ISSN 0020-8671

ACKNOWLEDGEMENTS

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

MEMBERS

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

SPONSORS

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

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Printed in Wales by Cambrian Printers, Aberystwyth

Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

IDC 01 00:00:36.8±6.1**,19°.56N**×**93°.15E,h0**^{km}**,mb3.6**/2**, mb1 3.6**/3**,mb1mx3.4**/23**,mbtmp3.6**/3**,ML3.7**/1**,Error ellipse: s-maj=145.3km s-min=36.3km az=37.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**5.59**	**100**	Pn	Pn	00 02 01.2	0.0
	0.6nm,0.3s,baz=282,slow=14,SNR=7.8						
SHL	**Shillong**	**6.09**	**349**	*e*PKP	Pn	00 02 11.5	+3.4
SHL				*e*S	Sn	00 03 18.5	0.0
MKAR	**Makanchi Array**	**28.58**	**344**	P	P	00 06 34.1	-0.4
	0.4nm,0.6s,baz=149,slow=9.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**34.92**	**351**	P	P	00 07 30.6	+0.5
	0.8nm,0.6s,baz=168,slow=7.4,SNR=5.4						

---

*DDA **01** 00:02:04.6,39°.11N×40°.44E,h7km±4km,Md3.0*
*ISCJB **01** 00:02:05.3±0.5,39°.10N±0°.03×40°.41E±0°.04,h10km,Error ellipse: s-maj=4.7km s-min=4.0km az=2.6*
*ISK **01** 00:02:05.7,38°.99N×40°.34E,h8km,MD2.7*
ISC 01 00:02:05.2±0.6**,39°.09N**±0°.03×**40°.42E**±0°.04**,h2**^{km}±6^{km}**, n15,**σ**1s.01**/23**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.22**	**165**	PG	**Pg**	**00 02 09.6**	**+0.1**
BINT				*e*SG	**Sg**	**00 02 12.7**	**+0.5**
BNGL	**BINGOL**	**0.59**	**103**	*i* P	**Pg**	**00 02 15.4**	**-1.0**
BNGL				*i* S	**Sg**	**00 02 25.0**	**+1.0**
PTK	**Pertek**	**0.82**	**256**	*e*PG	**Pg**	**00 02 20.3**	**-0.7**
PTK				*e*SG	**Sg**	**00 02 32.0**	**+0.4**
KOPT	**Kop Dagi**	**0.93**	**4**	*i* P	**Pg**	**00 02 18.3**	**-4.8**
EZC	**Erzincan**	**1.06**	**309**	*e*PG	**Pg**	**00 02 26.8**	**+1.3**
ERZM	**Erzurum**	**1.10**	**42**	*i* P	**Pg**	**00 02 24.4**	**-1.9**
ERZM				*i* S	**Sg**	**00 02 40.6**	**+0.1**
SVRC	**Sivrice-ELAZID**	**1.12**	**231**	*e*PG	**Pg**	**00 02 25.3**	**-1.4**
DIYA	**Diyarbakir**	**1.19**	**191**	*i* P	**Pg**	**00 02 28.4**	**+0.4**
DIYA				*i* S	**Sg**	**00 02 44.7**	**+1.4**
ELZG	**Elazig**	**1.27**	**243**	*i* P	**Pg**	**00 02 28.7**	**-0.8**
BEST	**Besiri**	**1.37**	**150**	*i* P	**Pn**	**00 02 31.5**	**+0.2**
BEST				*i* S	**Sg**	**00 02 49.4**	**+0.2**
KEMA	**Kemaliye**	**1.51**	**277**	*i* P	**Pn**	**00 02 33.8**	**+0.6**
KEMA				*i* S	**Sn**	**00 02 54.9**	**+1.5**
MYA	**Malataya**	**1.73**	**245**	*e*PN	**Pn**	**00 02 35.5**	**-0.8**
MALT	**Malatya**	**1.74**	**244**	*e*PN	**Pn**	**00 02 35.6**	**-0.8**
MARD	**Mardin**	**1.79**	**171**	*i* P	**Pn**	**00 02 36.1**	**-1.0**
MARD				*i* S	**Sn**	**00 02 59.4**	**-1.2**
AGRB	**Hanur-Agry**	**2.06**	**76**	*e*PN	**Pn**	**00 02 42.9**	**+2.2**

GUC 01 00:05:39.5±0.4**,21°.86S**×**67°.94W,h224**^{km}±17^{km}**,ML3.8, 1C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**1.72**	**258**	*e*P	Pn	00 06 18.9	+1.6
MACH				*e*S	S	00 06 49.1	+2.3
HMBC	**Humberston**	**2.40**	**310**	*e*P	Pn	00 06 25.9	+1.9
HMBC				*e*S	S	00 07 00.8	+2.0
HMBC				AML	AML	00 07 02.3	
	comp=N,136nm,0.6s						
CEN1	**Los Morros**	**2.59**	**233**	*e*P	Pn	00 06 30.0	+4.1
CEN1				*e*S	S	00 07 06.6	+4.4
CEN1				AML	AML	00 07 08.4	
	comp=N,107nm,0.5s						
PSGC	**Pisagua**	**3.04**	**317**	*e*P	Pn	00 06 32.4	+1.5
PSGC				*e*S	S	00 07 13.0	+1.7
MNMC	**Miæe Miæ**	**3.12**	**330**	⇑*e*P	Pn	00 06 34.4	+2.5
MNMC				*e*S	S	00 07 15.8	+2.7
MNMC				AML	AML	00 07 19.6	
	comp=E,192nm,0.6s						

KRSC 01 00:30:10.3±1.5**,50°.30N**×**156°.61E,h5**^{km}±5^{km}**,ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**0.88**	**311**	*e*P	Pg	00 30 28.2	+1.0
ALID				*i* S	Sg	00 30 41.1	+2.4
MIPR	**Malaya Ipel'ka**	**1.98**	**3**	*e*P	Pn	00 30 45.4	+1.0
SDLR	**Sedlovina**	**3.30**	**24**	*e*P	Pn	00 31 05.1	+2.5
NLC	**Nalytchevo**	**3.34**	**30**	*e*P	Pn	00 31 04.6	+1.5
NLC				*i* S	Sn	00 31 44.4	+1.3
GNL	**Ganaly**	**3.50**	**13**	*e*P	Pn	00 31 07.7	+2.4
SPN	**Mys Shipunski**	**3.52**	**36**	*e*P	Pn	00 31 07.6	+2.1
SPN				*i* S	Sn	00 31 50.0	+2.6
KBTR	**Krutoberegovo**	**6.99**	**30**	*e*P	Pn	00 31 54.2	+1.0

CASC 01 00:36:15.7±2.1**,8°.38N**×**82°.92W,h8**^{km}**,MD3.8,2C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.37**	**318**	⇑*i*P	Pg	00 36 22.1	-0.9
BRU2	**Volcan**	**0.47**	**28**	*e*P	Pg	00 36 25.6	+0.7
QCR	**Quepos**	**1.62**	**310**	*e*P	Pn	00 36 43.7	-0.9
QCR				*e*S	Sn	00 37 07.2	+1.6
URSC	**Urasca**	**1.68**	**330**	⇓*e*P	Pn	00 36 44.1	-1.4
URSC				*e*S	Sn	00 37 07.9	+0.7
LAJ	**Bijagual**	**1.90**	**321**	*e*P	Pn	00 36 50.6	+2.2
LAJ				*e*S	Sn	00 37 18.9	+6.4
PRS1	**Puriscal**	**2.11**	**319**	⇓*e*P	Pn	00 36 50.6	-0.8
CGA2	**Cerro Gallo 2**	**2.24**	**317**	⇑*e*P	Pn	00 36 53.2	+0.2
CGA2				*e*S	Sn	00 37 23.3	+2.4
BCIP	**Isla Barro Col**	**3.14**	**75**	*e*P	Pn	00 37 07.8	+2.2

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*ISCJB **01** 00:37:37.3±0.4,18°.56S±0°.09×65°.55E±0°.07,h10km, mb4.2/20,MS4.2/15,Error ellipse: s-maj=12.6km s-min=9.1km az=162.8*
*IDC **01** 00:37:37.6±0.7,18°.61S×65°.52E,h0km,mb3.9/12, mb1 4.0/13,mb1mx4.0/24,mbtmp3.9/13,ML3.8/1,MS4.2/15, Ms1 4.2/15,ms1mx4.0/32,Error ellipse: s-maj=21.2km s-min=20.4km az=14.0*
*NEIC **01** 00:37:39.0±0.3,18°.58S×65°.54E,h10km,mb4.7/10,Error ellipse: s-maj=9.1km s-min=6.4km az=162.0*
*GCMT **01** 00:37:41.9±0.3,18°.58S×65°.34E,h12km,MW5.1,Moment Tensor Solution. s30,c36; s67,c89; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.36±.12; $M_{\theta\theta}$0.65±.13; $M_{\phi\phi}$2.71±.12; $M_{r\theta}$0.17±.47; $M_{\theta\phi}$-1.14±.11; $M_{\phi r}$3.52±.39; Best double couple: $M_0$4.80000×10^{16} NP1:ϕ_s323.00000°,δ24.00000°, λ-119.00000°. NP2:ϕ_s174.00000°,δ69.00000°, λ-77.00000°. Principal axes: T 4.5600, Plg23.0000°, Azm255.0000°; N 0.4800, Plg12.0000°, Azm350.0000°; P -5.0400, Plg64.0000°, Azm105.0000°; Data Used: II IC G IU.*
ISC 01 00:37:39.2±0.4**,18°.58S**±0°.08×**65°.54E**±0°.07**,h10**^{km}**,n42,** σ**0s.71**/32**,mb4.2**/20**,MS4.2**/15**,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.56**	**253**	Pn	**Pn**	**00 39 56.1**	**-0.9**
ABPO	**Ambohimpanom**	**17.34**	**266**	*e*Pn	**Pn**	**00 41 42.5**	**+0.9**
	154nm,2.2s						
OPO	**Ambohidratompo**	**17.40**	**267**	P	**Pn**	**00 41 43.7**	**+1.5**
	0.3nm,0.3s,baz=78,slow=14,SNR=2.9						
KMBO	**Kilima Mbogo**	**32.72**	**299**	*e*P	**P**	**00 44 12.4**	**+0.1**
	0.4nm,0.5s,mb3.6						
LBTB	**Lobatse**	**37.53**	**253**	P	**P**	**00 44 53.4**	**-0.3**
	2.3nm,0.6s,mb4.1,baz=110,slow=8.5,SNR=8.3						
LBTB	**Lobatse**	**37.53**	**253**	*e*P	**P**	**00 44 53.8**	**+0.1**
	3.6nm,0.6s,mb4.3						
BOSA	**Boshof**	**38.08**	**247**	LR	LR	00 56 58.1	
	comp=Z,530nm,19.3s,MS4.4,baz=134,slow=30						
BOSA	**Boshof**	**38.08**	**247**	*e*P	**P**	**00 44 58.0**	**-0.3**
	12nm,1.1s,mb4.6						
NWAO	**Narrogin (SRO)**	**48.26**	**118**	*e*P	**P**	**00 46 20.5**	**-0.1**
MAW	**Mawson**	**49.03**	**181**	LR	LR	01 02 03.2	
	comp=Z,217nm,21.3s,MS4.1,baz=357,slow=30						
CMAR	**Chiang Mai Arr**	**49.31**	**44**	P	**P**	**00 46 29.9**	**+1.2**
	1.2nm,0.6s,mb4.1,baz=236,slow=7.3,SNR=8.2						
CMAR				LR	LR	01 04 40.8	
	comp=Z,338nm,18.3s,MS4.4,baz=215,slow=33						
SHL	**Shillong**	**50.82**	**31**	*e*PKP	**P**	**00 46 44.0**	**+3.9**
LSA	**Lhasa**	**53.98**	**28**	*e*P	**P**	**00 47 03.7**	**+0.2**
	13nm,1.4s,mb4.7						
FORT	**Forrest**	**57.46**	**115**	*e*P	**P**	**00 47 28.8**	**+0.2**
AML	**Almayashu**	**60.87**	**7**	*e*P	**P**	**00 47 52.7**	**+0.9**
	4.1nm,0.6s,mb4.7						
GNI	**Garni**	**61.56**	**342**	*e*P	**P**	**00 47 55.8**	**-0.7**
	7.4nm,0.8s,mb4.9						
ASAR	**Alice Springs**	**63.45**	**108**	P	**P**	**00 48 09.8**	**+0.1**
	0.5nm,0.6s,mb3.8,baz=274,slow=5.1,SNR=8.6						
WRA	**Warramunga Arr**	**64.53**	**104**	P	**P**	**00 48 16.9**	**+0.1**
	0.5nm,0.6s,mb3.7,baz=260,slow=5.4,SNR=8.0						
WRA				LR	LR	01 13 59.9	
	comp=Z,519nm,21.6s,MS4.7,baz=260,slow=34						
BRTR	**Keskin Array B**	**65.20**	**333**	P	**P**	**00 48 22.0**	**+1.3**
	0.2nm,0.5s,mb3.5,baz=155,slow=5.3,SNR=2.7						
BRTR				LR	LR	01 17 26.3	
	comp=Z,58nm,18.8s,MS3.8,baz=348,slow=37						
MK31	**Makanchi Array**	**66.80**	**12**	*e*P	**P**	**00 48 29.9**	**-0.9**
MKAR	**Makanchi Array**	**66.80**	**12**	P	**P**	**00 48 31.1**	**+0.3**
	1.4nm,0.8s,mb4.0,baz=270,slow=4.9,SNR=4.0						
MKAR				LR	LR	01 15 56.0	
	comp=Z,145nm,19.8s,MS4.2,baz=185,slow=34						
KURK	**Kurchatov**	**69.95**	**9**	LR	LR	01 19 05.2	
	comp=Z,83nm,18.0s,MS4.0,baz=175,slow=36						
KURK	**Kurchatov**	**69.95**	**9**	*e*P	**P**	**00 48 50.6**	**+0.2**
	2.8nm,0.7s,mb4.3						
TORD	**Torodi Ar. Bea**	**70.38**	**292**	LR	LR	01 20 17.2	
	comp=Z,142nm,19.7s,MS4.2,baz=115,slow=36						
QSPA	**South Pole Qui**	**71.52**	**180**	P	**P**	**00 49 00.2**	**+0.4**
	5.1nm,0.8s,mb4.5,baz=265,slow=2.0,SNR=15						
QSPA	**South Pole Qui**	**71.52**	**180**	*e*P	**P**	**00 48 59.6**	**-0.2**
	5.3nm,0.8s,mb4.5						
DBIC	**Dimbokro**	**73.76**	**283**	LR	LR	01 18 02.7	
	comp=Z,235nm,21.6s,MS4.4,baz=92,slow=33						
ZAA0	**Zalesovo Array**	**74.11**	**12**	*e*P	**P**	**00 49 14.8**	**-0.6**
ZALV	**Zalesovo Beam**	**74.11**	**12**	P	**P**	**00 49 15.2**	**-0.2**
	2.4nm,0.6s,mb4.3,baz=200,slow=6.9,SNR=14						
ZALV				LR	LR	01 20 31.9	
	comp=Z,105nm,20.5s,MS4.1,baz=68,slow=35						
SONM	**Songino Array**	**75.56**	**27**	P	**P**	**00 49 24.6**	**+0.7**
	1.1nm,0.7s,mb3.9,baz=197,slow=4.5,SNR=4.1						
SONM				LR	LR	01 21 39.6	
	comp=Z,239nm,19.4s,MS4.5,baz=172,slow=35						
KEST	**Kesra**	**75.80**	**316**	LR	LR	01 26 18.1	
	comp=Z,53nm,19.0s,MS3.9,baz=231,slow=38						
ULN	**Ulaanbaatar**	**75.87**	**27**	P	**P**	**00 49 25.2**	**-0.5**
AKASG	**Malin Array Be**	**76.02**	**337**	P	**P**	**00 49 26.2**	**-0.2**
	1.3nm,0.7s,mb4.0,baz=134,slow=4.9,SNR=2.9						
KIEV	**Kiev**	**76.02**	**337**	*e*P	**P**	**00 49 25.4**	**-1.1**
	3.5nm,0.8s,mb4.3						
KSRS	**Korea Array**	**80.90**	**46**	LR	LR	01 28 36.5	
	comp=Z,86nm,18.4s,MS4.1,baz=50,slow=38						
CLL	**Collm**	**83.36**	**330**	*e*P	**P**	**00 50 06.0**	**-0.3**
FINES	**FINESS Array B**	**85.75**	**342**	P	**P**	**00 50 16.8**	**-1.4**
	1.0nm,0.6s,mb4.2,baz=90,slow=1.9,SNR=3.5						
ESDC	**Sonseca Array**	**86.85**	**314**	P	**P**	**00 50 23.9**	**-0.2**
	0.4nm,0.7s,mb3.8,baz=119,slow=4.9,SNR=3.9						
CBIJ	**Chichi jima**	**87.03**	**60**	LR	LR	01 22 06.3	
	comp=Z,141nm,21.5s,MS4.3,baz=88,slow=31						
MJAR	**Matsushiro Arr**	**87.72**	**50**	LR	LR	01 33 00.1	
	comp=Z,76nm,18.2s,MS4.1,baz=250,slow=38						
PMSA	**Palmer Station**	**88.44**	**199**	*e*P	**P**	**00 50 31.0**	**-0.4**
	7.3nm,1.2s,mb4.8						
TXAR	**Lajitas Array**	**165.45**	**319**	PKPab	PKPab	00 58 43.5	+0.9
	0.4nm,0.8s,baz=48,slow=2.7,SNR=3.6						

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*IDC **01** 01:17:29.8±0.9,33°.24S×179°.44W,h0km,mb4.7/4, mb1 4.7/5,mb1mx4.3/17,mbtmp4.6/5,ML3.8/1,Error ellipse: s-maj=32.9km s-min=27.2km az=93.0*
*ISCJB **01** 01:17:32.4±0.7,33°.47S±0°.07×179°.3W±0°.1,h33km, mb4.6/6,Error ellipse: s-maj=16.8km s-min=8.0km az=18.9*
*NEIC **01** 01:17:34.9±0.7,33°.36S×179°.40W,h35km,mb4.7/3,Error ellipse: s-maj=28.5km s-min=19.8km az=120.0*
ISC 01 01:17:34.0±0.8**,33°.45S**±0°.07×**179°.2W**±0°.1**,h35**^{km}**,n35,** σ**1s.09**/25**,mb4.6**/6**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.57**	**205**	*e*PN	**Pn**	**01 18 40.4**	**-0.1**
PUZ	**Puketiti**	**5.04**	**203**	*e*PN	**Pn**	**01 18 46.9**	**-0.1**
PUZ				*e*SN	**Sn**	**01 19 45.6**	**+1.6**
CNGZ	**Carnagh Statio**	**5.43**	**202**	*e*PN	**Pn**	**01 18 51.6**	**-0.8**
MWZ	**Matawai**	**5.54**	**207**	PN	**Pn**	**01 18 54.4**	**+0.6**
URZ	**Urewera**	**5.64**	**211**	Pn	**Pn**	**01 18 54.8**	**-0.5**
	2.7nm,0.3s,baz=322,slow=13,SNR=12						
URZ				Sn	**Sn**	**01 19 59.6**	**+0.8**
	baz=75,slow=20,SNR=2.6						
URZ	**Urewera**	**5.64**	**211**	PN	**Pn**	**01 18 55.3**	**0.0**
URZ				*e*SN	**Sn**	**01 20 00.7**	**+1.9**
OUZ	**Omahuta**	**6.18**	**251**	PN	**Pn**	**01 19 01.7**	**-1.0**
BKZ	**Black Stump Fm**	**6.66**	**210**	PN	**Pn**	**01 19 07.2**	**-2.2**
BFZ	**Birch Farm**	**8.07**	**205**	PN	**Pn**	**01 19 26.4**	**-2.1**
MRZ	**Mangatainoka R**	**8.30**	**208**	PN	**Pn**	**01 19 27.6**	**-4.2**
MRZ				*e*SN	**Sn**	**01 20 58.2**	**-6.0**
THZ	**Tophouse**	**10.37**	**215**	*e*PN	**Pn**	**01 19 55.5**	**-4.7**
ASAR	**Alice Springs**	**42.00**	**271**	P	**P**	**01 25 20.9**	**-0.9**
	2.3nm,0.6s,mb4.0,baz=111,slow=7.6,SNR=21						
ASAR				PcP	PcP	01 27 15.8	-0.9
	1.1nm,0.5s,baz=121,slow=4.4,SNR=7.1						
WRA	**Warramunga Arr**	**43.26**	**276**	P	**P**	**01 25 33.5**	**+1.3**
	7.7nm,0.4s,mb4.8,baz=117,slow=7.7,SNR=70						
FITZ	**Fitzroy Crossi**	**51.38**	**273**	*e*P	**P**	**01 26 36.1**	**+0.7**
	2.0nm,0.5s,mb4.3						
QSPA	**South Pole Qui**	**56.67**	**180**	P	**P**	**01 27 17.1**	**+3.9**
	9.4nm,0.9s,mb4.8,baz=32,slow=3.2,SNR=41						
QSPA	**South Pole Qui**	**56.67**	**180**	*e*P	**P**	**01 27 17.1**	**+3.9**
	5.7nm,0.7s,mb4.7						
VNA3	**Neumayer Olymp**	**75.34**	**177**	*e*	**P**	**01 29 13.1**	**-0.1**
VNA3				*e*		01 29 15.6	
VNA2	**Neumayer--Watz**	**75.76**	**177**	*e*	**P**	**01 29 15.6**	**0.0**
VNA2				*e*		01 29 21.5	
VNA1	**Neumayer--Stat**	**76.00**	**177**	*e*	**P**	**01 29 17.6**	**+0.7**
PETK	**Petropavlovsk-**	**88.50**	**346**	P	**P**	**01 30 23.6**	**+1.3**
	5.9nm,0.6s,mb5.1,baz=140,slow=8.2,SNR=14						
DAC	**Darwin (Calif)**	**90.13**	**45**	*e*P	**P**	**01 30 29.8**	**-0.5**
	2.2nm,0.3s,mb5.0						
MKAR	**Makanchi Array**	**118.90**	**309**	PKP	PKPdf	01 36 17.7	-0.6
	0.4nm,0.5s,baz=139,slow=1.1,SNR=7.2						
KKAR	**Karatay Array**	**125.84**	**302**	*e*PKPdf	PKPdf	01 36 31.7	0.0
KEV	**Kevo**	**140.84**	**346**	*e*pkp	PKiKP	01 37 05.6	+3.9
ARCES	**ARCESS Array B**	**141.32**	**346**	PKhKP	PKPpre	01 36 55.4	
	6.2nm,1.0s,baz=36,slow=6.4,SNR=4.7						
JOF	**Joensuu**	**144.82**	**336**	*e*pkp	PKPdf	01 37 05.2	-1.0
KAF	**Kangasniemi**	**147.02**	**338**	*e*pkp	PKPdf	01 37 11.5	+1.5
FINES	**FINESS Array B**	**147.60**	**337**	PKPbc	PKPbc	01 37 14.0	+0.3
	5.0nm,0.5s,baz=42,slow=3.7,SNR=42						
NOA	**NORSAR Array B**	**151.57**	**349**	PKPbc	PKPbc	01 37 24.1	+0.5
	2.7nm,0.8s,baz=16,slow=4.1,SNR=8.7						
IDID	**Didziasalis**	**151.62**	**328**	*e*P	PKPbc	01 37 24.5	+0.7
ISAL	**Salakas**	**151.72**	**329**	*e*P	PKPbc	01 37 24.6	+0.6
IIGN	**Ignalina**	**151.82**	**329**	*e*P	PKPbc	01 37 24.8	+0.5
BRTR	**Keskin Array B**	**152.97**	**293**	PKPbc	PKPbc	01 37 26.9	-0.5
	1.2nm,0.5s,baz=144,slow=3.6,SNR=14						
ESDC	**Sonseca Array**	**172.72**	**30**	PKP	PKPdf	01 37 41.4	+2.3
	0.6nm,0.9s,baz=243,slow=1.0,SNR=4.2						
MDT	**Midelt**	**175.45**	**97**	PKP	PKPdf	01 37 43.5	+3.2
	1.1nm,0.9s,baz=338,slow=2.8,SNR=3.7						

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*PGC **01** 01:19:08.8±1.8,49°.94N×130°.11W,h10km,ML3.4/9, Mw4.2,209km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **01** 01:19:09.9±1.9,50°.14N×130°.09W,h0km,mb3.7/3, mb1 4.0/9,mb1mx3.7/26,mbtmp3.7/9,ML3.5/6,Error ellipse: s-maj=31.0km s-min=13.2km az=75.0*
*BJI **01** 01:19:11.7,50°.20N×129°.80W,h10km,mB4.7/3,mb4.4/2*
*ISCJB **01** 01:19:12.1±0.5,50°.24N±0°.05×129°.64W±0°.07,h10km, mb3.8/4,Error ellipse: s-maj=8.0km s-min=4.3km az=40.3*
*NEIC **01** 01:19:13.7±1.0,50°.23N×129°.76W,h10km,mb4.0/5, MW4.2(PGC),Error ellipse: s-maj=18.3km s-min=6.6km az=54.0*
ISC 01 01:19:13.9±0.5**,50°.31N**±0°.04×**129°.68W**±0°.07**,h10**^{km}**,n57,** σ**1s.39**/64**,mb3.8**/4**,3D,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.05**	**71**	Pn	**Pg**	**01 19 33.1**	**-0.9**
HOLB				⇑Sn	**Sn**	**01 19 49.8**	**+0.6**
BPBC	**Brooks Peninsu**	**1.24**	**96**	Pn	**Pg**	**01 19 33.8**	**-3.8**
MAYB	**Maynard**	**1.61**	**86**	Pn	**Pn**	**01 19 40.0**	**-2.4**
EDB	**Eliza Dome**	**1.71**	**104**	⇑Pn	**Pn**	**01 19 39.6**	**-4.0**
EDB				⇑Sn	**Sn**	**01 20 02.4**	**-3.1**
BBB	**Bella Bella**	**2.12**	**27**	Pn	**Pn**	**01 19 49.4**	**0.0**
	31nm,0.3s,baz=47,slow=14,SNR=168						
BBB				Sn	**Sn**	**01 20 18.6**	**+2.7**
	47nm,0.3s,baz=127,slow=20,SNR=13						
BBB	**Bella Bella**	**2.12**	**27**	Pn	**Pn**	**01 19 49.4**	**0.0**
BBB				Sn	**Sn**	**01 20 18.6**	**+2.7**
BBB	**Bella Bella**	**2.12**	**27**	⇑Pn	**Pn**	**01 19 49.5**	**+0.1**
BBB				⇑Sn	**Sn**	**01 20 17.4**	**+1.6**
GDR	**Gold River**	**2.41**	**101**	⇓Pn	**Pn**	**01 19 50.0**	**-3.3**
BNB	**Barry Inlet**	**2.62**	**331**	⇑Pn	**Pn**	**01 19 52.0**	**-4.2**
BTB	**Buttle Lake**	**2.82**	**106**	⇓Pn	**Pn**	**01 19 55.5**	**-3.4**
BTB				⇑Sn	**Sn**	**01 20 29.0**	**-3.9**
MOBC	**Moresby Island**	**3.18**	**334**	Pn	**Pn**	**01 20 00.9**	**-3.0**
DIB	**Dawson Inlet,**	**3.38**	**330**	Pn	**Pn**	**01 20 05.0**	**-1.7**
DIB				Sn	**Sg**	**01 21 01.3**	**-1.2**
	SNR=242						
DIB	**Dawson Inlet,**	**3.38**	**330**	⇓Pn	**Pn**	**01 20 03.4**	**-3.3**
NDB	**Naden**	**4.17**	**332**	⇑Pn	**Pn**	**01 20 15.2**	**-2.4**
PGC	**Sidney**	**4.39**	**110**	*e*Pn	**Pn**	**01 20 19.7**	**-0.8**
NLWA	**Neilton Lookou**	**4.82**	**125**	*e*Pn	**Pn**	**01 20 25.4**	**-1.0**
JCW	**Jim Creek**	**5.50**	**110**	*e*Pn	**Pn**	**01 20 35.4**	**-0.3**
	8.0nm,0.7s						
RPW	**Rockport**	**5.65**	**106**	*e*Pn	**Pn**	**01 20 36.9**	**-1.0**
LON	**Longmire**	**6.32**	**121**	*e*Pn	**Pn**	**01 20 46.5**	**-0.6**
	6.2nm,0.6s						
ETW	**Entiat**	**6.72**	**110**	*e*Pn	**Pn**	**01 20 53.4**	**+0.8**
	14nm,0.8s						
OD2	**Odessa Site #2**	**7.80**	**108**	*e*Pn	**Pn**	**01 21 06.4**	**-0.9**
	6.8nm,0.7s						
HAWA	**Hanford**	**7.81**	**116**	*e*Pn	**Pn**	**01 21 10.3**	**+2.8**
	8.6nm,0.9s						
DLBC	**Dease Lake**	**8.15**	**359**	Pn	**Pn**	**01 21 11.6**	**-0.6**
	0.5nm,0.3s,baz=180,slow=16,SNR=9.6						
DLBC	**Dease Lake**	**8.15**	**359**	*e*Pn	**Pn**	**01 21 13.9**	**+1.8**
NEW	**Newport**	**8.46**	**99**	*e*Pn	**Pn**	**01 21 15.9**	**-0.5**
LNOR	**Lincton Mounta**	**8.82**	**116**	*e*Pn	**Pn**	**01 21 22.2**	**+0.9**
	5.8nm,0.9s						
WVOR	**Wild Horse Val**	**10.95**	**132**	*e*Pn	**Pn**	**01 21 50.8**	**+0.2**
	3.0nm,0.4s						
CHMT	**Chamberlain Mo**	**11.39**	**101**	*e*Pn	**Pn**	**01 21 56.3**	**-0.2**
	4.2nm,1.2s						
EGMT	**Eagleton**	**13.24**	**92**	*e*Pn	**Pn**	**01 22 23.0**	**+1.3**
	7.3nm,0.9s						
IMW	**Indian Meadow**	**14.27**	**109**	*e*Pn	**Pn**	**01 22 36.1**	**+0.4**
	4.6nm,0.3s						
NVAR	**Mina Array Bea**	**14.37**	**141**	Pn	**Pn**	**01 22 38.0**	**+0.8**
	0.5nm,0.3s,baz=315,slow=11,SNR=3.3						
MOOW	**Moose Ponds**	**14.46**	**110**	*e*Pn	**Pn**	**01 22 40.6**	**+2.1**
	11nm,1.0s						
TPAW	**Teton Pass**	**14.48**	**111**	Pn	**Pn**	**01 22 44.3**	**+5.5**
	16nm,1.0s						
REDW	**Red Top Meadow**	**14.62**	**111**	*e*Pn	**Pn**	**01 22 41.8**	**+1.3**
	23nm,1.5s						
SNOW	**Snow King Moun**	**14.62**	**111**	*e*Pn	**Pn**	**01 22 42.4**	**+1.8**
	8.5nm,0.9s						
LOHW	**Long Hollow**	**14.62**	**110**	*e*Pn	**Pn**	**01 22 45.0**	**+4.3**
	8.8nm,1.1s						
RLMT	**Red Lodge**	**14.67**	**103**	*e*Pn	**Pn**	**01 22 46.5**	**+5.2**
	26nm,1.8s						
PDAR	**Pinedale Array**	**15.73**	**111**	Pn	**Pn**	**01 22 57.2**	**+1.8**
	0.0nm,0.3s,baz=312,slow=11,SNR=8.8						
ILAR	**Eielson Array**	**17.09**	**334**	P	**Pn**	**01 23 12.2**	**-0.4**
	0.0nm,0.3s,baz=161,slow=9.5,SNR=6.8						
FFC	**Flin Flon**	**17.38**	**65**	*e*Pn	**Pn**	**01 23 17.3**	**+1.1**
	16nm,1.1s						
INK	**Inuvik**	**18.16**	**355**	P	**Pn**	**01 23 25.1**	**-0.7**
	0.1nm,0.3s,baz=191,slow=5.2,SNR=3.5						
PV01	**Paradox Valley**	**19.34**	**121**	*e*P	**Pn**	**01 23 38.0**	**-2.3**
	1μm,1.4s						
SMCO	**Snowmass**	**19.51**	**116**	*e*P	**Pn**	**01 23 40.2**	**-2.2**
	2.8nm,0.9s						
COLD	**Coldfoot**	**19.85**	**336**	*e*P	**Pn**	**01 23 47.5**	**+1.4**
	4.8nm,1.3s						
MVCO	**Mesa Verde**	**20.05**	**123**	*e*P	**P**	**01 23 46.3**	**-0.6**
	40nm,1.7s						
ULM	**Lac du Bonnet**	**21.50**	**77**	P	**P**	**01 24 03.9**	**+1.3**
	12nm,0.7s,mb4.5,baz=293,slow=11,SNR=11						
ULM	**Lac du Bonnet**	**21.50**	**77**	P	**P**	**01 24 03.9**	**+1.3**
ANMO	**Albuquerque**	**22.83**	**123**	P	**P**	**01 24 15.8**	**-1.1**
	1.2nm,0.8s,mb3.4,baz=322,slow=9.4,SNR=5.3						
ANMO	**Albuquerque**	**22.83**	**123**	P	**P**	**01 24 15.8**	**-1.1**
ECSD	**EROS Data Cent**	**23.34**	**94**	*e*P	**P**	**01 24 22.8**	**+0.5**
	8.7nm,0.8s,mb4.2						
TXAR	**Lajitas Array**	**28.70**	**127**	P	**P**	**01 25 09.5**	**-1.4**
	0.4nm,0.8s,mb3.2,baz=286,slow=3.6,SNR=5.0						
TXAR	**Lajitas Array**	**28.70**	**127**	P	**P**	**01 25 09.5**	**-1.5**
CN2	**Changchun**	**65.79**	**310**	*e*P	**P**	**01 30 00.6**	**+1.7**
HHC	**Hu-ho-hao-te**	**74.58**	**316**	*e*P	**P**	**01 30 54.4**	**+1.6**
HHC				pP	pP	01 30 58.6	+2.6
HHC				sP	sP	01 31 01.9	+4.7
HHC				PcP	PcP	01 31 09.2	+2.1
HHC				PP	PP	01 33 42.7	+3.9
HHC				S	S	01 40 29.0	+1.0
HHC				sS	sS	01 40 36.2	+2.8
HHC				ScS	ScS	01 41 01.7	-2.3
HHC				SS	SS	01 45 17.8	+4.0
HHC				pmax	pmax		
	comp=Z,100nm,5.5s						
LZH	**Lanzhou**	**81.88**	**319**	*e*P	**P**	**01 31 34.0**	**+0.7**
LZH				pP	pP	01 31 38.0	+1.4
LZH				sP	sP	01 31 40.0	+2.2
CD2	**Chengdu**	**86.34**	**316**	*e*P	**P**	**01 31 56.9**	**+0.8**
CD2				pmax	pmax		
	comp=Z,20nm,4.8s						
GYA	**Guiyang**	**88.77**	**312**	*e*P	**P**	**01 32 08.9**	**+1.1**

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*PGC **01** 01:20:03.5±2.3,50°.00N×129°.99W,h10km,ML3.4/7, Mw4.0,198km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **01** 01:20:04.9±1.4,50°.22N±0°.04×129°.62W±0°.07,h2km±9km, mb3.9/6,Error ellipse: s-maj=8.3km s-min=6.2km az=140.4*
*BJI **01** 01:20:04.6,50°.20N×129°.70W,h10km,mB4.7/3,mb4.4/1*
*IDC **01** 01:20:05.7±1.4,50°.18N×129°.61W,h0km,mb3.9/4, mb1 4.1/10,mb1mx3.9/26,mbtmp3.9/10,ML3.6/5,MS3.2/4, Ms1 3.2/4,ms1mx3.0/31,Error ellipse: s-maj=26.0km s-min=12.5km az=72.0*
*NEIC **01** 01:20:07.7±0.8,50°.21N×129°.68W,h10km,mb4.1/6, MW4.0(PGC),Error ellipse: s-maj=14.5km s-min=5.5km az=56.0*
ISC 01 01:20:06.9±1.7**,50°.28N**±0°.04×**129°.59W**±0°.08**,h2**^{km}±10^{km}**, n52,**σ**1s.18**/57**,mb3.9**/6**,8D,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.00**	**68**	⇓Pn	**Pb**	**01 20 26.5**	**-0.4**
HOLB				⇑Sn	**Sn**	**01 20 42.1**	**-0.4**
BPBC	**Brooks Peninsu**	**1.17**	**95**	⇑Pn	**Pg**	**01 20 27.3**	**-2.0**
BPBC				⇓Sn	**Sg**	**01 20 44.3**	**-0.2**
MAYB	**Maynard**	**1.55**	**84**	⇓Pn	**Pn**	**01 20 33.5**	**-2.0**
EDB	**Eliza Dome**	**1.64**	**103**	⇓Pn	**Pn**	**01 20 33.0**	**-3.6**
EDB				⇓Sn	**Sn**	**01 20 54.1**	**-4.1**
BBB	**Bella Bella**	**2.12**	**25**	Pn	**Pn**	**01 20 42.9**	**-0.5**
	71nm,0.3s,baz=42,slow=13,SNR=8.9						
BBB				Sn	**Sn**	**01 21 09.9**	**-0.4**
	51nm,0.3s,baz=129,slow=22,SNR=7.0						
BBB				LR	LR	01 21 43.1	
	comp=Z,333nm,18.1s,baz=198,slow=44						
BBB	**Bella Bella**	**2.12**	**25**	⇓Pn	**Pn**	**01 20 43.0**	**-0.4**
BBB				⇓Sn	**Sn**	**01 21 10.7**	**+0.4**
BNB	**Barry Inlet**	**2.67**	**330**	⇑Pn	**Pn**	**01 20 46.4**	**-4.5**
OZB	**Mount Ozzard**	**2.97**	**115**	⇑Sn	**Sn**	**01 21 27.5**	**-3.6**
MOBC	**Moresby Island**	**3.23**	**334**	⇓Pn	**Pn**	**01 20 54.4**	**-4.2**
PGC	**Sidney**	**4.32**	**110**	*e*Pn	**Pn**	**01 21 13.0**	**-0.5**
NLWA	**Neilton Lookou**	**4.75**	**125**	*e*Pn	**Pn**	**01 21 19.5**	**+0.1**
JCW	**Jim Creek**	**5.43**	**110**	*e*Pn	**Pn**	**01 21 29.0**	**+0.3**
RPW	**Rockport**	**5.58**	**106**	*e*Pn	**Pn**	**01 21 31.4**	**+0.6**
LON	**Longmire**	**6.25**	**121**	*e*Pn	**Pn**	**01 21 39.9**	**-0.2**
	11nm,0.6s						
ETW	**Entiat**	**6.66**	**110**	*e*Pn	**Pn**	**01 21 46.7**	**+1.1**
	16nm,0.6s						
HOOD	**Mount Hood Mea**	**7.29**	**130**	*e*Pn	**Pn**	**01 21 54.3**	**+0.1**
	89nm,1.5s						
OD2	**Odessa Site #2**	**7.74**	**108**	*e*Pn	**Pn**	**01 21 59.5**	**-0.9**
	16nm,0.9s						
HAWA	**Hanford**	**7.74**	**116**	*e*Pn	**Pn**	**01 22 01.0**	**+0.5**
	8.9nm,0.8s						
DLBC	**Dease Lake**	**8.18**	**358**	Pn	**Pn**	**01 22 06.6**	**+0.1**
	0.7nm,0.3s,baz=180,slow=15,SNR=7.9						
DLBC				LR	LR	01 25 19.1	
	comp=Z,203nm,19.8s,baz=288,slow=38						
DLBC	**Dease Lake**	**8.18**	**358**	*e*Pn	**Pn**	**01 22 07.2**	**+0.7**
NEW	**Newport**	**8.40**	**99**	*e*Pn	**Pn**	**01 22 08.4**	**-1.0**
	4.9nm,0.8s						
LNOR	**Lincton Mounta**	**8.75**	**116**	*e*Pn	**Pn**	**01 22 15.5**	**+1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	9.1nm,0.8s						
WVOR	**Wild Horse Val**	**10.89**	**132**	*e*Pn	**Pn**	**01 22 43.3**	**-0.2**
	8.3nm,1.0s						
CHMT	**Chamberlain Mo**	**11.33**	**101**	*e*Pn	**Pn**	**01 22 49.8**	**+0.2**
	10nm,1.3s						
HLID	**Hailey**	**12.34**	**117**	*e*Pn	**Pn**	**01 23 04.9**	**+1.4**
	4.1nm,0.8s						
IMW	**Indian Meadow**	**14.20**	**110**	*e*Pn	**Pn**	**01 23 31.4**	**+2.7**
	13nm,0.9s						
NVAR	**Mina Array Bea**	**14.31**	**142**	Pn	**Pn**	**01 23 30.7**	**+0.3**
	0.3nm,0.3s,baz=323,slow=14,SNR=1.7						
MOOW	**Moose Ponds**	**14.40**	**110**	*e*Pn	**Pn**	**01 23 33.4**	**+1.9**
	14nm,1.0s						
TPAW	**Teton Pass**	**14.42**	**111**	*e*Pn	**Pn**	**01 23 38.9**	**+7.1**
	23nm,1.0s						
REDW	**Red Top Meadow**	**14.55**	**111**	*e*Pn	**Pn**	**01 23 38.5**	**+4.9**
	27nm,1.3s						
SNOW	**Snow King Moun**	**14.55**	**111**	*e*Pn	**Pn**	**01 23 38.7**	**+5.1**
	16nm,1.0s						
LOHW	**Long Hollow**	**14.56**	**110**	*e*Pn	**Pn**	**01 23 35.5**	**+1.8**
	33nm,1.5s						
RLMT	**Red Lodge**	**14.61**	**103**	*e*Pn	**Pn**	**01 23 42.4**	**+8.1**
	14nm,1.3s						
PDAR	**Pinedale Array**	**15.67**	**111**	Pn	**Pn**	**01 23 50.1**	**+1.6**
	0.1nm,0.3s,baz=312,slow=9.6,SNR=7.5						
ILAR	**Eielson Array**	**17.15**	**334**	P	**Pn**	**01 24 08.6**	**+1.2**
	0.0nm,0.3s,baz=147,slow=12,SNR=3.7						
ILAR				LR	LR	01 30 07.0	
	comp=Z,48nm,20.1s,baz=297,slow=35						
FFC	**Flin Flon**	**17.33**	**64**	*e*Pn	**Pn**	**01 24 11.4**	**+1.7**
	11nm,0.8s						
SRU	**San Rafael**	**17.50**	**122**	*e*Pn	**Pn**	**01 24 13.4**	**+1.5**
	6.4nm,0.8s						
INK	**Inuvik**	**18.19**	**355**	P	**Pn**	**01 24 20.9**	**+0.7**
	0.1nm,0.3s,baz=155,slow=10,SNR=4.7						
INK	**Inuvik**	**18.19**	**355**	P	**Pn**	**01 24 20.9**	**+0.7**
PV01	**Paradox Valley**	**19.27**	**121**	*e*P	**Pn**	**01 24 32.3**	**-1.1**
	2μm,1.5s						
SMCO	**Snowmass**	**19.44**	**116**	*e*P	**Pn**	**01 24 34.6**	**-1.0**
	11nm,1.3s						
MVCO	**Mesa Verde**	**19.98**	**123**	*e*P	**Pn**	**01 24 39.1**	**-2.9**
	52nm,1.6s						
ULM	**Lac du Bonnet**	**21.45**	**77**	P	**P**	**01 24 56.8**	**+0.6**
	18nm,0.7s,mb4.5,baz=281,slow=10,SNR=11						
ANMO	**Albuquerque**	**22.76**	**123**	P	**P**	**01 25 09.1**	**-1.2**
	2.4nm,0.8s,mb3.6,baz=327,slow=8.4,SNR=6.9						
ANMO				LR	LR	01 33 56.3	
	comp=Z,130nm,18.4s,baz=352,slow=36						
ECSD	**EROS Data Cent**	**23.28**	**94**	*e*P	**P**	**01 25 15.7**	**0.0**
	14nm,0.8s,mb4.4						
BNM	**Barren Site**	**23.28**	**125**	*e*P	**P**	**01 25 14.9**	**-0.9**
	4.1nm,0.9s,mb3.9						
TXAR	**Lajitas Array**	**28.63**	**127**	P	**P**	**01 26 03.5**	**-1.0**
	0.9nm,0.9s,mb3.5,baz=328,slow=7.0,SNR=5.2						
CN2	**Changchun**	**65.86**	**310**	*e*P	**P**	**01 30 52.6**	**-1.0**
HHC	**Hu-ho-hao-te**	**74.64**	**316**	*e*P	**P**	**01 31 45.7**	**-1.7**
HHC				PcP	PcP	01 32 00.8	-0.9
HHC				PP	PP	01 34 34.3	+0.7
HHC				S	S	01 41 19.4	-4.5
HHC				ScS	ScS	01 41 53.6	-6.1
HHC				SS	SS	01 46 07.4	-2.4
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
MKAR	**Makanchi Array**	**79.46**	**338**	P	**P**	**01 32 14.4**	**0.0**
	comp=Z,0.5nm,0.8s,mb3.5,baz=29,slow=6.8,SNR=3.1						
LZH	**Lanzhou**	**81.95**	**319**	*e*P	**P**	**01 32 29.5**	**+1.6**
LZH				pP	pP	01 32 33.0	+4.4
LZH				sP	sP	01 32 34.5	+5.7
CD2	**Chengdu**	**86.40**	**316**	*e*P	**P**	**01 32 48.6**	**-2.1**
CD2				pmax	pmax		
	comp=Z,20nm,5.6s						

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*BJI **01** 01:21:47.8, 39°.10S×175°.90E, h50km, mB5.5/9, mb5.4/17, Ms4.8/7, Ms7 4.7/12*

*ISCJB **01** 01:21:48.9±0.2, 39°.17S±0°.02×175°.87E±0°.03, h99km±1km, mb5.2/55, Error ellipse: s-maj=4.1km s-min=3.0km az=22.7*

*WEL **01** 01:21:50.9±0.1, 39°.11S×175°.89E, h85km±1km, ML5.8/24, Error ellipse: s-maj=0.8km s-min=0.6km az=90.0*

WEL Felt between Auckland, Otago and Gisborne, maximum reported intensity MM 5.

*NEIC **01** 01:21:50.9, 39°.11S×175°.89E, h51km, mb5.2/15, ML5.8(WEL), After WEL.*

NEIC Felt [IV] at Hastings, Havelock North, Napier, Palmerston North, Taradale, Taupo, Wanganui and Wellington. Felt throughout the central part of the North Island and in parts of the South Island.

*IDC **01** 01:21:51.4±0.9, 38°.89S×175°.95E, h107km±9km, mb4.7/13, mb1 4.8/13, mb1mx4.7/15, mbtmp4.7/13, MS3.8/6, Ms1 3.8/6, ms1mx3.6/16, Error ellipse: s-maj=16.7km s-min=13.5km az=32.0*

*GCMT **01** 01:21:52.5±0.3, 39°.14S×175°.88E, h96km±2km, MW5.2, Moment Tensor Solution. s38,c55; s1,c1; Moment tensor: Scale 10^{16}Nm; M_{rr}0.19±.24; $M_{\theta\theta}$7.64±.26; $M_{\phi\phi}$-7.83±.24; $M_{r\theta}$2.56±.18; $M_{\theta\phi}$-0.37±.23; $M_{\phi r}$-2.49±.17; Best double couple: $M_0$8.50000×10^{16} NP1:ϕ_s46.00000°, δ65.00000°, λ179.00000°. NP2:ϕ_s137.00000°, δ89.00000°, λ25.00000°. Principal axes: T 8.5100, Plg18.0000°, Azm4.0000°; N 0.0300, Plg65.0000°, Azm140.0000°; P -8.5500, Plg16.0000°, Azm269.0000°; Data Used: IU II CN IC G. Surface waves: sta= 63, comp= 91, per= 50.*

*DJA **01** 01:22:07, 39°.30S×175°.06E, h214km, mb5.2/27*

ISC 01 01:21:49.9±0.2**, 39°.18S**±0°.02×**175°.89E**±0°.03**, h92**km±1km**, h67**km±5.9km**:pP-P, n311, σ0.98**/295**, mb5.2**/55**, 9C-6D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTVZ	**Oturere**	**0.17**	**273**	⥣P*	**Pn**	**01 22 03.1**	**+0.1**
OTVZ				S*	**Sn**	**01 22 13.0**	**+0.2**
RITZ	**Rihia Road**	**0.20**	**354**	⥣P*	**Pn**	**01 22 03.3**	**+0.2**
RITZ				S*	**Sn**	**01 22 12.9**	**+0.1**
RITZ	**Rihia Road**	**0.20**	**354**	P	**Pn**	**01 22 03.3**	**+0.2**
TUVZ	**Tukino**	**0.20**	**242**	⥣P*	**Pn**	**01 22 03.6**	**+0.5**
TUVZ				S*	**Sn**	**01 22 12.9**	**0.0**
TUVZ	**Tukino**	**0.20**	**242**	P	**Pn**	**01 22 03.6**	**+0.5**
KRVZ	**Karewarewa**	**0.21**	**292**	⥣P*	**Pn**	**01 22 03.0**	**-0.1**
KRVZ				S*	**Sn**	**01 22 13.0**	**0.0**
NGZ	**Ngauruhoe**	**0.22**	**269**	⥣P*	**Pn**	**01 22 03.0**	**-0.1**
NGZ				S*	**Sn**	**01 22 13.3**	**+0.2**
NGZ	**Ngauruhoe**	**0.22**	**269**	P	**Pn**	**01 22 03.1**	**-0.1**
WTVZ	**West Tongariro**	**0.24**	**284**	⥣P*	**Pn**	**01 22 03.0**	**-0.2**
WTVZ				S*	**Sn**	**01 22 13.1**	**0.0**
WTVZ	**West Tongariro**	**0.24**	**284**	P	**Pn**	**01 22 03.0**	**-0.2**
KATZ	**Kakaramea**	**0.25**	**323**	P*	**Pn**	**01 22 03.1**	**-0.2**
KATZ				S*	**Sn**	**01 22 12.9**	**-0.4**
KATZ	**Kakaramea**	**0.25**	**323**	P	**Pn**	**01 22 03.1**	**-0.2**
MOVZ	**Moawhango**	**0.26**	**204**	P*	**Pn**	**01 22 03.6**	**+0.3**
MOVZ				S*	**Sn**	**01 22 12.9**	**-0.4**
MOVZ	**Moawhango**	**0.26**	**204**	P	**Pn**	**01 22 03.6**	**+0.3**
MOVZ				S	**Sn**	**01 22 12.9**	**-0.4**
WPVZ	**Whakapapa**	**0.27**	**263**	⥣P*	**Pn**	**01 22 03.4**	**0.0**
DRZ	**Dome Shelter**	**0.27**	**248**	P*	**Pn**	**01 22 04.0**	**+0.6**
DRZ	**Dome Shelter**	**0.27**	**248**	P	**Pn**	**01 22 04.0**	**+0.6**
WNVZ	**Wahianoa**	**0.27**	**235**	P*	**Pn**	**01 22 03.9**	**+0.5**
WNVZ				S*	**Sn**	**01 22 13.4**	**0.0**
FWVZ	**Far West T-bar**	**0.27**	**253**	P*	**Pn**	**01 22 03.2**	**-0.1**
FWVZ	**Far West T-bar**	**0.27**	**253**	P	**Pn**	**01 22 03.2**	**-0.2**
TRVZ	**Turoa**	**0.29**	**244**	P*	**Pn**	**01 22 04.1**	**+0.6**
RATZ	**Rangitukua**	**0.32**	**344**	P*	**Pn**	**01 22 03.2**	**-0.4**
RATZ	**Rangitukua**	**0.32**	**344**	P	**Pn**	**01 22 03.2**	**-0.4**
HATZ	**Hinemaiaia**	**0.33**	**30**	⥥P*	**Pn**	**01 22 03.3**	**-0.4**
HATZ				S*	**Sn**	**01 22 12.7**	**-1.2**
HATZ	**Hinemaiaia**	**0.33**	**30**	P	**Pn**	**01 22 03.3**	**-0.4**
BHHZ	**Black Hill Sta**	**0.34**	**156**	P*	**Pn**	**01 22 04.3**	**+0.5**
BHHZ				S*	**Sn**	**01 22 14.1**	**+0.1**
TWVZ	**Taurewa**	**0.36**	**286**	P*	**Pn**	**01 22 03.8**	**-0.1**
TWVZ	**Taurewa**	**0.36**	**286**	P	**Pn**	**01 22 03.8**	**-0.1**
MTVZ	**Mangateitei**	**0.39**	**237**	P*	**Pn**	**01 22 04.5**	**+0.5**
PKVZ	**Pokaka**	**0.43**	**254**	P*	**Pn**	**01 22 04.7**	**+0.4**
BKZ	**Black Stump Fm**	**0.47**	**89**	P*	**Pn**	**01 22 04.9**	**+0.4**
BKZ				S*	**Sn**	**01 22 15.5**	**-0.1**
BKZ	**Black Stump Fm**	**0.47**	**89**	P	**Pn**	**01 22 04.9**	**+0.3**
BKZ				S	**Sn**	**01 22 15.5**	**-0.1**
WATZ	**Wairara**	**0.48**	**346**	P*	**Pn**	**01 22 04.2**	**-0.4**
WATZ	**Wairara**	**0.48**	**346**	P	**Pn**	**01 22 04.2**	**-0.5**
WHTZ	**Whakaora**	**0.51**	**6**	P*	**Pn**	**01 22 04.9**	**0.0**
WHTZ	**Whakaora**	**0.51**	**6**	P	**Pn**	**01 22 04.9**	**0.0**
MCHZ	**McNeill Hill**	**0.68**	**113**	PN	**Pn**	**01 22 07.9**	**+1.5**
MCHZ				SN	**Sn**	**01 22 21.5**	**+2.8**
ALRZ	**Allen Road**	**0.71**	**30**	P*	**Pn**	**01 22 06.2**	**-0.5**
NMHZ	**Naumai**	**0.72**	**84**	PN	**Pn**	**01 22 08.0**	**+1.3**
PNHZ	**Pukenui**	**0.78**	**162**	PN	**Pn**	**01 22 08.4**	**+1.1**
PRRZ	**Plateau Road**	**0.78**	**31**	P*	**Pn**	**01 22 06.8**	**-0.5**
HRRZ	**Handcock Road**	**0.84**	**22**	P*	**Pn**	**01 22 07.9**	**0.0**
VRZ	**Vera Road**	**0.88**	**273**	P*	**Pn**	**01 22 08.7**	**+0.3**
VRZ	**Vera Road**	**0.88**	**273**	P	**Pn**	**01 22 08.7**	**+0.4**
TSZ	**Takapari Road**	**0.89**	**176**	*e*PN	**Pn**	**01 22 09.5**	**+1.1**
TSZ	**Takapari Road**	**0.89**	**176**	P	**Pn**	**01 22 09.6**	**+1.2**
WAZ	**Wanganui**	**0.91**	**230**	PN	**Pn**	**01 22 09.9**	**+1.2**
WAZ	**Wanganui**	**0.91**	**230**	P	**Pn**	**01 22 09.9**	**+1.2**
RRRZ	**Republican Roa**	**0.97**	**31**	P*	**Pn**	**01 22 09.0**	**-0.3**
RRRZ	**Republican Roa**	**0.97**	**31**	P	**Pn**	**01 22 09.0**	**-0.3**
RAHZ	**Arahi**	**0.97**	**75**	PN	**Pn**	**01 22 10.0**	**+0.6**
KAHZ	**Kahuranaki**	**0.99**	**129**	PN	**Pn**	**01 22 10.8**	**+1.3**
WPHZ	**Waipukurau**	**0.99**	**154**	PN	**Pn**	**01 22 10.7**	**+1.2**
UTU	**Utuhina**	**1.02**	**14**	P*	**Pn**	**01 22 10.0**	**0.0**
UTU	**Utuhina**	**1.02**	**14**	P	**Pn**	**01 22 10.0**	**0.0**
HIZ	**Hauiti**	**1.04**	**309**	⥥PN	**Pn**	**01 22 10.0**	**-0.2**
HIZ	**Hauiti**	**1.04**	**309**	P	**Pn**	**01 22 09.3**	**-0.8**
CKHZ	**Cape Kidnapper**	**1.04**	**118**	PN	**Pn**	**01 22 11.5**	**+1.3**
TARZ	**Mount Tarawera**	**1.06**	**28**	P*	**Pn**	**01 22 10.3**	**0.0**
MKRZ	**Makatiti**	**1.13**	**24**	P*	**Pn**	**01 22 11.4**	**+0.2**
OMRZ	**Omania**	**1.13**	**20**	P*	**Pn**	**01 22 11.1**	**-0.1**
PXZ	**Pawanui**	**1.14**	**139**	PN	**Pn**	**01 22 12.0**	**+0.7**
DVHZ	**Dannevirke**	**1.15**	**169**	PN	**Pn**	**01 22 12.2**	**+0.8**
RAEZ	**Rainy Point**	**1.17**	**264**	PN	**Pn**	**01 22 12.6**	**+1.1**
RAEZ	**Rainy Point**	**1.17**	**264**	P	**Pn**	**01 22 12.6**	**+1.0**
KARZ	**Kaharoa**	**1.19**	**14**	P*	**Pn**	**01 22 11.8**	**-0.1**
KARZ	**Kaharoa**	**1.19**	**14**	P	**Pn**	**01 22 11.8**	**-0.1**
MHEZ	**Mangahewa**	**1.22**	**274**	PN	**Pn**	**01 22 13.2**	**+0.9**
POWZ	**Post Office Ro**	**1.22**	**184**	PN	**Pn**	**01 22 13.0**	**+0.7**
LIRZ	**Lichensteins R**	**1.23**	**19**	P*	**Pn**	**01 22 12.4**	**0.0**
LIRZ	**Lichensteins R**	**1.23**	**19**	P	**Pn**	**01 22 12.4**	**0.0**
PRHZ	**Porangahau**	**1.23**	**152**	PN	**Pn**	**01 22 13.6**	**+1.1**
EDRZ	**Edgecumbe**	**1.26**	**32**	P*	**Pn**	**01 22 12.5**	**-0.3**
EDRZ	**Edgecumbe**	**1.26**	**32**	P	**Pn**	**01 22 12.5**	**-0.2**
DREZ	**Durham Road**	**1.31**	**269**	PN	**Pn**	**01 22 14.2**	**+0.9**
URZ	**Urewera**	**1.32**	**47**	P*	**Pn**	**01 22 13.0**	**-0.5**
URZ	**Urewera**	**1.32**	**47**	P	**Pn**	**01 22 13.1**	**-0.4**
	4μm,0.3s,baz=244,slow=7.8,SNR=3249						
URZ				S	**Sn**	**01 22 30.2**	**-1.1**
	6μm,0.3s,baz=90,slow=19,SNR=65						
URZ	**Urewera**	**1.32**	**47**	P	**Pn**	**01 22 12.1**	**-1.4**
MARZ	**Manawahe**	**1.34**	**28**	P*	**Pn**	**01 22 13.5**	**-0.2**
MARZ	**Manawahe**	**1.34**	**28**	P	**Pn**	**01 22 13.5**	**-0.2**
DFE	**Dawson Falls**	**1.39**	**263**	PN	**Pn**	**01 22 15.8**	**+1.4**
DFE	**Dawson Falls**	**1.39**	**263**	P	**Pn**	**01 22 15.8**	**+1.5**
NEZ	**North Egmont**	**1.39**	**265**	PN	**Pn**	**01 22 15.6**	**+1.3**
NEZ	**North Egmont**	**1.39**	**265**	P	**Pn**	**01 22 15.6**	**+1.2**
KNZ	**Kokohu**	**1.40**	**84**	PN	**Pn**	**01 22 14.5**	**0.0**
OPRZ	**Ohinepanea**	**1.43**	**22**	P*	**Pn**	**01 22 14.0**	**-0.8**
TGRZ	**Tauranga**	**1.47**	**12**	P*	**Pn**	**01 22 15.4**	**0.0**
TOZ	**Tahuroa Road**	**1.47**	**348**	P*	**Pn**	**01 22 14.6**	**-0.8**
TOZ	**Tahuroa Road**	**1.47**	**348**	P	**Pn**	**01 22 14.6**	**-0.8**
PKE	**Pukeiti**	**1.48**	**269**	PN	**Pn**	**01 22 16.1**	**+0.7**
PKE	**Pukeiti**	**1.48**	**269**	P	**Pn**	**01 22 16.1**	**+0.7**
MRZ	**Mangatainoka R**	**1.50**	**189**	PN	**Pn**	**01 22 16.0**	**+0.3**
NRZ	**Ngariki Road**	**1.52**	**263**	PN	**Pn**	**01 22 16.9**	**+0.9**
NRZ	**Ngariki Road**	**1.52**	**263**	P	**Pn**	**01 22 16.9**	**+0.9**
BFZ	**Birch Farm**	**1.53**	**170**	PN	**Pn**	**01 22 16.7**	**+0.6**
BFZ	**Birch Farm**	**1.53**	**170**	P	**Pn**	**01 22 16.7**	**+0.6**
MWZ	**Matawai**	**1.53**	**57**	P*	**Pn**	**01 22 15.8**	**-0.3**
MWZ	**Matawai**	**1.53**	**57**	P	**Pn**	**01 22 15.4**	**-0.7**
MHGZ	**Mahia Peninsul**	**1.57**	**90**	PN	**Pn**	**01 22 17.1**	**+0.5**
NWEZ	**Newall Road**	**1.57**	**266**	PN	**Pn**	**01 22 17.4**	**+0.9**
NWEZ	**Newall Road**	**1.57**	**266**	P	**Pn**	**01 22 17.4**	**+0.8**
PRGZ	**Paritu Road**	**1.57**	**81**	PN	**Pn**	**01 22 16.8**	**+0.2**
TIWZ	**Tintock**	**1.60**	**180**	PN	**Pn**	**01 22 17.5**	**+0.5**
OGWZ	**Otaki Gorge**	**1.73**	**198**	PN	**Pn**	**01 22 18.9**	**+0.3**
HOWZ	**Holdsworth Sta**	**1.75**	**189**	PN	**Pn**	**01 22 18.8**	**0.0**
KIW	**Kapiti Island**	**1.84**	**204**	PN	**Pn**	**01 22 20.0**	**-0.1**
MYRZ	**Mayor Island**	**1.91**	**9**	PN	**Pn**	**01 22 21.2**	**+0.2**
TMWZ	**Te Maipa**	**1.93**	**180**	PN	**Pn**	**01 22 21.2**	**0.0**
WIZ	**White Island**	**1.94**	**32**	PN	**Pn**	**01 22 20.3**	**-1.0**
WIZ	**White Island**	**1.94**	**32**	P	**Pn**	**01 22 20.3**	**-1.0**
CNGZ	**Carnagh Statio**	**1.94**	**70**	PN	**Pn**	**01 22 21.5**	**+0.1**
MTW	**Mount Morrison**	**2.00**	**188**	PN	**Pn**	**01 22 21.8**	**-0.3**
MTW	**Mount Morrison**	**2.00**	**188**	P	**Pn**	**01 22 21.8**	**-0.4**
CAW	**Cannon Point**	**2.03**	**198**	PN	**Pn**	**01 22 22.2**	**-0.3**
CAW	**Cannon Point**	**2.03**	**198**	P	**Pn**	**01 22 22.2**	**-0.3**
MKAZ	**Moumakai**	**2.14**	**344**	⥣*e*PN	**Pn**	**01 22 23.6**	**-0.3**
MKAZ	**Moumakai**	**2.14**	**344**	*e*P	**Pn**	**01 22 22.6**	**-1.3**
PUZ	**Puketiti**	**2.16**	**60**	PN	**Pn**	**01 22 23.7**	**-0.5**
DUWZ	**D'Urville Isla**	**2.22**	**222**	PN	**Pn**	**01 22 24.4**	**-0.6**
TRWZ	**Traveller**	**2.23**	**184**	PN	**Pn**	**01 22 24.6**	**-0.5**
PAWZ	**Paruwai Farm**	**2.23**	**189**	PN	**Pn**	**01 22 24.5**	**-0.6**
PAWZ	**Paruwai Farm**	**2.23**	**189**	P	**Pn**	**01 22 24.5**	**-0.7**
WEL	**Wellington**	**2.27**	**202**	PN	**Pn**	**01 22 25.1**	**-0.7**
WEL	**Wellington**	**2.27**	**202**	P	**Pn**	**01 22 25.1**	**-0.6**
MSWZ	**Moikau Station**	**2.29**	**192**	PN	**Pn**	**01 22 25.2**	**-0.8**
MSWZ	**Moikau Station**	**2.29**	**192**	P	**Pn**	**01 22 25.2**	**-0.7**
SNZO	**South Karori**	**2.32**	**203**	PN	**Pn**	**01 22 25.2**	**-1.0**
SNZO	**South Karori**	**2.32**	**203**	P	**Pn**	**01 22 25.5**	**-0.8**
BHW	**Baring Head**	**2.36**	**199**	PN	**Pn**	**01 22 26.0**	**-0.9**
BHW	**Baring Head**	**2.36**	**199**	P	**Pn**	**01 22 26.0**	**-0.9**
TCW	**Tory Channel**	**2.38**	**211**	PN	**Pn**	**01 22 26.3**	**-0.8**
TCW	**Tory Channel**	**2.38**	**211**	P	**Pn**	**01 22 26.3**	**-0.8**
KUZ	**Kuaotunu**	**2.43**	**357**	PN	**Pn**	**01 22 27.0**	**-0.8**
KUZ	**Kuaotunu**	**2.43**	**357**	P	**Pn**	**01 22 27.0**	**-0.8**
PLWZ	**Palliser**	**2.44**	**191**	PN	**Pn**	**01 22 26.9**	**-1.0**
WTAZ	**Waiatarua**	**2.46**	**335**	P	**Pn**	**01 22 28.3**	**0.0**
MXZ	**Matakaoa Point**	**2.49**	**51**	PN	**Pn**	**01 22 27.9**	**-0.7**
MXZ	**Matakaoa Point**	**2.49**	**51**	P	**Pn**	**01 22 28.0**	**-0.6**
MTAZ	**Motutapu**	**2.50**	**342**	PN	**Pn**	**01 22 28.6**	**-0.2**
MTAZ	**Motutapu**	**2.50**	**342**	P	**Pn**	**01 22 28.6**	**-0.2**
TUWZ	**Tuamarina**	**2.70**	**213**	PN	**Pn**	**01 22 30.4**	**-1.0**
NNZ	**Nelson**	**2.80**	**222**	PN	**Pn**	**01 22 31.4**	**-1.3**
NNZ	**Nelson**	**2.80**	**222**	P	**Pn**	**01 22 31.4**	**-1.3**
CMWZ	**Cape Campbell**	**2.87**	**206**	PN	**Pn**	**01 22 33.0**	**-0.7**
CMWZ	**Cape Campbell**	**2.87**	**206**	P	**Pn**	**01 22 33.0**	**-0.6**
BSWZ	**Blackbirch Sta**	**2.96**	**211**	PN	**Pn**	**01 22 33.6**	**-1.3**
BSWZ	**Blackbirch Sta**	**2.96**	**211**	P	**Pn**	**01 22 33.6**	**-1.3**
QRZ	**Quartz Range**	**3.06**	**236**	PN	**Pn**	**01 22 34.9**	**-1.3**
THZ	**Tophouse**	**3.44**	**220**	PN	**Pn**	**01 22 39.9**	**-1.4**
THZ	**Tophouse**	**3.44**	**220**	P	**Pn**	**01 22 39.7**	**-1.6**
WCZ	**Waipu Caves**	**3.45**	**339**	PN	**Pn**	**01 22 41.2**	**-0.3**
WCZ	**Waipu Caves**	**3.45**	**339**	P	**Pn**	**01 22 41.2**	**-0.3**
KHZ	**Kahutara**	**3.70**	**208**	PN	**Pn**	**01 22 42.7**	**-2.1**
KHZ	**Kahutara**	**3.70**	**208**	P	**Pn**	**01 22 42.7**	**-2.1**
DSZ	**Denniston Nort**	**4.04**	**229**	PN	**Pn**	**01 22 47.1**	**-2.2**
DSZ	**Denniston Nort**	**4.04**	**229**	P	**Pn**	**01 22 47.1**	**-2.3**
OUZ	**Omahuta**	**4.35**	**334**	PN	**Pn**	**01 22 53.7**	**+0.1**
OUZ	**Omahuta**	**4.35**	**334**	P	**Pn**	**01 22 53.2**	**-0.5**
LTZ	**Lake Taylor**	**4.53**	**216**	PN	**Pn**	**01 22 53.2**	**-2.8**
LTZ	**Lake Taylor**	**4.53**	**216**	P	**Pn**	**01 22 53.2**	**-2.8**
CRLZ	**Canterbury Las**	**5.04**	**208**	PN	**Pn**	**01 22 59.7**	**-3.2**
CRLZ	**Canterbury Las**	**5.04**	**208**	P	**Pn**	**01 22 59.7**	**-3.2**
MQZ	**McQueen's Vall**	**5.14**	**207**	PN	**Pn**	**01 23 00.3**	**-4.0**
MQZ	**McQueen's Vall**	**5.14**	**207**	P	**Pn**	**01 23 00.3**	**-4.0**
WVZ	**Waitaha Valley**	**5.50**	**223**	PN	**Pn**	**01 23 07.4**	**-1.9**
WVZ	**Waitaha Valley**	**5.50**	**223**	P	**Pn**	**01 23 07.4**	**-1.9**
RPZ	**Rata Peaks**	**5.81**	**217**	PN	**Pn**	**01 23 11.3**	**-2.1**
RPZ	**Rata Peaks**	**5.81**	**217**	P	**Pn**	**01 23 11.3**	**-2.1**
	16nm,0.3s,baz=54,slow=1.0,SNR=45						
RPZ				S	**Sn**	**01 24 12.9**	**-5.7**
	356nm,0.3s,baz=328,slow=21,SNR=60						
RPZ	**Rata Peaks**	**5.81**	**217**	P	**Pn**	**01 23 11.3**	**-2.1**
LBZ	**Lake Benmore**	**6.73**	**217**	PN	**Pn**	**01 23 23.1**	**-2.8**
LBZ	**Lake Benmore**	**6.73**	**217**	P	**Pn**	**01 23 23.1**	**-2.8**
ODZ	**Otahua Downs**	**7.04**	**212**	P	**Pn**	**01 23 26.2**	**-4.0**
CTZ	**Chatham Island**	**7.24**	**131**	PN	**Pn**	**01 23 32.2**	**-0.7**
CTZ	**Chatham Island**	**7.24**	**131**	P	**Pn**	**01 23 32.9**	**0.0**
DZM	**Mont Dzumac**	**18.86**	**332**	*e*P	**Pn**	**01 26 04.9**	**+0.6**
	158nm,1.4s						
DZM				*e*LR	LR	01 30 31.0	
	686nm,29.1s						
DZM	**Mont Dzumac**	**18.86**	**332**	*e*P	**Pn**	**01 26 04.1**	**-0.2**
DZM	**Mont Dzumac**	**18.86**	**332**	*e*P	**Pn**	**01 26 04.2**	**-0.1**
	60nm,1.3s						
MILA	**Mila**	**21.11**	**267**	*e*P	**P**	**01 26 29.4**	**+2.4**
	96nm,1.2s,mb5.0						
CNB	**Canberra Magne**	**21.43**	**272**	*e*P	**P**	**01 26 32.8**	**+2.4**
MSVF	**Nonsavu**	**21.45**	**6**	*e*P	**P**	**01 26 29.9**	**-0.8**
	56nm,0.9s,mb4.9						
MSVF	**Nonsavu**	**21.45**	**6**	P	**P**	**01 26 29.0**	**-1.7**
	396nm,0.9s,mb5.7,SNR=8.2						
ARMA	**Armidale**	**21.70**	**286**	*e*P	**P**	**01 26 37.1**	**+3.8**
ARMA	**Armidale**	**21.70**	**286**	*e*P	**P**	**01 26 36.9**	**+3.6**
	66nm,1.0s,mb4.9						
CAN	**Canberra**	**21.71**	**272**	P	**P**	**01 26 36.0**	**+2.5**
	22nm,0.9s,mb4.5						
MOO	**Moorlands**	**21.92**	**252**	*e*P	**P**	**01 26 36.4**	**+0.9**
TOO	**Toolangi**	**23.83**	**264**	*e*P	**P**	**01 26 56.0**	**+1.6**
AFI	**Afiamalu**	**27.42**	**27**	LR	LR	01 37 22.2	
	comp=Z,171nm,20.5s,baz=82,slow=34						
RAR	**Rarotonga**	**27.49**	**56**	LR	LR	01 36 29.3	
	comp=Z,408nm,21.3s,baz=244,slow=32						
STKA	**Stephens Creek**	**28.72**	**274**	P	**P**	**01 27 40.0**	**+1.6**
	51nm,0.8s,mb5.2,baz=106,slow=9.6,SNR=50						
STKA				LR	LR	01 37 28.1	
	comp=Z,226nm,20.4s,baz=300,slow=33						
STKA	**Stephens Creek**	**28.72**	**274**	*e*P	**P**	**01 27 40.0**	**+1.6**
	36nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**28.72**	**274**	*e*P	**P**	**01 27 39.9**	**+1.6**
	9.4nm,0.9s,mb4.4						
CTA	**Charters Tower**	**31.80**	**298**	P	**P**	**01 28 06.0**	**+0.3**
	6.3nm,0.8s,mb4.4,baz=136,slow=8.8,SNR=5.5						
CTA	**Charters Tower**	**31.80**	**298**	*e*P	**P**	**01 28 07.1**	**+1.4**
	4.0nm,0.6s,mb4.3						
BBOO	**Buckleboo**	**32.65**	**269**	*e*P	**P**	**01 28 13.4**	**+0.4**
	122nm,0.8s,mb5.8						
HNR	**Honiara**	**32.87**	**330**	LR	LR	01 38 52.1	
	comp=Z,184nm,18.4s,baz=137,slow=31						
PPT	**Papeete**	**36.91**	**64**	*e*LR	LR	01 38 51.4	
	857nm,34.0s,baz=220						
PPT	**Papeete**	**36.91**	**64**	P	**P**	**01 28 49.8**	**0.0**
	29nm,0.7s,mb5.3,baz=234,slow=23,SNR=4.1						
COEN	**Coen**	**38.21**	**302**	P	**P**	**01 29 01.6**	**+0.8**
	205nm,0.9s,mb6.0						
ASAR	**Alice Springs**	**38.66**	**281**	P	**P**	**01 29 04.7**	**+0.2**
	103nm,0.9s,mb5.7,baz=122,slow=7.6,SNR=310						
ASAR				S	**S**	**01 34 54.9**	**+0.5**
	1.7nm,1.0s,baz=124,slow=15,SNR=4.9						
SBA	**Scott Base**	**38.98**	**183**	*e*P	**P**	**01 29 10.2**	**+3.7**
	27nm,1.2s,mb5.0						
FORT	**Forrest**	**39.69**	**267**	*e*P	**P**	**01 29 12.8**	**-0.2**
	118nm,0.8s,mb5.8						
FORT	**Forrest**	**39.69**	**267**	*e*P	**P**	**01 29 12.6**	**-0.5**
	156nm,0.8s,mb5.9						
WRA	**Warramunga Arr**	**40.48**	**286**	P	**P**	**01 29 18.8**	**-0.8**
	69nm,0.7s,mb5.6,baz=125,slow=8.0,SNR=232						
RKT	**Rikitea**	**44.46**	**84**	*e*LQ		01 40 40.9	
	340nm,38.0s						
RKT				*e*LR	LR	01 42 32.8	
	441nm,31.8s						
CASY	**Casey**	**45.05**	**211**	⥥*i*P	**P**	**01 29 56.4**	**+0.4**
CASY	**Casey**	**45.05**	**211**	*e*P	**P**	**01 29 56.4**	**+0.4**
	113nm,0.9s,mb5.6						
KAKA	**Kakadu**	**46.51**	**292**	*e*P	**P**	**01 30 08.1**	**0.0**
	11nm,0.6s,mb4.8						
KAKA	**Kakadu**	**46.51**	**292**	*e*P	**P**	**01 30 08.5**	**+0.4**
	34nm,0.6s,mb5.2						
KAKA	**Kakadu**	**46.51**	**292**	P	**P**	**01 30 08.4**	**+0.3**
	206nm26nm,0.7s,mb5.1						
KNA	**Kununurra**	**47.23**	**286**	P	**P**	**01 30 14.3**	**+0.6**
	2μm264nm,0.9s,mb6.0						
KNA	**Kununurra**	**47.23**	**286**	P	**P**	**01 30 14.2**	**+0.5**
	2μm265nm,0.9s,mb6.0						
KLBR	**Kellerberrin**	**47.30**	**260**	⥥*i*P	**P**	**01 30 13.2**	**-0.9**
	42nm,0.4s,mb5.5						
FITZ	**Fitzroy Crossi**	**48.16**	**281**	*e*P	**P**	**01 30 21.0**	**+0.1**
	144nm,0.9s,mb5.8						
FITZ	**Fitzroy Crossi**	**48.16**	**281**	*e*P	**P**	**01 30 21.3**	**+0.4**
	68nm,0.7s,mb5.6						
FITZ	**Fitzroy Crossi**	**48.16**	**281**	P	**P**	**01 30 20.7**	**-0.2**
	2μm254nm,1.0s,mb6.0						
FITZ	**Fitzroy Crossi**	**48.16**	**281**	P	**P**	**01 30 21.3**	**+0.4**
	2μm254nm,1.0s,mb6.0						
TAOE	**Nuku Hiva Isla**	**49.53**	**64**	*e*S	**S**	**01 37 46.1**	**+14**
	161nm,32.8s						
TAOE				*e*LR	LR	01 44 45.4	
	371nm,31.0s						
MORW	**Morawa**	**49.77**	**263**	*e*P	**P**	**01 30 32.3**	**-0.8**
QSPA	**South Pole Qui**	**50.95**	**180**	P	**P**	**01 30 44.8**	**+3.6**
	23nm,0.9s,mb5.2,baz=27,slow=2.2,SNR=30						
QSPA	**South Pole Qui**	**50.95**	**180**	*e*P	**P**	**01 30 44.7**	**+3.4**
	67nm,0.5s,mb5.9						
MBWA	**Marble Bar**	**50.96**	**274**	*e*P	**P**	**01 30 41.5**	**-0.7**
	14nm,0.7s,mb5.1						
MMRI	**Maumere**	**56.67**	**288**	P	**P**	**01 31 22.3**	**-1.5**
	2μm92nm,0.9s,mb5.8						
MMRI	**Maumere**	**56.67**	**288**	P	**P**	**01 31 23.4**	**-0.4**
	2μm92nm,0.9s,mb5.8						
NLAI	**Namlea**	**56.86**	**296**	P	**P**	**01 31 24.4**	**-0.8**
	28nm,0.7s,mb5.4						
LBMI	**Labuha**	**58.46**	**299**	P	**P**	**01 31 37.0**	**+0.7**
	40nm,0.8s,mb5.5						
LBMI	**Labuha**	**58.46**	**299**	P	**P**	**01 31 37.4**	**+1.1**
	40nm,0.8s,mb5.5						
KDI	**Kendari**	**59.54**	**292**	P	**P**	**01 31 42.5**	**-1.4**
	512nm23nm,1.2s,mb5.1						
KDI	**Kendari**	**59.54**	**292**	P	**P**	**01 31 42.8**	**-1.1**
	511nm23nm,1.2s,mb5.1						
BKSI	**Bulukumba**	**60.43**	**289**	P	**P**	**01 31 49.7**	**-0.3**
	551nm27nm,1.1s,mb5.2						
BKSI	**Bulukumba**	**60.43**	**289**	P	**P**	**01 31 50.1**	**+0.1**
	554nm27nm,1.1s,mb5.2						
LUWI	**Luwuk**	**61.46**	**294**	P	**P**	**01 31 57.8**	**+0.9**
	862nm71nm,1.3s,mb5.5						
LUWI	**Luwuk**	**61.46**	**294**	P	**P**	**01 31 58.0**	**+1.1**
	860nm71nm,1.3s,mb5.5						
SPSI	**Sidrap Palu**	**61.61**	**290**	P	Px	01 32 10.5	
TTSI	**Tana Toraja**	**62.19**	**290**	P	**P**	**01 32 01.9**	**+0.1**
	37nm,0.9s,mb5.4						
TTSI	**Tana Toraja**	**62.19**	**290**	P	**P**	**01 32 02.2**	**+0.4**
	37nm,0.9s,mb5.4						
MAW	**Mawson**	**62.31**	**203**	P	**P**	**01 32 03.3**	**+1.5**
	24nm,0.8s,mb5.3,baz=125,slow=7.9,SNR=50						
MAW	**Mawson**	**62.31**	**203**	⥥*i*P	**P**	**01 32 03.2**	**+1.4**
	16nm,0.6s,mb5.2						
MAW	**Mawson**	**62.31**	**203**	*e*P	**P**	**01 32 03.2**	**+1.4**
	15nm,1.2s,mb4.9						
MRSI	**Marisa**	**63.11**	**295**	P	**P**	**01 32 06.8**	**-1.1**
	14nm,1.3s,mb4.7						
MRSI	**Marisa**	**63.11**	**295**	P	**P**	**01 32 07.1**	**-0.8**
	809nm14nm,1.3s,mb4.7						
KBKI	**Kotabaru**	**64.70**	**288**	P	**P**	**01 32 18.3**	**-0.1**
	48nm,1.0s,mb5.3						
KBKI	**Kotabaru**	**64.70**	**288**	P	**P**	**01 32 18.3**	**-0.1**
	1μm48nm,1.0s,mb5.3						
PWJI	**Pagerwojo**	**64.93**	**280**	P	**P**	**01 32 19.7**	**-0.2**
	80nm,0.9s,mb5.5						
PWJI	**Pagerwojo**	**64.93**	**280**	P	**P**	**01 32 20.3**	**+0.4**
	81nm,0.9s,mb5.6						
PMSA	**Palmer Station**	**66.33**	**156**	P	**P**	**01 32 29.8**	**+1.7**
	2.0nm,0.7s,mb4.0,baz=212,slow=4.8,SNR=4.9						
SYO	**Syowa Base**	**67.39**	**196**	⥣*i*P	**P**	**01 32 34.0**	**-0.8**
SYO	**Syowa Base**	**67.39**	**196**	⥥*e*pP	pP	01 32 51.6	-6.5
CISI	**Cisompet, Garu**	**68.28**	**278**	P	**P**	**01 32 40.1**	**-1.1**
	163nm,0.8s,mb5.9						
CISI	**Cisompet, Garu**	**68.28**	**278**	P	**P**	**01 32 41.1**	**-0.1**
	162nm,0.8s,mb5.9						
MYLDM	**Lahad Datu**	**68.85**	**296**	P	**P**	**01 32 45.8**	**+1.1**
	22nm,1.2s,mb4.9						
MYLDM	**Lahad Datu**	**68.85**	**296**	P	**P**	**01 32 46.5**	**+1.8**
	22nm,1.2s,mb4.9						
LEM	**Lembang**	**68.89**	**279**	P	**P**	**01 32 45.6**	**+0.6**
	80nm,1.0s,mb5.5						
LEM	**Lembang**	**68.89**	**279**	P	**P**	**01 32 46.1**	**+1.1**
	81nm,1.0s,mb5.5						
MAIT	**Maitri**	**69.76**	**186**	*e*P	**P**	**01 32 50.9**	**+1.4**
MAIT				*e*	pP	01 33 14.6	+1.6
VNA3	**Neumayer Olymp**	**69.82**	**178**	*e*P	**P**	**01 32 48.8**	**-1.0**
VNA2	**Neumayer--Watz**	**70.18**	**179**	*e*P	**P**	**01 32 51.3**	**-0.8**
STKI	**Sintang**	**70.42**	**287**	P	**P**	**01 32 54.8**	**+0.4**
STKI	**Sintang**	**70.42**	**287**	P	**P**	**01 32 55.0**	**+0.6**
	35nm,1.0s,mb5.1						
VNA1	**Neumayer--Stat**	**70.44**	**179**	*e*P	**P**	**01 32 53.3**	**-0.3**
SBUM	**Sibu**	**71.47**	**289**	P	**P**	**01 33 00.8**	**+0.1**
	20nm,1.3s,mb4.8						
KSM	**Kuching**	**72.23**	**287**	*e*P	**P**	**01 33 04.3**	**-1.0**
	24nm,1.0s,mb5.0						
KSM	**Kuching**	**72.23**	**287**	P	**P**	**01 33 04.8**	**-0.5**
	29nm,0.9s,mb5.1						
KLSI		**72.46**	**278**	P	**P**	**01 33 15.5**	**+8.8**
PPBI	**Pangkal Pinang**	**73.00**	**281**	P	**P**	**01 33 10.0**	**+0.2**
	36nm,1.0s,mb5.2						
MDSI	**Maura Dua**	**73.02**	**278**	P	**P**	**01 33 09.2**	**-0.8**
	39nm,1.0s,mb5.2						
KSI	**Kapahiang**	**74.76**	**278**	P	**P**	**01 33 22.9**	**+2.7**
	70nm,0.9s,mb5.4						
MNSI	**Mandailing Nat**	**79.90**	**279**	P	**P**	**01 33 47.8**	**-1.1**
	27nm,0.9s,mb5.1						
PLCA	**Paso Flores**	**80.05**	**135**	P	**P**	**01 33 46.9**	**-2.3**
	0.8nm,0.7s,baz=256,slow=6.6,SNR=2.6						
PLCA	**Paso Flores**	**80.05**	**135**	P	**P**	**01 33 46.9**	**-2.3**

PSI	Prapat	81.69	280	P	P	01 33 56.7	-1.7
	19nm,0.8s,mb5.0,baz=158,slow=5.1,SNR=17						
PSI	Prapat	81.69	280	P	P	01 33 56.7	-1.7
MJAR	Matsushiro Arr	82.96	330	P	P	01 34 03.6	-0.8
	3.0nm,0.6s,mb4.3,baz=166,slow=6.0,SNR=8.2						
TPTI		83.31	280	P	P	01 34 06.2	-0.6
KSRS	Korea Array	88.09	324	P	P	01 34 32.3	+2.6
	2.1nm,0.8s,mb4.2,baz=143,slow=5.5,SNR=4.5						
KSRS				LR	LR	02 07 30.3	
	comp=Z,23nm,21.4s,baz=150,slow=31						
NJ2	Nanjing	88.46	315	eP	P	01 34 33.8	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
CMAR	Chiang Mai Arr	91.79	292	P	P	01 34 47.5	0.0
	comp=Z,2.9nm,0.8s,mb4.6,baz=154,slow=3.3,SNR=20						
CMAR				PP	PP	01 38 26.0	-1.9
	comp=Z,0.6nm,0.6s,baz=148,slow=6.6,SNR=5.5						
GYA	Guiyang	91.81	303	eP	P	01 34 50.7	+3.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.3						
GYA				pmax	pmax		
	comp=Z,160nm,5.9s						
GYA				LR	LR		
	comp=N,480nm,18.9s						
GYA				LR	LR		
	comp=E,420nm,19.7s						
GYA				LR	LR		
	comp=Z,540nm,20.0s						
PETK	Petropavlovsk-	93.25	349	P	P	01 34 52.7	-0.7
	comp=Z,0.8nm,0.3s,mb4.5,baz=126,slow=7.5,SNR=4.4						
PETK				LR	LR	02 08 05.7	
	comp=Z,45nm,20.5s,baz=245,slow=30						
KMI	Kunming	93.52	300	P	P	01 34 58.9	+3.6
KMI				pP	pP	01 35 17.2	-2.7
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.1						
KMI				pmax	pmax		
	comp=Z,68nm,3.5s						
KMI				LR	LR		
	comp=N,100nm,17.0s						
KMI				LR	LR		
	comp=E,73nm,15.7s						
KMI				LR	LR		
	comp=Z,98nm,18.2s						
CN2	Changchun	94.33	326	eP	P	01 35 04.3	+5.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.3						
CN2				LR	LR		
	comp=Z,2μm,19.0s						
BJI	Beijing	95.86	318	P	P	01 35 10.3	+4.6
BJI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb5.3						
BJI				LR	LR		
	comp=Z,52nm,30.8s						
CD2	Chengdu	96.69	305	eP	P	01 35 13.2	+3.5
CD2				pP	pP	01 35 30.8	-3.5
CD2				SKS		01 45 43.5	
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.3						
CD2				pmax	pmax		
	comp=Z,40nm,5.6s						
CD2				LR	LR		
	comp=N,120nm,11.9s						
CD2				LR	LR		
	comp=Z,120nm,13.1s						
NVAR	Mina Array Bea	98.00	46	P	P	01 35 13.3	-2.1
	comp=Z,0.5nm,0.4s,mb4.4,baz=233,slow=5.5,SNR=2.9						
HHC	Hu-ho-hao-te	98.88	316	eP	P	01 35 23.4	+4.1
HHC				SKS		01 45 53.8	
HHC				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.3						
HHC				pmax	pmax		
	comp=Z,89nm,6.5s						
HHC				LR	LR		
	comp=N,120nm,17.0s						
HHC				LR	LR		
	comp=E,120nm,18.6s						
HHC				LR	LR		
	comp=Z,110nm,17.0s						
LZH	Lanzhou	100.07	309	eP	Pdif	01 35 29.5	+4.6
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
PDAR	Pinedale Array	105.86	48	PP	PP	01 40 14.4	-0.4
	comp=Z,0.6nm,0.6s,baz=241,slow=4.9,SNR=4.9						
MKAR	Makanchi Array	119.38	308	PKP	PKPdf	01 40 25.7	-2.2
	comp=Z,0.3nm,0.6s,baz=217,slow=1.3,SNR=3.4						
ERPA	Erie	124.16	61	ePKPdf	PKPdf	01 40 41.7	+4.4
KEV	Kevo	145.23	342	epkp	PKPdf	01 41 13.0	-2.5
ARCES	ARCESS Array B	145.75	342	PKPbc	PKPbc	01 41 15.6	-1.4
	comp=Z,18nm,0.8s,baz=38,slow=2.2,SNR=31						
ARE0	ARCESS Array S	145.75	342	ePKPdf	PKPdf	01 41 15.9	-0.5
ASF	Jabal al Asfar	146.18	271	PKPbc	PKPbc	01 41 19.0	-0.4
	comp=Z,3.0nm,0.9s,baz=185,slow=3.3,SNR=4.6						
MALT	Malatya	147.03	282	ePKPdf	PKPdf	01 41 20.5	+1.0
MALT				ePKPbc	PKPab	01 41 24.1	+0.7
LIC	Lamto	147.19	178	ePKIKP	PKPbc	01 41 22.9	+0.1
	comp=Z,64nm,0.8s						
KIC	Kosan Boka	147.33	179	ePKIKP	PKPbc	01 41 23.3	+0.1
	comp=Z,61nm,0.8s						
TIC	Toumodi	147.60	178	ePKIKP	PKPbc	01 41 23.7	-0.3
	comp=Z,34nm,1.0s						
DBIC	Dimbokro	147.63	179	PKPbc	PKPbc	01 41 24.2	+0.2
	comp=Z,17nm,0.8s,baz=150,slow=3.7,SNR=20						
JOF	Joensuu	148.13	330	epkp	PKPdf	01 41 21.3	+0.8
KAF	Kangasniemi	150.51	331	epkp	PKPbc	01 41 27.4	-2.4
BR131	Keskin Array S	150.98	283	ePKPdf	PKPbc	01 41 30.1	-1.5
BR131				PKPbc	PKPab	01 41 38.7	-0.8
BRTR	Keskin Array B	150.98	283	PKPbc	PKPbc	01 41 30.7	-0.9
	comp=Z,2.9nm,0.9s,baz=146,slow=4.9,SNR=12						
FINES	FINESS Array B	151.00	330	PKPbc	PKPbc	01 41 29.6	-1.3
	comp=Z,10.0nm,0.9s,baz=43,slow=2.8,SNR=22						
TORD	Torodi Ar. Bea	153.57	193	PKP	PKPbc	01 41 34.8	-3.4
	comp=Z,3.9nm,0.5s,baz=169,slow=1.4,SNR=7.9						
TORD				PKPab	PKPab	01 41 49.3	-1.5
	comp=Z,14nm,0.6s,baz=165,slow=3.9,SNR=13						
NOA	NORSAR Array B	156.13	341	PKPab	PKPab	01 41 59.1	-1.4
	comp=Z,1.6nm,0.7s,baz=27,slow=3.4,SNR=7.5						
KEST	Kesra	168.76	256	PKPab	PKPab	01 42 57.0	+0.2
	comp=Z,2.7nm,0.8s,baz=237,slow=4.5,SNR=16						
MDT	Midelt	173.64	176	PKPab	PKPab	01 43 20.9	+2.7
	comp=Z,3.0nm,1.1s,baz=115,slow=6.2,SNR=4.1						
PBDV	Barranco-do-Ve	176.43	121	ePKPdf	PKPab	01 43 40.1	+9.4
MTE	Manteigas	177.09	64	ePKPdf	PKPab	01 43 32.9	-0.7
PCBR	Castelo Branco	177.31	75	ePKPdf	PKPab	01 43 34.9	+0.2
PMRV	Marv??o	177.44	83	ePKPdf	PKPab	01 43 36.0	+0.7
ESDC	Sonseca Array	179.49	347	PKPab		01 43 42.4	
	comp=Z,2.0nm,1.0s,baz=345,slow=4.1,SNR=9.0						

IDC 01 01:36:46.2±2.1, 5°.80S×151°.36E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/16, mbtmp3.8/4, Error ellipse: s-maj=107.0km s-min=29.1km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.71	228	P	P	01 41 39.5	+0.4
	1.7nm,0.7s,baz=54,slow=10,SNR=13						
ASAR	Alice Springs	24.45	222	P	P	01 42 07.3	+0.5
	1.5nm,0.4s,baz=57,slow=9.0,SNR=18						
FITZ	Fitzroy Crossi	27.92	242	P	P	01 42 37.9	-0.5
	1.6nm,0.4s,baz=58,slow=6.9,SNR=14						
ILAR	Eielson Array	83.62	22	P	P	01 49 16.4	+0.1
	0.3nm,0.7s,baz=244,slow=5.9,SNR=4.3						

IDC 01 02:03:33.3±2.0, 6°.82S×150°.44E, h0km, mb3.4/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.5/4, Error ellipse: s-maj=110.0km s-min=27.3km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.36	229	P	P	02 08 10.7	-0.8
	0.6nm,0.6s,baz=53,slow=11,SNR=9.7						
ASAR	Alice Springs	23.09	222	P	P	02 08 40.2	-0.6
	0.9nm,0.7s,baz=59,slow=9.1,SNR=5.2						
FITZ	Fitzroy Crossi	26.65	243	P	P	02 09 14.4	+0.4
	1.1nm,0.7s,baz=90,slow=8.1,SNR=3.8						
ILAR	Eielson Array	84.90	22	P	P	02 16 09.4	-0.3
	0.7nm,0.9s,baz=259,slow=5.4,SNR=6.2						
TORD	Torodi Ar. Bea	148.60	284	PKPbc	PKPbc	02 23 23.6	+0.2
	0.7nm,0.5s,baz=59,slow=2.6,SNR=15						

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*ISCJB **01** 02:13:19.3±1.5, 40°.26N±0°.09×78°.00E±0°.09, h10km, Error ellipse: s-maj=14.6km s-min=7.1km az=143.7*
*BJI **01** 02:13:20.2, 40°.28N×77°.57E, h14km, ML3.3/5*
*NNC **01** 02:13:21.0±5.8, 40°.38N×78°.50E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=46.5km s-min=22.8km az=169.0*
ISC 01 02:13:21.3±1.5, 40°.25N±0°.10×77°.87E±0°.10, h10km, n15, σ1s.02/18, 10C-1D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	1.64	244	Pg	Pg	02 13 53.8	+1.2
KSH				Sg	Sg	02 14 19.5	+5.6
KSH				smax			
	comp=N,230nm,0.5s						
KSH				smax			
	comp=E,370nm,0.6s						
ULHL	Ulahol	2.34	329	P	Pn	02 13 58.3	-1.5
	SNR=71						
KNDC	Almaty	3.04	347	⇑Pn	Pn	02 14 10.1	+0.6
	comp=E,111nm,0.6s						
KNDC				⇑Sn	Sn	02 14 51.2	+5.3
	comp=E,336nm,0.8s						
TKM2	Tokmak 2	3.17	328	⇑Pn	Pn	02 14 10.9	-0.2
	comp=E,16nm,0.5s						
TKM2				⇑Sn	Sn	02 14 53.1	+4.1
	comp=E,76nm,0.5s						
TKM2	Tokmak 2	3.17	328	P	Pn	02 14 10.2	-0.9
	SNR=39						
KBK	Karagaybulak	3.26	319	P	Pn	02 14 12.0	-0.4
	SNR=22						
AAK	Ala-Archa	3.48	314	P	Pn	02 14 17.2	+1.8
	SNR=12						
CHMS	Chumysh	3.61	321	P	Pn	02 14 16.0	-1.2
	SNR=7.7						
AML	Almayashu	3.67	302	P	Pn	02 14 16.9	-1.1
	SNR=23						
EKS2	Erkin-Say	3.91	309	P	Pn	02 14 20.6	-0.8
	SNR=15						
USP	Ospenovka	3.93	321	P	Pn	02 14 21.4	-0.2
	SNR=5.5						
KK31	Karatay Array	6.21	300	⇑Pn	Pb	02 15 03.6	-5.8
	comp=E,1.5nm,0.5s,baz=120,slow=16,SNR=9.8						
KK31				⇑Sn	Sb	02 16 24.6	+0.9
	comp=E,4.4nm,0.6s,baz=124,slow=25,SNR=4.3						
MK31	Makanchi Array	7.29	25	⇑Pn	Pn	02 15 07.9	+0.2
	comp=E,0.4nm,0.4s,baz=23,slow=16,SNR=17						
MK31				⇑Sn	Sn	02 16 31.4	+1.0
	comp=E,1.1nm,0.6s,baz=206,slow=22,SNR=4.0						
MK31				⇑Lg		02 17 00.2	
	comp=E,1.4nm,0.5s,baz=210,slow=26,SNR=4.3						
KURBB	Kurchatov Arra	10.38	2	⇓Lg		02 18 45.9	
	comp=E,1.7nm,0.7s						
KURK	Kurchatov	10.48	3	⇑Lg		02 18 50.5	
	comp=E,9.9nm,0.9s						

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*NEIC **01** 02:37:16.1, 38°.61S×175°.92E, h154km, MG4.1(WEL), After WEL.*
WEL 01 02:37:15.3±0.3, 38°.46S×176°.01E, h148km±2km, ML3.4/5, 1D, Error ellipse: s-maj=2.7km s-min=2.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTVZ	Oturere	0.76	201	PN	Pn	02 37 38.5	+0.5
NGZ	Ngauruhoe	0.79	204	PN	Pn	02 37 38.6	+0.4
NGZ	Ngauruhoe	0.79	204	P	Pn	02 37 38.6	+0.4
BKZ	Black Stump Fm	0.80	152	⇓PN	Pn	02 37 38.7	+0.3
BKZ				SN	Sn	02 37 56.2	+0.2
WPVZ	Whakapapa	0.83	206	PN	Pn	02 37 38.8	+0.3
FWVZ	Far West T-bar	0.87	204	PN	Pn	02 37 38.6	-0.2
FWVZ				PN	Pn	02 37 39.3	+0.4
FWVZ	Far West T-bar	0.87	204	P	Pn	02 37 38.6	-0.3
URZ	Urewera	0.89	77	PN	Pn	02 37 38.7	-0.3
URZ				SN	Sn	02 37 56.8	-0.2
NMHZ	Naumai	0.89	136	ePN	Pn	02 37 39.9	+0.9
WNVZ	Wahianoa	0.93	200	PN	Pn	02 37 39.6	+0.3
WNVZ				SN	Sn	02 37 58.6	+0.9
RAHZ	Arahi	0.96	119	PN	Pn	02 37 40.6	+1.0
MOVZ	Moawhango	0.97	192	PN	Pn	02 37 39.5	-0.1
MOVZ				SN	Sn	02 37 58.1	-0.2
MOVZ	Moawhango	0.97	192	P	Pn	02 37 39.5	-0.2
BHHZ	Black Hill Sta	1.03	178	PN	Pn	02 37 40.3	+0.1
BHHZ				SN	Sn	02 37 58.8	-0.5
BHHZ				SN	Sn	02 37 58.9	-0.3
MCHZ	McNeill Hill	1.12	152	ePN	Pn	02 37 41.7	+0.8
MWZ	Matawai	1.20	85	PN	Pn	02 37 41.5	-0.2
MWZ				SN	Sn	02 38 01.6	-0.2
KNZ	Kokohu	1.42	114	PN	Pn	02 37 43.8	-0.1
CKHZ	Cape Kidnapper	1.46	146	PN	Pn	02 37 44.8	+0.5
CKHZ				SN	Sn	02 38 06.2	-0.3
PNHZ	Pukenui	1.46	174	PN	Pn	02 37 44.0	-0.3
KAHZ	Kahuranaki	1.50	154	PN	Pn	02 37 45.1	+0.4
WAZ	Wanganui	1.52	211	PN	Pn	02 37 44.5	-0.5
WAZ	Wanganui	1.52	211	P	Pn	02 37 44.5	-0.5
TSZ	Takapari Road	1.60	181	PN	Pn	02 37 45.4	-0.4
WPHZ	Waipukurau	1.64	168	PN	Pn	02 37 45.9	-0.3
PXZ	Pawanui	1.71	157	PN	Pn	02 37 46.9	-0.1
CNGZ	Carnagh Statio	1.72	92	PN	Pn	02 37 47.7	+0.5
DVHZ	Dannevirke	1.84	176	PN	Pn	02 37 47.6	-0.9
PRHZ	Porangahau	1.87	165	PN	Pn	02 37 48.4	-0.4
POWZ	Post Office Ro	1.94	185	PN	Pn	02 37 48.5	-1.1
POWZ	Post Office Ro	1.94	185	P	Pn	02 37 48.5	-1.1
MXZ	Matakaoa Point	2.02	64	PN	Pn	02 37 49.9	-0.7
MRZ	Mangatainoka R	2.23	188	PN	Pn	02 37 51.3	-1.6
BFZ	Birch Farm	2.23	175	PN	Pn	02 37 51.7	-1.3
TIWZ	Tintock	2.32	182	PN	Pn	02 37 52.6	-1.5
OGWZ	Otaki Gorge	2.44	195	PN	Pn	02 37 53.8	-1.8
OGWZ	Otaki Gorge	2.44	195	P	Pn	02 37 53.8	-1.8
HOWZ	Holdsworth Sta	2.47	189	PN	Pn	02 37 53.9	-2.0
KIW	Kapiti Island	2.55	199	PN	Pn	02 37 54.5	-2.4
TMWZ	Te Maipa	2.65	182	PN	Pn	02 37 56.1	-2.1
MTW	Mount Morrison	2.73	188	PN	Pn	02 37 56.6	-2.6
CAW	Cannon Point	2.75	195	PN	Pn	02 37 56.9	-2.4
TRWZ	Traveller	2.95	185	PN	Pn	02 37 59.5	-2.4
PAWZ	Paruwai Farm	2.96	189	PN	Pn	02 37 59.2	-2.8
PAWZ	Paruwai Farm	2.96	189	P	Pn	02 37 59.2	-2.8
MSWZ	Moikau Station	3.01	191	PN	Pn	02 37 59.9	-2.8
TCW	Tory Channel	3.06	205	PN	Pn	02 38 00.4	-2.9
PLWZ	Palliser	3.16	190	PN	Pn	02 38 01.5	-3.1
TUWZ	Tuamarina	3.37	208	PN	Pn	02 38 04.3	-2.9
QRZ	Quartz Range	3.58	228	PN	Pn	02 38 05.9	-4.1
THZ	Tophouse	4.07	215	PN	Pn	02 38 12.7	-3.7
MQZ	McQueen's Vall	5.83	205	ePN	Pn	02 38 32.1	-7.4

IDC 01 02:53:09.6±2.7, 15°.91S×174°.33W, h120km±25km, mb3.7/6, mb1 4.0/7, mb1mx3.8/18, mbtmp3.7/7, MS3.6/1, Ms1 3.6/1, ms1mx2.8/17, Error ellipse: s-maj=53.3km s-min=17.7km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.16	51	P	Pn	02 53 58.4	+0.3
	189nm,0.3s,baz=186,slow=2.2,SNR=220						
AFI				S	Sn	02 54 30.6	-4.8
	367nm,0.3s,baz=41,slow=19,SNR=12						
URZ	Urewera	23.51	197	LR	LR	03 06 34.5	
	comp=Z,130nm,19.6s,baz=119,slow=34						
STKA	Stephens Creek	43.01	240	P	P	03 00 57.2	-0.2
	4.4nm,0.6s,baz=80,slow=8.9,SNR=11						
ASAR	Alice Springs	49.11	252	P	P	03 01 45.0	-0.3
	6.6nm,0.6s,baz=88,slow=8.3,SNR=72						
TXAR	Lajitas Array	81.63	56	P	P	03 05 15.0	+0.2
	0.5nm,1.1s,baz=241,slow=9.2,SNR=3.2						
ILAR	Eielson Array	83.11	11	P	P	03 05 21.5	-0.1
	0.3nm,0.5s,baz=221,slow=6.2,SNR=9.8						
PDAR	Pinedale Array	83.24	42	P	P	03 05 22.4	-0.3
	0.5nm,0.7s,baz=225,slow=2.4,SNR=4.7						
MAW	Mawson	87.03	199	P	P	03 05 41.5	+0.2
	0.9nm,0.5s,baz=129,slow=6.5,SNR=4.8						
BRTR	Keskin Array B	145.97	320	PKPbc	PKPbc	03 12 36.1	+0.5
	1.1nm,0.6s,baz=66,slow=3.0,SNR=6.8						

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*IDC **01** 03:37:21.8±1.9, 33°.24S×179°.33W, h0km, mb4.1/3, mb1 4.2/4, mb1mx4.0/17, mbtmp4.1/4, ML3.7/1, Error ellipse: s-maj=47.2km s-min=31.3km az=60.0*
ISC 01 03:37:27.8±4.2, 33°.5S±0°.1×179°.7W±0°.2, h21km±31km, n12, σ1s.17/13, mb4.0/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	4.83	200	PN	Pn	03 38 40.0	+0.8
MWZ	Matawai	5.30	204	PN	Pn	03 38 44.8	-0.8
URZ	Urewera	5.38	208	Pn	Pn	03 38 47.1	+0.3
	2.0nm,0.3s,baz=98,slow=13,SNR=23						
URZ				Sn	Sn	03 39 47.4	-0.8
	1.5nm,0.3s,baz=72,slow=20,SNR=2.8						
URZ	Urewera	5.38	208	PN	Pn	03 38 47.1	+0.3
URZ				SN	Sn	03 39 49.0	+0.9
OUZ	Omahuta	5.80	251	PN	Pn	03 38 53.1	+0.6
KNZ	Kokohu	5.88	200	PN	Pn	03 38 55.7	+2.1
BFZ	Birch Farm	7.84	203	ePN	Pn	03 39 17.9	-2.6
MRZ	Mangatainoka R	8.05	207	ePN	Pn	03 39 20.2	-3.3
ASAR	Alice Springs	41.62	271	P	P	03 45 14.2	-0.3
	1.0nm,0.8s,mb3.5,baz=113,slow=7.4,SNR=7.8						
WRA	Warramunga Arr	42.89	276	P	P	03 45 24.8	-0.1
	2.0nm,0.4s,mb4.2,baz=116,slow=7.8,SNR=22						
QSPA	South Pole Qui	56.59	180	P	P	03 47 08.6	+0.3
	2.6nm,0.9s,mb4.3,baz=31,slow=4.2,SNR=13						
FINES	FINESS Array B	147.52	337	PKPbc	PKPdf	03 57 05.4	-1.4
	1.4nm,0.5s,baz=34,slow=4.3,SNR=7.8						

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*NEIC **01** 03:51:12.9, 16°.85N×99°.96W, h8km, MD3.5(MEX), After MEX.*
MEX 01 03:51:12.9±0.6, 16°.85N×99°.96W, h8km±5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.10	78	iP	Pg	03 51 13.6	-1.7
ACX				iS	Sg	03 51 15.1	-1.8
ACX	Acapulco	0.10	78	iP	Pg	03 51 13.6	-1.7
ACX				iS	Sg	03 51 15.1	-1.8
CAIG	El Cayaco	0.35	304	iP	Pg	03 51 19.4	-0.4
CAIG				iS	Sg	03 51 24.9	+0.4
CAIG	El Cayaco	0.35	304	iP	Pg	03 51 19.4	-0.4
CAIG				iS	Sg	03 51 24.9	+0.4
PNIG	Pinotepa	1.82	104	iP	Pn	03 51 41.7	-2.8
PNIG				iS	Sn	03 52 03.6	-4.2
PNIG	Pinotepa	1.82	104	iP	Pn	03 51 41.7	-2.8
PNIG				iS	Sn	03 52 03.6	-4.2
UTMO	Huajuapan	2.28	64	eP	Pn	03 51 48.2	-2.7
UTMO				iS	Sn	03 52 15.8	-3.4
MZVM		2.43	17	eP	Pn	03 51 49.7	-3.3
MZVM				iS	Sn	03 52 17.7	-5.3
PBVM	Pinon	2.71	18	eP	Pn	03 51 54.5	-2.3
PBVM	Pinon	2.71	18	eP	Pn	03 51 54.5	-2.3
IIO	Organos	2.97	23	eP	Pn	03 51 58.6	-1.8
IIO	Organos	2.97	23	eP	Pn	03 51 58.6	-1.8

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*NIED **01** 03:55:00, 43°.30N×146°.80E, h47km, Mw3.7 Best double couple: M0 4.48000×10^14 NP1:φs53.00000°, δ51.00000°, λ122.00000°. NP2:φs188.00000°, δ49.00000°, λ57.00000°.*
*IDC **01** 03:55:15.8±1.1, 43°.53N×146°.66E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/25, mbtmp3.7/8, ML3.4/1, Error ellipse: s-maj=29.6km s-min=22.1km az=150.0*
*ISCJB **01** 03:55:22.0±1.2, 43°.40N±0°.10×146°.7E±0°.1, h63km±10km, mb3.5/7, Error ellipse: s-maj=18.7km s-min=10.7km az=145.6*
*JMA **01** 03:55:21.5±0.2, 43°.33N×146°.76E, h46km±3km, M3.9*
JMA Felt I J1.
*NEIC **01** 03:55:23.9±1.4, 43°.63N×146°.77E, h61km±13km, MG3.9(JMA), Error ellipse: s-maj=22.5km s-min=11.4km az=146.0*
ISC 01 03:55:22.2±1.2, 43°.4N±0°.1×146°.8E±0°.1, h49km±11km, n20, σ1s.01/28, mb3.5/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.75	265	P	Pn	03 55 35.8	-0.7
NEM2				eS	Sn	03 55 46.5	-0.5
JRA	Rausu	1.30	294	P	Pn	03 55 44.1	+0.2
JNK	Nakash	1.50	277	P	Pn	03 55 46.4	-0.2
JNK				eS	Sn	03 56 04.7	-0.3
JAK	Akkeshi	1.57	255	P	Pn	03 55 47.1	-0.6
JAK				eS	Sn	03 56 05.8	-1.1
JTKR	Abashiri--Toko	2.14	286	P	Pn	03 55 56.7	+1.2
JAR	Ashorobuto	2.19	268	P	Pn	03 55 56.7	+0.6
JAR				eS	Sn	03 56 22.7	+0.7
JOB	Onbets	2.21	257	P	Pn	03 55 56.5	+0.1
JOB				eS	Sn	03 56 22.4	-0.1
JMP	Maruseppu	2.54	284	P	Pn	03 56 02.3	+1.4
JCH	Churui	2.63	253	P	Pn	03 56 02.3	+0.2
JCH				eS	Sn	03 56 32.4	-0.3
ERM	Erimo	3.01	243	ePn	Pn	03 56 10.2	+2.9
ERM				eS	Sn	03 56 40.7	-1.5
ASAJ	Asahikawa	3.10	284	Pn	Pn	03 56 10.8	+2.3
	3.6nm,0.3s,baz=107,slow=13,SNR=16						
ASAJ				Sn	Sn	03 56 52.5	+8.2
	4.4nm,0.3s,baz=115,slow=19,SNR=3.5						
ASAJ	Asahikawa	3.10	284	ePn	Pn	03 56 10.9	+2.3
PETK	Petropavlovsk-	12.10	33	Pn	Pn	03 58 10.0	-1.7
	0.2nm,0.3s,baz=195,slow=10,SNR=3.4						
SONM	Songino Array	28.34	293	P	P	04 01 09.9	-1.3
	0.2nm,0.4s,mb3.1,baz=70,slow=4.7,SNR=2.9						
ILAR	Eielson Array	41.91	36	P	P	04 03 07.5	+0.2
	0.5nm,0.7s,mb3.2,baz=261,slow=7.2,SNR=7.1						
MKAR	Makanchi Array	44.49	298	P	P	04 03 27.4	-1.0
	0.4nm,0.2s,mb3.7,baz=77,slow=7.9,SNR=4.4						
KURK	Kurchatov	45.48	304	P	P	04 03 36.6	+0.3
	0.3nm,0.3s,mb3.7,baz=72,slow=8.6,SNR=3.6						
INK	Inuvik	46.82	30	P	P	04 03 46.6	0.0
	1.0nm,0.4s,mb4.1,baz=284,slow=3.9,SNR=8.2						
ASAR	Alice Springs	67.80	193	P	P	04 06 16.4	+1.6
	0.3nm,0.7s,mb3.5,baz=17,slow=6.8,SNR=3.4						
TXAR	Lajitas Array	83.06	56	P	P	04 07 42.1	-0.4
	0.3nm,0.7s,mb3.4,baz=306,slow=3.9,SNR=4.3						

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*MOS **01** 04:00:34.5±0.9, 25°.31S×177°.61W, h138km, mb5.7/59, MS5.5/10, Error ellipse: s-maj=10.7km s-min=9.6km az=168.8*
*DJA **01** 04:00:37, 25°.51S×177°.46W, h161km, Mw6.1/45*
*ISCJB **01** 04:00:37.8±0.1, 25°.46S±0°.04×177°.73W±0°.02, h168km, mb5.7/288, Error ellipse: s-maj=5.4km s-min=2.5km az=163.7*
*IDC **01** 04:00:37.0±0.9, 25°.34S×177°.62W, h149km±6km, mb5.4/34, mb1 5.5/35, mb1mx5.5/35, mbtmp5.4/35, MS4.8/16, Ms1 4.8/16, ms1mx4.6/30, Error ellipse: s-maj=9.7km s-min=8.5km az=32.0*
*BJI **01** 04:00:38.1, 25°.12S×177°.76W, h162km, mB6.0/40, mb5.7/62*
*NEIC **01** 04:00:39.4±0.1, 25°.39S×177°.64W, mb5.7/181, MW6.0, MW6.0, Error ellipse: s-maj=4.6km s-min=3.1km az=159.0, Moment Tensor Solution. s53 Moment tensor: Scale 10^18Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.30000×10^18 NP1: φs130.00000°, δ14.00000°, λ177.00000°. NP2: φs223.00000°, δ89.00000°, λ76.00000°. Principal axes: T 1.1000, Plg44.0000°, Azm119.0000°; N 0.2700, Plg14.0000°, Azm223.0000°; P -1.3700, Plg42.0000°, Azm326.0000°;*
*GCMT **01** 04:00:40.8±0.1, 25°.51S×177°.25W, h172km, MW6.0, Moment Tensor Solution. s109,c249; s81,c114; Moment tensor: Scale 10^18Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.20000×10^18 NP1:φs109.00000°, δ15.00000°, λ159.00000°. NP2:φs220.00000°, δ85.00000°, λ76.00000°. Principal axes: T 1.0800, Plg49.0000°, Azm115.0000°; N 0.2500, Plg14.0000°, Azm221.0000°; P -1.3300, Plg38.0000°, Azm323.0000°; Data Used: II IU CN IC G. Surface waves: sta=118, comp=259, per= 50.*
ISC 01 04:00:39.5±0.1, 25°.46S±0°.04×177°.68W±0°.02, h170km, h170km±1.7km:pP-P, n1689, σ0s.71/961, mb5.7/286, 303C-312D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.66	332	ePn	Pn	04 02 43.0	+1.5
MSVF	Nonsavu	8.66	332	Pn	Pn	04 02 43.1	+1.6
	22μm,1.2s						
OUZ	Omahuta	12.30	216	ePn	Pn	04 03 32.2	+3.3
	324nm,1.4s						
MXZ	Matakaoa Point	12.54	195	PN	Pn	04 03 23.5	-8.5
MXZ				SN	Sn	04 05 35.2	-16
AFI	Afiamalu	12.76	27	P	Pn	04 03 25.4	-10
	135nm,0.3s,baz=272,slow=2.2,SNR=90						
AFI				S	Sn	04 05 32.7	-24

74nm,0.3s,baz=223,slow=19,SNR=6.1
AFI Afiamalu 12.76 27 *e*P **Pn 04 03 25.0 -10**
AFI pmax pmax
comp=Z,809nm,0.6s
AFI Afiamalu 12.76 27 *e*Pn **Pn 04 03 25.0 -10**
comp=Z,809nm,0.6s
AFI *e*S Sn 04 05 32.2 -24
MWZ Matawai 13.46 196 PN **Pn 04 03 33.7 -10**
MWZ *e*SN **Sn 04 05 53.8 -19**
URZ Urewera 13.50 198 P **Pn 04 03 39.4 -4.8**
comp=Z,2.6nm,0.3s,baz=360,slow=4.1,SNR=9.1
URZ S **Sn 04 05 58.6 -15**
comp=Z,16nm,0.3s,baz=30,slow=16,SNR=3.8
URZ ScP ScP 04 12 15.9 +1.0
baz=215,slow=3.3,SNR=7.8
URZ ScS ScS 04 15 49.5 -2.3
comp=Z,0.4nm,0.3s,baz=150,slow=22,SNR=11
URZ Urewera 13.50 198 *e*Pn **Pn 04 03 45.4 +1.2**
comp=Z,216nm,0.5s
URZ *e*S **Sn 04 06 02.2 -12**
URZ ScP ScP 04 12 15.9 +1.0
URZ ScS ScS 04 15 49.5 -2.3
URZ Urewera 13.50 198 PN **Pn 04 03 36.1 -8.1**
URZ SN **Sn 04 06 00.4 -14**
BAYA Yate Dam 14.51 280 *e*P **Pn 04 04 01.8 +4.9**
BKZ Black Stump Fm 14.52 198 PN **Pn 04 03 51.3 -5.6**
LASL Noumea 14.80 279 *e*P **Pn 04 04 05.7 +5.2**
NORM Noumea 14.85 279 *e*P **Pn 04 04 05.8 +4.7**
DZM Mont Dzumac 14.93 280 *e*P **Pn 04 04 07.1 +5.0**
comp=Z,5μm,1.7s
DZM *e*LR LR 04 07 25.5
comp=Z,10μm,26.2s
NOUC Port Laguerre 15.04 280 *e*P **Pn 04 04 08.1 +4.6**
PNHZ Pukenui 15.30 198 PN **Pn 04 03 59.5 -7.0**
DVHZ Dannevirke 15.67 198 PN **Pn 04 04 04.0 -7.0**
BFZ Birch Farm 16.00 197 PN **Pn 04 04 05.9 -9.2**
MRZ Mangatainoka R 16.17 199 PN **Pn 04 04 07.4 -10**
OGWZ Otaki Gorge 16.43 200 PN **Pn 04 04 13.1 -7.2**
DUWZ D'Urville Isla 16.82 203 PN **Pn 04 04 19.0 -6.1**
RAR Rarotonga 16.97 79 P **Pn 04 04 22.4 -4.6**
comp=Z,5.1nm,0.3s,baz=266,slow=5.5,SNR=18
RAR S **S 04 07 20.0 -14**
comp=Z,13nm,0.3s,baz=94,slow=19,SNR=4.0
RAR LR LR 04 09 55.7
comp=Z,3μm,19.6s,baz=260,slow=33
RAR Rarotonga 16.97 79 *e*P **Pn 04 04 22.3 -4.7**
RAR *e*S **S 04 07 19.2 -15**
RAR pmax pmax
comp=Z,619nm,1.0s
RAR Rarotonga 16.97 79 *e*P **Pn 04 04 22.3 -4.7**
comp=Z,619nm,1.0s
RAR *e*S **S 04 07 19.2 -15**
SNZO South Karori 17.02 200 *e*P **Pn 04 04 22.5 -4.9**
comp=Z,375nm,1.7s
SNZO *e*S **S 04 07 19.3 -16**
SNZO *e*ScP ScP 04 12 23.5 +2.1
TCW Tory Channel 17.07 201 *e*PN **Pn 04 04 21.0 -7.0**
QRZ Quartz Range 17.36 206 PN **Pn 04 04 25.3 -6.1**
NNZ Nelson 17.38 203 PN **Pn 04 04 25.1 -6.6**
BSWZ Blackbirch Sta 17.66 201 PN **Pn 04 04 30.0 -4.9**
KHZ Kahutara 18.40 201 *e*P **P 04 04 36.3 -5.1**
comp=Z,145nm,0.5s
KHZ *e*S **S 04 07 50.0 -13**
KHZ Kahutara 18.40 201 *e*PN **Pn 04 04 33.8 -10**
RPZ Rata Peaks 20.40 204 P **P 04 04 59.7 -3.3**
comp=Z,28nm,0.6s,baz=331,slow=3.0,SNR=6.2
RPZ S **S 04 08 32.4 -10**
comp=Z,72nm,0.6s,baz=317,slow=19,SNR=13
RPZ ScP ScP 04 12 30.7 +2.0
comp=Z,114nm,1.1s,baz=111,slow=2.6,SNR=10
RPZ Rata Peaks 20.40 204 *e*P **P 04 04 59.8 -3.2**
comp=Z,64nm,0.9s
RPZ *e*S **S 04 08 30.0 -12**
RPZ *e*ScP ScP 04 12 29.9 +1.1
ODZ Otahua Downs 21.70 203 *e*P **P 04 05 13.9 -2.9**
comp=Z,290nm,1.1s,mb5.6
ODZ *e*S **S 04 08 55.3 -10**
ODZ *e*ScP ScP 04 12 33.7 +1.8
TBI Tubuai 25.76 91 *e*P **P 04 05 53.0 -1.5**
comp=Z,847nm,1.1s,mb6.3
HNR Honiara 26.57 303 P **P 04 05 57.5 -4.3**
comp=Z,203nm,0.9s,mb5.8,baz=201,slow=14,SNR=2.1
HNR Honiara 26.57 303 *e*P **P 04 06 01.2 -0.7**
PAE Paea 27.22 79 *e*P **P 04 06 04.1 -3.5**
comp=Z,30nm,1.0s,mb4.9
PAE Paea 27.22 79 *e*P **P 04 06 04.1 -3.5**
PAE pmax pmax
comp=Z,30nm,1.0s,mb4.9
PPT Papeete 27.25 79 *e*P **P 04 06 04.5 -3.4**
comp=Z,113nm,1.2s,mb5.4
PPT *e*LQ 04 11 38.9
comp=Z,25μm,26.8s
PPT *e*LR LR 04 12 40.9
baz=256
PPT Papeete 27.25 79 P **P 04 06 05.2 -2.8**
comp=Z,102nm,1.1s,mb5.4,baz=170,slow=9.5,SNR=3.5
PPT LR LR 04 15 16.0
comp=Z,2μm,18.2s,baz=252,slow=32
PPT Papeete 27.25 79 P **P 04 06 05.2 -2.7**
PPT pmax pmax
comp=Z,103nm,1.1s
PPT MLR MLR
comp=Z,2μm,18.2s
TIAR Tiarei 27.46 79 *e*P **P 04 06 06.5 -3.3**
comp=Z,247nm,1.0s,mb5.8
ARMA Armidale 27.52 253 *e*P **P 04 06 13.6 +3.5**
ARMA *e*pP pP 04 06 49.4 +4.1
ARMA *e*S **S 04 10 40.9 +2.3**
ARMA *e*SCP ScP 04 12 52.0 +3.5
ARMA *e*SCS ScS 04 16 44.3 +3.7
ARMA Armidale 27.52 253 *e*P **P 04 06 13.4 +3.3**
comp=Z,144nm,1.1s,mb5.6
ARMA *e*ScP ScP 04 12 50.9 +2.4
EIDS Eidsvold 28.19 263 *e*P **P 04 06 17.8 +1.6**
comp=Z,504nm,1.1s,mb6.2
EIDS *e*pP pP 04 06 56.9 +5.5
MEH Mehetia 28.49 81 *e*P **P 04 06 15.9 -3.0**
comp=Z,193nm,1.1s,mb5.7
CNB Canberra Magne 29.96 243 *e*P **P 04 06 34.7 +2.9**
CNB *e*S **S 04 11 18.5 +1.6**
CNB *e*SCP ScP 04 12 59.0 +2.9
CNB *e*SCS ScS 04 16 54.8 +3.0
CAN Canberra 30.26 243 *e*P **P 04 06 36.8 +2.5**
CAN pmax pmax
comp=Z,25nm,0.6s,mb5.1
CAN Canberra 30.26 243 *e*P **P 04 06 36.8 +2.5**
comp=Z,25nm,0.6s,mb5.1
TOO Toolangi 33.44 240 *e*P **P 04 07 04.0 +1.9**
TOO *e*pP pP 04 07 45.1 +7.2
TOO *e*S **S 04 12 11.8 +1.0**
TOO *e*SCP ScP 04 13 10.8 +2.9
TOO *e* 04 13 25.1
CTA Charters Tower 33.62 272 P **P 04 07 04.7 +0.9**
comp=Z,328nm,1.0s,mb6.0,baz=98,slow=11,SNR=126
CTA S **S 04 12 13.4 -0.5**
comp=Z,10nm,0.9s,baz=268,slow=15,SNR=4.7
CTA ScP ScP 04 13 11.4 +2.6
comp=Z,54nm,1.1s,baz=119,slow=2.3,SNR=9.8
CTA ScS ScS 04 17 13.9 +3.2
comp=Z,3.6nm,0.9s,baz=282,slow=21,SNR=8.9
CTA LR LR 04 18 33.2
comp=Z,4μm,18.2s,baz=101,slow=32
CTA Charters Tower 33.62 272 *e*P **P 04 07 05.0 +1.1**
comp=Z,338nm,1.2s,mb6.0
CTA *e*pP pP 04 07 44.8 +5.1
CTA *e*S **S 04 12 13.5 -0.5**
CTA *e*SCP ScP 04 13 11.5 +2.7
CTA *e*SCS ScS 04 17 13.8 +3.1
CTA Charters Tower 33.62 272 P **P 04 07 04.7 +0.8**
CTA S **S 04 12 13.4 -0.6**
CTA 04 17 13.9
CTA pmax pmax
comp=Z,328nm,1.0s
CTA smax
comp=N,10.0nm,0.9s
CTA Charters Tower 33.62 272 P **P 04 07 04.7 +0.9**
CTA S **S 04 12 13.4 -0.5**
CTA ScP ScP 04 13 11.4 +2.6
CTA ScS ScS 04 17 13.9 +3.2
CTA LR LR 04 18 33.1
CTAO Charters Tower 33.62 272 *e*P **P 04 07 05.2 +1.3**
CTAO *e*S **S 04 12 15.4 +1.4**
CTAO *e* 04 13 11.5
CTAO pmax pmax
comp=Z,512nm,1.2s,mb6.1
CTAO Charters Tower 33.62 272 *e*P **P 04 07 05.2 +1.3**
comp=Z,512nm,1.2s,mb6.1
CTAO *e*S **S 04 12 15.4 +1.4**
CTAO *e*ScP ScP 04 13 11.5 +2.7
CTAO Charters Tower 33.62 272 P **P 04 07 05.0 +1.1**
comp=Z,5μmcomp=Z,445nm,1.2s,mb6.1
STKA Stephens Creek 36.15 250 P **P 04 07 25.8 +0.4**
comp=Z,74nm,0.5s,mb5.5,baz=92,slow=8.9,SNR=125
STKA PcP PcP 04 09 48.8 +1.4
comp=Z,40nm,0.8s,baz=56,slow=4.4,SNR=6.5
STKA ScP ScP 04 13 18.9 +1.2
comp=Z,40nm,1.1s,baz=93,slow=5.3,SNR=7.8
STKA LR LR 04 21 42.1
comp=Z,1μm,18.9s,baz=83,slow=35
STKA Stephens Creek 36.15 250 *e*P **P 04 07 26.3 +0.9**
comp=Z,67nm,0.6s,mb5.5
STKA *e*pP pP 04 08 04.9 +3.3
STKA *e*PCP PcP 04 09 49.1 +1.7
STKA *e*S **S 04 12 50.8 -1.7**
STKA *e*SCP ScP 04 13 20.2 +2.5
STKA *e* 04 14 00.5
STKA *e*SCS ScS 04 17 24.5 +0.5
STKA Stephens Creek 36.15 250 *e*P **P 04 07 26.2 +0.8**
comp=Z,65nm,1.4s,mb5.1
STKA *e* pP 04 08 06.5 +4.9
STKA *e*PcP PcP 04 09 49.3 +2.0
STKA *e*S **S 04 12 55.4 +2.9**
STKA *e*ScP ScP 04 13 18.9 +1.1
KWAJ Kwajalein Atol 36.95 335 *e*P **P 04 07 30.7 -1.6**
comp=Z,441nm,1.1s,mb6.0
PMG Port Moresby 37.00 289 *d i*P **P 04 07 32.7 -0.1**
PMG pmax pmax
comp=Z,548nm,1.7s
PMG Port Moresby 37.00 289 *e*P **P 04 07 32.1 -0.7**
comp=Z,485nm,1.2s,mb6.0
PMG *e* pP 04 08 11.7 +2.6
PMG *e*PcP PcP 04 09 50.9 +0.7
PMG Port Moresby 37.00 289 P **P 04 07 33.3 +0.5**
comp=Z,6μmcomp=Z,267nm,1.1s,mb5.8
COEN Coen 38.46 280 *e*P **P 04 07 45.9 +0.9**
comp=Z,4μm,1.4s,mb6.9
COEN *e* pP 04 08 22.0 +0.5
COEN Coen 38.46 280 P **P 04 07 45.8 +0.8**
comp=Z,1μm,1.5s,mb6.3
RKT Rikitea 38.87 96 *e*P **P 04 07 47.2 -1.2**
comp=Z,262nm,1.1s,mb5.8
RKT *e*pP pP 04 08 06.3 -19
comp=Z,102nm,1.1s
RKT *e*S **S 04 13 31.4 -2.5**
comp=Z,3μm,28.8s
RKT *e*LQ 04 16 22.9
comp=Z,5μm,29.5s
RKT *e*LR LR 04 17 56.8
comp=Z,3μm,34.5s
RKT Rikitea 38.87 96 *e*P **P 04 07 47.2 -1.2**
RKT *e*S **S 04 13 31.4 -2.5**
RKT pmax pmax
comp=Z,262nm,1.1s,mb5.8
RKT Rikitea 38.87 96 *e*P **P 04 07 47.2 -1.2**
comp=Z,262nm,1.1s,mb5.8
RKT *e*pP pP 04 08 06.3 -19
RKT *e*S **S 04 13 31.4 -2.5**
RKT *e*LQ 04 16 22.9
TAOE Nuku Hiva Isla 39.30 72 *e*P **P 04 07 50.3 -1.7**
comp=Z,2μm,1.0s,mb6.6
TAOE *e*S **S 04 13 42.0 +1.7**
comp=Z,3μm,25.5s
TAOE *e*LQ 04 16 41.5
comp=Z,7μm,29.1s
TAOE *e*LR LR 04 18 15.2
comp=Z,2μm,23.5s
TAOE Nuku Hiva Isla 39.30 72 *e*P **P 04 07 50.5 -1.5**
comp=Z,756nm,1.0s,mb6.3
TAOE *e*S **S 04 13 42.0 +1.7**
TAOE *e*LQ 04 16 41.5
BBOO Buckleboo 40.81 249 *e*P **P 04 08 04.0 -0.3**
comp=Z,926nm,1.3s,mb6.2
BBOO *e*PcP PcP 04 10 02.2 +0.2
JOHN Johnston Islan 42.68 12 *e*P **P 04 08 18.4 -1.1**
comp=Z,2μm,1.4s,mb6.6
PTCN Pitcairn Islan 42.85 100 *e*P **P 04 08 19.8 -1.1**
comp=Z,3μm,1.5s,mb6.6
ASAR Alice Springs 43.88 262 P **P 04 08 29.6 +0.3**
comp=Z,116nm,0.8s,mb5.6,baz=92,slow=6.6,SNR=570
ASAR ScP ScP 04 13 51.4 +3.3
comp=Z,21nm,1.0s,baz=113,slow=4.3,SNR=9.7
ASAR S **S 04 14 44.4 -3.3**
comp=Z,20nm,1.0s,baz=100,slow=15,SNR=12
ASAR ScS ScS 04 18 10.2 -0.1
comp=Z,12nm,1.2s,baz=76,slow=6.6,SNR=4.8
ASAR Alice Springs 43.88 262 P **P 04 08 29.6 +0.4**
ASAR S **S 04 14 44.4 -3.3**
ASAR 04 18 10.3
ASAR pmax pmax
comp=Z,116nm,0.8s
ASAR pmax pmax
comp=N,21nm,1.0s
ASAR smax
comp=N,20nm,1.0s
WRA Warramunga Arr 44.42 267 P **P 04 08 33.1 -0.5**
comp=N,40nm,0.5s,mb5.3,baz=105,slow=8.0,SNR=260
WRA ScP ScP 04 13 53.8 +3.5
comp=N,44nm,1.0s,baz=105,slow=4.3,SNR=9.3
WRA S **S 04 14 52.6 -3.0**
comp=N,24nm,1.1s,baz=99,slow=15,SNR=6.2
WRA LR LR 04 25 48.1
comp=N,3μm,18.3s,baz=85,slow=34
WRA Warramunga Arr 44.42 267 P **P 04 08 33.1 -0.5**
WRA S **S 04 14 52.6 -3.0**
WRA pmax pmax
comp=Z,40nm,0.5s
WRA smax
comp=N,24nm,1.1s
WAKE Wake Island 47.02 340 *e*P **P 04 08 51.7 -2.0**
comp=N,716nm,1.1s,mb6.2
FORT Forrest 47.77 251 *e*P **P 04 08 58.9 -0.7**
comp=N,267nm,0.4s,mb6.2
FORT *e*S **S 04 15 33.3 -10**
FORT Forrest 47.77 251 *e*P **P 04 08 59.0 -0.6**
comp=N,370nm,0.7s,mb6.1
KAKA Kakadu 48.56 275 *e*P **P 04 09 04.4 -1.4**
comp=N,108nm,0.9s,mb5.5
KAKA Kakadu 48.56 275 *e*P **P 04 09 04.9 -0.9**
HON Honolulu 50.28 24 *e*P **P 04 09 17.3 -1.3**
KIP Kipapa 50.36 24 *d i*P **P 04 09 18.1 -1.1**
KIP Kipapa 50.36 24 *e*P **P 04 09 18.1 -1.1**
comp=N,290nm,1.2s,mb5.8
BAKI Biak 50.64 291 P **P 04 09 22.1 +0.5**
comp=N,9μmcomp=N,403nm,1.6s,mb5.8
KNA Kununurra 50.77 270 P **P 04 09 23.0 +0.5**
comp=N,1μm,0.9s,mb6.6
TLE Tual 51.32 284 P **P 04 09 26.8 +0.2**
comp=N,8μmcomp=N,627nm,1.1s,mb6.1
FITZ Fitzroy Crossi 52.82 266 P **P 04 09 37.5 -0.2**
comp=N,99nm,1.0s,mb5.5,baz=118,slow=7.4,SNR=133
FITZ S **S 04 16 49.6 -3.6**
comp=N,3.5nm,1.0s,baz=332,slow=23,SNR=6.3
FITZ Fitzroy Crossi 52.82 266 *e*P **P 04 09 37.5 -0.2**
comp=N,183nm,1.1s,mb5.7
FITZ *e*S **S 04 16 50.9 -2.4**
FITZ Fitzroy Crossi 52.82 266 *e*P **P 04 09 37.5 -0.2**
comp=N,291nm,1.3s,mb5.8
FITZ Fitzroy Crossi 52.82 266 P **P 04 09 37.2 -0.5**
comp=N,6μmcomp=N,363nm,1.8s,mb5.8
KMBL Kambalda 52.92 249 *e*P **P 04 09 37.5 -0.7**
comp=N,319nm,0.9s,mb6.0
SBA Scott Base 52.96 184 *e*P **P 04 09 40.6 +2.8**
SBA pmax pmax
comp=Z,545nm,1.5s,mb6.1
SBA Scott Base 52.96 184 *e*P **P 04 09 40.6 +2.8**
comp=Z,546nm,1.5s,mb6.1
SBA *e*pP pP 04 10 19.1 +2.7
SBA *e*ScP ScP 04 14 28.8 +3.2
GUMO Guam 53.28 312 P **P 04 09 39.8 -1.2**
comp=Z,130nm,0.6s,mb5.9,baz=267,slow=22,SNR=15
GUMO Guam 53.28 312 *e*P **P 04 09 40.0 -0.9**
GUMO pmax pmax
comp=Z,1μm,1.5s,mb6.5
GUMO Guam 53.28 312 *e*P **P 04 09 40.0 -0.9**
comp=Z,1μm,1.5s,mb6.5
MIDW Midway 53.37 0 *e*P **P 04 09 39.9 -1.4**
comp=Z,1μm,1.9s,mb6.2
KLBR Kellerberrin 56.35 248 *e*P **P 04 10 02.3 -0.6**
comp=Z,72nm,0.5s,mb5.8
KLBR *e*pP pP 04 10 41.3 -0.7
NWAO Narrogin (SRO) 56.53 246 *e*P **P 04 10 04.3 +0.1**
NWAO pmax pmax
comp=Z,242nm,1.9s
NWAO Narrogin (SRO) 56.53 246 *e*P **P 04 10 04.3 +0.1**
comp=Z,242nm,1.9s,mb5.7
MEEK Meekatharra 56.70 254 *e*P **P 04 10 04.4 -1.1**
MBWA Marble Bar 57.19 260 *e*P **P 04 10 08.7 -0.3**
comp=Z,116nm,1.1s,mb5.6
MBWA Marble Bar 57.19 260 P **P 04 10 09.2 +0.2**
SNR=7.6
NLAI Namlea 57.40 283 P **P 04 10 10.2 -0.3**
comp=Z,9μmcomp=Z,616nm,1.4s,mb6.2
LBMI Labuha 58.30 286 P **P 04 10 17.6 +0.8**
comp=Z,3μmcomp=Z,348nm,1.2s,mb6.0
TNTI Ternate 59.12 287 P **P 04 10 22.1 -0.3**
comp=Z,9μmcomp=Z,583nm,1.4s,mb6.2
MMRI Maumere 59.37 275 P **P 04 10 24.2 0.0**
comp=Z,5μmcomp=Z,301nm,1.4s,mb5.9
CASY Casey 59.65 206 *e*P **P 04 10 25.5 +0.3**
CASY Casey 59.65 206 *e*P **P 04 10 25.4 +0.1**
comp=Z,284nm,1.0s,mb6.0
CASY *e*ScP ScP 04 14 55.3 +0.1
BBSI Bau Bau 60.40 278 P **P 04 10 31.6 +0.4**
comp=Z,2μmcomp=Z,249nm,1.1s,mb6.0
RPN Rapa Nui 60.58 108 P **P 04 10 32.0 -0.3**
comp=Z,103nm,0.8s,mb5.7,baz=295,slow=3.6,SNR=7.1
RPN LR LR 04 30 09.2
comp=Z,742nm,20.6s,baz=278,slow=29
RPN Rapa Nui 60.58 108 *e*P **P 04 10 31.7 -0.6**
comp=Z,1μm,1.5s,mb6.5
KDI Kendari 61.04 280 P **P 04 10 35.3 -0.2**
comp=Z,2μmcomp=Z,206nm,1.2s,mb5.8
MNI Manado 61.64 287 P **P 04 10 39.5 0.0**
comp=Z,5μmcomp=Z,249nm,1.8s,mb5.7
KMSI Cibinong 61.96 285 P **P 04 10 42.1 +0.4**
comp=Z,8μmcomp=Z,636nm,1.4s,mb6.3
SGSI Sangihe 62.18 289 P **P 04 10 42.9 -0.2**
LUWI Luwuk 62.24 283 P **P 04 10 44.2 +0.6**
comp=Z,8μmcomp=Z,628nm,1.3s,mb6.3
BKSI Bulukumba 62.67 277 P **P 04 10 46.0 -0.4**
comp=Z,2μmcomp=Z,218nm,1.1s,mb5.9
SPSI Sidrap Palu 63.58 279 P **P 04 10 51.4 -1.0**
comp=Z,2μmcomp=Z,101nm,1.1s,mb5.6
MRSI Marisa 63.69 284 P **P 04 10 51.1 -2.1**
comp=Z,2μmcomp=Z,152nm,1.4s,mb5.6
DAV Davao City (W) 63.91 292 P **P 04 10 54.5 -0.1**
comp=Z,182nm,0.5s,mb6.2,baz=10,slow=5.6,SNR=5.5
DAV Davao City (W) 63.91 292 ‖ *e*P **P 04 10 51.9 -2.7**
DAV Davao City (W) 63.91 292 P **P 04 10 54.8 +0.2**
SNR=6.9
TTSI Tana Toraja 63.94 280 P **P 04 10 54.3 -0.5**
comp=Z,2μmcomp=Z,129nm,1.5s,mb5.5
QSPA South Pole Qui 64.63 180 P **P 04 10 59.9 +1.7**
comp=Z,402nm,1.1s,mb6.2,baz=35,slow=3.0,SNR=501
QSPA S **S 04 19 28.3 +4.5**
comp=Z,4.5nm,1.1s,baz=75,slow=23,SNR=13
QSPA South Pole Qui 64.63 180 *e*P **P 04 10 59.9 +1.7**
comp=Z,561nm,1.1s,mb6.3
QSPA *e*pP pP 04 11 39.3 +1.0
QSPA sP sP 04 12 00.1 +3.3
TOLI Toli-Toli 65.01 284 P **P 04 11 01.0 -0.7**
comp=Z,4μmcomp=Z,244nm,1.2s,mb5.9
CBIJ Chichi jima 65.02 321 P **P 04 11 00.1 -1.3**
comp=Z,57nm,0.4s,mb5.7,baz=274,slow=12,SNR=6.3
KHKI Kahang-Kahang 65.46 272 P **P 04 11 04.5 -0.1**
comp=Z,2μmcomp=Z,200nm,1.2s,mb5.8
IGBI Denpasar 65.69 272 P **P 04 11 06.3 +0.2**
comp=Z,940nm,1.1s,mb6.5
SRBI Singaraja 65.93 272 P **P 04 11 07.9 +0.3**
comp=Z,4μmcomp=Z,268nm,1.1s,mb6.0
NBBI Negara 66.35 272 P **P 04 11 09.6 -0.7**
comp=Z,399nm,1.2s,mb6.1
MIR Mirnyy 66.66 206 ⇑ *i*P **P 04 11 12.0 +0.6**
MIR *i* *PP pP 04 11 50.0 -1.7
MIR *i* PPP 04 15 27.0
MIR *e*S S 04 19 44.0 -4.8
MIR *e*S S 04 19 46.0 -2.8
MIR *e*PS 04 20 50.0
MIR *e*SS SS 04 24 16.0 +7.0
MIR pmax pmax
comp=E,404nm,2.0s
MIR pmax pmax
comp=Z,808nm,2.0s,mb6.2
MIR pmax pmax
comp=Z,288nm,1.4s,mb5.9
MIR smax
comp=E,700nm,7.0s
MIR smax
comp=N,1μm,8.0s
JAGI Jajag, Banyuwa 66.73 272 P **P 04 11 12.4 -0.3**
comp=N,339nm,1.2s,mb6.0
TBP Tagbilaran 66.75 294 *e*P **P 04 11 13.3 +0.5**
KBKI Kotabaru 67.09 278 P **P 04 11 15.4 +0.4**
comp=N,2μmcomp=N,122nm,1.6s,mb5.5
GMJI Gumukmas 67.45 271 P **P 04 11 17.1 -0.2**
comp=N,174nm,1.4s,mb5.7
KMMI Kalianget 67.48 273 P **P 04 11 18.9 +1.5**
comp=N,332nm,1.8s,mb5.9
KRKI Karangkates 68.39 271 P **P 04 11 23.8 +0.6**
comp=N,312nm,1.2s,mb5.9
MYLDM Lahad Datu 68.97 287 P **P 04 11 27.9 +1.2**
MYLDM Lahad Datu 68.97 287 P **P 04 11 29.0 +2.3**
comp=N,4μmcomp=N,174nm,1.7s,mb5.5
PWJI Pagerwojo 69.03 271 P **P 04 11 27.1 0.0**
comp=N,152nm,1.3s,mb5.6
SJI Sawahan 69.19 271 P **P 04 11 28.8 +0.7**
comp=N,166nm,0.9s,mb5.7
PCJI Pacitan 69.53 271 P **P 04 11 31.1 +0.9**
comp=N,6μmcomp=N,477nm,1.5s,mb6.0
NGJI Ngawi 69.61 271 P **P 04 11 33.1 +2.4**
comp=N,188nm,1.4s,mb5.6
SDKM Sandakan 70.33 286 P **P 04 11 35.4 +0.4**
SMRI Semarang 70.66 271 P **P 04 11 37.1 0.0**
comp=N,134nm,1.9s,mb5.3
JHJ Hachijo jima 2 70.95 323 P **P 04 11 37.7 -0.6**
comp=N,158nm,0.8s,mb5.8,baz=204,slow=9.3,SNR=4.2
BJII Banjamegara 71.21 271 P **P 04 11 41.4 +1.0**
comp=N,80nm,1.6s,mb5.2
KDM Kudat 71.27 287 P **P 04 11 41.7 +1.1**
KKM Kota Kinabalu 71.38 286 P **P 04 11 42.0 +0.7**
KKM Kota Kinabalu 71.38 286 *e*P **P 04 11 40.8 -0.6**
comp=N,206nm,0.8s,mb5.9
TGY Tagaytay City 71.55 296 P **P 04 11 42.4 +0.1**
comp=N,132nm,0.3s,mb6.2,baz=268,slow=18,SNR=8.6
TGY Tagaytay City 71.55 296 P **P 04 11 42.4 +0.1**
TGY pmax pmax
comp=Z,133nm,0.3s
BTM Bintulu 72.77 282 P **P 04 11 50.2 +0.5**
STKI Sintang 72.78 279 P **P 04 11 50.1 +0.4**
comp=Z,327nm,1.3s,mb5.9
CISI Cisompet, Garu 72.83 270 P **P 04 11 50.2 +0.2**
comp=Z,4μmcomp=Z,262nm,1.3s,mb5.8
JCJI Jatiwangi 72.86 271 P **P 04 11 49.5 -0.7**
comp=Z,380nm,1.2s,mb6.0
BCPH Baguio City Da 73.08 298 ‖ *e*P **P 04 11 47.6 -3.7**
SBUM Sibu 73.19 281 P **P 04 11 52.2 +0.1**
SBUM Sibu 73.19 281 P **P 04 11 52.5 +0.4**
comp=Z,152nm,1.3s,mb5.6
LEM Lembang 73.31 270 P **P 04 11 53.3 +0.5**
comp=Z,4μmcomp=Z,327nm,1.2s,mb6.0
JOW Kunigami 73.61 311 *e*P **P 04 11 53.9 -0.4**
comp=Z,193nm,1.1s,mb5.7
JOW *e*pP pP 04 12 36.4 +1.0
PIP Pasuquin 74.13 300 ‖ *i*P PcP 04 12 08.2 -3.4
CBJI Citeko 74.17 270 P **P 04 11 57.2 -0.6**
comp=Z,422nm,1.0s,mb6.1
MJAR Matsushiro Arr 74.38 324 P **P 04 11 57.3 -1.2**
comp=Z,52nm,0.9s,mb5.2,baz=162,slow=5.6,SNR=42
MJAR LR LR 04 45 37.2
comp=Z,452nm,18.2s,baz=250,slow=36
MJAR Matsushiro Arr 74.38 324 P **P 04 11 57.3 -1.2**
MJAR pmax pmax
comp=Z,52nm,0.9s
MJAR MLR MLR
comp=Z,452nm,18.2s
MJAR Matsushiro Arr 74.38 324 P **P 04 11 57.3 -1.2**
MJAR LR LR 04 45 37.2
MAJO Matsushiro 74.39 324 *e*P **P 04 11 57.1 -1.4**
MAJO pmax pmax
comp=Z,99nm,1.1s,mb5.5
MAJO Matsushiro 74.39 324 *e*P **P 04 11 57.1 -1.4**
comp=Z,99nm,1.1s,mb5.5
MAT Matsushiro 74.39 324 P **P 04 11 56.7 -1.8**
MAT S S 04 21 14.0 -4.9
KSM Kuching 74.45 279 P **P 04 11 59.5 0.0**
KSM Kuching 74.45 279 *e*P **P 04 11 58.9 -0.6**
comp=Z,352nm,1.1s,mb6.0

KSM *e*pP pP 04 12 40.4 -0.2
KSM Kuching 74.45 279 P **P 04 11 59.7 +0.2**
comp=Z,4μmcomp=Z,328nm,1.2s,mb5.9
SBJI Serang 74.94 270 P **P 04 12 03.0 +0.7**
comp=Z,5μmcomp=Z,218nm,1.8s,mb5.5
RBSI Rajabasa 75.41 270 P **P 04 12 04.7 -0.3**
comp=Z,3μmcomp=Z,209nm,1.1s,mb5.7
BLSI Bandar Lampung 76.06 271 P **P 04 12 08.5 -0.1**
comp=Z,162nm,1.1s,mb5.5
JNU Nakatsue 76.10 317 *e*P **P 04 12 06.6 -1.7**
comp=Z,103nm,1.1s,mb5.4
ERM Erimo 76.28 331*c i*P **P 04 12 10.0 +0.8**
ERM Erimo 76.28 331 *e*P **P 04 12 08.8 -0.4**
comp=Z,138nm,1.3s,mb5.4
TWG Pinlang 76.33 304 *e*P **P 04 12 07.2 -2.8**
comp=Z,34nm,0.7s,mb5.1
YULB Yu-li 76.50 304 *e*P **P 04 12 09.5 -1.3**
comp=Z,42nm,1.0s,mb5.0
AMKA Amchitka 76.55 358 *e*P **P 04 12 09.9 -0.6**
comp=Z,435nm,1.1s,mb6.0
PPBI Pangkal Pinang 76.60 274 P **P 04 12 12.1 +0.4**
comp=Z,127nm,1.6s,mb5.3
KLI Kotabumi 76.62 271 P **P 04 12 11.5 -0.3**
comp=Z,5μmcomp=Z,187nm,1.3s,mb5.6
PMSA Palmer Station 76.64 156 P **P 04 12 11.6 +0.6**
comp=Z,176nm,1.0s,mb5.6,baz=246,slow=4.7,SNR=113
PMSA LR LR 04 37 27.6
comp=Z,776nm,21.5s,baz=255,slow=29
PMSA Palmer Station 76.64 156 *e*P **P 04 12 11.0 0.0**
comp=Z,352nm,1.1s,mb5.9
KASI Kota Agung 76.67 270 P **P 04 12 12.3 +0.2**
comp=Z,3μmcomp=Z,287nm,1.2s,mb5.8
NACB Ninganchiao 76.73 305 *e*P **P 04 12 10.6 -1.5**
comp=Z,357nm,1.2s,mb5.9
KLSI 76.80 271 P **P 04 12 12.4 -0.5**
comp=Z,3μmcomp=Z,159nm,1.8s,mb5.3
YUK Yuzh-Kuril'sk 76.81 334⇓*i*P **P 04 12 04.9 -7.2**
YUK *i* 04 15 12.5
YUK *i*S S 04 21 38.4 -6.8
YUK pmax pmax
comp=N,700nm,1.0s
YUK pmax pmax
comp=E,770nm,1.0s
YUK pmax pmax
comp=Z,1μm,1.0s,mb6.4
YUK pmax pmax
comp=Z,738nm,1.0s,mb6.3
YUK smax
comp=N,2μm,3.0s
YUK smax
comp=E,2μm,3.0s
TPUB Ta-pu 76.94 304 *e*P **P 04 12 12.7 -0.6**
comp=E,186nm,1.0s,mb5.7
SSLB Suanglung 76.98 304 *e*P **P 04 12 11.0 -2.5**
comp=E,127nm,1.0s,mb5.5
ADK Adak 77.01 1 *e*P **P 04 12 12.3 -0.7**
ADK pmax pmax
comp=Z,644nm,1.1s,mb6.2
ADK Adak 77.01 1 *e*P **P 04 12 12.3 -0.7**
comp=Z,644nm,1.1s,mb6.2
MAW Mawson 77.02 200 P **P 04 12 14.4 +1.3**
comp=Z,43nm,0.5s,mb5.4,baz=127,slow=6.6,SNR=343
MAW LR LR 04 43 14.4
comp=Z,330nm,19.0s,baz=122,slow=33
MAW Mawson 77.02 200 *e*P **P 04 12 14.4 +1.3**
comp=Z,95nm,1.4s,mb5.2
MAW *e*S S 04 21 47.7 +0.6
MAW Mawson 77.02 200 *e*P **P 04 12 14.3 +1.2**
comp=Z,12nm,0.6s,mb4.7
YHNB Yeheng 77.18 305 *e*P **P 04 12 13.1 -1.6**
comp=Z,585nm,1.6s,mb6.0
LWLI Liwa 77.27 270 P **P 04 12 15.2 -0.3**
comp=Z,269nm,0.9s,mb5.9
TATO Taipei 77.28 306 *e*P **P 04 12 14.3 -0.9**
comp=Z,673nm,1.4s,mb6.1
MDSI Maura Dua 77.39 271 P **P 04 12 15.0 -1.1**
comp=Z,2μmcomp=Z,150nm,1.1s,mb5.5
ATKA Atka Island 77.39 2 *e*P **P 04 12 14.2 -0.9**
comp=Z,722nm,1.0s,mb6.3
SMY Shemya 78.19 355 *e*P **P 04 12 18.7 -0.8**
comp=Z,2μm,1.2s,mb6.5
ASAJ Asahikawa 78.22 332 P **P 04 12 21.1 +1.1**
comp=Z,61nm,0.9s,mb5.2,baz=218,slow=11,SNR=56
ASAJ Asahikawa 78.22 332 P **P 04 12 21.1 +1.2**
ASAJ pmax pmax
comp=Z,61nm,0.9s
ASAJ Asahikawa 78.22 332 *e*P **P 04 12 21.0 +1.1**
comp=Z,343nm,1.8s,mb5.7
NIKO Nikolski 78.48 5 *e*P **P 04 12 20.0 -1.1**
comp=Z,820nm,1.2s,mb6.2
NIKO *e* 04 12 41.2
KSI Kapahiang 79.17 271 P **P 04 12 25.8 -0.1**
comp=Z,6μmcomp=Z,262nm,1.1s,mb5.8
SKR Severo-Kuril's 79.28 343 *e*P **P 04 12 24.7 -0.8**
SKR *e* 04 12 30.0
SKR *i*S S 04 22 12.0 +0.7
SKR *e* 04 22 26.0
SKR pmax pmax
comp=N,210nm,1.1s
SKR pmax pmax
comp=Z,750nm,1.1s,mb6.2
SKR pmax pmax
comp=E,480nm,1.5s
SKR pmax pmax
comp=N,1μm,4.0s
SKR pmax pmax
comp=E,3μm,4.0s
SKR pmax pmax
comp=Z,3μm,4.0s
SKR smax
comp=N,3μm,8.0s
SKR smax
comp=E,2μm,8.0s
SKR MLR MLR
comp=N,1μm,16.0s
SKR MLR MLR
comp=E,1μm,16.0s
SKR MLR MLR
comp=Z,1μm,16.0s
QZH Quanzhou 79.41 304⇓*i*P **P 04 12 24.8 -2.1**
QZH pP pP 04 13 05.4 -3.2
QZH sP sP 04 13 22.5 -4.1
QZH S S 04 22 07.2 -6.6
QZH ScS ScS 04 22 30.0 -4.7
QZH pmax pmax
comp=Z,170nm,1.0s,mb5.6
QZH pmax pmax
comp=Z,3μm,3.3s
QZH LR LR
comp=N,3μm,9.4s
QZH LR LR
comp=E,3μm,14.8s
QZH LR LR
comp=Z,5μm,17.3s
UNV Unalaska Valle 79.57 7 *e*P **P 04 12 26.0 -1.0**
comp=Z,295nm,1.3s,mb5.8
USHA Ushuaia 79.84 146 P **P 04 12 28.8 0.0**
comp=Z,100nm,1.0s,mb5.4,baz=218,slow=6.9,SNR=25
AKUT Akutan 79.93 7 *e*P **P 04 12 28.2 -0.7**
comp=Z,153nm,1.0s,mb5.6
MYKOM Kota Tinggi 80.37 277 P **P 04 12 32.5 +0.2**
MYKOM Kota Tinggi 80.37 277 P **P 04 12 32.6 +0.2**
comp=Z,2μmcomp=Z,153nm,1.4s,mb5.5
YSS Yuzh-Sakhalins 80.45 334κ *i*P **P 04 12 32.0 +0.1**
YSS *e*S S 04 22 26.0 +2.2
YSS pmax pmax
comp=Z,490nm,1.1s,mb6.0
YSS pmax pmax
comp=Z,2μm,3.0s
YSS smax
comp=N,4μm,9.0s
YSS Yuzh-Sakhalins 80.45 334 *e*P **P 04 12 32.5 +0.6**
comp=N,622nm,1.2s,mb6.1
KSRS Korea Array 80.80 319 P **P 04 12 34.2 +0.2**
comp=N,84nm,1.0s,mb5.3,baz=138,slow=5.0,SNR=57
KSRS Korea Array 80.80 319 P **P 04 12 34.3 +0.3**
KSRS pmax pmax
comp=Z,84nm,1.0s,mb5.3
RGRI Rengat 80.81 274 P **P 04 12 35.3 +0.6**
comp=Z,519nm,1.2s,mb6.0
BSC Santa Cruz Isl 80.82 46⇓P **P 04 12 34.6 +0.3**
baz=81
PET Petropavlovsk 80.83 346⇓*i*P **P 04 12 33.2 -0.6**
PET *e* 04 15 34.7
PET *e*S S 04 22 26.6 -0.8
PET pmax pmax
comp=Z,344nm,1.1s,mb5.9
PET pmax pmax
comp=Z,2μm,2.8s,mb6.3
PET pmax pmax
comp=Z,1μm,13.9s
PET pmax pmax
comp=Z,300nm,9.2s
PET Petropavlovsk 80.83 346 *e*P **P 04 12 32.8 -1.0**
comp=Z,347nm,1.1s,mb5.9
SCI San Clemente I 80.89 47⇑P **P 04 12 34.8 +0.1**
baz=81
FALS False Pass 80.92 8 *e*P **P 04 12 33.7 -0.5**
comp=Z,2μm,2.6s,mb6.3
KGM Kluang 80.95 277 P **P 04 12 35.5 +0.1**
SBC Santa Barbara 81.05 45⇑P **P 04 12 35.9 +0.5**
baz=81
SSE Sheshan 81.11 310 P **P 04 12 33.4 -2.4**
SSE S S 04 22 30.6 -0.7
SSE pmax pmax
comp=Z,69nm,1.1s,mb5.2
SSE pmax pmax
comp=Z,710nm,4.6s
SSE LR LR
comp=N,2μm,14.7s
SSE LR LR
comp=E,2μm,14.8s
SSE LR LR
comp=Z,3μm,12.2s
PEA0B Petropavlovsk- 81.12 345 *e*P **P 04 12 35.3 -0.1**
PETK Petropavlovsk- 81.12 345 P **P 04 12 35.2 -0.1**
comp=Z,408nm,0.9s,mb6.1,baz=114,slow=7.3,SNR=378
PETK Petropavlovsk- 81.12 345 P **P 04 12 35.3 0.0**
PETK pmax pmax
comp=Z,408nm,0.9s,mb6.1
CIS Catalina Islan 81.25 47⇑P **P 04 12 36.2 -0.3**
baz=81
BLG Laguna Peak 81.26 46⇓P **P 04 12 36.4 -0.2**
baz=81
PKM Peak Mountain 81.27 45⇓P **P 04 12 37.1 +0.5**
baz=81,SNR=7.7
SDSI Sungai Dareh 81.38 273 P **P 04 12 36.4 -1.3**
comp=Z,1μmcomp=Z,40nm,1.8s,mb4.7
SMMC Simmler 81.41 44⇑P **P 04 12 37.8 +0.5**
baz=82,SNR=6.5
SAO San Andreas Ge 81.45 42 *e*P **P 04 12 37.4 -0.1**
SAO pmax pmax
comp=Z,44nm,0.9s,mb5.1
SAO San Andreas Ge 81.45 42 *e*P **P 04 12 37.4 -0.1**
comp=Z,44nm,0.9s,mb5.1
FMP Fort Macarthur 81.51 46⇑P **P 04 12 37.8 -0.1**
baz=82
INCN Inchon 81.59 318 *e*P **P 04 12 38.9 +0.7**
comp=Z,153nm,1.0s,mb5.6
OSI Osito Adit 81.79 46⇓P **P 04 12 39.3 0.0**
baz=82,SNR=6.3
OSI Osito Adit 81.79 46 *e*P **P 04 12 39.7 +0.4**
comp=Z,58nm,0.8s,mb5.3
109C Camp Elliot, M 81.80 48⇓P **P 04 12 39.1 -0.3**
baz=82,SNR=8.3
SDPT Sand Point 81.82 10 *e*P **P 04 12 38.2 -0.8**
comp=Z,522nm,1.2s,mb6.0
DECC Green Verdugo 81.82 46⇓P **P 04 12 39.1 -0.4**
baz=82,SNR=6.5
PASC Pasadena Art C 81.87 46 *e*P **P 04 12 39.5 -0.2**
comp=Z,279nm,0.8s,mb5.9
HOPS Hopland 81.95 40 *e*P **P 04 12 40.0 0.0**
comp=Z,89nm,1.0s,mb5.3
BAR Barrett 81.96 48 *e*P **P 04 12 40.0 -0.2**
comp=Z,136nm,1.8s,mb5.3
SYO Syowa Base 81.97 193⇓*i*P **P 04 12 38.4 -1.4**
MWC Mount Wilson 81.98 46 *e*P **P 04 12 40.4 +0.1**
MWC pmax pmax
comp=Z,76nm,0.9s,mb5.3
MWC Mount Wilson 81.98 46 *e*P **P 04 12 40.4 +0.1**
comp=Z,76nm,0.9s,mb5.3
ARVC Arvin 82.04 45⇑P **P 04 12 40.4 -0.2**
baz=82,SNR=14
KCPM Cahto Peak 82.12 39 *e*P **P 04 12 42.2 +1.3**
comp=Z,51nm,1.2s,mb5.0
MURC Murrieta 82.17 47⇑P **P 04 12 41.6 +0.2**
baz=82
BFSC Mount Baldy Ra 82.25 46⇑P **P 04 12 41.5 -0.2**
baz=82,SNR=22
MONP Monument Peak 82.26 48⇓P **P 04 12 42.2 +0.4**
baz=82,SNR=81
PDSI Padang 82.26 273 P **P 04 12 41.6 -0.7**
comp=Z,99nm,1.5s,mb5.2
BKNI Bangkinang 82.27 274 P **P 04 12 43.3 +0.9**
comp=Z,2μmcomp=Z,106nm,1.4s,mb5.3
VES Vestal, Richgr 82.33 44⇓P **P 04 12 41.8 -0.3**
baz=82,SNR=44
DVTC Desert V Tower 82.34 48⇓P **P 04 12 42.6 +0.4**
baz=82,SNR=10
GZH Guangzhou 82.42 300 P **P 04 12 43.1 +0.2**
GZH S S 04 22 45.8 +0.7
GZH pmax pmax
comp=Z,2μm,3.6s
GZH LR LR
comp=N,1μm,13.7s
GZH LR LR
comp=E,2μm,12.9s
GZH LR LR
comp=Z,4μm,16.6s
EDW2 Edwards Air Fo 82.43 46⇓P **P 04 12 42.9 +0.2**
baz=83,SNR=40
RCTC Rector, Farmer 82.52 44⇓P **P 04 12 42.9 -0.2**
baz=83
SPIA Saint Paul Isl 82.55 4 *e*P **P 04 12 42.8 +0.1**
comp=Z,824nm,1.3s,mb6.3
KTGM Kuala Trenggan 82.57 279 P **P 04 12 44.3 +0.5**
ISA Isabella 82.60 45⇑P **P 04 12 43.8 +0.3**
baz=83,SNR=76
ISA Isabella 82.60 45 *e*P **P 04 12 43.7 +0.2**
ISA pmax pmax
comp=Z,93nm,1.0s,mb5.5
ISA Isabella 82.60 45 *e*P **P 04 12 43.7 +0.2**
comp=Z,93nm,1.0s,mb5.5
PFO Pinyon Flat Ob 82.67 48 P **P 04 12 44.0 +0.1**
comp=Z,352nm,0.9s,mb6.1,SNR=19
PFO Pinyon Flat Ob 82.67 48⇑P **P 04 12 43.9 0.0**
baz=83,SNR=31
PFO Pinyon Flat Ob 82.67 48 *e*P **P 04 12 43.9 0.0**
PFO pmax pmax
comp=Z,57nm,0.9s,mb5.3
PFO Pinyon Flat Ob 82.67 48 *e*P **P 04 12 43.9 0.0**
comp=Z,57nm,0.9s,mb5.3
SWSC Sam W. Stewart 82.71 48⇓P **P 04 12 44.1 0.0**
baz=83,SNR=5.4
BBRC Big Bear Solar 82.75 47⇓P **P 04 12 44.8 +0.5**
baz=83
KHMM Horse Mountain 82.83 38 *e*P **P 04 12 46.1 +1.6**
comp=Z,86nm,1.1s,mb5.4
CMB Columbia Colle 82.91 42 *e*P **P 04 12 44.9 -0.1**
CMB pmax pmax
comp=Z,79nm,1.0s,mb5.4
CMB Columbia Colle 82.91 42 *e*P **P 04 12 44.9 -0.1**
comp=Z,79nm,1.0s,mb5.4
LRMC Laurel Mountai 82.99 45⇓P **P 04 12 45.9 +0.3**
baz=83
FRIM Kepong 83.00 277 P **P 04 12 47.4 +1.2**
CHGN Chignik 83.07 11 *e*P **P 04 12 44.7 -0.7**
RRX Edison Barstow 83.07 46⇓P **P 04 12 46.1 +0.2**
baz=83
KRMB Red Mountain 83.17 38 *e*P **P 04 12 47.1 +0.8**
comp=Z,66nm,1.1s,mb5.3
QIZ Qiongzhong 83.17 295 P **P 04 12 46.6 -0.2**
QIZ pP pP 04 13 29.2 +0.3
QIZ sP sP 04 13 47.8 +1.0
QIZ PP PP 04 16 00.5 -0.3
QIZ S S 04 22 48.4 -4.5
QIZ sS sS 04 24 04.7 -1.2
QIZ SS SS 04 28 22.4 +0.7
QIZ pmax pmax
comp=Z,46nm,1.4s,mb5.0
QIZ pmax pmax
comp=Z,720nm,12.5s
QIZ LR LR
comp=N,1μm,11.3s
QIZ LR LR
comp=E,360nm,13.3s
QIZ LR LR
comp=Z,1μm,13.2s
QIZ Qiongzhong 83.17 295 *e*P **P 04 12 47.7 +0.8**
comp=Z,33nm,1.0s,mb5.0
VNA3 Neumayer Olymp 83.19 176 *e*P **P 04 12 43.3 -2.8**
VNA3 *e* 04 31 01.5
BELC Belle Mtn. Jos 83.20 47⇑P **P 04 12 47.1 +0.5**
baz=83,SNR=72
NJ2 Nanjing 83.28 310 *e*P **P 04 12 47.1 0.0**
NJ2 pP pP 04 13 24.5 -4.7
NJ2 sP sP 04 13 47.0 -0.1
NJ2 PP PP 04 15 57.5 -4.0
NJ2 SKS 04 22 51.0
NJ2 S S 04 22 54.0 +0.6
NJ2 pmax pmax
comp=Z,240nm,1.1s,mb5.8
NJ2 pmax pmax
comp=Z,1μm,3.7s
NJ2 LR LR
comp=N,3μm,11.8s
NJ2 LR LR
comp=E,4μm,13.8s
NJ2 LR LR
comp=Z,5μm,13.6s
112A Yuma 83.30 49⇑P **P 04 12 47.6 +0.5**
baz=83,SNR=23
WDC Whiskeytown Da 83.31 39 *e*P **P 04 12 47.1 +0.1**
WDC pmax pmax
comp=Z,125nm,1.0s,mb5.6
WDC Whiskeytown Da 83.31 39 *e*P **P 04 12 47.1 +0.1**
comp=Z,125nm,1.0s,mb5.6
SISI Saibi 83.32 272 P **P 04 12 49.6 +1.8**
comp=Z,100nm,2.2s,mb5.2
CWC Cottonwood Cre 83.33 44⇑P **P 04 12 47.3 0.0**
baz=84,SNR=12
BC3 Big Chuckawall 83.36 48⇓P **P 04 12 47.9 +0.5**
baz=84,SNR=15
GLA Glamis 83.43 49⇓P **P 04 12 48.5 +0.6**
baz=84,SNR=26
GLA Glamis 83.43 49 *e*P **P 04 12 47.5 -0.3**
GLA pmax pmax
comp=Z,128nm,1.0s,mb5.6
GLA Glamis 83.43 49 *e*P **P 04 12 47.5 -0.3**
comp=Z,128nm,1.0s,mb5.6
GSC Goldstone 83.45 46⇓P **P 04 12 48.1 +0.2**
baz=84,SNR=35
GSC Goldstone 83.45 46 *e*P **P 04 12 47.9 0.0**
GSC pmax pmax
comp=Z,86nm,1.0s,mb5.4
GSC Goldstone 83.45 46 *e*P **P 04 12 47.9 0.0**
comp=Z,86nm,1.0s,mb5.4
KBO Bosley Butte 83.47 37 *e*P **P 04 12 48.8 +1.0**
comp=Z,565nm,2.1s,mb5.9
MPMC Manual Prospec 83.48 45⇓P **P 04 12 48.2 +0.3**
baz=84,SNR=69
HEC Hector,Ludlow 83.48 47⇓P **P 04 12 48.1 +0.1**
baz=84,SNR=62
MTUM Tungsten Hills 83.60 43 *e*P **P 04 12 49.0 +0.4**
MLAC Mammoth Lakes 83.60 43⇑P **P 04 12 48.9 +0.3**
baz=84,SNR=8.8
VNA2 Neumayer--Watz 83.64 177 *e*P **P 04 12 46.1 -2.2**
VNA2 *e* 04 31 01.1
WAKR Walker 83.78 42 *e*P **P 04 12 49.9 +0.4**
comp=Z,97nm,0.9s,mb5.5
MNSI Mandailing Nat 83.79 274 P **P 04 12 49.4 -0.8**
comp=Z,47nm,1.0s,mb5.2
MAIT Maitri 83.80 183 *e*P **P 04 12 49.2 0.0**
NVL N'lazarevskaya 83.80 183*c i*P **P 04 12 49.4 +0.2**
NVL *i*S S 04 22 50.9 -6.7
NVL pmax pmax
comp=Z,213nm,0.9s,mb5.9
NVL MLR MLR
comp=Z,339nm,17.0s
KEBM Edson Butte 83.86 36 *e*P **P 04 12 50.4 +0.6**
comp=Z,178nm,1.1s,mb5.7
VNA1 Neumayer--Stat 83.86 176 *e*P **P 04 12 47.4 -2.1**
IRM Iron Mountain 83.86 48⇓P **P 04 12 50.5 +0.5**
baz=84,SNR=22
GMRC Granite Mounta 83.89 47⇑P **P 04 12 50.5 +0.3**
baz=84,SNR=32
YBH Yreka Blue Hor 83.98 38 *e*P **P 04 12 50.9 +0.5**
YBH pmax pmax
comp=Z,82nm,0.9s
YBH Yreka Blue Hor 83.98 38 *e*P **P 04 12 50.9 +0.5**
comp=Z,82nm,0.9s,mb5.5
YBH *e* pP 04 13 31.6 -0.9
113A Mohawk Valley, 83.99 50⇓P **P 04 12 50.9 +0.2**
baz=84,SNR=38
Y12C Blythe 84.05 48⇑P **P 04 12 51.3 +0.4**
baz=84,SNR=19
IPM Ipoh 84.08 278 P **P 04 12 52.7 +1.1**
IPM Ipoh 84.08 278 *e*P **P 04 12 52.1 +0.5**
comp=Z,197nm,1.3s,mb5.7
IPM *e* pP 04 13 32.2 -1.6
WCN Washoe City 84.10 41⇑P **P 04 12 51.4 +0.3**
baz=84,SNR=43
WCN Washoe City 84.10 41 *e*P **P 04 12 51.3 +0.2**
WCN pmax pmax
comp=Z,104nm,0.9s,mb5.6
WCN Washoe City 84.10 41 *e*P **P 04 12 51.3 +0.2**
comp=Z,104nm,0.9s,mb5.6
BEKR Beckworth 84.10 41⇓P **P 04 12 51.7 +0.6**
baz=84
TUQ Turquoise Moun 84.11 46⇑P **P 04 12 51.6 +0.4**
baz=84,SNR=5.3
GRAC Grapevine Rang 84.13 44⇓P **P 04 12 51.6 +0.3**
baz=84,SNR=45
FURC Furnace Creek, 84.13 45⇑P **P 04 12 51.2 -0.1**
baz=84,SNR=7.4
SHOC Shoshone 84.16 46⇓P **P 04 12 51.5 0.0**
baz=84,SNR=8.3
214A Organ Pipe Nat 84.19 51⇑P **P 04 12 51.9 +0.2**
baz=84,SNR=22
Z13A Yuma Proving G 84.32 49⇑P **P 04 12 52.6 +0.3**
baz=84,SNR=50
HUMO Hull Mountain 84.43 37 *e*P **P 04 12 53.1 +0.4**
comp=Z,123nm,1.3s,mb5.5
HUMO *e*pP pP 04 13 35.8 +1.0
NVAR Mina Array Bea 84.43 43 P **P 04 12 53.0 +0.2**
comp=Z,95nm,0.8s,mb5.6,baz=222,slow=8.6,SNR=253
LDFC Landfair 84.43 47 *e*P **P 04 12 53.7 +0.8**
comp=Z,210nm,0.9s,mb5.9
U10A Ash Meadows, A 84.44 45⇓P **P 04 12 53.2 +0.3**
baz=85,SNR=14
Y13A Salome 84.55 49⇑P **P 04 12 53.8 +0.3**
baz=85,SNR=50
NEE2 Needles Airpor 84.58 47⇓P **P 04 12 54.0 +0.4**
baz=85,SNR=10
PAHR Pah Rah Range 84.58 41 *e*P **P 04 12 53.4 -0.1**
comp=Z,115nm,1.0s,mb5.6
PAHR *e*pP pP 04 13 37.9 +2.2
114A Black Gap (USA 84.59 50⇓P **P 04 12 53.9 +0.2**
baz=85,SNR=20
V11A Goodsprings 84.67 46⇑P **P 04 12 54.3 +0.3**
baz=85,SNR=33
W12A Cal Nev Ari 84.72 47⇑P **P 04 12 54.9 +0.6**
baz=85,SNR=21
MDJ Mudanjiang 84.74 325 P **P 04 12 54.8 +0.6**
MDJ pP pP 04 13 37.7 +1.3
MDJ sP sP 04 13 54.4 +0.1
MDJ PP PP 04 16 11.6 -1.5
MDJ SKS 04 22 56.5
MDJ S S 04 23 09.1 +1.7
MDJ sS sS 04 24 19.1 -1.6
MDJ SS SS 04 28 43.9 -0.1
MDJ pmax pmax
comp=Z,160nm,1.5s,mb5.5
MDJ pmax pmax
comp=Z,1μm,5.3s
MDJ Mudanjiang 84.74 325 *e*P **P 04 12 54.5 +0.3**
comp=Z,228nm,1.2s,mb5.8
KULM Kulim 84.77 278 P **P 04 12 56.6 +1.6**
KULM Kulim 84.77 278 *e*P **P 04 12 56.5 +1.4**
comp=Z,205nm,1.4s,mb5.7
OHAK Old Harbor 84.89 13 *e*P **P 04 12 54.8 +0.2**
comp=Z,2μm,2.7s,mb6.3
HABR Khabarovsk 84.89 331*d i*P **P 04 12 55.9 +1.1**
HABR *e* 04 16 09.2
HABR *e*S S 04 23 05.1 -3.6
HABR *e*SS SS 04 28 45.1 -1.0
HABR *e*SSS 04 32 16.6
HABR pmax pmax
comp=Z,2μm,2.2s,mb6.5
HABR MLR MLR
comp=Z,491nm,18.0s
Z14A Wintersburg 84.90 49⇓P **P 04 12 55.9 +0.6**
baz=85,SNR=30
V12A Nelson 84.99 47⇓P **P 04 12 55.9 +0.2**
baz=85,SNR=31
115A Sonoran Desert 85.02 50⇓P **P 04 12 56.2 +0.3**
baz=85
U11A Corn Creek 85.05 46⇓P **P 04 12 56.3 +0.4**
baz=85,SNR=10
216A Three Points, 85.17 51⇑P **P 04 12 57.2 +0.6**

baz=85,SNR=38
S10A Tonopah Range, 85.18 44 ⇑P **P 04 12 56.6 +0.1**
baz=85,SNR=239
Y14A Wickenburg 85.19 49 ⇓P **P 04 12 56.9 +0.2**
baz=85,SNR=68
PSI Prapat 85.24 275 P **P 04 12 55.9 -1.6**
comp=Z,45nm,1.1s,mb5.1,baz=144,slow=2.5,SNR=25
PSI Prapat 85.24 275 P **P 04 12 55.9 -1.5**
PSI pmax pmax
comp=Z,45nm,1.1s,mb5.1
SHPR Sheep Range 85.25 46 *e*P **P 04 12 57.3 +0.4**
116A Eloy 85.31 51 ⇓P **P 04 12 57.7 +0.5**
baz=85,SNR=39
Z15A Gila River Ind 85.40 50 ⇓P **P 04 12 58.0 +0.3**
baz=86,SNR=13
UBT Ubonrachathani 85.41 289 ⇑P **P 04 13 01.0 +2.8**
comp=Z,354nm,1.0s,mb6.0
MOD Modoc 85.45 39 *e*P **P 04 12 58.0 +0.2**
comp=Z,114nm,1.0s,mb5.5
217A Green Valley 85.50 52 ⇓P **P 04 12 58.9 +0.7**
baz=86,SNR=95
DL2 Dalian 85.54 317 ⇓*i*P **P 04 12 58.6 +0.3**
DL2 SKS 04 23 05.4
DL2 S S 04 23 21.5 +6.0
DL2 pmax pmax
comp=Z,80nm,1.5s,mb5.2
DL2 pmax pmax
comp=Z,510nm,4.2s
S11A Rachel 85.55 45 ⇓P **P 04 12 58.4 0.0**
baz=86,SNR=44
KDAK Kodiak Island 85.55 13 P **P 04 12 56.4 -1.5**
comp=Z,158nm,1.2s,mb5.6,baz=188,slow=6.0,SNR=6.7
KDAK Kodiak Island 85.55 13 *e*P **P 04 12 57.7 -0.2**
KDAK pmax pmax
comp=Z,224nm,1.3s,mb5.7
KDAK Kodiak Island 85.55 13 *e*P **P 04 12 57.7 -0.2**
comp=Z,224nm,1.3s,mb5.7
X14A Yava 85.57 49 ⇑P **P 04 12 59.1 +0.5**
baz=86,SNR=49
R10A Warm Springs 85.58 44 ⇑P **P 04 12 59.0 +0.5**
baz=86,SNR=91
U12A Valley of Fire 85.61 46 ⇓P **P 04 12 59.2 +0.5**
baz=86,SNR=48
SNG Songkhla 85.62 280 P **P 04 13 02.0 +2.7**
comp=Z,140nm,0.8s,mb5.7
WHN Wuhan 85.63 307 ⇓P **P 04 12 59.2 +0.3**
WHN pP pP 04 13 39.5 -1.7
WHN sP sP 04 13 57.6 -1.5
WHN S S 04 23 07.5 -9.3
WHN pmax pmax
comp=Z,340nm,1.1s,mb6.0
WHN pmax pmax
comp=Z,3μm,4.2s
V13A Grand Canyon W 85.63 47 ⇓P **P 04 12 59.2 +0.3**
baz=86,SNR=46
T11A Corn Creek, Al 85.64 45 ⇑P **P 04 12 59.3 +0.5**
baz=86,SNR=182
K05A Summer Lake 85.65 38 ⇓P **P 04 12 59.4 +0.7**
baz=86,SNR=41
Y15A Casa Rosa Ranc 85.65 49 ⇓P **P 04 12 59.5 +0.5**
baz=86,SNR=42
PLCA Paso Flores 85.66 133 P **P 04 12 59.8 +0.7**
comp=Z,117nm,1.1s,mb5.5,baz=237,slow=5.2,SNR=107
PLCA PKKPbc PKKPbc 04 31 01.4 +0.9
comp=Z,2.9nm,0.8s,baz=90,slow=1.0,SNR=4.4
PLCA LR LR 04 44 02.4
comp=Z,763nm,18.3s,baz=255,slow=30
PLCA Paso Flores 85.66 133 *e*P **P 04 12 59.8 +0.7**
comp=Z,389nm,1.4s,mb5.9
T12A Moapa 85.66 46 ⇓P **P 04 12 59.2 +0.3**
baz=86,SNR=6.8
HEBO Mount Hebo 85.77 35 *e*P **P 04 13 00.2 +1.0**
TUC Tucson 85.81 51 *e*P **P 04 13 00.6 +0.8**
TUC pmax pmax
comp=Z,95nm,0.9s,mb5.5
TUC Tucson 85.81 51 *e*P **P 04 13 00.6 +0.8**
comp=Z,95nm,0.9s,mb5.5
Q10A Clear Creek Ra 85.85 43 ⇓P **P 04 12 59.8 0.0**
baz=86,SNR=58
W14A Seligman 85.86 48 ⇑P **P 04 13 00.8 +0.8**
baz=86,SNR=67
318A Bisbee 85.90 52 ⇓P **P 04 13 00.9 +0.6**
baz=86,SNR=96
Z16A Peralta Trail, 85.93 50 ⇑P **P 04 13 01.0 +0.6**
baz=86,SNR=32
U13A Pakoon Wash 85.97 46 ⇓P **P 04 13 01.0 +0.6**
baz=86,SNR=78
117A Oracle 85.99 51 ⇑P **P 04 13 01.6 +0.9**
baz=86,SNR=77
X15A Humboldt 86.02 49 ⇓P **P 04 13 01.4 +0.6**
baz=86,SNR=86
R11A Troy Canyon, C 86.07 44 ⇑P **P 04 13 00.8 -0.1**
baz=86,SNR=44
V14A Boquillas Ranc 86.09 48 ⇑P **P 04 13 01.8 +0.7**
baz=86,SNR=85
S12A Delamar Landin 86.10 45 ⇑P **P 04 13 01.9 +0.8**
baz=86,SNR=105
218A Dragoon 86.15 52 ⇑P **P 04 13 02.4 +0.9**
baz=86,SNR=76
SNY Shenyang 86.19 320 ⇓P **P 04 13 01.4 0.0**
SNY pP pP 04 13 40.4 -3.3
SNY sP sP 04 13 57.9 -3.7
SNY PP PP 04 16 19.1 -5.8
SNY SKS 04 23 05.3
SNY S S 04 23 19.7 -2.0
SNY pmax pmax
comp=Z,110nm,2.1s,mb5.2
SNY pmax pmax
comp=Z,1μm,4.1s
SNY LR LR
comp=N,2μm,13.8s
SNY LR LR
comp=E,6μm,13.8s
SNY LR LR
comp=Z,7μm,13.2s
Y16A Circle Bar Ran 86.20 50 ⇑P **P 04 13 02.3 +0.7**
baz=86,SNR=177
H04A Detroit Lake 86.23 36 ⇑P **P 04 13 01.1 -0.5**
baz=86,SNR=14
Q11A Duckwater 86.33 44 ⇑P **P 04 13 02.1 -0.1**
baz=86,SNR=43
BMN Battle Mountai 86.33 42 *e*P **P 04 13 02.0 -0.2**
BMN *e*pP pP 04 13 44.9 +0.4
F03A Seaside 86.35 35 ⇑P **P 04 13 02.4 +0.3**
baz=86
T13A Saint George 86.36 46 ⇓P **P 04 13 02.9 +0.5**
baz=86,SNR=53
319A Douglas 86.38 53 ⇑P **P 04 13 03.4 +0.8**
baz=86,SNR=67
W15A Williams 86.39 48 ⇓P **P 04 13 03.4 +0.8**
baz=86,SNR=15
CN2 Changchun 86.40 323 ⇓P **P 04 13 02.1 -0.3**
CN2 *e*S S 04 23 29.1 +5.4
CN2 pmax pmax
comp=Z,300nm,1.2s,mb5.9
CN2 pmax pmax
comp=Z,1μm,4.0s
G04A Mulino, 86.42 36 ⇓P **P 04 13 02.5 0.0**
baz=87,SNR=13
X16A Lo Mia Camp, P 86.53 49 ⇓P **P 04 13 04.0 +0.7**
baz=87,SNR=155
Y17A Roosevelt 86.53 50 ⇑P **P 04 13 03.9 +0.6**
baz=87,SNR=62
118A Homack Ranch, 86.57 51 ⇑P **P 04 13 04.4 +0.9**
baz=87
Z17A San Carlos Hig 86.58 51 ⇓P **P 04 13 04.3 +0.8**
baz=87,SNR=22
R12A Pony Springs, 86.68 45 ⇑P **P 04 13 04.2 +0.3**
baz=87,SNR=54
P11A Circle Ranch, 86.69 43 ⇑P **P 04 13 03.9 0.0**
baz=87,SNR=19
S13A Holt Ranch, En 86.72 46 ⇓P **P 04 13 04.5 +0.4**
baz=87,SNR=56
219A White Tail Can 86.73 52 ⇓P **P 04 13 04.9 +0.6**
baz=87,SNR=26
WVOR Wild Horse Val 86.74 39 *e*P **P 04 13 04.0 -0.1**
WVOR pmax pmax
comp=Z,44nm,1.0s,mb5.2
WVOR Wild Horse Val 86.74 39 *e*P **P 04 13 04.0 -0.1**
comp=Z,44nm,1.0s,mb5.2
Z18A Geronimo 86.77 51 ⇑P **P 04 13 05.1 +0.7**
baz=87,SNR=24
E03A Lebam 86.77 34 ⇓P **P 04 13 04.5 +0.4**
baz=87,SNR=8.7
V15A Kaibab Nationa 86.82 48 ⇑P **P 04 13 05.4 +0.8**
baz=87,SNR=88
TIA Tai'an 86.84 313 ⇑P **P 04 13 05.1 +0.4**
TIA pmax pmax
comp=Z,370nm,1.1s,mb6.1
TIA pmax pmax
comp=Z,2μm,5.9s
TIA LR LR
comp=N,2μm,13.7s
TIA LR LR
comp=E,4μm,15.6s
TIA LR LR
comp=Z,6μm,17.7s
W16A Flagstaff 86.84 49 ⇑P **P 04 13 05.5 +0.7**
baz=87,SNR=88
320A Kipp Ranch, An 86.90 53 ⇑P **P 04 13 06.2 +1.1**
baz=87,SNR=93
X17A Forest Lakes 86.92 50 ⇑P **P 04 13 05.9 +0.8**
baz=87,SNR=45
T14A Hurricane 86.92 46 ⇑P **P 04 13 05.3 +0.2**
baz=87,SNR=27
KLR Kul'dur 86.94 330 ⇑*i*P **P 04 13 02.0 -2.8**
KLR *e*S S 04 23 10.0 -19
KLR *e* 04 23 30.5
KLR *e* 04 24 50.5
KLR pmax pmax
comp=Z,2μm,8.0s
KLR pmax pmax
comp=N,57nm,1.6s
KLR pmax pmax
comp=Z,600nm,1.6s,mb6.2
KLR smax
comp=N,2μm,7.0s
KLR smax
comp=E,1μm,7.0s
HOOD Mount Hood Mea 86.94 36 *e*P **P 04 13 04.4 -0.5**
comp=E,35nm,0.9s,mb5.2
F04A Amboy 86.94 35 ⇓P **P 04 13 04.7 -0.2**
baz=87,SNR=13
Q12A Willow Creek R 86.96 44 ⇑P **P 04 13 05.2 -0.1**
baz=87,SNR=18
R13A O'Grain Ranch, 87.00 45 ⇓P **P 04 13 06.0 +0.6**
baz=87,SNR=19
TPTI 87.01 275 P **P 04 13 06.8 +0.7**
CCUT Cedar City 87.02 46 *e*P **P 04 13 06.3 +0.7**
comp=E,76nm,1.0s,mb5.5
U15A North Rim 87.08 47 ⇓P **P 04 13 06.6 +0.7**
baz=87,SNR=104
ARUT Antelope Range 87.11 46 *e*P **P 04 13 06.4 +0.4**
ARUT pmax pmax
comp=Z,42nm,0.9s,mb5.3
ARUT Antelope Range 87.11 46 *e*P **P 04 13 06.4 +0.4**
comp=Z,42nm,0.9s,mb5.3
119A Ashpeak Ranch, 87.11 52 ⇓P **P 04 13 06.9 +0.8**
baz=87,SNR=30
Y18A Canyon Day Jun 87.14 50 ⇓P **P 04 13 07.2 +1.0**
baz=87,SNR=176
P12A McGill 87.17 44 ⇑P **P 04 13 06.3 +0.1**
baz=87,SNR=62
WUAZ Wupatki 87.18 48 ⇓P **P 04 13 06.8 +0.4**
baz=87,SNR=59
WUAZ Wupatki 87.18 48 *e*P **P 04 13 06.7 +0.3**
comp=Z,77nm,0.9s,mb5.5
NLWA Neilton Lookou 87.19 33 *e*P **P 04 13 06.3 +0.2**
220A Playas Peak, P 87.20 53 ⇑P **P 04 13 07.4 +0.8**
baz=87,SNR=57
S14A Cedar City 87.27 46 ⇓P **P 04 13 07.2 +0.4**
baz=87,SNR=18
I07A Izee 87.30 38 ⇑P **P 04 13 06.6 -0.1**
baz=88,SNR=29
T15A Red Dirt Ranch 87.36 47 ⇑P **P 04 13 07.7 +0.5**
baz=88,SNR=29
W17A Winslow 87.39 49 ⇓P **P 04 13 08.1 +0.7**
baz=88
J08A Circle Bar Ran 87.42 39 ⇑P **P 04 13 07.0 -0.3**
baz=88
Q13A Wheeler Ranch, 87.42 44 ⇑P **P 04 13 07.3 -0.1**
baz=88,SNR=55
Z19A T-Link Ranch, 87.42 51 ⇓P **P 04 13 08.3 +0.7**
baz=88,SNR=8.4
G06A Carlson Farm, 87.42 36 ⇑P **P 04 13 07.1 -0.2**
baz=88,SNR=19
120A U Bar Ranch, L 87.47 52 ⇓P **P 04 13 08.9 +1.0**
baz=88,SNR=60
X18A Snowflake 87.61 50 ⇑P **P 04 13 09.1 +0.7**
baz=88,SNR=106
R14A James Farms, M 87.67 45 ⇑P **P 04 13 08.7 0.0**
baz=88,SNR=10
U16A Tuba City 87.70 48 ⇓P **P 04 13 09.3 +0.5**
baz=88,SNR=48
P13A Bates Ranch, G 87.71 44 ⇓P **P 04 13 08.8 0.0**
baz=88,SNR=65
O12A Currie 87.74 43 ⇑P **P 04 13 08.6 -0.2**
baz=88,SNR=63
S15A Panguitch 87.74 46 ⇑P **P 04 13 10.4 +1.4**
baz=88,SNR=26
HDW Hoodsport 87.77 33 P **P 04 13 09.7 +0.8**
Y19A Nutioso 87.79 51 ⇓P **P 04 13 10.3 +1.0**
baz=88,SNR=107
221A Mesquite Ranch 87.80 53 ⇑P **P 04 13 10.2 +0.8**
baz=88,SNR=11
LON Longmire 87.80 35 *e*P **P 04 13 08.7 -0.3**
LON pmax pmax
comp=Z,31nm,0.9s,mb5.1
LON Longmire 87.80 35 *e*P **P 04 13 08.7 -0.4**
comp=Z,31nm,0.9s,mb5.1
Q14A Sevier Lake (B 87.91 45 ⇑P **P 04 13 10.0 +0.3**
baz=88,SNR=124
T16A Glen Canyon Da 87.92 47 ⇑P **P 04 13 10.0 +0.2**
baz=88,SNR=29
D05A Enumclaw 88.00 34 ⇑P **P 04 13 10.3 +0.4**
baz=88,SNR=44
RSO Redoubt South 88.00 12 *e*P **P 04 13 08.9 -0.8**
X19A St. Johns 88.02 50 ⇓P **P 04 13 10.9 +0.6**
baz=88,SNR=28
121A Cookes Peak, D 88.07 53 ⇓P **P 04 13 11.5 +0.8**
baz=88,SNR=34
W18A Petrified Fore 88.08 49 ⇓P **P 04 13 10.9 +0.3**
baz=88,SNR=5.3
R15A Junction 88.10 46 ⇓P **P 04 13 11.4 +0.7**
baz=88,SNR=51
O13A Hicks Ranch, I 88.13 43 ⇑P **P 04 13 10.9 +0.1**
baz=88,SNR=21
PGC Sidney 88.25 33 *e*P **P 04 13 11.6 +0.5**
comp=Z,5.0nm,1.0s,mb4.3
V18A Ganado 88.27 49 ⇑P **P 04 13 12.1 +0.6**
baz=88,SNR=44
S16A Weppner Ranch, 88.27 46 ⇓P **P 04 13 11.4 -0.1**
baz=88,SNR=25
RMW Rattlesnake Mo 88.27 34 P **P 04 13 11.5 +0.3**
NAC Naches 88.30 35 P **P 04 13 11.8 +0.4**
W19A Sanders 88.32 50 ⇑P **P 04 13 12.3 +0.5**
baz=88,SNR=38
222A Williams Famil 88.34 53 ⇓P **P 04 13 12.5 +0.6**
baz=88,SNR=24
MSU Marysvale 88.34 46 *e*P **P 04 13 12.6 +0.8**
SEW Seward 88.34 14 *e*P **P 04 13 11.0 -0.2**
comp=Z,138nm,1.1s,mb5.7
G08A Pilot Rock 88.37 37 ⇑P **P 04 13 11.7 0.0**
baz=88,SNR=92
Y20A Horse Springs, 88.38 51 ⇓P **P 04 13 13.2 +1.1**
baz=88,SNR=67
P14A Drum Mountains 88.39 44 ⇑P **P 04 13 12.0 0.0**
baz=88
T17A Navajo Res., N 88.39 47 ⇓P **P 04 13 12.6 +0.5**
baz=88,SNR=18
Q15A Fillmore 88.49 45 ⇑P **P 04 13 12.8 +0.3**
baz=89,SNR=47
HTW Haystack Looko 88.52 34 P **P 04 13 12.5 +0.1**
SLKM Skilak Lake 88.55 13 *e*P **P 04 13 11.8 -0.4**
Z21A St. Cloud Mine 88.56 52 ⇓P **P 04 13 14.0 +1.1**
baz=89,SNR=68
X20A Quemado 88.63 51 ⇑P **P 04 13 14.1 +0.8**
baz=89,SNR=60
R16A Teasdale 88.66 46 ⇑P **P 04 13 13.9 +0.6**
baz=89,SNR=37
E07A Sunnyside 88.70 36 ⇓P **P 04 13 13.5 +0.2**
baz=89,SNR=44
JCW Jim Creek 88.70 34 *e*P **P 04 13 13.4 +0.2**
U18A Rough Rock, Ch 88.70 48 ⇑P **P 04 13 13.6 0.0**
baz=89,SNR=26
122A Conniff Cattle 88.72 53 ⇓P **P 04 13 14.8 +1.1**
baz=89,SNR=40
RSW Rattlesnake Hi 88.73 36 *e*P **P 04 13 14.2 +0.8**
S17A Black Ridge (B 88.75 47 ⇑P **P 04 13 13.4 -0.3**
baz=89,SNR=20
CMW Cultus Mountai 88.76 33 P **P 04 13 14.2 +0.8**
HAWA Hanford 88.76 36 *e*P **P 04 13 13.4 -0.1**
comp=Z,68nm,1.0s,mb5.5
223A Chaparral, Ant 88.78 54 ⇑P **P 04 13 14.8 +0.8**
baz=89,SNR=15
P15A Leamington 88.88 45 ⇓P **P 04 13 14.2 0.0**
baz=89,SNR=43
V19A Window Rock 88.88 49 ⇓P **P 04 13 14.7 +0.3**
baz=89,SNR=8.4
DUG Dugway 88.89 44 ⇓P **P 04 13 14.0 -0.4**
baz=89,SNR=13
DUG Dugway 88.89 44 *e*P **P 04 13 13.9 -0.5**
DUG pmax pmax
comp=Z,20nm,1.0s,mb5.0
DUG Dugway 88.89 44 *e*P **P 04 13 13.9 -0.4**
comp=Z,20nm,1.0s,mb5.0
Y21A Point of Rocks 88.92 51 ⇑P **P 04 13 15.8 +1.2**
baz=89,SNR=105
W20A Ramah 88.94 50 ⇓P **P 04 13 15.6 +0.9**
baz=89,SNR=113
MFID Camas Ranch 88.97 40 ⇓P **P 04 13 14.7 +0.1**
baz=89,SNR=33
WRW Wenatchee Ridg 89.01 34 P **P 04 13 14.8 +0.1**
Z22A Elephant Butte 89.03 52 ⇑P **P 04 13 15.7 +0.5**
baz=89,SNR=165
ENH Enshi 89.06 304 *e*P **P 04 13 15.7 +0.3**
comp=Z,259nm,1.3s,mb6.0
X21A Alamocita Cree 89.08 51 ⇑P **P 04 13 15.8 +0.5**
baz=89,SNR=73
U19A Dine' College, 89.08 49 ⇓P **P 04 13 15.6 +0.3**
baz=89,SNR=53
T18A Mexican Hat 89.09 48 ⇑P **P 04 13 15.6 +0.2**
baz=89
OT3 Othello 3 89.09 36 P **P 04 13 15.7 +0.6**
LNOR Lincton Mounta 89.10 37 *e*P **P 04 13 14.7 -0.5**
CRAG Craig 89.12 24 *e*P **P 04 13 15.6 +0.6**
comp=Z,52nm,1.0s,mb5.4
ETW Entiat 89.12 35 P **P 04 13 15.7 +0.4**
B06A Marblemount 89.14 34 ⇓P **P 04 13 15.3 0.0**
baz=89,SNR=20
A05A Maple Falls 89.16 33 ⇑P **P 04 13 15.4 +0.1**
baz=89,SNR=9.6
O15A The Old Anders 89.16 44 ⇑P **P 04 13 16.0 +0.4**
baz=89,SNR=5.3
RC01 Rabbit Creek A 89.17 13 *e*P **P 04 13 14.9 -0.2**
comp=Z,266nm,1.2s,mb6.0
RC01 *e*PP PP 04 16 45.6 -2.7
324A Moseley Ranch, 89.18 54 ⇓P **P 04 13 16.0 +0.1**
baz=89,SNR=44
BGU Big Grassy Mou 89.18 43 *e*P **P 04 13 15.3 -0.3**
comp=Z,19nm,1.0s,mb5.0
425A Indio Mountain 89.21 55 ⇓P **P 04 13 16.3 +0.2**
baz=89,SNR=59
Q16A Castle Valley 89.22 46 ⇓P **P 04 13 16.5 +0.6**
baz=89,SNR=48
123A Bell Site, Whi 89.22 53 ⇓P **P 04 13 16.6 +0.5**
baz=89,SNR=15
NLU North Lily Min 89.22 44 *e*P **P 04 13 15.7 -0.2**
comp=Z,24nm,0.9s,mb5.1
626A Big Bend Ranch 89.24 57 ⇓P **P 04 13 16.3 0.0**
baz=89,SNR=58
R17A Hanksville Air 89.24 46 ⇑P **P 04 13 15.9 -0.1**
baz=89,SNR=32
P16A Fountain Green 89.29 45 ⇑P **P 04 13 16.9 +0.7**
baz=89,SNR=5.9
S18A Hurst Farm, Bl 89.31 47 ⇓P **P 04 13 16.1 -0.2**
baz=89,SNR=15
V20A Brimhall 89.32 49 ⇑P **P 04 13 16.6 +0.1**
baz=89,SNR=12
GYA Guiyang 89.36 300 ⇓*i*P **P 04 13 16.7 -0.2**
GYA PP PP 04 16 54.3 +3.7
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,470nm,8.6s
GYA LR LR
comp=N,4μm,19.9s
GYA LR LR
comp=E,2μm,20.7s
GYA LR LR
comp=Z,5μm,19.0s
WTV Waterville 89.38 35 P **P 04 13 16.5 +0.1**
MNTX Cornudas Mount 89.38 54 ⇑P **P 04 13 16.9 0.0**
baz=90,SNR=102
MNTX Cornudas Mount 89.38 54 *e*P **P 04 13 16.8 -0.1**
comp=Z,48nm,0.9s,mb5.4
Y22A Socorro 89.39 52 ⇑P **P 04 13 17.3 +0.5**
baz=90,SNR=88
TMUT Trail Mountain 89.41 45 *e*P **P 04 13 17.7 +0.9**
comp=Z,140nm,0.8s,mb5.9
224A Cornudas Mount 89.47 54 ⇓P **P 04 13 17.6 +0.4**
baz=90,SNR=67
TXAR Lajitas Array 89.48 57 P **P 04 13 17.3 -0.1**
comp=Z,22nm,0.8s,mb5.1,baz=213,slow=7.5,SNR=212
TXAR S S 04 23 33.1 -20
comp=Z,1.6nm,1.2s,baz=201,slow=6.6,SNR=6.1
TXAR PKKPbc PKKPbc 04 30 54.0 +2.1
comp=Z,0.6nm,0.6s,baz=133,slow=1.9,SNR=8.4
TXAR LR LR 04 45 43.9
comp=Z,378nm,19.5s,baz=125,slow=30
TXAR Lajitas Array 89.48 57 P **P 04 13 17.3 -0.1**
TXAR S S 04 23 33.1 -20
TXAR PKKPbc PKKPbc 04 30 54.0 +2.1
TXAR LR LR 04 45 44.0
Y22D IRIS PASSCAL I 89.49 52 ⇑P **P 04 13 17.8 +0.5**
baz=90,SNR=9.2
T19A Beclabito 89.49 48 ⇓P **P 04 13 17.2 -0.1**
baz=90,SNR=19
LENM Lemitar 89.50 52 *e*P **P 04 13 17.9 +0.6**
LAZ Ladron 89.51 51 *e*P **P 04 13 18.0 +0.6**
comp=Z,32nm,1.1s,mb5.2
LAZ *e*pP pP 04 14 01.3 +1.3
D08A Wollman Farm, 89.51 36 ⇑P **P 04 13 17.3 +0.2**
baz=90,SNR=91
325A Bean Ranch, Si 89.52 55 ⇑P **P 04 13 17.3 -0.2**
baz=90,SNR=73
526A Mary Lane Ranc 89.52 56 ⇑P **P 04 13 17.6 0.0**
baz=90
W21A San Fidel 89.53 50 ⇑P **P 04 13 17.9 +0.4**
baz=90
MPU Maple Canyon 89.54 45 *e*P **P 04 13 17.5 +0.1**
comp=Z,45nm,0.8s,mb5.5
Z23A Rita Site, Whi 89.56 53 ⇑P **P 04 13 18.1 +0.5**
baz=90,SNR=26
E09A Wood Farm, Sta 89.58 37 ⇓P **P 04 13 17.1 -0.3**
baz=90,SNR=76
NOQ North Oquirrh 89.59 44 *e*P **P 04 13 18.3 +0.7**
comp=Z,52nm,0.9s,mb5.5
U20A Newcomb 89.59 49 ⇑P **P 04 13 17.7 0.0**
baz=90,SNR=12
I12A Atlanta 89.60 40 ⇑P **P 04 13 17.7 +0.2**
baz=90,SNR=77
SIT Sitka 89.60 22 *e*P **P 04 13 18.2 +1.0**
SIT pmax pmax
comp=Z,55nm,1.1s,mb5.4
SIT Sitka 89.60 22 *e*P **P 04 13 18.2 +1.0**
comp=Z,55nm,1.1s,mb5.4
BJT Baijiatuau 89.61 315 *e*P **P 04 13 18.0 +0.2**
comp=Z,844nm,1.8s,mb6.4
BJI Beijing 89.62 315 P **P 04 13 18.1 +0.4**
BJI pmax pmax
comp=Z,160nm,1.8s,mb5.7
BJI pmax pmax
comp=Z,2μm,4.1s
O16A Springville 89.73 44 ⇑P **P 04 13 18.3 +0.1**
baz=90,SNR=16
BNM Barren Site 89.74 52 *e*P **P 04 13 18.8 +0.4**
comp=Z,41nm,1.1s,mb5.3
BNM *e*pP pP 04 14 01.1 0.0
F10A Beach Ranch, E 89.74 37 ⇓P **P 04 13 17.6 -0.6**
baz=90,SNR=134
SRU San Rafael 89.74 46 ⇑P **P 04 13 18.3 0.0**
baz=90,SNR=73
SRU San Rafael 89.74 46 *e*P **P 04 13 18.4 0.0**
SRU pmax pmax
comp=Z,67nm,0.9s,mb5.6
SRU San Rafael 89.74 46 *e*P **P 04 13 18.4 0.0**
comp=Z,67nm,0.9s,mb5.6
627A Terlingua Ranc 89.75 57 ⇑P **P 04 13 18.6 0.0**
baz=90,SNR=69
PMR Palmer 89.76 13 *e*P **P 04 13 17.1 -0.7**
PMR *e* 04 16 49.9
PMR pmax pmax
comp=Z,197nm,1.3s,mb5.9
PMR Palmer 89.76 13 *e*P **P 04 13 17.1 -0.7**
comp=Z,196nm,1.3s,mb5.9
PMR *e*PP PP 04 16 49.9 -3.1
R18A Canyonlands Na 89.76 47 ⇑P **P 04 13 18.3 -0.1**
baz=90,SNR=24
SPUT South Promonto 89.76 43 *e*P **P 04 13 17.7 -0.7**
comp=Z,61nm,1.0s,mb5.5

TTA Tatalina 89.76 10 eP P 04 13 17.9 +0.1
NST Nakhon Sawan 89.80 287 ⇑P P 04 13 20.5 +1.4
comp=Z,167nm,1.0s,mb5.9
P17A Butcher Ranch, 89.81 45 ⇓P P 04 13 18.8 +0.1
baz=90,SNR=79
LPM Los Pinos Moun 89.82 52 eP P 04 13 19.3 +0.5
HVU Hansel Valley 89.83 43 eP P 04 13 18.6 -0.1
HVU pmax pmax
comp=Z,229nm,1.9s,mb5.8
HVU Hansel Valley 89.83 43 eP P 04 13 18.6 -0.1
comp=Z,229nm,1.9s,mb5.8
OD2 Odessa Site #2 89.83 36 eP P 04 13 18.8 +0.3
124A Stringfield Ra 89.84 53 ⇑P P 04 13 19.4 +0.4
baz=90,SNR=42
CTU Camp Tracy 89.84 44 eP P 04 13 19.0 +0.3
comp=Z,45nm,0.9s,mb5.4
M15A Larsen Ranch, 89.85 43 ⇑P P 04 13 18.6 -0.1
baz=90,SNR=16
426A McDonald Obser 89.87 56 ⇑P P 04 13 19.2 0.0
baz=90,SNR=58
HLID Hailey 89.88 40 ⇑P P 04 13 19.0 +0.2
baz=90,SNR=81
HLID Hailey 89.88 40 eP P 04 13 18.8 -0.1
comp=Z,36nm,1.0s,mb5.3
V21A Milan 89.89 50 ⇑P P 04 13 19.3 +0.2
baz=90,SNR=10
S19A Harvey Farm, M 89.91 48 ⇓P P 04 13 19.0 -0.2
baz=90,SNR=23
527A Woodward Ranch 89.92 56 ⇑P P 04 13 19.2 -0.2
baz=90,SNR=48
J13A Cove Ranch, Pi 89.93 41 ⇓P P 04 13 19.4 +0.3
baz=90,SNR=98
JLU Jordanelle 89.98 44 eP P 04 13 19.5 0.0
comp=Z,27nm,0.9s,mb5.2
Q18A Rafter H Ranch 89.99 46 ⇑P P 04 13 19.0 -0.5
baz=90,SNR=28
225A Deer Hill, Car 90.00 54 ⇓P P 04 13 19.9 +0.2
baz=90,SNR=55
DAU Daniels Canyon 90.00 44 eP P 04 13 19.5 0.0
K14A Jones Ranch, D 90.03 42 ⇑P P 04 13 19.5 -0.1
baz=90,SNR=26
Y23A Lovelace Mesa, 90.03 52 ⇑P P 04 13 19.9 0.0
baz=90,SNR=54
W22A Albuquerque 90.05 51 ⇑P P 04 13 20.5 +0.6
baz=90,SNR=10
MVCO Mesa Verde 90.05 48 ⇓P P 04 13 19.5 -0.3
baz=90,SNR=24
MVCO Mesa Verde 90.05 48 eP P 04 13 19.7 -0.1
comp=Z,21nm,0.9s,mb5.1
DIV Divide 90.08 15 eP P 04 13 19.3 0.0
comp=Z,140nm,1.0s,mb5.8
SML Sawmill 90.12 13 eP P 04 13 18.7 -0.8
SML pmax pmax
comp=Z,28nm,1.2s,mb5.1
SML Sawmill 90.12 13 eP P 04 13 18.7 -0.8
comp=Z,28nm,1.2s,mb5.1
B08A Colville Reser 90.12 35 ⇓P P 04 13 19.2 -0.7
baz=90,SNR=82
R19A Curley Farm, L 90.12 47 ⇓P P 04 13 19.6 -0.5
baz=90,SNR=24
WRAK Wrangell Islan 90.13 23 eP P 04 13 20.4 +0.7
comp=Z,82nm,0.9s,mb5.7
628A Black Gap, Mar 90.15 57 ⇑P P 04 13 20.1 -0.3
baz=90,SNR=51
N16A Rees Ranch, Co 90.15 44 ⇑P P 04 13 20.4 +0.2
baz=90,SNR=29
L15A Malad City 90.19 43 ⇓P P 04 13 20.1 -0.3
baz=90,SNR=46
O17A Robinson Place 90.21 45 ⇑P P 04 13 20.8 +0.3
baz=90,SNR=122
U21A Nageezi 90.21 49 ⇑P P 04 13 20.6 0.0
baz=90,SNR=178
P18A Preston Nutter 90.21 45 ⇑P P 04 13 20.7 +0.2
baz=90,SNR=12
H12A Diamond D Ranc 90.21 39 ⇓P P 04 13 20.4 0.0
baz=90,SNR=152
BMRM Bremner River 90.21 15 eP P 04 13 19.9 -0.1
comp=Z,148nm,1.1s,mb5.8
Z24A Sheeppen Canyo 90.22 53 ⇓P P 04 13 21.0 +0.2
baz=90
326A Caldwell Ranch 90.23 55 ⇓P P 04 13 20.4 -0.4
baz=90,SNR=14
I13A Wildhorse Cree 90.26 40 ⇑P P 04 13 20.8 +0.1
baz=90,SNR=36
ANMO Albuquerque 90.27 51 P P 04 13 21.1 +0.2
comp=Z,35nm,0.9s,mb5.3,baz=220,slow=4.7,SNR=129
ANMO Albuquerque 90.27 51 P P 04 13 21.1 +0.2
ANMO pmax pmax
comp=Z,35nm,0.9s
ANMO Albuquerque 90.27 51 eP P 04 13 21.0 +0.1
comp=Z,35nm,0.9s,mb5.3
M16A Huntsville 90.27 44 ⇑P P 04 13 20.6 -0.2
baz=90,SNR=34
J14A Carey 90.27 41 ⇓P P 04 13 21.2 +0.5
baz=90,SNR=84
X23A Hourglass Bar 90.27 51 ⇓P P 04 13 21.1 +0.2
baz=90
G12A Big Creek, Yel 90.29 39 ⇑P P 04 13 20.6 -0.1
baz=90
PV10 Paradox Valley 90.32 47 eP P 04 13 17.6 -3.5
comp=Z,327nm,0.9s,mb6.3
C09A Chrisman Ranch 90.32 35 ⇑P P 04 13 20.5 -0.3
baz=90,SNR=34
PPLA Purkeypile 90.36 11 eP P 04 13 19.3 -1.4
comp=Z,48nm,1.1s,mb5.3
GDL2 Guadalupe Moun 90.38 54 eP P 04 13 21.6 +0.1
125A Gardner Draw, 90.40 54 ⇑P P 04 13 21.5 -0.1
baz=90,SNR=65
PV04 Paradox Valley 90.41 47 eP P 04 13 21.6 +0.1
427A Hayter Ranch, 90.43 56 ⇑P P 04 13 21.9 +0.1
baz=90,SNR=126
PNL Peninsula 90.47 18 eP P 04 13 21.2 0.0
comp=Z,121nm,1.0s,mb5.8
Y24A Capitan 90.47 52 ⇑P P 04 13 22.1 +0.3
baz=91,SNR=140
HWUT Hardware Ranch 90.47 43 eP P 04 13 21.2 -0.5
S20A Disappointment 90.47 48 ⇓P P 04 13 21.8 0.0
baz=91,SNR=30
Q19A Hogan Spring (90.48 46 ⇓P P 04 13 21.5 -0.3
baz=91,SNR=32
K15A Arbon 90.50 42 ⇑P P 04 13 21.6 -0.2
baz=91,SNR=22
PV01 Paradox Valley 90.50 47 eP P 04 13 21.5 -0.4
comp=Z,3μm,1.0s
226A Malaga, Loving 90.50 55 ⇓P P 04 13 21.9 -0.2
baz=91,SNR=29
528A Cox Ranch, San 90.55 57 ⇓P P 04 13 22.2 -0.1
baz=91,SNR=50
N17A Moffit Pass 90.56 44 ⇑P P 04 13 22.2 +0.1
baz=91,SNR=27
H13A Challis 90.56 40 ⇓P P 04 13 22.1 +0.1
baz=91,SNR=51
T21A Navajo Lake 90.59 49 ⇑P P 04 13 22.3 0.0
baz=91,SNR=23
W23A Werner Place, 90.59 51 ⇑P P 04 13 22.4 0.0
baz=91,SNR=21
327A Balmorhea Ranc 90.61 55 ⇓P P 04 13 22.5 -0.1
baz=91
R20A Redvale 90.65 47 ⇓P P 04 13 22.2 -0.4
baz=91,SNR=19
I14A Mackay 90.66 41 ⇑P P 04 13 22.8 +0.3
baz=91,SNR=80
Z25A Roswell 90.66 53 ⇓P P 04 13 22.9 +0.1
baz=91,SNR=58
F12A Elk City 90.70 38 ⇓P P 04 13 22.2 -0.4
baz=91,SNR=174
O18A Roosevelt 90.71 45 ⇑P P 04 13 22.7 -0.1
baz=91,SNR=16
U22A Llaves 90.73 50 ⇑P P 04 13 23.2 +0.1
baz=91
S21A Coal Bank Pass 90.77 48 ⇓P P 04 13 23.4 +0.2
baz=91,SNR=35
CLNB Carlsbad 90.77 54 eP P 04 13 22.9 -0.4
comp=Z,15nm,1.4s,mb4.8
L16A Fish Haven 90.79 43 ⇓P P 04 13 22.8 -0.3
baz=91,SNR=39
X24A Lazy VL Ranch, 90.80 52 ⇑P P 04 13 23.0 -0.4
baz=91,SNR=6.5
TIY Taiyuan 90.80 312 eP P 04 13 24.4 +1.1
TIY pP pP 04 14 06.5 +0.5
TIY S S 04 24 03.2 -2.0
TIY pmax pmax
comp=Z,240nm,1.1s,mb6.1
TIY LR LR
comp=N,2μm,12.5s
TIY LR LR
comp=E,2μm,11.1s
TIY LR LR
comp=Z,3μm,10.8s
126A Clayton Basin, 90.86 54 ⇓P P 04 13 23.2 -0.5
baz=91,SNR=17
V23A Ortiz Mt. (NFS 90.87 50 ⇓P P 04 13 24.3 +0.7
baz=91,SNR=35
G13A Cobalt 90.89 39 ⇑P P 04 13 23.4 -0.1
baz=91,SNR=66
428A Kincaid Ranch, 90.90 56 ⇓P P 04 13 24.1 +0.1
baz=91,SNR=27
E12A Beaver Dam Sad 90.92 38 ⇓P P 04 13 23.2 -0.5
baz=91,SNR=33
CMIG Matias Romero 90.94 72 P P 04 13 24.3 -0.1
comp=Z,17nm,0.9s,mb5.1,baz=258,slow=5.0,SNR=19
CMIG LR LR 04 45 20.9
comp=Z,315nm,18.1s,baz=66,slow=30
CMIG Matias Romero 90.94 72 P P 04 13 24.3 -0.1
CMIG LR LR 04 45 20.9
M17A Scullys Gap (B 90.96 44 ⇓P P 04 13 23.6 -0.3
baz=91,SNR=41
J15A Blackfoot 90.96 41 ⇑P P 04 13 24.5 +0.6
baz=91,SNR=79
Y25A Mesa, Roswell 91.00 53 ⇓P P 04 13 24.1 -0.2
baz=91,SNR=46
P19A Cripple Cowboy 91.03 46 ⇑P P 04 13 23.9 -0.4
baz=91,SNR=7.5
T22A Edith 91.03 49 ⇓P P 04 13 24.2 -0.2
baz=91,SNR=19
227A Bennet, Jal 91.08 55 ⇓P P 04 13 24.2 -0.6
baz=91
H14A Leadore 91.11 40 ⇓P P 04 13 24.9 +0.3
baz=91,SNR=74
Q20A Ridgley Place, 91.12 47 ⇑P P 04 13 24.5 -0.2
baz=91,SNR=30
328A Wristen Ranch, 91.13 56 ⇑P P 04 13 24.2 -0.8
baz=91,SNR=22
W24A Lazy 6 Ranch, 91.14 51 ⇑P P 04 13 24.7 -0.3
baz=91,SNR=44
K16A Soda Springs 91.15 42 ⇓P P 04 13 24.9 +0.1
baz=91,SNR=18
U23A El Rito 91.17 50 ⇑P P 04 13 25.2 +0.1
baz=91,SNR=28
L17A Cokeville 91.18 43 ⇑P P 04 13 24.3 -0.7
baz=91
Z26A Caprock 91.19 54 ⇓P P 04 13 24.8 -0.5
baz=91,SNR=55
NEW Newport 91.21 36 ⇓P P 04 13 24.5 -0.4
baz=91,SNR=27
NEW Newport 91.21 36 eP P 04 13 24.3 -0.6
NEW pmax pmax
comp=Z,22nm,0.9s
NEW Newport 91.21 36 eP P 04 13 24.3 -0.7
comp=Z,22nm,0.9s,mb5.2
TRF Thorofare Moun 91.22 12 eP P 04 13 23.6 -1.0
comp=Z,72nm,0.9s,mb5.7
SEY Seymchan 91.25 347 d iP P 04 13 24.7 -0.1
SEY Seymchan 91.25 347 i P P 04 13 24.7 -0.1
I15A Monteview 91.27 41 ⇑P P 04 13 25.9 +0.5
baz=91,SNR=41
O19A Miners Draw (B 91.30 45 ⇑P P 04 13 25.0 -0.5
baz=91,SNR=23
R21A Cimarron 91.30 48 ⇓P P 04 13 25.7 0.0
baz=91,SNR=67
M18A Lyman 91.31 44 ⇓P P 04 13 25.2 -0.4
baz=91,SNR=50
N18A Larsen Ranch, 91.31 45 ⇑P P 04 13 25.3 -0.3
baz=91
X25A Clemmons Ranch 91.33 52 ⇑P P 04 13 25.5 -0.3
baz=91,SNR=7.5
127A Arkansas Junct 91.36 54 ⇓P P 04 13 25.4 -0.6
baz=92,SNR=35
XAN Xi'an 91.36 307 P P 04 13 26.8 +0.8
XAN PP PP 04 17 06.8 +0.5
XAN SKS 04 23 42.2
XAN S S 04 24 14.0 +3.5
XAN SS SS 04 30 23.4 +2.6
XAN pmax pmax
comp=Z,33nm,1.0s,mb5.3
XAN pmax pmax
comp=Z,190nm,9.2s
XAN LR LR
comp=N,3μm,13.3s
XAN LR LR
comp=E,1μm,11.7s
XAN LR LR
comp=Z,2μm,12.1s
J16A Bone 91.38 42 ⇑P P 04 13 26.2 +0.4
baz=92,SNR=69
AHID Auburn Hatcher 91.41 43 eP P 04 13 26.4 +0.5
comp=Z,98nm,1.0s,mb5.8
C11A Tepee Creek (N 91.41 36 ⇑P P 04 13 25.6 -0.3
baz=92,SNR=80
G14A Jackson 91.42 40 ⇓P P 04 13 26.1 +0.1
baz=92,SNR=13
D12A Red Ives Fores 91.42 37 ⇓P P 04 13 25.1 -0.8
baz=92
LCO Las Campanas 91.42 123 eP P 04 13 26.4 -0.2
comp=Z,59nm,1.0s,mb5.6
BDT Bhumibol Dam 91.46 288 P P 04 13 29.0 +2.2
comp=Z,29nm,1.0s,mb5.3
S22A 4UR Ranch, Cre 91.46 49 ⇓P P 04 13 26.6 +0.2
baz=92,SNR=72
V24A Rampart Ranch, 91.50 51 ⇓P P 04 13 26.6 0.0
baz=92,SNR=45
K17A Gardner Place, 91.51 43 ⇑P P 04 13 26.5 +0.1
baz=92,SNR=58
SKAG Skagway 91.51 20 eP P 04 13 26.7 +0.7
comp=Z,65nm,1.1s,mb5.6
SKAG e pP 04 14 06.9 -1.8
SKAG ePP PP 04 17 05.1 -1.8
Q21A Lamborn Mesa, 91.53 47 ⇓P P 04 13 26.5 -0.2
baz=92,SNR=26
H15A Lima 91.53 40 ⇑P P 04 13 26.7 +0.2
baz=92,SNR=92
MCMT McKenzie Canyo 91.53 40 eP P 04 13 26.8 +0.2
comp=Z,48nm,1.0s,mb5.5
N19A John Jarvie Ra 91.58 45 ⇑P P 04 13 26.0 -0.8
baz=92,SNR=7.5
L18A Fontenelle, Gr 91.60 44 ⇑P P 04 13 26.5 -0.4
baz=92,SNR=12
RRI2 Red Ridge 91.60 42 eP P 04 13 26.8 -0.1
comp=Z,90nm,1.0s,mb5.8
Y26A Elida 91.63 53 ⇓P P 04 13 26.6 -0.6
baz=92,SNR=7.7
T23A Casias Ranch, 91.64 49 ⇓P P 04 13 27.2 0.0
baz=92,SNR=14
BPAW Bear Paw Mtn. 91.69 11 eP P 04 13 25.4 -1.4
comp=Z,74nm,1.5s,mb5.5
BPAW ePP PP 04 17 02.3 -5.9
E13A Victor 91.71 38 ⇑P P 04 13 26.2 -1.0
baz=92,SNR=21
MCK McKinley 91.73 12 eP P 04 13 25.9 -1.1
MCK e 04 17 03.9
MCK pmax pmax
comp=Z,62nm,1.1s,mb5.5
MCK McKinley 91.73 12 eP P 04 13 25.9 -1.1
comp=Z,62nm,1.1s,mb5.5
MCK ePP PP 04 17 03.9 -4.6
C12B Naegeli Ranch, 91.75 37 ⇑P P 04 13 27.0 -0.4
baz=92,SNR=29
R22A Saguache, Gunn 91.76 48 ⇓P P 04 13 28.0 +0.3
baz=92,SNR=38
PAX Paxson 91.77 14 eP P 04 13 24.8 -2.3
PAX e 04 17 05.3
PAX pmax pmax
comp=Z,51nm,1.2s,mb5.4
PAX Paxson 91.77 14 eP P 04 13 24.8 -2.4
comp=Z,51nm,1.2s,mb5.4
PAX ePP PP 04 17 05.3 -3.5
Z27A Tatum 91.77 54 ⇑P P 04 13 27.2 -0.7
baz=92
O20A White River Ci 91.78 46 ⇑P P 04 13 27.4 -0.4
baz=92,SNR=14
I16A Newdale 91.80 41 ⇓P P 04 13 28.3 +0.5
baz=92,SNR=105
F14A Wisdom 91.80 39 ⇑P P 04 13 27.3 -0.4
baz=92,SNR=18
W25A X Bar L Ranch, 91.82 52 ⇑P P 04 13 27.8 -0.3
baz=92,SNR=54
U24A Moreno Valley 91.84 50 ⇓P P 04 13 28.3 +0.2
baz=92
KMI Kunming 91.86 297 P P 04 13 29.8 +1.3
KMI pP pP 04 14 09.3 -1.9
KMI sP sP 04 14 26.3 -2.7
KMI PP PP 04 17 16.3 +5.9
KMI SKS 04 23 47.2
KMI S S 04 24 18.1 +2.8
KMI sS sS 04 25 28.1 -1.6
KMI pmax pmax
comp=Z,100nm,1.2s,mb5.7
KMI LR LR
comp=N,940nm,12.9s
KMI LR LR
comp=E,2μm,12.4s
KMI LR LR
comp=Z,3μm,11.5s
REDW Red Top Meadow 91.89 42 eP P 04 13 28.2 0.0
comp=Z,116nm,1.1s,mb5.8
TPAW Teton Pass 91.90 42 eP P 04 13 28.5 +0.2
comp=Z,52nm,0.9s,mb5.6
M19A Rock Springs 91.93 44 ⇑P P 04 13 27.9 -0.5
baz=92,SNR=11
CFAA Coronel Fontan 91.93 126 P P 04 13 28.2 -0.7
comp=Z,3.1nm,1.0s,mb4.3,baz=244,slow=3.8,SNR=42
CFAA LR LR 04 45 59.1
comp=Z,62nm,18.2s,baz=239,slow=30
CFAA Coronel Fontan 91.93 126 P P 04 13 28.2 -0.7
CFAA LR LR 04 45 59.1
G15A Dillon 91.94 40 ⇓P P 04 13 28.4 +0.1
baz=92,SNR=126
D13A Huson 91.94 38 ⇓P P 04 13 28.4 0.0
baz=92,SNR=9.2
CHRT Chiangrai 91.95 291 ⇓P P 04 13 29.0 0.0
comp=Z,1μm,1.0s,mb6.8
X26A CR and CF Fran 91.95 52 ⇓P P 04 13 28.2 -0.5
baz=92,SNR=8.8
HYT Haines Junctio 91.96 18 eP P 04 13 28.6 +0.5
J17A Brown Place, J 91.98 42 ⇑P P 04 13 28.7 +0.1
baz=92,SNR=84
DLMT Dillon 91.99 40 eP P 04 13 28.7 +0.1
comp=Z,71nm,1.0s,mb5.7
Q22A Crested Butte, 91.99 48 ⇓P P 04 13 28.9 +0.1
baz=92,SNR=50
K18A Toltan Ranch, 91.99 43 ⇑P P 04 13 28.9 +0.3
baz=92,SNR=166
S23A Nye Farm, Mont 92.00 49 ⇑P P 04 13 29.0 +0.1
baz=92,SNR=9.4
SNOW Snow King Moun 92.01 42 eP P 04 13 29.2 +0.4
comp=Z,123nm,1.0s,mb5.9
V25A Rancho No Teng 92.02 51 ⇑P P 04 13 28.7 -0.3
baz=92,SNR=35
CMAR Chiang Mai Arr 92.04 289 P P 04 13 30.4 +0.9
comp=Z,89nm,0.9s,mb5.8,baz=136,slow=3.0,SNR=109
CMAR PKKPbc PKKPbc 04 30 45.3 +0.4
comp=Z,2.6nm,0.6s,baz=291,slow=4.8,SNR=7.8
CMAR Chiang Mai Arr 92.04 289 P P 04 13 30.5 +1.0
CMAR 04 30 45.3
CMAR pmax pmax
comp=Z,89nm,0.9s
MSO Missoula 92.07 38 ⇓P P 04 13 27.9 -1.0
baz=92,SNR=20
MSO Missoula 92.07 38 eP P 04 13 26.8 -2.2
comp=Z,16nm,1.3s,mb4.9
E14A Clinton 92.08 39 ⇓P P 04 13 28.9 -0.1
baz=92,SNR=39
Y27A Causey 92.09 53 ⇓P P 04 13 28.7 -0.7
baz=92,SNR=40
MENT Mentasta 92.14 15 eP P 04 13 28.8 0.0
MENT ePP PP 04 17 07.2 -4.5
N20A Spence Gulch, 92.14 45 ⇑P P 04 13 29.4 0.0
baz=92,SNR=24
IMW Indian Meadow 92.14 42 eP P 04 13 29.8 +0.4
comp=Z,89nm,1.0s,mb5.8
B12A Libby 92.15 36 ⇓P P 04 13 29.1 -0.1
baz=92,SNR=6.0
MOOW Moose Ponds 92.17 42 eP P 04 13 29.4 -0.1
comp=Z,23nm,1.0s,mb5.2
LOHW Long Hollow 92.18 42 eP P 04 13 29.4 -0.2
comp=Z,40nm,1.0s,mb5.4
CHTO Chiang Mai 92.20 290 eP P 04 13 31.4 +1.2
CHTO e*PP pP 04 14 11.9 -1.0
CHTO pmax pmax
comp=Z,107nm,0.9s,mb5.9
CHTO Chiang Mai 92.20 290 eP P 04 13 31.4 +1.2
comp=Z,107nm,0.9s,mb5.9
CHTO epP pP 04 14 11.9 -1.0
CHTO Chiang Mai 92.20 290 P P 04 13 31.6 +1.4
SNR=55
BSMT Bassoo Peak 92.21 37 eP P 04 13 29.5 -0.1
C13A Hot Springs 92.22 37 ⇑P P 04 13 30.2 +0.5
baz=92
W26A Owens Ranch, T 92.25 52 ⇓P P 04 13 29.5 -0.6
baz=92,SNR=8.1
J18A Kendall Valley 92.32 43 ⇓P P 04 13 30.1 0.0
baz=92,SNR=267
F15A Butte 92.32 39 ⇑P P 04 13 29.8 -0.4
baz=92,SNR=36
O21A Pagoda 92.32 46 ⇑P P 04 13 29.8 -0.5
baz=92,SNR=6.2
T24A Torres, Weston 92.33 50 ⇓P P 04 13 30.4 0.0
baz=92,SNR=7.5
LRM Limekiln Ridge 92.33 39 eP P 04 13 29.8 -0.3
LRM ePP PP 04 17 11.6 -2.1
BW06 Boulder Array 92.36 43 ⇑P P 04 13 29.6 -0.8
baz=92,SNR=44
BW06 Boulder Array 92.36 43 eP P 04 13 30.0 -0.4
PDAR Pinedale Array 92.36 43 P P 04 13 29.8 -0.6
comp=Z,52nm,0.9s,mb5.6,baz=210,slow=2.9,SNR=282
PDAR PKKPbc PKKPbc 04 30 45.3 +0.1
comp=Z,1.4nm,0.6s,baz=64,slow=3.9,SNR=9.5
PDAR PKPPKP 04 38 54.4
comp=Z,0.7nm,0.8s,baz=5.2,slow=2.0,SNR=4.0
SDCO Great Sand Dun 92.36 49 ⇑P P 04 13 30.3 -0.2
baz=92,SNR=39
SDCO Great Sand Dun 92.36 49 eP P 04 13 30.3 -0.2
comp=Z,20nm,0.9s,mb5.2
SDCO e 04 14 25.7
I17A Pilgrim Ck. 92.37 42 ⇓P P 04 13 31.1 +0.7
baz=92,SNR=16
G16A Moss Hill, Enn 92.37 40 ⇑P P 04 13 30.4 0.0
baz=92,SNR=78
FLWY Flagg Ranch 92.39 42 eP P 04 13 31.0 +0.6
comp=Z,114nm,0.9s,mb5.9
A12A Yaak River Ran 92.39 36 ⇑P P 04 13 30.2 -0.1
baz=92,SNR=8.6
H16A Russell Place, 92.40 41 ⇑P P 04 13 31.2 +0.7
baz=92,SNR=54
MSTX Muleshoe 92.41 53 ⇑P P 04 13 30.4 -0.5
baz=92,SNR=38
SWMT Swartz Lake 92.44 37 eP P 04 13 29.8 -0.9
U25A Circle Dot Ran 92.44 51 ⇓P P 04 13 30.5 -0.4
baz=93,SNR=26
D14A Greenough 92.46 38 ⇑P P 04 13 29.9 -0.8
baz=93,SNR=22
P22A Eagle 92.47 47 ⇓P P 04 13 30.5 -0.4
baz=93,SNR=25
CHMT Chamberlain Mo 92.51 38 eP P 04 13 30.2 -0.8
CHMT epP pP 04 14 13.7 0.0
CHMT ePP PP 04 17 13.3 -1.7
YFT Old Faithful 92.51 41 eP P 04 13 32.8 +1.7
comp=Z,60nm,0.9s,mb5.7
S24A Houchin Ranch, 92.51 49 ⇓P P 04 13 31.5 +0.2
baz=93,SNR=16
X27A F and S Farms, 92.51 53 ⇓P P 04 13 30.9 -0.4
baz=93,SNR=18
M20A Sweetwater, Wa 92.53 45 ⇓P P 04 13 31.0 -0.2
baz=93,SNR=17
YMR Madison River 92.55 41 eP P 04 13 32.2 +1.0
comp=Z,76nm,0.9s,mb5.8
SLMT Seeley Lake 92.56 38 eP P 04 13 29.2 -2.0
SLMT ePP PP 04 17 12.9 -2.5
E15A Deer Lodge 92.57 39 ⇑P P 04 13 30.9 -0.4
baz=93,SNR=20
N21A Black Mountain 92.58 46 ⇓P P 04 13 31.4 0.0
baz=93,SNR=28
V26A Tequesquite Ra 92.58 51 ⇓P P 04 13 30.7 -0.9
baz=93,SNR=20
DOT Dot Lake 92.67 14 eP P 04 13 30.9 -0.4
comp=Z,195nm,1.1s,mb6.2
DOT ePP PP 04 17 10.8 -5.1
B13A Whitefish 92.69 37 ⇓P P 04 13 31.8 0.0
baz=93,SNR=6.2
TRQA Tornquist 92.69 135 eP P 04 13 32.2 0.0
comp=Z,112nm,1.5s,mb5.8
TRQA ePP PP 04 17 10.8 -5.0
I18A Diamond G Ranc 92.71 42 ⇑P P 04 13 31.8 -0.1
baz=93,SNR=40
BOZ Bozeman (W) 92.71 40 ⇑P P 04 13 31.9 -0.1
baz=93,SNR=88
BOZ Bozeman (W) 92.71 40 eP P 04 13 31.8 -0.1
BOZ pmax pmax
comp=Z,41nm,0.8s,mb5.6
BOZ Bozeman (W) 92.71 40 eP P 04 13 31.8 -0.1
comp=Z,41nm,0.8s,mb5.6
BOZ epP pP 04 14 14.8 +0.2

L20A Wamsutter 92.71 44 ⇓P P 04 13 32.2 +0.2
baz=93,SNR=39
C14A Swan Lake 92.73 37 ⇑P P 04 13 31.8 -0.2
baz=93,SNR=5.3
Q23A Hartsel 92.73 48 ⇓P P 04 13 32.2 0.0
baz=93,SNR=16
YNR Norris Junctio 92.75 41 *e*P **P 04 13 33.5 +1.4**
comp=Z,22nm,0.9s,mb5.3
F16A Kennard Place, 92.79 40 ⇓P P 04 13 32.4 +0.2
baz=93,SNR=33
T25A Trinidad 92.81 50 ⇑P P 04 13 32.1 -0.5
baz=93
LKWY Lake 92.83 41 *e*P **P 04 13 33.9 +1.4**
LKWY pmax pmax
comp=Z,39nm,0.9s,mb5.5
LKWY Lake 92.83 41 *e*P **P 04 13 33.9 +1.4**
comp=Z,39nm,0.9s,mb5.5
K19A Absolon Red Bu 92.83 43 ⇓P P 04 13 31.7 -0.9
baz=93,SNR=40
R24A Sanders Place, 92.88 49 ⇑P P 04 13 32.8 -0.1
baz=93,SNR=27
HIA Hailar 92.89 324 *e*P **P 04 13 32.2 -0.5**
HIA pmax pmax
comp=Z,49nm,1.1s
HIA Hailar 92.89 324 *e*P **P 04 13 32.2 -0.5**
comp=Z,49nm,1.1s,mb5.5
O22A Kremmling 92.90 47 ⇓P P 04 13 32.7 -0.2
baz=93,SNR=50
J19A Crowheart 92.94 43 ⇓P P 04 13 32.7 -0.3
baz=93,SNR=15
P23A Jefferson 92.97 48 ⇑P P 04 13 33.6 +0.4
baz=93,SNR=13
COLA College 92.97 12 *e*P **P 04 13 31.6 -1.0**
COLA *e* 04 17 13.8
COLA pmax pmax
comp=Z,77nm,1.1s,mb5.8
COLA College 92.97 12 *e*P **P 04 13 31.6 -1.1**
comp=Z,77nm,1.1s,mb5.7
COLA *e*PP PP 04 17 13.8 -4.4
JCT Junction City 92.97 58 ⇓P P 04 13 32.4 -1.2
baz=93
JCT Junction City 92.97 58 *e*P **P 04 13 32.4 -1.1**
JCT pmax pmax
comp=Z,40nm,1.0s,mb5.5
JCT Junction City 92.97 58 *e*P **P 04 13 32.4 -1.1**
comp=Z,40nm,1.0s,mb5.5
D15A Lincoln 92.99 38 ⇓P P 04 13 32.8 -0.4
baz=93,SNR=11
HHC Hu-ho-hao-te 93.02 314 ⇓P P 04 13 34.2 +0.7
HHC PP PP 04 17 21.7 +2.6
HHC SKS 04 23 52.5
HHC S S 04 24 29.1 +4.2
HHC pmax pmax
comp=Z,120nm,1.5s,mb5.8
HHC pmax pmax
comp=Z,1μm,4.8s
HHC LR LR
comp=N,2μm,13.2s
HHC LR LR
comp=E,2μm,16.0s
HHC LR LR
comp=Z,2μm,15.8s
G17A Pierce Place, 93.05 41 ⇑P P 04 13 33.5 0.0
baz=93,SNR=25
A13A Flathead Natio 93.05 36 ⇑P P 04 13 33.0 -0.4
baz=93
S25A Robets Cordova 93.05 50 ⇑P P 04 13 33.3 -0.4
baz=93,SNR=15
K20A Yellowstone Ra 93.06 44 ⇓P P 04 13 32.7 -0.9
baz=93,SNR=40
ILAR Eielson Array 93.06 13 P **P 04 13 31.9 -1.2**
comp=Z,15nm,1.0s,mb5.1,baz=224,slow=4.8,SNR=75
ILAR PP PP 04 17 14.3 -4.7
comp=Z,14nm,1.0s,baz=226,slow=7.4,SNR=8.9
ILAR S SKSac 04 23 53.2 +2.9
comp=Z,0.5nm,1.1s,baz=232,slow=3.0,SNR=4.5
ILAR ScS ScS 04 24 24.6 -1.2
comp=Z,2.2nm,1.2s,baz=210,slow=9.7,SNR=5.3
ILAR PKKP PKKPbc 04 30 36.0 -8.5
comp=Z,0.9nm,0.8s,baz=332,slow=2.6,SNR=5.0
ILAR Eielson Array 93.06 13 P **P 04 13 31.9 -1.2**
ILAR 04 17 14.3
ILAR S SKSac 04 23 53.2 +2.9
ILAR 04 24 24.6
ILAR pmax pmax
comp=Z,15nm,1.0s
ILAR pmax pmax
comp=Z,14nm,1.0s
ILAR smax
comp=N,1.0nm,1.1s
M21A Separation Pea 93.12 45 ⇓P P 04 13 33.3 -0.6
baz=93,SNR=24
E16A East Helena 93.18 39 ⇑P P 04 13 33.6 -0.5
baz=93,SNR=5.6
HRY Holter Researc 93.19 39 *e*P **P 04 13 33.2 -0.9**
Q24A Divide 93.22 48 ⇓P P 04 13 34.3 -0.2
baz=93
N22A Wattenberg Ran 93.29 46 ⇓P P 04 13 34.8 0.0
baz=93,SNR=20
L21A Rawlins 93.30 45 ⇓P P 04 13 34.0 -0.8
baz=93,SNR=8.1
B14A Marquette Ranc 93.33 37 ⇓P P 04 13 33.8 -1.0
baz=94,SNR=49
ISCO Idaho Springs 93.33 47 ⇓P P 04 13 34.8 -0.2
baz=94,SNR=16
ISCO Idaho Springs 93.33 47 *e*P **P 04 13 34.7 -0.2**
ISCO pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
ISCO Idaho Springs 93.33 47 *e*P **P 04 13 34.7 -0.3**
comp=Z,9.7nm,0.8s,mb5.0
H18A Shoshone NF, C 93.33 42 ⇑P P 04 13 34.7 -0.1
baz=94
O23A Lake Granby, G 93.34 47 ⇓P P 04 13 35.0 0.0
baz=94,SNR=43
C15A Salmond Ranch, 93.36 38 ⇓P P 04 13 34.3 -0.6
baz=94,SNR=9.6
WALA Waterton Lakes 93.39 36 *e*P **P 04 13 34.6 -0.4**
comp=Z,1.0nm,1.0s
R25A Fountain Ranch 93.40 49 ⇓P P 04 13 34.7 -0.6
baz=94,SNR=10
F17A Fitzpatrick Pl 93.42 40 ⇑P P 04 13 35.5 +0.3
baz=94,SNR=27
D16A Dana Ranch, Ca 93.53 39 ⇓P P 04 13 35.6 0.0
baz=94,SNR=12
J20A Shoshoni 93.58 43 ⇓P P 04 13 35.9 -0.1
baz=94,SNR=64
A14A Double T Ranch 93.60 36 ⇑P P 04 13 35.5 -0.5
baz=94,SNR=35
E17A Martinsdale 93.61 40 ⇓P P 04 13 35.7 -0.3
baz=94,SNR=6.9
AMTX Amarillo 93.64 53 ⇑P P 04 13 35.7 -0.8
baz=94
AMTX Amarillo 93.64 53 *e*P **P 04 13 35.7 -0.8**
comp=Z,23nm,0.9s,mb5.3
P24A Kohler Place, 93.66 48 ⇓P P 04 13 35.9 -0.6
baz=94
N23A Red Feather La 93.67 46 ⇑P P 04 13 36.4 -0.1
baz=94,SNR=28
B15A Bradely Ranch, 93.69 37 ⇓P P 04 13 35.4 -1.0
baz=94
CD2 Chengdu 93.70 302 ⇑*i*P **P 04 13 37.8 +0.9**
CD2 PP PP 04 17 27.0 +2.3
CD2 SKS 04 23 55.2
CD2 pmax pmax
comp=Z,190nm,1.1s,mb6.1
CD2 pmax pmax
comp=Z,1μm,4.8s
K21A Alcova 93.73 44 ⇑P P 04 13 36.1 -0.6
baz=94,SNR=33
H19A Powell 93.73 42 ⇑P P 04 13 36.9 +0.2
baz=94,SNR=21
G18A Lazy EL Ranch, 93.74 41 ⇓P P 04 13 36.7 0.0
baz=94,SNR=28
Q25A Bedland, Calha 93.80 49 ⇓P P 04 13 36.4 -0.7
baz=94,SNR=11
RLMT Red Lodge 93.81 41 ⇓P P 04 13 37.2 +0.2
baz=94,SNR=25
RLMT Red Lodge 93.81 41 *e*P **P 04 13 37.5 +0.5**
comp=Z,22nm,0.9s,mb5.3
O24A Longmont 93.85 47 ⇑P P 04 13 37.4 0.0
baz=94,SNR=11
C16A Fuhringer Ranc 93.85 38 ⇑P P 04 13 36.4 -0.7
baz=94
I20A Worland 93.87 43 ⇑P P 04 13 37.0 -0.4
baz=94,SNR=12
BTO Baotou 93.90 313 *e*P **P 04 13 37.2 -0.3**
GCMT Greycliff 93.93 41 *e*P **P 04 13 37.7 +0.2**
comp=Z,18nm,1.1s,mb5.1
L22A Ellis Ranch, M 93.94 45 ⇓P P 04 13 37.7 0.0
baz=94
F18A Big Timber 93.97 40 ⇓P P 04 13 37.8 +0.1
baz=94,SNR=21
J21A Lysite 93.98 43 ⇓P P 04 13 37.8 -0.1
baz=94,SNR=74
A15A Johnson Ranch, 93.98 37 ⇑P P 04 13 36.9 -0.8
baz=94,SNR=24
BILL Bilibino 93.98 354 ⇑*e*P **P 04 13 37.1 -0.1**
BILL *e* 04 17 28.7
BILL *e*S SKSac 04 23 58.3 +3.1
BILL *e*PS PS 04 25 51.7 -18
BILL *e*SS SS 04 31 06.7 +10
BILL pmax pmax
comp=Z,123nm,1.0s,mb6.0
BILL Bilibino 93.98 354 *e*P **P 04 13 36.9 -0.3**
comp=Z,112nm,1.0s,mb6.0
BILL *e* pP 04 14 19.7 -0.2
D17A Six Diamond Ra 94.09 39 ⇓P P 04 13 38.0 -0.2
baz=94,SNR=25
DAWY Dawson 94.13 16 *e*P **P 04 13 38.0 0.0**
DAWY *e*pP pP 04 14 19.9 -0.8
P25A Willow Gulch B 94.15 48 ⇑P P 04 13 38.5 -0.2
baz=94,SNR=19
PHWY Pilot Hill 94.19 46 *e*P **P 04 13 38.2 -0.7**
comp=Z,12nm,0.8s,mb5.1
K22A Casper 94.20 44 ⇓P P 04 13 38.3 -0.5
baz=94,SNR=22
E18A Harlowton 94.21 40 ⇑P P 04 13 38.9 +0.1
baz=94,SNR=9.1
B16A M & M Farms, S 94.22 38 ⇑P P 04 13 37.8 -1.0
baz=94,SNR=5.9
H20A Greybull 94.23 42 ⇑P P 04 13 38.3 -0.7
baz=94,SNR=16
EGAK Eagle 94.30 15 *e*P **P 04 13 38.5 -0.3**
comp=Z,46nm,1.1s,mb5.5
EGAK *e*PP PP 04 17 25.4 -3.2
C17A Wharram Farm, 94.31 39 ⇑P P 04 13 38.8 -0.4
baz=94,SNR=31
I21A Big Trails, Te 94.32 43 ⇑P P 04 13 38.9 -0.5
baz=94,SNR=58
N24A Carr 94.33 47 ⇑P P 04 13 39.4 -0.1
baz=94,SNR=31
F19A Roth Farm, Mol 94.39 41 ⇓P P 04 13 39.3 -0.4
baz=94,SNR=7.6
L23A Garrett 94.45 45 ⇑P P 04 13 39.6 -0.4
baz=95,SNR=26
NNA Nana 94.47 105 LR LR 04 47 06.3
comp=Z,378nm,18.4s,baz=255,slow=30
NNA Nana 94.47 105 *e*P **P 04 13 41.0 +0.1**
comp=Z,99nm,1.5s,mb5.7
G20A Bridger 94.49 42 ⇓P P 04 13 39.6 -0.5
baz=95,SNR=13
J22A Midwest 94.61 44 ⇑P P 04 13 40.1 -0.6
baz=95,SNR=54
D18A Linhart Farms, 94.62 39 ⇑P P 04 13 40.5 -0.2
baz=95,SNR=7.9
B17A L&G Farms, Che 94.66 38 ⇓P P 04 13 40.0 -0.8
baz=95
COLD Coldfoot 94.68 10 *e*P **P 04 13 40.3 -0.2**
comp=Z,28nm,1.2s,mb5.4
COLD *e*PP PP 04 17 25.6 -5.9
M24A Cheyenne 94.69 46 ⇓P P 04 13 41.1 -0.1
baz=95,SNR=16
E19A Rath Farm, Rou 94.81 40 ⇓P P 04 13 41.4 -0.1
baz=95,SNR=9.1
F20A Billings 94.84 41 ⇓P P 04 13 41.5 -0.2
baz=95,SNR=7.6
N25A Grover 94.85 47 ⇓P P 04 13 41.6 -0.3
baz=95
H21A Big Horn, Sher 94.89 43 ⇑P P 04 13 41.7 -0.3
baz=95,SNR=22
L24A Wheatland 94.91 46 ⇑P P 04 13 42.1 0.0
baz=95,SNR=15
A17A Triple J Farms 95.07 38 ⇑P P 04 13 42.3 -0.4
baz=95
EGMT Eagleton 95.09 39 ⇓P P 04 13 42.6 -0.2
baz=95
EGMT Eagleton 95.09 39 *e*P **P 04 13 42.0 -0.8**
comp=Z,8.2nm,0.9s,mb5.0
G21A Lodge Grass 95.10 42 ⇓P P 04 13 42.5 -0.4
baz=95
CLNS Chul'man 95.15 332 *d i*P **P 04 13 43.1 +0.3**
CLNS *e*PPP 04 19 48.4
CLNS *e*S SKSac 04 24 08.1 +6.2
CLNS *e* 04 24 46.8
CLNS *e*SSS 04 34 50.6
CLNS pmax pmax
comp=Z,116nm,1.5s,mb5.9
CLNS pmax pmax
comp=N,53nm,1.3s
CLNS pmax pmax
comp=E,17nm,1.4s
CLNS smax
comp=E,340nm,12.5s
CLNS smax
comp=N,451nm,12.3s
CLNS Chul'man 95.15 332 ⇓*i*P **P 04 13 43.2 +0.4**
E20A Meyer Farm, Mu 95.22 41 ⇓P P 04 13 43.2 -0.2
baz=95
ATAH Atahualpa 95.27 100 P **P 04 13 46.7 +2.2**
comp=N,44nm,1.3s,mb5.5,baz=218,slow=3.1,SNR=29
ATAH PP PP 04 17 30.9 -6.0
comp=N,4.6nm,0.9s,baz=225,slow=4.3,SNR=2.1
ATAH LR LR 04 48 33.2
comp=N,638nm,18.6s,baz=249,slow=30
B18A Beardsley Farm 95.28 38 ⇑P P 04 13 43.2 -0.5
baz=95,SNR=14
C19A Slack Wire Ran 95.34 39 ⇑P P 04 13 43.9 0.0
baz=96
F21A Absaloka Mine, 95.46 41 ⇓P P 04 13 44.5 -0.1
baz=96
D20A Manuel Ranch, 95.52 40 ⇑P P 04 13 44.8 0.0
baz=96
A18A Metzger Ranch, 95.53 38 ⇓P P 04 13 44.0 -0.8
baz=96
WMOK Wichita Mounta 95.69 54 *e*P **P 04 13 44.7 -1.2**
WMOK pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
WMOK Wichita Mounta 95.69 54 *e*P **P 04 13 44.7 -1.2**
comp=Z,9.4nm,1.2s,mb5.0
E21A Keefer Ranch, 95.86 41 ⇑P P 04 13 46.2 -0.1
baz=96
C20A Veseth Ranch, 95.93 40 ⇓P P 04 13 46.6 0.0
baz=96
LZH Lanzhou 96.00 307 *e*P **P 04 13 48.3 +1.1**
LZH PP PP 04 17 43.1 +0.7
LZH SKS 04 24 08.0
LZH S S 04 24 55.1 +4.0
LZH pmax pmax
comp=Z,62nm,1.3s,mb5.8
LZH pmax pmax
comp=Z,490nm,4.6s
EDM Edmonton 96.09 33 *e*P **P 04 13 46.4 -0.8**
D21A La Casta Ranch 96.18 40 ⇑P P 04 13 47.9 +0.1
baz=96
OGNE Ogallala 96.28 48 ⇓P P 04 13 47.9 -0.4
baz=96
LAO LASA Array 96.44 41 ⇑P P 04 13 48.7 -0.3
baz=97
RSSD Black Hills 96.50 44 *e*P **P 04 13 48.6 -0.7**
RSSD pmax pmax
comp=Z,28nm,0.9s,mb5.6
RSSD Black Hills 96.50 44 *e*P **P 04 13 48.6 -0.7**
comp=Z,28nm,0.9s,mb5.6
JTS JuntasAbangare 96.78 82 P **P 04 13 51.1 -0.2**
comp=Z,164nm,1.0s,mb6.3,SNR=5.0
JTS JuntasAbangare 96.78 82 *i*P **P 04 13 50.6 -0.7**
JTS JuntasAbangare 96.78 82 *e*P **P 04 13 50.2 -1.1**
YAK Yakutsk 96.80 338 *d i*P **P 04 13 49.1 -1.1**
YAK *e*S SKSac 04 24 14.7 +4.4
YAK *e**SS S 04 24 56.9 +0.2
YAK pmax pmax
comp=Z,257nm,1.1s,mb6.5
YAK pmax pmax
comp=N,36nm,1.1s
YAK pmax pmax
comp=E,40nm,1.0s
YAK smax
comp=E,41nm,1.5s
YAK smax
comp=N,303nm,5.6s
YAK Yakutsk 96.80 338 *e*P **P 04 13 49.5 -0.7**
comp=N,272nm,1.0s,mb6.5
OTAV Otavalo 98.43 94 *e*P **P 04 14 00.1 +1.3**
comp=N,26nm,1.7s,mb5.4
OTAV *e*PP PP 04 17 55.1 -6.2
DGMT Dagmar 98.51 40 ⇑P **P 04 13 58.3 +0.1**
baz=99
INK Inuvik 98.96 15 P **P 04 13 59.4 -0.4**
comp=N,7.8nm,1.0s,mb5.1,baz=211,slow=6.4,SNR=9.5
INK PP PP 04 17 56.5 -7.8
comp=N,18nm,1.1s,baz=204,slow=7.6,SNR=5.6
INK S SKSac 04 24 21.4 +0.3
comp=N,5.4nm,1.2s,baz=223,slow=7.5,SNR=7.7
INK Inuvik 98.96 15 P **P 04 13 59.4 -0.4**
INK S SKSac 04 24 21.4 +0.3
INK pmax pmax
comp=Z,8.0nm,1.0s
INK smax
comp=N,5.0nm,1.2s
ULN Ulaanbaatar 99.29 319 *i* P Pdif 04 14 01.4 -0.5
ULN Ulaanbaatar 99.29 319 *i* P Pdif 04 14 01.4 -0.5
ULN Ulaanbaatar 99.29 319 P Pdif 04 14 01.7 -0.2
SNR=20
SONM Songino Array 99.67 318 P Pdif 04 14 03.4 -0.2
comp=N,17nm,1.2s,baz=134,slow=4.2,SNR=40
SONM PP PP 04 18 04.7 -5.4
comp=N,12nm,1.2s,baz=131,slow=4.9,SNR=7.2
SONM PKKPbc PKKPbc 04 30 24.8 -0.8
comp=N,6.7nm,0.8s,baz=260,slow=2.8,SNR=20
SONM Songino Array 99.67 318 P Pdif 04 14 03.4 -0.2
SONM 04 18 04.7
SONM pmax pmax
comp=Z,17nm,1.2s
SONM pmax pmax
comp=Z,12nm,1.2s
LPAZ La Paz 99.86 113 P Pdif 04 14 06.2 +1.7
comp=Z,5.1nm,1.0s,baz=251,slow=3.5,SNR=19
LPAZ PP PP 04 18 07.1 -4.7
comp=Z,8.1nm,1.1s,baz=253,slow=7.8,SNR=4.6
LPAZ PKKPbc PKKPbc 04 30 24.8 +1.2
comp=Z,2.5nm,0.6s,baz=41,slow=3.8,SNR=17
LPAZ LR LR 04 49 50.0
comp=Z,338nm,18.9s,baz=265,slow=30
GTA Gaotai 100.32 309 P Pdif 04 14 07.0 +0.5
GTA SKS 04 24 28.5
GTA S Sdif 04 25 29.8 +2.4
GTA SS SS 04 32 28.2 +1.1
GTA pmax pmax
comp=Z,16nm,1.8s
GTA pmax pmax
comp=Z,280nm,8.9s
GTA LR LR
comp=N,310nm,15.8s
GTA LR LR
comp=E,320nm,13.7s
GTA LR LR
comp=Z,440nm,13.4s
YKA Yellowknife Ar 100.87 25 P Pdif 04 14 07.5 -1.4
comp=Z,2.9nm,0.8s,baz=229,slow=3.8,SNR=5.3
YKA PKKPbc PKKPbc 04 30 20.4 -2.2
comp=Z,2.9nm,0.8s,baz=58,slow=2.5,SNR=3.2
YKA Yellowknife Ar 100.87 25 P Pdif 04 14 07.5 -1.4
YKA PKKPbc PKKPbc 04 30 20.4 -2.2
SHL Shillong 100.94 293 *e*PKP Pdif 04 14 10.0 +0.7
ECSD EROS Data Cent 101.11 47 *e*Pdif Pdif 04 14 10.3 +0.2
ZAK Zakamensk 102.62 320 *e*P Pdif 04 14 15.5 -1.2
ZAK pmax pmax
comp=Z,5.0nm,2.0s
CPUP Villa Florida 102.78 127 Pdiff Pdif 04 14 20.0 +2.6
comp=Z,2.3nm,0.9s,baz=209,slow=7.6,SNR=3.9
CPUP Villa Florida 102.78 127 P Pdif 04 14 20.0 +2.5
CPUP pmax pmax
comp=Z,2.0nm,0.9s
CPUP Villa Florida 102.78 127 Pdif Pdif 04 14 20.0 +2.6
TLY Talaya 102.95 321 *e*P Pdif 04 14 15.5 -2.7
TLY *e*S Sdif 04 25 41.1 -8.2
TLY pmax pmax
comp=Z,11nm,1.4s
TLY Talaya 102.95 321 *i* P Pdif 04 14 17.1 -1.1
TLY Talaya 102.95 321 P Pdif 04 14 17.6 -0.6
SNR=7.8
TIXI Tiksi 103.59 345 *d i*P Pdif 04 14 19.2 -1.9
TIXI *e* 04 18 33.2
TIXI *e*S SKSac 04 24 42.6 -0.6
TIXI *e*SP SP 04 27 30.3 -0.7
TIXI *e*PS PS 04 27 47.5 -5.1
TIXI *e* 04 28 51.1
TIXI pmax pmax
comp=Z,18nm,1.1s
TAPN Taplejung 105.08 293 *e*P PKiKP 04 18 42.6 +0.8
comp=Z,45nm,1.2s
ODAN Odare 105.17 293 *e*P PKiKP 04 18 42.8 +0.8
comp=Z,36nm,0.8s
SIV San Ignacio 105.80 117 Pdiff Pdif 04 14 34.5 +3.6
comp=Z,1.2nm,0.9s,baz=268,slow=8.3,SNR=5.3
RAMN Ramite 105.86 293 *e*P PKiKP 04 18 43.6 +0.3
comp=Z,18nm,0.6s
JIRN Jiri 106.45 293 *e*P PKiKP 04 18 44.8 +0.5
GUN Gumba 106.79 293 *e*P PKiKP 04 18 45.2 +0.2
PKI Pulchoki 107.07 293 *e*P PKiKP 04 18 45.6 +0.1
comp=Z,32nm,0.9s
KKN Kakani 107.25 293 *e*P PKiKP 04 18 45.8 0.0
comp=Z,26nm,0.8s
DMN Daman 107.33 293 *e*P PKiKP 04 18 46.2 +0.2
GKN Gorkha 107.86 293 *e*P PKiKP 04 18 46.4 -0.5
KOLN Koldanda 108.64 292 *e*P PKiKP 04 18 48.0 -0.4
comp=Z,17nm,0.9s
DANN Dangsing 108.70 293 *e*P PKiKP 04 18 48.4 -0.1
comp=Z,49nm,0.9s
WMQ Urumqi 110.36 310 Pdif Pdif 04 14 52.0 +0.9
WMQ PP PP 04 19 32.0 +2.8
WMQ AMB AMB
comp=Z,220nm,10.0s
WMQ LR LR
comp=N,410nm,20.0s
WMQ LR LR
comp=E,690nm,20.0s
WMQ LR LR
comp=Z,890nm,20.0s
ZAA0 Zalesovo Array 114.50 320 *e*PKPdf PKiKP 04 18 57.6 -1.0
ZALV Zalesovo Beam 114.50 320 PKP PKiKP 04 18 57.5 -1.1
comp=Z,6.6nm,0.5s,baz=167,slow=0.7,SNR=23
ZALV SKP 04 22 19.2
comp=Z,5.9nm,0.8s,baz=169,slow=5.3,SNR=5.3
ZALV Zalesovo Beam 114.50 320 PKIKP PKiKP 04 18 57.6 -1.1
ZALV pmax pmax
comp=Z,7.0nm,0.5s
ZALV pmax pmax
comp=N,6.0nm,0.9s
MK31 Makanchi Array 114.76 312 *e*PKIKP PKiKP 04 18 58.7 -0.7
MKAR Makanchi Array 114.76 312 PKP PKiKP 04 18 58.6 -0.8
comp=N,14nm,0.7s,baz=177,slow=0.7,SNR=47
MKAR SKP 04 22 19.7
comp=N,6.4nm,0.9s,baz=69,slow=3.9,SNR=6.9
MKAR Makanchi Array 114.76 312 PKIKP PKiKP 04 18 58.6 -0.8
MKAR pmax pmax
comp=Z,14nm,0.7s
MKAR pmax pmax
comp=N,6.0nm,0.9s
NVS Novosibirsk 115.56 321 *e*P Pdif 04 15 12.9 -1.3
NVS *i* 04 18 58.4
NVS *i* 04 25 33.3
NVS pmax pmax
comp=Z,8.0nm,1.9s
NVS pmax pmax
comp=N,6.0nm,2.1s
NVS pmax pmax
comp=E,15nm,2.4s
SJG San Juan 116.59 82 *e*PKIKP PKPdf 04 19 02.0 -1.8
KURK Kurchatov 117.79 316 PKP PKPdf 04 19 04.2 -0.9
comp=E,16nm,0.5s,baz=104,slow=1.8,SNR=44
KURK PP PP 04 20 10.9 -10
comp=E,1.0nm,0.3s,baz=97,slow=4.5,SNR=3.6
KURK SKP 04 22 26.0
comp=E,7.3nm,0.9s,baz=110,slow=2.0,SNR=5.3
KURK Kurchatov 117.79 316 *e*PKPdf PKPdf 04 19 04.6 -0.6
KURK Kurchatov 117.79 316 P PKPdf 04 19 04.5 -0.6
SNR=15
KSH Kashi 117.89 303 *e*PKP PKPdf 04 19 06.1 +0.4
KSH PKS 04 22 41.5
KSH LR LR
comp=N,730nm,11.2s
KSH LR LR
comp=E,1μm,14.9s
KSH LR LR
comp=Z,1μm,21.5s
ULHL Ulahol 118.19 306 P PKPdf 04 19 06.6 +0.4
SNR=21
OPO Ambohidratompo 118.19 229 PKP PKPdf 04 19 07.6 +0.6
comp=Z,5.4nm,0.6s,baz=74,slow=2.5,SNR=16

TKM2 Tokmak 2 118.77 307 P PKPdf 04 19 06.9 -0.4
SNR=31
TKM2 Tokmak 2 118.77 307 *e*PKPdf PKPdf 04 19 06.7 -0.6
KZA Kyzart 118.89 306 P PKPdf 04 19 08.3 +0.7
SNR=21
KZA Kyzart 118.89 306 *e*PKPdf PKPdf 04 19 08.0 +0.4
KBK Karagaybulak 119.20 306 P PKPdf 04 19 08.0 -0.1
SNR=12
CHMS Chumysh 119.39 307 P PKPdf 04 19 08.2 -0.3
SNR=15
UCH Uchtor 119.45 306 *e*PKPdf PKPdf 04 19 09.6 +0.9
AAK Ala-Archa 119.53 306 PKP PKPdf 04 19 08.8 +0.1
comp=Z,4.5nm,0.4s,baz=124,slow=2.6,SNR=21
AAK SKP 04 22 29.8
comp=Z,4.7nm,0.8s,baz=214,slow=2.3,SNR=4.7
AAK Ala-Archa 119.53 306 PKIKP PKPdf 04 19 08.8 +0.1
AAK pmax pmax
comp=Z,5.0nm,0.4s
AAK pmax pmax
comp=N,5.0nm,0.8s
AAK Ala-Archa 119.53 306 *e*PKPdf PKPdf 04 19 08.3 -0.4
AAK Ala-Archa 119.53 306 P PKPdf 04 19 09.0 +0.3
SNR=6.6
USP Ospenovka 119.61 307 P PKPdf 04 19 08.7 -0.2
SNR=9.8
SUR Sutherland 119.84 198 PKP PKPdf 04 19 10.5 +0.7
comp=N,37nm,0.8s,baz=190,slow=4.0,SNR=3.2
FDF Fort de France 119.91 87 *e*PKIKP PKPdf 04 19 09.4 -0.9
AML Almayashu 120.04 305 P PKPdf 04 19 10.3 +0.5
SNR=54
AML Almayashu 120.04 305 *e*PKPdf PKPdf 04 19 10.2 +0.4
EKS2 Erkin-Say 120.05 306 P PKPdf 04 19 09.9 +0.1
SNR=18
EKS2 Erkin-Say 120.05 306 *e*PKPdf PKPdf 04 19 09.7 -0.1
PKME Peaks-Kenny Pk 120.27 51 *e*PKPdf PKPdf 04 19 09.0 -1.1
BOSA Boshof 121.89 204 PKP PKPdf 04 19 14.2 +0.4
comp=N,14nm,0.6s,baz=204,slow=2.0,SNR=21
BOSA SKP 04 22 35.6
comp=N,10nm,1.1s,baz=206,slow=4.5,SNR=3.4
BOSA Boshof 121.89 204 PKIKP PKPdf 04 19 14.3 +0.4
BOSA pmax pmax
comp=Z,14nm,0.6s
BOSA pmax pmax
comp=N,10.0nm,1.1s
SCHQ Schefferville 122.33 40 PKP PKPdf 04 19 12.9 -0.8
comp=N,7.2nm,0.9s,baz=330,slow=2.9,SNR=5.1
KBL Kabul 122.43 296 *e*PKIKP PKPdf 04 19 15.0 +0.4
KKAR Karatay Array 122.49 306 *e*PKIKP PKPdf 04 19 13.9 -0.5
BVA0 Borovoye Array 123.01 318 PKIKP PKPdf 04 19 14.4 -0.7
BVA0 pmax pmax
comp=Z,4.0nm,0.5s
BVAR Borovoye Array 123.01 318 PKhKP PKPpre 04 19 02.8
comp=Z,1.1nm,0.7s,baz=126,slow=2.0,SNR=4.4
BVAR PKP PKPdf 04 19 14.6 -0.5
comp=Z,21nm,0.5s,baz=102,slow=2.1,SNR=74
BRVK Borovoye 123.07 318*d i*PKIKP PKPdf 04 19 14.3 -0.9
BRVK pmax pmax
comp=Z,75nm,1.2s
BRVK Borovoye 123.07 318 *e*PKPdf PKPdf 04 19 14.6 -0.7
BRVK *e*PP PP 04 20 55.9 -1.4
BRVK Borovoye 123.07 318 P PKPdf 04 19 15.1 -0.1
SNR=22
LBTB Lobatse 125.00 206 PKP PKPdf 04 19 19.9 0.0
comp=Z,12nm,0.9s,baz=262,slow=1.7,SNR=12
LBTB Lobatse 125.00 206 PKIKP PKPdf 04 19 19.9 0.0
LBTB pmax pmax
comp=Z,12nm,0.9s
KBS Kingsbay 126.29 358 *e*P PKPdf 04 19 20.8 +0.1
KBS *e*PP PP 04 21 16.9 -1.1
KBS AMS AMS 04 53 57.9
comp=Z,1µm,10.1s
KBS Kingsbay 126.29 358*d i*PKIKP PKPdf 04 19 20.6 -0.2
KBS pmax pmax
comp=Z,52nm,1.0s
KBS Kingsbay 126.29 358 *e*P PKPdf 04 19 20.8 +0.1
KBS LR LR
comp=Z,1µm,10.1s
SPITS Spitsbergen Ar 126.81 356 PKP PKPdf 04 19 21.4 -0.4
comp=Z,70nm,0.8s,baz=336,slow=4.3,SNR=27
SPITS Spitsbergen Ar 126.81 356 PKIKP PKPdf 04 19 21.4 -0.4
SPITS pmax pmax
comp=Z,70nm,0.8s
SPITS Spitsbergen Ar 126.81 356 PKP PKPdf 04 19 21.4 -0.4
DAG Danmarks Havn 127.62 6⇑*i*PKIKP PKPdf 04 19 21.9 -1.4
DAG pmax pmax
comp=Z,13nm,1.0s
DAG Danmarks Havn 127.62 6⇑*i*P PKPdf 04 19 21.9 -1.4
comp=Z,13nm,1.0s
SUMG Summit 127.88 14 *e*PKPdf PKPdf 04 19 24.3 +0.4
SUMG *e*PP PP 04 21 24.6 -3.9
SVE Sverdlovsk 128.19 323 *e*PKIKP PKPdf 04 19 25.2 +0.3
SVE pmax pmax
comp=Z,92nm,1.3s
JMDO Jabal Madar 129.23 279 P PKPdf 04 19 28.8 +0.9
SNR=5.5
ARU Arti 129.39 323 *i* PKIKP PKPdf 04 19 27.4 +0.2
ARU 04 21 36.8
ARU 04 26 20.0
ARU Arti 129.39 323 *e*PKPdf PKPdf 04 19 27.2 0.0
SMDO Samad 129.45 280 P PKPdf 04 19 29.0 +0.6
SNR=7.5
AB31 Akbulak array 129.81 314 *i* PKIKP PKPdf 04 19 26.4 -1.8
AB31 pmax pmax
comp=Z,9.0nm,0.6s
ABKAR Akbulak array 129.81 314 *e*PKPdf PKPdf 04 19 27.4 -0.8
BSY Bisya 130.13 279 P PKPdf 04 19 29.9 +0.2
SNR=7.2
AKTK Aktyubinsk 130.89 316 PKP PKPpre 04 19 16.0
AKTK PKP PKPdf 04 19 29.9 -0.3
AKTK SKPbc SKPbc 04 22 38.3 -0.3
AKTO Aktyubinsk 130.89 316 PKhKP PKPpre 04 19 16.0
comp=Z,1.2nm,0.6s,baz=123,slow=2.2,SNR=4.0
AKTO PKP PKPdf 04 19 29.9 -0.3
comp=Z,18nm,0.7s,baz=91,slow=6.6,SNR=35
AKTO SKPbc SKPbc 04 22 38.3 -0.3
comp=Z,30nm,1.1s,baz=80,slow=4.8,SNR=3.8
AKTO Aktyubinsk 130.89 316 PKHKP PKPpre 04 19 16.0
AKTO 04 19 29.9
AKTO pmax pmax
comp=Z,1.0nm,0.6s
AKTO pmax pmax
comp=Z,18nm,0.7s
TSUM Tsumeb 133.19 200 PKP PKPdf 04 19 35.5 -0.1
comp=Z,16nm,1.0s,baz=153,slow=3.1,SNR=11
TSUM SKPbc SKPbc 04 22 50.2 +2.3
comp=Z,9.6nm,1.0s,baz=64,slow=2.8,SNR=4.0
TSUM Tsumeb 133.19 200 PKPdf PKPdf 04 19 36.0 +0.4
TSUM *e*PP PP 04 21 60.0 -2.7
KEV Kevo 133.37 348 *e*PKHKP PKPpre 04 19 23.7
KEV Kevo 133.37 348 *e*pkp PKPpre 04 19 23.7
APA Apatity 133.78 344⇓*i*PKIKP PKPdf 04 19 33.2 -2.0
APA *i* 04 22 05.0
APA pmax pmax
comp=Z,31nm,1.0s
ARCES ARCESS Array B 133.83 349 PKhKP PKPpre 04 19 29.0
comp=Z,9.4nm,0.8s,baz=2.6,slow=2.7,SNR=11
ARCES PKP PKPdf 04 19 35.0 -0.3
comp=Z,38nm,0.7s,baz=85,slow=1.1,SNR=34
ARCES SKPbc SKPbc 04 22 49.6 +1.3
comp=Z,48nm,0.9s,baz=0.0,slow=4.9,SNR=16
ARE0 ARCESS Array S 133.83 349 *e*PKPdf PKPdf 04 19 35.2 0.0
JMIC Jan Mayen 134.02 5 *e*PP PP 04 22 07.6 -0.3
JMIC AMS AMS 05 03 06.2
comp=Z,863nm,16.1s
KTK1 Kautokeino 134.68 350 *e*P PKPdf 04 19 36.4 -0.4
KTK1 *e*PP PP 04 22 11.4 -0.7
KTK1 *e*SS SS 04 39 50.7 +1.0
KTK1 AMS AMS 04 49 08.2
comp=Z,3µm,9.3s
KTK1 Kautokeino 134.68 350 *e*P PKPpre 04 19 29.3
KTK1 LR LR
comp=Z,3µm,9.3s
TRO Tromso 134.73 352 *e*P PKPdf 04 19 37.8 +0.9
TRO *e*PP PP 04 22 08.6 -3.8
TRO AMS AMS 04 50 02.4
comp=Z,2µm,12.0s
KLMR Klimovskoe 136.50 335 *e*PKIKP PKPdf 04 19 36.6 -3.8
KLMR 04 22 19.0
KLMR pmax pmax
comp=Z,71nm,1.2s
JOF Joensuu 137.91 341 *e*PKHKP PKPpre 04 19 32.9
JOF Joensuu 137.91 341 *e*pkp PKPpre 04 19 32.9
MAK Makhachkala 139.30 307 *e*PKIKP PKPdf 04 19 45.0 -1.2
MAK *e* 04 22 37.4
MAK pmax pmax

comp=Z,258nm,1.5s
ATD Arta Tunnel 139.32 258 PKhKP PKPpre 04 19 41.5
comp=Z,3.1nm,0.3s,baz=240,slow=20,SNR=1.6
ATD SKP 04 23 10.6
comp=Z,54nm,1.2s,baz=293,slow=4.4,SNR=9.7
RDF Al-Radifah 139.81 285 *e*P PKPpre 04 19 40.3
RDF AMb AMB 04 19 52.5
comp=Z,248nm,1.1s
KAF Kangasniemi 139.97 343 *e*PKHKP PKPpre 04 19 36.9
KAF Kangasniemi 139.97 343 *e*pkp PKPpre 04 19 36.9
MIB Mutribah 140.07 287 *e*P PKPpre 04 19 40.5
MIB AMb AMB 04 19 52.0
comp=Z,111nm,1.0s
NAY Al-Naaiem 140.11 286 *e*P PKPpre 04 19 40.4
NAY AMb AMB 04 19 51.9
comp=Z,52nm,1.1s
MOS Moscow 140.34 329 *e*PKHKP PKPpre 04 19 39.7
MOS pmax pmax
comp=Z,134nm,1.6s
FINES FINESS Array B 140.58 342 PKhKP PKPpre 04 19 40.3
comp=Z,16nm,0.6s,baz=61,slow=3.6,SNR=31
FINES SKP 04 23 09.8
comp=Z,34nm,0.9s,baz=50,slow=3.0,SNR=10
FINES FINESS Array B 140.58 342 PKHKP PKPpre 04 19 40.3
FINES pmax pmax
comp=Z,16nm,0.6s
FINES pmax pmax
comp=N,34nm,0.9s
VRHR Novokhopersk 140.62 321 *e*PKHKP PKPpre 04 19 40.7
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=N,7.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,1.1s
DGRG David-gareji 141.13 305 P PKPdf 04 19 43.0 -6.5
DGRG S SKPdf 04 23 14.5 +6.4
OBN Obninsk 141.20 329⇓*e*PKHKP PKPpre 04 19 41.8
OBN *i* 04 19 48.2
OBN *e* 04 20 38.0
OBN *e* 04 22 51.1
OBN *e* 04 26 42.5
OBN pmax pmax
comp=Z,51nm,1.1s
OBN pmax pmax
comp=Z,77nm,1.2s
OBN Obninsk 141.20 329 *i* PKP PKPdf 04 19 48.2 -1.0
MTA Mtatsminda 141.51 306 P PKPdf 04 19 45.8 -4.4
MTA S SKPdf 04 23 16.5 +7.7
TBLG Delisi 141.54 306 PKIKP PKPdf 04 19 45.8 -4.5
GNI Garni 141.83 303 *e*P PKPdf 04 19 45.6 -5.2
GNI Garni 141.83 303 SKP SKPdf 04 23 15.4 +6.0
comp=Z,22nm,1.0s,baz=322,slow=3.1,SNR=8.0
GNI Garni 141.83 303*c i*PKIKP PKPdf 04 19 46.8 -4.0
GNI pmax pmax
comp=Z,45nm,1.2s
GNI Garni 141.83 303 *e*PKPdf PKPdf 04 19 47.0 -3.8
GNI Garni 141.83 303 P PKPdf 04 19 47.4 -3.4
SNR=8.0
ZEI Tsey 141.93 308 *i* PKIKP PKPdf 04 19 56.1 +5.2
ZEI *e* 04 22 59.1
ZEI pmax pmax
comp=Z,50nm,1.2s
VSR Storozhevoye 141.95 322 *e*PKHKP PKPpre 04 19 44.3
VSR pmax pmax
comp=Z,50nm,0.7s
VSR pmax pmax
comp=N,40nm,2.3s
VSR pmax pmax
comp=E,40nm,1.5s
GOR Gori 141.95 306 P PKPdf 04 19 48.0 -3.0
VORD Divnogorie 141.99 322 *e*PKHKP PKPpre 04 19 44.7
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s
VORD pmax pmax
comp=E,40nm,0.8s
MBAR Mbarara 142.24 231 *i* PKIKP PKPdf 04 19 55.7 +3.3
KIV Kislovodsk 142.49 310⇑*i*PKHKP PKPpre 04 19 47.3
KIV *e* 04 26 46.5
KIV pmax pmax
comp=Z,53nm,1.2s
KIV Kislovodsk 142.49 310 PKPdf PKPdf 04 19 48.1 -3.7
SNR=8.3
CLDR Caldiran 142.61 302 *e*P PKPdf 04 19 47.6 -4.7
BHD Baghdad 142.73 292 *e*x x 04 20 54.0
VSU Vasula 142.79 339*c i*PKIKP PKPdf 04 19 54.9 +3.0
HKR Hakkari 142.96 299 *e*P PKPdf 04 19 50.2 -2.8
KARS Kars 142.99 304 *e*P PKPdf 04 19 49.8 -3.0
HAKT HAKKARI 142.99 299⇑*i*P PKPdf 04 19 48.7 -4.3
VANB Van 143.10 301 *e*P PKPdf 04 19 51.5 -1.7
CUKT Cukurca 143.11 299 *e*P PKPdf 04 19 48.2 -5.0
AGRB Hanur-Agry 143.25 303 *e*P PKPdf 04 19 49.0 -4.3
DAGI Agillar 143.76 305⇑*i*P PKPdf 04 19 52.3 -1.9
FOO Floro 143.83 358 *e*P PKPdf 04 19 50.2 -3.4
FOO *e*PP PP 04 23 06.5 -1.7
FOO *e*SS SS 04 41 37.3 +0.6
FOO AMS AMS 04 52 51.9
comp=Z,2µm,16.1s
FOO Floro 143.83 358 *e*P PKPdf 04 19 48.7 -4.9
FOO LR LR
comp=Z,2µm,16.1s
DBOC Borcka 143.88 306⇓*i*P PKPdf 04 19 52.9 -1.5
BCA Borcka 143.89 306 *e*P PKPdf 04 19 49.5 -4.9
NB2 NORSAR Subarra143.92 353 PKP PKPdf 04 19 51.2 -2.6
baz=14,slow=3.6
NB2 NORSAR Subarra143.92 353 PKIKP PKPdf 04 19 51.2 -2.6
NB2 NORSAR Subarra143.92 353 PKPab PKPdf 04 19 51.2 -2.6
NOA NORSAR Array B 143.92 353 PKP PKPdf 04 19 51.2 -2.7
comp=Z,174nm,1.0s,baz=12,slow=2.3,SNR=268
NOA PP PP 04 23 04.0 -4.8
comp=Z,15nm,1.1s,baz=11,slow=6.2,SNR=3.6
NOA SKP 04 23 17.9
comp=Z,7.3nm,0.9s,baz=15,slow=4.3,SNR=4.2
NOA NORSAR Array B 143.92 353 PKIKP PKPdf 04 19 51.2 -2.6
NOA 04 23 17.9
NOA pmax pmax
comp=Z,174nm,1.0s
NOA pmax pmax
comp=N,7.0nm,0.9s
NOA NORSAR Array B 143.92 353 PKP PKPdf 04 19 51.2 -2.7
NOA PP PP 04 23 04.0 -4.8
NOA SKP 04 23 17.9
DDEM Demirkent 143.92 305⇓*i*P PKPdf 04 19 53.3 -1.2
HOMI Horasan 143.99 304⇑*i*P PKPdf 04 19 54.0 -0.6
NAO01 NORSAR Array S 144.15 353 *e*PKPdf PKPdf 04 19 52.1 -2.1
SUE Sulen 144.38 358⇓*i*P PKPdf 04 19 53.1 -1.5
SUE AMb AMB 04 19 53.6
comp=Z,286nm,1.3s
ERZM Erzurum 144.42 304⇑*i*P PKPdf 04 19 55.0 -0.4
EZM Erzurum 144.42 304 *e*P PKPdf 04 19 55.2 -0.2
PZAR Pazar-Rize 144.48 306 *e*P PKPdf 04 19 54.5 -0.9
SOC Sochi 144.65 310*de*PKIKP PKPdf 04 19 54.2 -1.5
SOC *e* 04 20 48.9
SOC *e* 04 23 11.0
SOC pmax pmax
comp=Z,246nm,1.0s
BNGL BINGOL 144.77 302⇓*i*P PKPdf 04 19 56.3 +0.3
BEST Besiri 144.86 300⇓*i*P PKPdf 04 19 56.8 +0.5
ASK Askoy 144.94 358 *e*P PKPbc 04 19 54.1 -1.1
RUND Rundenannen 145.00 357 *e*P PKPbc 04 19 54.3 -1.2
BER Bergen 145.03 357 *e*P PKPbc 04 19 55.4 -0.2
BER *e*SS SS 04 41 50.6 +0.1
BER AMS AMS 04 53 27.0
comp=Z,3µm,13.0s
KOPT Kop Dagi 145.05 304⇑*i*P PKPbc 04 19 58.0 +1.7
IZAR Zarasai 145.07 336 *e* PKPbc 04 19 53.5 -2.3
WAL1 Walls 145.12 3 P PKPbc 04 19 54.6 -1.2
WAL1 Walls 145.12 3 *e*P PKPbc 04 19 54.6 -1.2
EGD Espegrend 145.15 357 *e*P PKPdf 04 19 54.9 -1.1
IDID Didziasalis 145.22 336 *e*P PKPdf 04 19 56.4 +0.1
IDID AMB AMB 04 19 57.7
comp=Z,346nm,1.0s
IDID *e*PP PP 04 23 12.8 -4.1
ISAL Salakas 145.25 336 *e*P PKPdf 04 19 56.5 +0.2
ISAL AMB AMB 04 19 57.9
comp=Z,458nm,1.1s
LRW Lerwick 145.26 3 P PKPdf 04 19 54.9 -1.3
LRW Lerwick 145.26 3 *e*P PKPdf 04 19 54.9 -1.3
BINT Bingol 145.29 302 *e*P PKPdf 04 19 55.9 -1.1
MICGM Minsk 145.39 334⇓*i*PKP PKPdf 04 19 57.0 +0.4
IIGN Ignalina 145.39 336 *e*P PKPdf 04 19 57.1 +0.5
IIGN AMB AMB 04 19 58.4

comp=Z,477nm,1.0s
IIGN *e*PP PP 04 23 13.2 -4.6
MNK Minsk 145.41 334⇓*i*PKP2 PKPab 04 19 57.0 -0.3
MNK *e* 04 23 14.0
KONO Kongsberg 145.46 353 *e*P PKPdf 04 19 55.7 -0.8
KONO AMb AMB 04 19 58.3
comp=Z,455nm,0.5s
KONO *e*SS SS 04 41 57.0 +1.7
KONO AMS AMS 04 53 37.9
comp=Z,2µm,14.5s
KONO Kongsberg 145.46 353 *e*P PKPdf 04 19 55.7 -0.8
KONO *e*PKPdf PKPdf 04 19 56.5 -0.1
KONO LR LR
comp=Z,2µm,14.5s
NACGM Naroch 145.52 335 *i* PKP PKPdf 04 19 54.0 -2.8
GUMT Gumushane 145.70 305 *e*P PKPdf 04 19 58.9 +1.3
DIYA Diyarbakir 145.75 301⇑*i*P PKPdf 04 19 59.3 +1.5
ANN Anapa 145.77 313 *i* PKP2 PKPab 04 19 57.2 -1.8
ANN *i* 04 23 18.2
ANN pmax pmax
comp=N,225nm,1.2s
ANN pmax pmax
comp=E,110nm,1.2s
ANN pmax pmax
comp=Z,825nm,1.2s
BLS5 Blasjo 145.94 356⇓*i*P PKPdf 04 19 58.3 +0.9
BLS5 AMb AMB 04 19 59.1
comp=Z,228nm,1.9s
EZC Erzincan 145.97 304 *e*P PKPdf 04 19 59.9 +1.8
PTK Pertek 146.13 302 *e*P PKPdf 04 19 58.6 +0.3
ESPY Espiye-Giresun 146.14 306 *e*P PKPdf 04 19 58.7 +0.4
SVRC Sivrice-ELAZID 146.30 302 *e*P PKPbc 04 20 00.6 +0.5
GRSN GIRESUNGRSN 146.47 306⇑*i*P PKPdf 04 19 58.5 -0.4
ELZG Elazig 146.52 302⇓*i*P PKPab 04 20 02.5 +0.4
RSC Scourie 146.71 7 P PKPdf 04 19 59.3 +0.6
RSC Scourie 146.71 7 *e*P PKPdf 04 19 59.3 +0.6
KEMA Kemaliye 146.72 303⇑*i*P PKPab 04 20 02.5 -0.5
RRH Rhenigidale 146.94 9 P PKPdf 04 19 59.8 +0.7
RRH Rhenigidale 146.94 9 *e*P PKPdf 04 19 59.8 +0.7
SNART Snartemo 146.97 355⇓*i*P PKPbc 04 20 01.3 -0.1
SNART AMb AMB 04 20 01.9
comp=Z,161nm,1.1s
MYA Malataya 146.99 302 *e*P PKPbc 04 20 02.0 -0.1
MALT Malatya 146.99 302 *e*P PKPdf 04 19 59.5 -0.3
MALT Malatya 146.99 302 *e*PKPdf PKPdf 04 20 00.3 +0.5
MALT *e*PKPbc PKPbc 04 20 03.4 +1.2
MALT Malatya 146.99 302⇓*i*P PKPdf 04 20 00.4 +0.6
RRR Rubha Reidh 147.11 8 P PKPdf 04 20 00.9 +1.5
RRR Rubha Reidh 147.11 8 *e*P PKPdf 04 20 00.9 +1.5
MVH1 Achvaich 147.23 6 P PKPbc 04 20 01.6 -0.6
MVH1 Achvaich 147.23 6 *e*P PKPbc 04 20 01.6 -0.6
ATAB Bozova 147.26 300⇑*i*P PKPbc 04 20 02.5 -0.4
RSDY Resadiye-TOKAT 147.30 306 *e*P PKPbc 04 20 02.9 0.0
KSK Scoval 147.38 9 P PKPbc 04 20 01.9 -0.7
KSK Scoval 147.38 9 *e*P PKPbc 04 20 01.9 -0.7
AKCD Akcadag 147.38 302⇓*i*P PKPbc 04 20 04.3 +1.2
AKASG Malin Array Be 147.42 328 PKP PKPdf 04 19 58.6 -1.5
comp=Z,44nm,0.4s,baz=43,slow=3.7,SNR=208
AKASG PKPbc PKPbc 04 20 02.1 -0.8
comp=Z,44nm,0.4s,baz=45,slow=4.0,SNR=220
AKASG SKP 04 23 25.8
comp=Z,7.3nm,0.8s,baz=44,slow=2.5,SNR=5.1
AKASG Malin Array Be 147.42 328 PKIKP PKPdf 04 19 58.6 -1.5
AKASG 04 20 02.1
AKASG 04 23 25.8
AKASG pmax pmax
comp=Z,44nm,0.4s
AKASG pmax pmax
comp=Z,44nm,0.4s
AKASG pmax pmax
comp=N,7.0nm,0.9s
AKBB Malin Array Si 147.42 328 *e*PKIKP PKPdf 04 19 59.2 -0.9
AKBB *e* 04 20 02.2
KIEV Kiev 147.43 328 *e*PKIKP PKPdf 04 19 59.9 -0.3
KIEV *e* 04 20 02.4
KAC Achnashellach 147.53 8 P PKPbc 04 20 02.3 -0.6
KAC Achnashellach 147.53 8 *e*P PKPbc 04 20 02.3 -0.6
SUW Suwalki 147.54 337 *e*PKPdf PKPbc 04 20 02.9 -0.2
SUW *e* 04 20 05.4
SUW *e* 04 20 09.4
SUW Suwalki 147.54 337 *e*PKPdf PKPdf 04 20 00.2 0.0
SUW *e*PKPbc PKPbc 04 20 02.8 -0.3
ERBA Erbaa 147.64 307⇑*i*P PKPbc 04 20 04.4 +0.6
KPL Plockton 147.64 8 P PKPbc 04 20 02.2 -1.0
KPL Plockton 147.64 8 *e*P PKPbc 04 20 02.2 -1.0
MCD Coleburn Disti 147.66 6 P PKPbc 04 20 02.1 -1.2
MCD Coleburn Disti 147.66 6 *e*P PKPbc 04 20 02.1 -1.2
SVSK Karacayir 147.68 305 *e*P PKPbc 04 20 03.1 -0.8
MDO Dochfour 147.69 7 P PKPbc 04 20 02.9 -0.5
MDO Dochfour 147.69 7 *e*P PKPbc 04 20 02.9 -0.5
KSB Sheil Bridge 147.79 8 P PKPbc 04 20 02.5 -1.1
KSB Sheil Bridge 147.79 8 *e*P PKPbc 04 20 02.5 -1.1
GZT Gaziantep 147.85 300⇑*i*P PKPbc 04 20 04.1 -0.3
SIM Simferopol’ 147.85 315 *e*PKP2 PKPbc 04 20 04.7 +0.5
SIM pmax pmax
comp=Z,588nm,1.0s
TOKT Tokat 147.90 306 *e*P PKPbc 04 20 04.6 +0.1
MME1 Meikle Cairn 147.95 5 P PKPdf 04 20 02.6 +1.8
MME1 Meikle Cairn 147.95 5 *e*P PKPdf 04 20 02.6 +1.8
KAR1 Arisaig 148.03 8 P PKPbc 04 20 03.2 -1.0
KAR1 Arisaig 148.03 8 *e*P PKPbc 04 20 03.2 -1.0
KVT Kavak 148.03 308 *e*P PKPbc 04 20 04.9 +0.1
GAZ Gaziantep 148.16 300 *e*P PKPbc 04 20 05.5 +0.2
SARI SarD1z-Kayseri 148.22 303 *e*P PKPbc 04 20 05.1 -0.3
KMRS Kahramanmaras 148.34 301 *e*P PKPbc 04 20 05.7 -0.1
KUZU Kuzuini 148.35 299⇑*i*P PKPbc 04 20 06.2 +0.4
MUD Monsted U’grnd 148.64 353⇓*i*PKP2 PKPbc 04 20 05.8 -0.1
MUD pmax pmax
comp=Z,130nm,0.9s
MUD Monsted U’grnd 148.64 353⇓*i*P PKPbc 04 20 05.8 -0.1
comp=Z,130nm,0.9s
MUD *i* 04 20 49.4
BOYT Boyabat 148.73 309⇑*i*P PKPbc 04 20 06.8 +0.3
ANDN Andirin 148.75 301⇓*i*P PKPbc 04 20 08.0 +1.2
BYBT Boyabat 148.81 309 *e*P PKPbc 04 20 07.4 +0.6
COP Copenhagen 148.91 349⇓*i*PKP2 PKPbc 04 20 06.5 -0.1
COP pmax pmax
comp=Z,150nm,0.9s
COP Copenhagen 148.91 349⇓*i*P PKPbc 04 20 06.5 -0.1
comp=Z,149nm,0.9s
EAB Aberfoyle 148.92 7 P PKPdf 04 20 01.0 -1.4
EAB Aberfoyle 148.92 7 *e*P PKPdf 04 20 01.0 -1.4
BSD Bornholm Skovb 148.96 346⇓*i*PKP2 PKPbc 04 20 06.3 -0.4
BSD pmax pmax
comp=Z,120nm,0.9s
BSD MLR MLR
comp=Z,2µm,14.0s
BSD Bornholm Skovb 148.96 346⇓*i*P PKPbc 04 20 06.3 -0.4
comp=Z,123nm,0.9s
BSD *i* 04 20 48.7
BSD
comp=Z,2µm,14.0s
COBT Iskenderun 149.04 299⇓*i*P PKPbc 04 20 07.9 +0.3
CTKT Corum 149.08 307⇑*i*P PKPbc 04 20 06.2 -1.3
BZK Bozkurt 149.16 310 *e*P PKPbc 04 20 07.6 0.0
KOZT Kozan 149.18 301 *e*P PKPbc 04 20 07.7 -0.2
HTY Hatay 149.21 298 *e*P PKPbc 04 20 08.4 +0.4
YAYL Yayladag 149.25 298⇓*i*P PKPbc 04 20 08.6 +0.5
PGBU Glenifferbraes 149.28 8 P PKPdf 04 20 04.5 +1.5
PGBU Glenifferbraes 149.28 8 *e*P PKPdf 04 20 04.5 +1.5
FKH Fakeheh 149.29 295 *e*P PKPbc 04 20 09.4 +1.2
EDI Edinburgh 149.31 6 P PKPdf 04 20 01.2 -1.8
EDI Edinburgh 149.31 6 *e*P PKPdf 04 20 01.2 -1.8
CORM Corum 149.34 307 *e*P PKPbc 04 20 09.0 +0.8
CEYT Ceyhan 149.34 300 *e*P PKPbc 04 20 07.9 -0.4
EAU Auchinoon 149.36 6 P PKPdf 04 20 02.5 -0.6
EAU Auchinoon 149.36 6 *e*P PKPdf 04 20 02.5 -0.6
ESY Stoneypath 149.36 5 P PKPdf 04 20 01.2 -1.9
ESY Stoneypath 149.36 5 *e*P PKPdf 04 20 01.2 -1.9
EBL Broad Law 149.47 6 P PKPdf 04 20 01.5 -1.8
EBL Broad Law 149.47 6 *e*P PKPdf 04 20 01.5 -1.8
YURE YUREGIR 149.47 300⇑*i*P PKPbc 04 20 09.2 +0.6
TOS Tosya 149.48 308 *e*P PKPbc 04 20 08.8 +0.3
AVNT Avonos 149.59 304⇑*i*P PKPbc 04 20 09.7 +0.8
HWQ Hawqa 149.66 295 *e*P PKPbc 04 20 09.7 +0.6
CDAG Cicekdag 149.70 306⇑*i*P PKPbc 04 20 08.2 -0.9
KRTS Karatas 149.73 299 *e*P PKPbc 04 20 10.1 +0.8
WAR Warsaw 149.74 337 *e*PKPdf PKPbc 04 20 09.4 +0.7
WAR *e* 04 20 15.4
BALT Daday 149.75 310 *i* P PKPbc 04 20 09.2 +0.1
KARA Karaisali 149.82 301 *e*P PKPbc 04 20 09.7 +0.3
RCY Rachaya 149.86 293 *e*P PKPbc 04 20 10.6 +0.9

ESK	Eskdalemuir	149.90	6	P	PKPdf	04 20 04.4	+0.4
ESK	Eskdalemuir	149.90	6	eP	PKPdf	04 20 04.4	+0.4
ESK	Eskdalemuir	149.90	6	ePKPdf	PKPdf	04 20 02.6	-1.4
ESK				ePKPbc	PKPbc	04 20 08.6	-0.4
KIS	Kishinev	149.94	322	⇓iPKP	PKPbc	04 20 08.0	-1.4
KIS				M		04 20 09.0	
	comp=Z,700nm,1.5s						
KIS				epPKP		04 20 52.0	
KIS				i SKKS	SKKSac	04 30 20.0	+0.9
KIS	Kishinev	149.94	322κ	iPKHKP	PKPbc	04 20 08.0	-1.4
KIS				i		04 20 14.0	
KIS				e		04 27 02.0	
KIS				pmax	pmax		
	comp=Z,700nm,1.6s						
KIS				pmax	pmax		
	comp=Z,2μm,2.0s						
BHL	Bhannes	149.95	294	eP	PKPbc	04 20 10.7	+0.9
GULE	Gulek	150.03	301	⇓iP	PKPbc	04 20 11.1	+1.1
ECK	Cauldkaine Hil	150.04	6	P	PKPdf	04 20 04.4	+0.1
ECK	Cauldkaine Hil	150.04	6	eP	PKPdf	04 20 04.4	+0.1
GKP	Gorka Klasztor	150.06	342	ePKPdf	PKPbc	04 20 09.7	+0.3
GKP				e		04 20 15.3	
GKP				e		04 20 20.6	
ELDT	Eldivan	150.10	308	⇑iP	PKPbc	04 20 09.2	-0.8
GAL1	Galloway	150.17	8	P	PKPbc	04 20 08.3	-1.4
GAL1	Galloway	150.17	8	P	PKPbc	04 20 08.4	-1.2
GAL1	Galloway	150.17	8	eP	PKPbc	04 20 08.3	-1.4
GAL1				eP		04 20 08.4	
BR131	Keskin Array S	150.20	306	ePKPdf	PKPdf	04 20 04.6	-0.4
BR131				ePKPbc	PKPbc	04 20 10.1	-0.2
BRTR	Keskin Array B	150.20	306	PKP	PKPdf	04 20 04.7	-0.3
	comp=Z,9.5nm,1.1s,baz=119,slow=1.5,SNR=32						
BRTR				PKPbc	PKPbc	04 20 09.9	-0.3
	comp=Z,126nm,1.0s,baz=132,slow=2.9,SNR=181						
GCD	Castle Douglas	150.27	7	P	PKPbc	04 20 08.2	-1.7
GCD	Castle Douglas	150.27	7	eP	PKPbc	04 20 08.2	-1.7
LVV	L'vov	150.43	331	PKIKP	PKPbc	04 20 10.3	-0.2
GMM	Mts of Mourne	150.61	10	P	PKPbc	04 20 09.5	-1.2
GMM	Mts of Mourne	150.61	10	eP	PKPbc	04 20 09.5	-1.2
BBAL	Bala	150.64	306	⇑iP	PKPbc	04 20 11.3	0.0
XDE	Dent Fell	150.67	7	P	PKPdf	04 20 04.0	-1.2
XDE	Dent Fell	150.67	7	eP	PKPdf	04 20 04.0	-1.2
PCED	Cedros	150.76	56	ePKP	PKPbc	04 20 11.6	0.0
CALA	Caldeira	150.77	56	ePKP	PKPbc	04 20 12.1	+0.4
HOR	Horta	150.84	56	ePKP	PKPbc	04 20 12.2	+0.4
EREN	Erenkoy	150.89	298	eP	PKPbc	04 20 11.9	-0.2
BSEG	Bad Segeberg	150.94	350	ePKPdf	PKPdf	04 20 06.1	+0.4
BSEG				ePKPbc	PKPbc	04 20 12.2	+0.7
PCAN	Candelaria	150.97	56	ePKP	PKPbc	04 20 12.0	-0.1
TLCR		150.98	319	⇓PKIKP	PKPbc	04 20 11.6	-0.3
TLCR		150.98	319	⇓iP	PKPbc	04 20 11.6	-0.3
HLG	Helgoland	151.01	353	ePKPbc	PKPbc	04 20 12.7	+1.0
SGKT	Sivrigoynuk	151.04	309	⇑iP	PKPbc	04 20 11.2	-1.0
ROSA	Rosais	151.07	55	ePKP	PKPbc	04 20 12.5	+0.1
PHNC	Paralimni	151.10	297	P	PKPbc	04 20 12.9	+0.4
	comp=Z,4.0nm,0.9s						
KWP	Kalwaria Pacla	151.14	332	ePKPdf	PKPbc	04 20 12.6	+0.4
KWP				e		04 20 20.7	
KWP	Kalwaria Pacla	151.14	332	ePKPbc	PKPbc	04 20 12.5	+0.3
KWP	Kalwaria Pacla	151.14	332	⇑iP	PKPbc	04 20 12.4	+0.3
PMAN	Manadas	151.21	55	ePKP	PKPbc	04 20 13.1	+0.4
PID	Ribeirinha	151.25	56	ePKP	PKPbc	04 20 11.7	-1.1
CFR	Carcaliu	151.38	320	⇓PKIKP	PKPbc	04 20 12.9	+0.1
CFR	Carcaliu	151.38	320	⇓iP	PKPbc	04 20 12.9	+0.1
HPK	Haverah Park	151.39	5	P	PKPdf	04 20 07.1	+0.7
HPK	Haverah Park	151.39	5	eP	PKPdf	04 20 07.1	+0.7
TESR		151.42	324	⇑P	PKPbc	04 20 13.4	+0.6
TESR		151.42	324	⇑iP	PKPbc	04 20 13.4	+0.5
DLF	Lyons Farm	151.42	11	eP	PKPbc	04 20 11.6	-1.0
BUR08	Bucovina Ar. S	151.43	327	ePKPdf	PKPdf	04 20 07.8	+1.2
BUR08				ePKPbc	PKPbc	04 20 12.9	0.0
BUR01	Bucovina Ar. S	151.44	327	P	PKPdf	04 20 08.3	+1.7
BURAR	Bucovina Array	151.44	327	⇑PKIKP	PKPbc	04 20 12.3	-0.6
BURAR	Bucovina Array	151.44	327	⇑iP	PKPbc	04 20 12.3	-0.6
PETR		151.58	322	⇑P	PKPbc	04 20 13.8	+0.6
PETR		151.58	322	⇑iP	PKPbc	04 20 13.9	+0.6
TIRR	Tirgusor	151.62	319	PKPdf	PKPdf	04 20 06.5	-0.5
TIRR				ePKPbc	PKPbc	04 20 13.4	0.0
TIRR	Tirgusor	151.62	319	⇓iP	PKPbc	04 20 13.4	0.0
ERMK	Ermenek	151.64	301	⇓iP	PKPbc	04 20 11.3	-2.4
RUE	Ruedersdorf	151.66	345	ePKPbc	PKPbc	04 20 14.2	+1.0
RUE	Ruedersdorf	151.66	345	ePKPbc	PKPbc	04 20 13.8	+0.5
CSS	Prodhromos	151.68	297	P	PKPbc	04 20 13.9	0.0
	comp=Z,3.1nm,1.1s						
KDHN	Kadinhani	151.71	305	⇓iP	PKPbc	04 20 13.7	-0.1
MAMC	Mammari	151.73	297	P	PKPbc	04 20 14.1	+0.1
HENT	Hendek	151.75	310	⇑iP	PKPbc	04 20 13.1	-0.8
WLF1	Llynfaes	151.75	9	P	PKPdf	04 20 09.5	+2.6
WLF1	Llynfaes	151.75	9	eP	PKPdf	04 20 09.5	+2.6
VRI	Vrincioaia	151.78	322	⇓PKIKP	PKPbc	04 20 13.5	-0.2
VRI	Vrincioaia	151.78	322	⇓iP	PKPbc	04 20 13.5	-0.2
LHO	Holmfirth	151.78	5	P	PKPdf	04 20 06.7	-0.3
LHO	Holmfirth	151.78	5	eP	PKPdf	04 20 06.7	-0.3
PLOR	Plostina	151.83	322	⇓iP	PKPbc	04 20 13.5	-0.3
OJC	Ojcow	151.84	336	ePKPdf	PKPdf	04 20 06.6	-0.5
OJC				ePKPdc		04 20 14.0	
OJC				ePKPab	PKPab	04 20 23.3	-0.1
OJC				ePP	PP	04 23 52.2	-3.0
OJC				e		04 30 28.1	
ADH	Angra Heroismo	151.84	55	ePKP	PKPbc	04 20 13.9	-0.2
STHS	Stebnicka Huta	151.92	333	ePKIKP	PKPdf	04 20 08.4	+1.1
STHS	Stebnicka Huta	151.92	333	ePKP	PKPdf	04 20 08.4	+1.1
CVD	Cernavoda	151.93	319	⇑PKIKP	PKPbc	04 20 14.6	+0.5
CVD	Cernavoda	151.93	319	⇑iP	PKPbc	04 20 14.6	+0.5
GRER		151.93	321	⇓P	PKPbc	04 20 14.3	+0.2
GRER		151.93	321	⇓iP	PKPbc	04 20 14.3	+0.2
SZAC	Souni-Zanaja	152.08	297	P	PKPbc	04 20 14.7	-0.1
UZH	Uzhgorod	152.08	331	ePKIKP	PKPdf	04 20 07.4	-0.2
UZH				i		04 20 24.7	
PSN	Preselentsi	152.18	317	i P	PKPbc	04 20 15.5	+0.8
GAZI	Gazipasa	152.21	300	⇑iP	PKPdf	04 20 07.1	-1.0
ALFC	Alevga	152.23	298	P	PKPbc	04 20 14.8	-0.3
	comp=Z,3.1nm,0.8s						
CRVS	Cervenica-Dubn	152.23	332	ePKIKP	PKPdf	04 20 07.7	-0.1
CRVS	Cervenica-Dubn	152.23	332	ePKP	PKPdf	04 20 07.7	-0.1
BMR	Baia Mare	152.23	328	⇑PKIKP	PKPbc	04 20 15.1	+0.4
BMR	Baia Mare	152.23	328	⇑iP	PKPbc	04 20 15.1	+0.4
NIE	Niedzica	152.29	334	ePKPdf	PKPdf	04 20 08.2	+0.4
NIE				ePKiKP	PKiKP	04 20 14.4	-0.6
TRPA	Tarpa	152.34	330	⇓iP	PKPbc	04 20 14.9	0.0
DOPR	Dopca	152.44	324	⇓iP	PKPbc	04 20 16.2	+1.0
MLR	Muntele Rosu	152.44	322	⇓PKIKP	PKPbc	04 20 14.5	-0.7
MLR	Muntele Rosu	152.44	322	⇓iP	PKPbc	04 20 14.5	-0.7
BORA	Eskisehir	152.44	308	⇓iP	PKPbc	04 20 15.7	+0.2
KSP	Ksiaz	152.48	341	ePKPdf	PKPdf	04 20 08.3	+0.2
KSP				e		04 20 26.3	
PPCY	Paphos	152.49	297	P	PKPbc	04 20 15.1	-0.6
WIT	Witteveen	152.49	354	ePKP	PKPdf	04 20 08.6	+0.6
	comp=Z,207nm,0.8s						
WIT	Witteveen	152.49	354	ex	PKPbc	04 20 15.7	+0.6
	comp=Z,608nm,1.4s						
WIT	Witteveen	152.49	354	ex	PKPab	04 20 26.1	+0.1
	comp=Z,651nm,1.3s						
RAC	Raciborz	152.52	338	ePKIKP	PKPdf	04 20 09.1	+0.9
CWF	Charnwood Fore	152.62	5	P	PKPbc	04 20 13.3	-2.0
CWF	Charnwood Fore	152.62	5	eP	PKPbc	04 20 13.3	-2.0
OKC	Ostrava-Krasne	152.75	337	ePKIKP	PKPdf	04 20 08.8	+0.3
OKC				e		04 20 27.5	
OKC				e		04 23 55.2	
OKC	Ostrava-Krasne	152.75	337	ePKPDF	PKPdf	04 20 08.8	+0.3
OKC				⇑ePKP	PKPbc	04 20 15.8	+0.1
OKC				ePKPAB	PKPab	04 20 27.5	+0.3
OKC				ePP	PP	04 23 55.2	-5.2
UPC	Upice	152.86	341	ePKIKP	PKPdf	04 20 08.8	+0.2
UPC				e		04 20 28.4	
UPC	Upice	152.86	341	ePKPDF	PKPdf	04 20 08.8	+0.2
UPC				⇑ePKP	PKPbc	04 20 16.4	+0.4
UPC				ePKPAB	PKPab	04 20 28.4	+0.8
DPC	Dobruska-Polom	152.90	340	ePKIKP	PKPdf	04 20 08.8	+0.1
DPC				e		04 20 28.0	
DPC				e		04 23 55.6	
DPC	Dobruska-Polom	152.90	340	ePKPDF	PKPdf	04 20 08.8	+0.1
DPC				⇑ePKP	PKPbc	04 20 16.8	+0.7
DPC				ePKPAB	PKPab	04 20 28.0	+0.2
DPC				ePP	PP	04 23 55.6	-5.6
DPC				eSKKS	SKKSac	04 30 35.2	+0.2
PRD	Provadia	152.92	317	i P	PKPbc	04 20 16.7	+0.3
CLL	Collm	152.93	345	ePKPdf	PKPdf	04 20 08.8	+0.1
CLL				ePKPbc	PKPbc	04 20 16.5	+0.4
CLL	Collm	152.93	345	⇓ePKIKP	PKPdf	04 20 09.0	+0.3

CLL				i		04 20 27.0	
CLL				pmax	pmax		
	comp=Z,26nm,1.1s						
CLL				pmax	pmax		
	comp=Z,282nm,1.3s						
CLL	Collm	152.93	345	ePKP	PKPdf	04 20 09.0	+0.3
CLL				⇓iPKP	PKPbc	04 20 16.1	0.0
CLL				⇓iPKP	PKPab	04 20 27.0	-0.9
CLL				epPKP	pPKPab	04 21 12.0	+1.0
CLZ	Clausthal	152.96	349	ePKPdf	PKPdf	04 20 09.2	+0.5
CLZ				ePKPbc	PKPbc	04 20 16.9	+0.8
KECS	Kecovo	152.96	333	ePKIKP	PKPdf	04 20 08.5	-0.4
KECS	Kecovo	152.96	333	ePKP	PKPdf	04 20 08.5	-0.4
VOIR		152.96	323	⇑PKIKP	PKPdf	04 20 08.7	-0.3
VOIR		152.96	323	⇑iP	PKPdf	04 20 08.7	-0.3
MORC	Moravsky Berou	153.00	338	ePKPdf	PKPdf	04 20 08.4	-0.4
MORC				ePKPbc	PKPbc	04 20 16.9	+0.6
MORC	Moravsky Berou	153.00	338	⇓iP	PKPdf	04 20 09.2	+0.3
HTR	Trewern Hill	153.08	8	P	PKPdf	04 20 11.6	+2.7
HTR	Trewern Hill	153.08	8	eP	PKPdf	04 20 11.6	+2.7
BRG	Berggiesshubel	153.10	344	ePKPdf	PKPdf	04 20 09.4	+0.4
BRG				ePKPbc	PKPbc	04 20 17.1	+0.6
BRG				ePP	PP	04 23 58.6	-3.6
BRG	Berggiesshubel	153.10	344	⇑iPKP	PKPdf	04 20 09.3	+0.3
	comp=Z,34nm,1.1s						
BRG	Berggiesshubel	153.10	344	i PKP	PKPbc	04 20 16.7	+0.2
	comp=Z,131nm,1.2s						
BRG	Berggiesshubel	153.10	344	i PKP	PKPab	04 20 26.1	-2.6
	comp=Z,163nm,1.1s						
BRG				i pPKP	pPKPdf	04 20 56.4	+2.6
	comp=Z,42nm,1.1s						
BRG				PP	PP	04 23 57.0	-5.2
BRG				SKKS	SKKSac	04 30 36.0	0.0
BRG				SS	SS	04 43 12.0	-8.7
BRG				e		04 44 04.0	
	comp=Z,13nm,1.4s						
BRG							
	comp=N,2μm,13.0s						
BRG							
	comp=E,1μm,14.3s						
BRG							
	comp=Z,2μm,13.7s						
BRG	Berggiesshubel	153.10	344	⇑iPKIKP	PKPdf	04 20 09.3	+0.3
BRG				i		04 20 26.1	
BRG				i		04 20 56.4	
BRG						04 23 57.0	
BRG				e		04 44 04.0	
BRG				pmax	pmax		
	comp=Z,20nm,1.1s						
BRG				pmax	pmax		
	comp=Z,98nm,1.1s						
BRG				MLR	MLR		
	comp=N,1μm,13.0s						
BRG				MLR	MLR		
	comp=E,645nm,14.3s						
BRG				MLR	MLR		
	comp=Z,1μm,13.7s						
DRGR		153.24	328	⇓PKIKP	PKPbc	04 20 16.9	0.0
DRGR		153.24	328	⇓iP	PKPbc	04 20 16.9	0.0
PVCC	Panska Ves	153.25	342	ePKIKP	PKPdf	04 20 09.6	+0.4
PVCC				e		04 20 29.6	
PVCC				e		04 23 57.4	
PVCC	Panska Ves	153.25	342	ePKPDF	PKPdf	04 20 09.6	+0.4
PVCC				⇑ePKP	PKPbc	04 20 17.4	+0.6
PVCC				ePKPAB	PKPab	04 20 29.6	+0.3
PVCC				ePP	PP	04 23 57.4	-5.7
PVCC				eSKKS	SKKSac	04 30 38.3	+1.5
NEUB	Neuenburg	153.29	347	ePKPbc	PKPbc	04 20 17.5	+0.6
NEUB				ePKPab	PKPab	04 20 29.2	-0.2
PDA	Ponta Delgada	153.31	56	ePKP	PKPbc	04 20 16.8	-0.6
WTSB	Winterswijk	153.32	354	ePKP	PKPdf	04 20 09.4	+0.2
	comp=Z,26nm,0.8s						
WTSB	Winterswijk	153.32	354	ex	PKPbc	04 20 16.8	-0.1
	comp=Z,158nm,1.0s						
WTSB	Winterswijk	153.32	354	ex	PKPab	04 20 29.2	-0.3
	comp=Z,171nm,1.2s						
CMLA	Cha da Macela	153.41	56	ePKP	PKPbc	04 20 16.4	-1.2
GDZ	Gediz	153.44	307	⇑iP	PKPdf	04 20 07.3	-2.5
KORT	Korkueli	153.52	302	⇑iP	PKPdf	04 20 09.8	-0.3
VYHS	Vyhne	153.61	335	ePKIKP	PKPbc	04 20 18.3	+0.6
VYHS	Vyhne	153.61	335	ePKP	PKPbc	04 20 18.3	+0.6
PSZ	Piszkesteto	153.65	333	ePKPdf	PKPdf	04 20 09.8	-0.1
PSZ				ePKPbc	PKPbc	04 20 18.3	+0.5
PSZ	Piszkesteto	153.65	333	⇓iP	PKPdf	04 20 09.7	-0.2
PSZ	Piszkesteto	153.65	333	⇓ePKP	PKPdf	04 20 09.3	-0.6
PSZ				ePKP	PKPab	04 20 31.2	+0.1
PSZ				ePP	PP	04 24 03.0	-2.6
KHAL	Karahalli	153.70	306	⇑iP	PKPdf	04 20 10.4	+0.1
PRA	Prague	153.70	342	PKPDF	PKPdf	04 20 11.0	+1.1
PRA				⇑PKP	PKPbc	04 20 19.0	+1.2
PRA				PKPAB	PKPab	04 20 33.0	+1.8
PRA				PP	PP	04 24 00.0	-5.6
KOLL	Kolacno	153.71	335	ePKIKP	PKPbc	04 20 18.3	+0.4
KOLL	Kolacno	153.71	335	ePKP	PKPbc	04 20 18.3	+0.4
VRAC	Vranov	153.72	339	PKIKP	PKPdf	04 20 10.1	+0.2
VRAC	Vranov	153.72	339	⇓iP	PKPbc	04 20 18.1	+0.2
PRU	Pruhonice	153.75	342	ePKIKP	PKPdf	04 20 10.4	+0.5
PRU	Pruhonice	153.75	342	ePKPDF	PKPdf	04 20 10.4	+0.5
PRU				⇑ePKP	PKPbc	04 20 19.0	+1.1
PRU				ePKPAB	PKPab	04 20 32.5	+1.1
PRU				ePP	PP	04 23 58.9	-7.0
PRU				eSKKS	SKKSac	04 30 40.6	+1.1
SZH	Strazhica	153.78	319	i P	PKPbc	04 20 18.0	-0.2
BUG	Bochum--Univer	153.79	353	ePKPbc	PKPbc	04 20 18.3	+0.3
BUG				ePKPab	PKPab	04 20 31.0	-0.5
JMB	Yambol	153.82	316	i P	PKPbc	04 20 19.8	+1.5
MOX	Moxa	153.86	347	ePKP	PKPdf	04 20 10.2	+0.1
MOX				e		04 20 18.4	
	comp=Z,68nm,1.5s						
MOX				e		04 20 31.7	
	comp=Z,221nm,1.4s						
MOX				ePP	PP	04 24 03.0	-3.4
MOX	Moxa	153.86	347	ePKPdf	PKPdf	04 20 10.3	+0.2
MOX				ePKPbc	PKPbc	04 20 18.6	+0.5
MOX				ePKPab	PKPab	04 20 31.7	-0.2
MOX				ePP	PP	04 24 02.7	-3.7
MOX	Moxa	153.86	347	ePKIKP	PKPdf	04 20 10.2	+0.1
MOX				e		04 20 31.7	
MOX				e		04 24 03.0	
MOX				pmax	pmax		
	comp=Z,68nm,1.5s						
TANN	Tannenbergstha	153.89	345	ePKPdf	PKPdf	04 20 10.4	+0.3
TANN				ePKPbc	PKPbc	04 20 18.9	+0.7
TANN				ePKPab	PKPab	04 20 32.2	+0.2
TANN				ePP	PP	04 24 03.4	-3.2
WERD	Werda	153.89	345	ePKPdf	PKPdf	04 20 10.3	+0.2
WERD				ePKPbc	PKPbc	04 20 18.9	+0.7
WERD				ePKPab	PKPab	04 20 32.2	+0.2
WERD				ePP	PP	04 24 03.4	-3.2
DURS	Dursunbey	153.95	309	⇑iP	PKPbc	04 20 17.9	-0.8
PSMA	Santa Maria	153.95	57	eP	PKPdf	04 20 02.5	-8.2
GUNZ	Gunzen	153.97	345	ePKPdf	PKPdf	04 20 10.6	+0.4
GUNZ				ePKPbc	PKPbc	04 20 19.1	+0.7
GUNZ				ePKPab	PKPab	04 20 32.5	+0.2
GUNZ				ePP	PP	04 24 03.8	-3.2
WERN	Wernitzgruen	154.03	345	ePKPdf	PKPdf	04 20 10.7	+0.4
WERN				ePKPbc	PKPbc	04 20 19.3	+0.8
WERN				ePKPab	PKPab	04 20 32.9	+0.3
WERN				ePP	PP	04 24 04.2	-3.2
GOLH	Golhisar	154.04	303	⇑iP	PKPdf	04 20 15.6	+4.8
NKC	Novy Kostel	154.06	345	ePKIKP	PKPdf	04 20 10.7	+0.3
NKC				e		04 20 32.9	
NKC				e		04 24 05.2	
NKC	Novy Kostel	154.06	345	ePKPDF	PKPdf	04 20 10.7	+0.3
NKC				⇑ePKP	PKPbc	04 20 19.2	+0.6
NKC				ePKPAB	PKPab	04 20 32.9	+0.2
NKC				ePP	PP	04 24 05.2	-2.4
TREC	Trest	154.09	340	ePKIKP	PKPdf	04 20 10.2	-0.2
TREC				e		04 20 33.2	
TREC				e		04 24 05.8	
TREC	Trest	154.09	340	ePKPDF	PKPdf	04 20 10.2	-0.2
TREC				⇑ePKP	PKPbc	04 20 19.2	+0.5
TREC				ePKPAB	PKPab	04 20 33.2	+0.3
TREC				ePP	PP	04 24 05.8	-2.1
TREC				eSKKS	SKKSac	04 30 42.7	+1.3
PVL	Pavlikeni	154.16	319	i P	PKPbc	04 20 19.9	+0.9
GZR	Gura Zlata	154.19	326	⇓PKIKP	PKPdf	04 20 10.2	-0.5
GZR	Gura Zlata	154.19	326	⇓iP	PKPdf	04 20 10.2	-0.5
DNZL	Cakiroluk	154.27	305	⇑iP	PKPbc	04 20 18.9	-0.6
AKAS	Kas	154.32	301	⇑iP	PKPdf	04 20 14.9	+3.7
BUD	Budapest	154.35	333	⇓ePKP	PKPbc	04 20 19.2	-0.1

BUD				ePKP	PKPab	04 20 34.2	+0.1
ZST	Bratislava	154.50	337	ePKIKP	PKPdf	04 20 09.6	-1.5
ZST	Bratislava	154.50	337	ePKP	PKPdf	04 20 09.6	-1.5
BEBN	Eben Emael	154.57	355	PKPbc	PKPbc	04 20 20.0	+0.3
BEBN				PKPab	PKPab	04 20 34.6	-0.3
HGN	Heimansgroeve	154.59	355	ePKP	PKPbc	04 20 18.1	-1.5
	comp=Z,30nm,1.3s						
HGN	Heimansgroeve	154.59	355	ex	x	04 20 25.3	
	comp=Z,45nm,2.2s						
HGN	Heimansgroeve	154.59	355	ex	PKPab	04 20 34.8	-0.2
	comp=Z,157nm,1.0s						
BZS	Buzias	154.61	327	⇓PKIKP	PKPdf	04 20 10.7	-0.6
BZS	Buzias	154.61	327	⇓iP	PKPdf	04 20 10.7	-0.6
DIM	Dimitrovgrad	154.70	317	P	PKPdf	04 20 20.2	+8.7
MEM	Membach	154.73	354	PKPdf	PKPdf	04 20 11.5	+0.2
MEM				PKPbc	PKPbc	04 20 19.7	-0.3
MEM				PKPab	PKPab	04 20 35.1	-0.5
KHC	Kasperske Hory	154.79	342	ePKIKP	PKPdf	04 20 11.8	+0.4
KHC				e		04 20 36.5	
KHC				e		04 24 09.3	
KHC	Kasperske Hory	154.79	342	ePKPdf	PKPdf	04 20 10.9	-0.5
KHC				ePKPbc	PKPbc	04 20 21.1	+0.9
KHC	Kasperske Hory	154.79	342	ePKPDF	PKPdf	04 20 11.8	+0.4
KHC				⇑ePKP	PKPbc	04 20 20.7	+0.5
KHC				ePKPAB	PKPab	04 20 36.5	+0.6
KHC				ePP	PP	04 24 09.3	-2.4
KHC				eSKKS	SKKSac	04 30 47.4	+2.2
TNS	Taunus Mts	154.83	351	ePKPdf	PKPdf	04 20 11.8	+0.4
TNS				ePKPab	PKPab	04 20 35.7	-0.3
TNS				ePP	PP	04 24 08.2	-3.6
TNS	Taunus Mts	154.83	351	ePKP2	PKPab	04 20 35.7	-0.3
TNS				e		04 24 08.2	
GRA1	Grafenberg Arr	154.84	346	ePKPab	PKPab	04 20 36.5	+0.4
GRA1				ePP	PP	04 24 08.2	-3.7
GRF	Grafenberg Arr	154.84	346	ePKPab	PKPab	04 20 36.5	+0.4
GRF				ePP	PP	04 24 08.2	-3.7
GRFO	Grafenberg	154.84	346	ePKIKP	PKPdf	04 20 11.3	-0.2
GRFO				e		04 20 36.6	
SNF	Seneffe	154.95	357	PKPdf	PKPdf	04 20 10.7	-0.9
SNF				PKPbc	PKPdf	04 20 20.7	+9.1
SNF				PKPab	PKPab	04 20 36.2	-0.3
WET	Wettzell	154.97	343	ePKPdf	PKPdf	04 20 11.8	+0.1
WET				ePKPbc	PKPdf	04 20 21.0	+9.3
WET				ePKPab	PKPab	04 20 37.1	+0.5
WET				ePP	PP	04 24 09.4	-3.3
WET	Wettzell	154.97	343	ePKP2	PKPab	04 20 37.1	+0.5
WET				e		04 24 09.4	
BCLA	Clavier	154.98	355	PKPbc	PKPdf	04 20 20.6	+8.9
BCLA				PKPab	PKPab	04 20 36.1	-0.5
GEC2	GERESS Array S	155.02	342	ePKPdf	PKPdf	04 20 11.7	0.0
GEC2				ePKPbc	PKPdf	04 20 21.1	+9.4
GEC2				ePKPab	PKPab	04 20 37.1	+0.2
GEC2	GERESS Array S	155.02	342	ePKP2	PKPab	04 20 37.1	+0.2
SOP	Sopron	155.13	337	⇓ePKP	PKPdf	04 20 21.0	+9.1
SOP				ePKP	PKPab	04 20 38.1	+0.7
AYDN	Tasoluk	155.15	305	⇑iP	PKPdf	04 20 12.8	+0.6
CONA	Conrad Observa	155.16	338	⇓iPKPdf	PKPdf	04 20 11.5	-0.5
	comp=Z,15nm,1.0s,SNR=8.7						
CONA	Conrad Observa	155.16	338	P	PKPab	04 20 38.3	+0.7
	comp=Z,253nm,1.3s						
PLD	Plovdiv	155.19	318	P	PKPab	04 20 35.4	-2.5
PGB	Panagyurishte	155.25	319	P	PKPdf	04 20 22.0	+10
ABH	Alteburg	155.29	352	PKP	PKPdf	04 20 11.9	-0.2
GIVF	Givet	155.32	356	ePKIKP	PKPdf	04 20 11.6	-0.5
DOU	Dourbes	155.34	356	PKPdf	PKPdf	04 20 14.0	+1.9
DOU				PKPbc	PKPdf	04 20 21.8	+10
DOU				PKPab	PKPab	04 20 37.5	-0.7
TOD	Tromm	155.38	350	PKIKP	PKPdf	04 20 12.4	+0.2
BAIF	Baives	155.40	357	ePKIKP	PKPdf	04 20 11.8	-0.4
PKSM	Moragy	155.52	332	⇓PKIKP	PKPdf	04 20 11.8	-0.7
PKSM	Moragy	155.52	332	⇓iP	PKPdf	04 20 11.8	-0.7
RUP	Ruppelstein	155.52	353	PKP	PKPdf	04 20 12.6	+0.2
PRK	Paraskevi	155.64	310	eP	PKPab	04 20 39.0	-0.9
WLF	Walferdange	155.66	354	PKPdf	PKPdf	04 20 13.2	+0.7
WLF				PKPab	PKPab	04 20 39.7	+0.2
WLF	Walferdange	155.66	354	ePKPdf	PKPdf	04 20 13.2	+0.6
WLF				ePKPbc	PKPdf	04 20 22.9	+10
WLF				ePKPab	PKPab	04 20 39.7	+0.1
WLF	Walferdange	155.66	354	ePKPdf	PKPdf	04 20 13.2	+0.7
WLF				ePKPab	PKPab	04 20 39.2	-0.3
MOA	Molln	155.75	340	⇓iPKPdf	PKPdf	04 20 11.7	-1.0
	comp=Z,11nm,1.1s						
MOA	Molln	155.75	340	P	PKPab	04 20 39.9	-0.1
	comp=Z,167nm,1.2s,SNR=10						
VTS	Vitosha	155.78	320	⇓PKP2	PKPab	04 20 41.3	+0.9
VTS	Vitosha	155.78	320	P	PKPab	04 20 40.1	-0.3
VTS	Vitosha	155.78	320	⇓iP	PKPab	04 20 41.3	+0.9
VTS	Vitosha	155.78	320	P	PKPdf	04 20 23.2	+10
ARSA	Arzberg	155.86	338	⇓iPKPdf	PKPdf	04 20 11.9	-1.0
	comp=Z,12nm,1.0s						
ARSA	Arzberg	155.86	338	P	PKPab	04 20 40.4	-0.1
	comp=Z,100nm,1.1s,SNR=9.8						
LIA	Limnos Island	156.06	313	eP	PKPdf	04 20 27.5	+14
STU	Stuttgart	156.12	349	ePKPab	PKPab	04 20 41.4	-0.2
STU	Stuttgart	156.12	349	ePKIKP	PKPdf	04 20 12.8	-0.4
STU				e		04 20 41.1	
NVR	Nevrokopi	156.13	317	eP	PKPdf	04 20 23.0	+10
LANF	Langenberg	156.14	351	PKP	PKPdf	04 20 13.6	+0.4
CHOS	Chios island	156.17	308	eP	PKPdf	04 20 23.5	+10
FUR	Furstenfeldbru	156.27	345	ePKPab	PKPab	04 20 42.7	+0.5
RJOB	Jochberg	156.28	342	ePKPab	PKPab	04 20 43.2	+0.9
KOGS	Kog	156.29	336	ePKPdf	PKPdf	04 20 12.7	-0.8
KOGS				e		04 20 23.2	
KOGS				ePKPab	PKPab	04 20 41.7	-0.7
KOGS				e		04 21 53.4	
KOGS				ePP	PP	04 24 17.3	-2.9
KOGS	Kog	156.29	336	ePKPdf	PKPdf	04 20 12.7	-0.8
KOGS				e		04 20 23.2	
KOGS				ePKPab	PKPab	04 20 41.7	-0.7
KOGS				e		04 21 53.4	
KOGS				ePP	PP	04 24 17.3	-2.9
KKB	Krupnik	156.30	319	i P	PKPdf	04 20 24.0	+10
KARP	Karpathos	156.42	301	eP	PKPab	04 20 44.0	+0.6
SRS	Serrai	156.43	317	P	PKPab	04 20 42.2	-1.1
SOKA	Soboth	156.53	338	⇓iPKPdf	PKPdf	04 20 12.8	-1.0
	comp=Z,16nm,1.1s						
SOKA	Soboth	156.53	338	P	PKPab	04 20 43.2	-0.2
	comp=Z,196nm,1.2s						
FLN	La Foliniere	156.64	5	ePKIKP	PKPdf	04 20 13.3	-0.6
	comp=Z,92nm,1.1s						
FLN				eMLR	MLR		
	comp=Z,310nm,22.8s						
FLN	La Foliniere	156.64	5	ePKPdf	PKPdf	04 20 13.3	-0.6
FLN				LR	LR		
	comp=Z,310nm,22.8s						
BFO	Black Forest	156.69	350	ePKP2	PKPab	04 20 43.7	-0.4
BFO	Black Forest	156.69	350	ePKPdf	PKPdf	04 20 12.5	-1.5
BFO				ePKPbc	PKPdf	04 20 24.4	+10
BFO				ePKPab	PKPab	04 20 43.2	-0.9
BFO				ePKPab	PKPab	04 20 43.7	-0.4
KBA	Koelnbreinsper	156.72	341	⇓iPKPdf	PKPdf	04 20 12.9	-1.1
	comp=Z,15nm,1.2s,SNR=7.0						
KBA	Koelnbreinsper	156.72	341	P	PKPab	04 20 44.1	-0.2
	comp=Z,162nm,1.6s						
ROSF	Rostrenen	156.75	9	ePKIKP	PKPdf	04 20 12.5	-1.5
	comp=Z,20nm,0.9s						
SOH	Sokhos	156.75	316	P	PKPab	04 20 44.0	-0.6
CDF	Champ du Feu	156.76	352	ePKIKP	PKPdf	04 20 13.2	-0.9
DOBS	Dobrina	156.83	336	ePKPdf	PKPdf	04 20 13.7	-0.5
DOBS	Dobrina	156.83	336	ePKPdf	PKPdf	04 20 13.7	-0.5
LDF	La Druitiere	156.83	4	ePKIKP	PKPdf	04 20 13.3	-0.8
	comp=Z,8.4nm,0.8s						
KNT	Kendrikon	156.83	318	P	PKPab	04 20 44.7	-0.3
SPAK	Spaichingen-Ko	156.84	349	PKP	PKPdf	04 20 14.3	+0.1
OBKA	Obir	156.84	338	⇓iPKPdf	PKPdf	04 20 13.3	-0.9
OBKA	Obir	156.84	338	P	PKPab	04 20 43.9	-0.8
	SNR=8.1						
MEZF	Maizieres J'vi	156.90	355	ePKIKP	PKPdf	04 20 14.1	-0.1
	comp=Z,51nm,1.1s						
SGMF	Saint Gilles	156.93	8	ePKIKP	PKPdf	04 20 13.3	-1.0
VAY	Valandovo	156.94	318	P	PKPab	04 20 44.4	-1.0
VAY	Valandovo	156.94	318	i PKP	PKPab	04 20 45.3	-0.2
PLG	Polygyros	156.94	315	eP	PKPab	04 20 43.5	-2.0
PLG	Polygyros	156.94	315	P	PKPab	04 20 44.8	-0.7
WATA	Walderalm	156.97	344	⇑iPKPdf	PKPdf	04 20 14.2	-0.2
	comp=Z,2.7nm,0.6s						
WATA	Walderalm	156.97	344	P	PKPab	04 20 45.7	+0.4
	comp=Z,194nm,1.2s,SNR=8.9						
ECH	Echery	156.97	352	PKP	PKPdf	04 20 15.1	+0.8
ECH				ePKPab	PKPab	04 20 44.6	-0.6
GRR	Gorron	156.98	5	ePKIKP	PKPdf	04 20 13.9	-0.4
WTTA	Wattenberg	157.02	344	⇓iPKPdf	PKPdf	04 20 13.7	-0.8

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time	Res
	comp=Z,16nm,1.1s						
WTTA	Wattenberg	157.02	344	P	PKPab	04 20 45.2	-0.3
	comp=Z,196nm,1.0s,SNR=11						
RETA	Reutte	157.02	345	⇓iPKPdf	PKPdf	04 20 13.7	-0.7
	comp=Z,7.0nm,1.2s						
RETA	Reutte	157.02	345	P	PKPab	04 20 45.3	-0.3
	comp=Z,185nm,1.1s,SNR=19						
MYKA	Terra Mystica	157.03	340	⇓iPKPdf	PKPdf	04 20 13.3	-1.1
	comp=Z,9.8nm,1.0s						
MYKA	Terra Mystica	157.03	340	P	PKPab	04 20 44.7	-0.9
	comp=Z,167nm,1.2s						
HORT	Hortiatis	157.04	316	P	PKPab	04 20 44.8	-1.1
MOTA	Moosalm	157.08	345	⇓iPKPdf	PKPdf	04 20 13.1	-1.4
	comp=Z,6.6nm,0.9s						
MOTA	Moosalm	157.08	345	P	PKPab	04 20 46.0	+0.2
	comp=Z,158nm,1.0s,SNR=11						
THEF	They Montfort	157.10	354	PKP	PKPdf	04 20 15.3	+0.8
APE	Apeiranthos	157.10	306	eP	PKPab	04 20 38.0	-8.3
QUIF	Quistinic	157.17	10	ePKIKP	PKPdf	04 20 13.7	-0.9
FELD	Feldberg im Sc	157.18	350	PKP	PKPdf	04 20 15.1	+0.5
SKO	Skopje	157.19	321	ePKP	PKPab	04 20 47.9	+1.4
SFTF	Sexfontaines	157.20	355	ePKIKP	PKPdf	04 20 14.3	-0.3
	comp=Z,71nm,1.1s						
LJU	Ljubljana	157.25	338	ePKIKP	PKPdf	04 20 14.6	-0.2
LJU				e		04 24 22.9	
LJU	Ljubljana	157.25	338	ePKPdf	PKPdf	04 20 14.6	-0.2
LJU				e		04 20 24.3	
LJU				ePKPab	PKPab	04 20 46.1	-0.5
LJU				ePP	PP	04 24 22.9	-2.5
LJU				eSKKSac	SKKSac	04 30 55.5	-3.0
LJU	Ljubljana	157.25	338	ePKPdf	PKPdf	04 20 14.6	-0.2
LJU				e		04 20 24.3	
LJU				ePKPab	PKPab	04 20 46.1	-0.5
LJU				ePP	PP	04 24 22.9	-2.5
LJU				eSKKSac	SKKSac	04 30 55.5	-3.0
GRG	Griva	157.26	318	P	PKPab	04 20 46.1	-0.7
ABTA	Abfaltersbach	157.26	342	⇓iPKPdf	PKPdf	04 20 13.4	-1.4
	comp=Z,14nm,1.0s,SNR=9.3						
ABTA	Abfaltersbach	157.26	342	P	PKPab	04 20 45.5	-1.0
	comp=Z,166nm,0.9s						
HAU	Haudompre	157.28	353	ePKIKP	PKPdf	04 20 13.9	-0.8
	comp=Z,17nm,1.1s						
HAU				eMLR	MLR		
	comp=Z,251nm,20.5s						
HAU	Haudompre	157.28	353	ePKPdf	PKPdf	04 20 13.9	-0.8
HAU				LR	LR		
	comp=Z,250nm,20.5s						
MOF	Molkenrain	157.33	352	PKP	PKPdf	04 20 14.6	-0.2
CADS	Cadrg	157.35	339	ePKPdf	PKPdf	04 20 14.0	-0.9
CADS				e		04 20 23.9	
CADS				ePKPab	PKPab	04 20 45.7	-1.3
CADS				e		04 21 54.1	
CADS	Cadrg	157.35	339	ePKPdf	PKPdf	04 20 14.0	-0.9
CADS				e		04 20 23.9	
CADS				ePKPab	PKPab	04 20 45.7	-1.3
CADS				e		04 21 54.1	
PLE	Pljevlja	157.36	326	⇑iPKP	PKPdf	04 20 14.9	-0.1
PLE	Pljevlja	157.36	326	⇑iPKP	PKPdf	04 20 15.0	0.0
HINF	Hinteralfeld	157.40	352	ePKIKP	PKPdf	04 20 14.1	-0.8
DAVA	Damuels	157.41	347	⇑iPKPdf	PKPdf	04 20 14.0	-0.9
	comp=Z,14nm,1.1s						
DAVA	Damuels	157.41	347	P	PKPab	04 20 46.9	-0.3
	comp=Z,118nm,1.0s,SNR=11						
IVA	Berane	157.43	325	⇑iPKP	PKPdf	04 20 14.5	-0.6
IVA	Berane	157.43	325	⇑iPKP	PKPdf	04 20 14.5	-0.6
BOJS	Bojanci	157.46	336	eP	PKPdf	04 20 24.9	+10
BOJS				ePKPab	PKPab	04 20 47.1	-0.4
BOJS				ePP	PP	04 24 23.4	-3.2
BOJS				eSKKSac	SKKSac	04 30 58.5	-1.1
BOJS	Bojanci	157.46	336	ePKPdf	PKPdf	04 20 15.0	-0.1
BOJS				e		04 20 24.9	
BOJS				ePKPab	PKPab	04 20 47.1	-0.4
BOJS				ePP	PP	04 24 23.4	-3.2
BOJS				eSKKSac	SKKSac	04 30 58.5	-1.1
FETA	Feichten	157.47	345	⇓iPKPdf	PKPdf	04 20 14.2	-0.8
	comp=Z,15nm,1.0s,SNR=8.4						
FETA	Feichten	157.47	345	P	PKPab	04 20 47.4	0.0
	comp=Z,137nm,1.4s						
VOY	Vojsko	157.48	339	ePKPdf	PKPdf	04 20 14.7	-0.3
VOY				ePKPab	PKPab	04 20 46.7	-0.8
VOY				e		04 21 32.7	
VOY				e		04 21 44.9	
VOY	Vojsko	157.48	339	ePKPdf	PKPdf	04 20 14.7	-0.3
VOY				ePKPab	PKPab	04 20 46.7	-0.8
VOY				e		04 21 32.7	
VOY				e		04 21 44.9	
PVY	Plav	157.58	324	⇑iPKP	PKPdf	04 20 14.1	-1.2
PVY	Plav	157.58	324	⇑iPKP	PKPdf	04 20 14.1	-1.2
BBS	Basel-Blauen	157.66	351	PKIKP	PKPdf	04 20 14.8	-0.4
KRUS	Krusevo	157.69	320	i PKP	PKPab	04 20 48.5	-0.2
BCI	Bajram Curri	157.69	323	i P	PKPdf	04 20 14.9	-0.5
UPM	Unac-Piva	157.69	327	⇑iPKP	PKPdf	04 20 14.5	-0.9
BIA	Bitola	157.87	319	ePKP	PKPab	04 20 48.8	-0.7
LOMF	Lomont	157.87	352	PKP	PKPdf	04 20 16.2	+0.7
NKY	Niksic	157.94	326	⇑iPKP	PKPdf	04 20 14.3	-1.4
NKY	Niksic	157.94	326	⇑iPKP	PKPdf	04 20 14.3	-1.4
FNA	Florina	157.98	319	P	PKPab	04 20 49.5	-0.5
KZN	Kozani	158.03	317	P	PKPab	04 20 48.7	-1.5
TTG	Podgorica	158.07	325	⇑iPKP	PKPdf	04 20 14.4	-1.5
BRY	Bratogost	158.10	327	⇑iPKP	PKPdf	04 20 14.8	-1.1
BRY	Bratogost	158.10	327	⇑iPKP	PKPdf	04 20 14.8	-1.1
LOR	Lormes	158.20	357	ePKIKP	PKPdf	04 20 15.5	-0.4
	comp=Z,38nm,1.2s						
LOR				eMLR	MLR		
	comp=Z,399nm,21.8s						
LOR	Lormes	158.20	357	ePKPdf	PKPdf	04 20 15.5	-0.4
LOR				LR	LR		
	comp=Z,400nm,21.8s						
HYF	Humbligny	158.24	359	ePKIKP	PKPdf	04 20 15.9	0.0
TUE	Stuetta	158.30	347	ePKPdf	PKPdf	04 20 15.6	-0.4
TUE				ePKPab	PKPab	04 20 51.3	+0.3
BUM	Brajici-Budva	158.35	325	⇑iPKP	PKPdf	04 20 14.8	-1.4
BUM	Brajici-Budva	158.35	325	⇑iPKP	PKPdf	04 20 14.8	-1.4
NEST	Nestorio	158.40	318	P	PKPab	04 20 51.2	-0.6
ULC	Ulcinj	158.41	324	⇑iPKP	PKPdf	04 20 15.2	-1.1
ULC	Ulcinj	158.41	324	⇑iPKP	PKPdf	04 20 15.2	-1.1
SSF	Saint Saulge	158.42	358	ePKIKP	PKPdf	04 20 15.7	-0.5
	comp=Z,56nm,1.4s						
KBN	Korca	158.43	319	i P	PKPab	04 20 51.3	-0.6
HCY	Herceg Novi	158.45	326	⇑iPKP	PKPdf	04 20 15.2	-1.2
HCY	Herceg Novi	158.45	326	⇑iPKP	PKPdf	04 20 15.3	-1.1
CABF	La Chapelle	158.68	353	ePKIKP	PKPdf	04 20 16.6	+0.1
	comp=Z,37nm,1.1s						
AVF	Avril sur Loir	158.70	358	ePKIKP	PKPdf	04 20 15.7	-0.8
	comp=Z,64nm,1.6s						
MFF	Saint Martin d	158.81	5	ePKIKP	PKPdf	04 20 16.0	-0.6
	comp=Z,24nm,1.0s						
SMF	Signal de Mont	158.83	357	ePKIKP	PKPdf	04 20 15.9	-0.8
BGF	Bois d'Agland	158.94	359	ePKIKP	PKPdf	04 20 16.4	-0.4
	comp=Z,38nm,1.2s						
TCF	Toulx Ste Croi	159.22	0	ePKIKP	PKPdf	04 20 16.6	-0.5
	comp=Z,39nm,1.3s						
SRN	Sarande	159.37	318	i P	PKPab	04 20 55.5	-0.5
IGT	Igoumenitsa	159.38	317	P	PKPab	04 20 54.7	-1.4
AGO	Saint Agoulin	159.44	358	PKP	PKPdf	04 20 17.7	+0.3
PLDF	La Plantade	159.51	357	PKP	PKPdf	04 20 17.5	0.0
KEK	Kerkira	159.59	318	P	PKPab	04 20 56.1	-0.9
LKD2	Lefkada island	159.62	315	P	PKPab	04 20 56.2	-0.9
LIC	Lamto	159.62	159	ePKIKP	PKPdf	04 20 18.0	-0.6
	comp=Z,99nm,1.0s						
LIC	Lamto	159.62	159	⇑iPKIKP	PKPdf	04 20 18.0	-0.6
	comp=Z,78nm,1.0s						
LIC				eMLR	MLR		
	comp=Z,385nm,22.0s						
LIC	Lamto	159.62	159	⇑iPKPdf	PKPdf	04 20 18.0	-0.6
LIC				LR	LR		
	comp=Z,190nm,22.0s						
ITM	Ithomi	159.63	310	P	PKPab	04 20 56.6	-0.7
LPL	La Plagne	159.68	351	ePKIKP	PKPdf	04 20 17.9	+0.2
LPG	La Plagne	159.69	351	ePKIKP	PKPdf	04 20 17.9	+0.2
PYM	Petit Puy Mans	159.75	359	PKP	PKPdf	04 20 18.4	+0.6
KIC	Kosan Boka	159.84	159	ePKIKP	PKPdf	04 20 18.3	-0.6
	comp=Z,92nm,1.0s						
TIC	Toumodi	160.01	158	ePKIKP	PKPdf	04 20 18.5	-0.6
	comp=Z,117nm,1.2s						
DBIC	Dimbokro	160.09	159	PKP	PKPdf	04 20 18.2	-0.9
	comp=Z,26nm,1.0s,baz=176,slow=0.8,SNR=14						
DBIC				PKPab	PKPab	04 20 59.7	0.0
	comp=Z,63nm,0.9s,baz=179,slow=5.3,SNR=18						
DBIC				PP	PP	04 24 40.5	-0.4
	comp=Z,15nm,1.2s,baz=212,slow=4.7,SNR=4.5						
DBIC	Dimbokro	160.09	159	PKIKP	PKPdf	04 20 18.2	-1.0
DBIC						04 20 59.7	
DBIC						04 24 40.5	
DBIC				pmax	pmax		
	comp=Z,27nm,1.0s						
DBIC				pmax	pmax		
	comp=Z,63nm,0.9s						
DBIC				pmax	pmax		
	comp=Z,15nm,1.2s						
DBIC	Dimbokro	160.09	159	ePKPdf	PKPdf	04 20 18.1	-1.1
DBIC				ePKPab	PKPab	04 20 60.0	+0.3
SSB	Saint Sauveur	160.15	355	ePKIKP	PKPdf	04 20 18.4	+0.2
SSB				e		04 20 59.0	
RJF	Les Rejaudoux	160.19	2	ePKIKP	PKPdf	04 20 17.9	-0.4
	comp=Z,21nm,1.0s						
RJF				eMLR	MLR		
	comp=Z,416nm,22.0s						
RJF	Les Rejaudoux	160.19	2	ePKPdf	PKPdf	04 20 17.9	-0.4
RJF				LR	LR		
	comp=Z,420nm,22.0s						
EMAZ	Mazaricos	160.25	25	PKP	PKPdf	04 20 18.7	+0.3
ORIF	Oris-en-Rattie	160.38	352	ePKIKP	PKPdf	04 20 18.2	-0.3
	comp=Z,21nm,1.1s						
ORIF				eMLR	MLR		
	comp=Z,176nm,19.8s						
MBDF	Montbardon	160.44	350	ePKIKP	PKPdf	04 20 18.2	-0.4
	comp=Z,30nm,1.1s						
STS	Santiago	160.46	24	PKIKP	PKPdf	04 20 19.1	+0.5
LFF	La Frestale	160.53	3	ePKIKP	PKPdf	04 20 18.2	-0.5
	comp=Z,18nm,0.9s						
VIVF	Saint-Julien-l	160.56	355	ePKIKP	PKPdf	04 20 18.5	-0.2
	comp=Z,56nm,1.4s						
EPON	Pontenova	160.56	21	PKP	PKPdf	04 20 18.7	0.0
CAF	Calviac	160.58	1	ePKIKP	PKPdf	04 20 18.5	-0.2
	comp=Z,24nm,1.1s						
AQU	L'Aquila	160.84	334	⇓iP	PKPab	04 21 02.4	+0.1
SAOF	Saorge	161.03	348	PKP	PKPdf	04 20 19.3	+0.1
AUTN	L'Aution	161.05	349	PKP	PKPdf	04 20 20.2	+1.0
LUCF	Luceram	161.16	349	PKP	PKPdf	04 20 19.5	+0.1
EARI	Arriondas	161.17	17	PKP	PKPdf	04 20 19.8	+0.4
SBF	Sospel	161.18	348	ePKIKP	PKPdf	04 20 18.6	-0.8
	comp=Z,33nm,1.0s						
MVIF	Mont Vial	161.19	349	PKP	PKPdf	04 20 19.6	+0.2
REVF	Revere	161.31	349	PKP	PKPdf	04 20 19.5	0.0
SMRF	Simiane la Rot	161.34	353	ePKIKP	PKPdf	04 20 19.7	+0.1
CALN	Calern	161.38	350	PKP	PKPdf	04 20 19.6	0.0
LASF	Ste Croix	161.39	357	ePKIKP	PKPdf	04 20 19.6	0.0
	comp=Z,40nm,1.1s						
ERUA	La Rua	161.40	22	PKIKP	PKPdf	04 20 19.6	-0.1
ELOB	Lobios	161.52	25	PKP	PKPdf	04 20 20.3	+0.5
FRF	La Foret Royal	161.60	350	ePKIKP	PKPdf	04 20 19.1	-0.7
	comp=Z,23nm,1.1s						
ELAN	Lanestosa	161.66	13	PKP	PKPdf	04 20 20.1	+0.2
PCAB	Cabril	161.67	25	ePKPdf	PKPdf	04 20 20.5	+0.5
PCAB	Cabril	161.67	25	ePKPab	PKPab	04 21 05.4	-0.5
PMAR	Madeira	161.71	62	ePKPab	PKPab	04 21 06.0	-0.6
CHIE	El Hierro	161.72	78	PKP	PKPdf	04 20 19.4	-1.1
LMR	La Mourre	161.85	350	ePKIKP	PKPdf	04 20 19.4	-0.7
	comp=Z,41nm,1.4s						
PTO	Porto	161.92	27	ePKPab	PKPab	04 21 06.9	-0.1
ECAL	Calabor	161.94	22	PKP	PKPdf	04 20 20.5	+0.2
PBRG	Braganca	162.06	22	ePKPdf	PKPdf	04 20 20.9	+0.5
PBRG	Braganca	162.06	22	ePKPab	PKPab	04 21 06.7	-0.9
PMPS	Porto Santo	162.06	61	ePKPdf	PKPdf	04 20 21.6	+0.9
PGF	Pioggiola	162.09	344	ePKIKP	PKPdf	04 20 19.4	-1.0
	comp=Z,26nm,0.9s						
SJPF	Ste Jean	162.15	9	ePKIKP	PKPdf	04 20 20.5	+0.1
	comp=Z,26nm,1.2s						
PVRL	Vila Real	162.16	25	ePKPdf	PKPdf	04 20 21.1	+0.6
PVRL	Vila Real	162.16	25	ePKPab	PKPab	04 21 07.7	-0.4
MTLF	Montolieu	162.16	0	ePKIKP	PKPdf	04 20 20.1	-0.3
	comp=Z,14nm,1.0s						
EPF	Esparros	162.40	5	ePKIKP	PKPdf	04 20 20.6	-0.1
	comp=Z,40nm,1.2s						
ETSF	Etsaut	162.45	7	ePKIKP	PKPdf	04 20 21.0	+0.3
	comp=Z,23nm,1.0s						
MVO	Moncorvo	162.52	24	ePKPdf	PKPdf	04 20 21.6	+0.8
MVO	Moncorvo	162.52	24	ePKPab	PKPab	04 21 09.5	-0.1
MVO	Moncorvo	162.52	24	PKP	PKPdf	04 20 21.7	+0.8
EBIE	Bielsa	162.73	5	PKP	PKPdf	04 20 22.7	+1.7
CEL	Celeste	162.83	321	ePKPdf	PKPdf	04 20 20.8	-0.5
CEL				ePKPab	PKPab	04 21 10.7	-0.5
CCAN	Las Canadas	162.88	77	PKP	PKPdf	04 20 22.9	+1.3
MTE	Manteigas	162.97	27	ePKPdf	PKPdf	04 20 21.6	+0.3
MTE	Manteigas	162.97	27	ePKPab	PKPab	04 21 11.4	-0.3
MTE	Manteigas	162.97	27	ePKPdf	PKPdf	04 20 21.8	+0.5
CLLI	Llivia	163.02	1	PKP	PKPdf	04 20 21.4	+0.1
CSOR	Sort	163.10	3	PKP	PKPdf	04 20 22.1	+0.7
PTOM	Tomar	163.25	30	ePKPdf	PKPdf	04 20 21.9	+0.3
PTOM	Tomar	163.25	30	ePKPab	PKPab	04 21 12.5	-0.5
PMAFR	Mafra	163.36	33	ePKPdf	PKPdf	04 20 22.9	+1.2
PCBR	Castelo Branco	163.47	27	ePKPdf	PKPdf	04 20 22.5	+0.7
PCBR	Castelo Branco	163.47	27	ePKPab	PKPab	04 21 13.6	-0.3
EMIR	Miracle	163.58	2	PKP	PKPdf	04 20 22.3	+0.5
ESAC	San Caprasio	163.62	7	PKP	PKPdf	04 20 20.6	-1.3
EPLA	Plasencia	163.83	24	PKIKP	PKPdf	04 20 22.1	0.0
PMRV	Marv??o	163.86	28	ePKPdf	PKPdf	04 20 22.6	+0.4
PMRV	Marv??o	163.86	28	ePKPab	PKPab	04 21 15.1	-0.5
GUD	Guadarrama	163.93	18	PKIKP	PKPdf	04 20 22.2	0.0
EPOB	Poblet	164.12	3	PKP	PKPdf	04 20 23.5	+1.2
PESTR	Estremoz	164.23	30	ePKPdf	PKPdf	04 20 23.3	+0.8
PESTR	Estremoz	164.23	30	ePKPab	PKPab	04 21 16.3	-1.0
ETOR	Torete	164.26	12	PKIKP	PKPdf	04 20 21.5	-1.0
EVO	Evora	164.31	31	ePKIKP	PKPdf	04 20 22.8	+0.2
EVO				eMLR	MLR		
	comp=Z,291nm,19.8s						
EVO	Evora	164.31	31	ePKPdf	PKPdf	04 20 23.3	+0.7
EVO	Evora	164.31	31	ePKPab	PKPab	04 21 16.8	-0.8
EBAD	Badajoz	164.58	28	PKP	PKPdf	04 20 23.4	+0.5
PTEO	Sao Teotonio	164.72	35	ePKPdf	PKPdf	04 20 24.3	+1.3
PBEJ	Beja	164.78	32	ePKPdf	PKPdf	04 20 24.0	+0.9
ESDC	Sonseca Array	164.88	19	PKP	PKPdf	04 20 23.7	+0.6
	comp=Z,3.5nm,0.8s,baz=349,slow=2.5,SNR=17						
ESDC				PKPab	PKPab	04 21 19.9	-0.1
	comp=Z,17nm,0.9s,baz=329,slow=3.9,SNR=25						
ESDC				PP	PP	04 25 03.8	-2.3
	comp=Z,1.3nm,0.9s,baz=359,slow=4.3,SNR=5.2						
ESDC	Sonseca Array	164.88	19	PKP	PKPdf	04 20 23.7	+0.6
ESLA	Sonseca Array	164.88	19	ePKPdf	PKPdf	04 20 23.6	+0.5
ESLA				ePKPab	PKPab	04 21 20.0	-0.1
PAB	San Pablo	164.88	20	ePKIKP	PKPdf	04 20 23.2	+0.1
MORF	Marmelete	164.94	36	ePKPdf	PKPdf	04 20 24.4	+1.2
MORF	Marmelete	164.94	36	ePKPab	PKPab	04 21 19.6	-0.9
EMOS	Mosqueruela	164.96	8	PKP	PKPdf	04 20 23.1	-0.1
PFVI	Vila Bisbo	164.98	37	PKP	PKPdf	04 20 21.4	-1.9
PCVE	Castro Verde	165.01	34	ePKPdf	PKPdf	04 20 24.4	+1.1
PCVE	Castro Verde	165.01	34	ePKPab	PKPab	04 21 20.3	-0.4
PBAR	Barrancos	165.05	30	ePKPdf	PKPdf	04 20 23.8	+0.5
CFTV	Fuerteventura	165.07	75	PKP	PKPdf	04 20 24.5	+0.9
PVAQ	Vaqueiros	165.34	33	ePKPdf	PKPdf	04 20 24.6	+1.1
PVAQ	Vaqueiros	165.34	33	ePKPab	PKPab	04 21 21.4	-0.8
PBDV	Barranco-do-Ve	165.36	34	ePKPdf	PKPdf	04 20 24.7	+1.1
PBDV	Barranco-do-Ve	165.36	34	ePKPab	PKPab	04 21 21.8	-0.5
EMIN	Mina Concepcio	165.55	30	PKP	PKPdf	04 20 24.6	+0.9
ECHE	Chera	165.64	10	PKIKP	PKPdf	04 20 24.1	+0.4
ETOS	Mallorca	165.73	358	PKP	PKPdf	04 20 25.6	+1.8
EADA	Adamuz	166.05	23	PKP	PKPdf	04 20 24.9	+0.8
EVIA	Vianos	166.24	16	PKIKP	PKPdf	04 20 25.6	+1.4
EBAN	Banos Encina	166.32	21	PKIKP	PKPdf	04 20 25.1	+0.8
ETOB	Tobarra	166.46	13	PKP	PKPdf	04 20 26.2	+1.8
ESPR	Espera	166.66	30	PKP	PKPdf	04 20 26.0	+1.4
ELUQ	Luque	166.70	23	PKIKP	PKPdf	04 20 25.1	+0.5
EQES	Quesada	166.87	19	PKP	PKPdf	04 20 25.2	+0.4
EHUE	Huescar	167.00	18	PKIKP	PKPdf	04 20 25.3	+0.5
ELOJ	Sierra Loja	167.11	24	PKIKP	PKPdf	04 20 24.8	-0.1
EJIF	Jimena Fronter	167.17	30	PKIKP	PKPdf	04 20 26.3	+1.3
ECOG	Cogollos-Vega	167.20	22	PKIKP	PKPdf	04 20 24.9	-0.1
ERON	Agron	167.35	23	PKP	PKPdf	04 20 25.4	+0.3
TORD	Torodi Ar. Bea	167.74	177	PKP	PKPdf	04 20 25.1	-0.9
	comp=Z,22nm,0.8s,baz=346,slow=0.2,SNR=55						
TORD				PKPab	PKPab	04 21 33.0	-0.1
	comp=Z,119nm,1.2s,baz=183,slow=3.3,SNR=28						
TORD				PP	PP	04 25 19.0	-1.6
	comp=Z,4.8nm,1.0s,baz=183,slow=4.4,SNR=3.8						
ENIJ	Nijar	167.89	18	PKIKP	PKPdf	04 20 26.2	+0.7
CAEH	'Ain El Ouahch	168.07	342	P	PKPab	04 21 32.0	-2.2
KEST	Kesra	168.12	331	PKP	PKPdf	04 20 25.9	+0.2
	comp=Z,1.5nm,0.9s,baz=356,slow=5.5,SNR=5.4						
KEST				PKPab	PKPab	04 21 34.9	+0.4
	comp=Z,30nm,1.0s,baz=320,slow=1.2,SNR=36						
KEST				PP	PP	04 25 23.3	+0.3
	comp=Z,7.9nm,1.1s,baz=278,slow=2.5,SNR=7.5						
CKFL	Kef-Lekhel	168.47	342	P	PKPab	04 21 35.0	-1.0
DFRA	Djebel Bou Aff	168.54	345	P	PKPab	04 21 36.0	-0.3
CASM	Ain Smara	168.66	343	P	PKPab	04 21 35.5	-1.3
ABA	Alger-Bouzarea	168.68	357	P	PKPab	04 21 36.7	-0.2
SET	Setif	168.98	347	P	PKPab	04 21 39.0	+0.8
EBNR	Beni Rached	169.19	3	P	PKPab	04 21 40.4	+1.3
EMHD	Djebel Mahouad	169.28	357	P	PKPab	04 21 40.0	+0.5
ADJB	Djebel Djouab	169.30	355	P	PKPab	04 21 39.4	-0.2
ECHA	Ech Chlef	169.32	4	P	PKPab	04 21 40.2	+0.5
EANR	'Ain N'Sour	169.49	5	P	PKPab	04 21 41.0	+0.5
ETRT	Tiaret	170.07	5	P	PKPab	04 21 44.0	+1.0

*TAP **01** 04:02:34.7, 24.54N×122.50E, h109km, ML3.1, D*
*ISCJB **01** 04:02:35.4±1.0, 24.42N±0.07×122.62E±0.03, h85km±11km, Error ellipse: s-maj=11.6km s-min=3.9km az=177.4*
*JMA **01** 04:02:35.9±0.2, 24.62N×122.66E, h84km±2km, M2.0*
ISC 01 04:02:35.9±1.0**, 24.42N**±0.07×**122.62E**±0.03**, h84**km±10km**, n16, σ0.59**/28**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.36	83	P	Pn	04 02 49.0	0.0
YOJ				eS	Sn	04 02 58.9	+0.3
ENA	Nanau	0.80	271	P	Pn	04 02 52.9	-0.1
	baz=258						
ENA				S	Sn	04 03 06.4	+0.8
	baz=258						
TWE	Neicheng	0.92	289	P	Pn	04 02 53.9	-0.4
	baz=284						
TWE				eS	Sn	04 03 07.0	-1.0
	baz=284						
ENTT	Nioudou	0.99	283	i P	Pn	04 02 55.1	+0.1
	baz=277						
ENTT				eS	Sn	04 03 09.8	+0.5
	baz=277						
TWD	Chiawan	0.99	251	eP	Pn	04 02 55.0	-0.1
	baz=235						
TWD				eS	Sn	04 03 09.2	-0.3
	baz=235						
HATJ	Hateruma jima	1.14	108	P	Pn	04 02 57.8	+0.9
HATJ				eS	Sn	04 03 12.7	+0.1
NSK	Sanguang	1.18	283	i P	Pn	04 02 57.3	-0.1
	baz=278						
NSK				S	Sn	04 03 12.9	-0.6
	baz=278						
WHF	Hehuan Shan	1.27	258	i P	Pn	04 02 58.7	+0.2
	baz=244						
WHF				S	Sn	04 03 15.5	+0.1
	baz=244						
JKRS	Kuro-shima	1.28	98	P	Pn	04 02 58.9	+0.3
JKRS				eS	Sn	04 03 16.2	+0.6
TWT	Tachien	1.33	263	eP	Pn	04 03 00.0	+0.8
	baz=250						
TWT				eS	Sn	04 03 17.2	+0.5
	baz=250						
JIJ	Ishigaki jima	1.39	92	P	Pn	04 02 59.8	-0.2
JIJ				eS	Sn	04 03 17.3	-0.8
EHY	Hungye	1.50	233	eS	Sn	04 03 18.9	-1.6
	baz=226						
TWF1	Yuli	1.61	229	eP	Pn	04 03 02.8	0.0
	baz=229						
CHKT	Chengkung	1.75	222	eS	Sn	04 03 25.8	-0.5
	baz=209						
YUS	Yu-Shan	1.78	239	eS	Sn	04 03 28.3	+1.0
	baz=230						
JTJ	Tarama	1.91	83	P	Pn	04 03 06.7	0.0
JTJ				eS	Sn	04 03 29.3	-0.8

*IDC **01** 04:07:36.3±0.8, 60.52S×23.72W, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.3/17, mbtmp4.3/10, ML5.7/1, Error ellipse: s-maj=29.3km s-min=19.0km az=11.0*
*NEIC **01** 04:07:37.6±0.5, 60.40S×23.69W, h10km, mb4.4/2, Error ellipse: s-maj=20.0km s-min=14.4km az=187.0*
ISC 01 04:07:35.2±0.7**, 61.2S**±0.1×**23.8W**±0.3**, h10**km**, n20, σ0.78**/15**, mb4.2**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	11.35	153	e	Pn	04 10 17.2	+0.1
VNA3	Neumayer Olymp	11.53	157	e	Pn	04 10 19.6	+0.1
VNA2	Neumayer--Watz	11.75	153	e	Pn	04 10 22.2	-0.3
PMSA	Palmer Station	18.40	241	P	Pn	04 11 58.2	+8.2
	2.4nm,0.3s,baz=93,slow=13,SNR=54						
PLCA	Paso Flores	34.84	284	P	P	04 14 26.2	+0.2
	5.1nm,0.8s,mb4.5,baz=156,slow=7.0,SNR=2.1						
CFAA	Coronel Fontan	41.31	295	P	P	04 15 20.6	0.0
	0.4nm,0.6s,mb3.2,baz=154,slow=8.7,SNR=4.0						
CPUP	Villa Florida	41.58	312	P	P	04 15 22.1	-0.8
	2.1nm,0.6s,mb4.0,baz=130,slow=7.9,SNR=12						
CPUP	Villa Florida	41.58	312	eP	P	04 15 20.2	-2.7
	6.8nm,0.8s,mb4.3						
BOSA	Boshof	45.90	68	P	P	04 15 57.5	-0.1
	4.2nm,1.1s,mb4.3,baz=225,slow=4.3,SNR=2.6						
SIV	San Ignacio	52.41	313	P	P	04 16 46.8	-0.8
	1.4nm,0.6s,mb4.0,baz=155,slow=11,SNR=8.4						
LPAZ	La Paz	54.81	305	P	P	04 17 06.9	+1.7
	2.3nm,0.7s,mb4.3,baz=143,slow=5.6,SNR=10.0						
LPAZ	La Paz	54.81	305	P	P	04 17 06.8	+1.7
	2.9nm,0.8s,mb4.4						
TORD	Torodi Ar. Bea	76.82	25	P	P	04 19 27.2	+0.4
	4.5nm,0.7s,mb4.5,baz=200,slow=6.4,SNR=28						
ASAR	Alice Springs	93.52	160	P	P	04 20 57.4	+6.3
	1.0nm,0.8s,mb4.3,baz=179,slow=3.3,SNR=5.7						
WRA	Warramunga Arr	97.24	159	P	P	04 21 14.2	+6.1
	0.9nm,1.0s,mb4.2,baz=190,slow=4.0,SNR=3.1						
NVAR	Mina Array Bea	124.86	287	PKP	PKPdf	04 26 37.0	+2.6
	0.4nm,0.5s,baz=150,slow=4.8,SNR=2.4						
DLBC	Dease Lake	144.63	299	ePKPdf	PKPdf	04 27 11.2	+0.9
SONM	Songino Array	148.98	93	PKPbc	PKPbc	04 27 23.4	+1.3
	1.5nm,0.7s,baz=208,slow=2.8,SNR=4.5						
INK	Inuvik	150.82	314	PKPbc	PKPbc	04 27 26.5	+0.5
	3.2nm,0.7s,baz=71,slow=2.3,SNR=9.6						
ILAR	Eielson Array	154.68	303	PKPbc	PKPbc	04 27 35.5	+0.9
	0.9nm,0.9s,baz=137,slow=2.6,SNR=5.1						

*IDC **01** 04:24:29.6±0.4, 37.26N×69.04E, h0km, mb5.0/31, mb1 5.1/37, mb1mx5.1/39, mbtmp5.1/37, ML4.9/5, MS5.0/17, Ms1 5.0/17, ms1mx4.6/36, Error ellipse: s-maj=10.5km s-min=8.3km az=144.0*
*ISCJB **01** 04:24:30.5±0.1, 37.32N±0.01×68.95E±0.01, h14km, mb5.3/287, MS5.0/212, Error ellipse: s-maj=2.2km s-min=1.6km az=21.1*
*NEIC **01** 04:24:30.5±1.8, 37.33N×68.93E, h2km±11km, mb5.4/167, MS4.9/159, Error ellipse: s-maj=4.8km s-min=2.6km az=182.0*
NEIC Felt at Dushanbe.
*NNC **01** 04:24:31.0±6.9, 37.72N×68.61E, h0km, mb5.7, mpv5.9, Error ellipse: s-maj=59.1km s-min=51.8km az=51.0*
*BGS **01** 04:24:31.2±2.4, 36.12N×67.46E, h10km, mb5.0, MS5.1*
*BJI **01** 04:24:32.0, 37.57N×69.32E, h5km, mB5.4/32, mb5.3/47, Ms5.5/48, Ms7 5.4/44*
*TEH **01** 04:24:33.0, 37.42N×68.93E, h10km*
*MOS **01** 04:24:33.3±1.0, 37.37N×68.97E, h33km, mb5.5/122, MS4.9/58, Error ellipse: s-maj=5.3km s-min=3.1km az=131.9*
MOS Felt (III-IV) at Dushanbe.
*SZGRF **01** 04:24:35.6, 36.83N×68.78E, h33km, mb5.1, Hindu Kush, Afghanistan, region*
*DJA **01** 04:24:40, 37.39N×68.99E, h65km, mb5.3/22*
ISC 01 04:24:30.4±0.6**, 37.36N**±0.01×**68.95E**±0.01**, h0**km±3km**, n1031, σ1.11**/951**, mb5.3**/287**, MS5.0**/212**, 41C-55D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSH	Dushanbe	1.20	353	⇓iPG	Pg	04 24 54.0	+0.6
KBL	Kabul	2.82	178	ePN	Pn	04 25 20.2	+3.6
KBL				eS	Sg	04 26 01.5	+0.6
CEP	Cherat	4.28	145	⇓P	Pn	04 25 41.0	+4.3
CEP				S	Sg	04 26 54.0	+6.2
CHM	Chimkent	4.97	6	ePG	Pg	04 26 17.3	+12
THW	Thamme Wali	5.10	153	P	Pn	04 25 50.7	+2.7
CHCP	Chirah Chowk	5.10	135	P	Pn	04 25 51.5	+3.5
CHCP				S	Sg	04 27 05.0	-9.3
KK31	Karatay Array	5.86	11	Pn	Pn	04 26 00.1	+1.7
	48nm,0.5s,baz=198,slow=12,SNR=719						
KK31				⇓Sn	Sn	04 27 05.6	-0.6
	233nm,0.5s,baz=298,slow=37,SNR=3.4						
KK31				⇑Lg		04 27 29.6	
	1μm,0.6s,baz=195,slow=27,SNR=6.6						

KKAR	Karatay Array	5.86	11	ePN	Pn	04 26 00.1	+1.7
KKAR				pmax	pmax		
	comp=Z,15nm,0.6s						
KKAR	Karatay Array	5.86	11	ePn	Pn	04 26 00.1	+1.7
	comp=Z,15nm,0.6s						
KKAR				eS	Sg	04 27 36.8	-1.7
KSH	Kashi	5.92	67	Pn	Pn	04 25 56.6	-2.6
KSH				Sn	Sn	04 27 00.2	-7.5
KSH				smax			
	comp=N,7µm,1.6s						
KSH				smax			
	comp=E,3µm,0.9s						
AML	Almayashu	6.00	36	P	Pn	04 26 02.8	+2.4
	SNR=402						
SARP	Sargodha	6.24	149	P	Pn	04 26 06.2	+2.6
EKS2	Erkin-Say	6.46	34	P	Pn	04 26 09.4	+2.7
	SNR=207						
EKS2	Erkin-Say	6.46	34	ePn	Pn	04 26 08.4	+1.8
UCH	Uchtor	6.48	40	P	Pn	04 26 10.1	+3.2
	SNR=158						
UCH	Uchtor	6.48	40	ePn	Pn	04 26 10.0	+3.2
UCH				eSn	Sn	04 27 22.2	+0.8
JMU	Jammu	6.73	132	ex	Pb	04 26 32.0	+3.8
JMU				eS	Sn	04 27 26.5	-1.3
KZA	Kyzart	6.76	44	P	Pn	04 26 13.5	+2.7
	SNR=428						
KZA	Kyzart	6.76	44	ePn	Pn	04 26 13.6	+2.8
AAK	Ala-Archa	6.77	37	P	Pn	04 26 13.3	+2.4
	SNR=1044						
AAK	Ala-Archa	6.77	37	Pn	Pn	04 26 13.3	+2.4
	comp=E,5.6nm,0.3s,baz=202,slow=5.2,SNR=1054						
AAK				Lg		04 28 04.8	
	comp=E,0.4nm,0.3s,baz=74,slow=19,SNR=2.6						
AAK	Ala-Archa	6.77	37c	iPN	Pn	04 26 13.1	+2.2
AAK				pmax	pmax		
	comp=Z,568nm,0.6s						
AAK	Ala-Archa	6.77	37	ePn	Pn	04 26 13.2	+2.3
AAK	Ala-Archa	6.77	37	Pn	Pn	04 26 13.6	+2.7
	comp=Z,18µm,0.5s						
AAK	Ala-Archa	6.77	37	P	Pn	04 26 13.4	+2.5
	SNR=148						
KBK	Karagaybulak	7.01	39	P	Pn	04 26 16.8	+2.6
	SNR=1640						
CHMS	Chumysh	7.17	36	P	Pn	04 26 18.5	+2.2
	SNR=89						
USP	Ospenovka	7.26	34	P	Pn	04 26 19.2	+1.6
	SNR=243						
ULHL	Ulahol	7.43	47	P	Pn	04 26 22.5	+2.5
	SNR=199						
DLH	Dalhousie	7.50	128	ex	x	04 26 31.0	
DLH				ex	x	04 28 34.0	
TKM2	Tokmak 2	7.53	40	⇑Pn	Pn	04 26 23.2	+1.9
	comp=Z,822nm,0.6s						
TKM2				Sn	Sn	04 27 45.4	-2.0
TKM2				⇑Lg		04 28 29.6	
	comp=Z,2µm,1.2s						
TKM2	Tokmak 2	7.53	40	P	Pn	04 26 24.0	+2.7
	SNR=126						
TKM2	Tokmak 2	7.53	40	ePn	Pn	04 26 23.2	+1.9
ISRO	Mashad	7.67	265	eP	Pn	04 26 21.2	-2.1
MHI	Mashad	7.67	265	eP	Pn	04 26 22.0	-1.3
IMOG	Moghan	7.82	264	eP	Pn	04 26 23.6	-1.7
IAKL	Akhelmad	8.19	268	eP	Pn	04 26 28.2	-2.3
IEMG	Emamgholi	8.20	273	eP	Pn	04 26 27.5	-3.0
IKRD	Kardeh	8.36	269	eP	Pn	04 26 20.0	-13
ASH	Ashkhabad	8.43	277	P	Pn	04 26 28.0	-5.7
KNDC	Almaty	8.46	44	⇓Pn	Pn	04 26 36.0	+1.8
	comp=Z,2µm,0.6s						
KNDC				⇑Lg		04 29 02.7	
	comp=Z,3µm,1.5s						
AAA	Alma-Ata	8.49	43	iP	Pn	04 26 36.1	+1.6
AAA				iS	Sn	04 28 08.1	-2.9
AAA				pmax	pmax		
	comp=Z,5µm,1.6s						
AAA				smax			
	comp=E,2µm,2.9s						
AAA				MLR	MLR		
	comp=Z,50µm,10.0s						
AAA	Alma-Ata	8.49	43	eP	Pn	04 26 36.2	+1.7
BHK	Bhakra	8.56	132	ePKP	Pn	04 26 33.8	-1.7
BHK				ex	x	04 28 58.4	
VAN	Vannovskaya	8.62	277	eP	Pn	04 26 32.3	-4.0
VAN				S	Sn	04 28 09.0	-5.2
ISFR	Sfrayin	8.74	271	eP	Pn	04 26 36.2	-1.8
IDAH	Dahanechah	8.76	241	eP	Pn	04 26 40.2	+2.0
SDNR	Sundarnagar	8.84	129	ePKP	Pn	04 26 40.5	+1.2
SDNR				ex	x	04 28 21.5	
ISHV	Shirvan	8.95	274	eP	Pn	04 26 38.4	-2.4
SMLA	Simla	9.21	130	iP	Pn	04 26 45.0	+0.5
SMLA				ix	x	04 29 32.2	
IKOO	Kooshah	9.54	242	eP	Pn	04 26 48.9	0.0
KLP	Kalpa	9.63	124	ePKP	Pn	04 26 50.0	-0.2
KLP				ex	x	04 28 23.9	
DDI	Dehra Dun	10.32	130	ePKP	Pn	04 26 59.3	-0.4
DDI				ex	x	04 28 57.0	
KHET	Khetri	10.91	146	ePKP	Pn	04 27 06.6	-1.1
KHET				AMb	AMB	04 27 13.4	
	comp=Z,81nm,1.1s						
KHET				ex	x	04 29 05.8	
NDI	New Delhi	11.09	139	ePKP	Pn	04 27 10.2	+0.1
NDI				AMb	AMB	04 27 13.9	
	comp=Z,270nm,1.2s						
NDI				ex	x	04 29 11.0	
JOSI	Joshimath	11.12	125	ePKP	Pn	04 27 10.0	-0.6
JOSI				ex	x	04 29 32.4	
KUDL	Kundal	11.17	143	ex	Pn	04 27 05.9	-5.4
KUDL				AMb	AMB	04 27 08.8	
	comp=Z,263nm,1.2s						
KUDL				ex	x	04 29 25.1	
AYAN	Aya Nagar	11.20	140	ePKP	Pn	04 27 10.9	-0.8
AYAN				AMb	AMB	04 27 15.2	
	comp=Z,156nm,1.0s						
SONA	Sohna	11.37	141	ePKP	Pn	04 27 13.1	-0.9
SONA				AMb	AMB	04 27 20.1	
	comp=Z,153nm,1.3s						
SONA				ex	x	04 29 14.9	
AJM	Ajmer	11.88	154	ePKP	Pn	04 27 19.6	-1.4
AJM				AMb	AMB	04 27 22.1	
	comp=Z,28nm,0.9s						
AJM				ex	x	04 29 13.0	
PTH	Pithoragarh	12.21	126	ePKP	Pn	04 27 23.5	-2.0
PTH				eS	Sn	04 29 32.2	-10
IANJ	Anjilo	12.26	266	eP	Pn	04 27 25.1	-1.1
IBAF	Bafgh	12.45	246	eP	Pn	04 27 29.8	+1.0
ISHM	Shahmirzad	12.68	268	eP	Pn	04 27 30.7	-1.2
ICHK	Chekchek	12.99	251	eP	Pn	04 27 35.8	-0.4
ILAS	Lasjerd	13.04	266	eP	Pn	04 27 35.0	-1.8
IMEH	Mehriz	13.25	247	eP	Pn	04 27 40.4	+0.7
AB31	Akbulak array	13.56	334	Pn	Pn	04 27 41.3	-2.6
	comp=Z,160nm,0.6s,baz=164,slow=12,SNR=623						
AB31				⇑Sn	Sn	04 30 02.9	-12
	comp=Z,334nm,0.8s,baz=170,slow=24						
AB31	Akbulak array	13.56	334	iP	Pn	04 27 41.3	-2.6
ABKAR	Akbulak array	13.56	334	ePn	Pn	04 27 41.4	-2.4
	comp=Z,5.2nm,1.3s						
ABKAR				eS	Sn	04 30 03.1	-12
MK31	Makanchi Array	13.66	42	Pn	Pn	04 27 44.9	-0.3
	comp=Z,192nm,0.9s,baz=238,slow=7.0,SNR=391						
MK31	Makanchi Array	13.66	42	iP	Pn	04 27 44.8	-0.4
MK31				pmax	pmax		
	comp=Z,223nm,0.8s						
MK31	Makanchi Array	13.66	42	ePn	Pn	04 27 44.6	-0.5
MKAR	Makanchi Array	13.66	42	Pn	Pn	04 27 44.5	-0.6
	comp=Z,11nm,0.3s,baz=228,slow=13,SNR=224						
MKAR				Lg		04 31 52.0	
	comp=Z,1.0nm,0.3s,baz=254,slow=25,SNR=2.5						
IZEF	Zefreh	14.31	257	eP	Pn	04 27 53.1	-1.1
IBND	Bandar-abas	14.39	230	eP	Pn	04 27 55.4	+0.1
IKLH	Kolahrood	14.74	259	eP	Pn	04 27 57.9	-2.1
KURBB	Kurchatov Arra	14.92	24	⇑Pn	Pn	04 27 59.3	-3.1
	comp=Z,32nm,1.6s						
KURK	Kurchatov	15.03	24	⇑Pn	Pn	04 28 00.5	-3.4
	comp=Z,127nm,1.3s						
KURK	Kurchatov	15.03	24	Pn	Pn	04 27 59.0	-4.9
	comp=Z,1.9nm,0.3s,baz=214,slow=12,SNR=59						
KURK				Lg		04 32 18.2	
	comp=Z,0.8nm,0.3s,baz=181,slow=26,SNR=3.8						
KURK	Kurchatov	15.03	24c	iP	Pn	04 28 00.4	-3.5
KURK				pmax	pmax		
	comp=Z,158nm,1.7s						
KURK	Kurchatov	15.03	24	ePn	Pn	04 28 01.0	-2.9
KURK	Kurchatov	15.03	24	P	Pn	04 28 01.4	-2.4
	SNR=20						
AKTK	Aktyubinsk	15.23	333	Pn	Pn	04 28 04.0	-2.6
AKTK				Sn	Sn	04 30 43.1	-13
AKTK				Lg		04 32 39.1	
AKTK				LR	LR	04 34 19.9	
AKTO	Aktyubinsk	15.23	333	⇓Pn	Pn	04 28 04.4	-2.2
	comp=Z,28nm,0.8s						
AKTO				⇑Sn	Sn	04 30 47.2	-8.8
	comp=Z,45nm,0.9s						
AKTO	Aktyubinsk	15.23	333	Pn	Pn	04 28 04.0	-2.6
	comp=Z,2.8nm,0.3s,baz=151,slow=14,SNR=58						
AKTO				Sn	Sn	04 30 43.1	-13
	comp=Z,3.9nm,0.3s,baz=315,slow=20,SNR=4.0						
AKTO				Lg		04 32 39.1	
	comp=Z,1.2nm,0.3s,baz=223,slow=19,SNR=2.8						
AKTO				LR	LR	04 34 19.9	
	comp=Z,5µm,18.2s,baz=148,slow=38						
AKTO	Aktyubinsk	15.23	333	P	Pn	04 28 04.4	-2.2
AKTO						04 30 47.1	
AKTO				pmax	pmax		
	comp=Z,28nm,0.8s						
AKTO				smax			
	comp=N,45nm,1.0s						
DANN	Dangsing	15.34	122	eP	Pn	04 28 04.3	-3.8
	comp=N,2µm,1.1s						
VOSK	Vostochnaya	15.43	5	⇑Pn	Pn	04 28 06.2	-2.9
	comp=N,154nm,1.1s						
VOSK				⇑Sn	Sn	04 30 51.2	-9.4
	comp=N,431nm,1.9s						
IPIR	Pirpir	15.51	258	eP	Pn	04 28 08.0	-2.3
ZRNK	Zerenda	15.59	0	⇓Pn	Pn	04 28 08.9	-2.3
	comp=N,121nm,0.8s						
ZRNK				⇑Sn	Sn	04 30 55.5	-8.9
	comp=N,390nm,1.1s						
KOLN	Koldanda	15.61	124	eP	Pn	04 28 07.7	-3.9
	comp=N,270nm,0.7s						
WMQ	Urumqi	15.62	60	P	Pn	04 28 09.6	-2.1
WMQ				sP	sP	04 28 16.6	+0.5
WMQ				PP		04 28 22.6	
WMQ				S	Sn	04 31 02.6	-2.7
WMQ				SS		04 31 21.6	
WMQ				pmax	pmax		
	comp=Z,660nm,0.8s						
WMQ				LR	LR		
	comp=N,6µm,12.0s						
WMQ				LR	LR		
	comp=E,5µm,9.0s						
WMQ				LR	LR		
	comp=Z,6µm,9.0s						
BVA0	Borovoye Array	15.69	3	Pn	Pn	04 28 11.1	-1.5
	comp=Z,30nm,0.8s						
BVA0				⇑Sn	Sn	04 30 59.9	-7.2
	comp=Z,7.0nm,0.7s						
BVA0	Borovoye Array	15.69	3	P	Pn	04 28 11.0	-1.6
BVA0				pmax	pmax		
	comp=Z,44nm,0.9s						
BVAR	Borovoye Array	15.69	3	Pn	Pn	04 28 10.2	-2.4
	comp=Z,2.5nm,0.3s,baz=169,slow=12,SNR=35						
BVAR				Sn	Sn	04 31 00.8	-6.3
	comp=Z,7.1nm,0.3s,baz=179,slow=23,SNR=5.0						
BVAR				Lg		04 32 44.0	
	comp=Z,2.3nm,0.3s,baz=214,slow=24,SNR=2.5						
BVAR	Borovoye Array	15.69	3	P	Pn	04 28 10.2	-2.4
BVAR						04 31 00.8	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR				smax			
	comp=N,7.0nm,0.3s						
BRVK	Borovoye	15.72	3d	iP	Pn	04 28 11.3	-1.7
BRVK				pmax	pmax		
	comp=Z,118nm,1.7s						
BRVK	Borovoye	15.72	3	ePn	Pn	04 28 11.7	-1.3
	comp=Z,279nm,0.9s						
BRVK				eS	Sn	04 30 59.6	-8.2
BRVK	Borovoye	15.72	3	P	Pn	04 28 12.2	-0.7
	SNR=62						
BHV	Bhavnagar	15.80	169	ePKP	Pn	04 28 15.0	+0.8
BHV				ex	x	04 31 54.5	
BHPL	Bhopal	15.85	150	ePKP	Pn	04 28 14.6	-0.2
BHPL				AMb	AMB	04 28 26.1	
	comp=Z,136nm,0.7s						
BHPL				ex	x	04 31 01.3	
GKN	Gorkha	16.16	121	eP	Pn	04 28 14.5	-4.2
	comp=Z,544nm,0.5s						
DMN	Daman	16.73	121	eP	Pn	04 28 22.6	-3.4
	comp=Z,699nm,0.7s						
KKN	Kakani	16.73	120	eP	Pn	04 28 22.0	-4.1
	comp=Z,1µm,0.8s						
NAZ	Nazwa, Dubai	16.75	226	P	Pn	04 28 30.6	+4.2
	SNR=6.8						
ASHO	Ashiyiah	16.77	225	P	Pn	04 28 28.4	+1.8
	SNR=11						
ISRB	Sarab	16.88	278	eP	Pn	04 28 25.7	-2.2
PKIN	Phulchoki	16.94	120	eP	Pn	04 28 25.4	-3.4
	comp=Z,659nm,0.5s						
PKI	Pulchoki	16.96	120	eP	Pn	04 28 25.8	-3.2
	comp=Z,1µm,0.8s						
HOQ	Hoqain	16.99	219	Pn	Pn	04 28 32.5	+3.2
	SNR=11						
WBK	Wadi Bani Khal	17.04	213	Pn	Pn	04 28 30.6	+0.6
	SNR=16						
JBP	Jabalpur	17.04	143	ex	Pn	04 28 26.9	-3.1
JBP				ex	x	04 31 27.5	
SMDO	Samad	17.07	216	Pn	Pn	04 28 30.4	0.0
	SNR=7.2						
GUN	Gumba	17.07	119	eP	Pn	04 28 27.1	-3.3
	comp=Z,1µm,0.8s						
ASUD	Al Ashush, Dub	17.23	226	P	Pn	04 28 34.0	+1.6
	SNR=6.5						
MAK	Makhachkala	17.30	296d	iP	Pn	04 28 31.9	-1.3
MAK				e		04 31 40.9	
MAK				pmax	pmax		
	comp=Z,1µm,1.8s						
MAK				MLR	MLR		
	comp=Z,13µm,12.0s						
MAK	Makhachkala	17.30	296⇓	iP	Pn	04 28 31.8	-1.4
IHRS	Heris	17.33	280	eP	Pn	04 28 31.0	-2.6
JIRN	Jiri	17.44	119	eP	Pn	04 28 32.5	-2.5
ARQ	Araqi	17.59	221	Pn	Pn	04 28 39.5	+2.5
	SNR=14						
JMDO	Jabal Madar	17.64	215	Pn	Pn	04 28 39.6	+2.1
	SNR=19						
IKOM	Komasi	17.68	266	eP	Pn	04 28 35.7	-2.3
BSY	Bisya	17.74	218	Pn	Pn	04 28 41.3	+2.5
	SNR=20						
AKL	Akola	18.02	155⇑	iP	Pn	04 28 42.6	+0.3
AKL				AMP		04 28 50.9	
	comp=Z,273nm,0.9s						
AKL				ix	x	04 31 48.9	
ITBZ	Tabriz	18.04	280	eP	Pn	04 28 41.5	-0.9
IVIS	Veis	18.11	268	eP	Pn	04 28 42.7	-0.6
RAMN	Ramite	18.17	120	eP	Pn	04 28 40.5	-3.5
	comp=Z,540nm,0.7s						
IAZR	Azarshahr	18.22	278	eP	Pn	04 28 43.3	-1.3
IMRD	Marand	18.36	281	eP	Pn	04 28 45.9	-0.4
IGHG	Ghaleghazi	18.39	267	eP	Pn	04 28 47.1	+0.4
ISHB	Shabestar	18.45	280	eP	Pn	04 28 46.4	-1.0
DGRG	David-gareji	18.65	290	P	Pn	04 28 48.2	-1.7
TAPN	Taplejung	18.70	117	eP	Pn	04 28 48.4	-2.2
	comp=Z,706nm,0.8s						
ODAN	Odare	18.77	119	eP	Pn	04 28 48.4	-3.0
GNI	Garni	19.07	286	Pn	Pn	04 28 55.0	+0.1
	comp=Z,3.2nm,0.3s,baz=14,slow=3.3,SNR=35						
GNI				LR	LR	04 38 07.4	
	comp=Z,2µm,18.1s,baz=96,slow=43						
GNI	Garni	19.07	286d	iP	Pn	04 28 55.4	+0.5
GNI				pmax	pmax		
	comp=Z,782nm,1.7s						
GNI	Garni	19.07	286	ePn	Pn	04 28 55.8	+0.8
	comp=Z,420nm,0.9s						
GNI	Garni	19.07	286	P	Pn	04 28 56.2	+1.3
	SNR=64						
MTA	Mtatsminda	19.11	291	P	Pn	04 28 54.9	-0.5
TBLG	Delisi	19.15	291	P	Pn	04 28 54.8	-1.1
TBLG	Delisi	19.15	291	P	Pn	04 28 54.8	-1.1
POO	Poona	19.25	166	ePKP	Pn	04 28 55.5	-1.7
POO				AMb	AMB	04 29 05.1	
	comp=Z,104nm,1.0s						
MIB	Mutribah	19.49	254	eP	Pn	04 28 59.0	-1.2
MIB				AMb	AMB	04 29 05.9	
	comp=Z,472nm,0.8s						
KBD	Kabd	19.53	251	eP	Pn	04 28 59.2	-1.3
KBD				AMb	AMB	04 29 03.2	
	comp=Z,167nm,1.1s						
QRN	Al-Qurain	19.58	250	eP	Pn	04 28 59.7	-1.5
QRN				AMb	AMB	04 29 05.3	
	comp=Z,198nm,0.8s						
GOR	Gori	19.64	291	P	Pn	04 29 01.8	-0.1
RDF	Al-Radifah	19.77	251	eP	Pn	04 29 02.6	-0.7
RDF				AMb	AMB	04 29 14.9	
	comp=Z,300nm,0.9s						
NAY	Al-Naaiem	19.84	252	eP	Pn	04 29 02.5	-1.7
NAY				AMb	AMB	04 29 05.8	
	comp=Z,118nm,1.4s						
ZAA0	Zalesovo Array	19.87	28	eP	Pn	04 29 01.6	-2.8
ZALV	Zalesovo Beam	19.87	28	P	Pn	04 29 01.6	-2.8
	comp=Z,45nm,0.3s,baz=216,slow=10,SNR=388						
ZALV				S	Sn	04 32 42.5	-5.7
	baz=237,slow=10,SNR=2.1						
ZALV				LR	LR	04 37 40.3	
	comp=Z,2µm,19.9s,baz=216,slow=40						
ZALV	Zalesovo Beam	19.87	28	P	Pn	04 29 01.6	-2.8
ZALV				S	Sn	04 32 42.5	-5.7
ZALV				pmax	pmax		
	comp=Z,45nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,2µm,19.9s						
ZEI	Tsey	19.89	294	eP	Pn	04 29 02.9	-1.8
ZEI				pmax	pmax		
	comp=Z,151nm,1.0s						
ZEI				MLR	MLR		
	comp=Z,3µm,13.0s						
LSA	Lhasa	20.00	106	eP	Pn	04 29 06.0	-0.1
	comp=Z,349nm,1.2s						
LSA				LR	LR		
	comp=Z,320nm,20.0s						
NVS	Novosibirsk	20.02	25	iP	P	04 29 02.1	-2.4
NVS				e		04 32 44.4	
NVS				pmax	pmax		
	comp=Z,145nm,1.1s						
NVS				pmax	pmax		
	comp=N,138nm,1.5s						
NVS				pmax	pmax		
	comp=E,79nm,1.3s						
NVS				smax			
	comp=E,320nm,2.0s						
NVS				smax			
	comp=N,261nm,2.4s						
LATR	Latur	20.02	158	ePKP	P	04 29 04.3	-0.5
LATR				ePKP		04 29 05.7	
LATR				ex	x	04 32 40.6	
SVE	Sverdlovsk	20.25	347⇓	eP	P	04 29 09.9	+3.0
SVE				eS	S	04 32 56.6	+1.9
SVE				pmax	pmax		
	comp=Z,165nm,1.0s						
SVE				MLR	MLR		
	comp=Z,4µm,10.0s,MS5.1						
ARU	Arti	20.31	343d	iP	P	04 29 08.1	+0.5
ARU				e		04 29 24.4	
ARU				ePPP		04 29 32.4	
ARU				S	S	04 32 54.6	-1.3
ARU				SS		04 33 12.0	
ARU				SSS		04 33 26.0	
ARU				pmax	pmax		
	comp=Z,128nm,1.7s						
ARU				MLR	MLR		
	comp=Z,2µm,12.0s,MS4.8						
ARU	Arti	20.31	343	eP	P	04 29 07.4	-0.2
	comp=Z,131nm,0.8s						
ARU				LR	LR		
	comp=Z,310nm,19.0s						
ARU	Arti	20.31	343	Pn	P	04 29 09.0	+1.4
	comp=Z,930nm,0.8s,SNR=12						
KAD	Karad	20.50	166	ePKP	P	04 29 09.6	-0.4
KIV	Kislovodsk	20.93	297⇓	eP	P	04 29 14.3	-0.2
KIV				e		04 29 32.4	
KIV				eS	S	04 33 06.8	-1.7
KIV				pmax	pmax		
	comp=Z,234nm,1.0s						
KIV				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.0						
KIV	Kislovodsk	20.93	297	eP	P	04 29 13.8	-0.7
	comp=Z,249nm,0.8s						
KIV				LR	LR		
	comp=Z,5µm,20.0s,MS4.9						
KIV	Kislovodsk	20.93	297	P	P	04 29 14.0	-0.5
	comp=Z,2µm,0.7s,SNR=21						
KIV	Kislovodsk	20.93	297	P	P	04 29 14.6	+0.2
	SNR=41						
HYB	Hyderabad	21.60	154⇑	iP	P	04 29 22.0	+0.2
	comp=Z,200nm,1.0s,mb5.5						
HYB				eS	S	04 33 24.0	+2.1
HYB				LR	LR	04 38 00.0	
	comp=Z,8.4nm,12.0s						
CAL	Calcutta	22.30	126	ePKP	P	04 29 30.6	+1.2
CAL				eS	S	04 33 36.7	+1.0
BWNR	Bhubaneshwar	22.46	135	ePKP	P	04 29 29.0	-2.1
SHL	Shillong	22.76	115⇑	iP	P	04 29 33.0	-1.2
SHL				ix	x	04 33 40.0	
SOC	Sochi	23.02	295d	iP	P	04 29 36.9	+0.1
SOC				e*PP		04 29 41.8	
SOC				e		04 29 53.6	
SOC				eS	S	04 33 42.4	-6.0
SOC				eSS		04 34 17.8	
SOC				pmax	pmax		
	comp=Z,308nm,1.4s,mb5.6						
SOC	Sochi	23.02	295	iP	P	04 29 36.8	0.0
VIS	Vishakhapatnam	23.30	143	ePKP	P	04 29 40.0	+0.1
VIS				iP		04 29 40.1	
VIS				AMb	AMB	04 29 45.5	
	comp=Z,93nm,1.8s,mb5.0						
VIS				ex	x	04 29 47.7	
	comp=Z,89nm,2.0s						
VIS				ix	x	04 33 50.2	
AGT	Agartala	23.35	119	ex	P	04 29 37.0	-3.5
AGT				ex	x	04 30 17.0	
RBK	Rabkut	23.66	217	P	P	04 29 43.4	-0.3
	SNR=8.7						
VRHR	Novokhopersk	23.74	314	eP	P	04 29 42.9	-1.2
VRHR				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.1						
VRHR				pmax	pmax		
	comp=N,20nm,0.8s						
VRHR				pmax	pmax		
	comp=E,50nm,1.0s						
MALT	Malatya	24.07	282	eP	P	04 29 48.9	+1.6
MALT				pmax	pmax		
	comp=Z,106nm,1.3s,mb5.2						
MALT				MLR	MLR		
	comp=Z,3µm,20.0s,MS4.7						
MALT	Malatya	24.07	282	eP	P	04 29 48.9	+1.6
	comp=Z,106nm,1.3s,mb5.2						
MALT				LR	LR		
	comp=Z,3µm,20.0s,MS4.7						
MALT	Malatya	24.07	282	P	P	04 29 49.7	+2.4
	comp=Z,2µmcomp=Z,73nm,1.5s,mb5.0						
GTA	Gaotai	24.23	76	⇑P	P	04 29 49.7	+1.0
GTA				pP		04 29 54.0	
GTA				sP	sP	04 29 56.8	+8.1
GTA				S	S	04 34 05.9	-2.1
GTA				sS	sS	04 34 13.0	+4.9
GTA				pmax	pmax		
	comp=Z,220nm,1.9s,mb5.4						
GTA				pmax	pmax		
	comp=Z,2µm,5.6s						
GTA				LR	LR		
	comp=N,6µm,15.2s,MS5.5						
GTA				LR	LR		
	comp=E,9µm,13.1s,MS5.5						
GTA				LR	LR		
	comp=Z,10µm,13.1s,MS5.5						
ABTO	Aybut	24.23	219	P	P	04 29 48.1	-0.8
	SNR=13						
IMP	Imphal	24.72	113	ex	P	04 29 55.0	+1.7
IMP				ex	x	04 30 34.0	
ANN	Anapa	24.78	297	eP	P	04 29 52.9	-0.8
ANN				e		04 30 25.2	
ANN				eS	S	04 34 15.2	-1.7
ANN				pmax	pmax		
	comp=Z,174nm,1.2s,mb5.7						
ANN				MLR	MLR		
	comp=N,2µm,14.0s,MS5.2						
ANN				MLR	MLR		
	comp=E,4µm,14.0s,MS5.2						
ANN				MLR	MLR		
	comp=Z,5µm,14.0s,MS5.1						
VSR	Storozhevoye	25.21	313	eP	P	04 29 56.2	-1.3
VSR				eS	S	04 34 16.5	-7.2
VSR				pmax	pmax		
	comp=N,100nm,1.0s						
VSR				pmax	pmax		
	comp=E,300nm,1.0s						
VSR				pmax	pmax		

comp=Z,220nm,1.0s,mb5.8
VSR smax
comp=N,90nm,0.9s
VSR smax
comp=Z,30nm,1.3s
VSR smax
comp=E,80nm,1.0s
VSR MLR MLR
comp=Z,4μm,13.0s,MS5.2
VSR MLR MLR
comp=N,2μm,11.0s,MS5.0
VSR MLR MLR
comp=E,2μm,12.0s,MS5.0
FKH Fakeheh 26.50 273 *e*P **P 04 30 11.4 +2.0**
YURE YUREGIR 26.51 279 *i* P **P 04 30 12.1 +2.7**
MOY Mondy 26.70 47 *e*P **P 04 30 11.6 +0.6**
MOY pmax pmax
comp=Z,200nm,2.0s,mb5.5
ASF Jabal al Asfar 26.76 268 P **P 04 30 12.8 +1.1**
comp=Z,22nm,1.0s,mb4.8,baz=283,slow=2.6,SNR=18
ASF LR LR 04 43 28.7
comp=Z,5μm,19.0s,MS5.0,baz=119,slow=42
ASF Jabal al Asfar 26.76 268 P **P 04 30 12.8 +1.1**
ASF pmax pmax
comp=Z,22nm,1.0s
ASF MLR MLR
comp=Z,5μm,19.0s
AVNT Avonos 26.79 284 *i* P **P 04 30 13.5 +1.5**
HWQ Hawqa 26.86 273 *e*P **P 04 30 14.4 +1.8**
GULE Gulek 27.09 280 *i* P **P 04 30 17.3 +2.6**
SIM Simferopol' 27.14 297 *e*P **P 04 30 15.2 +0.1**
SIM pmax pmax
comp=Z,173nm,1.0s,mb5.7
BHL Bhannes 27.20 273 *e*P **P 04 30 17.5 +1.8**
ILGA Ilgaz 27.43 289 *i* P **P 04 30 19.3 +1.5**
BR131 Keskin Array S 27.61 286 *e*P **P 04 30 20.1 +0.7**
comp=Z,23nm,0.8s,mb5.0
BR131 LR LR
comp=Z,853nm,20.0s,MS4.3
BRTR Keskin Array B 27.61 286 P **P 04 30 20.1 +0.8**
comp=Z,25nm,0.8s,mb5.1,baz=99,slow=8.6,SNR=90
BRTR Keskin Array B 27.61 286 *ce*P **P 04 30 20.1 +0.8**
BRTR pmax pmax
comp=Z,25nm,0.8s
BALT Daday 27.65 290 *i* P **P 04 30 19.6 0.0**
MMAI Mount Meron Ar 27.67 271 P **P 04 30 20.9 +1.0**
comp=Z,1.0nm,0.3s,baz=85,slow=11,SNR=4.2
MMAI LR LR 04 43 47.2
comp=Z,2μm,19.1s,baz=60,slow=42
ZAK Zakamensk 27.69 51 *e*P **P 04 30 16.6 -3.3**
ZAK pmax pmax
comp=Z,36nm,1.3s,mb5.0
LZH Lanzhou 27.91 82 *e*P **P 04 30 22.9 +0.9**
LZH pP 04 30 28.0
LZH sP sP 04 30 31.2 +9.1
LZH PP 04 31 11.0
LZH *e*S **S 04 35 04.6 -2.0**
LZH SS 04 36 22.2
LZH pmax pmax
comp=Z,34nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,150nm,4.0s
LZH LR LR
comp=N,7μm,12.1s,MS5.6
LZH LR LR
comp=E,5μm,11.3s,MS5.6
LZH LR LR
comp=Z,6μm,11.3s,MS5.4
MOS Moscow 27.96 321 *e*P **P 04 30 21.6 -0.6**
MOS *e* 04 30 26.5
MOS *e* 04 31 12.6
MOS *e* 04 31 20.6
MOS pmax pmax
comp=Z,300nm,1.8s,mb5.8
MOS pmax pmax
comp=Z,129nm,1.4s,mb5.6
MOS MLR MLR
comp=E,3.0nm,13.0s
MOS MLR MLR
comp=Z,4μm,13.0s,MS5.1
OBN Obninsk 28.21 319⇓*e*P **P 04 30 24.2 -0.3**
OBN *e* 04 31 11.8
OBN *e*S **S 04 35 13.7 +2.7**
OBN pmax pmax
comp=Z,123nm,1.2s,mb5.6
OBN MLR MLR
comp=Z,3μm,16.0s,MS5.0
OBN Obninsk 28.21 319 *e*P **P 04 30 24.6 +0.1**
comp=Z,241nm,1.1s,mb5.9
OBN LR LR
comp=Z,3μm,20.0s,MS4.9
TLY Talaya 28.27 48 *e*P **P 04 30 26.1 +1.0**
TLY *e*SS 04 36 34.0
TLY *e*SSS 04 36 50.7
TLY pmax pmax
comp=Z,67nm,1.0s,mb5.4
TLY MLR MLR
comp=Z,2μm,12.0s,MS4.9
TLY Talaya 28.27 48 *e*P **P 04 30 25.9 +0.8**
comp=Z,64nm,1.0s,mb5.4
TLY LR LR
comp=Z,705nm,20.0s,MS4.3
TLY Talaya 28.27 48 P **P 04 30 26.4 +1.3**
comp=Z,367nm,0.9s,mb6.2,SNR=11
TLY Talaya 28.27 48 P **P 04 30 26.8 +1.7**
SNR=19
SGKT Sivrigoynuk 28.73 288 *i* P **P 04 30 29.3 0.0**
CSS Prodhromos 28.75 276 PFAKE 04 30 40.0 +10
CSS LR LR
comp=Z,1μm,19.0s,MS4.5
IRK Irkutsk 28.80 48⇓*i*P **P 04 30 30.9 +1.1**
IRK *e* 04 31 39.4
IRK *e*S **S 04 35 21.7 +1.4**
IRK pmax pmax
comp=Z,200nm,1.6s,mb5.7
SONM Songino Array 29.22 57 P **P 04 30 34.2 +0.6**
comp=Z,11nm,0.6s,mb4.9,baz=270,slow=8.9,SNR=35
SONM LR LR 04 43 24.6
comp=Z,7μm,18.6s,MS5.3,baz=260,slow=39
SONM Songino Array 29.22 57 P **P 04 30 34.2 +0.6**
SONM pmax pmax
comp=Z,11nm,0.6s
SONM MLR MLR
comp=Z,7μm,18.6s
EIL Elat 29.25 265 P **P 04 30 35.0 +0.9**
comp=Z,58nm,1.0s,mb5.4,baz=49,slow=5.4,SNR=10.0
EIL LR LR 04 45 09.5
comp=Z,4μm,18.6s,MS5.1,baz=90,slow=42
CD2 Chengdu 29.41 92 *e*P **P 04 30 37.2 +1.8**
CD2 pP 04 30 41.2
CD2 sP sP 04 30 44.3 +8.8
CD2 PP PP 04 31 35.2 -6.4
CD2 S **S 04 35 32.1 +1.8**
CD2 sS sS 04 35 37.6 +7.3
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.0
CD2 pmax pmax
comp=Z,100nm,4.8s
CD2 LR LR
comp=N,6μm,10.0s
CD2 LR LR
comp=Z,8μm,10.8s,MS5.6
TRD Trivandrum 29.63 164 *e*PKP **P 04 30 37.7 +0.2**
TRD AMb AMB 04 30 44.9
comp=Z,126nm,1.1s,mb5.7
ULN Ulaanbaatar 29.66 57 *e*P **P 04 30 38.1 +0.6**
ULN pmax pmax
comp=Z,48nm,1.2s,mb5.2
ULN MLR MLR
comp=Z,7μm,19.0s,MS5.3
ULN Ulaanbaatar 29.66 57 *e*P **P 04 30 38.1 +0.5**
comp=Z,48nm,1.2s,mb5.2
ULN LR LR
comp=Z,7μm,19.0s,MS5.3
ULN Ulaanbaatar 29.66 57 P **P 04 30 38.4 +0.9**
SNR=17
ESKT Eskisehir 29.77 286 *i* P **P 04 30 38.2 -0.4**
KLMR Klimovskoe 29.93 331 *e*P **P 04 30 38.6 -1.1**
KLMR *e*PPP 04 31 42.0
KLMR *e*S **S 04 35 33.7 -4.1**
KLMR pmax pmax
comp=Z,88nm,1.3s,mb5.4
KLMR MLR MLR
comp=Z,2μm,16.0s,MS4.7
KIS Kishinev 30.96 301 *e*P **P 04 30 43.0 -6.0**
KIS *i* S **S 04 35 52.0 -2.3**
KIS *e*LQ 04 41 20.0
KIS LRM 04 47 30.0
comp=Z,3μm,16.0s
KIS Kishinev 30.96 301 *e*P **P 04 30 43.0 -6.0**
KIS *e* 04 32 14.0
KIS *e* 04 33 50.0
KIS *i* S **S 04 35 52.0 -2.3**
KHAL Karahalli 31.01 284 *i* P **P 04 30 50.0 +0.5**
AKASG Malin Array Be 31.12 308 P **P 04 30 49.8 -0.5**
comp=Z,16nm,0.6s,mb5.1,baz=86,slow=7.3,SNR=32
AKASG Malin Array Be 31.12 308 P **P 04 30 49.8 -0.6**
AKASG pmax pmax
comp=Z,16nm,0.6s
AKBB Malin Array Si 31.12 308 *e*P **P 04 30 50.2 -0.2**
KIEV Kiev 31.13 308 *e*P **P 04 30 49.8 -0.6**
KIEV pmax pmax
comp=Z,89nm,1.2s,mb5.6
KIEV MLR MLR
comp=Z,1μm,19.0s,MS4.5
KIEV Kiev 31.13 308 *e*P **P 04 30 49.8 -0.6**
comp=Z,89nm,1.2s,mb5.6
KIEV LR LR
comp=Z,1μm,19.0s,MS4.5
KMI Kunming 31.20 103 P **P 04 30 51.0 -0.3**
KMI pP 04 30 56.6
KMI sP sP 04 30 58.6 +7.3
KMI PP PP 04 31 57.3 -4.2
KMI S **S 04 35 58.8 +0.4**
KMI sS sS 04 36 04.4 +5.9
KMI SS 04 37 43.4
KMI pmax pmax
comp=Z,13nm,1.2s,mb4.7
KMI pmax pmax
comp=Z,270nm,4.0s
KMI LR LR
comp=N,1μm,16.7s,MS4.7
KMI LR LR
comp=E,530nm,15.7s,MS4.7
AKAS Kas 31.37 280 *i* P **P 04 30 51.1 -1.7**
PSN Preselentsi 31.38 295 *i* P **P 04 30 54.0 +1.2**
PALK Pallekele 31.80 157 *i* P **P 04 30 58.3 +1.6**
PALK Pallekele 31.80 157 *e*P **P 04 30 57.9 +1.2**
comp=E,54nm,1.1s,mb5.4
BTO Baotou 31.89 71 *e*P **P 04 30 57.5 +0.3**
PRD Provadia 31.98 294 P **P 04 30 58.9 +0.9**
CHRT Chiangrai 32.00 114 P **P 04 30 57.0 -1.3**
comp=E,110nm,0.7s,mb5.9
CHG Chiang Mai 32.08 117⇑P **P 04 30 58.0 -1.1**
comp=E,21nm,0.9s,mb5.1
CHTO Chiang Mai 32.08 117 *e*P **P 04 30 59.2 +0.1**
CHTO pmax pmax
comp=Z,22nm,1.1s,mb5.0
CHTO MLR MLR
comp=Z,1μm,20.0s,MS4.7
CHTO Chiang Mai 32.08 117 *e*P **P 04 30 59.2 +0.2**
comp=Z,22nm,1.1s,mb5.0
CHTO LR LR
comp=Z,1μm,20.0s,MS4.7
CHTO Chiang Mai 32.08 117 P **P 04 31 01.2 +2.1**
SNR=11
CMAR Chiang Mai Arr 32.31 117 P **P 04 31 00.8 -0.3**
comp=Z,18nm,1.0s,mb5.0,baz=301,slow=7.9,SNR=43
CMAR Chiang Mai Arr 32.31 117 P **P 04 31 00.8 -0.3**
CMAR pmax pmax
comp=Z,18nm,1.0s
VRI Vrincioaia 32.37 299⇑P **P 04 31 02.4 +1.0**
VRI Vrincioaia 32.37 299⇑*i*P **P 04 31 02.4 +1.0**
PLOR Plostina 32.43 299⇓*i*P **P 04 31 03.3 +1.4**
TESR 32.43 300⇑P **P 04 31 02.4 +0.5**
TESR 32.43 300⇑*i*P **P 04 31 02.4 +0.5**
ARG Arkhangelos 32.54 281 *e*P **P 04 31 03.2 +0.2**
TRBA At Turbah 32.69 229 *e*P **P 04 31 05.8 +1.3**
KDAG Bornova 32.72 285 *i* P **P 04 31 03.8 -0.7**
MICGM Minsk 32.73 315 *e*P **P 04 31 04.0 -0.4**
MNK Minsk 32.76 315 *e*P **P 04 31 04.0 -0.7**
MNK *e* 04 32 18.0
MNK *e*S **S 04 36 20.0 -2.2**
MNK *e*SS 04 38 16.0
MNK MLR MLR
comp=E,10μm,14.0s
MNK MLR MLR
comp=Z,8μm,15.0s,MS5.5
MLR Muntele Rosu 32.92 298⇓P **P 04 31 08.2 +1.9**
MLR Muntele Rosu 32.92 298⇓*i*P **P 04 31 08.2 +1.9**
HHC Hu-ho-hao-te 33.01 71⇑P **P 04 31 08.4 +1.3**
HHC pP 04 31 12.9
HHC sP sP 04 31 15.4 +8.2
HHC PP PP 04 32 18.2 -3.3
HHC PcP PcP 04 33 51.9 +1.0
HHC S **S 04 36 26.3 -0.2**
HHC sS sS 04 36 33.3 +6.7
HHC ScP ScP 04 37 34.5 -1.8
HHC SS SS 04 38 24.5 -24
HHC ScS ScS 04 41 33.7 -2.7
HHC pmax pmax
comp=Z,54nm,1.1s,mb5.4
HHC pmax pmax
comp=Z,410nm,6.5s
HHC LR LR
comp=N,4μm,12.6s,MS5.5
HHC LR LR
comp=E,5μm,12.3s,MS5.5
HHC LR LR
comp=Z,7μm,12.4s,MS5.5
SZH Strazhica 33.05 294 *i* P **P 04 31 08.4 +1.1**
BDT Bhumibol Dam 33.17 119 P **P 04 31 09.0 +0.4**
comp=Z,33nm,1.0s,mb5.2
SMG Samos 33.19 284 *e*P **P 04 31 09.5 +0.8**
PUL Pulkovo 33.26 325⇑*e*P **P 04 31 10.1 +1.1**
PUL pmax pmax
comp=Z,143nm,0.4s,mb6.2
PUL MLR MLR
comp=Z,3μm,19.0s,MS5.0
BUR01 Bucovina Ar. S 33.44 302 P **P 04 31 12.0 +1.3**
BURAR Bucovina Array 33.44 302⇑P **P 04 31 11.4 +0.7**
BURAR Bucovina Array 33.44 302⇑*i*P **P 04 31 11.4 +0.7**
BUR08 Bucovina Ar. S 33.45 302 *e*P **P 04 31 11.6 +0.8**
KARP Karpathos 33.47 280 *e*P **P 04 31 12.0 +0.9**
PVL Pavlikeni 33.49 294 *i* P **P 04 31 13.5 +2.3**
VOIR 33.56 298⇓P **P 04 31 12.6 +0.8**
VOIR 33.56 298⇓*i*P **P 04 31 12.6 +0.8**
IDID Didziasalis 33.57 316 *e*P **P 04 31 12.2 +0.4**
IDID AMB AMB 04 31 17.4
comp=Z,19nm,1.2s,mb4.9
GYA Guiyang 33.61 98⇑*i*P **P 04 31 11.2 -1.3**
GYA PP PP 04 32 27.0 -1.3
GYA PcP PcP 04 33 54.4 +1.6
GYA S **S 04 36 35.8 -0.2**
GYA ScP ScP 04 37 38.9 +0.3
GYA SS SS 04 38 40.0 -21
GYA ScS ScS 04 41 37.5 -2.4
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,180nm,4.8s
GYA LR LR
comp=N,3μm,16.9s,MS5.1
GYA LR LR
comp=E,2μm,17.7s,MS5.1
GYA LR LR
comp=Z,2μm,16.0s,MS4.9
CHOS Chios island 33.65 285 *e*P **P 04 31 14.0 +1.3**
IIGN Ignalina 33.87 316 *e*P **P 04 31 14.7 +0.3**
IIGN AMB AMB 04 31 20.2
comp=Z,27nm,1.3s,mb5.0
ISAL Salakas 33.98 316 *e*P **P 04 31 15.6 +0.3**
ISAL AMB AMB 04 31 21.0
comp=Z,20nm,1.4s,mb4.8
ENH Enshi 34.21 90 *e*P **P 04 31 17.6 0.0**
comp=Z,35nm,1.0s,mb5.2
ENH LR LR
comp=Z,482nm,20.0s
JOF Joensuu 34.30 330 *e*P **P 04 31 16.7 -1.3**
JOF pmax pmax
comp=Z,68nm,0.8s,mb5.6
JOF Joensuu 34.30 330 *ep* **P 04 31 16.7 -1.3**
comp=Z,68nm,0.8s,mb5.6
LVV L'vov 34.33 306 *e*P **P 04 31 20.9 +2.5**
LVV *e*S **S 04 36 44.6 -2.0**
CIT Chita 34.34 50 *e*P **P 04 31 18.7 +0.2**
APE Apeiranthos 34.35 283⇑P **P 04 31 19.4 +0.6**
APE Apeiranthos 34.35 283 *e*P **P 04 31 19.5 +0.7**
APE Apeiranthos 34.35 283⇑*i*P **P 04 31 19.4 +0.6**
PGB Panagyurishte 34.41 293 *i* P **P 04 31 20.6 +1.4**
VSU Vasula 34.49 321 *d i*P **P 04 31 19.3 -0.4**
VSU Vasula 34.49 321 *i* P **P 04 31 19.3 -0.4**
BMR Baia Mare 34.60 302 P **P 04 31 22.7 +1.9**
MPEP Malo Peshtene 34.63 294 *i* P **P 04 31 22.7 +1.6**
ATD Arta Tunnel 34.79 229 P **P 04 31 23.6 +0.9**
comp=Z,28nm,0.8s,mb5.2,baz=116,slow=22,SNR=12
NVR Nevrokopi 34.79 291 *e*P **P 04 31 23.5 +1.0**
NST Nakhon Sawan 35.03 120 P **P 04 31 25.4 +0.6**
VTS Vitosha 35.10 293⇑P **P 04 31 25.8 +0.6**
VTS Vitosha 35.10 293⇑*i*P **P 04 31 25.8 +0.6**
VTS Vitosha 35.10 293 *i* P **P 04 31 26.5 +1.3**
DRGR 35.14 300⇓P **P 04 31 26.4 +0.9**
DRGR 35.14 300⇓*i*P **P 04 31 26.4 +0.9**
GZR Gura Zlata 35.16 298⇓P **P 04 31 25.9 +0.2**
GZR Gura Zlata 35.16 298⇓*i*P **P 04 31 25.9 +0.2**
KWP Kalwaria Pacla 35.17 305 *e*P **P 04 31 26.0 +0.2**
KWP LMZ 04 48 54.4
comp=Z,2μm,17.5s
KWP Kalwaria Pacla 35.17 305 *e*P **P 04 31 26.7 +0.9**
comp=Z,145nm,0.3s,mb6.4
KWP LR LR
comp=Z,2μm,19.0s,MS4.9
TRPA Tarpa 35.25 303⇑*i*P **P 04 31 27.1 +0.7**
PLG Polygyros 35.26 289 *e*P **P 04 31 27.5 +0.9**
KKB Krupnik 35.29 292 *i* P **P 04 31 27.8 +0.9**
SUW Suwalki 35.33 313 *e*P **P 04 31 24.0 -3.0**
SUW *ep*P 04 31 28.0
SUW LMZ 04 47 46.0
comp=Z,2μm,17.6s
SUW Suwalki 35.33 313 *e*P **P 04 31 26.8 -0.2**
comp=Z,56nm,1.0s,mb5.5
UZH Uzhgorod 35.42 304 *e*P **P 04 31 25.0 -2.8**
UZH *e* 04 32 47.8
UZH MLR MLR
comp=N,1μm,12.0s,MS5.1
UZH MLR MLR
comp=E,2μm,12.0s,MS5.1
UZH MLR MLR
comp=Z,1μm,12.0s,MS4.8
VAY Valandovo 35.76 291 *e*P **P 04 31 31.1 +0.3**
FINES FINESS Array B 35.85 326 P **P 04 31 31.5 +0.1**
comp=Z,43nm,0.8s,mb5.3,baz=108,slow=12,SNR=29
FINES LR LR 04 47 01.7
comp=Z,3μm,18.4s,MS5.1,baz=110,slow=38
FINES PKKP 04 55 54.5
comp=Z,3.8nm,0.9s,baz=324,slow=5.2,SNR=4.7
FINES FINESS Array B 35.85 326 P **P 04 31 31.5 +0.1**
FINES LR LR 04 47 01.7
FINES PKKP 04 55 54.5
BZS Buzias 35.96 298⇓P **P 04 31 33.2 +0.7**
BZS Buzias 35.96 298⇓*i*P **P 04 31 33.2 +0.7**
CRVS Cervenica-Dubn 35.97 304 *e*P **P 04 31 32.8 +0.2**
CRVS pmax pmax
comp=Z,17nm,1.4s,mb4.7
CRVS Cervenica-Dubn 35.97 304 *e*P **P 04 31 32.8 +0.2**
comp=Z,17nm,1.4s,mb4.7
CRVS Cervenica-Dubn 35.97 304 *e*P **P 04 31 32.8 +0.2**
KAF Kangasniemi 36.01 327 *e*P **P 04 31 31.6 -1.2**
KAF pmax pmax
comp=Z,32nm,0.7s,mb5.3
KAF Kangasniemi 36.01 327 *ep* **P 04 31 31.6 -1.2**
comp=Z,32nm,0.7s,mb5.3
LVZ Lovozero 36.06 339 PFAKE 04 31 50.0 +17
LVZ LR LR
comp=Z,1μm,22.0s,MS4.6
STHS Stebnicka Huta 36.12 305 *e*P **P 04 31 33.7 -0.2**
STHS pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
STHS Stebnicka Huta 36.12 305 *e*P **P 04 31 33.7 -0.2**
comp=Z,7.8nm,0.9s,mb4.5
STHS Stebnicka Huta 36.12 305 *e*P **P 04 31 33.7 -0.2**
APA Apatity 36.21 338⇑*i*P **P 04 31 34.4 0.0**
APA *i* 04 32 56.0
APA *e*S **S 04 37 10.0 -5.2**
APA pmax pmax
comp=Z,18nm,1.0s,mb4.9
APA MLR MLR
comp=Z,3μm,9.0s
SKO Skopje 36.49 292 *e*P **P 04 31 37.2 0.0**
KECS Kecovo 36.62 303 *e*P **P 04 31 38.5 +0.4**
comp=Z,5.3nm,1.2s
KECS Kecovo 36.62 303 *e*P **P 04 31 38.5 +0.4**
BJT Baijiatuau 36.62 71 *e*P **P 04 31 39.6 +1.4**
BJT pmax pmax
comp=Z,22nm,0.7s
BJT MLR MLR
comp=Z,1μm,20.0s
BJT Baijiatuau 36.62 71 *e*P **P 04 31 39.6 +1.4**
comp=Z,22nm,0.7s,mb5.0
BJT LR LR
comp=Z,1μm,20.0s,MS4.7
BJI Beijing 36.62 71 P **P 04 31 38.4 +0.2**
BJI S **S 04 37 20.4 -1.6**
BJI pmax pmax
comp=Z,41nm,1.0s,mb5.1
BJI pmax pmax
comp=Z,520nm,9.4s
BJI LR LR
comp=N,4μm,11.5s,MS5.6
BJI LR LR
comp=E,4μm,13.3s,MS5.6
BJI LR LR
comp=Z,3μm,16.4s,MS5.2
NIE Niedzica 36.73 305 *e*P **P 04 31 40.5 +1.4**
NIE *es*P sP 04 31 45.1 +6.0
KRUS Krusevo 36.73 291 *e*P **P 04 31 38.8 -0.4**
BIA Bitola 36.73 291 *e*P **P 04 31 38.6 -0.7**
PSZ Piszkesteto 37.02 302 *e*P **P 04 31 42.4 +0.8**
PSZ pmax pmax
comp=Z,54nm,1.3s,mb5.1
PSZ MLR MLR
comp=Z,747nm,20.0s,MS4.5
PSZ Piszkesteto 37.02 302 *e*P **P 04 31 42.4 +0.8**
comp=Z,54nm,1.3s,mb5.1
PSZ LR LR
comp=Z,747nm,20.0s,MS4.5
PSZ Piszkesteto 37.02 302⇓*i*P **P 04 31 41.9 +0.3**
PSZ Piszkesteto 37.02 302⇓*e*P **P 04 31 42.8 +1.2**
OJC Ojcow 37.07 306 *e*P **P 04 31 42.3 +0.3**
OJC *ep*P 04 31 45.1
OJC *e*PP PP 04 33 07.5 +1.3
OJC *e*S **S 04 37 29.6 +0.9**
OJC L 04 51 04.6
comp=Z,1.9nm,15.2s
BUD Budapest 37.63 302⇓*e*P **P 04 31 47.1 +0.3**
VYHS Vyhne 37.71 303 *e*P **P 04 31 47.8 +0.4**
VYHS pmax pmax
comp=Z,21nm,1.5s,mb4.7
VYHS Vyhne 37.71 303 *e*P **P 04 31 47.8 +0.4**
comp=Z,21nm,1.5s,mb4.6
VYHS Vyhne 37.71 303 *e*P **P 04 31 47.8 +0.4**
TIR Tirane 37.76 292 PFAKE 04 32 00.0 +12
TIR LR LR
comp=Z,1μm,20.0s,MS4.8
WHN Wuhan 37.98 87⇓P **P 04 31 50.4 +0.5**
WHN S **S 04 37 46.4 +3.4**
WHN LR LR
comp=N,7μm,11.1s,MS5.7
WHN LR LR
comp=E,4μm,14.2s,MS5.7
WHN LR LR
comp=Z,8μm,11.8s,MS5.8
OKC Ostrava-Krasne 38.13 306 *i* P **P 04 31 51.0 0.0**
OKC *e* 04 31 56.2
OKC *e* 04 33 21.3
OKC MLR MLR
comp=Z,1μm,14.8s,MS4.8
OKC Ostrava-Krasne 38.13 306⇓*i*P **P 04 31 51.0 0.0**
OKC *ex* x 04 31 56.2
OKC *e*PP PP 04 33 21.3 +3.4
OKC AMS AMS 04 53 30.0
comp=Z,1μm,14.8s
HIA Hailar 38.14 55⇑*i*P **P 04 31 51.7 +0.7**
HIA Hailar 38.14 55 *e*P **P 04 31 51.5 +0.4**
comp=Z,8.1nm,0.4s,mb4.8
HIA LR LR
comp=Z,4μm,19.0s,MS5.2
TIA Tai'an 38.27 77 P **P 04 31 53.1 +0.8**
TIA pmax pmax
comp=Z,80nm,1.0s,mb5.4
MORC Moravsky Berou 38.53 306 *e*P **P 04 31 55.1 +0.8**
MORC *e* 04 33 26.4
MORC pmax pmax
comp=Z,52nm,1.1s,mb5.1

MORC Moravsky Berou 38.53 306 *e*P **P 04 31 55.1 +0.8**
comp=Z,52nm,1.1s,mb5.1
MORC *e*PP PP 04 33 26.4 +4.2
MORC Moravsky Berou 38.53 306 ⇓*i*P **P 04 31 54.8 +0.5**
GKP Gorka Klasztor 38.77 311 *e*P **P 04 31 56.2 -0.1**
GKP LMZ 04 50 37.6
comp=Z,2μm,17.2s
VRAC Vranov 39.16 305 ⇓P **P 04 32 00.0 +0.4**
VRAC Vranov 39.16 305 ⇓*i*P **P 04 32 00.0 +0.4**
SOP Sopron 39.28 302 ⇓*e*P **P 04 32 01.4 +0.7**
DPC Dobruska-Polom 39.30 307 ⇓*i*P **P 04 32 01.7 +0.9**
DPC *e* 04 33 34.6
DPC MLR MLR
comp=Z,2μm,12.5s,MS5.0
DPC Dobruska-Polom 39.30 307 ⇓*i*P **P 04 32 01.7 +0.9**
DPC *ex* x 04 32 06.2
DPC *e*PP PP 04 33 34.6 +4.0
DPC AMS AMS 04 51 00.0
comp=Z,2μm,12.5s
KSP Ksiaz 39.31 307 *e*P **P 04 31 59.2 -1.7**
KSP *e*pP 04 32 01.7
KSP LMZ 04 51 18.9
comp=Z,3μm,18.3s
KEV Kevo 39.40 338 *e*P **P 04 31 59.9 -1.4**
KEV pmax pmax
comp=Z,13nm,0.7s,mb4.7
KEV Kevo 39.40 338 PFAKE 04 32 10.0 +8.7
KEV LR LR
comp=Z,625nm,19.0s,MS4.5
KEV Kevo 39.40 338 *e*p **P 04 31 59.9 -1.4**
comp=Z,13nm,0.7s,mb4.7
UPC Upice 39.49 307 *i* P **P 04 32 02.9 +0.5**
UPC Upice 39.49 307 ⇓*i*P **P 04 32 02.9 +0.5**
UPC *ex* x 04 32 07.7
KOGS Kog 39.61 300 *e*P **P 04 32 03.4 +0.1**
KOGS Kog 39.61 300 *e*P **P 04 32 03.4 +0.1**
ARCES ARCESS Array B 39.72 338 P **P 04 32 04.2 +0.1**
comp=Z,27nm,0.8s,mb4.9,baz=124,slow=8.5,SNR=21
ARCES ARCESS Array B 39.72 338 P **P 04 32 04.2 +0.2**
ARCES pmax pmax
comp=Z,27nm,0.8s
ARE0 ARCESS Array S 39.72 338 *e*P **P 04 32 05.2 +1.2**
CONA Conrad Observa 39.73 303 ⇓*i*sP sP 04 32 05.2 +0.7
comp=Z,86nm,1.2s,SNR=18
TREC Trest 39.88 305 *i* P **P 04 32 06.4 +0.8**
TREC MLR MLR
comp=Z,1μm,14.3s,MS4.9
TREC Trest 39.88 305 ⇓*i*P **P 04 32 06.4 +0.8**
TREC *ex* x 04 32 10.9
TREC AMS AMS 04 52 40.0
comp=Z,1μm,14.3s
ARSA Arzberg 40.02 302 ⇑*i*sP sP 04 32 07.0 +0.2
comp=Z,26nm,1.1s,SNR=10
QIZ Qiongzhong 40.04 106 PFAKE 04 32 20.0 +13
QIZ LR LR
comp=Z,531nm,21.0s,MS4.4
KTK1 Kautokeino 40.17 336 *e*P **P 04 32 07.3 -0.5**
DOBS Dobrina 40.18 300 *i* P **P 04 32 08.7 +0.6**
DOBS Dobrina 40.18 300 *i* P **P 04 32 08.7 +0.6**
PERS Pernice 40.37 301 *e*P **P 04 32 10.3 +0.6**
PERS Pernice 40.37 301 *e*P **P 04 32 10.3 +0.6**
PVCC Panska Ves 40.41 307 *i* P **P 04 32 10.6 +0.6**
PVCC MLR MLR
comp=Z,2μm,12.9s,MS5.1
PVCC Panska Ves 40.41 307 ⇓*i*P **P 04 32 10.6 +0.6**
PVCC *ex* x 04 32 15.2
PVCC AMS AMS 04 51 50.0
comp=Z,2μm,12.9s
BOJS Bojanci 40.42 299 *e*P **P 04 32 10.2 +0.1**
BOJS *e* 04 32 10.7
BOJS Bojanci 40.42 299 *e*P **P 04 32 10.2 +0.1**
BOJS *e* 04 32 10.7
SOKA Soboth 40.42 301 ⇓*i*sP sP 04 32 11.0 +0.9
comp=Z,69nm,1.3s
PRU Pruhonice 40.46 306 ⇓*i*P **P 04 32 11.7 +1.3**
PRU *e* 04 33 45.8
PRU MLR MLR
comp=Z,1μm,14.5s,MS4.8
PRU Pruhonice 40.46 306 ⇓*i*P **P 04 32 11.7 +1.3**
PRU *ex* x 04 32 16.5
PRU *e*PP PP 04 33 45.8 +2.6
PRU AMS AMS 04 53 30.0
comp=Z,1μm,14.5s
OBKA Obir 40.77 301 ⇓*i*sP sP 04 32 13.8 +0.8
comp=Z,49nm,1.6s,SNR=11
BRG Berggiesshubel 40.80 307 *e*P **P 04 32 13.8 +0.6**
comp=Z,29nm,0.8s,mb5.1
MOA Molln 40.81 303 ⇑*i*sP sP 04 32 13.4 0.0
comp=Z,44nm,1.1s,SNR=18
LJU Ljubljana 40.84 300 *e*P **P 04 32 14.5 +0.9**
LJU Ljubljana 40.84 300 *e*P **P 04 32 14.5 +0.8**
DL2 Dalian 40.98 71 P **P 04 32 16.2 +1.3**
DL2 S **S 04 38 30.6 +2.7**
DL2 pmax pmax
comp=Z,40nm,0.8s,mb5.2
DL2 pmax pmax
comp=Z,360nm,4.0s
DL2 LR LR
comp=N,1μm,16.8s,MS5.2
DL2 LR LR
comp=E,2μm,14.7s,MS5.2
DL2 LR LR
comp=Z,2μm,14.9s,MS5.2
CUC Castrocucco 41.05 291 *e*P **P 04 32 16.1 +0.7**
comp=Z,134nm,1.3s,mb5.5
CUC LR LR
comp=Z,829nm,20.0s,MS4.6
GEC2 GERESS Array S 41.09 304 *e*P **P 04 32 15.9 +0.3**
comp=Z,22nm,1.2s,mb4.8
GEC2 GERESS Array S 41.09 304 *e*P **P 04 32 15.9 +0.3**
GEC2 pmax pmax
comp=Z,22nm,1.2s,mb4.8
KHC Kasperske Hory 41.15 305 *i* P **P 04 32 16.9 +0.8**
KHC MLR MLR
comp=Z,1μm,14.2s,MS5.0
KHC Kasperske Hory 41.15 305 *e*P **P 04 32 16.6 +0.6**
comp=Z,66nm,1.5s,mb5.2
KHC Kasperske Hory 41.15 305 ⇓*i*P **P 04 32 16.9 +0.8**
KHC *ex* x 04 32 21.0
KHC *e*PP PP 04 33 47.2 -3.5
KHC AMS AMS 04 54 00.0
comp=Z,1μm,14.2s
VOY Vojsko 41.28 300 *e*P **P 04 32 17.7 +0.4**
VOY *e* 04 32 22.2
VOY *e* 04 32 33.8
VOY Vojsko 41.28 300 *e*P **P 04 32 17.7 +0.4**
VOY *e* 04 32 22.2
VOY *e* 04 32 33.8
CADS Cadrg 41.36 300 *e*P **P 04 32 17.7 -0.2**
CADS Cadrg 41.36 300 *e*P **P 04 32 17.7 -0.2**
CLL Collm 41.37 308 *e*P **P 04 32 18.0 +0.1**
comp=Z,73nm,1.7s,mb5.1
CLL Collm 41.37 308 *i* P **P 04 32 17.9 0.0**
CLL *i* 04 34 12.6
CLL *e*S **S 04 38 32.0 -1.3**
CLL pmax pmax
comp=Z,54nm,1.8s,mb5.0
CLL Collm 41.37 308 *i* P **P 04 32 17.9 0.0**
comp=Z,54nm,1.8s,mb5.0
CLL *i* 04 32 22.2
CLL *i* PcP PcP 04 34 12.6 -3.5
CLL S **S 04 38 32.0 -1.3**
CLL Collm 41.37 308 *i* P **P 04 32 17.9 0.0**
comp=Z,54nm,1.8s,mb5.0
CLL *i* 04 32 22.2
comp=Z,73nm,1.7s
CLL *e*PP PP 04 33 48.0 -5.1
CLL *e* 04 34 02.0
CLL *i* PcP PcP 04 34 12.6 -3.5
comp=Z,63nm,1.1s
CLL *e*PPP 04 34 17.0
CLL *e*PPPP 04 34 26.0
CLL *e*S **S 04 38 32.0 -1.3**
CLL *e* 04 39 14.0
CLL Lmax 04 52 00.0
MYKA Terra Mystica 41.37 301 ⇑*i*sP sP 04 32 18.9 +0.8
comp=Z,53nm,1.7s
CLNS Chul'man 41.40 44*c i*P **P 04 32 18.7 +0.6**
CLNS *e**PP 04 32 29.1
CLNS *e* 04 33 59.4
CLNS *e* 04 34 12.3
CLNS *e*S **S 04 38 34.8 +1.1**
CLNS *e*SS SS 04 41 34.2 -2.9
CLNS pmax pmax
comp=Z,82nm,0.9s,mb5.5
CLNS pmax pmax
comp=N,23nm,1.0s
CLNS pmax pmax
comp=E,41nm,0.8s
CLNS pmax pmax
comp=Z,18nm,1.4s,mb4.6
CLNS pmax pmax
comp=N,12nm,0.8s
CLNS pmax pmax
comp=E,11nm,0.7s
CLNS smax
comp=N,267nm,17.3s
CLNS smax
comp=E,120nm,12.3s
CLNS MLR MLR
comp=Z,4μm,13.0s,MS5.5
CLNS MLR MLR
comp=N,493nm,15.0s,MS4.7
CLNS MLR MLR
comp=E,548nm,11.0s,MS4.7
TRI Trieste 41.42 300 PFAKE 04 32 30.0 +12
TRI LR LR
comp=Z,1μm,22.0s,MS4.7
CEL Celeste 41.44 288 PFAKE 04 32 30.0 +11
CEL LR LR
comp=Z,815nm,21.0s,MS4.6
KBA Koelnbreinsper 41.52 302 *i* sP sP 04 32 19.7 +0.5
comp=Z,64nm,1.3s,SNR=9.9
WET Wettzell 41.60 305 *e*P **P 04 32 20.1 +0.3**
comp=Z,42nm,1.9s,mb4.8
WET Wettzell 41.60 305 *e*P **P 04 32 20.1 +0.3**
WET pmax pmax
comp=Z,42nm,1.9s,mb4.8
TANN Tannenbergstha 41.77 307 *e*P **P 04 32 21.5 +0.4**
comp=Z,45nm,1.4s,mb5.0
NKC Novy Kostel 41.79 307 *i* P **P 04 32 22.2 +0.9**
NKC MLR MLR
comp=Z,2μm,11.8s,MS5.2
NKC Novy Kostel 41.79 307 ⇓*i*P **P 04 32 22.2 +0.9**
NKC *ex* x 04 32 26.7
NKC AMS AMS 04 52 40.0
comp=Z,2μm,11.8s
RJOB Jochberg 41.81 303 *e*P **P 04 32 21.6 +0.1**
comp=Z,47nm,1.5s,mb5.0
TRO Tromso 41.82 336 *e*P **P 04 32 23.2 +1.9**
TRO *e*S **S 04 38 41.2 +1.7**
WERN Wernitzgruen 41.83 307 *e*P **P 04 32 22.4 +0.7**
comp=Z,42nm,1.5s,mb5.0
GUNZ Gunzen 41.85 307 *e*P **P 04 32 22.5 +0.6**
comp=Z,54nm,1.5s,mb5.1
WERD Werda 41.86 307 *e*P **P 04 32 22.6 +0.7**
comp=Z,44nm,1.4s,mb5.0
MOR8 Moi Rana 42.26 331 *e*P **P 04 32 24.1 -0.8**
MOR8 AMb AMB 04 32 38.7
comp=Z,66nm,0.4s,mb5.8
MOR8 Moi Rana 42.26 331 *e*P **P 04 32 24.1 -0.8**
comp=Z,66nm,0.4s,mb5.7
MOX Moxa 42.29 307 *e*P **P 04 32 26.2 +0.8**
comp=Z,66nm,1.7s,mb5.1
MOX *e* 04 34 07.2
MOX
comp=Z,2μm,17.0s
MOX Moxa 42.29 307 *e*P **P 04 32 26.1 +0.7**
comp=Z,72nm,1.6s,mb5.2
MOX Moxa 42.29 307 *e*P **P 04 32 26.2 +0.8**
MOX *e* 04 34 07.2
MOX pmax pmax
comp=Z,66nm,1.7s,mb5.1
MOX MLR MLR
comp=Z,2μm,17.0s,MS5.0
AQU L'Aquila 42.29 295 *e*P **P 04 32 26.4 +0.8**
AQU pmax pmax
comp=Z,49nm,0.9s,mb5.2
AQU MLR MLR
comp=Z,2μm,20.0s,MS5.0
AQU L'Aquila 42.29 295 *e*P **P 04 32 26.4 +0.9**
comp=Z,49nm,0.9s,mb5.2
AQU LR LR
comp=Z,2μm,20.0s,MS5.0
STEI Steigen 42.46 333 *e*P **P 04 32 27.2 +0.6**
GRA1 Grafenberg Arr 42.62 306 *e*P **P 04 32 29.7 +1.5**
comp=Z,214nm,1.9s,mb5.5
GRA1 *e*PP PP 04 34 11.7 +5.0
GRF Grafenberg Arr 42.62 306 *e*P **P 04 32 29.7 +1.5**
comp=Z,214nm,1.9s,mb5.5
GRF *e*PP PP 04 34 11.7 +5.0
GRF Grafenberg Arr 42.62 306 *e*P **P 04 32 29.7 +1.5**
GRF *e* 04 34 11.7
GRF pmax pmax
comp=Z,214nm,1.9s,mb5.5
GRF Grafenberg Arr 42.62 306 *e*P **P 04 32 29.7 +1.5**
GRF *e* 04 34 11.7
GRF pmax pmax
comp=Z,214nm,1.9s,mb5.5
GRFO Grafenberg 42.63 306 *e*P **P 04 32 29.6 +1.4**
GRFO pmax pmax
comp=Z,43nm,1.1s,mb5.1
GRFO Grafenberg 42.63 306 *e*P **P 04 32 29.6 +1.4**
comp=Z,43nm,1.1s,mb5.1
WTTA Wattenberg 42.65 302 *i* sP sP 04 32 28.3 -0.1
comp=Z,43nm,1.1s,SNR=11
CN2 Changchun 42.67 63 *e*P **P 04 32 29.0 +0.4**
CN2 *e*sP sP 04 32 36.0 +7.3
CN2 *e*S **S 04 38 50.5 -2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,15.0s,MS4.7
CN2 LR LR
comp=E,600nm,15.0s,MS4.7
CN2 LR LR
comp=Z,700nm,17.0s,MS4.6
TPTI 42.69 136 P **P 04 32 30.2 +1.1**
comp=Z,27nm,0.9s,mb5.0
NB2 NORSAR Subarra 42.70 323 P **P 04 32 27.8 -0.8**
comp=Z,21nm,0.7s,mb5.0,baz=96,slow=8.6
NOA NORSAR Array B 42.70 323 P **P 04 32 27.9 -0.7**
comp=Z,34nm,0.8s,mb5.1,baz=97,slow=8.1,SNR=55
NOA PP PP 04 34 11.7 +4.4
comp=Z,19nm,1.0s,baz=94,slow=11,SNR=4.7
NOA LR LR 04 52 55.3
comp=Z,1μm,18.0s,MS4.9,baz=95,slow=40
NOA NORSAR Array B 42.70 323 P **P 04 32 27.9 -0.7**
NOA 04 34 11.7
NOA pmax pmax
comp=Z,34nm,0.8s
NOA pmax pmax
comp=Z,19nm,1.0s
NOA MLR MLR
comp=Z,1μm,18.0s
FLOS Flostrand 42.72 331 *e*P **P 04 32 30.2 +1.5**
FUR Furstenfeldbru 42.77 304 *e*P **P 04 32 29.9 +0.6**
comp=Z,256nm,2.1s,mb5.6
FUR Furstenfeldbru 42.77 304 *e*P **P 04 32 29.9 +0.6**
FUR pmax pmax
comp=Z,256nm,2.1s,mb5.6
NAO01 NORSAR Array S 42.84 322 *e*P **P 04 32 29.6 -0.1**
comp=Z,2.8nm,0.4s,mb4.3
NSS Namsos 42.90 328 *e*P **P 04 32 32.6 +2.5**
NSS *e*SS SS 04 42 00.3 -5.9
BSEG Bad Segeberg 42.90 312 *e*P **P 04 32 30.9 +0.6**
comp=Z,59nm,1.3s,mb5.2
BSEG Bad Segeberg 42.90 312 *e*P **P 04 32 30.9 +0.6**
BSEG pmax pmax
comp=Z,59nm,1.3s,mb5.2
CLZ Clausthal 42.98 309 *e*P **P 04 32 31.3 +0.3**
comp=Z,44nm,1.6s,mb4.9
CLZ Clausthal 42.98 309 *e*P **P 04 32 31.3 +0.3**
CLZ pmax pmax
comp=Z,44nm,1.6s,mb4.9
MOTA Moosalm 42.99 302 ⇓*i*pP pP 04 32 30.6 -0.6
comp=Z,24nm,0.8s,SNR=15
KULM Kulim 43.08 130 P **P 04 32 32.6 +0.4**
KULM Kulim 43.08 130 *e*P **P 04 32 32.1 -0.1**
comp=Z,40nm,1.5s,mb4.9
KULM LR LR
comp=Z,673nm,20.0s,MS4.5
KULM Kulim 43.08 130 P Px 04 32 43.0
NRDL Niedersach Rie 43.09 310 *e*P **P 04 32 31.5 -0.4**
comp=Z,88nm,2.0s,mb5.1
LOF Lofoten 43.13 333 *e*P **P 04 32 31.9 -0.1**
WDD Wield Dalam 43.20 285 *e*P **P 04 32 33.2 +0.2**
comp=Z,247nm,1.1s,mb5.8
WDD LR LR
comp=Z,491nm,21.0s,MS4.4
RETA Reutte 43.20 303 *i* sP sP 04 32 32.7 -0.3
comp=Z,28nm,1.4s,SNR=8.6
FETA Feichten 43.30 302 *i* sP sP 04 32 33.5 -0.2
comp=Z,41nm,1.2s,SNR=13
KONO Kongsberg 43.38 320 *e*P **P 04 32 33.6 -0.5**
KONO *e*S **S 04 39 01.4 -1.3**
KONO Kongsberg 43.38 320 *e*P **P 04 32 33.7 -0.4**
KONO pmax pmax
comp=Z,27nm,0.9s,mb5.0
KONO MLR MLR
comp=Z,2μm,20.0s,MS5.1
KONO Kongsberg 43.38 320 *e*P **P 04 32 33.7 -0.4**
comp=Z,27nm,0.9s,mb5.0
KONO LR LR
comp=Z,2μm,20.0s,MS5.1
MSEY Mahe Island 43.66 200 PFAKE 04 32 50.0 +13
MSEY LR LR
comp=Z,766nm,20.0s,MS4.6
DAVA Damuels 43.83 303 *i* sP sP 04 32 37.8 -0.2
comp=Z,66nm,1.2s,SNR=14
IPM Ipoh 43.95 130 P **P 04 32 39.1 -0.1**
IPM Ipoh 43.95 130 *e*P **P 04 32 37.9 -1.3**
comp=Z,31nm,0.8s,mb5.1
IPM Ipoh 43.95 130 P **P 04 32 39.2 0.0**
comp=Z,803nmcomp=Z,57nm,1.4s,mb5.1
PSI Prapat 44.05 134 P **P 04 32 40.0 0.0**
comp=Z,14nm,0.7s,mb4.8,baz=313,slow=11,SNR=4.7
PSI Prapat 44.05 134 P **P 04 32 40.0 -0.1**
PSI pmax pmax
comp=Z,14nm,0.7s,mb4.8
STU Stuttgart 44.06 305 *e*P **P 04 32 40.4 +0.7**
comp=Z,39nm,1.2s,mb5.0
VLC Villacollemand 44.06 298 *e*P **P 04 32 40.1 +0.2**
comp=Z,117nm,1.3s,mb5.5
VLC LR LR
comp=Z,1μm,19.0s,MS4.8
TOD Tromm 44.20 306 *e*P **P 04 32 40.8 0.0**
YAK Yakutsk 44.23 36 *e*P **P 04 32 40.6 -0.3**
YAK *e* 04 34 21.7
YAK *e* 04 34 28.6
YAK *e*S **S 04 39 10.9 -4.2**
YAK pmax pmax
comp=Z,121nm,1.1s,mb5.5
YAK pmax pmax
comp=E,72nm,1.5s
YAK pmax pmax
comp=N,11nm,1.5s
YAK pmax pmax
comp=Z,49nm,1.5s,mb5.0
YAK pmax pmax
comp=E,62nm,1.5s
YAK pmax pmax
comp=N,24nm,1.2s
YAK smax
comp=N,434nm,3.5s
YAK smax
comp=E,209nm,2.0s
YAK MLR MLR
comp=N,1μm,13.0s,MS5.5
YAK MLR MLR
comp=Z,4μm,12.0s,MS5.6
YAK MLR MLR
comp=E,3μm,12.0s,MS5.5
YAK Yakutsk 44.23 36 *e*Pn **P 04 32 41.0 +0.1**
comp=E,111nm,0.7s,mb5.7
YAK LR LR
comp=Z,1μm,21.0s,MS4.9
TUE Stuetta 44.33 301 *e*P **P 04 32 41.8 -0.2**
comp=Z,14nm,0.9s,mb4.7
TUE LR LR
comp=Z,1μm,22.0s,MS4.8
TNS Taunus Mts 44.34 307 *e*P **P 04 32 42.5 +0.5**
comp=Z,43nm,1.4s,mb5.0
TNS Taunus Mts 44.34 307 *e*P **P 04 32 42.5 +0.5**
TNS pmax pmax
comp=Z,43nm,1.4s,mb5.0
SPAK Spaichingen-Ko 44.43 304 *e*P **P 04 32 43.2 +0.5**
IBBN Ibbenburen 44.55 310 *e*P **P 04 32 44.1 +0.5**
comp=Z,56nm,1.2s,mb5.4
KTGM Kuala Trenggan 44.60 127 P **P 04 32 44.7 +0.2**
DGAR Diego Garcia 44.66 175 PFAKE 04 33 00.0 +15
DGAR LR LR
comp=Z,2μm,22.0s,MS5.0
BFO Black Forest 44.69 304 *e*P **P 04 32 44.8 0.0**
comp=Z,44nm,1.4s,mb5.2
BFO LR LR
comp=Z,831nm,20.0s,MS4.7
LANF Langenberg 44.93 305 *e*P **P 04 32 46.6 -0.1**
BUG Bochum--Univer 44.94 309 *e*P **P 04 32 47.0 +0.3**
comp=Z,40nm,1.3s,mb5.2
FELD Feldberg im Sc 44.98 304 *e*P **P 04 32 46.4 -0.7**
INCN Inchon 45.17 71 PFAKE 04 33 00.0 +11
INCN LR LR
comp=Z,1μm,21.0s,MS4.8
FRIM Kepong 45.29 131 P **P 04 32 50.2 +0.2**
RUP Ruppelstein 45.30 306 *e*P **P 04 32 50.4 +0.7**
CDF Champ du Feu 45.37 305 *e*P **P 04 32 49.7 -0.5**
comp=Z,28nm,1.1s,mb4.8
CDF Champ du Feu 45.37 305 *e*P **P 04 32 49.7 -0.5**
CDF pmax pmax
comp=Z,14nm,1.1s,mb4.8
CDF Champ du Feu 45.37 305 *e*P **P 04 32 49.7 -0.5**
comp=Z,14nm,1.1s,mb4.8
PGF Pioggiola 45.41 296 *e*P **P 04 32 50.1 -0.6**
comp=Z,228nm,1.2s,mb5.7
PGF Pioggiola 45.41 296 *e*P **P 04 32 50.1 -0.6**
PGF pmax pmax
comp=Z,114nm,1.2s,mb5.7
PGF Pioggiola 45.41 296 *e*P **P 04 32 50.1 -0.6**
comp=Z,114nm,1.2s,mb5.7
MDJ Mudanjiang 45.42 61 P **P 04 32 50.4 -0.3**
MDJ pP 04 32 52.8
MDJ sP sP 04 32 55.7 +5.0
MDJ PcP PcP 04 34 29.2 -0.7
MDJ PP PP 04 34 37.7 +1.1
MDJ ScP ScP 04 38 22.8 -1.0
MDJ PcS PcS 04 38 24.6 +0.9
MDJ S **S 04 39 31.0 -1.8**
MDJ ScS ScS 04 42 47.5 -1.0
MDJ pmax pmax
comp=Z,12nm,1.4s,mb4.6
MDJ pmax pmax
comp=Z,250nm,7.9s
MDJ LR LR
comp=N,2μm,10.8s,MS5.7
MDJ LR LR
comp=E,6μm,14.6s,MS5.7
MDJ LR LR
comp=Z,8μm,12.4s,MS5.9
MDJ Mudanjiang 45.42 61 PFAKE 04 33 00.0 +9.3
MDJ LR LR
comp=Z,7μm,19.0s,MS5.6
ECH Echery 45.48 304 *e*P **P 04 32 50.4 -0.7**
ECH Echery 45.48 304 *e*P **P 04 32 50.9 -0.2**
ECH pmax pmax
comp=Z,11nm,0.6s,mb5.0
ECH MLR MLR
comp=Z,849nm,20.0s,MS4.7
ECH Echery 45.48 304 *e*P **P 04 32 50.9 -0.2**
comp=Z,11nm,0.6s,mb5.0
ECH LR LR
comp=Z,849nm,20.0s,MS4.7
MOF Molkenrain 45.56 304 *e*P **P 04 32 51.1 -0.7**
TIXI Tiksi 45.60 23 *e*P **P 04 32 50.9 -0.8**
TIXI *e*S **S 04 39 32.2 -2.5**
TIXI pmax pmax
comp=Z,92nm,1.0s,mb5.8
TIXI MLR MLR
comp=Z,2μm,12.0s,MS5.2
TIXI Tiksi 45.60 23 *e*P **P 04 32 51.1 -0.6**
comp=Z,92nm,1.0s,mb5.8
TIXI LR LR
comp=Z,845nm,19.0s,MS4.7
FOO Floro 45.71 323 *e*P **P 04 32 53.4 +0.7**
FOO *e*S **S 04 39 36.9 +0.3**
FOO *e*SS SS 04 42 56.6 -3.7
FOO Floro 45.71 323 *e*P **P 04 32 57.0 +4.3**
HINF Hinteralfeld 45.76 304 *e*P **P 04 32 52.6 -0.7**
comp=Z,60nm,1.2s,mb5.2
HINF Hinteralfeld 45.76 304 *e*P **P 04 32 52.6 -0.7**
HINF pmax pmax
comp=Z,30nm,1.2s,mb5.2
HINF Hinteralfeld 45.76 304 *e*P **P 04 32 52.6 -0.7**
comp=Z,30nm,1.2s,mb5.2

MEM Membach 45.84 308 P **P 04 32 54.0 +0.1**
comp=Z,12nm,1.4s,mb4.7
LOMF Lomont 45.86 303 *e*P **P 04 32 53.5 -0.6**
WLF Walferdange 45.89 306 P **P 04 32 55.1 +0.8**
comp=Z,37nm,1.6s,mb5.2
WLF Walferdange 45.89 306 *e*P **P 04 32 55.3 +1.0**
comp=Z,64nm,1.3s,mb5.5
WLF Walferdange 45.89 306 *e*P **P 04 32 55.7 +1.4**
WLF pmax pmax
comp=Z,39nm,1.0s,mb5.4
WLF MLR MLR
comp=Z,1µm,20.0s,MS4.8
WLF Walferdange 45.89 306 *e*P **P 04 32 55.7 +1.4**
comp=Z,39nm,1.0s,mb5.4
WLF LR LR
comp=Z,1µm,20.0s,MS4.8
KLR Kul'dur 45.97 54 *e*P **P 04 32 51.4 -3.5**
KLR pmax pmax
comp=Z,100nm,1.4s,mb5.7
KLR MLR MLR
comp=E,4µm,13.0s
KLR MLR MLR
comp=Z,6µm,13.0s,MS5.8
VSL Villasalto 45.97 292 *e*P **P 04 32 55.0 -0.2**
comp=Z,21nm,1.0s,mb5.1
VSL LR LR
comp=Z,358nm,20.0s,MS4.3
HAU Haudompre 46.05 304 *e*P **P 04 32 55.0 -0.6**
comp=Z,112nm,1.4s,mb5.4
HAU *e*MLR MLR
comp=Z,778nm,18.0s,MS4.4
HAU Haudompre 46.05 304 *e*P **P 04 32 55.0 -0.6**
HAU pmax pmax
comp=Z,56nm,1.4s,mb5.4
HAU MLR MLR
comp=Z,780nm,18.0s,MS4.7
HAU Haudompre 46.05 304 *e*P **P 04 32 55.0 -0.6**
comp=Z,56nm,1.4s,mb5.4
HAU LR LR
comp=Z,780nm,18.0s,MS4.7
MNSI Mandailing Nat 46.06 135 P **P 04 33 02.2 +6.1**
comp=Z,3µmcomp=Z,83nm,1.0s,mb5.7
SAOF Saorge 46.09 298 *e*P **P 04 32 56.4 +0.4**
TATO Taipei 46.09 90 PFAKE 04 33 10.0 +14
TATO LR LR
comp=Z,2µm,19.0s,MS5.0
YHNB Yeheng 46.15 90 PFAKE 04 33 10.0 +13
YHNB LR LR
comp=Z,1µm,19.0s,MS4.9
KSRS Korea Array 46.15 71 P **P 04 32 55.8 -0.8**
comp=Z,13nm,0.5s,mb5.2,baz=273,slow=6.6,SNR=34
KSRS LR LR 04 54 45.7
comp=Z,3µm,19.2s,MS5.2,baz=295,slow=39
KSRS Korea Array 46.15 71 P **P 04 32 55.8 -0.8**
KSRS pmax pmax
comp=Z,13nm,0.5s,mb5.2
KSRS MLR MLR
comp=Z,3µm,19.2s,MS5.2
AUTN L'Aution 46.17 298 *e*P **P 04 32 58.0 +1.4**
SBF Sospel 46.20 298 *e*P **P 04 32 56.7 -0.2**
comp=Z,309nm,1.1s,mb5.9
SBF Sospel 46.20 298 *e*P **P 04 32 56.7 -0.2**
SBF pmax pmax
comp=Z,155nm,1.1s,mb6.0
SBF Sospel 46.20 298 *e*P **P 04 32 56.7 -0.2**
comp=Z,155nm,1.1s,mb6.0
SSLB Suanglung 46.24 92 *e*P **P 04 32 59.1 +1.7**
THEF They Montfort 46.25 304 *e*P **P 04 32 57.0 -0.2**
LUCF Luceram 46.26 298 *e*P **P 04 32 57.9 +0.6**
REVF Revere 46.28 298 *e*P **P 04 32 57.5 0.0**
LPG La Plagne 46.30 301 *e*P **P 04 32 57.6 0.0**
comp=Z,59nm,0.8s,mb5.3
LPG La Plagne 46.30 301 *e*P **P 04 32 57.6 0.0**
LPG pmax pmax
comp=Z,30nm,0.8s,mb5.4
LPG La Plagne 46.30 301 *e*P **P 04 32 57.6 0.0**
comp=Z,30nm,0.8s,mb5.4
TOUF Mont Tournerai 46.30 299 *e*P **P 04 32 58.3 +0.7**
LPL La Plagne 46.30 301 *e*P **P 04 32 57.7 +0.1**
comp=Z,210nm,1.3s,mb5.7
LPL La Plagne 46.30 301 *e*P **P 04 32 57.7 +0.1**
LPL pmax pmax
comp=Z,105nm,1.3s,mb5.7
LPL La Plagne 46.30 301 *e*P **P 04 32 57.7 +0.1**
comp=Z,105nm,1.3s,mb5.7
BCLA Clavier 46.31 308 P **P 04 32 58.2 +0.6**
comp=Z,17nm,2.0s,mb4.7
MVIF Mont Vial 46.39 298 *e*P **P 04 32 58.3 -0.1**
MBDF Montbardon 46.46 300 *e*P **P 04 32 58.2 -0.7**
comp=Z,145nm,1.1s,mb5.6
MBDF Montbardon 46.46 300 *e*P **P 04 32 58.2 -0.7**
MBDF pmax pmax
comp=Z,72nm,1.1s,mb5.6
MBDF Montbardon 46.46 300 *e*P **P 04 32 58.2 -0.7**
comp=Z,72nm,1.1s,mb5.6
SURF Saint Ours 46.49 299 *e*P **P 04 32 59.7 +0.6**
CABF La Chapelle 46.51 302 *e*P **P 04 32 59.0 -0.2**
comp=Z,181nm,1.3s,mb5.7
CABF La Chapelle 46.51 302 *e*P **P 04 32 59.0 -0.2**
CABF pmax pmax
comp=Z,91nm,1.3s,mb5.8
CABF La Chapelle 46.51 302 *e*P **P 04 32 59.0 -0.2**
comp=Z,91nm,1.3s,mb5.7
CALN Calern 46.61 298 *e*P **P 04 33 00.2 +0.1**
GIVF Givet 46.67 307 *e*P **P 04 33 00.6 +0.2**
MEZF Maizieres J'vi 46.81 305 *e*P **P 04 33 01.6 0.0**
comp=Z,173nm,1.4s,mb5.7
MEZF Maizieres J'vi 46.81 305 *e*P **P 04 33 01.6 0.0**
comp=Z,173nm,1.4s,mb6.0
DOU Dourbes 46.81 307 P **P 04 33 02.6 +1.1**
comp=Z,20nm,2.2s,mb4.9
FRF La Foret Royal 46.83 298 *e*P **P 04 33 01.2 -0.6**
comp=Z,205nm,1.1s,mb5.9
FRF La Foret Royal 46.83 298 *e*P **P 04 33 01.2 -0.6**
FRF pmax pmax
comp=Z,103nm,1.1s,mb5.9
FRF La Foret Royal 46.83 298 *e*P **P 04 33 01.2 -0.6**
comp=Z,103nm,1.1s,mb5.9
SFTF Sexfontaines 46.88 305 *e*P **P 04 33 01.8 -0.3**
comp=Z,158nm,1.5s,mb5.6
SFTF Sexfontaines 46.88 305 *e*P **P 04 33 01.8 -0.3**
comp=Z,158nm,1.5s,mb5.9
LMR La Mourre 46.98 298 *e*P **P 04 33 02.3 -0.7**
comp=Z,145nm,1.6s,mb5.5
LMR La Mourre 46.98 298 *e*P **P 04 33 02.3 -0.7**
LMR pmax pmax
comp=Z,73nm,1.6s,mb5.6
LMR La Mourre 46.98 298 *e*P **P 04 33 02.3 -0.7**
comp=Z,73nm,1.6s,mb5.6
ORIF Oris-en-Rattie 47.03 300 *e*P **P 04 33 04.1 +0.8**
comp=Z,46nm,1.3s,mb5.2
ORIF *e*MLR MLR
comp=Z,1µm,19.5s,MS4.6
ORIF Oris-en-Rattie 47.03 300 *e*P **P 04 33 04.1 +0.8**
ORIF pmax pmax
comp=Z,23nm,1.3s,mb5.2
ORIF Oris-en-Rattie 47.03 300 *e*P **P 04 33 04.1 +0.8**
comp=Z,23nm,1.3s,mb5.2
BAIF Baives 47.07 307 *e*P **P 04 33 03.8 +0.2**
comp=Z,165nm,1.4s,mb5.7
BAIF Baives 47.07 307 *e*P **P 04 33 03.8 +0.2**
BAIF pmax pmax
comp=Z,83nm,1.4s,mb5.7
BAIF Baives 47.07 307 *e*P **P 04 33 03.8 +0.2**
comp=Z,82nm,1.4s,mb5.7
KEST Kesra 47.21 287 P **P 04 33 06.0 +1.2**
comp=Z,62nm,1.1s,mb5.6,baz=9.4,slow=2.2,SNR=42
KEST Kesra 47.21 287 *e*P **P 04 33 06.0 +1.1**
BKNI Bangkinang 47.28 134 P **P 04 33 10.0 +4.4**
comp=Z,107nm,0.8s,mb6.0
KGM Kluang 47.28 130 P **P 04 33 05.7 +0.1**
KBS Kingsbay 47.41 347 *e*P **P 04 33 06.4 +0.5**
KBS AMb AMB 04 33 08.5
comp=Z,66nm,1.0s,mb5.7
KBS Kingsbay 47.41 347 *d i*P **P 04 33 06.5 +0.6**
KBS pmax pmax
comp=Z,135nm,1.2s,mb6.0
KBS Kingsbay 47.41 347 *e*P **P 04 33 06.7 +0.8**
comp=Z,82nm,0.9s,mb5.9
KBS LR LR
comp=Z,1µm,20.0s,MS4.8
SMRF Simiane la Rot 47.47 299 *e*P **P 04 33 06.6 -0.2**
comp=Z,74nm,1.2s,mb5.4
SMRF Simiane la Rot 47.47 299 *e*P **P 04 33 06.6 -0.2**
comp=Z,74nm,1.2s,mb5.7
PPI Padang Panjang 47.55 135 P **P 04 33 11.8 +4.1**
comp=Z,47nm,1.0s,mb5.6

MYKOM Kota Tinggi 47.79 129 P **P 04 33 09.2 -0.4**
MYKOM Kota Tinggi 47.79 129 P **P 04 33 10.0 +0.4**
comp=Z,33nm,1.4s,mb5.3
LOR Lormes 47.85 304 *e*P **P 04 33 09.0 -0.7**
comp=Z,97nm,1.5s,mb5.4
LOR *e*MLR MLR
comp=Z,1µm,20.5s,MS4.5
LOR Lormes 47.85 304 *e*P **P 04 33 09.0 -0.7**
LOR pmax pmax
comp=Z,48nm,1.5s,mb5.4
LOR MLR MLR
comp=Z,1µm,20.5s,MS4.8
LOR Lormes 47.85 304 *e*P **P 04 33 09.0 -0.7**
comp=Z,48nm,1.5s,mb5.4
LOR LR LR
comp=Z,1µm,20.5s,MS4.8
SSB Saint Sauveur 47.86 301 *e*P **P 04 33 09.3 -0.5**
SSB pmax pmax
comp=Z,75nm,1.4s,mb5.6
SSB MLR MLR
comp=Z,797nm,20.0s,MS4.7
SSB Saint Sauveur 47.86 301 *e*P **P 04 33 09.3 -0.5**
comp=Z,75nm,1.4s,mb5.6
SSB LR LR
comp=Z,797nm,20.0s,MS4.7
VIVF Saint-Julien-l 47.88 300 *e*P **P 04 33 09.9 0.0**
comp=Z,317nm,1.3s,mb6.0
VIVF Saint-Julien-l 47.88 300 *e*P **P 04 33 09.9 0.0**
VIVF pmax pmax
comp=Z,158nm,1.3s,mb6.0
VIVF Saint-Julien-l 47.88 300 *e*P **P 04 33 09.9 0.0**
comp=Z,158nm,1.3s,mb6.0
PDSI Padang 47.96 135 P **P 04 33 11.3 +0.4**
comp=Z,7µmcomp=Z,120nm,0.9s,mb6.0
SMF Signal de Mont 48.01 303 *e*P **P 04 33 10.5 -0.4**
comp=Z,237nm,1.3s,mb5.8
SMF Signal de Mont 48.01 303 *e*P **P 04 33 10.5 -0.4**
SMF pmax pmax
comp=Z,118nm,1.3s,mb5.9
SMF Signal de Mont 48.01 303 *e*P **P 04 33 10.5 -0.4**
comp=Z,118nm,1.3s,mb5.9
SSF Saint Saulge 48.13 303 *e*P **P 04 33 11.2 -0.7**
comp=Z,86nm,1.3s,mb5.4
SSF Saint Saulge 48.13 303 *e*P **P 04 33 11.2 -0.7**
SSF pmax pmax
comp=Z,43nm,1.3s,mb5.4
SSF Saint Saulge 48.13 303 *e*P **P 04 33 11.2 -0.7**
comp=Z,43nm,1.3s,mb5.4
KMBO Kilima Mbogo 48.24 225 *i*P **P 04 33 10.1 -3.0**
KMBO pmax pmax
comp=Z,51nm,0.5s
KMBO Kilima Mbogo 48.24 225 *e*P **P 04 33 13.1 0.0**
comp=Z,19nm,1.0s,mb5.2
KMBO LR LR
comp=Z,670nm,22.0s,MS4.6
HABR Khabarovsk 48.25 55 *e*P **P 04 33 11.4 -1.4**
HABR *e* 04 34 37.7
HABR *e*S **S 04 40 11.3 -1.9**
HABR *e*'SS sS 04 40 16.6 +3.3
HABR *e* 04 43 02.5
HABR *e*SSS 04 44 50.3
HABR pmax pmax
comp=Z,143nm,1.8s,mb5.8
HABR pmax pmax
comp=N,18nm,0.7s
HABR pmax pmax
comp=E,104nm,1.8s
HABR MLR MLR
comp=Z,2µm,18.0s,MS5.2
AVF Avril sur Loir 48.30 303 *e*P **P 04 33 12.6 -0.6**
comp=Z,197nm,1.3s,mb5.8
AVF Avril sur Loir 48.30 303 *e*P **P 04 33 12.6 -0.6**
AVF pmax pmax
comp=Z,99nm,1.3s,mb5.8
AVF Avril sur Loir 48.30 303 *e*P **P 04 33 12.6 -0.6**
comp=Z,99nm,1.3s,mb5.8
CMAH Djebel Manchou 48.36 289 P **P 04 33 13.6 -0.2**
SDSI Sungai Dareh 48.53 134 P **P 04 33 17.3 +2.0**
comp=Z,15nm,0.8s,mb5.1
AGO Saint Agoulin 48.63 302 *e*P **P 04 33 17.1 +1.4**
LASF Ste Croix 48.64 299 *e*P **P 04 33 16.0 +0.1**
comp=Z,299nm,1.3s,mb5.9
HYF Humbligny 48.66 304 *e*P **P 04 33 15.8 -0.2**
BGF Bois d'Agland 48.69 303 *e*P **P 04 33 15.6 -0.6**
comp=Z,112nm,1.3s,mb5.4
BGF Bois d'Agland 48.69 303 *e*P **P 04 33 15.6 -0.6**
BGF pmax pmax
comp=Z,56nm,1.3s,mb5.4
BGF Bois d'Agland 48.69 303 *e*P **P 04 33 15.6 -0.6**
comp=Z,56nm,1.3s,mb5.4
PYM Petit Puy Mans 48.79 302 *e*P **P 04 33 18.3 +1.4**
CKFL Kef-Lekhel 48.96 289 P **P 04 33 19.0 +0.6**
CASM Ain Smara 49.19 289 P **P 04 33 20.0 -0.2**
TCF Toulx Ste Croi 49.19 303 *e*P **P 04 33 19.9 -0.1**
comp=Z,205nm,1.3s,mb5.7
TCF Toulx Ste Croi 49.19 303 *e*P **P 04 33 19.9 -0.1**
TCF pmax pmax
comp=Z,103nm,1.3s,mb5.7
TCF Toulx Ste Croi 49.19 303 *e*P **P 04 33 19.9 -0.1**
comp=Z,103nm,1.3s,mb5.7
DFRA Djebel Bou Aff 49.55 289 P **P 04 33 23.0 +0.1**
CAF Calviac 49.65 301 *e*P **P 04 33 23.7 +0.2**
comp=Z,154nm,1.3s,mb5.5
CAF Calviac 49.65 301 *e*P **P 04 33 23.7 +0.2**
CAF pmax pmax
comp=Z,77nm,1.3s,mb5.5
CAF Calviac 49.65 301 *e*P **P 04 33 23.7 +0.2**
comp=Z,77nm,1.3s,mb5.5
SJAF Saint Jean de 49.78 298 *e*P **P 04 33 23.9 -0.7**
EJON La Jonquera 49.79 298 P **P 04 33 24.9 +0.2**
comp=Z,48nm,1.1s,mb5.3
HPK Haverah Park 49.90 313 P **P 04 33 24.2 -1.1**
HPK AMB AMB 04 33 32.2
comp=Z,28nm,1.4s,mb5.0
HPK AMS AMS 04 59 26.4
comp=Z,1µm,12.8s
HPK Haverah Park 49.90 313 *e*P **P 04 33 24.2 -1.1**
HPK AMB AMB 04 33 32.2
comp=Z,28nm,1.4s,mb5.0
HPK AMS AMS 04 59 26.4
comp=Z,1µm,12.8s,MS5.0
RJF Les Rejaudoux 49.91 302 *e*P **P 04 33 25.8 +0.2**
comp=Z,160nm,1.4s,mb5.4
RJF *e*MLR MLR
comp=Z,975nm,21.5s,MS4.5
RJF Les Rejaudoux 49.91 302 *e*P **P 04 33 25.8 +0.2**
RJF pmax pmax
comp=Z,80nm,1.4s,mb5.5
RJF MLR MLR
comp=Z,980nm,21.5s,MS4.8
RJF Les Rejaudoux 49.91 302 *e*P **P 04 33 25.8 +0.2**
comp=Z,80nm,1.4s,mb5.5
RJF LR LR
comp=Z,980nm,21.5s,MS4.8
CWF Charnwood Fore 49.95 312 P **P 04 33 24.6 -1.2**
CWF AMB AMB 04 33 24.8
comp=Z,25nm,1.2s,mb5.0
CWF AMS AMS 04 59 28.0
comp=Z,1µm,13.7s
CWF Charnwood Fore 49.95 312 *e*P **P 04 33 24.6 -1.2**
CWF AMB AMB 04 33 24.8
comp=Z,25nm,1.2s,mb5.0
CWF AMS AMS 04 59 28.0
comp=Z,1µm,13.7s,MS5.1
JNU Nakatsue 49.96 75 *e*P **P 04 33 26.9 +0.7**
comp=Z,65nm,1.1s,mb5.5
MTLF Montolieu 49.99 299 *e*P **P 04 33 26.1 -0.1**
comp=Z,109nm,1.3s,mb5.3
MTLF Montolieu 49.99 299 *e*P **P 04 33 26.1 -0.1**
MTLF pmax pmax
comp=Z,54nm,1.3s,mb5.3
MTLF Montolieu 49.99 299 *e*P **P 04 33 26.1 -0.1**
comp=Z,54nm,1.3s,mb5.3
SET Setif 50.03 289 P **P 04 33 28.0 +1.4**
ESY Stoneypath 50.11 316 P **P 04 33 26.1 -0.8**
ESY Stoneypath 50.11 316 *e*P **P 04 33 26.1 -0.8**
LDF La Druitiere 50.15 306 *e*P **P 04 33 26.4 -0.9**
MCD Coleburn Disti 50.19 318 P **P 04 33 26.5 -0.9**
MCD Coleburn Disti 50.19 318 *e*P **P 04 33 26.5 -0.9**
CARF Carcanieres 50.26 298 *e*P **P 04 33 27.9 -0.3**
CFON Fontmartina 50.32 297 P **P 04 33 29.1 +0.5**
comp=Z,49nm,0.9s,mb5.4
FLN La Foliniere 50.33 306 *e*P **P 04 33 27.9 -0.8**
comp=Z,80nm,1.3s,mb5.2
FLN *e*MLR MLR
comp=Z,962nm,19.0s,MS4.5

FLN La Foliniere 50.33 306 *e*P **P 04 33 27.9 -0.8**
FLN pmax pmax
comp=Z,40nm,1.3s,mb5.2
FLN MLR MLR
comp=Z,960nm,19.0s,MS4.8
FLN La Foliniere 50.33 306 *e*P **P 04 33 27.9 -0.8**
comp=Z,40nm,1.3s,mb5.2
FLN LR LR
comp=Z,960nm,19.0s,MS4.8
EBL Broad Law 50.38 316 P **P 04 33 28.1 -0.8**
EBL Broad Law 50.38 316 *e*P **P 04 33 28.1 -0.8**
VALF Valcebollere 50.41 298 *e*P **P 04 33 29.1 -0.3**
CLLI Llivia 50.42 298 P **P 04 33 29.9 +0.4**
EDI Edinburgh 50.43 316 P **P 04 33 27.1 -2.2**
EDI AMB AMB 04 33 32.6
comp=Z,26nm,1.4s,mb5.0
EDI AMS AMS 04 59 47.5
comp=Z,2µm,15.2s
EDI Edinburgh 50.43 316 *e*P **P 04 33 27.1 -2.2**
EDI AMB AMB 04 33 32.6
comp=Z,26nm,1.4s,mb5.0
EDI AMS AMS 04 59 47.5
comp=Z,2µm,15.2s,MS5.2
ECK Cauldkaine Hil 50.53 315 P **P 04 33 29.4 -0.7**
ECK Cauldkaine Hil 50.53 315 *e*P **P 04 33 29.4 -0.7**
LFF La Frestale 50.55 301 *e*P **P 04 33 30.3 -0.1**
comp=Z,220nm,1.3s,mb5.6
LFF La Frestale 50.55 301 *e*P **P 04 33 30.3 -0.1**
LFF pmax pmax
comp=Z,110nm,1.3s,mb5.6
LFF La Frestale 50.55 301 *e*P **P 04 33 30.3 -0.1**
comp=Z,110nm,1.3s,mb5.6
EBH Black Hill 50.55 316 P **P 04 33 29.3 -0.9**
EBH Black Hill 50.55 316 *e*P **P 04 33 29.3 -0.9**
ESK Eskdalemuir 50.55 315 P **P 04 33 28.3 -2.0**
ESK AMB AMB 04 33 34.1
comp=Z,44nm,1.5s,mb5.2
ESK AMS AMS 05 00 57.3
comp=Z,2µm,13.3s
ESK Eskdalemuir 50.55 315 *e*P **P 04 33 28.3 -2.0**
ESK AMB AMB 04 33 34.1
comp=Z,44nm,1.5s,mb5.2
ESK AMS AMS 05 00 57.3
comp=Z,2µm,13.3s,MS5.3
ESK Eskdalemuir 50.55 315 *i*P **P 04 33 30.6 +0.4**
ESK Eskdalemuir 50.55 315 *e*P **P 04 33 29.2 -1.0**
comp=Z,31nm,0.9s,mb5.2
ESK LR LR
comp=Z,1µm,19.0s,MS4.9
GRR Gorron 50.67 306 *e*P **P 04 33 30.4 -0.9**
comp=Z,202nm,1.4s,mb5.6
GRR Gorron 50.67 306 *e*P **P 04 33 30.4 -0.9**
GRR pmax pmax
comp=Z,101nm,1.4s,mb5.6
GRR Gorron 50.67 306 *e*P **P 04 33 30.4 -0.9**
comp=Z,101nm,1.4s,mb5.6
MFF Saint Martin d 50.68 304 *e*P **P 04 33 30.4 -0.9**
comp=Z,129nm,1.3s,mb5.4
MFF Saint Martin d 50.68 304 *e*P **P 04 33 30.4 -0.9**
MFF pmax pmax
comp=Z,65nm,1.3s,mb5.4
MFF Saint Martin d 50.68 304 *e*P **P 04 33 30.4 -0.9**
comp=Z,64nm,1.3s,mb5.4
ETOS Mallorca 50.69 294 P **P 04 33 30.6 -1.0**
comp=Z,22nm,0.8s,mb5.1
MDO Dochfour 50.80 318 P **P 04 33 30.4 -1.6**
MDO Dochfour 50.80 318 *e*P **P 04 33 30.4 -1.6**
MLS Moulis 50.89 299 *e*P **P 04 33 32.5 -0.5**
EMIR Miracle 50.91 297 P **P 04 33 34.1 +0.9**
comp=Z,54nm,1.1s,mb5.4
EAB Aberfoyle 51.02 316 P **P 04 33 32.7 -1.0**
EAB Aberfoyle 51.02 316 *e*P **P 04 33 32.7 -1.0**
CSOR Sort 51.05 298 P **P 04 33 34.2 0.0**
comp=Z,40nm,1.1s,mb5.3
RSC Scourie 51.07 319 P **P 04 33 33.1 -1.0**
RSC Scourie 51.07 319 *e*P **P 04 33 33.1 -1.0**
MCH1 Michaelchurch 51.13 311 P **P 04 33 33.9 -0.7**
MCH1 AMB AMB 04 33 45.9
comp=Z,78nm,1.2s,mb5.5
MCH1 AMS AMS 04 58 34.3
comp=Z,1µm,15.5s
MCH1 Michaelchurch 51.13 311 *e*P **P 04 33 33.9 -0.7**
MCH1 AMB AMB 04 33 45.9
comp=Z,78nm,1.2s,mb5.5
MCH1 AMS AMS 04 58 34.3
comp=Z,1µm,15.5s,MS5.0
PGBU Glenifferbraes 51.17 316 P **P 04 33 34.0 -0.9**
PGBU AMB AMB 04 33 40.9
comp=Z,52nm,2.0s,mb5.1
PGBU AMS AMS 05 00 19.7
comp=Z,2µm,12.2s
PGBU Glenifferbraes 51.17 316 *e*P **P 04 33 34.0 -0.9**
PGBU AMB AMB 04 33 40.9
comp=Z,52nm,2.0s,mb5.1
PGBU AMS AMS 05 00 19.7
comp=Z,2µm,12.2s,MS5.3
HTR Trewern Hill 51.27 311 P **P 04 33 34.1 -1.6**
HTR Trewern Hill 51.27 311 *e*P **P 04 33 34.1 -1.6**
KAC Achnashellach 51.29 318 P **P 04 33 33.6 -2.2**
KAC Achnashellach 51.29 318 *e*P **P 04 33 33.6 -2.2**
EPF Esparros 51.39 299 *e*P **P 04 33 35.5 -1.3**
comp=Z,24nm,0.9s,mb4.8
EPF Esparros 51.39 299 *e*P **P 04 33 35.5 -1.3**
EPF pmax pmax
comp=Z,12nm,0.9s,mb4.8
EPF Esparros 51.39 299 *e*P **P 04 33 35.5 -1.3**
comp=Z,12nm,0.9s,mb4.8
KSI Kapahiang 51.41 135 P **P 04 33 35.8 -1.4**
comp=Z,7µmcomp=Z,207nm,0.8s,mb6.1
EPOB Poblet 51.41 297 P **P 04 33 36.9 0.0**
comp=Z,13nm,0.8s,mb4.9
RRR Rubha Reidh 51.49 319 P **P 04 33 36.1 -1.1**
RRR Rubha Reidh 51.49 319 *e*P **P 04 33 36.1 -1.1**
KPL Plockton 51.50 318 P **P 04 33 36.0 -1.3**
KPL AMB AMB 04 33 36.6
comp=Z,60nm,3.1s
KPL AMS AMS 04 56 42.5
comp=Z,1µm,22.3s
KPL Plockton 51.50 318 *e*P **P 04 33 36.0 -1.3**
KPL AMB AMB 04 33 36.6
comp=Z,60nm,3.1s
KPL AMS AMS 04 56 42.5
comp=Z,1µm,22.3s,MS4.9
TGY Tagaytay City 51.51 102 LR LR 04 57 53.8
comp=Z,3.8nm,18.6s,baz=83,slow=39
LABF Labassere 51.57 299 *e*P **P 04 33 38.0 -0.1**
EBIE Bielsa 51.64 299 P **P 04 33 38.9 +0.2**
comp=Z,11nm,0.8s,mb4.8
VIEF Viey 51.66 299 *e*P **P 04 33 38.7 -0.1**
MBAR Mbarara 51.70 232 PFAKE 04 33 50.0 +11
MBAR LR LR
comp=Z,617nm,22.0s,MS4.6
SGMF Saint Gilles 51.80 306 *e*P **P 04 33 39.1 -0.6**
comp=Z,166nm,1.4s,mb5.5
SGMF Saint Gilles 51.80 306 *e*P **P 04 33 39.1 -0.6**
SGMF pmax pmax
comp=Z,83nm,1.4s,mb5.5
SGMF Saint Gilles 51.80 306 *e*P **P 04 33 39.1 -0.6**
comp=Z,83nm,1.4s,mb5.5
EMHD Djebel Mahouad 51.87 290 P **P 04 33 40.5 +0.1**
REYF Montagne du Re 51.89 299 *e*P **P 04 33 39.3 -1.2**
EIBI Ibiza 52.02 294 P **P 04 33 42.6 +1.0**
comp=Z,57nm,0.9s,mb5.5
ETSF Etsaut 52.06 299 *e*P **P 04 33 41.7 -0.1**
comp=Z,138nm,0.9s,mb5.6
ETSF Etsaut 52.06 299 *e*P **P 04 33 41.7 -0.1**
ETSF pmax pmax
comp=Z,69nm,0.9s,mb5.6
ETSF Etsaut 52.06 299 *e*P **P 04 33 41.7 -0.1**
comp=Z,69nm,0.9s,mb5.6
ERTA Horta de San J 52.08 297 P **P 04 33 41.8 -0.1**
comp=Z,40nm,1.1s,mb5.3
DYA Yadsworthy 52.08 309 AMS AMS 05 00 54.6
comp=Z,1µm,13.8s,MS5.1
KSM Kuching 52.17 123 P **P 04 33 42.3 -0.6**
KSM Kuching 52.17 123 *e*P **P 04 33 42.1 -0.8**
comp=Z,30nm,1.1s,mb5.1
KSM LR LR
comp=Z,389nm,19.0s,MS4.5
KSM Kuching 52.17 123 P **P 04 33 42.3 -0.6**
comp=Z,41nm,1.2s,mb5.2
ROSF Rostrenen 52.24 307 *e*P **P 04 33 42.3 -0.7**
comp=Z,100nm,1.2s,mb5.3
ROSF Rostrenen 52.24 307 *e*P **P 04 33 42.3 -0.7**
ROSF pmax pmax
comp=Z,50nm,1.2s,mb5.3

ROSF **Rostrenen 52.24 307** *e*P **P 04 33 42.3 -0.7**
comp=Z,50nm,1.2s,mb5.3
HTL **Hartland 52.27 310** AMS AMS 05 00 49.4
comp=Z,2µm,18.1s,MS5.1
QUIF **Quistinic 52.28 306** *e*P **P 04 33 42.6 -0.8**
comp=Z,189nm,1.4s,mb5.5
QUIF **Quistinic 52.28 306** *e*P **P 04 33 42.6 -0.8**
QUIF pmax pmax
comp=Z,94nm,1.4s,mb5.5
QUIF **Quistinic 52.28 306** *e*P **P 04 33 42.6 -0.8**
comp=Z,94nm,1.4s,mb5.5
PPBI **Pangkal Pinang 52.29 130** P **P 04 33 43.0 -0.8**
comp=Z,52nm,1.2s,mb5.3
LARF **Larrau 52.31 300** *e*P **P 04 33 42.7 -0.9**
ESAC **San Caprasio 52.39 298** P **P 04 33 44.8 +0.6**
comp=Z,109nm,1.0s,mb5.7
SJPF **Ste Jean 52.45 300** *e*P **P 04 33 44.6 -0.1**
comp=Z,54nm,1.2s,mb5.1
SJPF **Ste Jean 52.45 300** *e*P **P 04 33 44.6 -0.1**
SJPF pmax pmax
comp=Z,27nm,1.2s,mb5.0
SJPF **Ste Jean 52.45 300** *e*P **P 04 33 44.6 -0.1**
comp=Z,27nm,1.2s,mb5.1
EALK **Alkurruntz 52.61 300** P **P 04 33 45.9 0.0**
comp=Z,14nm,0.9s,mb4.9
ELIZ **Elizondo 52.65 300** P **P 04 33 48.4 +2.3**
ELIZ pmax pmax
comp=Z,34nm,1.1s,mb5.2
ELIZ **Elizondo 52.65 300** P **P 04 33 48.4 +2.2**
comp=Z,34nm,1.1s,mb5.2
SBUM **Sibu 52.75 121** P **P 04 33 47.2 0.0**
SBUM **Sibu 52.75 121** P **P 04 33 47.0 -0.2**
comp=Z,43nm,1.2s,mb5.3
BTM **Bintulu 52.81 119** P **P 04 33 48.3 +0.6**
EMOS **Mosqueruela 52.86 296** P **P 04 33 48.8 +1.1**
comp=Z,33nm,0.9s,mb5.3
EBNR **Beni Rached 52.90 291** P **P 04 33 48.0 -0.1**
KDM **Kudat 52.93 113** P **P 04 33 49.7 +1.1**
KKM **Kota Kinabalu 53.06 114** PFAKE 04 34 00.0 +10
KKM LR LR
comp=Z,1µm,19.0s,MS5.0
ECHA **Ech Chlef 53.07 291** P **P 04 33 53.0 +3.6**
EANR **'Ain N'Sour 53.35 290** P **P 04 33 52.0 +0.6**
ETRT **Tiaret 53.42 290** P **P 04 33 52.5 +0.6**
DAG **Danmarks Havn 53.44 343**⇓ *i*P **P 04 33 52.0 +0.5**
DAG pmax pmax
comp=Z,25nm,0.7s,mb5.2
DAG **Danmarks Havn 53.44 343**⇓ *i*P **P 04 33 52.0 +0.5**
comp=Z,25nm,0.7s,mb5.3
KLSI **53.48 134** P **P 04 33 52.9 +0.4**
comp=Z,44nm,1.1s,mb5.3
ECHE **Chera 53.49 295** P **P 04 33 53.6 +1.2**
ECHE pmax pmax
comp=Z,29nm,0.9s,mb5.2
ECHE **Chera 53.49 295** P **P 04 33 53.6 +1.2**
comp=Z,29nm,0.9s,mb5.2
YSS **Yuzh-Sakhalins 53.67 55**⇑ *e*P **P 04 33 53.0 -0.6**
YSS pmax pmax
comp=Z,140nm,1.2s,mb5.9
YSS MLR MLR
comp=Z,3µm,13.0s,MS5.5
YSS MLR MLR
comp=E,3µm,16.0s
YSS **Yuzh-Sakhalins 53.67 55** *e*P **P 04 33 54.2 +0.6**
comp=E,113nm,1.1s,mb5.8
YSS LR LR
comp=Z,827nm,19.0s,MS4.8
TPI **Tanjungpandan 53.69 129** P **P 04 33 53.6 -0.5**
comp=Z,19nm,1.3s,mb5.0
ETOR **Torete 53.82 297** P **P 04 33 54.2 -0.6**
ETOR pmax pmax
comp=Z,12nm,1.2s,mb4.8
ETOR **Torete 53.82 297** P **P 04 33 54.2 -0.6**
comp=Z,12nm,1.2s,mb4.8
ELAN **Lanestosa 53.94 300** P **P 04 33 56.2 +0.5**
comp=Z,78nm,1.0s,mb5.7
STKI **Sintang 53.99 123** P **P 04 33 56.6 +0.2**
comp=Z,63nm,1.2s,mb5.5
SDKM **Sandakan 54.05 113** P **P 04 33 56.9 +0.1**
MAJO **Matsushiro 54.16 68** *e*P **P 04 33 56.8 -0.6**
MAJO pmax pmax
comp=Z,75nm,1.7s,mb5.4
MAJO MLR MLR
comp=Z,802nm,20.0s,MS4.8
MAJO **Matsushiro 54.16 68** *e*P **P 04 33 56.8 -0.6**
comp=Z,76nm,1.7s,mb5.5
MAJO LR LR
comp=Z,802nm,20.0s,MS4.8
MAT **Matsushiro 54.16 68** P **P 04 33 56.2 -1.2**
MJAR **Matsushiro Arr 54.16 68** P **P 04 33 56.9 -0.4**
comp=Z,7.3nm,0.9s,mb4.7,baz=291,slow=9.9,SNR=25
MJAR LR LR 04 58 19.0
comp=Z,930nm,18.1s,MS4.9,baz=240,slow=38
MJAR **Matsushiro Arr 54.16 68** P **P 04 33 56.9 -0.5**
MJAR pmax pmax
comp=Z,7.0nm,0.9s
MJAR MLR MLR
comp=Z,930nm,18.1s
ETOB **Tobarra 54.26 295** P **P 04 33 58.9 +0.9**
comp=Z,24nm,0.8s,mb5.3
EMUR **La Murta 54.34 294** P **P 04 33 58.8 +0.1**
comp=Z,25nm,0.8s,mb5.3
ASAJ **Asahikawa 54.50 58** *e*P **P 04 34 00.0 +0.3**
comp=Z,23nm,1.3s,mb5.0
SEY **Seymchan 54.62 34**⇓ *e*P **P 04 34 01.2 +0.9**
EVIA **Vianos 54.95 295** P **P 04 34 03.6 +0.5**
EVIA pmax pmax
comp=Z,19nm,0.7s,mb5.2
EVIA **Vianos 54.95 295** P **P 04 34 03.6 +0.6**
comp=Z,19nm,0.7s,mb5.2
EARI **Arriondas 55.13 301** P **P 04 34 04.5 +0.2**
comp=Z,22nm,0.9s,mb5.2
MYLDM **Lahad Datu 55.32 113** P **P 04 34 07.0 +1.0**
MYLDM **Lahad Datu 55.32 113** P **P 04 34 08.1 +2.1**
comp=Z,31nm,1.0s,mb5.3
EHUE **Huescar 55.34 294** P **P 04 34 05.5 -0.4**
GUD **Guadarrama 55.37 298** P **P 04 34 05.9 -0.1**
GUD pmax pmax
comp=Z,45nm,1.1s,mb5.4
GUD **Guadarrama 55.37 298** P **P 04 34 05.9 -0.2**
comp=Z,45nm,1.1s,mb5.4
ENIJ **Nijar 55.39 293** P **P 04 34 06.4 +0.1**
ENIJ pmax pmax
comp=Z,93nm,1.2s,mb5.7
ENIJ **Nijar 55.39 293** P **P 04 34 06.4 +0.1**
comp=Z,93nm,1.2s,mb5.7
TSM **Tawau 55.46 114** P **P 04 34 07.0 0.0**
ESDC **Sonseca Array 55.60 297** P **P 04 34 07.7 0.0**
comp=Z,13nm,0.8s,mb5.0,baz=63,slow=7.6,SNR=44
ESDC **Sonseca Array 55.60 297** P **P 04 34 07.8 0.0**
comp=Z,62nm,1.1s,mb5.5
ESLA **Sonseca Array 55.60 297** *e*P **P 04 34 07.4 -0.3**
ESLA LR LR
comp=Z,3µm,21.0s,MS5.3
ERM **Erimo 55.63 60** PFAKE 04 34 20.0 +12
ERM LR LR
comp=Z,3µm,19.0s,MS5.4
EQES **Quesada 55.69 294** P **P 04 34 08.7 +0.2**
comp=Z,74nm,1.2s,mb5.6
COCO **West Island 55.82 146** PFAKE 04 34 20.0 +11
COCO LR LR
comp=Z,601nm,22.0s,MS4.6
EBER **Berja 55.92 293** P **P 04 34 11.0 +0.9**
comp=Z,49nm,1.0s,mb5.5
PAB **San Pablo 55.93 297** *e*P **P 04 34 10.2 +0.1**
PAB pmax pmax
comp=Z,81nm,1.3s,mb5.6
PAB MLR MLR
comp=Z,502nm,19.0s,MS4.6
PAB **San Pablo 55.93 297** *e*P **P 04 34 10.2 +0.2**
comp=Z,81nm,1.3s,mb5.6
PAB LR LR
comp=Z,502nm,19.0s,MS4.6
EBAN **Banos Encina 56.06 295** P **P 04 34 11.3 +0.2**
EBAN pmax pmax
comp=Z,30nm,0.7s,mb5.4
EBAN **Banos Encina 56.06 295** P **P 04 34 11.3 +0.2**
comp=Z,30nm,0.7s,mb5.4
ECOG **Cogollos-Vega 56.26 294** P **P 04 34 12.3 -0.2**
ECOG pmax pmax
comp=Z,21nm,0.8s,mb5.2
ECOG **Cogollos-Vega 56.26 294** P **P 04 34 12.3 -0.2**
comp=Z,21nm,0.8s,mb5.2
EPON **Pontenova 56.44 302** P **P 04 34 13.4 -0.2**
comp=Z,67nm,1.5s,mb5.5
EGUA **Guajares 56.44 293** P **P 04 34 13.9 +0.1**
comp=Z,449nm,1.0s,mb6.5

ERON **Agron 56.54 294** P **P 04 34 13.3 -1.2**
comp=Z,13nm,0.7s,mb5.1
EADA **Adamuz 56.63 295** P **P 04 34 15.2 0.0**
comp=Z,25nm,0.8s,mb5.3
ELUQ **Luque 56.66 294** P **P 04 34 14.5 -0.8**
ELUQ pmax pmax
comp=Z,76nm,1.7s,mb5.5
ELUQ **Luque 56.66 294** P **P 04 34 14.5 -0.8**
comp=Z,76nm,1.7s,mb5.5
ECAL **Calabor 56.68 300** P **P 04 34 15.8 +0.4**
comp=Z,164nm,1.4s,mb5.9
PBRG **Braganca 56.73 300** *e*P **P 04 34 16.1 +0.3**
comp=Z,40nm,1.4s,mb5.3
ELOJ **Sierra Loja 56.74 294** P **P 04 34 15.1 -0.8**
ELOJ pmax pmax
comp=Z,12nm,0.8s,mb5.0
ELOJ **Sierra Loja 56.74 294** P **P 04 34 15.1 -0.8**
comp=Z,12nm,0.8s,mb5.0
JHJ **Hachijo jima 2 56.76 71** LR LR 05 01 24.3
comp=Z,1µm,18.5s,MS5.1,baz=91,slow=39
ERUA **La Rua 56.78 301** P **P 04 34 16.5 +0.3**
ERUA pmax pmax
comp=Z,128nm,1.8s,mb5.7
ERUA **La Rua 56.78 301** P **P 04 34 16.5 +0.3**
comp=Z,128nm,1.8s,mb5.7
EPLA **Plasencia 56.95 298** P **P 04 34 17.1 -0.3**
EPLA pmax pmax
comp=Z,76nm,1.0s,mb5.7
EPLA **Plasencia 56.95 298** P **P 04 34 17.1 -0.3**
comp=Z,76nm,1.0s,mb5.7
MVO **Moncorvo 57.18 299** *i*P **P 04 34 19.3 +0.3**
comp=Z,99nm,1.5s,mb5.6
MVO *i*SS 04 45 07.1
MVO *e*LR LR 05 00 08.2
comp=Z,577nm,16.0s
MVO **Moncorvo 57.18 299** P **P 04 34 19.4 +0.4**
EMIJ **Mijas 57.44 294** P **P 04 34 19.2 -1.7**
comp=Z,19nm,0.7s,mb5.2
STS **Santiago 57.55 302** P **P 04 34 20.4 -1.2**
STS pmax pmax
comp=Z,45nm,1.1s,mb5.4
STS **Santiago 57.55 302** P **P 04 34 20.4 -1.2**
comp=Z,45nm,1.1s,mb5.4
PVRL **Vila Real 57.61 300** *e*P **P 04 34 22.5 +0.5**
comp=Z,64nm,1.2s,mb5.5
ELOB **Lobios 57.62 300** P **P 04 34 22.8 +0.8**
comp=Z,33nm,0.8s,mb5.4
PCAB **Cabril 57.66 300** *e*P **P 04 34 22.9 +0.6**
comp=Z,192nm,1.4s,mb5.9
EMAZ **Mazaricos 57.82 302** P **P 04 34 23.7 +0.2**
comp=Z,13nm,0.9s,mb5.0
MTE **Manteigas 57.84 299** *i*P **P 04 34 24.4 +0.7**
comp=Z,176nm,1.5s,mb5.9
MTE *i*SS 04 45 12.1
MTE *e*LR LR 04 59 26.3
comp=Z,479nm,18.0s
MTE **Manteigas 57.84 299** *e*P **P 04 34 24.1 +0.5**
comp=Z,100nm,1.0s,mb5.8
MTE LR LR
comp=Z,659nm,20.0s,MS4.7
EZAM **Zamans 57.94 301** P **P 04 34 24.2 -0.1**
EZAM pmax pmax
comp=Z,185nm,1.5s,mb5.9
EZAM **Zamans 57.94 301** P **P 04 34 24.2 -0.1**
comp=Z,185nm,1.5s,mb5.9
EJIF **Jimena Fronter 57.99 294** P **P 04 34 24.0 -0.8**
EJIF pmax pmax
comp=Z,322nm,3.3s
EJIF **Jimena Fronter 57.99 294** P **P 04 34 24.0 -0.8**
comp=Z,322nm,3.3s
ALE **Alert 57.99 353** P **P 04 34 25.0 +0.8**
comp=Z,108nm,0.6s,mb6.0,SNR=6.1
PCBR **Castelo Branco 58.02 298** *e*P **P 04 34 25.1 +0.2**
comp=Z,73nm,1.8s,mb5.4
ESPR **Espera 58.10 294** P **P 04 34 25.1 -0.4**
comp=Z,20nm,0.6s,mb5.3
PMRV **Marv??o 58.13 298** *i*P **P 04 34 25.7 0.0**
comp=Z,100nm,1.5s,mb5.6
PMRV *i*SS 04 45 20.5
PMRV *e*LR LR 05 03 19.5
comp=Z,462nm,18.0s
EBAD **Badajoz 58.14 297** P **P 04 34 23.5 -2.3**
comp=Z,55nm,1.0s,mb5.5
EMIN **Mina Concepcio 58.31 296** P **P 04 34 26.9 -0.1**
comp=Z,29nm,0.9s,mb5.3
PBAR **Barrancos 58.40 296** *i*P **P 04 34 27.8 +0.2**
comp=Z,117nm,1.5s,mb5.7
PBAR *i*SS SS 04 45 34.9 -48
PBAR *e*LR LR 05 01 02.8
comp=Z,465nm,18.0s
PESTR **Estremoz 58.50 297** *i*P **P 04 34 28.4 +0.1**
comp=Z,122nm,1.3s,mb5.8
PESTR *i*SS 04 45 22.8
PESTR *e*LR LR 05 00 46.0
comp=Z,364nm,18.0s
SFS **San Fernando 58.52 294** PFAKE 04 34 40.0 +12
SFS LR LR
comp=Z,1µm,21.0s,MS5.0
BILL **Bilibino 58.55 26**⇓ *e*P **P 04 34 29.6 +1.4**
BILL *e* 04 36 35.2
BILL *e*S **S 04 42 37.0 +4.4**
BILL pmax pmax
comp=Z,12nm,0.4s,mb5.3
BILL MLR MLR
comp=Z,2µm,18.0s,MS5.2
PTOM **Tomar 58.77 298** *e*P **P 04 34 30.8 +0.6**
comp=Z,167nm,1.5s,mb5.8
EVO **Evora 58.95 297** *e*P **P 04 34 32.0 +0.6**
comp=Z,173nm,1.3s,mb5.6
EVO **Evora 58.95 297** *i*P **P 04 34 31.6 +0.2**
comp=Z,107nm,1.4s,mb5.7
EGRO **El Granado 58.99 296** P **P 04 34 32.2 +0.4**
comp=Z,122nm,1.3s,mb5.8
PBEJ **Beja 59.05 296** *e*P **P 04 34 32.6 +0.4**
comp=Z,88nm,1.3s,mb5.6
PVAQ **Vaqueiros 59.21 296** *i*P **P 04 34 33.4 +0.1**
comp=Z,158nm,1.4s,mb5.8
PVAQ *i*SS 04 45 33.9
PVAQ *e*LR LR 05 04 32.9
comp=Z,654nm,18.0s
OPO **Ambohidratompo 59.29 204** P **P 04 34 33.3 -0.6**
comp=Z,6.4nm,0.9s,mb4.6,baz=339,slow=8.6,SNR=2.7
PCVE **Castro Verde 59.35 296** *i*P **P 04 34 34.3 +0.1**
comp=Z,58nm,1.4s,mb5.4
PCVE *i*SS 04 45 30.9
DAV **Davao City (W) 59.41 106** LR LR 05 05 36.4
comp=Z,918nm,18.2s,MS5.0,baz=269,slow=42
DAV **Davao City (W) 59.41 106** PFAKE 04 34 50.0 +15
DAV LR LR
comp=Z,669nm,19.0s,MS4.8
PBDV **Barranco-do-Ve 59.44 295** *e*P **P 04 34 35.2 +0.4**
comp=Z,152nm,1.3s,mb5.9
PBDV *i*SS 04 45 32.5
PBDV A 05 06 22.7
comp=Z,671nm,18.0s
PMAFR **Mafra 59.66 298** *e*P **P 04 34 36.8 +0.4**
comp=Z,154nm,1.6s,mb5.8
PMAFR *i*SS 04 45 17.9
ABPO **Ambohimpanom 59.70 204** *e*P **P 04 34 36.7 +0.1**
ABPO pmax pmax
comp=Z,14nm,0.8s,mb5.0
ABPO MLR MLR
comp=Z,655nm,20.0s,MS4.8
ABPO **Ambohimpanom 59.70 204** *e*P **P 04 34 36.7 0.0**
comp=Z,14nm,0.8s,mb5.0
ABPO LR LR
comp=Z,655nm,20.0s,MS4.8
SUMG **Summit 59.71 341** *e*P **P 04 34 37.3 +1.1**
comp=Z,45nm,0.9s,mb5.5
SUMG **Summit 59.71 341** *i*P **P 04 34 37.3 +1.2**
comp=Z,42nm,0.9s,mb5.5
PTEO **Sao Teotonio 59.88 296** *e*P **P 04 34 38.3 +0.5**
comp=Z,169nm,1.4s,mb5.9
MORF **Marmelete 59.93 296** *e*P **P 04 34 38.1 -0.1**
comp=Z,56nm,1.5s,mb5.4
MORF *i*SS 04 45 29.8
MORF *e*LR LR 05 01 40.9
comp=Z,741nm,18.0s
PFVI **Vila Bisbo 60.13 296** *e*P **P 04 34 40.0 +0.4**
comp=Z,141nm,1.5s,mb5.8
PFVI *i*SS 04 45 22.4
PFVI *e*LR LR 05 05 00.0
comp=Z,676nm,18.0s
PFVI **Vila Bisbo 60.13 296** P **P 04 34 38.3 -1.3**
PEA0B **Petropavlovsk- 60.49 44** *e*P **P 04 34 41.7 -0.1**
PETK **Petropavlovsk- 60.49 44** P **P 04 34 40.5 -1.2**
comp=Z,6.5nm,0.6s,mb4.8,baz=300,slow=1.5,SNR=16

PETK LR LR 05 02 58.7
comp=Z,797nm,18.2s,MS4.9,baz=288,slow=38
PETK **Petropavlovsk- 60.49 44** P **P 04 34 40.6 -1.2**
PETK pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
PETK MLR MLR
comp=Z,797nm,18.2s,MS4.9
PET **Petropavlovsk 61.05 44** *i*P **P 04 34 44.6 -1.0**
PET MLR MLR
comp=Z,993nm,19.0s,MS5.0
CBIJ **Chichi jima 61.40 76** LR LR 05 02 30.3
comp=Z,657nm,20.4s,MS4.8,baz=331,slow=37
BKSI **Bulukumba 63.78 120** P **P 04 35 03.3 -1.1**
comp=Z,25nm,1.4s,mb5.2
TORD **Torodi Ar. Bea 64.11 267** P **P 04 35 05.2 -1.3**
comp=Z,44nm,1.0s,mb5.7,baz=46,slow=5.5,SNR=62
KDI **Kendari 64.56 117** P **P 04 35 08.9 -0.7**
comp=Z,26nm,1.4s,mb5.3
TNTI **Ternate 64.83 110** P **P 04 35 13.3 +2.0**
PMAR **Madeira 68.06 295** *e*P **P 04 35 32.3 +0.5**
comp=Z,307nm,1.3s,mb6.4
COLD **Coldfoot 71.57 15** *e*P **P 04 35 53.3 +0.4**
comp=Z,39nm,0.8s,mb5.6
DBIC **Dimbokro 73.11 265** P **P 04 36 01.8 -1.1**
comp=Z,15nm,0.9s,mb5.1,baz=44,slow=9.8,SNR=8.3
DBIC **Dimbokro 73.11 265** P **P 04 36 01.8 -1.1**
DBIC LR LR
comp=Z,1µm,20.0s,MS5.2
KIC **Kosan Boka 73.21 265** *e*P **P 04 36 02.3 -1.1**
comp=Z,79nm,1.1s,mb5.8
TIC **Toumodi 73.26 266** *e*P **P 04 36 02.5 -1.3**
comp=Z,133nm,1.3s,mb5.9
TIC **Toumodi 73.26 266** *e*P **P 04 36 02.5 -1.3**
TIC pmax pmax
comp=Z,133nm,1.3s,mb5.9
INK **Inuvik 73.31 9** P **P 04 36 03.9 +0.7**
comp=Z,26nm,0.9s,mb5.4,baz=4.2,slow=8.3,SNR=29
INK **Inuvik 73.31 9** P **P 04 36 03.9 +0.7**
INK pmax pmax
comp=Z,26nm,0.9s
INK **Inuvik 73.31 9** *e*P **P 04 36 03.6 +0.4**
comp=Z,24nm,0.9s,mb5.3
LIC **Lamto 73.52 265** *e*P **P 04 36 04.0 -1.3**
comp=Z,59nm,1.1s,mb5.2
LIC *e*MLR MLR
comp=Z,1µm,17.0s,MS5.0
LIC **Lamto 73.52 265** *e*P **P 04 36 04.0 -1.3**
comp=Z,30nm,1.1s,mb5.2
LIC LR LR
comp=Z,660nm,17.0s,MS5.0
TTA **Tatalina 73.78 20** *e*P **P 04 36 07.1 +1.1**
BPAW **Bear Paw Mtn. 74.06 17** *e*P **P 04 36 07.8 +0.1**
comp=Z,35nm,1.0s,mb5.3
COLA **College 74.09 15** *e*P **P 04 36 08.5 +0.7**
COLA pmax pmax
comp=Z,58nm,1.0s,mb5.6
COLA MLR MLR
comp=Z,492nm,20.0s,MS4.8
COLA **College 74.09 15** *e*P **P 04 36 08.5 +0.6**
comp=Z,58nm,1.0s,mb5.6
COLA LR LR
comp=Z,492nm,20.0s,MS4.8
TSUM **Tsumeb 74.18 230** P **P 04 36 08.2 -0.7**
comp=Z,24nm,0.9s,mb5.2,baz=15,slow=7.9,SNR=20
TSUM **Tsumeb 74.18 230** *e*P **P 04 36 08.0 -0.9**
comp=Z,13nm,0.8s,mb5.0
TSUM *e* 04 36 13.3
LBTB **Lobatse 74.24 220** P **P 04 36 09.2 0.0**
comp=Z,12nm,0.7s,mb5.0,baz=44,slow=7.6,SNR=9.5
LBTB **Lobatse 74.24 220** P **P 04 36 09.2 0.0**
LBTB pmax pmax
comp=Z,12nm,0.7s,mb5.0
ADK **Adak 74.31 36** PFAKE 04 36 20.0 +11
ADK LR LR
comp=Z,687nm,19.0s,MS5.0
ILAR **Eielson Array 74.39 15** P **P 04 36 09.2 -0.3**
comp=Z,14nm,1.0s,mb4.9,baz=322,slow=4.8,SNR=67
ILAR LR LR 05 15 45.8
comp=Z,454nm,18.0s,MS4.8,baz=87,slow=41
TRF **Thorofare Moun 74.78 17** *e*P **P 04 36 12.4 +0.6**
comp=Z,18nm,1.0s,mb5.0
PPLA **Purkeypile 74.79 18** *e*P **P 04 36 12.6 +0.7**
comp=Z,25nm,0.7s,mb5.4
MCK **McKinley 74.85 16** *e*P **P 04 36 12.7 +0.5**
MCK pmax pmax
comp=Z,22nm,1.3s,mb5.0
MCK **McKinley 74.85 16** *e*P **P 04 36 12.7 +0.5**
comp=Z,22nm,1.3s,mb5.0
MBWA **Marble Bar 75.32 132** *e*P **P 04 36 13.6 -1.9**
MBWA **Marble Bar 75.32 132** PFAKE 04 36 30.0 +15
MBWA LR LR
comp=Z,507nm,19.0s,MS4.8
EGAK **Eagle 75.48 13** *e*P **P 04 36 16.1 +0.3**
comp=Z,22nm,1.1s,mb5.1
EGAK LR LR
comp=Z,394nm,19.0s,MS4.7
DOT **Dot Lake 75.96 15** *e*P **P 04 36 18.8 +0.2**
comp=Z,55nm,0.9s,mb5.7
PAX **Paxson 76.28 15** *e*P **P 04 36 20.8 +0.4**
PAX pmax pmax
comp=Z,35nm,1.0s,mb5.4
PAX **Paxson 76.28 15** *e*P **P 04 36 20.8 +0.3**
comp=Z,35nm,1.0s,mb5.4
DAWY **Dawson 76.45 12** *e*P **P 04 36 21.9 +0.5**
PMR **Palmer 76.66 18** *e*P **P 04 36 20.2 -2.4**
PMR pmax pmax
comp=Z,50nm,1.4s,mb5.5
PMR **Palmer 76.66 18** *e*P **P 04 36 20.2 -2.4**
comp=Z,50nm,1.4s,mb5.5
SML **Sawmill 76.66 17** *e*P **P 04 36 23.2 +0.6**
SML pmax pmax
comp=Z,17nm,0.9s,mb5.2
SML **Sawmill 76.66 17** *e*P **P 04 36 23.2 +0.6**
comp=Z,17nm,0.9s,mb5.2
MENT **Mentasta 76.67 15** *e*P **P 04 36 23.3 +0.6**
FITZ **Fitzroy Crossi 76.73 125** *e*P **P 04 36 21.7 -1.9**
comp=Z,16nm,1.0s,mb5.1
RC01 **Rabbit Creek A 76.94 18** *e*P **P 04 36 24.6 +0.4**
BOSA **Boshof 77.37 218** P **P 04 36 26.7 -0.3**
comp=Z,18nm,0.9s,mb5.2,baz=28,slow=6.5,SNR=8.4
BOSA **Boshof 77.37 218** P **P 04 36 26.7 -0.3**
BOSA pmax pmax
comp=Z,18nm,0.9s,mb5.2
BOSA **Boshof 77.37 218** P **P 04 36 26.7 -0.3**
DIV **Divide 77.85 16** *e*P **P 04 36 30.3 +1.0**
BMRM **Bremner River 78.25 16** *e*P **P 04 36 32.5 +1.0**
comp=Z,63nm,1.2s,mb5.6
MEEK **Meekatharra 78.92 136** *e*P **P 04 36 33.6 -2.0**
MORW **Morawa 79.47 139** *e*P **P 04 36 37.0 -1.6**
HYT **Haines Junctio 79.79 13** *e*P **P 04 36 41.6 +1.6**
YKA **Yellowknife Ar 80.45 2** P **P 04 36 43.3 -0.1**
comp=Z,10.0nm,0.6s,mb4.9,baz=351,slow=5.6,SNR=11
PNL **Peninsula 80.52 14** *e*P **P 04 36 42.3 -1.6**
SCHQ **Schefferville 80.65 336** P **P 04 36 44.9 +0.2**
comp=Z,21nm,0.8s,mb5.2,baz=36,slow=6.6,SNR=13
SKAG **Skagway 81.45 12** *e*P **P 04 36 49.9 +1.0**
comp=Z,38nm,1.4s,mb5.2
KLBR **Kellerberrin 82.37 140** *e*P **P 04 36 51.7 -2.3**
comp=Z,40nm,1.1s,mb5.5
NWAO **Narrogin (SRO) 83.17 141** P **P 04 36 55.5 -2.7**
comp=Z,16nm,1.0s,mb5.2,baz=288,slow=13,SNR=2.3
NWAO **Narrogin (SRO) 83.17 141** P **P 04 36 55.5 -2.6**
NWAO pmax pmax
comp=Z,16nm,1.0s
DLBC **Dease Lake 83.25 10** *e*P **P 04 36 59.2 +0.9**
WRA **Warramunga Arr 83.84 121** P **P 04 36 59.0 -2.9**
comp=Z,9.3nm,0.9s,mb5.0,baz=324,slow=4.8,SNR=26
WRA PP PP 04 40 14.9 -0.5
comp=Z,3.6nm,1.1s,baz=315,slow=8.4,SNR=4.7
WRA **Warramunga Arr 83.84 121** P **P 04 36 59.0 -2.9**
WRA 04 40 14.9
WRA pmax pmax
comp=Z,9.0nm,0.9s
WRA pmax pmax
comp=Z,4.0nm,1.1s
WRAK **Wrangell Islan 84.84 12** *e*P **P 04 37 07.3 +0.8**
comp=Z,31nm,1.1s,mb5.5
WRAK LR LR
comp=Z,418nm,19.0s,MS4.8
ASAR **Alice Springs 86.10 124** P **P 04 37 10.8 -2.3**
comp=Z,5.9nm,0.9s,mb4.7,baz=313,slow=4.7,SNR=46
ASAR **Alice Springs 86.10 124** P **P 04 37 10.9 -2.3**
ASAR pmax pmax
comp=Z,6.0nm,0.9s
PMG **Port Moresby 86.42 105** PFAKE 04 37 30.0 +15
PMG LR LR
comp=Z,266nm,19.0s,MS4.7

FORT Forrest 87.46 132 *eP* **P 04 37 18.4 -1.2**
comp=Z,33nm,0.9s,mb5.6
FORT Forrest 87.46 132 *eP* **P 04 37 18.3 -1.4**
comp=Z,57nm,1.0s,mb5.8
FFC Flin Flon 87.95 355 *eP* **P 04 37 21.7 -0.1**
FFC pmax pmax
comp=Z,19nm,0.9s,mb5.4
FFC MLR MLR
comp=Z,677nm,19.0s,MS5.1
FFC Flin Flon 87.95 355 *eP* **P 04 37 21.7 -0.1**
comp=Z,19nm,0.9s,mb5.4
FFC LR LR
comp=Z,677nm,19.0s,MS5.1
PKME Peaks-Kenny Pk 89.54 332 PFAKE 04 37 40.0 +11
PKME LR LR
comp=Z,538nm,19.0s,MS5.0
EDM Edmonton 89.76 1 *eP* **P 04 37 31.0 +0.6**
LBNH Lisbon 91.38 333 PFAKE 04 37 50.0 +12
LBNH LR LR
comp=Z,666nm,19.0s,MS5.1
ULM Lac du Bonnet 91.74 350 P **P 04 37 37.5 -2.1**
comp=Z,3.4nm,0.8s,mb4.8,baz=336,slow=10.0,SNR=2.8
ULM LR LR 05 20 39.9
comp=Z,633nm,19.2s,MS5.1,baz=18,slow=37
LONY Lake Ozonia 91.98 335 PFAKE 04 37 50.0 +9.1
LONY LR LR
comp=Z,380nm,19.0s,MS4.9
CTA Charters Tower 92.39 113 P **P 04 37 42.0 -1.0**
comp=Z,5.2nm,0.9s,mb4.9,baz=280,slow=11,SNR=2.7
CTA Charters Tower 92.39 113 P **P 04 37 42.0 -1.0**
CTA pmax pmax
comp=Z,5.0nm,0.9s
CTA Charters Tower 92.39 113 P **P 04 37 42.0 -1.0**
NCB Newcomb 92.43 334 PFAKE 04 37 50.0 +7.1
NCB LR LR
comp=Z,558nm,19.0s,MS5.0
EYMN Ely 93.29 347 *eP* **P 04 37 48.0 +1.1**
comp=Z,18nm,1.1s,mb5.4
EYMN LR LR
comp=Z,543nm,19.0s,MS5.0
AGMN Agassiz Nation 93.65 350 PFAKE 04 38 00.0 +12
AGMN LR LR
comp=Z,551nm,20.0s,MS5.0
WALA Waterton Lakes 93.92 2 *eP* **P 04 37 53.2 +3.5**
comp=Z,0.1nm,0.8s
JCW Jim Creek 94.27 7 *eP* **P 04 37 52.2 +0.8**
DGMT Dagmar 94.33 355 PFAKE 04 38 00.0 +8.4
DGMT LR LR
comp=Z,514nm,19.0s,MS5.0
NEW Newport 94.58 4 *eP* **P 04 37 53.4 +0.7**
NEW pmax pmax
comp=Z,3.0nm,0.9s
NEW MLR MLR
comp=Z,445nm,22.0s
NEW Newport 94.58 4 *eP* **P 04 37 53.4 +0.6**
comp=Z,2.9nm,0.9s,mb4.7
NEW LR LR
comp=Z,445nm,22.0s,MS4.9
BINY Binghamton 94.60 335 PFAKE 04 38 00.0 +7.0
BINY LR LR
comp=Z,492nm,19.0s,MS5.0
COWI Conover 94.61 345 PFAKE 04 38 00.0 +7.1
COWI LR LR
comp=Z,574nm,21.0s,MS5.0
GLMI Grayling 94.77 341 PFAKE 04 38 10.0 +16
GLMI LR LR
comp=Z,655nm,20.0s,MS5.1
NLWA Neilton Lookou 94.85 9 PFAKE 04 38 10.0 +16
NLWA LR LR
comp=Z,511nm,20.0s,MS5.0
EGMT Eagleton 94.98 359 PFAKE 04 38 10.0 +15
EGMT LR LR
comp=Z,465nm,20.0s,MS5.0
BSMT Bassoo Peak 95.10 3 *eP* **P 04 38 01.7 +6.5**
SLMT Seeley Lake 95.75 2 *eP* **P 04 37 59.3 +1.2**
ERPA Erie 95.97 337 PFAKE 04 38 10.0 +11
ERPA LR LR
comp=Z,815nm,19.0s,MS5.2
CHMT Chamberlain Mo 96.08 2 *eP* **P 04 38 00.2 +0.6**
MSO Missoula 96.15 2 PFAKE 04 38 10.0 +10
MSO LR LR
comp=Z,331nm,21.0s,MS4.8
LAO LASA Array 96.22 357 PFAKE 04 38 10.0 +10
LAO LR LR
comp=Z,461nm,20.0s,MS5.0
HAWA Hanford 96.28 6 PFAKE 04 38 10.0 +9.5
HAWA LR LR
comp=Z,365nm,19.0s,MS4.9
HRY Holter Researc 96.30 1 *eP* **P 04 38 02.7 +2.1**
comp=Z,5.8nm,0.7s,mb5.2
AAM Ann Arbor 96.87 340 PFAKE 04 38 10.0 +6.7
AAM LR LR
comp=Z,409nm,19.0s,MS4.9
LRM Limekiln Ridge 97.18 1 *eP* **P 04 37 59.1 -5.5**
BOZ Bozeman (W) 97.37 0 PFAKE 04 38 20.0 +15
BOZ LR LR
comp=Z,511nm,20.0s,MS5.0
RLMT Red Lodge 97.88 359 PFAKE 04 38 20.0 +12
RLMT LR LR
comp=Z,537nm,20.0s,MS5.0
JFWS Jewell Farm 97.89 345 PFAKE 04 38 20.0 +12
JFWS LR LR
comp=Z,536nm,20.0s,MS5.0
MCWV Mont Chateau 98.16 336 PFAKE 04 38 20.0 +11
MCWV LR LR
comp=Z,541nm,19.0s,MS5.1
ECSD EROS Data Cent 98.22 349 *eP* **P 04 38 09.5 +0.2**
comp=Z,7.6nm,1.1s,mb5.3
ECSD LR LR
comp=Z,499nm,20.0s,MS5.0
LKWY Lake 98.45 360 PFAKE 04 38 20.0 +10
LKWY LR LR
comp=Z,742nm,19.0s,MS5.2
ACSO Alum Creek Sta 98.60 339 PFAKE 04 38 20.0 +8.9
ACSO LR LR
comp=Z,607nm,20.0s,MS5.1
CBN Corbin 98.64 334 PFAKE 04 38 20.0 +8.7
CBN LR LR
comp=Z,552nm,19.0s,MS5.1
RSSD Black Hills 98.64 355 PFAKE 04 38 20.0 +8.7
RSSD LR LR
comp=Z,541nm,19.0s,MS5.1
HLID Hailey 99.39 2 PFAKE 04 38 30.0 +15
HLID LR LR
comp=Z,430nm,20.0s,MS5.0
HUMO Hull Mountain 99.67 9 PFAKE 04 38 30.0 +14
HUMO LR LR
comp=Z,340nm,20.0s,MS4.8
HDIL Hopedale 99.93 343 PFAKE 04 38 30.0 +13
HDIL LR LR
comp=Z,526nm,21.0s,MS5.0
BW06 Boulder Array 100.24 359 PFAKE 04 38 30.0 +12
BW06 LR LR
comp=Z,549nm,19.0s,MS5.1
PDAR Pinedale Array 100.24 359 P Pdif 04 38 21.6 +3.1
comp=Z,0.7nm,1.0s,baz=69,slow=4.9,SNR=4.3
PDAR PP PP 04 42 20.7 -2.2
comp=Z,2.1nm,1.1s,baz=20,slow=4.7,SNR=4.4
AHID Auburn Hatcher 100.25 0 PFAKE 04 38 30.0 +12
AHID LR LR
comp=Z,480nm,22.0s,MS5.0
WVOR Wild Horse Val 100.28 6 PFAKE 04 38 30.0 +11
WVOR LR LR
comp=Z,413nm,19.0s,MS5.0
YBH Yreka Blue Hor 100.56 9 PFAKE 04 38 30.0 +10
YBH LR LR
comp=Z,490nm,20.0s,MS5.0
BLA Blacksburg 100.57 336 PFAKE 04 38 30.0 +10
BLA LR LR
comp=Z,749nm,21.0s,MS5.2
MOD Modoc 100.66 7 PFAKE 04 38 30.0 +10
MOD LR LR
comp=Z,397nm,20.0s,MS4.9
WCI Wyandotte Cave 101.39 340 PFAKE 04 38 30.0 +6.5
WCI LR LR
comp=Z,382nm,20.0s,MS4.9
HWUT Hardware Ranch 101.41 0 PFAKE 04 38 40.0 +16
HWUT LR LR
comp=Z,256nm,19.0s,MS4.8
OGNE Ogallala 101.63 353 PFAKE 04 38 40.0 +15
OGNE LR LR
comp=Z,415nm,20.0s,MS5.0
WDC Whiskeytown Da 101.72 9 PFAKE 04 38 40.0 +15
WDC LR LR
comp=Z,418nm,19.0s,MS5.0
BMN Battle Mountai 102.38 5 PFAKE 04 38 40.0 +12
BMN LR LR
comp=Z,340nm,21.0s,MS4.8
KSU1 Kansas State U 102.76 349 PFAKE 04 38 40.0 +10
KSU1 LR LR
comp=Z,535nm,19.0s,MS5.1
CCM Cathedral Cave 102.76 344 PFAKE 04 38 40.0 +10
CCM LR LR
comp=Z,861nm,21.0s,MS5.2
DUG Dugway 102.80 1 PFAKE 04 38 40.0 +10
DUG LR LR
comp=Z,304nm,20.0s,MS4.8
ISCO Idaho Springs 103.05 356 PFAKE 04 38 40.0 +9.1
ISCO LR LR
comp=Z,584nm,21.0s,MS5.1
JOHN Johnston Islan 103.08 57 PFAKE 04 38 40.0 +8.9
JOHN LR LR
comp=Z,752nm,19.0s,MS5.2
HOPS Hopland 103.22 10 PFAKE 04 38 40.0 +8.3
HOPS LR LR
comp=Z,522nm,19.0s,MS5.1
CBKS Cedar Bluff 103.48 351 PFAKE 04 38 40.0 +7.1
CBKS LR LR
comp=Z,643nm,21.0s,MS5.1
WVT Waverly 103.77 341 PFAKE 04 38 50.0 +16
WVT LR LR
comp=Z,688nm,20.0s,MS5.2
CMB Columbia Colle 104.48 8 PFAKE 04 38 50.0 +13
CMB LR LR
comp=Z,477nm,19.0s,MS5.0
TPH Tonopah 104.72 5 PFAKE 04 38 50.0 +12
TPH LR LR
comp=Z,387nm,20.0s,MS4.9
MAW Mawson 104.75 182 PFAKE 04 38 50.0 +12
MAW LR LR
comp=Z,153nm,19.0s,MS4.6
GOGA Godfrey 105.04 336 PFAKE 04 43 10.0 +15
GOGA LR LR
comp=Z,724nm,19.0s,MS5.2
SDCO Great Sand Dun 105.09 355 PFAKE 04 43 10.0 +15
SDCO LR LR
comp=Z,400nm,19.0s,MS5.0
RCBR Riachuelo 105.31 274 PFAKE 04 43 10.0 +14
RCBR LR LR
comp=Z,538nm,19.0s,MS5.1
SAO San Andreas Ge 105.62 9 PFAKE 04 43 10.0 +14
SAO LR LR
comp=Z,386nm,20.0s,MS4.9
OXF Oxford 105.71 342 PFAKE 04 43 10.0 +14
OXF LR LR
comp=Z,625nm,21.0s,MS5.1
MVCO Mesa Verde 105.76 358 PFAKE 04 43 10.0 +14
MVCO LR LR
comp=Z,418nm,19.0s,MS5.0
DAC Darwin (Calif) 106.48 6 PFAKE 04 43 10.0 +13
DAC LR LR
comp=Z,427nm,21.0s,MS5.0
MIAR Mount Ida 106.63 345 PFAKE 04 43 10.0 +12
MIAR LR LR
comp=Z,445nm,20.0s,MS5.0
WMOK Wichita Mounta 107.36 349 PFAKE 04 43 10.0 +11
WMOK LR LR
comp=Z,447nm,19.0s,MS5.0
WUAZ Wupatki 107.49 0 PFAKE 04 43 10.0 +11
WUAZ LR LR
comp=Z,279nm,19.0s,MS4.8
AMTX Amarillo 107.59 352 PFAKE 04 43 10.0 +11
AMTX LR LR
comp=Z,533nm,19.0s,MS5.1
ANMO Albuquerque 107.93 356 PFAKE 04 43 10.0 +10
ANMO LR LR
comp=Z,445nm,19.0s,MS5.0
CASY Casey 108.15 164 PFAKE 04 43 10.0 +11
CASY LR LR
comp=Z,620nm,19.0s,MS5.2
PFO Pinyon Flat Ob 109.21 5 PFAKE 04 43 10.0 +7.6
PFO LR LR
comp=Z,317nm,19.0s,MS4.9
NATX Nacogdoches 109.55 345 PFAKE 04 43 10.0 +6.9
NATX LR LR
comp=Z,727nm,21.0s,MS5.2
FDF Fort de France 110.11 308 PFAKE 04 43 20.0 +16
FDF LR LR
comp=Z,367nm,20.0s,MS5.0
SJG San Juan 110.49 314 PFAKE 04 43 20.0 +15
SJG LR LR
comp=Z,248nm,19.0s,MS4.8
TUC Tucson 110.69 360 PFAKE 04 43 20.0 +15
TUC LR LR
comp=Z,447nm,19.0s,MS5.1
MNTX Cornudas Mount 111.09 355 PFAKE 04 43 20.0 +14
MNTX LR LR
comp=Z,430nm,20.0s,MS5.0
HKT Hockley 111.54 346 PFAKE 04 43 20.0 +13
HKT LR LR
comp=Z,530nm,20.0s,MS5.1
JCT Junction City 111.69 350 PFAKE 04 43 20.0 +13
JCT LR LR
comp=Z,398nm,21.0s,MS5.0
GRGR Grenville 112.39 307 PFAKE 04 43 20.0 +11
GRGR LR LR
comp=Z,222nm,19.0s,MS4.8
SDDR Presa de Saban 112.59 319 PFAKE 04 43 20.0 +11
SDDR LR LR
comp=Z,425nm,20.0s,MS5.0
TXAR Lajitas Array 113.29 353 PP PP 04 43 58.0 -1.0
comp=Z,1.6nm,0.9s,baz=22,slow=4.0,SNR=5.5
TXAR PKKPab PKKPab 04 54 02.0 -3.9
comp=Z,0.7nm,1.0s,baz=188,slow=6.3,SNR=4.5
KVTX Kingsville 114.26 347 PFAKE 04 43 20.0 +7.9
KVTX LR LR
comp=Z,582nm,20.0s,MS5.2
MSVF Nonsavu 115.56 93 PFAKE 04 43 30.0 +15
MSVF LR LR
comp=Z,12μm,20.0s,MS6.5
MTDJ Mount Denham 116.33 324 PFAKE 04 43 30.0 +14
MTDJ LR LR
comp=Z,379nm,20.0s,MS5.0
SDV Santo Domingo 120.44 312 PFAKE 04 43 40.0 +16
SDV LR LR
comp=Z,134nm,22.0s,MS4.5
AFI Afiamalu 121.51 83 PFAKE 04 43 40.0 +14
AFI LR LR
comp=Z,6μm,22.0s,MS6.2
XMAS Kiritimati 121.85 58 PFAKE 04 43 40.0 +13
XMAS LR LR
comp=Z,2μm,20.0s,MS5.7
SNZO South Karori 124.08 119 PFAKE 04 43 40.0 +10
SNZO LR LR
comp=Z,1μm,20.0s,MS5.5
TGUH Tegucigalpa,Un 124.18 332 PFAKE 04 43 40.0 +8.6
TGUH LR LR
comp=Z,238nm,21.0s,MS4.8
SPB Sao Paulo 124.42 265 PFAKE 04 43 40.0 +8.4
SPB LR LR
comp=Z,474nm,22.0s,MS5.1
BCIP Isla Barro Col 125.25 321 PFAKE 04 43 40.0 +6.5
BCIP LR LR
comp=Z,142nm,20.0s,MS4.6
ROSC El Rosal 125.84 313 PKP PKPdf 04 43 34.5 -0.2
comp=Z,1.7nm,0.5s,baz=105,slow=20,SNR=2.2
JTS JuntasAbangare 126.65 327 PFAKE 04 43 50.0 +14
JTS LR LR
comp=Z,408nm,21.0s,MS5.1
QSPA South Pole Qui 127.16 180 *e*PKPdf PKPdf 04 43 36.1 +0.9
QSPA LR LR
comp=Z,289nm,22.0s,MS4.9
SIV San Ignacio 131.17 282 PKP PKPdf 04 43 44.4 -0.3
comp=Z,1.5nm,0.9s,baz=79,slow=5.2,SNR=3.7
SIV PP PP 04 46 02.6 +0.5
comp=Z,4.0nm,1.1s,baz=70,slow=11,SNR=5.0
OTAV Otavalo 131.97 314 *e*PKPdf PKPdf 04 43 48.5 +2.2
OTAV LR LR
comp=Z,209nm,20.0s,MS4.8
CPUP Villa Florida 133.60 268 PKP PKPdf 04 43 46.0 -3.0
comp=Z,0.8nm,0.6s,baz=131,slow=9.3,SNR=2.4
CPUP PP PP 04 46 20.0 +2.1
comp=Z,2.0nm,0.8s,baz=80,slow=7.7,SNR=3.3
CPUP Villa Florida 133.60 268 PKIKP PKPdf 04 43 46.0 -3.0
CPUP 04 46 20.0
CPUP pmax pmax
comp=Z,10.0nm,0.6s
CPUP Villa Florida 133.60 268 PKP PKPdf 04 43 46.0 -3.0
CPUP PP PP 04 46 20.0 +2.1
LPAZ La Paz 136.78 287 PKP PKPdf 04 43 55.2 0.0
comp=Z,1.9nm,1.0s,baz=50,slow=8.2,SNR=5.1
LPAZ La Paz 136.78 287 *e*PKPdf PKPdf 04 43 57.3 +2.2
LPAZ LR LR
comp=Z,307nm,19.0s,MS5.0
NNA Nana 140.30 301 PFAKE 04 44 10.0 +8.3
NNA LR LR
comp=Z,229nm,22.0s,MS4.9
TRQA Tornquist 141.54 254 *e*PKPdf PKPdf 04 44 02.1 -1.2
TRQA LR LR
comp=Z,390nm,19.0s,MS5.2
CFAA Coronel Fontan 144.47 266 PKP PKPdf 04 44 06.5 -2.1
comp=Z,1.8nm,1.0s,baz=53,slow=1.8,SNR=21
CFAA PP PP 04 47 28.2 +3.2
comp=Z,1.0nm,1.1s,baz=83,slow=6.0,SNR=3.5
LCO Las Campanas 145.43 272 *e*PKPbc PKPbc 04 44 10.3 -0.1
LMEL Las Melosas 146.79 264 *e*P PKPbc 04 44 14.6 +0.3
LMEL Las Melosas 146.79 264 *e*P PKPdf 04 44 14.6 +2.1
PLCA Paso Flores 148.56 251 PKPbc PKPbc 04 44 17.4 -1.5
comp=Z,40nm,1.0s,baz=104,slow=4.2,SNR=9.5
PLCA Paso Flores 148.56 251 *e*PKPdf PKPdf 04 44 16.6 +1.4
PLCA *e*PKPbc PKPbc 04 44 19.8 +0.9

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*ISCJB **01** 04:33:26.2±0.5, 6°.83N±0°.05×72°.89W±0°.04, h171km±4km, mb3.8/13, Error ellipse: s-maj=8.0km s-min=6.9km az=173.3*
*IDC **01** 04:33:26.8±1.5, 6°.75N×72°.92W, h168km±14km, mb3.6/13, mb1 3.8/16, mb1mx3.7/24, mbtmp3.7/16, Error ellipse: s-maj=15.3km s-min=11.8km az=57.0*
*NEIC **01** 04:33:27.0±0.5, 6°.74N×72°.93W, h170km±4km, mb4.1/4, Error ellipse: s-maj=7.0km s-min=5.7km az=114.0*
*FUNV **01** 04:33:29.0, 6°.94N×72°.95W, h170km, MW4.1*
ISC 01 04:33:27.1±0.5, 6°.81N±0°.05×72°.89W±0°.04, h163km±4km, n203, σ0°59/213, mb3.8/13, 90C-73D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.19**	**28**	⇓*iP*	**Pn**	**04 33 55.7**	**+0.9**
CAPV				*eS*	**Sn**	**04 34 16.2**	**+0.1**
ROSC	**El Rosal**	**2.41**	**217**	P	**Pn**	**04 34 07.3**	**-0.6**
	78nm,0.3s,baz=274,slow=19,SNR=273						
ROSC				S	**Sn**	**04 34 33.5**	**-5.9**
	95nm,0.3s,baz=100,slow=17,SNR=14						
SOCV	**Socops**	**2.49**	**54**	⇓*iP*	**Pn**	**04 34 10.2**	**+1.4**
SOCV				*eS*	**Sn**	**04 34 40.3**	**-0.7**
VIGV	**El Vigia**	**2.52**	**37**	⇓*iP*	**Pn**	**04 34 10.1**	**+1.0**
VIGV				*eS*	**Sn**	**04 34 40.3**	**-1.4**
SDV	**Santo Domingo**	**3.04**	**47**	*e*Pn	**Pn**	**04 34 16.8**	**+1.3**
SDV				*eS*	**Sn**	**04 34 53.2**	**+0.2**
ELOV	**Elorza**	**3.38**	**87**	*eP*	**Pn**	**04 34 21.5**	**+1.7**
VIRV	**Villa del Rosa**	**3.70**	**7**	⇑*eP*	**Pn**	**04 34 22.5**	**-1.4**
VIRV				*eS*	**Sn**	**04 35 03.2**	**-4.9**
QARV	**Quebrada Arrib**	**4.11**	**35**	⇓*eP*	**Pn**	**04 34 29.7**	**+0.6**
QARV				*eS*	**Sn**	**04 35 13.3**	**-4.1**
SANV	**Sanarito**	**4.26**	**51**	*eP*	**Pn**	**04 34 31.8**	**+0.7**
SANV				*eS*	**Sn**	**04 35 17.8**	**-3.2**
CURV	**Curarigua**	**4.30**	**42**	*eP*	**Pn**	**04 34 32.1**	**+0.4**
CURV				*eS*	**Sn**	**04 35 17.6**	**-4.4**
DABV	**Dabajuro**	**4.65**	**28**	*eP*	**Pn**	**04 34 35.7**	**-0.5**
DABV				*eS*	**Sn**	**04 35 24.4**	**-5.8**
SIQV	**Siquisique**	**4.88**	**38**	*eP*	**Pn**	**04 34 38.5**	**-0.7**
SIQV				*eS*	**Sn**	**04 35 30.5**	**-5.0**
BAUV	**El Baul**	**5.25**	**66**	⇓*eP*	**Pn**	**04 34 43.7**	**-0.3**
MAPV	**Macapo**	**5.31**	**55**	*eP*	**Pn**	**04 34 45.7**	**+0.8**
IMOV	**Isla Los Monje**	**5.85**	**19**	*eP*	**Pn**	**04 34 51.4**	**-0.6**
MONV	**Montecano**	**5.87**	**29**	*eP*	**Pn**	**04 34 51.4**	**-0.8**
MONV				*eS*	**Sn**	**04 35 52.0**	**-7.0**
TURV	**Turiamo**	**6.16**	**54**	*eP*	**Pn**	**04 34 56.3**	**+0.2**
CAOV	**Caicara del Or**	**6.54**	**85**	*eP*	**Pn**	**04 35 00.7**	**-0.4**
MERV	**Las Mercedes**	**6.96**	**69**	*eP*	**Pn**	**04 35 06.3**	**-0.4**
BCIP	**Isla Barro Col**	**7.27**	**289**	*e*Pn	**Pn**	**04 35 05.7**	**-5.2**
BIRV	**Birongo**	**7.49**	**60**	*eP*	**Pn**	**04 35 13.0**	**-0.7**
CUPV	**Cœpira**	**7.73**	**65**	*eP*	**Pn**	**04 35 16.7**	**-0.2**
OTAV	**Otavalo**	**8.57**	**221**	*e*Pn	**Pn**	**04 35 27.6**	**-0.5**
	2.6nm,0.6s						
PCRV	**Puerto La Cruz**	**8.82**	**67**	P	**Pn**	**04 35 32.4**	**+1.1**
	1.4nm,0.3s,baz=188,slow=7.5,SNR=11						
MTDJ	**Mount Denham**	**12.22**	**339**	*e*Pn	**Pn**	**04 36 17.0**	**+1.2**
	27nm,0.6s						
MTDJ				*eS*	**Sn**	**04 38 16.0**	**-15**
SJG	**San Juan**	**13.01**	**30**	P	**Pn**	**04 36 26.2**	**+0.1**
	0.6nm,0.3s,baz=210,slow=20,SNR=2.7						
SJG	**San Juan**	**13.01**	**30**	P	**Pn**	**04 36 26.2**	**+0.1**
TEIG	**Tepich**	**20.02**	**313**	*eP*	**P**	**04 37 47.1**	**-0.3**
	6.9nm,0.7s						
LPAZ	**La Paz**	**23.43**	**168**	P	**P**	**04 38 21.9**	**+0.2**
	0.7nm,0.3s,mb3.5,baz=340,slow=7.6,SNR=14						
LPAZ	**La Paz**	**23.43**	**168**	*eP*	**P**	**04 38 21.7**	**0.0**
	1.1nm,0.7s,mb3.4						
LPAZ				*e*		04 38 53.4	
SIV	**San Ignacio**	**25.50**	**153**	P	**P**	**04 38 39.6**	**-0.9**
	1.8nm,0.9s,mb3.6,baz=335,slow=8.8,SNR=7.9						
628A	**Black Gap, Mar**	**36.15**	**312**	⇑P	**P**	**04 40 12.8**	**-1.0**
	baz=36						
528A	**Cox Ranch, San**	**36.44**	**313**	⇓P	**P**	**04 40 15.3**	**-1.0**
	baz=36						
627A	**Teringua Ranc**	**36.50**	**312**	⇑P	**P**	**04 40 16.1**	**-0.7**
	baz=37,SNR=5.6						
TXAR	**Lajitas Array**	**36.64**	**312**	P	**P**	**04 40 17.3**	**-0.7**
	1.5nm,0.6s,mb3.8,baz=121,slow=8.5,SNR=22						
428A	**Kincaid Ranch,**	**36.68**	**314**	⇓P	**P**	**04 40 17.7**	**-0.7**
	baz=37						
527A	**Woodward Ranch**	**37.03**	**313**	⇓P	**P**	**04 40 20.9**	**-0.4**
	baz=37						
626A	**Big Bend Ranch**	**37.10**	**311**	⇑P	**P**	**04 40 21.2**	**-0.7**
	baz=37						
328A	**Wristen Ranch,**	**37.14**	**315**	⇑P	**P**	**04 40 20.9**	**-1.4**
	baz=37						
427A	**Hayter Ranch,**	**37.26**	**314**	⇓P	**P**	**04 40 22.1**	**-1.1**
	baz=37,SNR=6.8						
526A	**Mary Lane Ranc**	**37.34**	**312**	⇓P	**P**	**04 40 23.1**	**-0.8**
	baz=37						
426A	**McDonald Obser**	**37.62**	**313**	⇓P	**P**	**04 40 25.9**	**-0.4**
	baz=38,SNR=5.3						
227A	**Bennet, Jal**	**37.84**	**316**	⇑P	**P**	**04 40 27.1**	**-1.0**
	baz=38						
AMTX	**Amarillo**	**38.51**	**321**	⇑P	**P**	**04 40 33.1**	**-0.6**
	baz=39						
Z27A	**Tatum**	**38.55**	**317**	⇓P	**P**	**04 40 32.4**	**-1.5**
	baz=39						
MSTX	**Muleshoe**	**38.64**	**318**	⇓P	**P**	**04 40 33.7**	**-1.1**
	baz=39						
325A	**Bean Ranch, Si**	**38.68**	**313**	⇓P	**P**	**04 40 34.0**	**-1.0**
	baz=39						
Y27A	**Causey**	**38.85**	**318**	⇑P	**P**	**04 40 35.6**	**-0.9**
	baz=39						
225A	**Deer Hill, Car**	**38.97**	**314**	⇑P	**P**	**04 40 37.4**	**-0.1**
	baz=39						
Z26A	**Caprock**	**39.04**	**317**	⇑P	**P**	**04 40 37.3**	**-0.8**
	baz=39,SNR=8.4						
324A	**Moseley Ranch,**	**39.08**	**313**	⇑P	**P**	**04 40 37.8**	**-0.7**
	baz=39,SNR=5.8						
MNTX	**Cornudas Mount**	**39.15**	**314**	⇓P	**P**	**04 40 38.4**	**-0.6**
	baz=39,SNR=6.0						
125A	**Gardner Draw,**	**39.16**	**315**	⇑P	**P**	**04 40 38.7**	**-0.4**
	baz=39,SNR=5.4						
X27A	**F and S Farms,**	**39.27**	**319**	⇑P	**P**	**04 40 39.2**	**-0.8**
	baz=39						
Y26A	**Elida**	**39.31**	**318**	⇑P	**P**	**04 40 39.5**	**-0.9**
	baz=39						
224A	**Cornudas Mount**	**39.45**	**314**	⇑P	**P**	**04 40 41.5**	**0.0**
	baz=40,SNR=12						
Z25A	**Roswell**	**39.55**	**316**	⇑P	**P**	**04 40 42.2**	**-0.1**
	baz=40,SNR=6.4						
X26A	**CR and CF Fran**	**39.68**	**318**	⇓P	**P**	**04 40 42.9**	**-0.4**
	baz=40						
124A	**Stringfield Ra**	**39.74**	**315**	⇑P	**P**	**04 40 44.0**	**+0.1**
	baz=40						
Y25A	**Mesa, Roswell**	**39.90**	**317**	⇓P	**P**	**04 40 45.4**	**+0.2**
	baz=40						
Z24A	**Sheeppen Canyo**	**40.02**	**316**	⇑P	**P**	**04 40 46.1**	**-0.1**
	baz=40						
X25A	**Clemmons Ranch**	**40.23**	**318**	⇓P	**P**	**04 40 48.0**	**+0.1**
	baz=40						
Y24A	**Capitan**	**40.41**	**316**	⇓P	**P**	**04 40 49.2**	**-0.2**
	baz=40,SNR=6.6						
V26A	**Tequesquite Ra**	**40.42**	**320**	⇑P	**P**	**04 40 49.4**	**-0.1**
	baz=40						
W25A	**X Bar L Ranch,**	**40.51**	**319**	⇑P	**P**	**04 40 49.9**	**-0.3**
	baz=41						
222A	**Williams Famil**	**40.60**	**313**	⇑P	**P**	**04 40 50.8**	**-0.3**
	baz=41						
Y23A	**Lovelace Mesa,**	**40.84**	**316**	⇑P	**P**	**04 40 53.3**	**+0.4**
	baz=41						
221A	**Mesquite Ranch**	**41.05**	**312**	⇓P	**P**	**04 40 55.1**	**+0.4**
	baz=41						

U25A	Circle Dot Ran	41.19	320	⇑P	P	04 40 55.6	-0.2
	baz=41						
320A	Kipp Ranch, An	41.28	311	⇓P	P	04 40 56.2	-0.3
	baz=41						
V24A	Rampart Ranch,	41.34	319	⇑P	P	04 40 57.4	+0.4
	baz=41						
220A	Playas Peak, P	41.55	312	⇓P	P	04 40 59.3	+0.5
	baz=42						
U24A	Moreno Valley	41.75	320	⇑P	P	04 41 00.6	+0.3
	baz=42						
X22A	Bernardo	41.81	316	⇑P	P	04 41 01.0	+0.1
	baz=42						
120A	U Bar Ranch, L	41.95	312	⇑P	P	04 41 02.3	+0.4
	baz=42						
V23A	Ortiz Mt. (NFS	41.95	318	⇑P	P	04 41 02.5	+0.5
	baz=42						
S25A	Robets Cordova	41.99	322	⇓P	P	04 41 02.7	+0.5
	baz=42						
Y21A	Point of Rocks	42.01	315	⇓P	P	04 41 02.9	+0.4
	baz=42						
T24A	Torres, Weston	42.01	320	⇑P	P	04 41 03.1	+0.7
	baz=42						
219A	White Tail Can	42.14	311	⇑P	P	04 41 03.6	0.0
	baz=42						
Z20A	Nine Sixteen R	42.20	313	⇓P	P	04 41 04.2	+0.2
	baz=42						
R25A	Fountain Ranch	42.20	322	⇓P	P	04 41 04.2	+0.3
	baz=42						
U23A	El Rito	42.30	319	⇑P	P	04 41 05.6	+0.9
	baz=42						
X21A	Alamocita Cree	42.32	315	⇓P	P	04 41 05.4	+0.4
	baz=42						
318A	Bisbee	42.43	310	⇓P	P	04 41 05.6	-0.3
	baz=42						
Y20A	Horse Springs,	42.45	314	⇑P	P	04 41 06.8	+0.8
	baz=42						
S24A	Houchin Ranch,	42.46	321	⇓P	P	04 41 07.0	+1.0
	baz=43						
V22A	San Miguel Ran	42.53	318	⇓P	P	04 41 06.9	+0.3
	baz=43						
119A	Ashpeak Ranch,	42.55	312	⇑P	P	04 41 06.9	+0.1
	baz=43						
T23A	Casias Ranch,	42.61	320	⇑P	P	04 41 08.0	+0.7
	baz=43						
SDCO	Great Sand Dun	42.70	321	⇓P	P	04 41 08.7	+0.8
	baz=43						
218A	Dragoon	42.72	311	⇑P	P	04 41 08.4	+0.2
	baz=43,SNR=5.9						
R24A	Sanders Place,	42.76	322	⇑P	P	04 41 09.0	+0.6
	baz=43						
X20A	Quemado	42.87	315	⇑P	P	04 41 09.6	+0.3
	baz=43						
118A	Homack Ranch,	42.98	312	⇑P	P	04 41 10.5	+0.2
	baz=43						
S23A	Nye Farm, Mont	42.99	321	⇑P	P	04 41 10.6	+0.3
	baz=43						
Y19A	Nutrioso	43.10	314	⇑P	P	04 41 11.4	+0.2
	baz=43						
217A	Green Valley	43.21	310	⇓P	P	04 41 12.3	+0.1
	baz=43						
117A	Oracle	43.52	311	⇑P	P	04 41 14.4	-0.2
	baz=44						
S22A	4UR Ranch, Cre	43.54	320	⇓P	P	04 41 15.2	+0.4
	baz=44						
Y18A	Canyon Day Jun	43.58	313	⇑P	P	04 41 15.1	0.0
	baz=44						
W19A	Sanders	43.79	315	⇑P	P	04 41 17.2	+0.5
	baz=44						
ISCO	Idaho Springs	44.05	323	⇓P	P	04 41 19.5	+0.7
	baz=44						
S21A	Coal Bank Pass	44.11	319	⇑P	P	04 41 19.4	+0.2
	baz=44						
Q22A	Crested Butte,	44.26	321	⇓P	P	04 41 20.6	+0.2
	baz=44						
U19A	Dine' College,	44.29	317	⇑P	P	04 41 20.1	-0.6
	baz=44						
T19A	Beclabito	44.46	317	⇑P	P	04 41 22.4	+0.3
	baz=44						
S20A	Disappointment	44.58	319	⇑P	P	04 41 23.7	+0.7
	baz=45						
P22A	Eagle	44.62	322	⇑P	P	04 41 23.4	+0.1
	baz=45						
Y16A	Circle Bar Ran	44.68	312	⇑P	P	04 41 24.1	+0.3
	baz=45						
R20A	Redvale	44.80	320	⇓P	P	04 41 25.4	+0.7
	baz=45						
U18A	Rough Rock, Ch	44.81	316	⇓P	P	04 41 24.6	-0.3
	baz=45						
O22A	Kremmling	44.84	323	⇑P	P	04 41 25.2	+0.2
	baz=45						
X16A	Lo Mia Camp, P	44.91	313	⇑P	P	04 41 25.8	+0.1
	baz=45						
Q20A	Ridgley Place,	45.19	320	⇑P	P	04 41 28.7	+1.0
	baz=45						
114A	Black Gap (USA	45.21	310	⇓P	P	04 41 28.1	+0.1
	baz=45						
W16A	Flagstaff	45.30	314	⇓P	P	04 41 29.2	+0.5
	baz=45						
Y15A	Casa Rosa Ranc	45.34	312	⇓P	P	04 41 29.3	+0.2
	baz=45						
WUAZ	Wupatki	45.39	315	⇑P	P	04 41 30.0	+0.6
	baz=46						
X15A	Humboldt	45.52	313	⇑P	P	04 41 30.7	+0.3
	baz=46						
Z14A	Wintersburg	45.53	311	⇓P	P	04 41 30.7	+0.1
	baz=46						
U16A	Tuba City	45.54	315	⇑P	P	04 41 30.8	+0.2
	baz=46						
S18A	Hurst Farm, Bl	45.58	318	⇓P	P	04 41 31.0	+0.2
	baz=46						
L23A	Garrett	45.60	326	⇓P	P	04 41 31.3	+0.4
	baz=46						
T17A	Navajo Res., N	45.75	317	⇑P	P	04 41 32.3	+0.1
	baz=46						
Q19A	Hogan Spring (	45.80	320	⇓P	P	04 41 32.7	+0.1
	baz=46						
Y14A	Wickenburg	45.83	312	⇑P	P	04 41 32.4	-0.5
	baz=46						
X14A	Yava	45.99	312	⇓P	P	04 41 33.7	-0.5
	baz=46						
Z13A	Yuma Proving G	45.99	310	⇓P	P	04 41 34.0	-0.2
	baz=46						
S17A	Black Ridge (B	46.09	317	⇑P	P	04 41 35.2	+0.4
	baz=46						
V15A	Kaibab Nationa	46.11	314	⇓P	P	04 41 35.5	+0.4
	baz=46,SNR=6.2						
N20A	Spence Gulch,	46.28	323	⇓P	P	04 41 37.4	+1.1
	baz=46						
Y13A	Salome	46.39	311	⇓P	P	04 41 37.5	+0.2
	baz=46						
Q18A	Rafter H Ranch	46.44	319	⇑P	P	04 41 37.7	+0.1
	baz=46						
O19A	Miners Draw (B	46.49	321	⇑P	P	04 41 37.8	-0.1
	baz=47						
U15A	North Rim	46.49	315	⇓P	P	04 41 38.0	0.0
	baz=47						
V14A	Boquillas Ranc	46.69	314	⇑P	P	04 41 40.1	+0.6
	baz=47						
SRU	San Rafael	46.70	319	⇑P	P	04 41 39.4	-0.2
	baz=47						
J22A	Midwest	46.88	326	⇑P	P	04 41 40.6	-0.4
	baz=47						
R16A	Teasdale	46.89	318	⇓P	P	04 41 41.1	0.0
	baz=47						
P17A	Butcher Ranch,	47.04	320	⇑P	P	04 41 41.7	-0.5
	baz=47						
N18A	Larsen Ranch,	47.23	322	⇓P	P	04 41 43.8	+0.2
	baz=47						
ULM	Lac du Bonnet	47.38	340	P	P	04 41 43.5	-1.1
	3.1nm,0.4s,mb4.3,baz=142,slow=7.5,SNR=3.8						
ULM	Lac du Bonnet	47.38	340	P	P	04 41 43.5	-1.1
O17A	Robinson Place	47.44	320	⇓P	P	04 41 45.6	+0.3
	baz=48						
K20A	Yellowstone Ra	47.45	324	⇓P	P	04 41 45.0	-0.3
	baz=48						
K19A	Absolon Red Bu	47.84	324	⇓P	P	04 41 48.6	+0.2
	baz=48						
T13A	Saint George	47.91	315	⇑P	P	04 41 49.1	+0.1
	baz=48						
N17A	Moffit Pass	47.92	321	⇓P	P	04 41 49.4	+0.4
	baz=48						
O16A	Springville	47.94	320	⇓P	P	04 41 49.3	+0.2
	baz=48						
V12A	Nelson	47.99	313	⇑P	P	04 41 49.4	-0.2
	baz=48						
L18A	Fontenelle, Gr	48.00	323	⇓P	P	04 41 49.8	+0.2
	baz=48						
M17A	Scullys Gap (B	48.12	322	⇑P	P	04 41 50.2	-0.4
	baz=48						
SCHQ	Schefferville	48.13	5	P	P	04 41 51.0	+0.7
	4.4nm,0.9s,mb4.1,baz=252,slow=12,SNR=7.6						
S13A	Holt Ranch, En	48.15	316	⇑P	P	04 41 50.7	-0.1
	baz=48						
PDAR	Pinedale Array	48.22	324	P	P	04 41 50.9	-0.4
	0.8nm,0.5s,mb3.6,baz=123,slow=9.2,SNR=9.4						
N16A	Rees Ranch, Co	48.27	321	⇑P	P	04 41 51.4	-0.3
	baz=48						
Q14A	Sevier Lake (B	48.45	318	⇓P	P	04 41 53.6	+0.5
	baz=48						
L17A	Cokeville	48.61	322	⇓P	P	04 41 54.1	-0.2
	baz=49						
M16A	Huntsville	48.63	321	⇑P	P	04 41 54.3	-0.1
	baz=49						
J18A	Kendall Valley	48.76	324	⇑P	P	04 41 54.9	-0.5
	baz=49						
DGMT	Dagmar	49.27	333	⇓P	P	04 41 59.1	0.0
	baz=49						
K16A	Soda Springs	49.47	323	⇑P	P	04 42 00.8	+0.1
	baz=50						
L15A	Malad City	49.48	321	⇓P	P	04 42 00.6	-0.3
	baz=50						
O13A	Hicks Ranch, I	49.50	318	⇓P	P	04 42 01.5	+0.4
	baz=50						
Q12A	Willow Creek R	49.52	317	⇑P	P	04 42 01.6	+0.3
	baz=50						
R11A	Troy Canyon, C	49.71	316	⇑P	P	04 42 02.6	-0.2
	baz=50						
J16A	Bone	49.74	323	⇑P	P	04 42 03.0	+0.2
	baz=50						
E20A	Meyer Farm, Mu	49.81	329	⇓P	P	04 42 03.7	+0.4
	baz=50						
K15A	Arbon	49.95	322	⇑P	P	04 42 04.5	+0.1
	baz=50						
L14A	Malta	50.03	321	⇑P	P	04 42 04.7	-0.4
	baz=50						
O12A	Currie	50.08	318	⇑P	P	04 42 05.3	-0.1
	baz=50						
S10A	Tonopah Range,	50.23	315	⇑P	P	04 42 07.5	+0.9
	baz=50						
F18A	Big Timber	50.26	327	⇑P	P	04 42 07.2	+0.5
	baz=50						
J15A	Blackfoot	50.30	323	⇑P	P	04 42 07.2	+0.2
	baz=50						
H16A	Russell Place,	50.37	325	⇓P	P	04 42 07.5	0.0
	baz=50						
G17A	Pierce Place,	50.46	326	⇓P	P	04 42 09.4	+1.2
	baz=51						
D19A	Cripps Ranch,	50.63	329	⇓P	P	04 42 09.2	-0.2
	baz=51						
I15A	Monteview	50.67	324	⇓P	P	04 42 09.6	-0.2
	baz=51						
J14A	Carey	50.91	322	⇑P	P	04 42 12.1	+0.5
	baz=51						
G16A	Moss Hill, Enn	51.00	325	⇑P	P	04 42 12.6	+0.4
	baz=51						
H15A	Lima	51.12	324	⇑P	P	04 42 14.6	+1.5
	baz=51						
VES	Vestal, Richgr	51.16	311	⇓P	P	04 42 13.4	-0.2
	baz=51						
J13A	Cove Ranch, Pi	51.35	322	⇓P	P	04 42 16.0	+1.1
	baz=52						
HLID	Hailey	51.59	322	⇑P	P	04 42 16.4	-0.2
	baz=52						
NVAR	Mina Array Bea	51.66	315	P	P	04 42 17.2	-0.1
	0.8nm,0.5s,mb3.6,baz=115,slow=8.1,SNR=2.8						
B18A	Beardsley Farm	51.89	329	⇑P	P	04 42 19.1	+0.3
	baz=52						
D16A	Dana Ranch, Ca	51.95	327	⇓P	P	04 42 19.2	-0.1
	baz=52						
I12A	Atlanta	52.15	322	⇓P	P	04 42 20.9	+0.1
	baz=52						
H12A	Diamond D Ranc	52.39	323	⇑P	P	04 42 22.1	-0.5
	baz=52						
C11A	Tepee Creek (N	55.01	326	⇑P	P	04 42 41.4	-0.2
	baz=55						
I07A	Izee	55.02	320	⇓P	P	04 42 41.5	-0.3
	baz=55						
G08A	Pilot Rock	55.27	322	⇑P	P	04 42 43.2	-0.3
	baz=55						
H04A	Detroit Lake	57.01	320	⇑P	P	04 42 56.4	+0.6
	baz=57						
YKA	Yellowknife Ar	63.35	340	P	P	04 43 38.2	-0.4
	1.5nm,0.6s,mb4.0,baz=131,slow=6.6,SNR=5.0						
DBIC	Dimbokro	67.50	86	P	P	04 44 05.8	-0.4
	3.4nm,0.7s,mb4.2,baz=281,slow=16,SNR=11						
TORD	Torodi Ar. Bea	73.51	78	P	P	04 44 41.4	-1.2
	0.4nm,0.4s,mb3.5,baz=279,slow=5.9,SNR=16						
ILAR	Eielson Array	77.07	335	P	P	04 45 01.3	-0.6
	0.2nm,0.6s,mb2.9,baz=99,slow=4.6,SNR=4.2						
NOA	NORSAR Array B	81.22	29	P	P	04 45 24.9	+0.3
	1.4nm,0.9s,mb3.6,baz=295,slow=4.8,SNR=2.4						
ARCES	ARCESS Array B	86.60	20	P	P	04 45 51.4	-0.2
	2.3nm,0.8s,mb4.1,baz=255,slow=2.7,SNR=3.3						
ASAR	Alice Springs	149.29	234	PKP	PKPdf	04 52 52.4	-0.5
	0.8nm,0.5s,baz=120,slow=3.6,SNR=12						
ASAR				PKPbc	PKPbc	04 52 55.9	-1.5
	0.8nm,0.5s,baz=118,slow=3.9,SNR=15						
WRA	Warramunga Arr	150.53	241	PKPbc	PKPbc	04 52 58.6	-1.9
	1.5nm,0.6s,baz=107,slow=2.7,SNR=26						
CMAR	Chiang Mai Arr	153.63	18	PKPbc	PKPbc	04 53 06.8	-0.6
	1.0nm,0.4s,baz=324,slow=2.5,SNR=5.5						

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*IDC **01** 04:42:56.3±0.8, 37°.92N×142°.62E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.9/23, mbtmp3.8/11, ML3.4/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/36, Error ellipse: s-maj=24.0km s-min=20.2km az=87.0*

*ISCJB **01** 04:42:57.1±1.7, 37°.90N±0°.05×142°.64E±0°.07, h20km±11km, mb3.8/11, Error ellipse: s-maj=10.6km s-min=6.5km az=34.7*

*JMA **01** 04:42:57.3±0.1, 37°.81N×142°.59E, h27km±2km, M4.2*

*NEIC **01** 04:43:01.5±0.6, 37°.97N×142°.55E, h35km, mb4.1/1, Error ellipse: s-maj=14.2km s-min=9.4km az=130.0*

ISC 01 04:42:57.1±1.6**, 37°.93N**±0°.05×**142°.59E**±0°.07**, h6**km±9km**, n32, σ0s.90**/36**, mb3.8**/11**, 6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	1.11	299	⇓P	Pg	04 43 18.0	-0.3
JIO				eS	Sg	04 43 33.3	+0.6
JMM	Marumori	1.42	268	⇓P	Pn	04 43 21.7	-1.7
JFK	Kawauchi	1.47	248	⇓P	Pn	04 43 21.9	-2.2
JMK	Ichinoseki	1.48	314	P	Pn	04 43 24.1	-0.2
JOU	Okura	1.58	287	⇓P	Pn	04 43 25.0	-0.6
JFT	Otama	1.83	258	⇓P	Pn	04 43 28.2	-0.8
JFT				eS	Sn	04 43 49.5	-3.0
JOM	Ohasama	1.85	327	⇓P	Pn	04 43 29.8	+0.5
JYK	Kaneyama	2.01	300	P	Pn	04 43 31.7	+0.2
JYS	Shirataka	2.01	279	P	Pn	04 43 31.4	-0.1
JYS				eS	Sn	04 43 56.0	-1.0
JANG	Nango	2.58	342	P	Pn	04 43 40.4	+1.0
JANG				eS	Sn	04 44 11.9	+0.8
JAW	Awa shima	2.68	282	P	Pn	04 43 41.0	+0.2
MJAR	Matsushiro Arr	3.75	250	Pn	Pn	04 43 56.3	+0.8
	2.8nm,0.3s,baz=56,slow=10,SNR=19						
MJAR				Sn	Sn	04 44 45.6	+5.5
	2.2nm,0.3s,baz=136,slow=32,SNR=3.5						
MAJO	Matsushiro	3.76	250	ePn	Pn	04 43 56.1	+0.6
MAT	Matsushiro	3.76	250	P	Pn	04 43 56.4	+0.9
MAT				eS	Sn	04 44 41.6	+1.5
ERM	Erimo	4.11	6	ePn	Pn	04 43 59.0	-1.4
ERM				eS	Sn	04 44 47.7	-1.0
ASAJ	Asahikawa	6.18	0	LR	LR	04 46 45.4	
	comp=Z,807nm,20.6s,baz=188,slow=37						
KSRS	Korea Array	11.63	272	Pn	Pn	04 45 47.5	+4.0
	0.1nm,0.3s,baz=85,slow=14,SNR=4.1						
SONM	Songino Array	28.08	302	P	P	04 48 50.5	+1.2
	1.3nm,0.7s,mb3.7,baz=111,slow=8.2,SNR=8.2						
ZALV	Zalesovo Beam	42.01	312	P	P	04 50 49.4	+0.5
	2.0nm,0.7s,mb3.8,baz=87,slow=8.2,SNR=7.0						
MKAR	Makanchi Array	44.44	302	P	P	04 51 08.9	+0.2
	0.4nm,0.2s,mb3.7,baz=87,slow=10,SNR=6.7						
ILAR	Eielson Array	48.24	33	P	P	04 51 38.3	0.0
	0.3nm,0.5s,mb3.6,baz=254,slow=6.0,SNR=8.9						
WRA	Warramunga Arr	58.08	189	P	P	04 52 50.9	-0.3
	1.1nm,0.6s,mb4.1,baz=6.5,slow=7.3,SNR=14						
WRA	Warramunga Arr	58.08	189	P	P	04 52 50.9	-0.3
ABKAR	Akbulak array	58.08	310	eP	P	04 52 50.8	-0.2
	1.1nm,0.7s,mb4.0						
ASAR	Alice Springs	61.80	189	P	P	04 53 16.9	+0.2
	0.3nm,0.6s,mb3.6,baz=14,slow=12,SNR=4.7						
FINES	FINESS Array B	68.46	332	P	P	04 53 59.8	+0.2
	3.8nm,0.8s,mb4.5,baz=62,slow=8.9,SNR=4.7						
NOA	NORSAR Array B	73.72	338	P	P	04 54 31.5	0.0
	1.1nm,0.9s,mb3.8,baz=68,slow=4.7,SNR=3.5						
NOA	NORSAR Array B	73.72	338	P	P	04 54 31.5	0.0
AKASG	Malin Array Be	74.16	323	P	P	04 54 33.6	-0.6
	1.0nm,0.5s,mb4.0,baz=44,slow=5.8,SNR=6.1						
PDAR	Pinedale Array	76.38	46	P	P	04 54 48.0	+0.8
	0.3nm,0.5s,mb3.4,baz=316,slow=2.5,SNR=3.5						
CLL	Collm	80.78	331	ePcP	PcP	04 55 17.0	-1.0
LPAZ	La Paz	145.44	60	PKPbc	PKPbc	05 02 37.5	+1.0
	1.2nm,0.9s,baz=315,slow=2.9,SNR=4.5						

DJA 01 04:44:47, 2°.09S×120°.55E, h10km, MLv3.8/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.20	218	P	Pb	04 45 08.0	-1.8
TTSI				S	Sb	04 45 25.0	-0.4
APSI	Ampana	1.61	43	P	Pn	04 45 14.3	-1.1
APSI				S	Sn	04 45 36.2	0.0
SPSI	Sidrap Palu	2.02	203	P	Pn	04 45 19.8	-1.3
SPSI				S	Sn	04 45 47.1	+0.7
LUWI	Luwuk	2.45	65	P	Pn	04 45 29.6	+2.5
LUWI				S	Sn	04 45 58.7	+1.5
KDI	Kendari	2.78	132	P	Pn	04 45 29.9	-1.7
KDI				S	Sn	04 46 08.2	+3.0
MRSI	Marisa	2.90	29	P	Pn	04 45 31.6	-1.7
TOLI	Toli-Toli	3.20	4	P	Pn	04 45 38.7	+1.3
BKSI	Bulukumba	3.24	188	P	Pn	04 45 39.5	+1.6
BKSI				S	Sn	04 46 18.0	+1.4

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*IDC **01** 05:00:36.1±1.4, 7°.73S×127°.35E, h0km, mb3.9/4, mb1 4.1/6, mb1mx3.9/17, mbtmp3.9/6, ML4.1/2, Error ellipse: s-maj=205.1km s-min=28.5km az=65.0*

*ISCJB **01** 05:00:47.7±4.1, 7°.7S±0°.2×128°.2E±0°.2, h129km±47km, mb3.7/4, Error ellipse: s-maj=32.1km s-min=18.2km az=41.3*

*NEIC **01** 05:00:50.0±3.0, 7°.77S×128°.32E, h138km±36km, Error ellipse: s-maj=32.2km s-min=25.5km az=78.0*

ISC 01 05:00:49.2±3.8**, 7°.7S**±0°.2×**128°.2E**±0°.2**, h126**km±45km**, n9, σ0s.93**/11**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.49	140	ePn	Pn	05 02 21.6	-0.7
	100nm,0.3s						
KAKA				eSn	Sn	05 03 36.2	+1.2
FITZ	Fitzroy Crossi	10.60	193	ePn	Pn	05 03 18.3	+0.6
FITZ				eSn	Sn	05 05 14.6	0.0
WRA	Warramunga Arr	13.53	154	Pn	Pn	05 03 53.8	-2.3
	1.0nm,0.3s,baz=340,slow=13,SNR=58						
WRA				Sn	Sx	05 06 16.2	
	2.4nm,0.3s,baz=320,slow=19,SNR=11						
ASAR	Alice Springs	16.77	162	P	Pn	05 04 36.9	+0.3
	0.5nm,0.3s,baz=337,slow=9.4,SNR=33						
ASAR				S	Sx	05 07 36.0	
	0.6nm,0.3s,baz=315,slow=16,SNR=6.8						
SONM	Songino Array	58.58	343	P	P	05 10 33.6	+0.9
	0.9nm,0.3s,mb4.2,baz=168,slow=8.7,SNR=6.4						
MKAR	Makanchi Array	67.86	328	P	P	05 11 33.4	-0.5
	0.2nm,0.3s,mb3.4,baz=113,slow=6.8,SNR=3.2						
ZALV	Zalesovo Beam	71.45	335	P	P	05 11 55.2	-0.6
	0.6nm,0.3s,mb3.9,baz=151,slow=4.5,SNR=4.3						
ZALV	Zalesovo Beam	71.45	335	P	P	05 11 55.2	-0.6
KURK	Kurchatov	72.21	329	P	P	05 12 01.1	+0.7
	0.8nm,0.6s,mb3.7,baz=129,slow=5.2,SNR=5.6						

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*TRN **01** 05:24:49.3, 17°.47N×61°.36W, h23km, MD3.5, M3.7(FDF)*

*NEIC **01** 05:24:49.4±3.0, 17°.55N×61°.28W, h10km, Error ellipse: s-maj=35.5km s-min=14.5km az=51.0*

ISC 01 05:24:48.1±1.7**, 17°.58N**±0°.07×**61°.21W**±0°.07**, h11**km±7km**, n14, σ0s.92**/22**, 2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.56	279	ePg	Pg	05 24 58.9	0.0
ANWB				eSg	Sg	05 25 06.4	+0.1
BPA	Boggy Peak	0.81	230	⇓iP	Pg	05 25 04.3	+0.5
BPA				eS	Sg	05 25 14.4	0.0
BPA	Boggy Peak	0.81	230	⇓iP	Pg	05 25 04.3	+0.5
BPA				eS	Sg	05 25 14.4	0.0
DEG	La Desirade	1.27	174	eP	Pn	05 25 10.3	-1.4
SKI	Saint Kitts	1.48	261	eP	Pn	05 25 13.6	-1.1
SKI				eS	Sn	05 25 32.3	-1.8
SKI	Saint Kitts	1.48	261	eP	Pn	05 25 13.6	-1.1
SKI				eS	Sn	05 25 32.3	-1.8
LZG	Guadaloupe-1	1.53	201	eP	Pn	05 25 14.8	-0.6
BCG	Bois Riant Cap	1.54	195	eP	Pn	05 25 15.0	-0.4
SCG	Saint Claude	1.60	196	eP	Pn	05 25 16.1	-0.4
SCG				eS	Sn	05 25 37.4	+0.2
PHG	Guadaloupe-2	1.61	195	eP	Pn	05 25 16.1	-0.4
HMG	Houelmont	1.65	197	eP	Pn	05 25 17.1	0.0
TBG	Guadaloupe-3	1.77	194	eP	Pn	05 25 18.3	-0.4
FDF	Fort de France	2.83	179	ePn	Pn	05 25 34.4	+1.1
FDF				eSn	Sn	05 26 08.9	+1.5
SJG	San Juan	4.74	277	ePn	Pn	05 26 01.4	+1.9
SJG				eSn	Sn	05 26 55.7	+1.2

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*IDC **01** 05:31:21.8±0.7, 15°.48S×176°.33W, h0km, mb4.8/15, mb1 5.0/15, mb1mx4.9/18, mbtmp4.8/15, MS4.4/16, Ms1 4.4/16, ms1mx4.1/34, Error ellipse: s-maj=26.2km s-min=17.0km az=146.0*

*ISCJB **01** 05:31:26.8±2.0, 15°.41S±0°.06×176°.40W±0°.04, h40km±17km, mb5.1/115, MS4.5/25, Error ellipse: s-maj=11.2km s-min=5.3km az=156.5*

*DJA **01** 05:31:26, 15°.58S×176°.28W, h20km, mb5.1/13*

*BJI **01** 05:31:27.8, 14°.90S×175°.98W, h45km, mB5.2/18, mb4.9/25, Ms4.9/11, Ms7 4.6/17*

*GCMT **01** 05:31:27.6±0.3, 15°.11S×176°.14W, h13km±1km, MW5.1, Moment Tensor Solution. s14,c19; s64,c89; Moment tensor: Scale 10^{16}Nm; M_{rr}2.05±.34; $M_{\theta\theta}$1.10±.23; $M_{\phi\phi}$-3.15±.26; $M_{r\theta}$-3.99±1.04; $M_{\theta\phi}$3.33±.21; $M_{\phi r}$-0.43±.60; Best double couple: $M_0$5.90000×10^{16} NP1:ϕ_s187.00000°, δ49.00000°, λ157.00000°. NP2:ϕ_s292.00000°, δ73.00000°, λ43.00000°. Principal axes: T 6.3100, Plg42.0000°, Azm158.0000°; N -0.9300, Plg44.0000°, Azm310.0000°; P -5.3900, Plg15.0000°, Azm55.0000°; Data Used: IU II CN G IC.*

*MOS **01** 05:31:27.9±0.9, 14°.85S×176°.51W, h33km, mb5.3/30, MS4.7/4 Error ellipse: s-maj=16.2km s-min=9.4km az=62.9*

*SZGRF **01** 05:31:27.4, 15°.69S×177°.20W, h33km, Fiji Islands region*

*NEIC **01** 05:31:28.9±1.4, 15°.26S×176°.46W, h41km±11km, mb5.1/75, Error ellipse: s-maj=11.5km s-min=5.2km az=148.0*

ISC 01 05:31:29.8±1.7**, 15°.41S**±0°.06×**176°.38W**±0°.04**, h51**km±15km**, n722, σ0s.55**/552**, mb5.1**/115**, MS4.5**/25**, 209C-177D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.70	72	Pn	Pn	05 32 27.8	-10
	8.5nm,0.3s,baz=144,slow=8.7,SNR=7.6						
AFI				LR	LR	05 34 08.7	
	comp=Z,6μm,19.9s,baz=242,slow=36						
AFI	Afiamalu	4.70	72	ePn	Pn	05 32 29.8	-8.3
MSVF	Nonsavu	5.82	246	ePn	Pn	05 32 53.0	-0.5
	55nm,1.3s						
RAR	Rarotonga	16.79	113	LR	LR	05 39 05.3	
	comp=Z,286nm,21.6s,baz=266,slow=28						
DZM	Mont Dzumac	17.55	245	eP	Pn	05 35 34.9	+3.9
	215nm,1.6s						
DZM				eLR	LR	05 39 46.6	
	5μm,25.0s						
DZM	Mont Dzumac	17.55	245	eP	Pn	05 35 34.2	+3.3
DZM	Mont Dzumac	17.55	245	ePn	Pn	05 35 31.6	+0.6
	147nm,1.5s						
NOUC	Port Laguerre	17.69	245	eP	Pn	05 35 33.1	+0.5
URZ	Urewera	23.48	193	LR	LR	05 44 17.6	
	comp=Z,1μm,19.2s,MS4.3,baz=22,slow=33						
HNR	Honiara	23.86	282	LR	LR	05 44 27.2	
	comp=Z,1μm,20.1s,MS4.3,baz=302,slow=33						
PPT	Papeete	25.79	99	eLQ		05 42 04.0	
	2μm,25.8s						
PPT				eLR	LR	05 43 14.6	
	2μm,27.5s,baz=261						
PPT	Papeete	25.79	99	LR	LR	05 43 55.4	
	comp=Z,783nm,19.5s,MS4.2,baz=269,slow=29						
RPZ	Rata Peaks	30.18	198	LR	LR	05 46 47.2	

comp=Z,626nm,21.4s,MS4.2,baz=170,slow=31
ARMA Armidale 32.89 237 *e*P **P 05 37 59.5 +0.3**
ARMA Armidale 32.89 237 *e*P **P 05 37 59.7 +0.5**
128nm,1.8s,mb5.5
MGCD Mangrove Creek 34.33 233 *e*P **P 05 38 11.9 +0.3**
110nm,1.4s,mb5.6
CTA Charters Tower 35.84 257 LR LR 05 50 55.4
comp=Z,677nm,20.5s,MS4.4,baz=64,slow=33
TAOE Nuku Hiva Isla 35.98 84 *e*LR LR 05 47 51.4
2µm,28.6s,baz=257
CNB Canberra Magne 36.49 231 *e*P **P 05 38 29.8 -0.4**
YNG Young 36.83 233 *e*P **P 05 38 33.0 -0.1**
20nm,1.4s,mb4.8
CMSA Cobar Meteorol 38.09 238 *e*P **P 05 38 43.1 -0.7**
RKT Rikitea 39.73 108 *e*LR LR 05 49 45.1
1µm,27.0s,baz=281
STKA Stephens Creek 41.55 239 P **P 05 39 12.1 -0.5**
23nm,1.1s,mb4.7,baz=80,slow=6.9,SNR=11
STKA LR LR 05 55 52.9
comp=Z,743nm,18.1s,MS4.6,baz=51,slow=35
STKA Stephens Creek 41.55 239 *e*P **P 05 39 11.8 -0.8**
21nm,1.2s,mb4.7
STKA Stephens Creek 41.55 239 *e*P **P 05 39 12.6 +0.1**
22nm,1.6s,mb4.5
WB2 Warramunga Arr 47.03 257 *e*P **P 05 39 56.4 -0.1**
WRA Warramunga Arr 47.04 257 P **P 05 39 55.0 -1.7**
13nm,1.1s,mb4.8,baz=89,slow=8.0,SNR=32
WRA PcP PcP 05 41 27.8 -0.4
2.4nm,1.1s,baz=88,slow=4.2,SNR=4.5
ASAR Alice Springs 47.37 252 P **P 05 39 57.4 -1.8**
15nm,0.9s,mb4.9,baz=87,slow=7.8,SNR=41
KAKA Kakadu 49.63 266 *e*P **P 05 40 16.3 -0.3**
388nm,1.6s,mb6.2
KAKA Kakadu 49.63 266 P **P 05 40 16.9 +0.3**
KNA Kununurra 52.71 262 *e*P **P 05 40 39.1 -0.6**
47nm,1.2s,mb5.3
KNA Kununurra 52.71 262 P **P 05 40 39.8 +0.1**
FORT Forrest 52.85 243 *e*P **P 05 40 40.7 +0.1**
36nm,0.9s,mb5.3
FITZ Fitzroy Crossi 55.39 258 *e*P **P 05 40 58.6 -0.7**
33nm,1.3s,mb5.2
NLAI Namlea 56.90 276 P **P 05 41 11.4 +1.3**
895nm51nm,1.8s,mb5.2
MBWA Marble Bar 60.59 254 P **P 05 41 35.5 -0.2**
2µm68nm,1.5s,mb5.6
KDI Kendari 61.01 274 P **P 05 41 39.0 +0.4**
31nm,1.4s,mb5.2
KLBR Kellerberrin 61.69 242 *e*P **P 05 41 41.9 -1.0**
99nm,1.5s,mb5.7
MRSI Marisa 62.91 279 P **P 05 41 51.0 -0.4**
480nm14nm,1.4s,mb4.9
SBA Scott Base 63.02 184 *e*P **P 05 41 52.8 +1.7**
SBA pmax pmax
comp=Z,143nm,1.5s,mb5.9
SBA Scott Base 63.02 184 *e*P **P 05 41 52.8 +1.7**
comp=Z,143nm,1.5s,mb5.9
BKSI Bulukumba 63.07 272 P **P 05 41 52.2 -0.2**
comp=Z,13nm,1.5s,mb4.8
MORW Morawa 63.28 245 *e*P **P 05 41 52.5 -1.1**
BNSI Bone 63.32 273 P **P 05 41 54.5 +0.4**
comp=Z,49nm,1.4s,mb5.4
ADK Adak 67.01 360 *e*P **P 05 42 16.4 -0.7**
ADK pmax pmax
comp=Z,49nm,1.4s,mb5.3
ADK Adak 67.01 360 *e*P **P 05 42 16.4 -0.7**
comp=Z,49nm,1.4s,mb5.3
MJAR Matsushiro Art 67.12 322 P **P 05 42 16.8 -1.4**
comp=Z,2.3nm,0.7s,mb4.3,baz=164,slow=5.7,SNR=8.6
MAT Matsushiro 67.12 322 P **P 05 42 16.4 -1.8**
ATKA Atka Island 67.35 1 *e*P **P 05 42 18.4 -1.0**
comp=Z,102nm,1.3s,mb5.7
KBKI Kotabaru 67.40 273 P **P 05 42 22.0 +1.5**
comp=Z,2µmcomp=Z,45nm,1.5s,mb5.3
MYLDM Lahad Datu 67.64 282 P **P 05 42 24.7 +2.7**
SMY Shemya 68.35 354 *e*P **P 05 42 25.0 -0.6**
SMY pmax pmax
comp=Z,150nm,1.4s,mb5.8
SMY Shemya 68.35 354 *e*P **P 05 42 24.9 -0.6**
comp=Z,150nm,1.4s,mb5.8
CASY Casey 69.20 204 *e*P **P 05 42 29.8 -1.0**
PEA0B Petropavlovsk- 71.80 344 *e*P **P 05 42 46.1 -0.6**
PETK Petropavlovsk- 71.80 344 P **P 05 42 46.4 -0.4**
comp=Z,20nm,1.1s,mb5.0,baz=118,slow=8.6,SNR=18
PETK LR LR 06 16 24.7
comp=Z,80nm,18.4s,MS4.0,baz=194,slow=38
SBUM Sibu 72.77 278 P **P 05 42 54.8 +1.4**
STKI Sintang 72.81 275 P **P 05 42 55.5 +1.8**
comp=Z,40nm,1.5s,mb5.1
KSRS Korea Array 74.18 317 P **P 05 43 01.9 +0.8**
comp=Z,10nm,1.1s,mb4.7,baz=126,slow=6.8,SNR=12
KSM Kuching 74.33 276 *e*P **P 05 43 02.8 +0.2**
comp=Z,56nm,1.5s,mb5.3
KSM Kuching 74.33 276 P **P 05 43 03.1 +0.5**
VES Vestal, Richgr 74.37 45 ⇑P **P 05 43 02.1 -0.2**
baz=74
BFSC Mount Baldy Ra 74.52 47 ⇓P **P 05 43 03.1 -0.1**
baz=75
QSPA South Pole Qui 74.63 180 *e*P **P 05 43 04.3 +1.2**
comp=Z,147nm,1.5s,mb5.7
ISA Isabella 74.69 46 ⇓P **P 05 43 04.1 -0.1**
baz=75,SNR=9.2
ISA Isabella 74.69 46 *e*P **P 05 43 04.4 +0.2**
ISA pmax pmax
comp=Z,28nm,1.4s,mb5.0
ISA Isabella 74.69 46 *e*P **P 05 43 04.4 +0.2**
comp=Z,28nm,1.4s,mb5.0
CMB Columbia Colle 74.70 43 *e*P **P 05 43 04.7 +0.5**
CMB pmax pmax
comp=Z,12nm,1.2s,mb4.7
CMB Columbia Colle 74.70 43 *e*P **P 05 43 04.7 +0.5**
comp=Z,12nm,1.2s,mb4.7
MONP Monument Peak 74.72 49 ⇑P **P 05 43 04.8 +0.4**
baz=75
LEM Lembang 74.76 267 P **P 05 43 06.0 +0.9**
comp=Z,56nm,1.4s,mb5.3
WDC Whiskeytown Da 74.79 40 *e*P **P 05 43 04.6 0.0**
WDC pmax pmax
comp=Z,26nm,1.4s,mb5.0
WDC Whiskeytown Da 74.79 40 *e*P **P 05 43 04.6 0.0**
comp=Z,26nm,1.4s,mb5.0
SWSC Sam W. Stewart 75.20 49 ⇓P **P 05 43 07.8 +0.6**
baz=75
YBH Yreka Blue Hor 75.37 39 *e*P **P 05 43 08.4 +0.4**
YBH pmax pmax
comp=Z,20nm,1.2s
YBH Yreka Blue Hor 75.37 39 *e*P **P 05 43 08.4 +0.4**
comp=Z,20nm,1.2s,mb4.9
CWC Cottonwood Cre 75.37 45 ⇓P **P 05 43 08.6 +0.5**
baz=76
MLAC Mammoth Lakes 75.50 44 ⇓P **P 05 43 09.3 +0.6**
baz=76
MTUM Tungsten Hills 75.53 44 *e*P **P 05 43 09.4 +0.5**
KDAK Kodiak Island 75.54 13 LR LR 06 13 01.5
comp=Z,213nm,18.7s,MS4.5,baz=242,slow=33
WAKR Walker 75.58 43 *e*P **P 05 43 09.8 +0.5**
MPMC Manual Prospec 75.58 46 ⇑P **P 05 43 09.0 -0.3**
baz=76,SNR=16
BELC Belle Mtn. Jos 75.58 48 ⇓P **P 05 43 09.6 +0.3**
baz=76
GSC Goldstone 75.67 47 ⇓P **P 05 43 10.0 +0.2**
baz=76
GSC Goldstone 75.67 47 *e*P **P 05 43 10.4 +0.6**
GSC pmax pmax
comp=Z,14nm,1.2s,mb4.8
GSC Goldstone 75.67 47 *e*P **P 05 43 10.4 +0.6**
comp=Z,14nm,1.2s,mb4.8
HUMO Hull Mountain 75.75 38 *e*P **P 05 43 11.2 +1.1**
comp=Z,20nm,1.4s,mb4.8
HEC Hector,Ludlow 75.76 47 ⇓P **P 05 43 10.4 0.0**
baz=76
BC3 Big Chuckawall 75.80 49 ⇑P **P 05 43 10.8 +0.1**
baz=76
WCN Washoe City 75.81 42 ⇑P **P 05 43 10.4 -0.1**
baz=76,SNR=5.9
112A Yuma 75.90 50 ⇑P **P 05 43 11.8 +0.6**
baz=76
GLA Glamis 75.97 50 ⇑P **P 05 43 12.0 +0.5**
baz=76
GLA Glamis 75.97 50 *e*P **P 05 43 12.9 +1.3**
GLA pmax pmax
comp=Z,31nm,1.4s,mb5.0
GLA Glamis 75.97 50 *e*P **P 05 43 12.9 +1.3**
comp=Z,31nm,1.4s,mb5.0
GRAC Grapevine Rang 76.15 45 ⇓P **P 05 43 13.2 +0.6**
baz=76
GMRC Granite Mounta 76.21 48 ⇑P **P 05 43 12.6 -0.3**
baz=76,SNR=5.8

FURC Furnace Creek, 76.23 46 ⇑P **P 05 43 12.8 -0.2**
baz=76
IRM Iron Mountain 76.27 48 ⇓P **P 05 43 13.3 0.0**
baz=76
PAHR Pah Rah Range 76.28 42 *e*P **P 05 43 13.3 +0.1**
comp=Z,23nm,1.2s,mb5.0
NVAR Mina Array Bea 76.28 43 P **P 05 43 13.4 +0.1**
comp=Z,13nm,1.1s,mb4.8,baz=227,slow=8.3,SNR=36
Y12C Blythe 76.53 49 ⇑P **P 05 43 14.7 0.0**
baz=77
U10A Ash Meadows, A 76.57 46 ⇑P **P 05 43 14.9 0.0**
baz=77
113A Mohawk Valley, 76.61 50 ⇓P **P 05 43 15.0 -0.2**
baz=77,SNR=5.1
Z13A Yuma Proving G 76.90 50 ⇑P **P 05 43 16.6 -0.2**
baz=77,SNR=6.9
V11A Goodsprings 76.90 47 ⇑P **P 05 43 16.9 +0.1**
baz=77
MOD Modoc 76.93 39 *e*P **P 05 43 16.8 0.0**
comp=Z,30nm,1.3s,mb5.1
214A Organ Pipe Nat 76.95 51 ⇓P **P 05 43 17.2 0.0**
baz=77,SNR=6.7
K05A Summer Lake 77.05 39 ⇑P **P 05 43 17.6 +0.1**
baz=77,SNR=7.5
Y13A Salome 77.06 49 ⇑P **P 05 43 17.7 -0.1**
baz=77,SNR=6.2
S10A Tonopah Range, 77.16 45 ⇑P **P 05 43 18.0 -0.2**
baz=77,SNR=8.4
V12A Nelson 77.26 47 ⇑P **P 05 43 19.0 +0.2**
baz=77
114A Black Gap (USA 77.26 51 ⇓P **P 05 43 18.6 -0.2**
baz=77,SNR=6.0
MDJ Mudanjiang 77.30 324 P **P 05 43 19.7 +0.9**
MDJ PcP PcP 05 43 29.9 +0.6
MDJ PP PP 05 46 13.0 -0.8
MDJ S S 05 53 09.2 +4.2
MDJ pmax pmax
comp=Z,13nm,1.4s,mb4.7
MDJ pmax pmax
comp=Z,110nm,7.4s
MDJ LR LR
comp=N,82nm,28.9s
MDJ LR LR
comp=E,97nm,34.7s
MDJ LR LR
comp=Z,93nm,37.1s
SHPR Sheep Range 77.42 46 *e*P **P 05 43 20.1 +0.3**
H04A Detroit Lake 77.44 36 ⇑P **P 05 43 19.8 +0.2**
baz=78
Z14A Wintersburg 77.50 50 ⇑P **P 05 43 20.1 -0.2**
baz=78
R10A Warm Springs 77.55 44 ⇑P **P 05 43 20.8 +0.4**
baz=78
S11A Rachel 77.59 45 ⇓P **P 05 43 20.9 +0.3**
baz=78
Y14A Wickenburg 77.73 50 ⇓P **P 05 43 21.2 -0.2**
baz=78,SNR=9.5
115A Sonoran Desert 77.73 51 ⇓P **P 05 43 21.7 +0.2**
baz=78
T11A Corn Creek, Al 77.75 46 ⇑P **P 05 43 21.4 -0.1**
baz=78,SNR=16
Q10A Clear Creek Ra 77.76 44 ⇑P **P 05 43 21.5 -0.1**
baz=78
E03A Lebam 77.81 34 ⇑P **P 05 43 21.6 0.0**
baz=78
U12A Valley of Fire 77.82 47 ⇑P **P 05 43 22.0 +0.1**
baz=78
NJ2 Nanjing 77.89 308 *e*P **P 05 43 13.3 -9.1**
216A Three Points, 77.99 52 ⇑P **P 05 43 23.1 +0.1**
baz=78,SNR=12
Z15A Gila River Ind 78.05 50 ⇑P **P 05 43 23.4 +0.1**
baz=78,SNR=5.7
116A Eloy 78.06 51 ⇑P **P 05 43 23.4 0.0**
baz=78,SNR=6.3
X14A Yava 78.06 49 ⇑P **P 05 43 23.1 -0.2**
baz=78
R11A Troy Canyon, C 78.06 45 ⇑P **P 05 43 22.7 -0.5**
baz=78,SNR=11
BMN Battle Mountai 78.06 42 *e*P **P 05 43 23.4 +0.2**
BMN pmax pmax
comp=Z,23nm,1.3s,mb5.0
BMN Battle Mountai 78.06 42 *e*P **P 05 43 23.4 +0.2**
comp=Z,23nm,1.3s,mb5.0
S12A Delamar Landin 78.19 46 ⇑P **P 05 43 24.1 +0.1**
baz=78,SNR=7.7
U13A Pakoon Wash 78.22 47 ⇑P **P 05 43 23.9 -0.2**
baz=78,SNR=6.4
Y15A Casa Rosa Ranc 78.23 50 ⇑P **P 05 43 24.2 0.0**
baz=78,SNR=23
WVOR Wild Horse Val 78.25 40 *e*P **P 05 43 24.1 -0.1**
WVOR pmax pmax
comp=Z,17nm,1.2s,mb4.8
WVOR Wild Horse Val 78.25 40 *e*P **P 05 43 24.1 -0.1**
comp=Z,17nm,1.2s,mb4.9
Q11A Duckwater 78.27 44 ⇑P **P 05 43 24.0 -0.3**
baz=78,SNR=20
W14A Seligman 78.27 48 ⇑P **P 05 43 24.4 -0.1**
baz=78
W14A ⇑P 05 43 24.6
baz=78,SNR=10
217A Green Valley 78.38 52 ⇑P **P 05 43 25.3 +0.2**
baz=78,SNR=12
V14A Boquillas Ranc 78.45 48 ⇑P **P 05 43 25.6 +0.2**
baz=78
V14A ⇑P 05 43 25.8
baz=78,SNR=11
SLKM Skilak Lake 78.53 13 *e*P **P 05 43 24.1 -1.2**
X15A Humboldt 78.54 49 ⇑P **P 05 43 26.1 +0.1**
baz=79,SNR=16
X15A ⇓P 05 43 26.6
baz=79
T13A Saint George 78.55 46 ⇓P **P 05 43 25.8 -0.2**
baz=79,SNR=7.4
T13A ⇓P 05 43 26.2
baz=79
Z16A Peralta Trail, 78.62 51 ⇑P **P 05 43 26.7 +0.3**
baz=79
TUC Tucson 78.64 52 *e*P **P 05 43 27.0 +0.4**
TUC pmax pmax
comp=Z,37nm,1.4s,mb5.1
TUC Tucson 78.64 52 *e*P **P 05 43 27.0 +0.5**
comp=Z,37nm,1.4s,mb5.1
I07A Izee 78.65 38 ⇑P **P 05 43 27.1 +0.8**
baz=79,SNR=6.1
G06A Carlson Farm, 78.66 37 ⇓P **P 05 43 26.3 -0.1**
baz=79
R12A Pony Springs, 78.72 45 ⇑P **P 05 43 26.6 -0.2**
baz=79
117A Oracle 78.79 52 ⇑P **P 05 43 27.7 +0.3**
baz=79,SNR=17
Y16A Circle Bar Ran 78.82 50 ⇑P **P 05 43 27.7 +0.2**
baz=79,SNR=11
W15A Williams 78.84 49 ⇓P **P 05 43 28.4 +0.8**
baz=79
S13A Holt Ranch, En 78.86 46 ⇑P **P 05 43 27.9 +0.2**
baz=79
318A Bisbee 78.86 53 ⇑P **P 05 43 28.1 +0.3**
baz=79,SNR=12
J08A Circle Bar Ran 78.87 39 ⇓P **P 05 43 27.2 -0.3**
baz=79
LON Longmire 78.89 35 *e*P **P 05 43 27.7 +0.1**
LON pmax pmax
comp=Z,12nm,1.3s,mb4.7
LON Longmire 78.89 35 *e*P **P 05 43 27.7 +0.1**
comp=Z,12nm,1.3s,mb4.7
Q12A Willow Creek R 78.92 44 ⇓P **P 05 43 27.6 -0.3**
baz=79,SNR=8.5
D05A Enumclaw 79.05 34 ⇓P **P 05 43 29.6 +1.1**
baz=79,SNR=8.9
218A Dragoon 79.06 52 ⇑P **P 05 43 29.1 +0.2**
baz=79,SNR=11
R13A O'Grain Ranch, 79.08 45 ⇑P **P 05 43 28.8 0.0**
baz=79
P12A McGill 79.09 44 ⇓P **P 05 43 29.0 +0.2**
baz=79
X16A Lo Mia Camp, P 79.10 50 ⇓P **P 05 43 29.3 +0.3**
baz=79,SNR=19
X16A ⇓P 05 43 30.0
baz=79
T14A Hurricane 79.15 47 ⇓P **P 05 43 29.1 -0.2**
baz=79
CCUT Cedar City 79.19 46 *e*P **P 05 43 30.1 +0.7**
comp=Z,16nm,1.4s,mb4.8
V15A Kaibab Nationa 79.21 48 ⇑P **P 05 43 29.8 +0.2**
baz=79,SNR=9.4
Y17A Roosevelt 79.21 51 ⇑P **P 05 43 29.8 +0.1**
baz=79,SNR=11
Y17A ⇓P 05 43 30.6
baz=79

CN2 Changchun 79.27 321 *e*P **P 05 43 32.4 +2.7**
CN2 *es*P sP 05 43 40.0 -10
CN2 *e*S S 05 53 31.0 +4.8
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.8
CN2 LR LR
comp=E,300nm,18.0s,MS4.8
CN2 LR LR
comp=Z,400nm,19.0s,MS4.8
Z17A San Carlos Hig 79.31 51 ⇑P **P 05 43 30.3 +0.1**
baz=79,SNR=7.0
W16A Flagstaff 79.34 49 ⇑P **P 05 43 30.7 +0.3**
baz=79,SNR=8.0
319A Douglas 79.39 53 ⇓P **P 05 43 30.9 +0.2**
baz=79,SNR=6.6
118A Homack Ranch, 79.40 52 ⇓P **P 05 43 31.0 +0.3**
baz=80
U15A North Rim 79.41 48 ⇑P **P 05 43 30.9 +0.2**
baz=80,SNR=9.3
Q13A Wheeler Ranch, 79.42 45 ⇑P **P 05 43 30.3 -0.4**
baz=80,SNR=9.1
S14A Cedar City 79.43 46 ⇑P **P 05 43 30.7 0.0**
baz=80
X17A Forest Lakes 79.53 50 ⇑P **P 05 43 31.4 0.0**
baz=80,SNR=8.6
Z18A Geronimo 79.55 51 ⇑P **P 05 43 31.7 +0.2**
baz=80
O12A Currie 79.60 43 ⇓P **P 05 43 31.1 -0.5**
baz=80,SNR=7.8
T15A Red Dirt Ranch 79.62 47 ⇓P **P 05 43 31.5 -0.4**
baz=80
T15A ⇑P 05 43 31.6
baz=80,SNR=7.5
WUAZ Wupatki 79.65 49 ⇑P **P 05 43 32.2 +0.2**
baz=80,SNR=5.3
WUAZ Wupatki 79.65 49 *e*P **P 05 43 32.6 +0.6**
comp=Z,11nm,0.4s,mb5.1
G08A Pilot Rock 79.66 37 ⇑P **P 05 43 32.5 +0.7**
baz=80,SNR=13
219A White Tail Can 79.67 53 ⇓P **P 05 43 32.4 +0.2**
baz=80,SNR=9.9
P13A Bates Ranch, G 79.68 44 ⇑P **P 05 43 31.9 -0.1**
baz=80,SNR=15
JCW Jim Creek 79.69 34 *e*P **P 05 43 31.6 -0.3**
TTA Tatalina 79.70 9 *e*P **P 05 43 31.9 +0.3**
PMR Palmer 79.74 13 *e*P **P 05 43 31.4 -0.5**
PMR pmax pmax
comp=Z,46nm,1.4s,mb5.2
PMR Palmer 79.74 13 *e*P **P 05 43 31.4 -0.5**
comp=Z,46nm,1.4s,mb5.2
Y18A Canyon Day Jun 79.85 51 ⇓P **P 05 43 33.9 +0.7**
baz=80,SNR=14
E07A Sunnyside 79.86 36 ⇓P **P 05 43 33.0 +0.1**
baz=80
RSW Rattlesnake Hi 79.92 36 *e*P **P 05 43 33.8 +0.6**
W17A Winslow 79.93 49 ⇓P **P 05 43 34.3 +0.8**
baz=80
Q14A Sevier Lake (B 79.95 45 ⇓P **P 05 43 33.6 +0.1**
baz=80,SNR=14
320A Kipp Ranch, An 79.95 54 ⇑P **P 05 43 34.2 +0.5**
baz=80,SNR=9.6
HAWA Hanford 79.95 36 *e*P **P 05 43 33.2 -0.2**
comp=Z,24nm,1.3s,mb5.0
119A Ashpeak Ranch, 79.96 52 ⇑P **P 05 43 34.3 +0.5**
baz=80,SNR=7.2
DIV Divide 80.10 15 *e*P **P 05 43 33.0 -0.8**
comp=Z,36nm,1.2s,mb5.2
U16A Tuba City 80.11 48 ⇓P **P 05 43 34.7 +0.3**
baz=80,SNR=8.9
220A Playas Peak, P 80.19 53 ⇓P **P 05 43 35.4 +0.4**
baz=80,SNR=18
ETW Entiat 80.21 35 *e*P **P 05 43 35.0 +0.3**
T16A Glen Canyon Da 80.23 47 ⇓P **P 05 43 35.8 +0.7**
baz=80
BMRM Bremner River 80.25 15 *e*P **P 05 43 34.3 -0.3**
comp=Z,78nm,1.4s,mb5.5
X18A Snowflake 80.25 50 ⇓P **P 05 43 35.5 +0.2**
baz=80,SNR=5.2
R15A Junction 80.26 46 ⇓P **P 05 43 36.0 +0.7**
baz=80
P14A Drum Mountains 80.38 44 ⇓P **P 05 43 36.1 +0.3**
baz=80,SNR=15
120A U Bar Ranch, L 80.38 52 ⇓P **P 05 43 36.3 +0.3**
baz=80,SNR=6.4
MSU Marysvale 80.47 46 *e*P **P 05 43 37.3 +0.9**
S16A Weppner Ranch, 80.51 47 ⇑P **P 05 43 36.6 +0.1**
baz=81
S16A ⇑P 05 43 36.8
baz=81,SNR=5.8
Y19A Nutrioso 80.52 51 ⇓P **P 05 43 37.4 +0.7**
baz=81,SNR=16
Y19A ⇓P 05 43 37.5
baz=81
MFID Camas Ranch 80.52 40 ⇑P **P 05 43 36.6 +0.1**
baz=81
Q15A Fillmore 80.56 45 ⇑P **P 05 43 36.9 0.0**
baz=81
Z20A Nine Sixteen R 80.65 52 ⇑P **P 05 43 37.7 +0.3**
baz=81,SNR=11
D08A Wollman Farm, 80.68 36 ⇓P **P 05 43 37.1 -0.1**
baz=81,SNR=6.7
X19A St. Johns 80.69 50 ⇑P **P 05 43 37.8 +0.2**
baz=81,SNR=9.3
T17A Navajo Res., N 80.73 48 ⇑P **P 05 43 38.2 +0.4**
baz=81,SNR=7.9
V18A Ganado 80.78 49 ⇓P **P 05 43 38.2 +0.1**
baz=81,SNR=8.1
E09A Wood Farm, Sta 80.81 36 ⇑P **P 05 43 38.0 0.0**
baz=81
221A Mesquite Ranch 80.81 53 ⇓P **P 05 43 38.7 +0.4**
baz=81,SNR=6.3
DUG Dugway 80.84 44 ⇑P **P 05 43 37.9 -0.4**
baz=81,SNR=9.0
DUG Dugway 80.84 44 *e*P **P 05 43 38.1 -0.2**
DUG pmax pmax
comp=Z,14nm,1.4s,mb4.7
DUG Dugway 80.84 44 *e*P **P 05 43 38.1 -0.2**
comp=Z,14nm,1.4s,mb4.7
R16A Teasdale 80.85 46 ⇑P **P 05 43 39.2 +0.9**
baz=81
P15A Leamington 80.91 45 ⇑P **P 05 43 38.5 -0.2**
baz=81,SNR=5.4
OD2 Odessa Site #2 80.98 36 *e*P **P 05 43 38.1 -0.8**
121A Cookes Peak, D 81.03 53 ⇓P **P 05 43 39.7 +0.2**
baz=81,SNR=5.8
S17A Black Ridge (B 81.03 47 ⇓P **P 05 43 39.4 0.0**
baz=81
F10A Beach Ranch, E 81.05 37 ⇓P **P 05 43 38.5 -0.7**
baz=81,SNR=8.2
O15A The Old Anders 81.12 44 ⇑P **P 05 43 39.3 -0.5**
baz=81
U18A Rough Rock, Ch 81.14 48 ⇑P **P 05 43 39.9 -0.1**
baz=81
I12A Atlanta 81.15 40 ⇑P **P 05 43 40.0 +0.1**
baz=81,SNR=16
Y20A Horse Springs, 81.15 51 ⇓P **P 05 43 40.7 +0.6**
baz=81,SNR=16
B08A Colville Reser 81.19 34 ⇑P **P 05 43 39.5 -0.5**
baz=81,SNR=7.2
X20A Quemado 81.33 51 ⇓P **P 05 43 41.6 +0.6**
baz=81,SNR=9.2
Q16A Castle Valley 81.36 46 ⇑P **P 05 43 41.2 +0.1**
baz=81
Z21A St. Cloud Mine 81.44 52 ⇑P **P 05 43 42.7 +1.1**
baz=82,SNR=29
R17A Hanksville Air 81.45 46 ⇑P **P 05 43 41.2 -0.3**
baz=82,SNR=6.5
C09A Chrisman Ranch 81.46 35 ⇑P **P 05 43 41.1 -0.3**
baz=82
T18A Mexican Hat 81.46 48 ⇓P **P 05 43 41.7 0.0**
baz=82
T18A ⇓P 05 43 41.9
baz=82
HLID Hailey 81.48 40 ⇓P **P 05 43 41.3 -0.3**
baz=82,SNR=19
HLID Hailey 81.48 40 *e*P **P 05 43 41.9 +0.3**
comp=Z,25nm,1.4s,mb4.9
TMUT Trail Mountain 81.51 45 *e*P **P 05 43 42.8 +0.9**
comp=Z,30nm,1.4s,mb5.0
J13A Cove Ranch, Pi 81.55 41 ⇑P **P 05 43 41.9 0.0**
baz=82,SNR=15
MPU Maple Canyon 81.55 45 *e*P **P 05 43 42.4 +0.3**
comp=Z,14nm,1.4s,mb4.7

U19A **Dine' College,** 81.57 49 ⇑P P 05 43 42.2 0.0
baz=82,SNR=11
W20A **Ramah** 81.58 50 ⇑P P 05 43 42.8 +0.5
baz=82,SNR=18
S18A **Hurst Farm, Bl** 81.62 47 ⇓P P 05 43 42.4 -0.1
baz=82
BPAW **Bear Paw Mtn.** 81.64 11 *e*P P 05 43 40.2 -1.7
comp=Z,26nm,1.8s,mb4.8
HVU **Hansel Valley** 81.64 43 *e*P P 05 43 43.2 +0.7
HVU pmax pmax
comp=Z,18nm,1.2s,mb4.9
HVU **Hansel Valley** 81.64 43 *e*P P 05 43 43.2 +0.7
comp=Z,18nm,1.2s,mb4.9
122A **Conniff Cattle** 81.70 53 ⇓P P 05 43 43.3 +0.2
baz=82
SKAG **Skagway** 81.70 20 *e*P P 05 43 43.1 +0.7
comp=Z,28nm,1.3s,mb5.0
MCK **McKinley** 81.70 12 *e*P P 05 43 41.3 -1.0
MCK pmax pmax
comp=Z,36nm,1.2s,mb5.2
MCK **McKinley** 81.70 12 *e*P P 05 43 41.2 -1.0
comp=Z,36nm,1.2s,mb5.2
M15A **Larsen Ranch,** 81.70 43 ⇑P P 05 43 42.5 -0.3
baz=82
H12A **Diamond D Ranc** 81.71 39 ⇓P P 05 43 42.6 -0.2
baz=82,SNR=9.1
G12A **Big Creek, Yel** 81.72 39 ⇓P P 05 43 42.6 -0.2
baz=82,SNR=22
Y21A **Point of Rocks** 81.72 51 ⇑P P 05 43 44.2 +1.1
baz=82,SNR=6.9
O16A **Springville** 81.73 44 ⇑P P 05 43 43.1 0.0
baz=82
K14A **Jones Ranch, D** 81.75 42 ⇓P P 05 43 43.0 -0.1
baz=82,SNR=12
SEY **Seymchan** 81.81 346 *e*P P 05 43 42.0 -0.9
X21A **Alamocita Cree** 81.82 51 ⇑P P 05 43 44.1 +0.4
baz=82,SNR=9.5
I13A **Wildhorse Cree** 81.84 40 ⇓P P 05 43 44.2 +0.7
baz=82
223A **Chaparral, Ant** 81.86 54 ⇓P P 05 43 44.7 +0.8
baz=82
V20A **Brimhall** 81.89 50 ⇑P P 05 43 44.0 0.0
baz=82
SRU **San Rafael** 81.89 46 ⇑P P 05 43 43.8 -0.1
baz=82
SRU ⇓P 05 43 44.0
baz=82,SNR=7.8
SRU **San Rafael** 81.89 46 *e*P P 05 43 44.2 +0.3
SRU pmax pmax
comp=Z,23nm,1.5s,mb4.9
SRU **San Rafael** 81.89 46 *e*P P 05 43 44.1 +0.2
comp=Z,23nm,1.5s,mb4.9
P17A **Butcher Ranch,** 81.91 45 ⇑P P 05 43 44.1 +0.1
baz=82
J14A **Carey** 81.92 41 ⇓P P 05 43 44.1 +0.1
baz=82,SNR=12
T19A **Beclabito** 81.93 48 ⇓P P 05 43 44.3 +0.1
baz=82,SNR=8.0
Z22A **Elephant Butte** 81.95 52 ⇓P P 05 43 44.7 +0.4
baz=82,SNR=11
JLU **Jordanelle** 81.95 44 *e*P P 05 43 44.4 +0.2
comp=Z,25nm,1.6s,mb4.9
DAU **Daniels Canyon** 82.00 44 *e*P P 05 43 45.0 +0.6
L15A **Malad City** 82.00 43 ⇓P P 05 43 43.9 -0.5
baz=82,SNR=8.4
HYT **Haines Junctio** 82.08 18 *e*P P 05 43 44.4 0.0
H13A **Challis** 82.09 40 ⇑P P 05 43 44.8 0.0
baz=82,SNR=11
F12A **Elk City** 82.10 38 ⇑P P 05 43 44.3 -0.5
baz=82,SNR=14
N16A **Rees Ranch, Co** 82.10 44 ⇑P P 05 43 45.1 +0.1
baz=82,SNR=5.2
U20A **Newcomb** 82.10 49 ⇓P P 05 43 45.0 0.0
baz=82,SNR=8.1
Q18A **Rafter H Ranch** 82.16 46 ⇓P P 05 43 45.6 +0.3
baz=82,SNR=11
M16A **Huntsville** 82.17 43 ⇓P P 05 43 45.1 -0.2
baz=82,SNR=6.8
W21A **San Fidel** 82.21 50 ⇑P P 05 43 46.0 +0.3
baz=82,SNR=5.7
SDSI **Sungai Dareh** 82.22 271 P P 05 43 45.6 -0.7
comp=Z,14nm,1.5s,mb4.7
Y22A **Socorro** 82.23 52 ⇓P P 05 43 45.9 +0.1
baz=82,SNR=15
K15A **Arbon** 82.24 42 ⇑P P 05 43 45.0 -0.6
baz=82,SNR=8.1
O17A **Robinson Place** 82.25 45 ⇑P P 05 43 45.8 +0.1
baz=82,SNR=11
E12A **Beaver Dam Sad** 82.25 38 ⇑P P 05 43 44.9 -0.7
baz=82
S19A **Harvey Farm, M** 82.25 48 ⇑P P 05 43 45.8 0.0
baz=82
I14A **Mackay** 82.27 40 ⇓P P 05 43 45.6 -0.2
baz=82,SNR=9.1
LAZ **Ladron** 82.29 51 *e*P P 05 43 47.0 +0.9
comp=Z,30nm,2.0s,mb4.9
P18A **Preston Nutter** 82.32 45 ⇓P P 05 43 46.0 -0.1
baz=82
HWUT **Hardware Ranch** 82.35 43 *e*P P 05 43 46.4 +0.2
comp=Z,24nm,1.5s,mb4.9
NEW **Newport** 82.36 35 ⇑P P 05 43 46.1 -0.1
baz=82
NEW **Newport** 82.36 35 *e*P P 05 43 45.6 -0.5
NEW pmax pmax
comp=Z,17nm,1.5s
NEW **Newport** 82.36 35 *e*P P 05 43 45.5 -0.6
comp=Z,17nm,1.5s,mb4.8
G13A **Cobalt** 82.37 39 ⇑P P 05 43 46.0 -0.2
baz=82,SNR=7.5
324A **Moseley Ranch,** 82.37 55 ⇑P P 05 43 46.7 0.0
baz=82,SNR=20
R19A **Curley Farm, L** 82.41 47 ⇓P P 05 43 46.9 +0.3
baz=82,SNR=9.5
425A **Indio Mountain** 82.51 55 ⇑P P 05 43 47.5 +0.2
baz=83,SNR=18
Z23A **Rita Site, Whi** 82.52 53 ⇓P P 05 43 47.7 +0.4
baz=83
N17A **Moffit Pass** 82.53 44 ⇓P P 05 43 46.6 -0.6
baz=83
MNTX **Cornudas Mount** 82.55 54 ⇑P P 05 43 48.3 +0.7
baz=83,SNR=26
MNTX **Cornudas Mount** 82.55 54 *e*P P 05 43 47.9 +0.3
comp=Z,30nm,1.4s,mb5.1
BNM **Barren Site** 82.57 52 *e*P P 05 43 47.3 -0.3
comp=Z,33nm,1.6s,mb5.1
224A **Cornudas Mount** 82.59 54 ⇑P P 05 43 48.3 +0.6
baz=83,SNR=24
C11A **Tepee Creek (N** 82.62 36 ⇑P P 05 43 47.5 0.0
baz=83,SNR=11
J15A **Blackfoot** 82.65 41 ⇑P P 05 43 48.2 +0.5
baz=83,SNR=14
H14A **Leadore** 82.66 40 ⇓P P 05 43 47.9 +0.1
baz=83,SNR=9.2
DOT **Dot Lake** 82.68 14 *e*P P 05 43 46.6 -0.8
comp=Z,116nm,1.5s,mb5.7
Q19A **Hogan Spring (** 82.70 46 ⇑P P 05 43 47.8 -0.4
baz=83,SNR=13
Q19A ⇑P 05 43 48.4
baz=83
PV04 **Paradox Valley** 82.70 47 *e*P P 05 43 47.6 -0.5
D12A **Red Ives Fores** 82.72 37 ⇑P P 05 43 47.6 -0.4
baz=83
626A **Big Bend Ranch** 82.72 57 ⇓P P 05 43 48.8 +0.4
baz=83,SNR=13
325A **Bean Ranch, Si** 82.75 55 ⇑P P 05 43 48.5 -0.1
baz=83,SNR=27
U21A **Nageezi** 82.75 49 ⇓P P 05 43 48.8 +0.3
baz=83,SNR=17
U21A ⇓P 05 43 49.5
baz=83
W22A **Albuquerque** 82.77 51 ⇓P P 05 43 49.4 +0.8
baz=83
O18A **Roosevelt** 82.77 45 ⇓P P 05 43 48.5 0.0
baz=83
DLBC **Dease Lake** 82.79 23 *e*P P 05 43 48.4 +0.3
PV01 **Paradox Valley** 82.83 47 *e*P P 05 43 48.9 +0.1
comp=Z,2µm,1.4s
S20A **Disappointment** 82.84 48 ⇑P P 05 43 49.2 +0.3
baz=83,SNR=7.5
S20A ⇓P 05 43 49.4
baz=83
M17A **Scullys Gap (B** 82.88 44 ⇓P P 05 43 48.6 -0.5
baz=83
124A **Stringfield Ra** 82.89 53 ⇓P P 05 43 49.2 -0.1
baz=83,SNR=9.9
I15A **Monteview** 82.91 41 ⇓P P 05 43 49.4 +0.4
baz=83,SNR=6.2
G14A **Jackson** 82.92 39 ⇓P P 05 43 49.2 +0.1
baz=83
K16A **Soda Springs** 82.92 42 ⇓P P 05 43 49.6 +0.5
baz=83,SNR=5.8
Y23A **Lovelace Mesa,** 82.92 52 ⇓P P 05 43 49.1 -0.3
baz=83,SNR=11
COLA **College** 82.93 12 *e*P P 05 43 47.4 -1.3
COLA pmax pmax
comp=Z,160nm,2.2s,mb5.7
COLA **College** 82.93 12 *e*P P 05 43 47.4 -1.3
comp=Z,160nm,2.2s,mb5.7
526A **Mary Lane Ranc** 82.95 56 ⇑P P 05 43 49.9 +0.2
baz=83
R20A **Redvale** 82.99 47 ⇑P P 05 43 49.4 -0.3
baz=83,SNR=7.1
R20A ⇓P 05 43 50.2
baz=83
C12B **Naegeli Ranch,** 82.99 36 ⇓P P 05 43 48.8 -0.6
baz=83
TXAR **Lajitas Array** 83.02 57 P P 05 43 50.7 +0.7
comp=Z,11nm,1.2s,mb4.8,baz=232,slow=4.1,SNR=40
TXAR LR LR 06 13 34.2
comp=Z,397nm,18.9s,MS4.8,baz=320,slow=30
ANMO **Albuquerque** 83.03 51 *e*P P 05 43 50.3 +0.4
ANMO pmax pmax
comp=Z,30nm,1.3s
ANMO **Albuquerque** 83.03 51 *e*P P 05 43 50.3 +0.4
comp=Z,30nm,1.3s,mb5.2
ILAR **Eielson Array** 83.04 12 P P 05 43 48.1 -1.1
comp=Z,15nm,1.2s,mb4.9,baz=225,slow=5.6,SNR=33
ILAR LR LR 06 13 47.2
comp=Z,128nm,20.4s,MS4.3,baz=194,slow=31
ILAR **Eielson Array** 83.04 12 P P 05 43 48.1 -1.1
ILAR LR LR 06 13 47.2
T21A **Navajo Lake** 83.08 49 ⇑P P 05 43 50.2 +0.1
baz=83,SNR=6.0
X23A **Hourglass Bar** 83.08 51 ⇓P P 05 43 50.0 -0.3
baz=83,SNR=12
E13A **Victor** 83.09 38 ⇑P P 05 43 49.1 -0.9
baz=83,SNR=9.5
MCMT **McKenzie Canyo** 83.09 40 *e*P P 05 43 50.2 +0.3
comp=Z,5.8nm,1.2s,mb4.5
H15A **Lima** 83.11 40 ⇑P P 05 43 50.0 -0.2
baz=83,SNR=13
J16A **Bone** 83.11 42 ⇓P P 05 43 50.2 +0.1
baz=83,SNR=14
225A **Deer Hill, Car** 83.15 54 ⇓P P 05 43 51.4 +0.7
baz=83,SNR=16
S21A **Coal Bank Pass** 83.18 48 ⇓P P 05 43 50.8 +0.1
baz=83,SNR=11
P19A **Cripple Cowboy** 83.20 46 ⇓P P 05 43 50.5 -0.2
baz=83
Z24A **Sheeppen Canyo** 83.21 53 ⇑P P 05 43 51.0 +0.1
baz=83,SNR=7.8
426A **McDonald Obser** 83.23 56 ⇑P P 05 43 51.6 +0.5
baz=83,SNR=34
F14A **Wisdom** 83.26 39 ⇑P P 05 43 50.3 -0.6
baz=83
D13A **Huson** 83.26 37 ⇑P P 05 43 50.0 -0.9
baz=83,SNR=6.8
M18A **Lyman** 83.26 44 ⇑P P 05 43 50.8 -0.1
baz=83,SNR=9.5
627A **Terlingua Ranc** 83.29 57 ⇑P P 05 43 52.2 +0.8
baz=83,SNR=24
K17A **Gardner Place,** 83.31 42 ⇓P P 05 43 51.1 -0.1
baz=83,SNR=7.7
U22A **Llaves** 83.32 50 ⇑P P 05 43 51.4 0.0
baz=83
N18A **Larsen Ranch,** 83.32 44 ⇓P P 05 43 51.3 0.0
baz=83
B12A **Libby** 83.33 36 ⇓P P 05 43 51.4 +0.3
baz=83
RRI2 **Red Ridge** 83.33 42 *e*P P 05 43 51.6 +0.3
comp=Z,26nm,1.2s,mb5.1
W23A **Werner Place,** 83.34 51 ⇑P P 05 43 51.3 -0.2
baz=83,SNR=10
527A **Woodward Ranch** 83.37 56 ⇓P P 05 43 52.2 +0.4
baz=83,SNR=27
Q20A **Ridgley Place,** 83.38 47 ⇑P P 05 43 51.3 -0.4
baz=83,SNR=20
Y24A **Capitan** 83.39 52 ⇑P P 05 43 51.7 -0.2
baz=83,SNR=19
O19A **Miners Draw (B** 83.39 45 ⇑P P 05 43 51.8 +0.1
baz=84,SNR=7.8
BJI **Beijing** 83.41 314 P P 05 43 51.7 -0.1
BJI SS SS 05 59 40.3 +4.3
BJI pmax pmax
comp=Z,28nm,1.5s,mb5.1
BJI pmax pmax
comp=Z,88nm,6.7s
BJI LR LR
comp=N,100nm,16.2s,MS4.5
BJI LR LR
comp=E,130nm,16.2s,MS4.5
BJI LR LR
comp=Z,61nm,18.2s,MS4.0
MSO **Missoula** 83.43 38 ⇑P P 05 43 51.0 -0.7
baz=84,SNR=6.3
MSO **Missoula** 83.43 38 *e*P P 05 43 50.8 -0.9
comp=Z,15nm,1.5s,mb4.8
BSMT **Bassoo Peak** 83.46 37 *e*P P 05 43 51.2 -0.6
G15A **Dillon** 83.48 40 ⇓P P 05 43 51.7 -0.3
baz=84,SNR=12
I16A **Newdale** 83.48 41 ⇑P P 05 43 52.0 -0.1
baz=84,SNR=11
E14A **Clinton** 83.49 38 ⇑P P 05 43 50.8 -1.2
baz=84,SNR=6.3
125A **Gardner Draw,** 83.49 54 ⇑P P 05 43 52.2 -0.2
baz=84,SNR=14
DLMT **Dillon** 83.51 40 *e*P P 05 43 52.2 +0.1
comp=Z,17nm,1.3s,mb5.0
L18A **Fontenelle, Gr** 83.51 43 ⇑P P 05 43 51.9 -0.3
baz=84
326A **Caldwell Ranch** 83.51 55 ⇑P P 05 43 52.5 0.0
baz=84,SNR=12
GDL2 **Guadalupe Moun** 83.55 54 *e*P P 05 43 53.4 +0.7
P20A **De Beque** 83.55 46 ⇑P P 05 43 52.4 -0.1
baz=84,SNR=8.9
T22A **Edith** 83.55 49 ⇑P P 05 43 52.4 -0.2
baz=84,SNR=6.8
V23A **Ortiz Mt. (NFS** 83.56 50 ⇓P P 05 43 53.1 +0.4
baz=84,SNR=16
N19A **John Jarvie Ra** 83.62 45 ⇑P P 05 43 52.8 0.0
baz=84
TPAW **Teton Pass** 83.64 42 *e*P P 05 43 53.1 +0.3
comp=Z,29nm,1.4s,mb5.2
REDW **Red Top Meadow** 83.64 42 *e*P P 05 43 52.9 0.0
comp=Z,39nm,1.4s,mb5.3
R21A **Cimarron** 83.65 48 ⇓P P 05 43 53.3 +0.3
baz=84,SNR=29
Z25A **Roswell** 83.69 53 ⇑P P 05 43 53.6 +0.2
baz=84,SNR=12
226A **Malaga, Loving** 83.70 54 ⇓P P 05 43 53.4 -0.1
baz=84
628A **Black Gap, Mar** 83.71 57 ⇑P P 05 43 53.6 +0.1
baz=84,SNR=17
J17A **Brown Place, J** 83.73 42 ⇑P P 05 43 53.3 -0.1
baz=84,SNR=9.0
SNOW **Snow King Moun** 83.75 42 *e*P P 05 43 53.8 +0.4
comp=Z,35nm,1.4s,mb5.3
U23A **El Rito** 83.79 50 ⇓P P 05 43 53.7 -0.1
baz=84,SNR=20
427A **Hayter Ranch,** 83.80 56 ⇑P P 05 43 54.2 +0.3
baz=84,SNR=31
F15A **Butte** 83.80 39 ⇓P P 05 43 53.5 -0.1
baz=84,SNR=6.5
D14A **Greenough** 83.81 38 ⇓P P 05 43 52.8 -0.9
baz=84
LRM **Limekiln Ridge** 83.82 39 *e*P P 05 43 53.5 -0.2
K18A **Toltan Ranch,** 83.83 43 ⇑P P 05 43 53.9 0.0
baz=84,SNR=23
Q21A **Lamborn Mesa,** 83.83 47 ⇑P P 05 43 54.1 +0.1
baz=84,SNR=11
IMW **Indian Meadow** 83.84 41 *e*P P 05 43 54.2 +0.4
comp=Z,18nm,1.2s,mb5.1
CHMT **Chamberlain Mo** 83.88 38 *e*P P 05 43 53.4 -0.6
MOOW **Moose Ponds** 83.89 42 *e*P P 05 43 54.1 0.0
comp=Z,13nm,1.4s,mb4.9
S22A **4UR Ranch, Cre** 83.91 48 ⇑P P 05 43 54.7 +0.4
baz=84,SNR=23
M19A **Rock Springs** 83.91 44 ⇓P P 05 43 54.2 -0.1
baz=84
B13A **Whitefish** 83.92 36 ⇓P P 05 43 53.8 -0.4
baz=84
LOHW **Long Hollow** 83.92 42 *e*P P 05 43 53.9 -0.4
comp=Z,18nm,1.4s,mb5.0
W24A **Lazy 6 Ranch,** 83.92 51 ⇑P P 05 43 54.5 0.0
baz=84,SNR=11
O20A **White River Ci** 83.93 46 ⇑P P 05 43 54.2 -0.2
baz=84,SNR=6.4
G16A **Moss Hill, Enn** 83.93 40 ⇑P P 05 43 54.4 +0.1
baz=84,SNR=6.9
CLNB **Carlsbad** 83.95 54 *e*P P 05 43 55.4 +0.7
comp=Z,5.4nm,1.2s,mb4.5
Y25A **Mesa, Roswell** 83.96 53 ⇓P P 05 43 54.3 -0.4
baz=84,SNR=8.8
126A **Clayton Basin,** 83.98 54 ⇓P P 05 43 54.5 -0.3
baz=84,SNR=5.9
E15A **Deer Lodge** 84.00 39 ⇓P P 05 43 54.4 -0.2
baz=84,SNR=9.1
H16A **Russell Place,** 84.03 41 ⇑P P 05 43 55.2 +0.4
baz=84,SNR=12
528A **Cox Ranch, San** 84.03 57 ⇓P P 05 43 55.4 +0.2
baz=84,SNR=9.8
IPM **Ipoh** 84.06 276 P P 05 43 57.1 +1.4
FLWY **Flagg Ranch** 84.08 41 *e*P P 05 43 55.7 +0.7
comp=Z,38nm,1.4s,mb5.3
I17A **Pilgrim Ck.** 84.08 42 ⇑P P 05 43 55.6 +0.5
baz=84
J18A **Kendall Valley** 84.11 42 ⇑P P 05 43 55.2 -0.1
baz=84,SNR=21
R22A **Saguache, Gunn** 84.16 48 ⇑P P 05 43 55.8 +0.1
baz=84,SNR=15
BILL **Bilibino** 84.17 354 ⇓*e*P P 05 43 54.2 -0.8
BILL *e* 05 47 08.3
BILL *e*SS SS 05 59 39.1 -7.0
BILL pmax pmax
comp=Z,12nm,1.2s,mb4.9
DAWY **Dawson** 84.17 15 *e*P P 05 43 54.6 -0.4
YMR **Madison River** 84.19 41 *e*P P 05 43 56.5 +0.8
comp=Z,44nm,1.5s,mb5.4
T23A **Casias Ranch,** 84.19 49 ⇑P P 05 43 55.9 +0.1
baz=84,SNR=7.9
BW06 **Boulder Array** 84.21 43 ⇑P P 05 43 55.4 -0.4
baz=84,SNR=10
BW06 **Boulder Array** 84.21 43 *e*P P 05 43 55.3 -0.5
comp=Z,16nm,1.3s,mb5.0
PDAR **Pinedale Array** 84.21 43 P P 05 43 55.2 -0.5
comp=Z,5.7nm,1.1s,mb4.6,baz=208,slow=2.9,SNR=28
PDAR LR LR 06 15 10.1
comp=Z,162nm,18.2s,MS4.5,baz=271,slow=31
N20A **Spence Gulch,** 84.22 45 ⇓P P 05 43 55.7 -0.2
baz=84,SNR=8.2
V24A **Rampart Ranch,** 84.23 51 ⇓P P 05 43 55.5 -0.5
baz=84,SNR=5.4
A13A **Flathead Natio** 84.24 36 ⇑P P 05 43 55.7 -0.1
baz=84
BOZ **Bozeman (W)** 84.24 40 ⇓P P 05 43 55.7 -0.1
baz=84,SNR=13
BOZ **Bozeman (W)** 84.24 40 *e*P P 05 43 55.6 -0.3
BOZ pmax pmax
comp=Z,18nm,1.4s,mb5.0
BOZ **Bozeman (W)** 84.24 40 *e*P P 05 43 55.6 -0.2
comp=Z,18nm,1.4s,mb5.0
Z26A **Caprock** 84.25 53 ⇑P P 05 43 55.9 -0.3
baz=84,SNR=15
F16A **Kennard Place,** 84.31 40 ⇓P P 05 43 55.9 -0.3
baz=84,SNR=6.2
Q22A **Crested Butte,** 84.32 47 ⇑P P 05 43 56.7 +0.3
baz=84,SNR=18
EGAK **Eagle** 84.32 14 *e*P P 05 43 55.3 -0.5
comp=Z,32nm,1.3s,mb5.3
428A **Kincaid Ranch,** 84.32 56 ⇑P P 05 43 56.8 +0.1
baz=84,SNR=11
D15A **Lincoln** 84.38 38 ⇓P P 05 43 55.9 -0.6
baz=84,SNR=5.5
328A **Wristen Ranch,** 84.46 56 ⇓P P 05 43 56.8 -0.5
baz=84,SNR=8.7
I18A **Diamond G Ranc** 84.47 42 ⇑P P 05 43 56.6 -0.5
baz=84,SNR=5.4
S23A **Nye Farm, Mont** 84.49 49 ⇑P P 05 43 57.2 -0.1
baz=84
O21A **Pagoda** 84.50 46 ⇑P P 05 43 57.0 -0.3
baz=85
U24A **Moreno Valley** 84.50 50 ⇓P P 05 43 58.1 +0.7
baz=85
ENH **Enshi** 84.51 303 *e*P P 05 43 58.6 +1.0
comp=Z,6.3nm,0.7s,mb4.8
127A **Arkansas Junct** 84.51 54 ⇑P P 05 43 57.0 -0.6
baz=85,SNR=5.4
M20A **Sweetwater, Wa** 84.56 44 ⇑P P 05 43 57.5 0.0
baz=85,SNR=8.0
B14A **Marquette Ranc** 84.60 37 ⇓P P 05 43 57.2 -0.4
baz=85
COLD **Coldfoot** 84.62 10 *e*P P 05 43 57.2 -0.1
HRY **Holter Researc** 84.63 39 *e*P P 05 43 58.3 +0.5
G17A **Pierce Place,** 84.63 40 ⇓P P 05 43 57.9 0.0
baz=85
W25A **X Bar L Ranch,** 84.64 51 ⇓P P 05 43 57.7 -0.4
baz=85,SNR=15
L20A **Wamsutter** 84.68 44 ⇑P P 05 43 58.2 0.0
baz=85,SNR=7.9
C15A **Salmond Ranch,** 84.69 37 ⇓P P 05 43 57.6 -0.5
baz=85,SNR=8.7
N21A **Black Mountain** 84.69 45 ⇓P P 05 43 58.6 +0.3
baz=85,SNR=14
K19A **Absolon Red Bu** 84.70 43 ⇓P P 05 43 57.4 -0.9
baz=85,SNR=7.9
P22A **Eagle** 84.73 47 ⇑P P 05 43 58.1 -0.4
baz=85,SNR=9.0
V25A **Rancho No Teng** 84.76 51 ⇓P P 05 43 58.4 -0.4
baz=85,SNR=11
J19A **Crowheart** 84.77 43 ⇓P P 05 43 58.1 -0.4
baz=85
A14A **Double T Ranch** 84.82 36 ⇓P P 05 43 58.1 -0.6
baz=85,SNR=5.8
Z27A **Tatum** 84.86 54 ⇓P P 05 43 58.5 -0.9
baz=85
SDCO **Great Sand Dun** 84.87 49 ⇓P P 05 43 59.0 -0.2
baz=85,SNR=12
SDCO **Great Sand Dun** 84.87 49 *e*P P 05 43 59.0 -0.2
comp=Z,15nm,1.4s,mb4.9
T24A **Torres, Weston** 84.93 50 ⇑P P 05 43 59.6 +0.1
baz=85,SNR=7.3
D16A **Dana Ranch, Ca** 84.95 38 ⇓P P 05 43 59.6 +0.1
baz=85,SNR=5.3
F17A **Fitzpatrick Pl** 84.96 40 ⇓P P 05 43 59.2 -0.3
baz=85,SNR=5.8
K20A **Yellowstone Ra** 84.96 43 ⇑P P 05 43 58.9 -0.7
baz=85,SNR=7.2
B15A **Bradely Ranch,** 84.98 37 ⇓P P 05 43 58.7 -0.9
baz=85,SNR=5.2
H18A **Shoshone NF, C** 85.01 41 ⇑P P 05 43 59.8 0.0
baz=85
S24A **Houchin Ranch,** 85.03 49 ⇑P P 05 44 00.4 +0.3
baz=85,SNR=7.7
Q23A **Hartsel** 85.10 48 ⇑P P 05 44 00.3 0.0
baz=85,SNR=6.0
E17A **Martinsdale** 85.10 39 ⇑P P 05 43 60.0 -0.2
baz=85
W26A **Owens Ranch, T** 85.11 52 ⇓P P 05 44 00.2 -0.4
baz=85
O22A **Kremmling** 85.11 46 ⇓P P 05 44 00.6 +0.2
baz=85,SNR=13
Y27A **Causey** 85.12 53 ⇓P P 05 43 59.8 -0.8
baz=85
U25A **Circle Dot Ran** 85.14 50 ⇑P P 05 44 00.0 -0.6
baz=85
M21A **Separation Pea** 85.16 45 ⇓P P 05 44 00.3 -0.3
baz=85,SNR=6.7
C16A **Fuhringer Ranc** 85.21 38 ⇑P P 05 44 00.4 -0.3
baz=85
A15A **Johnson Ranch,** 85.22 36 ⇓P P 05 44 00.4 -0.3
baz=85,SNR=8.5
P23A **Jefferson** 85.29 47 ⇑P P 05 44 01.8 +0.5
baz=85,SNR=5.4
L21A **Rawlins** 85.31 44 ⇑P P 05 44 00.6 -0.8
baz=85
R24A **Sanders Place,** 85.35 48 ⇑P P 05 44 01.2 -0.4
baz=85
V26A **Tequesquite Ra** 85.37 51 ⇓P P 05 44 01.2 -0.6
baz=85
G18A **Lazy EL Ranch,** 85.37 41 ⇑P P 05 44 01.6 +0.1
baz=85,SNR=5.8
J20A **Shoshoni** 85.44 43 ⇑P P 05 44 01.5 -0.5
baz=86
H19A **Powell** 85.44 41 ⇓P P 05 44 02.1 +0.2
baz=86,SNR=6.8
N22A **Wattenberg Ran** 85.44 46 ⇓P P 05 44 02.0 -0.1
baz=86
MSTX **Muleshoe** 85.45 53 ⇓P P 05 44 01.8 -0.4
baz=86
X27A **F and S Farms,** 85.45 52 ⇑P P 05 44 02.0 -0.3
baz=86
RLMT **Red Lodge** 85.47 41 ⇓P P 05 44 02.2 +0.2
baz=86,SNR=7.5
RLMT **Red Lodge** 85.47 41 *e*P P 05 44 02.2 +0.2

comp=Z,18nm,1.4s,mb5.0
GYA Guiyang 85.52 299 P P 05 44 03.9 +1.1
GYA PP PP 05 47 24.6 +2.5
GYA SKS 05 54 24.3
GYA S S 05 54 33.0 +2.2
GYA SS SS 06 00 11.2 +3.5
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,120nm,5.9s
GYA LR LR
comp=Z,840nm,20.0s,MS5.1
GCMT Greycliff 85.52 40 *e*P **P 05 44 02.7 +0.4**
comp=Z,19nm,1.5s,mb5.1
B16A M & M Farms, S 85.53 37 ⇓P **P 05 44 01.7 -0.5**
baz=86
D17A Six Diamond Ra 85.53 39 ⇑P **P 05 44 02.4 +0.1**
baz=86,SNR=13
F18A Big Timber 85.54 40 ⇓P **P 05 44 02.5 +0.1**
baz=86,SNR=7.2
S25A Robets Cordova 85.61 49 ⇑P **P 05 44 02.6 -0.3**
baz=86,SNR=5.6
Q24A Divide 85.61 48 ⇓P **P 05 44 02.9 0.0**
baz=86
ISCO Idaho Springs 85.62 47 ⇑P **P 05 44 02.7 -0.2**
baz=86
ISCO Idaho Springs 85.62 47 *e*P **P 05 44 03.6 +0.7**
ISCO pmax pmax
comp=Z,13nm,1.6s,mb4.9
ISCO Idaho Springs 85.62 47 *e*P **P 05 44 03.6 +0.6**
comp=Z,13nm,1.6s,mb4.9
PSI Prapat 85.63 274 P **P 05 44 03.5 -0.1**
comp=Z,3.4nm,0.5s,mb4.8,baz=184,slow=2.7,SNR=4.7
I20A Worland 85.67 42 ⇓P **P 05 44 02.8 -0.3**
baz=86
K21A Alcova 85.68 44 ⇑P **P 05 44 02.6 -0.6**
baz=86,SNR=5.3
C17A Wharram Farm, 85.71 38 ⇑P **P 05 44 02.7 -0.5**
baz=86,SNR=18
E18A Harlowton 85.72 39 ⇓P **P 05 44 03.6 +0.3**
baz=86
N23A Red Feather La 85.84 46 ⇑P **P 05 44 03.6 -0.4**
baz=86
R25A Fountain Ranch 85.91 49 ⇓P **P 05 44 04.0 -0.4**
baz=86
H20A Greybull 85.99 42 ⇑P **P 05 44 04.1 -0.6**
baz=86
F19A Roth Farm, Mol 86.00 40 ⇑P **P 05 44 04.1 -0.6**
baz=86,SNR=6.2
B17A L&G Farms, Che 86.00 38 ⇓P **P 05 44 04.1 -0.5**
baz=86,SNR=10
D18A Linhart Farms, 86.08 39 ⇓P **P 05 44 05.3 +0.3**
baz=86,SNR=5.7
I21A Big Trails, Te 86.16 43 ⇑P **P 05 44 05.2 -0.3**
baz=86,SNR=7.1
K22A Casper 86.17 44 ⇑P **P 05 44 05.1 -0.5**
baz=86
XAN Xi'an 86.32 307 P **P 05 44 06.8 +0.3**
XAN pP pP 05 44 22.3 +1.0
XAN pmax pmax
comp=Z,3.0nm,1.5s,mb4.3
XAN pmax pmax
comp=Z,31nm,12.8s
A17A Triple J Farms 86.37 37 ⇓P **P 05 44 06.3 -0.1**
baz=86,SNR=18
E19A Rath Farm, Rou 86.37 40 ⇓P **P 05 44 06.6 +0.1**
baz=86,SNR=6.3
F20A Billings 86.47 41 ⇓P **P 05 44 06.9 -0.1**
baz=86
EGMT Eagleton 86.49 38 ⇑P **P 05 44 07.2 +0.2**
baz=87
L23A Garrett 86.50 45 ⇑P **P 05 44 07.1 -0.2**
baz=87
J22A Midwest 86.52 43 ⇑P **P 05 44 06.6 -0.7**
baz=87,SNR=5.9
P25A Willow Gulch B 86.53 48 ⇓P **P 05 44 07.3 -0.1**
baz=87
N24A Carr 86.54 46 ⇓P **P 05 44 07.8 +0.3**
baz=87
JCT Junction City 86.56 57 ⇓P **P 05 44 07.1 -0.7**
baz=87
JCT Junction City 86.56 57 *e*P **P 05 44 07.9 +0.1**
JCT pmax pmax
comp=Z,26nm,1.7s,mb5.2
JCT Junction City 86.56 57 *e*P **P 05 44 07.9 +0.1**
comp=Z,26nm,1.7s,mb5.2
AMTX Amarillo 86.62 53 ⇑P **P 05 44 07.5 -0.5**
baz=87
B18A Beardsley Farm 86.65 38 ⇓P **P 05 44 07.7 -0.1**
baz=87,SNR=7.9
C19A Slack Wire Ran 86.78 39 ⇓P **P 05 44 08.9 +0.4**
baz=87,SNR=10
E20A Meyer Farm, Mu 86.80 40 ⇓P **P 05 44 08.7 +0.1**
baz=87
MAW Mawson 86.85 199 P **P 05 44 08.3 -0.2**
comp=Z,22nm,1.3s,mb5.2,baz=111,slow=7.8,SNR=12
MAW LR LR 06 18 53.2
comp=Z,306nm,20.0s,MS4.7,baz=118,slow=33
MAW Mawson 86.85 199 *e*P **P 05 44 08.7 +0.1**
comp=Z,12nm,1.5s,mb4.9
A18A Metzger Ranch, 86.86 37 ⇑P **P 05 44 08.3 -0.5**
baz=87,SNR=11
HHC Hu-ho-hao-te 86.94 314 *e*P **P 05 44 09.6 +0.2**
HHC PP PP 05 47 35.6 +2.4
HHC SKS 05 54 32.1
HHC S S 05 54 45.5 +1.4
HHC SS SS 06 00 31.4 +3.4
HHC pmax pmax
comp=Z,17nm,1.2s,mb5.2
HHC pmax pmax
comp=Z,91nm,5.8s
HHC LR LR
comp=N,120nm,15.1s,MS4.6
HHC LR LR
comp=E,170nm,16.8s,MS4.6
HHC LR LR
comp=Z,110nm,16.1s,MS4.3
EDM Edmonton 87.02 32 *e*P **P 05 44 09.0 -0.5**
D20A Manuel Ranch, 87.05 39 ⇑P **P 05 44 09.7 -0.1**
baz=87
F21A Absaloka Mine, 87.13 41 ⇓P **P 05 44 10.5 +0.3**
baz=87
C20A Veseth Ranch, 87.41 39 ⇓P **P 05 44 11.5 0.0**
baz=88,SNR=6.7
E21A Keefer Ranch, 87.47 40 ⇓P **P 05 44 12.2 +0.3**
baz=88
D21A La Casta Ranch 87.74 40 ⇑P **P 05 44 13.3 +0.2**
baz=88
BTO Baotou 87.93 313 *e*P **P 05 44 14.6 +0.4**
RSSD Black Hills 88.43 43 *e*P **P 05 44 16.3 -0.1**
KMI Kunming 88.45 296 P **P 05 44 18.2 +1.2**
KMI PP PP 05 47 47.9 +2.2
KMI S S 05 55 03.4 +4.2
KMI pmax pmax
comp=Z,14nm,1.1s,mb5.1
KMI pmax pmax
comp=Z,140nm,4.9s
KMI LR LR
comp=N,130nm,16.3s,MS4.5
KMI LR LR
comp=E,100nm,16.3s,MS4.5
KMI LR LR
comp=Z,140nm,21.3s,MS4.3
WMOK Wichita Mounta 88.81 54 *e*P **P 05 44 18.3 -0.2**
WMOK pmax pmax
comp=Z,39nm,2.5s,mb5.3
WMOK Wichita Mounta 88.81 54 *e*P **P 05 44 18.3 -0.2**
comp=Z,39nm,2.5s,mb5.3
CD2 Chengdu 89.37 302 *e*P **P 05 44 22.0 +0.8**
CD2 PP PP 05 47 56.2 +3.2
CD2 SKS 05 54 49.0
CD2 S S 05 55 09.2 +1.6
CD2 SS SS 06 01 07.5 +3.6
CD2 pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
CD2 pmax pmax
comp=Z,30nm,5.6s
CD2 LR LR
comp=N,130nm,16.2s
CD2 LR LR
comp=Z,140nm,13.8s,MS4.5
HKT Hockley 89.64 59 *e*P **P 05 44 23.2 +0.7**
HKT pmax pmax
comp=Z,7.0nm,1.3s,mb4.8
HKT Hockley 89.64 59 *e*P **P 05 44 23.2 +0.7**
comp=Z,6.8nm,1.3s,mb4.8
CMAR Chiang Mai Arr 89.89 289 P **P 05 44 25.2 +1.3**
comp=Z,0.9nm,0.4s,mb4.5,baz=98,slow=3.0,SNR=18
CHTO Chiang Mai 89.99 289 *e*P **P 05 44 25.5 +1.1**
CHTO Chiang Mai 89.99 289 P **P 05 44 25.7 +1.3**
comp=Z,11nm,1.7s,mb4.9
DGMT Dagmar 90.04 39 ⇓P **P 05 44 24.2 +0.3**
baz=90
DGMT Dagmar 90.04 39 *e*P **P 05 44 24.5 +0.6**
comp=Z,53nm,1.5s,mb5.7
LZH Lanzhou 90.93 307 *e*P **P 05 44 29.0 +0.6**
LZH *e*S S 05 55 23.0 +1.2
LZH SS SS 06 01 30.0 +3.8
LZH pmax pmax
comp=Z,27nm,1.3s,mb5.4
LZH pmax pmax
comp=Z,120nm,7.8s
YKA Yellowknife Ar 91.27 24 LR LR 06 17 02.9
comp=Z,37nm,20.8s,MS3.8,baz=35,slow=30
PLCA Paso Flores 91.62 133 P **P 05 44 29.3 -2.3**
comp=Z,2.9nm,1.0s,mb4.5,baz=255,slow=12,SNR=2.3
PLCA Paso Flores 91.62 133 P **P 05 44 29.3 -2.3**
SYO Syowa Base 92.00 192 ⇓*e*X **P 05 44 30.0 -2.8**
ULN Ulaanbaatar 92.54 319 *e*P **P 05 44 36.1 +0.6**
ULN pmax pmax
comp=Z,1.0nm,0.5s,mb4.5
ULN Ulaanbaatar 92.54 319 *e*P **P 05 44 36.1 +0.6**
comp=Z,1.5nm,0.5s,mb4.7
ULN Ulaanbaatar 92.54 319 P **P 05 44 36.2 +0.7**
SONM Songino Array 92.95 319 P **P 05 44 37.0 -0.4**
comp=Z,1.4nm,0.9s,mb4.4,baz=186,slow=1.5,SNR=5.8
VNA3 Neumayer Olymp 93.08 176 *e*P **P 05 44 35.2 -2.5**
ECSD EROS Data Cent 93.31 46 *e*P **P 05 44 38.5 -0.7**
comp=Z,15nm,1.4s,mb5.2
VNA2 Neumayer--Watz 93.55 176 *e*P **P 05 44 37.2 -2.7**
ZAK Zakamensk 95.69 321 *e*P **P 05 44 49.0 -0.9**
ULM Lac du Bonnet 95.76 40 LR LR 06 21 49.3
comp=Z,453nm,19.4s,MS5.0,baz=274,slow=32
FVM French Village 96.20 52 *e*P **P 05 44 52.3 -0.3**
FVM pmax pmax
comp=Z,141nm,2.9s,mb5.9
FVM French Village 96.20 52 *e*P **P 05 44 52.3 -0.3**
comp=Z,141nm,2.9s,mb5.9
JFWS Jewell Farm 97.55 48 *e*P **P 05 44 57.8 -0.7**
DMN Daman 104.39 295 *e*P PKiKP 05 49 42.0 -3.7
comp=Z,8.3nm,0.4s
DANN Dangsing 105.68 296 *e*P PKiKP 05 49 46.4 -1.7
comp=Z,54nm,0.6s
JOSI Joshimath 109.62 297 *ex* PKiKP 05 49 56.5 +1.1
AKL Akola 110.54 287 *e*PKP PKiKP 05 49 55.4 -2.0
AGRA Agra 110.62 294 *e*PKP PKiKP 05 49 56.3 -1.1
AGRA AMb AMB 05 50 05.5
comp=Z,132nm,0.5s
KLP Kalpa 110.84 298 *e*PKP PKiKP 05 49 57.9 +0.3
KLP AMb AMB 05 50 17.1
comp=Z,10.0nm,0.6s
AYAN Aya Nagar 111.49 295 *e*PKP PKiKP 05 49 58.0 -1.0
SONA Sohna 111.50 295 *e*PKP PKiKP 05 49 58.3 -0.7
KUDL Kundal 112.01 294 *e*PKP PKiKP 05 50 01.1 +1.1
KLMR Klimovskoe 127.79 339 *e*PKIKP PKPdf 05 50 26.8 -2.4
KLMR pmax pmax
comp=Z,26nm,1.6s
OBN Obninsk 132.93 335 ⇓*i*PKIKP PKPdf 05 50 38.1 -1.1
OBN *e* 05 52 59.1
OBN pmax pmax
comp=Z,10.0nm,0.8s
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.6
ANN Anapa 139.11 323 *i* PKIKP PKPdf 05 50 53.6 +2.6
ANN *e* 05 57 59.0
ANN pmax pmax
comp=Z,32nm,1.0s
AKASG Malin Array Be 139.19 335 PKP PKPdf 05 50 49.8 -1.1
comp=Z,0.3nm,0.3s,baz=18,slow=1.5,SNR=7.9
STHS Stebnicka Huta 143.16 341 *e*PKHKP PKPdf 05 50 49.5 -8.6
STHS Stebnicka Huta 143.16 341 *e*PKP PKPdf 05 50 49.5 -8.6
CLL Collm 143.41 350 *e*PKPdf PKPdf 05 50 57.6 -0.9
CLL Collm 143.41 350 *i* PKIKP PKPdf 05 50 57.3 -1.2
CLL *i* 05 51 02.3
CLL pmax pmax
comp=Z,8.0nm,1.2s
CLL Collm 143.41 350 *i* PKP PKPdf 05 50 57.3 -1.2
CLL *i* 05 51 02.3
CLL Collm 143.41 350 *i* PKPdf PKPdf 05 50 57.3 -1.2
comp=Z,8.0nm,1.2s
CLL *i* PKiKP PKiKP 05 51 02.3 +0.5
UZH Uzhgorod 143.49 339 *e*PKHKP PKPpre 05 50 42.4
UPC Upice 143.59 347 *e*PKIKP PKPdf 05 50 56.5 -2.3
UPC Upice 143.59 347 *e*PKP PKPdf 05 50 56.5 -2.3
BRG Berggiesshubel 143.66 349 *e*P PKPdf 05 50 57.3 -1.7
comp=Z,4.5nm,0.8s
BRG *e* 05 51 04.8
comp=Z,3.0nm,1.0s
BRG Berggiesshubel 143.66 349 *e*PKIKP PKPdf 05 50 57.3 -1.6
BRG *e* 05 51 04.8
BRG pmax pmax
comp=Z,3.0nm,0.9s
DPC Dobruska-Polom 143.66 346 *e*PKIKP PKPdf 05 50 57.5 -1.5
DPC *e* 05 51 02.1
DPC Dobruska-Polom 143.66 346 *e*PKP PKPdf 05 50 57.5 -1.5
DPC *ex* x 05 51 02.1
BUG Bochum--Univer 143.94 356 *e*PKPdf PKPdf 05 50 59.4 0.0
KECS Kecovo 144.22 341 *e*PKIKP PKPdf 05 50 58.0 -2.0
KECS Kecovo 144.22 341 *e*PKP PKPdf 05 50 58.0 -2.0
MOX Moxa 144.27 351 *e*PKPdf PKPdf 05 51 00.0 0.0
BR131 Keskin Array S 144.31 319 *e*PKPdf PKPdf 05 50 58.4 -2.0
BRTR Keskin Array B 144.31 319 PKP PKPdf 05 50 58.7 -1.8
comp=Z,28nm,1.2s,baz=116,slow=2.9,SNR=47
TANN Tannenbergstha 144.36 350 *e*PKPdf PKPdf 05 51 00.0 -0.2
PRU Pruhonice 144.39 348 *e*PKIKP PKPdf 05 50 58.7 -1.6
PRU Pruhonice 144.39 348 *e*PKP PKPdf 05 50 58.7 -1.6
GUNZ Gunzen 144.43 350 *e*PKPdf PKPdf 05 51 00.5 +0.2
WERN Wernitzgruen 144.50 350 *e*PKPdf PKPdf 05 51 00.7 +0.3
NKC Novy Kostel 144.54 350 *e*PKIKP PKPdf 05 51 00.1 -0.4
NKC Novy Kostel 144.54 350 *e*PKP PKPdf 05 51 00.1 -0.4
VRAC Vranov 144.57 345 PKIKP PKPdf 05 50 59.1 -1.5
MLR Muntele Rosu 144.62 333 PKIKP PKPdf 05 51 00.2 -0.6
MLR Muntele Rosu 144.62 333 ⇓*i*P PKPdf 05 50 59.9 -0.9
BEBN Eben Emael 144.67 358 PKP PKPdf 05 51 00.4 -0.3
VYHS Vyhne 144.71 342 *e*PKIKP PKPdf 05 50 59.2 -1.7
VYHS Vyhne 144.71 342 *e*PKP PKPdf 05 50 59.1 -1.8
MEM Membach 144.84 357 PKP PKPdf 05 51 00.7 -0.4
DRGR 144.90 337 PKIKP PKPdf 05 51 00.0 -1.2
DRGR 144.90 337 ⇑*i*P PKPdf 05 51 00.0 -1.2
PSZ Piszkesteto 144.91 341 PKIKP PKPdf 05 51 00.4 -0.8
PSZ Piszkesteto 144.91 341 ⇑*e*PKP PKPdf 05 50 59.5 -1.7
SNF Seneffe 144.99 359 PKP PKPdf 05 51 00.7 -0.6
VOIR 145.05 333 PKIKP PKPdf 05 51 01.3 -0.2
VOIR 145.05 333 ⇓*i*P PKPbc 05 51 00.3 -0.7
BCLA Clavier 145.06 358 PKP PKPdf 05 51 01.7 +0.3
GRA3 Grafenberg Arr 145.17 351 *e*PKPbc PKPbc 05 51 01.0 -0.2
GRA1 Grafenberg Arr 145.25 351 *e*PKPbc PKPbc 05 51 01.4 -0.1
GRF Grafenberg Arr 145.25 351 *e*PKPbc PKPbc 05 51 01.4 -0.1
GRA2 Grafenberg Arr 145.27 351 *e*PKPbc PKPbc 05 51 01.4 -0.2
GRA4 Grafenberg Arr 145.34 351 *e*PKPbc PKPbc 05 51 01.7 -0.1
DOU Dourbes 145.40 359 PKP PKPdf 05 51 00.7 -1.3
KHC Kasperske Hory 145.40 348 *e*PKIKP PKPdf 05 51 01.5 -0.5
KHC Kasperske Hory 145.40 348 *e*PKP PKPdf 05 51 01.3 -0.7
KHC *ex* x 05 51 07.1
GRB4 Grafenberg Arr 145.42 351 *e*PKPbc PKPbc 05 51 01.8 -0.3
GRB1 Grafenberg Arr 145.48 351 *e*PKPbc PKPbc 05 51 02.0 -0.2
GRB3 Grafenberg Arr 145.50 351 *e*PKPbc PKPbc 05 51 02.0 -0.3
WET Wettzell 145.51 349 *e*PKPbc PKPbc 05 51 02.2 -0.2
BUD Budapest 145.56 341 ⇓*e*PKP PKPdf 05 51 02.4 0.0
TOD Tromm 145.64 354 PKP2 PKPab 05 51 01.5 -1.5
GEC2 GERESS Array S 145.65 348 *e*PKPbc PKPbc 05 51 02.4 -0.4
RUP Ruppelstein 145.69 356 PKIKP PKPdf 05 51 02.0 -0.5
GRB5 Grafenberg Arr 145.75 351 *e*PKPbc PKPbc 05 51 02.8 -0.3
WLF Walferdange 145.78 357 PKP PKPdf 05 51 03.2 +0.6
WLF Walferdange 145.78 357 *e*PKPbc PKPbc 05 51 03.3 +0.1
WLF Walferdange 145.78 357 *e*PKPbc PKPbc 05 51 03.2 0.0
GRC1 Grafenberg Arr 145.89 351 *e*PKPbc PKPbc 05 51 03.1 -0.4
GRC3 Grafenberg Arr 145.98 351 *e*PKPbc PKPbc 05 51 03.4 -0.4
CONA Conrad Observa 146.03 345 ⇑*i*PKPab PKPab 05 51 03.5 -1.1
comp=Z,49nm,1.5s
GZR Gura Zlata 146.03 336 PKIKP PKPdf 05 51 03.2 0.0
GZR Gura Zlata 146.03 336 ⇑*i*P PKPdf 05 51 03.3 +0.1
SOP Sopron 146.08 344 ⇓*e*PKP PKPdf 05 51 04.3 +1.1
BZS Buzias 146.30 337 PKP2 PKPdf 05 51 03.5 -0.2
BZS Buzias 146.30 337 ⇑*i*P PKPdf 05 51 04.2 +0.5
LANF Langenberg 146.35 355 PKP PKPdf 05 51 04.8 +1.2
STU Stuttgart 146.42 353 *e*PKPbc PKPbc 05 51 05.2 +0.1
MOA Molln 146.48 347 ⇑*i*PKPdf PKPdf 05 51 02.7 -1.2
comp=Z,18nm,1.7s
ROSF Rostrenen 146.68 8 *e*PKP1 PKPbc 05 51 04.2 -1.7
FUR Furstenfeldbru 146.73 351 *e*PKPbc PKPbc 05 51 05.8 -0.2
ARSA Arzberg 146.75 345 ⇓*i*PKPdf PKPdf 05 51 03.2 -1.2
comp=Z,14nm,1.3s
PKSM Moragy 146.81 341 PKIKP PKPdf 05 51 04.5 0.0
PKSM Moragy 146.81 341 ⇓*i*P PKPdf 05 51 04.3 -0.2
SGMF Saint Gilles 146.86 8 *e*PKP1 PKPbc 05 51 04.8 -1.6
RJOB Jochberg 146.88 349 *e*PKPbc PKPbc 05 51 06.3 -0.2
BFO Black Forest 146.94 354 *e*PKPbc PKPbc 05 51 06.4 -0.2
CDF Champ du Feu 146.95 356 *e*PKP1 PKPbc 05 51 05.8 -0.9
CSS Prodhromos 147.00 312 *e*PKPbc PKPbc 05 51 07.4 +0.1
SPAK Spaichingen-Ko 147.12 354 PKP PKPdf 05 51 06.2 +1.2
THEF They Montfort 147.22 357 PKP PKPdf 05 51 06.7 +1.6
SFTF Sexfontaines 147.28 358 *e*PKP1 PKPbc 05 51 06.8 -0.8
comp=Z,67nm,1.4s
KOGS Kog 147.30 344 *e*PKPdf PKPdf 05 51 07.0 +1.6
KOGS Kog 147.30 344 *e*PKPdf PKPdf 05 51 07.0 +1.6
SOKA Soboth 147.40 345 ⇑*i*PKPdf PKPdf 05 51 05.0 -0.5
comp=Z,28nm,1.4s
KBA Koelnbreinsper 147.41 348 ⇑*i*PKPdf PKPdf 05 51 04.9 -0.6
comp=Z,14nm,1.6s
HAU Haudompre 147.42 357 *e*PKP1 PKPbc 05 51 07.2 -0.8
comp=Z,75nm,1.5s
HAU *e*MLR MLR
comp=Z,165nm,19.0s,MS4.5
HAU Haudompre 147.42 357 *e*PKP PKPbc 05 51 07.2 -0.8
HAU LR LR
comp=Z,160nm,19.0s,MS4.8
MOF Molkenrain 147.52 356 PKP PKPbc 05 51 07.8 -0.5
HINF Hinteralfeld 147.58 356 *e*PKP1 PKPbc 05 51 07.4 -1.0
DAVA Damuels 147.79 352 ⇑*i*PKPdf PKPdf 05 51 05.9 -0.2
comp=Z,29nm,1.6s
BBS Basel-Blauen 147.88 355 PKIKP PKPdf 05 51 05.7 -0.6
ABTA Abfaltersbach 147.89 348 ⇑*i*PKPdf PKPdf 05 51 05.9 -0.4
comp=Z,14nm,1.0s
FETA Feichten 147.93 351 ⇑*i*PKPdf PKPdf 05 51 05.9 -0.5
comp=Z,21nm,1.1s
VTS Vitosha 148.11 332 ⇑PKP2 PKPbc 05 51 09.4 -0.6
VTS Vitosha 148.11 332 ⇑*i*P PKPbc 05 51 09.4 -0.6
LJU Ljubljana 148.12 346 *i* PKIKP PKPdf 05 51 06.7 0.0
LJU Ljubljana 148.12 346 *i* PKPdf PKPdf 05 51 06.7 0.0
CADS Cadrg 148.13 347 *e*PKPdf PKPdf 05 51 05.8 -0.9
CADS Cadrg 148.13 347 *e*PKPdf PKPdf 05 51 05.8 -0.9
LOR Lormes 148.24 360 *e*PKP1 PKPbc 05 51 09.3 -0.9
comp=Z,62nm,1.6s
LOR *e*MLR MLR
comp=Z,145nm,19.8s,MS4.5
LOR Lormes 148.24 360 *e*PKP PKPbc 05 51 09.3 -0.9
LOR LR LR
comp=Z,140nm,19.8s,MS4.8
VISS Visnje 148.27 345 *e*PKPdf PKPbc 05 51 09.3 -1.0
VISS Visnje 148.27 345 *e*PKPdf PKPbc 05 51 09.3 -1.0
SSF Saint Saulge 148.44 0 *e*PKP1 PKPbc 05 51 10.1 -0.7
comp=Z,72nm,1.4s
TUE Stuetta 148.66 352 *e*PKPdf PKPdf 05 51 07.5 0.0
TUE *e*PKPbc PKPbc 05 51 11.3 0.0
AVF Avril sur Loir 148.71 0 *e*PKP1 PKPbc 05 51 10.3 -1.2
comp=Z,84nm,1.6s
MFF Saint Martin d 148.74 5 *e*PKP1 PKPbc 05 51 10.5 -1.0
comp=Z,72nm,1.5s
CABF La Chapelle 148.83 357 *e*PKP1 PKPbc 05 51 11.5 -0.2
comp=Z,98nm,1.3s
SMF Signal de Mont 148.86 360 *e*PKP1 PKPbc 05 51 10.9 -0.9
comp=Z,63nm,1.6s
BGF Bois d'Agland 148.94 1 *e*PKP1 PKPbc 05 51 11.3 -0.7
comp=Z,52nm,1.3s
TCF Toulx Ste Croi 149.19 2 *e*PKP1 PKPbc 05 51 11.7 -1.0
comp=Z,52nm,1.4s
VAY Valandovo 149.41 331 *e*PKP PKPbc 05 51 11.4 -2.0
AGO Saint Agoulin 149.45 1 PKP PKPbc 05 51 12.7 -0.6
PLDF La Plantade 149.53 360 PKP PKPbc 05 51 13.2 -0.3
PYM Petit Puy Mans 149.75 1 PKP PKPbc 05 51 13.6 -0.5
LPL La Plagne 149.87 356 *e*PKP1 PKPbc 05 51 14.6 +0.2
comp=Z,106nm,1.7s
LPG La Plagne 149.89 356 *e*PKP1 PKPbc 05 51 14.8 +0.4
KRUS Krusevo 149.97 333 *e*PKP PKPbc 05 51 13.0 -1.8
RJF Les Rejaudoux 150.15 3 *e*PKP1 PKPbc 05 51 14.3 -0.8
RJF *e*MLR MLR
comp=Z,193nm,18.5s,MS4.6
RJF Les Rejaudoux 150.15 3 *e*PKP PKPbc 05 51 14.3 -0.8
RJF LR LR
comp=Z,190nm,18.5s,MS4.9
BIA Bitola 150.22 332 *e*PKP PKPbc 05 51 14.1 -1.3
LFF La Frestale 150.47 4 *e*PKP1 PKPbc 05 51 15.0 -0.8
comp=Z,108nm,1.6s
ORIF Oris-en-Rattie 150.53 357 *e*PKP1 PKPbc 05 51 15.5 -0.5
comp=Z,95nm,1.8s
ORIF *e*MLR MLR
comp=Z,173nm,19.5s,MS4.6
CAF Calviac 150.55 2 *e*PKP1 PKPbc 05 51 15.4 -0.6
comp=Z,62nm,1.6s
VIVF Saint-Julien-l 150.64 358 *e*PKP1 PKPbc 05 51 15.9 -0.3
comp=Z,93nm,1.5s
MBDF Montbardon 150.66 355 *e*PKP1 PKPbc 05 51 15.9 -0.4
comp=Z,61nm,1.3s
OCF Saint Nazaire 150.89 358 PKP PKPbc 05 51 16.9 0.0
OG26 St.-Nazaire-De 150.89 358 PKP PKPbc 05 51 16.9 0.0
SAOF Saorge 151.32 354 PKP PKPbc 05 51 17.1 -0.8
TOUF Mont Tournerai 151.32 355 PKP PKPbc 05 51 17.2 -0.7
AUTN L'Aution 151.33 354 PKP PKPbc 05 51 17.5 -0.4
LASF Ste Croix 151.43 360 *e*PKP1 PKPbc 05 51 17.8 -0.3
comp=Z,83nm,1.5s
SBF Sospel 151.46 354 *e*PKP1 PKPbc 05 51 17.1 -1.1
comp=Z,89nm,1.4s
SMRF Simiane la Rot 151.48 357 *e*PKP1 PKPbc 05 51 18.1 -0.1
comp=Z,87nm,1.5s
CALN Calern 151.62 355 PKP PKPbc 05 51 18.5 -0.1
FRF La Foret Royal 151.82 355 *e*PKP1 PKPbc 05 51 18.1 -0.9
MTLF Montolieu 152.14 2 *e*PKP1 PKPbc 05 51 19.1 -0.7
PVRL Vila Real 152.42 19 *e*PKP PKPdf 05 51 14.0 +0.4
PGF Pioggiola 152.56 351 *e*PKP1 PKPbc 05 51 19.5 -1.2
comp=Z,72nm,1.4s
MVO Moncorvo 152.73 18 *e*PKP PKPdf 05 51 13.8 -0.2
TORD Torodi Ar. Bea 177.08 140 PKP PKPdf 05 51 34.1 -1.3
comp=Z,1.8nm,1.1s,baz=223,slow=2.2,SNR=4.9
TORD PKPab PKPab 05 53 19.8 +0.5
comp=Z,4.2nm,1.2s,baz=249,slow=6.0,SNR=9.7

BJI 01 05:37:19.3, 42°.54N×83°.94E, h16km, ML2.7/6, 1C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**3.03**	**64**	Pg	Pg	05 38 14.5	-2.9
WMQ				Sn	Sn	05 38 49.0	+6.5
WMQ				smax			
comp=N,29nm,0.5s							
WMQ				smax			
comp=E,36nm,0.5s							
MK31	**Makanchi Array**	**4.41**	**345**	⇓Pn	Pn	05 38 36.0	+10
comp=E,0.8nm,0.3s,baz=161,slow=16,SNR=14							
MK31				⇑Lg		05 39 30.1	
comp=E,13nm,0.8s,baz=166,slow=29,SNR=13							
TKM2	**Tokmak 2**	**6.16**	**276**	⇓Lg		05 40 27.3	
comp=E,4.6nm,0.6s							

*IDC **01** 05:40:09.1±4.5, 14°.19N×123°.40E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/20, mbtmp3.9/3, MS3.1/1, Ms1 3.1/1, ms1mx2.7/33, Error ellipse: s-maj=119.6km s-min=23.4km az=34.0*

*ISCJB **01** 05:40:20.0±0.8, 12°.71N±0°.03×122°.01E±0°.05, h18km±9km, mb3.9/3, Error ellipse: s-maj=8.3km s-min=4.5km az=160.9*

*MAN **01** 05:40:19, 12°.70N×122°.00E, h11km, mb4.5, ML3.3, MS3.2*

ISC 01 05:40:19.9±0.9, 12°.72N±0°.03×122°.02E±0°.05, h11km±7km, n28, σ1s09/30, mb3.9/3, 3C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTRP	**Odiongan**	**0.36**	**180**	*e*P	**Pg**	**05 40 27.5**	**+0.4**
BOAC	**Boac**	**0.75**	**347**	*e*P	**Pg**	**05 40 33.2**	**-1.3**
AUQP	**San Andres**	**0.87**	**47**	*e*P	**Pg**	**05 40 36.8**	**0.0**
GQP	**Guinayangan**	**1.25**	**19**	⇓*e*P	**Pn**	**05 40 41.6**	**-1.7**
GQP				*e*S	**Sb**	**05 40 58.7**	**-0.8**
RCP	**Roxas**	**1.35**	**148**	⇓*e*P	**Pn**	**05 40 43.6**	**-1.2**
RCP				*i* S	**Sb**	**05 41 01.3**	**-1.3**
LQP	**Lukban**	**1.46**	**341**	⇑*e*P	**Pn**	**05 40 45.4**	**-0.8**
TGY	**Tagaytay City**	**1.73**	**323**	Pn	**Pn**	**05 40 49.2**	**-0.8**
601nm,0.3s,baz=161,slow=3.2,SNR=75							
TGY	**Tagaytay City**	**1.73**	**323**	⇑*e*P	**Pn**	**05 40 50.0**	**+0.1**
BUSP	**Coron**	**1.92**	**248**	*e*P	**Pn**	**05 40 51.9**	**-0.7**
POLP	**Polilio Island**	**2.00**	**358**	*e*P	**Pn**	**05 40 54.2**	**+0.6**
LUBP	**Lubang**	**2.00**	**300**	*e*P	**Pn**	**05 40 53.2**	**-0.5**

CUYO Cuyo Island 2.10 208 *e*P Pn 05 40 54.7 -0.4
GUIM Jordan 2.16 165 *e*P Pn 05 40 56.4 +0.6
CNP Catarman 2.59 94 *e*P Pn 05 41 03.0 +1.3
ENPP El Nido 2.96 240 *e*P Pn 05 41 06.4 -0.4
PCPH Palayan 2.96 342⇑*e*P Pn 05 41 08.0 +1.1
LLP Lapu-Lapu 3.06 141 *e*P Pn 05 41 08.4 +0.2
LLP *e*S Sn 05 41 43.7 -1.0
TBP Tagbilaran 3.51 149 *e*P Pn 05 41 14.4 0.0
MSLP Maasin 3.79 132 *e*P Pn 05 41 18.9 +0.6
BCPH Baguio City Da 3.90 339⇓*e*P Pn 05 41 25.7 +6.0
BOLP Bolinao 4.17 331 *e*P Pn 05 41 25.1 +1.6
CAUP Cauayan 4.20 357 *e*P Pn 05 41 26.1 +2.1
PAGZ Pagadian 5.03 164 *e*P Pn 05 41 37.5 +2.3
BUKP Musuan 5.67 148 *e*P Pn 05 41 45.7 +1.6
DAV Davao City (W) 6.62 148 LR LR 05 44 48.1
comp=Z,158nm,21.9s,baz=245,slow=38
CMAR Chiang Mai Arr 22.94 287 P P 05 45 24.4 0.0
2.2nm,0.8s,mb3.6,baz=96,slow=7.7,SNR=9.7
WRA Warramunga Arr 34.65 159 P P 05 47 07.1 -2.4
1.9nm,0.9s,mb4.0,baz=343,slow=9.0,SNR=7.9
ASAR Alice Springs 37.99 162 P P 05 47 38.5 +0.6
1.8nm,0.7s,mb3.9,baz=341,slow=6.6,SNR=18

NIED ***01*** *05:41:00, 42.60N×141.70E, h125km, Mw4.5 Best double couple: M₀5.43000×10¹⁵ NP1:φs253.00000°, δ76.00000°, λ-67.00000°. NP2:φs12.00000°, δ27.00000°, λ-148.00000°.*
ISCJB ***01*** *05:41:15.7±0.2, 42.58N±0.03×141.74E±0.03, h134km±1km, mb4.5/79, Error ellipse: s-maj=4.4km s-min=3.3km az=149.1*
BJI ***01*** *05:41:15.3, 42.78N×141.80E, h135km, mB4.7/18, mb4.7/32*
MOS ***01*** *05:41:15.5±0.8, 42.63N×141.69E, h128km, mb4.5/44, Error ellipse: s-maj=8.7km s-min=5.4km az=109.0*
IDC ***01*** *05:41:16.6±0.9, 42.58N×141.74E, h128km±7km, mb4.2/22, mb1 4.3/25, mb1mx4.2/30, mbtmp4.2/25, Error ellipse: s-maj=12.1km s-min=9.2km az=131.0*
JMA ***01*** *05:41:16.5±0.1, 42.59N×141.73E, h133km±1km, M4.5 Broadband fault plane solution: P waves. NP1: φs12.00000°, δ55.00000°, λ-174.00000°. NP2: φs278.00000°, δ85.00000°, λ-35.00000°. Principal axes: T Plg20.0000°, Azm330.0000°; N Plg55.0000°, Azm91.0000°; P Plg28.0000°, Azm229.0000°;*
JMA Felt II J1.
NEIC ***01*** *05:41:16.7±0.3, 42.60N×141.71E, h128km±3km, mb4.4/30 Error ellipse: s-maj=5.0km s-min=4.0km az=129.0*
NEIC Recorded [2 JMA] in southern Hokkaido. Also recorded [2 JMA] in Aomori and [1 JMA] in Iwate, Honshu.
ISC 01 05:41:16.8±0.2**, 42.58N**±0.02×**141.74E**±0.03**, h129**km±1km**, h132**km±1.2km**:pP-P, n231, σ0.72**/261**, mb4.5**/79**, 14C-17D, Hokkaido region**

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

JEW Eniwo 0.33 320 ⇓P Pn 05 41 35.1 +0.2
JEW *e*S Sn 05 41 49.2 +0.5
JBT2 Biratori 2 0.50 67 ⇓P Pn 05 41 36.0 +0.3
JBT2 S Sn 05 41 51.4 +1.3
JNB Noboribetsu 0.53 258 ⇓P Pn 05 41 35.8 -0.1
JNB *e*S Sn 05 41 50.4 0.0
JNBK Urakawa-nobuka 0.81 112 ⇑P Pn 05 41 38.3 +0.4
JNBK *e*S Sn 05 41 55.1 +1.2
JFR Furan 0.85 47 ⇓P Pn 05 41 38.0 -0.3
JFR *e*S Sn 05 41 54.1 -0.5
JKB Kayabe 0.87 217 ⇓P Pn 05 41 38.2 -0.2
JKB *e*S Sn 05 41 54.3 -0.5
JAB Ashibetsu 0.99 21 ⇓P Pn 05 41 40.0 +0.5
JAB *e*S Sn 05 41 57.3 +0.6
JHR Hokuryu 1.16 359 ⇓P Pn 05 41 42.0 +0.9
JHR *e*S Sn 05 42 01.2 +1.5
ERM Erimo 1.20 118 *e*Pn Pn 05 41 41.9 +0.4
ERM *e*Sn Sn 05 42 00.6 +0.3
JCH Churui 1.20 88 ⇓P Pn 05 41 41.2 -0.3
JCH S Sn 05 41 59.7 -0.7
JSK Shakotan 1.21 310 ⇑P Pn 05 41 42.1 +0.5
JSK *e*S Sn 05 42 01.5 +1.0
JOT Ohata 1.31 203 ⇑P Pn 05 41 42.6 -0.1
JOT *e*S Sn 05 42 02.0 -0.4
JKK2 Kamakawa 2 1.48 29 ⇓P Pn 05 41 44.6 0.0
JAR Ashorobuto 1.65 64 ⇓P Pn 05 41 45.9 -0.6
JAR *e*S Sn 05 42 07.8 -1.4
ASAJ Asahikawa 1.66 22 P Pn 05 41 46.7 +0.2
113nm,0.3s,baz=225,slow=13,SNR=418
ASAJ S Sn 05 42 09.2 -0.1
71nm,0.3s,baz=255,slow=20,SNR=11
ASAJ Asahikawa 1.66 22 PN Pn 05 41 46.7 +0.2
ASAJ S Sn 05 42 09.2 -0.1
ASAJ pmax pmax
comp=Z,113nm,0.3s
ASAJ smax
comp=N,71nm,0.3s
ASAJ Asahikawa 1.66 22 *e*Pn Pn 05 41 46.6 +0.1
JOSM Okushiri--Mats 1.75 254 ⇓P Pn 05 41 48.0 +0.3
JYG Yagishiri 1.86 353 ⇓P Pn 05 41 49.6 +0.7
JYG *e*S Sn 05 42 13.9 +0.3
JTKR Abashiri--Toko 2.11 48 ⇓P Pn 05 41 52.2 +0.3
JTKR *e*S Sn 05 42 18.6 -0.3
YUK Yuzh-Kuril'sk 3.34 63⇑*i*PN Pn 05 42 08.1 +0.4
YUK *i* S Sn 05 42 46.8 -0.3
YUK pmax pmax
comp=N,151nm,0.6s
YUK pmax pmax
comp=Z,485nm,0.6s
YUK pmax pmax
comp=E,158nm,0.3s
YUK pmax pmax
comp=Z,1μm,1.0s
YUK smax
comp=N,913nm,0.6s
YUK smax
comp=E,2μm,0.6s
YUK smax
comp=N,1μm,1.0s
YUK smax
comp=E,3μm,1.0s
YSS Yuzh-Sakhalins 4.43 9 *e*PN Pn 05 42 22.4 +0.3
YSS *e*S Sn 05 43 13.0 +0.1
YSS pmax pmax
comp=Z,70nm,0.6s
YSS smax
comp=N,400nm,3.0s
YSS smax
comp=N,190nm,1.2s
YSS Yuzh-Sakhalins 4.43 9 *e*Pn Pn 05 42 23.1 +1.0
KUR Kuril'sk 5.16 57⇑*i*PN Pn 05 42 31.0 -0.9
KUR S Sn 05 43 29.0 -1.4
KUR pmax pmax
comp=N,140nm,0.9s
KUR pmax pmax
comp=E,140nm,0.9s
KUR pmax pmax
comp=Z,640nm,0.9s
KUR smax
comp=N,220nm,0.8s
KUR smax
comp=E,110nm,0.8s
MAJO Matsushiro 6.62 205 *e*PN Pn 05 42 51.2 -0.4
MAT Matsushiro 6.62 205 P Pn 05 42 51.1 -0.5
MAT *e*S Sn 05 44 02.7 -3.0
MJAR Matsushiro Arr 6.62 205 P Pn 05 42 51.6 0.0
comp=E,7.4nm,0.3s,baz=24,slow=9.4,SNR=49
MJAR Matsushiro Arr 6.62 205 PN Pn 05 42 51.6 0.0
MJAR pmax pmax
comp=Z,7.0nm,0.3s
VLA Vladivostok 7.26 278⇓*i*P Pn 05 43 00.1 0.0
VLA pmax pmax
comp=Z,41nm,0.6s
VLA Vladivostok 7.26 278⇓*i*PN Pn 05 43 00.1 0.0
VLA *i* S Sn 05 44 20.7 -0.3
VLA pmax pmax
comp=Z,41nm,0.6s
HABR Khabarovsk 7.53 324 *e*PN Pn 05 43 03.3 -0.5
HABR S Sn 05 44 25.6 -1.9
HABR pmax pmax
comp=E,99nm,2.0s
HABR pmax pmax
comp=Z,161nm,2.0s
HABR pmax pmax
comp=N,85nm,2.1s

MDJ Mudanjiang 9.05 287 P Pn 05 43 23.6 -0.6
MDJ S Sn 05 45 03.2 -1.0
MDJ PcP PcP 05 49 36.3 +1.7
MDJ ScP ScP 05 52 56.4 +1.9
MDJ PcS PcS 05 53 09.8 +2.1
MDJ ScS ScS 05 56 29.8 +1.3
MDJ pmax pmax
comp=Z,13nm,0.8s
MDJ pmax pmax
comp=Z,81nm,4.0s
MDJ LR LR
comp=N,280nm,14.6s
MDJ LR LR
comp=E,80nm,7.7s
MDJ LR LR
comp=Z,90nm,7.7s
MDJ Mudanjiang 9.05 287 *e*Pn Pn 05 43 23.2 -1.0
comp=Z,12nm,0.8s
JHJ Hachijo jima 2 9.57 190 P Pn 05 43 27.3 -4.1
comp=Z,35nm,0.3s,baz=54,slow=19,SNR=12
JHJ S Sn 05 45 06.4 -11
comp=Z,45nm,0.3s,baz=62,slow=23,SNR=14
KLR Kul'dur 9.62 317 *e*PN Pn 05 43 24.8 -7.1
KLR pmax pmax
comp=Z,57nm,1.4s
KSRS Korea Array 11.76 249 P Pn 05 44 01.1 +0.6
comp=Z,0.5nm,0.3s,baz=62,slow=13,SNR=24
KSRS Korea Array 11.76 249 PN Pn 05 44 01.1 +0.7
KSRS pmax pmax
comp=Z,1.0nm,0.3s
CN2 Changchun 11.96 281 ⇑P Pn 05 44 03.2 +0.3
CN2 *e*sP 05 44 37.1
CN2 *e*S Sn 05 46 13.9 -0.7
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,500nm,4.0s
PETK Petropavlovsk- 14.99 40 P Pn 05 44 40.4 -1.2
comp=Z,0.5nm,0.3s,baz=220,slow=9.2,SNR=8.0
PETK Petropavlovsk- 14.99 40 P Pn 05 44 40.4 -1.3
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 14.99 40 P Pn 05 44 40.4 -1.3
CBIJ Chichi jima 15.46 179 P Pn 05 44 44.6 -3.1
comp=Z,10.0nm,0.3s,baz=158,slow=19,SNR=3.2
HIA Hailar 16.67 301 *e*P Pn 05 45 01.5 -1.0
HIA pmax pmax
comp=Z,34nm,0.8s
HIA Hailar 16.67 301 *e*Pn Pn 05 45 01.5 -1.0
comp=Z,34nm,0.8s
CLNS Chul'man 17.88 329 *e*P Pn 05 45 15.5 -1.4
CLNS pmax pmax
comp=Z,64nm,0.8s
CLNS pmax pmax
comp=N,27nm,0.8s
CLNS pmax pmax
comp=E,33nm,0.8s
BJI Beijing 19.35 271 P P 05 45 31.6 -0.4
BJI sP sP 05 46 09.2 -2.3
BJI S S 05 49 04.3 +0.4
BJI pmax pmax
comp=Z,17nm,0.5s
YAK Yakutsk 20.76 344 *e*P P 05 45 43.7 -3.3
YAK *e*S S 05 49 25.6 -5.6
YAK *e*SS 05 50 01.5
YAK pmax pmax
comp=Z,43nm,0.6s
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=E,7.0nm,0.8s
YAK smax
comp=N,28nm,1.4s
YAK smax
comp=E,40nm,1.4s
YAK Yakutsk 20.76 344 *e*P P 05 45 44.4 -2.6
comp=E,99nm,0.7s
SEY Seymchan 21.32 13⇑*e*P P 05 45 51.0 -1.9
HHC Hu-ho-hao-te 22.54 276 *e*P P 05 46 04.6 -1.3
HHC pP 05 46 27.1
HHC PP 05 46 38.5
HHC sP sP 05 46 45.4 -0.7
HHC S S 05 49 57.6 -5.5
HHC SS 05 50 52.3
HHC pmax pmax
comp=Z,15nm,1.1s,mb4.3
HHC pmax pmax
comp=Z,89nm,5.6s
HHC LR LR
comp=N,830nm,10.9s
HHC LR LR
comp=E,160nm,9.7s
HHC LR LR
comp=Z,170nm,8.2s
ULN Ulaanbaatar 24.86 294 *e*P P 05 46 27.1 +0.1
ULN pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
ULN Ulaanbaatar 24.86 294 *e*P P 05 46 27.1 +0.1
comp=Z,9.1nm,0.7s,mb4.4
SONM Songino Array 25.30 294 P P 05 46 31.5 +0.5
comp=Z,13nm,0.5s,mb4.7,baz=81,slow=10,SNR=37
SONM ScP ScP 05 53 27.6 +0.2
comp=Z,1.2nm,0.7s,baz=127,slow=1.8,SNR=6.3
SONM Songino Array 25.30 294 P P 05 46 31.5 +0.5
SONM pmax pmax
comp=Z,13nm,0.5s
SONM pmax pmax
comp=N,1.0nm,0.7s
TLY Talaya 27.20 303 *e*P P 05 46 46.5 -1.5
TLY pmax pmax
comp=Z,11nm,0.8s,mb4.5
TLY Talaya 27.20 303 *e*P P 05 46 48.4 +0.4
comp=Z,13nm,0.9s,mb4.5
ZAK Zakamensk 27.36 300 *e*P P 05 46 48.9 -0.5
LZH Lanzhou 29.84 270 *e*P P 05 47 11.2 -0.4
LZH pmax pmax
comp=Z,14nm,1.0s,mb4.7
LZH LR LR
comp=N,120nm,6.9s
LZH LR LR
comp=E,120nm,6.2s
LZH LR LR
comp=Z,150nm,12.1s
GTA Gaotai 31.57 279 *e*P P 05 47 27.9 +1.1
GTA pmax pmax
comp=Z,12nm,0.7s,mb4.7
CD2 Chengdu 32.33 261 *e*P P 05 47 33.9 +0.3
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
CD2 pmax pmax
comp=Z,20nm,5.4s
GYA Guiyang 32.80 252 P P 05 47 38.9 +1.3
GYA pP pP 05 48 08.0 +2.3
GYA sP sP 05 48 22.3 +1.7
GYA PP PP 05 48 52.8 -1.4
GYA PcP PcP 05 50 21.7 +2.0
GYA S S 05 52 45.5 +0.4
GYA ScP ScP 05 53 52.0 +0.4
GYA PcS PcS 05 54 05.6 +0.4
GYA ScS ScS 05 57 50.7 -1.2
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
KMI Kunming 36.39 254 P P 05 48 09.6 +1.0
KMI pP pP 05 48 39.1 +2.1
KMI sP sP 05 48 53.7 +1.9
KMI PP PP 05 49 36.5 +2.6
KMI S S 05 53 40.6 +0.2
KMI sS sS 05 54 30.7 +0.7
KMI pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
KMI pmax pmax
comp=Z,87nm,5.6s
ZAA0 Zalesovo Array 38.55 307 *e*P P 05 48 26.4 0.0
ZALV Zalesovo Beam 38.55 307 P P 05 48 26.7 +0.3
comp=Z,20nm,0.4s,mb5.2,baz=98,slow=8.6,SNR=44
ZALV PcP PcP 05 50 36.5 +0.3
comp=Z,3.9nm,0.5s,baz=95,slow=3.3,SNR=6.1
ZALV ScP ScP 05 54 11.9 -0.2
comp=Z,8.8nm,0.8s,baz=88,slow=3.9,SNR=25
ZALV Zalesovo Beam 38.55 307 P P 05 48 26.7 +0.3
ZALV 05 50 36.5
ZALV 05 54 12.0
ZALV pmax pmax
comp=Z,20nm,0.4s,mb5.1
ZALV Zalesovo Beam 38.55 307 P P 05 48 26.7 +0.3

ZALV PcP PcP 05 50 36.5 +0.3
ZALV ScP ScP 05 54 11.9 -0.2
NVS Novosibirsk 39.36 309 *e*P P 05 48 32.1 -1.1
NVS *e*S S 05 54 14.1 -10
NVS pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
NVS pmax pmax
comp=E,2.0nm,0.5s
NVS smax
comp=E,13nm,2.0s
MK31 Makanchi Array 41.60 297 *e*P P 05 48 51.8 +0.1
MKAR Makanchi Array 41.60 297 P P 05 48 51.6 0.0
comp=E,7.2nm,0.8s,mb4.4,baz=81,slow=9.4,SNR=55
MKAR ScP ScP 05 54 23.7 -0.5
comp=E,0.8nm,0.7s,baz=64,slow=5.5,SNR=4.9
MKAR Makanchi Array 41.60 297 P P 05 48 51.7 0.0
MKAR pmax pmax
comp=Z,7.0nm,0.8s
MKAR pmax pmax
comp=N,1.0nm,0.7s
MKAR Makanchi Array 41.60 297 P P 05 48 51.6 0.0
MKAR ScP ScP 05 54 23.7 -0.5
KURK Kurchatov 42.89 304 P P 05 49 02.6 +0.6
comp=N,36nm,0.7s,mb5.1,baz=75,slow=8.8,SNR=80
KURK Kurchatov 42.89 304*c* *i*P P 05 49 01.8 -0.2
KURK pmax pmax
comp=Z,77nm,0.8s,mb5.4
KURK Kurchatov 42.89 304 *e*P P 05 49 02.0 0.0
comp=Z,72nm,0.9s,mb5.3
CHTO Chiang Mai 43.16 250 *e*P P 05 49 05.5 +0.9
CHTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
CHTO Chiang Mai 43.16 250 *e*P P 05 49 05.5 +0.9
comp=Z,4.7nm,0.6s,mb4.3
CMAR Chiang Mai Arr 43.40 250 P P 05 49 07.2 +0.7
comp=Z,1.5nm,0.5s,mb3.8,baz=42,slow=7.6,SNR=8.7
CMAR Chiang Mai Arr 43.40 250 P P 05 49 07.3 +0.8
CMAR pmax pmax
comp=Z,2.0nm,0.5s
ILAR Eielson Array 44.75 35 P P 05 49 16.6 -0.1
comp=Z,1.6nm,0.7s,mb3.8,baz=238,slow=5.1,SNR=29
ILAR Eielson Array 44.75 35 P P 05 49 16.6 -0.1
ILAR pmax pmax
comp=Z,2.0nm,0.7s
VOSK Vostochnaya 46.91 308 P P 05 49 32.9 -0.9
VOSK pmax pmax
comp=Z,14nm,0.7s,mb4.7
JIRN Jiri 47.01 270 *e*P P 05 49 34.7 -0.2
comp=Z,10nm,0.2s,mb5.1
GUN Gumba 47.10 271 *e*P P 05 49 35.7 +0.1
comp=Z,24nm,0.3s,mb5.4
BVA0 Borovoye Array 47.16 309 *i* P P 05 49 35.9 +0.1
BVA0 pmax pmax
comp=Z,4.0nm,0.3s,mb4.5
BVAR Borovoye Array 47.16 309 P P 05 49 36.1 +0.4
comp=Z,23nm,0.3s,mb5.2,baz=76,slow=9.1,SNR=108
BVAR PcP PcP 05 51 05.5 +0.3
comp=Z,4.0nm,0.5s,baz=73,slow=3.0,SNR=4.1
BVAR ScP ScP 05 54 47.1 +0.2
comp=Z,2.0nm,0.7s,baz=96,slow=3.0,SNR=7.5
EGAK Eagle 47.17 35 *e*P P 05 49 35.6 -0.1
comp=Z,3.5nm,0.7s,mb4.1
BRVK Borovoye 47.21 309*c* *i*P P 05 49 36.6 +0.5
BRVK pmax pmax
comp=Z,30nm,1.2s,mb4.8
BRVK Borovoye 47.21 309 *e*P P 05 49 36.8 +0.6
comp=Z,29nm,1.1s,mb4.8
KKN Kakani 47.61 271 *e*P P 05 49 39.9 +0.3
PKI Pulchoki 47.63 271 *e*P P 05 49 39.8 0.0
comp=Z,6.3nm,0.3s,mb4.7
GKN Gorkha 47.97 272 *e*P P 05 49 42.6 +0.3
comp=Z,8.1nm,0.3s,mb4.8
AAK Ala-Archa 48.26 294 P P 05 49 44.6 +0.2
comp=Z,3.5nm,0.3s,mb4.4,baz=69,slow=3.5,SNR=6.0
AAK Ala-Archa 48.26 294*c* *i*P P 05 49 44.5 +0.1
AAK pmax pmax
comp=Z,4.0nm,1.7s,mb3.8
KOLN Koldanda 48.86 272 *e*P P 05 49 49.7 +0.5
comp=Z,15nm,0.3s,mb5.0
INK Inuvik 49.38 29 P P 05 49 52.7 +0.1
comp=Z,3.6nm,0.6s,mb4.2,baz=312,slow=7.4,SNR=20
INK Inuvik 49.38 29 P P 05 49 52.7 +0.1
INK pmax pmax
comp=Z,4.0nm,0.6s
INK Inuvik 49.38 29 *e*P P 05 49 52.6 0.0
comp=Z,9.8nm,1.4s,mb4.2
HYT Haines Junctio 49.77 39 *e*P P 05 49 57.2 +1.6
SVE Sverdlovsk 51.25 316⇑*e*P P 05 50 07.6 +0.8
SVE pmax pmax
comp=Z,54nm,0.7s,mb5.3
ARU Arti 52.46 316*c* *i*P P 05 50 15.6 -0.1
ARU *e* 05 52 12.2
ARU S S 05 57 32.9 +1.2
ARU SS SS 06 01 13.1 +2.4
ARU pmax pmax
comp=Z,38nm,1.2s,mb4.9
ARU Arti 52.46 316 *e*P P 05 50 15.8 +0.1
comp=Z,27nm,0.8s,mb4.9
ARU Arti 52.46 316 P P 05 50 15.0 -0.7
comp=Z,189nm,0.6s,SNR=5.2
AB31 Akbulak array 54.66 307 P P 05 50 31.7 -0.2
AB31 pmax pmax
comp=Z,4.0nm,0.3s,mb4.6
PSI Prapat 54.98 236 P P 05 50 35.2 +0.6
comp=Z,2.3nm,0.6s,mb4.1,baz=23,slow=13,SNR=3.1
PSI Prapat 54.98 236 P P 05 50 35.3 +0.7
PSI pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KBS Kingsbay 55.24 350*d* *i*P P 05 50 36.2 +0.5
KBS pmax pmax
comp=Z,38nm,2.5s,mb4.7
AKTO Aktyubinsk 55.25 309 P P 05 50 36.4 +0.2
comp=Z,6.7nm,0.6s,mb4.6,baz=65,slow=12,SNR=3.8
AKTO Aktyubinsk 55.25 309 P P 05 50 36.4 +0.3
AKTO pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
KAKA Kakadu 55.68 191 *e*P P 05 50 39.1 -0.4
comp=Z,19nm,0.7s,mb5.0
KAKA Kakadu 55.68 191 *e*P P 05 50 39.5 0.0
comp=Z,67nm,0.8s,mb5.5
KEV Kevo 58.37 338 *e*P P 05 50 56.9 -0.9
KEV pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
KEV Kevo 58.37 338 *e*p P 05 50 56.9 -0.9
comp=Z,5.0nm,0.4s,mb4.7
ARCES ARCESS Array B 58.92 338 P P 05 51 01.1 -0.5
comp=Z,4.9nm,0.8s,mb4.4,baz=42,slow=7.4,SNR=12
ARCES ARCESS Array B 58.92 338 P P 05 51 01.2 -0.4
ARCES pmax pmax
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 58.93 32 P P 05 51 07.4 +5.6
comp=Z,1.6nm,0.5s,mb4.1,baz=307,slow=7.2,SNR=5.8
YKA Yellowknife Ar 58.93 32 P P 05 51 07.4 +5.6
YKA pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 61.22 331 *e*P P 05 51 16.1 -1.3
JOF pmax pmax
comp=Z,12nm,0.5s,mb5.0
JOF Joensuu 61.22 331 *e*p P 05 51 16.1 -1.3
comp=Z,12nm,0.5s,mb5.0
WRA Warramunga Arr 62.58 188 P P 05 51 25.9 -1.1
comp=Z,2.8nm,0.5s,mb4.4,baz=5.5,slow=7.0,SNR=47
WRA Warramunga Arr 62.58 188 P P 05 51 25.9 -1.1
WRA pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 63.52 332 *e*P P 05 51 30.4 -2.3
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
KAF Kangasniemi 63.52 332 *e*p P 05 51 30.4 -2.3
comp=Z,9.0nm,0.6s,mb4.8
OBN Obninsk 63.85 322⇓*i*P P 05 51 34.9 -0.1
OBN *e**PP pP 05 52 06.0 -0.2
OBN *e* 05 53 52.8
OBN *e*S S 05 59 59.2 -0.5
OBN pmax pmax
comp=Z,20nm,1.0s,mb4.9
FINES FINESS Array B 64.05 331 P P 05 51 35.7 -0.5
comp=Z,18nm,0.5s,mb5.2,baz=53,slow=7.3,SNR=81
FINES FINESS Array B 64.05 331 P P 05 51 35.7 -0.5
FINES pmax pmax
comp=Z,18nm,0.5s
VSR Storozhevoye 64.97 317 *e*P P 05 51 41.8 -0.6
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
VSR pmax pmax
comp=N,10.0nm,1.1s

VSR pmax pmax
comp=E,10.0nm,1.2s
VSR MLR MLR
comp=E,370nm,19.0s
VSR MLR MLR
comp=Z,590nm,19.0s
VSR MLR MLR
comp=N,600nm,17.0s
VSU Vasula 65.83 329c iP **P 05 51 47.6 -0.1**
VSU pmax pmax
comp=Z,36nm,0.9s,mb5.2
ASAR Alice Springs 66.31 188 P **P 05 51 51.2 +0.1**
comp=Z,3.3nm,0.7s,mb4.3,baz=12,slow=6.6,SNR=34
ASAR Alice Springs 66.31 188 P **P 05 51 51.2 +0.1**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
KIV Kislovodsk 67.52 309⇑eP **P 05 52 00.0 +1.3**
KIV e*PP pP 05 52 31.6 +1.3
KIV e 05 54 25.5
KIV eS S 06 00 45.9 +1.3
KIV pmax pmax
comp=Z,40nm,1.7s,mb4.9
IDID Didziasalis 67.99 326 eP **P 05 52 01.6 +0.2**
IDID AMB AMB 05 52 02.1
comp=Z,7.2nm,0.7s,mb4.5
ISAL Salakas 68.07 326 eP **P 05 52 02.1 +0.2**
ISAL AMB AMB 05 52 02.7
comp=Z,8.8nm,0.6s,mb4.7
IIGN Ignalina 68.18 326 eP **P 05 52 02.9 +0.2**
IIGN AMB AMB 05 52 03.4
comp=Z,9.3nm,0.6s,mb4.7
NB2 NORSAR Subarra 69.18 337 P **P 05 52 08.3 -0.5**
comp=Z,7.6nm,0.6s,mb4.6,baz=36,slow=6.5
NOA NORSAR Array B 69.18 337 P **P 05 52 08.2 -0.6**
comp=Z,6.4nm,0.6s,mb4.5,baz=36,slow=6.3,SNR=27
NOA NORSAR Array B 69.18 337 P **P 05 52 08.2 -0.6**
NOA pmax pmax
comp=Z,6.0nm,0.6s
ANN Anapa 69.91 313 eP **P 05 52 23.9 +10**
ANN pmax pmax
comp=Z,28nm,0.9s,mb5.0
AKASG Malin Array Be 70.10 321 P **P 05 52 14.2 -0.3**
comp=Z,4.9nm,0.5s,mb4.5,baz=43,slow=6.2,SNR=21
AKASG Malin Array Be 70.10 321 P **P 05 52 14.2 -0.3**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
KIEV Kiev 70.11 321 eP **P 05 52 14.0 -0.6**
KIEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
KIEV Kiev 70.11 321 eP **P 05 52 14.0 -0.6**
comp=Z,7.5nm,0.6s,mb4.6
NVAR Mina Array Bea 71.52 55 P **P 05 52 24.5 +1.1**
comp=Z,1.0nm,0.6s,mb3.7,baz=296,slow=6.2,SNR=11
PDAR Pinedale Array 73.64 47 P **P 05 52 36.2 +0.4**
comp=Z,0.9nm,0.5s,mb3.8,baz=270,slow=0.4,SNR=11
NAY Al-Naaiem 73.91 295 eP **P 05 52 36.9 -0.8**
NAY AMb AMB 05 52 37.4
comp=Z,8.8nm,0.7s,mb4.6
RDF Al-Radifah 73.91 295 eP **P 05 52 38.1 +0.4**
RDF AMb AMB 05 52 40.0
comp=Z,24nm,0.9s,mb4.9
BUR08 Bucovina Ar. S 74.13 321 eP **P 05 52 39.2 +0.6**
STHS Stebnicka Huta 74.59 324 eP **P 05 52 42.1 +0.9**
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
STHS Stebnicka Huta 74.59 324 eP **P 05 52 42.1 +0.9**
comp=Z,4.7nm,0.7s,mb4.2
STHS Stebnicka Huta 74.59 324 eP **P 05 52 42.1 +0.9**
OJC Ojcow 74.59 326 eP **P 05 52 41.7 +0.5**
CRVS Cervenica-Dubn 74.88 324 eP **P 05 52 43.1 +0.2**
CRVS Cervenica-Dubn 74.88 324 eP **P 05 52 43.1 +0.2**
NIE Niedzica 74.98 325 eP **P 05 52 44.7 +1.2**
BRTR Keskin Array B 75.39 311 P **P 05 52 46.4 +0.3**
comp=Z,1.4nm,0.6s,mb3.8,baz=66,slow=3.4,SNR=4.9
BRTR Keskin Array B 75.39 311 i P **P 05 52 46.4 +0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
SRU San Rafael 75.61 50 eP **P 05 52 48.2 +0.9**
SRU pmax pmax
comp=Z,4.0nm,1.2s,mb3.9
SRU San Rafael 75.61 50 eP **P 05 52 48.1 +0.9**
comp=Z,4.2nm,1.2s,mb3.9
MORC Moravsky Berou 75.87 326 eP **P 05 52 48.6 +0.1**
UPC Upice 75.91 328 eP **P 05 52 49.5 +0.7**
UPC Upice 75.91 328 eP **P 05 52 49.5 +0.7**
DPC Dobruska-Polom 75.91 327 eP **P 05 52 49.7 +0.9**
DPC Dobruska-Polom 75.91 327 eP **P 05 52 49.7 +0.9**
VYHS Vyhne 76.32 325 eP **P 05 52 51.0 -0.1**
VYHS pmax pmax
comp=Z,4.0nm,1.4s,mb3.9
VYHS Vyhne 76.32 325 eP **P 05 52 51.0 -0.1**
comp=Z,4.3nm,1.4s,mb3.9
VYHS Vyhne 76.32 325 eP **P 05 52 51.0 -0.1**
CLL Collm 76.42 330 eP **P 05 52 51.0 -0.7**
CLL i 05 52 56.5
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
CLL Collm 76.42 330 eP **P 05 52 51.0 -0.7**
comp=Z,5.0nm,1.0s,mb4.1
CLL i 05 52 56.5
CLL Collm 76.42 330 eP **P 05 52 51.0 -0.7**
comp=Z,5.0nm,1.0s,mb4.1
CLL i P(2) 05 52 56.5
comp=Z,7.0nm,0.5s
PRU Pruhonice 76.90 328 eP **P 05 52 54.4 +0.1**
PRU Pruhonice 76.90 328 eP **P 05 52 54.4 +0.1**
KHC Kasperske Hory 77.96 328 eP **P 05 53 00.8 +0.5**
KHC Kasperske Hory 77.96 328 eP **P 05 53 00.8 +0.5**
GRA1 Grafenberg Arr 78.40 330 eP **P 05 53 03.0 +0.3**
comp=Z,8.0nm,1.2s,mb4.2
GRF Grafenberg Arr 78.40 330 eP **P 05 53 03.0 +0.3**
comp=Z,8.0nm,1.2s,mb4.2
GRF Grafenberg Arr 78.40 330 eP **P 05 53 03.0 +0.3**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
GRF Grafenberg Arr 78.40 330 eP **P 05 53 03.0 +0.3**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
SCHQ Schefferville 79.94 16 P **P 05 53 10.7 -0.3**
comp=Z,2.2nm,0.7s,mb3.9,baz=260,slow=12,SNR=3.9
LOR Lormes 83.07 333 eP **P 05 53 27.0 -0.6**
comp=Z,5.5nm,0.6s,mb4.2
LOR Lormes 83.07 333 eP **P 05 53 27.0 -0.6**
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
LOR Lormes 83.07 333 eP **P 05 53 27.0 -0.6**
comp=Z,2.8nm,0.6s,mb4.2
FLN La Foliniere 83.15 336 eP **P 05 53 27.8 -0.2**
SSF Saint Saulge 83.37 333 eP **P 05 53 28.7 -0.4**
LPL La Plagne 83.56 330 eP **P 05 53 30.9 +0.8**
comp=Z,5.8nm,0.5s,mb4.2
LPL La Plagne 83.56 330 eP **P 05 53 30.9 +0.8**
LPL pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
LPL La Plagne 83.56 330 eP **P 05 53 30.9 +0.8**
comp=Z,2.9nm,0.5s,mb4.3
LPG La Plagne 83.57 330 eP **P 05 53 30.5 +0.3**
SMF Signal de Mont 83.62 332 eP **P 05 53 30.1 -0.3**
AVF Avril sur Loir 83.66 333 eP **P 05 53 30.3 -0.3**
comp=Z,15nm,0.8s,mb4.5
AVF Avril sur Loir 83.66 333 eP **P 05 53 30.3 -0.3**
AVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
AVF Avril sur Loir 83.66 333 eP **P 05 53 30.3 -0.3**
comp=Z,7.6nm,0.8s,mb4.5
MBDF Montbardon 84.22 330 eP **P 05 53 33.7 +0.2**
comp=Z,3.6nm,0.5s,mb4.1
MBDF Montbardon 84.22 330 eP **P 05 53 33.7 +0.2**
MBDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
MBDF Montbardon 84.22 330 eP **P 05 53 33.7 +0.2**
comp=Z,1.8nm,0.5s,mb4.1
SGMF Saint Gilles 84.22 337 eP **P 05 53 33.3 -0.1**
ROSF Rostrenen 84.35 337 eP **P 05 53 34.0 -0.1**
ORIF Oris-en-Rattie 84.39 330 eP **P 05 53 34.3 0.0**
comp=Z,5.9nm,0.7s,mb4.1
ORIF Oris-en-Rattie 84.39 330 eP **P 05 53 34.3 0.0**
ORIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
ORIF Oris-en-Rattie 84.39 330 eP **P 05 53 34.3 0.0**
comp=Z,3.0nm,0.7s,mb4.1
TCF Toulx Ste Croi 84.48 333 eP **P 05 53 34.6 -0.2**
comp=Z,6.3nm,0.7s,mb4.2
TCF Toulx Ste Croi 84.48 333 eP **P 05 53 34.6 -0.2**
TCF pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
TCF Toulx Ste Croi 84.48 333 eP **P 05 53 34.6 -0.2**
comp=Z,3.2nm,0.7s,mb4.2
QUIF Quistinic 84.70 337 eP **P 05 53 35.4 -0.5**
VIVF Saint-Julien-l 84.88 331 eP **P 05 53 36.3 -0.5**
comp=Z,5.6nm,0.6s,mb4.2
VIVF Saint-Julien-l 84.88 331 eP **P 05 53 36.3 -0.5**
VIVF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
VIVF Saint-Julien-l 84.88 331 eP **P 05 53 36.3 -0.5**
comp=Z,2.8nm,0.6s,mb4.2
MFF Saint Martin d 84.97 335 eP **P 05 53 37.2 0.0**
comp=Z,5.4nm,0.4s,mb4.3
PGF Pioggiola 85.19 327 eP **P 05 53 37.6 -0.8**
SMRF Simiane la Rot 85.31 330 eP **P 05 53 39.2 +0.3**
RJF Les Rejaudoux 85.58 333 eP **P 05 53 40.5 +0.2**
CAF Calviac 85.73 333 eP **P 05 53 41.6 +0.6**
comp=Z,9.0nm,0.7s,mb4.3
CAF Calviac 85.73 333 eP **P 05 53 41.6 +0.6**
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
CAF Calviac 85.73 333 eP **P 05 53 41.6 +0.6**
comp=Z,4.5nm,0.7s,mb4.3
LASF Ste Croix 85.84 331 eP **P 05 53 41.8 +0.2**
LFF La Frestale 86.16 333 eP **P 05 53 43.7 +0.6**
comp=Z,13nm,0.7s,mb4.5
LFF La Frestale 86.16 333 eP **P 05 53 43.7 +0.6**
LFF pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
LFF La Frestale 86.16 333 eP **P 05 53 43.7 +0.6**
comp=Z,6.6nm,0.7s,mb4.5
TXAR Lajitas Array 86.55 53 P **P 05 53 45.8 +0.5**
comp=Z,0.3nm,0.5s,mb3.4,baz=288,slow=3.3,SNR=13
MTLF Montolieu 87.07 332 eP **P 05 53 48.0 +0.4**
comp=Z,4.7nm,0.6s,mb4.2
MTLF Montolieu 87.07 332 eP **P 05 53 48.0 +0.4**
MTLF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
MTLF Montolieu 87.07 332 eP **P 05 53 48.0 +0.4**
comp=Z,2.3nm,0.6s,mb4.2
EPF Esparros 87.99 333 eP **P 05 53 52.6 +0.6**
comp=Z,9.5nm,0.9s,mb4.3
EPF Esparros 87.99 333 eP **P 05 53 52.6 +0.6**
EPF pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
EPF Esparros 87.99 333 eP **P 05 53 52.6 +0.6**
comp=Z,4.8nm,0.9s,mb4.3
ETSF Etsaut 88.41 333 eP **P 05 53 54.6 +0.6**
comp=Z,4.0nm,0.5s,mb4.2
ETSF Etsaut 88.41 333 eP **P 05 53 54.6 +0.6**
ETSF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
ETSF Etsaut 88.41 333 eP **P 05 53 54.6 +0.6**
comp=Z,2.0nm,0.5s,mb4.2
SJPF Ste Jean 88.43 334 eP **P 05 53 54.7 +0.6**
TORD Torodi Ar. Bea 113.52 317 PP PP 06 00 22.7 -10
comp=Z,0.8nm,0.9s,baz=13,slow=6.2,SNR=3.4
LPAZ La Paz 143.42 53 PKP PKPdf 06 00 34.1 -2.0
comp=Z,0.3nm,0.5s,baz=13,slow=6.1,SNR=4.7
PLCA Paso Flores 155.88 97 PKPab PKPab 06 01 23.9 +1.3
comp=Z,1.8nm,0.8s,baz=336,slow=4.9,SNR=4.2
PLCA Paso Flores 155.88 97 PKP2 PKPab 06 01 23.9 +1.3
PLCA pmax pmax
comp=Z,2.0nm,0.8s

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*IDC **01** 05:56:48.5±0.7, 31.°17N×103.°73E, h0km, mb4.2/11, mb1 4.3/13, mb1mx4.1/26, mbtmp4.1/13, ML3.7/2, MS3.7/5, Ms1 3.7/5, ms1mx3.1/42, Error ellipse: s-maj=28.8km s-min=15.4km az=58.0*
*BJI **01** 05:56:50.3, 31.°21N×103.°75E, h15km, mb4.3/11, ML3.9/16, Ms4.4/7, Ms7 4.0/10*
*NEIC **01** 05:56:50.9±0.5, 31.°15N×103.°65E, h10km, mb4.0/2, Error ellipse: s-maj=14.8km s-min=9.7km az=58.0*
ISC 01 05:56:49.9±0.7**, 31.°24N**±0.°02×**103.°79E**±0.°04**, h3**km±5km**, n31,** σ**1.s20**/41**, mb4.0**/12**, MS3.7**/3**, 1C-1D, Sichuan**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CD2 Chengdu 0.33 184⇓iPg **Pg 05 56 55.9 -0.3**
CD2 Sg **Sg 05 57 01.3 +0.8**
CD2 smax
comp=N,36μm,0.8s
CD2 smax
comp=E,28μm,0.7s
LZH Lanzhou 4.83 1 eP **Pb 05 58 11.5 -3.7**
LZH pP 05 58 16.2
LZH sP 05 58 18.0
LZH Pg **Pg 05 58 21.5 -1.0**
LZH Sg **Sg 05 59 25.2 +0.1**
LZH pmax pmax
comp=Z,18nm,1.0s
LZH smax
comp=N,260nm,1.1s
LZH smax
comp=E,2μm,1.2s
LZH LR LR
comp=N,1μm,5.3s
LZH LR LR
comp=E,4μm,8.0s
LZH LR LR
comp=Z,2μm,8.0s
ENH Enshi 5.00 100 ePn **Pn 05 58 09.4 +3.6**
comp=Z,216nm,1.1s
XAN Xi'an 5.15 56 Pn **Pn 05 58 09.1 +1.3**
XAN Sn **Sn 05 59 06.8 -1.0**
XAN Sg **Sg 05 59 34.3 -1.1**
XAN smax
comp=N,350nm,1.3s
XAN smax
comp=E,150nm,1.2s
XAN LR LR
comp=N,2μm,10.5s
XAN LR LR
comp=E,390nm,10.7s
XAN LR LR
comp=Z,340nm,7.0s
GYA Guiyang 5.39 151⇑iPn **Pg 05 58 31.5 -1.7**
GYA Pg **Pg 05 58 31.5 -1.7**
GYA Sn **Sn 05 59 14.7 +1.0**
GYA Sg **Sg 05 59 45.6 +2.5**
GYA smax
comp=N,590nm,1.0s
GYA smax
comp=E,450nm,1.0s
GYA LR LR
comp=N,2μm,4.8s
GYA LR LR
comp=E,1μm,3.1s
GYA LR LR
comp=Z,2μm,3.7s
KMI Kunming 6.16 189 Pn **Pn 05 58 21.2 -0.6**
KMI Sn **Sn 05 59 30.5 -2.2**
KMI smax
comp=N,62nm,1.5s
KMI smax
comp=E,63nm,1.2s
KMI LR LR
comp=N,1μm,8.7s
KMI LR LR
comp=E,3μm,6.7s
KMI LR LR
comp=Z,1μm,5.0s
GTA Gaotai 8.77 339 eP **Pn 05 58 48.2 -9.3**
GTA pP 05 58 52.4
GTA sP 05 58 55.9
GTA S **Sn 06 00 30.6 -6.3**
GTA sS 06 00 35.7
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA pmax pmax
comp=Z,56nm,7.4s
GTA LR LR
comp=N,700nm,14.6s
GTA LR LR
comp=E,970nm,13.4s
GTA LR LR
comp=Z,730nm,13.1s
WHN Wuhan 9.11 92 P **Pn 05 59 06.9 +4.8**
NJ2 Nanjing 12.87 82 eP Px 06 00 43.9
NJ2 S **Sn 06 02 18.0 +0.7**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 LR LR
comp=N,560nm,12.5s
NJ2 LR LR
comp=E,720nm,10.4s
NJ2 LR LR
comp=Z,5μm,11.5s
CMAR Chiang Mai Arr 13.46 200 Pn **Pn 06 00 00.8 -1.0**
comp=Z,0.2nm,0.3s,baz=322,slow=14,SNR=2.4
CMAR LR LR 06 05 52.0
comp=Z,117nm,19.0s,baz=188,slow=41
SONM Songino Array 16.69 6 Pn **Pn 06 00 46.9 +2.3**
comp=Z,0.2nm,0.3s,baz=183,slow=12,SNR=7.6
SONM LR LR 06 07 51.6
comp=Z,293nm,20.3s,baz=359,slow=40
WMQ Urumqi 17.86 319 eP **Pn 06 01 01.7 +2.4**
WMQ pmax pmax
comp=Z,16nm,1.0s
KSRS Korea Array 20.84 66 P **P 06 01 33.6 +0.9**
comp=Z,4.1nm,0.6s,baz=265,slow=11,SNR=15
MK31 Makanchi Array 22.70 319 eP **P 06 01 53.7 +1.2**
MKAR Makanchi Array 22.70 319 P **P 06 01 53.2 +0.7**
comp=Z,5.7nm,1.0s,mb4.0,baz=130,slow=11,SNR=19
MKAR Makanchi Array 22.70 319 P **P 06 01 53.2 +0.7**
KZA Kyzart 25.21 303 eP **P 06 02 18.7 +2.0**
comp=Z,14nm,1.2s,mb4.3
ZAA0 Zalesovo Array 26.48 334 eP **P 06 02 28.8 +0.7**
ZALV Zalesovo Beam 26.48 334 P **P 06 02 27.7 -0.4**
comp=Z,1.3nm,0.4s,mb3.8,baz=139,slow=9.8,SNR=8.5
ZALV LR LR 06 13 24.8
comp=Z,126nm,21.3s,MS3.4,baz=57,slow=38
ZALV Zalesovo Beam 26.48 334 P **P 06 02 27.7 -0.4**
ZALV LR LR 06 13 24.8
KURK Kurchatov 26.98 323 P **P 06 02 31.9 -0.6**
comp=Z,1.8nm,0.7s,mb3.7,baz=130,slow=9.3,SNR=12
KURK LR LR 06 14 16.3
comp=Z,197nm,19.8s,MS3.7,baz=125,slow=39
KURK Kurchatov 26.98 323 P **P 06 02 31.9 -0.6**
KURK LR LR 06 14 16.2
BVAR Borovoye Array 32.52 322 P **P 06 03 21.6 -0.1**
comp=Z,0.5nm,0.5s,mb3.7,baz=119,slow=12,SNR=3.4
BVAR PcP PcP 06 06 07.3 -1.0
comp=Z,0.5nm,0.4s,baz=141,slow=4.8,SNR=2.7
ABKAR Akbulak array 37.38 312 eP **P 06 04 03.9 +0.2**
comp=Z,0.3nm,0.4s,mb3.5
ARCES ARCESS Array B 57.02 336 P **P 06 06 35.5 -0.9**
comp=Z,4.1nm,0.9s,mb4.5,baz=74,slow=6.7,SNR=3.4
ARCES PcP PcP 06 07 29.4 -2.1
comp=Z,3.4nm,0.9s,baz=88,slow=4.2,SNR=4.6
ARCES LR LR 06 33 16.7
comp=Z,113nm,19.1s,MS4.0,baz=231,slow=38
ARCES ARCESS Array B 57.02 336 P **P 06 06 35.5 -0.9**
ARCES PcP PcP 06 07 29.4 -2.1
ARCES LR LR 06 33 16.8
WRA Warramunga Arr 58.74 146 P **P 06 06 48.1 -0.9**
comp=Z,5.6nm,0.6s,mb4.8,baz=338,slow=7.7,SNR=55
ASAR Alice Springs 61.75 149 P **P 06 07 08.9 -0.8**
comp=Z,1.1nm,0.5s,mb4.3,baz=346,slow=6.7,SNR=17
NOA NORSAR Array B 64.40 327 P **P 06 07 26.0 -0.9**
comp=Z,0.5nm,0.5s,mb3.8,baz=88,slow=7.3,SNR=3.3
ILAR Eielson Array 69.83 26 P **P 06 08 00.2 -1.1**
comp=Z,0.4nm,0.6s,mb3.5,baz=299,slow=3.6,SNR=8.4
TORD Torodi Ar. Bea 93.33 287 P **P 06 10 06.1 -0.6**
comp=Z,0.4nm,0.7s,mb4.0,baz=63,slow=4.0,SNR=2.8

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*DDA **01** 06:08:26.5, 36.°84N×29.°29E, h7km±3km, Md2.8*
*ISK **01** 06:08:26.4, 36.°90N×29.°22E, h5km, MD2.8*
*CSEM **01** 06:08:27.1±0.3, 36.°85N×29.°22E, h2km, MD2.8, Error ellipse: s-maj=6.7km s-min=5.3km az=18.0*
*ISCJB **01** 06:08:28.2±0.6, 36.°89N±0.°03×29.°25E±0.°04, h10km, Error ellipse: s-maj=5.2km s-min=4.3km az=37.8*
ISC 01 06:08:28.0±0.8**, 36.°88N**±0.°04×**29.°21E**±0.°05**, h6**km±9km**, n22,** σ**1.s17**/36**, 1C, Turkey**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GLHS Glhisar (BURDU 0.36 40 ePG **Pg 06 08 33.6 -1.4**
GLHS eSG **Sg 06 08 40.3 +0.5**
GLHS Glhisar (BURDU 0.36 40 ePg **Pg 06 08 33.6 -1.4**
GLHS eSg **Sg 06 08 40.3 +0.5**
GOLH Golhisar 0.46 38⇑iP **Pg 06 08 34.7 -2.1**
GOLH i S **Sg 06 08 42.9 +0.1**
GOLH Golhisar 0.46 38 i P **Pg 06 08 34.7 -2.1**
GOLH i S **Sg 06 08 42.9 +0.1**
ELL Elmali 0.57 103 ePG **Pg 06 08 38.3 -0.8**
ELL eSG **Sg 06 08 47.8 +1.3**
ELL Elmali 0.57 103 ePg **Pg 06 08 38.3 -0.8**
ELL eSg **Sg 06 08 47.8 +1.2**
AKAS Kas 0.72 154 eP **Pg 06 08 39.3 -2.5**
AKAS eS **Sg 06 08 53.2 +2.1**
AKAS Kas 0.72 154 eP **Pg 06 08 39.3 -2.5**
AKAS eS **Sg 06 08 53.2 +2.1**
DNZL Cakiroluk 0.82 351 eP **Pg 06 08 43.2 -0.6**
DNZL eS **Sg 06 08 55.3 +0.9**
DNZL Cakiroluk 0.82 351 eP **Pg 06 08 43.2 -0.6**
DNZL eS **Sg 06 08 55.3 +0.8**
KORT Korkueli 0.92 82 eP **Pg 06 08 45.5 -0.2**
KORT eS **Sg 06 09 01.0 +3.4**
KORT Korkueli 0.92 82 eP **Pg 06 08 45.5 -0.2**
KORT eS **Sg 06 09 01.0 +3.3**
AYDN Tasoluk 1.32 307 eP **Pn 06 08 52.9 0.0**
AYDN eS **Sg 06 09 12.0 +1.6**
AYDN Tasoluk 1.32 307 eP **Pn 06 08 52.9 -0.1**
AYDN eS **Sg 06 09 12.0 +1.6**
DAT Datca 1.32 264 ePN **Pn 06 08 53.1 +0.1**
DAT Datca 1.32 264 ePn **Pn 06 08 53.1 +0.1**
BODT Bodrum 1.53 277 ePN **Pn 06 08 55.4 -0.5**
BODT Bodrum 1.53 277 ePn **Pn 06 08 55.4 -0.5**
SUTC Sutluce-Ispart 1.55 67 ePN **Pn 06 08 56.4 +0.2**
SUTC Sutluce-Ispart 1.55 67 ePn **Pn 06 08 56.4 +0.3**
HDMB Hadim 2.63 87 ePN **Pn 06 09 11.2 +0.3**
HDMB Hadim 2.63 87 ePn **Pn 06 09 11.2 +0.3**

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*DJA **01** 06:14:17, 23.°27S×179.°07W, h517km, mb5.0/16*
*ISCJB **01** 06:14:26.0±0.8, 23.°41S±0.°05×179.°97W±0.°04, h555km±10km, mb4.7/65, Error ellipse: s-maj=8.3km s-min=5.0km az=156.9*
*NEIC **01** 06:14:26.7±0.8, 23.°37S×179.°89W, h553km±8km, mb4.8/33, Error ellipse: s-maj=8.3km s-min=5.9km az=142.0*
*IDC **01** 06:14:28.0±0.6, 23.°29S×179.°95W, h566km±7km, mb4.1/21, mb1 4.2/21, mb1mx4.2/25, mbtmp4.1/21, Error ellipse: s-maj=12.0km s-min=8.9km az=153.0*
ISC 01 06:14:26.4±0.8**, 23.°39S**±0.°06×**179.°93W**±0.°04**, h546**km±10km**, h559**km±3.5km**:pP-P, n354,** σ**0.s62**/337**, mb4.7**/65**, 95C-122D, South of Fiji Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 5.94 341 ePn **P 06 16 04.9 +0.5**
202nm,0.7s
MSVF Nonsavu 5.94 341 P **P 06 16 05.0 +0.6**
2μm,0.5s
AFI Afiamalu 12.18 41 P **P 06 17 02.2 -4.8**
4.6nm,0.3s,baz=290,slow=0.8,SNR=6.9
AFI S **S 06 19 08.3 -11**
2.5nm,0.3s,baz=141,slow=18,SNR=3.1
AFI Afiamalu 12.18 41 P **P 06 17 02.2 -4.8**
AFI ePn **P 06 17 03.1 -3.8**
AFI S **S 06 19 08.3 -11**
AFI eSn **S 06 19 11.9 -7.2**
DZM Mont Dzumac 12.65 273 eP **P 06 17 09.8 -1.9**
URZ Urewera 15.04 189 P **P 06 17 34.3 -1.8**
4.2nm,0.3s,baz=13,slow=3.6,SNR=13
URZ S **S 06 20 06.9 -5.4**
0.3nm,0.3s,baz=75,slow=16,SNR=3.9
URZ Urewera 15.04 189 eP **P 06 17 34.3 -1.8**
19nm,0.6s
URZ S **S 06 20 06.9 -5.4**
SNZO South Karori 18.43 193 eP **P 06 18 07.3 -0.8**
92nm,0.9s
KHZ Kahutara 19.74 194 eP **P 06 18 18.6 -1.4**
64nm,1.2s
RPZ Rata Peaks 21.59 198 P **P 06 18 39.0 +2.2**
36nm,0.6s,mb5.2,baz=9.9,slow=2.9,SNR=11
RPZ Rata Peaks 21.59 198 eP **P 06 18 39.3 +2.4**
43nm,0.7s,mb5.2
ARMA Armidale 26.27 248 eP **P 06 19 20.2 +1.7**
ARMA Armidale 26.27 248 eP **P 06 19 20.0 +1.4**
36nm,1.0s,mb5.0
EIDS Eidsvold 26.46 260 eP **P 06 19 21.4 +1.1**
47nm,1.0s,mb5.1
CNB Canberra Magne 29.17 239⇓iP **P 06 19 45.5 +1.7**
CAN Canberra 29.46 239 eP **P 06 19 47.7 +1.4**
145nm,1.4s,mb5.4

CTA Charters Tower 31.54 269 P P 06 20 05.5 +1.1
106nm,0.5s,mb5.6,baz=97,slow=11,SNR=139
CTA Charters Tower 31.54 269 ⇓iP P 06 20 05.5 +1.0
82nm,0.5s,mb5.5
CTAO Charters Tower 31.54 269 eP P 06 20 05.6 +1.2
114nm,0.6s,mb5.6
CTAO Charters Tower 31.54 269 P P 06 20 05.3 +0.8
2µm189nm,0.7s,mb5.7
PMG Port Moresby 34.39 288 eP P 06 20 28.9 +0.3
122nm,0.8s,mb5.5
PMG Port Moresby 34.39 288 P P 06 20 29.2 +0.6
171nm,0.9s,mb5.6
STKA Stephens Creek 34.98 247 P P 06 20 34.2 +0.9
32nm,0.7s,mb5.0,baz=88,slow=9.4,SNR=56
STKA Stephens Creek 34.98 247 eP P 06 20 34.3 +1.0
6.8nm,0.7s,mb4.3
COEN Coen 36.10 278 eP P 06 20 43.3 +0.5
140nm,0.9s,mb5.5
COEN Coen 36.10 278 P P 06 20 43.7 +0.9
81nm,1.5s,mb5.0
ASAR Alice Springs 42.19 260 P P 06 21 32.0 +0.3
61nm,0.8s,mb5.2,baz=93,slow=8.3,SNR=356
ASAR ScP ScP 06 26 12.9 +0.9
5.4nm,1.0s,baz=102,slow=4.3,SNR=15
ASAR S S 06 27 11.9 -0.7
1.5nm,0.7s,baz=99,slow=13,SNR=7.6
WRA Warramunga Arr 42.51 266 P P 06 21 34.3 0.0
59nm,0.7s,mb5.2,baz=102,slow=8.1,SNR=363
WRA ScP ScP 06 26 15.2 +1.8
6.8nm,1.0s,baz=100,slow=4.1,SNR=7.4
WRA S S 06 27 15.3 -2.0
2.4nm,0.8s,baz=99,slow=14,SNR=6.9
KAKA Kakadu 46.33 275 ⇓iP P 06 22 03.2 -0.6
40nm,0.6s,mb5.1
KAKA Kakadu 46.33 275 eP P 06 22 03.4 -0.4
140nm,0.7s,mb5.6
KAKA Kakadu 46.33 275 P P 06 22 03.6 -0.2
FORT Forrest 46.55 249 eP P 06 22 04.8 -0.5
182nm,0.7s,mb5.7
FORT Forrest 46.55 249 eP P 06 22 05.0 -0.3
195nm,0.7s,mb5.7
KNA Kununurra 48.73 269 P P 06 22 21.9 +0.1
3µm311nm,0.9s,mb5.8
GUMO Guam 50.37 313 P P 06 22 32.8 -1.0
67nm,0.6s,mb5.2,baz=184,slow=11,SNR=7.7
FITZ Fitzroy Crossi 50.94 265 P P 06 22 38.1 +0.2
42nm,0.8s,mb4.8,baz=118,slow=4.3,SNR=81
FITZ Fitzroy Crossi 50.94 265 ⇓iP P 06 22 38.0 +0.1
68nm,0.8s,mb5.0
FITZ Fitzroy Crossi 50.94 265 P P 06 22 38.4 +0.5
128nm,1.0s,mb5.2
SBA Scott Base 54.89 183 eP P 06 23 07.5 +2.4
16nm,0.9s,mb4.3
NLAI Namlea 54.93 283 P P 06 23 06.1 -0.4
708nm61nm,1.1s,mb4.8
NWAO Narrogin (SRO) 55.51 245 P P 06 23 10.1 -0.1
14nm,0.6s,mb4.4,baz=123,slow=6.5,SNR=10
NWAO Narrogin (SRO) 55.51 245 eP P 06 23 10.0 -0.2
18nm,0.8s,mb4.4
MBWA Marble Bar 55.53 260 eP P 06 23 09.8 -0.7
58nm,0.8s,mb4.9
TNTI Ternate 56.54 288 P P 06 23 17.1 -0.5
99nm,1.0s,mb5.0
KDI Kendari 58.66 280 P P 06 23 31.5 -0.5
639nm30nm,1.0s,mb4.5
BKSI Bulukumba 60.36 277 P P 06 23 42.4 -1.0
51nm,0.8s,mb4.9
CASY Casey 60.60 206 eP P 06 23 42.9 -1.1
CASY Casey 60.60 206 eP P 06 23 43.5 -0.5
19nm,1.0s,mb4.4
MRSI Marisa 61.20 284 P P 06 23 47.6 -1.3
25nm,0.8s,mb4.6
TTSI Tana Toraja 61.57 280 P P 06 23 50.6 -0.7
1µm22nm,1.3s,mb4.4
QSPA South Pole Qui 66.69 180 P P 06 24 23.7 +1.0
11nm,0.7s,mb4.5,baz=24,slow=1.6,SNR=69
PWJI Pagerwojo 66.94 271 P P 06 24 25.0 -0.4
49nm,1.0s,mb5.0
PCJI Pacitan 67.46 271 P P 06 24 28.4 -0.1
LEM Lembang 71.24 271 P P 06 24 51.6 +0.4
80nm,1.2s,mb5.1
MJAR Matsushiro Arr 71.52 325 P P 06 24 51.6 -0.6
5.7nm,0.9s,mb4.0,baz=163,slow=5.3,SNR=8.6
MAT Matsushiro 71.52 325 P P 06 24 51.2 -1.0
KSM Kuching 72.08 280 eP P 06 24 55.9 -0.2
23nm,0.7s,mb4.7
KSM epP pP 06 26 55.5 +6.0
KSM Kuching 72.08 280 P P 06 24 55.9 -0.2
41nm,1.0s,mb4.8
MDSI Maura Dua 75.29 271 P P 06 25 12.9 -1.4
25nm,1.2s,mb4.5
KSRS Korea Array 77.90 320 P P 06 25 28.6 +0.6
2.8nm,0.7s,mb3.7,baz=141,slow=5.7,SNR=7.8
MAW Mawson 78.25 200 P P 06 25 29.8 +0.3
7.9nm,0.9s,mb4.1,baz=122,slow=6.5,SNR=16
MAW Mawson 78.25 200 eP P 06 25 29.5 0.0
6.2nm,1.1s,mb3.9
PETK Petropavlovsk- 78.62 346 P P 06 25 31.1 -0.4
3.9nm,0.7s,mb3.8,baz=140,slow=7.7,SNR=7.7
PMSA Palmer Station 79.35 157 P P 06 25 35.5 +0.1
3.3nm,0.7s,mb3.8,baz=237,slow=5.6,SNR=4.4
PMSA Palmer Station 79.35 157 eP P 06 25 35.2 -0.1
9.4nm,1.2s,mb4.0
NJ2 Nanjing 80.38 311 eP P 06 25 41.7 +0.4
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb4.5
MNSI Mandailing Nat 81.59 275 P P 06 25 46.3 -1.7
MDJ Mudanjiang 81.88 326 P P 06 25 49.3 +0.6
MDJ pP pP 06 27 46.7 +0.7
MDJ sP sP 06 28 42.5 +0.9
MDJ S S 06 35 18.0 +0.8
MDJ pmax pmax
comp=Z,11nm,1.1s,mb4.2
MDJ pmax pmax
comp=Z,59nm,3.9s
109C Camp Elliot, M 81.97 49 ⇓P P 06 25 49.5 +0.1
baz=82
MURC Murrieta 82.30 48 ⇑P P 06 25 50.6 -0.6
baz=82
VES Vestal, Richgr 82.32 46 ⇑P P 06 25 50.5 -0.7
baz=82,SNR=5.0
BFSC Mount Baldy Ra 82.35 48 ⇑P P 06 25 50.7 -0.6
baz=82
KULM Kulim 82.43 279 eP P 06 25 51.9 -0.3
comp=Z,19nm,0.9s,mb4.5
MONP Monument Peak 82.44 49 ⇑P P 06 25 52.2 +0.3
baz=83
EDW2 Edwards Air Fo 82.49 47 ⇓P P 06 25 52.1 0.0
baz=83
DVTC Desert V Tower 82.54 50 ⇓P P 06 25 52.5 +0.2
baz=83
ISA Isabella 82.62 46 ⇑P P 06 25 52.8 +0.2
baz=83,SNR=9.2
ISA Isabella 82.62 46 eP P 06 25 52.7 0.0
comp=Z,12nm,0.9s,mb4.4
CMB Columbia Colle 82.78 43 eP P 06 25 52.5 -1.0
comp=Z,9.9nm,0.8s,mb4.4
PSI Prapat 82.99 276 P P 06 25 53.4 -1.7
comp=Z,1.9nm,0.3s,mb4.0,baz=188,slow=3.7,SNR=8.7
BELC Belle Mtn. Jos 83.35 49 ⇓P P 06 25 56.5 +0.1
baz=84,SNR=7.3
MPMC Manual Prospec 83.50 46 ⇓P P 06 25 57.0 0.0
baz=84,SNR=5.9
CN2 Changchun 83.52 324 ⇑P P 06 25 59.5 +2.6
CN2 epP pP 06 28 01.0 +6.1
CN2 eS S 06 35 37.0 +3.5
CN2 pmax pmax
comp=Z,30nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,400nm,5.0s
SYO Syowa Base 83.52 193⇑eP P 06 25 54.2 -2.5
SYO Syowa Base 83.52 193⇑eP P 06 25 58.0 +1.3
GSC Goldstone 83.53 47 ⇑P P 06 25 57.0 -0.2
baz=84
GSC Goldstone 83.53 47 eP P 06 25 57.0 -0.2
BC3 Big Chuckawall 83.54 49 ⇑P P 06 25 57.2 -0.1
baz=84
HEC Hector,Ludlow 83.59 48 ⇓P P 06 25 57.5 0.0
baz=84,SNR=8.7
GLA Glamis 83.65 50 ⇑P P 06 25 58.4 +0.5
baz=84
GLA Glamis 83.65 50 eP P 06 25 58.5 +0.6
YBH Yreka Blue Hor 83.65 39 P P 06 25 57.7 +0.1
comp=Z,4.1nm,0.8s,mb4.0,baz=9.0,slow=0.4,SNR=8.3
WAKR Walker 83.66 43 eP P 06 25 58.2 +0.4
WCN Washoe City 83.94 43 ⇑P P 06 25 59.7 +0.6
baz=84

GMRC Granite Mounta 84.02 48 ⇑P P 06 25 59.8 +0.2
baz=84,SNR=7.3
IRM Iron Mountain 84.03 49 ⇑P P 06 25 59.5 -0.2
baz=84,SNR=7.5
Y12C Blythe 84.24 50 ⇓P P 06 26 00.2 -0.5
baz=84
113A Mohawk Valley, 84.25 51 ⇓P P 06 26 01.0 +0.2
baz=84
NVAR Mina Array Bea 84.34 44 P P 06 26 01.1 0.0
comp=Z,3.4nm,0.9s,mb3.9,baz=221,slow=7.1,SNR=17
NVAR pP pP 06 28 02.5 +3.1
comp=Z,1.1nm,0.9s,baz=229,slow=8.7,SNR=3.9
NVAR Mina Array Bea 84.34 44 P P 06 26 01.1 0.0
NVAR pP pP 06 28 02.5 +3.1
U10A Ash Meadows, A 84.48 47 ⇑P P 06 26 01.4 -0.5
baz=85
214A Organ Pipe Nat 84.50 52 ⇓P P 06 26 02.0 -0.1
baz=85
Z13A Yuma Proving G 84.56 50 ⇑P P 06 26 02.6 +0.3
baz=85
V11A Goodsprings 84.76 47 ⇓P P 06 26 03.3 0.0
baz=85
Y13A Salome 84.76 50 ⇓P P 06 26 03.9 +0.5
baz=85,SNR=12
W12A Cal Nev Ari 84.84 48 ⇑P P 06 26 03.7 0.0
baz=85,SNR=5.5
114A Black Gap (USA 84.87 51 ⇓P P 06 26 04.1 +0.2
baz=85
V12A Nelson 85.09 48 ⇓P P 06 26 04.9 0.0
baz=85
Z14A Wintersburg 85.14 51 ⇓P P 06 26 05.7 +0.5
baz=85
S10A Tonopah Range, 85.15 45 ⇑P P 06 26 04.9 -0.2
baz=85
K05A Summer Lake 85.32 39 ⇓P P 06 26 06.2 +0.4
baz=86
VNA3 Neumayer Olymp 85.38 177 eP P 06 26 01.8 -3.9
Y14A Wickenburg 85.41 50 ⇓P P 06 26 06.2 -0.3
baz=86,SNR=5.6
216A Three Points, 85.51 52 ⇑P P 06 26 07.4 +0.4
baz=86
R10A Warm Springs 85.55 45 ⇓P P 06 26 07.2 +0.2
baz=86
116A Eloy 85.62 52 ⇑P P 06 26 07.6 +0.1
baz=86
T11A Corn Creek, Al 85.67 46 ⇓P P 06 26 07.7 0.0
baz=86
V13A Grand Canyon W 85.75 48 ⇓P P 06 26 07.9 -0.1
baz=86
X14A Yava 85.77 50 ⇑P P 06 26 08.5 +0.4
baz=86
VNA2 Neumayer--Watz 85.80 178 eP P 06 26 04.3 -3.4
217A Green Valley 85.86 53 ⇓P P 06 26 09.3 +0.6
baz=86,SNR=16
Y15A Casa Rosa Ranc 85.89 50 ⇑P P 06 26 08.7 -0.1
baz=86,SNR=8.5
W14A Seligman 86.03 49 ⇑P P 06 26 09.7 +0.3
baz=86,SNR=5.2
R11A Troy Canyon, C 86.05 45 ⇓P P 06 26 08.8 -0.6
baz=86
U13A Pakoon Wash 86.07 48 ⇓P P 06 26 09.9 +0.3
baz=86,SNR=6.5
S12A Delamar Landin 86.12 46 ⇓P P 06 26 10.0 +0.2
baz=86
TUC Tucson 86.16 52 eP P 06 26 10.7 +0.6
comp=Z,9.8nm,0.9s,mb4.4
ENH Enshi 86.20 305 eP P 06 26 10.9 +0.6
comp=Z,13nm,0.6s,mb4.7
Z16A Peralta Trail, 86.22 51 ⇓P P 06 26 10.7 +0.4
baz=86
V14A Boquillas Ranc 86.24 49 ⇓P P 06 26 10.4 +0.1
baz=86,SNR=7.0
X15A Humboldt 86.24 50 ⇓P P 06 26 10.7 +0.3
baz=86,SNR=6.5
318A Bisbee 86.30 54 ⇓P P 06 26 11.5 +0.7
baz=86,SNR=15
117A Oracle 86.32 52 ⇑P P 06 26 11.5 +0.6
baz=86,SNR=7.4
T13A Saint George 86.43 47 ⇑P P 06 26 11.3 0.0
baz=87
F04A Amboy 86.46 36 ⇑P P 06 26 12.1 +1.0
baz=87
Y16A Circle Bar Ran 86.46 51 ⇑P P 06 26 12.0 +0.6
baz=87,SNR=7.7
WVOR Wild Horse Val 86.48 41 eP P 06 26 10.6 -0.7
comp=Z,7.8nm,1.3s,mb4.2
WVOR epP pP 06 28 15.5 +5.2
218A Dragoon 86.53 53 ⇓P P 06 26 12.4 +0.6
baz=87,SNR=12
GYA Guiyang 86.55 301 P P 06 26 12.0 0.0
GYA pP pP 06 28 13.7 +2.6
GYA sP sP 06 29 09.3 +3.0
GYA PP PP 06 29 47.4 +3.1
GYA SKS 06 35 44.5
GYA S S 06 36 01.2 -2.1
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,140nm,6.0s
R12A Pony Springs, 86.68 46 ⇑P P 06 26 12.6 +0.2
baz=87
BJI Beijing 86.71 316 P P 06 26 13.1 +0.6
BJI pP pP 06 28 13.0 +1.4
BJI sP sP 06 29 09.0 +2.3
BJI S S 06 36 05.5 +1.2
BJI pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
BJI pmax pmax
comp=Z,78nm,3.5s
X16A Lo Mia Camp, P 86.76 50 ⇓P P 06 26 13.1 +0.2
baz=87,SNR=6.7
319A Douglas 86.79 54 ⇑P P 06 26 14.0 +0.9
baz=87,SNR=9.1
118A Homack Ranch, 86.92 53 ⇓P P 06 26 14.3 +0.7
baz=87
Q12A Willow Creek R 86.92 45 ⇓P P 06 26 13.4 -0.1
baz=87
I07A Izee 86.95 39 ⇓P P 06 26 13.9 +0.4
baz=87,SNR=8.0
V15A Kaibab Nationa 86.98 49 ⇑P P 06 26 14.6 +0.8
baz=87,SNR=5.1
G06A Carlson Farm, 87.01 37 ⇓P P 06 26 13.7 0.0
baz=87
T14A Hurricane 87.01 47 ⇑P P 06 26 13.4 -0.6
baz=87
W16A Flagstaff 87.05 50 ⇓P P 06 26 14.4 +0.2
baz=87
CCUT Cedar City 87.08 47 eP P 06 26 14.8 +0.4
P12A McGill 87.11 45 ⇓P P 06 26 14.5 +0.1
baz=87
219A White Tail Can 87.12 53 ⇓P P 06 26 14.7 +0.1
baz=87,SNR=13
J08A Circle Bar Ran 87.12 40 ⇑P P 06 26 14.3 0.0
baz=87
U15A North Rim 87.22 48 ⇓P P 06 26 15.8 +0.8
baz=87,SNR=11
320A Kipp Ranch, An 87.33 54 ⇑P P 06 26 16.3 +0.6
baz=88,SNR=10
WUAZ Wupatki 87.38 49 eP P 06 26 16.2 +0.5
Q13A Wheeler Ranch, 87.40 45 ⇓P P 06 26 15.6 -0.2
baz=88
Y18A Canyon Day Jun 87.44 52 ⇓P P 06 26 16.8 +0.7
baz=88,SNR=9.2
T15A Red Dirt Ranch 87.46 48 ⇓P P 06 26 16.3 +0.2
baz=88
D05A Enumclaw 87.48 35 ⇑P P 06 26 16.4 +0.5
baz=88
220A Playas Peak, P 87.61 54 ⇓P P 06 26 17.6 +0.7
baz=88,SNR=6.0
O12A Currie 87.65 44 ⇓P P 06 26 16.8 -0.1
baz=88
P13A Bates Ranch, G 87.68 45 ⇓P P 06 26 16.8 -0.3
baz=88
120A U Bar Ranch, L 87.85 53 ⇑P P 06 26 18.2 +0.2
baz=88
U16A Tuba City 87.87 49 ⇑P P 06 26 17.9 -0.2
baz=88,SNR=5.8
X18A Snowflake 87.88 51 ⇑P P 06 26 18.3 +0.2
baz=88
Q14A Sevier Lake (B 87.91 46 ⇓P P 06 26 18.4 +0.3
baz=88
G08A Pilot Rock 87.98 38 ⇑P P 06 26 18.6 +0.3
baz=88,SNR=9.8
Y19A Nutrioso 88.09 52 ⇓P P 06 26 19.5 +0.4
baz=88,SNR=8.5
Z20A Nine Sixteen R 88.16 53 ⇑P P 06 26 19.8 +0.4
baz=88

HAWA Hanford 88.32 37 eP P 06 26 20.1 +0.2
comp=Z,7.0nm,0.7s,mb4.5
S16A Weppner Ranch, 88.36 47 ⇑P P 06 26 20.2 -0.1
baz=88
P14A Drum Mountains 88.37 45 ⇑P P 06 26 20.3 0.0
baz=88
XAN Xi'an 88.48 308 P P 06 26 21.5 +0.6
XAN pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
XAN pmax pmax
comp=Z,18nm,5.8s
V18A Ganado 88.48 50 ⇓P P 06 26 21.0 +0.1
baz=89
RPW Rockport 88.52 35 eP P 06 26 20.1 -0.6
T17A Navajo Res., N 88.53 48 ⇑P P 06 26 21.2 +0.1
baz=89,SNR=5.4
ETW Entiat 88.62 36 eP P 06 26 21.3 +0.1
Y20A Horse Springs, 88.70 52 ⇑P P 06 26 22.4 +0.4
baz=89,SNR=6.4
MFID Camas Ranch 88.73 41 ⇑P P 06 26 21.8 0.0
baz=89,SNR=6.6
R16A Teasdale 88.73 47 ⇑P P 06 26 22.4 +0.4
baz=89
222A Williams Famil 88.77 54 ⇑P P 06 26 23.0 +0.7
baz=89
S17A Black Ridge (B 88.86 48 ⇓P P 06 26 22.0 -0.6
baz=89,SNR=5.8
X20A Quemado 88.92 52 ⇑P P 06 26 23.6 +0.6
baz=89,SNR=5.5
Z21A St. Cloud Mine 88.93 53 ⇓P P 06 26 23.9 +0.9
baz=89,SNR=8.4
KMI Kunming 89.08 298 P P 06 26 25.3 +1.4
KMI pmax pmax
comp=Z,13nm,0.9s,mb4.8
122A Conniff Cattle 89.13 54 ⇓P P 06 26 24.2 +0.3
baz=89,SNR=7.2
W20A Ramah 89.21 51 ⇓P P 06 26 24.5 +0.2
baz=89,SNR=8.7
T18A Mexican Hat 89.24 49 ⇑P P 06 26 24.6 +0.2
baz=89
Y21A Point of Rocks 89.26 52 ⇓P P 06 26 24.9 +0.4
baz=89,SNR=17
Q16A Castle Valley 89.27 47 ⇓P P 06 26 25.1 +0.6
baz=89,SNR=6.4
CHRT Chiangrai 89.28 292 ⇓P P 06 26 25.0 0.0
comp=Z,118nm,0.7s,mb5.8
U19A Dine' College, 89.28 50 ⇓P P 06 26 24.7 +0.1
baz=89
R17A Hanksville Air 89.32 47 ⇑P P 06 26 24.6 -0.2
baz=90,SNR=5.8
I12A Atlanta 89.36 41 ⇓P P 06 26 25.1 +0.3
baz=90,SNR=5.9
F10A Beach Ranch, E 89.37 38 ⇑P P 06 26 24.0 -0.8
baz=90,SNR=5.3
X21A Alamocita Cree 89.39 52 ⇑P P 06 26 25.2 +0.1
baz=90,SNR=7.1
CMAR Chiang Mai Arr 89.41 290 P P 06 26 26.7 +1.1
comp=Z,9.5nm,0.9s,mb4.6,baz=135,slow=3.3,SNR=49
CMAR pP pP 06 28 29.4 +4.0
comp=Z,1.0nm,0.3s,baz=120,slow=3.5,SNR=2.0
CMAR PP PP 06 30 01.6 -5.4
comp=Z,0.8nm,0.3s,baz=152,slow=6.5,SNR=5.0
Z22A Elephant Butte 89.42 53 ⇑P P 06 26 25.8 +0.5
baz=90
TMUT Trail Mountain 89.44 46 eP P 06 26 25.9 +0.7
comp=Z,14nm,0.7s,mb4.9
MPU Maple Canyon 89.53 46 eP P 06 26 26.1 +0.4
CHG Chiang Mai 89.56 291 ⇓P P 06 26 27.3 +1.0
comp=Z,18nm,0.9s,mb4.9
CHTO Chiang Mai 89.56 291 eP P 06 26 27.4 +1.2
comp=Z,14nm,0.8s,mb4.8
B08A Colville Reser 89.61 36 ⇑P P 06 26 25.1 -0.7
baz=90
HLID Hailey 89.67 41 ⇓P P 06 26 26.4 +0.2
baz=90,SNR=9.4
HLID Hailey 89.67 41 eP P 06 26 26.1 -0.1
324A Moseley Ranch, 89.67 55 ⇑P P 06 26 26.4 -0.2
baz=90,SNR=9.1
T19A Beclabito 89.68 49 ⇓P P 06 26 25.3 -1.1
baz=90
O16A Springville 89.72 45 ⇑P P 06 26 26.8 +0.3
baz=90
HVU Hansel Valley 89.72 44 eP P 06 26 26.7 +0.2
J13A Cove Ranch, Pi 89.72 42 ⇑P P 06 26 26.7 +0.3
baz=90,SNR=11
Y22A Socorro 89.74 53 ⇑P P 06 26 26.4 -0.4
baz=90,SNR=6.9
425A Indio Mountain 89.75 56 ⇓P P 06 26 27.2 +0.3
baz=90,SNR=7.2
M15A Larsen Ranch, 89.76 44 ⇓P P 06 26 26.5 -0.2
baz=90
SRU San Rafael 89.80 47 ⇓P P 06 26 26.9 -0.1
baz=90,SNR=15
SRU San Rafael 89.80 47 eP P 06 26 27.1 +0.1
comp=Z,13nm,0.8s,mb4.8
626A Big Bend Ranch 89.84 58 ⇓P P 06 26 27.3 0.0
baz=90,SNR=7.3
P17A Butcher Ranch, 89.84 46 ⇓P P 06 26 27.2 +0.1
baz=90,SNR=6.6
R18A Canyonlands Na 89.86 48 ⇓P P 06 26 27.1 -0.1
baz=90
MNTX Cornudas Mount 89.87 55 ⇓P P 06 26 27.2 -0.2
baz=90,SNR=10
K14A Jones Ranch, D 89.88 43 ⇓P P 06 26 27.0 -0.2
baz=90,SNR=5.6
224A Cornudas Mount 89.94 55 ⇓P P 06 26 27.7 0.0
baz=90,SNR=5.2
H12A Diamond D Ranc 89.95 40 ⇓P P 06 26 27.1 -0.3
baz=90,SNR=8.8
JLU Jordanelle 89.96 45 eP P 06 26 27.7 +0.1
DAU Daniels Canyon 89.98 45 eP P 06 26 28.4 +0.6
G12A Big Creek, Yel 89.99 40 ⇓P P 06 26 27.3 -0.3
baz=90
325A Bean Ranch, Si 90.03 56 ⇓P P 06 26 27.8 -0.3
baz=90,SNR=6.9
I13A Wildhorse Cree 90.04 41 ⇓P P 06 26 27.9 0.0
baz=90
S19A Harvey Farm, M 90.06 48 ⇑P P 06 26 27.9 -0.3
baz=90
Q18A Rafter H Ranch 90.06 47 ⇑P P 06 26 27.6 -0.5
baz=90,SNR=6.5
J14A Carey 90.09 42 ⇑P P 06 26 28.7 +0.5
baz=90,SNR=12
L15A Malad City 90.09 44 ⇓P P 06 26 27.9 -0.3
baz=90,SNR=8.2
526A Mary Lane Ranc 90.11 57 ⇓P P 06 26 28.4 -0.2
baz=90
HHC Hu-ho-hao-te 90.11 315 eP P 06 26 28.4 +0.1
HHC pP pP 06 28 28.3 0.0
HHC sP sP 06 29 21.3 -1.8
HHC SKS 06 36 08.1
HHC pmax pmax
comp=Z,13nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,68nm,7.0s
TXAR Lajitas Array 90.11 58 P P 06 26 28.5 -0.1
comp=Z,4.0nm,0.8s,mb4.3,baz=213,slow=6.4,SNR=58
TXAR pP pP 06 28 30.9 +2.3
comp=Z,2.0nm,0.9s,baz=205,slow=4.4,SNR=12
TXAR Lajitas Array 90.11 58 P P 06 26 28.5 -0.1
TXAR pP pP 06 28 30.9 +2.3
N16A Rees Ranch, Co 90.11 45 ⇑P P 06 26 29.1 +0.8
baz=90
M16A Huntsville 90.21 44 ⇓P P 06 26 28.9 +0.1
baz=90,SNR=5.0
O17A Robinson Place 90.21 46 ⇓P P 06 26 29.3 +0.5
baz=90,SNR=29
R19A Curley Farm, L 90.24 48 ⇓P P 06 26 28.6 -0.3
baz=90
P18A Preston Nutter 90.25 46 ⇑P P 06 26 29.0 0.0
baz=90
124A Stringfield Ra 90.28 54 ⇓P P 06 26 28.6 -0.7
baz=90,SNR=7.1
H13A Challis 90.31 41 ⇓P P 06 26 29.1 -0.1
baz=90
K15A Arbon 90.36 43 ⇓P P 06 26 29.3 -0.2
baz=90,SNR=7.5
627A Terlingua Ranc 90.38 58 ⇑P P 06 26 29.7 -0.1
baz=90,SNR=8.1
F12A Elk City 90.38 39 ⇓P P 06 26 28.9 -0.6
baz=90
HWUT Hardware Ranch 90.40 44 eP P 06 26 29.3 -0.4
comp=Z,4.5nm,0.7s,mb4.4
Y23A Lovelace Mesa, 90.41 53 ⇑P P 06 26 29.8 -0.1
baz=90
426A McDonald Obser 90.43 57 ⇓P P 06 26 29.9 -0.2
baz=90,SNR=7.8
U21A Nageezi 90.44 50 ⇑P P 06 26 29.7 -0.2

	baz=91,SNR=13							
I14A	**Mackay**	90.45	41	⇑P		P	06 26 30.3	+0.5
	baz=91,SNR=6.1							
225A	**Deer Hill, Car**	90.48	55	⇑P		P	06 26 30.2	-0.1
	baz=91							
527A	**Woodward Ranch**	90.51	57	⇑P		P	06 26 30.3	-0.1
	baz=91,SNR=5.5							
N17A	**Moffit Pass**	90.53	45	⇑P		P	06 26 30.6	+0.3
	baz=91							
Q19A	**Hogan Spring (**	90.57	47	⇑P		P	06 26 30.0	-0.5
	baz=91							
ANMO	**Albuquerque**	90.59	52	P		P	06 26 30.2	-0.5
	comp=Z,3.7nm,0.9s,mb4.3,baz=210,slow=5.9,SNR=14							
ANMO				pP		pP	06 28 35.7	+4.9
	comp=Z,0.4nm,0.3s,baz=228,slow=2.1,SNR=3.3							
ANMO	**Albuquerque**	90.59	52	*e*P		P	06 26 30.2	-0.5
	comp=Z,4.6nm,1.0s,mb4.4							
G13A	**Cobalt**	90.61	40	⇑P		P	06 26 30.2	-0.3
	baz=91							
S20A	**Disappointment**	90.63	49	⇓P		P	06 26 30.3	-0.5
	baz=91							
Z24A	**Sheeppen Canyo**	90.64	54	⇓P		P	06 26 31.0	0.0
	baz=91							
L16A	**Fish Haven**	90.70	44	⇑P		P	06 26 31.0	0.0
	baz=91							
O18A	**Roosevelt**	90.73	46	⇓P		P	06 26 31.4	+0.2
	baz=91							
326A	**Caldwell Ranch**	90.76	56	⇑P		P	06 26 30.9	-0.7
	baz=91							
628A	**Black Gap, Mar**	90.78	58	⇑P		P	06 26 31.6	-0.1
	baz=91,SNR=8.1							
J15A	**Blackfoot**	90.80	42	⇑P		P	06 26 31.5	+0.1
	baz=91,SNR=5.9							
125A	**Gardner Draw,**	90.86	55	⇓P		P	06 26 31.2	-0.7
	baz=91							
CD2	**Chengdu**	90.86	303	*e*P		P	06 26 33.5	+1.5
CD2				pP		pP	06 28 33.3	+1.2
CD2				sP		sP	06 29 26.4	-0.5
CD2				PP		PP	06 30 22.1	+4.0
CD2				SKS			06 36 13.4	
CD2				S		S	06 36 43.1	+0.6
CD2				pmax		pmax		
	comp=Z,20nm,1.1s,mb5.0							
CD2				pmax		pmax		
	comp=Z,30nm,5.8s							
Y24A	**Capitan**	90.86	53	⇓P		P	06 26 32.0	+0.1
	baz=91,SNR=12							
M17A	**Scullys Gap (B**	90.91	45	⇓P		P	06 26 31.7	-0.3
	baz=91,SNR=7.8							
S21A	**Coal Bank Pass**	90.94	49	⇓P		P	06 26 32.3	0.0
	baz=91							
C11A	**Tepee Creek (N**	90.98	37	⇑P		P	06 26 31.8	-0.4
	baz=91							
427A	**Hayter Ranch,**	90.99	57	⇑P		P	06 26 32.7	+0.1
	baz=91,SNR=6.4							
226A	**Malaga, Loving**	91.00	55	⇓P		P	06 26 32.1	-0.5
	baz=91							
K16A	**Soda Springs**	91.03	43	⇑P		P	06 26 32.9	+0.5
	baz=91							
Z25A	**Roswell**	91.09	54	⇓P		P	06 26 33.5	+0.4
	baz=91							
L17A	**Cokeville**	91.10	44	⇓P		P	06 26 32.5	-0.4
	baz=91							
528A	**Cox Ranch, San**	91.16	58	⇓P		P	06 26 33.4	-0.1
	baz=92							
V23A	**Ortiz Mt. (NFS**	91.17	51	⇓P		P	06 26 33.8	+0.5
	baz=91							
Q20A	**Ridgley Place,**	91.23	48	⇑P		P	06 26 33.0	-0.5
	baz=91							
J16A	**Bone**	91.24	43	⇑P		P	06 26 33.4	-0.1
	baz=91							
T22A	**Edith**	91.25	50	⇓P		P	06 26 33.1	-0.5
	baz=91							
M18A	**Lyman**	91.28	45	⇓P		P	06 26 33.6	-0.1
	baz=91,SNR=10.0							
N18A	**Larsen Ranch,**	91.31	45	⇓P		P	06 26 33.5	-0.3
	baz=91							
H15A	**Lima**	91.31	41	⇓P		P	06 26 33.7	-0.1
	baz=92							
O19A	**Miners Draw (B**	91.33	46	⇑P		P	06 26 33.4	-0.6
	baz=92							
K17A	**Gardner Place,**	91.40	43	⇑P		P	06 26 34.7	+0.4
	baz=92,SNR=5.1							
Y25A	**Mesa, Roswell**	91.41	54	⇑P		P	06 26 34.0	-0.5
	baz=92							
P20A	**De Beque**	91.43	47	⇓P		P	06 26 34.2	-0.2
	baz=92							
U23A	**El Rito**	91.43	51	⇓P		P	06 26 34.4	-0.1
	baz=92							
R21A	**Cimarron**	91.45	49	⇑P		P	06 26 34.7	+0.1
	baz=92,SNR=6.9							
RRI2	**Red Ridge**	91.46	43	*e*P		P	06 26 34.7	+0.2
W24A	**Lazy 6 Ranch,**	91.48	52	⇓P		P	06 26 34.0	-0.7
	baz=92							
ILAR	**Eielson Array**	91.52	14	P		P	06 26 32.6	-1.6
	comp=Z,0.2nm,0.6s,baz=213,slow=5.7,SNR=6.3							
ILAR				pP		pP	06 28 36.0	+1.6
	comp=Z,0.5nm,1.0s,baz=251,slow=4.7,SNR=2.8							
I16A	**Newdale**	91.63	42	⇓P		P	06 26 35.6	+0.3
	baz=92							
Z26A	**Caprock**	91.64	54	⇑P		P	06 26 35.2	-0.4
	baz=92							
S22A	**4UR Ranch, Cre**	91.65	49	⇓P		P	06 26 35.7	+0.2
	baz=92,SNR=7.2							
328A	**Wristen Ranch,**	91.68	57	⇓P		P	06 26 35.1	-0.7
	baz=92							
G15A	**Dillon**	91.70	41	⇓P		P	06 26 35.0	-0.5
	baz=92							
REDW	**Red Top Meadow**	91.76	43	*e*P		P	06 26 36.3	+0.5
V24A	**Rampart Ranch,**	91.81	52	⇓P		P	06 26 35.7	-0.6
	baz=92							
O20A	**White River Ci**	91.84	47	⇓P		P	06 26 35.7	-0.6
	baz=92							
SNOW	**Snow King Moun**	91.87	43	*e*P		P	06 26 37.1	+0.8
T23A	**Casias Ranch,**	91.88	50	⇑P		P	06 26 36.5	0.0
	baz=92							
K18A	**Toltan Ranch,**	91.90	44	⇑P		P	06 26 36.9	+0.4
	baz=92,SNR=9.6							
M19A	**Rock Springs**	91.91	45	⇑P		P	06 26 36.3	-0.3
	baz=92							
R22A	**Saguache, Gunn**	91.93	49	⇑P		P	06 26 36.4	-0.4
	baz=92							
IMW	**Indian Meadow**	91.98	42	*e*P		P	06 26 37.0	+0.1
Q22A	**Crested Butte,**	92.13	48	⇓P		P	06 26 37.6	0.0
	baz=92							
N20A	**Spence Gulch,**	92.17	46	⇓P		P	06 26 37.6	-0.2
	baz=92							
W25A	**X Bar L Ranch,**	92.17	52	⇓P		P	06 26 37.1	-0.8
	baz=92							
J18A	**Kendall Valley**	92.21	43	⇓P		P	06 26 37.9	0.0
	baz=92,SNR=5.5							
BW06	**Boulder Array**	92.28	44	⇑P		P	06 26 38.1	-0.1
	baz=92							
BW06	**Boulder Array**	92.28	44	*e*P		P	06 26 37.9	-0.3
PDAR	**Pinedale Array**	92.28	44	P		P	06 26 37.6	-0.7
	comp=Z,2.2nm,0.8s,mb4.2,baz=227,slow=3.0,SNR=20							
PDAR				PP		PP	06 30 25.7	-3.2
	comp=Z,1.0nm,1.0s,baz=243,slow=6.5,SNR=6.6							
V25A	**Rancho No Teng**	92.34	52	⇑P		P	06 26 38.3	-0.4
	baz=92							
BOZ	**Bozeman (W)**	92.46	41	⇓P		P	06 26 38.7	-0.3
	baz=93							
P22A	**Eagle**	92.58	48	⇑P		P	06 26 39.0	-0.8
	baz=93							
SDCO	**Great Sand Dun**	92.58	50	⇑P		P	06 26 39.3	-0.5
	baz=93							
SDCO	**Great Sand Dun**	92.58	50	*e*P		P	06 26 39.0	-0.8
	comp=Z,2.8nm,0.9s,mb4.3							
N21A	**Black Mountain**	92.62	46	⇓P		P	06 26 39.5	-0.4
	baz=93							
O22A	**Kremmling**	92.99	47	⇓P		P	06 26 41.3	-0.3
	baz=93							
R24A	**Sanders Place,**	93.08	50	⇓P		P	06 26 41.9	-0.2
	baz=93							
LZH	**Lanzhou**	93.11	308	*e*P		P	06 26 43.0	+0.7
LZH				pmax		pmax		
	comp=Z,13nm,1.0s,mb4.9							
LZH				pmax		pmax		
	comp=Z,91nm,4.2s							
D16A	**Dana Ranch, Ca**	93.23	40	⇓P		P	06 26 42.2	-0.3
	baz=93							
RWWY	**Rawlins**	93.27	46	*e*P		P	06 26 40.7	-2.2
S25A	**Robets Cordova**	93.30	50	⇑P		P	06 26 42.4	-0.6
	baz=93							
C17A	**Wharram Farm,**	94.00	39	⇑P		P	06 26 45.2	-0.8
	baz=94							
P25A	**Willow Gulch B**	94.32	49	⇓P		P	06 26 47.4	-0.2
	baz=94							

MKAR	**Makanchi Array**	**111.86**	**313**	PKiKP		PKiKP	06 31 57.8	-1.5
	comp=Z,0.5nm,0.7s,baz=42,slow=2.0,SNR=6.7							
MKAR				PP		PP	06 32 56.0	+2.7
	comp=Z,0.2nm,0.7s,baz=91,slow=8.6,SNR=4.5							
MKAR				SKP			06 34 41.9	
	comp=Z,0.7nm,0.8s,baz=75,slow=5.1,SNR=4.7							
KURK	**Kurchatov**	**114.88**	**317**	PKP		PP	06 33 08.2	-6.1
	comp=Z,0.7nm,0.2s,baz=94,slow=4.8,SNR=3.8							
BVAR	**Borovoye Array**	**120.10**	**319**	PKP		PKPdf	06 32 13.6	-1.4
	comp=Z,0.6nm,0.4s,baz=259,slow=0.8,SNR=4.4							
FINES	**FINESS Array B**	**137.99**	**342**	SKP			06 35 30.1	
	comp=Z,5.8nm,1.0s,baz=60,slow=8.2,SNR=5.0							
NOA	**NORSAR Array B**	**141.59**	**351**	PKhKP		PKPpre	06 32 49.7	
	comp=Z,1.6nm,0.8s,baz=16,slow=4.9,SNR=5.1							
NOA				SKPbc		SKPbc	06 35 39.7	-1.2
	comp=Z,1.5nm,0.8s,baz=14,slow=4.2,SNR=3.6							
NOA	**NORSAR Array B**	**141.59**	**351**	PKP		PKPpre	06 32 49.7	
NOA				SKPbc		SKPbc	06 35 39.7	-1.2
MALT	**Malatya**	**144.14**	**304**	*e*PKPdf		PKPdf	06 32 59.6	-0.7
KIEV	**Kiev**	**144.59**	**328**	*e*PKPdf		PKPdf	06 32 59.1	-1.6
BR131	**Keskin Array S**	**147.32**	**308**	*e*PKPbc		PKPbc	06 33 07.9	-1.0
BR131				*e*PKPab		PKPab	06 33 12.3	-0.3
BRTR	**Keskin Array B**	**147.32**	**308**	PKPbc		PKPbc	06 33 08.0	-0.9
	comp=Z,2.7nm,0.6s,baz=142,slow=4.2,SNR=12							
BRTR				PP		PP	06 36 37.5	-3.1
	comp=Z,1.2nm,0.9s,baz=93,slow=6.2,SNR=3.9							
BUR08	**Bucovina Ar. S**	**148.57**	**327**	*e*PKPbc		PKPbc	06 33 11.8	0.0
CSS	**Prodhromos**	**148.89**	**299**	*e*PKPbc		PKPbc	06 33 12.3	-0.8
STHS	**Stebnicka Huta**	**149.15**	**333**	*e*PKP		PKPbc	06 33 12.0	-1.2
STHS	**Stebnicka Huta**	**149.15**	**333**	*e*PKP		PKPbc	06 33 12.0	-1.2
CRVS	**Cervenica-Dubn**	**149.44**	**332**	*e*PKP		PKPbc	06 33 13.3	-0.6
CRVS	**Cervenica-Dubn**	**149.44**	**332**	*e*PKP		PKPbc	06 33 13.3	-0.6
NIE	**Niedzica**	**149.53**	**334**	*e*PKP		PKPbc	06 33 14.5	+0.4
KECS	**Kecovo**	**150.18**	**332**	*e*PKP		PKPbc	06 33 16.4	+0.8
KECS	**Kecovo**	**150.18**	**332**	*e*PKP		PKPbc	06 33 16.4	+0.8
CLL	**Collm**	**150.39**	**343**	⇓*i*PKP		PKPbc	06 33 15.2	-0.8
CLL				*e*PKP		PKPab	06 33 24.0	-0.9
CLL	**Collm**	**150.39**	**343**	⇓*i*PKPbc		PKPbc	06 33 15.2	-0.8
	comp=Z,10.0nm,0.9s							
CLL				*e*PKPab		PKPab	06 33 24.0	-0.9
	comp=Z,5.0nm,0.8s							
BRG	**Berggiesshubel**	**150.52**	**342**	*e*PKP		PKPbc	06 33 15.7	-0.7
	comp=Z,6.5nm,0.8s							
BRG				*e*			06 35 28.5	
	comp=Z,6.5nm,1.0s							
VYHS	**Vyhne**	**150.86**	**334**	*e*PKP		PKPbc	06 33 16.2	-1.0
VYHS	**Vyhne**	**150.86**	**334**	*e*PKP		PKPbc	06 33 16.2	-1.0
TORD	**Torodi Ar. Bea**	**169.70**	**189**	PKPab		PKPab	06 34 49.2	-0.6
	comp=Z,1.9nm,0.9s,baz=180,slow=4.3,SNR=6.2							

*IDC **01** 06:14:31.2±2.0,30°.85N×83°.61E,h0km,mb3.7/5, mb1 3.8/6,mb1mx3.5/26,mbtmp3.6/6,Error ellipse: s-maj=75.8km s-min=27.6km az=63.0*
*NEIC **01** 06:14:33.0±1.1,30°.91N×83°.71E,h10km,mb3.5/1,Error ellipse: s-maj=33.9km s-min=15.3km az=71.0*
*ISCJB **01** 06:14:34.7±1.4,30°.9N±0°.2×83°.7E±0°.3,h33km,mb3.7/5, Error ellipse: s-maj=42.1km s-min=19.4km az=157.2*

ISC 01 06:14:37.0±1.4,31°.0N±0°.2×83°.7E±0°.3,h35km,n9,σ0s44/9, mb3.7/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**15.83**	**356**	*e*Pn	**Pn**	**06 18 17.6**	**+0.6**
MKAR	**Makanchi Array**	**15.83**	**356**	Pn	**Pn**	**06 18 16.6**	**-0.4**
	baz=172,slow=12,SNR=2.9						
KURK	**Kurchatov**	**20.08**	**351**	P	**P**	**06 19 06.9**	**-0.3**
	1.0nm,0.6s,baz=174,slow=9.8,SNR=9.5						
ZALV	**Zalesovo Beam**	**22.97**	**2**	P	**P**	**06 19 37.7**	**-0.4**
	0.7nm,0.6s,mb3.2,baz=186,slow=8.9,SNR=4.3						
ABKAR	**Akbulak array**	**25.59**	**322**	*e*P	**P**	**06 20 03.0**	**+0.3**
	0.6nm,0.5s,mb3.4						
FINES	**FINESS Array B**	**47.93**	**327**	P	**P**	**06 23 11.3**	**-0.3**
	3.5nm,0.9s,mb4.4,baz=74,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**70.19**	**129**	P	**P**	**06 25 46.1**	**-0.2**
	0.7nm,0.7s,mb3.7,baz=322,slow=6.4,SNR=4.0						
WRA	**Warramunga Arr**	**70.19**	**129**	P	**P**	**06 25 46.1**	**-0.2**
ILAR	**Eielson Array**	**76.75**	**20**	P	**P**	**06 26 25.1**	**+0.8**
	0.7nm,0.8s,mb3.6,baz=294,slow=4.0,SNR=9.2						

*ISCJB **01** 06:18:47.5±1.2,76°.63N±0°.08×20°.1E±0°.5,h10km,Error ellipse: s-maj=18.2km s-min=7.3km az=148.8*
*CSEM **01** 06:18:49.4±0.9,76°.67N×20°.33E,h2km,ML2.4,Error ellipse: s-maj=78.9km s-min=7.3km az=68.0*
*NAO **01** 06:18:51.6±3.8,76°.69N×19°.70E,h3km±35km,ML2.2*
*BER **01** 06:18:55.9±3.0,76°.79N×19°.92E,h23km±40km,MD2.7, ML2.4,ML2.2(NAO)*

ISC 01 06:18:49.9±2.6,76°.67N±0°.09×19°.9E±0°.5,h5km±22km,n12, σ1s36/16,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**1.04**	**291**	*e*P	**Pg**	**06 19 12.1**	**+2.2**
HSP				*e*S	**Sg**	**06 19 22.7**	**-0.7**
SPA0	**Spitsbergen Ar**	**1.70**	**335**	Pg	**Pg**	**06 19 22.3**	**-0.2**
	baz=149,slow=16						
SPA0				Lg		06 19 43.8	
	baz=155,slow=28						
SPA0	**Spitsbergen Ar**	**1.70**	**335**	Pg	**Pg**	**06 19 22.3**	**-0.2**
	baz=149,slow=16						
SPA0				Lg		06 19 43.8	
	baz=155,slow=28						
SPA0	**Spitsbergen Ar**	**1.70**	**335**	Pg	**Pg**	**06 19 22.3**	**-0.1**
	baz=149,slow=15,SNR=94						
SPA0				Lg		06 19 43.8	
	baz=155,slow=23,SNR=9.0						
KBS	**Kingsbay**	**2.82**	**327**	Pn	**Pn**	**06 19 37.2**	**+1.6**
KBS				Pg	**Pg**	**06 19 43.9**	**0.0**
KBS				Lg		06 20 18.1	
KBS	**Kingsbay**	**2.82**	**327**	*e*P	**Pn**	**06 19 37.0**	**+1.4**
KBS				*e*Pg	**Pg**	**06 19 44.1**	**+0.1**
KBS				*e*Sg	**Sg**	**06 20 17.7**	**-2.7**
KBS				AML	AML	06 20 21.2	
	comp=Z,32nm,0.3s						
KBS	**Kingsbay**	**2.82**	**327**	*e*P	**Pn**	**06 19 37.0**	**+1.4**
	SNR=55						
KBS	**Kingsbay**	**2.82**	**327**	Pn	**Pn**	**06 19 37.2**	**+1.6**
KBS	**Kingsbay**	**2.82**	**327**	*e*Pg	**Pg**	**06 19 44.1**	**+0.2**
	SNR=92						
KBS				Lg		06 20 18.1	
ARA0	**ARCESS Array S**	**7.35**	**164**	Sn	**Sn**	**06 22 00.4**	**-0.9**
	baz=358,slow=22						
ARA0	**ARCESS Array S**	**7.35**	**164**	Sn	**Sn**	**06 22 00.4**	**-0.9**
	baz=358,slow=22						
ARA0	**ARCESS Array S**	**7.35**	**164**	Sn	**Sn**	**06 22 00.4**	**-0.9**
	baz=358,slow=21,SNR=55						

IDC 01 06:47:44.2±1.6,16°.50S×178°.25W,h0km,mb3.9/6, mb1 4.2/6,mb1mx4.0/17,mbtmp3.9/6,Error ellipse: s-maj=109.1km s-min=22.8km az=149.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.46**	**240**	P	P	06 55 16.4	0.0
	2.1nm,0.6s,baz=61,slow=13,SNR=2.5						
WRA	**Warramunga Arr**	**45.05**	**258**	P	P	06 56 02.3	+0.1
	1.1nm,0.5s,baz=95,slow=7.4,SNR=46						
ASAR	**Alice Springs**	**45.34**	**253**	P	P	06 56 04.2	-0.2
	6.2nm,0.6s,baz=87,slow=8.7,SNR=119						
ILAR	**Eielson Array**	**84.48**	**13**	P	P	07 00 18.6	+0.2
	0.2nm,0.4s,baz=223,slow=5.5,SNR=5.5						
TXAR	**Lajitas Array**	**85.11**	**58**	P	P	07 00 22.9	+0.4
	0.3nm,0.7s,baz=212,slow=6.8,SNR=4.3						
PDAR	**Pinedale Array**	**86.22**	**43**	P	P	07 00 27.7	0.0
	0.2nm,0.6s,baz=258,slow=3.6,SNR=2.6						

*IDC **01** 07:06:14.5±0.5,15°.31S×176°.38W,h0km,mb5.0/17, mb1 5.2/17,mb1mx5.1/19,mbtmp5.0/17,MS5.4/22, Ms1 5.4/22,ms1mx5.2/30,Error ellipse: s-maj=19.3km s-min=15.4km az=136.0*
*ISCJB **01** 07:06:15.2±0.1,15°.31S±0°.05×176°.40W±0°.03,h10km, mb5.3/172,MS5.5/238,Error ellipse: s-maj=7.2km s-min=3.2km az=157.1*
*NEIC **01** 07:06:16.7±0.1,15°.26S×176°.41W,h10km,mb5.4/116, MS5.6/200,MW5.7,MW5.6,Error ellipse: s-maj=8.1km s-min=4.0km az=145.0,Moment Tensor Solution. s25 Moment tensor: Scale 10^17^Nm; M_{rr}-0.73; $M_{\theta\theta}$3.06; $M_{\phi\phi}$-2.33; $M_{r\theta}$-0.08; $M_{\theta\phi}$2.30; $M_{\phi r}$-0.66; Best double couple: $M_0$3.70000×10^17^ NP1:ϕ_s294.00000°, δ78.00000°, λ-7.00000°. NP2:ϕ_s26.00000°, δ84.00000°, λ-168.00000°. Principal axes: T 3.9300, Plg3.0000°, Azm159.0000°; N -0.6100, Plg76.0000°, Azm53.0000°; P -3.3200, Plg13.0000°, Azm250.0000°;*
*DJA **01** 07:06:17,15°.57S×176°.02W,h10km,mb5.2/26*
*SZGRF **01** 07:06:17.5,16°.15S×175°.62W,h33km,mb5.7,Tonga Islands*
*BJI **01** 07:06:17.7,14°.80S×176°.63W,h10km,mB5.7/37, mb5.1/41,Ms5.3/38,Ms7 5.0/38*
*MOS **01** 07:06:19.2±1.1,15°.23S×176°.50W,h33km,mb5.5/52, MS5.6/43,Error ellipse: s-maj=10.7km s-min=7.3km az=59.6*
*GCMT **01** 07:06:21.4±0.1,15°.19S×176°.12W,h12km,MW5.7, Moment Tensor Solution. s81,c149; s44,c54; Moment tensor: Scale 10^17^Nm; M_{rr}3.80±.05; $M_{\theta\theta}$-0.09±.05; $M_{\phi\phi}$-3.71±.05; $M_{r\theta}$-0.61±.16; $M_{\theta\phi}$3.49±.04; $M_{\phi r}$-0.03±.14; Best double couple: $M_0$4.90000×10^17^ NP1:ϕ_s164.00000°, δ45.00000°, λ112.00000°. NP2:ϕ_s314.00000°, δ49.00000°, λ69.00000°. Principal axes: T 3.9600, Plg74.0000°, Azm155.0000°; N 1.8800, Plg16.0000°, Azm328.0000°; P -5.8400, Plg2.0000°, Azm59.0000°; Data Used: II IU CN IC G. Surface waves: sta=112, comp=224, per= 50.*

ISC 01 07:06:16.8±0.1,15°.31S±0°.05×176°.37W±0°.03,h10km, (h16km±1.8km:pP-P),n1034,σ0s70/727,mb5.3/172, MS5.5/238,217C-228D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.66**	**73**	Pn	**Pn**	**07 07 20.6**	**-6.7**
	30nm,0.3s,baz=264,slow=9.1,SNR=18						
AFI				LR	LR	07 09 01.7	
	comp=Z,78μm,20.4s,baz=280,slow=36						
AFI				T		07 11 52.8	
	73nm,0.3s,baz=118,slow=8.9,SNR=7.0						
AFI	**Afiamalu**	**4.66**	**73**	*e*Pn	**Pn**	**07 07 20.5**	**-6.8**
MSVF	**Nonsavu**	**5.87**	**245**	*e*Pn	**Pn**	**07 07 45.4**	**+1.5**
	93nm,0.9s						
MSVF	**Nonsavu**	**5.87**	**245**	Pn	**Pn**	**07 07 45.0**	**+1.1**
	241nm,0.7s,SNR=11						
RAR	**Rarotonga**	**16.82**	**113**	LR	LR	07 14 31.4	
	comp=Z,8μm,19.6s,baz=284,slow=30						
DZM	**Mont Dzumac**	**17.61**	**245**	*e*P	**Pn**	**07 10 25.9**	**+3.5**
	437nm,1.4s						
DZM				*e*LR	LR	07 14 40.0	
	62μm,25.1s						
DZM	**Mont Dzumac**	**17.61**	**245**	*e*P	**Pn**	**07 10 27.8**	**+5.4**
NOUC	**Port Laguerre**	**17.74**	**245**	*e*P	**Pn**	**07 10 29.5**	**+5.4**
OUZ	**Omahuta**	**21.78**	**203**	*e*P	**P**	**07 11 10.9**	**+2.1**
	263nm,1.5s,mb5.4						
URZ	**Urewera**	**23.57**	**193**	P	**P**	**07 11 23.8**	**-4.0**
	25nm,0.8s,mb4.7,baz=311,slow=5.1,SNR=7.5						
URZ				LR	LR	07 19 22.5	
	comp=Z,15μm,20.2s,MS5.4,baz=23,slow=33						
HNR	**Honiara**	**23.85**	**281**	LR	LR	07 19 20.9	
	comp=Z,18μm,21.3s,MS5.5,baz=114,slow=33						
HNR	**Honiara**	**23.85**	**281**	PFAKE		07 11 40.0	+9.5
HNR				LR	LR		
	comp=Z,18μm,22.0s,MS5.5						
XMAS	**Kiritimati**	**25.45**	**49**	*e*P	**P**	**07 11 45.4**	**+0.2**
	comp=Z,111nm,0.9s,mb5.4						
XMAS				LR	LR		
	comp=Z,17μm,20.0s,MS5.6						
PPT	**Papeete**	**25.79**	**99**	*e*S	**S**	**07 16 06.1**	**-12**
	comp=Z,2μm,25.8s						
PPT				*e*LQ		07 16 58.4	
	comp=Z,28μm,25.5s						
PPT				*e*LR	LR	07 18 08.5	
	comp=Z,25μm,26.5s,baz=266						
PPT	**Papeete**	**25.79**	**99**	LR	LR	07 19 22.0	
	comp=Z,6μm,19.9s,MS5.1,baz=271,slow=30						
PPT				T		07 38 40.9	
	comp=Z,23nm,0.4s,baz=200,slow=22,SNR=4.0						
SNZO	**South Karori**	**27.04**	**195**	*e*P	**P**	**07 11 59.9**	**+0.7**
	comp=Z,99nm,1.2s,mb5.2						
SNZO				LR	LR		
	comp=Z,11μm,22.0s,MS5.4						
RPZ	**Rata Peaks**	**30.28**	**198**	LR	LR	07 24 09.2	
	comp=Z,15μm,18.0s,MS5.7,baz=246,slow=36						
EIDS	**Eidsvold**	**32.04**	**247**	*e*P	**P**	**07 12 44.8**	**+0.9**
	comp=Z,170nm,2.4s,mb5.5						
JOHN	**Johnston Islan**	**32.55**	**12**	PFAKE		07 13 00.0	+12
JOHN				LR	LR		
	comp=Z,6μm,21.0s,MS5.3						
ARMA	**Armidale**	**32.95**	**237**	*e*P	**P**	**07 12 51.5**	**-0.3**
ARMA				*e*S	**S**	**07 17 59.8**	**-10**
ARMA	**Armidale**	**32.95**	**237**	*e*P	**P**	**07 12 52.6**	**+0.8**
	comp=Z,52nm,0.9s,mb5.5						
CTA	**Charters Tower**	**35.87**	**257**	P	**P**	**07 13 16.0**	**-1.2**
	comp=Z,18nm,0.7s,mb5.1,baz=87,slow=10,SNR=15						
CTA				PcP	PcP	07 15 44.4	-0.2
	comp=Z,4.0nm,0.7s,baz=101,slow=7.7,SNR=3.6						
CTA				LR	LR	07 25 59.8	
	comp=Z,9μm,20.9s,MS5.5,baz=80,slow=33						
CTA	**Charters Tower**	**35.87**	**257**	*e*P	**P**	**07 13 15.9**	**-1.3**
	comp=Z,16nm,0.7s,mb5.0						
CTA				*e*S	**S**	**07 18 45.5**	**-10**
CTA	**Charters Tower**	**35.87**	**257**	P	**P**	**07 13 16.0**	**-

MIDW LR LR
comp=Z,3µm,21.0s,MS5.1
BBOO Buckleboo 46.39 239 *eP* **P 07 14 44.4 +0.8**
comp=Z,120nm,1.1s,mb5.7
WRA Warramunga Arr 47.07 257 P **P 07 14 48.0 -1.2**
comp=Z,24nm,0.9s,mb5.1,baz=67,slow=3.0,SNR=50
WRA PcP PcP 07 16 20.6 -0.6
comp=Z,3.2nm,0.8s,baz=86,slow=3.6,SNR=3.9
WRA LR LR 07 32 10.9
comp=Z,8µm,21.4s,MS5.6,baz=85,slow=33
ASAR Alice Springs 47.41 252 P **P 07 14 49.8 -2.0**
comp=Z,40nm,0.7s,mb5.5,baz=85,slow=8.3,SNR=106
ASAR Alice Springs 47.41 252 P **P 07 14 49.8 -2.0**
ASAR pmax pmax
comp=Z,40nm,0.7s
GUMO Guam 47.90 305 PFAKE 07 15 10.0 +14
GUMO LR LR
comp=Z,2µm,21.0s,MS4.9
KAKA Kakadu 49.64 266 *eP* **P 07 15 06.9 -2.2**
comp=Z,58nm,0.9s,mb5.6
KAKA Kakadu 49.64 266 *eP* **P 07 15 08.6 -0.5**
comp=Z,233nm,1.0s,mb6.2
KAKA Kakadu 49.64 266 P **P 07 15 09.2 +0.1**
comp=Z,921nmcomp=Z,115nm,1.0s,mb5.9
KNA Kununurra 52.73 262 P **P 07 15 31.9 -0.3**
comp=Z,3µmcomp=Z,257nm,0.8s,mb6.2
FORT Forrest 52.90 243 *eP* **P 07 15 31.7 -1.6**
comp=Z,118nm,0.8s,mb5.9
FORT Forrest 52.90 243 *eP* **P 07 15 32.4 -1.0**
comp=Z,124nm,0.8s,mb5.9
FITZ Fitzroy Crossi 55.42 258 *eP* **P 07 15 50.5 -1.4**
comp=Z,48nm,0.8s,mb5.6
MBWA Marble Bar 60.63 254 *eP* **P 07 16 27.9 -0.5**
MBWA LR LR
comp=Z,45nm,0.9s,mb5.6
comp=Z,8µm,19.0s,MS5.9
MBWA Marble Bar 60.63 254 P **P 07 16 28.0 -0.4**
comp=Z,86nm,1.5s,mb5.7
KDI Kendari 61.02 274 P **P 07 16 30.6 -0.5**
comp=Z,738nmcomp=Z,42nm,1.5s,mb5.3
KDI Kendari 61.02 274 P **P 07 16 31.8 +0.7**
comp=Z,739nmcomp=Z,42nm,1.5s,mb5.3
DAV Davao City (W) 61.66 287 LR LR 07 41 19.1
comp=Z,713nm,20.3s,MS4.8,baz=112,slow=34
DAV Davao City (W) 61.66 287 PFAKE 07 16 50.0 +15
DAV LR LR
comp=Z,1µm,19.0s,MS5.1
DAV Davao City (W) 61.66 287⇓*eP* **P 07 16 35.2 -0.3**
LUWI Luwuk 61.67 277 P **P 07 16 39.2 +3.6**
comp=Z,2µmcomp=Z,105nm,1.2s,mb5.8
LUWI Luwuk 61.67 277 P **P 07 16 43.3 +7.7**
comp=Z,105nm,1.2s,mb5.8
KLBR Kellerberrin 61.75 242 *eP* **P 07 16 34.2 -1.6**
comp=Z,91nm,0.9s,mb5.9
NWAO Narrogin (SRO) 62.16 241 LR LR 07 43 24.3
comp=Z,7µm,18.6s,MS5.9,baz=69,slow=36
NWAO Narrogin (SRO) 62.16 241 *eP* **P 07 16 38.7 +0.1**
NWAO pmax pmax
comp=Z,134nm,1.7s
NWAO MLR MLR
comp=Z,6µm,19.0s
NWAO Narrogin (SRO) 62.16 241 *eP* **P 07 16 38.7 +0.1**
comp=Z,134nm,1.7s,mb5.8
NWAO LR LR
comp=Z,6µm,19.0s,MS5.8
MRSI Marisa 62.91 279 P **P 07 16 44.2 +0.3**
comp=Z,858nmcomp=Z,19nm,1.6s,mb5.0
MRSI Marisa 62.91 279 P **P 07 16 44.7 +0.8**
comp=Z,859nmcomp=Z,19nm,1.6s,mb5.0
BKSI Bulukumba 63.08 272 P **P 07 16 49.6 +4.6**
BKSI Bulukumba 63.08 272 P **P 07 16 51.9 +6.9**
comp=Z,22nm,1.7s,mb5.0
SBA Scott Base 63.12 184 *eP* **P 07 16 45.0 +0.7**
comp=Z,872nm,2.1s,mb6.5
SBA LR LR
comp=Z,1µm,19.0s,MS5.0
BNSI Bone 63.32 273 P **P 07 16 46.7 +0.1**
comp=Z,1µmcomp=Z,58nm,1.4s,mb5.5
BNSI Bone 63.32 273 P **P 07 16 47.6 +1.0**
comp=Z,1µmcomp=Z,58nm,1.4s,mb5.5
SPSI Sidrap Palu 63.76 273 P **P 07 16 48.2 -1.3**
comp=Z,980nmcomp=Z,31nm,1.2s,mb5.2
SPSI Sidrap Palu 63.76 273 P **P 07 16 49.4 -0.1**
comp=Z,986nmcomp=Z,31nm,1.2s,mb5.2
TTSI Tana Toraja 63.95 274 P **P 07 16 51.6 +0.8**
comp=Z,720nmcomp=Z,27nm,1.4s,mb5.1
TTSI Tana Toraja 63.95 274 P **P 07 16 58.7 +7.9**
comp=Z,27nm,1.4s,mb5.1
ADK Adak 66.91 360 *eP* **P 07 17 09.0 -0.1**
ADK pmax pmax
comp=Z,90nm,1.1s,mb5.7
ADK Adak 66.91 360 *eP* **P 07 17 09.0 0.0**
comp=Z,90nm,1.1s,mb5.7
MJAR Matsushiro Arr 67.05 321 P **P 07 17 10.1 -0.3**
comp=Z,8.1nm,0.9s,mb4.7,baz=158,slow=5.8,SNR=13
MJAR Matsushiro Arr 67.05 321 P **P 07 17 10.1 -0.2**
MJAR pmax pmax
comp=Z,8.0nm,0.9s
MAJO Matsushiro 67.05 321 *eP* **P 07 17 10.3 0.0**
MAJO pmax pmax
comp=Z,32nm,1.5s,mb5.1
MAJO MLR MLR
comp=Z,735nm,19.0s,MS4.9
MAJO Matsushiro 67.05 321 *eP* **P 07 17 10.3 0.0**
comp=Z,32nm,1.5s,mb5.1
MAJO LR LR
comp=Z,735nm,19.0s,MS4.9
MAT Matsushiro 67.05 321 P **P 07 17 08.6 -1.7**
MAT S S 07 26 03.0 -1.3
ATKA Atka Island 67.25 1 *eP* **P 07 17 11.0 -0.2**
comp=Z,259nm,1.5s,mb6.0
KBKI Kotabaru 67.40 273 P **P 07 17 14.0 +0.9**
comp=Z,63nm,1.3s,mb5.5
KBKI Kotabaru 67.40 273 P **P 07 17 14.5 +1.4**
comp=Z,3µmcomp=Z,63nm,1.3s,mb5.5
MYLDM Lahad Datu 67.62 282 P **P 07 17 17.1 +2.6**
comp=Z,2µmcomp=Z,30nm,2.9s,mb4.8
MYLDM Lahad Datu 67.62 282 P **P 07 17 18.1 +3.6**
comp=Z,2µmcomp=Z,30nm,2.9s,mb4.8
JOW Kunigami 68.14 308 *eP* **P 07 17 17.2 -0.2**
comp=Z,21nm,1.3s,mb5.0
ERM Erimo 68.16 329 *eP* **P 07 17 23.4 +6.2**
ERM pmax pmax
comp=Z,55nm,1.2s,mb5.5
ERM Erimo 68.16 329 PFAKE 07 17 30.0 +13
ERM LR LR
comp=Z,994nm,19.0s,MS5.1
SMY Shemya 68.25 354 *eP* **P 07 17 17.7 +0.1**
SMY pmax pmax
comp=Z,119nm,1.2s,mb5.8
SMY Shemya 68.25 354 *eP* **P 07 17 17.7 +0.1**
comp=Z,119nm,1.2s,mb5.8
SDKM Sandakan 69.00 282 P **P 07 17 24.4 +1.3**
CASY Casey 69.30 204 *eP* **P 07 17 22.9 -1.1**
CASY Casey 69.30 204 *eP* **P 07 17 23.5 -0.6**
comp=Z,18nm,1.1s,mb4.9
CASY LR LR
comp=Z,3µm,20.0s,MS5.5
UNV Unalaska Valle 69.39 6 *eP* **P 07 17 24.6 -0.1**
comp=Z,425nm,2.3s,mb6.0
JNU Nakatsue 69.67 315 *eP* **P 07 17 26.8 0.0**
comp=Z,21nm,1.2s,mb5.0
BCPH Baguio City Da 69.74 294⇓*eP* **P 07 17 26.3 -1.3**
ASAJ Asahikawa 69.98 330 LR LR 07 50 54.7
comp=Z,694nm,18.1s,MS5.0,baz=172,slow=38
ASAJ Asahikawa 69.98 330 *eP* **P 07 17 29.3 +0.8**
comp=Z,23nm,1.6s,mb4.9
SKR Severo-Kuril's 70.00 342 *eP* **P 07 17 25.0 -3.4**
SKR *e* 07 17 46.0
SKR *e* 07 20 12.0
SKR *e*PPP 07 21 50.0
SKR *e*S S 07 26 38.0 -0.8
SKR *e* 07 27 18.0
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.7
SKR pmax pmax
comp=N,1µm,4.0s
SKR pmax pmax
comp=E,1µm,4.0s
SKR pmax pmax
comp=Z,1µm,4.0s
SKR smax
comp=N,1µm,10.0s
SKR smax
comp=E,1µm,10.0s
SKR MLR MLR
comp=N,900nm,18.0s,MS5.3
SKR MLR MLR
comp=E,1µm,18.0s,MS5.3
SKR MLR MLR
comp=Z,1µm,18.0s,MS5.2
KKM Kota Kinabalu 70.05 282 *eP* **P 07 17 29.9 +0.3**
comp=Z,8.6nm,0.7s,mb4.8
KKM LR LR
comp=Z,1µm,22.0s,MS5.0
PET Petropavlovsk 71.38 344 *eP* **P 07 17 43.1 +6.3**
PET *e*S S 07 26 59.1 +4.4
PET *e*SS SS 07 31 33.2 +3.5
PET Petropavlovsk 71.38 344 PFAKE 07 17 50.0 +13
PET LR LR
comp=Z,1µm,19.0s,MS5.1
PETK Petropavlovsk- 71.71 344 P **P 07 17 38.2 -0.5**
comp=Z,22nm,0.8s,mb5.2,baz=119,slow=7.0,SNR=37
PETK LR LR 07 42 24.4
comp=Z,631nm,20.5s,MS4.9,baz=151,slow=30
YSS Yuzh-Sakhalins 72.02 332 *eP* **P 07 17 40.0 -0.8**
YSS *e*S S 07 27 05.0 +2.6
YSS *e*PPS 07 27 47.0
YSS pmax pmax
comp=Z,80nm,1.2s,mb5.5
YSS pmax pmax
comp=Z,600nm,4.0s
YSS Yuzh-Sakhalins 72.02 332 *eP* **P 07 17 41.2 +0.4**
comp=Z,69nm,1.3s,mb5.4
YSS LR LR
comp=Z,223nm,20.0s,MS4.4
NACB Ninganchiao 72.15 302 *eP* **P 07 17 41.8 -0.3**
comp=Z,65nm,1.3s,mb5.4
BTM Bintulu 72.16 279 P **P 07 17 42.8 +0.4**
SSLB Suanglung 72.51 301 *eP* **P 07 17 43.9 -0.4**
comp=Z,15nm,1.0s,mb4.9
YHNB Yeheng 72.55 302 PFAKE 07 18 00.0 +16
YHNB LR LR
comp=Z,2µm,20.0s,MS5.3
TATO Taipei 72.60 303 PFAKE 07 18 00.0 +15
TATO LR LR
comp=Z,1µm,19.0s,MS5.2
BJII Banjamegara 72.64 267 P **P 07 17 46.9 +1.6**
comp=Z,2µmcomp=Z,53nm,1.7s,mb5.2
BJII Banjamegara 72.64 267 P **P 07 17 55.1 +10**
SBUM Sibu 72.77 277 P **P 07 17 46.4 +0.3**
SBUM Sibu 72.77 277 P **P 07 17 45.9 -0.1**
comp=Z,719nmcomp=Z,15nm,2.6s,mb4.5
SBUM Sibu 72.77 277 P **P 07 17 47.4 +1.4**
comp=Z,732nmcomp=Z,15nm,2.5s,mb4.5
STKI Sintang 72.81 275 P **P 07 17 48.4 +2.1**
comp=Z,52nm,0.5s,mb5.8
BSC Santa Cruz Isl 72.92 47 ⇓P **P 07 17 47.4 +0.9**
baz=73
MCCM Marconi Confer 73.07 41 PFAKE 07 18 00.0 +13
MCCM LR LR
comp=Z,3µm,20.0s,MS5.5
SBC Santa Barbara 73.10 46 ⇑P **P 07 17 48.3 +0.8**
baz=73
SCI San Clemente I 73.16 48 ⇑P **P 07 17 49.0 +1.1**
baz=73
SAO San Andreas Ge 73.21 43 PFAKE 07 18 00.0 +12
SAO LR LR
comp=Z,3µm,20.0s,MS5.5
PKM Peak Mountain 73.28 46 ⇓P **P 07 17 49.2 +0.7**
baz=73
SMMC Simmler 73.38 45 ⇑P **P 07 17 50.0 +0.8**
baz=74
BLG Laguna Peak 73.38 47 ⇓P **P 07 17 50.0 +0.8**
baz=74
HOPS Hopland 73.44 41 PFAKE 07 18 00.0 +11
HOPS LR LR
comp=Z,6µm,19.0s,MS5.9
CIS Catalina Islan 73.48 48 ⇑P **P 07 17 50.2 +0.4**
baz=74
FMP Fort Macarthur 73.72 47 ⇓P **P 07 17 52.2 +1.0**
baz=74
OSI Osito Adit 73.89 46 ⇓P **P 07 17 52.9 +0.8**
baz=74
DECC Green Verdugo 73.97 47 ⇑P **P 07 17 53.2 +0.5**
baz=74
ARVC Arvin 74.09 46 ⇑P **P 07 17 53.4 0.0**
baz=74
KSRS Korea Array 74.11 317 P **P 07 17 54.0 +0.7**
comp=Z,19nm,1.1s,mb4.9,baz=127,slow=6.5,SNR=17
KSRS Korea Array 74.11 317 P **P 07 17 54.1 +0.7**
KSRS pmax pmax
comp=Z,19nm,1.2s,mb4.9
MWC Mount Wilson 74.15 47 *eP* **P 07 17 56.9 +3.2**
MWC pmax pmax
comp=Z,32nm,1.3s,mb5.1
MWC Mount Wilson 74.15 47 *eP* **P 07 17 56.9 +3.1**
comp=Z,32nm,1.3s,mb5.1
VES Vestal, Richgr 74.29 45 ⇑P **P 07 17 54.6 +0.1**
baz=74
KSM Kuching 74.33 276 P **P 07 17 55.2 0.0**
KSM Kuching 74.33 276 *eP* **P 07 17 55.0 -0.3**
comp=Z,28nm,1.0s,mb5.2
KSM LR LR
comp=Z,914nm,21.0s,MS5.0
KSM Kuching 74.33 276 P **P 07 17 54.7 -0.5**
comp=Z,1µmcomp=Z,33nm,1.2s,mb5.1
KSM Kuching 74.33 276 P **P 07 17 55.7 +0.5**
comp=Z,1µmcomp=Z,33nm,1.2s,mb5.1
BAR Barrett 74.36 49 *eP* **P 07 17 51.3 -3.6**
comp=Z,30nm,1.3s,mb5.1
RCTC Rector, Farmer 74.44 45 ⇑P **P 07 17 55.1 -0.2**
baz=75
BFSC Mount Baldy Ra 74.44 47 ⇓P **P 07 17 55.7 +0.2**
baz=75
MURC Murrieta 74.44 48 ⇓P **P 07 17 56.0 +0.6**
baz=75
EDW2 Edwards Air Fo 74.54 47 ⇓P **P 07 17 57.0 +1.0**
baz=75
ISA Isabella 74.61 46 ⇓P **P 07 17 57.7 +1.3**
baz=75
ISA Isabella 74.61 46 *eP* **P 07 17 56.8 +0.4**
ISA pmax pmax
comp=Z,196nm,2.6s,mb5.6
ISA Isabella 74.61 46 *eP* **P 07 17 56.8 +0.4**
comp=Z,196nm,2.6s,mb5.6
CMB Columbia Colle 74.62 43 *eP* **P 07 17 56.6 +0.3**
CMB pmax pmax
comp=Z,17nm,1.0s,mb4.9
CMB MLR MLR
comp=Z,2µm,20.0s,MS5.5
CMB Columbia Colle 74.62 43 *eP* **P 07 17 56.6 +0.2**
comp=Z,16nm,1.0s,mb4.9
CMB LR LR
comp=Z,2µm,20.0s,MS5.5
OHCM Honcut 74.64 41 *eP* **P 07 17 58.5 +2.0**
MONP Monument Peak 74.65 49 ⇓P **P 07 17 57.4 +0.8**
baz=75
WDC Whiskeytown Da 74.71 40 *eP* **P 07 17 56.5 -0.3**
WDC pmax pmax
comp=Z,67nm,1.6s,mb5.3
WDC MLR MLR
comp=Z,6µm,19.0s,MS5.9
WDC Whiskeytown Da 74.71 40 *eP* **P 07 17 56.5 -0.4**
comp=Z,67nm,1.6s,mb5.3
WDC LR LR
comp=Z,6µm,19.0s,MS5.9
QSPA South Pole Qui 74.73 180 P **P 07 17 56.4 +0.1**
comp=Z,52nm,1.1s,mb5.4,baz=35,slow=2.7,SNR=61
DVTC Desert V Tower 74.77 49 ⇓P **P 07 17 58.2 +0.9**
baz=75
LEM Lembang 74.78 267 P **P 07 17 58.3 +0.5**
LEM Lembang 74.78 267 P **P 07 17 58.9 +1.1**
comp=Z,3µmcomp=Z,107nm,1.5s,mb5.5
QZH Quanzhou 74.95 302⇓*P* **P 07 17 59.7 +1.1**
QZH S S 07 27 34.0 -2.5
QZH pmax pmax
comp=Z,1µm,5.7s
QZH LR LR
comp=N,3µm,17.7s,MS5.7
QZH LR LR
comp=E,1µm,14.3s,MS5.7
QZH LR LR
comp=Z,2µm,20.0s
BBRC Big Bear Solar 74.98 48 ⇑P **P 07 17 59.3 +0.7**
baz=75
INCN Inchon 74.98 316 PFAKE 07 18 10.0 +12
INCN LR LR
comp=Z,682nm,22.0s,MS4.9
PFO Pinyon Flat Ob 74.98 48 ⇓P **P 07 17 59.3 +0.7**
baz=75
PFO Pinyon Flat Ob 74.98 48 PFAKE 07 18 10.0 +11
PFO LR LR
comp=Z,5µm,20.0s,MS5.8
SWSC Sam W. Stewart 75.13 49 ⇑P **P 07 17 60.0 +0.5**
baz=75
RRX Edison Barstow 75.24 47 ⇓P **P 07 18 00.5 +0.5**
baz=75
YBH Yreka Blue Hor 75.29 39 *eP* **P 07 18 00.6 +0.5**
YBH pmax pmax
comp=Z,30nm,1.1s
YBH MLR MLR
comp=Z,5µm,20.0s
YBH Yreka Blue Hor 75.29 39 *eP* **P 07 18 00.6 +0.5**
comp=Z,30nm,1.1s,mb5.1
YBH LR LR
comp=Z,5µm,20.0s,MS5.8
CWC Cottonwood Cre 75.30 45 ⇓P **P 07 18 01.1 +0.8**
baz=75
MLAC Mammoth Lakes 75.42 44 ⇓P **P 07 18 01.5 +0.5**
baz=76
KDAK Kodiak Island 75.44 13*cePP* **P 07 18 01.9 +1.3**
KDAK Kodiak Island 75.44 13 PFAKE 07 18 10.0 +9.4
KDAK LR LR
comp=Z,3µm,22.0s,MS5.5
MTUM Tungsten Hills 75.45 44 *eP* **P 07 18 02.7 +1.5**
WAKR Walker 75.50 43 *eP* **P 07 18 01.5 +0.1**
MPMC Manual Prospec 75.50 46 ⇑P **P 07 18 02.2 +0.7**
baz=76
BELC Belle Mtn. Jos 75.51 48 ⇓P **P 07 18 02.2 +0.6**
baz=76
DAC Darwin (Calif) 75.55 46 PFAKE 07 18 10.0 +8.3
DAC LR LR
comp=Z,5µm,20.0s,MS5.8
GSC Goldstone 75.59 47 ⇓P **P 07 18 02.5 +0.5**
baz=76
GSC Goldstone 75.59 47 *eP* **P 07 18 02.4 +0.4**
GSC pmax pmax
comp=Z,45nm,1.6s,mb5.2
GSC Goldstone 75.59 47 *eP* **P 07 18 02.4 +0.4**
comp=Z,45nm,1.6s,mb5.2
SSE Sheshan 75.63 308 P **P 07 18 01.1 -1.3**
SSE S S 07 27 44.8 +1.0
SSE sS sS 07 27 50.7 +1.4
SSE pmax pmax
comp=Z,43nm,0.7s,mb5.5
SSE pmax pmax
comp=Z,210nm,5.0s
SSE LR LR
comp=N,350nm,22.2s,MS4.8
SSE LR LR
comp=E,330nm,22.4s,MS4.8
SSE LR LR
comp=Z,470nm,20.8s,MS4.8
HUMO Hull Mountain 75.66 38 *eP* **P 07 18 03.6 +1.4**
comp=Z,35nm,1.2s,mb5.2
HUMO LR LR
comp=Z,5µm,20.0s,MS5.8
HEC Hector,Ludlow 75.69 47 ⇓P **P 07 18 03.2 +0.6**
baz=76
BC3 Big Chuckawall 75.73 49 ⇓P **P 07 18 03.3 +0.4**
baz=76
WCN Washoe City 75.73 42 ⇑P **P 07 18 03.0 +0.3**
baz=76,SNR=6.8
WCN Washoe City 75.73 42 *eP* **P 07 18 01.9 -0.8**
WCN pmax pmax
comp=Z,25nm,1.2s,mb5.0
WCN Washoe City 75.73 42 *eP* **P 07 18 01.9 -0.8**
comp=Z,25nm,1.2s,mb5.0
112A Yuma 75.83 50 ⇓P **P 07 18 03.9 +0.5**
baz=76
GLA Glamis 75.89 50 ⇑P **P 07 18 04.0 +0.1**
baz=76,SNR=6.6
GLA Glamis 75.89 50 *eP* **P 07 18 04.0 +0.2**
GLA pmax pmax
comp=Z,38nm,1.3s,mb5.2
GLA Glamis 75.89 50 *eP* **P 07 18 04.0 +0.2**
comp=Z,38nm,1.3s,mb5.2
GRAC Grapevine Rang 76.08 45 ⇓P **P 07 18 05.6 +0.8**
baz=76
GMRC Granite Mounta 76.14 48 ⇑P **P 07 18 05.8 +0.6**
baz=76
FURC Furnace Creek, 76.15 46 ⇑P **P 07 18 05.5 +0.3**
baz=76
PAHR Pah Rah Range 76.19 42 *eP* **P 07 18 05.4 +0.1**
comp=Z,35nm,1.2s,mb5.2
IRM Iron Mountain 76.20 48 ⇓P **P 07 18 05.7 +0.2**
baz=76
NVAR Mina Array Bea 76.20 43 P **P 07 18 05.4 -0.1**
comp=Z,12nm,0.8s,mb4.9,baz=230,slow=7.8,SNR=35
SHOC Shoshone 76.26 46 ⇓P **P 07 18 06.0 +0.2**
baz=76
TUQ Turquoise Moun 76.28 47 ⇑P **P 07 18 06.4 +0.5**
baz=76
MIR Mirnyy 76.33 204 *eP* **P 07 18 04.0 -1.7**
MIR *e*S S 07 27 54.0 +3.6
MIR pmax pmax
comp=Z,80nm,1.6s,mb5.4
MIR pmax pmax
comp=Z,1µm,4.0s
MIR smax
comp=N,679nm,12.0s
MIR smax
comp=E,485nm,12.0s
MIR MLR MLR
comp=N,900nm,16.0s,MS5.6
MIR MLR MLR
comp=E,2µm,16.0s,MS5.6
MIR MLR MLR
comp=Z,4µm,16.0s,MS5.8
Y12C Blythe 76.45 49 ⇓P **P 07 18 07.1 +0.2**
baz=77
U10A Ash Meadows, A 76.49 46 ⇑P **P 07 18 07.7 +0.5**
baz=77
113A Mohawk Valley, 76.54 50 ⇑P **P 07 18 07.4 -0.1**
baz=77
COR Corvallis 76.66 36 PFAKE 07 18 20.0 +12
COR LR LR
comp=Z,5µm,21.0s,MS5.8
TPH Tonopah 76.74 44 PFAKE 07 18 20.0 +12
TPH LR LR
comp=Z,2µm,19.0s,MS5.5
HABR Khabarovsk 76.76 329 *eP* **P 07 18 07.7 -0.7**
HABR *e**PP pP 07 18 17.2 +5.5
HABR *e* 07 18 18.0
HABR *e* 07 20 59.5
HABR *e*S S 07 27 52.9 -2.6
HABR *e* 07 28 20.5
HABR *e*SS SS 07 32 49.1 -2.8
HABR *e*SSS 07 36 12.3
HABR pmax pmax
comp=E,34nm,1.4s
HABR pmax pmax
comp=N,41nm,2.7s
HABR pmax pmax
comp=Z,64nm,1.8s,mb5.2
HABR MLR MLR
comp=Z,639nm,20.0s,MS4.9
Z13A Yuma Proving G 76.83 50 ⇑P **P 07 18 10.0 +0.9**
baz=77,SNR=10
V11A Goodsprings 76.83 47 ⇑P **P 07 18 09.5 +0.5**
baz=77
MOD Modoc 76.85 40 *eP* **P 07 18 09.3 +0.3**
comp=Z,43nm,1.1s,mb5.3
MOD LR LR
comp=Z,6µm,19.0s,MS5.9
NEE2 Needles Airpor 76.88 48 ⇑P **P 07 18 09.4 +0.1**
baz=77
214A Organ Pipe Nat 76.88 51 ⇓P **P 07 18 09.7 +0.3**
baz=77,SNR=6.6
W12A Cal Nev Ari 76.96 48 ⇑P **P 07 18 09.8 0.0**
baz=77
K05A Summer Lake 76.96 39 ⇓P **P 07 18 10.7 +1.0**
baz=77,SNR=10
Y13A Salome 76.99 49 ⇓P **P 07 18 10.3 +0.3**
baz=77
S10A Tonopah Range, 77.08 45 ⇓P **P 07 18 11.4 +0.9**
baz=77,SNR=9.3
U11A Corn Creek 77.15 46 ⇓P **P 07 18 11.1 +0.3**
baz=77
V12A Nelson 77.18 47 ⇑P **P 07 18 11.9 +0.8**
baz=77
114A Black Gap (USA 77.19 51 ⇓P **P 07 18 11.5 +0.3**
baz=77
MDJ Mudanjiang 77.23 324 P **P 07 18 12.1 +1.0**
MDJ pP pP 07 18 15.2 +0.8
MDJ sP sP 07 18 16.9 +1.3
MDJ PcP PcP 07 18 23.0 +1.2
MDJ PP PP 07 21 07.3 +2.0
MDJ S S 07 28 04.2 +3.4
MDJ pmax pmax

comp=Z,17nm,1.2s,mb4.8
MDJ pmax pmax
comp=Z,250nm,4.9s
MDJ LR LR
comp=N,310nm,32.5s,MS4.7
MDJ LR LR
comp=E,430nm,31.2s,MS4.7
MDJ LR LR
comp=Z,670nm,32.5s,MS4.8
MDJ Mudanjiang 77.23 324 *e*P **P 07 18 12.6 +1.5**
comp=Z,31nm,1.3s,mb5.1
MDJ LR LR
comp=Z,698nm,20.0s,MS5.0
F03A Seaside 77.34 35 ⇑P **P 07 18 13.0 +1.3**
baz=78
SHPR Sheep Range 77.35 46 *e*P **P 07 18 11.9 -0.1**
H04A Detroit Lake 77.35 36 ⇓P **P 07 18 12.5 +0.7**
baz=78
PPBI Pangkal Pinang 77.37 271 P **P 07 18 14.8 +2.2**
comp=Z,4μmcomp=Z,35nm,2.2s,mb4.9
Z14A Wintersburg 77.43 50 ⇓P **P 07 18 12.9 +0.4**
baz=78
R10A Warm Springs 77.47 44 ⇓P **P 07 18 13.1 +0.5**
baz=78,SNR=13
G04A Mulino 77.50 36 ⇑P **P 07 18 13.5 +0.9**
baz=78
S11A Rachel 77.52 45 ⇑P **P 07 18 13.1 +0.2**
baz=78
Y14A Wickenburg 77.65 50 ⇑P **P 07 18 14.1 +0.4**
baz=78,SNR=12
T11A Corn Creek, Al 77.67 46 ⇑P **P 07 18 13.9 +0.1**
baz=78,SNR=10
Q10A Clear Creek Ra 77.68 44 ⇑P **P 07 18 13.9 +0.1**
baz=78
E03A Lebam 77.72 34 ⇑P **P 07 18 14.2 +0.4**
baz=78
U12A Valley of Fire 77.75 47 ⇑P **P 07 18 14.6 +0.4**
baz=78
T12A Moapa 77.77 46 ⇑P **P 07 18 15.1 +0.7**
baz=78
NJ2 Nanjing 77.84 308 *e*P **P 07 18 14.2 -0.6**
NJ2 pP pP 07 18 19.3 +1.2
NJ2 sP sP 07 18 21.4 +2.1
NJ2 PP PP 07 21 12.1 +1.3
NJ2 S S 07 28 04.5 -3.4
NJ2 sS sS 07 28 13.0 -0.4
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
NJ2 pmax pmax
comp=Z,550nm,4.1s
NJ2 LR LR
comp=N,650nm,24.7s
NJ2 LR LR
comp=E,950nm,31.3s
NJ2 LR LR
comp=Z,10μm,25.6s,MS6.0
V13A Grand Canyon W 77.86 47 ⇑P **P 07 18 15.4 +0.6**
baz=78
216A Three Points, 77.92 52 ⇓P **P 07 18 15.6 +0.3**
baz=78,SNR=11
F04A Amboy 77.97 35 ⇓P **P 07 18 15.9 +0.6**
baz=78
Z15A Gila River Ind 77.98 50 ⇓P **P 07 18 15.8 +0.2**
baz=78,SNR=5.7
BMN Battle Mountai 77.98 42 *e*P **P 07 18 15.5 +0.1**
BMN pmax pmax
comp=Z,35nm,1.2s,mb5.2
BMN MLR MLR
comp=Z,2μm,22.0s,MS5.4
BMN Battle Mountai 77.98 42 *e*P **P 07 18 15.5 +0.1**
comp=Z,35nm,1.2s,mb5.2
BMN LR LR
comp=Z,2μm,22.0s,MS5.4
R11A Troy Canyon, C 77.98 45 ⇑P **P 07 18 15.8 +0.3**
baz=78,SNR=12
X14A Yava 77.99 49 ⇑P **P 07 18 16.0 +0.4**
baz=78,SNR=7.6
116A Eloy 77.99 51 ⇓P **P 07 18 15.6 -0.1**
baz=78,SNR=7.0
HOOD Mount Hood Mea 78.04 36 *e*P **P 07 18 16.7 +1.1**
comp=Z,46nm,1.2s,mb5.3
NLWA Neilton Lookou 78.08 33 PFAKE 07 18 30.0 +14
NLWA LR LR
comp=Z,3μm,20.0s,MS5.7
S12A Delamar Landin 78.11 46 ⇑P **P 07 18 16.9 +0.6**
baz=78,SNR=11
U13A Pakoon Wash 78.14 47 ⇓P **P 07 18 16.6 +0.2**
baz=78,SNR=10
Y15A Casa Rosa Ranc 78.16 50 ⇑P **P 07 18 16.9 +0.4**
baz=78,SNR=21
WVOR Wild Horse Val 78.17 40 *e*P **P 07 18 16.6 +0.2**
WVOR pmax pmax
comp=Z,81nm,1.8s,mb5.3
WVOR MLR MLR
comp=Z,7μm,19.0s,MS6.0
WVOR Wild Horse Val 78.17 40 *e*P **P 07 18 16.6 +0.1**
comp=Z,81nm,1.8s,mb5.3
WVOR LR LR
comp=Z,7μm,19.0s,MS6.0
Q11A Duckwater 78.19 44 ⇑P **P 07 18 16.7 +0.1**
baz=78,SNR=23
W14A Seligman 78.20 48 ⇑P **P 07 18 16.9 +0.2**
baz=78,SNR=14
217A Green Valley 78.31 52 ⇑P **P 07 18 18.3 +0.9**
baz=78,SNR=11
V14A Boquillas Ranc 78.38 48 ⇓P **P 07 18 18.3 +0.6**
baz=78,SNR=9.6
SLKM Skilak Lake 78.43 13 *e*P **P 07 18 17.6 +0.2**
X15A Humboldt 78.47 49 ⇓P **P 07 18 18.7 +0.4**
baz=79,SNR=17
T13A Saint George 78.48 46 ⇓P **P 07 18 18.4 +0.1**
baz=79,SNR=9.1
P11A Circle Ranch, 78.48 43 ⇓P **P 07 18 18.2 0.0**
baz=79
Z16A Peralta Trail, 78.55 51 ⇑P **P 07 18 18.7 0.0**
baz=79,SNR=9.4
I07A Izee 78.57 38 ⇑P **P 07 18 18.9 +0.3**
baz=79,SNR=8.0
G06A Carlson Farm, 78.57 37 ⇑P **P 07 18 18.8 +0.2**
baz=79
TUC Tucson 78.57 52 *e*P **P 07 18 18.8 -0.1**
TUC pmax pmax
comp=Z,22nm,1.1s,mb5.0
TUC MLR MLR
comp=Z,4μm,20.0s,MS5.8
TUC Tucson 78.57 52 *e*P **P 07 18 18.8 0.0**
comp=Z,22nm,1.1s,mb5.0
TUC LR LR
comp=Z,4μm,20.0s,MS5.8
GZH Guangzhou 78.61 298 P **P 07 18 17.8 -1.5**
GZH S S 07 28 11.7 -4.9
GZH pmax pmax
comp=Z,310nm,5.4s
R12A Pony Springs, 78.64 45 ⇑P **P 07 18 19.6 +0.5**
baz=79,SNR=18
MDSI Maura Dua 78.67 268 P **P 07 18 20.2 +0.4**
comp=Z,810nmcomp=Z,17nm,2.5s,mb4.5
117A Oracle 78.72 52 ⇓P **P 07 18 20.7 +1.0**
baz=79,SNR=23
Y16A Circle Bar Ran 78.75 50 ⇓P **P 07 18 20.6 +0.7**
baz=79,SNR=9.9
W15A Williams 78.77 49 ⇓P **P 07 18 20.7 +0.8**
baz=79
J08A Circle Bar Ran 78.78 39 ⇓P **P 07 18 20.0 +0.2**
baz=79
S13A Holt Ranch, En 78.78 46 ⇑P **P 07 18 20.5 +0.6**
baz=79
318A Bisbee 78.80 53 ⇑P **P 07 18 20.9 +0.7**
baz=79,SNR=19
LON Longmire 78.80 35 *e*P **P 07 18 18.9 -0.9**
LON pmax pmax
comp=Z,38nm,1.6s,mb5.1
LON Longmire 78.80 35 *e*P **P 07 18 18.9 -0.9**
comp=Z,38nm,1.6s,mb5.1
Q12A Willow Creek R 78.84 44 ⇓P **P 07 18 21.1 +0.9**
baz=79,SNR=11
KLR Kul'dur 78.91 328 *e*P **P 07 18 17.3 -3.0**
KLR *e*S S 07 28 18.5 -0.2
KLR *e* 07 29 07.5
KLR smax
comp=N,700nm,9.5s
KLR smax
comp=E,1μm,9.5s
D05A Enumclaw 78.97 34 ⇓P **P 07 18 21.3 +0.6**
baz=79,SNR=9.1
218A Dragoon 78.99 52 ⇑P **P 07 18 22.2 +1.0**
baz=79,SNR=14
R13A O'Grain Ranch, 79.00 45 ⇑P **P 07 18 21.6 +0.5**
baz=79
P12A McGill 79.01 44 ⇓P **P 07 18 21.4 +0.3**
baz=79,SNR=7.9
X16A Lo Mia Camp, P 79.02 50 ⇓P **P 07 18 21.9 +0.6**
baz=79,SNR=22
RC01 Rabbit Creek A 79.06 13 *e*P **P 07 18 21.0 +0.2**
comp=E,125nm,1.5s,mb5.6
T14A Hurricane 79.08 47 ⇑P **P 07 18 21.7 +0.2**
baz=79
DL2 Dalian 79.09 315 P **P 07 18 24.9 +3.4**
DL2 pmax pmax
comp=Z,30nm,1.3s,mb5.1
DL2 pmax pmax
comp=Z,430nm,4.3s
DL2 LR LR
comp=N,380nm,18.9s,MS4.9
DL2 LR LR
comp=E,340nm,17.8s,MS4.9
DL2 LR LR
comp=Z,480nm,22.0s,MS4.8
CCUT Cedar City 79.11 46 *e*P **P 07 18 22.3 +0.5**
comp=Z,237nm,2.8s,mb5.6
V15A Kaibab Nationa 79.14 48 ⇑P **P 07 18 22.7 +0.8**
baz=79,SNR=11
Y17A Roosevelt 79.14 51 ⇓P **P 07 18 22.7 +0.7**
baz=79,SNR=8.8
ARUT Antelope Range 79.18 46 *e*P **P 07 18 22.8 +0.7**
ARUT pmax pmax
comp=Z,27nm,1.2s,mb5.0
ARUT Antelope Range 79.18 46 *e*P **P 07 18 22.8 +0.7**
comp=Z,27nm,1.2s,mb5.0
CN2 Changchun 79.20 321 *e*P **P 07 18 24.1 +2.1**
CN2 *es*P sP 07 18 31.0 +4.5
CN2 *e*S S 07 28 23.0 +1.0
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,18.0s,MS5.2
CN2 LR LR
comp=E,700nm,18.0s,MS5.2
CN2 LR LR
comp=Z,1μm,19.0s,MS5.2
Z17A San Carlos Hig 79.24 51 ⇑P **P 07 18 23.1 +0.6**
baz=79
W16A Flagstaff 79.27 49 ⇑P **P 07 18 23.3 +0.6**
baz=79
SNY Shenyang 79.30 319 ⇑P **P 07 18 22.0 -0.6**
SNY pmax pmax
comp=Z,29nm,1.4s,mb5.0
SNY pmax pmax
comp=Z,210nm,5.2s
SNY LR LR
comp=N,430nm,17.4s,MS5.0
SNY LR LR
comp=E,370nm,16.8s,MS5.0
SNY LR LR
comp=Z,610nm,18.0s,MS5.0
319A Douglas 79.32 53 ⇓P **P 07 18 23.2 +0.2**
baz=79,SNR=12
118A Homack Ranch, 79.33 52 ⇓P **P 07 18 24.1 +1.0**
baz=80
U15A North Rim 79.34 48 ⇓P **P 07 18 23.3 +0.3**
baz=80,SNR=11
Q13A Wheeler Ranch, 79.35 45 ⇓P **P 07 18 23.0 0.0**
baz=80,SNR=13
S14A Cedar City 79.35 46 ⇓P **P 07 18 23.6 +0.6**
baz=80
X17A Forest Lakes 79.46 50 ⇑P **P 07 18 24.8 +1.1**
baz=80,SNR=14
Z18A Geronimo 79.48 51 ⇓P **P 07 18 24.5 +0.7**
baz=80
O12A Currie 79.52 43 ⇑P **P 07 18 24.2 +0.3**
baz=80,SNR=12
T15A Red Dirt Ranch 79.55 47 ⇑P **P 07 18 24.8 +0.7**
baz=80,SNR=13
G08A Pilot Rock 79.57 37 ⇓P **P 07 18 24.0 -0.1**
baz=80,SNR=19
WUAZ Wupatki 79.57 49 ⇓P **P 07 18 24.7 +0.4**
baz=80,SNR=6.1
WUAZ Wupatki 79.57 49 *e*P **P 07 18 25.2 +0.9**
comp=Z,47nm,1.5s,mb5.2
WUAZ LR LR
comp=Z,4μm,21.0s,MS5.7
TTA Tatalina 79.60 9 *e*P **P 07 18 24.1 +0.3**
P13A Bates Ranch, G 79.60 44 ⇑P **P 07 18 24.6 +0.3**
baz=80,SNR=17
219A White Tail Can 79.60 53 ⇓P **P 07 18 24.5 0.0**
baz=80,SNR=13
JCW Jim Creek 79.60 34 *e*P **P 07 18 24.1 0.0**
PMR Palmer 79.64 13 *e*P **P 07 18 23.4 -0.6**
PMR pmax pmax
comp=Z,63nm,1.6s,mb5.3
PMR Palmer 79.64 13 *e*P **P 07 18 23.4 -0.6**
comp=Z,63nm,1.6s,mb5.3
R14A James Farms, M 79.71 46 ⇓P **P 07 18 25.5 +0.5**
baz=80
E07A Sunnyside 79.78 36 ⇓P **P 07 18 26.2 +1.1**
baz=80,SNR=6.3
Y18A Canyon Day Jun 79.78 51 ⇑P **P 07 18 26.1 +0.7**
baz=80,SNR=13
RSW Rattlesnake Hi 79.83 36 *e*P **P 07 18 25.7 +0.2**
W17A Winslow 79.86 49 ⇑P **P 07 18 26.3 +0.5**
baz=80
HAWA Hanford 79.87 36 *e*P **P 07 18 25.2 -0.4**
comp=Z,88nm,1.6s,mb5.4
HAWA LR LR
comp=Z,5μm,20.0s,MS5.9
Q14A Sevier Lake (B 79.87 45 ⇑P **P 07 18 26.8 +1.0**
baz=80,SNR=12
S15A Panguitch 79.87 46 ⇓P **P 07 18 26.3 +0.5**
baz=80
320A Kipp Ranch, An 79.89 54 ⇓P **P 07 18 26.8 +0.7**
baz=80,SNR=16
119A Ashpeak Ranch, 79.90 52 ⇑P **P 07 18 26.7 +0.6**
baz=80,SNR=9.7
O13A Hicks Ranch, I 79.95 44 ⇑P **P 07 18 26.4 +0.2**
baz=80
DIV Divide 80.00 15 *e*P **P 07 18 24.7 -1.2**
comp=Z,53nm,1.0s,mb5.4
A05A Maple Falls 80.01 33 ⇑P **P 07 18 26.5 +0.2**
baz=80
B06A Marblemount 80.03 34 ⇑P **P 07 18 26.9 +0.4**
baz=80
U16A Tuba City 80.04 48 ⇓P **P 07 18 27.2 +0.4**
baz=80,SNR=8.5
ETW Entiat 80.12 35 *e*P **P 07 18 26.8 -0.2**
220A Playas Peak, P 80.12 53 ⇑P **P 07 18 28.0 +0.6**
baz=80,SNR=25
BMRM Bremner River 80.15 15 *e*P **P 07 18 26.3 -0.5**
comp=Z,54nm,1.1s,mb5.4
Z19A T-Link Ranch, 80.15 52 ⇓P **P 07 18 28.0 +0.5**
baz=80
T16A Glen Canyon Da 80.15 47 ⇓P **P 07 18 27.9 +0.5**
baz=80
X18A Snowflake 80.17 50 ⇑P **P 07 18 28.3 +0.7**
baz=80,SNR=5.2
R15A Junction 80.19 46 ⇑P **P 07 18 28.4 +0.8**
baz=80
QIZ Qiongzhong 80.22 293 P **P 07 18 27.4 -0.7**
QIZ pP pP 07 18 30.8 -0.7
QIZ PP PP 07 21 29.9 -0.9
QIZ S S 07 28 34.5 +0.7
QIZ sS sS 07 28 39.5 +0.2
QIZ pmax pmax
comp=Z,20nm,1.5s,mb4.8
QIZ pmax pmax
comp=Z,300nm,6.1s
QIZ LR LR
comp=N,330nm,22.9s,MS4.8
QIZ LR LR
comp=E,340nm,19.8s,MS4.8
QIZ LR LR
comp=Z,1μm,21.9s,MS5.2
QIZ Qiongzhong 80.22 293 PFAKE 07 18 40.0 +12
QIZ LR LR
comp=Z,1μm,22.0s,MS5.2
LNOR Lincton Mounta 80.29 37 *e*P **P 07 18 28.2 +0.3**
P14A Drum Mountains 80.30 44 ⇓P **P 07 18 28.5 +0.4**
baz=80,SNR=18
120A U Bar Ranch, L 80.31 52 ⇓P **P 07 18 29.2 +0.9**
baz=80,SNR=7.3
WRAK Wrangell Islan 80.36 23 *e*P **P 07 18 29.4 +1.4**
comp=Z,51nm,1.5s,mb5.2
WRAK LR LR
comp=Z,4μm,22.0s,MS5.7
MSU Marysvale 80.40 46 *e*P **P 07 18 29.8 +1.1**
S16A Weppner Ranch, 80.43 47 ⇑P **P 07 18 29.3 +0.4**
baz=81
MFID Camas Ranch 80.44 40 ⇑P **P 07 18 29.5 +0.7**
baz=81
Y19A Nutrioso 80.44 51 ⇓P **P 07 18 29.8 +0.8**
baz=81,SNR=20
Q15A Fillmore 80.49 45 ⇑P **P 07 18 30.0 +0.9**
baz=81,SNR=8.4
Z20A Nine Sixteen R 80.58 52 ⇑P **P 07 18 30.7 +0.9**
baz=81,SNR=16
D08A Wollman Farm, 80.59 36 ⇓P **P 07 18 29.3 -0.2**
baz=81,SNR=9.8
W18A Petrified Fore 80.59 50 ⇑P **P 07 18 30.4 +0.6**
baz=81
MYKOM Kota Tinggi 80.62 274 P **P 07 18 30.0 -0.5**
X19A St. Johns 80.62 51 ⇑P **P 07 18 30.8 +0.8**
baz=81,SNR=15
T17A Navajo Res., N 80.66 48 ⇑P **P 07 18 31.3 +1.1**
baz=81,SNR=9.3
WHN Wuhan 80.68 305 P **P 07 18 32.2 +1.8**
WHN LR LR
comp=N,2μm,16.6s
WHN LR LR
comp=E,2μm,21.8s
WHN LR LR
comp=Z,2μm,21.1s,MS5.5
V18A Ganado 80.71 49 ⇓P **P 07 18 31.1 +0.7**
baz=81,SNR=12
E09A Wood Farm, Sta 80.73 37 ⇑P **P 07 18 30.0 -0.2**
baz=81,SNR=9.1
221A Mesquite Ranch 80.75 53 ⇓P **P 07 18 31.8 +1.1**
baz=81,SNR=8.6
DUG Dugway 80.77 44 ⇓P **P 07 18 29.9 -0.7**
baz=81,SNR=10
DUG Dugway 80.77 44 *e*P **P 07 18 30.8 +0.2**
DUG pmax pmax
comp=Z,26nm,1.5s,mb4.9
DUG MLR MLR
comp=Z,2μm,20.0s,MS5.4
DUG Dugway 80.77 44 *e*P **P 07 18 30.8 +0.1**
comp=Z,26nm,1.5s,mb4.9
DUG LR LR
comp=Z,2μm,20.0s,MS5.4
R16A Teasdale 80.77 46 ⇑P **P 07 18 31.5 +0.8**
baz=81
P15A Leamington 80.83 45 ⇑P **P 07 18 31.3 +0.4**
baz=81
W19A Sanders 80.85 50 ⇑P **P 07 18 31.6 +0.4**
baz=81
OD2 Odessa Site #2 80.90 36 *e*P **P 07 18 31.1 0.0**
S17A Black Ridge (B 80.95 47 ⇑P **P 07 18 32.1 +0.4**
baz=81
121A Cookes Peak, D 80.96 53 ⇓P **P 07 18 32.8 +1.0**
baz=81,SNR=10
F10A Beach Ranch, E 80.96 37 ⇓P **P 07 18 31.3 -0.2**
baz=81,SNR=13
BGU Big Grassy Mou 80.98 43 *e*P **P 07 18 31.4 -0.3**
comp=Z,121nm,2.4s,mb5.4
O15A The Old Anders 81.04 44 ⇑P **P 07 18 31.7 -0.3**
baz=81
I12A Atlanta 81.07 40 ⇑P **P 07 18 31.9 -0.2**
baz=81,SNR=20
U18A Rough Rock, Ch 81.07 48 ⇑P **P 07 18 32.4 +0.1**
baz=81
TRF Thorofare Moun 81.08 12 *e*P **P 07 18 31.4 -0.3**
comp=Z,59nm,1.3s,mb5.4
Y20A Horse Springs, 81.08 51 ⇓P **P 07 18 33.0 +0.5**
baz=81,SNR=22
B08A Colville Reser 81.10 35 ⇓P **P 07 18 31.6 -0.6**
baz=81,SNR=11
NLU North Lily Min 81.15 45 *e*P **P 07 18 30.9 -1.8**
comp=Z,73nm,2.2s,mb5.2
KGM Kluang 81.19 275 P **P 07 18 33.3 -0.2**
X20A Quemado 81.26 51 ⇑P **P 07 18 33.6 +0.2**
baz=81,SNR=20
P16A Fountain Green 81.27 45 ⇑P **P 07 18 33.5 +0.2**
baz=81
Q16A Castle Valley 81.28 46 ⇑P **P 07 18 33.7 +0.3**
baz=81
N15A Stansbury Isla 81.30 44 ⇑P **P 07 18 32.9 -0.6**
baz=81
222A Williams Famil 81.31 53 ⇓P **P 07 18 34.1 +0.4**
baz=81
V19A Window Rock 81.36 49 ⇓P **P 07 18 33.7 -0.2**
baz=82
Z21A St. Cloud Mine 81.37 52 ⇓P **P 07 18 34.6 +0.6**
baz=82,SNR=32
R17A Hanksville Air 81.37 46 ⇓P **P 07 18 33.5 -0.4**
baz=82,SNR=6.4
C09A Chrisman Ranch 81.37 35 ⇑P **P 07 18 32.6 -1.1**
baz=82
T18A Mexican Hat 81.39 48 ⇓P **P 07 18 33.9 -0.1**
baz=82
HLID Hailey 81.40 40 ⇓P **P 07 18 33.5 -0.4**
baz=82,SNR=19
HLID Hailey 81.40 40 *e*P **P 07 18 33.8 -0.1**
comp=Z,28nm,1.2s,mb5.1
HLID LR LR
comp=Z,3μm,20.0s,MS5.6
TMUT Trail Mountain 81.43 45 *e*P **P 07 18 35.4 +1.2**
comp=Z,470nm,2.7s,mb5.9
J13A Cove Ranch, Pi 81.46 41 ⇓P **P 07 18 33.8 -0.5**
baz=82,SNR=19
MPU Maple Canyon 81.48 45 *e*P **P 07 18 35.4 +1.0**
comp=Z,124nm,2.4s,mb5.4
U19A Dine' College, 81.49 49 ⇓P **P 07 18 34.6 0.0**
baz=82,SNR=19
W20A Ramah 81.51 50 ⇑P **P 07 18 34.6 -0.1**
baz=82,SNR=18
BPAW Bear Paw Mtn. 81.54 11 *e*P **P 07 18 29.9 -4.3**
comp=Z,27nm,1.4s,mb5.0
S18A Hurst Farm, Bl 81.55 47 ⇑P **P 07 18 34.7 -0.1**
baz=82
HVU Hansel Valley 81.56 43 *e*P **P 07 18 34.6 -0.2**
HVU pmax pmax
comp=Z,50nm,1.6s,mb5.2
HVU Hansel Valley 81.56 43 *e*P **P 07 18 34.6 -0.2**
comp=Z,50nm,1.6s,mb5.2
MCK McKinley 81.60 12 *e*P **P 07 18 33.6 -0.9**
MCK pmax pmax
comp=Z,45nm,1.1s,mb5.3
MCK McKinley 81.60 12 *e*P **P 07 18 33.6 -0.9**
comp=Z,45nm,1.1s,mb5.3
SKAG Skagway 81.60 20 *e*P **P 07 18 34.3 -0.3**
comp=Z,90nm,2.1s,mb5.3
M15A Larsen Ranch, 81.62 43 ⇓P **P 07 18 35.2 +0.1**
baz=82
H12A Diamond D Ranc 81.63 39 ⇑P **P 07 18 34.6 -0.4**
baz=82,SNR=16
122A Conniff Cattle 81.63 53 ⇓P **P 07 18 35.6 +0.2**
baz=82
G12A Big Creek, Yel 81.64 39 ⇓P **P 07 18 34.4 -0.8**
baz=82,SNR=27
O16A Springville 81.66 44 ⇓P **P 07 18 35.2 -0.1**
baz=82,SNR=9.0
Y21A Point of Rocks 81.66 51 ⇑P **P 07 18 35.7 +0.2**
baz=82,SNR=21
PAX Paxson 81.67 14 *e*P **P 07 18 33.9 -1.0**
PAX pmax pmax
comp=Z,21nm,1.3s,mb4.9
PAX Paxson 81.67 14 *e*P **P 07 18 33.9 -1.0**
comp=Z,21nm,1.3s,mb4.9
K14A Jones Ranch, D 81.67 42 ⇑P **P 07 18 35.2 -0.2**
baz=82,SNR=16
SEY Seymchan 81.72 346 *e*P **P 07 18 34.3 -0.8**
X21A Alamocita Cree 81.75 51 ⇓P **P 07 18 36.0 0.0**
baz=82,SNR=15
I13A Wildhorse Cree 81.76 40 ⇓P **P 07 18 36.2 +0.4**
baz=82
223A Chaparral, Ant 81.79 54 ⇓P **P 07 18 36.6 +0.3**
baz=82
SRU San Rafael 81.82 46 ⇓P **P 07 18 35.8 -0.4**
baz=82,SNR=8.1
SRU San Rafael 81.82 46 *e*P **P 07 18 36.7 +0.5**
SRU pmax pmax
comp=Z,193nm,2.7s,mb5.5
SRU San Rafael 81.82 46 *e*P **P 07 18 36.6 +0.4**
comp=Z,193nm,2.7s,mb5.5
V20A Brimhall 81.82 50 ⇓P **P 07 18 36.1 -0.2**
baz=82
P17A Butcher Ranch, 81.83 45 ⇑P **P 07 18 36.4 +0.1**
baz=82,SNR=5.8
J14A Carey 81.84 41 ⇓P **P 07 18 36.4 +0.1**
baz=82,SNR=18
T19A Beclabito 81.86 48 ⇓P **P 07 18 36.4 -0.1**
baz=82,SNR=12

JLU **Jordanelle** 81.88 44 eP P 07 18 36.1 -0.3
comp=Z,195nm,2.6s,mb5.6
Z22A **Elephant Butte** 81.88 52 ⇑P P 07 18 36.4 -0.3
baz=82,SNR=19
DAU **Daniels Canyon** 81.92 44 eP P 07 18 38.1 +1.4
L15A **Malad City** 81.92 43 ⇓P P 07 18 36.5 -0.2
baz=82,SNR=10
R18A **Canyonlands Na** 81.93 47 ⇑P P 07 18 36.4 -0.5
baz=82,SNR=5.6
HYT **Haines Junctio** 81.99 18 eP P 07 18 36.8 +0.2
H13A **Challis** 82.00 40 ⇓P P 07 18 36.9 -0.2
baz=82,SNR=17
F12A **Elk City** 82.01 38 ⇓P P 07 18 36.7 -0.4
baz=82,SNR=23
N16A **Rees Ranch, Co** 82.02 44 ⇓P P 07 18 37.1 -0.1
baz=82,SNR=6.6
U20A **Newcomb** 82.03 49 ⇑P P 07 18 37.7 +0.3
baz=82,SNR=7.2
MENT **Mentasta** 82.05 14 eP P 07 18 36.7 -0.2
Q18A **Rafter H Ranch** 82.08 46 ⇑P P 07 18 37.5 -0.2
baz=82,SNR=9.2
M16A **Huntsville** 82.09 43 ⇑P P 07 18 37.1 -0.5
baz=82,SNR=11
W21A **San Fidel** 82.14 50 ⇑P P 07 18 38.5 +0.5
baz=82
K15A **Arbon** 82.16 42 ⇓P P 07 18 37.9 0.0
baz=82,SNR=5.6
Y22A **Socorro** 82.16 52 ⇓P P 07 18 37.9 -0.3
baz=82,SNR=13
O17A **Robinson Place** 82.17 45 ⇓P P 07 18 38.0 0.0
baz=82,SNR=17
E12A **Beaver Dam Sad** 82.17 38 ⇑P P 07 18 37.2 -0.6
baz=82
123A **Bell Site, Whi** 82.17 53 ⇓P P 07 18 38.2 -0.1
baz=82
S19A **Harvey Farm, M** 82.18 48 ⇑P P 07 18 37.9 -0.2
baz=82,SNR=8.9
I14A **Mackay** 82.18 40 ⇓P P 07 18 38.2 +0.1
baz=82,SNR=12
LAZ **Ladron** 82.22 51 eP P 07 18 38.9 +0.4
comp=Z,64nm,2.0s,mb5.2
SDSI **Sungai Dareh** 82.23 271 P P 07 18 38.2 -0.8
comp=Z,1µmcomp=Z,21nm,1.4s,mb4.9
P18A **Preston Nutter** 82.25 45 ⇑P P 07 18 38.8 +0.3
baz=82,SNR=5.7
LENM **Lemitar** 82.25 52 eP P 07 18 39.6 +1.0
Y22D **IRIS PASSCAL I** 82.25 52 ⇓P P 07 18 38.5 -0.1
baz=82
HWUT **Hardware Ranch** 82.27 43 eP P 07 18 38.1 -0.5
HWUT LR LR
comp=Z,2µm,22.0s,MS5.5
KTGM **Kuala Trenggan** 82.27 278 P P 07 18 38.8 -0.4
NEW **Newport** 82.27 35 ⇓P P 07 18 38.3 -0.1
baz=82
NEW **Newport** 82.27 35 eP P 07 18 38.9 +0.6
NEW LR LR
comp=Z,3µm,22.0s,MS5.7
G13A **Cobalt** 82.29 39 ⇓P P 07 18 38.6 0.0
baz=82,SNR=18
324A **Moseley Ranch,** 82.31 55 ⇓P P 07 18 38.5 -0.5
baz=82,SNR=24
R19A **Curley Farm, L** 82.33 47 ⇑P P 07 18 38.9 -0.1
baz=82,SNR=9.9
MVCO **Mesa Verde** 82.40 48 ⇑P P 07 18 39.2 -0.1
baz=82
MVCO **Mesa Verde** 82.40 48 eP P 07 18 40.8 +1.4
comp=Z,81nm,2.0s,mb5.3
MVCO LR LR
comp=Z,4µm,20.0s,MS5.8
V21A **Milan** 82.43 50 ⇑P P 07 18 39.6 0.0
baz=83,SNR=6.2
425A **Indio Mountain** 82.45 55 ⇑P P 07 18 39.6 -0.1
baz=83,SNR=36
Z23A **Rita Site, Whi** 82.45 53 ⇑P P 07 18 39.5 -0.2
baz=83
N17A **Moffit Pass** 82.45 44 ⇓P P 07 18 39.4 -0.1
baz=83,SNR=6.9
MNTX **Cornudas Mount** 82.49 54 ⇓P P 07 18 39.7 -0.2
baz=83,SNR=40
MNTX **Cornudas Mount** 82.49 54 eP P 07 18 40.0 0.0
comp=Z,75nm,1.6s,mb5.4
MNTX LR LR
comp=Z,4µm,20.0s,MS5.7
BNM **Barren Site** 82.50 52 eP P 07 18 40.3 +0.3
comp=Z,59nm,1.5s,mb5.4
224A **Cornudas Mount** 82.53 54 ⇓P P 07 18 40.0 -0.1
baz=83,SNR=27
PV10 **Paradox Valley** 82.53 47 eP P 07 18 39.9 -0.1
comp=Z,230nm,0.9s,mb6.2
C11A **Tepee Creek (N** 82.53 36 ⇓P P 07 18 39.5 -0.2
baz=83
L16A **Fish Haven** 82.55 43 ⇑P P 07 18 39.2 -0.8
baz=83
J15A **Blackfoot** 82.57 41 ⇑P P 07 18 39.9 -0.2
baz=83,SNR=24
LPM **Los Pinos Moun** 82.57 52 eP P 07 18 41.4 +1.1
H14A **Leadore** 82.58 40 ⇓P P 07 18 40.1 0.0
baz=83,SNR=11
DOT **Dot Lake** 82.58 14 eP P 07 18 38.9 -0.7
comp=Z,142nm,1.4s,mb5.8
Q19A **Hogan Spring (** 82.62 46 ⇓P P 07 18 40.3 -0.2
baz=83,SNR=19
PV04 **Paradox Valley** 82.63 47 eP P 07 18 40.2 -0.2
D12A **Red Ives Fores** 82.63 37 ⇓P P 07 18 40.3 0.0
baz=83
626A **Big Bend Ranch** 82.66 57 ⇑P P 07 18 40.8 -0.1
baz=83,SNR=25
U21A **Nageezi** 82.68 49 ⇓P P 07 18 40.6 -0.2
baz=83,SNR=22
325A **Bean Ranch, Si** 82.68 55 ⇓P P 07 18 40.8 -0.1
baz=83,SNR=25
DLBC **Dease Lake** 82.69 23 eP P 07 18 40.2 -0.2
O18A **Roosevelt** 82.70 45 ⇓P P 07 18 40.8 0.0
baz=83
W22A **Albuquerque** 82.70 51 ⇑P P 07 18 41.3 +0.4
baz=83
PV01 **Paradox Valley** 82.75 47 eP P 07 18 41.3 +0.2
comp=Z,5µm,1.7s
S20A **Disappointment** 82.77 48 ⇑P P 07 18 41.1 -0.1
baz=83,SNR=12
M17A **Scullys Gap (B** 82.81 44 ⇓P P 07 18 41.1 -0.2
baz=83,SNR=8.5
124A **Stringfield Ra** 82.82 53 ⇓P P 07 18 41.6 -0.1
baz=83,SNR=16
I15A **Monteview** 82.83 41 ⇑P P 07 18 41.2 -0.1
baz=83,SNR=13
G14A **Jackson** 82.83 39 ⇑P P 07 18 41.0 -0.3
baz=83
COLA **College** 82.83 12 eP P 07 18 39.8 -1.1
COLA pmax pmax
comp=Z,78nm,1.4s,mb5.5
COLA MLR MLR
comp=Z,2µm,20.0s,MS5.5
COLA **College** 82.83 12 eP P 07 18 39.8 -1.1
comp=Z,78nm,1.4s,mb5.5
COLA LR LR
comp=Z,2µm,20.0s,MS5.5
K16A **Soda Springs** 82.84 42 ⇓P P 07 18 41.7 +0.2
baz=83,SNR=5.7
Y23A **Lovelace Mesa,** 82.85 52 ⇓P P 07 18 41.1 -0.7
baz=83
526A **Mary Lane Ranc** 82.89 56 ⇑P P 07 18 41.7 -0.3
baz=83
C12B **Naegeli Ranch,** 82.91 36 ⇓P P 07 18 41.0 -0.8
baz=83
R20A **Redvale** 82.91 47 ⇓P P 07 18 41.7 -0.3
baz=83,SNR=7.9
ILAR **Eielson Array** 82.94 12 P P 07 18 39.4 -2.1
comp=Z,7.5nm,1.0s,mb4.7,baz=222,slow=5.2,SNR=37
ILAR LR LR 07 48 07.7
comp=Z,1µm,21.7s,MS5.3,baz=214,slow=30
ANMO **Albuquerque** 82.96 51 eP P 07 18 42.1 -0.2
ANMO pmax pmax
comp=Z,38nm,1.4s
ANMO MLR MLR
comp=Z,4µm,20.0s
ANMO **Albuquerque** 82.96 51 eP P 07 18 42.1 -0.1
comp=Z,38nm,1.4s,mb5.2
ANMO LR LR
comp=Z,4µm,20.0s,MS5.8
TXAR **Lajitas Array** 82.96 57 P P 07 18 42.7 +0.3
comp=Z,5.6nm,0.9s,mb4.6,baz=226,slow=4.7,SNR=37
TXAR LR LR 07 47 57.5
comp=Z,5µm,20.2s,MS5.9,baz=310,slow=30
TXAR **Lajitas Array** 82.96 57 P P 07 18 42.7 +0.2
TXAR LR LR 07 47 57.5
L17A **Cokeville** 82.96 43 ⇓P P 07 18 41.5 -0.6
baz=83,SNR=8.1

E13A **Victor** 83.00 38 ⇑P P 07 18 41.2 -1.1
baz=83,SNR=13
MCMT **McKenzie Canyo** 83.00 40 eP P 07 18 42.3 0.0
comp=Z,8.5nm,1.1s,mb4.7
T21A **Navajo Lake** 83.01 49 ⇓P P 07 18 42.1 -0.4
baz=83,SNR=6.8
X23A **Hourglass Bar** 83.01 51 ⇑P P 07 18 42.1 -0.5
baz=83,SNR=9.7
H15A **Lima** 83.03 40 ⇑P P 07 18 41.7 -0.8
baz=83,SNR=21
J16A **Bone** 83.03 42 ⇓P P 07 18 41.8 -0.7
baz=83,SNR=17
225A **Deer Hill, Car** 83.09 54 ⇑P P 07 18 42.5 -0.5
baz=83,SNR=21
S21A **Coal Bank Pass** 83.11 48 ⇓P P 07 18 42.6 -0.4
baz=83,SNR=18
P19A **Cripple Cowboy** 83.12 46 ⇓P P 07 18 42.7 -0.3
baz=83
AHID **Auburn Hatcher** 83.12 42 PFAKE 07 18 50.0 +7.0
AHID LR LR
comp=Z,2µm,19.0s,MS5.4
Z24A **Sheeppen Canyo** 83.14 53 ⇓P P 07 18 42.8 -0.4
baz=83,SNR=6.2
FRIM **Kepong** 83.15 275 P P 07 18 43.7 -0.1
426A **McDonald Obser** 83.16 56 ⇓P P 07 18 42.9 -0.6
baz=83,SNR=34
F14A **Wisdom** 83.17 39 ⇓P P 07 18 42.3 -0.8
baz=83
D13A **Huson** 83.18 37 ⇓P P 07 18 42.0 -1.2
baz=83
M18A **Lyman** 83.19 44 ⇑P P 07 18 42.2 -1.1
baz=83,SNR=22
627A **Terlingua Ranc** 83.23 57 ⇓P P 07 18 43.1 -0.7
baz=83,SNR=29
K17A **Gardner Place,** 83.23 42 ⇑P P 07 18 42.9 -0.6
baz=83,SNR=6.6
B12A **Libby** 83.24 36 ⇑P P 07 18 43.1 -0.4
baz=83
N18A **Larsen Ranch,** 83.25 44 ⇑P P 07 18 42.6 -1.0
baz=83,SNR=5.9
U22A **Llaves** 83.25 50 ⇓P P 07 18 43.2 -0.6
baz=83
RRI2 **Red Ridge** 83.25 42 eP P 07 18 43.5 -0.1
comp=Z,116nm,1.7s,mb5.6
W23A **Werner Place,** 83.27 51 ⇓P P 07 18 43.0 -0.9
baz=83,SNR=12
Q20A **Ridgley Place,** 83.30 47 ⇓P P 07 18 43.2 -0.7
baz=83,SNR=21
527A **Woodward Ranch** 83.30 56 ⇓P P 07 18 43.7 -0.5
baz=83,SNR=18
O19A **Miners Draw (B** 83.32 45 ⇓P P 07 18 43.2 -0.8
baz=83,SNR=8.7
Y24A **Capitan** 83.32 52 ⇑P P 07 18 43.6 -0.6
baz=83,SNR=14
BJT **Baijiatuau** 83.34 314 eP P 07 18 44.3 +0.2
BJT pmax pmax
comp=Z,17nm,0.7s
BJT MLR MLR
comp=Z,628nm,20.0s
BJT **Baijiatuau** 83.34 314 eP P 07 18 44.2 +0.1
comp=Z,17nm,0.7s,mb5.2
BJT LR LR
comp=Z,628nm,20.0s,MS5.0
BJI **Beijing** 83.34 314 P P 07 18 43.6 -0.6
BJI pP pP 07 18 48.0 +0.5
BJI sP sP 07 18 49.4 +0.7
BJI PP PP 07 21 51.8 -4.4
BJI S S 07 29 06.6 +1.4
BJI pmax pmax
comp=Z,22nm,1.1s,mb5.1
BJI pmax pmax
comp=Z,430nm,5.2s
BJI LR LR
comp=N,270nm,19.6s,MS5.0
BJI LR LR
comp=E,490nm,17.9s,MS5.0
BJI LR LR
comp=Z,400nm,20.4s,MS4.8
MSO **Missoula** 83.34 38 ⇓P P 07 18 42.9 -1.1
baz=84
MSO **Missoula** 83.34 38 eP P 07 18 43.4 -0.6
comp=Z,18nm,1.4s,mb4.9
MSO LR LR
comp=Z,3µm,20.0s,MS5.7
BSMT **Bassoo Peak** 83.38 37 eP P 07 18 44.0 -0.1
G15A **Dillon** 83.39 40 ⇓P P 07 18 43.7 -0.6
baz=84,SNR=21
I16A **Newdale** 83.40 41 ⇓P P 07 18 44.0 -0.3
baz=84,SNR=19
E14A **Clinton** 83.40 38 ⇑P P 07 18 43.6 -0.7
baz=84,SNR=14
C13A **Hot Springs** 83.41 37 ⇓P P 07 18 43.0 -1.3
baz=84
DLMT **Dillon** 83.42 40 eP P 07 18 44.8 +0.3
comp=Z,42nm,1.4s,mb5.3
125A **Gardner Draw,** 83.43 54 ⇑P P 07 18 44.4 -0.4
baz=84,SNR=18
L18A **Fontenelle, Gr** 83.43 43 ⇓P P 07 18 44.1 -0.5
baz=84
326A **Caldwell Ranch** 83.45 55 ⇑P P 07 18 44.0 -0.9
baz=84,SNR=17
A12A **Yaak River Ran** 83.45 35 ⇓P P 07 18 43.9 -0.6
baz=84
DCID1 **Drake Creek** 83.46 42 eP P 07 18 45.4 +0.7
comp=Z,58nm,1.4s,mb5.4
P20A **De Beque** 83.47 46 ⇑P P 07 18 44.7 -0.1
baz=84,SNR=13
T22A **Edith** 83.48 49 ⇑P P 07 18 44.5 -0.4
baz=84,SNR=8.4
GDL2 **Guadalupe Moun** 83.48 54 eP P 07 18 45.4 +0.3
V23A **Ortiz Mt. (NFS** 83.49 50 ⇓P P 07 18 44.6 -0.4
baz=84,SNR=23
N19A **John Jarvie Ra** 83.54 45 ⇓P P 07 18 44.6 -0.5
baz=84,SNR=5.2
TPAW **Teton Pass** 83.56 42 eP P 07 18 45.7 +0.5
comp=Z,29nm,1.1s,mb5.3
X24A **Lazy VL Ranch,** 83.57 52 ⇓P P 07 18 44.6 -0.9
baz=84
R21A **Cimarron** 83.58 48 ⇑P P 07 18 45.1 -0.3
baz=84,SNR=25
Z25A **Roswell** 83.62 53 ⇓P P 07 18 45.3 -0.5
baz=84,SNR=18
628A **Black Gap, Mar** 83.64 57 ⇓P P 07 18 45.2 -0.7
baz=84,SNR=24
J17A **Brown Place, J** 83.65 42 ⇑P P 07 18 45.2 -0.5
baz=84,SNR=16
SWMT **Swartz Lake** 83.66 37 eP P 07 18 46.6 +1.0
U23A **El Rito** 83.72 50 ⇑P P 07 18 45.7 -0.5
baz=84,SNR=28
F15A **Butte** 83.72 39 ⇓P P 07 18 45.5 -0.5
baz=84,SNR=13
D14A **Greenough** 83.73 38 ⇑P P 07 18 45.0 -0.9
baz=84
427A **Hayter Ranch,** 83.73 56 ⇑P P 07 18 45.9 -0.4
baz=84,SNR=41
LRM **Limekiln Ridge** 83.74 39 eP P 07 18 46.0 0.0
K18A **Toltan Ranch,** 83.75 43 ⇓P P 07 18 45.8 -0.4
baz=84,SNR=12
IMW **Indian Meadow** 83.76 41 eP P 07 18 46.2 0.0
comp=Z,36nm,1.2s,mb5.4
Q21A **Lamborn Mesa,** 83.76 47 ⇓P P 07 18 46.1 -0.3
baz=84,SNR=21
CHMT **Chamberlain Mo** 83.80 38 eP P 07 18 45.3 -1.0
COCO **West Island** 83.81 259 PFAKE 07 19 00.0 +13
COCO LR LR
comp=Z,3µm,19.0s,MS5.6
MOOW **Moose Ponds** 83.81 42 eP P 07 18 46.1 -0.4
comp=Z,45nm,1.7s,mb5.3
SLMT **Seeley Lake** 83.82 38 eP P 07 18 45.5 -0.9
M19A **Rock Springs** 83.83 44 ⇑P P 07 18 46.0 -0.7
baz=84
B13A **Whitefish** 83.83 36 ⇓P P 07 18 46.2 -0.3
baz=84
S22A **4UR Ranch, Cre** 83.83 48 ⇓P P 07 18 46.3 -0.4
baz=84,SNR=25
LOHW **Long Hollow** 83.84 42 eP P 07 18 46.3 -0.3
comp=Z,49nm,1.6s,mb5.4
G16A **Moss Hill, Enn** 83.85 40 ⇑P P 07 18 46.1 -0.5
baz=84,SNR=9.7
O20A **White River Ci** 83.85 46 ⇑P P 07 18 45.9 -0.8
baz=84,SNR=11
W24A **Lazy 6 Ranch,** 83.85 51 ⇑P P 07 18 46.0 -0.9
baz=84,SNR=12
327A **Balmorhea Ranc** 83.85 55 ⇑P P 07 18 46.4 -0.6
baz=84
CLNB **Carlsbad** 83.88 54 eP P 07 18 48.4 +1.2
comp=Z,23nm,1.7s,mb5.0
Y25A **Mesa, Roswell** 83.89 53 ⇑P P 07 18 45.8 -1.3

baz=84,SNR=10.0
126A **Clayton Basin,** 83.92 54 ⇓P P 07 18 46.5 -0.8
baz=84,SNR=7.8
E15A **Deer Lodge** 83.92 39 ⇓P P 07 18 46.4 -0.6
baz=84,SNR=9.8
C14A **Swan Lake** 83.94 37 ⇓P P 07 18 47.0 -0.1
baz=84
H16A **Russell Place,** 83.94 41 ⇑P P 07 18 47.3 +0.2
baz=84,SNR=11
528A **Cox Ranch, San** 83.97 57 ⇑P P 07 18 47.3 -0.3
baz=84,SNR=32
FLWY **Flagg Ranch** 84.00 41 eP P 07 18 47.5 +0.1
comp=Z,73nm,1.4s,mb5.6
I17A **Pilgrim Ck.** 84.00 42 ⇓P P 07 18 47.5 0.0
baz=84
J18A **Kendall Valley** 84.03 42 ⇓P P 07 18 47.4 -0.2
baz=84,SNR=14
IPM **Ipoh** 84.06 276 P P 07 18 48.7 +0.2
IPM **Ipoh** 84.06 276 eP P 07 18 48.8 +0.3
comp=Z,84nm,1.4s,mb5.7
IPM **Ipoh** 84.06 276 P P 07 18 48.9 +0.4
comp=Z,37nm,1.5s,mb5.3
BILL **Bilibino** 84.07 354 ⇑eP P 07 18 46.2 -1.0
BILL e 07 22 07.1
BILL / S S 07 29 08.5 -2.9
BILL pmax pmax
comp=Z,38nm,1.7s,mb5.2
BILL **Bilibino** 84.07 354 eP P 07 18 47.8 +0.5
comp=Z,9.8nm,0.4s,mb5.3
BILL LR LR
comp=Z,2µm,20.0s,MS5.4
DAWY **Dawson** 84.07 15 eP P 07 18 46.2 -1.1
YFT **Old Faithful** 84.08 41 eP P 07 18 48.8 +0.9
comp=Z,225nm,2.6s,mb5.8
R22A **Saguache, Gunn** 84.09 48 ⇑P P 07 18 48.0 0.0
baz=84,SNR=18
YMR **Madison River** 84.10 41 eP P 07 18 49.0 +1.0
comp=Z,85nm,1.5s,mb5.7
T23A **Casias Ranch,** 84.12 49 ⇓P P 07 18 47.6 -0.6
baz=84,SNR=8.6
BW06 **Boulder Array** 84.13 43 ⇓P P 07 18 47.3 -0.9
baz=84,SNR=18
BW06 **Boulder Array** 84.13 43 eP P 07 18 48.0 -0.1
BW06 LR LR
comp=Z,2µm,19.0s,MS5.5
PDAR **Pinedale Array** 84.13 43 P P 07 18 47.0 -1.2
comp=Z,9.3nm,1.0s,mb4.9,baz=218,slow=2.8,SNR=48
PDAR PKKP PKKPbc 07 37 02.8 -0.9
comp=Z,0.5nm,1.0s,baz=78,slow=5.6,SNR=3.5
PDAR LR LR 07 49 27.4
comp=Z,1µm,19.4s,MS5.3,baz=250,slow=31
N20A **Spence Gulch,** 84.14 45 ⇓P P 07 18 47.4 -0.8
baz=84,SNR=8.6
X25A **Clemmons Ranch** 84.15 52 ⇑P P 07 18 47.9 -0.6
baz=84
A13A **Flathead Natio** 84.15 36 ⇓P P 07 18 48.1 0.0
baz=84
BOZ **Bozeman (W)** 84.16 40 ⇑P P 07 18 47.9 -0.3
baz=84,SNR=16
BOZ **Bozeman (W)** 84.16 40 eP P 07 18 47.9 -0.3
BOZ pmax pmax
comp=Z,18nm,1.4s,mb5.0
BOZ MLR MLR
comp=Z,5µm,19.0s,MS5.9
BOZ **Bozeman (W)** 84.16 40 eP P 07 18 47.9 -0.3
comp=Z,18nm,1.4s,mb5.0
BOZ LR LR
comp=Z,5µm,19.0s,MS5.9
V24A **Rampart Ranch,** 84.16 51 ⇓P P 07 18 47.9 -0.5
baz=84,SNR=9.4
Z26A **Caprock** 84.19 53 ⇑P P 07 18 48.2 -0.5
baz=84,SNR=18
EGAK **Eagle** 84.22 14 eP P 07 18 47.1 -1.0
comp=Z,72nm,1.5s,mb5.6
EGAK LR LR
comp=Z,2µm,21.0s,MS5.5
F16A **Kennard Place,** 84.22 40 ⇓P P 07 18 48.0 -0.5
baz=84,SNR=8.6
Q22A **Crested Butte,** 84.24 47 ⇓P P 07 18 48.3 -0.5
baz=84,SNR=21
227A **Bennet, Jal** 84.25 55 ⇓P P 07 18 48.3 -0.7
baz=84
428A **Kincaid Ranch,** 84.26 56 ⇑P P 07 18 48.3 -0.8
baz=84,SNR=18
D15A **Lincoln** 84.29 38 ⇑P P 07 18 48.6 -0.2
baz=84,SNR=8.9
YNR **Norris Junctio** 84.31 41 eP P 07 18 52.5 +3.5
comp=Z,87nm,2.0s,mb5.5
SMCO **Snowmass** 84.33 47 eP P 07 18 48.7 -0.6
comp=Z,61nm,1.5s,mb5.5
I18A **Diamond G Ranc** 84.39 42 ⇓P P 07 18 48.8 -0.6
baz=84,SNR=8.1
328A **Wristen Ranch,** 84.40 56 ⇑P P 07 18 48.7 -1.1
baz=84,SNR=12
LKWY **Lake** 84.41 41 PFAKE 07 19 00.0 +10
LKWY LR LR
comp=Z,3µm,20.0s,MS5.7
S23A **Nye Farm, Mont** 84.42 49 ⇑P P 07 18 49.4 -0.3
baz=84
O21A **Pagoda** 84.42 46 ⇓P P 07 18 49.4 -0.2
baz=84
U24A **Moreno Valley** 84.42 50 ⇑P P 07 18 49.4 -0.4
baz=84
127A **Arkansas Junct** 84.45 54 ⇓P P 07 18 49.5 -0.5
baz=85
ENH **Enshi** 84.46 303 eP P 07 18 50.7 +0.5
comp=Z,3.4nm,0.5s,mb4.7
ENH LR LR
comp=Z,655nm,22.0s,MS5.0
MNSI **Mandailing Nat** 84.47 272 P P 07 18 56.4 +5.8
comp=Z,2µmcomp=Z,20nm,1.6s,mb5.0
M20A **Sweetwater, Wa** 84.48 44 ⇓P P 07 18 49.6 -0.3
baz=85,SNR=9.6
WALA **Waterton Lakes** 84.50 36 eP P 07 18 49.3 -0.5
comp=Z,0.9nm,1.4s
B14A **Marquette Ranc** 84.51 37 ⇑P P 07 18 48.7 -1.2
baz=85
COLD **Coldfoot** 84.52 10 eP P 07 18 49.2 -0.3
comp=Z,50nm,1.4s,mb5.5
HRY **Holter Researc** 84.55 39 eP P 07 18 50.3 +0.1
G17A **Pierce Place,** 84.55 40 ⇑P P 07 18 49.8 -0.4
baz=85
E16A **East Helena** 84.55 39 ⇓P P 07 18 49.8 -0.4
baz=85
Y26A **Elida** 84.55 53 ⇓P P 07 18 49.4 -1.1
baz=85
W25A **X Bar L Ranch,** 84.57 51 ⇑P P 07 18 49.6 -0.9
baz=85,SNR=12
L20A **Wamsutter** 84.60 44 ⇓P P 07 18 49.9 -0.7
baz=85,SNR=23
C15A **Salmond Ranch,** 84.61 37 ⇑P P 07 18 49.5 -1.0
baz=85,SNR=10
N21A **Black Mountain** 84.62 45 ⇑P P 07 18 49.9 -0.7
baz=85,SNR=16
K19A **Absolon Red Bu** 84.62 43 ⇑P P 07 18 50.1 -0.5
baz=85,SNR=14
KULM **Kulim** 84.64 277 P P 07 18 51.6 +0.2
KULM **Kulim** 84.64 277 eP P 07 18 50.3 -1.1
comp=Z,35nm,1.4s,mb5.3
KULM LR LR
comp=Z,969nm,22.0s,MS5.1
P22A **Eagle** 84.65 47 ⇑P P 07 18 50.5 -0.4
baz=85,SNR=9.2
J19A **Crowheart** 84.69 43 ⇓P P 07 18 50.3 -0.6
baz=85,SNR=11
V25A **Rancho No Teng** 84.69 51 ⇓P P 07 18 50.4 -0.8
baz=85,SNR=11
A14A **Double T Ranch** 84.73 36 ⇓P P 07 18 50.5 -0.5
baz=85
SDCO **Great Sand Dun** 84.79 49 ⇓P P 07 18 51.3 -0.3
baz=85,SNR=12
SDCO **Great Sand Dun** 84.79 49 eP P 07 18 51.6 0.0
comp=Z,8.0nm,1.1s,mb4.8
SDCO LR LR
comp=Z,4µm,20.0s,MS5.8
Z27A **Tatum** 84.80 54 ⇑P P 07 18 50.7 -1.0
baz=85
X26A **CR and CF Fran** 84.80 52 ⇓P P 07 18 51.4 -0.3
baz=85
T24A **Torres, Weston** 84.85 50 ⇓P P 07 18 51.7 -0.2
baz=85,SNR=9.5
D16A **Dana Ranch, Ca** 84.87 38 ⇓P P 07 18 51.5 -0.2
baz=85,SNR=8.1
F17A **Fitzpatrick Pl** 84.88 40 ⇑P P 07 18 51.5 -0.3
baz=85,SNR=10
K20A **Yellowstone Ra** 84.88 43 ⇑P P 07 18 50.9 -1.0
baz=85,SNR=8.2
B15A **Bradely Ranch,** 84.90 37 ⇓P P 07 18 50.8 -1.1

baz=85,SNR=7.1
H18A Shoshone NF, C 84.93 41 ⇓P **P 07 18 51.7 -0.5**
baz=85
S24A Houchin Ranch, 84.96 49 ⇓P **P 07 18 52.2 -0.2**
baz=85,SNR=9.8
E17A Martinsdale 85.02 39 ⇓P **P 07 18 52.2 -0.3**
baz=85
TIY Taiyuan 85.02 311 *e*P **P 07 18 54.6 +1.9**
TIY S S 07 29 22.9 +0.8
TIY pmax pmax
comp=Z,410nm,4.5s
TIY LR LR
comp=N,240nm,13.7s,MS5.0
TIY LR LR
comp=E,290nm,13.1s,MS5.0
TIY LR LR
comp=Z,470nm,21.4s
Q23A Hartsel 85.02 48 ⇓P **P 07 18 52.6 -0.2**
baz=85,SNR=8.0
O22A Kremmling 85.04 46 ⇑P **P 07 18 52.5 -0.3**
baz=85,SNR=17
W26A Owens Ranch, T 85.04 52 ⇓P **P 07 18 52.0 -0.9**
baz=85
Y27A Causey 85.05 53 ⇑P **P 07 18 52.4 -0.6**
baz=85,SNR=9.6
U25A Circle Dot Ran 85.06 50 ⇓P **P 07 18 52.5 -0.5**
baz=85
M21A Separation Pea 85.08 45 ⇑P **P 07 18 52.3 -0.7**
baz=85,SNR=7.7
C16A Fuhringer Ranc 85.12 38 ⇑P **P 07 18 52.4 -0.6**
baz=85,SNR=7.6
A15A Johnson Ranch, 85.13 36 ⇓P **P 07 18 52.6 -0.4**
baz=85,SNR=12
P23A Jefferson 85.21 47 ⇓P **P 07 18 53.3 -0.4**
baz=85
RWWY Rawlins 85.22 45 *e*P **P 07 18 53.6 -0.1**
comp=Z,127nm,1.9s,mb5.7
L21A Rawlins 85.23 44 ⇓P **P 07 18 53.4 -0.3**
baz=85,SNR=7.2
R24A Sanders Place, 85.27 48 ⇑P **P 07 18 53.7 -0.3**
baz=85
G18A Lazy EL Ranch, 85.29 41 ⇓P **P 07 18 53.7 -0.2**
baz=85,SNR=7.6
V26A Tequesquite Ra 85.30 51 ⇑P **P 07 18 53.5 -0.7**
baz=85
T25A Trinidad 85.35 50 ⇓P **P 07 18 53.8 -0.6**
baz=86
H19A Powell 85.36 41 ⇑P **P 07 18 54.0 -0.2**
baz=86,SNR=7.0
J20A Shoshoni 85.36 43 ⇓P **P 07 18 54.0 -0.3**
baz=86
N22A Wattenberg Ran 85.37 46 ⇑P **P 07 18 54.2 -0.3**
baz=86,SNR=9.2
MSTX Muleshoe 85.38 53 ⇑P **P 07 18 53.8 -0.9**
baz=86
RLMT Red Lodge 85.38 41 ⇑P **P 07 18 54.0 -0.3**
baz=86,SNR=6.6
RLMT Red Lodge 85.38 41 *e*P **P 07 18 53.8 -0.6**
comp=Z,25nm,1.4s,mb5.2
RLMT LR LR
comp=Z,3μm,22.0s,MS5.7
X27A F and S Farms, 85.39 52 ⇑P **P 07 18 53.8 -0.9**
baz=86
PMSA Palmer Station 85.41 157 P **P 07 18 54.2 0.0**
comp=Z,17nm,0.8s,mb5.2,baz=247,slow=4.6,SNR=17
PMSA Palmer Station 85.41 157 *e*P **P 07 18 55.0 +0.7**
comp=Z,29nm,1.0s,mb5.4
PMSA LR LR
comp=Z,839nm,19.0s,MS5.2
HIA Hailar 85.41 324 PFAKE 07 19 10.0 +16
HIA LR LR
comp=Z,1μm,20.0s,MS5.2
GCMT Greycliff 85.44 40 *e*P **P 07 18 55.1 +0.5**
comp=Z,39nm,1.8s,mb5.2
B16A M & M Farms, S 85.44 37 ⇑P **P 07 18 53.8 -0.8**
baz=86,SNR=6.9
D17A Six Diamond Ra 85.44 39 ⇓P **P 07 18 54.1 -0.5**
baz=86,SNR=17
F18A Big Timber 85.46 40 ⇓P **P 07 18 54.6 -0.2**
baz=86,SNR=8.5
GYA Guiyang 85.48 299 P **P 07 18 56.3 +1.0**
GYA PP PP 07 22 17.2 +3.3
GYA SKS 07 29 18.0
GYA S S 07 29 26.4 -0.8
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,190nm,6.4s
GYA LR LR
comp=N,4μm,22.9s,MS5.8
GYA LR LR
comp=E,3μm,23.7s,MS5.8
GYA LR LR
comp=Z,4μm,21.0s,MS5.8
O23A Lake Granby, G 85.50 46 ⇓P **P 07 18 54.6 -0.5**
baz=86
Q24A Divide 85.54 48 ⇓P **P 07 18 55.5 +0.2**
baz=86,SNR=5.1
S25A Robets Cordova 85.54 49 ⇓P **P 07 18 55.2 -0.1**
baz=86,SNR=8.3
ISCO Idaho Springs 85.54 47 ⇑P **P 07 18 55.2 -0.2**
baz=86
ISCO Idaho Springs 85.54 47 *e*P **P 07 18 55.8 +0.5**
ISCO LR LR
comp=Z,3μm,19.0s,MS5.7
I20A Worland 85.59 42 ⇓P **P 07 18 55.4 0.0**
baz=86,SNR=10
K21A Alcova 85.60 44 ⇓P **P 07 18 55.0 -0.6**
baz=86,SNR=6.9
C17A Wharram Farm, 85.63 38 ⇑P **P 07 18 55.5 0.0**
baz=86,SNR=26
PSI Prapat 85.63 274 LR LR 07 57 23.7
comp=Z,1μm,21.1s,MS5.3,baz=131,slow=36
E18A Harlowton 85.64 39 ⇑P **P 07 18 55.2 -0.4**
baz=86,SNR=8.4
N23A Red Feather La 85.76 46 ⇑P **P 07 18 56.4 0.0**
baz=86
R25A Fountain Ranch 85.84 49 ⇑P **P 07 18 56.1 -0.7**
baz=86
H20A Greybull 85.91 42 ⇑P **P 07 18 56.5 -0.5**
baz=86
F19A Roth Farm, Mol 85.92 40 ⇑P **P 07 18 56.7 -0.3**
baz=86
D18A Linhart Farms, 86.00 39 ⇓P **P 07 18 57.2 -0.2**
baz=86
PAYG Puerto Ayora 86.05 90 PFAKE 07 19 10.0 +12
PAYG LR LR
comp=Z,1μm,20.0s,MS5.4
O24A Longmont 86.05 47 ⇓P **P 07 18 57.4 -0.4**
baz=86
I21A Big Trails, Te 86.08 43 ⇑P **P 07 18 57.2 -0.7**
baz=86,SNR=8.6
K22A Casper 86.09 44 ⇑P **P 07 18 57.3 -0.7**
baz=86
G20A Bridger 86.09 41 ⇑P **P 07 18 57.3 -0.6**
baz=86
XAN Xi'an 86.27 307 P **P 07 19 00.0 +1.0**
XAN pmax pmax
comp=Z,5.0nm,1.5s,mb4.5
XAN pmax pmax
comp=Z,63nm,5.8s
A17A Triple J Farms 86.28 37 ⇓P **P 07 18 58.3 -0.5**
baz=86,SNR=24
E19A Rath Farm, Rou 86.29 40 ⇑P **P 07 18 58.8 -0.1**
baz=86,SNR=6.3
F20A Billings 86.39 41 ⇓P **P 07 18 59.1 -0.2**
baz=86
EGMT Eagleton 86.41 38 ⇓P **P 07 18 59.1 -0.3**
baz=86
EGMT Eagleton 86.41 38 PFAKE 07 19 10.0 +11
EGMT LR LR
comp=Z,4μm,22.0s,MS5.7
L23A Garrett 86.42 45 ⇓P **P 07 18 59.3 -0.4**
baz=87
J22A Midwest 86.44 43 ⇓P **P 07 18 58.9 -0.8**
baz=87
JCT Junction City 86.50 57 ⇑P **P 07 18 59.6 -0.7**
baz=87,SNR=6.2
JCT Junction City 86.50 57 *e*P **P 07 19 00.1 -0.2**
JCT pmax pmax
comp=Z,34nm,1.5s,mb5.4
JCT MLR MLR
comp=Z,4μm,20.0s,MS5.8
JCT Junction City 86.50 57 *e*P **P 07 19 00.1 -0.2**
comp=Z,34nm,1.5s,mb5.3
JCT LR LR
comp=Z,4μm,20.0s,MS5.8
AMTX Amarillo 86.56 53 ⇑P **P 07 18 59.7 -0.8**
baz=87
AMTX Amarillo 86.56 53 PFAKE 07 19 10.0 +10
AMTX LR LR
comp=Z,5μm,21.0s,MS5.9
B18A Beardsley Farm 86.57 38 ⇑P **P 07 19 00.0 -0.1**
baz=87,SNR=12
H21A Big Horn, Sher 86.59 42 ⇑P **P 07 18 59.8 -0.5**
baz=87
C19A Slack Wire Ran 86.70 39 ⇓P **P 07 19 00.7 -0.2**
baz=87,SNR=11
E20A Meyer Farm, Mu 86.71 40 ⇑P **P 07 19 00.8 -0.1**
baz=87
G21A Lodge Grass 86.74 41 ⇑P **P 07 19 00.9 -0.1**
baz=87
M24A Cheyenne 86.76 46 ⇓P **P 07 19 01.4 +0.1**
baz=87
A18A Metzger Ranch, 86.77 37 ⇑P **P 07 19 00.5 -0.6**
baz=87,SNR=16
CLNS Chul'man 86.79 332 *e*P **P 07 19 01.4 +0.4**
CLNS pmax pmax
comp=Z,11nm,1.0s,mb5.0
CLNS pmax pmax
comp=N,10.0nm,1.7s
HHC Hu-ho-hao-te 86.88 314 ⇑P **P 07 19 02.1 +0.2**
HHC pP pP 07 19 07.0 +1.8
HHC sP sP 07 19 09.1 +2.7
HHC PP PP 07 22 27.6 +2.6
HHC SKS 07 29 26.4
HHC S S 07 29 39.8 -0.4
HHC sS sS 07 29 47.6 +1.9
HHC pmax pmax
comp=Z,29nm,1.3s,mb5.3
HHC pmax pmax
comp=Z,460nm,5.9s
HHC LR LR
comp=N,390nm,15.1s,MS5.1
HHC LR LR
comp=E,470nm,18.6s,MS5.1
HHC LR LR
comp=Z,590nm,17.5s,MS5.0
L24A Wheatland 86.92 45 ⇑P **P 07 19 01.8 -0.3**
baz=87
EDM Edmonton 86.93 32 *e*P **P 07 19 00.2 -1.6**
MAW Mawson 86.95 199 P **P 07 19 01.3 -0.5**
comp=Z,5.3nm,0.7s,mb4.9,baz=113,slow=6.0,SNR=9.8
MAW LR LR 07 53 48.2
comp=Z,4μm,20.4s,MS5.8,baz=112,slow=33
D20A Manuel Ranch, 86.97 39 ⇑P **P 07 19 02.1 -0.1**
baz=87,SNR=12
F21A Absaloka Mine, 87.05 41 ⇑P **P 07 19 02.1 -0.5**
baz=87
KVTX Kingsville 87.11 61 PFAKE 07 19 10.0 +6.7
KVTX LR LR
comp=Z,2μm,19.0s,MS5.6
C20A Veseth Ranch, 87.32 39 ⇓P **P 07 19 03.3 -0.6**
baz=88
E21A Keefer Ranch, 87.38 40 ⇓P **P 07 19 04.1 -0.1**
baz=88
D21A La Casta Ranch 87.66 40 ⇑P **P 07 19 05.9 +0.4**
baz=88,SNR=7.0
BTO Baotou 87.87 313 *e*P **P 07 19 06.8 +0.1**
YAK Yakutsk 87.92 338 PFAKE 07 19 20.0 +14
YAK LR LR
comp=Z,551nm,20.0s,MS5.0
LAO LASA Array 87.98 40 ⇑P **P 07 19 08.0 +1.0**
baz=88
LAO LASA Array 87.98 40 PFAKE 07 19 20.0 +13
LAO LR LR
comp=Z,3μm,22.0s,MS5.6
RSSD Black Hills 88.35 43 *e*P **P 07 19 09.3 +0.4**
RSSD pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
RSSD MLR MLR
comp=Z,3μm,20.0s,MS5.7
RSSD Black Hills 88.35 43 *e*P **P 07 19 09.3 +0.4**
comp=Z,4.0nm,0.9s,mb4.7
RSSD LR LR
comp=Z,3μm,20.0s,MS5.7
KMI Kunming 88.41 296 P **P 07 19 10.8 +1.2**
KMI pP pP 07 19 15.5 +2.5
KMI sP sP 07 19 17.3 +3.2
KMI PP PP 07 22 41.5 +3.8
KMI SKS 07 29 39.7
KMI S S 07 29 55.2 -0.4
KMI sS sS 07 30 02.4 +1.3
KMI pmax pmax
comp=Z,18nm,2.0s,mb5.0
KMI pmax pmax
comp=Z,310nm,4.0s
KMI LR LR
comp=N,370nm,20.2s,MS5.0
KMI LR LR
comp=E,480nm,20.2s,MS5.0
KMI LR LR
comp=Z,900nm,23.6s,MS5.1
OGNE Ogallala 88.51 47 PFAKE 07 19 20.0 +10
OGNE LR LR
comp=Z,3μm,22.0s,MS5.6
WMOK Wichita Mounta 88.74 54 PFAKE 07 19 20.0 +9.0
WMOK LR LR
comp=Z,5μm,21.0s,MS5.9
INK Inuvik 88.89 15 LR LR 07 51 21.2
comp=Z,1μm,21.4s,MS5.3,baz=209,slow=30
INK Inuvik 88.89 15 *e*P **P 07 19 11.1 +0.3**
INK pmax pmax
comp=Z,6.0nm,1.1s
INK Inuvik 88.89 15 *e*P **P 07 19 11.1 +0.3**
comp=Z,5.9nm,1.1s,mb4.8
CD2 Chengdu 89.33 302 ⇑*i*P **P 07 19 14.9 +1.1**
CD2 pP pP 07 19 19.7 +2.6
CD2 sP sP 07 19 21.9 +3.6
CD2 PP PP 07 22 48.4 +3.5
CD2 SKS 07 29 42.4
CD2 sS sS 07 30 10.4 +0.9
CD2 pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
CD2 pmax pmax
comp=Z,340nm,4.8s
CD2 LR LR
comp=N,700nm,22.6s,MS5.2
CD2 LR LR
comp=E,1μm,26.2s,MS5.2
CD2 LR LR
comp=Z,710nm,28.2s,MS4.9
CBKS Cedar Bluff 89.40 49 ⇓P **P 07 19 13.7 -0.2**
baz=90
CBKS Cedar Bluff 89.40 49 PFAKE 07 19 30.0 +16
CBKS LR LR
comp=Z,3μm,20.0s,MS5.7
HKT Hockley 89.58 59 *e*P **P 07 19 16.9 +1.9**
HKT pmax pmax
comp=Z,72nm,1.9s,mb5.7
HKT MLR MLR
comp=Z,4μm,20.0s,MS5.8
HKT Hockley 89.58 59 *e*P **P 07 19 16.9 +1.9**
comp=Z,72nm,1.9s,mb5.7
HKT LR LR
comp=Z,4μm,20.0s,MS5.8
CMAR Chiang Mai Arr 89.87 289 P **P 07 19 17.4 +0.8**
comp=Z,4.8nm,1.0s,mb4.8,baz=103,slow=2.9,SNR=23
DGMT Dagmar 89.96 39 ⇑P **P 07 19 16.3 0.0**
baz=90
DGMT Dagmar 89.96 39 *e*P **P 07 19 15.8 -0.5**
comp=Z,43nm,1.3s,mb5.6
DGMT LR LR
comp=Z,5μm,20.0s,MS6.0
CHTO Chiang Mai 89.97 289 *e*P **P 07 19 17.5 +0.5**
CHTO LR LR
comp=Z,704nm,21.0s,MS5.1
CHTO Chiang Mai 89.97 289 P **P 07 19 18.1 +1.1**
comp=Z,462nmcomp=Z,11nm,1.8s,mb4.9
LZH Lanzhou 90.87 307 *e*P **P 07 19 22.5 +1.6**
LZH pP pP 07 19 26.6 +2.4
LZH sP sP 07 19 30.0 +4.6
LZH SKS 07 29 55.0
LZH *e*S S 07 30 16.5 -1.6
LZH sS sS 07 30 23.0 -0.6
LZH pmax pmax
comp=Z,42nm,1.5s,mb5.5
LZH pmax pmax
comp=Z,210nm,4.7s
LZH LR LR
comp=N,640nm,16.7s,MS5.2
LZH LR LR
comp=E,420nm,14.2s,MS5.2
LZH LR LR
comp=Z,600nm,17.0s,MS5.1
NATX Nacogdoches 91.08 57 PFAKE 07 19 30.0 +8.0
NATX LR LR
comp=Z,4μm,20.0s,MS5.8
YKA Yellowknife Ar 91.17 24 LR LR 07 52 29.2
comp=Z,400nm,22.0s,MS4.8,baz=325,slow=30
PLCA Paso Flores 91.68 133 P **P 07 19 24.6 -0.1**
comp=Z,5.6nm,0.9s,mb4.9,baz=259,slow=2.4,SNR=8.3
PLCA LR LR 07 51 50.5
comp=Z,710nm,19.8s,MS5.1,baz=261,slow=30
PLCA Paso Flores 91.68 133 *e*P **P 07 19 25.9 +1.2**
comp=Z,10nm,1.0s,mb5.1
PLCA LR LR
comp=Z,812nm,20.0s,MS5.2
KSU1 Kansas State U 91.80 50 PFAKE 07 19 40.0 +15
KSU1 LR LR
comp=Z,4μm,20.0s,MS5.8
ULN Ulaanbaatar 92.47 319 *e*P **P 07 19 28.4 +0.4**
ULN pmax pmax
comp=Z,23nm,1.4s,mb5.3
ULN MLR MLR
comp=Z,475nm,20.0s,MS4.9
ULN Ulaanbaatar 92.47 319 *e*P **P 07 19 28.4 +0.4**
comp=Z,23nm,1.4s,mb5.3
ULN LR LR
comp=Z,475nm,20.0s,MS4.9
ULN Ulaanbaatar 92.47 319 P **P 07 19 29.2 +1.2**
MIAR Mount Ida 92.77 55 PFAKE 07 19 40.0 +10
MIAR LR LR
comp=Z,4μm,20.0s,MS5.9
TGUH Tegucigalpa,Un 92.78 76 PFAKE 07 19 40.0 +10
TGUH LR LR
comp=Z,2μm,21.0s,MS5.6
SONM Songino Array 92.88 319 P **P 07 19 29.2 -0.6**
comp=Z,2.4nm,0.6s,mb4.8,baz=131,slow=4.9,SNR=11
PAF Port-aux-Franc 93.00 217 PFAKE 07 19 40.0 +9.4
PAF LR LR
comp=Z,3μm,20.0s,MS5.7
ECSD EROS Data Cent 93.23 46 *e*P **P 07 19 30.2 -1.4**
comp=Z,19nm,1.4s,mb5.3
ECSD LR LR
comp=Z,4μm,21.0s,MS5.8
TEIG Tepich 93.44 70 PFAKE 07 19 40.0 +6.9
TEIG LR LR
comp=Z,2μm,22.0s,MS5.5
FFC Flin Flon 93.62 34 PFAKE 07 19 40.0 +6.9
FFC LR LR
comp=Z,3μm,22.0s,MS5.8
NVL N'lazarevskaya 93.95 183 *d*iP **P 07 19 34.5 0.0**
NVL *e**PP pP 07 19 45.4 +7.5
NVL *e**SP sP 07 19 49.7 +11
NVL *e*S S 07 30 04.2 -40
NVL *e* 07 30 40.5
NVL *e* 07 37 08.1
NVL *e* 07 40 48.4
NVL pmax pmax
comp=Z,11nm,1.0s,mb5.2
NVL MLR MLR
comp=Z,1μm,17.0s,MS5.4
JTS JuntasAbangare 94.02 80 PFAKE 07 19 50.0 +14
JTS LR LR
comp=Z,4μm,20.0s,MS5.9
TIXI Tiksi 94.16 345 PFAKE 07 19 50.0 +15
TIXI LR LR
comp=Z,555nm,20.0s,MS5.0
VBMS Vicksburg 94.59 58 PFAKE 07 19 50.0 +12
VBMS LR LR
comp=Z,3μm,19.0s,MS5.8
AGMN Agassiz Nation 95.11 41 PFAKE 07 19 50.0 +10
AGMN LR LR
comp=Z,3μm,20.0s,MS5.8
CCM Cathedral Cave 95.53 52 PFAKE 07 19 50.0 +7.7
CCM LR LR
comp=Z,4μm,20.0s,MS5.9
ULM Lac du Bonnet 95.68 40 LR LR 07 56 21.7
comp=Z,5μm,20.7s,MS6.0,baz=259,slow=31
TLY Talaya 95.79 322 *e*P **P 07 19 46.0 +2.9**
TLY *e* 07 30 12.2
TLY *e*S S 07 31 03.1 +2.2
TLY *e*PPS 07 32 57.1
TLY *e*SS SS 07 37 22.4 -8.5
TLY pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
TLY Talaya 95.79 322 PFAKE 07 19 50.0 +6.9
TLY LR LR
comp=Z,572nm,20.0s,MS5.0
LCO Las Campanas 95.84 122 PFAKE 07 20 00.0 +16
LCO LR LR
comp=Z,1μm,20.0s,MS5.3
NNA Nana 95.86 104 PFAKE 07 20 00.0 +16
NNA LR LR
comp=Z,993nm,20.0s,MS5.3
OXF Oxford 96.07 56 PFAKE 07 20 00.0 +15
OXF LR LR
comp=Z,4μm,20.0s,MS5.9
FVM French Village 96.14 52 *e*P **P 07 19 45.0 -0.1**
JFWS Jewell Farm 97.47 48 *e*P **P 07 19 50.6 -0.4**
JFWS MLR MLR
comp=Z,5μm,20.0s,MS6.0
HDIL Hopedale 97.61 50 PFAKE 07 20 00.0 +8.3
HDIL LR LR
comp=Z,3μm,20.0s,MS5.8
LRAL Lakeview Retre 97.67 58 PFAKE 07 20 00.0 +7.8
LRAL LR LR
comp=Z,2μm,19.0s,MS5.6
OTAV Otavalo 97.70 92 PFAKE 07 20 00.0 +7.2
OTAV LR LR
comp=Z,1μm,22.0s,MS5.4
WVT Waverly 97.71 55 PFAKE 07 20 00.0 +7.7
WVT LR LR
comp=Z,4μm,20.0s,MS5.9
EYMN Ely 97.83 43 PFAKE 07 20 00.0 +7.5
EYMN LR LR
comp=Z,3μm,21.0s,MS5.8
BCIP Isla Barro Col 98.62 83 PFAKE 07 20 10.0 +13
BCIP LR LR
comp=Z,1μm,22.0s,MS5.4
TRQA Tornquist 98.83 133 PFAKE 07 20 10.0 +13
TRQA LR LR
comp=Z,945nm,20.0s,MS5.3
COWI Conover 98.98 45 PFAKE 07 20 10.0 +12
COWI LR LR
comp=Z,3μm,19.0s,MS5.8
WCI Wyandotte Cave 99.36 53 PFAKE 07 20 10.0 +10
WCI LR LR
comp=Z,2μm,22.0s,MS5.7
LSA Lhasa 99.53 298 PFAKE 07 20 10.0 +9.4
LSA LR LR
comp=Z,595nm,20.0s,MS5.1
GOGA Godfrey 100.64 58 PFAKE 07 20 20.0 +15
GOGA LR LR
comp=Z,4μm,21.0s,MS5.9
DWPF Disney 101.33 64 PFAKE 07 20 20.0 +12
DWPF LR LR
comp=Z,2μm,19.0s,MS5.6
GLMI Grayling 101.85 47 PFAKE 07 20 20.0 +10
GLMI LR LR
comp=Z,4μm,22.0s,MS5.9
AAM Ann Arbor 102.11 49 PFAKE 07 20 20.0 +8.4
AAM LR LR
comp=Z,3μm,19.0s,MS5.9
ACSO Alum Creek Sta 102.27 51 PFAKE 07 20 20.0 +7.7
ACSO LR LR
comp=Z,6μm,20.0s,MS6.1
LPAZ La Paz 102.53 111 PFAKE 07 20 30.0 +17
LPAZ LR LR
comp=Z,906nm,20.0s,MS5.3
MTDJ Mount Denham 102.85 74 PFAKE 07 20 30.0 +15
MTDJ LR LR
comp=Z,1μm,20.0s,MS5.4
NHSC New Hope 103.30 59 PFAKE 07 20 30.0 +13
NHSC LR LR
comp=Z,3μm,19.0s,MS5.9
BLA Blacksburg 103.76 55 PFAKE 07 20 30.0 +11
BLA LR LR
comp=Z,4μm,20.0s,MS6.0
MCWV Mont Chateau 104.56 52 PFAKE 07 20 30.0 +7.5
MCWV LR LR
comp=Z,4μm,21.0s,MS5.9
ERPA Erie 104.78 50 PFAKE 07 20 30.0 +6.6
ERPA LR LR
comp=Z,3μm,21.0s,MS5.9
GTBY Guantanamo Bay 105.44 73 PFAKE 07 24 50.0 +9.1
GTBY LR LR
comp=Z,2μm,20.0s,MS5.6

CNNC Cliffs of the 105.50 57 PFAKE 07 24 50.0 +9.4
CNNC LR LR
comp=Z,4μm,20.0s,MS5.9
CBN Corbin 106.29 54 PFAKE 07 24 50.0 +8.1
CBN LR LR
comp=Z,5μm,19.0s,MS6.1
SDV Santo Domingo 107.39 85 PFAKE 07 25 00.0 +15
SDV LR LR
comp=Z,557nm,20.0s,MS5.1
CPUP Villa Florida 107.74 125 PFAKE 07 25 00.0 +15
CPUP LR LR
comp=Z,129nm,20.0s,MS4.5
BINY Binghamton 107.75 50 PFAKE 07 25 00.0 +15
BINY LR LR
comp=Z,3μm,22.0s,MS5.8
DGAR Diego Garcia 108.18 257 PFAKE 07 25 00.0 +14
DGAR LR LR
comp=Z,4μm,21.0s,MS6.0
MK31 Makanchi Array 108.72 315 *e*PKPdf PKiKP 07 24 45.3 -0.9
SDDR Presa de Saban 108.81 75 PFAKE 07 25 00.0 +13
SDDR LR LR
comp=Z,4μm,21.0s,MS6.0
LONY Lake Ozonia 108.93 48 PFAKE 07 25 00.0 +13
LONY LR LR
comp=Z,4μm,19.0s,MS6.0
NCB Newcomb 109.16 48 PFAKE 07 25 00.0 +13
NCB LR LR
comp=Z,3μm,20.0s,MS5.9
LBNH Lisbon 110.82 48 PFAKE 07 25 00.0 +10
LBNH LR LR
comp=Z,4μm,20.0s,MS6.0
KURK Kurchatov 111.19 319*c i*PKIKP PKiKP 07 24 49.7 -1.0
KURK pmax pmax
comp=Z,7.0nm,1.7s
KURK Kurchatov 111.19 319 *e*PKPdf PKiKP 07 24 49.6 -1.1
KURK LR LR
comp=Z,513nm,20.0s,MS5.1
PKME Peaks-Kenny Pk 112.70 47 PFAKE 07 25 10.0 +16
PKME LR LR
comp=Z,3μm,20.0s,MS5.9
TKM2 Tokmak 2 113.42 310 PFAKE 07 25 10.0 +15
TKM2 LR LR
comp=Z,502nm,19.0s,MS5.1
SJG San Juan 113.47 77 PFAKE 07 25 10.0 +14
SJG LR LR
comp=Z,1μm,22.0s,MS5.4
UCH Uchtor 114.23 310 PFAKE 07 25 10.0 +13
UCH LR LR
comp=Z,177nm,20.0s,MS4.7
AAK Ala-Archa 114.23 310 PFAKE 07 25 10.0 +13
AAK LR LR
comp=Z,396nm,20.0s,MS5.0
EKS2 Erkin-Say 114.76 310 PFAKE 07 25 10.0 +12
EKS2 LR LR
comp=Z,508nm,20.0s,MS5.1
AML Almayashu 114.84 310 PFAKE 07 25 10.0 +12
AML LR LR
comp=Z,429nm,19.0s,MS5.1
NIL Nilore 115.15 300 PFAKE 07 25 10.0 +11
NIL LR LR
comp=Z,284nm,19.0s,MS4.9
BRVK Borovoye 116.11 322*d i*PKIKP PKPdf 07 24 58.2 -1.8
BRVK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 116.11 322 PFAKE 07 25 10.0 +10
BRVK LR LR
comp=Z,598nm,19.0s,MS5.2
BBSR BB Station 116.19 61 PFAKE 07 25 10.0 +9.1
BBSR LR LR
comp=Z,1μm,20.0s,MS5.5
KBS Kingsbay 116.23 358 PFAKE 07 25 10.0 +10
KBS LR LR
comp=Z,912nm,21.0s,MS5.4
GRGR Grenville 116.70 84 PFAKE 07 25 10.0 +7.7
GRGR LR LR
comp=Z,818nm,21.0s,MS5.3
SPB Sao Paulo 116.87 127 PFAKE 07 25 10.0 +7.5
SPB LR LR
comp=Z,973nm,19.0s,MS5.4
RER Riviere de l'E 117.32 236 PFAKE 07 25 10.0 +6.6
RER LR LR
comp=Z,3μm,22.0s,MS5.8
ANWB Willy Bob 117.51 78 PFAKE 07 25 20.0 +16
ANWB LR LR
comp=Z,1μm,21.0s,MS5.5
FDF Fort de France 117.66 81 PFAKE 07 25 20.0 +16
FDF LR LR
comp=Z,1μm,22.0s,MS5.5
KBL Kabul 118.65 301 *e*PKIKP PKPdf 07 25 04.6 -1.0
BBGH Gun Hill 118.90 83 PFAKE 07 25 20.0 +13
BBGH LR LR
comp=Z,2μm,20.0s,MS5.8
ARU Arti 121.75 328 *i* PKIKP PKPdf 07 25 09.4 -1.4
ARU 07 32 04.8
ARU SS SS 07 43 12.2 -7.9
ARU MLR MLR
comp=Z,745nm,20.0s,MS5.3
ARU Arti 121.75 328 *e*PKPdf PKPdf 07 25 08.4 -2.3
ARU LR LR
comp=Z,791nm,20.0s,MS5.4
ABKAR Akbulak array 123.29 319 *e*PKPdf PKPdf 07 25 13.1 -0.9
KEV Kevo 123.66 350 PFAKE 07 25 30.0 +16
KEV LR LR
comp=Z,806nm,20.0s,MS5.4
LVZ Lovozero 123.77 346 PFAKE 07 25 30.0 +16
LVZ LR LR
comp=Z,339nm,19.0s,MS5.0
ARCES ARCESS Array B 124.09 351 PKP PKPdf 07 25 13.1 -1.9
comp=Z,6.3nm,0.7s,baz=90,slow=2.4,SNR=9.3
ARCES ARCESS Array B 124.09 351 PKP PKPdf 07 25 13.1 -1.9
APA Apatity 124.31 347⇓*i*PKIKP PKPdf 07 25 09.5 -5.9
APA pmax pmax
comp=Z,74nm,1.7s
APA MLR MLR
comp=Z,700nm,17.0s,MS5.4
MSEY Mahe Island 124.95 253 PFAKE 07 25 30.0 +12
MSEY LR LR
comp=Z,2μm,20.0s,MS5.8
ABPO Ambohimpanom 125.18 233 PFAKE 07 25 30.0 +11
ABPO LR LR
comp=Z,3μm,20.0s,MS6.0
KLMR Klimovskoe 127.70 339 *e*PKIKP PKPdf 07 25 19.5 -2.6
KLMR pmax pmax
comp=Z,26nm,1.3s
BORG Borgarnes 127.76 13 PFAKE 07 25 30.0 +7.9
BORG LR LR
comp=Z,2μm,21.0s,MS5.8
JOF Joensuu 128.64 344 *e*PKIKP PKPdf 07 25 21.2 -2.6
KAF Kangasniemi 130.56 346 *e*PKIKP PKPdf 07 25 24.3 -3.2
FINES FINESS Array B 131.20 346 PKP PKPdf 07 25 27.9 -0.8
comp=Z,4.5nm,0.8s,baz=96,slow=7.7,SNR=5.8
FINES FINESS Array B 131.20 346 PKP PKPdf 07 25 27.9 -0.8
OBN Obninsk 132.85 335⇑*i*PKIKP PKPdf 07 25 32.2 +0.2
OBN *e* 07 28 00.3
OBN *e*PS PS 07 38 09.5 -4.8
OBN pmax pmax
comp=Z,30nm,1.5s
OBN MLR MLR
comp=Z,400nm,20.0s,MS5.1
OBN Obninsk 132.85 335 PFAKE 07 25 40.0 +8.0
OBN LR LR
comp=Z,683nm,22.0s,MS5.3
MAK Makhachkala 133.53 315 *i* PKIKP PKPdf 07 25 32.9 -0.8
MAK *e* 07 32 35.8
MAK *e*PS PS 07 38 19.3 -1.6
MAK pmax pmax
comp=Z,161nm,1.4s
NB2 NORSAR Subarra134.01 355 PKPdf PKPdf 07 25 33.9 -0.1
comp=Z,3.9nm,1.1s,baz=14,slow=1.8
NOA NORSAR Array B 134.01 355 PKP PKPdf 07 25 32.5 -1.5
comp=Z,1.4nm,0.8s,baz=11,slow=4.1,SNR=4.6
LBTB Lobatse 134.56 208 PFAKE 07 25 50.0 +14
LBTB LR LR
comp=Z,2μm,20.0s,MS5.9
KONO Kongsberg 135.51 356 PFAKE 07 25 50.0 +13
KONO LR LR
comp=Z,704nm,20.0s,MS5.4
RCBR Riachuelo 135.56 115 PFAKE 07 25 50.0 +12
RCBR LR LR
comp=Z,1μm,19.0s,MS5.6
KIV Kislovodsk 136.27 319 PFAKE 07 25 50.0 +11
KIV LR LR
comp=Z,707nm,20.0s,MS5.4
GNI Garni 136.53 313 *i* PKIKP PKPdf 07 25 39.0 -0.4
GNI pmax pmax
comp=Z,15nm,1.7s
GNI Garni 136.53 313 PFAKE 07 25 50.0 +11
GNI LR LR
comp=Z,538nm,19.0s,MS5.3
SOC Sochi 138.32 320 *e*PKIKP PKPdf 07 25 46.7 +4.1
KIEV Kiev 139.12 335 *e*PKIKP PKPdf 07 25 43.7 -0.1
KIEV MLR MLR
comp=Z,841nm,20.0s,MS5.5
ESK Eskdalemuir 139.73 6 PFAKE 07 26 00.0 +15
ESK LR LR
comp=Z,2μm,20.0s,MS5.8
MALT Malatya 141.75 314 PFAKE 07 26 00.0 +11
MALT LR LR
comp=Z,758nm,20.0s,MS5.5
MALT Malatya 141.75 314 PKP PKPdf 07 25 57.6 +8.6
LVV L'vov 141.79 339 *e*PKIKP PKPdf 07 25 49.2 +0.5
KWP Kalwaria Pacla 142.40 340 PFAKE 07 26 00.0 +10
KWP LR LR
comp=Z,899nm,21.0s,MS5.5
KMBO Kilima Mbogo 142.96 247 *e*PKIKP PKPdf 07 25 48.8 -3.1
KMBO MLR MLR
comp=Z,1μm,20.0s
TSUM Tsumeb 143.06 202 PFAKE 07 26 00.0 +8.1
TSUM LR LR
comp=Z,2μm,21.0s,MS5.8
STHS Stebnicka Huta 143.07 341 *e*PKIKP PKPdf 07 25 46.4 -4.6
BUR08 Bucovina Ar. S 143.14 336 *e*PKPdf PKPdf 07 25 55.9 +4.7
BURAR Bucovina Array 143.16 335 ⇓PKIKP PKPdf 07 25 55.0 +3.8
CLL Collm 143.31 350 *i* PKIKP PKPdf 07 25 49.2 -2.1
CLL *i* 07 25 54.3
CLL pmax pmax
comp=Z,14nm,1.2s
CLL MLR MLR
comp=Z,900nm,18.7s,MS5.6
CLL Collm 143.31 350 *i* PKP PKPdf 07 25 49.2 -2.1
CLL *i* 07 25 54.3
CLL LR LR
comp=Z,900nm,18.7s,MS5.6
UZH Uzhgorod 143.40 339 *e*PKIKP PKPdf 07 25 48.4 -3.2
UZH *i* 07 25 54.2
CRVS Cervenica-Dubn 143.45 340 *e*PKIKP PKPdf 07 25 49.7 -2.0
UPC Upice 143.49 347 *e*PKIKP PKPdf 07 25 48.9 -2.8
UPC Upice 143.49 347 *e*PKP PKPdf 07 25 48.9 -2.8
BRG Berggiesshubel 143.56 349 *e*PKP PKPdf 07 25 50.5 -1.3
comp=Z,3.5nm,0.7s
BRG
comp=N,493nm,21.0s
BRG
comp=E,686nm,21.6s
BRG
comp=Z,721nm,19.7s
BRG Berggiesshubel 143.56 349 *e*PKIKP PKPdf 07 25 50.5 -1.3
BRG pmax pmax
comp=Z,20nm,0.7s
BRG MLR MLR
comp=N,295nm,21.0s,MS5.3
BRG MLR MLR
comp=E,411nm,21.6s,MS5.3
BRG MLR MLR
comp=Z,432nm,19.7s,MS5.2
DPC Dobruska-Polom 143.57 346 *e*PKIKP PKPdf 07 25 51.1 -0.7
DPC *e* 07 25 56.7
DPC MLR MLR
comp=Z,900nm,18.9s,MS5.6
DPC Dobruska-Polom 143.57 346 *e*PKP PKPdf 07 25 51.1 -0.7
DPC *ep*PKP PKiKP 07 25 56.7 +1.5
DPC AMS AMS 08 38 20.0
comp=Z,900nm,18.9s
OKC Ostrava-Krasne 143.59 344 AMS AMS 08 36 20.0
comp=Z,600nm,18.0s
PVCC Panska Ves 143.77 348 AMS AMS 08 38 30.0
comp=Z,1μm,19.6s
MORC Moravsky Berou 143.81 345 ⇓PKIKP PKPdf 07 25 48.8 -3.5
VRI Vrincioaia 143.89 332 ⇓PKIKP PKPdf 07 25 55.0 +2.5
KECS Kecovo 144.13 341 *e*PKIKP PKPdf 07 25 52.0 -0.9
TIRR Tirgusor 144.15 329 *e*PKIKP PKPdf 07 25 51.0 -2.0
MOX Moxa 144.17 351 *e*PKP PKPdf 07 25 53.7 +0.8
MOX
comp=Z,500nm,18.0s
PRA Prague 144.24 348 PKP PKPdf 07 25 53.0 0.0
BR131 Keskin Array S 144.24 319 *e*PKPdf PKPdf 07 25 50.7 -2.7
BR131 LR LR
comp=Z,751nm,20.0s,MS5.5
BRTR Keskin Array B 144.24 319 PKP PKPdf 07 25 50.7 -2.6
comp=Z,24nm,1.0s,baz=106,slow=2.7,SNR=71
PRU Pruhonice 144.29 348 *e*PKIKP PKPdf 07 25 52.1 -1.0
PRU *e* 07 25 58.8
PRU MLR MLR
comp=Z,1μm,19.7s,MS5.6
PRU Pruhonice 144.29 348 *e*PKP PKPdf 07 25 52.1 -1.0
PRU *ep*PKP PKiKP 07 25 58.8 +2.1
PRU AMS AMS 08 32 40.0
comp=Z,1μm,19.7s
NKC Novy Kostel 144.44 350 AMS AMS 08 33 00.0
comp=Z,1μm,26.1s
VRAC Vranov 144.47 345⇑PKIKP PKPdf 07 25 51.9 -1.5
MLR Muntele Rosu 144.53 333 ⇓PKIKP PKPdf 07 25 52.0 -1.7
VYHS Vyhne 144.62 342 *e*PKIKP PKPdf 07 25 51.2 -2.5
DRGR 144.81 337⇑PKIKP PKPdf 07 25 54.8 +0.7
PSZ Piszkesteto 144.81 341 *e*PKIKP PKPdf 07 25 52.6 -1.5
PSZ MLR MLR
comp=Z,882nm,19.0s,MS5.5
VOIR 144.97 333⇑PKIKP PKPdf 07 25 52.4 -2.0
GRF Grafenberg Arr 145.16 351 *e*PKPbc PKPbc 07 25 53.4 -0.7
GRF *eL* 08 35 37.9
comp=Z,1μm,20.1s
KHC Kasperske Hory 145.30 348 *e*PKP2 PKPab 07 25 52.9 -1.8
KHC MLR MLR
comp=Z,1μm,19.9s,MS5.7
KHC Kasperske Hory 145.30 348 *e*PKPbc PKPbc 07 25 54.2 -0.4
KHC Kasperske Hory 145.30 348 *e*PKP PKPdf 07 25 52.9 -2.0
KHC *ep*PKP PKiKP 07 25 58.9 +0.1
KHC AMS AMS 08 36 00.0
comp=Z,1μm,19.9s
WET Wettzell 145.42 349 *e*PKPbc PKPbc 07 25 54.2 -0.8
TOD Tromm 145.54 354 PKIKP PKPdf 07 25 54.0 -1.3
GEC2 GERESS Array S 145.55 348 *e*PKPbc PKPbc 07 25 54.5 -0.9
RUP Ruppelstein 145.59 356 PKIKP PKPdf 07 25 54.2 -1.1
WLF Walferdange 145.68 357 *e*PKPbc PKPbc 07 25 55.3 -0.5
WLF Walferdange 145.68 357 *e*PKPbc PKPbc 07 25 55.1 -0.7
WLF LR LR
comp=Z,1μm,20.0s,MS5.7
CMLA Cha da Macela 145.88 44 PFAKE 07 26 10.0 +14
CMLA LR LR
comp=Z,3μm,21.0s,MS6.1
CONA Conrad Observa 145.94 345 *i* PKPab PKPab 07 25 55.7 -1.4
comp=Z,68nm,1.6s,SNR=24
GZR Gura Zlata 145.95 336⇑PKIKP PKPdf 07 25 55.7 -0.4
BZS Buzias 146.21 337⇑PKP2 PKPab 07 25 56.3 -1.9
LANF Langenberg 146.25 355 PKP PKPdf 07 25 56.5 0.0
STU Stuttgart 146.32 353 *e*PKPbc PKPbc 07 25 57.1 -0.7
MOA Molln 146.38 347 *i* PKPab PKPab 07 25 57.4 -1.4
comp=Z,15nm,0.8s,SNR=8.1
FLN La Foliniere 146.47 5 *e*PKP1 PKPbc 07 25 56.1 -2.1
comp=Z,57nm,0.9s
FLN *e*MLR MLR
comp=Z,2μm,20.8s,MS5.7
FLN La Foliniere 146.47 5 *e*PKP PKPdf 07 25 56.1 -0.8
FLN LR LR
comp=Z,2μm,20.8s,MS6.0
ROSF Rostrenen 146.58 8 *e*PKP1 PKPbc 07 25 55.7 -2.9
comp=Z,40nm,1.0s
ARSA Arzberg 146.65 345⇑*i*PKPdf PKPdf 07 25 56.6 -0.7
comp=Z,28nm,1.6s,SNR=6.0
LDF La Druitiere 146.67 5 *e*PKP1 PKPbc 07 25 56.7 -2.1
PKSM Moragy 146.72 341 ⇓PKIKP PKPdf 07 25 56.2 -1.2
SGMF Saint Gilles 146.75 8 *e*PKP1 PKPbc 07 25 56.3 -2.8
comp=Z,62nm,0.9s
RJOB Jochberg 146.79 349 *e*PKPbc PKPbc 07 25 59.5 +0.3
GRR Gorron 146.81 5 *e*PKP1 PKPbc 07 25 57.2 -2.0
comp=Z,42nm,0.9s
BFO Black Forest 146.85 354 *e*PKPbc PKPbc 07 25 59.4 +0.1
CDF Champ du Feu 146.85 356 *e*PKP1 PKPbc 07 25 57.6 -1.7
comp=Z,30nm,0.8s
CSS Prodhromos 146.94 312 *e*PKPbc PKPbc 07 25 59.1 -1.0
CSS LR LR
comp=Z,488nm,20.0s,MS5.3
QUIF Quistinic 147.00 8 *e*PKP1 PKPbc 07 25 57.5 -2.3
comp=Z,76nm,1.1s
SPAK Spaichingen-Ko 147.03 354 PKP PKPdf 07 25 58.4 +0.6
ECH Echery 147.06 356 PKP PKPdf 07 25 58.6 +0.7
ECH Echery 147.06 356 *e*PKPbc PKPbc 07 25 59.2 -0.8
ECH LR LR
comp=Z,2μm,20.0s,MS5.8
THEF They Montfort 147.12 357 PKP PKPdf 07 25 58.4 +0.4
SFTF Sexfontaines 147.18 358 *e*PKP1 PKPbc 07 25 58.6 -1.7
KOGS Kog 147.21 344 *e*PKPdf PKPdf 07 25 58.6 +0.5
SOKA Soboth 147.31 345⇑*i*PKPdf PKPdf 07 25 57.0 -1.3
comp=Z,40nm,1.6s
KBA Koelnbreinsper 147.31 348⇑*i*PKPdf PKPdf 07 25 57.4 -0.9
comp=Z,14nm,0.6s,SNR=6.7
HAU Haudompre 147.32 357 *e*PKP1 PKPbc 07 25 59.0 -1.7
comp=Z,39nm,0.9s
HAU *e*MLR MLR
comp=Z,2μm,20.5s,MS5.5
HAU Haudompre 147.32 357 *e*PKP PKPdf 07 25 59.0 +0.7
HAU LR LR
comp=Z,2μm,20.5s,MS5.8
FELD Feldberg im Sc 147.33 355 PKP PKPdf 07 25 59.1 +0.8
RETA Reutte 147.38 351⇑*i*PKPdf PKPdf 07 25 57.9 -0.5
comp=Z,30nm,1.5s
MOF Molkenrain 147.42 356 PKP PKPdf 07 25 59.3 +0.8
WTTA Wattenberg 147.45 350⇑*i*PKPdf PKPdf 07 25 58.1 -0.5
comp=Z,33nm,1.1s
HINF Hinteralfeld 147.48 356 *e*PKP1 PKPbc 07 25 59.2 -1.9
MYKA Terra Mystica 147.67 347⇑*i*PKPdf PKPdf 07 25 57.7 -1.2
comp=Z,38nm,1.3s
DAVA Damuels 147.70 352⇑*i*PKPdf PKPdf 07 25 57.8 -1.2
comp=Z,38nm,1.7s
BBS Basel-Blauen 147.78 355 PKIKP PKPdf 07 25 58.6 -0.5
GOLS Golise 147.78 344 *e*PKPdf PKPdf 07 25 59.5 +0.3
ABTA Abfaltersbach 147.79 349⇑*i*PKPdf PKPdf 07 25 58.1 -1.0
comp=Z,25nm,0.9s
FETA Feichten 147.84 351 *i* PKPdf PKPdf 07 25 59.1 -0.1
comp=Z,35nm,1.1s,SNR=10
LOMF Lomont 147.94 356 PKP PKPdf 07 26 00.5 +1.1
LJU Ljubljana 148.03 346 *e*PKIKP PKPdf 07 25 57.8 -1.8
VTS Vitosha 148.03 332 ⇓PKIKP PKPdf 07 25 59.7 0.0
CADS Cadrg 148.03 347 *e*PKPdf PKPdf 07 25 58.4 -1.1
LOR Lormes 148.14 360 *e*PKP1 PKPbc 07 26 01.2 -1.7
comp=Z,23nm,0.8s
LOR *e*MLR MLR
comp=Z,2μm,18.8s,MS5.5
LOR Lormes 148.14 360 *e*PKP PKPdf 07 26 01.2 +1.5
LOR LR LR
comp=Z,2μm,18.8s,MS5.8
VOY Vojsko 148.18 346 *e*PKPdf PKPdf 07 25 58.0 -1.8
VOY *e* 07 26 04.1
SSF Saint Saulge 148.34 0 *e*PKP1 PKPbc 07 26 02.0 -1.5
comp=Z,114nm,1.4s
BOJS Bojanci 148.35 344 *e*PKPdf PKPdf 07 25 58.8 -1.3
TRI Trieste 148.52 346 PFAKE 07 26 10.0 +10
TRI LR LR
comp=Z,1μm,19.0s,MS5.7
TUE Stuetta 148.57 352 *e*PKPdf PKPdf 07 26 00.3 -0.2
TUE *e*PKPbc PKPbc 07 26 04.5 +0.4
TUE *e*PKPab PKPab 07 26 06.8 -0.7
TUE LR LR
comp=Z,1μm,20.0s,MS5.7
AVF Avril sur Loir 148.61 0 *e*PKP1 PKPbc 07 26 02.3 -1.9
MFF Saint Martin d 148.64 5 *e*PKP1 PKPbc 07 26 02.4 -1.9
CABF La Chapelle 148.73 357 *e*PKP1 PKPbc 07 26 03.5 -1.0
comp=Z,229nm,1.6s
SMF Signal de Mont 148.76 360 *e*PKP1 PKPbc 07 26 02.8 -1.8
BGF Bois d'Agland 148.84 1 *e*PKP1 PKPbc 07 26 03.0 -1.8
comp=Z,35nm,0.8s
MBAR Mbarara 148.89 242 PFAKE 07 26 10.0 +8.0
MBAR LR LR
comp=Z,665nm,19.0s,MS5.5
TCF Toulx Ste Croi 149.09 2 *e*PKP1 PKPbc 07 26 03.7 -1.7
comp=Z,35nm,1.1s
PYM Petit Puy Mans 149.65 1 PKP PKPdf 07 26 04.0 +1.8
LPL La Plagne 149.78 356 *e*PKP1 PKPbc 07 26 06.5 -0.6
LPG La Plagne 149.79 356 *e*PKP1 PKPbc 07 26 06.6 -0.6
RJF Les Rejaudoux 150.05 3 *e*PKP1 PKPbc 07 26 06.0 -1.8
RJF *e*MLR MLR
comp=Z,2μm,19.0s,MS5.6
RJF Les Rejaudoux 150.05 3 *e*PKP PKPdf 07 26 06.0 +3.1
RJF LR LR
comp=Z,2μm,19.0s,MS5.9
SSB Saint Sauveur 150.12 359 PKP PKPdf 07 26 04.3 +1.3
SSB Saint Sauveur 150.12 359 *e*PKPdf PKPdf 07 26 04.1 +1.1
SSB *e*PKPbc PKPbc 07 26 07.8 -0.2
SSB *e*PKPab PKPab 07 26 13.2 -0.6
SSB LR LR
comp=Z,2μm,19.0s,MS5.8
LFF La Frestale 150.37 4 *e*PKP1 PKPbc 07 26 06.9 -1.7
ORIF Oris-en-Rattie 150.43 357 *e*PKP1 PKPbc 07 26 07.6 -1.1
ORIF *e*MLR MLR
comp=Z,2μm,20.2s,MS5.5
CAF Calviac 150.45 2 *e*PKP1 PKPbc 07 26 07.2 -1.6
comp=Z,15nm,0.7s
TIR Tirane 150.49 335 PFAKE 07 26 10.0 +6.3
TIR LR LR
comp=Z,2μm,21.0s,MS5.8
VIVF Saint-Julien-l 150.54 358 *e*PKP1 PKPbc 07 26 07.7 -1.3
MBDF Montbardon 150.56 355 *e*PKP1 PKPbc 07 26 07.8 -1.2
comp=Z,27nm,0.9s
VLC Villacollemand 150.68 350 PFAKE 07 26 10.0 +6.1
VLC LR LR
comp=Z,733nm,20.0s,MS5.5
SAOF Saorge 151.22 354 PKP PKPdf 07 26 05.5 +0.8
TOUF Mont Tournerai 151.23 355 PKP PKPdf 07 26 06.0 +1.3
AUTN L'Aution 151.23 354 PKP PKPdf 07 26 05.7 +1.0
LASF Ste Croix 151.33 360 *e*PKP1 PKPbc 07 26 09.9 -1.0
LUCF Luceram 151.34 354 PKP PKPdf 07 26 06.1 +1.2
MVIF Mont Vial 151.35 355 PKP PKPdf 07 26 05.5 +0.6
SBF Sospel 151.36 354 *e*PKP1 PKPbc 07 26 08.9 -2.1
SMRF Simiane la Rot 151.38 357 *e*PKP1 PKPbc 07 26 10.0 -1.0
comp=Z,26nm,0.8s
FRF La Foret Royal 151.73 355 *e*PKP1 PKPbc 07 26 10.0 -1.8
AQU L'Aquila 151.77 345⇑PKIKP PKPbc 07 26 09.6 -2.3
AQU MLR MLR
comp=Z,1μm,20.0s,MS5.8
PCAB Cabril 151.83 19 *e*PKPdf PKPbc 07 26 11.5 -0.6
LMR La Mourre 151.96 356 *e*PKP1 PKPbc 07 26 10.4 -2.0
SJPF Ste Jean 151.98 8 *e*PKP1 PKPbc 07 26 10.7 -1.7
MTLF Montolieu 152.04 2 *e*PKP1 PKPbc 07 26 11.0 -1.5
PBRG Braganca 152.12 17 *e*PKPdf PKPbc 07 26 15.0 +2.2
EPF Esparros 152.23 5 *e*PKP1 PKPbc 07 26 11.5 -1.5
ETSF Etsaut 152.27 7 *e*PKP1 PKPbc 07 26 11.7 -1.4
comp=Z,20nm,0.8s
PVRL Vila Real 152.32 19 *e*PKPdf PKPbc 07 26 14.0 +0.8
PGF Pioggiola 152.47 351 *e*PKP1 PKPbc 07 26 11.6 -1.9
comp=Z,71nm,1.1s
MVO Moncorvo 152.63 18 *e*PKPdf PKPbc 07 26 13.6 -0.3
MVO *e*LQ 08 09 35.8
MVO *e*LR LR 08 17 52.3
comp=Z,2μm,17.6s
MTE Manteigas 153.17 19 *e*LR LR 08 17 46.1
comp=Z,2μm,20.1s
MTE Manteigas 153.17 19 PFAKE 07 26 20.0 +12
MTE LR LR
comp=Z,2μm,19.0s,MS5.9
CUC Castrocucco 153.20 339 PFAKE 07 26 20.0 +12
CUC LR LR
comp=Z,872nm,19.0s,MS5.6
PCBR Castelo Branco 153.70 20 *e*PKPdf PKPdf 07 26 09.4 +0.9
PMAFR Mafra 153.85 23 *e*LR LR 08 18 09.5
comp=Z,2μm,17.9s
PMRV Marv??o 154.10 20 *e*PKPdf PKPbc 07 26 17.6 +0.4
PMRV *e*LR LR 08 18 12.7
comp=Z,2μm,23.7s
PESTR Estremoz 154.54 21 *e*PKPdf PKPbc 07 26 18.7 +0.5
PESTR *e*LR LR 08 17 43.7
comp=Z,1μm,20.3s
CEL Celeste 154.71 337 PFAKE 07 26 20.0 +10
CEL LR LR
comp=Z,886nm,20.0s,MS5.6
ESLA Sonseca Array 154.83 14 PFAKE 07 26 20.0 +10
ESLA LR LR
comp=Z,10μm,22.0s,MS6.6
PAB San Pablo 154.86 15 PFAKE 07 26 20.0 +10
PAB LR LR
comp=Z,1μm,22.0s,MS5.7
PBEJ Beja 155.19 22 *e*PKPdf PKPdf 07 26 12.0 +1.3
PBAR Barrancos 155.35 20 *e*LR LR 08 18 32.1
comp=Z,3μm,20.4s
VSL Villasalto 155.38 349 PFAKE 07 26 20.0 +9.1
VSL LR LR
comp=Z,1μm,19.0s,MS5.8
PCVE Castro Verde 155.48 23 *e*LR LR 08 18 19.2
comp=Z,3μm,20.7s
MORF Marmelete 155.53 24 *e*LR LR 08 19 04.3
comp=Z,2μm,19.4s
PFVI Vila Bisbo 155.61 25 *e*LR LR 08 18 38.1
comp=Z,3μm,19.8s
PVAQ Vaqueiros 155.80 22 A 08 30 17.5
comp=Z,3μm,19.7s

PBDV	Barranco-do-Ve	155.86	23	eLR	LR	08 18 38.5	
	comp=Z,4μm,20.3s						
SFS	San Fernando	157.18	21	PFAKE		07 26 20.0	+6.7
SFS				LR	LR		
	comp=Z,6μm,22.0s,MS6.4						
WDD	Wield Dalam	157.33	337	PFAKE		07 26 20.0	+6.5
WDD				LR	LR		
	comp=Z,1μm,20.0s,MS5.8						
KEST	Kesra	159.03	347	PKPab	PKPab	07 26 51.4	-0.5
	comp=Z,2.6nm,1.0s,baz=33,slow=8.3,SNR=3.3						
DBIC	Dimbokro	168.04	135	PFAKE		07 26 40.0	+15
DBIC				LR	LR		
	comp=Z,2μm,20.0s						
TORD	Torodi Ar. Bea	177.15	139	PKP	PKPdf	07 26 26.9	-1.6
	comp=Z,2.2nm,0.3s,baz=259,slow=2.3,SNR=7.2						
TORD				PKPab	PKPab	07 28 12.6	+0.2
	comp=Z,2.2nm,0.3s,baz=242,slow=3.2,SNR=9.5						
TORD				PP	PP	07 32 06.7	+1.9
	comp=Z,0.7nm,0.3s,baz=222,slow=2.0,SNR=4.4						
TORD	Torodi Ar. Bea	177.15	139	PKP	PKPdf	07 26 26.9	-1.6
TORD				PKPab	PKPab	07 28 12.6	+0.2
TORD				PP	PP	07 32 06.7	+1.9

IDC 01 07:22:46.9±2.0, 9°.20S×125°.09E, h0km, mb3.6/1, mb1 3.7/3, mb1mx3.5/16, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=218.3km s-min=33.2km az=57.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.92	141	Pn	Pn	07 26 04.0	-1.6
	0.2nm,0.3s,baz=321,slow=14,SNR=16						
WRA				Sn	Sn	07 28 30.6	-10
	0.3nm,0.3s,baz=75,slow=25,SNR=7.6						
ASAR	Alice Springs	16.67	151	Pn	Pn	07 26 43.5	+1.6
	0.1nm,0.3s,baz=320,slow=10,SNR=9.3						
ASAR				Sn	Sn	07 29 38.0	-10
	0.1nm,0.3s,baz=319,slow=18,SNR=5.2						
MKAR	Makanchi Array	67.53	330	P	P	07 33 45.0	+0.1
	0.2nm,0.3s,baz=131,slow=7.4,SNR=4.2						

*ISCJB **01** 07:49:37.3±0.7, 16°.60N±0°.05×97°.19W±0°.05, h33km, Error ellipse: s-maj=7.3km s-min=5.9km az=31.2*
*MEX **01** 07:49:39.5±0.5, 16°.62N×97°.18W, h31km±21km, MD3.5*
*NEIC **01** 07:49:39.5, 16°.62N×97°.18W, h31km, MD3.5(MEX), After MEX.*

ISC 01 07:49:37.3±1.4, 16°.60N±0°.06×97°.18W±0°.06, h33km±13km, n9, σ0§94/18, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.64	42	i P	Pb	07 49 50.2	0.0
VHO				i S	Sb	07 49 58.4	-0.5
VHO	Vista Hermosa	0.64	42	i P	Pb	07 49 50.2	0.0
VHO				i S	Sb	07 49 58.4	-0.5
PNIG	Pinotepa	0.93	258	eP	Pn	07 49 55.0	+0.9
PNIG				i S	Sn	07 50 05.1	-1.2
PNIG	Pinotepa	0.93	258	eP	Pn	07 49 55.0	+0.9
PNIG				i S	Sn	07 50 05.1	-1.2
HUIG	Huatulco	1.32	128	i P	Pn	07 49 59.8	+0.3
HUIG				i S	Sn	07 50 15.7	-0.3
HUIG	Huatulco	1.32	128	i P	Pn	07 49 59.8	+0.3
HUIG				i S	Sn	07 50 15.7	-0.3
UTMO	Huajuapan	1.36	334	i P	Pn	07 50 00.1	0.0
UTMO				i S	Sn	07 50 15.9	-1.2
PPM	Popocatepetl	2.82	331	eP	Pn	07 50 23.1	+3.0
PPM				i S	Sn	07 50 53.6	+0.7
PPM	Popocatepetl	2.82	331	eP	Pn	07 50 23.1	+3.0
PPM				i S	Sn	07 50 53.6	+0.7

*IDC **01** 08:08:51.4±1.0, 28°.04N×52°.48E, h0km, mb4.0/15, mb1 4.0/16, mb1mx3.9/28, mbtmp4.0/16, ML3.7/1, Error ellipse: s-maj=24.7km s-min=17.2km az=165.0*
*CSEM **01** 08:08:53.6±0.2, 28°.08N×52°.51E, h10km, ML3.7, Error ellipse: s-maj=8.0km s-min=4.9km az=152.0*
*ISCJB **01** 08:08:53.1±1.1, 28°.07N±0°.05×52°.49E±0°.05, h19km±8km, mb3.9/19, Error ellipse: s-maj=9.4km s-min=6.5km az=155.9*
*NEIC **01** 08:08:54.1, 28°.34N×52°.53E, h3km, mb3.9/4, ML3.6(THR), MN3.8(TEH), After THR.*
*SGS **01** 08:08:56.9, 28°.16N×52°.49E, h12km*
*TEH **01** 08:08:57.7, 28°.18N×52°.40E, h31km*

ISC 01 08:08:54.7±0.9, 28°.09N±0°.04×52°.50E±0°.05, h16km±5km, n74, σ1§01/82, mb3.9/19, 2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.47	65	ePg	Pg	08 09 02.0	-2.2
GHIR				eSg	Sg	08 09 08.0	-2.5
GHIR	Ghir-Karzin	0.47	65	ePg	Pg	08 09 02.0	-2.2
GHIR				eSg	Sg	08 09 08.0	-2.5
ISRV	Sarvestan	1.40	23	⇓ePn	Pn	08 09 20.5	+1.0
ISRV				eSg	Sg	08 09 40.8	+1.0
ISRV	Sarvestan	1.40	23	⇓ePn	Pn	08 09 20.5	+1.0
ISRV				e		08 09 24.4	
	comp=Z,14μm,0.1s						
ISRV				eSg	Sg	08 09 40.8	+1.0
IPAR	Pars	1.81	15	ePn	Pn	08 09 26.2	+1.0
IPAR				eSg	Sg	08 09 53.2	+0.1
IPAR				e		08 09 56.2	
	comp=Z,11μm,0.5s						
IPAR	Pars	1.81	15	ePn	Pn	08 09 26.2	+1.0
IPAR				eSg	Sg	08 09 53.2	+0.1
SLWS		3.68	207	P	Pg	08 10 06.1	+1.0
IMEH	Mehriz	3.77	29	ePn	Pn	08 09 53.0	+0.9
IMEH				e		08 10 10.2	
	comp=N,1μm,0.2s						
IMEH	Mehriz	3.77	29	ePn	Pn	08 09 53.0	+0.9
ISAD	Sadrabad	3.95	15	ePn	Pn	08 09 54.3	-0.3
ISAD				e		08 11 10.4	
	comp=Z,1μm,0.3s						
ISAD	Sadrabad	3.95	15	ePn	Pn	08 09 54.3	-0.3
KRBR	Kerman	4.18	62	ePn	Pn	08 09 59.0	+1.2
KRBR	Kerman	4.18	62	ePn	Pn	08 09 59.0	+1.2
IBAF	Bafgh	4.39	37	e	Pn	08 10 02.3	+1.6
	comp=Z,1μm,0.1s						
IBAF				ePn	Pn	08 10 01.5	+0.8
RDF	Al-Radifah	4.44	282	eP	Pn	08 10 01.4	+0.1
RDF				AML	AML	08 11 06.7	
	comp=Z,35nm,0.4s						
RDF	Al-Radifah	4.44	282	eP	Pn	08 10 01.4	+0.1
ICHK	Chekchek	4.46	21	e	Pn	08 10 03.3	+1.7
	comp=Z,1μm,0.2s						
ICHK				ePn	Pn	08 10 02.1	+0.5
NASN	Na'in	4.70	3	ePn	Pn	08 10 05.0	0.0
NASN	Na'in	4.70	3	ePn	Pn	08 10 05.0	0.0
NAY	Al-Naaiem	4.76	285	eP	Pn	08 10 05.8	0.0
NAY				AML	AML	08 11 11.1	
	comp=Z,24nm,0.7s						
NAY	Al-Naaiem	4.76	285	eP	Pn	08 10 05.8	0.0
IPIR	Pirpir	4.79	344	ePn	Pn	08 10 05.9	-0.2
IPIR				e		08 11 03.1	
	comp=Z,612nm,0.4s						
IPIR	Pirpir	4.79	344	ePn	Pn	08 10 05.9	-0.2
IZEF	Zefreh	4.79	358	ePn	Pn	08 10 06.2	0.0
IZEF	Zefreh	4.79	358	ePn	Pn	08 10 06.2	0.0
MIB	Mutribah	4.84	292	eP	Pn	08 10 07.2	+0.4
MIB				AML	AML	08 11 12.2	
	comp=Z,38nm,0.6s						
MIB	Mutribah	4.84	292	eP	Pn	08 10 07.2	+0.4
IKLH	Kolahrood	5.27	352	ePn	Pn	08 10 12.0	-0.8
IKLH				e		08 10 45.9	
	comp=Z,266nm,0.3s						
IKLH	Kolahrood	5.27	352	ePn	Pn	08 10 12.0	-0.8
HRDDS		5.83	209	P	Pn	08 10 21.8	+1.4
GHVR	GHOM	6.46	351	ePn	Pn	08 10 29.0	-0.1
GHVR	GHOM	6.46	351	ePn	Pn	08 10 29.0	-0.1
ZHSF	Zahedan	7.41	76	ePn	Pn	08 10 44.0	+1.8
LYLS		7.68	220	P	Pn	08 10 46.2	+0.3
LYLS		7.68	220	P	Pn	08 10 46.2	+0.3
BRTR	Keskin Array B	19.45	312	P	Pn	08 13 21.3	-0.4
	comp=Z,0.2nm,0.3s,baz=124,slow=13,SNR=10						
BRTR	Keskin Array B	19.45	312	P	Pn	08 13 21.3	-0.4
KKAR	Karatay Array	20.89	39	eP	P	08 13 35.3	-0.9
	comp=Z,2.8nm,0.6s						
KKAR	Karatay Array	20.89	39	eP	P	08 13 35.3	-0.8
	comp=Z,2.8nm,0.6s						
ABKAR	Akbulak array	21.90	13	eP	P	08 13 46.4	-0.6
	comp=Z,4.9nm,0.8s,mb4.0						
ABKAR	Akbulak array	21.90	13	eP	P	08 13 46.4	-0.5
	comp=Z,4.9nm,0.8s,mb4.0						
AML	Almayashu	22.21	45	eP	P	08 13 50.8	+0.4
	comp=Z,5.1nm,0.6s,mb4.1						
AML	Almayashu	22.21	45	eP	P	08 13 50.8	+0.4
	comp=Z,5.1nm,0.6s,mb4.1						
EKS2	Erkin-Say	22.55	44	eP	P	08 13 55.9	+2.0
	comp=Z,2.3nm,0.6s,mb3.8						
EKS2	Erkin-Say	22.55	44	eP	P	08 13 55.9	+1.9
	comp=Z,2.3nm,0.6s,mb3.8						
AKTK	Aktyubinsk	22.71	9	P	P	08 13 57.0	+1.5
AKTK	Aktyubinsk	22.71	9	P	P	08 13 57.0	+1.4
AKTO	Aktyubinsk	22.71	9	P	P	08 13 57.0	+1.5
	comp=Z,2.3nm,0.6s,mb3.8,baz=286,slow=14,SNR=7.0						
AAK	Ala-Archa	22.98	45	P	P	08 14 03.2	+4.7
	comp=Z,2.1nm,0.5s,mb3.8,baz=286,slow=5.5,SNR=4.4						
BVAR	Borovoye Array	28.22	23	P	P	08 14 45.9	-0.7
	comp=Z,1.3nm,0.6s,mb3.7,baz=220,slow=9.1,SNR=5.1						
BVAR	Borovoye Array	28.22	23	P	P	08 14 45.9	-0.7
MK31	Makanchi Array	29.87	43	eP	P	08 15 01.3	0.0
MK31	Makanchi Array	29.87	43	eP	P	08 15 01.3	0.0
MKAR	Makanchi Array	29.87	43	P	P	08 15 00.9	-0.4
	comp=Z,0.5nm,0.3s,mb3.7,baz=226,slow=7.9,SNR=8.9						
MKAR	Makanchi Array	29.87	43	P	P	08 15 00.9	-0.4
KURK	Kurchatov	30.02	34	P	P	08 15 01.0	-1.6
	comp=Z,0.4nm,0.7s,mb3.3,baz=233,slow=9.0,SNR=3.4						
KURK	Kurchatov	30.02	34	P	P	08 15 01.0	-1.6
ZALV	Zalesovo Beam	35.00	33	P	P	08 15 45.0	-1.2
	comp=Z,1.0nm,0.3s,mb4.2,baz=244,slow=9.3,SNR=6.9						
FINES	FINESS Array B	37.73	340	P	P	08 16 08.6	-0.8
	comp=Z,1.6nm,0.5s,mb4.0,baz=134,slow=11,SNR=6.7						
FINES	FINESS Array B	37.73	340	P	P	08 16 08.6	-0.7
NOA	NORSAR Array B	42.92	332	P	P	08 16 51.3	-1.1
	comp=Z,0.6nm,0.7s,mb3.5,baz=122,slow=8.3,SNR=2.9						
NOA	NORSAR Array B	42.92	332	P	P	08 16 51.3	-1.1
CMAR	Chiang Mai Arr	43.51	92	P	P	08 16 58.6	+0.9
	comp=Z,0.5nm,0.4s,mb3.6,baz=290,slow=8.6,SNR=5.1						
CMAR	Chiang Mai Arr	43.51	92	P	P	08 16 58.5	+0.8
ARCES	ARCESS Array B	44.33	347	P	P	08 17 03.8	+0.2
	comp=Z,3.0nm,0.8s,mb4.1,baz=152,slow=4.1,SNR=3.5						
ARCES	ARCESS Array B	44.33	347	P	P	08 17 03.8	+0.2
SONM	Songino Array	45.82	49	P	P	08 17 15.4	-0.3
	comp=Z,0.5nm,0.6s,mb3.6,baz=231,slow=13,SNR=2.8						
SONM	Songino Array	45.82	49	P	P	08 17 15.4	-0.4
TORD	Torodi Ar. Bea	49.48	263	P	P	08 17 43.6	-1.0
	comp=Z,2.7nm,0.5s,mb4.5,baz=61,slow=8.5,SNR=24						
DBIC	Dimbokro	58.17	260	P	P	08 18 47.5	-0.8
	comp=Z,4.4nm,1.0s,mb4.4,baz=33,slow=7.4,SNR=4.8						
DBIC	Dimbokro	58.17	260	P	P	08 18 47.5	-0.7
SCHQ	Schefferville	82.44	329	P	P	08 21 15.3	-0.7
	comp=Z,12nm,1.2s,mb4.7,baz=23,slow=7.7,SNR=4.7						
ILAR	Eielson Array	86.22	8	P	P	08 21 33.3	-1.8
	comp=Z,0.3nm,0.9s,mb3.5,baz=301,slow=3.9,SNR=3.0						
ASAR	Alice Springs	93.78	115	P	P	08 22 10.0	-1.3
	comp=Z,0.3nm,0.6s,mb3.9,baz=302,slow=4.4,SNR=5.2						

*ISCJB **01** 08:28:17.9±0.3, 18°.69S±0°.07×65°.43E±0°.06, h10km, mb4.5/39, MS4.5/14, Error ellipse: s-maj=10.2km s-min=7.4km az=154.3*
*IDC **01** 08:28:18.6±0.5, 18°.55S×65°.46E, h0km, mb4.4/25, mb1 4.4/26, mb1mx4.4/31, mbtmp4.4/26, ML3.5/1, MS4.4/14, Ms1 4.4/14, ms1mx4.1/34, Error ellipse: s-maj=15.2km s-min=13.7km az=46.0*
*NEIC **01** 08:28:19.9±0.3, 18°.61S×65°.38E, h10km, mb4.8/9, Error ellipse: s-maj=10.2km s-min=7.0km az=159.0*
*GCMT **01** 08:28:22.7±0.4, 18°.34S×65°.33E, h13km±1km, MW5.0, Moment Tensor Solution. s16,c22; s57,c88; Moment tensor: Scale 10^16Nm; Mrr=3.70±.30; Mθθ0.40±.18; Mφφ3.31±.22; Mrθ0.90±.61; Mrφ-1.00±.13; Mθφ0.82±.48; Best double couple: M0=3.80000×10^16 NP1:φs=329.00000°, δ43.00000°, λ-112.00000°. NP2:φs=178.00000°, δ51.00000°, λ-71.00000°. Principal axes: T 3.6600, Plg4.0000°, Azm254.0000°; N 0.3800, Plg15.0000°, Azm345.0000°; P -4.0300, Plg75.0000°, Azm149.0000°; Data Used: G IU IC II.*

ISC 01 08:28:19.9±0.3, 18°.68S±0°.07×65°.42E±0°.06, h10km, n90, σ1§04/66, mb4.5/39, MS4.5/14, 8C-3D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRIV	Mauritius Mete	7.65	257	ePn	Pn	08 30 10.0	-1.4
RER	Riviere de l'E	9.43	253	ePn	Pn	08 30 35.5	-0.4
	89nm,0.7s						
ABPO	Ambohimpanom	17.23	266	ePn	Pn	08 32 18.2	-2.6
	14nm,0.9s						
OPO	Ambohidratompo	17.28	267	Pn	Pn	08 32 21.3	-0.2
	0.1nm,0.3s,baz=107,slow=11,SNR=2.7						
KMBO	Kilima Mbogo	32.67	299	eP	P	08 34 54.1	+1.5
	5.8nm,1.1s,mb4.4						
LBTB	Lobatse	37.40	253	P	P	08 35 33.8	+0.5
	9.9nm,1.1s,mb4.5,baz=112,slow=11,SNR=3.3						
BOSA	Boshof	37.95	247	P	P	08 35 37.9	0.0
	7.6nm,1.1s,mb4.3,baz=72,slow=9.3,SNR=2.5						
NWAO	Narrogin (SRO)	48.31	118	LR	LR	08 52 20.4	
	comp=Z,435nm,21.0s,MS4.4,baz=275,slow=30						
MAW	Mawson	48.93	181	P	P	08 37 07.6	+1.7
	3.0nm,0.6s,mb4.5,baz=321,slow=11,SNR=6.1						
MAW				LR	LR	08 52 42.3	
	comp=Z,251nm,18.7s,MS4.2,baz=337,slow=30						
CMAR	Chiang Mai Arr	49.46	44	P	P	08 37 10.4	-0.2
	3.6nm,0.8s,mb4.4,baz=235,slow=8.6,SNR=12						
CMAR				LR	LR	08 54 50.7	
	comp=Z,382nm,19.4s,MS4.4,baz=231,slow=32						
FITZ	Fitzroy Crossi	56.90	100	P	P	08 38 06.3	+0.8
	1.4nm,0.8s,mb4.0,baz=214,slow=7.3,SNR=2.6						
FITZ				LR	LR	08 57 37.9	
	comp=Z,276nm,21.4s,MS4.3,baz=266,slow=31						
QIZ	Qiongzhong	57.50	52	P	P	08 38 08.0	-1.6
QIZ				S	S	08 46 05.2	-2.2
EKS2	Erkin-Say	61.52	7	eP	P	08 38 38.0	+1.1
	4.7nm,0.9s,mb4.6						
AAK	Ala-Archa	61.58	8	P	P	08 38 38.5	+1.2
	3.7nm,0.9s,mb4.5						
GNI	Garni	61.62	342	P	P	08 38 39.3	+1.7
	12nm,0.7s,mb5.2,baz=341,slow=5.4,SNR=7.0						
ASAR	Alice Springs	63.52	108	P	P	08 38 50.6	-0.3
	1.8nm,0.7s,mb4.2,baz=265,slow=5.8,SNR=12						
DAV	Davao City (W)	64.58	72	LR	LR	09 04 37.4	
	comp=Z,268nm,21.1s,MS4.4,baz=231,slow=34						
WRA	Warramunga Arr	64.61	104	P	P	08 38 58.3	+0.2
	2.7nm,0.8s,mb4.3,baz=262,slow=5.9,SNR=11						
BRTR	Keskin Array B	65.24	333	P	P	08 39 01.4	-0.2
	1.9nm,0.9s,mb4.1,baz=126,slow=6.3,SNR=6.9						
GTA	Gaotai	66.13	29	eP	P	08 39 07.9	+0.5
GTA				pP	pP	08 39 12.5	+1.9
GTA				sP	sP	08 39 16.1	+4.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
VNA2	Neumayer--Watz	66.88	200	eP	P	08 39 09.8	-2.0
VNA2				e		08 39 16.9	
MK31	Makanchi Array	66.92	13	eP	P	08 39 12.0	-0.3
MKAR	Makanchi Array	66.92	13	P	P	08 39 11.8	-0.5
	comp=Z,2.9nm,0.9s,mb4.3,baz=208,slow=6.9,SNR=18						
VNA3	Neumayer Olymp	67.66	200	eP	P	08 39 15.7	-1.1
VNA3				e		08 39 21.6	
VNA3				e		08 39 26.2	
WHN	Wuhan	67.89	45	P	P	08 39 18.5	-0.3
STKA	Stephens Creek	68.90	118	P	P	08 39 27.2	+2.0
	comp=Z,2.5nm,1.0s,mb4.1,baz=240,slow=16,SNR=2.2						
STKA				LR	LR	09 08 00.8	
	comp=Z,204nm,18.4s,MS4.4,baz=101,slow=35						
AKTK	Aktyubinsk	69.12	355	P	P	08 39 26.1	+0.1
AKTO	Aktyubinsk	69.12	355	P	P	08 39 26.1	+0.1
	comp=Z,0.6nm,0.3s,mb4.0,baz=208,slow=4.1,SNR=3.8						
KURK	Kurchatov	70.06	9	P	P	08 39 30.4	-1.4
	comp=Z,4.3nm,0.8s,mb4.4,baz=206,slow=6.8,SNR=20						
QSPA	South Pole Qui	71.42	180	P	P	08 39 41.1	+1.2
	comp=Z,4.8nm,1.0s,mb4.4,baz=270,slow=3.2,SNR=10						
QSPA	South Pole Qui	71.42	180	P	P	08 39 41.1	+1.2
BVAR	Borovoye Array	71.53	3	P	P	08 39 39.7	-1.0
	comp=Z,5.1nm,0.8s,mb4.5,baz=164,slow=5.9,SNR=21						
BRVK	Borovoye	71.56	3	eP	P	08 39 41.0	+0.1
	comp=Z,6.6nm,0.8s,mb4.6						
VRI	Vrincioaia	73.19	333	⇓iP	P	08 39 51.8	+1.0
MLR	Muntele Rosu	73.23	332	⇓iP	P	08 39 51.4	+0.3
KIC	Kosan Boka	73.46	283	eP	P	08 39 58.5	+5.3
	comp=Z,26nm,1.0s,mb5.1						
KIC	Kosan Boka	73.46	283	eP	P	08 39 58.5	+5.3
	comp=Z,26nm,1.0s,mb5.1						
VOIR		73.59	332	⇑iP	P	08 39 52.9	-0.3
LIC	Lamto	73.67	283	eP	P	08 39 54.3	-0.1
	comp=Z,75nm,1.7s,mb5.4						
LIC	Lamto	73.67	283	eP	P	08 39 54.3	-0.1
	comp=Z,75nm,1.7s,mb5.3						
DBIC	Dimbokro	73.68	283	P	P	08 39 55.1	+0.6
	comp=Z,6.4nm,0.9s,mb4.5,baz=98,slow=7.1,SNR=3.4						
DBIC				LR	LR	09 09 49.6	
	comp=Z,377nm,19.1s,MS4.7,baz=43,slow=34						
TIC	Toumodi	73.82	283	eP	P	08 39 55.2	-0.1
	comp=Z,79nm,1.6s,mb5.4						
TIC	Toumodi	73.82	283	eP	P	08 39 55.2	-0.1
	comp=Z,79nm,1.6s,mb5.4						
ZAA0	Zalesovo Array	74.23	12	eP	P	08 39 54.1	-2.7
ZALV	Zalesovo Beam	74.23	12	P	P	08 39 55.5	-1.3
	comp=Z,9.3nm,0.8s,mb4.8,baz=208,slow=5.1,SNR=28						
ZALV				LR	LR	09 13 09.6	
	comp=Z,135nm,18.0s,MS4.3,baz=67,slow=36						
BURAR	Bucovina Array	75.20	333	⇓iP	P	08 40 04.6	+2.1
BZS	Buzias	75.32	330	⇑iP	P	08 40 04.2	+0.9
CTA	Charters Tower	75.48	107	LR	LR	09 10 07.2	
	comp=Z,378nm,19.4s,MS4.7,baz=246,slow=33						
DRGR		75.68	331	⇑iP	P	08 40 06.2	+0.9
SONM	Songino Array	75.70	27	P	P	08 40 05.2	-0.2
	comp=Z,2.8nm,0.8s,mb4.2,baz=210,slow=5.5,SNR=12						
SONM				LR	LR	09 11 60.0	
	comp=Z,261nm,21.1s,MS4.5,baz=298,slow=35						
KEST	Kesra	75.80	316	P	P	08 40 08.2	+2.0
	comp=Z,1.3nm,0.9s,mb3.9,baz=107,slow=6.4,SNR=3.6						
AKASG	Malin Array Be	76.07	337	P	P	08 40 06.9	-0.5
	comp=Z,6.7nm,0.8s,mb4.6,baz=143,slow=5.0,SNR=14						
KIEV	Kiev	76.07	337	eP	P	08 40 06.7	-0.7
	comp=Z,8.7nm,0.8s,mb4.7						
CRVS	Cervenica-Dubn	77.81	332	eP	P	08 40 21.7	+4.4
CRVS	Cervenica-Dubn	77.81	332	e	P	08 40 21.7	+4.4
KECS	Kecovo	77.95	331	eP	P	08 40 18.3	+0.3
KECS	Kecovo	77.95	331	eP	P	08 40 18.2	+0.2
STHS	Stebnicka Huta	78.29	332	eP	P	08 40 16.5	-3.4
ARSA	Arzberg	79.46	328	⇑iP	P	08 40 26.8	+0.4
	comp=Z,6.3nm,0.9s,mb4.5						
CONA	Conrad Observa	79.75	329	⇑iP	P	08 40 28.4	+0.4
	comp=Z,9.7nm,1.0s,mb4.7						
VRAC	Vranov	80.34	330	P	P	08 40 31.6	+0.5
	comp=Z,2.1nm,0.3s,mb4.5,baz=202,slow=5.4,SNR=3.6						
ABTA	Abfaltersbach	80.68	326	⇑iP	P	08 40 32.8	-0.2
	comp=Z,8.7nm,0.9s,mb4.7						
KSRS	Korea Array	81.05	46	LR	LR	09 14 49.0	
	comp=Z,100nm,18.3s,MS4.2,baz=58,slow=34						
FETA	Feichten	81.80	326	⇑iP	P	08 40 38.9	-0.1
	comp=Z,4.7nm,0.9s,mb4.4						
DAVOX	Davos/Dischmat	82.11	325	P	P	08 40 40.2	-0.4
	comp=Z,3.1nm,0.6s,mb4.4,baz=145,slow=14,SNR=4.8						
DAVA	Damuels	82.42	326	⇑iP	P	08 40 42.0	-0.2
	comp=Z,8.7nm,0.8s,mb4.7						
MDT	Midelt	84.21	307	LR	LR	09 19 10.8	
	comp=Z,340nm,18.7s,MS4.8,baz=99,slow=36						
FINES	FINESS Array B	85.81	342	P	P	08 40 59.1	0.0
	comp=Z,3.8nm,0.8s,mb4.7,baz=46,slow=5.8,SNR=6.7						
ESDC	Sonseca Array	86.84	314	P	P	08 41 05.0	+0.2
	comp=Z,0.7nm,0.4s,mb4.2,baz=115,slow=3.7,SNR=6.0						
BBTS	Babate	87.23	286	LR	LR	09 17 09.8	
	comp=Z,397nm,20.6s,MS4.8,baz=306,slow=34						
MJAR	Matsushiro Arr	87.87	50	P	P	08 41 07.8	-2.0
	comp=Z,0.8nm,0.5s,mb4.2,baz=194,slow=4.5,SNR=2.6						
MJAR				LR	LR	09 18 03.4	
	comp=Z,101nm,21.8s,MS4.2,baz=330,slow=34						
ILAR	Eielson Array	129.12	17	PKP	PKPdf	08 47 27.6	-0.2
	comp=Z,0.3nm,0.7s,baz=328,slow=1.2,SNR=4.3						
ULM	Lac du Bonnet	145.14	339	PKPbc	PKPbc	08 47 55.7	-1.4
	comp=Z,5.2nm,0.7s,baz=64,slow=4.7,SNR=5.5						
ULM	Lac du Bonnet	145.14	339	PKPbc	PKPbc	08 47 55.7	-1.4
ACSO	Alum Creek Sta	145.38	315	ePKPbc	PKPbc	08 47 57.9	-0.4
EDM	Edmonton	145.51	359	ePKPbc	PKPbc	08 47 58.2	0.0
COWI	Conover	145.52	328	ePKPbc	PKPbc	08 47 57.8	-0.7
JFWS	Jewell Farm	148.27	325	ePKPdf	PKPdf	08 48 00.8	-2.3
JFWS				ePKPbc	PKPbc	08 48 06.0	-0.4
ECSD	EROS Data Cent	150.81	333	ePKPdf	PKPdf	08 48 05.5	-1.6
ECSD				ePKPbc	PKPbc	08 48 12.6	-0.1
ECSD				ePKPab	PKPab	08 48 18.7	-1.0
LAO	LASA Array	151.23	348	ePKPdf	PKPdf	08 48 07.0	-0.7
LAO				ePKPbc	PKPbc	08 48 15.4	+1.9
SWMT	Swartz Lake	151.24	359	ePKPbc	PKPbc	08 48 13.9	+0.3
SWMT				ePKPab	PKPab	08 48 20.2	-1.2
FVM	French

MABI	**Malga Bissina**	**0.69**	**178**	Pg	**Pg**	**08 38 32.5**	**+0.1**
MABI				Sg	**Sg**	**08 38 41.7**	**+0.2**
	28nm,0.1s						
MABI	**Malga Bissina**	**0.69**	**178**	Pg	**Pg**	**08 38 32.5**	**+0.1**
MABI				Sg	**Sg**	**08 38 41.7**	**+0.2**
	28nm,0.1s						
MOTA	**Moosalm**	**0.74**	**35**	⇑*i*Pg	**Pg**	**08 38 33.3**	**-0.1**
MOTA				⇑*i*Sg	**Sg**	**08 38 43.4**	**+0.2**
	9.4nm,0.2s						
MOTA	**Moosalm**	**0.74**	**35**	Pg	**Pg**	**08 38 33.3**	**-0.1**
MOTA				Sg	**Sg**	**08 38 43.4**	**+0.3**
	9.4nm,0.2s						
VDL	**Val di Lei**	**0.75**	**250**	*e*Pg	**Pg**	**08 38 34.0**	**+0.4**
	80nm,0.2s						
RETA	**Reutte**	**0.77**	**15**	⇑*i*Pg	**Pg**	**08 38 33.9**	**-0.1**
RETA				⇓*i*Sg	**Sg**	**08 38 43.9**	**-0.2**
	22nm,0.4s						
RETA	**Reutte**	**0.77**	**15**	Pg	**Pg**	**08 38 33.9**	**-0.1**
RETA				Sg	**Sg**	**08 38 43.9**	**-0.2**
	22nm,0.4s						
TUE	**Stuetta**	**0.82**	**251**	Pg	**Pg**	**08 38 34.4**	**-0.5**
TUE				Sg	**Sg**	**08 38 45.5**	**-0.2**
	18nm,0.3s						
TUE	**Stuetta**	**0.82**	**251**	Pg	**Pg**	**08 38 34.4**	**-0.5**
TUE				Sg	**Sg**	**08 38 45.5**	**-0.2**
	18nm,0.3s						
WTTA	**Wattenberg**	**0.95**	**56**	⇑*e*Pg	**Pg**	**08 38 37.0**	**-0.4**
	SNR=8.0						
WTTA				⇓*i*Sg	**Sg**	**08 38 50.0**	**+0.2**
	18nm,0.5s						
WTTA	**Wattenberg**	**0.95**	**56**	Pg	**Pg**	**08 38 37.0**	**-0.4**
	SNR=8.0						
WTTA				Sg	**Sg**	**08 38 50.0**	**+0.2**
	18nm,0.5s						
WATA	**Walderalm**	**0.96**	**51**	⇑*i*Pg	**Pg**	**08 38 37.3**	**-0.3**
WATA				⇑*i*Sg	**Sg**	**08 38 50.5**	**+0.4**
	4.9nm,0.2s						
WATA	**Walderalm**	**0.96**	**51**	Pg	**Pg**	**08 38 37.3**	**-0.3**
WATA				Sg	**Sg**	**08 38 50.5**	**+0.4**
	4.9nm,0.2s						

*IDC **01** 09:05:21.7±1.5, 56.°00N×161.°16E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/26, mbtmp3.4/4, ML3.2/1, Error ellipse: s-maj=38.2km s-min=21.4km az=132.0*
*ISCJB **01** 09:05:31.4±0.5, 55.°00N±0.°02×161.°72E±0.°06, h92km±7km, mb3.4/3, Error ellipse: s-maj=6.3km s-min=4.0km az=12.8*
*KRSC **01** 09:05:31.7±0.7, 55.°03N×161.°65E, h86km±55km, ML4.2*
*MOS **01** 09:05:31.3±0.2, 54.°98N×161.°72E, h91km, mb4.2/1, Error ellipse: s-maj=28.5km s-min=12.4km az=74.4*
ISC 01 09:05:32.4±0.5,**55.°00N**±0.°02×**161.°72E**±0.°07,**h88**km±7km, **n29**,σ0°**75**/**48**,**mb3.4**/3,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.45**	**179**	*i* P	**Pn**	**09 05 46.9**	**+0.5**
MKZ				*i* S	**Sn**	**09 05 57.9**	**+1.1**
ZLN	**Zelenaya**	**1.14**	**333**	*e*P	**Pn**	**09 05 53.6**	**+0.1**
ZLN				*i* S	**Sn**	**09 06 10.0**	**+0.7**
BZMR	**Bezymyannaya**	**1.17**	**324**	*e*P	**Pn**	**09 05 53.4**	**-0.4**
BZMR				*i* S	**Sn**	**09 06 09.2**	**-0.7**
CIRR	**Tsirk**	**1.24**	**334**	*e*P	**Pn**	**09 05 54.9**	**+0.2**
CIRR				*i* S	**Sn**	**09 06 12.3**	**+0.8**
KPT	**Kopyto**	**1.29**	**319**	*e*P	**Pn**	**09 05 55.0**	**-0.2**
KPT				*i* S	**Sn**	**09 06 12.3**	**-0.2**
KBTR	**Krutoberegovo**	**1.36**	**27**	*e*P	**Pn**	**09 05 56.5**	**+0.3**
KBTR				*i* S	**Sn**	**09 06 14.6**	**+0.5**
KRSR	**Krestovskiy**	**1.38**	**332**	*e*P	**Pn**	**09 05 56.1**	**-0.3**
KRSR				*i* S	**Sn**	**09 06 13.9**	**-0.7**
KLY	**Klyuchi**	**1.44**	**336**	*e*P	**Pn**	**09 05 56.4**	**-0.8**
KLY				*i* S	**Sn**	**09 06 14.9**	**-1.1**
KOZR	**Kozyr**	**1.48**	**317**	PN	**Pn**	**09 05 57.9**	**+0.2**
KOZR				S	**Sn**	**09 06 17.4**	**+0.5**
KOZ	**Kozyrevsk**	**1.49**	**316**	*e*P	**Pn**	**09 05 57.9**	**+0.1**
KOZ				*i* S	**Sn**	**09 06 17.4**	**+0.4**
SMKR	**Semkarok**	**1.59**	**355**	*e*P	**Pn**	**09 05 59.2**	**+0.2**
BDR	**Baidarnaya**	**1.59**	**350**	*e*P	**Pn**	**09 05 59.5**	**+0.4**
BDR				*i* S	**Sn**	**09 06 20.1**	**+0.7**
KII	**Karymskiy**	**1.64**	**235**	*e*P	**Pn**	**09 06 00.0**	**+0.3**
KII				*i* S	**Sn**	**09 06 20.6**	**+0.1**
SRKR	**Sorokina**	**1.68**	**350**	*e*P	**Pn**	**09 06 00.4**	**+0.1**
SRKR				*i* S	**Sn**	**09 06 21.4**	**0.0**
SRDR	**Sredinnyy**	**1.74**	**320**	*e*P	**Pn**	**09 06 00.3**	**-0.7**
SRDR				*i* S	**Sn**	**09 06 21.5**	**-1.2**
SPN	**Mys Shipunski**	**2.15**	**208**	*e*P	**Pn**	**09 06 05.5**	**-1.0**
SPN				*i* S	**Sn**	**09 06 30.1**	**-2.4**
NLC	**Nalytchevo**	**2.31**	**218**	*e*P	**Pn**	**09 06 08.3**	**-0.2**
NLC				*i* S	**Sn**	**09 06 35.1**	**-1.0**
BKI	**Bering**	**2.45**	**84**	*e*P	**Pn**	**09 06 10.5**	**+0.1**
BKI				*i* S	**Sn**	**09 06 38.1**	**-1.5**
AVH	**Avacha**	**2.47**	**226**	*e*P	**Pn**	**09 06 11.3**	**+0.6**
GNL	**Ganaly**	**2.57**	**241**	*e*P	**Pn**	**09 06 12.5**	**+0.5**
PET	**Petropavlovsk**	**2.68**	**224**	*e*P	**Pn**	**09 06 13.8**	**+0.3**
PET				*i* S	**Sn**	**09 06 44.6**	**-0.5**
PET	**Petropavlovsk**	**2.68**	**224**	*e*PN	**Pn**	**09 06 13.6**	**+0.1**
PET				*e*S	**Sn**	**09 06 45.1**	**0.0**
PET				pmax	pmax		
	comp=Z,28nm,0.4s						
PET				smax			
	comp=E,129nm,0.5s						
PET				smax			
	comp=N,112nm,0.6s						
PETK	**Petropavlovsk-**	**3.04**	**233**	Pn	**Pn**	**09 06 18.3**	**0.0**
	comp=N,2.1nm,0.3s,baz=72,slow=18,SNR=33						
PETK				Lg		09 07 13.6	
	comp=N,1.0nm,0.3s,baz=283,slow=26,SNR=1.6						
MIPR	**Malaya Ipel'ka**	**4.02**	**229**	*e*P	**Pn**	**09 06 32.8**	**+1.2**
ALID	**Alaid**	**5.57**	**225**	*e*P	**Pn**	**09 06 55.1**	**+2.5**
KURK	**Kurchatov**	**47.55**	**301**	P	**P**	**09 13 53.4**	**-5.1**
	comp=N,0.7nm,0.5s,mb3.8,baz=55,slow=8.3,SNR=4.0						
KURK	**Kurchatov**	**47.55**	**301**	P	**P**	**09 13 53.4**	**-5.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
MKAR	**Makanchi Array**	**48.20**	**295**	P	**P**	**09 13 57.6**	**-6.0**
	comp=Z,0.3nm,0.6s,mb3.3,baz=51,slow=9.4,SNR=3.0						
TXAR	**Lajitas Array**	**69.03**	**69**	P	**P**	**09 16 28.7**	**+0.3**
	comp=Z,0.2nm,0.6s,mb3.1,baz=303,slow=5.9,SNR=4.8						

*ISCJB **01** 09:15:51.9±1.0, 21.°19S±0.°05×69.°1W±0.°2, h128km±11km, mb3.4/2, Error ellipse: s-maj=30.9km s-min=7.1km az=4.8*
*GUC **01** 09:15:51.6±0.8, 21.°18S×69.°06W, h125km±11km, ML3.8*
*IDC **01** 09:16:14.3±7.2, 19.°20S×67.°98W, h246km±44km, mb3.4/2, mb1 3.6/2, mb1mx3.2/15, mbtmp3.4/2, Error ellipse: s-maj=105.9km s-min=37.3km az=22.0*
ISC 01 09:15:52.8±1.0,**21.°19S**±0.°05×**69.°0W**±0.°2,**h120**km±12km, **n8**,σ0°**70**/**14**,**mb3.4**/2,**2C**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**1.22**	**215**	*e*P	**Pn**	**09 16 17.0**	**0.0**
MACH				*i* S	**Sn**	**09 16 36.2**	**+0.7**
HMBC	**Humberston**	**1.23**	**318**	⇑*i*P	**Pn**	**09 16 16.9**	**-0.3**
HMBC				*i* S	**Sn**	**09 16 35.9**	**+0.2**
HMBC				AML	AML	09 16 38.5	
	comp=N,3μm,0.4s						
PSGC	**Pisagua**	**1.90**	**326**	⇑*i*P	**Pn**	**09 16 24.3**	**-0.8**
PSGC				*i* S	**Sn**	**09 16 49.0**	**-0.7**
PSGC				AML	AML	09 16 54.2	
	comp=N,541nm,0.4s						
MNMC	**Miæe Miæ**	**2.12**	**345**	*e*P	**Pn**	**09 16 27.7**	**-0.1**
MNMC				*e*S	**Sn**	**09 16 54.9**	**+0.3**
MNMC				AML	AML	09 16 58.3	
	comp=N,1μm,0.0s						
MECH	**Mejillones**	**2.33**	**215**	*e*P	**Pn**	**09 16 30.0**	**-0.4**
MECH				*i* S	**Sn**	**09 16 59.0**	**-0.2**
MECH				AML	AML	09 17 02.3	
	comp=E,374nm,0.5s						
LPAZ	**La Paz**	**4.95**	**10**	P	**Pn**	**09 17 06.2**	**+1.1**
	comp=E,0.4nm,0.3s,baz=182,slow=10,SNR=11						
LPAZ				S	**Sn**	**09 17 47.5**	**-14**
	comp=E,0.2nm,0.3s,baz=216,slow=10,SNR=4.2						
TXAR	**Lajitas Array**	**60.33**	**325**	P	**P**	**09 25 50.5**	**+1.3**
	comp=E,0.6nm,1.1s,mb3.5,baz=120,slow=5.3,SNR=2.9						
TORD	**Torodi Ar. Bea**	**77.34**	**70**	P	**P**	**09 27 33.6**	**-1.2**
	comp=E,0.3nm,0.6s,mb3.2,baz=264,slow=5.4,SNR=1.8						

NEIC 01 09:16:11.1,61.°62N×147.°73W,h20km,ML3.7(PMR), **ML3.4**(AEIC),**After AEIC.,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SML	**Sawmill**	**0.34**	**304**	P	Pg	09 16 16.5	-1.9
SML				S	Sg	09 16 23.9	+0.6
PMR	**Palmer**	**0.67**	**268**	P	Pb	09 16 22.9	-1.1
PMR				S	Sb	09 16 32.2	-0.7
DIV	**Divide**	**1.06**	**117**	P	Pb	09 16 28.3	-2.4
DIV				S	Sb	09 16 42.9	-1.4
RC01	**Rabbit Creek A**	**1.10**	**242**	P	Pn	09 16 30.4	-1.0
RC01				S	Sb	09 16 45.5	+0.1
FIB	**Fire Island**	**1.26**	**250**	P	Pn	09 16 33.2	-0.3
DHY	**Denali Highway**	**1.47**	**6**	P	Pn	09 16 33.9	-2.5
BMRM	**Bremner River**	**1.65**	**112**	P	Pn	09 16 37.5	-1.3
SLKM	**Skilak Lake**	**1.65**	**228**	P	Pn	09 16 38.5	-0.3
PAX	**Paxson**	**1.72**	**37**	P	Pn	09 16 38.3	-1.5
SEW	**Seward**	**1.74**	**210**	P	Pn	09 16 39.4	-0.7
RND	**Reindeer**	**1.87**	**344**	P	Pn	09 16 40.4	-1.5
RAGM	**Ragged Mountai**	**1.94**	**128**	P	Pn	09 16 42.0	-0.9
TRF	**Thorofare Moun**	**2.19**	**328**	P	Pn	09 16 44.8	-1.4
MCK	**McKinley**	**2.19**	**346**	P	Pn	09 16 44.5	-1.8
MENT	**Mentasta**	**2.29**	**53**	*e*P	Pn	09 16 46.8	-0.9
BRLK	**Bradley Lake**	**2.42**	**221**	P	Pn	09 16 48.7	-0.9
PPLA	**Purkeypile**	**2.45**	**304**	P	Pn	09 16 49.0	-0.8
DOT	**Dot Lake**	**2.65**	**38**	P	Pn	09 16 50.8	-1.8
RSO	**Redoubt South**	**2.71**	**247**	*e*Pn	Pn	09 16 53.5	+0.1
RSO				*e*Sn	Sn	09 17 28.4	+3.0
BPAW	**Bear Paw Mtn.**	**2.90**	**331**	P	Pn	09 16 54.6	-1.5
CHUM	**Lake Minchumin**	**3.10**	**319**	P	Pn	09 16 57.8	-1.0
BCA3	**Beaver Creek A**	**3.13**	**60**	P	Pn	09 16 57.8	-1.4
COLA	**College**	**3.27**	**359**	P	Pn	09 16 59.8	-1.3
MDM	**Murphy Dome**	**3.36**	**356**	P	Pn	09 17 01.1	-1.3
SVW2	**Sparrevohn**	**3.82**	**266**	*e*P	Pn	09 17 07.4	-1.2
TT01	**Tatalina**	**4.08**	**292**	P	Pn	09 17 10.6	-1.7
TTA	**Tatalina**	**4.09**	**292**	*e*P	Pn	09 17 11.3	-1.0
EGAK	**Eagle**	**4.35**	**40**	*e*Pn	Pn	09 17 15.6	-0.3
EGAK				*e*Sg	Sg	09 18 27.3	-3.1
DAWY	**Dawson**	**4.54**	**54**	P	Pn	09 17 16.8	-1.8
IM3	**Indian Mountai**	**5.12**	**331**	P	Pn	09 17 24.8	-1.8
GCSA	**Galena City Sc**	**5.19**	**311**	P	Pn	09 17 25.9	-1.7
COLD	**Coldfoot**	**5.73**	**350**	P	Pn	09 17 32.7	-2.2
BM3	**Burnt Mountain**	**5.98**	**12**	P	Pn	09 17 35.7	-2.5
SKAG	**Skagway**	**6.49**	**104**	*e*P	Pn	09 17 45.8	+0.5
SIT	**Sitka**	**7.81**	**120**	*e*P	Pn	09 18 02.5	-1.0

*NEIC **01** 09:31:16.1, 17.°29N×93.°97W, h180km, MD4.0(MEX), After MEX.*
MEX 01 09:31:16.1±1.2,**17.°29N**×**93.°97W,h180**km±14km,**MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.90**	**258**	*i* P	Pn	09 31 41.9	-1.1
CMIG				*i* S	Sn	09 32 02.6	-1.1
CMIG	**Matias Romero**	**0.90**	**258**	*i* P	Pn	09 31 41.9	-1.1
CMIG				*i* S	Sn	09 32 02.6	-1.1
TGIG		**0.95**	**122**	*i* P	Pn	09 31 42.6	-0.8
TGIG				*i* S	Sn	09 32 01.1	-3.3
PCIG		**1.73**	**155**	*i* P	Pn	09 31 49.5	-0.8
PCIG				*i* S	Sn	09 32 14.7	-2.1
HUIG	**Huatulco**	**2.55**	**234**	*i* P	Pn	09 31 56.1	-3.2
HUIG				*i* S	Sn	09 32 31.4	-1.5
HUIG	**Huatulco**	**2.55**	**234**	*i* P	Pn	09 31 56.1	-3.2
HUIG				*i* S	Sn	09 32 31.4	-1.5
VHO	**Vista Hermosa**	**2.65**	**266**	*i* P	Pn	09 31 59.7	-0.9
VHO				*i* S	Sn	09 32 34.0	-1.0
VHO	**Vista Hermosa**	**2.65**	**266**	*i* P	Pn	09 31 59.7	-0.9
VHO				*i* S	Sn	09 32 34.0	-1.0
TPIG	**Tehuac#an**	**3.42**	**290**	*e*P	Pn	09 32 07.8	-2.2
TPIG				*i* S	Sn	09 32 50.6	-1.3
UTMO	**Huajuapan**	**3.70**	**279**	*e*P	Pn	09 32 11.3	-2.1
UTMO				*i* S	Sn	09 32 56.9	-1.2
PNIG	**Pinotepa**	**4.08**	**258**	*i* P	Pn	09 32 15.3	-3.0
PNIG				*i* S	Sn	09 33 05.2	-1.5
PNIG	**Pinotepa**	**4.08**	**258**	*i* P	Pn	09 32 15.3	-3.0
PNIG				*i* S	Sn	09 33 05.2	-1.5
PPM	**Popocatepetl**	**4.77**	**293**	*e*P	Pn	09 32 26.2	-0.8
PPM				*i* S	Sn	09 33 19.0	-3.7
PPM	**Popocatepetl**	**4.77**	**293**	*e*P	Pn	09 32 26.2	-0.8
PPM				*i* S	Sn	09 33 19.0	-3.7

IDC 01 09:57:14.2±1.4,**4.°45S**×**145.°19E,h0**km,**mb3.7**/4, **mb1 3.9**/5,**mb1mx3.7**/16,**mbtmp3.7**/5,**ML3.9**/1,**Error ellipse: s-maj=60.9km s-min=24.2km az=120.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.68**	**214**	P	Pn	10 01 33.8	-0.6
	0.4nm,0.3s,baz=34,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**22.00**	**209**	P	P	10 02 10.4	+0.3
	0.5nm,0.5s,baz=42,slow=7.8,SNR=26						
FITZ	**Fitzroy Crossi**	**23.45**	**233**	P	P	10 02 25.4	-0.2
	3.0nm,0.5s,baz=49,slow=8.7,SNR=16						
STKA	**Stephens Creek**	**27.50**	**187**	P	P	10 03 01.1	-1.3
	2.0nm,0.7s,baz=1.1,slow=13,SNR=3.3						
ILAR	**Eielson Array**	**84.78**	**24**	P	P	10 09 50.8	+0.7
	0.4nm,0.6s,baz=253,slow=5.3,SNR=12						

*DJA **01** 10:02:23, 10.°63N×128.°27E, h20km, mb5.0/10*
*MAN **01** 10:02:45, 8.°77N×127.°64E, h40km, mb4.6, ML3.5, MS3.4*
*ISCJB **01** 10:02:47.5±0.4, 8.°74N±0.°04×127.°52E±0.°04, h36km, mb4.3/22, Error ellipse: s-maj=5.5km s-min=5.0km az=26.0*
*BJI **01** 10:02:49.2, 8.°10N×127.°38E, h83km, mB4.9/3, mb4.6/10*
*IDC **01** 10:02:49.4±0.6, 8.°60N×127.°44E, h36km±4km, mb4.1/14, mb1 4.1/15, mb1mx4.1/23, mbtmp4.1/15, ML4.3/1, MS3.4/3, Ms1 3.5/3, ms1mx2.9/37, Error ellipse: s-maj=21.5km s-min=11.3km az=78.0*
*NEIC **01** 10:02:51.5±1.8, 8.°56N×127.°46E, h58km±17km, mb4.6/8, Error ellipse: s-maj=14.6km s-min=7.2km az=63.0*
ISC 01 10:02:49.7±0.4,**8.°74N**±0.°04×**127.°48E**±0.°04,**h38**km, **h38**km±1.6km:**pP-P**,**n50**,σ1°**21**/**54**,**mb4.3**/22,**2C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.85**	**277**	*e*P	**Pn**	**10 03 17.1**	**-1.8**
MATI	**Mati**	**2.15**	**214**	*e*P	**Pn**	**10 03 20.7**	**-2.4**
SCPH	**Surigao**	**2.22**	**298**	⇑*e*P	**Pn**	**10 03 21.9**	**-2.1**
DAV	**Davao City (W)**	**2.51**	**229**	Pn	**Pn**	**10 03 28.1**	**+0.2**
	67nm,0.3s,baz=106,slow=7.1,SNR=13						
DAV				Sn	**Sn**	**10 03 59.5**	**+2.2**
	89nm,0.3s,baz=124,slow=23,SNR=9.1						
DAV				LR	LR	10 04 26.2	
	comp=Z,1μm,18.0s,baz=12,slow=40						
BUKP	**Musuan**	**2.54**	**251**	*e*P	**Pn**	**10 03 28.4**	**0.0**
BUKP				*e*S	**Sn**	**10 03 59.1**	**+0.9**
DMPH	**Davao City--Mi**	**2.55**	**230**	⇑*e*P	**Pn**	**10 03 29.2**	**+0.6**
DMPH				*e*S	**Sn**	**10 03 59.8**	**+1.3**
CGP	**Cagayan de Oro**	**2.77**	**264**	*e*P	**Pn**	**10 03 30.6**	**-1.0**
CGP				*i* S	**Sn**	**10 04 04.0**	**+0.2**
MSLP	**Maasin**	**2.94**	**298**	*e*P	**Pn**	**10 03 33.0**	**-0.8**
TBP	**Tagbilaran**	**3.70**	**285**	*e*P	**Pn**	**10 03 43.8**	**-0.5**
TBP				*e*S	**Sn**	**10 04 22.1**	**-4.6**
LLP	**Lapu-Lapu**	**3.81**	**295**	*e*P	**Pn**	**10 03 44.1**	**-1.7**
LLP				*e*S	**Sn**	**10 04 29.0**	**-0.3**
PAGZ	**Pagadian**	**4.15**	**258**	*e*P	**Pn**	**10 03 50.9**	**+0.3**
GUIM	**Jordan**	**5.18**	**292**	*e*P	**Pn**	**10 04 03.8**	**-0.8**
SGSI	**Sangihe**	**5.38**	**201**	P	**Pn**	**10 04 10.7**	**+3.2**
	2.7nm389nm,0.7s						
TNTI	**Ternate**	**7.91**	**181**	P	**Pn**	**10 04 42.6**	**+0.3**
	2μm187nm,1.0s						
LBMI	**Labuha**	**9.31**	**180**	P	**Pn**	**10 05 01.4**	**-0.1**
	769nm53nm,0.8s						
MYLDM	**Lahad Datu**	**9.59**	**249**	P	**Pn**	**10 04 58.6**	**-6.7**
	14nm,1.3s						
MRSI	**Marisa**	**9.89**	**214**	P	**Pn**	**10 05 09.1**	**-0.3**
	725nm62nm,0.6s						
LUWI	**Luwuk**	**10.79**	**206**	P	**Pn**	**10 05 24.8**	**+3.1**
	1μm109nm,1.1s						
APSI	**Ampana**	**11.21**	**212**	P	**Pn**	**10 05 30.7**	**+3.2**
KKM	**Kota Kinabalu**	**11.49**	**257**	P	**Pn**	**10 05 21.3**	**-10**
	19nm,1.6s						
TTSI	**Tana Toraja**	**13.98**	**213**	P	**Pn**	**10 06 05.9**	**+0.6**
	926nm70nm,1.3s						
SBUM	**Sibu**	**16.42**	**249**	P	**Pn**	**10 06 32.9**	**-4.5**
GUMO	**Guam**	**17.72**	**73**	LR	LR	10 13 07.7	
	comp=Z,83nm,18.0s,baz=280,slow=35						

KSM	**Kuching**	**18.55**	**248**	*e*P	**Pn**	**10 07 02.5**	**-1.3**
	8.0nm,0.8s						
KAKA	**Kakadu**	**21.87**	**167**	*e*P	**P**	**10 07 37.2**	**-2.1**
	28nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**26.73**	**184**	P	**P**	**10 08 24.9**	**-0.9**
	2.3nm,0.7s,mb3.8,baz=282,slow=3.4,SNR=6.7						
KSRS	**Korea Array**	**28.59**	**1**	P	**P**	**10 08 45.2**	**+3.0**
	1.6nm,0.8s,mb3.8,baz=169,slow=9.3,SNR=4.1						
KSRS				pP	pP	10 08 52.7	-0.1
	2.1nm,0.7s,baz=181,slow=10.0,SNR=4.4						
WRA	**Warramunga Arr**	**29.29**	**167**	P	**P**	**10 08 46.8**	**-1.8**
	0.7nm,0.5s,mb3.7,baz=354,slow=9.2,SNR=5.0						
CMAR	**Chiang Mai Arr**	**29.33**	**292**	P	**P**	**10 08 48.6**	**-0.4**
	0.9nm,0.4s,mb3.9,baz=104,slow=7.0,SNR=8.2						
CMAR				pP	pP	10 08 59.1	-0.6
	0.9nm,0.3s,baz=109,slow=7.0,SNR=2.8						
CMAR				LR	LR	10 21 33.6	
	comp=Z,42nm,18.6s,baz=195,slow=38						
CMAR	**Chiang Mai Arr**	**29.33**	**292**	P	**P**	**10 08 48.6**	**-0.4**
CMAR				pP	pP	10 08 59.1	-0.6
CMAR				LR	LR	10 21 33.6	
BJI	**Beijing**	**32.76**	**344**	P	**P**	**10 09 09.1**	**-10**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
BJI				pmax	pmax		
	comp=Z,84nm,3.4s						
ASAR	**Alice Springs**	**32.81**	**169**	P	**P**	**10 09 18.3**	**-1.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=359,slow=10,SNR=11						
ASAR				PcP	PcP	10 12 04.2	+0.1
	comp=Z,1.4nm,0.8s,baz=348,slow=2.4,SNR=9.7						
STKA	**Stephens Creek**	**42.58**	**162**	P	**P**	**10 10 41.1**	**-0.9**
	comp=Z,4.8nm,0.9s,mb4.2,baz=6.4,slow=15,SNR=5.5						
STKA				pP	pP	10 10 51.7	-1.3
	comp=Z,2.1nm,0.6s,baz=280,slow=17,SNR=2.4						
STKA	**Stephens Creek**	**42.58**	**162**	P	**P**	**10 10 41.1**	**-0.9**
STKA				pP	pP	10 10 51.7	-1.3
SONM	**Songino Array**	**42.87**	**339**	P	**P**	**10 10 45.5**	**+1.4**
	comp=Z,5.8nm,1.1s,mb4.2,baz=160,slow=9.8,SNR=12						
SONM				pP	pP	10 10 57.0	+1.9
	comp=Z,3.2nm,0.8s,baz=150,slow=9.2,SNR=8.7						
PETK	**Petropavlovsk-**	**50.55**	**23**	P	**P**	**10 11 45.6**	**+1.4**
	comp=Z,3.4nm,0.8s,mb4.3,baz=224,slow=4.1,SNR=5.0						
PETK				pP	pP	10 11 56.0	+0.7
	comp=Z,4.3nm,0.7s,baz=182,slow=5.3,SNR=8.0						
MK31	**Makanchi Array**	**53.96**	**323**	*e*P	**P**	**10 12 09.8**	**+0.1**
MKAR	**Makanchi Array**	**53.96**	**323**	P	**P**	**10 12 10.2**	**+0.5**
	comp=Z,7.1nm,0.7s,mb4.7,baz=117,slow=7.7,SNR=66						
MKAR				pP	pP	10 12 21.6	+0.7
	comp=Z,8.8nm,0.7s,baz=125,slow=7.6,SNR=14						
MKAR				PcP	PcP	10 13 16.4	+1.8
	comp=Z,3.7nm,0.9s,baz=107,slow=6.5,SNR=4.0						
KZA	**Kyzart**	**56.53**	**315**	*e*P	**P**	**10 12 31.2**	**+3.0**
	comp=Z,6.5nm,0.9s,mb4.7						
ZALV	**Zalesovo Beam**	**56.53**	**331**	P	**P**	**10 12 28.7**	**+0.7**
	comp=Z,9.8nm,0.9s,mb4.8,baz=114,slow=7.0,SNR=19						
ZALV				pP	pP	10 12 39.2	-0.1
	comp=Z,10nm,0.8s,baz=114,slow=6.6,SNR=13						
ZALV				sP	sP	10 12 46.9	+3.0
	comp=Z,3.5nm,0.7s,baz=113,slow=7.3,SNR=3.0						
KURK	**Kurchatov**	**58.00**	**326**	P	**P**	**10 12 38.8**	**+0.3**
	comp=Z,7.8nm,0.8s,mb4.8,baz=127,slow=6.2,SNR=3.8						
KURK				pP	pP	10 12 49.8	0.0
	comp=Z,10nm,0.9s,baz=126,slow=6.4,SNR=4.5						
KKAR	**Karatay Array**	**60.17**	**315**	*e*P	**P**	**10 12 55.1**	**+1.4**
	comp=Z,2.5nm,0.7s,mb4.3						
BRVK	**Borovoye**	**63.67**	**326**	*e*P	**P**	**10 13 17.9**	**+0.9**
	comp=Z,17nm,0.9s,mb5.1						
ABKAR	**Akbulak array**	**68.81**	**320**	*e*P	**P**	**10 13 50.9**	**+0.9**
	comp=Z,2.1nm,0.9s,mb4.1						
BPAW	**Bear Paw Mtn.**	**78.49**	**26**	*e*P	**P**	**10 14 47.3**	**+0.7**
	comp=Z,11nm,1.1s,mb4.7						
MCK	**McKinley**	**79.38**	**27**	*e*P	**P**	**10 14 51.7**	**+0.3**
	comp=Z,21nm,1.2s,mb5.0						
ILAR	**Eielson Array**	**80.29**	**26**	P	**P**	**10 14 56.5**	**+0.1**
	comp=Z,1.4nm,0.9s,mb3.9,baz=

SONM	Songino Array	22.01	2	P	P	10 32 35.0	-3.8
	comp=E,0.3nm,0.4s,mb3.1,baz=171,slow=10,SNR=3.3						
MKAR	Makanchi Array	27.75	325	P	P	10 33 36.5	+3.3
	comp=E,0.7nm,0.8s,mb3.4,baz=128,slow=9.3,SNR=5.8						
ZALV	Zalesovo Beam	31.94	337	P	P	10 34 10.7	+0.5
	comp=E,0.5nm,0.3s,mb3.9,baz=137,slow=6.9,SNR=1.9						
ZALV				LR	LR	10 48 46.1	
	comp=E,21nm,20.4s,baz=72,slow=39						
KURK	Kurchatov	32.16	328	P	P	10 34 14.0	+1.8
	comp=E,0.5nm,0.5s,mb3.6,baz=130,slow=10,SNR=5.2						

*IDC **01** 10:31:47.7±0.8, 15°.56S×175°.31W, h0km, mb4.2/9, mb1 4.5/9, mb1mx4.3/18, mbtmp4.2/9, MS3.9/10, Ms1 3.9/10, ms1mx3.7/26, Error ellipse: s-maj=38.8km s-min=18.1km az=138.0*

*ISCJB **01** 10:31:48.4±0.6, 15°.55±0°.2×175°.5W±0°.1, h10km, mb4.2/14, MS3.9/9, Error ellipse: s-maj=27.4km s-min=12.0km az=140.0*

*NEIC **01** 10:31:49.3±0.6, 15°.64S×175°.24W, h10km, mb4.4/3, Error ellipse: s-maj=28.7km s-min=12.5km az=145.0*

*GCMT **01** 10:31:57.6±0.3, 15°.39S×174°.89W, h18km±1km, MW5.0, Moment Tensor Solution. s26,c36; s79,c126; Moment tensor: Scale 10^16 Nm; Mrr=0.85±.15; Mθθ=3.02±.15; Mφφ=-2.17±.12; Mrθ=0.17±.29; Mθφ=3.54±.12; Mφr=0.64±.27; Best double couple: M0=4.50000×10^16 NP1:φs=108.00000°, δ=81.00000°, λ=-7.00000°. NP2:φs=199.00000°, δ=83.00000°, λ=-171.00000°. Principal axes: T 4.8200, Plg1.0000°, Azm333.0000°; N -0.7200, Plg79.0000°, Azm236.0000°; P -4.0900, Plg11.0000°, Azm63.0000°; Data Used: II G IU CN IC.*

ISC 01 10:31:49.8±0.6, 15°.6S±0°.2×175°.4W±0°.1, h10km, n39, σ1=16/22, mb4.2/14, MS3.9/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.84	65	Pn	Pn	10 32 39.7	-9.3
	16nm,0.3s,baz=67,slow=18,SNR=21						
AFI				LR	LR	10 33 55.9	
	comp=Z,2μm,21.9s,baz=23,slow=34						
AFI	Afiamalu	3.84	65	ePn	Pn	10 32 44.6	-4.4
AFI				LR	LR	10 33 55.9	
DZM	Mont Dzumac	18.38	247	eP	Pn	10 36 09.2	+4.3
	140nm,1.4s						
DZM				eLR	LR	10 40 38.9	
	1μm,27.3s						
URZ	Urewera	23.55	195	P	P	10 37 00.2	-0.4
	9.4nm,0.8s,mb4.3,baz=38,slow=17,SNR=2.5						
PPT	Papeete	24.79	98	eLQ		10 42 00.7	
PPT	2μm,29.0s						
				eLR	LR	10 43 06.3	
	335nm,25.2s						
PPT	Papeete	24.79	98	LR	LR	10 43 57.9	
	comp=Z,231nm,20.1s,MS3.7,baz=268,slow=30						
HNR	Honiara	24.85	281	LR	LR	10 45 13.1	
	comp=Z,413nm,18.3s,MS4.0,baz=110,slow=32						
RPZ	Rata Peaks	30.34	200	LR	LR	10 47 21.4	
	comp=Z,120nm,21.2s,MS3.5,baz=22,slow=31						
TAOE	Nuku Hiva Isla	35.02	83	eLR	LR	10 47 45.6	
	523nm,26.7s						
RKT	Rikitea	38.74	108	eLR	LR	10 49 37.6	
	176nm,38.0s						
STKA	Stephens Creek	42.31	240	P	P	10 39 44.2	+0.3
	4.1nm,0.9s,mb4.1,baz=39,slow=17,SNR=3.8						
STKA				LR	LR	10 55 21.7	
	comp=Z,175nm,21.3s,MS3.9,baz=25,slow=33						
STKA	Stephens Creek	42.31	240	P	P	10 39 44.2	+0.3
STKA				LR	LR	10 55 21.7	
WRA	Warramunga Arr	47.96	257	P	P	10 40 28.2	-0.8
	3.9nm,0.9s,mb4.5,baz=90,slow=7.5,SNR=12						
ASAR	Alice Springs	48.26	252	P	P	10 40 31.0	-0.2
	2.3nm,0.8s,mb4.3,baz=87,slow=8.4,SNR=18						
GUMO	Guam	48.85	304	LR	LR	11 01 04.1	
	comp=Z,63nm,18.6s,MS3.6,baz=92,slow=36						
KAKA	Kakadu	50.60	266	eP	P	10 40 49.8	+0.6
CBIJ	Chichi jima	59.13	315	LR	LR	11 03 36.4	
	comp=Z,128nm,19.0s,MS4.1,baz=118,slow=32						
MJAR	Matsushiro Arr	67.86	321	LR	LR	11 06 35.7	
	comp=Z,85nm,20.6s,MS4.0,baz=160,slow=31						
PETK	Petropavlovsk-	72.23	343	P	P	10 43 13.7	-1.1
	1.6nm,0.8s,mb4.0,baz=134,slow=11,SNR=4.3						
PETK				LR	LR	11 08 42.5	
	comp=Z,81nm,19.9s,MS4.0,baz=330,slow=31						
CMB	Columbia Colle	74.15	42	eP	P	10 43 24.6	-2.0
KDAK	Kodiak Island	75.48	12	LR	LR	11 10 01.7	
	comp=Z,134nm,19.4s,MS4.3,baz=299,slow=30						
NVAR	Mina Array Bea	75.73	43	P	P	10 43 34.7	-1.0
	2.1nm,0.8s,mb4.1,baz=228,slow=9.0,SNR=7.9						
DIB	Dawson Inlet,	77.78	25	T		12 09 08.2	
VIB	Van Inlet	77.79	25	T		12 09 11.3	
TXAR	Lajitas Array	82.29	57	P	P	10 44 11.1	-0.8
	0.9nm,0.9s,mb3.7,baz=211,slow=4.4,SNR=9.2						
GDL2	Guadalupe Moun	82.85	54	eP	P	10 44 16.5	+1.8
	2.4nm,0.9s,mb4.2						
ILAR	Eielson Array	82.99	12	P	P	10 44 15.5	+0.8
	1.9nm,1.1s,mb4.0,baz=207,slow=6.5,SNR=11						
TPAW	Teton Pass	83.11	41	eP	P	10 44 17.0	+1.2
	1.7nm,0.7s,mb4.2						
SNOW	Snow King Moun	83.22	41	eP	P	10 44 17.9	+1.5
	9.4nm,1.3s,mb4.7						
IMW	Indian Meadow	83.31	41	eP	P	10 44 18.6	+1.8
	3.3nm,0.9s,mb4.4						
PDAR	Pinedale Array	83.67	43	P	P	10 44 18.6	0.0
	1.7nm,0.7s,mb4.3,baz=233,slow=3.9,SNR=14						
DAWY	Dawson	84.07	15	eP	P	10 44 21.2	+0.9
COLD	Coldfoot	84.62	10	eP	P	10 44 22.4	-0.6
	7.7nm,1.2s,mb4.7						
RLMT	Red Lodge	84.95	41	eP	P	10 44 22.1	-3.1
MKAR	Makanchi Array	109.60	315	PKiKP	PKiKP	10 50 22.0	+1.2
	0.2nm,0.4s,baz=50,slow=2.3,SNR=3.0						
DPC	Dobruska-Polom	144.05	347	ePKP	PKPdf	10 51 25.9	+0.3
BRTR	Keskin Array B	145.07	319	PKPbc	PKPbc	10 51 26.8	-0.4
	8.2nm,1.1s,baz=86,slow=2.1,SNR=16						
KHC	Kasperske Hory	145.74	350	ePKP	PKPdf	10 51 28.3	-0.3
TORD	Torodi Ar. Bea	176.27	130	PKP	PKPdf	10 51 59.6	-1.6
	0.3nm,0.9s,baz=190,slow=0.9,SNR=3.9						

IDC 01 10:43:03.9±2.1, 16°.82S×170°.20W, h399km±22km, mb3.4/4, mb1 3.6/5, mb1mx3.2/20, mbtmp3.4/5, Error ellipse: s-maj=37.1km s-min=20.6km az=142.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.27	332	P	Pn	10 44 09.4	+0.1
	1.9nm,0.3s,baz=205,slow=19,SNR=4.3						
AFI				S	S	10 44 58.0	-4.3
	10nm,0.3s,baz=154,slow=23,SNR=9.4						
URZ	Urewera	24.09	205	P	P	10 47 45.4	0.0
	6.5nm,0.7s,baz=1.4,slow=18,SNR=3.0						
WRA	Warramunga Arr	52.53	258	P	P	10 51 38.5	+0.1
	1.7nm,0.6s,baz=96,slow=7.9,SNR=13						
ASAR	Alice Springs	52.61	253	P	P	10 51 38.9	-0.1
	3.2nm,0.6s,baz=90,slow=8.1,SNR=38						
TXAR	Lajitas Array	78.88	55	P	P	10 54 24.6	+0.1
	0.3nm,0.6s,baz=219,slow=4.2,SNR=6.0						

*NIED **01** 10:46:00.41°.80N×144°.00E, h26km, Mw4.5 Best double couple: M0=6.13000×10^15 NP1:φs=29.00000°, δ=68.00000°, λ=70.00000°. NP2:φs=253.00000°, δ=29.00000°, λ=130.00000°.*

*IDC **01** 10:46:11.4±0.6, 41°.85N×143°.96E, h0km, mb4.3/20, mb1 4.4/25, mb1mx4.3/32, mbtmp4.2/25, ML3.7/5, MS3.7/6, Ms1 3.7/6, ms1mx3.3/38, Error ellipse: s-maj=15.8km s-min=12.9km az=117.0*

*BJI **01** 10:46:14.4, 41°.64N×143°.84E, h32km, mB4.9/11, mb4.6/15, Ms4.2/9, Ms7 4.0/9*

*MOS **01** 10:46:14.7±1.0, 41°.85N×143°.93E, h37km, mb4.7/16, Error ellipse: s-maj=9.6km s-min=6.3km az=101.9*

*ISCJB **01** 10:46:14.4±0.6, 41°.76N±0°.03×144°.09E±0°.05, h40km±4km, mb4.5/45, MS4.0/11, Error ellipse: s-maj=7.6km s-min=3.9km az=37.2*

*NEIC **01** 10:46:15.3, 41°.77N×144°.04E, h48km, mb4.4/5, After JMA.*

*JMA **01** 10:46:15.2±0.2, 41°.77N×144°.04E, h48km±3km, M4.5 Broadband fault plane solution: P waves. NP1: φs=74.00000°, δ=16.00000°, λ=-50.00000°. NP2:φs=213.00000°, δ=78.00000°, λ=-100.00000°. Principal axes: T Plg32.0000°, Azm312.0000°; N Plg10.0000°, Azm216.0000°; P Plg56.0000°, Azm110.0000°;*

ISC 01 10:46:15.5±0.9, 41°.82N±0°.03×144°.04E±0°.05, h28km±6km, n92, σ0=92/106, mb4.5/45, MS4.0/11, 12C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	0.69	287	c iP	Pb	10 46 29.0	+0.1
ERM	Erimo	0.69	287	ePn	Pn	10 46 29.2	-0.1
ERM				eSn	Sn	10 46 39.8	+0.8
JEM	Erimo	0.69	287	↓iP	Pb	10 46 29.0	+0.1
JCH	Churui	0.94	328	↑iP	Pn	10 46 33.0	+0.2
JCH				eS	Sb	10 46 46.4	+1.2
JNBK	Urakawa-nobuka	1.06	296	↑iP	Pn	10 46 35.1	+0.7
JOB	Onbets	1.09	352	↑iP	Pn	10 46 35.4	+0.5
JOB				eS	Sn	10 46 50.6	+1.6
JAK	Akkeshi	1.27	22	↑iP	Pn	10 46 37.5	+0.2
JAK				eS	Sn	10 46 52.9	-0.5
JAR	Ashorobuto	1.49	352	↑iP	Pn	10 46 40.4	+0.1
JAR				eS	Sn	10 46 58.4	-0.4
JBT2	Biratori 2	1.57	308	P	Pn	10 46 40.9	-0.5
JFR	Furan	1.72	322	P	Pn	10 46 42.9	-0.5
JNK	Nakash	1.83	16	P	Pn	10 46 44.6	-0.4
JNK				eS	Sn	10 47 07.2	-0.1
ASAJ	Asahikawa	2.53	336	Pn	Pn	10 46 55.1	+0.5
	12nm,0.3s,baz=192,slow=10,SNR=101						
ASAJ				Sn	Sn	10 47 32.9	+8.4
	43nm,0.3s,baz=184,slow=24,SNR=7.1						
ASAJ				LR	LR	10 48 15.1	
	comp=Z,2μm,20.4s,baz=226,slow=50						
ASAJ	Asahikawa	2.53	336	ePn	Pn	10 46 55.1	+0.5
YUK	Yuzh-Kuril'sk	2.59	31	↑iP	Pn	10 46 56.4	+1.0
YUK				i S	Sn	10 47 26.7	+0.8
YUK				pmax	pmax		
	comp=N,160nm,0.5s						
YUK				pmax	pmax		
	comp=Z,255nm,0.5s						
YUK				pmax	pmax		
	comp=E,88nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,2.0s						
YUK				smax			
	comp=N,1μm,0.6s						
YUK				smax			
	comp=E,1μm,0.6s						
YUK				smax			
	comp=N,1μm,0.6s						
YUK				smax			
	comp=E,820nm,0.6s						
KUR	Kuril'sk	4.40	38	eP	Pn	10 47 21.5	+1.2
KUR				eS	Sn	10 48 10.3	-0.3
KUR				pmax	pmax		
	comp=E,80nm,0.6s						
KUR				pmax	pmax		
	comp=Z,150nm,0.6s						
KUR				smax			
	comp=N,230nm,0.5s						
KUR				smax			
	comp=E,90nm,0.5s						
YSS	Yuzh-Sakhalins	5.21	350	eP	Pn	10 47 32.0	+0.5
YSS				e		10 48 27.0	
YSS				MLR	MLR		
	comp=Z,1μm,15.0s						
YSS				MLR	MLR		
	comp=N,1μm,16.0s						
YSS				MLR	MLR		
	comp=E,900nm,17.0s						
MAJO	Matsushiro	6.95	223	eP	Pn	10 47 54.7	-0.6
MAJO				pmax	pmax		
	comp=Z,11nm,0.5s						
MAJO	Matsushiro	6.95	223	ePn	Pn	10 47 54.7	-0.7
	comp=Z,11nm,0.5s						
MAT	Matsushiro	6.95	223	P	Pn	10 47 54.9	-0.4
MAT				eS	Sn	10 49 14.1	+0.7
MJAR	Matsushiro Arr	6.95	223	Pn	Pn	10 47 55.6	+0.3
	comp=Z,1.2nm,0.3s,baz=29,slow=13,SNR=20						
MJAR				Sn	Sn	10 49 15.3	+1.9
	baz=291,slow=20,SNR=1.2						
HABR	Khabarovsk	9.19	319	P	Pn	10 48 24.6	-1.5
HABR				e		10 50 05.0	
HABR				pmax	pmax		
	comp=E,31nm,2.3s						
HABR				pmax	pmax		
	comp=Z,25nm,2.5s						
HABR				pmax	pmax		
	comp=N,9.0nm,1.5s						
JHJ	Hachijo jima 2	9.32	203	Pn	Pn	10 48 26.3	-1.5
	comp=N,6.3nm,0.3s,baz=51,slow=19,SNR=2.9						
JHJ				Sn	Sn	10 50 01.5	-10
	comp=N,18nm,0.3s,baz=84,slow=22,SNR=6.1						
KLR	Kul'dur	11.36	315	eP	Pn	10 48 54.7	-1.0
KLR				MLR	MLR		
	comp=E,500nm,12.0s						
KLR				MLR	MLR		
	comp=Z,900nm,12.0s						
KSRS	Korea Array	13.16	256	Pn	Pn	10 49 20.7	+0.2
	comp=Z,0.2nm,0.3s,baz=55,slow=32,SNR=5.7						
KSRS				LR	LR	10 54 21.0	
	comp=Z,254nm,19.5s,baz=280,slow=37						
PETK	Petropavlovsk-	14.56	34	Pn	Pn	10 49 38.3	-1.1
	comp=Z,0.5nm,0.3s,baz=186,slow=4.5,SNR=5.1						
PETK				LR	LR	10 55 29.7	
	comp=Z,105nm,19.6s,baz=66,slow=38						
HIA	Hailar	18.52	302	eP	Pn	10 50 27.8	-2.0
HIA				pmax	pmax		
	comp=Z,18nm,0.9s						
HIA	Hailar	18.52	302	eP	Pn	10 50 27.8	-2.0
	comp=Z,18nm,0.9s						
BJI	Beijing	21.10	274	P	P	10 50 55.3	-2.3
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
BJI				pmax	pmax		
	comp=Z,91nm,4.5s						
BJI				LR	LR		
	comp=N,120nm,15.7s,MS4.0						
BJI				LR	LR		
	comp=E,540nm,16.5s,MS4.0						
BJI				LR	LR		
	comp=Z,270nm,17.4s,MS3.7						
SEY	Seymchan	21.71	10	ceP	P	10 51 01.9	-2.1
YAK	Yakutsk	21.99	342	eP	P	10 51 02.2	-4.8
YAK				e*PP		10 51 16.8	
YAK				e		10 51 27.9	
YAK				eS	S	10 54 59.3	-8.6
YAK				e*SS	sS	10 55 13.4	-6.8
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,14nm,1.4s						
YAK				smax			
	comp=N,56nm,1.9s						
YAK				smax			
	comp=E,64nm,1.9s						
YAK				MLR	MLR		
	comp=Z,328nm,16.0s,MS3.8						
YAK				MLR	MLR		
	comp=E,188nm,18.0s,MS3.8						
YAK				MLR	MLR		
	comp=N,254nm,18.0s,MS3.8						
WHN	Wuhan	26.35	254	P	P	10 51 47.3	-1.7
WHN				LR	LR		
	comp=N,760nm,14.3s,MS4.5						
WHN				LR	LR		
	comp=E,880nm,18.2s,MS4.5						
WHN				LR	LR		
	comp=Z,680nm,22.4s,MS4.1						
ULN	Ulaanbaatar	26.73	296	eP	P	10 51 52.2	-0.1
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
ULN	Ulaanbaatar	26.73	296	eP	P	10 51 52.2	0.0
	comp=Z,4.3nm,0.6s,mb4.2						
SONM	Songino Array	27.17	296	P	P	10 51 56.2	-0.1
	comp=Z,5.7nm,0.9s,mb4.1,baz=92,slow=7.6,SNR=25						
SONM				LR	LR	11 03 42.1	
	comp=Z,360nm,19.0s,MS4.0,baz=93,slow=39						
TLY	Talaya	29.04	304	eP	P	10 52 13.5	+0.6
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
TLY				MLR	MLR		
	comp=Z,214nm,19.0s,MS3.8						
ZAK	Zakamensk	29.22	301	eP	P	10 52 15.1	+0.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
GTA	Gaotai	33.38	281	eP	P	10 52 52.8	+1.5
GTA				pP	pP	10 52 57.5	-2.0
GTA				sP	sP	10 53 01.1	-1.9
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
QIZ	Qiongzhong	36.85	242	P	P	10 53 18.1	-3.2
QIZ				S	S	10 59 01.1	-3.0
QIZ				LR	LR		
	comp=E,78nm,15.6s						
QIZ				LR	LR		
	comp=Z,180nm,14.2s,MS4.0						
ZALV	Zalesovo Beam	40.37	308	P	P	10 53 50.2	-0.3
	comp=Z,8.5nm,0.8s,mb4.5,baz=87,slow=8.0,SNR=32						
ZALV				PcP	PcP	10 55 53.5	+0.3
	comp=Z,0.9nm,0.5s,baz=106,slow=3.1,SNR=3.8						
ZALV				LR	LR	11 11 51.5	
	comp=Z,97nm,18.2s,MS3.7,baz=252,slow=38						
ZALV	Zalesovo Beam	40.37	308	P	P	10 53 50.2	-0.2
ZALV						10 55 53.5	
ZALV	Zalesovo Beam	40.37	308	P	P	10 53 50.2	-0.3
ZALV				PcP	PcP	10 55 53.5	+0.3
ZALV				LR	LR	11 11 51.5	
MK31	Makanchi Array	43.47	298	eP	P	10 54 15.4	-0.5
MKAR	Makanchi Array	43.47	298	P	P	10 54 15.3	-0.6
	comp=Z,2.7nm,0.7s,mb4.1,baz=76,slow=10,SNR=23						
MKAR				PcP	PcP	10 56 04.3	+0.7
	comp=Z,0.3nm,0.4s,baz=69,slow=7.9,SNR=2.7						
MKAR				LR	LR	11 13 17.9	
	comp=Z,86nm,18.5s,MS3.7,baz=265,slow=38						
MKAR	Makanchi Array	43.47	298	i P	P	10 54 15.8	-0.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	44.39	35	P	P	10 54 23.3	+0.3
	comp=Z,5.6nm,1.1s,mb4.2,baz=276,slow=6.4,SNR=33						
KURK	Kurchatov	44.73	305	ceP	P	10 54 25.4	-0.5
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
KURK	Kurchatov	44.73	305	eP	P	10 54 27.2	+1.3
	comp=Z,8.3nm,0.6s,mb4.7						
CMAR	Chiang Mai Arr	44.77	253	P	P	10 54 27.1	+0.4
	comp=Z,0.8nm,0.5s,mb3.8,baz=36,slow=7.7,SNR=6.0						
TAPN	Taplejung	47.77	271	eP	P	10 54 50.5	+0.4
	comp=Z,12nm,0.5s,mb5.2						
ODAN	Odare	48.27	271	eP	P	10 54 54.4	+0.4
	comp=Z,21nm,0.9s,mb5.2						
RAMN	Ramite	48.81	271	eP	P	10 54 58.6	+0.4
	comp=Z,34nm,0.7s,mb5.5						
GUN	Gumba	48.83	273	eP	P	10 54 59.1	+0.8
	comp=Z,70nm,0.4s						
BRVK	Borovoye	49.02	310	deP	P	10 54 59.9	+0.5
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
INK	Inuvik	49.21	29	P	P	10 55 01.5	+0.8
	comp=Z,3.8nm,0.5s,mb4.7,baz=286,slow=5.7,SNR=29						
KKN	Kakani	49.34	273	eP	P	10 55 02.7	+0.5
	comp=Z,26nm,0.8s,mb5.3						
PKI	Pulchoki	49.37	273	eP	P	10 55 02.6	+0.2
DMN	Daman	49.57	273	eP	P	10 55 04.7	+0.7
	comp=Z,18nm,0.5s,mb5.3						
GKN	Gorkha	49.71	274	eP	P	10 55 05.2	+0.2
	comp=Z,12nm,0.5s,mb5.2						
KZA	Kyzart	49.85	295	eP	P	10 55 05.6	-0.3
	comp=Z,2.7nm,0.5s,mb4.5						
AAK	Ala-Archa	50.13	296	ceP	P	10 55 07.8	-0.2
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
DANN	Dangsing	50.18	275	eP	P	10 55 09.3	+0.7
	comp=Z,75nm,0.8s						
KOLN	Koldanda	50.61	274	eP	P	10 55 12.3	+0.5
	comp=Z,12nm,0.5s,mb5.1						
KKAR	Karatay Array	52.59	298	eP	P	10 55 25.5	-0.9
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KKAR	Karatay Array	52.59	298	eP	P	10 55 25.5	-1.0
	comp=Z,3.4nm,0.6s,mb4.5						
SVE	Sverdlovsk	52.98	317	eP	P	10 55 29.6	+0.5
SVE				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
ARU	Arti	54.19	317	c iP	P	10 55 37.6	-0.4
ARU						10 57 36.4	
ARU				S	S	11 03 14.6	+1.6
ARU				SS	SS	11 06 55.3	+1.0
ARU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
SPITS	Spitsbergen Ar	56.23	349	P	P	10 55 51.1	-1.3
	comp=Z,11nm,1.0s,mb4.8,baz=56,slow=4.9,SNR=4.2						
AKTK	Aktyubinsk	57.05	311	P	P	10 55 58.3	-0.3
AKTO	Aktyubinsk	57.05	311	P	P	10 55 58.3	-0.3
	comp=Z,1.8nm,0.8s,mb4.2,baz=33,slow=8.4,SNR=4.0						
RES	Resolute Bay	57.46	16	P	P	10 56 01.1	-0.1
	comp=Z,5.9nm,0.5s,mb4.8,baz=348,slow=6.8,SNR=6.5						
KEV	Kevo	59.70	339	eP	P	10 56 15.3	-1.5
ARCES	ARCESS Array B	60.25	339	P	P	10 56 21.1	+0.5
	comp=Z,3.3nm,0.6s,mb4.6,baz=48,slow=7.8,SNR=10						
WRA	Warramunga Arr	62.10	190	P	P	10 56 33.6	-0.1
	comp=Z,0.8nm,0.9s,mb3.8,baz=7.3,slow=6.7,SNR=3.8						
JOF	Joensuu	62.71	332	eP	P	10 56 35.3	-2.0
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
KAF	Kangasniemi	64.99	333	eP	P	10 56 49.3	-3.0
KAF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
OBN	Obninsk	65.50	323	↑eP	P	10 56 54.5	-1.2
OBN				eS	S	11 05 38.1	-0.3
OBN				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.0						
FINES	FINESS Array B	65.53	332	P	P	10 56 55.0	-0.8
	comp=Z,7.9nm,0.8s,mb4.8,baz=45,slow=8.1,SNR=13						
ASAR	Alice Springs	65.83	190	P	P	10 56 59.0	+0.9
	comp=Z,0.3nm,0.8s,mb3.4,baz=8.9,slow=6.8,SNR=4.2						
KIV	Kislovodsk	69.32	311	↓eP	P	10 57 20.9	+0.8
KIV				eS	S	11 06 29.0	+4.3
KIV				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
KIV				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.1						
NB2	NORSAR Subarra	70.55	338	P	P	10 57 27.4	+0.1
	comp=Z,1.1nm,0.5s,mb4.0,baz=35,slow=6.5						
NOA	NORSAR Array B	70.55	338	P	P	10 57 27.4	+0.1
	comp=Z,2.9nm,0.8s,mb4.3,baz=35,slow=6.1,SNR=6.0						
NOA	NORSAR Array B	70.55	338	P	P	10 57 27.4	+0.1
NVAR	Mina Array Bea	70.55	56	P	P	10 57 29.6	+1.9
	comp=Z,0.5nm,0.5s,mb3.7,baz=306,slow=7.7,SNR=3.1						
AKASG	Malin Array Be	71.75	323	P	P	10 57 34.0	-0.8
	comp=Z,1.7nm,0.5s,mb4.3,baz=43,slow=6.8,SNR=9.6						
PDAR	Pinedale Array	72.90	48	P	P	10 57 42.7	+0.9
	comp=Z,0.4nm,0.4s,mb3.7,baz=355,slow=0.3,SNR=7.1						
BRTR	Keskin Array B	77.18	312	P	P	10 58 06.4	-0.1
	comp=Z,0.9nm,0.6s,mb3.9,baz=90,slow=4.3,SNR=4.8						
BRTR	Keskin Array B	77.18	312	i P	P	10 58 06.3	-0.2
BRTR				pmax	pm

tensor: Scale 10^{16}Nm; M_{rr}3.14±.20; $M_{\theta\theta}$-1.34±.13; $M_{\phi\phi}$-1.80±.13; $M_{r\theta}$2.16±.28; $M_{r\phi}$-1.56±.08; $M_{\theta\phi}$0.92±.26; Best double couple: $M_0$3.90000×10^{16} NP1:ϕ_s208.00000°, δ29.00000°,λ65.00000°. NP2:ϕ_s56.00000°,δ63.00000°, λ103.00000°. Principal axes: T 4.0300, Plg69.0000°, Azm352.0000°; N -0.2100, Plg12.0000°, Azm229.0000°; P -3.8100, Plg17.0000°, Azm136.0000°; Data Used: II IC IU G CN.

MOS ***01*** *11:01:18.2±1.4,22°.65S×174°.93W,h33km,mb5.4/21 Error ellipse: s-maj=12.9km s-min=10.4km az=49.1*

NEIC ***01*** *11:01:19.4±1.8,22°.74S×174°.93W,h59km±15km,mb5.1/58, Error ellipse: s-maj=12.0km s-min=6.6km az=147.0*

SZGRF ***01*** *11:01:19.9,21°.75S×173°.44W,h33km,Tonga Islands*

ISC 01 11:01:17.6±1.5,22°.87S±0°.06×174°.82W±0°.05, h46km±12km,h43km±1.5km:pP-P,n590,σ0s60/502, mb5.1/86,MS4.5/25,201C-201D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 125nm,1.0s	**8.42**	**306**	*e*Pn	**Pn**	**11 03 17.9**	**+0.9**
MSVF	**Nonsavu** 442nm,1.5s,SNR=11	**8.42**	**306**	Pn	**Pn**	**11 03 18.0**	**+1.0**
AFI	**Afiamalu** 9.6nm,0.3s,baz=95,slow=6.0,SNR=11	**9.37**	**18**	Pn	**Pn**	**11 03 18.9**	**-11**
AFI	4.3nm,0.3s,baz=359,slow=19,SNR=1.7			Sn	Sn	11 04 50.1	-24
AFI	**Afiamalu**	**9.37**	**18**	*e*P	**Pn**	**11 03 28.1**	**-2.0**
AFI	comp=Z,154nm,0.8s			pmax	pmax		
AFI	**Afiamalu** comp=Z,154nm,0.8s	**9.37**	**18**	*e*Pn	**Pn**	**11 03 28.1**	**-2.0**
RAR	**Rarotonga** comp=Z,20nm,0.3s,baz=237,slow=9.6,SNR=9.0	**14.05**	**86**	Pn	**Pn**	**11 04 24.1**	**-10**
RAR	comp=Z,7.4nm,0.3s,baz=70,slow=21,SNR=4.1			Sn	Sn	11 06 44.6	-24
RAR	comp=Z,2μm,19.4s,baz=269,slow=34			LR	LR	11 09 02.9	
RAR	**Rarotonga**	**14.05**	**86**	*e*Pn	**Pn**	**11 04 24.5**	**-10**
URZ	**Urewera** comp=Z,0.3nm,0.3s,baz=302,slow=2.2,SNR=2.5	**16.83**	**202**	Pn	**Pn**	**11 05 08.8**	**-1.1**
URZ	comp=Z,1.2nm,0.3s,baz=178,slow=20,SNR=7.4			Sn	**Sn**	**11 08 07.6**	**-8.2**
DZM	**Mont Dzumac** comp=Z,130nm,1.4s	**17.34**	**269**	*e*P	**Pn**	**11 05 19.0**	**+2.6**
DZM	comp=Z,1μm,21.2s			*e*LR	LR	11 09 21.3	
RPZ	**Rata Peaks** comp=Z,22nm,0.9s,mb4.6,baz=43,slow=3.2,SNR=3.9	**23.84**	**206**	P	**P**	**11 06 28.6**	**+2.1**
PPT	**Papeete** comp=Z,2μm,25.0s	**24.25**	**82**	*e*LQ		11 11 12.7	
PPT	comp=Z,766nm,21.5s,baz=268			*e*LR	LR	11 12 44.9	
PPT	**Papeete** comp=Z,936nm,18.5s,MS4.3,baz=37,slow=33	**24.25**	**82**	LR	LR	11 14 22.0	
HNR	**Honiara** comp=Z,252nm,20.6s,MS3.8,baz=87,slow=30	**27.61**	**295**	LR	LR	11 14 55.6	
EIDS	**Eidsvold** comp=Z,31nm,1.6s,mb4.9	**31.17**	**258**	*e*P	**P**	**11 07 31.5**	**-0.9**
TAOE	**Nuku Hiva Isla** comp=Z,2μm,30.9s	**36.03**	**73**	*e*LQ		11 16 21.3	
TAOE	comp=Z,436nm,20.6s			*e*LR	LR	11 18 20.1	
CTA	**Charters Tower** comp=Z,6.6nm,0.7s,mb4.7,baz=97,slow=10,SNR=5.2	**36.26**	**267**	P	**P**	**11 08 15.8**	**-0.9**
CTA	**Charters Tower**	**36.26**	**267**	P	**P**	**11 08 15.8**	**-0.9**
RKT	**Rikitea** comp=Z,632nm,29.8s,baz=264	**36.60**	**98**	*e*LR	LR	11 17 38.5	
PMG	**Port Moresby**	**38.77**	**284**	*de*P	**P**	**11 08 35.9**	**-2.1**
PMG	comp=Z,43nm,1.7s			pmax	pmax		
STKA	**Stephens Creek** comp=Z,3.1nm,0.5s,mb4.3,baz=104,slow=12,SNR=8.2	**39.52**	**247**	P	**P**	**11 08 45.4**	**+1.3**
STKA	comp=Z,613nm,19.4s,MS4.5,baz=57,slow=34			LR	LR	11 23 45.4	
STKA	**Stephens Creek** comp=Z,5.0nm,1.4s,mb4.0	**39.52**	**247**	*e*P	**P**	**11 08 44.4**	**+0.3**
ASAR	**Alice Springs** comp=Z,12nm,0.9s,mb4.8,baz=91,slow=8.4,SNR=57	**46.90**	**258**	P	**P**	**11 09 42.1**	**-1.7**
WRA	**Warramunga Arr** comp=Z,4.6nm,0.9s,mb4.4,baz=94,slow=8.2,SNR=29	**47.24**	**263**	P	**P**	**11 09 44.1**	**-2.3**
FITZ	**Fitzroy Crossi** comp=Z,4.6nm,0.9s,mb4.5,baz=135,slow=8.7,SNR=5.1	**55.67**	**263**	P	**P**	**11 10 47.3**	**-2.3**
FITZ	comp=Z,392nm,18.5s,MS4.5,baz=84,slow=36			LR	LR	11 34 57.2	
CASY	**Casey** comp=Z,52nm,1.6s,mb5.4	**63.12**	**206**	*e*P	**P**	**11 11 41.7**	**+1.5**
QSPA	**South Pole Qui** comp=Z,301nm,18.9s,MS4.5,baz=52,slow=32	**67.21**	**180**	LR	LR	11 37 17.3	
QSPA	**South Pole Qui** comp=Z,25nm,1.2s,mb5.1	**67.21**	**180**	*e*P	**P**	**11 12 09.0**	**+2.5**
MIR	**Mirnyy**	**70.11**	**205**	*e*P	**P**	**11 12 29.0**	**+4.2**
MIR				*i*	pP	11 12 39.0	+1.0
MIR				*i*		11 12 50.0	
MIR	comp=Z,70nm,1.8s,mb5.3			pmax	pmax		
MJAR	**Matsushiro Arr** comp=Z,2.9nm,0.7s,mb4.3,baz=161,slow=5.9,SNR=8.2	**73.87**	**322**	P	**P**	**11 12 45.3**	**-2.4**
MAJO	**Matsushiro**	**73.87**	**322**	*e*P	**P**	**11 12 47.0**	**-0.7**
MAJO	comp=Z,3.0nm,0.5s,mb4.5			pmax	pmax		
MAJO	**Matsushiro** comp=Z,2.8nm,0.5s,mb4.5	**73.87**	**322**	*e*P	**P**	**11 12 47.0**	**-0.7**
MAT	**Matsushiro**	**73.87**	**322**	P	**P**	**11 12 45.7**	**-2.0**
MAT				*e*S	S	11 22 26.0	+10
KSM	**Kuching** comp=Z,21nm,1.1s,mb5.0	**76.66**	**277**	*e*P	**P**	**11 13 02.8**	**-1.5**
BSC	**Santa Cruz Isl** baz=77	**77.15**	**44**	⇑P	**P**	**11 13 07.0**	**+0.5**
ASAJ	**Asahikawa** comp=Z,22nm,1.4s,mb4.9	**77.23**	**330**	*e*P	**P**	**11 13 07.2**	**+0.5**
PKM	**Peak Mountain** baz=78	**77.60**	**44**	⇑P	**P**	**11 13 10.3**	**+1.3**
SMMC	**Simmler** baz=78	**77.74**	**43**	⇓P	**P**	**11 13 10.5**	**+0.7**
ARVC	**Arvin** baz=79	**78.37**	**44**	⇓P	**P**	**11 13 13.2**	**-0.1**
MURC	**Murrieta** baz=79	**78.50**	**46**	⇑P	**P**	**11 13 14.1**	**+0.1**
BFSC	**Mount Baldy Ra** baz=79	**78.58**	**45**	⇑P	**P**	**11 13 14.8**	**+0.3**
MONP	**Monument Peak** baz=79	**78.59**	**47**	⇑P	**P**	**11 13 14.6**	**0.0**
VES	**Vestal, Richgr** baz=79,SNR=8.8	**78.66**	**43**	⇓P	**P**	**11 13 15.3**	**+0.4**
EDW2	**Edwards Air Fo** baz=79,SNR=6.8	**78.76**	**45**	⇓P	**P**	**11 13 16.3**	**+0.8**
ISA	**Isabella** baz=79,SNR=9.1	**78.93**	**44**	⇑P	**P**	**11 13 16.8**	**+0.4**
ISA	**Isabella**	**78.93**	**44**	*e*P	**P**	**11 13 16.7**	**+0.3**
ISA	comp=Z,40nm,1.5s,mb5.1			pmax	pmax		
ISA	**Isabella** comp=Z,40nm,1.5s,mb5.1	**78.93**	**44**	*e*P	**P**	**11 13 16.7**	**+0.3**
PFO	**Pinyon Flat Ob** baz=79	**79.00**	**46**	⇑P	**P**	**11 13 16.9**	**+0.1**
SWSC	**Sam W. Stewart** baz=79	**79.04**	**47**	⇓P	**P**	**11 13 17.4**	**+0.4**
CMB	**Columbia Colle**	**79.25**	**41**	*e*P	**P**	**11 13 18.0**	**0.0**
CMB	comp=Z,25nm,1.3s,mb5.0			pmax	pmax		
CMB	**Columbia Colle** comp=Z,25nm,1.3s,mb5.0	**79.25**	**41**	*e*P	**P**	**11 13 18.0**	**-0.1**
PETK	**Petropavlovsk-** comp=Z,19nm,1.0s,mb5.0,baz=124,slow=8.0,SNR=23	**79.34**	**344**	P	**P**	**11 13 17.3**	**-0.8**
PETK	comp=Z,115nm,20.3s,MS4.2,baz=337,slow=32			LR	LR	11 43 38.6	
YSS	**Yuzh-Sakhalins**	**79.34**	**332**	*e*P	**P**	**11 13 17.8**	**-0.5**
YSS				*e*	pP	11 13 29.3	-2.5
YSS	comp=Z,80nm,1.2s,mb5.5			pmax	pmax		
YSS	comp=Z,200nm,17.0s,MS4.5			MLR	MLR		
YSS	**Yuzh-Sakhalins** comp=Z,101nm,1.4s,mb5.6	**79.34**	**332**	*e*P	**P**	**11 13 18.2**	**-0.1**
BELC	**Belle Mtn. Jos** baz=80,SNR=5.8	**79.54**	**46**	⇑P	**P**	**11 13 19.8**	**+0.1**
112A	**Yuma** baz=80	**79.64**	**48**	⇑P	**P**	**11 13 19.7**	**-0.6**
CWC	**Cottonwood Cre** baz=80	**79.67**	**43**	⇑P	**P**	**11 13 20.7**	**+0.4**
BC3	**Big Chuckawall** baz=80	**79.70**	**47**	⇑P	**P**	**11 13 20.9**	**+0.4**
GLA	**Glamis** baz=80	**79.77**	**48**	⇓P	**P**	**11 13 21.3**	**+0.3**
GSC	**Goldstone** baz=80,SNR=6.1	**79.78**	**45**	⇑P	**P**	**11 13 21.2**	**+0.2**
MPMC	**Manual Prospec** baz=80,SNR=13	**79.81**	**44**	⇓P	**P**	**11 13 20.9**	**-0.3**
HEC	**Hector,Ludlow** baz=80,SNR=8.3	**79.81**	**45**	⇓P	**P**	**11 13 21.5**	**+0.3**
MLAC	**Mammoth Lakes** baz=80	**79.94**	**42**	⇑P	**P**	**11 13 21.7**	**0.0**
WAKR	**Walker** comp=Z,35nm,1.2s,mb5.2	**80.12**	**41**	*e*P	**P**	**11 13 22.9**	**+0.1**
QZH	**Quanzhou**	**80.17**	**302**	P	**P**	**11 13 27.6**	**+4.2**
QZH				S	S	11 23 29.3	+4.2
QZH	comp=Z,740nm,19.2s,MS5.0			LR	LR		
IRM	**Iron Mountain** baz=80,SNR=7.3	**80.20**	**47**	⇓P	**P**	**11 13 23.3**	**0.0**
GMRC	**Granite Mounta** baz=80	**80.22**	**46**	⇓P	**P**	**11 13 22.7**	**-0.7**
MAW	**Mawson** comp=Z,5.8nm,0.8s,mb4.6,baz=80,slow=5.5,SNR=5.7	**80.33**	**199**	P	**P**	**11 13 25.5**	**+2.0**
MAW	comp=Z,260nm,18.1s,MS4.6,baz=316,slow=34			LR	LR	11 47 27.6	
113A	**Mohawk Valley,** baz=80	**80.33**	**48**	⇑P	**P**	**11 13 23.8**	**-0.2**
YBH	**Yreka Blue Hor** comp=Z,12nm,1.1s,mb4.7,baz=160,slow=1.5,SNR=9.1	**80.34**	**37**	P	**P**	**11 13 24.2**	**+0.3**
YBH	comp=Z,257nm,19.1s,MS4.6,baz=249,slow=30			LR	LR	11 41 26.0	
Y12C	**Blythe** baz=81	**80.38**	**47**	⇑P	**P**	**11 13 24.1**	**-0.2**
WCN	**Washoe City** baz=81,SNR=6.9	**80.44**	**40**	⇑P	**P**	**11 13 25.0**	**+0.5**
WCN	**Washoe City**	**80.44**	**40**	*e*P	**P**	**11 13 24.6**	**+0.1**
WCN	comp=Z,28nm,1.4s,mb5.0			pmax	pmax		
WCN	**Washoe City** comp=Z,28nm,1.4s,mb5.0	**80.44**	**40**	*e*P	**P**	**11 13 24.6**	**+0.1**
FURC	**Furnace Creek,** baz=81	**80.46**	**44**	⇑P	**P**	**11 13 24.5**	**-0.2**
GRAC	**Grapevine Rang** baz=81	**80.46**	**43**	⇓P	**P**	**11 13 24.7**	**+0.1**
SHOC	**Shoshone** baz=81,SNR=5.2	**80.49**	**45**	⇑P	**P**	**11 13 25.4**	**+0.6**
214A	**Organ Pipe Nat** baz=81	**80.53**	**50**	⇓P	**P**	**11 13 25.1**	**0.0**
KSRS	**Korea Array** comp=Z,7.0nm,1.1s,mb4.5,baz=138,slow=6.2,SNR=9.1	**80.62**	**317**	P	**P**	**11 13 25.6**	**+0.2**
KSRS	comp=Z,155nm,18.5s,MS4.4,baz=315,slow=35			LR	LR	11 47 52.6	
Z13A	**Yuma Proving G** baz=81	**80.65**	**48**	⇓P	**P**	**11 13 25.7**	**-0.1**
LDFC	**Landfair** comp=Z,42nm,1.4s,mb5.2	**80.76**	**46**	*e*P	**P**	**11 13 26.9**	**+0.6**
NVAR	**Mina Array Bea** comp=Z,11nm,0.9s,mb4.8,baz=223,slow=8.8,SNR=7.6	**80.77**	**42**	P	**P**	**11 13 26.1**	**-0.1**
U10A	**Ash Meadows, A** baz=81,SNR=6.1	**80.77**	**44**	⇑P	**P**	**11 13 26.7**	**+0.5**
HUMO	**Hull Mountain** comp=Z,22nm,1.1s,mb5.0	**80.80**	**36**	*e*P	**P**	**11 13 26.4**	**+0.1**
Y13A	**Salome** baz=81,SNR=9.2	**80.89**	**48**	⇑P	**P**	**11 13 26.9**	**-0.1**
114A	**Black Gap (USA** baz=81	**80.93**	**49**	⇓P	**P**	**11 13 27.2**	**0.0**
V11A	**Goodsprings** baz=81	**81.00**	**45**	⇓P	**P**	**11 13 27.5**	**-0.1**
W12A	**Cal Nev Ari** baz=81	**81.05**	**46**	⇓P	**P**	**11 13 27.6**	**-0.2**
Z14A	**Wintersburg** baz=81	**81.23**	**48**	⇓P	**P**	**11 13 28.2**	**-0.6**
V12A	**Nelson** baz=82,SNR=5.3	**81.32**	**45**	⇑P	**P**	**11 13 29.2**	**0.0**
115A	**Sonoran Desert** baz=82	**81.36**	**49**	⇓P	**P**	**11 13 29.4**	**-0.1**
U11A	**Corn Creek** baz=82	**81.38**	**45**	⇓P	**P**	**11 13 29.3**	**-0.2**
216A	**Three Points,** baz=82	**81.51**	**50**	⇑P	**P**	**11 13 30.0**	**-0.3**
Y14A	**Wickenburg** baz=82	**81.52**	**48**	⇑P	**P**	**11 13 30.4**	**0.0**
SHPR	**Sheep Range** comp=Z,22nm,1.4s,mb4.9	**81.58**	**45**	*e*P	**P**	**11 13 30.7**	**+0.2**
116A	**Eloy** baz=82	**81.65**	**50**	⇓P	**P**	**11 13 31.0**	**0.0**
Z15A	**Gila River Ind** baz=82	**81.74**	**49**	⇓P	**P**	**11 13 31.4**	**-0.1**
MOD	**Modoc** comp=Z,31nm,1.4s,mb5.0	**81.80**	**38**	*e*P	**P**	**11 13 31.3**	**-0.3**
217A	**Green Valley** baz=82	**81.84**	**51**	⇓P	**P**	**11 13 31.9**	**-0.2**
S11A	**Rachel** baz=82	**81.88**	**43**	⇓P	**P**	**11 13 31.6**	**-0.5**
X14A	**Yava** baz=82,SNR=5.2	**81.90**	**47**	⇑P	**P**	**11 13 32.6**	**+0.3**
R10A	**Warm Springs** baz=82,SNR=15	**81.92**	**43**	⇑P	**P**	**11 13 32.8**	**+0.5**
U12A	**Valley of Fire** baz=82	**81.94**	**45**	⇓P	**P**	**11 13 32.6**	**+0.1**
V13A	**Grand Canyon W** baz=82,SNR=5.8	**81.96**	**46**	⇑P	**P**	**11 13 33.0**	**+0.4**
Y15A	**Casa Rosa Ranc** baz=82,SNR=12	**81.99**	**48**	⇑P	**P**	**11 13 32.4**	**-0.4**
T12A	**Moapa** baz=82	**81.99**	**45**	⇓P	**P**	**11 13 32.8**	**0.0**
K05A	**Summer Lake** baz=82	**82.01**	**37**	⇓P	**P**	**11 13 32.8**	**+0.1**
TUC	**Tucson**	**82.16**	**50**	*e*P	**P**	**11 13 34.2**	**+0.5**
TUC	comp=Z,17nm,1.4s,mb4.8			pmax	pmax		
TUC	**Tucson** comp=Z,17nm,1.4s,mb4.8	**82.16**	**50**	*e*P	**P**	**11 13 34.2**	**+0.4**
Q10A	**Clear Creek Ra** baz=82,SNR=9.4	**82.18**	**42**	⇓P	**P**	**11 13 34.1**	**+0.4**
W14A	**Seligman** baz=82,SNR=12	**82.19**	**47**	⇓P	**P**	**11 13 33.9**	**+0.1**
318A	**Bisbee** baz=82	**82.25**	**51**	⇑P	**P**	**11 13 34.0**	**-0.3**
Z16A	**Peralta Trail,** baz=82,SNR=12	**82.27**	**49**	⇓P	**P**	**11 13 34.7**	**+0.3**
U13A	**Pakoon Wash** baz=82,SNR=14	**82.30**	**45**	⇓P	**P**	**11 13 35.3**	**+0.9**
117A	**Oracle** baz=82,SNR=9.2	**82.33**	**50**	⇑P	**P**	**11 13 35.1**	**+0.4**
X15A	**Humboldt** baz=82,SNR=15	**82.36**	**48**	⇑P	**P**	**11 13 34.9**	**+0.1**
R11A	**Troy Canyon, C** baz=83,SNR=8.7	**82.40**	**43**	⇓P	**P**	**11 13 35.0**	**+0.1**
V14A	**Boquillas Ranc** baz=83,SNR=11	**82.42**	**46**	⇓P	**P**	**11 13 35.3**	**+0.3**
S12A	**Delamar Landin** baz=83,SNR=10	**82.43**	**44**	⇓P	**P**	**11 13 35.6**	**+0.6**
218A	**Dragoon** baz=83,SNR=9.1	**82.50**	**51**	⇓P	**P**	**11 13 35.5**	**0.0**
Y16A	**Circle Bar Ran** baz=83,SNR=16	**82.54**	**49**	⇑P	**P**	**11 13 35.5**	**-0.1**
H04A	**Detroit Lake** baz=83	**82.61**	**35**	⇓P	**P**	**11 13 36.2**	**+0.4**
Q11A	**Duckwater** baz=83,SNR=5.1	**82.66**	**43**	⇓P	**P**	**11 13 36.3**	**+0.1**
BMN	**Battle Mountai**	**82.67**	**41**	*e*P	**P**	**11 13 36.7**	**+0.5**
BMN	comp=Z,30nm,1.4s,mb5.1			pmax	pmax		
BMN	**Battle Mountai** comp=Z,30nm,1.4s,mb5.1	**82.67**	**41**	*e*P	**P**	**11 13 36.7**	**+0.5**
T13A	**Saint George** baz=83,SNR=7.7	**82.69**	**45**	⇓P	**P**	**11 13 36.0**	**-0.4**
W15A	**Williams** baz=83	**82.72**	**47**	⇑P	**P**	**11 13 36.7**	**0.0**
319A	**Douglas** baz=83	**82.73**	**52**	⇑P	**P**	**11 13 36.3**	**-0.4**
F03A	**Seaside** baz=83	**82.75**	**33**	⇑P	**P**	**11 13 37.1**	**+0.6**
G04A	**Mulino** baz=83	**82.81**	**34**	⇓P	**P**	**11 13 37.8**	**+0.9**
X16A	**Lo Mia Camp, P** baz=83,SNR=17	**82.86**	**48**	⇑P	**P**	**11 13 38.0**	**+0.6**
Y17A	**Roosevelt** baz=83,SNR=6.6	**82.88**	**49**	⇓P	**P**	**11 13 37.9**	**+0.4**
118A	**Homack Ranch,** baz=83	**82.92**	**50**	⇓P	**P**	**11 13 38.1**	**+0.4**
Z17A	**San Carlos Hig** baz=83	**82.92**	**50**	⇑P	**P**	**11 13 37.5**	**-0.2**
R12A	**Pony Springs,** baz=83,SNR=15	**83.01**	**43**	⇑P	**P**	**11 13 38.9**	**+0.9**
P11A	**Circle Ranch,** baz=83	**83.02**	**42**	⇑P	**P**	**11 13 38.6**	**+0.5**
S13A	**Holt Ranch, En** baz=83,SNR=10	**83.05**	**44**	⇓P	**P**	**11 13 39.1**	**+0.9**
219A	**White Tail Can** baz=83	**83.08**	**51**	⇓P	**P**	**11 13 38.8**	**+0.2**
Z18A	**Geronimo** baz=83	**83.11**	**50**	⇓P	**P**	**11 13 38.9**	**+0.3**
V15A	**Kaibab Nationa** baz=83,SNR=14	**83.15**	**47**	⇓P	**P**	**11 13 39.2**	**+0.4**
W16A	**Flagstaff** baz=83	**83.18**	**48**	⇓P	**P**	**11 13 39.1**	**+0.1**
E03A	**Lebam** baz=83	**83.18**	**33**	⇑P	**P**	**11 13 39.6**	**+1.0**
T14A	**Hurricane** baz=83,SNR=7.2	**83.25**	**45**	⇓P	**P**	**11 13 39.8**	**+0.5**
X17A	**Forest Lakes** baz=83,SNR=5.4	**83.25**	**49**	⇑P	**P**	**11 13 40.0**	**+0.6**
320A	**Kipp Ranch, An** baz=83	**83.26**	**52**	⇓P	**P**	**11 13 39.9**	**+0.4**
Q12A	**Willow Creek R** baz=84,SNR=7.3	**83.29**	**43**	⇑P	**P**	**11 13 39.9**	**+0.5**
HOOD	**Mount Hood Mea** comp=Z,29nm,1.3s,mb5.2	**83.32**	**35**	*e*P	**P**	**11 13 40.0**	**+0.5**
R13A	**O'Grain Ranch,** baz=84,SNR=6.2	**83.33**	**44**	⇑P	**P**	**11 13 40.1**	**+0.4**
F04A	**Amboy** baz=84,SNR=6.8	**83.34**	**34**	⇑P	**P**	**11 13 40.6**	**+1.1**
U15A	**North Rim** baz=84,SNR=13	**83.41**	**46**	⇓P	**P**	**11 13 40.3**	**+0.2**
ARUT	**Antelope Range**	**83.44**	**44**	*e*P	**P**	**11 13 40.5**	**+0.3**
ARUT				pmax	pmax		
ARUT	**Antelope Range** comp=Z,23nm,1.2s,mb5.1	**83.44**	**44**	*e*P	**P**	**11 13 40.5**	**+0.2**
119A	**Ashpeak Ranch,** baz=84	**83.46**	**51**	⇑P	**P**	**11 13 40.5**	**0.0**
Y18A	**Canyon Day Jun** baz=84,SNR=16	**83.49**	**49**	⇓P	**P**	**11 13 41.0**	**+0.4**
P12A	**McGill** baz=84,SNR=10	**83.50**	**42**	⇓P	**P**	**11 13 41.1**	**+0.6**
WUAZ	**Wupatki** baz=84	**83.52**	**47**	⇓P	**P**	**11 13 40.8**	**+0.1**
WUAZ	**Wupatki** comp=Z,49nm,1.6s,mb5.4	**83.52**	**47**	*e*P	**P**	**11 13 41.2**	**+0.5**
220A	**Playas Peak, P** baz=84,SNR=5.9	**83.56**	**52**	⇓P	**P**	**11 13 41.2**	**+0.2**
S14A	**Cedar City** baz=84	**83.60**	**45**	⇑P	**P**	**11 13 41.4**	**+0.4**
NJ2	**Nanjing**	**83.66**	**309**	*e*P	**P**	**11 13 42.7**	**+1.2**
NJ2	comp=Z,30nm,1.3s,mb5.3			pmax	pmax		
I07A	**Izee** baz=84,SNR=8.2	**83.66**	**37**	⇑P	**P**	**11 13 42.1**	**+0.8**
T15A	**Red Dirt Ranch** baz=84,SNR=29	**83.69**	**46**	⇓P	**P**	**11 13 42.0**	**+0.5**
W17A	**Winslow** baz=84	**83.73**	**48**	⇓P	**P**	**11 13 42.3**	**+0.5**
Q13A	**Wheeler Ranch,** baz=84	**83.75**	**43**	⇑P	**P**	**11 13 42.1**	**+0.3**
Z19A	**T-Link Ranch,** baz=84	**83.77**	**50**	⇓P	**P**	**11 13 42.4**	**+0.4**
J08A	**Circle Bar Ran** baz=84,SNR=18	**83.77**	**38**	⇑P	**P**	**11 13 42.2**	**+0.4**
G06A	**Carlson Farm,** baz=84,SNR=8.2	**83.80**	**35**	⇑P	**P**	**11 13 42.5**	**+0.6**
120A	**U Bar Ranch, L** baz=84,SNR=5.9	**83.82**	**51**	⇓P	**P**	**11 13 42.5**	**+0.2**
X18A	**Snowflake** baz=84	**83.95**	**49**	⇑P	**P**	**11 13 42.9**	**-0.1**
HABR	**Khabarovsk**	**83.97**	**329**	*ce*P	**P**	**11 13 42.1**	**-0.6**
HABR				*PP	pP	11 13 53.6	-2.7
HABR				*e*SP	sP	11 13 57.4	-4.0
HABR				*i*		11 18 58.2	
HABR				*e*S	S	11 24 01.5	-1.6
HABR				*e*SS	SS	11 29 32.1	-0.6
HABR				*e*SSS		11 33 01.7	
HABR	comp=Z,90nm,17.0s,MS4.2			MLR	MLR		
R14A	**James Farms, M** baz=84	**84.00**	**44**	⇑P	**P**	**11 13 43.4**	**+0.3**
U16A	**Tuba City** baz=84,SNR=11	**84.03**	**47**	⇑P	**P**	**11 13 43.6**	**+0.3**
P13A	**Bates Ranch, G** baz=84,SNR=21	**84.04**	**43**	⇑P	**P**	**11 13 43.7**	**+0.4**
O12A	**Currie** baz=84,SNR=18	**84.07**	**42**	⇓P	**P**	**11 13 43.4**	**0.0**
S15A	**Panguitch** baz=84	**84.07**	**45**	⇑P	**P**	**11 13 43.8**	**+0.3**
Y19A	**Nutrioso** baz=84,SNR=14	**84.13**	**50**	⇓P	**P**	**11 13 44.4**	**+0.5**
Z20A	**Nine Sixteen R** baz=84,SNR=5.5	**84.15**	**51**	⇓P	**P**	**11 13 44.0**	**0.0**
221A	**Mesquite Ranch** baz=84	**84.16**	**52**	⇓P	**P**	**11 13 44.5**	**+0.4**
MDJ	**Mudanjiang**	**84.16**	**324**	P	**P**	**11 13 44.1**	**+0.4**
MDJ				PP	PP	11 17 00.6	+1.7
MDJ				S	S	11 24 06.3	+1.2
MDJ				SS	SS	11 29 35.8	+0.2
MDJ	comp=Z,16nm,0.7s,mb5.3			pmax	pmax		
MDJ	comp=Z,140nm,5.4s			pmax	pmax		
MDJ	comp=N,69nm,16.5s,MS4.3			LR	LR		
MDJ	comp=E,96nm,20.3s,MS4.3			LR	LR		
MDJ	comp=Z,140nm,17.4s,MS4.4			LR	LR		
MDJ	**Mudanjiang** comp=Z,25nm,1.1s,mb5.2	**84.16**	**324**	*e*P	**P**	**11 13 43.4**	**-0.4**
LON	**Longmire**	**84.20**	**34**	*e*P	**P**	**11 13 43.3**	**-0.6**
LON	comp=Z,28nm,1.5s,mb5.2			pmax	pmax		
LON	**Longmire** comp=Z,28nm,1.5s,mb5.2	**84.20**	**34**	*e*P	**P**	**11 13 43.2**	**-0.7**
Q14A	**Sevier Lake (B** baz=84,SNR=33	**84.24**	**44**	⇑P	**P**	**11 13 44.3**	**0.0**
T16A	**Glen Canyon Da** baz=84,SNR=6.2	**84.25**	**46**	⇓P	**P**	**11 13 44.6**	**+0.2**
X19A	**St. Johns** baz=84,SNR=10	**84.36**	**49**	⇓P	**P**	**11 13 45.7**	**+0.7**
D05A	**Enumclaw** baz=85,SNR=11	**84.41**	**33**	⇓P	**P**	**11 13 45.9**	**+0.9**
W18A	**Petrified Fore** baz=85	**84.42**	**48**	⇑P	**P**	**11 13 45.3**	**-0.1**
121A	**Cookes Peak, D** baz=85	**84.42**	**51**	⇑P	**P**	**11 13 45.2**	**-0.2**
R15A	**Junction** baz=85,SNR=6.3	**84.43**	**45**	⇓P	**P**	**11 13 46.2**	**+0.8**
O13A	**Hicks Ranch, I** baz=85,SNR=5.8	**84.46**	**42**	⇑P	**P**	**11 13 46.0**	**+0.6**
S16A	**Weppner Ranch,** baz=85,SNR=9.5	**84.60**	**45**	⇑P	**P**	**11 13 46.7**	**+0.6**
V18A	**Ganado** baz=85,SNR=24	**84.61**	**48**	⇓P	**P**	**11 13 46.7**	**+0.5**
W19A	**Sanders** baz=85	**84.66**	**48**	⇑P	**P**	**11 13 46.8**	**+0.3**
MSU	**Marysvale**	**84.67**	**44**	*e*P	**P**	**11 13 47.2**	**+0.7**
MSU	comp=Z,35nm,1.3s,mb5.3			pmax	pmax		
MSU	**Marysvale** comp=Z,35nm,1.3s,mb5.3	**84.67**	**44**	*e*P	**P**	**11 13 47.2**	**+0.7**
222A	**Williams Famil** baz=85	**84.70**	**52**	⇓P	**P**	**11 13 46.8**	**0.0**
P14A	**Drum Mountains** baz=85,SNR=11	**84.72**	**43**	⇑P	**P**	**11 13 46.9**	**+0.2**
T17A	**Navajo Res., N** baz=85,SNR=12	**84.72**	**46**	⇑P	**P**	**11 13 47.1**	**+0.3**
Y20A	**Horse Springs,** baz=85,SNR=22	**84.72**	**50**	⇓P	**P**	**11 13 46.9**	**0.0**
G08A	**Pilot Rock** baz=85,SNR=34	**84.74**	**36**	⇑P	**P**	**11 13 47.0**	**+0.3**
Q15A	**Fillmore** baz=85,SNR=8.9	**84.82**	**44**	⇑P	**P**	**11 13 47.7**	**+0.5**
Z21A	**St. Cloud Mine** baz=85,SNR=16	**84.91**	**51**	⇓

HAWA **Hanford** 85.14 35 *eP* P 11 13 48.2 -0.4
comp=Z,43nm,1.4s,mb5.4
P15A **Leamington** 85.21 43 ⇓P P 11 13 49.5 +0.4
baz=85
V19A **Window Rock** 85.21 48 ⇓P P 11 13 49.0 -0.3
baz=85
DUG **Dugway** 85.23 43 ⇑P P 11 13 49.5 +0.3
baz=85
Y21A **Point of Rocks** 85.27 50 ⇑P P 11 13 49.8 +0.2
baz=85,SNR=18
W20A **Ramah** 85.28 49 ⇑P P 11 13 49.8 +0.1
baz=86,SNR=23
MFID **Camas Ranch** 85.32 39 ⇑P P 11 13 49.7 +0.1
baz=86,SNR=19
Z22A **Elephant Butte** 85.39 51 ⇑P P 11 13 50.1 -0.1
baz=86,SNR=15
U19A **Dine' College,** 85.41 48 ⇓P P 11 13 50.1 -0.2
baz=86,SNR=26
T18A **Mexican Hat** 85.42 47 ⇓P P 11 13 50.2 -0.1
baz=86,SNR=38
X21A **Alamocita Cree** 85.42 50 ⇑P P 11 13 50.2 -0.1
baz=86,SNR=19
PLCA **Paso Flores** 85.50 132 P P 11 13 50.3 -0.5
comp=Z,4.5nm,1.1s,mb4.6,baz=255,slow=5.0,SNR=3.7
PLCA LR LR 11 46 28.7
comp=Z,223nm,18.4s,MS4.6,baz=38,slow=32
ETW **Entiat** 85.52 34 *eP* P 11 13 50.2 -0.3
comp=Z,53nm,1.4s,mb5.6
Q16A **Castle Valley** 85.55 45 ⇑P P 11 13 51.1 +0.2
baz=86,SNR=13
324A **Moseley Ranch,** 85.55 53 ⇓P P 11 13 50.5 -0.6
baz=86,SNR=15
B06A **Marblemount** 85.55 32 ⇑P P 11 13 50.7 0.0
baz=86
R17A **Hanksville Air** 85.57 45 ⇑P P 11 13 50.9 -0.1
baz=86,SNR=13
VNA3 **Neumayer Olymp** 85.57 175 *eP* P 11 13 49.1 -1.5
VNA3 *e* 11 13 52.2
A05A **Maple Falls** 85.58 32 ⇑P P 11 13 51.2 +0.4
baz=86
425A **Indio Mountain** 85.59 54 ⇑P P 11 13 51.3 0.0
baz=86,SNR=12
P16A **Fountain Green** 85.62 44 ⇑P P 11 13 51.5 +0.2
baz=86,SNR=5.0
626A **Big Bend Ranch** 85.63 56 ⇓P P 11 13 51.5 0.0
baz=86,SNR=19
S18A **Hurst Farm, Bl** 85.64 46 ⇓P P 11 13 51.3 -0.1
baz=86
V20A **Brimhall** 85.66 48 ⇓P P 11 13 51.4 -0.1
baz=86
TMUT **Trail Mountain** 85.73 44 *eP* P 11 13 52.6 +0.8
comp=Z,66nm,1.4s,mb5.7
Y22A **Socorro** 85.74 51 ⇓P P 11 13 52.4 +0.4
baz=86,SNR=13
MNTX **Cornudas Mount** 85.75 53 ⇑P P 11 13 52.1 +0.1
baz=86,SNR=13
MNTX **Cornudas Mount** 85.75 53 *eP* P 11 13 52.1 +0.1
comp=Z,18nm,1.4s,mb5.1
T19A **Beclabito** 85.83 47 ⇑P P 11 13 52.5 +0.2
baz=86
224A **Cornudas Mount** 85.84 53 ⇑P P 11 13 52.3 -0.2
baz=86,SNR=11
Y22D **IRIS PASSCAL I** 85.84 50 ⇑P P 11 13 52.6 +0.2
baz=86
LENM **Lemitar** 85.85 50 *eP* P 11 13 53.2 +0.7
comp=Z,14nm,1.2s,mb5.1
LAZ **Ladron** 85.85 50 *eP* P 11 13 53.3 +0.8
comp=Z,32nm,1.7s,mb5.3
W21A **San Fidel** 85.87 49 ⇓P P 11 13 52.3 -0.3
baz=86
TXAR **Lajitas Array** 85.88 56 P P 11 13 52.2 -0.5
comp=Z,9.0nm,1.0s,mb5.0,baz=210,slow=7.8,SNR=42
TXAR **Lajitas Array** 85.88 56 P P 11 13 52.2 -0.6
325A **Bean Ranch, Si** 85.89 54 ⇓P P 11 13 52.7 -0.1
baz=86,SNR=15
D08A **Wollman Farm,** 85.89 35 ⇓P P 11 13 52.7 +0.3
baz=86,SNR=11
526A **Mary Lane Ranc** 85.91 55 ⇑P P 11 13 52.6 -0.3
baz=86,SNR=14
Z23A **Rita Site, Whi** 85.92 51 ⇓P P 11 13 52.1 -0.7
baz=86
U20A **Newcomb** 85.93 48 ⇓P P 11 13 52.5 -0.3
baz=86,SNR=14
I12A **Atlanta** 85.95 39 ⇓P P 11 13 52.9 +0.2
baz=86,SNR=14
E09A **Wood Farm, Sta** 85.96 35 ⇓P P 11 13 52.9 +0.2
baz=86
CN2 **Changchun** 85.98 321 *eP* P 11 13 53.3 +0.4
CN2 *es*P sP 11 14 12.3 +0.7
CN2 *eS* S 11 24 23.2 0.0
CN2 pmax pmax
comp=Z,20nm,1.1s,mb5.3
CN2 pmax pmax
comp=Z,400nm,5.0s
CN2 LR LR
comp=N,400nm,16.0s,MS5.1
CN2 LR LR
comp=E,400nm,16.0s,MS5.1
CN2 LR LR
comp=Z,600nm,17.0s,MS5.1
L14A **Malta** 86.03 41 ⇓P P 11 13 53.3 +0.1
baz=86
VNA2 **Neumayer--Watz** 86.05 176 *eP* P 11 13 51.9 -1.0
VNA2 *e* pP 11 14 04.2 -2.3
SRU **San Rafael** 86.07 45 ⇑P P 11 13 53.4 -0.1
baz=86,SNR=7.9
SRU **San Rafael** 86.07 45 *eP* P 11 13 53.2 -0.3
SRU pmax pmax
comp=Z,41nm,1.3s,mb5.5
SRU **San Rafael** 86.07 45 *eP* P 11 13 53.2 -0.3
comp=Z,41nm,1.3s,mb5.5
KLR **Kul'dur** 86.08 328 *eP* P 11 13 49.6 -3.6
KLR pmax pmax
comp=Z,70nm,2.2s,mb5.5
BNM **Barren Site** 86.09 51 *eP* P 11 13 54.2 +0.5
comp=Z,32nm,1.6s,mb5.3
R18A **Canyonlands Na** 86.09 46 ⇑P P 11 13 53.3 -0.2
baz=86,SNR=6.1
F10A **Beach Ranch, E** 86.11 36 ⇑P P 11 13 53.6 +0.1
baz=86,SNR=13
P17A **Butcher Ranch,** 86.14 44 ⇑P P 11 13 54.0 +0.2
baz=86,SNR=14
627A **Terlingua Ranc** 86.15 56 ⇓P P 11 13 53.3 -0.8
baz=86,SNR=16
M15A **Larsen Ranch,** 86.18 42 ⇓P P 11 13 54.3 +0.3
baz=86
124A **Stringfield Ra** 86.20 52 ⇓P P 11 13 53.9 -0.4
baz=86,SNR=7.0
OD2 **Odessa Site #2** 86.22 34 *eP* P 11 13 54.4 +0.4
comp=Z,63nm,1.5s,mb5.6
HLID **Hailey** 86.23 39 ⇓P P 11 13 54.9 +0.8
baz=86,SNR=8.9
HLID **Hailey** 86.23 39 *eP* P 11 13 53.9 -0.2
comp=Z,12nm,1.3s,mb5.0
S19A **Harvey Farm, M** 86.24 46 ⇑P P 11 13 54.3 0.0
baz=86
426A **McDonald Obser** 86.25 55 ⇓P P 11 13 54.2 -0.4
baz=86,SNR=17
VNA1 **Neumayer--Stat** 86.26 176 *eP* P 11 13 53.9 -0.1
VNA1 *e* pP 11 14 05.5 -2.1
J13A **Cove Ranch, Pi** 86.27 40 ⇓P P 11 13 54.5 +0.1
baz=86,SNR=14
527A **Woodward Ranch** 86.31 55 ⇑P P 11 13 54.6 -0.3
baz=86,SNR=19
JLU **Jordanelle** 86.31 43 *eP* P 11 13 54.7 +0.1
comp=Z,32nm,1.7s,mb5.3
Q18A **Rafter H Ranch** 86.32 45 ⇑P P 11 13 54.9 +0.2
baz=86,SNR=16
DAU **Daniels Canyon** 86.33 43 *eP* P 11 13 57.0 +2.3
DAU pmax pmax
comp=Z,15nm,1.2s,mb5.1
DAU **Daniels Canyon** 86.33 43 *eP* P 11 13 57.0 +2.3
comp=Z,15nm,1.2s,mb5.1
IPM **Ipoh** 86.35 276 *eP* P 11 13 55.5 0.0
comp=Z,53nm,1.3s,mb5.6
K14A **Jones Ranch, D** 86.36 41 ⇓P P 11 13 55.2 +0.3
baz=86
225A **Deer Hill, Car** 86.37 53 ⇓P P 11 13 55.2 +0.1
baz=86,SNR=7.5
MVCO **Mesa Verde** 86.38 47 ⇑P P 11 13 55.4 +0.3
baz=87
MVCO **Mesa Verde** 86.38 47 *eP* P 11 13 55.3 +0.2
comp=Z,5.5nm,1.1s,mb4.7
Y23A **Lovelace Mesa,** 86.38 51 ⇓P P 11 13 55.1 -0.1
baz=87,SNR=12
W22A **Albuquerque** 86.39 50 ⇓P P 11 13 55.2 +0.1
baz=87
R19A **Curley Farm, L** 86.45 46 ⇑P P 11 13 55.5 +0.1
baz=87
N16A **Rees Ranch, Co** 86.48 43 ⇑P P 11 13 55.2 -0.2
baz=87
B08A **Colville Reser** 86.52 33 ⇑P P 11 13 56.7 +1.2
baz=87
L15A **Malad City** 86.53 41 ⇑P P 11 13 55.5 -0.2
baz=87
O17A **Robinson Place** 86.54 44 ⇑P P 11 13 56.3 +0.6
baz=87,SNR=26
P18A **Preston Nutter** 86.54 44 ⇑P P 11 13 55.7 -0.1
baz=87
U21A **Nageezi** 86.54 48 ⇑P P 11 13 56.0 +0.1
baz=87,SNR=21
628A **Black Gap, Mar** 86.55 56 ⇓P P 11 13 55.7 -0.3
baz=87,SNR=15
H12A **Diamond D Ranc** 86.56 38 ⇓P P 11 13 56.7 +0.9
baz=87,SNR=8.2
Z24A **Sheeppen Canyo** 86.58 52 ⇑P P 11 13 56.5 +0.4
baz=87,SNR=8.8
M16A **Huntsville** 86.60 42 ⇑P P 11 13 55.8 -0.2
baz=87,SNR=7.1
326A **Caldwell Ranch** 86.61 54 ⇑P P 11 13 55.6 -0.7
baz=87
I13A **Wildhorse Cree** 86.61 39 ⇑P P 11 13 56.0 0.0
baz=87
ANMO **Albuquerque** 86.61 50 *eP* P 11 13 56.5 +0.2
ANMO pmax pmax
comp=Z,27nm,1.3s
ANMO **Albuquerque** 86.61 50 *eP* P 11 13 56.5 +0.3
comp=Z,27nm,1.3s,mb5.3
J14A **Carey** 86.61 40 ⇑P P 11 13 56.0 0.0
baz=87,SNR=7.2
G12A **Big Creek, Yel** 86.64 38 ⇑P P 11 13 56.5 +0.3
baz=87
C09A **Chrisman Ranch** 86.71 34 ⇓P P 11 13 56.4 +0.1
baz=87
GDL2 **Guadalupe Moun** 86.75 53 *eP* P 11 13 57.5 +0.5
comp=Z,13nm,1.1s,mb5.1
125A **Gardner Draw,** 86.76 53 ⇓P P 11 13 57.0 -0.1
baz=87,SNR=8.8
S20A **Disappointment** 86.81 47 ⇑P P 11 13 57.2 +0.1
baz=87
Q19A **Hogan Spring (** 86.81 45 ⇑P P 11 13 56.7 -0.4
baz=87
427A **Hayter Ranch,** 86.81 55 ⇓P P 11 13 56.9 -0.4
baz=87,SNR=20
Y24A **Capitan** 86.83 51 ⇑P P 11 13 57.1 -0.2
baz=87,SNR=20
K15A **Arbon** 86.83 41 ⇓P P 11 13 57.6 +0.4
baz=87
N17A **Moffit Pass** 86.89 43 ⇓P P 11 13 57.4 0.0
baz=87,SNR=6.4
H13A **Challis** 86.92 39 ⇑P P 11 13 57.5 0.0
baz=87,SNR=5.7
T21A **Navajo Lake** 86.92 48 ⇑P P 11 13 57.0 -0.7
baz=87
W23A **Werner Place,** 86.94 50 ⇑P P 11 13 57.8 -0.1
baz=87,SNR=7.3
528A **Cox Ranch, San** 86.95 56 ⇓P P 11 13 57.6 -0.4
baz=87,SNR=15
R20A **Redvale** 86.98 46 ⇑P P 11 13 57.6 -0.4
baz=87
I14A **Mackay** 87.01 39 ⇑P P 11 13 57.9 0.0
baz=87
Z25A **Roswell** 87.02 52 ⇓P P 11 13 58.1 -0.2
baz=87,SNR=9.9
F12A **Elk City** 87.06 37 ⇓P P 11 13 58.1 -0.1
baz=87,SNR=13
U22A **Llaves** 87.07 49 ⇑P P 11 13 58.2 -0.3
baz=87,SNR=5.2
S21A **Coal Bank Pass** 87.10 47 ⇑P P 11 13 58.4 -0.2
baz=87,SNR=5.2
L16A **Fish Haven** 87.12 42 ⇑P P 11 13 58.2 -0.4
baz=87
CLNB **Carlsbad** 87.14 53 *eP* P 11 13 58.4 -0.5
comp=Z,1.5nm,0.8s,mb4.3
X24A **Lazy VL Ranch,** 87.15 51 ⇓P P 11 13 57.9 -1.0
baz=87
V23A **Ortiz Mt. (NFS** 87.21 49 ⇓P P 11 13 58.5 -0.7
baz=87,SNR=8.3
126A **Clayton Basin,** 87.22 53 ⇓P P 11 13 58.4 -0.8
baz=87
G13A **Cobalt** 87.24 38 ⇓P P 11 13 58.7 -0.4
baz=87
E12A **Beaver Dam Sad** 87.29 37 ⇑P P 11 13 58.7 -0.5
baz=88
M17A **Scullys Gap (B** 87.29 43 ⇓P P 11 13 58.5 -0.9
baz=88
428A **Kincaid Ranch,** 87.29 55 ⇓P P 11 13 59.5 -0.2
baz=88,SNR=8.4
J15A **Blackfoot** 87.30 40 ⇑P P 11 13 59.1 -0.3
baz=88
Y25A **Mesa, Roswell** 87.36 52 ⇑P P 11 13 59.4 -0.5
baz=88,SNR=12
P19A **Cripple Cowboy** 87.36 45 ⇑P P 11 13 59.4 -0.4
baz=88
T22A **Edith** 87.37 48 ⇑P P 11 13 59.2 -0.6
baz=88
Q20A **Ridgley Place,** 87.45 46 ⇑P P 11 13 59.5 -0.7
baz=88
H14A **Leadore** 87.46 39 ⇑P P 11 13 60.0 -0.1
baz=88
K16A **Soda Springs** 87.49 41 ⇓P P 11 14 00.4 +0.1
baz=88
W24A **Lazy 6 Ranch,** 87.49 50 ⇓P P 11 14 00.4 -0.1
baz=88,SNR=9.7
U23A **El Rito** 87.51 49 ⇑P P 11 14 00.4 -0.2
baz=88,SNR=8.8
328A **Wristen Ranch,** 87.51 55 ⇑P P 11 13 59.9 -0.8
baz=88
L17A **Cokeville** 87.51 42 ⇑P P 11 14 00.3 -0.1
baz=88
CPRX **Cap Rock** 87.52 53 *eP* P 11 14 00.8 +0.1
comp=Z,14nm,1.1s,mb5.1
Z26A **Caprock** 87.56 52 ⇓P P 11 14 00.7 -0.2
baz=88,SNR=11
NEW **Newport** 87.60 34 ⇓P P 11 14 00.4 -0.2
baz=88
I15A **Monteview** 87.62 40 ⇑P P 11 14 00.8 -0.1
baz=88
O19A **Miners Draw (B** 87.63 44 ⇓P P 11 14 00.7 -0.4
baz=88
R21A **Cimarron** 87.63 47 ⇓P P 11 14 01.1 0.0
baz=88,SNR=6.3
M18A **Lyman** 87.64 43 ⇓P P 11 14 00.8 -0.3
baz=88,SNR=11
N18A **Larsen Ranch,** 87.64 43 ⇑P P 11 14 01.0 -0.1
baz=88,SNR=5.9
P20A **De Beque** 87.67 45 ⇑P P 11 14 01.4 +0.1
baz=88
X25A **Clemmons Ranch** 87.68 51 ⇓P P 11 14 01.0 -0.4
baz=88,SNR=12
J16A **Bone** 87.72 41 ⇓P P 11 14 01.2 -0.2
baz=88
127A **Arkansas Junct** 87.72 53 ⇑P P 11 14 01.1 -0.6
baz=88
G14A **Jackson** 87.77 38 ⇓P P 11 14 01.6 0.0
baz=88
C11A **Tepee Creek (N** 87.79 35 ⇑P P 11 14 01.3 -0.3
baz=88
S22A **4UR Ranch, Cre** 87.80 47 ⇓P P 11 14 01.9 0.0
baz=88,SNR=7.8
D12A **Red Ives Fores** 87.80 36 ⇓P P 11 14 01.5 -0.2
baz=88
V24A **Rampart Ranch,** 87.84 50 ⇓P P 11 14 02.2 0.0
baz=88,SNR=11
K17A **Gardner Place,** 87.85 41 ⇑P P 11 14 01.6 -0.4
baz=88,SNR=8.1
Q21A **Lamborn Mesa,** 87.86 46 ⇑P P 11 14 01.9 -0.3
baz=88
H15A **Lima** 87.88 39 ⇓P P 11 14 02.1 -0.1
baz=88
MCMT **McKenzie Canyo** 87.88 39 *eP* P 11 14 04.0 +1.9
comp=Z,2.9nm,1.5s,mb4.3
L18A **Fontenelle, Gr** 87.94 42 ⇓P P 11 14 02.6 +0.2
baz=88
T23A **Casias Ranch,** 87.97 48 ⇓P P 11 14 02.7 0.0
baz=88
E13A **Victor** 88.07 37 ⇑P P 11 14 02.2 -0.7
baz=88
R22A **Saguache, Gunn** 88.09 47 ⇑P P 11 14 03.1 -0.2
baz=88
O20A **White River Ci** 88.11 45 ⇓P P 11 14 03.0 -0.3
baz=88
I16A **Newdale** 88.14 40 ⇑P P 11 14 02.9 -0.5
baz=88
Z27A **Tatum** 88.14 53 ⇓P P 11 14 03.4 -0.2
baz=88
F14A **Wisdom** 88.16 38 ⇑P P 11 14 03.6 +0.2
baz=88
W25A **X Bar L Ranch,** 88.17 50 ⇓P P 11 14 03.1 -0.6
baz=88,SNR=12
SKAG **Skagway** 88.21 19 *eP* P 11 14 04.4 +1.1
comp=Z,75nm,2.1s,mb5.5
REDW **Red Top Meadow** 88.23 41 *eP* P 11 14 04.6 +0.8
comp=Z,21nm,1.6s,mb5.1
M19A **Rock Springs** 88.26 43 ⇑P P 11 14 04.0 0.0
baz=88
G15A **Dillon** 88.29 39 ⇑P P 11 14 04.2 +0.2
baz=88
X26A **CR and CF Fran** 88.30 51 ⇓P P 11 14 04.2 -0.2
baz=88
D13A **Huson** 88.31 36 ⇓P P 11 14 04.0 -0.1
baz=88
J17A **Brown Place, J** 88.32 41 ⇓P P 11 14 04.5 +0.2
baz=88
Q22A **Crested Butte,** 88.32 46 ⇓P P 11 14 04.0 -0.3
baz=88,SNR=6.3
K18A **Toltan Ranch,** 88.32 42 ⇓P P 11 14 04.4 +0.1
baz=88,SNR=8.7
S23A **Nye Farm, Mont** 88.34 48 ⇓P P 11 14 03.7 -0.8
baz=88
DLMT **Dillon** 88.34 39 *eP* P 11 14 04.2 0.0
comp=Z,8.0nm,1.2s,mb4.8
SNOW **Snow King Moun** 88.35 41 *eP* P 11 14 05.0 +0.6
comp=Z,42nm,1.8s,mb5.4
V25A **Rancho No Teng** 88.36 50 ⇑P P 11 14 04.6 0.0
baz=88,SNR=7.3
MSO **Missoula** 88.44 37 ⇓P P 11 14 04.7 0.0
baz=89
E14A **Clinton** 88.44 37 ⇓P P 11 14 04.5 -0.2
baz=89
Y27A **Causey** 88.45 52 ⇑P P 11 14 04.6 -0.5
baz=89
N20A **Spence Gulch,** 88.47 44 ⇓P P 11 14 04.9 -0.1
baz=89,SNR=6.9
IMW **Indian Meadow** 88.48 40 *eP* P 11 14 05.1 +0.1
comp=Z,3.5nm,1.0s,mb4.5
B12A **Libby** 88.53 35 ⇑P P 11 14 04.8 -0.3
baz=89
J18A **Kendall Valley** 88.65 41 ⇑P P 11 14 05.7 -0.2
baz=89,SNR=15
T24A **Torres, Weston** 88.67 49 ⇓P P 11 14 05.4 -0.7
baz=89
F15A **Butte** 88.67 38 ⇑P P 11 14 05.8 0.0
baz=89
BW06 **Boulder Array** 88.69 42 ⇑P P 11 14 05.7 -0.3
baz=89
PDAR **Pinedale Array** 88.69 42 P P 11 14 04.4 -1.6
comp=Z,3.0nm,0.9s,mb4.6,baz=224,slow=4.1,SNR=15
PDAR LR LR 11 47 56.1
comp=Z,186nm,18.1s,MS4.5,baz=250,slow=32
SDCO **Great Sand Dun** 88.70 48 ⇓P P 11 14 05.1 -1.0
baz=89
I17A **Pilgrim Ck.** 88.71 41 ⇑P P 11 14 05.3 -0.7
baz=89
G16A **Moss Hill, Enn** 88.72 39 ⇓P P 11 14 05.3 -0.8
baz=89
H16A **Russell Place,** 88.75 40 ⇓P P 11 14 05.5 -0.7
baz=89
MSTX **Muleshoe** 88.78 52 ⇓P P 11 14 05.9 -0.7
baz=89,SNR=6.6
A12A **Yaak River Ran** 88.78 34 ⇓P P 11 14 06.5 +0.2
baz=89,SNR=5.4
U25A **Circle Dot Ran** 88.79 49 ⇓P P 11 14 06.1 -0.5
baz=89
P22A **Eagle** 88.80 46 ⇓P P 11 14 06.0 -0.6
baz=89
D14A **Greenough** 88.83 37 ⇑P P 11 14 06.5 0.0
baz=89
S24A **Houchin Ranch,** 88.84 48 ⇑P P 11 14 06.8 -0.1
baz=89
M20A **Sweetwater, Wa** 88.86 44 ⇓P P 11 14 06.5 -0.4
baz=89
X27A **F and S Farms,** 88.86 52 ⇓P P 11 14 06.7 -0.3
baz=89
N21A **Black Mountain** 88.91 44 ⇓P P 11 14 06.5 -0.5
baz=89
E15A **Deer Lodge** 88.93 38 ⇓P P 11 14 07.4 +0.4
baz=89,SNR=5.0
V26A **Tequesquite Ra** 88.93 50 ⇑P P 11 14 06.4 -0.9
baz=89
L20A **Wamsutter** 89.04 43 ⇑P P 11 14 07.8 +0.1
baz=89,SNR=8.3
I18A **Diamond G Ranc** 89.05 41 ⇑P P 11 14 07.2 -0.4
baz=89
BOZ **Bozeman (W)** 89.06 39 ⇑P P 11 14 07.5 -0.2
baz=89,SNR=5.7
BOZ **Bozeman (W)** 89.06 39 *eP* P 11 14 08.0 +0.3
BOZ pmax pmax
comp=Z,27nm,1.8s,mb5.3
BOZ **Bozeman (W)** 89.06 39 *eP* P 11 14 08.0 +0.3
comp=Z,27nm,1.8s,mb5.3
B13A **Whitefish** 89.07 35 ⇑P P 11 14 07.3 -0.3
baz=89
C14A **Swan Lake** 89.10 36 ⇑P P 11 14 07.3 -0.5
baz=89
DLBC **Dease Lake** 89.10 22 P P 11 14 07.2 -0.3
comp=Z,4.6nm,1.0s,mb4.8,baz=192,slow=7.2,SNR=7.3
F16A **Kennard Place,** 89.14 39 ⇓P P 11 14 07.6 -0.4
baz=89
T25A **Trinidad** 89.15 49 ⇑P P 11 14 07.8 -0.5
baz=89
K19A **Absolon Red Bu** 89.16 42 ⇑P P 11 14 07.8 -0.4
baz=89
R24A **Sanders Place,** 89.21 48 ⇓P P 11 14 08.0 -0.5
baz=89
O22A **Kremmling** 89.23 45 ⇓P P 11 14 08.2 -0.4
baz=89,SNR=5.8
J19A **Crowheart** 89.27 42 ⇑P P 11 14 08.4 -0.3
baz=90
P23A **Jefferson** 89.30 46 ⇑P P 11 14 08.6 -0.4
baz=90
D15A **Lincoln** 89.35 37 ⇑P P 11 14 08.5 -0.5
baz=90
SEY **Seymchan** 89.36 346 *deP* P 11 14 08.4 -0.3
JCT **Junction City** 89.38 57 ⇑P P 11 14 08.8 -0.8
baz=90
JCT **Junction City** 89.38 57 *eP* P 11 14 09.8 +0.3
JCT pmax pmax
comp=Z,24nm,1.8s,mb5.2
JCT **Junction City** 89.38 57 *eP* P 11 14 09.8 +0.3
comp=Z,24nm,1.8s,mb5.2
K20A **Yellowstone Ra** 89.39 43 ⇑P P 11 14 08.8 -0.5
baz=90
S25A **Robets Cordova** 89.39 48 ⇑P P 11 14 08.5 -0.9
baz=90
G17A **Pierce Place,** 89.39 39 ⇓P P 11 14 09.0 -0.2
baz=90
A13A **Flathead Natio** 89.43 35 ⇓P P 11 14 09.0 -0.3
baz=90
M21A **Separation Pea** 89.45 44 ⇑P P 11 14 09.2 -0.4
baz=90
N22A **Wattenberg Ran** 89.62 45 ⇓P P 11 14 10.0 -0.4
baz=90
L21A **Rawlins** 89.63 44 ⇓P P 11 14 10.0 -0.5
baz=90
BJI **Beijing** 89.65 314 P P 11 14 09.5 -1.1
BJI pmax pmax
comp=Z,14nm,2.1s,mb4.9
BJI pmax pmax
comp=Z,210nm,4.0s
BJI LR LR
comp=N,340nm,12.9s,MS5.0
BJI LR LR
comp=E,140nm,12.2s,MS5.0
BJI LR LR
comp=Z,130nm,24.2s
ISCO **Idaho Springs** 89.66 46 ⇓P P 11 14 10.4 -0.2
baz=90
B14A **Marquette Ranc** 89.70 36 ⇑P P 11 14 10.5 -0.1
baz=90
C15A **Salmond Ranch,** 89.73 37 ⇑P P 11 14 10.7 0.0
baz=90,SNR=8.2
R25A **Fountain Ranch** 89.73 48 ⇓P P 11 14 10.2 -0.8
baz=90
F17A **Fitzpatrick Pl** 89.77 39 ⇓P P 11 14 10.9 -0.1
baz=90
D16A **Dana Ranch, Ca** 89.89 38 ⇓P P 11 14 11.4 -0.2
baz=90
J20A **Shoshoni** 89.92 42 ⇓P P 11 14 11.4 -0.3
baz=90
E17A **Martinsdale** 89.96 38 ⇓P P 11 14 11.6 -0.3
baz=90
A14A **Double T Ranch** 89.98 35 ⇑P P 11 14 12.1 +0.2
baz=90,SNR=8.7

P24A	Kohler Place,	89.99	47	⇑P		P	11 14 11.5	-0.6
	baz=90							
AMTX	Amarillo	90.00	52	⇓P		P	11 14 11.4	-1.0
	baz=90							
K21A	Alcova	90.06	43	⇓P		P	11 14 11.9	-0.5
	baz=90							
B15A	Bradely Ranch,	90.06	36	⇑P		P	11 14 11.9	-0.4
	baz=90							
H19A	Powell	90.08	41	⇑P		P	11 14 11.8	-0.6
	baz=90							
G18A	Lazy EL Ranch,	90.08	40	⇑P		P	11 14 11.8	-0.6
	baz=90							
Q25A	Bedland, Calha	90.14	47	⇑P		P	11 14 11.2	-1.7
	baz=90							
RLMT	Red Lodge	90.15	40	⇓P		P	11 14 12.8	0.0
	baz=90							
RLMT	Red Lodge	90.15	40	*e*P		P	11 14 13.7	+1.0
	comp=Z,28nm,1.9s,mb5.3							
O24A	Longmont	90.18	46	⇓P		P	11 14 12.5	-0.6
	baz=90							
I20A	Worland	90.21	42	⇑P		P	11 14 13.1	+0.1
	baz=90,SNR=5.3							
C16A	Fuhringer Ranc	90.22	37	⇑P		P	11 14 12.8	-0.3
	baz=90							
GCMT	Greycliff	90.28	39	*e*P		P	11 14 14.6	+1.2
	comp=Z,17nm,1.7s,mb5.1							
J21A	Lysite	90.31	42	⇓P		P	11 14 14.1	+0.5
	baz=90,SNR=5.5							
F18A	Big Timber	90.31	39	⇑P		P	11 14 13.8	+0.3
	baz=90,SNR=6.7							
A15A	Johnson Ranch,	90.36	36	⇓P		P	11 14 13.4	-0.2
	baz=90,SNR=16							
GYA	Guiyang	90.38	299	P		P	11 14 15.8	+1.5
GYA				pP		pP	11 14 29.9	+1.9
GYA				sP		sP	11 14 38.3	+5.2
GYA				PP		PP	11 17 52.6	+3.2
GYA				SKS			11 24 41.4	
GYA				sS		sS	11 25 29.0	+0.3
GYA				SS		SS	11 31 09.8	+2.5
GYA				pmax		pmax		
	comp=Z,20nm,1.0s,mb5.4							
GYA				pmax		pmax		
	comp=Z,150nm,5.6s							
GYA				LR		LR		
	comp=N,680nm,23.9s,MS5.1							
GYA				LR		LR		
	comp=E,520nm,24.7s,MS5.1							
GYA				LR		LR		
	comp=Z,740nm,22.0s,MS5.1							
D17A	Six Diamond Ra	90.44	38	⇓P		P	11 14 14.3	+0.2
	baz=91,SNR=11							
P25A	Willow Gulch B	90.48	47	⇓P		P	11 14 13.2	-1.3
	baz=91							
K22A	Casper	90.53	43	⇓P		P	11 14 13.5	-1.1
	baz=91							
E18A	Harlowton	90.56	39	⇑P		P	11 14 15.3	+0.7
	baz=91,SNR=5.4							
H20A	Greybull	90.57	41	⇓P		P	11 14 14.7	0.0
	baz=91							
I21A	Big Trails, Te	90.65	42	⇑P		P	11 14 15.1	-0.1
	baz=91,SNR=5.3							
C17A	Wharram Farm,	90.67	37	⇑P		P	11 14 15.5	+0.3
	baz=91,SNR=18							
F19A	Roth Farm, Mol	90.74	40	⇓P		P	11 14 15.8	+0.3
	baz=91,SNR=5.2							
L23A	Garrett	90.78	44	⇑P		P	11 14 15.2	-0.5
	baz=91							
G20A	Bridger	90.83	40	⇓P		P	11 14 15.9	0.0
	baz=91							
J22A	Midwest	90.95	43	⇓P		P	11 14 16.2	-0.4
	baz=91							
D18A	Linhart Farms,	90.97	38	⇓P		P	11 14 16.7	+0.2
	baz=91							
B17A	L&G Farms, Che	91.02	37	⇑P		P	11 14 16.7	0.0
	baz=91							
E19A	Rath Farm, Rou	91.16	39	⇓P		P	11 14 17.3	-0.1
	baz=91,SNR=6.1							
F20A	Billings	91.18	40	⇓P		P	11 14 17.4	-0.1
	baz=91							
A17A	Triple J Farms	91.44	36	⇓P		P	11 14 18.4	-0.3
	baz=92							
G21A	Lodge Grass	91.44	41	⇓P		P	11 14 19.0	+0.2
	baz=92							
EGMT	Eagleton	91.45	38	⇓P		P	11 14 18.7	-0.1
	baz=92							
E20A	Meyer Farm, Mu	91.56	39	⇑P		P	11 14 19.1	-0.2
	baz=92							
B18A	Beardsley Farm	91.64	37	⇓P		P	11 14 19.5	-0.2
	baz=92,SNR=6.1							
C19A	Slack Wire Ran	91.69	38	⇑P		P	11 14 20.3	+0.4
	baz=92,SNR=17							
BILL	Bilibino	91.71	353	⇓*e*P		P	11 14 19.1	-0.4
BILL				*e*S		S	11 24 55.2	-21
BILL				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.8							
D20A	Manuel Ranch,	91.87	39	⇓P		P	11 14 20.6	-0.1
	baz=92,SNR=10.0							
A18A	Metzger Ranch,	91.89	37	⇓P		P	11 14 19.9	-0.9
	baz=92,SNR=17							
XAN	Xi'an	91.91	306	P		P	11 14 21.8	+0.5
XAN				pmax		pmax		
	comp=Z,7.0nm,1.4s,mb4.8							
XAN				pmax		pmax		
	comp=Z,23nm,4.6s							
E21A	Keefer Ranch,	92.20	40	⇓P		P	11 14 22.1	-0.1
	baz=92							
C20A	Veseth Ranch,	92.28	38	⇓P		P	11 14 22.5	-0.1
	baz=92,SNR=11							
D21A	La Casta Ranch	92.52	39	⇑P		P	11 14 23.5	-0.3
	baz=93							
LAO	LASA Array	92.78	40	⇑P		P	11 14 25.3	+0.3
	baz=93							
RSSD	Black Hills	92.83	43	*e*P		P	11 14 25.5	+0.2
RSSD				pmax		pmax		
	comp=Z,19nm,1.3s,mb5.4							
RSSD	Black Hills	92.83	43	*e*P		P	11 14 25.5	+0.3
	comp=Z,19nm,1.3s,mb5.4							
KMI	Kunming	93.05	296	P		P	11 14 28.2	+1.5
KMI				pP		pP	11 14 41.8	+1.4
KMI				sP		sP	11 14 46.9	+1.4
KMI				PP		PP	11 18 17.3	+6.8
KMI				S		S	11 25 29.5	-0.4
KMI				sS		sS	11 25 51.7	-1.3
KMI				pmax		pmax		
	comp=Z,14nm,1.1s,mb5.3							
KMI				pmax		pmax		
	comp=Z,110nm,3.1s							
KMI				LR		LR		
	comp=N,89nm,19.2s,MS4.5							
KMI				LR		LR		
	comp=E,130nm,18.2s,MS4.5							
KMI				LR		LR		
	comp=Z,170nm,21.1s,MS4.5							
HHC	Hu-ho-hao-te	93.12	313	*e*P		P	11 14 27.4	+0.7
HHC				pP		pP	11 14 41.1	+0.8
HHC				sP		sP	11 14 46.2	+0.8
HHC				PP		PP	11 18 14.6	+3.9
HHC				SKS			11 24 56.2	
HHC				S		S	11 25 29.1	-0.7
HHC				sS		sS	11 25 51.4	-1.5
HHC				pmax		pmax		
	comp=Z,17nm,1.0s,mb5.4							
HHC				pmax		pmax		
	comp=Z,110nm,5.1s							
HHC				LR		LR		
	comp=N,220nm,14.2s,MS4.9							
HHC				LR		LR		
	comp=E,190nm,11.3s,MS4.9							
HHC				LR		LR		
	comp=Z,190nm,15.5s,MS4.7							
CBKS	Cedar Bluff	93.19	49	⇑P		P	11 14 26.9	-0.2
	baz=93							
CMAR	Chiang Mai Arr	93.68	288	P		P	11 14 30.9	+1.2
	comp=Z,9.8nm,1.1s,mb5.2,baz=122,slow=3.0,SNR=42							
CHG	Chiang Mai	93.81	289	⇑P		P	11 14 31.4	+1.0
	comp=Z,12nm,1.4s,mb5.1							
CHTO	Chiang Mai	93.81	289	*e*P		P	11 14 31.0	+0.6
CHTO				pmax		pmax		
	comp=Z,34nm,1.5s,mb5.6							
CHTO	Chiang Mai	93.81	289	*e*P		P	11 14 31.0	+0.6
	comp=Z,34nm,1.5s,mb5.6							
CD2	Chengdu	94.55	302	*e*P		P	11 14 35.3	+1.8
CD2				pP		pP	11 14 48.8	+1.6
CD2				sP		sP	11 14 54.0	+1.7
CD2				PP		PP	11 18 26.5	+4.4
CD2				SKS			11 25 05.5	
CD2				S		S	11 25 42.2	-0.6
CD2				sS		sS	11 26 05.3	-0.6
CD2				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb5.4							
CD2				pmax		pmax		
	comp=Z,30nm,5.2s							
CD2				LR		LR		
	comp=N,160nm,15.5s							
CD2				LR		LR		
	comp=Z,220nm,17.8s,MS4.7							
DGMT	Dagmar	94.86	39	⇑P		P	11 14 34.0	-0.4
	baz=95							
DGMT	Dagmar	94.86	39	*e*P		P	11 14 34.8	+0.3
	comp=Z,48nm,1.1s,mb5.8							
LZH	Lanzhou	96.55	306	*e*P		P	11 14 45.0	+2.5
LZH				pP		pP	11 14 57.0	+0.8
LZH				sP		sP	11 15 06.0	+4.7
LZH				pmax		pmax		
	comp=Z,36nm,1.6s,mb5.5							
LZH				pmax		pmax		
	comp=Z,100nm,4.0s							
YKA	Yellowknife Ar	97.44	24	LR		LR	11 53 28.1	
	comp=Z,16nm,19.1s,MS3.5,baz=145,slow=32							
ECSD	EROS Data Cent	97.44	46	*e*P		P	11 14 45.5	-0.8
	comp=Z,48nm,1.8s,mb5.6							
LPAZ	La Paz	98.43	112	LR		LR	11 54 16.2	
	comp=Z,106nm,18.4s,MS4.4,baz=314,slow=32							
WMQ	Urumqi	110.71	310	*e*Pdif		Pdif	11 15 48.0	+2.6
WMQ				PP		PP	11 20 28.0	+5.0
WMQ				SKS		SKSdf	11 26 54.0	+0.4
WMQ				S		Sdif	11 27 59.0	+0.8
WMQ				AMB		AMB		
	comp=Z,200nm,8.0s							
WMQ				LR		LR		
	comp=N,65nm,22.0s,MS4.5							
WMQ				LR		LR		
	comp=E,110nm,22.0s,MS4.5							
WMQ				LR		LR		
	comp=Z,110nm,20.0s,MS4.4							
MKAR	Makanchi Array	114.97	312	PKP		PKiKP	11 19 52.1	-1.2
	comp=Z,0.4nm,0.5s,baz=259,slow=1.2,SNR=4.8							
KURK	Kurchatov	117.74	316	*c i*PKIKP		PKPdf	11 20 00.4	+1.9
KURK				pmax		pmax		
	comp=Z,5.0nm,2.5s							
BRVK	Borovoye	122.85	319	*c i*PKIKP		PKPdf	11 20 09.5	+1.2
BRVK				pmax		pmax		
	comp=Z,3.0nm,1.0s							
KKAR	Karatay Array	123.03	307	*e*PKIKP		PKPdf	11 20 08.3	-0.7
KBL	Kabul	123.61	297	*e*PKIKP		PKPdf	11 20 10.9	+0.5
ARCES	ARCESS Array B	131.75	351	PKP		PKPdf	11 20 25.0	+0.2
	comp=Z,4.1nm,0.9s,baz=316,slow=3.3,SNR=4.1							
ARCES	ARCESS Array B	131.75	351	PKP		PKPdf	11 20 25.0	+0.2
ANN	Anapa	145.76	318	*i* PKHKP		PKPpre	11 20 50.8	
ANN				pmax		pmax		
	comp=Z,108nm,1.3s							
SUW	Suwalki	146.06	341	*e*PKIKP		PKPdf	11 20 51.6	+0.3
AKASG	Malin Array Be	146.50	332	PKPbc		PKPbc	11 20 52.9	-0.7
	comp=Z,3.4nm,0.6s,baz=42,slow=3.6,SNR=22							
KIEV	Kiev	146.51	332	*e*PKHKP		PKPdf	11 20 52.1	0.0
MALT	Malatya	147.71	306	*e*PKIKP		PKPbc	11 20 57.8	+0.4
LVV	L'vov	149.29	336	*e*PKIKP		PKPbc	11 21 02.4	+1.3
KWP	Kalwaria Pacla	149.94	337	*e*PKP		PKPbc	11 21 03.2	+0.5
KWP	Kalwaria Pacla	149.94	337	*e*PKPbc		PKPbc	11 21 02.3	-0.4
NRDL	Niedersach Rie	150.18	354	*e*PKPbc		PKPbc	11 21 04.0	+0.8
OJC	Ojcow	150.40	341	*e*PKP		PKPbc	11 21 05.0	+1.2
BUR08	Bucovina Ar. S	150.54	332	*e*PKPbc		PKPbc	11 21 05.2	+1.0
BURAR	Bucovina Array	150.55	332	⇓*i*P		PKPab	11 21 11.1	+0.1
BR131	Keskin Array S	150.62	311	*e*PKPbc		PKPbc	11 21 04.5	-0.2
BRTR	Keskin Array B	150.62	311	PKPbc		PKPbc	11 21 04.2	-0.4
	comp=Z,6.7nm,1.1s,baz=140,slow=2.7,SNR=14							
BRTR				PKPab		PKPab	11 21 12.1	+0.5
	comp=Z,4.5nm,0.8s,baz=132,slow=3.5,SNR=3.8							
BRTR	Keskin Array B	150.62	311	*c i*PKIKP		PKPbc	11 21 07.0	+2.3
BRTR				pmax		pmax		
	comp=Z,7.0nm,1.1s							
STHS	Stebnicka Huta	150.63	338	*e*PKIKP		PKPbc	11 21 06.5	+2.1
STHS	Stebnicka Huta	150.63	338	*e*PKP		PKPbc	11 21 06.5	+2.1
KSP	Ksiaz	150.76	346	*e*PKP		PKPbc	11 21 07.7	+3.1
CLZ	Clausthal	150.80	353	*e*PKPbc		PKPbc	11 21 07.0	+2.3
UZH	Uzhgorod	150.92	336	*e*PKIKP		PKPbc	11 21 07.0	+1.9
UZH				*e*			11 21 13.6	
UZH				*e*			11 21 15.4	
UZH				*e*			11 21 21.4	
CLL	Collm	150.97	350	*e*(PKP)		PKPbc	11 21 05.0	-0.1
CLL				⇑*i*PKPbc		PKPbc	11 21 07.2	+2.1
	comp=Z,65nm,1.5s							
CLL				*e*PKPab		PKPab	11 21 14.0	+1.4
	comp=Z,16nm,1.1s							
CLL				⇓*i*(pPKPdf)			11 21 17.3	
	comp=Z,75nm,1.7s							
CLL				*e*			11 21 56.0	
	comp=Z,14nm,1.0s							
CLL				*e*PP		PP	11 24 44.0	+1.9
CLL				*e*pPP			11 24 57.0	
CRVS	Cervenica-Dubn	150.99	338	*e*PKIKP		PKPbc	11 21 02.2	-3.0
CRVS	Cervenica-Dubn	150.99	338	*e*PKP		PKPbc	11 21 02.2	-3.0
UPC	Upice	151.14	346	*e*PKIKP		PKPbc	11 21 07.8	+2.3
UPC				*e*			11 21 15.4	
UPC	Upice	151.14	346	⇑*e*PKP		PKPbc	11 21 07.8	+2.3
UPC				*e*PKPab		PKPab	11 21 15.4	+2.1
DPC	Dobruska-Polom	151.22	345	*e*PKIKP		PKPbc	11 21 05.8	+0.1
DPC				*e*			11 21 08.7	
DPC				*e*			11 21 18.0	
DPC	Dobruska-Polom	151.22	345	⇑*e*PKP		PKPbc	11 21 05.8	+0.1
DPC				*ex*		x	11 21 08.7	
DPC				*e*pPKP		pPKPbc	11 21 18.0	-1.8
OKC	Ostrava-Krasne	151.22	342	*e*PKIKP		PKPbc	11 21 07.7	+2.0
OKC				*e*			11 21 15.9	
OKC	Ostrava-Krasne	151.22	342	⇑*e*PKP		PKPbc	11 21 07.7	+2.0
OKC				*e*PKPAB		PKPab	11 21 15.9	+2.2
BRG	Berggiesshubel	151.22	348	*e*PKPbc		PKPbc	11 21 07.6	+1.9
BRG	Berggiesshubel	151.22	348	*e*PKP		PKPdf	11 20 58.5	-1.2
	comp=Z,14nm,1.6s							
BRG	Berggiesshubel	151.22	348	*i* PKP		PKPbc	11 21 07.3	+1.6
	comp=Z,41nm,1.4s							
BRG				*e*PP		PP	11 24 37.8	-5.9
	comp=Z,4.8nm,0.9s							
BRG								
	comp=N,190nm,11.7s							
BRG								
	comp=E,94nm,17.3s							
BRG								
	comp=Z,237nm,12.3s							
BRG	Berggiesshubel	151.22	348	*e*PKIKP		PKPdf	11 20 58.5	-1.2
BRG				*i*			11 21 07.3	
BRG				pmax		pmax		
	comp=Z,9.0nm,1.6s							
BRG				MLR		MLR		
	comp=N,114nm,11.7s							
BRG				MLR		MLR		
	comp=E,56nm,17.3s							
BRG				MLR		MLR		
	comp=Z,142nm,12.3s,MS5.0							
NEUB	Neuenburg	151.25	351	*e*PKPbc		PKPbc	11 21 07.9	+2.1
BUG	Bochum--Üniver	151.43	357	*e*PKPbc		PKPbc	11 21 08.0	+1.8
PVCC	Panska Ves	151.43	347	*e*PKIKP		PKPbc	11 21 09.2	+3.0
PVCC	Panska Ves	151.43	347	⇑*e*PKP		PKPbc	11 21 09.2	+3.0
MORC	Moravsky Berou	151.44	343	*e*PKIKP		PKPbc	11 21 08.9	+2.7
MORC	Moravsky Berou	151.44	343	⇓*i*P		PKPab	11 21 09.4	+3.2
KECS	Kecovo	151.69	338	*e*PKIKP		PKPbc	11 21 07.9	+1.1
KECS	Kecovo	151.69	338	*e*PKP		PKPbc	11 21 07.9	+1.1
MOX	Moxa	151.82	351	*e*PKP		PKPbc	11 21 08.6	+1.5
	comp=Z,39nm,1.6s							
MOX	Moxa	151.82	351	*e*PKPbc		PKPbc	11 21 09.2	+2.1
MOX	Moxa	151.82	351	*e*PKIKP		PKPbc	11 21 08.6	+1.5
MOX				pmax		pmax		
	comp=Z,39nm,1.6s							
TANN	Tannenbergstha	151.92	350	*e*PKPbc		PKPbc	11 21 09.4	+2.1
PRU	Pruhonice	151.95	347	*e*PKIKP		PKPbc	11 21 10.7	+3.3
PRU	Pruhonice	151.95	347	⇑*e*PKP		PKPbc	11 21 10.7	+3.3
GUNZ	Gunzen	151.99	350	*e*PKPbc		PKPbc	11 21 10.1	+2.6
NKC	Novy Kostel	152.10	350	*e*PKIKP		PKPbc	11 21 10.4	+2.7
NKC	Novy Kostel	152.10	350	⇑*e*PKP		PKPbc	11 21 10.4	+2.7
VYHS	Vyhne	152.22	340	*e*PKIKP		PKPbc	11 21 08.5	+0.5
VYHS	Vyhne	152.22	340	*e*PKP		PKPbc	11 21 08.5	+0.5
MEM	Membach	152.30	359	PKPbc		PKPbc	11 21 10.5	+2.3
MEM				PKPab		PKPab	11 21 20.5	+2.4
PSZ	Piszkesteto	152.37	338	⇑*e*pPKP		PKPbc	11 21 10.8	+2.4
SNF	Seneffe	152.40	1	PKPbc		PKPbc	11 21 11.2	+2.8
SNF				PKPab		PKPab	11 21 20.3	+1.8
BCLA	Clavier	152.50	360	PKPbc		PKPbc	11 21 09.1	+0.5
BCLA				PKPab		PKPab	11 21 18.2	-0.7
TNS	Taunus Mts	152.58	355	*e*PKPbc		PKPbc	11 21 10.9	+2.1
GRF	Grafenberg Arr	152.81	351	*e*PKPbc		PKPbc	11 21 11.4	+2.1
KHC	Kasperske Hory	152.96	348	*e*PKIKP		PKPbc	11 21 10.4	+0.7
KHC	Kasperske Hory	152.96	348	⇑*e*PKP		PKPbc	11 21 12.4	+2.7
KHC				*e*PKPAB		PKPab	11 21 22.2	+1.2
WET	Wettzell	153.08	349	*e*PKPbc		PKPbc	11 21 12.1	+2.2
GEC2	GERESS Array S	153.21	347	*e*PKPbc		PKPbc	11 21 12.2	+2.0
WLF	Walferdange	153.25	359	*e*PKPbc		PKPbc	11 21 12.5	+2.2
CONA	Conrad Observa	153.58	344	⇑*i*PKPbc		PKPbc	11 21 08.7	-2.4
	comp=Z,10nm,1.5s							
CONA				⇓*i*sPKPdf			11 21 26.0	
	comp=Z,22nm,1.4s							
SOP	Sopron	153.61	343	⇑*e*pPKP		PKPbc	11 21 13.5	+2.3
BFO	Black Forest	154.47	355	*e*PKPbc		PKPbc	11 21 14.7	+1.7
SOKA	Soboth	154.95	344	⇑*i*PKPdf		PKPdf	11 21 02.2	-3.1
	comp=Z,4.9nm,1.1s							
GROS	Grobnik	155.02	343	*e*PKPdf		PKPdf	11 21 06.7	+1.3
GROS				*e*			11 21 15.9	
GROS	Grobnik	155.02	343	*e*PKPdf		PKPdf	11 21 06.7	+1.3
GROS				*e*			11 21 15.9	
FETA	Feichten	155.49	351	⇑*i*PKPbc		PKPdf	11 21 10.5	+4.5
	comp=Z,3.9nm,1.1s							
GCIS	Gornji Cirnik	155.53	342	*e*PKPdf		PKPdf	11 21 08.2	+2.0
GCIS				*i*			11 21 17.5	
GCIS				*e*PKPab		PKPab	11 21 31.5	-0.5
GCIS	Gornji Cirnik	155.53	342	*e*PKPdf		PKPdf	11 21 08.2	+2.0
GCIS				*i*			11 21 17.5	
GCIS				*e*PKPab		PKPab	11 21 31.5	-0.5

NEIC ***01*** *11:05:26.8, 19°.35N×64°.95W, h93km, MD3.5(RSPR), After RSPR.*

RSPR 01 11:05:26.8, 19°.35N×64°.95W, h93km±15km, MD3.5/3, 5C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTP	Monte Pirata	1.37	205	⇓*e*P	Pn	11 05 50.9	-0.2
MTP				*e*S	Sn	11 06 09.6	+0.1
CBYP	Canovanas	1.37	219	⇑*e*P	Pn	11 05 50.0	-1.2
CBYP				*e*S	Sn	11 06 09.2	-0.3
SJG	San Juan	1.68	223	*e*Pn	Pn	11 05 54.3	-0.6
CELP	Cerrillos	2.00	231	⇑*e*P	Pn	11 05 59.1	0.0
CELP				*e*S	Sn	11 06 23.0	-0.7
ICM	Isla Caja Muer	2.08	226	⇑*e*P	Pn	11 05 59.4	-0.8
ICM				*e*S	Sn	11 06 25.0	-0.6
LSP	Las Mesas	2.33	240	⇑*e*P	Pn	11 06 03.4	-0.1
LSP				*e*S	Sn	11 06 32.0	+0.3
CRPR	Cabo Rojo, PR	2.44	237	⇑*e*P	Pn	11 06 04.9	-0.1

MAN 01 11:10:33, 17°.52N×120°.02E, h23km, mb4.6, ML3.5, MS3.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.67	78	*e*P	Pb	11 10 47.1	+1.0
ABRA				*e*S	Sb	11 10 57.0	+2.0
BOLP	Bolinao	1.13	185	*e*P	Pn	11 10 53.3	-0.1
BOLP				*e*S	Sb	11 11 04.3	-3.9
APYP	Conner	1.22	73	*e*P	Pn	11 10 55.3	+0.7
BCPH	Baguio City Da	1.25	154	⇑*i*P	Pn	11 10 54.4	-0.6
BCPH				*i* S	Sn	11 11 12.1	+0.9
CAUP	Cauayan	1.81	108	*e*P	Pn	11 11 05.3	+2.5
BALP	Baler	2.31	140	*e*P	Pn	11 11 11.5	+1.8

NEIC 01 11:12:37.9, 63°.22N×150°.60W, h125km, MG2.9(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.27	31	P	Pn	11 12 55.7	+0.4
TRF				S	Sn	11 13 09.4	+0.9
PPLA	Purkeypile	0.79	247	P	Pn	11 12 58.3	-0.2
RND	Reindeer	0.81	76	P	Pn	11 12 57.3	-1.3
RND				S	Sn	11 13 13.9	-0.3
BPAW	Bear Paw Mtn.	0.90	349	P	Pn	11 12 59.4	0.0
BPAW				S	Sn	11 13 15.4	-0.2
MCK	McKinley	0.91	55	P	Pn	11 12 58.5	-0.9
MCK				S	Sn	11 13 15.9	+0.2
CHUM	Lake Minchumin	1.02	312	P	Pn	11 13 00.4	-0.1
CHUM				S	Sn	11 13 17.3	-0.3
DHY	Denali Highway	1.47	94	P	Pn	11 13 04.3	-1.0
DHY				S	Sn	11 13 26.3	+0.2
SML	Sawmill	1.76	142	P	Pn	11 13 07.5	-1.2
SML				S	Sn	11 13 32.5	+0.4
PMR	Palmer	1.77	157	P	Pn	11 13 07.6	-1.1
MDM	Murphy Dome	2.03	30	P	Pn	11 13 11.8	-0.1
MDM				S	Sn	11 13 36.5	-1.5
COLA	College	2.05	35	P	Pn	11 13 11.9	-0.3
RC01	Rabbit Creek A	2.17	169	P	Pn	11 13 13.4	-0.3
RC01				S	Sn	11 13 40.1	-1.0
PAX	Paxson	2.34	94	P	Pn	11 13 16.2	+0.4
TTA	Tatalina	2.48	266	*e*P	Pn	11 13 16.8	-0.8
TT01	Tatalina	2.49	265	P	Pn	11 13 17.0	-0.7
SLKM	Skilak Lake	2.73	176	P	Pn	11 13 19.7	-1.1
DOT	Dot Lake	2.97	79	P	Pn	11 13 23.3	-0.5
DIV	Divide	3.08	131	P	Pn	11 13 23.5	-1.9
IM3	Indian Mountai	3.09	335	P	Pn	11 13 24.9	-0.5
MENT	Mentasta	3.14	92	*e*P	Pn	11 13 25.9	-0.2
SVW2	Sparrevohn	3.16	230	*e*P	Pn	11 13 25.8	-0.6
SEW	Seward	3.17	170	P	Pn	11 13 25.7	-0.8
BRLK	Bradley Lake	3.47	182	P	Pn	11 13 29.9	-0.6
BMRM	Bremner River	3.61	126	P	Pn	11 13 30.8	-1.5
BCA3	Beaver Creek A	4.00	88	P	Pn	11 13 36.7	-0.7
COLD	Coldfoot	4.03	2	P	Pn	11 13 37.4	-0.4
EGAK	Eagle	4.

683nm,0.4s
KOLN Koldanda 3.15 178 *e*Pn **Pn 11 24 54.6 +1.2**
KOLN *e*Sn **Sn 11 25 36.2 +5.0**
1μm,0.6s
PTH Pithoragarh 3.15 245 *e*PKP **Pn 11 24 55.0 +1.6**
PTH *e*SB **Sg 11 25 44.5 -0.2**
JOSI Joshimath 3.41 265 *e*PKP **Pn 11 25 00.3 +3.3**
JOSI *e*S **Sn 11 25 40.4 +2.8**
KKN Kakani 3.50 153 *e*Pn **Pn 11 24 59.4 +1.2**
DMN Daman 3.60 157 *e*Pn **Pn 11 25 00.9 +1.4**
DMN *e*Sn **Sn 11 25 46.9 +4.6**
2μm,1.2s
GUN Gumba 3.66 145 *e*Pn **Pn 11 25 01.6 +1.2**
PKIN Phulchoki 3.73 153 *e*Pn **Pn 11 25 02.4 +1.0**
PKI Pulchoki 3.74 153 *e*Pn **Pn 11 25 02.7 +1.1**
JIRN Jiri 4.02 143 *e*Pn **Pn 11 25 06.9 +1.5**
KLP Kalpa 4.53 279 *e*PKP **Pn 11 25 11.6 -0.8**
RAMN Ramite 4.81 145 *e*Pn **Pn 11 25 16.4 +0.2**
TAPN Taplejung 5.13 133 *e*Pn **Pn 11 25 21.3 +0.7**
ODAN Odare 5.30 139 *e*Pn **Pn 11 25 23.7 +0.7**
SDNR Sundarnagar 5.62 277 *e*x **Pn 11 25 32.5 +5.2**
AYAN Aya Nagar 6.05 248 *e*PKP **Pn 11 25 31.9 -1.4**
AGRA Agra 6.10 234 *e*PKP **Pn 11 25 33.1 -0.8**
AGRA *e*x x 11 26 48.8
SONA Sohna 6.19 246 *e*PKP **Pn 11 25 32.9 -2.2**
KUDL Kundal 6.70 247 *e*PKP **Pn 11 25 39.6 -2.6**
KUDL AMb AMB 11 25 41.4
comp=Z,19nm,0.6s
KUDL *e*x x 11 27 32.6
LSA Lhasa 6.73 99 P **Pn 11 25 43.8 +1.2**
LSA S **Sn 11 26 57.7 -1.9**
LSA LR LR
comp=E,1μm,6.5s
LSA LR LR
comp=Z,1μm,6.2s
LSA Lhasa 6.73 99 *e*P **Pn 11 25 44.2 +1.6**
LSA pmax pmax
comp=Z,64nm,1.0s
LSA Lhasa 6.73 99 *e*Pn **Pn 11 25 44.2 +1.6**
comp=Z,64nm,1.0s
KHET Khetri 7.28 249 *e*PKP **Pn 11 25 47.9 -2.3**
KHET AMb AMB 11 25 57.8
comp=Z,22nm,1.4s
SHL Shillong 9.12 124 *e*x x 11 26 09.0
SHL *e*S x 11 27 47.0
KSH Kashi 10.54 326 *e*P **Pn 11 26 35.0 +0.2**
KSH *e*pP 11 26 42.1
KSH *e*PP 11 26 43.7
KSH *e*sP 11 26 46.9
KSH *e*S **Sn 11 28 29.4 -3.7**
KSH *e*sS 11 28 40.4
KSH *e*SS 11 28 42.8
KSH pmax pmax
comp=Z,41nm,0.9s
KSH LR LR
comp=N,2μm,12.5s
KSH LR LR
comp=E,3μm,12.0s
KSH LR LR
comp=Z,1μm,9.6s
AKL Akola 11.73 211 ⇑ *i*P **Pn 11 26 48.1 -3.1**
AKL *i*x x 11 28 53.9
KBL Kabul 12.69 290 *e*P **Pn 11 27 03.4 -0.8**
KBL *e* 11 29 25.4
KBL pmax pmax
comp=Z,14nm,0.8s
KBL Kabul 12.69 290 *e*Pn **Pn 11 27 03.4 -0.9**
comp=Z,14nm,0.8s
KBL *e*Sn **Sn 11 29 25.4 -0.3**
KZA Kyzart 12.94 332 *e*Pn **Pn 11 27 08.1 +0.4**
comp=Z,15nm,1.0s
VIS Vishakhapatnam 13.15 181 *i*P **Pn 11 27 20.0 +9.3**
VIS *i*S **Sn 11 29 44.1 +6.9**
WMQ Urumqi 13.29 13 *e*P **Pn 11 27 12.8 +0.4**
WMQ pmax pmax
comp=Z,17nm,1.0s
AML Almayashu 13.66 328 *e*Pn **Pn 11 27 16.8 -0.7**
comp=Z,19nm,1.1s
AAK Ala-Archa 13.71 331 Pn **Pn 11 27 19.3 +1.1**
comp=Z,0.0nm,0.3s,baz=205,slow=4.3,SNR=3.6
AAK Lg 11 31 24.1
comp=Z,0.0nm,0.3s,baz=322,slow=13,SNR=1.6
AAK LR LR 11 33 02.5
comp=Z,367nm,19.6s,baz=128,slow=39
AAK Ala-Archa 13.71 331 *ce*P **Pn 11 27 19.2 +1.0**
AAK pmax pmax
comp=Z,3.0nm,1.7s
EKS2 Erkin-Say 14.05 329 *e*Pn **Pn 11 27 24.8 +2.0**
comp=Z,5.2nm,0.7s
HYB Hyderabad 14.19 200 *i*P **Pn 11 27 18.5 -6.3**
HYB *e*S **Sn 11 29 58.0 -4.4**
GTA Gaotai 15.79 53 *e*P **Pn 11 27 44.0 -2.1**
GTA pmax pmax
comp=Z,4.0nm,0.7s
MK31 Makanchi Array 15.87 357 *e*P **Pn 11 27 47.2 +0.1**
MKAR Makanchi Array 15.87 357 Pn **Pn 11 27 46.5 -0.5**
comp=Z,0.2nm,0.3s,baz=183,slow=11,SNR=29
MKAR LR LR 11 34 54.7
comp=Z,281nm,18.9s,baz=174,slow=41
MKAR Makanchi Array 15.87 357 *ce*P **Pn 11 27 49.2 +2.1**
MKAR pmax pmax
comp=Z,7.0nm,0.8s
KKAR Karatay Array 15.95 323 *e*P **Pn 11 27 47.8 -0.4**
KKAR pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array 15.95 323 *e*Pn **Pn 11 27 47.8 -0.4**
comp=Z,8.3nm,0.8s
LZH Lanzhou 17.73 68 *e*P **Pn 11 28 12.3 +1.6**
LZH pP pP 11 28 19.0 +5.4
LZH sP sP 11 28 23.1 +8.5
LZH pmax pmax
comp=Z,39nm,1.2s
LZH pmax pmax
comp=Z,80nm,4.0s
LZH LR LR
comp=N,610nm,10.3s
LZH LR LR
comp=E,830nm,10.3s
LZH LR LR
comp=Z,900nm,11.4s
KMI Kunming 17.94 104 P **Pn 11 28 11.6 -1.8**
KMI pP pP 11 28 19.6 +3.5
KMI sP sP 11 28 23.9 +6.9
KMI PP 11 28 27.8
KMI S **Sn 11 31 35.7 +2.0**
KMI pmax pmax
comp=Z,15nm,0.7s
KMI pmax pmax
comp=Z,46nm,3.3s
KMI LR LR
comp=N,620nm,19.3s
KMI LR LR
comp=E,280nm,18.5s
KMI LR LR
comp=Z,400nm,19.8s
CMAR Chiang Mai Arr 18.71 128 P **Pn 11 28 19.6 -3.3**
comp=Z,0.2nm,0.3s,baz=313,slow=11,SNR=20
KURK Kurchatov 20.10 351 P **P 11 28 35.6 -1.8**
comp=Z,22nm,1.1s,baz=172,slow=10,SNR=54
KURK LR LR 11 37 27.2
comp=Z,364nm,18.4s,MS3.8,baz=185,slow=40
KURK Kurchatov 20.10 351 *d*P **P 11 28 36.4 -1.0**
KURK pmax pmax
comp=Z,42nm,1.2s
XAN Xi'an 21.66 75 P **P 11 28 51.6 -2.9**
XAN pP 11 29 03.2
XAN pmax pmax
comp=Z,4.0nm,1.1s,mb3.8
XAN pmax pmax
comp=Z,27nm,11.2s
XAN LR LR
comp=N,190nm,10.7s
XAN LR LR
comp=Z,110nm,14.2s,MS3.4
ENH Enshi 22.37 85 *e*P **P 11 29 00.2 -1.9**
comp=Z,23nm,1.0s,mb4.6
ZALV Zalesovo Beam 23.02 2 P **P 11 29 08.6 -0.2**
comp=Z,3.9nm,0.7s,mb3.9,baz=182,slow=10,SNR=17
ZALV LR LR 11 39 08.2
comp=Z,135nm,18.3s,MS3.4,baz=65,slow=39
ZALV Zalesovo Beam 23.02 2 P **P 11 29 08.6 -0.2**
ZALV LR LR 11 39 08.2
BVAR Borovoye Array 24.06 340 P **P 11 29 19.7 +0.7**
comp=Z,2.3nm,0.7s,mb3.7,baz=146,slow=11,SNR=12
BRVK Borovoye 24.12 340 *ce*P **P 11 29 21.3 +1.8**
BRVK pmax pmax
comp=Z,20nm,2.5s,mb4.1
BRVK Borovoye 24.12 340 *e*P **P 11 29 20.3 +0.7**
comp=Z,4.6nm,0.7s,mb4.0
SONM Songino Array 24.32 40 P **P 11 29 20.9 -0.6**
comp=Z,3.9nm,0.7s,mb4.0,baz=226,slow=10,SNR=6.6
SONM LR LR 11 39 36.4
comp=Z,148nm,20.8s,MS3.5,baz=57,slow=38
ZAK Zakamensk 24.42 32 *e*P **P 11 29 22.7 +0.4**
ULN Ulaanbaatar 24.70 40 *e*P **P 11 29 24.8 -0.1**
ULN pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
ULN Ulaanbaatar 24.70 40 *e*P **P 11 29 24.8 -0.1**
comp=Z,6.2nm,0.8s,mb4.2
ABKAR Akbulak array 25.51 323 *e*P **P 11 29 32.2 0.0**
comp=Z,5.3nm,0.7s,mb4.2
TLY Talaya 25.51 30 *e*P **P 11 29 33.4 +1.1**
TLY pmax pmax
comp=Z,7.0nm,1.6s,mb3.9
TLY MLR MLR
comp=Z,74nm,15.0s,MS3.3
IRK Irkutsk 26.19 30 *e*P **P 11 29 40.1 +1.7**
IRK pmax pmax
comp=Z,18nm,1.9s,mb4.3
QIZ Qiongzhong 26.59 110 P **P 11 29 37.6 -4.7**
QIZ S **S 11 34 08.6 -8.8**
QIZ LR LR
comp=N,270nm,19.9s,MS3.8
QIZ LR LR
comp=E,84nm,18.3s,MS3.8
QIZ LR LR
comp=Z,140nm,13.4s,MS3.7
AKTK Aktyubinsk 27.22 323 P **P 11 29 48.0 +0.3**
AKTK LR LR 11 41 49.7
AKTO Aktyubinsk 27.22 323 P **P 11 29 48.0 +0.3**
comp=Z,1.1nm,0.5s,mb3.7,baz=124,slow=10,SNR=6.2
AKTO LR LR 11 41 49.7
comp=Z,201nm,19.0s,MS3.7,baz=126,slow=39
ARU Arti 30.89 333 *d*P **P 11 30 22.0 +1.8**
ARU *e* 11 31 21.2
ARU S **S 11 35 26.4 +2.1**
ARU SS SS 11 37 08.9 -27
ARU pmax pmax
comp=Z,15nm,1.7s,mb4.5
GNI Garni 32.63 297 *c*P **P 11 30 40.4 +4.6**
GNI pmax pmax
comp=Z,13nm,1.2s
ZEI Tsey 33.53 302 *e*P **P 11 30 46.5 +2.9**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
KIV Kislovodsk 34.56 304 ⇓ *e*P **P 11 30 55.0 +2.4**
KIV *e* 11 32 07.6
KIV *e*S **S 11 36 12.5 -9.3**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,100nm,18.0s,MS3.6
VRHR Novokhopersk 36.83 315 *e*P **P 11 31 12.8 +0.9**
VRHR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VRHR pmax pmax
comp=N,10.0nm,1.1s
VRHR pmax pmax
comp=E,10.0nm,0.8s
KSRS Korea Array 37.05 68 P **P 11 31 12.9 -1.1**
comp=E,1.3nm,0.6s,mb3.9,baz=270,slow=9.6,SNR=4.0
KSRS Korea Array 37.05 68 P **P 11 31 12.9 -1.1**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.8
VORD Divnogorie 38.21 315 *e*P **P 11 31 25.0 +1.4**
VORD pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD pmax pmax
comp=E,20nm,1.7s
VSR Storozhevoye 38.35 315 *e*P **P 11 31 25.5 +0.7**
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,20nm,1.0s,mb4.8
VSR pmax pmax
comp=N,9.0nm,0.8s
OBN Obninsk 40.91 320 ⇓ *e*P **P 11 31 46.6 +0.6**
OBN *e* 11 33 19.0
OBN pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.8
BRTR Keskin Array B 41.16 296 P **P 11 31 48.8 +0.4**
comp=Z,2.4nm,1.1s,mb3.7,baz=115,slow=4.4,SNR=5.8
KLMR Klimovskoe 41.52 329 *e*P **P 11 31 51.4 +0.4**
KLMR pmax pmax
comp=Z,27nm,1.3s,mb4.7
AKASG Malin Array Be 44.45 313 P **P 11 32 13.2 -1.7**
comp=Z,1.6nm,0.6s,mb4.0,baz=83,slow=7.2,SNR=4.9
MJAR Matsushiro Arr 45.34 68 P **P 11 32 20.1 -2.0**
comp=Z,1.1nm,0.6s,mb3.9,baz=282,slow=10,SNR=3.2
FINES FINESS Array B 47.86 327 P **P 11 32 40.9 -0.7**
comp=Z,3.6nm,0.6s,mb4.6,baz=107,slow=8.7,SNR=6.0
ARCES ARCESS Array B 50.28 337 P **P 11 33 00.5 +0.5**
comp=Z,5.4nm,0.9s,mb4.6,baz=76,slow=5.1,SNR=4.4
ARCES ARCESS Array B 50.28 337 P **P 11 33 00.5 +0.5**
SEY Seymchan 53.39 32 *ce*P **P 11 33 23.0 -0.3**
NB2 NORSAR Subarra 54.96 326 P **P 11 33 32.9 -1.9**
comp=Z,3.8nm,0.8s,mb4.5,baz=88,slow=7.4
NOA NORSAR Array B 54.96 326 P **P 11 33 33.4 -1.4**
comp=Z,2.3nm,0.7s,mb4.3,baz=89,slow=7.1,SNR=6.6
NOA LR LR 11 58 20.5
comp=Z,94nm,18.6s,MS3.9,baz=80,slow=37
NOA NORSAR Array B 54.96 326 P **P 11 33 33.4 -1.4**
NOA LR LR 11 58 20.5
CEL Celeste 55.03 297 *e*P **P 11 33 35.0 -0.6**
comp=Z,12nm,0.8s,mb5.0
PETK Petropavlovsk- 56.70 44 LR LR 12 02 27.3
comp=Z,94nm,18.1s,MS3.9,baz=1.3,slow=41
KEST Kesra 60.77 296 P **P 11 34 14.9 -1.1**
comp=Z,2.3nm,1.0s,mb4.3,baz=92,slow=5.6,SNR=4.9
SUMG Summit 69.47 344 *e*P **P 11 35 11.9 0.0**
comp=Z,13nm,0.9s,mb4.9
WRA Warramunga Arr 70.30 129 P **P 11 35 14.9 -2.8**
comp=Z,4.4nm,0.8s,mb4.5,baz=324,slow=6.3,SNR=15
ASAR Alice Springs 72.66 132 P **P 11 35 29.4 -2.5**
comp=Z,1.3nm,0.8s,mb3.9,baz=323,slow=5.9,SNR=8.6
COLD Coldfoot 74.16 19 *e*P **P 11 35 40.6 +0.5**
comp=Z,3.3nm,1.0s,mb4.2
TORD Torodi Ar. Bea 76.41 277 P **P 11 35 51.2 -2.8**
comp=Z,1.6nm,0.7s,mb4.1,baz=44,slow=4.8,SNR=9.1
TORD Torodi Ar. Bea 76.41 277 P **P 11 35 51.2 -2.8**
COLA College 76.51 20 *e*P **P 11 35 53.9 +0.2**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
COLA College 76.51 20 *e*P **P 11 35 53.9 +0.2**
comp=Z,3.7nm,0.8s,mb4.4
ILAR Eielson Array 76.86 20 P **P 11 35 54.4 -1.4**
comp=Z,4.0nm,0.9s,mb4.3,baz=300,slow=4.8,SNR=30
INK Inuvik 77.31 13 *e*P **P 11 35 57.4 -0.8**
INK pmax pmax
comp=Z,17nm,1.4s
INK Inuvik 77.31 13 *e*P **P 11 35 57.4 -0.8**
comp=Z,17nm,1.4s,mb4.8
EGAK Eagle 78.45 18 *e*P **P 11 36 05.1 +0.5**
comp=Z,12nm,1.3s,mb4.7
BOSA Boshof 81.14 229 P **P 11 36 18.1 -1.6**
comp=Z,3.0nm,0.8s,mb4.3,baz=112,slow=14,SNR=4.9
STKA Stephens Creek 83.25 133 P **P 11 36 27.9 -2.7**
comp=Z,4.1nm,0.8s,mb4.5,baz=1.3,slow=3.2,SNR=4.0
STKA Stephens Creek 83.25 133 P **P 11 36 27.9 -2.7**
DBIC Dimbokro 85.20 275 P **P 11 36 39.6 -1.5**
comp=Z,3.4nm,0.7s,mb4.6,baz=24,slow=9.6,SNR=5.2
YKA Yellowknife Ar 85.77 8 P **P 11 36 42.5 -0.5**
comp=Z,2.6nm,0.8s,mb4.5,baz=337,slow=4.8,SNR=3.7
YKA Yellowknife Ar 85.77 8 P **P 11 36 42.5 -0.5**
TXAR Lajitas Array 119.68 7 PKP PKPdf 11 42 52.7 -1.9
comp=Z,0.2nm,0.6s,baz=246,slow=0.6,SNR=5.5
TXAR Lajitas Array 119.68 7 PKP PKPdf 11 42 52.7 -1.9
CPUP Villa Florida 145.43 268 PKPbc PKPdf 11 43 40.3 -2.2
comp=Z,0.4nm,0.3s,baz=108,slow=6.4,SNR=3.2
LPAZ La Paz 150.30 293 PKPbc PKPbc 11 43 54.5 -1.4
comp=Z,1.1nm,0.8s,baz=231,slow=6.5,SNR=4.4
LPAZ PKPab PKPab 11 44 00.2 -2.0
comp=Z,1.0nm,0.6s,baz=166,slow=3.8,SNR=4.8

IDC 01 11:28:38.1±2.6, 6°.84S×147°.83E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=58.7km s-min=40.6km az=106.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.46**	**224**	P	Pn	11 32 54.6	-1.0
	0.2nm,0.3s,baz=49,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**21.42**	**217**	P	P	11 33 27.9	0.0
	1.8nm,0.5s,baz=52,slow=9.2,SNR=47						
FITZ	**Fitzroy Crossi**	**24.35**	**241**	P	P	11 33 56.4	-1.5
	1.9nm,0.5s,baz=50,slow=10,SNR=12						
STKA	**Stephens Creek**	**25.58**	**192**	P	P	11 34 09.1	+0.1
	1.0nm,0.3s,baz=20,slow=9.3,SNR=7.7						
TORD	**Torodi Ar. Bea**	**146.09**	**283**	PKPbc	PKPbc	11 48 22.1	+0.9
	0.5nm,0.8s,baz=75,slow=3.8,SNR=4.0						

*ISK **01** 11:58:31.6, 37°.91N×27°.10E, h5km, MD3.1*
*ATH **01** 11:58:31.3, 37°.88N×27°.18E, h18km±2km, MD3.2/4*
*NEIC **01** 11:58:31.0, 37°.90N×27°.13E, h3km, ML3.1(ISK), After ISK.*
*ISCJB **01** 11:58:31.7±0.4, 37°.90N±0°.02×27°.09E±0°.03, h1km±4km, Error ellipse: s-maj=4.0km s-min=2.5km az=162.0*
*DDA **01** 11:58:31.5, 37°.92N×27°.11E, h6km±3km, Md3.1*
*CSEM **01** 11:58:32.1±0.1, 37°.91N×27°.10E, h2km, MD3.1, Error ellipse: s-maj=3.2km s-min=2.1km az=72.0*
*THE **01** 11:58:33.1, 37°.97N×27°.11E, h2km±1km, ML3.2/3, Error ellipse: s-maj=1.0km s-min=0.4km az=31.0*
ISC 01 11:58:32.5±0.3, 37°.91N±0°.02×27°.10E±0°.03, h5km±3km, n84, σ0=92/128, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.24**	**154**	*i* P	**Pg**	**11 58 36.8**	**-0.3**
GCAM				*i* S	**Sg**	**11 58 40.7**	**+0.4**
GCAM	**G?zelcaml?**	**0.24**	**154**	*i* P	**Pg**	**11 58 36.8**	**-0.3**
GCAM				*i* S	**Sg**	**11 58 40.7**	**+0.4**
SMG	**Samos**	**0.29**	**226**	*e*Pb	**Pg**	**11 58 37.9**	**-0.3**
SMG				*e*Sb	**Sg**	**11 58 43.3**	**+1.2**
SMG	**Samos**	**0.29**	**226**	*e*PB	**Pg**	**11 58 37.9**	**-0.3**
SMG				*e*SB	**Sg**	**11 58 43.3**	**+1.2**
SMG	**Samos**	**0.29**	**226**	*e*Pb	**Pg**	**11 58 37.9**	**-0.3**
SMG				*e*Sb	**Sg**	**11 58 43.3**	**+1.2**
BLCB	**Balcova**	**0.47**	**354**	PG	**Pg**	**11 58 41.4**	**-0.2**
BLCB				SG	**Sg**	**11 58 48.0**	**+0.1**
BLCB	**Balcova**	**0.47**	**354**	P	**Pg**	**11 58 41.5**	**-0.2**
BLCB				S	**Sg**	**11 58 47.7**	**-0.1**
BLCB	**Balcova**	**0.47**	**354**	P	**Pg**	**11 58 41.5**	**-0.2**
BLCB				S	**Sg**	**11 58 47.7**	**-0.1**
BLCB				*i* Sg	**Sg**	**11 58 48.0**	**+0.2**
IZM	**Izmir**	**0.50**	**15**	PG	**Pg**	**11 58 41.8**	**-0.3**
IZM				SG	**Sg**	**11 58 49.8**	**+1.1**
IZM	**Izmir**	**0.50**	**15**	Pg	**Pg**	**11 58 41.8**	**-0.3**
IZM				Sg	**Sg**	**11 58 49.8**	**+1.1**
IZM	**Izmir**	**0.50**	**15**	*i* Pg	**Pg**	**11 58 41.8**	**-0.4**
IZM				*i* Sg	**Sg**	**11 58 49.8**	**+1.1**
KDAG	**Bornova**	**0.51**	**15**	*i* P	**Pg**	**11 58 40.8**	**-1.4**
KDAG				*i* S	**Sg**	**11 58 46.0**	**-2.8**
KDAG	**Bornova**	**0.51**	**15**	*i* P	**Pg**	**11 58 40.8**	**-1.5**
URLA	**Izmir**	**0.60**	**318**	*i* P	**Pg**	**11 58 42.6**	**-1.5**
URLA				*i* S	**Sg**	**11 58 51.5**	**-0.3**
URLA	**Izmir**	**0.60**	**318**	*i* P	**Pg**	**11 58 42.6**	**-1.5**
URLA				*i* S	**Sg**	**11 58 51.5**	**-0.4**
AYDN	**Tasoluk**	**0.67**	**112**	*i* P	**Pg**	**11 58 45.2**	**-0.1**
AYDN				*i* S	**Sg**	**11 58 53.7**	**-0.3**
AYDN	**Tasoluk**	**0.67**	**112**	*i* P	**Pg**	**11 58 45.2**	**-0.1**
AYDN				*i* S	**Sg**	**11 58 53.7**	**-0.2**
MLSB	**Milas**	**0.82**	**139**	*e*PG	**Pg**	**11 58 48.3**	**+0.1**
MLSB				*e*SG	**Sg**	**11 58 59.5**	**+0.7**
MLSB	**Milas**	**0.82**	**139**	Pg	**Pg**	**11 58 47.8**	**-0.4**
MLSB	**Milas**	**0.82**	**139**	Pg	**Pg**	**11 58 47.8**	**-0.4**
MLSB				*e*Sg	**Sg**	**11 58 59.5**	**+0.7**
BODT	**Bodrum**	**0.87**	**169**	*e*PG	**Pg**	**11 58 48.7**	**-0.5**
BODT				*e*SG	**Sg**	**11 59 01.0**	**+0.6**
BODT	**Bodrum**	**0.87**	**169**	Pg	**Pg**	**11 58 48.9**	**-0.2**
BODT	**Bodrum**	**0.87**	**169**	Pg	**Pg**	**11 58 48.9**	**-0.2**
BODT				*e*Sg	**Sg**	**11 59 01.0**	**+0.6**
BDRM	**Kayabasi**	**0.89**	**162**	*i* P	**Pg**	**11 58 48.6**	**-1.0**
BDRM				*i* S	**Sg**	**11 59 00.7**	**-0.4**
BDRM	**Kayabasi**	**0.89**	**162**	*i* P	**Pg**	**11 58 48.6**	**-1.0**
BDRM				*i* S	**Sg**	**11 59 00.7**	**-0.4**
CHOS	**Chios island**	**0.95**	**300**	*e*PN	**Pn**	**11 58 51.4**	**-1.2**
CHOS				*e*SN	**Sn**	**11 59 05.0**	**-1.5**
CHOS	**Chios island**	**0.95**	**300**	P	**Pg**	**11 58 50.8**	**0.0**
CHOS				S	**Sg**	**11 59 04.6**	**+1.4**
CHOS	**Chios island**	**0.95**	**300**	P	**Pg**	**11 58 50.8**	**0.0**
CHOS	**Chios island**	**0.95**	**300**	*e*Pn	**Pn**	**11 58 51.4**	**-1.2**
CHOS				S	**Sg**	**11 59 04.6**	**+1.4**
CHOS				*e*Sn	**Sn**	**11 59 05.0**	**-1.5**
AKHS	**Akhisar**	**1.11**	**30**	*i* P	**Pg**	**11 58 52.6**	**-1.3**
AKHS				*i* S	**Sg**	**11 59 09.8**	**+1.5**
AKHS	**Akhisar**	**1.11**	**30**	*i* P	**Pg**	**11 58 52.6**	**-1.3**
AKHS				*i* S	**Sg**	**11 59 09.9**	**+1.5**
AKS	**Akhisar**	**1.11**	**30**	*e*PN	**Pn**	**11 58 53.6**	**-1.2**
AKS	**Akhisar**	**1.11**	**30**	Pn	**Pn**	**11 58 54.0**	**-0.8**
AKS	**Akhisar**	**1.11**	**30**	Pn	**Pn**	**11 58 54.0**	**-0.8**
YER	**Yerkesik**	**1.22**	**129**	*e*PN	**Pn**	**11 58 54.8**	**-1.4**
YER	**Yerkesik**	**1.22**	**129**	Pn	**Pn**	**11 58 54.2**	**-2.0**
YER	**Yerkesik**	**1.22**	**129**	*e*Pn	**Pn**	**11 58 54.8**	**-1.4**
DAT	**Datca**	**1.24**	**162**	*e*PN	**Pn**	**11 58 55.3**	**-1.2**
DAT				*e*SN	**Sn**	**11 59 13.2**	**-0.5**
DAT	**Datca**	**1.24**	**162**	*e*Pn	**Pn**	**11 58 55.3**	**-1.2**
DAT				*e*Sn	**Sn**	**11 59 13.2**	**-0.4**
NIS1	**Nisyros Isl.**	**1.31**	**177**	P	**Pn**	**11 58 57.7**	**+0.2**
NIS1				S	**Sg**	**11 59 17.1**	**+2.5**
NIS1	**Nisyros Isl.**	**1.31**	**177**	P	**Pn**	**11 58 57.7**	**+0.2**
NIS1				S	**Sg**	**11 59 17.1**	**+2.5**
KULA	**Kula-Manisa**	**1.37**	**63**	*e*PN	**Pn**	**11 58 58.1**	**-0.1**
KULA	**Kula-Manisa**	**1.37**	**63**	*e*Pn	**Pn**	**11 58 58.1**	**-0.2**
AYVA	**Ayvalik**	**1.43**	**347**	*i* P	**Pn**	**11 58 59.1**	**0.0**
AYVA				*i* S	**Sb**	**11 59 18.5**	**+0.3**
AYVA	**Ayvalik**	**1.43**	**347**	*i* P	**Pn**	**11 58 59.1**	**0.0**
AYVA				*i* S	**Sb**	**11 59 18.5**	**+0.3**
PRK	**Paraskevi**	**1.48**	**334**	*e*Pn	**Pn**	**11 59 00.1**	**+0.2**
PRK				*e*Sn	**Sn**	**11 59 20.8**	**+1.2**
PRK	**Paraskevi**	**1.48**	**334**	*e*PN	**Pn**	**11 59 00.1**	**+0.2**
PRK				*e*SN	**Sn**	**11 59 20.8**	**+1.2**
PRK	**Paraskevi**	**1.48**	**334**	P	**Pn**	**11 58 58.9**	**-1.0**
PRK				S	**Sn**	**11 59 18.7**	**-0.9**
PRK	**Paraskevi**	**1.48**	**334**	P	**Pn**	**11 58 58.9**	**-1.0**
PRK	**Paraskevi**	**1.48**	**334**	*e*Pn	**Pn**	**11 59 00.1**	**+0.2**
PRK				S	**Sn**	**11 59 18.7**	**-0.9**
PRK				*e*Sn	**Sn**	**11 59 20.8**	**+1.2**
APE	**Apeiranthos**	**1.51**	**236**	*e*PN	**Pn**	**11 59 00.8**	**+0.6**
APE	**Apeiranthos**	**1.51**	**236**	*e*Pn	**Pn**	**11 59 00.3**	**+0.1**
APE	**Apeiranthos**	**1.51**	**236**	*e*PN	**Pn**	**11 59 00.3**	**+0.1**
APE	**Apeiranthos**	**1.51**	**236**	P	**Pn**	**11 59 00.3**	**+0.1**
APE	**Apeiranthos**	**1.51**	**236**	P	**Pn**	**11 59 00.3**	**+0.1**
DENT	**Denizli**	**1.54**	**95**	*e*PN	**Pn**	**11 59 00.3**	**-0.3**
DENT	**Denizli**	**1.54**	**95**	*e*Pn	**Pn**	**11 59 00.3**	**-0.3**
TURN	**Turunc**	**1.58**	**131**	*i* P	**Pn**	**11 58 57.8**	**-3.5**
TURN				*i* S	**Sn**	**11 59 16.8**	**-5.3**
DEMI	**Demirci**	**1.69**	**48**	*i* P	**Pn**	**11 59 03.8**	**+1.0**
DEMI				*i* S	**Sn**	**11 59 25.2**	**+0.4**
DEMI	**Demirci**	**1.69**	**48**	*i* P	**Pn**	**11 59 03.8**	**+1.0**
DEMI				*i* S	**Sn**	**11 59 25.2**	**+0.3**
BALB	**Balikesir**	**1.83**	**19**	*e*PN	**Pn**	**11 59 04.5**	**-0.1**
BALB	**Balikesir**	**1.83**	**19**	*e*Pn	**Pn**	**11 59 04.5**	**-0.1**
BALY	**Balya**	**1.87**	**12**	*i* P	**Pn**	**11 59 05.8**	**+0.7**
BALY				*i* S	**Sn**	**11 59 33.0**	**+3.9**
BALY	**Balya**	**1.87**	**12**	*i* P	**Pn**	**11 59 05.8**	**+0.6**
KHL	**Karahalli**	**1.95**	**77**	*e*PN	**Pn**	**11 59 06.5**	**+0.2**
KHL	**Karahalli**	**1.95**	**77**	*e*Pn	**Pn**	**11 59 06.5**	**+0.2**
EZN	**Ezine**	**2.00**	**343**	*e*PN	**Pn**	**11 59 07.3**	**+0.3**
EZN	**Ezine**	**2.00**	**343**	*e*Pn	**Pn**	**11 59 07.3**	**+0.3**
GONE	**Gonen-Balikesi**	**2.18**	**12**	*e*PN	**Pn**	**11 59 09.7**	**+0.3**
GONE	**Gonen-Balikesi**	**2.18**	**12**	*e*Pn	**Pn**	**11 59 09.7**	**+0.3**
GADA	**Gvkgeada**	**2.46**	**338**	*e*PN	**Pn**	**11 59 13.7**	**+0.4**
GADA	**Gvkgeada**	**2.46**	**338**	*e*Pn	**Pn**	**11 59 13.7**	**+0.4**
GELI	**Tayfur-Gelibol**	**2.53**	**349**	*e*PN	**Pn**	**11 59 14.9**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.53**	**349**	*e*Pn	**Pn**	**11 59 14.9**	**+0.7**
KCTX	**Karacabey (Bur**	**2.54**	**22**	*e*PN	**Pn**	**11 59 14.5**	**0.0**
KCTX	**Karacabey (Bur**	**2.54**	**22**	*e*Pn	**Pn**	**11 59 14.5**	**+0.1**
ERIK	**Erikli-Kesan**	**2.79**	**351**	*e*PN	**Pn**	**11 59 18.9**	**+1.0**
ERIK	**Erikli-Kesan**	**2.79**	**351**	*e*Pn	**Pn**	**11 59 18.9**	**+1.0**
CAVI	**Cavuskoy**	**3.13**	**42**	*e*PN	**Pn**	**11 59 22.9**	**+0.4**
CAVI	**Cavuskoy**	**3.13**	**42**	*e*Pn	**Pn**	**11 59 22.9**	**+0.4**
ADVT	**Abdulvahap**	**3.24**	**38**	*e*PN	**Pn**	**11 59 24.8**	**+0.8**
ADVT	**Abdulvahap**	**3.24**	**38**	*e*Pn	**Pn**	**11 59 24.8**	**+0.7**
GULT	**Gulveren**	**3.66**	**45**	*e*PN	**Pn**	**11 59 31.2**	**+1.5**

GULT	**Gulveren**	**3.66**	**45**	*e*Pn	**Pn**	**11 59 31.2**	**+1.5**	

IDC 01 12:00:54.7±2.7, 50°03S×119°88E, h0km, mb4.1/3, mb1 4.3/3, mb1mx4.0/12, mbtmp4.1/3, Error ellipse: s-maj=64.5km s-min=48.2km az=178.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**24.30**	**50**	P	P	12 06 13.9	+0.3
	6.7nm,1.2s,baz=201,slow=16,SNR=4.5						
ASAR	**Alice Springs**	**28.50**	**28**	P	P	12 06 51.5	-0.1
	4.1nm,1.0s,baz=198,slow=9.1,SNR=19						
CMAR	**Chiang Mai Arr**	**70.65**	**339**	P	P	12 12 12.0	+0.1
	1.5nm,0.8s,baz=188,slow=5.6,SNR=11						
PDAR	**Pinedale Array**	**145.68**	**83**	PKPbc	PKPbc	12 20 34.0	-0.6
	0.8nm,1.0s,baz=223,slow=6.1,SNR=6.1						

*MAN **01** 12:00:57, 10°72N×124°95E, h4km, mb4.9, ML3.8, MS3.8*
*ISCJB **01** 12:00:58.0±0.8, 10°70N±0°03×124°96E±0°05, h16km±6km, mb3.7/10, MS3.1/2, Error ellipse: s-maj=7.9km s-min=4.9km az=166.6*
*IDC **01** 12:00:58.5±0.8, 10°44N×124°54E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.8/22, mbtmp3.8/11, ML4.5/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/20, Error ellipse: s-maj=35.6km s-min=12.6km az=74.0*
*NEIC **01** 12:00:59.9±0.6, 10°34N×124°15E, h10km, Error ellipse: s-maj=18.0km s-min=10.7km az=74.0*
ISC 01 12:00:57.8±0.9, 10°64N±0°03×124°92E±0°04, h0km±6km, n30, σ1§12/36, mb3.8/10, MS3.1/2, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.51**	**187**	*e*P	**Pg**	**12 01 09.0**	**+1.4**
MSLP				*e*S	**Sg**	**12 01 18.4**	**+4.3**
OCLP	**Ormoc**	**0.51**	**323**	*e*P	**Pg**	**12 01 07.3**	**-0.3**
OCLP				*e*S	**Sg**	**12 01 15.1**	**+0.8**
LLP	**Lapu-Lapu**	**1.00**	**251**	*e*P	**Pg**	**12 01 15.9**	**-1.0**
LLP				*i* S	**Sg**	**12 01 29.9**	**0.0**
SCPH	**Surigao**	**1.02**	**147⇑**	*e*P	**Pg**	**12 01 17.3**	**0.0**
BESP	**Borongan**	**1.08**	**28**	*e*P	**Pg**	**12 01 16.1**	**-2.5**
TBP	**Tagbilaran**	**1.41**	**228**	*e*P	**Pn**	**12 01 23.9**	**-0.8**
TBP				*e*S	**Sg**	**12 01 43.1**	**0.0**
BUTP	**Butuan**	**1.80**	**157**	*e*P	**Pn**	**12 01 30.4**	**+0.4**
SNPH	**Sibulan**	**2.10**	**232**	*e*P	**Pn**	**12 01 35.0**	**+0.7**
SNPH				*e*S	**Sn**	**12 02 08.4**	**+7.2**
CGP	**Cagayan de Oro**	**2.18**	**186**	*e*P	**Pn**	**12 01 33.8**	**-1.6**
CGP				*i* S	**Sn**	**12 02 02.8**	**-0.3**
GUIM	**Jordan**	**2.30**	**270**	*e*P	**Pn**	**12 01 36.5**	**-0.4**
BUKP	**Musuan**	**2.75**	**177**	*e*P	**Pn**	**12 01 44.4**	**+1.2**
PAGZ	**Pagadian**	**3.17**	**209**	*e*P	**Pn**	**12 01 51.6**	**+2.8**
OTRP	**Odiongan**	**3.32**	**301**	*e*P	**Pn**	**12 01 50.6**	**-0.4**
DAV	**Davao City (W)**	**3.61**	**170**	Pn	**Pn**	**12 01 55.5**	**+0.5**
	39nm,0.3s,baz=242,slow=2.2,SNR=2.7						
DAV				Sn	**Sn**	**12 02 37.4**	**-0.8**
	37nm,0.3s,baz=137,slow=7.9,SNR=4.0						
DAV				Lg		12 02 51.0	
	21nm,0.3s,baz=70,slow=16,SNR=3.3						
KKM	**Kota Kinabalu**	**9.75**	**243**	*e*Pn	**Pn**	**12 03 08.6**	**-11**
CMAR	**Chiang Mai Arr**	**26.30**	**290**	P	**P**	**12 06 35.4**	**+0.1**
	0.5nm,0.5s,mb3.4,baz=154,slow=43,SNR=3.1						
KSRS	**Korea Array**	**26.83**	**5**	P	**P**	**12 06 42.0**	**+2.1**
	2.5nm,0.9s,mb3.9,baz=178,slow=12,SNR=5.3						
KSRS				LR	LR	12 16 53.0	
	comp=Z,44nm,20.1s,MS3.0,baz=1.4,slow=35						
MJAR	**Matsushiro Arr**	**28.45**	**23**	LR	LR	12 15 36.9	
	comp=Z,63nm,20.4s,MS3.2,baz=175,slow=30						
FITZ	**Fitzroy Crossi**	**28.57**	**179**	P	**P**	**12 06 54.9**	**-0.7**
	2.4nm,1.1s,mb4.0,baz=10,slow=7.7,SNR=3.2						
WRA	**Warramunga Arr**	**31.77**	**163**	P	**P**	**12 07 23.8**	**-0.2**
	1.6nm,1.1s,mb3.8,baz=205,slow=7.9,SNR=3.8						
ASAR	**Alice Springs**	**35.21**	**166**	P	**P**	**12 07 52.2**	**-1.6**
	0.5nm,0.4s,mb3.8,baz=341,slow=6.6,SNR=26						
STKA	**Stephens Creek**	**45.19**	**160**	P	**P**	**12 09 17.3**	**+0.7**
	2.1nm,0.8s,mb4.1,baz=0.0,slow=9.1,SNR=3.8						
STKA	**Stephens Creek**	**45.19**	**160**	P	**P**	**12 09 17.3**	**+0.7**
PETK	**Petropavlovsk-**	**49.86**	**25**	P	**P**	**12 09 57.4**	**+4.8**
	0.6nm,0.6s,mb3.7,baz=213,slow=5.7,SNR=4.1						
PETK	**Petropavlovsk-**	**49.86**	**25**	P	**P**	**12 09 57.4**	**+4.7**
MK31	**Makanchi Array**	**50.94**	**323**	*e*P	**P**	**12 10 01.6**	**+0.6**
MKAR	**Makanchi Array**	**50.94**	**323**	P	**P**	**12 09 59.9**	**-1.1**
	1.3nm,0.6s,mb4.0,baz=124,slow=8.0,SNR=14						
ZALV	**Zalesovo Beam**	**53.67**	**332**	P	**P**	**12 10 22.0**	**+0.9**
	0.4nm,0.3s,mb3.9,baz=99,slow=9.2,SNR=3.5						
KURK	**Kurchatov**	**55.02**	**326**	*e*P	**P**	**12 10 29.1**	**-1.9**
ILAR	**Eielson Array**	**79.69**	**26**	P	**P**	**12 13 09.9**	**+2.9**
	0.2nm,0.6s,mb3.2,baz=240,slow=6.1,SNR=4.1						

NNC 01 12:14:01.1±11.0, 38°09N×69°12E, h0km, mb3.7, mpv3.2, 5C-1D, Error ellipse: s-maj=116.0km s-min=88.9km az=100.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.12**	**12**	⇑Pn	Pn	12 15 22.7	+3.7
	0.4nm,0.3s,baz=178,slow=16						
KK31				⇑Sn	Sn	12 16 25.4	+6.6
	1.4nm,0.3s						
TKM2	**Tokmak 2**	**6.90**	**44**	⇓Pn	Pn	12 15 43.0	-0.5
	2.9nm,0.5s						
TKM2				⇑Lg		12 17 43.7	
	5.7nm,0.8s						
AB31	**Akbulak array**	**12.97**	**332**	⇑Pn	Pn	12 17 02.7	-3.9
	1.9nm,0.8s						
AB31				⇑Sn	Sn	12 19 28.1	-3.5
	0.3nm,0.3s,baz=162,slow=24,SNR=3.1						

*IDC **01** 12:19:00.0±7.4, 34°52N×108°23E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/21, mbtmp3.2/3, Error ellipse: s-maj=652.4km s-min=29.8km az=49.0*
*ISCJB **01** 12:19:01.9±1.1, 32°76N±0°04×105°46E±0°1, h10km, mb3.2/3, Error ellipse: s-maj=14.4km s-min=6.1km az=4.8*
*BJI **01** 12:19:06.2, 32°74N×105°44E, h15km, ML3.2/5*
ISC 01 12:19:04.7±1.1, 32°72N±0°04×105°4E±0°1, h10km, n5, σ0§91/7, mb3.2/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.28**	**218**	Pg	**Pg**	**12 19 48.0**	**-0.4**
CD2				Sg	**Sg**	**12 20 17.8**	**-0.1**
CD2				smax			
	comp=N,180nm,0.8s						
CD2				smax			
	comp=E,330nm,0.6s						
LZH	**Lanzhou**	**3.59**	**340**	Pg	**Pg**	**12 20 13.9**	**+0.3**
LZH				Sg	**Sg**	**12 20 59.2**	**-1.0**
LZH				smax			
	comp=N,54nm,0.5s						
LZH				smax			
	comp=E,80nm,0.7s						
MKAR	**Makanchi Array**	**22.54**	**315**	P	**P**	**12 24 07.0**	**+2.3**
	comp=E,0.1nm,0.3s,mb2.7,baz=116,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**59.23**	**148**	P	**P**	**12 29 05.8**	**-0.5**
	comp=E,0.2nm,0.4s,mb3.5,baz=342,slow=7.6,SNR=2.6						
ASAR	**Alice Springs**	**62.33**	**150**	P	**P**	**12 29 27.2**	**-0.1**
	comp=E,0.1nm,0.3s,mb3.4,baz=332,slow=6.5,SNR=7.4						

*DDA **01** 12:24:25.8, 37°93N×27°09E, h15km±2km, Md2.9*
*ISK **01** 12:24:25.2, 37°89N×27°03E, h5km, MD2.5*
*ATH **01** 12:24:25.7, 37°62N×26°95E, h38km±1km, MD3.1/3*
*ISCJB **01** 12:24:26.3±0.4, 37°89N±0°02×27°08E±0°03, h10km, Error ellipse: s-maj=3.9km s-min=2.9km az=170.7*
*CSEM **01** 12:24:26.2±0.2, 37°90N×27°09E, h5km, MD3.1, Error ellipse: s-maj=5.8km s-min=4.1km az=78.0*
ISC 01 12:24:26.5±0.5, 37°90N±0°02×27°09E±0°03, h2km±4km, n34, σ1§19/61, Turkey

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SMG	**Samos**	**0.28**	**227**	*e*PB	**Pg**	**12 24 32.5**	**+0.7**
SMG				*e*SB	**Sg**	**12 24 37.5**	**+2.1**
SMG	**Samos**	**0.28**	**227**	*e*Pb	**Pg**	**12 24 32.5**	**+0.7**
SMG				*e*Sb	**Sg**	**12 24 37.5**	**+2.1**
BLCB	**Balcova**	**0.49**	**355**	*e*PG	**Pg**	**12 24 36.0**	**+0.2**
BLCB				*e*SG	**Sg**	**12 24 42.4**	**+0.2**
BLCB	**Balcova**	**0.49**	**355**	P	**Pg**	**12 24 36.1**	**+0.2**
BLCB				S	**Sg**	**12 24 42.5**	**+0.3**
BLCB	**Balcova**	**0.49**	**355**	*e*Pg	**Pg**	**12 24 36.0**	**+0.1**
BLCB				*e*Sg	**Sg**	**12 24 42.4**	**+0.2**
IZM	**Izmir**	**0.52**	**15**	*e*PG	**Pg**	**12 24 36.4**	**-0.1**
IZM				*e*SG	**Sg**	**12 24 44.3**	**+1.2**
IZM	**Izmir**	**0.52**	**15**	*e*Pg	**Pg**	**12 24 36.4**	**0.0**
IZM				*e*Sg	**Sg**	**12 24 44.3**	**+1.2**
KDAG	**Bornova**	**0.52**	**15**	*i* P	**Pg**	**12 24 35.2**	**-1.3**
KDAG				*i* S	**Sg**	**12 24 42.8**	**-0.5**
KDAG	**Bornova**	**0.52**	**15**	*i* P	**Pg**	**12 24 35.2**	**-1.3**
KDAG				*i* S	**Sg**	**12 24 42.8**	**-0.5**
URLA	**Izmir**	**0.61**	**320**	*i* P	**Pg**	**12 24 36.9**	**-1.2**
URLA				*i* S	**Sg**	**12 24 44.7**	**-1.3**
URLA	**Izmir**	**0.61**	**320**	*i* P	**Pg**	**12 24 36.9**	**-1.2**
URLA				*i* S	**Sg**	**12 24 44.7**	**-1.3**
AYDN	**Tasoluk**	**0.67**	**111**	*i* P	**Pg**	**12 24 39.3**	**+0.1**
AYDN				*i* S	**Sg**	**12 24 48.6**	**+0.7**
AYDN	**Tasoluk**	**0.67**	**111**	*i* P	**Pg**	**12 24 39.3**	**0.0**
AYDN				*i* S	**Sg**	**12 24 48.6**	**+0.7**
BODT	**Bodrum**	**0.85**	**168**	*e*PG	**Pg**	**12 24 41.8**	**-1.1**
BODT				*e*SG	**Sg**	**12 24 54.4**	**+0.6**
BODT	**Bodrum**	**0.85**	**168**	*e*Pg	**Pg**	**12 24 41.8**	**-1.0**
BODT				*e*Sg	**Sg**	**12 24 54.4**	**+0.5**
BDRM	**Kayabasi**	**0.88**	**161**	*i* P	**Pg**	**12 24 43.8**	**+0.5**
BDRM	**Kayabasi**	**0.88**	**161**	*i* P	**Pg**	**12 24 43.8**	**+0.5**
CHOS	**Chios island**	**0.95**	**301**	*e*PN	**Pn**	**12 24 45.1**	**-1.8**
CHOS				*e*SN	**Sn**	**12 24 59.9**	**-1.2**
CHOS	**Chios island**	**0.95**	**301**	P	**Pg**	**12 24 44.9**	**+0.1**
CHOS				S	**Sg**	**12 24 59.7**	**+2.6**
CHOS	**Chios island**	**0.95**	**301**	P	**Pg**	**12 24 44.9**	**+0.1**
CHOS				*e*Sn	**Sn**	**12 24 59.9**	**-1.2**
AKHS	**Akhisar**	**1.13**	**30**	*i* P	**Pg**	**12 24 47.0**	**-1.2**
AKHS				*i* S	**Sg**	**12 25 02.9**	**0.0**
AKHS	**Akhisar**	**1.13**	**30**	*i* P	**Pg**	**12 24 47.0**	**-1.2**
AKHS				*i* S	**Sg**	**12 25 02.8**	**-0.1**
DAT	**Datca**	**1.23**	**162**	*e*PN	**Pn**	**12 24 48.7**	**-2.0**
DAT				*e*SN	**Sn**	**12 25 07.0**	**-1.0**
DAT	**Datca**	**1.23**	**162**	*e*Pn	**Pn**	**12 24 48.7**	**-2.0**
DAT				*e*Sn	**Sn**	**12 25 07.0**	**-0.9**
KULA	**Kula-Manisa**	**1.38**	**63**	*e*PN	**Pn**	**12 24 52.5**	**-0.3**
KULA	**Kula-Manisa**	**1.38**	**63**	*e*Pn	**Pn**	**12 24 52.5**	**-0.3**
PRK	**Paraskevi**	**1.49**	**335**	*e*PN	**Pn**	**12 24 54.9**	**+0.5**
PRK				*e*SN	**Sn**	**12 25 15.9**	**+1.5**
PRK	**Paraskevi**	**1.49**	**335**	*e*Pn	**Pn**	**12 24 54.9**	**+0.5**
DEMI	**Demirci**	**1.71**	**48**	*i* P	**Pn**	**12 24 54.9**	**-2.5**
DEMI	**Demirci**	**1.71**	**48**	*i* P	**Pn**	**12 24 54.8**	**-2.6**
BALY	**Balya**	**1.89**	**12**	*i* P	**Pn**	**12 25 00.3**	**+0.6**
BALY				*i* S	**Sn**	**12 25 26.5**	**+2.3**
BALY	**Balya**	**1.89**	**12**	*i* P	**Pn**	**12 25 00.3**	**+0.5**
BALY				*i* S	**Sn**	**12 25 26.5**	**+2.4**
KHAL	**Karahalli**	**1.95**	**75**	*i* P	**Pn**	**12 25 01.7**	**+1.0**
KHAL				*i* S	**Sn**	**12 25 27.1**	**+1.4**
KHAL	**Karahalli**	**1.95**	**75**	*i* P	**Pn**	**12 25 01.7**	**+1.1**
KHAL				*i* S	**Sn**	**12 25 27.1**	**+1.4**

IDC 01 12:42:50.3±1.9, 6°74S×128°43E, h0km, mb4.0/1, mb1 4.2/3, mb1mx3.7/16, mbtmp4.0/3, ML4.3/2, Error ellipse: s-maj=108.8km s-min=30.1km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
TLE	**Tual**	**4.42**	**76**	P	Pg	12 44 29.1	+14
	0.8nm163nm,1.0s						
KAKA	**Kakadu**	**7.13**	**147**	P	Pn	12 44 38.7	+2.8
	1.0nm3μm63nm,0.6s						
KNA	**Kununurra**	**8.96**	**178**	P	Pn	12 45 11.3	+10
WRA	**Warramunga Arr**	**14.32**	**157**	Pn	Pn	12 46 13.2	-1.3
	1.9nm,0.3s,baz=335,slow=13,SNR=24						
WRA				Sn	Sn	12 48 40.1	-14
	1.6nm,0.3s,baz=334,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.63**	**163**	P	Pn	12 46 58.4	+0.8
	0.5nm,0.3s,baz=343,slow=11,SNR=23						
ASAR				S	Sn	12 50 04.8	-10
	0.4nm,0.3s,baz=216,slow=17,SNR=5.3						
MKAR	**Makanchi Array**	**67.16**	**327**	P	P	12 53 46.1	+0.1
	0.9nm,0.5s,baz=116,slow=8.2,SNR=13						

MAN 01 12:57:59, 16°70N×119°97E, h11km, mb4.0, ML2.8, MS2.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.33**	**190**	*e*P	Pg	12 58 07.7	+2.2
BCPH	**Baguio City Da**	**0.67**	**119⇑**	*i*P	Pg	12 58 12.5	+0.5
BCPH				*i* S	Sg	12 58 21.9	+1.1
SCZP	**Santa Cruz**	**0.92**	**183**	*e*P	Pg	12 58 14.8	-2.0
APYP	**Conner**	**1.68**	**46**	*e*P	Pn	12 58 27.9	-0.4
CAUP	**Cauayan**	**1.79**	**82**	*e*P	Pn	12 58 30.9	+1.1
BALP	**Baler**	**1.82**	**122**	*e*P	Pn	12 58 30.2	0.0

*ISK **01** 13:01:02.8, 41°05N×35°21E, h14km, MD2.5*
*ISCJB **01** 13:01:04.6±0.9, 40°99N±0°06×35°13E±0°05, h10km, Error ellipse: s-maj=8.0km s-min=5.5km az=174.2*
*CSEM **01** 13:01:04.1±0.5, 40°97N×35°19E, h5km, MD3.0*
*DDA **01** 13:01:05.2, 40°90N×35°14E, h7km±2km, Md3.0*
ISC 01 13:01:04.8±1.1, 40°99N±0°06×35°16E±0°05, h10km±8km, n16, σ1§14/25, Turkey

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.46**	**217**	*i* P	**Pg**	**13 01 12.8**	**-1.0**
CTKT				*i* S	**Sg**	**13 01 18.7**	**-1.3**
CTKT	**Corum**	**0.46**	**217**	*i* P	**Pg**	**13 01 12.9**	**-1.0**
CTKT				*i* S	**Sg**	**13 01 18.7**	**-1.3**
TOS	**Tosya**	**0.86**	**273**	*e*PG	**Pg**	**13 01 20.6**	**-0.8**
TOS				*e*SG	**Sg**	**13 01 33.6**	**+1.0**
TOS	**Tosya**	**0.86**	**273**	*e*Pg	**Pg**	**13 01 20.6**	**-0.8**
TOS				*e*Sg	**Sg**	**13 01 33.6**	**+1.0**
CORM	**Corum**	**0.91**	**206**	*e*PG	**Pg**	**13 01 21.8**	**-0.5**
CORM				*e*SG	**Sg**	**13 01 36.0**	**+1.9**
CORM	**Corum**	**0.91**	**206**	*e*Pg	**Pg**	**13 01 21.8**	**-0.5**
CORM				*e*Sg	**Sg**	**13 01 36.0**	**+1.9**
ERBA	**Erbaa**	**1.25**	**104**	*i* P	**Pb**	**13 01 28.3**	**-0.2**
ERBA				*i* S	**Sg**	**13 01 47.1**	**+2.0**
ERBA	**Erbaa**	**1.25**	**104**	*i* P	**Pb**	**13 01 28.3**	**-0.2**
YOZ	**Yozgat**	**1.36**	**175**	*e*PN	**Pn**	**13 01 28.6**	**-1.2**
YOZ	**Yozgat**	**1.36**	**175**	*e*Pn	**Pn**	**13 01 28.6**	**-1.2**
ELDT	**Eldivan**	**1.41**	**250**	*i* P	**Pn**	**13 01 31.2**	**+0.7**
ELDT	**Eldivan**	**1.41**	**250**	*i* P	**Pn**	**13 01 31.2**	**+0.7**
CDAG	**Cicekdag**	**1.49**	**204**	*i* P	**Pn**	**13 01 32.9**	**+1.2**
CDAG				*i* S	**Sn**	**13 01 51.5**	**+0.3**
CDAG	**Cicekdag**	**1.49**	**204**	*i* P	**Pn**	**13 01 32.9**	**+1.2**
CDAG				*i* S	**Sn**	**13 01 51.5**	**+0.3**
SVSK	**Karacayir**	**1.77**	**127**	*e*PN	**Pn**	**13 01 34.1**	**-1.3**
SVSK	**Karacayir**	**1.77**	**127**	*e*Pn	**Pn**	**13 01 34.1**	**-1.4**

MAN 01 13:01:11, 12°80N×124°28E, h14km, mb4.3, ML3.2, MS3.0, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.64**	**136**	*e*P	Pn	13 01 39.0	-0.5
AUQP	**San Andres**	**1.65**	**288**	*e*P	Pn	13 01 38.9	-0.7
GQP	**Guinayangan**	**2.10**	**302⇓**	*e*P	Pn	13 01 43.9	-1.8
GQP				*e*S	Sn	13 02 10.7	-1.0
BOAC	**Boac**	**2.46**	**286**	*e*P	Pn	13 01 51.8	+1.0
MSLP	**Maasin**	**2.71**	**168**	*e*P	Pn	13 01 58.2	+4.1
GUIM	**Jordan**	**2.73**	**218**	*e*P	Pn	13 01 56.5	+2.1
POLP	**Polilio Island**	**2.98**	**310**	*e*P	Pn	13 01 58.9	+1.0
CUYO	**Cuyo Island**	**3.74**	**239**	*e*P	Pn	13 02 08.4	+0.1
BALP	**Baler**	**3.93**	**318**	*e*P	Pn	13 02 12.4	+1.5
CAUP	**Cauayan**	**4.75**	**330**	*e*P	Pn	13 02 18.5	-3.8

*ISCJB **01** 13:04:57.8±0.2, 48°64N±0°04×157°48E±0°04, h10km, mb4.2/38, MS3.4/5, Error ellipse: s-maj=6.2km s-min=3.6km az=174.0*
*IDC **01** 13:04:58.1±0.6, 48°58N×157°51E, h0km, mb4.1/18, mb1 4.3/21, mb1mx4.2/30, mbtmp4.1/21, ML3.9/3, MS3.4/4, Ms1 3.4/4, ms1mx2.9/28, Error ellipse: s-maj=18.2km s-min=9.9km az=148.0*
*SKHL **01** 13:04:58.9±2.0, 48°50N×157°70E, h54km±1km, mb5.0/2, mbv5.4/1*
*NEIC **01** 13:04:59.4±3.0, 48°62N×157°50E, h8km±18km, mb4.4/15, Error ellipse: s-maj=8.5km s-min=5.2km az=150.0*
*BJI **01** 13:05:00.8, 49°12N×156°99E, h8km, mB4.5/14, mb4.4/20, Ms4.3/9, Ms7 3.9/11*
*MOS **01** 13:05:02.5±1.0, 48°71N×157°30E, h46km, mb4.3/12, Error ellipse: s-maj=11.6km s-min=8.2km az=87.1*
ISC 01 13:04:59.9±0.2, 48°66N±0°04×157°46E±0°04, h10km, (h12km±1.9km:pP-P), n263, σ0§59/269, mb4.2/38, MS3.4/5, 86C-96D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.21**	**337**	*e*PN	**Pn**	**13 05 36.4**	**-0.2**
SKR				*i* S	**Sn**	**13 06 03.0**	**-0.9**
SKR				pmax	pmax		
	comp=N,120nm,0.5s						
SKR				pmax	pmax		
	comp=E,120nm,0.5s						
SKR				pmax	pmax		
	comp=Z,280nm,0.5s						
SKR				pmax	pmax		
	comp=Z,800nm,2.0s						
SKR				smax			
	comp=N,2μm,0.2s						
SKR				smax			
	comp=E,2μm,0.5s						
SKR				smax			
	comp=N,2μm,1.0s						
SKR				smax			
	comp=E,1μm,2.0s						
SKR	**Severo-Kuril's**	**2.21**	**337**	*e*P	**Pn**	**13 05 36.4**	**-0.2**
SKR				AMB	AMB	13 05 38.5	
	comp=E,800nm,2.0s						
SKR				AMB	AMB	13 05 38.5	
	comp=E,120nm,0.5s						
SKR				AMB	AMB	13 05 38.5	
	comp=E,280nm,0.5s						
SKR				*i* S	**Sn**	**13 06 03.0**	**-0.9**
SKR				A		13 06 05.0	
	comp=E,2μm,0.2s						
SKR				A		13 06 05.0	
	comp=E,2μm,0.5s						
SKR				A		13 06 05.0	
	comp=E,460nm,0.5s						
SKR				A		13 06 05.0	
	comp=E,2μm,1.0s						
SKR				A		13 06 05.0	
	comp=E,1μm,2.0s						
SKR				A		13 06 05.0	
	comp=E,1μm,2.0s						
PET	**Petropavlovsk**	**4.43**	**9**	*e*PN	**Pn**	**13 06 06.3**	**-0.9**
PET				pmax	pmax		
	comp=Z,79nm,0.5s						
PET	**Petropavlovsk**	**4.43**	**9**	*e*Pn	**Pn**	**13 06 06.4**	**-0.7**
PET				*e*S	**Sn**	**13 06 54.8**	**-4.0**
PET	**Petropavlovsk**	**4.43**	**9**	*e*P	**Pn**	**13 06 06.7**	**-0.5**
PETK	**Petropavlovsk-**	**4.46**	**2**	Pn	**Pn**	**13 06 08.4**	**+0.9**
	comp=Z,5.0nm,0.3s,baz=164,slow=15,SNR=182						
PETK				Sn	**Sn**	**13 07 07.7**	**+8.4**
	comp=Z,2.4nm,0.3s,baz=206,slow=16,SNR=2.8						
PETK	**Petropavlovsk-**	**4.46**	**2**	Pn	**Pn**	**13 06 08.4**	**+0.9**
PETK				Sn	**Sn**	**13 07 07.7**	**+8.4**
KUR	**Kuril'sk**	**7.41**	**246**	*e*P	**Pn**	**13 06 46.3**	**-1.7**
KUR				AMB	AMB	13 06 50.0	
	comp=Z,90nm,0.7s						
KUR				*e*S	**Sn**	**13 08 08.4**	**-3.6**
KUR				A		13 08 13.8	
	comp=Z,110nm,0.8s						
YSS	**Yuzh-Sakhalins**	**10.04**	**266**	*e*PN	**Pn**	**13 07 25.9**	**+1.8**
ASAJ	**Asahikawa**	**11.22**	**252**	Pn	**Pn**	**13 07 40.0**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=71,slow=17,SNR=15						
ASAJ	**Asahikawa**	**11.22**	**252**	PN	**Pn**	**13 07 40.0**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**11.22**	**252**	*e*P	**Pn**	**13 07 39.8**	**-0.5**
	comp=Z,2.4nm,0.6s						
ERM	**Erimo**	**12.05**	**242**	*i* PN	**Pn**	**13 07 47.7**	**-3.9**
ERM	**Erimo**	**12.05**	**242**	*e*P	**Pn**	**13 07 47.9**	**-3.7**
ERM	**Erimo**	**12.05**	**242**	*e*P	**Pn**	**13 07 47.8**	**-3.8**
HABR	**Khabarovsk**	**14.84**	**278**	*e*P	**Pn**	**13 08 27.3**	**-2.3**
HABR						13 11 12.6	
HABR				pmax	pmax		
	comp=N,5.0nm,0.7s						
HABR				pmax	pmax		
	comp=Z,6.0nm,1.9s						
HABR				pmax	pmax		
	comp=E,15nm,1.8s						
HABR				MLR	MLR		
	comp=Z,50nm,16.0s						
MAJO	**Matsushiro**	**18.58**	**236**	*e*P	**Pn**	**13 09 17.1**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAJO	**Matsushiro**	**18.58**	**236**	*e*P	**Pn**	**13 09 17.1**	**-0.2**
	comp=Z,8.4nm,0.9s						
MJAR	**Matsushiro Arr**	**18.58**	**236**	P	**Pn**	**13 09 15.2**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=35,slow=8.1,SNR=7.4						
MJAR				S	**Sn**	**13 12 46.4**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=11,slow=29,SNR=4.3						
MJAR	**Matsushiro Arr**	**18.58**	**236**	P	**Pn**	**13 09 15.2**	**-2.0**
MJAR				S	**Sn**	**13 12 46.4**	**+1.6**
BILL	**Bilibino**	**19.94**	**10⇓**	*e*P	**Pn**	**13 09 32.9**	**-0.3**
BILL				*e*S	**Sn**	**13 13 09.8**	**-7.3**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s						
YAK	**Yakutsk**	**20.49**	**321**	*e*P	**P**	**13 09 37.6**	**0.0**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4

comp=Z,20nm,1.0s,mb5.0
KMI **Kunming** 48.46 261 P P 13 13 44.5 +2.0
KMI pP pP 13 13 47.0 +1.3
KMI pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
MK31 **Makanchi Array** 48.66 298 *e*P P 13 13 43.7 -0.1
MKAR **Makanchi Array** 48.66 298 P P 13 13 44.0 +0.2
comp=Z,0.7nm,0.6s,mb3.9,baz=68,slow=8.0,SNR=8.5
MKAR LR LR 13 35 20.8
comp=Z,48nm,19.4s,MS3.5,baz=260,slow=37
MKAR **Makanchi Array** 48.66 298 *i* P P 13 13 44.0 +0.2
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR **Makanchi Array** 48.66 298 P P 13 13 44.0 +0.2
MKAR LR LR 13 35 20.8
KURK **Kurchatov** 48.74 304 P P 13 13 45.1 +0.7
comp=Z,2.7nm,0.5s,mb4.5,baz=67,slow=8.1,SNR=15
KURK **Kurchatov** 48.74 304*ce*P P 13 13 44.5 +0.1
KURK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KURK **Kurchatov** 48.74 304 *e*P P 13 13 43.6 -0.8
comp=Z,2.7nm,0.7s,mb4.4
BVAR **Borovoye Array** 51.90 310 P P 13 14 08.2 0.0
comp=Z,1.5nm,0.5s,mb4.2,baz=58,slow=8.9,SNR=8.4
BRVK **Borovoye** 51.94 310*ce*P P 13 14 08.9 +0.4
BRVK pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
BRVK **Borovoye** 51.94 310 *e*P P 13 14 08.5 0.0
YBH **Yreka Blue Hor** 54.26 65 P P 13 14 26.4 +0.6
comp=Z,4.2nm,0.9s,mb4.4,baz=234,slow=4.4,SNR=6.6
A13A **Flathead Natio** 54.76 54 ⇓P P 13 14 29.3 -0.1
baz=54
K05A **Summer Lake** 54.76 63 ⇓P P 13 14 30.3 +0.9
baz=54
I07A **Izee** 54.77 61 ⇓P P 13 14 30.4 +0.9
baz=55
B13A **Whitefish** 55.05 54 ⇓P P 13 14 31.6 +0.1
baz=55
KZA **Kyzart** 55.48 296 *e*P P 13 14 36.3 +1.7
comp=Z,4.9nm,1.1s,mb4.5
ARU **Arti** 55.57 318*d i*P P 13 14 35.0 -0.1
ARU 13 16 37.7
ARU S S 13 22 22.1 +1.9
ARU SS SS 13 26 05.9 +1.5
ARU pmax pmax
comp=Z,12nm,1.0s,mb4.9
ARU **Arti** 55.57 318 *e*P P 13 14 34.5 -0.6
comp=Z,7.2nm,0.9s,mb4.7
ARU *e* 13 14 44.5
AAK **Ala-Archa** 55.59 297 P P 13 14 36.2 +0.8
comp=Z,1.3nm,0.3s,mb4.5,baz=134,slow=4.2,SNR=6.4
AAK **Ala-Archa** 55.59 297*ce*P P 13 14 35.6 +0.1
AAK pmax pmax
comp=Z,4.0nm,2.5s,mb4.0
E12A **Beaver Dam Sad** 55.61 57 ⇓P P 13 14 35.4 -0.2
baz=55
CMAR **Chiang Mai Arr** 55.65 259 P P 13 14 36.4 +0.2
comp=Z,0.6nm,0.5s,mb3.9,baz=32,slow=7.3,SNR=7.6
EKS2 **Erkin-Say** 56.00 298 *e*P P 13 14 39.3 +0.9
comp=Z,3.0nm,1.0s,mb4.3
F12A **Elk City** 56.19 57 ⇑P P 13 14 39.8 +0.1
baz=56
D14A **Greenough** 56.35 55 ⇓P P 13 14 40.4 -0.4
baz=56
C15A **Salmond Ranch,** 56.41 54 ⇑P P 13 14 41.5 +0.2
baz=56
B16A **M & M Farms, S** 56.51 53 ⇑P P 13 14 41.4 -0.6
baz=56
G12A **Big Creek, Yel** 56.52 58 ⇑P P 13 14 42.1 0.0
baz=56
ARCES **ARCESS Array B** 56.99 342 LR LR 13 42 50.1
comp=Z,47nm,21.4s,MS3.5,baz=239,slow=40
H12A **Diamond D Ranc** 57.14 58 ⇓P P 13 14 46.5 0.0
baz=57
G13A **Cobalt** 57.16 57 ⇑P P 13 14 46.6 0.0
baz=57,SNR=7.2
E15A **Deer Lodge** 57.22 55 ⇓P P 13 14 47.0 0.0
baz=57
MFID **Camas Ranch** 57.29 60 ⇑P P 13 14 47.9 +0.4
baz=57
I12A **Atlanta** 57.45 59 ⇑P P 13 14 48.8 +0.1
baz=57
H13A **Challis** 57.47 58 ⇑P P 13 14 49.2 +0.4
baz=57
KKAR **Karatay Array** 57.62 300 *e*P P 13 14 50.0 +0.1
KKAR pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
KKAR **Karatay Array** 57.62 300 *e*P P 13 14 50.0 +0.1
comp=Z,1.1nm,0.7s,mb4.0
I13A **Wildhorse Cree** 57.95 58 ⇑P P 13 14 52.7 +0.5
baz=58,SNR=7.2
HLID **Hailey** 58.01 59 ⇓P P 13 14 52.7 +0.1
baz=58
HLID **Hailey** 58.01 59 *e*P P 13 14 53.2 +0.6
comp=Z,1.7nm,0.8s,mb4.1
G15A **Dillon** 58.08 56 ⇓P P 13 14 52.9 -0.1
baz=58
MCMT **McKenzie Canyo** 58.09 57 *e*P P 13 14 52.0 -1.2
comp=Z,1.0nm,1.0s,mb3.8
E17A **Martinsdale** 58.16 54 ⇓P P 13 14 54.0 +0.3
baz=58
J13A **Cove Ranch, Pi** 58.24 59 ⇑P P 13 14 54.8 +0.5
baz=58
BOZ **Bozeman (W)** 58.26 56 ⇑P P 13 14 54.5 +0.2
baz=58
I14A **Mackay** 58.32 58 ⇑P P 13 14 55.4 +0.6
baz=58,SNR=8.7
C19A **Slack Wire Ran** 58.33 52 ⇓P P 13 14 54.7 -0.1
baz=58
G16A **Moss Hill, Enn** 58.42 56 ⇓P P 13 14 55.7 +0.2
baz=58
F17A **Fitzpatrick Pl** 58.62 55 ⇓P P 13 14 57.0 +0.2
baz=58
J14A **Carey** 58.66 59 ⇓P P 13 14 58.2 +1.0
baz=58,SNR=5.9
C20A **Veseth Ranch,** 58.89 52 ⇓P P 13 14 59.0 +0.3
baz=59
G17A **Pierce Place,** 58.95 55 ⇓P P 13 14 59.5 +0.3
baz=59
NVAR **Mina Array Bea** 58.96 66 P P 13 14 59.9 +0.6
comp=Z,1.8nm,0.7s,mb4.2,baz=296,slow=7.0,SNR=14
NVAR **Mina Array Bea** 58.96 66 P P 13 14 59.9 +0.6
H16A **Russell Place,** 59.06 56 ⇑P P 13 15 00.0 +0.1
baz=59
F18A **Big Timber** 59.13 54 ⇑P P 13 15 00.3 0.0
baz=59
J15A **Blackfoot** 59.23 58 ⇓P P 13 15 01.5 +0.4
baz=59
YMR **Madison River** 59.24 56 *e*P P 13 15 02.0 +0.9
ABKAR **Akbulak array** 59.42 311 *e*P P 13 15 02.5 +0.2
comp=Z,1.6nm,0.5s,mb4.3
F19A **Roth Farm, Mol** 59.58 54 ⇑P P 13 15 03.7 +0.2
baz=59
RLMT **Red Lodge** 59.87 55 ⇓P P 13 15 06.4 +0.8
baz=60
O12A **Currie** 59.90 62 ⇓P P 13 15 06.3 +0.6
baz=60
H18A **Shoshone NF, C** 59.95 55 ⇓P P 13 15 06.6 +0.6
baz=60
F20A **Billings** 60.04 54 ⇑P P 13 15 07.2 +0.6
baz=60
K16A **Soda Springs** 60.07 58 ⇓P P 13 15 07.9 +1.0
baz=60
J17A **Brown Place, J** 60.22 57 ⇑P P 13 15 08.4 +0.5
baz=60
G20A **Bridger** 60.38 54 ⇑P P 13 15 09.1 +0.1
baz=60
Q12A **Willow Creek R** 60.64 63 ⇑P P 13 15 10.7 -0.2
baz=60
R11A **Troy Canyon, C** 60.64 64 ⇑P P 13 15 10.9 0.0
baz=60
P13A **Bates Ranch, G** 60.85 62 ⇓P P 13 15 12.1 -0.2
baz=61
MPMC **Manual Prospec** 60.98 67 ⇓P P 13 15 12.7 -0.6
baz=61
S11A **Rachel** 61.00 65 ⇓P P 13 15 13.5 +0.1
baz=61
M16A **Huntsville** 61.03 59 ⇑P P 13 15 13.5 0.0
baz=61
K18A **Toltan Ranch,** 61.06 57 ⇑P P 13 15 13.8 +0.1
baz=61
DUG **Dugway** 61.07 61 ⇓P P 13 15 14.0 +0.2
baz=61
DUG **Dugway** 61.07 61 *e*P P 13 15 14.0 +0.2
DUG pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
DUG **Dugway** 61.07 61 *e*P P 13 15 14.0 +0.2
comp=Z,3.4nm,0.9s,mb4.5
FURC **Furnace Creek,** 61.10 67 ⇑P P 13 15 14.0 0.0
baz=61
Q13A **Wheeler Ranch,** 61.18 63 ⇑P P 13 15 14.8 +0.3
baz=61
J19A **Crowheart** 61.20 56 ⇑P P 13 15 14.7 +0.1
baz=61
R12A **Pony Springs,** 61.24 64 ⇓P P 13 15 14.7 -0.3
baz=61
BW06 **Boulder Array** 61.24 57 ⇑P P 13 15 14.8 -0.1
baz=61
PDAR **Pinedale Array** 61.24 57 P P 13 15 15.3 +0.4
comp=Z,2.8nm,0.9s,mb4.4,baz=308,slow=3.6,SNR=15
I20A **Worland** 61.26 55 ⇓P P 13 15 15.1 +0.1
baz=61
P14A **Drum Mountains** 61.32 62 ⇑P P 13 15 15.5 +0.1
baz=61
H21A **Big Horn, Sher** 61.40 54 ⇓P P 13 15 16.0 +0.1
baz=61
EDW2 **Edwards Air Fo** 61.45 69 ⇑P P 13 15 16.2 -0.2
baz=61
M17A **Scullys Gap (B** 61.47 59 ⇓P P 13 15 16.6 +0.2
baz=61
L18A **Fontenelle, Gr** 61.53 58 ⇓P P 13 15 17.0 +0.1
baz=61
S12A **Delamar Landin** 61.57 64 ⇑P P 13 15 17.4 +0.2
baz=61
Q14A **Sevier Lake (B** 61.59 62 ⇑P P 13 15 17.3 0.0
baz=61
K19A **Absolon Red Bu** 61.60 57 ⇑P P 13 15 17.0 -0.4
baz=61
R13A **O'Grain Ranch,** 61.72 63 ⇑P P 13 15 18.3 +0.1
baz=62
N17A **Moffit Pass** 61.72 59 ⇑P P 13 15 18.5 +0.3
baz=62
P15A **Leamington** 61.79 61 ⇓P P 13 15 18.7 +0.1
baz=62
I21A **Big Trails, Te** 61.80 55 ⇑P P 13 15 19.0 +0.4
baz=62
SHOC **Shoshone** 61.83 67 ⇓P P 13 15 18.6 -0.3
baz=62
J21A **Lysite** 62.03 55 ⇓P P 13 15 20.5 +0.4
baz=62
S13A **Holt Ranch, En** 62.17 64 ⇓P P 13 15 21.5 +0.2
baz=62
N18A **Larsen Ranch,** 62.36 59 ⇑P P 13 15 22.6 +0.2
baz=62
J22A **Midwest** 62.51 55 ⇓P P 13 15 23.1 -0.3
baz=62
T13A **Saint George** 62.52 64 ⇑P P 13 15 24.1 +0.5
baz=62
U12A **Valley of Fire** 62.53 65 ⇓P P 13 15 22.3 -1.3
baz=62
K21A **Alcova** 62.61 56 ⇓P P 13 15 23.8 -0.2
baz=62
Q16A **Castle Valley** 62.87 61 ⇓P P 13 15 25.8 0.0
baz=63
U13A **Pakoon Wash** 62.88 65 ⇓P P 13 15 26.5 +0.5
baz=63
L21A **Rawlins** 62.99 56 ⇑P P 13 15 26.5 -0.1
baz=63
SRU **San Rafael** 63.12 61 ⇑P P 13 15 27.7 +0.2
baz=63
V13A **Grand Canyon W** 63.25 65 ⇑P P 13 15 28.2 -0.2
baz=63
RSSD **Black Hills** 63.34 53 *e*P P 13 15 28.5 -0.4
RSSD pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
RSSD **Black Hills** 63.34 53 *e*P P 13 15 28.5 -0.4
comp=Z,3.4nm,1.0s,mb4.4
S16A **Weppner Ranch,** 63.42 62 ⇓P P 13 15 29.5 0.0
baz=63
R17A **Hanksville Air** 63.47 61 ⇑P P 13 15 30.0 +0.1
baz=63
FINES **FINESS Array B** 63.52 336 P P 13 15 29.3 -0.5
comp=Z,1.6nm,0.8s,mb4.1,baz=19,slow=8.1,SNR=4.2
P19A **Cripple Cowboy** 63.65 59 ⇓P P 13 15 31.4 +0.3
baz=63
IRM **Iron Mountain** 63.67 68 ⇑P P 13 15 31.3 0.0
baz=64
N21A **Black Mountain** 63.72 58 ⇓P P 13 15 31.6 +0.2
baz=64
O20A **White River Ci** 63.73 58 ⇓P P 13 15 31.0 -0.6
baz=64
V14A **Boquillas Ranc** 63.92 65 ⇓P P 13 15 33.0 0.0
baz=64
S17A **Black Ridge (B** 63.95 62 ⇓P P 13 15 32.3 -0.8
baz=64
Q19A **Hogan Spring (** 63.95 60 ⇑P P 13 15 32.4 -0.7
baz=64,SNR=5.8
R18A **Canyonlands Na** 63.97 61 ⇑P P 13 15 32.4 -0.8
baz=64
W14A **Seligman** 64.22 65 ⇓P P 13 15 35.3 +0.4
baz=64
V15A **Kaibab Nationa** 64.36 64 ⇓P P 13 15 35.9 +0.2
baz=64
S18A **Hurst Farm, Bl** 64.38 62 ⇑P P 13 15 35.6 -0.3
baz=64
R19A **Curley Farm, L** 64.40 61 ⇓P P 13 15 35.8 -0.2
baz=64
N23A **Red Feather La** 64.50 57 ⇓P P 13 15 36.9 +0.3
baz=64
T18A **Mexican Hat** 64.83 62 ⇓P P 13 15 38.2 -0.6
baz=65
S19A **Harvey Farm, M** 64.84 61 ⇓P P 13 15 38.6 -0.3
baz=65
X14A **Yava** 64.84 66 ⇓P P 13 15 38.6 -0.3
baz=65
P22A **Eagle** 64.94 58 ⇑P P 13 15 39.3 -0.2
baz=65
R20A **Redvale** 64.98 60 ⇑P P 13 15 39.0 -0.8
baz=65
O23A **Lake Granby, G** 64.98 57 ⇓P P 13 15 40.1 +0.3
baz=65
Q21A **Lamborn Mesa,** 65.00 59 ⇑P P 13 15 39.7 -0.2
baz=65,SNR=5.5
WUAZ **Wupatki** 65.04 64 ⇑P P 13 15 41.0 +0.8
baz=65
SMCO **Snowmass** 65.10 59 *e*P P 13 15 41.1 +0.5
comp=Z,3.6nm,1.0s,mb4.4
X15A **Humboldt** 65.23 65 ⇓P P 13 15 41.5 +0.1
baz=65
S20A **Disappointment** 65.23 60 ⇓P P 13 15 41.2 -0.3
baz=65
Z13A **Yuma Proving G** 65.24 67 ⇓P P 13 15 41.4 -0.1
baz=65
U18A **Rough Rock, Ch** 65.32 62 ⇑P P 13 15 40.0 -2.0
baz=65
R21A **Cimarron** 65.33 60 ⇓P P 13 15 41.9 -0.2
baz=65
Q22A **Crested Butte,** 65.35 59 ⇑P P 13 15 41.7 -0.5
baz=65
ISCO **Idaho Springs** 65.44 57 ⇑P P 13 15 43.0 +0.3
baz=65
ISCO **Idaho Springs** 65.44 57 *e*P P 13 15 42.9 +0.2
ISCO pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ISCO **Idaho Springs** 65.44 57 *e*P P 13 15 42.9 +0.2
comp=Z,4.1nm,0.9s,mb4.5
T19A **Beclabito** 65.53 62 ⇓P P 13 15 43.0 -0.4
baz=65
Y15A **Casa Rosa Ranc** 65.53 66 ⇑P P 13 15 43.4 0.0
baz=65
MVCO **Mesa Verde** 65.58 61 ⇓P P 13 15 43.7 0.0
baz=65
S21A **Coal Bank Pass** 65.67 60 ⇑P P 13 15 44.3 0.0
baz=65
X16A **Lo Mia Camp, P** 65.75 65 ⇑P P 13 15 45.0 +0.2
baz=66
V18A **Ganado** 65.77 63 ⇑P P 13 15 45.1 +0.2
baz=66
U19A **Dine' College,** 65.79 62 ⇑P P 13 15 45.0 -0.1
baz=66
R22A **Saguache, Gunn** 65.88 59 ⇑P P 13 15 45.9 +0.3
baz=66
Q23A **Hartsel** 65.93 58 ⇓P P 13 15 45.9 0.0
baz=66
114A **Black Gap (USA** 66.02 67 ⇑P P 13 15 46.3 -0.3
baz=66
Y16A **Circle Bar Ran** 66.10 65 ⇓P P 13 15 46.9 -0.2
baz=66
S22A **4UR Ranch, Cre** 66.17 60 ⇓P P 13 15 47.8 +0.3
baz=66,SNR=6.4
115A **Sonoran Desert** 66.45 67 ⇓P P 13 15 49.5 +0.1
baz=66
U21A **Nageezi** 66.60 61 ⇓P P 13 15 49.5 -0.7
baz=66
Y17A **Roosevelt** 66.61 65 ⇓P P 13 15 50.2 -0.2
baz=66
214A **Organ Pipe Nat** 66.61 68 ⇓P P 13 15 50.8 +0.4
baz=66
R24A **Sanders Place,** 66.81 58 ⇑P P 13 15 51.6 +0.1
baz=67
W20A **Ramah** 67.01 63 ⇑P P 13 15 52.7 -0.2
baz=67
Y18A **Canyon Day Jun** 67.04 65 ⇑P P 13 15 52.8 -0.3
baz=67
V21A **Milan** 67.05 62 ⇓P P 13 15 53.0 -0.1
baz=67
U22A **Llaves** 67.10 61 ⇑P P 13 15 53.4 -0.1
baz=67
NB2 **NORSAR Subarra** 67.32 343 P P 13 15 54.6 +0.2
comp=Z,3.7nm,0.9s,mb4.4,baz=22,slow=6.5
NOA **NORSAR Array B** 67.32 343 P P 13 15 54.7 +0.3
comp=Z,2.3nm,0.8s,mb4.2,baz=23,slow=6.3,SNR=4.8
NOA LR LR 13 46 17.7
comp=Z,16nm,20.5s,MS3.2,baz=190,slow=37
NOA **NORSAR Array B** 67.32 343 P P 13 15 54.7 +0.3
NOA LR LR 13 46 17.7
Y19A **Nutrioso** 67.38 64 ⇑P P 13 15 56.4 +1.2
baz=67
X20A **Quemado** 67.42 63 ⇑P P 13 15 55.7 +0.2
baz=67
U23A **El Rito** 67.52 60 ⇓P P 13 15 56.0 -0.1
baz=67,SNR=7.2
T24A **Torres, Weston** 67.65 59 ⇓P P 13 15 57.2 +0.2
baz=67
118A **Homack Ranch,** 67.87 65 ⇓P P 13 15 58.5 +0.1
baz=68
X21A **Alamocita Cree** 67.91 63 ⇑P P 13 15 59.1 +0.6
baz=68
V23A **Ortiz Mt. (NFS** 67.93 61 ⇑P P 13 15 59.2 +0.5
baz=68
Y20A **Horse Springs,** 67.93 64 ⇑P P 13 15 59.1 +0.3
baz=68
217A **Green Valley** 67.96 67 ⇓P P 13 15 58.4 -0.5
baz=68
T25A **Trinidad** 67.97 59 ⇑P P 13 15 59.3 +0.4
baz=68
Y21A **Point of Rocks** 68.28 63 ⇓P P 13 16 01.1 +0.2
baz=68
ANMO **Albuquerque** 68.33 62 *e*P P 13 16 01.7 +0.5
Z20A **Nine Sixteen R** 68.36 64 ⇑P P 13 16 00.9 -0.5
baz=68
V24A **Rampart Ranch,** 68.47 60 ⇑P P 13 16 02.0 -0.1
baz=68
U25A **Circle Dot Ran** 68.49 59 ⇓P P 13 16 02.3 +0.1
baz=68
318A **Bisbee** 68.69 66 ⇓P P 13 16 03.2 -0.4
baz=68
120A **U Bar Ranch, L** 68.74 65 ⇑P P 13 16 03.5 -0.3
baz=68
219A **White Tail Can** 68.74 66 ⇓P P 13 16 04.0 +0.1
baz=68
W24A **Lazy 6 Ranch,** 68.76 61 ⇓P P 13 16 03.7 -0.2
baz=68
Z21A **St. Cloud Mine** 68.77 64 ⇓P P 13 16 04.5 +0.5
baz=69
319A **Douglas** 69.17 66 ⇓P P 13 16 06.4 -0.1
baz=69
Z22A **Elephant Butte** 69.23 63 ⇑P P 13 16 06.3 -0.5
baz=69
220A **Playas Peak, P** 69.25 65 ⇑P P 13 16 06.9 -0.1
baz=69
Y23A **Lovelace Mesa,** 69.29 62 ⇑P P 13 16 07.4 +0.2
baz=69
W25A **X Bar L Ranch,** 69.30 60 ⇑P P 13 16 07.2 -0.1
baz=69
Y24A **Capitan** 69.65 62 ⇓P P 13 16 09.5 +0.1
baz=69
X25A **Clemmons Ranch** 69.67 61 ⇓P P 13 16 09.9 +0.3
baz=70
Y25A **Mesa, Roswell** 70.09 61 ⇓P P 13 16 11.8 -0.3
baz=70
Z24A **Sheeppen Canyo** 70.12 62 ⇓P P 13 16 12.0 -0.3
baz=70
X26A **CR and CF Fran** 70.15 60 ⇑P P 13 16 12.3 -0.2
baz=70
Z25A **Roswell** 70.53 62 ⇑P P 13 16 14.8 -0.1
baz=70
224A **Cornudas Mount** 70.92 63 ⇓P P 13 16 17.1 -0.1
baz=71
Z26A **Caprock** 70.97 61 ⇑P P 13 16 17.0 -0.5
baz=71,SNR=7.9
Y27A **Causey** 71.00 60 ⇓P P 13 16 17.4 -0.3
baz=71
125A **Gardner Draw,** 71.01 62 ⇑P P 13 16 17.5 -0.3
baz=71
MNTX **Cornudas Mount** 71.28 63 ⇑P P 13 16 18.5 -0.9
baz=71
WRA **Warramunga Arr** 71.35 203 P P 13 16 18.3 -1.4
comp=Z,2.9nm,0.8s,mb4.2,baz=21,slow=6.5,SNR=16
Z27A **Tatum** 71.38 61 ⇓P P 13 16 19.7 -0.3
baz=71
425A **Indio Mountain** 72.17 64 ⇑P P 13 16 24.4 -0.4
baz=72
426A **McDonald Obser** 72.82 63 ⇑P P 13 16 28.3 -0.4
baz=73
328A **Wristen Ranch,** 73.02 62 ⇓P P 13 16 29.5 -0.4
baz=73
427A **Hayter Ranch,** 73.06 63 ⇑P P 13 16 29.6 -0.5
baz=73
526A **Mary Lane Ranc** 73.22 64 ⇓P P 13 16 30.7 -0.3
baz=73
527A **Woodward Ranch** 73.44 63 ⇓P P 13 16 31.8 -0.6
baz=73
626A **Big Bend Ranch** 73.56 64 ⇓P P 13 16 32.8 -0.3
baz=73
428A **Kincaid Ranch,** 73.57 62 ⇓P P 13 16 33.1 0.0
baz=73
528A **Cox Ranch, San** 73.92 63 ⇓P P 13 16 34.7 -0.5
baz=74
TXAR **Lajitas Array** 74.00 64 P P 13 16 35.2 -0.4
comp=Z,3.8nm,0.7s,mb4.5,baz=303,slow=5.0,SNR=49
627A **Terlingua Ranc** 74.08 64 ⇓P P 13 16 35.7 -0.5
baz=74
628A **Black Gap, Mar** 74.35 63 ⇓P P 13 16 37.4 -0.3
baz=74
ASAR **Alice Springs** 75.02 202 P P 13 16 40.8 -0.6
comp=Z,2.1nm,0.8s,mb4.1,baz=14,slow=5.6,SNR=25
BRTR **Keskin Array B** 78.94 319 P P 13 17 05.4 +1.9
comp=Z,0.5nm,0.6s,mb3.6,baz=3.6,slow=4.6,SNR=2.8
QSPA **South Pole Qui** 138.40 180 PKP PKPdf 13 24 24.6 +0.8
comp=Z,1.2nm,0.8s,baz=334,slow=4.5,SNR=9.7
PLCA **Paso Flores** 145.45 95 PKPbc PKPbc 13 24 37.2 -0.4
comp=Z,2.7nm,1.0s,baz=326,slow=7.2,SNR=3.5
PLCA **Paso Flores** 145.45 95 PKPbc PKPbc 13 24 37.2 -0.4

*IDC **01** 13:22:51.7±1.6, 6.74N×123.60E, h0km, mb3.3/3,*
mb1 3.6/3, mb1mx3.3/19, mbtmp3.3/3, Error ellipse:
s-maj=34.2km s-min=24.8km az=12.0
*MAN **01** 13:22:53, 7.16N×123.59E, h31km, mb4.2, ML3.1, MS2.8*
ISC 01 13:22:49.8±1.1, 7.03N±0.05×123.53E±0.03, h1km±8km,
n13, σ1°27/21, mb3.1/3, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.74**	**75**	*e*P	**Pg**	**13 23 03.4**	**-0.6**
CTBH				*i* S	**Sg**	**13 23 13.5**	**-0.1**
PAGZ	**Pagadian**	**0.82**	**350**	*e*P	**Pg**	**13 23 07.7**	**+2.0**
PAGZ				*e*S	**Sg**	**13 23 18.7**	**+2.4**
IPIL	**Ipil**	**1.21**	**309**	*e*P	**Pg**	**13 23 14.2**	**+1.2**
ZMPH	**Zamboanga City**	**1.45**	**267**	⇓*i*P	**Pn**	**13 23 16.4**	**-0.8**
ZMPH				*i* S	**Sb**	**13 23 35.0**	**-1.6**
GSPH	**General Santos**	**1.70**	**123**	⇑*i*P	**Pn**	**13 23 22.5**	**+1.9**
GSPH				*i* S	**Sn**	**13 23 47.9**	**+4.9**
BUKP	**Musuan**	**1.74**	**61**	*e*P	**Pn**	**13 23 20.9**	**-0.3**
BUKP				*e*S	**Sn**	**13 23 40.3**	**-3.8**
DMPH	**Davao City--Mi**	**1.97**	**88**	⇑*e*P	**Pn**	**13 23 24.3**	**0.0**
DMPH				*e*S	**Sn**	**13 23 50.4**	**+0.7**
DAV	**Davao City (W)**	**2.04**	**89**	Pn	**Pn**	**13 23 26.6**	**+1.3**
DAV				Sn	**Sg**	**13 23 54.2**	**-1.1**
SNPH	**Sibulan**	**2.31**	**353**	⇓*e*P	**Pg**	**13 23 33.1**	**-1.1**
SNPH				*e*S	**Sg**	**13 24 02.5**	**-1.8**
GUIM	**Jordan**	**3.69**	**346**	*e*P	**Sb**	**13 24 41.2**	**0.0**
CMAR	**Chiang Mai Arr**	**26.49**	**298**	P	**P**	**13 28 32.8**	**+3.8**
WRA	**Warramunga Arr**	**28.84**	**159**	P	**P**	**13 28 48.6**	**-1.4**
ASAR	**Alice Springs**	**32.15**	**162**	P	**P**	**13 29 19.6**	**+0.5**

comp=Z,1.0nm,0.8s,baz=335,slow=8.0,SNR=4.9

*ISCJB **01** 13:38:40.9±0.7,24°.10S±0°.05×67°.1W±0°.2,h200km±33km, Error ellipse: s-maj=23.2km s-min=8.6km az=177.5*
*IDC **01** 13:38:40.9±1.6,24°.15S×67°.09W,h163km±17km, mb1 3.1/4,mb1mx3.0/18,mbtmp3.0/4,Error ellipse: s-maj=34.3km s-min=14.3km az=93.0*
*NEIC **01** 13:38:40.8±0.8,24°.10S×67°.14W,h166km±11km, MG4.6(GUC),Error ellipse: s-maj=14.6km s-min=11.4km az=89.0*
*GUC **01** 13:38:43.8±1.0,23°.76S×67°.45W,h231km±44km,ML4.6*

ISC 01 13:38:41.9±0.7,24°.07S±0°.06×67°.1W±0°.2,h195km±33km, n17,σ1°11/25,1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	Los Morros	2.94	283	∥iP	Pn	13 39 33.4	+2.9
CEN1				i S	Sn	13 40 08.9	+0.5
CEN1				AML	AML	13 40 11.2	
	comp=N,557nm,0.6s						
ANCH	Antofagasta	3.07	276	P	Pn	13 39 28.0	-4.1
ANCH				S	Sn	13 40 04.3	-7.0
ANCH	Antofagasta	3.07	276	eP	Pn	13 39 28.0	-4.1
ANCH				i S	Sn	13 40 04.3	-7.0
ANCH				AML	AML	13 40 07.2	
	comp=E,1μm,0.2s						
MACH	Maria Elena	3.09	307	eP	Pn	13 39 33.6	+1.3
MACH				eS	Sn	13 40 10.9	-0.8
MECH	Mejillones	3.24	287	eP	Pn	13 39 35.1	+1.0
MECH				i S	Sn	13 40 13.9	-1.0
MECH				AML	AML	13 40 21.9	
	comp=N,1μm,0.3s						
HMBC	Humberston	4.58	325	eP	Pn	13 39 50.3	-0.5
HMBC				i S	Sn	13 40 41.6	-3.5
MNMC	Miæe Miæ	5.44	334	eP	Pn	13 40 02.6	+0.8
MNMC				eS	Sn	13 41 03.8	-1.2
CFAA	Coronel Fontan	7.58	188	P	Pn	13 40 29.4	-0.2
	comp=N,0.1nm,0.3s,baz=2.0,slow=8.2,SNR=9.6						
CFAA				S	Sn	13 41 48.9	-6.2
	comp=N,0.2nm,0.3s,baz=275,slow=23,SNR=6.4						
CFAA	Coronel Fontan	7.58	188	P	Pn	13 40 29.4	-0.2
CFAA				S	Sn	13 41 48.9	-6.2
LPAZ	La Paz	7.80	353	P	Pn	13 40 35.0	+2.5
	comp=N,1.8nm,0.3s,baz=153,slow=8.6,SNR=41						
LPAZ				S	Sn	13 42 00.7	+0.1
	comp=N,0.1nm,0.3s,baz=23,slow=23,SNR=2.5						
LPAZ	La Paz	7.80	353	ePn	Pn	13 40 33.5	+0.9
LPAZ				S	Sn	13 42 00.7	+0.1
CPUP	Villa Florida	9.11	106	P	Pn	13 40 49.5	-0.1
	comp=N,0.3nm,0.3s,baz=291,slow=11,SNR=3.6						
SIV	San Ignacio	9.82	36	P	Pn	13 40 58.6	-0.2
	comp=N,0.9nm,0.3s,baz=215,slow=13,SNR=13						
TRQA	Tornquist	14.61	164	ePn	Pn	13 41 58.1	-1.3
ASAR	Alice Springs	128.37	205	PKP	PKPdf	13 57 28.6	+2.8
	comp=N,0.3nm,0.6s,baz=159,slow=2.8,SNR=4.5						
WRA	Warramunga Arr	131.53	207	PKP	PKPdf	13 57 35.0	+3.1
	comp=N,0.7nm,1.1s,baz=154,slow=1.8,SNR=5.3						
MKAR	Makanchi Array	146.62	40	PKPbc	PKPbc	13 58 02.0	+1.8
	comp=N,0.7nm,0.6s,baz=308,slow=3.5,SNR=9.8						

*IDC **01** 13:46:38.1±1.5,6°.05S×147°.47E,h0km,mb3.7/4, mb1 3.9/5,mb1mx3.6/16,mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=63.1km s-min=19.2km az=120.0*
*ISCJB **01** 13:46:42.5±3.8,6°.0S±0°.2×147°.4E±0°.3,h45km±36km, mb3.8/5,Error ellipse: s-maj=46.3km s-min=27.2km az=30.0*
*NEIC **01** 13:46:44.8±2.1,6°.07S×147°.46E,h53km±20km,mb4.5/1, Error ellipse: s-maj=28.7km s-min=17.1km az=120.0*

ISC 01 13:46:44.4±3.2,6°.1S±0°.2×147°.4E±0°.3,h47km±31km,n11, σ0°68/14,mb3.8/5,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.35	184	ePn	Pn	13 47 34.5	+0.2
PMG				ePg	Pn	13 47 39.7	+5.4
PMG				eSn	Sn	13 48 07.1	-5.7
COEN	Coen	8.90	208	eP	Pn	13 48 51.0	+0.4
WRA	Warramunga Arr	18.77	221	P	Pn	13 50 59.3	-1.3
	0.3nm,0.3s,baz=40,slow=12,SNR=7.9						
WRA				S	S	13 54 19.0	-12
	0.1nm,0.3s,baz=50,slow=22,SNR=3.0						
ASAR	Alice Springs	21.82	215	P	P	13 51 32.6	-0.2
	0.4nm,0.3s,mb3.3,baz=52,slow=8.8,SNR=29						
ASAR				S	S	13 55 35.2	+3.8
	0.7nm,0.9s,baz=33,slow=21,SNR=4.6						
FITZ	Fitzroy Crossi	24.40	239	P	P	13 51 59.5	+0.9
	2.5nm,0.5s,mb3.9,baz=70,slow=9.2,SNR=17						
FITZ	Fitzroy Crossi	24.40	239	eP	P	13 51 59.1	+0.5
STKA	Stephens Creek	26.27	191	P	P	13 52 15.9	+0.5
	1.3nm,0.5s,mb3.7,baz=8.3,slow=12,SNR=6.0						
STKA	Stephens Creek	26.27	191	eP	P	13 52 15.4	0.0
ULN	Ulaanbaatar	64.35	331	eP	P	13 57 15.6	+0.3
	2.0nm,0.4s,mb4.5						
ILAR	Eielson Array	85.36	23	P	P	13 59 15.9	-0.4
	0.2nm,0.6s,mb3.4,baz=262,slow=5.3,SNR=4.2						
TORD	Torodi Ar. Bea	145.50	284	PKPbc	PKPbc	14 06 19.0	+0.4
	0.5nm,0.5s,baz=68,slow=4.1,SNR=6.1						

MAN 01 14:03:15,11°.28N×124°.62E,h2km,mb4.3,ML3.1,MS2.9, 2D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.23	182	eP	Pg	14 03 21.1	+1.7
BESP	Borongan	0.86	68	eP	Pg	14 03 33.0	+1.4
LLP	Lapu-Lapu	1.15	214	∥eP	Pg	14 03 36.2	-0.9
LLP				eS	Sg	14 03 51.7	-0.4
MSLP	Maasin	1.17	168	eP	Pg	14 03 37.6	+0.2
CNP	Catarman	1.22	2	eP	Pg	14 03 39.3	+0.8
TBP	Tagbilaran	1.75	205	eP	Pn	14 03 46.1	-0.3
TBP				eS	Sn	14 04 07.8	-1.4
GUIM	Jordan	2.10	252	eP	Pn	14 03 52.7	+1.6
SNPH	Sibulan	2.36	215	∥eP	Pn	14 03 54.1	-0.6
SNPH				eS	Sn	14 04 31.4	+7.2
PAGZ	Pagadian	3.62	200	eP	Pn	14 04 13.9	+1.7
CAUP	Cauayan	6.25	335	eP	Pn	14 04 50.3	+2.1

*ISCJB **01** 14:38:13.2±2.7,12°.1N±0°.2×145°.2E±0°.5,h74km±18km, mb3.7/7,Error ellipse: s-maj=86.6km s-min=24.8km az=172.8*
*NEIC **01** 14:38:13.9±2.4,12°.17N×145°.15E,h60km±20km,mb4.2/2, Error ellipse: s-maj=71.0km s-min=21.0km az=85.0*
*IDC **01** 14:38:14.4±2.9,12°.11N×145°.20E,h65km±21km,mb3.6/6, mb1 3.6/6,mb1mx3.4/22,mbtmp3.6/6,Error ellipse: s-maj=86.9km s-min=19.9km az=83.0*

ISC 01 14:38:13.9±2.8,12°.1N±0°.2×145°.2E±0°.5,h64km±19km,n11, σ0°93/13,mb3.8/7,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.51	346	P	Pn	14 38 37.5	-1.3
	31nm,0.3s,baz=191,slow=7.0,SNR=2.2						
GUMO				S	Sn	14 38 58.3	+0.9
	46nm,0.3s,baz=209,slow=21,SNR=2.9						
GUMO	Guam	1.51	346	eP	Pn	14 38 37.7	-1.1
GUMO				S	Sn	14 38 58.4	+0.9
ASAR	Alice Springs	37.25	197	P	P	14 45 20.4	+0.8
	0.9nm,0.7s,mb3.7,baz=18,slow=9.5,SNR=24						
CMAR	Chiang Mai Arr	45.01	284	P	P	14 46 23.1	-0.4
	0.1nm,0.3s,mb3.1,baz=106,slow=4.6,SNR=4.4						
SONM	Songino Array	48.14	325	P	P	14 46 49.2	+1.8
	0.2nm,0.4s,mb3.5,baz=147,slow=5.5,SNR=4.3						
MK31	Makanchi Array	62.80	317	P	P	14 48 31.4	-1.3
MKAR	Makanchi Array	62.80	317	P	P	14 48 33.2	+0.4
	0.7nm,0.6s,mb4.0,baz=94,slow=7.5,SNR=5.8						
KURK	Kurchatov	65.94	320	P	P	14 48 53.1	-0.1
	1.7nm,0.6s,mb4.2,baz=103,slow=6.5,SNR=7.5						
KURK	Kurchatov	65.94	320	eP	P	14 48 52.1	-1.1
	5.2nm,1.1s,mb4.5						
BVAR	Borovoye Array	71.30	322	P	P	14 49 26.7	+0.2
	1.3nm,0.5s,mb4.1,baz=101,slow=7.7,SNR=9.4						
ABKAR	Akbulak array	77.87	318	eP	P	14 50 04.3	-0.5
	1.0nm,0.6s,mb3.9						

*IDC **01** 15:01:58.5±0.8,31°.25N×103°.77E,h0km,mb3.9/9, mb1 4.0/11,mb1mx3.9/22,mbtmp3.9/11,ML3.8/1,Error ellipse: s-maj=29.6km s-min=16.1km az=60.0*
*ISCJB **01** 15:02:01.0±0.8,31°.20N±0°.04×103°.71E±0°.08,h27km±6km, mb3.9/10,Error ellipse: s-maj=11.9km s-min=6.9km az=170.6*
*BJI **01** 15:02:00.9,31°.21N×103°.85E,h16km,mB4.5/5,mb4.2/7, ML3.8/15,Ms3.7/3,Ms7 3.2/3*
*NEIC **01** 15:02:00.1±0.4,31°.27N×103°.87E,h10km,mb4.0/2,Error ellipse: s-maj=11.9km s-min=8.0km az=60.0*

ISC 01 15:02:00.0±0.7,31°.26N±0°.03×103°.89E±0°.05,h8km±5km, n23,σ0°91/31,mb3.9/10,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.37	198	∥iPg	Pg	15 02 07.3	+0.1
CD2				Sg	Sg	15 02 12.8	+0.7
CD2				smax			
	comp=N,13μm,0.5s						
CD2				smax			
	comp=E,36μm,0.6s						
LZH	Lanzhou	4.81	360	Pg	Pg	15 03 32.3	+0.1
LZH				Sn	Sn	15 04 24.2	+16
LZH				Sg	Sg	15 04 34.7	+0.1
LZH				smax			
	comp=N,57nm,0.6s						
LZH				smax			
	comp=E,130nm,0.8s						
LZH				LR	LR		
	comp=N,510nm,9.0s						
LZH				LR	LR		
	comp=E,820nm,9.8s						
LZH				LR	LR		
	comp=Z,570nm,10.6s						
ENH	Enshi	4.92	100	eP	Pn	15 03 14.3	+0.1
XAN	Xi'an	5.07	56	Pn	Pn	15 03 21.6	+5.3
XAN				Pg	Pg	15 03 36.7	-0.4
XAN				Sn	Sn	15 04 23.8	+8.8
XAN				Sg	Sg	15 04 42.4	-0.4
XAN				smax			
	comp=N,140nm,0.9s						
XAN				smax			
	comp=E,53nm,0.8s						
XAN				LR	LR		
	comp=N,190nm,9.7s						
XAN				LR	LR		
	comp=E,40nm,8.4s						
XAN				LR	LR		
	comp=Z,74nm,10.1s						
GYA	Guiyang	5.37	152	Pn	Pn	15 03 23.5	+3.0
GYA				Sn	Sn	15 04 23.5	+1.0
GYA				Sg	Sg	15 04 50.7	-1.8
GYA				smax			
	comp=N,160nm,0.7s						
GYA				smax			
	comp=E,190nm,0.7s						
KMI	Kunming	6.20	190	Pg	Pn	15 03 32.4	+0.5
KMI				Sg	Sn	15 04 41.6	-1.4
KMI				smax			
	comp=N,31nm,0.7s						
KMI				smax			
	comp=E,39nm,0.7s						
KMI				LR	LR		
	comp=N,210nm,11.4s						
KMI				LR	LR		
	comp=E,440nm,14.4s						
KMI				LR	LR		
	comp=Z,160nm,13.3s						
GTA	Gaotai	8.78	339	eP	Px	15 04 45.5	
GTA				pP		15 04 49.8	
GTA				sP		15 04 53.2	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	Chiang Mai Arr	13.51	201	Pn	Pn	15 05 12.6	+0.5
	comp=Z,0.1nm,0.3s,baz=12,slow=11,SNR=7.1						
SONM	Songino Array	16.66	6	Pn	Pn	15 05 54.9	+1.1
	baz=185,slow=11,SNR=5.6						
KSRS	Korea Array	20.75	66	P	P	15 06 43.0	+1.8
	comp=Z,2.0nm,0.7s,baz=253,slow=9.6,SNR=6.3						
MK31	Makanchi Array	22.74	319	eP	P	15 07 02.1	-0.3
MKAR	Makanchi Array	22.74	319	P	P	15 07 02.5	+0.1
	comp=Z,1.9nm,0.8s,mb3.6,baz=125,slow=10,SNR=17						
KZA	Kyzart	25.27	303	eP	P	15 07 28.0	+1.3
	comp=Z,3.3nm,0.8s,mb3.9						
ZALV	Zalesovo Beam	26.50	334	P	P	15 07 37.3	-0.4
	comp=Z,1.9nm,0.7s,mb3.7,baz=137,slow=9.3,SNR=7.9						
KURK	Kurchatov	27.01	323	P	P	15 07 41.9	-0.4
	comp=Z,1.9nm,0.8s,mb3.7,baz=126,slow=10,SNR=14						
KURK	Kurchatov	27.01	323	eP	P	15 07 41.6	-0.7
	comp=Z,1.7nm,0.7s,mb3.7						
ARCES	ARCESS Array B	57.04	336	P	P	15 11 45.3	-0.7
	comp=Z,3.7nm,0.9s,mb4.4,baz=86,slow=7.9,SNR=10.0						
ARCES				PcP	PcP	15 12 39.6	-1.4
	comp=Z,1.6nm,0.7s,baz=54,slow=4.8,SNR=4.1						
FINES	FINESS Array B	57.33	326	P	P	15 11 47.2	-1.0
	comp=Z,1.5nm,0.8s,mb4.1,baz=98,slow=8.6,SNR=4.0						
FINES	FINESS Array B	57.33	326	P	P	15 11 47.2	-1.0
ASAR	Alice Springs	61.72	149	P	P	15 12 19.0	+0.1
	comp=Z,0.5nm,0.5s,mb3.9,baz=335,slow=6.7,SNR=18						
ILAR	Eielson Array	69.77	26	P	P	15 13 09.7	-0.7
	comp=Z,0.5nm,0.7s,mb3.5,baz=291,slow=4.6,SNR=6.8						
STKA	Stephens Creek	72.24	147	P	P	15 13 25.9	+0.1
	comp=Z,2.7nm,1.0s,mb4.1,baz=337,slow=7.7,SNR=3.6						
TORD	Torodi Ar. Bea	93.41	287	P	P	15 15 15.2	-1.3
	comp=Z,0.9nm,1.2s,mb4.1,baz=76,slow=4.2,SNR=3.0						

*DDA **01** 15:07:22.5,38°.84N×31°.29E,h7km±1km,Md2.9*
*ISCJB **01** 15:07:23.5±0.5,38°.79N±0°.03×31°.28E±0°.03,h10km±5km, Error ellipse: s-maj=5.5km s-min=4.0km az=173.5*
*ISK **01** 15:07:23.1,38°.77N×31°.29E,h5km,MD2.9*
*CSEM **01** 15:07:23.4±0.1,38°.77N×31°.28E,h5km,MD2.9*

ISC 01 15:07:23.8±0.5,38°.79N±0°.03×31°.27E±0°.03,h7km±5km, n32,σ0°86/48,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	Bolvadin	0.26	254	i P	Pg	15 07 28.9	0.0
BOLV				i S	Sg	15 07 33.1	+0.8
BOLV	Bolvadin	0.26	254	i P	Pg	15 07 28.9	0.0
BOLV				i S	Sg	15 07 33.1	+0.8
KIZT	Kizilcal	0.48	79	ePG	Pg	15 07 32.9	-0.3
KIZT				eSG	Sg	15 07 39.9	+0.4
KIZT	Kizilcal	0.48	79	ePg	Pg	15 07 32.9	-0.3
KIZT				eSg	Sg	15 07 39.9	+0.4
SHUT	Suhut-Afyon	0.61	247	ePG	Pg	15 07 35.6	0.0
SHUT				eSG	Sg	15 07 44.6	+1.2
SHUT	Suhut-Afyon	0.61	247	ePg	Pg	15 07 35.6	+0.1
SHUT				eSg	Sg	15 07 44.6	+1.1
SVRH	Sivrihisar-ESK	0.69	17	ePG	Pg	15 07 36.9	-0.1
SVRH				eSG	Sg	15 07 47.0	+1.1
SVRH	Sivrihisar-ESK	0.69	17	ePg	Pg	15 07 36.9	-0.1
SVRH				eSg	Sg	15 07 47.1	+1.2
KDHN	Kadinhani	0.71	112	i P	Pg	15 07 36.5	-1.0
KDHN				i S	Sg	15 07 47.2	+0.4
KDHN	Kadinhani	0.71	112	i P	Pg	15 07 36.5	-1.0
KDHN				i S	Sg	15 07 47.2	+0.4
ESKT	Eskisehir	0.80	336	i P	Pg	15 07 37.2	-2.0
ESKT				i S	Sg	15 07 48.4	-1.2
SEYT	Eskypehyr	0.80	336	i S	Sg	15 07 48.4	-1.1
KONT	Konya--Tatoy	1.20	134	ePN	Pn	15 07 45.9	-1.1
KONT	Konya--Tatoy	1.20	134	ePn	Pn	15 07 45.9	-1.1
SUTC	Sutluce-Ispart	1.33	189	ePN	Pn	15 07 48.6	-0.1
SUTC	Sutluce-Ispart	1.33	189	ePn	Pn	15 07 48.6	-0.2
GDZ	Gediz	1.43	283	i P	Pn	15 07 49.5	-0.6
GDZ				i S	Sb	15 08 07.2	-1.9
GDZ	Gediz	1.43	283	i P	Pn	15 07 49.5	-0.6
GDZ				i S	Sb	15 08 07.2	-1.9
KHL	Karahalli	1.45	252	ePN	Pn	15 07 50.7	+0.3
KHL	Karahalli	1.45	252	ePn	Pn	15 07 50.7	+0.3
MDU	Mudurnu	1.67	359	ePN	Pn	15 07 54.3	+0.7
MDU	Mudurnu	1.67	359	ePn	Pn	15 07 54.3	+0.8
GULT	Gulveren	1.74	341	ePN	Pn	15 07 55.0	+0.6
GULT	Gulveren	1.74	341	ePn	Pn	15 07 55.0	+0.5
CAVI	Cavuskoy	1.79	322	ePN	Pn	15 07 55.8	+0.6
CAVI	Cavuskoy	1.79	322	ePn	Pn	15 07 55.8	+0.6
SGKT	Sivrigoynuk	1.88	19	i P	Pn	15 07 56.8	+0.4
SGKT				i S	Sn	15 08 25.6	+5.2
SGKT	Sivrigoynuk	1.88	19	i P	Pn	15 07 56.8	+0.4
ULDT	Uludag	2.13	310	i P	Pn	15 07 59.4	-0.5
ULDT				i S	Sn	15 08 27.3	+0.7
ULDT	Uludag	2.13	310	i P	Pn	15 07 59.4	-0.5
ULDT				i S	Sn	15 08 27.3	+0.7
YLV	Yalova	2.30	321	ePN	Pn	15 08 03.1	+1.0
YLV	Yalova	2.30	321	ePn	Pn	15 08 03.2	+1.0

*ISCJB **01** 15:11:46.4±0.4,22°.67S±0°.09×174°.8W±0°.1,h39km, mb4.4/17,Error ellipse: s-maj=14.1km s-min=12.0km az=40.7*
*NEIC **01** 15:11:47.9±0.4,22°.61S×174°.82W,mb4.4/4,Error ellipse: s-maj=15.1km s-min=12.1km az=147.0*
*IDC **01** 15:11:48.2±0.6,22°.54S×174°.93W,h40km±5km,mb4.2/13, mb1 4.3/13,mb1mx4.2/19,mbtmp4.2/13,Error ellipse: s-maj=21.0km s-min=15.1km az=124.0*

ISC 01 15:11:48.0±0.5,22°.75S±0°.10×174°.8W±0°.1,h41km, h41km±1.3km:pP-P,n38,σ1°12/34,mb4.4/17,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.38	305	eP	Pn	15 13 48.3	+1.3
	58nm,1.1s						
AFI	Afiamalu	9.24	18	Pn	Pn	15 13 51.1	-7.7
	4.9nm,0.3s,baz=209,slow=23,SNR=6.6						
AFI				Sn	Sn	15 15 24.7	-17
	2.1nm,0.3s,baz=66,slow=20,SNR=3.0						
AFI	Afiamalu	9.24	18	eP	Pn	15 13 50.8	-8.0
AFI				Sn	Sn	15 15 24.7	-17
RAR	Rarotonga	14.00	87	Pn	Pn	15 14 54.7	-9.0
	6.4nm,0.3s,baz=270,slow=15,SNR=3.2						
URZ	Urewera	16.95	202	S	Sn	15 18 36.3	-13
	0.4nm,0.3s,baz=139,slow=20,SNR=5.0						
RPZ	Rata Peaks	23.97	206	P	P	15 16 59.1	+0.6
	11nm,0.8s,mb4.3,baz=66,slow=20,SNR=2.6						
CTA	Charters Tower	36.31	267	P	P	15 18 47.2	-0.7
	2.1nm,0.4s,mb4.4,baz=84,slow=15,SNR=3.7						
CTA	Charters Tower	36.31	267	P	P	15 18 47.2	-0.7
CTAO	Charters Tower	36.31	267	eP	P	15 18 46.5	-1.4
STKA	Stephens Creek	39.60	247	P	P	15 19 15.5	-0.1
	1.7nm,0.5s,mb4.0,baz=105,slow=14,SNR=5.3						
ASAR	Alice Springs	46.97	258	P	P	15 20 13.6	-1.5
	4.4nm,0.9s,mb4.4,baz=99,slow=6.9,SNR=11						
SBA	Scott Base	55.85	185	eP	P	15 21 24.6	+3.7
QSPA	South Pole Qui	67.33	180	P	P	15 22 40.4	+2.3
	5.1nm,1.1s,mb4.5,baz=69,slow=2.2,SNR=11						
QSPA				pP	pP	15 22 52.8	+2.5
	2.2nm,0.9s,baz=13,slow=5.0,SNR=3.2						
QSPA	South Pole Qui	67.33	180	eP	P	15 22 40.4	+2.2
	5.1nm,1.0s,mb4.5						
QSPA				pP	pP	15 22 52.8	+2.5
MJAR	Matsushiro Arr	73.81	322	P	P	15 23 17.1	-1.1
	1.3nm,0.6s,mb4.0,baz=152,slow=4.9,SNR=4.4						
MJAR				pP	pP	15 23 29.1	-1.3
	1.4nm,0.6s,baz=154,slow=2.8,SNR=3.1						
PETK	Petropavlovsk-	79.24	344	P	P	15 23 48.5	0.0
	4.7nm,0.9s,mb4.4,baz=134,slow=10,SNR=8.3						
PETK	Petropavlovsk-	79.24	344	P	P	15 23 48.5	0.0
MAW	Mawson	80.45	199	P	P	15 23 56.8	+1.7
	4.1nm,0.7s,mb4.5,baz=106,slow=7.8,SNR=5.1						
MAW				pP	pP	15 24 09.2	+1.8
	3.6nm,0.8s,baz=207,slow=6.9,SNR=3.5						
NVAR	Mina Array Bea	80.65	42	P	P	15 23 56.9	+0.4
	2.7nm,0.8s,mb4.2,baz=225,slow=8.8,SNR=15						
MSU	Marysvale	84.56	44	eP	P	15 24 16.9	0.0
	3.8nm,1.1s,mb4.4						
VNA3	Neumayer Olymp	85.68	175	e	P	15 24 20.0	-2.1
VNA3				e		15 24 44.5	
TXAR	Lajitas Array	85.78	56	P	P	15 24 23.8	+0.6
	2.4nm,0.9s,mb4.4,baz=216,slow=7.7,SNR=19						
TXAR				pP	pP	15 24 35.1	-0.6
	0.9nm,0.9s,baz=232,slow=7.1,SNR=3.4						
TXAR	Lajitas Array	85.78	56	P	P	15 24 23.8	+0.6
TXAR				pP	pP	15 24 35.1	-0.6
HLID	Hailey	86.11	39	eP	P	15 24 25.0	+0.5
VNA2	Neumayer--Watz	86.16	176	e	P	15 24 22.8	-1.6
	baz=202,slow=3.4						
GDL2	Guadalupe Moun	86.65	53	eP	P	15 24 27.7	+0.3
	2.4nm,0.9s,mb4.4						
PSI	Prapat	87.66	274	P	P	15 24 32.5	-0.3
	5.2nm,0.7s,mb4.9,baz=150,slow=10,SNR=6.0						
PSI	Prapat	87.66	274	P	P	15 24 32.5	-0.3
BW06	Boulder Array	88.58	42	eP	P	15 24 35.2	-1.2
	1.4nm,0.9s,mb4.3						
PDAR	Pinedale Array	88.58	42	P	P	15 24 36.2	-0.2
	1.1nm,0.8s,mb4.2,baz=204,slow=2.9,SNR=6.6						
PDAR				pP	pP	15 24 48.1	-0.8
	0.1nm,0.3s,baz=97,slow=30,SNR=2.9						
ILAR	Eielson Array	89.87	12	P	P	15 24 41.6	-0.3
	1.8nm,0.9s,mb4.4,baz=220,slow=5.1,SNR=12						
CMAR	Chiang Mai Arr	93.68	288	P	P	15 25 02.3	+1.6
	2.5nm,0.9s,mb4.7,baz=130,slow=3.2,SNR=12						
CMAR				pP	pP	15 25 13.5	+0.3
	1.6nm,0.8s,baz=132,slow=3.1,SNR=4.9						
MKAR	Makanchi Array	114.92	312	PKP	PKiKP	15 30 23.3	-0.9
	0.3nm,0.7s,baz=102,slow=0.9,SNR=5.3						
KURK	Kurchatov	117.68	317	PKP	PKPdf	15 30 28.6	-0.8
	0.6nm,0.8s,baz=93,slow=2.1,SNR=5.6						
MALT	Malatya	147.68	306	ePKPab	PKPab	15 31 29.4	-1.2
BRTR	Keskin Array B	150.57	312	PKPbc	PKPbc	15 31 35.8	+0.2
	1.7nm,0.8s,baz=139,slow=3.0,SNR=8.3						
BRTR				pPKPbc	pPKPbc	15 31 47.8	-0.6
	1.2nm,0.8s,baz=134,slow=3.6,SNR=3.7						
GRF	Grafenberg Arr	152.70	351	ePKP	PKPdf	15 31 31.7	-1.3
TORD	Torodi Ar. Bea	169.87	160	PKPab	PKPab	15 33 07.3	+1.0
	0.6nm,0.8s,baz=201,slow=1.7,SNR=3.2						

*NOU **01** 15:11:46.4±1.9,18°.58S×169°.07E,h30km±999km,MD3.0, ML3.6*
*ISCJB **01** 15:11:48.2±2.2,19°.18S±0°.08×169°.1E±0°.1,h7km±14km, mb4.0/9,MS3.8/9,Error ellipse: s-maj=25.0km s-min=7.2km az=26.8*
*IDC **01** 15:11:48.7±1.1,19°.09S×168°.99E,h0km,mb4.0/8, mb1 4.2/8,mb1mx4.1/15,mbtmp4.0/8,MS3.8/11, Ms1 3.8/11,ms1mx3.6/23,Error ellipse: s-maj=33.6km s-min=24.5km az=114.0*
*NEIC **01** 15:11:55.1±2.7,19°.28S×168°.95E,h43km±21km,mb4.0/1, Error ellipse: s-maj=31.9km s-min=16.5km az=94.0*

ISC 01 15:11:48.8±2.6,19°.23S±0°.08×169°.2E±0°.1,h1km±17km, n26,σ1°02/26,mb4.1/9,MS3.8/9,Vanuatu Islands

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

KSRS **Korea Array** **68.45 326** P **P** **15 22 50.8 -1.7**
comp=Z,1.2nm,1.0s,mb4.1,baz=114,slow=4.9,SNR=3.7
KSRS LR LR 15 52 11.3
comp=Z,30nm,18.0s,MS3.6,baz=157,slow=36
QSPA South Pole Qui **70.83 180** P **P** **15 23 07.0 +0.3**
comp=Z,5.3nm,0.9s,mb4.7,baz=38,slow=6.4,SNR=8.4
QSPA South Pole Qui **70.83 180** *eP* **P** **15 23 07.8 +1.2**
PETK Petropavlovsk- **72.71 353** P **P** **15 23 17.5 -0.7**
comp=Z,2.3nm,0.9s,mb4.3,baz=152,slow=9.8,SNR=4.1
CMAR Chiang Mai Arr **78.43 294** P **P** **15 23 49.1 -2.7**
comp=Z,0.2nm,0.5s,mb3.5,baz=132,slow=5.0,SNR=2.7
SONM Songino Array **87.16 323** P **P** **15 24 36.5 -0.1**
comp=Z,1.3nm,1.1s,mb4.1,baz=119,slow=5.1,SNR=4.5
SONM LR LR 16 04 58.0
comp=Z,58nm,18.0s,MS4.0,baz=244,slow=37
NVAR Mina Array Bea **88.85 49** P **P** **15 24 46.6 +1.8**
comp=Z,0.3nm,0.4s,mb3.9,baz=246,slow=4.5,SNR=3.4
TXAR Lajitas Array **96.82 61** LR LR 16 04 51.5
comp=Z,59nm,19.5s,MS4.1,baz=170,slow=33

IDC 01 15:46:07.6±2.9,11°.91S×166°.81E,h0km,mb3.7/3,
mb1 3.9/3,mb1mx3.6/16,mbtmp3.7/3,Error ellipse:
s-maj=166.8km s-min=31.3km az=132.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.56**	**225**	P	P	15 52 23.3	+0.3
	2.4nm,0.9s,baz=61,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**33.35**	**245**	P	P	15 52 47.5	-0.2
	0.3nm,0.4s,baz=72,slow=9.4,SNR=15						
ILAR	**Eielson Array**	**84.00**	**18**	P	P	15 58 39.5	+0.1
	0.3nm,0.6s,baz=228,slow=7.9,SNR=8.1						

*TIR **01** 15:54:47.7±1.8,40°.76N×21°.22E,h0km±12km,ML2.9*
SKO 01 15:54:54.3,40°.63N×20°.67E,h3km,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.09**	**94**	*i* Pg	Pg	15 54 53.3	-2.8
KBN				*i* SG	Sg	15 54 58.4	+1.1
BIA	**Bitola**	**0.63**	**52**	*e*Pg	Pg	15 55 05.7	-0.7
BIA				*e*Sg	Sg	15 55 14.5	-0.1
BIA				*e*Lg		15 55 14.9	
	comp=E,29nm,0.4s						
BIA				*e*Lg		15 55 15.3	
	comp=N,17nm,0.2s						
KRUS	**Krusevo**	**0.86**	**30**	*e*Pg	Pg	15 55 09.7	-1.1
KRUS				*e*Sg	Sg	15 55 21.6	-0.3
SRN	**Sarande**	**0.91**	**215**	*i* PG	Pg	15 55 10.0	-1.7
SRN				*i* SG	Sg	15 55 29.3	+5.8
PUK	**Puka**	**1.53**	**338**	*i* PN	Pn	15 55 17.4	-5.1
PUK				*i* SG	Sg	15 55 45.5	+2.1

*SKO **01** 15:57:47.4,40°.68N×20°.75E,h8km*
TIR 01 15:57:52.2±4.0,41°.01N×21°.25E,h0km±45km,ML3.2,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	**Bitola**	**0.06**	**78**	*e*Pg	Pg	15 57 57.3	+4.0
BIA				*e*Sg	Sg	15 58 05.8	+12
BIA				*e*Lg		15 58 06.3	
	comp=E,32nm,0.4s						
BIA				*e*Lg		15 58 06.5	
	comp=N,16nm,0.2s						
KRUS	**Krusevo**	**0.36**	**0**	*e*Pg	Pg	15 58 01.5	+2.4
KBN	**Korca**	**0.52**	**222**	*i* PG	Pg	15 58 06.1	+4.0
KBN				*i* SG	Sg	15 58 10.3	+1.5
PUK	**Puka**	**1.45**	**316**	*i* PN	Pn	15 58 17.2	-2.5
PUK				*i* SN	Sn	15 58 38.2	-1.2
SRN	**Sarande**	**1.47**	**221**	*i* PG	Pg	15 58 19.7	-0.7
SRN				*i* SG	Sg	15 58 42.8	+3.3
BCI	**Bajram Curri**	**1.62**	**327**	*i* PN	Pn	15 58 20.5	-1.5
BCI				*i* SN	Sn	15 58 43.0	-0.6

*ISCJB **01** 15:59:34.5±0.5,9°.02N±0°.09×40°.53W±0°.09,h10km,*
mb4.1/17,MS3.6/15,Error ellipse: s-maj=13.8km
s-min=12.0km az=140.4
*IDC **01** 15:59:35.0±0.6,9°.07N×40°.53W,h0km,mb4.0/15,*
mb1 4.2/15,mb1mx4.0/26,mbtmp4.0/15,MS3.6/15,
Ms1 3.6/15,ms1mx3.4/34,Error ellipse: s-maj=18.9km
s-min=15.0km az=140.0
*NEIC **01** 15:59:36.5±0.4,9°.07N×40°.54W,h10km,mb4.5/2,Error ellipse: s-maj=11.3km s-min=8.9km az=146.0*
ISC 01 15:59:36.4±0.5,9°.02N±0°.09×40°.51W±0°.09,h10km,n33,
σ0°.90/23,mb4.1/17,MS3.6/15,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz**	**23.82 275**		LR	LR	16 15 31.1	
	comp=Z,147nm,18.2s,MS3.5,baz=76,slow=40						
BBTS	**Babate**	**24.11**	**74**	LR	LR	16 12 02.1	
	comp=Z,177nm,18.8s,MS3.6,baz=306,slow=31						
SJG	**San Juan**	**26.49 293**		P	**P**	**16 05 12.8**	**-1.3**
	18nm,0.2s,mb5.2,baz=156,slow=20,SNR=3.4						
SJG				LR	LR	16 14 11.8	
	comp=Z,157nm,18.3s,MS3.6,baz=235,slow=33						
SIV	**San Ignacio**	**32.13 219**		P	**P**	**16 06 04.1**	**-0.2**
	0.6nm,0.5s,mb3.6,baz=46,slow=5.2,SNR=5.0						
ROSC	**El Rosal**	**33.82 265**		LR	LR	16 20 14.0	
	comp=Z,99nm,19.7s,MS3.5,baz=60,slow=37						
DBIC	**Dimbokro**	**35.38**	**91**	P	**P**	**16 06 32.7**	**0.0**
	8.9nm,1.2s,mb4.6,baz=280,slow=7.7,SNR=4.3						
DBIC				LR	LR	16 18 13.0	
	comp=Z,100nm,18.5s,MS3.6,baz=196,slow=32						
DBIC	**Dimbokro**	**35.38**	**91**	P	**P**	**16 06 32.7**	**0.0**
DBIC				LR	LR	16 18 13.0	
LPAZ	**La Paz**	**37.15 228**		P	**P**	**16 06 49.8**	**+2.1**
	1.7nm,0.8s,mb3.9,baz=19,slow=7.1,SNR=6.6						
LPAZ				LR	LR	16 21 04.8	
	comp=Z,54nm,19.3s,MS3.4,baz=37,slow=35						
LPAZ	**La Paz**	**37.15 228**		*eP*	**P**	**16 06 49.4**	**+1.7**
LPAZ				LR	LR	16 21 04.8	
MDT	**Midelt**	**40.73**	**49**	P	**P**	**16 07 18.9**	**+1.4**
	1.0nm,0.7s,mb3.5,baz=252,slow=6.4,SNR=2.7						
MDT				LR	LR	16 22 10.7	
	comp=Z,27nm,20.1s,MS3.1,baz=235,slow=33						
TORD	**Torodi Ar. Bea**	**41.58**	**80**	P	**P**	**16 07 24.6**	**-0.2**
	2.3nm,0.7s,mb3.9,baz=275,slow=8.5,SNR=12						
TORD				LR	LR	16 23 17.8	
	comp=Z,133nm,18.3s,MS3.9,baz=255,slow=34						
ESDC	**Sonseca Array**	**44.64**	**41**	LR	LR	16 22 46.7	
	comp=Z,52nm,20.2s,MS3.5,baz=265,slow=31						
CFAA	**Coronel Fontan**	**48.33 212**		P	**P**	**16 08 18.6**	**+0.4**
	0.7nm,1.0s,mb3.6,baz=51,slow=11,SNR=5.1						
SCHQ	**Schefferville**	**50.26 341**		P	**P**	**16 08 32.9**	**+0.1**
	4.3nm,0.8s,mb4.5,baz=110,slow=12,SNR=2.8						
PLCA	**Paso Flores**	**56.73 207**		P	**P**	**16 09 20.6**	**+0.2**
	3.6nm,0.8s,mb4.4,baz=30,slow=11,SNR=5.4						
PLCA				LR	LR	16 35 29.0	
	comp=Z,71nm,18.9s,MS3.8,baz=46,slow=38						
PLCA	**Paso Flores**	**56.73 207**		*eP*	**P**	**16 09 20.7**	**+0.3**
	3.4nm,0.8s,mb4.4						
PLCA				LR	LR	16 35 29.0	
DAVOX	**Davos/Dischmat**	**56.91**	**39**	LR	LR	16 28 22.1	
	comp=Z,83nm,22.0s,MS3.8,baz=84,slow=30						
ULM	**Lac du Bonnet**	**61.33 323**		P	**P**	**16 09 51.2**	**-1.0**
	5.7nm,0.8s,mb4.7,baz=122,slow=4.3,SNR=3.7						
TXAR	**Lajitas Array**	**62.27 298**		P	**P**	**16 09 59.2**	**+0.3**
	0.3nm,0.6s,mb3.6,baz=116,slow=6.3,SNR=5.6						
TXAR	**Lajitas Array**	**62.27 298**		*eP*	**P**	**16 09 59.2**	**+0.2**
GDL2	**Guadalupe Moun**	**63.16 301**		*eP*	**P**	**16 10 04.6**	**-0.3**
	4.5nm,1.2s,mb4.5						
NOA	**NORSAR Array B**	**64.29**	**25**	LR	LR	16 35 53.5	
	comp=Z,20nm,18.8s,MS3.3,baz=35,slow=34						
ANMO	**Albuquerque**	**65.20 304**		LR	LR	16 35 01.6	
	comp=Z,70nm,19.8s,MS3.9,baz=38,slow=33						
PDAR	**Pinedale Array**	**68.57 312**		LR	LR	16 35 47.3	
	comp=Z,66nm,21.2s,MS3.8,baz=90,slow=32						
AKASG	**Malin Array Be**	**70.26**	**39**	P	**P**	**16 10 50.0**	**+0.2**
	0.3nm,0.3s,mb3.7,baz=266,slow=4.8,SNR=3.3						
BRTR	**Keskin Array B**	**72.11**	**51**	P	**P**	**16 11 00.9**	**-0.3**
	0.7nm,0.8s,mb3.6,baz=242,slow=2.7,SNR=3.6						
RES	**Resolute Bay**	**72.36 347**		LR	LR	16 42 03.1	
	comp=Z,37nm,19.5s,MS3.7,baz=324,slow=35						
NVAR	**Mina Array Bea**	**74.91 307**		P	**P**	**16 11 18.3**	**+0.5**
	0.1nm,0.3s,mb3.3,baz=106,slow=3.3,SNR=1.7						
PMSA	**Palmer Station**	**75.68 190**		P	**P**	**16 11 22.4**	**+0.9**
	4.6nm,0.8s,mb4.5,baz=21,slow=9.2,SNR=6.6						
VNA1	**Neumayer--Stat**	**82.43 170**		*e*	**P**	**16 11 57.1**	**-1.3**
VNA3	**Neumayer Olymp**	**82.70 170**		*e*	**P**	**16 11 57.8**	**-2.0**
VNA3				*e*		16 12 04.9	
ILAR	**Eielson Array**	**88.78 336**		P	**P**	**16 12 30.9**	**+0.7**
	1.0nm,0.8s,mb4.2,baz=63,slow=3.5,SNR=10						
ASAR	**Alice Springs**	**164.48 160**		PKPab	PKPab	16 20 35.5	-0.1
	0.5nm,1.0s,baz=189,slow=4.1,SNR=4.2						

*NEIC **01** 16:08:36.1±1.9,17°.67N×61°.12W,h10km,MD3.8(RSPR),*
Error ellipse: s-maj=22.8km s-min=10.5km az=57.0
*TRN **01** 16:08:41.0,17°.10N×61°.32W,h3km,MD3.5,M3.8(FDF)*
*RSPR **01** 16:08:40.5,17°.65N×61°.19W,h25km±37km,MD3.8/3*
ISC 01 16:08:38.4±1.3,17°.58N±0°.07×61°.25W±0°.06,h16km±6km,
n25,σ0°.80/33,8C-3D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.52 280**		*e*Pg	**Pg**	**16 08 48.5**	**-0.3**
ANWB				*e*Sg	**Sg**	**16 08 55.9**	**0.0**
BPA	**Boggy Peak**	**0.79 228**		‖*i* P	**Pb**	**16 08 53.9**	**+0.2**
BPA				*e*S	**Sb**	**16 09 04.1**	**0.0**
BPA	**Boggy Peak**	**0.79 228**		‖*i* P	**Pb**	**16 08 53.9**	**+0.2**
BPA				*e*S	**Sb**	**16 09 04.1**	**0.0**
DEG	**La Desirade**	**1.27 172**		*e*P	**Pn**	**16 09 00.1**	**-1.3**
LZG	**Guadaloupe-1**	**1.51 200**		*e*P	**Pn**	**16 09 04.5**	**-0.3**
SCG	**Saint Claude**	**1.59 195**		*e*P	**Pn**	**16 09 05.9**	**0.0**
PHG	**Guadaloupe-2**	**1.60 194**		*e*P	**Pn**	**16 09 05.8**	**-0.2**
HMG	**Houelmont**	**1.64 195**		*e*P	**Pn**	**16 09 06.8**	**+0.3**
MGG	**Marie-Galante**	**1.65 182**		*e*P	**Pn**	**16 09 06.5**	**-0.2**
SEUS	**St. Eustatius**	**1.66 267**		‖*e*P	**Pn**	**16 09 06.9**	**+0.1**
SEUS				*e*S	**Sn**	**16 09 27.4**	**-0.4**
TBG	**Guadaloupe-3**	**1.76 193**		*e*P	**Pn**	**16 09 07.9**	**-0.3**
SMRT	**St. Maarten**	**1.81 285**		‖*e*P	**Pn**	**16 09 08.3**	**-0.6**
SMRT				*e*S	**Sn**	**16 09 29.9**	**-1.5**
SABA	**Saba**	**1.91 272**		‖*e*P	**Pn**	**16 09 10.5**	**+0.3**
SABA				*e*S	**Sn**	**16 09 32.8**	**-1.1**
FDF	**Fort de France**	**2.83 178**		*e*Pn	**Pn**	**16 09 22.7**	**-0.2**
FDF	**Fort de France**	**2.83 178**		*e*P	**Pn**	**16 09 22.8**	**-0.1**
MVM	**Montagne Vauci**	**3.02 174**		*e*P	**Pn**	**16 09 26.0**	**+0.4**
BIM	**Bigot**	**3.04 177**		*e*P	**Pn**	**16 09 27.2**	**+1.4**
STVI	**Saint Thomas**	**3.61 283**		‖*e*P	**Pn**	**16 09 32.1**	**-1.6**
STVI				*e*S	**Sn**	**16 10 16.7**	**+0.6**
MTP	**Monte Pirata**	**4.14 278**		‖*e*P	**Pn**	**16 09 40.6**	**-0.3**
MTP	**Monte Pirata**	**4.14 278**		*e*Pn	**Pn**	**16 09 40.4**	**-0.5**
MTP				*e*Sn	**Sn**	**16 10 30.9**	**+1.9**
CBYP	**Canovanas**	**4.45 280**		‖*e*P	**Pn**	**16 09 45.5**	**+0.3**
SJG	**San Juan**	**4.70 277**		‖*e*P	**Pn**	**16 09 49.6**	**+0.9**
ICM	**Isla Caja Muer**	**5.04 274**		‖*e*P	**Pn**	**16 09 54.4**	**+1.1**
CELP	**Cerrillos**	**5.11 276**		‖*e*P	**Pn**	**16 09 56.0**	**+1.8**
CELP	**Cerrillos**	**5.11 276**		*e*Pn	**Pn**	**16 09 54.2**	**-0.1**

IDC 01 16:13:14.1±1.2,9°.14N×40°.43W,h0km,mb3.7/5,
mb1 3.9/5,mb1mx3.6/22,mbtmp3.7/5,MS3.3/1,Ms1 3.3/1,
ms1mx2.3/28,Error ellipse: s-maj=48.7km
s-min=25.8km az=165.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**24.01**	**74**	LR	LR	16 24 58.0	
	comp=Z,73nm,19.7s,baz=80,slow=29						
LPAZ	**La Paz**	**37.28 227**		P	P	16 20 28.7	+0.6
	0.4nm,0.4s,baz=45,slow=5.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**41.49**	**81**	P	P	16 21 03.5	+0.1
	0.9nm,0.7s,baz=267,slow=9.2,SNR=5.1						
TXAR	**Lajitas Array**	**62.28 298**		P	P	16 23 38.4	0.0
	0.2nm,0.5s,baz=116,slow=4.1,SNR=3.8						
BRTR	**Keskin Array B**	**71.98**	**51**	P	P	16 24 39.9	0.0
	0.3nm,0.7s,baz=269,slow=8.5,SNR=2.5						
ILAR	**Eielson Array**	**88.70 336**		P	P	16 26 09.8	+0.5
	0.6nm,1.1s,baz=52,slow=5.8,SNR=4.4						

IDC 01 16:15:14.4±1.1,8°.92N×40°.52W,h0km,mb3.8/5,
mb1 4.0/5,mb1mx3.7/22,mbtmp3.8/5,MS2.8/1,Ms1 2.8/1,
ms1mx2.1/32,Error ellipse: s-maj=46.9km
s-min=25.5km az=157.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**26.52 293**		LR	LR	16 28 02.9	
	comp=Z,22nm,21.9s,baz=50,slow=29						
LPAZ	**La Paz**	**37.07 228**		P	P	16 22 27.4	+0.8
	0.7nm,0.7s,baz=56,slow=3.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**41.61**	**80**	P	P	16 23 03.9	-0.7
	1.0nm,0.8s,baz=277,slow=8.3,SNR=4.0						
TXAR	**Lajitas Array**	**62.31 298**		P	P	16 25 38.5	-0.4
	0.3nm,0.7s,baz=124,slow=7.7,SNR=4.0						
BRTR	**Keskin Array B**	**72.18**	**51**	P	P	16 26 42.0	+0.7
	0.5nm,0.9s,baz=262,slow=8.2,SNR=2.6						
ILAR	**Eielson Array**	**88.87 336**		P	P	16 28 10.6	+0.3
	0.4nm,0.9s,baz=64,slow=4.1,SNR=3.7						

*IDC **01** 16:32:41.8±1.6,10°.93S×163°.81E,h0km,mb3.7/6,*
mb1 4.0/7,mb1mx3.8/17,mbtmp3.8/7,ML4.6/1,MS3.6/4,
Ms1 3.6/4,ms1mx3.2/29,Error ellipse: s-maj=54.3km
s-min=28.2km az=158.0
*ISCJB **01** 16:32:46.3±1.0,10°.8S±0°.2×163°.62E±0°.09,h33km,*
mb3.6/7,MS3.4/3,Error ellipse: s-maj=29.3km
s-min=11.5km az=9.6
*NEIC **01** 16:32:47.7±1.3,10°.83S×163°.64E,h35km,Error ellipse:*
s-maj=39.4km s-min=21.2km az=170.0
ISC 01 16:32:48.4±1.0,10°.7S±0°.2×163°.67E±0°.09,h35km,n12,
σ1°.20/12,mb3.6/7,MS3.4/3,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.88 289**		Pn	**Pn**	**16 33 43.6**	**-1.9**
	36nm,0.3s,baz=121,slow=2.4,SNR=17						
HNR				Sn	**Sn**	**16 34 30.1**	**+0.2**
	28nm,0.3s,baz=176,slow=23,SNR=5.3						
HNR				LR	LR	16 35 19.1	
	comp=Z,1μm,18.8s,baz=112,slow=38						
HNR	**Honiara**	**3.88 289**		*eP*	**Pn**	**16 33 43.8**	**-1.7**
HNR				Sn	**Sn**	**16 34 30.1**	**+0.2**
HNR				LR	LR	16 35 19.1	
URZ	**Urewera**	**29.96 159**		LR	LR	16 48 30.5	
	comp=Z,111nm,21.2s,MS3.5,baz=289,slow=32						
GUMO	**Guam**	**30.51 322**		LR	LR	16 51 12.2	
	comp=Z,56nm,18.1s,MS3.2,baz=95,slow=36						
ASAR	**Alice Springs**	**31.14 242**		P	**P**	**16 39 02.4**	**-1.6**
	0.3nm,0.6s,mb3.3,baz=66,slow=10,SNR=8.2						
FITZ	**Fitzroy Crossi**	**37.51 254**		P	**P**	**16 40 01.1**	**+1.9**
	1.1nm,0.9s,mb3.6,baz=117,slow=6.8						
FITZ				LR	LR	16 52 29.2	
	comp=Z,77nm,20.1s,MS3.5,baz=344,slow=32						
FITZ	**Fitzroy Crossi**	**37.51 254**		*eP*	**P**	**16 40 01.6**	**+2.4**
FITZ				LR	LR	16 52 29.2	
CMAR	**Chiang Mai Arr**	**70.11 294**		P	**P**	**16 43 58.5**	**+0.9**
	1.0nm,1.0s,mb3.7,baz=105,slow=5.7,SNR=6.5						
SONM	**Songino Array**	**77.20 324**		P	**P**	**16 44 39.3**	**+0.6**
	0.4nm,0.7s,mb3.4,baz=133,slow=8.1,SNR=2.4						
ILAR	**Eielson Array**	**83.85**	**19**	P	**P**	**16 45 13.5**	**-0.5**
	0.4nm,0.9s,mb3.5,baz=255,slow=3.5,SNR=3.2						
NVAR	**Mina Array Bea**	**87.37**	**50**	P	**P**	**16 45 31.1**	**-0.9**
	0.1nm,0.3s,mb3.5,baz=241,slow=2.8,SNR=3.0						
MKAR	**Makanchi Array**	**91.89 317**		P	**P**	**16 45 54.1**	**+1.1**
	0.2nm,0.2s,mb4.0,baz=98,slow=5.0,SNR=2.8						

*DJA **01** 16:42:54.8±1.31S×112°.00E,h134km,MLv2.9/7*
*IDC **01** 16:42:59.6±21.0,7°.90S×112°.21E,h228km±211km,*
mb3.2/3,mb1 3.1/4,mb1mx2.9/17,mbtmp3.1/4,ML3.2/1,
Error ellipse: s-maj=339.3km s-min=43.7km az=53.0
ISC 01 16:42:50.4±0.9,8°.5S±0°.2×112°.1E±0°.1,h173km±6km,n11,
σ0°.89/14,mb3.6/3,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**0.51**	**46**	P	**Pn**	**16 43 15.9**	**+1.4**
KRKI				S	**Sn**	**16 43 32.1**	**-0.8**
PWJI	**Pagerwojo**	**0.56 331**		P	**Pn**	**16 43 14.1**	**-0.7**
PWJI				S	**Sn**	**16 43 29.5**	**-3.9**
SJI	**Sawahan**	**0.84 338**		P	**Pn**	**16 43 15.1**	**-1.2**
PCJI	**Pacitan**	**0.95 290**		P	**Pn**	**16 43 17.9**	**+0.8**
NGJI	**Ngawi**	**1.30 332**		P	**Pn**	**16 43 20.1**	**+0.1**
GMJI	**Gumukmas**	**1.37**	**80**	P	**Pn**	**16 43 22.0**	**+1.4**
UGM	**Wanagama**	**1.66 291**		P	**Pn**	**16 43 23.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**16.26 127**		P	**Pn**	**16 46 37.3**	**+8.0**
	0.1nm,0.3s,baz=326,slow=12,SNR=3.9						
FITZ				S	**S**	**16 49 29.4**	**-0.6**
	0.0nm,0.3s,baz=198,slow=20,SNR=2.3						
ASAR	**Alice Springs**	**25.76 128**		P	**P**	**16 48 12.3**	**+7.1**
	0.5nm,0.5s,mb3.4,baz=303,slow=7.7,SNR=27						
MKAR	**Makanchi Array**	**61.13 337**		P	**P**	**16 52 46.7**	**+0.4**
	0.3nm,0.2s,mb3.7,baz=148,slow=7.3,SNR=5.8						
ZALV	**Zalesovo Beam**	**66.36 343**		P	**P**	**16 53 19.7**	**-0.6**
	0.6nm,0.5s,mb3.7,baz=149,slow=3.4,SNR=3.3						

*ISCJB **01** 17:05:10.7±0.9,19°.3S±0°.2×177°.6W±0°.1,h498km±13km,*
mb4.1/8,Error ellipse: s-maj=28.2km s-min=13.1km
az=143.0
*IDC **01** 17:05:11.2±2.1,19°.36S×177°.69W,h481km±28km,mb3.6/6,*
mb1 3.7/8,mb1mx3.4/19,mbtmp3.6/8,Error ellipse:
s-maj=29.5km s-min=17.0km az=130.0
*NEIC **01** 17:05:11.8±0.9,19°.39S×177°.62W,h496km±10km,mb4.9/1,*
Error ellipse: s-maj=22.9km s-min=13.5km az=143.0
ISC 01 17:05:12.0±1.1,19°.4S±0°.2×177°.6W±0°.2,h497km±13km,
n19,σ0°.76/18,mb4.1/8,2D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.43 291**		*eP*	**P**	**17 06 34.5**	**+0.7**
AFI	**Afiamalu**	**7.80**	**47**	P	**P**	**17 07 06.1**	**-0.3**
	4.1nm,0.3s,baz=243,slow=6.8,SNR=4.8						
AFI				S	**S**	**17 08 35.2**	**-4.8**
	7.4nm,0.3s,baz=45,slow=23,SNR=9.5						
AFI	**Afiamalu**	**7.80**	**47**	*eP*	**P**	**17 07 05.7**	**-0.6**
AFI				S	**S**	**17 08 35.2**	**-4.8**
URZ	**Urewera**	**19.36 193**		P	**P**	**17 09 04.9**	**+0.1**
	1.2nm,0.3s,baz=5.6,slow=17,SNR=6.8						
ARMA	**Armidale**	**29.90 242**		*eP*	**P**	**17 10 39.2**	**+0.6**
CTA	**Charters Tower**	**33.98 263**		P	**P**	**17 11 13.2**	**-0.5**
	22nm,0.4s,mb4.9,baz=90,slow=11,SNR=39						
CTA	**Charters Tower**	**33.98 263**		‖*i* P	**P**	**17 11 13.1**	**-0.6**
	17nm,0.4s,mb4.8						
CTAO	**Charters Tower**	**33.98 263**		*eP*	**P**	**17 11 13.1**	**-0.6**
	23nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**38.61 243**		P	**P**	**17 11 52.1**	**+0.2**
	1.8nm,0.3s,mb3.9,baz=84,slow=9.6,SNR=5.6						
ASAR	**Alice Springs**	**45.14 256**		P	**P**	**17 12 43.2**	**-0.5**
	19nm,0.6s,mb4.7,baz=91,slow=8.5,SNR=578						
KAKA	**Kakadu**	**48.33 270**		‖*i* P	**P**	**17 13 06.8**	**-1.2**
	16nm,0.5s,mb4.6						
KAKA	**Kakadu**	**48.33 270**		*eP*	**P**	**17 13 06.6**	**-1.4**
FITZ	**Fitzroy Crossi**	**53.55 261**		*eP*	**P**	**17 13 45.2**	**-0.8**
	3.2nm,0.4s,mb4.0						
MJAR	**Matsushiro Arr**	**69.53 323**		P	**P**	**17 15 30.2**	**-0.1**
	1.3nm,0.6s,mb3.6,baz=134,slow=1.7,SNR=3.6						
ILAR	**Eielson Array**	**87.15**	**13**	P	**P**	**17 17 04.7**	**+0.6**
	0.3nm,0.7s,mb3.1,baz=212,slow=4.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**90.09 289**		P	**P**	**17 17 20.6**	**+1.7**
	1.0nm,0.8s,mb3.7,baz=110,slow=2.8,SNR=7.8						
MKAR	**Makanchi Array**	**110.70 314**		PKiKP	PKiKP	17 22 47.1	-0.6
	0.3nm,0.2s,baz=110,slow=2.1,SNR=2.2						
BRTR	**Keskin Array B**	**146.35 314**		PKPbc	PKPbc	17 23 57.5	+0.6
	0.7nm,0.7s,baz=118,slow=2.5,SNR=4.2						
CLL	**Collm**	**147.06 348**		*e*PKPbc	PKPbc	17 23 59.0	+0.6

*MOS **01** 17:19:10.3±1.1,4°.63N×126°.05E,h103km,mb5.6/60,*
MS4.5/19,Error ellipse: s-maj=8.0km s-min=4.7km
az=108.6
*BJI **01** 17:19:10.0,4°.35N×126°.16E,h123km,mB5.3/32,mb5.4/70*
*ISCJB **01** 17:19:10.2±0.1,4°.54N±0°.02×126°.16E±0°.02,h109km,*
mb5.6/209,Error ellipse: s-maj=3.0km s-min=2.2km
az=4.0
*IDC **01** 17:19:11.7±0.5,4°.55N×126°.08E,h106km±4km,mb5.1/33,*
mb1 5.2/33,mb1mx5.2/34,mbtmp5.1/33,MS4.4/20,
Ms1 4.4/20,ms1mx4.2/28,Error ellipse: s-maj=11.8km
s-min=8.7km az=70.0
*NEIC **01** 17:19:11.7±0.1,4°.54N×126°.04E,mb5.7/116,MW5.5,*
Error ellipse: s-maj=4.9km s-min=3.5km az=65.0,Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.11; $M_{\theta\theta}$0.13; $M_{\phi\phi}$0.97; $M_{r\theta}$-0.75; $M_{\theta\phi}$-0.21; $M_{\phi r}$2.09; Best double couple: $M_0$2.50000×10^{17} NP1:ϕ_s161.00000°, δ77.00000°, λ-92.00000°. NP2:ϕ_s351.00000°, δ13.00000°, λ-80.00000°. Principal axes: T 2.4200, Plg32.0000°, Azm252.0000°; N 0.0900, Plg2.0000°, Azm161.0000°; P -2.5100, Plg57.0000°, Azm67.0000°;
NEIC Felt [II] on Pulau Sangihe.
*GCMT **01** 17:19:12.3±0.1,4°.59N×126°.17E,h114km±1km,MW5.6,*
*Moment Tensor Solution. s100,c184; s19,c19; Moment tensor: Sc

AUQP San Andres 9.40 339 *e*P **Pn 17 21 30.1 +5.5**
ENPP El Nido 9.42 315 *e*P **Pn 17 21 25.6 +0.9**
BUSP Coron 9.49 322 *e*P **Pn 17 21 28.4 +2.7**
KDM Kudat 9.58 285 P **Pn 17 21 29.8 +2.8**
BNDI Bandanaira 9.73 157 P ScS 17 34 32.6 +1.9
BNDI Bandanaira 9.73 157 P **Pn 17 21 30.3 +1.3**
740nm,1.6s
TTSI Tana Toraja 9.83 220 P **Pn 17 21 32.3 +1.9**
1μm,1.0s
BOAC Boac 9.85 335 *e*P **Pn 17 21 38.3 +7.6**
KKM Kota Kinabalu 10.02 279 P **Pn 17 21 36.8 +3.8**
KKM Kota Kinabalu 10.02 279 *e*P **Pn 17 21 32.7 -0.3**
2μm,1.3s
KKM Kota Kinabalu 10.02 279 P **Pn 17 21 35.5 +2.5**
915nm,1.1s
BBSI Bau Bau 10.57 200 P **Pn 17 21 39.4 -0.9**
4μm418nm,1.0s
SPSI Sidrap Palu 10.57 217 P **Pn 17 21 41.3 +0.9**
6μm669nm,0.8s
TGY Tagaytay City 10.83 332 P **Pn 17 21 47.0 +3.2**
87nm,0.3s,baz=185,slow=10,SNR=13
LUBP Lubang 10.86 328 *e*P **Pn 17 21 47.2 +3.0**
POLP Polilio Island 10.96 338 *e*P **Pn 17 21 49.0 +3.4**
BAKI Biak 11.44 119 P **Pn 17 21 53.8 +1.8**
1μm,1.4s
BKSI Bulukumba 11.49 212 P **Pn 17 21 52.2 -0.4**
3μm185nm,1.1s
BALP Baler 12.03 338 *e*P **Pn 17 22 01.9 +2.1**
TLE Tual 12.04 147 P **Pn 17 22 01.4 +1.5**
7μm487nm,1.3s
KBKI Kotabaru 12.65 232 P **Pn 17 22 09.4 +1.4**
7μm330nm,1.2s
SCZP Santa Cruz 12.76 332 *e*P **Pn 17 22 10.6 +1.2**
PALP Palanan 12.99 344 *e*P **Pn 17 22 18.4 +5.9**
BCPH Baguio City Da 13.00 335⇑*i*P **Pn 17 22 13.8 +1.3**
CAUP Cauayan 13.06 341 *e*P **Pn 17 22 14.5 +1.2**
BTM Bintulu 13.12 265 P **Pn 17 22 16.3 +2.2**
BOLP Bolinao 13.29 333 *e*P **Pn 17 22 21.4 +5.1**
MMRI Maumere 13.64 197 P **Pn 17 22 20.8 -0.1**
6μm774nm,1.0s
CVP Callao Caves 13.78 342⇓*e*P **Pn 17 22 22.8 +0.2**
SBUM Sibu 14.07 262 P **Pn 17 22 29.0 +2.6**
SBUM Sibu 14.07 262 P **Pn 17 22 28.8 +2.4**
1μm,1.2s
ABRA Dolores 14.10 338 *e*P **Pn 17 22 28.2 +1.4**
APYP Conner 14.11 340 *e*P **Pn 17 22 27.4 +0.5**
WSI Waingapu 15.26 203 P **Pn 17 22 41.5 0.0**
1μm,0.9s
STKI Sintang 15.32 254 P **Pn 17 22 45.1 +2.8**
8μm556nm,1.6s
KSM Kuching 16.12 260 P **Pn 17 22 54.2 +2.0**
KSM Kuching 16.12 260 *e*P **Pn 17 22 51.5 -0.7**
696nm,1.0s
KSM Kuching 16.12 260 P **Pn 17 22 54.4 +2.2**
10μm866nm,1.2s
KHKI Kahang-Kahang 16.57 219 P **Pn 17 22 57.9 +0.1**
4μm309nm,1.1s
SRBI Singaraja 16.61 221 P **Pn 17 22 58.9 +0.6**
5μm375nm,1.0s
KMMI Kalianget 16.74 227 P **Pn 17 23 01.1 +1.2**
4μm434nm,1.1s
DNP Denpasar 17.06 220 P **Pn 17 23 05.7 +1.9**
1μm,1.4s
IGBI Denpasar 17.21 220 P **Pn 17 23 04.0 -1.6**
910nm,1.0s
GMJI Gumukmas 17.95 225 P **Pn 17 23 14.6 0.0**
5μm287nm,1.4s
KAKA Kakadu 18.22 160⇑*i*P **P 17 23 14.9 -1.6**
129nm,0.5s
KAKA Kakadu 18.22 160 *e*P **P 17 23 14.9 -1.6**
598nm,0.6s
KRKI Karangkates 18.59 227 P **P 17 23 22.1 +1.5**
679nm,0.8s
SJI Sawahan 18.83 230 P **P 17 23 21.4 -1.8**
7μm461nm,1.9s
NGJI Ngawi 18.83 231 P **P 17 23 26.8 +3.6**
9μm502nm,1.1s
TWG Pinlang 18.85 345 *e*P **P 17 23 20.8 -2.6**
187nm,0.6s
PWJI Pagerwojo 18.98 229 P **P 17 23 24.9 0.0**
5μm399nm,1.5s
MMPI Merauke 19.17 132 P **P 17 23 31.5 +4.6**
9μm566nm,0.7s
YULB Yu-li 19.34 346 *e*P **P 17 23 25.4 -3.3**
240nm,0.8s
TPUB Ta-pu 19.42 345 *e*P **P 17 23 27.3 -2.2**
720nm,0.9s
SMRI Semarang 19.45 234 P **P 17 23 31.1 +1.1**
688nm,1.1s
PCJI Pacitan 19.57 230 P **P 17 23 28.9 -2.3**
238nm,1.6s
SSLB Suanglung 19.81 346 *e*P **P 17 23 31.1 -2.6**
368nm,0.9s
TPI Tanjungpandan 19.86 249 P ScP 17 31 15.1 +1.2
TPI Tanjungpandan 19.86 249 P **P 17 23 36.0 +1.6**
3μm285nm,1.2s
UGM Wanagama 19.90 232 P **P 17 23 35.5 +0.7**
576nm,1.7s
YOGI Yogyakarta 20.02 232 P **P 17 23 37.7 +1.6**
2μm,1.6s
NACB Ninganchiao 20.03 348 *e*P **P 17 23 33.3 -2.8**
147nm,1.0s
BJII Banjamegara 20.20 234 P **P 17 23 39.7 +1.6**
892nm,1.8s
KNA Kununurra 20.30 173 P **P 17 23 39.5 +0.4**
2μm,0.9s
GUMO Guam 20.54 63 P **P 17 23 42.4 +0.7**
228nm,0.9s,baz=159,slow=5.3,SNR=7.3
GUMO LR LR 17 30 22.2
comp=Z,2μm,18.6s,baz=258,slow=33
GUMO Guam 20.54 63 P **P 17 23 42.4 +0.7**
GUMO pmax pmax
comp=Z,228nm,0.9s
GUMO MLR MLR
comp=Z,2μm,18.6s
GUMO Guam 20.54 63 P **P 17 23 39.6 -2.1**
comp=Z,506nm,1.1s
GUMO Guam 20.54 63 P **P 17 23 39.1 -2.6**
comp=Z,6μmcomp=Z,506nm,1.2s
YHNB Yeheng 20.56 348 *e*P **P 17 23 39.6 -2.2**
comp=Z,131nm,0.6s
TATO Taipei 20.83 348 *e*P **P 17 23 42.5 -2.3**
comp=Z,135nm,0.8s
JCJI Jatiwangi 20.94 239 P **P 17 23 50.2 +4.1**
QIZ Qiongzhong 21.49 313 P **P 17 23 52.1 +0.3**
QIZ pP 17 24 11.4
QIZ S **S 17 27 43.5 -0.4**
QIZ sS sS 17 28 16.5 -2.7
QIZ pmax pmax
comp=Z,310nm,14.0s
QIZ LR LR
comp=N,4μm,15.4s
QIZ LR LR
comp=E,1μm,16.9s
QIZ LR LR
comp=Z,2μm,18.2s
QIZ Qiongzhong 21.49 313 *e*P **P 17 23 51.7 -0.2**
comp=Z,91nm,0.9s,mb5.1
QZH Quanzhou 21.57 341⇓*i*P **P 17 23 51.1 -1.6**
QZH pP 17 24 14.9
QZH sP sP 17 24 31.7 +4.0
QZH S **S 17 27 41.6 -3.8**
QZH pmax pmax
comp=Z,290nm,0.6s,mb5.8
QZH pmax pmax
comp=Z,2μm,3.1s
QZH LR LR
comp=Z,1μm,14.5s
LEM Lembang 21.67 239 P **P 17 23 56.1 +2.3**
comp=Z,7μmcomp=Z,500nm,0.9s,mb5.8
CISI Cisompet, Garu 21.89 237 P ScP 17 31 19.1 +0.3
CISI Cisompet, Garu 21.89 237 P **P 17 23 55.4 -0.7**
comp=Z,6μmcomp=Z,345nm,1.2s,mb5.6
CBJI Citeko 22.13 241 P **P 17 23 59.5 +0.8**
comp=Z,1μm,1.1s,mb6.1
GZH Guangzhou 22.23 327 P **P 17 24 00.3 +0.6**
GZH S **S 17 27 58.4 +1.6**
GZH LR LR
comp=N,580nm,10.8s
GZH LR LR
comp=E,920nm,14.3s
GZH LR LR
comp=Z,1μm,15.3s
JOW Kunigami 22.28 5 *e*P **P 17 24 01.1 +0.9**
comp=Z,411nm,0.9s,mb5.8
DBJI Dramaga 22.28 241 P **P 17 23 59.5 -0.8**
comp=Z,8μmcomp=Z,398nm,1.9s,mb5.4
MYKOM Kota Tinggi 22.44 264 P **P 17 24 03.0 +1.0**
MYKOM Kota Tinggi 22.44 264 P **P 17 24 02.7 +0.7**
comp=Z,7μmcomp=Z,440nm,1.4s,mb5.6
FITZ Fitzroy Crossi 22.48 181 P **P 17 24 01.3 -1.0**
comp=Z,227nm,0.9s,mb5.5,baz=14,slow=9.9,SNR=142
FITZ S **S 17 27 59.3 -1.6**
comp=Z,20nm,0.8s,baz=160,slow=15,SNR=4.2
FITZ Fitzroy Crossi 22.48 181⇑*i*P **P 17 24 00.3 -2.0**
comp=Z,373nm,0.8s,mb5.8
FITZ *e*S **S 17 27 56.5 -4.4**
FITZ Fitzroy Crossi 22.48 181 P **P 17 24 01.3 -1.0**
comp=Z,7μmcomp=Z,612nm,1.4s,mb5.8
SBJI Serang 22.62 242 P **P 17 24 04.3 +0.4**
comp=Z,9μmcomp=Z,581nm,1.5s,mb5.7
SKJI Sukabumi 22.67 240 P **P 17 24 03.1 -1.3**
comp=Z,9μmcomp=Z,321nm,1.0s,mb5.6
RBSI Rajabasa 22.84 243 P **P 17 24 05.9 -0.1**
comp=Z,710nm,0.9s,mb6.0
KGM Kluang 22.94 265 P **P 17 24 07.6 +0.8**
KTGM Kuala Trenggan 22.96 273 P **P 17 24 08.5 +1.5**
BLSI Bandar Lampung 23.08 245 P **P 17 24 10.1 +1.9**
comp=Z,8μmcomp=Z,585nm,1.1s,mb5.8
KLI Kotabumi 23.23 247 P **P 17 24 09.8 +0.3**
comp=Z,7μmcomp=Z,468nm,1.2s,mb5.7
CGJI Cibinong 23.23 242 P ScP 17 31 21.7 -0.6
CGJI Cibinong 23.23 242 P **P 17 24 07.6 -1.9**
comp=Z,3μmcomp=Z,346nm,1.0s,mb5.7
KLSI 23.28 247 P ScP 17 31 22.7 +0.3
KLSI 23.28 247 P **P 17 24 10.9 +0.9**
comp=Z,482nm,2.1s,mb5.5
UBT Ubonrachathani 23.37 299⇓P **P 17 24 10.9 +0.1**
MDSI Maura Dua 23.71 248 P ScP 17 31 23.6 0.0
MDSI Maura Dua 23.71 248 P **P 17 24 13.7 -0.2**
comp=Z,5μmcomp=Z,282nm,1.3s,mb5.4
KASI Kota Agung 23.83 245 P ScP 17 31 24.0 +0.1
KASI Kota Agung 23.83 245 P **P 17 24 14.7 -0.3**
comp=Z,6μmcomp=Z,302nm,0.8s,mb5.7
LWLI Liwa 24.02 247 P **P 17 24 17.5 +0.7**
comp=Z,1μm,0.9s,mb6.2
RGRI Rengat 24.29 259 P **P 17 24 20.8 +1.6**
comp=Z,381nm,0.4s,mb6.1
FRIM Kepong 24.51 268 P **P 17 24 21.6 +0.3**
MNAI Manna 24.80 249 P **P 17 24 23.9 0.0**
comp=Z,846nm,1.3s,mb6.0
KSI Kapahiang 24.91 251 P **P 17 24 25.8 +1.0**
comp=Z,662nm,1.3s,mb5.9
COEN Coen 24.94 138 *e*P **P 17 24 25.3 +0.3**
comp=Z,662nm,0.9s,mb6.1
COEN Coen 24.94 138 P **P 17 24 25.5 +0.5**
comp=Z,458nm,1.5s,mb5.7
IPM Ipoh 25.06 271 P **P 17 24 26.6 +0.4**
IPM Ipoh 25.06 271 *e*P **P 17 24 25.5 -0.7**
comp=Z,242nm,1.0s,mb5.6
IPM Ipoh 25.06 271 P **P 17 24 26.1 -0.1**
comp=Z,3μmcomp=Z,319nm,1.1s,mb5.6
PMG Port Moresby 25.08 123*de*P **P 17 24 26.9 +0.5**
PMG pmax pmax
comp=Z,254nm,1.0s
PMG Port Moresby 25.08 123 *e*P **P 17 24 25.8 -0.6**
comp=Z,199nm,1.0s,mb5.5
PMG Port Moresby 25.08 123 P **P 17 24 26.5 +0.1**
comp=Z,4μmcomp=Z,268nm,1.1s,mb5.6
BKNI Bangkinang 25.44 261 P **P 17 24 29.7 +0.1**
comp=Z,9μmcomp=Z,932nm,1.0s,mb6.2
SNG Songkhla 25.55 277 P **P 17 24 31.0 +0.4**
comp=Z,200nm,1.0s,mb5.5
PPI Padang Panjang 26.21 260 P **P 17 24 36.1 -0.5**
comp=Z,270nm,1.3s,mb5.5
PDSI Padang 26.24 259 P **P 17 24 36.4 -0.5**
comp=Z,6μmcomp=Z,543nm,1.0s,mb5.9
MBWA Marble Bar 26.29 194 *e*P **P 17 24 36.6 -0.5**
comp=Z,274nm,1.1s,mb5.6
MBWA Marble Bar 26.29 194 P **P 17 24 36.8 -0.3**
comp=Z,3μmcomp=Z,261nm,1.4s,mb5.5
MBWA Marble Bar 26.29 194 P **P 17 24 37.3 +0.2**
SNR=22
MNSI Mandailing Nat 26.81 263 P **P 17 24 41.4 -0.6**
comp=Z,3μmcomp=Z,279nm,1.1s,mb5.7
SSE Sheshan 26.85 351 P **P 17 24 42.8 +0.7**
SSE sP sP 17 25 22.8 +3.4
SSE S **S 17 29 08.5 -1.9**
SSE pmax pmax
comp=Z,59nm,0.8s,mb5.2
SSE pmax pmax
comp=Z,400nm,9.9s
SSE LR LR
comp=N,370nm,23.5s
SSE LR LR
comp=E,640nm,23.3s
SSE LR LR
comp=Z,590nm,38.5s
CBIJ Chichi jima 27.17 33 P **P 17 24 43.6 -1.4**
comp=Z,300nm,0.4s,mb6.2,baz=153,slow=4.9,SNR=39
CBIJ LR LR 17 33 25.9
comp=Z,777nm,21.9s,baz=198,slow=31
PSI Prapat 27.23 267 P **P 17 24 45.5 -0.3**
comp=Z,53nm,0.8s,mb5.1,baz=92,slow=5.6,SNR=33
PSI ScP ScP 17 31 33.3 -0.4
comp=Z,20nm,0.8s,baz=159,slow=3.6,SNR=8.2
TSI Tuntungan 27.55 269 P **P 17 24 49.2 +0.6**
NST Nakhon Sawan 27.88 295 P **P 17 24 52.0 +0.5**
WHN Wuhan 28.18 338⇑P **P 17 24 54.8 +0.8**
WHN pP pP 17 25 19.6 +1.1
WHN sP sP 17 25 34.7 +3.2
WHN S **S 17 29 29.7 -1.8**
WHN pmax pmax
comp=Z,270nm,0.9s,mb5.8
WHN LR LR
comp=Z,1μm,16.0s
NJ2 Nanjing 28.23 347 *e*P **P 17 24 54.8 +0.3**
NJ2 pP pP 17 25 18.3 -0.6
NJ2 sP sP 17 25 31.9 0.0
NJ2 PP PP 17 25 49.2 -11
NJ2 S **S 17 29 29.6 -2.6**
NJ2 pmax pmax
comp=Z,160nm,0.9s,mb5.5
NJ2 pmax pmax
comp=Z,220nm,6.8s
NJ2 LR LR
comp=N,430nm,11.6s
NJ2 LR LR
comp=E,590nm,10.7s
NJ2 LR LR
comp=Z,13μm,13.3s
GYA Guiyang 28.70 321⇑*i*P **P 17 24 59.4 +0.7**
GYA pP pP 17 25 26.8 +3.6
GYA sP sP 17 25 41.6 +5.4
GYA PP PP 17 25 57.0 -8.6
GYA PcP PcP 17 28 07.2 +0.6
GYA S **S 17 29 36.4 -3.4**
GYA sS sS 17 30 26.9 +4.3
GYA SS 17 31 16.4
GYA ScP ScP 17 31 36.0 -2.0
GYA PcS PcS 17 31 48.9 -0.5
GYA ScS ScS 17 35 28.4 -3.3
GYA pmax pmax
comp=Z,30nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,420nm,4.9s
GYA LR LR
comp=N,2μm,13.7s
GYA LR LR
comp=E,2μm,16.9s
GYA LR LR
comp=Z,740nm,14.0s
JNU Nakatsue 28.80 8 *e*P **P 17 24 59.4 -0.1**
comp=Z,165nm,1.0s,mb5.6
TPTI 28.94 269 P **P 17 25 00.4 -0.6**
comp=Z,45nm,1.4s,mb4.9
ASAR Alice Springs 29.01 165 P **P 17 25 00.7 -0.8**
comp=Z,9.7nm,0.6s,mb4.6,baz=342,slow=7.4,SNR=119
ASAR S **S 17 29 57.7 +13**
comp=Z,2.5nm,0.7s,baz=350,slow=21,SNR=2.5
ASAR ScP ScP 17 31 39.4 +0.4
comp=Z,24nm,1.2s,baz=0.0,slow=3.8,SNR=6.1
ASAR P3KPbc 17 57 10.6
comp=Z,0.9nm,0.8s,baz=151,slow=4.2,SNR=7.7
ASAR Alice Springs 29.01 165 P **P 17 25 00.7 -0.8**
ASAR S **S 17 29 57.7 +13**
ASAR ScP ScP 17 31 39.4 +0.4
ASAR *e* 17 57 10.6
BDT Bhumibol Dam 29.46 298⇓P **P 17 25 09.0 +3.5**
comp=Z,42nm,0.9s,mb5.1
CHRT Chiangrai 29.88 303 P **P 17 25 07.0 -2.2**
comp=Z,447nm,1.0s,mb6.0
CMAR Chiang Mai Arr 29.99 300 P **P 17 25 11.3 +1.2**
comp=Z,30nm,1.0s,mb4.9,baz=119,slow=7.4,SNR=135
CMAR PcP PcP 17 28 11.7 +1.6
comp=Z,5.8nm,0.7s,baz=108,slow=0.6,SNR=6.3
CMAR ScP ScP 17 31 42.5 +0.3
comp=Z,23nm,1.1s,baz=137,slow=1.8,SNR=19
CMAR PKiKP PKiKP 17 35 42.4 -0.1
comp=Z,0.9nm,0.6s,baz=131,slow=3.8,SNR=4.1
CMAR LR LR 17 39 26.5
comp=Z,740nm,19.0s,baz=110,slow=41
CMAR P3KPbc 17 57 09.7
comp=Z,0.4nm,0.4s,baz=296,slow=4.6,SNR=8.2
CMAR Chiang Mai Arr 29.99 300 P **P 17 25 11.3 +1.2**
CMAR PcP PcP 17 28 11.7 +1.6
CMAR ScP ScP 17 31 42.5 +0.3
ENH Enshi 30.07 330 *e*P **P 17 25 10.4 -0.3**
comp=Z,65nm,0.8s,mb5.3
CHG Chiang Mai 30.14 300⇑P **P 17 25 12.1 +0.6**
CHTO Chiang Mai 30.14 300 *e*P **P 17 25 11.2 -0.3**
CHTO pmax pmax
comp=Z,151nm,1.3s,mb5.5
CHTO Chiang Mai 30.14 300 *e*P **P 17 25 11.2 -0.2**
comp=Z,151nm,1.3s,mb5.5
CHTO Chiang Mai 30.14 300 P **P 17 25 12.1 +0.6**
comp=Z,1μmcomp=Z,108nm,1.3s,mb5.3
CHTO Chiang Mai 30.14 300 P **P 17 25 12.7 +1.2**
SNR=66
KMI Kunming 30.43 315 P **P 17 25 15.8 +1.8**
KMI pP pP 17 25 44.3 +5.7
KMI sP sP 17 26 00.1 +8.6
KMI PP PP 17 26 21.4 -3.4
KMI PcP PcP 17 28 13.3 +2.2
KMI S **S 17 30 06.2 -0.6**
KMI sS sS 17 30 54.7 +5.0
KMI ScP ScP 17 31 44.0 +0.5
KMI SS 17 31 57.1
KMI pmax pmax
comp=Z,14nm,1.0s,mb4.5
KMI pmax pmax
comp=Z,120nm,3.5s
KMI LR LR
comp=N,2μm,17.4s
KMI LR LR
comp=E,2μm,18.0s
KMI LR LR
comp=Z,1μm,22.5s
CTA Charters Tower 31.43 142⇑*i*P **P 17 25 24.4 +1.6**
comp=Z,20nm,0.8s,mb4.9
CTAO Charters Tower 31.43 142 *e*P **P 17 25 23.2 +0.4**
CTAO pmax pmax
comp=Z,36nm,0.8s,mb5.2
CTAO Charters Tower 31.43 142 *e*P **P 17 25 23.2 +0.4**
comp=Z,36nm,0.8s,mb5.2
CTAO Charters Tower 31.43 142 P **P 17 25 24.0 +1.2**
comp=Z,48nm,0.8s,mb5.3
TIA Tai'an 32.62 346 P **P 17 25 32.9 -0.2**
TIA pmax pmax
comp=Z,150nm,1.0s,mb5.8
INCN Inchon 32.81 1 *e*P **P 17 25 35.7 +1.0**
comp=Z,82nm,0.8s,mb5.6
KSRS Korea Array 32.82 3 P **P 17 25 35.9 +1.1**
comp=Z,162nm,1.0s,mb5.8,baz=180,slow=9.8,SNR=150
KSRS PcP PcP 17 28 18.9 +1.6
comp=Z,14nm,1.0s,baz=190,slow=4.5,SNR=4.9
KSRS ScP ScP 17 31 51.9 +0.6
comp=Z,4.5nm,1.0s,baz=182,slow=5.2,SNR=4.5
KSRS LR LR 17 36 50.5
comp=Z,455nm,21.9s,baz=290,slow=32
XAN Xi'an 33.46 333 P **P 17 25 39.9 -0.5**
XAN S **S 17 30 49.6 -4.3**
XAN pmax pmax
comp=Z,43nm,1.0s,mb5.2
XAN LR LR
comp=Z,150nm,14.9s
COCO West Island 33.55 240 *i*P **P 17 25 41.2 -0.2**
CD2 Chengdu 33.68 324 *e*P **P 17 25 42.6 +0.3**
CD2 pP pP 17 26 13.0 +5.8
CD2 sP sP 17 26 27.5 +7.5
CD2 PP PP 17 27 01.3 +0.5
CD2 PcP PcP 17 28 17.5 -2.4
CD2 S **S 17 30 56.5 -0.8**
CD2 sS sS 17 31 49.9 +9.4
CD2 PcS PcS 17 32 02.7 -3.2
CD2 SS SS 17 33 14.0 -13
CD2 ScS ScS 17 35 48.8 -7.3
CD2 pmax pmax
comp=Z,50nm,0.9s,mb5.3
CD2 pmax pmax
comp=Z,100nm,5.2s
CD2 LR LR
comp=N,1μm,14.3s
CD2 LR LR
comp=E,2μm,15.6s
CD2 LR LR
comp=Z,770nm,15.3s
MAJO Matsushiro 33.74 18 *e*P **P 17 25 41.5 -1.3**
MAJO pmax pmax
comp=Z,287nm,1.2s,mb6.0
MAJO Matsushiro 33.74 18 *e*P **P 17 25 41.5 -1.3**
comp=Z,287nm,1.2s,mb6.0
MAT Matsushiro 33.74 18 P **P 17 25 41.6 -1.2**
MAT S **S 17 30 54.0 -4.1**
MJAR Matsushiro Arr 33.74 18 P **P 17 25 41.8 -1.0**
comp=Z,121nm,1.0s,mb5.7,baz=200,slow=9.0,SNR=188
MJAR ScP ScP 17 31 54.9 +0.3
comp=Z,7.7nm,1.1s,baz=216,slow=4.5,SNR=5.7
MJAR LR LR 17 37 41.7
comp=Z,620nm,19.3s,baz=205,slow=33
MJAR Matsushiro Arr 33.74 18 P **P 17 25 41.8 -1.0**
MJAR ScP ScP 17 31 54.9 +0.3
MJAR LR LR 17 37 41.7
DL2 Dalian 34.48 354⇓*i*P **P 17 25 50.2 +1.1**
DL2 sP sP 17 26 33.6 +6.7
DL2 S **S 17 31 07.7 -1.7**
DL2 pmax pmax
comp=Z,180nm,1.0s,mb5.9
DL2 pmax pmax
comp=Z,170nm,5.2s
FORT Forrest 35.14 177 *e*P **P 17 25 53.7 -1.2**
comp=Z,84nm,0.7s,mb5.7
FORT Forrest 35.14 177 *e*P **P 17 25 54.6 -0.3**
comp=Z,156nm,0.7s,mb6.0
TIY Taiyuan 35.34 341 *e*P **P 17 25 56.3 -0.3**
TIY pP pP 17 26 21.0 -0.6
TIY PP PP 17 27 18.8 -0.2
TIY S **S 17 31 18.3 -4.4**
TIY ScS ScS 17 36 04.1 -0.7
TIY LR LR
comp=N,350nm,9.5s
TIY LR LR
comp=E,310nm,9.3s
TIY LR LR
comp=Z,450nm,23.9s
HNR Honiara 36.41 112 P **P 17 26 06.3 +0.2**
comp=Z,110nm,0.8s,mb5.8,baz=190,slow=7.4,SNR=7.0
HNR LR LR 17 39 51.6
comp=Z,493nm,20.5s,baz=294,slow=34
HNR Honiara 36.41 112 P **P 17 26 06.3 +0.3**
HNR pmax pmax
comp=Z,110nm,0.8s,mb5.8
HNR MLR MLR
comp=Z,493nm,20.5s
HNR Honiara 36.41 112 *e*P **P 17 26 05.8 -0.3**
comp=Z,858nm,1.5s,mb6.5
BJT Baijiatuau 36.48 347 *e*P **P 17 26 05.9 -0.3**
BJT pmax pmax
comp=Z,261nm,0.9s
BJT Baijiatuau 36.48 347 *e*P **P 17 26 05.9 -0.3**
comp=Z,261nm,0.9s,mb6.2
BJI Beijing 36.49 347 P **P 17 26 05.9 -0.5**
BJI pP pP 17 26 35.8 +4.3
BJI sP sP 17 26 45.2 +0.9
BJI PP PP 17 27 33.1 +1.4
BJI PcP PcP 17 28 28.4 +0.5
BJI S **S 17 31 36.6 -3.7**
BJI sS sS 17 32 25.4 +1.6
BJI SS SS 17 34 16.7 -6.2
BJI ScS ScS 17 36 11.6 +0.6
BJI pmax pmax
comp=Z,260nm,0.9s,mb6.2
KLBR Kellerberrin 36.79 192 *e*P **P 17 26 08.6 -0.4**
comp=Z,150nm,0.9s,mb5.9
IMP Imphal 36.95 306 *e*PKP **P 17 26 09.0 -1.5**
IMP *ex* x 17 27 32.0
SNY Shenyang 37.22 357⇓P **P 17 26 13.7 +1.2**

SNY				S	S	17 31 50.6	-0.6
SNY				pmax	pmax		
	comp=Z,570nm,1.2s,mb6.4						
SNY				LR	LR		
	comp=N,490nm,22.5s						
SNY				LR	LR		
	comp=E,330nm,14.7s						
SNY				LR	LR		
	comp=Z,630nm,20.1s						
LZH	**Lanzhou**	**37.54**	**330**	⇑P	**P**	**17 26 16.2**	**+0.9**
LZH				pP	pP	17 26 41.0	+0.5
LZH				sP	sP	17 26 57.0	+3.7
LZH				S	**S**	**17 31 54.0**	**-2.3**
LZH				sS	sS	17 32 40.0	+0.1
LZH				SS	SS	17 34 39.1	-6.5
LZH				pmax	pmax		
	comp=Z,190nm,1.2s,mb5.8						
LZH				pmax	pmax		
	comp=Z,240nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,12.6s						
LZH				LR	LR		
	comp=E,1μm,12.9s						
LZH				LR	LR		
	comp=Z,2μm,13.8s						
NWAO	**Narrogin (SRO)**	**38.19**	**192**	*e*P	**P**	**17 26 20.8**	**0.0**
NWAO				pmax	pmax		
	comp=Z,174nm,1.0s						
NWAO	**Narrogin (SRO)**	**38.19**	**192**	*e*P	**P**	**17 26 20.8**	**+0.1**
	comp=Z,174nm,1.0s,mb5.8						
NWAO	**Narrogin (SRO)**	**38.19**	**192**	P	**P**	**17 26 21.4**	**+0.7**
	SNR=8.6						
BBOO	**Buckleboo**	**38.29**	**166**	*e*P	**P**	**17 26 21.5**	**-0.1**
	comp=Z,172nm,0.6s,mb6.1						
EIDS	**Eidsvold**	**38.32**	**142**	*e*P	**P**	**17 26 21.0**	**-1.0**
	comp=Z,88nm,0.8s,mb5.6						
HHC	**Hu-ho-hao-te**	**38.48**	**342**	⇓P	**P**	**17 26 23.5**	**+0.4**
HHC				pP	pP	17 26 48.9	+0.5
HHC				sP	sP	17 27 01.9	+0.8
HHC				PP	PP	17 27 58.4	+5.0
HHC				PcP	PcP	17 28 34.5	+0.5
HHC				S	**S**	**17 32 09.5**	**-0.8**
HHC				sS	sS	17 32 54.6	+0.6
HHC				SS	SS	17 34 58.3	-6.0
HHC				ScS	ScS	17 36 19.6	-2.7
HHC				pmax	pmax		
	comp=Z,68nm,1.2s,mb5.3						
HHC				pmax	pmax		
	comp=Z,410nm,5.0s						
HHC				LR	LR		
	comp=N,500nm,14.1s						
HHC				LR	LR		
	comp=E,670nm,12.5s						
HHC				LR	LR		
	comp=Z,810nm,17.2s						
BTO	**Baotou**	**38.75**	**340**	*e*P	**P**	**17 26 24.5**	**-0.9**
AGT	**Agartala**	**38.76**	**303**	*ex*	**P**	**17 26 22.0**	**-3.7**
AGT				*ex*	x	17 26 48.0	
VLA	**Vladivostok**	**38.77**	**7**	⇓*i*P	**P**	**17 26 24.4**	**-1.1**
VLA				*i*		17 27 54.6	
VLA				*i*		17 28 33.3	
VLA				*e*S	**S**	**17 32 12.7**	**-2.0**
VLA				pmax	pmax		
	comp=Z,223nm,1.4s,mb5.8						
SHL	**Shillong**	**38.96**	**306**	*e*PKP	**P**	**17 26 26.0**	**-1.4**
SHL				*i x*	x	17 32 06.0	
STKA	**Stephens Creek**	**39.06**	**159**	P	**P**	**17 26 28.3**	**+0.2**
	comp=Z,52nm,0.7s,mb5.5,baz=335,slow=7.7,SNR=68						
STKA				S	**S**	**17 32 14.0**	**-5.3**
	comp=Z,11nm,1.0s,baz=291,slow=8.9,SNR=3.9						
STKA	**Stephens Creek**	**39.06**	**159**	*e*P	**P**	**17 26 27.8**	**-0.3**
	comp=Z,30nm,0.8s,mb5.2						
CN2	**Changchun**	**39.13**	**359**	⇓P	**P**	**17 26 28.8**	**+0.3**
CN2				*es*P	sP	17 27 08.3	+1.8
CN2				*e*PP	PP	17 28 01.6	+1.2
CN2				*e*S	**S**	**17 32 19.3**	**-0.6**
CN2				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.7						
CN2				pmax	pmax		
	comp=Z,600nm,5.0s						
MDJ	**Mudanjiang**	**40.05**	**4**	P	**P**	**17 26 37.4**	**+1.3**
MDJ				pP	pP	17 27 00.3	-1.2
MDJ				PP	PP	17 28 10.7	+0.2
MDJ				PcP	PcP	17 28 39.6	+0.7
MDJ				PcS	PcS	17 32 29.3	+0.1
MDJ				S	**S**	**17 32 34.5**	**+0.8**
MDJ				sS	sS	17 33 18.9	+1.3
MDJ				pmax	pmax		
	comp=Z,210nm,1.2s,mb5.8						
MDJ				pmax	pmax		
	comp=Z,610nm,5.6s						
MDJ				LR	LR		
	comp=N,660nm,27.1s						
MDJ				LR	LR		
	comp=E,310nm,27.1s						
MDJ				LR	LR		
	comp=Z,760nm,38.4s						
MDJ	**Mudanjiang**	**40.05**	**4**	*e*P	**P**	**17 26 37.2**	**+1.1**
	comp=Z,233nm,1.1s,mb5.9						
ERM	**Erimo**	**40.30**	**20**	P	**P**	**17 26 39.7**	**+1.5**
	comp=Z,1μm,0.9s,mb6.8,SNR=14						
ERM	**Erimo**	**40.30**	**20***c*	*i*P	**P**	**17 26 39.6**	**+1.4**
ERM				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.4						
ERM	**Erimo**	**40.30**	**20**	⇑*i*P	**P**	**17 26 39.6**	**+1.4**
	comp=Z,270nm,1.2s,mb6.0						
KWAJ	**Kwajalein Atol**	**41.37**	**82**	*e*P	**P**	**17 26 47.6**	**+0.2**
LSA	**Lhasa**	**41.50**	**311**	P	**P**	**17 26 49.2**	**+0.9**
LSA	**Lhasa**	**41.50**	**311**	*e*P	**P**	**17 26 49.0**	**+0.7**
LSA				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.4						
LSA	**Lhasa**	**41.50**	**311**	*e*P	**P**	**17 26 49.0**	**+0.7**
	comp=Z,39nm,0.6s,mb5.4						
ASAJ	**Asahikawa**	**42.01**	**18**	P	**P**	**17 26 53.6**	**+1.4**
	comp=Z,371nm,0.8s,mb6.2,baz=231,slow=13,SNR=247						
ASAJ				S	**S**	**17 33 04.5**	**+1.7**
	comp=Z,8.2nm,1.0s,baz=68,slow=23,SNR=3.5						
ASAJ				LR	LR	17 43 22.0	
	comp=Z,632nm,19.9s,baz=212,slow=34						
ASAJ	**Asahikawa**	**42.01**	**18**	P	**P**	**17 26 53.6**	**+1.4**
ASAJ				S	**S**	**17 33 04.6**	**+1.8**
ASAJ				pmax	pmax		
	comp=Z,371nm,0.8s						
ASAJ				smax			
	comp=N,8.0nm,1.0s						
ASAJ				MLR	MLR		
	comp=Z,632nm,19.9s						
ASAJ	**Asahikawa**	**42.01**	**18**	⇓*i*P	**P**	**17 26 53.5**	**+1.3**
	comp=Z,184nm,0.9s,mb5.8						
GTA	**Gaotai**	**42.13**	**329**	P	**P**	**17 26 53.2**	**-0.1**
GTA				pP	pP	17 27 19.4	+0.5
GTA				sP	sP	17 27 35.4	+3.9
GTA				S	**S**	**17 33 00.2**	**-4.6**
GTA				sS	sS	17 33 49.0	0.0
GTA				ScS	ScS	17 36 42.7	-1.5
GTA				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
GTA				pmax	pmax		
	comp=Z,130nm,7.5s						
GTA				LR	LR		
	comp=N,1μm,18.3s						
GTA				LR	LR		
	comp=E,820nm,20.7s						
GTA				LR	LR		
	comp=Z,680nm,17.1s						
ARMA	**Armidale**	**42.43**	**147**	*e*P	**P**	**17 26 56.6**	**+0.8**
ARMA	**Armidale**	**42.43**	**147**	*e*P	**P**	**17 26 56.4**	**+0.6**
	comp=Z,100nm,0.8s,mb5.6						
YUK	**Yuzh-Kuril'sk**	**43.02**	**21**	⇑*i*P	**P**	**17 26 59.2**	**-1.1**
YUK				S	**S**	**17 33 15.5**	**-2.0**
YUK				pmax	pmax		
	comp=N,1μm,1.0s						
YUK				pmax	pmax		
	comp=E,1μm,1.0s						
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				pmax	pmax		
	comp=Z,1μm,1.0s						
TAPN	**Taplejung**	**43.10**	**306**	*e*P	**P**	**17 27 00.8**	**-0.5**
	comp=Z,35nm,0.5s,mb5.4						
ODAN	**Odare**	**43.16**	**305**	*e*P	**P**	**17 27 01.5**	**-0.3**
	comp=Z,90nm,0.6s,mb5.7						
RAMN	**Ramite**	**43.84**	**305**	*e*P	**P**	**17 27 07.2**	**0.0**
	comp=Z,60nm,0.7s,mb5.5						
VIS	**Vishakhapatnam**	**43.91**	**291**	*e*PKP	**P**	**17 27 06.3**	**-1.6**
VIS				*i x*	x	17 33 31.4	
HABR	**Khabarovsk**	**44.45**	**8***d*	*i*P	**P**	**17 27 12.8**	**+1.1**
HABR				*PP	pP	17 27 38.6	+1.1
HABR				*e*SP	sP	17 27 52.3	+2.1
HABR						17 28 53.6	
HABR				*e*		17 28 56.7	
HABR				*e*PPP		17 29 37.2	
HABR				*e*S	**S**	**17 33 39.2**	**+0.9**
HABR				*e*SS	sS	17 34 25.0	+2.2
HABR				*e*		17 36 57.2	
HABR				*e*SSS		17 37 59.1	
HABR				pmax	pmax		
	comp=Z,1μm,2.1s,mb6.3						
HABR				pmax	pmax		
	comp=Z,680nm,1.8s,mb6.1						
HABR				pmax	pmax		
	comp=E,216nm,1.4s						
HABR				pmax	pmax		
	comp=N,247nm,1.8s						
JIRN	**Jiri**	**44.45**	**306**	*e*P	**P**	**17 27 12.3**	**+0.1**
	comp=N,23nm,0.2s,mb5.5						
YSS	**Yuzh-Sakhalins**	**44.64**	**16**	⇓*i*P	**P**	**17 27 13.8**	**+0.5**
YSS				*e*		17 27 51.2	
YSS				*e*		17 28 57.0	
YSS				*e*S	**S**	**17 33 39.0**	**-2.1**
YSS				pmax	pmax		
	comp=Z,380nm,1.1s,mb6.0						
YSS				MLR	MLR		
	comp=Z,200nm,18.0s						
YSS	**Yuzh-Sakhalins**	**44.64**	**16**	*e*P	**P**	**17 27 13.7**	**+0.4**
	comp=Z,443nm,1.0s,mb6.2						
KLR	**Kul'dur**	**44.80**	**5**	⇑*i*P	**P**	**17 27 11.8**	**-2.7**
KLR				*e*		17 28 52.5	
KLR				*e*S	**S**	**17 33 39.5**	**-3.9**
KLR				pmax	pmax		
	comp=N,78nm,1.8s						
KLR				pmax	pmax		
	comp=Z,400nm,1.8s,mb5.8						
KLR				smax			
	comp=N,600nm,11.0s						
KLR				smax			
	comp=E,1μm,11.0s						
GUN	**Gumba**	**44.81**	**306**	*e*P	**P**	**17 27 14.8**	**-0.1**
	comp=E,73nm,0.4s,mb5.8						
HIA	**Hailar**	**44.92**	**354**	*e*P	**P**	**17 27 16.6**	**+1.1**
HIA				pmax	pmax		
	comp=Z,555nm,1.1s						
HIA	**Hailar**	**44.92**	**354**	*e*P	**P**	**17 27 16.6**	**+1.1**
	comp=Z,555nm,1.1s,mb6.2						
PKI	**Pulchoki**	**45.05**	**305**	*e*P	**P**	**17 27 16.6**	**-0.3**
CAN	**Canberra**	**45.06**	**153**	*e*P	**P**	**17 27 17.9**	**+1.1**
CAN				pmax	pmax		
	comp=Z,83nm,1.0s,mb5.4						
CAN	**Canberra**	**45.06**	**153**	*e*P	**P**	**17 27 17.9**	**+1.1**
	comp=Z,83nm,1.0s,mb5.4						
PKIN	**Phulchoki**	**45.07**	**305**	*e*P	**P**	**17 27 17.3**	**+0.3**
	comp=Z,36nm,0.5s,mb5.4						
CNB	**Canberra Magne**	**45.22**	**153**	*e*P	**P**	**17 27 19.1**	**+1.0**
KKN	**Kakani**	**45.25**	**305**	*e*P	**P**	**17 27 17.8**	**-0.6**
	comp=Z,31nm,0.4s,mb5.4						
PALK	**Pallekele**	**45.29**	**276**	*i* P	**P**	**17 27 19.8**	**+0.8**
PALK	**Pallekele**	**45.29**	**276**	*e*P	**P**	**17 27 18.1**	**-0.9**
	comp=Z,13nm,0.6s,mb4.8						
PALK	**Pallekele**	**45.29**	**276**	P	**P**	**17 27 19.2**	**+0.2**
	comp=Z,29nm,1.4s,mb4.8						
DMN	**Daman**	**45.32**	**305**	*e*P	**P**	**17 27 19.3**	**+0.3**
	comp=Z,80nm,0.9s,mb5.4						
GKN	**Gorkha**	**45.85**	**305**	*e*P	**P**	**17 27 22.3**	**-0.9**
	comp=Z,24nm,0.4s,mb5.3						
MDRS	**Chennai**	**46.10**	**284**	*ex*	x	17 27 42.5	
ULN	**Ulaanbaatar**	**46.20**	**342**	*e*P	**P**	**17 27 25.6**	**0.0**
ULN				pmax	pmax		
	comp=Z,125nm,1.1s,mb5.6						
ULN	**Ulaanbaatar**	**46.20**	**342**	*e*P	**P**	**17 27 25.6**	**+0.1**
	comp=Z,125nm,1.1s,mb6.5						
ULN	**Ulaanbaatar**	**46.20**	**342**	P	**P**	**17 27 25.4**	**-0.2**
ULN	**Ulaanbaatar**	**46.20**	**342**	P	**P**	**17 27 25.4**	**-0.2**
	SNR=55						
SONM	**Songino Array**	**46.38**	**342**	P	**P**	**17 27 26.8**	**-0.1**
	comp=Z,28nm,1.0s,mb5.0,baz=160,slow=8.5,SNR=115						
SONM				pP	pP	17 27 52.4	-0.6
	comp=Z,33nm,1.0s,baz=157,slow=8.3,SNR=5.9						
SONM				PcP	PcP	17 29 00.5	+0.3
	comp=Z,17nm,0.8s,baz=159,slow=5.9,SNR=2.7						
SONM				ScP	ScP	17 32 46.1	+2.7
	comp=Z,2.9nm,0.7s,baz=165,slow=4.9,SNR=3.5						
SONM				LR	LR	17 46 31.9	
	comp=Z,556nm,20.7s,baz=154,slow=35						
SONM	**Songino Array**	**46.38**	**342**	P	**P**	**17 27 26.8**	**-0.1**
SONM				*PP	pP	17 27 52.4	-0.5
SONM						17 29 00.5	
KOLN	**Koldanda**	**46.61**	**304**	*e*P	**P**	**17 27 29.0**	**-0.2**
	comp=Z,110nm,0.3s,mb6.1						
DANN	**Dangsing**	**46.70**	**305**	*e*P	**P**	**17 27 29.5**	**-0.3**
	comp=Z,188nm,0.5s,mb6.1						
NOUC	**Port Laguerre**	**47.35**	**126**	*e*P	**P**	**17 27 39.8**	**+4.8**
DZM	**Mont Dzumac**	**47.45**	**126**	*e*P	**P**	**17 27 37.1**	**+1.4**
	comp=Z,391nm,1.1s,mb6.0						
DZM				*e*pP	pP	17 28 06.5	+4.7
	comp=Z,349nm,1.1s						
DZM				*e*S	**S**	**17 34 25.2**	**+3.2**
	comp=Z,854nm,26.1s						
DZM				*e*LR	LR	17 41 17.3	
	comp=Z,752nm,27.6s						
DZM	**Mont Dzumac**	**47.45**	**126**	*e*P	**P**	**17 27 35.4**	**-0.3**
DZM	**Mont Dzumac**	**47.45**	**126**	*e*P	**P**	**17 27 36.9**	**+1.1**
	comp=Z,178nm,1.0s,mb5.8						
HYB	**Hyderabad**	**48.32**	**289**	*i* P	**P**	**17 27 42.0**	**-0.5**
HYB				*e*pP	pP	17 28 08.0	-0.7
HYB				*es*P	sP	17 28 20.0	-1.2
HYB				*e*S	**S**	**17 34 34.0**	**-0.5**
CIT	**Chita**	**48.49**	**350**	*e*P	**P**	**17 27 44.2**	**+0.9**
CIT				*e*	pP	17 28 08.8	-0.6
CIT				*e*		17 29 41.7	
CIT				*e*		17 34 35.6	
CIT				pmax	pmax		
	comp=Z,198nm,1.2s,mb5.8						
NGP	**Nagpur**	**48.59**	**294**	*e*PKP	**P**	**17 27 43.5**	**-1.1**
TRD	**Trivandrum**	**49.02**	**277**	*e*PKP	**P**	**17 27 46.5**	**-1.5**
TRD				AMb	AMB	17 27 48.9	
	comp=Z,196nm,0.9s,mb6.0						
ZAK	**Zakamensk**	**49.60**	**341**	*e*P	**P**	**17 27 51.4**	**-0.3**
ZAK				*e*	pP	17 28 17.3	-0.7
AKL	**Akola**	**50.36**	**293**	⇓*i*P	**P**	**17 27 57.1**	**-0.9**
AKL				AMP		17 28 00.0	
	comp=Z,148nm,1.3s						
AKL				*i x*	x	17 34 59.8	
LATR	**Latur**	**50.36**	**290**	*e*PKP	**P**	**17 27 56.7**	**-1.3**
BHPL	**Bhopal**	**50.55**	**296**	*e*PKP	**P**	**17 27 57.9**	**-1.5**
TLY	**Talaya**	**50.61**	**342**	*e*P	**P**	**17 27 59.3**	**0.0**
TLY				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.5						
TLY				MLR	MLR		
	comp=Z,252nm,17.0s						
TLY	**Talaya**	**50.61**	**342**	*e*P	**P**	**17 27 59.4**	**+0.1**
	comp=Z,48nm,0.9s,mb5.5						
TLY	**Talaya**	**50.61**	**342**	P	**P**	**17 27 59.9**	**+0.6**
	comp=Z,305nm,0.9s,mb6.3,SNR=17						
TLY	**Talaya**	**50.61**	**342**	P	**P**	**17 28 00.1**	**+0.8**
	SNR=36						
IRK	**Irkutsk**	**50.91**	**343**	*e*P	**P**	**17 28 01.3**	**-0.3**
IRK				*e*S	**S**	**17 35 08.6**	**-0.9**
IRK				pmax	pmax		
	comp=Z,163nm,1.7s,mb5.8						
MOY	**Mondy**	**51.45**	**340**	*e*P	**P**	**17 28 06.2**	**+0.6**
MOY				pmax	pmax		
	comp=Z,115nm,1.8s,mb5.6						
WMQ	**Urumqi**	**51.76**	**325**	P	**P**	**17 28 08.0**	**-0.1**
WMQ				pP	pP	17 28 37.0	+2.5
WMQ				sP	sP	17 28 52.0	+5.0
WMQ				PP	PP	17 30 08.0	+1.1
WMQ				S	**S**	**17 35 18.0**	**-3.5**
WMQ				ScS	ScS	17 37 42.0	-5.3
WMQ				SS	SS	17 38 54.0	-5.5
WMQ				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.5						
WMQ				pmax	pmax		
	comp=Z,250nm,5.0s						
WMQ				LR	LR		
	comp=N,2μm,20.0s						
WMQ				LR	LR		
	comp=E,1μm,20.0s						
WMQ				LR	LR		
	comp=Z,870nm,20.0s						
DDI	**Dehra Dun**	**52.05**	**305**	*ex*	x	17 29 34.4	
CLNS	**Chul'man**	**52.18**	**359**	*i* P	**P**	**17 28 12.2**	**+1.2**
CLNS				*e*PP	pP	17 28 36.2	-1.3
CLNS				*e*		17 29 21.5	
CLNS				*e*		17 30 11.3	
CLNS				*e*PPP		17 31 22.6	
CLNS				*i* S	**S**	**17 35 27.1**	**+0.3**
CLNS				*e*SS	SS	17 38 58.0	-7.7
CLNS				*e*SSS		17 40 44.6	
CLNS				pmax	pmax		
	comp=E,32nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,241nm,1.6s,mb6.0						
CLNS				pmax	pmax		
	comp=N,207nm,1.8s						
CLNS				pmax	pmax		
	comp=Z,66nm,1.6s,mb5.4						
CLNS				pmax	pmax		
	comp=E,40nm,1.7s						
CLNS				pmax	pmax		
	comp=N,78nm,2.0s						
CLNS				smax			
	comp=E,229nm,10.2s						
CLNS				smax			
	comp=N,287nm,16.1s						
NDI	**New Delhi**	**52.22**	**303**	*ex*	**P**	**17 28 09.0**	**-2.8**
SKR	**Severo-Kuril's**	**52.42**	**24**	⇓*i*P	**P**	**17 28 14.0**	**+1.2**
SKR				*e*		17 28 52.0	
SKR				*e*		17 30 17.0	
SKR				*e*S	S	17 35 52.0	+22
SKR				*e*		17 37 53.0	
SKR				pmax	pmax		
	comp=Z,2μm,3.0s						
SKR				pmax	pmax		
	comp=N,800nm,2.0s						
SKR				pmax	pmax		
	comp=E,1μm,2.0s						
SKR				pmax	pmax		
	comp=N,320nm,1.5s						
SKR				pmax	pmax		
	comp=E,400nm,1.5s						
SKR				pmax	pmax		
	comp=Z,800nm,1.5s,mb6.5						
SKR				smax			
	comp=E,1μm,12.0s						
SKR				MLR	MLR		
	comp=Z,900nm,16.0s						
KAD	**Karad**	**52.43**	**288**	*e*PKP	**P**	**17 28 11.8**	**-1.7**
POO	**Poona**	**52.92**	**290**	*e*PKP	**P**	**17 28 15.5**	**-1.5**
POO				AMb	AMB	17 28 17.7	
	comp=Z,84nm,0.7s,mb5.9						
SMLA	**Simla**	**53.05**	**306**	*i* P	**P**	**17 28 16.2**	**-1.6**
SMLA				AML	AML	17 28 19.4	
	comp=Z,752nm,0.5s						
SMLA				*i x*	x	17 35 34.3	
BHK	**Bhakra**	**53.75**	**306**	*ex*	x	17 28 45.8	
AJM	**Ajmer**	**53.79**	**300**	*e*PKP	**P**	**17 28 21.8**	**-1.5**
PETK	**Petropavlovsk-**	**54.92**	**23**	P	**P**	**17 28 32.5**	**+1.4**
	comp=Z,62nm,0.6s,mb5.8,baz=188,slow=3.9,SNR=136						
PETK				LR	LR	17 52 06.6	
	comp=Z,183nm,20.7s,baz=354,slow=36						
BHV	**Bhavnagar**	**55.02**	**293**	*e*PKP	**P**	**17 28 32.0**	**-0.3**
PET	**Petropavlovsk**	**55.23**	**23**	⇓*i*P	**P**	**17 28 34.2**	**+1.0**
PET				*e*S	**S**	**17 36 09.1**	**+1.0**
PET				pmax	pmax		
	comp=Z,1μm,2.0s,mb6.6						
PET				pmax	pmax		
	comp=Z,296nm,1.6s,mb6.1						
PET				pmax	pmax		
	comp=Z,500nm,15.5s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
PET				MLR	MLR		
	comp=Z,300nm,15.0s						
PET	**Petropavlovsk**	**55.23**	**23**	*e*P	**P**	**17 28 34.0**	**+0.8**
	comp=Z,683nm,1.4s,mb6.5						
MSVF	**Nonsavu**	**55.75**	**115**	*e*P	**P**	**17 28 39.4**	**+1.7**
	comp=Z,204nm,1.1s,mb6.1						
MSVF	**Nonsavu**	**55.75**	**115**	P	**P**	**17 28 40.3**	**+2.7**
	comp=Z,992nm,1.1s,mb6.8,SNR=19						
MK31	**Makanchi Array**	**56.59**	**325**	*e*P	**P**	**17 28 42.1**	**-1.0**
MKAR	**Makanchi Array**	**56.59**	**325**	P	**P**	**17 28 42.7**	**-0.3**
	comp=Z,20nm,0.4s,mb5.5,baz=120,slow=8.5,SNR=166						
MKAR				pP	pP	17 29 09.1	-0.9
	comp=Z,108nm,0.9s,baz=118,slow=8.2,SNR=8.7						
MKAR				ScP	ScP	17 33 26.4	-1.2
	comp=Z,10nm,0.9s,baz=116,slow=5.5,SNR=4.6						
MKAR				S	**S**	**17 36 30.5**	**+4.2**
	comp=Z,7.5nm,1.1s,baz=129,slow=13,SNR=4.3						
MKAR				LR	LR	17 52 10.2	
	comp=Z,369nm,20.6s,baz=121,slow=35						
MKAR				PKPPKP		17 58 36.0	
	comp=Z,0.6nm,0.9s,baz=264,slow=3.5,SNR=3.9						
MKAR				PKP2ab		17 59 04.4	
	comp=Z,1.1nm,0.9s,baz=262,slow=2.5,SNR=4.5						
MKAR				P4KPbc		18 05 56.3	
	comp=Z,0.5nm,0.6s,baz=109,slow=5.8,SNR=6.4						
MKAR	**Makanchi Array**	**56.59**	**325**	*i* P	**P**	**17 28 42.7**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,20nm,0.4s						
MKAR	**Makanchi Array**	**56.59**	**325**	P	**P**	**17 28 42.7**	**-0.3**
MKAR				pP	pP	17 29 09.1	-0.9
MKAR				ScP	ScP	17 33 26.4	-1.2
MKAR				S	**S**	**17 36 30.5**	**+4.2**
MKAR				LR	LR	17 52 10.2	
MKAR				P'P'		17 58 36.0	
MKAR				P'P'ab		17 59 04.4	
KSH	**Kashi**	**57.09**	**315**	*e*P	**P**	**17 28 46.7**	**-0.1**
KSH				*e*pP	pP	17 29 16.5	+2.8
KSH				*es*P	sP	17 29 30.7	+4.7
KSH				*e*PcP	PcP	17 29 41.4	+1.0
KSH				*e*PP	PP	17 30 55.7	+0.9
KSH				*e*ScP	ScP	17 33 27.6	-2.4
KSH				*e*PcS	PcS	17 33 40.7	-0.7
KSH				*e*S	**S**	**17 36 26.8**	**-6.4**
KSH				*e*ScS	ScS	17 38 19.6	-5.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.2s,mb5.0						
KSH				pmax	pmax		
	comp=Z,170nm,2.7s,mb5.6						
KSH				LR	LR		
	comp=N,640nm,12.5s						
KSH				LR	LR		
	comp=E,630nm,14.8s						
KSH				LR	LR		
	comp=Z,1μm,28.5s						
YAK	**Yakutsk**	**57.44**	**2***d*	*i*P	**P**	**17 28 49.3**	**+0.5**
YAK				*e*PP	pP	17 29 11.0	-4.7
YAK				*e*		17 29 37.0	
YAK				*e*		17 30 56.9	
YAK				*e*S	**S**	**17 36 34.7**	**-2.3**
YAK				*e*		17 38 23.6	
YAK				*e*SS	SS	17 40 27.0	-1.4
YAK				pmax	pmax		
	comp=Z,217nm,0.9s,mb6.2						
YAK				pmax	pmax		
	comp=N,136nm,1.3s						
YAK				pmax	pmax		
	comp=E,22nm,1.3s						
YAK				pmax	pmax		
	comp=Z,176nm,2.1s,mb5.7						
YAK				pmax	pmax		
	comp=E,38nm,1.5s						
YAK				pmax	pmax		
	comp=N,124nm,1.6s						
YAK				smax			
	comp=N,714nm,3.4s						
YAK				smax			
	comp=E,1μm,2.9s						
YAK	**Yakutsk**	**57.44**	**2**	*e*P	**P**	**17 28 48.9**	**+0.1**
	comp=E,295nm,0.9s,mb6.3						
ULHL	**Ulahol**	**58.06**	**318**	P	**P**	**17 28 54.5**	**+1.0**
	SNR=15						
KZA	**Kyzart**	**58.66**	**317**	P	**P**	**17 28 58.4**	**+0.7**
	SNR=25						
KZA	**Kyzart**	**58.66**	**317**	*e*P	**P**	**17 28 58.0**	**+0.3**
	comp=E,55nm,0.9s,mb5.6						
TKM2	**Tokmak 2**	**58.78**	**318**	P	**P**	**17 28 58.4**	**-0.1**
	SNR=26						
TKM2	**Tok

comp=Z,45nm,1.3s,mb5.3
AAK Ala-Archa 59.40 318 P **P 17 29 02.0 -0.8**
comp=Z,2.6nm,0.3s,mb4.7,baz=141,slow=9.1,SNR=9.1
AAK LR LR 17 57 13.9
comp=Z,656nm,20.4s,baz=96,slow=38
AAK PKP2bc 17 58 44.2
comp=Z,1.5nm,0.4s,baz=234,slow=4.1,SNR=5.6
AAK Ala-Archa 59.40 318 *eP* **P 17 29 02.9 +0.2**
AAK pmax pmax
comp=Z,12nm,2.2s,mb4.5
AAK Ala-Archa 59.40 318 *eP* **P 17 29 01.6 -1.1**
comp=Z,77nm,1.4s,mb5.5
AAK Ala-Archa 59.40 318 P **P 17 29 03.9 +1.2**
SNR=15
ZAA0 Zalesovo Array 59.63 333 *eP* **P 17 29 03.0 -1.2**
ZAA0 *ep*P pP 17 29 27.9 -3.4
ZALV Zalesovo Beam 59.63 333 P **P 17 29 03.1 -1.0**
comp=Z,15nm,0.5s,mb5.2,baz=116,slow=6.8,SNR=44
ZALV ScP ScP 17 33 39.7 -1.2
comp=Z,2.5nm,0.6s,baz=112,slow=1.6,SNR=3.3
ZALV PKP2bc 17 58 41.0
comp=Z,0.5nm,0.5s,baz=274,slow=5.8,SNR=3.5
ZALV Zalesovo Beam 59.63 333 P **P 17 29 03.1 -1.0**
ZALV ScP ScP 17 33 39.7 -1.2
ZALV ⇑*e* 17 58 41.0
USP Ospenovka 59.66 318 P **P 17 29 03.9 -0.6**
SNR=12
AML Almayashu 59.73 317 P **P 17 28 47.4 -18**
SNR=9.1
AML Almayashu 59.73 317 *eP* **P 17 29 05.1 0.0**
comp=Z,52nm,0.8s,mb5.6
EKS2 Erkin-Say 59.89 318 P **P 17 29 06.5 +0.4**
SNR=19
EKS2 Erkin-Say 59.89 318 *eP* **P 17 29 06.5 +0.4**
comp=Z,30nm,0.6s,mb5.5
KBL Kabul 60.60 307 *eP* **P 17 29 10.5 -0.6**
KBL *e**PP pP 17 29 37.9 -0.4
KBL pmax pmax
comp=Z,86nm,0.8s,mb5.8
KBL Kabul 60.60 307 *eP* **P 17 29 10.4 -0.7**
comp=Z,86nm,0.8s,mb5.8
KBL *ep*P pP 17 29 37.9 -0.5
KURK Kurchatov 60.78 327 P **P 17 29 11.6 -0.4**
comp=Z,561nm,0.6s,mb6.8,SNR=63
KURK Kurchatov 60.78 327 P **P 17 29 11.8 -0.2**
comp=Z,34nm,0.6s,mb5.6,baz=126,slow=6.0,SNR=42
KURK pP pP 17 29 38.1 -1.1
comp=Z,197nm,0.8s,baz=124,slow=6.2,SNR=16
KURK PKPPKP 17 58 28.1
comp=Z,1.2nm,0.9s,baz=277,slow=3.5,SNR=4.1
KURK PKP2ab 17 58 47.9
comp=Z,1.4nm,0.8s,baz=303,slow=3.3,SNR=3.6
KURK Kurchatov 60.78 327 *ceP* **P 17 29 11.2 -0.8**
KURK pmax pmax
comp=Z,96nm,1.1s,mb5.7
KURK Kurchatov 60.78 327 *eP* **P 17 29 10.7 -1.3**
comp=Z,261nm,0.8s,mb6.3
KURK *ep*P pP 17 29 36.8 -2.4
KURK Kurchatov 60.78 327 P **P 17 29 11.7 -0.3**
SNR=49
NVS Novosibirsk 60.92 333 ⇑*iP* **P 17 29 10.6 -2.3**
NVS *i* *PP pP 17 29 36.7 -3.4
NVS *e* 17 31 35.4
NVS *i* S **S 17 37 16.6 -5.5**
NVS *i* 17 38 44.2
NVS pmax pmax
comp=N,24nm,1.4s
NVS pmax pmax
comp=Z,54nm,1.4s,mb5.4
NVS pmax pmax
comp=E,22nm,1.2s
NVS pmax pmax
comp=N,20nm,1.9s
NVS pmax pmax
comp=E,18nm,1.9s
NVS pmax pmax
comp=Z,32nm,1.9s,mb5.0
NVS smax
comp=N,33nm,2.2s
NVS smax
comp=E,45nm,2.0s
NVS smax
comp=N,17nm,2.0s
NVS smax
comp=E,10.0nm,2.0s
SEY Seymchan 61.40 13 *deP* **P 17 29 17.7 +1.7**
SMY Shemya 62.08 31 *eP* **P 17 29 21.8 +1.1**
comp=E,1μm,2.1s,mb6.6
KKAR Karatay Array 62.27 317 *eP* **P 17 29 20.9 -1.3**
KKAR *e**PP pP 17 29 49.4 -0.2
KKAR pmax pmax
comp=Z,57nm,1.0s,mb5.6
KKAR Karatay Array 62.27 317 *eP* **P 17 29 20.9 -1.4**
comp=Z,56nm,1.0s,mb5.5
KKAR *ep*P pP 17 29 49.4 -0.1
RPZ Rata Peaks 62.73 145 P **P 17 29 26.0 +0.8**
comp=Z,14nm,0.8s,mb4.9,baz=353,slow=4.1,SNR=2.8
RPZ Rata Peaks 62.73 145 P **P 17 29 25.9 +0.7**
comp=Z,46nm,0.7s,mb5.5
URZ Urewera 63.50 137 P **P 17 29 31.3 +0.9**
SNZO South Karori 63.53 141 *eP* **P 17 29 31.2 +0.7**
AMKA Amchitka 64.17 34 *eP* **P 17 29 34.8 +0.2**
comp=Z,76nm,0.8s,mb5.6
BVAR Borovoye Array 66.36 327 P **P 17 29 48.3 -0.3**
comp=Z,38nm,0.8s,mb5.3,baz=126,slow=7.5,SNR=99
BVAR pP pP 17 30 15.4 -0.8
comp=Z,48nm,0.6s,baz=121,slow=6.4,SNR=9.8
BVAR PKP2bc 17 58 24.6
comp=Z,0.5nm,0.5s,baz=17,slow=6.5,SNR=3.8
BVAR Borovoye Array 66.36 327 P **P 17 29 48.3 -0.3**
BVAR *PP pP 17 30 15.4 -0.9
BVAR Borovoye Array 66.36 327 P **P 17 29 48.3 -0.3**
BVAR pP pP 17 30 15.4 -0.8
BVAR ⇑*e* 17 58 24.6
BRVK Borovoye 66.43 327 P **P 17 29 48.9 -0.2**
comp=Z,516nm,1.2s,mb6.2,SNR=22
BRVK Borovoye 66.43 327 *ceP* **P 17 29 48.8 -0.3**
BRVK pmax pmax
comp=Z,76nm,0.9s,mb5.5
BRVK Borovoye 66.43 327 *eP* **P 17 29 47.9 -1.2**
comp=Z,110nm,0.8s,mb5.7
BRVK Borovoye 66.43 327 P **P 17 29 49.2 +0.1**
SNR=40
TIXI Tiksi 67.07 1 *diP* **P 17 29 52.1 -0.7**
TIXI *e* 17 32 20.2
TIXI *e*S S 17 38 36.4 -1.1
TIXI *e* 17 39 35.4
TIXI pmax pmax
comp=Z,230nm,1.3s,mb5.8
TIXI MLR MLR
comp=Z,261nm,16.0s
TIXI Tiksi 67.07 1 *eP* **P 17 29 52.3 -0.6**
comp=Z,330nm,1.3s,mb6.0
WBK Wadi Bani Khal 67.23 293 P **P 17 29 54.3 -0.5**
SNR=5.2
IDAH Dahanechah 67.67 303 *eP* **P 17 29 57.4 0.0**
JMDO Jabal Madar 68.01 292 P **P 17 29 58.9 -0.9**
SNR=10
IMYA Miami 68.11 307 *eP* **P 17 29 59.7 -0.4**
SMDO Samad 68.11 293 P **P 17 29 59.4 -1.0**
SNR=5.3
IKOO Kooshah 68.34 303 *eP* **P 17 30 01.5 -0.1**
ISRO Mashad 68.61 307 *eP* **P 17 30 02.8 -0.4**
IMOG Moghan 68.68 307 *eP* **P 17 30 02.5 -1.1**
HOQ Hoqain 68.83 293 P **P 17 30 04.1 -0.7**
SNR=6.6
BSY Bisya 68.87 293 P **P 17 30 04.5 -0.6**
SNR=5.1
BILL Bilibino 68.94 15 ⇓*eP* **P 17 30 04.7 +0.1**
BILL *e* 17 32 35.1
BILL *i* S S 17 38 55.5 -4.5
BILL pmax pmax
comp=Z,157nm,2.2s,mb5.5
BILL MLR MLR
comp=Z,200nm,16.0s
BILL Bilibino 68.94 15 *eP* **P 17 30 04.6 0.0**
comp=Z,39nm,0.8s,mb5.3
IPAY Payeh 69.01 307 *eP* **P 17 30 04.7 -1.0**
IAKL Akhelmad 69.23 307 *eP* **P 17 30 07.1 +0.1**
IKRD Kardeh 69.45 308 *eP* **P 17 30 03.3 -5.1**
IEMG Emamgholi 69.45 308 *eP* **P 17 30 08.5 +0.1**
ABKT Ailbek 69.96 309 P **P 17 30 11.7 +0.2**
comp=Z,152nm,0.8s,mb5.9,SNR=10
IBAF Bafgh 71.13 302 *eP* **P 17 30 17.9 -0.8**
ABKAR Akbulak array 71.19 321 *eP* **P 17 30 17.2 -1.5**
comp=Z,64nm,0.8s,mb5.5
NIKO Nikolski 71.50 35 *eP* **P 17 30 19.4 -1.1**
comp=Z,109nm,0.9s,mb5.7
CASY Casey 71.53 187 ⇑*iP* **P 17 30 21.0 +0.7**
CASY Casey 71.53 187 *eP* **P 17 30 20.9 +0.6**
comp=Z,36nm,0.7s,mb5.3
IMEH Mehriz 71.92 301 *eP* **P 17 30 22.0 -1.5**
ICHK Chekchek 72.18 302 *eP* **P 17 30 24.4 -0.6**
SVE Sverdlovsk 73.00 328 ⇓*eP* **P 17 30 29.2 -0.1**
SVE *e* pP 17 30 56.9 -0.5
SVE *e*S S 17 39 44.6 -2.6
SVE pmax pmax
comp=Z,110nm,1.1s,mb5.6
ISRV Sarvestan 73.03 299 *eP* **P 17 30 29.2 -0.9**
UNV Unalaska Valle 73.10 35 *eP* **P 17 30 30.1 +0.1**
comp=Z,366nm,1.3s,mb6.0
IPAR Pars 73.12 300 *eP* **P 17 30 30.8 +0.1**
IGLO Ghaloghah 73.13 307 *eP* **P 17 30 30.5 -0.1**
AKUT Akutan 73.60 35 *eP* **P 17 30 33.3 +0.4**
comp=Z,554nm,1.2s,mb6.2
ILAS Lasjerd 73.71 305 *eP* **P 17 30 32.8 -1.2**
IFIR Firoozkooh 73.90 306 *eP* **P 17 30 34.2 -0.9**
GAMB Gambell 73.91 24 *eP* **P 17 30 35.1 +0.6**
comp=Z,238nm,1.5s,mb5.7
ARU Arti 73.97 328 *ciP* **P 17 30 33.6 -1.4**
ARU 17 30 49.0
ARU *e**PP pP 17 31 00.7 -2.5
ARU *e**SP sP 17 31 11.8 -3.4
ARU *e*PPP 17 35 02.4
ARU S S 17 39 53.7 -4.5
ARU 17 40 28.5
ARU SSS 17 47 57.6
ARU pmax pmax
comp=Z,80nm,1.0s,mb5.4
ARU Arti 73.97 328 *eP* **P 17 30 32.9 -2.2**
comp=Z,72nm,0.8s,mb5.5
ARU Arti 73.97 328 P **P 17 30 33.5 -1.5**
comp=Z,514nm,0.6s,mb6.4,SNR=31
IZEF Zefreh 73.99 303 *eP* **P 17 30 35.1 -0.6**
IPRN Peran 74.30 306 *eP* **P 17 30 37.6 +0.2**
IDMV Damavand 74.48 306 *eP* **P 17 30 38.3 -0.2**
IKLH Kolahrood 74.65 303 *eP* **P 17 30 39.8 +0.3**
MIR Mirnyy 74.79 193 ⇑*iP* **P 17 30 40.2 +0.7**
MIR *i* 17 30 48.0
MIR *i* 17 31 03.0
MIR pmax pmax
comp=Z,127nm,1.0s,mb5.6
FALS False Pass 75.11 34 *eP* **P 17 30 41.5 -0.2**
comp=Z,525nm,1.1s,mb6.2
KIP Kipapa 75.17 69 *eP* **P 17 30 43.4 +0.7**
KIP pmax pmax
comp=Z,93nm,1.0s,mb5.5
KIP Kipapa 75.17 69 *eP* **P 17 30 43.4 +0.7**
comp=Z,93nm,1.0s,mb5.5
IPIR Pirpir 75.18 302 *eP* **P 17 30 42.3 -0.3**
IR3 Iran Long-Peri 75.29 305 *eP* **P 17 30 42.8 -0.3**
XMAS Kiritimati 76.28 89 *eP* **P 17 30 50.5 +1.3**
comp=Z,380nm,1.6s,mb5.9
SDPT Sand Point 76.86 34 *eP* **P 17 30 51.6 0.0**
comp=Z,771nm,1.6s,mb6.2
UMR Umm Al-Rimmam 77.74 299 *eP* **P 17 30 55.4 -1.7**
UMR AMb AMB 17 30 56.8
comp=Z,102nm,0.7s,mb5.7
RDF Al-Radifah 77.87 298 *eP* **P 17 30 56.8 -1.0**
RDF AMb AMB 17 30 59.1
comp=Z,90nm,0.6s,mb5.7
MIB Mutribah 78.07 299 *eP* **P 17 30 57.2 -1.8**
MIB AMb AMB 17 30 58.9
comp=Z,190nm,0.9s,mb5.8
NAY Al-Naaiem 78.14 299 *eP* **P 17 30 57.4 -1.9**
NAY AMb AMB 17 30 59.2
comp=Z,68nm,0.8s,mb5.4
ISRB Sarab 78.16 308 *eP* **P 17 30 58.5 -0.7**
CHGN Chignik 78.18 33 *eP* **P 17 30 59.0 +0.1**
IHRS Heris 78.68 308 *eP* **P 17 31 01.2 -0.9**
IAZR Azarshahr 79.48 307 *eP* **P 17 31 05.5 -1.0**
DGRG David-gareji 80.12 311 P **P 17 31 08.6 -1.2**
DGRG S pP 17 31 40.8 +2.4
SVW2 Sparrevohn 80.39 29 *eP* **P 17 31 12.0 +1.2**
comp=Z,203nm,1.4s,mb5.8
TTA Tatalina 80.46 27 *eP* **P 17 31 12.7 +1.5**
GNI Garni 80.55 310 *diP* **P 17 31 13.4 +1.3**
GNI pmax pmax
comp=Z,48nm,1.7s
MTA Mtatsminda 80.57 311 P **P 17 31 11.2 -1.0**
MTA S pP 17 31 42.8 +2.1
TBLG Delisi 80.61 311 P **P 17 31 11.3 -1.1**
TBLG S pP 17 31 42.6 +1.6
TBLG Delisi 80.61 311 P **P 17 31 11.3 -1.2**
TBLG S pP 17 31 42.6 +1.6
ABPO Ambohimpanom 81.04 250 *eP* **P 17 31 13.9 -1.3**
ABPO pmax pmax
comp=Z,32nm,1.0s,mb5.1
ABPO Ambohimpanom 81.04 250 *eP* **P 17 31 13.9 -1.2**
comp=Z,32nm,1.0s,mb5.1
GOR Gori 81.09 312 P **P 17 31 16.6 +1.6**
OHAK Old Harbor 81.10 33 *eP* **P 17 31 15.2 +0.5**
comp=Z,162nm,1.1s,mb5.8
ZEI Tsey 81.27 312 *eP* **P 17 31 15.3 -0.6**
ZEI *e**PP pP 17 31 45.9 +1.4
ZEI *e*S S 17 41 17.5 +0.1
ZEI pmax pmax
comp=Z,44nm,1.5s,mb5.1
KDAK Kodiak Island 81.53 32 P **P 17 31 18.0 +1.0**
comp=Z,855nm,0.8s,mb6.6,SNR=13
KDAK Kodiak Island 81.53 32 P **P 17 31 17.6 +0.7**
comp=Z,88nm,0.8s,mb5.7,baz=245,slow=2.1,SNR=29
KDAK LR LR 18 05 45.1
comp=Z,303nm,20.2s,baz=249,slow=34
KDAK Kodiak Island 81.53 32 *ceP* **P 17 31 17.8 +0.8**
KDAK Kodiak Island 81.53 32 *eP* **P 17 31 17.8 +0.8**
comp=Z,226nm,1.2s,mb5.9
RSO Redoubt South 81.69 30 *eP* **P 17 31 18.0 +0.3**
GOF Gofitskoye 81.97 315 *eP* **P 17 31 06.1 -13**
GOF pmax pmax
comp=Z,30nm,1.0s,mb5.1
KIV Kislovodsk 82.19 314 ⇑*eP* **P 17 31 20.9 +0.2**
KIV *e* 17 34 31.8
KIV *i* S S 17 41 24.9 -1.9
KIV pmax pmax
comp=Z,34nm,1.4s,mb5.0
KIV MLR MLR
comp=Z,100nm,15.0s
KIV Kislovodsk 82.19 314 *eP* **P 17 31 20.6 -0.2**
comp=Z,49nm,0.8s,mb5.4
KIV Kislovodsk 82.19 314 P **P 17 31 22.3 +1.6**
SNR=6.8
PPLA Purkeypile 82.19 27 *eP* **P 17 31 21.1 +0.8**
comp=Z,460nm,1.6s,mb6.1
DAGI Agillar 82.72 311 *iP* **P 17 31 22.8 -0.8**
BPAW Bear Paw Mtn. 82.83 26 *eP* **P 17 31 24.4 +0.8**
comp=Z,502nm,1.4s,mb6.2
DBAD Bademkaya 82.88 311 *iP* **P 17 31 24.1 -0.3**
SLKM Skilak Lake 82.94 30 *eP* **P 17 31 24.4 +0.1**
VRHR Novokhopersk 83.08 321 *eP* **P 17 31 23.3 -1.8**
VRHR *e**PP pP 17 31 52.0 -1.8
VRHR *e*S S 17 41 27.5 -8.0
VRHR pmax pmax
comp=Z,50nm,0.8s,mb5.4
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR smax
comp=E,210nm,1.3s
VRHR smax
comp=Z,20nm,1.2s
VRHR smax
comp=N,190nm,1.6s
TRF Thorofare Moun 83.09 27 *eP* **P 17 31 25.4 +0.5**
comp=N,578nm,1.7s,mb6.2
ERZM Erzurum 83.13 310 *iP* **P 17 31 18.7 -7.0**
RC01 Rabbit Creek A 83.21 29 *eP* **P 17 31 25.8 +0.1**
comp=N,271nm,1.0s,mb6.0
BEST Besiri 83.22 307 *iP* **P 17 31 26.1 -0.1**
SEW Seward 83.31 30 *eP* **P 17 31 26.6 +0.5**
comp=N,436nm,1.2s,mb6.2
COLD Coldfoot 83.39 23 *eP* **P 17 31 28.1 +1.7**
comp=N,337nm,1.1s,mb6.1
PMR Palmer 83.53 29 *eP* **P 17 31 27.6 +0.4**
PMR pmax pmax
comp=Z,686nm,2.4s,mb6.1
PMR Palmer 83.53 29 *eP* **P 17 31 27.6 +0.4**
comp=Z,686nm,2.4s,mb6.1
MCK McKinley 83.72 26 *eP* **P 17 31 28.1 -0.1**
MCK pmax pmax
comp=Z,647nm,1.5s,mb6.2
MCK McKinley 83.72 26 *eP* **P 17 31 28.1 0.0**
comp=Z,647nm,1.5s,mb6.2
SML Sawmill 83.92 28 *eP* **P 17 31 29.8 +0.6**
SML pmax pmax
comp=Z,132nm,1.3s,mb5.6
SML Sawmill 83.92 28 *eP* **P 17 31 29.8 +0.6**
comp=Z,132nm,1.3s,mb5.6
COLA College 84.23 25 *eP* **P 17 31 30.3 -0.4**
COLA pmax pmax
comp=Z,38nm,0.8s,mb5.3
COLA College 84.23 25 *eP* **P 17 31 30.3 -0.5**
comp=Z,38nm,0.8s,mb5.3
MAW Mawson 84.29 200 P **P 17 31 31.6 +0.7**
comp=Z,28nm,1.0s,mb5.1,baz=60,slow=6.2,SNR=24
MAW LR LR 18 02 45.5
comp=Z,141nm,20.9s,baz=64,slow=31
MAW Mawson 84.29 200 *eP* **P 17 31 31.3 +0.3**
comp=Z,24nm,0.9s,mb5.0
MAW *e*S S 17 41 39.5 -7.5
SOC Sochi 84.34 313 *eP* **P 17 31 33.1 +1.3**
SOC *e* pP 17 32 00.2 -0.3
SOC *e*S S 17 41 35.4 -13
SOC *e**SS sS 17 42 37.7 -0.3
KLMR Klimovskoe 84.44 331 *diP* **P 17 31 31.1 -0.8**
KLMR *e*S S 17 41 40.3 -8.6
KLMR pmax pmax
comp=Z,210nm,1.5s,mb5.8
VSR Storozhevoye 84.62 321 *eP* **P 17 31 31.4 -1.6**
VSR *e**PP pP 17 31 59.1 -2.7
VSR *e*S S 17 41 41.6 -9.4
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,30nm,1.2s
VSR smax
comp=N,190nm,2.6s
VSR smax
comp=Z,120nm,3.8s
VSR smax
comp=E,100nm,1.9s
ILAR Eielson Array 84.64 25 P **P 17 31 31.9 -0.9**
comp=E,20nm,0.9s,mb5.1,baz=247,slow=4.6,SNR=113
ILAR PKKPbc PKKPbc 17 49 42.5 -2.7
comp=E,0.6nm,0.8s,baz=32,slow=2.2,SNR=5.2
ILAR LR LR 18 08 02.8
comp=E,183nm,18.9s,baz=159,slow=35
DIV Divide 85.14 29 *eP* **P 17 31 37.1 +1.8**
comp=E,389nm,1.3s,mb6.2
SBA Scott Base 85.19 172 P **P 17 31 33.9 -1.4**
SBA pmax pmax
comp=Z,51nm,1.1s,mb5.4
SBA Scott Base 85.19 172 P **P 17 31 33.9 -1.4**
comp=Z,51nm,1.1s,mb5.4
PAX Paxson 85.26 27 *eP* **P 17 31 36.1 +0.1**
PAX pmax pmax
comp=Z,153nm,1.4s,mb5.7
PAX Paxson 85.26 27 *eP* **P 17 31 36.1 +0.2**
comp=Z,153nm,1.4s,mb5.7
KEMA Kemaliye 85.37 309 *iP* **P 17 31 37.5 +0.5**
MALT Malatya 85.45 308 *eP* **P 17 31 37.4 -0.1**
MALT pmax pmax
comp=Z,63nm,1.3s,mb5.4
MALT Malatya 85.45 308 *eP* **P 17 31 37.4 -0.1**
comp=Z,63nm,1.3s,mb5.4
MALT Malatya 85.45 308 ⇑*iP* **P 17 31 37.6 +0.1**
MOS Moscow 85.47 325 *eP* **P 17 31 37.6 +0.4**
MOS *e**PP pP 17 32 01.7 -4.3
MOS *e*S S 17 41 48.4 -11
MOS *e* 17 41 54.8
MOS pmax pmax
comp=Z,52nm,0.8s,mb5.5
MOS MLR MLR
comp=Z,800nm,21.0s
BMRM Bremner River 85.71 29 *eP* **P 17 31 39.3 +1.1**
comp=Z,117nm,1.0s,mb5.8
AKCD Akcadag 85.85 308 *iP* **P 17 31 40.4 +0.9**
DOT Dot Lake 85.89 27 *eP* **P 17 31 38.7 -0.3**
comp=Z,104nm,0.9s,mb5.8
PPT Papeete 85.89 108 *e*LR LR 17 58 58.6
comp=Z,648nm,32.0s
PPT Papeete 85.89 108 LR LR 18 04 35.4
comp=Z,213nm,19.8s,baz=137,slow=32
ANN Anapa 85.95 314 ⇑*iP* **P 17 31 38.2 -1.6**
ANN *e**PP pP 17 32 08.9 +0.3
ANN *e* 17 35 02.5
ANN *e*S S 17 41 50.7 -14
ANN *i* SS SS 17 47 41.0 -3.3
ANN pmax pmax
comp=Z,139nm,1.4s,mb5.7
MENT Mentasta 86.06 27 *eP* **P 17 31 40.2 +0.3**
OBN Obninsk 86.09 325 ⇑*eP* **P 17 31 39.9 -0.3**
OBN *e* 17 35 03.6
OBN *i* S S 17 41 55.0 -10
OBN pmax pmax
comp=Z,114nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,200nm,19.0s
OBN Obninsk 86.09 325 *eP* **P 17 31 37.7 -2.6**
comp=Z,42nm,0.4s,mb5.7
GZT Gaziantep 86.17 307 *iP* **P 17 31 40.2 -0.9**
SCER sogukcermik 86.39 310 *iP* **P 17 31 42.2 +0.2**
LVZ Lovozero 86.42 338 *deP* **P 17 31 41.5 -0.1**
LVZ pmax pmax
comp=Z,179nm,2.4s,mb5.6
APA Apatity 86.91 337 ⇓*iP* **P 17 31 43.0 -1.0**
APA *i* *PP pP 17 32 09.3 -3.6
APA *i* S S 17 42 07.0 -5.8
APA pmax pmax
comp=Z,69nm,1.3s,mb5.4
APA MLR MLR
comp=Z,400nm,18.0s
ASF Jabal al Asfar 87.00 302 P **P 17 31 45.4 +0.2**
comp=Z,25nm,0.8s,mb5.2,baz=338,slow=5.0,SNR=36
EGAK Eagle 87.09 25 *eP* **P 17 31 45.1 +0.2**
comp=Z,26nm,1.0s,mb5.1
ANDN Andirin 87.13 307 *iP* **P 17 31 45.3 -0.4**
YAYL Yayladag 87.42 306 *iP* **P 17 31 46.7 -0.5**
DAWY Dawson 87.92 26 *eP* **P 17 31 49.5 +0.6**
MMAI Mount Meron Ar 88.20 303 P **P 17 31 51.3 +0.3**
comp=Z,4.2nm,0.5s,mb4.7,baz=83,slow=7.9,SNR=9.8
JOF Joensuu 88.22 333 *eP* **P 17 31 49.1 -1.2**
JOF pmax pmax
comp=Z,13nm,0.4s,mb5.3
JOF Joensuu 88.22 333 *ep* **P 17 31 49.1 -1.2**
comp=Z,13nm,0.4s,mb5.3
SIM Simferopol' 88.29 315 *eP* **P 17 31 51.9 +0.8**
SIM *e**PP pP 17 32 20.0 -0.1
SIM *e*S S 17 42 20.0 -6.9
SIM pmax pmax
comp=Z,13nm,1.0s,mb4.9
GULE Gulek 88.40 307 *iP* **P 17 31 52.4 +0.7**
EIL Elat 88.84 300 P **P 17 31 54.2 +0.2**
comp=Z,22nm,0.8s,mb5.3,baz=24,slow=2.1,SNR=18
KEV Kevo 88.96 340 *eP* **P 17 31 51.6 -2.1**
KEV pmax pmax
comp=Z,13nm,0.7s,mb5.1
KEV Kevo 88.96 340 *ep* **P 17 31 51.6 -2.1**
comp=Z,13nm,0.7s,mb5.1
KMBO Kilima Mbogo 89.00 269 P **P 17 31 55.3 +0.3**
comp=Z,12nm,1.0s,mb4.9,baz=180,slow=24,SNR=18
KMBO LR LR 18 07 59.6
comp=Z,193nm,18.1s,baz=92,slow=33
KMBO Kilima Mbogo 89.00 269 P **P 17 31 55.3 +0.2**
KMBO pmax pmax
comp=Z,12nm,1.0s
KMBO MLR MLR
comp=Z,193nm,18.1s
KMBO Kilima Mbogo 89.00 269 *eP* **P 17 31 55.1 0.0**
comp=Z,40nm,1.4s,mb5.3
KMBO Kilima Mbogo 89.00 269 P **P 17 31 55.4 +0.4**
SNR=9.2
BR131 Keskin Array S 89.09 310 *eP* **P 17 31 52.4 -2.5**
comp=Z,5.7nm,0.6s,mb4.8
BRTR Keskin Array B 89.09 310 P **P 17 31 53.3 -1.6**
comp=Z,17nm,0.9s,mb5.1,baz=127,slow=5.2,SNR=39
BRTR pP pP 17 32 22.1 -1.9
comp=Z,8.4nm,0.8s,baz=90,slow=3.7,SNR=3.4
BRTR LR LR 18 14 27.6
comp=Z,91nm,21.2s,baz=72,slow=37
BRTR Keskin Array B 89.09 310 *iP* **P 17 31 53.2 -1.7**
BRTR pmax pmax
comp=Z,17nm,0.9s

BALT **Daday** 89.12 311 *i* P P 17 31 53.6 -1.4
ARCES **ARCESS Array B** 89.52 340 P P 17 31 55.5 -0.8
comp=Z,75nm,0.9s,mb5.8,baz=86,slow=7.1,SNR=119
ARCES LR LR 18 13 23.0
comp=Z,210nm,19.0s,baz=109,slow=36
ARE0 **ARCESS Array S** 89.52 340 *e*P P 17 31 55.1 -1.2
SPITS **Spitsbergen Ar** 89.60 349 P P 17 31 56.6 0.0
comp=Z,9.1nm,0.4s,mb5.3,baz=104,slow=6.2,SNR=28
INK **Inuvik** 89.64 21 P P 17 31 56.8 -0.1
comp=Z,53nm,1.0s,mb5.6,baz=281,slow=5.8,SNR=63
INK PKKPbc PKKPbc 17 49 29.9 -3.2
comp=Z,1.8nm,0.6s,baz=57,slow=3.1,SNR=5.4
INK **Inuvik** 89.64 21 *e*P P 17 31 56.5 -0.4
comp=Z,112nm,1.3s,mb5.8
CSS **Prodhromos** 89.76 305 *e*P P 17 31 58.3 +0.1
comp=Z,22nm,0.8s,mb5.3
KBS **Kingsbay** 90.13 350 *de*P P 17 31 59.3 +0.3
KBS pmax pmax
comp=Z,17nm,1.2s,mb5.0
KDHN **Kadinhani** 90.38 309 *i* P P 17 31 58.6 -2.3
GAZI **Gazipasa** 90.46 306 *i* P P 17 31 58.9 -2.6
SKAG **Skagway** 90.46 30 *e*P P 17 32 02.1 +1.2
comp=Z,54nm,1.0s,mb5.6
KAF **Kangasniemi** 90.64 332 *e*P P 17 31 59.6 -2.1
KAF pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
KAF **Kangasniemi** 90.64 332 *e*p P 17 31 59.6 -2.1
comp=Z,9.3nm,0.4s,mb5.3
FINES **FINESS Array B** 90.88 332 P P 17 32 01.5 -1.2
comp=Z,7.4nm,0.5s,mb5.1,baz=61,slow=4.4,SNR=65
FINES LR LR 18 16 49.6
comp=Z,202nm,20.1s,baz=274,slow=38
FINES **FINESS Array B** 90.88 332 P P 17 32 01.5 -1.2
FINES LR LR 18 16 49.6
AKASG **Malin Array Be** 90.93 321 P P 17 32 01.4 -1.9
comp=Z,6.4nm,0.5s,mb5.0,baz=72,slow=4.5,SNR=20
AKBB **Malin Array Si** 90.93 321 *e*P P 17 32 01.8 -1.4
AKBB *e**PP pP 17 32 30.5 -1.8
KIEV **Kiev** 90.94 321 *e*P P 17 32 01.8 -1.5
KIEV *e**PP pP 17 32 30.5 -1.9
KIEV pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
KIEV **Kiev** 90.94 321 *e*P P 17 32 01.8 -1.5
comp=Z,4.0nm,0.4s,mb4.9
KIEV *e*pP pP 17 32 30.5 -1.9
MNK **Minsk** 91.19 325 *e*P P 17 32 01.0 -3.4
IDID **Didziasalis** 91.67 326 *e*P P 17 32 05.7 -0.9
IIGN **Ignalina** 91.95 326 *e*P P 17 32 07.0 -0.9
ISAL **Salakas** 91.97 326 *e*P P 17 32 07.0 -0.9
TLCR 92.00 315 ⇑*i*P P 17 32 08.9 +0.6
TIRR **Tirgusor** 92.39 315 ⇓*i*P P 17 32 15.0 +4.8
WRAK **Wrangell Islan** 92.60 33 *e*P P 17 32 12.1 +1.3
comp=Z,89nm,1.1s,mb6.0
SYO **Syowa Base** 92.95 201 ⇓*e*PcP PcP 17 32 11.4 -1.3
TESR 93.28 317 ⇑*i*P P 17 32 13.3 -0.9
VRI **Vrincioaia** 93.34 316 ⇑*i*P P 17 32 14.8 +0.3
DLBC **Dease Lake** 93.36 31 *e*P P 17 32 15.6 +1.2
PLOR **Plostina** 93.39 316 ⇑*i*P P 17 32 15.9 +1.1
BALY **Balya** 93.69 310 *i* P P 17 32 14.4 -1.9
MLR **Muntele Rosu** 93.94 316 ⇑*i*P P 17 32 17.1 -0.2
SUW **Suwalki** 93.96 325 *e*P P 17 32 16.4 -0.7
SUW *e*pP pP 17 32 43.8 -2.4
SUW **Suwalki** 93.96 325 *e*P P 17 32 16.8 -0.4
SUW pmax pmax
comp=Z,44nm,0.9s,mb5.8
SUW **Suwalki** 93.96 325 *e*P P 17 32 16.8 -0.4
comp=Z,44nm,0.9s,mb5.8
BURAR **Bucovina Array** 94.04 318 ⇓*i*P P 17 32 17.7 0.0
BUR08 **Bucovina Ar. S** 94.05 318 *e*P P 17 32 16.1 -1.6
TAOE **Nuku Hiva Isla** 94.32 99 *e*LR LR 18 02 23.1
comp=Z,537nm,24.8s
VOIR 94.57 316 ⇑*i*P P 17 32 21.0 +0.8
KWP **Kalwaria Pacla** 95.24 321 *e*P P 17 32 23.9 +0.7
KWP **Kalwaria Pacla** 95.24 321 P P 17 32 23.4 +0.2
comp=Z,14nm,0.4s,mb5.7
TRPA **Tarpa** 95.69 319 ⇓*i*P P 17 32 24.2 -1.0
UZH **Uzhgorod** 95.74 320 ⇓*i*P P 17 32 25.8 +0.4
UZH *e* pP 17 32 52.4 -2.2
UZH *e*S S 17 43 31.0 -2.6
DRGR 95.88 318 ⇑*i*P P 17 32 26.6 +0.5
CRVS **Cervenica-Dubn** 96.21 320 *e*P P 17 32 27.5 -0.1
CRVS pmax pmax
comp=Z,17nm,1.1s,mb5.4
CRVS **Cervenica-Dubn** 96.21 320 *e*P P 17 32 27.5 -0.1
comp=Z,17nm,1.1s,mb5.4
CRVS **Cervenica-Dubn** 96.21 320 *e*P P 17 32 27.5 -0.1
STHS **Stebnicka Huta** 96.22 321 *e*P P 17 32 28.5 +0.9
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
STHS **Stebnicka Huta** 96.22 321 *e*P P 17 32 28.5 +0.9
comp=Z,5.1nm,0.8s,mb5.0
STHS **Stebnicka Huta** 96.22 321 *e*P P 17 32 28.5 +0.9
DAG **Danmarks Havn** 96.40 352 ⇑*i*P P 17 32 26.8 -1.1
DAG pmax pmax
comp=Z,37nm,1.0s,mb5.8
DAG **Danmarks Havn** 96.40 352 ⇑*i*P P 17 32 26.8 -1.1
comp=Z,37nm,1.0s,mb5.8
KECS **Kecovo** 96.94 320 *e*P P 17 32 30.2 -0.7
KECS pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
KECS **Kecovo** 96.94 320 *e*P P 17 32 30.2 -0.7
comp=Z,4.2nm,0.7s,mb5.0
KECS **Kecovo** 96.94 320 *e*P P 17 32 30.2 -0.7
NB2 **NORSAR Subarra** 97.83 334 P P 17 32 33.1 -1.5
comp=Z,19nm,0.8s,mb5.7,baz=67,slow=4.6
NOA **NORSAR Array B** 97.83 334 P P 17 32 33.7 -0.9
comp=Z,14nm,0.8s,mb5.5,baz=66,slow=4.6,SNR=31
NOA PP PP 17 36 37.6 +3.7
comp=Z,1.4nm,0.7s,baz=74,slow=8.5,SNR=2.6
NOA LR LR 18 18 00.0
comp=Z,178nm,20.2s,baz=65,slow=36
NOA **NORSAR Array B** 97.83 334 P P 17 32 33.7 -0.9
NOA 17 36 37.6
NOA **NORSAR Array B** 97.83 334 P P 17 32 33.7 -0.9
NOA PP PP 17 36 37.6 +3.7
NOA LR LR 18 18 00.0
VYHS **Vyhne** 98.00 320 *e*P P 17 32 35.3 -0.3
VYHS pmax pmax
comp=Z,2.0nm,1.3s,mb4.5
VYHS **Vyhne** 98.00 320 *e*P P 17 32 35.3 -0.3
comp=Z,2.3nm,1.3s,mb4.5
VYHS **Vyhne** 98.00 320 *e*P P 17 32 35.3 -0.3
OKC **Ostrava-Krasne** 98.05 322 *e*pP pP 17 33 04.4 -0.6
OKC *e*SKS 17 43 02.6
OKC *e*S S 17 43 55.7 +2.4
OKC AMS AMS 18 23 00.0
comp=Z,200nm,10.1s
NAO01 **NORSAR Array S** 98.06 333 *e*P P 17 32 34.4 -1.2
comp=Z,18nm,1.0s,mb5.6
MORC **Moravsky Berou** 98.44 322 ⇑*i*P P 17 32 36.5 -1.1
PKSM **Moragy** 98.75 318 ⇓*i*P P 17 32 37.8 -1.3
DPC **Dobruska-Polom** 99.02 322 *e*P P 17 32 41.4 +1.3
DPC *e* pP 17 33 07.3 -2.0
DPC *e* 17 43 07.6
DPC *e*S S 17 43 56.5 -4.9
DPC MLR MLR
comp=Z,400nm,22.7s
DPC **Dobruska-Polom** 99.02 322 *e*PDIF P 17 32 41.4 +1.3
DPC *e*pP pP 17 33 07.3 -2.0
DPC *e*SKS 17 43 07.6
DPC *e*SDIF S 17 43 56.5 -4.9
DPC AMS AMS 18 17 00.0
comp=Z,400nm,22.7s
YKA **Yellowknife Ar** 99.02 24 P P 17 32 39.8 0.0
comp=Z,13nm,0.8s,mb5.5,baz=299,slow=4.7,SNR=24
YKA PP PP 17 36 41.3 -1.6
comp=Z,2.9nm,0.9s,baz=283,slow=8.8,SNR=3.9
YKA **Yellowknife Ar** 99.02 24 P P 17 32 39.9 0.0
YKA PP PP 17 36 41.3 -1.6
UPC **Upice** 99.15 323 *e*P P 17 32 41.8 +1.0
UPC *e* pP 17 33 08.1 -1.9
UPC **Upice** 99.15 323 *e*PDIFF P 17 32 41.8 +1.0
UPC *e*pP pP 17 33 08.1 -1.9
VRAC **Vranov** 99.17 321 ⇑*i*P P 17 32 38.5 -2.4
TREC **Trest** 99.86 322 *e*SDIF Sdif 17 44 06.7 -1.6
TREC AMS AMS 18 19 00.0
comp=Z,300nm,28.4s
RKT **Rikitea** 99.90 113 *e*LR LR 18 05 31.8
comp=Z,692nm,39.0s
PVCC **Panska Ves** 100.02 323 *e*P Pdif 17 32 45.8 +1.3
PVCC *e* 17 33 13.5
PVCC MLR MLR
comp=Z,200nm,17.0s
PVCC **Panska Ves** 100.02 323 *e*PDIFF Pdif 17 32 45.8 +1.3
PVCC *e*pP 17 33 13.5
PVCC AMS AMS 18 21 10.0
comp=Z,200nm,17.0s
PRU **Pruhonice** 100.22 322 *e*P Pdif 17 32 46.8 +1.4
PRU *e*S Sdif 17 44 09.9 -1.4
PRU MLR MLR
comp=Z,200nm,15.5s
PRU **Pruhonice** 100.22 322 *e*PDIFF Pdif 17 32 46.8 +1.4
PRU *e*pP 17 33 14.7
PRU *e*SKS 17 43 20.9
PRU *e*SDIF Sdif 17 44 09.9 -1.4
PRU AMS AMS 18 22 20.0
comp=Z,200nm,15.5s
PRA **Prague** 100.25 323 PDIFF Pdif 17 32 47.0 +1.5
PRA AMS AMS 18 23 00.0
BRG **Berggiesshubel** 100.27 323 *e*Pdiff Pdif 17 32 46.5 +0.9
BRG **Berggiesshubel** 100.27 323 *e*PDIF Pdif 17 32 45.6 0.0
comp=Z,7.7nm,0.9s
BRG *e*pP 17 33 13.5
comp=Z,26nm,1.6s
BRG *e*sP 17 33 31.7
comp=Z,12nm,1.1s
BRG *e*PP PP 17 36 58.4 +5.7
comp=Z,19nm,1.8s
BRG *e*SKS 17 43 13.5
comp=Z,2.3nm,0.9s
BRG SDIF Sdif 17 44 13.0 +1.3
BRG SS SS 17 51 08.0 -0.4
BRG
comp=N,369nm,19.3s
BRG
comp=E,256nm,21.2s
BRG
comp=Z,324nm,38.6s
BRG **Berggiesshubel** 100.27 323 *e*P Pdif 17 32 45.6 0.0
BRG *e* 17 36 58.4
BRG *e* 17 43 13.5
BRG S Sdif 17 44 13.0 +1.3
BRG SS SS 17 51 08.0 -0.4
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG pmax pmax
comp=Z,11nm,1.8s
BRG MLR MLR
comp=N,221nm,19.3s
BRG MLR MLR
comp=E,153nm,21.2s
BRG MLR MLR
comp=Z,194nm,18.6s
E03A **Lebam** 100.48 41 ⇑P Pdif 17 32 47.0 +0.5
baz=100
CLL **Collm** 100.67 324 *e*Pdiff Pdif 17 32 48.0 +0.6
CLL **Collm** 100.67 324 *i* P Pdif 17 32 46.8 -0.6
CLL *e*S Sdif 17 44 12.0 -3.1
CLL pmax pmax
comp=Z,8.0nm,1.2s
CLL MLR MLR
comp=Z,200nm,19.3s
CLL **Collm** 100.67 324 *i* Pdif Pdif 17 32 46.8 -0.6
comp=Z,8.0nm,1.2s
CLL *e*Sdif Sdif 17 44 12.0 -3.1
CLL LR LR
comp=Z,200nm,19.3s
CLL **Collm** 100.67 324 *i* Pdif Pdif 17 32 46.8 -0.6
comp=Z,8.0nm,1.2s
CLL *i* 17 32 57.2
CLL *i* pPdif 17 33 14.6
CLL *e*PP PP 17 36 54.0 -1.8
CLL *e* 17 37 46.0
CLL *e*Sdif Sdif 17 44 12.0 -3.1
CLL *e*PS PS 17 46 00.0 +0.6
CLL *e*PPS 17 46 48.0
CLL *e* 17 47 36.0
CLL *e*SS SS 17 51 18.0 +4.1
CLL *e* 17 56 36.0
CLL LmV 18 22 00.0
comp=N,200nm,22.0s
CLL LmV 18 22 00.0
comp=E,200nm,21.7s
CLL LmV 18 22 00.0
comp=Z,200nm,19.3s
JCW **Jim Creek** 101.00 39 *e*Pdif Pdif 17 32 49.5 +0.7
comp=Z,43nm,1.3s
KHC **Kasperske Hory** 101.10 322 *e*P Pdif 17 32 50.4 +1.1
KHC *e* 17 43 18.7
KHC *e*S Sdif 17 44 17.0 -1.6
KHC MLR MLR
comp=Z,300nm,20.5s
KHC **Kasperske Hory** 101.10 322 *e*PDIF Pdif 17 32 50.4 +1.1
KHC *e*pP 17 33 17.2
KHC *e*SKS 17 43 18.7
KHC *e*SDIF Sdif 17 44 17.0 -1.6
KHC AMS AMS 18 17 30.0
comp=Z,300nm,20.5s
MOA **Molln** 101.10 320 ⇑*i*Pdiff Pdif 17 32 49.2 -0.1
comp=Z,13nm,1.3s
GEC2 **GERESS Array S** 101.12 322 *e*Pdiff Pdif 17 32 50.1 +0.7
B06A **Marblemount** 101.17 39 ⇑P Pdif 17 32 50.6 +1.0
baz=101
D05A **Enumclaw** 101.29 40 ⇑P Pdif 17 32 51.5 +1.3
baz=101
TANN **Tannenbergstha** 101.32 323 *e*Pdiff Pdif 17 32 51.1 +0.8
NKC **Novy Kostel** 101.39 323 *e*P Pdif 17 32 51.0 +0.4
NKC *e*S Sdif 17 44 21.0 -0.1
NKC MLR MLR
comp=Z,300nm,8.4s
NKC **Novy Kostel** 101.39 323 *e*PDIFF Pdif 17 32 51.0 +0.4
NKC *e*pP 17 33 19.5
NKC *e*SDIF Sdif 17 44 21.0 -0.1
NKC AMS AMS 18 21 00.0
comp=Z,300nm,8.4s
GUNZ **Gunzen** 101.41 323 *e*Pdiff Pdif 17 32 51.7 +1.0
WERN **Wernitzgruen** 101.42 323 *e*Pdiff Pdif 17 32 51.8 +1.1
F04A **Amboy** 101.42 42 ⇓P Pdif 17 32 51.9 +1.2
baz=101
WET **Wettzell** 101.52 322 *e*Pdiff Pdif 17 32 52.5 +1.3
G04A **Mulino** 101.62 42 ⇓P Pdif 17 32 51.9 +0.3
baz=102
MOX **Moxa** 101.73 324 *e*P Pdif 17 32 52.7 +0.6
comp=Z,12nm,1.5s
MOX **Moxa** 101.73 324 *e*Pdiff Pdif 17 32 52.9 +0.8
MOX **Moxa** 101.73 324 *e*P Pdif 17 32 52.7 +0.6
MOX pmax pmax
comp=Z,12nm,1.5s
H04A **Detroit Lake** 101.98 43 ⇑P Pdif 17 32 54.1 +0.9
baz=102
CLZ **Clausthal** 101.99 325 *e*Pdiff Pdif 17 32 54.4 +1.1
HUMO **Hull Mountain** 102.10 45 *e*Pdif Pdif 17 32 54.3 +0.6
comp=Z,9.3nm,1.3s
ETW **Entiat** 102.21 39 *e*Pdif Pdif 17 32 55.5 +1.2
comp=Z,15nm,1.3s
GRA1 **Grafenberg Arr** 102.33 323 *e*Pdif Pdif 17 32 56.2 +1.4
GRF **Grafenberg Arr** 102.33 323 *e*Pdiff Pdif 17 32 56.2 +1.4
B08A **Colville Reser** 102.56 38 ⇑P Pdif 17 32 56.8 +1.0
baz=102
G06A **Carlson Farm,** 102.84 42 ⇑P Pdif 17 32 57.9 +0.9
baz=103
D08A **Wollman Farm,** 103.30 40 ⇓P Pdif 17 32 60.0 +0.9
baz=103
K05A **Summer Lake** 103.50 44 ⇑P Pdif 17 33 01.4 +1.4
baz=104
FETA **Feichten** 103.64 321 ⇑*i*Pdiff Pdif 17 33 00.1 -0.5
comp=Z,5.6nm,1.3s
TNS **Taunus Mts** 103.76 324 *e*Pdiff Pdif 17 33 02.4 +1.3
G08A **Pilot Rock** 103.92 41 ⇑P Pdif 17 33 02.9 +1.0
baz=104
NEW **Newport** 103.96 38 ⇓P Pdif 17 33 03.2 +1.2
baz=104
NEW **Newport** 103.96 38 *e*P Pdif 17 33 03.2 +1.2
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW **Newport** 103.96 38 *e*Pdif Pdif 17 33 03.2 +1.2
comp=Z,4.7nm,0.9s
I07A **Izee** 103.99 43 ⇑P Pdif 17 33 02.6 +0.4
baz=104
E09A **Wood Farm, Sta** 104.00 40 ⇓P Pdif 17 33 03.5 +1.4
baz=104
MOD **Modoc** 104.19 45 *e*Pdif Pdif 17 33 03.2 +0.1
comp=Z,6.0nm,1.1s
A12A **Yaak River Ran** 104.58 37 ⇓P Pdif 17 33 05.0 +0.2
baz=104
C11A **Tepee Creek (N** 104.66 38 ⇓P Pdif 17 33 05.6 +0.4
baz=105
J08A **Circle Bar Ran** 104.95 43 ⇑P Pdif 17 33 06.5 +0.1
baz=105
A13A **Flathead Natio** 105.32 37 ⇑P PKiKP 17 37 22.1 +0.4
baz=105
WCN **Washoe City** 105.44 47 PKiKP PKiKP 17 37 24.6 +2.4
B13A **Whitefish** 105.53 37 ⇓P PKiKP 17 37 22.6 +0.5
baz=106
D12A **Red Ives Fores** 105.55 39 ⇑P PKiKP 17 37 22.3 +0.1
baz=106
BSMT **Bassoo Peak** 105.56 38 *e*Pdif Pdif 17 33 11.1 +1.9
comp=Z,12nm,1.3s
WALA **Waterton Lakes** 105.56 36 *e*PKiKP PKiKP 17 37 20.9 -1.2
PAHR **Pah Rah Range** 105.58 47 *e*PKiKP PKiKP 17 37 23.3 +0.9
E12A **Beaver Dam Sad** 105.67 39 ⇑P PKiKP 17 37 22.1 -0.3
baz=106
C13A **Hot Springs** 105.76 38 ⇑P PKiKP 17 37 22.5 0.0
baz=106
A14A **Double T Ranch** 105.89 36 ⇓P PKiKP 17 37 23.8 +1.0
baz=106
D13A **Huson** 106.08 38 ⇓P PKiKP 17 37 23.3 +0.1
baz=106
F12A **Elk City** 106.14 40 ⇑P PKiKP 17 37 23.6 +0.3
baz=106
SWMT **Swartz Lake** 106.19 38 *e*PKiKP PKiKP 17 37 23.6 +0.3
C14A **Swan Lake** 106.23 37 ⇑P PKiKP 17 37 24.1 +0.7
baz=106
B14A **Marquette Ranc** 106.25 37 ⇓P PKiKP 17 37 24.5 +1.1
baz=106
A15A **Johnson Ranch,** 106.29 36 ⇑P PKiKP 17 37 24.6 +1.2
baz=106
G12A **Big Creek, Yel** 106.36 40 ⇓P PKiKP 17 37 24.6 +0.9
baz=106
MSO **Missoula** 106.52 38 ⇑P PKiKP 17 37 24.7 +0.7
baz=106
MSO **Missoula** 106.52 38 *e*PKiKP PKiKP 17 37 24.7 +0.7
SMMC **Simmler** 106.53 51 ⇓P PKiKP 17 37 24.3 -0.1
baz=106
E13A **Victor** 106.53 39 ⇓P PKiKP 17 37 24.8 +0.8
baz=106
SLMT **Seeley Lake** 106.61 38 *e*Pdif Pdif 17 33 14.6 +0.8
comp=Z,3.5nm,1.1s
D14A **Greenough** 106.68 38 ⇓P PKiKP 17 37 24.1 -0.1
baz=107
B15A **Bradely Ranch,** 106.69 37 ⇑P PKiKP 17 37 23.8 -0.5
baz=107
MFID **Camas Ranch** 106.71 42 ⇓P PKiKP 17 37 25.4 +1.0
baz=107
LPG **La Plagne** 106.78 320 *e*PKIKP PKiKP 17 37 23.5 -1.0
comp=Z,3.6nm,0.6s
PKM **Peak Mountain** 106.80 52 ⇓P PKiKP 17 37 24.8 -0.1
baz=107
NVAR **Mina Array Bea** 106.80 48 Pdiff Pdif 17 33 15.9 +1.2
comp=Z,1.5nm,0.8s,baz=264,slow=5.0,SNR=8.0
NVAR PKiKP PKiKP 17 37 26.4 +1.7
comp=Z,3.7nm,0.9s,baz=268,slow=4.7,SNR=6.7
NVAR PP PP 17 37 46.5 +4.7
comp=Z,5.1nm,1.0s,baz=269,slow=9.1,SNR=5.8
NVAR PKKPbc PKKPbc 17 48 44.9 +0.5
comp=Z,1.8nm,0.7s,baz=120,slow=5.3,SNR=8.9
NVAR PKKPab PKKPab 17 48 59.0 -0.8
comp=Z,3.1nm,0.7s,baz=128,slow=4.4,SNR=8.8
NVAR **Mina Array Bea** 106.80 48 Pdif Pdif 17 33 15.9 +1.2
NVAR PKPdf PKiKP 17 37 26.4 +1.7
NVAR PP PP 17 37 46.5 +4.7
NVAR PKKPbc PKKPbc 17 48 44.9 +0.5
NVAR PKKPab PKKPab 17 48 59.0 -0.8
C15A **Salmond Ranch,** 106.91 37 ⇓P PKiKP 17 37 25.3 +0.6
baz=107
SBF **Sospel** 107.01 318 *e*PKIKP PKiKP 17 37 23.3 -1.7
I12A **Atlanta** 107.03 42 ⇑P PKiKP 17 37 25.0 0.0
baz=107
MBDF **Montbardon** 107.09 319 *e*PKIKP PKiKP 17 37 24.6 -0.5
comp=Z,2.4nm,0.6s
B16A **M & M Farms, S** 107.15 36 ⇓P PKiKP 17 37 26.1 +1.0
baz=107
BSC **Santa Cruz Isl** 107.22 52 ⇓P PKiKP 17 37 25.9 +0.3
baz=107
H13A **Challis** 107.28 41 ⇓P PKiKP 17 37 26.0 +0.5
baz=107
F14A **Wisdom** 107.32 39 ⇓P PKiKP 17 37 26.8 +1.3
baz=107
A17A **Triple J Farms** 107.49 35 ⇓P PKiKP 17 37 26.2 +0.5
baz=107
HLID **Hailey** 107.60 42 ⇓P PKiKP 17 37 26.6 +0.5
baz=108
HLID **Hailey** 107.60 42 *e*Pdif Pdif 17 33 20.2 +2.0
comp=Z,4.0nm,1.2s
BLG **Laguna Peak** 107.63 52 ⇑P PKiKP 17 37 26.5 +0.1
baz=108
I13A **Wildhorse Cree** 107.64 41 ⇑P PKiKP 17 37 26.5 +0.4
baz=108
J13A **Cove Ranch, Pi** 107.82 42 ⇓P PKiKP 17 37 26.7 +0.3
baz=108
F15A **Butte** 107.85 39 ⇑P PKiKP 17 37 26.2 -0.3
baz=108
D16A **Dana Ranch, Ca** 107.89 37 ⇓P PKiKP 17 37 26.7 +0.2
baz=108
GRAC **Grapevine Rang** 107.99 49 ⇑P PKiKP 17 37 28.4 +1.4
baz=108
A18A **Metzger Ranch,** 107.99 35 ⇑P PKiKP 17 37 26.5 -0.1
baz=108
E16A **East Helena** 108.05 38 ⇓P PKiKP 17 37 27.3 +0.5
baz=108
I14A **Mackay** 108.08 41 ⇓P PKiKP 17 37 27.1 +0.1
baz=108
C17A **Wharram Farm,** 108.08 37 ⇑P PKiKP 17 37 27.1 +0.2
baz=108
G15A **Dillon** 108.16 39 ⇓P PKiKP 17 37 27.9 +0.8
baz=108
MPMC **Manual Prospec** 108.22 50 ⇑P PKiKP 17 37 27.6 +0.1
baz=108
P11A **Circle Ranch,** 108.25 46 ⇓P PKiKP 17 37 27.5 0.0
baz=108
LRMC **Laurel Mountai** 108.26 50 ⇓P PKiKP 17 37 27.7 +0.1
baz=108
B18A **Beardsley Farm** 108.29 36 ⇓P PKiKP 17 37 27.3 +0.1
baz=108
J14A **Carey** 108.29 42 ⇓P PKiKP 17 37 27.2 -0.1
baz=108
H15A **Lima** 108.30 40 ⇑P PKiKP 17 37 27.5 +0.2
baz=108
D17A **Six Diamond Ra** 108.36 37 ⇓P PKiKP 17 37 27.8 +0.5
baz=108
CIS **Catalina Islan** 108.38 53 ⇓P PKiKP 17 37 27.7 -0.1
baz=108
F16A **Kennard Place,** 108.42 39 ⇓P PKiKP 17 37 27.8 +0.3
baz=108
BOZ **Bozeman (W)** 108.48 39 *e*PKiKP PKiKP 17 37 29.1 +1.4
EGMT **Eagleton** 108.48 36 ⇓P PKiKP 17 37 27.9 +0.4
baz=108
EGMT **Eagleton** 108.48 36 *e*PKiKP PKiKP 17 37 28.5 +0.9
G16A **Moss Hill, Enn** 108.56 39 ⇓P PKiKP 17 37 28.4 +0.5
baz=108
KEST **Kesra** 108.69 310 PP PP 17 37 57.1 +1.4
comp=Z,2.7nm,0.9s,baz=76,slow=4.2,SNR=8.6
O12A **Currie** 108.69 45 ⇑P PKiKP 17 37 28.0 -0.2
baz=109
BFSC **Mount Baldy Ra** 108.70 52 ⇑P PKiKP 17 37 28.2 -0.2
baz=109
R11A **Troy Canyon, C** 108.83 47 ⇓P PKiKP 17 37 29.7 +1.1
baz=109
P12A **McGill** 108.89 46 ⇓P PKiKP 17 37 29.4 +0.8
baz=109
F17A **Fitzpatrick Pl** 108.96 38 ⇑P PKiKP 17 37 29.6 +1.0
baz=109
J15A **Blackfoot** 108.97 41 ⇓P PKiKP 17 37 29.6 +1.0
baz=109
U10A **Ash Meadows, A** 108.97 49 ⇓P PKiKP 17 37 29.2 +0.3
baz=109
GSC **Goldstone** 109.00 50 ⇓P PKiKP 17 37 28.7 -0.3
baz=109
C19A **Slack Wire Ran** 109.04 36 ⇑P PKiKP 17 37 29.4 +0.7
baz=109
G17A **Pierce Place,** 109.19 39 ⇑P PKiKP 17 37 29.0 0.0
baz=109
K15A **Arbon** 109.22 42 ⇓P PKiKP 17 37 30.5 +1.3
baz=109
F18A **Big Timber** 109.54 38 ⇓P PKiKP 17 37 30.3 +0.7
baz=110
L15A **Malad City** 109.61 42 ⇑P PKiKP 17 37 29.6 -0.3
baz=110
S12A **Delamar Landin** 109.64 48 ⇑P PKiKP 17 37 31.0 +0.9
baz=110
C20A **Veseth Ranch,** 109.66 36 ⇓P PKiKP 17 37 30.0 +0.2
baz=110
Q13A **Wheeler Ranch,** 109.73 46 ⇓P PKiKP 17 37 31.3 +1.1
baz=110
K16A **Soda Springs** 109.78 41 ⇑P PKiKP 17 37 30.5 +0.4
baz=110
PFO **Pinyon Flat Ob** 109.85 52 ⇑P PKiKP 17 37 30.5 -0.1

baz=110
N15A **Stansbury Isla** 109.99 44 ⇑P PKiKP 17 37 30.3 -0.3
baz=110
REDW **Red Top Meadow** 110.02 41 *e*PKiKP PKiKP 17 37 32.5 +1.9
GMRC **Granite Mounta** 110.06 51 ⇓P PKiKP 17 37 32.4 +1.4
baz=110
LOHW **Long Hollow** 110.06 40 *e*PKiKP PKiKP 17 37 29.4 -1.2
BELC **Belle Mtn. Jos** 110.07 51 ⇓P PKiKP 17 37 32.5 +1.5
baz=110
DUG **Dugway** 110.08 44 ⇓P PKiKP 17 37 31.6 +0.8
baz=110
J17A **Brown Place, J** 110.11 41 ⇑P PKiKP 17 37 32.6 +1.9
baz=110
MONP **Monument Peak** 110.12 53 ⇓P PKiKP 17 37 31.8 +0.6
baz=110
P14A **Drum Mountains** 110.15 45 ⇑P PKiKP 17 37 31.6 +0.6
baz=110
E20A **Meyer Farm, Mu** 110.20 37 ⇑P PKiKP 17 37 31.5 +0.7
baz=110
O15A **The Old Anders** 110.28 44 ⇑P PKiKP 17 37 31.6 +0.4
baz=110
V12A **Nelson** 110.34 49 ⇑P PKiKP 17 37 32.5 +1.1
baz=110
S13A **Holt Ranch, En** 110.38 47 ⇓P PKiKP 17 37 32.2 +0.7
baz=110
T13A **Saint George** 110.56 48 ⇓P PKiKP 17 37 32.6 +0.7
baz=110
L17A **Cokeville** 110.58 42 ⇑P PKiKP 17 37 32.4 +0.7
baz=110
SWSC **Sam W. Stewart** 110.59 52 ⇓P PKiKP 17 37 33.6 +1.6
baz=111
BC3 **Big Chuckawall** 110.62 52 ⇓P PKiKP 17 37 33.5 +1.5
baz=111
P15A **Leamington** 110.71 45 ⇓P PKiKP 17 37 33.3 +1.3
baz=111
S14A **Cedar City** 110.81 47 ⇓P PKiKP 17 37 33.5 +1.2
baz=111
Q15A **Fillmore** 110.88 45 ⇑P PKiKP 17 37 33.1 +0.8
baz=111
K18A **Toltan Ranch,** 110.88 41 ⇓P PKiKP 17 37 33.6 +1.3
baz=111
V13A **Grand Canyon W** 110.95 49 ⇓P PKiKP 17 37 34.2 +1.5
baz=111
M17A **Scullys Gap (B** 111.00 42 ⇓P PKiKP 17 37 33.6 +1.1
baz=111
PDAR **Pinedale Array** 111.14 41 Pdiff Pdif 17 33 36.6 +2.7
comp=Z,0.2nm,0.6s,baz=309,slow=2.9,SNR=1.7
PDAR PKiKP PKiKP 17 37 33.7 +1.0
comp=Z,0.7nm,0.5s,baz=256,slow=1.2,SNR=4.9
PDAR PKKPbc PKKPbc 17 48 28.4 -2.4
comp=Z,0.5nm,0.6s,baz=138,slow=4.8,SNR=3.9
PDAR PKKPab PKKPab 17 48 39.2 -1.4
comp=Z,4.9nm,0.8s,baz=120,slow=6.4,SNR=20
L18A **Fontenelle, Gr** 111.21 42 ⇑P PKiKP 17 37 34.4 +1.4
baz=111
MSU **Marysvale** 111.22 46 *e*PKIKP PKiKP 17 37 35.5 +2.5
J19A **Crowheart** 111.22 40 ⇑P PKiKP 17 37 34.4 +1.5
baz=111
LAO **LASA Array** 111.23 36 ⇓P PKiKP 17 37 33.6 +0.8
baz=111
H20A **Greybull** 111.30 39 ⇑P PKiKP 17 37 34.5 +1.5
baz=111
U14A **Mt Trumbull** 111.33 48 ⇑P PKiKP 17 37 33.8 +0.5
baz=111
DGMT **Dagmar** 111.40 33 ⇑P PKiKP 17 37 34.2 +1.1
baz=111
DGMT **Dagmar** 111.40 33 *e*PKiKP PKiKP 17 37 34.9 +1.9
I20A **Worland** 111.48 39 ⇓P PKiKP 17 37 34.3 +0.9
baz=111,SNR=5.7
O17A **Robinson Place** 111.51 44 ⇓P PKiKP 17 37 34.3 +0.8
baz=112
K19A **Absolon Red Bu** 111.57 40 ⇑P PKiKP 17 37 34.8 +1.2
baz=112
T15A **Red Dirt Ranch** 111.68 47 ⇑P PKiKP 17 37 35.3 +1.3
baz=112
V14A **Boquillas Ranc** 111.69 49 ⇓P PKiKP 17 37 35.6 +1.5
baz=112
J20A **Shoshoni** 111.80 40 ⇑P PKiKP 17 37 35.3 +1.3
baz=112
W14A **Seligman** 111.87 49 ⇑P PKiKP 17 37 34.8 +0.4
baz=112
N18A **Larsen Ranch,** 111.89 42 ⇓P PKiKP 17 37 35.0 +0.8
baz=112
S16A **Weppner Ranch,** 111.97 46 ⇑P PKiKP 17 37 36.1 +1.6
baz=112
K20A **Yellowstone Ra** 111.97 40 ⇑P PKiKP 17 37 35.3 +0.9
baz=112
O18A **Roosevelt** 111.98 43 ⇓P PKiKP 17 37 36.3 +1.9
baz=112
U15A **North Rim** 111.99 48 ⇓P PKiKP 17 37 36.5 +1.9
baz=112
M19A **Rock Springs** 111.99 42 ⇑P PKiKP 17 37 36.0 +1.5
baz=112
I21A **Big Trails, Te** 112.07 39 ⇑P PKiKP 17 37 36.1 +1.6
baz=112
SRU **San Rafael** 112.14 45 ⇑P PKiKP 17 37 36.6 +1.9
baz=112
SRU **San Rafael** 112.14 45 *e*PKiKP PKiKP 17 37 35.7 +1.0
Z13A **Yuma Proving G** 112.18 52 ⇓P PKiKP 17 37 36.3 +1.2
baz=112
N19A **John Jarvie Ra** 112.26 42 ⇓P PKiKP 17 37 36.3 +1.4
baz=112
L20A **Wamsutter** 112.29 41 ⇑P PKiKP 17 37 36.1 +1.2
baz=112
X14A **Yava** 112.30 50 ⇑P PKiKP 17 37 36.6 +1.4
baz=112
R17A **Hanksville Air** 112.31 45 ⇓P PKiKP 17 37 36.5 +1.3
baz=112
V15A **Kaibab Nationa** 112.32 48 ⇑P PKiKP 17 37 36.9 +1.7
baz=112
Q18A **Rafter H Ranch** 112.42 44 ⇓P PKiKP 17 37 36.5 +1.2
baz=112
Y14A **Wickenburg** 112.42 51 ⇑P PKiKP 17 37 36.1 +0.6
baz=112
S17A **Black Ridge (B** 112.58 46 ⇓P PKiKP 17 37 36.5 +0.8
baz=112
M20A **Sweetwater, Wa** 112.64 41 ⇓P PKiKP 17 37 36.8 +1.2
baz=113
K21A **Alcova** 112.69 40 ⇑P PKiKP 17 37 36.3 +0.6
baz=113,SNR=7.0
T17A **Navajo Res., N** 112.84 47 ⇑P PKiKP 17 37 37.2 +1.1
baz=113
R18A **Canyonlands Na** 112.90 45 ⇑P PKiKP 17 37 36.6 +0.4
baz=113
N20A **Spence Gulch,** 112.90 42 ⇑P PKiKP 17 37 37.5 +1.3
baz=113,SNR=6.2
Y15A **Casa Rosa Ranc** 112.93 50 ⇑P PKiKP 17 37 37.2 +0.8
baz=113
L21A **Rawlins** 112.94 41 ⇓P PKiKP 17 37 37.0 +0.8
baz=113
U16A **Tuba City** 112.96 48 ⇑P PKiKP 17 37 37.3 +0.9
baz=113
P19A **Cripple Cowboy** 112.97 43 ⇓P PKiKP 17 37 37.1 +0.7
baz=113
WUAZ **Wupatki** 113.03 48 ⇓P PKiKP 17 37 37.6 +1.0
baz=113
WUAZ **Wupatki** 113.03 48 *e*PKiKP PKiKP 17 37 37.8 +1.2
Q19A **Hogan Spring (** 113.09 44 ⇑P PKiKP 17 37 37.6 +1.0
baz=113
U17A **Shonto** 113.11 47 ⇑P PKiKP 17 37 37.0 +0.3
baz=113
M21A **Separation Pea** 113.12 41 ⇑P PKiKP 17 37 37.5 +0.9
baz=113,SNR=7.6
S18A **Hurst Farm, Bl** 113.13 46 ⇓P PKiKP 17 37 37.8 +1.1
baz=113
K22A **Casper** 113.14 40 ⇑P PKiKP 17 37 37.6 +1.1
baz=113
RWWY **Rawlins** 113.18 41 *e*PKPdf PKiKP 17 37 36.4 -0.3
O20A **White River Ci** 113.24 43 ⇑P PKiKP 17 37 38.1 +1.2
baz=113,SNR=5.5
214A **Organ Pipe Nat** 113.30 52 ⇑P PKiKP 17 37 38.2 +1.0
baz=113
R19A **Curley Farm, L** 113.39 45 ⇓P PKiKP 17 37 38.6 +1.5
baz=113
X16A **Lo Mia Camp, P** 113.42 50 ⇓P PKiKP 17 37 39.1 +1.8
baz=113
N21A **Black Mountain** 113.43 42 ⇑P PKiKP 17 37 38.7 +1.5
baz=113,SNR=8.2
P20A **De Beque** 113.44 43 ⇓P PKiKP 17 37 39.1 +1.9
baz=113
T18A **Mexican Hat** 113.46 46 ⇑P PKiKP 17 37 39.2 +1.8
baz=113
Y16A **Circle Bar Ran** 113.61 50 ⇑P PKiKP 17 37 39.3 +1.6
baz=114
S19A **Harvey Farm, M** 113.72 45 ⇑P PKiKP 17 37 39.2 +1.3
baz=114
O21A **Pagoda** 113.73 42 ⇑P PKiKP 17 37 39.0 +1.3
baz=114
Q20A **Ridgley Place,** 113.76 44 ⇓P PKiKP 17 37 39.3 +1.5
baz=114
U18A **Rough Rock, Ch** 113.77 47 ⇑P PKiKP 17 37 39.5 +1.5
baz=114
PV01 **Paradox Valley** 113.94 45 *e*PKiKP PKiKP 17 37 39.9 +1.6
V18A **Ganado** 114.02 48 ⇓P PKiKP 17 37 39.6 +1.2
baz=114
R20A **Redvale** 114.05 45 ⇓P PKiKP 17 37 39.8 +1.3
baz=114
N22A **Wattenberg Ran** 114.11 41 ⇑P PKiKP 17 37 39.9 +1.4
baz=114
Y17A **Roosevelt** 114.17 50 ⇓P PKiKP 17 37 39.8 +1.0
baz=114
T19A **Beclabito** 114.20 46 ⇓P PKiKP 17 37 40.5 +1.7
baz=114
S20A **Disappointment** 114.23 45 ⇓P PKiKP 17 37 40.0 +1.2
baz=114,SNR=5.3
U19A **Dine' College,** 114.31 47 ⇑P PKiKP 17 37 40.3 +1.3
baz=114
Q21A **Lamborn Mesa,** 114.31 44 ⇓P PKiKP 17 37 40.4 +1.5
baz=114
MVCO **Mesa Verde** 114.41 46 ⇓P PKiKP 17 37 41.1 +1.9
baz=114,SNR=7.6
MVCO **Mesa Verde** 114.41 46 *e*PKiKP PKiKP 17 37 41.3 +2.1
W18A **Petrified Fore** 114.42 48 ⇑P PKiKP 17 37 41.0 +1.8
baz=114
P22A **Eagle** 114.50 43 ⇑P PKiKP 17 37 41.5 +2.2
baz=114
X18A **Snowflake** 114.50 49 ⇓P PKiKP 17 37 41.4 +2.0
baz=114
V19A **Window Rock** 114.67 47 ⇓P PKiKP 17 37 42.1 +2.4
baz=115
117A **Oracle** 114.69 51 ⇑P PKiKP 17 37 41.6 +1.7
baz=115
S21A **Coal Bank Pass** 114.71 45 ⇓P PKiKP 17 37 42.0 +2.3
baz=115,SNR=18
Y18A **Canyon Day Jun** 114.75 50 ⇓P PKiKP 17 37 41.8 +1.9
baz=115
Q22A **Crested Butte,** 114.75 43 ⇓P PKiKP 17 37 41.6 +1.8
baz=115
O23A **Lake Granby, G** 114.76 42 ⇓P PKiKP 17 37 41.2 +1.4
baz=115,SNR=5.8
U20A **Newcomb** 114.77 46 ⇑P PKiKP 17 37 41.3 +1.4
baz=115
M24A **Cheyenne** 114.84 40 ⇓P PKiKP 17 37 41.2 +1.4
baz=115
217A **Green Valley** 114.94 52 ⇑P PKiKP 17 37 41.9 +1.6
baz=115
X19A **St. Johns** 115.04 49 ⇑P PKiKP 17 37 42.0 +1.5
baz=115
V20A **Brimhall** 115.06 47 ⇓P PKiKP 17 37 42.0 +1.5
baz=115
ISCO **Idaho Springs** 115.17 42 ⇓P PKiKP 17 37 42.0 +1.4
baz=115,SNR=6.2
ISCO **Idaho Springs** 115.17 42 *e*PKPdf PKPdf 17 37 42.1 +1.6
T21A **Navajo Lake** 115.20 45 ⇑P PKiKP 17 37 42.5 +1.8
baz=115
P23A **Jefferson** 115.23 42 ⇑P PKiKP 17 37 42.4 +1.7
baz=115
118A **Homack Ranch,** 115.26 51 ⇑P PKiKP 17 37 42.4 +1.4
baz=115
Y19A **Nutrioso** 115.27 49 ⇑P PKiKP 17 37 43.0 +2.1
baz=115
W20A **Ramah** 115.33 48 ⇓P PKiKP 17 37 42.6 +1.6
baz=115
S22A **4UR Ranch, Cre** 115.34 44 ⇑P PKiKP 17 37 42.5 +1.5
baz=115
U21A **Nageezi** 115.36 46 ⇑P PKiKP 17 37 42.9 +1.9
baz=115,SNR=16
O24A **Longmont** 115.37 41 ⇑P PKiKP 17 37 42.0 +1.1
baz=115
218A **Dragoon** 115.47 51 ⇓P PKiKP 17 37 42.4 +1.1
baz=116
Q23A **Hartsel** 115.47 43 ⇓P PKiKP 17 37 43.2 +2.1
baz=115
X20A **Quemado** 115.59 48 ⇓P PKiKP 17 37 43.5 +2.0
baz=116
T22A **Edith** 115.63 45 ⇓P PKiKP 17 37 43.6 +2.1
baz=116,SNR=7.6
N25A **Grover** 115.65 40 ⇑P PKiKP 17 37 42.7 +1.2
baz=116
V21A **Milan** 115.66 47 ⇑P PKiKP 17 37 43.2 +1.6
baz=116
318A **Bisbee** 115.72 52 ⇓P PKPdf 17 37 43.4 +1.5
baz=116
119A **Ashpeak Ranch,** 115.72 50 ⇓P PKPdf 17 37 43.6 +1.8
baz=116
P24A **Kohler Place,** 115.79 42 ⇑P PKiKP 17 37 42.8 +1.1
baz=116
Q24A **Divide** 115.90 43 ⇑P PKPdf 17 37 43.7 +1.7
baz=116
Y20A **Horse Springs,** 115.95 49 ⇑P PKPdf 17 37 44.3 +2.1
baz=116
W21A **San Fidel** 115.96 47 ⇑P PKPdf 17 37 44.3 +2.1
baz=116
U22A **Llaves** 115.96 46 ⇑P PKPdf 17 37 44.2 +2.0
baz=116
219A **White Tail Can** 116.07 51 ⇓P PKPdf 17 37 42.8 +0.3
baz=116
Z20A **Nine Sixteen R** 116.12 50 ⇓P PKPdf 17 37 43.7 +1.1
baz=116
V22A **San Miguel Ran** 116.14 46 ⇓P PKPdf 17 37 43.4 +0.9
baz=116
X21A **Alamocita Cree** 116.16 48 ⇑P PKPdf 17 37 43.6 +1.0
baz=116
T23A **Casias Ranch,** 116.23 45 ⇓P PKPdf 17 37 44.1 +1.4
baz=116
SDCO **Great Sand Dun** 116.26 44 ⇓P PKPdf 17 37 44.3 +1.6
baz=116,SNR=5.7
P25A **Willow Gulch B** 116.28 42 ⇓P PKPdf 17 37 43.9 +1.2
baz=116
R24A **Sanders Place,** 116.30 43 ⇓P PKPdf 17 37 43.9 +1.2
baz=116
319A **Douglas** 116.30 52 ⇓P PKPdf 17 37 44.4 +1.4
baz=116
120A **U Bar Ranch, L** 116.33 50 ⇓P PKPdf 17 37 44.3 +1.3
baz=116
Y21A **Point of Rocks** 116.43 48 ⇓P PKPdf 17 37 44.7 +1.6
baz=116
U23A **El Rito** 116.46 46 ⇑P PKPdf 17 37 44.1 +1.0
baz=116,SNR=6.1
ESDC **Sonseca Array** 116.50 319 PKKP PKKPdf 17 48 42.1 +4.0
comp=Z,0.2nm,0.3s,baz=237,slow=4.4,SNR=4.1
S24A **Houchin Ranch,** 116.52 44 ⇓P PKPdf 17 37 44.7 +1.5
baz=116
Q25A **Bedland, Calha** 116.53 42 ⇓P PKPdf 17 37 44.4 +1.2
baz=116,SNR=5.2
LAZ **Ladron** 116.66 48 *e*PKPdf PKPdf 17 37 45.7 +2.1
220A **Playas Peak, P** 116.68 51 ⇓P PKPdf 17 37 45.0 +1.3
baz=117
X22A **Bernardo** 116.70 48 ⇑P PKPdf 17 37 45.1 +1.5
baz=117
Z21A **St. Cloud Mine** 116.74 49 ⇑P PKPdf 17 37 44.8 +1.1
baz=117
V23A **Ortiz Mt. (NFS** 116.74 46 ⇓P PKPdf 17 37 44.9 +1.2
baz=117,SNR=5.7
R25A **Fountain Ranch** 116.90 43 ⇓P PKPdf 17 37 45.1 +1.2
baz=117
T24A **Torres, Weston** 116.91 44 ⇓P PKPdf 17 37 45.7 +1.8
baz=117
ANMO **Albuquerque** 116.91 47 *e*PKIKP PKPdf 17 37 45.3 +1.3
320A **Kipp Ranch, An** 116.91 52 ⇑P PKPdf 17 37 45.8 +1.6
baz=117
121A **Cookes Peak, D** 116.98 50 ⇓P PKPdf 17 37 46.0 +1.8
baz=117
Y22A **Socorro** 116.99 48 ⇓P PKPdf 17 37 46.0 +1.7
baz=117,SNR=8.9
W23A **Werner Place,** 117.03 47 ⇓P PKPdf 17 37 45.7 +1.5
baz=117
S25A **Robets Cordova** 117.04 44 ⇑P PKPdf 17 37 45.7 +1.5
baz=117
LPM **Los Pinos Moun** 117.07 48 *e*PKPdf PKPdf 17 37 46.1 +1.7
BNM **Barren Site** 117.15 48 *e*PKPdf PKPdf 17 37 46.5 +1.9
221A **Mesquite Ranch** 117.21 51 ⇓P PKPdf 17 37 46.9 +2.1
baz=117
X23A **Hourglass Bar** 117.27 47 ⇑P PKPdf 17 37 46.5 +1.7
baz=117
Z22A **Elephant Butte** 117.29 49 ⇑P PKPdf 17 37 46.5 +1.7
baz=117
T25A **Trinidad** 117.32 44 ⇑P PKPdf 17 37 46.3 +1.6
baz=117,SNR=6.7
V24A **Rampart Ranch,** 117.40 46 ⇑P PKPdf 17 37 47.1 +2.1
baz=117,SNR=19
122A **Conniff Cattle** 117.51 50 ⇓P PKPdf 17 37 47.2 +2.0
baz=118
W24A **Lazy 6 Ranch,** 117.55 46 ⇓P PKPdf 17 37 46.8 +1.5
baz=118,SNR=15
Y23A **Lovelace Mesa,** 117.67 48 ⇑P PKPdf 17 37 46.8 +1.3
baz=118,SNR=5.7
U25A **Circle Dot Ran** 117.69 45 ⇑P PKPdf 17 37 47.0 +1.5
baz=118
222A **Williams Famil** 117.69 50 ⇑P PKPdf 17 37 47.3 +1.6
baz=118
V25A **Rancho No Teng** 117.81 45 ⇓P PKPdf 17 37 47.2 +1.4
baz=118,SNR=17
Z23A **Rita Site, Whi** 117.84 49 ⇓P PKPdf 17 37 46.9 +1.0
baz=118
PVRL **Vila Real** 118.00 322 *e*PKPdf PKPdf 17 37 46.9 +0.9
Y24A **Capitan** 118.13 48 ⇓P PKPdf 17 37 47.8 +1.4
baz=118,SNR=16
W25A **X Bar L Ranch,** 118.23 46 ⇑P PKPdf 17 37 47.7 +1.1
baz=118,SNR=11
MTE **Manteigas** 118.40 321 *e*PKPdf PKPdf 17 37 47.4 +0.7
MTE **Manteigas** 118.40 321 *e*PKPdf PKPdf 17 37 47.5 +0.7
X25A **Clemmons Ranch** 118.41 47 ⇓P PKPdf 17 37 47.8 +0.9
baz=118,SNR=5.7
V26A **Tequesquite Ra** 118.42 45 ⇑P PKPdf 17 37 47.5 +0.6
baz=118
Z24A **Sheeppen Canyo** 118.46 48 ⇓P PKPdf 17 37 48.7 +1.6
baz=118,SNR=13
ECSD **EROS Data Cent** 118.46 34 *e*PKPdf PKPdf 17 37 47.1 +0.3
PCBR **Castelo Branco** 118.67 321 *e*PKPdf PKPdf 17 37 47.3 0.0
124A **Stringfield Ra** 118.68 49 ⇑P PKPdf 17 37 49.0 +1.4
baz=119,SNR=9.9
Y25A **Mesa, Roswell** 118.68 47 ⇑P PKPdf 17 37 48.5 +1.0
baz=119,SNR=24
W26A **Owens Ranch, T** 118.79 46 ⇑P PKPdf 17 37 48.6 +0.9
baz=119
224A **Cornudas Mount** 118.91 50 ⇑P PKPdf 17 37 49.3 +1.4
baz=119,SNR=5.6
Z25A **Roswell** 118.96 48 ⇑P PKPdf 17 37 48.8 +0.8
baz=119
X26A **CR and CF Fran** 119.02 46 ⇑P PKPdf 17 37 49.0 +0.9
baz=119,SNR=5.9
MNTX **Cornudas Mount** 119.18 50 ⇓P PKPdf 17 37 49.7 +1.2
baz=119,SNR=22
MNTX **Cornudas Mount** 119.18 50 *e*PKPdf PKPdf 17 37 49.4 +0.9
324A **Moseley Ranch,** 119.22 50 ⇓P PKPdf 17 37 49.9 +1.3
baz=119,SNR=18
125A **Gardner Draw,** 119.29 49 ⇓P PKPdf 17 37 49.5 +0.8
baz=119
Y26A **Elida** 119.31 47 ⇓P PKPdf 17 37 49.4 +0.7
baz=119
PBAR **Barrancos** 119.32 319 *e*PKPdf PKPdf 17 37 50.4 +1.8
225A **Deer Hill, Car** 119.42 49 ⇑P PKPdf 17 37 49.9 +0.9
baz=119,SNR=8.7
Z26A **Caprock** 119.51 48 ⇑P PKPdf 17 37 49.6 +0.5
baz=120
325A **Bean Ranch, Si** 119.64 50 ⇓P PKPdf 17 37 50.3 +0.9
baz=120,SNR=10
CPRX **Cap Rock** 119.71 48 *e*PKPdf PKPdf 17 37 50.4 +0.9
GDL2 **Guadalupe Moun** 119.72 49 *e*PKPdf PKPdf 17 37 50.6 +1.1
EVO **Evora** 119.76 320 *e*PKPdf PKPdf 17 37 49.9 +0.5
126A **Clayton Basin,** 119.77 48 ⇑P PKPdf 17 37 50.4 +0.8
baz=120,SNR=6.1
Y27A **Causey** 119.81 47 ⇓P PKPdf 17 37 50.5 +0.9
baz=120,SNR=12
SCHQ **Schefferville** 119.88 9 PKP PKPdf 17 37 49.6 +0.5
comp=Z,8.9nm,0.5s,baz=47,slow=2.7,SNR=19
425A **Indio Mountain** 119.89 51 ⇑P PKPdf 17 37 50.7 +0.8
baz=120,SNR=10
226A **Malaga, Loving** 119.99 49 ⇓P PKPdf 17 37 50.8 +0.7
baz=120
Z27A **Tatum** 120.05 47 ⇑P PKPdf 17 37 50.6 +0.5
baz=120,SNR=30
MSTX **Muleshoe** 120.05 46 ⇑P PKPdf 17 37 50.8 +0.7
baz=120,SNR=13
CLNB **Carlsbad** 120.06 49 *e*PKPdf PKPdf 17 37 51.5 +1.3
PCVE **Castro Verde** 120.28 319 *e*PKPdf PKPdf 17 37 50.6 +0.1
AMTX **Amarillo** 120.37 45 ⇓P PKPdf 17 37 51.5 +0.8
baz=120
PBDV **Barranco-do-Ve** 120.43 318 *e*PKPdf PKPdf 17 37 52.6 +1.8
COWI **Conover** 120.66 28 *e*PKPdf PKPdf 17 37 51.3 +0.3
426A **McDonald Obser** 120.68 50 ⇓P PKPdf 17 37 51.9 +0.5
baz=121
526A **Mary Lane Ranc** 120.91 51 ⇑P PKPdf 17 37 53.0 +1.1
baz=121,SNR=13
427A **Hayter Ranch,** 121.08 50 ⇑P PKPdf 17 37 53.3 +1.1
baz=121,SNR=16
626A **Big Bend Ranch** 121.10 52 ⇓P PKPdf 17 37 53.0 +0.8
baz=121,SNR=6.1
527A **Woodward Ranch** 121.24 51 ⇑P PKPdf 17 37 52.8 +0.3
baz=121,SNR=17
328A **Wristen Ranch,** 121.28 49 ⇓P PKPdf 17 37 53.1 +0.6
baz=121,SNR=18
KSU1 **Kansas State U** 121.35 38 *e*PKPdf PKPdf 17 37 52.6 +0.1
TXAR **Lajitas Array** 121.56 52 PKP PKPdf 17 37 53.8 +0.6
comp=Z,3.5nm,0.8s,baz=235,slow=0.9,SNR=32
TXAR PKKPbc PKKPbc 17 47 53.6 -0.3
comp=Z,1.3nm,0.8s,baz=111,slow=7.1,SNR=4.3
TXAR SKKP 17 51 49.4
comp=Z,1.7nm,1.1s,baz=134,slow=5.4,SNR=4.5
TXAR **Lajitas Array** 121.56 52 PKP PKPdf 17 37 53.8 +0.6
TXAR PKKPbc PKKPbc 17 47 53.6 -0.3
TXAR SKKP 17 51 49.4
428A **Kincaid Ranch,** 121.68 50 ⇓P PKPdf 17 37 54.0 +0.7
baz=122,SNR=22
627A **Terlingua Ranc** 121.72 51 ⇓P PKPdf 17 37 54.4 +1.0
baz=122,SNR=22
528A **Cox Ranch, San** 121.86 50 ⇓P PKPdf 17 37 54.9 +1.2
baz=122,SNR=13
628A **Black Gap, Mar** 122.10 51 ⇑P PKPdf 17 37 55.1 +1.0
baz=122,SNR=9.6
TORD **Torodi Ar. Bea** 122.14 288 PKP PKPdf 17 37 54.2 -0.4
comp=Z,6.6nm,0.7s,baz=74,slow=1.7,SNR=29
TORD pPKP pPKPdf 17 38 23.1 -1.8
comp=Z,9.2nm,0.7s,baz=51,slow=1.9,SNR=5.3
TORD PKKPab PKKPab 17 47 55.4 +3.2
comp=Z,2.2nm,0.8s,baz=266,slow=3.9,SNR=7.8
TORD SKKP 17 51 52.3
comp=Z,1.1nm,0.9s,baz=247,slow=3.8,SNR=3.6
JFWS **Jewell Farm** 122.44 31 *e*PKIKP PKPdf 17 37 54.1 -0.3
WMOK **Wichita Mounta** 122.46 44 *e*PKIKP PKPdf 17 37 55.2 +0.5
JCT **Junction City** 123.97 48 ⇑P PKPdf 17 37 58.6 +0.9
baz=124
JCT **Junction City** 123.97 48 *e*PKPdf PKPdf 17 37 58.4 +0.6
HDIL **Hopedale** 124.61 32 *e*PKPdf PKPdf 17 37 59.1 +0.4
CCM **Cathedral Cave** 125.25 36 *e*PKIKP PKPdf 17 37 59.8 -0.2
FVM **French Village** 125.77 35 *e*PKIKP PKPdf 17 38 00.5 -0.5
MIAR **Mount Ida** 126.06 41 *e*PKIKP PKPdf 17 38 02.6 +1.0
OLIL **Olney** 126.56 33 *e*PKPdf PKPdf 17 38 03.1 +0.7
HKT **Hockley** 127.17 47 *e*PKIKP PKPdf 17 38 03.8 -0.1
WCI **Wyandotte Cave** 127.90 32 *e*PKIKP PKPdf 17 38 05.4 +0.3
WVT **Waverly** 128.55 35 *e*PKIKP PKPdf 17 38 06.6 +0.2
BINY **Binghamton** 129.33 21 *e*PKPdf PKPdf 17 38 08.9 +1.2
KIC **Kosan Boka** 129.81 282 *e*PKP1 PKPdf 17 38 09.9 +0.6
comp=Z,100nm,1.2s
DBIC **Dimbokro** 129.86 282 PKP PKPdf 17 38 09.6 +0.2
comp=Z,9.4nm,1.0s,baz=54,slow=4.5,SNR=11
DBIC pPKP pPKPdf 17 38 38.1 -1.7
comp=Z,29nm,1.1s,baz=120,slow=2.1,SNR=6.1
DBIC SKPbc 17 41 20.8
comp=Z,26nm,0.7s,baz=55,slow=4.4,SNR=18
DBIC **Dimbokro** 129.86 282 *e*PKPdf PKPdf 17 38 08.2 -1.3
SSPA **Standing Stone** 129.95 24 *e*PKPdf PKPdf 17 38 09.2 +0.4
TIC **Toumodi** 130.02 283 *e*PKP1 PKPdf 17 38 10.7 +1.0
comp=Z,123nm,1.3s
LIC **Lamto** 130.11 282 *e*PKP1 PKPdf 17 38 10.4 +0.5
comp=Z,84nm,1.0s
TKL **Tuckaleechee C** 131.16 33 PKP PKPdf 17 38 12.0 +0.7
baz=238,slow=4.4
TKL SKPbc SKPbc 17 41 27.1 +1.0
comp=Z,21nm,1.1s,baz=240,slow=0.2,SNR=5.4
JSRW **J. Sargeant Re** 132.42 26 *e*PKPdf PKPdf 17 38 13.9 +0.3
CMIG **Matias Romero** 134.12 61 PKP PKPdf 17 38 18.9 +1.5
comp=Z,7.9nm,0.9s,baz=221,slow=3.0
CMIG SKiKP 17 41 47.5
comp=Z,12nm,0.9s,baz=286,slow=3.4,SNR=7.9
BBTS **Babate** 138.40 298 SKP SKPbc 17 41 50.0 +0.1
comp=Z,36nm,0.9s,baz=29,slow=0.4,SNR=3.7
PLCA **Paso Flores** 140.94 160 PKP PKPdf 17 38 30.5 +1.2
comp=Z,7.9nm,0.8s,baz=216,slow=4.8,SNR=11
PLCA **Paso Flores** 140.94 160 PKP PKPdf 17 38 30.5 +1.2
JTS **JuntasAbangare** 145.70 64 *e*PKP2 PKPab 17 38 39.2 -0.2
TRQA **Tornquist** 145.80 169 *e*PKPdf PKPdf 17 38 39.3 +1.4
MTDJ **Mount Denham** 147.49 45 *e*PKPbc PKPbc 17 38 45.2 +1.3
GTBY **Guantanamo Bay** 147.95 40 *e*PKPbc PKPbc 17 38 45.5 +0.4
CFAA **Coronel Fontan** 149.85 155 PKP PKPdf 17 38 45.8 +1.0
comp=Z,3.1nm,0.6s,baz=257,slow=3.9,SNR=13
CFAA PKPbc PKPbc 17 38 50.7 +1.0
comp=Z,3.1nm,0.6s,baz=220,slow=2.4,SNR=36
CFAA **Coronel Fontan** 149.85 155 PKP PKPdf 17 38 45.8 +1.0
CFAA PKPbc PKPbc 17 38 50.7 +1.0
BCIP **Isla Barro Col** 150.74 62 *e*PKPdf PKPdf 17 38 47.0 +0.3

LCO	**Las Campanas**	**150.86**	**149**	*e*PKPbc	PKPbc	17 38 53.1	+1.0
SDDR	**Presa de Saban**	**151.01**	**36**	*e*PKPbc	PKPbc	17 38 53.2	+0.4
SJG	**San Juan**	**154.44**	**28**	PKPab	PKPab	17 39 15.0	+0.1
comp=Z,38nm,0.9s,baz=325,slow=2.1,SNR=12							
SJG	**San Juan**	**154.44**	**28**	*e*PKPab	PKPab	17 39 15.9	+1.0
OTAV	**Otavalo**	**154.96**	**80**	*e*PKPdf	PKPdf	17 38 54.0	+1.1
ATAH	**Atahualpa**	**155.43**	**97**	PKP	PKPdf	17 38 56.2	+2.7
comp=Z,15nm,1.0s,baz=285,slow=3.6,SNR=17							
ATAH				PKPab	PKPab	17 39 19.6	+0.1
comp=Z,34nm,1.0s,baz=125,slow=1.8,SNR=4.8							
NNA	**Nana**	**156.07**	**109**	PKP	PKPdf	17 38 55.7	+1.4
comp=Z,7.0nm,0.5s,baz=293,slow=6.0,SNR=3.2							
ROSC	**El Rosal**	**157.51**	**66**	PKP	PKPdf	17 38 58.3	+2.1
comp=Z,4.1nm,0.3s,baz=85,slow=16,SNR=8.6							
ROSC				PKPab	PKPab	17 39 29.7	+1.2
comp=Z,6.9nm,0.3s,baz=105,slow=18,SNR=6.0							
CPUP	**Villa Florida**	**158.05**	**172**	PKP	PKPdf	17 38 57.8	+1.3
comp=Z,6.1nm,1.0s,baz=25,slow=2.0,SNR=7.4							
CPUP				PKPab	PKPab	17 39 30.9	+0.8
comp=Z,5.3nm,0.6s,baz=173,slow=3.7,SNR=9.6							
CPUP	**Villa Florida**	**158.05**	**172**	PKP	PKPdf	17 38 57.8	+1.3
CPUP				PKPab	PKPab	17 39 30.9	+0.8
SDV	**Santo Domingo**	**158.61**	**52**	*e*PKPdf	PKPdf	17 38 58.3	+0.9
FDF	**Fort de France**	**159.55**	**21**	*e*PKIKP	PKPdf	17 38 58.4	-0.1
LPAZ	**La Paz**	**161.73**	**131**	PKP	PKPdf	17 39 03.5	+2.7
comp=Z,8.5nm,1.0s,baz=25,slow=1.1,SNR=25							
LPAZ	**La Paz**	**161.73**	**131**	*e*PKPdf	PKPdf	17 39 02.9	+2.1
SIV	**San Ignacio**	**166.56**	**149**	PKP	PKPdf	17 39 06.6	+1.4
comp=Z,3.9nm,0.5s,baz=191,slow=1.0,SNR=20							

*IPEC **01** 17:36:33.9±0.1, 50.°20N×19.°08E, h1km±1km, ML2.1/4, Error ellipse: s-maj=2.8km s-min=0.8km az=170.0*
*CSEM **01** 17:36:33.7±0.3, 50.°15N×19.°08E, h2km, ML2.7/8, Error ellipse: s-maj=7.3km s-min=2.8km az=1.0*
*PRU **01** 17:36:34.5, 50.°12N×19.°06E, h0km*
WAR 01 17:36:34.0, 50.°08N×19.°16E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.44**	**71**	*e*Pg	Pg	17 36 42.7	+0.3
OJC				*e*Sg	Sg	17 36 49.2	+1.2
OJC	**Ojcow**	**0.44**	**71**	*e*Pg	Pg	17 36 42.7	+0.3
baz=267							
OJC				*e*Sg	Sg	17 36 48.5	+0.5
baz=267							
OKC	**Ostrava-Krasne**	**0.69**	**250**	*e*PG	Pg	17 36 48.1	+0.8
OKC				*e*SG	Sg	17 36 56.1	-0.2
comp=Z,28nm,0.7s							
OKC	**Ostrava-Krasne**	**0.69**	**250**	*e*Pg	Pg	17 36 47.3	0.0
baz=59							
OKC				Sg	Sg	17 36 56.1	-0.2
comp=Z,28nm,0.7s							
NIE	**Niedzica**	**1.00**	**131**	*e*Pg	Pg	17 36 53.4	+0.3
NIE				*e*Sg	Sg	17 37 09.7	+3.6
NIE	**Niedzica**	**1.00**	**131**	*e*Pg	Pg	17 36 53.4	+0.3
NIE				*e*Sg	Sg	17 37 09.7	+3.6
MORC	**Moravsky Berou**	**1.08**	**254**	*e*Pg	Pg	17 36 54.5	-0.3
baz=66							
MORC				*e*Sg	Sg	17 37 07.8	-1.0
comp=Z,29nm,0.4s,baz=66							
STHS	**Stebnicka Huta**	**1.51**	**115**	*e*PN	Pn	17 37 03.3	+1.1
STHS				*e*SN	Sn	17 37 24.7	+2.1
STHS	**Stebnicka Huta**	**1.51**	**115**	*e*Pn	Pn	17 37 03.3	+1.1
STHS				*e*Sn	Sn	17 37 24.7	+2.1
JAVC	**Velka Javorina**	**1.56**	**219**	*e*Pn	Pn	17 37 03.0	+0.1
JAVC				*e*Sg	Sg	17 37 25.5	+1.5
comp=Z,19nm,1.2s							
VYHS	**Vyhne**	**1.60**	**188**	*e*PN	Pn	17 37 02.5	-1.0
VYHS				*e*SN	Sn	17 37 21.6	-3.2
VYHS	**Vyhne**	**1.60**	**188**	*e*Pn	Pn	17 37 02.5	-1.0
VYHS				*e*Sn	Sn	17 37 21.6	-3.2
KECS	**Kecovo**	**1.82**	**151**	*e*PN	Pn	17 37 05.6	-0.9
KECS				*e*SN	Sn	17 37 30.4	+0.2
VRAC	**Vranov**	**1.83**	**246**	*e*Pn	Pn	17 37 06.7	0.0
baz=60							
VRAC				*e*Sg	Sg	17 37 31.5	-1.4
comp=Z,9.7nm,0.6s,baz=60							
DPC	**Dobruska-Polom**	**1.84**	**280**	*e*PG	Pg	17 37 06.0	-3.2
DPC				*e*SG	Sg	17 37 30.3	-2.8
comp=Z,21nm,0.8s							
DPC	**Dobruska-Polom**	**1.84**	**280**	*e*Pn	Pn	17 37 05.8	-1.0
baz=94							
DPC				Sg	Sg	17 37 30.3	-2.8
comp=Z,21nm,0.8s							
CRVS	**Cervenica-Dubn**	**1.91**	**127**	*e*PN	Pn	17 37 10.1	+2.4
CRVS				*e*SN	Sn	17 37 32.9	+0.4
CRVS	**Cervenica-Dubn**	**1.91**	**127**	*e*Pn	Pn	17 37 10.1	+2.4
CRVS				*e*Sn	Sn	17 37 32.9	+0.4
KRUC	**Moravsky**	**2.06**	**242**	*e*Pn	Pn	17 37 09.9	0.0
baz=56							
KRUC				*e*Sn	Sn	17 37 37.6	+1.3
comp=Z,11nm,0.5s,baz=56							
PRU	**Pruhonice**	**2.98**	**270**	*e*SG	Sg	17 38 06.1	-3.4
comp=Z,6.1nm,0.9s							
PRU	**Pruhonice**	**2.98**	**270**	Sg	Sg	17 38 06.1	-3.4
comp=Z,6.1nm,0.9s							
KHC	**Kasperske Hory**	**3.75**	**257**	*e*SG	Sg	17 38 31.8	-2.6
comp=Z,3.0nm,0.5s							
KHC	**Kasperske Hory**	**3.75**	**257**	Sg	Sg	17 38 31.8	-2.6
comp=Z,3.0nm,0.5s							
CLL	**Collm**	**4.10**	**290**	*e*Sg	Sg	17 38 45.0	-0.7
CLL	**Collm**	**4.10**	**290**	*e*Sg	Sg	17 38 45.0	-0.7
NKC	**Novy Kostel**	**4.32**	**275**	*e*SG	Sg	17 38 48.1	-4.5
NKC	**Novy Kostel**	**4.32**	**275**	Sg	Sg	17 38 48.1	-4.5

*BJI **01** 17:46:26.6, 56.°66N×115.°52E, h10km, mb3.8/3*
*IDC **01** 17:46:31.2±0.8, 56.°15N×114.°79E, h0km, mb3.8/11, mb1 4.0/13, mb1mx3.8/27, mbtmp3.8/13, ML3.4/2, Error ellipse: s-maj=19.5km s-min=17.5km az=163.0*
*MOS **01** 17:46:31.1±1.0, 56.°15N×114.°86E, h15km, mb4.6/3, Error ellipse: s-maj=12.2km s-min=7.9km az=60.8*
*NEIC **01** 17:46:31.5±0.4, 56.°13N×115.°06E, h10km, mb4.1/2, Error ellipse: s-maj=9.1km s-min=6.2km az=151.0*
*BYKL **01** 17:46:33.1±0.3, 56.°14N×114.°88E*
ISC 01 17:46:32.0±0.3, 56.°02N±0.°03×114.°87E±0.°03, h10km, n83, σ1§56/141, mb3.9/14, 19C-12D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOA	**Uoyan**	**1.77**	**275**	⇑*i*Pn	**Pn**	**17 47 03.2**	**+0.6**
YOA				⇓*i*Pg	**Pg**	**17 47 04.6**	**-1.2**
YOA				Pmax		17 47 11.3	
1μm,0.8s							
YOA				*i* Sg	**Sg**	**17 47 28.4**	**-0.3**
YOA				Smax		17 47 31.5	
12μm,0.4s							
KMO	**Kumora**	**2.07**	**268**	PN	**Pn**	**17 47 07.5**	**+0.8**
KMO	**Kumora**	**2.07**	**268**	⇓*i*Pn	**Pn**	**17 47 07.5**	**+0.8**
KMO				⇑*i*Pg	**Pg**	**17 47 09.4**	**-2.2**
KMO				*e*		17 47 11.4	
KMO				max		17 47 14.2	
713nm,0.5s							
KMO				*i* Sg	**Sg**	**17 47 37.2**	**-1.2**
KMO				Smax		17 47 38.2	
5μm,1.0s							
CRS	**Chara**	**2.08**	**63**	*e*PN	**Pn**	**17 47 07.7**	**+0.8**
CRS				*e*		17 47 36.6	
CRS				pmax	pmax		
comp=Z,287nm,0.6s							
CRS				smax			
comp=E,3μm,1.1s							
CRS	**Chara**	**2.08**	**63**	*e*Pg	**Pn**	**17 47 07.7**	**+0.8**
CRS				*e*Sg	**Sg**	**17 47 36.6**	**-2.3**
CRS	**Chara**	**2.08**	**63**	⇓*i*Pn	**Pn**	**17 47 07.4**	**+0.5**
CRS				⇓*i*Pg	**Pg**	**17 47 09.9**	**-2.0**
CRS				⇑*i*		17 47 13.7	
CRS				max		17 47 14.0	
comp=E,393nm,0.8s							
CRS				*e*		17 47 17.0	
CRS				*i* Sg	**Sg**	**17 47 36.7**	**-2.2**
CRS				Smax		17 47 38.3	
comp=E,3μm,1.5s							
YLYR	**Ulyunkhan**	**2.40**	**243**	⇑*i*PN	**Pn**	**17 47 13.0**	**+1.7**
YLYR				*e*		17 47 16.3	
YLYR				*e*S	**Sn**	**17 47 43.4**	**+2.7**
YLYR				*e*		17 47 49.2	
YLYR				pmax	pmax		
comp=Z,198nm,0.7s							
YLYR				smax			
comp=N,2μm,0.3s							
YLYR	**Ulyunkhan**	**2.40**	**243**	⇑*i*Pn	**Pn**	**17 47 13.0**	**+1.7**
YLYR				*e*Pg	**Pg**	**17 47 16.3**	**-1.7**
YLYR				*e*Sn	**Sn**	**17 47 43.4**	**+2.7**
YLYR				*e*Sg	**Sg**	**17 47 49.2**	**+0.1**
YLYR	**Ulyunkhan**	**2.40**	**243**	⇑*i*Pn	**Pn**	**17 47 12.9**	**+1.6**
comp=N,41nm,0.5s							
YLYR				⇑*i*Pn	**Pn**	**17 47 12.9**	**+1.6**
comp=N,57nm,0.5s							
YLYR				⇓*i*Pn	**Pn**	**17 47 12.9**	**+1.6**
comp=N,81nm,0.5s							
YLYR				*e*Pg	**Pg**	**17 47 16.4**	**-1.6**
YLYR				*e*PgPg		17 47 20.0	
YLYR				max		17 47 20.6	
comp=N,325nm,0.7s							
YLYR				*e*Sg	**Sg**	**17 47 49.1**	**0.0**
YLYR				Smax		17 47 49.9	
comp=N,2μm,0.7s							
YLYR				*e*		17 47 51.0	
KHNR	**Khani**	**2.98**	**70**	*e*Pn	**Pn**	**17 47 19.3**	**+0.1**
KHNR				⇑*i*Pg	**Pg**	**17 47 24.7**	**-4.2**
KHNR				*e*Sn	**Sn**	**17 47 53.9**	**-0.9**
KHNR				*e*Sg	**Sg**	**17 48 02.2**	**-5.3**
NIZ	**Nizh Angarsk**	**3.01**	**268**	*e*PN	**Pn**	**17 47 21.0**	**+1.4**
NIZ				*e*		17 47 27.5	
NIZ				*e*		17 48 07.7	
NIZ				pmax	pmax		
comp=Z,116nm,0.9s							
NIZ				smax			
comp=N,736nm,0.8s							
NIZ	**Nizh Angarsk**	**3.01**	**268**	*e*Pn	**Pn**	**17 47 21.0**	**+1.4**
NIZ				*e*Pg	**Pg**	**17 47 27.5**	**-2.1**
NIZ				*e*Sg	**Sg**	**17 48 07.7**	**-0.9**
NIZ	**Nizh Angarsk**	**3.01**	**268**	⇓*i*Pn	**Pn**	**17 47 20.4**	**+0.8**
NIZ				*e*Pg	**Pg**	**17 47 26.4**	**-3.2**
NIZ				Pmax		17 47 46.4	
comp=N,117nm,1.1s							
NIZ				*i* Sg	**Sg**	**17 48 06.8**	**-1.8**
NIZ				Smax		17 48 18.1	
comp=N,740nm,0.5s							
TUP	**Tupik**	**3.32**	**117**	⇑*i*PN	**Pn**	**17 47 25.6**	**+1.7**
TUP				*e*		17 47 33.5	
TUP				*e*		17 48 16.8	
TUP				pmax	pmax		
comp=Z,237nm,0.6s							
TUP				smax			
comp=N,1μm,1.0s							
TUP	**Tupik**	**3.32**	**117**	⇑*i*Pn	**Pn**	**17 47 25.6**	**+1.7**
TUP				*e*Pg	**Pg**	**17 47 33.5**	**-2.0**
TUP				*e*Sg	**Sg**	**17 48 16.8**	**-1.7**
TUP	**Tupik**	**3.32**	**117**	⇑*i*Pn	**Pn**	**17 47 25.6**	**+1.7**
TUP				*e*		17 47 29.9	
TUP				*e*Pg	**Pg**	**17 47 32.0**	**-3.5**
TUP				Pmax		17 47 34.7	
comp=N,214nm,0.8s							
TUP				*e*Sn	**Sn**	**17 48 06.2**	**+2.8**
TUP				*e*Sg	**Sg**	**17 48 17.0**	**-1.5**
TUP				Smax		17 48 19.0	
comp=N,968nm,1.0s							
TUP				*e*		17 48 24.1	
SYVR	**Suvo**	**3.68**	**232**	*e*PN	**Pn**	**17 47 30.2**	**+1.4**
SYVR				*e*		17 47 39.2	
SYVR				*e*		17 48 28.6	
SYVR				pmax	pmax		
comp=Z,84nm,1.0s							
SYVR				smax			
comp=N,655nm,0.7s							
SYVR	**Suvo**	**3.68**	**232**	⇓*i*Pn	**Pn**	**17 47 30.2**	**+1.4**
SYVR				*e*		17 47 34.5	
SYVR				*e*Pg	**Pg**	**17 47 39.5**	**-2.9**
SYVR				*e*		17 47 45.3	
SYVR				max		17 47 49.0	
comp=N,85nm,1.3s							
SYVR				*i* Sn	**Sn**	**17 48 15.7**	**+3.5**
SYVR				*i* Sg	**Sg**	**17 48 28.4**	**-1.6**
SYVR				Smax		17 48 31.2	
comp=N,619nm,1.0s							
SYVR				*e*		17 48 36.1	
CIT	**Chita**	**4.08**	**192**	*e*PN	**Pn**	**17 47 35.4**	**+1.1**
CIT				*e*S	**Sg**	**17 48 40.1**	**-2.8**
CIT				smax			
comp=E,1μm,0.6s							
CIT	**Chita**	**4.08**	**192**	*e*Pn	**Pn**	**17 47 35.4**	**+1.1**
CIT				*e*Sg	**Sg**	**17 48 40.1**	**-2.8**
CIT	**Chita**	**4.08**	**192**	*e*Pn	**Pn**	**17 47 35.8**	**+1.5**
CIT				*e*		17 47 40.8	
CIT				⇓*i*Pg	**Pg**	**17 47 48.3**	**-1.8**
CIT				Pmax		17 47 49.2	
comp=E,182nm,1.1s							
CIT				*e*		17 48 24.7	
CIT				*e*Sg	**Sg**	**17 48 43.6**	**+0.7**
CIT				Smax		17 48 46.9	
comp=E,1μm,0.6s							
MXMB	**Maximikha**	**4.50**	**235**	⇑*i*Pn	**Pn**	**17 47 41.7**	**+1.6**
MXMB				*e*Pg	**Pg**	**17 47 55.5**	**-2.7**
MXMB				⇑*i*		17 47 58.7	
MXMB				max		17 48 00.1	
comp=E,233nm,1.0s							
MXMB				*e*Sn	**Sn**	**17 48 33.8**	**+1.3**
MXMB				*e*Sg	**Sg**	**17 48 54.6**	**-1.8**
MXMB				Smax		17 49 03.1	
comp=E,903nm,0.8s							
OGRR	**Ongureny**	**4.83**	**244**	*e*PN	**Pn**	**17 47 45.8**	**+1.1**
OGRR				*e*		17 47 59.6	
OGRR				*e*		17 49 03.0	
OGRR				pmax	pmax		
comp=Z,55nm,1.5s							
OGRR				smax			
comp=N,322nm,1.4s							
OGRR	**Ongureny**	**4.83**	**244**	*e*Pn	**Pn**	**17 47 45.8**	**+1.1**
OGRR				*e*Pg	**Pg**	**17 47 59.6**	**-4.8**
OGRR				*e*Sg	**Sg**	**17 49 03.0**	**-4.0**
OGRR	**Ongureny**	**4.83**	**244**	⇓*i*Pn	**Pn**	**17 47 45.7**	**+1.0**
OGRR				⇓*i*		17 47 56.3	
OGRR				*e*Pg	**Pg**	**17 48 00.4**	**-4.0**
OGRR				*e*		17 48 04.2	
OGRR				max		17 48 04.7	
comp=N,55nm,1.5s							
OGRR				*e*		17 48 46.4	
OGRR				*e*Sg	**Sg**	**17 49 03.9**	**-3.1**
OGRR				*e*		17 49 13.4	
OGRR				max		17 49 15.9	
comp=N,321nm,1.2s							
CLNS	**Chul'man**	**5.62**	**77**	*e*PN	**Pn**	**17 47 59.6**	**+4.1**
CLNS				*e*		17 48 13.8	
CLNS				*e*		17 49 26.7	
CLNS				pmax	pmax		
comp=Z,3.0nm,0.3s							
CLNS				pmax	pmax		
comp=E,9.0nm,0.8s							
CLNS				pmax	pmax		
comp=N,1.0nm,0.2s							
CLNS				pmax	pmax		
comp=Z,15nm,0.4s							
CLNS				pmax	pmax		
comp=E,32nm,0.8s							
CLNS				pmax	pmax		
comp=N,29nm,0.8s							
CLNS				smax			
comp=E,150nm,0.8s							
CLNS				smax			
comp=N,221nm,0.8s							
CLNS				smax			
comp=Z,91nm,0.7s							
CLNS	**Chul'man**	**5.62**	**77**	*e*	**Pn**	**17 47 59.7**	**+4.2**
CLNS				*e*		17 48 08.3	
CLNS				*e*Pg	**Pg**	**17 48 14.4**	**-5.2**
CLNS				*e*		17 48 42.3	
CLNS				*e*Sg	**Sg**	**17 49 27.0**	**-5.3**
TNDR	**Tynda**	**5.66**	**95**	*e*	**Pb**	**17 48 12.2**	**+1.5**
TNDR				*e*		17 48 58.6	
TNDR				*e*Sg	**Sg**	**17 49 29.0**	**-4.4**
ZRHB	**Zarechye**	**5.70**	**236**	*e*Pg	**Pg**	**17 48 16.4**	**-4.6**
ZRHB				Pmax		17 48 26.1	
comp=Z,96nm,1.0s							
ZRHB				*e*Sg	**Sg**	**17 49 31.9**	**-2.8**
ZRHB				Smax		17 50 08.4	
comp=Z,1μm,1.0s							
UUDB	**Ulan-Yde**	**5.95**	**229**	⇑*i*Pn	**Pn**	**17 48 01.7**	**+1.7**
UUDB				*e*		17 48 10.1	
UUDB				⇑*i*Pg	**Pg**	**17 48 21.7**	**-4.1**
UUDB				Pmax		17 48 37.1	
comp=Z,46nm,0.8s							
UUDB				*e*		17 49 14.7	
UUDB				*e*Sg	**Sg**	**17 49 41.1**	**-1.7**
UUDB				Smax		17 49 49.0	
comp=Z,580nm,1.8s							
UUDB				*e*		17 49 55.1	
TRG	**Tyrgan**	**5.95**	**240**	*e*PN	**Pn**	**17 48 01.8**	**+1.8**
TRG				*e*		17 48 20.0	
TRG				*e*S	**Sn**	**17 49 08.8**	**+0.6**
TRG				*e*		17 49 36.3	
TRG				pmax	pmax		
comp=Z,20nm,0.9s							
TRG				smax			
comp=N,128nm,0.8s							
TRG	**Tyrgan**	**5.95**	**240**	*e*Pn	**Pn**	**17 48 01.7**	**+1.7**
TRG				*e*Pg	**Pg**	**17 48 20.6**	**-5.3**
TRG				Pmax		17 48 29.9	
comp=N,20nm,1.0s							
TRG				*e*Sg	**Sg**	**17 49 39.4**	**-3.5**
TRG				Smax		17 49 57.4	
comp=N,143nm,1.4s							
KAB	**Kabansk**	**6.26**	**234**	*e*Sg	**Sg**	**17 49 51.0**	**-1.8**
KAB				*e*		17 50 02.4	
KAB				max		17 50 21.1	
comp=N,1μm,1.4s							
HRMR	**Khuramsha**	**6.42**	**230**	⇓*i*Pn	**Pn**	**17 48 07.9**	**+1.4**
HRMR				⇑*i*Pg	**Pg**	**17 48 30.1**	**-4.8**
HRMR				Pmax		17 48 37.8	
comp=N,43nm,0.6s							
HRMR				*e*		17 49 25.7	
HRMR				*e*Sg	**Sg**	**17 49 55.3**	**-2.7**
HRMR				*e*		17 50 01.0	
HRMR				max		17 50 18.1	
comp=N,1μm,1.2s							
LSTR	**Listvyanka**	**7.24**	**239**	*e*Pn	**Pn**	**17 48 21.1**	**+3.5**
LSTR				*e*		17 48 48.1	
LSTR				max		17 49 17.6	
comp=N,6.0nm,0.8s							
LSTR				*e*		17 49 56.5	
LSTR				*e*Sg	**Sg**	**17 50 17.5**	**-6.5**
LSTR				Smax		17 50 34.2	
comp=N,306nm,1.9s							
IRK	**Irkutsk**	**7.28**	**243**	*e*	**Sn**	**17 49 46.4**	**+5.4**
IRK				*e*Sg	**Sg**	**17 50 19.2**	**-6.3**
IRK				Smax		17 50 30.0	
comp=N,276nm,1.0s							
HIA	**Hailar**	**7.38**	**154**	*e*PN	**Pn**	**17 48 17.7**	**-2.0**
HIA				pmax	pmax		
comp=Z,16nm,0.7s							
HIA	**Hailar**	**7.38**	**154**	*e*P	**Pn**	**17 48 17.6**	**-2.0**
comp=Z,16nm,0.7s							
HIA	**Hailar**	**7.38**	**154**	*e*	**Pn**	**17 48 19.0**	**-0.7**
HIA				*e*		17 48 50.1	
HIA				*e*		17 49 40.1	
HIA				*e*Sg	**Sg**	**17 50 24.8**	**-3.9**
TLY	**Talaya**	**7.93**	**241**	*e*PN	**Pn**	**17 48 29.7**	**+2.5**
TLY				*e*		17 48 56.2	
TLY				*e*		17 50 39.2	
TLY				pmax	pmax		
comp=Z,7.0nm,0.6s							
TLY				smax			
comp=N,139nm,1.7s							
TLY	**Talaya**	**7.93**	**241**	Pn	**Pn**	**17 48 27.4**	**+0.2**
TLY				*e*Lg		17 50 41.4	
TLY	**Talaya**	**7.93**	**241**	*e*Pg	**Pb**	**17 48 55.9**	**+6.5**
TLY				Pmax		17 49 01.2	
comp=N,5.0nm,0.1s							
TLY				*e*		17 49 25.7	
TLY				*e*		17 50 08.4	
TLY				*e*Sg	**Sb**	**17 50 39.7**	**+16**
TLY				Smax		17 51 12.8	
comp=N,139nm,1.7s							
ARS	**Arshan**	**8.40**	**246**	*e*Pn	**Pn**	**17 48 37.2**	**+3.5**
ARS				*e*		17 48 59.7	
ARS				*e*Pg	Pn	17 49 05.5	+32
ARS				Pmax		17 49 31.3	
comp=N,15nm,0.6s							
ARS				*e*		17 50 52.7	
ARS				*e*Sg	Sn	17 50 55.0	+46
ARS				Smax		17 51 00.2	
comp=N,346nm,0.9s							
ZAK	**Zakamensk**	**8.95**	**236**	*e*P	**Pn**	**17 48 44.6**	**+3.4**
ZAK	**Zakamensk**	**8.95**	**236**	⇓*i*Pn	**Pn**	**17 48 45.0**	**+3.8**
ZAK				*e*		17 49 03.4	
ZAK				*e*Pg	Pn	17 49 15.2	+34
ZAK				Pmax		17 49 32.1	
comp=N,4.0nm,0.9s							
ZAK				*e*Sg	Sn	17 51 13.1	+51
ZAK				*e*		17 51 19.5	
ZAK				max		17 51 53.7	
comp=N,71nm,1.6s							
MOY	**Mondy**	**9.29**	**248**	*e*P	**Pn**	**17 48 47.9**	**+2.2**
MOY				pmax	pmax		
comp=Z,10.0nm,0.5s							
MOY	**Mondy**	**9.29**	**248**	⇑*i*Pn	**Pn**	**17 48 48.2**	**+2.5**
MOY				*e*		17 48 56.7	
MOY				*e*		17 49 11.0	
MOY				Pg	Pn	17 49 21.7	+36
MOY				Pmax		17 49 33.8	
comp=Z,18nm,0.9s							
MOY				*e*		17 50 49.4	
MOY				*e*Sg	Sn	17 51 23.0	+53
MOY				Smax		17 51 36.7	
comp=Z,165nm,1.6s							
ORL	**Orlik**	**9.47**	**255**	⇑*i*Pn	**Pn**	**17 48 49.2**	**+0.9**
ORL				*e*		17 49 04.6	
ORL				max		17 49 19.8	
comp=Z,10.0nm,1.6s							
ORL				*e*Pg	Pn	17 49 24.2	+36
ORL				*e*		17 50 48.7	
ORL				*e*Sg	Sn	17 51 28.4	+54
ORL				Smax		17 51 42.1	
comp=Z,148nm,2.0s							
ULN	**Ulaanbaatar**	**9.48**	**214**	*e*P	**Pn**	**17 48 50.6**	**+2.2**
ULN				pmax	pmax		
comp=Z,2.0nm,0.8s							
ULN	**Ulaanbaatar**	**9.48**	**214**	*e*P	**Pn**	**17 48 50.6**	**+2.2**
comp=Z,2.5nm,0.8s							
ULN	**Ulaanbaatar**	**9.48**	**214**	*e*	**Pn**	**17 49 06.7**	**+18**
ULN				*e*Pg	Pn	17 49 26.8	+38
ULN				*e*		17 50 46.5	
ULN				*e*Sg	Sn	17 51 30.3	+55
YAK	**Yakutsk**	**9.71**	**46**	*e*P	**Pn**	**17 48 45.2**	**-6.3**
YAK				*e*S	**Sn**	**17 50 46.7**	**+6.2**
YAK				pmax	pmax		
comp=Z,3.0nm,0.8s							
YAK				pmax	pmax		
comp=E,3.0nm,1.2s							
YAK				smax			
comp=E,25nm,0.9s							
YAK				smax			
comp=N,15nm,0.5s							
YAK				MLR	MLR		
comp=Z,251nm,18.0s							
YAK				MLR	MLR		
comp=N,225nm,24.0s							
YAK				MLR	MLR		
comp=E,212nm,15.0s							
YAK	**Yakutsk**	**9.71**	**46**	*e*P	**Pn**	**17 48 47.3**	**-4.3**
comp=E,9.2nm,0.6s							
SONM	**Songino Array**	**9.72**	**216**	Pn	**Pn**	**17 48 54.1**	**+2.5**
comp=E,0.3nm,0.3s,baz=18,slow=12,SNR=15							
SONM				Lg		17 51 41.2	
comp=E,4.5nm,0.3s,baz=20,slow=28,SNR=20							
HABR	**Khabarovsk**	**14.45**	**113**	*e*P	**Pn**	**17 49 56.2**	**-0.1**
HABR				*e*		17 52 35.5	
HABR				pmax	pmax		
comp=E,10.0nm,0.6s	

ZALV			Lg			17 55 39.4	
KSRS	**Korea Array**	**20.55 149**	P	**P**		**17 51 14.5**	**+4.1**
	comp=Z,0.6nm,0.5s,baz=334,slow=13,SNR=2.6						
KURK	**Kurchatov**	**22.09 271**	P	**P**		**17 51 28.8**	**+1.9**
	comp=Z,1.1nm,0.3s,mb3.8,baz=71,slow=10,SNR=9.5						
KURK	**Kurchatov**	**22.09 271**	*e*P	**P**		**17 51 27.0**	**+0.1**
KURK	**Kurchatov**	**22.09 271**	P	**P**		**17 51 28.8**	**+1.9**
MK31	**Makanchi Array**	**22.13 259**	*e*P	**P**		**17 51 28.2**	**+0.8**
MKAR	**Makanchi Array**	**22.13 259**	P	**P**		**17 51 28.2**	**+0.8**
	comp=Z,2.9nm,0.7s,mb3.8,baz=57,slow=9.2,SNR=22						
XAN	**Xi'an**	**22.36 193**	P	**P**		**17 51 37.3**	**+7.4**
XAN			pP			17 51 43.8	
XAN			pmax	pmax			
	comp=Z,3.0nm,0.9s,mb3.7						
BVAR	**Borovoye Array**	**25.65 282**	P	**P**		**17 52 02.0**	**+0.6**
	comp=Z,0.5nm,0.4s,mb3.4,baz=73,slow=11,SNR=3.7						
AAK	**Ala-Archa**	**29.06 260**	*e*P	**P**		**17 52 30.0**	**-2.2**
ARU	**Arti**	**30.56 295**	*c i*P	**P**		**17 52 44.6**	**-0.7**
ARU						17 53 43.2	
ARU			S	**S**		**17 57 46.1**	**-0.6**
ARU			SS	SS		17 59 26.1	-30
ARU			pmax	pmax			
	comp=Z,10.0nm,2.5s,mb4.2						
FINES	**FINESS Array B**	**43.00 315**	P	**P**		**17 54 30.3**	**-0.6**
	comp=Z,4.6nm,0.9s,mb4.2,baz=60,slow=7.5,SNR=5.3						
FINES	**FINESS Array B**	**43.00 315**	P	**P**		**17 54 30.3**	**-0.6**
ILAR	**Eielson Array**	**44.51 37**	P	**P**		**17 54 43.5**	**+0.4**
	comp=Z,1.3nm,0.9s,mb3.8,baz=304,slow=7.7,SNR=15						
AKASG	**Malin Array Be**	**48.26 302**	P	**P**		**17 55 12.4**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=41,slow=8.6,SNR=4.5						
NB2	**NORSAR Subarra**	**48.83 321**	P	**P**		**17 55 16.2**	**-0.6**
	comp=Z,1.0nm,0.5s,mb4.1,baz=50,slow=7.9						
NOA	**NORSAR Array B**	**48.83 321**	P	**P**		**17 55 16.4**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.3,baz=50,slow=7.7,SNR=6.7						
BUR08	**Bucovina Ar. S**	**52.28 301**	*e*P	**P**		**17 55 43.8**	**+0.7**
CLL	**Collm**	**55.13 312**	*e*P	**P**		**17 56 09.0**	**+5.1**
CLL			*e*			17 57 12.0	
CLL			pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.5						
BOZ	**Bozeman (W)**	**71.42 32**	*e*P	**P**		**17 57 48.4**	**-3.6**
BOZ			pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.3						
BOZ	**Bozeman (W)**	**71.42 32**	*e*P	**P**		**17 57 48.4**	**-3.5**
	comp=Z,1.8nm,0.5s,mb4.3						
ESDC	**Sonseca Array**	**71.51 315**	P	**P**		**17 57 52.7**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.8,baz=31,slow=7.4,SNR=3.7						
NVAR	**Mina Array Bea**	**75.65 40**	P	**P**		**17 58 18.0**	**+1.0**
	comp=Z,0.6nm,0.7s,mb3.7,baz=350,slow=4.7,SNR=2.2						
ASAR	**Alice Springs**	**81.00 162**	P	**P**		**17 58 46.8**	**+0.3**
	comp=Z,0.9nm,0.9s,mb3.7,baz=355,slow=5.1,SNR=9.0						

MAN 01 17:52:32.7±08N×123°91E, h30km, mb4.2, ML3.0, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.36**	**67**	⇓*i*P	Pb	17 52 41.7	+1.4
CTBH				*i* S	Sb	17 52 49.1	+3.1
PAGZ	**Pagadian**	**0.93**	**326**	*e*P	Pn	17 52 49.0	0.0
PAGZ				*e*S	Sn	17 52 56.5	-4.9
BUKP	**Musuan**	**1.39**	**55**	*e*P	Pn	17 52 59.1	+3.8
IPIL	**Ipil**	**1.51**	**298**	*e*P	Pn	17 52 57.4	+0.5
IPIL				*e*S		17 53 01.1	

*IDC **01** 18:11:45.5±2.1, 18°34N×68°87W, h121km±18km, mb3.5/8, mb1 3.7/9, mb1mx3.5/21, mbtmp3.5/9, Error ellipse: s-maj=22.0km s-min=19.0km az=178.0*
*ISCJB **01** 18:11:46.4±0.4, 18°60N±0°09×68°73W±0°04, h143km±4km, mb3.5/8, Error ellipse: s-maj=14.7km s-min=5.2km az=16.4*
*RSPR **01** 18:11:47.6, 18°71N×68°67W, h138km±3km, MD4.1/18*
*NEIC **01** 18:11:47.6, 18°71N×68°67W, h138km, MD4.1(RSPR), After RSPR.*

ISC 01 18:11:47.5±0.4, 18°56N±0°08×68°74W±0°04, h136km±4km, n42, σ0s93/48, mb3.5/8, 11C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMN1	**Samana, DR**	**0.80**	**321**	⇑*e*P	**Pn**	**18 12 08.9**	**-0.4**
SMN1				*e*S	**Sn**	**18 12 25.7**	**-0.2**
IMO	**Isla Mona**	**0.91**	**119**	⇑*i*P	**Pn**	**18 12 10.3**	**+0.2**
AGPR	**Aguadilla, PR**	**1.55**	**93**	⇓*e*P	**Pn**	**18 12 17.1**	**+0.5**
AGPR				*e*S	**Sn**	**18 12 39.9**	**+1.2**
LSP	**Las Mesas**	**1.62**	**103**	⇓*e*P	**Pn**	**18 12 18.2**	**+0.8**
LSP	**Las Mesas**	**1.62**	**103**	*e*P	**Pn**	**18 12 16.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.65**	**109**	⇓*i*P	**Pn**	**18 12 17.3**	**-0.3**
CRPR				*e*S	**Sn**	**18 12 40.0**	**-0.7**
LRS	**Lares**	**1.82**	**98**	⇑*e*P	**Pn**	**18 12 19.8**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.86**	**108**	⇑*i*P	**Pn**	**18 12 20.8**	**+0.6**
GBPR				*e*S	**Sn**	**18 12 46.8**	**+1.6**
AOPR	**Arecibo Observ**	**1.90**	**96**	⇑*e*P	**Pn**	**18 12 20.6**	**0.0**
AOPR				*e*S	**Sn**	**18 12 45.9**	**-0.1**
OBIP	**Obispado Ponce**	**2.09**	**104**	⇓*e*P	**Pn**	**18 12 23.1**	**+0.2**
OBIP				*e*S	**Sn**	**18 12 51.0**	**+0.9**
CELP	**Cerrillos**	**2.11**	**103**	⇑*i*P	**Pn**	**18 12 23.5**	**+0.3**
CELP	**Cerrillos**	**2.11**	**103**	*e*P	**Pn**	**18 12 22.8**	**-0.3**
ICM	**Isla Caja Muer**	**2.21**	**107**	⇓*e*P	**Pn**	**18 12 24.1**	**-0.3**
ICM	**Isla Caja Muer**	**2.21**	**107**	*e*S	**Sn**	**18 12 53.0**	**+0.3**
ICM	**Isla Caja Muer**	**2.21**	**107**	*e*P	**Pn**	**18 12 23.9**	**-0.5**
SDDR	**Presa de Saban**	**2.45**	**280**	⇑*e*P	**Pn**	**18 12 27.5**	**+0.2**
SDDR	**Presa de Saban**	**2.45**	**280**	*e*S	**Sn**	**18 12 59.5**	**+1.6**
SDDR	**Presa de Saban**	**2.45**	**280**	*e*P	**Pn**	**18 12 26.8**	**-0.5**
SJG	**San Juan**	**2.50**	**100**	⇑*e*P	**Pn**	**18 12 28.6**	**+0.6**
SJG	**San Juan**	**2.50**	**100**	*e*S	**Sn**	**18 12 58.4**	**-0.7**
SJG	**San Juan**	**2.50**	**100**	⇑*e*P	**Pn**	**18 12 27.6**	**-0.4**
SJG	**San Juan**	**2.50**	**100**	P	**Pn**	**18 12 27.2**	**-0.7**
	22nm,0.3s,baz=275,slow=8.3,SNR=44						
SJG				S	**Sn**	**18 12 58.6**	**-0.5**
	24nm,0.3s,baz=330,slow=19,SNR=6.4						
SJG	**San Juan**	**2.50**	**100**	⇑*e*P	**Pn**	**18 12 28.6**	**+0.6**
SJG				*e*S	**Sn**	**18 12 58.4**	**-0.7**
CBYP	**Canovanas**	**2.75**	**96**	⇑*e*P	**Pn**	**18 12 30.7**	**-0.5**
CBYP	**Canovanas**	**2.75**	**96**	*e*P	**Pn**	**18 12 30.1**	**-1.0**
HUMP	**Col San Antoni**	**2.78**	**98**	⇑*e*P	**Pn**	**18 12 30.9**	**-0.6**
HUMP				*e*S	**Sn**	**18 13 04.2**	**-1.1**
MTP	**Monte Pirata**	**3.06**	**98**	⇑*e*P	**Pn**	**18 12 34.6**	**-0.6**
STVI	**Saint Thomas**	**3.60**	**93**	⇑*e*P	**Pn**	**18 12 41.6**	**-0.5**
GRTK	**Grand Turk**	**3.70**	**323**	*e*P	**Pn**	**18 12 41.4**	**-2.0**
TBVI	**Tortola**	**3.92**	**91**	⇓*i*P	**Pn**	**18 12 45.1**	**-1.2**
SDV	**Santo Domingo**	**9.79**	**191**	*e*P	**Pn**	**18 14 05.9**	**+0.9**
	17nm,0.8s						
TXAR	**Lajitas Array**	**33.56**	**295**	P	**P**	**18 18 13.9**	**-0.5**
	0.1nm,0.4s,mb2.9,baz=115,slow=8.1,SNR=3.0						
CPUP	**Villa Florida**	**45.98**	**166**	P	**P**	**18 19 54.5**	**-2.6**
	0.6nm,0.3s,mb3.6,baz=349,slow=3.9,SNR=5.6						
PLCA	**Paso Flores**	**59.01**	**182**	P	**P**	**18 21 31.4**	**-1.4**
	2.9nm,1.1s,mb4.0,baz=0.0,slow=3.0,SNR=3.3						
ESDC	**Sonseca Array**	**59.12**	**54**	P	**P**	**18 21 34.9**	**+1.1**
	0.2nm,0.3s,mb3.4,baz=259,slow=8.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**67.61**	**83**	P	**P**	**18 22 30.4**	**+0.4**
	1.2nm,0.7s,mb3.7,baz=295,slow=6.2,SNR=6.5						
ILAR	**Eielson Array**	**68.32**	**333**	P	**P**	**18 22 33.5**	**-0.1**
	0.3nm,0.5s,mb3.2,baz=91,slow=7.3,SNR=5.1						
KEST	**Kesra**	**69.92**	**58**	P	**P**	**18 22 45.9**	**+1.8**
	0.9nm,0.9s,mb3.5,baz=243,slow=2.3,SNR=3.7						
BRTR	**Keskin Array B**	**87.45**	**49**	P	**P**	**18 24 21.6**	**+1.8**
	0.9nm,0.7s,mb3.7,baz=349,slow=2.9,SNR=4.1						
CN2	**Changchun**	**116.60**	**349**	*e*P	PKPdf	18 30 19.5	+4.0
STKA	**Stephens Creek**	**149.64**	**238**	PKPbc	PKPbc	18 31 19.9	-1.6
	1.7nm,0.8s,baz=69,slow=4.0,SNR=4.0						
ASAR	**Alice Springs**	**158.28**	**253**	PKPab	PKPab	18 32 03.2	-0.8
	0.5nm,0.8s,baz=102,slow=4.7,SNR=6.8						

*ISCJB **01** 18:17:35.5±0.6, 39°61N±0°05×20°65E±0°04, h17km±6km, Error ellipse: s-maj=8.1km s-min=5.4km az=170.1*
*ATH **01** 18:17:35.2, 39°53N×20°70E, h20km±2km, MD3.1/5*
*NEIC **01** 18:17:35.2, 39°53N×20°70E, h20km, MD3.1(ATH), After ATH.*
*THE **01** 18:17:35.7, 39°51N×20°67E, h0km±6km, ML1.7/2, Error ellipse: s-maj=7.0km s-min=1.8km az=23.0*
*CSEM **01** 18:17:35.1±0.3, 39°55N×20°69E, h10km, MD3.1, Error ellipse: s-maj=8.8km s-min=6.4km az=7.0*

ISC 01 18:17:35.6±0.6, 39°57N±0°06×20°68E±0°04, h14km±5km, n23, σ0s97/38, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**58**	*e*Pb	**Pg**	**18 17 39.3**	**-0.2**
JAN				*e*Sb	**Sg**	**18 17 43.3**	**+1.1**
JAN	**Janina**	**0.16**	**58**	*e*PB	**Pg**	**18 17 39.3**	**-0.2**
JAN				*e*SB	**Sg**	**18 17 43.3**	**+1.1**
JAN	**Janina**	**0.16**	**58**	*e*Pb	**Pg**	**18 17 39.3**	**-0.2**
JAN				*e*Sb	**Sg**	**18 17 43.3**	**+1.1**
IGT	**Igoumenitsa**	**0.27**	**261**	P	**Pg**	**18 17 40.1**	**-1.3**
IGT				S	**Sg**	**18 17 44.3**	**-1.0**
IGT	**Igoumenitsa**	**0.27**	**261**	P	**Pg**	**18 17 40.1**	**-1.3**
IGT				S	**Sg**	**18 17 44.3**	**-1.0**
KEK	**Kerkira**	**0.69**	**282**	*e*Pb	**Pb**	**18 17 48.7**	**-0.8**
KEK				*e*Sn	**Sg**	**18 18 00.1**	**+1.8**
KEK	**Kerkira**	**0.69**	**282**	*e*PB	**Pb**	**18 17 48.7**	**-0.8**
KEK				*e*SN	**Sg**	**18 18 00.1**	**+1.8**
KEK	**Kerkira**	**0.69**	**282**	P	**Pg**	**18 17 49.1**	**-0.1**
KEK				S	**Sg**	**18 18 00.9**	**+2.6**
KEK	**Kerkira**	**0.69**	**282**	*e*Pb	**Pb**	**18 17 48.7**	**-0.8**
KEK	**Kerkira**	**0.69**	**282**	P	**Pg**	**18 17 49.1**	**-0.1**
KEK				S	**Sg**	**18 18 00.9**	**+2.6**
NEST	**Nestorio**	**0.89**	**19**	P	**Pb**	**18 17 53.5**	**+0.7**
NEST	**Nestorio**	**0.89**	**19**	P	**Pb**	**18 17 53.5**	**+0.7**
THL	**Klokotos Trika**	**1.03**	**90**	*e*PN	**Pn**	**18 17 54.8**	**-0.8**
THL				*e*SN	**Sn**	**18 18 09.2**	**-0.7**
THL	**Klokotos Trika**	**1.03**	**90**	*e*Pn	**Pn**	**18 17 54.8**	**-0.8**
THL				*e*Sn	**Sn**	**18 18 09.2**	**-0.7**
EVR	**Evrytania**	**1.09**	**126**	*e*Pn	**Pn**	**18 17 55.6**	**-0.9**
EVR	**Evrytania**	**1.09**	**126**	*e*PN	**Pn**	**18 17 55.6**	**-0.9**
EVR	**Evrytania**	**1.09**	**126**	*e*Pn	**Pn**	**18 17 55.6**	**-0.9**
VLS	**Valsamata**	**1.40**	**183**	*e*Pn	**Pn**	**18 18 01.0**	**+0.3**
VLS				*e*Sn	**Sn**	**18 18 20.3**	**+1.4**
VLS	**Valsamata**	**1.40**	**183**	*e*PN	**Pn**	**18 18 01.0**	**+0.3**
VLS				*e*SN	**Sn**	**18 18 20.3**	**+1.4**
VLS	**Valsamata**	**1.40**	**183**	P	**Pn**	**18 18 01.1**	**+0.4**
VLS				S	**Sn**	**18 18 20.4**	**+1.5**
VLS	**Valsamata**	**1.40**	**183**	*e*Pn	**Pn**	**18 18 01.0**	**+0.3**
VLS				*e*Sn	**Sn**	**18 18 20.3**	**+1.4**
EFP	**Efpalio**	**1.49**	**140**	*e*PN	**Pn**	**18 18 02.5**	**+0.5**
EFP	**Efpalio**	**1.49**	**140**	*e*Pn	**Pn**	**18 18 02.5**	**+0.5**

IDC 01 19:13:59.8±1.8, 3°98S×151°60E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/15, mbtmp3.7/5, MS3.5/3, Ms1 3.5/3, ms1mx2.9/19, Error ellipse: s-maj=56.6km s-min=26.6km az=119.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.84**	**198**	LR	LR	19 23 10.1	
	comp=Z,102nm,19.9s,baz=225,slow=33						
ASAR	**Alice Springs**	**25.98**	**220**	P	P	19 19 34.4	0.0
	0.9nm,0.7s,baz=54,slow=8.3,SNR=14						
STKA	**Stephens Creek**	**29.30**	**198**	LR	LR	19 31 01.1	
	comp=Z,163nm,18.2s,baz=255,slow=35						
MJAR	**Matsushiro Arr**	**42.21**	**344**	LR	LR	19 38 49.3	
	comp=Z,62nm,18.2s,baz=120,slow=35						
CMAR	**Chiang Mai Arr**	**56.45**	**295**	P	P	19 23 43.2	-0.6
	0.2nm,0.6s,baz=108,slow=5.8,SNR=2.9						
PETK	**Petropavlovsk-**	**57.11**	**4**	P	P	19 23 46.5	-1.3
	1.3nm,0.4s,baz=170,slow=8.8,SNR=2.7						
SONM	**Songino Array**	**65.00**	**328**	P	P	19 24 43.0	+1.4
	0.3nm,0.6s,baz=140,slow=4.9,SNR=1.8						
ILAR	**Eielson Array**	**81.86**	**22**	P	P	19 26 21.3	+0.7
	0.8nm,0.6s,baz=242,slow=6.1,SNR=7.8						

*IDC **01** 19:22:15.5±1.6, 2°49N×95°94E, h0km, mb3.8/5, mb1 3.8/7, mb1mx3.6/21, mbtmp3.8/7, ML3.3/2, MS3.5/4, Ms1 3.6/4, ms1mx3.1/22, Error ellipse: s-maj=53.8km s-min=20.1km az=59.0*
*ISCJB **01** 19:22:21.1±2.0, 2°65N±0°07×96°2E±0°1, h50km±17km, mb4.0/9, MS3.8/4, Error ellipse: s-maj=22.9km s-min=9.9km az=164.1*
*NEIC **01** 19:22:21.1±0.7, 2°58N×96°09E, h35km, mb4.3/2, Error ellipse: s-maj=14.9km s-min=8.8km az=223.0*
*DJA **01** 19:22:23, 2°58N×96°38E, h13km, MLv4.0/4*

ISC 01 19:22:22.9±1.9, 2°69N±0°07×96°2E±0°1, h46km±17km, n21, σ0s86/21, mb4.0/9, MS3.8/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.14**	**60**	P	**Pn**	**19 22 41.1**	**-1.4**
TPTI				S	**Sn**	**19 22 55.9**	**-0.9**
TSI	**Tuntungan**	**2.50**	**71**	P	**Pn**	**19 23 03.3**	**+2.1**
PSI	**Prapat**	**2.73**	**88**	Pn	**Pn**	**19 23 04.2**	**-0.1**
	2.0nm,0.3s,baz=284,slow=6.1,SNR=16						
PSI				LR	LR	19 24 30.5	
	comp=Z,336nm,18.8s,baz=262,slow=45						
MNSI	**Mandailing Nat**	**3.87**	**119**	P	**Pn**	**19 23 19.4**	**-0.6**
MNSI				S	**Sn**	**19 24 04.6**	**+0.3**
SISI	**Saibi**	**4.93**	**144**	P	**Pn**	**19 23 33.8**	**-0.7**
IPM	**Ipoh**	**5.14**	**70**	*e*P	**Pn**	**19 23 37.5**	**+0.1**
	24nm,0.9s						
IPM	**Ipoh**	**5.14**	**70**	P	**Pn**	**19 23 37.9**	**+0.5**
BKNI	**Bangkinang**	**5.38**	**116**	P	**Pn**	**19 23 42.8**	**+2.0**
CMAR	**Chiang Mai Arr**	**15.90**	**10**	Pn	**Pn**	**19 26 03.9**	**+0.2**
	0.1nm,0.3s,baz=199,slow=11,SNR=15						
GTA	**Gaotai**	**36.70**	**5**	*e*P	**P**	**19 29 25.4**	**0.0**
GTA				pP	pP	19 29 29.7	-8.2
GTA				sP	sP	19 29 33.3	-10
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
BJT	**Baijiatuau**	**41.34**	**23**	*e*P	**P**	**19 30 05.3**	**+1.0**
	comp=Z,12nm,0.9s,mb4.5						
BJI	**Beijing**	**41.36**	**23**	P	**P**	**19 30 03.6**	**-0.8**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.3						
BJI				pmax	pmax		
	comp=Z,72nm,5.2s						
BJI				LR	LR		
	comp=N,280nm,14.3s,MS4.3						
BJI				LR	LR		
	comp=E,120nm,13.5s,MS4.3						
BJI				LR	LR		
	comp=Z,130nm,16.0s,MS3.9						
ASAR	**Alice Springs**	**45.09**	**128**	P	**P**	**19 30 34.2**	**-0.7**
	comp=Z,0.2nm,0.6s,mb3.1,baz=302,slow=7.7,SNR=6.8						
MKAR	**Makanchi Array**	**45.56**	**347**	P	**P**	**19 30 38.1**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.9,baz=167,slow=7.1,SNR=11						
MKAR				LR	LR	19 52 35.2	
	comp=Z,68nm,18.7s,MS3.6,baz=72,slow=40						
MK31	**Makanchi Array**	**45.56**	**347**	*e*P	**P**	**19 30 38.0**	**-0.2**
SONM	**Songino Array**	**45.83**	**10**	P	**P**	**19 30 41.1**	**+0.9**
	comp=Z,1.4nm,0.8s,mb4.0,baz=187,slow=8.9,SNR=10.0						
SONM				PcP	PcP	19 32 17.4	+0.3
	comp=Z,0.5nm,0.7s,baz=189,slow=3.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**51.94**	**351**	P	**P**	**19 31 27.1**	**+0.1**
	comp=Z,1.9nm,0.7s,mb4.1,baz=176,slow=6.6,SNR=9.3						
STKA	**Stephens Creek**	**55.10**	**132**	P	**P**	**19 31 50.0**	**-0.5**
	comp=Z,1.0nm,0.6s,mb4.0,baz=300,slow=20,SNR=2.7						
ABKAR	**Akbulak array**	**55.73**	**332**	*e*P	**P**	**19 31 54.6**	**-0.2**
	comp=Z,1.4nm,0.9s,mb4.0						
ARCES	**ARCESS Array B**	**80.80**	**340**	LR	LR	20 15 35.5	
	comp=Z,53nm,18.2s,MS3.9,baz=278,slow=40						
NOA	**NORSAR Array B**	**85.22**	**331**	LR	LR	20 17 53.6	
	comp=Z,25nm,21.4s,MS3.6,baz=70,slow=39						

GUC 01 19:23:26.8±0.9, 20°46S×69°00W, h130km±17km, ML4.1, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.86**	**282**	⇑*i*P	Pn	19 23 48.9	+0.5
HMBC				*i* S	Sn	19 24 06.1	+1.3
HMBC				AML	AML	19 24 10.4	
	comp=N,4μm,0.6s						
PSGC	**Pisagua**	**1.36**	**309**	⇑*i*P	Pn	19 23 54.0	+0.6
PSGC				*i* S	Sn	19 24 14.9	+1.3
PSGC				AML	AML	19 24 17.9	
	comp=N,2μm,0.4s						
MNMC	**Miæe Miæ**	**1.44**	**337**	⇑*i*P	Pn	19 23 55.1	+0.9
MNMC				*i* S	Sn	19 24 16.5	+1.4
MNMC				AML	AML	19 24 18.2	
	comp=E,9μm,0.6s						
MACH	**Maria Elena**	**1.87**	**202**	*e*P	Pn	19 24 01.6	+2.4
MACH				*i* S	Sn	19 24 24.8	+0.8
TOCH	**Tocopilla**	**1.98**	**214**	*e*P	Pn	19 24 01.6	+1.1
TOCH				*e*S	Sn	19 24 27.0	+0.6
TOCH				AML	AML	19 24 28.2	
	comp=N,1μm,0.3s						
CEN1	**Los Morros**	**3.12**	**201**	*e*P	Pn	19 24 18.1	+3.1

WEL 01 19:42:18.6±0.3, 36°92S×176°93E, h209km±4km, ML3.9/8, Error ellipse: s-maj=5.6km s-min=5.0km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.27**	**121**	PN	Pn	19 42 51.2	0.0
MXZ				SN	Sn	19 43 16.1	-0.6
URZ	**Urewera**	**1.35**	**174**	PN	Pn	19 42 51.9	+0.1
URZ				SN	Sn	19 43 17.6	-0.3
MWZ	**Matawai**	**1.49**	**162**	PN	Pn	19 42 53.4	+0.4
MWZ				SN	Sn	19 43 19.6	-0.3
PUZ	**Puketiti**	**1.56**	**138**	PN	Pn	19 42 53.8	+0.2
PUZ				SN	Sn	19 43 19.7	-1.3
CNGZ	**Carnagh Statio**	**1.86**	**147**	PN	Pn	19 42 57.1	+0.7
RAHZ	**Arahi**	**2.00**	**176**	PN	Pn	19 42 58.2	+0.5
PRGZ	**Paritu Road**	**2.14**	**160**	PN	Pn	19 42 59.2	0.0
NMHZ	**Naumai**	**2.18**	**183**	PN	Pn	19 43 00.2	+0.7
KNZ	**Kokohu**	**2.18**	**165**	PN	Pn	19 42 59.2	-0.4
BKZ	**Black Stump Fm**	**2.27**	**189**	PN	Pn	19 43 00.1	-0.4
MHGZ	**Mahia Peninsul**	**2.36**	**161**	PN	Pn	19 43 01.4	-0.1
OTVZ	**Oturere**	**2.45**	**204**	PN	Pn	19 43 03.1	+0.6
MCHZ	**McNeill Hill**	**2.53**	**184**	PN	Pn	19 43 03.4	+0.1
FWVZ	**Far West T-bar**	**2.57**	**205**	PN	Pn	19 43 04.6	+0.7
WNVZ	**Wahianoa**	**2.62**	**203**	PN	Pn	19 43 04.4	0.0
MOVZ	**Moawhango**	**2.65**	**200**	PN	Pn	19 43 04.3	-0.4
BHHZ	**Black Hill Sta**	**2.65**	**195**	PN	Pn	19 43 04.0	-0.7
CKHZ	**Cape Kidnapper**	**2.74**	**178**	PN	Pn	19 43 05.2	-0.5
KAHZ	**Kahuranaki**	**2.87**	**181**	PN	Pn	19 43 06.6	-0.6
PNHZ	**Pukenui**	**3.04**	**191**	PN	Pn	19 43 07.9	-1.3
PXZ	**Pawanui**	**3.11**	**181**	PN	Pn	19 43 08.6	-1.3
WPHZ	**Waipukurau**	**3.16**	**187**	PN	Pn	19 43 09.4	-1.2
TSZ	**Takapari Road**	**3.23**	**193**	PN	Pn	19 43 10.1	-1.2
PRHZ	**Porangahau**	**3.35**	**184**	PN	Pn	19 43 11.2	-1.6
DVHZ	**Dannevirke**	**3.43**	**190**	PN	Pn	19 43 11.7	-2.0
POWZ	**Post Office Ro**	**3.58**	**194**	PN	Pn	19 43 13.9	-1.6
BFZ	**Birch Farm**	**3.79**	**188**	PN	Pn	19 43 16.1	-2.0
MRZ	**Mangatainoka R**	**3.88**	**195**	PN	Pn	19 43 16.8	-2.4
OGWZ	**Otaki Gorge**	**4.13**	**199**	PN	Pn	19 43 19.8	-2.4
KIW	**Kapiti Island**	**4.24**	**201**	PN	Pn	19 43 21.2	-2.4
THZ	**Tophouse**	**5.75**	**212**	PN	Pn	19 43 40.4	-2.4
KHZ	**Kahutara**	**6.08**	**204**	PN	Pn	19 43 44.0	-2.9
LTZ	**Lake Taylor**	**6.86**	**210**	PN	Pn	19 43 53.7	-3.4

KRSC 01 19:49:57.3±0.3, 52°64N×160°68E, h15km±15km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.61**	**319**	*e*P	Pg	19 50 09.7	+0.5
SPN				*i* S	Sg	19 50 17.8	+0.5
PET	**Petropavlovsk**	**1.29**	**288**	*e*P	Pn	19 50 20.5	-0.2
PET				*i* S	Sb	19 50 37.5	0.0
AVH	**Avacha**	**1.33**	**299**	*e*P	Pn	19 50 21.1	-0.2
KII	**Karymskiy**	**1.58**	**333**	*e*P	Pn	19 50 26.1	+1.4
KII				*i* S	Sn	19 50 46.7	+1.8
GRL	**Gorelyy**	**1.59**	**268**	*e*P	Pn	19 50 26.3	+1.4
GNL	**Ganaly**	**1.96**	**304**	*e*P	Pn	19 50 31.4	+1.5
GNL				*i* S	Sn	19 50 56.7	+2.5
MKZ	**Mys Kozlova**	**2.02**	**18**	*e*P	Pn	19 50 31.9	+1.1
MKZ				*i* S	Sn	19 50 56.9	+1.2
MIPR	**Malaya Ipel'ka**	**2.43**	**263**	*e*P	Pn	19 50 38.2	+1.8
MIPR				*i* S	Sn	19 51 09.1	+3.4
KBTR	**Krutoberegovo**	**3.79**	**18**	*e*P	Pn	19 50 58.2	+3.2

*TIR **01** 19:52:28.7±2.3, 41°19N×20°14E, h0km, ML2.9*
*ISCJB **01** 19:52:32.4±1.5, 41°01N±0°06×20°12E±0°09, h1km±11km, Error ellipse: s-maj=13.8km s-

3.7nm,0.8s,baz=117,slow=7.0,SNR=4.6
LPAZ La Paz 52.28 305 P **P 20 03 50.0 -0.1**
8.0nm,0.7s,mb4.8,baz=156,slow=6.0,SNR=41
LPAZ LR LR 20 24 57.1
comp=Z,39nm,21.1s,MS3.4,baz=232,slow=35
LPAZ La Paz 52.28 305 *e*P **P 20 03 49.8 -0.2**
7.9nm,0.7s,mb4.8
LIC Lamto 66.13 22 *e*P **P 20 05 26.1 +0.2**
88nm,0.8s,mb5.8
KIC Kosan Boka 66.32 23 *e*P **P 20 05 27.3 +0.2**
43nm,0.8s,mb5.6
TIC Toumodi 66.54 22 *e*P **P 20 05 28.8 +0.3**
45nm,0.7s,mb5.6
DBIC Dimbokro 66.59 22 P **P 20 05 29.2 +0.3**
25nm,0.9s,mb5.3,baz=171,slow=8.0,SNR=33
DBIC LR LR 20 27 16.9
comp=Z,77nm,19.8s,MS3.9,baz=132,slow=30
DBIC Dimbokro 66.59 22 P **P 20 05 29.2 +0.3**
DBIC LR LR 20 27 16.9
TORD Torodi Ar. Bea 74.33 28 P **P 20 06 16.6 +0.5**
14nm,0.4s,mb5.2,baz=199,slow=6.4,SNR=202
TORD LR LR 20 31 04.0
comp=Z,93nm,19.7s,MS4.1,baz=10.0,slow=30
GRGR Grenville 75.92 323 *e*P **P 20 06 25.1 -0.2**
SDV Santo Domingo 76.06 314 *e*P **P 20 06 24.7 -1.4**
6.5nm,0.6s,mb4.7
FDF Fort de France 78.21 325 *e*P **P 20 06 38.1 0.0**
78nm,1.0s,mb5.6
TBG Guadaloupe-3 79.41 325 *e*P **P 20 06 45.2 +0.5**
PHG Guadaloupe-2 79.56 325 *e*P **P 20 06 46.5 +0.9**
MTP Monte Pirata 82.76 322 *e*P **P 20 07 01.1 -1.4**
14nm,0.6s,mb5.2
STVI Saint Thomas 82.80 322 *e*P **P 20 07 01.9 -0.9**
TAM Tamanrasset 84.55 29 *e*P **P 20 07 13.5 +1.9**
3.7nm,1.0s,mb4.5
STKA Stephens Creek 89.80 169 P **P 20 07 37.3 +0.1**
6.5nm,0.8s,mb5.0,baz=168,slow=5.9,SNR=12
PPT Papeete 91.77 232 LR LR 20 42 25.7
comp=Z,242nm,18.7s,MS4.7,baz=45,slow=31
ASAR Alice Springs 96.83 161 P **P 20 08 08.8 -0.9**
4.6nm,0.8s,mb5.0,baz=180,slow=4.0,SNR=65
628A Black Gap, Mar ⇑P PKiKP 20 13 06.6 +0.2
baz=108
627A Terlingua Ranc 108.48 296 ⇓P PKiKP 20 13 06.5 -0.3
baz=109
TXAR Lajitas Array 108.52 296 PKiKP PKiKP 20 13 07.0 0.0
0.5nm,0.8s,baz=163,slow=4.4,SNR=6.1
626A Big Bend Ranch 108.92 295 ⇓P PKiKP 20 13 07.4 -0.3
baz=109
428A Kincaid Ranch, 109.21 297 ⇑P PKiKP 20 13 08.0 -0.2
baz=109
427A Hayter Ranch, 109.65 297 ⇑P PKiKP 20 13 09.0 0.0
baz=110
426A McDonald Obser 109.80 296 ⇑P PKiKP 20 13 09.0 -0.3
baz=110
326A Caldwell Ranch 110.31 297 ⇓P PKiKP 20 13 10.2 0.0
baz=110
425A Indio Mountain 110.35 295 ⇑P PKiKP 20 13 10.2 -0.2
baz=110
Y27A Causey 112.05 299 ⇑P PKiKP 20 13 13.4 0.0
baz=112
124A Stringfield Ra 112.16 296 ⇑P PKiKP 20 13 14.2 +0.5
baz=112
X26A CR and CF Fran 112.90 299 ⇓P PKiKP 20 13 13.8 -1.3
baz=113
220A Playas Peak, P 112.99 293 ⇑P PKiKP 20 13 15.1 -0.2
baz=113
121A Cookes Peak, D 113.14 294 ⇑P PKiKP 20 13 15.6 0.0
baz=113
Y24A Capitan 113.15 297 ⇓P PKiKP 20 13 15.7 +0.1
baz=113
318A Bisbee 113.33 292 ⇑P PKiKP 20 13 15.8 -0.1
baz=114
Z22A Elephant Butte 113.33 296 ⇑P PKiKP 20 13 16.0 +0.1
baz=114
219A White Tail Can 113.42 293 ⇓P PKiKP 20 13 16.2 0.0
baz=114
120A U Bar Ranch, L 113.56 294 ⇑P PKiKP 20 13 15.9 -0.5
baz=114
Z21A St. Cloud Mine 113.72 295 ⇓P PKiKP 20 13 17.0 +0.4
baz=114
W25A X Bar L Ranch, 113.75 299 ⇓P PKiKP 20 13 16.2 -0.5
baz=114
V26A Tequesquite Ra 113.91 299 ⇑P PKiKP 20 13 16.4 -0.6
baz=114
Z20A Nine Sixteen R 114.00 294 ⇓P PKiKP 20 13 17.2 -0.1
baz=114
X23A Hourglass Bar 114.05 297 ⇓P PKiKP 20 13 17.8 +0.6
baz=114
119A Ashpeak Ranch, 114.07 293 ⇓P PKiKP 20 13 17.6 +0.3
baz=114
W24A Lazy 6 Ranch, 114.19 298 ⇓P PKiKP 20 13 17.3 -0.2
baz=114
Y20A Horse Springs, 114.55 295 ⇑P PKiKP 20 13 18.4 +0.2
baz=115
V24A Rampart Ranch, 114.55 298 ⇑P PKiKP 20 13 18.2 0.0
baz=115
117A Oracle 114.62 292 ⇓P PKiKP 20 13 18.2 -0.2
baz=115
U25A Circle Dot Ran 114.70 299 ⇓P PKiKP 20 13 18.2 -0.3
baz=115
X21A Alamocita Cree 114.70 296 ⇑P PKiKP 20 13 18.5 0.0
baz=115
X20A Quemado 115.12 295 ⇓P PKiKP 20 13 19.4 +0.1
baz=115
214A Organ Pipe Nat 115.15 290 ⇓P PKiKP 20 13 19.8 +0.4
baz=115
Y18A Canyon Day Jun 115.25 294 ⇓P PKiKP 20 13 19.3 -0.3
baz=115
U23A El Rito 115.47 298 ⇑P PKPdf 20 13 19.3 -0.7
baz=116
V22A San Miguel Ran 115.47 297 ⇓P PKPdf 20 13 20.0 0.0
baz=116
Y17A Roosevelt 115.58 293 ⇑P PKPdf 20 13 20.3 +0.1
baz=116
Z16A Peralta Trail, 115.58 292 ⇓P PKPdf 20 13 20.0 -0.2
baz=116
S25A Robets Cordova 115.73 300 ⇑P PKPdf 20 13 21.0 +0.6
baz=116
X18A Snowflake 115.81 294 ⇓P PKPdf 20 13 20.8 +0.1
baz=116
114A Black Gap (USA 115.82 291 ⇓P PKPdf 20 13 20.7 0.0
baz=116
Y16A Circle Bar Ran 116.04 293 ⇑P PKPdf 20 13 21.0 -0.1
baz=116
X17A Forest Lakes 116.07 293 ⇑P PKPdf 20 13 21.4 +0.2
baz=116
S24A Houchin Ranch, 116.08 300 ⇓P PKPdf 20 13 21.5 +0.4
baz=116
U21A Nageezi 116.24 297 ⇑P PKPdf 20 13 21.7 +0.3
baz=116
113A Mohawk Valley, 116.28 290 ⇓P PKPdf 20 13 21.0 -0.6
baz=116
SDCO Great Sand Dun 116.30 299 ⇓P PKPdf 20 13 21.4 -0.1
baz=116
T22A Edith 116.36 298 ⇓P PKPdf 20 13 22.3 +0.7
baz=116
X16A Lo Mia Camp, P 116.45 293 ⇓P PKPdf 20 13 22.2 +0.4
baz=117
Z13A Yuma Proving G 116.57 290 ⇑P PKPdf 20 13 21.9 -0.2
baz=117
U20A Newcomb 116.61 296 ⇓P PKPdf 20 13 22.1 0.0
baz=117
V18A Ganado 116.75 295 ⇑P PKPdf 20 13 21.5 -0.9
baz=117
Y14A Wickenburg 116.84 291 ⇑P PKPdf 20 13 21.8 -0.8
baz=117
U19A Dine' College, 116.87 296 ⇓P PKPdf 20 13 22.3 -0.3
baz=117
X15A Humboldt 116.90 292 ⇓P PKPdf 20 13 22.6 -0.2
baz=117
S22A 4UR Ranch, Cre 116.92 298 ⇑P PKPdf 20 13 22.7 0.0
baz=117
W16A Flagstaff 117.04 293 ⇑P PKPdf 20 13 22.8 -0.1
baz=117
X14A Yava 117.20 292 ⇓P PKPdf 20 13 23.2 -0.1
baz=117
T19A Beclabito 117.22 296 ⇓P PKPdf 20 13 23.0 -0.3
baz=117
R22A Saguache, Gunn 117.27 299 ⇑P PKPdf 20 13 23.6 +0.2
baz=117
U18A Rough Rock, Ch 117.29 295 ⇑P PKPdf 20 13 23.6 +0.2
baz=117
WUAZ Wupatki 117.30 294 ⇑P PKPdf 20 13 23.7 +0.2
baz=117
S21A Coal Bank Pass 117.30 298 ⇓P PKPdf 20 13 24.0 +0.6
baz=118
Q23A Hartsel 117.39 300 ⇓P PKPdf 20 13 23.8 +0.3
baz=118
SWSC Sam W. Stewart 117.43 289 ⇓P PKPdf 20 13 23.8 0.0
baz=118
U16A Tuba City 117.68 294 ⇑P PKPdf 20 13 23.9 -0.3
baz=118
S20A Disappointment 117.70 297 ⇑P PKPdf 20 13 25.0 +0.8
baz=118
P23A Jefferson 117.77 300 ⇓P PKPdf 20 13 24.8 +0.5
baz=118
BC3 Big Chuckawall 117.83 289 ⇑P PKPdf 20 13 24.5 -0.1
baz=118
Q22A Crested Butte, 117.85 299 ⇑P PKPdf 20 13 24.8 +0.3
baz=118
T18A Mexican Hat 117.87 296 ⇑P PKPdf 20 13 24.4 -0.1
baz=118
W14A Seligman 117.89 292 ⇑P PKPdf 20 13 24.7 +0.1
baz=118
V15A Kaibab Nationa 117.93 293 ⇑P PKPdf 20 13 25.4 +0.7
baz=118
R20A Redvale 118.00 298 ⇑P PKPdf 20 13 25.1 +0.3
baz=118
S19A Harvey Farm, M 118.00 297 ⇑P PKPdf 20 13 25.0 +0.2
baz=118
IRM Iron Mountain 118.08 290 ⇑P PKPdf 20 13 25.3 +0.3
baz=118
T17A Navajo Res., N 118.20 295 ⇓P PKPdf 20 13 25.8 +0.7
baz=118
V14A Boquillas Ranc 118.24 292 ⇓P PKPdf 20 13 25.8 +0.6
baz=118
P22A Eagle 118.37 300 ⇓P PKPdf 20 13 24.3 -1.1
baz=118
S18A Hurst Farm, Bl 118.37 296 ⇑P PKPdf 20 13 25.0 -0.5
baz=118
BELC Belle Mtn. Jos 118.38 289 ⇓P PKPdf 20 13 26.2 +0.5
baz=118
R19A Curley Farm, L 118.50 297 ⇑P PKPdf 20 13 25.4 -0.3
baz=119
T16A Glen Canyon Da 118.53 295 ⇓P PKPdf 20 13 27.1 +1.3
baz=119
O22A Kremmling 118.72 300 ⇓P PKPdf 20 13 26.2 +0.2
baz=119
GMRC Granite Mounta 118.83 290 ⇓P PKPdf 20 13 26.6 +0.2
baz=119
V13A Grand Canyon W 118.84 292 ⇑P PKPdf 20 13 26.5 0.0
baz=119
P20A De Beque 119.05 299 ⇑P PKPdf 20 13 26.6 -0.2
baz=119
S16A Weppner Ranch, 119.16 295 ⇓P PKPdf 20 13 26.2 -0.7
baz=119
V12A Nelson 119.17 291 ⇓P PKPdf 20 13 26.5 -0.5
baz=119
U13A Pakoon Wash 119.28 292 ⇑P PKPdf 20 13 27.4 +0.1
baz=119,SNR=5.3
P19A Cripple Cowboy 119.43 298 ⇑P PKPdf 20 13 27.7 +0.3
baz=120
O20A White River Ci 119.49 299 ⇑P PKPdf 20 13 27.2 -0.3
baz=120
R16A Teasdale 119.55 296 ⇓P PKPdf 20 13 27.9 +0.2
baz=120
Q18A Rafter H Ranch 119.56 297 ⇓P PKPdf 20 13 27.7 0.0
baz=120
U12A Valley of Fire 119.58 292 ⇓P PKPdf 20 13 27.6 -0.2
baz=120
N21A Black Mountain 119.65 300 ⇓P PKPdf 20 13 28.0 +0.2
baz=120
T13A Saint George 119.73 293 ⇓P PKPdf 20 13 28.2 +0.1
baz=120
SRU San Rafael 119.75 297 ⇑P PKPdf 20 13 28.0 0.0
baz=120
GSC Goldstone 119.81 290 ⇓P PKPdf 20 13 28.5 +0.2
baz=120
P18A Preston Nutter 120.02 297 ⇑P PKPdf 20 13 29.1 +0.5
baz=120
O19A Miners Draw (B 120.03 299 ⇑P PKPdf 20 13 28.7 +0.1
baz=120
MSU Marysvale 120.07 295 *e*PKPdf PKPdf 20 13 29.0 +0.3
EDW2 Edwards Air Fo 120.08 288 ⇓P PKPdf 20 13 28.6 -0.2
baz=120
S13A Holt Ranch, En 120.15 293 ⇑P PKPdf 20 13 29.0 +0.1
baz=120
LRMC Laurel Mountai 120.40 289 ⇓P PKPdf 20 13 29.6 +0.2
baz=120
O18A Roosevelt 120.42 298 ⇓P PKPdf 20 13 30.0 +0.7
baz=121
U10A Ash Meadows, A 120.46 291 ⇑P PKPdf 20 13 29.7 +0.2
baz=121
Q15A Fillmore 120.55 295 ⇑P PKPdf 20 13 29.7 +0.1
baz=121
S12A Delamar Landin 120.66 293 ⇑P PKPdf 20 13 31.0 +1.1
baz=121
R13A O'Grain Ranch, 120.67 294 ⇓P PKPdf 20 13 30.4 +0.5
baz=121
O17A Robinson Place 120.70 297 ⇑P PKPdf 20 13 29.7 -0.2
baz=121
MPMC Manual Prospec 120.75 290 ⇓P PKPdf 20 13 30.1 0.0
baz=121
ISA Isabella 120.94 289 ⇑P PKPdf 20 13 30.8 +0.3
baz=121
P15A Leamington 120.95 296 ⇓P PKPdf 20 13 30.6 +0.3
baz=121
Q14A Sevier Lake (B 120.97 295 ⇓P PKPdf 20 13 30.1 -0.3
baz=121,SNR=8.9
M19A Rock Springs 120.99 299 ⇑P PKPdf 20 13 30.4 +0.1
baz=121
L20A Wamsutter 121.01 300 ⇑P PKPdf 20 13 30.3 0.0
baz=121
R12A Pony Springs, 121.10 293 ⇓P PKPdf 20 13 30.9 +0.2
baz=121
Q13A Wheeler Ranch, 121.31 294 ⇓P PKPdf 20 13 31.3 +0.2
baz=121,SNR=5.8
P14A Drum Mountains 121.34 295 ⇓P PKPdf 20 13 31.6 +0.5
baz=122
R11A Troy Canyon, C 121.60 293 ⇑P PKPdf 20 13 31.9 +0.3
baz=122
M17A Scullys Gap (B 121.67 298 ⇑P PKPdf 20 13 31.5 -0.2
baz=122
DUG Dugway 121.69 296 ⇑P PKPdf 20 13 32.0 +0.2
baz=122,SNR=7.3
DUG Dugway 121.69 296 *e*PKPdf PKPdf 20 13 31.3 -0.4
P13A Bates Ranch, G 121.69 295 ⇓P PKPdf 20 13 31.8 0.0
baz=122
S10A Tonopah Range, 121.76 292 ⇑P PKPdf 20 13 32.1 +0.1
baz=122
Q12A Willow Creek R 121.77 294 ⇓P PKPdf 20 13 31.9 -0.1
baz=122,SNR=7.1
R10A Warm Springs 121.90 292 ⇓P PKPdf 20 13 32.5 +0.3
baz=122
J20A Shoshoni 121.95 302 ⇑P PKPdf 20 13 32.4 +0.2
baz=122
M16A Huntsville 122.00 298 ⇑P PKPdf 20 13 32.6 +0.3
baz=122
Q11A Duckwater 122.02 293 ⇓P PKPdf 20 13 32.9 +0.5
baz=122
NOA NORSAR Array B 122.12 20 PKP PKPdf 20 13 31.2 -0.7
2.1nm,0.9s,baz=192,slow=1.5,SNR=4.3
P12A McGill 122.14 294 ⇓P PKPdf 20 13 33.2 +0.6
baz=122
HWUT Hardware Ranch 122.20 298 *e*PKPdf PKPdf 20 13 32.1 -0.5
L17A Cokeville 122.26 299 ⇓P PKPdf 20 13 32.8 +0.1
baz=122
ULM Lac du Bonnet 122.31 314 PKP PKPdf 20 13 31.1 -1.4
2.1nm,0.4s,baz=113,slow=2.6,SNR=4.2
Q10A Clear Creek Ra 122.37 292 ⇑P PKPdf 20 13 33.5 +0.4
baz=122
M15A Larsen Ranch, 122.50 297 ⇓P PKPdf 20 13 32.8 -0.4
baz=123
J18A Kendall Valley 122.72 300 ⇓P PKPdf 20 13 33.2 -0.4
baz=123
L15A Malad City 122.89 298 ⇑P PKPdf 20 13 33.9 -0.1
baz=123
NVAR Mina Array Bea 123.00 291 PKP PKPdf 20 13 35.3 +0.9
2.8nm,0.7s,baz=147,slow=3.3,SNR=20
I18A Diamond G Ranc 123.01 301 ⇑P PKPdf 20 13 34.4 +0.2
baz=123
L14A Malta 123.32 297 ⇑P PKPdf 20 13 34.7 -0.1
baz=124
RRI2 Red Ridge 123.43 299 *e*PKPdf PKPdf 20 13 34.8 -0.2
MOOW Moose Ponds 123.47 300 *e*PKPdf PKPdf 20 13 33.7 -1.3
MOOW *e* 20 13 50.2
K15A Arbon 123.49 298 ⇓P PKPdf 20 13 35.2 +0.1
baz=124
CMAR Chiang Mai Arr 123.50 110 PKP PKPdf 20 13 35.5 -0.5
4.4nm,0.8s,baz=234,slow=3.7,SNR=37
K14A Jones Ranch, D 123.68 297 ⇓P PKPdf 20 13 35.8 +0.3
baz=124
J15A Blackfoot 123.99 299 ⇑P PKPdf 20 13 36.5 +0.4
baz=124
H16A Russell Place, 124.44 300 ⇓P PKPdf 20 13 37.4 +0.5
baz=125
J14A Carey 124.44 298 ⇓P PKPdf 20 13 37.6 +0.7
baz=125,SNR=7.0
I15A Monteview 124.47 299 ⇓P PKPdf 20 13 38.2 +1.2
baz=125
F18A Big Timber 124.66 302 ⇑P PKPdf 20 13 37.9 +0.7
baz=125
J13A Cove Ranch, Pi 124.81 297 ⇓P PKPdf 20 13 38.5 +0.9
baz=125
D20A Manuel Ranch, 124.87 304 ⇑P PKPdf 20 13 38.0 +0.3
baz=125
I14A Mackay 124.87 298 ⇑P PKPdf 20 13 38.4 +0.6
baz=125,SNR=9.2
H15A Lima 125.02 299 ⇑P PKPdf 20 13 38.9 +0.9
baz=125,SNR=6.3
HLID Hailey 125.05 297 ⇓P PKPdf 20 13 38.4 +0.3
baz=125
G16A Moss Hill, Enn 125.10 300 ⇑P PKPdf 20 13 38.6 +0.5
baz=125
I13A Wildhorse Cree 125.17 298 ⇓P PKPdf 20 13 39.1 +0.8
baz=125
D19A Cripps Ranch, 125.25 304 ⇑P PKPdf 20 13 38.8 +0.5
baz=125
E18A Harlowton 125.26 303 ⇓P PKPdf 20 13 38.9 +0.6
baz=125
C20A Veseth Ranch, 125.29 305 ⇑P PKPdf 20 13 37.9 -0.5
baz=125
BOZ Bozeman (W) 125.33 301 ⇓P PKPdf 20 13 39.0 +0.4
baz=126
BOZ Bozeman (W) 125.33 301 *e*PKPdf PKPdf 20 13 38.7 +0.1
H14A Leadore 125.35 299 ⇓P PKPdf 20 13 38.8 +0.2
baz=126,SNR=15
G15A Dillon 125.36 300 ⇓P PKPdf 20 13 39.0 +0.3
baz=126,SNR=6.8
F16A Kennard Place, 125.44 301 ⇑P PKPdf 20 13 39.6 +0.9
baz=126
DLMT Dillon 125.56 300 *e*PKPdf PKPdf 20 13 39.4 +0.3
I12A Atlanta 125.56 297 ⇓P PKPdf 20 13 39.2 +0.2
baz=126,SNR=5.5
MFID Camas Ranch 125.61 296 ⇓P PKPdf 20 13 39.3 +0.2
baz=126
D18A Linhart Farms, 125.69 303 ⇓P PKPdf 20 13 39.4 +0.2
baz=126
FINES FINESS Array B 125.69 28 PKP PKPdf 20 13 37.9 -0.8
5.1nm,0.5s,baz=156,slow=2.0,SNR=64
H13A Challis 125.73 298 ⇓P PKPdf 20 13 39.4 +0.1
baz=126,SNR=11
C19A Slack Wire Ran 125.76 304 ⇑P PKPdf 20 13 39.4 +0.1
baz=126
LRM Limekiln Ridge 125.84 301 *e*PKPdf PKPdf 20 13 39.9 +0.4
LRM *e* 20 13 55.6
G14A Jackson 125.87 299 ⇓P PKPdf 20 13 39.8 +0.2
baz=126,SNR=11
F15A Butte 125.88 301 ⇓P PKPdf 20 13 40.3 +0.8
baz=126,SNR=7.4
H12A Diamond D Ranc 126.00 298 ⇓P PKPdf 20 13 39.9 0.0
baz=126,SNR=9.0
D17A Six Diamond Ra 126.05 303 ⇓P PKPdf 20 13 40.2 +0.3
baz=126
G13A Cobalt 126.12 299 ⇓P PKPdf 20 13 40.3 +0.2
baz=126,SNR=5.5
WVOR Wild Horse Val 126.22 294 *e*PKPdf PKPdf 20 13 40.5 +0.2
F14A Wisdom 126.26 300 ⇓P PKPdf 20 13 40.7 +0.4
baz=126
EGMT Eagleton 126.29 304 ⇑P PKPdf 20 13 41.1 +0.8
baz=126
KAF Kangasniemi 126.32 27 *e*p PKPdf 20 13 38.5 -1.4
2.6nm,0.5s
D16A Dana Ranch, Ca 126.34 302 ⇑P PKPdf 20 13 40.5 0.0
baz=126
LBCM Butte Creek Ri 126.36 290 P PKPdf 20 13 41.6 +0.9
E15A Deer Lodge 126.38 301 ⇑P PKPdf 20 13 40.9 +0.4
baz=126
C17A Wharram Farm, 126.44 303 ⇑P PKPdf 20 13 39.9 -0.7
baz=127
A19A Klindworth Far 126.53 305 ⇓P PKPdf 20 13 41.0 +0.2
baz=127
B18A Beardsley Farm 126.58 304 ⇑P PKPdf 20 13 41.1 +0.2
baz=127
MOD Modoc 126.64 292 *e*PKPdf PKPdf 20 13 41.0 -0.2
G12A Big Creek, Yel 126.66 298 ⇑P PKPdf 20 13 41.7 +0.6
baz=127
D15A Lincoln 126.79 301 ⇓P PKPdf 20 13 41.7 +0.4
baz=127,SNR=6.9
J08A Circle Bar Ran 126.83 294 ⇑P PKPdf 20 13 42.2 +0.7
baz=127
B17A L&G Farms, Che 126.95 304 ⇓P PKPdf 20 13 42.0 +0.5
baz=127
A18A Metzger Ranch, 127.00 305 ⇓P PKPdf 20 13 41.5 -0.1
baz=127
C16A Fuhringer Ranc 127.01 303 ⇑P PKPdf 20 13 41.9 +0.2
baz=127,SNR=9.5
CHMT Chamberlain Mo 127.03 301 *e*PKPdf PKPdf 20 13 41.6 -0.1
CHMT *e* 20 13 56.4
F12A Elk City 127.09 299 ⇑P PKPdf 20 13 42.4 +0.5
baz=127
E13A Victor 127.11 300 ⇓P PKPdf 20 13 42.4 +0.5
baz=127,SNR=8.7
D14A Greenough 127.27 301 ⇑P PKPdf 20 13 42.0 -0.2
baz=127,SNR=7.6
MSO Missoula 127.28 300 ⇑P PKPdf 20 13 42.2 0.0
baz=127,SNR=11
MSO Missoula 127.28 300 *e*PKPdf PKPdf 20 13 42.1 -0.2
MSO *e* 20 13 56.7
C15A Salmond Ranch, 127.38 302 ⇑P PKPdf 20 13 42.2 -0.2
baz=128
SLMT Seeley Lake 127.38 301 *e*PKPdf PKPdf 20 13 41.9 -0.5
A17A Triple J Farms 127.40 304 ⇓P PKPdf 20 13 43.0 +0.6
baz=128
B16A M & M Farms, S 127.45 303 ⇓P PKPdf 20 13 42.6 +0.1
baz=128
K05A Summer Lake 127.55 292 ⇑P PKPdf 20 13 43.5 +0.6
baz=128
D13A Huson 127.72 300 ⇑P PKPdf 20 13 43.3 +0.3
baz=128,SNR=8.9
E12A Beaver Dam Sad 127.73 299 ⇓P PKPdf 20 13 43.0 -0.1
baz=128
B15A Bradely Ranch, 127.76 303 ⇑P PKPdf 20 13 42.1 -1.0
baz=128
A16A West Butte Ran 127.80 304 ⇓P PKPdf 20 13 43.0 -0.2
baz=128
SWMT Swartz Lake 127.81 301 *e*PKPdf PKPdf 20 13 42.9 -0.4
I07A Izee 127.87 294 ⇓P PKPdf 20 13 43.8 +0.3
baz=128
C14A Swan Lake 127.89 301 ⇑P PKPdf 20 13 43.5 +0.2
baz=128
KKAR Karatay Array 128.10 68 *e*PKPdf PKPdf 20 13 43.0 -0.9
D12A Red Ives Fores 128.10 300 ⇓P PKPdf 20 13 43.6 -0.2
baz=128
F10A Beach Ranch, E 128.18 298 ⇑P PKPdf 20 13 43.1 -0.9
baz=128
C13A Hot Springs 128.20 301 ⇑P PKPdf 20 13 43.7 -0.3
baz=128
JOF Joensuu 128.26 29 *e*p PKPdf 20 13 42.7 -0.9
8.7nm,0.6s
A15A Johnson Ranch, 128.32 303 ⇓P PKPdf 20 13 44.2 +0.1
baz=128,SNR=6.3
BSMT Bassoo Peak 128.43 301 *e*PKPdf PKPdf 20 13 43.2 -1.1
G08A Pilot Rock 128.50 296 ⇓P PKPdf 20 13 44.7 +0.1
baz=129
A14A Double T Ranch 128.63 303 ⇓P PKPdf 20 13 44.7 -0.1
baz=129
C12B Naegeli Ranch, 128.64 300 ⇑P PKPdf 20 13 44.8 0.0
baz=129
B13A Whitefish 128.66 301 ⇓P PKPdf 20 13 45.0 +0.2
baz=129
LSA Lhasa 128.67 95 *e*PKPdf PKPdf 20 13 46.2 +0.7
VIPM Ingram Point 128.73 294 P PKPdf 20 13 45.8 +0.7
E09A Wood Farm, Sta 129.01 297 ⇑P PKPdf 20 13 45.0 -0.6
baz=129
A13A Flathead Natio 129.05 302 ⇓P PKPdf 20 13 45.5 -0.1
baz=129
C11A Tepee Creek (N 129.09 300 ⇑P PKPdf 20 13 45.6 -0.1
baz=129
IRO Indian Ridge 129.16 292 P PKPdf 20 13 46.6 +0.6
G06A Carlson Farm, 129.27 295 ⇓P PKPdf 20 13 46.4 +0.3
baz=129
EKS2 Erkin-Say 129.39 70 *e*PKPdf PKPdf 20 13 45.8 -0.6
BROR Big Rock Looko 129.45 293 P PKPdf 20 13 46.8 +0.4
H04A Detroit Lake 129.62 293 ⇑P PKPdf 20 13 47.0 +0.3
baz=130
KZA Kyzart 129.71 72 *e*PKPdf PKPdf 20 13 47.1 +0.1
AAK Ala-Archa 129.73 71 *e*PKPdf PKPdf 20 13 46.3 -0.8
D08A Wollman Farm, 129.77 297 ⇓P PKPdf 20 13 46.8 -0.2
baz=130
NEW Newport 129.80 300 ⇑P PKPdf 20 13 46.6 -0.4
baz=130

OD2	Odessa Site #2	129.91 298	eP	KPdf	PKPdf	20 13 47.4	+0.1
C09A	Chrisman Ranch	130.00 298	⇓P		PKPdf	20 13 47.3	-0.1
	baz=130						
G04A	Mulino	130.14 293	⇑P		PKPdf	20 13 48.5	+0.8
	baz=130						
F04A	Amboy	130.64 294	⇓P		PKPdf	20 13 48.9	+0.3
	baz=131						
ETW	Entiat	130.83 297	eP	KPdf	PKPdf	20 13 49.1	+0.2
B08A	Colville Reser	130.90 298	⇓P		PKPdf	20 13 48.8	-0.3
	baz=131						
LON	Longmire	130.93 295	eP	KPdf	PKPdf	20 13 48.5	-0.7
KMI	Kunming	130.99 109		PKP	PKPdf	20 13 52.0	+2.0
F03A	Seaside	131.19 293	⇑P		PKPdf	20 13 50.8	+1.1
	baz=131						
D05A	Enumclaw	131.32 296	⇓P		PKPdf	20 13 50.6	+0.7
	baz=132						
E03A	Lebam	131.63 294	⇓P		PKPdf	20 13 51.8	+1.3
	baz=132						
HTW	Haystack Looko	131.66 296		P	PKPdf	20 13 50.2	-0.3
JCW	Jim Creek	132.01 297		P	PKPdf	20 13 51.2	0.0
B06A	Marblemount	132.02 297	⇑P		PKPdf	20 13 52.1	+0.9
	baz=132						
ARCES	ARCESS Array B	132.42 22		PKP	PKPdf	20 13 50.3	-1.0
	3.0nm,0.6s,baz=224,slow=2.1,SNR=15						
A05A	Maple Falls	132.64 297	⇑P		PKPdf	20 13 52.9	+0.6
	baz=133						
CD2	Chengdu	136.22 106	ePKP		PKPdf	20 13 58.2	-1.5
MKAR	Makanchi Array	136.60 72		PKP	PKPdf	20 14 01.0	+1.1
	1.4nm,0.7s,baz=255,slow=2.8,SNR=5.6						
WMQ	Urumqi	137.36 79	ePKP		PKPdf	20 14 00.0	-1.4
YKA	Yellowknife Ar	138.25 316		PKP	PKPdf	20 14 01.7	-0.7
	6.7nm,0.6s,baz=126,slow=2.4,SNR=26						
ZALV	Zalesovo Beam	142.36 65	PKhKP		PKPpre	20 14 01.6	
	2.1nm,0.4s,baz=235,slow=4.5,SNR=12						
HHC	Hu-ho-hao-te	147.89 103	ePKPbc		PKPdf	20 14 19.0	-1.1
HHC				PP	PP	20 17 55.1	+4.0
HHC				SKS	SKSdf	20 21 15.6	-13
HHC				SKKS	SKKSac	20 24 33.1	-8.7
HHC				SS	SS	20 36 54.3	-1.9
HHC				AMB	AMB		
	comp=Z,87nm,9.4s						
HHC				LR	LR		
	comp=N,100nm,18.1s,MS4.8						
HHC				LR	LR		
	comp=E,120nm,21.3s,MS4.8						
HHC				LR	LR		
	comp=Z,110nm,19.8s,MS4.7						
INK	Inuvik	147.91 318	ePKPbc		PKPbc	20 14 21.3	-0.9
INK			e			20 14 36.5	
DAWY	Dawson	148.79 309	ePKPbc		PKPbc	20 14 23.9	-0.8
DAWY			e			20 14 39.6	
BJT	Baijiatuan	149.62 110	ePKPbc		PKPbc	20 14 26.8	-0.8
BJI	Beijing	149.64 109	PKPbc		PKPbc	20 14 25.2	-2.4
EGAK	Eagle	149.74 310	ePKPbc		PKPbc	20 14 26.2	-0.9
SONM	Songino Array	149.87 89	PKP		PKPdf	20 14 22.4	-0.6
	comp=Z,17nm,0.5s,baz=213,slow=1.7,SNR=5.3						
SONM				PKPbc	PKPbc	20 14 27.3	-0.5
	comp=Z,13nm,0.4s,baz=224,slow=2.9,SNR=94						
BMRM	Bremner River	149.93 302	ePKPbc		PKPbc	20 14 27.4	-0.1
ULN	Ulaanbaatar	150.24 89	ePKPbc		PKPbc	20 14 28.0	-0.7
DIV	Divide	150.52 302	ePKPbc		PKPbc	20 14 28.7	-0.3
DOT	Dot Lake	150.61 307	ePKPbc		PKPbc	20 14 29.2	+0.1
DOT			e			20 14 44.9	
PAX	Paxson	151.00 305	ePKPbc		PKPbc	20 14 29.6	-0.5
SEW	Seward	151.85 298	ePKPbc		PKPbc	20 14 31.4	-0.7
SML	Sawmill	151.91 302	ePKPbc		PKPbc	20 14 31.9	-0.2
SML			e			20 14 47.8	
ILAR	Eielson Array	152.10 309	PKPbc		PKPbc	20 14 32.0	-0.5
	comp=Z,44nm,0.9s,baz=111,slow=2.0,SNR=220						
RC01	Rabbit Creek A	152.32 300	ePKPbc		PKPbc	20 14 32.5	-0.6
KDAK	Kodiak Island	152.49 292	ePKPbc		PKPbc	20 14 33.4	-0.3
COLA	College	152.53 309	ePKPbc		PKPbc	20 14 32.1	-1.3
MCK	McKinley	152.72 306	ePKPbc		PKPbc	20 14 33.4	-0.6
MCK			e			20 14 49.4	
KSRS	Korea Array	153.04 128	PKPbc		PKPbc	20 14 35.1	-0.4
	comp=Z,2.7nm,0.8s,baz=192,slow=1.6,SNR=5.7						
KSRS				PKPab	PKPab	20 14 47.0	0.0
	comp=Z,2.1nm,0.8s,baz=212,slow=4.3,SNR=4.6						
TRF	Thorofare Moun	153.23 305	ePKPbc		PKPbc	20 14 34.4	-0.7
BPAW	Bear Paw Mtn.	153.68 306	ePKPbc		PKPbc	20 14 35.5	-0.6
PPLA	Purkeypile	153.94 303	ePKPbc		PKPbc	20 14 36.3	-0.3

IDC ***01*** *20:38:45.0±0.9, 9°.37S×158°.05E, h0km, mb3.8/7, mb1 4.1/8, mb1mx3.9/16, mbtmp3.9/8, ML4.1/1, MS3.7/2, Ms1 3.7/2, ms1mx3.0/19, Error ellipse: s-maj=28.8km s-min=20.2km az=147.0*

NEIC ***01*** *20:38:49.7±0.7, 9°.51S×158°.15E, h35km, mb4.0/1, Error ellipse: s-maj=21.8km s-min=11.7km az=145.0*

ISC 01 20:38:45.6±6.5, 9°.4S±0°.2×158°.14E±0°.07, h6km±41km, n14, σ0°86/14, mb3.7/7, MS3.7/2, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.79	90	Pn	Pn	20 39 17.4	+0.3
	104nm,0.3s,baz=213,slow=3.1,SNR=29						
HNR				Sn	Sn	20 39 39.7	-0.5
	743nm,0.3s,baz=324,slow=19,SNR=26						
HNR	Honiara	1.79	90	eP	Pn	20 39 16.8	-0.3
HNR				Sn	Sn	20 39 39.7	-0.5
CTA	Charters Tower	15.62	226	Pn	Pn	20 42 26.4	-0.1
	0.5nm,0.3s,baz=44,slow=15,SNR=5.0						
CTAO	Charters Tower	15.62	226	eP	Pn	20 42 26.1	-0.5
	12nm,1.0s						
STKA	Stephens Creek	27.10	212	P	P	20 44 30.4	+1.0
	4.5nm,0.5s,mb4.3,baz=50,slow=15,SNR=20						
STKA	Stephens Creek	27.10	212	P	P	20 44 30.4	+1.0
ASAR	Alice Springs	27.14	236	P	P	20 44 29.1	-0.8
	2.2nm,0.8s,mb3.7,baz=65,slow=10,SNR=13						
URZ	Urewera	33.39	152	LR	LR	20 57 15.6	
	comp=Z,109nm,21.6s,MS3.5,baz=233,slow=33						
CMAR	Chiang Mai Arr	64.63	296	P	P	20 49 24.4	-0.3
	0.2nm,0.5s,mb3.4,baz=114,slow=4.4,SNR=2.8						
SONM	Songino Array	73.06	326	P	P	20 50 17.2	+0.6
	0.2nm,0.5s,mb3.3,baz=140,slow=5.2,SNR=3.1						
ILAR	Eielson Array	84.51	21	P	P	20 51 18.7	-0.5
	0.1nm,0.5s,mb3.2,baz=235,slow=3.2,SNR=2.5						
MKAR	Makanchi Array	87.28	318	P	P	20 51 32.3	-1.0
	0.5nm,0.6s,mb4.0,baz=106,slow=5.1,SNR=4.3						
NVAR	Mina Array Bea	90.79	51	P	P	20 51 52.2	+2.1
	0.3nm,0.6s,mb3.8,baz=241,slow=5.0,SNR=3.1						
PDAR	Pinedale Array	98.01	48	LR	LR	21 36 43.6	
	comp=Z,42nm,18.5s,MS4.0,baz=255,slow=36						

SZGRF ***01*** *20:52:49.9, 30°.04N×140°.23E, h33km, mb5.4, Southeast of Honshu, Japan*

NIED ***01*** *20:53:00, 29°.70N×139°.90E, h360km, Mw5.1 Best double couple: M0 4.73000×10^16 NP1:φs323.00000°, δ59.00000°, λ-42.00000°. NP2:φs79.00000°, δ55.00000°, λ-140.00000°.*

BGS ***01*** *20:53:21.9±1.6, 28°.61N×137°.89E, h350km, mb4.9*

BJI ***01*** *20:53:24.6, 29°.72N×139°.34E, h352km, mB4.8/24, mb5.3/61*

JMA ***01*** *20:53:25.5±0.2, 29°.74N×139°.87E, h375km±3km, M5.4*

IDC ***01*** *20:53:25.7±0.5, 29°.70N×139°.47E, h355km±4km, mb4.6/24, mb1 4.7/30, mb1mx4.6/34, mbtmp4.7/30, Error ellipse: s-maj=9.3km s-min=6.1km az=77.0*

MOS ***01*** *20:53:25.9±0.8, 29°.81N×139°.30E, h363km, mb5.2/88, Error ellipse: s-maj=8.5km s-min=3.9km az=112.7*

NEIC ***01*** *20:53:25.3±0.1, 29°.73N×139°.33E, mb5.0/159, MW5.0(NIED), Error ellipse: s-maj=4.6km s-min=3.4km az=158.0*

ISCJB ***01*** *20:53:26.4±0.2, 29°.79N±0°.02×139°.26E±0°.02, h365km±2km, mb5.0/274, Error ellipse: s-maj=3.2km s-min=2.2km az=155.2*

TEH ***01*** *20:53:27.0, 29°.83N×139°.49E, h368km*

DJA ***01*** *20:53:29, 29°.67N×139°.37E, h394km, mb5.0/37*

ISC 01 20:53:28.3±0.2, 29°.84N±0°.02×139°.29E±0°.02, h372km±2km, h366km±5.0km: pP-P, n1242, σ0°87/1269, mb5.0/274, 211C-267D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.29	8	⇑P	Pn	20 54 30.6	-1.1
JHJ	Hachijo jima 2	3.29	7	P	Pn	20 54 30.8	-1.0
	497nm,0.3s,baz=187,slow=2.8,SNR=549						
JHJ				S	S	20 55 19.6	-3.5
	2μm,0.3s,baz=143,slow=20,SNR=10						
CBIJ	Chichi jima	3.74	136	P	Pn	20 54 30.1	-6.0
	1μm,0.3s,baz=282,slow=23,SNR=425						
CBIJ				S	S	20 55 21.0	-10
	3μm,0.3s,baz=271,slow=21,SNR=26						
CBIJ	Chichi jima	3.74	136	⇓P	Pn	20 54 30.0	-6.1
CBIJ				eS	S	20 55 19.5	-11
JHHJ	Haha-jima-NKT	4.09	141	⇓P	Pn	20 54 33.3	-6.2
JHHJ				S	S	20 55 26.4	-11
TK01	Tokai 1	4.17	340	P	Pn	20 54 41.4	+1.3
JMY	Miyakejima3	4.22	3	P	Pn	20 54 39.4	-1.3
JKO	Kozu shima	4.33	358	⇑P	Pn	20 54 41.3	-0.5
JWZ	Kozaga	4.78	321	P	Pn	20 54 48.4	+2.0
JWZ				eS	S	20 55 52.6	+2.9
BSO1	Boso 1	5.00	16	P	Pn	20 54 46.8	-2.0
BSO1				eS	S	20 55 50.1	-4.1
JIE	Ise	5.04	335	⇑P	Pn	20 54 51.1	+1.9
JIE				S	S	20 55 57.7	+2.9
JWM	Minabe	5.21	321	P	Pn	20 54 53.2	+2.1
JOD2	Odawara 2	5.41	358	P	Pn	20 54 52.0	-1.2
JOD2				eS	S	20 56 01.5	-0.6
JEG	Eigenji	5.82	336	⇑P	Pn	20 55 00.2	+2.5
JRY	Ryogami san	6.17	357	⇑P	Pn	20 55 00.6	-0.9
JRY				S	S	20 56 16.0	-1.4
JGM	Miyama	6.23	340	⇑P	Pn	20 55 03.9	+1.6
JFM	Mihama	6.32	335	⇑P	Pn	20 55 05.5	+2.2
JWT	Wachi	6.34	330	⇑P	Pn	20 55 05.8	+2.3
JAG	Ashikaga	6.57	1	⇑P	Pn	20 55 03.5	-2.6
JGN	Niukaw	6.58	346	⇑P	Pn	20 55 06.8	+0.6
JET	Tanbara	6.60	308	⇓P	Pn	20 55 09.4	+2.8
JNG	Nsakai	6.62	352	P	Pn	20 55 06.4	-0.3
MJAR	Matsushiro Arr	6.74	353	P	Pn	20 55 06.9	-1.1
	42nm,0.3s,baz=167,slow=10.0,SNR=343						
MJAR				S	S	20 56 28.2	-1.1
	16nm,0.3s,baz=173,slow=12,SNR=11						
MJAR				ScP	ScP	21 04 11.3	-0.5
	0.1nm,0.3s,baz=178,slow=0.9,SNR=7.1						
MJAR	Matsushiro Arr	6.74	353	P	Pn	20 55 06.9	-1.2
MJAR				S	S	20 56 28.3	-1.1
MAJO	Matsushiro	6.74	353	eP	Pn	20 55 06.9	-1.2
MAJO				pmax	pmax		
	comp=Z,300nm,0.5s						
MAJO	Matsushiro	6.74	353	eP	Pn	20 55 06.9	-1.2
	comp=Z,300nm,0.5s						
MAT	Matsushiro	6.74	353	P	Pn	20 55 07.1	-1.0
MAT				S	S	20 56 28.3	-1.1
MAT	Matsushiro	6.74	353	P	Pn	20 55 07.1	-1.0
MAT				S	S	20 56 28.7	-0.7
JKY	Yasaka	6.76	330	P	Pn	20 55 10.6	+2.3
JHO	Hitachi	6.83	9	⇑P	Pn	20 55 06.5	-2.6
JKG	Kaga	6.88	340	⇑P	Pn	20 55 11.0	+1.3
JSB	Shiboa	7.13	4	P	Pn	20 55 10.5	-2.0
JJN	Nakama	7.30	353	P	Pn	20 55 13.6	-0.9
JHS	Saijyo	7.33	316	P	Pn	20 55 17.9	+3.1
JHS				eS	S	20 56 46.0	+4.3
JTZ	Takazaki	7.34	288	⇓P	Pn	20 55 18.2	+3.1
ONAJ	Iwakimizuishiy	7.35	9	⇑P	Pn	20 55 12.5	-2.5
JHK	Hiroka	7.39	358	⇑P	Pn	20 55 13.6	-1.9
JFY	Yanaizu	7.55	3	P	Pn	20 55 15.7	-1.7
JKD	Kudamatsu	7.57	306	⇓P	Pn	20 55 21.1	+3.4
JFT	Otama	7.71	6	⇑P	Pn	20 55 17.7	-1.5
JIU2	Izumi 2	7.75	293	⇓P	Pn	20 55 23.4	+3.7
JSZ	Suzu	7.75	349	P	Pn	20 55 19.1	-0.6
JSU	Suzuyama	7.79	285	P	Pn	20 55 23.0	+2.8
JZO	Okuchi	7.81	289	⇓P	Pn	20 55 23.5	+3.1
JNU	Nakatsue	7.89	297	eP	Pn	20 55 24.5	+3.1
	comp=Z,66nm,0.9s						
SAI	Saigo	8.07	323	P	Pn	20 55 26.7	+3.2
SAI				eS	S	20 57 00.1	+2.5
JMM	Marumori	8.10	8	⇑P	Pn	20 55 22.2	-1.5
JMZ	Minamidaito 2	8.19	243	P	Pn	20 55 25.6	+0.6
JFA	Akaike	8.20	300	P	Pn	20 55 27.9	+3.0
JHG	Hegura jima	8.22	347	P	Pn	20 55 24.9	-0.3
JTY	Toyota	8.26	304	P	Pn	20 55 28.7	+3.1
JHD	Hondo	8.27	291	P	Pn	20 55 29.2	+3.4
JYS	Shirataka	8.38	4	⇑P	Pn	20 55 25.9	-1.1
JSJ	Shimokoshiki	8.44	285	P	Pn	20 55 30.6	+2.8
JOU	Okura	8.58	7	⇑P	Pn	20 55 28.5	-0.8
JAM	Amami Oshima	8.59	263	P	Pn	20 55 33.3	+3.6
JAW	Awa shima	8.59	360	P	Pn	20 55 27.8	-1.7
JAW				S	S	20 57 04.5	-4.2
JUR	Ureshino	8.61	294	P	Pn	20 55 33.1	+3.3
JYA	Atsumi	8.74	2	⇑P	Pn	20 55 30.0	-1.2
JIO	Ouri	8.76	11	⇑P	Pn	20 55 30.1	-1.3
JYK	Kaneyama	9.10	5	P	Pn	20 55 34.5	-0.9
JMK	Ichinoseki	9.22	9	P	Pn	20 55 35.9	-1.0
JMK				S	S	20 57 18.7	-3.7
JTB	Tobi-shima	9.33	1	P	Pn	20 55 37.1	-1.1
OFUJ	Ofunato	9.42	11	P	Pn	20 55 38.4	-0.8
JFU	Fukue jima 2	9.45	290	P	Pn	20 55 42.7	+3.0
JTU	Tsushima	9.59	302	P	Pn	20 55 44.3	+3.0
JRG	Rokugo	9.60	6	P	Pn	20 55 40.8	-0.5
JOM	Ohasama	9.75	9	P	Pn	20 55 42.5	-0.6
MIYJ	Miyakonagasawa	9.93	11	P	Pn	20 55 44.7	-0.5
JOG2	Oga 2	10.06	2	P	Pn	20 55 46.4	-0.3
JOW	Kunigami	10.16	255	eP	Pn	20 55 49.8	+1.7
	comp=Z,100nm,0.6s						
JOW	Kunigami	10.16	255	P	Pn	20 55 50.2	+2.1
JKZ	Kuzumaki	10.26	9	P	Pn	20 55 48.7	-0.3
JTH	Tanohata	10.29	11	P	Pn	20 55 48.9	-0.6
JIH	Iheya	10.35	257	P	Pn	20 55 52.8	+2.4
JAH	Hinai	10.38	6	P	Pn	20 55 50.3	-0.2
JANG	Nango	10.66	9	P	Pn	20 55 53.3	-0.5
JIW	Iwasaki	10.74	3	P	Pn	20 55 54.8	0.0
JJT2	Tamagusuku 2	10.85	253	P	Pn	20 55 59.0	+2.8
JTM	Tenmabayashi	11.02	7	P	Pn	20 55 58.1	+0.1
JSI2	Shiura 2	11.23	4	P	Pn	20 56 00.7	+0.2
JKE	Kume jima 2	11.58	255	P	Pn	20 56 06.3	+1.4
JOT	Ohata	11.60	7	P	Pn	20 56 05.1	+0.2
JOT				eS	S	20 58 09.8	-3.7
JKB	Kayabe	12.10	6	P	P	20 56 10.7	+0.8
JKB				S	S	20 58 20.8	-2.9
KSRS	Korea Array	12.13	312	P	P	20 56 11.9	+1.6
	comp=Z,9.1nm,0.3s,baz=122,slow=11,SNR=176						
KSRS				PcP	PcP	21 01 20.5	-0.5
	comp=Z,0.2nm,0.3s,baz=167,slow=1.4,SNR=7.4						
KSRS				ScP	ScP	21 04 18.6	+0.6
	comp=Z,0.1nm,0.3s,baz=142,slow=1.6,SNR=11						
JOSM	Okushiri–Mats	12.21	1	P	P	20 56 12.5	+1.3
JOSM				S	S	20 58 24.9	-1.1
ERM	Erimo	12.54	13	Pn	Pn	20 56 16.6	+0.7
	comp=Z,4μm,0.6s,SNR=66						
ERM	Erimo	12.54	13	d iP	P	20 56 16.2	+1.4
ERM	Erimo	12.54	13	eP	P	20 56 16.1	+1.3
	comp=Z,389nm,0.6s						
INCN	Inchon	13.00	309	eP	P	20 56 21.7	+1.8
	comp=Z,84nm,0.7s						
INCN				e		20 56 34.3	
ASAJ	Asahikawa	14.49	10	P	P	20 56 37.2	+1.1
	comp=Z,12nm,0.3s,baz=222,slow=11,SNR=115						
ASAJ				S	S	20 59 11.9	+0.2
	comp=Z,1.0nm,0.3s,baz=242,slow=17,SNR=2.1						
ASAJ	Asahikawa	14.49	10	P	P	20 56 37.2	+1.1
ASAJ				S	S	20 59 12.0	+0.2
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	Asahikawa	14.49	10	eP	P	20 56 37.5	+1.4
	comp=N,41nm,0.5s						
VLA	Vladivostok	14.52	338	⇓iP	P	20 56 36.2	-0.2
VLA				eS	S	20 59 10.5	-1.9
VLA				pmax	pmax		
	comp=Z,79nm,0.8s						
JIJ	Ishigaki jima	14.55	252	P	P	20 56 38.1	+1.0
JKRS	Kuro-shima	14.71	251	P	P	20 56 40.7	+1.8
IRIF	Iriomote-Funau	14.90	252	P	P	20 56 41.8	+0.9
YUK	Yuzh-Kuril'sk	15.10	18	⇑iP	P	20 56 38.3	-4.5
YUK				i S	S	20 59 17.7	-6.3
YUK				pmax	pmax		
	comp=Z,3μm,1.8s						
YUK				pmax	pmax		
	comp=N,529nm,1.0s						
YUK				pmax	pmax		
	comp=E,471nm,1.0s						
YUK				pmax	pmax		
	comp=Z,785nm,1.0s						
YUK				smax			
	comp=N,3355μm,2.7s						
YUK				smax			
	comp=E,2275μm,2.7s						
YOJ	Yonaguni jima	15.45	254	P	P	20 56 47.4	+0.6
SSE	Sheshan	15.66	279	P	P	20 56 48.8	-0.3
SSE				pmax	pmax		
	comp=Z,120nm,0.7s						
SSE				pmax	pmax		
	comp=Z,160nm,4.6s						
SSE				LR	LR		
	comp=N,150nm,30.3s						
SSE				LR	LR		
	comp=E,65nm,30.4s						
SSE				LR	LR		
	comp=Z,74nm,18.3s						
TATO	Taipei	16.53	257	eP	P	20 56 58.6	0.0
	comp=Z,49nm,0.5s						
MDJ	Mudanjiang	16.63	335	P	P	20 57 00.6	+1.3
MDJ				S	S	20 59 53.2	-0.9
MDJ				PcP	PcP	21 01 26.1	-1.0
MDJ				ScP	ScP	21 04 25.7	-0.1
MDJ				PcS	PcS	21 05 01.8	-1.2
MDJ				ScS	ScS	21 08 06.5	+1.2
MDJ				pmax	pmax		
	comp=Z,55nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,130nm,4.0s						
MDJ	Mudanjiang	16.63	335	eP	P	20 57 00.5	+1.2
	comp=Z,78nm,1.1s						
YHNB	Yeheng	16.74	256	eP	P	20 57 00.1	-0.6
	comp=Z,84nm,0.6s						
NACB	Ninganchiao	16.75	255	eP	P	20 56 58.9	-1.9
	comp=Z,92nm,0.6s						
KUR	Kuril'sk	16.78	21	P	P	20 57 00.5	-0.5
KUR				pmax	pmax		
	comp=N,260nm,1.0s						
KUR				pmax	pmax		
	comp=E,280nm,1.0s						
KUR				pmax	pmax		
	comp=Z,380nm,1.0s						
GUMO	Guam	16.98	161	P	P	20 57 01.6	-1.8
	comp=Z,18nm,0.3s,baz=355,slow=8.8,SNR=11						
GUMO	Guam	16.98	161	P	P	20 57 01.6	-1.8
GUMO				pmax	pmax		
	comp=Z,18nm,0.3s						
GUMO	Guam	16.98	161	eP	P	20 57 00.9	-2.5
	comp=Z,209nm,0.9s						
GUMO	Guam	16.98	161	P	P	20 57 02.6	-0.8
	comp=Z,293nm,1.1s						
DL2	Dalian	17.13	307	⇓P	P	20 57 04.8	0.0
DL2				sP	sP	20 58 36.4	-8.5
DL2				S	S	21 00 02.7	-1.5
DL2				pmax	pmax		
	comp=Z,70nm,0.5s						
DL2				pmax	pmax		
	comp=Z,100nm,5.0s						
YSS	Yuzh-Sakhalins	17.30	8	eP	P	20 57 07.0	+0.6
YSS				eS	S	21 00 07.0	-0.1
YSS	Yuzh-Sakhalins	17.30	8	eP	P	20 57 07.8	+1.4
	comp=Z,191nm,0.6s						
YULB	Yu-li	17.32	252	eP	P	20 57 06.1	-0.8
	comp=Z,118nm,0.6s						
SSLB	Suanglung	17.44	254	eP	P	20 57 07.7	-0.5
	comp=Z,164nm,0.6s						
SNY	Shenyang	17.44	318	⇓P	P	20 57 08.8	+0.8
SNY				S	S	21 00 14.9	+4.8
SNY				pmax	pmax		
	comp=Z,200nm,4.9s						
SNY				LR	LR		
	comp=N,360nm,14.7s						
SNY				LR	LR		
	comp=E,280nm,12.0s						
SNY				LR	LR		
	comp=Z,280nm,9.8s						
NJ2	Nanjing	17.67	282	eP	P	20 57 10.6	0.0
NJ2				pmax	pmax		
	comp=Z,450nm,0.8s						
TWG	Pinlang	17.75	251	eP	P	20 57 10.6	-1.1
	comp=Z,143nm,0.8s						
CN2	Changchun	17.77	325	⇓P	P	20 57 12.1	+0.6
CN2				esP	sP	20 58 43.6	-8.3
CN2				eS	S	21 00 15.5	-0.9
CN2				pmax	pmax		
	comp=Z,70nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
TPUB	Ta-pu	17.91	253	eP	P	20 57 12.7	-0.6
	comp=Z,170nm,0.8s						
HABR	Khabarovsk	18.89	351	ceP	P	20 57 24.3	+1.1
HABR				S	S	21 00 41.0	+3.5
HABR				pmax	pmax		
	comp=Z,87nm,1.5s						
HABR				pmax	pmax		
	comp=N,37nm,0.9s						
HABR				pmax	pmax		
	comp=E,17nm,0.6s						
HABR				MLR	MLR		
	comp=Z,78nm,13.0s						
QZH	Quanzhou	19.01	260	⇑iP	P	20 57 24.8	0.0
QZH				pmax	pmax		
	comp=Z,180nm,0.4s						
TIA	Tai'an	19.62	295	P	P	20 57 30.0	-1.1
TIA				pmax	pmax		
	comp=Z,240nm,0.6s						
KLR	Kul'dur	20.20	346	eP	P	20 57 33.3	-2.9
KLR				eS	S	21 00 56.0	-3.0
KLR				pmax	pmax		
	comp=Z,84nm,0.9s						
KLR				smax			
	comp=N,800nm,12.0s						
KLR				smax			
	comp=E,900nm,12.0s						
BJT	Baijiatuan	21.45	304	eP	P	20 57 47.0	-0.8
BJT				pmax	pmax		
	comp=Z,343nm,1.1s						
BJT	Baijiatuan	21.45	304	eP	P	20 57 47.0	-0.8
	comp=Z,343nm,1.1s,mb5.5						
BJI	Beijing	21.45	305	P	P	20 57 47.2	-0.6
BJI				sP	sP	20 59 30.7	-1.8
BJI				S	S	21 01 23.0	+3.4
BJI				pmax	pmax		
	comp=Z,200nm,1.1s,mb5.3						
WHN	Wuhan	21.56	278	P	P	20 57 49.5	+0.6
WHN				sP	sP	20 59 33.5	-0.3
WHN				S	S	21 01 28.0	+6.4
WHN				pmax	pmax		
	comp=Z,980nm,4.8s						
WHN				LR	LR		
	comp=N,730nm,8.7s						
WHN				LR	LR		
	comp=E,340nm,3.5s						
WHN				LR	LR		
	comp=Z,420nm,9.8

GYA S **S** **21 03 16.9 -0.6**
GYA ScP ScP 21 04 58.7 +0.2
GYA sS sS 21 05 21.2 -2.3
GYA PcS PcS 21 05 35.6 -0.7
GYA ScS ScS 21 08 52.0 -1.2
GYA pmax pmax
comp=Z,40nm,0.9s,mb4.7
GYA pmax pmax
comp=Z,160nm,4.3s
CIT Chita 29.20 327 *e*P **P** **20 58 56.8 0.0**
CIT *e* 21 03 25.7
CIT pmax pmax
comp=Z,383nm,1.2s,mb5.5
LZH Lanzhou 30.27 291 ⇓P **P** **20 59 06.7 +0.3**
LZH pP pP 21 00 17.2 +2.0
LZH PP PP 21 00 29.0 +4.9
LZH S **S** **21 03 34.0 -4.5**
LZH sS sS 21 05 45.2 +0.5
LZH pmax pmax
comp=Z,150nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,360nm,4.1s
ULN Ulaanbaatar 30.58 315 *e*P **P** **20 59 09.7 +0.7**
ULN pmax pmax
comp=Z,132nm,0.9s,mb5.2
ULN Ulaanbaatar 30.58 315 *e*P **P** **20 59 09.7 +0.7**
comp=Z,132nm,0.9s,mb5.2
ULN Ulaanbaatar 30.58 315 P **P** **20 59 10.5 +1.5**
comp=Z,1μmcomp=Z,170nm,1.0s,mb5.2
ULN Ulaanbaatar 30.58 315 P **P** **20 59 10.6 +1.6**
SNR=79
CD2 Chengdu 30.60 281 ⇓*i*P **P** **20 59 09.6 +0.3**
CD2 pP pP 21 00 20.7 +2.5
CD2 PP PP 21 00 31.7 +3.9
CD2 S **S** **21 03 44.9 +1.2**
CD2 SS SS 21 06 09.4 -4.2
CD2 pmax pmax
comp=Z,470nm,0.6s,mb5.9
CD2 pmax pmax
comp=Z,1μm,5.2s
SONM Songino Array 30.98 315 P **P** **20 59 13.4 +1.0**
comp=Z,33nm,0.4s,mb4.9,baz=121,slow=8.0,SNR=311
SONM PcP PcP 21 01 58.2 +0.2
comp=Z,6.1nm,0.8s,baz=112,slow=1.8,SNR=3.8
SONM ScP ScP 21 05 04.6 -0.3
comp=Z,4.0nm,0.9s,baz=98,slow=2.9,SNR=6.7
SONM Songino Array 30.98 315 P **P** **20 59 13.4 +1.0**
SONM 21 01 58.2
TNTI Ternate 31.06 204 P **P** **20 59 11.6 -1.9**
comp=Z,1μmcomp=Z,76nm,1.1s,mb4.8
MYLDM Lahad Datu 31.42 223 P **P** **20 59 18.0 +1.4**
MYLDM Lahad Datu 31.42 223 P **P** **20 59 17.8 +1.2**
comp=Z,39nm,1.0s,mb4.6
SDKM Sandakan 31.84 225 P **P** **20 59 19.8 -0.5**
KKM Kota Kinabalu 32.14 227 P **P** **20 59 21.3 -1.6**
KKM Kota Kinabalu 32.14 227 *e*P **P** **20 59 23.4 +0.4**
comp=Z,18nm,0.8s,mb4.3
TSM Tawau 32.50 223 P **P** **20 59 27.1 +1.2**
KMI Kunming 32.68 271 P **P** **20 59 28.2 +0.8**
KMI pP pP 21 00 38.0 +1.2
KMI PP PP 21 00 57.4 +6.7
KMI sP sP 21 01 20.3 +0.4
KMI S **S** **21 04 16.7 +0.8**
KMI sS sS 21 06 22.4 -0.5
KMI SS SS 21 06 52.4 -3.4
KMI pmax pmax
comp=Z,73nm,0.6s,mb5.1
KMI pmax pmax
comp=Z,140nm,3.4s
KMI LR LR
comp=N,260nm,15.9s
KMI LR LR
comp=E,110nm,22.0s
KMI LR LR
comp=Z,130nm,13.6s
YAK Yakutsk 32.81 352 *e*P **P** **20 59 27.7 -0.3**
YAK *e*PPP 21 02 02.1
YAK *e*S **S** **21 04 14.5 -2.4**
YAK *e*SS SS 21 06 53.9 -3.5
YAK pmax pmax
comp=Z,60nm,0.9s,mb4.8
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=N,26nm,1.3s
YAK smax
comp=E,84nm,1.5s
YAK smax
comp=N,279nm,2.3s
YAK Yakutsk 32.81 352 *e*P **P** **20 59 27.5 -0.5**
comp=N,75nm,0.8s,mb5.0
MRSI Marisa 33.55 213 P **P** **20 59 36.0 +1.0**
GTA Gaotai 33.63 297 ⇓P **P** **20 59 35.9 +0.5**
GTA pP pP 21 00 42.8 -2.3
GTA sP sP 21 01 22.2 -6.0
GTA S **S** **21 04 30.8 +0.6**
GTA sS sS 21 06 29.1 -8.4
GTA SS SS 21 07 08.0 -6.6
GTA pmax pmax
comp=Z,180nm,1.0s,mb5.3
GTA pmax pmax
comp=Z,170nm,5.4s
GTA LR LR
comp=N,85nm,12.6s
GTA LR LR
comp=E,87nm,13.2s
GTA LR LR
comp=Z,100nm,12.9s
ZAK Zakamensk 33.87 318 *e*P **P** **20 59 38.4 +1.1**
ZAK pmax pmax
comp=Z,75nm,1.1s,mb4.8
IRK Irkutsk 34.11 321 ⇓*i*P **P** **20 59 40.3 +1.0**
IRK *e*S **S** **21 04 41.4 +4.3**
IRK pmax pmax
comp=Z,120nm,1.8s,mb4.8
SEY Seymchan 34.17 11 *e*P **P** **20 59 38.1 -1.5**
TLY Talaya 34.21 320 *e*P **P** **20 59 39.5 -0.6**
TLY pmax pmax
comp=Z,66nm,0.8s,mb4.9
TLY MLR MLR
comp=Z,57nm,15.0s
TLY Talaya 34.21 320 *e*P **P** **20 59 41.5 +1.4**
comp=Z,43nm,0.6s,mb4.9
TLY Talaya 34.21 320 P **P** **20 59 41.2 +1.1**
comp=Z,532nm,0.8s,mb5.8,SNR=16
TLY Talaya 34.21 320 P **P** **20 59 42.0 +1.9**
SNR=29
LUWI Luwuk 34.52 210 P **P** **20 59 41.2 -2.0**
comp=Z,26nm,0.9s,mb4.4
NLAI Namlea 34.90 202 P **P** **20 59 46.1 -0.4**
comp=Z,705nmcomp=Z,32nm,0.8s,mb4.6
MOY Mondy 35.71 319 *e*P **P** **20 59 53.2 +0.4**
MOY pmax pmax
comp=Z,61nm,2.5s,mb4.4
TLE Tual 35.83 191 P **P** **20 59 54.1 -0.2**
comp=Z,108nm,1.1s,mb5.0
BTM Bintulu 36.31 228 P **P** **20 59 58.4 +0.1**
CHRT Chiangrai 37.04 264 ⇓P **P** **21 00 04.0 -0.4**
comp=Z,526nm,0.6s,mb5.9
SBUM Sibu 37.44 228 P **P** **21 00 08.3 +0.5**
SBUM Sibu 37.44 228 P **P** **21 00 07.3 -0.5**
comp=Z,19nm,1.0s,mb4.3
CHTO Chiang Mai 38.19 263 *e*P **P** **21 00 14.1 +0.2**
CHTO pmax pmax
comp=Z,84nm,0.8s,mb5.0
CHTO Chiang Mai 38.19 263 *e*P **P** **21 00 14.1 +0.2**
comp=Z,84nm,0.8s,mb5.0
CHTO Chiang Mai 38.19 263 P **P** **21 00 14.2 +0.3**
comp=Z,1μmcomp=Z,147nm,1.1s,mb5.1
CHTO Chiang Mai 38.19 263 P **P** **21 00 14.6 +0.6**
SNR=41
CMAR Chiang Mai Arr 38.34 262 P **P** **21 00 15.6 +0.4**
comp=Z,20nm,0.7s,mb4.5,baz=61,slow=6.0,SNR=242
CMAR PcP PcP 21 02 20.1 -0.1
comp=Z,8.5nm,0.9s,baz=41,slow=1.2,SNR=12
CMAR ScP ScP 21 05 32.7 +0.7
comp=Z,2.2nm,1.0s,baz=52,slow=2.3,SNR=5.4
CMAR PKiKP PKiKP 21 09 32.8 -1.0
comp=Z,0.4nm,0.5s,baz=282,slow=1.3,SNR=4.5
CMAR Chiang Mai Arr 38.34 262 P **P** **21 00 15.6 +0.4**
CMAR PcP PcP 21 02 20.1 -0.1
CMAR ScP ScP 21 05 32.7 +0.7
SPSI Sidrap Palu 38.47 212 P **P** **21 00 14.7 -1.5**
comp=Z,21nm,0.9s,mb4.4
NST Nakhon Sawan 38.57 257 P **P** **21 00 17.8 +0.8**

BDT Bhumibol Dam 38.81 260 P **P** **21 00 20.0 +1.0**
comp=Z,44nm,0.9s,mb4.7
KSM Kuching 39.43 230 P **P** **21 00 24.8 +0.7**
KSM Kuching 39.43 230 *e*P **P** **21 00 23.8 -0.3**
comp=Z,35nm,0.6s,mb4.8
KSM Kuching 39.43 230 P **P** **21 00 24.3 +0.2**
comp=Z,465nmcomp=Z,55nm,0.7s,mb4.9
BKSI Bulukumba 39.51 211 P **P** **21 00 24.1 -0.6**
comp=Z,17nm,1.2s,mb4.2
STKI Sintang 39.73 227 P **P** **21 00 26.9 +0.3**
comp=Z,22nm,0.9s,mb4.4
PMG Port Moresby 39.75 168 *ce*P **P** **21 00 23.6 -3.0**
PMG pmax pmax
comp=Z,43nm,1.7s
PMG Port Moresby 39.75 168 P **P** **21 00 24.4 -2.2**
comp=Z,56nm,0.8s,mb4.9
BILL Bilibino 41.41 15 ⇓*e*P **P** **21 00 39.6 +0.2**
BILL *e* 21 02 28.1
BILL *i* S **S** **21 06 27.9 +2.3**
BILL *e*SS SS 21 09 53.8 +7.2
BILL pmax pmax
comp=Z,32nm,1.6s,mb4.3
LSA Lhasa 41.54 282 P **P** **21 00 42.3 +1.3**
LSA Lhasa 41.54 282 *e*P **P** **21 00 42.6 +1.6**
LSA pmax pmax
comp=Z,21nm,0.8s,mb4.3
LSA Lhasa 41.54 282 *e*P **P** **21 00 42.6 +1.5**
comp=Z,21nm,0.8s,mb4.3
MMRI Maumere 41.63 206 P **P** **21 00 41.0 -0.8**
comp=Z,75nm,0.8s,mb4.9
KTGM Kuala Trenggan 41.91 242 P **P** **21 00 43.4 -0.8**
SHL Shillong 41.96 276 ⇓*i*P **P** **21 00 43.0 -1.5**
TIXI Tiksi 42.25 355 *d i*P **P** **21 00 45.8 -0.2**
TIXI *e*S **S** **21 06 37.1 -0.6**
TIXI *e*SS SS 21 10 00.5 0.0
TIXI pmax pmax
comp=Z,25nm,0.7s,mb4.5
TIXI Tiksi 42.25 355 *e*P **P** **21 00 45.8 -0.3**
comp=Z,23nm,0.7s,mb4.4
WMQ Urumqi 42.92 304 P **P** **21 00 53.0 +1.2**
WMQ pP pP 21 02 08.0 +3.1
WMQ PP PP 21 02 42.0 +1.5
WMQ ScP ScP 21 05 49.0 -0.7
WMQ S **S** **21 06 50.0 +1.8**
WMQ ScS ScS 21 10 09.0 -1.5
WMQ pmax pmax
comp=Z,220nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,270nm,4.0s
WMQ LR LR
comp=N,71nm,16.0s
WMQ LR LR
comp=E,52nm,16.0s
WMQ LR LR
comp=Z,44nm,16.0s
COEN Coen 43.70 175 *e*P **P** **21 00 55.8 -2.5**
comp=Z,329nm,0.8s,mb5.5
COEN Coen 43.70 175 P **P** **21 00 57.1 -1.2**
comp=Z,205nm,0.9s,mb5.3
MYKOM Kota Tinggi 43.71 237 P **P** **21 00 59.2 +0.7**
MYKOM Kota Tinggi 43.71 237 P **P** **21 00 59.0 +0.6**
comp=Z,16nm,0.8s,mb4.2
KGM Kluang 43.94 238 P **P** **21 01 01.4 +1.1**
KMMI Kalianget 44.02 218 P **P** **21 01 00.5 -0.3**
comp=Z,30nm,1.9s,mb4.6
NIKO Nikolski 44.04 43 *e*P **P** **21 00 58.9 -1.6**
comp=Z,26nm,0.4s,mb4.7
IPM Ipoh 44.07 243 P **P** **21 01 01.6 +0.3**
IPM Ipoh 44.07 243 *e*P **P** **21 01 00.6 -0.6**
comp=Z,35nm,0.6s,mb4.7
IPM Ipoh 44.07 243 P **P** **21 01 00.8 -0.5**
comp=Z,508nmcomp=Z,54nm,0.8s,mb4.7
FRIM Kepong 44.40 241 P **P** **21 01 04.0 +0.1**
TAPN Taplejung 45.05 280 *e*P **P** **21 01 09.7 +0.9**
comp=Z,91nm,0.6s,mb5.1
ODAN Odare 45.46 279 *e*P **P** **21 01 12.8 +0.8**
comp=Z,294nm,0.7s,mb5.5
ZAA0 Zalesovo Array 45.75 318 *e*P **P** **21 01 13.6 -0.3**
ZALV Zalesovo Beam 45.75 318 P **P** **21 01 13.8 0.0**
LSA comp=Z,62nm,0.6s,mb4.9,baz=97,slow=7.2,SNR=116
ZALV PcP PcP 21 02 43.6 -0.8
comp=Z,28nm,0.7s,baz=109,slow=3.3,SNR=12
ZALV ScP ScP 21 05 59.6 -1.5
comp=Z,4.1nm,0.7s,baz=109,slow=4.4,SNR=3.3
ZALV S **S** **21 07 29.2 +0.8**
comp=Z,2.2nm,0.7s,baz=102,slow=14,SNR=3.6
ZALV Zalesovo Beam 45.75 318 P **P** **21 01 13.8 0.0**
ZALV 21 02 43.6
ZALV S **S** **21 07 29.2 +0.9**
ZALV Zalesovo Beam 45.75 318 P **P** **21 01 13.8 0.0**
ZALV PcP PcP 21 02 43.6 -0.8
ZALV ScP ScP 21 05 59.6 -1.5
ZALV S **S** **21 07 29.2 +0.8**
PWJI Pagerwojo 46.00 219 P **P** **21 01 14.4 -1.8**
comp=Z,67nm,0.9s,mb4.8
RAMN Ramite 46.11 280 *e*P **P** **21 01 17.8 +0.8**
comp=Z,437nm,0.7s,mb5.7
JIRN Jiri 46.27 281 *e*P **P** **21 01 19.5 +1.3**
comp=Z,350nm,0.5s,mb5.7
KNA Kununurra 46.45 194 P **P** **21 01 18.2 -1.4**
comp=Z,470nmcomp=Z,71nm,0.8s,mb4.8
GUN Gumba 46.46 281 *e*P **P** **21 01 21.0 +1.3**
comp=Z,486nm,0.8s,mb5.7
TSI Tuntungan 46.59 244 P **P** **21 01 20.8 0.0**
MK31 Makanchi Array 46.78 308 *i*P **P** **21 01 22.1 +0.3**
MK31 pmax pmax
comp=Z,18nm,0.4s,mb4.7
MK31 Makanchi Array 46.78 308 *e*P **P** **21 01 22.1 +0.3**
MKAR Makanchi Array 46.78 308 P **P** **21 01 22.1 +0.3**
comp=Z,58nm,0.7s,mb4.9,baz=90,slow=7.5,SNR=259
MKAR PcP PcP 21 02 47.7 -0.4
comp=Z,22nm,0.7s,baz=79,slow=6.3,SNR=9.0
MKAR ScP ScP 21 06 05.3 -0.2
comp=Z,4.8nm,0.6s,baz=77,slow=5.5,SNR=6.9
MKAR Makanchi Array 46.78 308 P **P** **21 01 22.1 +0.3**
MKAR 21 02 47.7
NVS Novosibirsk 46.80 319 ⇓*i*P **P** **21 01 21.7 -0.2**
NVS *e* pP 21 02 38.5 +2.1
NVS *e*PP pP 21 02 41.7 +5.3
NVS *e*S **S** **21 07 41.4 -1.8**
NVS *e* 21 10 32.8
NVS pmax pmax
comp=Z,70nm,1.1s,mb4.8
NVS pmax pmax
comp=N,16nm,1.2s
NVS pmax pmax
comp=E,55nm,1.2s
NVS smax
comp=N,12nm,2.8s
NVS smax
comp=E,8.0nm,2.4s
PKI Pulchoki 46.95 281 *e*P **P** **21 01 24.1 +0.6**
comp=E,239nm,1.0s,mb5.4
PKIN Phulchoki 46.96 281 *e*P **P** **21 01 24.7 +1.1**
comp=E,136nm,0.7s,mb5.3
DMN Daman 47.20 281 *e*P **P** **21 01 26.2 +0.8**
SDSI Sungai Dareh 47.33 237 P **P** **21 01 26.4 -0.1**
comp=E,23nm,1.1s,mb4.3
LEM Lembang 47.48 225 P **P** **21 01 27.5 -0.1**
comp=E,187nm,0.8s,mb5.4
GKN Gorkha 47.49 282 *e*P **P** **21 01 28.2 +0.6**
comp=E,371nm,1.1s,mb5.5
MNSI Mandailing Nat 47.53 240 P **P** **21 01 27.5 -0.6**
comp=E,36nm,0.7s,mb4.7
KLSI 47.71 230 P **P** **21 01 28.7 -0.6**
comp=E,128nm,0.8s,mb5.2
PPI Padang Panjang 47.76 238 P **P** **21 01 29.1 -0.6**
comp=E,24nm,0.8s,mb4.5
MDSI Maura Dua 47.92 231 P **P** **21 01 30.3 -0.7**
comp=E,71nm,0.7s,mb5.0
CISI Cisompet, Garu 47.93 224 P **P** **21 01 29.4 -1.6**
comp=E,71nm,1.3s,mb4.7
DANN Dangsing 48.14 283 *e*P **P** **21 01 33.9 +1.4**
comp=E,407nm,0.6s,mb5.8
LWLI Liwa 48.40 230 P **P** **21 01 33.1 -1.4**
comp=E,102nm,0.7s,mb5.1
KSI Kapahiang 48.40 233 P **P** **21 01 33.8 -0.8**
comp=E,56nm,0.9s,mb4.8
KOLN Koldanda 48.44 282 *e*P **P** **21 01 35.8 +1.0**
comp=E,460nm,0.8s,mb5.8
KURK Kurchatov 49.25 313 P **P** **21 01 40.2 -0.3**
comp=E,1μm,0.9s,mb6.1
KURK Kurchatov 49.25 313 P **P** **21 01 41.0 +0.5**
comp=E,129nm,0.6s,mb5.3,baz=91,slow=7.9,SNR=142
KURK S **S** **21 08 17.8 +0.4**
comp=E,1.3nm,0.3s,baz=86,slow=11,SNR=5.4

KURK Kurchatov 49.25 313 *de*P **P** **21 01 40.5 0.0**
KURK pmax pmax
comp=Z,290nm,1.4s,mb5.3
KURK Kurchatov 49.25 313 *e*P **P** **21 01 40.4 -0.1**
comp=Z,168nm,0.9s,mb5.3
KURK Kurchatov 49.25 313 P **P** **21 01 40.9 +0.4**
SNR=89
FITZ Fitzroy Crossi 49.45 197 P **P** **21 01 40.9 -1.4**
comp=Z,16nm,0.5s,mb4.5,baz=19,slow=5.8,SNR=87
FITZ ScP ScP 21 06 15.9 -1.3
comp=Z,5.7nm,0.9s,baz=0.5,slow=2.7,SNR=4.2
FITZ S **S** **21 08 17.8 -2.9**
comp=Z,1.7nm,0.8s,baz=190,slow=18,SNR=3.8
FITZ Fitzroy Crossi 49.45 197 *e*P **P** **21 01 41.1 -1.2**
comp=Z,27nm,0.5s,mb4.7
FITZ Fitzroy Crossi 49.45 197 *e*P **P** **21 01 40.9 -1.4**
comp=Z,26nm,0.8s,mb4.5
FITZ Fitzroy Crossi 49.45 197 P **P** **21 01 41.1 -1.2**
comp=Z,64nm,0.9s,mb4.8
CTA Charters Tower 50.09 171 *e*P **P** **21 01 45.9 -1.1**
comp=Z,15nm,0.8s,mb4.3
ULHL Ulahol 51.39 302 P **P** **21 01 57.6 +1.1**
SNR=23
TKM2 Tokmak 2 51.77 303 P **P** **21 02 00.7 +1.4**
SNR=110
TKM2 Tokmak 2 51.77 303 *e*P **P** **21 02 00.3 +1.0**
TKM2 pmax pmax
comp=Z,137nm,1.0s,mb5.2
TKM2 Tokmak 2 51.77 303 *e*P **P** **21 02 00.3 +1.1**
comp=Z,137nm,1.0s,mb5.2
KSH Kashi 52.01 299 ⇓*i*P **P** **21 02 05.2 +4.2**
KSH *e*PcP PcP 21 03 14.2 +6.6
KSH *e*pP pP 21 03 23.6 +6.2
KSH *e*PP PP 21 04 08.9 +5.5
KSH *e*ScP ScP 21 06 31.1 +2.9
KSH PcS PcS 21 07 10.4 +4.1
KSH S **S** **21 08 56.2 +0.9**
KSH ScS ScS 21 11 12.0 +0.7
KSH sS sS 21 11 15.4 +3.5
KSH pmax pmax
comp=Z,220nm,0.9s,mb5.5
KSH LR LR
comp=N,210nm,5.0s
KSH LR LR
comp=E,200nm,4.9s
KSH LR LR
comp=Z,380nm,6.8s
KZA Kyzart 52.14 302 P **P** **21 02 04.2 +2.2**
SNR=65
KZA Kyzart 52.14 302 *e*P **P** **21 02 03.9 +1.9**
comp=Z,67nm,0.8s,mb5.0
VIS Vishakhapatnam 52.17 270 *e*PKP **P** **21 02 02.9 +0.4**
VIS AMb AMB 21 02 04.3
comp=Z,57nm,0.8s,mb5.0
VIS *i* x x 21 03 25.4
KBK Karagaybulak 52.28 303 P **P** **21 02 04.3 +1.3**
SNR=100
CHMS Chumysh 52.38 303 P **P** **21 02 04.4 +0.8**
SNR=23
USP Ospenovka 52.52 304 P **P** **21 02 05.4 +0.7**
SNR=77
AAK Ala-Archa 52.62 303 P **P** **21 02 06.4 +1.0**
SNR=42
AAK Ala-Archa 52.62 303 P **P** **21 02 06.3 +0.9**
comp=Z,41nm,0.6s,mb4.9,baz=112,slow=5.6,SNR=105
AAK Ala-Archa 52.62 303 *de*P **P** **21 02 06.1 +0.7**
AAK pmax pmax
comp=Z,29nm,0.7s,mb4.7
AAK Ala-Archa 52.62 303 *e*P **P** **21 02 05.7 +0.3**
comp=Z,58nm,0.7s,mb5.0
AAK Ala-Archa 52.62 303 P **P** **21 02 06.5 +1.1**
comp=Z,533nm,0.6s,mb6.0,SNR=29
AAK Ala-Archa 52.62 303 P **P** **21 02 06.3 +0.9**
comp=Z,178nmcomp=Z,22nm,1.1s,mb4.4
AAK Ala-Archa 52.62 303 P **P** **21 02 06.6 +1.2**
SNR=26
UCH Uchtor 52.66 302 P **P** **21 02 07.9 +2.2**
SNR=15
UCH Uchtor 52.66 302 *e*P **P** **21 02 07.5 +1.8**
comp=Z,26nm,0.8s,mb4.6
SMLA Simla 52.91 288 *i* P **P** **21 02 05.9 -1.8**
SDNR Sundarnagar 52.98 289 *ex* x 21 02 08.5
EKS2 Erkin-Say 53.14 303 P **P** **21 02 10.2 +1.0**
SNR=7.0
EKS2 Erkin-Say 53.14 303 *e*P **P** **21 02 09.6 +0.5**
comp=Z,44nm,0.8s,mb4.8
AML Almayashu 53.28 302 P **P** **21 02 12.2 +2.0**
SNR=67
AML Almayashu 53.28 302 *e*P **P** **21 02 11.7 +1.5**
comp=Z,142nm,0.7s,mb5.4
ASAR Alice Springs 53.45 186 P **P** **21 02 09.8 -1.8**
comp=Z,7.1nm,0.5s,mb4.2,baz=18,slow=12,SNR=153
ASAR PcP PcP 21 03 12.7 -0.4
comp=Z,3.2nm,0.8s,baz=12,slow=4.6,SNR=7.1
ASAR S **S** **21 09 12.7 -2.1**
comp=Z,2.9nm,1.0s,baz=12,slow=14,SNR=7.4
NDI New Delhi 53.56 285 *e*PKP **P** **21 02 11.0 -1.5**
KDAK Kodiak Island 53.74 38 P **P** **21 02 12.2 -1.0**
comp=Z,9.6nm,0.4s,mb4.5,baz=250,slow=2.2,SNR=14
KDAK Kodiak Island 53.74 38 *i* P **P** **21 02 12.7 -0.5**
KDAK Kodiak Island 53.74 38 *e*P **P** **21 02 12.6 -0.6**
MBWA Marble Bar 54.09 203 *e*P **P** **21 02 15.0 -1.2**
MBWA Marble Bar 54.09 203 *e*P **P** **21 02 14.8 -1.4**
comp=Z,40nm,0.6s,mb4.9
MBWA Marble Bar 54.09 203 P **P** **21 02 15.0 -1.2**
comp=Z,74nm,0.7s,mb5.1
PPLA Purkeypile 54.14 32 *e*P **P** **21 02 16.7 +0.7**
BVA0 Borovoye Array 54.30 316 *i* P **P** **21 02 17.6 +0.3**
BVA0 pmax pmax
comp=Z,25nm,0.5s,mb4.8
BVAR Borovoye Array 54.30 316 P **P** **21 02 17.9 +0.5**
comp=Z,140nm,0.5s,mb5.5,baz=96,slow=7.4,SNR=862
BVAR PcP PcP 21 03 15.9 -0.2
comp=Z,32nm,0.7s,baz=87,slow=3.9,SNR=11
BVAR ScP ScP 21 06 37.8 -0.1
comp=Z,3.1nm,0.6s,baz=105,slow=5.1,SNR=5.3
BVAR S **S** **21 09 26.0 +0.5**
comp=Z,4.0nm,0.7s,baz=87,slow=14,SNR=9.6
BVAR Borovoye Array 54.30 316 P **P** **21 02 17.9 +0.6**
BVAR 21 03 15.9
BVAR S **S** **21 09 26.0 +0.5**
BRVK Borovoye 54.37 316 P **P** **21 02 18.8 +1.0**
comp=Z,1μm,0.6s,mb6.3,SNR=44
BRVK Borovoye 54.37 316 *de*P **P** **21 02 18.2 +0.4**
BRVK pmax pmax
comp=Z,95nm,0.6s,mb5.3
BRVK Borovoye 54.37 316 *e*P **P** **21 02 18.0 +0.3**
comp=Z,125nm,0.8s,mb5.3
BRVK Borovoye 54.37 316 P **P** **21 02 18.7 +0.9**
SNR=41
BPAW Bear Paw Mtn. 54.76 30 *e*P **P** **21 02 21.0 +0.6**
comp=Z,6.9nm,0.5s,mb4.2
BHPL Bhopal 55.17 279 *e*PKP **P** **21 02 23.6 -0.4**
RC01 Rabbit Creek A 55.23 34 *e*P **P** **21 02 23.4 -0.4**
COLD Coldfoot 55.33 27 *e*P **P** **21 02 24.3 0.0**
comp=Z,10nm,1.3s,mb4.0
KK31 Karatay Array 55.43 304 *i* P **P** **21 02 25.8 +0.3**
KK31 pmax pmax
comp=Z,60nm,0.5s,mb5.2
KKAR Karatay Array 55.43 304 *e*P **P** **21 02 26.1 +0.6**
KKAR pmax pmax
comp=Z,115nm,0.7s,mb5.3
KKAR Karatay Array 55.43 304 *e*P **P** **21 02 26.1 +0.6**
comp=Z,115nm,0.7s,mb5.3
MCK McKinley 55.65 31 *e*P **P** **21 02 26.7 +0.1**
MCK pmax pmax
comp=Z,8.0nm,0.4s,mb4.4
MCK McKinley 55.65 31 *e*P **P** **21 02 26.7 +0.1**
comp=Z,7.6nm,0.4s,mb4.4
EIDS Eidsvold 56.05 167 *e*P **P** **21 02 27.7 -2.2**
EIDS Eidsvold 56.05 167 *e*P **P** **21 02 27.8 -2.1**
comp=Z,13nm,0.9s,mb4.3
COLA College 56.15 29 *e*P **P** **21 02 30.6 +0.5**
comp=Z,13nm,1.0s,mb4.2
AJM Ajmer 56.43 284 *e*PKP **P** **21 02 31.7 -1.1**
HYB Hyderabad 56.44 272 *i* P **P** **21 02 32.5 -0.5**
ILAR Eielson Array 56.56 30 P **P** **21 02 32.0 -1.0**
comp=Z,5.2nm,0.8s,mb3.9,baz=254,slow=4.7,SNR=42
ILAR PcP PcP 21 03 23.1 -1.5
comp=Z,3.3nm,0.7s,baz=262,slow=3.8,SNR=9.0
ILAR pP pP 21 03 48.0 -2.9
comp=Z,2.7nm,0.7s,baz=273,slow=6.4,SNR=3.8
BMRM Bremner River 57.73 34 *e*P **P** **21 02 41.7 +0.5**
LATR Latur 57.77 274 *e*PKP **P** **21 02 41.9 -0.2**
DOT Dot Lake 57.82 31 *e*P **P** **21 02 41.3 -0.5**
comp=Z,79nm,1.1s,mb5.0

MENT **Mentasta** 58.01 32 eP P 21 02 42.8 -0.3
KBL **Kabul** 58.55 294 eP P 21 02 47.3 0.0
KBL pmax pmax
comp=Z,52nm,0.8s,mb5.0
KBL **Kabul** 58.55 294 eP P 21 02 47.3 0.0
comp=Z,52nm,0.8s,mb5.0
EGAK **Eagle** 59.01 29 eP P 21 02 49.3 -0.6
comp=Z,4.6nm,0.6s,mb4.1
PALK **Pallekele** 59.24 260 P P 21 02 52.4 +0.2
comp=Z,255nm,0.8s,mb5.7,SNR=6.4
PALK **Pallekele** 59.24 260 i P P 21 02 51.1 -1.1
PALK **Pallekele** 59.24 260 eP P 21 02 52.2 -0.1
comp=Z,48nm,1.1s,mb4.8
PALK **Pallekele** 59.24 260 P P 21 02 52.5 +0.3
comp=Z,27nm,1.0s,mb4.6
SVE **Sverdlovsk** 59.50 321⇑eP P 21 02 53.8 +0.5
SVE pmax pmax
comp=Z,122nm,0.8s,mb5.4
MEEK **Meekatharra** 59.55 202 eP P 21 02 52.6 -1.4
DAWY **Dawson** 59.85 30 eP P 21 02 55.6 +0.1
POO **Poona** 60.07 275 ePKP P 21 02 58.0 +0.3
KAD **Karad** 60.28 274 ePKP P 21 02 58.9 -0.3
ARU **Arti** 60.70 321d iP P 21 03 01.6 +0.2
ARU e 21 03 40.4
ARU e 21 05 17.6
ARU S S 21 10 51.2 +3.4
ARU SS SS 21 14 54.8 +1.4
ARU pmax pmax
comp=Z,200nm,0.7s,mb5.7
ARU **Arti** 60.70 321 eP P 21 03 01.4 0.0
comp=Z,189nm,0.6s,mb5.7
ARU **Arti** 60.70 321 P P 21 03 01.7 +0.3
comp=Z,2µm,0.6s,SNR=75
ARMA **Armidale** 61.07 168 eP P 21 03 03.5 -0.6
FORT **Forrest** 61.23 191 eP P 21 03 04.0 -1.1
comp=Z,41nm,0.5s,mb5.1
FORT **Forrest** 61.23 191 eP P 21 03 04.0 -1.2
comp=Z,48nm,0.6s,mb5.1
AB31 **Akbulak array** 61.36 313 eP P 21 03 05.9 0.0
AB31 pmax pmax
comp=Z,98nm,0.4s,mb5.6
ABKAR **Akbulak array** 61.36 313 eP P 21 03 06.0 +0.1
comp=Z,129nm,0.4s,mb5.7
STKA **Stephens Creek** 61.42 178 P P 21 03 04.9 -1.5
comp=Z,5.5nm,0.8s,mb4.1,baz=355,slow=3.7,SNR=12
STKA **Stephens Creek** 61.42 178 eP P 21 03 05.0 -1.4
comp=Z,7.3nm,1.5s,mb3.9
INK **Inuvik** 61.61 25 eP P 21 03 06.7 -0.5
INK pmax pmax
comp=Z,19nm,0.7s
INK **Inuvik** 61.61 25 eP P 21 03 06.7 -0.5
comp=Z,19nm,0.7s,mb4.7
TRD **Trivandrum** 61.85 264 ePKP P 21 03 09.9 +0.2
AKTO **Aktyubinsk** 62.30 314 P P 21 03 11.9 -0.2
AKTO pmax pmax
comp=Z,16nm,0.6s,mb4.7
MORW **Morawa** 62.64 203 eP P 21 03 13.2 -1.3
KLBR **Kellerberrin** 64.43 200 eP P 21 03 24.8 -1.2
comp=Z,25nm,0.8s,mb4.9
IMYA **Miami** 64.93 299 eP P 21 03 29.8 +0.4
IMOG **Moghan** 65.59 299 eP P 21 03 34.5 +0.9
IEMG **Emamgholi** 65.67 300 eP P 21 03 35.5 +1.5
IPAY **Payeh** 65.73 299 eP P 21 03 35.2 +0.7
IAKL **Akhelmad** 65.86 300 eP P 21 03 36.5 +1.2
ABKT **Aibek** 65.89 301 P P 21 03 36.8 +1.4
comp=Z,330nm,0.6s,mb6.2,SNR=23
IKRD **Kardeh** 65.99 300 eP P 21 03 32.2 -3.9
ISFR **Sfrayin** 66.28 300 eP P 21 03 39.2 +1.3
ISHV **Shirvan** 66.33 301 eP P 21 03 39.8 +1.6
ALE **Alert** 67.37 3 P P 21 03 44.3 +0.3
comp=Z,258nm,0.7s,mb6.1,SNR=9.8
KBS **Kingsbay** 67.43 350ceP P 21 03 45.7 +1.3
KBS pmax pmax
comp=Z,23nm,1.0s,mb4.9
KBS **Kingsbay** 67.43 350 eP P 21 03 45.5 +1.2
comp=Z,13nm,0.6s,mb4.8
APA **Apatity** 68.54 337⇓iP P 21 03 51.6 +0.3
APA i 21 04 11.0
APA pmax pmax
comp=Z,84nm,0.8s,mb5.5
KLMR **Klimovskoe** 68.93 329d iP P 21 03 54.0 +0.2
KLMR pmax pmax
comp=Z,83nm,0.9s,mb5.5
KEV **Kevo** 69.55 340 eP P 21 03 57.9 +0.5
KEV pmax pmax
comp=Z,90nm,1.0s,mb5.5
KEV **Kevo** 69.55 340 eP P 21 03 57.9 +0.5
comp=Z,90nm,1.0s,mb5.5
KEV **Kevo** 69.55 340 ep P 21 03 56.5 -0.9
comp=Z,43nm,0.6s,mb5.4
IGLO **Ghaloghah** 69.60 301 eP P 21 04 00.1 +1.7
IKIA **Kiasar** 69.82 301 eP P 21 04 01.6 +1.9
ARCES **ARCESS Array B** 70.11 340 P P 21 04 01.6 +0.7
comp=Z,73nm,0.7s,mb5.5,baz=76,slow=8.9,SNR=165
ARE0 **ARCESS Array S** 70.11 340 eP P 21 04 01.4 +0.6
IBAF **Bafgh** 70.18 296 eP P 21 04 02.5 +0.6
ISHM **Shahmirzad** 70.27 301 eP P 21 04 03.9 +1.5
IALA **Alasht** 70.52 301 eP P 21 04 05.1 +1.2
ILAS **Lasjerd** 70.68 300 eP P 21 04 06.0 +1.1
IFIR **Firoozkooh** 70.73 301 eP P 21 04 06.7 +1.5
IPRN **Peran** 70.81 301 eP P 21 04 07.2 +1.6
ICHK **Chekchek** 70.82 297 eP P 21 04 06.0 +0.2
YKA **Yellowknife Ar** 70.94 28 P P 21 04 05.2 -0.7
comp=Z,4.7nm,0.6s,mb4.4,baz=297,slow=6.2,SNR=15
WBK **Wadi Bani Khal** 71.08 286 P P 21 04 08.4 +0.9
SNR=9.0
IDMV **Damavand** 71.30 301 eP P 21 04 09.3 +0.7
JOF **Joensuu** 71.49 333 eP P 21 04 08.4 -0.8
JOF pmax pmax
comp=Z,89nm,0.7s,mb5.6
JOF **Joensuu** 71.49 333 ep P 21 04 08.4 -0.8
comp=Z,89nm,0.7s,mb5.6
SMDO **Samad** 71.66 286 P P 21 04 11.7 +0.8
SNR=6.4
VRHR **Novokhopersk** 71.87 319⇓iP P 21 04 10.8 -0.8
VRHR pmax pmax
comp=Z,200nm,0.6s,mb6.0
VRHR pmax pmax
comp=N,9.0nm,0.3s
VRHR pmax pmax
comp=E,20nm,0.5s
JMDO **Jabal Madar** 71.91 286 P P 21 04 12.6 +0.3
SNR=6.5
HOQ **Hoqain** 72.05 287 P P 21 04 13.6 +0.4
SNR=27
IZEF **Zefreh** 72.16 298 eP P 21 04 14.9 +1.2
BSY **Bisya** 72.50 287 P P 21 04 16.4 +0.6
SNR=17
IKLH **Kolahrood** 72.56 299 eP P 21 04 16.8 +0.8
ASHO **Ashiyiah** 72.62 289 P P 21 04 17.1 +0.6
SNR=5.2
ARQ **Araqi** 72.81 287 P P 21 04 18.5 +0.8
SNR=27
OBN **Obninsk** 72.83 324⇓eP P 21 04 17.1 0.0
OBN e 21 07 03.6
OBN i S S 21 13 05.9 -6.0
OBN pmax pmax
comp=Z,119nm,0.8s,mb5.7
OBN **Obninsk** 72.83 324 eP P 21 04 16.9 -0.2
comp=Z,104nm,0.8s,mb5.6
OBN **Obninsk** 72.83 324 P P 21 04 17.3 +0.2
comp=Z,845nm,0.7s,SNR=14
IPAR **Pars** 72.87 295 eP P 21 04 18.4 +0.5
IRAZ **Razeghan** 72.94 301 eP P 21 04 18.7 +0.5
NLWA **Neilton Lookou** 72.97 45 eP P 21 04 18.6 +0.5
ISRV **Sarvestan** 73.01 294 eP P 21 04 19.6 +0.9
VSR **Storozhevoye** 73.21 320d iP P 21 04 19.3 -0.1
VSR pmax pmax
comp=Z,240nm,1.1s,mb5.8
VSR pmax pmax
comp=N,30nm,0.6s
VSR pmax pmax
comp=E,60nm,0.6s
VORD **Divnogorie** 73.25 319d iP P 21 04 19.6 -0.1
VORD pmax pmax
comp=Z,60nm,0.6s,mb5.5
VORD pmax pmax
comp=N,8.0nm,0.3s
VORD pmax pmax
comp=E,30nm,1.0s
A05A **Maple Falls** 73.34 43 ⇑P P 21 04 20.2 0.0
baz=73
IPIR **Pirpir** 73.35 298 eP P 21 04 22.0 +1.4
PUL **Pulkovo** 73.50 330ceP P 21 04 21.4 +0.5
PUL pmax pmax
comp=Z,100nm,0.8s,mb5.6
E03A **Lebam** 73.52 46 ⇑P P 21 04 21.7 +0.4
baz=73
ISRB **Sarab** 73.57 304 eP P 21 04 22.3 +0.5
DGRG **David-gareji** 73.63 309 P P 21 04 21.8 -0.2
JCW **Jim Creek** 73.79 44 P P 21 04 23.3 +0.5
F03A **Seaside** 73.79 46 ⇓P P 21 04 23.0 +0.1
baz=74
IHRS **Heris** 73.81 305 eP P 21 04 23.2 +0.1
KAF **Kangasniemi** 73.89 333 eP P 21 04 21.8 -1.4
KAF pmax pmax
comp=Z,64nm,0.7s,mb5.5
KAF **Kangasniemi** 73.89 333 ep P 21 04 21.8 -1.4
comp=Z,64nm,0.7s,mb5.5
MTA **Mtatsminda** 73.92 309 P P 21 04 24.0 +0.3
TBLG **Delisi** 73.94 309 P P 21 04 24.3 +0.5
TBLG **Delisi** 73.94 309 P P 21 04 24.3 +0.4
ZEI **Tsey** 74.05 310 eP P 21 04 23.6 -0.8
ZEI pmax pmax
comp=Z,56nm,0.6s,mb5.5
D05A **Enumclaw** 74.20 44 ⇓P P 21 04 25.8 +0.6
baz=74
GOR **Gori** 74.25 310 P P 21 04 26.6 +1.0
KIV **Kislovodsk** 74.32 312⇑eP P 21 04 26.6 +0.6
KIV e 21 07 18.5
KIV eS S 21 13 28.5 -0.4
KIV pmax pmax
comp=Z,117nm,0.8s,mb5.7
KIV **Kislovodsk** 74.32 312 eP P 21 04 25.7 -0.2
comp=Z,100nm,0.8s,mb5.6
KIV **Kislovodsk** 74.32 312 P P 21 04 26.1 +0.1
comp=Z,790nm,0.7s,mb6.5,SNR=39
KIV **Kislovodsk** 74.32 312 P P 21 04 26.9 +1.0
SNR=24
FINES **FINESS Array B** 74.36 333 P P 21 04 25.9 0.0
comp=Z,59nm,0.6s,mb5.5,baz=64,slow=5.3,SNR=359
TDL **Tradedollar La** 74.44 45 P P 21 04 27.4 +0.8
ITBZ **Tabriz** 74.48 305 eP P 21 04 27.3 +0.3
F04A **Amboy** 74.51 46 ⇓P P 21 04 27.4 +0.4
baz=74
LON **Longmire** 74.51 45 P P 21 04 26.4 -0.6
IMRD **Marand** 74.58 306 eP P 21 04 28.0 +0.4
GNI **Garni** 74.62 308deP P 21 04 29.1 +1.3
GNI pmax pmax
comp=Z,53nm,0.9s
GNI **Garni** 74.62 308 eP P 21 04 28.8 +1.1
comp=Z,57nm,1.0s,mb5.3
GNI **Garni** 74.62 308 P P 21 04 29.6 +1.9
SNR=8.3
KEBM **Edson Butte** 74.65 49 P P 21 04 28.8 +1.0
NLW **Nelson Butte** 74.79 43 P P 21 04 29.1 +0.5
G04A **Mulino** 74.80 46 ⇓P P 21 04 28.9 +0.2
baz=75
ISHB **Shabestar** 74.83 306 eP P 21 04 29.5 +0.5
ETW **Entiat** 75.01 44 eP P 21 04 29.8 -0.1
comp=Z,15nm,0.7s,mb4.8
H04A **Detroit Lake** 75.22 47 ⇓P P 21 04 31.2 +0.2
baz=75
BROR **Big Rock Looko** 75.24 47 P P 21 04 31.5 +0.3
B08A **Colville Reser** 75.25 43 ⇑P P 21 04 31.2 +0.1
baz=75
IKOM **Komasi** 75.26 301 eP P 21 04 31.0 -0.5
HOOD **Mount Hood Mea** 75.26 46 eP P 21 04 32.1 +0.8
comp=Z,48nm,1.4s,mb5.0
VFP **Flag Point** 75.38 46 P P 21 04 32.5 +0.6
IVIS **Veis** 75.59 302 eP P 21 04 33.0 -0.4
HUMO **Hull Mountain** 75.68 49 eP P 21 04 33.7 +0.1
comp=Z,3.7nm,0.8s,mb4.2
E07A **Sunnyside** 75.79 44 ⇑P P 21 04 34.3 +0.1
baz=76
IDHR **Dehrash** 75.86 302 eP P 21 04 34.2 -0.7
G06A **Carlson Farm,** 75.94 46 ⇑P P 21 04 35.3 +0.2
baz=76
HAWA **Hanford** 76.07 44 eP P 21 04 35.8 0.0
comp=Z,12nm,1.1s,mb4.5
OD2 **Odessa Site #2** 76.08 43 eP P 21 04 35.5 -0.3
comp=Z,8.3nm,0.6s,mb4.6
D08A **Wollman Farm,** 76.12 44 ⇑P P 21 04 36.1 +0.1
baz=76
C09A **Chrisman Ranch** 76.14 43 ⇑P P 21 04 36.3 +0.1
baz=76
VIPM **Ingram Point** 76.29 46 P P 21 04 37.6 +0.5
URZ **Urewera** 76.41 150 P P 21 04 35.8 -1.8
comp=Z,6.4nm,0.7s,mb4.4,baz=308,slow=19,SNR=3.7
NEW **Newport** 76.59 42 ⇓P P 21 04 38.8 +0.1
baz=76
NEW **Newport** 76.59 42 eP P 21 04 38.4 -0.2
NEW pmax pmax
comp=Z,33nm,1.2s
NEW **Newport** 76.59 42 eP P 21 04 38.4 -0.3
comp=Z,33nm,1.2s,mb4.9
KCPM **Cahto Peak** 76.60 52 eP P 21 04 39.5 +0.6
E09A **Wood Farm, Sta** 76.85 44 ⇑P P 21 04 40.5 +0.3
baz=77
G08A **Pilot Rock** 76.95 45 ⇑P P 21 04 41.0 +0.2
baz=77
K05A **Summer Lake** 76.97 48 ⇓P P 21 04 41.6 +0.7
baz=77
A12A **Yaak River Ran** 77.09 41 ⇓P P 21 04 42.1 +0.6
baz=77
UMR **Umm Al-Rimmam** 77.17 297 eP P 21 04 41.9 -0.3
UMR AMb AMB 21 04 42.6
comp=Z,232nm,0.5s,mb6.2
I07A **Izee** 77.20 46 ⇑P P 21 04 42.6 +0.5
baz=77
ANN **Anapa** 77.26 314 eP P 21 04 41.7 -0.7
ANN e 21 04 50.2
ANN e*PP pP 21 06 04.2 -1.9
ANN e 21 07 39.5
ANN eS S 21 14 04.2 +3.5
ANN pmax pmax
comp=E,39nm,1.2s
ANN pmax pmax
comp=Z,232nm,1.2s,mb5.8
LTIM **Timbered Crate** 77.31 50 P P 21 04 43.2 +0.5
MIB **Mutribah** 77.34 297 eP P 21 04 42.9 -0.3
MIB AMb AMB 21 04 43.6
comp=Z,346nm,0.6s,mb6.3
KBD **Kabd** 77.35 296 eP P 21 04 43.0 -0.2
KBD AMb AMB 21 04 43.8
comp=Z,108nm,0.4s,mb5.9
B12A **Libby** 77.37 41 ⇓P P 21 04 43.3 +0.4
baz=77
QRN **Al-Qurain** 77.38 296 eP P 21 04 42.9 -0.4
QRN AMb AMB 21 04 44.1
comp=Z,220nm,0.9s,mb5.9
MICGM **Minsk** 77.46 326⇓eP P 21 04 44.0 +0.7
MNK **Minsk** 77.48 326⇓eP P 21 04 44.0 +0.6
MNK pmax pmax
comp=Z,280nm,1.0s,mb6.0
IDID **Didziasalis** 77.54 327 eP P 21 04 44.2 +0.5
IDID AMB AMB 21 04 45.4
comp=Z,56nm,0.8s,mb5.3
F10A **Beach Ranch, E** 77.67 44 ⇑P P 21 04 44.6 0.0
baz=78
ISAL **Salakas** 77.68 328 eP P 21 04 45.0 +0.5
ISAL AMB AMB 21 04 46.2
comp=Z,70nm,0.9s,mb5.4
NACGM **Naroch** 77.76 327 eP P 21 04 42.0 -2.9
IIGN **Ignalina** 77.76 327 eP P 21 04 45.4 +0.4
IIGN AMB AMB 21 04 46.6
comp=Z,42nm,0.8s,mb5.2
C12B **Naegeli Ranch,** 77.82 42 ⇑P P 21 04 45.6 +0.2
baz=78
SUMG **Summit** 77.85 359⇓iP P 21 04 46.5 +1.4
comp=Z,28nm,0.9s,mb5.0
WALA **Waterton Lakes** 78.01 40 eP P 21 04 46.4 0.0
comp=Z,0.2nm,0.6s
B13A **Whitefish** 78.06 41 ⇑P P 21 04 47.2 +0.5
baz=78,SNR=14
BSMT **Bassoo Peak** 78.15 41 eP P 21 04 47.8 +0.6
comp=Z,11nm,1.0s,mb4.5
ABTO **Aybut** 78.19 283 P P 21 04 48.1 +0.2
SNR=6.3
J08A **Circle Bar Ran** 78.21 47 ⇑P P 21 04 48.2 +0.6
baz=78
A14A **Double T Ranch** 78.33 40 ⇑P P 21 04 48.6 +0.4
baz=78,SNR=12
C13A **Hot Springs** 78.36 42 ⇑P P 21 04 48.8 +0.5
baz=78
JTMT **Jette** 78.49 41 eP P 21 04 49.2 +0.1
comp=Z,11nm,1.0s,mb4.5
WVOR **Wild Horse Val** 78.56 48 eP P 21 04 49.4 -0.2
A15A **Johnson Ranch,** 78.71 40 ⇑P P 21 04 50.1 -0.1
baz=78,SNR=14
D13A **Huson** 78.73 42 ⇓P P 21 04 50.1 -0.3
baz=79
B14A **Marquette Ranc** 78.74 40 ⇑P P 21 04 50.9 +0.5
baz=79,SNR=16
SWMT **Swartz Lake** 78.78 41 eP P 21 04 50.5 -0.1
comp=Z,12nm,1.0s,mb4.6
AKASG **Malin Array Be** 78.90 323 P P 21 04 50.8 -0.5
comp=Z,42nm,0.7s,mb5.3,baz=49,slow=5.5,SNR=148
KIEV **Kiev** 78.91 323 eP P 21 04 50.7 -0.6
KIEV pmax pmax
comp=Z,50nm,0.7s,mb5.3
KIEV **Kiev** 78.91 323 eP P 21 04 50.7 -0.6
comp=Z,50nm,0.7s,mb5.4
F12A **Elk City** 78.96 43 ⇓P P 21 04 51.8 +0.2
baz=79
SCO **Scoresbysund** 79.06 354 i P P 21 04 52.6 +0.9
SCO pmax pmax
comp=Z,11nm,0.7s,mb4.7
SCO **Scoresbysund** 79.06 354 i P P 21 04 52.6 +0.9
comp=Z,11nm,0.7s,mb4.7
B15A **Bradely Ranch,** 79.17 40 ⇑P P 21 04 52.7 0.0
baz=79,SNR=11
MSO **Missoula** 79.17 42 ⇑P P 21 04 52.4 -0.4
baz=79
MSO **Missoula** 79.17 42 eP P 21 04 51.9 -0.9
comp=Z,5.1nm,0.9s,mb4.2
SLMT **Seeley Lake** 79.21 41 eP P 21 04 52.3 -0.6
comp=Z,21nm,0.7s,mb5.0
E13A **Victor** 79.23 42 ⇑P P 21 04 52.5 -0.6
baz=79
D14A **Greenough** 79.29 42 ⇓P P 21 04 52.9 -0.5
baz=79,SNR=8.6
WCN **Washoe City** 79.38 51 ⇓P P 21 04 54.1 +0.1
baz=79
C15A **Salmond Ranch,** 79.43 41 ⇑P P 21 04 54.4 +0.3
baz=79,SNR=17
CHMT **Chamberlain Mo** 79.53 42 eP P 21 04 53.1 -1.5
comp=Z,3.2nm,0.8s,mb4.1
CMB **Columbia Colle** 79.58 52 eP P 21 04 54.9 -0.2
CMB pmax pmax
comp=Z,15nm,0.9s,mb4.7
CMB **Columbia Colle** 79.58 52 eP P 21 04 54.9 -0.3
comp=Z,15nm,0.9s,mb4.7
B16A **M & M Farms, S** 79.59 40 ⇓P P 21 04 54.8 -0.2
baz=79,SNR=5.9
E14A **Clinton** 79.66 42 ⇓P P 21 04 55.1 -0.2
baz=80
MALT **Malatya** 79.81 308 eP P 21 04 57.4 +1.0
MALT pmax pmax
comp=Z,38nm,0.9s,mb5.1
MALT **Malatya** 79.81 308 eP P 21 04 57.4 +1.0
comp=Z,38nm,0.9s,mb5.1
MALT **Malatya** 79.81 308⇓iP P 21 04 57.5 +1.1
MALT **Malatya** 79.81 308 P P 21 04 57.8 +1.4
MFID **Camas Ranch** 79.84 46 ⇑P P 21 04 56.8 +0.4
baz=80
H12A **Diamond D Ranc** 79.84 44 ⇑P P 21 04 56.4 0.0
baz=80
D15A **Lincoln** 79.88 41 ⇓P P 21 04 56.4 -0.1
baz=80
C16A **Fuhringer Ranc** 79.90 40 ⇑P P 21 04 56.6 0.0
baz=80,SNR=11
G13A **Cobalt** 79.93 44 ⇑P P 21 04 56.3 -0.5
baz=80,SNR=12
SUW **Suwalki** 79.98 327 eP P 21 04 56.6 -0.3
SUW **Suwalki** 79.98 327 eP P 21 04 56.3 -0.6
comp=Z,18nm,0.3s,mb5.3
WAKR **Walker** 80.00 51 eP P 21 04 57.3 0.0
comp=Z,4.3nm,0.6s,mb4.4
F14A **Wisdom** 80.05 43 ⇑P P 21 04 57.3 -0.2
baz=80
I12A **Atlanta** 80.07 45 ⇑P P 21 04 57.7 +0.1
baz=80
NB2 **NORSAR Subarra** 80.11 337 P P 21 04 57.3 -0.2
baz=46,slow=5.1
NB2 **NORSAR Subarra** 80.11 337 P P 21 04 57.3 -0.2
NB2 **NORSAR Subarra** 80.11 337 P P 21 04 57.3 -0.2
NOA **NORSAR Array B** 80.11 337 P P 21 04 57.2 -0.3
comp=Z,60nm,0.8s,mb5.4,baz=46,slow=5.3,SNR=183
NOA PP PP 21 08 04.7 -0.2
comp=Z,3.9nm,0.9s,baz=44,slow=7.4,SNR=3.3
NOA **NORSAR Array B** 80.11 337 P P 21 04 57.2 -0.3
NOA PP PP 21 08 04.7 -0.2
E15A **Deer Lodge** 80.15 42 ⇓P P 21 04 57.9 0.0
baz=80,SNR=14
B17A **L&G Farms, Che** 80.16 40 ⇑P P 21 04 58.1 +0.1
baz=80,SNR=31
G14A **Jackson** 80.31 43 ⇓P P 21 04 58.9 +0.1
baz=80
A18A **Metzger Ranch,** 80.33 39 ⇓P P 21 04 58.8 -0.1
baz=80,SNR=19
NAO01 **NORSAR Array S** 80.36 337 eP P 21 04 58.1 -0.7
comp=Z,42nm,0.8s,mb5.2
D16A **Dana Ranch, Ca** 80.44 41 ⇓P P 21 04 59.5 0.0
baz=80,SNR=8.2
BMN **Battle Mountai** 80.49 49 eP P 21 05 00.7 +0.8
BMN pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
BMN **Battle Mountai** 80.49 49 eP P 21 05 00.7 +0.8
comp=Z,6.8nm,1.0s,mb4.3
C17A **Wharram Farm,** 80.55 40 ⇓P P 21 04 59.4 -0.7
baz=80,SNR=7.1
F15A **Butte** 80.55 42 ⇓P P 21 05 00.4 +0.3
baz=80,SNR=34
LRM **Limekiln Ridge** 80.59 42 eP P 21 05 00.5 +0.2
comp=Z,148nm,0.8s,mb5.8
I13A **Wildhorse Cree** 80.63 45 ⇓P P 21 05 01.2 +0.7
baz=80
HLID **Hailey** 80.63 45 ⇓P P 21 05 01.2 +0.6
baz=80
HLID **Hailey** 80.63 45 eP P 21 05 00.8 +0.2
E16A **East Helena** 80.64 41 ⇓P P 21 05 00.8 +0.3
baz=80
B18A **Beardsley Farm** 80.66 39 ⇓P P 21 05 00.7 +0.1
baz=80,SNR=22
H14A **Leadore** 80.70 44 ⇑P P 21 05 00.9 -0.1
baz=80
FFC **Flin Flon** 80.73 31 i P P 21 05 00.9 0.0
FFC **Flin Flon** 80.73 31 eP P 21 04 59.9 -1.0
comp=Z,8.9nm,0.8s,mb4.5
DLMT **Dillon** 80.75 43 eP P 21 05 01.4 +0.2
comp=Z,17nm,1.0s,mb4.7
NVAR **Mina Array Bea** 80.80 51 P P 21 05 01.8 +0.2
comp=Z,14nm,0.9s,mb4.7,baz=283,slow=5.4,SNR=32
NVAR pP pP 21 06 22.2 -3.9
comp=Z,1.5nm,0.7s,baz=294,slow=4.8,SNR=2.1
MLAC **Mammoth Lakes** 80.85 52 ⇓P P 21 05 01.8 0.0
baz=81
D17A **Six Diamond Ra** 80.86 41 ⇓P P 21 05 01.5 -0.2
baz=81,SNR=13
J13A **Cove Ranch, Pi** 80.87 45 ⇓P P 21 05 02.2 +0.4
baz=81
EGMT **Eagleton** 80.89 39 ⇑P P 21 05 01.6 -0.2
baz=81,SNR=12
EGMT **Eagleton** 80.89 39 eP P 21 05 01.9 +0.1
comp=Z,31nm,1.1s,mb5.0
G15A **Dillon** 80.92 43 ⇑P P 21 05 02.1 0.0
baz=81,SNR=15
I14A **Mackay** 81.02 44 ⇓P P 21 05 03.6 +1.0
baz=81,SNR=40
F16A **Kennard Place,** 81.09 42 ⇑P P 21 05 03.0 +0.1
baz=81,SNR=17
H15A **Lima** 81.13 43 ⇓P P 21 05 03.3 +0.1
baz=81
E17A **Martinsdale** 81.15 41 ⇓P P 21 05 03.6 +0.4
baz=81,SNR=18
BOZ **Bozeman (W)** 81.16 42 ⇑P P 21 05 03.6 +0.3
baz=81,SNR=17
BOZ **Bozeman (W)** 81.16 42 eP P 21 05 03.0 -0.3
KIS **Kishinev** 81.20 320 P P 21 05 03.3 -0.2
KIS **Kishinev** 81.20 320⇓iP P 21 05 03.6 +0.1
SMMC **Simmler** 81.21 54 ⇑P P 21 05 03.8 0.0
baz=81
G16A **Moss Hill, Enn** 81.29 43 ⇑P P 21 05 04.3 +0.3
baz=81
J14A **Carey** 81.31 45 ⇓P P 21 05 05.2 +1.1
baz=81,SNR=23
D18A **Linhart Farms,** 81.33 40 ⇓P P 21 05 04.5 +0.3
baz=81
C19A **Slack Wire Ran** 81.44 39 ⇓P P 21 05 05.0 +0.3
baz=81,SNR=14
PKM **Peak Mountain** 81.55 55 ⇑P P 21 05 05.9 +0.4
baz=81
TIN **Tinemaha** 81.56 52 ⇓P P 21 05 05.8 +0.3
baz=81
I15A **Monteview** 81.57 44 ⇓P P 21 05 05.9 +0.4
baz=81
F17A **Fitzpatrick Pl** 81.58 42 ⇓P P 21 05 05.9 +0.4
baz=81,SNR=9.6

VES	Vestal, Richgr	81.58	54	⇓P	P	21 05 06.0	+0.3
	baz=81						
E18A	Harlowton	81.63	41	⇓P	P	21 05 06.3	+0.6
	baz=82,SNR=15						
IAS	Iasi	81.80	320	P	P	21 05 06.7	+0.2
IAS	Iasi	81.80	320	⇓iP	P	21 05 06.7	+0.2
G17A	Pierce Place,	81.86	42	⇑P	P	21 05 07.7	+0.8
	baz=82,SNR=5.5						
Q10A	Clear Creek Ra	81.87	50	⇑P	P	21 05 07.3	+0.1
	baz=82						
P11A	Circle Ranch,	81.91	49	⇓P	P	21 05 07.9	+0.5
	baz=82						
J15A	Blackfoot	81.93	44	⇓P	P	21 05 08.4	+1.0
	baz=82,SNR=6.5						
K14A	Jones Ranch, D	81.95	45	⇓P	P	21 05 08.2	+0.8
	baz=82,SNR=7.7						
CWC	Cottonwood Cre	81.97	53	⇑P	P	21 05 07.5	-0.2
	baz=82						
C20A	Veseth Ranch,	82.03	39	⇓P	P	21 05 08.0	+0.3
	baz=82,SNR=8.3						
F18A	Big Timber	82.12	41	⇑P	P	21 05 08.5	+0.3
	baz=82,SNR=15						
LVV	L'vov	82.12	324	eP	P	21 05 07.5	-0.7
BSC	Santa Cruz Isl	82.13	55	⇑P	P	21 05 08.5	-0.1
	baz=82						
GRAC	Grapevine Rang	82.17	52	⇓P	P	21 05 08.8	+0.1
	baz=82						
L14A	Malta	82.19	46	⇓P	P	21 05 09.4	+0.7
	baz=82,SNR=7.9						
O12A	Currie	82.19	48	⇓P	P	21 05 09.2	+0.4
	baz=82						
GCMT	Greycliff	82.22	41	eP	P	21 05 09.3	+0.6
	comp=Z,6.0nm,0.8s,mb4.5						
R10A	Warm Springs	82.22	50	⇑P	P	21 05 09.3	+0.4
	baz=82						
TLCR		82.24	318	⇑iP	P	21 05 09.0	+0.1
I16A	Newdale	82.24	44	⇓P	P	21 05 10.1	+1.2
	baz=82,SNR=7.5						
K15A	Arbon	82.27	45	⇑P	P	21 05 09.7	+0.7
	baz=82						
BR131	Keskin Array S	82.28	311	eP	P	21 05 09.4	+0.2
	comp=Z,55nm,0.7s,mb5.5						
BRTR	Keskin Array B	82.28	311	P	P	21 05 09.6	+0.4
	comp=Z,67nm,0.7s,mb5.6,baz=97,slow=3.8,SNR=269						
BRTR				PP	PP	21 08 21.1	-2.3
	comp=Z,2.7nm,0.7s,baz=67,slow=8.0,SNR=4.2						
BRTR				PKKPbc	PKKPbc	21 23 32.9	-0.7
	comp=Z,0.7nm,0.6s,baz=177,slow=2.5,SNR=4.4						
BRTR	Keskin Array B	82.28	311	eP	P	21 05 09.6	+0.4
BRTR				pmax	pmax		
	comp=Z,67nm,0.7s						
D20A	Manuel Ranch,	82.32	40	⇑P	P	21 05 09.6	+0.3
	baz=82,SNR=13						
E19A	Rath Farm, Rou	82.33	40	⇑P	P	21 05 09.6	+0.3
	baz=82,SNR=18						
Q11A	Duckwater	82.36	50	⇓P	P	21 05 09.7	+0.1
	baz=82						
J16A	Bone	82.50	44	⇑P	P	21 05 11.1	+0.8
	baz=82,SNR=6.4						
P12A	McGill	82.51	49	⇑P	P	21 05 10.7	+0.3
	baz=82,SNR=13						
IMW	Indian Meadow	82.55	43	eP	P	21 05 11.6	+1.0
MPMC	Manual Prospec	82.58	53	⇓P	P	21 05 10.7	-0.1
	baz=82						
FLWY	Flagg Ranch	82.59	43	eP	P	21 05 12.0	+1.3
	comp=Z,9.4nm,0.8s,mb4.7						
F19A	Roth Farm, Mol	82.59	41	⇓P	P	21 05 10.7	0.0
	baz=82,SNR=9.9						
HVU	Hansel Valley	82.61	46	eP	P	21 05 11.7	+0.8
HVU				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
HVU	Hansel Valley	82.61	46	eP	P	21 05 11.7	+0.8
	comp=Z,5.3nm,0.4s,mb4.7						
CFR	Carcaliu	82.63	318	P	P	21 05 11.2	+0.3
CFR	Carcaliu	82.63	318	⇑iP	P	21 05 11.0	+0.1
RRI2	Red Ridge	82.63	44	eP	P	21 05 11.9	+0.9
	comp=Z,8.5nm,0.7s,mb4.7						
R11A	Troy Canyon, C	82.67	50	⇓P	P	21 05 11.3	+0.1
	baz=82,SNR=16						
E20A	Meyer Farm, Mu	82.67	40	⇑P	P	21 05 11.2	+0.1
	baz=82,SNR=6.3						
TESR		82.70	320	⇓iP	P	21 05 11.3	+0.1
L15A	Malad City	82.73	46	⇑P	P	21 05 11.8	+0.4
	baz=83,SNR=13						
LRMC	Laurel Mountai	82.74	53	⇑P	P	21 05 11.1	-0.5
	baz=83						
I17A	Pilgrim Ck.	82.75	43	⇓P	P	21 05 13.2	+1.7
	baz=83						
K16A	Soda Springs	82.76	44	⇑P	P	21 05 12.6	+1.1
	baz=83,SNR=7.7						
Q12A	Willow Creek R	82.79	49	⇑P	P	21 05 11.9	+0.1
	baz=83						
FURC	Furnace Creek,	82.80	52	⇓P	P	21 05 12.0	+0.1
	baz=83,SNR=6.1						
BUR08	Bucovina Ar. S	82.82	322	eP	P	21 05 12.1	+0.3
RLMT	Red Lodge	82.83	42	⇓P	P	21 05 12.5	+0.6
	baz=83,SNR=17						
RLMT	Red Lodge	82.83	42	eP	P	21 05 12.2	+0.3
BUR01	Bucovina Ar. S	82.83	321	P	P	21 05 12.7	+0.8
BURAR	Bucovina Array	82.83	321	⇓iP	P	21 05 12.7	+0.8
PETR		82.84	319	⇓iP	P	21 05 13.4	+1.5
EDW2	Edwards Air Fo	82.84	54	⇓P	P	21 05 12.2	0.0
	baz=83,SNR=6.8						
TIRR	Tirgusor	82.89	318	eP	P	21 05 11.7	-0.5
TIRR				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.4						
TIRR	Tirgusor	82.89	318	eP	P	21 05 11.7	-0.5
	comp=Z,56nm,0.9s,mb5.4						
TIRR	Tirgusor	82.89	318	⇑iP	P	21 05 12.0	-0.2
SNOW	Snow King Moun	82.91	44	eP	P	21 05 13.4	+1.0
	comp=Z,4.1nm,0.8s,mb4.3						
BSD	Bornholm Skovb	82.91	331	⇓iP	P	21 05 11.3	-0.8
BSD				pmax	pmax		
	comp=Z,64nm,0.8s,mb5.5						
BSD	Bornholm Skovb	82.91	331	⇓iP	P	21 05 11.3	-0.8
	comp=Z,64nm,0.8s,mb5.5						
KWP	Kalwaria Pacla	82.92	324	eP	P	21 05 12.6	+0.4
KWP	Kalwaria Pacla	82.92	324	eP	P	21 05 12.2	0.0
	comp=Z,148nm,1.0s,mb5.8						
KWP	Kalwaria Pacla	82.92	324	⇓iP	P	21 05 12.6	+0.4
S11A	Rachel	82.93	51	⇑P	P	21 05 12.7	+0.2
	baz=83						
D21A	La Casta Ranch	82.97	39	⇑P	P	21 05 12.8	+0.2
	baz=83						
J17A	Brown Place, J	82.99	44	⇑P	P	21 05 13.6	+0.8
	baz=83						
M15A	Larsen Ranch,	83.00	46	⇓P	P	21 05 13.1	+0.3
	baz=83						
VRI	Vrincioaia	83.04	319	P	P	21 05 14.2	+1.3
VRI	Vrincioaia	83.04	319	⇑iP	P	21 05 13.5	+0.6
F20A	Billings	83.07	41	⇑P	P	21 05 12.9	-0.2
	baz=83						
P13A	Bates Ranch, G	83.10	48	⇓P	P	21 05 13.9	+0.5
	baz=83						
GKP	Gorka Klasztor	83.17	329	eP	P	21 05 13.2	-0.2
GRER		83.18	319	⇓iP	P	21 05 15.7	+2.0
U10A	Ash Meadows, A	83.19	52	⇑P	P	21 05 14.3	+0.4
	baz=83,SNR=6.2						
CVD	Cernavoda	83.19	318	⇓iP	P	21 05 14.7	+0.9
K17A	Gardner Place,	83.21	44	⇓P	P	21 05 14.2	+0.4
	baz=83						
E21A	Keefer Ranch,	83.23	40	⇓P	P	21 05 14.1	+0.2
	baz=83						
H19A	Powell	83.26	42	⇑P	P	21 05 14.8	+0.7
	baz=83,SNR=6.1						
FKH	Fakeheh	83.30	306	eP	P	21 05 14.9	+0.4
L16A	Fish Haven	83.32	45	⇓P	P	21 05 15.2	+0.7
	baz=83,SNR=9.8						
R12A	Pony Springs,	83.32	50	⇑P	P	21 05 14.7	+0.2
	baz=83,SNR=9.3						
I18A	Diamond G Ranc	83.33	43	⇑P	P	21 05 15.1	+0.7
	baz=83						
Q13A	Wheeler Ranch,	83.37	49	⇑P	P	21 05 14.9	+0.2
	baz=83,SNR=9.9						
G20A	Bridger	83.38	41	⇓P	P	21 05 14.5	-0.1
	baz=83,SNR=6.9						
AMRR	Amara	83.43	318	P	P	21 05 16.4	+1.5
AMRR	Amara	83.43	318	⇓iP	P	21 05 14.7	-0.2
SCI	San Clemente I	83.43	56	⇓P	P	21 05 14.9	-0.3
	baz=83						
GSC	Goldstone	83.45	53	⇓P	P	21 05 15.3	0.0
	baz=83,SNR=12						
HWUT	Hardware Ranch	83.46	45	eP	P	21 05 15.5	+0.3
	comp=Z,31nm,0.8s,mb5.2						
DUG	Dugway	83.47	47	⇑P	P	21 05 15.7	+0.5
	baz=83,SNR=19						
DUG	Dugway	83.47	47	eP	P	21 05 15.5	+0.3
DUG				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9						
DUG	Dugway	83.47	47	eP	P	21 05 15.5	+0.3
	comp=Z,12nm,0.6s,mb4.9						
J18A	Kendall Valley	83.49	44	⇓P	P	21 05 15.8	+0.5
	baz=83,SNR=13						
SHOC	Shoshone	83.50	52	⇑P	P	21 05 15.4	-0.1
	baz=83						
COP	Copenhagen	83.52	333	iP	P	21 05 14.9	-0.2
COP				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.4						
COP	Copenhagen	83.52	333	iP	P	21 05 14.9	-0.2
	comp=Z,52nm,0.8s,mb5.4						
RRX	Edison Barstow	83.54	53	⇑P	P	21 05 15.9	+0.2
	baz=83						
S12A	Delamar Landin	83.55	50	⇓P	P	21 05 16.1	+0.4
	baz=83						
M16A	Huntsville	83.59	46	⇓P	P	21 05 15.9	+0.1
	baz=83,SNR=8.9						
HWQ	Hawqa	83.60	306	eP	P	21 05 16.1	+0.1
DGMT	Dagmar	83.60	37	⇑P	P	21 05 15.4	-0.4
	baz=83						
L17A	Cokeville	83.61	45	⇓P	P	21 05 16.5	+0.5
	baz=83,SNR=17						
LAO	LASA Array	83.61	39	⇑P	P	21 05 15.9	0.0
	baz=83						
F21A	Absaloka Mine,	83.64	40	⇑P	P	21 05 15.8	-0.2
	baz=84						
P14A	Drum Mountains	83.64	48	⇓P	P	21 05 16.4	+0.3
	baz=84,SNR=30						
O15A	The Old Anders	83.64	47	⇓P	P	21 05 16.5	+0.4
	baz=84						
NOQ	North Oquirrh	83.65	47	eP	P	21 05 16.8	+0.7
	comp=Z,32nm,0.8s,mb5.2						
MLR	Muntele Rosu	83.70	319	⇑iP	P	21 05 17.1	+0.8
BMR	Baia Mare	83.72	322	P	P	21 05 17.1	+0.8
BMR	Baia Mare	83.72	322	⇑iP	P	21 05 17.3	+1.0
DOPR	Dopca	83.73	320	⇓iP	P	21 05 17.3	+0.9
UZH	Uzhgorod	83.75	324	eP	P	21 05 13.0	-3.5
STHS	Stebnicka Huta	83.79	325	eP	P	21 05 17.4	+0.7
STHS				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
STHS	Stebnicka Huta	83.79	325	eP	P	21 05 17.4	+0.7
	comp=Z,13nm,0.9s,mb4.8						
STHS	Stebnicka Huta	83.79	325	eP	P	21 05 17.4	+0.7
K18A	Toltan Ranch,	83.81	44	⇓P	P	21 05 17.4	+0.5
	baz=84,SNR=7.1						
R13A	O'Grain Ranch,	83.83	49	⇑P	P	21 05 17.4	+0.3
	baz=84,SNR=6.6						
Q14A	Sevier Lake (B	83.84	48	⇓P	P	21 05 17.4	+0.3
	baz=84,SNR=24						
SHPR	Sheep Range	83.94	51	eP	P	21 05 17.9	+0.2
	comp=Z,28nm,1.4s,mb4.9						
TRPA	Tarpa	83.94	323	⇑iP	P	21 05 17.5	+0.1
G21A	Lodge Grass	83.95	41	⇓P	P	21 05 17.3	-0.2
	baz=84,SNR=7.5						
N16A	Rees Ranch, Co	83.95	46	⇑P	P	21 05 18.0	+0.4
	baz=84,SNR=5.5						
TUQ	Turquoise Moun	83.99	53	⇓P	P	21 05 18.0	0.0
	baz=84,SNR=13						
OJC	Ojcow	83.99	326	eP	P	21 05 17.3	-0.3
BHL	Bhannes	84.00	306	eP	P	21 05 17.9	-0.2
SULR		84.01	319	⇑iP	P	21 05 17.5	-0.3
CRVS	Cervenica-Dubn	84.01	324	eP	P	21 05 17.7	-0.1
CRVS	Cervenica-Dubn	84.01	324	eP	P	21 05 17.7	-0.1
CRVS				ePP	PP	21 08 41.8	+4.8
BW06	Boulder Array	84.03	44	⇓P	P	21 05 17.8	-0.2
	baz=84,SNR=12						
PDAR	Pinedale Array	84.03	44	P	P	21 05 17.8	-0.2
	comp=Z,4.4nm,0.7s,mb4.4,baz=309,slow=1.3,SNR=31						
PDAR				pP	pP	21 06 39.6	-3.6
	comp=Z,1.0nm,0.8s,baz=316,slow=2.5,SNR=3.2						
HEC	Hector,Ludlow	84.03	53	⇑P	P	21 05 18.0	-0.1
	baz=84,SNR=14						
J19A	Crowheart	84.04	43	⇑P	P	21 05 18.5	+0.5
	baz=84,SNR=15						
MURC	Murrieta	84.07	55	⇑P	P	21 05 17.9	-0.5
	baz=84						
NLU	North Lily Min	84.07	47	eP	P	21 05 18.4	+0.1
	comp=Z,12nm,0.9s,mb4.7						
M17A	Scullys Gap (B	84.09	45	⇑P	P	21 05 18.6	+0.3
	baz=84,SNR=12						
V11A	Goodsprings	84.11	52	⇓P	P	21 05 18.7	+0.2
	baz=84,SNR=7.8						
T12A	Moapa	84.12	51	⇓P	P	21 05 18.8	+0.2
	baz=84						
P15A	Leamington	84.16	47	⇓P	P	21 05 19.0	+0.3
	baz=84,SNR=5.3						
I20A	Worland	84.18	42	⇑P	P	21 05 19.1	+0.4
	baz=84,SNR=15						
MUD	Monsted U'grnd	84.20	335	⇓iP	P	21 05 18.0	-0.6
MUD				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.2						
MUD	Monsted U'grnd	84.20	335	⇓iP	P	21 05 18.0	-0.6
	comp=Z,35nm,0.9s,mb5.2						
L18A	Fontenelle, Gr	84.22	45	⇓P	P	21 05 19.4	+0.4
	baz=84,SNR=7.7						
S13A	Holt Ranch, En	84.23	50	⇓P	P	21 05 19.6	+0.5
	baz=84,SNR=15						
VOIR		84.24	320	⇑iP	P	21 05 19.8	+0.8
NIE	Niedzica	84.26	325	eP	P	21 05 19.3	+0.3
MPU	Maple Canyon	84.32	47	eP	P	21 05 19.3	-0.2
	comp=Z,6.1nm,0.6s,mb4.6						
DAU	Daniels Canyon	84.33	46	eP	P	21 05 20.0	+0.5
DAU				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
DAU	Daniels Canyon	84.33	46	eP	P	21 05 20.0	+0.4
	comp=Z,16nm,0.8s,mb4.9						
ARUT	Antelope Range	84.39	49	eP	P	21 05 20.3	+0.4
ARUT				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
ARUT	Antelope Range	84.39	49	eP	P	21 05 20.2	+0.4
	comp=Z,9.4nm,0.9s,mb4.6						
U12A	Valley of Fire	84.40	51	⇓P	P	21 05 20.2	+0.2
	baz=84,SNR=7.0						
H21A	Big Horn, Sher	84.40	41	⇓P	P	21 05 20.0	+0.2
	baz=84,SNR=10.0						
K19A	Absolon Red Bu	84.42	43	⇓P	P	21 05 19.5	-0.5
	baz=84,SNR=8.9						
M18A	Lyman	84.49	45	⇑P	P	21 05 20.7	+0.4
	baz=84,SNR=8.1						
T13A	Saint George	84.50	50	⇑P	P	21 05 20.9	+0.4
	baz=84,SNR=12						
GMRC	Granite Mounta	84.52	53	⇑P	P	21 05 20.6	-0.1
	baz=84,SNR=9.9						
P16A	Fountain Green	84.53	47	⇓P	P	21 05 21.0	+0.4
	baz=84						
J20A	Shoshoni	84.56	43	⇑P	P	21 05 20.6	0.0
	baz=84						
V12A	Nelson	84.57	52	⇓P	P	21 05 20.9	+0.1
	baz=84,SNR=7.8						
S14A	Cedar City	84.59	49	⇓P	P	21 05 20.9	0.0
	baz=84						
PFO	Pinyon Flat Ob	84.59	54	P	P	21 05 20.0	-1.0
	comp=Z,127nm,1.1s,mb5.7,SNR=8.5						
PFO	Pinyon Flat Ob	84.59	54	⇑P	P	21 05 20.9	-0.1
	baz=84,SNR=13						
PFO	Pinyon Flat Ob	84.59	54	eP	P	21 05 20.5	-0.5
PFO				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
PFO	Pinyon Flat Ob	84.59	54	eP	P	21 05 20.5	-0.5
	comp=Z,20nm,0.9s,mb4.9						
DRGR		84.69	322	P	P	21 05 21.3	+0.1
DRGR		84.69	322	⇓iP	P	21 05 21.4	+0.2
BELC	Belle Mtn. Jos	84.70	54	⇑P	P	21 05 21.1	-0.4
	baz=84,SNR=15						
I21A	Big Trails, Te	84.75	42	⇑P	P	21 05 21.6	+0.1
	baz=85,SNR=12						
KECS	Kecovo	84.78	324	eP	P	21 05 21.4	-0.2
KECS				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
KECS	Kecovo	84.78	324	eP	P	21 05 21.4	-0.2
	comp=Z,4.7nm,1.1s,mb4.2						
KECS	Kecovo	84.78	324	eP	P	21 05 21.4	-0.2
KECS				ePP	PP	21 08 43.2	+0.1
O17A	Robinson Place	84.78	46	⇑P	P	21 05 22.3	+0.6
	baz=85,SNR=9.2						
U13A	Pakoon Wash	84.80	51	⇓P	P	21 05 22.3	+0.3
	baz=85,SNR=14						
MSU	Marysvale	84.81	48	eP	P	21 05 22.6	+0.6
MSU				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
MSU	Marysvale	84.81	48	eP	P	21 05 22.6	+0.6
	comp=Z,12nm,1.0s,mb4.7						
K20A	Yellowstone Ra	84.82	43	⇑P	P	21 05 21.5	-0.4
	baz=85,SNR=8.2						
R15A	Junction	84.92	49	⇑P	P	21 05 23.2	+0.7
	baz=85,SNR=5.7						
J21A	Lysite	84.94	42	⇓P	P	21 05 22.5	0.0
	baz=85,SNR=15						
N18A	Larsen Ranch,	84.99	45	⇑P	P	21 05 22.8	0.0
	baz=85,SNR=6.5						
MONP	Monument Peak	85.00	55	⇓P	P	21 05 22.9	-0.1
	baz=85,SNR=8.2						
MAMC	Mammari	85.02	308	P	P	21 05 21.9	-1.2
T14A	Hurricane	85.03	50	⇓P	P	21 05 23.3	+0.2
	baz=85						
SZH	Strazhica	85.04	318	iP	P	21 05 22.9	-0.1
OKC	Ostrava-Krasne	85.05	326	eP	P	21 05 22.6	-0.3
OKC	Ostrava-Krasne	85.05	326	eP	P	21 05 22.6	-0.3
OKC				ePP	PP	21 08 44.7	-0.6
CSS	Prodhromos	85.06	308	P	P	21 05 22.5	-0.7
	comp=Z,0.7nm,0.7s,mb3.6						
CSS	Prodhromos	85.06	308	P	P	21 05 21.7	-1.5
V13A	Grand Canyon W	85.09	51	⇑P	P	21 05 23.3	-0.1
	baz=85,SNR=10						
JMB	Yambol	85.13	317	P	P	21 05 23.4	-0.1
S15A	Panguitch	85.16	49	⇑P	P	21 05 24.2	+0.5
	baz=85						
P17A	Butcher Ranch,	85.19	47	⇑P	P	21 05 24.1	+0.3
	baz=85,SNR=8.9						
O18A	Roosevelt	85.20	46	⇓P	P	21 05 24.6	+0.7
	baz=85,SNR=9.8						
L20A	Wamsutter	85.20	44	⇓P	P	21 05 24.0	+0.2
	baz=85						
IRM	Iron Mountain	85.21	53	⇑P	P	21 05 23.9	-0.1
	baz=85,SNR=9.1						
Q16A	Castle Valley	85.23	48	⇓P	P	21 05 24.5	+0.5
	baz=85,SNR=7.9						
RUE	Ruedersdorf	85.24	330	eP	P	21 05 23.6	-0.2
	comp=Z,57nm,1.5s,mb5.2						
KSP	Ksiaz	85.25	328	eP	P	21 05 23.9	0.0
BC3	Big Chuckawall	85.27	54	⇑P	P	21 05 24.2	-0.1
	baz=85,SNR=8.3						
U14A	Mt Trumbull	85.32	51	⇓P	P	21 05 24.8	+0.3
	baz=85,SNR=6.5						
N19A	John Jarvie Ra	85.35	45	⇓P	P	21 05 24.4	-0.1
	baz=85,SNR=6.0						
DVTC	Desert V Tower	85.35	55	⇓P	P	21 05 24.7	-0.1
	baz=85,SNR=6.0						
MORC	Moravsky Berou	85.38	326	eP	P	21 05 24.2	-0.3
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
MORC	Moravsky Berou	85.38	326	eP	P	21 05 24.2	-0.3
	comp=Z,6.2nm,0.8s,mb4.5						
MORC	Moravsky Berou	85.38	326	⇑iP	P	21 05 24.3	-0.2
R16A	Teasdale	85.39	48	⇑P	P	21 05 25.6	+0.8
	baz=85,SNR=8.0						
SWSC	Sam W. Stewart	85.42	55	⇑P	P	21 05 24.5	-0.5
	baz=85						
PVL	Pavlikeni	85.42	318	P	P	21 05 25.3	+0.5
PSZ	Piszkesteto	85.44	324	eP	P	21 05 24.0	-0.9
PSZ				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.0						
PSZ	Piszkesteto	85.44	324	eP	P	21 05 24.0	-0.8
	comp=Z,30nm,1.3s,mb5.0						
PSZ	Piszkesteto	85.44	324	⇑iP	P	21 05 24.4	-0.5
PSZ	Piszkesteto	85.44	324	⇓eP	P	21 05 24.6	-0.3
ALFC	Alevga	85.45	308	P	P	21 05 24.1	-1.1
	comp=Z,1.2nm,0.6s,mb3.9						
J22A	Midwest	85.46	42	⇓P	P	21 05 24.8	-0.2
	baz=85,SNR=21						
K21A	Alcova	85.48	43	⇓P	P	21 05 25.2	+0.1
	baz=85,SNR=33						
T15A	Red Dirt Ranch	85.52	50	⇑P	P	21 05 25.7	+0.2
	baz=85,SNR=12						
GZR	Gura Zlata	85.53	321	P	P	21 05 25.3	0.0
GZR	Gura Zlata	85.53	321	⇑iP	P	21 05 24.9	-0.4
SRU	San Rafael	85.54	47	⇑P	P	21 05 25.3	-0.2
	baz=85,SNR=9.5						
DPC	Dobruska-Polom	85.57	327	eP	P	21 05 25.5	+0.1
DPC	Dobruska-Polom	85.57	327	eP	P	21 05 25.5	+0.1
DPC				ePP	PP	21 08 50.1	+0.7
M20A	Sweetwater, Wa	85.60	44	⇓P	P	21 05 25.8	0.0
	baz=85						
VYHS	Vyhne	85.60	325	eP	P	21 05 25.4	-0.2
VYHS				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
VYHS	Vyhne	85.60	325	eP	P	21 05 25.4	-0.2
	comp=Z,11nm,1.0s,mb4.6						
VYHS	Vyhne	85.60	325	eP	P	21 05 25.4	-0.2
VYHS				ePP	PP	21 08 49.2	-0.6
UPC	Upice	85.61	328	eP	P	21 05 25.4	-0.2
UPC	Upice	85.61	328	eP	P	21 05 25.4	-0.2
UPC				ePP	PP	21 08 48.0	-1.7
S16A	Weppner Ranch,	85.64	49	⇑P	P	21 05 26.1	+0.1
	baz=86						
O19A	Miners Draw (B	85.73	45	⇑P	P	21 05 26.2	-0.2
	baz=86,SNR=6.1						
PPCY	Paphos	85.78	308	P	P	21 05 24.4	-2.4
V14A	Boquillas Ranc	85.81	51	⇓P	P	21 05 27.2	+0.3
	baz=86,SNR=9.5						
L21A	Rawlins	85.81	43	⇑P	P	21 05 26.8	0.0
	baz=86,SNR=15						
R17A	Hanksville Air	85.81	48	⇓P	P	21 05 26.9	0.0
	baz=86,SNR=6.5						
Y12C	Blythe	85.87	53	⇑P	P	21 05 27.2	-0.1
	baz=86						
K22A	Casper	85.89	42	⇓P	P	21 05 27.1	-0.1
	baz=86,SNR=11						
U15A	North Rim	85.91	50	⇑P	P	21 05 27.7	+0.3
	baz=86,SNR=9.9						
N20A	Spence Gulch,	85.94	45	⇓P	P	21 05 28.0	+0.5
	baz=86,SNR=12

X14A Yava 86.60 52 ⇑P P 21 05 31.2 +0.5
baz=86
M22A Cedar Creek Ra 86.61 43 ⇓P P 21 05 31.3 +0.7
baz=86
W15A Williams 86.63 51 ⇓P P 21 05 31.5 +0.7
baz=86
PRU Pruhonice 86.65 328 eP P 21 05 30.8 +0.2
PRU Pruhonice 86.65 328 eP P 21 05 30.8 +0.2
P20A De Beque 86.65 46 ⇑P P 21 05 31.0 +0.1
baz=86
TREC Trest 86.69 327 eP P 21 05 30.4 -0.4
TREC Trest 86.69 327 eP P 21 05 30.4 -0.4
S18A Hurst Farm, Bl 86.70 48 ⇓P P 21 05 31.0 -0.2
baz=86,SNR=7.0
L23A Garrett 86.70 42 ⇓P P 21 05 30.8 -0.3
baz=86,SNR=25
Z13A Yuma Proving G 86.78 53 ⇑P P 21 05 31.7 0.0
baz=87,SNR=7.4
O21A Pagoda 86.80 45 ⇓P P 21 05 31.5 0.0
baz=87
R19A Curley Farm, L 86.82 47 ⇑P P 21 05 31.7 0.0
baz=87,SNR=5.9
Y14A Wickenburg 86.82 52 ⇑P P 21 05 31.7 -0.1
baz=87
U16A Tuba City 86.84 50 ⇓P P 21 05 32.2 +0.4
baz=87
113A Mohawk Valley, 86.94 54 ⇓P P 21 05 32.6 +0.2
baz=87
NEUB Neuenburg 87.02 330 eP P 21 05 31.8 -0.6
comp=Z,27nm,1.0s,mb5.0
VTS Vitosha 87.03 318 P P 21 05 32.4 -0.2
VTS Vitosha 87.03 318 ⇑iP P 21 05 32.1 -0.5
VTS Vitosha 87.03 318 iP P 21 05 32.4 -0.2
Q20A Ridgley Place, 87.04 46 ⇑P P 21 05 32.8 +0.1
baz=87,SNR=12
WUAZ Wupatki 87.04 50 ⇓P P 21 05 33.0 +0.2
baz=87
X15A Humboldt 87.04 52 ⇑P P 21 05 33.1 +0.3
baz=87,SNR=8.9
T18A Mexican Hat 87.10 48 ⇑P P 21 05 33.2 +0.1
baz=87
CLZ Clausthal 87.15 331 eP P 21 05 32.7 -0.3
comp=Z,21nm,1.2s,mb4.8
CLZ Clausthal 87.15 331 eP P 21 05 32.7 -0.3
CLZ pmax pmax
comp=Z,21nm,1.2s,mb4.8
Z14A Wintersburg 87.18 53 ⇓P P 21 05 34.1 +0.5
baz=87
L24A Wheatland 87.20 42 ⇓P P 21 05 33.8 +0.3
baz=87
PKSM Moragy 87.21 323 ⇑iP P 21 05 33.0 -0.4
S19A Harvey Farm, M 87.22 48 ⇓P P 21 05 33.8 +0.2
baz=87
PRK Paraskevi 87.24 314 ePN P 21 05 32.5 -1.2
KAVA Kavala 87.25 317 P P 21 05 32.6 -1.1
RSC Scourie 87.26 342 ⇓eP P 21 05 33.1 -0.2
Y15A Casa Rosa Ranc 87.27 52 ⇑P P 21 05 34.1 +0.1
baz=87
SOP Sopron 87.28 325 ⇓eP P 21 05 33.4 -0.3
TANN Tannenbergstha 87.29 329 eP P 21 05 33.2 -0.5
comp=Z,49nm,2.2s,mb5.0
N23A Red Feather La 87.31 44 ⇑P P 21 05 34.8 +0.8
baz=87,SNR=8.7
WERD Werda 87.33 329 eP P 21 05 33.4 -0.5
comp=Z,13nm,1.2s,mb4.6
MMB Musomiste 87.35 317 P P 21 05 33.8 -0.4
MVH1 Achvaich 87.35 341 ⇓eP P 21 05 33.2 -0.6
GUNZ Gunzen 87.38 329 eP P 21 05 33.8 -0.3
comp=Z,12nm,0.8s,mb4.8
MCD Coleburn Disti 87.39 341 ⇓eP P 21 05 33.5 -0.4
O22A Kremmling 87.39 44 ⇑P P 21 05 34.6 +0.2
baz=87,SNR=6.4
WERN Wernitzgruen 87.42 329 eP P 21 05 34.1 -0.2
comp=Z,35nm,1.5s,mb5.0
NVR Nevrokopi 87.42 317 ePB P 21 05 33.5 -1.0
NKC Novy Kostel 87.42 329 eP P 21 05 34.0 -0.3
NKC Novy Kostel 87.42 329 eP P 21 05 34.0 -0.3
R20A Redvale 87.44 47 ⇑P P 21 05 34.9 +0.3
baz=87,SNR=6.1
CSNA Conrad Observa 87.45 326 ⇓iPcP PcP 21 05 34.5 -1.6
comp=Z,18nm,0.8s
MOX Moxa 87.50 330 eP P 21 05 33.9 -0.7
comp=Z,43nm,1.9s,mb5.0
MOX Moxa 87.50 330 eP P 21 05 33.9 -0.7
MOX pmax pmax
comp=Z,43nm,1.9s,mb5.0
U18A Rough Rock, Ch 87.52 49 ⇓P P 21 05 35.4 +0.4
baz=87,SNR=10
LIA Limnos Island 87.52 315 ePB P 21 05 34.0 -1.0
MME1 Meikle Cairn 87.53 341 ⇓eP P 21 05 33.8 -0.9
KKB Krupnik 87.56 318 iP P 21 05 34.8 -0.3
Q21A Lamborn Mesa, 87.56 46 ⇑P P 21 05 35.7 +0.5
baz=87,SNR=5.0
114A Black Gap (USA 87.57 53 ⇓P P 21 05 35.6 +0.3
baz=87,SNR=5.8
P22A Eagle 87.61 45 ⇓P P 21 05 36.0 +0.6
baz=87,SNR=5.5
M24A Cheyenne 87.62 43 ⇑P P 21 05 36.2 +0.8
baz=87,SNR=8.8
X16A Lo Mia Camp, P 87.62 51 ⇓P P 21 05 35.9 +0.3
baz=87
S20A Disappointment 87.66 47 ⇓P P 21 05 36.2 +0.5
baz=88
KHC Kasperske Hory 87.70 328 eP P 21 05 35.1 -0.5
KHC Kasperske Hory 87.70 328 eP P 21 05 34.6 -1.0
comp=Z,17nm,0.8s,mb4.9
KHC Kasperske Hory 87.70 328 eP P 21 05 35.1 -0.5
SRS Serrai 87.73 317 P P 21 05 34.1 -1.8
O23A Lake Granby, G 87.74 44 ⇓P P 21 05 36.7 +0.6
baz=88
MDO Dochfour 87.82 341 ⇓eP P 21 05 35.3 -0.7
T19A Beclabito 87.83 48 ⇓P P 21 05 36.9 +0.4
baz=88
GEC2 GERESS Array S 87.84 327 eP P 21 05 35.7 -0.6
comp=Z,15nm,0.8s,mb4.9
GEC2 GERESS Array S 87.84 327 eP P 21 05 35.7 -0.6
GEC2 pmax pmax
comp=Z,15nm,0.8s,mb4.9
R21A Cimarron 87.85 46 ⇓P P 21 05 37.3 +0.7
baz=88,SNR=5.6
IBBN Ibbenburen 87.88 333 eP P 21 05 35.9 -0.5
comp=Z,49nm,0.8s,mb5.4
DIVS Divibare 87.88 321 P P 21 05 35.6 -1.0
V18A Ganado 87.89 50 ⇓P P 21 05 37.2 +0.5
baz=88
Y16A Circle Bar Ran 87.90 52 ⇑P P 21 05 37.4 +0.5
baz=88
MVCO Mesa Verde 87.94 48 ⇓P P 21 05 37.5 +0.5
baz=88
Q22A Crested Butte, 87.96 46 ⇓P P 21 05 37.9 +0.8
baz=88,SNR=14
WET Wettzell 88.01 328 eP P 21 05 36.6 -0.5
comp=Z,8.0nm,1.0s,mb4.5
WET Wettzell 88.01 328 eP P 21 05 36.6 -0.5
WET pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
U19A Dine' College, 88.02 49 ⇓P P 21 05 38.0 +0.5
baz=88
KAC Achnashellach 88.03 342 ⇓eP P 21 05 36.5 -0.5
SOH Sokhos 88.05 317 P P 21 05 36.5 -1.0
115A Sonoran Desert 88.05 53 ⇓P P 21 05 38.0 +0.4
baz=88
214A Organ Pipe Nat 88.06 54 ⇓P P 21 05 38.1 +0.4
baz=88
ARSA Arzberg 88.08 325 ⇓iPcP PcP 21 05 37.0 -1.9
comp=Z,6.8nm,0.8s
KNT Kendrikon 88.11 317 P P 21 05 36.3 -1.4
S21A Coal Bank Pass 88.12 47 ⇓P P 21 05 38.6 +0.7
baz=88,SNR=6.4
ISCO Idaho Springs 88.18 44 ⇑P P 21 05 38.7 +0.6
baz=88,SNR=5.2
VAY Valandovo 88.20 318 P P 21 05 36.7 -1.4
VAY Valandovo 88.20 318 eP P 21 05 36.8 -1.4
KPL Plockton 88.26 342 eP P 21 05 37.7 -0.4
KPL AMB AMB 21 05 42.3
comp=Z,100nm,3.1s
PLG Polygyros 88.28 317 ePN P 21 05 37.5 -1.0
PLG Polygyros 88.28 317 P P 21 05 37.5 -1.0
MOA Molln 88.28 327 ⇓iPcP PcP 21 05 37.9 -1.9
comp=Z,12nm,0.9s
P23A Jefferson 88.31 45 ⇑P P 21 05 39.4 +0.7
baz=88
O24A Longmont 88.31 44 ⇓P P 21 05 39.3 +0.6
baz=88
HORT Hortiatis 88.34 317 P P 21 05 37.5 -1.3
GRA1 Grafenberg Arr 88.36 329 eP P 21 05 38.6 -0.1
comp=Z,47nm,1.1s,mb5.2
GRF Grafenberg Arr 88.36 329 eP P 21 05 38.6 -0.1
comp=Z,47nm,1.1s,mb5.2
GRF Grafenberg Arr 88.36 329 eP P 21 05 38.6 -0.1
GRF pmax pmax
comp=Z,47nm,1.1s,mb5.2
GRF Grafenberg Arr 88.36 329 eP P 21 05 38.6 -0.1
GRF pmax pmax
comp=Z,47nm,1.1s,mb5.2
GRFO Grafenberg 88.36 329 eP P 21 05 38.7 0.0
GRFO pmax pmax
comp=Z,37nm,1.4s,mb5.0
GRFO Grafenberg 88.36 329 eP P 21 05 38.7 0.0
comp=Z,36nm,1.4s,mb5.0
THE Thessaloniki 88.40 317 P P 21 05 37.2 -1.9
PAIG Paliouri 88.41 316 P P 21 05 37.8 -1.4
U20A Newcomb 88.42 48 ⇓P P 21 05 39.3 0.0
baz=88,SNR=6.3
R22A Saguache, Gunn 88.44 46 ⇑P P 21 05 40.4 +1.0
baz=88,SNR=5.3
SKO Skopje 88.44 319 eP P 21 05 39.6 +0.3
V19A Window Rock 88.47 49 ⇓P P 21 05 40.0 +0.5
baz=88
GRG Griva 88.53 317 P P 21 05 38.1 -1.6
Q23A Hartsel 88.60 45 ⇑P P 21 05 40.6 +0.6
baz=88,SNR=6.0
EBH Black Hill 88.60 340 eP P 21 05 39.1 -0.6
W19A Sanders 88.60 50 ⇓P P 21 05 40.5 +0.4
baz=88
ESY Stoneypath 88.61 340 ⇓eP P 21 05 39.1 -0.6
KAR1 Arisaig 88.67 342 eP P 21 05 40.1 +0.1
S22A 4UR Ranch, Cre 88.68 46 ⇑P P 21 05 40.9 +0.5
baz=88
PERS Pernice 88.71 325 iP P 21 05 39.5 -0.9
PERS Pernice 88.71 325 iP P 21 05 39.5 -0.9
SOKA Soboth 88.72 325 ⇓iPcP PcP 21 05 39.7 -2.0
comp=Z,38nm,1.3s
BUG Bochum--Univer 88.73 332 eP P 21 05 39.5 -0.9
comp=Z,31nm,1.1s,mb5.0
P24A Kohler Place, 88.78 44 ⇑P P 21 05 41.1 +0.2
baz=89
V20A Brimhall 88.80 49 ⇑P P 21 05 41.3 +0.2
baz=89
EBL Broad Law 88.86 340 ⇓eP P 21 05 40.5 -0.5
DOBS Dobrina 88.87 325 iP P 21 05 40.1 -1.1
DOBS Dobrina 88.87 325 iP P 21 05 40.1 -1.1
O25A Wiggins 88.88 43 ⇑P P 21 05 41.6 +0.3
baz=89
EAB Aberfoyle 88.89 341 ⇓eP P 21 05 39.9 -1.2
EAU Auchinoon 88.92 340 ⇓eP P 21 05 40.5 -0.7
KRUS Krusevo 88.94 318 eP P 21 05 40.2 -1.4
Y18A Canyon Day Jun 88.94 51 ⇑P P 21 05 42.3 +0.5
baz=89,SNR=5.3
U21A Nageezi 88.95 48 ⇓P P 21 05 42.0 +0.2
baz=89
Q24A Divide 88.98 45 ⇑P P 21 05 42.5 +0.7
baz=89
216A Three Points, 88.98 53 ⇓P P 21 05 42.5 +0.5
baz=89
RJOB Jochberg 89.06 327 eP P 21 05 41.7 -0.3
comp=Z,37nm,0.9s,mb5.2
X19A St. Johns 89.06 50 ⇓P P 21 05 42.8 +0.5
baz=89
T22A Edith 89.08 47 ⇓P P 21 05 43.0 +0.6
baz=89,SNR=6.0
117A Oracle 89.16 53 ⇑P P 21 05 43.0 +0.2
baz=89
TNS Taunus Mts 89.17 331 eP P 21 05 42.0 -0.5
comp=Z,12nm,0.8s,mb4.8
TNS Taunus Mts 89.17 331 eP P 21 05 42.0 -0.5
TNS pmax pmax
comp=Z,12nm,0.8s,mb4.8
W20A Ramah 89.18 49 ⇑P P 21 05 43.2 +0.4
baz=89
P25A Willow Gulch B 89.23 44 ⇑P P 21 05 43.4 +0.4
baz=89
FNA Florina 89.24 318 P P 21 05 41.0 -2.0
KBA Koelnbreinsper 89.27 326 ⇑iP P 21 05 42.0 -1.0
comp=Z,11nm,0.7s,mb4.8
ESK Eskdalemuir 89.30 340 eP P 21 05 41.4 -1.6
ESK AMB AMB 21 05 43.0
comp=Z,34nm,2.7s,mb4.7
ESK Eskdalemuir 89.30 340 iP P 21 05 43.5 +0.5
Y19A Nutrioso 89.36 51 ⇓P P 21 05 44.5 +0.7
baz=89
XAL Allendale 89.38 339 eP P 21 05 42.4 -1.0
ECK Cauldkaine Hil 89.39 340 ⇓eP P 21 05 43.0 -0.4
LJU Ljubljana 89.42 325 iP P 21 05 42.6 -1.1
LJU Ljubljana 89.42 325 iP P 21 05 42.5 -1.2
BOJS Bojanci 89.43 324 iP P 21 05 43.0 -0.8
BOJS Bojanci 89.43 324 iP P 21 05 43.0 -0.8
MYKA Terra Mystica 89.44 326 ⇑iP P 21 05 42.4 -1.4
comp=Z,14nm,0.6s,mb5.0
FUR Furstenfeldbru 89.45 328 eP P 21 05 43.7 -0.1
comp=Z,75nm,1.1s,mb5.4
FUR Furstenfeldbru 89.45 328 eP P 21 05 43.7 -0.1
FUR pmax pmax
comp=Z,75nm,1.1s,mb5.4
R24A Sanders Place, 89.46 45 ⇓P P 21 05 44.8 +0.7
baz=89,SNR=15
TOD Tromm 89.48 330 eP P 21 05 43.5 -0.5
SDCO Great Sand Dun 89.52 46 ⇓P P 21 05 45.0 +0.6
baz=89,SNR=5.1
X20A Quemado 89.52 50 ⇓P P 21 05 45.3 +0.8
baz=89,SNR=8.6
Q25A Bedland, Calha 89.56 44 ⇑P P 21 05 44.6 +0.1
baz=89
217A Green Valley 89.56 53 ⇓P P 21 05 45.3 +0.6
baz=89
OGNE Ogallala 89.58 42 ⇓P P 21 05 44.5 -0.1
baz=89
ATAL Atalanti 89.58 315 P P 21 05 42.9 -1.7
T23A Casias Ranch, 89.61 47 ⇑P P 21 05 45.4 +0.6
baz=89
LKR Lokris 89.62 315 P P 21 05 43.0 -1.8
THL Klokotos Trika 89.64 317 P P 21 05 41.6 -3.3
118A Homack Ranch, 89.65 52 ⇓P P 21 05 45.4 +0.4
baz=90,SNR=5.7
NEST Nestorio 89.67 318 P P 21 05 42.9 -2.1
CADS Cadrg 89.68 326 iP P 21 05 42.9 -2.1
CADS i 21 05 52.7
CADS Cadrg 89.68 326 iP P 21 05 42.9 -2.1
CADS i 21 05 52.7
VOY Vojsko 89.74 325 eP P 21 05 43.8 -1.4
VOY Vojsko 89.74 325 eP P 21 05 43.8 -1.4
S24A Houchin Ranch, 89.76 46 ⇓P P 21 05 46.2 +0.7
baz=90,SNR=8.6
ABH Alteburg 89.81 331 eP P 21 05 44.8 -0.7
KNDS Knezji Dol 89.85 325 iP P 21 05 44.1 -1.6
KNDS Knezji Dol 89.85 325 iP P 21 05 44.1 -1.6
BEBN Eben Emael 89.87 333 P P 21 05 45.1 -0.6
comp=Z,7.0nm,1.1s,mb4.5
MEM Membach 89.88 332 P P 21 05 45.1 -0.7
ABTA Abfaltersbach 89.90 327 ⇓iP P 21 05 44.2 -1.7
comp=Z,41nm,1.0s,mb5.3
WATA Walderalm 89.92 327 ⇓iPcP PcP 21 05 45.2 -1.8
comp=Z,12nm,0.8s
STU Stuttgart 89.94 330 eP P 21 05 45.7 -0.4
comp=Z,38nm,1.0s,mb5.3
STU Stuttgart 89.94 330 eP P 21 05 45.9 -0.2
STU pmax pmax
comp=Z,26nm,0.9s,mb5.2
STU Stuttgart 89.94 330 eP P 21 05 45.9 -0.2
comp=Z,26nm,0.9s,mb5.2
WTTA Wattenberg 89.94 327 ⇓iPcP PcP 21 05 45.4 -1.7
comp=Z,28nm,1.2s
U23A El Rito 89.95 47 ⇓P P 21 05 47.0 +0.6
baz=90,SNR=8.1
HPK Haverah Park 89.95 338 eP P 21 05 45.0 -1.0
HPK AMB AMB 21 05 48.1
comp=Z,69nm,2.2s,mb5.2
Y20A Horse Springs, 89.98 50 ⇑P P 21 05 47.4 +0.8
baz=90,SNR=13
218A Dragoon 89.98 53 ⇑P P 21 05 47.3 +0.7
baz=90,SNR=8.5
R25A Fountain Ranch 90.02 45 ⇓P P 21 05 46.5 -0.1
baz=90,SNR=5.7
119A Ashpeak Ranch, 90.03 52 ⇓P P 21 05 47.4 +0.5
baz=90,SNR=6.1
TRI Trieste 90.03 325 eP P 21 05 45.1 -1.5
TRI pmax pmax
comp=Z,29nm,1.1s,mb5.1
TRI Trieste 90.03 325 eP P 21 05 45.1 -1.5
comp=Z,29nm,1.1s,mb5.1
X21A Alamocita Cree 90.05 50 ⇑P P 21 05 47.5 +0.6
baz=90,SNR=10
DSF Desfina 90.06 315 P P 21 05 44.3 -2.6
MOTA Moosalm 90.13 328 ⇓iP P 21 05 45.0 -2.1
comp=Z,19nm,1.0s,mb5.0
RUP Ruppelstein 90.15 331 eP P 21 05 46.3 -0.7
RETA Reutte 90.19 328 ⇑iPcP PcP 21 05 46.7 -1.5
comp=Z,30nm,1.2s
DID Didima 90.19 314 P P 21 05 44.0 -3.5
T24A Torres, Weston 90.21 46 ⇓P P 21 05 48.2 +0.6
baz=90
S25A Robets Cordova 90.23 45 ⇑P P 21 05 47.6 -0.1
baz=90
Z20A Nine Sixteen R 90.31 51 ⇑P P 21 05 48.7 +0.6
baz=90,SNR=24
KALE Kalithea 90.31 316 P P 21 05 44.1 -3.9
V23A Ortiz Mt. (NFS 90.31 48 ⇓P P 21 05 48.7 +0.6
baz=90
BCLA Clavier 90.31 333 P P 21 05 47.1 -0.7
comp=Z,10nm,1.2s,mb4.6
318A Bisbee 90.33 53 ⇓P P 21 05 48.7 +0.5
baz=90,SNR=11
TRIZ Trizonia 90.36 316 P P 21 05 45.5 -2.8
LHO Holmfirth 90.37 338 ⇓eP P 21 05 47.7 -0.3
LANF Langenberg 90.39 330 eP P 21 05 47.5 -0.7
Y21A Point of Rocks 90.39 50 ⇓P P 21 05 49.3 +0.8
baz=90,SNR=12
EFP Efpalio 90.43 316 P P 21 05 40.9 -7.7
GUR Goura 90.47 315 P P 21 05 46.9 -1.9
U24A Moreno Valley 90.48 47 ⇑P P 21 05 50.0 +1.1
baz=90,SNR=5.1
LAKA Lakka 90.50 316 P P 21 05 47.5 -1.4
LAZ Ladron 90.51 49 eP P 21 05 49.0 0.0
comp=Z,6.3nm,1.3s,mb4.4
219A White Tail Can 90.51 52 ⇓P P 21 05 49.5 +0.4
baz=90,SNR=14
KBI1 Birley Grange 90.51 338 eP P 21 05 47.6 -1.0
FETA Feichten 90.54 328 ⇓iPcP PcP 21 05 48.2 -1.6
comp=Z,27nm,0.9s
WLF Walferdange 90.56 332 P P 21 05 49.0 0.0
comp=Z,29nm,1.5s,mb5.0
WLF Walferdange 90.56 332 eP P 21 05 48.7 -0.2
comp=Z,56nm,1.3s,mb5.3
T25A Trinidad 90.57 46 ⇑P P 21 05 49.7 +0.4
baz=90,SNR=7.9
ANMO Albuquerque 90.62 49 eP P 21 05 50.0 +0.5
ANMO pmax pmax
comp=Z,13nm,1.0s
ANMO Albuquerque 90.62 49 eP P 21 05 50.0 +0.4
comp=Z,13nm,1.0s,mb4.8
SPAK Spaichingen-Ko 90.62 329 eP P 21 05 48.6 -0.7
SNF Seneffe 90.65 333 P P 21 05 48.6 -0.7
BFO Black Forest 90.65 330 P P 21 05 48.6 -0.8
comp=Z,186nm,1.0s,mb6.0,SNR=10
BFO Black Forest 90.65 330 eP P 21 05 48.8 -0.6
comp=Z,43nm,1.1s,mb5.3
BFO Black Forest 90.65 330 eP P 21 05 48.8 -0.6
BFO pmax pmax
comp=Z,43nm,1.1s,mb5.3
W23A Werner Place, 90.69 48 ⇑P P 21 05 50.3 +0.4
baz=90,SNR=5.4
DAVA Damuels 90.74 328 ⇓iPcP PcP 21 05 49.2 -1.4
comp=Z,50nm,1.0s
GIVF Givet 90.75 333 eP P 21 05 50.0 +0.2
comp=Z,45nm,1.2s,mb5.0
GIVF Givet 90.75 333 eP P 21 05 50.0 +0.2
GIVF pmax pmax
comp=Z,22nm,1.2s,mb5.0
GIVF Givet 90.75 333 eP P 21 05 50.0 +0.2
comp=Z,22nm,1.2s,mb5.0
VLX Vlachokerasia 90.81 315 P P 21 05 48.0 -2.4
Z21A St. Cloud Mine 90.81 50 ⇑P P 21 05 51.2 +0.7
baz=91,SNR=17
DOU Dourbes 90.85 333 P P 21 05 49.5 -0.7
comp=Z,11nm,1.5s,mb4.6
KEK Kerkira 90.85 318 P P 21 05 49.4 -1.1
319A Douglas 90.86 53 ⇓P P 21 05 51.2 +0.5
baz=91,SNR=7.1
CWF Charnwood Fore 90.87 337 eP P 21 05 48.5 -1.8
CWF AMB AMB 21 05 49.1
comp=Z,50nm,0.9s,mb5.4
Y22A Socorro 90.90 50 ⇓P P 21 05 51.4 +0.5
baz=91
V24A Rampart Ranch, 90.91 47 ⇓P P 21 05 51.6 +0.8
baz=91,SNR=10
BNM Barren Site 91.00 49 eP P 21 05 51.8 +0.5
comp=Z,19nm,1.4s,mb4.8
X23A Hourglass Bar 91.02 49 ⇓P P 21 05 51.8 +0.4
baz=91
BAIF Baives 91.03 333 eP P 21 05 51.0 -0.1
comp=Z,32nm,1.2s,mb4.8
BAIF Baives 91.03 333 eP P 21 05 51.0 -0.1
BAIF pmax pmax
comp=Z,16nm,1.2s,mb4.8
BAIF Baives 91.03 333 eP P 21 05 51.0 -0.1
comp=Z,16nm,1.2s,mb4.8
U25A Circle Dot Ran 91.04 46 ⇑P P 21 05 51.8 +0.4
baz=91,SNR=18
GMM Mts of Mourne 91.04 340 eP P 21 05 49.6 -1.5
CDF Champ du Feu 91.05 330 eP P 21 05 50.5 -0.7
comp=Z,72nm,1.1s,mb5.2
CDF Champ du Feu 91.05 330 eP P 21 05 50.5 -0.7
CDF pmax pmax
comp=Z,36nm,1.1s,mb5.2
CDF Champ du Feu 91.05 330 eP P 21 05 50.5 -0.7
comp=Z,36nm,1.1s,mb5.2
220A Playas Peak, P 91.07 52 ⇓P P 21 05 52.0 +0.4
baz=91,SNR=12
FELD Feldberg im Sc 91.14 330 eP P 21 05 50.0 -1.7
W24A Lazy 6 Ranch, 91.14 48 ⇑P P 21 05 52.6 +0.7
baz=91,SNR=12
121A Cookes Peak, D 91.20 51 ⇑P P 21 05 52.9 +0.7
baz=91,SNR=7.4
ITM Ithomi 91.21 315 P P 21 05 50.7 -1.5
ECH Echery 91.25 330 eP P 21 05 51.1 -1.0
ECH Echery 91.25 330 eP P 21 05 50.7 -1.4
ECH pmax pmax
comp=Z,26nm,1.1s,mb5.1
ECH Echery 91.25 330 eP P 21 05 50.7 -1.5
comp=Z,26nm,1.1s,mb5.1
V25A Rancho No Teng 91.25 47 ⇑P P 21 05 53.1 +0.6
baz=91,SNR=11
KFL Anninata 91.31 316 P P 21 05 51.7 -0.9
Z22A Elephant Butte 91.31 50 ⇓P P 21 05 53.1 +0.3
baz=91,SNR=12
VLS Valsamata 91.38 316 P P 21 05 51.9 -1.1
320A Kipp Ranch, An 91.40 52 ⇑P P 21 05 53.8 +0.6
baz=91,SNR=5.5
Y23A Lovelace Mesa, 91.50 49 ⇓P P 21 05 53.9 +0.3
baz=91,SNR=14
221A Mesquite Ranch 91.52 52 ⇑P P 21 05 54.5 +0.7
baz=91
MOF Molkenrain 91.54 330 eP P 21 05 52.6 -0.9
TUE Stuetta 91.59 328 eP P 21 05 52.5 -1.2
comp=Z,19nm,0.9s,mb5.0
122A Conniff Cattle 91.63 51 ⇓P P 21 05 54.8 +0.6
baz=91
BBS Basel-Blauen 91.67 330 eP P 21 05 53.2 -0.9
HINF Hinteralfeld 91.69 330 eP P 21 05 53.0 -1.2
comp=Z,39nm,1.0s,mb5.0
HINF Hinteralfeld 91.69 330 eP P 21 05 53.0 -1.2
HINF pmax pmax
comp=Z,19nm,1.0s,mb5.0
HINF Hinterlafeld 91.69 330 eP P 21 05 53.0 -1.2
comp=Z,19nm,1.0s,mb5.0
THEF They Montfort 91.74 331 eP P 21 05 52.1 -2.3
W25A X Bar L Ranch, 91.74 47 ⇓P P 21 05 55.1 +0.4
baz=92,SNR=10.0
HAU Haudompre 91.76 331 eP P 21 05 53.4 -1.1
comp=Z,20nm,0.8s,mb4.8
HAU Haudompre 91.76 331 eP P 21 05 53.4 -1.1
HAU pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
HAU Haudompre 91.76 331 eP P 21 05 53.4 -1.1
comp=Z,10nm,0.8s,mb4.8
Z23A Rita Site, Whi 91.80 50 ⇓P P 21 05 55.2 +0.2
baz=92,SNR=6.2
V26A Tequesquite Ra 91.81 46 ⇑P P 21 05 55.0 0.0
baz=92
Y24A Capitan 91.91 49 ⇓P P 21 05 55.4 -0.2
baz=92,SNR=6.6
MEZF Maizieres J'vi 91.92 332 eP P 21 05 54.7 -0.5
comp=Z,44nm,0.8s,mb5.1
MEZF Maizieres J'vi 91.92 332 eP P 21 05 54.7 -0.5
comp=Z,44nm,0.8s,mb5.4
222A Williams Famil 91.92 51 ⇓P P 21 05 55.7 +0.1
baz=92,SNR=8.1
X25A Clemmons Ranch 92.04 48 ⇓P P 21 05 56.3 +0.2
baz=92

LOMF	Lomont	92.05	330	eP		P	21 05 55.3	-0.6
MCH1	Michaelchurch	92.05	338	eP		P	21 05 54.9	-0.9
MCH1					AMB	AMB	21 06 01.5	
	comp=Z,35nm,2.0s,mb5.0							
HTR	Trewern Hill	92.07	338	⇓eP		P	21 05 55.2	-0.7
SFTF	Sexfontaines	92.15	331	eP		P	21 05 55.6	-0.7
	comp=Z,120nm,1.0s,mb5.5							
SFTF	Sexfontaines	92.15	331	eP		P	21 05 55.6	-0.7
	comp=Z,120nm,1.0s,mb5.8							
Z24A	Sheeppen Canyo	92.33	49	⇓P		P	21 05 57.6	+0.1
	baz=92							
Y25A	Mesa, Roswell	92.40	48	⇓P		P	21 05 57.6	-0.1
	baz=92							
X26A	CR and CF Fran	92.58	47	⇓P		P	21 05 58.6	+0.1
	baz=92							
124A	Stringfield Ra	92.66	50	⇑P		P	21 05 59.4	+0.4
	baz=92							
CABF	La Chapelle	92.95	330	eP		P	21 05 59.1	-0.9
	comp=Z,40nm,0.9s,mb5.2							
CABF	La Chapelle	92.95	330	eP		P	21 05 59.1	-0.9
CABF					pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2							
CABF	La Chapelle	92.95	330	eP		P	21 05 59.1	-0.9
	comp=Z,20nm,0.9s,mb5.2							
Y26A	Elida	92.96	48	⇓P		P	21 06 00.5	+0.1
	baz=93							
X27A	F and S Farms,	92.97	47	⇑P		P	21 06 00.5	+0.2
	baz=93							
224A	Cornudas Mount	93.00	50	⇑P		P	21 06 00.8	+0.3
	baz=93							
Z26A	Caprock	93.27	49	⇑P		P	21 06 01.8	0.0
	baz=93							
MNTX	Cornudas Mount	93.32	51	⇓P		P	21 06 02.0	0.0
	baz=93							
LOR	Lormes	93.38	331	eP		P	21 06 00.8	-1.2
	comp=Z,55nm,1.1s,mb5.2							
LOR	Lormes	93.38	331	eP		P	21 06 00.8	-1.2
LOR					pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2							
LOR	Lormes	93.38	331	eP		P	21 06 00.8	-1.2
	comp=Z,27nm,1.1s,mb5.2							
324A	Moseley Ranch,	93.41	51	⇑P		P	21 06 02.4	-0.1
	baz=93							
Y27A	Causey	93.41	48	⇑P		P	21 06 02.4	0.0
	baz=93							
225A	Deer Hill, Car	93.44	50	⇓P		P	21 06 02.5	0.0
	baz=93							
LPL	La Plagne	93.50	329	eP		P	21 06 01.9	-0.7
	comp=Z,32nm,0.7s,mb5.2							
LPL	La Plagne	93.50	329	eP		P	21 06 01.9	-0.7
LPL					pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2							
LPL	La Plagne	93.50	329	eP		P	21 06 01.9	-0.7
	comp=Z,16nm,0.7s,mb5.2							
LPG	La Plagne	93.51	329	eP		P	21 06 02.1	-0.5
	comp=Z,32nm,0.6s,mb5.2							
LPG	La Plagne	93.51	329	eP		P	21 06 02.1	-0.5
LPG					pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2							
LPG	La Plagne	93.51	329	eP		P	21 06 02.1	-0.5
	comp=Z,16nm,0.6s,mb5.2							
126A	Clayton Basin,	93.64	49	⇓P		P	21 06 03.4	-0.1
	baz=94							
SSF	Saint Saulge	93.69	331	eP		P	21 06 02.5	-0.9
	comp=Z,52nm,1.0s,mb5.2							
SSF	Saint Saulge	93.69	331	eP		P	21 06 02.5	-0.9
SSF					pmax	pmax		
	comp=Z,26nm,1.0s,mb5.2							
SSF	Saint Saulge	93.69	331	eP		P	21 06 02.5	-0.9
	comp=Z,26nm,1.0s,mb5.2							
AMTX	Amarillo	93.71	46	⇑P		P	21 06 03.9	+0.1
	baz=94							
Z27A	Tatum	93.74	48	⇓P		P	21 06 03.6	-0.4
	baz=94							
325A	Bean Ranch, Si	93.80	51	⇓P		P	21 06 04.3	+0.1
	baz=94							
SMF	Signal de Mont	93.88	331	eP		P	21 06 03.3	-1.0
	comp=Z,67nm,1.0s,mb5.3							
SMF	Signal de Mont	93.88	331	eP		P	21 06 03.3	-1.0
SMF					pmax	pmax		
	comp=Z,34nm,1.0s,mb5.3							
SMF	Signal de Mont	93.88	331	eP		P	21 06 03.3	-1.0
	comp=Z,34nm,1.0s,mb5.3							
HYF	Humbligny	93.89	332	eP		P	21 06 03.9	-0.4
LDF	La Druitiere	93.89	334	eP		P	21 06 03.1	-1.2
	comp=Z,14nm,0.8s,mb4.7							
LDF	La Druitiere	93.89	334	eP		P	21 06 03.1	-1.2
LDF					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7							
LDF	La Druitiere	93.89	334	eP		P	21 06 03.1	-1.2
	comp=Z,6.9nm,0.8s,mb4.7							
AVF	Avril sur Loir	93.97	331	eP		P	21 06 03.8	-0.9
	comp=Z,60nm,0.9s,mb5.3							
AVF	Avril sur Loir	93.97	331	eP		P	21 06 03.8	-0.9
AVF					pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3							
AVF	Avril sur Loir	93.97	331	eP		P	21 06 03.8	-0.9
	comp=Z,30nm,0.9s,mb5.3							
CEL	Celeste	94.08	319	eP		P	21 06 04.4	-1.0
	comp=Z,58nm,0.8s,mb5.7							
MBDF	Montbardon	94.09	328	eP		P	21 06 03.7	-1.6
	comp=Z,14nm,0.7s,mb4.8							
MBDF	Montbardon	94.09	328	eP		P	21 06 03.7	-1.6
MBDF					pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8							
MBDF	Montbardon	94.09	328	eP		P	21 06 03.7	-1.6
	comp=Z,6.9nm,0.7s,mb4.8							
425A	Indio Mountain	94.15	51	⇑P		P	21 06 06.2	+0.3
	baz=94							
GRR	Gorron	94.33	335	eP		P	21 06 05.4	-0.9
ORIF	Oris-en-Rattie	94.35	329	eP		P	21 06 05.4	-1.1
	comp=Z,13nm,0.6s,mb4.8							
ORIF	Oris-en-Rattie	94.35	329	eP		P	21 06 05.4	-1.1
ORIF					pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9							
ORIF	Oris-en-Rattie	94.35	329	eP		P	21 06 05.4	-1.1
	comp=Z,6.6nm,0.6s,mb4.8							
BGF	Bois d'Agland	94.37	332	eP		P	21 06 05.6	-0.9
	comp=Z,43nm,1.2s,mb5.1							
BGF	Bois d'Agland	94.37	332	eP		P	21 06 05.6	-0.9
BGF					pmax	pmax		
	comp=Z,22nm,1.2s,mb5.1							
BGF	Bois d'Agland	94.37	332	eP		P	21 06 05.6	-0.9
	comp=Z,22nm,1.2s,mb5.1							
SBF	Sospel	94.44	327	eP		P	21 06 05.1	-1.8
	comp=Z,30nm,0.8s,mb5.1							
SBF	Sospel	94.44	327	eP		P	21 06 05.1	-1.8
SBF					pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1							
SBF	Sospel	94.44	327	eP		P	21 06 05.1	-1.8
	comp=Z,15nm,0.8s,mb5.1							
326A	Caldwell Ranch	94.50	50	⇑P		P	21 06 07.4	-0.1
	baz=94							
AGO	Saint Agoulin	94.65	331	eP		P	21 06 07.0	-0.8
PGF	Pioggiola	94.68	326	eP		P	21 06 06.6	-1.4
	comp=Z,6.4nm,0.8s,mb4.4							
PGF	Pioggiola	94.68	326	eP		P	21 06 06.6	-1.4
PGF					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4							
PGF	Pioggiola	94.68	326	eP		P	21 06 06.6	-1.4
	comp=Z,3.2nm,0.8s,mb4.4							
TCF	Toulx Ste Croi	94.85	332	eP		P	21 06 07.9	-0.8
	comp=Z,24nm,1.0s,mb4.9							
TCF	Toulx Ste Croi	94.85	332	eP		P	21 06 07.9	-0.8
TCF					pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9							
TCF	Toulx Ste Croi	94.85	332	eP		P	21 06 07.9	-0.8
	comp=Z,12nm,1.0s,mb4.9							
426A	McDonald Obser	94.87	51	⇑P		P	21 06 09.1	-0.1
	baz=95							
VIVF	Saint-Julien-l	94.94	329	eP		P	21 06 08.1	-1.0
	comp=Z,24nm,0.8s,mb5.0							
VIVF	Saint-Julien-l	94.94	329	eP		P	21 06 08.1	-1.0
VIVF					pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0							
VIVF	Saint-Julien-l	94.94	329	eP		P	21 06 08.1	-1.0
	comp=Z,12nm,0.8s,mb5.0							
PYM	Petit Puy Mans	94.95	331	eP		P	21 06 09.6	+0.4
FRF	La Foret Royal	95.04	328	eP		P	21 06 07.8	-1.9
	comp=Z,14nm,1.0s,mb4.6							
FRF	La Foret Royal	95.04	328	eP		P	21 06 07.8	-1.9
FRF					pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7							
FRF	La Foret Royal	95.04	328	eP		P	21 06 07.8	-1.9
	comp=Z,7.2nm,1.0s,mb4.7							
526A	Mary Lane Ranc	95.21	51	⇓P		P	21 06 10.9	+0.2
	baz=95							
SMRF	Simiane la Rot	95.22	328	eP		P	21 06 09.5	-0.9
	comp=Z,11nm,0.9s,mb4.6							
SMRF	Simiane la Rot	95.22	328	eP		P	21 06 09.5	-0.9
	comp=Z,11nm,0.9s,mb4.9							
328A	Wristen Ranch,	95.23	49	⇓P		P	21 06 10.5	-0.3
	baz=95							
LMR	La Mourre	95.28	327	eP		P	21 06 09.1	-1.6
	comp=Z,23nm,1.0s,mb4.9							
LMR	La Mourre	95.28	327	eP		P	21 06 09.1	-1.6
LMR					pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9							
LMR	La Mourre	95.28	327	eP		P	21 06 09.1	-1.6
	comp=Z,12nm,1.0s,mb4.9							
626A	Big Bend Ranch	95.49	52	⇓P		P	21 06 12.0	0.0
	baz=95							
MFF	Saint Martin d	95.54	333	eP		P	21 06 11.0	-0.8
	comp=Z,20nm,1.0s,mb4.9							
MFF	Saint Martin d	95.54	333	eP		P	21 06 11.0	-0.8
MFF					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9							
MFF	Saint Martin d	95.54	333	eP		P	21 06 11.0	-0.8
	comp=Z,9.9nm,1.0s,mb4.9							
428A	Kincaid Ranch,	95.73	50	⇑P		P	21 06 13.2	+0.2
	baz=96							
LASF	Ste Croix	95.91	329	eP		P	21 06 12.7	-0.9
	comp=Z,29nm,1.0s,mb5.1							
RJF	Les Rejaudoux	95.93	332	eP		P	21 06 13.0	-0.6
	comp=Z,15nm,0.7s,mb4.9							
RJF	Les Rejaudoux	95.93	332	eP		P	21 06 13.0	-0.6
RJF					pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.9							
RJF	Les Rejaudoux	95.93	332	eP		P	21 06 13.0	-0.6
	comp=Z,7.4nm,0.7s,mb4.9							
TXAR	Lajitas Array	95.95	51	P		P	21 06 14.1	0.0
	comp=Z,6.9nm,0.7s,mb4.9,baz=300,slow=3.2,SNR=92							
TXAR				pP		pP	21 07 34.5	-6.3
	comp=Z,2.3nm,0.9s,baz=293,slow=3.5,SNR=3.6							
TXAR				PKKPbc		PKKPbc	21 22 59.8	-0.2
	comp=Z,0.5nm,0.7s,baz=144,slow=4.7,SNR=4.8							
TXAR	Lajitas Array	95.95	51	P		P	21 06 14.1	0.0
TXAR				pP		pP	21 07 34.5	-6.3
TXAR				PKKPbc		PKKPbc	21 22 59.8	-0.2
CAF	Calviac	96.00	331	eP		P	21 06 13.5	-0.5
	comp=Z,25nm,1.3s,mb4.9							
CAF	Calviac	96.00	331	eP		P	21 06 13.5	-0.5
CAF					pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9							
CAF	Calviac	96.00	331	eP		P	21 06 13.5	-0.5
	comp=Z,13nm,1.3s,mb4.9							
628A	Black Gap, Mar	96.38	51	⇑P		P	21 06 16.2	+0.2
	baz=96							
LFF	La Frestale	96.55	332	eP		P	21 06 15.9	-0.5
	comp=Z,24nm,0.8s,mb5.1							
LFF	La Frestale	96.55	332	eP		P	21 06 15.9	-0.5
LFF					pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1							
LFF	La Frestale	96.55	332	eP		P	21 06 15.9	-0.5
	comp=Z,12nm,0.8s,mb5.1							
MTLF	Montolieu	97.21	330	eP		P	21 06 18.9	-0.6
	comp=Z,14nm,1.2s,mb4.7							
MTLF	Montolieu	97.21	330	eP		P	21 06 18.9	-0.6
MTLF					pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.7							
MTLF	Montolieu	97.21	330	eP		P	21 06 18.9	-0.6
	comp=Z,7.0nm,1.2s,mb4.7							
EPF	Esparros	98.27	331	eP		P	21 06 23.6	-0.6
ETSF	Etsaut	98.76	331	eP		Pdif	21 06 26.2	-0.1
	comp=Z,6.8nm,0.8s							
ETSF	Etsaut	98.76	331	eP		Pdif	21 06 26.2	-0.1
ETSF					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7							
ETSF	Etsaut	98.76	331	eP		Pdif	21 06 26.2	-0.1
	comp=Z,3.4nm,0.8s							
ESDC	Sonseca Array	102.86	332	PP		PP	21 10 53.0	-10
	comp=Z,1.3nm,0.7s,baz=34,slow=8.9,SNR=4.7							
QSPA	South Pole Qui	119.60	180	ePKPdf		PKPdf	21 11 31.7	-1.5
TORD	Torodi Ar. Bea	120.87	310	PKP		PKPdf	21 11 36.2	-1.4
	comp=Z,5.6nm,0.6s,baz=41,slow=1.1,SNR=99							
TORD				PP		PP	21 12 53.9	-17
	comp=Z,1.4nm,0.7s,baz=40,slow=6.9,SNR=4.5							
TORD				PKKPbc		PKKPbc	21 21 40.6	-1.2
	comp=Z,1.0nm,0.5s,baz=218,slow=3.3,SNR=14							
SYO	Syowa Base	120.97	204	⇓ePKPdf		PKPdf	21 11 34.0	-2.1
BOSA	Boshof	123.16	254	PKP		PKPdf	21 11 41.3	-0.3
	comp=Z,5.3nm,0.8s,baz=88,slow=9.5,SNR=7.4							
DBIC	Dimbokro	129.97	311	PKP		PKPdf	21 11 54.5	-0.6
	comp=Z,8.1nm,0.7s,baz=14,slow=3.0,SNR=14							
TIC	Toumodi	130.10	311	ePKIKP		PKPdf	21 11 54.9	-0.4
	comp=Z,13nm,0.4s							
KIC	Kosan Boka	130.12	310	ePKIKP		PKPdf	21 11 55.1	-0.2
	comp=Z,19nm,0.6s							
LIC	Lamto	130.41	310	ePKIKP		PKPdf	21 11 55.6	-0.3
	comp=Z,28nm,0.7s							
LIC	Lamto	130.41	310	ePKIKP		PKPdf	21 11 55.2	-0.7
	comp=Z,20nm,0.8s							
LPAZ	La Paz	151.48	68	PKP		PKPdf	21 12 32.4	-0.4
	comp=Z,3.0nm,0.7s,baz=290,slow=2.1,SNR=17							
LPAZ				PKPbc		PKPbc	21 12 39.2	-0.1
	comp=Z,27nm,0.7s,baz=331,slow=2.1,SNR=81							
LPAZ	La Paz	151.48	68	PKIKP		PKPdf	21 12 32.4	-0.5
LPAZ					pmax	pmax		
	comp=Z,3.0nm,0.7s							
LPAZ					pmax	pmax		
	comp=Z,27nm,0.7s							
LPAZ	La Paz	151.48	68	ePKPdf		PKPdf	21 12 33.5	+0.6
LPAZ				ePKPbc		PKPbc	21 12 40.1	+0.7
PLCA	Paso Flores	153.45	122	PKP		PKPdf	21 12 34.4	-0.6
	comp=Z,1.1nm,0.8s,baz=326,slow=19,SNR=2.9							
PLCA				PKPbc		PKPbc	21 12 42.5	-0.5
	comp=Z,6.5nm,0.6s,baz=231,slow=2.7,SNR=18							
PLCA	Paso Flores	153.45	122	PKP		PKPdf	21 12 34.4	-0.6
PLCA				PKPbc		PKPbc	21 12 42.5	-0.5
CPUP	Villa Florida	164.92	81	PKP		PKPdf	21 12 47.9	-0.8
	comp=Z,2.5nm,0.7s,baz=299,slow=2.6,SNR=9.1							
CPUP				PKPab		PKPab	21 13 46.1	-1.3
	comp=Z,1.8nm,0.7s,baz=264,slow=5.6,SNR=4.5							

BUC 01 21:11:22.8±26.0, 45°.65N×29°.36E, h147km, MD3.5/4, 2C-10D, Error ellipse: s-maj=503.2km s-min=249.1km az=30.0, Ukraine - Moldova - Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLCR		0.61	220	⇓iP	Pn	21 11 41.2	-3.1
TLCR				i S	Sn	21 12 14.2	+14
TLCR		0.61	220	⇓iP	Pn	21 11 41.2	-3.1
TLCR		0.61	220	S	Sn	21 12 14.2	+14
CFR	Carcaliu	0.99	242	⇓iP	Pn	21 11 51.3	+4.2
CFR				i S	Sn	21 11 59.8	-5.8
CFR	Carcaliu	0.99	242	⇓iP	Pn	21 11 51.3	+4.2
CFR	Carcaliu	0.99	242	S	Sn	21 11 59.8	-5.8
TIRR	Tirgusor	1.37	210	i S	Sn	21 12 11.4	-0.7
TIRR	Tirgusor	1.37	210	S	Sn	21 12 11.4	-0.7
VRI	Vrincioaia	1.86	278	⇓iP	Pn	21 11 57.4	+1.4
VRI				i S	Sn	21 12 11.1	-10
VRI	Vrincioaia	1.86	278	⇓iP	Pn	21 11 57.4	+1.4
VRI	Vrincioaia	1.86	278	S	Sn	21 12 11.1	-10
PLOR	Plostina	1.91	277	⇓iP	Pn	21 11 58.0	+1.4
PLOR				i S	Sn	21 12 12.7	-10
PLOR	Plostina	1.91	277	⇓iP	Pn	21 11 58.0	+1.4
PLOR	Plostina	1.91	277	S	Sn	21 12 12.7	-10
MLR	Muntele Rosu	2.41	267	⇑iP	Pn	21 11 59.8	-2.7
MLR				i S	Sn	21 12 16.5	-17
MLR	Muntele Rosu	2.41	267	⇑iP	Pn	21 11 59.8	-2.7
MLR	Muntele Rosu	2.41	267	S	Sn	21 12 16.5	-17
VOIR		3.04	267	⇓iP	Pn	21 12 08.8	-1.6
VOIR				i S	Sn	21 12 33.0	-14
VOIR		3.04	267	⇓iP	Pn	21 12 08.8	-1.6
VOIR		3.04	267	S	Sn	21 12 33.0	-14

DJA 01 21:58:05, 0°.33S×123°.93E, h102km, MLv4.0/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.90	3	P	Pn	21 58 25.1	+0.5
KMSI				S	Sn	21 58 39.2	0.0
LUWI	Luwuk	1.36	239	P	Pn	21 58 30.8	+1.2
LUWI				S	Sn	21 58 48.8	+0.5
MNI	Manado	1.98	27	P	Pn	21 58 38.1	+0.6
MRSI	Marisa	2.15	292	P	Pn	21 58 38.7	-0.8
LBMI	Labuha	3.58	95	P	Pn	21 58 58.1	-0.5
TNTI	Ternate	3.61	72	P	Pn	21 58 57.5	-1.4
KDI	Kendari	3.83	200	P	Pn	21 59 02.8	+0.8
KDI				S	Sn	21 59 45.8	-0.4
NLAI	Namlea	4.29	132	P	Pn	21 59 09.2	+1.1
TTSI	Tana Toraja	4.92	237	P	Pn	21 59 18.3	+1.7
TTSI				S	Sn	22 00 12.3	0.0

*IDC **01** 21:59:40.1±1.7, 19°.83S×63°.46W, h0km, mb4.7/1, mb1 4.2/4, mb1mx3.8/20, mbtmp4.2/4, ML4.3/3, Error ellipse: s-maj=37.3km s-min=20.2km az=34.0*
*NEIC **01** 21:59:40.6±0.7, 20°.00S×63°.46W, h10km, mb4.4/1, Error ellipse: s-maj=13.1km s-min=11.1km az=88.0*

ISC 01 21:59:40.6±3.8, 19°.90S±0°.06×63°.49W±0°.07, h6km±25km, n9, σ1°09/12, mb4.3/2, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIV	San Ignacio	4.51	31	Pn	Pn	22 00 49.9	+0.3
	7.5nm,0.3s,baz=215,slow=12,SNR=140						
SIV				Sn	Sn	22 01 41.6	-0.8
	3.3nm,0.3s,baz=214,slow=20,SNR=6.7						
LPAZ	La Paz	5.69	308	Pn	Pn	22 01 06.7	+1.0
	4.3nm,0.3s,baz=128,slow=9.7,SNR=105						
LPAZ				Sn	Sn	22 02 13.0	+1.6
	4.4nm,0.3s,baz=176,slow=19,SNR=6.9						
LPAZ				Lg		22 02 40.2	
	baz=180,slow=20,SNR=1.7						
LPAZ	La Paz	5.69	308	ePn	Pn	22 01 06.7	+1.0
LPAZ				eSn	Sn	22 02 09.9	-1.5
LPAZ				Lg		22 02 40.2	
CPUP	Villa Florida	8.55	140	Pn	Pn	22 01 46.1	+1.1
	1.2nm,0.3s,baz=322,slow=13,SNR=5.8						
CPUP	Villa Florida	8.55	140	ePn	Pn	22 01 42.8	-2.2
	36nm,0.6s						
CPUP				Sn	Sn	22 03 22.4	+0.6
LCO	Las Campanas	11.20	214	Pn	Pn	22 02 20.1	-1.2
RCBR	Riachuelo	30.24	66	P	P	22 05 56.3	+3.8
	4.3nm,0.7s,mb4.3						
TORD	Torodi Ar. Bea	72.04	68	P	P	22 11 06.0	0.0
	2.2nm,0.7s,mb4.2,baz=247,slow=6.3,SNR=20						
SONM	Songino Array	150.95	14	PKPbc	PKPbc	22 19 34.7	+0.4
	0.5nm,0.5s,baz=346,slow=1.2,SNR=3.9						

*ISCJB **01** 22:36:43.0±1.4, 24°.44S±0°.10×179°.96W±0°.09, h573km±19km, mb3.8/12, Error ellipse: s-maj=15.3km s-min=12.9km az=167.7*
*IDC **01** 22:36:43.5±8.1, 24°.49S×179°.96W, h564km±87km, mb3.1/5, mb1 3.4/5, mb1mx3.2/14, mbtmp3.1/5, Error ellipse: s-maj=63.4km s-min=44.0km az=161.0*
*NEIC **01** 22:36:43.3±0.9, 24°.45S×179°.93W, h563km±11km, mb4.0/8, Error ellipse: s-maj=10.2km s-min=8.5km az=166.0*

ISC 01 22:36:43.2±1.3, 24°.45S±0°.10×179°.94W±0°.09, h561km±17km, n30, σ0°.54/24, mb3.8/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	13.01	38	eP	P	22 39 31.6	-0.6
URZ	Urewera	14.00	190	eP	P	22 39 42.4	+0.4
RAR	Rarotonga	18.87	84	P	P	22 40 28.8	+0.3
CTAO	Charters Tower	31.54	271	eP	P	22 42 20.5	+0.2
	7.2nm,0.7s,mb4.3						
STKA	Stephens Creek	34.57	249	P	P	22 42 45.1	-0.6
	0.6nm,0.3s,mb3.6,baz=90,slow=13,SNR=4.0						
STKA	Stephens Creek	34.57	249	eP	P	22 42 46.9	+1.1
	0.9nm,1.0s,mb3.2						
PMG	Port Moresby	34.73	290	eP	P	22 42 47.5	+0.3
ASAR	Alice Springs	42.00	261	P	P	22 43 46.2	+0.2
	0.7nm,0.4s,mb3.5,baz=105,slow=8.3,SNR=8.1						
MIDW	Midway	52.41	3	eP	P	22 45 04.3	+0.3
MBWA	Marble Bar	55.33	260	eP	P	22 45 23.4	-1.4
	15nm,1.2s,mb4.1						
RPN	Rapa Nui	62.85	109	eP	P	22 46 15.1	+0.1
QSPA	South Pole Qui	65.64	180	eP	P	22 46 31.9	+0.2
	0.7nm,0.6s,mb3.4						
KSM	Kuching	72.25	280	eP	P	22 47 11.8	-0.7
	12nm,1.3s,mb4.2						
MJAR	Matsushiro Arr	72.38	326	P	P	22 47 12.7	0.0
	0.7nm,0.5s,mb3.3,baz=150,slow=3.7,SNR=4.1						
MAJO	Matsushiro	72.38	326	eP	P	22 47 12.9	+0.1
	2.5nm,0.8s,mb3.7						
PMSA	Palmer Station	78.39	157	eP	P	22 47 45.5	-0.2
	2.1nm,0.5s,mb3.7						
YSS	Yuzh-Sakhalins	78.65	335	P	P	22 47 47.3	+0.1
MDJ	Mudanjiang	82.75	326	eP	P	22 48 08.5	0.0
ENH	Enshi	86.80	305	eP	P	22 48 28.2	-0.4
PLCA	Paso Flores	87.85	134	eP	P	22 48 32.5	-0.9
	1.1nm,0.4s,mb3.9						
CMAR	Chiang Mai Arr	89.77	290	P	P	22 48 43.5	+0.9
	0.8nm,0.3s,mb4.0,baz=134,slow=2.6,SNR=4.6						
TXAR	Lajitas Array	90.67	58	P	P	22 48 47.4	+0.8
	0.5nm,0.8s,mb3.5,baz=208,slow=4.3,SNR=3.7						
HIA	Hailar	90.88	325	P	P	22 48 47.4	+0.3
TCUT	Toone Canyon	91.01	45	eP	P	22 48 47.6	-0.3
	28nm,0.4s						
BVAR	Borovoye Array	120.88	318	PKP	PKPdf	22 54 32.4	+0.7
	0.4nm,0.3s,baz=116,slow=1.9,SNR=4.4						
ARCES	ARCESS Array B	132.43	348	PKP	PKPdf	22 54 53.4

*ISCJB **01** 22:58:40.1±0.8, 20°.86S×0°.09×178°.69W±0°.08, h609km×10km, mb3.9/21, Error ellipse: s-maj=13.5km s-min=10.8km az=170.9*
*IDC **01** 22:58:40.2±2.2, 20°.84S×178°.62W, h592km±21km, mb3.5/12, mb1 3.7/12, mb1mx3.6/17, mbtmp3.5/12, Error ellipse: s-maj=35.1km s-min=15.4km az=150.0*
*NEIC **01** 22:58:40.9±0.6, 20°.82S×178°.65W, h605km±6km, mb4.1/12, Error ellipse: s-maj=8.9km s-min=6.8km az=169.0*
ISC 01 22:58:40.9±0.8, 20°.83S±0°.09×178°.66W±0°.08, h602km±10km, n66, σ0$72/37, mb3.9/21, 9C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.38	314	*e*Pn	P	23 00 10.2	+1.0
AFI	Afiamalu	9.51	45	*e*P	P	23 00 53.9	-1.1
RAR	Rarotonga 49nm,0.8s	17.64	95	*e*P	P	23 02 12.8	-0.3
URZ	Urewera 4.9nm,0.6s	17.75	191	*e*P	P	23 02 13.9	0.0
CTA	Charters Tower 4.3nm,0.5s,mb4.4,baz=96,slow=12,SNR=6.5	32.84	265	P	P	23 04 27.4	+0.6
CTAO	Charters Tower 4.1nm,0.4s,mb4.4	32.84	265	*e*P	P	23 04 27.4	+0.6
PMG	Port Moresby	34.82	284	*e*P	P	23 04 44.1	+0.7
STKA	Stephens Creek 3.5nm,0.8s,mb3.9,baz=97,slow=8.1,SNR=3.5	37.09	244	P	P	23 05 01.5	-0.2
STKA	Stephens Creek	37.09	244	*e*P	P	23 05 01.5	-0.3
ASAR	Alice Springs 9.6nm,0.8s,mb4.4,baz=90,slow=8.3,SNR=75	43.84	257	P	P	23 05 55.5	+0.1
ASAR				PcP	PcP	23 07 28.2	+0.1
	1.0nm,0.6s,baz=105,slow=3.8,SNR=5.8						
ASAR				ScP	ScP	23 10 24.6	+1.4
	0.5nm,0.7s,baz=107,slow=5.5,SNR=4.3						
KAKA	Kakadu	47.37	272	*e*P	P	23 06 21.9	-0.3
FITZ	Fitzroy Crossi 2.3nm,0.5s,mb3.8	52.37	263	*e*P	P	23 06 58.5	-0.2
MBWA	Marble Bar 4.0nm,0.5s,mb3.9	57.18	258	*e*P	P	23 07 31.5	-0.6
SBA	Scott Base 2.1nm,0.7s,mb3.4	57.50	184	P	P	23 07 33.4	+0.1
NWAO	Narrogin (SRO) 10.0nm,1.1s,mb3.9	57.67	244	*e*P	P	23 07 34.5	-0.8
DAV	Davao City (W)	61.37	291	P	P	23 07 58.8	-1.4
RPN	Rapa Nui	62.96	111	*e*P	P	23 08 09.4	-0.7
QSPA	South Pole Qui 2.6nm,0.7s,mb3.8	69.24	180	*e*P	P	23 08 49.1	+1.1
KKM	Kota Kinabalu	69.25	285	*e*P	P	23 08 49.5	+0.2
MJAR	Matsushiro Arr 2.8nm,0.6s,mb3.9,baz=160,slow=6.1,SNR=6.7	70.11	324	P	P	23 08 53.8	-0.1
MAJO	Matsushiro 2.9nm,0.5s,mb4.0	70.11	324	*e*P	P	23 08 53.2	-0.7
KSM	Kuching	72.85	278	*e*P	P	23 09 10.0	-0.3
TWG	Pinlang	73.04	303	P	P	23 09 11.5	+0.4
YULB	Yu-li	73.17	304	*e*P	P	23 09 11.8	-0.1
NACB	Ninganchiao	73.35	305	*e*P	P	23 09 12.1	-0.8
TPUB	Ta-pu 72nm,1.6s,mb5.0	73.64	303	*e*P	P	23 09 13.0	-1.5
PETK	Petropavlovsk- 4.6nm,0.7s,mb4.0,baz=133,slow=8.1,SNR=9.0	76.43	346	P	P	23 09 29.8	+0.4
KSRS	Korea Array 1.2nm,0.6s,mb3.5,baz=117,slow=6.0,SNR=3.5	76.73	319	P	P	23 09 32.1	+0.7
YBH	Yreka Blue Hor 2.0nm,0.6s,mb3.7,baz=175,slow=4.7,SNR=5.9	80.93	39	P	P	23 09 54.0	+0.5
PMSA	Palmer Station 1.4nm,0.6s,mb3.6	81.23	157	*e*P	P	23 09 54.5	-0.2
NVAR	Mina Array Bea 1.3nm,0.6s,mb3.6,baz=224,slow=7.9,SNR=6.5	81.69	44	P	P	23 09 58.7	+1.2
NVAR	Mina Array Bea	81.69	44	P	P	23 09 58.7	+1.2
ENH	Enshi 6.5nm,0.6s,mb4.4	85.72	304	*e*P	P	23 10 18.2	+0.7
TXAR	Lajitas Array 0.4nm,0.7s,mb3.3,baz=202,slow=4.3,SNR=7.0	87.75	58	P	P	23 10 27.6	+0.5
ILAR	Eielson Array 1.7nm,0.8s,mb3.9,baz=226,slow=6.0,SNR=7.4	88.77	13	P	P	23 10 30.1	-0.8
PDAR	Pinedale Array 1.1nm,0.6s,mb3.8,baz=212,slow=3.0,SNR=5.3	89.62	43	P	P	23 10 36.1	+0.7
CMAR	Chiang Mai Arr 2.0nm,0.7s,mb4.1,baz=130,slow=2.9,SNR=14	89.64	290	P	P	23 10 37.5	+1.3
ZALV	Zalesovo Beam 0.7nm,0.5s,baz=46,slow=4.2,SNR=3.9	110.36	321	PKiKP	PKiKP	23 16 03.8	-1.4
MKAR	Makanchi Array 0.2nm,0.4s,baz=119,slow=1.6,SNR=6.3	110.97	313	PKiKP	PKiKP	23 16 06.2	-0.4
KURK	Kurchatov 0.5nm,0.5s,baz=96,slow=2.0,SNR=4.4	113.82	317	PKiKP	PKiKP	23 16 10.8	-1.0
BVAR	Borovoye Array 1.1nm,0.4s,baz=103,slow=3.1,SNR=12	118.93	320	PKP	PKPdf	23 16 20.8	-0.9
ARCES	ARCESS Array B	129.13	349	PKP	PKPdf	23 16 40.2	-0.5
FINES	FINESS Array B 2.5nm,1.0s,baz=72,slow=6.2,SNR=7.4	135.91	343	PKP	PKPdf	23 16 54.6	+0.9
FINES				SKPbc	SKPbc	23 19 30.0	+0.3
	5.4nm,1.1s,baz=63,slow=4.7,SNR=5.0						
AKASG	Malin Array Be 5.8nm,0.4s,baz=43,slow=4.2,SNR=23	143.00	330	PKhKP	PKPpre	23 17 03.9	
AKASG	Malin Array Be	143.00	330	PKP	PKPpre	23 17 03.9	
MALT	Malatya	143.64	307	⇑*i*P	PKPdf	23 17 08.5	+0.1
ASF	Jabal al Asfar 1.8nm,0.8s,baz=130,slow=6.0,SNR=3.9	146.38	297	PKPbc	PKPbc	23 17 15.4	-0.4
BRTR	Keskin Array B 2.3nm,0.7s,baz=117,slow=4.5,SNR=11	146.60	312	PKPbc	PKPbc	23 17 15.9	-0.2
MMAI	Mount Meron Ar 5.2nm,0.6s,baz=74,slow=5.8,SNR=14	147.44	299	PKPbc	PKPbc	23 17 19.1	+0.6
TIRR	Tirgusor	147.48	323	⇑*i*P	PKPbc	23 17 17.5	-0.7
VRI	Vrincioaia	147.50	326	⇓*i*P	PKPbc	23 17 17.8	-0.4
CRVS	Cervenica-Dubn	147.69	335	*e*P	PKPbc	23 17 18.3	-0.3
CRVS	Cervenica-Dubn	147.69	335	*e*PKP	PKPbc	23 17 18.3	-0.3
MLR	Muntele Rosu	148.16	326	⇑*i*P	PKPbc	23 17 20.1	+0.2
CLL	Collm	148.24	346	⇓*i*PKP	PKPbc	23 17 19.8	-0.1
CLL				⇑*i*PKP	PKPab	23 17 25.1	-0.2
CLL	Collm	148.24	346	⇓*i*PKPbc	PKPbc	23 17 19.8	-0.1
	comp=Z,6.0nm,0.9s						
CLL				⇑*i*PKPab	PKPab	23 17 25.1	-0.2
	comp=Z,4.0nm,0.7s						
BRG	Berggiesshubel	148.42	345	*e*P	PKPbc	23 17 20.2	-0.2
	comp=Z,5.0nm,1.0s						
BRG				*e*		23 17 26.1	
	comp=Z,4.0nm,0.9s						
VOIR		148.66	327	⇓*i*P	PKPbc	23 17 21.3	+0.2
VYHS	Vyhne	149.03	337	*e*P	PKPbc	23 17 21.9	0.0
VYHS	Vyhne	149.03	337	*e*PKP	PKPbc	23 17 21.9	0.0
GZR	Gura Zlata	149.81	329	⇓*i*P	PKPbc	23 17 23.4	-0.5
BZS	Buzias	150.19	331	⇑*i*P	PKPbc	23 17 24.7	-0.1
CONA	Conrad Observa	150.53	340	⇑*i*PKiKP	PKiKP	23 17 25.9	0.0
	comp=Z,3.5nm,0.6s						
PKSM	Moragy	150.99	335	⇑*i*P	PKPbc	23 17 26.3	-0.3
VTS	Vitosha	151.58	325	⇓*i*P	PKPbc	23 17 27.7	-0.3
ABTA	Abfaltersbach	152.59	343	⇑*i*PKPbc	PKPbc	23 17 29.0	-1.1
	comp=Z,2.2nm,0.6s						

*NNC **01** 23:16:23.1±6.5, 51°.38N×90°.22E, h0km, mb3.8, mpv3.9, Error ellipse: s-maj=52.9km s-min=38.4km az=80.0*
*IDC **01** 23:16:30.0±2.4, 51°.19N×89°.62E, h0km, mb3.7/1, mb1 3.8/5, mb1mx3.5/27, mbtmp3.8/5, ML3.7/4, Error ellipse: s-maj=22.4km s-min=15.0km az=85.0*
*ISCJB **01** 23:16:32.7±0.8, 51°.30N±0°.04×89°.20E±0°.08, h10km, mb3.7/2, Error ellipse: s-maj=7.6km s-min=5.7km az=155.5*
*NEIC **01** 23:16:35.9±0.6, 51°.29N×88°.91E, h10km, mb3.3/2, Error ellipse: s-maj=9.7km s-min=7.5km az=170.0*
ISC 01 23:16:33.0±1.0, 51°.28N±0°.04×89°.4E±0°.1, h10km, n24, σ1$38/40, mb3.7/2, 8C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.88	315	*e*Pn	Pn	23 17 32.5	-0.1
ZAA0				*e*Pg	Pg	23 17 47.1	-0.2
ZAA0				*e*S	Sg	23 18 38.1	+0.6
ZALV	Zalesovo Beam 2.4nm,0.3s,baz=136,slow=15,SNR=30	3.88	315	Pn	Pn	23 17 31.4	-1.2
ZALV				Pg	Pg	23 17 43.7	-3.5
	4.6nm,0.3s,baz=131,slow=15,SNR=23						
ZALV				Lg		23 18 37.1	
	11nm,0.3s,baz=134,slow=28,SNR=14						
MK31	Makanchi Array	6.50	229	⇓Pn	Pn	23 18 07.8	-0.7
	15nm,0.6s,baz=58,slow=12,SNR=179						
MK31				⇓Sn	Sn	23 19 34.1	+12
	4.1nm,0.5s,baz=56,slow=29,SNR=4.9						
MK31				⇓Lg		23 19 56.4	
	31nm,0.8s,baz=47,slow=31,SNR=6.3						
MK31	Makanchi Array	6.50	229	*e*Pn	Pn	23 18 08.2	-0.4
MK31				*e*Sg	Sg	23 19 57.2	-4.1
MKAR	Makanchi Array	6.50	229	Pn	Pn	23 18 08.4	-0.1
	2.7nm,0.3s,baz=49,slow=12,SNR=123						
MKAR				Sn	Sn	23 19 22.6	0.0
	0.7nm,0.3s,baz=46,slow=29,SNR=2.0						
MKAR				Lg		23 19 56.3	
	0.6nm,0.3s,baz=39,slow=28,SNR=3.8						
KURK	Kurchatov	6.85	269	⇑Pn	Pn	23 18 12.8	-0.6
	6.0nm,0.7s						
KURK				⇓Sn	Sn	23 19 34.3	+2.9
	6.4nm,0.7s						
KURK				⇑Lg		23 20 12.1	
	33nm,0.7s						
KURK	Kurchatov	6.85	269	Pn	Pn	23 18 14.3	+0.9
	0.4nm,0.3s,baz=83,slow=15,SNR=12						
KURK				Sn	Sn	23 19 34.7	+3.4
	0.4nm,0.3s,baz=81,slow=26,SNR=3.0						
KURK				Lg		23 20 14.2	
	0.4nm,0.3s,baz=85,slow=33,SNR=4.7						
KURK	Kurchatov	6.85	269	*e*Pn	Pn	23 18 12.6	-0.8
KURK				*e*Sn	Sn	23 19 28.5	-2.8
KURBB	Kurchatov Arra 0.6nm,0.3s	6.92	269	⇑Pn	Pn	23 18 14.2	-0.2
KURBB				⇓Sn	Sn	23 19 34.3	+1.2
	4.1nm,0.7s						
KURBB				⇑Lg		23 20 19.0	
	13nm,0.7s						
WMQ	Urumqi	7.55	190	*e*Pn	Pb	23 18 45.7	+1.7
WMQ				Sn	Sn	23 19 55.7	+7.0
WMQ				smax			
	comp=N,28nm,1.0s						
WMQ				smax			
	comp=E,35nm,1.0s						
TLY	Talaya	8.88	82	Pn	Pn	23 18 47.5	+6.3
TLY				*e*Sn	Sn	23 20 32.5	+11
VOSK	Vostochnaya	11.47	284	⇑Pn	Pn	23 19 11.5	-5.1
	comp=E,1.8nm,0.8s						
VOSK				⇑Sn	Sn	23 21 25.2	+0.6
	comp=E,2.5nm,0.7s						
SONM	Songino Array	11.54	101	Lg		23 22 15.7	
	comp=E,0.1nm,0.3s,baz=290,slow=31,SNR=3.5						
BVA0	Borovoye Array	11.83	286	Pn	Pn	23 19 19.3	-2.2
	comp=E,0.2nm,0.6s,baz=84,slow=13,SNR=6.2						
BVA0				⇓Sn	Sn	23 21 34.8	+1.3
	comp=E,0.8nm,0.9s,baz=99,slow=22,SNR=4.7						
BVAR	Borovoye Array	11.83	286	Pn	Pn	23 19 19.5	-2.0
	comp=E,0.4nm,0.3s,baz=94,slow=12,SNR=7.1						
BVAR				Sn	Sn	23 21 29.9	-3.6
	comp=E,0.3nm,0.3s,baz=93,slow=24,SNR=3.1						
ULN	Ulaanbaatar	11.94	100	Pn	Pn	23 19 31.4	+8.4
TKM2	Tokmak 2	12.58	234	*e*Pn	Pn	23 19 30.7	-1.2
ZRNK	Zerenda	12.67	286	⇑Pn	Pn	23 19 30.1	-2.9
	comp=E,1.7nm,0.7s						
ZRNK				⇓Sn	Sn	23 21 55.7	+1.8
	comp=E,4.9nm,1.1s						
KKAR	Karatay Array	15.21	245	*e*Pn	Pn	23 20 07.4	-0.3
	comp=E,4.2nm,0.8s						
KKAR				*e*Sn	Sn	23 22 56.7	+0.6
AB31	Akbulak array	18.91	275	⇑Pn	Pn	23 20 56.1	+2.0
	comp=E,0.6nm,0.7s,baz=64,slow=10,SNR=3.5						
ABKAR	Akbulak array	18.91	275	*e*P	Pn	23 20 51.8	-2.3
	comp=E,0.3nm,0.3s						
KBL	Kabul	22.30	229	*e*P	P	23 21 30.8	+0.4
	comp=E,4.5nm,1.2s,mb3.8						
TRO	Tromso	36.65	326	*i* P	P	23 23 42.0	+2.9
BRTR	Keskin Array B	39.86	276	P	P	23 24 07.2	+0.8
	comp=E,1.3nm,0.9s,mb3.6,baz=32,slow=9.7,SNR=4.5						

*IDC **01** 23:31:43.9±1.6, 9°.72S×119°.83E, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.8/15, mbtmp3.9/6, ML3.9/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/24, Error ellipse: s-maj=133.2km s-min=22.6km az=56.0*
*ISCJB **01** 23:31:47.5±0.6, 10°.14S±0°.05×119°.51E±0°.04, h55km±7km, mb4.1/7, Error ellipse: s-maj=8.9km s-min=5.5km az=22.3*
*DJA **01** 23:31:47, 10°.20S×119°.48E, h17km, MLv4.6/7*
*NEIC **01** 23:31:48.1±0.3, 10°.03S×119°.45E, h35km, mb4.2/4, Error ellipse: s-maj=10.4km s-min=5.0km az=56.0*
ISC 01 23:31:49.2±0.5, 10°.15S±0°.05×119°.54E±0°.04, h52km±6km, n32, σ1$02/39, mb4.1/7, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	0.89	58	P	Pn	23 32 05.0	-0.5
WSI				S	Sn	23 32 16.5	-0.9
MMRI	Maumere	3.06	61	P	Pn	23 32 36.6	+1.5
KHKI	Kahang-Kahang	4.26	294	P	Pn	23 32 52.4	+0.8
IGBI	Denpasar	4.53	287	P	Pn	23 32 54.8	-0.4
IGBI				S	Sn	23 33 45.7	-0.9
SRBI	Singaraja	4.74	295	P	Pn	23 32 57.8	-0.3
BKSI	Bulukumba	4.83	7	P	Pn	23 33 00.1	+0.7
SPSI	Sidrap Palu 33nm,0.6s	6.15	2	P	Pn	23 33 17.9	+0.4
GMJI	Gumukmas 0.3nm50nm,1.3s	6.30	287	P	Pn	23 33 19.3	-0.2
TTSI	Tana Toraja 32nm,0.6s	7.06	2	P	Pn	23 33 32.3	+2.3
FITZ	Fitzroy Crossi 0.8nm,0.3s,baz=334,slow=7.3,SNR=22	9.87	144	Pn	Pn	23 34 08.9	+0.4
FITZ				Sn	Sn	23 35 55.0	-3.0
	1.2nm,0.3s,baz=225,slow=8.6,SNR=6.9						
FITZ				LR	LR	23 37 52.8	
	comp=Z,134nm,18.9s,baz=36,slow=37						
FITZ	Fitzroy Crossi 4.3nm,0.6s	9.87	144	*e*Pn	Pn	23 34 08.9	+0.4
FITZ				*e*Sn	Sn	23 35 56.2	-1.8
FITZ				LR	LR	23 37 52.8	
KNA	Kununurra	10.58	123	P	Pn	23 34 18.5	+0.3
MBWA	Marble Bar	10.95	179	*e*Pn	Pn	23 34 23.6	+0.5
MBWA				*e*Sn	Sn	23 36 14.2	-10
KAKA	Kakadu	12.90	103	*e*Pn	Pn	23 34 50.2	+0.3
KAKA				*e*Sn	Sn	23 37 11.7	-0.4
KSM	Kuching	14.75	321	Pn	Pn	23 35 12.8	-2.0
KKM	Kota Kinabalu 8.5nm,1.0s	16.42	348	*e*Pn	Pn	23 35 33.9	-2.4
DAV	Davao City (W)	18.13	20	Pn	Pn	23 35 56.1	-1.3
ASAR	Alice Springs 0.4nm,0.3s,baz=318,slow=12,SNR=23	19.20	136	P	Pn	23 36 12.0	+1.8
ASAR				S	S	23 39 41.3	-2.5
	0.1nm,0.3s,baz=312,slow=24,SNR=5.0						
COCO	West Island	22.36	263	P	P	23 36 44.3	+1.2
COEN	Coen	23.42	102	*e*P	P	23 36 55.6	+1.6
CMAR	Chiang Mai Arr 1.1nm,0.6s,mb4.0,baz=155,slow=6.7,SNR=7.7	34.94	324	P	P	23 38 36.6	+0.3
ENH	Enshi 6.8nm,0.8s,mb4.3	41.33	347	*e*P	P	23 39 29.6	-0.4
MAJO	Matsushiro	49.66	20	P	P	23 40 35.7	0.0
SONM	Songino Array 1.0nm,0.7s,mb3.9,baz=164,slow=7.9,SNR=4.4	58.90	350	P	P	23 41 43.3	+0.6
KBL	Kabul 1.9nm,0.4s,mb4.5	65.28	315	*e*P	P	23 42 26.2	+0.4
MK31	Makanchi Array	65.71	333	*e*P	P	23 42 28.4	+0.1
MKAR	Makanchi Array 0.7nm,0.5s,mb4.0,baz=147,slow=6.4,SNR=15	65.71	333	P	P	23 42 28.4	0.0
TKM2	Tokmak 2	66.30	326	P	P	23 42 32.5	+0.4
UCH	Uchtor	66.44	325	P	P	23 42 33.5	+0.4
AAK	Ala-Archa	66.72	325	*e*P	P	23 42 34.9	0.0
EKS2	Erkin-Say 1.2nm,0.7s,mb4.0	67.14	325	*e*P	P	23 42 36.9	-0.7
ZALV	Zalesovo Beam 1.0nm,0.4s,mb4.1,baz=142,slow=7.3,SNR=5.5	70.30	339	P	P	23 42 56.5	-0.5

*ISCJB **01** 23:33:19.9±0.4, 37°.92N±0°.03×21°.42E±0°.03, h21km±4km, Error ellipse: s-maj=5.1km s-min=4.1km az=19.5*
*CSEM **01** 23:33:19.5±0.3, 37°.92N×21°.39E, h20km, MD3.2, Error ellipse: s-maj=6.4km s-min=5.3km az=33.0*
*ATH **01** 23:33:19.6, 37°.91N×21°.43E, h20km±1km, MD3.2/14*
*NEIC **01** 23:33:19.6, 37°.91N×21°.43E, h20km, MD3.2(ATH), After ATH.*
*THE **01** 23:33:19.3, 37°.89N×21°.45E, h0km±1km, ML2.0/6, Error ellipse: s-maj=1.9km s-min=0.6km az=240.0*
ISC 01 23:33:19.7±0.5, 37°.91N±0°.04×21°.42E±0°.03, h18km±4km, n58, σ1$20/85, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.15	15	*e*Pb	Pg	23 33 24.2	+0.3
RLS				*e*Sb	Sg	23 33 28.1	+1.3
RLS	Riolos of Patr	0.15	15	*e*PB	Pg	23 33 24.2	+0.3
RLS				*e*SB	Sg	23 33 28.1	+1.3
RLS	Riolos of Patr	0.15	15	*e*Pb	Pg	23 33 24.2	+0.3
RLS				*e*Sb	Sg	23 33 28.1	+1.3
KFL	Anninata	0.54	292	P	Pg	23 33 30.4	+0.1
KFL	Anninata	0.54	292	P	Pg	23 33 30.4	+0.1
LAKA	Lakka	0.55	53	P	Pg	23 33 29.8	-0.9
LAKA				S	Sg	23 33 38.2	+0.1
LAKA	Lakka	0.55	53	P	Pg	23 33 29.8	-0.9
LAKA				S	Sg	23 33 38.2	+0.1
EFP	Efpalio	0.64	37	*e*PB	Pb	23 33 31.9	-0.5
EFP				*e*SN	Sg	23 33 41.1	+0.1
EFP	Efpalio	0.64	37	P	Pg	23 33 31.4	-1.0
EFP				S	Sg	23 33 41.3	+0.3
EFP	Efpalio	0.64	37	P	Pg	23 33 31.4	-1.0
EFP	Efpalio	0.64	37	*e*Pb	Pb	23 33 31.9	-0.5
EFP				S	Sg	23 33 41.3	+0.3
TRIZ	Trizonia	0.69	48	P	Pg	23 33 32.0	-1.2
TRIZ				S	Sg	23 33 42.5	+0.1
TRIZ	Trizonia	0.69	48	P	Pg	23 33 32.0	-1.2
TRIZ				S	Sg	23 33 42.5	+0.1
VLS	Valsamata	0.70	292	*e*Pn	Pn	23 33 33.4	-1.4
VLS				*e*Sn	Sg	23 33 44.6	+1.7
VLS	Valsamata	0.70	292	*e*PN	Pn	23 33 33.4	-1.4
VLS				*e*SN	Sg	23 33 44.6	+1.7
VLS	Valsamata	0.70	292	P	Pg	23 33 32.7	-0.8
VLS				S	Sg	23 33 44.5	+1.6
VLS	Valsamata	0.70	292	P	Pg	23 33 32.7	-0.8
VLS	Valsamata	0.70	292	*e*Pn	Pn	23 33 33.4	-1.4
VLS				*e*Sn	Sg	23 33 44.6	+1.7
GUR	Goura	0.73	88	*e*PN	Pn	23 33 33.3	-1.8
GUR				*e*SN	Sn	23 33 44.0	-1.9
GUR	Goura	0.73	88	P	Pg	23 33 32.4	-1.6
GUR				S	Sg	23 33 43.8	+0.1
GUR	Goura	0.73	88	P	Pg	23 33 32.4	-1.6
GUR	Goura	0.73	88	*e*Pn	Pn	23 33 33.3	-1.8
GUR				S	Sg	23 33 43.8	+0.1
ITM	Ithomi	0.83	151	*e*Pb	Pb	23 33 35.0	-0.6
ITM				*e*Sn	Sn	23 33 47.8	-0.6
ITM	Ithomi	0.83	151	*e*PB	Pb	23 33 35.0	-0.6
ITM				*e*SN	Sn	23 33 47.8	-0.6
ITM	Ithomi	0.83	151	P	Pb	23 33 34.8	-0.8
ITM	Ithomi	0.83	151	P	Pb	23 33 34.8	-0.8
ITM				*e*Sn	Sn	23 33 47.8	-0.6
VLX	Vlachokerasia	0.94	125	*e*PN	Pn	23 33 37.8	-0.1
VLX				*e*SN	Sn	23 33 50.1	-0.8
VLX	Vlachokerasia	0.94	125	P	Pb	23 33 36.6	-0.7
VLX				S	Sb	23 33 49.1	-0.3
VLX	Vlachokerasia	0.94	125	P	Pb	23 33 36.6	-0.7
VLX	Vlachokerasia	0.94	125	*e*Pn	Pn	23 33 37.8	-0.1
VLX				S	Sb	23 33 49.1	-0.3
VLX				*e*Sn	Sn	23 33 50.1	-0.8
PYL	PYLOS	1.04	166	*e*PN	Pn	23 33 39.5	+0.1
PYL	PYLOS	1.04	166	P	Pb	23 33 38.6	-0.6
PYL	PYLOS	1.04	166	P	Pb	23 33 38.6	-0.6
PYL	PYLOS	1.04	166	*e*Pn	Pn	23 33 39.5	+0.1
EVR	Evrytania	1.05	17	*e*Pn	Pn	23 33 39.6	+0.1
EVR	Evrytania	1.05	17	*e*PN	Pn	23 33 39.6	+0.1
EVR	Evrytania	1.05	17	*e*Pn	Pn	23 33 39.6	+0.1
LTK	Loutraki	1.23	84	*e*PN	Pn	23 33 42.8	+0.8
LTK	Loutraki	1.23	84	*e*Pn	Pn	23 33 42.8	+0.8
LKR	Lokris	1.45	59	*e*Pn	Pn	23 33 46.9	+1.9
LKR	Lokris	1.45	59	*e*PN	Pn	23 33 46.9	+1.9
LKR	Lokris	1.45	59	*e*Pn	Pn	23 33 46.9	+1.9
DID	Didima	1.50	105	*e*PN	Pn	23 33 47.7	+2.0
DID	Didima	1.50	105	P	Pn	23 33 46.1	+0.4
DID				S	Sn	23 34 07.3	+2.5
DID	Didima	1.50	105	P	Pn	23 33 46.1	+0.4
DID	Didima	1.50	105	*e*Pn	Pn	23 33 47.7	+2.0
DID				S	Sn	23 34 07.3	+2.5
VLI	Veliai	1.70	134	*e*Pn	Pn	23 33 50.4	+2.0
VLI	Veliai	1.70	134	*e*PN	Pn	23 33 50.4	+2.0
VLY	Voula,Athens	1.88	91	*e*Pn	Pn	23 33 52.8	+1.9
VLY	Voula,Athens	1.88	91	*e*PN	Pn	23 33 52.8	+1.9
VLY	Voula,Athens	1.88	91	*e*Pn	Pn	23 33 52.8	+1.9
PTL	Penteli	1.94	85	*e*Pn	Pn	23 33 53.2	+1.5
PTL	Penteli	1.94	85	*e*PN	Pn	23 33 53.2	+1.5
PTL	Penteli	1.94	85	*e*Pn	Pn	23 33 53.2	+1.5
KYTH	Kithira	2.08	141	*e*Pn	Pn	23 33 56.0	+2.3
KYTH	Kithira	2.08	141	*e*PN	Pn	23 33 56.0	+2.3
STON	Ston	5.71	331	*e*Pn	Pn	23 34 42.0	-1.6
STON				Sn	Sn	23 35 45.2	-3.4
STON	Ston	5.71	331	*e*Pn	Pn	23 34 41.9	-1.6

*ISCJB **01** 23:46:18.5±0.6, 52°.22N±0°.09×170°.17E±0°.06, h10km, mb3.9/20, MS2.8/3, Error ellipse: s-maj=12.6km s-min=5.6km az=3.3*
*IDC **01** 23:46:18.4±0.9, 52°.17N×170°.28E, h0km, mb3.9/15, mb1 4.1/16, mb1mx4.0/27, mbtmp3.9/16, ML4.1/1, MS2.9/3, Ms1 2.9/3, ms1mx2.7/35, Error ellipse: s-maj=29.6km s-min=13.8km az=173.0*
*MOS **01** 23:46:18.6±0.9, 52°.20N×170°.19E, h13km, mb4.6/3, Error ellipse: s-maj=13.5km s-min=10.1km az=122.6*
*NEIC **01** 23:46:19.8±0.5, 52°.13N×170°.30E, h10km, mb4.3/5, Error ellipse: s-maj=15.8km s-min=5.2km az=171.0*
*KRSC **01** 23:46:22.2±2.3, 52°.24N×169°.64E, h15km±15km, ML4.3*
**ISC 01 23:

MKAR	**Makanchi Array**	53.97	302	P	P	23 55 43.8	-0.3
	comp=Z,0.3nm,0.6s,mb3.4,baz=57,slow=8.2,SNR=2.8						
BVAR	**Borovoye Array**	55.60	314	P	P	23 55 55.7	0.0
	comp=Z,1.8nm,0.7s,mb4.2,baz=62,slow=7.0,SNR=9.2						
BVAR	**Borovoye Array**	55.60	314	P	P	23 55 55.7	0.0
KKAR	**Karatay Array**	62.55	306	*e*P	P	23 56 43.3	-0.8
	comp=Z,0.5nm,0.6s,mb3.8						
CMAR	**Chiang Mai Arr**	64.20	267	P	P	23 56 55.1	-0.2
	comp=Z,0.8nm,0.4s,mb4.1,baz=28,slow=6.7,SNR=6.7						
TXAR	**Lajitas Array**	65.10	74	P	P	23 57 02.0	+0.9
	comp=Z,1.7nm,0.8s,mb4.1,baz=300,slow=3.7,SNR=16						
NOA	**NORSAR Array B**	65.81	349	P	P	23 57 05.7	+0.5
	comp=Z,1.3nm,0.8s,mb4.0,baz=16,slow=6.5,SNR=3.7						
AKASG	**Malin Array Be**	72.25	335	P	P	23 57 45.8	+0.5
	comp=Z,0.3nm,0.4s,mb3.5,baz=15,slow=3.8,SNR=3.5						
KHC	**Kasperske Hory**	77.06	345	*e*P	P	23 58 13.8	+0.6
ASAR	**Alice Springs**	82.00	213	P	P	23 58 39.5	-0.8
	comp=Z,0.7nm,0.8s,mb3.6,baz=23,slow=6.4,SNR=6.2						
STKA	**Stephens Creek**	87.46	204	LR	LR	00 34 58.9	
	comp=Z,479nm,21.2s,baz=110,slow=33						

BJI ***02*** *00:06:40.9, 5.°32S×101.°58E, h24km, mB5.0/28, mb5.0/51, Ms4.7/40, Ms7 4.5/35*
IDC ***02*** *00:06:45.2±0.5, 4.°44S×101.°52E, h0km, mb4.8/18, mb1 4.8/19, mb1mx4.7/23, mbtmp4.8/19, ML4.0/1, MS4.2/14, Ms1 4.2/14, ms1mx3.9/28, Error ellipse: s-maj=19.2km s-min=11.1km az=53.0*
ISCJB ***02*** *00:06:48.5±0.2, 4.°53S±0.°03×101.°44E±0.°03, h31km, mb5.0/95, MS4.3/34, Error ellipse: s-maj=5.3km s-min=3.0km az=36.5*
MOS ***02*** *00:06:49.1±0.9, 4.°38S×101.°55E, h33km, mb5.2/31, MS4.3/5, Error ellipse: s-maj=12.2km s-min=5.8km az=109.8*
DJA ***02*** *00:06:49, 4.°74S×101.°13E, h40km, mb5.2/30*
NEIC ***02*** *00:06:49.4±2.3, 4.°48S×101.°46E, h24km±15km, mb5.0/34, Error ellipse: s-maj=8.9km s-min=4.9km az=46.0*
ISC 02 00:06:50.8±0.2, **4.°53S**±0.°03×**101.°43E**±0.°03, **h34**km, **h34**km±1.8km; **pP-P, n296,** σ0.98/270, **mb5.0**/95, **MS4.3**/34, **17C-11D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	1.45	53	P	Pn	00 07 15.5	+0.8
MNAI	**Manna**	1.53	84	P	Pn	00 07 16.6	+0.8
KRJI	**Kerinci**	2.42	1	P	Pn	00 07 30.0	+2.0
LWLI	**Liwa**	2.66	101	P	Pn	00 07 31.9	+0.5
MDSI	**Maura Dua**	2.74	89	P	Pn	00 07 33.5	+1.1
KLSI		3.29	93	P	Pn	00 07 41.4	+1.4
KLI	**Kotabumi**	3.43	96	P	Pn	00 07 44.7	+2.8
SDSI	**Sungai Dareh**	3.57	360	P	Pn	00 07 44.0	+0.1
PDSI	**Padang**	3.72	345	P	Pn	00 07 45.9	0.0
BLSI	**Bandar Lampung**	3.89	103	P	Pn	00 07 55.3	+7.0
SISI	**Saibi**	3.95	324	P	Pn	00 07 48.5	-0.5
PPI	**Padang Panjang**	4.17	346	P	Pn	00 07 52.1	-0.1
RGRI	**Rengat**	4.25	12	P	Pn	00 07 54.4	+1.2
CGJI	**Cibinong**	4.72	116	P	Pn	00 07 58.7	-1.0
BKNI	**Bangkinang**	4.84	355	P	Pn	00 08 00.8	-0.5
	3.4nm5μm533nm,0.9s						
MNSI	**Mandailing Nat**	5.60	341	P	Pn	00 08 11.0	-0.8
	0.7nm2μm120nm,0.9s						
SKJI	**Sukabumi**	5.66	116	P	Px	00 08 26.2	
DBJI	**Dramaga**	5.66	111	P	Pn	00 08 13.5	+0.8
	2.0nm5μm628nm,1.2s						
CBJI	**Citeko**	5.71	109	P	Pn	00 08 16.1	+2.8
	6.0nm2μm,1.1s						
LEM	**Lembang**	6.57	111	P	Pn	00 08 26.0	+0.9
	1.3nm4μm374nm,1.0s						
MYKOM	**Kota Tinggi**	6.72	21	P	Pn	00 08 27.5	+0.3
	0.8nm1μm134nm,0.9s						
KGM	**Kluang**	6.77	16	P	Pn	00 08 29.1	+1.3
CISI	**Cisompet, Garu**	7.03	116	P	Pn	00 08 30.0	-1.4
	1.6nm4μm483nm,0.9s						
PSI	**Prapat**	7.70	341	Pn	Pn	00 08 38.0	-2.6
	2.1nm,0.3s,baz=148,slow=11,SNR=17						
PSI	**Prapat**	7.70	341	Pn	Pn	00 08 38.0	-2.6
FRIM	**Kepong**	7.71	1	P	Pn	00 08 41.5	+0.6
BJII	**Banjamegara**	8.69	109	P	Pn	00 08 54.8	+0.5
	62nm,1.2s						
TPTI		8.82	331	P	Pn	00 08 56.9	+0.8
	1.2nm4μm336nm,0.6s						
COCO	**West Island**	8.87	211	*e*P	Pn	00 08 52.8	-3.8
IPM	**Ipoh**	8.96	357	P	Pn	00 08 59.5	+1.6
IPM	**Ipoh**	8.96	357	*e*Pn	Pn	00 08 58.3	+0.4
	49nm,0.9s						
IPM	**Ipoh**	8.96	357	P	Pn	00 08 59.5	+1.6
	618nm52nm,1.0s						
SMRI	**Semarang**	9.31	106	P	Pn	00 09 03.3	+0.6
	185nm,1.0s						
UGM	**Wanagama**	9.64	111	P	Pn	00 09 07.1	-0.2
	255nm,1.9s						
PCJI	**Pacitan**	10.35	111	P	Pn	00 09 15.9	-1.1
	119nm,1.6s						
NGJI	**Ngawi**	10.37	106	P	Px	00 09 27.4	
	161nm,1.8s						
PBKI	**Pangkalan Bun**	10.38	80	P	Pn	00 09 22.0	+4.6
	186nm,0.9s						
KSM	**Kuching**	10.69	56	*e*Pn	Pn	00 09 20.0	-1.6
KSM				*e*Sn	Sn	00 11 19.2	-1.0
SJI	**Sawahan**	10.76	108	P	Pn	00 09 23.6	+1.0
	127nm,0.9s						
PWJI	**Pagerwojo**	10.88	109	P	Pn	00 09 22.9	-1.4
	89nm,1.0s						
STKI	**Sintang**	11.03	66	P	Pn	00 09 35.0	+8.7
	51nm,0.8s						
SNG	**Songkhla**	11.65	356	P	Pn	00 09 33.0	-1.9
	120nm,0.7s						
SBUM	**Sibu**	12.82	57	P	Pn	00 09 54.7	+3.9
	66nm,0.9s						
KBKI	**Kotabaru**	14.75	86	P	Pn	00 10 18.4	+1.2
KKM	**Kota Kinabalu**	18.12	55	P	Pn	00 11 01.0	+1.0
KKM	**Kota Kinabalu**	18.12	55	*e*P	Pn	00 11 00.8	+0.8
	150nm,1.4s						
KKM	**Kota Kinabalu**	18.12	55	P	Pn	00 11 00.8	+0.8
	1μm73nm,1.1s						
SPSI	**Sidrap Palu**	18.30	89	P	Pn	00 11 01.6	-0.6
	936nm61nm,1.0s						
TTSI	**Tana Toraja**	18.41	86	P	Pn	00 11 04.0	+0.4
	61nm,1.0s						
TSM	**Tawau**	18.62	62	P	Pn	00 11 06.7	+0.7
BKSI	**Bulukumba**	18.64	93	P	Pn	00 11 05.0	-1.4
	796nm53nm,1.0s						
SDKM	**Sandakan**	18.70	57	P	Pn	00 11 07.9	+0.7
KDM	**Kudat**	19.12	54	P	Pn	00 11 12.5	+0.3
MYLDM	**Lahad Datu**	19.59	61	P	Pn	00 11 18.2	+0.4
	1μm119nm,1.1s						
MRSI	**Marisa**	21.09	77	P	P	00 11 32.4	-0.1
	1μm179nm,1.0s,mb5.3						
KDI	**Kendari**	21.14	89	P	P	00 11 32.9	-0.2
	1μm69nm,1.1s,mb4.9						
LUWI	**Luwuk**	21.59	81	P	P	00 11 38.8	+0.8
	1μm158nm,1.0s,mb5.4						
BDT	**Bhumibol Dam**	21.77	354	P	P	00 11 38.0	-1.7
	16nm,1.0s,mb4.4						
CM31	**Chiang Mai Arr**	22.97	354	*e*P	P	00 11 52.1	-0.5
	29nm,0.7s,mb4.8						
CMAR	**Chiang Mai Arr**	22.97	354	P	P	00 11 50.9	-1.7
	39nm,0.8s,mb4.9,baz=185,slow=8.4,SNR=92						
CMAR				PcP	PcP	00 15 40.5	-1.6
	1.4nm,0.4s,baz=157,slow=4.8,SNR=5.5						
CMAR				LR	LR	00 22 02.5	
	comp=Z,771nm,19.1s,MS4.2,baz=188,slow=40						
CMAR	**Chiang Mai Arr**	22.97	354	P	P	00 11 50.9	-1.7
CMAR						00 15 40.5	
CHG	**Chiang Mai**	23.32	354	⇑P	P	00 11 55.2	-1.1
	29nm,0.9s,mb4.7						
CHTO	**Chiang Mai**	23.32	354	*e*P	P	00 11 55.2	-1.1
CHTO				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.6						
CHTO	**Chiang Mai**	23.32	354	*e*P	P	00 11 55.2	-1.1
	comp=Z,24nm,0.9s,mb4.6						
CHTO	**Chiang Mai**	23.32	354	P	P	00 11 55.3	-1.0
	comp=Z,346nmcomp=Z,34nm,1.1s,mb4.7						
PALK	**Pallekele**	23.78	299	*e*P	P	00 12 00.7	+0.1
MBWA	**Marble Bar**	24.27	135	*e*P	P	00 12 04.3	-0.8
QIZ	**Qiongzhong**	24.83	19	P	P	00 12 10.0	-0.1
QIZ				pP		00 12 20.3	
QIZ				sP	sP	00 12 24.1	+0.2
QIZ				S	S	00 16 35.0	+4.1
QIZ				sS	sS	00 16 48.4	+1.6
QIZ				pmax	pmax		
	comp=Z,32nm,1.4s,mb4.7						
QIZ				pmax	pmax		
	comp=Z,140nm,6.5s						
QIZ				LR	LR		
	comp=N,290nm,19.1s						
QIZ				LR	LR		
	comp=Z,430nm,22.9s,MS3.9						
QIZ	**Qiongzhong**	24.83	19	*e*P	P	00 12 10.4	+0.2
	comp=Z,58nm,1.3s,mb5.0						
TGY	**Tagaytay City**	26.78	46	P	P	00 12 27.7	-0.2
	comp=Z,88nm,0.3s,mb5.7,baz=138,slow=16,SNR=2.3						
FITZ	**Fitzroy Crossi**	27.25	122	P	P	00 12 31.6	-0.5
	comp=Z,19nm,0.9s,mb4.6,baz=298,slow=5.2,SNR=31						
FITZ				LR	LR	00 22 59.3	
	comp=Z,557nm,19.9s,MS4.1,baz=311,slow=36						
FITZ	**Fitzroy Crossi**	27.25	122	*e*P	P	00 12 31.2	-0.9
	comp=Z,29nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	27.25	122	*e*P	P	00 12 31.5	-0.6
	comp=Z,24nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	27.25	122	P	P	00 12 31.3	-0.8
	comp=Z,58nm,1.0s,mb5.0						
KNA	**Kununurra**	29.08	115	P	P	00 12 47.4	-1.1
KMI	**Kunming**	29.50	2	P	P	00 12 53.3	+1.3
KMI				pP	pP	00 13 03.0	+1.2
KMI				S	S	00 17 45.9	+1.4
KMI				sS	sS	00 18 02.5	+2.0
KMI				SS	SS	00 19 24.3	-26
KMI				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.0						
KMI				LR	LR		
	comp=N,420nm,17.6s,MS4.3						
KMI				LR	LR		
	comp=E,510nm,16.1s,MS4.3						
KMI				LR	LR		
	comp=Z,510nm,20.9s,MS4.1						
GYA	**Guiyang**	31.22	9	⇑*i*P	P	00 13 06.9	-0.3
GYA				pP	pP	00 13 20.6	+3.7
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
KAKA	**Kakadu**	31.69	107	*e*P	P	00 13 08.4	-3.2
	comp=Z,21nm,0.9s,mb5.0						
KAKA	**Kakadu**	31.69	107	*e*P	P	00 13 09.8	-1.8
ODAN	**Odare**	34.03	337	*e*P	P	00 13 32.8	+1.0
	comp=Z,88nm,0.9s,mb5.7						
TAPN	**Taplejung**	34.35	338	*e*P	P	00 13 36.0	+1.4
	comp=Z,127nm,1.0s,mb5.8						
RAMN	**Ramite**	34.42	336	*e*P	P	00 13 36.9	+1.7
	comp=Z,55nm,0.8s,mb5.5						
YHNB	**Yeheng**	34.91	33	P	P	00 13 39.3	-0.2
CD2	**Chengdu**	35.31	3	*e*P	P	00 13 45.2	+2.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,20nm,5.2s						
LSA	**Lhasa**	35.43	344	P	P	00 13 44.6	+0.7
LSA				S	S	00 19 17.0	+0.3
LSA				LR	LR		
	comp=N,170nm,27.1s,MS3.9						
LSA				LR	LR		
	comp=E,220nm,30.5s,MS3.9						
LSA				LR	LR		
	comp=Z,300nm,26.2s,MS3.9						
LSA	**Lhasa**	35.43	344	*e*P	P	00 13 44.5	+0.6
LSA				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
LSA	**Lhasa**	35.43	344	*e*P	P	00 13 44.5	+0.6
	comp=Z,16nm,0.8s,mb5.0						
ENH	**Enshi**	35.45	12	*e*P	P	00 13 43.3	-0.7
	comp=Z,16nm,0.6s,mb5.1						
PKI	**Pulchoki**	35.46	335	*e*P	P	00 13 45.0	+0.8
	comp=Z,26nm,0.8s,mb5.2						
PKIN	**Phulchoki**	35.47	335	*e*P	P	00 13 45.7	+1.4
	comp=Z,34nm,0.8s,mb5.4						
GUN	**Gumba**	35.57	336	*e*P	P	00 13 46.5	+1.4
	comp=Z,108nm,0.7s,mb5.9						
DMN	**Daman**	35.62	335	*e*P	P	00 13 46.5	+0.9
	comp=Z,46nm,0.8s,mb5.5						
GKN	**Gorkha**	36.17	334	*e*P	P	00 13 51.0	+0.8
	comp=Z,139nm,1.1s,mb5.8						
KOLN	**Koldanda**	36.43	333	*e*P	P	00 13 53.5	+1.0
	comp=Z,52nm,0.8s,mb5.5						
ASAR	**Alice Springs**	36.64	124	P	P	00 13 53.8	-0.6
	comp=Z,7.0nm,0.9s,mb4.5,baz=302,slow=7.8,SNR=48						
ASAR				S	S	00 19 35.4	0.0
	comp=Z,1.5nm,1.1s,baz=293,slow=14,SNR=4.1						
DANN	**Dangsing**	36.85	334	*e*P	P	00 13 57.1	+1.0
	comp=Z,158nm,1.0s,mb5.8						
WHN	**Wuhan**	37.00	19	P	P	00 13 55.3	-2.0
WHN				LR	LR		
	comp=N,2μm,23.2s						
WHN				LR	LR		
	comp=E,970nm,14.5s						
WHN				LR	LR		
	comp=Z,1μm,19.3s,MS4.6						
XAN	**Xi'an**	39.01	10	P	P	00 14 12.9	-1.3
XAN				pP	pP	00 14 23.0	-1.0
XAN				sP	sP	00 14 26.6	-1.5
XAN				PP	PP	00 15 45.7	+1.6
XAN				ScS	ScS	00 24 18.8	-2.5
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
XAN				LR	LR		
	comp=N,360nm,17.2s,MS4.2						
XAN				LR	LR		
	comp=E,68nm,18.4s,MS4.2						
XAN				LR	LR		
	comp=Z,200nm,15.0s,MS4.1						
NJ2	**Nanjing**	39.98	23	*e*P	P	00 14 24.2	+1.9
NJ2				pP	pP	00 14 34.0	+1.8
NJ2				PP	PP	00 16 01.0	+6.3
NJ2				S	S	00 20 31.0	+5.4
NJ2				sS	sS	00 20 47.0	+5.1
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,160nm,4.7s						
NJ2				LR	LR		
	comp=N,450nm,15.1s,MS4.5						
NJ2				LR	LR		
	comp=E,350nm,19.8s,MS4.5						
SSE	**Sheshan**	40.13	27	P	P	00 14 21.2	-2.4
SSE				S	S	00 20 26.9	-1.1
SSE				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
SSE				pmax	pmax		
	comp=Z,150nm,4.2s						
SSE				LR	LR		
	comp=N,250nm,16.2s,MS4.3						
SSE				LR	LR		
	comp=E,260nm,16.2s,MS4.3						
SSE				LR	LR		
	comp=Z,300nm,14.6s,MS4.3						
LZH	**Lanzhou**	40.46	3	*e*P	P	00 14 26.2	-0.1
LZH				*e*S	S	00 20 34.2	+1.4
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.1						
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
LZH				LR	LR		
	comp=N,570nm,16.7s,MS4.7						
LZH				LR	LR		
	comp=E,570nm,14.0s,MS4.7						
LZH				LR	LR		
	comp=Z,820nm,17.9s,MS4.6						
GTA	**Gaotai**	43.74	358	P	P	00 14 53.2	+0.2
GTA				pP	pP	00 15 02.6	-0.4
GTA				sP	sP	00 15 06.9	-0.1
GTA				S	S	00 21 18.7	-2.4
GTA				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.9						
GTA				pmax	pmax		
	comp=Z,110nm,6.9s						
GTA				LR	LR		
	comp=N,560nm,19.8s,MS4.6						
GTA				LR	LR		
	comp=E,440nm,19.8s,MS4.6						
GTA				LR	LR		
	comp=Z,740nm,20.1s,MS4.6						
PMG	**Port Moresby**	45.62	99	*e*P	P	00 15 07.7	-0.7
PMG				pmax	pmax		
	comp=Z,33nm,1.2s						
PMG	**Port Moresby**	45.62	99	*e*P	P	00 15 08.1	-0.3
	comp=Z,596nm,0.9s						
HHC	**Hu-ho-hao-te**	46.10	11	⇑P	P	00 15 12.5	+0.8
HHC				pP	pP	00 15 22.4	+0.7
HHC				sP	sP	00 15 26.4	+0.6
HHC				PcP	PcP	00 16 48.4	+0.8
HHC				PP	PP	00 17 00.6	+0.3
HHC				ScP	ScP	00 20 36.9	-1.6
HHC				S	S	00 21 57.1	+1.9
HHC				sS	sS	00 22 13.6	+1.9
HHC				ScS	ScS	00 25 01.7	-3.1
HHC				SS	SS	00 25 14.7	-6.2
HHC				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.2						
HHC				pmax	pmax		
	comp=Z,170nm,5.5s						
HHC				LR	LR		
	comp=N,370nm,13.3s,MS4.6						
HHC				LR	LR		
	comp=E,260nm,12.5s,MS4.6						
HHC				LR	LR		
	comp=Z,330nm,17.9s						
CTA	**Charters Tower**	46.26	114	*e*P	P	00 15 13.0	-0.4
	comp=Z,21nm,0.9s,mb5.1						
CTAO	**Charters Tower**	46.26	114	*e*P	P	00 15 13.3	-0.1
CTAO				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
CTAO	**Charters Tower**	46.26	114	*e*P	P	00 15 13.3	-0.1
	comp=Z,36nm,1.0s,mb5.3						
BJT	**Baijiatuau**	46.35	16	*e*P	P	00 15 13.9	+0.2
BJT				pmax	pmax		
	comp=Z,57nm,0.6s						
BJT	**Baijiatuau**	46.35	16	*e*P	P	00 15 13.9	+0.2
	comp=Z,57nm,0.6s,mb5.7						
BJI	**Beijing**	46.38	16	P	P	00 15 13.8	-0.1
BJI				S	S	00 22 03.4	+4.2
BJI				pmax	pmax		
	comp=Z,74nm,0.7s,mb5.7						
BJI				pmax	pmax		
	comp=Z,120nm,3.8s						
BJI				LR	LR		
	comp=N,400nm,17.8s,MS4.6						
BJI				LR	LR		
	comp=E,370nm,14.5s,MS4.6						
BJI				LR	LR		
	comp=Z,270nm,21.2s						
STKA	**Stephens Creek**	46.42	131	P	P	00 15 14.2	-0.3
	comp=Z,6.7nm,0.8s,mb4.6,baz=318,slow=7.5,SNR=10.0						
STKA	**Stephens Creek**	46.42	131	*e*P	P	00 15 14.6	+0.1
	comp=Z,6.5nm,0.7s,mb4.7						
STKA	**Stephens Creek**	46.42	131	*e*P	P	00 15 14.8	+0.4
KSRS	**Korea Array**	48.50	28	P	P	00 15 30.1	-0.3
	comp=Z,18nm,0.9s,mb5.1,baz=214,slow=8.0,SNR=29						
KBL	**Kabul**	49.41	324	*e*P	P	00 15 37.5	0.0
KBL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
KBL	**Kabul**	49.41	324	*e*P	P	00 15 37.5	+0.1
	comp=Z,8.4nm,1.1s,mb4.7						
WMQ	**Urumqi**	49.69	347	P	P	00 15 40.0	+0.5
WMQ				pP	pP	00 15 50.0	+0.4
WMQ				sP	sP	00 15 54.0	+0.4
WMQ				PP	PP	00 17 35.0	+0.7
WMQ				S	S	00 22 45.0	-1.1
WMQ				ScS	ScS	00 25 26.0	-2.5
WMQ				pmax	pmax		
	comp=Z,76nm,1.0s,mb5.7						
WMQ				pmax	pmax		
	comp=Z,200nm,5.0s						
WMQ				LR	LR		
	comp=N,150nm,16.0s,MS4.3						
WMQ				LR	LR		
	comp=E,180nm,17.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,170nm,16.0s,MS4.1						
KSH	**Kashi**	49.72	334	*e*P	P	00 15 38.6	-1.1
KSH				*e*pP	pP	00 15 48.7	-1.1
KSH				*e*sP	sP	00 15 52.6	-1.2
KSH				*e*PcP	PcP	00 17 02.0	+1.5
KSH				*e*PP	PP	00 17 32.9	-1.7
KSH				*e*ScP	ScP	00 20 53.2	-0.6
KSH				*e*PcS	PcS	00 20 57.0	-0.3
KSH				*e*S	S	00 22 41.7	-4.8
KSH				*e*ScS	ScS	00 25 25.2	-3.7
KSH				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
KSH				LR	LR		
	comp=N,260nm,4.8s						
KSH				LR	LR		
	comp=E,220nm,5.2s						
KSH				LR	LR		
	comp=Z,330nm,5.7s						
CBIJ	**Chichi jima**	50.38	49	LR	LR	00 36 13.6	
	comp=Z,181nm,21.3s,MS4.1,baz=318,slow=35						
EIDS	**Eidsvold**	51.88	119	*e*P	P	00 15 57.0	+0.6
	comp=Z,13nm,1.0s,mb4.8						
ULHL	**Ulahol**	51.88	336	P	P	00 15 56.5	+0.5
	SNR=21						
SONM	**Songino Array**	52.32	4	P	P	00 15 59.9	+0.7
	comp=Z,50nm,0.8s,mb5.5,baz=184,slow=8.6,SNR=227						
SONM				LR	LR	00 40 32.5	
	comp=Z,330nm,20.7s,MS4.4,baz=326,slow=39						
ULN	**Ulaanbaatar**	52.40	5	*e*P	P	00 16 00.5	+0.7
ULN				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	52.40	5	*e*P	P	00 16 00.5	+0.8
	comp=Z,37nm,0.9s,mb5.3						
UCH	**Uchtor**	52.57	335	*e*P	P	00 16 01.4	+0.2
TKM2	**Tokmak 2**	52.70	336	P	P	00 16 02.5	+0.5
	SNR=46						
TKM2	**Tokmak 2**	52.70	336	*e*P	P	00 16 02.2	+0.1
TKM2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
TKM2	**Tokmak 2**	52.70	336	*e*P	P	00 16 02.2	+0.1
	comp=Z,30nm,0.8s,mb5.3						
KBK	**Karagaybulak**	52.75	336	P	P	00 16 03.4	+1.0
	SNR=10						
CN2	**Changchun**	52.75	22	*e*P	P	00 16 01.3	-1.1
CN2				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.3						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,19.0s,MS4.5						
CN2				LR	LR		
	comp=E,200nm,19.0s,MS4.5						
CN2				LR	LR		
	comp=Z,400nm,19.0s,MS4.5						
AML	**Almayashu**	52.85	334	P	P	00 16 03.9	+0.7
	SNR=23						
AML	**Almayashu**	52.85	334	*e*P	P	00 16 03.6	+0.4
	comp=Z,15nm,0.8s,mb5.0						
AAK	**Ala-Archa**	52.92	335	*c*e*P	P	00 16 04.2	+0.5
AAK				pmax	pmax		
	comp=Z,13nm,2.5s,mb4.4						
AAK	**Ala-Archa**	52.92	335	*e*P	P	00 16 03.9	+0.2
	comp=Z,8.6nm,0.9s,mb4.7						
CHMS	**Chumysh**	53.11	336	P	P	00 16 05.1	0.0
	SNR=7.8						
EKS2	**Erkin-Say**	53.24	335	P	P	00 16 06.8	+0.8
	SNR=34						
EKS2	**Erkin-Say**	53.24	335	*e*P	P	00 16 06.6	+0.5
	comp=Z,36nm,0.8s,mb5.3						
MAJO	**Matsushiro**	53.37	37	*e*P	P	00 16 05.5	-1.7
MAJO				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
MAJO	**Matsushiro**	53.37	37	*e*P	P	00 16 05.5	-1.7
	comp=Z,20nm,0.8s,m

KKAR pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KKAR Karatay Array 55.04 333 *eP* **P 00 16 18.0 -1.2**
comp=Z,4.3nm,0.7s,mb4.6
KKAR PcP PcP 00 17 19.8 -0.7
MDJ Mudanjiang 55.05 24 P **P 00 16 18.4 -0.8**
MDJ pP pP 00 16 30.3 +0.8
MDJ sP sP 00 16 34.1 +0.7
MDJ PP PP 00 18 24.4 +1.6
MDJ S **S 00 23 59.8 +0.4**
MDJ ScS ScS 00 26 03.3 -2.6
MDJ pmax pmax
comp=Z,12nm,0.9s,mb4.9
MDJ pmax pmax
comp=Z,56nm,5.0s
MDJ LR LR
comp=N,150nm,16.4s,MS4.3
MDJ LR LR
comp=E,160nm,15.5s,MS4.3
MDJ LR LR
comp=Z,230nm,18.1s,MS4.3
MDJ Mudanjiang 55.05 24 *eP* **P 00 16 18.7 -0.5**
HIA Hailar 55.89 14 *eP* **P 00 16 24.4 -0.8**
HIA pmax pmax
comp=Z,17nm,0.8s
HIA Hailar 55.89 14 *eP* **P 00 16 24.4 -0.8**
comp=Z,17nm,0.8s,mb5.1
MOY Mondy 55.98 360 *eP* **P 00 16 26.2 +0.5**
MOY pmax pmax
comp=Z,25nm,2.2s,mb4.9
TLY Talaya 56.02 2 *eP* **P 00 16 25.8 -0.3**
TLY *eS* **S 00 24 02.9 -9.2**
TLY pmax pmax
comp=Z,30nm,0.9s,mb5.3
TLY MLR MLR
comp=Z,279nm,17.0s,MS4.4
TLY Talaya 56.02 2 *eP* **P 00 16 26.4 +0.4**
comp=Z,31nm,0.9s,mb5.3
TLY Talaya 56.02 2 P **P 00 16 27.9 +1.8**
comp=Z,203nm,0.8s,mb6.2,SNR=6.0
IRK Irkutsk 56.60 2 *eP* **P 00 16 30.2 0.0**
IRK pmax pmax
comp=Z,45nm,2.4s,mb5.1
CIT Chita 57.27 9 *eP* **P 00 16 34.9 0.0**
KURK Kurchatov 58.42 343 *eP* **P 00 16 42.8 -0.2**
KURK pmax pmax
comp=Z,23nm,1.0s,mb5.2
KURK Kurchatov 58.42 343 *eP* **P 00 16 42.7 -0.3**
comp=Z,19nm,0.9s,mb5.1
KLR Kul'dur 59.67 23 *eP* **P 00 16 47.0 -4.7**
KLR pmax pmax
comp=Z,50nm,1.6s,mb5.3
ZALV Zalesovo Beam 59.90 349 P **P 00 16 52.6 -0.6**
comp=Z,35nm,0.8s,mb5.4,baz=170,slow=5.1,SNR=137
ZALV S **S 00 25 00.0 -2.8**
comp=Z,0.9nm,0.6s,baz=161,slow=14,SNR=4.9
ZALV LR LR 00 46 38.7
comp=Z,107nm,21.0s,MS4.0,baz=71,slow=40
ZALV Zalesovo Beam 59.90 349 P **P 00 16 52.7 -0.5**
ZALV S **S 00 25 00.0 -2.8**
ATD Arta Tunnel 60.41 286 LR LR 00 37 12.0
comp=Z,79nm,21.6s,MS3.8,baz=280,slow=30
ASAJ Asahikawa 60.91 33 *eP* **P 00 16 59.4 -1.0**
comp=Z,5.4nm,0.8s,mb4.7
NVS Novosibirsk 61.06 348⇓*iP* **P 00 17 00.2 -0.9**
NVS *eS* **S 00 25 13.6 -4.0**
NVS pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
NVS pmax pmax
comp=N,4.0nm,1.0s
NVS pmax pmax
comp=E,3.0nm,1.0s
NVS smax
comp=N,6.0nm,1.8s
NVS smax
comp=E,7.0nm,1.7s
YUK Yuzh-Kuril'sk 62.67 35⇑*iP* **P 00 17 04.9 -7.3**
YUK MLR MLR
comp=E,724nm,16.7s
YUK MLR MLR
comp=Z,189nm,16.7s,MS4.3
YSS Yuzh-Sakhalins 62.89 31⇓*iP* **P 00 17 13.0 -0.6**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 62.89 31 *eP* **P 00 17 13.3 -0.2**
comp=Z,45nm,0.8s,mb5.7
BRVK Borovoye 63.10 340 *eP* **P 00 17 14.1 -0.7**
BRVK pmax pmax
comp=Z,20nm,1.2s,mb5.1
BRVK Borovoye 63.10 340 *eP* **P 00 17 13.9 -0.9**
comp=Z,14nm,0.9s,mb5.1
AB31 Akbulak array 64.53 331 *iP* **P 00 17 23.4 -0.9**
AB31 pmax pmax
comp=Z,44nm,0.9s,mb5.5
ABKAR Akbulak array 64.53 331 *eP* **P 00 17 23.7 -0.6**
comp=Z,34nm,0.8s,mb5.4
MCQ Macquarie Isla 67.92 148 *eP* **P 00 17 46.2 +0.1**
comp=Z,22μm,1.0s
MAW Mawson 68.21 195 P **P 00 17 47.7 0.0**
comp=Z,6.7nm,0.5s,mb4.9,baz=105,slow=9.2,SNR=37
MAW LR LR 00 42 01.6
comp=Z,423nm,19.3s,MS4.7,baz=202,slow=31
MAW Mawson 68.21 195 *eP* **P 00 17 47.5 -0.1**
MAW pmax pmax
comp=Z,1.0nm,0.5s
MAW Mawson 68.21 195 *eP* **P 00 17 47.5 -0.2**
comp=Z,1.4nm,0.5s,mb4.2
MAW LR LR 00 42 01.6
GNI Garni 68.33 316 *eP* **P 00 17 48.7 -0.2**
GNI pmax pmax
comp=Z,8.0nm,1.0s
SVE Sverdlovsk 69.55 337⇓*eP* **P 00 17 56.2 +0.1**
SVE *e*SSS 00 34 27.5
SVE pmax pmax
comp=Z,49nm,0.9s,mb5.4
SVE MLR MLR
comp=Z,336nm,21.0s,MS4.6
YAK Yakutsk 69.83 14 *eP* **P 00 17 55.4 -2.3**
YAK pmax pmax
comp=Z,34nm,1.0s,mb5.2
YAK pmax pmax
comp=N,9.0nm,1.0s
ZEI Tsey 70.06 319 *eP* **P 00 17 59.7 +0.2**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
ARU Arti 70.08 336*c iP* **P 00 17 58.9 -0.4**
ARU *e* 00 20 31.7
ARU S S 00 27 08.0 +0.2
ARU SS SS 00 31 39.6 +1.6
ARU pmax pmax
comp=Z,31nm,1.0s,mb5.2
ARU Arti 70.08 336 *eP* **P 00 17 58.8 -0.6**
comp=Z,25nm,0.9s,mb5.1
ARU Arti 70.08 336 P **P 00 17 58.3 -1.0**
comp=Z,162nm,0.8s,mb6.0,SNR=6.4
ASF Jabal al Asfar 71.22 306 P **P 00 18 06.9 +0.1**
comp=Z,4.1nm,0.8s,mb4.4,baz=337,slow=3.2,SNR=9.2
KIV Kislovodsk 71.38 319 *eP* **P 00 18 07.6 +0.1**
KIV *i* 00 18 25.5
KIV *i*S S 00 27 29.0 +5.6
KIV pmax pmax
comp=Z,11nm,1.2s,mb4.7
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.1
KIV Kislovodsk 71.38 319 *eP* **P 00 18 08.3 +0.7**
EIL Elat 72.08 303 P **P 00 18 12.3 +0.2**
comp=Z,4.1nm,0.8s,mb4.4,baz=264,slow=9.2,SNR=5.6
MALT Malatya 72.09 313 *eP* **P 00 18 12.3 +0.4**
MALT pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MALT Malatya 72.09 313 *eP* **P 00 18 12.2 +0.3**
comp=Z,5.8nm,1.0s,mb4.5
MMAI Mount Meron Ar 72.67 306 P **P 00 18 16.2 +0.6**
comp=Z,3.0nm,0.7s,mb4.3,baz=80,slow=9.4,SNR=5.9
PETK Petropavlovsk- 74.26 31 P **P 00 18 22.9 -1.5**
comp=Z,3.9nm,0.7s,mb4.4,baz=205,slow=5.7,SNR=5.2
VRHR Novokhopersk 75.21 326 *eP* **P 00 18 29.2 -0.8**
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VRHR pmax pmax
comp=N,10.0nm,0.6s
BOSA Boshof 75.71 242 LR LR 00 47 36.0
comp=N,322nm,20.3s,MS4.6,baz=125,slow=32
BR131 Keskin Array S 76.07 313 *eP* **P 00 18 34.6 -0.5**
BRTR Keskin Array B 76.07 313 P **P 00 18 34.5 -0.6**
comp=N,3.1nm,0.7s,mb4.3,baz=133,slow=6.6,SNR=19
BRTR Keskin Array B 76.07 313*cePP* **P 00 18 34.5 -0.7**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
VORD Divnogorie 76.47 325 *eP* **P 00 18 36.1 -1.1**
VORD pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,7.0nm,0.8s
VSR Storozhevoye 76.65 325 *eP* **P 00 18 37.0 -1.2**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,1.0s
SEY Seymchan 77.43 21 *eP* **P 00 18 42.3 0.0**
OBN Obninsk 79.68 328⇓*iP* **P 00 18 55.0 +0.1**
OBN *i* pP 00 19 03.3 -2.2
OBN *e* 00 21 57.2
OBN *e*S S 00 29 01.4 +6.6
OBN pmax pmax
comp=Z,26nm,1.1s,mb5.1
OBN MLR MLR
comp=Z,100nm,21.0s,MS4.1
SBA Scott Base 80.52 169 *eP* **P 00 19 00.6 +1.5**
KLMR Klimovskoe 80.71 334 *eP* **P 00 18 58.5 -1.8**
KLMR pmax pmax
comp=Z,34nm,1.3s,mb5.1
AKASG Malin Array Be 82.34 322 P **P 00 19 07.5 -1.7**
comp=Z,4.1nm,0.8s,mb4.4,baz=87,slow=5.0,SNR=12
VRI Vrincioaia 82.66 317⇓⇓P **P 00 19 11.6 +0.6**
VRI Vrincioaia 82.66 317⇓⇓*iP* **P 00 19 11.6 +0.6**
TSUM Tsumeb 82.73 251 LR LR 00 52 18.7
comp=Z,204nm,21.9s,MS4.5,baz=135,slow=33
TESR 82.88 318⇓*iP* **P 00 19 12.6 +0.5**
MLR Muntele Rosu 83.11 317⇓⇓P **P 00 19 14.1 +0.8**
MLR Muntele Rosu 83.11 317⇓⇓*iP* **P 00 19 14.1 +0.8**
BURAR Bucovina Array 84.09 319⇑⇑P **P 00 19 19.5 +1.2**
BURAR Bucovina Array 84.09 319⇑⇑*iP* **P 00 19 19.5 +1.2**
BUR08 Bucovina Ar. S 84.11 319 *eP* **P 00 19 19.2 +0.9**
VTS Vitosha 84.41 313⇑⇑P **P 00 19 20.0 0.0**
VTS Vitosha 84.41 313⇑⇑*iP* **P 00 19 20.0 0.0**
JOF Joensuu 85.10 334 *eP* **P 00 19 19.0 -4.0**
JOF Joensuu 85.10 334 *ep* **P 00 19 19.0 -4.0**
QSPA South Pole Qui 85.45 180 *eP* **P 00 19 25.3 +0.7**
BZS Buzias 86.11 316⇑⇑P **P 00 19 28.3 -0.1**
BZS Buzias 86.11 316⇑⇑*iP* **P 00 19 28.3 -0.1**
UZH Uzhgorod 86.22 319 *eP* **P 00 19 34.4 +5.5**
SUW Suwalki 86.76 325 *eP* **P 00 19 31.2 -0.2**
SUW Suwalki 86.76 325 *eP* **P 00 19 31.5 +0.1**
SUW pmax pmax
comp=Z,33nm,0.9s,mb5.6
SUW Suwalki 86.76 325 *eP* **P 00 19 31.5 +0.1**
comp=Z,33nm,0.9s,mb5.6
CRVS Cervenica-Dubn 86.81 319 *eP* **P 00 19 32.1 +0.3**
CRVS Cervenica-Dubn 86.81 319 *eP* **P 00 19 32.1 +0.3**
FINES FINESS Array B 87.00 332 P **P 00 19 32.1 -0.3**
comp=Z,4.0nm,0.8s,mb4.7,baz=104,slow=8.0,SNR=6.2
FINES LR LR 01 05 24.5
comp=Z,108nm,19.2s,MS4.3,baz=127,slow=40
STHS Stebnicka Huta 87.04 320 *eP* **P 00 19 32.9 0.0**
STHS *e* pP 00 19 43.5 -0.1
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
STHS Stebnicka Huta 87.04 320 *eP* **P 00 19 32.9 0.0**
comp=Z,4.4nm,0.9s,mb4.7
STHS *e* pP 00 19 43.5 -0.1
STHS Stebnicka Huta 87.04 320 *eP* **P 00 19 32.9 0.0**
STHS *ep*P pP 00 19 43.4 -0.2
KAF Kangasniemi 87.07 333 *eP* **P 00 19 30.6 -2.2**
KAF Kangasniemi 87.07 333 *ep* **P 00 19 30.6 -2.2**
KECS Kecovo 87.37 319 *eP* **P 00 19 34.8 +0.3**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
KECS Kecovo 87.37 319 *eP* **P 00 19 34.8 +0.3**
comp=Z,2.8nm,1.1s,mb4.4
KECS *e*PP pP 00 19 49.9 +4.6
KECS Kecovo 87.37 319 *eP* **P 00 19 34.8 +0.3**
KECS *ep*P pP 00 19 49.9 +4.6
PKSM Moragy 88.25 316⇑⇑P **P 00 19 39.1 +0.3**
PKSM Moragy 88.25 316⇑⇑*iP* **P 00 19 39.0 +0.2**
VYHS Vyhne 88.46 319 *eP* **P 00 19 39.9 +0.2**
VYHS *e* pP 00 19 48.9 -1.6
VYHS pmax pmax
comp=Z,3.0nm,1.5s,mb4.3
VYHS Vyhne 88.46 319 *eP* **P 00 19 39.9 +0.2**
comp=Z,2.7nm,1.5s,mb4.3
VYHS *e* pP 00 19 48.9 -1.6
VYHS Vyhne 88.46 319 *eP* **P 00 19 39.9 +0.2**
VYHS *ep*P pP 00 19 48.9 -1.6
KOLL Kolacno 88.75 319 *eP* **P 00 19 42.1 +1.0**
KOLL *e* pP 00 19 50.4 -1.5
KOLL Kolacno 88.75 319 *eP* **P 00 19 42.1 +1.0**
KOLL *ep*P pP 00 19 50.4 -1.5
ARCES ARCESS Array B 89.32 340 P **P 00 19 43.2 -0.1**
comp=Z,7.8nm,0.8s,mb5.1,baz=104,slow=5.1,SNR=10
ARCES LR LR 01 04 06.6
comp=Z,222nm,18.1s,MS4.6,baz=59,slow=39
ARCES ARCESS Array B 89.32 340 P **P 00 19 43.2 -0.1**
ARCES LR LR 01 04 06.6
MORC Moravsky Berou 89.48 320 *eP* **P 00 19 45.4 +0.9**
MORC pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
MORC Moravsky Berou 89.48 320 *eP* **P 00 19 45.4 +0.9**
comp=Z,4.7nm,0.7s,mb4.9
MORC Moravsky Berou 89.48 320⇓⇓*iP* **P 00 19 45.1 +0.6**
GOLS Golise 90.31 316 *iP* **P 00 19 49.1 +0.7**
BOJS Bojanci 90.52 315 *iP* **P 00 19 49.2 -0.2**
BOJS *i* pP 00 19 58.3 -1.9
PERS Pernice 90.72 317 *iP* **P 00 19 51.2 +0.8**
PERS *i* pP 00 19 59.6 -1.5
SOKA Soboth 90.79 317⇑*iPcP* PcP 00 19 51.2 -0.5
comp=Z,6.7nm,1.0s
VISS Visnje 90.83 316 *iP* **P 00 19 50.9 0.0**
VISS *i* pP 00 20 03.0 +1.4
CLL Collm 92.51 321 *eP* **P 00 19 59.0 +0.4**
CLL *e*S S 00 31 04.0 +3.7
CLL Collm 92.51 321 *eP* **P 00 19 59.0 +0.4**
CLL *ep*P pP 00 20 06.0 -3.3
CLL *e*S S 00 31 04.0 +3.7
CLL *e*PS PS 00 32 10.0 -5.7
CLL *e*SSSS 00 44 12.0
CLL LmV 01 15 00.0
comp=Z,100nm,20.2s
NOA NORSAR Array B 94.03 331 LR LR 01 09 35.0
comp=Z,66nm,19.5s,MS4.1,baz=90,slow=40
KEST Kesra 94.31 305 LR LR 01 05 14.1
comp=Z,35nm,18.3s,MS3.9,baz=306,slow=37
RAR Rarotonga 96.55 112 LR LR 00 59 58.6
comp=Z,2μm,18.4s,MS5.6,baz=0.0,slow=33
HAWA Hanford 125.28 34 *e*PKPdf PKPdf 00 25 49.3 +1.0
MOD Modoc 127.41 39 *e*PKPdf PKPdf 00 25 54.1 +1.7
MSO Missoula 127.96 30 *e*PKPdf PKPdf 00 25 52.8 -0.6
DLMT Dillon 129.65 31 *e*PKPdf PKPdf 00 25 58.5 +1.9
BOZ Bozeman (W) 129.94 30 *e*PKIKP PKPdf 00 25 59.0 +1.8
NVAR Mina Array Bea 130.59 41 PKP PKPdf 00 25 59.4 +0.8
comp=Z,1.3nm,0.7s,baz=285,slow=2.0,SNR=3.6
NVAR SKPbc SKPbc 00 29 21.7 +1.8
comp=Z,1.4nm,0.8s,baz=289,slow=3.5,SNR=6.2
NVAR SKP 00 29 36.0
comp=Z,0.3nm,0.3s,baz=318,slow=1.2,SNR=4.5
RRI2 Red Ridge 131.70 32 *e*PKPdf PKPdf 00 26 02.7 +2.1
REDW Red Top Meadow 131.94 32 *e*PKPdf PKPdf 00 26 02.7 +1.6
GSC Goldstone 133.28 44 *e*PKIKP PKPdf 00 26 05.5 +1.7
MSU Marysvale 134.43 37 *e*PKIKP PKPdf 00 26 08.8 +2.9
SDCO Great Sand Dun 138.80 33 *e*PKPdf PKPdf 00 26 14.8 +0.8
ANMO Albuquerque 140.22 37 *e*PKIKP PKPdf 00 26 18.7 +2.0
GDL2 Guadalupe Moun 143.38 38 *e*PKPdf PKPdf 00 26 20.9 -1.5
ACSO Alum Creek Sta 144.23 6 *e*PKPdf PKPdf 00 26 21.6 -2.0
WMOK Wichita Mounta 144.58 29 *e*PKIKP PKPdf 00 26 22.3 -2.1
MVL Millersville 144.63 357 *e*PKPdf PKPdf 00 26 23.3 -1.1
CCM Cathedral Cave 144.68 17 *e*PKIKP PKPdf 00 26 22.4 -2.1
BLO Bloomington 144.77 11 *e*PKIKP PKPdf 00 26 23.2 -1.4
OLIL Olney 144.87 13 *e*PKPdf PKPdf 00 26 23.8 -1.0
FVM French Village 144.99 16 *e*PKIKP PKPdf 00 26 23.8 -1.2
MCWV Mont Chateau 145.01 2 *e*PKPab PKPab 00 26 24.4 0.0
SDMD Soldier's Deli 145.24 358 *e*PKPab PKPab 00 26 24.6 -0.5
SIUC Southern Illin 145.56 15 *e*PKPdf PKPdf 00 26 25.8 -0.2
USIN University of 145.70 13 *e*PKPdf PKPdf 00 26 26.4 +0.1
WCI Wyandotte Cave 145.72 11 *e*PKP2 PKPab 00 26 26.1 -0.9
TXAR Lajitas Array 145.74 41 PKPbc PKPbc 00 26 27.7 +0.7
comp=Z,17nm,0.8s,baz=285,slow=1.5,SNR=75
GNAR Gosnell 146.98 17 *e*PKPab PKPab 00 26 31.2 -0.7
JSRW J. Sargeant Re 146.98 359 *e*PKPab PKPbc 00 26 30.3 -0.1
MIAR Mount Ida 147.05 23 *e*PKP2 PKPbc 00 26 30.5 -0.2
UALR University of 147.31 21 *e*PKPab PKPbc 00 26 31.1 -0.4
JCT Junction City 147.33 35 *e*PKP2 PKPbc 00 26 30.1 -1.5
WVT Waverly 147.41 14 *e*PKP2 PKPbc 00 26 31.2 -0.5
SWET Sewanee 148.71 12 *e*PKPdf PKPbc 00 26 34.6 -0.6
CPCT Cooper Cave 148.74 9 *e*PKPab PKPbc 00 26 35.4 +0.2
NATX Nacogdoches 148.98 27 *e*PKPab PKPbc 00 26 36.8 +0.8

DJA 02 00:22:26, 0°.08S×123°.46E, h68km, MLv4.0/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.83**	**39**	P	Pn	00 22 43.8	+1.5
KMSI				S	Sn	00 22 57.5	+3.1
LUWI	**Luwuk**	**1.18**	**216**	P	Pn	00 22 46.6	-0.1
LUWI				S	Sn	00 23 02.0	-0.1
APSI	**Ampana**	**1.99**	**246**	P	Pn	00 22 58.6	+1.1
LBMI	**Labuha**	**4.08**	**98**	P	Pn	00 23 26.7	+0.8
SPSI	**Sidrap Palu**	**5.34**	**224**	P	Pn	00 23 44.2	+1.0

CASC 02 00:25:55.7±2.6, 8°.65N×83°.17W, h18km±7km, MD3.5, 1C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.01**	**9**⇑	*iP*	Pg	00 25 58.2	-0.6
ACR				*e*S	Sg	00 26 02.0	+1.1
CTCR	**Cotoan**	**0.47**	**59**⇓	*iP*	Pg	00 26 04.8	-0.5
CTCR				*e*S	Sg	00 26 13.2	+1.4
BRU2	**Volcan**	**0.49**	**73**	*e*S	Sg	00 26 14.7	+2.3
TBS2		**0.53**	**74**	*e*P	Pg	00 26 11.9	+5.6
TBS2				*e*S	Sg	00 26 20.6	+7.2
URSC	**Urasca**	**1.32**	**333**⇓	*iP*	Pn	00 26 18.1	-1.3
URSC				*e*S	Sn	00 26 39.8	+3.2
PRS1	**Puriscal**	**1.74**	**320**	*iP*	Pn	00 26 23.5	-1.6
PRS1				⇓*e*S	Sn	00 26 47.4	+0.5

WEL 02 00:27:22.6±0.4, 37°.95S×176°.15E, h164km±3km, ML3.5/12, Error ellipse: s-maj=4.7km s-min=4.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.82**	**113**	PN	Pn	00 27 47.3	-0.1
URZ				SN	Sn	00 28 06.4	+0.1
MWZ	**Matawai**	**1.15**	**110**	PN	Pn	00 27 50.2	+0.2
MWZ				SN	Sn	00 28 10.5	-0.5
RAHZ	**Arahi**	**1.22**	**143**	PN	Pn	00 27 51.2	+0.7
RAHZ				SN	Sn	00 28 13.0	+1.0
BKZ	**Black Stump Fm**	**1.25**	**168**	PN	Pn	00 27 51.0	+0.2
BKZ				SN	Sn	00 28 12.4	-0.1
WNVZ	**Wahianoa**	**1.45**	**197**	PN	Pn	00 27 53.3	+0.6
BHHZ	**Black Hill Sta**	**1.54**	**182**	PN	Pn	00 27 53.6	0.0
BHHZ				SN	Sn	00 28 16.5	-1.1
MCHZ	**McNeill Hill**	**1.56**	**164**	PN	Pn	00 27 54.1	+0.4
KNZ	**Kokohu**	**1.61**	**132**	PN	Pn	00 27 54.2	-0.1
PRGZ	**Paritu Road**	**1.68**	**126**	PN	Pn	00 27 54.9	-0.2
MHGZ	**Mahia Peninsul**	**1.83**	**132**	PN	Pn	00 27 56.6	0.0
CKHZ	**Cape Kidnapper**	**1.86**	**157**	PN	Pn	00 27 57.1	+0.1
KAHZ	**Kahuranaki**	**1.93**	**163**	PN	Pn	00 27 57.8	0.0
PNHZ	**Pukenui**	**1.96**	**179**	PN	Pn	00 27 57.6	-0.6
TSZ	**Takapari Road**	**2.11**	**184**	PN	Pn	00 27 59.1	-0.7
WPHZ	**Waipukurau**	**2.13**	**174**	PN	Pn	00 27 59.4	-0.6
PRHZ	**Porangahau**	**2.35**	**171**	PN	Pn	00 28 01.7	-0.9
DVHZ	**Dannevirke**	**2.35**	**180**	PN	Pn	00 28 01.4	-1.2
POWZ	**Post Office Ro**	**2.46**	**187**	PN	Pn	00 28 02.6	-1.3
BFZ	**Birch Farm**	**2.73**	**178**	PN	Pn	00 28 05.4	-1.7
MRZ	**Mangatainoka R**	**2.75**	**189**	PN	Pn	00 28 05.5	-1.8
TIWZ	**Tintock**	**2.83**	**184**	PN	Pn	00 28 06.6	-1.8
OGWZ	**Otaki Gorge**	**2.96**	**195**	PN	Pn	00 28 08.0	-2.0
HOWZ	**Holdsworth Sta**	**2.99**	**189**	PN	Pn	00 28 08.1	-2.2
KIW	**Kapiti Island**	**3.06**	**198**	PN	Pn	00 28 09.0	-2.3
MTW	**Mount Morrison**	**3.25**	**189**	PN	Pn	00 28 10.9	-2.7
MSWZ	**Moikau Station**	**3.53**	**191**	PN	Pn	00 28 14.1	-3.1
TCW	**Tory Channel**	**3.57**	**203**	PN	Pn	00 28 14.8	-2.8

ATH ***02*** *00:40:42.6, 37°.89N×21°.43E, h25km±1km, MD3.2/16*
NEIC ***02*** *00:40:42.6, 37°.89N×21°.43E, h25km, MD3.2(ATH), After ATH.*
ISCJB ***02*** *00:40:43.0±0.4, 37°.88N±0°.03×21°.42E±0°.03, h23km±4km, Error ellipse: s-maj=4.6km s-min=4.2km az=143.8*
CSEM ***02*** *00:40:43.0±0.2, 37°.88N×21°.41E, h20km, MD3.2, Error ellipse: s-maj=4.6km s-min=4.0km az=76.0*
THE ***02*** *00:40:43.1, 37°.88N×21°.44E, h17km±1km, ML2.6/7, Error ellipse: s-maj=1.7km s-min=0.9km az=337.0*

ISC 02 00:40:42.8±0.6, 37°.86N±0°.03×21°.42E±0°.03, h18km±4km, n64, σ0°.89/96, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.20**	**11**	*e*Pb	**Pg**	**00 40 47.9**	**+0.2**
RLS				*e*Sb	**Sg**	**00 40 51.6**	**+0.6**
RLS	**Riolos of Patr**	**0.20**	**11**	*e*PB	**Pg**	**00 40 47.9**	**+0.2**
RLS				*e*SB	**Sg**	**00 40 51.6**	**+0.6**
RLS	**Riolos of Patr**	**0.20**	**11**	*e*Pb	**Pg**	**00 40 47.9**	**+0.2**
RLS				*e*Sb	**Sg**	**00 40 51.6**	**+0.6**
UPR	**University Cam**	**0.51**	**34**	*e*PB	**Pb**	**00 40 52.7**	**-0.5**
UPR				*e*SB	**Sb**	**00 41 00.0**	**-0.3**
UPR	**University Cam**	**0.51**	**34**	P	**Pg**	**00 40 53.2**	**+0.2**
UPR				S	**Sg**	**00 41 00.8**	**+0.9**
UPR	**University Cam**	**0.51**	**34**	*e*Pb	**Pb**	**00 40 52.7**	**-0.5**
UPR	**University Cam**	**0.51**	**34**	P	**Pg**	**00 40 53.2**	**+0.2**
UPR				*e*Sb	**Sb**	**00 41 00.0**	**-0.3**
UPR				S	**Sg**	**00 41 00.8**	**+0.9**
KFL	**Anninata**	**0.56**	**296**	P	**Pg**	**00 40 53.9**	**0.0**
KFL	**Anninata**	**0.56**	**296**	P	**Pg**	**00 40 53.9**	**0.0**
LAKA	**Lakka**	**0.58**	**49**	P	**Pg**	**00 40 53.5**	**-0.8**
LAKA				S	**Sg**	**00 41 02.3**	**+0.2**
LAKA	**Lakka**	**0.58**	**49**	P	**Pg**	**00 40 53.5**	**-0.8**
LAKA				S	**Sg**	**00 41 02.3**	**+0.2**
EFP	**Efpalio**	**0.68**	**34**	*e*PN	**Pn**	**00 40 55.2**	**-2.4**
EFP				*e*SN	**Sb**	**00 41 05.0**	**-0.2**
EFP	**Efpalio**	**0.68**	**34**	P	**Pb**	**00 40 55.4**	**-0.8**
EFP				S	**Sb**	**00 41 05.9**	**+0.7**
EFP	**Efpalio**	**0.68**	**34**	P	**Pb**	**00 40 55.4**	**-0.8**
EFP				*e*Sn	**Sb**	**00 41 05.0**	**-0.2**
EFP				S	**Sb**	**00 41 05.9**	**+0.7**
TRIZ	**Trizonia**	**0.72**	**46**	P	**Pb**	**00 40 55.8**	**-1.0**
TRIZ				S	**Sb**	**00 41 05.8**	**-0.5**
TRIZ	**Trizonia**	**0.72**	**46**	P	**Pb**	**00 40 55.8**	**-1.0**
TRIZ				S	**Sb**	**00 41 05.8**	**-0.5**
VLS	**Valsamata**	**0.73**	**296**	*e*Pn	**Pb**	**00 40 56.4**	**-0.5**
VLS				*e*Sn	**Sn**	**00 41 08.3**	**-0.5**
VLS	**Valsamata**	**0.73**	**296**	*e*PN	**Pb**	**00 40 56.4**	**-0.5**
VLS				*e*SN	**Sn**	**00 41 08.3**	**-0.5**
VLS	**Valsamata**	**0.73**	**296**	P	**Pb**	**00 40 56.4**	**-0.5**
VLS				S	**Sb**	**00 41 08.4**	**+1.8**
VLS	**Valsamata**	**0.73**	**296**	P	**Pb**	**00 40 56.4**	**-0.5**
VLS				*e*Sn	**Sn**	**00 41 08.3**	**-0.5**
GUR	**Goura**	**0.73**	**84**	*e*PN	**Pn**	**00 40 56.8**	**-1.5**
GUR	**Goura**	**0.73**	**84**	P	**Pb**	**00 40 56.0**	**-1.0**
GUR				S	**Sb**	**00 41 06.8**	**+0.1**
GUR	**Goura**	**0.73**	**84**	P	**Pb**	**00 40 56.0**	**-1.0**
GUR	**Goura**	**0.73**	**84**	*e*Pn	**Pn**	**00 40 56.8**	**-1.5**
GUR				S	**Sb**	**00 41 06.8**	**+0.1**
KALE	**Kalithea**	**0.78**	**47**	P	**Pb**	**00 40 56.7**	**-1.0**
KALE				S	**Sb**	**00 41 09.0**	**+1.1**
KALE	**Kalithea**	**0.78**	**47**	P	**Pb**	**00 40 56.7**	**-1.0**
KALE				S	**Sb**	**00 41 09.0**	**+1.1**
ITM	**Ithomi**	**0.79**	**149**	*e*Pn	**Pn**	**00 40 58.2**	**-0.9**
ITM				*e*Sn	**Sn**	**00 41 10.3**	**-0.1**
ITM	**Ithomi**	**0.79**	**149**	*e*PN	**Pn**	**00 40 58.2**	**-0.9**
ITM				*e*SN	**Sn**	**00 41 10.3**	**-0.1**
ITM	**Ithomi**	**0.79**	**149**	P	**Pb**	**00 40 58.3**	**+0.3**
ITM	**Ithomi**	**0.79**	**149**	P	**Pb**	**00 40 58.3**	**+0.3**
ITM				*e*Sn	**Sn**	**00 41 10.3**	**-0.1**
VLX	**Vlachokerasia**	**0.91**	**123**	*e*PN	**Pn**	**00 41 00.6**	**0.0**
VLX				*e*SN	**Sn**	**00 41 13.6**	**+0.3**
VLX	**Vlachokerasia**	**0.91**	**123**	P	**Pb**	**00 41 00.1**	**+0.1**
VLX				S	**Sb**	**00 41 13.1**	**+1.4**

VLX	**Vlachokerasia**	**0.91 123**	P	**Pb**	**00 41 00.1**	**+0.1**
VLX	**Vlachokerasia**	**0.91 123**	*e*Pn	**Pn**	**00 41 00.6**	**0.0**
VLX			S	**Sb**	**00 41 13.1**	**+1.4**
VLX			*e*Sn	**Sn**	**00 41 13.6**	**+0.3**
PYL	**PYLOS**	**1.00 165**	*e*PN	**Pn**	**00 41 01.9**	**0.0**
PYL	**PYLOS**	**1.00 165**	P	**Pb**	**00 41 01.7**	**+0.1**
PYL	**PYLOS**	**1.00 165**	*e*Pn	**Pn**	**00 41 01.9**	**0.0**
DSF	**Desfina**	**1.03 58**	P	**Pb**	**00 41 01.1**	**-1.0**
DSF			S	**Sb**	**00 41 16.4**	**+1.1**
DSF	**Desfina**	**1.03 58**	P	**Pb**	**00 41 01.1**	**-1.0**
DSF			S	**Sb**	**00 41 16.4**	**+1.1**
EVR	**Evrytania**	**1.09 16**	*e*Pn	**Pn**	**00 41 02.5**	**-0.8**
EVR	**Evrytania**	**1.09 16**	*e*PN	**Pn**	**00 41 02.5**	**-0.8**
EVR	**Evrytania**	**1.09 16**	*e*Pn	**Pn**	**00 41 02.5**	**-0.8**
LTK	**Loutraki**	**1.23 82**	*e*PN	**Pn**	**00 41 05.8**	**+0.7**
LTK	**Loutraki**	**1.23 82**	*e*Pn	**Pn**	**00 41 05.8**	**+0.7**
LKR	**Lokris**	**1.47 57**	*e*Pn	**Pn**	**00 41 09.1**	**+0.7**
LKR	**Lokris**	**1.47 57**	*e*PN	**Pn**	**00 41 09.1**	**+0.7**
LKR	**Lokris**	**1.47 57**	*e*Pn	**Pn**	**00 41 09.1**	**+0.7**
DID	**Didima**	**1.48 103**	*e*PN	**Pn**	**00 41 09.3**	**+0.7**
DID	**Didima**	**1.48 103**	*e*Pn	**Pn**	**00 41 09.3**	**+0.7**
NAIG	**Nisos Aigina**	**1.64 93**	*e*Pb	**Pb**	**00 41 11.3**	**-1.2**
NAIG	**Nisos Aigina**	**1.64 93**	*e*PB	**Pb**	**00 41 11.3**	**-1.2**
VLI	**Veliai**	**1.66 133**	*e*Pn	**Pn**	**00 41 12.7**	**+1.6**
VLI	**Veliai**	**1.66 133**	*e*PN	**Pn**	**00 41 12.7**	**+1.6**
VLI	**Veliai**	**1.66 133**	*e*Pn	**Pn**	**00 41 12.7**	**+1.6**
THL	**Klokotos Trika**	**1.76 15**	*e*PN	**Pn**	**00 41 13.8**	**+1.4**
THL	**Klokotos Trika**	**1.76 15**	*e*Pn	**Pn**	**00 41 13.8**	**+1.4**
VLY	**Voula,Athens**	**1.88 90**	*e*Pn	**Pn**	**00 41 15.2**	**+1.2**
VLY	**Voula,Athens**	**1.88 90**	*e*PN	**Pn**	**00 41 15.2**	**+1.2**
VLY	**Voula,Athens**	**1.88 90**	*e*Pn	**Pn**	**00 41 15.2**	**+1.2**
NEO	**Neokhori**	**2.02 44**	*e*PN	**Pn**	**00 41 17.0**	**+1.1**
NEO	**Neokhori**	**2.02 44**	*e*PN	**Pn**	**00 41 17.0**	**+1.1**
NEO	**Neokhori**	**2.02 44**	*e*Pn	**Pn**	**00 41 17.0**	**+1.1**
KYTH	**Kithira**	**2.04 140**	*e*Pb	**Pb**	**00 41 18.2**	**-1.1**
KYTH	**Kithira**	**2.04 140**	*e*PB	**Pb**	**00 41 18.2**	**-1.1**

*IDC **02** 01:43:43.5±1.6, 6°.28S×104°.45E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/18, mbtmp4.1/8, Error ellipse: s-maj=79.4km s-min=16.9km az=53.0*
*NEIC **02** 01:43:48.8±0.9, 6°.26S×104°.53E, h35km, mb4.3/2, Error ellipse: s-maj=50.0km s-min=11.2km az=51.0*
*ISCJB **02** 01:43:51.3±1.1, 6°.40S±0°.09×104°.38E±0°.08, h80km±9km, mb4.0/10, Error ellipse: s-maj=18.9km s-min=7.9km az=37.1*
*DJA **02** 01:43:51, 6°.37S×104°.43E, h12km, MLv4.3/14*
ISC 02 01:43:52.1±1.1, **6°.42S**±0°.09×**104°.39E**±0°.08, **h69**km±9km, **n26**, σ1**9**26/28, **mb4.0**/10, **Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.89**	**7**	P	**Pn**	**01 44 07.2**	**-2.0**
KASI				S	**Sn**	**01 44 18.3**	**-3.6**
BLSI	**Bandar Lampung**	**1.35**	**39**	P	**Pn**	**01 44 13.9**	**-1.1**
BLSI				S	**Sn**	**01 44 31.7**	**-0.5**
LWLI	**Liwa**	**1.43**	**347**	P	**Pn**	**01 44 15.1**	**-1.0**
RBSI	**Rajabasa**	**1.46**	**67**	P	**Pn**	**01 44 14.5**	**-2.0**
KLI	**Kotabumi**	**1.61**	**17**	P	**Pn**	**01 44 19.6**	**+1.1**
KLI				S	**Sn**	**01 44 40.7**	**+2.2**
KLSI		**1.75**	**11**	P	**Pn**	**01 44 20.6**	**+0.2**
SBJI	**Serang**	**1.76**	**80**	P	**Pn**	**01 44 24.9**	**+4.4**
SBJI				S	**Sn**	**01 44 41.8**	**-0.2**
MDSI	**Maura Dua**	**1.93**	**354**	P	**Pn**	**01 44 23.1**	**+0.3**
SKJI	**Sukabumi**	**2.23**	**105**	P	Px	01 44 41.2	
DBJI	**Dramaga**	**2.35**	**93**	P	**Pn**	**01 44 28.2**	**-0.3**
CBJI	**Citeko**	**2.45**	**90**	P	**Pn**	**01 44 31.0**	**+1.2**
MNAI	**Manna**	**2.49**	**325**	P	**Pn**	**01 44 29.9**	**-0.5**
LEM	**Lembang**	**3.23**	**97**	P	**Pn**	**01 44 43.5**	**+3.0**
KSI	**Kapahiang**	**3.28**	**327**	P	**Pn**	**01 44 43.5**	**+2.4**
PPBI	**Pangkal Pinang**	**4.57**	**23**	P	**Pn**	**01 45 01.7**	**+2.9**
FITZ	**Fitzroy Crossi**	**23.76**	**121**	P	**P**	**01 48 57.7**	**-0.7**
	4.3nm,0.7s,mb3.9,baz=228,slow=4.0,SNR=16						
CMAR	**Chiang Mai Arr**	**25.29**	**348**	P	**P**	**01 49 11.7**	**-0.5**
	0.7nm,0.3s,mb3.5,baz=165,slow=12,SNR=5.6						
ASAR	**Alice Springs**	**33.15**	**124**	P	**P**	**01 50 21.9**	**-0.1**
	0.5nm,0.5s,mb3.6,baz=306,slow=8.3,SNR=11						
STKA	**Stephens Creek**	**42.97**	**131**	P	**P**	**01 51 45.3**	**+0.7**
	2.6nm,0.4s,mb4.3,baz=310,slow=8.6,SNR=12						
SONM	**Songino Array**	**54.04**	**2**	P	**P**	**01 53 08.0**	**-1.3**
	1.2nm,0.7s,mb4.0,baz=111,slow=3.3,SNR=4.7						
EKS2	**Erkin-Say**	**56.22**	**333**	*e*P	**P**	**01 53 26.8**	**+1.7**
	2.7nm,0.9s,mb4.3						
MKAR	**Makanchi Array**	**56.49**	**342**	P	**P**	**01 53 25.9**	**-1.0**
	1.2nm,0.6s,mb4.1,baz=144,slow=8.7,SNR=3.9						
ZALV	**Zalesovo Beam**	**62.35**	**347**	P	**P**	**01 54 07.4**	**+0.2**
	3.1nm,0.5s,mb4.6,baz=162,slow=5.4,SNR=11						
ABKAR	**Akbulak array**	**67.60**	**330**	*e*P	**P**	**01 54 40.4**	**-1.0**
	1.8nm,0.6s,mb4.1						
BRTR	**Keskin Array B**	**79.51**	**312**	P	**P**	**01 55 52.0**	**+0.5**
	0.4nm,0.5s,mb3.5,baz=124,slow=8.9,SNR=3.2						
TXAR	**Lajitas Array**	**145.08**	**46**	PKP	PKPdf	02 03 23.1	+0.8
	0.8nm,0.7s,baz=329,slow=1.1,SNR=7.4						

*ATH **02** 01:57:25.9, 41°.65N×23°.99E, h16km±1km, MD3.3/7*
*NEIC **02** 01:57:25.9, 41°.65N×23°.99E, h16km, MD3.3(ATH), After ATH.*
*SOF **02** 01:57:25.4, 41°.62N×24°.03E, h18km, MD3.1*
*ISCJB **02** 01:57:26.1±0.4, 41°.64N±0°.01×24°.02E±0°.02, h5km±3km, Error ellipse: s-maj=2.9km s-min=2.5km az=173.0*
*THE **02** 01:57:26.8, 41°.62N×23°.99E, h7km±1km, ML3.0/8, Error ellipse: s-maj=1.4km s-min=0.7km az=327.0*
*CSEM **02** 01:57:26.5±0.1, 41°.63N×24°.02E, h2km, MD3.3, Error ellipse: s-maj=2.2km s-min=2.0km az=93.0*
*SKO **02** 01:57:27.6, 41°.65N×23°.96E, h5km, M2.4, ML2.7*
*BEO **02** 01:57:28.4±0.6, 41°.62N×24°.06E, h15km±3km, ML3.1/9*
ISC 02 01:57:26.7±0.4, **41°.63N**±0°.02×**24°.01E**±0°.02, **h3**km±3km, **n116**, σ0**82**/176, **9C-9D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	**Musomiste**	**0.21 260**		Pg	**Pg**	**01 57 31.0**	**+0.2**
MMB	**Musomiste**	**0.21 260**		Pg	**Pg**	**01 57 31.0**	**+0.2**
NVR	**Nevrokopi**	**0.30 202**		*e*Pb	**Pg**	**01 57 32.6**	**+0.2**
NVR				*e*Sb	**Sg**	**01 57 37.1**	**+0.8**
NVR	**Nevrokopi**	**0.30 202**		*e*PB	**Pg**	**01 57 32.6**	**+0.2**
NVR				*e*SB	**Sg**	**01 57 37.1**	**+0.8**
NVR	**Nevrokopi**	**0.30 202**		*e*Pb	**Pg**	**01 57 32.6**	**+0.2**
NVR				*e*Sb	**Sg**	**01 57 37.1**	**+0.8**
SRS	**Serrai**	**0.60 212**		P	**Pg**	**01 57 37.8**	**-0.3**
SRS	**Serrai**	**0.60 212**		P	**Pg**	**01 57 38.4**	**+0.3**
SRS				S	**Sg**	**01 57 46.6**	**+0.7**
SRS	**Serrai**	**0.60 212**		P	**Pg**	**01 57 37.8**	**-0.3**
SRS				S	**Sg**	**01 57 46.6**	**+0.7**
PLD	**Plovdiv**	**0.70**	**47**	⇑*i*Pg	**Pg**	**01 57 40.6**	**+0.4**
PLD				*e*Sg	**Sg**	**01 57 50.5**	**+1.2**
PLD	**Plovdiv**	**0.70**	**47**	P	**Pg**	**01 57 40.8**	**+0.6**
PLD				S	**Sg**	**01 57 50.6**	**+1.3**
PLD	**Plovdiv**	**0.70**	**47**	Pg	**Pg**	**01 57 40.6**	**+0.4**
PLD	**Plovdiv**	**0.70**	**47**	⇑*i*Pg	**Pg**	**01 57 40.6**	**+0.4**
PLD				*e*Sg	**Sg**	**01 57 50.5**	**+1.2**
KKB	**Krupnik**	**0.73 289**		Pg	**Pg**	**01 57 40.0**	**-0.7**
KKB	**Krupnik**	**0.73 289**		Pg	**Pg**	**01 57 40.0**	**-0.7**
KAVA	**Kavala**	**0.74 149**		P	**Pg**	**01 57 40.0**	**-0.8**
KAVA				S	**Sg**	**01 57 50.8**	**+0.5**
KAVA	**Kavala**	**0.74 149**		P	**Pg**	**01 57 40.0**	**-0.8**
KAVA				S	**Sg**	**01 57 50.8**	**+0.5**
PGB	**Panagyurishte**	**0.93**	**7**	Pg	**Pg**	**01 57 43.5**	**-1.0**
PGB	**Panagyurishte**	**0.93**	**7**	Pg	**Pg**	**01 57 43.5**	**-1.0**
SOH	**Sokhos**	**0.95 212**		*e*Pn	**Pg**	**01 57 44.5**	**-0.3**
SOH				*e*Sn	**Sn**	**01 57 57.7**	**-3.1**
SOH	**Sokhos**	**0.95 212**		*e*PN	**Pg**	**01 57 44.5**	**-0.3**
SOH				*e*SN	**Sn**	**01 57 57.7**	**-3.1**
SOH	**Sokhos**	**0.95 212**		P	**Pg**	**01 57 44.5**	**-0.3**
SOH				S	**Sg**	**01 57 57.6**	**+0.6**
SOH	**Sokhos**	**0.95 212**		P	**Pg**	**01 57 44.5**	**-0.3**
SOH				S	**Sg**	**01 57 57.6**	**+0.6**
KNT	**Kendrikon**	**0.96 241**		P	**Pg**	**01 57 44.6**	**-0.4**
KNT				S	**Sg**	**01 57 57.6**	**+0.2**
KNT	**Kendrikon**	**0.96 241**		P	**Pg**	**01 57 44.6**	**-0.4**
KNT				S	**Sg**	**01 57 57.6**	**+0.2**
KDZ	**Kurdzhali**	**1.05**	**88**	Pg	**Pg**	**01 57 45.2**	**-1.7**
KDZ	**Kurdzhali**	**1.05**	**88**	Pg	**Pg**	**01 57 45.2**	**-1.7**
VAY	**Valandovo**	**1.12 255**		⇓*i*Pg	**Pg**	**01 57 48.6**	**+0.4**
VAY				*e*Sg	**Sg**	**01 58 04.9**	**+2.1**
VAY	**Valandovo**	**1.12 255**		P	**Pg**	**01 57 47.4**	**-0.8**
VAY				S	**Sg**	**01 58 04.0**	**+1.2**
VAY	**Valandovo**	**1.12 255**		*e*Pg	**Pg**	**01 57 47.6**	**+0.4**
VAY				*e*Sg	**Sg**	**01 58 02.7**	**-0.1**
VAY				*e*Lg		01 58 04.2	
	comp=N,105nm,0.4s						
VAY				*e*Lg		01 58 04.8	
	comp=E,258nm,0.8s						
VAY	**Valandovo**	**1.12 255**		P	**Pg**	**01 57 47.4**	**-0.8**
VAY	**Valandovo**	**1.12 255**		⇓*i*Pg	**Pg**	**01 57 48.6**	**+0.4**
VAY				S	**Sg**	**01 58 04.0**	**+1.2**
VAY				*e*Sg	**Sg**	**01 58 04.9**	**+2.1**
VTS	**Vitosha**	**1.13 328**		*e*Pg	**Pg**	**01 57 48.5**	**+0.1**
VTS				*e*Sg	**Sg**	**01 58 05.8**	**+2.7**
VTS	**Vitosha**	**1.13 328**		P	**Pg**	**01 57 48.3**	**-0.1**
VTS				S	**Sg**	**01 58 03.5**	**+0.4**
VTS	**Vitosha**	**1.13 328**		⇓*i*P	**Pg**	**01 57 48.1**	**-0.3**
VTS	**Vitosha**	**1.13 328**		*e*Pg	**Pg**	**01 57 48.5**	**+0.1**
VTS				S	**Sg**	**01 58 03.5**	**+0.4**
VTS				*e*Sg	**Sg**	**01 58 05.8**	**+2.7**
HORT	**Hortiatis**	**1.24 214**		P	**Pg**	**01 57 49.4**	**-1.0**
HORT	**Hortiatis**	**1.24 214**		P	**Pg**	**01 57 49.8**	**-0.6**
HORT				S	**Sg**	**01 58 07.1**	**+0.7**
HORT	**Hortiatis**	**1.24 214**		P	**Pg**	**01 57 49.8**	**-0.6**
HORT				S	**Sg**	**01 58 07.1**	**+0.7**
THE	**Thessaloniki**	**1.27 219**		P	**Pg**	**01 57 50.1**	**-0.9**
THE	**Thessaloniki**	**1.27 219**		P	**Pg**	**01 57 50.6**	**-0.4**
THE				S	**Sg**	**01 58 07.2**	**-0.2**
THE	**Thessaloniki**	**1.27 219**		P	**Pg**	**01 57 50.6**	**-0.4**
THE				S	**Sg**	**01 58 07.2**	**-0.2**
OUR	**Ouranopolis**	**1.29 181**		P	**Pg**	**01 57 50.1**	**-1.3**
OUR	**Ouranopolis**	**1.29 181**		P	**Pg**	**01 57 50.4**	**-1.0**
OUR				S	**Sg**	**01 58 08.0**	**-0.2**
OUR	**Ouranopolis**	**1.29 181**		P	**Pg**	**01 57 50.4**	**-1.0**
OUR				S	**Sg**	**01 58 08.0**	**-0.2**
PLG	**Polygyros**	**1.32 199**		*e*Pn	**Pn**	**01 57 51.1**	**-0.9**
PLG				*e*Sn	**Sg**	**01 58 08.8**	**-0.4**
PLG	**Polygyros**	**1.32 199**		*e*PN	**Pn**	**01 57 51.1**	**-0.9**
PLG				*e*SN	**Sg**	**01 58 08.8**	**-0.4**
PLG	**Polygyros**	**1.32 199**		P	**Pg**	**01 57 51.5**	**-0.5**
PLG				S	**Sg**	**01 58 08.8**	**-0.4**
PLG	**Polygyros**	**1.32 199**		*e*Pn	**Pn**	**01 57 51.1**	**-0.9**
PLG	**Polygyros**	**1.32 199**		P	**Pg**	**01 57 51.5**	**-0.5**
PLG				S	**Sg**	**01 58 08.8**	**-0.4**
ALN	**Alexandroupoli**	**1.70 115**		*e*Pn	**Pn**	**01 57 56.9**	**-0.3**
ALN				*e*Sn	**Sn**	**01 58 21.0**	**+1.6**
ALN	**Alexandroupoli**	**1.70 115**		*e*PN	**Pn**	**01 57 56.9**	**-0.3**
ALN				*e*SN	**Sn**	**01 58 21.0**	**+1.6**
ALN	**Alexandroupoli**	**1.70 115**		P	**Pn**	**01 57 57.1**	**-0.1**
ALN				S	**Sn**	**01 58 19.6**	**+0.2**
ALN	**Alexandroupoli**	**1.70 115**		P	**Pn**	**01 57 57.1**	**-0.1**
ALN				S	**Sn**	**01 58 19.6**	**+0.2**
ALN				*e*Sn	**Sn**	**01 58 21.0**	**+1.6**
PAIG	**Paliouri**	**1.72 189**		P	**Pn**	**01 57 57.2**	**-0.2**
PAIG	**Paliouri**	**1.72 189**		P	**Pn**	**01 57 56.6**	**-0.8**
PAIG				S	**Sn**	**01 58 18.6**	**-1.3**
PAIG	**Paliouri**	**1.72 189**		P	**Pn**	**01 57 57.2**	**-0.2**
PAIG				S	**Sn**	**01 58 18.6**	**-1.3**
ENEZ	**Enez**	**1.85 118**		*e*P	**Pn**	**01 57 59.1**	**-0.1**
ENEZ	**Enez**	**1.85 118**		*e*P	**Pn**	**01 57 59.1**	**-0.1**
ZAPS	**Zavoj**	**1.93 329**		*e*Pn	**Pn**	**01 58 01.8**	**+1.4**
ZAPS				*e*Sn	**Sn**	**01 58 24.6**	**-0.7**
LIA	**Limnos Island**	**1.94 152**		*e*Pn	**Pn**	**01 58 01.3**	**+0.7**
LIA				*e*Sn	**Sn**	**01 58 26.6**	**+1.1**
LIA	**Limnos Island**	**1.94 152**		*e*PN	**Pn**	**01 58 01.3**	**+0.7**
LIA				*e*SN	**Sn**	**01 58 26.6**	**+1.1**
LIA	**Limnos Island**	**1.94 152**		*e*Pn	**Pn**	**01 58 01.3**	**+0.7**
LIA				*e*Sn	**Sn**	**01 58 26.6**	**+1.1**
BARS	**Barje**	**2.02 307**		*e*Pn	**Pn**	**01 58 02.1**	**+0.5**
BARS				*e*Sn	**Sn**	**01 58 27.8**	**+0.5**
BARS	**Barje**	**2.02 307**		*e*Pn	**Pn**	**01 58 02.1**	**+0.5**
BARS				*e*Sn	**Sn**	**01 58 27.8**	**+0.5**
GADA	**Gvkgeada**	**2.03 134**		*e*P	**Pn**	**01 58 01.6**	**-0.1**
GADA	**Gvkgeada**	**2.03 134**		*e*P	**Pn**	**01 58 01.6**	**-0.1**
EDRB	**Edirne**	**2.06 83**		*e*P	**Pn**	**01 58 01.6**	**-0.5**
EDRB	**Edirne**	**2.06 83**		*e*P	**Pn**	**01 58 01.6**	**-0.5**
KRUS	**Krusevo**	**2.09 264**		*e*Pn	**Pn**	**01 58 02.5**	**0.0**
BIA	**Bitola**	**2.11 254**		*e*Pn	**Pn**	**01 58 02.7**	**-0.2**
ERIK	**Erikli-Kesan**	**2.12 116**		*e*P	**Pn**	**01 58 02.9**	**-0.1**
ERIK	**Erikli-Kesan**	**2.12 116**		*e*P	**Pn**	**01 58 02.9**	**-0.1**
KZN	**Kozani**	**2.15 233**		*e*Pn	**Pn**	**01 58 03.2**	**-0.2**
KZN				*e*Sn	**Sn**	**01 58 31.2**	**+0.7**
KZN	**Kozani**	**2.15 233**		*e*PN	**Pn**	**01 58 03.2**	**-0.2**
KZN				*e*SN	**Sn**	**01 58 31.2**	**+0.7**
KZN	**Kozani**	**2.15 233**		*e*Pn	**Pn**	**01 58 03.2**	**-0.2**
KZN				*e*Sn	**Sn**	**01 58 31.2**	**+0.7**
FNA	**Florina**	**2.16 248**		P	**Pn**	**01 58 04.1**	**+0.6**
FNA	**Florina**	**2.16 248**		P	**Pn**	**01 58 04.1**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.23 123**		*e*P	**Pn**	**01 58 04.3**	**-0.2**
GELI	**Tayfur-Gelibol**	**2.23 123**		*e*P	**Pn**	**01 58 04.3**	**-0.2**
ZIMR		**2.26**	**26**	⇑*i*P	**Pn**	**01 58 05.1**	**+0.2**
NEO	**Neokhori**	**2.40 195**		P	**Pn**	**01 58 06.6**	**-0.2**
NEO	**Neokhori**	**2.40 195**		P	**Pn**	**01 58 06.6**	**-0.2**
LPK	**Lapseki**	**2.43 120**		*e*P	**Pn**	**01 58 07.6**	**+0.3**
LPK	**Lapseki**	**2.43 120**		*e*P	**Pn**	**01 58 07.6**	**+0.4**
EZN	**Ezine**	**2.52 135**		*e*P	**Pn**	**01 58 08.3**	**-0.2**
EZN	**Ezine**	**2.52 135**		*e*P	**Pn**	**01 58 08.3**	**-0.1**
RKY	**Sarkoy-Tekirda**	**2.57 110**		*e*P	**Pn**	**01 58 09.8**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.57 110**		*e*P	**Pn**	**01 58 09.8**	**+0.6**
BOLS	**Boljevac**	**2.67 326**		*e*Pn	**Pn**	**01 58 12.5**	**+1.9**
BOLS				*e*Sn	**Sn**	**01 58 41.7**	**-1.7**
BOLS	**Boljevac**	**2.67 326**		*e*Pn	**Pn**	**01 58 12.5**	**+1.9**
BOLS				*e*Sn	**Sn**	**01 58 41.7**	**-1.7**
PRK	**Paraskevi**	**2.94 143**		*e*Pn	**Pn**	**01 58 14.6**	**+0.3**
PRK				*e*Sn	**Sn**	**01 58 50.1**	**+0.1**
PRK	**Paraskevi**	**2.94 143**		*e*PN	**Pn**	**01 58 14.6**	**+0.3**
PRK				*e*SN	**Sn**	**01 58 50.1**	**+0.1**
PRK	**Paraskevi**	**2.94 143**		*e*Pn	**Pn**	**01 58 14.6**	**+0.3**
PRK				*e*Sn	**Sn**	**01 58 50.1**	**+0.1**
GONE	**Gonen-Balikesi**	**3.21 118**		*e*P	**Pn**	**01 58 18.6**	**+0.7**
GONE	**Gonen-Balikesi**	**3.21 118**		*e*P	**Pn**	**01 58 18.6**	**+0.7**
DJES	**Djerdap**	**3.23 341**		*e*Pg	**Pg**	**01 58 27.7**	**-0.8**
GRUS	**Gruza**	**3.31 314**		*e*Pn	**Pn**	**01 58 20.8**	**+1.4**
GRUS				*e*Sn	**Sn**	**01 58 59.0**	**-0.3**
GRUS	**Gruza**	**3.31 314**		*e*Pn	**Pn**	**01 58 20.8**	**+1.4**
GRUS				*e*Sn	**Sn**	**01 58 59.0**	**-0.3**
DIVS	**Divibare**	**3.85 311**		*e*Pn	**Pn**	**01 58 26.6**	**-0.2**
DIVS				*e*Sn	**Sn**	**01 59 11.0**	**-1.5**
DIVS	**Divibare**	**3.85 311**		*e*Pn	**Pn**	**01 58 26.6**	**-0.2**
DIVS				*e*Sn	**Sn**	**01 59 11.0**	**-1.5**
GZR	**Gura Zlata**	**3.87 347**		⇓*i*P	**Pn**	**01 58 26.4**	**-0.6**
GZR	**Gura Zlata**	**3.87 347**		⇓*i*P	**Pn**	**01 58 26.4**	**-0.6**
BBLS	**Lazići**	**4.06 305**		*e*Pn	**Pn**	**01 58 31.8**	**+2.1**
BBLS	**Lazići**	**4.06 305**		*e*Pn	**Pn**	**01 58 31.8**	**+2.1**
MLR	**Muntele Rosu**	**4.11**	**19**	⇓*i*P	**Pn**	**01 58 29.7**	**-0.6**
MLR	**Muntele Rosu**	**4.11**	**19**	⇓*i*P	**Pn**	**01 58 29.7**	**-0.6**
BZS	**Buzias**	**4.35 337**		*e*Pn	**Pn**	**01 58 34.1**	**+0.5**
BZS	**Buzias**	**4.35 337**		⇑*i*P	**Pn**	**01 58 32.9**	**-0.7**
BZS	**Buzias**	**4.35 337**		⇑*i*P	**Pn**	**01 58 32.9**	**-0.7**
BZS	**Buzias**	**4.35 337**		*e*Pn	**Pn**	**01 58 34.1**	**+0.5**
PLOR	**Plostina**	**4.63**	**23**	⇑*i*P	**Pn**	**01 58 38.0**	**+0.5**
PLOR	**Plostina**	**4.63**	**23**	⇑*i*P	**Pn**	**01 58 38.0**	**+0.5**
VRI	**Vrincioaia**	**4.67**	**24**	⇑*i*P	**Pn**	**01 58 37.9**	**-0.1**
VRI	**Vrincioaia**	**4.67**	**24**	⇑*i*P	**Pn**	**01 58 37.9**	**-0.1**
TLCR		**4.99**	**43**	⇓*i*P	**Pn**	**01 58 41.7**	**-0.7**
TLCR		**4.99**	**43**	⇓*i*P	**Pn**	**01 58 41.7**	**-0.7**

*ISCJB **02** 01:58:50.2±0.4, 51°.05N±0°.02×5°.95E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=2.3km az=140.1*
*CSEM **02** 01:58:51.3±0.1, 51°.03N×6°.03E, h20km, ML2.5/12, Error ellipse: s-maj=3.3km s-min=2.3km az=145.0*
*BGR **02** 01:58:52.0±0.5, 51°.05N×6°.07E, h10km, ML1.9/3, Error ellipse: s-maj=6.7km s-min=3.3km az=111.0*
*LDG **02** 01:58:52.1±0.1, 51°.04N×5°.99E, h10km, Md2.6/1, Ml2.2/10, Error ellipse: s-maj=1.4km s-min=0.9km az=146.0*
*BNS **02** 01:58:52.4±0.5, 51°.06N×6°.03E, h14km±4km, ML1.9*
*UCC **02** 01:58:52.1±0.3, 51°.05N×6°.00E, h15km, ML1.7*
ISC 02 01:58:51.1±0.4, **51°.04N**±0°.02×**5°.97E**±0°.03, **h10**km, **n67**, σ1**9**07/119, **5C-3D, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RODG	**Roetgen-Dahlhe**	**0.17**	**53**	*e*Pg	**Pg**	**01 58 56.1**	**+1.3**
RODG				*e*Sg	**Sg**	**01 58 58.8**	**+1.6**
	563nm,0.1s						
RODG	**Roetgen-Dahlhe**	**0.17**	**53**	Pg	**Pg**	**01 58 56.1**	**+1.4**
RODG				Sg	**Sg**	**01 58 58.8**	**+1.6**
	563nm,0.1s						
HGN	**Heimansgroeve**	**0.28 185**		*e*Pg	**Pg**	**01 58 58.0**	**+1.3**
HGN				*e*Sg	**Sg**	**01 59 02.2**	**+1.7**
HGN	**Heimansgroeve**	**0.28 185**		⇑*i*Pg	**Pg**	**01 58 57.9**	**+1.2**
	13nm,0.1s						
HGN				*e*Sg	**Sg**	**01 59 02.1**	**+1.6**
HGN				*e*Sg	**Sg**	**01 59 02.2**	**+1.7**
HGN	**Heimansgroeve**	**0.28 185**		Pg	**Pg**	**01 58 58.0**	**+1.3**
HGN				Sg	**Sg**	**01 59 02.2**	**+1.7**
BD11	**Borschemich**	**0.29**	**82**	*e*Pg	**Pg**	**01 58 57.9**	**+0.9**
BEBN	**Eben Emael**	**0.31 217**		⇑P	**Pg**	**01 58 58.5**	**+1.3**
BEBN				S	**Sg**	**01 59 03.2**	**+1.9**
	comp=N,44nm,0.2s						
BEBN	**Eben Emael**	**0.31 217**		P	**Pg**	**01 58 58.5**	**+1.3**
BEBN				S	**Sg**	**01 59 03.2**	**+1.9**
	comp=N,44nm,0.2s						
BD05	**Hambach**	**0.34 108**		*e*Pg	**Pg**	**01 58 59.0**	**+1.1**
DREG	**Dreilaegerbach**	**0.42 156**		*e*Pg	**Pg**	**01 59 00.1**	**+0.9**
DREG				*e*Sg	**Sg**	**01 59 06.0**	**+1.2**
DREG	**Dreilaegerbach**	**0.42 156**		Pg	**Pg**	**01 59 00.1**	**+0.9**
DREG				Sg	**Sg**	**01 59 06.0**	**+1.3**
KLL	**Kalltalsperre**	**0.45 151**		⇑*e*Pg	**Pg**	**01 59 00.7**	**+0.8**
KLL				*e*Sg	**Sg**	**01 59 07.0**	**+1.1**
	comp=N,26nm,0.2s						
KLL	**Kalltalsperre**	**0.45 151**		Pg	**Pg**	**01 59 00.7**	**+0.8**
KLL				Sg	**Sg**	**01 59 07.0**	**+1.1**
	comp=N,26nm,0.2s						
LAUG	**Laupendahl**	**0.69 63**		*e*Pg	**Pg**	**01 59 04.3**	**-0.1**
LAUG				*e*Sg	**Sg**	**01 59 12.8**	**-0.5**
	comp=N,33nm,0.3s						
LAUG	**Laupendahl**	**0.69 63**		Pg	**Pg**	**01 59 04.3**	**0.0**
LAUG				Sg	**Sg**	**01 59 12.8**	**-0.5**
	comp=N,33nm,0.3s						
STB	**Steinbach**	**0.71 129**		⇑*e*Pg	**Pg**	**01 59 05.5**	**+0.7**
STB				*e*Sg	**Sg**	**01 59 14.8**	**+0.7**
	comp=N,48nm,0.4s						
STB	**Steinbach**	**0.71 129**		Pg	**Pg**	**01 59 05.5**	**+0.7**
STB				Sg	**Sg**	**01 59 14.8**	**+0.7**
	comp=N,48nm,0.4s						
BCLA	**Clavier**	**0.75 214**		⇓P	**Pg**	**01 59 06.8**	**+1.2**
BCLA

SMG				eSb	Sg	02 14 35.0	+0.4
BLCB	Balcova	0.47	355	ePG	Pg	02 14 34.0	-0.1
BLCB				eSG	Sg	02 14 40.6	+0.3
BLCB	Balcova	0.47	355	ePg	Pg	02 14 34.0	-0.1
BLCB				eSg	Sg	02 14 40.6	+0.2
IZM	Izmir	0.50	15	ePG	Pg	02 14 34.4	-0.3
IZM	Izmir	0.50	15	ePg	Pg	02 14 34.4	-0.2
MLSB	Milas	0.82	139	ePG	Pg	02 14 40.0	-0.7
MLSB				eSG	Sg	02 14 52.6	+1.2
MLSB	Milas	0.82	139	ePg	Pg	02 14 40.0	-0.7
MLSB				eSg	Sg	02 14 52.6	+1.2
BODT	Bodrum	0.87	169	ePG	Pg	02 14 40.7	-0.9
BODT				eSG	Sg	02 14 52.9	0.0
BODT	Bodrum	0.87	169	ePg	Pg	02 14 40.7	-0.9
BODT				eSg	Sg	02 14 52.9	0.0
CHOS	Chios island	0.95	300	ePN	Pn	02 14 44.2	-0.1
CHOS				eSN	Sn	02 14 57.5	-0.3
CHOS	Chios island	0.95	300	ePn	Pn	02 14 44.2	-0.1
CHOS				eSn	Sn	02 14 57.5	-0.3
AKS	Akhisar	1.11	30	ePN	Pn	02 14 46.0	-0.6
AKS	Akhisar	1.11	30	ePn	Pn	02 14 46.0	-0.6
KULA	Kula-Manisa	1.37	64	ePN	Pn	02 14 50.1	0.0
KULA	Kula-Manisa	1.37	64	ePn	Pn	02 14 50.1	0.0
PRK	Paraskevi	1.48	334	ePN	Pn	02 14 53.1	+1.5
PRK	Paraskevi	1.48	334	ePn	Pn	02 14 53.1	+1.5

ISCJB ***02*** *02:16:56.4±0.1, 49°.14N±0°.04×28°.35W±0°.03, h10km, mb4.4/110, MS4.0/38, Error ellipse: s-maj=6.2km s-min=2.0km az=13.3*
IDC ***02*** *02:16:56.3±0.4, 49°.10N×28°.41W, h0km, mb4.2/29, mb1 4.3/31, mb1mx4.2/39, mbtmp4.2/31, ML4.2/29, MS4.0/29, Ms1 4.0/29, ms1mx3.9/40, Error ellipse: s-maj=13.4km s-min=10.4km az=175.0*
NEIC ***02*** *02:16:58.3±0.2, 49°.17N×28°.31W, h10km, mb4.5/80, Error ellipse: s-maj=6.8km s-min=2.7km az=13.0*
BJI ***02*** *02:16:58.1, 49°.86N×28°.48W, h10km, mB4.9/13, mb5.0/18, Ms4.8/9, Ms7 4.4/10*
CSEM ***02*** *02:16:58.1±0.1, 49°.10N×28°.32W, h10km, mb4.5/67, Ms3.9, Mw4.9, Error ellipse: s-maj=6.5km s-min=2.8km az=14.0*
IGIL ***02*** *02:16:59.1, 49°.20N×28°.31W, h10km, mb4.4*
GCMT ***02*** *02:17:00.5±0.3, 49°.17N×28°.20W, h12km, MW4.9, Moment Tensor Solution. s22,c27; s77,c115; Moment tensor: Scale 10^16 Nm; Mrr-2.40±.09; Mθθ0.24±.09; Mφφ2.16±.06; Mrθ0.25±.34; Mθφ-0.33±.06; Mφr0.37±.28; Best double couple: M0 2.40000×10^16 NP1:φs344.00000°, δ41.00000°, λ-100.00000°. NP2:φs177.00000°, δ49.00000°, λ-81.00000°. Principal axes: T 2.2400, Plg4.0000°, Azm261.0000°; N 0.2300, Plg7.0000°, Azm352.0000°; P -2.4600, Plg82.0000°, Azm140.0000°; Data Used: II IU IC G CN.*

ISC 02 02:16:58.5±0.1, 49°.18N±0°.04×28°.30W±0°.02, h10km, (h13km±1.1km:pP-P), n514, σ0s92/509, mb4.4/108, MS4.0/38, 51C-59D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSB	Dublin	14.32	65	ePn	Pn	02 20 20.2	-0.8
DSB	Dublin	14.32	65	ePn	Pn	02 20 20.2	-0.8
EMAZ	Mazaricos	14.77	108	P	Pn	02 20 25.4	-1.9
15nm,0.6s							
EPON	Pontenova	15.74	104	P	Pn	02 20 38.9	-1.1
16nm,0.5s							
PTO	Porto	16.02	113	eP	Pn	02 20 43.1	-0.6
68nm,1.5s							
BORG	Borgarnes	16.05	11	LR	LR	02 24 58.1	
comp=Z,351nm,21.9s,baz=204,slow=30							
ESK	Eskdalemuir	16.50	59	ePn	Pn	02 20 50.8	+1.1
ESK	Eskdalemuir	16.50	59	ePn	Pn	02 20 50.8	+1.0
ROSF	Rostrenen	16.51	83	eP	Pn	02 20 48.2	-1.8
EKA	Eskdalemuir Ar	16.53	59	Pn	Pn	02 20 49.9	-0.3
0.6nm,0.3s,baz=254,slow=14,SNR=19							
EKA	Eskdalemuir Ar	16.53	59	Pn	Pn	02 20 49.8	-0.3
QUIF	Quistinic	16.68	85	eP	Pn	02 20 50.2	-1.9
ECAL	Calabor	16.71	108	P	Pn	02 20 55.3	+2.8
5.9nm,1.1s							
ECAL	Calabor	16.71	108	P	Pn	02 20 55.3	+2.7
5.9nm,1.1s							
MVO	Moncorvo	16.97	110	eP	Pn	02 21 00.4	+4.6
MVO				eS	Sn	02 24 14.3	+10
EARI	Arriondas	16.99	102	P	Pn	02 20 55.1	-0.9
29nm,0.8s							
SGMF	Saint Gilles	17.00	83	eP	Pn	02 20 54.0	-2.1
PMAFR	Mafra	17.02	120	eS	Sn	02 24 21.8	+16
PTOM	Tomar	17.09	117	eP	Pn	02 20 56.9	-0.4
59nm,1.9s							
PTOM	Tomar	17.09	117	eP	Pn	02 20 56.9	-0.4
59nm,1.9s							
MTE	Manteigas	17.11	113	eP	Pn	02 20 57.1	-0.4
58nm,1.6s							
MTE				eS	Sn	02 24 15.3	+7.6
MTE	Manteigas	17.11	113	ePn	Pn	02 20 57.2	-0.4
27nm,1.2s							
MTE	Manteigas	17.11	113	ePn	Pn	02 20 57.2	-0.3
27nm,1.2s							
MTE				eS	Sn	02 24 15.3	+7.6
PCBR	Castelo Branco	17.50	114	eP	Pn	02 21 02.1	-0.3
35nm,1.8s							
PCBR	Castelo Branco	17.50	114	eP	Pn	02 21 02.1	-0.3
35nm,1.8s							
PMRV	Marv??o	17.81	115	eP	Pn	02 21 06.4	+0.1
49nm,1.8s							
PMRV				eS	Sn	02 24 31.2	+6.5
PMRV	Marv??o	17.81	115	eP	Pn	02 21 06.4	+0.1
49nm,1.8s							
PMRV				eS	Sn	02 24 31.2	+6.5
EVOP	Sao Brissos	17.98	119	eP	Pn	02 21 09.7	+1.4
EVOP				AMb	AMB	02 21 14.1	
comp=Z,33nm,2.6s							
EVO	Evora	18.04	119	eP	Pn	02 21 06.0	-3.1
comp=Z,41nm,1.3s							
EVO				eMLR	MLR		
comp=Z,373nm,18.8s							
EVO	Evora	18.04	119	eP	Pn	02 21 09.9	+0.8
comp=Z,38nm,1.9s							
EVO	Evora	18.04	119	eP	Pn	02 21 09.9	+0.8
comp=Z,38nm,1.9s							
PESTR	Estremoz	18.06	117	eP	Pn	02 21 10.0	+0.7
comp=Z,36nm,1.8s							
PESTR				eS	Sn	02 24 45.5	+15
PESTR	Estremoz	18.06	117	eP	Pn	02 21 10.0	+0.7
comp=Z,36nm,1.8s							
GRR	Gorron	18.07	82	eP	Pn	02 21 08.8	-0.6
comp=Z,49nm,1.0s							
GRR	Gorron	18.07	82	eP	Pn	02 21 08.8	-0.6
comp=Z,25nm,1.0s							
GRR	Gorron	18.07	82	eP	Pn	02 21 08.8	-0.6
comp=Z,25nm,1.0s							
ELAN	Lanestosa	18.17	100	P	Pn	02 21 10.8	+0.2
comp=Z,8.5nm,0.7s							
ELAN	Lanestosa	18.17	100	P	Pn	02 21 10.8	+0.1
comp=Z,8.5nm,0.7s							
EPLA	Plasencia	18.20	112	P	Pn	02 21 10.2	-0.9
comp=Z,4.6nm,0.5s							
EPLA	Plasencia	18.20	112	P	Pn	02 21 10.2	-0.9
comp=Z,4.6nm,0.5s							
FLN	La Foliniere	18.23	81	eP	Pn	02 21 10.2	-1.2
FLN				eMLR	MLR		
comp=Z,1μm,20.8s							
FLN	La Foliniere	18.23	81	eP	Pn	02 21 10.2	-1.2
MESJ	Messejana	18.39	121	eP	Pn	02 21 14.2	+0.7
comp=Z,40nm,1.7s							
MESJ				eS	Sn	02 24 41.5	+2.7
MESJ	Messejana	18.39	121	eP	Pn	02 21 14.2	+0.7
MESJ				AMb	AMB	02 21 26.0	
comp=Z,40nm,1.7s							
MESJ				eS	Sn	02 24 41.5	+2.6
MESJ				eS	Sn	02 24 41.7	+2.9
MESJ	Messejana	18.39	121	eP	Pn	02 21 14.2	+0.7
comp=Z,40nm,1.7s							
MESJ				eS	Sn	02 24 41.5	+2.7
EBAD	Badajoz	18.47	116	P	Pn	02 21 13.8	-0.5
comp=Z,2.3nm,0.5s							
EBAD	Badajoz	18.47	116	P	Pn	02 21 13.9	-0.5
comp=Z,2.3nm,0.5s							
LDF	La Druitiere	18.50	81	eP	Pn	02 21 13.8	-0.9
comp=Z,13nm,0.9s							
LDF	La Druitiere	18.50	81	eP	Pn	02 21 13.8	-0.9
comp=Z,6.4nm,0.9s							
LDF	La Druitiere	18.50	81	eP	Pn	02 21 13.8	-0.9
comp=Z,6.4nm,0.9s							
MORF	Marmelete	18.53	122	eS	Sn	02 25 01.1	+19
PFVI	Vila Bisbo	18.56	123	eS	Sn	02 24 52.5	+10
PCVE	Castro Verde	18.64	121	eS	Sn	02 25 00.9	+16
PBAR	Barrancos	18.84	118	eP	Pn	02 21 19.7	+0.8
comp=Z,27nm,1.5s							
PBAR				eS	Sn	02 25 05.8	+16
PBAR	Barrancos	18.84	118	eP	Pn	02 21 19.7	+0.8
comp=Z,27nm,1.5s							
PBDV	Barranco-do-Ve	18.98	121	eS	Sn	02 24 48.1	-4.8
PVAQ	Vaqueiros	18.98	121	eP	Pn	02 21 20.0	-0.6
comp=Z,42nm,1.6s							
PVAQ				eS	Sn	02 25 01.5	+8.4
PVAQ	Vaqueiros	18.98	121	eP	Pn	02 21 20.0	-0.6
comp=Z,42nm,1.6s							
MFF	Saint Martin d	19.01	87	eP	Pn	02 21 20.3	-0.6
MFF	Saint Martin d	19.01	87	eP	Pn	02 21 20.3	-0.6
GUD	Guadarrama	19.05	107	P	Pn	02 21 20.9	-0.5
comp=Z,0.1nm,0.4s							
GUD	Guadarrama	19.05	107	P	Pn	02 21 20.9	-0.5
comp=Z,0.1nm,0.4s							
EMIN	Mina Concepcio	19.33	118	P	Pn	02 21 24.8	0.0
comp=Z,5.9nm,1.1s							
EMIN	Mina Concepcio	19.33	118	P	Pn	02 21 24.8	0.0
comp=Z,5.9nm,1.1s							
EALK	Alkurruntz	19.43	98	P	Pn	02 21 25.6	-0.3
comp=Z,4.7nm,0.5s							
EALK	Alkurruntz	19.43	98	P	Pn	02 21 25.6	-0.3
comp=Z,4.7nm,0.5s							
ELIZ	Elizondo	19.44	98	P	Pn	02 21 25.9	-0.2
comp=Z,0.2nm,0.4s							
ELIZ	Elizondo	19.44	98	P	Pn	02 21 25.9	-0.1
comp=Z,0.2nm,0.4s							
OSSF	Osses	19.57	97	eP	Pn	02 21 30.2	+2.6
PAB	San Pablo	19.58	110	eP	Pn	02 21 24.7	-3.0
comp=Z,3.5nm,0.8s							
PAB	San Pablo	19.58	110	eP	Pn	02 21 24.7	-3.0
comp=Z,3.5nm,0.8s							
SJPF	Ste Jean	19.66	98	eP	Pn	02 21 26.6	-2.1
SJPF	Ste Jean	19.66	98	eP	Pn	02 21 26.6	-2.1
ESBB	Sonseca Array	19.74	110	P	Pn	02 21 27.9	-1.7
comp=Z,0.8nm,0.4s							
ESBB	Sonseca Array	19.74	110	P	Pn	02 21 27.9	-1.7
comp=Z,0.8nm,0.4s							
ESDC	Sonseca Array	19.74	110	P	Pn	02 21 28.1	-1.6
comp=Z,0.1nm,0.3s,baz=302,slow=10,SNR=17							
ESDC				LR	LR	02 27 34.4	
comp=Z,512nm,18.4s,baz=300,slow=32							
ESDC	Sonseca Array	19.74	110	P	Pn	02 21 28.1	-1.5
ESLA	Sonseca Array	19.74	110	ePn	Pn	02 21 27.9	-1.7
ESLA	Sonseca Array	19.74	110	ePn	Pn	02 21 27.9	-1.7
ECAB	El Cabril	19.86	115	P	Pn	02 21 29.6	-1.5
comp=Z,2.9nm,0.8s							
ECAB	El Cabril	19.86	115	P	Pn	02 21 29.6	-1.5
comp=Z,2.9nm,0.8s							
LFF	La Frestale	20.17	91	eP	P	02 21 32.7	-0.2
LFF	La Frestale	20.17	91	eP	P	02 21 32.7	-0.2
ETSF	Etsaut	20.19	98	eP	P	02 21 33.9	+0.8
ETSF	Etsaut	20.19	98	eP	P	02 21 33.9	+0.8
ETOR	Torete	20.28	104	P	P	02 21 34.3	+0.2
comp=Z,1.1nm,1.3s							
ETOR	Torete	20.28	104	P	P	02 21 34.3	+0.2
comp=Z,1.1nm,1.3s							
EADA	Adamuz	20.30	114	P	P	02 21 33.3	-1.1
comp=Z,5.4nm,0.7s							
EADA	Adamuz	20.30	114	P	P	02 21 33.3	-1.0
comp=Z,5.4nm,0.7s							
ESPR	Espera	20.42	119	P	P	02 21 36.4	+0.7
comp=Z,16nm,1.0s							
ESPR	Espera	20.42	119	P	P	02 21 36.3	+0.7
comp=Z,16nm,1.0s							
RJF	Les Rejaudoux	20.55	90	eP	P	02 21 36.6	-0.3
RJF				eMLR	MLR		
comp=Z,740nm,18.8s,MS3.8							
RJF	Les Rejaudoux	20.55	90	eP	P	02 21 36.6	-0.3
RJF				LR	LR		
comp=Z,740nm,18.8s,MS4.1							
RJF	Les Rejaudoux	20.55	90	eP	P	02 21 36.6	-0.3
HYF	Humbligny	20.64	84	eP	P	02 21 38.0	+0.1
HYF	Humbligny	20.64	84	eP	P	02 21 38.0	+0.1
TCF	Toulx Ste Croi	20.66	86	eP	P	02 21 38.1	0.0
comp=Z,29nm,0.9s							
TCF	Toulx Ste Croi	20.66	86	eP	P	02 21 38.1	0.0
comp=Z,15nm,0.9s							
TCF	Toulx Ste Croi	20.66	86	eP	P	02 21 38.1	0.0
comp=Z,15nm,0.9s							
EPF	Esparros	20.71	96	eP	P	02 21 38.1	-0.7
comp=Z,12nm,0.9s							
EPF	Esparros	20.71	96	eP	P	02 21 38.1	-0.7
comp=Z,6.3nm,0.9s							
EPF	Esparros	20.71	96	eP	P	02 21 38.1	-0.7
comp=Z,6.2nm,0.9s							
EBIE	Bielsa	20.75	97	P	P	02 21 40.6	+1.5
comp=Z,10nm,0.8s							
EBIE	Bielsa	20.75	97	P	P	02 21 40.7	+1.6
comp=Z,10nm,0.8s							
RESF	Ens	20.82	97	eP	P	02 21 41.3	+1.4
RESF	Ens	20.82	97	eP	P	02 21 41.3	+1.4
ESAC	San Caprasio	20.82	100	P	P	02 21 42.1	+2.2
comp=Z,20nm,0.5s							
ESAC	San Caprasio	20.82	100	P	P	02 21 42.1	+2.2
comp=Z,20nm,0.5s							
SNF	Seneffe	20.97	74	P	P	02 21 41.7	+0.2
comp=Z,30nm,2.3s							
SNF	Seneffe	20.97	74	P	P	02 21 41.6	+0.1
comp=Z,30nm,2.3s							
BGF	Bois d'Agland	20.99	85	eP	P	02 21 41.5	-0.2
comp=Z,47nm,0.7s							
BGF	Bois d'Agland	20.99	85	eP	P	02 21 41.5	-0.2
comp=Z,24nm,0.7s							
BGF	Bois d'Agland	20.99	85	eP	P	02 21 41.5	-0.2
comp=Z,24nm,0.7s							
BAIF	Baives	21.00	75	eP	P	02 21 41.3	-0.5
BAIF	Baives	21.00	75	eP	P	02 21 41.3	-0.5
CAF	Calviac	21.05	90	eP	P	02 21 41.2	-1.2
comp=Z,108nm,1.4s,mb4.7							
CAF	Calviac	21.05	90	eP	P	02 21 41.2	-1.2
comp=Z,54nm,1.4s,mb4.7							
CAF	Calviac	21.05	90	eP	P	02 21 41.2	-1.2
comp=Z,54nm,1.4s,mb4.7							
FRNF	Fournols	21.20	89	eP	P	02 21 44.4	+0.4
FRNF	Fournols	21.20	89	eP	P	02 21 44.4	+0.4
DOU	Dourbes	21.24	75	P	P	02 21 44.3	0.0
comp=Z,9.0nm,0.8s,mb4.2							
DOU	Dourbes	21.24	75	P	P	02 21 44.3	-0.1
comp=Z,9.0nm,0.8s,mb4.2							
AVF	Avril sur Loir	21.25	84	eP	P	02 21 44.1	-0.4
comp=Z,57nm,0.9s,mb4.6							
AVF	Avril sur Loir	21.25	84	eP	P	02 21 44.1	-0.4
comp=Z,28nm,0.9s,mb4.6							
AVF	Avril sur Loir	21.25	84	eP	P	02 21 44.1	-0.4
comp=Z,28nm,0.9s,mb4.6							
EMIJ	Mijas	21.26	118	P	P	02 21 46.4	+1.7
comp=Z,13nm,1.0s,mb4.2							
EMIJ	Mijas	21.26	118	P	P	02 21 46.4	+1.7
comp=Z,13nm,1.0s,mb4.2							
SSF	Saint Saulge	21.26	84	eP	P	02 21 44.3	-0.3
comp=Z,45nm,0.8s,mb4.5							
SSF	Saint Saulge	21.26	84	eP	P	02 21 44.3	-0.3
comp=Z,23nm,0.8s,mb4.5							
SSF	Saint Saulge	21.26	84	eP	P	02 21 44.3	-0.3
comp=Z,23nm,0.8s,mb4.5							
EVIA	Vianos	21.27	110	P	P	02 21 45.3	+0.5
comp=Z,14nm,0.7s,mb4.4							
EVIA	Vianos	21.27	110	P	P	02 21 45.3	+0.5
comp=Z,14nm,0.7s,mb4.4							
AGO	Saint Agoulin	21.34	86	eP	P	02 21 47.1	+1.6
AGO	Saint Agoulin	21.34	86	eP	P	02 21 47.1	+1.6
PYM	Petit Puy Mans	21.36	87	eP	P	02 21 47.4	+1.6
PYM	Petit Puy Mans	21.36	87	eP	P	02 21 47.4	+1.6
GIVF	Givet	21.38	75	eP	P	02 21 45.3	-0.6
comp=Z,29nm,0.7s,mb4.4							
GIVF	Givet	21.38	75	eP	P	02 21 45.3	-0.6
comp=Z,14nm,0.7s,mb4.4							
GIVF	Givet	21.38	75	eP	P	02 21 45.3	-0.6
comp=Z,14nm,0.7s,mb4.4							
LOR	Lormes	21.43	83	eP	P	02 21 46.0	-0.5
comp=Z,42nm,0.8s,mb4.5							
LOR				eMLR	MLR		
comp=Z,1μm,21.0s,MS3.9							
LOR	Lormes	21.43	83	eP	P	02 21 46.0	-0.5
comp=Z,21nm,0.8s,mb4.5							
LOR				LR	LR		
comp=Z,1μm,21.0s,MS4.2							
LOR	Lormes	21.43	83	eP	P	02 21 46.0	-0.5
comp=Z,21nm,0.8s,mb4.5							
EQES	Quesada	21.44	113	P	P	02 21 47.3	+0.6
comp=Z,4.5nm,0.8s,mb3.9							
EQES	Quesada	21.44	113	P	P	02 21 47.3	+0.6
comp=Z,4.5nm,0.8s,mb3.9							
EMOS	Mosqueruela	21.54	104	P	P	02 21 48.8	+1.1
comp=Z,8.7nm,1.1s,mb4.1							
EMOS	Mosqueruela	21.54	104	P	P	02 21 48.8	+1.2
comp=Z,8.7nm,1.1s,mb4.1							
CSOR	Sort	21.54	97	P	P	02 21 48.2	+0.6
comp=Z,12nm,1.5s,mb4.1							
CSOR	Sort	21.54	97	P	P	02 21 48.2	+0.5
comp=Z,12nm,1.5s,mb4.1							
SMF	Signal de Mont	21.61	84	eP	P	02 21 48.0	-0.4
comp=Z,160nm,1.6s,mb4.9							
SMF	Signal de Mont	21.61	84	eP	P	02 21 48.0	-0.4
comp=Z,80nm,1.6s,mb4.9							
SMF	Signal de Mont	21.61	84	eP	P	02 21 48.0	-0.4
comp=Z,80nm,1.6s,mb4.9							
BCLA	Clavier	21.63	74	P	P	02 21 47.9	-0.6
comp=Z,23nm,1.7s,mb4.3							
BCLA	Clavier	21.63	74	P	P	02 21 47.9	-0.7
comp=Z,23nm,1.7s,mb4.3							
ERTA	Horta de San J	21.73	101	P	P	02 21 52.6	+2.8
comp=Z,9.1nm,0.7s,mb4.3							
BEBN	Eben Emael	21.80	73	P	P	02 21 51.5	+1.0
comp=Z,12nm,1.5s,mb4.1							
BEBN	Eben Emael	21.80	73	P	P	02 21 51.4	+1.0
comp=Z,12nm,1.5s,mb4.1							
MTLF	Montolieu	21.80	94	eP	P	02 21 49.8	-0.7
comp=Z,120nm,1.6s,mb4.8							
MTLF	Montolieu	21.80	94	eP	P	02 21 49.8	-0.7
comp=Z,60nm,1.6s,mb4.8							
MTLF	Montolieu	21.80	94	eP	P	02 21 49.8	-0.7
comp=Z,60nm,1.6s,mb4.8							
MEZF	Maizieres J'vi	21.87	79	eP	P	02 21 50.7	-0.5
comp=Z,33nm,0.7s,mb4.6							
MEZF	Maizieres J'vi	21.87	79	eP	P	02 21 50.7	-0.5
comp=Z,33nm,0.7s,mb4.9							
MEZF	Maizieres J'vi	21.87	79	eP	P	02 21 50.7	-0.5
comp=Z,17nm,0.7s,mb4.6							
SFTF	Sexfontaines	21.94	80	eP	P	02 21 51.4	-0.5
SFTF	Sexfontaines	21.94	80	eP	P	02 21 51.4	-0.5
HGN	Heimansgroeve	21.97	73	eP	P	02 21 57.0	+4.8
comp=Z,30nm,1.2s,mb4.6							
EPOB	Poblet	22.01	100	P	P	02 21 53.8	+1.1
comp=Z,6.7nm,0.9s,mb4.1							
EPOB	Poblet	22.01	100	P	P	02 21 53.8	+1.1
comp=Z,6.7nm,0.9s,mb4.1							
EMIR	Miracle	22.02	98	P	P	02 21 54.0	+1.2
comp=Z,1.2nm,0.3s,mb3.8							
EMIR	Miracle	22.02	98	P	P	02 21 54.0	+1.2
comp=Z,1.2nm,0.3s,mb3.8							
CLLI	Llivia	22.04	96	P	P	02 21 54.9	+1.9
CLLI	Llivia	22.04	96	P	P	02 21 54.9	+1.9
MEM	Membach	22.04	73	P	P	02 21 53.3	+0.3
comp=Z,16nm,1.1s,mb4.3							
MEM	Membach	22.04	73	P	P	02 21 53.2	+0.3
comp=Z,16nm,1.1s,mb4.3							
WLF	Walferdange	22.31	76	P	P	02 21 55.7	-0.1
comp=Z,21nm,2.0s,mb4.2							
WLF	Walferdange	22.31	76	eP	P	02 21 55.6	-0.3
comp=Z,15nm,1.0s,mb4.4							
WLF	Walferdange	22.31	76	eP	P	02 21 55.6	-0.2
comp=Z,15nm,1.0s,mb4.4							
WTSB	Winterswijk	22.34	69	eP	P	02 22 00.7	+4.5
comp=Z,41nm,1.4s,mb4.7							
THEF	They Montfort	22.54	79	eP	P	02 21 58.0	-0.3
THEF	They Montfort	22.54	79	eP	P	02 21 58.0	-0.3
LASF	Ste Croix	22.56	91	eP	P	02 22 00.2	+1.6
LASF	Ste Croix	22.56	91	eP	P	02 22 00.2	+1.6
VIVF	Saint-Julien-l	22.79	88	eP	P	02 22 01.6	+0.7
VIVF	Saint-Julien-l	22.79	88	eP	P	02 22 01.6	+0.7
HAU	Haudompre	22.84	80	eP	P	02 21 59.0	-2.4
comp=Z,23nm,0.8s,mb4.4							
HAU				eMLR	MLR		
comp=Z,929nm,20.8s,MS3.9							
HAU	Haudompre	22.84	80	eP	P	02 21 59.0	-2.4
comp=Z,12nm,0.8s,mb4.4							
HAU				LR	LR		
comp=Z,930nm,20.8s,MS4.2							
HAU	Haudompre	22.84	80	eP	P	02 21 59.0	-2.4
comp=Z,12nm,0.8s,mb4.4							
RUP	Ruppelstein	22.88	75	eP	P	02 22 00.9	-1.0
RUP	Ruppelstein	22.88	75	eP	P	02 22 00.9	-1.0
CABF	La Chapelle	23.09	83	eP	P	02 22 04.1	0.0
comp=Z,38nm,1.0s,mb4.5							
CABF	La Chapelle	23.09	83	eP	P	02 22 04.1	0.0
comp=Z,19nm,1.0s,mb4.5							
CABF	La Chapelle	23.09	83	eP	P	02 22 04.1	0.0
comp=Z,19nm,1.0s,mb4.5							
HINF	Hinteralfeld	23.21	80	eP	P	02 22 02.9	-2.5
comp=Z,18nm,0.8s,mb4.3							
HINF	Hinteralfeld	23.21	80	eP	P	02 22 02.9	-2.5
comp=Z,8.9nm,0.8s,mb4.2							
HINF	Hinteralfeld	23.21	80	eP	P	02 22 02.9	-2.5
comp=Z,8.9nm,0.8s,mb4.3							
ECH	Echery	23.30	79	eP	P	02 22 05.1	-1.2
ECH	Echery	23.30	79	eP	P	02 22 05.1	-1.2
CDF	Champ du Feu	23.32	78	eP	P	02 22 06.4	-0.2
comp=Z,22nm,1.0s,mb4.2							
CDF	Champ du Feu	23.32	78	eP	P	02 22 06.4	-0.2
comp=Z,11nm,1.0s,mb4.2							
CDF	Champ du Feu	23.32	78	eP	P	02 22 06.4	-0.2
comp=Z,11nm,1.0s,mb4.2							
MOF	Molkenrain	23.39	80	eP	P	02 22 08.1	+0.9
MOF	Molkenrain	23.39	80	eP	P	02 22 08.1	+0.9
LANF	Langenberg	23.52	77	eP	P	02 22 08.8	+0.2
LANF	Langenber

NOA LR LR 02 31 26.3
NOA NORSAR Array B 25.10 47 P **P 02 22 22.5 -0.5**
TUE Stuetta 25.25 82 *eP* **P 02 22 26.2 +1.7**
comp=Z,14nm,1.1s,mb4.4
TUE Stuetta 25.25 82 *eP* **P 02 22 26.2 +1.7**
comp=Z,14nm,1.1s,mb4.4
DAVOX Davos/Dischmat 25.49 81 P **P 02 22 28.4 +1.7**
comp=Z,6.2nm,0.7s,mb4.2,baz=297,slow=12,SNR=9.5
DAVOX LR LR 02 31 57.3
comp=Z,725nm,18.5s,MS4.2,baz=301,slow=35
DAVOX Davos/Dischmat 25.49 81 P **P 02 22 28.4 +1.7**
GRFO Grafenberg 25.51 74 *eP* **P 02 22 27.1 +0.4**
comp=Z,21nm,1.3s,mb4.5
GRFO Grafenberg 25.51 74 *eP* **P 02 22 27.1 +0.3**
comp=Z,21nm,1.3s,mb4.5
GRA1 Grafenberg Arr 25.51 74 *eP* **P 02 22 27.0 +0.2**
comp=Z,29nm,1.4s,mb4.6
GRA1 Grafenberg Arr 25.51 74 *eP* **P 02 22 27.0 +0.2**
comp=Z,29nm,1.4s,mb4.6
GRF Grafenberg Arr 25.51 74 *eP* **P 02 22 27.0 +0.2**
comp=Z,29nm,1.4s,mb4.6
GRF Grafenberg Arr 25.51 74 *eP* **P 02 22 27.0 +0.2**
comp=Z,29nm,1.4s,mb4.6
MOX Moxa 25.54 71 *eP* **P 02 22 29.9 +2.9**
comp=Z,12nm,1.3s,mb4.3
MOX
comp=Z,500nm,20.0s
FETA Feichten 25.96 80⇑*iP* **P 02 22 32.1 +1.1**
comp=Z,14nm,1.7s,mb4.2
FETA Feichten 25.96 80 P **P 02 22 32.1 +1.2**
comp=Z,14nm,1.7s,mb4.2
FRB Frobisher Bay 26.02 319 LR LR 02 30 31.7
comp=Z,145nm,19.0s,MS3.5,baz=56,slow=31
MOTA Moosalm 26.10 79⇑*iP* **P 02 22 32.8 +0.7**
comp=Z,8.3nm,1.1s,mb4.2
MOTA Moosalm 26.10 79 P **P 02 22 32.8 +0.6**
comp=Z,8.3nm,1.1s,mb4.2
NKC Novy Kostel 26.15 72 *eP* **P 02 22 35.1 +2.5**
HFS Hagfors 26.19 49 P **P 02 22 33.8 +0.9**
comp=Z,3.4nm,0.9s,mb3.9,baz=261,slow=8.3,SNR=3.0
HFS LR LR 02 32 27.8
comp=Z,415nm,18.1s,MS4.0,baz=274,slow=35
HFS Hagfors 26.19 49 P **P 02 22 33.8 +1.0**
CLL Collm 26.26 69 *eP* **P 02 22 35.0 +1.5**
comp=Z,12nm,1.5s,mb4.2
CLL *eS* **S 02 27 21.0 +15**
CLL LR LR
comp=Z,600nm,19.5s,MS4.1
CLL Collm 26.26 69 *eP* **P 02 22 35.0 +1.5**
comp=Z,12nm,1.5s,mb4.2
CLL *e* 02 22 43.0
CLL *e*PPPP 02 23 28.0
CLL *e* 02 23 57.0
CLL *eS* **S 02 27 21.0 +15**
CLL Lm 02 32 00.0
comp=N,200nm,18.8s
CLL Lm 02 32 00.0
comp=E,400nm,19.9s
CLL Lm 02 32 00.0
comp=Z,600nm,19.5s
CLL Collm 26.26 69 *eP* **P 02 22 35.0 +1.5**
comp=Z,12nm,1.5s,mb4.2
BRG Berggiesshubel 26.93 70 *eP* **P 02 22 42.1 +2.5**
comp=Z,12nm,1.5s,mb4.2
BRG
comp=N,347nm,13.9s
BRG
comp=E,453nm,16.3s
BRG
comp=Z,640nm,17.4s
KHC Kasperske Hory 27.14 74 *eP* **P 02 22 46.9 +5.4**
KHC AMS AMS 02 33 00.0
comp=Z,600nm,17.9s
PVCC Panska Ves 27.40 71 *eP* **P 02 22 47.5 +3.7**
PVCC AMS AMS 02 33 00.0
comp=Z,500nm,14.3s
PRU Pruhonice 27.52 72 *eP* **P 02 22 51.0 +6.1**
PRU AMS AMS 02 33 10.0
comp=Z,500nm,17.2s
UPC Upice 28.30 70 *eP* **P 02 22 56.8 +5.0**
TREC Trest 28.30 73 AMS AMS 02 33 10.0
comp=Z,500nm,17.9s
DPC Dobruska-Polom 28.53 70 *eP* **P 02 22 58.5 +4.6**
DPC AMS AMS 02 34 00.0
comp=Z,500nm,15.6s
OBKA Obir 28.60 79⇑*iP* **P 02 22 54.7 0.0**
comp=Z,7.8nm,0.7s,mb4.5
OBKA Obir 28.60 79 P **P 02 22 54.7 +0.1**
comp=Z,7.8nm,0.7s,mb4.5
SOKA Soboth 28.86 78⇑*iP* **P 02 22 56.4 -0.4**
comp=Z,8.8nm,0.7s,mb4.6
SOKA Soboth 28.86 78 P **P 02 22 56.4 -0.5**
comp=Z,8.8nm,0.7s,mb4.6
VRAC Vranov 28.99 72 LR LR 02 33 49.3
comp=Z,561nm,20.6s,MS4.2,baz=281,slow=35
OKC Ostrava-Krasne 29.80 71 AMS AMS 02 34 50.0
comp=Z,500nm,15.9s
KEST Kesra 30.52 102 P **P 02 23 11.4 -0.3**
comp=Z,2.9nm,0.8s,mb4.1,baz=302,slow=5.1,SNR=12
KEST LR LR 02 33 25.0
comp=Z,104nm,21.7s,MS3.5,baz=261,slow=32
PKSM Moragy 31.34 77⇑*iP* **P 02 23 18.0 -0.9**
PKSM Moragy 31.34 77⇑*iP* **P 02 23 18.0 -0.9**
FINES FINESS Array B 32.29 47 P **P 02 23 26.8 -0.2**
comp=Z,6.8nm,1.0s,mb4.4,baz=190,slow=33,SNR=7.7
FINES LR LR 02 35 00.6
comp=Z,387nm,20.2s,MS4.1,baz=288,slow=34
FINES FINESS Array B 32.29 47 P **P 02 23 26.8 -0.2**
FINES LR LR 02 35 00.6
FINES FINESS Array B 32.29 47 P **P 02 23 26.8 -0.2**
ARCES ARCESS Array B 32.58 32 P **P 02 23 27.9 -1.5**
comp=Z,3.7nm,0.9s,mb4.3,baz=252,slow=7.1,SNR=6.5
ARCES LR LR 02 35 18.8
comp=Z,160nm,20.4s,MS3.7,baz=224,slow=34
ARCES ARCESS Array B 32.58 32 P **P 02 23 28.0 -1.5**
SPITS Spitsbergen Ar 33.43 15 LR LR 02 32 55.8
comp=Z,64nm,20.8s,MS3.3,baz=125,slow=29
BZS Buzias 33.48 77⇓*iP* **P 02 23 38.2 +0.6**
BZS Buzias 33.48 77⇓*iP* **P 02 23 38.2 +0.6**
BUR08 Bucovina Ar. S 34.93 72 *eP* **P 02 23 49.8 -0.4**
BUR08 Bucovina Ar. S 34.93 72 *eP* **P 02 23 49.8 -0.4**
BURAR Bucovina Array 34.95 72⇑*iP* **P 02 23 51.3 +0.9**
BURAR Bucovina Array 34.95 72⇑*iP* **P 02 23 51.3 +0.9**
VOIR 35.75 75⇑*iP* **P 02 23 56.6 -0.6**
VOIR 35.75 75⇑*iP* **P 02 23 56.6 -0.6**
VTS Vitosha 35.87 81⇓*iP* **P 02 23 58.9 +0.7**
VTS Vitosha 35.87 81⇓*iP* **P 02 23 58.9 +0.7**
MLR Muntele Rosu 36.29 75⇓*iP* **P 02 24 02.3 +0.5**
MLR Muntele Rosu 36.29 75⇓*iP* **P 02 24 02.3 +0.5**
TORD Torodi Ar. Bea 43.60 135 P **P 02 25 02.1 -0.7**
comp=Z,3.5nm,1.0s,mb4.1,baz=334,slow=7.3,SNR=9.0
TORD LR LR 02 41 33.2
comp=Z,181nm,20.1s,MS4.0,baz=300,slow=34
BRTR Keskin Array B 44.08 78 P **P 02 25 06.5 0.0**
comp=Z,2.1nm,0.7s,mb4.0,baz=293,slow=5.2,SNR=10
BRTR LR LR 02 45 59.4
comp=Z,105nm,18.2s,MS3.8,baz=292,slow=40
BRTR Keskin Array B 44.08 78 P **P 02 25 06.5 0.0**
BRTR LR LR 02 45 59.4
BRTR Keskin Array B 44.08 78 P **P 02 25 06.4 -0.1**
FVM French Village 45.18 280 *eP* **P 02 25 14.9 -0.4**
comp=Z,6.6nm,0.8s,mb4.5
FVM French Village 45.18 280 *eP* **P 02 25 14.9 -0.4**
comp=Z,6.6nm,0.8s,mb4.5
CCM Cathedral Cave 45.67 281 *eP* **P 02 25 19.1 0.0**
comp=Z,11nm,1.0s,mb4.7
CCM Cathedral Cave 45.67 281 *eP* **P 02 25 19.1 0.0**
comp=Z,11nm,1.0s,mb4.7
YKA Yellowknife Ar 46.53 320 P **P 02 25 24.0 -1.6**
comp=Z,2.3nm,0.9s,mb4.1,baz=64,slow=7.8,SNR=6.2
YKA PcP PcP 02 26 59.0 -0.6
comp=Z,0.7nm,0.5s,baz=65,slow=4.1,SNR=6.9
YKA LR LR 02 43 16.7
comp=Z,9.0nm,19.9s,MS2.7,baz=275,slow=34
YKA Yellowknife Ar 46.53 320 P **P 02 25 24.1 -1.6**
YKA PcP PcP 02 26 59.0 -0.6
YKA LR LR 02 43 16.7
YKA Yellowknife Ar 46.53 320 P **P 02 25 24.0 -1.6**
YKA Yellowknife Ar 46.53 320 PcP PcP 02 26 59.0 -0.7
DBIC Dimbokro 46.76 147 P **P 02 25 26.2 -1.7**
comp=Z,6.8nm,0.9s,mb4.6,baz=310,slow=5.9,SNR=6.4
DBIC LR LR 02 43 11.9
comp=Z,160nm,20.8s,MS4.0,baz=320,slow=34
DBIC Dimbokro 46.76 147 P **P 02 25 26.2 -1.7**
MIAR Mount Ida 49.27 278 *eP* **P 02 25 46.9 -0.3**
comp=Z,44nm,1.8s,mb5.2
MIAR Mount Ida 49.27 278 *eP* **P 02 25 46.9 -0.3**
comp=Z,44nm,1.8s,mb5.2
ARU Arti 49.66 47 P **P 02 25 50.3 +0.4**
comp=Z,6.7nm,0.7s,mb4.8
ARU Arti 49.66 47 P **P 02 25 50.3 +0.4**
comp=Z,6.7nm,0.7s,mb4.8
INK Inuvik 50.47 332 P **P 02 25 54.2 -1.7**
comp=Z,1.3nm,0.5s,mb4.2,baz=54,slow=8.0,SNR=7.7
INK Inuvik 50.47 332 P **P 02 25 54.2 -1.7**
INK Inuvik 50.47 332 P **P 02 25 54.2 -1.7**
B18A Beardsley Farm 51.14 302⇓P **P 02 26 00.2 -1.0**
baz=51
EGMT Eagleton 51.34 302⇑P **P 02 26 02.2 -0.4**
baz=51
EGMT Eagleton 51.34 302 *eP* **P 02 26 03.8 +1.1**
comp=Z,20nm,1.4s,mb4.9
EGMT Eagleton 51.34 302 *eP* **P 02 26 03.8 +1.1**
comp=Z,20nm,1.4s,mb4.9
E19A Rath Farm, Rou 51.67 300⇓P **P 02 26 04.7 -0.5**
baz=52
F20A Billings 51.67 299⇓P **P 02 26 05.3 0.0**
baz=52,SNR=5.1
B17A L&G Farms, Che 51.77 303⇓P **P 02 26 05.3 -0.6**
baz=52,SNR=5.2
G20A Bridger 52.04 298⇓P **P 02 26 07.7 -0.3**
baz=52
C17A Wharram Farm, 52.12 302⇑P **P 02 26 07.8 -0.7**
baz=52,SNR=5.1
I21A Big Trails, Te 52.32 296⇓P **P 02 26 09.0 -1.1**
baz=52
H20A Greybull 52.34 297⇓P **P 02 26 09.3 -0.9**
baz=52
D17A Six Diamond Ra 52.35 301⇓P **P 02 26 09.2 -1.0**
baz=52
WMOK Wichita Mounta 52.51 282 *eP* **P 02 26 11.1 -0.6**
comp=Z,6.3nm,1.3s,mb4.4
WMOK Wichita Mounta 52.51 282 *eP* **P 02 26 11.1 -0.5**
comp=Z,6.3nm,1.3s,mb4.4
F18A Big Timber 52.52 300⇓P **P 02 26 10.5 -0.9**
baz=52
K22A Casper 52.54 295⇓P **P 02 26 11.1 -0.7**
baz=52
C16A Fuhringer Ranc 52.57 302⇑P **P 02 26 12.2 +0.4**
baz=52,SNR=7.0
AKTK Aktyubinsk 52.62 53 P **P 02 26 12.6 +0.4**
AKTK Aktyubinsk 52.62 53 P **P 02 26 12.6 +0.4**
AKTO Aktyubinsk 52.62 53 P **P 02 26 12.6 +0.4**
comp=Z,2.2nm,0.8s,mb4.2,baz=312,slow=9.7,SNR=8.6
RLMT Red Lodge 52.71 298⇓P **P 02 26 13.5 +0.6**
baz=53
RLMT Red Lodge 52.71 298 *eP* **P 02 26 13.6 +0.7**
comp=Z,2.5nm,0.8s,mb4.2
RLMT Red Lodge 52.71 298 *eP* **P 02 26 13.6 +0.7**
comp=Z,2.5nm,0.8s,mb4.2
I20A Worland 52.73 297⇑P **P 02 26 13.2 +0.1**
baz=53
A14A Double T Ranch 52.82 305⇓P **P 02 26 13.0 -0.7**
baz=53
L22A Ellis Ranch, M 52.85 294⇓P **P 02 26 13.7 -0.4**
baz=53
D16A Dana Ranch, Ca 52.90 302⇑P **P 02 26 14.0 -0.3**
baz=53,SNR=6.5
K21A Alcova 52.98 295⇑P **P 02 26 14.9 -0.1**
baz=53
WALA Waterton Lakes 53.03 305 *eP* **P 02 26 15.2 -0.1**
comp=Z,0.5nm,1.3s,mb3.3
WALA Waterton Lakes 53.03 305 *eP* **P 02 26 15.1 -0.2**
comp=Z,0.5nm,1.3s,mb3.3
J20A Shoshoni 53.05 296⇑P **P 02 26 15.5 0.0**
baz=53,SNR=6.2
C15A Salmond Ranch, 53.06 303⇓P **P 02 26 15.1 -0.3**
baz=53,SNR=5.6
B14A Marquette Ranc 53.09 304⇓P **P 02 26 14.4 -1.3**
baz=53
I19A Meeetse 53.19 297⇓P **P 02 26 14.4 -2.0**
baz=53
H18A Shoshone NF, C 53.20 298⇓P **P 02 26 16.5 0.0**
baz=53
N23A Red Feather La 53.23 292⇓P **P 02 26 17.4 +0.6**
baz=53,SNR=9.3
HRY Holter Researc 53.24 301 *eP* **P 02 26 17.2 +0.4**
HRY Holter Researc 53.24 301 *eP* **P 02 26 17.2 +0.3**
D15A Lincoln 53.44 302⇓P **P 02 26 18.4 +0.1**
baz=53,SNR=13
L21A Rawlins 53.45 294⇑P **P 02 26 18.2 -0.3**
baz=53,SNR=6.8
RWWY Rawlins 53.52 294 *eP* **P 02 26 19.8 +0.8**
comp=Z,11nm,1.0s,mb4.8
RWWY Rawlins 53.52 294 *eP* **P 02 26 19.8 +0.8**
comp=Z,11nm,1.0s,mb4.8
K20A Yellowstone Ra 53.62 296⇓P **P 02 26 18.7 -0.9**
baz=54
M21A Separation Pea 53.66 294⇓P **P 02 26 20.4 +0.4**
baz=54,SNR=9.8
J19A Crowheart 53.67 297⇑P **P 02 26 19.8 -0.3**
baz=54
C14A Swan Lake 53.69 303⇑P **P 02 26 19.1 -1.0**
baz=54
B13A Whitefish 53.73 304⇓P **P 02 26 19.5 -0.8**
baz=54
BOZ Bozeman (W) 53.75 300⇑P **P 02 26 20.6 0.0**
baz=54,SNR=5.9
BOZ Bozeman (W) 53.75 300 *eP* **P 02 26 20.8 +0.2**
comp=Z,20nm,1.8s,mb4.7
BOZ Bozeman (W) 53.75 300 *eP* **P 02 26 20.8 +0.2**
comp=Z,20nm,1.8s,mb4.7
K19A Absolon Red Bu 53.82 296⇑P **P 02 26 20.0 -1.1**
baz=54,SNR=5.4
CHMT Chamberlain Mo 53.92 302 *eP* **P 02 26 22.1 +0.3**
CHMT Chamberlain Mo 53.92 302 *eP* **P 02 26 22.1 +0.3**
L20A Wamsutter 54.01 295 P **P 02 26 22.9 +0.4**
baz=54,SNR=7.2
C13A Hot Springs 54.19 304⇑P **P 02 26 22.8 -1.0**
baz=54
N21A Black Mountain 54.27 293⇑P **P 02 26 25.0 +0.6**
baz=54,SNR=7.7
BW06 Boulder Array 54.27 296⇓P **P 02 26 23.4 -1.1**
baz=54,SNR=10
BW06 Boulder Array 54.27 296 *eP* **P 02 26 23.9 -0.5**
comp=Z,4.6nm,0.9s,mb4.4
BW06 Boulder Array 54.27 296 *eP* **P 02 26 23.9 -0.5**
comp=Z,4.6nm,0.9s,mb4.4
PDAR Pinedale Array 54.27 296 P **P 02 26 23.9 -0.5**
comp=Z,3.1nm,0.9s,mb4.2,baz=54,slow=7.7,SNR=16
PDAR LR LR 02 46 27.7
comp=Z,120nm,21.5s,MS3.9,baz=68,slow=33
PDAR Pinedale Array 54.27 296 P **P 02 26 23.9 -0.5**
J18A Kendall Valley 54.27 297⇑P **P 02 26 24.5 0.0**
baz=54,SNR=7.0
LOHW Long Hollow 54.37 298 *eP* **P 02 26 26.0 +0.8**
comp=Z,9.9nm,1.4s,mb4.5
LOHW Long Hollow 54.37 298 *eP* **P 02 26 26.0 +0.8**
comp=Z,9.9nm,1.4s,mb4.5
MOOW Moose Ponds 54.37 298 *eP* **P 02 26 25.6 +0.4**
comp=Z,6.4nm,1.3s,mb4.4
MOOW Moose Ponds 54.37 298 *eP* **P 02 26 25.6 +0.4**
comp=Z,6.4nm,1.3s,mb4.4
DLMT Dillon 54.47 300 *eP* **P 02 26 26.5 +0.7**
comp=Z,5.5nm,1.0s,mb4.4
DLMT Dillon 54.47 300 *eP* **P 02 26 26.5 +0.7**
comp=Z,5.5nm,1.0s,mb4.4
G15A Dillon 54.53 300⇑P **P 02 26 26.7 +0.4**
baz=54
TPAW Teton Pass 54.65 298 *eP* **P 02 26 27.6 +0.4**
comp=Z,2.8nm,0.8s,mb4.3
TPAW Teton Pass 54.65 298 *eP* **P 02 26 27.6 +0.4**
comp=Z,2.8nm,0.8s,mb4.3
REDW Red Top Meadow 54.67 298 *eP* **P 02 26 27.6 +0.3**
comp=Z,18nm,1.5s,mb4.9
REDW Red Top Meadow 54.67 298 *eP* **P 02 26 27.6 +0.3**
comp=Z,18nm,1.5s,mb4.9
N20A Spence Gulch, 54.67 294⇓P **P 02 26 28.2 +0.9**
baz=54,SNR=8.5
E13A Victor 54.72 302⇑P **P 02 26 27.6 0.0**
baz=55
I16A Newdale 54.73 298⇓P **P 02 26 28.3 +0.6**
baz=55
DAWY Dawson 54.98 330 *eP* **P 02 26 29.6 +0.4**
DAWY Dawson 54.98 330 *eP* **P 02 26 29.6 +0.3**
D12A Red Ives Fores 54.99 304⇓P **P 02 26 28.9 -0.6**
baz=55
C11A Tepee Creek (N 55.01 305⇓P **P 02 26 28.5 -1.2**
baz=55
T24A Torres, Weston 55.02 288⇓P **P 02 26 30.2 +0.3**
baz=55
U25A Circle Dot Ran 55.04 287⇓P **P 02 26 30.5 +0.4**
baz=55
DLBC Dease Lake 55.14 321 P **P 02 26 30.9 +0.4**
comp=Z,1.5nm,0.7s,mb4.2,baz=38,slow=11,SNR=4.5
DLBC Dease Lake 55.14 321 P **P 02 26 30.9 +0.4**
NEW Newport 55.22 306 *eP* **P 02 26 31.0 -0.2**
comp=Z,5.5nm,1.2s,mb4.5
NEW Newport 55.22 306 *eP* **P 02 26 31.0 -0.2**
comp=Z,5.5nm,1.2s,mb4.5
E12A Beaver Dam Sad 55.50 303⇑P **P 02 26 32.8 -0.4**
baz=55,SNR=5.3
O19A Miners Draw (B 55.52 294⇓P **P 02 26 33.7 +0.3**
baz=55,SNR=14
MSTX Muleshoe 55.55 284⇑P **P 02 26 33.7 -0.1**
baz=55
G13A Cobalt 55.55 301⇑P **P 02 26 33.8 +0.1**
baz=55,SNR=6.3
J15A Blackfoot 55.56 298⇑P **P 02 26 34.0 +0.3**
baz=55
M17A Scullys Gap (B 55.71 296⇑P **P 02 26 34.4 -0.4**
baz=56
F12A Elk City 55.72 302⇑P **P 02 26 34.6 -0.3**
baz=56,SNR=6.4
H13A Challis 55.89 301⇑P **P 02 26 36.7 +0.6**
baz=56,SNR=5.8
G12A Big Creek, Yel 56.15 302⇓P **P 02 26 37.6 -0.3**
baz=56
HWUT Hardware Ranch 56.16 296 *eP* **P 02 26 37.9 -0.2**
comp=Z,28nm,1.5s,mb5.1
HWUT Hardware Ranch 56.16 296 *eP* **P 02 26 37.9 -0.2**
comp=Z,28nm,1.5s,mb5.1
I13A Wildhorse Cree 56.21 300⇑P **P 02 26 39.4 +1.0**
baz=56,SNR=5.6
H12A Diamond D Ranc 56.24 301⇓P **P 02 26 38.5 0.0**
baz=56,SNR=6.2
B08A Colville Reser 56.34 307⇓P **P 02 26 37.7 -1.5**
baz=56
S21A Coal Bank Pass 56.35 290⇑P **P 02 26 40.5 +1.0**
baz=56
M16A Huntsville 56.38 296⇓P **P 02 26 39.6 0.0**
baz=56
K14A Jones Ranch, D 56.52 298⇑P **P 02 26 40.8 +0.2**
baz=56
HLID Hailey 56.60 300⇑P **P 02 26 42.1 +0.9**
baz=56,SNR=7.9
P18A Preston Nutter 56.61 294⇑P **P 02 26 41.6 +0.3**
baz=56
M15A Larsen Ranch, 56.77 297 P **P 02 26 42.3 -0.1**
baz=57,SNR=6.6
ILAR Eielson Array 56.83 333 P **P 02 26 43.0 +0.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=45,slow=5.0,SNR=17
ILAR PcP PcP 02 27 37.4 -0.7
comp=Z,0.7nm,0.8s,baz=13,slow=3.5,SNR=4.6
ILAR LR LR 02 48 56.6
comp=Z,136nm,19.9s,MS4.0,baz=87,slow=34
ILAR Eielson Array 56.83 333 P **P 02 26 43.0 +0.5**
ILAR Eielson Array 56.83 333 PcP PcP 02 27 37.3 -0.7
R19A Curley Farm, L 56.85 292⇑P **P 02 26 43.9 +0.8**
baz=57,SNR=6.5
I12A Atlanta 56.86 300⇓P **P 02 26 44.0 +1.0**
baz=57,SNR=17
Q18A Rafter H Ranch 56.87 293⇓P **P 02 26 43.4 +0.3**
baz=57
SRU San Rafael 57.10 293 *eP* **P 02 26 45.1 +0.3**
comp=Z,4.8nm,0.9s,mb4.5
SRU San Rafael 57.10 293 *eP* **P 02 26 45.1 +0.3**
comp=Z,4.8nm,0.9s,mb4.5
BRVK Borovoye 57.15 45 *eP* **P 02 26 44.9 -0.1**
comp=Z,5.1nm,0.9s,mb4.5
BRVK Borovoye 57.15 45 *eP* **P 02 26 44.8 -0.1**
comp=Z,5.1nm,0.9s,mb4.5
BVAR Borovoye Array 57.22 45 P **P 02 26 46.3 +0.9**
comp=Z,5.1nm,0.7s,mb4.7,baz=301,slow=6.0,SNR=25
BVAR Borovoye Array 57.22 45 P **P 02 26 46.3 +0.9**
ANMO Albuquerque 57.25 287 P **P 02 26 46.2 +0.3**
comp=Z,0.4nm,0.4s,mb3.8,baz=73,slow=9.3,SNR=3.1
ANMO Albuquerque 57.25 287 P **P 02 26 46.2 +0.3**
MFID Camas Ranch 57.49 300⇓P **P 02 26 48.6 +1.1**
baz=57
125A Gardner Draw, 57.60 284⇓P **P 02 26 47.8 -0.7**
baz=58
428A Kincaid Ranch, 57.60 281⇓P **P 02 26 48.1 -0.3**
baz=58
R17A Hanksville Air 57.65 293⇓P **P 02 26 49.0 +0.3**
baz=58,SNR=7.1
DUG Dugway 57.78 296⇑P **P 02 26 49.9 +0.3**
baz=58,SNR=9.3
DUG Dugway 57.78 296 *eP* **P 02 26 49.7 +0.1**
comp=Z,9.3nm,1.0s,mb4.8
DUG Dugway 57.78 296 *eP* **P 02 26 49.7 +0.1**
comp=Z,9.3nm,1.0s,mb4.8
BNM Barren Site 57.88 286 *eP* **P 02 26 52.1 +1.8**
comp=Z,7.7nm,1.4s,mb4.5
BNM Barren Site 57.88 286 *eP* **P 02 26 52.2 +1.9**
comp=Z,7.7nm,1.4s,mb4.5
124A Stringfield Ra 58.08 284⇓P **P 02 26 52.0 +0.2**
baz=58
R16A Teasdale 58.20 293⇑P **P 02 26 53.6 +1.0**
baz=58
P14A Drum Mountains 58.32 295⇓P **P 02 26 53.5 +0.2**
baz=58
MSU Marysvale 58.48 294 *eP* **P 02 26 54.9 +0.4**
MSU Marysvale 58.48 294 *eP* **P 02 26 54.9 +0.4**
426A McDonald Obser 58.51 282⇓P **P 02 26 55.4 +0.5**
baz=58
S16A Weppner Ranch, 58.63 293⇓P **P 02 26 55.9 +0.3**
baz=58
Q14A Sevier Lake (B 58.83 295⇓P **P 02 26 57.6 +0.7**
baz=59,SNR=9.0
ROSC El Rosal 58.84 237 LR LR 02 48 36.5
comp=Z,135nm,20.2s,MS4.1,baz=24,slow=32
627A Terlingua Ranc 58.91 280⇑P **P 02 26 57.5 -0.1**
baz=59
P13A Bates Ranch, G 58.97 296⇑P **P 02 26 58.5 +0.7**
baz=59,SNR=6.1
TXAR Lajitas Array 59.17 280 P **P 02 26 58.9 -0.5**
comp=Z,2.0nm,1.1s,mb4.1,baz=64,slow=8.5,SNR=8.4
TXAR PcP PcP 02 27 47.4 -0.4
comp=Z,1.9nm,1.0s,baz=69,slow=4.9,SNR=5.2
TXAR LR LR 02 51 37.2
comp=Z,327nm,21.4s,MS4.4,baz=290,slow=35
TXAR Lajitas Array 59.17 280 P **P 02 26 58.9 -0.5**
TXAR PcP PcP 02 27 47.5 -0.4
TXAR LR LR 02 51 37.2
TXAR Lajitas Array 59.17 280 P **P 02 26 58.9 -0.5**
TXAR Lajitas Array 59.17 280 PcP PcP 02 27 47.5 -0.4
U16A Tuba City 59.38 291⇓P **P 02 27 01.8 +1.1**
baz=59,SNR=5.6
P12A McGill 59.48 296⇑P **P 02 27 02.6 +1.1**
baz=59
WVOR Wild Horse Val 59.71 301 *eP* **P 02 27 03.5 +0.6**
comp=Z,7.4nm,1.0s,mb4.7
WVOR Wild Horse Val 59.71 301 *eP* **P 02 27 03.5 +0.6**
comp=Z,7.4nm,1.0s,mb4.7
CCUT Cedar City 59.81 294 *eP* **P 02 27 04.8 +1.1**
comp=Z,6.9nm,1.0s,mb4.6
CCUT Cedar City 59.81 294 *eP* **P 02 27 04.8 +1.1**
comp=Z,6.9nm,1.0s,mb4.6
U15A North Rim 59.90 292⇓P **P 02 27 04.9 +0.6**
baz=60
R12A Pony Springs, 60.05 295⇓P **P 02 27 06.3 +1.0**
baz=60
R11A Troy Canyon, C 60.61 296⇑P **P 02 27 07.8 -1.4**
baz=60,SNR=5.6
U13A Pakoon Wash 60.92 293⇓P **P 02 27 10.8 -0.5**
baz=61,SNR=5.6
MOD Modoc 60.99 301 *eP* **P 02 27 12.4 +0.7**
comp=Z,8.3nm,1.1s,mb4.8
MOD Modoc 60.99 301 *eP* **P 02 27 12.4 +0.7**
comp=Z,8.3nm,1.1s,mb4.8
T11A Corn Creek, Al 61.13 294⇓P **P 02 27 13.2 +0.4**
baz=61
V13A Grand Canyon W 61.31 293⇓P **P 02 27 14.6 +0.6**
baz=61,SNR=6.2
S10A Tonopah Range, 61.49 296⇑P **P 02 27 15.1 -0.1**
baz=61
V12A Nelson 61.91 293⇓P **P 02 27 18.4 +0.4**
baz=62
NVAR Mina Array Bea 62.16 297 P **P 02 27 18.8 -0.9**
comp=Z,1.0nm,0.8s,mb4.0,baz=94,slow=11,SNR=4.9
NVAR Mina Array Bea 62.16 297 P **P 02 27 18.8 -0.9**
U10A Ash Meadows, A 62.34 294⇑P **P 02 27 21.6 +0.7**
baz=62
KURK Kurchatov 62.55 43 P **P 02 27 22.5 +0.4**
comp=Z,3.3nm,0.7s,mb4.6,baz=320,slow=7.1,SNR=16
KURK Kurchatov 62.55 43 *eP* **P 02 27 22.3 +0.2**
comp=Z,3.2nm,0.8s,mb4.5
KURK Kurchatov 62.55 43 *eP* **P 02 27 22.3 +0.2**
comp=Z,3.2nm,0.8s,mb4.5
FURC Furnace Creek, 62.62 295⇑P **P 02 27 21.7 -1.1**
baz=62

ZALV	**Zalesovo Beam**	**62.85**	**38**	P	**P**	**02 27 24.3**	**+0.2**
	comp=Z,0.8nm,0.5s,mb4.2,baz=314,slow=7.3,SNR=3.7						
ZALV				LR	LR	02 55 48.0	
	comp=Z,135nm,19.0s,MS4.1,baz=70,slow=37						
MPMC	**Manual Prospec**	**63.27**	**295** ⇓	P	**P**	**02 27 28.2**	**+1.1**
	baz=63						
GSC	**Goldstone**	**63.38**	**294** ⇑	P	**P**	**02 27 28.5**	**+0.7**
	baz=63						
GSC	**Goldstone**	**63.38**	**294**	*e*P	**P**	**02 27 28.7**	**+0.9**
	comp=Z,7.6nm,0.7s,mb4.9						
GSC	**Goldstone**	**63.38**	**294**	*e*P	**P**	**02 27 28.7**	**+0.9**
	comp=Z,7.6nm,0.7s,mb4.9						
ISA	**Isabella**	**64.13**	**295** ⇑	P	**P**	**02 27 33.3**	**+0.5**
	baz=64						
MK31	**Makanchi Array**	**67.07**	**44**	*e*P	**P**	**02 27 52.1**	**+0.5**
MK31	**Makanchi Array**	**67.07**	**44**	*e*P	**P**	**02 27 52.1**	**+0.5**
MKAR	**Makanchi Array**	**67.07**	**44**	P	**P**	**02 27 52.0**	**+0.4**
	comp=Z,2.3nm,0.8s,mb4.3,baz=327,slow=5.2,SNR=14						
MKAR				LR	LR	02 56 33.8	
	comp=Z,144nm,19.6s,MS4.2,baz=329,slow=35						
ATAH	**Atahualpa**	**71.05**	**234**	P	**P**	**02 28 17.6**	**+0.9**
	comp=Z,4.1nm,0.8s,mb4.4,baz=21,slow=7.3,SNR=2.7						
SIV	**San Ignacio**	**71.09**	**213**	P	**P**	**02 28 14.7**	**-2.1**
	comp=Z,6.3nm,1.2s,mb4.4,baz=54,slow=7.6,SNR=9.3						
SIV	**San Ignacio**	**71.09**	**213**	P	**P**	**02 28 14.7**	**-2.1**
WMQ	**Urumqi**	**71.80**	**43**	*e*P	**P**	**02 28 22.0**	**+1.1**
WMQ				sP	sP	02 28 29.0	+3.6
WMQ				PP	PP	02 31 03.0	+3.3
WMQ				S	S	02 37 46.0	+5.0
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
WMQ				pmax	pmax		
	comp=Z,75nm,7.0s						
WMQ				LR	LR		
	comp=N,160nm,18.0s,MS4.4						
WMQ				LR	LR		
	comp=E,130nm,18.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,190nm,18.0s,MS4.4						
LPAZ	**La Paz**	**74.12**	**220**	P	**P**	**02 28 34.1**	**-0.7**
	comp=Z,2.8nm,1.1s,mb4.1,baz=16,slow=12,SNR=5.6						
LPAZ				LR	LR	02 57 16.7	
	comp=Z,123nm,21.6s,MS4.2,baz=343,slow=33						
LPAZ	**La Paz**	**74.12**	**220**	P	**P**	**02 28 34.2**	**-0.6**
SONM	**Songino Array**	**75.72**	**30**	P	**P**	**02 28 43.0**	**-0.9**
	comp=Z,0.9nm,0.7s,mb3.8,baz=323,slow=6.2,SNR=4.9						
SONM				LR	LR	03 05 07.6	
	comp=Z,112nm,19.5s,MS4.2,baz=22,slow=38						
SONM	**Songino Array**	**75.72**	**30**	P	**P**	**02 28 43.0**	**-0.8**
CPUP	**Villa Florida**	**79.51**	**206**	P	**P**	**02 29 03.3**	**-1.7**
	comp=Z,1.4nm,0.6s,mb4.0,baz=1.5,slow=3.3,SNR=6.1						
CPUP				LR	LR	02 59 59.8	
	comp=Z,62nm,20.2s,MS3.9,baz=195,slow=32						
CPUP	**Villa Florida**	**79.51**	**206**	P	**P**	**02 29 03.3**	**-1.7**
HHC	**Hu-ho-hao-te**	**83.63**	**29**	*e*P	**P**	**02 29 27.4**	**+0.5**
HHC				pP	pP	02 29 32.3	+2.1
HHC				sP	sP	02 29 34.4	+3.0
HHC				PP	PP	02 32 41.5	+2.9
HHC				S	S	02 39 48.3	-0.7
HHC				sS	sS	02 39 56.1	+1.6
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,73nm,6.4s						
HHC				LR	LR		
	comp=N,130nm,15.7s,MS4.6						
HHC				LR	LR		
	comp=E,160nm,17.3s,MS4.6						
HHC				LR	LR		
	comp=Z,97nm,15.7s,MS4.3						
CN2	**Changchun**	**84.59**	**19**	*e*P	**P**	**02 29 31.1**	**-0.6**
CN2				*e*S	S	02 39 55.4	-3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb5.4						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,21.0s,MS4.7						
CN2				LR	LR		
	comp=E,200nm,21.0s,MS4.7						
CN2				LR	LR		
	comp=Z,70nm,17.0s,MS4.1						
MDJ	**Mudanjiang**	**84.61**	**16**	P	**P**	**02 29 30.2**	**-1.6**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,51nm,4.1s						
LZH	**Lanzhou**	**85.08**	**37**	*e*P	**P**	**02 29 34.5**	**+0.2**
LZH				pP	pP	02 29 38.0	+0.3
LZH				sP	sP	02 29 41.0	+2.1
LZH				pmax	pmax		
	comp=Z,20nm,1.5s,mb5.0						
LZH				pmax	pmax		
	comp=Z,86nm,4.5s						
BJI	**Beijing**	**85.79**	**27**	P	**P**	**02 29 36.2**	**-1.6**
BJI				pP	pP	02 29 39.5	-1.6
BJI				sP	sP	02 29 40.8	-1.5
BJI				S	S	02 40 08.6	-1.9
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.9						
BJI				pmax	pmax		
	comp=Z,63nm,4.0s						
BJI				LR	LR		
	comp=N,75nm,15.4s,MS4.5						
BJI				LR	LR		
	comp=E,83nm,10.5s,MS4.5						
BJI				LR	LR		
	comp=Z,23nm,21.9s						
CFAA	**Coronel Fontan**	**87.94**	**213**	LR	LR	03 04 39.3	
	comp=Z,13nm,21.5s,MS3.3,baz=355,slow=33						
CD2	**Chengdu**	**89.55**	**40**	*e*P	**P**	**02 29 56.0**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.2						
CD2				pmax	pmax		
	comp=Z,30nm,8.2s						
BOSA	**Boshof**	**90.96**	**135**	LR	LR	03 08 02.8	
	comp=Z,160nm,19.1s,MS4.5,baz=277,slow=34						
NJ2	**Nanjing**	**94.00**	**27**	*e*P	**P**	**02 30 17.6**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
KMI	**Kunming**	**94.13**	**43**	P	**P**	**02 30 17.0**	**-0.3**
KMI				pP	pP	02 30 21.4	+0.7
KMI				sP	sP	02 30 23.6	+1.7
KMI				PP	PP	02 34 05.4	+2.4
KMI				S	S	02 41 24.2	-4.1
KMI				SS	SS	02 47 47.2	0.0
KMI				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.3						
KMI				LR	LR		
	comp=N,130nm,21.9s,MS4.5						
KMI				LR	LR		
	comp=E,90nm,18.7s,MS4.5						
KMI				LR	LR		
	comp=Z,150nm,24.1s						
GYA	**Guiyang**	**94.67**	**40**	*e*P	**P**	**02 30 19.6**	**-0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.2						
PLCA	**Paso Flores**	**96.97**	**211**	LR	LR	03 13 12.5	
	comp=Z,81nm,19.1s,MS4.2,baz=282,slow=35						
CMAR	**Chiang Mai Arr**	**98.02**	**50**	LR	LR	03 18 19.8	
	comp=Z,139nm,19.1s,MS4.5,baz=323,slow=38						
QSPA	**South Pole Qui**	**139.06**	**180**	*e*PKPdf	PKPdf	02 36 24.2	+0.7
QSPA	**South Pole Qui**	**139.06**	**180**	*e*PKIKP	PKPdf	02 36 24.2	+0.7
ASAR	**Alice Springs**	**150.94**	**35**	PKPbc	PKPbc	02 36 50.5	-0.7
	comp=Z,1.8nm,0.5s,baz=350,slow=1.9,SNR=40						
ASAR	**Alice Springs**	**150.94**	**35**	PKPbc	PKPbc	02 36 50.5	-0.8

DDA ***02*** *02:28:45.3, 36°.94N×29°.22E, h25km±2km, Md3.2*
CSEM ***02*** *02:28:47.9±0.1, 37°.11N×29°.15E, h2km, MD3.4, Error ellipse: s-maj=4.2km s-min=3.0km az=3.0*
ISCJB ***02*** *02:28:47.6±0.5, 37°.07N±0°.03×29°.15E±0°.02, h5km±4km, Error ellipse: s-maj=4.3km s-min=3.3km az=4.1*
NEIC ***02*** *02:28:47.0, 37°.12N×29°.13E, h5km, MD3.3(ATH), ML3.3(ISK), After ISK.*
ISK ***02*** *02:28:47.0, 37°.10N×29°.13E, h3km, MD3.4*
ATH ***02*** *02:28:52.9, 36°.59N×29°.02E, h15km±1km, MD3.3/6*
ISC 02 02:28:48.2±0.5, 37°.08N±0°.03×29°.14E±0°.02, h5km±4km, n73, σ1s01/96, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**76**	*e*PG	**Pg**	**02 28 53.2**	**-0.7**
GLHS				*e*SG	**Sg**	**02 28 58.4**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.29**	**76**	*e*Pg	**Pg**	**02 28 53.2**	**-0.7**
GLHS				*e*Sg	**Sg**	**02 28 58.4**	**+0.7**
GOLH	**Golhisar**	**0.37**	**65**	*i* P	**Pg**	**02 28 53.8**	**-1.5**
GOLH				*i* S	**Sg**	**02 29 00.9**	**+0.8**
GOLH	**Golhisar**	**0.37**	**65**	*i* P	**Pg**	**02 28 53.8**	**-1.5**
GOLH				*i* S	**Sg**	**02 29 00.9**	**+0.8**
DNZL	**Cakiroluk**	**0.61**	**353**	*i* P	**Pg**	**02 28 58.2**	**-1.7**
DNZL				*i* S	**Sg**	**02 29 08.7**	**+0.9**
DNZL	**Cakiroluk**	**0.61**	**353**	*i* P	**Pg**	**02 28 58.2**	**-1.7**
DNZL				*i* S	**Sg**	**02 29 08.7**	**+0.8**
DENT	**Denizli**	**0.68**	**353**	*e*PG	**Pg**	**02 29 00.8**	**-0.4**
DENT	**Denizli**	**0.68**	**353**	*e*Pg	**Pg**	**02 29 00.8**	**-0.4**
YER	**Yerkesik**	**0.69**	**275**	*e*PG	**Pg**	**02 29 00.9**	**-0.5**
YER				*e*SG	**Sg**	**02 29 11.1**	**+0.7**
YER	**Yerkesik**	**0.69**	**275**	*e*Pg	**Pg**	**02 29 00.9**	**-0.5**
YER				*e*Sg	**Sg**	**02 29 11.1**	**+0.7**
ELL	**Elmali**	**0.70**	**118**	*e*PG	**Pg**	**02 29 01.1**	**-0.5**
ELL	**Elmali**	**0.70**	**118**	*e*Pg	**Pg**	**02 29 01.1**	**-0.5**
AKAS	**Kas**	**0.93**	**156**	*i* P	**Pg**	**02 28 59.9**	**-6.0**
AKAS				*i* S	**Sg**	**02 29 18.1**	**+0.1**
KSL	**Kastellorizon**	**1.00**	**159**	*e*Pn	**Pn**	**02 29 05.1**	**-3.7**
KSL	**Kastellorizon**	**1.00**	**159**	*e*PN	**Pn**	**02 29 05.1**	**-3.7**
MLSB	**Milas**	**1.11**	**281**	*e*PN	**Pn**	**02 29 08.7**	**-1.7**
MLSB	**Milas**	**1.11**	**281**	*e*Pn	**Pn**	**02 29 08.7**	**-1.7**
AYDN	**Tasoluk**	**1.16**	**300**	*i* P	**Pg**	**02 29 09.9**	**-0.5**
AYDN				*i* S	**Sg**	**02 29 26.6**	**+1.1**
AYDN	**Tasoluk**	**1.16**	**300**	*i* P	**Pg**	**02 29 09.9**	**-0.5**
AYDN				*i* S	**Sg**	**02 29 26.6**	**+1.1**
ARG	**Arkhangelos**	**1.19**	**224**	*e*Pn	**Pn**	**02 29 08.4**	**-3.1**
ARG	**Arkhangelos**	**1.19**	**224**	*e*PN	**Pn**	**02 29 08.4**	**-3.1**
ARG	**Arkhangelos**	**1.19**	**224**	*e*Pn	**Pn**	**02 29 08.4**	**-3.1**
BCK	**Bucak**	**1.21**	**71**	*e*PN	**Pn**	**02 29 11.3**	**-0.4**
BCK	**Bucak**	**1.21**	**71**	*e*Pn	**Pn**	**02 29 11.4**	**-0.4**
ANTB	**Antalya**	**1.22**	**98**	*e*PN	**Pn**	**02 29 11.5**	**-0.4**
ANTB	**Antalya**	**1.22**	**98**	*e*Pn	**Pn**	**02 29 11.5**	**-0.4**
KHL	**Karahalli**	**1.27**	**14**	*e*PN	**Pn**	**02 29 11.5**	**-1.2**
KHL	**Karahalli**	**1.27**	**14**	*e*Pn	**Pn**	**02 29 11.5**	**-1.1**
DAT	**Datca**	**1.30**	**255**	*e*PN	**Pn**	**02 29 12.8**	**-0.3**
DAT	**Datca**	**1.30**	**255**	*e*Pn	**Pn**	**02 29 12.8**	**-0.2**
KHAL	**Karahalli**	**1.31**	**12**	*i* P	**Pn**	**02 29 13.5**	**+0.3**
KHAL				*i* S	**Sb**	**02 29 33.1**	**+2.6**
KHAL	**Karahalli**	**1.31**	**12**	*i* P	**Pn**	**02 29 13.5**	**+0.3**
KHAL				*i* S	**Sb**	**02 29 33.1**	**+2.6**
BDRM	**Kayabasi**	**1.36**	**270**	*i* P	**Pn**	**02 29 13.4**	**-0.4**
BDRM				*i* S	**Sb**	**02 29 32.2**	**+0.4**
BDRM	**Kayabasi**	**1.36**	**270**	*i* P	**Pn**	**02 29 13.4**	**-0.4**
BDRM				*i* S	**Sb**	**02 29 32.2**	**+0.4**
BODT	**Bodrum**	**1.47**	**270**	*e*PN	**Pn**	**02 29 14.9**	**-0.4**
BODT	**Bodrum**	**1.47**	**270**	*e*Pn	**Pn**	**02 29 14.9**	**-0.4**
KULA	**Kula-Manisa**	**1.48**	**345**	*e*PN	**Pn**	**02 29 15.2**	**-0.3**
KULA	**Kula-Manisa**	**1.48**	**345**	*e*Pn	**Pn**	**02 29 15.2**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.53**	**75**	*e*PN	**Pn**	**02 29 16.9**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.53**	**75**	*e*Pn	**Pn**	**02 29 16.9**	**+0.7**
SHUT	**Suhut-Afyon**	**1.84**	**37**	*e*PN	**Pn**	**02 29 20.5**	**0.0**
SHUT	**Suhut-Afyon**	**1.84**	**37**	*e*Pn	**Pn**	**02 29 20.5**	**0.0**
DEMI	**Demirci**	**1.98**	**350**	*i* P	**Pn**	**02 29 22.4**	**0.0**
DEMI				*i* S	**Sn**	**02 29 45.9**	**-1.8**
DEMI	**Demirci**	**1.98**	**350**	*i* P	**Pn**	**02 29 22.4**	**0.0**
DEMI				*i* S	**Sn**	**02 29 45.9**	**-1.8**
IZM	**Izmir**	**1.99**	**312**	*e*PN	**Pn**	**02 29 21.9**	**-0.5**
IZM	**Izmir**	**1.99**	**312**	*e*Pn	**Pn**	**02 29 21.9**	**-0.5**
GDZ	**Gediz**	**2.02**	**7**	*i* P	**Pn**	**02 29 22.0**	**-0.9**
GDZ	**Gediz**	**2.02**	**7**	*i* P	**Pn**	**02 29 22.0**	**-0.9**
AKHS	**Akhisar**	**2.08**	**330**	*i* P	**Pn**	**02 29 23.2**	**-0.5**
AKHS				*i* S	**Sn**	**02 29 50.4**	**+0.4**
AKHS	**Akhisar**	**2.08**	**330**	*i* P	**Pn**	**02 29 23.2**	**-0.5**
AKHS				*i* S	**Sn**	**02 29 50.4**	**+0.5**
BOLV	**Bolvadin**	**2.17**	**41**	*i* P	**Pn**	**02 29 26.0**	**+1.0**
BOLV				*i* S	**Sn**	**02 29 52.1**	**-0.1**
BOLV	**Bolvadin**	**2.17**	**41**	*i* P	**Pn**	**02 29 26.0**	**+1.0**
BOLV				*i* S	**Sn**	**02 29 52.1**	**-0.1**
HDMB	**Hadim**	**2.68**	**92**	*e*PN	**Pn**	**02 29 32.9**	**+0.9**
HDMB	**Hadim**	**2.68**	**92**	*e*Pn	**Pn**	**02 29 32.9**	**+1.0**
KONT	**Konya--Tatoy**	**2.70**	**70**	*e*PN	**Pn**	**02 29 33.0**	**+0.8**
KONT	**Konya--Tatoy**	**2.70**	**70**	*e*Pn	**Pn**	**02 29 33.0**	**+0.8**
KIZT	**Kizilcal**	**2.81**	**49**	*e*PN	**Pn**	**02 29 34.2**	**+0.4**
KIZT	**Kizilcal**	**2.81**	**49**	*e*Pn	**Pn**	**02 29 34.2**	**+0.5**
ZKR	**Zakros**	**3.08**	**231**	*e*Pn	**Pn**	**02 29 38.2**	**+0.8**
ZKR	**Zakros**	**3.08**	**231**	*e*PN	**Pn**	**02 29 38.2**	**+0.8**
ZKR	**Zakros**	**3.08**	**231**	*e*Pn	**Pn**	**02 29 38.2**	**+0.8**
LAST	**Lasithi**	**3.53**	**238**	*e*Pn	**Pn**	**02 29 45.0**	**+1.3**
LAST	**Lasithi**	**3.53**	**238**	*e*PN	**Pn**	**02 29 45.0**	**+1.3**
LAST	**Lasithi**	**3.53**	**238**	*e*Pn	**Pn**	**02 29 45.0**	**+1.3**
IKL	**Isikli**	**3.75**	**102**	*e*PN	**Pn**	**02 29 48.3**	**+1.6**
IKL	**Isikli**	**3.75**	**102**	*e*Pn	**Pn**	**02 29 48.3**	**+1.7**
CSS	**Prodhromos**	**4.00**	**121**	*e*Pn	**Pn**	**02 29 49.9**	**-0.2**
CSS				*e*S	**Sn**	**02 30 36.5**	**-0.9**
CSS	**Prodhromos**	**4.00**	**121**	*e*Pn	**Pn**	**02 29 49.9**	**-0.2**
CSS				*e*S	**Sn**	**02 30 36.5**	**-0.9**
SIVA	**Sivas**	**4.07**	**241**	*e*Pn	**Pn**	**02 29 53.3**	**+2.2**
SIVA	**Sivas**	**4.07**	**241**	*e*PN	**Pn**	**02 29 53.3**	**+2.2**
SIVA	**Sivas**	**4.07**	**241**	*e*Pn	**Pn**	**02 29 53.3**	**+2.2**
KARN	**Karanos**	**4.54**	**250**	*e*PN	**Pn**	**02 30 00.8**	**+3.2**
KARN	**Karanos**	**4.54**	**250**	*e*Pn	**Pn**	**02 30 00.8**	**+3.2**

IDC ***02*** *02:40:14.0±1.9, 31°.69S×180°.00E, h328km±18km, mb4.2/10, mb1 4.3/13, mb1mx4.2/19, mbtmp4.2/13, Error ellipse: s-maj=16.4km s-min=13.1km az=101.0*
ISCJB ***02*** *02:40:15.3±0.7, 31°.92S±0°.06×179°.88E±0°.08, h356km±7km, mb4.4/21, Error ellipse: s-maj=11.6km s-min=9.0km az=16.5*
NEIC ***02*** *02:40:15.5±1.1, 31°.76S×179°.96E, h345km±10km, mb4.7/15, Error ellipse: s-maj=12.9km s-min=10.3km az=105.0*
ISC 02 02:40:17.8±0.7, 32°.09S±0°.06×179°.93E±0°.09, h370km±7km, h350km±.3km: pP-P, n145, σ1s26/121, mb4.4/19, 1C-3D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.62**	**193**	PN	**Pn**	**02 41 44.7**	**-0.2**
MXZ				SN	**S**	**02 42 56.0**	**+0.4**
PUZ	**Puketiti**	**6.12**	**192**	PN	**Pn**	**02 41 50.2**	**-0.3**
PUZ				SN	**S**	**02 43 00.7**	**-5.2**
OUZ	**Omahuta**	**6.13**	**238**	*e*Pn	**Pn**	**02 41 53.6**	**+2.9**
OUZ				*e*S	**S**	**02 43 09.1**	**+2.9**
MARZ	**Manawahe**	**6.46**	**203**	PN	**Pn**	**02 41 54.8**	**+0.5**
MWZ	**Matawai**	**6.53**	**197**	PN	**Pn**	**02 41 54.8**	**-0.4**
CNGZ	**Carnagh Statio**	**6.53**	**192**	PN	**Pn**	**02 41 55.2**	**+0.1**
EDRZ	**Edgecumbe**	**6.54**	**203**	PN	**Pn**	**02 41 59.3**	**+4.0**
URZ	**Urewera**	**6.57**	**200**	P	**Pn**	**02 41 55.0**	**-0.6**
	78nm,0.3s,baz=303,slow=2.9,SNR=50						
URZ				S	**S**	**02 43 15.0**	**-0.3**
	58nm,0.3s,baz=286,slow=6.4,SNR=3.2						
URZ	**Urewera**	**6.57**	**200**	*e*Pn	**Pn**	**02 41 54.9**	**-0.7**
URZ				*e*S	**S**	**02 43 16.3**	**+1.1**
URZ	**Urewera**	**6.57**	**200**	PN	**Pn**	**02 41 54.7**	**-0.9**
TARZ	**Mount Tarawera**	**6.74**	**204**	PN	**Pn**	**02 42 00.5**	**+3.0**
RRRZ	**Republican Roa**	**6.83**	**203**	PN	**Pn**	**02 42 00.5**	**+1.9**
PRRZ	**Plateau Road**	**7.01**	**203**	PN	**Pn**	**02 42 03.8**	**+3.2**
PRGZ	**Paritu Road**	**7.02**	**193**	PN	**Pn**	**02 42 00.0**	**-0.6**
PRGZ				SN	**S**	**02 43 24.7**	**+0.2**
ALRZ	**Allen Road**	**7.09**	**203**	PN	**Pn**	**02 42 02.7**	**+1.2**
KNZ	**Kokohu**	**7.15**	**194**	PN	**Pn**	**02 42 01.1**	**-1.1**
RAHZ	**Arahi**	**7.19**	**198**	PN	**Pn**	**02 42 01.8**	**-0.9**
MHGZ	**Mahia Peninsul**	**7.24**	**193**	PN	**Pn**	**02 42 03.6**	**+0.4**
NMHZ	**Naumai**	**7.44**	**199**	PN	**Pn**	**02 42 05.2**	**-0.3**
BKZ	**Black Stump Fm**	**7.59**	**201**	PN	**Pn**	**02 42 06.8**	**-0.6**
HIZ	**Hauiti**	**7.63**	**211**	PN	**Pn**	**02 42 10.4**	**+2.6**
MCHZ	**McNeill Hill**	**7.79**	**199**	PN	**Pn**	**02 42 10.5**	**+0.9**
KRVZ	**Karewarewa**	**7.81**	**205**	PN	**Pn**	**02 42 11.8**	**+1.9**
WTVZ	**West Tongariro**	**7.85**	**206**	PN	**Pn**	**02 42 11.6**	**+1.2**
OTVZ	**Oturere**	**7.86**	**205**	PN	**Pn**	**02 42 10.5**	**0.0**
OTVZ				*e*SN	**S**	**02 43 44.7**	**+2.2**
TWVZ	**Taurewa**	**7.87**	**206**	PN	**Pn**	**02 42 12.6**	**+2.1**
NGZ	**Ngauruhoe**	**7.90**	**205**	PN	**Pn**	**02 42 12.8**	**+1.9**
CKHZ	**Cape Kidnapper**	**7.90**	**196**	PN	**Pn**	**02 42 10.0**	**-0.9**
TUVZ	**Tukino**	**7.96**	**205**	PN	**Pn**	**02 42 11.4**	**-0.2**
BHHZ	**Black Hill Sta**	**8.02**	**202**	PN	**Pn**	**02 42 13.2**	**+0.9**
BHHZ				SN	**S**	**02 43 46.0**	**+0.2**
WNVZ	**Wahianoa**	**8.03**	**205**	PN	**Pn**	**02 42 12.1**	**-0.4**
MOVZ	**Moawhango**	**8.05**	**204**	PN	**Pn**	**02 42 13.9**	**+1.3**
MOVZ				SN	**S**	**02 43 44.4**	**-2.1**
KAHZ	**Kahuranaki**	**8.07**	**197**	PN	**Pn**	**02 42 11.7**	**-1.2**
PXZ	**Pawanui**	**8.30**	**197**	PN	**Pn**	**02 42 13.9**	**-1.7**
PNHZ	**Pukenui**	**8.37**	**200**	PN	**Pn**	**02 42 14.3**	**-2.0**
WPHZ	**Waipukurau**	**8.44**	**199**	PN	**Pn**	**02 42 19.3**	**+2.0**
TSZ	**Takapari Road**	**8.57**	**201**	PN	**Pn**	**02 42 16.6**	**-2.2**
PRHZ	**Porangahau**	**8.58**	**197**	PN	**Pn**	**02 42 17.4**	**-1.5**
WAZ	**Wanganui**	**8.63**	**206**	PN	**Pn**	**02 42 21.1**	**+1.6**
DVHZ	**Dannevirke**	**8.74**	**199**	PN	**Pn**	**02 42 19.3**	**-1.4**
POWZ	**Post Office Ro**	**8.94**	**201**	PN	**Pn**	**02 42 24.1**	**+1.0**
BFZ	**Birch Farm**	**9.07**	**198**	PN	**Pn**	**02 42 23.0**	**-1.6**
MRZ	**Mangatainoka R**	**9.24**	**201**	PN	**Pn**	**02 42 24.6**	**-2.1**
TIWZ	**Tintock**	**9.26**	**199**	PN	**Pn**	**02 42 27.6**	**+0.8**
HOWZ	**Holdsworth Sta**	**9.48**	**201**	PN	**Pn**	**02 42 27.6**	**-1.9**
OGWZ	**Otaki Gorge**	**9.51**	**202**	*e*PN	**Pn**	**02 42 27.9**	**-1.9**
TMWZ	**Te Maipa**	**9.56**	**199**	PN	**Pn**	**02 42 31.5**	**+1.1**
KIW	**Kapiti Island**	**9.64**	**203**	PN	**Pn**	**02 42 31.4**	**+0.1**
MTW	**Mount Morrison**	**9.72**	**200**	PN	**Pn**	**02 42 32.7**	**+0.4**
CAW	**Cannon Point**	**9.81**	**202**	PN	**Pn**	**02 42 32.7**	**-0.6**
TRWZ	**Traveller**	**9.89**	**199**	PN	**Pn**	**02 42 35.3**	**+1.0**
DUWZ	**D'Urville Isla**	**9.95**	**207**	PN	**Pn**	**02 42 34.2**	**-0.7**
PAWZ	**Paruwai Farm**	**9.95**	**200**	PN	**Pn**	**02 42 35.5**	**+0.5**
MSWZ	**Moikau Station**	**10.03**	**201**	PN	**Pn**	**02 42 36.3**	**+0.3**
SNZO	**South Karori**	**10.11**	**203**	*e*Pn	**Pn**	**02 42 37.0**	**+0.2**
SNZO				*e*S	**S**	**02 44 30.5**	**-0.6**
SNZO	**South Karori**	**10.11**	**203**	PN	**Pn**	**02 42 37.2**	**+0.3**
BHW	**Baring Head**	**10.14**	**202**	PN	**Pn**	**02 42 36.8**	**-0.4**
TCW	**Tory Channel**	**10.17**	**205**	PN	**Pn**	**02 42 36.8**	**-0.8**
PLWZ	**Palliser**	**10.17**	**200**	PN	**Pn**	**02 42 37.3**	**-0.3**
TUWZ	**Tuamarina**	**10.48**	**206**	PN	**Pn**	**02 42 39.2**	**-2.0**
NNZ	**Nelson**	**10.51**	**208**	*e*PN	**Pn**	**02 42 40.0**	**-1.7**
QRZ	**Quartz Range**	**10.55**	**212**	PN	**Pn**	**02 42 42.1**	**0.0**
BSWZ	**Blackbirch Sta**	**10.75**	**205**	PN	**Pn**	**02 42 44.7**	**+0.3**
THZ	**Tophouse**	**11.16**	**208**	PN	**Pn**	**02 42 48.1**	**-1.2**
KHZ	**Kahutara**	**11.49**	**204**	*e*Pn	**Pn**	**02 42 52.7**	**-0.4**
	93nm,0.4s						
KHZ				*e*S	**S**	**02 44 54.7**	**-6.2**
KHZ	**Kahutara**	**11.49**	**204**	PN	**Pn**	**02 42 50.7**	**-2.4**
DSZ	**Denniston Nort**	**11.62**	**212**	PN	**Pn**	**02 42 54.1**	**-0.5**
LTZ	**Lake Taylor**	**12.28**	**207**	PN	**Pn**	**02 43 00.6**	**-1.8**
MQZ	**McQueen's Vall**	**12.93**	**204**	PN	**Pn**	**02 43 10.1**	**0.0**
RPZ	**Rata Peaks**	**13.54**	**209**	P	**P**	**02 43 17.0**	**+1.5**
	3.6nm,0.3s,baz=280,slow=1.2,SNR=6.2						
RPZ				S	**S**	**02 45 41.8**	**-0.7**
	8.3nm,0.3s,baz=172,slow=21,SNR=16						
MSVF	**Nonsavu**	**14.40**	**353**	*e*Pn	**P**	**02 43 20.5**	**-4.6**
	23nm,0.6s						
ODZ	**Otahua Downs**	**14.82**	**207**	PN	**P**	**02 43 34.1**	**+4.7**
DZM	**Mont Dzumac**	**15.60**	**306**	*e*P	**P**	**02 43 36.8**	**-1.4**
DZM	**Mont Dzumac**	**15.60**	**306**	*e*Pn	**P**	**02 43 36.0**	**-2.2**
	33nm,0.8s						
NOUC	**Port Laguerre**	**15.68**	**306**	*e*P	**P**	**02 43 37.4**	**-1.6**
AFI	**Afiamalu**	**19.63**	**25**	P	**P**	**02 44 15.1**	**-5.9**
	5.2nm,0.3s,baz=84,slow=19,SNR=4.1						
ARMA	**Armidale**	**24.22**	**266** ⇓	*i*P	**P**	**02 45 05.5**	**+2.8**
ARMA	**Armidale**	**24.22**	**266**	*e*P	**P**	**02 45 04.9**	**+2.2**
	5.8nm,0.6s,mb4.0						
CNB	**Canberra Magne**	**25.58**	**254**	*e*P	**P**	**02 45 17.8**	**+3.0**

DBIC Dimbokro 154.32 169 PKP PKPdf 02 59 27.9 +1.1
comp=Z,2.0nm,0.6s,baz=185,slow=14,SNR=4.7
DBIC PKPbc PKPbc 02 59 37.0 +1.6
comp=Z,5.8nm,1.0s,baz=195,slow=8.3,SNR=7.8
DBIC PKPab PKPab 02 59 53.4 +2.5
comp=Z,1.7nm,0.4s,baz=182,slow=8.3,SNR=6.4
DBIC Dimbokro 154.32 169 PKP PKPdf 02 59 27.9 +1.1
DBIC PKPbc PKPbc 02 59 37.0 +1.6
DBIC PKPab PKPab 02 59 53.4 +2.5
CLL Collm 158.52 337 ∥ PKPab PKPab 03 00 06.6 -1.6
TORD Torodi Ar. Bea 161.07 185 PKP PKPdf 02 59 36.0 +1.0
comp=Z,2.2nm,0.9s,baz=14,slow=0.6,SNR=14
TORD PKPab PKPab 03 00 21.6 +1.4
comp=Z,1.9nm,0.7s,baz=180,slow=3.3,SNR=24
TORD Torodi Ar. Bea 161.07 185 PKP PKPdf 02 59 36.0 +1.0
TORD PKPab PKPab 03 00 21.6 +1.4
ESDC Sonseca Array 171.80 22 PKP PKPdf 02 59 43.2 +0.7
comp=Z,0.8nm,0.7s,baz=7.7,slow=3.2,SNR=4.5
ESDC PKPab PKPab 03 01 06.3 -0.8
comp=Z,0.9nm,0.7s,baz=317,slow=3.9,SNR=6.0

OTT 02 03:02:10.8±1.3, 60.68N×58.41W, h18km, ML3.7/7, LAlbertaRADOR Sea Seismic Zone. 354km east from Killiniq, Qc, Davis Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRB	**Frobisher Bay**	**5.65**	**307**	PN	Pn	03 03 34.5	+0.7
FRB				SN	Sn	03 04 34.3	-3.8
FRB				Trac		03 04 37.5	
comp=Z,25nm,0.5s							
SCHQ	**Schefferville**	**7.39**	**221**	PN	Pn	03 03 58.6	+1.0
SCHQ				SN	Sn	03 05 18.1	-2.7
SCHQ				Trac		03 05 31.5	
comp=Z,26nm,0.7s							
IVKQ	**Ivujivik**	**9.46**	**289**	SN	Sn	03 06 02.6	-9.2
INUQ	**Inukjuak**	**10.24**	**266**	PN	Pn	03 04 33.4	-3.2
INUQ				SN	Sn	03 06 21.8	-9.0
NATG	**Natashquan Que**	**10.71**	**195**	PN	Pn	03 04 40.9	-2.2
NATG				SN	Sn	03 06 33.1	-9.2
NATG				Trac		03 06 37.2	
comp=Z,2.9nm,0.3s							
LG4Q	**La Grande 4**	**11.05**	**237**	PN	Pn	03 04 45.7	-2.0
LG4Q				SN	Sn	03 06 41.0	-10
LG4Q				Trac		03 06 43.8	
comp=Z,0.8nm,0.4s							
DRLN	**Deer Lake**	**11.46**	**177**	PN	Pn	03 04 51.1	-2.2
SMQ	**Clarke City**	**11.48**	**208**	PN	Pn	03 04 50.9	-2.7
SMQ				SN	Sn	03 06 50.1	-11
SMQ				Trac		03 06 56.6	
comp=Z,0.6nm,0.2s							
MNQ	**Manicouagan**	**11.72**	**214**	PN	Pn	03 04 54.4	-2.4
MNQ				SN	Sn	03 06 55.7	-11
MNQ				Trac		03 07 06.9	
comp=Z,0.7nm,0.2s							
ICQ	**Pointe Anglais**	**12.26**	**208**	PN	Pn	03 05 01.6	-2.7
ICQ				SN	Sn	03 07 07.7	-13
ICQ				Trac		03 07 11.6	
comp=Z,17nm,0.8s							
GSQ	**Grosses Roches**	**12.80**	**207**	PN	Pn	03 05 08.3	-3.4
GSQ				SN	Sn	03 07 26.5	-7.0
WEMQ	**Wemindji, Queb**	**13.11**	**243**	PN	Pn	03 05 12.1	-3.7
WEMQ				SN	Sn	03 07 29.9	-11

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*BJI **02** 03:14:27.0, 7.43S×130.53E, h147km, mB4.8/22, mb4.8/38*
*NEIC **02** 03:14:36.3±1.0, 6.51S×130.05E, h148km±10km, mb4.9/25, Error ellipse: s-maj=8.7km s-min=5.3km az=50.0*
NEIC Felt at Darwin, Australia.
*ISCJB **02** 03:14:37.5±0.4, 6.52S±0.03×130.14E±0.03, h178km±3km, mb4.9/74, Error ellipse: s-maj=5.6km s-min=4.2km az=156.9*
*IDC **02** 03:14:37.6±1.6, 6.52S×129.98E, h161km±14km, mb4.3/15, mb1 4.4/17, mb1mx4.3/21, mbtmp4.3/17, Error ellipse: s-maj=15.8km s-min=9.2km az=65.0*
*DJA **02** 03:14:38, 6.59S×130.14E, h150km, mb5.0/30*
ISC 02 03:14:38.3±0.4, 6.54S±0.03×130.14E±0.03, h169km±3km, h157km±3.8km: pP-P, n161, σ1.14/165, mb4.9/74, 2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.02**	**353**	P	**Pn**	**03 15 14.5**	**-0.4**
BNDI				S	**Sn**	**03 15 43.0**	**-0.2**
TLE	**Tual**	**2.74**	**71**	P	**Pn**	**03 15 23.4**	**+0.2**
MSAI	**Masohi**	**3.40**	**339**	P	**Pn**	**03 15 31.3**	**-0.2**
MSAI				S	**Sn**	**03 16 10.9**	**-1.9**
NLAI	**Namlea**	**4.47**	**317**	P	**Pn**	**03 15 46.8**	**+1.7**
NLAI				S	**Sn**	**03 16 41.7**	**+4.4**
LBMI	**Labuha**	**6.43**	**336**	P	**Pn**	**03 16 10.2**	**-0.7**
1.6nm4μm536nm,0.9s							
LBMI				S	**Sn**	**03 17 17.5**	**-6.2**
1.6nm4μm536nm,0.9s							
KAKA	**Kakadu**	**6.54**	**160**	*e*P	**Pn**	**03 16 10.8**	**-1.5**
446nm,0.8s							
KAKA				*e*S	**Sn**	**03 17 19.5**	**-6.7**
KAKA	**Kakadu**	**6.54**	**160**	*e*Pn	**Pn**	**03 16 10.9**	**-1.4**
KAKA				*e*S	**Sn**	**03 17 20.0**	**-6.3**
KAKA	**Kakadu**	**6.54**	**160**	P	**Pn**	**03 16 11.2**	**-1.1**
414nm,0.6s							
TNTI	**Ternate**	**7.78**	**339**	P	**Pn**	**03 16 28.8**	**+0.1**
0.3nm77nm,0.7s							
KDI	**Kendari**	**7.92**	**289**	P	**Pn**	**03 16 33.7**	**+3.1**
0.2nm42nm,0.8s							
BAKI	**Biak**	**7.98**	**48**	P	**Pn**	**03 16 31.4**	**-0.1**
4.0nm1μm,0.8s							
BAKI				S	**Sn**	**03 17 55.3**	**-5.5**
4.0nm1μm,0.8s							
MMRI	**Maumere**	**8.10**	**255**	P	**Pn**	**03 16 34.5**	**+1.4**
2μm156nm,0.8s							
MMRI				S	**Sn**	**03 18 03.6**	**-0.1**
2μm156nm,0.8s							
KNA	**Kununurra**	**9.25**	**188**	P	**Pn**	**03 16 46.6**	**-1.5**
1μm,0.7s							
BKSI	**Bulukumba**	**10.04**	**276**	P	**Pn**	**03 16 59.6**	**+1.0**
34nm,0.6s							
MRSI	**Marisa**	**10.75**	**310**	P	**Pn**	**03 17 08.9**	**+1.0**
1μm135nm,1.0s							
TTSI	**Tana Toraja**	**10.85**	**288**	P	Px	03 17 20.7	
SGSI	**Sangihe**	**11.15**	**336**	P	**Pn**	**03 17 20.9**	**+7.7**
FITZ	**Fitzroy Crossi**	**12.30**	**201**	P	**Pn**	**03 17 25.2**	**-2.7**
6.5nm,0.3s,baz=36,slow=11,SNR=200							
FITZ	**Fitzroy Crossi**	**12.30**	**201**	*e*P	**Pn**	**03 17 24.6**	**-3.3**
54nm,0.4s							
FITZ				*e*S	**Sn**	**03 19 33.3**	**-11**
FITZ	**Fitzroy Crossi**	**12.30**	**201**	*e*Pn	**Pn**	**03 17 25.1**	**-2.9**
FITZ				*e*S	**Sn**	**03 19 33.1**	**-11**
FITZ	**Fitzroy Crossi**	**12.30**	**201**	P	**Pn**	**03 17 25.1**	**-2.8**
KBKI	**Kotabaru**	**14.29**	**282**	P	**Pn**	**03 17 55.8**	**+2.6**
2μm75nm,0.9s							
KHKI	**Kahang-Kahang**	**14.52**	**262**	P	**Pn**	**03 17 55.4**	**-0.7**
60nm,0.9s							
COEN	**Coen**	**14.79**	**121**	*e*Pn	**Pn**	**03 17 58.9**	**-0.4**
778nm,0.8s							
COEN				*e*S	**Sn**	**03 20 32.1**	**-12**
COEN	**Coen**	**14.79**	**121**	P	**Pn**	**03 18 00.2**	**+0.8**
554nm,0.8s							
JAGI	**Jajag, Banyuwa**	**15.96**	**262**	P	**Pn**	**03 18 12.8**	**-1.1**
48nm,1.1s							
KMMI	**Kalianget**	**16.07**	**267**	P	**Pn**	**03 18 18.0**	**+2.9**
121nm,0.7s							
MYLDM	**Lahad Datu**	**16.45**	**315**	P	**Pn**	**03 18 22.6**	**+2.9**
25nm,0.8s							
PMG	**Port Moresby**	**17.09**	**101**	*e*P	**Pn**	**03 18 27.9**	**+0.5**
68nm,1.0s							
PMG				*e*Pn	**Pn**	**03 18 29.0**	**+1.6**
PMG	**Port Moresby**	**17.09**	**101**	P	**Pn**	**03 18 29.1**	**+1.6**
95nm,1.2s							
ASAR	**Alice Springs**	**17.41**	**168**	P	**Pn**	**03 18 30.1**	**-1.0**
4.3nm,0.3s,baz=352,slow=13,SNR=379							
ASAR				S	**S**	**03 21 39.4**	**-2.8**
3.7nm,0.3s,baz=354,slow=27,SNR=9.2							
MBWA	**Marble Bar**	**17.68**	**214**	*e*P	**Pn**	**03 18 33.4**	**-1.0**
MBWA				*e*S	**S**	**03 21 34.8**	**-13**
MBWA	**Marble Bar**	**17.68**	**214**	*e*Pn	**Pn**	**03 18 33.0**	**-1.4**
37nm,0.6s							
MBWA				*e*S	**S**	**03 21 42.6**	**-5.1**
MBWA	**Marble Bar**	**17.68**	**214**	P	**Pn**	**03 18 33.8**	**-0.6**
57nm,0.7s							
MTSU	**Mount Surprise**	**18.00**	**131**	*e*P	**Pn**	**03 18 37.3**	**-0.8**
108nm,1.2s							
PWJI	**Pagerwojo**	**18.25**	**264**	P	**P**	**03 18 39.7**	**+0.6**
84nm,0.9s							
SJI	**Sawahan**	**18.27**	**265**	P	**P**	**03 18 40.9**	**+1.5**
100nm,0.7s							
KKM	**Kota Kinabalu**	**18.69**	**312**	*e*P	**P**	**03 18 43.8**	**-0.2**
75nm,1.3s							
KKM	**Kota Kinabalu**	**18.69**	**312**	P	**P**	**03 18 52.3**	**+8.3**
PCJI	**Pacitan**	**18.88**	**264**	P	**P**	**03 18 45.2**	**-0.8**
99nm,1.3s							
UGM	**Wanagama**	**19.51**	**265**	P	**P**	**03 18 54.8**	**+2.0**
222nm,2.3s							
BJII	**Banjarnegara**	**20.30**	**267**	P	**P**	**03 19 06.5**	**+5.2**
3μm55nm,1.0s							
CTA	**Charters Tower**	**20.64**	**132**	P	**P**	**03 19 06.0**	**+1.2**
38nm,0.9s,baz=316,slow=12,SNR=19							
CTA	**Charters Tower**	**20.64**	**132**	*e*P	**P**	**03 19 05.9**	**+1.1**
23nm,0.8s							
CTAO	**Charters Tower**	**20.64**	**132**	*e*P	**P**	**03 19 05.6**	**+0.7**
77nm,1.3s							
CTAO	**Charters Tower**	**20.64**	**132**	P	**P**	**03 19 06.1**	**+1.3**
49nm,0.9s							
KSM	**Kuching**	**21.34**	**291**	*e*P	**P**	**03 19 11.8**	**-0.6**
21nm,1.0s,mb4.4							
CISI	**Cisompet, Garu**	**22.18**	**266**	P	**P**	**03 19 20.0**	**-1.1**
3μm345nm,0.8s,mb5.9							
LEM	**Lembang**	**22.37**	**268**	P	**P**	**03 19 24.7**	**+1.8**
88nm,0.8s,mb5.3							
TGY	**Tagaytay City**	**22.45**	**336**	P	**P**	**03 19 22.2**	**-1.4**
173nm,0.3s,mb6.0,baz=280,slow=13,SNR=4.7							
TPI	**Tanjungpandan**	**22.72**	**278**	P	**P**	**03 19 25.7**	**-0.4**
1μm50nm,0.7s,mb5.0							
MEEK	**Meekatharra**	**22.80**	**207**	*e*P	**P**	**03 19 27.0**	**+0.4**
MEEK				*e*S	**S**	**03 23 42.2**	**+19**
CBJI	**Citeko**	**23.14**	**269**	P	**P**	**03 19 27.3**	**-2.6**
300nm,0.9s,mb5.7							
DBJI	**Dramaga**	**23.24**	**269**	P	**P**	**03 19 29.7**	**-1.1**
58nm,1.1s,mb4.9							
QLP	**Quilpie**	**24.03**	**148**	*e*P	**P**	**03 19 38.2**	**+0.4**
FORT	**Forrest**	**24.19**	**184**	*e*P	**P**	**03 19 39.9**	**+0.7**
51nm,0.6s,mb5.2							
FORT				*e*S	S	03 24 14.7	+30
FORT	**Forrest**	**24.19**	**184**	*e*P	**P**	**03 19 39.9**	**+0.7**
60nm,0.8s,mb5.2							
PPBI	**Pangkal Pinang**	**24.32**	**279**	P	**P**	**03 19 42.2**	**+1.5**
2μm42nm,1.3s,mb4.8							
MORW	**Morawa**	**26.06**	**209**	*e*P	**P**	**03 19 56.0**	**-0.2**
MORW				*e*S	S	03 24 56.4	+42
BBOO	**Buckleboo**	**26.71**	**169**	*e*P	**P**	**03 20 01.4**	**-0.5**
8.3nm,0.6s,mb4.5							
BBOO	**Buckleboo**	**26.71**	**169**	*e*P	**P**	**03 20 02.1**	**+0.2**
179nm,1.7s,mb5.4							
STKA	**Stephens Creek**	**27.38**	**158**	P	**P**	**03 20 08.3**	**+0.4**
8.5nm,0.7s,mb4.5,baz=332,slow=9.8,SNR=15							
STKA	**Stephens Creek**	**27.38**	**158**	*e*P	**P**	**03 20 08.1**	**+0.1**
6.7nm,0.8s,mb4.3							
CMSA	**Cobar Meteorol**	**28.81**	**152**	*e*P	**P**	**03 20 21.5**	**+0.9**
HNR	**Honiara**	**29.65**	**98**	P	**P**	**03 20 29.8**	**+1.5**
129nm,0.4s,mb6.0,baz=233,slow=5.2,SNR=9.1							
HNR	**Honiara**	**29.65**	**98**	*e*P	**P**	**03 20 29.6**	**+1.3**
673nm,0.8s							
PPI	**Padang Panjang**	**30.28**	**280**	P	**P**	**03 20 34.5**	**+0.6**
ARMA	**Armidale**	**31.17**	**142**	*e*P	**P**	**03 20 43.1**	**+1.6**
12nm,0.9s,mb4.6							
QIZ	**Qiongzhong**	**32.34**	**322**	*e*P	**P**	**03 20 51.0**	**-0.8**
18nm,1.1s,mb4.7							
PSI	**Prapat**	**32.52**	**286**	P	**P**	**03 20 50.7**	**-2.8**
20nm,0.8s,mb4.9,baz=170,slow=4.0,SNR=18							
CAN	**Canberra**	**33.48**	**151**	*e*P	**P**	**03 21 02.9**	**+1.3**
16nm,0.7s,mb4.9							
CNB	**Canberra Magne**	**33.65**	**151**	*e*P	**P**	**03 21 04.3**	**+1.2**
CMAR	**Chiang Mai Arr**	**39.55**	**309**	P	**P**	**03 21 51.7**	**-1.4**
1.4nm,0.3s,mb4.0,baz=192,slow=8.3,SNR=14							
CMAR				PcP	PcP	03 23 58.6	+1.3
2.0nm,0.6s,baz=174,slow=2.8,SNR=6.8							
CHTO	**Chiang Mai**	**39.76**	**310**	*e*P	**P**	**03 21 54.5**	**-0.3**
22nm,0.8s,mb4.8							
NJ2	**Nanjing**	**39.86**	**345**	*e*P	**P**	**03 21 57.7**	**+2.2**
NJ2				pmax	pmax		
comp=Z,30nm,1.0s,mb4.9							
WHN	**Wuhan**	**39.86**	**339**	P	**P**	**03 21 55.5**	**0.0**
GYA	**Guiyang**	**39.93**	**326**	P	**P**	**03 21 58.0**	**+1.8**
GYA				pP	pP	03 22 34.2	+1.5
GYA				PP	PP	03 23 37.5	+5.8
GYA				ScP	ScP	03 27 32.0	+0.4
GYA				S	**S**	**03 27 51.4**	**+2.6**
GYA				sS	sS	03 28 55.6	+2.9
GYA				pmax	pmax		
comp=Z,20nm,1.0s,mb4.7							
GYA				pmax	pmax		
comp=Z,120nm,5.2s							
KMI	**Kunming**	**41.25**	**321**	P	**P**	**03 22 07.7**	**+0.7**
KMI				pmax	pmax		
comp=Z,13nm,1.1s,mb4.5							
MJAR	**Matsushiro Arr**	**43.52**	**9**	P	**P**	**03 22 23.3**	**-1.8**
comp=Z,3.1nm,0.7s,mb4.0,baz=185,slow=9.1,SNR=7.9							
KSRS	**Korea Array**	**43.82**	**357**	P	**P**	**03 22 25.8**	**-1.7**
comp=Z,1.4nm,0.5s,mb3.8,baz=174,slow=9.3,SNR=6.1							
CD2	**Chengdu**	**44.99**	**327** ∥	*i*P	**P**	**03 22 36.1**	**-0.9**
CD2				pP	pP	03 23 11.8	-2.4
CD2				sP	sP	03 23 30.0	-3.1
CD2				PP	PP	03 24 24.1	-1.6
CD2				S	**S**	**03 29 01.6**	**-1.2**
CD2				sS	sS	03 30 04.2	-3.6
CD2				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.5							
CD2				pmax	pmax		
comp=Z,30nm,5.2s							
XAN	**Xi'an**	**45.09**	**335**	P	**P**	**03 22 36.3**	**-1.3**
XAN				pP	pP	03 23 09.3	-5.6
XAN				sP	sP	03 23 30.2	-3.6
XAN				pmax	pmax		
comp=Z,4.0nm,1.1s,mb4.0							
XAN				pmax	pmax		
comp=Z,25nm,5.5s							
BJT	**Baijiatuan**	**48.09**	**346**	*e*P	**P**	**03 23 00.3**	**-0.6**
comp=Z,14nm,0.5s,mb4.8							
BJI	**Beijing**	**48.11**	**346**	P	**P**	**03 23 03.2**	**+2.2**
BJI				S	**S**	**03 29 47.3**	**+0.5**
BJI				pmax	pmax		
comp=Z,17nm,0.5s,mb4.9							
BJI				pmax	pmax		
comp=Z,44nm,3.6s							
BJI				LR	LR		
comp=N,320nm,9.5s							
BJI				LR	LR		
comp=E,280nm,10.2s							
BJI				LR	LR		
comp=Z,110nm,22.5s							
SHL	**Shillong**	**49.00**	**312**	*e*PKP	**P**	**03 23 06.0**	**-2.1**
comp=Z,13nm,0.9s,mb4.6							
LZH	**Lanzhou**	**49.07**	**332**	*e*P	**P**	**03 23 08.0**	**-0.5**
LZH				pP	pP	03 23 45.5	-0.8
LZH				sP	sP	03 24 03.5	-1.6
LZH				pmax	pmax		
comp=Z,30nm,1.4s,mb4.7							
LZH				pmax	pmax		
comp=Z,71nm,4.1s							
HHC	**Hu-ho-hao-te**	**50.16**	**342**	*e*P	**P**	**03 23 20.2**	**+3.6**
HHC				pP	pP	03 23 52.6	-2.0
HHC				sP	sP	03 24 08.5	-4.8
HHC				PcP	PcP	03 24 35.8	+2.4
HHC				PP	PP	03 25 19.0	+5.4
HHC				S	**S**	**03 30 20.9**	**+5.6**
HHC				sS	sS	03 31 18.5	-2.9
HHC				ScS	ScS	03 32 53.5	+3.1
HHC				SS	SS	03 33 55.6	+4.5
HHC				pmax	pmax		
comp=Z,20nm,1.1s,mb4.7							
HHC				pmax	pmax		
comp=Z,59nm,6.9s							
HHC				LR	LR		
comp=N,97nm,15.7s							
HHC				LR	LR		
comp=E,92nm,15.9s							
HHC				LR	LR		
comp=Z,58nm,15.1s							
CN2	**Changchun**	**50.29**	**356**	*e*P	**P**	**03 23 22.3**	**+4.8**
CN2				*e*S	**S**	**03 30 23.0**	**+6.0**
CN2				pmax	pmax		
comp=Z,10.0nm,0.3s,mb4.9							
CN2				pmax	pmax		
comp=Z,90nm,5.0s							
CN2				LR	LR		
comp=N,500nm,23.0s							
CN2				LR	LR		
comp=E,300nm,23.0s							
CN2				LR	LR		
comp=Z,100nm,7.0s							
MDJ Mudanjiang 50.93 359 P **P** **03 23 22.3 0.0**							
MDJ				pP	pP	03 23 56.1	-4.3
MDJ				sP	sP	03 24 16.5	-2.6
MDJ				PP	PP	03 25 19.1	-1.4
MDJ				S	**S**	**03 30 23.9**	**-1.9**
MDJ				sS	sS	03 31 28.3	-3.8
MDJ				ScS	ScS	03 32 56.3	+0.8
MDJ				SS	SS	03 34 02.4	-0.7
MDJ				pmax	pmax		
comp=Z,9.0nm,0.7s,mb4.5							
MDJ				pmax	pmax		
comp=Z,25nm,4.2s							
MDJ				LR	LR		
comp=N,400nm,14.7s							
MDJ				LR	LR		
comp=E,96nm,11.4s							
MDJ				LR	LR		
comp=Z,110nm,10.4s							
ASAJ Asahikawa 51.66 11 P **P** **03 23 27.8 0.0**							
comp=Z,4.4nm,0.5s,mb4.4,baz=235,slow=6.2,SNR=7.9							
LSA Lhasa 51.97 316 *e*P **P** **03 23 30.4 +0.1**							
comp=Z,29nm,0.7s,mb5.0							
VIS Vishakhapatnam 52.13 298 *e*PKP **P** **03 23 31.7 0.0**							
VIS				AMb	AMB	03 23 32.6	
comp=Z,54nm,0.7s,mb5.3							
ODAN Odare 53.06 311 *e*P **P** **03 23 38.3 -0.1**							
comp=Z,109nm,0.6s,mb5.8							
TAPN Taplejung 53.09 311 *e*P **P** **03 23 38.5 -0.1**							
comp=Z,100nm,0.5s,mb5.8							
GTA Gaotai 53.64 331 P **P** **03 23 42.7 +0.3**							
GTA				pmax	pmax		
comp=Z,16nm,1.0s,mb4.7							
RAMN Ramite 53.71 310 *e*P **P** **03 23 43.2 +0.1**							
comp=Z,282nm,0.6s							
JIRN Jiri 54.39 311 *e*P **P** **03 23 48.0 -0.1**							
comp=Z,12nm,0.2s,mb5.3							
GUN Gumba 54.76 311 *e*P **P** **03 23 50.7 0.0**							
comp=Z,222nm,0.7s,mb6.0							
PKI Pulchoki 54.94 310 *e*P **P** **03 23 51.5 -0.5**							
comp=Z,65nm,0.6s,mb5.5							
PKIN Phulchoki 54.95 310 *e*P **P** **03 23 52.2 +0.1**							
comp=Z,56nm,0.6s,mb5.5							
DMN Daman 55.19 310 *e*P **P** **03 23 53.7 -0.1**							
comp=Z,70nm,0.7s,mb5.5							
GKN Gorkha 55.74 310 *e*P **P** **03 23 57.5 -0.3**							
comp=Z,119nm,0.5s,mb6.0							
KOLN Koldanda 56.42 309 *e*P **P** **03 24 02.4 -0.1**							
comp=Z,92nm,0.7s,mb5.7							
DANN Dangsing 56.59 310 *e*P **P** **03 24 03.5 -0.2**							
comp=Z,91nm,0.9s,mb5.6							
ULN Ulaanbaatar 57.88 342 *e*P **P** **03 24 13.0 +0.6**							
comp=Z,17nm,0.7s,mb5.0							
SONM Songino Array 58.05 341 P **P** **03 24 14.0 +0.4**							
comp=Z,4.8nm,0.5s,mb4.6,baz=160,slow=7.0,SNR=31							
BHPL Bhopal 59.39 302 *e*PKP **P** **03 24 21.7 -1.6**							
BHPL				AMb	AMB	03 24 23.1	
comp=Z,12nm,0.7s,mb4.8							
AGRA Agra 60.61 306 *e*PKP **P** **03 24 29.1 -2.5**							
AGRA				AMb	AMB	03 24 30.5	
comp=Z,46nm,0.4s,mb5.7							
POO Poona 60.83 295 *ex* x 03 24 26.4							
POO				AMb	AMB	03 24 32.8	
comp=Z,18nm,1.1s,mb4.8							
JOSI Joshimath 60.86 310 ∥ *e*PKP **P** **03 24 33.2 0.0**							
SONA Sohna 61.74 307 *e*PKP **P** **03 24 37.7 -1.5**							
SONA				AMb	AMB	03 24 38.5	
comp=Z,49nm,0.5s,mb5.6							
AYAN Aya Nagar 61.80 307 *e*PKP **P** **03 24 37.8 -1.8**							
AYAN				AMb	AMB	03 24 38.4	
comp=Z,19nm,0.4s,mb5.2							
KUDL Kundal 62.16 306 *ex* x 03 24 35.2							
KHET Khetri 62.68 306 *i* P **P** **03 24 43.5 -1.9**							
KHET				AMb	AMB	03 24 44.7	
comp=Z,17nm,0.7s,mb5.0							
KKR Kurukshetra 62.69 308 *e*PKP **P** **03 24 44.9 -0.5**							
AJM Ajmer 62.98 304 *ex* x 03 24 35.2							
AJM				AMb	AMB	03 24 41.6	
comp=Z,16nm,0.3s,mb5.3							
WMQ Urumqi 63.09 327 *e*P **P** **03 24 38.0 -10**							
WMQ				pmax	pmax		
comp=Z,18nm,1.0s,mb4.9							
PETK Petropavlovsk- 63.85 18 P **P** **03 24 52.9 +0.3**							
comp=Z,7.1nm,0.7s,mb4.6,baz=184,slow=5.8,SNR=11							
KSH Kashi 67.78 317 *e*P **P** **03 25 18.6 +0.6**							
KSH				*e*PcP	PcP	03 25 45.6	+2.1
KSH				*e*pP	pP	03 25 57.0	-1.2
KSH				*e*sP	sP	03 26 14.5	-1.9
KSH				*e*PP	PP	03 27 49.9	+0.1
KSH				*e*ScP		03 29 32.2	
KSH				*e*PcS		03 29 48.9	
KSH				*e*ScS	ScS	03 34 56.6	-4.1
KSH				pmax	pmax		
comp=Z,33nm,0.9s,mb5.1							
KSH				pmax	pmax		
comp=Z,190nm,4.0s							
KSH				LR	LR		
comp=N,420nm,14.1s							
KSH				LR	LR		
comp=E,240nm,6.7s							
KSH				LR	LR		
comp=Z,210nm,6.6s							
MK31 Makanchi Array 67.92 327 *e*P **P** **03 25 19.1 +0.4**							
MKAR Makanchi Array 67.92 327 P **P** **03 25 19.1 +0.3**							
comp=Z,21nm,0.5s,mb5.2,baz=118,slow=8.1,SNR=299							
ULHL Ulahol 68.97 320 P **P** **03 25 26.5 +1.1**							
SNR=7.0							
KZA Kyzart 69.52 319 P **P** **03 25 30.2 +1.5**							
SNR=24							
KZA Kyzart 69.52 319 *e*P **P** **03 25 30.3 +1.5**							
comp=Z,26nm,0.9s,mb5.0							
TKM2 Tokmak 2 69.72 320 P **P** **03 25 30.7 +0.7**							
SNR=29							
TKM2 Tokmak 2 69.72 320 *e*P **P** **03 25 30.5 +0.5**							
comp=Z,18nm,0.7s,mb4.9							
KBK Karagaybulak 70.00 320 P **P** **03 25 32.9 +1.2**							
SNR=6.4							
UCH Uchtor 70.07 319 *e*P **P** **03 25 33.5 +1.4**							
comp=Z,4.9nm,0.7s,mb4.3							
AAK Ala-Archa 70.28 320 P **P** **03 25 34.4 +1.0**							
SNR=11							
AAK Ala-Archa 70.28 320 P **P** **03 25 34.7 +1.3**							
comp=Z,7.3nm,0.4s,mb4.7,baz=124,slow=5.2,SNR=33							
AAK Ala-Archa 70.28 320 *e*P **P** **03 25 34.0 +0.7**							
comp=Z,14nm,0.7s,mb4.8							
**AML

SCHQ	**Schefferville**	**129.95**	**13**	SKPbc		03 36 33.6	
	comp=Z,9.0nm,0.7s,baz=352,slow=2.6,SNR=9.8						
KIC	**Kosan Boka**	**135.18**	**272**	*e*PKIKP	PKPdf	03 33 40.2	+1.4
	comp=Z,77nm,1.8s						
DBIC	**Dimbokro**	**135.31**	**273**	PKP	PKPdf	03 33 40.5	+1.5
	comp=Z,2.5nm,0.4s,baz=94,slow=14,SNR=12						
DBIC				SKPbc	SKPbc	03 36 52.6	-1.9
	comp=Z,3.9nm,1.0s,baz=108,slow=3.2,SNR=4.8						
DBIC	**Dimbokro**	**135.31**	**273**	*e*PKPdf	PKPdf	03 33 40.4	+1.3
LIC	**Lamto**	**135.46**	**272**	*e*PKIKP	PKPdf	03 33 40.2	+0.9
	comp=Z,16nm,0.5s						
TIC	**Toumodi**	**135.47**	**273**	*e*PKIKP	PKPdf	03 33 40.6	+1.2
	comp=Z,7.2nm,0.6s						
CPUP	**Villa Florida**	**146.53**	**168**	PKPbc	PKPbc	03 34 01.0	+0.5
	comp=Z,3.9nm,0.6s,baz=144,slow=1.4,SNR=16						
CPUP				SKPbc	SKPbc	03 37 22.9	-0.7
	comp=Z,2.7nm,0.8s,baz=242,slow=1.6,SNR=6.1						
LPAZ	**La Paz**	**150.99**	**142**	PKPbc	PKPbc	03 34 13.8	+1.7
	comp=Z,2.0nm,0.5s,baz=104,slow=1.6,SNR=19						
LPAZ				PKPab	PKPab	03 34 22.2	+2.1
	comp=Z,3.2nm,0.5s,baz=295,slow=2.1,SNR=12						
LPAZ	**La Paz**	**150.99**	**142**	*e*PKPbc	PKPbc	03 34 13.9	+1.7
LPAZ				*e*PKPab	PKPab	03 34 22.7	+2.6

DJA 02 03:23:49,0.31S×126.10E,h20km,MLv3.5/3,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.44**	**103**	P	Pn	03 24 16.8	+2.9
LBMI				S	Sn	03 24 31.3	-1.0
TNTI	**Ternate**	**1.66**	**50**	P	Pn	03 24 15.8	-1.2
NLAI	**Namlea**	**3.08**	**161**	P	Pn	03 24 36.1	-0.4
NLAI				S	Sn	03 25 14.4	+1.7

*IDC **02** 03:27:55.2±1.0,35.59N×99.61E,h0km,mb3.8/11, mb1 4.0/14,mb1mx3.9/27,mbtmp3.9/14,ML4.0/3,MS3.4/5, Ms1 3.4/5,ms1mx2.9/31,Error ellipse: s-maj=27.6km s-min=18.2km az=39.0*
*BJI **02** 03:27:57.4,35.50N×99.69E,h23km,mb4.2/2,ML4.1/12, Ms4.0/11,Ms7 3.7/9*
*NEIC **02** 03:27:58.7±2.9,35.60N×99.73E,h24km±24km,mb3.9/4, Error ellipse: s-maj=12.5km s-min=7.6km az=69.0*

ISC 02 03:27:56.4±1.6,35.63N±0.05×99.71E±0.06,h4km±10km, n26,σ1°21/35,mb3.9/10,MS3.2/4,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.39**	**81**	Pn	**Pn**	**03 28 53.2**	**+3.2**
LZH				Pg	**Pg**	**03 29 00.2**	**-1.1**
LZH				Sn	**Sn**	**03 29 35.4**	**+4.8**
LZH				Sg	**Sg**	**03 29 45.2**	**0.0**
LZH				smax			
	comp=N,3μm,0.7s						
LZH				smax			
	comp=E,7μm,0.7s						
LZH				LR	LR		
	comp=N,2μm,5.0s						
LZH				LR	LR		
	comp=E,3μm,4.0s						
LZH				LR	LR		
	comp=Z,2μm,5.4s						
GTA	**Gaotai**	**3.77**	**1**	Pn	**Pn**	**03 28 59.0**	**+3.7**
GTA				Pg	**Pg**	**03 29 07.1**	**-1.6**
GTA				Sn	**Sn**	**03 29 44.8**	**+4.7**
GTA				Sg	**Sg**	**03 29 57.6**	**+0.1**
GTA				smax			
	comp=N,85nm,1.1s						
GTA				smax			
	comp=E,170nm,1.0s						
GTA				LR	LR		
	comp=N,650nm,10.2s						
GTA				LR	LR		
	comp=E,800nm,6.6s						
GTA				LR	LR		
	comp=Z,880nm,11.4s						
CD2	**Chengdu**	**5.80**	**143**	*e*Pn	**Pn**	**03 29 24.5**	**+1.3**
CD2				Sn	**Sn**	**03 30 31.4**	**+1.2**
CD2				Sg	Sg	03 30 59.8	-3.0
CD2				smax			
	comp=N,110nm,1.2s						
CD2				smax			
	comp=E,120nm,1.2s						
CD2				LR	LR		
	comp=N,2μm,9.5s						
CD2				LR	LR		
	comp=E,3μm,8.2s						
CD2				LR	LR		
	comp=Z,1μm,6.4s						
XAN	**Xi'an**	**7.74**	**99**	Pn	**Pn**	**03 29 49.5**	**-0.3**
XAN				Sn	**Sn**	**03 31 15.6**	**-2.3**
XAN				Sg	Sn	03 32 06.5	+49
XAN				smax			
	comp=N,50nm,1.0s						
XAN				smax			
	comp=E,23nm,1.0s						
ENH	**Enshi**	**9.80**	**120**	Pn	**Pn**	**03 30 16.8**	**-1.2**
SONM	**Songino Array**	**13.16**	**20**	Pn	**Pn**	**03 31 05.1**	**+1.1**
	comp=E,1.2nm,0.3s,baz=201,slow=15,SNR=22						
SONM				Lg		03 35 04.9	
	comp=E,0.3nm,0.3s,baz=214,slow=31,SNR=3.5						
SONM				LR	LR	03 36 43.1	
	comp=E,234nm,18.5s,baz=170,slow=40						
WHN	**Wuhan**	**13.28**	**108**	P	**Pn**	**03 31 00.0**	**-5.7**
ULN	**Ulaanbaatar**	**13.38**	**22**	*e*Pn	**Pn**	**03 31 07.5**	**+0.5**
	comp=E,4.9nm,0.6s						
CHTO	**Chiang Mai**	**16.77**	**183**	*e*Pn	**Pn**	**03 31 52.9**	**+0.7**
	comp=E,6.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.12**	**182**	P	**Pn**	**03 31 54.9**	**-1.7**
	comp=E,0.2nm,0.3s,baz=356,slow=12,SNR=14						
MK31	**Makanchi Array**	**17.17**	**316**	*e*P	**Pn**	**03 31 59.3**	**+2.3**
MKAR	**Makanchi Array**	**17.17**	**316**	P	**Pn**	**03 31 56.0**	**-1.0**
	comp=E,0.4nm,0.3s,baz=117,slow=14,SNR=11						
MKAR				S	**Sn**	**03 34 56.7**	**-11**
	comp=E,0.1nm,0.3s,baz=128,slow=18,SNR=3.1						
MKAR				Lg		03 37 10.4	
	comp=E,0.1nm,0.3s,baz=116,slow=29,SNR=2.8						
TKM2	**Tokmak 2**	**20.00**	**299**	*e*P	**Pn**	**03 32 33.3**	**+1.8**
	comp=E,5.1nm,0.6s						
KZA	**Kyzart**	**20.07**	**296**	*e*P	**P**	**03 32 33.9**	**+3.3**
	comp=E,5.6nm,0.9s						
AAK	**Ala-Archa**	**20.73**	**297**	P	**P**	**03 32 37.8**	**0.0**
	comp=E,1.2nm,0.3s,baz=217,slow=13,SNR=2.7						
AAK				LR	LR	03 42 17.4	
	comp=E,199nm,19.5s,MS3.5,baz=325,slow=42						
ZALV	**Zalesovo Beam**	**21.06**	**335**	P	**P**	**03 32 40.9**	**-0.4**
	comp=E,3.0nm,0.4s,mb4.0,baz=141,slow=11,SNR=8.7						
KURK	**Kurchatov**	**21.43**	**321**	P	**P**	**03 32 43.0**	**-2.2**
	comp=E,2.9nm,0.7s,mb3.8,baz=127,slow=11,SNR=8.6						
KURK				LR	LR	03 41 25.0	
	comp=E,100nm,19.2s,MS3.2,baz=160,slow=38						
KURK	**Kurchatov**	**21.43**	**321**	*e*P	**P**	**03 32 44.1**	**-1.1**
	comp=E,2.9nm,0.6s,mb3.8						
KURK				LR	LR	03 41 25.0	
KSRS	**Korea Array**	**22.71**	**77**	P	**P**	**03 32 59.8**	**+0.7**
	comp=E,1.9nm,0.4s,mb3.9,baz=263,slow=8.7,SNR=11						
KSRS				LR	LR	03 42 35.0	
	comp=E,49nm,21.1s,MS2.9,baz=275,slow=39						
BVAR	**Borovoye Array**	**26.97**	**319**	P	**P**	**03 33 38.9**	**0.0**
	comp=E,0.3nm,0.4s,mb3.2,baz=97,slow=12,SNR=3.6						
BRTR	**Keskin Array B**	**51.39**	**296**	P	**P**	**03 37 02.4**	**+0.1**
	comp=E,1.1nm,0.7s,mb3.9,baz=110,slow=6.4,SNR=6.2						
ARCES	**ARCESS Array B**	**51.62**	**334**	P	**P**	**03 37 03.2**	**-0.3**
	comp=E,4.3nm,1.0s,mb4.3,baz=72,slow=9.9,SNR=3.3						
FINES	**FINESS Array B**	**51.76**	**324**	P	**P**	**03 37 03.9**	**-0.8**
	comp=E,5.2nm,1.1s,mb4.4,baz=88,slow=9.9,SNR=3.5						
NOA	**NORSAR Array B**	**58.86**	**325**	P	**P**	**03 37 54.1**	**-1.8**
	comp=E,0.6nm,0.6s,mb3.8,baz=66,slow=6.6,SNR=3.1						
NOA				LR	LR	04 02 34.9	
	comp=E,23nm,19.8s,MS3.3,baz=90,slow=35						
ASAR	**Alice Springs**	**67.28**	**146**	P	**P**	**03 38 51.6**	**-0.6**
	comp=E,0.4nm,0.6s,mb3.6,baz=334,slow=7.0,SNR=4.6						
ILAR	**Eielson Array**	**67.33**	**25**	P	**P**	**03 38 51.9**	**-0.1**
	comp=E,1.2nm,1.0s,mb3.9,baz=288,slow=5.7,SNR=8.7						

IDC 02 03:37:51.3±1.6,7.09S×150.68E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.8/15,mbtmp3.8/5,MS3.8/1,Ms1 3.7/1, ms1mx2.7/25,Error ellipse: s-maj=60.9km s-min=24.5km az=118.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**23.05**	**223**	P	P	03 42 58.1	-0.3
	1.0nm,0.7s,baz=54,slow=9.5,SNR=11						
STKA	**Stephens Creek**	**26.08**	**198**	P	P	03 43 27.0	+0.3
	1.8nm,0.7s,baz=24,slow=12,SNR=2.6						
STKA				LR	LR	03 52 10.5	
	comp=Z,229nm,21.5s,baz=23,slow=33						
FITZ	**Fitzroy Crossi**	**26.73**	**243**	P	P	03 43 32.6	-0.2
	1.2nm,0.6s,baz=61,slow=6.7,SNR=6.6						
SONM	**Songino Array**	**67.16**	**329**	P	P	03 48 47.6	+0.7
	0.3nm,0.5s,baz=147,slow=3.4,SNR=3.1						
ILAR	**Eielson Array**	**85.06**	**22**	P	P	03 50 28.5	-0.1
	1.1nm,0.8s,baz=251,slow=5.5,SNR=13						

MEX 02 03:38:33.7±1.6,17.38N×95.41W,h140km±24km,MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.30**	**257**	*i* P	Pn	03 38 60.0	-0.4
VHO				*i* S	Sn	03 39 19.8	-0.9
TPIG	**Tehuac#an**	**2.12**	**299**	*i* P	Pn	03 39 09.7	0.0
TPIG				*i* S	Sn	03 39 36.2	-1.1
TGIG		**2.27**	**105**	*i* P	Pn	03 39 10.7	-0.8
TGIG				*i* S	Sn	03 39 37.6	-3.0
UTMO	**Huajuapan**	**2.32**	**281**	*i* P	Pn	03 39 10.8	-1.4
UTMO				*i* S	Sn	03 39 38.2	-3.4
PCIG		**2.69**	**128**	*e*P	Pn	03 39 15.6	-1.1
PCIG				*i* S	Sn	03 39 47.5	-2.3
PNIG	**Pinotepa**	**2.78**	**250**	*i* P	Pn	03 39 15.9	-1.9
PNIG				*i* S	Sn	03 39 50.1	-1.8
CCIG	**Comitan**	**3.32**	**109**	*i* P	Pn	03 39 25.1	+0.2
CCIG				*i* S	Sn	03 40 02.9	-1.6

*NEIC **02** 03:51:35.5,33.94S×70.34W,h114km,MD3.4(GUC),After GUC.*

GUC 02 03:51:35.5±0.8,33.94S×70.34W,h114km±3km,MD3.4, ML3.8,4C-10D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	**0.15**	**51**	*e*P	Pn	03 51 50.9	-0.3
LMEL				*i* S	Sn	03 52 03.3	+0.3
LMEL	**Las Melosas**	**0.15**	**51**	*e*P	Pn	03 51 50.9	-0.3
LMEL				*i* S	Sn	03 52 03.3	+0.3
LMEL				AML	AML	03 52 06.7	
	comp=N,4μm,0.2s						
CHCH	**Chadas Angostu**	**0.26**	**271**	*e*P	Pn	03 51 51.8	+0.3
CHCH	**Chadas Angostu**	**0.26**	**271**	*e*P	Pn	03 51 51.8	+0.3
CACH	**El Canelo**	**0.28**	**231**	⇓*i*P	Pn	03 51 52.0	+0.4
CACH				*i* S	Sn	03 52 04.8	+1.0
CACH	**El Canelo**	**0.28**	**231**	⇓*i*P	Pn	03 51 52.0	+0.4
CACH				*i* S	Sn	03 52 04.8	+1.0
SJCH	**San Jose de Ma**	**0.30**	**358**	⇓*i*P	Pn	03 51 51.9	+0.1
SJCH				*i* S	Sn	03 52 04.4	+0.5
SJCH	**San Jose de Ma**	**0.30**	**358**	⇓*i*P	Pn	03 51 51.9	+0.1
SJCH				*i* S	Sn	03 52 04.4	+0.5
SJCH				AML	AML	03 52 05.3	
	comp=N,5μm,0.3s						
PCH	**Pirque**	**0.35**	**335**	⇓*i*P	Pn	03 51 52.2	+0.2
PCH				*i* S	Sn	03 52 04.5	+0.2
PCH	**Pirque**	**0.35**	**335**	⇓*i*P	Pn	03 51 52.2	+0.2
PCH				*i* S	Sn	03 52 04.5	+0.2
ANTU	**Antumapu**	**0.44**	**326**	*e*P	Pn	03 51 52.2	-0.3
ANTU				*i* S	Sn	03 52 05.3	+0.1
ANTU	**Antumapu**	**0.44**	**326**	*e*P	Pn	03 51 52.2	-0.3
ANTU				*i* S	Sn	03 52 05.3	+0.1
ANTU				AML	AML	03 52 07.0	
	comp=E,4μm,0.4s						
FSR	**Penalolen**	**0.49**	**341**	⇓*i*P	Pn	03 51 53.0	+0.3
FSR				*i* S	Sn	03 52 06.0	+0.4
FSR	**Penalolen**	**0.49**	**341**	⇓*i*P	Pn	03 51 53.0	+0.3
FSR				*i* S	Sn	03 52 06.0	+0.4
FSR				AML	AML	03 52 06.8	
	comp=E,1μm,0.6s						
SAN	**Santiago**	**0.56**	**331**	*e*P	Pn	03 51 53.1	0.0
SAN				*i* S	Sn	03 52 06.3	-0.1
SAN	**Santiago**	**0.56**	**331**	*e*P	Pn	03 51 53.1	0.0
SAN				*i* S	Sn	03 52 06.3	-0.1
SAN				AML	AML	03 52 07.1	
	comp=N,3μm,0.4s						
TACH	**Talagante**	**0.57**	**300**	⇑*i*P	Pn	03 51 53.4	+0.1
TACH				*i* S	Sn	03 52 06.7	+0.1
TACH	**Talagante**	**0.57**	**300**	⇑*i*P	Pn	03 51 53.4	+0.1
TACH				*i* S	Sn	03 52 06.7	+0.1
FCH	**Farellones**	**0.61**	**4**	⇓*i*P	Pn	03 52 03.7	+10
FCH				*i* S	Sn	03 52 17.5	+10
FCH				AML	AML	03 52 19.2	
	comp=N,5μm,0.3s						
PEL	**Peldehue**	**0.84**	**340**	⇓*i*P	Pn	03 51 55.7	+0.2
PEL				*i* S	Sn	03 52 10.8	+0.2
PEL				AML	AML	03 52 12.9	
	comp=E,4μm,0.7s						
LNV	**Longovilo**	**0.89**	**269**	⇑*i*P	Pn	03 51 55.9	0.0
LNV				*i* S	Sn	03 52 11.5	+0.1
LNV	**Longovilo**	**0.89**	**269**	⇑*i*P	Pn	03 51 55.9	0.0
LNV				*i* S	Sn	03 52 11.5	+0.1
ROCH	**El Roble**	**1.12**	**330**	*e*P	Pn	03 51 58.6	+0.3
ROCH				*i* S	Sn	03 52 16.3	+0.9
ROCH	**El Roble**	**1.12**	**330**	*e*P	Pn	03 51 58.6	+0.3
ROCH				*i* S	Sn	03 52 16.3	+0.9
JACH	**Jahuel**	**1.27**	**350**	*e*P	Pn	03 52 00.2	+0.3
JACH				*i* S	Sn	03 52 18.9	+0.5
JACH	**Jahuel**	**1.27**	**350**	*e*P	Pn	03 52 00.2	+0.3
JACH				*i* S	Sn	03 52 18.9	+0.5
TALC	**Talca**	**1.80**	**216**	*e*P	Pn	03 52 06.4	+0.2
TALC				*i* S	Sn	03 52 29.7	+0.1
TALC	**Talca**	**1.80**	**216**	*e*P	Pn	03 52 06.4	+0.2
TALC				*i* S	Sn	03 52 29.7	+0.1
TALC				AML	AML	03 52 31.2	
	comp=N,1μm,0.2s						
CMCH	**Combarbala**	**2.81**	**348**	*e*P	Pn	03 52 18.0	-1.2
CMCH				*i* S	Sn	03 52 51.0	-1.8
CMCH	**Combarbala**	**2.81**	**348**	*e*P	Pn	03 52 18.0	-1.2
CMCH				*i* S	Sn	03 52 51.0	-1.8
CMCH				AML	AML	03 52 57.2	
	comp=E,564nm,0.7s						
TRQA	**Tornquist**	**7.92**	**124**	*e*Pn	Pn	03 53 26.3	-1.6
	comp=E,3.3nm,0.5s						

*IDC **02** 03:58:55.4±3.2,30.81N×83.24E,h0km,mb3.5/5, mb1 3.7/7,mb1mx3.5/26,mbtmp3.5/7,ML3.5/2,MS2.9/1, Ms1 2.9/1,ms1mx2.1/29,Error ellipse: s-maj=80.8km s-min=28.2km az=55.0*
*NEIC **02** 03:58:56.6±1.1,30.82N×83.16E,h10km,mb3.7/1,Error ellipse: s-maj=29.0km s-min=11.7km az=57.0*
*ISCJB **02** 03:59:02.4±1.9,30.98N±0.09×83.5E±0.1,h69km±24km, mb3.2/5,Error ellipse: s-maj=17.1km s-min=12.6km az=136.1*
*NDI **02** 03:59:28.5±2.6,30.60N×82.38E,h10km,mb3.9, mb3.7(NEIC)*

ISC 02 03:59:02.8±1.7,31.02N±0.09×83.6E±0.1,h51km±24km, n17,σ1°21/18,mb3.4/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.24**	**244**	*ex*	**Pn**	**03 59 51.1**	**0.0**
PTH				*eS*	**Sn**	**04 00 30.1**	**+1.6**
JOSI	**Joshimath**	**3.47**	**263**	*e*PKP	**Pn**	**03 59 59.2**	**+4.9**
JOSI				*eS*	**Sn**	**04 00 28.1**	**-6.0**
KLP	**Kalpa**	**4.57**	**278**	*e*PKP	x	04 00 24.2	
KLP				*eS*	**Sn**	**04 01 08.0**	**+6.7**
DDI	**Dehra Dun**	**4.79**	**263**	*ex*	x	04 00 22.0	
SONA	**Sohna**	**6.27**	**246**	*e*PKP	x	04 00 47.0	
SONA				*eS*	**Sn**	**04 01 42.8**	**-0.4**
KUDL	**Kundal**	**6.79**	**247**	*ex*	**Pn**	**04 00 33.6**	**-6.3**
KUDL				AMb	AMB	04 00 35.2	
	comp=Z,3.6nm,0.7s						
KUDL				*ex*	x	04 01 43.6	
KHET	**Khetri**	**7.36**	**248**	*ex*	**Pn**	**04 00 50.9**	**+3.2**
KHET				AMb	AMB	04 00 55.6	
	comp=Z,1.8nm,0.3s						
KHET				*eS*	**Sn**	**04 02 08.5**	**-1.3**
MK31	**Makanchi Array**	**15.78**	**357**	*e*Pn	**Pn**	**04 02 41.5**	**-0.1**
MKAR	**Makanchi Array**	**15.78**	**357**	Pn	**Pn**	**04 02 41.0**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=178,slow=14,SNR=3.6						
CMAR	**Chiang Mai Arr**	**18.73**	**128**	P	**Pn**	**04 03 17.0**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=315,slow=12,SNR=3.5						
KURK	**Kurchatov**	**20.02**	**351**	P	**P**	**04 03 30.5**	**-0.7**
	comp=Z,0.7nm,0.2s,baz=176,slow=9.9,SNR=10.0						
ZALV	**Zalesovo Beam**	**22.93**	**2**	P	**P**	**04 04 02.4**	**+0.1**
	comp=Z,0.4nm,0.4s,mb3.2,baz=193,slow=5.8,SNR=3.1						
BVAR	**Borovoye Array**	**23.99**	**340**	P	**P**	**04 04 13.2**	**+0.8**
	comp=Z,0.4nm,0.3s,mb3.3,baz=134,slow=4.2,SNR=3.0						
SONM	**Songino Array**	**24.22**	**40**	P	**P**	**04 04 17.4**	**+2.9**
	comp=Z,1.0nm,0.8s,mb3.3,baz=232,slow=8.9,SNR=4.6						
ABKAR	**Akbulak array**	**25.47**	**322**	Pn	**P**	**04 04 24.0**	**-2.0**
KSRS	**Korea Array**	**36.97**	**68**	LR	LR	04 22 43.1	
	comp=Z,18nm,21.7s,baz=320,slow=38						
ILAR	**Eielson Array**	**76.76**	**20**	P	**P**	**04 10 49.4**	**+0.9**
	comp=Z,0.4nm,0.8s,mb3.4,baz=321,slow=5.2,SNR=4.8						

DJA 02 04:07:25,7.64S×106.73E,h35km,MLv3.7/6,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.65**	**345**	P	Pn	04 07 39.5	+1.7
SKJI				S	Sn	04 07 48.5	+1.6
CISI	**Cisompet, Garu**	**1.08**	**86**	P	Pn	04 07 44.6	+1.0
CISI				S	Sn	04 07 57.0	-0.4
DBJI	**Dramaga**	**1.08**	**1**	P	Pn	04 07 44.3	+0.7
DBJI				S	Sn	04 07 57.8	+0.4
LEM	**Lembang**	**1.20**	**48**	P	Pn	04 07 46.2	+1.0
LEM				S	Sn	04 08 02.9	+2.7
SBJI	**Serang**	**1.62**	**338**	P	Pn	04 07 52.0	+0.9
SBJI				S	Sn	04 08 12.4	+1.6

*ISCJB **02** 04:08:01.1±0.5,37.90N±0.02×21.44E±0.03,h3km±4km, Error ellipse: s-maj=4.3km s-min=3.5km az=4.4*
*ATH **02** 04:08:01.2,37.91N×21.42E,h21km±1km,MD3.2/16*
*NEIC **02** 04:08:01.2,37.91N×21.42E,h21km,MD3.2(ATH),After ATH.*
*CSEM **02** 04:08:01.5±0.2,37.91N×21.42E,h20km,MD3.2,Error ellipse: s-maj=5.5km s-min=5.1km az=23.0*
*THE **02** 04:08:01.6,37.90N×21.46E,h6km±3km,ML2.5/7,Error ellipse: s-maj=3.5km s-min=0.7km az=2.0*

ISC 02 04:08:01.8±0.5,37.91N±0.02×21.44E±0.03,h6km±4km, n63,σ0°86/105,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.15**	**9**	*e*Pb	**Pg**	**04 08 06.0**	**+1.0**
RLS				*e*Sb	**Sg**	**04 08 09.8**	**+2.7**
RLS	**Riolos of Patr**	**0.15**	**9**	*e*PB	**Pg**	**04 08 06.0**	**+1.0**
RLS				*e*SB	**Sg**	**04 08 09.8**	**+2.7**
RLS	**Riolos of Patr**	**0.15**	**9**	*e*Pb	**Pg**	**04 08 06.0**	**+1.0**
RLS				*e*Sb	**Sg**	**04 08 09.8**	**+2.7**
UPR	**University Cam**	**0.47**	**36**	*e*PB	**Pg**	**04 08 10.8**	**-0.1**
UPR				*e*SB	**Sg**	**04 08 17.8**	**+0.8**
UPR	**University Cam**	**0.47**	**36**	*e*Pb	**Pg**	**04 08 10.8**	**-0.1**
UPR				*e*Sb	**Sg**	**04 08 17.8**	**+0.8**
LAKA	**Lakka**	**0.54**	**52**	P	**Pg**	**04 08 11.7**	**-0.6**
LAKA				S	**Sg**	**04 08 19.5**	**+0.1**
LAKA	**Lakka**	**0.54**	**52**	P	**Pg**	**04 08 11.7**	**-0.6**
LAKA				S	**Sg**	**04 08 19.5**	**+0.1**
KFL	**Anninata**	**0.55**	**292**	P	**Pg**	**04 08 12.5**	**+0.1**
KFL	**Anninata**	**0.55**	**292**	P	**Pg**	**04 08 12.5**	**+0.1**
EFP	**Efpalio**	**0.64**	**35**	*e*PN	**Pg**	**04 08 13.6**	**-0.5**
EFP				*e*SN	**Sg**	**04 08 22.9**	**+0.5**
EFP	**Efpalio**	**0.64**	**35**	P	**Pg**	**04 08 13.3**	**-0.8**
EFP				S	**Sg**	**04 08 23.6**	**+1.2**
EFP	**Efpalio**	**0.64**	**35**	P	**Pg**	**04 08 13.3**	**-0.8**
EFP	**Efpalio**	**0.64**	**35**	*e*Pn	**Pg**	**04 08 13.6**	**-0.5**
EFP				S	**Sg**	**04 08 23.6**	**+1.2**
TRIZ	**Trizonia**	**0.68**	**47**	P	**Pg**	**04 08 13.9**	**-1.0**
TRIZ				S	**Sg**	**04 08 23.5**	**-0.3**
TRIZ	**Trizonia**	**0.68**	**47**	P	**Pg**	**04 08 13.9**	**-1.0**
TRIZ				S	**Sg**	**04 08 23.5**	**-0.3**
GUR	**Goura**	**0.72**	**87**	*e*PN	**Pg**	**04 08 15.6**	**0.0**
GUR				*e*SN	**Sg**	**04 08 26.3**	**+1.4**
GUR	**Goura**	**0.72**	**87**	P	**Pg**	**04 08 14.3**	**-1.3**
GUR				S	**Sg**	**04 08 25.2**	**+0.3**
GUR	**Goura**	**0.72**	**87**	P	**Pg**	**04 08 14.3**	**-1.3**
GUR	**Goura**	**0.72**	**87**	*e*Pn	**Pg**	**04 08 15.6**	**0.0**
GUR				S	**Sg**	**04 08 25.2**	**+0.3**
GUR				*e*Sn	**Sg**	**04 08 26.3**	**+1.4**
VLS	**Valsamata**	**0.72**	**292**	*e*Pn	**Pg**	**04 08 14.6**	**-1.1**
VLS				*e*Sn	**Sg**	**04 08 26.0**	**+0.9**
VLS	**Valsamata**	**0.72**	**292**	*e*PN	**Pg**	**04 08 14.6**	**-1.1**
VLS				*e*SN	**Sg**	**04 08 26.0**	**+0.9**
VLS	**Valsamata**	**0.72**	**292**	P	**Pg**	**04 08 14.9**	**-0.8**
VLS				S	**Sg**	**04 08 26.9**	**+1.8**
VLS	**Valsamata**	**0.72**	**292**	*e*Pn	**Pg**	**04 08 14.6**	**-1.1**
VLS	**Valsamata**	**0.72**	**292**	P	**Pg**	**04 08 14.9**	**-0.8**
VLS				*e*Sn	**Sg**	**04 08 26.0**	**+0.9**
VLS				S	**Sg**	**04 08 26.9**	**+1.8**
KALE	**Kalithea**	**0.74**	**49**	P	**Pg**	**04 08 14.9**	**-1.1**
KALE				S	**Sg**	**04 08 25.9**	**+0.3**
KALE	**Kalithea**	**0.74**	**49**	P	**Pg**	**04 08 14.9**	**-1.1**
KALE				S	**Sg**	**04 08 25.9**	**+0.3**
ITM	**Ithomi**	**0.82**	**152**	*e*Pb	**Pg**	**04 08 16.8**	**-0.8**
ITM				*e*Sn	**Sg**	**04 08 29.5**	**+1.3**
ITM	**Ithomi**	**0.82**	**152**	*e*PB	**Pg**	**04 08 16.8**	**-0.8**
ITM				*e*SN	**Sg**	**04 08 29.5**	**+1.3**
ITM	**Ithomi**	**0.82**	**152**	P	**Pg**	**04 08 17.0**	**-0.6**
ITM	**Ithomi**	**0.82**	**152**	P	**Pg**	**04 08 17.0**	**-0.6**
ITM				*e*Sn	**Sg**	**04 08 29.5**	**+1.3**
VLX	**Vlachokerasia**	**0.92**	**125**	*e*PN	**Pg**	**04 08 19.3**	**-0.1**
VLX				*e*SN	**Sg**	**04 08 32.4**	**+1.0**

3.7nm,0.7s
KURBB **Kurchatov Arra** **5.86 237** ⇓Pn Pn 04 21 50.6 -0.6
0.7nm,0.6s
KURBB ⇓Lg 04 23 28.8
1.7nm,0.3s
MK31 Makanchi Array **7.70 201** ⇑Pn Pn 04 22 20.2 +3.7
1.6nm,0.7s,baz=26,slow=13,SNR=29
MK31 ⇑Sn Sn 04 23 50.7 +6.3
0.4nm,0.6s,baz=26,slow=27,SNR=4.2
MK31 ⇑Lg 04 24 23.7
1.1nm,0.7s,baz=28,slow=32,SNR=4.7
VOSK Vostochnaya **9.24 268** ⇑Pn Pn 04 22 37.1 -0.5
1.0nm,0.6s
VOSK ⇓Sn Sn 04 24 21.9 -0.2
2.5nm,0.8s
ZRNK Zerenda **10.35 271** ⇑Pn Pn 04 22 51.3 -1.5
1.1nm,0.5s
ZRNK ⇓Sn Sn 04 24 50.4 +1.0
1.3nm,0.9s

IGQ 02 04:24:35.1, 0.61N×79.98W, h8km±2km, Mb4.0, Ms3.8, 10C-1D, Error ellipse: s-maj=7.2km s-min=1.5km az=54.2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.89**	**195**	S	Sg	04 25 04.3	+0.4
JAMA	**Jama**	**0.89**	**195**	P	Pg	04 24 51.2	-1.1
GOLV	**Golondrinas**	**0.93**	**115**	S	Sg	04 25 11.4	+6.4
GOLV	**Golondrinas**	**0.93**	**115**	P	Pg	04 24 54.3	+1.4
PINO	**Pino**	**1.56**	**119**	⇑P	Pn	04 25 04.7	+1.5
TERV	**Terraza Guagua**	**1.57**	**119**	P	Pn	04 25 04.9	+1.5
YANA	**Yana**	**1.58**	**117**	⇑P	Pn	04 25 05.1	+1.7
YANA	**Yana**	**1.58**	**117**	⇑S	Sn	04 25 30.5	+6.5
GGP	**Refugio Guagua**	**1.58**	**119**	⇑P	Pn	04 25 04.9	+1.4
JUA2	**San Juan 2**	**1.59**	**121**	⇑S	Sn	04 25 31.8	+7.4
JUA2	**San Juan 2**	**1.59**	**121**	⇑P	Pn	04 25 05.2	+1.5
COTA	**Cotacachi**	**1.66**	**99**	P	Pn	04 25 06.7	+2.2
PITA	**Cotopaxi Volc**	**1.93**	**127**	⇑P	Pn	04 25 10.8	+2.6
CAMI	**Rancho Maria**	**1.95**	**131**	P	Pn	04 25 11.7	+3.2
NAS2	**Nasa**	**1.95**	**129**	P	Pn	04 25 11.8	+3.2
BREF	**Cotopaxi Volca**	**1.99**	**130**	⇑P	Pn	04 25 12.3	+3.2
VC1	**Cotopaxi 1**	**2.00**	**128**	P	Pn	04 25 12.4	+3.1
BVC2	**Cotopaxi Volca**	**2.00**	**129**	⇑P	Pn	04 25 12.6	+3.3
MOV1	**Cotopaxi Vol s**	**2.02**	**130**	P	Pn	04 25 12.1	+2.6
BTAM	**Cotopaxi Volca**	**2.03**	**129**	P	Pn	04 25 12.7	+3.1
CAYR	**Refugio Cayamb**	**2.05**	**107**	P	Pn	04 25 14.4	+4.4
CAYA	**Cayambe**	**2.06**	**105**	⇑P	Pn	04 25 14.0	+4.0
COV1	**Cotopaxi Volc**	**2.06**	**128**	P	Pn	04 25 12.3	+2.2
TAMB	**Tambo**	**2.06**	**129**	P	Pn	04 25 13.4	+3.4
ANTI	**Antisana**	**2.10**	**120**	P	Pn	04 25 13.8	+3.3
ARRY	**Arrayan**	**2.59**	**144**	⇓P	Pn	04 25 20.6	+3.3
PAT1	**Patacocha**	**2.60**	**144**	P	Pn	04 25 21.0	+3.5

*IDC **02** 04:24:39.0±9.1, 12.52N×89.88W, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/21, mbtmp3.6/5, ML2.8/1, Error ellipse: s-maj=158.9km s-min=42.3km az=178.0*
*ISCJB **02** 04:24:43.1±1.8, 12.67N±0.06×90.34W±0.05, h21km±12km, mb3.9/3, Error ellipse: s-maj=10.9km s-min=7.5km az=14.6*
*CASC **02** 04:24:44.0±1.7, 12.75N×90.29W, h14km±9km, MD3.7*
*NEIC **02** 04:24:48.7±1.3, 13.02N×90.09W, h35km, Error ellipse: s-maj=28.6km s-min=10.8km az=207.0*

ISC 02 04:24:42.8±1.7, 12.72N±0.06×90.28W±0.04, h5km±9km, n24, σ1.9 00/32, mb3.9/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**1.29**	**30**	*e*P	**Pn**	**04 25 06.7**	**-0.8**
SBLS				*e*S	**Sg**	**04 25 24.6**	**+0.4**
SNJE	**San Jose**	**1.32**	**30**	*e*P	**Pn**	**04 25 07.3**	**-0.6**
RTR	**El Retiro**	**1.33**	**28**	*e*P	**Pn**	**04 25 07.4**	**-0.6**
RTR				*e*S	**Sg**	**04 25 25.4**	**0.0**
BOQS	**Boqueron**	**1.40**	**44**	*e*P	**Pn**	**04 25 09.0**	**-0.1**
BOQS				*e*S	**Sb**	**04 25 28.9**	**+1.1**
SNET	**Serv Nac Est T**	**1.40**	**46**	*e*P	**Pn**	**04 25 09.3**	**+0.2**
LFRS	**El Faro**	**1.49**	**53**	*e*P	**Pn**	**04 25 09.4**	**-0.8**
LFRS				*e*S	**Sn**	**04 25 30.9**	**+0.9**
RBDL	**Robledal**	**1.50**	**22**	*e*P	**Pn**	**04 25 10.0**	**-0.5**
RBDL				*e*S	**Sn**	**04 25 29.1**	**-1.3**
LBRS	**Las Brisas**	**1.57**	**50**	*e*P	**Pn**	**04 25 11.0**	**-0.4**
SNVI	**San Vicente**	**1.66**	**57**	*e*P	**Pn**	**04 25 12.6**	**0.0**
FUG	**Fuego 3**	**1.81**	**342**	*e*P	**Pn**	**04 25 13.9**	**-0.7**
FUG				*e*S	**Sn**	**04 25 40.5**	**+2.5**
NBG	**Las Nubes**	**1.86**	**358**	*e*P	**Pn**	**04 25 16.5**	**+1.1**
MTO2	**Montecristo 2**	**1.90**	**28**	*e*P	**Pn**	**04 25 15.7**	**-0.1**
VSM	**San Miguel**	**2.08**	**70**	*e*P	**Pn**	**04 25 17.6**	**-0.7**
BLLM	**Bellamira**	**2.11**	**70**	*e*P	**Pn**	**04 25 18.7**	**-0.1**
BLLM				*e*S	**Sn**	**04 25 45.9**	**+0.3**
CAHU	**Cacacuatique**	**2.27**	**62**	*e*P	**Pn**	**04 25 20.9**	**-0.1**
MRL	**Marmol**	**2.41**	**14**	*e*P	**Pn**	**04 25 23.8**	**+0.9**
CNCH	**Conchagua**	**2.44**	**77**	*e*P	**Pn**	**04 25 23.1**	**-0.3**
TGUH	**Tegucigalpa,Un**	**3.21**	**65**	*e*Pn	**Pn**	**04 25 32.1**	**-1.9**
JTS	**JuntasAbangare**	**5.75**	**114**	Pn	**Pn**	**04 26 11.3**	**+2.5**
CMIG	**Matias Romero**	**6.23**	**315**	Pn	**Pn**	**04 26 16.1**	**+0.7**
	0.2nm,0.3s,baz=348,slow=22,SNR=8.2						
CMIG				Sn	**Sn**	**04 27 24.7**	**-2.3**
	baz=85,slow=12,SNR=1.7						
TXAR	**Lajitas Array**	**20.70**	**325**	P	**P**	**04 29 24.6**	**+0.7**
	1.0nm,0.9s,baz=141,slow=11,SNR=5.8						
TKL	**Tuckaleechee C**	**23.59**	**13**	P	**P**	**04 29 53.9**	**-0.8**
	2.3nm,0.8s,mb3.6,baz=162,slow=20,SNR=3.4						
NVAR	**Mina Array Bea**	**35.72**	**321**	P	**P**	**04 31 44.1**	**+1.7**
	0.7nm,0.7s,mb3.7,baz=130,slow=9.5,SNR=5.2						
SCHQ	**Schefferville**	**45.87**	**19**	P	**P**	**04 33 01.6**	**-4.3**
	3.0nm,0.9s,mb4.2,baz=233,slow=10,SNR=3.5						

IDC 02 04:44:31.1±6.6, 17.76S×178.57W, h578km±78km, mb3.0/6, mb1 3.3/6, mb1mx3.2/15, mbtmp3.0/6, Error ellipse: s-maj=37.2km s-min=24.8km az=130.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.57**	**241**	P	P	04 51 05.7	+0.2
	6.0nm,0.5s,baz=88,slow=9.6,SNR=26						
ASAR	**Alice Springs**	**44.67**	**254**	P	P	04 51 53.5	-0.2
	28nm,0.6s,baz=88,slow=8.5,SNR=340						
ASAR				PcP	PcP	04 53 24.0	+0.3
	1.0nm,0.8s,baz=101,slow=4.9,SNR=5.0						
QSPA	**South Pole Qui**	**72.29**	**180**	P	P	04 54 58.2	0.0
	2.4nm,1.0s,baz=32,slow=5.6,SNR=6.7						
NVAR	**Mina Array Bea**	**79.42**	**44**	P	P	04 55 37.8	-0.4
	0.2nm,0.4s,baz=232,slow=9.3,SNR=5.0						
ILAR	**Eielson Array**	**85.78**	**13**	P	P	04 56 08.7	-0.8
	0.2nm,0.4s,baz=221,slow=4.9,SNR=9.7						
TXAR	**Lajitas Array**	**86.04**	**58**	P	P	04 56 13.3	+1.8
	0.4nm,0.7s,baz=219,slow=5.8,SNR=4.5						
PDAR	**Pinedale Array**	**87.35**	**43**	P	P	04 56 18.3	+0.9
	0.4nm,0.6s,baz=265,slow=1.6,SNR=4.4						
BRTR	**Keskin Array B**	**144.57**	**315**	PKP	PKPdf	05 03 01.9	-0.7
	0.5nm,0.5s,baz=125,slow=3.2,SNR=4.1						

*DDA **02** 04:51:36.6, 37.05N×26.39E, h5km±3km, Ml4.3*
*ATH **02** 04:51:37.5, 36.98N×26.47E, h27km±1km, ML3.9*
*NEIC **02** 04:51:37.5, 36.98N×26.47E, h27km, ML3.9(ATH), After ATH.*
*IDC **02** 04:51:37.4±1.4, 36.67N×26.57E, h0km, mb3.5/2, mb1 3.4/3, mb1mx3.2/23, mbtmp3.4/3, ML2.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.1/37, Error ellipse: s-maj=81.9km s-min=22.3km az=153.0*
*THE **02** 04:51:38.8, 37.05N×26.43E, h10km±2km, ML3.6/2, Error ellipse: s-maj=2.7km s-min=0.7km az=190.0*
*CSEM **02** 04:51:38.9±0.1, 37.01N×26.43E, h15km, ML3.6/2, Error ellipse: s-maj=4.0km s-min=2.9km az=161.0*
*ISCJB **02** 04:51:38.0±0.4, 37.00N±0.02×26.42E±0.02, h14km±3km, mb3.7/3, Error ellipse: s-maj=3.4km s-min=2.8km az=143.5*

ISC 02 04:51:38.9±0.4, 37.01N±0.02×26.43E±0.02, h15km±3km, n117, σ0.9 92/159, mb3.7/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APE	**Apeiranthos**	**0.72**	**275**	*e*Pn	**Pg**	**04 51 52.3**	**-0.7**
APE				*e*Sn	**Sg**	**04 52 03.9**	**+1.4**
APE	**Apeiranthos**	**0.72**	**275**	*e*PN	**Pg**	**04 51 52.3**	**-0.7**
APE				*e*SN	**Sg**	**04 52 03.9**	**+1.4**
APE	**Apeiranthos**	**0.72**	**275**	P	**Pg**	**04 51 52.3**	**-0.7**
APE				S	**Sg**	**04 52 03.1**	**+0.6**
APE	**Apeiranthos**	**0.72**	**275**	P	**Pg**	**04 51 52.3**	**-0.7**
APE				S	**Sg**	**04 52 03.1**	**+0.6**
NIS1	**Nisyros Isl.**	**0.72**	**124**	P	**Pg**	**04 51 53.6**	**+0.6**
NIS1				S	**Sg**	**04 52 03.9**	**+1.4**
NIS1	**Nisyros Isl.**	**0.72**	**124**	P	**Pg**	**04 51 53.6**	**+0.6**
NIS1				S	**Sg**	**04 52 03.9**	**+1.4**
SMG	**Samos**	**0.77**	**25**	*e*Pn	**Pg**	**04 51 52.9**	**-1.0**
SMG				*e*Sn	**Sg**	**04 52 04.1**	**0.0**
SMG	**Samos**	**0.77**	**25**	*e*PN	**Pg**	**04 51 52.9**	**-1.0**
SMG				*e*SN	**Sg**	**04 52 04.1**	**0.0**
SMG	**Samos**	**0.77**	**25**	*e*Pn	**Pg**	**04 51 52.9**	**-1.0**
SMG				*e*Sn	**Sg**	**04 52 04.1**	**0.0**
BDRM	**Kayabasi**	**0.81**	**86**	*i* P	**Pg**	**04 51 54.0**	**-0.7**
BDRM				*i* S	**Sg**	**04 52 06.5**	**+1.1**
BDRM	**Kayabasi**	**0.81**	**86**	*i* P	**Pg**	**04 51 54.0**	**-0.7**
BDRM				*i* S	**Sg**	**04 52 06.5**	**+1.1**
THR2	**Thira island,**	**0.97**	**235**	P	**Pg**	**04 51 57.1**	**-0.6**
THR2	**Thira island,**	**0.97**	**235**	P	**Pg**	**04 51 57.1**	**-0.6**
THR1	**Thera Island**	**1.00**	**231**	P	**Pg**	**04 51 57.8**	**-0.5**
THR1	**Thera Island**	**1.00**	**231**	P	**Pg**	**04 51 57.8**	**-0.5**
THR3	**Thira Island,**	**1.02**	**235**	P	**Pg**	**04 51 58.2**	**-0.4**
THR3	**Thira Island,**	**1.02**	**235**	P	**Pg**	**04 51 58.2**	**-0.4**
THR5	**Thira Island,**	**1.05**	**236**	P	**Pg**	**04 51 58.5**	**-0.7**
THR5	**Thira Island,**	**1.05**	**236**	P	**Pg**	**04 51 58.5**	**-0.7**
AYDN	**Tasoluk**	**1.33**	**60**	*i* P	**Pn**	**04 52 02.5**	**-0.5**
AYDN				*i* S	**Sn**	**04 52 20.6**	**+0.3**
AYDN	**Tasoluk**	**1.33**	**60**	*i* P	**Pn**	**04 52 02.5**	**-0.4**
AYDN				*i* S	**Sn**	**04 52 20.6**	**+0.3**
URLA	**Izmir**	**1.36**	**6**	*i* P	**Pn**	**04 52 01.3**	**-2.0**
URLA				*i* S	**Sn**	**04 52 20.6**	**-0.6**
URLA	**Izmir**	**1.36**	**6**	*i* P	**Pn**	**04 52 01.3**	**-2.1**
CHOS	**Chios island**	**1.41**	**348**	*e*PB	**Pn**	**04 52 02.8**	**-1.3**
CHOS	**Chios island**	**1.41**	**348**	P	**Pn**	**04 52 02.3**	**-1.8**
CHOS				S	**Sn**	**04 52 20.6**	**-1.8**
CHOS	**Chios island**	**1.41**	**348**	P	**Pn**	**04 52 02.3**	**-1.8**
CHOS	**Chios island**	**1.41**	**348**	*e*Pb	**Pn**	**04 52 02.8**	**-1.3**
CHOS				S	**Sn**	**04 52 20.6**	**-1.8**
BLCB	**Balcova**	**1.46**	**19**	P	**Pn**	**04 52 03.8**	**-1.0**
BLCB				S	**Sn**	**04 52 22.4**	**-1.2**
BLCB	**Balcova**	**1.46**	**19**	P	**Pn**	**04 52 03.8**	**-1.0**
BLCB				S	**Sn**	**04 52 22.4**	**-1.2**
KARP	**Karpathos**	**1.57**	**158**	*e*Pb	**Pn**	**04 52 04.6**	**-1.7**
KARP	**Karpathos**	**1.57**	**158**	*e*PB	**Pn**	**04 52 04.6**	**-1.7**
KARP	**Karpathos**	**1.57**	**158**	*e*Pb	**Pn**	**04 52 04.6**	**-1.7**
ARG	**Arkhangelos**	**1.58**	**119**	*e*Pn	**Pn**	**04 52 05.7**	**-0.6**
ARG	**Arkhangelos**	**1.58**	**119**	*e*PN	**Pn**	**04 52 05.7**	**-0.6**
ARG	**Arkhangelos**	**1.58**	**119**	*e*Pn	**Pn**	**04 52 05.7**	**-0.6**
NPS	**Neapolis**	**1.86**	**201**	*e*Pn	**Pn**	**04 52 09.2**	**-1.1**
NPS				*e*Sn	**Sn**	**04 52 32.8**	**-0.7**
NPS	**Neapolis**	**1.86**	**201**	*e*PN	**Pn**	**04 52 09.2**	**-1.1**
NPS				*e*SN	**Sn**	**04 52 32.8**	**-0.7**
NPS	**Neapolis**	**1.86**	**201**	*e*Pn	**Pn**	**04 52 09.2**	**-1.1**
NPS				*e*Sn	**Sn**	**04 52 32.8**	**-0.7**
ZKR	**Zakros**	**1.90**	**185**	*e*Pn	**Pn**	**04 52 10.3**	**-0.4**
ZKR				*e*Sn	**Sn**	**04 52 34.0**	**-0.3**
ZKR	**Zakros**	**1.90**	**185**	*e*PN	**Pn**	**04 52 10.3**	**-0.4**
ZKR				*e*SN	**Sn**	**04 52 34.0**	**-0.3**
ZKR	**Zakros**	**1.90**	**185**	*e*Pn	**Pn**	**04 52 10.3**	**-0.4**
ZKR				*e*Sn	**Sn**	**04 52 34.0**	**-0.3**
LAST	**Lasithi**	**2.00**	**203**	*e*Pb	**Pn**	**04 52 11.6**	**-0.5**
LAST				*e*Sn	**Sn**	**04 52 35.7**	**-1.1**
LAST	**Lasithi**	**2.00**	**203**	*e*PB	**Pn**	**04 52 11.6**	**-0.5**
LAST				*e*SN	**Sn**	**04 52 35.7**	**-1.1**
LAST	**Lasithi**	**2.00**	**203**	*e*Pb	**Pn**	**04 52 11.6**	**-0.5**
LAST				*e*Sn	**Sn**	**04 52 35.7**	**-1.1**
AKHS	**Akhisar**	**2.17**	**30**	*i* P	**Pn**	**04 52 14.0**	**-0.4**
AKHS				*i* S	**Sn**	**04 52 48.3**	**+7.3**
AKHS	**Akhisar**	**2.17**	**30**	*i* P	**Pn**	**04 52 14.0**	**-0.5**
DNZL	**Cakiroluk**	**2.19**	**71**	*e*P	**Pn**	**04 52 17.1**	**+2.3**
DNZL				*i* S	**Sg**	**04 52 51.7**	**+2.3**
DNZL	**Cakiroluk**	**2.19**	**71**	*e*P	**Pn**	**04 52 17.1**	**+2.3**
PRK	**Paraskevi**	**2.24**	**357**	*e*Pn	**Pn**	**04 52 15.5**	**0.0**
PRK	**Paraskevi**	**2.24**	**357**	*e*PN	**Pn**	**04 52 15.5**	**0.0**
PRK	**Paraskevi**	**2.24**	**357**	*e*Pn	**Pn**	**04 52 15.5**	**0.0**
VLY	**Voula,Athens**	**2.26**	**293**	*e*Pn	**Pn**	**04 52 16.1**	**+0.3**
VLY				*e*Sn	**Sn**	**04 52 44.0**	**+0.6**
VLY	**Voula,Athens**	**2.26**	**293**	*e*PN	**Pn**	**04 52 16.1**	**+0.3**
VLY				*e*SN	**Sn**	**04 52 44.0**	**+0.6**
VLY	**Voula,Athens**	**2.26**	**293**	*e*Pn	**Pn**	**04 52 16.1**	**+0.3**
VLY				*e*Sn	**Sn**	**04 52 44.0**	**+0.6**
PTL	**Penteli**	**2.29**	**298**	*e*Pn	**Pn**	**04 52 16.2**	**+0.1**
PTL	**Penteli**	**2.29**	**298**	*e*PN	**Pn**	**04 52 16.2**	**+0.1**
PTL	**Penteli**	**2.29**	**298**	*e*Pn	**Pn**	**04 52 16.2**	**+0.1**
ATHU	**Athens Univers**	**2.31**	**295**	P	**Pn**	**04 52 17.2**	**+0.7**
ATHU				S	**Sn**	**04 52 45.9**	**+1.3**
ATHU	**Athens Univers**	**2.31**	**295**	P	**Pn**	**04 52 17.2**	**+0.7**
ATHU				S	**Sn**	**04 52 45.9**	**+1.3**
ATH	**Athens Observa**	**2.36**	**295**	*e*Pn	**Pn**	**04 52 17.0**	**-0.2**
ATH				*e*Sn	**Sn**	**04 52 46.4**	**+0.5**
ATH	**Athens Observa**	**2.36**	**295**	*e*PN	**Pn**	**04 52 17.0**	**-0.2**
ATH				*e*SN	**Sn**	**04 52 46.4**	**+0.5**
ATH	**Athens Observa**	**2.36**	**295**	*e*Pn	**Pn**	**04 52 17.0**	**-0.2**
ATH				*e*Sn	**Sn**	**04 52 46.4**	**+0.5**
SIVA	**Sivas**	**2.38**	**214**	*e*Pn	**Pn**	**04 52 17.1**	**-0.3**
SIVA				*e*Sn	**Sn**	**04 52 46.0**	**-0.3**
SIVA	**Sivas**	**2.38**	**214**	*e*PN	**Pn**	**04 52 17.1**	**-0.3**
SIVA				*e*SN	**Sn**	**04 52 46.0**	**-0.3**
SIVA	**Sivas**	**2.38**	**214**	*e*Pn	**Pn**	**04 52 17.1**	**-0.3**
SIVA				*e*Sn	**Sn**	**04 52 46.0**	**-0.3**
VAM	**Vamos**	**2.41**	**229**	*e*Pn	**Pn**	**04 52 17.5**	**-0.3**
VAM	**Vamos**	**2.41**	**229**	*e*PN	**Pn**	**04 52 17.5**	**-0.3**
VAM	**Vamos**	**2.41**	**229**	*e*Pn	**Pn**	**04 52 17.5**	**-0.3**
NAIG	**Nisos Aigina**	**2.46**	**289**	*e*Pn	**Pn**	**04 52 19.1**	**+0.6**
NAIG	**Nisos Aigina**	**2.46**	**289**	*e*PN	**Pn**	**04 52 19.1**	**+0.6**
NAIG	**Nisos Aigina**	**2.46**	**289**	*e*Pn	**Pn**	**04 52 19.1**	**+0.6**
GOLH	**Golhisar**	**2.51**	**84**	*i* P	**Pn**	**04 52 19.9**	**+0.7**
GOLH	**Golhisar**	**2.51**	**84**	*i* P	**Pn**	**04 52 19.9**	**+0.7**
KARN	**Karanos**	**2.59**	**233**	*e*PN	**Pn**	**04 52 19.8**	**-0.4**
KARN				*e*SN	**Sn**	**04 52 51.0**	**-0.4**
KARN	**Karanos**	**2.59**	**233**	*e*Pn	**Pn**	**04 52 19.8**	**-0.4**
DID	**Didima**	**2.60**	**282**	*e*PN	**Pn**	**04 52 20.7**	**+0.3**
DID	**Didima**	**2.60**	**282**	*e*Pn	**Pn**	**04 52 20.7**	**+0.3**
AKAS	**Kas**	**2.67**	**106**	*i* P	**Pn**	**04 52 25.3**	**+4.0**
AKAS	**Kas**	**2.67**	**106**	*i* P	**Pn**	**04 52 25.3**	**+3.9**
DEMI	**Demirci**	**2.72**	**41**	*i* P	**Pg**	**04 52 30.3**	**-0.8**
DEMI				*i* S	**Sg**	**04 53 05.1**	**-1.2**
KHAL	**Karahalli**	**2.79**	**60**	*e*P	**Pn**	**04 52 23.4**	**+0.4**
KHAL	**Karahalli**	**2.79**	**60**	*e*P	**Pn**	**04 52 23.4**	**+0.4**
VLI	**Veliai**	**2.82**	**265**	*e*Pn	**Pn**	**04 52 23.7**	**+0.3**
VLI	**Veliai**	**2.82**	**265**	*e*PN	**Pn**	**04 52 23.7**	**+0.3**
VLI	**Veliai**	**2.82**	**265**	*e*Pn	**Pn**	**04 52 23.7**	**+0.3**
KYTH	**Kithira**	**2.82**	**256**	*e*Pn	**Pn**	**04 52 23.2**	**-0.3**
KYTH	**Kithira**	**2.82**	**256**	*e*PN	**Pn**	**04 52 23.2**	**-0.3**
KYTH	**Kithira**	**2.82**	**256**	*e*Pn	**Pn**	**04 52 23.2**	**-0.3**
LTK	**Loutraki**	**2.93**	**291**	*e*PN	**Pn**	**04 52 25.5**	**+0.5**
LTK	**Loutraki**	**2.93**	**291**	*e*Pn	**Pn**	**04 52 25.5**	**+0.5**
LIA	**Limnos Island**	**3.05**	**342**	*e*Pn	**Pn**	**04 52 26.5**	**-0.1**
LIA	**Limnos Island**	**3.05**	**342**	*e*PN	**Pn**	**04 52 26.5**	**-0.1**
LIA	**Limnos Island**	**3.05**	**342**	*e*Pn	**Pn**	**04 52 26.5**	**-0.1**
GDZ	**Gediz**	**3.18**	**48**	*e*P	**Pn**	**04 52 28.9**	**+0.4**
GDZ				*i* S	**Sg**	**04 53 20.2**	**-0.9**
GDZ	**Gediz**	**3.18**	**48**	*e*P	**Pn**	**04 52 28.9**	**+0.5**
VLX	**Vlachokerasia**	**3.25**	**278**	*e*PN	**Pn**	**04 52 30.2**	**+0.8**
VLX	**Vlachokerasia**	**3.25**	**278**	*e*Pn	**Pn**	**04 52 30.2**	**+0.8**
GUR	**Goura**	**3.38**	**287**	*e*PN	**Pn**	**04 52 31.7**	**+0.5**
GUR	**Goura**	**3.38**	**287**	*e*Pn	**Pn**	**04 52 31.7**	**+0.5**
ITM	**Ithomi**	**3.60**	**274**	*e*Pn	**Pn**	**04 52 35.2**	**+1.0**
ITM	**Ithomi**	**3.60**	**274**	*e*PN	**Pn**	**04 52 35.2**	**+1.0**
ITM	**Ithomi**	**3.60**	**274**	*e*Pn	**Pn**	**04 52 35.2**	**+1.0**
PYL	**PYLOS**	**3.76**	**270**	*e*PN	**Pn**	**04 52 37.1**	**+0.8**
PYL	**PYLOS**	**3.76**	**270**	*e*Pn	**Pn**	**04 52 37.1**	**+0.8**
EFP	**Efpalio**	**3.86**	**293**	*e*PN	**Pn**	**04 52 38.8**	**+1.1**
EFP	**Efpalio**	**3.86**	**293**	*e*Pn	**Pn**	**04 52 38.8**	**+1.1**
BRTR	**Keskin Array B**	**6.28**	**62**	Pn	**Pn**	**04 53 12.8**	**+1.8**
	0.2nm,0.3s,baz=241,slow=15,SNR=6.5						
BRTR	**Keskin Array B**	**6.28**	**62**	Pn	**Pn**	**04 53 12.8**	**+1.8**
CUC	**Castrocucco**	**8.84**	**293**	*e*Pn	**Pn**	**04 53 47.2**	**+1.1**
	6.2nm,0.8s						
CUC	**Castrocucco**	**8.84**	**293**	*e*Pn	**Pn**	**04 53 47.2**	**+1.1**
	6.2nm,0.8s						
DAVOX	**Davos/Dischmat**	**15.70**	**314**	LR	LR	05 02 21.5	
	comp=Z,37nm,18.1s,baz=12,slow=40						
MDT	**Midelt**	**25.74**	**270**	P	**P**	**04 57 10.7**	**+1.9**
	0.7nm,0.6s,mb3.4,baz=70,slow=12,SNR=4.1						
MDT	**Midelt**	**25.74**	**270**	P	**P**	**04 57 10.7**	**+1.9**
TORD	**Torodi Ar. Bea**	**32.47**	**229**	P	**P**	**04 58 08.6**	**-0.2**
	2.9nm,0.3s,mb4.6,baz=33,slow=8.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**32.47**	**229**	P	**P**	**04 58 08.6**	**-0.2**
MKAR	**Makanchi Array**	**41.92**	**58**	P	**P**	**04 59 30.0**	**+1.3**
	0.3nm,0.6s,mb3.1,baz=266,slow=9.0,SNR=3.0						
MKAR	**Makanchi Array**	**41.92**	**58**	P	**P**	**04 59 30.0**	**+1.3**

*IDC **02** 05:25:53.2±1.2, 13.58N×88.15W, h0km, mb3.4/6, mb1 3.8/7, mb1mx3.7/20, mbtmp3.5/7, ML3.7/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/17, Error ellipse: s-maj=76.6km s-min=21.1km az=49.0*
*ISCJB **02** 05:25:59.4±0.5, 13.02N±0.07×88.95W±0.05, h68km±6km, mb3.4/6, Error ellipse: s-maj=13.4km s-min=3.6km az=32.0*
*NEIC **02** 05:26:00.3±2.2, 12.93N×88.89W, h56km±22km, mb3.9/1, MD4.3(SNET), Error ellipse: s-maj=34.9km s-min=12.4km az=206.0*
NEIC Felt [II] at San Salvador. Also felt at La Libertad.
*CASC **02** 05:26:00.0±2.1, 13.02N×88.98W, h31km±6km, MD3.8, ML4.1, mb3.9(NEIC)*

ISC 02 05:26:00.6±0.4, 13.07N±0.07×88.94W±0.05, h61km±7km, n53, σ1.9 17/59, mb3.4/6, 1C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.57**	**348**	*e*P	**Pn**	**05 26 12.3**	**-1.0**
LBRS	**Las Brisas**	**0.68**	**352**	*e*P	**Pn**	**05 26 14.3**	**-0.3**
SNET	**Serv Nac Est T**	**0.68**	**336**	*e*P	**Pn**	**05 26 13.5**	**-1.1**
SNET				*e*S	**Sn**	**05 26 24.1**	**-0.8**
SNET				AML	AML	05 26 25.6	
	comp=Z,10μm,0.3s						
BOQS	**Boqueron**	**0.74**	**334**	*e*P	**Pn**	**05 26 14.6**	**-0.8**
VSM	**San Miguel**	**0.74**	**61**	*e*P	**Pn**	**05 26 15.5**	**+0.1**
BLLM	**Bellamira**	**0.78**	**61**	⇓*i*P	**Pn**	**05 26 16.0**	**+0.2**
CAHU	**Cacacuatique**	**1.00**	**45**	*e*P	**Pn**	**05 26 19.4**	**+0.7**
SBLS	**San Blas**	**1.01**	**319**	*e*P	**Pn**	**05 26 18.1**	**-0.7**
SNJE	**San Jose**	**1.03**	**321**	*e*P	**Pn**	**05 26 18.3**	**-0.6**
RTR	**El Retiro**	**1.07**	**320**	*e*P	**Pn**	**05 26 19.1**	**-0.5**
CNCH	**Conchagua**	**1.10**	**79**	*e*P	**Pn**	**05 26 20.0**	**0.0**
CNCH				*e*S	**Sn**	**05 26 36.5**	**+2.1**
RBDL	**Robledal**	**1.27**	**325**	*e*P	**Pn**	**05 26 22.0**	**-0.2**
MTO2	**Montecristo 2**	**1.39**	**343**	*e*P	**Pn**	**05 26 23.6**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.90**	**59**	*e*Pn	**Pn**	**05 26 31.3**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.90**	**59**	*e*P	**Pn**	**05 26 31.4**	**+0.8**
NBG	**Las Nubes**	**2.04**	**318**	*e*P	**Pn**	**05 26 33.7**	**+1.1**
PCG	**Pacaya**	**2.09**	**309**	*e*P	**Pn**	**05 26 34.3**	**+1.0**
LEON	**Leon**	**2.10**	**108**	*e*P	**Pn**	**05 26 36.3**	**+2.9**
MRL	**Marm

XRY	Khrisi	1.17	89	*e*Pn	Pg	05 43 59.7 +0.2
XRY	Khrisi	1.17	89	*e*PN	Pg	05 43 59.7 +0.2
XRY	Khrisi	1.17	89	*e*Pn	Pg	05 43 59.7 +0.2
ZKR	Zakros	1.61	81	*e*Pn	Pn	05 44 06.6 +1.0
ZKR				*e*Sn	Sn	05 44 28.1 +1.6
ZKR	Zakros	1.61	81	*e*PN	Pn	05 44 06.6 +1.0
ZKR				*e*SN	Sn	05 44 28.1 +1.6
ZKR	Zakros	1.61	81	P	Pn	05 44 06.3 +0.7
ZKR				S	Sn	05 44 29.2 +2.7
ZKR	Zakros	1.61	81	P	Pn	05 44 06.3 +0.7
ZKR	Zakros	1.61	81	*e*Pn	Pn	05 44 06.6 +1.0
ZKR				*e*Sn	Sn	05 44 28.1 +1.6
ZKR				S	Sn	05 44 29.2 +2.7
THR5	Thira Island,	1.77	29	P	Pn	05 44 07.4 -0.5
THR5	Thira Island,	1.77	29	P	Pn	05 44 07.4 -0.5
THR3	Thira Island,	1.79	30	P	Pn	05 44 07.3 -0.8
THR3	Thira Island,	1.79	30	P	Pn	05 44 07.3 -0.8
VLI	Veliai	2.14	330	*e*Pb	Pb	05 44 12.7 -3.3
VLI				*e*Sn	Sn	05 44 38.7 -0.9
VLI	Veliai	2.14	330	*e*PB	Pb	05 44 12.7 -3.3
VLI				*e*SN	Sn	05 44 38.7 -0.9
VLI	Veliai	2.14	330	*e*Pb	Pb	05 44 12.7 -3.3
VLI				*e*Sn	Sn	05 44 38.7 -0.9
APE	Apeiranthos	2.42	25	*e*Pn	Pn	05 44 16.7 -0.1
APE	Apeiranthos	2.42	25	*e*PN	Pn	05 44 16.7 -0.1
APE	Apeiranthos	2.42	25	P	Pn	05 44 15.3 -1.4
APE	Apeiranthos	2.42	25	P	Pn	05 44 15.3 -1.4
APE	Apeiranthos	2.42	25	*e*Pn	Pn	05 44 16.7 -0.1
KARP	Karpathos	2.46	73	*e*Pb	Pb	05 44 18.8 -2.6
KARP	Karpathos	2.46	73	*e*PB	Pb	05 44 18.8 -2.6
KARP	Karpathos	2.46	73	*e*Pb	Pb	05 44 18.8 -2.6
DID	Didima	2.76	343	*e*PN	Pn	05 44 21.7 +0.2
DID				*e*SN	Sn	05 44 53.3 -1.6
DID	Didima	2.76	343	P	Pn	05 44 21.1 -0.4
DID				S	Sn	05 44 53.2 -1.7
DID	Didima	2.76	343	P	Pn	05 44 21.1 -0.4
DID	Didima	2.76	343	*e*Pn	Pn	05 44 21.7 +0.2
DID				S	Sn	05 44 53.2 -1.7
LTBQ	Tobruq	2.82	186	*i* P	Pn	05 44 25.9 +3.6
	SNR=46					
LTBQ				*e*S	Sn	05 44 55.7 -0.6
	88nm,0.7s,SNR=46					
PYL	PYLOS	2.88	315	*e*PN	Pn	05 44 23.8 +0.7
PYL	PYLOS	2.88	315	P	Pn	05 44 23.1 0.0
PYL	PYLOS	2.88	315	P	Pn	05 44 23.1 0.0
PYL	PYLOS	2.88	315	*e*Pn	Pn	05 44 23.8 +0.7
VLX	Vlachokerasia	2.93	329	*e*PN	Pn	05 44 23.5 -0.3
VLX	Vlachokerasia	2.93	329	P	Pn	05 44 25.1 +1.3
VLX	Vlachokerasia	2.93	329	*e*Pn	Pn	05 44 23.5 -0.3
VLX	Vlachokerasia	2.93	329	P	Pn	05 44 25.1 +1.3
NAIG	Nisos Aigina	2.95	348	*e*Pn	Pn	05 44 24.6 +0.5
NAIG	Nisos Aigina	2.95	348	*e*PN	Pn	05 44 24.6 +0.5
NAIG	Nisos Aigina	2.95	348	*e*Pn	Pn	05 44 24.6 +0.5
ITM	Ithomi	2.99	321	*e*Pn	Pn	05 44 25.1 +0.5
ITM				*e*Sn	Sn	05 44 59.0 -1.5
ITM	Ithomi	2.99	321	*e*PN	Pn	05 44 25.1 +0.5
ITM				*e*SN	Sn	05 44 59.0 -1.5
ITM	Ithomi	2.99	321	P	Pn	05 44 25.4 +0.8
ITM	Ithomi	2.99	321	*e*Pn	Pn	05 44 25.1 +0.5
ITM	Ithomi	2.99	321	P	Pn	05 44 25.4 +0.8
ITM				*e*Sn	Sn	05 44 59.0 -1.5
VLY	Voula,Athens	3.00	353	*e*Pn	Pn	05 44 24.4 -0.4
VLY	Voula,Athens	3.00	353	*e*PN	Pn	05 44 24.4 -0.4
VLY	Voula,Athens	3.00	353	*e*Pn	Pn	05 44 24.4 -0.4
ATH	Athens Observa	3.13	352	*e*Pn	Pn	05 44 26.6 +0.1
ATH	Athens Observa	3.13	352	*e*PN	Pn	05 44 26.6 +0.1
ATH	Athens Observa	3.13	352	*e*Pn	Pn	05 44 26.6 +0.1
PTL	Penteli	3.19	354	*e*Pn	Pn	05 44 27.0 -0.3
PTL	Penteli	3.19	354	*e*PN	Pn	05 44 27.0 -0.3
PTL	Penteli	3.19	354	*e*Pn	Pn	05 44 27.0 -0.3
LTK	Loutraki	3.32	342	*e*PN	Pn	05 44 29.7 +0.6
LTK	Loutraki	3.32	342	P	Pn	05 44 28.8 -0.3
LTK	Loutraki	3.32	342	P	Pn	05 44 28.8 -0.3
LTK	Loutraki	3.32	342	*e*Pn	Pn	05 44 29.7 +0.6
ARG	Arkhangelos	3.42	66	*e*Pn	Pn	05 44 31.5 +1.1
ARG	Arkhangelos	3.42	66	*e*PN	Pn	05 44 31.5 +1.1
ARG	Arkhangelos	3.42	66	*e*Pn	Pn	05 44 31.5 +1.1
GUR	Goura	3.44	334	*e*PN	Pn	05 44 30.9 +0.2
GUR	Goura	3.44	334	P	Pn	05 44 30.9 +0.2
GUR	Goura	3.44	334	*e*Pn	Pn	05 44 30.9 +0.2
SLUM		3.46	167	P	Pn	05 44 32.6 +1.6
	baz=171					
SLUM		3.46	167	P	Pn	05 44 32.6 +1.6
SMG	Samos	3.51	35	*e*Pn	Pn	05 44 31.6 -0.1
SMG	Samos	3.51	35	*e*PN	Pn	05 44 31.6 -0.1
SMG	Samos	3.51	35	*e*Pn	Pn	05 44 31.6 -0.1
DSF	Desfina	3.81	339	P	Pn	05 44 35.8 0.0
DSF	Desfina	3.81	339	P	Pn	05 44 35.8 0.0
LAKA	Lakka	3.84	332	P	Pn	05 44 37.0 +0.7
LAKA				S	Sn	05 45 20.3 -1.1
LAKA	Lakka	3.84	332	P	Pn	05 44 37.0 +0.7
LAKA				S	Sn	05 45 20.3 -1.1
RLS	Riolos of Patr	3.91	325	*e*Pn	Pn	05 44 38.0 +0.8
RLS	Riolos of Patr	3.91	325	*e*PN	Pn	05 44 38.0 +0.8
RLS	Riolos of Patr	3.91	325	*e*Pn	Pn	05 44 38.0 +0.8
LKR	Lokris	3.91	345	*e*Pn	Pn	05 44 37.6 +0.4
LKR	Lokris	3.91	345	*e*PN	Pn	05 44 37.6 +0.4
LKR	Lokris	3.91	345	P	Pn	05 44 36.6 -0.6
LKR	Lokris	3.91	345	P	Pn	05 44 36.6 -0.6
LKR	Lokris	3.91	345	*e*Pn	Pn	05 44 37.6 +0.4
TRIZ	Trizonia	3.91	334	P	Pn	05 44 37.6 +0.3
TRIZ	Trizonia	3.91	334	P	Pn	05 44 37.6 +0.3
EFP	Efpalio	4.03	332	*e*PN	Pn	05 44 39.2 +0.3
EFP	Efpalio	4.03	332	P	Pn	05 44 40.0 +1.1
EFP	Efpalio	4.03	332	*e*Pn	Pn	05 44 39.2 +0.3
EFP	Efpalio	4.03	332	P	Pn	05 44 40.0 +1.1
VLS	Valsamata	4.44	319	*e*Pn	Pn	05 44 46.1 +1.6
VLS	Valsamata	4.44	319	*e*PN	Pn	05 44 46.1 +1.6
VLS	Valsamata	4.44	319	*e*Pn	Pn	05 44 46.1 +1.6
HMAT	Matruh	4.45	147	P	Pn	05 44 45.3 +0.7
	baz=151					
HMAT				AMP		05 45 00.0
	comp=E,110μm,0.5s,logA/T=5.3,baz=151					
HMAT				S	Sn	05 45 33.9 -2.5
	baz=151					
HMAT	Matruh	4.45	147	P	Pn	05 44 45.3 +0.7
HMAT				S	Sn	05 45 33.9 -2.5
EVR	Evrytania	4.50	335	*e*Pn	Pn	05 44 45.8 +0.5
EVR	Evrytania	4.50	335	*e*PN	Pn	05 44 45.8 +0.5
EVR	Evrytania	4.50	335	*e*Pn	Pn	05 44 45.8 +0.5
NEO	Neokhori	4.51	350	*e*Pn	Pn	05 44 46.3 +0.8
NEO	Neokhori	4.51	350	*e*PN	Pn	05 44 46.3 +0.8
NEO	Neokhori	4.51	350	*e*Pn	Pn	05 44 46.3 +0.8
SIGR	SIGRI	4.51	16	P	Pn	05 44 47.5 +2.0
SIGR	SIGRI	4.51	16	P	Pn	05 44 47.5 +2.0
PRK	Paraskevi	4.65	19	*e*Pn	Pn	05 44 47.8 +0.4
PRK	Paraskevi	4.65	19	*e*PN	Pn	05 44 47.8 +0.4
PRK	Paraskevi	4.65	19	*e*Pn	Pn	05 44 47.8 +0.4
THL	Klokotos Trika	5.02	340	*e*PN	Pn	05 44 53.1 +0.6
THL	Klokotos Trika	5.02	340	*e*Pn	Pn	05 44 53.1 +0.6
LJBD	Adjabya	5.23	222	*i* P	Pn	05 44 56.6 +1.3
	SNR=45					
OUR	Ouranopolis	5.46	358	P	Pn	05 44 59.8 +1.3
OUR	Ouranopolis	5.46	358	P	Pn	05 44 59.8 +1.3
PLG	Polygyros	5.54	353	*e*Pn	Pn	05 44 59.5 -0.1
PLG	Polygyros	5.54	353	*e*PN	Pn	05 44 59.5 -0.1
PLG	Polygyros	5.54	353	*e*Pn	Pn	05 44 59.5 -0.1
SWA2		5.70	170	P	Pn	05 45 03.3 +1.5
	baz=172					
SWA2				S	Sn	05 46 07.0 -0.2
	baz=172					
SWA2		5.70	170	P	Pn	05 45 03.3 +1.5
SWA2				S	Sn	05 46 07.0 -0.3
HORT	Hortiatis	5.79	351	P	Pn	05 45 05.4 +2.3
HORT	Hortiatis	5.79	351	P	Pn	05 45 05.4 +2.3
KEK	Kerkira	6.01	325	*e*Pn	Pn	05 45 07.8 +1.7
KEK	Kerkira	6.01	325	*e*PN	Pn	05 45 07.8 +1.7
KEK	Kerkira	6.01	325	*e*Pn	Pn	05 45 07.8 +1.7
FNA	Florina	6.33	340	P	Pn	05 45 12.9 +2.4
FNA	Florina	6.33	340	P	Pn	05 45 12.9 +2.4
RDO	Rodhopi	6.35	9	*e*Pn	Pn	05 45 12.2 +1.5
RDO	Rodhopi	6.35	9	*e*PN	Pn	05 45 12.2 +1.5
RDO	Rodhopi	6.35	9	*e*Pn	Pn	05 45 12.2 +1.5
NVR	Nevrokopi	6.48	357	*e*Pn	Pn	05 45 13.8 +1.3
NVR	Nevrokopi	6.48	357	*e*PN	Pn	05 45 13.8 +1.3
NVR	Nevrokopi	6.48	357	*e*Pn	Pn	05 45 13.8 +1.3
KRUS	Krusevo	6.91	341	*e*Pn	Pn	05 45 16.9 -1.5
GLL	Jalalah	8.21	128	P	Pn	05 45 35.5 -0.8
	baz=131					
GLL	Jalalah	8.21	128	P	Pn	05 45 35.5 -0.8
HFRF	Wahat Farafira	8.44	155	P	Pn	05 45 40.5 +1.1
	baz=157					
HFRF	Wahat Farafira	8.44	155	P	Pn	05 45 40.5 +1.1
CUC	Castrocucco	8.45	310	*e*Pn	Pn	05 45 40.0 +0.5
	comp=E,11nm,0.6s					
CUC	Castrocucco	8.45	310	*e*Pn	Pn	05 45 40.0 +0.4
	comp=E,11nm,0.6s					
SUZ		8.80	122	P	Pn	05 45 43.3 -1.1
	baz=125					
SUZ		8.80	122	P	Pn	05 45 43.3 -1.1
BRTR	Keskin Array B	8.89	54	Pn	Pn	05 45 41.7 -4.0
	comp=E,0.2nm,0.3s,baz=225,slow=14,SNR=12					
MMAI	Mount Meron Ar	9.43	98	Pn	Pn	05 45 50.4 -2.6
	comp=E,2.1nm,0.3s,baz=280,slow=11,SNR=4.1					
STON	Ston	9.49	329	*e*Pn	Pn	05 45 48.2 -5.7
STON				Sn	Sn	05 47 27.3 -13
HNKL	Nakhl	9.57	118	P	Pn	05 45 53.4 -1.5
	baz=121					
HNKL	Nakhl	9.57	118	P	Pn	05 45 53.4 -1.5
DIVS	Divibare	9.79	342	*e*Pn	Pn	05 45 57.1 -0.8
HKAT	Jabal Katrina	10.41	125	P	Pn	05 46 05.6 -1.0
	baz=127					
HKAT	Jabal Katrina	10.41	125	P	Pn	05 46 05.6 -0.9
EIL	Elat	10.41	117	Pn	Pn	05 46 03.7 -2.8
	comp=E,0.6nm,0.3s,baz=342,slow=16,SNR=6.8					
EIL				Sn	Sn	05 47 53.6 -10
	comp=E,1.2nm,0.3s,baz=47,slow=17,SNR=5.3					
EIL	Elat	10.41	117	Pn	Pn	05 46 03.7 -2.8
FETA	Feichten	15.85	324	⇑*i* P	Pn	05 47 21.6 +1.4
	comp=E,11nm,1.4s					
FETA	Feichten	15.85	324	P	Pn	05 47 21.6 +1.4
	comp=E,11nm,1.4s					
MBDF	Montbardon	16.64	312	*e*P	Pn	05 47 25.6 -4.8
	comp=E,5.3nm,0.7s					
MBDF	Montbardon	16.64	312	*e*P	Pn	05 47 25.6 -4.8
	comp=E,2.7nm,0.7s					
GNI	Garni	17.06	66	LR	LR	05 53 26.8
	comp=E,19nm,19.5s,baz=291,slow=35					
HINF	Hinteralfeld	18.34	320	*e*P	Pn	05 47 46.9 -4.6
LOR	Lormes	19.69	315	*e*P	Pn	05 48 04.5 -3.3
LOR	Lormes	19.69	315	*e*P	Pn	05 48 04.5 -3.3
ETSF	Etsaut	20.88	300	*e*P	P	05 48 18.3 -1.0
	comp=E,9.8nm,0.8s					
ETSF	Etsaut	20.88	300	*e*P	P	05 48 18.3 -1.0
	comp=E,4.9nm,0.8s					
ETSF	Etsaut	20.88	300	*e*P	P	05 48 18.3 -1.0
	comp=E,4.9nm,0.8s					
BAIF	Baives	21.11	322	*e*P	P	05 48 19.6 -2.1
	comp=E,11nm,0.6s,mb4.1					
BAIF	Baives	21.11	322	*e*P	P	05 48 19.6 -2.1
	comp=E,5.6nm,0.6s,mb4.1					
BAIF	Baives	21.11	322	*e*P	P	05 48 19.6 -2.1
	comp=E,5.6nm,0.6s,mb4.1					
ESDC	Sonseca Array	22.93	290	P	P	05 48 40.2 -1.1
	comp=E,2.1nm,0.7s,mb3.7,baz=81,slow=9.0,SNR=8.0					
ESDC	Sonseca Array	22.93	290	P	P	05 48 40.2 -1.1
MDT	Midelt	24.05	273	LR	LR	05 59 30.4
	comp=E,64nm,18.0s,MS3.1,baz=136,slow=40					
HFS	Hagfors	26.20	348	P	P	05 49 06.6 -5.1
	comp=E,2.4nm,0.7s,mb3.8,baz=163,slow=11,SNR=7.5					
FINES	FINESS Array B	26.62	2	P	P	05 49 09.9 -5.5
	comp=E,1.1nm,0.5s,mb3.7,baz=168,slow=9.8,SNR=5.1					
FINES				LR	LR	05 59 53.4
	comp=E,78nm,18.4s,MS3.3,baz=127,slow=37					
NB2	NORSAR Subarra	27.50	346	P	P	05 49 19.1 -4.3
	comp=Z,0.5nm,0.4s,mb3.5,baz=156,slow=9.3					
NB2	NORSAR Subarra	27.50	346	P	P	05 49 19.1 -4.3
	comp=Z,0.5nm,0.4s,mb3.5,baz=156,slow=9.0,SNR=4.7					
NOA	NORSAR Array B	27.50	346	P	P	05 49 18.5 -4.9
	comp=Z,0.6nm,0.5s,mb3.5,baz=150,slow=8.9,SNR=5.0					
EKA	Eskdalemuir Ar	27.87	326	P	P	05 49 23.6 -3.1
	comp=Z,1.5nm,0.8s,mb3.7,baz=124,slow=8.6,SNR=6.9					
AKTK	Aktyubinsk	28.98	47	P	P	05 49 32.3 -4.4
AKTO	Aktyubinsk	28.98	47	P	P	05 49 32.3 -4.4
	comp=Z,0.6nm,0.3s,mb3.9,baz=248,slow=12,SNR=3.8					
TORD	Torodi Ar. Bea	29.75	229	P	P	05 49 45.9 +2.1
	comp=Z,3.3nm,0.4s,mb4.4,baz=35,slow=8.6,SNR=3.1					
ARCES	ARCESS Array B	34.73	1	P	P	05 50 21.5 -5.4
	comp=Z,1.5nm,0.6s,mb4.1,baz=165,slow=10.0,SNR=10.0					
DBIC	Dimbokro	38.82	230	P	P	05 51 01.4 -1.0
	comp=Z,1.7nm,0.4s,mb4.1,baz=24,slow=13,SNR=11					
DBIC	Dimbokro	38.82	230	P	P	05 51 01.4 -1.0
TIC	Toumodi	38.94	231	*e*P	P	05 51 05.9 +2.5
	comp=Z,37nm,1.2s,mb5.0					
KIC	Kosan Boka	38.98	230	*e*P	P	05 51 03.5 -0.3
	comp=Z,167nm,2.2s,mb5.4					
LIC	Lamto	39.27	230	*e*P	P	05 51 06.4 +0.3
	comp=Z,81nm,1.7s,mb5.2					
MKAR	Makanchi Array	44.54	56	P	P	05 51 45.5 -3.4
	comp=Z,0.8nm,0.4s,mb3.9,baz=268,slow=7.6,SNR=8.4					
ZALV	Zalesovo Beam	45.73	46	P	P	05 51 53.6 -4.6
	comp=Z,3.9nm,0.4s,mb4.7,baz=269,slow=8.9,SNR=14					
ZALV				LR	LR	06 13 15.8
	comp=Z,19nm,20.0s,MS3.0,baz=241,slow=39					
SONM	Songino Array	60.23	50	P	P	05 53 42.1 -3.2
	comp=Z,1.7nm,0.6s,mb4.2,baz=280,slow=8.6,SNR=6.4					
SCHQ	Schefferville	62.94	319	P	P	05 54 00.9 -2.5
	comp=Z,1.6nm,0.4s,mb4.5,baz=51,slow=9.8,SNR=5.3					
SCHQ	Schefferville	62.94	319	P	P	05 54 00.9 -2.6
YKA	Yellowknife Ar	77.50	342	P	P	05 55 29.4 -3.1
	comp=Z,0.5nm,0.5s,mb3.8,baz=32,slow=5.2,SNR=15					
SJG	San Juan	80.21	285	LR	LR	06 26 00.1
	comp=Z,428nm,18.1s,MS4.8,baz=276,slow=32					
ILAR	Eielson Array	80.45	356	P	P	05 55 45.0 -3.7
	comp=Z,0.8nm,0.9s,mb3.6,baz=360,slow=4.8,SNR=10					
ASAR	Alice Springs	118.71	100	PKP	PKPdf	06 02 22.8 -3.0
	comp=Z,0.4nm,0.6s,baz=308,slow=1.1,SNR=7.7					
ASAR	Alice Springs	118.71	100	PKIKP	PKPdf	06 02 22.8 -3.0

ISCJB ***02*** *05:45:30.8±0.6, 35°.00N±0°.04×137°.51E±0°.04, h40km±12km, Error ellipse: s-maj=7.9km s-min=5.1km az=157.8*
JMA ***02*** *05:45:30.8, 35°.06N×137°.51E, h42km, M2.7 Broadband fault plane solution: P waves. NP1:φs119.00000°, δ52.00000°, λ-146.00000°. NP2:φs6.00000°, δ64.00000°, λ-43.00000°. Principal axes: T Plg7.0000°, Azm65.0000°; N Plg41.0000°, Azm161.000°; P Plg48.0000°, Azm327.0000°;*
ISC 02 05:45:31.1±0.6, 35°.00N±0°.05×137°.51E±0°.04, h38km±11km, n10, σ0°48/18, 3C, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYZW	Yoshizawa	0.18	91	P	Pn	05 45 37.8	-0.3
JYZW				S	Sn	05 45 43.0	+0.1
SHZ3	Shizuoka 3	0.58	83	⇑P	Pn	05 45 42.5	-0.4
SHZ3				S	Sn	05 45 51.4	+0.2
TK04	Tokai 4	0.68	154	P	Pn	05 45 45.0	+0.7
JIE	Ise	0.90	228	⇑P	Pn	05 45 47.2	0.0
JIE				*e*S	Sn	05 45 59.1	+0.1
TSUJ	Tsu 2	0.94	252	P	Pn	05 45 48.3	+0.5
TSUJ				*e*S	Sn	05 46 01.0	+0.9
JGM	Miyama	0.95	317	P	Pn	05 45 47.5	-0.5
JGM				*e*S	Sn	05 45 59.7	-0.7
JYN	Shimob	0.98	59	P	Pn	05 45 48.4	0.0
JIZS	Izushimoda	1.16	104	P	Pn	05 45 50.5	-0.4
JIZS				S	Sn	05 46 05.1	-0.4
JKN2	Miekihoku	1.27	234	⇑P	Pn	05 45 52.1	-0.3
JKN2				*e*S	Sn	05 46 07.4	-0.8
MAT	Matsushiro	1.64	20	P	Pn	05 45 58.1	+0.6
MAT				S	Sn	05 46 17.9	+0.5

JMA 02 06:14:32.2±0.2, 44°.00N×148°.14E, h0km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.85	251	P	Pn	06 15 05.6	+0.4
NEM2				*e*S	Sn	06 15 29.8	+0.6
JRA	Rausu	2.18	269	P	Pn	06 15 10.4	+0.7
JRA				*e*S	Sn	06 15 38.4	+1.0
JAK	Akkeshi	2.70	249	P	Pn	06 15 18.0	+1.2
JAK				*e*S	Sn	06 15 51.3	+1.1
JCH	Churui	3.75	250	*e*S	Sn	06 16 17.9	+1.8
JKB	Kayabe	5.63	250	P	Pn	06 15 58.7	+1.6

IDC ***02*** *06:18:54.7±0.5, 13°.86N×60°.36W, h0km, mb4.3/22, mb1 4.5/24, mb1mx4.4/29, mbtmp4.3/24, MS3.8/15, Ms1 3.8/15, ms1mx3.8/21, Error ellipse: s-maj=14.2km s-min=10.7km az=76.0*
TRN ***02*** *06:18:56.4, 13°.87N×60°.44W, h14km, MD4.7, M4.5(FDF)*
TRN Felt Widely in Saint Lucia,IV. St. Vinc ent III. Barbados III.
BJI ***02*** *06:18:56.0, 13°.90N×60°.40W, h16km, mB5.5/6, Ms5.0/3, Ms7 4.7/4*
NEIC ***02*** *06:18:57.0, 13°.86N×60°.44W, h16km, mb4.7/64, MD4.7(TRN), MD4.6(RSPR), After TRN.*
NEIC Felt at Babonneau, Blanchard, Castries, Choiseul, Desruisseaux and Monier.
ISCJB ***02*** *06:18:58.5±0.4, 13°.88N±0°.02×60°.41W±0°.03, h36km±2km, mb4.6/84, MS3.9/16, Error ellipse: s-maj=5.1km s-min=2.6km az=175.4*
FUNV ***02*** *06:19:01.9, 13°.77N×60°.47W, h25km, MW4.2*
RSPR ***02*** *06:19:08.7, 13°.87N×61°.32W, h35km±34km, MD4.6/11*
ISC 02 06:18:58.1±0.7, 13°.87N±0°.02×60°.39W±0°.03, h19km±3km, h24km±.3km: pP-P, n398, σ0°67/416, mb4.6/84, MS3.9/16, 105C-87D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLW	Petit Monier	0.56	286	⇓*i* P	Pg	06 19 08.7	-0.6
SLW	Petit Monier	0.56	286	*e*P	Pg	06 19 09.6	+0.3
MCLT	Moule a Chique	0.56	254	*e*P	Pg	06 19 08.6	-0.7
MCLT				*e*S	Sg	06 19 17.8	+0.8
MCLT	Moule a Chique	0.56	254	*e*P	Pg	06 19 09.1	-0.2
MCLT				*e*S	Sg	06 19 18.3	+1.4
SLPE	Piton Saint Es	0.59	267	*e*P	Pg	06 19 10.2	+0.3
SLB	Belfond	0.64	266	⇑*i* P	Pg	06 19 11.0	+0.3
SLB	Belfond	0.64	266	⇑*i* P	Pg	06 19 11.0	+0.3
SLDE	Delcer	0.66	264	*e*P	Pb	06 19 11.4	+0.4
MVM	Montagne Vaucl	0.84	324	⇑*e*P	Pb	06 19 12.7	-1.5
SFAN	Fancy Village	0.90	238	*e*P	Pb	06 19 15.3	+0.1
SFAN	Fancy Village	0.90	238	*e*P	Pb	06 19 15.3	+0.1
BHS	Barnard House	0.92	232	*e*P	Pb	06 19 15.2	-0.3
BHS	Barnard House	0.92	232	*e*P	Pb	06 19 15.2	-0.3
BIM	Bigot	0.92	314	⇓*e*P	Pb	06 19 14.1	-1.5
SVB	Belmont	1.03	235	*e*P	Pb	06 19 17.1	-0.2
SVB				*e*S	Sb	06 19 31.4	+0.9
SVB	Belmont	1.03	235	*e*P	Pb	06 19 17.1	-0.2
SVB				*e*S	Sb	06 19 31.4	+0.9
BBGH	Gun Hill	1.08	132	*e*Pn	Pn	06 19 16.3	-2.0
FCV	Fort Charlotte	1.09	230	⇓*i* P	Pb	06 19 18.1	-0.4
FCV	Fort Charlotte	1.09	230	⇓*i* P	Pb	06 19 18.1	-0.4
FDF	Fort de France	1.13	319	*e*Pn	Pn	06 19 17.2	-1.8
FDF				*e*Sn	Sn	06 19 34.1	+0.1
FDF	Fort de France	1.13	319	⇓*e*P	Pn	06 19 16.8	-2.2
BBSP	Saint Philip	1.18	130	⇑*e*P	Pn	06 19 19.4	-0.3
BBSP				*e*S	Sb	06 19 37.3	+2.4
BBSP	Saint Philip	1.18	130	⇑*e*P	Pn	06 19 19.4	-0.3
BBSP				*e*S	Sb	06 19 37.3	+2.4
DSHT	Scott's Head	1.64	325	⇑*e*P	Pn	06 19 26.1	0.0
DSHT	Scott's Head	1.64	325	⇑*e*P	Pn	06 19 26.1	0.0
DFBT	Forest Bistro	1.65	326	*e*P	Pn	06 19 26.4	+0.2
DFBT	Forest Bistro	1.65	326	*e*P	Pn	06 19 26.4	+0.2
DLPL	La Plaine	1.68	330	*e*P	Pn	06 19 26.3	-0.2
DLPL				*e*S	Sn	06 19 48.4	+1.0
DPMT	Pointe Michel	1.68	325	⇓*e*P	Pn	06 19 26.9	+0.3
DPMT	Pointe Michel	1.68	325	⇓*e*P	Pn	06 19 26.9	+0.3
GRCU	Cariacou	1.73	217	*e*P	Pn	06 19 27.0	-0.3
GRCU	Cariacou	1.73	217	*e*P	Pn	06 19 27.0	-0.3
MDN	Morne-Daniel	1.74	326	⇓*e*P	Pn	06 19 28.2	+0.9
MDN	Morne-Daniel	1.74	326	⇓*e*P	Pn	06 19 27.9	+0.5
DWS	Wesley	1.91	332	*e*P	Pn	06 19 30.0	+0.3
DWS				*e*S	Sn	06 19 54.7	+1.4
DWS	Wesley	1.91	332	*e*P	Pn	06 19 30.0	+0.3
DWS				*e*S	Sn	06 19 54.7	+1.4
GRIC	Isle de Caille	1.96	217	*e*P	Pn	06 19 31.2	+0.8
GRIC				*e*S	Sn	06 19 55.4	+0.8
GRSS	Sisters	1.97	218	*e*P	Pn	06 19 31.2	+0.7
GRSS				*e*S	Sn	06 19 55.4	+0.8
GRSS	Sisters	1.97

30nm,0.9s
OTAV Otavalo 22.43 234 *e*P **P 06 23 55.5 -0.6**
27nm,1.6s,mb4.4
ATAH Atahualpa 27.48 222 P **P 06 24 43.5 +0.1**
2.2nm,0.5s,mb4.0,baz=308,slow=12,SNR=2.5
ATAH LR LR 06 36 51.2
comp=Z,280nm,21.5s,MS3.8,baz=222,slow=39
SIV San Ignacio 29.68 181 P **P 06 25 02.9 0.0**
1.2nm,0.6s,mb3.8,baz=3.6,slow=9.0,SNR=9.0
LPAZ La Paz 30.93 195 P **P 06 25 14.5 +0.5**
3.1nm,0.8s,mb4.2,baz=355,slow=6.7,SNR=13
LPAZ LR LR 06 38 54.3
comp=Z,429nm,20.1s,MS4.1,baz=54,slow=39
LPAZ La Paz 30.93 195 *e*P **P 06 25 14.7 +0.7**
6.2nm,0.9s,mb4.4
SWET Sewanee 31.32 317 *e*P **P 06 25 17.8 +0.4**
ACSO Alum Creek Sta 32.89 327 *e*P **P 06 25 31.5 +0.4**
19nm,1.0s,mb5.0
WVT Waverly 33.11 317 *e*P **P 06 25 32.8 -0.2**
3.6nm,0.5s,mb4.6
WVT *e* 06 25 40.6
OXF Oxford 33.32 313 *e*P **P 06 25 35.3 +0.4**
18nm,0.8s,mb5.0
WCI Wyandotte Cave 33.40 321 *e*P **P 06 25 36.2 +0.6**
14nm,1.0s,mb4.9
USIN University of 34.09 320 *e*P **P 06 25 41.6 0.0**
9.2nm,0.5s,mb5.0
USIN *e* 06 25 48.9
BLO Bloomington 34.14 322 *e*P **P 06 25 43.1 +1.1**
15nm,0.7s,mb5.0
OLIL Olney 34.82 320 *e*P **P 06 25 48.5 +0.6**
28nm,1.0s,mb5.2
OLIL *e* pP 06 25 55.0 +1.3
SIUC Southern Illin 34.93 318 *e*P **P 06 25 49.2 +0.3**
13nm,0.8s,mb4.9
FVM French Village 35.87 318 *e*P **P 06 25 57.3 +0.3**
7.4nm,0.6s,mb4.8
FVM *e* pP 06 26 03.8 +1.1
MIAR Mount Ida 36.35 310 *e*P **P 06 26 00.4 -0.7**
2.1nm,0.6s,mb4.2
CCM Cathedral Cave 36.45 317 *e*P **P 06 26 01.3 -0.6**
12nm,1.0s,mb4.8
CCM *e*PcP PcP 06 28 25.4 -0.3
HDIL Hopedale 36.67 322 *e*P **P 06 26 04.3 +0.6**
14nm,0.6s,mb5.0
GLMI Grayling 37.10 331 *e*P **P 06 26 08.1 +0.8**
22nm,0.6s,mb5.2
JFWS Jewell Farm 38.70 324 *e*P **P 06 26 20.8 -0.1**
14nm,0.6s,mb4.9
CPUP Villa Florida 40.07 176 P **P 06 26 31.1 -1.4**
1.4nm,0.6s,mb3.9,baz=327,slow=7.7,SNR=6.5
CPUP LR LR 06 44 57.4
comp=Z,161nm,20.9s,MS3.9,baz=350,slow=39
CPUP Villa Florida 40.07 176 *e*P **P 06 26 30.4 -2.0**
10nm,0.8s,mb4.6
COWI Conover 40.22 329 *e*P **P 06 26 33.9 +0.4**
7.1nm,0.7s,mb4.5
WMOK Wichita Mounta 40.36 308 *e*P **P 06 26 33.6 -1.2**
5.4nm,0.5s,mb4.5
SCHQ Schefferville 41.18 354 P **P 06 26 41.5 +0.2**
1.6nm,0.7s,mb3.7,baz=174,slow=17,SNR=3.9
SCHQ LR LR 06 40 44.5
comp=Z,160nm,21.4s,MS3.9,baz=125,slow=32
528A Cox Ranch, San 42.25 300 ⇓P **P 06 26 49.8 -0.7**
baz=42
AMTX Amarillo 42.65 307 *e*P **P 06 26 54.0 +0.4**
5.8nm,0.5s,mb4.6
TXAR Lajitas Array 42.82 298 P **P 06 26 55.2 +0.1**
0.6nm,0.6s,mb3.5,baz=96,slow=8.5,SNR=7.1
TXAR PcP PcP 06 28 46.9 +0.7
0.8nm,0.6s,baz=118,slow=6.0,SNR=5.9
TXAR Lajitas Array 42.82 298 P **P 06 26 55.2 +0.1**
TXAR PcP PcP 06 28 46.9 +0.7
427A Hayter Ranch, 42.92 301 ⇑P **P 06 26 55.4 -0.5**
baz=43
ECSD EROS Data Cent 42.94 321 *e*P **P 06 26 55.4 -0.5**
13nm,1.1s,mb4.6
MSTX Muleshoe 43.23 305 ⇓P **P 06 26 57.4 -0.9**
baz=43
626A Big Bend Ranch 43.26 298 ⇑P **P 06 26 57.5 -1.2**
baz=43
526A Mary Lane Ranc 43.33 299 ⇓P **P 06 26 58.3 -0.9**
baz=43
425A Indio Mountain 44.24 300 ⇓P **P 06 27 06.2 -0.4**
baz=44,SNR=6.2
W26A Owens Ranch, T 44.34 306 ⇓P **P 06 27 06.8 -0.5**
baz=44,SNR=8.3
325A Bean Ranch, Si 44.35 301 ⇓P **P 06 27 07.3 -0.1**
baz=44,SNR=7.8
125A Gardner Draw, 44.39 303 ⇑P **P 06 27 07.4 -0.3**
baz=44
225A Deer Hill, Car 44.40 302 ⇓P **P 06 27 07.5 -0.3**
baz=44
V26A Tequesquite Ra 44.57 307 P **P 06 27 08.6 -0.6**
baz=45,SNR=15
Y25A Mesa, Roswell 44.74 304 ⇓P **P 06 27 10.7 +0.2**
baz=45,SNR=16
MNTX Cornudas Mount 44.77 301 ⇑P **P 06 27 10.2 -0.5**
baz=45
MNTX Cornudas Mount 44.77 301 *e*P **P 06 27 09.8 -0.9**
10nm,1.3s,mb4.5
324A Moseley Ranch, 44.79 301 ⇓P **P 06 27 10.7 -0.3**
baz=45,SNR=8.6
W25A X Bar L Ranch, 44.92 306 ⇓P **P 06 27 11.6 -0.3**
baz=45,SNR=8.1
224A Cornudas Mount 44.97 302 ⇑P **P 06 27 12.1 -0.2**
baz=45,SNR=6.9
AGMN Agassiz Nation 45.13 327 *e*P **P 06 27 12.6 -0.8**
24nm,0.6s,mb5.2
AGMN *e* pP 06 27 19.8 +0.5
V25A Rancho No Teng 45.23 307 ⇑P **P 06 27 14.3 0.0**
baz=45,SNR=16
U25A Circle Dot Ran 45.23 308 P **P 06 27 14.2 -0.2**
baz=45,SNR=14
Y24A Capitan 45.34 304 P **P 06 27 15.3 0.0**
baz=45,SNR=10
T25A Trinidad 45.47 309 ⇑P **P 06 27 16.0 -0.2**
baz=46,SNR=6.3
S25A Robets Cordova 45.66 310 ⇑P **P 06 27 17.4 -0.4**
baz=46,SNR=8.8
W24A Lazy 6 Ranch, 45.66 306 ⇑P **P 06 27 18.4 +0.6**
baz=46,SNR=10
V24A Rampart Ranch, 45.70 307 ⇓P **P 06 27 18.3 +0.2**
baz=46,SNR=6.5
CFAA Coronel Fontan 45.84 189 P **P 06 27 17.6 -1.5**
0.5nm,0.8s,mb3.5,baz=1.8,slow=7.4,SNR=9.1
Y23A Lovelace Mesa, 45.84 304 ⇓P **P 06 27 19.1 -0.1**
baz=46
T24A Torres, Weston 45.94 309 ⇓P **P 06 27 20.0 +0.1**
baz=46,SNR=6.0
W23A Werner Place, 46.23 306 ⇓P **P 06 27 22.8 +0.4**
baz=46,SNR=8.5
S24A Houchin Ranch, 46.24 309 ⇓P **P 06 27 22.6 +0.3**
baz=46,SNR=5.1
222A Williams Famil 46.28 301 ⇓P **P 06 27 22.8 0.0**
baz=46
R24A Sanders Place, 46.35 310 ⇓P **P 06 27 22.8 -0.4**
baz=46
BNM Barren Site 46.36 304 *e*P **P 06 27 23.5 +0.2**
6.0nm,0.5s,mb4.8
Z22A Elephant Butte 46.42 303 ⇑P **P 06 27 24.2 +0.4**
baz=46
V23A Ortiz Mt. (NFS 46.42 306 ⇓P **P 06 27 24.4 +0.7**
baz=46,SNR=5.9
ANMO Albuquerque 46.42 305 *e*P **P 06 27 24.1 +0.2**
11nm,1.4s,mb4.6
SDCO Great Sand Dun 46.49 309 ⇓P **P 06 27 23.8 -0.4**
baz=47
SDCO Great Sand Dun 46.49 309 *e*P **P 06 27 23.4 -0.8**
11nm,1.4s,mb4.6
SDCO *e* 06 27 31.1
Y22A Socorro 46.58 304 ⇓P **P 06 27 24.4 -0.6**
baz=47,SNR=5.4
U23A El Rito 46.59 307 ⇑P **P 06 27 23.8 -1.2**
baz=47
121A Cookes Peak, D 46.94 302 ⇓P **P 06 27 28.9 +1.0**
baz=47
Z21A St. Cloud Mine 47.01 303 P **P 06 27 29.2 +0.8**
baz=47,SNR=8.0
V22A San Miguel Ran 47.03 306 ⇑P **P 06 27 29.5 +0.9**
baz=47
Y21A Point of Rocks 47.16 304 P **P 06 27 30.6 +0.9**
baz=47,SNR=14
ISCO Idaho Springs 47.25 312 ⇑P **P 06 27 30.2 0.0**
baz=47
ISCO Idaho Springs 47.25 312 *e*P **P 06 27 30.5 +0.3**
4.2nm,0.8s,mb4.4
M24A Cheyenne 47.29 314 ⇓P **P 06 27 30.5 0.0**
baz=47
320A Kipp Ranch, An 47.33 300 ⇑P **P 06 27 30.6 -0.3**
baz=47
T22A Edith 47.33 308 ⇓P **P 06 27 31.6 +0.7**
baz=47
X21A Alamocita Cree 47.36 304 ⇑P **P 06 27 31.2 +0.1**
baz=47
220A Playas Peak, P 47.43 301 ⇑P **P 06 27 32.3 +0.6**
baz=48,SNR=5.8
S22A 4UR Ranch, Cre 47.49 309 ⇑P **P 06 27 32.0 0.0**
baz=48,SNR=6.3
R22A Saguache, Gunn 47.58 309 ⇓P **P 06 27 33.3 +0.5**
baz=48
120A U Bar Ranch, L 47.64 301 ⇓P **P 06 27 34.3 +0.9**
baz=48
Y20A Horse Springs, 47.71 303 ⇓P **P 06 27 34.6 +0.7**
baz=48,SNR=7.4
Z20A Nine Sixteen R 47.72 302 ⇑P **P 06 27 35.4 +1.4**
baz=48
U21A Nageezi 47.75 307 P **P 06 27 35.0 +0.8**
baz=48,SNR=5.1
RSSD Black Hills 47.83 318 *e*P **P 06 27 35.0 +0.4**
2.0nm,0.6s,mb4.3
Q22A Crested Butte, 47.89 310 ⇑P **P 06 27 34.9 -0.2**
baz=48,SNR=5.7
319A Douglas 47.97 300 ⇑P **P 06 27 36.3 +0.3**
baz=48,SNR=7.0
P22A Eagle 48.01 311 ⇑P **P 06 27 35.8 -0.3**
baz=48
SMCO Snowmass 48.03 311 *e*P **P 06 27 36.3 0.0**
4.1nm,0.9s,mb4.5
O22A Kremmling 48.04 312 ⇑P **P 06 27 36.0 -0.4**
baz=48
219A White Tail Can 48.06 301 ⇓P **P 06 27 36.8 +0.2**
baz=48,SNR=6.9
N22A Wattenberg Ran 48.20 313 ⇑P **P 06 27 37.2 -0.3**
baz=48,SNR=6.8
R21A Cimarron 48.22 309 ⇑P **P 06 27 37.7 0.0**
baz=48,SNR=6.2
Q21A Lamborn Mesa, 48.37 310 ⇑P **P 06 27 39.2 +0.3**
baz=48
Y19A Nutrioso 48.44 303 ⇑P **P 06 27 40.6 +1.1**
baz=48,SNR=12
P21A Newcastle 48.49 311 ⇑P **P 06 27 40.0 +0.1**
baz=49
M22A Cedar Creek Ra 48.50 314 ⇓P **P 06 27 40.4 +0.5**
baz=49
X19A St. Johns 48.56 304 P **P 06 27 41.4 +0.9**
baz=49,SNR=6.1
318A Bisbee 48.58 300 ⇓P **P 06 27 40.8 +0.2**
baz=49,SNR=18
L22A Ellis Ranch, M 48.62 314 ⇓P **P 06 27 40.7 0.0**
baz=49
V19A Window Rock 48.66 306 ⇓P **P 06 27 40.7 -0.5**
baz=49
218A Dragoon 48.71 300 ⇑P **P 06 27 42.2 +0.6**
baz=49,SNR=8.3
118A Homack Ranch, 48.77 301 ⇓P **P 06 27 42.5 +0.5**
baz=49
R20A Redvale 48.79 309 ⇓P **P 06 27 42.3 +0.1**
baz=49,SNR=5.5
K22A Casper 48.90 315 ⇑P **P 06 27 42.6 -0.3**
baz=49
PV01 Paradox Valley 48.92 309 *e*P **P 06 27 43.4 +0.3**
247nm,0.7s
PV01 *e*PcP PcP 06 29 08.5 +1.2
T19A Beclabito 48.92 307 P **P 06 27 42.7 -0.4**
baz=49,SNR=7.4
U19A Dine' College, 48.93 306 P **P 06 27 43.2 -0.1**
baz=49,SNR=10
N21A Black Mountain 48.94 312 ⇑P **P 06 27 43.7 +0.4**
baz=49
Q20A Ridgley Place, 48.95 310 ⇑P **P 06 27 43.6 +0.3**
baz=49
X18A Snowflake 49.12 304 ⇑P **P 06 27 44.8 +0.1**
baz=49,SNR=6.4
J22A Midwest 49.16 316 ⇑P **P 06 27 43.9 -1.0**
baz=49
S19A Harvey Farm, M 49.24 308 ⇓P **P 06 27 45.1 -0.5**
baz=49
217A Green Valley 49.32 300 ⇓P **P 06 27 46.6 +0.2**
baz=49,SNR=7.2
TUC Tucson 49.38 301 *e*P **P 06 27 47.1 +0.3**
9.1nm,1.2s,mb4.7
117A Oracle 49.39 301 ⇑P **P 06 27 46.9 +0.1**
baz=50,SNR=9.2
K21A Alcova 49.40 315 ⇑P **P 06 27 47.0 +0.3**
baz=50,SNR=13
U18A Rough Rock, Ch 49.48 306 ⇑P **P 06 27 47.5 +0.1**
baz=50
R19A Curley Farm, L 49.48 309 ⇑P **P 06 27 47.5 +0.1**
baz=50
T18A Mexican Hat 49.65 307 ⇑P **P 06 27 48.5 -0.2**
baz=50,SNR=12
M20A Sweetwater, Wa 49.66 313 ⇓P **P 06 27 48.9 +0.2**
baz=50
Q19A Hogan Spring (49.67 310 ⇓P **P 06 27 49.1 +0.2**
baz=50,SNR=6.0
Y17A Roosevelt 49.68 303 ⇑P **P 06 27 48.8 -0.2**
baz=50
J21A Lysite 49.79 316 ⇓P **P 06 27 49.6 -0.1**
baz=50
I21A Big Trails, Te 49.86 316 ⇓P **P 06 27 49.6 -0.6**
baz=50
L20A Wamsutter 49.94 314 ⇓P **P 06 27 51.4 +0.5**
baz=50,SNR=7.8
R18A Canyonlands Na 49.99 309 P **P 06 27 51.4 +0.1**
baz=50,SNR=11
K20A Yellowstone Ra baz=50,SNR=6.2 **50.16 314** ⇑P **P 06 27 52.6 +0.1**
N19A John Jarvie Ra 50.18 312 P **P 06 27 52.3 -0.4**
baz=50,SNR=10
J20A Shoshoni 50.23 315 ⇓P **P 06 27 53.4 +0.4**
baz=50,SNR=5.6
Y16A Circle Bar Ran 50.23 303 ⇑P **P 06 27 53.4 +0.1**
baz=50,SNR=7.0
X16A Lo Mia Camp, P 50.30 303 ⇓P **P 06 27 54.0 +0.2**
baz=50
Q18A Rafter H Ranch 50.36 310 ⇑P **P 06 27 54.3 +0.2**
baz=50
U16A Tuba City 50.41 306 ⇑P **P 06 27 54.8 +0.3**
baz=50
WUAZ Wupatki 50.47 305 ⇑P **P 06 27 55.3 +0.4**
baz=50
WUAZ Wupatki 50.47 305 *e*P **P 06 27 55.7 +0.8**
7.9nm,0.8s,mb4.8
W16A Flagstaff 50.51 304 ⇓P **P 06 27 56.1 +0.8**
baz=51,SNR=5.2
K19A Absolon Red Bu 50.57 315 ⇓P **P 06 27 55.2 -0.4**
baz=51,SNR=10
P18A Preston Nutter 50.59 310 ⇓P **P 06 27 56.3 +0.4**
baz=51,SNR=6.8
R17A Hanksville Air 50.62 309 ⇑P **P 06 27 56.0 0.0**
baz=51
SRU San Rafael 50.66 309 ⇑P **P 06 27 56.4 +0.1**
baz=51,SNR=7.0
SRU San Rafael 50.66 309 *e*P **P 06 27 56.7 +0.4**
6.3nm,0.7s,mb4.7
J19A Crowheart 50.86 315 ⇓P **P 06 27 57.4 -0.4**
baz=51,SNR=8.6
P17A Butcher Ranch, 50.91 310 ⇑P **P 06 27 58.8 +0.5**
baz=51,SNR=6.4
Y15A Casa Rosa Ranc 50.95 303 ⇑P **P 06 27 58.6 0.0**
baz=51
D21A La Casta Ranch 50.95 320 ⇑P **P 06 27 59.0 +0.6**
baz=51,SNR=7.5
X15A Humboldt 50.96 303 ⇑P **P 06 27 58.5 -0.2**
baz=51,SNR=5.9
G20A Bridger 51.00 318 P **P 06 27 58.3 -0.5**
baz=51,SNR=7.5
BW06 Boulder Array 51.04 314 ⇑P **P 06 27 59.2 0.0**
baz=51
BW06 Boulder Array 51.04 314 *e*P **P 06 27 58.9 -0.3**
9.1nm,0.9s,mb4.7
BW06 *e* pP 06 28 05.5 +0.4
PDAR Pinedale Array 51.04 314 P **P 06 27 58.9 -0.3**
3.8nm,0.4s,mb4.7,baz=118,slow=9.4,SNR=38
PDAR LR LR 06 50 33.8
comp=Z,132nm,18.2s,MS4.0,baz=110,slow=37
I19A Meeteetse 51.08 316 ⇓P **P 06 27 59.1 -0.4**
baz=51
L18A Fontenelle, Gr 51.11 313 ⇑P **P 06 28 00.0 +0.3**
baz=51
O17A Robinson Place 51.11 311 ⇑P **P 06 28 00.0 +0.3**
baz=51,SNR=18
V15A Kaibab Nationa 51.16 305 ⇑P **P 06 28 00.7 +0.5**
baz=51,SNR=5.2
R16A Teasdale 51.17 308 ⇑P **P 06 28 00.3 0.0**
baz=51,SNR=5.8
F20A Billings 51.17 318 ⇓P **P 06 28 00.2 +0.1**
baz=51,SNR=7.1
K18A Toltan Ranch, 51.34 314 ⇑P **P 06 28 01.7 +0.3**
baz=51,SNR=7.2
U15A North Rim 51.38 306 ⇑P **P 06 28 02.0 +0.1**
baz=51,SNR=5.0
N17A Moffit Pass 51.39 312 ⇓P **P 06 28 02.3 +0.4**
baz=52
E20A Meyer Farm, Mu 51.44 319 ⇓P **P 06 28 02.1 +0.1**
baz=52,SNR=9.7
X14A Yava 51.49 303 ⇑P **P 06 28 02.8 +0.1**
baz=52,SNR=6.0
Y14A Wickenburg 51.49 302 ⇑P **P 06 28 02.8 +0.1**
baz=52,SNR=5.4
I18A Diamond G Ranc 51.53 315 ⇑P **P 06 28 03.4 +0.6**
baz=52,SNR=6.7
DAU Daniels Canyon 51.55 311 *e*P **P 06 28 03.8 +0.7**
T15A Red Dirt Ranch 51.58 306 ⇓P **P 06 28 03.7 +0.4**
baz=52,SNR=9.4
RLMT Red Lodge 51.65 317 *e*P **P 06 28 04.0 +0.3**
3.3nm,0.5s,mb4.5
D20A Manuel Ranch, 51.67 320 ⇑P **P 06 28 04.0 +0.2**
baz=52,SNR=10
JLU Jordanelle 51.74 311 *e*P **P 06 28 04.9 +0.4**
31nm,1.5s,mb5.0
MSU Marysvale 51.76 308 *e*P **P 06 28 05.3 +0.7**
N16A Rees Ranch, Co 51.81 311 ⇑P **P 06 28 05.3 +0.3**
baz=52,SNR=6.8
E19A Rath Farm, Rou 51.84 319 ⇑P **P 06 28 05.1 0.0**
baz=52,SNR=6.2
C20A Veseth Ranch, 51.84 321 ⇑P **P 06 28 05.6 +0.5**
baz=52
V14A Boquillas Ranc 51.87 305 ⇑P **P 06 28 05.5 0.0**
baz=52
J17A Brown Place, J 52.03 315 ⇑P **P 06 28 06.9 +0.3**
baz=52,SNR=9.3
NLU North Lily Min 52.03 310 *e*P **P 06 28 06.6 -0.1**
12nm,1.4s,mb4.6
LOHW Long Hollow 52.04 315 *e*P **P 06 28 06.5 -0.1**
13nm,1.6s,mb4.6
M16A Huntsville 52.07 312 ⇑P **P 06 28 06.6 -0.3**
baz=52,SNR=8.2
SNOW Snow King Moun 52.09 315 *e*P **P 06 28 07.3 +0.2**
24nm,1.5s,mb4.9
HWUT Hardware Ranch 52.11 312 *e*P **P 06 28 06.6 -0.6**
11nm,1.1s,mb4.7
HWUT *e* 06 28 14.2
REDW Red Top Meadow 52.13 315 *e*P **P 06 28 07.4 +0.1**
43nm,1.8s,mb5.1
Y13A Salome 52.15 302 ⇑P **P 06 28 07.7 +0.1**
baz=52,SNR=8.8
D19A Cripps Ranch, 52.17 320 ⇓P **P 06 28 07.9 +0.3**
baz=52
F18A Big Timber 52.23 318 P **P 06 28 08.1 +0.1**
baz=52,SNR=6.3
TPAW Teton Pass 52.24 315 *e*P **P 06 28 08.3 +0.2**
5.1nm,0.9s,mb4.5
IMW Indian Meadow 52.36 315 *e*P **P 06 28 09.4 +0.3**
20nm,2.1s,mb4.7
RRI2 Red Ridge 52.45 314 *e*P **P 06 28 10.0 +0.3**
31nm,1.8s,mb4.9
ARUT Antelope Range 52.56 307 *e*P **P 06 28 10.7 0.0**
5.0nm,0.7s,mb4.5
ARUT *e* 06 28 18.1
V13A Grand Canyon W 52.62 305 ⇑P **P 06 28 11.6 +0.6**
baz=53,SNR=7.2
YMR Madison River 52.63 316 *e*P **P 06 28 10.5 -0.5**
4.6nm,0.6s,mb4.6
DUG Dugway 52.64 310 ⇑P **P 06 28 11.2 0.0**
baz=53
DUG Dugway 52.64 310 *e*P **P 06 28 11.5 +0.3**
4.9nm,0.7s,mb4.5
P14A Drum Mountains 52.69 309 ⇓P **P 06 28 11.8 +0.3**
baz=53,SNR=5.9
Q14A Sevier Lake (B 52.70 309 ⇑P **P 06 28 11.4 -0.3**
baz=53,SNR=8.4
I16A Newdale 52.73 315 P **P 06 28 12.1 +0.3**
baz=53,SNR=6.0
L15A Malad City 52.81 312 P **P 06 28 12.2 -0.1**
baz=53,SNR=11
H16A Russell Place, 52.83 316 ⇑P **P 06 28 12.8 +0.3**
baz=53
F17A Fitzpatrick Pl 52.84 318 ⇓P **P 06 28 12.7 +0.1**
baz=53
BGU Big Grassy Mou 52.99 311 *e*P **P 06 28 13.5 -0.2**
10nm,0.7s,mb4.9
BGU *e* pP 06 28 20.9 +1.2
HVU Hansel Valley 53.03 312 *e*P **P 06 28 14.2 +0.3**
7.5nm,0.7s,mb4.7
EGMT Eagleton 53.05 320 ⇑P **P 06 28 14.4 +0.4**
baz=53
EGMT Eagleton 53.05 320 *e*P **P 06 28 14.5 +0.4**
5.7nm,0.6s,mb4.7
B18A Beardsley Farm 53.21 321 P **P 06 28 15.8 +0.6**
baz=53,SNR=8.9
J15A Blackfoot 53.24 314 ⇑P **P 06 28 15.1 -0.4**
baz=53
Q13A Wheeler Ranch, 53.26 308 ⇑P **P 06 28 16.2 +0.4**
baz=53,SNR=7.7
IRM Iron Mountain 53.29 302 ⇑P **P 06 28 15.9 -0.1**
baz=53,SNR=9.0
P13A Bates Ranch, G 53.37 309 ⇓P **P 06 28 16.3 -0.2**
baz=53,SNR=8.5
BOZ Bozeman (W) 53.40 317 ⇑P **P 06 28 16.7 +0.1**
baz=54
BOZ Bozeman (W) 53.40 317 *e*P **P 06 28 16.3 -0.4**
1.6nm,1.1s,mb3.9
L14A Malta 53.43 312 P **P 06 28 16.9 -0.1**
baz=54,SNR=8.0
I15A Monteview 53.45 315 ⇑P **P 06 28 17.6 +0.5**
baz=54,SNR=5.1
A18A Metzger Ranch, 53.45 321 ⇑P **P 06 28 16.8 -0.2**
baz=54,SNR=9.5
BC3 Big Chuckawall 53.47 302 ⇓P **P 06 28 17.2 -0.2**
baz=54
K14A Jones Ranch, D 53.52 313 ⇑P **P 06 28 18.0 +0.4**
baz=54,SNR=13
C17A Wharram Farm, 53.53 320 P **P 06 28 17.6 0.0**
baz=54,SNR=5.5
HRY Holter Researc 53.89 318 *e*P **P 06 28 20.4 +0.2**
DLMT Dillon 53.95 316 *e*P **P 06 28 21.1 +0.4**
12nm,1.5s,mb4.6
J14A Carey 53.98 314 ⇓P **P 06 28 21.1 +0.1**
baz=54,SNR=7.1
A17A Triple J Farms 53.98 321 ⇑P **P 06 28 20.7 -0.2**
baz=54,SNR=9.1
LRM Limekiln Ridge 54.00 317 *e*P **P 06 28 20.7 -0.3**
16nm,0.8s,mb5.0
LRM *e* 06 28 28.4
O12A Currie 54.10 310 ⇑P **P 06 28 22.1 +0.2**
baz=54,SNR=5.4
I14A Mackay 54.10 315 ⇑P **P 06 28 21.5 -0.3**
baz=54
MONP Monument Peak 54.18 301 ⇓P **P 06 28 22.4 -0.2**
baz=54
C16A Fuhringer Ranc 54.21 320 ⇑P **P 06 28 22.3 -0.3**
baz=54
H14A Leadore 54.24 315 ⇑P **P 06 28 22.7 -0.2**
baz=54
R11A Troy Canyon, C 54.34 307 ⇓P **P 06 28 23.6 0.0**
baz=54,SNR=8.3
B16A M & M Farms, S 54.41 320 ⇑P **P 06 28 23.6 -0.4**
baz=54,SNR=8.4
J13A Cove Ranch, Pi 54.46 314 ⇓P **P 06 28 24.4 0.0**
baz=54
Q11A Duckwater 54.48 308 ⇓P **P 06 28 24.8 +0.1**
baz=54
A16A West Butte Ran 54.53 321 ⇑P **P 06 28 24.9 0.0**
baz=55
I13A Wildhorse Cree 54.56 314 ⇑P **P 06 28 25.4 +0.3**
baz=55
U10A Ash Meadows, A 54.58 305 ⇑P **P 06 28 25.6 +0.1**
baz=55
HLID Hailey 54.67 314 ⇓P **P 06 28 25.7 -0.2**
baz=55
HLID Hailey 54.67 314 *e*P **P 06 28 26.2 +0.2**
3.2nm,0.7s,mb4.5
HLID *e* pP 06 28 33.5 +1.5
C15A Salmond Ranch, 54.75 319 ⇓P **P 06 28 26.6 +0.1**
baz=55,SNR=6.6
B15A Bradely Ranch, 54.90 320 P **P 06 28 27.2 -0.4**
baz=55,SNR=5.9
DBIC Dimbokro 55.01 92 P **P 06 28 27.8 -1.1**
2.5nm,0.6s,mb4.4,baz=217,slow=14,SNR=7.4
DBIC LR LR 06 48 10.0
comp=Z,92nm,20.5s,MS3.8,baz=236,slow=32
S10A Tonopah Range, 55.04 307 ⇑P **P 06 28 28.8 0.0**

	baz=55						
D14A	Greenough	55.09	318	⇓P	P	06 28 28.7	-0.2
	baz=55						
PLCA	Paso Flores	55.13	189	P	P	06 28 29.3	0.0
	2.8nm,0.7s,mb4.4,baz=11,slow=4.8,SNR=7.0						
PLCA				LR	LR	06 51 24.8	
	comp=Z,95nm,20.1s,MS3.9,baz=187,slow=35						
PLCA	Paso Flores	55.13	189	P	P	06 28 29.3	0.0
PLCA				LR	LR	06 51 24.8	
SLMT	Seeley Lake	55.14	318	*e*P	P	06 28 29.5	+0.2
I12A	Atlanta	55.23	314	⇓P	P	06 28 29.5	-0.6
	baz=55						
A15A	Johnson Ranch,	55.24	321	P	P	06 28 30.0	0.0
	baz=55,SNR=7.5						
E13A	Victor	55.34	317	⇓P	P	06 28 30.1	-0.7
	baz=55						
C14A	Swan Lake	55.47	319	⇓P	P	06 28 31.7	0.0
	baz=56						
ESDC	Sonseca Array	55.53	51	P	P	06 28 32.4	+0.1
	0.5nm,0.3s,mb4.0,baz=264,slow=4.5,SNR=6.4						
EDW2	Edwards Air Fo	55.71	303	⇑P	P	06 28 33.7	+0.1
	baz=56						
BMN	Battle Mountai	55.98	310	*e*P	P	06 28 35.8	+0.3
	10nm,0.9s,mb4.9						
BMN				*e*	pP	06 28 43.0	+1.5
BSMT	Bassoo Peak	56.16	319	*e*P	P	06 28 36.4	-0.2
	14nm,1.5s,mb4.8						
BSMT				*e*		06 28 43.9	
NVAR	Mina Array Bea	56.45	307	P	P	06 28 39.1	+0.2
	1.7nm,0.6s,mb4.2,baz=94,slow=7.0,SNR=18						
EDM	Edmonton	57.17	325	*e*P	P	06 28 43.0	-0.8
EDM				*e*	pP	06 28 50.3	+0.6
WAKR	Walker	57.34	307	*e*P	P	06 28 46.2	+1.0
NEW	Newport	57.78	319	⇓P	P	06 28 47.4	-0.7
	baz=58						
NEW	Newport	57.78	319	*e*P	P	06 28 47.1	-0.9
	4.9nm,0.8s,mb4.6						
NEW				*e*	pP	06 28 54.0	-0.1
OD2	Odessa Site #2	58.58	317	*e*P	P	06 28 53.5	-0.2
K05A	Summer Lake	59.11	312	⇑P	P	06 28 57.2	-0.3
	baz=59,SNR=5.6						
SUMG	Summit	60.09	7	*e*P	P	06 29 04.2	+0.5
SUMG				*e*	pP	06 29 11.5	+1.7
SUMG	Summit	60.09	7	*i*P	P	06 29 04.6	+0.8
	18nm,1.0s,mb5.1						
TORD	Torodi Ar. Bea	60.21	83	P	P	06 29 04.0	-1.6
	7.2nm,0.6s,mb4.9,baz=316,slow=5.2,SNR=6.0						
TORD				LR	LR	06 51 32.6	
	comp=Z,128nm,20.1s,MS4.1,baz=260,slow=32						
YBH	Yreka Blue Hor	60.29	310	P	P	06 29 04.2	-1.4
	1.6nm,0.6s,mb4.2,baz=357,slow=5.1,SNR=11						
YKA	Yellowknife Ar	61.66	335	P	P	06 29 13.5	-1.0
	5.9nm,0.5s,mb5.0,baz=106,slow=7.5,SNR=74						
YKA				LR	LR	06 57 06.6	
	comp=Z,12nm,18.2s,MS3.1,baz=10.0,slow=37						
NLWA	Neilton Lookou	62.00	316	*e*P	P	06 29 15.6	-1.5
	3.2nm,0.8s,mb4.5						
NLWA				*e*		06 29 24.6	
TAM	Tamanrasset	62.77	71	*e*P	P	06 29 23.7	+0.9
	5.9nm,1.1s,mb4.6						
KEST	Kesra	65.66	57	P	P	06 29 41.7	+0.2
	0.9nm,0.8s,mb3.8,baz=93,slow=7.8,SNR=3.6						
KEST				LR	LR	06 53 00.2	
	comp=Z,40nm,21.6s,MS3.6,baz=324,slow=31						
DAVOX	Davos/Dischmat	66.52	45	P	P	06 29 47.8	+1.0
	2.0nm,0.7s,mb4.3,baz=265,slow=11,SNR=2.7						
DAVA	Damuels	66.56	44	⇑*i*sP	sP	06 29 53.7	-1.7
	13nm,1.3s						
DLBC	Dease Lake	67.65	328	P	P	06 29 54.6	+0.9
	3.8nm,0.7s,mb4.5,baz=138,slow=1.9,SNR=13						
DLBC	Dease Lake	67.65	328	*e*P	P	06 29 54.3	+0.6
NOA	NORSAR Array B	69.07	30	LR	LR	06 55 45.4	
	comp=Z,55nm,18.1s,MS3.8,baz=260,slow=32						
INK	Inuvik	70.98	338	P	P	06 30 13.7	-0.5
	3.5nm,0.5s,mb4.5,baz=87,slow=5.9,SNR=21						
INK	Inuvik	70.98	338	*e*P	P	06 30 13.0	-1.2
	4.2nm,0.6s,mb4.5						
INK				*e*	pP	06 30 20.5	+0.1
DAWY	Dawson	72.82	333	*e*P	P	06 30 25.3	0.0
DAWY				*e*	pP	06 30 32.7	+1.2
EGAK	Eagle	73.62	334	*e*P	P	06 30 29.4	-0.6
	16nm,1.3s,mb4.8						
ARCES	ARCESS Array B	75.67	21	P	P	06 30 40.8	-1.0
	3.0nm,0.7s,mb4.3,baz=270,slow=5.4,SNR=3.2						
ARCES				LR	LR	06 56 32.2	
	comp=Z,72nm,21.7s,MS3.9,baz=73,slow=30						
ILAR	Eielson Array	76.08	334	P	P	06 30 43.5	-0.7
	1.7nm,0.4s,mb4.3,baz=90,slow=4.6,SNR=57						
FINES	FINESS Array B	76.25	30	LR	LR	06 57 53.4	
	comp=Z,87nm,18.5s,MS4.1,baz=156,slow=31						
COLA	College	76.48	334	*e*P	P	06 30 46.5	0.0
COLA				*e*	pP	06 30 53.3	+0.6
TRF	Thorofare Moun	77.67	333	*e*P	P	06 30 53.2	0.0
	12nm,0.7s,mb4.9						
BPAW	Bear Paw Mtn.	77.90	333	*e*P	P	06 30 53.7	-0.8
	12nm,1.2s,mb4.7						
PMSA	Palmer Station	78.45	182	*e*P	P	06 30 54.6	-2.7
	3.1nm,0.4s,mb4.6						
KDAK	Kodiak Island	79.56	327	P	P	06 31 05.0	+1.2
	10nm,0.9s,mb4.8,baz=107,slow=3.5,SNR=8.7						
KDAK	Kodiak Island	79.56	327	P	P	06 31 05.0	+1.2
BRTR	Keskin Array B	84.32	51	P	P	06 31 28.3	-0.9
	1.7nm,0.8s,mb4.2,baz=271,slow=6.2,SNR=6.2						
BRTR				LR	LR	07 04 10.6	
	comp=Z,40nm,21.7s,MS3.8,baz=100,slow=32						
CN2	Changchun	122.36	355	*e*PKP	PKPdf	06 37 49.1	-3.3
CN2				PP	PP	06 39 27.5	+0.6
CN2				AMB	AMB		
	comp=Z,200nm,7.0s						
HHC	Hu-ho-hao-te	125.05	7	*e*PKP	PKPdf	06 37 54.6	-3.0
HHC				PP	PP	06 39 46.8	+1.8
HHC				PKS		06 41 30.4	
HHC				SKS	SKSdf	06 45 01.0	-7.8
HHC				SKKS	SKKSac	06 46 34.9	-9.1
HHC				AMB	AMB		
	comp=Z,70nm,9.0s						
HHC				LR	LR		
	comp=N,100nm,21.7s,MS4.7						
HHC				LR	LR		
	comp=E,150nm,22.7s,MS4.7						
HHC				LR	LR		
	comp=Z,100nm,18.7s,MS4.5						
BJI	Beijing	126.27	3	PKP	PKPdf	06 37 58.0	-2.0
BJI				SS	SS	06 56 53.5	-1.2
BJI				LR	LR		
	comp=N,94nm,26.2s,MS4.5						
BJI				LR	LR		
	comp=E,93nm,26.4s,MS4.5						
BJI				LR	LR		
	comp=Z,49nm,31.7s						
LZH	Lanzhou	128.13	16	*e*PKP	PKPdf	06 37 57.5	-6.1
LZH				sPKP		06 38 06.5	
NJ2	Nanjing	134.34	1	*e*PKP	PKPdf	06 38 17.1	+1.6
KMI	Kunming	137.90	23	PKP	PKPdf	06 38 23.8	+1.5
GYA	Guiyang	137.98	17	*e*Pdif	Pdif	06 35 27.6	-3.3
GYA				PKP	PKPdf	06 38 20.0	-2.4
GYA				PP	PP	06 41 10.6	+1.9
GYA				AMB	AMB		
	comp=Z,90nm,7.8s						
ARMA	Armidale	146.24	235	*e*PKPbc	PKPbc	06 38 38.6	+0.6
STKA	Stephens Creek	153.05	225	PKP	PKPdf	06 38 48.3	+0.6
	comp=Z,2.7nm,0.8s,baz=77,slow=2.5,SNR=5.2						
STKA				PKPbc	PKPbc	06 38 54.2	-0.8
	comp=Z,2.3nm,0.6s,baz=52,slow=4.3,SNR=8.1						
ASAR	Alice Springs	163.31	232	PKP	PKPdf	06 38 59.6	-0.8
	comp=Z,1.1nm,0.9s,baz=88,slow=2.6,SNR=9.9						

*ISCJB **02** 06:21:31.2±1.1, 6°.48S±0°.06×103°.61E±0°.07, h49km±11km, mb3.9/8, Error ellipse: s-maj=13.6km s-min=7.4km az=145.8*
*DJA **02** 06:21:32, 6°.40S×103°.71E, h17km, MLv4.2/14*
*IDC **02** 06:21:34.6±0.8, 6°.09S×104°.05E, h43km±6km, mb3.6/7, mb1 3.7/7, mb1mx3.6/17, mbtmp3.6/7, Error ellipse: s-maj=34.7km s-min=13.8km az=62.0*
ISC 02 06:21:32.8±1.1, 6°.44S±0°.06×103°.62E±0°.08, h42km±11km, h45km±1.4km: pP-P, n28, σ1°.02/29, mb3.9/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	1.26	44	P	Pn	06 21 51.4	-2.5
KASI				S	Sn	06 22 07.6	-2.0
LWLI	Liwa	1.47	17	P	Pn	06 21 56.4	-0.5
LWLI				S	Sn	06 22 15.3	+0.4
BLSI	Bandar Lampung	1.93	57	S	Sn	06 22 27.5	+1.3
KLI	Kotabumi	1.99	38	P	Pn	06 22 04.4	+0.5
KLI				S	Sn	06 22 28.8	+1.2
MDSI	Maura Dua	2.01	16	P	Pn	06 22 03.7	-0.6
KLSI		2.06	33	P	Pn	06 22 04.7	-0.1
CGJI	Cibinong	2.07	95	P	Pn	06 22 03.9	-1.1
MNAI	Manna	2.17	342	P	Pn	06 22 06.9	+0.5
RBSI	Rajabasa	2.19	75	P	Pn	06 22 05.7	-1.0
SBJI	Serang	2.51	83	P	Pn	06 22 10.6	-0.5
KSI	Kapahiang	2.95	340	P	Pn	06 22 18.3	+1.2
DBJI	Dramaga	3.11	92	P	Pn	06 22 19.7	+0.4
CBJI	Citeko	3.21	90	P	Pn	06 22 23.3	+2.6
LEM	Lembang	3.99	96	P	Pn	06 22 34.3	+2.9
CISI	Cisompet, Garu	4.31	105	P	Pn	06 22 34.6	-1.2
UGM	Wanagama	7.00	103	P	Pn	06 23 12.8	0.0
	1.3nm149nm,1.6s						
PCJI	Pacitan	7.70	104	P	Pn	06 23 22.3	0.0
	0.6nm90nm,0.8s						
MNSI	Mandailing Nat	8.24	331	P	Px	06 23 41.5	
PWJI	Pagerwojo	8.27	101	P	Pn	06 23 30.6	+0.4
FITZ	Fitzroy Crossi	24.40	120	P	P	06 26 47.3	-0.1
	1.5nm,0.7s,mb3.5,baz=253,slow=9.6,SNR=4.6						
CMAR	Chiang Mai Arr	25.16	350	P	P	06 26 53.7	-0.5
	0.7nm,0.4s,mb3.6,baz=184,slow=9.0,SNR=4.6						
CMAR				pP	pP	06 27 04.6	-1.0
	1.3nm,0.7s,baz=178,slow=9.2,SNR=2.6						
ASAR	Alice Springs	33.77	124	P	P	06 28 10.9	+0.2
	1.3nm,0.8s,mb3.9,baz=296,slow=8.1,SNR=11						
ASAR				pP	pP	06 28 21.9	-0.4
	0.6nm,0.4s,baz=303,slow=7.9,SNR=5.7						
STKA	Stephens Creek	43.53	131	P	P	06 29 33.0	+0.5
	1.8nm,0.5s,mb4.1,baz=294,slow=6.9,SNR=7.2						
SONM	Songino Array	54.09	2	P	P	06 30 53.9	+0.8
	0.4nm,0.5s,mb3.6,baz=178,slow=10,SNR=3.1						
MKAR	Makanchi Array	56.28	343	P	P	06 31 08.5	-0.4
	0.5nm,0.6s,mb3.8,baz=154,slow=7.8,SNR=5.0						
MKAR				pP	pP	06 31 21.2	+0.1
	1.2nm,0.8s,baz=142,slow=8.5,SNR=9.6						
ZALV	Zalesovo Beam	62.21	348	P	P	06 31 48.9	-0.9
	0.5nm,0.3s,mb4.0,baz=207,slow=2.9,SNR=2.2						
ZALV				pP	pP	06 32 01.9	-0.2
	1.3nm,0.5s,baz=142,slow=5.1,SNR=4.7						
MAW	Mawson	66.96	196	P	P	06 32 25.7	+5.0
	5.5nm,0.3s,mb5.0,baz=104,slow=11,SNR=18						
TXAR	Lajitas Array	145.63	45	PKPbc	PKPbc	06 41 07.8	+0.3
	0.2nm,0.4s,baz=232,slow=1.4,SNR=3.7						
TXAR				pPKPbc	pPKPbc	06 41 21.5	+0.9
	0.7nm,0.6s,baz=348,slow=2.0,SNR=6.5						

*NEIC **02** 06:22:55.5, 13°.82N×60°.41W, h23km, MD2.9(TRN), After TRN.*
TRN 02 06:22:54.3, 13°.83N×60°.44W, h14km, MD2.9, M3.6(FDF), 2C-3D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCLT	Moule a Chique	0.50	256	*e*P	Pg	06 23 07.6	+3.5
MCLT				*e*S	Sg	06 23 16.4	+5.5
MCLT	Moule a Chique	0.50	256	*e*P	Pg	06 23 07.6	+3.5
MCLT				*e*S	Sg	06 23 16.4	+5.5
SLW	Petit Monier	0.52	292	‖*i*P	Pg	06 23 07.6	+3.1
SLB	Belfond	0.58	270	‖*e*P	Pg	06 23 09.8	+4.1
SLB	Belfond	0.58	270	‖*e*P	Pg	06 23 09.8	+4.1
MVM	Montagne Vaucl	0.84	329	*e*P	Pg	06 23 11.7	+1.0
SSV	Crater Summit	0.89	236	*e*P	Pg	06 23 14.0	+2.6
SSV				*e*S	Sg	06 23 26.9	+3.9
SSV	Crater Summit	0.89	236	*e*P	Pg	06 23 14.0	+2.6
SSV				*e*S	Sg	06 23 26.9	+3.9
BIM	Bigot	0.92	318	*e*P	Pb	06 23 12.9	+0.9
SVB	Belmont	0.96	235	*e*P	Pb	06 23 14.7	+1.9
SVB				*e*S	Sb	06 23 29.6	+4.2
SVB	Belmont	0.96	235	*e*P	Pb	06 23 14.7	+1.9
SVB				*e*S	Sb	06 23 29.6	+4.2
FDF	Fort de France	1.13	323	*e*Pn	Pn	06 23 16.5	+0.8
FDF				*e*Sn	Sn	06 23 31.7	+0.6
FDF	Fort de France	1.13	323	*e*P	Pb	06 23 16.3	+0.6
FDF				*e*S	Sb	06 23 31.5	+1.2
DSTT	Stowe	1.64	329	‖*e*P	Pn	06 23 24.1	+1.4
DSTT	Stowe	1.64	329	‖*e*P	Pn	06 23 24.1	+1.4
DFBT	Forest Bistro	1.66	328	*e*P	Pn	06 23 24.9	+1.9
DFBT				*e*S	Sn	06 23 46.4	+2.2
DFBT	Forest Bistro	1.66	328	*e*P	Pn	06 23 24.9	+1.9
DFBT				*e*S	Sn	06 23 46.4	+2.2
DLPL	La Plaine	1.69	333	*e*S	Sn	06 23 46.6	+1.8
DWS	Wesley	1.92	334	*e*S	Sn	06 23 53.0	+2.3
GRGR	Grenville	2.06	215	Pn	Pn	06 23 31.1	+2.6
TBG	Guadaloupe-3	2.32	330	*e*P	Pn	06 23 34.5	+2.4
PHG	Guadaloupe-2	2.46	332	*e*P	Pn	06 23 35.9	+1.8

*NEIC **02** 06:56:17.8, 13°.81N×60°.66W, h25km, MD3.6(TRN), After TRN.*
TRN 02 06:56:17.4, 13°.81N×60°.66W, h23km, MD3.6, M3.4(FDF), Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCLT	Moule a Chique	0.29	250	*e*P	Pb	06 56 25.8	+1.7
MCLT				*e*S	Sb	06 56 30.9	+2.2
MCLT	Moule a Chique	0.29	250	*e*P	Pb	06 56 25.8	+1.7
MCLT				*e*S	Sb	06 56 31.6	+2.9
SLPE	Piton Saint Es	0.33	275	*e*P	Pb	06 56 26.5	+1.9
SLPE				*e*S	Sb	06 56 33.9	+4.3
SLW	Petit Monier	0.34	308	*e*P	Pb	06 56 25.7	+0.8
SLW	Petit Monier	0.34	308	*e*P	Pb	06 56 26.5	+1.6
SLW				*e*S	Sb	06 56 33.5	+3.5
SLB	Belfond	0.37	272	*i*P	Pb	06 56 28.0	+2.7
SLB				*e*S	Sb	06 56 34.7	+3.9
SLB	Belfond	0.37	272	*i*P	Pb	06 56 28.0	+2.7
SLB				*e*S	Sb	06 56 34.7	+3.9
SLDE	Delcer	0.39	269	*e*P	Pb	06 56 26.9	+1.2
SLDE				*e*S	Sb	06 56 34.3	+3.1
MVM	Montagne Vaucl	0.77	343	*e*P	Pb	06 56 30.0	-2.2
MVM				*e*S	Sb	06 56 41.4	-0.9
SVB	Belmont	0.79	227	*e*P	Pb	06 56 33.8	+1.5
SVB				*e*S	Sb	06 56 45.7	+3.1
SVB	Belmont	0.79	227	*e*P	Pb	06 56 33.8	+1.5
SVB				*e*S	Sb	06 56 45.7	+3.1
BIM	Bigot	0.81	330	*e*P	Pb	06 56 31.1	-1.6
BIM				*e*S	Sb	06 56 44.4	+1.2
FDF	Fort de France	1.03	333	*e*Pn	Pn	06 56 34.1	-2.3
FDF	Fort de France	1.03	333	*e*P	Pn	06 56 34.3	-2.1
FDF				*e*S	Sb	06 56 49.5	-0.2
GRCU	Cariacou	1.54	210	*e*P	Pn	06 56 44.5	+1.1
GRCU				*e*S	Sn	06 57 03.6	+0.9
GRCU	Cariacou	1.54	210	*e*P	Pn	06 56 44.5	+1.1
GRCU				*e*S	Sn	06 57 03.6	+0.9
DSTT	Stowe	1.56	337	*e*P	Pn	06 56 44.9	+1.3
DSTT				*e*S	Sn	06 57 04.8	+1.8
DSTT	Stowe	1.56	337	*e*P	Pn	06 56 44.9	+1.3
DSTT				*e*S	Sn	06 57 04.8	+1.8
GRIC	Isle de Caille	1.77	211	*e*P	Pn	06 56 48.4	+2.0
GRIC				*e*S	Sn	06 57 10.4	+2.1
GRSS	Sisters	1.77	212	*e*P	Pn	06 56 48.7	+2.2
GRSS				*e*S	Sn	06 57 10.6	+2.3
GRSS	Sisters	1.77	212	*e*P	Pn	06 56 48.7	+2.2
GRSS				*e*S	Sn	06 57 10.6	+2.3
GRHS	Sauteurs	1.84	211	*e*P	Pn	06 56 49.7	+2.1
GRHS	Sauteurs	1.84	211	*e*P	Pn	06 56 49.7	+2.1
DWS	Wesley	1.86	340	*e*P	Pn	06 56 49.4	+1.7
DWS	Wesley	1.86	340	*e*P	Pn	06 56 49.4	+1.7
GRW	Mount Saint Ca	1.91	211	*e*P	Pn	06 56 50.2	+1.7
GRW				*e*S	Sn	06 57 14.0	+2.2
GRW	Mount Saint Ca	1.91	211	*e*P	Pn	06 56 50.2	+1.7
GRW				*e*S	Sn	06 57 14.0	+2.2
GRGR	Grenville	1.93	210	*e*Pn	Pn	06 56 49.3	+0.5
TBG	Guadaloupe-3	2.24	335	*e*P	Pn	06 56 54.9	+1.9
HMG	Houelmont	2.38	335	*e*P	Pn	06 56 53.6	-1.3
SCG	Saint Claude	2.41	336	*e*P	Pn	06 56 55.2	-0.2
BCG	Bois Riant Cap	2.44	338	*e*P	Pn	06 56 53.9	-1.9
TOSP	Speyside	2.50	177	*e*P	Pn	06 56 57.7	+1.1
TOSP				*e*S	Sn	06 57 27.6	+1.2

BJI 02 07:06:11.9, 39°.40N×112°.91E, h19km, ML3.7/10, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HHC	Hu-ho-hao-te	1.78	325	*e*Pg	Pg	07 06 43.5	-2.6
HHC				Sg	Sg	07 07 08.6	-0.6
HHC				smax			
	comp=N,540nm,0.6s						
HHC				smax			
	comp=E,1μm,0.6s						
BTO	Baotou	2.52	299	*e*Pg	Pg	07 06 56.7	-3.6
BTO				Sg	Sg	07 07 27.3	-5.8
BTO				smax			
	comp=N,38nm,0.2s						
BTO				smax			
	comp=E,56nm,0.2s						
TIA	Tai'an	4.61	132	Pn	Pn	07 07 22.5	+2.0
TIA				Pg	Pg	07 07 34.1	-6.1
TIA				Sg	Sg	07 08 37.5	-2.4
TIA				smax			
	comp=N,90nm,0.5s						
TIA				smax			
	comp=E,70nm,0.5s						
XAN	Xi'an	6.24	212	Pn	Pn	07 07 45.9	+3.0
XAN				Sn	Sn	07 08 55.5	+1.9
XAN				Sg	Sn	07 09 31.9	+38
XAN				smax			
	comp=N,40nm,0.8s						
XAN				smax			
	comp=E,14nm,0.9s						
LZH	Lanzhou	7.91	248	Pg	Pb	07 08 37.6	+9.3
LZH				Sn	Sb	07 09 59.1	-2.9
LZH				Sg	Sn	07 10 16.3	+42
LZH				smax			
	comp=N,310nm,0.9s						
LZH				smax			
	comp=E,59nm,0.6s						
LZH				LR	LR		
	comp=N,240nm,4.0s						
LZH				LR	LR		
	comp=E,200nm,8.0s						
LZH				LR	LR		
	comp=Z,180nm,4.6s						
WHN	Wuhan	8.91	172	P	Pn	07 08 13.5	-6.1
WHN				S	Sn	07 09 40.4	-19
WHN				LR	LR		
	comp=N,310nm,3.6s						
WHN				LR	LR		
	comp=E,410nm,2.1s						
WHN				LR	LR		
	comp=Z,420nm,4.6s						

*BJI **02** 07:21:22.4, 7°.19S×156°.10E, h107km, mB4.8/3, mb4.8/5*
*IDC **02** 07:21:24.8±2.8, 7°.01S×155°.78E, h92km±28km, mb4.1/14, mb1 4.2/16, mb1mx4.2/19, mbtmp4.1/16, MS3.7/9, Ms1 3.7/9, ms1mx3.4/24, Error ellipse: s-maj=19.0km s-min=14.8km az=115.0*
*ISCJB **02** 07:21:25.7±1.4, 7°.06S±0°.08×155°.85E±0°.05, h118km±13km, mb4.4/22, Error ellipse: s-maj=12.7km s-min=9.0km az=179.4*
*NEIC **02** 07:21:25.2±1.2, 7°.04S×155°.91E, h101km±11km, mb4.8/12, Error ellipse: s-maj=10.8km s-min=9.4km az=120.0*
ISC 02 07:21:27.9±1.2, 7°.08S±0°.07×155°.85E±0°.05, h124km±11km, n46, σ1°.09/42, mb4.4/22, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.69	120	P	Pn	07 22 32.5	-4.2
	16nm,0.3s,baz=274,slow=3.6,SNR=9.1						
HNR				S	Sn	07 23 30.8	+0.8
	28nm,0.3s,baz=108,slow=19,SNR=3.3						
PMG	Port Moresby	8.90	254	*e*Pn	Pn	07 23 33.0	-0.7
	49nm,0.8s						
PMG				*e*Sn	Sn	07 25 14.1	+1.8
COEN	Coen	14.21	240	*e*P	Pn	07 24 46.7	+3.1
CTA	Charters Tower	15.93	215	P	Pn	07 25 04.3	-0.9
	0.5nm,0.3s,baz=41,slow=12,SNR=12						
CTA				LR	LR	07 28 59.9	
	comp=Z,156nm,20.0s,baz=39,slow=28						
CTA	Charters Tower	15.93	215	*e*P	Pn	07 25 04.5	-0.7
	17nm,0.9s						
CTA	Charters Tower	15.93	215	P	Pn	07 25 04.3	-0.9
CTAO	Charters Tower	15.93	215	*e*P	Pn	07 25 06.2	+1.0
	33nm,1.1s						
EIDS	Eidsvold	18.75	194	*e*P	P	07 25 36.6	-0.7
	19nm,1.2s						
GUMO	Guam	23.24	332	LR	LR	07 33 59.8	
	comp=Z,108nm,20.1s,baz=148,slow=33						
ARMA	Armidale	23.56	189	*e*P	P	07 26 26.7	-0.4
ARMA	Armidale	23.56	189	*e*P	P	07 26 27.5	+0.4
	87nm,1.7s,mb4.8						
KAKA	Kakadu	23.72	255	*e*P	P	07 26 27.9	-0.9
	16nm,0.6s,mb4.5						
KAKA	Kakadu	23.72	255	*e*P	P	07 26 29.1	+0.3
	74nm,0.8s,mb5.1						
ASAR	Alice Springs	26.76	230	P	P	07 26 55.4	-0.8
	3.8nm,0.5s,mb4.2,baz=61,slow=9.9,SNR=73						
STKA	Stephens Creek	28.03	206	P	P	07 27 07.2	-0.2
	5.0nm,0.5s,mb4.3,baz=21,slow=16,SNR=9.3						
STKA				LR	LR	07 37 31.6	
	comp=Z,299nm,18.2s,baz=205,slow=34						
STKA	Stephens Creek	28.03	206	*e*P	P	07 27 07.0	-0.4
	4.4nm,0.6s,mb4.2						
STKA	Stephens Creek	28.03	206	*e*P	P	07 27 07.2	-0.2
	1.0nm,0.6s,mb3.5						
FITZ	Fitzroy Crossi	31.40	247	P	P	07 27 36.6	-0.8
	11nm,0.6s,mb4.8,baz=85,slow=7.6,SNR=59						
FITZ	Fitzroy Crossi	31.40	247	‖*i*P	P	07 27 36.3	-1.1
	21nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	31.40	247	*e*P	P	07 27 36.0	-1.3
	13nm,0.7s,mb4.8						
FORT	Forrest	35.12	224	*e*P	P	07 28 08.7	-0.8
	32nm,0.6s,mb5.3						
FORT	Forrest	35.12	224	*e*P	P	07 28 08.6	-0.9
	29nm,0.5s,mb5.4						
URZ	Urewera	36.53	151	LR	LR	07 41 45.3	
	comp=Z,119nm,19.3s,baz=341,slow=33						
MBWA	Marble Bar	37.60	244	*e*P	P	07 28 29.7	-1.1
	6.7nm,0.7s,mb4.6						
RPZ	Rata Peaks	38.86	162	LR	LR	07 41 56.6	

ILAR LR LR 08 06 58.9
comp=Z,52nm,19.2s,baz=273,slow=33
MK31 Makanchi Array 84.02 319 *e*P **P** **07 33 45.3 +0.8**
MKAR Makanchi Array 84.02 319 P **P** **07 33 45.5 +1.0**
comp=Z,2.8nm,0.7s,mb4.2,baz=102,slow=6.1,SNR=20
MAW Mawson 84.65 203 P **P** **07 33 47.4 0.0**
comp=Z,3.7nm,0.9s,mb4.3,baz=98,slow=9.6,SNR=4.8
ZALV Zalesovo Beam 84.72 326 P **P** **07 33 47.3 -0.6**
comp=Z,2.3nm,0.5s,mb4.4,baz=112,slow=5.7,SNR=4.9
YKA Yellowknife Ar 96.01 28 P **P** **07 34 41.1 +0.3**
comp=Z,0.2nm,0.6s,mb3.8,baz=264,slow=4.7,SNR=2.6
TORD Torodi Ar. Bea 153.86 285 PKPbc PKPbc 07 41 13.8 +0.2
comp=Z,0.6nm,0.7s,baz=38,slow=2.4,SNR=6.0
TORD Torodi Ar. Bea 153.86 285 PKPbc PKPbc 07 41 13.8 +0.2
DBIC Dimbokro 160.84 270 PKPab PKPab 07 41 58.3 +0.9
comp=Z,2.2nm,0.5s,baz=138,slow=11,SNR=6.2

IDC 02 07:24:00.8±0.8, 25°.97S×71°.24E, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.0/19, mbtmp4.2/8, MS3.6/5, Ms1 3.6/5, ms1mx3.3/24, Error ellipse: s-maj=27.4km s-min=23.0km az=139.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**39.19**	**47**	LR	LR	07 44 52.4	
	comp=Z,147nm,20.2s,baz=353,slow=32						
BOSA	**Boshof**	**40.76**	**256**	P	P	07 31 44.4	+0.6
	2.7nm,0.7s,baz=89,slow=9.8,SNR=6.7						
MAW	**Mawson**	**41.96**	**185**	LR	LR	07 44 50.3	
	comp=Z,175nm,19.8s,baz=182,slow=30						
FITZ	**Fitzroy Crossi**	**50.74**	**93**	LR	LR	07 49 12.3	
	comp=Z,16nm,21.5s,baz=55,slow=30						
CMAR	**Chiang Mai Arr**	**51.73**	**34**	P	P	07 33 11.2	+1.2
	3.7nm,1.0s,baz=218,slow=7.7,SNR=9.6						
CMAR				LR	LR	07 53 19.2	
	comp=Z,45nm,18.4s,baz=120,slow=34						
ASAR	**Alice Springs**	**56.44**	**102**	P	P	07 33 44.6	0.0
	4.2nm,0.8s,baz=250,slow=6.2,SNR=39						
QSPA	**South Pole Qui**	**64.16**	**180**	P	P	07 34 36.9	+0.3
	1.5nm,0.6s,baz=344,slow=1.3,SNR=3.0						
MKAR	**Makanchi Array**	**73.11**	**8**	P	P	07 35 32.0	-0.7
	0.5nm,0.5s,baz=200,slow=6.4,SNR=4.3						
TORD	**Torodi Ar. Bea**	**77.99**	**291**	P	P	07 36 01.8	+0.3
	1.3nm,0.9s,baz=112,slow=4.7,SNR=8.3						
SONM	**Songino Array**	**79.98**	**23**	P	P	07 36 12.4	+0.8
	0.9nm,0.5s,baz=224,slow=3.8,SNR=5.3						
ZALV	**Zalesovo Beam**	**80.45**	**8**	P	P	07 36 12.9	-1.1
	1.3nm,0.8s,baz=185,slow=8.6,SNR=3.8						
KSRS	**Korea Array**	**82.55**	**42**	LR	LR	08 15 19.7	
	comp=Z,23nm,18.1s,baz=90,slow=37						
YKA	**Yellowknife Ar**	**143.28**	**5**	PKhKP	PKPpre	07 43 30.5	
	0.2nm,0.6s,baz=344,slow=3.0,SNR=4.8						
YKA				PKP	PKPdf	07 43 33.6	-2.7
	0.3nm,0.6s,baz=345,slow=3.3,SNR=4.8						

DJA 02 07:25:41, 3°.17S×103°.80E, h10km, MLv3.6/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.30**	**248**	P	Pn	07 26 04.8	-0.4
MDSI	**Maura Dua**	**1.36**	**164**	P	Pn	07 26 04.1	-2.0
KLSI		**1.77**	**148**	P	Pn	07 26 11.1	-0.6
LWLI	**Liwa**	**1.85**	**172**	P	Pn	07 26 12.3	-0.6
KRJI	**Kerinci**	**2.57**	**295**	P	Pn	07 26 13.6	-9.1
PDSI	**Padang**	**4.02**	**304**	P	Pn	07 26 35.2	-7.5
PPI	**Padang Panjang**	**4.34**	**308**	P	Pn	07 26 44.5	-2.6
SISI	**Saibi**	**5.05**	**291**	P	Pn	07 26 59.0	+2.1
	0.4nm133nm,0.9s						
WSI	**Waingapu**	**17.61**	**112**	P	Pn	07 29 47.0	+0.3

CASC 02 07:28:13.5±1.9, 12°.35N×87°.38W, h56km±18km, MD3.5, ML2.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**0.48**	**82**	*e*P	Pn	07 28 24.9	-0.1
TELN	**Telica**	**0.60**	**65**	*e*P	Pn	07 28 27.1	+0.8
CNGN	**Cerro Negro**	**0.69**	**77**	*e*P	Pn	07 28 27.5	+0.2
COPN	**Copaltepe**	**0.79**	**102**	*e*P	Pn	07 28 28.4	-0.3
MOMN	**Momotombo**	**0.83**	**86**	*e*P	Pn	07 28 29.2	0.0
CSAN		**0.95**	**100**	*e*P	Pn	07 28 30.9	+0.1
CNCH	**Conchagua**	**1.02**	**335**	*e*P	Pn	07 28 32.3	+0.5
CNCH				*e*P		07 28 32.3	
CNCH				*e*S	Sn	07 28 46.7	+1.5
XAVN	**Gruta Xavier**	**1.05**	**101**	*e*P	Pn	07 28 31.6	-0.5
MGAN	**Managua**	**1.13**	**100**	*e*S	Sn	07 28 47.9	+0.2
TICN	**Ticuantepe**	**1.17**	**105**	*e*P	Pn	07 28 34.5	+0.9
BLLM	**Bellamira**	**1.37**	**323**	*e*P	Pn	07 28 37.0	+0.7
BLLM				*e*S	Sn	07 28 54.3	+0.8
VSM	**San Miguel**	**1.38**	**321**	*e*P	Pn	07 28 37.6	+1.1
CAHU	**Cacacuatique**	**1.63**	**330**	*e*P	Pn	07 28 40.6	+0.8
BOAB	**BOACO BROADBAN**	**.68**	**86**	*e*P	Pn	07 28 38.3	-2.3
BOAB				AML	AML	07 29 00.9	
	comp=N,13nm,0.2s						
TGUH	**Tegucigalpa,Un**	**1.70**	**4**	*e*P	Pn	07 28 41.8	+0.9
TGUH				*e*S	Sn	07 29 02.0	+0.4
LFRS	**El Faro**	**2.07**	**308**	*e*P	Pn	07 28 46.6	+0.7
LFRS				*e*S	Sn	07 29 10.7	+0.2

IDC 02 07:30:15.0±3.5, 4°.93S×151°.43E, h127km±29km, mb3.7/12, mb1 3.8/13, mb1mx3.7/21, mbtmp3.7/13, Error ellipse: s-maj=31.5km s-min=16.6km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.89**	**198**	P	Pn	07 33 52.9	+1.4
	0.3nm,0.3s,baz=32,slow=9.1,SNR=5.1						
ASAR	**Alice Springs**	**25.15**	**221**	P	P	07 35 28.8	+0.3
	1.3nm,0.3s,baz=54,slow=9.1,SNR=32						
ASAR				ScP	ScP	07 42 27.2	+0.3
	0.8nm,0.6s,baz=61,slow=2.4,SNR=7.4						
FITZ	**Fitzroy Crossi**	**28.41**	**240**	P	P	07 35 57.1	-0.6
	0.9nm,0.5s,baz=41,slow=11,SNR=5.5						
PETK	**Petropavlovsk-**	**58.06**	**4**	P	P	07 39 55.4	+0.7
	2.1nm,0.8s,baz=171,slow=10,SNR=4.4						
SONM	**Songino Array**	**65.72**	**328**	P	P	07 40 47.9	+1.9
	1.1nm,0.6s,baz=155,slow=8.0,SNR=3.4						
MKAR	**Makanchi Array**	**79.53**	**319**	P	P	07 42 07.3	-0.5
	0.3nm,0.5s,baz=108,slow=3.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**80.51**	**327**	P	P	07 42 12.4	-0.4
	1.3nm,0.6s,baz=94,slow=5.6,SNR=5.0						
ILAR	**Eielson Array**	**82.80**	**22**	P	P	07 42 23.5	-1.1
	1.0nm,0.6s,baz=248,slow=5.3,SNR=31						
KURK	**Kurchatov**	**83.03**	**322**	P	P	07 42 26.3	+0.1
	1.1nm,0.8s,baz=114,slow=3.9,SNR=4.2						
QSPA	**South Pole Qui**	**85.03**	**180**	P	P	07 42 36.3	+0.5
	0.4nm,0.5s,baz=303,slow=4.7,SNR=6.0						
BVAR	**Borovoye Array**	**88.53**	**323**	P	P	07 42 52.6	-0.6
	0.7nm,0.6s,baz=107,slow=5.1,SNR=4.5						
INK	**Inuvik**	**89.07**	**21**	P	P	07 42 55.1	-0.2
	0.7nm,0.6s,baz=2.6,slow=5.0,SNR=4.7						
NVAR	**Mina Array Bea**	**93.24**	**52**	P	P	07 43 16.8	+1.4
	1.1nm,0.8s,baz=250,slow=6.0,SNR=6.4						
TORD	**Torodi Ar. Bea**	**149.05**	**287**	PKPbc	PKPbc	07 49 48.7	-0.6
	2.1nm,0.5s,baz=109,slow=2.7,SNR=23						

IDC 02 07:33:58.2±7.6, 21°.66N×144°.54E, h132km±68km, mb3.6/10, mb1 3.7/10, mb1mx3.5/23, mbtmp3.5/10, MS3.6/2, Ms1 3.6/2, ms1mx2.6/22, Error ellipse: s-maj=33.5km s-min=14.1km az=83.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.31**	**321**	P	P	07 38 36.2	+1.7
	1.6nm,0.7s,baz=146,slow=9.9,SNR=3.9						
FITZ	**Fitzroy Crossi**	**43.64**	**207**	P	P	07 41 49.9	+0.1
	2.4nm,0.6s,baz=27,slow=11,SNR=15						
ASAR	**Alice Springs**	**46.23**	**194**	P	P	07 42 09.8	-0.3
	1.0nm,0.6s,baz=18,slow=8.7,SNR=17						
STKA	**Stephens Creek**	**53.31**	**183**	P	P	07 43 03.1	-0.5
	2.3nm,0.7s,baz=321,slow=6.9,SNR=5.6						
MKAR	**Makanchi Array**	**55.65**	**313**	P	P	07 43 20.6	+0.1
	0.3nm,0.7s,baz=106,slow=9.1,SNR=3.2						
MKAR				PcP	PcP	07 44 18.1	-0.3
	0.4nm,0.5s,baz=64,slow=3.4,SNR=4.5						
MKAR				LR	LR	08 06 09.3	
	comp=Z,36nm,21.6s,baz=349,slow=35						
KURK	**Kurchatov**	**58.36**	**317**	P	P	07 43 39.4	-0.1
	0.5nm,0.4s,baz=92,slow=7.8,SNR=3.5						
ILAR	**Eielson Array**	**61.50**	**27**	P	P	07 43 59.9	-0.7
	0.3nm,0.8s,baz=251,slow=5.3,SNR=4.1						
BVAR	**Borovoye Array**	**63.52**	**320**	P	P	07 44 14.3	+0.1
	0.5nm,0.4s,baz=90,slow=7.6,SNR=3.6						
ARCES	**ARCESS Array B**	**79.35**	**342**	P	P	07 45 49.5	+0.6
	8.6nm,1.1s,baz=71,slow=9.1,SNR=3.5						
ARCES				LR	LR	08 28 15.5	
	comp=Z,51nm,18.8s,baz=266,slow=41						
FINES	**FINESS Array B**	**83.75**	**335**	P	P	07 46 11.3	-0.9
	1.9nm,0.4s,baz=46,slow=4.4,SNR=13						
LPAZ	**La Paz**	**148.69**	**86**	PKPbc	PKPbc	07 53 33.0	+2.3
	0.4nm,0.5s,baz=225,slow=1.4,SNR=4.0						

NEIC ***02*** *08:02:07.2, 16°.32N×93°.77W, h120km, MD3.8(MEX), After MEX.*

MEX 02 08:02:07.2±1.0, 16°.32N×93°.77W, h120km±10km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.77**	**53**	*i* P	Pn	08 02 26.1	-0.9
TGIG				*i* S	Sn	08 02 40.5	-1.6
PCIG		**0.81**	**139**	*e*P	Pn	08 02 25.6	-1.9
PCIG				*i* S	Sn	08 02 40.6	-2.0
CMIG	**Matias Romero**	**1.32**	**306**	*e*P	Pn	08 02 31.1	-1.4
CMIG				*i* S	Sn	08 02 50.5	-1.2
CMIG	**Matias Romero**	**1.32**	**306**	*e*P	Pn	08 02 31.1	-1.4
CMIG				*i* S	Sn	08 02 50.5	-1.2
CCIG	**Comitan**	**1.56**	**91**	*e*P	Pn	08 02 33.9	-1.4
CCIG				*i* S	Sn	08 02 56.1	-0.7
CCIG	**Comitan**	**1.56**	**91**	*e*P	Pn	08 02 33.9	-1.4
CCIG				*i* S	Sn	08 02 56.1	-0.7
THIG		**2.02**	**134**	*i* P	Pn	08 02 40.0	-0.8
THIG				*i* S	Sn	08 03 05.9	-0.7
VHO	**Vista Hermosa**	**2.94**	**285**	*i* P	Pn	08 02 52.9	+0.2
VHO				*i* S	Sn	08 03 26.5	-1.3
VHO	**Vista Hermosa**	**2.94**	**285**	*i* P	Pn	08 02 52.9	+0.2
VHO				*i* S	Sn	08 03 26.5	-1.3
UTMO	**Huajuapan**	**4.14**	**292**	*i* P	Pn	08 03 03.0	-5.6
UTMO				*i* S	Sn	08 03 53.2	-3.1
PNIG	**Pinotepa**	**4.19**	**272**	*e*P	Pn	08 03 03.9	-5.3
PNIG				*i* S	Sn	08 03 46.8	-11
PNIG	**Pinotepa**	**4.19**	**272**	*e*P	Pn	08 03 03.9	-5.3
PNIG				*i* S	Sn	08 03 46.8	-11

ISCJB ***02*** *08:16:59.7±0.2, 42°.78N±0°.03×142°.69E±0°.03, h98km±1km, mb4.4/56, Error ellipse: s-maj=4.7km s-min=3.2km az=157.6*
BJI ***02*** *08:16:59.3, 42°.85N×142°.79E, h101km, mB4.9/22, mb4.8/36*
MOS ***02*** *08:16:59.4±1.0, 42°.77N×142°.69E, h102km, mb4.5/21, Error ellipse: s-maj=8.9km s-min=6.5km az=84.8*
NEIC ***02*** *08:17:00.9±0.6, 42°.78N×142°.68E, h94km±5km, mb4.3/20, Error ellipse: s-maj=8.2km s-min=4.9km az=149.0*
NEIC Recorded [2 JMA] in southern Hokkaido. Also recorded [1 JMA] in Aomori, Honshu.
NIED ***02*** *08:17:00, 42°.80N×142°.80E, h86km, Mw4.4 Best double couple: M0 3.99000×10^15 NP1:φs=353.00000°, δ80.00000°, λ-46.00000°. NP2:φs=92.00000°, δ45.00000°, λ-166.00000°.*
IDC ***02*** *08:17:00.8±1.3, 42°.79N×142°.69E, h96km±9km, mb3.9/16, mb1 4.1/19, mb1mx4.0/25, mbtmp3.9/19, MS2.9/1, Ms1 2.9/1, ms1mx2.5/23, Error ellipse: s-maj=16.2km s-min=11.5km az=144.0*
JMA ***02*** *08:17:01.4±0.1, 42°.81N×142°.79E, h84km±2km, M4.2 Broadband fault plane solution: P waves. NP1: φs=79.00000°, δ49.00000°, λ173.00000°. NP2: φs=174.00000°, δ85.00000°, λ42.00000°. Principal axes: T Plg32.0000°, Azm45.0000°; N Plg48.0000°, Azm179.0000°; P Plg24.0000°, Azm299.0000°;*
JMA Felt II J1.

ISC 02 08:17:00.8±0.2, 42°.78N±0°.03×142°.70E±0°.03, h92km±1km, h105km±4.4km: pP-P, n194, σ0s72/216, mb4.4/56, 47C-45D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JBT2	**Biratori 2**	**0.25**	**270**	⇑P	**Pn**	**08 17 14.0**	**-0.1**
JBT2				*e*S	**Sn**	**08 17 23.5**	**-0.5**
JFR	**Furan**	**0.39**	**348**	P	**Pn**	**08 17 14.6**	**-0.3**
JFR				*e*S	**Sn**	**08 17 24.8**	**-0.6**
JNBK	**Urakawa-nobuka**	**0.50**	**176**	⇓P	**Pn**	**08 17 16.4**	**+0.7**
JCH	**Churui**	**0.51**	**109**	P	**Pn**	**08 17 15.0**	**-0.8**
JAB	**Ashibetsu**	**0.81**	**334**	⇓P	**Pn**	**08 17 18.4**	**0.0**
JAB				*e*S	**Sn**	**08 17 31.7**	**0.0**
ERM	**Erimo**	**0.83**	**156**	*e*/PN	**Pn**	**08 17 18.8**	**0.0**
JEM	**Erimo**	**0.83**	**156**	⇓P	**Pn**	**08 17 19.5**	**+0.7**
JOB	**Onbets**	**0.84**	**81**	⇓P	**Pn**	**08 17 18.7**	**-0.1**
JOB				*e*S	**Sn**	**08 17 32.4**	**0.0**
JEW	**Eniwo**	**0.92**	**274**	⇑P	**Pn**	**08 17 19.8**	**+0.1**
JEW				*e*S	**Sn**	**08 17 34.2**	**+0.3**
JAR	**Ashorobuto**	**0.94**	**56**	⇓P	**Pn**	**08 17 19.3**	**-0.6**
JAR				*e*S	**Sn**	**08 17 33.1**	**-1.1**
JKK2	**Kamakawa 2**	**1.09**	**2**	⇑P	**Pn**	**08 17 21.7**	**+0.1**
JKK2				*e*S	**Sn**	**08 17 37.5**	**+0.2**
JHR	**Hokuryu**	**1.20**	**324**	⇓P	**Pn**	**08 17 23.2**	**+0.3**
JHR				*e*S	**Sn**	**08 17 40.7**	**+1.2**
JMP	**Maruseppu**	**1.32**	**21**	⇑P	**Pn**	**08 17 24.5**	**+0.2**
ASAJ	**Asahikawa**	**1.34**	**357**	P	**Pn**	**08 17 24.8**	**+0.2**
	48nm,0.3s,baz=207,slow=14,SNR=345						
ASAJ				S	**Sn**	**08 17 42.7**	**+0.2**
	59nm,0.3s,baz=37,slow=20,SNR=21						
ASAJ	**Asahikawa**	**1.34**	**357**	PN	**Pn**	**08 17 24.8**	**+0.2**
ASAJ				S	**Sn**	**08 17 42.7**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,49nm,0.3s						
ASAJ				smax			
	comp=N,59nm,0.3s						
ASAJ	**Asahikawa**	**1.34**	**357**	*e*Pn	**Pn**	**08 17 24.8**	**+0.2**
JTKR	**Abashiri--Toko**	**1.48**	**36**	⇑P	**Pn**	**08 17 26.3**	**0.0**
JTKR				*e*S	**Sn**	**08 17 45.6**	**0.0**
JAK	**Akkeshi**	**1.48**	**81**	⇓P	**Pn**	**08 17 25.5**	**-0.8**
JAK				*e*S	**Sn**	**08 17 44.3**	**-1.4**
JKB	**Kayabe**	**1.52**	**235**	P	**Pn**	**08 17 27.1**	**+0.2**
JKB				*e*S	**Sn**	**08 17 46.9**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**2.62**	**60**	⇑/PN	**Pn**	**08 17 41.7**	**+0.5**
YUK				*i* S	**Sn**	**08 18 12.5**	**+0.2**
YUK				pmax	pmax		
	comp=Z,2μm,1.8s						
YUK				pmax	pmax		
	comp=N,208nm,0.4s						
YUK				pmax	pmax		
	comp=Z,589nm,0.4s						
YUK				pmax	pmax		
	comp=E,344nm,0.1s						
YUK				smax			
	comp=N,5μm,0.7s						
YUK				smax			
	comp=E,4μm,0.7s						
YUK				smax			
	comp=N,6μm,0.7s						
YUK				smax			
	comp=E,4μm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.17**	**1**	⇑*e*PN	**Pn**	**08 18 03.0**	**+0.9**
YSS				*e*S	**Sn**	**08 18 51.3**	**+1.6**
YSS				pmax	pmax		
	comp=N,90nm,1.1s						
YSS				pmax	pmax		
	comp=Z,90nm,1.1s						
YSS				smax			
	comp=N,250nm,1.0s						
YSS				smax			
	comp=N,1μm,3.0s						
YSS	**Yuzh-Sakhalins**	**4.17**	**1**	*e*Pn	**Pn**	**08 18 03.5**	**+1.5**
YSS				*e*Sn	**Sn**	**08 18 53.8**	**+4.1**
KUR	**Kuril'sk**	**4.46**	**55**	⇑/PN	**Pn**	**08 18 06.0**	**0.0**
KUR				pmax	pmax		
	comp=N,160nm,0.8s						
KUR				pmax	pmax		
	comp=E,130nm,0.8s						
KUR				pmax	pmax		
	comp=Z,650nm,0.8s						
KUR				pmax	pmax		
	comp=N,2μm,1.6s						
KUR				pmax	pmax		
	comp=E,2μm,1.6s						
KUR				pmax	pmax		
	comp=Z,2μm,1.6s						
MAJO	**Matsushiro**	**7.13**	**211**	*e*PN	**Pn**	**08 18 42.4**	**+0.1**
MAT	**Matsushiro**	**7.13**	**211**	P	**Pn**	**08 18 41.9**	**-0.4**
MAT				S	**Sn**	**08 20 03.6**	**+1.9**
MJAR	**Matsushiro Arr**	**7.13**	**211**	P	**Pn**	**08 18 41.8**	**-0.5**
	comp=Z,2.3nm,0.3s,baz=17,slow=14,SNR=21						
HABR	**Khabarovsk**	**7.82**	**319**	*d* /PN	**Pn**	**08 18 53.0**	**+1.4**
HABR				S	**Sn**	**08 20 19.1**	**+0.7**
HABR				pmax	pmax		
	comp=Z,217nm,1.4s						
HABR				pmax	pmax		
	comp=E,171nm,1.9s						
HABR				pmax	pmax		
	comp=N,145nm,1.9s						
MDJ	**Mudanjiang**	**9.67**	**285**	P	**Pn**	**08 19 18.4**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,25nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,110nm,6.9s						
MDJ	**Mudanjiang**	**9.67**	**285**	*e*Pn	**Pn**	**08 19 18.9**	**+2.0**
JHJ	**Hachijo jima 2**	**9.91**	**194**	P	**Pn**	**08 19 16.6**	**-3.7**
	comp=Z,12nm,0.3s,baz=312,slow=15,SNR=2.8						
JHJ				S	**Sn**	**08 20 59.8**	**-10**
	comp=Z,12nm,0.3s,baz=73,slow=19,SNR=4.9						
SKR	**Severo-Kuril's**	**12.12**	**45**	*e*PN	**Pn**	**08 19 50.5**	**+0.5**
SKR				pmax	pmax		
	comp=E,60nm,0.6s						
SKR				pmax	pmax		
	comp=Z,80nm,0.6s						
SKR				pmax	pmax		
	comp=N,160nm,0.9s						
KSRS	**Korea Array**	**12.50**	**250**	P	**Pn**	**08 19 55.0**	**-0.1**
	baz=54,slow=13,SNR=4.6						
KSRS				LR	LR	08 24 19.3	
	comp=N,52nm,20.3s,baz=50,slow=35						
PETK	**Petropavlovsk-**	**14.38**	**39**	P	**Pn**	**08 20 17.8**	**-1.9**
	comp=N,2.6nm,0.3s,baz=221,slow=9.0,SNR=47						
PETK	**Petropavlovsk-**	**14.38**	**39**	P	**Pn**	**08 20 17.8**	**-1.9**
PET	**Petropavlovsk**	**14.78**	**41**	*e*P	**Pn**	**08 20 23.3**	**-1.5**
PET				pmax	pmax		
	comp=Z,14nm,0.6s						
PET	**Petropavlovsk**	**14.78**	**41**	*e*Pn	**Pn**	**08 20 23.3**	**-1.5**
	comp=Z,14nm,0.6s						
CLNS	**Chul'man**	**18.09**	**327**	*e*P	**Pn**	**08 21 06.8**	**+1.2**
CLNS				pmax	pmax		
	comp=N,12nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,24nm,1.1s						
CLNS				pmax	pmax		
	comp=E,10.0nm,1.1s						
BJI	**Beijing**	**20.06**	**271**	P	**P**	**08 21 25.1**	**-1.4**
BJI				S	**S**	**08 25 06.5**	**-0.3**
BJI				pmax	pmax		
	comp=Z,25nm,0.9s						
BJI				pmax	pmax		
	comp=Z,110nm,6.0s						
BJI				LR	LR		
	comp=N,140nm,8.6s						
BJI				LR	LR		
	comp=E,82nm,4.8s						
BJI				LR	LR		
	comp=Z,130nm,4.5s						
BJT	**Baijiatuau**	**20.07**	**271**	*e*P	**P**	**08 21 24.6**	**-2.0**
BJT				pmax	pmax		
	comp=Z,26nm,1.0s						
BJT	**Baijiatuau**	**20.07**	**271**	*e*P	**P**	**08 21 24.6**	**-2.0**
	comp=Z,26nm,1.0s						
SEY	**Seymchan**	**20.97**	**12**	⇑*e*P	**P**	**08 21 34.8**	**-1.3**
HHC	**Hu-ho-hao-te**	**23.23**	**276**	*e*P	**P**	**08 21 59.0**	**-0.7**
HHC				pP		08 22 19.9	
HHC				PP		08 22 34.4	
HHC				PcP	PcP	08 25 46.2	+1.6
HHC				S	**S**	**08 25 59.9**	**-4.6**
HHC				sS	sS	08 26 35.7	-3.2
HHC				SS		08 26 53.4	
HHC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.2						
HHC				pmax	pmax		
	comp=Z,130nm,6.7s						
HHC				LR	LR		
	comp=N,140nm,7.6s						
HHC				LR	LR		
	comp=E,120nm,7.1s						
HHC				LR	LR		
	comp=Z,120nm,6.5s						
ULN	**Ulaanbaatar**	**25.42**	**294**	*e*P	**P**	**08 22 19.2**	**-0.4**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.1						
ULN	**Ulaanbaatar**	**25.42**	**294**	*e*P	**P**	**08 22 19.2**	**-0.4**
	comp=Z,8.9nm,1.1s,mb4.1						
SONM	**Songino Array**	**25.87**	**294**	P	**P**	**08 22 23.6**	**-0.1**
	comp=Z,4.2nm,0.9s,mb3.9,baz=79,slow=7.7,SNR=16						
LZH	**Lanzhou**	**30.55**	**271**	*e*P	**P**	**08 23 06.2**	**+0.8**
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,160nm,6.0s						
GTA	**Gaotai**	**32.24**	**279**	*e*P	**P**	**08 23 21.1**	**+0.8**
GTA				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
CD2	**Chengdu**	**33.06**	**262**	*e*P	**P**	**08 23 25.7**	**-1.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,20nm,5.2s						
GYA	**Guiyang**	**33.53**	**253**	P	**P**	**08 23 31.8**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
KMI	**Kunming**	**37.13**	**255**	P	**P**	**08 24 03.3**	**+0.8**
KMI				pP	pP	08 24 25.0	+1.3
KMI				sP	sP	08 24 37.9	+3.6
KMI				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
ZALV	**Zalesovo Beam**	**38.99**	**307**	P	**P**	**08 24 17.2**	**-0.6**
	comp=Z,2.8nm,0.7s,mb4.2,baz=69,slow=8.4,SNR=12						
ZALV				PcP	PcP	08 26 25.7	-0.5
	comp=Z,2.0nm,0.7s,baz=113,slow=3.2,SNR=6.3						
ZALV				ScP	ScP	08 30 05.5	-0.6
	comp=Z,1.6nm,0.6s,baz=100,slow=1.7,SNR=5.7						
WMQ	**Urumqi**	**39.42**	**291**	*e*P	**P**	**08 24 22.0**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.9						
MK31	**Makanchi Array**	**42.14**	**297**	*i* P	**P**	**08 24 42.7**	**-1.1**
MK31				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.9						
MK31	**Makanchi Array**	**42.14**	**297**	*e*P	**P**	**08 24 43.6**	**-0.2**
MKAR	**Makanchi Array**	**42.14**	**297**	P	**P**	**08 24 43.5**	**-0.3**
	comp=Z,10.0nm,0.7s,mb4.6,baz=81,slow=9.

TKM2	Tokmak 2	47.97	294	eP		P	08 25 30.5	+0.5
TKM2					pmax	pmax		
comp=Z,11nm,0.8s,mb4.7								
TKM2	Tokmak 2	47.97	294	eP		P	08 25 30.5	+0.6
comp=Z,11nm,0.8s,mb4.7								
KKN	Kakani	48.31	271	eP		P	08 25 32.6	-0.3
comp=Z,28nm,0.9s,mb5.1								
PKI	Pulchoki	48.34	271	eP		P	08 25 33.0	-0.1
ZRNK	Zerenda	48.41	309	i P		P	08 25 32.5	-0.7
ZRNK					pmax	pmax		
comp=Z,10.0nm,1.1s,mb4.6								
DMN	Daman	48.54	271	eP		P	08 25 34.9	+0.3
GKN	Gorkha	48.67	272	eP		P	08 25 35.3	-0.3
comp=Z,17nm,0.7s,mb5.1								
AAK	Ala-Archa	48.82	294	d iP		P	08 25 36.1	-0.5
INK	Inuvik	48.86	29	P		P	08 25 37.0	+0.5
comp=Z,2.4nm,0.5s,mb4.4,baz=346,slow=3.6,SNR=29								
INK	Inuvik	48.86	29	P		P	08 25 37.0	+0.5
INK					pmax	pmax		
comp=Z,2.0nm,0.5s								
INK	Inuvik	48.86	29	eP		P	08 25 37.8	+1.3
comp=Z,30nm,2.3s,mb4.8								
DANN	Dangsing	49.12	273	eP		P	08 25 39.7	+0.7
comp=Z,77nm,0.7s								
HYT	Haines Junctio	49.17	40	eP		P	08 25 40.3	+1.4
KOLN	Koldanda	49.56	273	eP		P	08 25 42.4	0.0
comp=Z,16nm,0.8s,mb5.0								
KKAR	Karatay Array	51.27	297	eP		P	08 25 54.3	-0.7
KKAR					pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.5								
KKAR	Karatay Array	51.27	297	eP		P	08 25 54.2	-0.8
comp=Z,2.7nm,0.6s,mb4.5								
ARU	Arti	52.81	316	d iP		P	08 26 05.7	-0.6
ARU							08 28 02.6	
ARU					S	S	08 33 23.4	-4.1
ARU					SS	SS	08 36 58.7	-8.0
ARU					pmax	pmax		
comp=Z,8.0nm,1.0s,mb4.7								
AB31	Akbulak array	55.11	308	i P		P	08 26 22.6	-0.5
AB31					pmax	pmax		
comp=Z,8.0nm,0.7s,mb4.9								
ABKAR	Akbulak array	55.11	308	eP		P	08 26 22.8	-0.3
comp=Z,5.9nm,0.7s,mb4.7								
AKTO	Aktyubinsk	55.68	310	i P		P	08 26 26.4	-0.8
AKTO					pmax	pmax		
comp=Z,1.0nm,1.1s,mb3.8								
YKA	Yellowknife Ar	58.38	32	P		P	08 26 45.4	-0.7
comp=Z,1.2nm,0.8s,mb4.0,baz=303,slow=6.8,SNR=11								
JCW	Jim Creek	62.82	48	eP		P	08 27 17.0	+0.6
RPW	Rockport	62.90	48	eP		P	08 27 17.4	+0.4
F04A	Amboy	63.84	51	⇓P		P	08 27 22.1	-1.1
baz=64								
OBN	Obninsk	64.13	322	⇓eP		P	08 27 22.7	-2.2
OBN					pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.5								
FINES	FINESS Array B	64.22	332	P		P	08 27 24.2	-1.2
comp=Z,3.1nm,0.6s,mb4.3,baz=54,slow=9.7,SNR=6.5								
H04A	Detroit Lake	64.69	52	⇓P		P	08 27 28.6	-0.2
baz=64								
D08A	Wollman Farm,	65.14	48	⇑P		P	08 27 31.8	+0.2
baz=65								
HAWA	Hanford	65.19	49	eP		P	08 27 32.2	+0.2
comp=Z,2.8nm,0.8s,mb4.1								
G06A	Carlson Farm,	65.26	51	⇓P		P	08 27 32.0	-0.4
baz=65								
NEW	Newport	65.38	46	⇓P		P	08 27 33.1	-0.1
baz=65								
NEW	Newport	65.38	46	eP		P	08 27 33.0	-0.2
NEW					pmax	pmax		
comp=Z,5.0nm,1.3s								
NEW	Newport	65.38	46	eP		P	08 27 33.0	-0.2
comp=Z,4.6nm,1.3s,mb4.2								
E09A	Wood Farm, Sta	65.89	48	⇓P		P	08 27 36.7	+0.2
baz=66,SNR=6.4								
C11A	Tepee Creek (N	66.10	46	⇓P		P	08 27 38.3	+0.5
baz=66								
G08A	Pilot Rock	66.17	50	⇓P		P	08 27 38.9	+0.5
baz=66								
I07A	Izee	66.60	51	⇓P		P	08 27 41.3	+0.3
baz=66								
ASAR	Alice Springs	66.61	189	P		P	08 27 40.6	-0.5
comp=Z,0.7nm,0.8s,mb3.6,baz=4.0,slow=5.9,SNR=7.2								
K05A	Summer Lake	66.61	53	⇓P		P	08 27 42.3	+1.2
baz=66								
B13A	Whitefish	66.72	45	⇑P		P	08 27 41.8	+0.1
baz=66								
A14A	Double T Ranch	66.88	44	⇑P		P	08 27 42.4	-0.3
baz=67								
C13A	Hot Springs	67.09	46	⇓P		P	08 27 44.3	+0.2
baz=67								
B14A	Marquette Ranc	67.34	45	⇓P		P	08 27 44.7	-1.0
baz=67								
E12A	Beaver Dam Sad	67.35	47	⇑P		P	08 27 45.9	+0.1
baz=67								
SWMT	Swartz Lake	67.50	46	eP		P	08 27 47.2	+0.5
D13A	Huson	67.52	46	⇓P		P	08 27 46.7	-0.2
baz=67								
B15A	Bradely Ranch,	67.74	44	⇑P		P	08 27 48.2	0.0
baz=68,SNR=5.6								
A16A	West Butte Ran	67.82	43	⇑P		P	08 27 48.0	-0.6
baz=68								
SLMT	Seeley Lake	67.94	46	eP		P	08 27 49.7	+0.3
comp=Z,6.5nm,1.2s,mb4.3								
KIV	Kislovodsk	67.94	310	c iP		P	08 27 50.3	+0.8
KIV				i		pP	08 28 16.7	+3.9
KIV					pmax	pmax		
comp=Z,13nm,0.8s,mb4.8								
ZEI	Tsey	67.98	308	eP		P	08 27 48.0	-1.8
ZEI					pmax	pmax		
comp=Z,6.0nm,0.4s,mb4.8								
D14A	Greenough	68.03	46	⇓P		P	08 27 48.9	-1.2
baz=68								
C15A	Salmond Ranch,	68.06	45	⇑P		P	08 27 50.4	+0.2
baz=68,SNR=7.1								
B16A	M & M Farms, S	68.11	44	⇑P		P	08 27 50.4	-0.1
baz=68,SNR=6.1								
TBLG	Delisi	68.14	307	P		P	08 27 50.6	-0.2
A17A	Triple J Farms	68.28	43	⇑P		P	08 27 51.1	-0.4
baz=68,SNR=6.1								
C16A	Fuhringer Ranc	68.49	44	⇑P		P	08 27 52.4	-0.4
baz=68,SNR=6.8								
A18A	Metzger Ranch,	68.72	42	⇑P		P	08 27 54.0	-0.3
baz=68								
E15A	Deer Lodge	68.91	46	⇓P		P	08 27 55.1	-0.5
baz=69								
B18A	Beardsley Farm	69.10	43	⇓P		P	08 27 56.1	-0.5
baz=69,SNR=5.2								
C17A	Wharram Farm,	69.10	44	⇓P		P	08 27 56.2	-0.4
baz=69								
HRY	Holter Researc	69.15	45	eP		P	08 27 57.4	+0.4
H13A	Challis	69.24	48	⇑P		P	08 27 57.7	+0.1
baz=69								
I12A	Atlanta	69.25	49	⇑P		P	08 27 57.4	-0.2
baz=69								
A19A	Klindworth Far	69.26	42	⇓P		P	08 27 57.8	+0.2
baz=69								
NB2	NORSAR Subarra	69.28	337	P		P	08 27 56.4	-1.2
comp=Z,2.5nm,0.8s,mb4.1,baz=37,slow=6.2								
NOA	NORSAR Array B	69.28	337	P		P	08 27 56.5	-1.1
comp=Z,4.3nm,0.8s,mb4.3,baz=36,slow=6.1,SNR=9.8								
EGMT	Eagleton	69.36	43	⇓P		P	08 27 58.2	-0.1
baz=69								
EGMT	Eagleton	69.36	43	eP		P	08 27 58.5	+0.2
comp=Z,9.7nm,1.0s,mb4.6								
DLMT	Dillon	69.62	47	eP		P	08 28 00.4	+0.4
comp=Z,3.5nm,1.1s,mb4.1								
HLID	Hailey	69.80	49	⇑P		P	08 28 01.2	+0.2
baz=70								
G15A	Dillon	69.81	47	⇓P		P	08 28 01.8	+0.7
baz=70,SNR=7.1								
E17A	Martinsdale	69.82	45	⇓P		P	08 28 01.5	+0.3
baz=70								
C19A	Slack Wire Ran	69.90	43	⇑P		P	08 28 01.8	+0.2
baz=70,SNR=6.7								
BOZ	Bozeman (W)	69.95	46	⇑P		P	08 28 02.6	+0.6
baz=70								
BOZ	Bozeman (W)	69.95	46	eP		P	08 28 02.8	+0.8
BOZ					pmax	pmax		
comp=Z,2.0nm,0.9s,mb4.0								
BOZ	Bozeman (W)	69.95	46	eP		P	08 28 02.8	+0.9
comp=Z,2.4nm,0.9s,mb4.0								
J13A	Cove Ranch, Pi	70.04	49	⇑P		P	08 28 03.1	+0.6
baz=70								
F17A	Fitzpatrick Pl	70.29	45	⇑P		P	08 28 04.5	+0.5
baz=70								
D19A	Cripps Ranch,	70.37	43	⇑P		P	08 28 03.8	-0.7
baz=70								
C20A	Veseth Ranch,	70.44	43	⇑P		P	08 28 04.7	-0.1
baz=70								
F18A	Big Timber	70.78	45	⇓P		P	08 28 07.4	+0.4
baz=70								
D20A	Manuel Ranch,	70.79	43	⇑P		P	08 28 07.8	+0.8
baz=70								
NVAR	Mina Array Bea	70.83	55	P		P	08 28 07.9	+0.5
comp=Z,1.0nm,0.6s,mb3.8,baz=298,slow=6.3,SNR=9.2								
E19A	Rath Farm, Rou	70.89	44	⇑P		P	08 28 07.7	+0.1
baz=71								
I16A	Newdale	71.20	47	⇓P		P	08 28 10.0	+0.5
baz=71								
J16A	Bone	71.53	48	⇓P		P	08 28 12.5	+0.9
baz=71								
RRI2	Red Ridge	71.64	48	eP		P	08 28 12.9	+0.7
comp=Z,4.2nm,1.0s,mb4.2								
MOOW	Moose Ponds	71.68	47	eP		P	08 28 13.7	+1.2
comp=Z,1.8nm,1.2s,mb3.8								
FURC	Furnace Creek,	72.97	56	⇓P		P	08 28 20.2	-0.1
baz=73								
BW06	Boulder Array	72.98	47	eP		P	08 28 20.1	-0.2
comp=Z,1.7nm,0.7s,mb4.0								
PDAR	Pinedale Array	72.98	47	P		P	08 28 19.9	-0.3
comp=Z,1.2nm,0.6s,mb3.9,baz=280,slow=1.7,SNR=12								
Q13A	Wheeler Ranch,	73.03	53	⇑P		P	08 28 20.6	0.0
baz=73								
Q14A	Sevier Lake (B	73.44	52	⇓P		P	08 28 22.5	-0.4
baz=73								
I21A	Big Trails, Te	73.47	45	⇑P		P	08 28 23.0	-0.1
baz=73								
N17A	Moffit Pass	73.52	49	⇑P		P	08 28 23.6	+0.2
baz=73								
BUR08	Bucovina Ar. S	74.42	321	eP		P	08 28 28.2	-0.3
SRU	San Rafael	74.94	50	eP		P	08 28 31.8	+0.1
SRU					pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.2								
SRU	San Rafael	74.94	50	eP		P	08 28 31.8	+0.1
comp=Z,4.0nm,0.9s,mb4.2								
R17A	Hanksville Air	75.31	51	⇑P		P	08 28 33.6	-0.2
baz=75								
P19A	Cripple Cowboy	75.45	49	⇑P		P	08 28 34.8	+0.2
baz=75								
U15A	North Rim	75.74	53	⇑P		P	08 28 37.0	+0.7
baz=76								
Q19A	Hogan Spring (	75.76	50	⇓P		P	08 28 36.2	-0.2
baz=76								
R18A	Canyonlands Na	75.79	51	⇑P		P	08 28 36.3	-0.3
baz=76								
BRTR	Keskin Array B	75.80	311	P		P	08 28 35.7	-0.9
comp=Z,0.8nm,0.8s,mb3.5,baz=79,slow=6.4,SNR=4.5								
BRTR	Keskin Array B	75.80	311	i P		P	08 28 37.2	+0.6
W14A	Seligman	76.09	55	⇑P		P	08 28 38.4	+0.1
baz=76								
PV10	Paradox Valley	76.29	50	eP		P	08 28 40.3	+0.9
comp=Z,123nm,0.8s								
O22A	Kremmling	76.42	47	⇑P		P	08 28 40.1	0.0
baz=76								
CLL	Collm	76.61	330	i P		P	08 28 40.3	-0.7
CLL					pmax	pmax		
comp=Z,7.0nm,0.7s,mb4.5								
U16A	Tuba City	76.62	53	⇑P		P	08 28 41.1	-0.2
baz=76								
S21A	Coal Bank Pass	77.49	50	⇑P		P	08 28 47.1	+1.0
baz=77								
X16A	Lo Mia Camp, P	77.62	55	⇓P		P	08 28 47.9	+1.0
baz=77								
V18A	Ganado	77.62	53	⇓P		P	08 28 47.8	+0.9
baz=77								
U19A	Dine' College,	77.64	52	⇓P		P	08 28 47.5	+0.5
baz=77								
SDCO	Great Sand Dun	78.71	49	⇓P		P	08 28 53.6	+0.7
baz=78								
SDCO	Great Sand Dun	78.71	49	eP		P	08 28 53.7	+0.8
comp=Z,1.0nm,1.0s,mb3.6								
X19A	St. Johns	78.89	53	⇓P		P	08 28 55.1	+1.2
baz=79								
Y18A	Canyon Day Jun	78.90	54	⇑P		P	08 28 55.0	+1.0
baz=79								
T23A	Casias Ranch,	78.92	49	⇑P		P	08 28 54.9	+0.8
baz=79								
T24A	Torres, Weston	79.44	49	⇑P		P	08 28 56.9	0.0
baz=79								
118A	Homack Ranch,	79.73	55	⇓P		P	08 28 59.4	+0.8
baz=80								
TXAR	Lajitas Array	85.86	53	P		P	08 29 30.2	-0.2
comp=Z,1.2nm,0.8s,mb3.9,baz=282,slow=3.9,SNR=11								
TXAR	Lajitas Array	85.86	53	P		P	08 29 30.2	-0.1
TXAR					pmax	pmax		
comp=Z,1.0nm,0.8s								

NEIC ***02*** *08:21:04.6, 14°.03N×60°.48W, h30km, MD3.5(TRN), After TRN.*

TRN 02 08:21:05.0, 13°.85N×60°.46W, h18km, MD3.5, M3.7(FDF), **2D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCLT	**Moule a Chique**	**0.48**	**254**	*eP*	Pg	08 21 17.7	+2.9
MCLT				*eS*	Sg	08 21 26.3	+5.1
MCLT	**Moule a Chique**	**0.48**	**254**	*eP*	Pg	08 21 17.7	+2.9
MCLT				*eS*	Sg	08 21 26.3	+5.1
SLW	**Petit Monier**	**0.49**	**291**	*eP*	Pg	08 21 17.7	+2.8
SLW	**Petit Monier**	**0.49**	**291**	*eP*	Pg	08 21 18.7	+3.8
SLW				*eS*	Sg	08 21 24.1	+2.5
SLPE	**Piton Saint Es**	**0.52**	**270**	*eP*	Pg	08 21 18.3	+3.0
SLPE				*eS*	Sg	08 21 26.7	+4.4
SLDE	**Delcer**	**0.58**	**266**	*eP*	Pg	08 21 18.6	+2.1
SLDE				*eS*	Sg	08 21 27.4	+3.1
MVM	**Montagne Vaucl**	**0.82**	**329**	*eP*	Pb	08 21 21.9	+1.1
BIM	**Bigot**	**0.89**	**319**	*eP*	Pb	08 21 23.2	+1.2
BIM				*eS*	Sb	08 21 35.6	+2.1
SVB	**Belmont**	**0.95**	**233**	*eP*	Pb	08 21 24.6	+1.5
SVB				*eS*	Sb	08 21 39.4	+4.1
SVB	**Belmont**	**0.95**	**233**	*eP*	Pb	08 21 24.6	+1.5
SVB				*eS*	Sb	08 21 38.4	+3.0
FDF	**Fort de France**	**1.11**	**323**	*e*Pn	Pn	08 21 25.7	+0.1
FDF	**Fort de France**	**1.11**	**323**	⇓*e*P	Pb	08 21 26.2	+0.6
FDF				⇓*e*S	Sb	08 21 41.4	+1.7
GRCU	**Cariacou**	**1.67**	**215**	*eP*	Pn	08 21 34.8	+1.4
GRCU				*eS*	Sn	08 21 56.7	+2.3
GRCU	**Cariacou**	**1.67**	**215**	*eP*	Pn	08 21 34.8	+1.4
GRCU				*eS*	Sn	08 21 56.7	+2.3
GRIC	**Isle de Caille**	**1.90**	**215**	*eP*	Pn	08 21 37.6	+1.1
GRIC				*eS*	Sn	08 22 02.3	+2.3
GRHS	**Sauteurs**	**1.98**	**216**	*eS*	Sn	08 22 04.0	+2.0
GRW	**Mount Saint Ca**	**2.04**	**215**	*eP*	Pn	08 21 41.0	+2.5
GRW				*eS*	Sn	08 22 07.1	+3.6
GRW	**Mount Saint Ca**	**2.04**	**215**	*eP*	Pn	08 21 40.5	+2.0
GRW				*eS*	Sn	08 22 04.7	+1.1
PHG	**Guadaloupe-2**	**2.44**	**332**	*eP*	Pn	08 21 47.0	+3.0

ISCJB ***02*** *08:36:06.6±0.6, 22°.11N±0°.03×121°.99E±0°.02, h33km, Error ellipse: s-maj=4.9km s-min=2.9km az=157.0*
JMA ***02*** *08:36:09.1±0.4, 22°.25N×122°.06E, h90km, M3.4*
TAP ***02*** *08:36:09.3, 22°.20N×121°.77E, h21km, ML3.7, D*

ISC 02 08:36:07.5±0.6, 22°.12N±0°.03×121°.94E±0°.03, h35km, n39, σ1°39/75, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.37**	**258**	⇑*i*P	Pn	08 36 14.8	-1.5
LAY				S	Sn	08 36 19.1	-3.3
TTN	**Taitung**	**0.97**	**311**	*eP*	Pn	08 36 24.8	+0.2
TTN				*eS*	Sn	08 36 36.2	-1.0
TSEB	**Hengchuen, Pin**	**0.99**	**258**	*eP*	Pn	08 36 24.8	-0.1
TSEB				S	Sn	08 36 38.4	+0.8
TAW	**Tawu**	**0.99**	**284**	*eP*	Pn	08 36 23.9	-1.1
TAW				*eS*	Sn	08 36 35.6	-2.2
ECL	**Taimali**	**1.03**	**298**	P	Pn	08 36 24.5	-0.9
ECL				S	Sn	08 36 36.3	-2.3
EAST	**Anshuo**	**1.04**	**285**	⇑*i*P	Pn	08 36 24.8	-0.9
EAST				S	Sn	08 36 37.2	-1.8
TWG	**Pinlang**	**1.06**	**311**	P	Pn	08 36 25.5	-0.5
TWG				*eS*	Sn	08 36 38.0	-1.6
TWK1	**Hengchun**	**1.06**	**261**	*eP*	Pn	08 36 25.5	-0.4
TWK1				*eS*	Sn	08 36 38.6	-1.0
CHKT	**Chengkung**	**1.11**	**332**	*eP*	Pn	08 36 24.9	-1.7
CHKT				S	Sn	08 36 38.1	-2.6
HEN	**Hengchun**	**1.12**	**265**	*eP*	Pn	08 36 27.8	+1.1
HEN				*eS*	Sn	08 36 40.5	-0.3
SCZT	**Fangliau**	**1.25**	**282**	P	Pn	08 36 28.1	-0.4
SSD	**Sandimen**	**1.36**	**298**	P	Pn	08 36 29.8	-0.2
SSD				*eS*	Sn	08 36 45.4	-1.5
ELDTW	**Lidau**	**1.36**	**322**	*eP*	Pn	08 36 29.6	-0.5
ELDTW				*eS*	Sn	08 36 44.9	-2.0
TWF1	**Yuli**	**1.36**	**334**	P	Pn	08 36 29.0	-1.1
TWF1				S	Sn	08 36 46.2	-0.8
EHY	**Hungye**	**1.50**	**338**	P	Pn	08 36 31.1	-0.8
EHY				S	Sn	08 36 49.5	-0.7
STYT	**Tauyuan**	**1.51**	**314**	P	Pn	08 36 32.2	+0.2
STYT				S	Sn	08 36 50.8	+0.3
TWM1	**Shoushan**	**1.57**	**297**	*eP*	Pn	08 36 36.3	+3.4
SGST	**Jiashian**	**1.58**	**308**	*eP*	Pn	08 36 34.9	+1.9
SGST				*eS*	Sn	08 36 55.7	+3.5
YUS	**Yu-Shan**	**1.64**	**327**	P	Pn	08 36 34.3	+0.4
YUS				*eS*	Sn	08 36 54.0	+0.2
WTP	**Ta-pu**	**1.66**	**313**	P	Pn	08 36 35.6	+1.5
WTP				S	Sn	08 36 57.7	+3.4
CHN1	**Nanshi**	**1.68**	**310**	P	Pn	08 36 36.4	+1.9
CHN1				S	Sn	08 36 58.0	+3.3
ALS	**Alishan**	**1.74**	**323**	P	Pn	08 36 36.3	+1.1
ALS				*eS*	Sn	08 36 58.9	+2.7
CHN4	**Tsaushan**	**1.75**	**315**	P	Pn	08 36 37.5	+2.2
CHN4				*eS*	Sn	08 37 00.2	+3.8
ESL	**Shilin**	**1.75**	**345**	P	Pn	08 36 35.0	-0.4
ESL				S	Sn	08 36 54.9	-1.6
CHN5	**Tsauling**	**1.88**	**322**	P	Pn	08 36 39.0	+1.8
CHN5				S	Sn	08 37 02.9	+3.3
CHY	**Chiayi**	**1.96**	**315**	*eP*	Pn	08 36 40.5	+2.2
CHY				S	Sn	08 37 04.8	+3.2
TWD	**Chiawan**	**1.98**	**351**	*eP*	Pn	08 36 38.5	-0.1
TWD				*eS*	Sn	08 37 00.6	-1.6
WGK	**Gukeng**	**2.01**	**321**	*eS*	Sn	08 37 06.7	+3.7
TYC	**Yuchr**	**2.04**	**331**	P	Pn	08 36 41.0	+1.6
TYC				*eS*	Sn	08 37 05.3	+1.8
WNT	**Mingjian**	**2.10**	**327**	*eP*	Pn	08 36 42.5	+2.3
WNT				*eS*	Sn	08 37 08.3	+3.2
WHF	**Hehuan Shan**	**2.11**	**343**	*eP*	Pn	08 36 40.4	+0.1
WHF				*eS*	Sn	08 37 04.9	-0.5
TWQ1	**Liyutan**	**2.47**	**334**	P	Pn	08 36 48.0	+2.8
TWQ1				*eS*	Sn	08 37 17.2	+3.1
TWC	**Suao**	**2.48**	**358**	*eP*	Pn	08 36 46.3	+0.8
TWC				*eS*	Sn	08 37 14.2	-0.3
YOJ	**Yonaguni jima**	**2.53**	**23**	P	Pn	08 36 46.7	+0.5
YOJ				*eS*	Sn	08 37 16.2	+0.4
HATJ	**Hateruma jima**	**2.59**	**41**	P	Pn	08 36 47.5	+0.6
HATJ				*eS*	Sn	08 37 15.9	-1.2
IRIF	**Iriomote-Funau**	**2.76**	**36**	P	Pn	08 36 50.0	+0.8
IRIF				*eS*	Sn	08 37 20.6	-0.7
JKRS	**Kuro-shima**	**2.84**	**42**	P	Pn	08 36 51.3	+0.8
JKRS				*eS*	Sn	08 37 22.6	-0.9
JIJ	**Ishigaki jima**	**3.02**	**42**	P	Pn	08 36 52.9	0.0
JIJ				*eS*	Sn	08 37 25.9	-1.9
JTJ	**Tarama**	**3.57**	**45**	P	Pn	08 37 01.2	+0.7
JTJ				*eS*	Sn	08 37 40.1	-1.4

ISCJB ***02*** *08:51:52.5±0.5, 28°.83N±0°.06×139°.8E±0°.2, h372km±10km, mb3.5/10, Error ellipse: s-maj=29.6km s-min=6.5km az=167.9*
IDC ***02*** *08:51:52.9±0.7, 28°.86N×139°.86E, h362km±12km, mb3.2/9, mb1 3.2/12, mb1mx3.0/24, mbtmp3.2/12, Error ellipse: s-maj=32.9km s-min=10.4km az=72.0*
JMA ***02*** *08:51:54.0±0.3, 28°.79N×139°.72E, h358km, M3.6*

ISC 02 08:51:53.5±0.5, 28°.88N±0°.06×139°.9E±0°.2, h367km±10km, n21, σ1°11/26, mb3.5/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.68**	**131**	P	Pn	08 52 52.2	+0.7
45nm,0.3s,baz=294,slow=21,SNR=39							
CBIJ				S	S	08 53 37.5	-0.7
75nm,0.3s,baz=261,slow=23,SNR=12							
CBIJ	**Chichi jima**	**2.68**	**131**	P	Pn	08 52 52.0	+0.5
CBIJ				*eS*	S	08 53 38.0	-0.2
JHHJ	**Haha-jima-NKT**	**3.01**	**138**	P	Pn	08 52 54.8	+0.5
JHHJ				*eS*	S	08 53 42.9	-0.3
JHJ2	**Mitsune**	**4.22**	**359**	*eS*	S	08 54 04.9	+1.0
JHJ	**Hachijo jima 2**	**4.23**	**358**	P	Pn	08 53 04.3	-1.3
7.1nm,0.3s,baz=238,slow=19,SNR=3.7							
JHJ				S	S	08 54 02.5	-1.5
10nm,0.3s,baz=319,slow=19,SNR=3.9							
BSO1	**Boso 1**	**5.83**	**9**	P	Pn	08 53 25.1	+2.3
BSO1				*eS*	S	08 54 35.8	+0.5
BSO3	**Boso 3**	**5.92**	**5**	P	Pn	08 53 26.5	+2.6
BSO3				*eS*	S	08 54 37.2	-0.2
BSO4	**Boso 4**	**6.10**	**3**	*eS*	S	08 54 40.1	-0.9
JAG	**Ashikaga**	**7.53**	**357**	*eS*	S	08 55 07.8	-3.2
KSRS	**Korea Array**	**13.18**	**314**	P	P	08 54 48.8	+1.5
0.2nm,0.3s,baz=126,slow=12,SNR=3.7							
SONM	**Songino Array**	**32.04**	**315**	P	P	08 57 46.7	-0.4
0.5nm,0.5s,mb3.0,baz=100,slow=6.3,SNR=2.7							
CMAR	**Chiang Mai Arr**	**38.77**	**264**	P	P	08 58 44.6	+0.4
0.4nm,0.4s,mb3.0,baz=46,slow=9.2,SNR=4.6							
ZALV	**Zalesovo Beam**	**46.83**	**318**	P	P	08 59 47.5	-0.2
0.7nm,0.4s,mb3.3,baz=90,slow=4.3,SNR=2.4							
MKAR	**Makanchi Array**	**47.80**	**308**	P	P	08 59 55.4	+0.3

2.8nm,0.8s,mb4.1,baz=72,slow=9.6,SNR=6.8
FINES FINESS Array B 75.46 333 P **P** **09 02 58.5 +0.8**
1.1nm,0.4s,mb4.0,baz=73,slow=5.2,SNR=7.3
TORD Torodi Ar. Bea 121.90 310 PKP PKPdf 09 10 05.7 +0.4
0.2nm,0.4s,baz=32,slow=0.2,SNR=7.0

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*BJI **02** 08:59:56.8, 0.°02N×97.°82E, h35km, mB5.0/29, mb5.0/50, Ms5.0/46, Ms7 4.8/47*
*IDC **02** 08:59:57.7±0.5, 0.°46N×98.°12E, h0km, mb4.6/22, mb1 4.6/24, mb1mx4.6/25, mbtmp4.6/24, ML4.4/2, MS4.3/19, Ms1 4.3/19, ms1mx4.1/27, Error ellipse: s-maj=16.5km s-min=12.0km az=75.0*
*MOS **02** 09:00:00.8±1.2, 0.°50N×98.°16E, h33km, mb5.3/33, MS4.8/6, Error ellipse: s-maj=13.1km s-min=6.2km az=96.8*
*GCMT **02** 09:00:00.6±0.3, 0.°38N×98.°06E, h25km±1km, MW5.1, Moment Tensor Solution. s25,c31; s70,c109; Moment tensor: Scale 10^16^Nm; M_{rr}=0.07±.19; $M_{\theta\theta}$=-4.45±.15; $M_{\phi\phi}$=4.51±.19; $M_{r\theta}$=1.05±.31; $M_{\theta\phi}$=2.88±.14; $M_{r\phi}$=0.29±.38; Best double couple: M_0=5.40000×10^16^ NP1:ϕ_s=332.00000°, δ79.00000°, λ=-177.00000°. NP2:ϕ_s=241.00000°, δ87.00000°, λ=-11.00000°. Principal axes: T 5.4200, Plg6.0000°, Azm287.0000°; N 0.0300, Plg78.0000°, Azm48.0000°; P -5.4600, Plg10.0000°, Azm196.0000°; Data Used: IC IU II CN G.*
*ISCJB **02** 09:00:00.2±0.2, 0.°42N±0.°03×98.°02E±0.°03, h29km, mb5.0/104, MS4.6/39 Error ellipse: s-maj=5.0km s-min=3.3km az=138.0*
*DJA **02** 09:00:02, 0.°37N×97.°96E, h30km, mb5.3/18*
*NEIC **02** 09:00:03.2±0.3, 0.°49N×98.°09E, h35km, mb5.1/26, Error ellipse: s-maj=7.9km s-min=7.1km az=81.0*
NEIC Felt [II] at Gunungsitoli.
ISC 02 09:00:02.5±0.2, 0.°42N±0.°03×98.°02E±0.°03, h31km, h31km±1.1km:pP-P,n247,σ1§17/234, mb5.0/104, MS4.6/39, 7C-10D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.60**	**76**	P	**Pn**	**09 00 28.4**	**-0.3**
MNSI				S	**Sn**	**09 00 51.0**	**+2.6**
SISI	**Saibi**	**2.03**	**148**	P	**Pn**	**09 00 33.8**	**-0.8**
PPI	**Padang Panjang**	**2.53**	**110**	P	**Pn**	**09 00 40.3**	**-1.1**
PSI	**Prapat**	**2.54**	**21**	Pn	**Pn**	**09 00 39.9**	**-1.7**
	14nm,0.3s,baz=179,slow=11,SNR=113						
PSI				LR	LR	09 01 25.5	
	comp=Z,2μm,20.7s,baz=193,slow=37						
PDSI	**Padang**	**2.77**	**118**	P	**Pn**	**09 00 43.9**	**-0.9**
TPTI		**2.95**	**343**	P	**Pn**	**09 00 45.3**	**-1.9**
BKNI	**Bangkinang**	**3.02**	**92**	P	**Pn**	**09 00 50.9**	**+2.7**
BKNI				S	**Sn**	**09 01 33.9**	**+11**
TSI	**Tuntungan**	**3.11**	**10**	P	**Pn**	**09 00 50.2**	**+0.7**
SDSI	**Sungai Dareh**	**3.66**	**111**	P	**Pn**	**09 00 57.1**	**+0.1**
KRJI	**Kerinci**	**4.25**	**126**	P	**Pn**	**09 01 09.5**	**+4.4**
RGRI	**Rengat**	**4.38**	**100**	P	**Pn**	**09 01 09.7**	**+2.8**
IPM	**Ipoh**	**5.03**	**37**	P	**Pn**	**09 01 17.0**	**+1.1**
IPM	**Ipoh**	**5.03**	**37**	*e*Pn	**Pn**	**09 01 16.2**	**+0.4**
	328nm,0.7s						
IPM	**Ipoh**	**5.03**	**37**	P	**Pn**	**09 01 16.0**	**+0.1**
	2.5nm6μm453nm,0.8s						
KULM	**Kulim**	**5.51**	**28**	P	**Pn**	**09 01 23.0**	**+0.6**
KULM	**Kulim**	**5.51**	**28**	*e*Pn	**Pn**	**09 01 22.0**	**-0.4**
	261nm,0.8s						
KULM	**Kulim**	**5.51**	**28**	P	**Pn**	**09 01 21.9**	**-0.5**
	2.0nm4μm400nm,1.1s						
KGM	**Kluang**	**5.53**	**73**	P	**Pn**	**09 01 24.8**	**+2.1**
MYKOM	**Kota Tinggi**	**5.99**	**77**	P	**Pn**	**09 01 31.7**	**+2.7**
MYKOM	**Kota Tinggi**	**5.99**	**77**	P	**Pn**	**09 01 29.6**	**+0.6**
	1.5nm2μm111nm,0.8s						
KSI	**Kapahiang**	**6.10**	**132**	P	**Pn**	**09 01 30.8**	**+0.2**
	3.1nm677nm,0.9s						
MNAI	**Manna**	**6.84**	**134**	P	**Pn**	**09 01 39.3**	**-1.5**
	2.4nm554nm,1.1s						
KTGM	**Kuala Trenggan**	**7.06**	**46**	P	**Pn**	**09 01 45.6**	**+1.8**
SNG	**Songkhla**	**7.20**	**21**	P	**Pn**	**09 01 45.0**	**-0.7**
	960nm,1.1s						
MDSI	**Maura Dua**	**7.84**	**128**	P	**Pn**	**09 01 53.3**	**-1.2**
	1.1nm2μm316nm,0.9s						
LWLI	**Liwa**	**8.09**	**132**	P	**Pn**	**09 01 58.6**	**+0.7**
	434nm,0.8s						
KLSI		**8.40**	**127**	P	**Pn**	**09 02 01.8**	**-0.4**
	2μm220nm,0.9s						
PPBI	**Pangkal Pinang**	**8.51**	**108**	P	**Pn**	**09 02 12.5**	**+8.8**
KASI	**Kota Agung**	**8.75**	**132**	P	**Pn**	**09 02 04.7**	**-2.3**
	154nm,0.9s						
RBSI	**Rajabasa**	**9.90**	**129**	P	Px	09 02 35.2	
TPI	**Tanjungpandan**	**10.13**	**108**	P	**Pn**	**09 02 34.8**	**+8.9**
DBJI	**Dramaga**	**11.13**	**129**	P	**Pn**	**09 02 38.4**	**-1.2**
	164nm,0.9s						
KSM	**Kuching**	**12.33**	**85**	*e*Pn	**Pn**	**09 02 52.7**	**-3.4**
BJII	**Banjamegara**	**13.97**	**124**	P	**Pn**	**09 03 14.3**	**-4.1**
SBUM	**Sibu**	**14.34**	**82**	P	**Pn**	**09 03 31.0**	**+7.5**
SMRI	**Semarang**	**14.44**	**121**	P	**Pn**	**09 03 23.5**	**-1.4**
	138nm,1.0s						
NGJI	**Ngawi**	**15.47**	**120**	P	**Pn**	**09 03 36.7**	**-1.9**
	102nm,1.3s						
CMAR	**Chiang Mai Arr**	**17.95**	**3**	P	**Pn**	**09 04 08.0**	**-1.9**
	1.9nm,0.3s,baz=193,slow=12,SNR=70						
CMAR				LR	LR	09 11 23.1	
	comp=Z,1μm,18.3s,baz=204,slow=38						
CHTO	**Chiang Mai**	**18.31**	**3**	*e*P	**Pn**	**09 04 12.2**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,23nm,0.9s						
CHTO	**Chiang Mai**	**18.31**	**3**	*e*Pn	**Pn**	**09 04 12.2**	**-2.1**
	comp=Z,23nm,0.9s						
KBKI	**Kotabaru**	**18.51**	**102**	P	**Pn**	**09 04 21.8**	**+5.0**
PALK	**Pallekele**	**18.56**	**292**	Pn	**Pn**	**09 04 18.1**	**+0.7**
	comp=Z,344nm,0.9s,SNR=6.7						
PALK	**Pallekele**	**18.56**	**292**	P	**Pn**	**09 04 17.5**	**+0.1**
	comp=Z,523nmcomp=Z,37nm,1.1s						
KKM	**Kota Kinabalu**	**19.00**	**73**	*e*P	**Pn**	**09 04 23.3**	**+0.6**
	comp=Z,46nm,0.6s						
KKM	**Kota Kinabalu**	**19.00**	**73**	P	**Pn**	**09 04 23.9**	**+1.2**
	comp=Z,889nmcomp=Z,71nm,0.7s						
MYLDM	**Lahad Datu**	**20.99**	**77**	P	**P**	**09 04 44.4**	**+0.9**
	comp=Z,1μmcomp=Z,100nm,1.2s						
QIZ	**Qiongzhong**	**21.84**	**31**	P	**P**	**09 04 52.5**	**0.0**
QIZ				pP		09 05 00.8	
QIZ				sP	sP	09 05 05.5	+0.7
QIZ				S	**S**	**09 08 52.8**	**+0.5**
QIZ				sS	sS	09 09 08.4	+2.7
QIZ				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.5						
QIZ				pmax	pmax		
	comp=Z,130nm,2.6s,mb4.9						
QIZ				LR	LR		
	comp=N,2μm,17.1s,MS4.6						
QIZ				LR	LR		
	comp=E,950nm,12.2s,MS4.6						
QIZ				LR	LR		
	comp=Z,2μm,15.7s,MS4.5						
TTSI	**Tana Toraja**	**22.06**	**99**	P	**P**	**09 04 59.1**	**+4.1**
	comp=Z,882nmcomp=Z,79nm,1.1s,mb5.0						
SPSI	**Sidrap Palu**	**22.16**	**102**	P	**P**	**09 05 01.0**	**+4.9**
VIS	**Vishakhapatnam**	**22.46**	**321**	*i* P	**P**	**09 05 00.0**	**+0.8**
VIS				*ex*	x	09 05 19.1	
	comp=Z,109nm,1.3s						
VIS				*i* S	**S**	**09 09 04.5**	**0.0**
BKSI	**Bulukumba**	**22.80**	**105**	P	**P**	**09 05 06.6**	**+3.8**
BWNR	**Bhubaneshwar**	**23.09**	**330**	*ex*	**P**	**09 05 02.0**	**-3.8**
KMI	**Kunming**	**24.98**	**10**	P	**P**	**09 05 24.2**	**+0.7**
KMI				pP		09 05 33.9	
KMI				sP	sP	09 05 38.0	+1.8
KMI				PP		09 06 01.5	
KMI				S	**S**	**09 09 41.2**	**-4.3**
KMI				sS	sS	09 09 57.1	-3.1
KMI				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.7						
KMI				pmax	pmax		
	comp=Z,170nm,3.1s						
KMI				LR	LR		
	comp=N,2μm,14.4s,MS4.9						
KMI				LR	LR		
	comp=E,1μm,12.8s,MS4.9						
KMI				LR	LR		
	comp=Z,2μm,13.8s,MS4.8						
HYB	**Hyderabad**	**25.54**	**312**	*i* P	**P**	**09 05 31.0**	**+2.3**
HYB				*eS*	**S**	**09 10 02.0**	**+7.4**
SHL	**Shillong**	**25.70**	**347**	⇓*i* P	**P**	**09 05 29.0**	**-1.0**
SHL				*ex*	x	09 09 50.0	
GYA	**Guiyang**	**27.20**	**17**	P	**P**	**09 05 45.6**	**+2.1**
GYA				pP	pP	09 05 55.4	+2.9
GYA				PP		09 06 31.0	
GYA				S	**S**	**09 10 20.0**	**-0.5**
GYA				sS	sS	09 10 36.4	+1.0
GYA				SS		09 11 35.6	
GYA				ScP	ScP	09 12 41.2	-0.6
GYA				ScS	ScS	09 16 32.0	-1.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,130nm,4.5s						
GYA				LR	LR		
	comp=N,620nm,13.7s,MS4.4						
GYA				LR	LR		
	comp=E,520nm,14.9s,MS4.4						
GYA				LR	LR		
	comp=Z,740nm,15.0s,MS4.4						
LATR	**Latur**	**27.65**	**312**	*e*PKP	**P**	**09 05 46.2**	**-1.5**
NGP	**Nagpur**	**27.71**	**319**	*ex*	**P**	**09 05 43.7**	**-4.5**
NGP				AMb	AMB	09 06 03.7	
	comp=Z,26nm,1.1s,mb4.8						
ODAN	**Odare**	**28.21**	**340**	*e*P	**P**	**09 05 53.1**	**+0.5**
	comp=Z,56nm,0.9s,mb5.2						
DAV	**Davao City (W)**	**28.27**	**76**	LR	LR	09 18 14.7	
	comp=Z,769nm,18.8s,MS4.3,baz=248,slow=39						
TAPN	**Taplejung**	**28.55**	**341**	*e*P	**P**	**09 05 55.7**	**+0.1**
	comp=Z,142nm,0.9s,mb5.7						
RAMN	**Ramite**	**28.58**	**338**	*e*P	**P**	**09 05 55.9**	**0.0**
	comp=Z,57nm,0.6s,mb5.5						
PKI	**Pulchoki**	**29.59**	**337**	*e*P	**P**	**09 06 05.0**	**+0.2**
	comp=Z,59nm,0.7s,mb5.5						
GUN	**Gumba**	**29.71**	**338**	*e*P	**P**	**09 06 06.3**	**+0.4**
	comp=Z,284nm,0.7s,mb6.1						
DMN	**Daman**	**29.74**	**336**	*e*P	**P**	**09 06 06.4**	**+0.2**
	comp=Z,57nm,0.7s,mb5.4						
POO	**Poona**	**29.79**	**309**	*ex*	**P**	**09 06 04.0**	**-2.7**
POO				AMb	AMB	09 06 20.2	
	comp=Z,26nm,0.8s,mb5.0						
KKN	**Kakani**	**29.84**	**337**	*e*P	**P**	**09 06 07.3**	**+0.3**
	comp=Z,108nm,0.9s,mb5.6						
LSA	**Lhasa**	**29.85**	**348**	*e*P	**P**	**09 06 08.0**	**+0.9**
LSA				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.3						
LSA	**Lhasa**	**29.85**	**348**	*e*P	**P**	**09 06 08.0**	**+0.9**
	comp=Z,48nm,0.8s,mb5.3						
BHPL	**Bhopal**	**30.25**	**320**	*e*PKP	**P**	**09 06 11.1**	**+0.3**
GKN	**Gorkha**	**30.28**	**336**	*e*P	**P**	**09 06 11.2**	**+0.2**
	comp=Z,168nm,1.0s,mb5.7						
KOLN	**Koldanda**	**30.51**	**334**	*e*P	**P**	**09 06 13.4**	**+0.4**
	comp=Z,84nm,0.8s,mb5.6						
CD2	**Chengdu**	**30.81**	**10**	*e*P	**P**	**09 06 13.4**	**-2.2**
CD2				pP	pP	09 06 22.9	-1.7
CD2				sP	sP	09 06 26.9	-1.5
CD2				PP	PP	09 07 15.0	-11
CD2				S	**S**	**09 11 13.3**	**-4.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.2						
CD2				pmax	pmax		
	comp=Z,100nm,5.8s						
DANN	**Dangsing**	**30.95**	**335**	*e*P	**P**	**09 06 17.4**	**+0.5**
	comp=Z,82nm,0.7s,mb5.7						
QZH	**Quanzhou**	**31.47**	**38**	*e*P	**P**	**09 06 24.2**	**+2.7**
QZH				*eS*	**S**	**09 11 31.5**	**+3.8**
QZH				LR	LR		
	comp=N,3μm,11.6s,MS5.5						
QZH				LR	LR		
	comp=E,6μm,15.6s,MS5.5						
QZH				LR	LR		
	comp=Z,2μm,15.5s,MS4.8						
TPUB	**Ta-pu**	**31.62**	**42**	*e*P	**P**	**09 06 16.6**	**-6.3**
ENH	**Enshi**	**31.63**	**19**	*e*P	**P**	**09 06 21.1**	**-1.7**
	comp=Z,34nm,1.0s,mb5.1						
SSLB	**Suanglung**	**32.17**	**42**	*e*P	**P**	**09 06 27.0**	**-0.6**
	comp=Z,26nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**32.81**	**126**	P	**P**	**09 06 32.8**	**-0.5**
	comp=Z,2.0nm,0.7s,mb4.1,baz=308,slow=10,SNR=4.8						
FITZ	**Fitzroy Crossi**	**32.81**	**126**	*e*P	**P**	**09 06 34.3**	**+1.0**
	comp=Z,13nm,0.8s,mb4.9						
PTH	**Pithoragarh**	**33.58**	**331**	*e*PKP	**P**	**09 06 41.5**	**+1.6**
AJM	**Ajmer**	**34.32**	**321**	*e*PKP	**P**	**09 06 46.6**	**+0.2**
AJM				AMb	AMB	09 07 01.4	
	comp=Z,32nm,1.3s,mb5.1						
XAN	**Xi'an**	**34.98**	**16**	P	**P**	**09 06 50.1**	**-1.9**
XAN				pP	pP	09 06 58.5	-2.5
XAN				sP	sP	09 07 03.1	-1.7
XAN				PP	PP	09 08 07.7	-4.0
XAN				PcP	PcP	09 09 25.9	+1.9
XAN				S	**S**	**09 12 15.0**	**-6.9**
XAN				ScS	ScS	09 17 08.2	-2.9
XAN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
XAN				pmax	pmax		
	comp=Z,17nm,6.0s						
XAN				LR	LR		
	comp=N,750nm,13.7s,MS4.7						
XAN				LR	LR		
	comp=E,530nm,14.6s,MS4.7						
XAN				LR	LR		
	comp=Z,420nm,16.7s,MS4.3						
DDI	**Dehra Dun**	**35.28**	**329**	*ex*	x	09 04 56.8	
LZH	**Lanzhou**	**35.90**	**8**	*e*P	**P**	**09 06 59.1**	**-0.8**
LZH				pP	pP	09 07 09.1	+0.1
LZH				sP	sP	09 07 13.1	+0.4
LZH				*eS*	**S**	**09 12 36.3**	**+0.2**
LZH				sS	sS	09 12 50.2	-0.9
LZH				SS	SS	09 14 59.5	-14
LZH				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.4						
LZH				pmax	pmax		
	comp=Z,210nm,5.1s						
LZH				LR	LR		
	comp=N,690nm,13.4s,MS5.0						
LZH				LR	LR		
	comp=E,1μm,12.8s,MS5.0						
LZH				LR	LR		
	comp=Z,1μm,15.0s,MS4.8						
SDNR	**Sundarnagar**	**36.78**	**329**	*e*PKP	**P**	**09 07 08.5**	**+1.0**
KLBR	**Kellerberrin**	**36.92**	**151**	*e*P	**P**	**09 07 10.5**	**+1.9**
	comp=Z,40nm,1.5s,mb5.0						
NJ2	**Nanjing**	**37.12**	**30**	*e*P	**P**	**09 07 10.2**	**-0.1**
NJ2				pP	pP	09 07 19.9	+0.5
NJ2				sP	sP	09 07 23.9	+0.7
NJ2				PP	PP	09 08 36.1	+0.8
NJ2				S	**S**	**09 12 54.0**	**-0.7**
NJ2				sS	sS	09 13 11.0	+1.3
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.2						
NJ2				pmax	pmax		
	comp=Z,170nm,3.8s						
NJ2				LR	LR		
	comp=N,1μm,15.5s,MS5.1						
NJ2				LR	LR		
	comp=E,2μm,17.0s,MS5.1						
NJ2				LR	LR		
	comp=Z,1μm,16.5s,MS4.8						
NWAO	**Narrogin (SRO)**	**37.79**	**153**	P	**P**	**09 07 15.3**	**-0.7**
	comp=Z,5.7nm,0.8s,mb4.3,baz=314,slow=6.5,SNR=2.8						
NWAO	**Narrogin (SRO)**	**37.79**	**153**	P	**P**	**09 07 15.3**	**-0.7**
GTA	**Gaotai**	**38.84**	**2**	*e*P	**P**	**09 07 24.6**	**-0.2**
GTA				pP	pP	09 07 33.8	-0.1
GTA				sP	sP	09 07 37.8	+0.1
GTA				S	**S**	**09 13 21.4**	**+0.7**
GTA				SS	SS	09 16 03.8	-9.0
GTA				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.5						
GTA				pmax	pmax		
	comp=Z,120nm,4.5s						
GTA				LR	LR		
	comp=N,550nm,12.3s,MS4.8						
GTA				LR	LR		
	comp=E,870nm,13.5s,MS4.8						
GTA				LR	LR		
	comp=Z,710nm,14.1s,MS4.6						
HHC	**Hu-ho-hao-te**	**42.08**	**15**	⇓P	**P**	**09 07 52.1**	**+0.5**
HHC				pP	pP	09 08 02.0	+1.2
HHC				sP	sP	09 08 06.0	+1.5
HHC				PP	PP	09 09 33.5	+4.1
HHC				PcP	PcP	09 09 46.3	+0.3
HHC				ScP	ScP	09 13 33.8	-0.6
HHC				S	**S**	**09 14 09.0**	**0.0**
HHC				sS	sS	09 14 26.7	+2.5
HHC				SS	SS	09 17 12.6	-4.7
HHC				pmax	pmax		
	comp=Z,43nm,1.4s,mb4.9						
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
HHC				LR	LR		
	comp=N,1μm,17.1s,MS5.0						
HHC				LR	LR		
	comp=E,950nm,14.5s,MS5.0						
HHC				LR	LR		
	comp=Z,2μm,16.6s,MS5.0						
FORT	**Forrest**	**42.15**	**140**	*e*P	**P**	**09 07 53.4**	**+1.1**
	comp=Z,32nm,0.7s,mb5.1						
FORT	**Forrest**	**42.15**	**140**	*e*P	**P**	**09 07 54.4**	**+2.1**
	comp=Z,44nm,0.7s,mb5.2						
ASAR	**Alice Springs**	**42.27**	**127**	P	**P**	**09 07 51.7**	**-1.7**
	comp=Z,2.6nm,0.7s,mb4.0,baz=300,slow=7.3,SNR=28						
ASAR				PcP	PcP	09 09 46.4	-0.6
	comp=Z,0.9nm,0.8s,baz=316,slow=2.8,SNR=2.0						
ASAR				S	**S**	**09 14 09.1**	**-3.2**
	comp=Z,1.0nm,1.1s,baz=297,slow=13,SNR=4.1						
BJT	**Baijiatuau**	**42.75**	**21**	*e*P	**P**	**09 07 57.4**	**+0.4**
BJT				pmax	pmax		
	comp=Z,67nm,0.7s						
BJT	**Baijiatuau**	**42.75**	**21**	*e*P	**P**	**09 07 57.4**	**+0.4**
	comp=Z,67nm,0.7s,mb5.5						
BJI	**Beijing**	**42.77**	**21**	P	**P**	**09 07 57.2**	**0.0**
BJI				S	**S**	**09 14 22.8**	**+3.7**
BJI				pmax	pmax		
	comp=Z,95nm,1.0s,mb5.5						
BJI				pmax	pmax		
	comp=Z,130nm,3.5s						
BJI				LR	LR		
	comp=N,770nm,18.7s,MS4.9						
BJI				LR	LR		
	comp=E,1μm,16.0s,MS4.9						
BJI				LR	LR		
	comp=Z,840nm,18.7s,MS4.7						
KSH	**Kashi**	**43.82**	**335**	*e*P	**P**	**09 07 59.4**	**-6.3**
DL2	**Dalian**	**43.99**	**27**	P	**P**	**09 08 06.5**	**-0.6**
DL2				S	**S**	**09 14 35.6**	**-1.5**
DL2				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.9						
DL2				LR	LR		
	comp=N,610nm,16.0s						
DL2				LR	LR		
	comp=Z,540nm,19.5s,MS4.5						
WMQ	**Urumqi**	**44.19**	**349**	P	**P**	**09 08 10.0**	**+1.5**
WMQ				pP	pP	09 08 20.0	+2.2
WMQ				sP	sP	09 08 24.0	+2.5
WMQ				PP	PP	09 09 54.0	+2.1
WMQ				S	**S**	**09 14 40.0**	**+0.2**
WMQ				sS	sS	09 14 56.0	+1.0
WMQ				SS	SS	09 17 50.0	-8.5
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
WMQ				pmax	pmax		
	comp=Z,220nm,4.0s						
WMQ				LR	LR		
	comp=N,450nm,16.0s,MS4.7						
WMQ				LR	LR		
	comp=E,630nm,16.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,390nm,16.0s,MS4.4						
KSRS	**Korea Array**	**46.04**	**33**	P	**P**	**09 08 22.2**	**-1.1**
	comp=Z,42nm,0.8s,mb5.4,baz=222,slow=8.4,SNR=69						
KSRS				LR	LR	09 30 10.3	
	comp=Z,408nm,18.3s,MS4.4,baz=218,slow=40						
TKM2	**Tokmak 2**	**46.85**	**337**	*e*P	**P**	**09 08 30.2**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
TKM2	**Tokmak 2**	**46.85**	**337**	*e*P	**P**	**09 08 30.2**	**+0.5**
	comp=Z,16nm,0.9s,mb5.0						
AML	**Almayashu**	**46.95**	**335**	*e*P	**P**	**09 08 31.3**	**+0.9**
	comp=Z,35nm,1.0s,mb5.2						
AAK	**Ala-Archa**	**47.04**	**336**	⇓*e*P	**P**	**09 08 32.5**	**+1.4**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
EKS2	**Erkin-Say**	**47.36**	**336**	*e*P	**P**	**09 08 34.4**	**+0.9**
	comp=Z,15nm,0.8s,mb5.0						
SONM	**Songino Array**	**47.79**	**8**	P	**P**	**09 08 37.0**	**+0.1**
	comp=Z,21nm,0.7s,mb5.3,baz=190,slow=9.0,SNR=72						
SONM				LR	LR	09 31 06.5	
	comp=Z,955nm,18.6s,MS4.8,baz=202,slow=39						
ULN	**Ulaanbaatar**	**47.91**	**8**	*e*P	**P**	**09 08 37.9**	**+0.1**
ULN				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
ULN	**Ulaanbaatar**	**47.91**	**8**	*e*P	**P**	**09 08 37.9**	**+0.2**
	comp=Z,23nm,0.9s,mb5.2						
MK31	**Makanchi Array**	**48.20**	**346**	*ce*P	**P**	**09 08 39.3**	**-0.7**
MK31				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.3						
MK31	**Makanchi Array**	**48.20**	**346**	*e*P	**P**	**09 08 40.0**	**-0.1**
MKAR	**Makanchi Array**	**48.20**	**346**	P	**P**	**09 08 39.7**	**-0.3**
	comp=Z,16nm,0.7s,mb5.2,baz=156,slow=7.6,SNR=150						
MKAR				LR	LR	09 33 10.6	
	comp=Z,238nm,19.4s,MS4.2,baz=160,slow=41						
BBOO	**Buckleboo**	**48.75**	**136**	*e*P	**P**	**09 08 46.3**	**+1.8**
	comp=Z,64nm,1.0s,mb5.6						
KK31	**Karatay Array**	**49.12**	**333**	*ce*P	**P**	**09 08 51.5**	**+4.3**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
KKAR	**Karatay Array**	**49.12**	**333**	*e*P	**P**	**09 08 47.6**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
KKAR	**Karatay Array**	**49.12**	**333**	*e*P	**P**	**09 08 47.5**	**+0.4**
	comp=Z,20nm,1.1s,mb5.1						
CN2	**Changchun**	**49.64**	**26**	*e*P	**P**	**09 08 51.4**	**+0.3**
CN2				*eS*	**S**	**09 15 58.6**	**+1.0**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=N,800nm,16.0s,MS5.1						
CN2				LR	LR		
	comp=E,1μm,16.0s,MS5.1						
CN2				LR	LR		
	comp=Z,500nm,18.0s,MS4.6						
ZAK	**Zakamensk**	**49.98**	**4**	⇓*i* P	**P**	**09 08 53.4**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
MOY	**Mondy**	**51.13**	**2**	*e*P	**P**	**09 09 02.5**	**+0.2**
TLY	**Talaya**	**51.30**	**4**	*e*P	**P**	**09 09 03.3**	**-0.2**
TLY				*eS*	**S**	**09 16 14.5**	**-6.0**
TLY				*e*SS	SS	09 19 50.9	-5.6
TLY				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
TLY				MLR	MLR		
	comp=Z,824nm,18.0s,MS4.8						
MJAR	**Matsushiro Arr**	**51.72**	**41**	P	**P**	**09 09 06.9**	**-0.1**
	comp=Z,2.0nm,0.7s,mb4.2,baz=218,slow=5.6,SNR=6.1						
IRK	**Irkutsk**	**51.91**	**5**	*e*P	**P**	**09 09 17.4**	**+9.3**
IRK				pmax	pmax		
	comp=Z,51nm,1.7s,mb5.2						
HIA	**Hailar**	**52.12**

KURK Kurchatov 52.76 345 *ce*P **P 09 09 13.2 -1.2**
KURK pmax pmax
comp=Z,20nm,0.8s,mb5.1
CIT Chita 53.06 12 *e*P **P 09 09 25.0 +8.4**
OPO Ambohidratompo 53.36 246 P **P 09 09 20.5 +1.1**
comp=Z,3.4nm,0.8s,mb4.3,baz=54,slow=8.4,SNR=4.1
ZALV Zalesovo Beam 54.46 350 P **P 09 09 26.2 -0.6**
comp=Z,48nm,0.8s,mb5.5,baz=176,slow=6.3,SNR=45
ZALV LR LR 09 38 13.8
comp=Z,344nm,18.3s,MS4.5,baz=315,slow=42
NVS Novosibirsk 55.59 350 ⇓*i*P **P 09 09 33.1 -1.9**
NVS *e* 09 11 44.1
NVS *e*S **S 09 17 08.3 -10**
NVS pmax pmax
comp=N,8.0nm,1.3s
NVS pmax pmax
comp=E,8.0nm,1.3s
NVS pmax pmax
comp=Z,18nm,1.3s,mb4.9
NVS pmax pmax
comp=Z,9.0nm,1.7s,mb4.5
NVS pmax pmax
comp=N,10.0nm,2.3s
NVS pmax pmax
comp=E,9.0nm,1.9s
NVS smax
comp=N,12nm,1.9s
NVS smax
comp=E,11nm,1.9s
RDF Al-Radifah 55.85 305 *e*P **P 09 09 37.1 -0.2**
RDF AMb AMB 09 09 38.3
comp=Z,42nm,0.9s,mb5.5
NAY Al-Naaiem 56.22 305 *e*P **P 09 09 39.2 -0.8**
NAY AMb AMB 09 09 40.0
comp=Z,21nm,0.8s,mb5.2
NAY AML AML 09 09 46.1
comp=Z,34nm,0.8s
MIB Mutribah 56.34 306 *e*P **P 09 09 40.4 -0.5**
MIB AMb AMB 09 09 41.5
comp=Z,48nm,0.8s,mb5.6
KLR Kul'dur 56.59 26 *e*P **P 09 09 39.0 -3.3**
KLR MLR MLR
comp=Z,1μm,14.0s,MS5.1
BVAR Borovoye Array 57.26 341 P **P 09 09 45.7 -1.2**
comp=Z,8.3nm,0.7s,mb4.9,baz=139,slow=9.2,SNR=37
EIDS Eidsvold 57.28 121 *e*P **P 09 09 52.4 +4.8**
comp=Z,36nm,0.4s,mb5.8
BRVK Borovoye 57.32 341 P **P 09 09 46.9 -0.4**
comp=Z,194nm,0.7s,mb6.2,SNR=5.2
BRVK Borovoye 57.32 341 *ce*P **P 09 09 46.6 -0.7**
BRVK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
HABR Khabarovsk 57.55 28 *e*P **P 09 09 47.2 -1.8**
HABR *e**SP sP 09 09 58.8 -3.4
HABR *e* 09 10 43.2
HABR 09 19 29.8
HABR pmax pmax
comp=N,5.0nm,0.7s
HABR pmax pmax
comp=E,28nm,1.4s
HABR pmax pmax
comp=Z,25nm,1.4s,mb5.0
HABR MLR MLR
comp=Z,416nm,17.0s,MS4.6
YNG Young 58.40 132 *e*P **P 09 09 55.7 +0.4**
comp=Z,13nm,0.9s,mb5.0
AB31 Akbulak array 58.59 332 *i*P **P 09 09 55.3 -1.0**
AB31 pmax pmax
comp=Z,13nm,0.6s,mb5.1
ABKAR Akbulak array 58.59 332 *e*P **P 09 09 55.5 -0.8**
comp=Z,18nm,0.7s,mb5.2
ASAJ Asahikawa 58.80 36 *e*P **P 09 09 57.8 -0.1**
comp=Z,8.2nm,1.1s,mb4.7
ARMA Armidale 59.41 126 *e*P **P 09 10 03.7 +1.3**
AKTO Aktyubinsk 60.30 332 LR LR 09 39 35.2
comp=Z,230nm,19.5s,MS4.3,baz=316,slow=39
YSS Yuzh-Sakhalins 60.54 34 ⇑*i*P **P 09 10 09.7 -0.1**
YSS *e* pP 09 10 18.2 -1.1
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.4
YSS MLR MLR
comp=E,500nm,14.0s
YSS MLR MLR
comp=Z,300nm,14.0s,MS4.6
YSS Yuzh-Sakhalins 60.54 34 *e*P **P 09 10 09.7 -0.1**
comp=Z,33nm,0.9s,mb5.5
KMBO Kilima Mbogo 60.78 268 P **P 09 10 13.6 +1.5**
comp=Z,3.1nm,0.7s,mb4.5,baz=180,slow=24,SNR=5.0
KMBO Kilima Mbogo 60.78 268 *e*P **P 09 10 13.6 +1.5**
GNI Garni 62.42 316 LR LR 09 41 01.6
comp=Z,84nm,21.6s,MS3.9,baz=106,slow=39
TBLG Delisi 63.11 318 P **P 09 10 23.7 -3.5**
SVE Sverdlovsk 63.72 338 *e*P **P 09 10 30.6 -0.3**
SVE pmax pmax
comp=Z,51nm,1.4s,mb5.4
ZEI Tsey 64.12 318 *e*P **P 09 10 33.0 -0.9**
ZEI pmax pmax
comp=Z,18nm,0.8s,mb5.2
ARU Arti 64.22 337 *c i*P **P 09 10 35.8 +1.5**
ARU 09 11 15.9
ARU *e* 09 12 52.2
ARU S **S 09 19 03.0 -6.6**
ARU pmax pmax
comp=Z,15nm,1.0s,mb5.0
ARU MLR MLR
comp=Z,370nm,17.0s,MS4.6
KIV Kislovodsk 65.43 319 *d i*P **P 09 10 48.5 +6.1**
KIV *i* pP 09 10 56.0 +4.0
KIV *e* 09 11 20.8
KIV pmax pmax
comp=Z,26nm,1.1s,mb5.2
YAK Yakutsk 65.94 16 *e*P **P 09 10 43.5 -1.8**
YAK pmax pmax
comp=Z,40nm,1.1s,mb5.4
YAK pmax pmax
comp=N,14nm,1.0s
YAK pmax pmax
comp=E,16nm,1.0s
YAK MLR MLR
comp=Z,867nm,13.0s,MS5.1
YAK MLR MLR
comp=E,485nm,16.0s,MS5.0
YAK MLR MLR
comp=N,527nm,13.0s,MS5.0
MALT Malatya 66.26 312 *e*P **P 09 10 48.4 +0.5**
SOKR Solikamsk 67.11 339 *d i*P **P 09 10 52.2 -0.6**
SOKR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
VRHR Novokhopersk 69.23 326 *e*P **P 09 11 10.8 +4.5**
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.4
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.5s
DZM Mont Dzumac 70.22 114 *e*LR LR 09 32 42.2
comp=E,409nm,23.4s
BRTR Keskin Array B 70.24 312 P **P 09 11 11.9 -0.9**
comp=E,2.1nm,0.7s,mb4.2,baz=129,slow=6.9,SNR=13
BRTR LR LR 09 44 33.5
comp=E,75nm,20.4s,MS3.9,baz=222,slow=38
VORD Divnogorie 70.50 325 *e*P **P 09 11 18.5 +4.4**
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 70.68 325 *e*P **P 09 11 18.5 +3.3**
VSR pmax pmax
comp=N,8.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=E,10.0nm,0.7s
PETK Petropavlovsk- 71.94 33 P **P 09 11 21.8 -1.0**
comp=E,2.3nm,0.7s,mb4.2,baz=222,slow=4.0,SNR=4.9
PETK LR LR 09 45 50.0
comp=E,141nm,18.3s,MS4.3,baz=240,slow=38
MAW Mawson 72.14 193 P **P 09 11 24.8 +1.1**
comp=E,3.4nm,0.3s,mb4.8,baz=48,slow=19,SNR=8.7
MAW LR LR 09 35 51.6
comp=E,220nm,21.3s,MS4.4,baz=189,slow=30
PET Petropavlovsk 72.42 34 *e*P **P 09 11 31.8 +6.1**
PET *e*S S 09 20 50.8 +3.4
PET pmax pmax
comp=Z,31nm,0.8s,mb5.3
PET MLR MLR
comp=Z,300nm,13.0s,MS4.8
MOS Moscow 73.42 329 *e*P **P 09 11 36.6 +5.0**
MOS pmax pmax
comp=Z,64nm,1.3s,mb5.4
OBN Obninsk 73.71 328 ⇓*i*P **P 09 11 38.2 +4.9**
OBN *i* pP 09 11 47.8 +4.8
OBN *e* 09 14 19.7
OBN pmax pmax
comp=Z,28nm,1.2s,mb5.1
TIXI Tiksi 73.81 10 *e*P **P 09 11 36.8 +3.2**
TIXI pmax pmax
comp=Z,34nm,1.2s,mb5.2
TIXI Tiksi 73.81 10 *e*P **P 09 11 32.8 -0.7**
comp=Z,26nm,0.9s,mb5.2
SEY Seymchan 74.16 23 ⇓*e*P **P 09 11 34.6 -1.1**
KLMR Klimovskoe 74.81 334 *e*P pP 09 11 49.8 +0.5
KLMR pmax pmax
comp=Z,31nm,1.4s,mb5.0
BOSA Boshof 75.10 240 P **P 09 11 43.2 +1.3**
comp=Z,3.0nm,0.7s,mb4.3,baz=101,slow=7.3,SNR=3.1
KIEV Kiev 76.38 322 *e*P **P 09 11 48.3 -0.5**
KIEV pmax pmax
comp=Z,11nm,0.9s,mb4.8
KIEV Kiev 76.38 322 *e*P **P 09 11 48.3 -0.5**
comp=Z,11nm,0.9s,mb4.8
BUR08 Bucovina Ar. S 78.17 319 *e*P **P 09 11 59.6 +0.8**
JOF Joensuu 79.20 335 *e*p **P 09 11 49.4 -15**
SYO Syowa Base 79.52 198 ⇓*e*PcP PcP 09 12 16.0 +2.3
UZH Uzhgorod 80.27 319 *e*P pP 09 12 20.6 +0.4
CRVS Cervenica-Dubn 80.86 319 *e*P **P 09 12 14.7 +1.2**
CRVS *e* pP 09 12 23.8 +0.5
CRVS *e*SP 09 12 31.5
FINES FINESS Array B 81.07 332 P **P 09 12 14.2 -0.1**
comp=Z,2.9nm,0.7s,mb4.3,baz=102,slow=5.8,SNR=4.5
FINES LR LR 09 52 33.1
comp=Z,259nm,18.9s,MS4.6,baz=322,slow=39
STHS Stebnicka Huta 81.09 320 *e*P **P 09 12 15.2 +0.5**
STHS *e* 09 12 21.8
KAF Kangasniemi 81.15 333 *e*P **P 09 12 13.9 -0.8**
KECS Kecovo 81.43 319 *e*P **P 09 12 18.1 +1.6**
KECS *e*PcP PcP 09 12 22.9 +0.4
VYHS Vyhne 82.52 319 *e*P **P 09 12 19.8 -2.5**
VYHS *e* 09 12 26.9
VYHS *e* 09 12 36.5
OKC Ostrava-Krasne 83.15 320 *e*P **P 09 12 30.7 +5.2**
OKC *e* 09 12 38.0
OKC Ostrava-Krasne 83.15 320 *e*P **P 09 12 30.7 +5.2**
OKC *e*pP pP 09 12 38.0 +2.7
ARCES ARCESS Array B 83.55 340 P **P 09 12 28.8 +1.7**
comp=Z,2.8nm,0.5s,mb4.6,baz=100,slow=5.4,SNR=16
ARCES LR LR 09 54 18.8
comp=Z,235nm,21.1s,MS4.5,baz=100,slow=39
CEL Celeste 83.55 308 *e*P **P 09 12 28.6 +0.7**
comp=Z,12nm,0.9s,mb5.0
DPC Dobruska-Polom 84.38 320 *e*P **P 09 12 38.3 +6.5**
DPC *e* 09 12 45.5
DPC Dobruska-Polom 84.38 320 *e*P **P 09 12 38.3 +6.5**
DPC *e*pP pP 09 12 45.5 +3.9
SOKA Soboth 84.88 317 ⇑*i*P **P 09 12 35.0 +0.6**
comp=Z,8.2nm,1.7s,mb4.6
VISS Visnje 84.94 316 *i* P **P 09 12 39.7 +5.0**
BRG Berggiesshubel 85.93 321 *e*P **P 09 12 45.6 +6.1**
comp=Z,3.7nm,0.7s,mb4.8
BRG *e* pP 09 12 56.0 +6.5
comp=Z,4.3nm,0.8s
BRG
comp=N,204nm,18.6s
BRG
comp=E,204nm,18.0s
BRG
comp=Z,227nm,19.5s
BRG Berggiesshubel 85.93 321 *e*P **P 09 12 45.6 +6.1**
BRG *e* pP 09 12 56.0 +6.6
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
BRG MLR MLR
comp=N,122nm,18.6s,MS4.5
BRG MLR MLR
comp=E,122nm,18.0s,MS4.5
BRG MLR MLR
comp=Z,136nm,19.5s,MS4.3
KHC Kasperske Hory 86.04 319 *e*P **P 09 12 45.5 +5.4**
KHC *e* 09 12 52.0
KHC Kasperske Hory 86.04 319 *e*P **P 09 12 45.5 +5.4**
KHC *e*pP pP 09 12 52.0 +2.0
CLL Collm 86.55 321 *e*P **P 09 12 49.0 +6.4**
CLL *e* pP 09 12 59.0 +6.5
GRF Grafenberg Arr 87.61 320 *e*P sP 09 13 05.1 +3.9
comp=Z,9.0nm,1.1s
GRF Grafenberg Arr 87.61 320 *e*P sP 09 13 05.1 +3.9
GRF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
NB2 NORSAR Subarra 88.09 331 P **P 09 12 52.4 +2.6**
comp=Z,1.8nm,0.8s,mb4.3,baz=92,slow=5.3
NOA NORSAR Array B 88.09 331 P **P 09 12 52.0 +2.2**
comp=Z,3.8nm,0.9s,mb4.6,baz=94,slow=4.9,SNR=6.1
NOA LR LR 09 59 37.0
comp=Z,167nm,18.3s,MS4.5,baz=90,slow=41
KEST Kesra 88.68 306 P **P 09 12 53.8 +0.6**
comp=Z,1.2nm,0.7s,mb4.3,baz=329,slow=7.1,SNR=4.3
KEST LR LR 09 55 59.0
comp=Z,59nm,19.4s,MS4.0,baz=265,slow=38
KEST Kesra 88.68 306 *e*P **P 09 12 52.8 -0.4**
NVL N'lazarevskaya 89.13 199 *e*P sP 09 13 07.2 -0.8
NVL pmax pmax
comp=Z,13nm,0.7s,mb5.4
SBF Sospel 90.14 314 *e*P **P 09 12 59.1 -0.7**
MBDF Montbardon 90.60 315 *e*P **P 09 13 00.9 -1.1**
comp=Z,7.3nm,0.7s,mb4.8
MBDF Montbardon 90.60 315 *e*P **P 09 13 00.9 -1.1**
MBDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
MBDF Montbardon 90.60 315 *e*P **P 09 13 00.9 -1.1**
comp=Z,3.7nm,0.7s,mb4.8
FRF La Foret Royal 90.72 313 *e*P **P 09 13 01.3 -1.2**
comp=Z,22nm,0.9s,mb5.2
FRF La Foret Royal 90.72 313 *e*P **P 09 13 01.3 -1.2**
FRF pmax pmax
comp=Z,11nm,0.9s,mb5.2
FRF La Foret Royal 90.72 313 *e*P **P 09 13 01.3 -1.2**
comp=Z,11nm,0.9s,mb5.2
ORIF Oris-en-Rattie 91.23 315 *e*P **P 09 13 04.7 -0.2**
TAM Tamanrasset 92.14 293 *e*P **P 09 13 11.1 +1.5**
TAM pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
TAM Tamanrasset 92.14 293 *e*P **P 09 13 11.1 +1.5**
comp=Z,4.8nm,0.9s,mb4.8
TORD Torodi Ar. Bea 96.07 283 P **P 09 13 27.0 -0.8**
comp=Z,0.4nm,0.7s,mb3.9,baz=82,slow=5.9,SNR=2.8
TORD LR LR 09 54 17.7
comp=Z,200nm,19.3s,MS4.6,baz=140,slow=34
ESDC Sonseca Array 98.96 310 LR LR 09 59 19.3
comp=Z,68nm,20.9s,MS4.1,baz=280,slow=36
ILAR Eielson Array 100.09 23 P Pdif 09 13 44.3 -0.6
comp=Z,0.1nm,0.8s,baz=297,slow=4.5,SNR=2.9
ILAR PP PP 09 17 47.8 -2.3
comp=Z,0.8nm,1.0s,baz=283,slow=6.3,SNR=4.5
PPT Papeete 111.45 109 *e*LR LR 09 51 50.6
comp=Z,269nm,22.8s
YKA Yellowknife Ar 112.62 16 PP PP 09 19 22.6 +0.6
comp=Z,1.2nm,0.9s,baz=335,slow=7.2,SNR=5.0
SCHQ Schefferville 123.55 350 PKP PKPdf 09 18 57.5 +0.7
comp=Z,1.7nm,0.9s,baz=288,slow=3.2,SNR=2.1
RKT Rikitea 123.84 118 *e*LR LR 09 57 30.8
comp=Z,270nm,28.5s
CHMT Chamberlain Mo 125.50 26 *e*PKPdf PKPdf 09 18 59.0 -1.8
WVOR Wild Horse Val 126.09 33 *e*PKIKP PKPdf 09 18 59.0 -3.0
DLMT Dillon 126.99 27 *e*PKPdf PKPdf 09 19 04.7 +1.0
NVAR Mina Array Bea 128.93 37 PKP PKPdf 09 19 09.4 +1.9
comp=Z,1.2nm,0.9s,baz=246,slow=2.6,SNR=5.1
SNOW Snow King Moun 129.29 27 *e*PKPdf PKPdf 09 19 08.3 +0.2
REDW Red Top Meadow 129.33 27 *e*PKPdf PKiKP 09 19 12.7 +3.7
PDAR Pinedale Array 130.38 27 PKP PKPdf 09 19 08.3 -1.9
comp=Z,0.3nm,0.8s,baz=270,slow=0.9,SNR=3.2
MSU Marysvale 132.34 32 *e*PKIKP PKPdf 09 19 16.7 +2.6
WMOK Wichita Mounta 141.66 23 *e*PKIKP PKPdf 09 19 26.9 -4.5
MIAR Mount Ida 143.57 16 *e*PKIKP PKPdf 09 19 35.9 +1.1
TXAR Lajitas Array 143.89 33 PKP PKPdf 09 19 33.6 -1.9
comp=Z,1.3nm,0.7s,baz=282,slow=0.6,SNR=16
SWET Sewanee 144.36 6 *e*PKPdf PKPdf 09 19 35.8 -0.4
JCT Junction City 144.91 27 *e*PKIKP PKPdf 09 19 36.1 -1.1
CPUP Villa Florida 144.97 221 PKPbc PKPdf 09 19 37.1 -0.3
comp=Z,7.6nm,0.9s,baz=92,slow=2.3,SNR=6.8
JSC Jenkinsville 145.48 359 *e*PKIKP PKPdf 09 19 38.3 +0.2
GOGA Godfrey 146.32 2 *e*PKP2 PKPdf 09 19 39.4 -0.2
LRAL Lakeview Retre 146.40 8 *e*PKPdf PKPdf 09 19 41.2 +1.5
LPAZ La Paz 159.14 220 PKP PKPdf 09 20 01.1 +2.4
comp=Z,1.5nm,0.9s,baz=91,slow=2.7,SNR=6.4

WEL 02 09:10:56.2±0.1, 37°.81S×176°.79E, h5km, ML3.6/12, 3C, Error ellipse: s-maj=1.1km s-min=1.0km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.19**	**259**	⇑PG	Pg	09 11 00.2	+0.2
OPRZ				SG	Sg	09 11 02.7	+0.1
MARZ	**Manawahe**	**0.20**	**208**	⇑PG	Pg	09 11 00.4	+0.2
EDRZ	**Edgecumbe**	**0.30**	**188**	PG	Pg	09 11 02.4	+0.3
LIRZ	**Lichensteins R**	**0.38**	**239**	PG	Pg	09 11 04.1	+0.6
MKRZ	**Makatiti**	**0.42**	**218**	PG	Pg	09 11 05.3	+1.0
WIZ	**White Island**	**0.42**	**48**	PG	Pg	09 11 04.7	+0.3
TGRZ	**Tauranga**	**0.43**	**280**	PG	Pg	09 11 04.9	+0.4
OMRZ	**Omania**	**0.45**	**228**	PG	Pg	09 11 05.3	+0.5
TARZ	**Mount Tarawera**	**0.48**	**208**	PG	Pg	09 11 06.4	+0.9
KARZ	**Kaharoa**	**0.48**	**244**	PG	Pg	09 11 06.0	+0.4
URZ	**Urewera**	**0.52**	**151**	⇑PG	Pg	09 11 05.9	-0.3
RRRZ	**Republican Roa**	**0.57**	**202**	PG	Pg	09 11 07.5	+0.2
UTU	**Utuhina**	**0.60**	**232**	PG	Pg	09 11 09.7	+1.9
MYRZ	**Mayor Island**	**0.69**	**320**	P*	Pb	09 11 09.8	-0.8
HRRZ	**Handcock Road**	**0.71**	**214**	P*	Pb	09 11 10.6	-0.4
PRRZ	**Plateau Road**	**0.76**	**204**	P*	Pb	09 11 11.1	-0.8
MWZ	**Matawai**	**0.78**	**132**	P*	Pb	09 11 10.9	-1.4
ALRZ	**Allen Road**	**0.83**	**205**	P*	Pb	09 11 12.5	-0.7
TOZ	**Tahuroa Road**	**1.03**	**274**	P*	Pb	09 11 15.4	-1.1
RAHZ	**Arahi**	**1.13**	**168**	P*	Pb	09 11 17.2	-1.0
PUZ	**Puketiti**	**1.19**	**103**	P*	Pb	09 11 18.5	-0.7
NMHZ	**Naumai**	**1.29**	**180**	P*	Pb	09 11 19.8	-1.1
CNGZ	**Carnagh Statio**	**1.30**	**122**	P*	Pb	09 11 21.8	+0.6
KUZ	**Kuaotunu**	**1.36**	**321**	PN	Pn	09 11 20.5	-1.4
BKZ	**Black Stump Fm**	**1.38**	**190**	P*	Pb	09 11 19.9	-2.5
KNZ	**Kokohu**	**1.39**	**151**	PN	Pn	09 11 22.1	-0.3
MKAZ	**Moumakai**	**1.47**	**298**	PN	Pn	09 11 22.8	-0.6
HIZ	**Hauiti**	**1.68**	**245**	PN	Pn	09 11 24.7	-1.6
BHHZ	**Black Hill Sta**	**1.77**	**199**	P*	Pb	09 11 27.7	-1.5
RVAZ	**Riverhead Bore**	**2.05**	**300**	PN	Pn	09 11 29.9	-1.4
PXZ	**Pawanui**	**2.22**	**179**	PN	Pn	09 11 32.3	-1.4
TSZ	**Takapari Road**	**2.34**	**196**	PN	Pn	09 11 35.0	-0.3

ISCJB ***02*** *09:16:38.3±0.6, 37°.87N±0°.04×22°.97E±0°.05, h26km±5km, Error ellipse: s-maj=6.8km s-min=6.0km az=151.2*
ATH ***02*** *09:16:38.6, 37°.87N×22°.95E, h17km±1km, MD2.8/5*
CSEM ***02*** *09:16:38.1±0.2, 37°.87N×22°.98E, h20km, MD2.8, Error ellipse: s-maj=5.6km s-min=4.9km az=24.0*
THE ***02*** *09:16:39.3, 37°.86N×22°.92E, h10km±5km, ML2.0/4, Error ellipse: s-maj=5.6km s-min=0.8km az=50.0*
ISC 02 09:16:38.2±0.6, 37°.88N±0°.04×22°.97E±0°.05, h26km±5km, n20, σ0°54/34, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.15**	**0**	*e*PB	**Pb**	**09 16 43.0**	**-0.4**
LTK				*e*SB	**Sb**	**09 16 45.8**	**-1.1**
LTK	**Loutraki**	**0.15**	**0**	P	**Pb**	**09 16 43.0**	**-0.4**
LTK				S	**Sb**	**09 16 45.8**	**-1.1**
LTK	**Loutraki**	**0.15**	**0**	P	**Pb**	**09 16 43.0**	**-0.4**
LTK				S	**Sb**	**09 16 45.8**	**-1.1**
DID	**Didima**	**0.43**	**150**	*e*PB	**Pb**	**09 16 47.1**	**-0.1**
DID				*e*SB	**Sb**	**09 16 53.8**	**+0.5**
DID	**Didima**	**0.43**	**150**	P	**Pb**	**09 16 47.2**	**0.0**
DID				S	**Sb**	**09 16 54.0**	**+0.7**
DID	**Didima**	**0.43**	**150**	P	**Pb**	**09 16 47.2**	**0.0**
DID				*e*Sb	**Sb**	**09 16 53.8**	**+0.5**
NAIG	**Nisos Aigina**	**0.43**	**106**	*e*PB	**Pb**	**09 16 47.5**	**+0.2**
NAIG	**Nisos Aigina**	**0.43**	**106**	*e*Pb	**Pb**	**09 16 47.5**	**+0.2**
GUR	**Goura**	**0.50**	**277**	P	**Pb**	**09 16 48.7**	**+0.3**
GUR				S	**Sb**	**09 16 55.0**	**-0.4**
GUR	**Goura**	**0.50**	**277**	P	**Pb**	**09 16 48.7**	**+0.3**
GUR				S	**Sb**	**09 16 55.0**	**-0.4**
DSF	**Desfina**	**0.64**	**327**	P	**Pb**	**09 16 51.7**	**+0.9**
DSF				S	**Sb**	**09 16 59.9**	**+0.6**
DSF	**Desfina**	**0.64**	**327**	P	**Pb**	**09 16 51.7**	**+0.9**
DSF				S	**Sb**	**09 16 59.9**	**+0.6**
VLY	**Voula,Athens**	**0.66**	**92**	*e*PN	**Pn**	**09 16 51.6**	**-0.2**
VLY	**Voula,Athens**	**0.66**	**92**	*e*Pn	**Pn**	**09 16 51.6**	**-0.2**
VLX	**Vlachokerasia**	**0.69**	**223**	*e*PN	**Pn**	**09 16 51.8**	**-0.5**
VLX				*e*SN	**Sn**	**09 17 01.3**	**-0.8**
VLX	**Vlachokerasia**	**0.69**	**223**	P	**Pb**	**09 16 52.2**	**+0.6**
VLX				S	**Sb**	**09 17 00.9**	**+0.2**
VLX	**Vlachokerasia**	**0.69**	**223**	*e*Pn	**Pn**	**09 16 51.8**	**-0.5**
VLX	**Vlachokerasia**	**0.69**	**223**	P	**Pb**	**09 16 52.2**	**+0.6**
VLX				S	**Sb**	**09 17 00.9**	**+0.2**
VLX				*e*Sn	**Sn**	**09 17 01.3**	**-0.8**
LKR	**Lokris**	**0.78**	**2**	*e*PN	**Pn**	**09 16 53.6**	**+0.1**
LKR	**Lokris**	**0.78**	**2**	*e*Pn	**Pn**	**09 16 53.6**	**+0.1**

CSEM ***02*** *09:16:45.1, 38°.03N×15°.06E, h7km, MD3.4/34, After ROM*
ROM 02 09:16:45.1±0.2, 38°.03N×15°.06E, h7km±1km, Md3.4/34, Ml3.5/31, 6C, Error ellipse: s-maj=1.5km s-min=1.2km az=115.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMME	**Mongiuffi-Meli**	**0.18**	**122**	Pg	Pg	09 16 49.3	+0.6
MMME				Sg	Sg	09 16 52.6	+1.5
	27μm,0.6s						
MMME	**Mongiuffi-Meli**	**0.18**	**122**	Pg	Pg	09 16 49.3	+0.6
MMME				Sg	Sg	09 16 52.6	+1.5
	27μm,0.6s						
ESLN	**Serra La Nave**	**0.34**	**192**	Pg	Pg	09 16 52.7	+0.9
ESLN				Sg	Sg	09 16 59.2	+2.9
	13μm,0.9s						
ESLN	**Serra La Nave**	**0.34**	**192**	Pg	Pg	09 16 52.7	+0.9
ESLN				Sg	Sg	09 16 59.2	+2.9
	13μm,0.9s						
VPL	**Vulcano Piano**	**0.35**	**350**	Pg	Pg	09 16 53.7	+1.7
VPL				Sg	Sg	09 16 59.4	+2.7
	10μm,0.5s						
VPL	**Vulcano Piano**	**0.35**	**350**	Pg	Pg	09 16 53.7	+1.7
VPL				Sg	Sg	09 16 59.4	+2.7
	10μm,0.5s						
MSRU	**Castanea**	**0.42**	**56**	Pg	Pg	09 16 54.4	+1.1
MSRU				Sg	Sg	09 17 01.0	+2.2
	6μm,0.4s						
MSRU	**Castanea**	**0.42**	**56**	Pg	Pg	09 16 54.4	+1.1
MSRU				Sg	Sg	09 17 01.0	+2.2
	6μm,0.4s						
LLI	**Lipari**	**0.42**	**348**	Pg	Pg	09 16 55.0	+1.7
	15μm,0.8s						
LLI	**Lipari**	**0.42**	**348**	Pg	Pg	09 16 55.0	+1.7
	15μm,0.8s						
MTTG	**Motta San Giov**	**0.50**	**93**	⇑*i*Pg	Pg	09 16 55.5	+0.7
MTTG				Sg	Sg	09 17 04.4	+3.1
	2μm,0.5s						
MTTG	**Motta San Giov**	**0.50**	**93**	⇑*i*Pg	Pg	09 16 55.5	+0.7
MTTG				Sg	Sg	09 17 04.4	+3.1
	2μm,0.5s						
ECNV	**Catenanuova**	**0.51**	**213**	Pg	Pg	09 16 57.1	+2.1
	5μm,0.8s						
ECNV	**Catenanuova**	**0.51**	**213**	Pg	Pg	09 16 57.1	+2.1
	5μm,0.8s						
SCLL	**Scilla**	**0.56**	**66**	⇑*i*Pg	Pg	09 16 56.6	+0.7
SCLL				Sg	Sg	09 17 04.6	+1.3
	200nm,0.2s						
SCLL	**Scilla**	**0.56**	**66**	⇑*i*Pg	Pg	09 16 56.6	+0.7
SCLL				Sg	Sg	09 17 04.6	+1.3
	200nm,0.2s						
SLNA	**Salina**	**0.56**	**341**	Pg	Pg	09 16 57.8	+1.9
SLNA	**Salina**	**0.56**	**341**	Pg	Pg	09 16 57.8	+1.9
MSCL	**Scilla**	**0.61**	**70**	Pg	Pg	09 16 57.4	+0.6
MSCL				Sg	Sg	09 17 07.2	+2.4
	2μm,0.6s						
MSCL	**Scilla**	**0.61**	**70**	Pg	Pg	09 16 57.4	+0.6
MSCL				Sg	Sg	09 17 07.2	+2.4
	2μm,0.6s						
IFIL	**Filicudi I Eol**	**0.66**	**324**	Pg	Pg	09 16 58.7	+0.9
IFIL				Sg	Sg	09 17 08.9	+2.5
	8μm,0.6s						
IFIL	**Filicudi I Eol**	**0.66**	**324**	Pg	Pg	09 16 58.7	+0.9
IFIL				Sg	Sg	09 17 08.9	+2.5
	8μm,0.6s						
CEL	**Celeste**	**0.69**	**71**	Pg	Pg	09 16 58.8	+0.3

CEL				Sg	Sg	09 17 09.8	+2.3
	1μm,0.4s							
CEL	**Celeste**	**0.69**	**71**	Pg	Pg	09 16 58.8	+0.3
CEL				Sg	Sg	09 17 09.8	+2.3
	1μm,0.4s							
HCRL	**Carlentini**	**0.75**	**182**	Pg	Pg	09 16 59.3	-0.1
HCRL				Sg	Sg	09 17 11.0	+1.9
	2μm,0.3s							
HCRL	**Carlentini**	**0.75**	**182**	Pg	Pg	09 16 59.3	-0.1
HCRL				Sg	Sg	09 17 11.0	+1.9
	2μm,0.3s							
HAGA	**Augusta**	**0.75**	**174**	Pg	Pg	09 16 59.4	-0.1
HAGA				Sg	Sg	09 17 10.5	+1.3
	3μm,0.9s							
HAGA	**Augusta**	**0.75**	**174**	Pg	Pg	09 16 59.4	-0.1
HAGA				Sg	Sg	09 17 10.5	+1.3
	3μm,0.9s							
IACL	**Alicudi**	**0.75**	**312**	Pg	Pg	09 16 59.9	+0.4
	2μm,0.3s							
IACL	**Alicudi**	**0.75**	**312**	Pg	Pg	09 16 59.9	+0.4
	2μm,0.3s							
MPAZ	**Palizzi**	**0.75**	**96⇑**	*i*Pg	Pg	09 16 59.7	+0.2
	1μm,0.3s							
MPAZ	**Palizzi**	**0.75**	**96⇑**	*i*Pg	Pg	09 16 59.7	+0.2
	1μm,0.3s							
SOI	**Samo**	**0.79**	**87**	Pg	Pg	09 17 00.1	-0.1
SOI				Sg	Sg	09 17 12.4	+2.0
	1μm,0.7s							
SOI	**Samo**	**0.79**	**87**	Pg	Pg	09 17 00.1	-0.1
SOI				Sg	Sg	09 17 12.4	+2.0
	1μm,0.7s							
CSLB	**Castelbuono**	**0.80**	**264**	Pg	Pg	09 17 00.1	-0.3
	518nm,0.4s							
CSLB	**Castelbuono**	**0.80**	**264**	Pg	Pg	09 17 00.1	-0.3
	518nm,0.4s							
GIB	**Gibilmanna**	**0.82**	**267**	Pg	Pg	09 17 00.9	+0.1
	6μm,0.6s							
GIB	**Gibilmanna**	**0.82**	**267**	Pg	Pg	09 17 00.9	+0.1
	6μm,0.6s							
JOPP	**Joppolo**	**0.87**	**48**	Pg	Pg	09 17 02.1	+0.3
JOPP				Sg	Sg	09 17 13.9	+0.9
	822nm,0.4s							
JOPP	**Joppolo**	**0.87**	**48**	Pg	Pg	09 17 02.1	+0.3
JOPP				Sg	Sg	09 17 13.9	+0.9
	822nm,0.4s							
SSY	**Sortino**	**0.88**	**179**	Pg	Pg	09 17 01.6	-0.3
SSY				Sg	Sg	09 17 14.9	+1.7
	4μm,0.5s							
SSY	**Sortino**	**0.88**	**179**	Pg	Pg	09 17 01.6	-0.3
SSY				Sg	Sg	09 17 14.9	+1.7
	4μm,0.5s							
HVZN	**Vizzini**	**0.89**	**198**	Pg	Pg	09 17 02.0	-0.3
HVZN				Sg	Sg	09 17 16.1	+2.3
	3μm,0.5s							
HVZN	**Vizzini**	**0.89**	**198**	Pg	Pg	09 17 02.0	-0.3
HVZN				Sg	Sg	09 17 16.1	+2.3
	3μm,0.5s							
RAFF	**Raffo Rosso**	**0.98**	**215**	Pg	Pg	09 17 04.1	+0.2
	2μm,0.5s							
RAFF	**Raffo Rosso**	**0.98**	**215**	Pg	Pg	09 17 04.1	+0.2
	2μm,0.5s							
HAVL	**Avola**	**1.07**	**177**	Pg	Pg	09 17 04.8	-0.8
HAVL				Sg	Sg	09 17 21.1	+1.6
	2μm,0.3s							
HAVL	**Avola**	**1.07**	**177**	Pg	Pg	09 17 04.8	-0.8
HAVL				Sg	Sg	09 17 21.1	+1.6
	2μm,0.3s							
HMDC	**Modica**	**1.09**	**192**	Pg	Pg	09 17 05.2	-0.9
HMDC				Sg	Sg	09 17 20.9	+0.7
HMDC	**Modica**	**1.09**	**192**	Pg	Pg	09 17 05.2	-0.9
HMDC				Sg	Sg	09 17 20.9	+0.7
PLAC	**Placanica**	**1.16**	**68**	Pg	Pg	09 17 07.2	-0.2
	538nm,0.4s							
PLAC	**Placanica**	**1.16**	**68**	Pg	Pg	09 17 07.2	-0.2
	538nm,0.4s							
GRI	**Girifalco**	**1.33**	**53**	Pg	Pg	09 17 09.2	-1.4
	376nm,0.5s							
GRI	**Girifalco**	**1.33**	**53**	Pg	Pg	09 17 09.2	-1.4
	376nm,0.5s							
FAVR	**Favara**	**1.34**	**236**	Pg	Pg	09 17 12.1	+1.2
	169nm,0.3s							
FAVR	**Favara**	**1.34**	**236**	Pg	Pg	09 17 12.1	+1.2
	169nm,0.3s							
CORL	**Corleone**	**1.40**	**265**	Pg	Pg	09 17 10.9	-1.0
	813nm,0.6s							
CORL	**Corleone**	**1.40**	**265**	Pg	Pg	09 17 10.9	-1.0
	813nm,0.6s							
CARO	**Carolei**	**1.52**	**36**	Pg	Pg	09 17 12.1	-2.2
	785nm,0.7s							
CARO	**Carolei**	**1.52**	**36**	Pg	Pg	09 17 12.1	-2.2
	785nm,0.7s							
SERS	**Sersale**	**1.62**	**51**	Pg	Pg	09 17 14.6	-1.6
	164nm,0.4s							
SERS	**Sersale**	**1.62**	**51**	Pg	Pg	09 17 14.6	-1.6
	164nm,0.4s							
USI	**Ustica**	**1.63**	**295**	Pg	Pg	09 17 12.9	-3.4
	264nm,0.3s							
USI	**Ustica**	**1.63**	**295**	Pg	Pg	09 17 12.9	-3.4
	264nm,0.3s							
CUC	**Castrocucco**	**2.05**	**16**	Pg	Pg	09 17 19.5	-4.8
	140nm,0.5s							
CUC	**Castrocucco**	**2.05**	**16**	Pg	Pg	09 17 19.5	-4.8
	140nm,0.5s							
BULG	**Bulgheria - Ca**	**2.06**	**7**	Pg	Pg	09 17 19.6	-5.0
	131nm,0.3s							
BULG	**Bulgheria - Ca**	**2.06**	**7**	Pg	Pg	09 17 19.6	-5.0
	131nm,0.3s							
SIRI	**Monte Sirino -**	**2.24**	**16**	Pg	Pg	09 17 22.3	-5.7
SIRI	**Monte Sirino -**	**2.24**	**16**	Pg	Pg	09 17 22.3	-5.7
CMPR	**Campora**	**2.29**	**5**	Pg	Pg	09 17 22.6	-6.4
	59nm,0.4s							
CMPR	**Campora**	**2.29**	**5**	Pg	Pg	09 17 22.6	-6.4
	59nm,0.4s							
MTSN	**Montesano sull**	**2.30**	**13**	Pg	Pg	09 17 23.5	-5.6
MTSN	**Montesano sull**	**2.30**	**13**	Pg	Pg	09 17 23.5	-5.6
MCEL	**Monticello**	**2.36**	**14**	Pg	Pg	09 17 24.8	-5.6
	108nm,0.5s							
MCEL	**Monticello**	**2.36**	**14**	Pg	Pg	09 17 24.8	-5.6
	108nm,0.5s							
CDRU	**Civita di Ruta**	**2.46**	**4**	Pg	Pg	09 17 25.4	-6.9
	22nm,0.5s							
CDRU	**Civita di Ruta**	**2.46**	**4**	Pg	Pg	09 17 25.4	-6.9
	22nm,0.5s							

ISCJB ***02*** *09:25:04.2±0.5, 38°.45N±0°.03×21°.82E±0°.03, h13km±2km, Error ellipse: s-maj=4.5km s-min=3.7km az=17.3*
ATH ***02*** *09:25:04.0, 38°.40N×21°.82E, h16km±1km, MD2.9/10, ML2.6*
NEIC ***02*** *09:25:04.0, 38°.40N×21°.82E, h16km, ML2.6(ATH), After ATH.*
THE ***02*** *09:25:04.7, 38°.43N×21°.78E, h1km±2km, ML2.4/8, Error ellipse: s-maj=2.2km s-min=0.5km az=342.0*
CSEM ***02*** *09:25:04.0±0.2, 38°.44N×21°.81E, h10km, MD2.9, Error ellipse: s-maj=4.6km s-min=3.6km az=23.0*

ISC 02 09:25:04.5±0.4, 38°.42N±0°.02×21°.81E±0°.03, h14km±2km, n49, σ1°.04/82, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.07**	**88**	*e*PB	**Pg**	**09 25 06.8**	**-0.5**
EFP	**Efpalio**	**0.07**	**88**	P	**Pg**	**09 25 06.8**	**-0.5**
EFP				S	**Sg**	**09 25 08.6**	**-0.7**
EFP	**Efpalio**	**0.07**	**88**	P	**Pg**	**09 25 06.8**	**-0.5**
EFP				S	**Sg**	**09 25 08.6**	**-0.7**
UPR	**University Cam**	**0.14**	**188**	*e*PB	**Pg**	**09 25 07.6**	**-0.5**
UPR	**University Cam**	**0.14**	**188**	P	**Pg**	**09 25 07.8**	**-0.3**
UPR				S	**Sg**	**09 25 10.3**	**-0.4**
UPR	**University Cam**	**0.14**	**188**	P	**Pg**	**09 25 07.8**	**-0.3**
UPR				S	**Sg**	**09 25 10.3**	**-0.4**
TRIZ	**Trizonia**	**0.21**	**106**	P	**Pg**	**09 25 09.1**	**-0.1**
TRIZ				S	**Sg**	**09 25 13.3**	**+0.8**
TRIZ	**Trizonia**	**0.21**	**106**	P	**Pg**	**09 25 09.1**	**-0.1**
TRIZ				S	**Sg**	**09 25 13.3**	**+0.8**
LAKA	**Lakka**	**0.23**	**144**	P	**Pg**	**09 25 09.4**	**0.0**
LAKA				S	**Sg**	**09 25 13.1**	**+0.3**
LAKA	**Lakka**	**0.23**	**144**	P	**Pg**	**09 25 09.4**	**0.0**
LAKA				S	**Sg**	**09 25 13.1**	**+0.3**
KALE	**Kalithea**	**0.26**	**97**	P	**Pg**	**09 25 09.8**	**-0.2**
KALE				S	**Sg**	**09 25 14.7**	**+1.0**
KALE	**Kalithea**	**0.26**	**97**	P	**Pg**	**09 25 09.8**	**-0.2**
KALE				S	**Sg**	**09 25 14.7**	**+1.0**
EVR	**Evrytania**	**0.49**	**360**	*e*Pn	**Pg**	**09 25 13.8**	**-0.4**
EVR				*e*Sn	**Sg**	**09 25 22.0**	**+1.2**
EVR	**Evrytania**	**0.49**	**360**	*e*Pn	**Pg**	**09 25 13.8**	**-0.4**
EVR				*e*SN	**Sg**	**09 25 22.0**	**+1.2**
EVR	**Evrytania**	**0.49**	**360**	*e*Pn	**Pg**	**09 25 13.8**	**-0.4**
DSF	**Desfina**	**0.56**	**91**	P	**Pg**	**09 25 14.8**	**-0.7**
DSF				S	**Sg**	**09 25 24.3**	**+1.3**
DSF	**Desfina**	**0.56**	**91**	P	**Pg**	**09 25 14.8**	**-0.7**
DSF				S	**Sg**	**09 25 24.3**	**+1.3**
GUR	**Goura**	**0.64**	**139**	*e*PN	**Pn**	**09 25 16.4**	**-2.7**
GUR				*e*SN	**Sg**	**09 25 25.0**	**-0.5**
GUR	**Goura**	**0.64**	**139**	P	**Pg**	**09 25 16.6**	**-0.4**
GUR				S	**Sg**	**09 25 26.5**	**+1.0**
GUR	**Goura**	**0.64**	**139**	P	**Pg**	**09 25 16.6**	**-0.4**
GUR				S	**Sg**	**09 25 26.5**	**+1.0**
KFL	**Anninata**	**0.86**	**249**	P	**Pg**	**09 25 20.7**	**-0.5**
KFL	**Anninata**	**0.86**	**249**	P	**Pg**	**09 25 20.7**	**-0.5**
LKR	**Lokris**	**0.96**	**76**	*e*Pn	**Pn**	**09 25 21.8**	**-1.7**
LKR				*e*Sn	**Sn**	**09 25 35.7**	**-1.2**
LKR	**Lokris**	**0.96**	**76**	*e*PN	**Pn**	**09 25 21.8**	**-1.7**
LKR				*e*SN	**Sn**	**09 25 35.7**	**-1.2**
LKR	**Lokris**	**0.96**	**76**	*e*Pn	**Pn**	**09 25 21.8**	**-1.7**
LKR				*e*Sn	**Sn**	**09 25 35.7**	**-1.2**
LKD2	**Lefkada island**	**0.97**	**292**	P	**Pb**	**09 25 22.3**	**-0.8**
LKD2				S	**Sb**	**09 25 37.2**	**+1.4**
LKD2	**Lefkada island**	**0.97**	**292**	P	**Pb**	**09 25 22.3**	**-0.8**
LKD2				S	**Sb**	**09 25 37.2**	**+1.4**
VLS	**Valsamata**	**0.99**	**256**	P	**Pb**	**09 25 22.1**	**-1.3**
VLS				S	**Sb**	**09 25 36.8**	**+0.5**
VLS	**Valsamata**	**0.99**	**256**	P	**Pb**	**09 25 22.1**	**-1.3**
VLS				S	**Sb**	**09 25 36.8**	**+0.5**
LTK	**Loutraki**	**0.99**	**113**	*e*PN	**Pn**	**09 25 22.7**	**-1.3**
LTK				*e*SN	**Sn**	**09 25 36.0**	**-1.8**
LTK	**Loutraki**	**0.99**	**113**	*e*Pn	**Pn**	**09 25 22.7**	**-1.3**
LTK				*e*Sn	**Sn**	**09 25 36.0**	**-1.8**
VLX	**Vlachokerasia**	**1.14**	**157**	*e*PN	**Pn**	**09 25 25.5**	**-0.5**
VLX				*e*SN	**Sn**	**09 25 41.0**	**-0.5**
VLX	**Vlachokerasia**	**1.14**	**157**	*e*Pn	**Pn**	**09 25 25.5**	**-0.5**
VLX				*e*Sn	**Sn**	**09 25 41.0**	**-0.5**
THL	**Klokotos Trika**	**1.15**	**8**	*e*PN	**Pn**	**09 25 25.8**	**-0.3**
THL				*e*SN	**Sn**	**09 25 42.7**	**+1.0**
THL	**Klokotos Trika**	**1.15**	**8**	P	**Pb**	**09 25 26.1**	**0.0**
THL	**Klokotos Trika**	**1.15**	**8**	*e*Pn	**Pn**	**09 25 25.8**	**-0.3**
THL	**Klokotos Trika**	**1.15**	**8**	P	**Pb**	**09 25 26.1**	**0.0**
THL				*e*Sn	**Sn**	**09 25 42.7**	**+1.0**
DID	**Didima**	**1.45**	**129**	*e*PN	**Pn**	**09 25 31.3**	**+1.0**
DID	**Didima**	**1.45**	**129**	P	**Pn**	**09 25 32.1**	**+1.8**
DID				S	**Sn**	**09 25 52.1**	**+3.0**
DID	**Didima**	**1.45**	**129**	*e*Pn	**Pn**	**09 25 31.3**	**+1.0**
DID	**Didima**	**1.45**	**129**	P	**Pn**	**09 25 32.1**	**+1.8**
DID				S	**Sn**	**09 25 52.1**	**+3.0**
NAIG	**Nisos Aigina**	**1.48**	**116**	*e*Pn	**Pn**	**09 25 31.3**	**+0.6**
NAIG	**Nisos Aigina**	**1.48**	**116**	*e*PN	**Pn**	**09 25 31.3**	**+0.6**
NAIG	**Nisos Aigina**	**1.48**	**116**	*e*Pn	**Pn**	**09 25 31.3**	**+0.6**
PYL	**PYLOS**	**1.53**	**182**	*e*PN	**Pn**	**09 25 32.2**	**+0.9**
PYL				*e*SN	**Sn**	**09 25 53.4**	**+2.5**
PYL	**PYLOS**	**1.53**	**182**	*e*Pn	**Pn**	**09 25 32.2**	**+0.9**
ATH	**Athens Observa**	**1.57**	**106**	*e*Pn	**Pn**	**09 25 32.7**	**+0.8**
ATH	**Athens Observa**	**1.57**	**106**	*e*PN	**Pn**	**09 25 32.7**	**+0.8**
ATH	**Athens Observa**	**1.57**	**106**	*e*Pn	**Pn**	**09 25 32.7**	**+0.8**

ISCJB ***02*** *09:35:11.4±0.5, 39°.15N±0°.03×140°.87E±0°.04, h10km±3km, mb3.8/17, Error ellipse: s-maj=5.4km s-min=4.6km az=31.8*
JMA ***02*** *09:35:11.5, 39°.17N×140°.86E, h8km±1km, M3.9*
Broadband fault plane solution: P waves. NP1: φs119.00000°, δ43.00000°, λ-12.00000°. NP2: φs218.00000°, δ82.00000°, λ-132.00000°. Principal axes: T Plg25.0000°, Azm339.0000°; N Plg41.0000°, Azm225.0000°; P Plg38.0000°, Azm91.0000°.

ISC 02 09:35:12.0±0.6, 39°.14N±0°.03×140°.87E±0°.04, h3km±4km, n38, σ0°.87/43, mb3.8/17, 4C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.31**	**324**	⇑P	**Pg**	**09 35 17.4**	**-0.6**
JRG				S	**Sg**	**09 35 22.1**	**0.0**
JMK	**Ichinoseki**	**0.33**	**125**	⇑P	**Pg**	**09 35 18.1**	**-0.2**
JMK				S	**Sg**	**09 35 23.2**	**+0.6**
JYK	**Kaneyama**	**0.46**	**241**	⇓P	**Pg**	**09 35 20.4**	**-0.3**
JYK				S	**Sg**	**09 35 27.1**	**+0.5**
JOM	**Ohasama**	**0.47**	**45**	⇓P	**Pg**	**09 35 20.3**	**-0.6**
JOM				S	**Sg**	**09 35 26.8**	**-0.2**
JIO	**Ouri**	**0.78**	**151**	⇑P	**Pg**	**09 35 26.5**	**-0.4**
JOU	**Okura**	**0.79**	**192**	⇑P	**Pg**	**09 35 27.1**	**0.0**
MAJO	**Matsushiro**	**3.34**	**220**	*e*P	**Pn**	**09 36 05.3**	**+0.2**
MAT	**Matsushiro**	**3.34**	**220**	P	**Pn**	**09 36 06.1**	**+1.0**
MAT				*e*S	**Sn**	**09 36 47.5**	**+2.2**
MJAR	**Matsushiro Arr**	**3.34**	**220**	Pn	**Pn**	**09 36 05.8**	**+0.7**
	2.6nm,0.3s,baz=23,slow=14,SNR=23						
ERM	**Erimo**	**3.36**	**31**	*de*P	**Pn**	**09 36 07.3**	**+2.0**
ASAJ	**Asahikawa**	**5.14**	**14**	*e*Pn	**Pn**	**09 36 32.3**	**+2.5**
	38nm,1.3s						
ASAJ	**Asahikawa**	**5.14**	**14**	Pn	**Pn**	**09 36 31.2**	**+1.4**
	1.9nm,0.3s,baz=234,slow=13,SNR=13						
ASAJ	**Asahikawa**	**5.14**	**14**	P	**Pn**	**09 36 31.2**	**+1.4**
JHJ	**Hachijo jima 2**	**6.07**	**189**	Pn	**Pn**	**09 36 43.1**	**+0.4**
	14nm,0.3s,baz=86,slow=9.3,SNR=7.8						
JHJ				Sn	**Sn**	**09 37 50.7**	**-2.0**
	baz=252,slow=20,SNR=2.5						
SKR	**Severo-Kuril's**	**15.77**	**38**	*e*P	**Pn**	**09 38 48.0**	**-6.9**
PETK	**Petropavlovsk-**	**18.13**	**34**	P	**Pn**	**09 39 25.6**	**+0.9**
	0.0nm,0.3s,baz=213,slow=4.8,SNR=2.6						
SONM	**Songino Array**	**26.30**	**301**	P	**P**	**09 40 49.5**	**+0.8**
	0.3nm,0.3s,mb3.3,baz=105,slow=5.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**40.20**	**311**	P	**P**	**09 42 49.0**	**-0.4**
	2.3nm,0.8s,mb4.0,baz=86,slow=7.6,SNR=7.1						
CHTO	**Chiang Mai**	**41.45**	**253**	*e*P	**P**	**09 42 57.7**	**-2.4**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
CHTO	**Chiang Mai**	**41.45**	**253**	*e*P	**P**	**09 42 57.6**	**-2.4**
	comp=Z,3.2nm,0.8s,mb4.0						
MK31	**Makanchi Array**	**42.66**	**300**	*e*P	**P**	**09 43 09.2**	**-0.5**
MKAR	**Makanchi Array**	**42.66**	**300**	P	**P**	**09 43 08.9**	**-0.8**
	comp=Z,1.4nm,0.8s,mb3.8,baz=85,slow=9.1,SNR=13						
KURK	**Kurchatov**	**44.32**	**306**	P	**P**	**09 43 22.6**	**-0.4**
	comp=Z,1.5nm,0.5s,mb4.0,baz=83,slow=8.3,SNR=11						
ILAR	**Eielson Array**	**47.96**	**33**	P	**P**	**09 43 51.2**	**-0.2**
	comp=Z,0.5nm,0.7s,mb3.6,baz=260,slow=5.6,SNR=6.4						
BVAR	**Borovoye Array**	**48.85**	**311**	P	**P**	**09 43 57.7**	**-0.8**
	comp=Z,0.8nm,0.6s,mb4.0,baz=69,slow=13,SNR=3.6						
EKS2	**Erkin-Say**	**49.63**	**297**	*e*P	**P**	**09 44 04.4**	**-0.2**
	comp=Z,1.3nm,0.9s,mb4.0						
INK	**Inuvik**	**52.72**	**28**	P	**P**	**09 44 27.6**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=293,slow=10,SNR=4.2						
AKTK	**Aktyubinsk**	**56.96**	**311**	P	**P**	**09 44 58.8**	**+0.4**
AKTO	**Aktyubinsk**	**56.96**	**311**	P	**P**	**09 44 58.8**	**+0.4**
	comp=Z,1.6nm,1.0s,mb4.0,baz=107,slow=11,SNR=3.4						
YKA	**Yellowknife Ar**	**62.21**	**31**	P	**P**	**09 45 33.0**	**-1.4**
	comp=Z,0.4nm,0.9s,mb3.5,baz=305,slow=7.4,SNR=3.2						
ASAR	**Alice Springs**	**62.82**	**187**	P	**P**	**09 45 38.0**	**-0.9**
	comp=Z,0.7nm,0.7s,mb3.9,baz=6.2,slow=4.5,SNR=9.8						
FINES	**FINESS Array B**	**66.76**	**332**	P	**P**	**09 46 04.0**	**-0.2**
	comp=Z,1.5nm,0.8s,mb4.1,baz=46,slow=8.4,SNR=3.0						
NB2	**NORSAR Subarra**	**72.08**	**337**	P	**P**	**09 46 37.6**	**+0.5**
	comp=Z,4.7nm,1.0s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**72.08**	**337**	P	**P**	**09 46 36.8**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.5,baz=45,slow=5.7,SNR=2.7						
NVAR	**Mina Array Bea**	**74.07**	**53**	P	**P**	**09 46 50.0**	**+0.6**
	comp=Z,0.9nm,0.8s,mb3.7,baz=310,slow=9.3,SNR=4.1						
PDAR	**Pinedale Array**	**76.50**	**46**	P	**P**	**09 47 03.1**	**-0.1**
	comp=Z,0.3nm,0.8s,mb3.3,baz=349,slow=1.8,SNR=3.2						
TXAR	**Lajitas Array**	**89.17**	**52**	P	**P**	**09 48 09.4**	**+0.2**
	comp=Z,0.1nm,0.6s,mb3.3,baz=301,slow=7.3,SNR=2.4						
LPAZ	**La Paz**	**145.94**	**56**	PKPbc	PKPbc	09 54 53.6	+0.3
	comp=Z,1.1nm,0.8s,baz=303,slow=2.2,SNR=4.0						

NIED ***02*** *09:35:00, 39°.20N×140°.90E, h5km, Mw4.2 Best double couple: M0:2.61000×10^15 NP1:φs33.00000°, δ82.00000°, λ168.00000°. NP2:φs124.00000°, δ78.00000°, λ8.00000°.*
MOS ***02*** *09:35:14.3±0.8, 39°.13N×140°.81E, h33km, mb4.8/6, Error ellipse: s-maj=15.2km s-min=8.4km az=75.6*
NEIC ***02*** *09:35:15.7±0.4, 39°.07N×140°.83E, mb4.2/2, Error ellipse: s-maj=10.4km s-min=5.9km az=129.0*
NEIC Recorded [2 JMA] in Akita and Iwate; [1 JMA] in Miyagi.
IDC ***02*** *09:35:15.8±0.7, 39°.12N×140°.80E, h30km±4km, mb3.6/15, mb1 3.8/20, mb1mx3.7/28, mbtmp3.6/20, ML3.6/3, MS3.6/3, Ms1 3.7/3, ms1mx3.1/26, Error ellipse: s-maj=16.4km s-min=14.0km az=158.0*
ISCJB ***02*** *09:35:20.1±0.7, 39°.17N±0°.03×140°.86E±0°.05, h10km±4km, mb4.2/12, MS3.7/2, Error ellipse: s-maj=5.9km s-min=5.0km az=175.4*
JMA ***02*** *09:35:20.6, 39°.17N×140°.85E, h6km±1km, M4.4*
JMA Felt II J1.

ISC 02 09:35:20.9±0.7, 39°.15N±0°.03×140°.85E±0°.04, h4km±5km, n32, σ1°.12/33, mb4.2/12, MS3.7/2, 5C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.29**	**326**	*e*S	**Sg**	**09 35 31.0**	**+0.5**
JMK	**Ichinoseki**	**0.35**	**125**	*e*S	**Sg**	**09 35 32.1**	**-0.2**
JYK	**Kaneyama**	**0.45**	**239**	*e*S	**Sg**	**09 35 35.5**	**+0.2**
JOM	**Ohasama**	**0.47**	**47**	*e*S	**Sg**	**09 35 35.4**	**-0.7**
JIO	**Ouri**	**0.80**	**151**	*e*S	**Sg**	**09 35 46.5**	**-0.1**
JOU	**Okura**	**0.80**	**190**	S	**Sg**	**09 35 47.0**	**+0.4**
MJAR	**Matsushiro Arr**	**3.34**	**220**	Pg	**Pn**	**09 36 11.6**	**-2.2**
	5.6nm,0.3s,baz=28,slow=14,SNR=19						
MJAR				Lg		09 36 57.0	
	4.3nm,0.3s,baz=201,slow=29,SNR=4.1						
ASAJ	**Asahikawa**	**5.13**	**14**	Sn	**Sn**	**09 37 37.4**	**-0.7**
	0.5nm,0.3s,baz=0.0,slow=20,SNR=2.5						
ASAJ	**Asahikawa**	**5.13**	**14**		**Sn**	**09 37 37.4**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**7.92**	**10**	*e*P	**Pn**	**09 37 09.8**	**-6.9**
YSS	**Yuzh-Sakhalins**	**7.92**	**10**	*e*Pn	**Pn**	**09 37 10.7**	**-6.0**
	comp=N,8.7nm,0.7s						
HABR	**Khabarovsk**	**10.21**	**338**	P	**Pn**	**09 37 40.9**	**-7.2**
HABR				pmax	pmax		
	comp=E,33nm,1.6s						
HABR				pmax	pmax		
	comp=Z,57nm,1.6s						
HABR				pmax	pmax		
	comp=N,39nm,1.4s						
KSRS	**Korea Array**	**10.30**	**265**	Pn	**Pn**	**09 37 42.8**	**-6.6**
	comp=N,1.1nm,0.3s,baz=74,slow=14,SNR=20						
KSRS				Sn	**Sn**	**09 39 42.4**	**-2.8**
	comp=N,0.3nm,0.3s,baz=72,slow=23,SNR=4.1						
KSRS				LR	LR	09 41 33.8	
	comp=N,235nm,18.6s,baz=340,slow=37						
ZALV	**Zalesovo Beam**	**40.18**	**311**	pP	**P**	**09 42 57.5**	**-0.4**
	comp=N,2.9nm,0.8s,mb4.1,baz=90,slow=8.9,SNR=5.9						
CHG	**Chiang Mai**	**41.43**	**253**	P	**P**	**09 43 11.1**	**+2.5**
CHG	**Chiang Mai**	**41.43**	**253**	⇑P	**P**	**09 43 15.1**	**+6.5**
	comp=N,12nm,0.8s,mb4.6						
CMAR	**Chiang Mai Arr**	**41.65**	**253**	LR	LR	10 02 43.8	
	comp=N,36nm,19.4s,MS3.3,baz=200,slow=40						
MK31	**Makanchi Array**	**42.64**	**300**	*e**PP	**P**	**09 43 18.3**	**+0.1**
MKAR	**Makanchi Array**	**42.64**	**300**	pP	**P**	**09 43 17.8**	**-0.5**
	comp=N,2.4nm,0.8s,mb4.0,baz=88,slow=8.9,SNR=12						
MKAR	**Makanchi Array**	**42.64**	**300**	*e*P	**P**	**09 43 18.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**44.30**	**306**	pP	**P**	**09 43 31.8**	**+0.3**
	comp=Z,2.6nm,0.6s,mb4.2,baz=83,slow=8.3,SNR=11						
KURK	**Kurchatov**	**44.30**	**306**	*ce*P	**P**	**09 43 30.4**	**-1.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
BVAR	**Borovoye Array**	**48.84**	**311**	pP	**P**	**09 44 07.1**	**+0.1**
	comp=Z,1.0nm,0.6s,mb4.0,baz=68,slow=13,SNR=3.1						
AAK	**Ala-Archa**	**49.12**	**297**	⇑*e*P	**P**	**09 44 10.7**	**+1.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,2.5s,mb3.9						
EKS2	**Erkin-Say**	**49.61**	**297**	*e*pP	**P**	**09 44 14.0**	**+0.9**
ARU	**Arti**	**54.49**	**317**	*c i*P	**P**	**09 44 49.1**	**-0.2**
ARU				*e*		09 46 47.4	
ARU				S	**S**	**09 52 22.4**	**-6.1**
ARU				SS	SS	09 56 00.1	-10
ARU				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.6						
OBN	**Obninsk**	**66.14**	**322**	⇓*e*P	**P**	**09 46 07.

INK	**Inuvik**	**17.72**	**32**	P	**Pn**	**10 18 36.7**	**-0.7**
YKA	**Yellowknife Ar**	**23.77**	**54**	P	**P**	**10 19 42.0**	**0.0**
	0.3nm,0.3s,mb3.2,baz=271,slow=9.2,SNR=12						
PETK	**Petropavlovsk-**	**25.09**	**283**	P	**P**	**10 19 53.2**	**-0.9**
	2.4nm,0.8s,mb3.8,baz=72,slow=13,SNR=4.5						
NVAR	**Mina Array Bea**	**32.01**	**104**	P	**P**	**10 20 56.8**	**+1.0**
	0.5nm,0.9s,mb3.3,baz=302,slow=10,SNR=2.9						
NVAR				pP	pP	10 21 09.4	+0.4
	0.3nm,0.5s,baz=309,slow=9.2,SNR=3.1						
PDAR	**Pinedale Array**	**34.10**	**90**	pP	pP	10 21 27.1	-0.2
	0.4nm,0.6s,baz=321,slow=7.0,SNR=4.6						
TXAR	**Lajitas Array**	**46.90**	**100**	pP	pP	10 23 13.0	-0.5
	0.4nm,0.7s,baz=325,slow=6.0,SNR=5.8						
MKAR	**Makanchi Array**	**66.03**	**319**	P	**P**	**10 25 14.8**	**-0.8**
	0.2nm,0.4s,mb3.5,baz=41,slow=7.6,SNR=2.6						

*DDA **02** 10:34:29.4, 35°.96N×31°.10E, h7km±9km, Md3.1*
*ISCJB **02** 10:34:41.1±1.5, 36°.55N±0°.07×31°.29E±0°.05, h11km±7km, Error ellipse: s-maj=12.5km s-min=5.8km az=23.6*
*CSEM **02** 10:34:41.5±0.5, 36°.54N×31°.30E, h10km, MD2.7, Error ellipse: s-maj=11.9km s-min=5.7km az=37.0*
*ISK **02** 10:34:42.6, 36°.62N×31°.37E, h13km, MD2.7*
ISC 02 10:34:41.5±1.4, 36°.53N±0°.07×31°.29E±0°.06, h13km±6km, n13, σ0s74/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.88**	**109**	*i* P	**Pg**	**10 34 57.8**	**-0.7**
GAZI	**Gazipasa**	**0.88**	**109**	*i* P	**Pg**	**10 34 57.8**	**-0.7**
SUTC	**Sutluce-Ispart**	**0.97**	**346**	*e*PG	**Pg**	**10 35 00.6**	**+0.3**
SUTC				*e*SG	**Sg**	**10 35 13.6**	**+0.6**
SUTC	**Sutluce-Ispart**	**0.97**	**346**	*e*Pg	**Pg**	**10 35 00.6**	**+0.3**
SUTC				*e*Sg	**Sg**	**10 35 13.6**	**+0.6**
HDMB	**Hadim**	**1.06**	**65**	*e*PG	**Pg**	**10 35 01.6**	**-0.3**
HDMB				*e*SG	**Sg**	**10 35 15.4**	**-0.2**
HDMB	**Hadim**	**1.06**	**65**	*e*Pg	**Pg**	**10 35 01.6**	**-0.2**
HDMB				*e*Sg	**Sg**	**10 35 15.4**	**-0.2**
ERMK	**Ermenek**	**1.31**	**85**	*i* P	**Pn**	**10 35 01.0**	**-4.5**
ERMK				*i* S	**Sb**	**10 35 21.8**	**-1.0**
ERMK	**Ermenek**	**1.31**	**85**	*i* P	**Pn**	**10 35 01.0**	**-4.5**
ERMK				*i* S	**Sb**	**10 35 21.8**	**-0.9**
GOLH	**Golhisar**	**1.55**	**298**	*i* P	**Pn**	**10 35 02.4**	**-6.4**
GOLH				*i* S	**Sn**	**10 35 27.9**	**-0.9**
KONT	**Konya--Tatoy**	**1.65**	**31**	*e*PN	**Pn**	**10 35 10.4**	**+0.2**
KONT				*e*SN	**Sn**	**10 35 30.9**	**-0.3**
KONT	**Konya--Tatoy**	**1.65**	**31**	*e*Pn	**Pn**	**10 35 10.4**	**+0.2**
KONT				*e*Sn	**Sn**	**10 35 31.0**	**-0.3**
IKL	**Isikli**	**1.96**	**98**	*e*PN	**Pn**	**10 35 15.9**	**+1.5**
IKL				*e*SN	**Sn**	**10 35 39.6**	**+0.9**
IKL	**Isikli**	**1.96**	**98**	*e*Pn	**Pn**	**10 35 15.9**	**+1.6**
IKL				*e*Sn	**Sn**	**10 35 39.6**	**+0.8**

*ISK **02** 10:35:57.7, 40°.54N×39°.45E, h10km, MD2.6*
*CSEM **02** 10:35:57.7, 40°.54N×39°.45E, h10km, MD2.6, After ISK*
*ISCJB **02** 10:35:58.6±0.7, 40°.51N±0°.07×39°.40E±0°.07, h7km±6km, Error ellipse: s-maj=13.7km s-min=6.8km az=30.3*
ISC 02 10:35:58.9±0.7, 40°.49N±0°.08×39°.41E±0°.07, h7km±5km, n12, σ0s73/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMT	**Gumushane**	**0.07**	**121**	PG	**Pg**	**10 36 00.6**	**-0.1**
GUMT				SG	**Sg**	**10 36 01.8**	**0.0**
GUMT	**Gumushane**	**0.07**	**121**	*i* Pg	**Pg**	**10 36 00.6**	**0.0**
GUMT				*i* Sg	**Sg**	**10 36 01.8**	**0.0**
ESPY	**Espiye-Giresun**	**0.67**	**310**	*e*PG	**Pg**	**10 36 11.5**	**-0.3**
ESPY				*e*SG	**Sg**	**10 36 20.7**	**+0.3**
ESPY	**Espiye-Giresun**	**0.67**	**310**	*e*Pg	**Pg**	**10 36 11.5**	**-0.2**
ESPY				*e*Sg	**Sg**	**10 36 20.7**	**+0.3**
PTK	**Pertek**	**1.60**	**180**	*e*PN	**Pn**	**10 36 27.4**	**-0.2**
PTK	**Pertek**	**1.60**	**180**	*e*Pn	**Pn**	**10 36 27.5**	**-0.1**
DDEM	**Demirkent**	**1.83**	**77**	*i* P	**Pn**	**10 36 31.6**	**+0.9**
BCA	**Borcka**	**1.93**	**60**	*e*PN	**Pn**	**10 36 30.3**	**-1.8**
BCA	**Borcka**	**1.93**	**60**	*e*Pn	**Pn**	**10 36 30.3**	**-1.9**
SVSK	**Karacayir**	**1.93**	**253**	*e*PN	**Pn**	**10 36 32.2**	**0.0**
SVSK	**Karacayir**	**1.93**	**253**	*e*Pn	**Pn**	**10 36 32.2**	**0.0**
DAGI	**Agillar**	**1.99**	**72**	*i* P	**Pn**	**10 36 34.0**	**+0.9**

*DDA **02** 10:37:35.6, 36°.70N×36°.25E, h7km±1km, Md2.9*
CSEM 02 10:37:35.6±0.4, 36°.67N×36°.25E, h10km, MD2.9, Error ellipse: s-maj=12.2km s-min=8.0km az=134.0, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTY	**Hatay**	**0.55**	**189**	*e*PG	Pg	10 37 45.3	-1.0
HTY	**Hatay**	**0.55**	**189**	*e*Pg	Pg	10 37 45.3	-1.0
YAYL	**Yayladag**	**0.64**	**190**	*i* P	Pg	10 37 48.7	+0.7
YAYL				*i* S	Sg	10 37 58.6	+2.2
YAYL	**Yayladag**	**0.64**	**190**	*i* P	Pg	10 37 48.7	+0.7
YAYL				*i* S	Sg	10 37 58.6	+2.2
KUZU	**Kuzuini**	**0.67**	**81**	*i* P	Pg	10 37 48.1	-0.6
KUZU				*i* S	Sg	10 37 58.3	+0.9
KUZU	**Kuzuini**	**0.67**	**81**	*i* P	Pg	10 37 48.1	-0.5
KUZU				*i* S	Sg	10 37 58.3	+0.9
GAZ	**Gaziantep**	**0.92**	**57**	*e*PG	Pg	10 37 54.0	+0.6
GAZ				*e*SG	Sg	10 38 08.6	+3.3
GAZ	**Gaziantep**	**0.92**	**57**	*e*Pg	Pg	10 37 54.0	+0.6
GULE	**Gulek**	**1.33**	**298**	*i* P	Pn	10 38 00.6	+0.4
GULE	**Gulek**	**1.33**	**298**	*i* P	Pn	10 38 00.6	+0.4

*ATH **02** 10:45:39.3, 37°.99N×21°.09E, h19km, MD3.0/3*
*ISCJB **02** 10:45:41.9±0.9, 37°.85N±0°.05×21°.32E±0°.04, h10km, Error ellipse: s-maj=6.9km s-min=5.0km az=10.8*
*THE **02** 10:45:42.2, 37°.80N×21°.35E, h16km±1km, ML2.4/6, Error ellipse: s-maj=2.4km s-min=1.1km az=181.0*
*CSEM **02** 10:45:42.0±0.4, 37°.80N×21°.35E, h15km, ML2.4/6, Error ellipse: s-maj=7.6km s-min=5.6km az=2.0*
ISC 02 10:45:42.3±1.1, 37°.83N±0°.05×21°.32E±0°.05, h12km±22km, n21, σ0s94/37, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.26**	**26**	*e*PB	**Pg**	**10 45 46.9**	**-0.8**
RLS				*e*SB	**Sg**	**10 45 50.6**	**-0.7**
RLS	**Riolos of Patr**	**0.26**	**26**	*e*Pb	**Pg**	**10 45 46.9**	**-0.8**
RLS				*e*Sb	**Sg**	**10 45 50.6**	**-0.7**
KFL	**Anninata**	**0.51**	**304**	P	**Pg**	**10 45 52.8**	**+0.6**
KFL	**Anninata**	**0.51**	**304**	P	**Pg**	**10 45 52.8**	**+0.6**
LAKA	**Lakka**	**0.66**	**51**	P	**Pg**	**10 45 54.7**	**-0.5**
LAKA				S	**Sg**	**10 46 04.7**	**+0.8**
LAKA	**Lakka**	**0.66**	**51**	P	**Pg**	**10 45 54.7**	**-0.5**
LAKA				S	**Sg**	**10 46 04.7**	**+0.8**
VLS	**Valsamata**	**0.68**	**301**	*e*PB	**Pg**	**10 45 48.4**	**-7.0**
EFP	**Efpalio**	**0.76**	**37**	P	**Pg**	**10 45 57.4**	**+0.5**
EFP				S	**Sg**	**10 46 08.4**	**+1.6**
EFP	**Efpalio**	**0.76**	**37**	P	**Pg**	**10 45 57.4**	**+0.5**
EFP				S	**Sg**	**10 46 08.4**	**+1.6**
TRIZ	**Trizonia**	**0.80**	**48**	P	**Pg**	**10 45 56.8**	**-1.0**
TRIZ				S	**Sg**	**10 46 08.7**	**+0.4**
TRIZ	**Trizonia**	**0.80**	**48**	P	**Pg**	**10 45 56.8**	**-1.0**
TRIZ				S	**Sg**	**10 46 08.7**	**+0.4**
ITM	**Ithomi**	**0.81**	**143**	*e*PN	**Pg**	**10 45 59.2**	**+1.3**
ITM	**Ithomi**	**0.81**	**143**	*e*Pn	**Pg**	**10 45 59.2**	**+1.3**
GUR	**Goura**	**0.81**	**82**	P	**Pg**	**10 45 56.9**	**-1.1**
GUR				S	**Sg**	**10 46 09.7**	**+1.0**
GUR	**Goura**	**0.81**	**82**	P	**Pg**	**10 45 56.9**	**-1.1**
GUR				S	**Sg**	**10 46 09.7**	**+1.0**
KALE	**Kalithea**	**0.86**	**49**	P	**Pg**	**10 45 57.7**	**-1.1**
KALE				S	**Sg**	**10 46 11.1**	**+1.1**
KALE	**Kalithea**	**0.86**	**49**	P	**Pg**	**10 45 57.7**	**-1.1**
KALE				S	**Sg**	**10 46 11.1**	**+1.1**
LKD2	**Lefkada island**	**1.09**	**332**	P	**Pg**	**10 46 03.2**	**-0.1**
LKD2				S	**Sg**	**10 46 18.1**	**+0.5**
LKD2	**Lefkada island**	**1.09**	**332**	P	**Pg**	**10 46 03.2**	**-0.1**
LKD2				S	**Sg**	**10 46 18.1**	**+0.5**
DSF	**Desfina**	**1.12**	**58**	P	**Pg**	**10 46 02.2**	**-1.6**
DSF				S	**Sg**	**10 46 17.4**	**-0.9**
DSF	**Desfina**	**1.12**	**58**	P	**Pg**	**10 46 02.2**	**-1.6**
DSF				S	**Sg**	**10 46 17.4**	**-0.9**

ISC 02 10:48:55.7±0.9, 46°.30N±0°.03×13°.16E±0°.04, h14km±6km, n14, σ0s37/26, 4C-6D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOO	**Bordano**	**0.04**	**298**	⇓*e*Pg	**Pg**	**10 48 57.9**	**-0.3**
BAD	**Bernadia**	**0.09**	**136**	⇑*e*Pg	**Pg**	**10 48 58.4**	**-0.2**
BAD				*e*Sg	**Sg**	**10 49 00.3**	**-0.4**
VINO	**Villanova**	**0.10**	**116**	⇑*i*Pg	**Pg**	**10 48 58.4**	**-0.3**
VINO				*i* Sg	**Sg**	**10 49 00.4**	**-0.5**
MPRI	**Monte Prat**	**0.13**	**243**	⇓*e*Pg	**Pg**	**10 48 59.2**	**+0.1**
MPRI				*e*Sg	**Sg**	**10 49 01.8**	**+0.3**
FUSE	**Fusea**	**0.16**	**317**	⇓*e*Pg	**Pg**	**10 48 59.3**	**-0.2**
FUSE				*e*Sg	**Sg**	**10 49 02.5**	**+0.2**
COLI	**Coloredo**	**0.23**	**137**	⇓*e*Pg	**Pg**	**10 49 00.7**	**+0.1**
COLI				*e*Sg	**Sg**	**10 49 04.5**	**+0.5**
PLRO	**Paularo**	**0.25**	**359**	⇓*e*Pg	**Pg**	**10 49 00.9**	**-0.2**
PLRO				*e*Sg	**Sg**	**10 49 04.7**	**0.0**
ROBS	**Robic**	**0.25**	**103**	*i* Pg	**Pg**	**10 49 00.7**	**-0.4**
ROBS				*i* Sg	**Sg**	**10 49 04.8**	**+0.2**
ROBS							
	comp=Z,8.0nm,0.0s						
LSR	**Lussari**	**0.31**	**56**	⇓*e*Pg	**Pg**	**10 49 01.9**	**-0.2**
LSR				*e*Sg	**Sg**	**10 49 06.6**	**+0.2**
ACOM	**Acomizza, Ital**	**0.35**	**45**	⇑*e*Pg	**Pg**	**10 49 02.7**	**-0.1**
ACOM				*e*Sg	**Sg**	**10 49 07.9**	**+0.3**
DRE	**Drenchia**	**0.36**	**110**	⇑*e*Pg	**Pg**	**10 49 02.5**	**-0.4**
DRE				*e*Sg	**Sg**	**10 49 08.6**	**+0.7**
CADS	**Cadrg**	**0.41**	**100**	*i* Pg	**Pg**	**10 49 03.3**	**-0.5**
CADS				*i* Sg	**Sg**	**10 49 10.2**	**+0.8**
CADS							
	comp=Z,5.0nm,0.1s						
CIMO	**Cimolais**	**0.50**	**271**	*e*Pg	**Pg**	**10 49 05.3**	**-0.1**
CIMO				*e*Sg	**Sg**	**10 49 12.6**	**+0.5**
VOJS	**Vojsko**	**0.57**	**118**	*i* Pg	**Pg**	**10 49 06.4**	**-0.5**

*ISCJB **02** 10:52:10.2±0.5, 45°.20N±0°.07×143°.1E±0°.1, h308km±4km, mb3.1/6, Error ellipse: s-maj=13.0km s-min=9.8km az=138.0*
*JMA **02** 10:52:10.2±0.3, 45°.31N×143°.06E, h310km±3km, M3.5*
*NEIC **02** 10:52:10.2, 45°.31N×143°.06E, h310km, MG3.5(JMA), After JMA.*
*IDC **02** 10:52:11.1±1.2, 45°.41N×143°.09E, h299km±14km, mb2.8/7, mb1 3.1/7, mb1mx3.0/19, mbtmp2.8/7, Error ellipse: s-maj=26.5km s-min=18.6km az=140.0*
ISC 02 10:52:11.1±0.5, 45°.18N±0°.07×143°.1E±0°.1, h303km±4km, n29, σ1s05/38, mb3.1/6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.44**	**240**	P	**Pn**	**10 52 49.8**	**-0.1**
JWK2	**Keihoku**	**0.88**	**279**	P	**Pn**	**10 52 51.2**	**0.0**
JWK2				*e*S	**S**	**10 53 22.0**	**-1.0**
ASAJ	**Asahikawa**	**1.13**	**200**	P	**Pn**	**10 52 53.2**	**+0.8**
	9.1nm,0.3s,baz=26,slow=3.6,SNR=124						
ASAJ	**Asahikawa**	**1.13**	**200**	*e*Pn	**Pn**	**10 52 53.3**	**+0.9**
ASAJ	**Asahikawa**	**1.13**	**200**	P	**Pn**	**10 52 53.3**	**+0.9**
JMP	**Maruseppu**	**1.19**	**172**	P	**Pn**	**10 52 53.5**	**+0.8**
JSS	**Shosan**	**1.20**	**230**	P	**Pn**	**10 52 53.2**	**+0.5**
JRR	**Rishiri**	**1.28**	**269**	P	**Pn**	**10 52 52.8**	**-0.4**
JRR				*e*S	**S**	**10 53 26.0**	**-0.6**
JTKR	**Abashiri--Toko**	**1.33**	**155**	P	**Pn**	**10 52 54.6**	**+1.0**
JTKR				*e*S	**S**	**10 53 29.0**	**+1.6**
JKK2	**Kamakawa 2**	**1.33**	**192**	P	**Pn**	**10 52 54.4**	**+0.8**
JYG	**Yagishiri**	**1.42**	**239**	P	**Pn**	**10 52 54.1**	**+0.1**
JHR	**Hokuryu**	**1.75**	**215**	P	**Pn**	**10 52 57.1**	**+0.8**
JAR	**Ashorobuto**	**1.94**	**166**	P	**Pn**	**10 52 58.9**	**+1.2**
JAR				*e*S	**S**	**10 53 35.9**	**+1.1**
JFR	**Furan**	**2.05**	**191**	P	**Pn**	**10 52 59.8**	**+1.2**
JAK	**Akkeshi**	**2.46**	**152**	P	**Pn**	**10 53 02.3**	**+0.3**
JAK				*e*S	**S**	**10 53 41.6**	**-1.0**
JCH	**Churui**	**2.57**	**176**	P	**Pn**	**10 53 02.8**	**-0.2**
JCH				*e*S	**S**	**10 53 41.7**	**-2.8**
NEM2	**Nemuro 2**	**2.62**	**133**	P	**Pn**	**10 53 02.5**	**-0.9**
NEM2				*e*S	**S**	**10 53 42.3**	**-2.8**
JEW	**Eniwo**	**2.63**	**208**	P	**Pn**	**10 53 04.8**	**+1.2**
JNBK	**Urakawa-nobuka**	**2.91**	**185**	P	**Pn**	**10 53 06.2**	**0.0**
JNBK				*e*S	**S**	**10 53 49.2**	**-1.1**
JKB	**Kayabe**	**3.63**	**206**	P	**Pn**	**10 53 13.3**	**-0.2**
JKB				*e*S	**S**	**10 54 01.0**	**-2.4**
SONM	**Songino Array**	**25.27**	**289**	P	**P**	**10 57 09.9**	**-0.3**
	0.4nm,0.3s,mb3.3,baz=91,slow=8.9,SNR=3.6						
SONM	**Songino Array**	**25.27**	**289**	P	**P**	**10 57 09.9**	**-0.3**
MKAR	**Makanchi Array**	**41.37**	**295**	P	**P**	**10 59 27.1**	**-0.8**
	0.1nm,0.5s,baz=97,slow=6.7,SNR=2.7						
ILAR	**Eielson Array**	**42.06**	**37**	P	**P**	**10 59 31.6**	**-1.6**
	0.3nm,0.5s,mb2.8,baz=256,slow=5.8,SNR=6.8						
YKA	**Yellowknife Ar**	**56.20**	**33**	P	**P**	**11 01 18.7**	**-0.9**
	0.9nm,0.6s,mb3.4,baz=307,slow=7.1,SNR=13						
YKA	**Yellowknife Ar**	**56.20**	**33**	P	**P**	**11 01 18.7**	**-0.9**
ASAR	**Alice Springs**	**69.03**	**189**	P	**P**	**11 02 46.0**	**+1.7**
	0.2nm,0.5s,mb3.1,baz=6.7,slow=5.8,SNR=6.6						
PDAR	**Pinedale Array**	**71.14**	**48**	P	**P**	**11 02 56.9**	**0.0**
	0.3nm,0.6s,mb3.1,baz=313,slow=1.7,SNR=3.4						
TXAR	**Lajitas Array**	**84.19**	**54**	P	**P**	**11 04 09.2**	**+0.5**
	0.3nm,0.6s,mb3.3,baz=284,slow=4.2,SNR=6.1						

*NIED **02** 10:55:00, 43°.60N×147°.30E, h62km, Mw4.3 Best double couple: M0=2.68000×10^15 NP1:φs=59.00000°, δ70.00000°, λ141.00000°. NP2:φs=164.00000°, δ54.00000°, λ25.00000°.*
*ISCJB **02** 10:55:53.8±0.7, 43°.79N±0°.04×147°.33E±0°.06, h58km±5km, mb4.2/28, Error ellipse: s-maj=8.9km s-min=4.6km az=140.1*
*MOS **02** 10:55:53.3±1.3, 43°.79N×147°.35E, h54km, mb4.5/7, Error ellipse: s-maj=10.1km s-min=7.6km az=73.9*
MOS Felt (III-IV) at Malokurilskoe; (II) at Yuzhno-Kuril'sk.
*SKHL **02** 10:55:55.6±1.6, 43°.90N×147°.40E, h67km±9km, mb5.1/4*
*JMA **02** 10:55:55.1±0.2, 43°.64N×147°.25E, h39km, M4.7*
JMA Felt I J1.
*BJI **02** 10:55:55.0, 43°.43N×147°.49E, h91km, mB4.9/5, mb4.7/14*
*NEIC **02** 10:55:55.6±0.8, 43°.71N×147°.28E, h61km±7km, mb4.5/6, Error ellipse: s-maj=11.1km s-min=6.3km az=150.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
*IDC **02** 10:55:59.5±1.0, 44°.01N×147°.16E, h85km±6km, mb3.9/16, mb1 4.0/19, mb1mx4.0/25, mbtmp3.9/19, MS2.9/3, Ms1 2.9/3, ms1mx2.6/34, Error ellipse: s-maj=31.1km s-min=12.2km az=169.0*
ISC 02 10:55:54.8±0.6, 43°.78N±0°.04×147°.34E±0°.05, h49km±5km, h88km±.6km: pP-P, n86, σ0s98/100, mb4.2/28, 6C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.10**	**284**	⇑*i*PN	**Pn**	**10 56 13.9**	**+0.1**
YUK				*i* S	**Sn**	**10 56 27.3**	**-0.6**
YUK				pmax	pmax		
	comp=N,699nm,0.2s						
YUK				pmax	pmax		
	comp=E,682nm,0.2s						
YUK				pmax	pmax		
	comp=Z,6μm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				smax			
	comp=N,5μm,0.3s						
YUK				smax			
	comp=E,12μm,0.3s						
YUK				smax			
	comp=N,4μm,0.6s						
YUK				smax			
	comp=E,10μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.10**	**284**	⇓*i*P	**Pn**	**10 56 13.9**	**+0.1**
YUK				AMB	AMB	10 56 14.3	
	comp=E,8μm,1.0s						
YUK				AMB	AMB	10 56 14.3	
	comp=E,770nm,0.2s						
YUK				AMB	AMB	10 56 14.3	
	comp=E,4μm,0.3s						
YUK				AMB	AMB	10 56 14.3	
	comp=E,720nm,0.3s						
YUK				*i* S	**Sn**	**10 56 27.3**	**-0.6**
YUK				A		10 56 27.8	
	comp=E,14μm,1.0s						
YUK				A		10 56 27.8	
	comp=E,18μm,0.5s						
YUK				A		10 56 27.8	
	comp=E,6μm,0.3s						
YUK				A		10 56 27.8	
	comp=E,12μm,0.3s						
NEM2	**Nemuro 2**	**1.23**	**251**	P	**Pn**	**10 56 15.1**	**-0.5**
NEM2				*e*S	**Sn**	**10 56 29.5**	**-1.7**
KUR	**Kuril'sk**	**1.50**	**14**	⇑*i*PN	**Pn**	**10 56 18.5**	**-0.8**
KUR				*e*S	**Sn**	**10 56 37.0**	**-0.7**
KUR				pmax	pmax		
	comp=N,540nm,0.8s						
KUR				pmax	pmax		
	comp=E,320nm,0.8s						
KUR				pmax	pmax		
	comp=Z,750nm,0.8s						
KUR				pmax	pmax		
	comp=N,2μm,2.0s						
KUR				pmax	pmax		
	comp=E,2μm,2.0s						
KUR				pmax	pmax		
	comp=Z,3μm,2.0s						
KUR				smax			
	comp=N,8μm,0.5s						
KUR				smax			
	comp=E,4μm,0.5s						
KUR				smax			
	comp=N,11μm,1.0s						
KUR				smax			
	comp=E,5μm,1.0s						
KUR	**Kuril'sk**	**1.50**	**14**	⇑*i*P	**Pn**	**10 56 18.5**	**-0.8**
KUR				AMB	AMB	10 56 27.8	
	comp=E,540nm,0.8s						
KUR				AMB	AMB	10 56 27.8	
	comp=E,320nm,0.8s						
KUR				AMB	AMB	10 56 27.8	
	comp=E,750nm,0.8s						
KUR				AMB	AMB	10 56 32.0	
	comp=E,2μm,2.0s						
KUR				*e*S	**Sn**	**10 56 37.0**	**-0.7**
KUR				A		10 56 39.0	
	comp=E,8μm,0.5s						
KUR				A		10 56 39.0	
	comp=E,4μm,0.5s						
KUR				A		10 56 40.0	
	comp=E,10μm,0.8s						
KUR				A		10 56 40.0	
	comp=E,4μm,0.8s						
JRA	**Rausu**	**1.61**	**276**	P	**Pn**	**10 56 21.3**	**+0.5**
JRA				*e*S	**Sn**	**10 56 40.7**	**+0.3**
JNK	**Nakash**	**1.91**	**265**	P	**Pn**	**10 56 24.9**	**0.0**
JNK				*e*S	**Sn**	**10 56 46.5**	**-1.3**
JAK	**Akkeshi**	**2.08**	**249**	P	**Pn**	**10 56 26.8**	**-0.4**
JAK				*e*S	**Sn**	**10 56 50.3**	**-1.6**
JTKR	**Abashiri--Toko**	**2.49**	**276**	P	**Pn**	**10 56 33.9**	**+1.1**
JTKR				*e*S	**Sn**	**10 57 03.8**	**+1.9**
JAR	**Ashorobuto**	**2.64**	**261**	P	**Pn**	**10 56 35.5**	**+0.6**
JAR				*e*S	**Sn**	**10 57 05.9**	**+0.2**
JOB	**Onbets**	**2.71**	**252**	P	**Pn**	**10 56 36.0**	**+0.2**
JOB				*e*S	**Sn**	**10 57 06.4**	**-0.8**
JMP	**Maruseppu**	**2.89**	**276**	P	**Pn**	**10 56 39.6**	**+1.3**
JCH	**Churui**	**3.13**	**250**	P	**Pn**	**10 56 41.4**	**-0.3**
JKK2	**Kamakawa 2**	**3.33**	**273**	P	**Pn**	**10 56 45.9**	**+1.6**
ASAJ	**Asahikawa**	**3.44**	**277**	P	**Pn**	**10 56 46.9**	**+1.0**
	comp=E,8.7nm,0.3s,baz=92,slow=15,SNR=62						
ASAJ				S	**Sn**	**10 57 33.0**	**+7.6**
	comp=E,12nm,0.3s,baz=24,slow=18,SNR=5.1						
ASAJ				LR	LR	10 58 24.3	
	comp=E,219nm,21.2s,baz=58,slow=44						
ASAJ	**Asahikawa**	**3.44**	**277**	*e*Pn	**Pn**	**10 56 47.7**	**+1.9**
ASAJ				*e*Sn	**Sn**	**10 57 26.2**	**+0.9**
ASAJ	**Asahikawa**	**3.44**	**277**	P	**Pn**	**10 56 47.7**	**+1.8**
JFR	**Furan**	**3.51**	**262**	*e*S	**Sn**	**10 57 27.6**	**+0.5**
ERM	**Erimo**	**3.54**	**242**	*de*PN	**Pn**	**10 56 49.0**	**+1.7**
ERM	**Erimo**	**3.54**	**242**	*e*P	**Pn**	**10 56 49.0**	**+1.7**
JSE	**Soyaes**	**3.61**	**291**	P	**Pn**	**10 56 49.5**	**+1.4**
JNBK	**Urakawa-nobuka**	**3.68**	**248**	P	**Pn**	**10 56 48.7**	**-0.5**
YSS	**Yuzh-Sakhalins**	**4.53**	**316**	⇓*i*PN	**Pn**	**10 57 02.2**	**+1.5**
YSS				*e*S	**Sn**	**10 57 51.2**	**-0.9**
YSS				pmax	pmax		
	comp=N,50nm,0.6s						
YSS				pmax	pmax		
	comp=E,70nm,0.6s						
YSS				pmax	pmax		
	comp=Z,70nm,0.6s						
YSS				smax			
	comp=E,80nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.53**	**316**	*e*Pn	**Pn**	**10 57 02.2**	**+1.5**
YSS	**Yuzh-Sakhalins**	**4.53**	**316**	⇓*i*P	**Pn**	**10 57 02.2**	**+1.5**
YSS				AMB	AMB	10 57 03.0	
	comp=E,50nm,0.6s						
YSS				AMB	AMB	10 57 03.0	
	comp=E,70nm,0.6s						
YSS				AMB	AMB	10 57 03.0	
	comp=E,70nm,0.6s						
YSS				*e*S	**Sn**	**10 57 51.2**	**-0.9**
YSS				A		10 57 56.7	
	comp=E,80nm,1.0s						
UGL	**Uglegorsk**	**6.43**	**327**	*e*P	**Pn**	**10 57 31.0**	**+4.2**
SKR	**Severo-Kuril's**	**9.12**	**38**	*e*PN	**Pn**	**10 58 04.0**	**+0.3**
SKR				pmax	pmax		
	comp=Z,80nm,0.9s						
SKR	**Severo-Kuril's**	**9.12**	**38**	*e*P	**Pn**	**10 58 04.0**	**+0.3**
SKR				AMB	AMB	10 58 07.5	
	comp=Z,80nm,0.9s						
HABR	**Khabarovsk**	**9.73**	**303**	PN	**Pn**	**10 58 17.9**	**+5.8**
HABR				pmax	pmax		
	comp=E,20nm,1.5s						
HABR				pmax	pmax		
	comp=Z,32nm,2.0s						
HABR				pmax	pmax		
	comp=N,26nm,3.0s						
MJAR	**Matsushiro Arr**	**10.05**	**227**	P	**Pn**	**10 58 15.4**	**-1.0**
	comp=N,0.9nm,0.3s,baz=27,slow=13,SNR=7.9						
MJAR				S	**Sn**	**11 00 11.6**	**+3.9**

CMAR	Chiang Mai Arr	47.67	254	P	P	11 04 26.7 +0.3
	comp=Z,0.7nm,0.5s,mb4.0,baz=38,slow=7.7,SNR=6.3					
AAK	Ala-Archa	51.47	296	‖ eP	P	11 04 54.0 -1.0
AAK				pmax	pmax	
	comp=Z,2.0nm,1.0s,mb4.0					
YKA	Yellowknife Ar	55.70	34	P	P	11 05 25.7 +0.1
	comp=Z,1.5nm,0.6s,mb4.2,baz=296,slow=6.7,SNR=16					
YKA	Yellowknife Ar	55.70	34	P	P	11 05 25.7 +0.1
ABKAR	Akbulak array	57.15	309	eP	P	11 05 35.7 -0.4
	comp=Z,4.5nm,0.8s,mb4.5					
AKTK	Aktyubinsk	57.62	311	P	P	11 05 39.1 -0.3
AKTO	Aktyubinsk	57.62	311	P	P	11 05 39.1 -0.3
	comp=Z,1.7nm,0.6s,mb4.2,baz=45,slow=4.0,SNR=6.4					
ARCES	ARCESS Array B	59.27	340	P	P	11 05 49.9 -0.8
	comp=Z,12nm,1.1s,mb4.8,baz=19,slow=8.7,SNR=2.9					
FINES	FINESS Array B	64.91	333	P	P	11 06 27.2 -1.3
	comp=Z,2.3nm,0.5s,mb4.4,baz=44,slow=6.1,SNR=7.2					
NVAR	Mina Array Bea	67.44	58	P	P	11 06 46.4 +1.2
	comp=Z,0.9nm,0.7s,mb3.9,baz=292,slow=5.9,SNR=9.9					
NVAR				pP	pP	11 07 08.8 +10
	comp=Z,1.5nm,0.8s,baz=296,slow=6.7,SNR=6.1					
NVAR	Mina Array Bea	67.44	58	P	P	11 06 46.4 +1.2
NVAR				pP	pP	11 07 08.8 +10
NB2	NORSAR Subarra	69.62	339	P	P	11 06 57.7 -0.7
	comp=Z,2.0nm,0.6s,mb4.2,baz=32,slow=6.9					
NOA	NORSAR Array B	69.62	339	P	P	11 06 57.1 -1.3
	comp=Z,1.4nm,0.5s,mb4.2,baz=32,slow=6.2,SNR=6.7					
PDAR	Pinedale Array	69.78	50	P	P	11 06 60.0 +0.3
	comp=Z,0.6nm,0.6s,mb3.7,baz=306,slow=2.4,SNR=6.5					
PDAR				pP	pP	11 07 22.6 +8.9
	comp=Z,0.6nm,0.8s,baz=299,slow=3.1,SNR=3.2					
ZEI	Tsey	69.97	310	eP	P	11 07 00.6 -0.2
ZEI				pmax	pmax	
	comp=Z,5.0nm,0.4s,mb4.8					
KIEV	Kiev	71.65	324	eP	P	11 07 10.3 -0.6
KIEV				pmax	pmax	
	comp=Z,9.0nm,0.8s,mb4.8					
KIEV	Kiev	71.65	324	eP	P	11 07 10.3 -0.6
	comp=Z,9.2nm,0.8s,mb4.8					
CLL	Collm	77.35	333	i P	P	11 07 43.8 -0.1
CLL				pmax	pmax	
	comp=Z,7.0nm,0.9s,mb4.6					
CLL	Collm	77.35	333	i P	P	11 07 43.8 -0.1
	comp=Z,7.0nm,0.9s,mb4.6					
BRG	Berggiesshubel	77.40	332	eP	P	11 07 44.1 -0.2
	comp=Z,5.3nm,0.9s,mb4.5					
BRG	Berggiesshubel	77.40	332	eP	P	11 07 44.1 -0.1
BRG				pmax	pmax	
	comp=Z,3.0nm,0.9s,mb4.2					
SCHQ	Schefferville	77.55	19	P	P	11 07 44.4 -0.5
	comp=Z,1.9nm,0.6s,mb4.2,baz=306,slow=8.0,SNR=3.2					
SCHQ	Schefferville	77.55	19	P	P	11 07 44.4 -0.5
BRTR	Keskin Array B	77.62	314	P	P	11 07 45.8 +0.1
	comp=Z,0.8nm,0.7s,mb3.7,baz=118,slow=2.5,SNR=2.9					
TXAR	Lajitas Array	82.52	56	P	P	11 08 12.5 +0.2
	comp=Z,0.4nm,0.6s,mb3.6,baz=298,slow=4.0,SNR=9.2					
TXAR				pP	pP	11 08 35.3 +8.7
	comp=Z,1.4nm,0.8s,baz=300,slow=3.9,SNR=9.0					
PLCA	Paso Flores	151.95	97	PKPbc	PKPbc	11 15 44.5 +0.6
	comp=Z,1.8nm,0.8s,baz=207,slow=4.5,SNR=3.1					
PLCA	Paso Flores	151.95	97	P	PKPbc	11 15 44.5 +0.7
PLCA	Paso Flores	151.95	97	PKPbc	PKPbc	11 15 44.5 +0.6

*ISCJB **02** 11:00:03.5±0.3, 8.45S±0.03×120.44E±0.02, h212km±3km, mb5.0/90, Error ellipse: s-maj=4.9km s-min=3.7km az=14.8*
*NEIC **02** 11:00:03.3±1.1, 8.28S×120.57E, h190km±11km, mb5.1/22, Error ellipse: s-maj=10.9km s-min=5.3km az=51.0*
*DJA **02** 11:00:04, 8.59S×120.51E, h198km, Mw5.3/42*
*MOS **02** 11:00:04.0±1.1, 8.14S×120.63E, h213km, mb5.0/24, Error ellipse: s-maj=16.4km s-min=7.6km az=121.8*
*IDC **02** 11:00:04.5±1.0, 8.29S×120.60E, h203km±8km, mb4.6/15, mb1 4.6/17, mb1mx4.6/21, mbtmp4.6/17, MS2.9/1, Ms1 2.9/1, ms1mx2.3/29, Error ellipse: s-maj=14.0km s-min=6.5km az=58.0*

ISC 02 11:00:04.2±0.3, 8.46S±0.03×120.45E±0.02, h203km±3km, h199km±3.5km: pP-P, n303, σ1.9±25/251, mb5.0/90, 38C-32D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	1.21	187	P	Pn	11 00 34.0	-1.8
WSI				S	Sn	11 00 57.9	-2.6
MMRI	Maumere	1.77	96	P	Pn	11 00 39.2	-1.5
BKSI	Bulukumba	3.13	354	P	Pn	11 00 55.8	+0.1
BBSI	Bau Bau	3.62	36	P	Pn	11 01 01.4	-0.1
SPSI	Sidrap Palu	4.52	351	P	Pn	11 01 13.7	+1.0
KHKI	Kahang-Kahang	4.80	271	P	Pn	11 01 15.7	-0.4
KHKI				S	Sn	11 02 09.6	-3.2
KDI	Kendari	4.96	26	P	Pn	11 01 17.9	-0.4
	0.4nm2μm117nm,0.9s						
SRBI	Singaraja	5.20	274	P	Pn	11 01 21.4	+0.1
	2.7nm7μm593nm,0.7s						
SRBI				S	Sn	11 02 21.7	-0.4
	2.7nm7μm593nm,0.7s						
IGBI	Denpasar	5.26	266	P	Pn	11 01 20.6	-1.5
	10nm1μm,0.9s						
IGBI				S	Sn	11 02 20.2	-3.3
	10nm1μm,0.9s						
TTSI	Tana Toraja	5.42	353	P	Pn	11 01 26.0	+1.9
	0.7nm2μm212nm,1.0s						
JAGI	Jajag, Banyuwa	6.23	269	P	Pn	11 01 32.4	-2.2
	8.2nm481nm,0.8s						
JAGI				S	Sn	11 02 42.8	-3.4
	8.2nm481nm,0.8s						
KMMI	Kalianget	6.58	282	P	Pn	11 01 42.4	+3.3
	0.9nm248nm,0.8s						
KBKI	Kotabaru	6.67	320	P	Pn	11 01 42.1	+1.9
	0.5nm3μm60nm,1.0s						
GMJI	Gumukmas	6.94	271	P	Pn	11 01 41.9	-1.8
	2.3nm7μm263nm,1.0s						
LUWI	Luwuk	7.72	18	P	Pn	11 01 54.5	+0.5
	0.3nm1μm104nm,1.0s						
KRKI	Karangkates	7.92	272	P	Pn	11 01 59.3	+2.7
	6.2nm424nm,0.7s						
KRKI				S	Sn	11 03 22.2	-3.9
	6.2nm424nm,0.7s						
NLAI	Namlea	8.40	52	P	Pn	11 02 05.0	+2.2
	3μm236nm,1.1s						
PWJI	Pagerwojo	8.57	272	P	Pn	11 02 04.9	-0.1
	3μm283nm,0.6s						
SJI	Sawahan	8.63	274	P	Pn	11 02 07.2	+1.4
	6μm219nm,0.7s						
NGJI	Ngawi	8.97	276	P	Pn	11 02 12.2	+2.0
	128nm,0.9s						
MRSI	Marisa	9.00	10	P	Pn	11 02 11.1	+0.5
	521nm41nm,1.2s						
PCJI	Pacitan	9.18	271	P	Pn	11 02 12.1	-0.8
	424nm,0.8s						
UGM	Wanagama	9.85	272	P	Pn	11 02 20.9	-0.6
	258nm,1.2s						
SMRI	Semarang	10.02	277	P	Pn	11 02 25.0	+1.2
	476nm,0.9s						
BNDI	Bandanaira	10.17	68	P	Pn	11 02 30.5	+4.8
LBMI	Labuha	10.47	42	P	Pn	11 02 29.7	+0.1
	2μm259nm,0.9s						
BJII	Banjamegara	10.70	275	P	Pn	11 02 32.2	-0.4
	84nm,1.2s						
FITZ	Fitzroy Crossi	10.83	153	P	Pn	11 02 33.7	-0.5
	8.1nm,0.3s,baz=343,slow=7.5,SNR=158						
FITZ				S	Sn	11 04 28.6	-6.5
	11nm,0.3s,baz=323,slow=6.0,SNR=3.8						
FITZ				LR	LR	11 06 33.6	
	comp=Z,74nm,21.8s,baz=327,slow=36						
FITZ	Fitzroy Crossi	10.83	153	eP	Pn	11 02 32.7	-1.4
	217nm,0.7s						
FITZ				eS	Sn	11 04 17.9	-17
FITZ	Fitzroy Crossi	10.83	153	ePn	Pn	11 02 33.7	-0.4
	0.3nm,0.6s						
FITZ	Fitzroy Crossi	10.83	153	P	Pn	11 02 33.3	-0.8
	298nm,0.8s						
KNA	Kununurra	10.88	133	P	Pn	11 02 32.5	-2.4
	841nm,0.7s						
TNTI	Ternate	11.47	37	P	Pn	11 02 42.1	-0.3
	3μm408nm,1.1s						
STKI	Sintang	12.32	313	P	Pn	11 02 56.2	+3.0
	71nm,0.9s						
TLE	Tual	12.51	78	P	Pn	11 02 52.0	-3.6
	190nm,0.8s						
KAKA	Kakadu	12.52	111	eP	Pn	11 02 52.3	-3.3
	162nm,0.5s						
KAKA				eS	S	11 05 00.4	-15
KAKA	Kakadu	12.52	111	ePn	Pn	11 02 53.1	-2.5
	893nm,0.9s						
KAKA	Kakadu	12.52	111	P	Pn	11 02 53.0	-2.6
	4μm493nm,0.8s						
CISI	Cisompet, Garu	12.55	273	P	Pn	11 02 54.5	-1.6
	5μm305nm,0.7s						
MBWA	Marble Bar	12.64	183	ePn	Pn	11 02 57.3	+0.1
	28nm,0.4s						
LEM	Lembang	12.83	276	P	Pn	11 03 01.3	+1.7
	2μm225nm,0.7s						
TSM	Tawau	12.93	348	P	Pn	11 03 03.6	+2.7
SBUM	Sibu	13.60	323	P	Pn	11 03 11.4	+2.2
SBUM	Sibu	13.60	323	P	Pn	11 03 10.2	+1.0
	1μm120nm,0.9s						
CBJI	Citeko	13.64	278	P	Pn	11 03 12.0	+2.3
MYLDM	Lahad Datu	13.69	352	P	Pn	11 03 13.4	+3.1
MYLDM	Lahad Datu	13.69	352	P	Pn	11 03 13.4	+3.1
	2μm132nm,1.4s						
DBJI	Dramaga	13.72	277	P	Pn	11 03 11.0	+0.3
	202nm,0.7s						
SKJI	Sukabumi	13.85	275	P	Pn	11 03 14.0	+1.7
	4μm416nm,1.0s						
KSM	Kuching	14.13	314	P	Pn	11 03 17.9	+2.1
KSM	Kuching	14.13	314	ePn	Pn	11 03 17.3	+1.5
KSM	Kuching	14.13	314	P	Pn	11 03 17.1	+1.3
	1μm118nm,1.1s						
CGJI	Cibinong	14.75	276	P	Pn	11 03 23.8	+0.4
	3μm220nm,0.7s						
RBSI	Rajabasa	14.83	279	P	Pn	11 03 26.8	+2.4
	120nm,1.1s						
KKM	Kota Kinabalu	15.02	344	eP	Pn	11 03 28.7	+2.1
KKM	Kota Kinabalu	15.02	344	P	Pn	11 03 27.9	+1.3
	2μm271nm,0.9s						
KLI	Kotabumi	15.90	282	P	Pn	11 03 38.6	+1.3
	146nm,1.1s						
KLSI		16.06	282	P	P	11 03 39.8	+1.0
	2μm124nm,1.5s						
KASI	Kota Agung	16.10	279	P	P	11 03 40.2	+0.9
	4μm230nm,0.6s						
LWLI	Liwa	16.64	281	P	P	11 03 49.5	+4.4
MDSI	Maura Dua	16.64	283	P	P	11 03 46.3	+1.1
	799nm43nm,0.8s						
BAKI	Biak	17.18	66	P	P	11 03 50.5	-0.6
	6μm519nm,1.2s						
MNAI	Manna	17.86	282	P	P	11 03 58.8	+0.3
	311nm,0.9s						
KSI	Kapahiang	18.39	284	P	P	11 04 11.1	+6.8
MYKOM	Kota Tinggi	19.43	301	P	P	11 04 17.7	+2.1
	924nm86nm,1.0s						
MMPI	Merauke	19.71	91	P	P	11 04 18.5	0.0
	1μm,0.7s						
ASAR	Alice Springs	19.86	141	P	P	11 04 20.4	+0.3
	14nm,0.3s,baz=331,slow=14,SNR=595						
ASAR				S	S	11 07 51.0	-1.5
	2.0nm,0.3s,baz=309,slow=16,SNR=15						
ASAR				ScP	ScP	11 11 45.5	-0.2
	1.9nm,0.3s,baz=328,slow=2.2,SNR=8.5						
ASAR	Alice Springs	19.86	141	P	P	11 04 20.4	+0.4
ASAR				S	S	11 07 51.1	-1.4
SDSI	Sungai Dareh	20.37	291	P	P	11 04 25.7	+0.1
	86nm,0.9s						
BKNI	Bangkinang	21.23	293	P	P	11 04 36.0	+1.4
	5μm593nm,0.9s,mb6.1						
PDSI	Padang	21.28	290	P	P	11 04 33.1	-2.0
	2μm136nm,0.7s,mb5.6						
PPI	Padang Panjang	21.50	291	P	P	11 04 36.2	-1.3
	4μm55nm,0.8s,mb5.1						
TGY	Tagaytay City	22.42	1	P	P	11 04 45.4	-0.7
	274nm,0.4s,baz=134,slow=5.9,SNR=11						
SISI	Saibi	22.42	287	P	P	11 04 44.9	-1.4
	68nm,1.1s,mb5.1						
MNSI	Mandailing Nat	22.75	293	P	P	11 04 49.2	0.0
	181nm,0.8s,mb5.7						
COEN	Coen	22.94	106	eP	P	11 04 49.6	-1.4
	2μm,0.9s						
COEN	Coen	22.94	106	P	P	11 04 51.0	+0.1
	1μm,0.9s						
KLBR	Kellerberrin	23.15	186	eP	P	11 04 54.1	+1.4
	22nm,0.7s,mb4.8						
IPM	Ipoh	23.25	303	eP	P	11 04 54.4	+0.5
	96nm,0.7s,mb5.4						
IPM	Ipoh	23.25	303	P	P	11 04 54.7	+0.9
	1μm154nm,0.8s,mb5.6						
FORT	Forrest	23.31	163	eP	P	11 04 54.7	+0.5
	118nm,0.8s,mb5.5						
FORT	Forrest	23.31	163	eP	P	11 04 55.3	+1.1
	138nm,0.8s,mb5.5						
KULM	Kulim	24.01	304	eP	P	11 05 00.7	-0.1
	58nm,0.8s,mb5.3						
KULM	Kulim	24.01	304	P	P	11 05 01.0	+0.3
	673nm84nm,0.9s,mb5.4						
PSI	Prapat	24.21	297	P	P	11 05 02.8	+0.3
	23nm,0.6s,mb5.0,baz=115,slow=9.2,SNR=20						
NWAO	Narrogin (SRO)	24.53	187	P	P	11 05 06.6	+1.4
	14nm,0.6s,mb4.8,baz=13,slow=10,SNR=15						
SNG	Songkhla	25.15	308	P	P	11 05 12.0	+1.0
TPTI		25.97	296	P	P	11 05 19.1	+0.7
	1μm74nm,1.1s,mb5.2						
CTA	Charters Tower	27.50	118	P	P	11 05 32.2	+0.3
	28nm,0.9s,mb4.9,baz=287,slow=12,SNR=16						
CTA	Charters Tower	27.50	118	eP	P	11 05 32.4	+0.4
	24nm,1.0s,mb4.8						
CTAO	Charters Tower	27.50	118	eP	P	11 05 33.1	+1.1
CTAO				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.0						
CTAO	Charters Tower	27.50	118	eP	P	11 05 33.1	+1.1
	comp=Z,41nm,1.0s,mb5.0						
BBOO	Buckleboo	28.21	151	eP	P	11 05 39.1	+0.9
	comp=Z,289nm,0.8s,mb6.0						
STKA	Stephens Creek	30.48	143	P	P	11 05 59.5	+1.3
	comp=Z,160nm,0.5s,mb5.9,baz=318,slow=8.8,SNR=707						
STKA	Stephens Creek	30.48	143	eP	P	11 05 59.4	+1.2
	comp=Z,169nm,0.5s,mb5.9						
STKA	Stephens Creek	30.48	143	eP	P	11 05 59.6	+1.3
	comp=Z,35nm,0.6s,mb5.2						
NST	Nakhon Sawan	31.31	320	P	P	11 06 07.0	+1.4
BDT	Bhumibol Dam	33.20	320	‖ P	P	11 06 23.0	+0.9
	comp=Z,29nm,1.0s,mb4.8						
EIDS	Eidsvold	33.66	124	eP	P	11 06 26.8	+0.8
	comp=Z,11nm,0.8s,mb4.4						
CMAR	Chiang Mai Arr	34.15	322	P	P	11 06 30.6	+0.4
	comp=Z,17nm,0.8s,mb4.6,baz=149,slow=6.7,SNR=62						
CMAR				PcP	PcP	11 09 03.9	+1.2
	comp=Z,5.5nm,0.8s,baz=166,slow=3.4,SNR=11						
CMAR				ScP	ScP	11 12 29.1	+0.6
	comp=Z,9.4nm,1.0s,baz=171,slow=3.0,SNR=26						
CMAR	Chiang Mai Arr	34.15	322	P	P	11 06 30.7	+0.4
CMAR						11 09 03.9	
CHG	Chiang Mai	34.42	322	⇑ P	P	11 06 33.6	+1.0
CHTO	Chiang Mai	34.42	322	eP	P	11 06 33.8	+1.2
CHTO				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.8						
CHTO	Chiang Mai	34.42	322	eP	P	11 06 33.8	+1.2
	comp=Z,31nm,1.0s,mb4.8						
CHRT	Chiangrai	34.74	324	⇑ P	P	11 06 35.0	-0.3
	comp=Z,210nm,1.2s,mb5.5						
ARMA	Armidale	36.41	131	eP	P	11 06 51.9	+2.4
ARMA	Armidale	36.41	131	eP	P	11 06 52.3	+2.8
	comp=Z,46nm,0.8s,mb5.1						
TOO	Toolangi	36.78	146	eP	P	11 06 54.9	+2.4
GYA	Guiyang	37.20	339	P	P	11 06 58.0	+1.9
GYA				pP	pP	11 07 41.3	+2.7
GYA				sP	sP	11 08 02.5	+0.8
GYA				PP	PP	11 08 32.7	+7.1
GYA				PcP	PcP	11 09 15.0	+3.4
GYA				S	S	11 12 31.8	+4.0
GYA				ScP	ScP	11 12 41.6	+2.1
GYA				PcS	PcS	11 13 02.4	+2.0
GYA				sS	sS	11 13 43.5	+0.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,130nm,5.6s						
GYA				LR	LR		
	comp=N,520nm,17.7s						
GYA				LR	LR		
	comp=E,460nm,18.9s						
GYA				LR	LR		
	comp=Z,540nm,17.0s						
CAN	Canberra	37.37	140	eP	P	11 06 59.6	+2.1
CAN				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.6						
CAN	Canberra	37.37	140	eP	P	11 06 59.6	+2.1
	comp=Z,13nm,0.6s,mb4.7						
KMI	Kunming	37.58	333	P	P	11 07 01.7	+2.4
KMI				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
CNB	Canberra Magne	37.60	140	eP	P	11 07 01.1	+1.7
RIV	Riverview	37.90	136	eP	P	11 07 04.4	+2.4
HNR	Honiara	39.01	95	P	P	11 07 11.4	-0.1
	comp=Z,265nm,0.9s,mb5.7,baz=303,slow=2.9,SNR=5.8						
WHN	Wuhan	39.22	352	P	P	11 07 13.0	+0.1
WHN				ScP	ScP	11 12 47.0	-0.1
ENH	Enshi	39.92	345	eP	P	11 07 18.2	-0.6
	comp=Z,16nm,0.6s,mb4.6						
NJ2	Nanjing	40.31	358	eP	P	11 07 23.2	+1.3
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s,mb4.9						
CD2	Chengdu	42.29	338	eP	P	11 07 38.2	+0.2
CD2				pP	pP	11 08 19.4	-2.0
CD2				sP	sP	11 08 40.8	-3.5
CD2				PP	PP	11 09 22.4	+1.8
CD2				S	S	11 13 44.7	+1.3
CD2				sS	sS	11 14 57.0	-2.7
CD2				SS	SS	11 16 54.1	-6.5
CD2				pmax	pmax		
	comp=Z,150nm,0.6s,mb5.6						
CD2				pmax	pmax		
	comp=Z,160nm,6.2s						
PALK	Pallekele	42.60	290	P	P	11 07 39.5	-1.3
	comp=Z,7.5nm,1.5s						
SHL	Shillong	43.78	321	⇑ i P	P	11 07 48.0	-2.0
VIS	Vishakhapatnam	44.96	306	ePKP	P	11 07 59.1	-0.4
VIS				AMb	AMB	11 08 00.9	
	comp=Z,43nm,0.8s,mb4.8						
KSRS	Korea Array	46.20	8	P	P	11 08 07.0	-1.9
	comp=Z,2.1nm,0.8s,baz=190,slow=8.2,SNR=5.6						
TRD	Trivandrum	46.50	290	ePKP	P	11 08 11.0	-0.6
LZH	Lanzhou	46.99	342	eP	P	11 08 15.0	0.0
LZH				PcP	PcP	11 09 45.0	+1.0
LZH				ScP	ScP	11 13 20.0	+1.5
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.3						
LSA	Lhasa	47.27	325	eP	P	11 08 19.1	+1.8
LSA				pmax	pmax		
	comp=Z,103nm,1.0s,mb5.1						
LSA	Lhasa	47.27	325	eP	P	11 08 19.1	+1.7
	comp=Z,103nm,1.0s,mb5.1						
MJAR	Matsushiro Arr	47.77	19	P	P	11 08 17.7	-3.3
	comp=Z,1.7nm,0.8s,baz=201,slow=7.7,SNR=3.9						
MJAR				ScP	ScP	11 13 20.2	-1.6
	comp=Z,1.7nm,0.8s,baz=220,slow=6.9,SNR=4.9						
BJI	Beijing	48.42	356	P	P	11 08 24.1	-1.8
BJI				S	S	11 15 15.5	+4.7
BJI				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.2						
BJI				pmax	pmax		
	comp=Z,78nm,4.0s						
BJI				LR	LR		
	comp=N,74nm,15.2s						
BJI				LR	LR		
	comp=E,70nm,15.4s						
BJI				LR	LR		
	comp=Z,30nm,17.9s						
HYB	Hyderabad	48.74	302	i P	P	11 08 28.5	-0.3
JIRN	Jiri	48.88	318	eP	P	11 08 30.6	+0.9
	comp=Z,64nm,0.6s,mb5.1						
GUN	Gumba	49.25	318	eP	P	11 08 32.7	+0.2
	comp=Z,195nm,0.7s,mb5.6						
PKI	Pulchoki	49.33	318	eP	P	11 08 32.8	-0.3
	comp=Z,92nm,0.6s,mb5.3						
PKIN	Phulchoki	49.34	318	eP	P	11 08 33.6	+0.4
	comp=Z,85nm,0.6s,mb5.2						
DMN	Daman	49.56	318	eP	P	11 08 34.5	-0.3
	comp=Z,112nm,0.9s,mb5.2						
KKN	Kakani	49.56	318	eP	P	11 08 34.6	-0.3
	comp=Z,63nm,0.8s,mb5.0						
HHC	Hu-ho-hao-te	49.74	351	eP	P	11 08 40.0	+4.0
HHC				pP	pP	11 09 22.4	+1.7
HHC				sP	sP	11 09 43.0	-0.2
HHC				PcP	PcP	11 09 57.3	+3.5
HHC				PP	PP	11 10 38.9	+6.1
HHC				ScP	ScP	11 13 33.2	+3.1
HHC				S	S	11 15 33.7	+4.4
HHC				sS	sS	11 16 48.8	+1.2
HHC				ScS	ScS	11 18 08.5	+2.4
HHC				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.2						
HHC				pmax	pmax		
	comp=Z,100nm,6.2s						
HHC				LR	LR		
	comp=N,130nm,10.0s						
HHC				LR	LR		
	comp=E,170nm,7.8s						
HHC				LR	LR		
	comp=Z,150nm,9.1s						
GKN	Gorkha	50.13	318	eP	P	11 08 38.7	-0.4
	comp=Z,112nm,0.7s,mb5.3						
NGP	Nagpur	50.19	307	ePKP	P	11 08 38.7	-1.1
KOLN	Koldanda	50.68	317	eP	P	11 08 42.5	-0.7
	comp=Z,90nm,0.7s,mb5.3						
LATR	Latur	50.88	302	ePKP	P	11 08 43.5	-1.4
LATR				AMb	AMB	11 08 44.6	
	comp=Z,44nm,1.0s,mb4.8						
DANN	Dangsing	50.94	317	eP	P	11 08 44.9	-0.3
	comp=Z,252nm,0.6s,mb5.8						
GTA	Gaotai	51.33	340	eP	P	11 08 48.3	+0.4
GTA				pP	pP	11 09 34.6	+1.7
GTA				sP	sP	11 09 54.3	-1.0
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
AKL	Akola	51.60	305	ePKP	P	11 08 48.9	-1.3
AKL				AMb	AMB	11 08 49.9	
	comp=Z,51nm,1.2s,mb4.8						
CN2	Changchun	52.21	5	eP	P	11 08 58.5	+4.2
CN2				eS	S	11 16 07.4	+4.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
CN2				pmax	pmax		
	comp=Z,60nm,4.0s						
KAD	Karad	52.41	299	ePKP	P	11 08 55.1	-1.1
KAD				AMb	AMB	11 08 56.5	
	comp=Z,51nm,0.9s,mb5.0						
BHPL	Bhopal	52.57	308	ePKP	P	11 08 56.0	-1.3
POO	Poona	53.22	301	ePKP	P	11 09 01.1	-1.1
POO				AMb	AMB	11 09 02.4	
	comp=Z,41nm,0.8s,mb4.9						
MDJ	Mudanjiang	53.47	8	P	P	11 09 05.0	+1.5
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,58nm,5.6s						
JOSI	Joshimath	55.17	317	ePKP	P	11 09 15.9	-0.2
JOSI				A

WMQ pmax pmax
comp=Z,200nm,6.0s
WMQ LR LR
comp=N,48nm,18.0s
WMQ LR LR
comp=E,92nm,18.0s
WMQ LR LR
comp=Z,56nm,18.0s
ZAK Zakamensk 60.47 347 *e*P **P 11 09 51.3 -1.2**
TLY Talaya 61.62 348 *e*P **P 11 09 59.1 -1.1**
TLY pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
KSH Kashi 63.04 323 *e*P **P 11 10 09.3 -0.6**
KSH *e*PcP PcP 11 10 48.3 +2.5
KSH *e*pP pP 11 10 53.5 -3.2
KSH *e*sP sP 11 11 14.2 -4.5
KSH *e*PP PP 11 12 29.9 -1.4
KSH *e*ScP ScP 11 14 30.3 +1.7
KSH *e*PcS 11 14 50.1
KSH *e*S **S 11 18 16.1 -8.0**
KSH *e*ScS ScS 11 19 38.2 -4.5
KSH pmax pmax
comp=Z,100nm,0.9s,mb5.5
KSH LR LR
comp=N,740nm,12.1s
KSH LR LR
comp=E,410nm,11.4s
KSH LR LR
comp=Z,440nm,5.7s
MK31 Makanchi Array 64.64 332 *ce*P **P 11 10 19.3 -0.9**
MK31 pmax pmax
comp=Z,15nm,0.5s,mb4.9
MK31 Makanchi Array 64.64 332 *e*P **P 11 10 19.9 -0.3**
MKAR Makanchi Array 64.64 332 P **P 11 10 19.8 -0.4**
comp=Z,28nm,0.7s,mb5.0,baz=146,slow=7.0,SNR=140
MKAR Makanchi Array 64.64 332 *ce*P **P 11 10 19.7 -0.5**
MKAR pmax pmax
comp=Z,28nm,0.7s
MKAR Makanchi Array 64.64 332 P **P 11 10 19.8 -0.4**
KBL Kabul 64.73 314 *e*P **P 11 10 20.4 -0.6**
KBL pmax pmax
comp=Z,43nm,0.8s,mb5.1
KBL Kabul 64.73 314 *e*P **P 11 10 20.4 -0.6**
comp=Z,43nm,0.8s,mb5.1
KZA Kyzart 65.08 324 P **P 11 10 23.7 +0.6**
SNR=10
TKM2 Tokmak 2 65.42 325 P **P 11 10 25.5 +0.3**
SNR=8.7
TKM2 Tokmak 2 65.42 325 *e*P **P 11 10 25.4 +0.2**
TKM2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
TKM2 Tokmak 2 65.42 325 *e*P **P 11 10 25.4 +0.1**
comp=Z,5.3nm,0.6s,mb4.3
AAK Ala-Archa 65.87 324 P **P 11 10 28.7 +0.6**
SNR=10
AAK Ala-Archa 65.87 324 *c i*P **P 11 10 27.8 -0.3**
AAK pmax pmax
comp=Z,13nm,0.9s,mb4.6
AAK Ala-Archa 65.87 324 P **P 11 10 28.2 +0.1**
comp=Z,145nm,0.7s,mb5.7,SNR=7.4
AAK Ala-Archa 65.87 324 P **P 11 10 28.2 +0.1**
comp=Z,6.7nm,1.0s,mb4.2
AAK Ala-Archa 65.87 324 P **P 11 10 28.6 +0.6**
SNR=9.5
AML Almayashu 66.02 324 P **P 11 10 29.9 +0.8**
SNR=17
AML Almayashu 66.02 324 *e*P **P 11 10 29.7 +0.6**
comp=Z,43nm,0.9s,mb5.1
USP Ospenovka 66.26 325 P **P 11 10 30.2 -0.4**
SNR=19
EKS2 Erkin-Say 66.30 324 P **P 11 10 30.9 0.0**
SNR=24
EKS2 Erkin-Say 66.30 324 *e*P **P 11 10 30.6 -0.2**
comp=Z,27nm,1.1s,mb4.8
JMDO Jabal Madar 68.31 298 P **P 11 10 43.3 -0.6**
SNR=7.3
KKAR Karatay Array 68.48 323 *e*P **P 11 10 43.9 -0.6**
KKAR pmax pmax
comp=Z,14nm,1.0s,mb4.5
KKAR Karatay Array 68.48 323 *e*P **P 11 10 43.9 -0.7**
comp=Z,14nm,1.0s,mb4.5
SMDO Samad 68.58 299 P **P 11 10 45.2 -0.3**
SNR=8.0
PETK Petropavlovsk- 69.01 23 P **P 11 10 47.0 -0.6**
comp=Z,1.7nm,0.6s,baz=200,slow=3.9,SNR=5.4
ZALV Zalesovo Beam 69.06 338 P **P 11 10 46.4 -1.5**
comp=Z,45nm,0.6s,mb5.3,baz=138,slow=4.8,SNR=123
KURK Kurchatov 69.16 333 P **P 11 10 47.6 -1.0**
comp=Z,13nm,0.8s,mb4.6,baz=146,slow=5.5,SNR=44
KURK Kurchatov 69.16 333 *ce*P **P 11 10 47.9 -0.6**
KURK pmax pmax
comp=Z,47nm,1.2s,mb5.0
KURK Kurchatov 69.16 333 P **P 11 10 48.8 +0.3**
SNR=14
HOQ Hoqain 69.40 299 P **P 11 10 50.6 0.0**
SNR=5.5
NVS Novosibirsk 70.34 338 *e*P **P 11 10 52.5 -3.1**
NVS pmax pmax
comp=Z,21nm,1.3s,mb4.6
NVS pmax pmax
comp=N,11nm,1.4s
NVS pmax pmax
comp=E,10.0nm,1.3s
YAK Yakutsk 70.64 5 *e*P **P 11 10 54.9 -2.4**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.5
SBA Scott Base 73.28 171 *e*P **P 11 11 16.4 +3.5**
SBA pmax pmax
comp=Z,144nm,2.8s,mb5.1
SBA Scott Base 73.28 171 *e*P **P 11 11 16.4 +3.5**
comp=Z,144nm,2.8s,mb5.1
VOSK Vostochnaya 74.04 331 P **P 11 11 16.4 -1.2**
VOSK pmax pmax
comp=Z,30nm,0.8s,mb5.0
BRVK Borovoye 74.58 331 P **P 11 11 20.7 0.0**
comp=Z,142nm,1.0s,mb5.5,SNR=5.2
BRVK Borovoye 74.58 331 *c i*P **P 11 11 19.7 -1.0**
BRVK pmax pmax
comp=Z,35nm,1.1s,mb4.9
BRVK Borovoye 74.58 331 P **P 11 11 20.6 -0.1**
SNR=11
ZRNK Zerenda 75.13 331 *i*P **P 11 11 22.4 -1.5**
ZRNK pmax pmax
comp=Z,45nm,0.8s,mb5.2
SEY Seymchan 75.28 14 *ce*P **P 11 11 23.8 -0.7**
AB31 Akbulak array 77.96 324 *ce*P **P 11 11 38.6 -1.2**
AB31 pmax pmax
comp=Z,21nm,0.7s,mb4.9
ABKAR Akbulak array 77.96 324 *e*P **P 11 11 38.9 -0.9**
comp=Z,37nm,1.0s,mb5.0
SYO Syowa Base 78.88 201⇑ *e*P **P 11 11 45.6 +1.1**
QRN Al-Qurain 79.00 301 *e*P **P 11 11 45.3 -0.7**
QRN AMb AMB 11 11 46.3
comp=Z,96nm,0.9s,mb5.4
UMR Umm Al-Rimmam 79.39 302 *e*P **P 11 11 47.4 -0.8**
UMR AMb AMB 11 11 48.1
comp=Z,62nm,0.8s,mb5.3
NAY Al-Naaiem 79.71 302 *e*P **P 11 11 48.7 -1.1**
NAY AMb AMB 11 11 50.0
comp=Z,34nm,0.9s,mb5.0
MIB Mutribah 79.78 302 *e*P **P 11 11 49.4 -0.8**
MIB AMb AMB 11 11 51.0
comp=Z,80nm,0.8s,mb5.4
SVE Sverdlovsk 81.30 331⇑ *e*P **P 11 11 57.1 -0.5**
SVE pmax pmax
comp=Z,33nm,1.1s,mb4.9
QSPA South Pole Qui 81.53 180 *e*P **P 11 12 01.2 +2.6**
comp=Z,3.2nm,0.6s,mb4.1
ARU Arti 82.10 330 *d i*P **P 11 12 00.4 -1.4**
ARU 11 15 06.0
ARU S S 11 21 57.9 -1.3
ARU SS SS 11 27 17.1 -6.5
ARU pmax pmax
comp=Z,24nm,1.2s,mb4.7
KMBO Kilima Mbogo 83.11 270 P **P 11 12 09.6 +1.5**
comp=Z,7.3nm,0.8s,mb4.4,baz=0.1,slow=24,SNR=19
KMBO Kilima Mbogo 83.11 270 *e*P **P 11 12 09.7 +1.7**
DGRG David-gareji 84.54 313 P **P 11 12 14.8 +0.2**
MTA Mtatsminda 85.03 313 P **P 11 12 17.8 +0.7**
TBLG Delisi 85.08 313 P **P 11 12 17.9 +0.6**
TBLG Delisi 85.08 313 P **P 11 12 17.9 +0.5**
ZEI Tsey 85.96 314 *e*P **P 11 12 21.4 -0.2**
ZEI pmax pmax
comp=Z,39nm,1.3s,mb5.0
KIV Kislovodsk 87.12 315 *e*P **P 11 12 25.8 -1.4**
KIV *i* *PP pP 11 13 17.0 -0.1
KIV *e* 11 15 54.0
KIV pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
MALT Malatya 88.98 309 P **P 11 12 36.8 +0.6**
BOSA Boshof 90.53 241 P **P 11 12 45.4 +1.7**
comp=Z,11nm,0.7s,mb4.9,baz=135,slow=3.3,SNR=17
ANN Anapa 90.98 315 *e*P **P 11 12 42.0 -3.3**
BRTR Keskin Array B 92.90 310 P **P 11 12 53.0 -1.3**
comp=Z,4.4nm,0.8s,mb4.5,baz=125,slow=5.4,SNR=18
BRTR Keskin Array B 92.90 310 *ce*P **P 11 12 53.5 -0.8**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
OBN Obninsk 93.39 325⇓ *e*P **P 11 12 54.8 -1.4**
OBN pmax pmax
comp=Z,29nm,1.5s,mb5.1
AKASG Malin Array Be 97.26 320 P **P 11 13 11.9 -1.9**
comp=Z,3.5nm,0.8s,mb4.7,baz=82,slow=4.5,SNR=14
ILAR Eielson Array 98.73 26 P **P 11 13 19.2 -1.0**
comp=Z,0.4nm,1.1s,baz=256,slow=5.5,SNR=3.1
YKA Yellowknife Ar 113.11 24 PKiKP PKiKP 11 18 16.4 -0.6
comp=Z,0.4nm,0.5s,baz=305,slow=1.8,SNR=13
YKA SKP 11 21 32.2
comp=Z,0.7nm,0.7s,baz=296,slow=2.1,SNR=5.3
YKA Yellowknife Ar 113.11 24 PKPdf PKiKP 11 18 16.4 -0.6
YKA SKP 11 21 32.2
NVAR Mina Array Bea 119.57 51 PKP PKPdf 11 18 31.0 +0.8
comp=Z,0.4nm,0.7s,baz=13,slow=1.4,SNR=3.7
NVAR SKP 11 21 46.2
comp=Z,1.0nm,0.9s,baz=241,slow=1.5,SNR=5.3
TORD Torodi Ar. Bea 119.78 280 PKP PKPdf 11 18 31.5 +0.3
comp=Z,3.8nm,0.6s,baz=74,slow=1.8,SNR=22
PDAR Pinedale Array 124.54 43 PKP PKPdf 11 18 39.6 0.0
comp=Z,0.2nm,0.5s,baz=49,slow=3.0,SNR=2.7
PDAR PKKPbc PKKPbc 11 28 24.2 +0.2
comp=Z,0.8nm,0.7s,baz=111,slow=4.9,SNR=6.9
DBIC Dimbokro 125.79 272 PKP PKPdf 11 18 42.8 0.0
comp=Z,7.8nm,0.9s,baz=145,slow=7.0,SNR=4.6
DBIC SKPbc 11 21 44.6
comp=Z,9.3nm,1.2s,baz=124,slow=3.6,SNR=3.2
S24A Houchin Ranch, 129.62 47 ⇓SKP 11 21 52.6
baz=130
Y22A Socorro 129.62 53 ⇑SKP 11 21 52.7
baz=130
Q25A Bedland, Calha 129.79 46 ⇓SKP 11 21 52.8
baz=130
Z22A Elephant Butte 129.84 53 ⇑SKP 11 21 53.2
baz=130
W23A Werner Place, 129.84 51 ⇑SKP 11 21 53.3
baz=130,SNR=13
122A Conniff Cattle 129.99 54 ⇓SKP SKPbc 11 21 54.3 +0.4
baz=130
PLCA Paso Flores 130.01 169 SKPbc SKPbc 11 21 55.5 +1.8
comp=Z,11nm,0.9s,baz=201,slow=3.9,SNR=14
X23A Hourglass Bar 130.01 52 ⇑SKP SKPbc 11 21 53.2 -0.8
baz=130
U24A Moreno Valley 130.05 49 ⇓SKP SKPbc 11 21 54.7 +0.7
baz=130
222A Williams Famil 130.08 55 ⇓SKP SKPbc 11 21 54.0 -0.3
baz=130
S25A Robets Cordova 130.18 47 ⇑SKP SKPbc 11 21 54.3 -0.2
baz=130
V24A Rampart Ranch, 130.31 50 ⇑SKP SKPbc 11 21 55.3 +0.3
baz=130,SNR=8.3
Y23A Lovelace Mesa, 130.34 52 ⇑SKP SKPbc 11 21 55.0 -0.2
baz=130
W24A Lazy 6 Ranch, 130.39 50 ⇓SKP SKPbc 11 21 55.1 -0.3
baz=130,SNR=11
T25A Trinidad 130.41 48 ⇓SKP SKPbc 11 21 55.0 -0.3
baz=130
Z23A Rita Site, Whi 130.42 53 ⇑SKP SKPbc 11 21 55.2 -0.4
baz=130
123A Bell Site, Whi 130.60 54 ⇓SKP SKPbc 11 21 56.3 +0.1
baz=130
X24A Lazy VL Ranch, 130.60 51 ⇑SKP SKPbc 11 21 55.6 -0.6
baz=130
U25A Circle Dot Ran 130.70 49 ⇑SKP SKPbc 11 21 56.2 -0.2
baz=131,SNR=17
V25A Rancho No Teng 130.76 49 ⇓SKP SKPbc 11 21 56.5 -0.3
baz=131,SNR=14
Y24A Capitan 130.82 52 ⇑SKP SKPbc 11 21 56.1 -0.9
baz=131,SNR=11
Z24A Sheeppen Canyo 131.08 53 SKP SKPbc 11 21 57.5 -0.5
baz=131,SNR=27
W25A X Bar L Ranch, 131.11 50 ⇓SKP SKPbc 11 21 57.5 -0.6
baz=131,SNR=7.3
X25A Clemmons Ranch 131.21 51 ⇑SKP SKPbc 11 21 57.5 -0.9
baz=131,SNR=24
124A Stringfield Ra 131.22 54 ⇑SKP SKPbc 11 21 58.0 -0.5
baz=131,SNR=18
224A Cornudas Mount 131.37 54 ⇑SKP SKPbc 11 21 58.6 -0.5
baz=131
V26A Tequesquite Ra 131.40 49 ⇓SKP SKPbc 11 21 58.2 -0.9
baz=131,SNR=14
Y25A Mesa, Roswell 131.40 52 ⇑SKP SKPbc 11 21 58.5 -0.7
baz=131,SNR=31
324A Moseley Ranch, 131.60 55 ⇓SKP SKPbc 11 21 58.8 -1.1
baz=132
MNTX Cornudas Mount 131.60 55 ⇓SKP SKPbc 11 21 59.1 -0.8
baz=132
Z25A Roswell 131.61 53 ⇑SKP SKPbc 11 21 59.5 -0.4
baz=132,SNR=14
X26A CR and CF Fran 131.86 51 ⇓SKP SKPbc 11 21 59.6 -1.2
baz=132,SNR=11
125A Gardner Draw, 131.87 53 ⇓SKP SKPbc 11 21 59.8 -1.1
baz=132
225A Deer Hill, Car 131.92 54 ⇓SKP SKPbc 11 22 00.5 -0.6
baz=132,SNR=7.9
325A Bean Ranch, Si 132.04 55 ⇑SKP SKPbc 11 22 00.9 -0.6
baz=132
Y26A Elida 132.08 51 ⇓SKP SKPbc 11 22 00.9 -0.7
baz=132,SNR=5.3
Z26A Caprock 132.19 52 ⇓SKP SKPbc 11 22 00.7 -1.2
baz=132,SNR=13
425A Indio Mountain 132.21 56 ⇓SKP SKPbc 11 22 01.5 -0.6
baz=132
X27A F and S Farms, 132.36 50 ⇓SKP SKPbc 11 22 01.5 -1.0
baz=132,SNR=5.8
126A Clayton Basin, 132.38 53 ⇓SKP SKPbc 11 22 01.8 -0.9
baz=132
226A Malaga, Loving 132.51 54 ⇓SKP SKPbc 11 22 01.9 -1.2
baz=132
Y27A Causey 132.60 51 ⇑SKP SKPbc 11 22 02.4 -0.9
baz=132,SNR=11
Z27A Tatum 132.77 52 ⇓SKP SKPbc 11 22 03.1 -0.8
baz=133,SNR=11
326A Caldwell Ranch 132.86 55 ⇑SKP SKPbc 11 22 03.2 -1.2
baz=133
MSTX Muleshoe 132.87 51 ⇓SKP SKPbc 11 22 03.3 -1.0
baz=133,SNR=7.4
426A McDonald Obser 133.03 56 ⇑SKP SKPbc 11 22 04.1 -0.8
baz=133,SNR=17
526A Mary Lane Ranc 133.16 56 ⇓SKP SKPbc 11 22 04.8 -0.6
baz=133,SNR=19
626A Big Bend Ranch 133.28 57 ⇑SKP SKPbc 11 22 04.9 -0.9
baz=133,SNR=9.1
AMTX Amarillo 133.34 49 ⇑SKP SKPbc 11 22 05.3 -0.6
baz=133
SCHQ Schefferville 133.39 6 SKPbc SKPbc 11 22 03.7 -1.6
comp=Z,6.3nm,0.7s,baz=10,slow=0.5,SNR=7.2
427A Hayter Ranch, 133.48 55 ⇓SKP SKPbc 11 22 05.3 -1.2
baz=133,SNR=9.4
527A Woodward Ranch 133.53 56 ⇓SKP SKPbc 11 22 05.7 -1.0
baz=133,SNR=30
TXAR Lajitas Array 133.74 57 PKP PKPdf 11 18 59.0 +1.5
comp=Z,0.2nm,0.5s,baz=303,slow=2.1,SNR=4.9
TXAR SKPbc SKPbc 11 22 06.3 -1.1
comp=Z,6.4nm,1.1s,baz=270,slow=2.5,SNR=28
328A Wristen Ranch, 133.78 54 ⇓SKP SKPbc 11 22 06.6 -0.8
baz=134,SNR=6.7
627A Terlingua Ranc 133.93 57 ⇑SKP SKPbc 11 22 06.8 -1.2
baz=134,SNR=11
428A Kincaid Ranch, 134.10 55 ⇑SKP SKPbc 11 22 07.8 -0.6
baz=134,SNR=18
528A Cox Ranch, San 134.20 56 ⇑SKP SKPbc 11 22 07.7 -1.1
baz=134
628A Black Gap, Mar 134.34 57 ⇓SKP SKPbc 11 22 08.5 -0.8
baz=134,SNR=9.3
LRAL Lakeview Retre 144.76 42 *e*PKPdf PKPdf 11 19 16.3 -1.1
CPUP Villa Florida 145.35 184 PKPbc PKPbc 11 19 20.4 +1.5
comp=Z,1.9nm,0.5s,baz=163,slow=3.3,SNR=7.5
CPUP SKPbc SKPbc 11 22 38.8 -0.5
comp=Z,4.0nm,0.9s,baz=187,slow=0.3,SNR=5.0
LPAZ La Paz 153.99 161 PKPbc PKPbc 11 19 43.8 +3.2
comp=Z,1.8nm,0.5s,baz=286,slow=1.2,SNR=3.7
LPAZ PKPab PKPab 11 19 56.9 +2.4
comp=Z,4.1nm,0.7s,baz=201,slow=5.3,SNR=7.3
LPAZ La Paz 153.99 161 PKPbc PKPbc 11 19 43.8 +3.2
LPAZ PKPab PKPab 11 19 56.9 +2.4

ISCJB ***02*** *11:00:16.2±0.7, 10°.92N±0°.03×60°.75W±0°.05, h82km±6km, Error ellipse: s-maj=7.9km s-min=3.9km az=14.1*
FUNV ***02*** *11:00:17.5, 11°.03N×60°.64W, h36km, MW3.6*
TRN ***02*** *11:00:18.5, 10°.97N×60°.72W, h33km, MD3.3*
NEIC ***02*** *11:00:18.4, 10°.98N×60°.72W, h33km, MD3.3(TRN), After TRN.*

ISC 02 11:00:17.4±0.6, 10°.94N±0°.02×60°.71W±0°.04, h57km±8km, n49, σ1°.14/80, 5C-11D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOT	**Bacolet**	**0.23**	**359**	⇓*i*P	**Pn**	**11 00 25.2**	**-1.5**
BOT	**Bacolet**	**0.23**	**359**	⇓*i*P	**Pn**	**11 00 25.2**	**-1.5**
TPR	**Prospect**	**0.26**	**346**	⇓*i*P	**Pn**	**11 00 25.3**	**-1.5**
TPR	**Prospect**	**0.26**	**346**	⇓*i*P	**Pn**	**11 00 25.3**	**-1.5**
TOSP	**Speyside**	**0.40**	**26**	*e*P	**Pn**	**11 00 27.5**	**-0.6**
TOSP				*e*S	**Sn**	**11 00 33.3**	**-2.4**
TBH	**Brigand Hill**	**0.57**	**218**	⇓*i*P	**Pn**	**11 00 31.2**	**+1.3**
TBH				*e*S	**Sn**	**11 00 40.4**	**+1.5**
TBH	**Brigand Hill**	**0.57**	**218**	⇓*i*P	**Pn**	**11 00 31.2**	**+1.3**
TBH				*e*S	**Sn**	**11 00 40.4**	**+1.5**
TRN	**Trinidad (W)**	**0.73**	**247**	⇑*e*P	**Pn**	**11 00 32.1**	**+0.2**
TRN				*e*S	**Sn**	**11 00 42.5**	**0.0**
TRN	**Trinidad (W)**	**0.73**	**247**	⇑*e*P	**Pn**	**11 00 32.1**	**+0.2**
TRN				*e*S	**Sn**	**11 00 42.5**	**0.0**
TPP	**Pointe-a-Pierr**	**0.95**	**230**	*e*P	**Pn**	**11 00 35.5**	**+0.8**
TPP				*e*S	**Sn**	**11 00 49.5**	**+2.1**
TPP	**Pointe-a-Pierr**	**0.95**	**230**	*e*P	**Pn**	**11 00 35.5**	**+0.8**
TPP				*e*S	**Sn**	**11 00 49.5**	**+2.1**
TCE	**Chacachacare**	**1.05**	**257**	⇑*e*P	**Pn**	**11 00 37.7**	**+1.8**
TCE				*e*S	**Sn**	**11 00 50.4**	**+0.7**
TCE	**Chacachacare**	**1.05**	**257**	⇑*e*P	**Pn**	**11 00 37.7**	**+1.8**
TCE				*e*S	**Sn**	**11 00 50.4**	**+0.7**
GRGR	**Grenville**	**1.50**	**322**	*e*Pn	**Pn**	**11 00 42.3**	**+0.2**
GUIV	**Guiria**	**1.51**	**259**	*e*P	**Pn**	**11 00 42.7**	**+0.6**
GUIV				*e*S	**Sn**	**11 01 00.7**	**-0.1**
GRW	**Mount Saint Ca**	**1.53**	**323**	*e*P	**Pn**	**11 00 42.5**	**+0.1**
GRW				*e*S	**Sn**	**11 01 01.6**	**+0.3**
GRW	**Mount Saint Ca**	**1.53**	**323**	*e*P	**Pn**	**11 00 42.5**	**+0.1**
GRW				*e*S	**Sn**	**11 01 01.6**	**+0.3**
GRHS	**Sauteurs**	**1.57**	**325**	*e*P	**Pn**	**11 00 43.6**	**+0.6**
GRHS				*e*S	**Sn**	**11 01 03.0**	**+0.7**
GRHS	**Sauteurs**	**1.57**	**325**	*e*P	**Pn**	**11 00 43.6**	**+0.6**
GRHS				*e*S	**Sn**	**11 01 03.0**	**+0.7**
GRIC	**Isle de Caille**	**1.59**	**328**	*e*P	**Pn**	**11 00 43.8**	**+0.5**
GRIC				*e*S	**Sn**	**11 01 03.6**	**+0.9**
GRSS	**Sisters**	**1.61**	**327**	*e*P	**Pn**	**11 00 44.5**	**+0.9**
GRSS				*e*S	**Sn**	**11 01 03.3**	**0.0**
GRSS	**Sisters**	**1.61**	**327**	*e*P	**Pn**	**11 00 44.5**	**+0.9**
GRSS				*e*S	**Sn**	**11 01 03.3**	**0.0**
GRCU	**Cariacou**	**1.69**	**335**	⇓*i*P	**Pn**	**11 00 45.3**	**+0.7**
GRCU				*e*S	**Sn**	**11 01 05.0**	**-0.1**
GRCU	**Cariacou**	**1.69**	**335**	⇓*i*P	**Pn**	**11 00 45.3**	**+0.7**
GRCU				*e*S	**Sn**	**11 01 05.0**	**-0.1**
GUNV	**Guanoco**	**2.32**	**251**	*e*P	**Pn**	**11 00 54.3**	**+1.1**
GUNV				*e*S	**Sn**	**11 01 21.5**	**+0.8**
SVB	**Belmont**	**2.38**	**347**	*e*P	**Pn**	**11 00 54.4**	**+0.4**
SVB				*e*S	**Sn**	**11 01 23.7**	**+1.6**
SVB	**Belmont**	**2.38**	**347**	*e*P	**Pn**	**11 00 54.4**	**+0.4**
SVB				*e*S	**Sn**	**11 01 23.7**	**+1.6**
ITEV	**Isla Los Testi**	**2.41**	**280**	*e*P	**Pn**	**11 00 54.4**	**0.0**
ITEV				*e*S	**Sn**	**11 01 21.9**	**-0.8**
SSV	**Crater Summit**	**2.42**	**349**	⇓*e*P	**Pn**	**11 00 56.4**	**+1.8**
SSV				*e*S	**Sn**	**11 01 26.7**	**+3.6**
SSV	**Crater Summit**	**2.42**	**349**	⇓*e*P	**Pn**	**11 00 56.4**	**+1.8**
SSV				*e*S	**Sn**	**11 01 25.5**	**+2.4**
CRUV	**Carupano**	**2.49**	**264**	⇑*i*P	**Pn**	**11 00 55.0**	**-0.6**
CRUV				*e*S	**Sn**	**11 01 22.6**	**-2.2**
MCLT	**Moule a Chique**	**2.76**	**355**	*e*P	**Pn**	**11 00 59.7**	**+0.4**
MCLT				*e*S	**Sn**	**11 01 29.8**	**-1.6**
MCLT	**Moule a Chique**	**2.76**	**355**	*e*P	**Pn**	**11 00 59.7**	**+0.4**
MCLT				*e*S	**Sn**	**11 01 29.8**	**-1.6**
RIOV	**Rio Grande**	**3.05**	**201**	*e*P	**Pn**	**11 01 04.5**	**+1.3**
RIOV				*e*S	**Sn**	**11 01 37.3**	**-1.2**
ORIV	**Oritupano**	**3.24**	**235**	*e*P	**Pn**	**11 01 07.0**	**+1.2**
ORIV				*e*S	**Sn**	**11 01 43.1**	**0.0**
IBAV	**Isla La Blanqu**	**3.89**	**283**	*e*P	**Pn**	**11 01 14.3**	**-0.4**
GURV	**El Guri**	**3.93**	**217**	*e*P	**Pn**	**11 01 15.9**	**+0.6**
PCRV	**Puerto La Cruz**	**3.93**	**259**	*e*P	**Pn**	**11 01 14.6**	**-0.7**
CUPV	**Cœpira**	**5.07**	**261**	*e*P	**Pn**	**11 01 30.6**	**-0.3**
CUPV				*e*S	**Sn**	**11 02 25.0**	**-3.1**
LUEV	**Luepa**	**5.12**	**188**	*e*P	**Pn**	**11 01 31.2**	**-0.3**
ORCV	**Isla La Orchil**	**5.44**	**280**	*e*P	**Pn**	**11 01 35.4**	**-0.6**
BIRV	**Birongo**	**5.48**	**266**	*e*P	**Pn**	**11 01 36.7**	**+0.2**
MERV	**Las Mercedes**	**5.75**	**254**	*e*P	**Pn**	**11 01 39.8**	**-0.4**
CAOV	**Caicara del Or**	**6.60**	**238**	*e*P	**Pn**	**11 01 51.8**	**-0.1**
TURV	**Turiamo**	**7.02**	**267**	*e*P	**Pn**	**11 01 55.6**	**-2.0**
BAUV	**El Baul**	**7.49**	**255**	*e*P	**Pn**	**11 02 02.0**	**-2.0**
MAPV	**Macapo**	**7.70**	**262**	⇓*i*P	**Pn**	**11 02 04.8**	**-2.1**
TEPV	**Terepaima**	**8.39**	**264**	*e*P	**Pn**	**11 02 14.8**	**-1.7**
MONV	**Montecano**	**9.13**	**277**	*e*P	**Pn**	**11 02 24.7**	**-1.9**

BJI ***02*** *11:28:07.0, 6°.23S×145°.98E, h68km, mB5.0/26, mb4.8/45, Ms4.8/18, Ms7 4.4/17*
MOS ***02*** *11:28:08.9±0.9, 5°.75S×145°.60E, h52km, mb5.1/18, Error ellipse: s-maj=12.3km s-min=7.1km az=107.2*
ISCJB ***02*** *11:28:10.5±0.9, 5°.85S±0°.04×145°.68E±0°.03, h66km±8km, mb5.1/114, Error ellipse: s-maj=6.5km s-min=5.1km az=42.9*
IDC ***02*** *11:28:11.7±2.5, 5°.82S×145°.54E, h66km±23km, mb4.7/21, mb1 4.8/24, mb1mx4.8/25, mbtmp4.8/24, MS3.7/18, Ms1 3.7/18, ms1mx3.6/29, Error ellipse: s-maj=14.2km s-min=8.6km az=98.0*
NEIC ***02*** *11:28:12.1±0.9, 5°.81S×145°.63E, h68km±9km, mb5.0/38, Error ellipse: s-maj=6.7km s-min=5.3km az=62.0*
NEIC Felt at Goroka.
DJA ***02*** *11:28:13, 5°.99S×145°.96E, h98km, mb5.4/44*
GCMT ***02*** *11:28:16.9±0.3, 5°.84S×145°.52E, h75km±3km, MW4.9, Moment Tensor Solution. s29,c39; s55,c78; Moment tensor: Scale 10^{16}Nm; M_{rr}2.27±.19; $M_{\theta\theta}$-2.27±.15; $M_{\phi\phi}$0.01±.17; $M_{r\theta}$-1.68±.10; $M_{\theta\phi}$-1.19±.13; $M_{r\phi}$0.42±.13; Best double couple: $M_0$3.10000×10^{16} NP1:ϕ_s45.00000°, δ35.00000°, λ53.00000°. NP2:ϕ_s268.00000°, δ63.00000°, λ113.00000°. Principal axes: T 3.0300, Plg64.0000°, Azm217.0000°; N 0.1300, Plg20.0000°, Azm77.0000°; P -3.1500, Plg15.0000°, Azm341.0000°; Data Used: II IC G IU CN.*

ISC 02 11:28:12.9±0.7, 5°.89S±0°.03×145°.66E±0°.03, h73km±6km, h72km±5.1km: pP-P, n237, σ1°.02/223, mb5.1/112, 9C-6D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.80**	**157**	*e*Pn	**Pn**	**11 29 09.4**	**+0.4**
PMG				*e*Sn	**Sn**	**11 29 52.2**	**-0.3**
MMPI	**Merauke**	**5.82**	**244**	P	**Pn**	**11 29 37.4**	**+0.7**
	4.6nm515nm,0.5s						
COEN	**Coen**	**8.38**	**197**	*e*Pn	**Pn**	**11 30 13.2**	**+1.6**
	3μm,0.8s						
COEN				*e*Sn	**Sn**	**11 31 42.4**	**-2.3**
COEN	**Coen**	**8.38**	**197**	P	**Pn**	**11 30 13.1**	**+1.5**
	6.0nm2μm,0.9s						
BAKI	**Biak**	**10.61**	**296**	P	**Pn**	**11 30 42.0**	**-0.1**
	1μm171nm,0.9s						
TLE	**Tual**	**12.86**	**270**	P	**Pn**	**11 31 17.1**	**+4.3**
	84nm,1.6s						
CTA	**Charters Tower**	**14.12**	**178**	P	**Pn**	**11 31 29.9**	**+0.4**
	5.6nm,0.3s,baz=355,slow=14,SNR=28						
CTA				LR	LR	11 36 39.0	
	comp=Z,598nm,18.6s,baz=12,slow=36						
CTA	**Charters Tower**	**14.12**	**178**	*e*P	**Pn**	**11 31 29.5**	**0.0**
	15nm,0.4s						
CTAO	**Charters Tower**	**14.12**	**178**	*e*P	**Pn**	**11 31 29.7**	**+0.2**
HNR	**Honiara**	**14.59**	**105**	P	**Pn**	**11 31 36.8**	**+1.1**
	2.9nm,0.3s,baz=240,slow=16,SNR=2.9						
HNR				LR	LR	11 36 57.1	
	comp=Z,236nm,21.6s,baz=47,slow=36						
HNR	**Honiara**	**14.59**	**105**	*e*P	**Pn**	**11 31 36.4**	**+0.7**
HNR				pmax	pmax		
	comp=Z,213nm,0.8s						
HNR	**Honiara**	**14.59**	**105**	*e*Pn	**Pn**	**11 31 36.4**	**+0.7**
	comp=Z,213nm,0.8s						
HNR				LR	LR	11 36 57.1	
KAKA	**Kakadu**	**14.69**	**242**	*e*P	**Pn**	**11 31 35.6**	**-1.3**
	comp=Z,268nm,0.6s						
KAKA				*e*S	**Sn**	**11 34 07.7**	**-11**

KAKA	**Kakadu**	14.69 242	*e*Pn	Pn	11 31 35.5	-1.4
	comp=Z,848nm,0.7s					
KAKA	**Kakadu**	14.69 242	P	Pn	11 31 36.5	-0.4
	comp=Z,5µmcomp=Z,696nm,0.8s					
BNDI	**Bandanaira**	15.74 274	P	Pn	11 31 55.0	+4.6
	comp=Z,179nm,1.1s					
NLAI	**Namlea**	18.68 277	P	Pn	11 32 27.2	+0.6
	comp=Z,2µmcomp=Z,177nm,1.2s					
LBMI	**Labuha**	18.86 285	P	Pn	11 32 28.9	+0.3
	comp=Z,2µmcomp=Z,162nm,1.2s					
KNA	**Kununurra**	19.25 238	P	Pn	11 32 31.9	-1.4
	comp=Z,6µmcomp=Z,824nm,0.8s					
GUMO	**Guam**	19.37 358	P	Pn	11 32 29.8	-4.9
	comp=Z,2.2nm,0.3s,baz=150,slow=14,SNR=2.5					
GUMO		LR	LR		11 39 23.5	
	comp=Z,197nm,18.0s,baz=93,slow=35					
GUMO	**Guam**	19.37 358	*e*P	Pn	11 32 29.9	-4.8
GUMO		LR	LR		11 39 23.5	
TNTI	**Ternate**	19.42 289	P	Pn	11 32 35.3	-0.1
	comp=Z,2µmcomp=Z,130nm,1.0s					
EIDS	**Eidsvold**	20.05 166	*e*Pn	P	11 32 41.7	+1.4
	comp=Z,79nm,0.8s					
ASAR	**Alice Springs**	20.98 211	P	P	11 32 49.9	-0.4
	comp=Z,59nm,0.8s,baz=32,slow=13,SNR=391					
ASAR		S	S		11 36 38.6	-1.5
	comp=Z,7.4nm,0.9s,baz=39,slow=25,SNR=6.8					
MNI	**Manado**	22.03 289	P	P	11 33 02.4	+0.8
	comp=Z,4µmcomp=Z,339nm,0.5s,mb5.9					
SGSI	**Sangihe**	22.24 295	P	P	11 33 05.0	+1.2
	comp=Z,2µmcomp=Z,203nm,0.8s,mb5.5					
KMSI	**Cibinong**	22.57 286	P	P	11 33 08.3	+0.9
	comp=Z,4µmcomp=Z,549nm,1.0s,mb5.8					
BBSI	**Bau Bau**	22.98 270	P	P	11 33 13.0	+1.4
	comp=Z,1µmcomp=Z,107nm,1.1s,mb5.1					
FITZ	**Fitzroy Crossi**	23.00 236	P	P	11 33 09.8	-2.0
	comp=Z,56nm,0.7s,mb5.0,baz=67,slow=9.9,SNR=138					
FITZ		S	S		11 37 16.6	-0.2
	comp=Z,8.1nm,0.8s,baz=204,slow=10.0,SNR=2.5					
FITZ		LR	LR		11 43 37.2	
	comp=Z,244nm,20.2s,baz=54,slow=40					
FITZ	**Fitzroy Crossi**	23.00 236	*e*P	P	11 33 08.6	-3.2
	comp=Z,110nm,0.8s,mb5.2					
FITZ		*e*S	S		11 37 22.8	+6.0
FITZ	**Fitzroy Crossi**	23.00 236	P	P	11 33 09.8	-2.0
FITZ		S	S		11 37 16.6	-0.2
FITZ		LR	LR		11 43 37.2	
FITZ	**Fitzroy Crossi**	23.00 236	P	P	11 33 09.2	-2.6
	comp=Z,151nm,0.7s,mb5.4					
KDI	**Kendari**	23.03 274	P	P	11 33 12.2	0.0
	comp=Z,30nm,1.3s,mb4.5					
LUWI	**Luwuk**	23.34 281	P	P	11 33 16.4	+1.4
	comp=Z,3µmcomp=Z,203nm,1.3s,mb5.3					
MMRI	**Maumere**	23.39 262	P	P	11 33 14.9	-0.6
	comp=Z,2µmcomp=Z,255nm,1.1s,mb5.5					
DAV	**Davao City (W)**	23.81 302	LR	LR	11 43 46.2	
	comp=Z,77nm,19.0s,baz=90,slow=40					
DAV	**Davao City (W)**	23.81 302	*e*P	P	11 33 18.9	-0.5
MRSI	**Marisa**	24.51 284	P	P	11 33 25.7	0.0
	comp=Z,975nmcomp=Z,106nm,0.8s,mb5.3					
ARMA	**Armidale**	25.04 168	*e*P	P	11 33 30.8	+0.5
ARMA	**Armidale**	25.04 168	*e*P	P	11 33 31.4	+1.0
	comp=Z,38nm,0.8s,mb4.9					
WSI	**Waingapu**	25.40 260	P	P	11 33 33.4	-0.4
	comp=Z,1µm,1.1s,mb6.2					
BKSI	**Bulukumba**	25.42 270	P	P	11 33 32.3	-1.7
	comp=Z,460nmcomp=Z,32nm,1.3s,mb4.6					
DZM	**Mont Dzumac**	25.74 131	*e*P	P	11 33 37.2	+0.4
	comp=Z,36nm,1.1s,mb4.7					
SPSI	**Sidrap Palu**	25.86 273	P	P	11 33 47.9	+10
TTSI	**Tana Toraja**	25.91 275	P	P	11 33 40.2	+1.8
	comp=Z,44nm,1.4s,mb4.7					
STKA	**Stephens Creek**	26.13 188	P	P	11 33 40.0	-0.2
	comp=Z,114nm,0.9s,mb5.3,baz=358,slow=7.9,SNR=91					
STKA		LR	LR		11 46 00.9	
	comp=Z,143nm,19.4s,baz=11,slow=41					
STKA	**Stephens Creek**	26.13 188	*e*P	P	11 33 39.5	-0.7
	comp=Z,72nm,0.9s,mb5.1					
MYLDM	**Lahad Datu**	29.26 292	P	P	11 34 09.7	+1.3
MYLDM	**Lahad Datu**	29.26 292	P	P	11 34 09.7	+1.3
	comp=Z,57nm,0.9s,mb5.2					
MBWA	**Marble Bar**	29.35 236	*e*P	P	11 34 07.9	-1.2
	comp=Z,9.7nm,0.7s,mb4.5					
CAN	**Canberra**	29.45 174	*e*P	P	11 34 10.9	+1.1
CAN		pmax	pmax			
	comp=Z,14nm,0.7s,mb4.7					
CAN	**Canberra**	29.45 174	*e*P	P	11 34 10.9	+1.1
	comp=Z,14nm,0.7s,mb4.7					
CNB	**Canberra Magne**	29.48 174	*e*P	P	11 34 10.6	+0.5
TSM	**Tawau**	29.53 289	P	P	11 34 10.7	-0.1
FORT	**Forrest**	29.77 212	*e*P	P	11 34 11.9	-0.8
	comp=Z,29nm,0.6s,mb5.1					
FORT	**Forrest**	29.77 212	*e*P	P	11 34 12.3	-0.4
	comp=Z,40nm,0.8s,mb5.1					
SDKM	**Sandakan**	30.64 291	P	P	11 34 21.9	+1.3
TOO	**Toolangi**	31.53 180	*e*P	P	11 34 29.0	+0.8
TGY	**Tagaytay City**	31.56 309	P	P	11 34 27.8	-0.9
	comp=Z,94nm,0.3s,mb6.0,baz=180,slow=12,SNR=3.8					
KKM	**Kota Kinabalu**	31.69 291	P	P	11 34 31.2	+1.4
KKM	**Kota Kinabalu**	31.69 291	*e*P	P	11 34 29.2	-0.6
CBIJ	**Chichi jima**	32.96 354	P	P	11 34 38.1	-2.6
	comp=Z,48nm,0.6s,mb5.5,baz=258,slow=14,SNR=8.9					
SJI	**Sawahan**	33.69 265	P	P	11 34 46.4	-1.0
	comp=Z,5µmcomp=Z,46nm,0.3s,mb5.8					
BTM	**Bintulu**	33.76 285	P	P	11 34 48.5	+0.5
PCJI	**Pacitan**	34.29 264	P	P	11 34 51.8	-0.7
	comp=Z,108nm,1.4s,mb5.5					
SBUM	**Sibu**	34.40 283	P	P	11 34 54.0	+0.5
SBUM	**Sibu**	34.40 283	P	P	11 34 54.0	+0.5
	comp=Z,17nm,1.4s,mb4.7					
BJII	**Banjamegara**	35.73 266	P	P	11 35 04.8	-0.2
	comp=Z,35nm,1.6s,mb5.0					
KSM	**Kuching**	36.05 281	P	P	11 35 08.0	+0.3
KSM	**Kuching**	36.05 281	*e*P	P	11 35 08.0	+0.3
	comp=Z,24nm,1.0s,mb5.1					
KSM	**Kuching**	36.05 281	P	P	11 35 07.8	+0.1
	comp=Z,26nm,1.1s,mb5.1					
KLBR	**Kellerberrin**	36.55 222	*e*P	P	11 35 10.3	-1.4
	comp=Z,16nm,0.6s,mb5.1					
CISI	**Cisompet, Garu**	37.61 265	P	P	11 35 22.3	+1.4
	comp=Z,96nm,1.0s,mb5.6					
NWAO	**Narrogin (SRO)**	37.73 221	P	P	11 35 21.2	-0.4
	comp=Z,9.1nm,0.5s,mb4.8,baz=34,slow=7.7,SNR=13					
NWAO		LR	LR		11 52 18.3	
	comp=Z,198nm,19.9s,baz=296,slow=38					
NWAO	**Narrogin (SRO)**	37.73 221	*e*P	P	11 35 21.1	-0.5
NWAO		LR	LR		11 52 18.3	
LEM	**Lembang**	37.81 266	P	P	11 35 22.2	-0.4
	comp=Z,55nm,0.9s,mb5.4					
TPUB	**Ta-pu**	37.94 321	*e*P	P	11 35 22.2	-1.3
	comp=Z,12nm,0.8s,mb4.8					
TPI	**Tanjungpandan**	38.02 273	P	P	11 35 25.0	+0.6
	comp=Z,422nmcomp=Z,49nm,1.1s,mb5.3					
OUZ	**Omahuta**	38.91 142	*e*P	P	11 35 34.5	+2.9
	comp=Z,44nm,1.3s,mb5.1					
JHJ	**Hachijo jima 2**	39.19 352	P	P	11 35 30.9	-3.0
	comp=Z,45nm,0.6s,mb5.5,baz=197,slow=11,SNR=5.6					
KASI	**Kota Agung**	40.95 268	P	P	11 35 46.8	-2.0
	comp=Z,108nm,1.0s,mb5.6					
MDSI	**Maura Dua**	41.33 270	P	P	11 35 50.6	-1.3
	comp=Z,51nm,1.4s,mb5.2					
LWLI	**Liwa**	41.41 269	P	P	11 35 52.3	-0.3
	comp=Z,148nm,0.9s,mb5.8					
MYKOM	**Kota Tinggi**	42.44 279	P	P	11 36 00.7	-0.2
MYKOM	**Kota Tinggi**	42.44 279	P	P	11 36 01.3	+0.3
	comp=Z,586nmcomp=Z,54nm,0.8s,mb5.3					
MJAR	**Matsushiro Arr**	42.78 351	P	P	11 36 00.6	-2.7
	comp=Z,4.5nm,0.5s,mb4.4,baz=173,slow=7.8,SNR=17					
MJAR		LR	LR		11 53 48.0	
	comp=Z,48nm,18.2s,baz=90,slow=36					
MAJO	**Matsushiro**	42.78 351	*e*P	P	11 36 02.4	-0.9
MAJO		pmax	pmax			
	comp=Z,12nm,0.7s,mb4.7					
MAJO	**Matsushiro**	42.78 351	*e*P	P	11 36 02.4	-0.9
	comp=Z,12nm,0.7s,mb4.7					
MAT	**Matsushiro**	42.78 351	P	P	11 36 01.0	-2.3
MAT		S	S		11 42 22.0	-0.1
KGM	**Kluang**	43.00 279	P	P	11 36 06.1	+0.5
URZ	**Urewera**	43.04 143	P	P	11 36 06.6	+1.1
	comp=Z,22nm,0.7s,mb5.0,baz=26,slow=1.8,SNR=16					
URZ		LR	LR		11 51 22.6	
	comp=Z,207nm,18.4s,baz=313,slow=32					
URZ	**Urewera**	43.04 143	*e*P	P	11 36 06.7	+1.2
	comp=Z,15nm,0.5s,mb5.0					
URZ		LR	LR		11 51 22.6	
QIZ	**Qiongzhong**	43.10 306	P	P	11 36 05.8	-0.4
QIZ		S	S		11 42 27.3	0.0
QIZ		SS	SS		11 45 39.8	-2.7
QIZ		pmax	pmax			
	comp=Z,13nm,0.9s,mb4.7					
QIZ		pmax	pmax			
	comp=Z,53nm,5.1s					
QIZ	**Qiongzhong**	43.10 306	*e*P	P	11 36 06.4	+0.2
	comp=Z,9.1nm,0.7s,mb4.6					
RPZ	**Rata Peaks**	43.80 153	P	P	11 36 12.5	+1.1
	comp=Z,66nm,0.7s,mb5.5,baz=254,slow=1.8,SNR=32					
RPZ		LR	LR		11 52 33.5	
	comp=Z,158nm,21.2s,baz=102,slow=33					
RPZ	**Rata Peaks**	43.80 153	*e*P	P	11 36 12.8	+1.4
	comp=Z,56nm,0.6s,mb5.5					
RPZ		LR	LR		11 52 33.5	
KTGM	**Kuala Trenggan**	43.89 284	P	P	11 36 12.9	+0.3
KHZ	**Kahutara**	43.98 150	*e*P	P	11 36 13.6	+0.7
	comp=Z,12nm,0.5s,mb4.9					
KRJI	**Kerinci**	44.24 273	P	P	11 36 15.2	-0.3
	comp=Z,188nm,0.8s,mb5.9					
SDSI	**Sungai Dareh**	44.41 275	P	P	11 36 16.6	-0.2
	comp=Z,60nm,0.9s,mb5.3					
FRIM	**Kepong**	44.90 281	P	P	11 36 20.9	+0.1
PDSI	**Padang**	45.37 275	P	P	11 36 22.8	-1.7
	comp=Z,38nm,0.7s,mb5.3					
PPI	**Padang Panjang**	45.49 275	P	P	11 36 24.7	-0.7
	comp=Z,75nm,1.1s,mb5.3					
IPM	**Ipoh**	45.74 282	P	P	11 36 27.5	+0.1
IPM	**Ipoh**	45.74 282	*e*P	P	11 36 27.3	-0.1
	comp=Z,29nm,0.6s,mb5.2					
IPM	**Ipoh**	45.74 282	P	P	11 36 27.5	+0.1
	comp=Z,572nmcomp=Z,47nm,0.7s,mb5.3					
KSRS	**Korea Array**	46.19 340	P	P	11 36 29.3	-1.2
	comp=Z,7.3nm,0.9s,mb4.4,baz=160,slow=9.2,SNR=12					
KSRS		LR	LR		11 52 58.7	
	comp=Z,114nm,19.3s,baz=171,slow=32					
KULM	**Kulim**	46.29 283	P	P	11 36 31.6	-0.1
KULM	**Kulim**	46.29 283	*e*P	P	11 36 31.3	-0.4
	comp=Z,30nm,0.6s,mb5.2					
MNSI	**Mandailing Nat**	46.48 277	P	P	11 36 32.9	-0.3
	comp=Z,33nm,0.9s,mb5.0					
SISI	**Saibi**	46.68 274	P	P	11 36 34.2	-0.6
	comp=Z,43nm,1.7s,mb4.9					
WHN	**Wuhan**	47.02 322	P	P	11 36 40.0	+2.9
PSI	**Prapat**	47.46 279	P	P	11 36 39.8	-1.1
	comp=Z,19nm,0.9s,mb4.8,baz=144,slow=5.3,SNR=20					
GYA	**Guiyang**	49.61 312	P	P	11 36 57.8	+0.6
GYA		pP	pP		11 37 15.6	+0.1
GYA		PP	PP		11 38 53.4	+1.1
GYA		ScP	ScP		11 42 07.0	-0.1
GYA		S	S		11 44 01.2	+0.9
GYA		ScS	ScS		11 46 41.5	-0.9
GYA		SS	SS		11 47 30.0	-3.6
GYA		pmax	pmax			
	comp=Z,20nm,1.0s,mb5.0					
GYA		pmax	pmax			
	comp=Z,130nm,5.0s					
GYA		LR	LR			
	comp=N,560nm,16.7s					
GYA		LR	LR			
	comp=E,490nm,18.9s					
GYA		LR	LR			
	comp=Z,550nm,17.0s					
ASAJ	**Asahikawa**	49.85 357	*e*P	P	11 36 58.4	-0.2
	comp=Z,3.6nm,0.6s,mb4.5					
NST	**Nakhon Sawan**	49.91 296	⇓P	P	11 37 00.0	+0.4
	comp=Z,50nm,0.6s,mb5.6					
ENH	**Enshi**	49.94 318	*e*P	P	11 36 59.0	-0.5
	comp=Z,15nm,0.9s,mb4.9					
CHRT	**Chiangrai**	51.87 301	P	P	11 37 14.0	-0.3
	comp=Z,200nm,0.8s,mb6.2					
KMI	**Kunming**	51.88 308	P	P	11 37 15.4	+1.2
KMI		pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.9					
CM31	**Chiang Mai Arr**	52.02 299	*e*P	P	11 37 16.5	+1.1
	comp=Z,9.6nm,0.5s,mb5.1					
CMAR	**Chiang Mai Arr**	52.02 299	P	P	11 37 15.6	+0.1
	comp=Z,19nm,0.7s,mb5.3,baz=121,slow=5.8,SNR=66					
CMAR		LR	LR		11 58 40.7	
	comp=Z,54nm,18.0s,baz=270,slow=35					
CHG	**Chiang Mai**	52.16 299	P	P	11 37 17.1	+0.7
	comp=Z,21nm,0.9s,mb5.2					
CHTO	**Chiang Mai**	52.16 299	*e*P	P	11 37 17.2	+0.8
CHTO		pmax	pmax			
	comp=Z,20nm,1.0s,mb5.1					
CHTO	**Chiang Mai**	52.16 299	*e*P	P	11 37 17.2	+0.8
	comp=Z,20nm,1.0s,mb5.1					
MDJ	**Mudanjiang**	52.31 346	P	P	11 37 17.8	+0.7
MDJ		pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6					
MDJ		pmax	pmax			
	comp=Z,77nm,6.1s					
MDJ	**Mudanjiang**	52.31 346	*e*P	P	11 37 15.8	-1.2
YSS	**Yuzh-Sakhalins**	52.67 358	*e*P	P	11 37 18.7	-1.0
YSS		pmax	pmax			
	comp=Z,30nm,1.0s,mb5.3					
YSS	**Yuzh-Sakhalins**	52.67 358	*e*P	P	11 37 19.0	-0.7
	comp=Z,17nm,0.9s,mb5.1					
CN2	**Changchun**	52.73 342	*e*P	P	11 37 23.2	+3.1
CN2		*e*S	S		11 44 44.0	+1.4
CN2		pmax	pmax			
	comp=Z,10.0nm,0.4s,mb5.2					
CN2		pmax	pmax			
	comp=Z,100nm,6.0s					
XAN	**Xi'an**	52.76 321	P	P	11 37 20.1	-0.5
XAN		pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.5					
XAN		pmax	pmax			
	comp=Z,10.0nm,4.4s					
BJI	**Beijing**	53.16 332	P	P	11 37 24.4	+0.9
BJI		S	S		11 44 51.7	+2.9
BJI		SS	SS		11 48 31.9	+2.4
BJI		pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.9					
BJI		pmax	pmax			
	comp=Z,98nm,4.0s					
BJI		LR	LR			
	comp=N,74nm,25.5s					
BJI		LR	LR			
	comp=E,100nm,25.8s					
BJI		LR	LR			
	comp=Z,130nm,31.1s					
CD2	**Chengdu**	54.25 315	*e*P	P	11 37 31.6	+0.1
CD2		PP	PP		11 39 35.8	+1.7
CD2		S	S		11 45 03.7	0.0
CD2		SS	SS		11 48 44.5	-2.3
CD2		pmax	pmax			
	comp=Z,20nm,0.7s,mb5.3					
CD2		pmax	pmax			
	comp=Z,120nm,5.2s					
CD2		LR	LR			
	comp=N,110nm,14.2s					
CD2		LR	LR			
	comp=Z,120nm,14.5s					
HHC	**Hu-ho-hao-te**	56.05 329	*e*P	P	11 37 46.7	+2.4
HHC		pP	pP		11 38 02.6	-0.3
HHC		PcP	PcP		11 38 43.0	+1.2
HHC		PP	PP		11 39 52.7	+2.6
HHC		S	S		11 45 29.6	+2.2
HHC		SS	SS		11 49 18.9	+4.0
HHC		pmax	pmax			
	comp=Z,11nm,1.1s,mb4.8					
HHC		pmax	pmax			
	comp=Z,71nm,6.3s					
HHC		LR	LR			
	comp=N,100nm,9.8s					
HHC		LR	LR			
	comp=E,140nm,8.8s					
HHC		LR	LR			
	comp=Z,180nm,12.7s					
KLR	**Kul'dur**	56.22 349	*e*P	P	11 37 38.6	-6.8
LZH	**Lanzhou**	57.26 320	*e*P	P	11 37 54.5	+1.5
LZH		S	S		11 45 44.1	+0.4
LZH		pmax	pmax			
	comp=Z,28nm,1.5s,mb5.1					
LZH		pmax	pmax			
	comp=Z,86nm,5.1s					
PETK	**Petropavlovsk-**	59.65 8	P	P	11 38 09.2	-0.1
	comp=Z,7.5nm,0.8s,mb4.8,baz=161,slow=5.9,SNR=8.7					
PETK		LR	LR		11 59 18.2	
	comp=Z,43nm,21.9s,baz=181,slow=31					
GTA	**Gaotai**	61.81 321	*e*P	P	11 38 24.8	+0.5
GTA		pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.7					
LSA	**Lhasa**	63.11 307	P	P	11 38 34.6	+1.4
LSA		pmax	pmax			
	comp=Z,20nm,0.9s,mb5.0					
LSA	**Lhasa**	63.11 307	*e*P	P	11 38 34.5	+1.3
LSA		pmax	pmax			
	comp=Z,15nm,0.7s,mb5.0					
LSA	**Lhasa**	63.11 307	*e*P	P	11 38 34.5	+1.3
	comp=Z,15nm,0.7s,mb5.0					
ULN	**Ulaanbaatar**	63.38 332	*e*P	P	11 38 35.3	+0.8
ULN		pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.5					
ULN	**Ulaanbaatar**	63.38 332	*e*P	P	11 38 35.3	+0.7
	comp=Z,4.6nm,0.8s,mb4.5					
SONM	**Songino Array**	63.66 332	P	P	11 38 36.3	-0.1
	comp=Z,1.5nm,0.5s,mb4.0,baz=160,slow=5.6,SNR=8.4					
SONM		LR	LR		12 04 31.3	
	comp=Z,50nm,19.2s,baz=181,slow=34					
SONM		PKP2bc			12 07 39.4	
	comp=Z,3.4nm,0.8s,baz=308,slow=2.5,SNR=12					
SONM	**Songino Array**	63.66 332	P	P	11 38 36.3	-0.1
SONM		LR	LR		12 04 31.3	
SONM		⇑*e*			12 07 39.4	
PPT	**Papeete**	64.21 107	LR	LR	12 03 01.5	
	comp=Z,242nm,21.8s,baz=243,slow=32					
CASY	**Casey**	65.01 195	*e*P	P	11 38 45.1	+0.2
	comp=Z,35nm,0.8s,mb5.2					
PALK	**Pallekele**	66.11 281	*i* P	P	11 38 53.5	+0.5
GUN	**Gumba**	66.69 304	*e*P	P	11 38 57.2	+0.7
	comp=Z,92nm,0.7s,mb5.7					
ZAK	**Zakamensk**	66.91 332	*e*P	P	11 38 56.8	-0.6
ZAK		pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.5					
PKI	**Pulchoki**	66.96 303	*e*P	P	11 38 58.8	+0.6
	comp=Z,78nm,1.1s,mb5.4					
KKN	**Kakani**	67.15 303	*e*P	P	11 38 59.8	+0.4
	comp=Z,72nm,0.8s,mb5.5					
DMN	**Daman**	67.23 303	*e*P	P	11 39 00.7	+0.8
	comp=Z,120nm,1.0s,mb5.7					
TLY	**Talaya**	67.64 333	*e*P	pP	11 39 20.1	-1.0
TLY		pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.5					
GKN	**Gorkha**	67.75 303	*e*P	P	11 39 03.4	+0.2
	comp=Z,66nm,0.9s,mb5.6					
KOLN	**Koldanda**	68.54 303	*e*P	P	11 39 08.5	+0.4
	comp=Z,66nm,0.8s,mb5.5					
DANN	**Dangsing**	68.60 303	*e*P	P	11 39 08.7	+0.2
	comp=Z,62nm,0.8s,mb5.5					
SEY	**Seymchan**	68.82 3⇑	*e*P	P	11 39 09.6	+0.5
MOY	**Mondy**	68.84 332	*e*P	P	11 39 10.4	+0.9
HYB	**Hyderabad**	70.17 291	*i* P	P	11 39 17.5	-0.9
MIR	**Mirnyy**	70.43 200	⇑*i* P	P	11 39 19.0	0.0
MIR		pmax	pmax			
	comp=Z,74nm,1.0s,mb5.5					
WMQ	**Urumqi**	71.84 320	P	P	11 39 29.0	+1.0
WMQ		PP	PP		11 42 11.0	+2.5
WMQ		S	S		11 48 43.0	0.0
WMQ		ScS	ScS		11 49 26.0	-1.3
WMQ		SS	SS		11 53 22.0	+1.2
WMQ		pmax	pmax			
	comp=Z,16nm,1.0s,mb4.8					
WMQ		pmax	pmax			
	comp=Z,160nm,7.0s					
WMQ		LR	LR			
	comp=N,50nm,20.0s					
WMQ		LR	LR			
	comp=E,68nm,20.0s					
WMQ		LR	LR			
	comp=Z,51nm,20.0s					
SBA	**Scott Base**	72.77 175	*e*P	P	11 39 34.5	+1.6
MK31	**Makanchi Array**	76.56 321	*e*P	P	11 39 55.5	+0.1
MKAR	**Makanchi Array**	76.56 321	P	P	11 39 55.2	-0.2
	comp=Z,6.0nm,0.8s,mb4.4,baz=99,slow=8.3,SNR=29					
MKAR	**Makanchi Array**	76.56 321	*i* P	P	11 39 55.4	0.0
MKAR		pmax	pmax			
	comp=Z,6.0nm,0.8s					
ZALV	**Zalesovo Beam**	78.21 328	P	P	11 40 03.2	-1.2
	comp=Z,2.0nm,0.3s,mb4.3,baz=104,slow=6.3,SNR=7.4					
ZALV		LR	LR		12 12 43.4	
	comp=Z,65nm,20.2s,baz=245,slow=34					
ZALV	**Zalesovo Beam**	78.21 328	P	P	11 40 03.2	-1.2
ZALV		LR	LR		12 12 43.4	
NVS	**Novosibirsk**	79.44 329	*e*P	P	11 40 08.7	-2.4
NVS		*e*	pP		11 40 30.1	-0.7
NVS		pmax	pmax			
	comp=Z,6.0nm,1.3s,mb4.3					
NVS		pmax	pmax			
	comp=E,5.0nm,1.5s					
KZA	**Kyzart**	79.61 315	P	P	11 40 13.9	+1.6
	SNR=29					
TKM2	**Tokmak 2**	79.63 315	P	P	11 40 13.2	+0.8
	SNR=5.3					
TKM2	**Tokmak 2**	79.63 315	*e*P	P	11 40 13.1	+0.7
TKM2		pmax	pmax			
	comp=Z,15nm,0.9s,mb4.8					
TKM2	**Tokmak 2**	79.63 315	*e*P	P	11 40 13.1	+0.7
	comp=Z,15nm,0.9s,mb4.8					
UCH	**Uchtor**	80.18 314	*e*P	P	11 40 16.9	+1.5
	comp=Z,8.8nm,1.2s,mb4.5					
AAK	**Ala-Archa**	80.31 315	*c e*P	P	11 40 16.3	+0.2
AAK		pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.4					
KURK	**Kurchatov**	80.33 324	P	P	11 40 15.8	-0.2
	comp=Z,55nm,0.8s,mb5.4,SNR=7.6					
KURK	**Kurchatov**	80.33 324	*c i* P	P	11 40 14.6	-1.4
KURK		pmax	pmax			
	comp=Z,14nm,1.2s,mb4.7					
USP	**Ospenovka**	80.50 315	P	P	11 40 17.3	+0.2
	SNR=7.2					
AML	**Almayashu**	80.73 314	P	P	11 40 20.0	+1.6
	SNR=5.3					
AML	**Almayashu**	80.73 314	*e*P	P	11 40 19.4	+1.0
	comp=Z,34nm,1.0s,mb5.1					
EKS2	**Erkin-Say**	80.83 315	P	P	11 40 19.9	+1.0
	SNR=22					
EKS2	**Erkin-Say**	80.83 315	*e*P	P	11 40 19.2	+0.3
	comp=Z,17nm,0.9s,mb4.9					
TTA	**Tatalina**	81.47 23	*e*P	P	11 40 21.9	+0.1
MAW	**Mawson**	81.83 203	P	P	11 40 23.4	-0.3
	comp=Z,21nm,0.7s,mb5.1,baz=89,slow=6.0,SNR=25					
MAW	**Mawson**	81.83 203	⇑*i* P	P	11 40 23.6	-0.1
	comp=Z,18nm,0.7s,mb5.0					
KBL	**Kabul**	82.38 306	*e*P	P	11 40 26.7	-0.6
KBL		pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.5					
KBL	**Kabul**	82.38 306	*e*P	P	11 40 26.7	-0.6
	comp=Z,6.1nm,0.7s,mb4.5					
KKAR	**Karatay Array**	83.26 315	*e*P	P	11 40 31.5	-0.1
KKAR		pm

ABKAR	Akbulak array	91.62	319	eP	P	11 41 10.2	-1.7
	comp=Z,5.5nm,0.8s,mb4.8						
INK	Inuvik	92.04	22	eP	P	11 41 12.2	-1.2
ARU	Arti	93.25	326	d iP	P	11 41 18.8	-0.5
ARU				S	SKSac	11 51 43.5	-3.4
ARU				pmax	pmax		
	comp=Z,35nm,1.7s,mb5.4						
NVAR	Mina Array Bea	98.36	52	P	P	11 41 42.9	0.0
	comp=Z,0.6nm,0.8s,mb4.2,baz=250,slow=6.8,SNR=4.5						
NVAR	Mina Array Bea	98.36	52	P	P	11 41 42.9	0.0
YKA	Yellowknife Ar	99.70	28	P	Pdif	11 41 47.3	-1.2
	comp=Z,1.4nm,1.0s,baz=271,slow=4.5,SNR=6.2						
YKA				PKKPbc	PKKPbc	11 58 08.5	-3.4
	comp=Z,0.8nm,0.6s,baz=91,slow=2.8,SNR=12						
YKA				LR	LR	12 23 55.4	
	comp=Z,7.2nm,18.3s,baz=290,slow=34						
YKA	Yellowknife Ar	99.70	28	P	Pdif	11 41 47.3	-1.3
YKA				PKKPbc	PKKPbc	11 58 08.6	-3.4
YKA				LR	LR	12 23 55.4	
VNA2	Neumayer--Watz	101.26	189	ePdiff	Pdif	11 41 52.1	-3.4
	baz=157,slow=4.6						
VNA3	Neumayer Olymp	101.30	188	ePdiff	Pdif	11 41 52.0	-3.7
PDAR	Pinedale Array	104.83	47	Pdiff	Pdif	11 42 10.9	-0.5
	comp=Z,0.5nm,0.9s,baz=250,slow=6.6,SNR=2.9						
PDAR				PKKPbc	PKKPbc	11 57 54.5	-1.7
	comp=Z,0.3nm,0.6s,baz=119,slow=3.9,SNR=3.5						
ARCES	ARCESS Array B	105.73	342	PKKPbc	PKKPbc	11 57 50.5	-3.8
	comp=Z,2.0nm,0.6s,baz=256,slow=1.0,SNR=7.9						
MALT	Malatya	107.14	308	ePKPdf	PKiKP	11 46 30.1	-1.0
TXAR	Lajitas Array	110.88	61	PKKPbc	PKKPbc	11 57 37.1	+0.4
	comp=Z,0.2nm,0.5s,baz=115,slow=5.2,SNR=6.1						
TXAR				PKKPab	PKKPab	11 57 46.6	+0.2
	comp=Z,0.6nm,0.7s,baz=118,slow=7.5,SNR=7.6						
SOKA	Soboth	121.33	322	⇓iPKiKP	PKiKP	11 46 57.5	-0.5
	comp=Z,5.8nm,1.2s						
ABTA	Abfaltersbach	122.81	323	⇑iPKiKP	PKiKP	11 47 00.1	-0.8
	comp=Z,6.1nm,0.9s						
PLCA	Paso Flores	122.94	148	PKP	PKPdf	11 47 01.8	+0.6
	comp=Z,8.5nm,0.7s,baz=217,slow=2.5,SNR=27						
TSUM	Tsumeb	123.12	243	ePKPdf	PKPdf	11 47 02.7	+0.6
FETA	Feichten	123.71	324	⇓iPKiKP	PKiKP	11 47 02.4	-0.2
	comp=Z,7.1nm,1.3s						
DAVA	Damuels	124.06	325	⇑iPKiKP	PKiKP	11 47 03.3	-0.1
	comp=Z,11nm,0.9s						
KEST	Kesra	130.13	313	PKP	PKPdf	11 47 15.4	+0.4
	comp=Z,1.6nm,0.9s,baz=315,slow=5.7,SNR=3.1						
LPAZ	La Paz	139.96	124	PKhKP	PKPpre	11 47 26.6	
	comp=Z,7.1nm,1.0s,baz=252,slow=3.2,SNR=9.5						
LPAZ				PKP	PKPdf	11 47 35.1	+1.2
	comp=Z,10nm,0.9s,baz=319,slow=4.2,SNR=19						
CPUP	Villa Florida	140.98	146	PKhKP	PKPpre	11 47 28.0	
	comp=Z,2.1nm,0.5s,baz=194,slow=2.4,SNR=6.4						
CPUP				PKP	PKPdf	11 47 35.1	-0.4
	comp=Z,4.5nm,0.6s,baz=240,slow=1.6,SNR=8.1						
TORD	Torodi Ar. Bea	143.77	284	PKP	PKPdf	11 47 37.9	-2.8
	comp=Z,10nm,0.6s,baz=64,slow=3.0,SNR=70						
SDV	Santo Domingo	143.90	83	eP	PKPdf	11 47 39.3	-1.7
SPB	Sao Paulo	148.03	157	ePKPbc	PKPbc	11 47 51.1	+0.1
SPB				ePKPab	PKPab	11 47 54.5	+0.8
KIC	Kosan Boka	150.56	272	ePKP1	PKPbc	11 47 57.6	0.0
	comp=Z,107nm,0.8s						
DBIC	Dimbokro	150.68	273	PKPbc	PKPbc	11 47 57.6	-0.2
	comp=Z,39nm,0.7s,baz=94,slow=2.8,SNR=42						
DBIC	Dimbokro	150.68	273	ePKPbc	PKPbc	11 47 57.9	0.0
CAM4	Nova Friburgo	150.80	164	⇑iP	PKPbc	11 47 57.7	-0.1
CAM4				i		11 47 59.8	
CAM4				i		11 48 05.5	
CAM4				i		11 48 09.9	
CAM4				i		11 48 19.2	
CAM4				i		11 48 24.1	
CAM4				i		11 48 28.7	
CAM4				i		11 48 38.3	
TIC	Toumodi	150.84	273	ePKP1	PKPbc	11 47 58.2	0.0
	comp=Z,120nm,0.9s						
LIC	Lamto	150.85	272	ePKP1	PKPbc	11 47 58.2	0.0
	comp=Z,200nm,0.8s						

*NEIC **02** 11:40:13.9, 16°.92N×94°.85W, h126km, MD4.0(MEX), After MEX.*

MEX 02 11:40:13.9±1.4, 16°.92N×94°.85W, h126km±23km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		1.66	95	eP	Pn	11 40 42.0	-1.5
TGIG				i S	Sn	11 41 03.5	-2.7
OXX	Oaxaca	1.80	275	i P	Pn	11 40 44.8	-0.5
OXX				i S	Sn	11 41 08.5	-0.8
OXX	Oaxaca	1.80	275	i P	Pn	11 40 44.8	-0.5
OXX				i S	Sn	11 41 08.5	-0.8
VHO	Vista Hermosa	1.81	275	i P	Pn	11 40 44.8	-0.6
VHO				i S	Sn	11 41 08.1	-1.4
VHO	Vista Hermosa	1.81	275	i P	Pn	11 40 44.8	-0.6
VHO				i S	Sn	11 41 08.1	-1.4
PCIG		1.98	127	eP	Pn	11 40 46.1	-1.3
PCIG				i S	Sn	11 41 11.6	-1.4
CCIG	Comitan	2.67	103	i P	Pn	11 40 55.4	-0.8
CCIG				i S	Sn	11 41 26.7	-2.0
CCIG	Comitan	2.67	103	i P	Pn	11 40 55.4	-0.8
CCIG				i S	Sn	11 41 26.7	-2.0
TPIG	Tehuac#an	2.83	302	i P	Pn	11 40 57.7	-0.4
TPIG				i S	Sn	11 41 31.1	-1.1
LVIG	Laguna Verde	3.16	332	i P	Pn	11 40 59.5	-3.0
LVIG				i S	Sn	11 41 33.9	-6.3
LVIG	Laguna Verde	3.16	332	i P	Pn	11 40 59.5	-3.0
LVIG				i S	Sn	11 41 33.9	-6.3
PNIG	Pinotepa	3.19	261	i P	Pn	11 41 00.1	-2.8
PNIG				i S	Sn	11 41 37.4	-3.3
PNIG	Pinotepa	3.19	261	i P	Pn	11 41 00.1	-2.8
PNIG				i S	Sn	11 41 37.4	-3.3
THIG		3.19	128	i S	Sn	11 41 40.6	-0.1

*ISCJB **02** 11:44:04.5±0.6, 36°.82N±0°.04×29°.21E±0°.04, h10km, Error ellipse: s-maj=5.3km s-min=5.0km az=18.6*
*DDA **02** 11:44:04.6, 36°.82N×29°.32E, h7km±6km, Md2.8*
*CSEM **02** 11:44:04.6±0.4, 36°.81N×29°.20E, h2km, MD2.4, Error ellipse: s-maj=7.9km s-min=6.7km az=31.0*
*ISK **02** 11:44:05.1, 36°.90N×29°.18E, h6km, MD2.4*

ISC 02 11:44:04.9±0.7, 36°.81N±0°.04×29°.21E±0°.05, h5km±10km, n18, σ1§05/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.41	34	PG	Pg	11 44 12.4	-0.5
GLHS				eSG	Sg	11 44 18.3	0.0
GLHS	Glhisar (BURDU	0.41	34	i Pg	Pg	11 44 12.4	-0.5
GLHS				eSg	Sg	11 44 18.3	0.0
GOLH	Golhisar	0.51	34	i P	Pg	11 44 13.3	-1.4
GOLH				i S	Sg	11 44 20.6	-0.8
GOLH	Golhisar	0.51	34	i P	Pg	11 44 13.3	-1.4
GOLH				i S	Sg	11 44 20.6	-0.8
ELL	Elmali	0.57	96	ePG	Pg	11 44 17.3	+1.5
ELL	Elmali	0.57	96	ePg	Pg	11 44 17.3	+1.5
AKAS	Kas	0.66	151	i P	Pg	11 44 16.6	-1.0
AKAS				i S	Sg	11 44 26.6	+0.4
AKAS	Kas	0.66	151	i P	Pg	11 44 16.6	-1.0
AKAS				i S	Sg	11 44 26.6	+0.4
YER	Yerkesik	0.81	294	ePG	Pg	11 44 19.9	-0.5
YER				eSG	Sg	11 44 30.9	+0.1
YER	Yerkesik	0.81	294	ePg	Pg	11 44 19.9	-0.5
YER				eSg	Sg	11 44 30.9	+0.1
DNZL	Cakiroluk	0.88	352	i P	Pg	11 44 23.1	+1.2
DNZL				i S	Sg	11 44 36.4	+3.0
DNZL	Cakiroluk	0.88	352	i P	Pg	11 44 23.1	+1.2
DNZL				i S	Sg	11 44 36.4	+3.0
DAT	Datca	1.31	267	ePN	Pn	11 44 30.6	+0.7
DAT	Datca	1.31	267	ePn	Pn	11 44 30.6	+0.8
AYDN	Tasoluk	1.35	309	i P	Pn	11 44 28.9	-1.6
AYDN	Tasoluk	1.35	309	i P	Pn	11 44 28.9	-1.6
SUTC	Sutluce-Ispart	1.58	65	ePN	Pn	11 44 34.2	+0.6
SUTC	Sutluce-Ispart	1.58	65	ePn	Pn	11 44 34.2	+0.6

JMA 02 11:46:27.8±0.2, 43°.72N×146°.82E, h36km±3km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.86	246	P	Pn	11 46 43.6	+0.2
NEM2				eS	Sn	11 46 54.9	+0.2
JRA	Rausu	1.25	281	P	Pn	11 46 49.3	+0.6
JRA				eS	Sn	11 47 05.0	+0.7
JNK	Nakash	1.53	266	P	Pn	11 46 53.5	+0.9
JNK				eS	Sn	11 47 11.9	+0.7
JAK	Akkeshi	1.71	246	P	Pn	11 46 55.7	+0.7
JAK				eS	Sn	11 47 16.3	+0.7
JTKR	Abashiri--Toko	2.12	278	P	Pn	11 47 02.3	+1.6
JAR	Ashorobuto	2.26	260	P	Pn	11 47 04.5	+1.9
JAR				eS	Sn	11 47 31.3	+2.1
JOB	Onbets	2.33	250	P	Pn	11 47 05.0	+1.5
JOB				eS	Sn	11 47 32.9	+2.0
JMP	Maruseppu	2.52	278	P	Pn	11 47 08.0	+1.8
JCH	Churui	2.76	248	P	Pn	11 47 10.5	+1.0
JCH				eS	Sn	11 47 41.9	+0.3

BUC 02 11:46:27.3±0.9, 46°.25N×25°.83E, h26km±15km, MD2.2/3, 3C-5D, Error ellipse: s-maj=6.7km s-min=2.8km az=2.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOPR	Dopca	0.42	227	⇓iP	Pb	11 46 36.3	+0.1
DOPR				i S	Sb	11 46 43.3	+1.1
DOPR	Dopca	0.42	227	⇓iP	Pb	11 46 36.3	+0.1
DOPR	Dopca	0.42	227	S	Sb	11 46 43.3	+1.1
PLOR	Plostina	0.70	125	i S	Sb	11 46 53.3	+3.2
PLOR	Plostina	0.70	125	S	Sb	11 46 53.3	+3.2
VRI	Vrincioaia	0.73	121	i S	Sb	11 46 51.9	+0.8
VRI	Vrincioaia	0.73	121	S	Sb	11 46 51.9	+0.8
MLR	Muntele Rosu	0.77	174	⇓PKIKP	Pb	11 46 42.2	+0.2
MLR				S	Sb	11 46 53.1	+1.1
MLR	Muntele Rosu	0.77	174	⇓iP	Pb	11 46 42.2	+0.2
MLR				i S	Sb	11 46 53.0	+1.0
MLR	Muntele Rosu	0.77	174	⇓iP	Pb	11 46 42.2	+0.2
MLR	Muntele Rosu	0.77	174	S	Sb	11 46 53.0	+1.0
VOIR		0.98	214	⇑PKIKP	Pn	11 46 45.7	+0.3
VOIR				S	Sb	11 46 58.7	+0.6
VOIR		0.98	214	⇑iP	Pn	11 46 45.7	+0.3
VOIR				i S	Sb	11 46 58.7	+0.6
VOIR		0.98	214	⇑iP	Pn	11 46 45.7	+0.3
VOIR		0.98	214	S	Sb	11 46 58.7	+0.6

*ISK **02** 11:53:52.6, 39°.62N×28°.32E, h5km, MD2.1*
*ISCJB **02** 11:53:53.8±0.7, 39°.57N±0°.08×28°.24E±0°.07, h15km±6km, Error ellipse: s-maj=15.5km s-min=5.2km az=31.2*
*DDA **02** 11:53:53.6, 39°.47N×28°.16E, h7km±3km, Md2.9*
*CSEM **02** 11:53:53.6±0.3, 39°.53N×28°.24E, h10km, MD2.9, Error ellipse: s-maj=13.8km s-min=4.3km az=36.0*

ISC 02 11:53:54.1±0.6, 39°.53N±0°.07×28°.22E±0°.07, h11km±8km, n16, σ0§96/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	Dursunbey	0.21	71	i P	Pg	11 53 59.1	+0.7
DURS	Dursunbey	0.21	71	i P	Pg	11 53 59.1	+0.7
BALB	Balikesir	0.29	292	ePG	Pg	11 53 59.7	-0.2
BALB				eSG	Sg	11 54 05.3	+1.6
BALB	Balikesir	0.29	292	ePg	Pg	11 53 59.7	-0.1
BALB				eSg	Sg	11 54 05.3	+1.6
BALY	Balya	0.51	294	i P	Pg	11 54 03.1	-0.9
BALY				i S	Sg	11 54 11.3	+0.6
BALY	Balya	0.51	294	i P	Pg	11 54 03.1	-0.9
BALY				i S	Sg	11 54 11.3	+0.5
DEMI	Demirci	0.62	142	i P	Pg	11 54 05.0	-1.1
DEMI				i S	Sg	11 54 14.5	+0.3
DEMI	Demirci	0.62	142	i P	Pg	11 54 05.1	-1.0
DEMI				i S	Sg	11 54 14.5	+0.2
GONE	Gonen-Balikesi	0.66	321	ePG	Pg	11 54 05.9	-0.9
GONE				eSG	Sg	11 54 15.1	-0.4
GONE	Gonen-Balikesi	0.66	321	ePg	Pg	11 54 05.9	-0.9
GONE				eSg	Sg	11 54 15.1	-0.4
GDZ	Gediz	1.07	114	i P	Pb	11 54 13.0	-1.6
GDZ				i S	Sb	11 54 30.5	+1.9
GDZ	Gediz	1.07	114	i P	Pb	11 54 13.0	-1.6
GDZ				i S	Sb	11 54 30.5	+1.9
KULA	Kula-Manisa	1.07	161	ePN	Pn	11 54 14.9	-0.1
KULA	Kula-Manisa	1.07	161	ePn	Pn	11 54 14.9	-0.1
GELI	Tayfur-Gelibol	1.60	303	ePN	Pn	11 54 22.6	+0.4
GELI	Tayfur-Gelibol	1.60	303	ePn	Pn	11 54 22.6	+0.4

WEL 02 11:54:22.6±0.3, 39°.45S×174°.55E, h177km±2km, ML3.6/14, Error ellipse: s-maj=1.7km s-min=1.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAEZ	Rainy Point	0.20	323	PN	Pn	11 54 45.9	-0.1
VRZ	Vera Road	0.36	26	PN	Pn	11 54 45.7	-0.7
VRZ				eSN	Sn	11 55 04.1	-0.6
DFE	Dawson Falls	0.37	289	PN	Pn	11 54 46.4	0.0
NEZ	North Egmont	0.40	297	PN	Pn	11 54 46.7	+0.2
MHEZ	Mangahewa	0.41	334	PN	Pn	11 54 46.6	-0.1
MHEZ				SN	Sn	11 55 04.7	-0.4
WAZ	Wanganui	0.45	132	PN	Pn	11 54 47.1	+0.4
WAZ				SN	Sn	11 55 04.9	-0.4
PKE	Pukeiti	0.51	300	PN	Pn	11 54 46.7	-0.2
PKVZ	Pokaka	0.64	76	PN	Pn	11 54 47.6	+0.1
MTVZ	Mangateitei	0.71	85	PN	Pn	11 54 47.9	-0.1
MTVZ				SN	Sn	11 55 07.1	-0.4
TWVZ	Taurewa	0.78	61	PN	Pn	11 54 48.0	-0.5
TRVZ	Turoa	0.79	79	PN	Pn	11 54 48.4	0.0
FWVZ	Far West T-bar	0.80	76	PN	Pn	11 54 48.4	-0.1
DRZ	Dome Shelter	0.80	78	PN	Pn	11 54 49.1	+0.6
WPVZ	Whakapapa	0.81	73	PN	Pn	11 54 48.4	-0.1
WNVZ	Wahianoa	0.82	82	PN	Pn	11 54 48.7	+0.1
NGZ	Ngauruhoe	0.86	72	PN	Pn	11 54 48.7	-0.1
WTVZ	West Tongariro	0.87	68	PN	Pn	11 54 48.8	-0.2
TUVZ	Tukino	0.87	78	PN	Pn	11 54 49.0	0.0
OTVZ	Oturere	0.91	72	PN	Pn	11 54 49.2	0.0
KRVZ	Karewarewa	0.92	68	PN	Pn	11 54 49.1	-0.2
MOVZ	Moawhango	0.93	88	PN	Pn	11 54 49.1	-0.3
HIZ	Hauiti	0.96	14	PN	Pn	11 54 48.6	-1.0
BHHZ	Black Hill Sta	1.17	92	PN	Pn	11 54 50.8	-0.4
TSZ	Takapari Road	1.24	120	PN	Pn	11 54 52.0	+0.2
TSZ				SN	Sn	11 55 12.8	-1.7
POWZ	Post Office Ro	1.33	136	PN	Pn	11 54 52.6	0.0
PNHZ	Pukenui	1.35	111	PN	Pn	11 54 52.9	+0.1
DUWZ	D'Urville Isla	1.43	200	PN	Pn	11 54 53.4	-0.1
KIW	Kapiti Island	1.44	169	PN	Pn	11 54 53.5	0.0
MRZ	Mangatainoka R	1.44	147	PN	Pn	11 54 53.7	+0.1
OGWZ	Otaki Gorge	1.45	161	PN	Pn	11 54 53.9	+0.2
OGWZ				SN	Sn	11 55 15.6	-2.2
DVHZ	Dannevirke	1.50	125	PN	Pn	11 54 54.3	+0.1
BKZ	Black Stump Fm	1.53	80	PN	Pn	11 54 54.0	-0.5
WPHZ	Waipukurau	1.58	113	PN	Pn	11 54 55.1	+0.2
HOWZ	Holdsworth Sta	1.62	153	PN	Pn	11 54 55.4	0.0
MCHZ	McNeill Hill	1.66	90	PN	Pn	11 54 56.3	+0.6
TIWZ	Tintock	1.67	143	PN	Pn	11 54 56.0	+0.1
CAW	Cannon Point	1.70	167	PN	Pn	11 54 56.1	0.0
TCW	Tory Channel	1.77	187	PN	Pn	11 54 57.0	+0.1
NMHZ	Naumai	1.78	79	PN	Pn	11 54 57.6	+0.6
BFZ	Birch Farm	1.79	134	PN	Pn	11 54 56.8	-0.3
PRHZ	Porangahau	1.80	118	PN	Pn	11 54 57.5	+0.3
KAHZ	Kahuranaki	1.83	102	PN	Pn	11 54 57.9	+0.4
WEL	Wellington	1.84	175	PN	Pn	11 54 57.5	-0.1
MTW	Mount Morrison	1.85	157	PN	Pn	11 54 57.5	-0.3
SNZO	South Karori	1.86	176	PN	Pn	11 54 57.5	-0.3
PXZ	Pawanui	1.87	109	PN	Pn	11 54 58.1	+0.1
TMWZ	Te Maipa	1.94	149	PN	Pn	11 54 58.6	-0.1
CKHZ	Cape Kidnapper	1.96	97	PN	Pn	11 54 59.3	+0.4
BHW	Baring Head	1.97	173	PN	Pn	11 54 58.6	-0.4
NNZ	Nelson	1.98	207	PN	Pn	11 54 58.5	-0.6
TUWZ	Tuamarina	2.03	193	PN	Pn	11 54 59.3	-0.4
MSWZ	Moikau Station	2.03	165	PN	Pn	11 54 59.3	-0.4
MSWZ				SN	Sn	11 55 25.5	-3.0
RAHZ	Arahi	2.04	76	PN	Pn	11 54 59.5	-0.3
QRZ	Quartz Range	2.07	228	PN	Pn	11 54 58.9	-1.2
PLWZ	Palliser	2.18	166	PN	Pn	11 55 00.8	-0.6
BSWZ	Blackbirch Sta	2.32	193	PN	Pn	11 55 02.9	0.0
URZ	Urewera	2.32	60	PN	Pn	11 55 01.6	-1.4
KNZ	Kokohu	2.46	81	PN	Pn	11 55 03.9	-0.6
MWZ	Matawai	2.58	65	PN	Pn	11 55 04.9	-1.0
MHGZ	Mahia Peninsul	2.62	85	PN	Pn	11 55 06.0	-0.4
THZ	Tophouse	2.63	208	PN	Pn	11 55 05.5	-1.0
PRGZ	Paritu Road	2.64	80	PN	Pn	11 55 06.0	-0.7
CNGZ	Carnagh Statio	3.01	72	PN	Pn	11 55 11.0	-0.1
KHZ	Kahutara	3.06	194	PN	Pn	11 55 11.1	-0.6
DSZ	Denniston Nort	3.10	222	PN	Pn	11 55 10.8	-1.4
PUZ	Puketiti	3.21	66	PN	Pn	11 55 12.2	-1.4
LTZ	Lake Taylor	3.75	207	PN	Pn	11 55 18.5	-1.7
CRLZ	Canterbury Las	4.37	199	PN	Pn	11 55 25.6	-2.6
MQZ	McQueen's Vall	4.49	198	PN	Pn	11 55 26.9	-2.8
LBZ	Lake Benmore	5.91	212	PN	Pn	11 55 45.6	-2.6

*NEIC **02** 12:00:08.0, 39°.43N×111°.25W, h2km, ML2.6(SLC), After SLC.*
*ISCJB **02** 12:00:09.1±0.2, 39°.40N±0°.01×111°.27W±0°.02, h10km, Error ellipse: s-maj=2.0km s-min=1.7km az=40.7*

ISC 02 12:00:09.3±0.2, 39°.40N±0°.01×111°.26W±0°.02, h10km, n79, σ1§11/113, 37C-35D, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMUT	Trail Mountain	0.11	158	ePg	Pg	12 00 11.5	-0.5
TMUT				eSg	Sg	12 00 14.3	+0.5
P16A	Fountain Green	0.38	305	P	Pg	12 00 16.8	0.0
	baz=0.4,SNR=646						
P17A	Butcher Ranch,	0.41	79	P	Pg	12 00 16.1	-1.3
	baz=0.4,SNR=198						
Q16A	Castle Valley	0.48	172	⇓P	Pg	12 00 18.3	-0.4
	baz=0.5,SNR=37						
Q16A				⇑S	Sg	12 00 24.5	-0.6
	baz=0.5						
SRU	San Rafael	0.64	116	P	Pg	12 00 20.6	-1.1
	baz=0.6,SNR=331						
SRU				⇑S	Sg	12 00 29.4	-0.6
	baz=0.6						
SRU	San Rafael	0.64	116	ePg	Pg	12 00 20.4	-1.3
SRU				eSg	Sg	12 00 29.5	-0.5
MPU	Maple Canyon	0.68	335	ePg	Pg	12 00 21.2	-1.3
MPU				eSg	Sg	12 00 29.7	-1.8
P15A	Leamington	0.81	283	⇑P	Pg	12 00 24.5	-0.4
	baz=0.8,SNR=257						
P18A	Preston Nutter	0.82	73	⇑S	Sg	12 00 34.8	-1.0
	baz=0.8						
NLU	North Lily Min	0.84	312	ePg	Pg	12 00 25.1	-0.5
NLU				eSg	Sg	12 00 37.1	+0.6
O17A	Robinson Place	0.89	27	⇓P	Pg	12 00 25.2	-1.4
	baz=0.9,SNR=80						
Q18A	Rafter H Ranch	0.92	108	⇓P	Pg	12 00 25.9	-1.2
	baz=0.9,SNR=112						
Q18A				⇑S	Sg	12 00 38.2	-0.9
	baz=0.9						
Q15A	Fillmore	0.96	246	⇑P	Pg	12 00 27.0	-0.7
	baz=1.0,SNR=30						
DAU	Daniels Canyon	1.02	0	ePg	Pg	12 00 27.5	-1.4
DAU				eSg	Sg	12 00 39.0	-3.1
R17A	Hanksville Air	1.06	156	P	Pg	12 00 28.7	-1.1
	baz=1.1,SNR=264						
R16A	Teasdale	1.12	189	⇓P	Pb	12 00 29.9	-0.9
	baz=1.2,SNR=69						
MSU	Marysvale	1.14	219	ePg	Pg	12 00 30.4	-0.8
MSU				eSg	Sg	12 00 50.5	+4.6
JLU	Jordanelle	1.21	353	ePg	Pg	12 00 31.3	-1.4
O15A	The Old Anders	1.28	314	⇑P	Pn	12 00 33.2	-0.2
	baz=1.3,SNR=19						
CTU	Camp Tracy	1.35	344	ePg	Pg	12 00 34.0	-1.2
CTU				eSn	Sg	12 00 54.7	+2.0
P14A	Drum Mountains	1.41	278	⇑P	Pn	12 00 35.3	+0.3
	baz=1.4,SNR=138						
P14A				⇑S	Sg	12 00 55.5	+0.7
	baz=1.4						
NOQ	North Oquirrh	1.42	333	ePn	Pn	12 00 35.5	+0.3
R15A	Junction	1.43	214	⇓P	Pn	12 00 35.7	+0.5
	baz=1.5,SNR=10						
R15A				⇓S	Sn	12 00 55.7	+1.7
	baz=1.5						
DUG	Dugway	1.44	304	⇓P	Pn	12 00 35.9	+0.5
	baz=1.4						
DUG				⇑S	Sn	12 00 55.5	+1.1
	baz=1.4						
DUG	Dugway	1.44	304	ePn	Pn	12 00 35.7	+0.3
R18A	Canyonlands Na	1.47	133	⇑P	Pn	12 00 35.7	-0.1
	baz=1.5,SNR=281						
N16A	Rees Ranch, Co	1.50	355	⇑Pg	Pg	12 00 37.0	-1.1
	baz=1.5,SNR=18						
N17A	Moffit Pass	1.58	12	⇓Pb	Pb	12 00 37.7	-0.9
	baz=1.5,SNR=18						
Q19A	Hogan Spring (	1.61	105	⇑Pb	Pn	12 00 38.1	+0.2
	baz=1.6,SNR=92						
Q14A	Sevier Lake (B	1.62	256	⇑Pb	Pb	12 00 38.9	-0.4
	baz=1.6,SNR=118						
S16A	Weppner Ranch,	1.69	189	⇓Pb	Pb	12 00 40.3	-0.2
	baz=1.7,SNR=97						
R14A	James Farms, M	1.76	232	⇓Pb	Pn	12 00 40.9	+1.1
	baz=1.8,SNR=9.8						
N15A	Stansbury Isla	1.78	327	⇓Pn	Pn	12 00 39.8	-0.3
	baz=1.8,SNR=23						
N15A				⇑Sb	Sb	12 01 05.6	+1.3
	baz=1.8						
P19A	Cripple Cowboy	1.78	82	⇓Pb	Pb	12 00 41.2	-0.8
	baz=1.8,SNR=

L16A	Fish Haven	2.62	357	⇓P		Pn	12 00 53.2 +1.5
	baz=2.6,SNR=33						
N20A	Spence Gulch,	2.71	57	⇓Pb		Pb	12 00 57.0 -0.9
	baz=2.7						
N20A				⇑Sb		Sb	12 01 33.0 +1.8
	baz=2.7						
T14A	Hurricane	2.74	212	⇑Pb		Pb	12 00 58.7 +0.4
	baz=2.8,SNR=6.9						
S20A	Disappointment	2.76	124	⇑P		Pn	12 00 55.1 +1.5
	baz=2.8,SNR=29						
S20A				⇑Sb		Sb	12 01 33.6 +1.1
	baz=2.8						
R12A	Pony Springs,	2.82	249	⇓Pb		Pb	12 01 00.2 +0.4
	baz=2.8,SNR=16						
O21A	Pagoda	3.03	73	⇑Pb		Pb	12 01 02.4 -0.9
	baz=3.0						
O21A				⇑Sb		Sb	12 01 41.8 +1.4
	baz=3.0						
R21A	Cimarron	3.07	108	⇑Sb		Sb	12 01 43.2 +1.7
	baz=3.1						
U15A	North Rim	3.07	196	⇓Pb		Pb	12 01 03.9 -0.1
	baz=3.1,SNR=34						
MVCO	Mesa Verde	3.08	134	*e*Pn		Pn	12 00 59.4 +1.4
MVCO				*e*Sg		Sg	12 01 47.3 -0.9
N21A	Black Mountain	3.18	63	⇑Pb		Pb	12 01 04.8 -1.0
	baz=3.1						
S21A	Coal Bank Pass	3.22	121	⇓P		Pn	12 01 02.0 +2.0
	baz=3.2,SNR=10						
SMCO	Snowmass	3.33	92	*e*Pn		Pn	12 01 02.8 +1.4
U14A	Mt Trumbull	3.34	208	⇑Pb		Pb	12 01 08.6 0.0
	baz=3.4						
O22A	Kremmling	3.71	77	⇓Sb		Sb	12 02 01.9 +2.0
	baz=3.7						
TPAW	Teton Pass	4.10	3	*e*Pn		Pn	12 01 12.0 0.0
TPAW				*e*Sg		Sg	12 02 17.8 -3.1
LOHW	Long Hollow	4.24	6	*e*Pn		Pn	12 01 14.3 +0.4
LOHW				*e*Sg		Sg	12 02 22.5 -3.0
IMW	Indian Meadow	4.50	3	*e*Pn		Pn	12 01 18.5 +1.0
IMW				*e*Sg		Sg	12 02 30.2 -3.7

IDC ***02*** *12:02:07.1±0.9,5°.20S×36°.04E, h0km, mb4.1/8, mb1 4.2/9, mb1mx3.9/22, mbtmp4.1/9, ML4.2/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/22, Error ellipse: s-maj=31.2km s-min=15.6km az=112.0*

NEIC ***02*** *12:02:08.8±0.6,5°.24S×36°.07E, h10km, mb3.9/1, Error ellipse: s-maj=25.2km s-min=12.5km az=110.0*

ISC 02 12:02:09.9±6.7,5°.26S±0°.08×36°.1E±0°.2, h17km±42km, n14, σ0§92/14, mb4.0/9, MS3.5/2, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	4.28	16	Pn		Pn	12 03 14.1 -0.2
	14nm,0.3s,baz=191,slow=18,SNR=100						
KMBO				Sn		Sn	12 04 04.5 +0.6
	22nm,0.3s,baz=233,slow=21,SNR=5.2						
KMBO				Lg			12 04 21.4
	68nm,0.3s,baz=270,slow=20,SNR=11						
LBTB	Lobatse	22.05	206	P		P	12 07 04.4 +0.5
	5.1nm,0.8s,mb4.0,baz=37,slow=13,SNR=5.9						
BOSA	Boshof	25.38	203	P		P	12 07 37.2 +0.8
	4.2nm,0.8s,mb4.0,baz=27,slow=4.5,SNR=5.4						
BOSA	Boshof	25.38	203	P		P	12 07 37.2 +0.8
EIL	Elat	34.75	358	P		P	12 08 58.6 -0.7
	3.5nm,0.7s,mb4.4,baz=176,slow=14,SNR=2.4						
TORD	Torodi Ar. Bea	38.72	298	P		P	12 09 32.7 -0.7
	1.0nm,0.7s,mb3.7,baz=104,slow=7.1,SNR=6.0						
TORD				LR		LR	12 27 25.3
	comp=Z,48nm,19.7s,MS3.3,baz=135,slow=39						
MALT	Malatya	43.41	3	*e*P		P	12 10 13.3 +1.6
	2.0nm,0.8s,mb3.9						
MKAR	Makanchi Array	65.98	33	P		P	12 12 55.4 +0.1
	0.8nm,0.6s,mb3.9,baz=235,slow=4.9,SNR=6.6						
MKAR				LR		LR	12 42 49.9
	comp=Z,34nm,18.3s,MS3.6,baz=264,slow=37						
CMAR	Chiang Mai Arr	66.29	67	P		P	12 12 58.5 +0.7
	0.9nm,0.8s,mb3.9,baz=255,slow=8.1,SNR=6.6						
CMAR	Chiang Mai Arr	66.29	67	P		P	12 12 58.5 +0.7
KURK	Kurchatov	66.68	28	P		P	12 12 58.0 -1.7
	0.8nm,0.5s,mb4.0,baz=233,slow=6.9,SNR=3.7						
ASAR	Alice Springs	95.07	114	P		P	12 15 31.4 -1.1
	0.6nm,1.0s,mb4.0,baz=269,slow=4.6,SNR=3.6						
ASAR	Alice Springs	95.07	114	P		P	12 15 31.4 -1.1
NVAR	Mina Array Bea	139.60	328	PKP		PKPdf	12 21 39.3 +2.2
	0.7nm,0.8s,baz=72,slow=2.9,SNR=3.2						

NIED ***02*** *12:03:00,26°.50N×125°.50E, h125km, Mw4.1 Best double couple: M0=1.79000×10^15 NP1:φ0=269.00000°, δ67.00000°,λ-140.00000°. NP2:φ0=161.00000°, δ54.00000°,λ-29.00000°.*

ISCJB ***02*** *12:03:13.8±0.3,26°.47N±0°.06×125°.55E±0°.04, h153km±5km, mb3.8/13, Error ellipse: s-maj=11.0km s-min=3.1km az=147.5*

JMA ***02*** *12:03:15.4±0.3,26°.51N×125°.50E, h140km, M4.5*

IDC ***02*** *12:03:15.8±1.0,26°.51N×125°.47E, h156km±8km, mb3.6/13, mb1 3.7/15, mb1mx3.6/23, mbtmp3.6/15, Error ellipse: s-maj=18.8km s-min=12.8km az=78.0*

NEIC ***02*** *12:03:15.3±0.8,26°.48N×125°.49E, h153km±9km, MG4.5(JMA), Error ellipse: s-maj=15.0km s-min=9.8km az=147.0*

ISC 02 12:03:14.8±0.3,26°.48N±0°.05×125°.54E±0°.04, h147km±5km, h154km±3.7km: pP-P, n44, σ1§31/66, mb3.8/13, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	1.12	97	P		Pn	12 03 41.2 +0.8
JKE				S		Sn	12 04 00.5 +9.1
JAGN	Aguni-jima	1.53	85	P		Pn	12 03 45.2 +0.8
JAGN				S		Sn	12 04 07.0 +5.9
JMJ	Miyako jima 2	1.67	188	P		Pn	12 03 47.1 +1.1
JMJ				S		Sn	12 04 09.9 +5.2
JOGS	Gusukube	1.72	184	P		Pn	12 03 47.5 +1.0
JOGS				S		Sn	12 04 11.4 +5.6
NAH1	Naha	1.95	98	P		Pn	12 03 49.9 +0.8
NAH1				S		Sn	12 04 14.7 +3.4
JTJ	Tarama	1.98	203	P		Pn	12 03 50.0 +0.4
JTJ				S		Sn	12 04 15.2 +3.0
JJT2	Tamagusuku 2	2.01	99	P		Pn	12 03 51.1 +1.2
JJT2				S		Sn	12 04 17.3 +4.5
JIH	Iheya	2.24	75	P		Pn	12 03 53.3 +0.7
JIH				S		Sn	12 04 22.1 +3.8
JIJ	Ishigaki jima	2.46	211	P		Pn	12 03 55.2 -0.1
JIJ				S		Sn	12 04 23.7 +0.1
JOW	Kunigami	2.47	81	*e*Pn		Pn	12 03 55.5 +0.1
JOW				*e*Sn		Sn	12 04 26.2 +2.3
JOW	Kunigami	2.47	81	P		Pn	12 03 55.9 +0.5
JOW				S		Sn	12 04 25.1 +1.2
JKRS	Kuro-shima	2.63	212	P		Pn	12 03 57.3 -0.1
JKRS				S		Sn	12 04 28.3 +0.6
IRIF	Iriomote-Funau	2.69	218	P		Pn	12 03 58.1 -0.1
IRIF				S		Sn	12 04 30.6 +1.3
HATJ	Hateruma jima	2.88	213	P		Pn	12 04 00.6 0.0
HATJ				*e*S		Sn	12 04 35.4 +1.6
YOJ	Yonaguni jima	3.04	229	P		Pn	12 04 03.6 +1.0
YOJ				S		Sn	12 04 40.7 +2.9
JTK	Tokunoshima	3.30	66	P		Pn	12 04 05.8 -0.1
JTK				S		Sn	12 04 44.0 0.0
TATO	Taipei	3.95	249	*e*Pn		Pn	12 04 16.9 +2.5
JAM	Amami Oshima	4.09	61	P		Pn	12 04 15.5 -0.7
JAM				S		Sn	12 05 01.2 -1.8
YHNB	Yeheng	4.17	245	*e*Pn		Pn	12 04 19.4 +2.2
NACB	Ninganchiao	4.25	238	*e*Pn		Pn	12 04 18.2 -0.1
NACB				*e*Sn		Sn	12 05 08.4 +1.6
JZK	Kikaishima	4.34	64	*e*S		Sn	12 05 08.7 -0.3
YULB	Yu-li	4.93	232	*e*Pn		Pn	12 04 25.6 -1.7
YULB				*e*Sn		Sn	12 05 17.1 -6.1
SSLB	Suanglung	4.95	238	*e*Pn		Pn	12 04 27.4 -0.1
SSLB				*e*Sn		Sn	12 05 23.2 -0.5
JMZ	Minamidaito 2	5.14	96	P		Pn	12 04 29.0 -1.1
JMZ				S		Sn	12 05 22.4 -6.0
TWG	Pinlang	5.46	229	*e*Pn		Pn	12 04 31.9 -2.4
	60nm,0.3s						
TWG				*e*Sn		Sn	12 05 36.6 +0.6
TPUB	Ta-pu	5.47	236	*e*Pn		Pn	12 04 34.5 0.0
	72nm,0.5s						
TPUB				*e*Sn		Sn	12 05 36.5 +0.2
KSRS	Korea Array	11.13	10	P		Pn	12 05 50.3 +0.6
	0.3nm,0.3s,baz=189,slow=14,SNR=11						
TGY	Tagaytay City	13.05	200	P		Pn	12 06 16.2 +1.4
	27nm,0.3s,baz=159,slow=8.6,SNR=3.4						
MJAR	Matsushiro Arr	14.73	44	P		Pn	12 06 38.1 +2.1
	0.1nm,0.3s,baz=252,slow=8.9,SNR=2.8						
CMAR	Chiang Mai Arr	25.81	257	P		P	12 08 31.1 -1.4
	0.4nm,0.5s,mb3.3,baz=66,slow=7.0,SNR=4.1						
SONM	Songino Array	26.08	330	P		P	12 08 36.4 +1.8
	4.0nm,0.4s,mb4.4,baz=146,slow=11,SNR=18						
SONM				pP		pP	12 09 08.0 +2.7
	4.3nm,1.2s,baz=144,slow=10,SNR=2.8						
MKAR	Makanchi Array	39.58	312	P		P	12 10 31.3 -0.3
	1.4nm,0.4s,mb3.9,baz=98,slow=10,SNR=25						
MKAR				pP		pP	12 11 04.7 +0.9
	1.2nm,0.7s,baz=99,slow=10,SNR=4.7						
MKAR				ScP		ScP	12 16 09.8 -1.1
	0.6nm,0.6s,baz=120,slow=5.2,SNR=6.0						
ZALV	Zalesovo Beam	40.60	324	P		P	12 10 39.4 -0.5
	2.5nm,0.4s,mb4.2,baz=110,slow=8.2,SNR=6.7						
ZALV				pP		pP	12 11 11.6 -0.7
	0.8nm,0.3s,baz=86,slow=7.4,SNR=3.3						
ZALV	Zalesovo Beam	40.60	324	P		P	12 10 39.4 -0.5
ZALV				pP		pP	12 11 11.6 -0.7
KURK	Kurchatov	42.99	317	P		P	12 10 58.8 -0.6
	0.9nm,0.5s,mb3.7,baz=108,slow=9.1,SNR=3.6						
KURK				pP		pP	12 11 34.2 +2.3
	0.8nm,0.5s,baz=106,slow=9.1,SNR=2.2						
ASAR	Alice Springs	50.50	170	P		P	12 11 59.0 +1.0
	2.5nm,0.6s,mb4.0,baz=355,slow=7.7,SNR=61						
ASAR				PcP		PcP	12 13 13.3 -0.6
	0.8nm,0.6s,baz=347,slow=3.7,SNR=7.4						
STKA	Stephens Creek	60.02	164	P		P	12 13 06.2 +0.2
	1.1nm,0.6s,mb3.9,baz=326,slow=8.6,SNR=4.2						
ILAR	Eielson Array	65.36	28	P		P	12 13 39.6 -1.4
	0.3nm,0.6s,mb3.3,baz=265,slow=5.0,SNR=7.8						
ARCES	ARCESS Array B	68.89	338	P		P	12 14 02.5 -0.7
	6.6nm,1.1s,mb4.3,baz=80,slow=6.7,SNR=3.3						
FINES	FINESS Array B	71.45	330	P		P	12 14 17.2 -1.7
	0.8nm,0.4s,mb3.8,baz=66,slow=3.5,SNR=4.7						
BRTR	Keskin Array B	74.97	307	pP		pP	12 15 18.9 +2.9
	1.7nm,0.9s,baz=119,slow=5.3,SNR=4.7						
YKA	Yellowknife Ar	79.30	24	P		P	12 15 03.8 +0.1
	1.2nm,0.4s,mb3.8,baz=303,slow=5.2,SNR=34						
NVAR	Mina Array Bea	92.05	45	P		P	12 16 08.6 +1.3
	0.2nm,0.5s,mb3.4,baz=297,slow=6.0,SNR=2.6						
PDAR	Pinedale Array	94.45	37	P		P	12 16 18.9 +0.6
	0.3nm,0.5s,mb3.7,baz=306,slow=5.4,SNR=2.0						

BUC 02 12:03:21.6±1.0,46°.58N×25°.46E, h0km, MD2.7/4, 8C-2D, Error ellipse: s-maj=9.3km s-min=6.9km az=84.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BURAR	Bucovina Array	1.05	351	⇑*i*P	Pg	12 03 43.5	+1.8
BURAR				*i* S	Sg	12 03 59.8	+4.4
BURAR	Bucovina Array	1.05	351	⇑*i*P	Pg	12 03 43.5	+1.8
BURAR	Bucovina Array	1.05	351	S	Sg	12 03 59.8	+4.4
PLOR	Plostina	1.10	131	⇑*i*P	Pg	12 03 43.0	+0.3
PLOR				*i* S	Sg	12 04 00.5	+3.6
PLOR	Plostina	1.10	131	⇑*i*P	Pg	12 03 43.0	+0.3
PLOR	Plostina	1.10	131	S	Sg	12 04 00.5	+3.6
VRI	Vrincioaia	1.13	128	⇓*i*P	Pg	12 03 45.8	+2.5
VRI				*i* S	Sg	12 04 02.2	+4.3
VRI	Vrincioaia	1.13	128	⇓*i*P	Pg	12 03 45.8	+2.5
VRI	Vrincioaia	1.13	128	S	Sg	12 04 02.2	+4.3
MLR	Muntele Rosu	1.14	162	⇑*i*P	Pg	12 03 44.9	+1.5
MLR				*i* S	Sg	12 04 01.6	+3.5
MLR	Muntele Rosu	1.14	162	⇑*i*P	Pg	12 03 44.9	+1.5
MLR	Muntele Rosu	1.14	162	S	Sg	12 04 01.6	+3.5
VOIR		1.18	194	⇑*i*P	Pg	12 03 43.9	-0.2
VOIR				*i* S	Sg	12 04 01.5	+2.2
VOIR		1.18	194	⇑*i*P	Pg	12 03 43.9	-0.2
VOIR		1.18	194	S	Sg	12 04 01.5	+2.2
DRGR		1.90	277	*i* S	Sn	12 04 22.1	+2.2
DRGR		1.90	277	S	Sn	12 04 22.1	+2.2
GZR	Gura Zlata	2.21	239	*i* S	Sn	12 04 29.7	+2.2
GZR	Gura Zlata	2.21	239	S	Sn	12 04 29.7	+2.2

IDC ***02*** *12:14:22.1±1.3,0°.80N×97°.42E, h0km, mb4.1/10, mb1 4.1/12, mb1mx4.0/23, mbtmp4.0/12, ML3.8/2, Error ellipse: s-maj=40.0km s-min=16.9km az=63.0*

ISCJB ***02*** *12:14:25.0±0.7,0°.82N±0°.05×97°.31E±0°.06, h33km, mb4.1/13, Error ellipse: s-maj=10.2km s-min=5.1km az=139.7*

NEIC ***02*** *12:14:27.2±0.6,0°.83N×97°.44E, h35km, mb3.7/2, Error ellipse: s-maj=13.0km s-min=9.2km az=71.0*

DJA ***02*** *12:14:29,0°.97N×97°.50E, h55km, MLv4.1/8*

ISC 02 12:14:27.5±0.7,0°.86N±0°.06×97°.37E±0°.06, h35km, n32, σ0§89/35, mb4.1/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	2.21	92	P	Pn	12 15 01.8	+0.1
MNSI				S	Sn	12 15 27.8	-0.1
TPTI		2.39	356	P	Pn	12 15 03.0	-1.2
TPTI				S	Sn	12 15 31.6	-0.7
PSI	Prapat	2.48	39	Pn	Pn	12 15 02.9	-2.4
	7.0nm,0.3s,baz=282,slow=8.9,SNR=14						
PSI	Prapat	2.48	39	Pn	Pn	12 15 02.9	-2.4
SISI	Saibi	2.77	142	P	Pn	12 15 15.1	+5.7
TSI	Tuntungan	2.88	25	P	Pn	12 15 12.0	+1.1
PPI	Padang Panjang	3.30	113	P	Pn	12 15 17.1	+0.4
PPI				S	Sn	12 15 54.3	-0.4
PDSI	Padang	3.56	120	P	Pn	12 15 21.5	+1.2
BKNI	Bangkinang	3.71	98	P	Pn	12 15 23.6	+1.3
SDSI	Sungai Dareh	4.43	114	P	Pn	12 15 32.6	+0.3
IPM	Ipoh	5.13	45	*e*Pn	Pn	12 15 43.3	+1.5
	34nm,0.6s						
IPM	Ipoh	5.13	45	P	Pn	12 15 43.3	+1.5
KULM	Kulim	5.49	37	*e*Pn	Pn	12 15 47.0	+0.2
	21nm,0.6s						
KULM	Kulim	5.49	37	P	Pn	12 15 46.9	+0.1
	37nm,0.7s						
MDSI	Maura Dua	8.63	128	P	Pn	12 16 28.8	-1.2
CMAR	Chiang Mai Arr	17.55	5	P	Pn	12 18 28.1	-1.4
	0.3nm,0.3s,baz=196,slow=12,SNR=13						
CHTO	Chiang Mai	17.91	5	*e*Pn	Pn	12 18 33.8	-0.1
	2.8nm,0.8s						
FITZ	Fitzroy Crossi	33.60	125	P	P	12 21 02.8	-1.9
	0.6nm,0.5s,mb3.8,baz=306,slow=9.3,SNR=5.4						
XAN	Xi'an	34.73	17	P	P	12 21 13.8	-0.5
XAN				pP	pP	12 21 22.2	-2.3
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
GTA	Gaotai	38.43	3	*e*P	P	12 21 46.9	+1.1
GTA				pP	pP	12 21 51.1	-4.9
GTA				sP	sP	12 21 54.0	-6.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ASAR	Alice Springs	43.06	127	P	P	12 22 23.6	-0.6
	comp=Z,1.1nm,0.7s,mb3.7,baz=298,slow=7.7,SNR=31						
ASAR	Alice Springs	43.06	127	P	P	12 22 23.6	-0.6
KSRS	Korea Array	46.03	34	P	P	12 22 48.1	+0.3
	comp=Z,1.1nm,0.5s,mb4.0,baz=221,slow=9.3,SNR=4.9						
SONM	Songino Array	47.44	8	P	P	12 22 59.2	+0.6
	comp=Z,1.1nm,0.7s,mb3.9,baz=196,slow=9.9,SNR=3.7						
MK31	Makanchi Array	47.61	346	*e*P	P	12 23 00.8	+0.9
MKAR	Makanchi Array	47.61	346	P	P	12 23 00.6	+0.7
	comp=Z,2.5nm,0.5s,mb4.5,baz=159,slow=8.6,SNR=30						
MJAR	Matsushiro Arr	51.83	42	P	P	12 23 32.0	-0.3
	comp=Z,0.4nm,0.3s,mb3.8,baz=241,slow=5.9,SNR=3.5						
KURK	Kurchatov	52.16	345	P	P	12 23 34.3	-0.1
	comp=Z,1.4nm,0.6s,mb4.1,baz=166,slow=6.8,SNR=3.1						
STKA	Stephens Creek	53.01	132	P	P	12 23 40.6	-0.5
	comp=Z,0.8nm,0.4s,mb4.0,baz=281,slow=5.2,SNR=2.3						
ZALV	Zalesovo Beam	53.92	351	P	P	12 23 47.5	+0.2
	comp=Z,2.0nm,0.3s,mb4.5,baz=177,slow=6.1,SNR=12						
ABKAR	Akbulak array	57.89	332	*e*P	P	12 24 16.2	+0.3
	comp=Z,0.3nm,0.2s,mb4.0						
ARCES	ARCESS Array B	82.91	340	P	P	12 26 48.7	+0.5
	comp=Z,8.7nm,1.0s,mb4.7,baz=92,slow=6.4,SNR=4.3						

ISCJB ***02*** *12:18:01.0±2.0,47°.9N±0°.2×154°.1E±0°.3, h74km±20km, mb3.5/4, Error ellipse: s-maj=36.8km s-min=14.5km az=41.8*

IDC ***02*** *12:18:03.0±3.1,47°.89N×154°.13E, h78km±28km, mb3.4/4, mb1 3.6/7, mb1mx3.2/25, mbtmp3.4/7, Error ellipse: s-maj=36.1km s-min=20.8km az=143.0*

NEIC ***02*** *12:18:02.3±1.5,47°.83N×154°.16E, h73km±15km, mb3.5/1, Error ellipse: s-maj=25.3km s-min=10.8km az=131.0*

ISC 02 12:18:02.7±1.8,47°.8N±0°.2×154°.2E±0°.3, h75km±17km, n10, σ0§57/9, mb3.5/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.74	22	P	Pn	12 19 25.0	-0.2
	0.9nm,0.3s,baz=186,slow=12,SNR=30						
PETK	Petropavlovsk-	5.74	22	P	Pn	12 19 25.0	-0.2
ASAJ	Asahikawa	8.87	249	P	Pn	12 20 08.8	+0.8
	0.8nm,0.3s,baz=83,slow=14,SNR=9.1						
MAJO	Matsushiro	16.31	232	*e*P	Pn	12 21 46.9	-0.1
	2.6nm,0.7s						
MJAR	Matsushiro Arr	16.31	232	P	Pn	12 21 46.0	-0.9
	0.1nm,0.3s,baz=28,slow=13,SNR=5.8						
MKAR	Makanchi Array	47.08	297	P	P	12 26 25.9	-0.8
	0.3nm,0.5s,mb3.3,baz=54,slow=7.5,SNR=3.5						
KURK	Kurchatov	47.36	303	P	P	12 26 29.4	+0.6
	0.3nm,0.3s,mb3.5,baz=68,slow=8.2,SNR=2.7						
FITZ	Fitzroy Crossi	70.44	209	P	P	12 29 09.2	+0.4
	1.6nm,0.9s,mb3.8,baz=36,slow=8.7,SNR=5.5						
TXAR	Lajitas Array	76.34	61	P	P	12 29 43.8	+0.2
	0.6nm,0.5s,mb3.3,baz=302,slow=5.2,SNR=11						
CPUP	Villa Florida	147.31	60	PKPbc	PKPbc	12 37 36.6	-0.9
	0.3nm,0.3s,baz=7.1,slow=8.1,SNR=2.9						

KRSC 02 12:30:58.2±0.9,54°.51N×160°.86E, h65km±65km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.51	84	*e*P	Pn	12 31 12.1	+1.5
MKZ				*e*S	Sn	12 31 21.9	+2.2
SPN	Mys Shipunski	1.50	200	*e*P	Pn	12 31 24.3	+1.4
SPN				*e*S	Sn	12 31 43.1	+1.5
NLC	Nalytchevo	1.61	214	*e*P	Pn	12 31 26.5	+2.0
NLC				*e*S	Sn	12 31 47.4	+3.1
KOZ	Kozyrevsk	1.65	340	*e*S	Sn	12 31 48.1	+2.9
AVH	Avacha	1.77	226	*e*P	Pn	12 31 29.7	+3.1
AVH				*e*S	Sn	12 31 52.4	+4.3
KLY	Klyuchi	1.81	356	*e*P	Pn	12 31 29.1	+2.0
KLY				*e*S	Sn	12 31 52.0	+2.9
GNL	Ganaly	1.90	246	*e*P	Pn	12 31 31.2	+2.9
SRDR	Sredinnyy	1.93	341	*e*P	Pn	12 31 30.5	+1.9
SRDR				*e*S	Sn	12 31 54.0	+2.2
PET	Petropavlovsk	1.98	222	*e*P	Pn	12 31 31.9	+2.5
PET				*e*S	Sn	12 31 56.7	+3.5
KBTR	Krutoberegovo	2.04	33	*e*P	Pn	12 31 33.1	+2.9
KBTR				*e*S	Sn	12 31 58.3	+3.8

JMA 02 12:43:02.3±0.1,28°.71N×127°.72E, h171km, M4.1, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.42	130	P	Pn	12 43 32.7	-0.1
JTK				S	Sn	12 43 56.5	+0.3
JIH	Iheya	1.68	172	P	Pn	12 43 36.0	+0.6
JIH				*e*S	Sn	12 44 01.4	+0.5
JAM	Amami Oshima	1.69	100	P	Pn	12 43 35.5	+0.1
JAM				S	Sn	12 44 00.2	-0.6
JOW	Kunigami	1.93	165	P	Pn	12 43 37.9	-0.2
JOW				*e*S	Sn	12 44 05.5	-0.1
JZK	Kikaishima	2.02	101	P	Pn	12 43 40.0	+1.0
JZK				S	Sn	12 44 08.1	+0.9
JAGN	Aguni-jima	2.15	191	P	Pn	12 43 40.9	+0.4
JAGN				*e*S	Sn	12 44 10.0	0.0
JNN	Nakanoshima	2.19	59	P	Pn	12 43 41.3	+0.4
JKE	Kume jima 2	2.52	199	P	Pn	12 43 44.6	-0.1
JKE				*e*S	Sn	12 44 17.1	-0.4
JJT2	Tamagusuku 2	2.56	179	P	Pn	12 43 45.4	+0.1
JJT2				*e*S	Sn	12 44 18.2	-0.3
JKC	Kuchinoerabu	2.77	50	P	Pn	12 43 48.1	+0.4
JSJ	Shimokoshiki	3.43	30	P	Pn	12 43 57.0	+1.2
JTN	Tanegashima 3	3.44	55	P	Pn	12 43 55.6	-0.3
JMZ	Minamidaito 2	4.24	132	P	Pn	12 44 05.3	-1.0
JTZ	Takazaki	4.31	42	P	Pn	12 44 06.6	-0.5

IDC ***02*** *12:43:02.4±1.4,17°.27N×100°.93W, h0km, mb3.9/6, mb1 4.1/9, mb1mx3.9/23, mbtmp3.7/9, ML3.1/3, MS3.4/5, Ms1 3.4/5, ms1mx3.1/24, Error ellipse: s-maj=34.0km s-min=19.0km az=35.0*

ISCJB ***02*** *12:43:04.7±0.8,17°.03N±0°.05×100°.95W±0°.03, h31km±6km, mb4.0/16, MS3.0/2, Error ellipse: s-maj=8.6km s-min=3.8km az=16.6*

MEX ***02*** *12:43:04.6±0.7,16°.99N×101°.12W, h23km±21km, MD4.0*

NEIC ***02*** *12:43:04.7,16°.99N×101°.12W, h23km, mb4.2/23, MD4.0(MEX), After MEX.*

ISC 02 12:43:04.7±0.8,17°.07N±0°.05×100°.93W±0°.03, h14km±5km, n123, σ1§20/147, mb4.0/15, MS3.0/2, 34C-25D, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.63	92	*e*P	Pg	12 43 17.7	+0.7
CAIG				*i* S	Sg	12 43 27.6	+2.2
CAIG	El Cayaco	0.63	92	*e*P	Pg	12 43 17.7	+0.7
CAIG				*i* S	Sg	12 43 27.6	+

325A	Bean Ranch, Si	14.71	346	P	Pn	12 46 37.8	+5.5
	baz=12,SNR=11						
324A	Moseley Ranch,	14.90	345	P	Pn	12 46 40.2	+5.2
	baz=12,SNR=9.0						
MNTX	Cornudas Mount	15.12	345	⇑P	Pn	12 46 42.1	+4.2
	baz=12						
MNTX	Cornudas Mount	15.12	345	*e*Pn	Pn	12 46 42.2	+4.4
	16nm,1.2s						
226A	Malaga, Loving	15.20	350	⇑P	Pn	12 46 42.9	+3.9
	baz=12,SNR=5.8						
CLNB	Carlsbad	15.36	351	*e*P	Pn	12 46 42.3	+1.1
	1.6nm,0.4s						
GDL2	Guadalupe Moun	15.38	349	*e*P	Pn	12 46 44.9	+3.5
	19nm,0.7s						
225A	Deer Hill, Car	15.39	347	⇓P	Pn	12 46 45.0	+3.6
	baz=13,SNR=8.1						
224A	Cornudas Mount	15.51	345	⇓P	Pn	12 46 46.1	+3.1
	baz=13,SNR=10						
NATX	Nacogdoches	15.69	20	*e*P	Pn	12 46 48.3	+2.9
	94nm,0.8s						
125A	Gardner Draw,	15.88	348	⇓P	Pn	12 46 50.8	+2.9
	baz=13						
124A	Stringfield Ra	16.09	346	⇑P	Pn	12 46 53.4	+2.8
	baz=13,SNR=8.8						
CPRX	Cap Rock	16.11	351	*e*P	Pn	12 46 53.9	+3.0
	19nm,1.1s						
Z26A	Caprock	16.37	351	⇑P	Pn	12 46 56.0	+1.9
	baz=14,SNR=7.1						
219A	White Tail Can	16.68	335	⇓P	Pn	12 47 00.1	+2.1
	baz=14						
Z24A	Sheeppen Canyo	16.68	347	⇑P	Pn	12 46 59.6	+1.6
	baz=14						
120A	U Bar Ranch, L	16.91	337	⇑P	Pn	12 47 02.6	+1.6
	baz=14						
Z22A	Elephant Butte	17.01	342	⇑P	Pn	12 47 03.5	+1.3
	baz=14,SNR=8.9						
Z21A	St. Cloud Mine	17.27	341	⇑P	Pn	12 47 07.6	+2.1
	baz=15						
Y23A	Lovelace Mesa,	17.41	346	⇑P	Pn	12 47 08.3	+1.0
	baz=15,SNR=14						
X26A	CR and CF Fran	17.60	352	⇓P	Pn	12 47 08.6	-0.9
	baz=15,SNR=7.1						
TUC	Tucson	17.61	331	*e*Pn	Pn	12 47 10.2	+0.5
	41nm,2.8s						
Y22A	Socorro	17.65	343	⇓P	Pn	12 47 11.2	+1.0
	baz=15,SNR=5.9						
WMOK	Wichita Mounta	17.70	6	*e*Pn	Pn	12 47 16.2	+5.4
	4.9nm,0.8s						
AMTX	Amarillo	17.75	358	⇑P	Pn	12 47 09.7	-1.8
	baz=15						
AMTX	Amarillo	17.75	358	*e*P	Pn	12 47 09.7	-1.8
	26nm,0.9s						
BNM	Barren Site	17.76	344	*e*P	Pn	12 47 12.8	+1.2
	5.1nm,1.1s						
LENM	Lemitar	17.87	343	*e*P	Pn	12 47 14.2	+1.3
Y20A	Horse Springs,	18.06	340	⇑P	Pn	12 47 16.2	+0.9
	baz=15						
LAZ	Ladron	18.14	343	*e*Pn	Pn	12 47 16.9	+0.7
	1.5nm,1.0s						
X21A	Alamocita Cree	18.36	342	⇑P	Pn	12 47 19.3	+0.3
	baz=16						
Y19A	Nutrioso	18.41	338	⇑P	Pn	12 47 20.1	+0.6
	baz=16						
ANMO	Albuquerque	18.48	346	Pn	Pn	12 47 19.4	-1.1
	0.1nm,0.3s,baz=150,slow=13,SNR=7.7						
ANMO				LR	LR	12 55 14.1	
	comp=Z,165nm,20.2s,baz=35,slow=40						
ANMO	Albuquerque	18.48	346	*e*P	Pn	12 47 19.2	-1.2
	5.6nm,0.7s						
MIAR	Mount Ida	18.61	19	*e*P	Pn	12 47 20.9	-1.1
	16nm,0.9s						
X20A	Quemado	18.68	340	⇑P	Pn	12 47 22.6	-0.2
	baz=16,SNR=5.6						
Y17A	Roosevelt	18.81	334	⇑P	Pn	12 47 23.7	-0.7
	baz=16						
V24A	Rampart Ranch,	18.98	349	⇑P	Pn	12 47 25.4	-1.1
	baz=16						
114A	Black Gap (USA	18.99	328	⇓P	Pn	12 47 26.5	-0.1
	baz=16						
W20A	Ramah	19.21	341	⇑P	Pn	12 47 29.5	+0.2
	baz=17						
X17A	Forest Lakes	19.34	335	⇑P	Pn	12 47 31.2	+0.4
	baz=17						
113A	Mohawk Valley,	19.46	326	⇑P	Pn	12 47 31.6	-0.7
	baz=17						
V22A	San Miguel Ran	19.51	345	⇑P	Pn	12 47 31.1	-1.7
	baz=17						
X16A	Lo Mia Camp, P	19.68	333	⇑P	Pn	12 47 34.2	-0.7
	baz=17,SNR=5.1						
U23A	El Rito	19.75	347	⇑P	Pn	12 47 33.4	-2.2
	baz=17,SNR=8.3						
U21A	Nageezi	20.19	344	⇓P	P	12 47 38.9	-0.1
	baz=18,SNR=5.3						
T24A	Torres, Weston	20.26	350	⇑P	P	12 47 39.5	-0.2
	baz=18						
LRAL	Lakeview Retre	20.26	36	*e*P	P	12 47 39.2	-0.6
	121nm,2.6s						
T22A	Edith	20.56	346	⇑P	P	12 47 42.6	-0.3
	baz=18						
WUAZ	Wupatki	20.60	335	⇓P	P	12 47 44.2	+0.8
	baz=18						
WUAZ	Wupatki	20.60	335	*e*P	P	12 47 42.2	-1.2
	20nm,0.8s						
Y12C	Blythe	20.62	326	⇑P	P	12 47 43.6	-0.1
	baz=18,SNR=6.8						
S24A	Houchin Ranch,	20.84	350	⇓P	P	12 47 45.2	-0.8
	baz=18,SNR=5.7						
SDCO	Great Sand Dun	20.99	350	⇓P	P	12 47 46.7	-0.9
	baz=18						
SDCO	Great Sand Dun	20.99	350	*e*P	P	12 47 46.5	-1.1
	10nm,1.1s						
SDCO				*e*Pn	P	12 47 54.6	+7.0
W14A	Seligman	21.08	331	⇑P	P	12 47 48.8	+0.2
	baz=19,SNR=9.5						
MVCO	Mesa Verde	21.15	343	*e*P	P	12 47 48.5	-0.9
	7.0nm,0.9s,mb4.0						
V15A	Kaibab Nationa	21.19	334	⇑P	P	12 47 50.2	+0.4
	baz=19,SNR=5.8						
S22A	4UR Ranch, Cre	21.24	347	⇑P	P	12 47 50.0	-0.4
	baz=19,SNR=6.3						
IRM	Iron Mountain	21.27	326	⇓P	P	12 47 51.2	+0.5
	baz=19,SNR=5.2						
S21A	Coal Bank Pass	21.39	345	⇓P	P	12 47 51.9	0.0
	baz=19,SNR=6.7						
V14A	Boquillas Ranc	21.43	332	⇓P	P	12 47 52.7	+0.2
	baz=19						
S20A	Disappointment	21.69	344	⇑P	P	12 47 55.4	+0.2
	baz=19						
R22A	Saguache, Gunn	21.69	347	⇓P	P	12 47 54.5	-0.7
	baz=19,SNR=6.4						
U15A	North Rim	21.76	335	⇓P	P	12 47 55.7	-0.2
	baz=19						
S19A	Harvey Farm, M	21.83	342	⇑P	P	12 47 56.2	-0.5
	baz=19						
GMRC	Granite Mounta	22.01	326	⇑P	P	12 47 59.3	+0.6
	baz=20						
V13A	Grand Canyon W	22.02	331	⇓P	P	12 47 58.9	+0.2
	baz=20						
U14A	Mt Trumbull	22.12	333	⇓P	P	12 47 59.9	+0.1
	baz=20						
WVT	Waverly	22.26	29	*e*P	P	12 48 07.0	+5.7
	5.5nm,0.8s,mb4.0						
PV04	Paradox Valley	22.37	343	*e*P	P	12 48 01.4	-1.0
R19A	Curley Farm, L	22.37	343	⇓P	P	12 48 02.6	+0.2
	baz=20						
U13A	Pakoon Wash	22.47	332	⇑P	P	12 48 03.4	-0.1
	baz=20						
CCM	Cathedral Cave	22.57	20	*e*P	P	12 48 09.9	+5.3
	12nm,0.9s,mb4.3						
SMCO	Snowmass	22.65	348	*e*Pn	P	12 48 10.8	+5.4
	12nm,1.4s,mb4.1						
T13A	Saint George	22.95	333	⇑P	P	12 48 08.7	+0.2
	baz=20						
ISCO	Idaho Springs	23.01	351	*e*P	P	12 48 07.4	-1.8
	3.0nm,0.7s,mb3.8						
SHPR	Sheep Range	23.11	330	*e*P	P	12 48 10.1	-0.2
	3.6nm,1.0s,mb3.8						
ARUT	Antelope Range	23.39	334	*e*P	P	12 48 12.7	-0.6
	8.9nm,0.8s,mb4.2						
S12A	Delamar Landin	23.85	332	⇓P	P	12 48 17.7	0.0
	baz=21						
TMUT	Trail Mountain	23.89	340	*e*P	P	12 48 17.8	-0.2
	4.6nm,0.6s,mb4.1						
TKL	Tuckaleechee C	23.99	36	P	P	12 48 17.7	-1.2
	4.4nm,0.8s,mb3.9,baz=220,slow=7.9,SNR=2.5						
TKL				LR	LR	12 59 54.8	
	comp=Z,55nm,20.1s,MS3.0,baz=180,slow=42						
S11A	Rachel	24.30	330	⇑P	P	12 48 22.1	+0.4
	baz=22						
R12A	Pony Springs,	24.34	333	⇓P	P	12 48 22.4	+0.3
	baz=22						
S10A	Tonopah Range,	24.93	330	⇓P	P	12 48 27.4	0.0
	baz=22						
NVAR	Mina Array Bea	26.17	328	P	P	12 48 38.7	0.0
	3.8nm,0.8s,mb4.0,baz=145,slow=11,SNR=20						
PDAR	Pinedale Array	26.65	346	P	P	12 48 41.9	-1.1
	1.5nm,0.8s,mb3.5,baz=162,slow=10,SNR=8.6						
WAKR	Walker Array	26.81	326	*e*P	P	12 48 46.2	+1.7
YKA	Yellowknife Ar	46.38	351	P	P	12 51 27.7	-2.6
	2.9nm,0.8s,mb4.3,baz=160,slow=7.1,SNR=20						
YKA				LR	LR	13 12 26.3	
	comp=Z,13nm,18.1s,MS2.9,baz=125,slow=38						
YKA	Yellowknife Ar	46.38	351	P	P	12 51 27.7	-2.6
YKA				LR	LR	13 12 26.3	
INK	Inuvik	55.22	346	*e*P	P	12 52 36.5	-0.4
	8.5nm,1.0s,mb4.7						
ILAR	Eielson Array	56.73	338	P	P	12 52 45.5	-2.2
	1.0nm,0.8s,mb3.9,baz=138,slow=4.1,SNR=12						
ILAR				PcP	PcP	12 53 42.2	-1.4
	0.3nm,0.8s,baz=158,slow=2.6,SNR=4.5						
RSO	Redoubt South	56.89	332	*e*P	P	12 52 45.6	-3.2
CFAA	Coronel Fontan	57.67	147	P	P	12 52 55.8	+1.0
	0.1nm,0.4s,mb3.2,baz=321,slow=4.6,SNR=3.0						
CMAR	Chiang Mai Arr	139.65	330	PKP	PKPdf	13 02 33.5	+0.6
	0.3nm,0.3s,baz=336,slow=2.0,SNR=4.3						

DJA 02 12:48:02.0±0.41S×123°.69E, h60km, MLv4.4/11, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.02	17	P	Pn	12 48 21.9	+1.6
LUWI	Luwuk	1.11	236	P	Pn	12 48 22.3	+0.8
MRSI	Marisa	1.96	297	P	Pn	12 48 33.1	+0.2
MRSI				S	Sn	12 48 56.6	+0.2
APSI	Ampana	2.10	256	S	Sn	12 49 01.3	+1.4
MNI	Manado	2.17	32	P	Pn	12 48 38.1	+2.3
MNI				S	Sn	12 49 03.6	+2.0
TOLI	Toli-Toli	3.27	298	P	Pn	12 48 52.3	+1.5
TOLI				S	Sn	12 49 28.1	-0.5
KDI	Kendari	3.68	197	P	Pn	12 48 57.8	+1.3
KDI				S	Sn	12 49 38.7	0.0
LBMI	Labuha	3.82	93	P	Pn	12 48 59.4	+1.1
LBMI				S	Sn	12 49 41.8	-0.2
TNTI	Ternate	3.86	72	P	Pn	12 48 59.4	+0.5
TNTI				S	Sn	12 49 45.5	+2.5
TTSI	Tana Toraja	4.67	236	P	Pn	12 49 11.3	+1.3
SPSI	Sidrap Palu	5.27	228	P	Pn	12 49 19.8	+1.5
BKSI	Bulukumba	6.04	216	P	Pn	12 49 32.1	+3.3

*NEIC **02** 13:04:38.2, 16°.83N×100°.66W, h16km, MD3.6(MEX), After MEX.*

MEX 02 13:04:37.9±0.8, 16°.83N×100°.66W, h19km±44km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.43	60	*i* P	Pg	13 04 45.5	-1.3
CAIG				*i* S	Sg	13 04 50.9	-1.8
CAIG	El Cayaco	0.43	60	*i* P	Pg	13 04 45.5	-1.3
CAIG				*i* S	Sg	13 04 50.9	-1.8
ACX	Acapulco	0.77	87	*i* P	Pb	13 04 48.4	-4.3
ACX				*i* S	Sb	13 04 58.1	-4.7
ACX	Acapulco	0.77	87	*i* P	Pb	13 04 48.7	-4.0
ACX				*i* S	Sb	13 04 58.1	-4.7
ZIIG	Zihuatanejo	1.09	315	*e*P	Pb	13 04 54.1	-4.0
ZIIG				*i* S	Sb	13 05 08.0	-4.1
ZIIG	Zihuatanejo	1.09	315	*e*P	Pb	13 04 54.1	-4.0
ZIIG				*i* S	Sb	13 05 08.0	-4.1
MEIG	Mezcala	1.47	42	*i* P	Pn	13 05 01.0	-2.4
MEIG				*i* S	Sn	13 05 17.7	-4.5
PLIG	Platanillo	1.90	35	*i* P	Pn	13 05 07.8	-1.5
PLIG				*i* S	Sn	13 05 28.2	-4.6
PLIG	Platanillo	1.90	35	*i* P	Pn	13 05 05.8	-3.6
PLIG				*i* S	Sn	13 05 28.2	-4.6
PNIG	Pinotepa	2.47	100	*i* P	Pn	13 05 14.5	-2.6
PNIG				*i* S	Sn	13 05 42.6	-4.1
PNIG	Pinotepa	2.47	100	*i* P	Pn	13 05 14.5	-2.6
PNIG				*i* S	Sn	13 05 42.6	-4.1
UTMO	Huajuapan	2.90	70	*i* P	Pn	13 05 20.1	-3.0
UTMO				*i* S	Sn	13 05 54.4	-3.1
MMIG	Aquila	2.94	300	*i* P	Pn	13 05 26.8	+3.1
PPM	Popocatepetl	2.94	41	*i* P	Pn	13 05 22.5	-1.2
PPM				*i* S	Sn	13 05 58.6	0.0
PPM				*i* S	Sn	13 06 01.6	+3.0
PPM	Popocatepetl	2.94	41	*i* P	Pn	13 05 22.5	-1.2
PPM				*i* S	Sn	13 05 58.6	0.0
PPM				*i* S	Sn	13 06 01.6	+3.0

SKHL 02 13:11:08.0±0.2, 53°.70N×142°.70E, h10km, mb4.4/2, 1C-1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKH	Okha	0.20	137	⇓*i* Pg	Pg	13 11 12.0	-0.3
OKH				AMB	AMB	13 11 12.1	
	500nm,0.2s						
OKH			⇑*i*	Sg	Sg	13 11 14.7	-0.4
OKH				A		13 11 14.9	
	2μm,0.2s						
OKH				A		13 11 14.9	
	3μm,0.2s						
NKL	Nikolayevsk	1.33	246	*e*Pg	Pg	13 11 33.8	+0.3
NKL				AMB	AMB	13 11 34.0	
	68nm,0.5s						
NKL				*e*Sg	Sg	13 11 52.0	+1.3
NKL				A		13 11 52.5	
	46nm,0.2s						
NKL				A		13 11 52.5	
	33nm,0.2s						
TYV	Tymovskoe	2.84	181	*e*Sg	Sg	13 12 43.5	+4.3
TYV				A		13 12 44.0	
	35nm,0.5s						

JMA 02 13:13:24.2±0.4, 31°.82N×141°.24E, h18km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	1.76	317	P	Pn	13 13 54.7	+0.9
BSO1	Boso 1	2.83	356	P	Pn	13 14 09.6	+1.0
BSO3	Boso 3	3.04	349	*e*S	Sn	13 14 47.7	+0.5
JRY	Ryogami san	4.62	336	P	Pn	13 14 36.0	+3.0
JHO	Hitachi	4.81	354	P	Pn	13 14 37.4	+1.7
MAT	Matsushiro	5.34	333	P	Pn	13 14 46.9	+3.9
MAT				*e*S	Sn	13 15 47.0	+3.0

*ISCJB **02** 13:55:12.1±0.4, 33°.67N±0°.02×35°.89E±0°.04, h6km±5km, Error ellipse: s-maj=5.3km s-min=3.4km az=158.6*
*GRAL **02** 13:55:12.7±0.3, 33°.68N×35°.90E, h0km±17km, MD3.2*
*CSEM **02** 13:55:12.2±0.1, 33°.67N×35°.87E, h0km±1km, ML3.2, Error ellipse: s-maj=2.7km s-min=2.0km az=83.0*
*NSSC **02** 13:55:13, 33°.65N×35°.94E, h8km±2km*

ISC 02 13:55:12.2±0.4, 33°.66N±0°.02×35°.89E±0°.04, h8km±5km, n28, σ0°.58/52, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCY	Rachaya	0.19	198	*e*P	Pg	13 55 16.0	0.0
RCY				*e*S	Sg	13 55 18.5	-0.2
RCY	Rachaya	0.19	198	*e*P	Pg	13 55 16.0	-0.1
RCY				*e*S	Sg	13 55 18.5	-0.1
BRBR	Barbar	0.26	168	⇑P	Pg	13 55 17.0	-0.3
BRBR				⇑S	Sg	13 55 21.0	+0.2
BRBR	Barbar	0.26	168	⇑*i* P	Pg	13 55 17.9	+0.6
BRBR				⇑*i* S	Sg	13 55 22.0	+1.2
BHL	Bhannes	0.31	321	*e*P	Pg	13 55 18.1	-0.2
BHL				*e*S	Sg	13 55 22.2	-0.2
BHL	Bhannes	0.31	321	*e*P	Pg	13 55 18.1	-0.2
BHL				*e*S	Sg	13 55 22.2	-0.2
QASN	Qassioun	0.35	112	⇑P	Pg	13 55 19.0	-0.1
QASN				⇑S	Sg	13 55 24.0	+0.3
QASN	Qassioun	0.35	112	⇑*i* P	Pg	13 55 19.3	+0.2
QASN				⇑*i* S	Sg	13 55 24.5	+0.8
BEYL	Beirut	0.39	302	*e*P	Pg	13 55 19.6	-0.1
BEYL	Beirut	0.39	302	*e*P	Pg	13 55 19.6	-0.2
MATL	Matarih	0.50	250	*e*P	Pg	13 55 21.9	0.0
MATL	Matarih	0.50	250	*e*P	Pg	13 55 21.9	+0.1
TOTH	TOTAH	0.54	124	⇓P	Pg	13 55 23.0	+0.3
TOTH				⇓S	Sg	13 55 30.0	+0.2
TOTH	TOTAH	0.54	124	⇓*i* P	Pg	13 55 23.7	+1.0
TOTH				⇓*i* S	Sg	13 55 30.2	+0.4
MARH	Ras Al Marh	0.61	54	⇑P	Pg	13 55 24.0	-0.1
MARH				⇑S	Sg	13 55 32.0	-0.1
MARH	Ras Al Marh	0.61	54	⇑*i* P	Pg	13 55 24.4	+0.3
MARH				⇑*i* S	Sg	13 55 32.7	+0.6
HWQ	Hawqa	0.61	5	*e*P	Pg	13 55 23.5	-0.6
HWQ				*e*S	Sg	13 55 31.4	-0.8
HWQ	Hawqa	0.61	5	*e*P	Pg	13 55 23.5	-0.6
HWQ				*e*S	Sg	13 55 31.4	-0.7
SALA	Sala	1.19	143	⇑P	Pg	13 55 35.0	0.0
SALA				⇑S	Sg	13 55 49.0	-1.4
SALA	Sala	1.19	143	⇑*i* P	Pg	13 55 35.0	0.0
SALA				⇑*i* S	Sg	13 55 49.7	-0.7
ROOS	tl_alroos	1.27	66	⇑P	Pn	13 55 36.0	-0.3
ROOS				⇑S	Sb	13 55 52.0	-1.0
ROOS	tl_alroos	1.27	66	⇑*i* P	Pn	13 55 36.5	+0.2
ROOS				⇑*i* S	Sb	13 55 52.7	-0.3
BIDA	Albida	1.39	15	⇓P	Pn	13 55 38.0	0.0
BIDA				⇓S	Sb	13 55 57.0	+0.5
BIDA	Albida	1.39	15	⇓*i* P	Pn	13 55 38.5	+0.5
BIDA				⇓*i* S	Sb	13 55 57.4	+0.9
ZALF	Zalf	1.42	121	⇑P	Pn	13 55 38.0	-0.4
ZALF				⇑S	Sb	13 55 56.0	-1.3
ZALF	Zalf	1.42	121	⇑*i* P	Pn	13 55 38.8	+0.4
ZALF				⇑*i* S	Sb	13 55 56.0	-1.3
WRDH	Warideh	1.89	13	⇑P	Pn	13 55 46.0	+1.1
WRDH				⇑S	Sn	13 56 09.0	+0.1
WRDH	Warideh	1.89	13	⇑*i* P	Pn	13 55 46.1	+1.2
WRDH				⇑*i* S	Sn	13 56 09.0	+0.1

*BJI **02** 14:14:49.2, 8°.24N×57°.89E, h10km, mB4.9/2, mb4.5/13*
*MOS **02** 14:14:55.2±1.0, 8°.77N×58°.34E, h10km, mb5.0/17, Error ellipse: s-maj=10.1km s-min=7.4km az=93.3*
*IDC **02** 14:14:55.3±0.6, 8°.72N×58°.43E, h0km, mb4.2/22, mb1 4.3/23, mb1mx4.2/27, mbtmp4.2/23, ML4.1/1, MS3.8/24, Ms1 3.9/24, ms1mx3.8/31, Error ellipse: s-maj=16.8km s-min=13.6km az=142.0*
*ISCJB **02** 14:14:55.1±0.4, 8°.72N±0°.06×58°.37E±0°.05, h10km, mb4.6/49, MS3.9/25, Error ellipse: s-maj=9.5km s-min=7.0km az=161.3*
*NEIC **02** 14:14:57.0±0.3, 8°.72N×58°.40E, h10km, mb4.9/20, Error ellipse: s-maj=8.1km s-min=5.8km az=156.0*
*CSEM **02** 14:14:57.4±0.2, 8°.78N×58°.40E, h10km, mb4.9/20, Ms3.6, Mw4.9, Error ellipse: s-maj=9.9km s-min=7.0km az=155.0*
*GCMT **02** 14:14:57.1±0.4, 8°.57N×58°.36E, h12km, MW4.9, Moment Tensor Solution. s16,c19; s66,c91; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.14±.09; $M_{\theta\theta}$1.21±.08; $M_{\phi\phi}$0.93±.09; $M_{r\theta}$-0.23±.35; $M_{r\phi}$-1.07±.07; $M_{\theta\phi}$-1.31±.35; Best double couple: $M_0$2.50000×10^{16} NP1:ϕ_s112.00000°, δ40.00000°, λ-125.00000°. NP2:ϕ_s334.00000°, δ59.00000°, λ-65.00000°. Principal axes: T 2.2800, Plg10.0000°, Azm46.0000°; N 0.4400, Plg21.0000°, Azm140.0000°; P -2.7100, Plg66.0000°, Azm293.0000°; Data Used: II IU IC G.*

ISC 02 14:14:56.9±0.4, 8°.69N±0°.06×58°.41E±0°.05, h10km, n171, σ0°.93/152, mb4.6/49, MS3.9/25, 7D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	Arta Tunnel	15.58	282	Pn	Pn	14 18 36.9	+0.2
	0.7nm,0.3s,baz=79,slow=10,SNR=2.6						
ATD				LR	LR	14 23 28.9	
	comp=Z,343nm,21.6s,baz=66,slow=33						
ATD	Arta Tunnel	15.58	282	Pn	Pn	14 18 36.9	+0.2
ATD				LR	LR	14 23 28.9	
ATD	Arta Tunnel	15.58	282	Pn	Pn	14 18 36.9	+0.1
TRD	Trivandrum	18.35	89	⇓*i* P	x	14 19 25.7	
TRD				*i* S	x	14 22 49.7	
HYB	Hyderabad	21.44	64	*i* P	P	14 19 46.5	+1.0
KMBO	Kilima Mbogo	23.23	246	P	P	14 20 05.5	+1.0
	15nm,1.1s,mb4.3,baz=356,slow=19,SNR=14						
KMBO				LR	LR	14 28 34.5	
	comp=Z,272nm,20.2s,MS3.7,baz=92,slow=35						
KMBO	Kilima Mbogo	23.23	246	*e*P	P	14 20 05.8	+1.2
KMBO				pmax	pmax		
	comp=Z,14nm,1.0s						
KMBO	Kilima Mbogo	23.23	246	*e*P	P	14 20 05.8	+1.3
	comp=Z,14nm,1.0s,mb4.3						
KMBO				LR	LR	14 28 34.5	
KMBO	Kilima Mbogo	23.23	246	*e*P	P	14 20 05.8	+1.2
	comp=Z,14nm,1.0s,mb4.3						
EIL	Elat	30.32	317	LR	LR	14 33 00.3	
	comp=Z,116nm,19.4s,MS3.5,baz=278,slow=36						
GNI	Garni	33.62	341	LR	LR	14 36 17.9	
	comp=Z,99nm,20.8s,MS3.5,baz=10,slow=38						
MALT	Malatya	34.56	332	P	P	14 21 47.6	+1.8
MALT				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
MALT	Malatya	34.56	332	P	P	14 21 47.6	+1.8
	comp=Z,14nm,1.4s,mb4.7						
MALT	Malatya	34.56	332	P	P	14 21 47.6	+1.8
	comp=Z,14nm,1.4s,mb4.7						
KKAR	Karatay Array	35.89	15	*e*P	P	14 21 57.8	+0.6
KKAR				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
KKAR	Karatay Array	35.89	15	*e*P	P	14 21 57.8	+0.6
	comp=Z,16nm,1.0s,mb4.9						
KKAR	Karatay Array	35.89	15	*e*P	P	14 21 57.8	+0.6
	comp=Z,16nm,1.0s,mb4.9						
AML	Almayashu	35.94	20	*e*P	P	14 21 58.6	+1.0
AML	Almayashu	35.94	20	*e*P	P	14 21 58.6	+1.0
ZEI	Tsey	36.26	342	*e*P	P	14 22 07.5	+7.1
ZEI				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
KZA	Kyzart	36.43	21	*e*P	P	14 22 03.2	+1.4
KZA				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
KZA	Kyzart	36.43	21	*e*P	P	14 22 03.2	+1.4
	comp=Z,35nm,1.3s,mb5.1						
KZA

comp=Z,10.0nm,1.1s,mb4.4
CHTO Chiang Mai 40.55 71 *e*P **P 14 22 37.4 +0.6**
comp=Z,9.5nm,1.1s,mb4.3
CHTO Chiang Mai 40.55 71 *e*P **P 14 22 37.4 +0.6**
comp=Z,9.5nm,1.1s,mb4.3
PSI Prapat 40.71 96 LR LR 14 36 42.2
comp=Z,120nm,18.6s,MS3.8,baz=78,slow=32
AKTK Aktyubinsk 41.62 360 P **P 14 22 44.1 -1.0**
AKTK LR LR 14 40 26.5
AKTK Aktyubinsk 41.62 360 P **P 14 22 44.1 -1.0**
AKTO Aktyubinsk 41.62 360 P **P 14 22 44.1 -1.0**
comp=Z,1.0nm,0.3s,mb3.9,baz=189,slow=11,SNR=5.4
AKTO LR LR 14 40 26.5
comp=Z,66nm,19.5s,MS3.5,baz=180,slow=37
MK31 Makanchi Array 43.10 24 P **P 14 22 56.9 -0.4**
MK31 Makanchi Array 43.10 24 P **P 14 22 56.9 -0.4**
MKAR Makanchi Array 43.10 24 P **P 14 22 57.0 -0.3**
comp=Z,1.9nm,0.7s,mb3.9,baz=222,slow=5.3,SNR=18
MKAR LR LR 14 41 45.9
comp=Z,52nm,19.2s,MS3.4,baz=193,slow=37
VRHR Novokhopersk 44.49 345 *e*P **P 14 23 15.7 +7.3**
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,60nm,1.6s
VORD Divnogorie 45.01 343 *e*P **P 14 23 18.7 +6.1**
VORD pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
VORD pmax pmax
comp=N,30nm,1.3s
VORD pmax pmax
comp=E,20nm,0.6s
KURK Kurchatov 45.12 18 P **P 14 23 11.9 -1.5**
comp=E,6.0nm,0.8s,mb4.5,baz=212,slow=8.5,SNR=9.1
KURK PcP PcP 14 24 54.3 +0.4
comp=E,0.5nm,0.2s,baz=224,slow=2.6,SNR=2.3
KURK Kurchatov 45.12 18 P **P 14 23 11.9 -1.5**
KURK Kurchatov 45.12 18 PcP PcP 14 24 54.3 +0.4
BVAR Borovoye Array 45.27 10 P **P 14 23 13.6 -0.9**
comp=E,2.8nm,0.8s,mb4.1,baz=191,slow=6.8,SNR=11
BVAR PcP PcP 14 24 54.4 +0.1
comp=E,0.5nm,0.4s,baz=202,slow=1.6,SNR=2.6
BVAR Borovoye Array 45.27 10 P **P 14 23 13.6 -1.0**
BVAR Borovoye Array 45.27 10 PcP PcP 14 24 54.4 +0.1
VSR Storozhevoye 45.27 343 *e*P **P 14 23 20.8 +6.2**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.5s
VTS Vitosha 45.75 324 ||*i*P **P 14 23 22.1 +3.5**
VRI Vrincioaia 45.95 329 ||*i*P **P 14 23 22.2 +2.1**
PLOR Plostina 45.98 329 ||*i*P **P 14 23 22.1 +1.8**
MLR Muntele Rosu 46.10 328 ||*i*P **P 14 23 26.2 +5.0**
LBTB Lobatse 46.30 223 P **P 14 23 23.4 +0.3**
comp=E,3.7nm,0.5s,mb4.6,baz=65,slow=8.7,SNR=6.1
LBTB Lobatse 46.30 223 P **P 14 23 23.5 +0.4**
TESR 46.44 330 ||*i*P **P 14 23 23.7 -0.2**
VOIR 46.53 328 ||*i*P **P 14 23 25.4 +0.8**
GTA Gaotai 47.99 44 *e*P **P 14 23 36.1 0.0**
GTA pmax pmax
comp=Z,2.0nm,1.3s,mb4.0
BOSA Boshof 48.98 220 P **P 14 23 43.7 -0.1**
comp=Z,4.6nm,0.9s,mb4.5,baz=45,slow=4.3,SNR=3.8
BOSA LR LR 14 41 39.5
comp=Z,475nm,20.3s,MS4.5,baz=52,slow=33
BOSA Boshof 48.98 220 P **P 14 23 43.7 -0.1**
BOSA LR LR 14 41 39.5
BOSA Boshof 48.98 220 P **P 14 23 43.7 -0.2**
ZALV Zalesovo Beam 49.88 20 P **P 14 23 48.9 -1.4**
comp=Z,9.5nm,0.6s,mb5.0,baz=224,slow=7.3,SNR=27
ZALV LR LR 14 45 41.7
comp=Z,139nm,21.3s,MS3.9,baz=247,slow=37
NVS Novosibirsk 50.10 18 *e*P **P 14 23 50.3 -1.8**
NVS pmax pmax
comp=Z,14nm,1.5s,mb4.8
NVS pmax pmax
comp=N,11nm,1.6s
NVS Novosibirsk 50.10 18 *e*P **P 14 23 50.3 -1.8**
comp=N,11nm,1.6s,mb4.6
KEST Kesra 52.10 309 LR LR 14 47 26.9
comp=N,24nm,20.2s,MS3.2,baz=230,slow=38
XAN Xi'an 52.73 54 P **P 14 24 12.1 0.0**
XAN pP pP 14 24 18.7 +3.4
XAN pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
MORC Moravsky Berou 53.20 328 *e*P **P 14 24 15.4 +0.1**
MORC pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
MORC Moravsky Berou 53.20 328 *e*P **P 14 24 15.4 +0.1**
comp=Z,9.9nm,1.1s,mb4.7
MORC Moravsky Berou 53.20 328 *e*P **P 14 24 15.4 +0.1**
comp=Z,9.9nm,1.1s,mb4.7
TORD Torodi Ar. Bea 55.77 280 P **P 14 24 34.7 +0.2**
comp=Z,4.4nm,0.8s,mb4.5,baz=93,slow=5.8,SNR=13
TORD LR LR 14 50 26.5
comp=Z,76nm,18.4s,MS3.8,baz=110,slow=38
TORD Torodi Ar. Bea 55.77 280 P **P 14 24 34.8 +0.2**
SONM Songino Array 56.17 37 P **P 14 24 36.4 -0.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=236,slow=7.5,SNR=7.4
SONM LR LR 14 48 53.5
comp=Z,99nm,18.7s,MS3.9,baz=80,slow=36
SONM Songino Array 56.17 37 P **P 14 24 36.4 -0.5**
CLL Collm 56.46 328 *e*P **P 14 24 39.0 +0.1**
CLL *e* 14 24 44.0
CLL pmax pmax
comp=Z,50nm,2.3s,mb5.1
CLL Collm 56.46 328 *e*P **P 14 24 39.0 +0.1**
comp=Z,50nm,2.3s,mb5.1
CLL *e* 14 24 44.0
CLL Collm 56.46 328 *e*P **P 14 24 39.0 +0.1**
MBDF Montbardon 57.14 318 *e*P **P 14 24 43.3 -0.5**
MBDF Montbardon 57.14 318 *e*P **P 14 24 43.3 -0.5**
FINES FINESS Array B 57.79 342 P **P 14 24 46.8 -1.4**
comp=Z,2.3nm,0.9s,mb4.2,baz=151,slow=3.2,SNR=2.8
FINES LR LR 14 51 12.7
comp=Z,71nm,20.1s,MS3.8,baz=325,slow=38
FINES FINESS Array B 57.79 342 P **P 14 24 46.8 -1.3**
CABF La Chapelle 58.31 320 *e*P **P 14 24 52.2 +0.1**
comp=Z,94nm,1.0s,mb5.5
CABF La Chapelle 58.31 320 *e*P **P 14 24 52.2 +0.1**
CABF pmax pmax
comp=Z,47nm,1.0s,mb5.5
CABF La Chapelle 58.31 320 *e*P **P 14 24 52.2 +0.1**
comp=Z,47nm,1.0s,mb5.5
CABF La Chapelle 58.31 320 *e*P **P 14 24 52.2 +0.1**
comp=Z,47nm,1.0s,mb5.5
CDF Champ du Feu 58.31 322 *e*P **P 14 24 51.7 -0.4**
CDF Champ du Feu 58.31 322 *e*P **P 14 24 51.7 -0.4**
HINF Hinterlalfeld 58.32 322 *e*P **P 14 24 52.1 0.0**
HINF Hinterlalfeld 58.32 322 *e*P **P 14 24 52.1 0.0**
LASF Ste Croix 58.85 317 *e*P **P 14 24 55.5 -0.4**
LASF Ste Croix 58.85 317 *e*P **P 14 24 55.5 -0.4**
SFTF Sexfontaines 59.59 322 *e*P **P 14 25 00.6 -0.3**
SFTF Sexfontaines 59.59 322 *e*P **P 14 25 00.6 -0.3**
MTLF Montolieu 59.74 315 *e*P **P 14 25 01.8 -0.2**
comp=Z,45nm,1.6s,mb4.9
MTLF Montolieu 59.74 315 *e*P **P 14 25 01.8 -0.2**
MTLF pmax pmax
comp=Z,23nm,1.6s,mb5.0
MTLF Montolieu 59.74 315 *e*P **P 14 25 01.8 -0.2**
comp=Z,23nm,1.6s,mb5.0
MTLF Montolieu 59.74 315 *e*P **P 14 25 01.8 -0.2**
comp=Z,23nm,1.6s,mb5.0
LOR Lormes 59.97 320 *e*P **P 14 25 02.9 -0.7**
comp=Z,23nm,1.0s,mb4.8
LOR *e*MLR MLR
comp=Z,51nm,22.0s,MS3.3
LOR Lormes 59.97 320 *e*P **P 14 25 02.9 -0.7**
LOR pmax pmax
comp=Z,11nm,1.0s,mb4.8
LOR MLR MLR
comp=Z,50nm,22.0s,MS3.6
LOR Lormes 59.97 320 *e*P **P 14 25 02.9 -0.7**
comp=Z,11nm,1.0s,mb4.9
LOR LR LR
comp=Z,50nm,22.0s,MS3.6
LOR Lormes 59.97 320 *e*P **P 14 25 02.9 -0.7**
comp=Z,11nm,1.0s,mb4.9
SSF Saint Saulge 60.12 320 *e*P **P 14 25 03.8 -0.8**
comp=Z,23nm,1.0s,mb4.9
SSF Saint Saulge 60.12 320 *e*P **P 14 25 03.8 -0.8**
SSF pmax pmax
comp=Z,12nm,1.0s,mb4.9
SSF Saint Saulge 60.12 320 *e*P **P 14 25 03.8 -0.8**
comp=Z,12nm,1.0s,mb4.9
SSF Saint Saulge 60.12 320 *e*P **P 14 25 03.8 -0.8**
comp=Z,12nm,1.0s,mb4.9
AVF Avril sur Loir 60.12 319 *e*P **P 14 25 03.5 -1.1**
AVF Avril sur Loir 60.12 319 *e*P **P 14 25 03.5 -1.1**
GIVF Givet 60.48 323 *e*P **P 14 25 06.7 -0.3**
GIVF Givet 60.48 323 *e*P **P 14 25 06.7 -0.3**
TCF Toulx Ste Croi 60.69 319 *e*P **P 14 25 08.0 -0.5**
TCF Toulx Ste Croi 60.69 319 *e*P **P 14 25 08.0 -0.5**
BAIF Baives 60.83 323 *e*P **P 14 25 09.2 -0.2**
BAIF Baives 60.83 323 *e*P **P 14 25 09.2 -0.2**
ETSF Etsaut 61.55 314 *e*P **P 14 25 14.9 +0.4**
comp=Z,14nm,0.9s,mb4.8
ETSF Etsaut 61.55 314 *e*P **P 14 25 14.9 +0.4**
ETSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
ETSF Etsaut 61.55 314 *e*P **P 14 25 14.9 +0.4**
comp=Z,6.8nm,0.9s,mb4.8
ETSF Etsaut 61.55 314 *e*P **P 14 25 14.9 +0.4**
comp=Z,6.8nm,0.9s,mb4.8
SJPF Ste Jean 62.08 314 *e*P **P 14 25 16.7 -1.3**
comp=Z,21nm,1.1s,mb4.9
SJPF Ste Jean 62.08 314 *e*P **P 14 25 16.7 -1.3**
SJPF pmax pmax
comp=Z,11nm,1.1s,mb4.9
SJPF Ste Jean 62.08 314 *e*P **P 14 25 16.7 -1.3**
comp=Z,11nm,1.1s,mb4.9
SJPF Ste Jean 62.08 314 *e*P **P 14 25 16.7 -1.3**
comp=Z,11nm,1.1s,mb4.9
KIC Kosan Boka 62.59 273 *e*P **P 14 25 22.7 +0.8**
comp=Z,57nm,1.3s,mb5.6
KIC Kosan Boka 62.59 273 *e*P **P 14 25 22.7 +0.8**
comp=Z,57nm,1.3s,mb5.5
DBIC Dimbokro 62.67 273 P **P 14 25 23.1 +0.7**
comp=Z,5.2nm,1.0s,mb4.6,baz=76,slow=9.8,SNR=2.8
DBIC LR LR 14 53 36.7
comp=Z,85nm,21.4s,MS3.9,baz=74,slow=37
DBIC Dimbokro 62.67 273 P **P 14 25 23.1 +0.7**
DBIC LR LR 14 53 36.7
DBIC Dimbokro 62.67 273 P **P 14 25 23.1 +0.7**
NOA NORSAR Array B 62.74 336 P **P 14 25 21.6 -0.5**
comp=Z,0.9nm,0.8s,mb4.0,baz=120,slow=8.2,SNR=2.7
NOA LR LR 14 55 11.9
comp=Z,55nm,20.3s,MS3.7,baz=175,slow=38
NOA NORSAR Array B 62.74 336 P **P 14 25 21.6 -0.4**
TIC Toumodi 62.83 273 *e*P **P 14 25 24.5 +1.0**
comp=Z,68nm,1.3s,mb5.6
TIC Toumodi 62.83 273 *e*P **P 14 25 24.5 +1.0**
comp=Z,68nm,1.3s,mb5.6
LIC Lamto 62.89 273 *e*P **P 14 25 24.9 +1.0**
comp=Z,46nm,1.1s,mb5.5
LIC Lamto 62.89 273 *e*P **P 14 25 24.6 +0.7**
comp=Z,86nm,1.4s,mb5.4
LIC *e*MLR MLR
comp=Z,215nm,19.5s,MS4.0
LIC Lamto 62.89 273 *e*P **P 14 25 24.6 +0.7**
comp=Z,43nm,1.4s,mb5.4
LIC LR LR
comp=Z,110nm,19.5s,MS4.0
LIC Lamto 62.89 273 *e*P **P 14 25 24.6 +0.7**
comp=Z,43nm,1.4s,mb5.4
ESDC Sonseca Array 63.30 310 P **P 14 25 25.8 -0.4**
comp=Z,0.4nm,0.3s,mb4.0,baz=76,slow=4.5,SNR=5.6
ESDC Sonseca Array 63.30 310 P **P 14 25 25.8 -0.4**
ARCES ARCESS Array B 64.38 348 P **P 14 25 31.5 -1.2**
comp=Z,6.1nm,1.1s,mb4.5,baz=145,slow=6.4,SNR=3.6
ARCES LR LR 14 56 52.1
comp=Z,70nm,20.9s,MS3.8,baz=41,slow=39
ARCES ARCESS Array B 64.38 348 P **P 14 25 31.5 -1.2**
ARCES LR LR 14 56 52.1
ARCES ARCESS Array B 64.38 348 P **P 14 25 31.5 -1.2**
KSRS Korea Array 68.52 53 P **P 14 26 00.3 +0.4**
comp=Z,1.6nm,0.9s,mb4.0,baz=266,slow=6.1,SNR=3.9
KSRS LR LR 14 56 38.1
comp=Z,126nm,21.4s,MS4.1,baz=117,slow=37
NWAO Narrogin (SRO) 69.56 130 LR LR 14 50 18.4
comp=Z,162nm,21.0s,MS4.2,baz=215,slow=30
BBTS Babate 73.36 289 LR LR 15 02 25.8
comp=Z,101nm,18.7s,MS4.1,baz=109,slow=39
MJAR Matsushiro Arr 76.71 55 LR LR 15 01 39.1
comp=Z,78nm,19.9s,MS4.0,baz=120,slow=37
WRA Warramunga Arr 79.91 112 P **P 14 27 05.8 -0.8**
comp=Z,2.7nm,1.0s,mb4.1,baz=292,slow=4.5,SNR=12
WRA Warramunga Arr 79.91 112 P **P 14 27 05.8 -0.8**
ASAR Alice Springs 80.38 116 P **P 14 27 08.7 -0.4**
comp=Z,3.0nm,1.0s,mb4.2,baz=285,slow=5.0,SNR=15
ASAR Alice Springs 80.38 116 P **P 14 27 08.7 -0.4**
GUMO Guam 84.59 77 LR LR 15 00 53.0
comp=Z,59nm,19.3s,MS4.0,baz=271,slow=33
PETK Petropavlovsk- 88.66 37 LR LR 15 09 32.6
comp=Z,74nm,20.8s,MS4.1,baz=121,slow=37
STKA Stephens Creek 88.80 122 P **P 14 27 52.5 +1.0**
comp=Z,5.2nm,1.0s,mb4.8,baz=306,slow=8.7,SNR=3.3
STKA LR LR 15 00 54.2
comp=Z,200nm,19.1s,MS4.6,baz=203,slow=31
STKA Stephens Creek 88.80 122 P **P 14 27 52.5 +1.0**
VNA2 Neumayer--Watz 90.48 197 *e* **P 14 27 57.1 -1.4**
baz=37,slow=4.9
VNA2 *e* 14 28 04.3
VNA3 Neumayer Olymp 91.29 197 *e* **P 14 27 59.3 -2.9**
VNA3 *e* 14 28 08.5
PDAR Pinedale Array 127.63 349 PKP PKPdf 14 34 02.7 -0.1
comp=Z,0.7nm,0.9s,baz=45,slow=2.8,SNR=4.2
PDAR Pinedale Array 127.63 349 PKIKP PKPdf 14 34 02.7 -0.1
NVAR Mina Array Bea 133.03 356 PKP PKPdf 14 34 14.4 +1.2
comp=Z,0.9nm,0.9s,baz=340,slow=1.3,SNR=4.7
NVAR Mina Array Bea 133.03 356 PKIKP PKPdf 14 34 14.4 +1.2
TXAR Lajitas Array 138.44 336 PKP PKPdf 14 34 21.9 -1.6
comp=Z,0.4nm,0.8s,baz=222,slow=1.2,SNR=3.7
TXAR Lajitas Array 138.44 336 PKP PKPdf 14 34 21.9 -1.6
TXAR Lajitas Array 138.44 336 PKIKP PKPdf 14 34 21.9 -1.6

ISCJB ***02*** *14:15:44.6±0.5, 52°.8N±0°.1×177°.1W±0°.1, h270km±7km, mb3.3/12, Error ellipse: s-maj=21.2km s-min=8.4km az=163.9*
NEIC ***02*** *14:15:45.6±0.6, 52°.69N×177°.03W, h266km±7km, mb4.2/2, Error ellipse: s-maj=19.5km s-min=8.0km az=163.0*
IDC ***02*** *14:15:46.4±2.7, 52°.91N×177°.01W, h274km±27km, mb3.1/12, mb1 3.4/15, mb1mx3.3/27, mbtmp3.2/15, Error ellipse: s-maj=26.6km s-min=11.2km az=167.0*
ISC 02 14:15:45.6±0.5, 52°.7N±0°.1×177°.1W±0°.1, h265km±6km, n26, σ1°.03/27, mb3.3/12, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.85**	**134**	*e*P	**Pn**	**14 16 21.7**	**+0.2**
ATKA	**Atka Island**	**1.81**	**105**	P	**Pn**	**14 16 27.3**	**-0.4**
AMKA	**Amchitka**	**2.61**	**241**	*e*P	**Pn**	**14 16 34.3**	**-0.7**
AMKA				*e*S	**S**	**14 17 09.3**	**-4.9**
SMY	**Shemya**	**5.38**	**274**	*e*P	**Pn**	**14 17 06.7**	**+0.3**
UNV	**Unalaska Valle**	**6.43**	**75**	P	**Pn**	**14 17 19.4**	**+0.2**
SVW2	**Sparrevohn**	**14.38**	**46**	*e*P	**Pn**	**14 18 59.8**	**+2.4**
	6.1nm,0.6s						
KDAK	**Kodiak Island**	**14.81**	**60**	P	**Pn**	**14 19 01.1**	**-1.6**
	5.3nm,0.3s,baz=280,slow=7.0,SNR=33						
PETK	**Petropavlovsk-**	**15.23**	**282**	P	**Pn**	**14 19 08.3**	**+0.7**
	0.4nm,0.3s,baz=81,slow=16,SNR=7.7						
PPLA	**Purkeypile**	**16.61**	**42**	*e*P	**P**	**14 19 23.8**	**+2.0**
	10nm,0.8s						
RC01	**Rabbit Creek A**	**17.01**	**50**	*e*P	**P**	**14 19 27.0**	**+0.8**
ILAR	**Eielson Array**	**19.54**	**40**	P	**P**	**14 19 50.8**	**-2.5**
	0.3nm,0.3s,baz=239,slow=9.3,SNR=28						
ILAR				ScP	ScP	14 27 08.2	-2.7
	0.0nm,0.3s,baz=284,slow=4.1,SNR=4.0						
DAWY	**Dawson**	**22.41**	**45**	P	**P**	**14 20 22.3**	**+0.8**
INK	**Inuvik**	**25.76**	**36**	P	**P**	**14 20 49.4**	**-2.4**
	3.5nm,1.2s,mb3.6,baz=250,slow=6.7,SNR=3.6						
INK	**Inuvik**	**25.76**	**36**	P	**P**	**14 20 49.4**	**-2.4**
YKA	**Yellowknife Ar**	**33.55**	**48**	P	**P**	**14 21 59.5**	**-0.6**
	1.1nm,0.4s,mb3.7,baz=282,slow=7.3,SNR=14						
MJAR	**Matsushiro Arr**	**35.06**	**261**	P	**P**	**14 22 13.5**	**0.0**
	0.9nm,0.5s,mb3.6,baz=41,slow=6.9,SNR=4.3						
KSRS	**Korea Array**	**40.71**	**271**	P	**P**	**14 23 00.2**	**-0.2**
	0.6nm,0.5s,mb3.1,baz=52,slow=7.8,SNR=4.1						
NVAR	**Mina Array Bea**	**42.34**	**85**	P	**P**	**14 23 14.5**	**+0.9**
	0.3nm,0.5s,mb2.7,baz=303,slow=10,SNR=3.7						
PDAR	**Pinedale Array**	**44.90**	**75**	P	**P**	**14 23 33.3**	**-0.5**
	0.8nm,0.5s,mb3.2,baz=311,slow=3.5,SNR=6.4						
SONM	**Songino Array**	**47.03**	**296**	P	**P**	**14 23 50.4**	**+0.1**
	0.2nm,0.3s,mb2.9,baz=50,slow=9.7,SNR=3.6						
TXAR	**Lajitas Array**	**57.40**	**83**	P	**P**	**14 25 06.4**	**-0.1**
	0.2nm,0.3s,mb3.0,baz=308,slow=5.8,SNR=6.3						
MKAR	**Makanchi Array**	**60.06**	**309**	P	**P**	**14 25 23.5**	**-0.9**
	0.3nm,0.3s,mb3.4,baz=51,slow=5.2,SNR=2.1						
BVAR	**Borovoye Array**	**60.58**	**320**	P	**P**	**14 25 27.8**	**-0.1**
	0.9nm,0.4s,mb3.6,baz=43,slow=6.5,SNR=3.4						
BVAR	**Borovoye Array**	**60.58**	**320**	P	**P**	**14 25 27.8**	**-0.1**
WRA	**Warramunga Arr**	**83.71**	**225**	P	**P**	**14 27 44.5**	**-0.1**
	0.3nm,0.8s,mb3.1,baz=30,slow=5.5,SNR=2.8						
ASAR	**Alice Springs**	**87.19**	**224**	P	**P**	**14 28 02.5**	**+0.9**
	0.3nm,0.5s,mb3.4,baz=32,slow=4.4,SNR=2.9						

IDC 02 14:39:58.0±1.3, 17°.45S×64°.91W, h0km, mb4.1/3, mb1 4.2/5, mb1mx3.9/17, mbtmp4.0/5, ML3.7/2, Error ellipse: s-maj=35.2km s-min=18.7km az=161.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.30**	**290**	Pn	Pn	14 40 49.5	-1.5
	4.6nm,0.3s,baz=113,slow=13,SNR=67						
LPAZ				Lg		14 41 32.1	
	109nm,0.3s,baz=234,slow=19,SNR=19						
SIV	**San Ignacio**	**3.95**	**69**	Pn	Pn	14 41 01.3	+1.4
	4.3nm,0.3s,baz=268,slow=11,SNR=83						
SIV				Pg	Pg	14 41 10.9	-3.0
	20nm,0.3s,baz=268,slow=16,SNR=74						
SIV				Lg		14 42 02.2	
	8.5nm,0.3s,baz=180,slow=20,SNR=4.0						
PLCA	**Paso Flores**	**23.71**	**191**	P	P	14 45 12.0	+0.3
	2.9nm,0.9s,baz=4.5,slow=11,SNR=4.7						
TORD	**Torodi Ar. Bea**	**72.43**	**70**	P	P	14 51 25.2	-1.6
	0.2nm,0.6s,baz=247,slow=6.1,SNR=2.4						
YKA	**Yellowknife Ar**	**88.70**	**339**	P	P	14 52 54.6	+1.7
	0.6nm,0.8s,baz=122,slow=4.2,SNR=5.7						

ATH ***02*** *14:44:15.3, 37°.90N×21°.44E, h31km±3km, MD2.8/5*
ISCJB ***02*** *14:44:16.1±0.6, 37°.87N±0°.05×21°.44E±0°.04, h30km±4km, Error ellipse: s-maj=7.7km s-min=4.8km az=177.3*
CSEM ***02*** *14:44:16.1±0.2, 37°.87N×21°.44E, h26km±2km, MD2.8, Error ellipse: s-maj=4.0km s-min=3.6km az=174.0*
THE ***02*** *14:44:16.5, 37°.88N×21°.45E, h15km±2km, ML1.7/4, Error ellipse: s-maj=3.0km s-min=0.7km az=47.0*
ISC 02 14:44:16.1±0.6, 37°.87N±0°.05×21°.44E±0°.04, h29km±5km, n26, σ0°.79/44, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.19**	**6**	*e*PB	**Pb**	**14 44 21.2**	**-0.9**
RLS				*e*SB	**Sb**	**14 44 25.1**	**-1.1**
RLS	**Riolos of Patr**	**0.19**	**6**	*e*Pb	**Pb**	**14 44 21.2**	**-0.9**
RLS				*e*Sb	**Sb**	**14 44 25.1**	**-1.1**
LAKA	**Lakka**	**0.57**	**48**	P	**Pb**	**14 44 27.8**	**+0.3**
LAKA				S	**Sb**	**14 44 35.7**	**+0.4**
LAKA	**Lakka**	**0.57**	**48**	P	**Pb**	**14 44 27.8**	**+0.3**
LAKA				S	**Sb**	**14 44 35.7**	**+0.4**
KFL	**Anninata**	**0.57**	**296**	P	**Pb**	**14 44 27.7**	**+0.1**
KFL	**Anninata**	**0.57**	**296**	P	**Pb**	**14 44 27.7**	**+0.1**
EFP	**Efpalio**	**0.67**	**33**	*e*PN	**Pn**	**14 44 29.2**	**-0.4**
EFP				*e*SN	**Sn**	**14 44 38.1**	**-1.0**
EFP	**Efpalio**	**0.67**	**33**	P	**Pb**	**14 44 28.9**	**-0.4**
EFP				S	**Sb**	**14 44 38.7**	**+0.5**
EFP	**Efpalio**	**0.67**	**33**	P	**Pb**	**14 44 28.9**	**-0.4**
EFP	**Efpalio**	**0.67**	**33**	*e*Pn	**Pn**	**14 44 29.2**	**-0.4**
EFP				*e*Sn	**Sn**	**14 44 38.1**	**-1.0**
EFP				S	**Sb**	**14 44 38.7**	**+0.5**
TRIZ	**Trizonia**	**0.70**	**45**	P	**Pb**	**14 44 29.3**	**-0.6**
TRIZ				S	**Sb**	**14 44 40.4**	**+1.2**
TRIZ	**Trizonia**	**0.70**	**45**	P	**Pb**	**14 44 29.3**	**-0.6**
TRIZ				S	**Sb**	**14 44 40.4**	**+1.2**
GUR	**Goura**	**0.72**	**84**	*e*PN	**Pn**	**14 44 29.5**	**-0.7**
GUR				*e*SN	**Sn**	**14 44 40.3**	**+0.1**
GUR	**Goura**	**0.72**	**84**	P	**Pb**	**14 44 29.6**	**-0.4**
GUR				S	**Sb**	**14 44 41.3**	**+1.8**
GUR	**Goura**	**0.72**	**84**	P	**Pb**	**14 44 29.6**	**-0.4**
GUR				*e*Sn	**Sn**	**14 44 40.3**	**+0.1**
GUR				S	**Sb**	**14 44 41.3**	**+1.8**
VLS	**Valsamata**	**0.74**	**295**	*e*PN	**Pn**	**14 44 30.0**	**-0.6**
VLS				*e*SN	**Sn**	**14 44 41.4**	**+0.6**
VLS	**Valsamata**	**0.74**	**295**	P	**Pb**	**14 44 30.1**	**-0.3**
VLS				S	**Sb**	**14 44 42.1**	**+1.9**
VLS	**Valsamata**	**0.74**	**295**	P	**Pb**	**14 44 30.1**	**-0.3**
VLS				*e*Sn	**Sn**	**14 44 41.4**	**+0.6**
VLS				S	**Sb**	**14 44 42.1**	**+1.9**
KALE	**Kalithea**	**0.76**	**46**	P	**Pb**	**14 44 30.8**	**0.0**
KALE	**Kalithea**	**0.76**	**46**	P	**Pb**	**14 44 30.8**	**0.0**
ITM	**Ithomi**	**0.79**	**150**	*e*PN	**Pn**	**14 44 32.2**	**+1.0**
ITM	**Ithomi**	**0.79**	**150**	P	**Pn**	**14 44 31.6**	**+0.4**
ITM	**Ithomi**	**0.79**	**150**	P	**Pn**	**14 44 31.6**	**+0.4**
ITM	**Ithomi**	**0.79**	**150**	*e*Pn	**Pn**	**14 44 32.2**	**+1.0**
PYL	**PYLOS**	**1.00**	**166**	*e*PB	**Pb**	**14 44 34.2**	**-0.6**
PYL	**PYLOS**	**1.00**	**166**	*e*Pb	**Pb**	**14 44 34.2**	**-0.6**

WEL 02 14:45:24.0±0.2, 38°.01S×176°.39E, h153km±2km, ML4.6/22, 2C, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIRZ	**Lichensteins R**	**0.01**	**286**	PN	Pn	14 45 44.5	+0.1
OMRZ	**Omania**	**0.10**	**189**	PN	Pn	14 45 44.6	+0.2
KARZ	**Kaharoa**	**0.12**	**263**	⇑PN	Pn	14 45 44.5	+0.1
OPRZ	**Ohinepanea**	**0.20**	**39**	PN	Pn	14 45 44.4	-0.2
OPRZ				SN	Sn	14 46 00.0	-0.3
MARZ	**Manawahe**	**0.22**	**85**	PN	Pn	14 45 44.8	+0.1
UTU	**Utuhina**	**0.23**	**223**	PN	Pn	14 45 45.1	+0.4
TARZ	**Mount Tarawera**	**0.24**	**159**	PN	Pn	14 45 45.1	+0.4
EDRZ	**Edgecumbe**	**0.29**	**110**	PN	Pn	14 45 44.9	0.0
TGRZ	**Tauranga**	**0.29**	**339**	PN	Pn	14 45 44.8	-0.1
RRRZ	**Republican Roa**	**0.35**	**164**	PN	Pn	14 45 45.0	0.0
HRRZ	**Handcock Road**	**0.39**	**193**	PN	Pn	14 45 45.4	+0.2
PRRZ	**Plateau Road**	**0.49**	**180**	PN	Pn	14 45 45.6	0.0
ALRZ	**Allen Road**	**0.56**	**184**	PN	Pn	14 45 45.7	-0.2
URZ	**Urewera**	**0.62**	**114**	PN	Pn	14 45 45.5	-0.8
URZ				*e*SN	Sn	14 46 01.7	-1.6
URZ				SN	Sn	14 46 02.4	-0.9
WHTZ	**Whakaora**	**0.74**	**207**	PN	Pn	14 45 47.5	+0.5
TOZ	**Tahuroa Road**	**0.76**	**291**	PN	Pn	14 45 47.3	+0.1
TOZ				SN	Sn	14 46 04.9	+0.1
WATZ	**Wairara**	**0.87**	**216**	PN	Pn	14 45 48.2	+0.2
HATZ	**Hinemaiaia**	**0.92**	**195**	PN	Pn	14 45 48.3	-0.1
MWZ	**Matawai**	**0.95**	**110**	PN	Pn	14 45 48.2	-0.4
MWZ				SN	Sn	14 46 06.6	-0.8
RATZ	**Rangitukua**	**0.99**	**209**	PN	Pn	14 45 49.0	+0.1
RITZ	**Rihia Road**	**1.06**	**203**	PN	Pn	14 45 49.8	+0.4
RAHZ	**Arahi**	**1.06**	**149**	PN	Pn	14 45 49.9	+0.4
KATZ	**Kakaramea**	**1.11**	**209**	PN	Pn	14 45 50.0	+0.1
NMHZ	**Naumai**	**1.14**	**164**	PN	Pn	14 45 50.9	+0.7
BKZ	**Black Stump Fm**	**1.16**	**176**	⇑PN	Pn	14 45 50.2	-0.2
KRVZ	**Karewarewa**	**1.24**	**208**	PN	Pn	14 45 51.1	0.0
WTVZ	**West Tongariro**	**1.27**	**209**	PN	Pn	14 45 51.5	0.0
OTVZ	**Oturere**	**1.29**	**206**	PN	Pn	14 45 51.7	+0.1
TWVZ	**Taurewa**	**1.30**	**215**	PN	Pn	14 45 51.8	0

WAZ	Wanganui	2.06 212	PN	Pn	14 45 59.4	-0.6
TSZ	Takapari Road	2.08 189	PN	Pn	14 45 59.0	-1.1
NEZ	North Egmont	2.20 234	PN	Pn	14 46 02.0	+0.5
PKE	Pukeiti	2.23 237	PN	Pn	14 46 02.2	+0.3
PRHZ	Porangahau	2.27 175	PN	Pn	14 46 01.4	-1.0
DVHZ	Dannevirke	2.30 184	PN	Pn	14 46 01.3	-1.4
POWZ	Post Office Ro	2.43 191	PN	Pn	14 46 02.7	-1.6
BFZ	Birch Farm	2.67 182	PN	Pn	14 46 05.6	-1.7
MRZ	Mangatainoka R	2.73 193	PN	Pn	14 46 05.9	-2.1
TIWZ	Tintock	2.79 188	PN	Pn	14 46 07.0	-1.8
OGWZ	Otaki Gorge	2.96 198	PN	Pn	14 46 08.7	-2.3
HOWZ	Holdsworth Sta	2.97 193	PN	Pn	14 46 08.6	-2.4
KIW	Kapiti Island	3.07 201	PN	Pn	14 46 09.7	-2.7
TMWZ	Te Maipa	3.12 187	PN	Pn	14 46 10.5	-2.4
MTW	Mount Morrison	3.22 192	PN	Pn	14 46 11.4	-2.8
CAW	Cannon Point	3.26 198	PN	Pn	14 46 11.9	-2.9
DUWZ	D'Urville Isla	3.39 214	PN	Pn	14 46 13.4	-2.9
TRWZ	Traveller	3.43 189	PN	Pn	14 46 14.0	-2.9
WEL	Wellington	3.51 200	PN	Pn	14 46 14.8	-3.1
MSWZ	Moikau Station	3.52 194	PN	Pn	14 46 14.7	-3.2
TCW	Tory Channel	3.59 206	PN	Pn	14 46 15.8	-3.2
PLWZ	Palliser	3.67 193	PN	Pn	14 46 16.5	-3.4
TUWZ	Tuamarina	3.91 208	PN	Pn	14 46 19.5	-3.5
NNZ	Nelson	3.96 215	PN	Pn	14 46 20.1	-3.7
QRZ	Quartz Range	4.11 226	PN	Pn	14 46 21.9	-3.8
BSWZ	Blackbirch Sta	4.18 207	PN	Pn	14 46 22.9	-3.6
THZ	Tophouse	4.61 214	PN	Pn	14 46 28.5	-3.7
KHZ	Kahutara	4.92 205	PN	Pn	14 46 32.1	-4.1
DSZ	Denniston Nort	5.14 222	PN	Pn	14 46 34.0	-5.2
LTZ	Lake Taylor	5.71 212	PN	Pn	14 46 42.0	-4.8
CRLZ	Canterbury Las	6.26 206	PN	Pn	14 46 48.4	-5.6
MQZ	McQueen's Vall	6.36 205	PN	Pn	14 46 49.5	-5.9

*ISCJB **02** 14:45:25.7±1.6, 21°.46S±0°.09×68°.4W±0°.2, h118km±17km, mb3.7/3, Error ellipse: s-maj=32.7km s-min=15.1km az=3.4*
*IDC **02** 14:45:25.6±2.6, 21°.47S×68°.54W, h102km±22km, mb3.9/3, mb1 4.0/5, mb1mx3.7/15, mbtmp3.9/5, Error ellipse: s-maj=38.0km s-min=25.7km az=92.0*
*NEIC **02** 14:45:26.6±1.4, 21°.43S×68°.49W, h107km±13km, mb3.6/1, Error ellipse: s-maj=29.2km s-min=12.9km az=94.0*

ISC 02 14:45:26.6±1.4, 21°.48S±0°.09×68°.4W±0°.2, h112km±15km, n13, σ1§06/9, mb3.7/3, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	5.17	3	P	Pn	14 46 42.4	+0.6
	5.3nm,0.3s,baz=195,slow=12,SNR=18						
LPAZ	La Paz	5.17	3	*e*P	Pn	14 46 43.2	+1.4
SIV	San Ignacio	8.86	53	P	Pn	14 47 30.9	-0.9
	2.7nm,0.3s,baz=237,slow=17,SNR=5.8						
CFAA	Coronel Fontan	10.09	179	P	Pn	14 47 47.6	-0.9
	0.1nm,0.3s,baz=350,slow=16,SNR=6.8						
TRQA	Tornquist	17.44	163	P	Pn	14 49 25.8	+3.0
	3.7nm,0.8s						
PDAR	Pinedale Array	74.31	330	P	P	14 56 51.2	-0.4
	0.2nm,0.4s,mb3.2,baz=123,slow=4.4,SNR=2.9						
PDAR	Pinedale Array	74.31	330	P	P	14 56 51.2	-0.4
TORD	Torodi Ar. Bea	76.93	70	P	P	14 57 07.7	+0.5
	1.3nm,0.8s,mb3.7,baz=253,slow=6.2,SNR=5.8						
YKA	Yellowknife Ar	91.31	340	P	P	14 58 18.5	-0.5
	0.8nm,0.5s,mb4.1,baz=131,slow=4.5,SNR=11						
ASAR	Alice Springs	130.14	207	PKP	PKPdf	15 04 24.6	+0.5
	0.1nm,0.5s,baz=126,slow=2.0,SNR=3.6						
ZALV	Zalesovo Beam	141.74	25	PKP	PKPdf	15 04 45.1	+0.5
	0.6nm,0.4s,baz=308,slow=3.5,SNR=3.0						
MK31	Makanchi Array	145.35	36	*e*PKP	PKPab	15 04 52.5	+1.0
MKAR	Makanchi Array	145.35	36	PKPbc	PKPbc	15 04 52.1	+0.9
	1.5nm,0.7s,baz=315,slow=3.9,SNR=11						

IDC 02 14:45:41.9±2.4, 5°.67S×130°.63E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=96.7km s-min=29.2km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.28	201	Pn	Pn	14 48 53.1	+1.3
	0.1nm,0.3s,baz=32,slow=11,SNR=5.6						
FITZ				Sn	Sn	14 51 07.0	-13
	0.3nm,0.3s,baz=165,slow=19,SNR=4.5						
WRA	Warramunga Arr	14.63	166	Pn	Pn	14 49 11.6	+1.3
	0.1nm,0.3s,baz=348,slow=13,SNR=2.8						
WRA				Sn	Sn	14 51 41.6	-12
	0.2nm,0.3s,baz=350,slow=24,SNR=3.6						
ASAR	Alice Springs	18.16	170	P	Pn	14 49 54.2	-1.5
	0.4nm,0.3s,baz=349,slow=10,SNR=20						
MKAR	Makanchi Array	67.47	326	P	P	14 56 39.8	+0.2
	0.3nm,0.4s,baz=134,slow=7.2,SNR=4.7						

IDC 02 14:47:14.1±2.4, 6°.02S×130°.01E, h0km, mb3.3/1, mb1 3.5/4, mb1mx3.3/17, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=93.9km s-min=30.7km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.75	199	Pn	Pn	14 50 18.0	+1.3
	0.1nm,0.3s,baz=27,slow=11,SNR=3.4						
FITZ				Sn	Sn	14 52 27.9	-12
	0.3nm,0.3s,baz=270,slow=20,SNR=3.4						
WRA	Warramunga Arr	14.47	163	Pn	Pn	14 50 40.0	-0.3
	0.2nm,0.3s,baz=346,slow=13,SNR=5.7						
WRA				Sn	Sn	14 53 08.8	-13
	0.1nm,0.3s,baz=333,slow=22,SNR=2.4						
ASAR	Alice Springs	17.95	168	P	Pn	14 51 24.6	-0.5
	0.1nm,0.3s,baz=340,slow=9.5,SNR=5.3						
MKAR	Makanchi Array	67.41	327	P	P	14 58 11.5	+0.1
	0.1nm,0.3s,baz=130,slow=6.3,SNR=2.9						

IDC 02 14:54:03.0±83.0, 13°.07S×166°.33E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/17, mbtmp3.9/3, Error ellipse: s-maj=1402.0km s-min=120.1km az=61.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.42	226	P	P	15 00 07.7	-0.7
	1.2nm,0.4s,baz=48,slow=10,SNR=6.0						
WRA	Warramunga Arr	31.38	253	P	P	15 00 26.3	+0.5
	0.4nm,0.4s,baz=82,slow=7.2,SNR=2.6						
ASAR	Alice Springs	32.45	246	P	P	15 00 35.5	+0.3
	0.7nm,0.3s,baz=69,slow=9.9,SNR=33						

*IDC **02** 15:10:57.4±1.5, 10°.99S×121°.54E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.8/17, mbtmp3.8/8, ML3.7/3, Error ellipse: s-maj=122.1km s-min=22.7km az=56.0*
*ISCJB **02** 15:11:06.0±3.2, 11°.8S±0°.1×121°.2E±0°.1, h114km±39km, mb3.6/5, Error ellipse: s-maj=26.2km s-min=14.7km az=156.9*
*NEIC **02** 15:11:06.2±2.5, 11°.77S×121°.04E, h98km±31km, Error ellipse: s-maj=25.2km s-min=19.3km az=181.0*

ISC 02 15:11:06.7±2.2, 11°.7S±0°.1×121°.17E±0°.10, h101km±27km, n19, σ1§08/20, mb3.6/5, South of Timor

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	7.67	146	Pn	Pn	15 12 56.0	+0.3
	0.9nm,0.3s,baz=337,slow=14,SNR=41						
FITZ				Sn	Sx	15 14 19.5	
	7.6nm,0.3s,baz=178,slow=17,SNR=17						
FITZ	Fitzroy Crossi	7.67	146	*e*P	Pn	15 12 55.7	0.0
	6.4nm,0.4s						
FITZ				*e*S	Sx	15 14 19.0	
FITZ	Fitzroy Crossi	7.67	146	*e*P	Pn	15 12 55.9	+0.3
FITZ				*e*S	Sx	15 14 21.2	
KNA	Kununurra	8.39	119	*e*P	Pn	15 13 06.3	+0.7
	5.5nm,0.2s						
KNA				*e*S	Sn	15 14 37.2	-1.4
MBWA	Marble Bar	9.47	188	*e*P	Pn	15 13 18.9	-1.4
MBWA				*e*S	Sx	15 14 57.9	
MBWA	Marble Bar	9.47	188	*e*P	Pn	15 13 18.8	-1.5
	5.5nm,0.5s						
KAKA	Kakadu	11.06	96	*e*P	Pn	15 13 43.4	+1.5
	7.4nm,0.6s						
KAKA	Kakadu	11.06	96	*e*P	Pn	15 13 43.3	+1.5
MEEK	Meekatharra	15.02	189	*e*P	Pn	15 14 33.5	-0.2
MEEK				*e*S	Sx	15 17 08.9	

WRA	Warramunga Arr	15.06	124	Pn	Pn	15 14 33.5	-0.8
	0.3nm,0.3s,baz=298,slow=14,SNR=6.3					
WRA				Sn	Sx	15 17 12.7	
	0.6nm,0.3s,baz=303,slow=24,SNR=6.5					
WRA	Warramunga Arr	15.06	124	Pn	Pn	15 14 33.5	-0.8
WRA				Sn	Sx	15 17 12.7	
WB2	Warramunga Arr	15.07	124	*e*P	Pn	15 14 33.8	-0.6
ASAR	Alice Springs	16.95	136	Pn	Pn	15 15 00.6	+2.8
	0.3nm,0.3s,baz=314,slow=12,SNR=71						
ASAR				Sn	Sx	15 18 02.2	
	0.4nm,0.3s,baz=314,slow=24,SNR=9.6						
MORW	Morawa	17.90	195	*e*P	Pn	15 15 10.7	+1.5
MORW				*e*S	Sx	15 18 12.6	
CMAR	Chiang Mai Arr	37.16	324	P	P	15 18 07.2	-0.8
	0.2nm,0.3s,mb3.5,baz=140,slow=5.9,SNR=2.9						
SONM	Songino Array	60.74	349	P	P	15 21 06.4	-1.2
	0.7nm,0.7s,mb3.8,baz=172,slow=7.2,SNR=5.2						
MKAR	Makanchi Array	67.85	332	P	P	15 21 54.5	+0.4
	0.3nm,0.4s,mb3.5,baz=137,slow=6.6,SNR=5.7						
ZALV	Zalesovo Beam	72.34	338	P	P	15 22 21.6	+0.3
	0.6nm,0.4s,mb3.8,baz=134,slow=6.2,SNR=4.3						
KURK	Kurchatov	72.38	333	P	P	15 22 22.0	+0.4
	0.3nm,0.5s,mb3.4,baz=142,slow=5.6,SNR=2.9						

IGQ 02 15:23:48.2, 1°.80S×80°.19W, h7km±2km, Mb4.3, Ms4.1, 6C-4D, Error ellipse: s-maj=2.8km s-min=0.8km az=126.6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	0.92	325	⇓P	Pg	15 24 05.0	-0.9
CHIS	Cerro-Chispas-	0.92	325	⇓S	Sg	15 24 18.6	+0.8
JAMA	Jama	1.53	360	S	Sn	15 24 36.9	+0.7
JAMA	Jama	1.53	360	P	Pn	15 24 15.2	-0.8
RIOE	Riobamba	1.56	88	P	Pn	15 24 18.3	+1.8
BIL2	Estacion Bilba	1.73	79	S	Sn	15 24 44.7	+3.7
BIL2	Estacion Bilba	1.73	79	P	Pn	15 24 21.1	+2.4
BMAS	Trigal station	1.74	80	⇓P	Pn	15 24 20.8	+1.9
BBIL	Ulba Tungurahu	1.74	78	S	Sn	15 24 44.0	+2.6
BBIL	Ulba Tungurahu	1.74	78	P	Pn	15 24 20.7	+1.8
ARRY	Arrayan	1.76	80	⇑P	Pn	15 24 20.6	+1.4
JUI6	Juive	1.77	78	P	Pn	15 24 22.2	+3.0
PAT1	Patacocha	1.78	81	P	Pn	15 24 21.2	+1.8
RETU	Refugio	1.78	79	⇑S	Sn	15 24 45.7	+3.3
RETU	Refugio	1.78	79	⇑P	Pn	15 24 21.8	+2.4
RUN5	Runtun	1.81	78	P	Pn	15 24 22.3	+2.5
BULB	Ulba Tungurahu	1.82	79	S	Sn	15 24 46.2	+2.9
BULB	Ulba Tungurahu	1.82	79	P	Pn	15 24 22.4	+2.4
ULBA	Ulba	1.82	79	P	Pn	15 24 22.2	+2.2
BRUN	Tungurahua Vol	1.82	78	P	Pn	15 24 22.5	+2.5
BRUN	Tungurahua Vol	1.82	78	S	Sn	15 24 47.4	+4.0
BMOR	Cotopaxi Volca	2.04	59	⇑P	Pn	15 24 26.3	+3.4
MACE	Macas	2.04	103	P	Pn	15 24 25.1	+2.0
MACE	Macas	2.04	103	S	Sn	15 24 50.6	+1.8
MOV1	Cotopaxi Vol s	2.06	58	P	Pn	15 24 26.2	+2.9
NAS2	Nasa	2.07	56	S	Sn	15 24 57.0	+7.5
NAS2	Nasa	2.07	56	P	Pn	15 24 27.1	+3.7
BREF	Cotopaxi Volca	2.08	57	⇑P	Pn	15 24 27.4	+3.8
BVC2	Cotopaxi Volca	2.11	57	P	Pn	15 24 27.1	+3.1
BVC2	Cotopaxi Volca	2.11	57	S	Sn	15 24 57.9	+7.3
BTAM	Cotopaxi Volca	2.12	58	P	Pn	15 24 26.9	+2.9
VC1	Cotopaxi 1	2.13	57	S	Sn	15 24 57.9	+6.9
VC1	Cotopaxi 1	2.13	57	P	Pn	15 24 27.2	+3.0
TAMB	Tambo	2.13	59	P	Pn	15 24 27.0	+2.7
PITA	Cotopaxi Volc	2.15	55	P	Pn	15 24 27.1	+2.6
COV1	Cotopaxi Volc	2.17	59	P	Pn	15 24 27.0	+2.2
JUA2	San Juan 2	2.24	45	P	Pn	15 24 27.2	+1.5
GOLV	Golondrinas	2.26	28	P	Pn	15 24 25.5	-0.6
TERV	Terraza Guagua	2.27	45	P	Pn	15 24 27.3	+1.1
GGP	Refugio Guagua	2.27	45	P	Pn	15 24 26.9	+0.6
PINO	Pino	2.28	44	S	Sn	15 24 58.7	+4.1
PINO	Pino	2.28	44	P	Pn	15 24 27.0	+0.7
ANTI	Antisana	2.44	57	⇑P	Pn	15 24 31.6	+3.2
COTA	Cotacachi	2.82	41	P	Pn	15 24 36.0	+2.3
CAYA	Cayambe	2.88	50	⇓P	Pn	15 24 38.1	+3.5

*IDC **02** 15:30:11.2±7.2, 23°.19S×179°.39W, h399km±74km, mb3.1/5, mb1 3.4/6, mb1mx3.2/18, mbtmp3.2/6, Error ellipse: s-maj=62.5km s-min=28.2km az=7.0*
*ISCJB **02** 15:30:13.6±1.6, 23°.66S±0°.10×179°.4W±0°.2, h438km±19km, mb3.4/5, Error ellipse: s-maj=28.7km s-min=15.0km az=178.8*
*NEIC **02** 15:30:14.5±1.3, 23°.59S×179°.41W, h439km±14km, mb4.6/1, Error ellipse: s-maj=21.5km s-min=16.8km az=100.0*

ISC 02 15:30:13.9±1.6, 23°.72S±0°.09×179°.4W±0°.2, h432km±18km, n10, σ0§86/11, mb3.4/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.42	338	*e*P	P	15 31 51.8	-0.4
	38nm,0.8s						
URZ	Urewera	14.80	191	P	P	15 33 27.1	+3.9
	2.0nm,0.3s,baz=16,slow=7.4,SNR=13						
URZ				S	S	15 35 58.5	-1.1
	0.5nm,0.3s,baz=146,slow=18,SNR=3.7						
URZ	Urewera	14.80	191	*e*P	P	15 33 25.2	+2.0
URZ				S	S	15 35 58.5	-1.1
CTA	Charters Tower	32.04	270	P	P	15 36 03.2	-0.1
	4.2nm,0.8s,mb3.8,baz=100,slow=11,SNR=3.5						
ASAR	Alice Springs	42.62	260	P	P	15 37 31.1	+0.4
	0.4nm,0.7s,mb2.9,baz=99,slow=7.5,SNR=11						
ASAR				PcP	PcP	15 39 13.6	+0.1
	0.3nm,0.5s,baz=95,slow=4.5,SNR=5.4						
WB2	Warramunga Arr	42.97	266	*e*P	P	15 37 32.6	-0.8
WRA	Warramunga Arr	42.98	266	P	P	15 37 33.3	-0.2
	0.4nm,0.3s,mb3.2,baz=93,slow=8.3,SNR=10.0						
WRA				PcP	PcP	15 39 14.2	-0.5
	0.6nm,0.8s,baz=92,slow=3.1,SNR=3.0						
TXAR	Lajitas Array	89.86	58	P	P	15 42 25.0	-0.6
	0.6nm,0.8s,mb3.5,baz=209,slow=7.2,SNR=6.3						
CMAR	Chiang Mai Arr	89.99	290	P	P	15 42 27.7	+1.2
	1.0nm,0.8s,mb3.7,baz=137,slow=4.2,SNR=6.6						
BRTR	Keskin Array B	147.92	308	PKPbc	PKPbc	15 49 09.3	-0.2
	0.9nm,0.6s,baz=85,slow=3.4,SNR=4.1						

*ISCJB **02** 15:34:52.5±0.6, 59°.80N±0°.04×22°.31E±0°.06, h0km, Error ellipse: s-maj=5.8km s-min=4.6km az=4.4*
*CSEM **02** 15:34:53.2±0.3, 59°.82N×22°.34E, h1km, ML2.0, Error ellipse: s-maj=7.9km s-min=6.4km az=37.0, Mining explosion.*
*IDC **02** 15:34:53.7±2.2, 59°.77N×22°.24E, h0km, mb1 3.1/3, mb1mx2.9/24, mbtmp2.9/3, ML2.6/3, Error ellipse: s-maj=26.1km s-min=11.7km az=168.0*
*BER **02** 15:34:53.9±4.3, 59°.80N×22°.27E, h0km±27km, ML2.1(NAO)*
*NAO **02** 15:34:53.5±1.3, 59°.81N×22°.36E, ML2.1*
*HEL **02** 15:34:54.0±0.1, 59°.81N×22°.30E, h0km, ML2.0, ML2.1(NAO), Explosion*

ISC 02 15:34:53.0±0.6, 59°.80N±0°.03×22°.36E±0°.06, h0km, n29, σ1§05/37, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	Metsahovi	1.11	67	*e*P	Pg	15 35 14.1	-0.2
MEF				*e*S	Sg	15 35 28.4	-0.2
MEF	Metsahovi	1.11	67	P	Pg	15 35 14.1	-0.2
MEF				S	Sg	15 35 28.4	-0.2
RAF	Rauma	1.27	347	*e*P	Pg	15 35 16.3	-1.0
RAF				*e*S	Sg	15 35 33.2	-0.4
RAF	Rauma	1.27	347	P	Pg	15 35 16.2	-1.1
RAF				S	Sg	15 35 33.2	-0.4
MTSE	Matsula	1.32	145	*e*P	Pg	15 35 18.4	+0.1
MTSE				*e*S	Sg	15 35 35.6	+0.3
MTSE	Matsula	1.32	145	P	Pg	15 35 18.3	0.0
MTSE				S	Sg	15 35 35.6	+0.3
PVF	Pernaja	1.91	65	*e*P	Pn	15 35 28.0	+1.3
PVF				*e*S	Sn	15 35 52.0	+0.6
FIA0	FINESS Array S	2.47	46	Pn	Pn	15 35 36.5	+2.1
	baz=229,slow=14						
FIA0				Lg		15 36 08.7	
	baz=232,slow=28						
FIA0	FINESS Array S	2.47	46	*e*P	Pn	15 35 36.0	+1.5
FIA0				*e*SB	Sb	15 36 09.2	0.0
FIA0	FINESS Array S	2.47	46	Pn	Pn	15 35 36.5	+2.0
	baz=229,slow=13,SNR=50						
FIA0				Lg		15 36 08.6	
	baz=232,slow=23						
FINES	FINESS Array B	2.47	46	Pn	Pn	15 35 37.0	+2.5
	1.4nm,0.3s,baz=230,slow=14,SNR=36						
FINES				Sn	Sn	15 36 08.3	+3.0
	3.3nm,0.3s,baz=230,slow=21,SNR=24						
VSU	Vasula	2.62	119	Lg		15 36 15.2	
VSU	Vasula	2.62	119	Lg		15 36 15.2	
VSU	Vasula	2.62	119	*e*SG	Sg	15 36 15.2	-2.0
VSU	Vasula	2.62	119	*e*S	Sn	15 36 15.0	+5.9
	102nm,0.5s,SNR=50						
VSU				Lg		15 36 15.2	
	SNR=55						
KEF	Keuruu	2.68	26	MSG		15 36 17.0	
	comp=Z,6.4nm,0.1s						
KAF	Kangasniemi	3.02	38	MSG		15 36 26.0	
	comp=Z,5.4nm,0.2s						
VAF	Ylistaro	3.26	3	MSG		15 36 32.9	
	comp=Z,2.5nm,0.1s						
HFS	Hagfors	4.37	278	Pn	Pn	15 36 00.8	+0.3
	baz=98,slow=9.3						
HFS				Lg		15 37 04.2	
	baz=102,slow=37						
HFS	Hagfors	4.37	278	*e*P	Pn	15 36 00.8	+0.3
HFS				*e*SB	Sb	15 37 04.2	+0.6
HFS	Hagfors	4.37	278	P	Pn	15 36 00.8	+0.3
NB2	NORSAR Subarra	5.66	288	Pn	Pn	15 36 18.6	+0.4
	baz=95,slow=14						
NB2	NORSAR Subarra	5.66	288	*e*P	Pn	15 36 18.6	+0.4
NB2	NORSAR Subarra	5.66	288	P	Pn	15 36 18.6	+0.4
NOA	NORSAR Array B	5.66	288	Pn	Pn	15 36 17.2	-1.1
	comp=Z,0.1nm,0.3s,baz=84,slow=13,SNR=3.6						
NOA				Lg		15 37 46.9	
	comp=Z,0.4nm,0.3s,baz=318,slow=25,SNR=4.5						
ARA0	ARCESS Array S	9.87	6	Pn	Pn	15 37 14.8	-1.1
	baz=193,slow=14						
ARA0				Sn	Sn	15 39 00.8	-6.4
	baz=193,slow=28						
ARA0	ARCESS Array S	9.87	6	*e*P	Pn	15 37 14.8	-1.1
ARA0				*e*S	Sn	15 39 00.8	-6.4
ARA0	ARCESS Array S	9.87	6	P	Pn	15 37 14.8	-1.1
ARCES	ARCESS Array B	9.87	6	Pn	Pn	15 37 14.5	-1.4
	comp=Z,0.1nm,0.3s,baz=182,slow=13,SNR=6.0						
ARCES				Sn	Sn	15 39 01.4	-5.8
	comp=Z,0.1nm,0.3s,baz=184,slow=24,SNR=2.5						

*ISCJB **02** 15:51:33.7±0.3, 22°.99N±0°.02×121°.55E±0°.02, h27km±2km, Error ellipse: s-maj=3.2km s-min=2.5km az=34.6*
*NEIC **02** 15:51:33.3±3.4, 22°.97N×121°.55E, h30km±12km, Error ellipse: s-maj=42.1km s-min=14.2km az=125.0*
*TAP **02** 15:51:33.6, 22°.97N×121°.52E, h38km±1km, ML3.5, C*
*JMA **02** 15:51:35.4±0.3, 23°.03N×121°.62E, h98km, M2.8*

ISC 02 15:51:34.1±0.4, 22°.99N±0°.02×121°.52E±0°.02, h26km±2km, n65, σ0§98/116, 8C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.18	308	⇑*i*P	Pb	15 51 41.3	+1.7
	baz=313						
CHKT				*i* S	Sb	15 51 46.2	+2.9
	baz=313						
TTN	Taitung	0.41	236	*e*P	Pb	15 51 44.4	+1.5
	baz=237						
TTN				S	Sb	15 51 51.6	+2.7
	baz=237						
TWG	Pinlang	0.44	248	*e*Pg	Pb	15 51 43.1	-0.3
TWG	Pinlang	0.44	248	⇑*i*P	Pb	15 51 43.5	0.0
	baz=249						
TWG				*i* S	Sb	15 51 49.6	-0.2
	baz=249						
YULB	Yu-li	0.45	333	*e*Pg	Pb	15 51 43.4	-0.2
ELDTW	Lidau	0.50	294	⇑*i*P	Pb	15 51 44.0	-0.5
	baz=295						
ELDTW				*e*S	Sb	15 51 50.0	-1.4
	baz=295						
EHY	Hungye	0.55	341	⇓*i*P	Pb	15 51 44.6	-0.6
	baz=341						
ECL	Taimali	0.65	233	*i* P	Pb	15 51 45.9	-1.0
	baz=234						
ECL				*e*S	Sb	15 51 54.0	-1.6
	baz=234						
YUS	Yu-Shan	0.72	314	⇑*i*P	Pb	15 51 48.0	-0.1
	baz=314						
YUS				S	Sb	15 51 56.7	-0.9
	baz=314						
STYT	Tauyuan	0.72	284	⇑*i*P	Pb	15 51 47.6	-0.5
	baz=285						
STYT				*e*S	Sb	15 51 56.7	-1.0
	baz=285						
ESL	Shilin	0.83	355	*e*P	Pb	15 51 48.3	-1.5
	baz=354						
ALS	Alishan	0.84	309	⇑*i*P	Pb	15 51 50.2	+0.1
	baz=309						
ALS				S	Sb	15 52 00.9	0.0
	baz=309						
TAW	Tawu	0.85	223	*e*P	Pb	15 51 49.2	-1.1
	baz=223						
TAW				*e*S	Sb	15 51 59.8	-1.5
	baz=223						
SSD	Sandimen	0.85	254	P	Pb	15 51 49.4	-0.9
	baz=254						
SSD				*e*S	Sb	15 51 59.0	-2.3
	baz=254						
EAST	Anshuo	0.86	226	*e*P	Pb	15 51 49.4	-1.1
	baz=226						
EAST				*e*S	Sb	15 52 00.7	-1.0
	baz=226						
SGST	Jiashian	0.87	276	P	Pb	15 51 50.7	+0.2
	baz=277						
SGST				*e*S	Sb	15 52 01.7	0.0
	baz=277						
WTP	Ta-pu	0.87	287	⇑*i*P	Pn	15 51 50.6	-0.1
	baz=288						
WTP				S	Sb	15 52 02.4	+0.5
	baz=288						
TPUB	Ta-pu	0.88	291	*e*Pg	Pn	15 51 50.3	-0.5
TPUB				*e*Sg	Sb	15 52 02.5	+0.5
CHN4	Tsaushan	0.93	293	*e*P	Pn	15 51 51.7	+0.2

	baz=348							
WHF				eS		Sn	15 52 08.7	-1.4
	baz=348							
NACB	**Ninganchiao**	**1.18**	**3**	eP		**Pn**	**15 51 53.5**	**-1.6**
HEN	**Hengchun**	**1.22**	**217**	eP		**Pn**	**15 51 55.6**	**+0.1**
	baz=216							
HEN				eS		**Sn**	**15 52 10.4**	**-0.7**
	baz=216							
TSEB	**Hengchuen, Pin**	**1.22**	**208**	P		**Pn**	**15 51 55.7**	**+0.1**
	baz=210							
TSEB				S		**Sn**	**15 52 11.5**	**+0.2**
	baz=210							
TWK1	**Hengchun**	**1.23**	**213**	P		**Pn**	**15 51 55.4**	**-0.3**
	baz=212							
TWK1				eS		**Sn**	**15 52 10.3**	**-1.1**
	baz=212							
SCLT	**Jiali**	**1.23**	**279**	eS		**Sn**	**15 52 13.0**	**+1.5**
	baz=279							
TWP	**Hsiaoliuchiu**	**1.24**	**239**	eP		**Pn**	**15 51 57.6**	**+1.7**
	baz=239							
TWP				eS		**Sn**	**15 52 12.8**	**+1.0**
	baz=239							
TWT	**Tachien**	**1.30**	**346**	eP		**Pn**	**15 51 56.6**	**0.0**
	baz=345							
TWT				eS		**Sn**	**15 52 11.9**	**-1.2**
	baz=345							
TCU	**Taichung**	**1.39**	**326**	eP		**Pn**	**15 51 58.9**	**+1.0**
	baz=326							
TCU				eS		**Sn**	**15 52 16.4**	**+1.0**
	baz=326							
WTCT	**Ta-ch'eng**	**1.43**	**308**	eP		**Pn**	**15 51 58.5**	**0.0**
	baz=308							
WTCT				eS		**Sn**	**15 52 16.3**	**-0.2**
	baz=308							
ENA	**Nanau**	**1.45**	**8**	eP		**Pn**	**15 51 57.8**	**-0.9**
	baz=8.0							
ENA				eS		**Sn**	**15 52 16.6**	**-0.2**
	baz=8.0							
TWQ1	**Liyutan**	**1.52**	**333**	eP		**Pn**	**15 52 00.8**	**+1.2**
	baz=333							
TWQ1				eS		**Sn**	**15 52 20.3**	**+1.7**
	baz=333							
NSY	**Sanyi**	**1.58**	**334**	eP		**Pn**	**15 52 02.1**	**+1.6**
	baz=334							
NSY				eS		**Sn**	**15 52 21.8**	**+1.7**
	baz=334							
TWC	**Suao**	**1.64**	**11**	eP		**Pn**	**15 52 01.6**	**+0.2**
	baz=10.0							
TWC				eS		**Sn**	**15 52 21.9**	**+0.3**
	baz=10.0							
ENTT	**Nioudou**	**1.65**	**2**	eP		**Pn**	**15 52 00.8**	**-0.6**
	baz=1.0							
ENTT				eS		**Sn**	**15 52 19.6**	**-2.1**
	baz=1.0							
YHNB	**Yeheng**	**1.68**	**356**	eP		**Pn**	**15 52 01.8**	**-0.1**
NSK	**Sanguang**	**1.69**	**355**	eP		**Pn**	**15 52 02.3**	**+0.3**
	baz=355							
NSK				eS		**Sn**	**15 52 21.5**	**-1.3**
	baz=355							
NSTT	**Nanjuang**	**1.70**	**344**	eP		**Pn**	**15 52 02.9**	**+0.7**
	baz=344							
NSTT				eS		**Sn**	**15 52 23.4**	**+0.3**
	baz=344							
TWE	**Neicheng**	**1.73**	**4**	eP		**Pn**	**15 52 01.8**	**-0.8**
	baz=4.0							
TWE				eS		**Sn**	**15 52 23.2**	**-0.6**
	baz=4.0							
PNG	**Penghu**	**1.90**	**288**	eP		**Pn**	**15 52 04.4**	**-0.5**
	baz=288							
PNG				eS		**Sn**	**15 52 25.6**	**-2.3**
	baz=288							
YOJ	**Yonaguni jima**	**2.01**	**43**	P		**Pn**	**15 52 07.3**	**+0.9**
YOJ				S		**Sn**	**15 52 31.3**	**+0.7**
TWB1	**Santiao Chiao**	**2.06**	**12**	eP		**Pn**	**15 52 08.1**	**+1.0**
	baz=12							
TWB1				eS		**Sn**	**15 52 31.3**	**-0.6**
	baz=12							
NWF	**Wu-fen Shan**	**2.09**	**7**	eP		**Pn**	**15 52 07.8**	**+0.4**
	baz=6.0							
NWF				eS		**Sn**	**15 52 33.2**	**+0.5**
	baz=6.0							
TWS1	**Kuangyinshan**	**2.10**	**358**	eP		**Pn**	**15 52 08.7**	**+1.0**
	baz=357							
HATJ	**Hateruma jima**	**2.35**	**63**	P		**Pn**	**15 52 11.7**	**+0.6**
HATJ				S		**Sn**	**15 52 39.0**	**-0.2**
IRIF	**Iriomote-Funau**	**2.43**	**56**	P		**Pn**	**15 52 12.9**	**+0.7**
IRIF				S		**Sn**	**15 52 42.0**	**+0.9**
JKRS	**Kuro-shima**	**2.60**	**61**	P		**Pn**	**15 52 15.5**	**+1.0**
JKRS				S		**Sn**	**15 52 45.2**	**-0.1**
JIJ	**Ishigaki jima**	**2.77**	**60**	P		**Pn**	**15 52 17.2**	**+0.4**
JIJ				S		**Sn**	**15 52 48.4**	**-1.0**
KNM	**Kinmen**	**3.17**	**297**	eP		**Pn**	**15 52 23.0**	**+0.7**
	baz=295							
KNM				eS		**Sn**	**15 52 57.8**	**-1.4**
	baz=295							
QZH	**Quanzhou**	**3.31**	**307**	ePn		**Pn**	**15 52 22.1**	**-2.2**
QZH				Sn		**Sn**	**15 52 57.2**	**-5.6**
JTJ	**Tarama**	**3.35**	**60**	P		**Pn**	**15 52 25.2**	**+0.4**
JTJ				eS		**Sn**	**15 53 03.4**	**-0.3**

*ISCJB **02** 16:31:51.2±0.5, 22°.86N±0°.02×121°.42E±0°.03, h16km±6km, Error ellipse: s-maj=4.5km s-min=3.6km az=176.2*
*TAP **02** 16:31:52.3, 22°.90N×121°.30E, h22km, ML3.1, B*
*JMA **02** 16:31:53.5±0.1, 22°.70N×121°.57E, h84km*

ISC 02 16:31:51.6±0.5, 22°.86N±0°.02×121°.38E±0°.02, h16km±3km, n43, σ0§94/66, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.23**	**245**	eP	**Pg**	**16 31 58.4**	**+1.6**
	baz=222						
CHKT	**Chengkung**	**0.24**	**358**	⇑iP	**Pg**	**16 31 58.2**	**+1.2**
	baz=26						
CHKT				i S	**Sg**	**16 32 02.4**	**+1.7**
	baz=26						
TWG	**Pinlang**	**0.28**	**263**	⇓iP	**Pg**	**16 31 58.3**	**+0.6**
	baz=259						
TWG				S	**Sg**	**16 32 02.1**	**+0.4**
	baz=259						
ECL	**Taimali**	**0.47**	**237**	i P	**Pg**	**16 32 00.8**	**-0.1**
	baz=226						
ECL				eS	**Sg**	**16 32 06.8**	**-0.4**
	baz=226						
ELDTW	**Lidau**	**0.47**	**315**	P	**Pg**	**16 32 00.3**	**-0.7**
	baz=313						
ELDTW				S	**Sg**	**16 32 05.7**	**-1.6**
	baz=313						
STYT	**Tauyuan**	**0.65**	**298**	P	**Pg**	**16 32 03.4**	**-0.9**
	baz=291						
STYT				eS	**Sg**	**16 32 11.7**	**-1.2**
	baz=291						
EHY	**Hungye**	**0.65**	**356**	eP	**Pg**	**16 32 03.1**	**-1.2**
	baz=3.0						
EAST	**Anshuo**	**0.68**	**226**	i P	**Pb**	**16 32 04.3**	**-0.6**
	baz=218						
SSD	**Sandimen**	**0.69**	**261**	i P	**Pb**	**16 32 04.3**	**-0.9**
	baz=259						
SSD				S	**Sb**	**16 32 11.4**	**-3.1**
	baz=259						
YUS	**Yu-Shan**	**0.74**	**328**	P	**Pb**	**16 32 05.4**	**-0.7**
	baz=333						
YUS				eS	**Sb**	**16 32 13.8**	**-2.1**
	baz=333						
SGST	**Jiashian**	**0.76**	**287**	P	**Pb**	**16 32 06.4**	**0.0**
	baz=293						
WTP	**Ta-pu**	**0.80**	**299**	P	**Pb**	**16 32 06.7**	**-0.4**
	baz=299						
WTP				S	**Sb**	**16 32 17.9**	**+0.2**
	baz=299						
SGLT	**Jiouru**	**0.83**	**261**	eS	**Sb**	**16 32 19.9**	**+1.5**
	baz=253						
LAY	**Lan-yu**	**0.83**	**169**	i P	**Pb**	**16 32 07.5**	**0.0**
	baz=156						
ALS	**Alishan**	**0.84**	**321**	P	**Pb**	**16 32 07.3**	**-0.4**
	baz=326						
ALS				S	**Sb**	**16 32 16.6**	**-2.2**
	baz=326						
CHN1	**Nanshi**	**0.85**	**293**	P	**Pb**	**16 32 07.8**	**-0.1**
	baz=292						
CHN1				eS	**Sb**	**16 32 19.5**	**+0.5**
	baz=292						
SCZT	**Fangliau**	**0.85**	**236**	P	**Pb**	**16 32 07.8**	**-0.1**
	baz=226						
CHN4	**Tsaushan**	**0.87**	**305**	i P	**Pb**	**16 32 08.2**	**-0.2**
	baz=305						
CHN4				S	**Sb**	**16 32 20.4**	**+0.7**
	baz=305						
TWM1	**Shoushan**	**0.88**	**268**	P	**Pb**	**16 32 09.3**	**+0.9**
	baz=265						
CHN3	**Shinhua**	**0.96**	**284**	eP	**Pb**	**16 32 10.9**	**+1.2**
	baz=282						
ESL	**Shilin**	**0.96**	**3**	eP	**Pb**	**16 32 07.2**	**-2.5**
	baz=8.0						
CHN5	**Tsauling**	**0.98**	**319**	i P	**Pb**	**16 32 09.8**	**-0.3**
	baz=321						
CHN5				eS	**Sb**	**16 32 22.2**	**-0.5**
	baz=321						
HEN	**Hengchun**	**1.03**	**215**	eS	**Sb**	**16 32 24.6**	**+0.4**
	baz=199						
TSEB	**Hengchuen, Pin**	**1.05**	**205**	eS	**Sb**	**16 32 24.8**	**+0.1**
	baz=192						
TWK1	**Hengchun**	**1.05**	**210**	eP	**Pb**	**16 32 10.5**	**-0.8**
	baz=195						
CHY	**Chiayi**	**1.08**	**306**	P	**Pb**	**16 32 12.3**	**+0.4**
	baz=307						
CHY				S	**Sb**	**16 32 26.9**	**+1.1**
	baz=307						
SMLT	**Sun Moon Lake**	**1.11**	**337**	P	**Pn**	**16 32 12.4**	**0.0**
	baz=340						
WGK	**Gukeng**	**1.11**	**318**	eP	**Pn**	**16 32 11.9**	**-0.6**
	baz=319						
WGK				eS	**Sb**	**16 32 27.5**	**+0.8**
	baz=319						
TYC	**Yuchr**	**1.15**	**336**	P	**Pn**	**16 32 13.0**	**0.0**
	baz=349						
TYC				i S	**Sb**	**16 32 28.3**	**+0.7**
	baz=349						
WHF	**Hehuan Shan**	**1.29**	**356**	P	**Pn**	**16 32 13.8**	**-1.0**
	baz=8.0						
TWT	**Tachien**	**1.40**	**353**	eP	**Pn**	**16 32 16.2**	**-0.3**
	baz=354						
TWQ1	**Liyutan**	**1.59**	**340**	P	**Pn**	**16 32 20.0**	**+1.0**
	baz=340						
TWQ1				eS	**Sn**	**16 32 40.0**	**+0.9**
	baz=340						
NSY	**Sanyi**	**1.65**	**340**	eP	**Pn**	**16 32 21.1**	**+1.2**
	baz=341						
NSY				S	**Sn**	**16 32 43.0**	**+2.2**
	baz=341						
ENTT	**Nioudou**	**1.79**	**6**	eP	**Pn**	**16 32 21.1**	**-0.7**
	baz=17						
NSTT	**Nanjuang**	**1.80**	**349**	eP	**Pn**	**16 32 23.2**	**+1.3**
	baz=349						
NSTT				eS	**Sn**	**16 32 44.6**	**+0.2**
	baz=349						
NSK	**Sanguang**	**1.81**	**360**	eP	**Pn**	**16 32 23.0**	**+0.9**
	baz=14						
NSK				eS	**Sn**	**16 32 45.0**	**+0.3**
	baz=14						
PNG	**Penghu**	**1.82**	**293**	eP	**Pn**	**16 32 21.1**	**-1.1**
	baz=279						
YOJ	**Yonaguni jima**	**2.19**	**43**	eS	**Sn**	**16 32 55.3**	**+1.2**
HATJ	**Hateruma jima**	**2.53**	**61**	eS	**Sn**	**16 33 01.4**	**-1.1**
IRIF	**Iriomote-Funau**	**2.62**	**55**	P	**Pn**	**16 32 33.7**	**+0.6**
IRIF				eS	**Sn**	**16 33 04.3**	**-0.2**
JKRS	**Kuro-shima**	**2.78**	**60**	P	**Pn**	**16 32 35.8**	**+0.4**
JKRS				eS	**Sn**	**16 33 08.0**	**-0.6**
JIJ	**Ishigaki jima**	**2.95**	**59**	P	**Pn**	**16 32 38.3**	**+0.6**
JIJ				eS	**Sn**	**16 33 12.0**	**-0.8**
JTJ	**Tarama**	**3.53**	**59**	P	**Pn**	**16 32 46.0**	**+0.3**
JTJ				eS	**Sn**	**16 33 26.5**	**-0.6**

CASC 02 16:44:28.8±2.2, 12°.53N×87°.86W, h35km±8km, MD4.0, ML3.9, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.74**	**2**	eP	Pn	16 44 43.3	+0.6
CNCH				eS	Sn	16 44 54.5	+1.8
LEON	**Leon**	**0.95**	**97**	eP	Pn	16 44 45.3	-0.4
BLLM	**Bellamira**	**0.97**	**338**	eP	Pn	16 44 46.0	0.0
VSM	**San Miguel**	**0.98**	**336**	eP	Pn	16 44 46.2	+0.2
VSM				eP		16 44 46.3	
VSM				eS	Sn	16 44 59.7	+1.1
TELN	**Telica**	**1.01**	**86**	eP	Pn	16 44 47.2	+0.7
CNGN	**Cerro Negro**	**1.14**	**92**	eP	Pn	16 44 48.0	-0.2
CNGN				eS	Sn	16 45 02.9	+0.4
CNGN				AML	AML	16 45 07.4	
	comp=N,2μm,0.3s						
CAHU	**Cacacuatique**	**1.28**	**344**	eP	Pn	16 44 50.4	+0.2
CAHU				eS	Sn	16 45 08.0	+2.0
COPN	**Copaltepe**	**1.29**	**106**	eP	Pn	16 44 49.9	-0.4
COPN				eS	Sn	16 45 05.9	-0.4
MOMN	**Momotombo**	**1.29**	**95**	eP	Pn	16 44 50.8	+0.4
CSAN		**1.45**	**104**	eP	Pn	16 44 52.6	+0.1
XAVN	**Gruta Xavier**	**1.55**	**104**	eP	Pn	16 44 53.8	0.0
TISN	**Laguna Tiscapa**	**1.60**	**104**	eP	Pn	16 44 54.5	-0.1
TGUH	**Tegucigalpa,Un**	**1.62**	**21**	⇑eP	Pn	16 44 55.6	+0.7
TGUH				eS	Sn	16 45 16.1	+1.6
CRUN	**El Crucero**	**1.62**	**110**	eP	Pn	16 44 55.5	+0.6
MGAN	**Managua**	**1.62**	**104**	eP	Pn	16 44 54.6	-0.3
HUEN		**1.66**	**97**	eP	Pn	16 44 55.2	-0.2
TICN	**Ticuantepe**	**1.67**	**107**	eP	Pn	16 44 55.4	-0.1
BOQS	**Boqueron**	**1.83**	**311**	eP	Pn	16 44 57.7	0.0
BOQS				eS	Sn	16 45 20.8	+1.1
SSN	**San Juan del S**	**2.31**	**122**	eP	Pn	16 45 03.1	-1.3
SSN				eS	Sn	16 45 30.7	-1.0
CONN	**Concepcion**	**2.39**	**114**	eP	Pn	16 45 05.8	+0.3
JCR	**Jicaral**	**3.79**	**134**	eP	Pn	16 45 24.8	0.0
CGA2	**Cerro Gallo 2**	**4.17**	**127**	eP	Pn	16 45 32.4	+2.5
PRS1	**Puriscal**	**4.31**	**126**	eP	Pn	16 45 35.3	+3.5
URSC	**Urasca**	**4.82**	**123**	eP	Pn	16 45 42.5	+3.6
BUS	**Buena Vista**	**5.00**	**126**	eP	Pn	16 45 44.1	+2.8

*ISCJB **02** 16:47:24.8±0.7, 7°.24N±0°.06×125°.63E±0°.05, h55km±6km, mb3.7/4, Error ellipse: s-maj=11.7km s-min=6.9km az=33.6*
*MAN **02** 16:47:25, 7°.27N×125°.59E, h31km, mb4.8, ML3.8, MS3.8*
*IDC **02** 16:48:01.9±1.6, 2°.78N×127°.03E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=98.2km s-min=25.4km az=69.0*

ISC 02 16:47:25.6±0.6, 7°.27N±0°.06×125°.63E±0°.05, h45km±7km, n13, σ1§23/18, mb3.7/4, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.22**	**214**	⇑eP	**Pn**	**16 47 32.7**	**-1.0**
DMPH				eS	**Sn**	**16 47 38.2**	**-1.1**
KCP	**Kidapawan**	**0.60**	**244**	⇑iP	**Pn**	**16 47 40.2**	**+2.3**
KCP				i S	**Sn**	**16 47 48.2**	**+1.6**
MATI	**Mati**	**0.70**	**117**	eP	**Pn**	**16 47 40.6**	**+1.4**
MATI				eS	**Sn**	**16 47 49.3**	**+0.4**
BUKP	**Musuan**	**0.83**	**317**	eP	**Pn**	**16 47 40.6**	**-0.3**
BUKP				eS	**Sn**	**16 47 49.1**	**-2.9**
GSPH	**General Santos**	**1.36**	**210**	⇑iP	**Pn**	**16 47 46.3**	**-1.9**
CTBH	**Cotabato--PC H**	**1.38**	**268**	⇓iP	**Pn**	**16 47 48.2**	**-0.2**
CTBH				i S	**Sn**	**16 48 05.5**	**+0.1**
CGP	**Cagayan de Oro**	**1.50**	**322**	eP	**Pn**	**16 47 50.6**	**+0.5**
CGP				i S	**Sn**	**16 48 08.7**	**+0.2**
PAGZ	**Pagadian**	**2.30**	**285**	eP	**Pn**	**16 48 02.5**	**+1.3**
PAGZ				eS		16 48 07.1	
FITZ	**Fitzroy Crossi**	**25.21**	**180**	P	**P**	**16 52 45.5**	**-1.8**
	0.9nm,0.5s,mb3.6,baz=8.4,slow=9.5,SNR=8.5						
WRA	**Warramunga Arr**	**28.37**	**163**	P	**P**	**16 53 15.3**	**-0.4**
	1.1nm,0.3s,mb3.9,baz=341,slow=10,SNR=11						
ASAR	**Alice Springs**	**31.79**	**165**	P	**P**	**16 53 46.1**	**+0.2**
	0.5nm,0.6s,mb3.5,baz=345,slow=7.1,SNR=11						
ASAR				PcP	PcP	16 57 08.1	+32
	0.2nm,0.5s,baz=355,slow=1.7,SNR=6.6						
STKA	**Stephens Creek**	**41.80**	**159**	P	**P**	**16 55 14.8**	**+3.8**
	1.1nm,0.6s,mb3.7,baz=336,slow=10.0,SNR=2.9						
MKAR	**Makanchi Array**	**54.05**	**324**	P	PcP	16 57 59.7	+10
	0.1nm,0.3s,baz=112,slow=6.9,SNR=2.9						

*BJI **02** 16:52:43.1, 38°.15N×74°.09E, h159km, mB4.4/1, mb4.0/2*
*ISCJB **02** 16:52:44.4±0.5, 38°.25N±0°.04×73°.99E±0°.08, h160km±7km, mb3.5/5, Error ellipse: s-maj=10.0km s-min=6.2km az=7.2*
*NEIC **02** 16:52:44.0±1.0, 38°.13N×74°.14E, h156km±7km, mb4.5/4, Error ellipse: s-maj=14.2km s-min=9.0km az=134.0*
*IDC **02** 16:52:46.7±7.2, 38°.31N×74°.14E, h172km±44km, mb3.3/5, mb1 3.4/11, mb1mx3.2/28, mbtmp3.2/11, Error ellipse: s-maj=67.4km s-min=25.3km az=11.0*
*NNC **02** 16:52:49.0±1.4, 38°.82N×73°.45E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=11.3km s-min=7.5km az=178.0*

ISC 02 16:52:45.6±0.5, 38°.27N±0°.04×73°.88E±0°.07, h157km±7km, n41, σ1§17/48, mb3.5/5, 6C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.05**	**52**	⇑iP	**Pn**	**16 53 15.5**	**-6.1**
KSH				S	**Sn**	**16 53 37.2**	**-12**
KSH				smax			
	comp=N,630nm,0.3s						
KSH				smax			
	comp=E,630nm,0.2s						
AML	**Almayashu**	**3.86**	**358**	P	**Pn**	**16 53 44.8**	**+0.8**
	SNR=284						
AML	**Almayashu**	**3.86**	**358**	eP	**Pn**	**16 53 44.7**	**+0.7**
AML				eS	**Sn**	**16 54 27.6**	**-2.0**
KZA	**Kyzart**	**3.94**	**15**	P	**Pn**	**16 53 45.1**	**0.0**
	SNR=185						
KZA	**Kyzart**	**3.94**	**15**	eP	**Pn**	**16 53 44.9**	**-0.3**
UCH	**Uchtor**	**3.98**	**7**	P	**Pn**	**16 53 46.4**	**+0.7**
	SNR=10						
UCH	**Uchtor**	**3.98**	**7**	eP	**Pn**	**16 53 45.8**	**+0.2**
ULHL	**Ulahol**	**4.36**	**24**	P	**Pn**	**16 53 51.9**	**+1.3**
	SNR=12						
AAK	**Ala-Archa**	**4.38**	**6**	P	**Pn**	**16 53 51.7**	**+0.8**
	SNR=11						
AAK	**Ala-Archa**	**4.38**	**6**	P	**Pn**	**16 53 51.5**	**+0.7**
	comp=E,0.1nm,0.3s,baz=146,slow=7.8,SNR=21						
AAK				S	**Sn**	**16 54 43.2**	**+1.3**
	comp=E,0.0nm,0.3s,baz=75,slow=22,SNR=6.6						
AAK	**Ala-Archa**	**4.38**	**6**	eP	**Pn**	**16 53 51.4**	**+0.5**
EKS2	**Erkin-Say**	**4.38**	**359**	P	**Pn**	**16 53 51.8**	**+0.9**
	SNR=20						
EKS2	**Erkin-Say**	**4.38**	**359**	eP	**Pn**	**16 53 51.7**	**+0.8**
KBK	**Karagaybulak**	**4.45**	**10**	P	**Pn**	**16 53 52.6**	**+0.7**
	SNR=27						
CHCP	**Chirah Chowk**	**4.63**	**186**	P	**Pn**	**16 53 54.0**	**-0.3**
CEP	**Cherat**	**4.72**	**200**	P	**Pn**	**16 53 54.9**	**-0.5**
CHMS	**Chumysh**	**4.77**	**8**	P	**Pn**	**16 53 56.5**	**+0.6**
	SNR=17						
TKM2	**Tokmak 2**	**4.82**	**15**	⇑Pn	**Pn**	**16 53 56.7**	**+0.1**
TKM2	comp=E,9.2nm,0.5s						
				⇑Sn	**Sn**	**16 54 50.8**	**-1.4**
	comp=E,30nm,0.7s						
TKM2	**Tokmak 2**	**4.82**	**15**	P	**Pn**	**16 53 56.8**	**+0.2**
	SNR=19						
TKM2	**Tokmak 2**	**4.82**	**15**	eP	**Pn**	**16 53 56.6**	**0.0**
USP	**Ospenovka**	**5.01**	**5**	P	**Pn**	**16 53 59.5**	**+0.4**
	SNR=7.2						
CHM	**Chimkent**	**5.20**	**322**	eP	**Pn**	**16 53 56.4**	**-5.2**
	comp=E,27nm,0.3s						
KBL	**Kabul**	**5.39**	**228**	eP	**Pn**	**16 54 04.1**	**-0.2**
	comp=E,7.3nm,0.5s						
KK31	**Karatay Array**	**5.46**	**333**	⇑Pn	**Pn**	**16 54 05.9**	**+0.8**
	comp=E,24nm,0.6s,baz=129,slow=11,SNR=182						
KK31				⇑Sn	**Sn**	**16 55 05.9**	**-1.5**
	comp=E,25nm,0.5s,baz=166,slow=26,SNR=12						
KKAR	**Karatay Array**	**5.46**	**333**	eP	**Pn**	**16 54 05.7**	**+0.6**
	comp=E,20nm,0.3s						
KKAR				eS	**Sn**	**16 55 05.9**	**-1.5**
THW	**Thamme Wali**	**5.74**	**198**	P	**Pn**	**16 54 07.8**	**-1.1**
MKAR	**Makanchi Array**	**10.53**	**33**	P	**Pn**	**16 55 10.0**	**-2.3**
	comp=E,0.1nm,0.3s,baz=205,slow=12,SNR=3.5						
KURK	**Kurchatov**	**12.89**	**14**	P	**Pn**	**16 55 42.4**	**-0.5**
	comp=E,0.3nm,0.3s,baz=207,slow=10.0,SNR=12						
AB31	**Akbulak array**	**14.87**	**322**	⇑P	**Pn**	**16 56 10.8**	**+3.0**
	comp=E,0.4nm,0.3s,baz=131,slow=14,SNR=25						
AB31				⇓S	**Sn**	**16 58 51.2**	**-1.8**
	comp=E,1.0nm,0.6s,baz=130,slow=24,SNR=4.7						
ABKAR	**Akbulak array**	**14.87**	**322**	eP	**Pn**	**16 56 08.8**	**+1.0**
	comp=E,1.4nm,0.4s						
BVAR	**Borovoye Array**	**14.95**	**352**	P	**Pn**	**16 56 09.9**	**+1.0**
	comp=E,0.2nm,0.3s,baz=158,slow=9.6,SNR=4.9						
BRVK	**Borovoye**	**15.00**	**352**	eP	**Pn**	**16 56 12.2**	**+2.8**
AKTK	**Aktyubinsk**	**16.59**	**322**	P	**Pn**	**16 56 30.0**	**+1.1**
AKTO	**Aktyubinsk**	**16.59**	**322**	P	**Pn**	**16 56 30.0**	**+1.1**
	comp=E,0.2nm,0.3s,baz=107,slow=13,SNR=3.7						
ZALV	**Zalesovo Beam**	**17.38**	**22**	P	**Pn**	**16 56 36.7**	**-1.6**
	comp=E,1.3nm,0.3s,baz=215,slow=9.3,SNR=24						
GTA	**Gaotai**	**20.21**	**79**	eP	**P**	**16 57 09.4**	**+1.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**25.45**	**57**	P	**P**	**16 57 57.7**	**-1.0**
	comp=Z,6.6nm,0.7s,mb3.2,baz=254,slow=10,SNR=6.3						
ARCES	**ARCESS Array B**	**40.42**	**336**	P	**P**	**17 00 08.1**	**+0.2**
	comp=Z,3.4nm,0.9s,mb4.0,baz=106,slow=8.9,SNR=8.4						
NOA	**NORSAR Array B**	**44.38**	**322**	P	**P**	**17 00 40.1**	**+0.2**
	comp=Z,1.0nm,0.7s,mb3.6,baz=91,slow=7.6,SNR=3.3						
ILAR	**Eielson Array**	**72.43**	**17**	P	**P**	**17 03 51.7**	**-2.5**
	comp=Z,0.7nm,0.9s,mb3.4,baz=267,slow=2.1,SNR=4.8						
YKA	**Yellowknife Ar**	**79.35**	**4**	P	**P**	**17 04 32.6**	**-0.8**
	comp=Z,0.6nm,0.5s,mb3.5,baz=348,slow=5.6,SNR=6.1						

*ISCJB **02** 16:57:32.8±0.6, 59°.85N±0°.03×22°.32E±0°.08, h0km, Error ellipse: s-maj=5.6km s-min=4.0km az=175.4*
*CSEM **02** 16:57:33.5±0.5, 59°.88N×22°.41E, h2km, ML2.1, Error ellipse: s-maj=10.9km s-min=6.2km az=82.0, Mining explosion.*
*HEL **02** 16:57:34.3±0.2, 59°.83N×22°.32E, h0km, ML1.9, Explosion*
*IDC **02** 16:57:36.2±1.8, 60°.03N×22°.21E, h0km, mb1 3.0/4, mb1mx2.9/25, mbtmp2.9/4, ML2.6/3, Error ellipse: s-maj=29.9km s-min=7.8km az=165.0*

ISC 02 16:57:33.3±0.6, 59°.84N±0°.03×22°.38E±0°.07, h0km, n21, σ1§23/40, Baltic Stations - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.08**	**69**	eP	**Pg**	**16 57 53.9**	**0.0**
MEF				eS	**Sg**	**16 58 08.7**	**+0.9**
MEF	**Metsahovi**	**1.08**	**69**	P	**Pg**	**16 57 53.9**	**0.0**
MEF				S	**Sg**	**16 58 08.7**	**+0.9**
RAF	**Rauma**	**1.22**	**346**	eP	**Pg**	**16 57 56.2**	**-0.5**
RAF				eS	**Sg**	**16 58 12.3**	**-0.2**
RAF	**Rauma**	**1.22**	**346**	eP	**Pg**	**16 57 56.3**	**-0.4**
	SNR=90						
RAF				S	**Sg**	**16 58 12.2**	**-0.3**
MTSE	**Matsula**	**1.35**	**146**	eP	**Pg**	**16 57 58.

MAN 02 17:11:28, 10°.14N×126°.24E, h0km, mb4.8, ML3.7, MS3.7, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.82**	**244**	⇓*eP*	Pg	17 11 44.7	+0.9
SCPH				*eS*	Sg	17 11 55.9	+1.5
MSLP	**Maasin**	**1.36**	**270**	*eP*	Pg	17 11 54.4	+0.3
MSLP				*eS*	Sg	17 12 13.7	+1.9
BUKP	**Musuan**	**2.53**	**207**	*eP*	Pn	17 12 11.5	+1.1
CNP	**Cataman**	**2.82**	**327**	*eP*	Pn	17 12 15.6	+1.3

KISR ***02*** *17:14:16.6±0.3, 31°.83N×46°.60E, h34km, ML2.6*

TEH 02 17:14:16.8, 32°.15N×47°.45E, h9km, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**2.02**	**2**	*ePn*	Pn	17 14 51.3	+0.3
IKOM				*eSg*	Sg	17 15 19.9	-1.9
IKOM				*e*		17 15 22.2	
	comp=N,5μm,0.2s						
MIB	**Mutribah**	**2.34**	**182**	*eP*	Pn	17 14 56.8	+1.5
MIB				*eS*	Sn	17 15 27.0	+2.8
MIB				AML	AML	17 15 34.0	
	comp=Z,41nm,0.6s						
IDHR	**Dehrash**	**2.69**	**341**	*ePn*	Pn	17 14 59.6	-0.7
IDHR				*eSg*	Sg	17 15 40.9	-2.5
IDHR				*e*		17 15 47.1	
	comp=Z,940nm,0.2s						
ILIN	**Lien**	**2.79**	**352**	*ePn*	Pn	17 15 02.1	+0.5
ILIN				*e*		17 15 52.3	
	comp=N,596nm,0.2s						
NAY	**Al-Naaiem**	**2.90**	**184**	*eP*	Pn	17 15 04.2	+1.1
IPIR	**Pirpir**	**2.96**	**79**	*ePn*	Pn	17 15 04.2	+0.2
IPIR				*e*		17 16 08.7	
	comp=Z,341nm,0.3s						
IRAZ	**Razeghan**	**3.85**	**32**	*ePn*	Pn	17 15 15.7	-0.5
IRAZ				*e*		17 15 27.5	
	comp=Z,242nm,0.3s						
IZEF	**Zefreh**	**4.19**	**78**	*ePn*	Pn	17 15 20.4	-0.5
IZEF				*e*		17 15 38.5	
	comp=Z,68nm,0.1s						

CASC 02 17:14:20.8±1.7, 12°.54N×87°.88W, h54km±42km, MD3.6, ML3.1, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.73**	**4**	*eP*	Pn	17 14 35.2	0.0
CNCH				*eS*	Sn	17 14 47.3	+1.6
BLLM	**Bellamira**	**0.96**	**339**	*eP*	Pn	17 14 38.7	+0.6
BLLM				*eS*	Sn	17 14 51.6	+0.7
VSM	**San Miguel**	**0.96**	**337**	*eP*	Pn	17 14 39.0	+0.8
VSM				*eS*	Sn	17 14 51.7	+0.8
TELN	**Telica**	**1.03**	**86**	*eP*	Pn	17 14 39.6	+0.6
CNGN	**Cerro Negro**	**1.16**	**92**	*eP*	Pn	17 14 40.6	-0.2
CNGN				*eS*	Sn	17 14 55.8	+0.2
CNGN				AML	AML	17 14 59.6	
	comp=E,318nm,0.1s						
CAHU	**Cacacuatique**	**1.26**	**345**	*eP*	Pn	17 14 42.7	+0.5
CAHU				*eS*	Sn	17 15 00.1	+1.9
COPN	**Copaltepe**	**1.31**	**106**	*eP*	Pn	17 14 42.5	-0.4
COPN				*eS*	Sn	17 14 59.1	-0.2
MOMN	**Momotombo**	**1.32**	**96**	*eP*	Pn	17 14 43.2	+0.3
SNVI	**San Vicente**	**1.42**	**319**	*eP*	Pn	17 14 44.0	-0.2
SNVI				*eS*	Sn	17 15 02.7	+0.9
CSAN		**1.47**	**104**	*eP*	Pn	17 14 45.3	+0.3
BOQS	**Boqueron**	**1.81**	**311**	⇑*eP*	Pn	17 14 50.2	+0.6

IDC ***02*** *17:20:56.7±0.4, 2°.98N×75°.93W, h0km, mb4.4/19, mb1 4.6/23, mb1mx4.6/26, mbtmp4.5/23, ML4.0/4, MS3.9/21, Ms1 3.9/21, ms1mx3.8/33, Error ellipse: s-maj=14.6km s-min=11.0km az=82.0*

ISCJB ***02*** *17:20:58.0±1.6, 2°.93N±0°.03×75°.95W±0°.03, h15km±11km, mb4.9/157, MS4.0/26, Error ellipse: s-maj=5.8km s-min=4.2km az=28.2*

BJI ***02*** *17:21:00.2, 3°.00N×76°.00W, h23km, mB5.1/11, Ms7 4.1/2*

NEIC ***02*** *17:21:00.3±1.7, 2°.95N×75°.98W, h23km±11km, mb4.9/128, MS4.1/5, Error ellipse: s-maj=6.4km s-min=4.9km az=46.0*

SZGRF ***02*** *17:21:13.0, 3°.38N×73°.55W, h33km, mb5.3, MS4.1, Colombia*

ISC 02 17:21:00.7±1.6, 2°.92N±0°.03×75°.91W±0°.03, h21km±11km, n466, σ19°07/419, mb4.9/158, MS4.0/26, 96C-76D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.49**	**39**	Pn	**Pn**	**17 21 40.0**	**0.0**
	181nm,0.3s,baz=302,slow=2.6,SNR=61						
ROSC				Lg		17 22 17.1	
	370nm,0.3s,baz=92,slow=21,SNR=29						
ROSC				LR	LR	17 22 53.3	
	comp=Z,4μm,19.6s,baz=30,slow=48						
ROSC	**El Rosal**	**2.49**	**39**	*eP*	**Pn**	**17 21 40.8**	**+0.8**
ROSC				*eSn*	**Sn**	**17 22 11.2**	**+1.5**
OTAV	**Otavalo**	**3.68**	**224**	*eP*	**Pn**	**17 21 57.5**	**+1.2**
OTAV				*eS*	**Sn**	**17 22 49.2**	**+10**
BCIP	**Isla Barro Col**	**7.33**	**328**	*ePn*	**Pn**	**17 22 45.9**	**-0.7**
	55nm,0.6s						
BCIP				*eSn*	**Sn**	**17 24 08.8**	**-0.5**
SDV	**Santo Domingo**	**7.92**	**41**	*eP*	**Pn**	**17 22 53.9**	**-0.8**
	109nm,0.9s						
SDV				*eSn*	**Sn**	**17 24 23.2**	**-0.5**
ATAH	**Atahualpa**	**10.29**	**194**	Pn	**Pn**	**17 23 27.8**	**+0.6**
	1.7nm,0.3s,baz=29,slow=6.9,SNR=31						
JTS	**JuntasAbangare**	**11.59**	**310**	*ePn*	**Pn**	**17 23 42.6**	**-2.4**
	26nm,1.0s						
PCRV	**Puerto La Cruz**	**13.32**	**57**	Pn	**Pn**	**17 24 07.6**	**-1.0**
	2.5nm,0.3s,baz=180,slow=5.6,SNR=3.4						
NNA	**Nana**	**14.84**	**184**	Pn	**Pn**	**17 24 29.1**	**-0.3**
	1.5nm,0.3s,baz=283,slow=14,SNR=3.2						
NNA	**Nana**	**14.84**	**184**	*ePn*	**Pn**	**17 24 29.0**	**-0.4**
	60nm,1.2s						
MTDJ	**Mount Denham**	**15.30**	**354**	P	**Pn**	**17 24 37.6**	**+2.1**
	284nm,1.5s						
TGUH	**Tegucigalpa,Un**	**15.76**	**315**	P	**Pn**	**17 24 42.9**	**+1.4**
SDDR	**Presa de Saban**	**16.59**	**15**	*ePn*	**Pn**	**17 24 52.6**	**+0.4**
	26nm,0.6s						
GTBY	**Guantanamo Bay**	**16.92**	**3**	*ePn*	**Pn**	**17 24 56.8**	**+0.5**
	139nm,1.2s						
SJG	**San Juan**	**17.88**	**32**	LR	LR	17 32 45.4	
	comp=Z,654nm,19.1s,baz=74,slow=40						
LPAZ	**La Paz**	**20.57**	**158**	P	**P**	**17 25 37.5**	**-0.8**
	3.6nm,0.7s,baz=344,slow=10.0,SNR=5.7						
LPAZ	**La Paz**	**20.57**	**158**	*eP*	**P**	**17 25 36.7**	**-1.6**
	14nm,1.1s						
TEIG	**Tepich**	**21.01**	**326**	*eP*	**P**	**17 25 42.1**	**-1.0**
	15nm,0.8s,mb4.4						
CMIG	**Matias Romero**	**23.36**	**308**	P	**P**	**17 26 05.7**	**-2.4**
	4.3nm,0.7s,mb4.0,baz=124,slow=12,SNR=8.3						
CMIG				LR	LR	17 36 07.3	
	comp=Z,140nm,19.9s,MS3.4,baz=143,slow=39						
SIV	**San Ignacio**	**23.84**	**142**	P	**P**	**17 26 11.9**	**-0.8**
	24nm,0.9s,mb4.6,baz=326,slow=11,SNR=80						
GOGA	**Godfrey**	**31.15**	**348**	*eP*	**P**	**17 27 18.3**	**+0.2**
LRAL	**Lakeview Retre**	**31.71**	**342**	*eP*	**P**	**17 27 22.1**	**-0.9**
	21nm,0.9s,mb5.0						
VBMS	**Vicksburg**	**32.22**	**336**	*eP*	**P**	**17 27 24.8**	**-2.7**
	51nm,1.0s,mb5.3						
CPUP	**Villa Florida**	**34.18**	**149**	P	**P**	**17 27 44.9**	**+0.2**
	1.0nm,0.6s,mb4.0,baz=345,slow=9.2,SNR=3.7						
CPUP				LR	LR	17 43 01.6	
	comp=Z,205nm,19.8s,MS3.9,baz=142,slow=39						
CPUP	**Villa Florida**	**34.18**	**149**	P	**P**	**17 27 44.9**	**+0.2**
CPUP				LR	LR	17 43 01.6	
BLA	**Blacksburg**	**34.38**	**354**	*eP*	**P**	**17 27 47.7**	**+1.4**
	31nm,1.0s,mb5.2						
WVT	**Waverly**	**34.84**	**343**	*eP*	**P**	**17 27 47.8**	**-2.5**
	18nm,1.0s,mb5.0						
CFAA	**Coronel Fontan**	**35.10**	**169**	P	**P**	**17 27 53.4**	**+0.8**
	1.3nm,0.8s,mb3.9,baz=338,slow=7.7,SNR=16						
CFAA				LR	LR	17 42 47.8	
	comp=Z,83nm,19.3s,MS3.5,baz=27,slow=37						
MIAR	**Mount Ida**	**35.50**	**334**	*eP*	**P**	**17 27 53.7**	**-2.4**
	10nm,1.0s,mb4.7						
JCT	**Junction City**	**35.53**	**323**	P	**P**	**17 27 54.9**	**-1.5**
	13nm,1.2s,mb4.8						
MCWV	**Mont Chateau**	**36.74**	**355**	*eP*	**P**	**17 28 06.0**	**-0.6**
	63nm,1.0s,mb5.4						
628A	**Black Gap, Mar**	**36.80**	**319**	⇓P	**P**	**17 28 07.2**	**0.0**
	baz=37,SNR=16						
627A	**Terlingua Ranc**	**37.10**	**318**	⇓P	**P**	**17 28 09.8**	**-0.1**
	baz=37,SNR=23						
TXAR	**Lajitas Array**	**37.22**	**318**	P	**P**	**17 28 10.6**	**-0.2**
	4.9nm,1.0s,mb4.3,baz=141,slow=6.1,SNR=30						
TXAR				PcP	PcP	17 30 31.5	+1.0
	1.7nm,0.8s,baz=137,slow=6.5,SNR=7.6						
TXAR				LR	LR	17 44 31.6	
	comp=Z,114nm,18.6s,MS3.7,baz=190,slow=38						
428A	**Kincaid Ranch,**	**37.48**	**320**	⇑P	**P**	**17 28 12.7**	**-0.3**
	baz=38						
SSPA	**Standing Stone**	**37.59**	**358**	*eP*	**P**	**17 28 13.7**	**-0.1**
	25nm,0.9s,mb4.9						
626A	**Big Bend Ranch**	**37.67**	**318**	⇓P	**P**	**17 28 14.7**	**+0.1**
	baz=38,SNR=13						
CCM	**Cathedral Cave**	**37.69**	**340**	*eP*	**P**	**17 28 12.8**	**-1.8**
	39nm,1.1s,mb5.0						
527A	**Woodward Ranch**	**37.70**	**319**	⇓P	**P**	**17 28 15.2**	**+0.3**
	baz=38,SNR=8.2						
PAL	**Palisades**	**37.96**	**2**	*eP*	**P**	**17 28 18.1**	**+1.2**
	38nm,1.0s,mb5.1						
526A	**Mary Lane Ranc**	**37.96**	**318**	⇓P	**P**	**17 28 17.7**	**+0.6**
	baz=38,SNR=7.3						
427A	**Hayter Ranch,**	**38.02**	**320**	⇓P	**P**	**17 28 16.9**	**-0.7**
	baz=38						
WMOK	**Wichita Mounta**	**38.14**	**329**	*eP*	**P**	**17 28 16.8**	**-1.8**
	8.2nm,0.9s,mb4.5						
426A	**McDonald Obser**	**38.31**	**319**	⇑P	**P**	**17 28 19.5**	**-0.6**
	baz=38,SNR=15						
326A	**Caldwell Ranch**	**38.70**	**320**	⇑P	**P**	**17 28 23.2**	**-0.1**
	baz=39						
ALLY	**Alegheny Colle**	**38.75**	**355**	*eP*	**P**	**17 28 24.0**	**+0.5**
	48nm,0.9s,mb5.2						
425A	**Indio Mountain**	**39.02**	**318**	⇑P	**P**	**17 28 25.4**	**-0.6**
	baz=39,SNR=21						
BINY	**Binghamton**	**39.11**	**360**	*eP*	**P**	**17 28 27.3**	**+0.7**
	80nm,1.4s,mb5.3						
226A	**Malaga, Loving**	**39.27**	**321**	⇑P	**P**	**17 28 28.1**	**0.0**
	baz=39						
QUA2	**Belchertown**	**39.32**	**4**	*eP*	**P**	**17 28 29.8**	**+1.5**
	31nm,1.0s,mb5.0						
325A	**Bean Ranch, Si**	**39.38**	**319**	⇑P	**P**	**17 28 28.9**	**-0.1**
	baz=39,SNR=25						
GDL2	**Guadalupe Moun**	**39.53**	**321**	*eP*	**P**	**17 28 33.2**	**+2.9**
	2.1nm,0.6s,mb4.0						
Z27A	**Tatum**	**39.58**	**323**	⇑P	**P**	**17 28 30.8**	**+0.2**
	baz=40						
TRY	**Troy**	**39.69**	**3**	*eP*	**P**	**17 28 33.7**	**+2.3**
	33nm,0.9s,mb5.1						
324A	**Moseley Ranch,**	**39.77**	**319**	⇓P	**P**	**17 28 31.5**	**-0.7**
	baz=40,SNR=43						
MSTX	**Muleshoe**	**39.77**	**324**	⇓P	**P**	**17 28 31.8**	**-0.5**
	baz=40,SNR=8.6						
MNTX	**Cornudas Mount**	**39.86**	**319**	⇓P	**P**	**17 28 32.7**	**-0.3**
	baz=40						
MNTX	**Cornudas Mount**	**39.86**	**319**	*eP*	**P**	**17 28 31.1**	**-1.9**
	26nm,1.1s,mb4.9						
Z26A	**Caprock**	**40.01**	**322**	⇑P	**P**	**17 28 35.0**	**+0.8**
	baz=40						
224A	**Cornudas Mount**	**40.20**	**319**	⇓P	**P**	**17 28 35.4**	**-0.4**
	baz=40,SNR=15						
ACCN	**Adirondack Com**	**40.34**	**3**	*eP*	**P**	**17 28 38.6**	**+1.8**
	26nm,1.2s,mb4.8						
Z25A	**Roswell**	**40.47**	**322**	⇑P	**P**	**17 28 38.1**	**+0.1**
	baz=40						
124A	**Stringfield Ra**	**40.55**	**320**	⇑P	**P**	**17 28 38.9**	**+0.2**
	baz=41,SNR=28						
KSU1	**Kansas State U**	**40.65**	**335**	*eP*	**P**	**17 28 37.3**	**-2.1**
	28nm,0.8s,mb5.0						
HNH	**Hanover**	**40.74**	**4**	*eP*	**P**	**17 28 42.0**	**+1.9**
	92nm,1.4s,mb5.2						
RCBR	**Riachuelo**	**40.89**	**102**	*eP*	**P**	**17 28 45.5**	**+3.7**
	5.0nm,0.7s,mb4.2						
Y25A	**Mesa, Roswell**	**40.89**	**322**	⇑P	**P**	**17 28 41.6**	**+0.1**
	baz=41,SNR=5.8						
NCB	**Newcomb**	**40.91**	**2**	*eP*	**P**	**17 28 42.6**	**+1.2**
	51nm,1.0s,mb5.1						
Z24A	**Sheeppen Canyo**	**40.91**	**321**	⇓P	**P**	**17 28 42.0**	**+0.3**
	baz=41,SNR=9.1						
123A	**Bell Site, Whi**	**41.03**	**320**	⇑P	**P**	**17 28 43.3**	**+0.6**
	baz=41,SNR=6.6						
222A	**Williams Famil**	**41.25**	**318**	⇑P	**P**	**17 28 44.7**	**+0.3**
	baz=41						
X25A	**Clemmons Ranch**	**41.28**	**323**	⇑P	**P**	**17 28 44.8**	**0.0**
	baz=41,SNR=10						
LBNH	**Lisbon**	**41.30**	**4**	*eP*	**P**	**17 28 44.1**	**-0.6**
	80nm,1.4s,mb5.2						
Y24A	**Capitan**	**41.35**	**322**	⇑P	**P**	**17 28 46.3**	**+1.0**
	baz=41,SNR=7.2						
Z23A	**Rita Site, Whi**	**41.42**	**320**	⇑P	**P**	**17 28 46.3**	**+0.5**
	baz=41,SNR=11						
LONY	**Lake Ozonia**	**41.55**	**1**	*eP*	**P**	**17 28 47.8**	**+1.1**
	50nm,1.2s,mb5.0						
W25A	**X Bar L Ranch,**	**41.64**	**324**	⇑P	**P**	**17 28 47.7**	**0.0**
	baz=42,SNR=7.9						
221A	**Mesquite Ranch**	**41.65**	**318**	⇓P	**P**	**17 28 49.2**	**+1.5**
	baz=42,SNR=9.9						
Y23A	**Lovelace Mesa,**	**41.74**	**321**	⇑P	**P**	**17 28 49.0**	**+0.5**
	baz=42						
320A	**Kipp Ranch, An**	**41.76**	**316**	⇑P	**P**	**17 28 48.8**	**+0.2**
	baz=42,SNR=14						
X24A	**Lazy VL Ranch,**	**41.78**	**322**	⇓P	**P**	**17 28 49.4**	**+0.7**
	baz=42						
FRNY	**Flat Rock**	**41.79**	**2**	*eP*	**P**	**17 28 50.7**	**+2.0**
	59nm,1.3s,mb5.1						
JFWS	**Jewell Farm**	**41.83**	**344**	*eP*	**P**	**17 28 45.9**	**-3.1**
	8.1nm,0.5s,mb4.6						
Z22A	**Elephant Butte**	**41.88**	**320**	⇓P	**P**	**17 28 50.0**	**+0.4**
	baz=42,SNR=12						
121A	**Cookes Peak, D**	**41.97**	**318**	⇑P	**P**	**17 28 50.8**	**+0.4**
	baz=42,SNR=24						
220A	**Playas Peak, P**	**42.09**	**317**	⇑P	**P**	**17 28 51.8**	**+0.4**
	baz=42,SNR=35						
V25A	**Rancho No Teng**	**42.16**	**324**	⇑P	**P**	**17 28 53.0**	**+1.1**
	baz=42,SNR=11						
BNM	**Barren Site**	**42.24**	**321**	*eP*	**P**	**17 28 53.4**	**+0.8**
	3.6nm,0.7s,mb4.1						
319A	**Douglas**	**42.30**	**316**	⇑P	**P**	**17 28 53.6**	**+0.5**
	baz=42,SNR=16						
Y22A	**Socorro**	**42.32**	**320**	⇑P	**P**	**17 28 53.9**	**+0.7**
	baz=42,SNR=5.8						
LPM	**Los Pinos Moun**	**42.35**	**321**	*eP*	**P**	**17 28 53.3**	**-0.2**
	11nm,1.2s,mb4.3						
U25A	**Circle Dot Ran**	**42.44**	**325**	⇓P	**P**	**17 28 55.0**	**+0.9**
	baz=42						
V24A	**Rampart Ranch,**	**42.47**	**324**	⇑P	**P**	**17 28 54.1**	**-0.3**
	baz=42						
120A	**U Bar Ranch, L**	**42.55**	**318**	⇑P	**P**	**17 28 55.4**	**+0.3**
	baz=43,SNR=7.8						
PKME	**Peaks-Kenny Pk**	**42.57**	**7**	*eP*	**P**	**17 28 48.4**	**-6.6**
	28nm,1.1s,mb4.9						
219A	**White Tail Can**	**42.65**	**316**	⇑P	**P**	**17 28 55.8**	**-0.1**
	baz=43,SNR=14						
ANMO	**Albuquerque**	**42.66**	**322**	*eP*	**P**	**17 28 55.8**	**-0.2**
	15nm,1.1s,mb4.6						
LAZ	**Ladron**	**42.73**	**321**	*eP*	**P**	**17 28 56.5**	**0.0**
	17nm,1.3s,mb4.6						
TRQA	**Tornquist**	**42.76**	**164**	*eP*	**P**	**17 28 57.2**	**+0.6**
	40nm,1.1s,mb5.1						
Y21A	**Point of Rocks**	**42.82**	**320**	⇑P	**P**	**17 28 58.6**	**+1.4**
	baz=43,SNR=8.7						
318A	**Bisbee**	**42.84**	**315**	⇓P	**P**	**17 28 57.8**	**+0.3**
	baz=43,SNR=9.5						
Z20A	**Nine Sixteen R**	**42.86**	**318**	⇑P	**P**	**17 28 58.5**	**+0.9**
	baz=43,SNR=11						
X21A	**Alamocita Cree**	**43.17**	**320**	⇓P	**P**	**17 29 00.6**	**+0.6**
	baz=43,SNR=17						
218A	**Dragoon**	**43.18**	**316**	⇑P	**P**	**17 29 00.9**	**+0.6**
	baz=43,SNR=10.0						
Y20A	**Horse Springs,**	**43.21**	**319**	⇓P	**P**	**17 29 01.4**	**+1.0**
	baz=43,SNR=9.8						
S25A	**Robets Cordova**	**43.35**	**326**	⇓P	**P**	**17 29 02.1**	**+0.6**
	baz=43,SNR=9.7						
U23A	**El Rito**	**43.42**	**324**	⇓P	**P**	**17 29 03.1**	**+1.0**
	baz=44						
W21A	**San Fidel**	**43.51**	**321**	⇓P	**P**	**17 29 03.0**	**+0.2**
	baz=44						
118A	**Homack Ranch,**	**43.51**	**317**	⇑P	**P**	**17 29 03.1**	**+0.2**
	baz=44						
V22A	**San Miguel Ran**	**43.58**	**323**	⇑P	**P**	**17 29 04.2**	**+0.9**
	baz=44						
217A	**Green Valley**	**43.61**	**315**	⇓P	**P**	**17 29 03.6**	**-0.1**
	baz=44,SNR=11						
X20A	**Quemado**	**43.68**	**320**	⇑P	**P**	**17 29 05.6**	**+1.4**
	baz=44,SNR=12						
PLCA	**Paso Flores**	**43.72**	**174**	P	**P**	**17 29 05.4**	**+1.1**
	6.9nm,0.9s,mb4.4,baz=345,slow=10,SNR=8.5						
PLCA				LR	LR	17 46 10.1	
	comp=Z,291nm,18.9s,MS4.2,baz=1.0,slow=35						
PLCA	**Paso Flores**	**43.72**	**174**	*eP*	**P**	**17 29 04.9**	**+0.5**
	7.0nm,0.9s,mb4.4						
U22A	**Llaves**	**43.85**	**323**	⇓P	**P**	**17 29 07.7**	**+2.2**
	baz=44						
TUC	**Tucson**	**43.89**	**316**	*eP*	**P**	**17 29 04.7**	**-1.2**
	19nm,1.3s,mb4.7						
117A	**Oracle**	**44.00**	**316**	⇑P	**P**	**17 29 06.8**	**-0.1**
	baz=44,SNR=13						
SDCO	**Great Sand Dun**	**44.01**	**326**	⇑P	**P**	**17 29 07.0**	**+0.3**
	baz=44						
SDCO	**Great Sand Dun**	**44.01**	**326**	*eP*	**P**	**17 29 06.6**	**-0.1**
	16nm,1.2s,mb4.6						
W20A	**Ramah**	**44.05**	**321**	⇑P	**P**	**17 29 07.9**	**+0.7**
	baz=44,SNR=8.2						
X19A	**St. Johns**	**44.12**	**319**	⇓P	**P**	**17 29 08.9**	**+1.1**
	baz=44,SNR=5.3						
216A	**Three Points,**	**44.19**	**315**	⇑P	**P**	**17 29 08.3**	**-0.1**
	baz=44						
COWI	**Conover**	**44.54**	**347**	*eP*	**P**	**17 29 09.1**	**-1.8**
	23nm,1.0s,mb5.0						
ECSD	**EROS Data Cent**	**44.60**	**339**	*eP*	**P**	**17 29 07.7**	**-3.7**
	5.2nm,0.8s,mb4.4						
W19A	**Sanders**	**44.61**	**320**	⇓P	**P**	**17 29 12.6**	**+0.9**
	baz=45						
116A	**Eloy**	**44.67**	**315**	⇓P	**P**	**17 29 13.2**	**+1.0**
	baz=45						
S22A	**4UR Ranch, Cre**	**44.76**	**325**	⇓P	**P**	**17 29 13.1**	**+0.3**
	baz=45,SNR=12						
U20A	**Newcomb**	**44.86**	**322**	⇑P	**P**	**17 29 14.0**	**+0.4**
	baz=45						
R22A	**Saguache, Gunn**	**45.05**	**325**	⇑P	**P**	**17 29 16.3**	**+1.2**
	baz=45						
115A	**Sonoran Desert**	**45.12**	**315**	⇓P	**P**	**17 29 17.2**	**+1.5**
	baz=45						
214A	**Organ Pipe Nat**	**45.13**	**314**	⇑P	**P**	**17 29 16.4**	**+0.6**
	baz=45,SNR=8.6						
Y16A	**Circle Bar Ran**	**45.26**	**317**	⇓P	**P**	**17 29 18.3**	**+1.5**
	baz=45,SNR=9.5						
S21A	**Coal Bank Pass**	**45.27**	**324**	⇑P	**P**	**17 29 17.2**	**+0.4**
	baz=45,SNR=8.8						
MVCO	**Mesa Verde**	**45.39**	**323**	*eP*	**P**	**17 29 17.9**	**+0.1**
	38nm,1.6s,mb5.0						
T19A	**Beclabito**	**45.46**	**322**	⇑P	**P**	**17 29 18.8**	**+0.4**
	baz=46						
ISCO	**Idaho Springs**	**45.53**	**328**	*eP*	**P**	**17 29 18.2**	**-0.7**
	13nm,1.4s,mb4.7						
X16A	**Lo Mia Camp, P**	**45.54**	**318**	⇑P	**P**	**17 29 20.0**	**+0.9**
	baz=46,SNR=7.1						
S20A	**Disappointment**	**45.72**	**324**	⇓P	**P**	**17 29 20.9**	**+0.5**
	baz=46,SNR=11						
SMCO	**Snowmass**	**45.83**	**326**	*eP*	**P**	**17 29 21.9**	**+0.7**
	4.0nm,0.8s,mb4.4						
Y15A	**Casa Rosa Ranc**	**45.88**	**317**	⇓P	**P**	**17 29 22.5**	**+0.7**
	baz=46						
R20A	**Redvale**	**45.97**	**324**	⇑P	**P**	**17 29 24.2**	**+1.8**
	baz=46						
PV01	**Paradox Valley**	**46.04**	**324**	*eP*	**P**	**17 29 23.5**	**+0.5**
	2μm,1.2s						
X15A	**Humboldt**	**46.12**	**317**	⇓P	**P**	**17 29 23.9**	**+0.2**
	baz=46,SNR=6.0						
S19A	**Harvey Farm, M**	**46.12**	**323**	⇓P	**P**	**17 29 23.6**	**0.0**
	baz=46						
WUAZ	**Wupatki**	**46.14**	**319**	⇑P	**P**	**17 29 24.1**	**+0.2**
	baz=46						
WUAZ	**Wupatki**	**46.14**	**319**	*eP*	**P**	**17 29 24.3**	**+0.5**
	14nm,1.1s,mb4.8						
T18A	**Mexican Hat**	**46.18**	**322**	⇓P	**P**	**17 29 24.8**	**+0.7**
	baz=46						
O22A	**Kremmling**	**46.29**	**327**	⇓P	**P**	**17 29 24.5**	**-0.3**
	baz=46						
Y14A	**Wickenburg**	**46.34**	**316**	⇓P	**P**	**17 29 25.7**	**+0.3**
	baz=46						
M24A	**Cheyenne**	**46.34**	**330**	⇓P	**P**	**17 29 25.9**	**+0.7**
	baz=46						
U16A	**Tuba City**	**46.36**	**320**	⇓P	**P**	**17 29 26.1**	**+0.6**
	baz=46						
R19A	**Curley Farm, L**	**46.55**	**323**	⇑P	**P**	**17 29 27.9**	**+0.9**
	baz=47						
X14A	**Yava**	**46.56**	**317**	⇑P	**P**	**17 29 27.5**	**+0.4**
	baz=47,SNR=5.4						
S18A	**Hurst Farm, Bl**	**46.61**	**322**	⇓P	**P**	**17 29 27.6**	**+0.2**
	baz=47,SNR=11						
EYMN	**Ely**	**46.83**	**346**	*eP*	**P**	**17 29 25.2**	**-3.8**
	25nm,1.0s,mb5.1						
V15A	**Kaibab Nationa**	**46.85**	**319**	⇑P	**P**	**17 29 30.3**	**+1.0**
	baz=47,SNR=8.2						
Q19A	**Hogan Spring (**	**46.99**	**324**	⇑P	**P**	**17 29 30.4**	**0.0**
	baz=47,SNR=7.3						
R18A	**Canyonlands Na**	**46.99**	**323**	⇑P	**P**	**17 29 30.5**	**0.0**
	baz=47						
W14A	**Seligman**	**47.10**	**318**	⇓P	**P**	**17 29 33.0**	**+1.7**
	baz=47						
L23A	**Garrett**	**47.26

K18A **Toltan Ranch,** 49.90 327 ⇑P P 17 29 53.0 +0.2
baz=50
HWUT **Hardware Ranch** 50.06 325 eP P 17 29 52.3 -1.7
11nm,1.0s,mb4.8
EDW2 **Edwards Air Fo** 50.34 314 ⇓P P 17 29 56.8 +0.5
baz=50
BGU **Big Grassy Mou** 50.47 324 eP P 17 29 55.1 -2.1
11nm,1.0s,mb4.8
R11A **Troy Canyon, C** 50.53 319 ⇓P P 17 29 59.0 +1.3
baz=51
P12A **McGill** 50.74 321 ⇑P P 17 30 00.7 +1.5
baz=51
L15A **Malad City** 50.78 325 ⇑P P 17 29 58.4 -1.1
baz=51
REDW **Red Top Meadow** 50.83 327 eP P 17 29 58.1 -1.6
12nm,0.9s,mb4.8
LOHW **Long Hollow** 50.86 328 eP P 17 29 59.4 -0.6
8.1nm,0.9s,mb4.7
S10A **Tonopah Range,** 50.96 318 ⇑P P 17 30 01.1 +0.2
baz=51,SNR=13
TPAW **Teton Pass** 50.97 327 eP P 17 29 59.7 -1.1
5.9nm,0.8s,mb4.6
MOOW **Moose Ponds** 51.03 328 eP P 17 29 59.6 -1.7
5.6nm,0.8s,mb4.5
RRI2 **Red Ridge** 51.07 327 eP P 17 29 59.8 -1.7
6.1nm,0.6s,mb4.7
ISA **Isabella** 51.07 315 ⇓P P 17 30 02.3 +0.6
baz=51
ISA **Isabella** 51.07 315 eP P 17 30 02.0 +0.3
13nm,1.5s,mb4.6
O12A **Currie** 51.11 322 ⇓P P 17 30 01.8 -0.1
baz=51
RLMT **Red Lodge** 51.22 330 eP P 17 30 00.8 -1.9
14nm,1.3s,mb4.7
IMW **Indian Meadow** 51.23 328 eP P 17 29 58.2 -4.6
11nm,0.6s,mb5.0
L14A **Malta** 51.29 325 ⇑P P 17 30 03.2 -0.1
baz=51
J15A **Blackfoot** 51.71 326 ⇑P P 17 30 05.8 -0.7
baz=52
E19A **Rath Farm, Rou** 51.95 332 ⇓P P 17 30 08.0 -0.1
baz=52
F18A **Big Timber** 52.00 330 ⇑P P 17 30 07.6 -0.9
baz=52,SNR=12
J14A **Carey** 52.27 326 ⇑P P 17 30 10.4 -0.1
baz=52,SNR=24
SCHQ **Schefferville** 52.28 7 P P 17 30 11.0 +0.6
17nm,0.9s,mb5.0,baz=188,slow=7.9,SNR=6.8
SCHQ LR LR 17 50 53.2
comp=Z,226nm,19.8s,MS4.2,baz=93,slow=34
SCHQ **Schefferville** 52.28 7 P P 17 30 11.0 +0.6
SCHQ LR LR 17 50 53.2
NVAR **Mina Array Bea** 52.37 318 P P 17 30 11.2 -0.2
6.9nm,0.9s,mb4.6,baz=134,slow=7.3,SNR=10
NVAR PcP PcP 17 31 22.8 +0.5
2.2nm,0.6s,baz=116,slow=4.3,SNR=4.3
E18A **Harlowton** 52.57 331 ⇓P P 17 30 11.6 -1.1
baz=53
I14A **Mackay** 52.62 326 ⇑P P 17 30 13.8 +0.7
baz=53
H15A **Lima** 52.63 327 ⇓P P 17 30 13.9 +0.7
baz=53,SNR=10
BMN **Battle Mountai** 52.75 321 eP P 17 30 14.5 +0.3
17nm,1.0s,mb4.9
BOZ **Bozeman (W)** 52.78 329 ⇓P P 17 30 13.6 -0.7
baz=53
BOZ **Bozeman (W)** 52.78 329 eP P 17 30 12.9 -1.4
3.7nm,0.7s,mb4.4
MCMT **McKenzie Canyo** 52.87 328 eP P 17 30 14.9 -0.1
4.6nm,1.1s,mb4.3
HLID **Hailey** 52.92 325 ⇑P P 17 30 15.0 -0.4
baz=53
HLID **Hailey** 52.92 325 eP P 17 30 14.1 -1.4
5.0nm,0.8s,mb4.5
I13A **Wildhorse Cree** 52.98 326 ⇓P P 17 30 15.4 -0.4
baz=53,SNR=9.3
C19A **Slack Wire Ran** 53.00 332 ⇓P P 17 30 16.3 +0.4
baz=53
H14A **Leadore** 53.02 327 ⇑P P 17 30 16.4 +0.3
baz=53
DLMT **Dillon** 53.09 328 eP P 17 30 14.6 -2.1
16nm,1.5s,mb4.7
WAKR **Walker** 53.17 318 P P 17 30 17.0 -0.3
12nm,1.4s,mb4.6
LRM **Limekiln Ridge** 53.33 329 eP P 17 30 16.9 -1.4
20nm,0.7s,mb5.2
D17A **Six Diamond Ra** 53.36 331 ⇓P P 17 30 17.5 -1.1
baz=53
F15A **Butte** 53.36 329 ⇑P P 17 30 17.9 -0.7
baz=53
G14A **Jackson** 53.47 328 ⇑P P 17 30 18.9 -0.6
baz=54
I12A **Atlanta** 53.48 325 ⇑P P 17 30 18.9 -0.6
baz=54,SNR=12
MFID **Camas Ranch** 53.64 325 ⇑P P 17 30 20.3 -0.4
baz=54
C17A **Wharram Farm,** 53.73 331 ⇓P P 17 30 20.1 -1.2
baz=54,SNR=8.0
H12A **Diamond D Ranc** 53.79 326 ⇑P P 17 30 21.3 -0.5
baz=54,SNR=11
G13A **Cobalt** 53.79 327 ⇑P P 17 30 20.9 -0.9
baz=54
D15A **Lincoln** 54.18 330 ⇓P P 17 30 24.0 -0.6
baz=54
G12A **Big Creek, Yel** 54.41 326 ⇑P P 17 30 25.4 -0.9
baz=54,SNR=7.1
A17A **Triple J Farms** 54.63 333 ⇓P P 17 30 28.3 +0.5
baz=55
C15A **Salmond Ranch,** 54.73 330 ⇑P P 17 30 28.6 +0.1
baz=55
WVOR **Wild Horse Val** 54.75 322 eP P 17 30 27.4 -1.4
21nm,1.1s,mb5.1
F12A **Elk City** 54.77 327 ⇑P P 17 30 28.4 -0.5
baz=55,SNR=10
SLMT **Seeley Lake** 54.81 329 Pn P 17 30 19.6 -10
5.1nm,0.9s,mb4.5
D13A **Huson** 55.21 329 ⇓P P 17 30 31.1 -0.9
baz=55
YBMT **Yellow Bay** 55.49 330 eP P 17 30 31.6 -2.4
4.1nm,0.8s,mb4.5
JTMT **Jette** 55.55 329 eP P 17 30 30.4 -4.1
5.6nm,1.0s,mb4.5
FFC **Flin Flon** 55.83 342 eP P 17 30 33.2 -3.2
12nm,1.1s,mb4.8
BSMT **Bassoo Peak** 55.87 329 eP P 17 30 34.5 -2.3
11nm,1.3s,mb4.7
LNOR **Lincton Mounta** 56.52 326 eP P 17 30 40.1 -1.3
7.1nm,0.8s,mb4.8
G08A **Pilot Rock** 56.56 325 ⇓P P 17 30 41.1 -0.7
baz=57,SNR=14
C11A **Tepee Creek (N** 56.62 329 ⇓P P 17 30 40.6 -1.5
baz=57,SNR=8.4
YBH **Yreka Blue Hor** 56.96 319 P P 17 30 41.8 -2.9
3.3nm,0.8s,mb4.4,baz=85,slow=8.3,SNR=3.4
YBH LR LR 18 00 05.0
comp=Z,82nm,18.0s,MS3.9,baz=143,slow=41
YBH **Yreka Blue Hor** 56.96 319 P P 17 30 41.8 -2.9
YBH LR LR 18 00 05.0
FCC **Fort Churchill** 57.48 349 eP P 17 30 46.3 -1.6
1.1nm,1.1s,mb3.8
G06A **Carlson Farm,** 57.51 324 ⇑P P 17 30 48.2 -0.2
baz=58
HOOD **Mount Hood Mea** 58.16 324 eP P 17 30 54.4 +1.4
28nm,0.9s,mb5.3
ETW **Entiat** 58.67 326 eP P 17 30 56.2 -0.3
24nm,1.4s,mb5.0
LON **Longmire** 59.03 325 eP P 17 30 56.9 -2.1
5.2nm,0.9s,mb4.6
NLWA **Neilton Lookou** 60.56 325 eP P 17 31 06.9 -2.7
11nm,1.2s,mb4.8
FRB **Frobisher Bay** 60.94 4 LR LR 17 56 38.9
comp=Z,156nm,18.2s,MS4.2,baz=198,slow=35
YKA **Yellowknife Ar** 66.00 341 P P 17 31 42.7 -2.6
6.3nm,0.8s,mb4.7,baz=134,slow=6.6,SNR=32
YKA LR LR 18 03 05.6
comp=Z,14nm,18.9s,MS3.2,baz=255,slow=38
YKA **Yellowknife Ar** 66.00 341 P P 17 31 42.7 -2.6
YKA LR LR 18 03 05.6
DLBC **Dease Lake** 69.46 333 eP P 17 32 05.8 -1.4
LIC **Lamto** 70.69 84 eP P 17 32 14.7 -1.0
63nm,1.3s,mb5.4
LIC **Lamto** 70.69 84 eP P 17 32 15.1 -0.6
61nm,1.3s,mb5.1
LIC eMLR MLR
comp=Z,136nm,21.8s,MS3.9
LIC **Lamto** 70.69 84 eP P 17 32 15.1 -0.6
comp=Z,31nm,1.3s,mb5.1
LIC LR LR
comp=Z,70nm,21.8s,MS3.9
TIC **Toumodi** 70.69 84 eP P 17 32 13.7 -2.0
comp=Z,43nm,1.0s,mb5.3
DBIC **Dimbokro** 70.86 84 P P 17 32 15.3 -1.5
comp=Z,16nm,1.0s,mb4.9,baz=240,slow=6.1,SNR=9.6
DBIC LR LR 18 02 19.6
comp=Z,86nm,19.9s,MS4.0,baz=198,slow=35
DBIC **Dimbokro** 70.86 84 eP P 17 32 14.6 -2.1
comp=Z,20nm,1.0s,mb5.0
KIC **Kosan Boka** 70.98 84 eP P 17 32 15.6 -1.9
comp=Z,50nm,1.0s,mb5.4
BORG **Borgarnes** 72.91 21 LR LR 18 04 03.7
comp=Z,97nm,19.1s,MS4.1,baz=216,slow=36
SUMG **Summit** 73.32 11 eP P 17 32 29.8 -0.5
comp=Z,10nm,0.6s,mb4.9
SUMG **Summit** 73.32 11 iP P 17 32 31.6 +1.3
comp=Z,9.5nm,0.7s,mb4.8
ESDC **Sonseca Array** 74.28 50 P P 17 32 35.9 -0.7
comp=Z,0.2nm,0.3s,baz=254,slow=5.6,SNR=5.6
ESDC **Sonseca Array** 74.28 50 P P 17 32 35.9 -0.7
INK **Inuvik** 75.77 341 eP P 17 32 43.9 -0.7
comp=Z,14nm,1.2s,mb4.8
SJPF **Ste Jean** 76.84 46 eP P 17 32 50.4 -0.9
comp=Z,26nm,1.0s,mb4.8
SJPF **Ste Jean** 76.84 46 eP P 17 32 50.4 -0.9
comp=Z,13nm,1.0s,mb4.8
EGAK **Eagle** 77.00 336 eP P 17 32 51.0 -0.6
comp=Z,9.9nm,1.0s,mb4.7
TORD **Torodi Ar. Bea** 77.28 77 P P 17 32 52.0 -2.2
comp=Z,5.0nm,1.1s,mb4.4,baz=284,slow=4.7,SNR=11
TORD LR LR 18 06 50.9
comp=Z,140nm,18.2s,MS4.3,baz=125,slow=36
ESK **Eskdalemuir** 77.81 34 eP P 17 32 55.1 -1.2
comp=Z,15nm,1.0s,mb4.9
GRR **Gorron** 77.91 41 eP P 17 32 56.4 -0.7
comp=Z,99nm,1.3s,mb5.3
GRR **Gorron** 77.91 41 eP P 17 32 56.4 -0.7
comp=Z,50nm,1.3s,mb5.3
EPF **Esparros** 77.97 47 eP P 17 32 56.8 -0.8
MFF **Saint Martin d** 78.11 43 eP P 17 32 57.7 -0.6
FLN **La Foliniere** 78.22 41 eP P 17 32 58.1 -0.7
comp=Z,42nm,1.0s,mb5.0
FLN eMLR MLR
comp=Z,80nm,22.5s,MS3.7
FLN **La Foliniere** 78.22 41 eP P 17 32 58.1 -0.7
comp=Z,21nm,1.0s,mb5.0
FLN LR LR
comp=Z,80nm,22.5s,MS4.0
LDF **La Druitiere** 78.43 41 eP P 17 32 59.2 -0.8
comp=Z,23nm,1.1s,mb4.7
LDF **La Druitiere** 78.43 41 eP P 17 32 59.2 -0.8
comp=Z,11nm,1.1s,mb4.7
LFF **La Frestale** 78.50 45 eP P 17 32 59.3 -1.2
ILAR **Eielson Array** 79.33 336 P P 17 33 03.0 -1.6
comp=Z,1.1nm,0.5s,mb4.0,baz=123,slow=4.2,SNR=11
ILAR LR LR 18 13 01.4
comp=Z,136nm,18.6s,MS4.3,baz=138,slow=39
MTLF **Montolieu** 79.37 47 eP P 17 33 04.8 -0.5
CAF **Calviac** 79.43 45 eP P 17 33 04.5 -1.1
comp=Z,30nm,1.2s,mb4.8
CAF **Calviac** 79.43 45 eP P 17 33 04.5 -1.1
comp=Z,15nm,1.2s,mb4.8
TCF **Toulx Ste Croi** 79.69 44 eP P 17 33 06.0 -0.9
comp=Z,27nm,1.2s,mb4.8
TCF **Toulx Ste Croi** 79.69 44 eP P 17 33 06.0 -0.9
comp=Z,14nm,1.2s,mb4.8
BGF **Bois d'Agland** 80.16 43 eP P 17 33 08.6 -0.9
comp=Z,23nm,0.8s,mb4.8
BGF **Bois d'Agland** 80.16 43 eP P 17 33 08.6 -0.9
comp=Z,11nm,0.8s,mb4.8
KDAK **Kodiak Island** 80.44 328 LR LR 18 14 29.3
comp=Z,95nm,19.1s,MS4.2,baz=288,slow=40
AVF **Avril sur Loir** 80.53 43 eP P 17 33 10.4 -1.0
comp=Z,40nm,1.3s,mb4.9
AVF **Avril sur Loir** 80.53 43 eP P 17 33 10.4 -1.0
comp=Z,20nm,1.3s,mb4.9
SSF **Saint Saulge** 80.66 43 eP P 17 33 10.8 -1.4
comp=Z,57nm,1.3s,mb5.0
SSF **Saint Saulge** 80.66 43 eP P 17 33 10.8 -1.4
comp=Z,29nm,1.3s,mb5.0
SMF **Signal de Mont** 80.85 43 eP P 17 33 12.2 -1.0
comp=Z,49nm,1.2s,mb5.0
SMF **Signal de Mont** 80.85 43 eP P 17 33 12.2 -1.0
comp=Z,25nm,1.2s,mb5.0
BPAW **Bear Paw Mtn.** 80.89 335 eP P 17 33 10.9 -2.1
comp=Z,13nm,1.4s,mb4.7
LOR **Lormes** 80.92 43 eP P 17 33 12.4 -1.1
comp=Z,40nm,1.3s,mb4.9
LOR eMLR MLR
comp=Z,76nm,18.8s,MS3.8
LOR **Lormes** 80.92 43 eP P 17 33 12.4 -1.1
comp=Z,20nm,1.3s,mb4.9
LOR LR LR
comp=Z,80nm,18.8s,MS4.1
TAM **Tamanrasset** 80.98 68 eP P 17 33 15.2 +0.8
comp=Z,5.0nm,1.0s,mb4.4
RSO **Redoubt South** 80.99 331 eP P 17 33 14.2 +0.5
BAIF **Baives** 81.42 40 eP P 17 33 15.2 -1.0
DOU **Dourbes** 81.68 40 P P 17 33 17.4 -0.1
comp=Z,17nm,1.3s,mb4.8
SFTF **Sexfontaines** 81.80 42 eP P 17 33 17.1 -1.1
comp=Z,52nm,1.0s,mb5.1
SFTF **Sexfontaines** 81.80 42 eP P 17 33 17.1 -1.1
comp=Z,52nm,1.0s,mb5.4
GIVF **Givet** 81.82 40 eP P 17 33 17.4 -0.9
comp=Z,130nm,1.3s,mb5.4
GIVF **Givet** 81.82 40 eP P 17 33 17.4 -0.9
comp=Z,65nm,1.3s,mb5.4
ORIF **Oris-en-Rattie** 82.13 45 eP P 17 33 18.8 -1.2
ORIF eMLR MLR
comp=Z,134nm,22.2s,MS4.0
BCLA **Clavier** 82.16 40 P P 17 33 19.4 -0.6
CABF **La Chapelle** 82.39 44 eP P 17 33 20.2 -1.1
comp=Z,14nm,0.9s,mb4.6
CABF **La Chapelle** 82.39 44 eP P 17 33 20.2 -1.1
comp=Z,6.8nm,0.9s,mb4.6
HGN **Heimansgroeve** 82.58 39 eP P 17 33 23.0 +0.7
comp=Z,20nm,1.2s,mb5.0
MEM **Membach** 82.62 40 P P 17 33 22.7 +0.2
comp=Z,18nm,1.2s,mb5.0
WLF **Walferdange** 82.64 40 P P 17 33 22.6 0.0
comp=Z,26nm,1.3s,mb5.1
WLF **Walferdange** 82.64 40 eP P 17 33 23.8 +1.2
comp=Z,39nm,1.1s,mb5.3
WLF **Walferdange** 82.64 40 eP P 17 33 22.1 -0.5
comp=Z,38nm,1.1s,mb5.3
HAU **Haudompre** 82.66 42 eP P 17 33 21.6 -1.1
comp=Z,28nm,1.1s,mb4.9
HAU eMLR MLR
comp=Z,124nm,20.8s,MS4.0
HAU **Haudompre** 82.66 42 eP P 17 33 21.6 -1.1
comp=Z,14nm,1.1s,mb4.9
HAU LR LR
comp=Z,120nm,20.8s,MS4.2
LPL **La Plagne** 82.77 45 eP P 17 33 22.3 -1.0
LPG **La Plagne** 82.78 45 eP P 17 33 22.7 -0.7
HINF **Hinteralfeld** 82.98 42 eP P 17 33 23.0 -1.4
comp=Z,21nm,1.1s,mb4.8
HINF **Hinteralfeld** 82.98 42 eP P 17 33 23.0 -1.4
comp=Z,11nm,1.1s,mb4.8
SBF **Sospel** 83.19 46 eP P 17 33 24.8 -0.7
comp=Z,27nm,0.9s,mb5.0
SBF **Sospel** 83.19 46 eP P 17 33 24.8 -0.7
comp=Z,13nm,0.9s,mb5.0
ECH **Echery** 83.21 42 eP P 17 33 24.1 -1.4
comp=Z,31nm,1.1s,mb5.2
WTSB **Winterswijk** 83.22 38 eP P 17 33 26.4 +0.9
comp=Z,38nm,1.2s,mb5.3
CDF **Champ du Feu** 83.30 42 eP P 17 33 25.0 -1.0
comp=Z,52nm,1.3s,mb5.1
CDF **Champ du Feu** 83.30 42 eP P 17 33 25.0 -1.0
comp=Z,26nm,1.3s,mb5.1
BFO **Black Forest** 84.00 42 eP P 17 33 29.9 +0.3
comp=Z,14nm,1.3s,mb4.9
BFO **Black Forest** 84.00 42 eP P 17 33 29.9 +0.3
comp=Z,14nm,1.3s,mb4.9
TNS **Taunus Mts** 84.16 40 eP P 17 33 31.5 +1.2
comp=Z,43nm,1.2s,mb5.5
TNS **Taunus Mts** 84.16 40 eP P 17 33 31.5 +1.2
comp=Z,43nm,1.2s,mb5.5
PGF **Pioggiola** 84.29 48 eP P 17 33 30.3 -0.9
comp=Z,43nm,1.3s,mb5.1
PGF **Pioggiola** 84.29 48 eP P 17 33 30.3 -0.9
comp=Z,22nm,1.3s,mb5.1
STU **Stuttgart** 84.59 41 eP P 17 33 33.4 +0.8
comp=Z,36nm,1.4s,mb5.3
TUE **Stuetta** 84.63 44 eP P 17 33 32.5 -0.3
comp=Z,17nm,1.3s,mb5.0
MUD **Monsted U'grnd** 84.86 34 iP P 17 33 35.5 +1.7
comp=Z,26nm,1.1s,mb5.3
DAVA **Damuels** 85.01 43⇑iP P 17 33 33.8 -1.0
comp=Z,35nm,1.1s,mb5.4,SNR=11
VNA3 **Neumayer Olymp** 85.28 163 eP P 17 33 33.9 -1.6
VNA3 e 17 33 46.5
VNA3 e 17 36 51.9
CLZ **Clausthal** 85.42 38 eP P 17 33 38.1 +1.4
comp=Z,26nm,1.2s,mb5.2
CLZ **Clausthal** 85.42 38 eP P 17 33 38.1 +1.4
comp=Z,26nm,1.2s,mb5.2
FETA **Feichten** 85.59 43⇑iP P 17 33 37.5 -0.1
comp=Z,30nm,1.1s,mb5.5,SNR=11
VNA2 **Neumayer--Watz** 85.84 162 eP P 17 33 36.8 -1.6
baz=313,slow=5.3
VNA2 e 17 33 45.8
VNA2 e 17 36 50.6
GRA1 **Grafenberg Arr** 85.94 41 eP P 17 33 40.7 +1.4
comp=Z,30nm,1.5s,mb5.3
GRA1 LR LR
comp=Z,100nm,21.9s,MS4.2
GRF **Grafenberg Arr** 85.94 41 eP P 17 33 40.7 +1.4
comp=Z,30nm,1.5s,mb5.3
GRF eL 18 06 31.6
comp=Z,87nm,21.9s
GRF **Grafenberg Arr** 85.94 41 eP P 17 33 40.7 +1.4
comp=Z,30nm,1.5s,mb5.3
GRF LR LR
comp=Z,100nm,21.9s,MS4.2
NB2 **NORSAR Subarra** 86.07 29 P P 17 33 39.5 -0.2
comp=Z,20nm,1.0s,mb5.3,baz=271,slow=5.1
NB2 **NORSAR Subarra** 86.07 29 P P 17 33 39.5 -0.2
NOA **NORSAR Array B** 86.07 29 P P 17 33 39.4 -0.3
comp=Z,14nm,1.0s,mb5.2,baz=269,slow=4.9,SNR=17
NOA LR LR 18 11 42.1
comp=Z,39nm,18.3s,MS3.8,baz=270,slow=35
MOX **Moxa** 86.19 40 eP P 17 33 41.8 +1.3
comp=Z,23nm,1.6s,mb5.2
MOX **Moxa** 86.19 40 eP P 17 33 41.7 +1.2
comp=Z,16nm,1.3s,mb5.1
MOX **Moxa** 86.19 40 eP P 17 33 41.8 +1.3
comp=Z,23nm,1.6s,mb5.2
NEUB **Neuenburg** 86.29 39 eP P 17 33 42.3 +1.3
comp=Z,25nm,1.1s,mb5.4
WERD **Werda** 86.63 40 eP P 17 33 44.1 +1.4
comp=Z,16nm,1.1s,mb5.2
WERN **Wernitzgruen** 86.68 40 eP P 17 33 44.4 +1.5
comp=Z,24nm,1.3s,mb5.3
NKC **Novy Kostel** 86.72 40 eP P 17 33 44.5 +1.3
TANN **Tannenbergstha** 86.73 40 eP P 17 33 44.7 +1.5
comp=Z,24nm,1.2s,mb5.3
ABTA **Abfaltersbach** 86.81 44⇑iP P 17 33 43.2 -0.5
comp=Z,30nm,1.1s,mb5.4,SNR=14
RJOB **Jochberg** 86.99 43 eP P 17 33 45.7 +1.2
comp=Z,17nm,1.1s,mb5.2
WET **Wettzell** 87.02 41 eP P 17 33 46.1 +1.5
comp=Z,34nm,1.2s,mb5.5
WET **Wettzell** 87.02 41 eP P 17 33 46.1 +1.5
comp=Z,34nm,1.2s,mb5.5
CLL **Collm** 87.06 39 eP P 17 33 46.0 +1.2
comp=Z,18nm,1.1s,mb5.2
CLL **Collm** 87.06 39⇑iP P 17 33 45.9 +1.1
comp=Z,28nm,1.2s,mb5.4
CLL e 17 34 06.0
CLL **Collm** 87.06 39⇑iP P 17 33 45.9 +1.1
comp=Z,28nm,1.2s,mb5.4
CLL LmV 18 14 00.0
comp=Z,100nm,19.4s
FBE **Freiberg** 87.29 39 eP P 17 33 47.5 +1.6
comp=Z,23nm,1.1s,mb5.3
HFS **Hagfors** 87.29 30 LR LR 18 10 06.5
comp=Z,84nm,18.6s,MS4.2,baz=258,slow=34
KBA **Koelnbreinsper** 87.38 43⇑iP P 17 33 45.7 -0.7
comp=Z,22nm,1.3s,mb5.2,SNR=7.6
KHC **Kasperske Hory** 87.48 41 eP P 17 33 46.0 -0.8
comp=Z,22nm,1.1s,mb5.3
KHC **Kasperske Hory** 87.48 41 eP P 17 33 46.6 -0.3
GEC2 **GERESS Array S** 87.57 41 eP P 17 33 48.4 +1.1
comp=Z,16nm,1.1s,mb5.2
GEC2 **GERESS Array S** 87.57 41 eP P 17 33 48.4 +1.1
comp=Z,16nm,1.1s,mb5.2
MYKA **Terra Mystica** 87.59 44⇑iP P 17 33 46.9 -0.6
comp=Z,19nm,1.2s,mb5.2
BRG **Berggiesshubel** 87.67 39 eP P 17 33 49.1 +1.4
comp=Z,23nm,1.1s,mb5.3
JAVS **Javornik** 87.91 44 iP P 17 33 50.2 +1.2
JAVS **Javornik** 87.91 44 iP P 17 33 50.2 +1.2
MOA **Molln** 87.98 42⇑iP P 17 33 48.6 -0.7
comp=Z,27nm,1.2s,mb5.4,SNR=9.3
PVCC **Panska Ves** 88.08 40 eP P 17 33 51.1 +1.4
PRU **Pruhonice** 88.08 40 eP P 17 33 51.4 +1.7
TREC **Trest** 88.72 41 eP P 17 33 52.7 -0.1
ARSA **Arzberg** 88.86 43⇑iPcP PcP 17 33 54.3 -0.6
comp=Z,12nm,1.1s
UPC **Upice** 89.00 40 eP P 17 33 55.5 +1.5
KSP **Ksiaz** 89.16 39 eP P 17 33 55.6 +0.8
DPC **Dobruska-Polom** 89.20 40 eP P 17 33 56.3 +1.3
VRAC **Vranov** 89.45 41 ⇓iP P 17 33 58.1 +1.9
MODS **Modra-Piesok** 89.96 42 eP P 17 34 00.5 +1.9
MODS **Modra-Piesok** 89.96 42 eP P 17 34 00.5 +1.9
OKC **Ostrava-Krasne** 90.41 40 eP P 17 34 02.0 +1.3
VYHS **Vyhne** 90.99 42 eP P 17 34 04.6 +1.2
comp=Z,10nm,1.8s,mb4.9
VYHS **Vyhne** 90.99 42 eP P 17 34 04.6 +1.2
PKSM **Moragy** 91.07 44⇑iP P 17 34 05.7 +1.9
ARCES **ARCESS Array B** 91.27 20 LR LR 18 08 24.8
comp=Z,54nm,19.5s,MS4.0,baz=84,slow=31
KECS **Kecovo** 92.08 41 eP P 17 34 10.1 +1.7
comp=Z,7.1nm,1.5s,mb4.8
KECS **Kecovo** 92.08 41 eP P 17 34 10.1 +1.7
STHS **Stebnicka Huta** 92.46 40 eP P 17 34 13.3 +3.1
comp=Z,3.4nm,1.1s,mb4.6
STHS **Stebnicka Huta** 92.46 40 eP P 17 34 13.3 +3.1
CRVS **Cervenica-Dubn** 92.67 41 eP P 17 34 13.4 +2.2
comp=Z,13nm,1.5s,mb5.1
CRVS **Cervenica-Dubn** 92.67 41 eP P 17 34 13.4 +2.2
QSPA **South Pole Qui** 92.95 180 P P 17 34 11.9 +0.1
comp=Z,7.8nm,1.1s,mb5.0,baz=112,slow=1.2,SNR=9.7
FINES **FINESS Array B** 93.17 28 P P 17 34 11.7 -1.5
comp=Z,6.9nm,0.9s,mb5.1,baz=333,slow=2.1,SNR=8.6
FINES LR LR 18 12 13.1
comp=Z,70nm,20.6s,MS4.1,baz=312,slow=33
BZS **Buzias** 93.20 44⇑iP P 17 34 14.6 +0.9
KWP **Kalwaria Pacla** 93.38 40⇑iP P 17 34 17.3 +2.9
TRPA **Tarpa** 93.48 42⇑iP P 17 34 16.5 +1.6
DRGR 93.79 43⇓iP P 17 34 18.1 +1.7
VOIR 95.61 44⇑iP P 17 34 29.0 +4.2
MLR **Muntele Rosu** 96.22 44⇓iP P 17 34 29.8 +2.3
BVAR **Borovoye Array** 117.49 22 PKP PKPdf 17 39 44.3 -0.6
comp=Z,0.5nm,0.5s,baz=15,slow=6.0,SNR=3.1
ZALV **Zalesovo Beam** 121.10 13 PKP PKPdf 17 39 51.2 -0.7
comp=Z,1.9nm,0.5s,baz=270,slow=2.4,SNR=13
ZALV **Zalesovo Beam** 121.10 13 PKP PKPdf 17 39 51.2 -0.7
KURK **Kurchatov** 122.29 19 PKP PKPdf 17 39 53.2 -1.1
comp=Z,2.6nm,0.7s,baz=316,slow=2.3,SNR=11
KURK **Kurchatov** 122.29 19 ePKPdf PKPdf 17 39 52.9 -1.3
MKAR **Makanchi Array** 126.90 19 PKP PKPdf 17 40 01.8 -1.5
comp=Z,1.2nm,0.4s,baz=354,slow=2.4,SNR=15
EKS2 **Erkin-Say** 127.00 28 ePKPdf PKPdf 17 40 03.9 +0.4
EKS2 ePP PP 17 42 04.7 +3.9
AAK **Ala-Archa** 127.36 27 PKP PKPdf 17 40 04.9 +0.7
comp=Z,1.0nm,0.3s,baz=199,slow=5.9,SNR=6.7
ULN **Ulaanbaatar** 129.36 357 ePKPdf PKPdf 17 40 08.7 +0.8
SONM **Songino Array** 129.42 358 PKP PKPdf 17 40 08.4 +0.4
comp=Z,4.4nm,0.9s,baz=349,slow=1.0,SNR=25
CN2 **Changchun** 129.69 340 ePKP PKPdf 17 40 06.8 -1.8
CN2 PP PP 17 42 21.5 +3.3
KSRS **Korea Array** 134.14 333 PKP PKPdf 17 40 17.3 +0.1
comp=Z,2.5nm,0.8s,baz=42,slow=1.8,SNR=7.6
STKA **Stephens Creek** 134.48 227 PKP PKPdf 17 40 18.1 +0.1
comp=Z,2.0nm,0.7s,baz=320,slow=16,SNR=4.8
BJI **Beijing** 135.84 347 PKP PKPdf 17 40 19.0 -1.3
BJI PP PP 17 42 57.3 -0.1
BJI SS SS 18 00 55.1 +1.0
BJI LR LR
comp=Z,15nm,24.7s,MS3.6
BJT **Baijiatuau** 135.86 347 ePKPdf PKPdf 17 40 20.2 -0.1
HHC **Hu-ho-hao-te** 135.91 352 ePKP PKPdf 17 40 18.3 -2.1
HHC sPKP 17 40 32.7
HHC PP PP 17 43 00.8 +3.0
HHC PKS 17 43 52.3
HHC SKS SKSdf 17 47 23.4 -7.1
HHC SKKS SKKSac 17 49 48.0 -5.2
HHC SS SS 18 00 55.0 +0.2
HHC AMB AMB
comp=Z,82nm,9.0s

GTA	Gaotai	137.70	5	ePKP	PKPdf	17 40 24.8	+1.0
GTA				sPKP		17 40 32.3	
LZH	Lanzhou	141.20	0	ePKP	PKPdf	17 40 27.0	-3.3
LZH				sPKP		17 40 36.5	
NJ2	Nanjing	142.50	339	ePKP	PKPdf	17 40 30.3	-2.4
XAN	Xi'an	142.96	353	PKP	PKPdf	17 40 34.9	+1.4
XAN				pPKP	pPKPdf	17 40 44.9	+4.3
GKN	Gorkha	144.01	30	eP	PKPdf	17 40 33.2	-2.3
	comp=Z,47nm,1.1s						
KKN	Kakani	144.50	29	eP	PKPdf	17 40 33.7	-2.7
	comp=Z,95nm,1.2s						
ASAR	Alice Springs	144.56	232	PKP	PKPdf	17 40 34.0	-2.5
	comp=Z,24nm,0.8s,baz=118,slow=4.0,SNR=158						
DMN	Daman	144.56	30	eP	PKPdf	17 40 34.0	-2.5
	comp=Z,108nm,0.9s						
GUN	Gumba	144.69	29	eP	PKPdf	17 40 34.8	-1.9
	comp=Z,252nm,0.9s						
PKIN	Phulchoki	144.73	30	eP	PKPdf	17 40 34.6	-2.2
	comp=Z,53nm,0.9s						
PKI	Pulchoki	144.75	30	eP	PKPdf	17 40 34.3	-2.5
	comp=Z,91nm,1.0s						
LSA	Lhasa	145.28	20	PKPbc	PKPbc	17 40 33.6	-3.7
LSA	Lhasa	145.28	20	ePKPdf	PKPdf	17 40 37.1	-0.6
WHN	Wuhan	145.31	344	PKPbc	PKPbc	17 40 37.0	-0.4
RAMN	Ramite	145.84	29	eP	PKPdf	17 40 36.3	-2.4
	comp=Z,52nm,1.0s						
WB2	Warramunga Arr	145.96	238	ePKPdf	PKPdf	17 40 38.1	-0.9
WRA	Warramunga Arr	145.97	238	PKPbc	PKPbc	17 40 38.7	-1.1
	comp=Z,24nm,0.9s,baz=114,slow=3.5,SNR=85						
WRA	Warramunga Arr	145.97	238	PKPbc	PKPbc	17 40 38.7	-1.1
TAPN	Taplejung	146.01	27	eP	PKPdf	17 40 38.1	-0.9
	comp=Z,41nm,0.6s						
ODAN	Odare	146.29	28	eP	PKPdf	17 40 36.2	-3.3
	comp=Z,60nm,0.9s						
CD2	Chengdu	146.36	1	ePKPbc	PKPdf	17 40 35.5	-4.0
CD2				pPKP	pPKPdf	17 40 45.0	-1.6
CD2				PP	PP	17 44 02.9	+1.4
CD2				SKKS	SKKSac	17 50 47.8	-6.4
CD2				SS	SS	18 02 53.1	-3.5
CD2				AMB	AMB		
	comp=Z,100nm,10.2s						
ENH	Enshi	146.60	351	ePKPdf	PKPdf	17 40 39.8	-0.1
GYA	Guiyang	150.69	355	i PKPbc	PKPdf	17 40 47.7	+1.1
GYA				PKPab	PKPab	17 41 01.2	+2.4
GYA				PKS		17 44 17.8	
GYA				PP	PP	17 44 31.6	+4.8
GYA				AMB	AMB		
	comp=Z,110nm,8.0s						
KMI	Kunming	152.10	3	PKPbc	PKPdf	17 40 49.8	+1.0
QIZ	Qiongzhong	157.47	346	PKP	PKPdf	17 40 53.0	-3.3
CHTO	Chiang Mai	157.82	13	ePKPdf	PKPdf	17 40 56.9	+0.1
CM31	Chiang Mai Arr	158.16	13	ePKPdf	PKPdf	17 40 58.0	+0.8
CMAR	Chiang Mai Arr	158.16	13	PKP	PKPdf	17 40 57.2	0.0
	comp=Z,3.6nm,0.9s,baz=303,slow=2.2,SNR=20						
CMAR				PKPab	PKPab	17 41 29.6	-1.1
	comp=Z,2.0nm,0.8s,baz=325,slow=5.5,SNR=8.1						

*IDC **02** 17:22:40.4±1.1, 17°.61N×61°.38W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.9/22, mbtmp4.0/5, ML6.0/1, Error ellipse: s-maj=25.8km s-min=17.1km az=80.0*
*ISCJB **02** 17:22:43.0±0.9, 17°.70N±0°.03×61°.23W±0°.04, h22km±6km, mb4.0/4, Error ellipse: s-maj=7.2km s-min=3.3km az=136.7*
*TRN **02** 17:22:42.8, 17°.53N×61°.37W, h10km, MD4.1, M4.4(FDF)*
*NEIC **02** 17:22:43.5±2.6, 17°.73N×61°.22W, h15km±15km, MD4.2(RSPR), Error ellipse: s-maj=17.5km s-min=6.0km az=49.0*
*RSPR **02** 17:22:45.7, 17°.92N×61°.17W, h25km±39km, MD4.2/8*
ISC 02 17:22:43.6±0.9, 17°.66N±0°.03×61°.26W±0°.03, h14km±4km, n64, σ1s00/96, mb4.0/4, 16C-10D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.51	271	eP	Pg	17 22 54.2	+0.6
ANWB				eS	Sg	17 23 01.2	+0.8
BPA	Boggy Peak	0.84	224	⇓i P	Pg	17 22 59.7	-0.2
BPA				eS	Sg	17 23 09.5	-1.3
DEG	La Desirade	1.35	172	eP	Pn	17 23 05.9	-2.2
SFG	Saint Francois	1.40	178	eP	Pn	17 23 07.9	-0.8
LZG	Guadaloupe-1	1.59	198	⇑eP	Pn	17 23 10.2	-1.2
SEUS	St. Eustatius	1.66	265	⇑eP	Pn	17 23 12.4	+0.1
SEUS				eS	Sn	17 23 33.4	0.0
SEUS	St. Eustatius	1.66	265	⇑eP	Pn	17 23 12.4	+0.1
SEUS				eS	Sn	17 23 33.4	0.0
SCG	Saint Claude	1.67	194	eP	Pn	17 23 11.8	-0.7
PHG	Guadaloupe-2	1.67	193	⇑iP	Pn	17 23 11.6	-1.0
HMG	Houelmont	1.72	194	eP	Pn	17 23 12.7	-0.5
MGG	Marie-Galante	1.73	182	eP	Pn	17 23 12.2	-1.2
SMRT	St. Maarten	1.78	283	⇑eP	Pn	17 23 14.0	+0.1
SMRT				eS	Sn	17 23 35.6	-0.8
SMRT	St. Maarten	1.78	283	⇑eP	Pn	17 23 14.4	+0.4
SMRT				eS	Sn	17 23 35.6	-0.8
TBG	Guadaloupe-3	1.83	192	eP	Pn	17 23 13.6	-1.1
SABA	Saba	1.90	269	⇑eP	Pn	17 23 16.3	+0.7
SABA				eS	Sn	17 23 40.4	+1.1
SABA	Saba	1.90	269	⇑eP	Pn	17 23 16.3	+0.7
SABA				eS	Sn	17 23 40.4	+1.1
DWS	Wesley	2.08	181	eP	Pn	17 23 18.4	+0.3
DWS				eS	Sn	17 23 44.5	+0.7
DWS	Wesley	2.08	181	eP	Pn	17 23 18.4	+0.3
DWS				eS	Sn	17 23 44.5	+0.7
DLPL	La Plaine	2.31	180	eP	Pn	17 23 22.2	+0.8
DLPL				eS	Sn	17 23 49.8	+0.2
MDN	Morne-Daniel	2.33	183	eP	Pn	17 23 22.6	+1.0
MDN				eS	Sn	17 23 53.4	+3.4
MDN	Morne-Daniel	2.33	183	eP	Pn	17 23 22.0	+0.4
MDN				eS	Sn	17 23 49.9	-0.1
DPMT	Pointe Michel	2.38	183	eP	Pn	17 23 25.3	+2.9
DPMT	Pointe Michel	2.38	183	eP	Pn	17 23 21.4	-0.9
DSTT	Stowe	2.40	181	⇓eP	Pn	17 23 23.4	+0.9
DSTT	Stowe	2.40	181	⇓eP	Pn	17 23 23.4	+0.9
DSTT				eS	Sn	17 23 51.8	0.0
DFBT	Forest Bistro	2.41	182	eP	Pn	17 23 25.5	+2.9
DFBT	Forest Bistro	2.41	182	eP	Pn	17 23 22.7	+0.1
DSHT	Scott's Head	2.43	183	eP	Pn	17 23 21.8	-1.2
DSHT	Scott's Head	2.43	183	eP	Pn	17 23 23.2	+0.3
DSHT				eS	Sn	17 23 51.7	-0.9
FDF	Fort de France	2.91	178	eP	Pn	17 23 28.1	-1.5
FDF	Fort de France	2.91	178	eP	Pn	17 23 29.1	-0.5
FDF				eS	Sn	17 24 05.8	+1.4
MVM	Montagne Vaucl	3.10	174	eP	Pn	17 23 32.2	0.0
BIM	Bigot	3.13	177	eP	Pn	17 23 32.9	+0.3
BIM				eS	Sn	17 24 12.2	+2.5
TBVI	Tortola	3.29	284	⇑eP	Pn	17 23 33.8	-0.9
TBVI				eS	Sn	17 24 12.3	-1.4
TBVI	Tortola	3.29	284	⇑eP	Pn	17 23 33.8	-0.9
TBVI				eS	Sn	17 24 12.3	-1.4
CDVI	St. Croix	3.35	272	⇑eP	Pn	17 23 37.3	+1.7
CDVI				eS	Sn	17 24 15.8	+0.6
CDVI	St. Croix	3.35	272	⇑eP	Pn	17 23 37.3	+1.7
CDVI				eS	Sn	17 24 15.8	+0.6
STVI	Saint Thomas	3.59	282	⇑eP	Pn	17 23 38.6	-0.3
STVI				eS	Sn	17 24 21.1	0.0
STVI	Saint Thomas	3.59	282	⇑eP	Pn	17 23 38.6	-0.3
STVI				eS	Sn	17 24 21.5	+0.4
MCLT	Moule a Chique	3.94	176	eP	Pn	17 23 44.2	+0.5
MCLT	Moule a Chique	3.94	176	eP	Pn	17 23 44.0	+0.4
MCLT				eS	Sn	17 24 28.3	-1.4
MTP	Monte Pirata	4.12	277	⇓eP	Pn	17 23 46.1	0.0
MTP				eS	Sn	17 24 33.8	-0.4
MTP	Monte Pirata	4.12	277	⇓eP	Pn	17 23 46.1	0.0
MTP				eS	Sn	17 24 33.8	-0.4
SVB	Belmont	4.36	180	eP	Pn	17 23 50.3	+0.8
SVB	Belmont	4.36	180	eP	Pn	17 23 50.3	+0.8
HUMP	Col San Antoni	4.40	277	⇓eP	Pn	17 23 51.2	+1.1
HUMP	Col San Antoni	4.40	277	⇓eP	Pn	17 23 51.2	+1.1
CBYP	Canovanas	4.42	279	⇑eP	Pn	17 23 51.2	+0.8
CBYP	Canovanas	4.42	279	⇑eP	Pn	17 23 51.2	+0.8
SJG	San Juan	4.68	276	Pn	Pn	17 23 52.8	-1.2
	13nm,0.3s,baz=111,slow=18,SNR=9.6						
SJG				Sn	Sn	17 24 46.5	-1.6
	6.2nm,0.3s,baz=315,slow=8.4,SNR=4.4						
SJG	San Juan	4.68	276	ePn	Pn	17 23 54.7	+0.7
SJG				eSn	Sn	17 24 44.3	-3.8
CELP	Cerrillos	5.09	276	⇓eP	Pn	17 24 00.1	+0.6
CELP				eS	Sn	17 24 58.4	+0.3
CELP	Cerrillos	5.09	276	ePn	Pn	17 23 59.8	+0.2
CELP				⇓eP		17 24 00.1	
CELP				eS	Sn	17 24 58.4	+0.3
CELP				eSn	Sn	17 25 01.6	+3.5
CELP	Cerrillos	5.09	276	⇓eP	Pn	17 24 00.1	+0.6
CELP				eS	Sn	17 24 58.4	+0.3
OBIP	Obispado Ponce	5.11	275	eSn	Sn	17 25 04.8	+6.0
OBIP	Obispado Ponce	5.11	275	ePn	Pn	17 23 58.6	-1.3
	81nm,0.9s						
CRPR	Cabo Rojo, PR	5.59	274	eP	Pn	17 24 07.6	+1.2
	204nm,1.3s						
AGPR	Aguadilla, PR	5.63	279	ePn	Pn	17 24 06.6	-0.4
TOSP	Speyside	6.36	174	eP	Pn	17 24 18.6	+1.5
MDT	Midelt	52.84	62	P	P	17 31 59.7	+0.7
	2.1nm,0.9s,mb4.1,baz=254,slow=7.0,SNR=3.6						
KEST	Kesra	64.35	58	P	P	17 33 19.8	+0.5
	1.4nm,0.8s,mb4.0,baz=270,slow=3.0,SNR=4.7						
ILAR	Eielson Array	72.33	333	P	P	17 34 06.5	-2.2
	1.2nm,0.8s,mb3.9,baz=108,slow=5.0,SNR=4.1						
BRTR	Keskin Array B	82.58	51	P	P	17 35 05.9	-0.6
	0.8nm,0.6s,mb3.9,baz=301,slow=6.2,SNR=3.4						
BRTR	Keskin Array B	82.58	51	P	P	17 35 05.9	-0.6

*ISCJB **02** 17:27:32.6±1.2, 28°.1S±0°.1×67°.4W±0°.1, h144km±14km, mb3.4/3, Error ellipse: s-maj=18.3km s-min=14.5km az=4.6*
*IDC **02** 17:27:33.7±2.8, 28°.13S×67°.40W, h138km±23km, mb3.6/3, mb1 3.6/4, mb1mx3.4/15, mbtmp3.5/4, Error ellipse: s-maj=40.3km s-min=20.5km az=126.0*
*NEIC **02** 17:27:33.5±0.9, 28°.04S×67°.42W, h139km±8km, Error ellipse: s-maj=18.0km s-min=11.1km az=158.0*
ISC 02 17:27:33.5±1.2, 28°.1S±0°.1×67°.40W±0°.10, h135km±14km, n12, σ0s51/9, mb3.4/3, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	3.05	251	ePn	Pn	17 28 20.9	+0.1
LCO				eSn	Sn	17 28 57.3	-0.2
CFAA	Coronel Fontan	3.59	191	P	Pn	17 28 28.9	+1.1
	0.5nm,0.3s,baz=4.6,slow=14,SNR=60						
CFAA				S	Sn	17 29 09.3	-0.7
	1.4nm,0.3s,baz=220,slow=23,SNR=4.8						
CPUP	Villa Florida	9.14	81	P	Pn	17 29 42.1	-0.1
	0.4nm,0.3s,baz=212,slow=8.1,SNR=3.0						
QSPA	South Pole Qui	62.14	180	P	P	17 37 40.1	+0.4
	0.7nm,0.8s,mb3.5,baz=213,slow=2.4,SNR=5.8						
TORD	Torodi Ar. Bea	78.39	68	P	P	17 39 18.9	-0.5
	0.5nm,0.5s,mb3.4,baz=273,slow=6.0,SNR=9.3						
TORD	Torodi Ar. Bea	78.39	68	P	P	17 39 18.9	-0.5
PDAR	Pinedale Array	80.47	330	P	P	17 39 30.0	-0.1
	0.4nm,0.5s,mb3.3,baz=122,slow=6.5,SNR=4.1						
ASAR	Alice Springs	124.61	204	PKP	PKPdf	17 46 16.4	-1.0
	0.2nm,0.4s,baz=130,slow=1.9,SNR=9.1						
WRA	Warramunga Arr	127.84	206	PKP	PKPdf	17 46 22.9	-0.8
	0.6nm,1.0s,baz=181,slow=1.5,SNR=4.1						
KURK	Kurchatov	145.82	39	PKPbc	PKPbc	17 46 57.0	+0.5
	0.2nm,0.3s,baz=340,slow=19,SNR=3.5						
ZALV	Zalesovo Beam	147.12	30	PKPbc	PKPbc	17 46 59.9	-0.2
	2.0nm,0.5s,baz=305,slow=3.8,SNR=9.8						
MKAR	Makanchi Array	149.81	44	PKPbc	PKPbc	17 47 07.2	-0.1
	1.6nm,0.7s,baz=308,slow=2.8,SNR=10						

*BJI **02** 17:28:16.6, 35°.79N×87°.06E, h11km, ML3.9/5*
*ISCJB **02** 17:28:18.4±0.9, 36°.2N±0°.1×86°.8E±0°.2, h10km, Error ellipse: s-maj=27.0km s-min=9.6km az=153.7*
*IDC **02** 17:28:19.9±1.7, 36°.18N×86°.96E, h0km, mb3.2/3, mb1 3.5/7, mb1mx3.3/26, mbtmp3.4/7, ML3.4/4, MS3.2/2, Ms1 3.2/2, ms1mx2.7/19, Error ellipse: s-maj=60.8km s-min=18.7km az=66.0*
*NEIC **02** 17:28:20.9±0.8, 36°.23N×86°.94E, h10km, mb3.6/2, Error ellipse: s-maj=27.1km s-min=8.5km az=63.0*
ISC 02 17:28:20.9±0.9, 36°.2N±0°.1×86°.9E±0°.2, h10km, n14, σ0s83/13, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	11.11	343	ePn	Pn	17 30 58.3	-1.5
MK31				eSn	Sn	17 32 57.6	-6.4
MKAR	Makanchi Array	11.11	343	Pn	Pn	17 31 00.9	+1.1
	0.1nm,0.3s,baz=154,slow=14,SNR=4.7						
MKAR				Lg		17 34 14.3	
	0.1nm,0.3s,baz=169,slow=28,SNR=3.8						
MKAR	Makanchi Array	11.11	343	Pn	Pn	17 31 00.9	+1.1
MKAR				Lg		17 34 14.3	
AAK	Ala-Archa	11.54	307	LR	LR	17 36 27.9	
	comp=Z,136nm,19.0s,baz=348,slow=42						
KURK	Kurchatov	15.67	340	Pn	Pn	17 32 00.8	-0.9
	0.1nm,0.3s,baz=150,slow=12,SNR=2.7						
KURK	Kurchatov	15.67	340	Pn	Pn	17 32 00.8	-0.9
ZALV	Zalesovo Beam	17.78	356	P	Pn	17 32 27.8	-0.5
	0.1nm,0.3s,baz=156,slow=16,SNR=3.1						
SONM	Songino Array	18.48	45	P	Pn	17 32 37.5	+0.5
	0.1nm,0.3s,baz=230,slow=13,SNR=3.6						
CHTO	Chiang Mai	20.33	145	P	P	17 32 56.7	-0.6
	2.4nm,1.2s						
BVAR	Borovoye Array	20.42	330	P	P	17 32 58.1	+0.1
	0.8nm,0.7s,baz=252,slow=37,SNR=7.5						
BRVK	Borovoye	20.49	330	eP	P	17 33 00.2	+1.4
	3.3nm,0.9s						
CMAR	Chiang Mai Arr	20.64	146	P	P	17 33 00.7	0.0
	0.6nm,0.8s,baz=332,slow=11,SNR=4.3						
AKTO	Aktyubinsk	25.18	313	LR	LR	17 44 31.5	
	comp=Z,48nm,18.8s,baz=312,slow=38						
ASAR	Alice Springs	74.28	136	P	P	17 39 58.8	+0.4
	0.3nm,0.8s,baz=315,slow=5.7,SNR=5.7						

CASC 02 17:45:57.6±1.9, 13°.43N×90°.96W, h36km±999km, MD3.5, ML3.0, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.89	33	eP	Pn	17 46 14.1	+0.5
FUG	Fuego 3	1.02	6	eP	Pn	17 46 16.0	+0.6
JAT	Jato	1.10	323	⇓eP	Pn	17 46 16.9	+0.3
FG6		1.13	4	eP	Pn	17 46 17.6	+0.8
NBG	Las Nubes	1.29	27	eP	Pn	17 46 21.3	+2.1
TP2	Tecpan 2	1.35	357	eP	Pn	17 46 21.1	+1.2
SBLS	San Blas	1.36	72	eP	Pn	17 46 20.1	0.0
SBLS				eS	Sn	17 46 39.5	+2.6
SNJE	San Jose	1.39	71	eP	Pn	17 46 20.5	0.0
RBDL	Robledal	1.41	61	eP	Pn	17 46 20.9	+0.2
BOQS	Boqueron	1.66	79	eP	Pn	17 46 25.4	+1.2
MTO2	Montecristo 2	1.83	58	eP	Pn	17 46 26.4	-0.1
LFRS	El Faro	1.85	84	eP	Pn	17 46 27.5	+0.6
LFRS				eS	Sn	17 46 50.0	+0.8
SNVI	San Vicente	2.07	85	eP	Pn	17 46 30.1	+0.3
SNVI				eS	Sn	17 46 55.5	+1.0
CAHU	Cacacuatique	2.69	82	eP	Pn	17 46 39.4	+1.0
CAHU				AML	AML	17 47 21.9	
	comp=Z,90nm,0.7s						
CNCH	Conchagua	3.04	92	eP	Pn	17 46 44.7	+1.4

*BJI **02** 17:58:58.5, 6°.54S×147°.65E, h25km, mB5.0/9, mb4.9/22, Ms4.5/1, Ms7 4.4/1*
*IDC **02** 17:58:58.8±0.8, 6°.51S×147°.26E, h0km, mb4.5/16, mb1 4.6/18, mb1mx4.6/20, mbtmp4.5/18, ML4.4/2, MS3.9/10, Ms1 3.9/10, ms1mx3.6/25, Error ellipse: s-maj=26.2km s-min=9.1km az=114.0*
*ISCJB **02** 17:58:60.0±3.1, 6°.54S±0°.05×147°.25E±0°.07, h21km±22km, mb4.7/53, MS3.9/8, Error ellipse: s-maj=11.9km s-min=8.2km az=172.0*
*NEIC **02** 17:59:00.6±3.6, 6°.52S×147°.24E, h14km±22km, mb4.8/30, Error ellipse: s-maj=10.2km s-min=6.7km az=83.0*
*DJA **02** 17:59:22, 7°.07S×146°.37E, h139km, mb5.0/5*
ISC 02 17:59:03.6±2.7, 6°.57S±0°.04×147°.29E±0°.06, h34km±19km, n109, σ0s94/100, mb4.7/53, MS3.9/8, 1C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.83	183	ePn	Pn	17 59 47.1	+0.7
COEN	Coen	8.39	209	ePn	Pn	18 01 02.7	-0.1
	275nm,0.6s						
COEN				eSn	Sn	18 02 34.6	-1.7
MTSU	Mount Surprise	11.86	194	eP	Pn	18 01 50.9	+0.5
	15nm,0.2s						
CTA	Charters Tower	13.48	184	Pn	Pn	18 02 13.2	+0.6
	1.7nm,0.3s,baz=359,slow=12,SNR=7.8						
CTA				LR	LR	18 07 02.2	
	comp=Z,608nm,18.8s,baz=11,slow=36						
CTAO	Charters Tower	13.48	184	ePn	Pn	18 02 09.8	-2.7
	40nm,1.3s						
KAKA	Kakadu	15.86	246	eP	Pn	18 02 44.0	-0.4
	70nm,0.6s						
KAKA	Kakadu	15.86	246	ePn	Pn	18 02 43.4	-1.0
	204nm,0.6s						
KAKA				eSn	Sn	18 05 32.4	-6.8
WB2	Warramunga Arr	18.30	222	eP	Pn	18 03 13.9	-0.9
WRA	Warramunga Arr	18.30	222	P	Pn	18 03 14.3	-0.7
	1.2nm,0.3s,baz=47,slow=12,SNR=11						
WRA				S	Sn	18 06 40.3	+1.9
	0.2nm,0.3s,baz=43,slow=22,SNR=3.1						
WRA				LR	LR	18 11 16.4	
	comp=Z,608nm,18.2s,baz=45,slow=40						
WRA	Warramunga Arr	18.30	222	P	Pn	18 03 14.3	-0.7
WRA				S	Sn	18 06 40.3	+1.9
WRA				LR	LR	18 11 16.4	
EIDS	Eidsvold	19.05	169	eP	Pn	18 03 25.5	+1.6
	16nm,0.9s						
GUMO	Guam	20.17	353	P	P	18 03 35.6	+0.4
	29nm,0.7s,baz=176,slow=11,SNR=3.6						
GUMO				LR	LR	18 09 41.3	
	comp=Z,318nm,21.1s,MS3.6,baz=174,slow=32						
KNA	Kununurra	20.32	242	P	P	18 03 36.5	-0.4
	1μm211nm,0.8s						
NLAI	Namlea	20.39	278	P	P	18 03 39.2	+1.5
	3μm63nm,0.5s						
ASAR	Alice Springs	21.32	216	P	P	18 03 47.5	-0.2
	7.9nm,0.6s,mb4.2,baz=50,slow=9.2,SNR=215						
ASAR				S	S	18 07 47.4	+4.6
	5.5nm,0.9s,baz=39,slow=17,SNR=9.5						
FITZ	Fitzroy Crossi	24.02	240	P	P	18 04 14.0	-1.6
	9.4nm,0.7s,mb4.3,baz=78,slow=9.3,SNR=54						
FITZ				LR	LR	18 14 37.4	
	comp=Z,292nm,19.1s,MS3.8,baz=55,slow=39						
FITZ	Fitzroy Crossi	24.02	240	eP	P	18 04 13.6	-2.0
	21nm,0.4s,mb4.9						
FITZ	Fitzroy Crossi	24.02	240	P	P	18 04 14.5	-1.1
	57nm,0.8s,mb5.1						
ARMA	Armidale	24.07	171	eP	P	18 04 15.9	0.0
MMRI	Maumere	24.92	264	P	P	18 04 23.8	0.0
STKA	Stephens Creek	25.74	191	P	P	18 04 31.2	+0.2
	25nm,0.8s,mb4.8,baz=353,slow=8.2,SNR=40						
STKA				LR	LR	18 15 14.2	
	comp=Z,503nm,19.5s,MS4.0,baz=17,slow=38						
STKA	Stephens Creek	25.74	191	eP	P	18 04 31.0	0.0
	18nm,0.8s,mb4.7						
STKA	Stephens Creek	25.74	191	eP	P	18 04 30.8	-0.2
	5.4nm,0.8s,mb4.1						
STKA				LR	LR	18 15 14.2	
YNG	Young	27.61	178	eP	P	18 04 49.3	+1.4
	16nm,0.9s,mb4.7						
BBOO	Buckleboo	28.13	200	eP	P	18 04 52.0	-0.5
	30nm,0.8s,mb5.0						
BBOO	Buckleboo	28.13	200	eP	P	18 04 51.8	-0.7
	151nm,1.0s,mb5.6						
FORT	Forrest	30.09	214	eP	P	18 05 10.1	+0.1
	11nm,0.6s,mb4.8						
MBWA	Marble Bar	30.36	239	eP	P	18 05 11.6	-0.8
MBWA	Marble Bar	30.36	239	eP	P	18 05 12.3	-0.1
	51nm,1.8s,mb5.0						
TOO	Toolangi	30.91	183	eP	P	18 05 15.3	-1.8
KKM	Kota Kinabalu	33.45	291	eP	P	18 05 38.0	-1.7
MEEK	Meekatharra	33.81	231	eP	P	18 05 42.2	-0.5
KMBL	Kambalda	34.26	221	eP	P	18 05 47.2	+0.7
	43nm,0.8s,mb5.4						
KLBR	Kellerberrin	37.17	224	eP	P	18 06 10.4	-1.1
	7.3nm,0.5s,mb4.8						
KSM	Kuching	37.77	281	eP	P	18 06 16.6	-0.3
	6.0nm,0.8s,mb4.4						
NWAO	Narrogin (SRO)	38.31	223	P	P	18 06 20.4	-0.7
	6.3nm,0.9s,mb4.3,baz=24,slow=12,SNR=4.1						
YHNB	Yeheng	40.02	322	eP	P	18 06 36.3	+0.8
	55nm,1.1s,mb5.2						
MJAR	Matsushiro Arr	43.72	349	P	P	18 07 05.1	-0.4
	2.3nm,0.7s,mb4.0,baz=173,slow=7.5,SNR=8.7						
MJAR	Matsushiro Arr	43.72	349	P	P	18 07 05.1	-0.4
MAJO	Matsushiro	43.72	349	eP	P	18 07 03.6	-1.9
	9.7nm,1.0s,mb4.5						
QIZ	Qiongzhong	44.82	305	eP	P	18 07 15.1	+0.5
	6.6nm,0.8s,mb4.5						
KSRS	Korea Array	47.38	339	P	P	18 07 34.9	+0.4
	6.3nm,0.9s,mb4.5,baz=158,slow=9.3,SNR=14						
KSRS				LR	LR	18 25 58.1	
	comp=Z,82nm,21.4s,MS3.7,baz=130,slow=34						
IPM	Ipoh	47.47	282	eP	P	18 07 36.1	+0.5
	8.6nm,0.6s,mb4.9						
KULM	Kulim	48.02	283	eP	P	18 07 40.5	+0.6
	12nm,0.6s,mb5.1						
ASAJ	Asahikawa	50.62	356	eP	P	18 07 59.4	+0.2
	7.2nm,1.1s,mb4.5						
NST	Nakhon Sawan	51.66	296	P	P	18 08 09.0	+1.5
YSS	Yuzh-Sakhalins	53.44	356	eP	P	18 08 20.3	+0.2
	12nm,0.9s,mb4.8						
CMAR	Chiang Mai Arr	53.77	298	P	P	18 08 24.7	+1.6
	8.5nm,0.7s,mb4.8,baz=123,slow=5.9,SNR=84						
CH

EKS2	Erkin-Say	82.46	314	*e*P	P	18 11 22.8	+0.1
	comp=Z,3.0nm,0.8s,mb4.3						
QSPA	South Pole Qui	83.41	180	*e*P	P	18 11 27.3	+0.4
	comp=Z,8.8nm,0.8s,mb4.8						
MCK	McKinley	84.63	24	P	P	18 11 32.7	-0.6
	comp=Z,4.7nm,0.7s,mb4.7						
KKAR	Karatay Array	84.89	314	*e*P	P	18 11 35.1	0.0
	comp=Z,0.5nm,0.2s,mb4.3						
ILAR	Eielson Array	85.88	23	P	P	18 11 38.2	-1.3
	comp=Z,3.1nm,0.8s,mb4.6,baz=256,slow=5.1,SNR=36						
BRVK	Borovoye	87.46	324	*e*P	P	18 11 45.1	-2.5
	comp=Z,4.7nm,1.0s,mb4.7						
DAWY	Dawson	88.66	25	*e*P	P	18 11 52.9	-0.1
BBB	Bella Bella	91.83	38	LR	LR	18 44 42.0	
	comp=Z,70nm,20.6s,MS4.1,baz=127,slow=30						
INK	Inuvik	92.07	21	P	P	18 12 09.3	+0.5
	comp=Z,2.0nm,1.1s,mb4.4,baz=269,slow=8.4,SNR=3.8						
ABKAR	Akbulak array	93.19	319	*e*P	P	18 12 12.5	-2.0
	comp=Z,8.7nm,1.4s,mb5.0						
YKA	Yellowknife Ar	99.53	28	P	P	18 12 42.8	-0.1
	comp=Z,0.4nm,0.9s,mb3.9,baz=274,slow=5.7,SNR=3.7						
YKA	Yellowknife Ar	99.53	28	P	P	18 12 42.8	-0.1
PDAR	Pinedale Array	104.08	48	Pdiff	Pdif	18 13 04.3	+1.0
	comp=Z,0.3nm,0.6s,baz=242,slow=3.2,SNR=3.5						
CLL	Collm	121.59	328	*e*PKPdf	PKPdf	18 17 54.0	+0.3
CFAA	Coronel Fontan	129.10	140	PKP	PKPdf	18 18 11.1	+2.4
	comp=Z,0.2nm,0.6s,baz=273,slow=5.8,SNR=3.9						
LPAZ	La Paz	138.24	123	PKP	PKPdf	18 18 29.5	+3.3
	comp=Z,0.6nm,0.4s,baz=230,slow=8.8,SNR=3.8						
SJG	San Juan	145.44	68	*e*PKPdf	PKPdf	18 18 38.6	-0.4
TORD	Torodi Ar. Bea	145.51	284	PKPbc	PKPbc	18 18 40.4	+1.1
	comp=Z,9.7nm,0.6s,baz=82,slow=4.4,SNR=57						
TORD	Torodi Ar. Bea	145.51	284	PKPbc	PKPbc	18 18 40.4	+1.1
MTP	Monte Pirata	146.00	67	*e*PKPdf	PKPdf	18 18 40.1	+0.1
KIC	Kosan Boka	152.21	271	*e*PKIKP	PKPbc	18 18 59.2	+2.4
	comp=Z,24nm,0.9s						
DBIC	Dimbokro	152.34	272	PKPbc	PKPbc	18 18 57.9	+0.8
	comp=Z,5.1nm,1.0s,baz=108,slow=7.2,SNR=3.4						
DBIC				PKPab	PKPab	18 19 09.2	+2.0
	comp=Z,4.4nm,0.5s,baz=75,slow=1.4,SNR=9.9						
DBIC	Dimbokro	152.34	272	*e*PKPdf	PKPbc	18 18 56.6	-0.6
DBIC				PKPbc	PKPbc	18 18 57.9	+0.8
DBIC				PKPab	PKPab	18 19 09.2	+2.0
LIC	Lamto	152.49	271	*e*PKIKP	PKPbc	18 18 58.6	+1.1
	comp=Z,39nm,1.0s						
TIC	Toumodi	152.50	272	*e*PKIKP	PKPbc	18 18 58.7	+1.2
	comp=Z,91nm,1.4s						

IDC ***02*** *18:12:31.0±1.0, 9.°48N×125.°01E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/21, mbtmp3.7/8, ML4.1/1, Error ellipse: s-maj=43.0km s-min=14.2km az=72.0*

ISCJB ***02*** *18:12:32.5±0.6, 9.°66N±0.°04×125.°46E±0.°05, h22km±5km, mb3.5/7, Error ellipse: s-maj=8.2km s-min=5.0km az=150.5*

MAN ***02*** *18:12:32, 9.°65N×125.°37E, h10km, mb4.8, ML3.7, MS3.8*

MAN INTENSITY II - SURIGAO CITY.

NEIC ***02*** *18:12:33.7±0.8, 9.°44N×124.°90E, h20km, mb3.9/1, Error ellipse: s-maj=28.5km s-min=10.9km az=61.0*

NEIC Felt [II PIVS] at Surigao, Mindanao.

ISC 02 18:12:32.9±0.6, 9.°65N±0.°04×125.°40E±0.°05, h13km±5km, n26, σ1§09/36, mb3.5/7, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.16	35⇑	*e*P	Pg	18 12 36.7	-0.1
SCPH				*e*S	Sg	18 12 39.8	+0.3
BUTP	Butuan	0.71	162	*e*P	Pg	18 12 46.3	-0.4
BUTP				*e*S	Sg	18 13 02.3	+6.3
MSLP	Maasin	0.72	313	*e*P	Pg	18 12 46.7	-0.1
MSLP				*e*S	Sg	18 12 57.2	+1.0
CGP	Cagayan de Oro	1.37	210	*e*P	Pn	18 12 55.9	-1.7
CGP				*i*S	Sn	18 13 16.4	+0.7
TBP	Tagbilaran	1.51	272	*e*P	Pn	18 12 58.7	-0.9
TBP				*e*S	Sn	18 13 18.3	-0.8
LLP	Lapu-Lapu	1.56	295⇑	*i*P	Pn	18 12 59.1	-1.1
LLP				*i*S	Sn	18 13 19.9	-0.4
OCLP	Ormoc	1.59	331	*e*P	Pn	18 13 00.9	+0.2
OCLP				*e*S	Sn	18 13 21.9	+0.7
BUKP	Musuan	1.79	191	*e*P	Pn	18 13 03.0	-0.3
SNPH	Sibulan	2.15	262	*e*P	Pn	18 13 08.7	+0.3
SNPH				*i*S	Sn	18 13 37.4	+2.5
DMPH	Davao City--Mi	2.55	177⇑	*e*P	Pn	18 13 15.4	+1.5
DMPH				*e*S	Sn	18 13 46.2	+1.5
DAV	Davao City (W)	2.57	176	Pn	Pn	18 13 13.4	-0.7
	44nm,0.3s,baz=311,slow=3.5,SNR=2.9						
DAV				Lg		18 13 48.7	
	25nm,0.3s,baz=243,slow=17,SNR=4.6						
DAV	Davao City (W)	2.57	176	*e*Pn	Pn	18 13 11.0	-3.1
DAV				Pn	Pn	18 13 13.4	-0.7
DAV				Lg		18 13 48.7	
PAGZ	Pagadian	2.67	228	*e*P	Pn	18 13 15.7	+0.1
MATI	Mati	2.82	162	*e*P	Pn	18 13 21.6	+4.0
GUIM	Jordan	2.93	290	*e*P	Pn	18 13 18.1	-0.9
CNP	Catarman	2.94	346	*e*P	Pn	18 13 19.9	+0.7
IPIL	Ipil	3.35	237	*e*P	Pn	18 13 26.5	+1.7
QIZ	Qiongzhong	17.71	303	P	Pn	18 16 34.1	-5.1
	11nm,1.2s						
CMAR	Chiang Mai Arr	27.08	292	P	P	18 18 13.6	-1.9
	0.2nm,0.4s,mb3.0,baz=116,slow=8.0,SNR=3.5						
FITZ	Fitzroy Crossi	27.57	179	P	P	18 18 17.9	-1.8
	1.9nm,0.9s,mb3.7,baz=178,slow=3.8,SNR=6.4						
WRA	Warramunga Arr	30.69	163	P	P	18 18 47.2	-0.2
	0.1nm,0.3s,mb3.1,baz=344,slow=9.3,SNR=3.8						
ASAR	Alice Springs	34.14	166	P	P	18 19 17.9	+0.2
	0.3nm,0.4s,mb3.6,baz=350,slow=7.0,SNR=25						
STKA	Stephens Creek	44.10	160	P	P	18 20 40.9	0.0
	1.8nm,0.8s,mb3.9,baz=293,slow=12,SNR=7.3						
PETK	Petropavlovsk-	50.56	25	P	P	18 21 33.5	+2.6
	1.0nm,0.7s,mb3.9,baz=216,slow=2.3,SNR=4.2						
MKAR	Makanchi Array	52.00	323	P	P	18 21 41.0	-0.9
	0.4nm,0.6s,mb3.6,baz=126,slow=8.7,SNR=7.6						
MKAR	Makanchi Array	52.00	323	P	P	18 21 41.0	-0.9

JMA 02 18:28:56.1±0.2, 43.°93N×147.°90E, h7km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.67	251	P	Pn	18 29 26.1	+0.4
NEM2				*e*S	Sn	18 29 47.7	+0.5
JRA	Rausu	2.01	271	P	Pn	18 29 31.1	+0.7
JRA				*e*S	Sn	18 29 56.4	+0.7
JNK	Nakash	2.33	263	P	Pn	18 29 35.8	+1.0
JNK				*e*S	Sn	18 30 04.5	+0.8
JAK	Akkeshi	2.51	249	P	Pn	18 29 38.3	+1.0
JTKR	Abashiri--Toko	2.88	272	P	Pn	18 29 44.0	+1.6
JAR	Ashorobuto	3.07	260	*e*S	Sn	18 30 23.2	+1.4
JOB	Onbets	3.13	252	*e*S	Sn	18 30 25.5	+2.0

IDC ***02*** *18:41:37.6±2.4, 20.°30S×169.°19E, h21km±13km, mb4.9/17, mb1 5.0/18, mb1mx5.0/20, mbtmp4.9/18, MS4.3/18, Ms1 4.3/18, ms1mx4.2/23, Error ellipse: s-maj=19.2km s-min=15.0km az=114.0*

ISCJB ***02*** *18:41:37.2±1.9, 20.°44S±0.°05×169.°21E±0.°04, h31km±13km, mb5.2/84, MS4.5/30, Error ellipse: s-maj=8.2km s-min=5.9km az=149.1*

MOS ***02*** *18:41:37.8±1.3, 20.°34S×169.°18E, h33km, mb5.4/24, Error ellipse: s-maj=12.0km s-min=10.2km az=32.7*

NOU ***02*** *18:41:38.5±0.3, 19.°80S×168.°60E, h10km, MD3.4, ML4.2*

NEIC ***02*** *18:41:39.8±1.0, 20.°43S×169.°24E, h43km±9km, mb5.2/49, Error ellipse: s-maj=7.6km s-min=6.0km az=159.0*

GCMT ***02*** *18:41:40.0±0.2, 20.°39S×169.°20E, h18km, MW5.2, Moment Tensor Solution. s54,c90; s85,c150; Moment tensor: Scale 10^16Nm; Mrr-1.91±.17; Mθθ5.21±.15; Mφφ-3.30±.14; Mrθ1.38±.33; Mθφ5.29±.13; Mφr-2.00±.32; Best double couple: M0 7.40000×10^16 NP1:φ22.00000°, δ71.00000°, λ-163.00000°. NP2:φ286.00000°, δ74.00000°, λ-20.00000°. Principal axes: T 7.7600, Plg2.0000°, Azm335.0000°; N -0.7900, Plg64.0000°, Azm70.0000°; P -6.9700, Plg25.0000°, Azm244.0000°; Data Used: II IU IC G CN.*

SZGRF ***02*** *18:41:41.1, 19.°71S×171.°16E, h46km, mb5.3, Vanuatu Islands region*

ISC 02 18:41:39.6±2.0, 20.°45S±0.°05×169.°20E±0.°04, h35km±14km, h40km±1.5km:pP-P, n284, σ1§17/163, mb5.2/84, MS4.5/30, 14C-5D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	2.75	231	*e*P	Pn	18 42 20.8	-0.4
BAYA				*e*S	Sn	18 42 51.7	-1.6
DZM	Mont Dzumac	3.04	237	*e*Pn	Pn	18 42 23.8	-1.4
	264nm,0.3s						
DZM				*e*Sn	Sn	18 42 56.5	-3.9
	495nm,0.3s						
DZM	Mont Dzumac	3.04	237	*e*P	Pn	18 42 23.3	-1.9
DZM				*e*S	Sn	18 42 56.7	-3.7
DZM				AMP		18 43 22.9	
	comp=Z,7μm,0.5s						
DZM	Mont Dzumac	3.04	237	*e*Pn	Pn	18 42 23.7	-1.5
NOUC	Port Laguerre	3.17	238	*e*P	Pn	18 42 25.3	-1.6
NOUC				AMP		18 43 32.4	
	comp=Z,545nm,0.8s						
MSVF	Nonsavu	8.79	74	*e*P	Pn	18 43 45.4	+1.2
	comp=Z,544nm,1.1s						
MSVF	Nonsavu	8.79	74	Pn	Pn	18 43 46.1	+1.9
	comp=Z,2μm,1.1s,SNR=17						
OUZ	Omahuta	15.22	166	*e*P	Pn	18 45 12.2	+0.4
	comp=Z,153nm,1.1s						
FUNA	Funafuti	15.29	41	P	Pn	18 45 12.0	-0.8
EIDS	Eidsvold	17.40	250	*e*P	Pn	18 45 41.8	+2.1
	comp=Z,49nm,0.8s						
ARMA	Armidale	18.70	234	*e*P	Pn	18 45 58.0	+2.4
ARMA	Armidale	18.70	234	*e*P	Pn	18 45 57.7	+2.1
	comp=Z,225nm,1.4s						
URZ	Urewera	19.03	161	P	Pn	18 45 58.7	-0.8
	comp=Z,2.3nm,0.3s,baz=328,slow=6.2,SNR=28						
URZ				LR	LR	18 52 27.5	
	comp=Z,617nm,19.3s,baz=349,slow=34						
URZ	Urewera	19.03	161	*e*P	Pn	18 45 58.1	-1.3
	comp=Z,388nm,1.2s						
AFI	Afiamalu	19.29	73	LR	LR	18 51 53.0	
	comp=Z,886nm,18.7s,baz=98,slow=32						
AFI	Afiamalu	19.29	73	P	Pn	18 45 59.0	-3.8
AFI				pmax	pmax		
	comp=Z,84nm,1.0s						
AFI	Afiamalu	19.29	73	P	Pn	18 45 59.0	-3.7
	comp=Z,84nm,1.0s						
SNZO	South Karori	21.32	169	*e*P	P	18 46 24.6	+1.2
	comp=Z,164nm,1.0s,mb5.3						
CTA	Charters Tower	21.53	267	P	P	18 46 26.5	+0.6
	comp=Z,84nm,0.9s,mb5.2,baz=90,slow=12,SNR=40						
CTA				LR	LR	18 54 16.9	
	comp=Z,829nm,18.9s,MS4.2,baz=85,slow=35						
CTA	Charters Tower	21.53	267	*e*P	P	18 46 27.3	+1.4
	comp=Z,52nm,0.9s,mb5.0						
CTAO	Charters Tower	21.53	267	*e*P	P	18 46 28.1	+2.2
CTAO				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.0						
CTAO	Charters Tower	21.53	267	*e*P	P	18 46 28.1	+2.2
	comp=Z,55nm,0.8s,mb5.0						
KHZ	Kahutara	22.21	171	*e*P	P	18 46 31.8	-1.1
	comp=Z,348nm,1.4s,mb5.6						
CNB	Canberra Magne	22.89	226	*e*P	P	18 46 41.9	+1.7
YNG	Young	23.00	229	*e*P	P	18 46 42.7	+1.3
	comp=Z,36nm,1.2s,mb4.7						
CAN	Canberra	23.14	226	*e*P	P	18 46 43.8	+1.0
CAN				pmax	pmax		
	comp=Z,153nm,1.2s,mb5.3						
CAN	Canberra	23.14	226	*e*P	P	18 46 43.8	+0.9
	comp=Z,153nm,1.2s,mb5.3						
RPZ	Rata Peaks	23.26	177	P	P	18 46 46.5	+2.5
	comp=Z,23nm,0.9s,mb4.6,baz=348,slow=15,SNR=6.8						
RPZ				LR	LR	18 55 09.8	
	comp=Z,2μm,18.3s,MS4.5,baz=181,slow=35						
RPZ	Rata Peaks	23.26	177	*e*P	P	18 46 42.0	-1.9
	comp=Z,219nm,1.6s,mb5.3						
RPZ				LR	LR	18 55 09.8	
PMG	Port Moresby	23.93	294	*e*P	P	18 46 50.9	+0.3
PMG				pmax	pmax		
	comp=Z,38nm,0.8s						
PMG	Port Moresby	23.93	294	*e*P	P	18 46 50.9	+0.3
	comp=Z,38nm,0.8s,mb4.9						
COEN	Coen	25.67	280	*e*P	P	18 47 07.8	+1.4
	comp=Z,308nm,1.0s,mb5.8						
TOO	Toolangi	26.74	225	*e*P	P	18 47 17.1	+1.2
STKA	Stephens Creek	27.19	240	P	P	18 47 21.1	+1.0
	comp=Z,36nm,0.7s,mb5.0,baz=75,slow=8.7,SNR=107						
STKA				ScP	ScP	18 54 20.3	+2.7
	comp=Z,1.9nm,0.7s,baz=122,slow=8.2,SNR=2.8						
STKA				LR	LR	18 56 25.2	
	comp=Z,972nm,21.4s,MS4.3,baz=176,slow=33						
STKA	Stephens Creek	27.19	240	*e*P	P	18 47 20.9	+0.9
	comp=Z,34nm,0.7s,mb5.0						
STKA	Stephens Creek	27.19	240	*e*P	P	18 47 20.8	+0.8
	comp=Z,5.6nm,0.7s,mb4.2						
ARPS	Mount Arapiles	29.87	230	*e*P	P	18 47 35.7	+0.7
	comp=Z,92nm,0.8s,mb5.6						
RAR	Rarotonga	28.98	97	LR	LR	18 56 05.9	
	comp=Z,486nm,21.1s,MS4.1,baz=265,slow=30						
RAR	Rarotonga	28.98	97	*e*P	P	18 47 36.8	+0.7
RAR				pmax	pmax		
	comp=Z,115nm,1.1s						
RAR	Rarotonga	28.98	97	*e*P	P	18 47 36.8	+0.6
	comp=Z,115nm,1.1s,mb5.5						
BBOO	Buckleboo	31.95	240	*e*P	P	18 48 01.9	-0.3
	comp=Z,57nm,0.9s,mb5.4						
WB2	Warramunga Arr	32.68	265	*e*P	P	18 48 07.7	-1.0
WRA	Warramunga Arr	32.69	265	P	P	18 48 07.4	-1.4
	comp=Z,28nm,0.8s,mb5.2,baz=94,slow=8.3,SNR=64						
WRA				ScP	ScP	18 54 37.5	+1.8
	comp=Z,2.4nm,1.2s,baz=86,slow=3.8,SNR=5.2						
WRA				LR	LR	19 01 25.7	
	comp=Z,444nm,19.0s,MS4.2,baz=150,slow=36						
ASAR	Alice Springs	32.82	258	P	P	18 48 09.6	-0.4
	comp=Z,84nm,0.7s,mb5.8,baz=82,slow=9.3,SNR=926						
ASAR				ScP	ScP	18 54 38.2	+2.1
	comp=Z,2.1nm,0.9s,baz=110,slow=3.5,SNR=4.7						
KAKA	Kakadu	36.00	276	*e*P	P	18 48 37.6	0.0
	comp=Z,18nm,1.0s,mb5.0						
KAKA	Kakadu	36.00	276	*e*P	P	18 48 37.3	-0.3
	comp=Z,57nm,1.1s,mb5.4						
FORT	Forrest	38.32	246	*e*P	P	18 48 57.1	0.0
	comp=Z,52nm,0.7s,mb5.4						
FORT	Forrest	38.32	246	*e*P	P	18 48 56.9	-0.2
	comp=Z,56nm,0.7s,mb5.4						
KNA	Kununurra	38.65	270	*e*P	P	18 48 59.9	-0.1
	comp=Z,68nm,0.8s,mb5.4						
PPT	Papeete	39.01	93	*e*LQ		18 58 10.5	
	comp=Z,4μm,31.5s						
PPT				*e*LR	LR	18 59 50.5	
	comp=Z,555nm,25.0s						
PPT	Papeete	39.01	93	LR	LR	19 00 21.4	
	comp=Z,434nm,20.1s,MS4.3,baz=275,slow=29						
FITZ	Fitzroy Crossi	41.10	266	P	P	18 49 20.9	+0.5
	comp=Z,48nm,0.7s,mb5.2,baz=114,slow=7.3,SNR=186						
FITZ				LR	LR	19 06 04.3	
	comp=Z,429nm,19.6s,MS4.3,baz=98,slow=36						
FITZ	Fitzroy Crossi	41.10	266	*e*P	P	18 49 20.1	-0.3
	comp=Z,89nm,0.7s,mb5.5						
FITZ	Fitzroy Crossi	41.10	266	*e*P	P	18 49 20.7	+0.3
	comp=Z,58nm,0.8s,mb5.3						
GUMO	Guam	41.43	323	LR	LR	19 04 15.3	
	comp=Z,317nm,19.8s,MS4.2,baz=140,slow=33						
KMBL	Kambalda	43.64	246	*e*P	P	18 49 40.7	-0.2
	comp=Z,372nm,0.8s,mb6.2						
MBWA	Marble Bar	46.10	260	*e*P	P	18 50 00.8	+0.2
MBWA	Marble Bar	46.10	260	*e*P	P	18 50 00.7	+0.1
	comp=Z,82nm,1.2s,mb5.5						
MEEK	Meekatharra	46.55	252	*e*P	P	18 50 04.0	-0.1
KLBR	Kellerberrin	47.18	245	*e*P	P	18 50 08.1	-0.8
	comp=Z,113nm,0.9s,mb5.8						
NWAO	Narrogin (SRO)	47.64	244	P	P	18 50 11.7	-0.8
	comp=Z,68nm,0.9s,mb5.7,baz=85,slow=9.0,SNR=28						
NWAO	Narrogin (SRO)	47.64	244	*e*P	P	18 50 11.6	-0.9
NWAO				pmax	pmax		
	comp=Z,68nm,1.0s						
NWAO	Narrogin (SRO)	47.64	244	*e*P	P	18 50 11.6	-0.9
	comp=Z,68nm,1.0s,mb5.6						
BKSI	Bulukumba	49.94	281	P	P	18 50 31.3	+0.9
CBIJ	Chichi jima	54.02	330	LR	LR	19 11 14.4	
	comp=Z,281nm,21.4s,MS4.3,baz=123,slow=33						
SJI	Sawahan	56.86	274	P	P	18 51 22.7	+1.4
	comp=Z,50nm,0.9s,mb5.5						
SBA	Scott Base	57.46	181	*e*P	P	18 51 25.0	+0.4
SBA				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.7						
SBA	Scott Base	57.46	181	*e*P	P	18 51 25.0	+0.4
	comp=Z,70nm,1.0s,mb5.7						
KKM	Kota Kinabalu	58.33	291	*e*P	P	18 51 29.7	-1.9
	comp=Z,12nm,0.7s,mb5.0						
KKM				*e*P		18 51 36.0	
CASY	Casey	59.01	204	*e*P	P	18 51 34.5	-1.1
	comp=Z,36nm,1.1s,mb5.3						
LEM	Lembang	61.05	273	P	P	18 51 51.7	+1.4
	comp=Z,112nm,1.3s,mb5.8						
KSM	Kuching	61.61	283	*e*P	P	18 51 54.1	-0.1
	comp=Z,32nm,0.9s,mb5.5						
CBJI	Citeko	61.90	274	P	P	18 51 55.9	-0.2
	comp=Z,218nm,1.0s,mb6.2						
DBJI	Dramaga	61.95	273	P	P	18 51 57.0	+0.6
	comp=Z,155nm,1.0s,mb6.1						
MJAR	Matsushiro Arr	63.80	332	P	P	18 52 06.4	-1.8
	comp=Z,10nm,0.9s,mb4.9,baz=168,slow=7.2,SNR=25						
MAJO	Matsushiro	63.80	332	*e*P	P	18 52 06.4	-1.8
MAJO				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
MAJO	Matsushiro	63.80	332	*e*P	P	18 52 06.4	-1.8
	comp=Z,21nm,1.0s,mb5.1						
MAT	Matsushiro	63.80	332	P	P	18 52 07.0	-1.2
MAT				S	S	19 00 42.0	+1.2
TPUB	Ta-pu	64.28	310	*e*P	P	18 52 09.7	-1.9
	comp=Z,25nm,0.8s,mb5.3						
SSLB	Suanglung	64.36	311	*e*P	P	18 52 11.6	-0.6
KASI	Kota Agung	64.40	274	P	P	18 52 13.5	+0.8
	comp=Z,103nm,1.0s,mb5.8						
YHNB	Yeheng	64.62	312	*e*P	P	18 52 14.4	+0.5
	comp=Z,30nm,0.8s,mb5.4						
JNU	Nakatsue	64.62	325	*e*P	P	18 52 13.0	-0.7
	comp=Z,12nm,1.0s,mb4.9						
TATO	Taipei	64.73	312	P	P	18 52 14.3	-0.3
LWLI	Liwa	64.98	274	P	sP	18 52 29.8	-1.6
MDSI	Maura Dua	65.06	275	P	P	18 52 16.0	-1.0
	comp=Z,42nm,0.8s,mb5.5						
MIR	Mirnyy	65.93	205⇓	*i*P		18 52 21.4	-0.3
MIR				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
KSI	Kapahiang	66.83	275	P	P	18 52 34.9	+6.5
ASAJ	Asahikawa	68.71	340	P	P	18 52 39.4	-0.2
	comp=Z,33nm,0.9s,mb5.3,baz=216,slow=11,SNR=20						
ASAJ	Asahikawa	68.71	340	*e*P	P	18 52 39.7	+0.1
	comp=Z,15nm,0.9s,mb4.9						
SDSI	Sungai Dareh	68.88	277	P	P	18 52 48.2	+6.9
SSE	Sheshan	68.92	317	P	P	18 52 41.3	+0.2
SSE				S	S	19 01 38.9	-4.3
SSE				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.4						
SSE				pmax	pmax		
	comp=Z,77nm,4.5s						
SSE				LR	LR		
	comp=N,110nm,16.7s,MS4.4						
SSE				LR	LR		
	comp=E,160nm,16.7s,MS4.4						
SSE				LR	LR		
	comp=Z,180nm,15.5s,MS4.4						
KSRS	Korea Array	69.48	326	P	P	18 52 43.9	-0.5
	comp=Z,3.0nm,0.7s,mb4.3,baz=137,slow=5.8,SNR=8.2						
KSRS				LR	LR	19 17 24.5	
	comp=Z,142nm,19.7s,MS4.2,baz=143,slow=31						
QSPA	South Pole Qui	69.61	180	*e*P	P	18 52 44.2	-0.5
	comp=Z,101nm,1.3s,mb5.6						
NJ2	Nanjing	71.05	316	*e*P	P	18 52 45.1	-9.1
NJ2				pP	pP	18 52 58.2	-6.8
NJ2				sP	sP	18 53 03.5	-5.6
NJ2				PP	PP	18 55 25.2	-7.1
NJ2				S	S	19 01 56.0	-12
NJ2				sS	sS	19 02 18.0	-8.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,60nm,6.4s						
NJ2				LR	LR		
	comp=N,480nm,14.6s						
NJ2				LR	LR		
	comp=E,300nm,25.0s						
NJ2				LR	LR		
	comp=Z,640nm,16.7s,MS5.0						
YSS	Yuzh-Sakhalins	71.20	341⇑	*e*P	P	18 52 55.2	+0.4
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
YSS	Yuzh-Sakhalins	71.20	341	*e*P	P	18 52 54.7	-0.1
	comp=Z,32nm,0.8s,mb5.3						
PSI	Prapat	72.59	280	P	P	18 53 02.7	-1.2
	comp=Z,4.0nm,0.3s,mb4.8,baz=224,slow=6.8,SNR=4.0						
PSI	Prapat	72.59	280	P	P	18 53 02.7	-1.2
WHN	Wuhan	73.13	313	P	P	18 53 07.5	+0.8
WHN				S	S	19 02 36.8	+4.7
WHN				LR	LR		
	comp=Z,400nm,20.0s,MS4.7						
PET	Petropavlovsk	73.73	353	*e*P	P	18 53 09.8	+0.1
PET				*e*S	S	19 02 38.3	+0.4
PET				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
PETK	Petropavlovsk-	73.92	353	P	P	18 53 10.2	-0.6
	comp=Z,7.9nm,0.8s,mb4.7,baz=152,slow=6.7,SNR=8.8						
PETK				LR	LR	19 23 23.1	
	comp=Z,154nm,18.7s,MS4.3,baz=155,slow=34						
MDJ	Mudanjiang	74.16	332	P	P	18 53 12.6	+0.2
MDJ				pP	pP	18 53 24.6	+1.3
MDJ				sP	sP	18 53 29.4	+2.0
MDJ				PP	PP	18 55 56.7	-1.9
MDJ				S	S	19 02 42.9	-0.3
MDJ				sS	sS	19 03 03.0	+1.8
MDJ				SS	SS

comp=Z,15nm,0.7s,mb5.0
MAW Mawson 77.31 202 *e*P **P 18 53 25.7 -4.5**
MAW pmax pmax
comp=Z,5.0nm,0.8s
MAW Mawson 77.31 202 *e*P **P 18 53 25.7 -4.5**
comp=Z,4.6nm,0.8s,mb4.5
MAW LR LR 19 22 46.8
BJT Baijiatuau 77.84 321 *e*P **P 18 53 33.4 -0.1**
BJT pmax pmax
comp=Z,33nm,0.8s
BJT Baijiatuau 77.84 321 *e*P **P 18 53 33.4 0.0**
comp=Z,33nm,0.8s,mb5.3
BJI Beijing 77.85 321 P **P 18 53 34.0 +0.5**
BJI S S 19 03 23.9 -0.1
BJI SS SS 19 08 30.6 +5.0
BJI pmax pmax
comp=Z,41nm,0.8s,mb5.4
BJI pmax pmax
comp=Z,120nm,3.5s
BJI LR LR
comp=N,140nm,16.6s,MS4.6
BJI LR LR
comp=E,220nm,17.6s,MS4.6
BJI LR LR
comp=Z,230nm,25.2s
CHRT Chiangrai 78.88 296 P **P 18 53 40.0 +0.3**
KMI Kunming 78.88 302 P **P 18 53 41.5 +1.9**
KMI pP pP 18 53 48.9 -1.7
KMI sP sP 18 53 53.7 -0.9
KMI pmax pmax
comp=Z,13nm,1.1s,mb4.8
XAN Xi'an 78.90 313 P **P 18 53 40.3 +0.8**
XAN pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
XAN LR LR
comp=N,140nm,15.5s,MS4.5
XAN LR LR
comp=E,110nm,15.3s,MS4.5
XAN LR LR
comp=Z,130nm,14.6s,MS4.4
CMAR Chiang Mai Arr 78.97 294 P **P 18 53 41.0 +0.8**
comp=Z,6.5nm,0.8s,mb4.6,baz=134,slow=4.2,SNR=49
CHG Chiang Mai 79.12 295 ⇓P **P 18 53 42.2 +1.2**
CHTO Chiang Mai 79.12 295 *e*P **P 18 53 41.8 +0.8**
CHTO pmax pmax
comp=Z,28nm,1.3s,mb5.0
CHTO Chiang Mai 79.12 295 *e*P **P 18 53 41.8 +0.8**
comp=Z,28nm,1.3s,mb5.0
CD2 Chengdu 80.94 308 *e*P **P 18 53 53.2 +2.6**
CD2 pP pP 18 54 06.4 +4.8
CD2 sP sP 18 54 11.6 +6.0
CD2 PP PP 18 57 01.1 +5.3
CD2 S S 19 03 58.4 +1.2
CD2 sS sS 19 04 20.9 +5.5
CD2 SS SS 19 09 17.4 +5.1
CD2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CD2 pmax pmax
comp=Z,30nm,6.2s
CD2 LR LR
comp=N,210nm,16.6s
CD2 LR LR
comp=Z,170nm,15.5s,MS4.5
HHC Hu-ho-hao-te 81.11 320 *e*P **P 18 53 52.0 +0.7**
HHC pP pP 18 54 05.4 +3.1
HHC sP sP 18 54 10.5 +4.2
HHC PP PP 18 57 01.9 +4.9
HHC S S 19 03 58.3 -0.2
HHC SKS 19 04 03.6
HHC sS sS 19 04 21.1 +4.4
HHC pmax pmax
comp=Z,73nm,5.7s
HHC LR LR
comp=N,250nm,12.3s,MS4.9
HHC LR LR
comp=E,200nm,12.5s,MS4.9
HHC LR LR
comp=Z,200nm,16.2s,MS4.6
HIA Hailar 82.13 330 P **P 18 53 56.0 -0.5**
HIA pmax pmax
comp=Z,14nm,1.0s
HIA Hailar 82.13 330 P **P 18 53 56.0 -0.5**
comp=Z,14nm,1.0s,mb4.8
LZH Lanzhou 83.51 312 *e*P **P 18 54 05.0 +1.1**
LZH pP pP 18 54 17.0 +2.0
LZH sP sP 18 54 24.0 +5.0
LZH SKS 19 04 19.0
LZH S S 19 04 25.2 +1.9
LZH sS sS 19 04 45.0 +3.4
LZH SS SS 19 09 54.0 +3.7
LZH pmax pmax
comp=Z,25nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,94nm,4.0s
SYO Syowa Base 83.77 196⇑*e*P **P 18 54 02.2 -2.6**
SEY Seymchan 84.15 352⇑*e*P **P 18 54 05.7 -0.9**
CLNS Chul'man 85.48 337 *e*P **P 18 54 12.9 -0.5**
CLNS pmax pmax
comp=N,12nm,1.1s
CLNS pmax pmax
comp=Z,23nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,6.0nm,1.0s
RSO Redoubt South 86.31 18 *e*P **P 18 54 15.5 -1.9**
NVL N'lazarevskaya 87.66 187 *e*P **P 18 54 33.2 +9.1**
NVL pmax pmax
comp=Z,20nm,1.1s,mb5.3
MAIT Maitri 87.67 187 *e*P **P 18 54 23.1 -1.0**
MAIT *e* 18 54 30.4
ULN Ulaanbaatar 87.81 323 *e*P **P 18 54 25.0 0.0**
ULN pmax pmax
comp=Z,26nm,1.1s,mb5.4
ULN Ulaanbaatar 87.81 323 *e*P **P 18 54 25.0 0.0**
comp=Z,26nm,1.1s,mb5.4
GTA Gaotai 87.93 313 *e*P **P 18 54 27.1 +1.3**
GTA pP pP 18 54 39.2 +2.3
GTA sP sP 18 54 44.5 +3.6
GTA pmax pmax
comp=Z,8.0nm,1.3s,mb4.8
YAK Yakutsk 88.00 343 *e*P **P 18 54 23.1 -2.5**
YAK pmax pmax
comp=Z,12nm,0.9s,mb5.1
YAK MLR MLR
comp=Z,220nm,21.0s,MS4.5
YAK MLR MLR
comp=E,96nm,18.0s,MS4.6
YAK MLR MLR
comp=N,192nm,18.0s,MS4.6
YAK Yakutsk 88.00 343 *e*P **P 18 54 24.3 -1.3**
comp=N,8.7nm,0.8s,mb5.0
SONM Songino Array 88.16 323 P **P 18 54 26.9 +0.2**
comp=N,12nm,1.0s,mb5.1,baz=135,slow=5.1,SNR=63
SONM LR LR 19 35 22.7
comp=N,136nm,18.4s,MS4.4,baz=125,slow=37
ISA Isabella 88.26 51 *e*P **P 18 54 26.9 -0.6**
ISA pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
ISA Isabella 88.26 51 *e*P **P 18 54 26.9 -0.5**
comp=Z,10.0nm,1.1s,mb5.0
VNA3 Neumayer Olymp 88.55 180 *e*P **P 18 54 24.0 -4.3**
VNA3 *e* pP 18 54 35.2 -4.2
VNA2 Neumayer--Watz 88.84 181 *e*P **P 18 54 25.6 -4.1**
baz=187,slow=4.3
VNA2 *e* pP 18 54 36.6 -4.2
WAKR Walker 88.86 48 *e*P **P 18 54 32.3 +2.1**
comp=Z,21nm,1.6s,mb5.2
VNA1 Neumayer--Stat 89.14 181 *e*P **P 18 54 27.2 -3.8**
VNA1 *e* pP 18 54 38.4 -3.8
NVAR Mina Array Bea 89.62 49 P **P 18 54 34.6 +0.9**
comp=Z,1.4nm,0.7s,mb4.4,baz=227,slow=8.5,SNR=9.5
MOD Modoc 89.84 45 *e*P **P 18 54 32.1 -2.7**
comp=Z,8.1nm,1.0s,mb5.0
LSA Lhasa 90.13 302 *e*P **P 18 54 38.0 +1.6**
LSA pmax pmax
comp=Z,9.0nm,1.3s,mb4.9
LSA Lhasa 90.13 302 *e*P **P 18 54 38.0 +1.6**
comp=Z,9.5nm,1.3s,mb5.0
NLWA Neilton Lookou 90.29 39 *e*P **P 18 54 35.1 -1.6**
comp=Z,6.9nm,0.8s,mb5.0
PGC Sidney 91.17 38 *e*P **P 18 54 42.3 +1.6**
comp=Z,0.8nm,0.9s,mb4.0
WVOR Wild Horse Val 91.19 45 *e*P **P 18 54 39.7 -1.3**
WVOR pmax pmax
comp=Z,14nm,1.3s,mb5.1
WVOR Wild Horse Val 91.19 45 *e*P **P 18 54 39.7 -1.3**
comp=Z,14nm,1.3s,mb5.1
LON Longmire 91.20 40 P **P 18 54 42.3 +1.4**
LON pmax pmax
comp=Z,10.0nm,1.3s,mb5.0
LON Longmire 91.20 40 P **P 18 54 42.3 +1.4**
comp=Z,10.0nm,1.3s,mb5.0
ZAK Zakamensk 91.25 324 *e*P **P 18 54 40.2 -0.9**
ZAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.8
ILAR Eielson Array 91.39 17 P **P 18 54 39.0 -2.4**
comp=Z,0.7nm,0.7s,mb4.1,baz=234,slow=5.0,SNR=7.4
TLY Talaya 91.73 325 *e*P **P 18 54 41.4 -1.9**
TLY pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
TLY MLR MLR
comp=N,72nm,19.0s
JCW Jim Creek 91.82 39 *e*P **P 18 54 45.5 +1.8**
comp=N,14nm,1.0s,mb5.2
HAWA Hanford 92.42 41 P **P 18 54 48.0 +1.4**
comp=N,19nm,1.4s,mb5.2
TUC Tucson 92.69 57 *e*P **P 18 54 49.0 +0.8**
TUC pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
TUC Tucson 92.69 57 *e*P **P 18 54 49.0 +0.8**
comp=Z,3.4nm,0.8s,mb4.8
MOY Mondy 93.15 325 *e*P **P 18 54 49.8 0.0**
TXAR Lajitas Array 97.37 62 P **P 18 55 09.9 +0.3**
comp=Z,0.2nm,0.7s,baz=306,slow=3.0,SNR=2.7
TXAR LR LR 19 33 59.3
comp=Z,183nm,18.1s,MS4.6,baz=185,slow=32
PDAR Pinedale Array 97.45 47 PP PP 18 59 12.2 +4.7
comp=Z,1.4nm,1.0s,baz=246,slow=6.3,SNR=6.4
PDAR LR LR 19 35 05.8
comp=Z,71nm,18.2s,MS4.2,baz=112,slow=33
PLCA Paso Flores 97.66 139 LR LR 19 33 07.8
comp=Z,90nm,18.4s,MS4.3,baz=54,slow=32
WMQ Urumqi 98.01 314 P **P 18 55 14.0 +1.8**
WMQ pP pP 18 55 28.0 +4.6
WMQ sP sP 18 55 33.0 +5.7
WMQ PP PP 18 59 16.0 +4.3
WMQ SKS 19 05 47.0
WMQ S S 19 06 34.0 -2.4
WMQ SS SS 19 13 20.0 +0.5
WMQ pmax pmax
comp=Z,16nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,100nm,8.0s
WMQ LR LR
comp=N,130nm,22.0s,MS4.5
WMQ LR LR
comp=E,130nm,22.0s,MS4.5
WMQ LR LR
comp=Z,110nm,22.0s,MS4.3
MKAR Makanchi Array 102.57 315 P Pdif 18 55 32.5 0.0
comp=Z,2.2nm,0.9s,baz=122,slow=3.9,SNR=8.7
MKAR PP PP 18 59 44.0 -2.2
comp=Z,1.0nm,1.0s,baz=104,slow=6.1,SNR=3.3
MKAR PKKP PKKPdf 19 11 51.1 +9.5
comp=Z,0.4nm,0.8s,baz=291,slow=5.1,SNR=4.5
MKAR Makanchi Array 102.57 315 P Pdif 18 55 32.5 0.0
MKAR 18 59 44.0
ZALV Zalesovo Beam 103.05 323 P Pdif 18 55 33.7 -0.9
comp=Z,1.0nm,0.7s,baz=96,slow=6.0,SNR=4.2
ZALV Zalesovo Beam 103.05 323 P Pdif 18 55 33.7 -0.9
ARCES ARCESS Array B 126.22 345 PKP PKPdf 19 00 37.6 -0.1
comp=Z,6.7nm,1.0s,baz=48,slow=2.1,SNR=6.4
FINES FINESS Array B 131.68 337 PKP PKPdf 19 00 45.9 -2.4
comp=Z,0.8nm,0.5s,baz=88,slow=2.7,SNR=5.4
FINES SKPbc SKPbc 19 04 10.4 -0.8
comp=Z,2.4nm,0.7s,baz=42,slow=3.7,SNR=10.0
BRTR Keskin Array B 137.52 307 SKPbc SKPbc 19 04 31.9 +1.0
comp=Z,0.6nm,0.9s,baz=36,slow=2.7,SNR=3.5
CRVS Cervenica-Dubn 141.65 325 *e*PKIKP PKPdf 19 01 06.2 -0.9
CRVS Cervenica-Dubn 141.65 325 *e*PKP PKPdf 19 01 06.2 -0.9
OKC Ostrava-Krasne 142.75 329 *e*PKIKP PKPdf 19 01 07.0 -2.0
OKC Ostrava-Krasne 142.75 329 *e*PKP PKPdf 19 01 07.0 -2.0
PSZ Piszkesteto 143.07 325⇑*e*PKP PKPdf 19 01 14.2 +4.5
DPC Dobruska-Polom 143.26 331 *e*PKIKP PKPdf 19 01 06.5 -3.4
DPC Dobruska-Polom 143.26 331 *e*PKP PKPdf 19 01 06.5 -3.4
VYHS Vyhne 143.27 327 *e*PKIKP PKPdf 19 01 08.8 -1.2
VYHS Vyhne 143.27 327 *e*PKP PKPdf 19 01 08.8 -1.2
UPC Upice 143.29 331 *e*PKIKP PKPdf 19 01 06.5 -3.5
UPC Upice 143.29 331 *e*PKP PKPdf 19 01 06.5 -3.5
RZN Rozhen 143.30 313 P PKPdf 19 01 13.7 +3.4
PGB Panagyurishte 143.31 315 P PKPdf 19 01 10.5 +0.2
BUD Budapest 143.80 325⇑*e*PKP PKPdf 19 01 12.5 +1.5
PVCC Panska Ves 143.92 332 *e*PKIKP PKPdf 19 01 08.3 -2.8
PVCC *e* 19 01 22.3
PVCC Panska Ves 143.92 332 *e*PKP PKPdf 19 01 08.3 -2.8
PVCC *ex* x 19 01 12.3
PVCC *ep*PKP pPKPdf 19 01 22.3 -0.2
VTS Vitosha 143.92 315 P PKPdf 19 01 08.8 -2.6
BRG Berggiesshubel 143.93 333 *e*PKPbc PKPdf 19 01 08.4 -2.7
BRG Berggiesshubel 143.93 333 *e*PKP PKPdf 19 01 07.8 -3.3
comp=Z,14nm,1.0s
BRG *i* 19 01 12.2
comp=Z,21nm,1.0s
BRG *i* pPKP pPKPdf 19 01 22.3 -0.3
comp=Z,25nm,0.8s
BRG *e*PP PP 19 04 26.0 +1.5
comp=Z,7.3nm,1.2s
BRG Berggiesshubel 143.93 333 *e*PKIKP PKPdf 19 01 07.8 -3.3
BRG *i* 19 01 12.2
BRG *i* 19 01 22.3
BRG *e* 19 04 26.0
BRG pmax pmax
comp=Z,8.0nm,1.0s
CLL Collm 143.99 334 *e*PKPbc PKPdf 19 01 08.2 -3.0
CLL Collm 143.99 334⇓*i*PKIKP PKPdf 19 01 08.1 -3.1
CLL *i* 19 01 22.3
CLL pmax pmax
comp=Z,11nm,1.0s
CLL Collm 143.99 334⇓*i*PKP PKPdf 19 01 08.1 -3.1
CLL *i* PKP PKPdf 19 01 10.9 -0.3
CLL *i* pPKP pPKPdf 19 01 22.3 -0.3
CLL Collm 143.99 334⇓*i*PKPpre PKPdf 19 01 08.1 -3.1
comp=Z,11nm,1.0s
CLL *i* PKPdf PKPdf 19 01 10.9 -0.3
comp=Z,51nm,1.6s
CLL *i* pPKPdf pPKPdf 19 01 22.3 -0.3
CLL *es*SKPbc 19 05 09.0
CLL *e*SSS 19 29 00.0
CLL Lm 20 07 00.0
comp=Z,100nm,20.4s
MMB Musomiste 144.02 314 P PKPdf 19 01 09.1 -2.5
PRU Pruhonice 144.32 332 *e*PKIKP PKPdf 19 01 10.5 -1.3
PRU *e* 19 01 23.6
PRU Pruhonice 144.32 332 *e*PKP PKPdf 19 01 10.5 -1.3
PRU *ex* x 19 01 14.1
PRU *ep*PKP pPKPdf 19 01 23.6 +0.3
KKB Krupnik 144.33 314 P PKPdf 19 01 10.2 -1.9
NEUB Neuenburg 144.55 335 *e*PKPbc PKPdf 19 01 10.5 -1.7
CLZ Clausthal 144.58 337 *e*PKPbc PKPdf 19 01 10.5 -1.7
ESK Eskdalemuir 144.71 352 *i*PKIKP pPKPdf 19 01 20.7 -3.1
TANN Tannenbergstha 144.89 334 *e*PKPbc PKPdf 19 01 11.8 -1.0
VAY Valandovo 144.92 314 *e*PKP PKPdf 19 01 13.6 +0.5
WERD Werda 144.93 334 *e*PKPbc PKPdf 19 01 11.9 -1.0
SOP Sopron 144.96 327⇑*e*PKP PKPdf 19 01 12.1 -0.9
GUNZ Gunzen 144.99 334 *e*PKPbc PKPdf 19 01 12.3 -0.6
GUNZ *ep*PKPbc 19 01 25.8
WERN Wernitzgruen 145.03 334 *e*PKPbc PKPbc 19 01 12.5 +0.1
WERN *ep*PKPbc 19 01 25.9
NKC Novy Kostel 145.04 334 *e*PKIKP PKPdf 19 01 11.8 -1.2
NKC *e* 19 01 16.3
NKC *e* 19 01 26.1
NKC Novy Kostel 145.04 334 *e*PKP PKPdf 19 01 11.8 -1.2
NKC *ex* x 19 01 16.3
NKC *ep*PKP pPKPdf 19 01 26.1 +1.6
MOX Moxa 145.06 335 *e*PKP PKPdf 19 01 11.6 -1.5
comp=Z,77nm,1.7s
MOX *e* 19 01 25.9
comp=Z,52nm,1.3s
MOX Moxa 145.06 335 *e*PKPbc PKPbc 19 01 12.1 -0.4
MOX *ep*PKPbc pPKPbc 19 01 25.8 +2.0
MOX Moxa 145.06 335 *e*PKIKP PKPdf 19 01 11.6 -1.5
MOX *e* 19 01 25.9
MOX pmax pmax
comp=Z,77nm,1.7s
IBBN Ibbenburen 145.08 340 *e*PKPbc PKPbc 19 01 12.0 -0.5
CONA Conrad Observa 145.15 328 *i* PKPdf PKPdf 19 01 13.0 -0.3
comp=Z,47nm,1.1s,SNR=26
SKO Skopje 145.37 316 *e*PKP PKPdf 19 01 17.1 +3.2
KHC Kasperske Hory 145.38 332 *e*PKIKP PKPdf 19 01 13.0 -0.7
KHC *e* 19 01 27.1
KHC Kasperske Hory 145.38 332 *e*PKPdf PKPdf 19 01 12.8 -0.8
KHC Kasperske Hory 145.38 332 *e*PKP PKPdf 19 01 13.0 -0.7
KHC *ex* x 19 01 17.2
KHC *ep*PKP pPKPdf 19 01 27.1 +2.0
GEC2 GERESS Array S 145.53 331 *e*PKPbc PKPbc 19 01 13.8 -0.3
GEC2 *ep*PKPbc pPKPbc 19 01 27.5 +2.1
UBBA Unterbreizbach 145.54 337 *e*PKPbc PKPbc 19 01 13.4 -0.7
WET Wettzell 145.68 332 *e*PKPbc PKPbc 19 01 14.4 -0.1
WET *ep*PKPbc pPKPbc 19 01 28.1 +2.2
ARSA Arzberg 145.78 328⇑*i*PKPab PKPab 19 01 15.3 0.0
comp=Z,21nm,1.3s
KRUS Krusevo 145.78 315 *e*PKP PKPdf 19 01 16.7 +2.1
GRA1 Grafenberg Arr 145.96 334 *e*PKPbc PKPbc 19 01 15.2 -0.2
GRA1 LR LR
comp=Z,500nm,20.3s,MS5.3
GRF Grafenberg Arr 145.96 334 *e*PKPbc PKPbc 19 01 15.2 -0.2
GRF *e*L 20 22 44.8
comp=Z,481nm,20.3s
GRFO Grafenberg 145.96 334 *e*PKP2 PKPab 19 01 14.6 -1.3
PERS Pernice 146.40 327 *i* PKPdf PKPdf 19 01 16.8 +1.3
PERS Pernice 146.40 327 *i* PKPdf PKPdf 19 01 16.8 +1.3
SOKA Soboth 146.41 327⇑*i*PKPab PKPab 19 01 15.7 -2.0
comp=Z,14nm,1.1s
TNS Taunus Mts 146.60 337 *e*PKPbc PKPbc 19 01 16.8 -0.5
TIR Tirane 146.71 316 *e*PKIKP PKPdf 19 01 15.0 -1.2
KBA Koelnbreinsper 146.97 329⇑*i*PKPdf PKPdf 19 01 13.4 -3.0
comp=Z,9.5nm,1.0s
TOD Tromm 146.98 336 PKP2 PKPab 19 01 21.4 +1.6
BOJS Bojanci 147.07 325 *i* PKPdf PKPdf 19 01 18.2 +1.5
BOJS *i* PKPbc PKPbc 19 01 21.0 +2.2
BOJS Bojanci 147.07 325 *i* PKPdf PKPdf 19 01 18.2 +1.5
BOJS *i* PKPbc PKPbc 19 01 21.0 +2.2
LJU Ljubljana 147.10 327 *i* PKPdf PKPdf 19 01 17.0 +0.3
LJU *i* PKPbc PKPbc 19 01 20.4 +1.6
LJU Ljubljana 147.10 327 *i* PKPdf PKPdf 19 01 17.0 +0.3
LJU *i* PKPbc PKPbc 19 01 20.4 +1.6
ABH Alteburg 147.21 338 PKP PKPab 19 01 22.3 +1.6
VOY Vojsko 147.43 327 *e*PKPdf PKPdf 19 01 18.3 +1.1
VOY *e* 19 01 19.7
VOY *e* 19 01 28.1
VOY *e* 19 01 36.9
VOY Vojsko 147.43 327 *e*PKPdf PKPdf 19 01 18.3 +1.1
VOY *e*PKPbc PKPbc 19 01 19.7 0.0
VOY *e* 19 01 28.1
VOY *e* 19 01 36.9
JAVS Javornik 147.44 327 *i* PKPdf PKPdf 19 01 17.9 +0.7
JAVS *i* PKPbc PKPbc 19 01 21.0 +1.2
JAVS Javornik 147.44 327 *i* PKPdf PKPdf 19 01 17.9 +0.7
JAVS *i* PKPbc PKPbc 19 01 21.0 +1.2
BCLA Clavier 147.49 341 APKP 19 01 31.4
RUP Ruppelstein 147.53 338 PKP2 PKPab 19 01 21.9 -0.1
ABTA Abfaltersbach 147.60 329⇑*i*PKPbc PKPbc 19 01 18.4 -1.8
comp=Z,20nm,1.2s,SNR=7.1
MOTA Moosalm 147.81 332⇑*i*PKPbc PKPbc 19 01 19.5 -1.3
comp=Z,18nm,0.9s
LANF Langenberg 147.86 337 PKP PKPdf 19 01 19.3 +1.4
LANF Langenberg 147.86 337 PKP PKPab 19 01 23.4 +0.1
WLF Walferdange 147.87 339 PKPbc PKPbc 19 01 20.7 -0.2
WLF E 19 01 28.0
WLF APKPbc 19 01 34.5
WLF Walferdange 147.87 339 *e*PKPdf PKPdf 19 01 16.7 -1.2
DOU Dourbes 147.99 341 PKPbc PKPbc 19 01 20.7 -0.5
DOU PKPab PKPab 19 01 25.0 +1.2
BFO Black Forest 148.20 335 *e*PKHKP PKPdf 19 01 16.0 -2.4
SPAK Spaichingen-Ko 148.20 335 PKP PKPab 19 01 26.8 +2.1
FETA Feichten 148.22 332⇑*i*PKPbc PKPbc 19 01 21.1 -0.7
comp=Z,16nm,0.9s,SNR=6.8
DAVA Damuels 148.39 333⇑*i*PKiKP PKiKP 19 01 22.9 -0.9
comp=Z,28nm,0.9s,SNR=9.0
CDF Champ du Feu 148.53 337 *e*PKP1 PKPbc 19 01 21.3 -1.3
comp=Z,56nm,1.1s
FELD Feldberg im Sc 148.69 335 PKP PKPab 19 01 25.0 -1.7
ECH Echery 148.74 337 PKP PKPbc 19 01 21.7 -1.4
ECH Echery 148.74 337 *e*PKPbc PKPbc 19 01 21.6 -1.5
THEF They Montfort 149.16 338 PKP PKPdf 19 01 21.7 +1.7
HINF Hinteralfeld 149.19 336 *e*PKP1 PKPbc 19 01 22.8 -1.5
HAU Haudompre 149.21 337 *e*PKP1 PKPbc 19 01 23.0 -1.3
comp=Z,42nm,1.1s
BBS Basel-Blauen 149.22 335 PKP2 PKPbc 19 01 26.1 +1.7
MEZF Maizieres J'vi 149.24 339 *e*PKP1 PKPbc 19 01 23.5 -0.9
TUE Stuetta 149.25 332 *e*PKPdf PKPdf 19 01 21.2 +1.0
SFTF Sexfontaines 149.30 339 *e*PKP1 PKPbc 19 01 23.9 -1.2
comp=Z,102nm,1.3s
LOMF Lomont 149.58 336 PKP PKPbc 19 01 23.2 -2.1
LOMF Lomont 149.58 336 PKP PKPab 19 01 27.1 -3.2
AQU L'Aquila 150.13 322 *e*PKIKP PKPbc 19 01 26.1 -0.7
CABF La Chapelle 150.48 336 *e*PKP1 PKPbc 19 01 26.5 -1.0
comp=Z,85nm,1.4s
LOR Lormes 150.71 339 *e*PKP1 PKPbc 19 01 26.6 -1.4
comp=Z,46nm,1.2s
CEL Celeste 150.89 313 *e*PKPdf PKPdf 19 01 20.5 -2.6
CEL *e*PKPbc PKPbc 19 01 28.5 -0.2
SSF Saint Saulge 151.01 340 *e*PKP1 PKPbc 19 01 27.3 -1.4
comp=Z,41nm,1.1s
LPL La Plagne 151.12 334 *e*PKP1 PKPbc 19 01 28.4 -0.6
comp=Z,18nm,0.7s
LPG La Plagne 151.13 334 *e*PKP1 PKPbc 19 01 28.4 -0.7
comp=Z,34nm,0.8s
MBDF Montbardon 151.74 333 *e*PKP1 PKPbc 19 01 29.2 -1.3
comp=Z,24nm,0.8s
ORIF Oris-en-Rattie 151.96 334 *e*PKP1 PKPbc 19 01 29.7 -1.3
comp=Z,24nm,0.8s
SSB Saint Sauveur 152.18 336 *e*PKIKP PKPbc 19 01 28.5 -3.0
KEST Kesra 156.67 315 PKPab PKPab 19 02 01.8 +1.1
comp=Z,1.8nm,0.9s,baz=15,slow=5.2,SNR=4.7

MAN 02 18:43:56, 9°.54N×125°.71E, h21km, mb4.0, ML2.7, MS2.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.32**	**318**⇓	*e*P		Pb	18 44 04.4	+1.3
SCPH				*e*S		Sb	18 44 16.1	+8.2
BUTP	**Butuan**	**0.58**	**188**	*e*P		Pb	18 44 08.0	+0.6
BUTP				*e*S		Sb	18 44 15.9	+0.7
MSLP	**Maasin**	**1.02**	**305**	*e*P		Pb	18 44 15.3	+0.3
MSLP				*e*S		Sb	18 44 28.8	+0.8

IDC ***02*** *18:47:34.5±1.1, 1°.49N×126°.22E, h0km, mb4.3/11, mb1 4.3/12, mb1mx4.1/23, mbtmp4.2/12, ML4.0/1, Error ellipse: s-maj=100.2km s-min=14.3km az=66.0*
BJI ***02*** *18:47:35.2, 0°.62N×126°.73E, h73km, mB4.9/2, mb4.7/2, Ms4.5/2*
ISCJB ***02*** *18:47:41.1±0.9, 1°.52N±0°.06×126°.42E±0°.05, h70km±8km, mb4.2/23, Error ellipse: s-maj=10.9km s-min=7.1km az=42.4*
NEIC ***02*** *18:47:42.8±1.9, 1°.44N×126°.40E, h73km±18km, mb4.4/16, Error ellipse: s-maj=21.2km s-min=7.5km az=60.0*
DJA ***02*** *18:47:43, 1°.38N×126°.27E, h20km, MLv4.5/5*
ISC 02 18:47:42.6±0.8, 1°.46N±0°.05×126°.41E±0°.06, h69km±7km, n45, σ1§03/49, mb4.3/23, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**126**	P		**Pn**	**18 48 03.4**	**0.0**
TNTI				S		**Sn**	**18 48 23.8**	**+5.0**
MNI	**Manado**	**1.57**	**269**	P		**Pn**	**18 48 06.9**	**-1.6**
MNI				S		**Sn**	**18 48 26.5**	**-1.5**
KMSI	**Cibinong**	**2.58**	**250**	P		**Pn**	**18 48 22.0**	**-0.1**
KMSI				S		**Sn**	**18 48 52.3**	**-0.2**
LUWI	**Luwuk**	**4.41**	**236**	P		**Sn**	**18 49 47.5**	**+10**
LUWI	**Luwuk**	**4.41**	**236**	P		**Pn**	**18 48 48.6**	**+1.6**
MRSI	**Marisa**	**4.57**	**258**	P		**Sn**	**18 49 44.4**	**+3.2**
MRSI	**Marisa**	**4.57**	**258**	P		**Pn**	**18 48 49.8**	**+0.5**
NLAI	**Namlea**	**4.72**	**172**	P		**Pn**	**18 48 50.9**	**-0.5**
TTSI	**Tana Toraja**	**7.96**	**236**	P		Px	18 49 53.7	
TTSI	**Tana Toraja** 36nm,0.9s	**7.96**	**236**	P		**Pn**	**18 49 35.8**	**+0.1**
MYLDM	**Lahad Datu**	**8.71**	**295**	P		**Pn**	**18 49 47.9**	**+1.9**
MYLDM	**Lahad Datu**	**8.71**	**295**	P		**Pn**	**18 49 47.2**	**+1.2**
KKM	**Kota Kinabalu**	**11.14**	**294**	*e*Pn		**Pn**	**18 50 20.7**	**+1.6**
KAKA	**Kakadu** 104nm,1.0s	**15.30**	**157**	*e*Pn		**Pn**	**18 51 11.3**	**-3.3**
KSM	**Kuching** 12nm,1.1s	**16.09**	**270**	*e*Pn		**Pn**	**18 51 24.9**	**+0.1**
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=6.8,slow=12,SNR=3.9	**19.45**	**182**	P		**Pn**	**18 52 03.3**	**-2.4**
WRA	**Warramunga Arr** 3.1nm,0.4s,mb4.0,baz=340,slow=9.2,SNR=24	**22.65**	**160**	P		**P**	**18 52 38.4**	**+0.2**
WRA				S		**S**	**18 56 42.1**	**+0.7**

4.5nm,1.1s,baz=329,slow=20,SNR=6.0
WB2 Warramunga Arr 22.65 160 *e*P **P 18 52 38.8 +0.7**
MBWA Marble Bar 23.41 196 *e*P **P 18 52 44.3 -1.4**
14nm,0.9s,mb4.3
QIZ Qiongzhong 23.84 318 P **P 18 52 50.7 +1.1**
QIZ LR LR
comp=N,290nm,8.5s
QIZ Qiongzhong 23.84 318 *e*P **P 18 52 48.3 -1.3**
comp=N,18nm,1.2s,mb4.3
ASAR Alice Springs 26.02 164 P **P 18 53 10.1 +0.7**
comp=N,1.2nm,0.4s,mb3.7,baz=350,slow=14,SNR=18
ASAR PcP PcP 18 56 37.4 +1.2
comp=N,0.6nm,0.6s,baz=360,slow=2.0,SNR=6.1
ASAR S **S 18 57 35.8 +0.4**
comp=N,0.7nm,0.9s,baz=349,slow=18,SNR=4.3
STKA Stephens Creek 36.15 158 P **P 18 54 39.8 +1.5**
comp=N,3.8nm,0.8s,mb4.4,baz=347,slow=11,SNR=4.5
STKA Stephens Creek 36.15 158 *e*P **P 18 54 39.6 +1.2**
comp=N,1.3nm,1.0s,mb3.8
MDJ Mudanjiang 43.06 3 *e*P **P 18 55 35.2 -0.4**
comp=N,9.1nm,1.1s,mb4.4
LSA Lhasa 43.72 313 P **P 18 55 40.9 -0.3**
comp=N,4.5nm,0.9s,mb4.2
HIA Hailar 47.97 354 *e*P **P 18 56 15.6 +1.3**
comp=N,16nm,1.5s,mb4.6
MK31 Makanchi Array 59.23 326 *e*P **P 18 57 36.5 -0.2**
MKAR Makanchi Array 59.23 326 P **P 18 57 37.0 +0.2**
comp=N,4.0nm,0.7s,mb4.5,baz=122,slow=7.6,SNR=25
MKAR PcP PcP 18 58 25.6 +1.2
comp=N,1.6nm,0.8s,baz=133,slow=6.8,SNR=4.8
YAK Yakutsk 60.47 2 *e*Pn **P 18 57 45.2 +0.2**
comp=N,8.2nm,0.8s,mb4.8
TKM2 Tokmak 2 61.23 319 *e*P **P 18 57 50.4 -0.2**
comp=N,5.3nm,1.1s,mb4.5
AAK Ala-Archa 61.82 319 P **P 18 57 55.1 +0.5**
comp=N,0.9nm,0.3s,mb4.3,baz=248,slow=7.8,SNR=3.8
EKS2 Erkin-Say 62.31 319 *e*P **P 18 57 56.7 -1.1**
comp=N,3.4nm,1.0s,mb4.3
ZALV Zalesovo Beam 62.46 334 P **P 18 57 58.6 +0.1**
comp=N,0.6nm,0.4s,mb4.0,baz=103,slow=4.7,SNR=4.6
KBL Kabul 62.66 308 *e*P **P 18 57 58.8 -1.5**
comp=N,5.4nm,0.8s,mb4.5
KURK Kurchatov 63.48 328 P **P 18 58 05.9 +0.6**
comp=N,5.4nm,0.7s,mb4.6,baz=125,slow=6.0,SNR=15
KURK Kurchatov 63.48 328 *e*P **P 18 58 04.8 -0.5**
comp=N,11nm,0.7s,mb4.9
BVAR Borovoye Array 69.04 328 P **P 18 58 41.5 +0.6**
comp=N,1.4nm,0.8s,mb3.8,baz=128,slow=9.6,SNR=6.7
BRVK Borovoye 69.11 328 *e*P **P 18 58 38.9 -2.5**
comp=N,2.2nm,0.8s,mb4.0
ABKAR Abkulak array 73.70 321 *e*P **P 18 59 08.2 -0.9**
comp=N,3.1nm,0.8s,mb4.1
AKTK Aktyubinsk 75.23 322 P **P 18 59 17.4 -0.6**
AKTO Aktyubinsk 75.23 322 P **P 18 59 17.4 -0.6**
comp=N,2.3nm,0.7s,mb4.0,baz=95,slow=8.8,SNR=8.5
MALT Malatya 87.52 308 *e*PKPdf **P 19 00 24.0 +0.8**
comp=N,1.7nm,0.6s,mb4.2
ASF Jabal al Asfar 88.82 302 P **P 19 00 30.5 +1.0**
comp=N,4.6nm,0.9s,mb4.5,baz=45,slow=4.3,SNR=8.0
BRTR Keskin Array B 91.21 310 P **P 19 00 40.8 +0.3**
comp=N,0.6nm,0.7s,mb3.8,baz=72,slow=4.7,SNR=3.8

FUNV 02 18:50:30.3, 6°.88N×73°.15W, h177km, MW3.6, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.28**	**40**	⇓*i*P	Pn	18 50 59.5	-0.5
CAPV				*e*S	Sn	18 51 20.9	-2.0
VIGV	**El Vigia**	**2.63**	**42**	*e*P	Pn	18 51 13.5	-0.9
VIGV				*e*S	Sn	18 51 45.5	-3.1
SOCV	**Socops**	**2.67**	**58**	⇓*i*P	Pn	18 51 14.5	-0.4
SOCV				*e*S	Sn	18 51 46.1	-3.3
VIRV	**Villa del Rosa**	**3.67**	**12**	*e*P	Pn	18 51 26.0	-1.2
VIRV				*e*S	Sn	18 52 06.7	-5.0
CURV	**Curarigua**	**4.43**	**45**	*e*P	Pn	18 51 36.3	-0.6
CURV				*e*S	Sn	18 52 23.9	-5.1
BAUV	**El Baul**	**5.46**	**68**	⇓*i*P	Pn	18 51 48.0	-2.3
BAUV				*e*S	Sn	18 52 46.5	-6.6
CAOV	**Caicara del Or**	**6.79**	**86**	*e*P	Pn	18 52 05.2	-2.5

*ISCJB **02** 18:59:18.2±0.3, 24°.78N±0°.03×98°.02E±0°.04, h10km, mb3.9/16, Error ellipse: s-maj=5.5km s-min=4.5km az=139.9*
*IDC **02** 18:59:20.4±0.9, 24°.89N×98°.14E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/27, mbtmp4.0/9, ML4.6/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/31, Error ellipse: s-maj=34.6km s-min=13.9km az=71.0*
*NEIC **02** 18:59:20.9±4.1, 24°.88N×98°.01E, h8km±27km, mb4.1/10, Error ellipse: s-maj=12.0km s-min=6.7km az=67.0*
*BJI **02** 18:59:21.5, 24°.85N×97°.96E, h19km, mB4.5/5, mb4.2/8, ML4.3/9, Ms4.2/7, Ms7 3.8/6*
ISC 02 18:59:20.5±0.3, 24°.81N±0°.03×97°.99E±0°.03, h10km, n41, σ1§37/51, mb3.9/16, 1C, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**3.69**	**270**	*e*PKP	**Pn**	**19 00 20.0**	**+2.4**
IMP				*e*S	**Sn**	**19 01 02.0**	**+0.9**
KMI	**Kunming**	**4.32**	**85**	Pg	**Pg**	**19 00 41.5**	**-1.8**
KMI				Sg	**Sg**	**19 01 37.9**	**-1.4**
KMI				smax			
KMI	comp=N,360nm,0.9s			smax			
KMI	comp=E,310nm,1.1s			smax			
KMI				LR	LR		
KMI	comp=N,2μm,4.9s			LR	LR		
KMI	comp=E,1μm,6.1s			LR	LR		
KMI	comp=Z,650nm,8.9s			LR	LR		
CHRT	**Chiangrai**	**5.18**	**161**	⇑PN	**Pn**	**19 00 39.0**	**+0.8**
CHRT	**Chiangrai**	**5.18**	**161**	PG	**Pg**	**19 00 59.5**	**-0.4**
CHRT				SG	**Sg**	**19 02 08.0**	**+0.9**
SHL	**Shillong**	**5.59**	**279**	*e*PKP	**Pn**	**19 00 42.0**	**-1.7**
SHL				*e*S	**Sn**	**19 01 37.0**	**-11**
CHTO	**Chiang Mai**	**6.03**	**171**	*e*Pn	**Pn**	**19 00 51.8**	**+2.0**
CHTO	comp=Z,19nm,0.6s			*e*Pg	**Pg**	**19 01 12.3**	**-3.8**
CHTO				*e*Sg	**Sg**	**19 02 31.9**	**-2.3**
CMAR	**Chiang Mai Arr**	**6.38**	**172**	Pn	**Pn**	**19 00 57.2**	**+2.6**
CMAR	comp=Z,3.4nm,0.3s,baz=346,slow=13,SNR=110			Pg	**Pg**	**19 01 19.7**	**-3.0**
CMAR	comp=Z,1.4nm,0.3s,baz=350,slow=17,SNR=25			Lg		19 02 44.8	
LSA	**Lhasa**	**7.80**	**310**	Pn	**Pn**	**19 01 13.6**	**-0.4**
LSA	**Lhasa**	**7.80**	**310**	*e*Pn	**Pn**	**19 01 14.4**	**+0.3**
LSA	comp=Z,6.0nm,0.4s			*e*S	Sn	19 03 02.5	+20
CD2	**Chengdu**	**7.94**	**39**	*e*P	**Pn**	**19 01 15.1**	**-0.8**
CD2				S	**Sn**	**19 02 44.6**	**-1.2**
CD2				pmax	pmax		
CD2	comp=Z,10.0nm,0.6s			pmax	pmax		
CD2	comp=Z,30nm,4.2s			LR	LR		
CD2	comp=N,1μm,9.5s			LR	LR		
CD2	comp=E,1μm,9.5s			LR	LR		
CD2	comp=Z,1μm,0.5s			LR	LR		
GYA	**Guiyang**	**8.00**	**76**	P	**Pn**	**19 01 18.4**	**+1.6**
GYA				pmax	pmax		
GYA	**Guiyang**	**8.00**	**76**	P	**Pn**	**19 01 18.5**	**+1.7**
GYA				S	**Sn**	**19 02 58.2**	**+11**
GYA	comp=N,60nm,0.8s			smax			
GYA	comp=E,90nm,0.8s			smax			
GYA				LR	LR		
GYA	comp=N,1μm,8.7s			LR	LR		
GYA	comp=E,500nm,7.1s			LR	LR		
GYA	comp=Z,380nm,7.8s			LR	LR		
TAPN	**Taplejung**	**9.58**	**288**	*e*P	**Pn**	**19 01 38.2**	**-0.4**
ODAN	comp=Z,13nm,0.4s **Odare**	**9.77**	**284**	*e*P	**Pn**	**19 01 40.4**	**-0.7**
RAMN	comp=Z,16nm,0.6s **Ramite**	**10.48**	**284**	*e*P	**Pn**	**19 01 49.3**	**-1.5**
	comp=Z,15nm,0.6s						
GUN	**Gumba**	**11.29**	**288**	*e*P	**Pn**	**19 02 00.3**	**-1.7**
	comp=Z,38nm,0.9s						
ENH	**Enshi**	**11.56**	**59**	*e*Pn	**Pn**	**19 02 05.2**	**-0.4**
PKI	**Pulchoki**	**11.63**	**286**	*e*P	**Pn**	**19 02 04.3**	**-2.3**
	comp=Z,16nm,0.7s						
KKN	**Kakani**	**11.79**	**287**	*e*P	**Pn**	**19 02 06.1**	**-2.6**
	comp=Z,20nm,0.8s						
DMN	**Daman**	**11.90**	**286**	*e*P	**Pn**	**19 02 08.0**	**-2.3**
	comp=Z,9.6nm,0.7s						
LZH	**Lanzhou**	**12.32**	**23**	P	**Pn**	**19 02 17.0**	**+1.0**
LZH				pP		19 02 19.5	
LZH				S	**Sn**	**19 04 33.0**	**-0.3**
LZH				SS		19 04 49.0	
LZH				pmax	pmax		
LZH	comp=Z,13nm,1.0s			pmax	pmax		
LZH	comp=Z,70nm,4.0s			LR	LR		
LZH	comp=N,600nm,7.2s			LR	LR		
LZH	comp=E,1μm,8.3s			LR	LR		
LZH	comp=Z,1μm,10.4s			LR	LR		
KULM	**Kulim**	**19.57**	**172**	P	**Pn**	**19 03 48.3**	**-1.7**
	comp=Z,12nm,1.1s						
SONM	**Songino Array**	**23.93**	**14**	P	**P**	**19 04 34.6**	**+0.1**
	comp=Z,1.4nm,0.9s,mb3.4,baz=192,slow=8.5,SNR=9.3						
ULN	**Ulaanbaatar**	**24.11**	**15**	*e*P	**P**	**19 04 36.0**	**-0.2**
	comp=Z,4.1nm,1.1s,mb3.8						
MK31	**Makanchi Array**	**25.27**	**334**	*e*P	**P**	**19 04 46.7**	**-0.1**
MKAR	**Makanchi Array**	**25.27**	**334**	P	**P**	**19 04 47.8**	**+0.9**
	comp=Z,2.6nm,0.7s,mb3.9,baz=147,slow=8.5,SNR=28						
TKM2	**Tokmak 2**	**25.80**	**320**	*e*P	**P**	**19 04 52.2**	**+0.6**
	comp=Z,2.2nm,0.9s,mb3.7						
KSM	**Kuching**	**26.07**	**151**	P	**P**	**19 04 57.7**	**+3.3**
	comp=Z,11nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**26.28**	**318**	P	**P**	**19 04 58.5**	**+2.4**
	comp=Z,1.2nm,0.4s,mb3.8,baz=241,slow=8.4,SNR=6.5						
AAK	**Ala-Archa**	**26.28**	**318**	*e*P	**P**	**19 04 56.7**	**+0.6**
	comp=Z,6.9nm,1.1s,mb4.1						
AML	**Almayashu**	**26.49**	**317**	*e*P	**P**	**19 04 58.7**	**+0.8**
	comp=Z,5.4nm,0.8s,mb4.1						
EKS2	**Erkin-Say**	**26.73**	**318**	*e*P	**P**	**19 05 02.5**	**+2.4**
	comp=Z,2.9nm,0.8s,mb3.9						
KBL	**Kabul**	**26.88**	**298**	*e*P	**P**	**19 05 01.2**	**-0.4**
	comp=Z,2.9nm,0.8s,mb3.9						
KURK	**Kurchatov**	**29.88**	**335**	P	**P**	**19 05 29.2**	**+1.1**
	comp=Z,0.4nm,0.3s,mb3.7,baz=137,slow=9.8,SNR=2.2						
KURK				LR	LR	19 18 50.2	
	comp=Z,72nm,21.0s,baz=140,slow=39						
ZALV	**Zalesovo Beam**	**30.73**	**345**	P	**P**	**19 05 36.6**	**+1.1**
	comp=Z,2.9nm,0.9s,mb4.1,baz=158,slow=9.6,SNR=10						
ABKAR	**Abkulak array**	**38.36**	**319**	*e*P	**P**	**19 06 42.2**	**+0.6**
	comp=Z,0.9nm,0.6s,mb3.7						
ASAJ	**Asahikawa**	**40.93**	**51**	P	**P**	**19 07 04.2**	**+1.0**
	comp=Z,1.9nm,0.6s,mb3.9,baz=270,slow=7.1,SNR=4.4						
GUMO	**Guam**	**45.45**	**95**	P	**P**	**19 07 36.0**	**-4.0**
	comp=Z,88nm,1.2s						
WRA	**Warramunga Arr**	**56.83**	**138**	P	**P**	**19 09 06.3**	**+0.9**
	comp=Z,1.1nm,0.8s,mb3.9,baz=327,slow=7.4,SNR=7.1						
ASAR	**Alice Springs**	**59.45**	**141**	P	**P**	**19 09 24.5**	**+0.9**
	comp=Z,0.8nm,0.9s,mb3.7,baz=320,slow=6.1,SNR=6.5						
LBTB	**Lobatse**	**85.76**	**240**	*e*P	**P**	**19 12 01.0**	**+0.7**
	comp=Z,4.2nm,0.8s,mb4.7						

*NEIC **02** 19:02:38.7, 36°.06S×72°.64W, h46km, MD3.6(GUC), After GUC.*
*GUC **02** 19:02:38.7±0.5, 36°.06S×72°.64W, h46km±2km, MD3.6, ML3.0*
ISC 02 19:02:38.9±1.8, 36°.06S±0°.05×72°.7W±0°.2, h44km±14km, n13, σ0§37/24, 8C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCO	**Chanco**	**0.36**	**24**	⇑*i*P	**Pn**	**19 02 47.7**	**-0.4**
CNCO				*i* S	**Sn**	**19 02 54.9**	**+0.3**
CNCO	**Chanco**	**0.36**	**24**	⇑*i*P	**Pn**	**19 02 47.7**	**-0.4**
CNCO				*i* S	**Sn**	**19 02 54.9**	**+0.3**
CNCO				AML	AML	19 02 55.4	
	comp=N,342nm,0.2s						
CCHI	**Chillan**	**0.74**	**136**	⇑*i*P	**Pn**	**19 02 52.7**	**-0.3**
CCHI				*i* S	**Sn**	**19 03 03.4**	**+0.2**
CCHI	**Chillan**	**0.74**	**136**	⇑*i*P	**Pn**	**19 02 52.7**	**-0.3**
CCHI				*i* S	**Sn**	**19 03 03.4**	**+0.2**
CCHI				AML	AML	19 03 04.6	
	comp=E,2μm,0.3s						
TALC	**Talca**	**1.10**	**53**	⇑*i*P	**Pn**	**19 02 57.4**	**-0.5**
TALC				*i* S	**Sn**	**19 03 11.7**	**-0.2**
TALC	**Talca**	**1.10**	**53**	⇑*i*P	**Pn**	**19 02 57.4**	**-0.5**
TALC				*i* S	**Sn**	**19 03 11.7**	**-0.2**
LNV	**Longovilo**	**2.36**	**27**	*e*P	**Pn**	**19 03 14.6**	**-0.5**
LNV				*e*S	**Sn**	**19 03 43.0**	**+0.1**
LNV	**Longovilo**	**2.36**	**27**	*e*P	**Pn**	**19 03 14.6**	**-0.5**
LNV				*e*S	**Sn**	**19 03 43.0**	**+0.1**
CACH	**El Canelo**	**2.60**	**42**	*e*P	**Pn**	**19 03 18.8**	**+0.3**
CACH	**El Canelo**	**2.60**	**42**	*e*P	**Pn**	**19 03 18.8**	**+0.3**
LMEL	**Las Melosas**	**3.02**	**44**	⇑*i*P	**Pn**	**19 03 24.6**	**+0.3**
LMEL				*i* S	**Sn**	**19 03 59.1**	**-0.1**
LMEL	**Las Melosas**	**3.02**	**44**	⇑*i*P	**Pn**	**19 03 24.6**	**+0.3**
LMEL				*i* S	**Sn**	**19 03 59.1**	**-0.1**
LMEL				AML	AML	19 04 14.6	
	comp=N,79nm,0.3s						
FCH	**Farellones**	**3.38**	**37**	*e*P	**Pn**	**19 03 30.0**	**+0.8**
FCH				*i* S	**Sn**	**19 04 07.9**	**-0.1**
FCH				AML	AML	19 04 13.8	
	comp=E,67nm,0.4s						

MAN 02 19:14:27, 10°.21N×125°.26E, h6km, mb4.5, ML3.3, MS3.2, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.40**	**259**	*e*P	Pg	19 14 36.5	+1.8
MSLP				*e*S	Sg	19 14 43.6	+3.7
SCPH	**Surigao**	**0.49**	**152**	⇓*e*P	Pg	19 14 37.7	+1.3
SCPH				*e*S	Sg	19 14 47.4	+4.6
OCLP	**Ormoc**	**1.05**	**323**	*e*P	Pg	19 14 47.5	+0.3
OCLP				*e*S	Sg	19 14 55.2	-5.6
LLP	**Lapu-Lapu**	**1.27**	**275**	*e*P	Pn	19 14 50.3	-1.0
LLP				*e*S	Sg	19 15 09.1	+1.1
BUTP	**Butuan**	**1.29**	**164**	*e*P	Pn	19 14 53.0	+1.5
TBP	**Tagbilaran**	**1.47**	**249**	*e*P	Pn	19 14 54.1	+0.1
TBP				*e*S	Sn	19 15 14.9	+1.3
TBP	**Tagbilaran**	**1.47**	**249**	⇑*i*P	Pn	19 15 05.0	+11
BUKP	**Musuan**	**2.33**	**185**	*e*P	Pn	19 15 06.6	+0.8
CNP	**Cataman**	**2.36**	**346**	*e*P	Pn	19 15 07.7	+1.5

*IDC **02** 19:23:47.5±1.9, 1°.57N×126°.55E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/18, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=112.7km s-min=24.8km az=69.0*
*ISCJB **02** 19:23:54.4±1.2, 1°.7N±0°.1×126°.41E±0°.06, h81km±10km, mb3.4/3, Error ellipse: s-maj=20.4km s-min=8.6km az=9.4*
*DJA **02** 19:23:54, 1°.69N×126°.33E, h9km, MLv4.2/6*
ISC 02 19:23:54.5±1.5, 1°.7N±0°.1×126°.49E±0°.07, h56km±16km, n10, σ1§08/13, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**135**	P	**Pn**	**19 24 16.6**	**+1.0**
TNTI				S	**Sn**	**19 24 37.3**	**+5.9**
MNI	**Manado**	**1.67**	**263**	P	**Pn**	**19 24 20.1**	**-1.3**
MNI				S	**Sn**	**19 24 40.3**	**-1.4**
KMSI	**Cibinong**	**2.73**	**247**	S	**Sn**	**19 25 09.4**	**+1.6**
LUWI	**Luwuk**	**4.58**	**234**	P	**Pn**	**19 25 01.2**	**-0.2**
LUWI				S	**Sn**	**19 25 53.9**	**+0.5**
MRSI	**Marisa**	**4.70**	**256**	P	**Pn**	**19 25 02.8**	**-0.2**
PCI	**Palu**	**7.12**	**249**	P	**Pn**	**19 25 37.0**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	**Pn**	**19 28 16.6**	**-4.1**
	0.1nm,0.3s,baz=10,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**22.80**	**161**	P	**P**	**19 28 51.0**	**-1.7**
	0.9nm,0.5s,mb3.5,baz=340,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.18**	**164**	P	**P**	**19 29 23.6**	**-0.3**
	0.3nm,0.4s,mb3.2,baz=346,slow=7.8,SNR=7.6						
MKAR	**Makanchi Array**	**59.12**	**326**	P	**P**	**19 33 50.6**	**+1.2**
	0.3nm,0.4s,mb3.7,baz=122,slow=8.5,SNR=4.9						

IDC 02 19:26:19.2±11.0, 2°.81S×102°.17E, h181km±106km, mb3.2/7, mb1 3.3/7, mb1mx3.2/18, mbtmp3.2/7, Error ellipse: s-maj=124.5km s-min=14.3km az=59.0,

Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.37**	**352**	P	P	19 30 52.8	+0.2
	1.1nm,0.6s,baz=182,slow=10,SNR=7.4						
WRA	**Warramunga Arr**	**35.72**	**121**	P	P	19 32 59.8	-1.0
	0.1nm,0.3s,baz=304,slow=9.1,SNR=2.8						
ASAR	**Alice Springs**	**37.03**	**127**	P	P	19 33 12.1	+0.2
	0.5nm,0.5s,baz=299,slow=7.4,SNR=8.9						
STKA	**Stephens Creek**	**47.01**	**132**	P	P	19 34 32.9	+0.4
	2.2nm,1.0s,baz=315,slow=4.3,SNR=4.7						
SONM	**Songino Array**	**50.56**	**4**	P	P	19 34 59.7	+0.5
	0.8nm,0.6s,baz=188,slow=8.4,SNR=9.1						
MKAR	**Makanchi Array**	**52.41**	**343**	P	P	19 35 13.0	+0.1
	0.4nm,0.4s,baz=148,slow=7.9,SNR=6.5						
ZALV	**Zalesovo Beam**	**58.38**	**348**	P	P	19 35 54.8	-0.7
	0.7nm,0.6s,baz=130,slow=2.3,SNR=3.8						

*CSEM **02** 19:32:55.8±1.5, 16°.41N×43°.00E, h2km, ML2.7, Error ellipse: s-maj=85.8km s-min=7.7km az=66.0*
SGS 02 19:32:56.4, 16°.72N×43°.42E, h10km, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAZS	**Jizan**	**0.59**	**306**	P	Pg	19 33 08.1	+0.2
JAZS	**Jizan**	**0.59**	**306**	P	Pg	19 33 08.1	+0.2
JAZS				S	Sg	19 33 16.9	+1.2
DJNS	**Zahran al Janu**	**0.98**	**7**	P	Pg	19 33 14.3	-1.0
DJNS	**Zahran al Janu**	**0.98**	**7**	P	Pg	19 33 14.3	-1.0
DJNS				S	Sg	19 33 27.8	-0.4
HAJJ	**Hajjah**	**1.03**	**170**	*i* P	Pg	19 33 13.8	-2.4
HAJJ				*e*		19 33 14.2	
	baz=303,slow=16						
HAJJ				*i* S	Sg	19 33 26.9	-2.7
HAJJ				AML	AML	19 33 31.9	
	comp=Z,145nm,0.2s						
HAJJ	**Hajjah**	**1.03**	**170**	*i* P	Pg	19 33 12.9	-3.3
	comp=Z,72nm,0.2s						
HAJJ				*i* S	Sg	19 33 26.9	-2.7
	comp=Z,72nm,0.2s						
WBHS	**Wadi 'Ibn Hash**	**1.99**	**341**	P	Pn	19 33 34.5	+4.4
WBHS	**Wadi 'Ibn Hash**	**1.99**	**341**	P	Pn	19 33 34.5	+4.4
NAMS	**An Nimas**	**2.70**	**335**	P	Pn	19 33 46.6	+6.7
NAMS	**An Nimas**	**2.70**	**335**	P	Pn	19 33 46.6	+6.7
TATS	**Tathlith**	**2.81**	**1**	P	Pn	19 33 46.6	+5.2
TATS	**Tathlith**	**2.81**	**1**	P	Pn	19 33 46.6	+5.2

*IDC **02** 19:39:24.3±1.6, 6°.18S×130°.50E, h0km, mb4.0/3, mb1 4.3/6, mb1mx3.9/16, mbtmp4.1/6, ML4.1/3, Error ellipse: s-maj=69.4km s-min=21.1km az=68.0*
*NEIC **02** 19:39:40.6±3.0, 6°.81S×129°.80E, h144km±31km, mb4.0/4, Error ellipse: s-maj=40.3km s-min=18.8km az=57.0*
ISC 02 19:39:41.7±1.6, 6°.9S±0°.1×129°.9E±0°.2, h156km±16km, n13, σ1§02/15, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.31**	**156**	*e*Pn	**Pn**	**19 41 13.9**	**+1.3**
	119nm,0.6s						
KAKA				*e*Sn	**Sn**	**19 42 22.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**11.86**	**200**	Pn	**Pn**	**19 42 26.2**	**+0.1**
	1.1nm,0.3s,baz=31,slow=11,SNR=38						
FITZ				Sn	Sx	19 44 32.8	
	1.3nm,0.3s,baz=34,slow=19,SNR=6.7						
WRA	**Warramunga Arr**	**13.67**	**162**	Pn	**Pn**	**19 42 48.4**	**-0.9**
	0.5nm,0.3s,baz=349,slow=13,SNR=42						
WRA				Sn	Sx	19 45 13.6	
	2.8nm,0.3s,baz=344,slow=24,SNR=13						
WB2	**Warramunga Arr**	**13.68**	**162**	*e*Pn	**Pn**	**19 42 48.3**	**-1.0**
WB2				*e*Sn	Sx	19 45 13.2	
ASAR	**Alice Springs**	**17.12**	**167**	P	**Pn**	**19 43 33.5**	**+1.9**
	1.1nm,0.3s,baz=344,slow=9.9,SNR=46						
ASAR				S	**S**	**19 46 40.7**	**-0.5**
	0.4nm,0.3s,baz=358,slow=29,SNR=5.4						
STKA	**Stephens Creek**	**27.16**	**158**	P	**P**	**19 45 12.6**	**+2.2**
	1.2nm,0.6s,mb3.7,baz=327,slow=14,SNR=4.0						
STKA	**Stephens Creek**	**27.16**	**158**	*e*P	**P**	**19 45 12.2**	**+1.8**
	0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.55**	**310**	P	**P**	**19 46 57.5**	**-0.2**
	0.4nm,0.6s,baz=143,slow=7.4,SNR=4.9						
MK31	**Makanchi Array**	**68.06**	**327**	*e*P	**P**	**19 50 24.1**	**-0.2**
MKAR	**Makanchi Array**	**68.06**	**327**	P	**P**	**19 50 24.4**	**+0.1**
	2.5nm,0.5s,mb4.2,baz=124,slow=7.8,SNR=42						
TKM2	**Tokmak 2**	**69.81**	**321**	*e*P	**P**	**19 50 35.3**	**+0.1**
	1.3nm,0.5s,mb3.9						
EKS2	**Erkin-Say**	**70.84**	**320**	*e*P	**P**	**19 50 41.9**	**+0.4**
	1.5nm,0.6s,mb3.9						
KURK	**Kurchatov**	**72.36**	**329**	P	**P**	**19 50 48.7**	**-1.6**
	2.2nm,0.7s,mb4.0						

*BGS **02** 20:00:15.0±1.7, 35°.39N×47°.34E, h10km, mb5.1*
*NSSP **02** 20:00:48.8, 38°.65N×45°.95E, h10km, Ms4.9*
*BJI **02** 20:00:49.5, 38°.86N×45°.05E, h31km, mB4.9/29, mb4.9/46, Ms4.8/44, Ms7 4.5/42*
*ISCJB **02** 20:00:50.6±0.3, 38°.66N±0°.01×45°.83E±0°.01, h11km±2km, mb4.8/167, MS4.3/58, Error ellipse: s-maj=2.5km s-min=1.6km az=28.0*
*TEH **02** 20:00:50.6, 38°.68N×45°.74E, h11km*
*NEIC **02** 20:00:50.8±0.8, 38°.72N×45°.79E, h3km±5km, mb4.9/81, ML4.8(THR), MN5.2(TEH), Error ellipse: s-maj=5.1km s-min=3.0km az=190.0*
NEIC Felt at Yerevan, Armenia.
*IDC **02** 20:00:50.3±0.5, 38°.72N×45°.74E, h0km, mb4.5/32, mb1 4.6/35, mb1mx4.6/37, mbtmp4.5/35, ML3.5/4, MS4.4/29, Ms1 4.4/29, ms1mx4.2/41, Error ellipse: s-maj=10.4km s-min=8.5km az=163.0*
*THR **02** 20:00:51.9±0.6, 38°.99N×45°.92E, h18km±9km, ML4.9*
*MOS **02** 20:00:51.6±1.3, 38°.69N×45°.84E, h22km, mb5.0/72, MS4.3/50, Error ellipse: s-maj=4.9km s-min=2.7km az=129.6*
*CSEM **02** 20:00:51.7±0.1, 38°.68N×45°.79E, h10km, mb4.9/99, Ms4.0, Mw5.0, Error ellipse: s-maj=3.2km s-min=2.2km az=32.0*
*GCMT **02** 20:00:54.5±0.2, 38°.69N×45°.79E, h15km±1km, MW5.0, Moment Tensor Solution. s31,c43; s78,c135; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.67±.13; $M_{\theta\theta}$-2.82±.13; $M_{\phi\phi}$3.49±.12; $M_{r\theta}$-0.22±.36; $M_{\theta\phi}$-3.11±.11; $M_{\phi r}$-0.69±.33; Best double couple: $M_0$4.50000×10^{16} NP1:ϕ_s113.00000°, δ80.00000°, λ-179.00000°. NP2:ϕ_p23.00000°, δ89.00000°, λ-10.00000°. Principal axes: T 4.8200, Plg6.0000°, Azm68.0000°; N -0.6600, Plg80.0000°, Azm194.0000°; P -4.1600, Plg8.0

IAZR eSg Sg 20 01 22.0 -0.9
IHRS Heris 1.02 109 Pg Pg 20 01 10.1 -0.6
IHRS Sg Sg 20 01 25.5 +1.6
IHRS Heris 1.02 109 eSg Sg 20 01 25.4 +1.5
IHRS ⇓ePg Pg 20 01 09.8 -0.9
IHRS e 20 01 25.7
comp=Z,96µm,0.2s
MAKU Maku 1.12 308 ePg Pg 20 01 11.1 -1.4
MAKU eSg Sg 20 01 25.6 -1.3
MAKU AML AML 20 01 31.4
comp=N,31µm,0.5s
MAKU Maku 1.12 308 ePg Pg 20 01 11.1 -1.3
MAKU eSg Sg 20 01 26.2 -0.7
STKZ 1.36 32⇑iP Pg 20 01 25.3 +8.3
STKZ ⇑iS Sg 20 01 44.2 +10
ARRZ Ararat 1.47 324⇓iP Pn 20 01 24.0 +5.5
VADZ Vardenis 1.50 358 eP Pn 20 01 19.0 0.0
VADZ eS Sn 20 01 40.0 +0.8
CLDR Caldiran 1.55 288 eP Pn 20 01 18.5 -1.2
CLDR Caldiran 1.55 288 Pn Pn 20 01 17.8 -1.9
CLDR Caldiran 1.55 288 Pn Pn 20 01 17.8 -1.9
CLDR Caldiran 1.55 288 eP Pn 20 01 18.5 -1.2
GRMI Germi 1.63 84 ePg Pg 20 01 20.4 -1.9
GRMI Germi 1.63 84 ePg Pg 20 01 20.4 -1.9
GRMI eSg Sg 20 01 42.6 -0.9
ISRB Sarab 1.68 119 Pg Pg 20 01 22.0 -1.3
ISRB Sarab 1.68 119⇓ePn Pn 20 01 21.7 +0.3
ISRB eSg Sg 20 01 45.7 +0.6
ISRB e 20 01 54.1
comp=Z,96µm,0.2s
ISRB Sarab 1.68 119⇓ePn Pn 20 01 21.7 +0.3
ISRB Sarab 1.68 119 Pg Pg 20 01 22.0 -1.3
ISRB eSg Sg 20 01 45.7 +0.6
GNI Garni 1.70 331 eP Pn 20 01 22.3 +0.7
GNI Garni 1.70 331 Pn Pn 20 01 22.0 +0.3
comp=Z,4µm,0.3s,baz=176,slow=1.2,SNR=8905
GNI Sn Sn 20 01 46.2 +2.3
comp=Z,2µm,0.3s,baz=345,slow=19,SNR=9.6
GNI Garni 1.70 331 d iPG Pg 20 01 21.8 -1.8
GNI Garni 1.70 331⇓iP Pn 20 01 22.0 +0.4
GNI ⇓iS Sn 20 01 46.8 +2.8
GNI Garni 1.70 331 P Pn 20 01 22.0 +0.3
SNR=1000
GNI Sn Sn 20 01 46.2 +2.3
GNI S Sn 20 01 46.8 +2.9
GNI Garni 1.70 331 P Pn 20 01 22.0 +0.4
SNR=3575
ERE Yerevan 1.83 326⇓iP Pn 20 01 20.4 -3.0
ERE ⇓S Sn 20 01 47.4 +0.3
ERE Yerevan 1.83 326⇓iP Pn 20 01 20.4 -3.0
ERE S Sn 20 01 47.4 +0.3
KAPZ Kaputan 1.86 333⇓P Pn 20 01 25.0 +1.1
VRNZ Vardanashen 1.87 318⇓iP Pn 20 01 23.9 -0.1
VRNZ ⇓iS Sn 20 01 51.6 +3.4
VRNZ Vardanashen 1.87 318⇓P Pn 20 01 23.9 -0.1
VRNZ S Sn 20 01 51.6 +3.5
DYDN Diyadin 1.87 299⇓iP Pn 20 01 24.8 +0.8
DYDN Diyadin 1.87 299 i P Pn 20 01 24.8 +0.8
VANB Van 1.90 269 eP Pn 20 01 25.9 +1.5
VANB Van 1.90 269 Pn Pn 20 01 25.0 +0.6
VANB Van 1.90 269 Pn Pn 20 01 25.0 +0.6
VANB Van 1.90 269 eP Pn 20 01 25.9 +1.5
BRDA Brd 1.91 33 P Pn 20 01 26.7 +2.1
SNR=349
BRDA S Sn 20 01 54.6 +5.3
HKR Hakkari 1.96 237 eP Pn 20 01 26.2 +0.9
HKR Hakkari 1.96 237 eP Pn 20 01 26.2 +0.9
HAKT HAKKARI 2.00 237⇑iP Pn 20 01 25.4 -0.3
HAKT HAKKARI 2.00 237 i P Pn 20 01 25.5 -0.2
VANT Van 2.01 264 eP Pn 20 01 27.9 +1.9
VANT Van 2.01 264 Pn Pn 20 01 28.3 +2.3
VANT Van 2.01 264 eP Pn 20 01 27.9 +1.9
VANT Van 2.01 264 Pn Pn 20 01 28.3 +2.3
GANJ Ganja 2.02 11 P Pn 20 01 27.6 +1.6
SNR=1000
GANJ S Sn 20 01 54.2 +2.4
GLBA Clilabad 2.09 73 S Sn 20 01 59.1 +5.4
ARUZ Aruch 2.09 321⇓iP Pn 20 01 27.6 +0.5
ARUZ ⇓iS Sn 20 01 57.0 +3.3
ARUZ Aruch 2.09 321⇓P Pn 20 01 27.6 +0.5
ARUZ S Sn 20 01 57.0 +3.3
AMBZ Amberd 2.10 326⇓iP Pn 20 01 28.0 +0.9
AMBZ ⇓iS Sn 20 01 57.4 +3.6
AMBZ Amberd 2.10 326⇓P Pn 20 01 28.0 +0.9
AMBZ S Sn 20 01 57.4 +3.6
VNNZ Vanand 2.11 314⇓P Pn 20 01 28.0 +0.7
AKSZ Araks 2.13 316⇓iP Pn 20 01 28.3 +0.7
AKSZ ⇓iS Sn 20 02 02.4 +7.7
CUKT Cukurca 2.25 232 eP Pn 20 01 29.1 0.0
CUKT Cukurca 2.25 232 eP Pn 20 01 29.2 0.0
LMTZ Lermontov 2.27 337⇑iP Pn 20 01 24.2 -5.3
LMTZ Lermontov 2.27 337⇑P Pn 20 01 24.2 -5.4
AGRB Hanur-Agry 2.38 293 eP Pn 20 01 32.3 +1.3
AGRB Hanur-Agry 2.38 293 eP Pn 20 01 32.3 +1.4
CKLZ Chkalov 2.44 339⇑iP Pn 20 01 27.3 -4.5
SPIZ Spitak 2.46 332⇑iP Pn 20 01 22.2 -10
DIGO Kars 2.57 314⇓iP Pn 20 01 34.0 +0.3
DIGO Kars 2.57 314 i P Pn 20 01 34.0 +0.4
STEZ Stepenevan 2.57 335⇑iP Pn 20 01 28.0 -5.7
STEZ Stepenevan 2.57 335⇓iP Pn 20 01 34.4 +0.7
STE Stepanavan 2.58 335⇓iP Pn 20 01 34.4 +0.6
GMRZ Gyumri 2.63 325⇑iP Pn 20 01 32.0 -2.5
GMRZ ⇑iS Sn 20 02 09.0 +2.1
SEKA Sheki 2.75 22 P Pn 20 01 39.6 +3.4
SNR=321
SEKA S Sn 20 02 15.9 +5.9
TATV Tatvan 2.78 268 eP Pn 20 01 36.7 +0.1
TATV Tatvan 2.78 268 eP Pn 20 01 36.7 +0.1
ALIB Äli-Bayra 2.79 61 P Pn 20 01 39.8 +3.1
SNR=143
DGRG David-gareji 2.80 353 ePN Pn 20 01 38.4 +1.6
DGRG David-gareji 2.80 353 P Pn 20 01 38.4 +1.6
DGRG S Sn 20 02 15.2 +4.1
DGRG David-gareji 2.80 353 ePn Pn 20 01 38.4 +1.6
IML Ismayilli 2.80 40 P Pn 20 01 38.5 +1.7
SNR=263
IML S Sn 20 02 16.3 +5.1
KARS Kars 2.88 314 eP Pn 20 01 39.3 +1.4
KARS Kars 2.88 314 Pn Pn 20 01 39.2 +1.3
KARS Kars 2.88 314 Pn Pn 20 01 39.2 +1.3
PQL Pirkuli 3.02 44 P Pn 20 01 42.1 +2.3
SNR=434
ZNJK Zanjan 3.03 130 ePn Pn 20 01 40.5 +0.6
ZNJK eSg Sg 20 02 26.3 -2.0
MTA Mtatsminda 3.12 346 ePN Pn 20 01 42.7 +1.5
MTA Mtatsminda 3.12 346 P Pn 20 01 42.7 +1.5
MTA S Sn 20 02 28.4 +9.3
MTA Mtatsminda 3.12 346 ePn Pn 20 01 42.7 +1.5
TBLG Delisi 3.17 345 PN Pn 20 01 43.3 +1.4
TBLG S Sb 20 02 27.0 -0.1
TBLG Delisi 3.17 345 P Pn 20 01 43.3 +1.4
TBLG S Sn 20 02 27.0 +6.8
TBLG Delisi 3.17 345 Pn Pn 20 01 43.3 +1.4
TBLG Sb Sb 20 02 27.0 -0.1
HOMI Horasan 3.33 296 eP Pn 20 01 47.9 +3.9
SIZA Siyzn 3.38 44 P Pn 20 01 48.6 +3.8
SNR=122
GOBA Gobu 3.49 59 P Pn 20 01 49.9 +3.6
SNR=12
GOR Gori 3.56 339 ePN Pn 20 01 49.4 +2.1
GOR Gori 3.56 339 P Pn 20 01 49.4 +2.2
GOR S Sg 20 02 41.8 -3.6
GOR Gori 3.56 339 ePn Pn 20 01 49.4 +2.1
BNGL BINGOL 3.65 276⇑iP Pn 20 01 49.2 +0.7
BEST Besiri 3.66 259⇑iP Pn 20 01 49.4 +0.8
NDR Nardaran 3.75 58 P Pn 20 01 53.1 +3.3
SNR=3.5
GALA Gala 3.78 61 P Pn 20 01 53.4 +3.1
SNR=2.7
DDEM Demirkent 3.84 307⇑iP Pn 20 01 55.6 +4.5
DAGI Agillar 3.85 310 eP Pn 20 02 00.4 +9.2
ILIN Lien 3.85 166 Pn Pn 20 01 56.1 +4.8
ILIN Lien 3.85 166 ePn Pn 20 01 49.3 -2.0
ILIN e 20 03 24.3
comp=N,21µm,0.5s
ILIN Lien 3.85 166 ePn Pn 20 01 49.3 -2.0
ARTV Artvin 3.91 311⇑iP Pn 20 01 52.7 +0.7
ARTV Artvin 3.91 311 i P Pn 20 01 52.7 +0.7
IDHR Dehrash 3.98 173 Pn Pn 20 01 57.7 +4.6
IDHR Dehrash 3.98 173 ePn Pn 20 01 54.3 +1.2
IDHR eSg Sg 20 02 56.1 -2.9

IDHR e 20 03 12.5
comp=Z,33µm,0.6s
IDHR Dehrash 3.98 173 ePn Pn 20 01 54.3 +1.2
IDHR eSg Sg 20 02 56.1 -2.9
DBOC Borcka 4.16 311 eP Pn 20 01 58.8 +3.3
BINT Bingol 4.17 275 eP Pn 20 01 58.0 +2.5
BINT Bingol 4.17 275 Pn Pn 20 01 59.2 +3.6
BINT Bingol 4.17 275 eP Pn 20 01 58.0 +2.4
BINT Bingol 4.17 275 Pn Pn 20 01 59.2 +3.6
MARD Mardin 4.20 253⇑iP Pn 20 01 55.0 -1.0
IVIS Veis 4.21 168 Pn Pn 20 02 05.2 +9.0
IVIS Veis 4.21 168 ePn Pn 20 01 58.8 +2.6
IVIS e 20 03 16.8
comp=Z,24µm,0.6s
IVIS Veis 4.21 168 ePn Pn 20 01 58.8 +2.6
KOPT Kop Dagi 4.34 290 eP Pn 20 02 03.1 +5.1
ZEI Tsey 4.35 341 ePN Pn 20 01 58.5 +0.4
ZEI pmax pmax
comp=Z,374nm,0.6s
ZEI Tsey 4.35 341 ePn Pn 20 01 58.5 +0.4
comp=Z,374nm,0.6s
IGHG Ghaleghazi 4.37 172 Pn Pb 20 02 08.6 +0.1
IGHG Ghaleghazi 4.37 172 ePn Pn 20 01 57.4 -1.0
IGHG eSg Sg 20 03 09.1 -2.3
IGHG e 20 03 34.0
comp=Z,20µm,0.5s
IGHG Ghaleghazi 4.37 172 ePn Pn 20 01 57.4 -1.0
IGHG eSg Sg 20 03 09.1 -2.3
MAK Makhachkala 4.48 16⇑ePN Pn 20 01 57.6 -2.3
MAK i 20 02 13.0
MAK eS Sb 20 03 04.4 -0.3
MAK pmax pmax
comp=Z,1µm,1.3s
MAK MLR MLR
comp=E,20µm,10.0s
MAK MLR MLR
comp=N,13µm,9.0s
MAK MLR MLR
comp=Z,6µm,10.0s
MAK Makhachkala 4.48 16 ePn Pn 20 01 57.6 -2.3
MAK Makhachkala 4.48 16 i Pb Pb 20 02 13.0 +2.7
comp=Z,1µm,1.3s
MAK eSb Sb 20 03 04.4 -0.3
comp=Z,6µm,10.0s
DIYA Diyarbakir 4.54 262⇑iP Pn 20 02 01.1 +0.4
DIYA Diyarbakir 4.54 262 i P Pn 20 02 01.1 +0.4
IRAZ Razeghan 4.63 133 Pn Pn 20 02 04.5 +2.6
IRAZ Razeghan 4.63 133 ePn Pn 20 02 01.0 -0.9
IRAZ e 20 03 35.3
comp=Z,11µm,0.3s
IRAZ Razeghan 4.63 133 ePn Pn 20 02 01.0 -0.9
IKOM Komasi 4.69 163 ePn Pn 20 02 05.4 +2.7
IKOM eSg Sg 20 03 14.7 -6.8
IKOM Komasi 4.69 163 ePn Pn 20 02 05.4 +2.7
IKOM eSg Sg 20 03 14.7 -6.8
IKOM e 20 03 41.2
comp=Z,31µm,0.7s
THKV Tehran--Karaj 4.88 123 ePn Pn 20 02 08.8 +3.4
THKV AML AML 20 03 39.1
comp=N,783nm,0.2s
IMHD Mahdasht 4.89 126 Pn Pn 20 02 08.7 +3.2
IMHD Mahdasht 4.89 126 e Pg 20 02 31.2 +6.5
comp=Z,11µm,0.4s
IMHD ePn Pn 20 02 06.0 +0.5
CHTH Charan 5.05 121 ePn Pn 20 02 10.9 +3.1
SVRC Sivrice-ELAZID 5.11 269 eP Pn 20 02 09.8 +1.3
SVRC Sivrice-ELAZID 5.11 269 eP Pn 20 02 09.8 +1.3
EZC Erzincan 5.13 284 eP Pn 20 02 13.2 +4.4
MACK Trabzon 5.18 298⇓iP Pn 20 02 13.2 +3.7
MACK Trabzon 5.18 298 i P Pn 20 02 13.2 +3.7
GUMT Gumushane 5.21 292 eP Pn 20 02 12.8 +2.9
GUMT Gumushane 5.21 292 eP Pn 20 02 12.8 +2.9
IR3 Iran Long-Peri 5.24 126 ePn Pn 20 02 09.4 -1.0
IR3 Iran Long-Peri 5.24 126 ePn Pn 20 02 09.4 -1.0
ASAO Ashtian 5.33 139 ePn Pn 20 02 15.7 +4.2
ELZG Elazig 5.35 270 eP Pn 20 02 14.1 +2.2
ELZG Elazig 5.35 270 eP Pn 20 02 14.1 +2.2
IAFJ Afjeh 5.48 119 eSg Sg 20 03 45.0 -1.9
IAFJ e 20 04 03.1
comp=N,8µm,0.2s
IAFJ Afjeh 5.48 119 eSg Sg 20 03 45.0 -1.9
BHD Baghdad 5.51 193 ex x 20 02 16.0
BHD i x x 20 02 42.0
BHD i x x 20 03 19.0
BHD i x x 20 03 52.0
IPRN Peran 5.73 113 ePn Pn 20 02 20.5 +3.5
IPRN e 20 02 46.8
comp=Z,8µm,0.5s
IPRN Peran 5.73 113 ePn Pn 20 02 20.5 +3.5
KEMA Kemaliye 5.74 278 eP Pn 20 02 17.9 +0.8
KEMA Kemaliye 5.74 278 eP Pn 20 02 17.9 +0.8
DAMV Damavand 5.78 120 ePn Pn 20 02 20.9 +3.2
KIV Kislovodsk 5.79 337 d iP Pn 20 02 20.6 +2.8
KIV pmax pmax
comp=Z,261nm,1.2s
KIV MLR MLR
comp=Z,4µm,17.0s
KIV Kislovodsk 5.79 337 ePn Pn 20 02 20.1 +2.3
comp=Z,441nm,1.1s
KIV Kislovodsk 5.79 337 Pn Pn 20 02 22.3 +4.5
comp=Z,1µm,1.0s,SNR=33
KIV Kislovodsk 5.79 337 ePn Pn 20 02 20.1 +2.3
comp=Z,441nm,1.1s
KIV Kislovodsk 5.79 337 i P Pn 20 02 20.6 +2.8
comp=Z,4µm,17.0s
KIV Kislovodsk 5.79 337 P Pn 20 02 22.4 +4.6
SNR=41
MALT Malatya 5.80 269 eP Pn 20 02 22.0 +3.9
MALT Malatya 5.80 269⇑ePn Pn 20 02 18.8 +0.7
MALT pmax pmax
comp=Z,252nm,1.0s
MALT Malatya 5.80 269⇑ePn Pn 20 02 18.8 +0.7
comp=Z,252nm,1.0s
MALT e 20 02 44.3
MALT Malatya 5.80 269 eP Pn 20 02 18.8 +0.7
comp=Z,252nm,1.0s
MYA Malataya 5.80 269 eP Pn 20 02 21.4 +3.3
IDMV Damavand 5.85 120 Pn Pn 20 02 24.6 +5.9
IDMV Damavand 5.85 120 ePn Pn 20 02 17.4 -1.3
IDMV e 20 04 13.9
comp=Z,11µm,0.8s
IDMV Damavand 5.85 120 ePn Pn 20 02 17.4 -1.3
IVRN Varamin 5.99 126 ePn Pn 20 02 19.0 -1.7
IVRN Varamin 5.99 126 ePn Pn 20 02 19.0 -1.7
ATAB Bozova 6.05 261 eP Pg 20 02 42.8 -4.2
GHVR GHOM 6.08 132 ePn Pn 20 02 24.8 +3.0
IALA Alasht 6.14 113 Pn Pn 20 02 26.0 +3.3
IALA Alasht 6.14 113 ePn Pn 20 02 25.1 +2.4
IALA e 20 02 54.3
comp=Z,4µm,0.2s
IALA Alasht 6.14 113 ePn Pn 20 02 25.1 +2.4
AKCD Akcadag 6.20 269⇓iP Pn 20 02 24.5 +1.0
AKCD Akcadag 6.20 269 i P Pn 20 02 24.5 +1.0
IFIR Firoozkooh 6.31 116 Pn Pn 20 02 31.4 +6.3
IFIR Firoozkooh 6.31 116 ePn Pn 20 02 31.5 +6.5
IFIR e 20 02 56.7
comp=Z,921nm,0.2s
IFIR Firoozkooh 6.31 116 ePn Pn 20 02 31.5 +6.5
ILAS Lasjerd 6.59 118 Pn Pn 20 02 35.0 +6.1
ILAS Lasjerd 6.59 118 ePn Pn 20 02 30.5 +1.6
ILAS Lasjerd 6.59 118 ePn Pn 20 02 30.5 +1.6
ISHM Shahmirzad 6.61 113 ePn Pn 20 02 32.3 +3.1
ISHM e 20 03 02.8
comp=Z,3µm,0.3s
ISHM Shahmirzad 6.61 113 ePn Pn 20 02 32.3 +3.1
GOF Gofitskoye 6.71 343 eP Pn 20 02 36.2 +5.6
GOF pmax pmax
comp=Z,200nm,1.3s
IGLO Ghaloghah 6.72 106 Pn Pn 20 02 33.4 +2.7
IGLO Ghaloghah 6.72 106 ePn Pn 20 02 33.4 +2.7
IGLO e 20 02 38.4
comp=Z,5µm,0.3s
IGLO Ghaloghah 6.72 106 ePn Pn 20 02 33.4 +2.7
SOC Sochi 6.73 319 d iP Pn 20 02 33.5 +2.7
SOC e 20 03 49.8
SOC pmax pmax
comp=Z,285nm,1.0s
SOC MLR MLR
comp=Z,4µm,10.0s
SOC Sochi 6.73 319 eS Sn 20 03 49.8 +1.8
comp=Z,4µm,10.0s
ISFB Sefidab 6.73 128 ePn Pn 20 02 32.9 +2.1
ISFB e 20 03 07.3

comp=Z,3µm,0.6s
ISFB eSg Sg 20 04 22.0 -5.2
ISFB e 20 05 03.2
comp=N,11µm,1.0s
ISFB Sefidab 6.73 128 ePn Pn 20 02 32.9 +2.1
ISFB eSg Sg 20 04 22.0 -5.2
SVSK Karacayir 6.95 283 eP Pn 20 02 38.7 +4.9
SVSK Karacayir 6.95 283 Pn Pn 20 02 38.9 +5.1
GAZ Gaziantep 6.96 260 eP Pn 20 02 37.3 +3.3
GAZ Gaziantep 6.96 260 Pn Pn 20 02 37.5 +3.5
SHGR Shooshtar-Gavs 6.98 159 ePn Pn 20 02 39.1 +4.8
IKLH Kolahrood 7.09 137 Pn Pn 20 02 41.8 +6.0
IKLH Kolahrood 7.09 137 ePn Pn 20 02 36.2 +0.4
IKLH e 20 05 18.0
comp=Z,4µm,0.7s
IKLH Kolahrood 7.09 137 ePn Pn 20 02 36.2 +0.4
SARI SarD1z-Kayseri 7.13 273 eP Pn 20 02 42.6 +6.3
IANJ Anjilo 7.22 114 ePn Pn 20 02 36.1 -1.4
IANJ e 20 04 51.1
comp=Z,2µm,0.6s
IANJ Anjilo 7.22 114 ePn Pn 20 02 36.1 -1.4
IPIR Pirpir 7.26 144 Pn Pn 20 02 44.5 +6.4
IPIR Pirpir 7.26 144 ePn Pn 20 02 41.6 +3.5
IPIR e 20 05 28.8
comp=Z,3µm,0.8s
IPIR Pirpir 7.26 144 ePn Pn 20 02 41.6 +3.5
ANDN Andirin 7.54 265 eP Pg 20 03 13.5 -2.0
IZEF Zefreh 7.82 135 Pn Pn 20 02 51.1 +5.3
IZEF Zefreh 7.82 135 ePn Pn 20 02 49.6 +3.8
IZEF e 20 05 25.9
comp=Z,2µm,0.7s
IZEF Zefreh 7.82 135 ePn Pn 20 02 49.6 +3.8
KOZT Kozan 7.97 265 eP Pn 20 02 50.5 +2.8
MRVT Maraveh tapeh 8.16 94 ePn Pn 20 02 50.5 +0.2
MRVT Maraveh tapeh 8.16 94 ePn Pn 20 02 50.8 +0.4
ANN Anapa 8.76 317 c iP Pn 20 03 03.3 +4.7
ANN eS Sn 20 04 45.3 +7.4
ANN pmax pmax
comp=Z,198nm,1.0s
ANN MLR MLR
comp=N,2µm,11.0s
ANN MLR MLR
comp=E,2µm,11.0s
ANN MLR MLR
comp=Z,2µm,11.0s
MIB Mutribah 8.93 171 eP Pn 20 03 01.2 +0.2
MIB Mutribah 8.93 171 eP Pn 20 03 01.2 +0.2
CDAG Cicekdag 8.94 280 eP Pn 20 03 06.5 +5.4
HWQ Hawqa 9.07 244 eP Pn 20 03 09.8 +6.9
BJRD Bojnurd 9.18 92 ePn Pn 20 03 05.0 +0.5
BJRD Bojnurd 9.18 92 ePn Pn 20 03 05.1 +0.7
UMR Umm Al-Rimmam 9.23 170 eP Pn 20 03 04.8 -0.3
UMR Umm Al-Rimmam 9.23 170 eP Pn 20 03 04.8 -0.3
NAY Al-Naaiem 9.47 172 eP Pn 20 03 08.3 -0.1
NAY Al-Naaiem 9.47 172 eP Pn 20 03 08.3 -0.1
BHL Bhannes 9.48 243 eP Pn 20 03 13.0 +4.5
BRTR Keskin Array B 9.51 280 Pn Pn 20 03 11.9 +3.0
comp=Z,0.7nm,0.3s,baz=104,slow=13,SNR=40
BRTR LR LR 20 06 58.2
comp=Z,1µm,18.0s,baz=270,slow=39
BRTR Keskin Array B 9.51 280 P Pn 20 03 11.9 +3.0
BRTR pmax pmax
comp=Z,1.0nm,0.3s
BRTR MLR MLR
comp=Z,1µm,18.0s
KBD Kabd 9.59 170 eP Pn 20 03 10.3 +0.2
KBD Kabd 9.59 170 eP Pn 20 03 10.3 +0.2
VAN Vannovskaya 9.69 90 eP Pn 20 03 10.4 -1.0
VAN eS Sn 20 05 06.2 +5.4
VAN Vannovskaya 9.69 90 eP Pn 20 03 10.4 -1.0
ABKT Ailbek 9.70 91 Pn Pn 20 03 10.6 -1.0
comp=Z,527nm,0.4s,SNR=43
ASF Jabal al Asfar 9.74 231 Pn Pn 20 03 11.2 -0.9
comp=Z,0.1nm,0.3s,baz=199,slow=2.7,SNR=3.2
ASF LR LR 20 06 58.7
comp=Z,1µm,21.8s,baz=280,slow=38
BBAL Bala 9.90 279 eP Pn 20 03 20.9 +6.6
MMAI Mount Meron Ar 10.15 239 Pn Pn 20 03 18.2 +0.4
comp=Z,0.4nm,0.3s,baz=66,slow=15,SNR=10
MMAI LR LR 20 07 39.3
comp=Z,3µm,20.6s,baz=60,slow=40
IPAR Pars 10.64 144 ePn Pn 20 03 21.3 -3.1
IPAR e 20 04 16.3
comp=Z,371nm,0.4s
IPAR Pars 10.64 144 ePn Pn 20 03 21.3 -3.1
CSS Prodhromos 10.67 254 ePn Pn 20 03 22.1 -2.7
CSS Prodhromos 10.67 254 ePn Pn 20 03 22.1 -2.7
SIM Simferopol' 10.75 309 eP Pn 20 03 29.0 +3.2
SIM eS Sn 20 05 25.0 -1.7
SIM pmax pmax
comp=Z,41nm,1.0s
ISRV Sarvestan 11.06 145 ePn Pn 20 03 26.9 -3.3
ISRV e 20 05 01.8
comp=Z,312nm,0.3s
ISRV Sarvestan 11.06 145 ePn Pn 20 03 26.9 -3.3
KZIT Kziot 12.16 234 P Pn 20 03 51.6 +6.4
HRFI Mount Harif 12.38 229 P Pn 20 03 52.5 +4.3
KRBR Kerman 12.52 131 ePn Pn 20 03 51.9 +1.8
EIL Elat 12.70 228 Pn Pn 20 03 53.9 +1.3
comp=Z,0.3nm,0.3s,baz=132,slow=12,SNR=3.8
EIL LR LR 20 08 52.8
comp=Z,2µm,19.8s,baz=48,slow=38
EIL Elat 12.70 228 Pn Pn 20 03 53.9 +1.4
VRHR Novokhopersk 12.78 348 eP Pn 20 03 55.2 +1.7
VRHR pmax pmax
comp=Z,120nm,1.4s
VRHR pmax pmax
comp=N,230nm,1.3s
VRHR pmax pmax
comp=E,80nm,1.1s
VRHR Novokhopersk 12.78 348 eP Pn 20 03 55.2 +1.7
comp=E,230nm,1.3s
VORD Divnogorie 13.13 342 eP Pn 20 03 58.9 +0.5
VORD eS Sn 20 06 29.3 +4.3
VORD pmax pmax
comp=N,330nm,1.8s
VORD pmax pmax
comp=Z,180nm,1.8s
VORD pmax pmax
comp=E,150nm,1.6s
VORD smax
comp=N,670nm,6.2s
VORD smax
comp=Z,340nm,5.3s
VORD smax
comp=E,330nm,2.5s
VORD MLR MLR
comp=Z,1µm,10.0s
VORD MLR MLR
comp=N,2µm,15.0s
VORD MLR MLR
comp=E,540nm,9.0s
VORD Divnogorie 13.13 342 eP Pn 20 03 58.9 +0.5
comp=E,670nm,6.2s
VSR Storozhevoye 13.39 342 eP Pn 20 04 01.9 -0.1
VSR eS Sn 20 06 33.9 +2.5
VSR pmax pmax
comp=Z,180nm,1.7s
VSR pmax pmax
comp=N,210nm,1.5s
VSR pmax pmax
comp=E,130nm,1.4s
VSR smax
comp=N,110nm,2.1s
VSR smax
comp=Z,190nm,3.3s
VSR smax
comp=E,50nm,1.0s
VSR MLR MLR
comp=Z,1µm,11.0s
VSR MLR MLR
comp=N,2µm,16.0s
VSR MLR MLR
comp=E,480nm,10.0s
VSR Storozhevoye 13.39 342 eP Pn 20 04 01.9 -0.1
comp=E,110nm,2.1s
VOR Voronezh 13.86 343 P Pn 20 04 09.0 +0.6
VOR pmax pmax
comp=Z,280nm,1.2s
VOR Voronezh 13.86 343 P Pn 20 04 09.0 +0.6
comp=Z,280nm,1.2s
BNDS Bandar-Abbas 14.19 139 ePn Pn 20 04 15.0 +2.0
TLCR 14.22 303⇑iP Pn 20 04 14.4 +1.1
TLCR 14.22 303⇑iP Pn 20 04 14.4 +1.1
TLCR 14.22 303 P Pn 20 04 14.4 +1.1

TIRR	**Tirgusor**	**14.25 300**	*e*P	**Pn**	**20 04 12.8**	**-0.8**
TIRR			pmax	pmax		
comp=Z,24nm,1.0s						
TIRR	**Tirgusor**	**14.25 300**	*e*Pn	**Pn**	**20 04 12.8**	**-0.8**
comp=Z,24nm,1.0s						
TIRR			*e*		20 04 44.6	
TIRR	**Tirgusor**	**14.25 300** ⇑	*i*P	**Pn**	**20 04 13.5**	**-0.1**
TIRR	**Tirgusor**	**14.25 300**	*e*Pn	**Pn**	**20 04 12.8**	**-0.8**
AKTK	**Aktyubinsk**	**14.61 32**	Pn	**Pn**	**20 04 16.8**	**-1.8**
AKTK			Sn	**Sn**	**20 06 53.5**	**-7.5**
AKTK			LR	LR	20 11 20.3	
AKTK	**Aktyubinsk**	**14.61 32**	Pn	**Pn**	**20 04 16.8**	**-1.8**
AKTO	**Aktyubinsk**	**14.61 32**	Pn	**Pn**	**20 04 16.8**	**-1.8**
comp=Z,1.4nm,0.3s,baz=216,slow=12,SNR=26						
AKTO			Sn	**Sn**	**20 06 53.5**	**-7.5**
comp=Z,0.4nm,0.3s,baz=311,slow=20,SNR=2.5						
AKTO			LR	LR	20 11 20.3	
comp=Z,693nm,18.7s,baz=20,slow=43						
AKTO	**Aktyubinsk**	**14.61 32**	P	**Pn**	**20 04 16.8**	**-1.8**
AKTO					20 06 53.5	
AKTO			pmax	pmax		
comp=Z,1.0nm,0.3s						
AKTO			MLR	MLR		
comp=Z,693nm,18.7s						
AB31	**Akbulak array**	**14.66 39**	*i* P	**Pn**	**20 04 16.9**	**-2.3**
AB31			pmax	pmax		
comp=Z,31nm,0.8s						
ABKAR	**Akbulak array**	**14.66 39**	*e*Pn	**Pn**	**20 04 16.6**	**-2.6**
comp=Z,45nm,0.8s						
ABKAR			*e*Sn	**Sn**	**20 06 42.5**	**-20**
ABKAR	**Akbulak array**	**14.66 39**	*e*Pn	**Pn**	**20 04 16.6**	**-2.6**
comp=Z,45nm,0.8s						
CFR	**Carcaliu**	**14.67 302** ⇓	*i*P	**Pn**	**20 04 20.5**	**+1.1**
KIS	**Kishinev**	**14.97 309**	*e*P	**Pn**	**20 04 23.0**	**-0.5**
KIS	**Kishinev**	**14.97 309**	*e*PP		20 04 34.0	
KIS			*e*S	**Sn**	**20 07 24.0**	**+14**
KIS			*e*LQ		20 10 00.0	
KIS			*e*LR	LR	20 10 42.0	
comp=Z,800nm,12.0s						
KIS	**Kishinev**	**14.97 309**	*e*P	**Pn**	**20 04 23.0**	**-0.5**
KIS			MLR	MLR		
comp=N,400nm,12.0s						
KIS			MLR	MLR		
comp=Z,800nm,12.0s						
KIS			MLR	MLR		
comp=E,600nm,11.0s						
KIS			MLR	MLR		
comp=Z,700nm,14.0s						
ALN	**Alexandroupoli**	**15.36 285**	P	**Pn**	**20 04 32.8**	**+4.1**
ALN	**Alexandroupoli**	**15.36 285**	P	**Pn**	**20 04 32.8**	**+4.1**
GRER		**15.51 302** ⇓	*i*P	**Pn**	**20 04 32.6**	**+2.0**
GRER		**15.51 302** ⇓	*i*P	**Pn**	**20 04 32.6**	**+2.0**
SULR		**15.79 299**	P	**Pn**	**20 04 35.6**	**+1.3**
SULR		**15.79 299** ⇓	*i*P	**Pn**	**20 04 34.9**	**+0.6**
SULR		**15.79 299**	P	**Pn**	**20 04 35.6**	**+1.3**
DIM	**Dimitrovgrad**	**15.82 289**	P	**Pn**	**20 04 37.4**	**+2.7**
DIM	**Dimitrovgrad**	**15.82 289**	P	**Pn**	**20 04 37.4**	**+2.7**
IAS	**Iasi**	**15.82 308** ⇓	P	**Pn**	**20 04 34.5**	**-0.3**
IAS	**Iasi**	**15.82 308** ⇓	*i*P	**Pn**	**20 04 34.5**	**-0.3**
VRI	**Vrincioaia**	**15.83 303** ⇓	P	**Pn**	**20 04 35.1**	**+0.2**
VRI	**Vrincioaia**	**15.83 303** ⇓	*i*P	**Pn**	**20 04 35.1**	**+0.2**
VRI	**Vrincioaia**	**15.83 303**	P	**Pn**	**20 04 35.7**	**+0.8**
KDZ	**Kurdzhali**	**15.87 287**	P	**Pn**	**20 04 37.2**	**+1.8**
KDZ	**Kurdzhali**	**15.87 287**	P	**Pn**	**20 04 37.2**	**+1.8**
PLOR	**Plostina**	**15.88 303** ⇓	P	**Pn**	**20 04 36.3**	**+0.8**
PLOR	**Plostina**	**15.88 303** ⇓	*i*P	**Pn**	**20 04 36.3**	**+0.8**
PLOR	**Plostina**	**15.88 303**	P	**Pn**	**20 04 36.3**	**+0.8**
NAZ	**Nazwa, Dubai**	**15.98 146**	P	**Pn**	**20 04 39.3**	**+2.4**
SNR=7.2						
NAZ	**Nazwa, Dubai**	**15.98 146**	P	**Pn**	**20 04 39.3**	**+2.3**
SNR=7.2						
APE	**Apeiranthos**	**16.10 271** ⇓	P	**Pn**	**20 04 44.0**	**+5.6**
APE	**Apeiranthos**	**16.10 271** ⇓	*i*P	**Pn**	**20 04 44.0**	**+5.6**
TESR		**16.12 305** ⇓	*i*P	**Pn**	**20 04 38.4**	**-0.2**
PVL	**Pavlikeni**	**16.12 293**	P	**Pn**	**20 04 44.4**	**+5.8**
ASUD	**Al Ashush, Dub**	**16.16 147**	P	**Pn**	**20 04 42.7**	**+3.5**
SNR=14						
ASUD	**Al Ashush, Dub**	**16.16 147**	P	**Pn**	**20 04 42.7**	**+3.5**
SNR=14						
MLR	**Muntele Rosu**	**16.23 301** ⇑	P	**Pn**	**20 04 40.4**	**+0.4**
MLR	**Muntele Rosu**	**16.23 301** ⇑	*i*P	**Pn**	**20 04 40.4**	**+0.4**
MLR	**Muntele Rosu**	**16.23 301**	P	**Pn**	**20 04 40.9**	**+0.9**
RZN	**Rozhen**	**16.40 287**	P	**Pn**	**20 04 44.0**	**+1.8**
RZN	**Rozhen**	**16.40 287**	P	**Pn**	**20 04 44.0**	**+1.8**
ASHO	**Ashiyiah**	**16.42 145**	P	**Pn**	**20 04 45.3**	**+2.7**
SNR=7.1						
ASHO	**Ashiyiah**	**16.42 145**	P	**Pn**	**20 04 45.3**	**+2.7**
SNR=7.1						
PLD	**Plovdiv**	**16.44 289**	P	**Pn**	**20 04 43.7**	**+1.0**
PLD	**Plovdiv**	**16.44 289**	P	**Pn**	**20 04 43.5**	**+0.8**
PLD	**Plovdiv**	**16.44 289**	P	**Pn**	**20 04 45.2**	**+2.5**
LAST	**Lasithi**	**16.63 264**	P	**Pn**	**20 04 47.7**	**+2.5**
LAST	**Lasithi**	**16.63 264**	P	**Pn**	**20 04 47.7**	**+2.5**
DOPR	**Dopca**	**16.75 302** ⇑	*i*P	**Pn**	**20 04 48.3**	**+1.7**
DOPR	**Dopca**	**16.75 302** ⇑	*i*P	**Pn**	**20 04 48.3**	**+1.7**
KIEV	**Kiev**	**16.81 321** ⇓	*e*P	**Pn**	**20 04 44.9**	**-2.4**
KIEV			pmax	pmax		
comp=Z,121nm,1.4s						
KIEV	**Kiev**	**16.81 321** ⇓	*e*Pn	**Pn**	**20 04 44.9**	**-2.5**
comp=Z,121nm,1.4s						
KIEV	**Kiev**	**16.81 321** ⇓	*e*Pn	**Pn**	**20 04 44.9**	**-2.4**
comp=Z,121nm,1.4s						
VOIR		**16.82 300** ⇑	*i*P	**Pn**	**20 04 48.9**	**+1.4**
VOIR		**16.82 300**	P	**Pn**	**20 04 48.7**	**+1.2**
PGB	**Panagyurishte**	**16.88 290**	P	**Pn**	**20 04 51.5**	**+3.2**
PGB	**Panagyurishte**	**16.88 290**	P	**Pn**	**20 04 51.5**	**+3.2**
KMPD	**K-Podol'skiy**	**17.11 312**	P	**Pn**	**20 04 51.0**	**-0.1**
MMB	**Musomiste**	**17.14 287**	P	**Pn**	**20 04 54.4**	**+2.9**
MMB	**Musomiste**	**17.14 287**	P	**Pn**	**20 04 54.4**	**+2.9**
SRS	**Serrai**	**17.22 285**	P	**Pn**	**20 04 57.4**	**+4.8**
MPEP	**Malo Peshtene**	**17.29 293**	P	**Pn**	**20 04 59.2**	**+5.7**
SOH	**Sokhos**	**17.40 284**	P	**Pn**	**20 04 59.6**	**+4.7**
BURAR	**Bucovina Array**	**17.45 307** ⇑	P	**Pn**	**20 04 55.5**	**+0.1**
BURAR	**Bucovina Array**	**17.45 307** ⇑	*i*P	**Pn**	**20 04 55.5**	**+0.1**
BURAR	**Bucovina Array**	**17.45 307**	P	**Pn**	**20 04 55.4**	**0.0**
BUR08	**Bucovina Ar. S**	**17.47 308**	*e*Pn	**Pn**	**20 04 54.5**	**-1.2**
BUR08	**Bucovina Ar. S**	**17.47 308**	*e*Pn	**Pn**	**20 04 54.5**	**-1.2**
VTS	**Vitosha**	**17.59 290** ⇓	P	**Pn**	**20 05 00.0**	**+2.8**
VTS	**Vitosha**	**17.59 290**	P	**Pn**	**20 04 59.0**	**+1.8**
VTS	**Vitosha**	**17.59 290** ⇓	*i*P	**Pn**	**20 05 00.0**	**+2.8**
VTS	**Vitosha**	**17.59 290**	*i* P	**Pn**	**20 04 58.4**	**+1.2**
VTS	**Vitosha**	**17.59 290**	P	**Pn**	**20 04 59.0**	**+1.8**
HORT	**Hortiatis**	**17.60 283**	P	**Pn**	**20 05 01.5**	**+4.2**
OBN	**Obninsk**	**17.60 342** *d*	*i*P	**Pn**	**20 04 54.7**	**-2.5**
OBN			*i* S	**Sn**	**20 08 19.6**	**+6.1**
OBN			pmax	pmax		
comp=Z,313nm,1.6s						
OBN			MLR	MLR		
comp=Z,2μm,20.0s						
OBN	**Obninsk**	**17.60 342**	*e*Pn	**Pn**	**20 04 54.6**	**-2.5**
comp=Z,294nm,1.2s						
OBN			*e*Sn	**Sn**	**20 08 13.4**	**-0.1**
OBN	**Obninsk**	**17.60 342**	Pn	**Pn**	**20 04 56.6**	**-0.6**
comp=Z,1μm,0.8s,SNR=6.8						
OBN	**Obninsk**	**17.60 342**	*e*Pn	**Pn**	**20 04 54.6**	**-2.6**
comp=Z,294nm,1.2s						
OBN			*e*Sn	**Sn**	**20 08 13.4**	**-0.1**
OBN			*i* S	**Sn**	**20 08 19.6**	**+6.1**
KKB	**Krupnik**	**17.63 288**	*i* P	**Pn**	**20 05 00.7**	**+3.0**
KNT	**Kendrikon**	**17.75 285**	P	**Pn**	**20 05 02.7**	**+3.6**
KARN	**Karanos**	**17.78 266**	P	**Pn**	**20 05 01.8**	**+2.2**
KARN	**Karanos**	**17.78 266**	P	**Pn**	**20 05 01.8**	**+2.2**
ARQ	**Araqi**	**17.80 146**	P	**Pn**	**20 04 59.9**	**0.0**
SNR=29						
ARQ	**Araqi**	**17.80 146**	P	**Pn**	**20 04 59.9**	**-0.1**
SNR=29						
DID	**Didima**	**17.81 273**	P	**Pn**	**20 05 02.4**	**+2.5**
DID	**Didima**	**17.81 273**	P	**Pn**	**20 05 02.4**	**+2.5**
LTK	**Loutraki**	**17.93 275**	P	**Pn**	**20 05 04.3**	**+2.9**
MOS	**Moscow**	**17.94 345**	*e*P	**Pn**	**20 04 59.8**	**-1.6**
MOS			*e*S	**Sn**	**20 08 25.0**	**+3.2**
MOS			pmax	pmax		
comp=Z,202nm,1.0s						
MOS			pmax	pmax		
comp=Z,500nm,1.9s						
MOS			MLR	MLR		
comp=Z,2μm,19.0s						
MOS			MLR	MLR		
comp=N,2μm,19.0s						
MOS	**Moscow**	**17.94 345**	*e*P	**Pn**	**20 04 59.8**	**-1.6**
comp=N,500nm,1.9s						
MOS			*e*S	**Sn**	**20 08 25.0**	**+3.2**
comp=N,2μm,19.0s						
VAY	**Valandovo**	**18.00 286**	P	**Pn**	**20 05 04.9**	**+2.7**
VAY	**Valandovo**	**18.00 286**	*e*P	**Pn**	**20 05 02.9**	**+0.7**
LIT	**Litokhoron**	**18.08 282**	P	**Pn**	**20 05 05.9**	**+2.6**
GRG	**Griva**	**18.12 285**	P	**Pn**	**20 05 07.1**	**+3.3**
VLI	**Veliai**	**18.20 271**	*e*Pn	**Pn**	**20 05 07.8**	**+3.0**
VLI	**Veliai**	**18.20 271**	*e*PN	**Pn**	**20 05 07.8**	**+3.0**
VLI	**Veliai**	**18.20 271**	*e*Pn	**Pn**	**20 05 07.8**	**+3.0**
DSF	**Desfina**	**18.21 276**	P	**Pn**	**20 05 06.5**	**+1.6**
DSF	**Desfina**	**18.21 276**	P	**Pn**	**20 05 06.5**	**+1.6**
KYTH	**Kithira**	**18.23 270**	*e*Pn	**Pn**	**20 05 05.8**	**+0.7**
KYTH	**Kithira**	**18.23 270**	*e*PN	**Pn**	**20 05 05.8**	**+0.7**
KYTH	**Kithira**	**18.23 270**	*e*Pn	**Pn**	**20 05 05.8**	**+0.7**
GZR	**Gura Zlata**	**18.35 299**	P	**Pn**	**20 05 07.8**	**+1.2**
GZR	**Gura Zlata**	**18.35 299** ⇓	*i*P	**Pn**	**20 05 07.5**	**+0.9**
GZR	**Gura Zlata**	**18.35 299**	P	**Pn**	**20 05 07.8**	**+1.2**
DJES	**Djerdap**	**18.38 296** ⇑	*i*P	**Pn**	**20 05 06.3**	**-0.6**
GUR	**Goura**	**18.43 275**	P	**Pn**	**20 05 10.8**	**+3.2**
THL	**Klokotos Trika**	**18.48 280**	P	**Pn**	**20 05 09.6**	**+1.4**
THL	**Klokotos Trika**	**18.48 280**	P	**Pn**	**20 05 09.6**	**+1.4**
VLX	**Vlachokerasia**	**18.50 273**	P	**Pn**	**20 05 09.3**	**+0.8**
VLX	**Vlachokerasia**	**18.50 273**	P	**Pn**	**20 05 09.3**	**+0.8**
KALE	**Kalithea**	**18.52 277**	P	**Pn**	**20 05 10.8**	**+2.2**
BMR	**Baia Mare**	**18.55 306**	P	**Pn**	**20 05 09.6**	**+0.7**
TRIZ	**Trizonia**	**18.57 277**	P	**Pn**	**20 05 10.8**	**+1.5**
TRIZ	**Trizonia**	**18.57 277**	P	**Pn**	**20 05 10.8**	**+1.5**
BSY	**Bisya**	**18.62 145**	P	**Pn**	**20 05 10.1**	**+0.1**
SNR=20						
KZN	**Kozani**	**18.62 283**	P	**Pn**	**20 05 12.7**	**+2.8**
BARS	**Barje**	**18.63 290**	P	**Pn**	**20 05 11.6**	**+1.6**
BARS	**Barje**	**18.63 290**	*e*P	**Pn**	**20 05 08.6**	**-1.4**
BSYO	**Bisya**	**18.65 145**	P	**Pn**	**20 05 10.1**	**-0.2**
SNR=20						
LAKA	**Lakka**	**18.67 276**	P	**Pn**	**20 05 12.1**	**+1.7**
EFP	**Efpalio**	**18.70 277**	P	**Pn**	**20 05 11.5**	**+0.7**
EFP	**Efpalio**	**18.70 277**	P	**Pn**	**20 05 11.5**	**+0.7**
SMDO	**Samad**	**18.74 143**	P	**Pn**	**20 05 12.1**	**+0.7**
SNR=16						
SMDO	**Samad**	**18.74 143**	P	**Pn**	**20 05 12.1**	**+0.7**
SNR=16						
DRGR		**18.77 303** ⇓	P	**Pn**	**20 05 12.5**	**+0.9**
DRGR		**18.77 303** ⇓	*i*P	**Pn**	**20 05 12.5**	**+0.9**
DRGR		**18.77 303**	P	**Pn**	**20 05 12.5**	**+0.9**
SKO	**Skopje**	**18.86 288**	*e*P	**Pn**	**20 05 14.2**	**+1.4**
ITM	**Ithomi**	**18.89 273**	P	**Pn**	**20 05 16.1**	**+2.9**
FNA	**Florina**	**18.90 284**	P	**Pn**	**20 05 14.3**	**+1.0**
FNA	**Florina**	**18.90 284**	P	**Pn**	**20 05 14.4**	**+1.1**
BIA	**Bitola**	**18.94 285**	*e*P	**Pn**	**20 05 14.4**	**+0.7**
KRUS	**Krusevo**	**18.99 286**	*e*P	**Pn**	**20 05 14.9**	**+0.5**
LTBQ	**Tobruq**	**19.01 256**	*i* P	**Pn**	**20 05 09.5**	**-5.2**
comp=N,104nm,2.1s,SNR=145						
KBL	**Kabul**	**19.09 95** ⇑	*i*P	**Pn**	**20 05 17.4**	**+1.8**
KBL			pmax	pmax		
comp=Z,60nm,1.0s						
KBL	**Kabul**	**19.09 95** ⇑	*i*P	**Pn**	**20 05 17.4**	**+1.8**
comp=Z,60nm,1.0s						
KBL	**Kabul**	**19.09 95**	*i* P	**Pn**	**20 05 17.4**	**+1.8**
comp=Z,60nm,1.0s						
RLS	**Riolos of Patr**	**19.09 276**	*e*Pn	**Pn**	**20 05 17.4**	**+1.8**
RLS	**Riolos of Patr**	**19.09 276**	*e*PN	**Pn**	**20 05 17.4**	**+1.8**
RLS	**Riolos of Patr**	**19.09 276**	*e*Pn	**Pn**	**20 05 17.4**	**+1.8**
LVV	**L'vov**	**19.11 313**	*e*P	**Pn**	**20 05 14.1**	**-1.6**
LVV			*e*S	**Sn**	**20 08 43.1**	**-6.9**
LVV	**L'vov**	**19.11 313**	*e*P	**Pn**	**20 05 14.1**	**-1.6**
NEST	**Nestorio**	**19.17 283**	P	**Pn**	**20 05 18.4**	**+1.9**
KK31	**Karatay Array**	**19.17 69**	*i* P	**Pn**	**20 05 15.0**	**-1.5**
KK31			pmax	pmax		
comp=Z,108nm,1.2s						
KK31	**Karatay Array**	**19.17 69**	*i* P	**Pn**	**20 05 15.0**	**-1.5**
comp=Z,108nm,1.2s						
KKAR	**Karatay Array**	**19.17 69** ⇑	*e*P	**Pn**	**20 05 14.3**	**-2.2**
KKAR			*e*S	**Sn**	**20 08 35.8**	**-16**
KKAR			pmax	pmax		
comp=Z,78nm,1.0s						
KKAR	**Karatay Array**	**19.17 69** ⇑	*e*Pn	**Pn**	**20 05 14.3**	**-2.2**
comp=Z,78nm,1.0s						
KKAR			*e*S	**Sn**	**20 08 35.8**	**-16**
BZS	**Buzias**	**19.20 299** ⇓	*i*P	**Pn**	**20 05 16.0**	**-0.8**
BZS	**Buzias**	**19.20 299**	P	**Pn**	**20 05 17.0**	**+0.2**
SVIS	**Svilajnac**	**19.23 295**	*e*P	**Pn**	**20 05 17.3**	**+0.1**
TRPA	**Tarpa**	**19.31 307** ⇓	*i*P	**Pn**	**20 05 17.2**	**-1.0**
TRPA	**Tarpa**	**19.31 307** ⇓	*e*P	**Pn**	**20 05 17.5**	**-0.7**
JMDO	**Jabal Madar**	**19.36 144**	P	**Pn**	**20 05 19.0**	**+0.1**
SNR=11						
JMDO	**Jabal Madar**	**19.36 144**	P	**Pn**	**20 05 19.0**	**+0.2**
SNR=11						
GRUS	**Gruza**	**19.54 294**	*e*P	**Pn**	**20 05 20.4**	**-0.5**
WBK	**Wadi Bani Khal**	**19.57 141**	P	**Pn**	**20 05 26.4**	**+5.1**
SNR=9.1						
UZH	**Uzhgorod**	**19.65 308** ⇑	*i*P	**Pn**	**20 05 21.3**	**-0.9**
UZH			*e*S	**Sn**	**20 08 55.0**	**-8.1**
UZH	**Uzhgorod**	**19.65 308**	*i* P	**Pn**	**20 05 21.3**	**-0.9**
ARU	**Arti**	**19.69 21** *d*	*i*P	**Pn**	**20 05 19.7**	**-2.9**
ARU			S	**Sn**	**20 09 00.1**	**-3.9**
ARU			pmax	pmax		
comp=Z,60nm,1.0s						
ARU			MLR	MLR		
comp=Z,2μm,16.0s						
ARU	**Arti**	**19.69 21** ⇓	*e*P	**Pn**	**20 05 19.5**	**-3.1**
comp=Z,82nm,0.9s						
ARU			*e*S	**Sn**	**20 08 54.6**	**-9.3**
ARU	**Arti**	**19.69 21**	P	**Pn**	**20 05 20.5**	**-2.1**
comp=Z,304nm,1.2s,SNR=17						
ARU	**Arti**	**19.69 21** ⇓	*e*P	**Pn**	**20 05 19.5**	**-3.1**
comp=Z,82nm,0.9s						
VLS	**Valsamata**	**19.76 276**	P	**Pn**	**20 05 22.4**	**-1.2**
VLS	**Valsamata**	**19.76 276**	P	**Pn**	**20 05 22.4**	**-1.2**
KWP	**Kalwaria Pacla**	**19.79 311**	*e*P	**Pn**	**20 05 22.4**	**-1.5**
KWP			*e*pP	pP	20 05 24.2	+1.1
KWP			LMZ		20 16 29.4	
comp=Z,900nm,15.3s						
KWP	**Kalwaria Pacla**	**19.79 311** ⇓	*e*P	**Pn**	**20 05 22.2**	**-1.7**
comp=Z,82nm,0.9s						
KWP	**Kalwaria Pacla**	**19.79 311** ⇑	*i*P	**Pn**	**20 05 22.1**	**-1.8**
KWP	**Kalwaria Pacla**	**19.79 311**	*e*P	**Pn**	**20 05 22.4**	**-1.5**
comp=Z,900nm,15.3s						
PVY	**Plav**	**19.97 290**	P	**Pn**	**20 05 27.0**	**+0.9**
MICGM	**Minsk**	**19.98 328**	*e*P	**Pn**	**20 05 21.0**	**-5.0**
MNK	**Minsk**	**19.99 328**	*e*P	**Pn**	**20 05 21.0**	**-5.2**
IVA	**Berane**	**20.04 290**	P	**P**	**20 05 27.0**	**+1.8**
IVA	**Berane**	**20.04 290**	P	**P**	**20 05 27.0**	**+1.8**
DIVS	**Divibare**	**20.08 294**	P	**P**	**20 05 24.7**	**-0.9**
DIVS	**Divibare**	**20.08 294**	P	**P**	**20 05 24.7**	**-0.9**
KEK	**Kerkira**	**20.17 281**	P	**P**	**20 05 25.2**	**-1.5**
KEK	**Kerkira**	**20.17 281**	P	**P**	**20 05 25.2**	**-1.5**
CRVS	**Cervenica-Dubn**	**20.26 308**	*e*P	**P**	**20 05 28.2**	**+0.7**
CRVS			pmax	pmax		
comp=Z,78nm,1.1s						
CRVS	**Cervenica-Dubn**	**20.26 308**	*e*P	**P**	**20 05 28.2**	**+0.7**
comp=Z,78nm,1.1s						
CRVS	**Cervenica-Dubn**	**20.26 308**	*e*P	**P**	**20 05 28.2**	**+0.7**
comp=Z,78nm,1.1s						
FRGS	**Fruska Gora**	**20.36 297** ⇓	*i*P	**P**	**20 05 28.8**	**+0.2**
BBLS	**Lazići**	**20.48 293**	P	**P**	**20 05 31.2**	**+1.3**
BBLS	**Lazići**	**20.48 293**	P	**P**	**20 05 31.2**	**+1.3**
STHS	**Stebnicka Huta**	**20.58 309**	*e*P	**P**	**20 05 31.2**	**+0.2**
STHS			pmax	pmax		
comp=Z,23nm,1.0s						
STHS	**Stebnicka Huta**	**20.58 309**	*e*P	**P**	**20 05 31.2**	**+0.2**
comp=Z,23nm,1.0s						
STHS	**Stebnicka Huta**	**20.58 309**	*e*P	**P**	**20 05 31.2**	**+0.2**
STHS	**Stebnicka Huta**	**20.58 309**	*e*P	**P**	**20 05 31.2**	**+0.2**
comp=Z,23nm,1.0s						
SVE	**Sverdlovsk**	**20.64 24** ⇓	*e*P	**P**	**20 05 31.4**	**-0.2**
SVE			*e*S	**S**	**20 09 19.7**	**-3.1**
SVE			pmax	pmax		
comp=Z,222nm,1.4s						
SVE			MLR	MLR		
comp=Z,1μm,16.0s,MS4.4						
SVE	**Sverdlovsk**	**20.64 24**	*e*P	**P**	**20 05 31.4**	**-0.2**
comp=Z,222nm,1.4s						
SVE			*e*S	**S**	**20 09 19.7**	**-3.1**
comp=Z,1μm,16.0s						
NACGM	**Naroch**	**20.71 328**	*e*P	**P**	**20 05 28.0**	**-4.4**
KECS	**Kecovo**	**20.72 306**	*e*P	**P**	**20 05 33.1**	**+0.5**
KECS			pmax	pmax		
comp=Z,21nm,0.9s						
KECS	**Kecovo**	**20.72 306**	*e*P	**P**	**20 05 33.1**	**+0.5**
comp=Z,20nm,0.9s						
KECS	**Kecovo**	**20.72 306**	*e*P	**P**	**20 05 33.1**	**+0.5**
UPM	**Unac-Piva**	**20.79 291**	P	**P**	**20 05 34.0**	**+0.7**
UPM	**Unac-Piva**	**20.79 291**	P	**P**	**20 05 34.0**	**+0.7**
PSZ	**Piszkesteto**	**20.93 305** ⇓	*e*P	**P**	**20 05 34.5**	**-0.3**
PSZ			pmax	pmax		
comp=Z,92nm,1.4s						
PSZ	**Piszkesteto**	**20.93 305** ⇓	*e*P	**P**	**20 05 34.5**	**-0.2**
comp=Z,92nm,1.4s						
PSZ	**Piszkesteto**	**20.93 305** ⇓	*e*P	**P**	**20 05 35.1**	**+0.3**
PSZ	**Piszkesteto**	**20.93 305**	*e*P	**P**	**20 05 34.5**	**-0.3**
comp=Z,92nm,1.4s						
NIE	**Niedzica**	**21.15 309**	*e*P	**P**	**20 05 37.9**	**+0.8**
NIE	**Niedzica**	**21.15 309**	*e*P	**P**	**20 05 37.9**	**+0.8**
IIGN	**Ignalina**	**21.25 328**	*e*P	**P**	**20 05 37.4**	**-0.8**
IIGN	**Ignalina**	**21.25 328**	*e*P	**P**	**20 05 37.4**	**-0.8**
PKSM	**Moragy**	**21.35 299** ⇓	*i*P	**P**	**20 05 39.2**	**-0.2**
PKSM	**Moragy**	**21.35 299**	P	**P**	**20 05 39.8**	**+0.4**
BUD	**Budapest**	**21.38 303** ⇓	*e*P	**P**	**20 05 40.0**	**+0.4**
BUD	**Budapest**	**21.38 303** ⇓	*e*P	**P**	**20 05 40.0**	**+0.4**
ZRNK	**Zerenda**	**21.44 41**	P	**P**	**20 05 40.0**	**-0.3**
ZRNK			pmax	pmax		
comp=Z,83nm,0.9s,mb5.1						
ZRNK	**Zerenda**	**21.44 41**	P	**P**	**20 05 40.0**	**-0.3**
comp=Z,83nm,0.9s,mb5.1						
ISAL	**Salakas**	**21.45 328**	*e*P	**P**	**20 05 39.5**	**-0.8**
ISAL	**Salakas**	**21.45 328**	*e*P	**P**	**20 05 39.5**	**-0.8**
AML	**Almayashu**	**21.48 72**	P	**P**	**20 05 42.7**	**+1.9**
SNR=18						
AML	**Almayashu**	**21.48 72**	*e*P	**P**	**20 05 39.0**	**-1.8**
comp=Z,67nm,1.1s,mb4.9						
AML	**Almayashu**	**21.48 72**	*e*P	**P**	**20 05 39.0**	**-1.7**
comp=Z,67nm,1.1s,mb4.9						
EKS2	**Erkin-Say**	**21.54 70**	P	**P**	**20 05 42.7**	**+1.2**
SNR=83						
EKS2	**Erkin-Say**	**21.54 70** ⇑	*e*P	**P**	**20 05 42.1**	**+0.7**
comp=Z,59nm,0.9s,mb5.0						
EKS2	**Erkin-Say**	**21.54 70** ⇑	*e*P	**P**	**20 05 42.1**	**+0.7**
comp=Z,59nm,0.9s,mb5.0						
RHK3	**Tenkes**	**21.56 298** ⇑	*e*P	**P**	**20 05 41.8**	**+0.2**
CEP	**Cherat**	**21.56 95** ⇓	P	**P**	**20 05 43.4**	**+1.6**
PKS9	**Tamasi**	**21.67 300** ⇑	*e*P	**P**	**20 05 43.4**	**+0.6**
OJC	**Ojcow**	**21.75 311**	*e*P	**P**	**20 05 42.7**	**-0.9**
OJC			*es*P	sP	20 05 54.6	+10
OJC	**Ojcow**	**21.75 311**	*e*P	**P**	**20 05 42.7**	**-0.9**
SUW	**Suwalki**	**21.76 322**	*e*P	**P**	**20 05 42.7**	**-1.0**
SUW			*ep*P		20 05 45.7	
SUW			*e*S	**S**	**20 09 45.9**	**+1.1**
SUW			LMZ		20 14 26.9	
comp=Z,1μm,20.5s						
SUW	**Suwalki**	**21.76 322** ⇓	*e*P	**P**	**20 05 42.1**	**-1.5**
comp=Z,660nm,1.0s						
SUW	**Suwalki**	**21.76 322** ⇓	*e*P	**P**	**20 05 42.1**	**-1.6**
comp=Z,660nm,1.0s						
SUW			*e*S	**S**	**20 09 45.9**	**+1.1**
comp=Z,1μm,20.5s						
LIKS	**Likavka**	**21.77 307**	*e*P	**P**	**20 05 43.8**	**0.0**
LIKS			pmax	pmax		
comp=Z,70nm,1.1s,mb5.0						
LIKS	**Likavka**	**21.77 307**	*e*P	**P**	**20 05 43.8**	**0.0**
comp=Z,70nm,1.1s,mb5.0						
LIKS	**Likavka**	**21.77 307**	*e*P	**P**	**20 05 43.8**	**0.0**
LIKS	**Likavka**	**21.77 307**	*e*P	**P**	**20 05 43.8**	**0.0**
comp=Z,70nm,1.1s,mb5.0						
VYHS	**Vyhne**	**21.77 306**	*e*P	**P**	**20 05 44.2**	**+0.3**
VYHS			pmax	pmax

OKC Ostrava-Krasne 22.62 309 *e*P **P 20 05 52.5 -0.3**
OKC *e*S **S 20 10 11.3 +10**
OKC AMS AMS 20 18 30.0
comp=Z,700nm,13.4s
OKC Ostrava-Krasne 22.62 309 *e*P **P 20 05 52.5 -0.3**
comp=Z,700nm,13.4s
KZA Kyzart 22.63 72 P **P 20 05 55.2 +2.1**
SNR=14
KZA Kyzart 22.63 72 *e*P **P 20 05 54.4 +1.2**
comp=Z,101nm,1.2s,mb5.1
KZA Kyzart 22.63 72 *e*P **P 20 05 54.3 +1.2**
comp=Z,101nm,1.2s,mb5.1
RAC Raciborz 22.67 309 *e*P **P 20 05 53.2 -0.2**
RAC Raciborz 22.67 309 *e*P **P 20 05 53.2 -0.2**
CHCP Chirah Chowk 22.68 94 P **P 20 05 54.6 +0.9**
CHCP S **S 20 10 12.0 +9.0**
MODS Modra-Piesok 22.74 305 *e*P **P 20 05 55.7 +1.5**
MODS Modra-Piesok 22.74 305 *e*P **P 20 05 55.7 +1.5**
ZST Bratislava 22.81 304 *e*P **P 20 05 55.4 +0.5**
ZST *e* 20 06 00.5
ZST pmax pmax
comp=Z,12nm,0.9s,mb4.3
ZST Bratislava 22.81 304 *e*P **P 20 05 55.4 +0.5**
comp=Z,12nm,0.9s,mb4.3
ZST *e* 20 06 00.5
ZST Bratislava 22.81 304 *e*P **P 20 05 55.4 +0.5**
ZST *e* 20 06 00.5
ZST Bratislava 22.81 304 *e*P **P 20 05 55.4 +0.5**
comp=Z,12nm,0.9s,mb4.3
TKM2 Tokmak 2 22.89 70 P **P 20 05 56.6 +0.8**
SNR=55
TKM2 Tokmak 2 22.89 70⇑ *e*P **P 20 05 55.5 -0.3**
TKM2 pmax pmax
comp=Z,69nm,1.0s,mb5.0
TKM2 Tokmak 2 22.89 70⇑ *e*P **P 20 05 55.5 -0.3**
comp=Z,69nm,1.0s,mb5.0
TKM2 Tokmak 2 22.89 70 *e*P **P 20 05 55.5 -0.3**
comp=Z,69nm,1.0s,mb5.0
MORC Moravsky Berou 22.97 308 ⇓P **P 20 05 56.5 -0.1**
MORC Moravsky Berou 22.97 308⇓*e*P **P 20 05 55.3 -1.2**
comp=Z,33nm,1.2s,mb4.6
MORC Moravsky Berou 22.97 308⇓*i*P **P 20 05 56.5 -0.1**
MORC Moravsky Berou 22.97 308⇓*i*P **P 20 05 56.5 -0.1**
KOGS Kog 23.02 299 P **P 20 05 57.0 -0.2**
KOGS Kog 23.02 299 P **P 20 05 57.0 -0.2**
SOP Sopron 23.05 302⇓*e*P **P 20 05 57.1 -0.3**
SOP Sopron 23.05 302⇓*e*P **P 20 05 57.1 -0.3**
CUC Castrocucco 23.20 283⇓*i*P **P 20 05 57.7 -1.4**
comp=Z,33nm,0.8s,mb4.8
CUC Castrocucco 23.20 283⇓*i*P **P 20 05 57.7 -1.4**
comp=Z,33nm,0.8s,mb4.8
PUL Pulkovo 23.30 340⇓*e*P **P 20 06 00.4 +0.4**
PUL pmax pmax
comp=Z,271nm,1.2s,mb5.5
PUL Pulkovo 23.30 340 *e*P **P 20 06 00.4 +0.4**
comp=Z,271nm,1.2s,mb5.5
VSU Vasula 23.34 334*d*i P **P 20 05 58.4 -1.9**
VSU Vasula 23.34 334 *i* P **P 20 05 58.4 -1.9**
ULHL Ulahol 23.37 71 P **P 20 06 04.0 +3.1**
SNR=26
KSH Kashi 23.38 78 P **P 20 06 00.6 -0.4**
KSH *e*pP 20 06 09.2
KSH *e*sP sP 20 06 13.3 +11
KSH *e*PP 20 06 30.2
KSH *e*S **S 20 10 03.7 -11**
KSH *e*sS sS 20 10 19.1 +3.6
KSH pmax pmax
comp=Z,15nm,0.7s,mb4.5
KSH LR LR
comp=N,3μm,13.3s,MS5.1
KSH LR LR
comp=E,2μm,10.1s,MS5.1
KSH LR LR
comp=Z,2μm,10.3s,MS4.8
CEL Celeste 23.39 278 *e*P **P 20 05 58.9 -2.2**
comp=Z,35nm,0.8s,mb4.8
CEL Celeste 23.39 278 *e*P **P 20 05 58.9 -2.2**
comp=Z,35nm,0.8s,mb4.8
VRAC Vranov 23.42 307 P **P 20 06 02.0 +0.6**
comp=Z,22nm,0.9s,mb4.6,baz=116,slow=10,SNR=28
VRAC LR LR 20 17 12.4
comp=Z,384nm,18.0s,MS3.9,baz=104,slow=42
VRAC Vranov 23.42 307 ⇑P **P 20 06 01.2 -0.2**
VRAC Vranov 23.42 307⇑*i*P **P 20 06 01.1 -0.3**
VRAC Vranov 23.42 307 *e*P **P 20 06 01.1 -0.3**
CONA Conrad Observa 23.56 303⇓*i*pP pP 20 06 02.2 -1.2
comp=Z,31nm,1.1s,SNR=16
CONA Conrad Observa 23.56 303 P **P 20 06 02.2 -0.6**
comp=Z,31nm,1.1s,mb4.7,SNR=16
BOJS Bojanci 23.59 297 P **P 20 06 03.0 -0.2**
BOJS Bojanci 23.59 297 P **P 20 06 03.0 -0.2**
ARSA Arzberg 23.65 301 P **P 20 06 03.9 +0.2**
ARSA Arzberg 23.65 301⇓*i*pP pP 20 06 03.2 -1.1
comp=Z,32nm,0.9s,SNR=24
ARSA Arzberg 23.65 301 P **P 20 06 03.9 +0.2**
SOKA Soboth 23.89 300⇓*i*pP pP 20 06 05.8 -0.7
comp=Z,64nm,1.3s
SOKA Soboth 23.89 300 P **P 20 06 05.8 -0.1**
comp=Z,64nm,1.3s,mb4.9
DPC Dobruska-Polom 23.89 309 *e*P **P 20 06 05.7 -0.2**
DPC MLR MLR
comp=Z,600nm,12.5s,MS4.3
DPC Dobruska-Polom 23.89 309 *e*P **P 20 06 05.7 -0.2**
DPC *e*S S 20 10 46.3 +24
DPC AMS AMS 20 19 00.0
comp=Z,600nm,12.5s
DPC Dobruska-Polom 23.89 309 *e*P **P 20 06 05.7 -0.2**
comp=Z,600nm,12.5s
LKFR Kufra 24.02 240 *i* P **P 20 06 07.0 -0.3**
comp=Z,189nm,1.7s,mb5.2,SNR=146
KSP Ksiaz 24.07 310 *e*P **P 20 06 07.4 0.0**
KSP *e*S **S 20 10 23.4 -2.0**
KSP LMZ 20 18 37.1
comp=Z,2μm,16.4s
KSP Ksiaz 24.07 310⇓*e*P **P 20 06 07.3 -0.2**
TREC Trest 24.12 306 *e*P **P 20 06 08.2 +0.3**
TREC MLR MLR
comp=Z,600nm,15.1s,MS4.2
TREC Trest 24.12 306 *e*P **P 20 06 08.2 +0.3**
TREC AMS AMS 20 20 30.0
comp=Z,600nm,15.1s
TREC Trest 24.12 306 *e*P **P 20 06 08.2 +0.3**
comp=Z,600nm,15.1s
UPC Upice 24.13 309 *e*P **P 20 06 08.2 +0.2**
UPC Upice 24.13 309 *e*P **P 20 06 08.2 +0.2**
UPC Upice 24.13 309 *e*P **P 20 06 08.2 +0.2**
CEY Cerknica 24.19 297 P **P 20 06 09.0 +0.3**
CEY Cerknica 24.19 297 P **P 20 06 09.0 +0.3**
OBKA Obir 24.20 299 P **P 20 06 09.3 +0.6**
OBKA Obir 24.20 299⇓*i*pP pP 20 06 09.0 -0.3
comp=Z,29nm,1.4s,SNR=7.3
OBKA Obir 24.20 299 P **P 20 06 09.3 +0.6**
CRNS Crni Vrh 24.34 298 *e*P **P 20 06 10.3 +0.2**
VOY Vojsko 24.59 298 *e*P **P 20 06 12.0 -0.3**
VOY *e* 20 06 25.6
VOY *e* 20 07 11.8
VOY Vojsko 24.59 298 *e*P **P 20 06 12.0 -0.3**
VOY *e* 20 06 25.6
VOY *e* 20 07 11.8
VOY Vojsko 24.59 298 *e*P **P 20 06 12.0 -0.3**
MOA Molln 24.60 302 P **P 20 06 12.1 -0.2**
MOA Molln 24.60 302⇓*i*pP pP 20 06 11.6 -1.3
comp=Z,44nm,1.3s,SNR=18
MOA Molln 24.60 302 P **P 20 06 12.1 -0.2**
TRI Trieste 24.65 297 *e*P **P 20 06 11.7 -1.1**
TRI pmax pmax
comp=Z,43nm,1.1s,mb4.9
TRI Trieste 24.65 297 *e*P **P 20 06 11.7 -1.2**
comp=Z,43nm,1.1s,mb4.9
TRI Trieste 24.65 297 *e*P **P 20 06 11.7 -1.1**
comp=Z,43nm,1.1s,mb4.9
VAE Valguarnera 24.69 277 P **P 20 06 14.3 +1.0**
comp=Z,20nm,1.1s,mb4.6,baz=50,slow=15,SNR=6.3
VAE Valguarnera 24.69 277 P **P 20 06 14.3 +1.0**
VAE Valguarnera 24.69 277 P **P 20 06 14.3 +1.0**
AQU L'Aquila 24.83 289 *e*P **P 20 06 14.1 -0.4**
AQU pmax pmax
comp=Z,51nm,1.0s,mb5.0
AQU L'Aquila 24.83 289 *e*P **P 20 06 14.1 -0.5**
comp=Z,51nm,1.0s,mb5.0
AQU L'Aquila 24.83 289⇓*i*P **P 20 06 14.8 +0.3**
AQU L'Aquila 24.83 289 *e*P **P 20 06 14.1 -0.4**
comp=Z,51nm,1.0s,mb5.0
MYKA Terra Mystica 24.83 299⇓*i*sP sP 20 06 14.4 -1.0
comp=Z,27nm,1.1s

MYKA Terra Mystica 24.83 299 P **P 20 06 14.4 -0.1**
comp=Z,27nm,1.1s,mb4.7
PRU Pruhonice 24.89 307 *e*P **P 20 06 15.2 +0.2**
PRU MLR MLR
comp=Z,700nm,15.9s,MS4.3
PRU Pruhonice 24.89 307 *e*P **P 20 06 15.2 +0.2**
PRU *e*S **S 20 10 52.7 +14**
PRU AMS AMS 20 18 30.0
comp=Z,700nm,15.9s
PRU Pruhonice 24.89 307 *e*P **P 20 06 15.2 +0.2**
comp=Z,700nm,15.9s
PVCC Panska Ves 25.02 308 *e*P **P 20 06 16.0 -0.1**
PVCC MLR MLR
comp=Z,800nm,14.3s,MS4.4
PVCC Panska Ves 25.02 308 *e*P **P 20 06 16.0 -0.1**
PVCC AMS AMS 20 18 30.0
comp=Z,800nm,14.3s
PVCC Panska Ves 25.02 308 *e*P **P 20 06 16.0 -0.1**
comp=Z,800nm,14.3s
KBA Koelnbreinsper 25.09 300⇓*i*sP sP 20 06 16.9 -0.8
comp=Z,97nm,0.9s,SNR=50
KBA Koelnbreinsper 25.09 300 P **P 20 06 16.9 0.0**
comp=Z,97nm,0.9s,mb5.3,SNR=50
GEC2 GERESS Array S 25.16 304 *e*P **P 20 06 17.8 +0.4**
comp=Z,72nm,1.3s,mb5.0
GEC2 GERESS Array S 25.16 304 *e*P **P 20 06 17.8 +0.4**
GEC2 pmax pmax
comp=Z,72nm,1.3s,mb5.0
GEC2 GERESS Array S 25.16 304 *e*P **P 20 06 17.8 +0.4**
comp=Z,72nm,1.3s,mb5.0
KHC Kasperske Hory 25.30 305 *e*P **P 20 06 18.6 -0.1**
KHC MLR MLR
comp=Z,700nm,17.3s,MS4.2
KHC Kasperske Hory 25.30 305 *e*P **P 20 06 17.4 -1.3**
comp=Z,76nm,1.2s,mb5.1
KHC Kasperske Hory 25.30 305 *e*P **P 20 06 18.6 -0.1**
KHC *e*S **S 20 10 59.0 +14**
KHC AMS AMS 20 18 10.0
comp=Z,700nm,17.3s
KHC Kasperske Hory 25.30 305 P **P 20 06 18.6 -0.1**
BHJ Bhuj 25.47 120 *e*PKP **P 20 06 19.5 -1.0**
BHJ AMb AMB 20 06 28.0
comp=Z,34nm,1.2s,mb4.8
BRG Berggiesshubel 25.50 309 *e*P **P 20 06 20.5 0.0**
comp=Z,25nm,1.2s,mb4.6
BRG Berggiesshubel 25.50 309 *e*P **P 20 06 20.1 -0.4**
comp=Z,11nm,1.0s,mb4.3
BRG *e* 20 06 23.5
comp=Z,24nm,1.2s
BRG *e* 20 06 43.1
comp=Z,23nm,1.3s
BRG *e* 20 06 58.0
comp=Z,37nm,1.6s
BRG
comp=N,606nm,14.5s
BRG
comp=E,406nm,18.1s
BRG
comp=Z,726nm,15.4s
BRG Berggiesshubel 25.50 309 *e*P **P 20 06 20.1 -0.4**
BRG *e* 20 06 23.5
BRG *e* 20 06 58.0
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
BRG MLR MLR
comp=N,363nm,14.5s,MS4.1
BRG MLR MLR
comp=E,243nm,18.1s,MS4.1
BRG MLR MLR
comp=Z,435nm,15.4s,MS4.1
BRG Berggiesshubel 25.50 309 *e*P **P 20 06 20.1 -0.4**
comp=Z,7.0nm,1.0s,mb4.2
RJOB Jochberg 25.56 302 *e*P **P 20 06 21.1 0.0**
comp=Z,51nm,1.0s,mb5.0
ABTA Abfaltersbach 25.62 299⇓*i*pP pP 20 06 21.2 -1.1
comp=Z,32nm,1.1s,SNR=22
ABTA Abfaltersbach 25.62 299 P **P 20 06 21.2 -0.4**
comp=Z,32nm,1.1s,mb4.8,SNR=22
WET Wettzell 25.75 305 *e*P **P 20 06 22.6 -0.2**
comp=Z,37nm,1.0s,mb4.9
WET Wettzell 25.75 305 *e*P **P 20 06 22.6 -0.2**
WET pmax pmax
comp=Z,37nm,1.0s,mb4.9
WET Wettzell 25.75 305 *e*P **P 20 06 22.6 -0.2**
comp=Z,37nm,1.0s,mb4.9
JOF Joensuu 25.83 345 *e*P **P 20 06 22.0 -1.4**
JOF Joensuu 25.83 345 *e*p **P 20 06 22.0 -1.4**
JOF Joensuu 25.83 345 *e*P **P 20 06 22.0 -1.4**
FINES FINESS Array B 25.88 338 P **P 20 06 21.6 -2.2**
comp=Z,21nm,0.8s,mb4.7,baz=132,slow=10,SNR=33
FINES LR LR 20 17 52.4
comp=Z,278nm,18.1s,MS3.8,baz=119,slow=40
FINES FINESS Array B 25.88 338 P **P 20 06 21.6 -2.2**
FINES pmax pmax
comp=Z,21nm,0.8s
FINES MLR MLR
comp=Z,278nm,18.1s
FINES FINESS Array B 25.88 338 P **P 20 06 21.6 -2.2**
comp=Z,278nm,18.1s
KURK Kurchatov 26.03 52 P **P 20 06 26.5 +1.2**
comp=Z,191nm,0.9s,mb5.6,SNR=10
KURK Kurchatov 26.03 52 P **P 20 06 25.6 +0.3**
comp=Z,27nm,0.7s,mb4.9,baz=262,slow=9.3,SNR=48
KURK LR LR 20 18 30.9
comp=Z,875nm,20.2s,MS4.3,baz=255,slow=41
KURK Kurchatov 26.03 52*c i*P **P 20 06 26.1 +0.8**
KURK pmax pmax
comp=Z,17nm,0.6s,mb4.8
KURK Kurchatov 26.03 52 P **P 20 06 25.6 +0.3**
KURK Kurchatov 26.03 52 P **P 20 06 26.8 +1.5**
SNR=13
RUE Ruedersdorf 26.08 312 *e*P **P 20 06 25.7 -0.1**
comp=Z,56nm,1.1s,mb5.0
RUE Ruedersdorf 26.08 312 *e*P **P 20 06 22.5 -3.3**
comp=Z,50nm,0.9s,mb5.0
RUE Ruedersdorf 26.08 312 *e*P **P 20 06 22.5 -3.3**
comp=Z,50nm,0.9s,mb5.0
CLL Collm 26.19 310 *e*P **P 20 06 27.1 +0.4**
comp=Z,36nm,1.1s,mb4.8
CLL Collm 26.19 310⇓*i*P **P 20 06 25.9 -0.8**
CLL pmax pmax
comp=Z,36nm,1.1s,mb4.8
CLL MLR MLR
comp=Z,300nm,19.5s,MS3.8
CLL Collm 26.19 310⇓*i*P **P 20 06 25.9 -0.8**
comp=Z,36nm,1.1s,mb4.8
CLL *e*S **S 20 11 06.0 +6.7**
CLL LR LR
comp=Z,300nm,19.5s,MS3.8
CLL Collm 26.19 310⇓*i*P **P 20 06 25.9 -0.8**
comp=Z,36nm,1.1s,mb4.8
CLL *i* 20 06 44.9
CLL *e*S **S 20 11 06.0 +6.7**
comp=N,100nm,31.2s
CLL *e*S **S 20 11 06.0 +6.7**
comp=E,300nm,21.1s
CLL *e*S **S 20 11 06.0 +6.7**
comp=Z,300nm,23.1s
CLL *e* 20 11 47.0
CLL *e* 20 12 36.0
CLL LV 20 19 00.0
comp=Z,300nm,19.5s
CLL Collm 26.19 310 *i* P **P 20 06 25.9 -0.8**
comp=Z,300nm,19.5s
NKC Novy Kostel 26.25 307 *e*P **P 20 06 27.2 -0.2**
NKC MLR MLR
comp=Z,900nm,10.6s,MS4.6
NKC Novy Kostel 26.25 307 *e*P **P 20 06 27.2 -0.2**
NKC pmax pmax
comp=Z,900nm,10.6s
NKC Novy Kostel 26.25 307 *e*P **P 20 06 27.2 -0.2**
comp=Z,900nm,10.6s
WTTA Wattenberg 26.27 300⇓*i*P **P 20 06 26.5 -1.0**
comp=Z,61nm,1.2s,mb5.0,SNR=17
WTTA Wattenberg 26.27 300 P **P 20 06 27.1 -0.5**
TANN Tannenbergstha 26.29 307 *e*P **P 20 06 27.3 -0.4**
comp=Z,28nm,1.8s,mb4.5
WERN Wernitzgruen 26.31 307 *e*P **P 20 06 28.0 +0.1**
comp=Z,48nm,1.7s,mb4.8
WATA Walderalm 26.32 300⇓*i*P **P 20 06 27.0 -1.0**
comp=Z,80nm,1.3s,mb5.1,SNR=18
WATA Walderalm 26.32 300 P **P 20 06 27.3 -0.7**
KAF Kangasniemi 26.35 339 *e*P **P 20 06 26.6 -1.5**
KAF Kangasniemi 26.35 339 *e*p **P 20 06 26.6 -1.5**
KAF Kangasniemi 26.35 339 *e*P **P 20 06 26.6 -1.5**
SDNR Sundarnagar 26.39 96 *e*PKP **P 20 06 29.5 +0.7**

BSD Bornholm Skovb 26.46 319 *i* P **P 20 06 27.2 -2.0**
BSD MLR MLR
comp=Z,780nm,21.0s,MS4.2
BSD Bornholm Skovb 26.46 319 *i* P **P 20 06 27.2 -2.0**
BSD *i* S **S 20 11 15.1 +12**
BSD
comp=Z,770nm,21.0s
BSD Bornholm Skovb 26.46 319 *i* P **P 20 06 27.2 -2.0**
comp=Z,780nm,21.0s
LJFR Jufra 26.57 258 *i* P **P 20 06 30.4 0.0**
comp=Z,86nm,1.5s,mb5.1,SNR=151
FUR Furstenfeldbru 26.63 302 *e*P **P 20 06 30.5 -0.3**
comp=Z,53nm,1.4s,mb4.9
FUR Furstenfeldbru 26.63 302 *e*P **P 20 06 30.5 -0.3**
FUR pmax pmax
comp=Z,53nm,1.4s,mb4.9
FUR Furstenfeldbru 26.63 302 *e*P **P 20 06 30.5 -0.3**
comp=Z,53nm,1.4s,mb4.9
MOTA Moosalm 26.64 300⇓*i*P **P 20 06 29.7 -1.2**
comp=Z,64nm,1.3s,mb5.0,SNR=9.6
MOTA Moosalm 26.64 300 P **P 20 06 30.3 -0.6**
FETA Feichten 26.86 300 *i* pP pP 20 06 32.2 -1.3
comp=Z,55nm,1.4s,SNR=9.9
FETA Feichten 26.86 300 P **P 20 06 32.2 -0.7**
comp=Z,55nm,1.4s,mb4.9,SNR=9.9
MOX Moxa 26.87 308 *e*P **P 20 06 32.4 -0.5**
comp=Z,15nm,1.4s,mb4.3
MOX *e*S **S 20 11 30.0 +20**
MOX
comp=Z,400nm,19.0s
MOX Moxa 26.87 308 *e*P **P 20 06 32.4 -0.5**
MOX pmax pmax
comp=Z,15nm,1.4s,mb4.3
MOX MLR MLR
comp=Z,400nm,19.0s,MS4.0
MOX Moxa 26.87 308 *e*P **P 20 06 32.4 -0.5**
comp=Z,400nm,19.0s
RETA Reutte 26.89 301⇓*i*P **P 20 06 31.8 -1.3**
comp=Z,15nm,0.7s,mb4.6
RETA Reutte 26.89 301 P **P 20 06 31.8 -1.3**
comp=Z,15nm,0.7s,mb4.6
GRA1 Grafenberg Arr 26.92 305 *e*P **P 20 06 33.7 +0.4**
comp=Z,81nm,1.6s,mb5.0
GRA1 LR LR
comp=Z,400nm,19.2s,MS4.0
GRA1 Grafenberg Arr 26.92 305 *e*P **P 20 06 33.7 +0.4**
comp=Z,400nm,19.2s
GRF Grafenberg Arr 26.92 305 *e*P **P 20 06 33.7 +0.4**
comp=Z,81nm,1.6s,mb5.0
GRF *e*L 20 19 23.2
comp=Z,385nm,19.2s
GRF Grafenberg Arr 26.92 305 *e*P **P 20 06 33.7 +0.4**
GRF pmax pmax
comp=Z,81nm,1.6s,mb5.0
GRF MLR MLR
comp=Z,400nm,19.2s,MS4.0
GRF Grafenberg Arr 26.92 305 *e*P **P 20 06 33.7 +0.4**
GRF pmax pmax
comp=Z,81nm,1.6s,mb5.0
GRF MLR MLR
comp=Z,400nm,19.2s,MS4.0
GRF Grafenberg Arr 26.92 305 *e*P **P 20 06 33.7 +0.4**
comp=Z,400nm,19.2s
GRFO Grafenberg 26.92 305 *e*P **P 20 06 31.9 -1.4**
GRFO pmax pmax
comp=Z,38nm,1.3s,mb4.8
GRFO Grafenberg 26.92 305 *e*P **P 20 06 31.9 -1.4**
comp=Z,38nm,1.3s,mb4.8
GRFO Grafenberg 26.92 305 *e*P **P 20 06 31.9 -1.4**
comp=Z,38nm,1.3s,mb4.8
ATD Arta Tunnel 27.15 186 LR LR 20 18 16.3
comp=Z,1μm,18.7s,MS4.5,baz=357,slow=38
DAVOX Davos/Dischmat 27.43 299 P **P 20 06 37.7 -0.3**
comp=Z,11nm,0.8s,mb4.4,baz=110,slow=8.5,SNR=12
DAVOX LR LR 20 19 20.7
comp=Z,779nm,20.4s,MS4.3,baz=89,slow=41
DAVOX Davos/Dischmat 27.43 299 P **P 20 06 37.7 -0.2**
DAVA Damuels 27.46 300 P **P 20 06 37.4 -0.9**
DAVA Damuels 27.46 300⇓*i*P **P 20 06 37.2 -1.1**
comp=Z,55nm,1.3s,mb4.9,SNR=16
DAVA Damuels 27.46 300 P **P 20 06 37.4 -0.9**
DDI Dehra Dun 27.74 98 *e*PKP **P 20 06 40.0 -0.9**
TUE Stuetta 27.77 298 *e*P **P 20 06 40.4 -0.6**
comp=Z,23nm,1.2s,mb4.7
TUE Stuetta 27.77 298 *e*P **P 20 06 40.4 -0.6**
comp=Z,23nm,1.2s,mb4.7
MK31 Makanchi Array 27.80 61 *i* P **P 20 06 41.9 +0.6**
MK31 pmax pmax
comp=Z,16nm,0.8s,mb4.7
MK31 Makanchi Array 27.80 61 *e*P **P 20 06 42.2 +0.9**
MK31 Makanchi Array 27.80 61 *i* P **P 20 06 41.9 +0.6**
comp=Z,16nm,0.8s,mb4.7
MKAR Makanchi Array 27.80 61 P **P 20 06 42.1 +0.8**
comp=Z,5.9nm,0.7s,mb4.3,baz=266,slow=6.3,SNR=49
MKAR LR LR 20 19 56.8
comp=Z,804nm,19.7s,MS4.3,baz=3.5,slow=41
MKAR Makanchi Array 27.80 61 P **P 20 06 42.1 +0.8**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR MLR MLR
comp=Z,804nm,19.7s
MKAR Makanchi Array 27.80 61 P **P 20 06 42.1 +0.8**
comp=Z,804nm,19.7s
CLZ Clausthal 27.91 310 *e*P **P 20 06 42.9 +0.7**
comp=Z,70nm,1.5s,mb5.1
CLZ Clausthal 27.91 310 *e*P **P 20 06 42.9 +0.7**
CLZ pmax pmax
comp=Z,70nm,1.5s,mb5.1
CLZ Clausthal 27.91 310 *e*P **P 20 06 42.9 +0.7**
comp=Z,70nm,1.5s,mb5.1
PGF Pioggiola 28.07 290 *e*P **P 20 06 42.6 -1.2**
comp=Z,66nm,1.2s,mb4.8
PGF Pioggiola 28.07 290 *e*P **P 20 06 42.6 -1.2**
PGF pmax pmax
comp=Z,33nm,1.2s,mb4.8
PGF Pioggiola 28.07 290 *e*P **P 20 06 42.6 -1.2**
comp=Z,33nm,1.2s,mb4.8
PGF Pioggiola 28.07 290 *e*P **P 20 06 42.6 -1.2**
comp=Z,33nm,1.2s,mb4.8
VSL Villasalto 28.18 283 *e*P **P 20 06 42.7 -2.1**
comp=Z,14nm,0.8s,mb4.6
VSL Villasalto 28.18 283 *e*P **P 20 06 42.7 -2.0**
comp=Z,14nm,0.8s,mb4.6
TNS Taunus Mts 28.77 306 *e*P **P 20 06 50.4 +0.5**
comp=Z,26nm,1.2s,mb4.8
TNS Taunus Mts 28.77 306 *e*P **P 20 06 50.4 +0.5**
TNS pmax pmax
comp=Z,26nm,1.2s,mb4.8
TNS Taunus Mts 28.77 306 *e*P **P 20 06 50.4 +0.5**
comp=Z,26nm,1.2s,mb4.8
KEST Kesra 29.07 276 P **P 20 06 53.1 +0.3**
comp=Z,1.9nm,0.9s,mb3.8,baz=234,slow=2.0,SNR=5.7
KEST LR LR 20 20 23.9
comp=Z,327nm,18.9s,MS4.0,baz=11,slow=40
KEST Kesra 29.07 276 *e*P **P 20 06 52.8 0.0**
KEST Kesra 29.07 276 *e*P **P 20 06 52.8 0.0**
SBF Sospel 29.13 293 *e*P **P 20 06 51.1 -2.0**
comp=Z,48nm,1.1s,mb4.8
SBF Sospel 29.13 293 *e*P **P 20 06 51.1 -2.0**
SBF pmax pmax
comp=Z,24nm,1.1s,mb4.8
SBF Sospel 29.13 293 *e*P **P 20 06 51.1 -2.0**
comp=Z,24nm,1.1s,mb4.8
SBF Sospel 29.13 293 *e*P **P 20 06 51.1 -2.0**
comp=Z,24nm,1.1s,mb4.8
CDF Champ du Feu 29.31 302 *e*P **P 20 06 52.7 -2.0**
CDF Champ du Feu 29.31 302 *e*P **P 20 06 52.7 -2.0**
HFS Hagfors 29.48 327 P **P 20 06 55.2 -0.9**
comp=Z,27nm,0.9s,mb5.0,baz=126,slow=9.3,SNR=25
HFS LR LR 20 19 38.5
comp=Z,2μm,18.9s,MS4.7,baz=125,slow=38
HFS Hagfors 29.48 327 P **P 20 06 55.2 -0.9**
HFS pmax pmax
comp=Z,27nm,0.9s
HFS MLR MLR
comp=Z,2μm,18.9s
HFS Hagfors 29.48 327 P **P 20 06 55.2 -0.9**
comp=Z,2μm,18.9s
HFA0 Hagfors New Ar 29.49 327 P **P 20 06 57.0 +0.8**
HFA0 Hagfors New Ar 29.49 327 P **P 20 06 57.0 +0.8**
HINF Hinteralfeld 29.55 301 *e*P **P 20 06 59.0 +2.2**
LPG La Plagne 29.56 296 *e*P **P 20 06 56.0 -1.0**
comp=Z,15nm,0.9s,mb4.4
LPG La Plagne 29.56 296 *e*P **P 20 06 56.0 -1.0**
LPG pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
LPG La Plagne 29.56 296 *e*P **P 20 06 56.0 -1.0**

comp=Z,7.5nm,0.9s,mb4.4
LPG La Plagne 29.56 296 *e*P **P 20 06 56.0 -1.0**
comp=Z,7.5nm,0.9s,mb4.4
MBDF Montbardon 29.56 294 *e*P **P 20 06 56.2 -0.8**
comp=Z,29nm,0.9s,mb4.7
MBDF Montbardon 29.56 294 *e*P **P 20 06 56.2 -0.8**
MBDF pmax pmax
comp=Z,15nm,0.9s,mb4.7
MBDF Montbardon 29.56 294 *e*P **P 20 06 56.2 -0.8**
comp=Z,15nm,0.9s,mb4.7
MBDF Montbardon 29.56 294 *e*P **P 20 06 56.2 -0.8**
comp=Z,15nm,0.9s,mb4.7
LPL La Plagne 29.57 296 *e*P **P 20 06 56.0 -1.1**
LPL La Plagne 29.57 296 *e*P **P 20 06 56.0 -1.1**
IBBN Ibbenburen 29.59 310 *e*P **P 20 06 58.2 +1.1**
comp=Z,59nm,1.3s,mb5.2
FRF La Foret Royal 29.72 292 *e*P **P 20 06 57.2 -1.2**
comp=Z,42nm,1.2s,mb4.7
FRF La Foret Royal 29.72 292 *e*P **P 20 06 57.2 -1.2**
FRF pmax pmax
comp=Z,21nm,1.2s,mb4.7
FRF La Foret Royal 29.72 292 *e*P **P 20 06 57.2 -1.2**
comp=Z,21nm,1.2s,mb4.8
FRF La Foret Royal 29.72 292 *e*P **P 20 06 57.2 -1.2**
comp=Z,21nm,1.2s,mb4.7
APA Apatity 29.77 350⇓ *i*P **P 20 06 58.0 -0.6**
APA *i* 20 07 11.5
APA MLR MLR
comp=Z,900nm,12.0s,MS4.6
APA Apatity 29.77 350 *i*P **P 20 06 58.0 -0.6**
LMR La Mourre 29.83 292 *e*P **P 20 06 58.1 -1.3**
comp=Z,32nm,1.4s,mb4.6
LMR La Mourre 29.83 292 *e*P **P 20 06 58.1 -1.3**
LMR pmax pmax
comp=Z,16nm,1.4s,mb4.6
LMR La Mourre 29.83 292 *e*P **P 20 06 58.1 -1.3**
comp=Z,16nm,1.4s,mb4.6
LMR La Mourre 29.83 292 *e*P **P 20 06 58.1 -1.3**
comp=Z,16nm,1.4s,mb4.6
NVS Novosibirsk 29.87 45 *e*P **P 20 06 59.0 -0.6**
NVS pmax pmax
comp=Z,12nm,1.8s,mb4.3
NVS Novosibirsk 29.87 45 *e*P **P 20 06 59.0 -0.6**
comp=Z,12nm,1.8s,mb4.3
HAU Haudompre 29.90 301 *e*P **P 20 06 58.3 -1.6**
CABF La Chapelle 30.02 298 *e*P **P 20 07 00.3 -0.8**
comp=Z,121nm,1.3s,mb5.2
CABF La Chapelle 30.02 298 *e*P **P 20 07 00.3 -0.8**
CABF pmax pmax
comp=Z,61nm,1.3s,mb5.2
CABF La Chapelle 30.02 298 *e*P **P 20 07 00.3 -0.8**
comp=Z,61nm,1.3s,mb5.2
CABF La Chapelle 30.02 298 *e*P **P 20 07 00.3 -0.8**
comp=Z,61nm,1.3s,mb5.2
WTSB Winterswijk 30.10 309 *e*P **P 20 07 02.3 +0.7**
comp=Z,39nm,2.3s,mb4.7
WTSB Winterswijk 30.10 309 *e*P **P 20 07 02.3 +0.6**
comp=Z,39nm,2.3s,mb4.7
WLF Walferdange 30.17 304 P **P 20 07 04.9 +2.6**
comp=Z,9.7nm,1.6s,mb4.3
ORIF Oris-en-Rattie 30.19 295 *e*P **P 20 07 00.7 -1.9**
ORIF *e*MLR MLR
comp=Z,870nm,21.2s,MS4.1
ORIF Oris-en-Rattie 30.19 295 *e*P **P 20 07 00.7 -1.9**
MEM Membach 30.37 306 P **P 20 07 05.4 +1.2**
comp=Z,14nm,1.5s,mb4.5
MEM Membach 30.37 306 P **P 20 07 05.3 +1.2**
comp=Z,14nm,1.5s,mb4.5
HGN Heimansgroeve 30.44 307⇑ *e*P **P 20 07 05.5 +0.8**
comp=Z,26nm,1.8s,mb4.7
HGN Heimansgroeve 30.44 307⇑ *e*P **P 20 07 05.5 +0.8**
comp=Z,26nm,1.8s,mb4.7
SMRF Simiane la Rot 30.46 293 *e*P **P 20 07 02.9 -2.1**
comp=Z,22nm,1.2s,mb4.5
SMRF Simiane la Rot 30.46 293 *e*P **P 20 07 02.9 -2.1**
comp=Z,22nm,1.2s,mb4.8
SMRF Simiane la Rot 30.46 293 *e*P **P 20 07 02.9 -2.1**
comp=Z,11nm,1.2s,mb4.5
ZALV Zalesovo Beam 30.52 47 P **P 20 07 05.2 -0.2**
comp=Z,1.5nm,0.5s,mb4.1,baz=257,slow=10,SNR=8.5
ZALV LR LR 20 21 03.6
comp=Z,222nm,20.5s,MS3.8,baz=248,slow=40
ZALV Zalesovo Beam 30.52 47 P **P 20 07 05.2 -0.2**
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
ZALV MLR MLR
comp=Z,222nm,20.5s,MS3.8
SFTF Sexfontaines 30.79 301 *e*P **P 20 07 06.0 -1.8**
SFTF Sexfontaines 30.79 301 *e*P **P 20 07 06.0 -1.8**
MEZF Maizieres J'vi 30.79 302 *e*P **P 20 07 06.3 -1.5**
comp=Z,28nm,1.0s,mb4.8
MEZF Maizieres J'vi 30.79 302 *e*P **P 20 07 06.3 -1.5**
comp=Z,28nm,1.0s,mb5.0
MEZF Maizieres J'vi 30.79 302 *e*P **P 20 07 06.3 -1.5**
comp=Z,14nm,1.0s,mb4.8
BHPL Bhopal 30.98 110 *e*PKP **P 20 07 08.7 -1.0**
BHPL AMb AMB 20 07 15.3
comp=Z,38nm,0.9s,mb5.2
NB2 NORSAR Subarra 31.00 328 P **P 20 07 07.8 -1.7**
comp=Z,24nm,1.0s,mb5.0,baz=123,slow=9.3
NB2 NORSAR Subarra 31.00 328 P **P 20 07 07.0 -2.5**
NB2 NORSAR Subarra 31.00 328 P **P 20 07 07.8 -1.7**
comp=Z,24nm,1.0s,mb5.0,baz=123,slow=8.7
NOA NORSAR Array B 31.00 328 P **P 20 07 07.2 -2.3**
comp=Z,11nm,0.8s,mb4.7,baz=123,slow=8.6,SNR=21
NOA LR LR 20 20 25.7
comp=Z,1μm,19.9s,MS4.7,baz=120,slow=38
NOA NORSAR Array B 31.00 328 P **P 20 07 07.3 -2.2**
NOA pmax pmax
comp=Z,11nm,0.9s
NOA MLR MLR
comp=Z,1μm,19.9s
NOA NORSAR Array B 31.00 328 P **P 20 07 07.2 -2.3**
NAO01 NORSAR Array S 31.04 327 *e*P **P 20 07 07.4 -2.4**
comp=Z,12nm,0.9s,mb4.7
NAO01 NORSAR Array S 31.04 327 *e*P **P 20 07 07.4 -2.5**
comp=Z,12nm,0.9s,mb4.7
VIVF Saint-Julien-l 31.05 295 *e*P **P 20 07 08.6 -1.6**
VIVF Saint-Julien-l 31.05 295 *e*P **P 20 07 08.6 -1.6**
GIVF Givet 31.07 305 *e*P **P 20 07 08.4 -1.8**
GIVF Givet 31.07 305 *e*P **P 20 07 08.4 -1.8**
LGHD Ghdames 31.08 265 *i*P **P 20 07 11.4 +0.8**
comp=Z,32nm,1.2s,mb5.0,SNR=152
SSB Saint Sauveur 31.12 296 *e*P **P 20 07 09.3 -1.5**
SSB pmax pmax
comp=Z,13nm,1.0s,mb4.7
SSB Saint Sauveur 31.12 296 *e*P **P 20 07 09.3 -1.5**
comp=Z,12nm,1.0s,mb4.7
SSB Saint Sauveur 31.12 296 *e*P **P 20 07 09.3 -1.5**
comp=Z,13nm,1.0s,mb4.7
BAIF Baives 31.46 305 *e*P **P 20 07 13.4 -0.3**
comp=Z,30nm,1.1s,mb4.7
BAIF Baives 31.46 305 *e*P **P 20 07 13.4 -0.3**
BAIF pmax pmax
comp=Z,15nm,1.1s,mb4.7
BAIF Baives 31.46 305 *e*P **P 20 07 13.4 -0.3**
comp=Z,15nm,1.1s,mb4.7
BAIF Baives 31.46 305 *e*P **P 20 07 13.4 -0.3**
comp=Z,15nm,1.1s,mb4.7
LOR Lormes 31.56 300 *e*P **P 20 07 12.8 -1.8**
LOR *e*MLR MLR
comp=Z,359nm,18.0s,MS3.8
LOR Lormes 31.56 300 *e*P **P 20 07 12.8 -1.8**
LOR LR LR
comp=Z,360nm,18.0s,MS4.1
LOR Lormes 31.56 300 *e*P **P 20 07 12.8 -1.8**
SMF Signal de Mont 31.57 298 *e*P **P 20 07 13.4 -1.3**
comp=Z,20nm,0.9s,mb4.7
SMF Signal de Mont 31.57 298 *e*P **P 20 07 13.4 -1.3**
SMF pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
SMF Signal de Mont 31.57 298 *e*P **P 20 07 13.4 -1.3**
comp=Z,10nm,0.9s,mb4.7
SMF Signal de Mont 31.57 298 *e*P **P 20 07 13.4 -1.3**
comp=Z,10nm,0.9s,mb4.7
WMQ Urumqi 31.66 67 P **P 20 07 17.0 +1.5**
WMQ pP pP 20 07 27.0 +11
WMQ sP sP 20 07 31.0 +15
WMQ PP PP 20 08 22.0 -4.8
WMQ S **S 20 12 22.0 -3.4**
WMQ pmax pmax
comp=Z,31nm,0.8s,mb5.2
WMQ pmax pmax
comp=Z,130nm,3.0s
WMQ LR LR
comp=N,770nm,14.0s,MS4.7
WMQ LR LR
comp=E,660nm,13.0s,MS4.7
WMQ LR LR
comp=Z,620nm,12.0s,MS4.5
LASF Ste Croix 31.69 293 *e*P **P 20 07 14.6 -1.2**
comp=Z,55nm,1.4s,mb4.9
LASF Ste Croix 31.69 293 *e*P **P 20 07 14.6 -1.2**
comp=Z,28nm,1.4s,mb4.9
SSF Saint Saulge 31.80 299 *e*P **P 20 07 15.1 -1.6**
SSF Saint Saulge 31.80 299 *e*P **P 20 07 15.1 -1.6**
AVF Avril sur Loir 31.91 299 *e*P **P 20 07 16.1 -1.6**
comp=Z,47nm,1.4s,mb4.8
AVF Avril sur Loir 31.91 299 *e*P **P 20 07 16.1 -1.6**
AVF pmax pmax
comp=Z,24nm,1.4s,mb4.8
AVF Avril sur Loir 31.91 299 *e*P **P 20 07 16.1 -1.6**
comp=Z,24nm,1.4s,mb4.8
AVF Avril sur Loir 31.91 299 *e*P **P 20 07 16.1 -1.6**
comp=Z,24nm,1.4s,mb4.8
BGF Bois d'Agland 32.26 298 *e*P **P 20 07 19.4 -1.4**
BGF Bois d'Agland 32.26 298 *e*P **P 20 07 19.4 -1.4**
HYF Humbligny 32.39 300 *e*P **P 20 07 20.8 -1.1**
HYF Humbligny 32.39 300 *e*P **P 20 07 20.8 -1.1**
KAD Karad 32.65 123 *e*PKP **P 20 07 25.3 +0.9**
KAD AMb AMB 20 08 12.5
comp=Z,19nm,1.5s,mb4.8
TCF Toulx Ste Croi 32.71 298 *e*P **P 20 07 23.5 -1.2**
comp=Z,23nm,1.1s,mb4.7
TCF Toulx Ste Croi 32.71 298 *e*P **P 20 07 23.5 -1.2**
TCF pmax pmax
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 32.71 298 *e*P **P 20 07 23.5 -1.2**
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 32.71 298 *e*P **P 20 07 23.5 -1.2**
comp=Z,11nm,1.1s,mb4.7
KEV Kevo 32.73 348 *e*P **P 20 07 23.1 -1.5**
KEV pmax pmax
comp=Z,20nm,0.9s,mb5.0
KEV Kevo 32.73 348 *e*P **P 20 07 23.1 -1.5**
comp=Z,20nm,0.9s,mb5.0
KEV Kevo 32.73 348 *e*P **P 20 07 23.1 -1.5**
comp=Z,20nm,0.9s,mb5.0
ARCES ARCESS Array B 32.79 347 P **P 20 07 24.3 -0.8**
comp=Z,15nm,0.9s,mb4.9,baz=138,slow=7.6,SNR=14
ARCES LR LR 20 21 45.8
comp=Z,1μm,18.5s,MS4.6,baz=327,slow=38
ARCES ARCESS Array B 32.79 347 P **P 20 07 24.3 -0.8**
ARCES pmax pmax
comp=Z,15nm,0.9s
ARCES MLR MLR
comp=Z,1μm,18.5s
ARCES ARCESS Array B 32.79 347 P **P 20 07 24.3 -0.8**
comp=Z,1μm,18.5s
ARE0 ARCESS Array S 32.79 347 *e*P **P 20 07 24.3 -0.8**
ARE0 ARCESS Array S 32.79 347 *e*P **P 20 07 24.3 -0.8**
CAF Calviac 32.90 295 *e*P **P 20 07 25.3 -1.1**
comp=Z,30nm,1.2s,mb4.8
CAF Calviac 32.90 295 *e*P **P 20 07 25.3 -1.1**
CAF pmax pmax
comp=Z,15nm,1.2s,mb4.8
CAF Calviac 32.90 295 *e*P **P 20 07 25.3 -1.1**
comp=Z,15nm,1.2s,mb4.8
CAF Calviac 32.90 295 *e*P **P 20 07 25.3 -1.1**
comp=Z,15nm,1.2s,mb4.8
MTLF Montolieu 32.95 292 *e*P **P 20 07 25.3 -1.5**
MTLF Montolieu 32.95 292 *e*P **P 20 07 25.3 -1.5**
DANN Dangsing 33.07 97 *e*P **P 20 07 29.8 +1.8**
comp=Z,101nm,0.8s,mb5.8
KOLN Koldanda 33.22 98 *e*P **P 20 07 30.6 +1.2**
comp=Z,36nm,1.1s,mb5.2
LFF La Frestale 33.83 295 *e*P **P 20 07 33.5 -1.0**
LFF *e* 20 07 36.6
LFF La Frestale 33.83 295 *e*P **P 20 07 33.5 -1.0**
GKN Gorkha 33.91 96 *e*P **P 20 07 36.3 +0.9**
comp=Z,34nm,0.7s,mb5.4
LDF La Druitiere 34.23 302 *e*P **P 20 07 37.0 -1.0**
LDF La Druitiere 34.23 302 *e*P **P 20 07 37.0 -1.0**
MFF Saint Martin d 34.32 298 *e*P **P 20 07 37.0 -1.8**
MFF Saint Martin d 34.32 298 *e*P **P 20 07 37.0 -1.8**
EPF Esparros 34.35 292 *e*P **P 20 07 37.1 -1.9**
comp=Z,22nm,1.2s,mb4.7
EPF Esparros 34.35 292 *e*P **P 20 07 37.1 -1.9**
EPF pmax pmax
comp=Z,11nm,1.2s,mb4.7
EPF Esparros 34.35 292 *e*P **P 20 07 37.1 -1.9**
comp=Z,11nm,1.2s,mb4.7
EPF Esparros 34.35 292 *e*P **P 20 07 37.1 -1.9**
comp=Z,11nm,1.2s,mb4.7
DMN Daman 34.47 97 *e*P **P 20 07 41.3 +1.1**
comp=Z,62nm,1.1s,mb5.4
FLN La Foliniere 34.47 302 *e*P **P 20 07 38.3 -1.7**
FLN *e*MLR MLR
comp=Z,352nm,20.2s,MS3.8
FLN La Foliniere 34.47 302 *e*P **P 20 07 38.3 -1.7**
FLN LR LR
comp=Z,350nm,20.3s,MS4.1
FLN La Foliniere 34.47 302 *e*P **P 20 07 38.3 -1.7**
KKN Kakani 34.51 96 *e*P **P 20 07 41.5 +0.9**
comp=Z,17nm,0.7s,mb5.1
PKI Pulchoki 34.72 97 *e*P **P 20 07 43.4 +1.0**
comp=Z,24nm,0.8s,mb5.2
GRR Gorron 34.73 302 *e*P **P 20 07 40.5 -1.7**
comp=Z,121nm,1.0s,mb5.5
GRR Gorron 34.73 302 *e*P **P 20 07 40.5 -1.7**
GRR pmax pmax
comp=Z,61nm,1.0s,mb5.5
GRR Gorron 34.73 302 *e*P **P 20 07 40.5 -1.7**
comp=Z,61nm,1.0s,mb5.5
GRR Gorron 34.73 302 *e*P **P 20 07 40.5 -1.7**
comp=Z,61nm,1.0s,mb5.5
GUN Gumba 34.92 96 *e*P **P 20 07 45.2 +1.0**
comp=Z,85nm,1.1s,mb5.6
ETSF Etsaut 35.02 292 *e*P **P 20 07 43.2 -1.7**
comp=Z,23nm,1.0s,mb4.8
ETSF Etsaut 35.02 292 *e*P **P 20 07 43.2 -1.7**
ETSF pmax pmax
comp=Z,12nm,1.0s,mb4.8
ETSF Etsaut 35.02 292 *e*P **P 20 07 43.2 -1.7**
comp=Z,12nm,1.0s,mb4.8
ETSF Etsaut 35.02 292 *e*P **P 20 07 43.2 -1.7**
comp=Z,12nm,1.0s,mb4.8
HPK Haverah Park 35.43 311 P **P 20 07 47.4 -0.8**
HPK AMB AMB 20 07 51.8
comp=Z,89nm,1.7s,mb5.4
HPK Haverah Park 35.43 311 *e*P **P 20 07 47.4 -0.8**
HPK AMB AMB 20 07 51.8
comp=Z,89nm,1.7s,mb5.4
HPK Haverah Park 35.43 311 *e*P **P 20 07 47.4 -0.8**
SJPF Ste Jean 35.47 293 *e*P **P 20 07 46.8 -1.9**
SJPF Ste Jean 35.47 293 *e*P **P 20 07 46.8 -1.9**
HYB Hyderabad 35.53 117 *i*P **P 20 07 49.0 -0.5**
SGMF Saint Gilles 35.86 301 *e*P **P 20 07 50.7 -1.3**
comp=Z,118nm,1.2s,mb5.4
SGMF Saint Gilles 35.86 301 *e*P **P 20 07 50.7 -1.3**
SGMF pmax pmax
comp=Z,59nm,1.2s,mb5.4
SGMF Saint Gilles 35.86 301 *e*P **P 20 07 50.7 -1.3**
comp=Z,59nm,1.2s,mb5.4
SGMF Saint Gilles 35.86 301 *e*P **P 20 07 50.7 -1.3**
comp=Z,59nm,1.2s,mb5.4
XAL Allendale 35.87 313 P **P 20 07 51.4 -0.6**
XAL Allendale 35.87 313 *e*P **P 20 07 51.4 -0.6**
XAL Allendale 35.87 313 *e*P **P 20 07 51.4 -0.6**
RAMN Ramite 35.95 97 *e*P **P 20 07 54.0 +1.0**
comp=Z,66nm,0.8s,mb5.6
HGH Gray Hill 35.99 307 P **P 20 07 52.3 -0.8**
HGH Gray Hill 35.99 307 *e*P **P 20 07 52.3 -0.8**
HGH Gray Hill 35.99 307 *e*P **P 20 07 52.3 -0.8**
MCH1 Michaelchurch 36.12 308 P **P 20 07 52.4 -1.8**
MCH1 AMB AMB 20 07 54.2
comp=Z,65nm,1.3s,mb5.4
MCH1 Michaelchurch 36.12 308 *e*P **P 20 07 52.4 -1.8**
MCH1 AMB AMB 20 07 54.2
comp=Z,65nm,1.3s,mb5.4
MCH1 Michaelchurch 36.12 308 *e*P **P 20 07 52.4 -1.8**
ESY Stoneypath 36.23 315 P **P 20 07 54.3 -0.7**
ESY Stoneypath 36.23 315 *e*P **P 20 07 54.3 -0.7**
ESY Stoneypath 36.23 315 *e*P **P 20 07 54.3 -0.7**
QUIF Quistinic 36.29 301 *e*P **P 20 07 54.0 -1.7**
QUIF Quistinic 36.29 301 *e*P **P 20 07 54.0 -1.7**
HTR Trewern Hill 36.29 308 P **P 20 07 53.9 -1.8**
HTR Trewern Hill 36.29 308 *e*P **P 20 07 53.9 -1.8**
HTR Trewern Hill 36.29 308 *e*P **P 20 07 53.9 -1.7**
ROSF Rostrenen 36.34 302 *e*P **P 20 07 54.6 -1.5**
ROSF Rostrenen 36.34 302 *e*P **P 20 07 54.6 -1.5**
ECK Cauldkaine Hil 36.43 313 P **P 20 07 55.5 -1.3**
ECK Cauldkaine Hil 36.43 313 *e*P **P 20 07 55.5 -1.3**
ECK Cauldkaine Hil 36.43 313 *e*P **P 20 07 55.5 -1.3**
EBL Broad Law 36.45 314 P **P 20 07 56.0 -0.9**
EBL Broad Law 36.45 314 *e*P **P 20 07 56.0 -0.9**
EBL Broad Law 36.45 314 *e*P **P 20 07 56.0 -0.9**
ESK Eskdalemuir 36.48 313 P **P 20 07 55.9 -1.3**
ESK AMB AMB 20 07 57.9
comp=Z,93nm,4.2s
ESK Eskdalemuir 36.48 313 *e*P **P 20 07 55.9 -1.3**
ESK AMB AMB 20 07 57.9
comp=Z,93nm,4.2s
ESK Eskdalemuir 36.48 313 *i*P **P 20 07 57.1 -0.2**
ESK Eskdalemuir 36.48 313 *e*P **P 20 07 55.9 -1.4**
EDI Edinburgh 36.55 314 P **P 20 07 56.4 -1.3**
EDI AMB AMB 20 08 00.4
comp=Z,41nm,2.6s,mb4.8
EDI Edinburgh 36.55 314 *e*P **P 20 07 56.4 -1.3**
EDI AMB AMB 20 08 00.4
comp=Z,41nm,2.6s,mb4.8
EDI Edinburgh 36.55 314 *e*P **P 20 07 56.4 -1.4**
ODAN Odare 36.60 96 *e*P **P 20 08 00.0 +1.4**
comp=Z,123nm,1.2s,mb5.6
TAPN Taplejung 36.62 95 *e*P **P 20 07 59.8 +1.1**
comp=Z,41nm,0.8s,mb5.3
MME1 Meikle Cairn 36.62 317 P **P 20 07 56.9 -1.5**
MME1 Meikle Cairn 36.62 317 *e*P **P 20 07 56.9 -1.5**
MME1 Meikle Cairn 36.62 317 *e*P **P 20 07 56.9 -1.5**
EBH Black Hill 36.77 315 P **P 20 07 58.7 -0.9**
EBH Black Hill 36.77 315 *e*P **P 20 07 58.7 -0.9**
EBH Black Hill 36.77 315 *e*P **P 20 07 58.7 -0.9**
MCD Coleburn Disti 36.82 317 P **P 20 07 59.1 -1.0**
MCD Coleburn Disti 36.82 317 *e*P **P 20 07 59.1 -1.0**
MCD Coleburn Disti 36.82 317 *e*P **P 20 07 59.1 -1.0**
EAB Aberfoyle 37.22 315 P **P 20 08 02.3 -1.2**
EAB Aberfoyle 37.22 315 *e*P **P 20 08 02.3 -1.2**
EAB Aberfoyle 37.22 315 *e*P **P 20 08 02.3 -1.2**
MVH1 Achvaich 37.37 318 P **P 20 08 03.0 -1.7**
MVH1 Achvaich 37.37 318 *e*P **P 20 08 03.0 -1.7**
MVH1 Achvaich 37.37 318 *e*P **P 20 08 03.0 -1.7**
TAM Tamanrasset 37.75 257 *e*P **P 20 08 08.6 +0.3**
TAM pmax pmax
comp=Z,21nm,1.1s,mb4.8
TAM Tamanrasset 37.75 257 *e*P **P 20 08 08.6 +0.3**
comp=Z,21nm,1.1s,mb4.8
TAM Tamanrasset 37.75 257 *e*P **P 20 08 08.6 +0.3**
comp=Z,21nm,1.1s,mb4.8
KAC Achnashellach 37.90 317 P **P 20 08 08.0 -1.2**
KAC Achnashellach 37.90 317 *e*P **P 20 08 08.0 -1.2**
KAC Achnashellach 37.90 317 *e*P **P 20 08 08.0 -1.2**
GMM Mts of Mourne 37.99 311 P **P 20 08 08.2 -1.8**
GMM Mts of Mourne 37.99 311 *e*P **P 20 08 08.2 -1.8**
GMM Mts of Mourne 37.99 311 *e*P **P 20 08 08.2 -1.8**
KAR1 Arisaig 38.12 316 P **P 20 08 09.4 -1.7**
KAR1 Arisaig 38.12 316 *e*P **P 20 08 09.4 -1.7**
KAR1 Arisaig 38.12 316 *e*P **P 20 08 09.4 -1.7**
ESDC Sonseca Array 38.20 288 P **P 20 08 10.3 -1.7**
comp=Z,3.1nm,0.7s,mb4.1,baz=64,slow=7.9,SNR=4.9
ESDC LR LR 20 25 24.8
comp=Z,209nm,19.5s,MS4.0,baz=100,slow=39
ESDC Sonseca Array 38.20 288 P **P 20 08 10.4 -1.6**
ESLA Sonseca Array 38.20 288 *e*P **P 20 08 09.0 -3.0**
comp=Z,2.3nm,1.1s,mb3.8
ESLA Sonseca Array 38.20 288 *e*P **P 20 08 09.0 -3.0**
comp=Z,2.3nm,1.1s,mb3.8
LSA Lhasa 38.23 90 P **P 20 08 12.8 +0.4**
LSA Lhasa 38.23 90 *e*P **P 20 08 13.9 +1.5**
LSA pmax pmax
comp=Z,20nm,0.8s,mb4.9
LSA Lhasa 38.23 90 *e*P **P 20 08 13.9 +1.5**
comp=Z,20nm,0.8s,mb4.9
LSA Lhasa 38.23 90 *e*P **P 20 08 13.9 +1.5**
comp=Z,20nm,0.8s,mb4.9
DLF Lyons Farm 38.30 310 *e*P **P 20 08 11.8 -0.9**
RRH Rhenigidale 38.69 317 P **P 20 08 14.7 -1.2**
RRH Rhenigidale 38.69 317 *e*P **P 20 08 14.7 -1.2**
RRH Rhenigidale 38.69 317 *e*P **P 20 08 14.7 -1.2**
VIS Vishakhapatnam 38.73 112 *e*PKP **P 20 08 15.7 -1.0**
VIS AMb AMB 20 08 20.4
comp=Z,22nm,0.9s,mb4.9
MOY Mondy 40.08 53 *e*P **P 20 08 29.8 +2.3**
MOY Mondy 40.08 53 *e*P **P 20 08 29.8 +2.3**
KMBO Kilima Mbogo 40.37 193 *e*P **P 20 08 32.7 +2.4**
KMBO Kilima Mbogo 40.37 193 *e*P **P 20 08 32.7 +2.4**
MTE Manteigas 40.67 290 *e*P **P 20 08 35.1 +2.5**
comp=Z,40nm,1.6s,mb4.8
MTE Manteigas 40.67 290 *e*P **P 20 08 32.8 +0.2**
comp=Z,30nm,1.3s,mb4.8
MTE Manteigas 40.67 290 *e*P **P 20 08 32.8 +0.2**
comp=Z,30nm,1.3s,mb4.8
SHL Shillong 40.75 95 *e*PKP **P 20 08 32.0 -1.4**
PMRV Marv??o 40.82 288 *e*P **P 20 08 36.4 +2.5**
MDT Midelt 40.92 278 P **P 20 08 34.4 -0.4**
comp=Z,3.9nm,0.9s,mb4.0,baz=83,slow=9.1,SNR=7.1
MDT Midelt 40.92 278 P **P 20 08 34.4 -0.4**
PBAR Barrancos 40.93 286 *e*P **P 20 08 37.0 +2.2**
PBAR Barrancos 40.93 286 *e*P **P 20 08 37.0 +2.2**
GTA Gaotai 41.42 71 *e*P **P 20 08 40.1 +1.3**
GTA pP pP 20 08 49.4 +10
GTA sP sP 20 08 53.9 +14
GTA S **S 20 14 52.7 -1.8**
GTA sS sS 20 15 08.3 +13
GTA pmax pmax
comp=Z,19nm,1.3s,mb4.6
GTA pmax pmax
comp=Z,50nm,4.2s
GTA LR LR
comp=N,360nm,18.9s,MS4.5
GTA LR LR
comp=E,580nm,18.3s,MS4.5
GTA LR LR
comp=Z,470nm,18.3s,MS4.4
SPITS Spitsbergen Ar 41.46 351 P **P 20 08 38.1 -0.6**
comp=Z,15nm,0.8s,mb4.7,baz=126,slow=13,SNR=4.5
SPITS LR LR 20 28 37.9
comp=Z,389nm,19.9s,MS4.3,baz=65,slow=40
SPITS Spitsbergen Ar 41.46 351 P **P 20 08 38.1 -0.6**
SPITS pmax pmax
comp=Z,15nm,0.8s
SPITS MLR MLR
comp=Z,389nm,19.9s
SPITS Spitsbergen Ar 41.46 351 P **P 20 08 38.1 -0.6**
comp=Z,389nm,19.9s
ZAK Zakamensk 41.62 54 *e*P **P 20 08 41.4 +1.1**
ZAK *e* 20 10 24.9
ZAK pmax pmax
comp=Z,4.0nm,1.8s,mb3.8
ZAK Zakamensk 41.62 54 *e*P **P 20 08 41.4 +1.1**
comp=Z,4.0nm,1.8s,mb3.8
TLY Talaya 41.72 52 *e*P **P 20 08 44.9 +3.8**
TLY *e*S **S 20 14 49.5 -9.2**
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
TLY MLR MLR
comp=Z,355nm,19.0s,MS4.3
TLY Talaya 41.72 52 P **P 20 08 41.7 +0.6**
TLY Talaya 41.72 52 P **P 20 08 41.7 +0.6**
IRK Irkutsk 42.06 51 *e*P **P 20 08 44.0 +0.2**
IRK *e* 20 10 25.3
IRK pmax pmax
comp=Z,30nm,1.5s,mb4.7
IRK Irkutsk 42.06 51 *e*P **P 20 08 44.0 +0.2**
comp=Z,30nm,1.5s,mb4.7
JMIC Jan Mayen 42.48 337 LR LR 20 26 58.8
comp=Z,363nm,18.3s,MS4.3,baz=83,slow=37
SONM Songino Array 44.04 58 P **P 20 09 00.8 +0.8**
comp=Z,2.7nm,0.7s,mb4.1,baz=278,slow=9.1,SNR=19
SONM LR LR 20 29 42.6
comp=Z,572nm,19.6s,MS4.5,baz=279,slow=39
SONM Songino Array 44.04 58 P **P 20 09 00.8 +0.8**
SONM pmax pmax
comp=Z,3.0nm,0.7s
SONM MLR MLR
comp=Z,572nm,19.6s
SONM Songino Array 44.04 58 P **P 20 09 00.8 +0.8**
comp=Z,572nm,19.6s
PALK Pallekele 44.33 126 *e*P **P 20 09 00.8 -1.9**
PALK pmax pmax
comp=Z,19nm,1.1s,mb4.7
PALK Pallekele 44.33 126 *e*P **P 20 09 00.8 -1.8**
comp=Z,19nm,1.1s,mb4.7
PALK Pallekele 44.33 126 *e*P **P 20 09 00.8 -1.9**
comp=Z,19nm,1.1s,mb4.7
ULN Ulaanbaatar 44.47 57 *e*P **P 20 09 04.4 +1.0**

ULN pmax pmax
comp=Z,21nm,0.9s,mb4.9
ULN Ulaanbaatar 44.47 57 *e*P **P 20 09 04.4 +1.0**
comp=Z,21nm,0.9s,mb4.9
ULN Ulaanbaatar 44.47 57 *e*P **P 20 09 04.4 +1.0**
comp=Z,21nm,0.9s,mb4.9
ULN Ulaanbaatar 44.47 57 P **P 20 09 05.1 +1.7**
SNR=14
LZH Lanzhou 45.52 74 ⇑P **P 20 09 13.5 +1.5**
LZH pP pP 20 09 24.0 +11
LZH sP sP 20 09 27.2 +14
LZH pmax pmax
comp=Z,35nm,1.2s,mb5.2
LZH pmax pmax
comp=Z,120nm,4.8s
LZH LR LR
comp=N,1μm,20.0s
LZH LR LR
comp=E,300nm,10.2s
LZH LR LR
comp=Z,450nm,16.1s,MS4.5
BORG Borgarnes 46.17 327 LR LR 20 29 25.7
comp=Z,601nm,20.3s,MS4.5,baz=86,slow=37
TORD Torodi Ar. Bea 46.52 249 P **P 20 09 18.6 -1.4**
comp=Z,7.3nm,1.0s,mb4.6,baz=35,slow=5.8,SNR=16
TORD LR LR 20 33 27.6
comp=Z,349nm,18.2s,MS4.3,baz=55,slow=42
CD2 Chengdu 47.53 81 ⇓*i*P **P 20 09 28.7 +0.9**
CD2 pP pP 20 09 38.6 +10
CD2 sP sP 20 09 42.6 +14
CD2 PP PP 20 11 19.3 +0.2
CD2 S **S 20 16 19.6 -4.0**
CD2 sS sS 20 16 37.4 +13
CD2 SS SS 20 19 43.0 -8.2
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,40nm,5.6s
CD2 LR LR
comp=N,560nm,11.9s,MS4.9
CD2 LR LR
comp=E,470nm,12.0s,MS4.9
CD2 LR LR
comp=Z,510nm,20.2s
BTO Baotou 48.49 66 *e*P **P 20 09 36.0 +0.9**
KMI Kunming 49.46 88 ⇓P **P 20 09 43.8 +1.1**
KMI pP pP 20 09 52.8 +9.4
KMI sP sP 20 09 57.4 +14
KMI S **S 20 16 47.3 -3.6**
KMI SS SS 20 20 18.2 -4.4
KMI pmax pmax
comp=Z,23nm,1.0s,mb5.2
KMI pmax pmax
comp=Z,110nm,4.1s
KMI LR LR
comp=N,250nm,18.8s,MS4.3
KMI LR LR
comp=E,220nm,19.4s,MS4.3
KMI LR LR
comp=Z,280nm,21.3s,MS4.2
HHC Hu-ho-hao-te 49.51 65 *e*P **P 20 09 44.3 +1.4**
HHC pP pP 20 09 54.1 +11
HHC sP sP 20 09 58.3 +14
HHC PcP PcP 20 11 06.6 +1.8
HHC PP PP 20 11 38.7 +1.8
HHC ScP ScP 20 14 58.1 -3.1
HHC S **S 20 16 49.1 -2.2**
HHC sS sS 20 17 05.0 +13
HHC ScS ScS 20 19 31.2 -4.5
HHC SS SS 20 20 16.1 -6.7
HHC pmax pmax
comp=Z,22nm,1.1s,mb5.1
HHC pmax pmax
comp=Z,91nm,5.3s
HHC LR LR
comp=N,560nm,17.6s,MS4.7
HHC LR LR
comp=E,340nm,16.2s,MS4.7
HHC LR LR
comp=Z,240nm,15.1s,MS4.3
CHG Chiang Mai 49.88 98 P **P 20 09 45.7 -0.3**
CHTO Chiang Mai 49.88 98 *e*P **P 20 09 45.4 -0.6**
CHTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CHTO Chiang Mai 49.88 98 *e*P **P 20 09 45.4 -0.6**
comp=Z,8.6nm,0.8s,mb4.8
CHTO Chiang Mai 49.88 98 *e*P **P 20 09 45.4 -0.6**
comp=Z,9.0nm,0.8s,mb4.8
CHTO Chiang Mai 49.88 98 P **P 20 09 46.4 +0.4**
SNR=8.4
CMAR Chiang Mai Arr 50.09 98 P **P 20 09 47.4 -0.1**
comp=Z,8.1nm,0.9s,mb4.7,baz=301,slow=8.4,SNR=56
CMAR LR LR 20 35 38.6
comp=Z,234nm,21.6s,MS4.2,baz=294,slow=42
CMAR Chiang Mai Arr 50.09 98 P **P 20 09 47.4 -0.1**
CMAR pmax pmax
comp=Z,8.0nm,0.9s
CMAR MLR MLR
comp=Z,234nm,21.6s
CMAR Chiang Mai Arr 50.09 98 P **P 20 09 47.4 -0.1**
comp=Z,234nm,21.6s
XAN Xi'an 50.16 75 P **P 20 09 48.6 +0.7**
XAN S **S 20 17 08.6 +8.2**
XAN pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
XAN pmax pmax
comp=Z,16nm,6.1s
XAN LR LR
comp=N,320nm,24.7s
XAN LR LR
comp=E,85nm,18.9s
XAN LR LR
comp=Z,110nm,24.1s,MS3.8
BDT Bhumibol Dam 50.84 99 ⇑P **P 20 09 53.0 -0.2**
GYA Guiyang 51.86 85 P **P 20 10 01.2 +0.4**
GYA pP pP 20 10 11.5 +10
GYA sP sP 20 10 18.2 +16
GYA PP PP 20 12 01.0 +2.5
GYA ScP ScP 20 15 06.7 -4.8
GYA S **S 20 17 18.9 -5.4**
GYA sS sS 20 17 37.0 +12
GYA ScS ScS 20 19 45.8 -6.5
GYA SS SS 20 20 55.2 -5.5
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,130nm,5.4s
GYA LR LR
comp=N,760nm,17.7s,MS4.9
GYA LR LR
comp=E,590nm,18.9s,MS4.9
GYA LR LR
comp=Z,650nm,17.0s,MS4.7
SUMG Summit 51.91 338 *e*P **P 20 10 00.0 -0.6**
comp=Z,24nm,1.0s,mb5.1
SUMG Summit 51.91 338 *i*P **P 20 10 01.2 +0.6**
SUMG Summit 51.91 338 *e*P **P 20 10 01.3 +0.7**
SNR=22
DGAR Diego Garcia 52.10 146 *e*P **P 20 10 05.3 +2.7**
DGAR pmax pmax
comp=Z,385nm,1.2s
DGAR Diego Garcia 52.10 146 *e*P **P 20 10 05.3 +2.7**
comp=Z,385nm,1.2s
ENH Enshi 52.23 79 *e*P **P 20 10 03.0 -0.6**
comp=Z,15nm,1.0s,mb4.9
ENH Enshi 52.23 79 *e*P **P 20 10 03.0 -0.6**
comp=Z,15nm,1.0s,mb4.9
HIA Hailar 52.26 53 *e*P **P 20 10 02.9 -0.6**
HIA pmax pmax
comp=Z,13nm,0.7s
HIA Hailar 52.26 53 *e*P **P 20 10 02.9 -0.6**
comp=Z,13nm,0.7s,mb5.0
HIA Hailar 52.26 53 *e*P **P 20 10 02.9 -0.6**
comp=Z,13nm,0.7s,mb5.0
BJI Beijing 53.08 65 P **P 20 10 08.8 -0.9**
BJI PP PP 20 12 07.9 -1.4
BJI S **S 20 17 36.1 -4.5**
BJI SS SS 20 21 17.1 -2.4
BJI pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
BJI pmax pmax
comp=Z,79nm,4.9s
BJI LR LR
comp=N,700nm,17.1s,MS4.8
BJI LR LR
comp=E,400nm,20.4s,MS4.8
BJI LR LR
comp=Z,190nm,25.2s,MS4.0
YAK Yakutsk 53.98 35 *e*P **P 20 10 14.3 -1.6**
YAK *e* 20 11 17.8
YAK *e* 20 12 14.9
YAK *e*PPP 20 13 25.3
YAK *e*S **S 20 17 47.3 -4.8**
YAK *e* 20 20 00.8
YAK *e*SS SS 20 21 34.9 +2.2
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.9
YAK pmax pmax
comp=Z,135nm,4.9s
YAK pmax pmax
comp=N,40nm,5.4s
YAK pmax pmax
comp=E,15nm,2.8s
YAK smax
comp=N,37nm,10.4s
YAK smax
comp=E,25nm,10.6s
YAK Yakutsk 53.98 35 *e*P **P 20 10 14.3 -1.6**
comp=E,13nm,0.9s,mb4.9
DBIC Dimbokro 55.62 249 P **P 20 10 26.3 -2.2**
comp=E,7.1nm,0.9s,mb4.7,baz=78,slow=17,SNR=2.6
DBIC LR LR 20 35 01.0
comp=E,313nm,18.1s,MS4.4,baz=124,slow=37
DBIC Dimbokro 55.62 249 P **P 20 10 26.3 -2.2**
DBIC pmax pmax
comp=Z,7.0nm,0.9s
DBIC MLR MLR
comp=Z,313nm,18.1s
DBIC Dimbokro 55.62 249 P **P 20 10 26.3 -2.2**
comp=Z,313nm,18.1s
KIC Kosan Boka 55.75 248 *e*P **P 20 10 29.7 +0.3**
comp=Z,76nm,1.3s,mb5.6
KIC Kosan Boka 55.75 248 *e*P **P 20 10 29.7 +0.3**
comp=Z,76nm,1.3s,mb5.6
TIC Toumodi 55.76 249 *e*P **P 20 10 29.7 +0.2**
comp=Z,11nm,0.4s,mb5.2
TIC Toumodi 55.76 249 *e*P **P 20 10 29.7 +0.2**
TIC pmax pmax
comp=Z,11nm,0.4s,mb5.2
TIC Toumodi 55.76 249 *e*P **P 20 10 29.7 +0.2**
comp=Z,11nm,0.4s,mb5.2
LIC Lamto 56.05 248 *e*P **P 20 10 31.9 +0.3**
comp=Z,63nm,1.2s,mb5.5
LIC Lamto 56.05 248 ⇑*i*P **P 20 10 32.0 +0.4**
comp=Z,48nm,1.1s,mb5.1
LIC *e*MLR MLR
comp=Z,283nm,21.0s,MS4.0
LIC Lamto 56.05 248 ⇑*i*P **P 20 10 32.0 +0.4**
comp=Z,24nm,1.1s,mb5.1
LIC LR LR
comp=Z,140nm,21.0s,MS4.0
LIC Lamto 56.05 248 ⇑*i*P **P 20 10 32.0 +0.4**
comp=Z,24nm,1.1s,mb5.1
OPO Ambohidratompo 56.95 178 P **P 20 10 38.0 +0.3**
comp=Z,1.9nm,0.7s,mb4.2,baz=49,slow=2.4,SNR=3.6
OPO Ambohidratompo 56.95 178 P **P 20 10 38.0 +0.3**
CN2 Changchun 57.92 57 *e*P **P 20 10 46.2 +1.7**
CN2 *e*S **S 20 18 47.4 +2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
CN2 pmax pmax
comp=Z,80nm,4.0s
CN2 LR LR
comp=N,600nm,19.0s,MS4.8
CN2 LR LR
comp=E,400nm,19.0s,MS4.8
CN2 LR LR
comp=Z,800nm,21.0s,MS4.8
QIZ Qiongzhong 58.27 90 P **P 20 10 47.3 +0.1**
QIZ pP pP 20 10 56.5 +8.6
QIZ S **S 20 18 49.2 -1.1**
QIZ sS sS 20 19 02.9 +12
QIZ SS SS 20 22 42.7 +0.8
QIZ pmax pmax
comp=Z,14nm,1.3s,mb4.8
QIZ LR LR
comp=N,250nm,19.7s,MS4.4
QIZ LR LR
comp=E,120nm,19.7s,MS4.4
QIZ LR LR
comp=Z,190nm,22.8s,MS4.2
NJ2 Nanjing 58.50 72 *e*P **P 20 10 49.6 +0.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
IPM Ipoh 60.42 110 P **P 20 10 59.0 -3.2**
MNSI Mandailing Nat 61.88 114 P **P 20 11 11.3 -0.8**
KSRS Korea Array 62.47 63 P **P 20 11 15.1 -0.6**
comp=Z,14nm,1.1s,mb5.0,baz=287,slow=7.2,SNR=15
KSRS Korea Array 62.47 63 P **P 20 11 15.1 -0.6**
KSRS pmax pmax
comp=Z,14nm,1.1s,mb5.0
KSRS Korea Array 62.47 63 P **P 20 11 15.1 -0.6**
comp=Z,14nm,1.1s,mb5.0
SEY Seymchan 63.18 29 ⇓*e*P **P 20 11 20.2 +0.1**
SEY Seymchan 63.18 29 *e*P **P 20 11 20.2 +0.1**
BKNI Bangkinang 63.26 113 P **P 20 11 19.9 -1.4**
PPI Padang Panjang 63.34 114 P **P 20 11 20.0 -1.8**
PDSI Padang 63.70 115 P **P 20 11 23.3 -0.9**
YHNB Yeheng 64.16 78 *e*P **P 20 11 28.0 +0.9**
comp=Z,28nm,0.9s,mb5.3
YHNB Yeheng 64.16 78 *e*P **P 20 11 28.0 +0.8**
comp=Z,28nm,0.9s,mb5.3
MYKOM Kota Tinggi 64.31 110 P **P 20 11 29.6 +1.4**
TPUB Ta-pu 64.33 80 *e*P **P 20 11 29.7 +1.4**
comp=Z,13nm,1.0s,mb4.9
TPUB Ta-pu 64.33 80 *e*P **P 20 11 29.7 +1.4**
comp=Z,13nm,1.0s,mb4.9
SDSI Sungai Dareh 64.41 114 P **P 20 11 26.1 -2.7**
RGRI Rengat 64.66 113 P **P 20 11 26.4 -4.1**
KRJI Kerinci 65.23 115 P **P 20 11 32.0 -2.3**
LBTB Lobatse 66.12 200 *e*P **P 20 11 39.3 -0.3**
LBTB pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
LBTB Lobatse 66.12 200 *e*P **P 20 11 39.3 -0.3**
comp=Z,10nm,1.0s,mb4.8
LBTB Lobatse 66.12 200 *e*P **P 20 11 39.3 -0.3**
comp=Z,10.0nm,1.0s,mb4.8
KSI Kapahiang 67.13 115 P **P 20 11 45.4 -1.0**
MNAI Manna 67.88 115 P **P 20 11 52.5 +1.3**
ASAJ Asahikawa 68.59 50 P **P 20 11 56.0 +0.8**
comp=Z,4.1nm,0.7s,mb4.5,baz=307,slow=5.1,SNR=2.4
ASAJ Asahikawa 68.59 50 P **P 20 11 56.1 +0.8**
ASAJ pmax pmax
comp=Z,4.0nm,0.7s
MDSI Maura Dua 68.84 114 P **P 20 11 53.6 -3.6**
LWLI Liwa 69.12 115 P **P 20 11 59.5 +0.6**
KLSI 69.37 114 P **P 20 12 00.2 -0.3**
BOSA Boshof 69.63 199 P **P 20 12 01.2 -0.5**
comp=Z,3.1nm,0.8s,mb4.3,baz=46,slow=3.4,SNR=4.3
BOSA LR LR 20 41 57.5
comp=Z,486nm,18.3s,MS4.8,baz=27,slow=35
BOSA Boshof 69.63 199 P **P 20 12 01.2 -0.5**
BOSA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOSA MLR MLR
comp=Z,486nm,18.3s,MS4.8
BOSA Boshof 69.63 199 P **P 20 12 01.2 -0.5**
comp=Z,486nm,18.3s
MAJO Matsushiro 69.97 59 *e*P **P 20 12 03.3 -0.6**
MAJO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MAJO Matsushiro 69.97 59 *e*P **P 20 12 03.3 -0.6**
MAJO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MAJO Matsushiro 69.97 59 *e*P **P 20 12 03.3 -0.6**
comp=Z,7.9nm,1.0s,mb4.6
MAJO Matsushiro 69.97 59 *e*P **P 20 12 03.3 -0.6**
comp=Z,8.0nm,1.0s,mb4.6
MAT Matsushiro 69.97 59 P **P 20 12 03.8 -0.1**
MAT S S 20 21 15.0 0.0
MJAR Matsushiro Arr 69.97 59 P **P 20 12 04.4 +0.5**
comp=Z,5.5nm,1.1s,mb4.4,baz=301,slow=7.2,SNR=10
MJAR LR LR 20 45 36.5
comp=Z,329nm,20.0s,MS4.6,baz=265,slow=38
MJAR Matsushiro Arr 69.97 59 P **P 20 12 04.4 +0.5**
MJAR pmax pmax
comp=Z,6.0nm,1.1s
MJAR MLR MLR
comp=Z,329nm,20.0s
MJAR Matsushiro Arr 69.97 59 P **P 20 12 04.4 +0.5**
comp=Z,329nm,20.0s
SCHQ Schefferville 70.54 326 P **P 20 12 06.3 -0.8**
comp=Z,5.3nm,0.7s,mb4.6,baz=74,slow=8.0,SNR=6.4
SCHQ Schefferville 70.54 326 P **P 20 12 06.3 -0.8**
SCHQ Schefferville 70.54 326 P **P 20 12 06.3 -0.8**
YUK Yuzh-Kuril'sk 70.58 49 P **P 20 12 08.1 +0.6**
YUK S S 20 21 21.8 -0.1
YUK MLR MLR
comp=N,2μm,16.0s,MS5.5
YUK MLR MLR
comp=Z,200nm,16.0s,MS4.5
YUK MLR MLR
comp=E,400nm,15.0s,MS5.5
YUK Yuzh-Kuril'sk 70.58 49 P **P 20 12 08.1 +0.6**
YUK S S 20 21 21.8 -0.1
YUK MLR MLR
comp=N,2μm,16.0s,MS5.5
YUK MLR MLR
comp=Z,200nm,16.0s,MS4.5
YUK MLR MLR
comp=E,400nm,15.0s,MS5.5
YUK Yuzh-Kuril'sk 70.58 49 P **P 20 12 08.1 +0.6**
YUK S S 20 21 21.8 -0.1
PETK Petropavlovsk- 71.31 36 P **P 20 12 09.6 -2.2**
comp=E,3.8nm,1.1s,mb4.2,baz=193,slow=6.1,SNR=4.2
PETK LR LR 20 51 00.6
comp=E,207nm,19.1s,MS4.4,baz=34,slow=42
PETK Petropavlovsk- 71.31 36 P **P 20 12 09.6 -2.2**
PETK pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
PETK MLR MLR
comp=Z,207nm,19.1s,MS4.4
PETK Petropavlovsk- 71.31 36 P **P 20 12 09.6 -2.2**
comp=Z,207nm,19.1s
INK Inuvik 73.35 360 P **P 20 12 21.4 -2.3**
comp=Z,1.4nm,0.7s,mb4.0,baz=42,slow=8.3,SNR=4.2
INK Inuvik 73.35 360 P **P 20 12 21.4 -2.3**
INK pmax pmax
comp=Z,1.0nm,0.7s
INK Inuvik 73.35 360 *e*P **P 20 12 21.1 -2.6**
comp=Z,4.5nm,1.1s,mb4.3
INK Inuvik 73.35 360 *e*P **P 20 12 21.1 -2.6**
comp=Z,4.5nm,1.1s,mb4.3
COLA College 76.24 6 *e*P **P 20 12 40.0 -0.5**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
COLA College 76.24 6 *e*P **P 20 12 40.0 -0.5**
comp=Z,7.4nm,0.8s,mb4.7
COLA College 76.24 6 *e*P **P 20 12 40.0 -0.5**
comp=Z,7.0nm,0.8s,mb4.6
ILAR Eielson Array 76.42 6 P **P 20 12 40.5 -1.0**
comp=Z,0.7nm,0.8s,baz=331,slow=5.8,SNR=7.0
ILAR Eielson Array 76.42 6 P **P 20 12 40.5 -1.0**
FCC Fort Churchill 77.35 340 P **P 20 12 45.1 -1.8**
FCC Fort Churchill 77.35 340 P **P 20 12 45.1 -1.8**
DAV Davao City (W) 77.64 91 LR LR 20 55 07.5
comp=Z,155nm,21.1s,MS4.3,baz=258,slow=42
YKA Yellowknife Ar 77.96 351 P **P 20 12 48.5 -1.7**
comp=Z,3.9nm,1.0s,mb4.3,baz=12,slow=5.8,SNR=20
YKA Yellowknife Ar 77.96 351 P **P 20 12 48.5 -1.7**
YKA pmax pmax
comp=Z,4.0nm,1.0s
YKA Yellowknife Ar 77.96 351 P **P 20 12 48.5 -1.7**
YKA Yellowknife Ar 77.96 351 P **P 20 12 48.5 -1.7**
comp=Z,4.0nm,1.0s,mb4.3
SML Sawmill 79.22 7 *e*P **P 20 12 55.8 -1.4**
SML pmax pmax
comp=Z,14nm,1.4s,mb4.7
SML Sawmill 79.22 7 *e*P **P 20 12 55.8 -1.4**
comp=Z,14nm,1.4s,mb4.7
SML Sawmill 79.22 7 *e*P **P 20 12 55.8 -1.4**
comp=Z,14nm,1.4s,mb4.7
LONY Lake Ozonia 81.22 321 *e*P **P 20 13 06.5 -1.7**
comp=Z,9.2nm,1.0s,mb4.7
LONY Lake Ozonia 81.22 321 *e*P **P 20 13 06.6 -1.7**
comp=Z,9.2nm,1.0s,mb4.7
KDAK Kodiak Island 82.68 10 *i*P **P 20 13 08.5 -7.2**
FFC Flin Flon 82.96 342 *i*P **P 20 13 16.9 -0.3**
FFC Flin Flon 82.96 342 *e*P **P 20 13 15.2 -2.0**
comp=Z,5.9nm,1.0s,mb4.6
FFC Flin Flon 82.96 342 *e*P **P 20 13 15.2 -2.0**
comp=Z,5.9nm,1.0s,mb4.6
DLBC Dease Lake 83.20 358 P **P 20 13 18.5 +0.1**
comp=Z,5.6nm,0.8s,mb4.7,baz=210,slow=5.2,SNR=6.9
DLBC Dease Lake 83.20 358 P **P 20 13 18.5 +0.1**
SSPA Standing Stone 85.81 321 *e*P **P 20 13 31.0 -0.9**
comp=Z,16nm,1.1s,mb5.2
SSPA Standing Stone 85.81 321 *e*P **P 20 13 31.0 -1.0**
comp=Z,16nm,1.1s,mb5.2
TKL Tuckaleechee C 92.59 321 P **P 20 14 03.3 -0.8**
comp=Z,5.5nm,0.9s,mb5.0,baz=89,slow=7.3,SNR=4.5
TKL Tuckaleechee C 92.59 321 P **P 20 14 03.3 -0.9**
TKL pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
TKL Tuckaleechee C 92.59 321 P **P 20 14 03.3 -0.9**
comp=Z,6.0nm,0.9s,mb5.0
YBH Yreka Blue Hor 99.30 351 LR LR 21 01 15.4
comp=Z,224nm,21.4s,MS4.6,baz=1.2,slow=36

IDC ***02*** *20:01:02.1±0.4, 15°.59S×173°.13W, h0km, mb5.0/21, mb1 5.1/23, mb1mx5.0/28, mbtmp5.0/23, ML4.3/2, MS4.2/4, Ms1 4.2/4, ms1mx3.8/18, Error ellipse: s-maj=18.9km s-min=10.5km az=124.0*

NEIC ***02*** *20:01:03.6±0.1, 15°.41S×173°.34W, h10km, mb5.4/123, MS5.0/1, Error ellipse: s-maj=8.8km s-min=3.7km az=139.0*

ISCJB ***02*** *20:01:05.9±0.1, 15°.41S±0°.05×173°.40W±0°.04, h33km, mb5.2/152, MS4.8/16, Error ellipse: s-maj=8.2km s-min=3.3km az=140.5*

SZGRF ***02*** *20:01:07.2, 15°.90S×173°.36W, h33km, Tonga Islands*

MOS ***02*** *20:01:08.7±1.0, 14°.80S×173°.13W, h33km, mb5.5/39, MS4.7/7, Error ellipse: s-maj=17.7km s-min=8.4km az=64.3*

GCMT ***02*** *20:01:15.7±0.3, 15°.13S×173°.07W, h12km, MW5.3, Moment Tensor Solution. s22,c23; s76,c101; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.01±.02; $M_{\theta\theta}$0.18±.02; $M_{\phi\phi}$-0.18±.01; $M_{r\theta}$-1.18±.05; $M_{\theta\phi}$-0.01±.02; $M_{\phi r}$0.47±.04; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s219.00000°, δ5.00000°, λ-163.00000°. NP2:ϕ_s112.00000°, δ88.00000°, λ-85.00000°. Principal axes: T 1.3400, Plg43.0000°, Azm197.0000°; N -0.1300, Plg5.0000°, Azm292.0000°; P -1.2100, Plg46.0000°, Azm28.0000°; Data Used: II IU IC G CN.*

ISC 02 20:01:07.9±0.1, 15°.42S±0°.05×173°.38W±0°.04, h35km, (h12km±3.6km:pP-P), n816, σ0s64/605, mb5.2/152, MS4.8/16, 156C-149D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.16**	**46**	Pn	**Pn**	**20 01 37.5**	**-3.9**
	2μm,0.3s,baz=44,slow=6,SNR=986						
AFI				Sn	**Sn**	**20 01 57.3**	**-10**
	3μm,0.3s,baz=64,slow=20,SNR=14						
AFI	**Afiamalu**	**2.16**	**46**	⇑*i*Pn	**Pn**	**20 01 37.2**	**-4.1**
AFI				*e*Pg	**Pn**	**20 01 41.3**	**0.0**
AFI				*e*Sn	**Sn**	**20 01 59.2**	**-7.7**
MSVF	**Nonsavu**	**8.54**	**253**	Pn	Px	20 03 21.0	
	1μm,1.0s,SNR=26						
RAR	**Rarotonga**	**14.14**	**116**	Pn	**Pn**	**20 04 19.3**	**-6.5**
	4.0nm,0.3s,baz=284,slow=4.2,SNR=2.8						
RAR				LR	LR	20 08 11.7	
	comp=Z,515nm,19.4s,baz=263,slow=31						
RAR				T		20 18 32.4	
	27nm,0.3s,baz=112,slow=15,SNR=6.2						
RAR	**Rarotonga**	**14.14**	**116**	*e*P	**Pn**	**20 04 15.3**	**-11**
RAR				pmax	pmax		
	comp=Z,341nm,1.5s						
RAR	**Rarotonga**	**14.14**	**116**	*e*Pn	**Pn**	**20 04 15.3**	**-11**
	comp=Z,341nm,1.5s						
RAR				LR	LR	20 08 11.7	
DZM	**Mont Dzumac**	**20.21**	**248**	*e*P	**P**	**20 05 44.2**	**+4.3**
	comp=Z,535nm,1.1s						
DZM				*e*LR	LR	20 10 41.7	
	comp=Z,3μm,27.7s						
DZM	**Mont Dzumac**	**20.21**	**248**	*e*P	**P**	**20 05 41.8**	**+1.9**
DZM	**Mont Dzumac**	**20.21**	**248**	*e*P	**P**	**20 05 42.0**	**+2.1**
	comp=Z,224nm,1.0s						
NOUC	**Port Laguerre**	**20.34**	**248**	*e*P	**P**	**20 05 43.7**	**+2.3**
PPT	**Papeete**	**22.92**	**99**	*e*LR	LR	20 11 18.1	
	comp=Z,1μm,28.0s						
OUZ	**Omahuta**	**22.92**	**208**	*e*P	**P**	**20 06 08.6**	**-0.3**
	comp=Z,198nm,1.2s,mb5.4						
XMAS	**Kiritimati**	**23.44**	**44**	*e*P	**P**	**20 06 11.6**	**-2.9**
	comp=Z,57nm,0.9s,mb5.0						

MKAZ **Moumakai** 23.88 203 P* P 20 06 19.1 +0.9
MWZ **Matawai** 24.20 198 P* P 20 06 21.1 0.0
URZ **Urewera** 24.25 198 P P 20 06 20.7 -0.9
comp=Z,55nm,0.5s,mb5.2,baz=15,slow=2.9,SNR=20
URZ S S 20 10 39.3 +1.2
comp=Z,8.0nm,0.6s,baz=16,slow=18,SNR=3.4
URZ **Urewera** 24.25 198 eP P 20 06 20.5 -1.2
comp=Z,88nm,0.8s,mb5.2
URZ **Urewera** 24.25 198 P* P 20 06 20.5 -1.2
KNZ **Kokohu** 24.80 197 P* P 20 06 28.8 +2.3
BFZ **Birch Farm** 26.74 198 P* P 20 06 44.5 +0.3
SNZO **South Karori** 27.79 199 P P 20 06 53.0 -0.6
comp=Z,68nm,0.8s,mb5.3
THZ **Tophouse** 28.81 202 P* P 20 07 02.7 0.0
KHZ **Kahutara** 29.17 200 eP P 20 07 05.2 -0.6
comp=Z,80nm,0.8s,mb5.5
RPZ **Rata Peaks** 31.17 202 P P 20 07 23.4 -0.2
comp=Z,15nm,0.6s,mb5.0,baz=101,slow=1.4,SNR=7.1
RPZ **Rata Peaks** 31.17 202 eP P 20 07 21.7 -1.8
comp=Z,32nm,0.8s,mb5.2
TAOE **Nuku Hiva Isla** 33.11 83 eLR LR 20 15 55.3
comp=Z,1µm,28.9s
EIDS **Eidsvold** 34.66 248 eP P 20 07 52.0 -2.2
comp=Z,4.3nm,0.6s,mb4.6
ARMA **Armidale** 35.35 239 eP P 20 08 00.0 -0.2
ARMA **Armidale** 35.35 239 eP P 20 07 60.0 -0.2
comp=Z,12nm,0.9s,mb4.8
RMQ **Roma** 36.91 246 eP P 20 08 14.2 +0.7
comp=Z,7.2nm,0.6s,mb4.7
RKT **Rikitea** 36.97 108 eLR LR 20 17 50.1
comp=Z,503nm,29.0s
CTAO **Charters Tower** 38.66 257 eP P 20 08 27.9 -0.5
CTAO pmax pmax
comp=Z,18nm,1.1s,mb4.7
CTAO **Charters Tower** 38.66 257 eP P 20 08 27.9 -0.5
comp=Z,18nm,1.1s,mb4.7
CNB **Canberra Magne** 38.76 232 eP P 20 08 28.9 -0.1
PMG **Port Moresby** 38.95 274 P P 20 08 29.9 -1.1
PMG pmax pmax
comp=Z,27nm,1.0s
PMG **Port Moresby** 38.95 274 P P 20 08 29.9 -1.1
comp=Z,27nm,1.0s,mb4.9
CMSA **Cobar Meteorol** 40.56 239 eP P 20 08 43.4 -0.7
QLP **Quilpie** 40.93 247 eP P 20 08 47.3 +0.1
COEN **Coen** 42.00 266 eP P 20 08 57.6 +1.5
TOO **Toolangi** 42.47 231 eP P 20 08 59.7 0.0
STKA **Stephens Creek** 44.05 240 P P 20 09 12.6 +0.1
comp=Z,24nm,0.9s,mb4.9,baz=74,slow=7.6,SNR=32
STKA LR LR 20 25 08.6
comp=Z,373nm,20.6s,MS4.3,baz=270,slow=33
STKA **Stephens Creek** 44.05 240 eP P 20 09 12.4 -0.1
comp=Z,21nm,1.0s,mb4.8
STKA **Stephens Creek** 44.05 240 eP P 20 09 12.1 -0.5
comp=Z,5.7nm,0.9s,mb4.3
BBOO **Buckleboo** 48.82 240 eP P 20 09 49.4 -0.6
comp=Z,14nm,1.0s,mb5.0
WB2 **Warramunga Arr** 49.85 257 eP P 20 09 56.9 -1.1
WRA **Warramunga Arr** 49.86 257 P P 20 09 57.4 -0.7
comp=Z,7.2nm,0.8s,mb4.8,baz=92,slow=6.8,SNR=41
ASAR **Alice Springs** 50.12 252 P P 20 09 59.9 -0.2
comp=Z,18nm,0.6s,mb5.3,baz=89,slow=7.6,SNR=158
ASAR S S 20 17 05.5 -4.0
comp=Z,0.9nm,0.8s,baz=91,slow=15,SNR=7.9
GUMO **Guam** 50.36 303 P P 20 09 59.7 -2.2
GUMO pmax pmax
comp=Z,255nm,1.5s,mb6.0
GUMO **Guam** 50.36 303 P P 20 09 59.7 -2.1
comp=Z,255nm,1.5s,mb6.0
KAKA **Kakadu** 52.52 266 eP P 20 10 18.3 +0.2
comp=Z,7.8nm,0.6s,mb4.8
FORT **Forrest** 55.43 243 eP P 20 10 38.2 -1.0
comp=Z,21nm,0.7s,mb5.3
FITZ **Fitzroy Crossi** 58.23 258 eP P 20 11 00.1 +0.9
comp=Z,5.5nm,0.8s,mb4.6
SBA **Scott Base** 63.24 185 eP P 20 11 34.6 +2.3
SBA pmax pmax
comp=Z,30nm,0.9s,mb5.4
SBA **Scott Base** 63.24 185 eP P 20 11 34.6 +2.3
comp=Z,30nm,0.9s,mb5.4
MBWA **Marble Bar** 63.38 254 eP P 20 11 34.5 +0.3
comp=Z,15nm,1.0s,mb5.1
MEEK **Meekatharra** 63.83 248 eP P 20 11 37.1 0.0
KLBR **Kellerberrin** 64.25 242 eP P 20 11 39.7 -0.1
comp=Z,32nm,1.1s,mb5.3
NWAO **Narrogin (SRO)** 64.63 241 eP P 20 11 41.7 -0.6
NWAO pmax pmax
comp=Z,57nm,1.7s
NWAO **Narrogin (SRO)** 64.63 241 eP P 20 11 41.7 -0.5
comp=Z,57nm,1.7s,mb5.3
CASY **Casey** 70.40 205 eP P 20 12 18.3 +0.2
comp=Z,21nm,1.0s,mb5.0
BSC **Santa Cruz Isl** 70.92 45 ⇑P P 20 12 22.0 +0.2
baz=71
SCI **San Clemente I** 71.11 47 ⇑P P 20 12 22.2 -0.7
baz=71
SMMC **Simmler** 71.42 44 ⇑P P 20 12 25.1 +0.3
baz=72
CIS **Catalina Islan** 71.44 46 ⇓P P 20 12 24.6 -0.4
baz=72,SNR=5.3
ASAJ **Asahikawa** 71.56 328 P P 20 12 27.2 +1.8
comp=Z,8.6nm,0.8s,mb4.8,baz=180,slow=5.1,SNR=3.9
MWC **Mount Wilson** 72.13 46 eP P 20 12 28.3 -0.8
MWC pmax pmax
comp=Z,60nm,1.1s,mb5.4
MWC **Mount Wilson** 72.13 46 eP P 20 12 28.3 -0.7
comp=Z,60nm,1.1s,mb5.4
BAR **Barrett** 72.27 48 eP P 20 12 27.5 -2.5
comp=Z,12nm,1.0s,mb4.8
VES **Vestal, Richgr** 72.34 44 P P 20 12 29.9 -0.3
baz=72,SNR=6.4
MURC **Murrieta** 72.39 47 ⇓P P 20 12 29.8 -0.8
baz=72,SNR=5.2
BFSC **Mount Baldy Ra** 72.42 46 ⇓P P 20 12 30.4 -0.4
baz=72,SNR=11
MONP **Monument Peak** 72.56 48 P P 20 12 31.6 -0.1
baz=73,SNR=14
ISA **Isabella** 72.65 44 ⇓P P 20 12 32.1 -0.1
baz=73,SNR=18
ISA **Isabella** 72.65 44 eP P 20 12 31.8 -0.3
ISA pmax pmax
comp=Z,47nm,1.2s,mb5.3
ISA **Isabella** 72.65 44 eP P 20 12 31.8 -0.4
comp=Z,47nm,1.2s,mb5.3
PETK **Petropavlovsk-** 72.65 342 P P 20 12 32.7 +1.0
comp=Z,25nm,0.8s,mb5.2,baz=131,slow=8.6,SNR=36
PETK **Petropavlovsk-** 72.65 342 P P 20 12 32.7 +1.0
DVTC **Desert V Tower** 72.67 48 ⇓P P 20 12 32.2 -0.1
baz=73,SNR=9.4
CMB **Columbia Colle** 72.76 41 eP P 20 12 31.5 -1.2
CMB pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CMB **Columbia Colle** 72.76 41 eP P 20 12 31.5 -1.2
comp=Z,9.5nm,0.9s,mb4.7
KKM **Kota Kinabalu** 72.90 281 eP P 20 12 33.8 -0.3
comp=Z,18nm,0.9s,mb5.0
PFO **Pinyon Flat Ob** 72.92 47 ⇑P P 20 12 33.4 -0.4
baz=73,SNR=9.7
PFO **Pinyon Flat Ob** 72.92 47 eP P 20 12 32.8 -1.0
PFO pmax pmax
comp=Z,25nm,1.1s,mb5.1
PFO **Pinyon Flat Ob** 72.92 47 eP P 20 12 32.8 -1.0
comp=Z,25nm,1.1s,mb5.0
WDC **Whiskeytown Da** 72.98 38 eP P 20 12 33.4 -0.6
WDC pmax pmax
comp=Z,58nm,1.4s,mb5.3
WDC **Whiskeytown Da** 72.98 38 eP P 20 12 33.4 -0.5
comp=Z,58nm,1.4s,mb5.3
SWSC **Sam W. Stewart** 73.03 48 ⇓P P 20 12 33.7 -0.7
baz=73,SNR=5.9
LRMC **Laurel Mountai** 73.08 45 P P 20 12 34.6 -0.1
baz=73,SNR=21
KEBM **Edson Butte** 73.40 35 eP P 20 12 36.1 -0.3
comp=Z,135nm,1.5s,mb5.7
BELC **Belle Mtn. Jos** 73.45 47 ⇓P P 20 12 36.5 -0.3
baz=74,SNR=21
YSS **Yuzh-Sakhalins** 73.51 330 ⇓iP P 20 12 38.4 +1.5
YSS MLR MLR
comp=E,400nm,16.0s
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.8
YSS **Yuzh-Sakhalins** 73.51 330 eP P 20 12 38.4 +1.5
comp=Z,16nm,0.8s,mb5.0
MPMC **Manual Prospec** 73.53 44 P P 20 12 37.5 +0.2
baz=74,SNR=35
GSC **Goldstone** 73.58 45 ⇑P P 20 12 37.3 -0.3
baz=74,SNR=20
GSC **Goldstone** 73.58 45 eP P 20 12 36.7 -1.0
GSC pmax pmax
comp=Z,47nm,1.2s,mb5.3
GSC **Goldstone** 73.58 45 eP P 20 12 36.7 -0.9
comp=Z,47nm,1.2s,mb5.3
TIN **Tinemaha** 73.60 43 ⇑P P 20 12 38.1 +0.5
baz=74,SNR=6.6
YBH **Yreka Blue Hor** 73.60 37 P P 20 12 38.0 +0.4
comp=Z,35nm,0.9s,mb5.3,baz=195,slow=2.4,SNR=54
YBH **Yreka Blue Hor** 73.60 37 eP P 20 12 37.8 +0.2
YBH pmax pmax
comp=Z,45nm,1.0s
YBH **Yreka Blue Hor** 73.60 37 eP P 20 12 37.8 +0.2
comp=Z,45nm,1.0s,mb5.3
WAKR **Walker** 73.64 41 eP P 20 12 37.6 -0.3
comp=Z,52nm,1.3s,mb5.3
BC3 **Big Chuckawall** 73.65 47 P P 20 12 38.0 -0.1
baz=74,SNR=17
HEC **Hector,Ludlow** 73.66 46 P P 20 12 37.6 -0.5
baz=74,SNR=24
GLA **Glamis** 73.79 48 ⇓P P 20 12 38.6 -0.3
baz=74,SNR=9.4
GLA **Glamis** 73.79 48 eP P 20 12 38.2 -0.7
GLA pmax pmax
comp=Z,51nm,1.2s,mb5.3
GLA **Glamis** 73.79 48 eP P 20 12 38.2 -0.7
comp=Z,51nm,1.2s,mb5.3
WCN **Washoe City** 73.91 41 ⇑P P 20 12 39.3 -0.2
baz=74,SNR=6.1
WCN **Washoe City** 73.91 41 eP P 20 12 39.2 -0.3
WCN pmax pmax
comp=Z,40nm,1.2s,mb5.2
WCN **Washoe City** 73.91 41 eP P 20 12 39.2 -0.3
comp=Z,40nm,1.2s,mb5.2
HUMO **Hull Mountain** 74.01 36 eP P 20 12 40.3 +0.3
comp=Z,46nm,1.2s,mb5.3
GMRC **Granite Mounta** 74.10 46 P P 20 12 40.3 -0.4
baz=74,SNR=21
IRM **Iron Mountain** 74.13 47 P P 20 12 40.7 -0.1
baz=74,SNR=26
GRAC **Grapevine Rang** 74.14 44 ⇓P P 20 12 41.1 +0.3
baz=74,SNR=22
FURC **Furnace Creek,** 74.18 44 ⇑P P 20 12 41.0 -0.2
baz=74,SNR=7.1
TUQ **Turquoise Moun** 74.26 46 ⇓P P 20 12 41.8 +0.2
baz=74,SNR=8.0
SHOC **Shoshone** 74.27 45 ⇑P P 20 12 41.0 -0.7
baz=74,SNR=5.7
NVAR **Mina Array Bea** 74.33 42 P P 20 12 41.9 0.0
comp=Z,28nm,1.0s,mb5.1,baz=228,slow=9.1,SNR=94
Y12C **Blythe** 74.36 48 ⇑P P 20 12 42.3 +0.1
baz=74,SNR=7.1
PAHR **Pah Rah Range** 74.38 40⇓eP P 20 12 41.8 -0.4
comp=Z,42nm,1.3s,mb5.2
113A **Mohawk Valley,** 74.41 49 P P 20 12 42.2 -0.4
baz=74,SNR=11
U10A **Ash Meadows, A** 74.52 45 ⇑P P 20 12 43.2 +0.2
baz=75,SNR=6.7
QSPA **South Pole Qui** 74.63 180 eP P 20 12 44.1 +1.0
comp=Z,46nm,0.9s,mb5.4
LDFC **Landfair** 74.64 46 eP P 20 12 43.4 -0.5
comp=Z,29nm,0.6s,mb5.4
Z13A **Yuma Proving G** 74.71 49 ⇓P P 20 12 44.2 -0.1
baz=75,SNR=40
214A **Organ Pipe Nat** 74.71 50 ⇓P P 20 12 44.0 -0.3
baz=75,SNR=13
V11A **Goodsprings** 74.82 46 ⇑P P 20 12 45.0 +0.2
baz=75,SNR=5.6
NEE2 **Needles Airpor** 74.82 47 ⇑P P 20 12 44.9 0.0
baz=75
MPOR **Mary's Peak** 74.89 34 P P 20 12 45.7 +0.6
Y13A **Salome** 74.89 48 P P 20 12 45.3 0.0
baz=75,SNR=16
KDAK **Kodiak Island** 74.93 11 P P 20 12 45.4 +0.4
comp=Z,22nm,0.9s,mb5.1,baz=198,slow=2.4,SNR=4.9
KDAK **Kodiak Island** 74.93 11 iP P 20 12 45.8 +0.8
KDAK **Kodiak Island** 74.93 11 P P 20 12 45.4 +0.4
114A **Black Gap (USA** 75.05 49 ⇑P P 20 12 46.2 0.0
baz=75,SNR=13
MOD **Modoc** 75.12 38 eP P 20 12 46.3 -0.2
comp=Z,61nm,1.0s,mb5.5
S10A **Tonopah Range,** 75.16 43 P P 20 12 46.7 -0.1
baz=75,SNR=36
V12A **Nelson** 75.16 46 ⇑P P 20 12 47.0 +0.2
baz=75,SNR=11
HEBO **Mount Hebo** 75.24 34 eP P 20 12 47.4 +0.4
comp=Z,52nm,0.9s,mb5.5
K05A **Summer Lake** 75.27 37 P P 20 12 48.0 +0.7
baz=75,SNR=48
Z14A **Wintersburg** 75.30 49 ⇑P P 20 12 47.9 +0.2
baz=75,SNR=14
SHPR **Sheep Range** 75.36 45 eP P 20 12 47.6 -0.3
comp=Z,43nm,1.1s,mb5.3
115A **Sonoran Desert** 75.50 50 ⇑P P 20 12 48.7 -0.2
baz=76,SNR=6.4
Y14A **Wickenburg** 75.55 48 P P 20 12 48.9 -0.2
baz=76,SNR=37
R10A **Warm Springs** 75.55 43 P P 20 12 49.4 +0.4
baz=76,SNR=39
T11A **Corn Creek, Al** 75.71 44 ⇓P P 20 12 50.2 +0.2
baz=76
216A **Three Points,** 75.74 51 P P 20 12 50.4 +0.1
baz=76,SNR=13
U12A **Valley of Fire** 75.74 45 ⇑P P 20 12 50.3 +0.1
baz=76,SNR=23
H04A **Detroit Lake** 75.75 35 P P 20 12 49.9 -0.2
baz=76,SNR=21
T12A **Moapa** 75.78 45 P P 20 12 50.5 +0.1
baz=76,SNR=7.0
Q10A **Clear Creek Ra** 75.78 43 ⇑P P 20 12 50.6 +0.3
baz=76,SNR=11
F03A **Seaside** 75.81 33 ⇑P P 20 12 50.9 +0.6
baz=76,SNR=12
116A **Eloy** 75.82 50 ⇑P P 20 12 50.6 -0.1
baz=76,SNR=7.1
V13A **Grand Canyon W** 75.83 46 P P 20 12 50.4 -0.3
baz=76,SNR=18
X14A **Yava** 75.89 48 P P 20 12 51.2 +0.1
baz=76,SNR=42
G04A **Mulino** 75.93 34 ⇓P P 20 12 51.4 +0.4
baz=76,SNR=11
Y15A **Casa Rosa Ranc** 76.04 49 P P 20 12 52.0 0.0
baz=76,SNR=75
R11A **Troy Canyon, C** 76.06 43 ⇑P P 20 12 51.8 -0.1
baz=76,SNR=35
217A **Green Valley** 76.11 51 P P 20 12 52.2 -0.1
baz=76,SNR=32
U13A **Pakoon Wash** 76.13 46 ⇑P P 20 12 52.7 +0.4
baz=76,SNR=86
W14A **Seligman** 76.13 47 ⇑P P 20 12 52.8 +0.4
baz=76,SNR=58
BMN **Battle Mountai** 76.15 41 eP P 20 12 51.8 -0.6
BMN pmax pmax
comp=Z,49nm,1.3s,mb5.3
BMN **Battle Mountai** 76.15 41 eP P 20 12 51.8 -0.6
comp=Z,49nm,1.3s,mb5.3
S12A **Delamar Landin** 76.15 44 ⇓P P 20 12 53.2 +0.8
baz=76,SNR=17
P10A **Eureka** 76.18 42 ⇑P P 20 12 52.9 +0.3
baz=76
KSRS **Korea Array** 76.18 316 P P 20 12 56.1 +3.5
comp=Z,2.5nm,0.8s,mb4.2,baz=127,slow=5.2,SNR=4.9
E03A **Lebam** 76.21 33 ⇓P P 20 12 53.1 +0.5
baz=76,SNR=19
Q11A **Duckwater** 76.28 43 ⇑P P 20 12 53.1 0.0
baz=76,SNR=29
V14A **Boquillas Ranc** 76.33 47 P P 20 12 53.9 +0.3
baz=76,SNR=56
X15A **Humboldt** 76.37 48 P P 20 12 54.0 +0.2
baz=76,SNR=38
Z16A **Peralta Trail,** 76.40 49 ⇓P P 20 12 54.3 +0.3
baz=76,SNR=6.0
F04A **Amboy** 76.42 34 ⇑P P 20 12 53.8 0.0
baz=76,SNR=8.9
WVOR **Wild Horse Val** 76.43 38 eP P 20 12 53.6 -0.3
WVOR pmax pmax
comp=Z,53nm,1.0s,mb5.4
WVOR **Wild Horse Val** 76.43 38 eP P 20 12 53.6 -0.3
comp=Z,53nm,1.0s,mb5.4
HOOD **Mount Hood Mea** 76.45 35 eP P 20 12 54.0 0.0
comp=Z,101nm,1.0s,mb5.7
T13A **Saint George** 76.48 45 ⇑P P 20 12 54.5 +0.2
baz=76
VIPM **Ingram Point** 76.52 36 P P 20 12 54.5 +0.1
117A **Oracle** 76.54 50 P P 20 12 54.9 +0.1
baz=77,SNR=42
VFP **Flag Point** 76.55 35 P P 20 12 54.6 +0.1
318A **Bisbee** 76.58 52 P P 20 12 55.0 0.0
baz=77,SNR=26
NLWA **Neilton Lookou** 76.60 32 eP P 20 12 54.6 -0.1
comp=Z,40nm,1.3s,mb5.2
Y16A **Circle Bar Ran** 76.62 49 P P 20 12 55.4 +0.2
baz=77,SNR=29
U14A **Mt Trumbull** 76.67 46 P P 20 12 56.0 +0.5
baz=77,SNR=86
W15A **Williams** 76.69 47 ⇑P P 20 12 56.1 +0.5
baz=77,SNR=8.8
R12A **Pony Springs,** 76.69 44 P P 20 12 55.8 +0.3
baz=77,SNR=21
218A **Dragoon** 76.78 51 ⇓P P 20 12 56.1 0.0
baz=77,SNR=36
S13A **Holt Ranch, En** 76.81 45 ⇑P P 20 12 56.6 +0.4
baz=77
I07A **Izee** 76.90 37 P P 20 12 56.8 +0.3
baz=77,SNR=74
X16A **Lo Mia Camp, P** 76.91 49 P P 20 12 57.2 +0.4
baz=77,SNR=48
Q12A **Willow Creek R** 76.93 43 P P 20 12 56.8 0.0
baz=77,SNR=25
G06A **Carlson Farm,** 76.96 35 ⇓P P 20 12 56.7 -0.2
baz=77,SNR=31
Y17A **Roosevelt** 77.00 49 ⇑P P 20 12 57.4 +0.1
baz=77,SNR=21
R13A **O'Grain Ranch,** 77.04 44 ⇑P P 20 12 58.0 +0.5
baz=77,SNR=22
T14A **Hurricane** 77.07 45 ⇑P P 20 12 57.8 +0.1
baz=77,SNR=7.1
J08A **Circle Bar Ran** 77.07 38 ⇓P P 20 12 58.1 +0.5
baz=77,SNR=18
V15A **Kaibab Nationa** 77.08 47 P P 20 12 58.4 +0.6
baz=77,SNR=55
Z17A **San Carlos Hig** 77.08 50 ⇑P P 20 12 57.3 -0.5
baz=77,SNR=10
319A **Douglas** 77.09 52 ⇓P P 20 12 57.9 0.0
baz=77,SNR=20
CCUT **Cedar City** 77.13 45 eP P 20 12 57.9 0.0
comp=Z,37nm,1.1s,mb5.2
118A **Homack Ranch,** 77.15 51 P P 20 12 58.5 +0.3
baz=77,SNR=37
W16A **Flagstaff** 77.18 48 ⇑P P 20 12 59.0 +0.7
baz=77,SNR=13
ARUT **Antelope Range** 77.20 45 eP P 20 12 58.2 -0.2
ARUT pmax pmax
comp=Z,39nm,1.0s,mb5.3
ARUT **Antelope Range** 77.20 45 eP P 20 12 58.2 -0.2
comp=Z,39nm,1.0s,mb5.3
LON **Longmire** 77.27 34 eP P 20 12 57.6 -0.9
LON pmax pmax
comp=Z,27nm,1.2s,mb5.0
LON **Longmire** 77.27 34 eP P 20 12 57.5 -1.0
comp=Z,27nm,1.2s,mb5.1
U15A **North Rim** 77.30 46 P P 20 12 59.6 +0.7
baz=77,SNR=54
X17A **Forest Lakes** 77.33 49 ⇓P P 20 13 00.1 +0.9
baz=77,SNR=26
S14A **Cedar City** 77.37 45 ⇑P P 20 12 59.6 +0.3
baz=77,SNR=5.1
219A **White Tail Can** 77.39 52 ⇑P P 20 12 59.7 +0.2
baz=77,SNR=36
Q13A **Wheeler Ranch,** 77.42 43 ⇓P P 20 12 59.8 +0.2
baz=78,SNR=39
D05A **Enumclaw** 77.45 33 ⇑P P 20 13 00.3 +0.7
baz=78,SNR=12
WUAZ **Wupatki** 77.49 48⇓iP P 20 13 00.1 +0.1
comp=Z,72nm,1.4s,mb5.4
T15A **Red Dirt Ranch** 77.53 46 ⇑P P 20 13 00.5 +0.2
baz=78,SNR=33
Y18A **Canyon Day Jun** 77.63 50 ⇓P P 20 13 01.2 +0.4
baz=78,SNR=28
O12A **Currie** 77.64 42 ⇓P P 20 13 01.0 +0.2
baz=78,SNR=31
320A **Kipp Ranch, An** 77.64 52 ⇓P P 20 13 01.4 +0.4
baz=78,SNR=11
PGC **Sidney** 77.64 31 eP P 20 13 00.3 -0.3
comp=Z,2.5nm,1.2s,mb4.0
P13A **Bates Ranch, G** 77.68 43 ⇓P P 20 13 01.4 +0.4
baz=78,SNR=11
119A **Ashpeak Ranch,** 77.70 51 ⇑P P 20 13 01.8 +0.5
baz=78,SNR=20
W17A **Winslow** 77.75 48 ⇑P P 20 13 02.4 +0.8
baz=78,SNR=7.6
S15A **Panguitch** 77.88 45 ⇓P P 20 13 03.5 +1.3
baz=78,SNR=5.6
220A **Playas Peak, P** 77.90 52 ⇑P P 20 13 03.0 +0.6
baz=78,SNR=22
Q14A **Sevier Lake (B** 77.93 44 ⇓P P 20 13 02.6 +0.2
baz=78,SNR=68
G08A **Pilot Rock** 77.94 36 ⇑P P 20 13 02.5 +0.2
baz=78,SNR=86
U16A **Tuba City** 77.97 47 P P 20 13 03.4 +0.6
baz=78,SNR=19
Z19A **T-Link Ranch,** 77.97 50 ⇑P P 20 13 02.8 0.0
baz=78,SNR=7.4
X18A **Snowflake** 78.05 49 ⇓P P 20 13 03.4 +0.2
baz=78,SNR=14
120A **U Bar Ranch, L** 78.11 51 P P 20 13 03.9 +0.3
baz=78,SNR=17
JCW **Jim Creek** 78.12 32 eP P 20 13 03.0 -0.2
comp=Z,168nm,1.7s,mb5.7
T16A **Glen Canyon Da** 78.12 46 ⇑P P 20 13 03.9 +0.4
baz=78,SNR=22
E07A **Sunnyside** 78.20 35 ⇓P P 20 13 04.2 +0.5
baz=78,SNR=19
R15A **Junction** 78.20 45 ⇓P P 20 13 04.7 +0.7
baz=78,SNR=17
RSW **Rattlesnake Hi** 78.25 35 eP P 20 13 04.0 0.0
comp=Z,33nm,1.2s,mb5.1
HAWA **Hanford** 78.28 35⇓eP P 20 13 04.0 -0.1
comp=Z,74nm,1.3s,mb5.5
Y19A **Nutrioso** 78.29 50 ⇑P P 20 13 05.6 +1.1
baz=78,SNR=73
P14A **Drum Mountains** 78.38 43 P P 20 13 05.1 +0.2
baz=78,SNR=64
Z20A **Nine Sixteen R** 78.39 51 P P 20 13 05.7 +0.5
baz=78,SNR=52
MSU **Marysvale** 78.42 45 eP P 20 13 05.7 +0.5
MSU pmax pmax
comp=Z,51nm,0.9s,mb5.5
MSU **Marysvale** 78.42 45 eP P 20 13 05.7 +0.5
comp=Z,51nm,0.9s,mb5.5
S16A **Weppner Ranch,** 78.42 46 ⇑P P 20 13 05.5 +0.3
baz=78,SNR=24
X19A **St. Johns** 78.48 49 P P 20 13 06.1 +0.5
baz=78,SNR=37
221A **Mesquite Ranch** 78.51 52 P P 20 13 06.4 +0.6
baz=78,SNR=12
U17A **Shonto** 78.52 47 ⇑P P 20 13 06.5 +0.7
baz=79
Q15A **Fillmore** 78.53 44 ⇑P P 20 13 06.3 +0.5
baz=79,SNR=11
ETW **Entiat** 78.59 33 eP P 20 13 05.4 -0.4
comp=Z,51nm,0.9s,mb5.5
V18A **Ganado** 78.62 48 P P 20 13 06.8 +0.5
baz=79,SNR=52
T17A **Navajo Res., N** 78.62 46 ⇓P P 20 13 06.9 +0.6
baz=79
LNOR **Lincton Mounta** 78.66 36 eP P 20 13 05.9 -0.4
LNOR pmax pmax
comp=Z,15nm,0.9s,mb4.9
LNOR **Lincton Mounta** 78.66 36 eP P 20 13 05.9 -0.4
comp=Z,15nm,0.9s,mb4.9
MFID **Camas Ranch** 78.69 39 ⇑P P 20 13 06.7 +0.2
baz=79,SNR=42
W19A **Sanders** 78.73 49 P P 20 13 07.3 +0.3
baz=79,SNR=23
121A **Cookes Peak, D** 78.74 52 P P 20 13 07.5 +0.4
baz=79,SNR=24
R16A **Teasdale** 78.78 45 P P 20 13 08.0 +0.9
baz=79,SNR=39
WTV **Waterville** 78.85 34 P P 20 13 06.9 -0.4
DUG **Dugway** 78.86 43 eP P 20 13 06.9 -0.6
DUG pmax pmax
comp=Z,45nm,1.2s,mb5.3
DUG **Dugway** 78.86 43 eP P 20 13 06.9 -0.6
comp=Z,45nm,1.2s,mb5.3
P15A **Leamington** 78.89 44 P P 20 13 08.0 +0.2
baz=79,SNR=14
Y20A **Horse Springs,** 78.91 50 P P 20 13 08.7 +0.7
baz=79,SNR=60
S17A **Black Ridge (B** 78.93 46 ⇑P P 20 13 07.6 -0.3
baz=79,SNR=24
U18A **Rough Rock, Ch** 79.00 47 ⇑P P 20 13 08.8 +0.4
baz=79,SNR=42
D08A **Wollman Farm,** 79.02 35 ⇓P P 20 13 08.5 +0.3
baz=79,SNR=26
MDJ **Mudanjiang** 79.05 322 P P 20 13 10.5 +2.0
MDJ pP pP 20 13 13.7 -5.8

MDJ sP sP 20 13 15.0 -8.5
MDJ PcP PcP 20 13 18.5 +1.6
MDJ PP PP 20 16 11.7 +3.6
MDJ S S 20 23 07.1 +2.0
MDJ ScS ScS 20 23 33.0 +4.9
MDJ SS SS 20 28 14.8 +3.0
MDJ pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MDJ pmax pmax
comp=Z,26nm,4.8s
MDJ LR LR
comp=N,470nm,20.4s,MS4.9
MDJ LR LR
comp=E,240nm,21.0s,MS4.9
MDJ LR LR
comp=Z,460nm,22.1s,MS4.8
222A Williams Famil 79.07 52 ⇑P P 20 13 09.1 +0.2
baz=79,SNR=7.3
BGU Big Grassy Mou 79.10 42 *eP* P 20 13 08.2 -0.6
comp=Z,24nm,1.4s,mb4.9
X20A Quemado 79.11 50 P P 20 13 09.7 +0.6
baz=79,SNR=44
E09A Wood Farm, Sta 79.12 35 P P 20 13 08.3 -0.5
baz=79,SNR=37
PMR Palmer 79.13 12 *eP* P 20 13 06.6 -1.9
PMR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
PMR Palmer 79.13 12 *eP* P 20 13 06.6 -1.9
PMR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
PMR Palmer 79.13 12 *eP* P 20 13 06.6 -1.9
comp=Z,5.3nm,0.5s,mb4.7
Z21A St. Cloud Mine 79.17 51 P P 20 13 10.3 +0.9
baz=79,SNR=16
NLU North Lily Min 79.22 43 *eP* P 20 13 09.8 +0.3
comp=Z,21nm,1.3s,mb4.9
V19A Window Rock 79.25 48 ⇑P P 20 13 10.6 +0.8
baz=79,SNR=11
TTA Tatalina 79.27 8 *eP* P 20 13 09.3 +0.1
TTA pmax pmax
comp=Z,29nm,1.1s,mb5.1
TTA Tatalina 79.27 8 *eP* P 20 13 09.3 +0.1
comp=Z,29nm,1.1s,mb5.1
Q16A Castle Valley 79.31 45 P P 20 13 10.8 +0.8
baz=79,SNR=14
I12A Atlanta 79.32 39 P P 20 13 10.2 +0.3
baz=79,SNR=63
F10A Beach Ranch, E 79.32 36 P P 20 13 09.4 -0.5
baz=79,SNR=56
OD2 Odessa Site #2 79.33 34⇓*eP* P 20 13 09.5 -0.4
comp=Z,164nm,1.8s,mb5.7
T18A Mexican Hat 79.34 47 P P 20 13 10.8 +0.5
baz=79,SNR=209
WRAK Wrangell Islan 79.36 22 *eP* P 20 13 09.6 -0.3
comp=Z,12nm,1.1s,mb4.7
R17A Hanksville Air 79.38 45 ⇓P P 20 13 10.7 +0.3
baz=79,SNR=35
W20A Ramah 79.38 49 P P 20 13 11.2 +0.8
baz=79,SNR=61
122A Conniff Cattle 79.41 52 P P 20 13 11.5 +0.8
baz=79,SNR=5.4
N15A Stansbury Isla 79.41 42 ⇑P P 20 13 10.5 0.0
baz=80,SNR=6.8
U19A Dine' College, 79.41 48 ⇑P P 20 13 11.3 +0.7
baz=80,SNR=47
TMUT Trail Mountain 79.47 44 *eP* P 20 13 11.2 +0.3
comp=Z,86nm,1.1s,mb5.6
Y21A Point of Rocks 79.48 50 ⇓P P 20 13 12.2 +1.1
baz=80,SNR=22
S18A Hurst Farm, Bl 79.52 46 ⇑P P 20 13 11.4 +0.2
baz=80,SNR=14
L14A Malta 79.54 41 ⇓P P 20 13 11.4 +0.1
baz=80,SNR=20
MPU Maple Canyon 79.55 43 *eP* P 20 13 11.5 +0.2
comp=Z,43nm,1.2s,mb5.2
NOQ North Oquirrh 79.55 43 *eP* P 20 13 10.8 -0.5
comp=Z,34nm,0.9s,mb5.3
B08A Colville Reser 79.58 33 ⇑P P 20 13 10.7 -0.6
baz=80,SNR=19
X21A Alamocita Cree 79.59 50 ⇑P P 20 13 12.5 +0.8
baz=80,SNR=22
HLID Hailey 79.63 39⇓*iP* P 20 13 11.6 -0.1
comp=Z,60nm,0.9s,mb5.5
SPUT South Promonto 79.67 42 *eP* P 20 13 11.1 -0.8
comp=Z,64nm,1.4s,mb5.4
Z22A Elephant Butte 79.68 51 ⇑P P 20 13 12.7 +0.6
baz=80,SNR=36
J13A Cove Ranch, Pi 79.68 40 ⇑P P 20 13 12.2 +0.3
baz=80,SNR=27
HVU Hansel Valley 79.70 41⇓*iP* P 20 13 11.7 -0.4
HVU pmax pmax
comp=Z,42nm,1.0s,mb5.3
HVU Hansel Valley 79.70 41⇓*iP* P 20 13 11.7 -0.4
comp=Z,42nm,1.0s,mb5.3
V20A Brimhall 79.71 48 ⇓P P 20 13 12.6 +0.3
baz=80,SNR=18
M15A Larsen Ranch, 79.75 42 ⇑P P 20 13 12.4 0.0
baz=80,SNR=24
T19A Beclabito 79.79 47 ⇑P P 20 13 13.4 +0.7
baz=80
C09A Chrisman Ranch 79.81 34 ⇑P P 20 13 12.4 -0.2
baz=80,SNR=9.2
SRU San Rafael 79.84 45 ⇓P P 20 13 13.2 +0.3
baz=80,SNR=38
SRU San Rafael 79.84 45⇓*iP* P 20 13 12.4 -0.5
SRU pmax pmax
comp=Z,46nm,1.1s,mb5.3
SRU San Rafael 79.84 45⇓*iP* P 20 13 12.4 -0.5
comp=Z,46nm,1.1s,mb5.3
K14A Jones Ranch, D 79.85 41 P P 20 13 13.1 +0.2
baz=80,SNR=30
P17A Butcher Ranch, 79.87 44 ⇑P P 20 13 13.7 +0.6
baz=80,SNR=18
H12A Diamond D Ranc 79.90 38 ⇑P P 20 13 13.1 0.0
baz=80,SNR=46
R18A Canyonlands Na 79.92 46 P P 20 13 13.4 0.0
baz=80,SNR=43
U20A Newcomb 79.94 48 ⇓P P 20 13 14.2 +0.7
baz=80,SNR=33
G12A Big Creek, Yel 79.94 38 P P 20 13 13.2 -0.1
baz=80,SNR=152
JLU Jordanelle 79.96 43 *eP* P 20 13 13.4 -0.1
comp=Z,46nm,1.2s,mb5.3
Y22A Socorro 79.98 51 ⇑P P 20 13 14.3 +0.5
baz=80,SNR=14
DAU Daniels Canyon 79.99 43 *eP* P 20 13 13.5 -0.2
DAU pmax pmax
comp=Z,46nm,1.4s,mb5.2
DAU Daniels Canyon 79.99 43 *eP* P 20 13 13.5 -0.2
comp=Z,46nm,1.4s,mb5.2
W21A San Fidel 80.00 49 ⇓P P 20 13 14.6 +0.8
baz=80,SNR=24
I13A Wildhorse Cree 80.00 39 ⇓P P 20 13 14.0 +0.4
baz=80,SNR=46
324A Moseley Ranch, 80.03 54 ⇓P P 20 13 14.0 -0.1
baz=80,SNR=20
J14A Carey 80.05 40 P P 20 13 14.7 +0.7
baz=80,SNR=57
LAZ Ladron 80.05 50 *eP* P 20 13 14.1 -0.1
comp=Z,16nm,1.2s,mb4.8
L15A Malad City 80.07 41 P P 20 13 13.9 -0.1
baz=80,SNR=10.0
LENM Lemitar 80.07 50 *eP* P 20 13 13.8 -0.4
comp=Z,31nm,1.3s,mb5.1
Q18A Rafter H Ranch 80.10 45 ⇓P P 20 13 14.4 0.0
baz=80,SNR=27
N16A Rees Ranch, Co 80.11 43 ⇑P P 20 13 14.5 +0.2
baz=80,SNR=7.8
S19A Harvey Farm, M 80.14 46 P P 20 13 14.9 +0.3
baz=80,SNR=30
425A Indio Mountain 80.15 54 ⇓P P 20 13 14.6 -0.2
baz=80,SNR=31
NJ2 Nanjing 80.19 307 *eP* P 20 13 12.9 -2.1
NJ2 pP pP 20 13 19.2 -6.8
NJ2 sP sP 20 13 21.9 -8.1
NJ2 PP PP 20 16 17.0 -0.9
NJ2 S S 20 23 16.0 -1.7
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.2
NJ2 pmax pmax
comp=Z,50nm,5.4s
NJ2 LR LR
comp=N,570nm,26.7s,MS4.9
NJ2 LR LR
comp=E,330nm,22.3s,MS4.9
NJ2 LR LR
comp=Z,400nm,16.9s

X22A Bernardo 80.19 50 ⇑P P 20 13 15.6 +0.7
baz=80
M16A Huntsville 80.20 42 P P 20 13 14.7 -0.1
baz=80,SNR=19
MNTX Cornudas Mount 80.22 53⇓*eP* P 20 13 14.4 -0.7
comp=Z,41nm,1.4s,mb5.2
O17A Robinson Place 80.23 44 P P 20 13 15.5 +0.5
baz=80,SNR=44
H13A Challis 80.27 38 ⇑P P 20 13 15.2 +0.1
baz=80,SNR=45
224A Cornudas Mount 80.27 53 ⇑P P 20 13 15.5 +0.1
baz=80,SNR=27
R19A Curley Farm, L 80.31 46 P P 20 13 15.6 +0.1
baz=80,SNR=39
V21A Milan 80.31 49 ⇑P P 20 13 16.3 +0.7
baz=80,SNR=36
626A Big Bend Ranch 80.32 56 P P 20 13 15.7 -0.1
baz=80,SNR=27
BNM Barren Site 80.32 51 *eP* P 20 13 15.2 -0.4
comp=Z,24nm,1.0s,mb5.1
K15A Arbon 80.33 41 P P 20 13 15.6 +0.1
baz=80,SNR=19
F12A Elk City 80.33 37 ⇑P P 20 13 15.3 0.0
baz=80,SNR=122
MVCO Mesa Verde 80.34 47 *eP* P 20 13 15.3 -0.4
comp=Z,16nm,0.9s,mb5.0
LPM Los Pinos Moun 80.39 50 *eP* P 20 13 15.7 -0.3
comp=Z,36nm,1.2s,mb5.2
HWUT Hardware Ranch 80.39 42⇓*iP* P 20 13 15.2 -0.6
comp=Z,19nm,1.2s,mb4.9
325A Bean Ranch, Si 80.40 54 ⇓P P 20 13 16.1 -0.1
baz=80,SNR=46
I14A Mackay 80.41 39 P P 20 13 16.2 +0.3
baz=80,SNR=22
E12A Beaver Dam Sad 80.52 36 ⇓P P 20 13 15.7 -0.7
baz=81
N17A Moffit Pass 80.54 43 P P 20 13 16.5 -0.1
baz=81,SNR=14
W22A Albuquerque 80.55 50 ⇓P P 20 13 17.7 +0.9
baz=81,SNR=5.5
526A Mary Lane Ranc 80.56 55 P P 20 13 16.9 -0.1
baz=81,SNR=18
G13A Cobalt 80.57 38 ⇓P P 20 13 16.8 +0.1
baz=81,SNR=51
U21A Nageezi 80.58 48 P P 20 13 17.5 +0.5
baz=81,SNR=88
124A Stringfield Ra 80.58 52 P P 20 13 17.2 +0.1
baz=81,SNR=21
TXAR Lajitas Array 80.60 56 P P 20 13 17.0 -0.3
comp=Z,14nm,1.0s,mb4.9,baz=224,slow=5.2,SNR=94
PV04 Paradox Valley 80.61 46⇓*iP* P 20 13 16.8 -0.3
Q19A Hogan Spring (80.63 45 P P 20 13 17.2 +0.1
baz=81,SNR=34
TRF Thorofare Moun 80.64 10⇓*iP* P 20 13 15.8 -0.8
comp=Z,12nm,0.7s,mb4.9
Y23A Lovelace Mesa, 80.66 51 P P 20 13 17.4 0.0
baz=81,SNR=12
L16A Fish Haven 80.69 42 ⇑P P 20 13 17.3 -0.1
baz=81
NEW Newport 80.71 34⇓*iP* P 20 13 16.2 -1.2
NEW pmax pmax
comp=Z,27nm,1.3s
NEW Newport 80.71 34⇓*iP* P 20 13 16.2 -1.2
comp=Z,27nm,1.3s,mb5.0
PV01 Paradox Valley 80.72 46 *eP* P 20 13 17.2 -0.5
comp=Z,6μm,1.1s
S20A Disappointment 80.72 47 P P 20 13 18.0 +0.3
baz=81,SNR=42
J15A Blackfoot 80.76 40 P P 20 13 18.5 +0.7
baz=81,SNR=65
ANMO Albuquerque 80.80 50 P P 20 13 18.2 +0.1
comp=Z,21nm,1.0s,mb5.0,baz=232,slow=5.3,SNR=35
ANMO Albuquerque 80.80 50⇓*iP* P 20 13 17.7 -0.5
ANMO pmax pmax
comp=Z,33nm,1.1s
ANMO Albuquerque 80.80 50⇓*iP* P 20 13 17.7 -0.4
comp=Z,33nm,1.1s,mb5.2
225A Deer Hill, Car 80.82 53 P P 20 13 18.6 +0.2
baz=81,SNR=15
H14A Leadore 80.83 39 P P 20 13 18.4 +0.3
baz=81,SNR=61
X23A Hourglass Bar 80.84 50 ⇑P P 20 13 18.4 0.0
baz=81,SNR=7.5
426A McDonald Obser 80.85 55 ⇑P P 20 13 18.6 0.0
baz=81,SNR=52
627A Terlingua Ranc 80.87 56 P P 20 13 18.7 0.0
baz=81,SNR=48
R20A Redvale 80.88 46 P P 20 13 18.6 +0.1
baz=81,SNR=11
V22A San Miguel Ran 80.89 49 ⇑P P 20 13 18.8 +0.2
baz=81
M17A Scullys Gap (B 80.91 43 P P 20 13 18.1 -0.5
baz=81,SNR=11
Z24A Sheeppen Canyo 80.92 52 P P 20 13 18.8 0.0
baz=81,SNR=16
T21A Navajo Lake 80.92 48 P P 20 13 19.3 +0.5
baz=81,SNR=16
C11A Tepee Creek (N 80.94 35 ⇑P P 20 13 18.7 +0.1
baz=81
527A Woodward Ranch 80.97 55 ⇓P P 20 13 18.7 -0.5
baz=81,SNR=17
D12A Red Ives Fores 81.00 36 ⇓P P 20 13 18.3 -0.6
baz=81
K16A Soda Springs 81.00 41 ⇑P P 20 13 19.7 +0.7
baz=81,SNR=16
I15A Monteview 81.04 40 P P 20 13 19.9 +0.6
baz=81,SNR=13
S21A Coal Bank Pass 81.05 47 P P 20 13 19.9 +0.5
baz=81,SNR=68
L17A Cokeville 81.09 42 P P 20 13 18.8 -0.7
baz=81,SNR=13
G14A Jackson 81.11 38 ⇑P P 20 13 20.0 +0.5
baz=81,SNR=18
CN2 Changchun 81.11 320 *eP* P 20 13 21.5 +1.9
CN2 *eS* S 20 23 32.9 +6.0
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CN2 pmax pmax
comp=Z,50nm,3.0s
CN2 LR LR
comp=N,500nm,17.0s,MS5.1
CN2 LR LR
comp=E,500nm,17.0s,MS5.1
CN2 LR LR
comp=Z,800nm,21.0s,MS5.0
W23A Werner Place, 81.12 50 P P 20 13 20.1 +0.2
baz=81,SNR=21
Y24A Capitan 81.12 51 P P 20 13 20.0 +0.1
baz=81,SNR=42
MCK McKinley 81.13 11⇓*iP* P 20 13 18.5 -0.8
MCK pmax pmax
comp=Z,33nm,0.9s,mb5.3
MCK McKinley 81.13 11⇓*iP* P 20 13 18.4 -0.8
comp=Z,33nm,0.9s,mb5.3
U22A Llaves 81.14 49 ⇓P P 20 13 20.4 +0.5
baz=81,SNR=16
P19A Cripple Cowboy 81.14 45 ⇑P P 20 13 20.0 +0.1
baz=81,SNR=17
326A Caldwell Ranch 81.15 54 ⇑P P 20 13 19.8 -0.3
baz=81
125A Gardner Draw, 81.18 53 ⇑P P 20 13 20.3 +0.1
baz=81
J16A Bone 81.21 41 ⇑P P 20 13 20.7 +0.6
baz=81,SNR=17
GDL2 Guadalupe Moun 81.21 53 *eP* P 20 13 20.2 -0.3
comp=Z,70nm,1.4s,mb5.4
MCMT McKenzie Canyo 81.25 39 *eP* P 20 13 20.4 +0.1
comp=Z,30nm,1.1s,mb5.1
H15A Lima 81.27 39 P P 20 13 20.9 +0.4
baz=81,SNR=59
AHID Auburn Hatcher 81.28 41⇓*eP* P 20 13 20.2 -0.3
comp=Z,20nm,1.0s,mb5.0
M18A Lyman 81.28 43 ⇓P P 20 13 20.6 +0.1
baz=81,SNR=13
628A Black Gap, Mar 81.29 56 P P 20 13 20.7 -0.2
baz=81,SNR=25
Q20A Ridgley Place, 81.29 46 ⇑P P 20 13 21.1 +0.5
baz=81,SNR=16
E13A Victor 81.33 37 ⇓P P 20 13 20.2 -0.5
baz=81,SNR=32
V23A Ortiz Mt. (NFS 81.35 49 ⇑P P 20 13 22.2 +1.1
baz=81,SNR=10
O19A Miners Draw (B 81.36 44 ⇓P P 20 13 21.0 -0.1
baz=81,SNR=6.9
226A Malaga, Loving 81.36 53 ⇑P P 20 13 20.9 -0.3
baz=81,SNR=24
T22A Edith 81.39 48 P P 20 13 21.4 +0.2
baz=81,SNR=14

Z25A Roswell 81.39 52 ⇓P P 20 13 21.4 0.0
baz=81
427A Hayter Ranch, 81.42 55 P P 20 13 21.5 0.0
baz=81,SNR=36
RRI2 Red Ridge 81.43 41⇓*iP* P 20 13 21.4 +0.1
comp=Z,81nm,1.2s,mb5.5
F14A Wisdom 81.47 38 P P 20 13 21.4 0.0
baz=82,SNR=18
P20A De Beque 81.48 45 ⇑P P 20 13 21.7 0.0
baz=82,SNR=13
D13A Huson 81.53 36 ⇑P P 20 13 21.0 -0.7
baz=82,SNR=63
R21A Cimarron 81.54 46 P P 20 13 22.6 +0.6
baz=82,SNR=22
U23A El Rito 81.59 49 P P 20 13 22.8 +0.4
baz=82,SNR=38
I16A Newdale 81.60 40 P P 20 13 22.8 +0.6
baz=82,SNR=30
CLNB Carlsbad 81.61 53 *eP* P 20 13 22.2 -0.4
comp=Z,14nm,1.3s,mb4.7
528A Cox Ranch, San 81.63 56 ⇑P P 20 13 22.6 -0.1
baz=82,SNR=31
G15A Dillon 81.65 39 P P 20 13 22.6 +0.1
baz=82,SNR=21
126A Clayton Basin, 81.66 53 P P 20 13 22.4 -0.4
baz=82,SNR=10.0
Y25A Mesa, Roswell 81.68 52 ⇓P P 20 13 22.4 -0.4
baz=82,SNR=16
MSO Missoula 81.68 37⇓*iP* P 20 13 21.5 -1.1
comp=Z,45nm,1.2s,mb5.3
W24A Lazy 6 Ranch, 81.69 50 P P 20 13 22.6 -0.3
baz=82,SNR=26
DLMT Dillon 81.69 38⇓*iP* P 20 13 22.4 -0.2
comp=Z,65nm,1.3s,mb5.4
DLBC Dease Lake 81.71 21 P P 20 13 21.9 -0.5
comp=Z,5.6nm,0.8s,mb4.5,baz=178,slow=4.5,SNR=8.6
E14A Clinton 81.72 37 P P 20 13 22.5 -0.2
baz=82,SNR=62
REDW Red Top Meadow 81.73 41 *eP* P 20 13 22.4 -0.5
comp=Z,79nm,1.4s,mb5.5
Q21A Lamborn Mesa, 81.73 46 ⇓P P 20 13 23.7 +0.6
baz=82
TPAW Teton Pass 81.73 41⇓*iP* P 20 13 22.9 -0.1
comp=Z,51nm,1.0s,mb5.4
BSMT Bassoo Peak 81.76 36 *eP* P 20 13 22.5 -0.5
comp=Z,69nm,1.1s,mb5.5
S22A 4UR Ranch, Cre 81.77 47 ⇓P P 20 13 24.1 +0.8
baz=82,SNR=73
C13A Hot Springs 81.79 36 ⇓P P 20 13 22.1 -1.0
baz=82,SNR=32
J17A Brown Place, J 81.82 41 ⇑P P 20 13 23.1 -0.3
baz=82,SNR=8.9
SNOW Snow King Moun 81.84 41 *eP* P 20 13 23.9 +0.3
comp=Z,34nm,1.0s,mb5.2
K18A Toltan Ranch, 81.89 42 P P 20 13 24.0 +0.2
baz=82,SNR=24
A12A Yaak River Ran 81.89 34 ⇑P P 20 13 23.4 -0.2
baz=82
M19A Rock Springs 81.92 43 ⇑P P 20 13 23.8 -0.1
baz=82,SNR=7.9
428A Kincaid Ranch, 81.94 55 ⇑P P 20 13 24.3 0.0
baz=82,SNR=19
IMW Indian Meadow 81.95 40⇓*iP* P 20 13 24.2 +0.1
comp=Z,76nm,1.2s,mb5.5
Z26A Caprock 81.95 52 P P 20 13 23.9 -0.4
baz=82,SNR=32
JTMT Jette 81.99 36 *eP* P 20 13 23.2 -0.9
comp=Z,12nm,1.1s,mb4.8
MOOW Moose Ponds 82.00 41⇓*iP* P 20 13 24.2 -0.1
comp=Z,39nm,1.3s,mb5.2
F15A Butte 82.00 38 ⇑P P 20 13 24.3 +0.1
baz=82,SNR=34
V24A Rampart Ranch, 82.01 50 ⇓P P 20 13 25.0 +0.5
baz=82,SNR=7.3
LOHW Long Hollow 82.02 41⇓*iP* P 20 13 24.1 -0.2
comp=Z,39nm,1.2s,mb5.2
LRM Limekiln Ridge 82.02 38 *eP* P 20 13 23.7 -0.7
comp=Z,140nm,1.0s,mb5.8
T23A Casias Ranch, 82.02 48 ⇑P P 20 13 25.3 +0.7
baz=82,SNR=9.8
SWMT Swartz Lake 82.02 36 *eP* P 20 13 22.6 -1.7
comp=Z,25nm,1.3s,mb5.0
R22A Saguache, Gunn 82.03 47 P P 20 13 25.5 +0.9
baz=82,SNR=35
D14A Greenough 82.07 37 ⇓P P 20 13 23.8 -0.7
baz=82,SNR=39
328A Wristen Ranch, 82.09 55 ⇑P P 20 13 24.5 -0.6
baz=82,SNR=15
G16A Moss Hill, Enn 82.09 39 P P 20 13 24.8 0.0
baz=82,SNR=13
CHMT Chamberlain Mo 82.12 37 *eP* P 20 13 24.1 -0.8
comp=Z,34nm,1.1s,mb5.2
SLMT Seeley Lake 82.16 37 *eP* P 20 13 23.6 -1.5
comp=Z,24nm,1.2s,mb5.0
H16A Russell Place, 82.17 40 ⇓P P 20 13 26.3 +1.2
baz=82,SNR=59
127A Arkansas Junct 82.19 53 ⇑P P 20 13 25.1 -0.5
baz=82,SNR=6.0
J18A Kendall Valley 82.19 41 ⇓P P 20 13 25.3 0.0
baz=82,SNR=68
I17A Pilgrim Ck. 82.19 40 ⇑P P 20 13 26.2 +1.0
baz=82,SNR=6.4
FLWY Flagg Ranch 82.19 40⇓*iP* P 20 13 25.5 +0.2
comp=Z,100nm,1.3s,mb5.6
N20A Spence Gulch, 82.19 44 P P 20 13 25.4 0.0
baz=82,SNR=25
YBMT Yellow Bay 82.20 36 *eP* P 20 13 23.9 -1.4
comp=Z,13nm,1.1s,mb4.8
Q22A Crested Butte, 82.21 46 P P 20 13 26.1 +0.6
baz=82,SNR=19
E15A Deer Lodge 82.22 38 P P 20 13 24.8 -0.6
baz=82,SNR=27
B13A Whitefish 82.23 35 P P 20 13 24.6 -0.8
baz=82,SNR=14
PDAR Pinedale Array 82.26 42 P P 20 13 25.1 -0.6
comp=Z,17nm,0.9s,mb5.0,baz=217,slow=3.7,SNR=103
PDAR LR LR 20 44 09.6
comp=Z,230nm,19.4s,MS4.5,baz=335,slow=32
YFT Old Faithful 82.29 40 *eP* P 20 13 27.1 +1.3
comp=Z,38nm,1.2s,mb5.2
C14A Swan Lake 82.30 36 ⇑P P 20 13 24.7 -1.1
baz=82
SMCO Snowmass 82.31 46 *eP* P 20 13 26.5 +0.4
comp=Z,28nm,0.9s,mb5.2
YMR Madison River 82.32 40 *eP* P 20 13 26.8 +0.9
comp=Z,131nm,1.2s,mb5.7
COLA College 82.37 11 *eP* P 20 13 24.9 -0.9
COLA pmax pmax
comp=Z,38nm,0.8s,mb5.4
COLA College 82.37 11 *eP* P 20 13 24.9 -0.9
comp=Z,38nm,0.8s,mb5.4
W25A X Bar L Ranch, 82.39 50 ⇑P P 20 13 25.8 -0.8
baz=82,SNR=16
BOZ Bozeman (W) 82.42 39⇓*iP* P 20 13 26.1 -0.4
BOZ pmax pmax
comp=Z,38nm,1.2s,mb5.2
BOZ Bozeman (W) 82.42 39⇓*iP* P 20 13 26.1 -0.4
comp=Z,38nm,1.2s,mb5.2
O21A Pagoda 82.44 45 ⇑P P 20 13 26.8 +0.1
baz=82,SNR=8.0
ILAR Eielson Array 82.46 11 P P 20 13 25.4 -0.8
comp=Z,6.3nm,0.7s,mb4.7,baz=228,slow=6.0,SNR=72
ILAR PP PP 20 16 30.9 -5.0
comp=Z,1.9nm,0.9s,baz=218,slow=8.2,SNR=5.5
F16A Kennard Place, 82.49 38 ⇓P P 20 13 27.1 +0.3
baz=83,SNR=24
YNR Norris Junctio 82.52 40 *eP* P 20 13 28.3 +1.3
comp=Z,79nm,1.5s,mb5.5
V25A Rancho No Teng 82.54 50 P P 20 13 27.2 -0.1
baz=83,SNR=49
SEY Seymchan 82.54 345*dP* P 20 13 26.9 +0.2
M20A Sweetwater, Wa 82.55 43 ⇑P P 20 13 27.3 0.0
baz=83,SNR=15
Z27A Tatum 82.55 53 P P 20 13 26.5 -1.0
baz=83,SNR=15
I18A Diamond G Ranc 82.56 41 ⇓P P 20 13 27.5 +0.2
baz=83,SNR=14
A13A Flathead Natio 82.57 35 ⇓P P 20 13 26.8 -0.3
baz=83
X26A CR and CF Fran 82.60 51 ⇓P P 20 13 26.9 -0.8
baz=83,SNR=6.3
D15A Lincoln 82.62 37 ⇓P P 20 13 27.4 0.0
baz=83,SNR=51
P22A Eagle 82.64 46 ⇑P P 20 13 28.1 +0.3
baz=83,SNR=12
N21A Black Mountain 82.66 44 ⇓P P 20 13 28.1 +0.3
baz=83,SNR=7.0
L20A Wamsutter 82.69 43 P P 20 13 28.3 +0.3

baz=83,SNR=34
SDCO Great Sand Dun 82.71 48 *e*P **P 20 13 27.6 -0.6**
comp=Z,31nm,1.3s,mb5.2
T24A Torres, Weston 82.74 49 ⇊P **P 20 13 29.1 +0.7**
baz=83,SNR=35
K19A Absolon Red Bu 82.75 42 ⇊P **P 20 13 27.8 -0.5**
baz=83,SNR=21
Y27A Causey 82.82 52 ⇑P **P 20 13 28.4 -0.4**
baz=83,SNR=12
J19A Crowheart 82.83 42 ⇑P **P 20 13 28.6 0.0**
baz=83,SNR=43
E16A East Helena 82.85 38 ⇊P **P 20 13 28.6 -0.1**
baz=83,SNR=52
HRY Holter Researc 82.85 38 *e*P **P 20 13 28.4 -0.3**
comp=Z,48nm,0.9s,mb5.5
S24A Houchin Ranch, 82.87 48 ⇊P **P 20 13 29.4 +0.4**
baz=83,SNR=30
B14A Marquette Ranc 82.89 36 ⇑P **P 20 13 28.2 -0.7**
baz=83,SNR=27
WALA Waterton Lakes 82.92 35 *e*P **P 20 13 28.0 -0.9**
comp=Z,1.6nm,1.4s
U25A Circle Dot Ran 82.93 49 ⇊P **P 20 13 29.3 0.0**
baz=83,SNR=45
C15A Salmond Ranch, 82.95 36 P **P 20 13 28.6 -0.7**
baz=83,SNR=49
Q23A Hartsel 82.98 47 ⇑P **P 20 13 30.2 +0.6**
baz=83,SNR=27
K20A Yellowstone Ra 83.00 42 P **P 20 13 28.8 -0.7**
baz=83,SNR=18
O22A Kremmling 83.05 45 ⇊P **P 20 13 29.8 -0.1**
baz=83,SNR=24
H18A Shoshone NF, C 83.13 40 ⇊P **P 20 13 30.2 0.0**
baz=83,SNR=15
F17A Fitzpatrick Pl 83.13 39 P **P 20 13 30.6 +0.5**
baz=83,SNR=34
A14A Double T Ranch 83.14 35 P **P 20 13 29.6 -0.5**
baz=83,SNR=17
M21A Separation Pea 83.15 44 ⇊P **P 20 13 30.2 -0.2**
baz=83,SNR=11
MSTX Muleshoe 83.15 52 ⇊P **P 20 13 30.4 -0.2**
baz=83,SNR=14
D16A Dana Ranch, Ca 83.18 37 ⇊P **P 20 13 30.5 +0.1**
baz=83,SNR=37
X27A F and S Farms, 83.18 51 ⇑P **P 20 13 30.3 -0.4**
baz=83,SNR=6.5
P23A Jefferson 83.18 46 ⇑P **P 20 13 31.4 +0.8**
baz=83,SNR=9.2
R24A Sanders Place, 83.20 47 ⇊P **P 20 13 31.2 +0.5**
baz=83,SNR=18
T25A Trinidad 83.23 49 ⇑P **P 20 13 30.8 -0.1**
baz=83,SNR=13
I19A Meeteetse 83.24 41 ⇑P **P 20 13 31.1 +0.3**
baz=83
B15A Bradely Ranch, 83.27 36 ⇑P **P 20 13 29.6 -1.1**
baz=83,SNR=22
RWWY Rawlins 83.29 44 *e*P **P 20 13 30.6 -0.5**
comp=Z,78nm,1.2s,mb5.6
E17A Martinsdale 83.30 38 ⇑P **P 20 13 31.2 +0.2**
baz=83,SNR=18
L21A Rawlins 83.31 43 ⇊P **P 20 13 30.7 -0.5**
baz=83,SNR=17
N22A Wattenberg Ran 83.39 45 ⇑P **P 20 13 31.9 +0.2**
baz=84,SNR=12
S25A Robets Cordova 83.44 48 ⇑P **P 20 13 31.9 -0.1**
baz=84,SNR=29
C16A Fuhringer Ranc 83.46 37 ⇊P **P 20 13 31.3 -0.5**
baz=84,SNR=46
Q24A Divide 83.49 47 P **P 20 13 32.4 +0.2**
baz=84,SNR=30
J20A Shoshoni 83.49 42 ⇊P **P 20 13 32.3 +0.2**
baz=84,SNR=53
O23A Lake Granby, G 83.50 45 ⇑P **P 20 13 32.8 +0.6**
baz=84,SNR=6.6
G18A Lazy EL Ranch, 83.51 40 ⇊P **P 20 13 32.3 +0.2**
baz=84,SNR=21
A15A Johnson Ranch, 83.52 35 P **P 20 13 31.2 -0.9**
baz=84,SNR=46
ISCO Idaho Springs 83.53 46 *e*P **P 20 13 32.1 -0.3**
ISCO pmax pmax
comp=Z,54nm,1.8s,mb5.4
ISCO Idaho Springs 83.53 46 *e*P **P 20 13 32.1 -0.3**
comp=Z,54nm,1.8s,mb5.4
H19A Powell 83.55 40 P **P 20 13 32.8 +0.5**
baz=84,SNR=31
M22A Cedar Creek Ra 83.57 44 ⇊P **P 20 13 32.3 -0.2**
baz=84,SNR=13
RLMT Red Lodge 83.59 40 *e*P **P 20 13 32.6 +0.1**
comp=Z,58nm,1.2s,mb5.6
GCMT Greycliff 83.68 39 *e*P **P 20 13 33.1 +0.1**
comp=Z,38nm,1.3s,mb5.4
K21A Alcova 83.70 43 P **P 20 13 32.6 -0.5**
baz=84,SNR=37
F18A Big Timber 83.70 39 P **P 20 13 33.4 +0.3**
baz=84,SNR=25
I20A Worland 83.75 41 ⇑P **P 20 13 33.4 0.0**
baz=84,SNR=43
D17A Six Diamond Ra 83.75 38 P **P 20 13 33.4 +0.1**
baz=84,SNR=56
R25A Fountain Ranch 83.75 48 ⇑P **P 20 13 33.4 -0.2**
baz=84,SNR=6.5
N23A Red Feather La 83.78 45 ⇊P **P 20 13 34.0 +0.4**
baz=84,SNR=20
CMIG Matias Romero 83.87 70 P **P 20 13 33.7 -0.9**
comp=Z,3.1nm,0.7s,mb4.5,baz=276,slow=8.0,SNR=5.4
J21A Lysite 83.90 42 ⇊P **P 20 13 34.2 0.0**
baz=84,SNR=66
E18A Harlowton 83.91 38 P **P 20 13 34.5 +0.3**
baz=84,SNR=30
C17A Wharram Farm, 83.95 37 P **P 20 13 33.9 -0.4**
baz=84,SNR=105
L22A Ellis Ranch, M 83.96 44 P **P 20 13 34.8 +0.3**
baz=84,SNR=22
H20A Greybull 84.08 41 ⇊P **P 20 13 35.0 -0.1**
baz=84,SNR=8.0
Q25A Bedland, Calha 84.10 47 ⇑P **P 20 13 35.0 -0.3**
baz=84,SNR=5.8
JCT Junction City 84.14 56 *e*P **P 20 13 33.7 -2.0**
JCT pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
JCT Junction City 84.14 56 *e*P **P 20 13 33.7 -2.0**
comp=Z,8.4nm,0.8s,mb4.9
A16A West Butte Ran 84.14 36 ⇊P **P 20 13 34.8 -0.5**
baz=84
F19A Roth Farm, Mol 84.15 39 ⇊P **P 20 13 35.3 -0.1**
baz=84,SNR=28
COLD Coldfoot 84.16 9 *e*P **P 20 13 35.7 +0.8**
comp=Z,12nm,1.0s,mb5.0
K22A Casper 84.18 43 P **P 20 13 35.2 -0.4**
baz=84,SNR=10
I21A Big Trails, Te 84.22 42 ⇑P **P 20 13 35.4 -0.4**
baz=84,SNR=45
B17A L&G Farms, Che 84.26 37 ⇊P **P 20 13 35.5 -0.4**
baz=84,SNR=23
D18A Linhart Farms, 84.29 38 P **P 20 13 36.4 +0.3**
baz=84,SNR=18
PHWY Pilot Hill 84.29 45 *e*P **P 20 13 35.9 -0.4**
comp=Z,29nm,1.4s,mb5.2
G20A Bridger 84.29 40 ⇊P **P 20 13 35.8 -0.3**
baz=84,SNR=10
AMTX Amarillo 84.34 52 *e*P **P 20 13 35.9 -0.7**
comp=Z,104nm,1.4s,mb5.8
P25A Willow Gulch B 84.41 47 P **P 20 13 36.8 0.0**
baz=84,SNR=14
L23A Garrett 84.49 44 ⇑P **P 20 13 37.0 -0.2**
baz=84,SNR=30
BILL Bilibino 84.53 352 *e*P **P 20 13 36.4 -0.4**
BILL Bilibino 84.53 352 *e*P **P 20 13 36.4 -0.4**
E19A Rath Farm, Rou 84.54 39 ⇊P **P 20 13 37.5 +0.2**
baz=85,SNR=29
J22A Midwest 84.56 42 ⇑P **P 20 13 37.1 -0.4**
baz=85,SNR=29
F20A Billings 84.61 40 ⇊P **P 20 13 37.9 +0.2**
baz=85,SNR=5.2
A17A Triple J Farms 84.65 36 P **P 20 13 37.6 -0.3**
baz=85,SNR=45
EGMT Eagleton 84.73 37 *e*P **P 20 13 37.6 -0.6**
comp=Z,64nm,1.4s,mb5.6
H21A Big Horn, Sher 84.75 41 ⇑P **P 20 13 38.3 -0.2**
baz=85,SNR=9.3
M24A Cheyenne 84.79 45 ⇊P **P 20 13 39.1 +0.4**
baz=85,SNR=6.5
D19A Cripps Ranch, 84.82 38 ⇑P **P 20 13 39.0 +0.2**
baz=85
B18A Beardsley Farm 84.90 37 ⇊P **P 20 13 39.0 -0.2**
baz=85,SNR=18
E20A Meyer Farm, Mu 84.96 39 ⇊P **P 20 13 39.8 +0.4**
baz=85,SNR=11
C19A Slack Wire Ran 85.00 38 P **P 20 13 39.7 +0.1**
baz=85,SNR=29
A18A Metzger Ranch, 85.12 36 ⇑P **P 20 13 39.8 -0.4**
baz=85,SNR=35
D20A Manuel Ranch, 85.23 39 P **P 20 13 40.9 0.0**
baz=85,SNR=22
EDM Edmonton 85.49 32 *e*P **P 20 13 41.1 -0.8**
EDM Edmonton 85.49 32 *e*P **P 20 13 41.1 -0.8**
EDM Edmonton 85.49 32 *e*P **P 20 13 41.1 -0.8**
C20A Veseth Ranch, 85.61 38 P **P 20 13 42.7 +0.1**
baz=86,SNR=22
A19A Klindworth Far 85.76 37 ⇑P **P 20 13 43.2 -0.2**
baz=86
D21A La Casta Ranch 85.91 39 ⇑P **P 20 13 44.2 0.0**
baz=86,SNR=7.5
LAO LASA Array 86.21 39 *e*P **P 20 13 45.9 +0.2**
comp=Z,58nm,1.3s,mb5.7
RSSD Black Hills 86.46 42 *e*P **P 20 13 45.3 -1.7**
RSSD pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
RSSD Black Hills 86.46 42 *e*P **P 20 13 45.2 -1.7**
comp=Z,8.0nm,1.0s,mb4.9
COCO West Island 86.62 258 P **P 20 13 45.0 -3.5**
MAW Mawson 87.78 199 P **P 20 13 54.0 +0.9**
comp=Z,11nm,0.8s,mb5.1,baz=122,slow=6.1,SNR=15
MAW Mawson 87.78 199 *e*P **P 20 13 53.8 +0.7**
comp=Z,6.7nm,0.6s,mb5.0
GYA Guiyang 88.07 298 P **P 20 13 55.6 +0.4**
GYA PP PP 20 17 25.4 +3.0
GYA SKS 20 24 21.3
GYA S S 20 24 38.0 +1.1
GYA SS SS 20 30 31.7 +5.6
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,180nm,5.2s
GYA LR LR
comp=N,2μm,22.7s,MS5.6
GYA LR LR
comp=E,2μm,23.9s,MS5.6
GYA LR LR
comp=Z,2μm,21.0s,MS5.5
INK Inuvik 88.28 14 P **P 20 13 55.3 +0.1**
comp=Z,11nm,0.9s,mb5.1,baz=221,slow=3.7,SNR=13
INK Inuvik 88.28 14 *e*P **P 20 13 54.4 -0.8**
INK pmax pmax
comp=Z,13nm,0.9s
INK Inuvik 88.28 14 *e*P **P 20 13 54.4 -0.8**
comp=Z,13nm,0.9s,mb5.2
HHC Hu-ho-hao-te 89.05 313 *e*P **P 20 14 00.9 +1.4**
HHC sP sP 20 14 07.9 -6.7
HHC PP PP 20 17 33.1 +3.2
HHC SKS 20 24 28.3
HHC S S 20 24 47.2 +1.6
HHC sS sS 20 24 55.5 -8.5
HHC SS SS 20 30 44.7 +4.9
HHC pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
HHC pmax pmax
comp=Z,120nm,6.1s
HHC LR LR
comp=N,370nm,15.7s,MS5.0
HHC LR LR
comp=E,250nm,15.1s,MS5.0
HHC LR LR
comp=Z,250nm,15.1s,MS4.8
YAK Yakutsk 89.14 337 *e*P **P 20 13 57.4 -1.9**
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.4
YAK Yakutsk 89.14 337 *e*P **P 20 13 57.4 -2.0**
comp=Z,17nm,0.9s,mb5.4
YKA Yellowknife Ar 90.10 23 P **P 20 14 03.0 -0.9**
comp=Z,4.0nm,0.8s,mb4.8,baz=238,slow=4.4,SNR=27
YKA Yellowknife Ar 90.10 23 P **P 20 14 03.0 -0.9**
TEIG Tepich 90.77 69 *e*P **P 20 14 06.7 -1.2**
comp=Z,22nm,1.3s,mb5.3
KMI Kunming 91.05 296 P **P 20 14 08.2 -1.0**
KMI pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
ECSD EROS Data Cent 91.26 45 *e*P **P 20 14 07.7 -2.0**
comp=Z,5.5nm,1.0s,mb4.8
CD2 Chengdu 91.83 301 *e*P **P 20 14 16.2 +3.5**
CD2 pP pP 20 14 21.0 -2.8
CD2 sP sP 20 14 23.8 -4.0
CD2 PP PP 20 17 58.4 +6.1
CD2 SKS 20 24 46.9
CD2 S S 20 25 14.9 +3.2
CD2 sS sS 20 25 22.9 -7.3
CD2 SS SS 20 31 27.0 +6.5
CD2 pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
CD2 pmax pmax
comp=Z,30nm,6.2s
CD2 LR LR
comp=E,130nm,14.3s
CD2 LR LR
comp=Z,140nm,10.7s,MS4.7
SYO Syowa Base 92.59 191⇑*e*P **P 20 14 14.6 -0.9**
CMAR Chiang Mai Arr 92.64 288 P **P 20 14 18.9 +2.2**
comp=Z,1.1nm,0.9s,mb4.3,baz=90,slow=2.6,SNR=5.6
VNA3 Neumayer Olymp 92.84 175 *e*Pdiff **P 20 14 14.3 -2.3**
VNA3 *e* 20 14 21.2
LZH Lanzhou 93.25 306 *e*P **P 20 14 20.4 +1.3**
LZH pP pP 20 14 26.0 -4.3
LZH sP sP 20 14 28.0 -6.3
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.3
VNA2 Neumayer--Watz 93.34 175 *e*Pdiff **P 20 14 16.5 -2.4**
baz=190,slow=2.4
SONM Songino Array 94.87 318 P **P 20 14 27.1 +0.8**
comp=Z,0.4nm,0.7s,baz=143,slow=5.0,SNR=3.1
SONM PP PP 20 18 13.6 -2.0
comp=Z,0.6nm,1.0s,baz=120,slow=5.8,SNR=4.0
SONM LR LR 20 49 44.0
comp=Z,149nm,21.6s,MS4.4,baz=263,slow=31
SONM Songino Array 94.87 318 P **P 20 14 27.1 +0.9**
SONM 20 18 13.6
MKAR Makanchi Array 110.85 315 PKiKP PKiKP
comp=Z,0.3nm,0.2s,baz=72,slow=4.7,SNR=4.2
MKAR Makanchi Array 110.85 315*c i*PKIKP PKiKP 20 19 37.7 +0.4
BVAR Borovoye Array 117.91 322 PKP PKPdf 20 19 50.5 -0.1
comp=Z,1.4nm,0.8s,baz=132,slow=2.2,SNR=8.5
BRVK Borovoye 117.96 322⇑*i*PKIKP PKPdf 20 19 50.1 -0.6
BRVK pmax pmax
comp=Z,4.0nm,1.7s
ARCES ARCESS Array B 124.63 352 PKP PKPdf 20 20 01.7 -1.4
comp=Z,3.2nm,0.8s,baz=25,slow=3.2,SNR=9.3
ARCES ARCESS Array B 124.63 352 PKP PKPdf 20 20 01.7 -1.4
AKTK Aktyubinsk 126.01 322 PKP PKPdf 20 20 06.1 -0.2
AKTO Aktyubinsk 126.01 322 PKP PKPdf 20 20 06.1 -0.2
comp=Z,1.2nm,0.7s,baz=171,slow=0.8,SNR=4.9
FINES FINESS Array B 131.96 348 PKP PKPdf 20 20 16.5 -0.7
comp=Z,3.0nm,0.9s,baz=106,slow=4.2,SNR=5.4
FINES FINESS Array B 131.96 348 PKP PKPdf 20 20 16.5 -0.7
OBN Obninsk 134.13 336⇑*i*PKIKP PKPdf 20 20 20.3 -1.2
OBN pmax pmax
comp=Z,8.0nm,0.8s
NOA NORSAR Array B 134.32 357 PKP PKPdf 20 20 22.1 +0.4
comp=Z,1.9nm,1.0s,baz=14,slow=4.2,SNR=2.9
HFS Hagfors 135.05 355 PKP PKPdf 20 20 23.9 +0.9
comp=Z,3.9nm,0.8s,baz=190,slow=7.5,SNR=3.7
KWP Kalwaria Pacla 143.44 342 ⇊PKIKP PKPdf 20 20 35.9 -2.8
KWP Kalwaria Pacla 143.44 342 ⇊*i*P PKPdf 20 20 35.9 -2.8
OJC Ojcow 143.68 346 *e*PKP PKPdf 20 20 36.4 -2.7
CLL Collm 143.83 353 *e*PKIKP PKPdf 20 20 37.0 -2.3
CLL *e* 20 20 43.0
CLL pmax pmax
comp=Z,10.0nm,0.8s
CLL Collm 143.83 353 *e*PKP PKPdf 20 20 37.0 -2.3
CLL *i* PKP PKPdf 20 20 38.8 -0.5
CLL *e* 20 20 43.0
CLL Collm 143.83 353 *e*PKPpre PKPdf 20 20 37.0 -2.3
comp=Z,10.0nm,0.8s
CLL *i* PKPdf PKPdf 20 20 38.8 -0.5
comp=Z,14nm,1.1s
CLL *e*PKiKP PKiKP 20 20 43.0 +0.2
CLL LmV 21 27 00.0
comp=Z,100nm,19.1s
MALT Malatya 143.89 315 PKIKP PKPdf 20 20 40.4 +0.5
MALT Malatya 143.89 315 *e*PKPdf PKPdf 20 20 39.7 -0.2
MALT Malatya 143.89 315 ⇊*i*P PKPdf 20 20 39.5 -0.4
STHS Stebnicka Huta 144.05 344 *e*PKIKP PKPdf 20 20 38.7 -1.1
STHS Stebnicka Huta 144.05 344 *e*PKP PKPdf 20 20 38.7 -1.1
BRG Berggiesshubel 144.14 352 *e*P PKPdf 20 20 37.7 -2.2
comp=Z,6.0nm,1.1s
BRG Berggiesshubel 144.14 352 *e*PKIKP PKPdf 20 20 37.7 -2.2
BRG pmax pmax
comp=Z,4.0nm,1.1s
UPC Upice 144.18 350 *e*PKIKP PKPdf 20 20 38.5 -1.5
UPC Upice 144.18 350 *e*PKP PKPdf 20 20 38.5 -1.5
DPC Dobruska-Polom 144.28 349 *e*PKIKP PKPdf 20 20 39.2 -1.0
DPC Dobruska-Polom 144.28 349 *e*PKP PKPdf 20 20 39.2 -1.0
BUR08 Bucovina Ar. S 144.37 338 *e*PKPdf PKPdf 20 20 38.8 -1.6
BURAR Bucovina Array 144.39 338 ⇑PKIKP PKPdf 20 20 39.3 -1.1
BURAR Bucovina Array 144.39 338 ⇑*i*P PKPdf 20 20 39.3 -1.1
PVCC Panska Ves 144.39 351 *e*PKIKP PKPdf 20 20 39.9 -0.4
PVCC Panska Ves 144.39 351 *e*PKP PKPdf 20 20 39.9 -0.4
OKC Ostrava-Krasne 144.41 347 *e*PKIKP PKPdf 20 20 39.4 -1.0
OKC Ostrava-Krasne 144.41 347 *e*PKP PKPdf 20 20 39.4 -1.0
CRVS Cervenica-Dubn 144.46 343 *e*PKIKP PKPdf 20 20 39.6 -0.9
CRVS Cervenica-Dubn 144.46 343 *e*PKP PKPdf 20 20 39.6 -0.9
CRVS *e*pP 20 57 23.9
UZH Uzhgorod 144.46 342⇑*i*PKIKP PKPdf 20 20 39.7 -0.8
UZH *e* 20 20 44.0
MORC Moravsky Berou 144.59 348 PKIKP PKPdf 20 20 40.5 -0.2
MORC Moravsky Berou 144.59 348 *e*PKPdf PKPdf 20 20 39.8 -1.0
MORC Moravsky Berou 144.59 348⇑*i*P PKPdf 20 20 40.0 -0.7
MOX Moxa 144.63 355 *e*PKP PKPdf 20 20 39.6 -1.2
comp=Z,31nm,1.5s
MOX Moxa 144.63 355 *e*PKIKP PKPdf 20 20 39.6 -1.2
MOX pmax pmax
comp=Z,31nm,1.5s
BEBN Eben Emael 144.70 1 PKP PKPdf 20 20 39.9 -1.0
WERD Werda 144.76 354 *e*PKPbc PKPdf 20 20 39.8 -1.2
TESR 144.77 336 ⇊*i*P PKPdf 20 20 40.0 -1.1
TANN Tannenbergstha 144.77 354 *e*PKPbc PKPdf 20 20 40.0 -1.0
TRPA Tarpa 144.83 341⇑*i*P PKPdf 20 20 40.4 -0.8
GUNZ Gunzen 144.84 354 *e*PKPbc PKPdf 20 20 40.4 -0.7
MEM Membach 144.89 1 PKP PKPdf 20 20 40.2 -1.0
MEM APKP 20 20 43.0
WERN Wernitzgruen 144.91 354 *e*PKPbc PKPdf 20 20 40.6 -0.6
TLCR 144.91 332 ⇑PKIKP PKPdf 20 20 41.2 -0.2
TLCR 144.91 332⇑*i*P PKPdf 20 20 41.2 -0.2
PRU Pruhonice 144.92 351 *e*PKIKP PKPdf 20 20 41.3 0.0
PRU Pruhonice 144.92 351 *e*PKP PKPdf 20 20 41.3 0.0
BMR Baia Mare 144.93 340 PKIKP PKPdf 20 20 41.5 +0.1
BMR Baia Mare 144.93 340⇑*i*P PKPdf 20 20 41.2 -0.2
SNF Seneffe 144.95 3 PKP PKPdf 20 20 40.4 -0.9
SNF APKP 20 20 43.2
NKC Novy Kostel 144.95 353 *e*PKIKP PKPdf 20 20 41.0 -0.3
NKC Novy Kostel 144.95 353 *e*PKP PKPdf 20 20 41.0 -0.3
BCLA Clavier 145.07 1 PKP PKPdf 20 20 40.9 -0.7
BCLA APKP 20 20 43.7
KECS Kecovo 145.11 344 *e*PKIKP PKPdf 20 20 41.9 +0.3
KECS Kecovo 145.11 344 *e*PKP PKPdf 20 20 41.9 +0.3
VRAC Vranov 145.23 349 PKPbc PKPbc 20 20 42.3 +0.8
comp=Z,21nm,1.0s,baz=354,slow=3.1,SNR=22
TNS Taunus Mts 145.25 358 *e*PKPbc PKPbc 20 20 41.5 -0.1
VRI Vrincioaia 145.27 335 ⇑PKIKP PKPdf 20 20 42.4 +0.4
VRI Vrincioaia 145.27 335⇑*i*P PKPbc 20 20 42.4 +0.6
PLOR Plostina 145.31 335 ⇑PKIKP PKPdf 20 20 42.6 +0.5
PLOR Plostina 145.31 335⇑*i*P PKPbc 20 20 42.6 +0.7
DOU Dourbes 145.37 2 PKP PKPdf 20 20 41.9 -0.1
GIVF Givet 145.37 2 *e*PKP1 PKPbc 20 20 41.4 -0.5
comp=Z,72nm,1.1s
BAIF Baives 145.39 3 *e*PKP1 PKPbc 20 20 41.7 -0.3
comp=Z,78nm,1.0s
TREC Trest 145.44 350 *e*PKIKP PKPdf 20 20 42.7 +0.5
TREC Trest 145.44 350 *e*PKP PKPdf 20 20 42.7 +0.5
VYHS Vyhne 145.52 346 *e*PKIKP PKPdf 20 20 43.3 +1.0
VYHS Vyhne 145.52 346 *e*PKP PKPdf 20 20 43.3 +1.0
KOLL Kolacno 145.54 346 *e*PKIKP PKPdf 20 20 43.6 +1.2
KOLL Kolacno 145.54 346 *e*PKP PKPdf 20 20 43.6 +1.2
KMBO Kilima Mbogo 145.55 244 PKPbc PKPbc 20 20 44.0 +0.4
comp=Z,3.5nm,0.7s,baz=181,slow=23,SNR=3.8
GRA1 Grafenberg Arr 145.61 355 *e*PKPbc PKPbc 20 20 43.1 +0.4
GRF Grafenberg Arr 145.61 355 *e*PKPbc PKPbc 20 20 43.1 +0.4
ABH Alteburg 145.62 359 PKP PKPdf 20 20 43.0 +0.5
TIRR Tirgusor 145.66 332 ⇊PKIKP PKPdf 20 20 44.0 +1.3
TIRR Tirgusor 145.66 332 *e*PKPdf PKPdf 20 20 43.3 +0.6
TIRR Tirgusor 145.66 332 ⇊*i*P PKPdf 20 20 44.0 +1.3
DOPR Dopca 145.71 337 ⇊*i*P PKPdf 20 20 44.4 +1.6
PSZ Piszkesteto 145.78 344 *e*PKP2 PKPab 20 20 42.8 -0.9
PSZ Piszkesteto 145.78 344 ⇊*i*P PKPbc 20 20 45.3 +2.0
PSZ Piszkesteto 145.78 344 *e*PKP PKPdf 20 20 44.1 +1.3
RUP Ruppelstein 145.80 359 PKP PKPdf 20 20 43.7 +0.9
WLF Walferdange 145.84 1 PKP PKPdf 20 20 43.7 +0.8
WLF APKP 20 20 46.1
WLF Walferdange 145.84 1 *e*PKPbc PKPbc 20 20 44.0 +0.6
WLF Walferdange 145.84 1 *e*PKPdf PKPdf 20 20 43.5 +0.6
TOD Tromm 145.86 357 PKP PKPdf 20 20 44.2 +1.3
MLR Muntele Rosu 145.89 335 PKIKP PKPdf 20 20 44.8 +1.7
MLR Muntele Rosu 145.89 335⇑*i*P PKPdf 20 20 44.7 +1.6
KHC Kasperske Hory 145.90 352 *e*PKP2 PKPab 20 20 42.9 -1.2
KHC Kasperske Hory 145.90 352 *e*PKP PKPdf 20 20 43.9 +0.9
DRGR 145.96 340 ⇑PKP2 PKPdf 20 20 42.2 -1.0
DRGR 145.96 340⇑*i*P PKPdf 20 20 42.2 -1.0
WET Wettzell 145.98 353 *e*PKPbc PKPbc 20 20 44.0 +0.1
MODS Modra-Piesok 145.98 347 *e*PKIKP PKPdf 20 20 44.8 +1.7
MODS Modra-Piesok 145.98 347 *e*PKP PKPdf 20 20 44.8 +1.7
GEC2 GERESS Array S 146.16 352 *e*PKPbc PKPbc 20 20 44.4 0.0
ROSF Rostrenen 146.18 12 *e*PKP1 PKPbc 20 20 44.1 -0.4
BRTR Keskin Array B 146.18 321 PKPbc PKPbc 20 20 45.6 +0.8
comp=Z,19nm,1.0s,baz=112,slow=1.9,SNR=51
BRTR Keskin Array B 146.18 321*c i*PKP2 PKPab 20 20 45.7 +0.2
BRTR pmax pmax
comp=Z,19nm,1.0s
FLN La Foliniere 146.24 8 *e*PKP1 PKPbc 20 20 43.5 -1.2
comp=Z,49nm,1.0s
FLN *e*MLR MLR
comp=Z,302nm,22.8s,MS4.7
FLN La Foliniere 146.24 8 *e*PKP PKPdf 20 20 43.5 -0.1
FLN LR LR
comp=Z,300nm,22.8s,MS5.0
VOIR 146.29 336 ⇑PKP2 PKPab 20 20 46.0 +0.3
VOIR 146.29 336⇑*i*P PKPab 20 20 46.0 +0.3
SGMF Saint Gilles 146.39 11 *e*PKP1 PKPbc 20 20 44.0 -1.1
comp=Z,59nm,1.1s
BUD Budapest 146.41 345 *e*PKP PKPdf 20 20 45.8 +1.9
SULR 146.43 334 ⇊*i*P PKPdf 20 20 45.3 +1.3
LDF La Druitiere 146.45 8 *e*PKP1 PKPbc 20 20 44.9 -0.4
comp=Z,4.6nm,0.5s
LANF Langenberg 146.51 359 PKP PKPdf 20 20 45.8 +1.8
GRR Gorron 146.55 9 *e*PKP1 PKPbc 20 20 45.6 0.0
comp=Z,47nm,1.1s
CONA Conrad Observa 146.69 349⇑*i*PKPab PKPab 20 20 46.0 -1.1
comp=Z,26nm,1.1s,SNR=17
MEZF Maizieres J'vi 146.98 2 *e*PKP1 PKPbc 20 20 46.6 -0.2
MOA Molln 147.05 351 *i*PKPab PKPab 20 20 47.5 -1.0
comp=Z,26nm,1.2s,SNR=11
CDF Champ du Feu 147.09 359 *e*PKP1 PKPbc 20 20 47.0 -0.1
comp=Z,68nm,1.1s
FUR Furstenfeldbru 147.12 354 *e*PKPbc PKPbc 20 20 47.4 +0.2
BFO Black Forest 147.15 358 *e*PKPbc PKPbc 20 20 47.3 0.0
GZR Gura Zlata 147.16 339 PKIKP PKPbc 20 20 47.8 +0.4
GZR Gura Zlata 147.16 339 ⇊*i*P PKPbc 20 20 47.7 +0.3
SFTF Sexfontaines 147.28 2 *e*PKP1 PKPbc 20 20 47.4 -0.3
comp=Z,39nm,0.8s
THEF They Montfort 147.28 1 PKP PKPbc 20 20 47.9 +0.2
ECH Echery 147.29 359 PKP PKPbc 20 20 48.1 +0.4
ECH Echery 147.29 359 *e*PKPdf PKPbc 20 20 47.7 0.0
BZS Buzias 147.36 340 ⇊PKIKP PKPdf 20 20 46.2 +0.6
BZS Buzias 147.36 340 ⇊*i*P PKPdf 20 20 46.2 +0.6
SPAK Spaichingen-Ko 147.36 357 PKP PKPbc 20 20 48.3 +0.4
ARSA Arzberg 147.41 349 ⇊*i p*PKPdf PKPbc 20 20 47.8 -0.3
comp=Z,14nm,1.1s,SNR=6.3
HAU Haudompre 147.50 0 *e*PKP1 PKPbc 20 20 48.0 -0.3
comp=Z,58nm,1.0s
HAU *e*MLR MLR
comp=Z,203nm,22.5s,MS4.5
HAU Haudompre 147.50 0 *e*PKP PKPbc 20 20 48.0 -0.3
HAU LR LR
comp=Z,200nm,22.5s,MS4.8
FELD Feldberg im Sc 147.61 358 PKP PKPbc 20 20 48.6 0.0
PKSM Moragy 147.69 344 ⇊PKIKP PKPdf 20 20 46.4 +0.3
PKSM Moragy 147.69 344 ⇊*i*P PKPdf 20 20 46.3 +0.2
HINF Hinteralfeld 147.69 360 *e*PKP1 PKPbc 20 20 48.4 -0.4
comp=Z,28nm,1.0s
ASF Jabal al Asfar 147.82 307 PKPbc PKPbc 20 20 49.3 -0.4
comp=Z,2.8nm,0.8s,baz=123,slow=2.7,SNR=3.7
RETA Reutte 147.84 355 *i*sPKPdf PKPbc 20 20 49.5 +0.3
comp=Z,23nm,1.2s,SNR=18
KBA Koelnbreinsper 147.94 351⇑*i*sPKPdf PKPbc 20 20 49.4 -0.1
comp=Z,11nm,0.8s,SNR=9.5
MOTA Moosalm 147.95 354⇓*i*sPKPdf PKPbc 20 20 49.5 0.0
comp=Z,22nm,1.0s,SNR=10
WTTA Wattenberg 147.97 354⇑*i*sPKPdf PKPbc 20 20 50.3 +0.7
comp=Z,22nm,0.9s

BBS	**Basel-Blauen**	**148.04**	**359**	PKP2	PKPbc	20 20 50.0	+0.2
SOKA	**Soboth**	**148.05**	**349**	⇓*i*pPKPdf	PKPbc	20 20 49.5	-0.3
	comp=Z,20nm,1.1s						
HYF	**Humbligny**	**148.07**	**5**	*e*PKP1	PKPbc	20 20 49.6	-0.2
PERS	**Pernice**	**148.07**	**349**	*i* PKPbc	PKPbc	20 20 49.4	-0.5
PERS	**Pernice**	**148.07**	**349**	*i* PKPbc	PKPbc	20 20 49.4	-0.5
DAVA	**Damuels**	**148.11**	**356**	⇓*i*sPKPdf	PKPbc	20 20 50.4	+0.5
	comp=Z,29nm,1.0s,SNR=8.7						
LOR	**Lormes**	**148.16**	**4**	*e*PKP1	PKPbc	20 20 49.7	-0.4
	comp=Z,39nm,1.1s						
LOR				*e*MLR	MLR		
	comp=Z,246nm,21.0s,MS4.7						
LOR	**Lormes**	**148.16**	**4**	*e*PKP	PKPbc	20 20 49.7	-0.4
LOR				LR	LR		
	comp=Z,250nm,21.0s,MS5.0						
FETA	**Feichten**	**148.30**	**355**	⇑*i*PKiKP	PKiKP	20 20 51.1	-1.0
	comp=Z,18nm,1.0s						
MYKA	**Terra Mystica**	**148.33**	**351**	⇓*i*sPKPdf	PKPbc	20 20 50.0	-0.5
	comp=Z,10nm,0.8s						
SSF	**Saint Saulge**	**148.34**	**4**	*e*PKP1	PKPbc	20 20 50.3	-0.3
	comp=Z,52nm,1.2s						
ABTA	**Abfaltersbach**	**148.38**	**352**	*i* sPKPdf	PKPbc	20 20 50.4	-0.2
	comp=Z,25nm,1.0s,SNR=17						
MFF	**Saint Martin d**	**148.40**	**9**	*e*PKP1	PKPbc	20 20 49.9	-0.8
MMAI	**Mount Meron Ar**	**148.59**	**309**	PKPbc	PKPbc	20 20 52.9	+1.2
	comp=Z,7.4nm,0.8s,baz=48,slow=5.0,SNR=11						
AVF	**Avril sur Loir**	**148.60**	**4**	*e*PKP1	PKPbc	20 20 50.6	-0.6
DAVOX	**Davos/Dischmat**	**148.61**	**356**	PKPbc	PKPbc	20 20 52.0	+0.7
	comp=Z,13nm,0.8s,baz=343,slow=2.5,SNR=14						
LJU	**Ljubljana**	**148.75**	**349**	*e*PKPdf	PKPdf	20 20 48.0	+0.2
LJU				*e*PKPbc	PKPbc	20 20 52.6	+0.9
LJU				*e*		20 21 09.0	
CRNS	**Crni Vrh**	**148.76**	**350**	*e*PKPbc	PKPbc	20 20 51.2	-0.5
SMF	**Signal de Mont**	**148.78**	**4**	*e*PKP1	PKPbc	20 20 51.1	-0.6
	comp=Z,53nm,1.4s						
BGF	**Bois d'Agland**	**148.79**	**5**	*e*PKP1	PKPbc	20 20 51.3	-0.4
CABF	**La Chapelle**	**148.90**	**1**	*e*PKP1	PKPbc	20 20 52.4	+0.4
	comp=Z,78nm,1.1s						
VISS	**Visnje**	**148.93**	**349**	*i* PKPdf	PKPdf	20 20 47.2	-0.9
VISS				*i* PKPbc	PKPbc	20 20 52.0	-0.1
VISS	**Visnje**	**148.93**	**349**	*i* PKPdf	PKPdf	20 20 47.2	-0.9
VISS				*i* PKPbc	PKPbc	20 20 52.0	-0.1
TUE	**Stuetta**	**148.95**	**356**	*e*PKPdf	PKPdf	20 20 48.4	+0.2
TUE				*e*PKPbc	PKPbc	20 20 52.5	+0.4
JAVS	**Javornik**	**148.98**	**350**	*i* PKPbc	PKPbc	20 20 51.7	-0.5
JAVS	**Javornik**	**148.98**	**350**	*i* PKPbc	PKPbc	20 20 51.7	-0.5
BOJS	**Bojanci**	**149.14**	**348**	*i* PKPdf	PKPdf	20 20 48.8	+0.3
BOJS				*i* PKPbc	PKPbc	20 20 52.9	+0.2
BOJS				*e*		20 21 03.3	
BOJS	**Bojanci**	**149.14**	**348**	*i* PKPdf	PKPdf	20 20 48.8	+0.3
BOJS				*i* PKPbc	PKPbc	20 20 52.9	+0.2
BOJS				*e*		20 21 03.3	
RJF	**Les Rejaudoux**	**149.90**	**7**	*e*PKP1	PKPbc	20 20 54.1	-0.4
RJF				*e*MLR	MLR		
	comp=Z,268nm,22.8s,MS4.7						
RJF	**Les Rejaudoux**	**149.90**	**7**	*e*PKP	PKPbc	20 20 54.1	-0.4
RJF				LR	LR		
	comp=Z,270nm,22.8s,MS5.0						
LPL	**La Plagne**	**149.99**	**360**	*e*PKP1	PKPbc	20 20 55.6	+0.8
	comp=Z,31nm,1.0s						
LPG	**La Plagne**	**150.01**	**360**	*e*PKP1	PKPbc	20 20 55.8	+1.0
	comp=Z,40nm,1.2s						
LFF	**La Frestale**	**150.15**	**8**	*e*PKP1	PKPbc	20 20 54.6	-0.6
	comp=Z,29nm,1.0s						
SSB	**Saint Sauveur**	**150.18**	**3**	*e*PKIKP	PKPdf	20 20 50.5	+0.4
SSB				*e*		20 20 55.6	
CAF	**Calviac**	**150.33**	**7**	*e*PKP1	PKPbc	20 20 55.3	-0.3
EIL	**Elat**	**150.34**	**303**	PKPbc	PKPbc	20 20 57.4	+1.2
	comp=Z,7.0nm,1.0s,baz=358,slow=6.6,SNR=3.6						
ORIF	**Oris-en-Rattie**	**150.59**	**1**	*e*PKP1	PKPbc	20 20 56.4	+0.2
	comp=Z,25nm,1.1s						
ORIF				*e*MLR	MLR		
	comp=Z,186nm,19.8s,MS4.6						
VIVF	**Saint-Julien-l**	**150.61**	**3**	*e*PKP1	PKPbc	20 20 56.4	+0.1
	comp=Z,28nm,1.1s						
VAY	**Valandovo**	**150.72**	**335**	*e*PKP	PKPbc	20 20 56.3	-0.4
MBDF	**Montbardon**	**150.78**	**360**	*e*PKP1	PKPbc	20 20 56.9	+0.2
	comp=Z,18nm,0.9s						
KRUS	**Krusevo**	**151.20**	**337**	*e*PKP	PKPbc	20 20 56.9	-0.9
LASF	**Ste Croix**	**151.34**	**4**	*e*PKP1	PKPbc	20 20 58.1	+0.1
	comp=Z,37nm,1.2s						
TOUF	**Mont Tournerai**	**151.49**	**359**	PKP	PKPbc	20 20 58.4	0.0
AUTN	**L'Aution**	**151.51**	**359**	PKP	PKPbc	20 20 58.9	+0.5
SAOF	**Saorge**	**151.51**	**359**	PKP	PKPbc	20 20 58.3	-0.1
SMRF	**Simiane la Rot**	**151.52**	**2**	*e*PKP1	PKPbc	20 20 58.9	+0.5
	comp=Z,32nm,0.9s						
SJPF	**Ste Jean**	**151.59**	**12**	*e*PKP1	PKPbc	20 20 58.1	-0.5
MVO	**Moncorvo**	**151.75**	**22**	*e*PKPdf	PKPbc	20 20 59.1	+0.1
MVO	**Moncorvo**	**151.75**	**22**	*e*PKPab	PKPab	20 21 24.6	+17
MTLF	**Montolieu**	**151.91**	**7**	*e*PKP1	PKPbc	20 20 59.0	-0.3
ETSF	**Etsaut**	**151.93**	**11**	*e*PKP1	PKPbc	20 20 59.3	-0.1
	comp=Z,22nm,0.8s						
FRF	**La Foret Royal**	**151.95**	**360**	*e*PKP1	PKPbc	20 20 59.8	+0.4
	comp=Z,12nm,0.8s						
EPF	**Esparros**	**151.96**	**10**	*e*PKP1	PKPbc	20 20 59.2	-0.3
	comp=Z,5.5nm,0.6s						
LMR	**La Mourre**	**152.18**	**0**	*e*PKP1	PKPbc	20 21 00.3	+0.4
MTE	**Manteigas**	**152.22**	**24**	*e*PKPdf	PKPbc	20 20 59.8	-0.3
MTE	**Manteigas**	**152.22**	**24**	*e*PKPab	PKPab	20 21 25.1	+15
PMRV	**Marv??o**	**153.11**	**24**	*e*PKPdf	PKPbc	20 21 01.8	-0.3
PMRV	**Marv??o**	**153.11**	**24**	*e*PKPab	PKPab	20 21 28.0	+14
EVO	**Evora**	**153.61**	**26**	⇑*i*PKP1	PKPbc	20 21 02.8	-0.5
	comp=Z,32nm,1.2s						
EVO				*e*MLR	MLR		
	comp=Z,194nm,20.5s,MS4.6						
ESDC	**Sonseca Array**	**154.12**	**19**	PKP	PKPdf	20 20 56.4	+0.2
	comp=Z,0.4nm,0.6s,baz=287,slow=4.1,SNR=2.9						
ESDC				PKPbc	PKPbc	20 21 04.1	-0.2
	comp=Z,1.5nm,0.7s,baz=317,slow=2.9,SNR=8.4						
ESDC				PKPab	PKPab	20 21 17.9	0.0
	comp=Z,2.3nm,0.7s,baz=328,slow=4.0,SNR=9.6						
ESDC	**Sonseca Array**	**154.12**	**19**	PKP	PKPdf	20 20 56.4	+0.2
ESDC				PKPbc	PKPbc	20 21 04.1	-0.3
ESDC				PKPab	PKPab	20 21 17.9	0.0
PBAR	**Barrancos**	**154.32**	**25**	*e*PKPdf	PKPbc	20 21 04.7	-0.1
KEST	**Kesra**	**159.62**	**354**	PKPab	PKPab	20 21 42.1	+0.5
	comp=Z,2.4nm,1.0s,baz=18,slow=5.3,SNR=5.3						
KEST	**Kesra**	**159.62**	**354**	*e*PKPab	PKPab	20 21 41.8	+0.2
TORD	**Torodi Ar. Bea**	**174.72**	**115**	PKP	PKPdf	20 21 12.8	-2.2
	comp=Z,1.0nm,0.9s,baz=360,slow=1.8,SNR=23						
TORD				PKPab	PKPab	20 22 46.9	-2.2
	comp=Z,2.1nm,0.9s,baz=259,slow=4.6,SNR=5.7						
TORD	**Torodi Ar. Bea**	**174.72**	**115**	PKP	PKPdf	20 21 12.8	-2.2
TORD				PKPab	PKPab	20 22 46.9	-2.2

*SGS **02** 20:20:29.5, 29°.69N×52°.49E, h26km*
*TEH **02** 20:20:31.0, 29°.45N×51°.88E, h13km*
*CSEM **02** 20:20:31.1±0.2, 29°.45N×51°.97E, h10km, ML3.5, Error ellipse: s-maj=5.9km s-min=4.0km az=146.0*

ISC 02 20:20:31.7±1.2, 29°.47N±0°.04×51°.96E±0°.07, h15km±10km, n31, σ0s63/37, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**0.51**	**70**	*e*Pg	**Pg**	**20 20 42.4**	**+0.5**
SHI				*e*Sg	**Sg**	**20 20 49.6**	**+0.8**
SHI	**Shiraz**	**0.51**	**70**	*e*Pg	**Pg**	**20 20 42.4**	**+0.5**
SHI				*e*Sg	**Sg**	**20 20 49.6**	**+0.8**
ISRV	**Sarvestan**	**1.01**	**95**	*e*Pg	**Pg**	**20 20 50.4**	**-0.9**
ISRV				*e*		20 21 13.8	
	comp=Z,25μm,0.2s						
ISRV	**Sarvestan**	**1.01**	**95**	*e*Pg	**Pg**	**20 20 50.4**	**-0.9**
IPAR	**Pars**	**1.02**	**68**	*e*Pg	**Pg**	**20 20 49.9**	**-1.5**
IPAR				*e*Sg	**Sg**	**20 21 05.1**	**+0.3**
IPAR				*e*		20 21 09.9	
	comp=Z,19μm,0.3s						
IPAR	**Pars**	**1.02**	**68**	*e*Pg	**Pg**	**20 20 49.9**	**-1.5**
IPAR				*e*Sg	**Sg**	**20 21 05.1**	**+0.3**
ISAD	**Sadrabad**	**2.85**	**31**	*e*Pn	**Pn**	**20 21 16.4**	**-0.3**
ISAD				*e*		20 22 04.6	
	comp=Z,2μm,0.3s						
ISAD	**Sadrabad**	**2.85**	**31**	*e*Pn	**Pn**	**20 21 16.4**	**-0.3**
IGAR	**Gharneh**	**2.93**	**1**	*e*Pn	**Pn**	**20 21 17.7**	**0.0**
IGAR				*e*		20 21 26.0	
	comp=Z,997nm,0.2s						
IMEH	**Mehriz**	**2.99**	**49**	*e*Pn	**Pn**	**20 21 19.3**	**+0.7**
IMEH				*e*		20 21 21.1	
	comp=Z,2μm,0.1s						
IMEH	**Mehriz**	**2.99**	**49**	*e*Pn	**Pn**	**20 21 19.3**	**+0.7**
IPIR	**Pirpir**	**3.33**	**344**	*e*Pn	**Pn**	**20 21 22.7**	**-0.6**
IPIR				*e*		20 22 09.1	
	comp=Z,754nm,0.1s						
IPIR	**Pirpir**	**3.33**	**344**	*e*Pn	**Pn**	**20 21 22.7**	**-0.6**
IZEF	**Zefreh**	**3.43**	**5**	*e*Pn	**Pn**	**20 21 24.7**	**0.0**
IZEF				*e*		20 21 26.1	
	comp=Z,463nm,0.1s						
IZEF	**Zefreh**	**3.43**	**5**	*e*Pn	**Pn**	**20 21 24.7**	**0.0**
ICHK	**Chekchek**	**3.48**	**37**	*e*Pn	**Pn**	**20 21 25.5**	**+0.2**
ICHK				*e*		20 21 26.4	
	comp=Z,1μm,0.2s						
ICHK	**Chekchek**	**3.48**	**37**	*e*Pn	**Pn**	**20 21 25.5**	**+0.2**
QRN	**Al-Qurain**	**3.61**	**259**	*e*P	**Pn**	**20 21 27.3**	**+0.2**
UMR	**Umm Al-Rimmam**	**3.70**	**272**	*e*P	**Pn**	**20 21 28.4**	**0.0**
UMR				AML	AML	20 22 13.7	
	comp=Z,53nm,0.3s						
UMR	**Umm Al-Rimmam**	**3.70**	**272**	*e*P	**Pn**	**20 21 28.4**	**0.0**
IBAF	**Bafgh**	**3.76**	**55**	*e*Pn	**Pn**	**20 21 29.4**	**+0.2**
IBAF				*e*		20 21 46.6	
	comp=Z,790nm,0.2s						
IBAF	**Bafgh**	**3.76**	**55**	*e*Pn	**Pn**	**20 21 29.4**	**+0.2**
IKLH	**Kolahrood**	**3.85**	**355**	*e*Pn	**Pn**	**20 21 29.9**	**-0.6**
IKLH				*e*		20 21 32.2	
	comp=Z,582nm,0.2s						
IKLH	**Kolahrood**	**3.85**	**355**	*e*Pn	**Pn**	**20 21 29.9**	**-0.6**
MIB	**Mutribah**	**4.04**	**276**	*e*P	**Pn**	**20 21 33.3**	**+0.3**
MIB				AML	AML	20 22 31.3	
	comp=Z,43nm,0.5s						
MIB	**Mutribah**	**4.04**	**276**	*e*P	**Pn**	**20 21 33.3**	**+0.3**
BOQSS		**4.25**	**213**	P	**Pn**	**20 21 37.4**	**+1.4**
SLWS		**4.80**	**194**	P	**Pn**	**20 21 43.5**	**0.0**
SLWS		**4.80**	**194**	P	**Pn**	**20 21 43.5**	**0.0**
SLWS				S	**Sn**	**20 22 39.1**	**+0.3**
BTHS		**5.49**	**191**	P	**Pn**	**20 21 52.8**	**-0.2**
BTHS		**5.49**	**191**	P	**Pn**	**20 21 52.8**	**-0.2**
BTHS				S	**Sn**	**20 22 55.0**	**-0.9**

*ISCJB **02** 20:21:24.1±5.3, 56°.4S±0°.2×26°.6W±0°.2, h60km±53km, mb4.4/8, Error ellipse: s-maj=28.0km s-min=17.0km az=15.2*
*IDC **02** 20:21:28.7±12.0, 56°.55S×26°.52W, h91km±103km, mb4.2/6, mb1 4.2/6, mb1mx4.0/14, mbtmp4.2/6, Error ellipse: s-maj=44.1km s-min=24.2km az=1.0*
*NEIC **02** 20:21:29.5±0.5, 56°.45S×26°.56W, h100km, mb4.3/4, Error ellipse: s-maj=17.7km s-min=11.9km az=170.0*

ISC 02 20:21:26.5±4.8, 56°.4S±0°.2×26°.6W±0°.2, h67km±50km, n16, σ0s82/14, mb4.3/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**16.52**	**161**	*e*P	**Pn**	**20 25 14.2**	**+0.7**
VNA3				*e*S	**Sn**	**20 27 57.5**	**-18**
VNA2	**Neumayer--Watz**	**16.72**	**158**	*e*P	**Pn**	**20 25 16.4**	**+0.5**
	baz=318,slow=15						
PMSA	**Palmer Station**	**19.89**	**230**	*e*P	**Pn**	**20 25 52.6**	**-1.4**
	12nm,0.8s						
TRQA	**Tornquist**	**29.76**	**293**	*e*P	**P**	**20 27 25.7**	**-0.6**
	3.5nm,0.6s,mb4.2						
CPUP	**Villa Florida**	**37.30**	**311**	P	**P**	**20 28 32.1**	**+0.3**
	0.6nm,0.4s,mb3.9,baz=115,slow=7.3,SNR=7.1						
BOSA	**Boshof**	**45.77**	**75**	P	**P**	**20 29 39.9**	**-1.2**
	3.9nm,1.0s,mb4.1,baz=213,slow=9.2,SNR=3.6						
LBTB	**Lobatse**	**48.83**	**72**	*e*P	**P**	**20 30 04.2**	**-0.6**
	3.4nm,0.7s,mb4.4						
LPAZ	**La Paz**	**50.85**	**305**	P	**P**	**20 30 21.9**	**+1.7**
	18nm,0.4s,mb5.4,baz=172,slow=4.7,SNR=100						
LPAZ	**La Paz**	**50.85**	**305**	*e*P	**P**	**20 30 21.6**	**+1.4**
	19nm,0.4s,mb5.5						
DBIC	**Dimbokro**	**65.39**	**24**	P	**P**	**20 32 02.1**	**+0.4**
	1.5nm,0.6s,mb4.0,baz=156,slow=11,SNR=3.7						
DBIC	**Dimbokro**	**65.39**	**24**	*e*P	**P**	**20 32 01.5**	**-0.2**
	3.2nm,0.7s,mb4.3						
TORD	**Torodi Ar. Bea**	**73.24**	**29**	P	**P**	**20 32 50.5**	**+0.4**
	5.4nm,0.6s,mb4.6,baz=200,slow=6.6,SNR=68						
ASAR	**Alice Springs**	**98.53**	**162**	P	**P**	**20 34 57.6**	**+0.1**
	0.4nm,0.7s,mb4.1,baz=176,slow=4.0,SNR=6.5						
YKA	**Yellowknife Ar**	**136.66**	**317**	PKP	PKPdf	20 40 38.9	-0.4
	0.3nm,0.3s,baz=132,slow=2.2,SNR=5.0						
SONM	**Songino Array**	**150.44**	**87**	PKPbc	PKPbc	20 41 07.6	-1.6
	2.3nm,0.6s,baz=217,slow=4.0,SNR=17						
SONM				pPKPbc	pPKPbc	20 41 35.5	+7.1
	0.7nm,0.6s,baz=221,slow=3.2,SNR=5.1						
ILAR	**Eielson Array**	**150.60**	**311**	PKPbc	PKPbc	20 41 07.3	-1.6
	0.7nm,0.6s,baz=64,slow=1.8,SNR=7.0						
ILAR				pPKPbc	pPKPbc	20 41 36.1	+7.8
	0.9nm,0.8s,baz=119,slow=1.9,SNR=5.9						

IDC 02 20:21:41.8±50.0, 16°.47S×178°.16W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=917.6km s-min=154.9km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.55**	**240**	P	P	20 29 15.5	+0.7
	1.0nm,0.8s,baz=90,slow=12,SNR=2.6						
WRA	**Warramunga Arr**	**45.15**	**258**	P	P	20 29 59.8	-0.8
	0.1nm,0.3s,baz=96,slow=8.0,SNR=3.4						
ASAR	**Alice Springs**	**45.43**	**253**	P	P	20 30 02.6	-0.1
	1.6nm,0.7s,baz=89,slow=8.0,SNR=27						

*ISCJB **02** 20:31:54.1±0.7, 36°.2S±0°.1×101°.6W±0°.2, h10km, mb4.3/12, MS3.9/6, Error ellipse: s-maj=20.6km s-min=15.7km az=167.9*
*IDC **02** 20:31:54.5±0.8, 36°.09S×101°.49W, h0km, mb4.1/7, mb1 4.4/7, mb1mx4.2/16, mbtmp4.1/7, MS3.9/7, Ms1 3.9/7, ms1mx3.7/23, Error ellipse: s-maj=24.5km s-min=23.3km az=66.0*
*NEIC **02** 20:31:55.8±0.5, 36°.11S×101°.41W, h10km, mb4.6/7, Error ellipse: s-maj=15.9km s-min=13.9km az=85.0*

ISC 02 20:31:56.2±0.7, 36°.1S±0°.1×101°.5W±0°.2, h10km, n26, σ0s90/16, mb4.3/12, MS3.9/6, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**11.19**	**321**	LR	LR	20 37 41.8	
	comp=Z,572nm,20.8s,baz=140,slow=31						
PLCA	**Paso Flores**	**24.60**	**110**	P	**P**	**20 37 17.2**	**+0.8**
	3.1nm,0.9s,mb3.8,baz=270,slow=12,SNR=2.7						
PLCA				LR	LR	20 44 29.2	
	comp=Z,118nm,18.4s,MS3.4,baz=101,slow=31						
USHA	**Ushuaia**	**29.38**	**140**	LR	LR	20 46 46.4	
	comp=Z,366nm,20.2s,MS4.0,baz=303,slow=30						
NNA	**Nana**	**32.75**	**49**	P	**P**	**20 38 26.3**	**-3.0**
	73nm,1.7s,mb5.3						
LPAZ	**La Paz**	**35.61**	**65**	P	**P**	**20 38 54.9**	**+0.7**
	13nm,1.2s,mb4.7,baz=218,slow=7.2,SNR=16						
LPAZ	**La Paz**	**35.61**	**65**	*e*P	**P**	**20 38 54.7**	**+0.5**
	23nm,1.3s,mb5.0						
ATAH	**Atahualpa**	**35.77**	**42**	LR	LR	20 48 05.5	
	comp=Z,92nm,21.3s,MS3.5,baz=268,slow=27						
SIV	**San Ignacio**	**41.10**	**72**	P	**P**	**20 39 39.4**	**-1.0**
	2.7nm,1.1s,mb3.8,baz=239,slow=8.0,SNR=6.0						
ROSC	**El Rosal**	**48.06**	**38**	LR	LR	20 57 23.3	
	comp=Z,152nm,19.4s,MS4.0,baz=24,slow=32						
JTS	**JuntasAbangare**	**48.74**	**22**	*e*P	**P**	**20 40 43.0**	**+1.8**
	12nm,1.0s,mb4.9						
QSPA	**South Pole Qui**	**54.08**	**180**	P	**P**	**20 41 21.1**	**+0.7**
	3.0nm,0.9s,mb4.2,baz=106,slow=4.1,SNR=8.6						
QSPA	**South Pole Qui**	**54.08**	**180**	*e*P	**P**	**20 41 20.2**	**-0.2**
	5.6nm,1.0s,mb4.5						
SBA	**Scott Base**	**55.35**	**195**	P	**P**	**20 41 29.2**	**-0.5**
	3.6nm,1.2s,mb4.3						
FDF	**Fort de France**	**63.34**	**44**	*e*P	**P**	**20 42 19.8**	**-5.9**
	120nm,1.3s						
TXAR	**Lajitas Array**	**65.15**	**358**	P	**P**	**20 42 37.0**	**-0.3**
	0.3nm,0.7s,mb3.4,baz=159,slow=7.5,SNR=5.5						
ISA	**Isabella**	**73.16**	**346**	P	**P**	**20 43 26.8**	**0.0**
SDCO	**Great Sand Dun**	**73.61**	**357**	*e*P	**P**	**20 43 29.2**	**-0.2**
	2.9nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**75.81**	**346**	P	**P**	**20 43 42.9**	**+0.7**
	1.8nm,0.9s,mb4.0,baz=177,slow=8.0,SNR=8.3						
CMB	**Columbia Colle**	**75.84**	**345**	P	**P**	**20 43 42.2**	**-0.2**
	4.0nm,0.9s,mb4.3						
PDAR	**Pinedale Array**	**78.87**	**354**	P	**P**	**20 43 58.9**	**-0.4**
	1.7nm,1.0s,mb3.9,baz=174,slow=6.0,SNR=9.3						
SADO	**Sadowa**	**83.04**	**16**	LR	LR	21 18 51.9	
	comp=Z,110nm,19.6s,MS4.2,baz=187,slow=34						
STKA	**Stephens Creek**	**90.19**	**229**	LR	LR	21 16 51.4	
	comp=Z,167nm,21.9s,MS4.4,baz=26,slow=30						
BRTR	**Keskin Array B**	**144.70**	**70**	PKP	PKPdf	20 51 31.4	-1.6
	1.3nm,0.8s,baz=309,slow=0.8,SNR=6.8						
CMAR	**Chiang Mai Arr**	**154.80**	**231**	PKPbc	PKPbc	20 51 57.7	-0.4
	0.2nm,0.5s,baz=221,slow=3.7,SNR=4.4						
CMAR				PKPab	PKPab	20 52 12.7	-0.5
	1.2nm,0.7s,baz=159,slow=3.3,SNR=8.8						
SONM	**Songino Array**	**156.34**	**308**	PKPbc	PKPdf	20 52 01.6	+11
	0.6nm,0.9s,baz=139,slow=0.9,SNR=5.9						
SONM				PKPab	PKPab	20 52 19.6	+0.6
	0.4nm,0.6s,baz=103,slow=3.5,SNR=3.3						
SONM	**Songino Array**	**156.34**	**308**	PKPab	PKPab	20 52 19.6	+0.6

MAN 02 20:40:27, 18°.62N×120°.45E, h7km, mb4.6, ML3.5, MS3.5, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.34**	**152**	⇑*i*P	Pg	20 40 37.8	+4.2
PIP				*e*S	Sg	20 40 42.1	+4.1
SIPP	**Brgy, Tapao**	**0.70**	**180**	⇑*i*P	Pg	20 40 42.8	+2.4
SIPP				*e*S	Sg	20 40 50.3	+0.8
ABRA	**Dolores**	**1.00**	**166**	*e*P	Pg	20 40 45.8	-0.5
ABRA				*e*S	Sg	20 40 53.9	-5.3
APYP	**Conner**	**1.07**	**135**	*e*P	Pg	20 40 46.8	-0.7
APYP				*e*S	Sg	20 40 56.4	-4.9
CAUP	**Cauayan**	**2.12**	**142**	*e*P	Pn	20 41 04.6	+1.7
BOLP	**Bolinao**	**2.29**	**193**	*e*P	Pn	20 41 06.2	+1.0
PALP	**Palanan**	**2.44**	**129**	*e*P	Pn	20 41 09.4	+2.2
SCZP	**Santa Cruz**	**2.88**	**190**	*e*P	Pn	20 41 15.0	+1.7
BALP	**Baler**	**3.06**	**159**	*e*P	Pn	20 41 18.9	+3.0

*IDC **02** 20:49:35.9±0.5, 43°.05N×79°.65E, h0km, mb4.4/19, mb1 4.5/26, mb1mx4.4/33, mbtmp4.4/26, ML4.2/7, MS3.8/10, Ms1 3.8/10, ms1mx3.4/44, Error ellipse: s-maj=10.2km s-min=9.2km az=52.0*
*ISCJB **02** 20:49:39.4±0.2, 43°.01N±0°.03×79°.80E±0°.03, h33km, mb4.5/59, MS3.9/13, Error ellipse: s-maj=4.2km s-min=3.2km az=14.3*
*NNC **02** 20:49:40.3±1.6, 43°.55N×79°.54E, h0km, mb4.9, mpv4.8, Error ellipse: s-maj=22.4km s-min=4.6km az=144.0*
*BJI **02** 20:49:40.0, 43°.04N×79°.83E, h29km, mB4.6/9, mb4.6/19, ML4.7/10, Ms4.2/13, Ms7 4.0/13*
*NEIC **02** 20:49:40.4±1.8, 43°.09N×79°.68E, h27km±13km, mb4.7/24, Error ellipse: s-maj=7.6km s-min=6.3km az=164.0*
*MOS **02** 20:49:41.3±1.0, 43°.30N×79°.83E, h33km, mb4.8/35, Error ellipse: s-maj=7.3km s-min=4.8km az=121.5*

ISC 02 20:49:41.1±0.2, 42°.98N±0°.03×79°.77E±0°.03, h35km, n208, σ1s30/219, mb4.5/59, MS3.9/13, 19C-11D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**2.06**	**277**	⇑Pn	**Pn**	**20 50 12.7**	**-0.6**
	2μm,1.0s						
KNDC				⇑Sn	**Sn**	**20 50 38.8**	**+1.1**
	6μm,0.7s						
AAA	**Alma-Ata**	**2.08**	**279**	*i* PN	**Pn**	**20 50 13.6**	**+0.1**
AAA				pmax	pmax		
	comp=Z,3μm,0.3s						
ULHL	**Ulahol**	**2.70**	**255**	P	**Pn**	**20 50 22.5**	**+0.4**
	SNR=80						
TKM2	**Tokmak 2**	**3.06**	**270**	⇓Pn	**Pn**	**20 50 29.8**	**+2.8**
	comp=Z,908nm,0.5s						
TKM2				⇑Sn	**Sn**	**20 51 07.8**	**+5.5**
	comp=Z,4μm,0.8s						
TKM2	**Tokmak 2**	**3.06**	**270**	P	**Pn**	**20 50 27.0**	**0.0**
	SNR=527						
TKM2	**Tokmak 2**	**3.06**	**270**	*e*Pn	**Pn**	**20 50 26.9**	**-0.1**
TKM2				*e*Sn	**Sn**	**20 51 04.3**	**+2.0**
KZA	**Kyzart**	**3.46**	**256**	P	**Pn**	**20 50 33.9**	**+1.5**
	SNR=40						

ZALV Zalesovo Beam 11.47 15 Pn **Pn 20 52 19.8 -2.4**
comp=Z,6.6nm,0.3s,baz=200,slow=13,SNR=112
ZALV Sn **Sn 20 54 19.6 -9.4**
comp=Z,2.1nm,0.3s,baz=208,slow=16,SNR=2.2
ZALV LR LR 20 57 06.9
comp=Z,344nm,18.2s,baz=74,slow=40
ZALV Zalesovo Beam 11.47 15 P **Pn 20 52 19.8 -2.4**
ZALV 20 54 19.6
ZALV pmax pmax
comp=Z,7.0nm,0.3s
ZALV smax
comp=N,2.0nm,0.3s
ZALV MLR MLR
comp=Z,344nm,18.2s
BVA0 Borovoye Array 11.84 331 ⇓Pn **Pn 20 52 22.7 -4.5**
comp=Z,1.8nm,0.5s
BVA0 ⇑Lg 20 55 37.5
comp=Z,43nm,0.9s
BVAR Borovoye Array 11.84 331 Pn **Pn 20 52 23.0 -4.3**
comp=Z,2.5nm,0.3s,baz=145,slow=14,SNR=33
BVAR Sn **Sn 20 54 38.3 +0.3**
comp=Z,4.1nm,0.3s,baz=123,slow=16,SNR=5.0
BVAR Lg 20 55 43.6
comp=Z,7.2nm,0.3s,baz=144,slow=26,SNR=9.6
BVAR Borovoye Array 11.84 331 P **Pn 20 52 23.0 -4.3**
BVAR 20 54 38.3
BVAR pmax pmax
comp=Z,3.0nm,0.3s
BVAR smax
comp=N,4.0nm,0.3s
BHK Bhakra 11.85 194 *e*PKP **Pn 20 52 25.0 -2.5**
KBL Kabul 11.87 228 *e*P **Pn 20 52 25.7 -2.1**
KBL pmax pmax
comp=Z,12nm,0.9s
KBL Kabul 11.87 228 *e*Pn **Pn 20 52 25.7 -2.1**
comp=Z,12nm,0.9s
BRVK Borovoye 11.90 331 *d i*P **Pn 20 52 23.5 -4.6**
BRVK pmax pmax
comp=Z,17nm,1.7s
BRVK Borovoye 11.90 331 *e*Pn **Pn 20 52 22.9 -5.2**
comp=Z,18nm,0.4s
BRVK *e*Sn **Sn 20 54 32.9 -6.6**
NVS Novosibirsk 12.08 10 *e*P **Pn 20 52 28.3 -2.3**
NVS *e* 20 54 42.5
ZRNK Zerenda 12.29 328 ⇓Pn **Pn 20 52 28.4 -5.1**
comp=Z,37nm,0.9s
ZRNK ⇑Lg 20 55 53.7
comp=Z,409nm,1.0s
ZRNK Zerenda 12.29 328 *i*P **Pn 20 52 28.3 -5.2**
ZRNK pmax pmax
comp=Z,37nm,0.9s
DDI Dehra Dun 12.71 187 *ex* **Pn 20 52 37.0 -2.3**
NDI New Delhi 14.42 189 *ex* **Pn 20 53 00.0 -2.6**
DANN Dangsing 14.96 166 *e*P **Pn 20 53 09.0 -0.9**
AB31 Akbulak array 15.09 301 Pn **Pn 20 53 09.3 -2.2**
comp=Z,8.9nm,0.5s,baz=91,slow=14,SNR=194
AB31 ⇑Lg 20 57 25.7
comp=Z,30nm,0.8s,baz=96,slow=23,SNR=4.2
AB31 Akbulak array 15.09 301 *e*P **Pn 20 53 05.7 -5.8**
AB31 pmax pmax
comp=Z,16nm,0.5s
ABKAR Akbulak array 15.09 301 *e*Pn **Pn 20 53 05.2 -6.3**
comp=Z,15nm,0.5s
GKN Gorkha 15.46 164 *e*P **Pn 20 53 15.8 -0.7**
KOLN Koldanda 15.49 167 *e*P **Pn 20 53 15.8 -1.1**
GTA Gaotai 15.51 97 *e*P **Pn 20 53 16.2 -0.8**
GTA pP pP 20 53 20.0 -10
GTA pmax pmax
comp=Z,8.0nm,1.6s
GTA pmax pmax
comp=Z,43nm,5.1s
GTA LR LR
comp=N,340nm,9.0s
GTA LR LR
comp=E,300nm,10.8s
GTA LR LR
comp=Z,440nm,12.6s
KKN Kakani 15.81 162 *e*P **Pn 20 53 20.5 -0.5**
GUN Gumba 15.84 160 *e*P **Pn 20 53 21.2 -0.1**
DMN Daman 15.94 162 *e*P **Pn 20 53 21.2 -1.5**
PKIN Phulchoki 16.04 162 *e*P **Pn 20 53 22.2 -1.7**
PKI Pulchoki 16.05 162 *e*P **Pn 20 53 22.4 -1.7**
LSA Lhasa 16.10 142 P **Pn 20 53 28.8 +4.1**
LSA Lhasa 16.10 142 *e*P **Pn 20 53 28.7 +4.0**
LSA pmax pmax
comp=Z,33nm,0.8s
LSA Lhasa 16.10 142 *e*Pn **Pn 20 53 28.6 +3.9**
comp=Z,33nm,0.8s
AKTK Aktyubinsk 16.64 304 Pn **Pn 20 53 26.2 -5.2**
AKTK Lg 20 58 22.4
AKTK LR LR 21 00 02.8
AKTO Aktyubinsk 16.64 304 ⇑Pn **Pn 20 53 29.7 -1.6**
comp=Z,3.7nm,0.8s
AKTO ⇑Lg 20 58 16.7
comp=Z,12nm,1.2s
AKTO Aktyubinsk 16.64 304 Pn **Pn 20 53 26.2 -5.2**
comp=Z,0.4nm,0.3s,baz=105,slow=10,SNR=17
AKTO Lg 20 58 22.4
comp=Z,0.4nm,0.3s,baz=352,slow=19,SNR=5.6
AKTO LR LR 21 00 02.8
comp=Z,457nm,19.7s,baz=114,slow=38
MOY Mondy 16.76 51 *e*P **Pn 20 53 36.8 +3.8**
MOY pmax pmax
comp=Z,29nm,2.3s
TLY Talaya 18.31 53 *e*P **Pn 20 53 51.7 -0.4**
TLY pmax pmax
comp=Z,2.0nm,0.7s
TLY MLR MLR
comp=Z,61nm,14.0s
SVE Sverdlovsk 18.45 325⇑*e*P **Pn 20 53 50.9 -2.8**
SVE pmax pmax
comp=Z,16nm,0.8s
SVE MLR MLR
comp=Z,354nm,10.0s
ARU Arti 19.10 322 *d i*P **Pn 20 53 59.2 -2.4**
ARU S **S 20 57 18.9 -16**
ARU pmax pmax
comp=Z,51nm,1.2s
ARU MLR MLR
comp=Z,607nm,19.0s
ARU Arti 19.10 322 *e*P **Pn 20 53 58.9 -2.8**
comp=Z,32nm,0.8s
ARU *e*S S 20 57 11.4 -24
SONM Songino Array 19.27 66 P **Pn 20 54 03.8 +0.1**
comp=Z,1.4nm,0.3s,baz=262,slow=12,SNR=97
SONM LR LR 21 02 20.9
comp=Z,210nm,19.8s,baz=273,slow=40
SONM Songino Array 19.27 66 P **Pn 20 54 03.8 +0.1**
SONM pmax pmax
comp=Z,1.0nm,0.3s
SONM MLR MLR
comp=Z,210nm,19.8s
ULN Ulaanbaatar 19.72 66 *e*P **Pn 20 54 08.4 -0.6**
ULN pmax pmax
comp=Z,19nm,1.1s
ULN Ulaanbaatar 19.72 66 *e*P **Pn 20 54 08.4 -0.6**
comp=Z,19nm,1.1s
LZH Lanzhou 19.77 102 *e*P **Pn 20 54 09.9 +0.1**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.0s
LZH LR LR
comp=N,740nm,11.5s
LZH LR LR
comp=E,740nm,10.7s
LZH LR LR
comp=Z,780nm,12.5s
BHPL Bhopal 19.79 186 *e*PKP **Pn 20 54 09.1 -0.9**
BHPL AMb AMB 20 54 20.4
comp=Z,58nm,1.6s
BHPL *ex* x 20 57 38.9
SHL Shillong 20.02 146 *e*PKP **P 20 54 12.0 +1.2**
SOKR Solikamsk 21.77 328 *c i*P **P 20 54 28.8 -0.7**
SOKR pmax pmax
comp=Z,20nm,0.8s,mb4.6
SOKR MLR MLR
comp=Z,210nm,15.0s,MS3.7
AKL Akola 22.34 187 *e*PKP **P 20 54 35.1 -0.6**
AKL AMb AMB 20 54 48.7
comp=Z,31nm,1.0s,mb4.7
XAN Xi'an 24.40 102 P **P 20 54 57.6 +1.5**
XAN pP 20 55 04.1
XAN pmax pmax
comp=Z,2.0nm,0.7s,mb3.7
LATR Latur 24.64 187 *e*PKP **P 20 54 59.1 +0.7**
LATR AMb AMB 20 55 09.8
comp=Z,22nm,0.9s,mb4.7
POO Poona 24.89 193 *e*PKP **P 20 54 58.2 -2.4**
POO AMb AMB 20 55 25.7
comp=Z,24nm,1.2s,mb4.6
VIS Vishakhapatnam 25.36 172 *e*PKP **P 20 55 05.5 +0.6**
VIS AMb AMB 20 55 17.1
comp=Z,20nm,1.1s,mb4.6
HYB Hyderabad 25.50 183 *i*P **P 20 55 11.0 +4.8**
TBLG Delisi 25.80 279 P **P 20 55 14.9 +6.1**
KMI Kunming 25.94 126 P **P 20 55 12.4 +2.3**
KMI pmax pmax
comp=Z,15nm,0.8s,mb4.6
KMI LR LR
comp=N,160nm,14.6s,MS3.9
KMI LR LR
comp=E,160nm,13.6s,MS3.9
KMI LR LR
comp=Z,220nm,16.6s,MS3.8
KAD Karad 26.03 192 *e*PKP **P 20 55 10.6 -0.3**
KAD AMb AMB 20 55 16.4
comp=Z,22nm,1.7s,mb4.4
ZEI Tsey 26.16 282 *e*P **P 20 55 13.3 +1.3**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.4
GNI Garni 26.24 276 P **P 20 55 17.6 +4.9**
comp=Z,3.4nm,0.6s,mb4.0,baz=127,slow=20,SNR=3.2
KIV Kislovodsk 26.79 285 *i*P **P 20 55 27.3 +10**
KIV *e* 20 56 00.9
KIV pmax pmax
comp=Z,6.0nm,1.1s,mb4.0
KIV MLR MLR
comp=Z,200nm,16.0s,MS3.8
ENH Enshi 26.87 108 *e*P **P 20 55 19.4 +0.9**
comp=Z,17nm,0.9s,mb4.6
SOC Sochi 28.97 285 *e*P **P 20 55 44.4 +7.3**
SOC *e*S **S 21 00 23.2 -2.3**
SOC MLR MLR
comp=Z,263nm,17.0s,MS3.9
CMAR Chiang Mai Arr 29.35 140 P **P 20 55 42.4 +1.7**
comp=Z,1.8nm,0.9s,mb3.8,baz=316,slow=8.8,SNR=17
CMAR LR LR 21 09 24.8
comp=Z,82nm,20.3s,MS3.3,baz=330,slow=40
CMAR Chiang Mai Arr 29.35 140 P **P 20 55 42.4 +1.7**
CMAR pmax pmax
comp=Z,2.0nm,0.9s
CMAR MLR MLR
comp=Z,82nm,20.3s
MOS Moscow 29.77 310 *e*P **P 20 55 47.8 +3.7**
MOS *e* 20 56 52.0
KLMR Klimovskoe 29.94 321 *e*P **P 20 55 44.2 -1.3**
KLMR pmax pmax
comp=Z,22nm,1.5s,mb4.7
WHN Wuhan 30.15 103 P **P 20 55 49.0 +1.3**
OBN Obninsk 30.30 309⇑*e*P **P 20 55 52.1 +3.3**
OBN *e* 20 56 42.7
OBN *i* 20 57 07.1
OBN pmax pmax
comp=Z,41nm,2.5s,mb4.7
OBN MLR MLR
comp=Z,200nm,18.0s,MS3.8
ANN Anapa 30.31 288 *e*P **P 20 55 52.5 +3.5**
ANN pmax pmax
comp=Z,43nm,1.0s,mb5.1
ANN MLR MLR
comp=Z,212nm,15.0s,MS3.9
JOF Joensuu 34.23 322 *e*P **P 20 56 20.2 -2.9**
BRTR Keskin Array B 34.44 281 P **P 20 56 24.9 -0.3**
comp=Z,3.0nm,0.7s,mb4.3,baz=73,slow=8.4,SNR=14
BRTR Keskin Array B 34.44 281 P **P 20 56 25.0 -0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
YAK Yakutsk 34.73 39 *e*P **P 20 56 31.0 +3.6**
YAK pmax pmax
comp=Z,18nm,1.1s,mb4.9
KIEV Kiev 34.84 301 *e*P **P 20 56 29.2 +0.7**
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KIEV Kiev 34.84 301 *e*P **P 20 56 29.2 +0.7**
comp=Z,7.8nm,0.8s,mb4.7
VSU Vasula 35.91 314⇑*e*P **P 20 56 42.2 +4.5**
VSU pmax pmax
comp=Z,45nm,1.7s,mb5.1
KAF Kangasniemi 36.39 320 *e*P **P 20 56 40.5 -1.2**
FINES FINESS Array B 36.43 319 P **P 20 56 41.1 -0.9**
comp=Z,2.4nm,0.6s,mb4.3,baz=95,slow=10,SNR=11
FINES FINESS Array B 36.43 319 P **P 20 56 41.1 -0.9**
FINES pmax pmax
comp=Z,2.0nm,0.6s
KSRS Korea Array 36.78 82 P **P 20 56 45.8 +0.5**
comp=Z,4.9nm,0.8s,mb4.4,baz=282,slow=8.5,SNR=13
KSRS LR LR 21 13 45.5
comp=Z,75nm,18.9s,MS3.5,baz=203,slow=39
KSRS Korea Array 36.78 82 P **P 20 56 45.8 +0.5**
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
KSRS MLR MLR
comp=Z,75nm,19.0s,MS3.5
ARCES ARCESS Array B 38.12 332 P **P 20 56 55.9 -0.4**
comp=Z,3.6nm,0.6s,mb4.3,baz=74,slow=6.8,SNR=10
ARCES ARCESS Array B 38.12 332 P **P 20 56 55.9 -0.4**
ARCES pmax pmax
comp=Z,4.0nm,0.6s
KWP Kalwaria Pacla 39.14 300 *e*P **P 20 57 07.1 +2.0**
KWP pmax pmax
comp=Z,24nm,0.9s,mb4.9
KWP Kalwaria Pacla 39.14 300 *e*P **P 20 57 07.1 +2.0**
comp=Z,24nm,0.9s,mb4.9
STHS Stebnicka Huta 40.12 300 *e*P **P 20 57 16.9 +3.7**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
STHS Stebnicka Huta 40.12 300 *e*P **P 20 57 16.9 +3.7**
comp=Z,4.4nm,0.8s,mb4.2
NIE Niedzica 40.71 300 *e*P **P 20 57 23.7 +5.6**
KECS Kecovo 40.84 299 *e*P **P 20 57 24.2 +5.0**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
KECS Kecovo 40.84 299 *e*P **P 20 57 24.2 +5.0**
comp=Z,1.8nm,0.8s,mb3.8
OJC Ojcow 40.84 302 *e*P **P 20 57 24.2 +5.1**
VYHS Vyhne 41.89 299 *e*P **P 20 57 32.9 +5.1**
VYHS pmax pmax
comp=Z,19nm,2.4s,mb4.3
VYHS Vyhne 41.89 299 *e*P **P 20 57 32.9 +5.1**
comp=Z,19nm,2.4s,mb4.3
OKC Ostrava-Krasne 41.96 302 *e*P **P 20 57 34.2 +5.8**
OKC Ostrava-Krasne 41.96 302 *e*pP **P 20 57 34.2 +5.8**
DPC Dobruska-Polom 42.96 303 *e*P **P 20 57 42.4 +5.9**
DPC MLR MLR
comp=Z,300nm,19.3s,MS4.2
DPC Dobruska-Polom 42.96 303 *e*pP **P 20 57 42.4 +5.9**
DPC AMS AMS 21 16 00.0
comp=Z,300nm,19.3s
UPC Upice 43.11 303 *e*P **P 20 57 43.3 +5.6**
UPC Upice 43.11 303 *e*pP **P 20 57 43.3 +5.6**
PSI Prapat 43.50 152 P **P 20 57 41.9 +0.7**
comp=Z,9.2nm,0.6s,mb4.7,baz=344,slow=5.7,SNR=7.9
PSI Prapat 43.50 152 P **P 20 57 41.9 +0.7**
PSI pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
NB2 NORSAR Subarra 43.61 319 P **P 20 57 40.6 -1.0**
comp=Z,5.4nm,0.8s,mb4.3,baz=83,slow=8.6
NOA NORSAR Array B 43.61 319 P **P 20 57 40.5 -1.1**
comp=Z,2.7nm,0.7s,mb4.1,baz=83,slow=8.0,SNR=8.9
NOA LR LR 21 16 38.6
comp=Z,256nm,18.1s,MS4.2,baz=80,slow=37
NOA NORSAR Array B 43.61 319 P **P 20 57 40.5 -1.1**
NOA pmax pmax
comp=Z,3.0nm,0.7s
NOA MLR MLR
comp=Z,256nm,18.1s
TREC Trest 43.78 302 AMS AMS 21 16 30.0
comp=Z,300nm,18.0s
CONA Conrad Observa 43.96 300 ⇓*i*pP **P 20 57 50.8 +6.3**
comp=Z,10nm,1.5s,mb4.3
PVCC Panska Ves 43.99 303 *e*P **P 20 57 50.8 +6.0**
PVCC MLR MLR
comp=Z,300nm,9.1s
PVCC Panska Ves 43.99 303 *e*pP **P 20 57 50.8 +6.0**
PVCC AMS AMS 21 16 30.0
comp=Z,300nm,9.1s
PRU Pruhonice 44.16 303 *e*P **P 20 57 51.9 +5.8**
PRU MLR MLR
comp=Z,300nm,7.8s
PRU Pruhonice 44.16 303 *e*pP **P 20 57 51.9 +5.8**
PRU AMS AMS 21 16 40.0
comp=Z,300nm,7.8s
BRG Berggiesshubel 44.27 304 *e*P **P 20 57 52.3 +5.3**
comp=Z,7.2nm,1.2s,mb4.3
BRG Berggiesshubel 44.27 304 *e*P **P 20 57 52.3 +5.3**
BRG pmax pmax
comp=Z,4.0nm,1.2s,mb4.0
MJAR Matsushiro Arr 44.60 78 P **P 20 57 50.1 +0.2**
comp=Z,2.2nm,0.8s,mb4.1,baz=295,slow=9.5,SNR=8.2
MJAR Matsushiro Arr 44.60 78 P **P 20 57 50.1 +0.3**
MJAR pmax pmax
comp=Z,2.0nm,0.8s
CLL Collm 44.72 305 *i*P **P 20 57 55.0 +4.4**
CLL *i* pP 20 58 04.4 +3.5
CLL pmax pmax
comp=Z,12nm,1.0s,mb4.7
CLL Collm 44.72 305 *i*P **P 20 57 55.0 +4.4**
comp=Z,12nm,1.0s,mb4.7
CLL *i* pP 20 58 04.4 +3.5
KHC Kasperske Hory 45.02 302 *e*P **P 20 57 53.0 0.0**
KHC pmax pmax
comp=Z,3.0nm,1.1s,mb4.0
KHC Kasperske Hory 45.02 302 *e*P **P 20 57 53.0 0.0**
comp=Z,3.0nm,1.1s,mb4.0
KHC Kasperske Hory 45.02 302 *e*pP **P 20 57 58.6 +5.6**
KHC AMS AMS 21 17 10.0
comp=Z,200nm,18.3s
NKC Novy Kostel 45.38 304 *e*P **P 20 58 03.3 +7.5**
NKC MLR MLR
comp=Z,300nm,16.7s,MS4.3
NKC Novy Kostel 45.38 304 *e*pP **P 20 58 03.3 +7.5**
NKC AMS AMS 21 20 40.0
comp=Z,300nm,16.7s
GRA1 Grafenberg Arr 46.30 303 *e*P **P 20 58 09.0 +5.9**
comp=Z,12nm,1.0s,mb4.8
GRF Grafenberg Arr 46.30 303 *e*P **P 20 58 09.0 +5.9**
comp=Z,12nm,1.0s,mb4.8
GRF Grafenberg Arr 46.30 303 *e*P **P 20 58 09.0 +5.9**
GRF pmax pmax
comp=Z,12nm,1.0s,mb4.8
GRF Grafenberg Arr 46.30 303 *e*P **P 20 58 09.0 +5.9**
GRF pmax pmax
comp=Z,12nm,1.0s,mb4.8
GRFO Grafenberg 46.30 303 *e*P **P 20 58 04.3 +1.2**
GRFO pmax pmax
comp=Z,18nm,1.1s,mb4.9
GRFO Grafenberg 46.30 303 *e*P **P 20 58 04.3 +1.2**
comp=Z,18nm,1.1s,mb4.9
WTTA Wattenberg 46.88 300 ⇓*i*pP **P 20 58 13.6 +6.0**
comp=Z,9.1nm,1.0s,mb4.7
RETA Reutte 47.35 301⇑*i*pP **P 20 58 16.4 +5.1**
comp=Z,8.6nm,0.9s,mb4.7
LPG La Plagne 50.68 300 *e*P **P 20 58 37.6 +0.8**
comp=Z,11nm,0.7s,mb4.6
LPG La Plagne 50.68 300 *e*P **P 20 58 37.6 +0.8**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPG La Plagne 50.68 300 *e*P **P 20 58 37.6 +0.8**
comp=Z,5.4nm,0.7s,mb4.6
LPL La Plagne 50.68 300 *e*P **P 20 58 37.2 +0.3**
comp=Z,8.4nm,0.3s,mb4.9
LPL La Plagne 50.68 300 *e*P **P 20 58 37.2 +0.3**
LPL pmax pmax
comp=Z,4.0nm,0.3s,mb4.8
LPL La Plagne 50.68 300 *e*P **P 20 58 37.2 +0.3**
comp=Z,4.2nm,0.3s,mb4.8
MBDF Montbardon 50.99 299 *e*P **P 20 58 39.8 +0.6**
ORIF Oris-en-Rattie 51.48 299 *e*P **P 20 58 43.9 +1.0**
comp=Z,18nm,1.0s,mb4.7
ORIF Oris-en-Rattie 51.48 299 *e*P **P 20 58 43.9 +1.0**
ORIF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ORIF Oris-en-Rattie 51.48 299 *e*P **P 20 58 43.9 +1.0**
comp=Z,9.3nm,1.0s,mb4.7
VIVF Saint-Julien-l 52.28 300 *e*P **P 20 58 48.0 -0.8**
RES Resolute Bay 62.57 358 LR LR 21 32 11.9
comp=Z,77nm,18.2s,MS3.9,baz=5.6,slow=41
COLD Coldfoot 63.77 19 *e*P **P 21 00 08.2 -0.7**
comp=Z,7.4nm,0.9s,mb4.7
INK Inuvik 66.26 13 LR LR 21 32 49.1
comp=Z,76nm,19.6s,MS3.9,baz=95,slow=39
INK Inuvik 66.26 13 *e*P **P 21 00 25.4 +0.3**
INK pmax pmax
comp=Z,5.0nm,1.0s
INK Inuvik 66.26 13 *e*P **P 21 00 25.4 +0.3**
comp=Z,5.3nm,1.0s,mb4.5
ILAR Eielson Array 66.56 20 P **P 21 00 27.1 +0.1**
comp=Z,1.2nm,0.8s,mb4.0,baz=324,slow=5.0,SNR=15
ILAR Eielson Array 66.56 20 P **P 21 00 27.2 +0.2**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
PPLA Purkeypile 66.63 23 *e*P **P 21 00 28.2 +0.7**
comp=Z,13nm,0.9s,mb5.0
KDAK Kodiak Island 70.52 27 P **P 21 00 52.1 +0.2**
comp=Z,5.9nm,0.7s,mb4.6,baz=315,slow=12,SNR=3.4
KDAK Kodiak Island 70.52 27 P **P 21 00 52.1 +0.2**
KDAK pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
TORD Torodi Ar. Bea 72.46 272 P **P 21 01 02.5 -1.8**
comp=Z,1.3nm,0.6s,mb4.1,baz=46,slow=5.1,SNR=21
TORD Torodi Ar. Bea 72.46 272 P **P 21 01 02.5 -1.8**
YKA Yellowknife Ar 74.24 7 P **P 21 01 15.3 +1.4**
comp=Z,2.8nm,0.7s,mb4.3,baz=348,slow=5.6,SNR=9.7
YKA Yellowknife Ar 74.24 7 P **P 21 01 15.3 +1.3**
YKA pmax pmax
comp=Z,3.0nm,0.7s
WRA Warramunga Arr 80.22 129 P **P 21 01 49.1 +1.1**
comp=Z,4.5nm,0.9s,mb4.4,baz=331,slow=5.5,SNR=21
WRA Warramunga Arr 80.22 129 P **P 21 01 49.1 +1.1**
WRA pmax pmax
comp=Z,5.0nm,0.9s
DBIC Dimbokro 81.56 271 P **P 21 01 55.0 -0.5**
comp=Z,8.8nm,1.2s,mb4.6,baz=8.1,slow=7.1,SNR=3.4
DBIC Dimbokro 81.56 271 P **P 21 01 55.0 -0.5**
DBIC pmax pmax
comp=Z,9.0nm,1.2s
KIC Kosan Boka 81.69 271 *e*P **P 21 02 01.1 +5.0**
comp=Z,12nm,0.6s,mb5.0
TIC Toumodi 81.70 271 *e*P **P 21 02 00.0 +3.8**
comp=Z,20nm,0.8s,mb5.1
TIC Toumodi 81.70 271 *e*P **P 21 02 00.0 +3.8**
TIC pmax pmax
comp=Z,20nm,0.8s,mb5.1
LIC Lamto 81.99 271 *e*P **P 21 01 57.0 -0.7**
comp=Z,64nm,1.4s,mb5.3
ASAR Alice Springs 82.93 132 P **P 21 02 02.9 +0.6**
comp=Z,1.8nm,0.6s,mb4.3,baz=327,slow=5.1,SNR=21
ASAR Alice Springs 82.93 132 P **P 21 02 02.9 +0.6**
ASAR pmax pmax
comp=Z,2.0nm,0.6s
NWAO Narrogin (SRO) 82.97 149 P **P 21 02 01.9 -0.3**
comp=Z,5.2nm,0.9s,mb4.6,baz=315,slow=4.3,SNR=3.8
NWAO Narrogin (SRO) 82.97 149 P **P 21 02 01.9 -0.4**
NWAO pmax pmax
comp=Z,5.0nm,0.9s
NWAO Narrogin (SRO) 82.97 149 P **P 21 02 01.9 -0.3**
CTA Charters Tower 87.52 120 P **P 21 02 25.8 +0.5**
comp=Z,2.7nm,0.3s,mb5.0,baz=346,slow=6.3,SNR=6.7
CTA Charters Tower 87.52 120 P **P 21 02 25.8 +0.5**
CTA pmax pmax
comp=Z,3.0nm,0.3s
CTA Charters Tower 87.52 120 P **P 21 02 25.8 +0.4**
CHMT Chamberlain Mo 89.75 9 *e*P **P 21 02 35.9 +0.3**
comp=Z,1.4nm,0.7s,mb4.4
STKA Stephens Creek 93.57 131 P **P 21 02 54.0 +0.7**
comp=Z,0.5nm,0.4s,mb4.3,baz=304,slow=3.6,SNR=3.0
MOD Modoc 93.59 15 *e*P **P 21 02 53.1 -0.4**
PDAR Pinedale Array 94.22 7 P **P 21 02 58.2 +1.9**
comp=Z,0.4nm,0.7s,mb4.0,baz=354,slow=3.6,SNR=3.3

CRAAG ***02*** *20:58:34.6, 36.°63N×5.°49E, MI4.1*
ISCJB ***02*** *20:58:34.3±0.3, 36.°93N±0.°02×5.°50E±0.°03, h10km, Error ellipse: s-maj=3.6km s-min=2.8km az=33.4*
CSEM ***02*** *20:58:35.9±0.2, 36.°78N×5.°60E, h10km, ML3.2/9, Error ellipse: s-maj=6.1km s-min=4.6km az=32.0*
MDD ***02*** *20:58:36.0±0.3, 36.°71N×5.°52E, h0km, mb4.3/24, Error ellipse: s-maj=5.4km s-min=3.3km az=43.0, PRIMO*
MDD EMS: IV INTENSIDAD MAXIMA-CRAAG.
LDG ***02*** *20:58:36.7±0.1, 36.°68N×5.°68E, h10km, Ml3.5/11, Error ellipse: s-maj=3.5km s-min=2.5km az=25.0*
NEIC ***02*** *20:58:36.7, 36.°74N×5.°51E, h0km, MG3.9(MDD), After MDD.*
ISC 02 20:58:35.8±0.3, 36.°86N±0.°02×5.°52E±0.°03, h10km, n217, σ1♀64/351, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFRA	**Djebel Bou Aff**	**0.43**	**137**	P	**Pg**	**20 58 42.6**	**-1.6**
DFRA	**Djebel Bou Aff**	**0.43**	**137**	P	**Pg**	**20 58 42.6**	**-1.6**
DFRA	**Djebel Bou Aff**	**0.43**	**137**	P	**Pg**	**20 58 42.6**	**-1.6**
DFRA	**Djebel Bou Aff**	**0.43**	**137**	P	**Pg**	**20 58 42.6**	**-1.6**
SET	**Setif**	**0.67**	**188**	P	**Pg**	**20 58 45.0**	**-3.7**
SET	**Setif**	**0.67**	**188**	P	**Pg**	**20 58 45.0**	**-3.7**
SET	**Setif**	**0.67**	**188**	P	**Pg**	**20 58 45.0**	**-3.7**
SET	**Setif**	**0.67**	**188**	P	**Pg**	**20 58 45.0**	**-3.7**
CKHR	**Kef el Ahmar**	**0.84**	**180**	P	**Pg**	**20 58 49.0**	**-3.0**
CKHR	**Kef el Ahmar**	**0.84**	**180**	P	**Pg**	**20 58 49.0**	**-3.0**
CKHR	**Kef el Ahmar**	**0.84**	**180**	P	**Pg**	**20 58 49.0**	**-3.0**
CKHR	**Kef el Ahmar**	**0.84**	**180**	P	**Pg**	**20 58 49.0**	**-3.0**
CASM	**Ain Smara**	**0.99**	**127**	P	**Pg**	**20 58 52.1**	**-2.7**
CASM	**Ain Smara**	**0.99**	**127**	P	**Pg**	**20 58 52.1**	**-2.7**
CASM	**Ain Smara**	**0.99**	**127**	P	**Pg**	**20 58 52.1**	**-2.7**
CASM	**Ain Smara**	**0.99**	**127**	P	**Pg**	**20 58 52.1**	**-2.7**
CKFL	**Kef-Lekhel**	**1.07**	**115**	P	**Pg**	**20 58 55.2**	**-1.2**
CKFL	**Kef-Lekhel**	**1.07**	**115**	P	**Pg**	**20 58 55.2**	**-1.2**
CKFL	**Kef-Lekhel**	**1.07**	**115**	P	**Pg**	**20 58 55.2**	**-1.2**
CKFL	**Kef-Lekhel**	**1.07**	**115**	P	**Pg**	**20 58 55.2**	**-1.2**
CAEH	**'Ain El Ouahch**	**1.07**	**94**	P	**Pg**	**20 58 55.7**	**-0.7**
CAEH	**'Ain El Ouahch**	**1.07**	**94**	P	**Pg**	**20 58 55.7**	**-0.7**
CAEH	**'Ain El Ouahch**	**1.07**	**94**	P	**Pg**	**20 58 55.7**	**-0.7**
CAEH	**'Ain El Ouahch**	**1.07**	**94**	P	**Pg**	**20 58 55.7**	**-0.7**
CMAH	**Djebel Manchou**	**1.55**	**98**	P	**Pn**	**20 59 02.7**	**-0.7**
CMAH	**Djebel Manchou**	**1.55**	**98**	P	**Pn**	**20 59 02.7**	**-0.7**
CMAH	**Djebel Manchou**	**1.55**	**98**	P	**Pn**	**20 59 02.7**	**-0.7**
CMAH	**Djebel Manchou**	**1.55**	**98**	P	**Pn**	**20 59 02.7**	**-0.7**
AKET	**Djebel Ketaf**	**1.55**	**239**	P	**Pg**	**20 59 05.8**	**+0.3**
AKET	**Djebel Ketaf**	**1.55**	**239**	P	**Pg**	**20 59 05.8**	**+0.3**
AKET	**Djebel Ketaf**	**1.55**	**239**	P	**Pg**	**20 59 05.8**	**+0.3**
AKET	**Djebel Ketaf**	**1.55**	**239**	P	**Pg**	**20 59 05.8**	**+0.3**
ABA	**Alger-Bouzarea**	**1.99**	**269**	P	**Pn**	**20 59 06.0**	**-3.5**
ABA	**Alger-Bouzarea**	**1.99**	**269**	P	**Pn**	**20 59 06.0**	**-3.5**
ABA	**Alger-Bouzarea**	**1.99**	**269**	P	**Pn**	**20 59 06.0**	**-3.5**
ABA	**Alger-Bouzarea**	**1.99**	**269**	P	**Pn**	**20 59 06.0**	**-3.5**
EMHD	**Djebel Mahouad**	**2.17**	**253**	P	**Pn**	**20 59 10.0**	**-1.9**
EMHD	**Djebel Mahouad**	**2.17**	**253**	P	**Pn**	**20 59 10.0**	**-1.9**
EMHD	**Djebel Mahouad**	**2.17**	**253**	P	**Pn**	**20 59 10.0**	**-1.9**
EMHD	**Djebel Mahouad**	**2.17**	**253**	P	**Pn**	**20 59 10.0**	**-1.9**
EBNR	**Beni Rached**	**3.26**	**261**	P	**Pg**	**20 59 34.5**	**-3.7**
EBNR	**Beni Rached**	**3.26**	**261**	P	**Pg**	**20 59 34.5**	**-3.7**
KEST	**Kesra**	**3.29**	**109**	*e*Pn	**Pn**	**20 59 27.1**	**-0.3**
KEST				*e*Sn	**Sn**	**21 00 06.2**	**-0.3**
KEST	**Kesra**	**3.29**	**109**	*e*Pn	**Pn**	**20 59 27.1**	**-0.3**
KEST				*e*Sn	**Sn**	**21 00 06.2**	**-0.4**
ETOS	**Mallorca**	**3.60**	**325**	Pn	**Pn**	**20 59 33.7**	**+2.2**
ETOS				Sn	**Sn**	**21 00 15.0**	**+1.0**
ETOS	**Mallorca**	**3.60**	**325**	Pn	**Pn**	**20 59 33.7**	**+2.2**
	24nm,0.3s,SNR=49						
ETOS				Sn	**Sn**	**21 00 12.6**	**-1.5**
	5.8nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.60**	**325**	Pn	**Pn**	**20 59 33.7**	**+2.2**
	24nm,0.3s,SNR=49						
ETOS				Sn	**Sn**	**21 00 12.6**	**-1.5**
	5.8nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.60**	**325**	Pn	**Pn**	**20 59 33.7**	**+2.1**
	9.8nm,0.2s,SNR=49						
ETOS				Sn	**Sn**	**21 00 15.0**	**+0.9**
	5.8nm,0.2s,SNR=7.9						
EANR	**'Ain N'Sour**	**3.68**	**257**	P	**Pn**	**20 59 35.8**	**+3.1**
EANR	**'Ain N'Sour**	**3.68**	**257**	P	**Pn**	**20 59 35.8**	**+3.1**
EANR	**'Ain N'Sour**	**3.68**	**257**	P	**Pn**	**20 59 35.8**	**+3.1**
EANR	**'Ain N'Sour**	**3.68**	**257**	P	**Pn**	**20 59 35.8**	**+3.1**
ETRT	**Tiaret**	**3.71**	**248**	P	**Pn**	**20 59 33.0**	**-0.2**
ETRT	**Tiaret**	**3.71**	**248**	P	**Pn**	**20 59 33.0**	**-0.2**
ETRT	**Tiaret**	**3.71**	**248**	P	**Pn**	**20 59 33.0**	**-0.2**
ETRT	**Tiaret**	**3.71**	**248**	P	**Pn**	**20 59 33.0**	**-0.2**
EIBI	**Ibiza**	**3.94**	**305**	Pn	**Pn**	**20 59 38.3**	**+1.9**
EIBI				Sn	**Sn**	**21 00 23.4**	**+0.8**
EIBI	**Ibiza**	**3.94**	**305**	Pn	**Pn**	**20 59 38.1**	**+1.8**
	6.8nm,0.2s,SNR=22						
EIBI				Sn	**Sn**	**21 00 22.1**	**-0.5**
	7.4nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.94**	**305**	Pn	**Pn**	**20 59 38.1**	**+1.8**
	6.8nm,0.2s,SNR=22						
EIBI				Sn	**Sn**	**21 00 22.1**	**-0.5**
	7.4nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.94**	**305**	Pn	**Pn**	**20 59 38.3**	**+2.0**
	5.3nm,0.1s,SNR=22						
EIBI				Sn	**Sn**	**21 00 23.4**	**+0.8**
	7.4nm,0.2s,SNR=7.9						
VSL	**Villasalto**	**4.02**	**48**	*e*Pn	**Pn**	**20 59 38.5**	**+1.1**
VSL				*e*Sn	**Sn**	**21 00 22.8**	**-1.8**
VSL	**Villasalto**	**4.02**	**48**	*e*Pn	**Pn**	**20 59 38.5**	**+1.1**
VSL				*e*Sn	**Sn**	**21 00 22.8**	**-1.8**
EBEN	**Beniarda**	**4.91**	**294**	Pn	**Pn**	**20 59 51.3**	**+1.8**
EBEN				Sn	**Sn**	**21 00 44.8**	**-1.5**
EBEN	**Beniarda**	**4.91**	**294**	Pn	**Pn**	**20 59 51.3**	**+1.8**
	2.9nm,0.6s,SNR=7.9						
EBEN				Sn	**Sn**	**21 00 44.8**	**-1.5**
	0.2nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.91**	**294**	Pn	**Pn**	**20 59 51.3**	**+1.8**
	2.9nm,0.6s,SNR=7.9						
EBEN				Sn	**Sn**	**21 00 44.8**	**-1.5**
	0.2nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.91**	**294**	Pn	**Pn**	**20 59 51.3**	**+1.7**
	0.2nm,0.3s,SNR=7.9						
EBEN				Sn	**Sn**	**21 00 44.8**	**-1.6**
	0.2nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.45**	**335**	Pn	**Pn**	**20 59 58.6**	**+1.7**
CFON				Sn	**Sn**	**21 01 00.4**	**+0.7**
CFON	**Fontmartina**	**5.45**	**335**	Pn	**Pn**	**20 59 58.6**	**+1.7**
	2.3nm,0.2s,SNR=7.9						
CFON				Sn	**Sn**	**21 01 00.4**	**+0.7**
	2.0nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.45**	**335**	Pn	**Pn**	**20 59 58.6**	**+1.7**
	2.3nm,0.2s,SNR=7.9						
CFON				Sn	**Sn**	**21 01 00.4**	**+0.7**
	2.0nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.45**	**335**	Pn	**Pn**	**20 59 58.6**	**+1.6**
	0.7nm,0.2s,SNR=7.9						
CFON				Sn	**Sn**	**21 01 00.4**	**+0.7**
	2.0nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**5.47**	**282**	Pn	**Pn**	**20 59 57.6**	**+0.2**
EMUR				Sn	**Sn**	**21 00 58.4**	**-1.9**
EMUR	**La Murta**	**5.47**	**282**	Pn	**Pn**	**20 59 57.6**	**+0.2**
	3.6nm,0.3s,SNR=6.8						
EMUR				Sn	**Sn**	**21 00 58.4**	**-1.9**
	0.4nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**5.47**	**282**	Pn	**Pn**	**20 59 57.6**	**+0.2**
	3.6nm,0.3s,SNR=6.8						
EMUR				Sn	**Sn**	**21 00 58.4**	**-1.9**
	0.4nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**5.47**	**282**	Pn	**Pn**	**20 59 57.6**	**+0.3**
	0.9nm,0.2s,SNR=6.8						
EPOB	**Poblet**	**5.66**	**324**	Pn	**Pn**	**21 00 01.6**	**+1.8**
EPOB				Sn	**Sn**	**21 01 04.7**	**-0.2**
EPOB	**Poblet**	**5.66**	**324**	Pn	**Pn**	**21 00 01.5**	**+1.6**
	3.1nm,0.2s,SNR=20						
EPOB				Sn	**Sn**	**21 01 02.5**	**-2.4**
	2.9nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.66**	**324**	Pn	**Pn**	**21 00 01.5**	**+1.6**
	3.1nm,0.2s,SNR=20						
EPOB				Sn	**Sn**	**21 01 02.5**	**-2.4**
	2.9nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.66**	**324**	Pn	**Pn**	**21 00 01.6**	**+1.7**
	1.5nm,0.3s,SNR=20						
EPOB				Sn	**Sn**	**21 01 04.7**	**-0.2**
	2.9nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**5.75**	**317**	Pn	**Pn**	**21 00 03.6**	**+2.5**
ERTA				Sn	**Sn**	**21 01 06.7**	**-0.4**
ERTA	**Horta de San J**	**5.75**	**317**	Pn	**Pn**	**21 00 03.6**	**+2.5**
	2.5nm,0.4s,SNR=6.4						
ERTA				Sn	**Sn**	**21 01 05.2**	**-1.9**
	0.7nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**5.75**	**317**	Pn	**Pn**	**21 00 03.6**	**+2.5**
	2.5nm,0.4s,SNR=6.4						
ERTA				Sn	**Sn**	**21 01 05.2**	**-1.9**
	0.7nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**5.75**	**317**	Pn	**Pn**	**21 00 03.6**	**+2.5**
	0.1nm,0.2s,SNR=6.4						
ERTA				Sn	**Sn**	**21 01 06.7**	**-0.4**
	0.7nm,0.2s,SNR=7.9						
ECHE	**Chera**	**5.79**	**300**	Pn	**Pn**	**21 00 03.9**	**+2.3**
ECHE	**Chera**	**5.79**	**300**	Pn	**Pn**	**21 00 03.9**	**+2.3**
	4.6nm,0.4s,SNR=7.9						
ECHE	**Chera**	**5.79**	**300**	Pn	**Pn**	**21 00 03.9**	**+2.3**
	4.6nm,0.4s,SNR=7.9						
ECHE	**Chera**	**5.79**	**300**	Pn	**Pn**	**21 00 03.9**	**+2.2**
	0.4nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.85**	**309**	Pn	**Pn**	**21 00 05.1**	**+2.6**
EMOS				Sn	**Sn**	**21 01 08.1**	**-1.5**
EMOS	**Mosqueruela**	**5.85**	**309**	Pn	**Pn**	**21 00 05.1**	**+2.6**
	1.9nm,0.2s,SNR=9.1						
EMOS				Sn	**Sn**	**21 01 08.1**	**-1.5**
	0.8nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.85**	**309**	Pn	**Pn**	**21 00 05.1**	**+2.6**
	1.9nm,0.2s,SNR=9.1						
EMOS				Sn	**Sn**	**21 01 08.1**	**-1.5**
	0.8nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.85**	**309**	Pn	**Pn**	**21 00 05.1**	**+2.6**
	1.5nm,0.2s,SNR=9.1						
EMOS				Sn	**Sn**	**21 01 08.1**	**-1.5**
	0.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.87**	**290**	Pn	**Pn**	**21 00 04.4**	**+1.6**
ETOB				Sn	**Sn**	**21 01 08.8**	**-1.4**
ETOB	**Tobarra**	**5.87**	**290**	Pn	**Pn**	**21 00 05.2**	**+2.3**
	2.3nm,0.1s,SNR=16						
ETOB				Sn	**Sn**	**21 01 08.9**	**-1.4**
	0.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.87**	**290**	Pn	**Pn**	**21 00 05.2**	**+2.3**
	2.3nm,0.1s,SNR=16						
ETOB				Sn	**Sn**	**21 01 08.9**	**-1.4**
	0.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.87**	**290**	Pn	**Pn**	**21 00 04.4**	**+1.5**
	2.1nm,0.1s,SNR=16						
ETOB				Sn	**Sn**	**21 01 08.9**	**-1.3**
	0.4nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.92**	**330**	Pn	**Pn**	**21 00 05.8**	**+2.3**
EMIR				Sn	**Sn**	**21 01 10.8**	**-0.5**
EMIR	**Miracle**	**5.92**	**330**	Pn	**Pn**	**21 00 05.8**	**+2.3**
	2.7nm,0.2s,SNR=11						
EMIR				Sn	**Sn**	**21 01 10.8**	**-0.5**
	2.3nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.92**	**330**	Pn	**Pn**	**21 00 05.8**	**+2.3**
	2.7nm,0.2s,SNR=11						
EMIR				Sn	**Sn**	**21 01 10.8**	**-0.5**
	2.3nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.92**	**330**	Pn	**Pn**	**21 00 05.8**	**+2.4**
	2.3nm,0.1s,SNR=11						
EMIR				Sn	**Sn**	**21 01 10.8**	**-0.5**
	2.3nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**5.94**	**341**	Pn	**Pn**	**21 00 04.0**	**+0.3**
EJON				Sn	**Sn**	**21 01 12.2**	**+0.5**
EJON	**La Jonquera**	**5.94**	**341**	Pn	**Pn**	**21 00 04.7**	**+1.0**
	1.4nm,0.2s,SNR=7.9						
EJON				Sn	**Sn**	**21 01 12.2**	**+0.5**
	1.9nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**5.94**	**341**	Pn	**Pn**	**21 00 04.7**	**+1.0**
	1.4nm,0.2s,SNR=7.9						
EJON				Sn	**Sn**	**21 01 12.2**	**+0.5**
	1.9nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**5.94**	**341**	Pn	**Pn**	**21 00 04.0**	**+0.3**
	0.6nm,0.2s,SNR=7.9						
EJON				Sn	**Sn**	**21 01 12.2**	**+0.5**
	1.9nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**6.19**	**273**	Pn	**Pn**	**21 00 06.2**	**-1.0**
	2.9nm,0.3s,SNR=7.9						
ENIJ				Sn	**Sn**	**21 01 15.1**	**-2.9**
	3.5nm,0.4s,SNR=7.9						
ENIJ	**Nijar**	**6.19**	**273**	Pn	**Pn**	**21 00 06.2**	**-1.0**
	2.9nm,0.3s,SNR=7.9						
ENIJ				Sn	**Sn**	**21 01 15.1**	**-2.9**
	3.5nm,0.4s,SNR=7.9						
CLLI	**Llivia**	**6.24**	**335**	Pn	**Pn**	**21 00 11.1**	**+3.3**
CLLI				Sn	**Sn**	**21 01 18.7**	**-0.5**
CLLI	**Llivia**	**6.24**	**335**	Pn	**Pn**	**21 00 11.1**	**+3.3**
	1.7nm,0.3s,SNR=11						
CLLI				Sn	**Sn**	**21 01 18.7**	**-0.5**
	0.5nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**6.24**	**335**	Pn	**Pn**	**21 00 11.1**	**+3.3**
	1.7nm,0.3s,SNR=11						
CLLI				Sn	**Sn**	**21 01 18.7**	**-0.5**
	0.5nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**6.24**	**335**	Pn	**Pn**	**21 00 11.1**	**+3.2**
	0.6nm,0.1s,SNR=11						
CLLI				Sn	**Sn**	**21 01 18.7**	**-0.5**
	0.5nm,0.2s,SNR=7.9						
PGF	**Pioggiola**	**6.28**	**24**	*e*Pn	**Pn**	**21 00 08.6**	**+0.2**
PGF				*e*Sn	**Sn**	**21 01 16.7**	**-3.5**
	12nm,0.4s						
PGF	**Pioggiola**	**6.28**	**24**	Pn	**Pn**	**21 00 08.6**	**+0.2**
PGF				Sn	**Sn**	**21 01 16.7**	**-3.5**
	6.2nm,0.4s						
PGF	**Pioggiola**	**6.28**	**24**	Pn	**Pn**	**21 00 08.6**	**+0.2**
PGF				Sn	**Sn**	**21 01 16.7**	**-3.5**
	6.2nm,0.4s						
PGF	**Pioggiola**	**6.28**	**24**	*e*Pn	**Pn**	**21 00 08.6**	**+0.2**
PGF				*e*Sn	**Sn**	**21 01 16.7**	**-3.5**
	6.2nm,0.4s						
CSOR	**Sort**	**6.46**	**330**	Pn	**Pn**	**21 00 13.9**	**+3.0**
CSOR				Sn	**Sn**	**21 01 23.9**	**-0.8**
CSOR	**Sort**	**6.46**	**330**	Pn	**Pn**	**21 00 14.3**	**+3.3**
	2.2nm,0.3s,SNR=11						
CSOR				Sn	**Sn**	**21 01 23.9**	**-0.8**
	0.4nm,0.3s,SNR=7.9						
CSOR	**Sort**	**6.46**	**330**	Pn	**Pn**	**21 00 14.3**	**+3.3**
	2.2nm,0.3s,SNR=11						
CSOR				Sn	**Sn**	**21 01 23.9**	**-0.8**
	0.4nm,0.3s,SNR=7.9						
CSOR	**Sort**	**6.46**	**330**	Pn	**Pn**	**21 00 13.9**	**+3.0**
	0.8nm,0.1s,SNR=11						
CSOR				Sn	**Sn**	**21 01 23.9**	**-0.8**
	0.4nm,0.3s,SNR=7.9						
LMR	**La Mourre**	**6.51**	**6**	*e*Pn	**Pn**	**21 00 11.7**	**+0.1**
LMR				*e*Sn	**Sn**	**21 01 23.6**	**-2.2**
	4.9nm,0.3s						
LMR	**La Mourre**	**6.51**	**6**	Pn	**Pn**	**21 00 11.7**	**+0.1**
LMR				Sn	**Sn**	**21 01 23.6**	**-2.2**
	2.5nm,0.3s						
LMR	**La Mourre**	**6.51**	**6**	Pn	**Pn**	**21 00 11.7**	**+0.1**
LMR				Sn	**Sn**	**21 01 23.6**	**-2.2**
	2.5nm,0.3s						
LMR	**La Mourre**	**6.51**	**6**	*e*Pn	**Pn**	**21 00 11.7**	**+0.1**
LMR				*e*Sn	**Sn**	**21 01 23.6**	**-2.2**
	2.5nm,0.3s						
EHUE	**Huescar**	**6.53**	**281**	Pn	**Pn**	**21 00 14.4**	**+2.5**
EHUE	**Huescar**	**6.53**	**281**	Pn	**Pn**	**21 00 14.4**	**+2.5**
	1.6nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**6.53**	**281**	Pn	**Pn**	**21 00 14.4**	**+2.5**
	1.6nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**6.53**	**281**	Pn	**Pn**	**21 00 14.4**	**+2.5**
	0.7nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**6.71**	**318**	Pn	**Pn**	**21 00 16.8**	**+2.4**
ESAC				Sn	**Sn**	**21 01 29.8**	**-1.1**
ESAC	**San Caprasio**	**6.71**	**318**	Pn	**Pn**	**21 00 16.8**	**+2.4**
	13nm,0.3s,SNR=6.4						
ESAC				Sn	**Sn**	**21 01 29.8**	**-1.1**
	0.3nm,0.5s,SNR=7.9						
ESAC	**San Caprasio**	**6.71**	**318**	Pn	**Pn**	**21 00 16.8**	**+2.4**
	13nm,0.3s,SNR=6.4						
ESAC				Sn	**Sn**	**21 01 29.8**	**-1.1**
	0.3nm,0.5s,SNR=7.9						
ESAC	**San Caprasio**	**6.71**	**318**	Pn	**Pn**	**21 00 16.8**	**+2.4**
	7.0nm,0.2s,SNR=6.4						
ESAC				Sn	**Sn**	**21 01 29.8**	**-1.1**
	0.3nm,0.5s,SNR=7.9						
EBER	**Berja**	**6.74**	**273**	Pn	**Pn**	**21 00 14.7**	**0.0**
EBER				Sn	**Sn**	**21 01 28.9**	**-2.7**
EBER	**Berja**	**6.74**	**273**	Pn	**Pn**	**21 00 14.7**	**0.0**
	1.2nm,0.2s,SNR=5.5						
EBER				Sn	**Sn**	**21 01 28.9**	**-2.7**
	0.5nm,0.2s,SNR=7.9						
EBER	**Berja**	**6.74**	**273**	Pn	**Pn**	**21 00 14.7**	**0.0**
	1.2nm,0.2s,SNR=5.5						
EBER				Sn	**Sn**	**21 01 28.9**	**-2.7**
	0.5nm,0.2s,SNR=7.9						
EBER	**Berja**	**6.74**	**273**	Pn	**Pn**	**21 00 14.7**	**0.0**
	0.6nm,0.2s,SNR=5.5						
FRF	**La Foret Royal**	**6.75**	**7**	*e*Pn	**Pn**	**21 00 15.2**	**+0.4**
FRF				*e*Sn	**Sn**	**21 01 30.2**	**-1.5**
	3.8nm,0.3s						
FRF	**La Foret Royal**	**6.75**	**7**	Pn	**Pn**	**21 00 15.2**	**+0.4**
FRF				Sn	**Sn**	**21 01 30.2**	**-1.5**
	1.9nm,0.3s						
FRF	**La Foret Royal**	**6.75**	**7**	Pn	**Pn**	**21 00 15.2**	**+0.4**
FRF				Sn	**Sn**	**21 01 30.2**	**-1.5**
	1.9nm,0.3s						
FRF	**La Foret Royal**	**6.75**	**7**	*e*Pn	**Pn**	**21 00 15.2**	**+0.4**
FRF				*e*Sn	**Sn**	**21 01 30.2**	**-1.5**
	1.9nm,0.3s						
EQES	**Quesada**	**6.91**	**280**	Pn	**Pn**	**21 00 18.4**	**+1.3**
EQES				Sn	**Sn**	**21 01 34.0**	**-1.7**
EQES	**Quesada**	**6.91**	**280**	Pn	**Pn**	**21 00 19.2**	**+2.2**
	15nm,0.6s,SNR=24						
EQES				Sn	**Sn**	**21 01 37.1**	**+1.4**
	0.5nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.91**	**280**	Pn	**Pn**	**21 00 19.2**	**+2.2**
	15nm,0.6s,SNR=24						
EQES				Sn	**Sn**	**21 01 37.1**	**+1.4**
	0.5nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.91**	**280**	Pn	**Pn**	**21 00 18.4**	**+1.4**
EQES				Sn	**Sn**	**21 01 34.0**	**-1.7**
	0.5nm,0.3s,SNR=7.9						
MTLF	**Montolieu**	**6.95**	**340**	*e*Pn	**Pn**	**21 00 18.2**	**+0.6**
MTLF				*e*Sn	**Sn**	**21 01 35.5**	**-1.1**
	3.0nm,0.5s						
MTLF	**Montolieu**	**6.95**	**340**	Pn	**Pn**	**21 00 18.2**	**+0.6**
MTLF				Sn	**Sn**	**21 01 35.5**	**-1.1**
	1.5nm,0.5s						
MTLF	**Montolieu**	**6.95**	**340**	Pn	**Pn**	**21 00 18.2**	**+0.6**
MTLF				Sn	**Sn**	**21 01 35.5**	**-1.1**
	1.5nm,0.5s						
MTLF	**Montolieu**	**6.95**	**340**	*e*Pn	**Pn**	**21 00 18.2**	**+0.6**
MTLF				*e*Sn	**Sn**	**21 01 35.5**	**-1.1**
	1.5nm,0.5s						
SMRF	**Simiane la Rot**	**7.11**	**0**	*e*Pn	**Pn**	**21 00 21.3**	**+1.5**
SMRF				*e*Sn	**Sn**	**21 01 39.9**	**-0.7**
	1.2nm,0.2s						
SMRF	**Simiane la Rot**	**7.11**	**0**	Pn	**Pn**	**21 00 21.3**	**+1.5**
SMRF				Sn	**Sn**	**21 01 39.9**	**-0.7**
	1.2nm,0.2s						
SMRF	**Simiane la Rot**	**7.11**	**0**	Pn	**Pn**	**21 00 21.3**	**+1.5**
SMRF				Sn	**Sn**	**21 01 39.9**	**-0.7**
	1.2nm,0.2s						
SMRF	**Simiane la Rot**	**7.11**	**0**	*e*Pn	**Pn**	**21 00 21.3**	**+1.5**
SMRF				*e*Sn	**Sn**	**21 01 39.9**	**-0.7**
	0.6nm,0.2s						
ETOR	**Torete**	**7.11**	**306**	Pn	**Pn**	**21 00 23.2**	**+3.4**
ETOR				Sn	**Sn**	**21 01 38.9**	**-1.7**
ETOR	**Torete**	**7.11**	**306**	Pn	**Pn**	**21 00 23.2**	**+3.4**
	4.0nm,0.3s,SNR=7.9						
ETOR				Sn	**Sn**	**21 01 38.9**	**-1.7**
	0.6nm,0.2s,SNR=7.9						
ETOR	**Torete**	**7.11**	**306**	Pn	**Pn**	**21 00 23.2**	**+3.4**
	4.0nm,0.3s,SNR=7.9						
ETOR				Sn	**Sn**	**21 01 38.9**	**-1.7**
	0.6nm,0.2s,SNR=7.9						
ETOR	**Torete**	**7.11**	**306**	Pn	**Pn**	**21 00 23.2**	**+3.4**
	1.5nm,0.2s,SNR=7.9						
ETOR				Sn	**Sn**	**21 01 38.8**	**-1.8**
ETOR				Sn	**Sn**	**21 01 38.9**	**-1.7**
	0.6nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**7.14**	**326**	Pn	**Pn**	**21 00 23.3**	**+3.1**
EBIE				Sn	**Sn**	**21 01 40.7**	**-0.6**
EBIE	**Bielsa**	**7.14**	**326**	Pn	**Pn**	**21 00 23.3**	**+3.1**
	1.2nm,0.3s,SNR=7.9						
EBIE				Sn	**Sn**	**21 01 40.7**	**-0.6**
	0.3nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**7.14**	**326**	Pn	**Pn**	**21 00 23.3**	**+3.1**
	1.2nm,0.3s,SNR=7.9						
EBIE				Sn	**Sn**	**21 01 40.7**	**-0.6**
	0.3nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**7.14**	**326**	Pn	**Pn**	**21 00 23.3**	**+3.1**
	0.2nm,0.1s,SNR=7.9						
EBIE				Sn	**Sn**	**21 01 40.7**	**-0.6**
	0.3nm,0.2s,SNR=7.9						
SBF	**Sospel**	**7.15**	**11**	*e*Pn

ELIZ	**Elizondo**	**8.29**	**322**	Pn	**Pn**	**21 00 39.5 +3.5**
	2.1nm,0.2s,SNR=9.2					
ELIZ				Sn	**Sn**	**21 02 07.4 -2.4**
	0.6nm,0.2s,SNR=7.9					
ELIZ	**Elizondo**	**8.29**	**322**	Pn	**Pn**	**21 00 39.5 +3.5**
	2.1nm,0.2s,SNR=9.2					
ELIZ				Sn	**Sn**	**21 02 07.4 -2.4**
	0.6nm,0.2s,SNR=7.9					
ELIZ	**Elizondo**	**8.29**	**322**	Pn	**Pn**	**21 00 39.5 +3.4**
	1.5nm,0.2s,SNR=9.2					
ELIZ				Sn	**Sn**	**21 02 07.4 -2.4**
	0.6nm,0.2s,SNR=7.9					
EALK	**Alkurruntz**	**8.32**	**322**	Pn	**Pn**	**21 00 39.1 +2.7**
EALK				Sn	**Sn**	**21 02 09.3 -1.2**
EALK	**Alkurruntz**	**8.32**	**322**	Pn	**Pn**	**21 00 39.6 +3.1**
	2.3nm,0.3s,SNR=12					
EALK				Sn	**Sn**	**21 02 09.3 -1.2**
	1.1nm,0.3s,SNR=7.9					
EALK	**Alkurruntz**	**8.32**	**322**	Pn	**Pn**	**21 00 39.6 +3.1**
	2.3nm,0.3s,SNR=12					
EALK				Sn	**Sn**	**21 02 09.3 -1.2**
	1.1nm,0.3s,SNR=7.9					
EALK	**Alkurruntz**	**8.32**	**322**	Pn	**Pn**	**21 00 39.2 +2.7**
	1.2nm,0.2s,SNR=12					
EALK				Sn	**Sn**	**21 02 09.3 -1.2**
	1.1nm,0.3s,SNR=7.9					
CAF	**Calviac**	**8.47**	**343**	*e*Pn	**Pn**	**21 00 39.1 +0.7**
CAF	**Calviac**	**8.47**	**343**	Pn	**Pn**	**21 00 39.1 +0.7**
CAF	**Calviac**	**8.47**	**343**	Pn	**Pn**	**21 00 39.1 +0.7**
CAF	**Calviac**	**8.47**	**343**	*e*Pn	**Pn**	**21 00 39.1 +0.7**
ELAN	**Lanestosa**	**9.35**	**316**	Pn	**Pn**	**21 00 52.9 +2.3**
ELAN				Sn	**Sn**	**21 02 32.2 -3.6**
ELAN	**Lanestosa**	**9.35**	**316**	Pn	**Pn**	**21 00 52.9 +2.3**
	1.0nm,0.3s,SNR=7.9					
ELAN				Sn	**Sn**	**21 02 32.2 -3.6**
	0.3nm,0.2s,SNR=7.9					
ELAN	**Lanestosa**	**9.35**	**316**	Pn	**Pn**	**21 00 52.9 +2.3**
	1.0nm,0.3s,SNR=7.9					
ELAN				Sn	**Sn**	**21 02 32.2 -3.6**
	0.3nm,0.2s,SNR=7.9					
ELAN	**Lanestosa**	**9.35**	**316**	Pn	**Pn**	**21 00 52.9 +2.3**
	0.3nm,0.2s,SNR=7.9					
EARI	**Arriondas**	**10.43**	**311**	Pn	**Pn**	**21 01 07.6 +2.2**
	0.2nm,0.2s					
EARI	**Arriondas**	**10.43**	**311**	Pn	**Pn**	**21 01 07.6 +2.2**
	0.6nm,0.3s,SNR=7.9					
EARI	**Arriondas**	**10.43**	**311**	Pn	**Pn**	**21 01 07.6 +2.2**
	0.6nm,0.3s,SNR=7.9					
EARI	**Arriondas**	**10.43**	**311**	Pn	**Pn**	**21 01 07.6 +2.3**
	0.2nm,0.2s,SNR=7.9					

IDC 02 20:59:05.4±5.2, 4°.74S×132°.65E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.3/15, mbtmp3.4/3, ML3.4/1, MS4.2/1, Ms1 4.2/1, ms1mx2.7/16, Error ellipse: s-maj=330.6km s-min=31.4km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.20**	**174**	Pn	Pn	21 02 40.4	-1.1
	0.2nm,0.3s,baz=355,slow=13,SNR=3.0						
WRA				Sn	Sn	21 05 17.5	-13
	0.2nm,0.3s,baz=350,slow=24,SNR=3.6						
ASAR	**Alice Springs**	**18.86**	**176**	P	Pn	21 03 27.8	+0.2
	0.1nm,0.3s,baz=354,slow=12,SNR=5.6						
AFI	**Afiamalu**	**55.48**	**104**	LR	LR	21 30 05.3	
	comp=Z,219nm,18.5s,baz=65,slow=34						
MKAR	**Makanchi Array**	**67.84**	**325**	P	P	21 10 05.5	+0.1
	0.1nm,0.3s,baz=110,slow=7.8,SNR=6.0						

THR ***02*** *21:06:05.9±0.3, 31°.74N×47°.11E, h14km±5km, ML3.6*
ISCJB ***02*** *21:06:12.2±1.5, 32°.22N±0°.04×47°.43E±0°.06, h0km±11km, Error ellipse: s-maj=9.3km s-min=5.6km az=151.7*
TEH ***02*** *21:06:14.2, 32°.15N×47°.40E, h13km*
CSEM ***02*** *21:06:14.2±0.7, 32°.22N×47°.43E, h10km, ML3.5, Error ellipse: s-maj=17.7km s-min=5.7km az=36.0*
KISR ***02*** *21:06:18.8±1.1, 30°.91N×45°.73E, h34km±44km, ML3.3*

ISC 02 21:06:15.2±1.4, 32°.24N±0°.04×47°.44E±0°.06, h15km±10km, n30, σ0°.78/39, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.16**	**96**	*e*Pg	**Pg**	**21 06 33.3**	**-4.3**
SHGR				*e*Sg	**Sg**	**21 06 53.4**	**+0.6**
SHGR				AML	AML	21 06 55.7	
	comp=N,2μm,0.2s						
SHGR	**Shooshtar-Gavs**	**1.16**	**96**	*e*Pg	**Pg**	**21 06 33.3**	**-4.3**
SHGR				*e*Sg	**Sg**	**21 06 53.4**	**+0.6**
IKOM	**Komasi**	**1.93**	**2**	*e*Pn	**Pn**	**21 06 48.0**	**+0.5**
IKOM				*e*Sg	**Sg**	**21 07 17.3**	**0.0**
IKOM				*e*		21 07 25.4	
	comp=Z,4μm,0.2s						
IKOM	**Komasi**	**1.93**	**2**	*e*Pn	**Pn**	**21 06 48.0**	**+0.5**
IKOM				*e*Sg	**Sg**	**21 07 17.3**	**0.0**
IGHG	**Ghaleghazi**	**2.21**	**341**	*e*Pn	**Pn**	**21 06 51.8**	**+0.5**
IGHG	**Ghaleghazi**	**2.21**	**341**	*e*Pn	**Pn**	**21 06 51.8**	**+0.5**
MIB	**Mutribah**	**2.43**	**182**	*e*P	**Pn**	**21 06 54.7**	**+0.3**
MIB				*e*S	**Sn**	**21 07 22.8**	**-1.0**
MIB				AML	AML	21 07 31.0	
	comp=Z,106nm,0.7s						
IDHR	**Dehrash**	**2.60**	**341**	*e*Pn	**Pn**	**21 06 56.9**	**+0.1**
IDHR				*e*Sg	**Sg**	**21 07 37.9**	**-1.0**
IDHR				*e*		21 07 49.1	
	comp=Z,2μm,0.2s						
IDHR	**Dehrash**	**2.60**	**341**	*e*Pn	**Pn**	**21 06 56.9**	**+0.1**
IDHR				*e*Sg	**Sg**	**21 07 37.9**	**-1.0**
UMR	**Umm Al-Rimmam**	**2.69**	**175**	*e*P	**Pn**	**21 07 00.5**	**+2.5**
UMR				*e*S	**Sn**	**21 07 30.6**	**+0.3**
UMR				AML	AML	21 07 40.6	
	comp=Z,152nm,0.5s						
ILIN	**Lien**	**2.70**	**352**	*e*Pn	**Pn**	**21 06 58.5**	**+0.4**
ILIN				*e*		21 07 47.8	
	comp=N,2μm,0.2s						
ILIN	**Lien**	**2.70**	**352**	*e*Pn	**Pn**	**21 06 58.5**	**+0.4**
IPIR	**Pirpir**	**2.95**	**80**	*e*Pn	**Pn**	**21 07 01.8**	**+0.3**
IPIR				*e*		21 08 06.0	
	comp=Z,1μm,0.3s						
IPIR	**Pirpir**	**2.95**	**80**	*e*Pn	**Pn**	**21 07 01.8**	**+0.3**
ASAO	**Ashtian**	**3.16**	**43**	*e*Pn	**Pn**	**21 07 05.2**	**+0.9**
ASAO				AML	AML	21 08 00.4	
	comp=E,47nm,0.0s						
ASAO	**Ashtian**	**3.16**	**43**	*e*Pn	**Pn**	**21 07 05.2**	**+0.8**
QRN	**Al-Qurain**	**3.51**	**173**	*e*P	**Pn**	**21 07 08.5**	**-0.7**
QRN				*e*S	**Sn**	**21 07 45.8**	**-4.6**
QRN				AML	AML	21 07 52.9	
	comp=Z,62nm,0.6s						
IKLH	**Kolahrood**	**3.65**	**72**	*e*Pn	**Pn**	**21 07 11.1**	**0.0**
IKLH				*e*		21 08 22.2	
	comp=Z,690nm,0.4s						
IKLH	**Kolahrood**	**3.65**	**72**	*e*Pn	**Pn**	**21 07 11.1**	**0.0**
IRAZ	**Razeghan**	**3.77**	**33**	*e*Pn	**Pn**	**21 07 13.3**	**+0.5**
IRAZ				*e*		21 07 24.9	
	comp=Z,694nm,0.3s						
IRAZ	**Razeghan**	**3.77**	**33**	*e*Pn	**Pn**	**21 07 13.3**	**+0.5**
IGAR	**Gharneh**	**3.90**	**86**	*e*Pn	**Pn**	**21 07 13.8**	**-0.8**
IGAR				*e*		21 08 02.4	
	comp=Z,913nm,0.1s						
GHVR	**GHOM**	**3.92**	**54**	*e*Pn	**Pn**	**21 07 14.7**	**-0.2**
GHVR				AML	AML	21 08 16.6	
	comp=E,46nm,0.5s						
GHVR	**GHOM**	**3.92**	**54**	*e*Pn	**Pn**	**21 07 14.7**	**-0.2**
IZEF	**Zefreh**	**4.18**	**80**	*e*Pn	**Pn**	**21 07 18.4**	**0.0**
IZEF				*e*		21 08 31.7	
	comp=Z,316nm,0.3s						
IZEF	**Zefreh**	**4.18**	**80**	*e*Pn	**Pn**	**21 07 18.4**	**0.0**
NASN	**Na'in**	**4.57**	**82**	*e*Pn	**Pn**	**21 07 22.3**	**-1.5**
NASN	**Na'in**	**4.57**	**82**	*e*Pn	**Pn**	**21 07 22.3**	**-1.5**
IDMV	**Damavand**	**5.07**	**48**	*e*Pn	**Pn**	**21 07 29.9**	**-0.7**
IDMV				*e*		21 07 39.6	
	comp=Z,140nm,0.2s						
IDMV	**Damavand**	**5.07**	**48**	*e*Pn	**Pn**	**21 07 29.9**	**-0.7**

ISCJB ***02*** *21:08:42.0±0.6, 38°.02N±0°.07×21°.54E±0°.03, h27km±5km, Error ellipse: s-maj=11.3km s-min=4.4km az=174.1*
ATH ***02*** *21:08:41.7, 38°.04N×21°.52E, h24km±1km, MD2.6/4*
THE ***02*** *21:08:42.7, 38°.04N×21°.56E, h24km±1km, ML1.2/6, Error ellipse: s-maj=2.0km s-min=0.7km az=351.0*
CSEM ***02*** *21:08:42.0±0.3, 38°.01N×21°.56E, h20km, MD2.6, Error ellipse: s-maj=8.8km s-min=2.9km az=168.0*

ISC 02 21:08:42.0±0.6, 38°.01N±0°.07×21°.54E±0°.03, h27km±5km, n21, σ0°.75/40, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**309**	*e*PB	**Pb**	**21 08 46.2**	**-0.5**
RLS				*e*SB	**Sb**	**21 08 48.9**	**-0.9**
RLS	**Riolos of Patr**	**0.07**	**309**	*e*Pb	**Pb**	**21 08 46.2**	**-0.5**
RLS				*e*Sb	**Sb**	**21 08 48.9**	**-0.9**
LAKA	**Lakka**	**0.41**	**57**	P	**Pb**	**21 08 50.5**	**-0.4**
LAKA				S	**Sb**	**21 08 56.8**	**-0.1**
LAKA	**Lakka**	**0.41**	**57**	P	**Pb**	**21 08 50.5**	**-0.4**
LAKA				S	**Sb**	**21 08 56.8**	**-0.1**
EFP	**Efpalio**	**0.51**	**35**	*e*PB	**Pb**	**21 08 51.8**	**-0.5**
EFP				*e*SB	**Sb**	**21 08 59.2**	**-0.2**
EFP	**Efpalio**	**0.51**	**35**	P	**Pb**	**21 08 51.8**	**-0.5**
EFP	**Efpalio**	**0.51**	**35**	P	**Pb**	**21 08 51.8**	**-0.5**
EFP				*e*Sb	**Sb**	**21 08 59.2**	**-0.2**
TRIZ	**Trizonia**	**0.55**	**50**	P	**Pb**	**21 08 52.6**	**-0.5**
TRIZ				S	**Sb**	**21 09 00.6**	**0.0**
TRIZ	**Trizonia**	**0.55**	**50**	P	**Pb**	**21 08 52.6**	**-0.5**
TRIZ				S	**Sb**	**21 09 00.6**	**0.0**
KFL	**Anninata**	**0.60**	**279**	P	**Pb**	**21 08 54.4**	**+0.5**
KFL	**Anninata**	**0.60**	**279**	P	**Pb**	**21 08 54.4**	**+0.5**
KALE	**Kalithea**	**0.61**	**51**	P	**Pb**	**21 08 53.6**	**-0.4**
KALE				S	**Sb**	**21 09 02.9**	**+0.7**
KALE	**Kalithea**	**0.61**	**51**	P	**Pb**	**21 08 53.6**	**-0.4**
KALE				S	**Sb**	**21 09 02.9**	**+0.7**
GUR	**Goura**	**0.64**	**97**	*e*PN	**Pn**	**21 08 54.5**	**-0.8**
GUR				*e*SN	**Sn**	**21 09 04.4**	**-0.2**
GUR	**Goura**	**0.64**	**97**	P	**Pb**	**21 08 54.6**	**0.0**
GUR				S	**Sb**	**21 09 04.6**	**+1.4**
GUR	**Goura**	**0.64**	**97**	P	**Pb**	**21 08 54.6**	**0.0**
GUR				*e*Sn	**Sn**	**21 09 04.4**	**-0.2**
VLS	**Valsamata**	**0.77**	**283**	*e*PN	**Pn**	**21 08 56.6**	**-0.4**
VLS				*e*SN	**Sn**	**21 09 07.5**	**-0.2**
VLS	**Valsamata**	**0.77**	**283**	P	**Pb**	**21 08 56.7**	**0.0**
VLS				S	**Sb**	**21 09 09.3**	**+2.6**
VLS	**Valsamata**	**0.77**	**283**	P	**Pb**	**21 08 56.7**	**0.0**
VLS				*e*Sn	**Sn**	**21 09 07.5**	**-0.2**
VLS				S	**Sb**	**21 09 09.3**	**+2.6**
DSF	**Desfina**	**0.88**	**63**	P	**Pb**	**21 08 58.1**	**-0.4**
DSF				S	**Sb**	**21 09 11.1**	**+1.3**
DSF	**Desfina**	**0.88**	**63**	P	**Pb**	**21 08 58.1**	**-0.4**
DSF				S	**Sb**	**21 09 11.1**	**+1.3**

IDC ***02*** *21:10:11.0±2.5, 30°.48N×83°.07E, h0km, mb3.3/6, mb1 3.5/8, mb1mx3.4/26, mbtmp3.3/8, ML3.2/2, Error ellipse: s-maj=72.1km s-min=23.4km az=63.0*
NEIC ***02*** *21:10:12.0±0.5, 30°.46N×82°.97E, h10km, mb4.0/5, Error ellipse: s-maj=10.2km s-min=5.6km az=50.0*
ISCJB ***02*** *21:10:13.4±0.6, 30°.48N±0°.07×82°.99E±0°.09, h33km, mb3.6/9, Error ellipse: s-maj=13.7km s-min=7.5km az=138.6*

ISC 02 21:10:12.5±4.4, 30°.45N±0°.08×82°.97E±0°.09, h13km±29km, n25, σ0°.74/25, mb3.6/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**7.13**	**94**	*e*Pn	**Pn**	**21 11 57.3**	**+0.8**
	11nm,1.0s						
TKM2	**Tokmak 2**	**13.77**	**337**	*e*Pn	**Pn**	**21 13 28.1**	**+0.8**
AML	**Almayashu**	**13.84**	**330**	*e*Pn	**Pn**	**21 13 27.2**	**-1.0**
AAK	**Ala-Archa**	**13.92**	**333**	Pn	**Pn**	**21 13 29.7**	**+0.3**
	0.9nm,0.6s						
MK31	**Makanchi Array**	**16.32**	**358**	*e*Pn	**Pn**	**21 14 03.0**	**+1.7**
MKAR	**Makanchi Array**	**16.32**	**358**	Pn	**Pn**	**21 14 00.2**	**-1.1**
	0.0nm,0.3s,baz=165,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	**16.32**	**358**	Pn	**Pn**	**21 14 00.2**	**-1.1**
CHTO	**Chiang Mai**	**18.55**	**125**	P	**Pn**	**21 14 29.3**	**0.0**
CMAR	**Chiang Mai Arr**	**18.79**	**126**	P	**Pn**	**21 14 31.0**	**-1.1**
	0.1nm,0.3s,baz=297,slow=11,SNR=3.9						
KURK	**Kurchatov**	**20.50**	**352**	*e*P	**P**	**21 14 49.0**	**-1.0**
	0.4nm,0.3s,baz=172,slow=9.8,SNR=5.9						
KURK	**Kurchatov**	**20.50**	**352**	*e*P	**P**	**21 14 49.7**	**-0.4**
	2.2nm,0.8s						
ENH	**Enshi**	**22.87**	**84**	*e*P	**P**	**21 15 16.4**	**+0.7**
	2.3nm,0.3s,mb4.1						
PALK	**Pallekele**	**23.16**	**186**	P	**P**	**21 15 18.8**	**0.0**
ZALV	**Zalesovo Beam**	**23.52**	**3**	P	**P**	**21 15 22.0**	**-0.2**
	0.4nm,0.4s,mb3.2,baz=185,slow=9.7,SNR=3.1						
BVAR	**Borovoye Array**	**24.36**	**341**	P	**P**	**21 15 30.4**	**+0.4**
	0.3nm,0.5s,mb3.0,baz=161,slow=9.2,SNR=3.1						
SONM	**Songino Array**	**24.97**	**39**	P	**P**	**21 15 35.5**	**-0.1**
	0.7nm,0.8s,mb3.3,baz=220,slow=11,SNR=6.3						
ULN	**Ulaanbaatar**	**25.35**	**40**	*e*P	**P**	**21 15 38.0**	**-1.1**
	1.7nm,0.9s,mb3.6						
TLY	**Talaya**	**26.15**	**30**	*e*P	**P**	**21 15 46.0**	**-0.3**
BJT	**Baijiatuau**	**28.61**	**61**	P	**P**	**21 16 08.0**	**-0.5**
	6.2nm,1.4s,mb4.2						
OBN	**Obninsk**	**40.98**	**321**	*e*P	**P**	**21 17 55.3**	**+0.5**
	4.1nm,0.4s,mb4.4						
TIRR	**Tirgusor**	**44.72**	**304**	P	**P**	**21 18 25.5**	**+0.3**
YSS	**Yuzh-Sakhalins**	**48.31**	**52**	*e*P	**P**	**21 18 53.3**	**-0.1**
WLF	**Walferdange**	**59.25**	**313**	P	**P**	**21 20 12.8**	**-0.7**
WRA	**Warramunga Arr**	**70.36**	**129**	P	**P**	**21 21 26.7**	**+0.5**
	0.4nm,0.5s,mb3.6,baz=322,slow=6.4,SNR=2.7						
ILAR	**Eielson Array**	**77.47**	**20**	P	**P**	**21 22 08.2**	**+1.0**
	0.2nm,0.5s,mb3.4,baz=352,slow=5.5,SNR=3.2						

BJI ***02*** *21:11:29.2, 29°.56N×82°.65E, h10km, mB4.4/5, mb3.9/10, Ms4.0/5, Ms7 3.9/5*
NDI ***02*** *21:11:33.3±4.6, 31°.42N×83°.36E, h10km, mb4.2, mb4.0(NEIC)*
DMN ***02*** *21:11:36.8±0.8, 31°.28N×83°.08E, h2km, Ml4.7/3, Error ellipse: s-maj=19.9km s-min=11.7km az=121.0*
ISCJB ***02*** *21:11:39.1±0.3, 30°.54N±0°.03×83°.13E±0°.04, h10km, mb3.7/16, Error ellipse: s-maj=4.5km s-min=3.7km az=164.3*
IDC ***02*** *21:11:39.3±0.9, 30°.54N×83°.26E, h0km, mb3.7/11, mb1 3.8/13, mb1mx3.7/26, mbtmp3.7/13, ML3.6/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/33, Error ellipse: s-maj=28.2km s-min=16.7km az=51.0*
NEIC ***02*** *21:11:40.6±0.4, 30°.53N×83°.17E, h10km, mb4.0/7, Error ellipse: s-maj=10.4km s-min=6.3km az=222.0*

ISC 02 21:11:41.4±0.3, 30°.60N±0°.02×83°.13E±0°.04, h10km, n71, σ1°.37/76, mb3.7/16, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.31**	**166**	*e*Pn	**Pg**	**21 12 23.8**	**-1.8**
DANN	**Dangsing**	**2.31**	**166**	*e*Sn	**Sg**	**21 12 57.3**	**+1.7**
	2μm,0.8s						
KOLN	**Koldanda**	**2.85**	**172**	*e*Pn	**Pg**	**21 12 30.8**	**-5.2**
KOLN	**Koldanda**	**2.85**	**172**	*e*Sn	**Sg**	**21 13 11.0**	**-2.0**
	715nm,0.6s						
GKN	**Gorkha**	**2.91**	**153**	*e*Pn	**Pg**	**21 12 31.3**	**-5.7**
GKN	**Gorkha**	**2.91**	**153**	*e*Sn	**Sg**	**21 13 11.2**	**-3.5**
	1μm,0.7s						
KKN	**Kakani**	**3.37**	**146**	*e*Pn	**Pn**	**21 12 36.2**	**+2.1**
DMN	**Daman**	**3.45**	**149**	*e*Pn	**Pn**	**21 12 38.4**	**+3.3**
GUN	**Gumba**	**3.60**	**137**	*e*Pn	**Pn**	**21 12 39.5**	**+2.3**
PKIN	**Phulchoki**	**3.61**	**146**	*e*Pn	**Pn**	**21 12 40.4**	**+3.1**
PKI	**Pulchoki**	**3.62**	**146**	*e*Pn	**Pn**	**21 12 40.3**	**+2.8**
RAMN	**Ramite**	**4.75**	**139**	*e*Pn	**Pn**	**21 12 54.5**	**+1.5**
TAPN	**Taplejung**	**5.16**	**128**	*e*Pn	**Pn**	**21 13 00.5**	**+1.9**
ODAN	**Odare**	**5.28**	**134**	*e*Pn	**Pn**	**21 13 01.3**	**+1.0**
KKR	**Kurukshetra**	**5.49**	**265**	*ex*	**Pn**	**21 13 00.6**	**-2.6**
AYAN	**Aya Nagar**	**5.64**	**250**	*e*PKP	**Pn**	**21 13 05.0**	**-0.2**
AYAN				AMb	AMB	21 13 22.6	
	comp=Z,13nm,1.3s						
AGRA	**Agra**	**5.65**	**235**	*e*PKP	**Pn**	**21 13 06.5**	**+1.1**
AGRA				*ex*	**Sn**	**21 14 01.1**	**-9.3**
SONA	**Sohna**	**5.77**	**248**	*ex*	**Pn**	**21 13 11.9**	**+4.8**
SONA				*e*S	**Sn**	**21 14 12.8**	**-0.5**
KHET	**Khetri**	**6.87**	**250**	*e*PKP	**Pn**	**21 13 21.2**	**-0.9**
KHET				AMb	AMB	21 13 28.2	
KHET				*ex*	x	21 13 56.9	
LSA	**Lhasa**	**7.00**	**95**	P	**Pn**	**21 13 25.3**	**+1.3**
LSA	**Lhasa**	**7.00**	**95**	*e*Pn	**Pn**	**21 13 25.4**	**+1.4**
	comp=Z,83nm,1.1s						
BHPL	**Bhopal**	**8.92**	**216**	*e*PKP	**Pn**	**21 13 50.5**	**+0.1**
BHPL				*ex*	x	21 15 43.4	
SHL	**Shillong**	**9.21**	**121**	*e*PKP	**Pn**	**21 13 50.0**	**-4.3**
SHL				*ex*	**Sn**	**21 15 30.0**	**-8.1**
AKL	**Akola**	**11.29**	**211**	*e*PKP	**Pn**	**21 14 24.6**	**+1.8**
AKL				*i x*	**Sn**	**21 16 28.8**	**-0.3**
KBL	**Kabul**	**12.51**	**292**	*e*Pn	**Pn**	**21 14 40.9**	**+1.5**
	comp=Z,6.2nm,0.7s						
KBL				*e*Sn	**Sn**	**21 17 02.9**	**+4.0**
UCH	**Uchtor**	**13.51**	**332**	*e*Pn	**Pn**	**21 14 53.8**	**+0.8**
TKM2	**Tokmak 2**	**13.69**	**336**	*e*Pn	**Pn**	**21 14 56.0**	**+0.5**
HYB	**Hyderabad**	**13.77**	**199**	*i* P	**Pn**	**21 14 55.0**	**-1.7**
AAK	**Ala-Archa**	**13.86**	**332**	*e*Pn	**Pn**	**21 14 58.6**	**+0.8**
EKS2	**Erkin-Say**	**14.17**	**331**	*e*Pn	**Pn**	**21 15 03.3**	**+1.2**
	comp=Z,1.7nm,0.6s						
POO	**Poona**	**14.68**	**217**	*ex*	**Pn**	**21 15 11.0**	**+1.9**
KKAR	**Karatay Array**	**16.03**	**325**	*e*P	**Pn**	**21 15 23.4**	**-3.4**
	comp=Z,2.2nm,0.7s						
MK31	**Makanchi Array**	**16.18**	**358**	*e*Pn	**Pn**	**21 15 28.4**	**-0.3**
MKAR	**Makanchi Array**	**16.18**	**358**	Pn	**Pn**	**21 15 27.5**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=174,slow=13,SNR=5.8						
MKAR	**Makanchi Array**	**16.18**	**358**	Pn	**Pn**	**21 15 27.5**	**-1.3**
GTA	**Gaotai**	**16.23**	**53**	*e*P	**Pn**	**21 15 30.5**	**+1.0**
GTA				pP	pP	21 15 34.8	-0.6
GTA				sP	sP	21 15 38.1	+1.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,5.4s						
GTA				LR	LR		
	comp=N,70nm,13.2s						
GTA				LR	LR		
	comp=E,82nm,11.1s						
GTA				LR	LR		
	comp=Z,74nm,10.2s						
LZH	**Lanzhou**	**18.14**	**67**	*e*P	**Pn**	**21 15 51.0**	**-2.4**
LZH				pP	pP	21 16 01.0	+4.5
LZH				sP	sP	21 16 04.5	+6.7
LZH				pmax	pmax		
	comp=Z,20nm,1.6s						
CHTO	**Chiang Mai**	**18.53**	**126**	*e*P	**Pn**	**21 15 55.9**	**-2.3**
	comp=Z,7.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**18.77**	**126**	P	**Pn**	**21 15 57.9**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=304,slow=12,SNR=6.1						
CMAR	**Chiang Mai Arr**	**18.77**	**126**	P	**Pn**	**21 15 57.9**	**-3.3**
KURK	**Kurchatov**	**20.38**	**352**	P	**P**	**21 16 17.3**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=170,slow=9.9,SNR=7.7						
KURK	**Kurchatov**	**20.38**	**352**	*e*P	**P**	**21 16 16.3**	**-1.8**
	comp=Z,21nm,1.5s						
XAN	**Xi'an**	**22.05**	**74**	P	**P**	**21 16 36.5**	**+0.3**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.5						
ZALV	**Zalesovo Beam**	**23.36**	**3**	P	**P**	**21 16 49.8**	**-0.2**
	comp=Z,1.5nm,0.7s,mb3.5,baz=182,slow=14,SNR=5.5						
ZALV	**Zalesovo Beam**	**23.36**	**3**	P	**P**	**21 16 49.8**	**-0.2**
BVAR	**Borovoye Array**	**24.26**	**341**	P	**P**	**21 16 59.1**	**+0.7**
	comp=Z,1.0nm,0.6s,mb3.4,baz=141,slow=9.6,SNR=8.0						
BVAR	**Borovoye Array**	**24.26**	**341**	P	**P**	**21 16 59.1**	**+0.6**
SONM	**Songino Array**	**24.77**	**39**	P	**P**	**21 17 03.5**	**+0.3**
	comp=Z,1.2nm,0.7s,mb3.5,baz=226,slow=9.7,SNR=10						
SONM	**Songino Array**	**24.77**	**39**	P	**P**	**21 17 03.5**	**+0.3**
ULN	**Ulaanbaatar**	**25.15**	**40**	*e*P	**P**	**21 17 06.4**	**-0.2**
	comp=Z,2.0nm,0.9s,mb3.6						
ABKAR	**Akbulak array**	**25.58**	**323**	*e*P	**P**	**21 17 11.6**	**+1.1**
	comp=Z,1.9nm,0.6s,mb3.8						
AKTK	**Aktyubinsk**	**27.29**	**324**	P	**P**	**21 17 25.2**	**-0.7**
AKTK				LR	LR	21 28 30.7	
AKTO	**Aktyubinsk**	**27.29**	**324**	P	**P**	**21 17 25.2**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.2,baz=219,slow=4.9,SNR=3.1						
AKTO				LR	LR	21 28 30.7	
	comp=Z,50nm,18.6s,baz=283,slow=37						
MALT	**Malatya**	**37.36**	**294**	*e*P	**P**	**21 18 53.5**	**-0.7**
KSRS	**Korea Array**	**37.47**	**67**	P	**P**	**21 18 52.9**	**-2.2**
	comp=Z,0.9nm,0.5s,mb3.9,baz=274,slow=11,SNR=4.0						
FINES	**FINESS Array B**	**47.97**	**327**	P	**P**	**21 20 20.8**	**+0.9**
	comp=Z,1.2nm,0.6s,mb4.1,baz=121,slow=9.7,SNR=4.5						
FINES	**FINESS Array B**	**47.97**	**327**	P	**P**	**21 20 20.8**	**+0.9**
YSS	**Yuzh-Sakhalins**	**48.12**	**53**	P	**P**	**21 20 20.3**	**-0.9**
KMBO	**Kilima Mbogo**	**53.82**	**243**	*e*P	**P**	**21 21 02.5**	**-2.1**
	comp=Z,4.1nm,1.1s,mb4.3						
NOA	**NORSAR Array B**	**55.06**	**326**	P	**P**	**21 21 13.2**	**+0.2**
	comp=Z,0.6nm,0.8s,mb3.7,baz=110,slow=7.7,SNR=3.4						
NOA	**NORSAR Array

KALE				S		Sg	21 13 28.8	+0.6
KALE	**Kalithea**	**0.59**	**55**	P		Pg	21 13 19.8	-0.6
KALE				S		Sg	21 13 28.8	+0.6
GUR	**Goura**	**0.66**	**100**	*e*PN		Pg	21 13 21.0	-0.6
GUR				*e*SN		Sg	21 13 30.4	+0.2
GUR	**Goura**	**0.66**	**100**	P		Pg	21 13 20.8	-0.8
GUR				S		Sg	21 13 30.2	0.0
GUR	**Goura**	**0.66**	**100**	P		Pg	21 13 20.8	-0.8
GUR				*e*Sn		Sg	21 13 30.4	+0.2
VLS	**Valsamata**	**0.75**	**280**	P		Pg	21 13 23.1	-0.3
VLS	**Valsamata**	**0.75**	**280**	P		Pg	21 13 23.1	-0.3
DSF	**Desfina**	**0.87**	**65**	P		Pg	21 13 24.2	-1.4
DSF				S		Sg	21 13 37.2	+0.2
DSF	**Desfina**	**0.87**	**65**	P		Pg	21 13 24.2	-1.4
DSF				S		Sg	21 13 37.2	+0.2
VLX	**Vlachokerasia**	**0.96**	**135**	P		Pg	21 13 26.9	-0.5
VLX				S		Sg	21 13 40.6	+0.7
VLX	**Vlachokerasia**	**0.96**	**135**	P		Pg	21 13 26.9	-0.5
VLX				S		Sg	21 13 40.6	+0.7
PYL	**PYLOS**	**1.17**	**171**	*e*PN		Pn	21 13 31.6	+0.5
PYL	**PYLOS**	**1.17**	**171**	*e*Pn		Pn	21 13 31.6	+0.5

*ISCJB **02** 21:19:44.1±0.6, 30°.83N×0°.08×83°.31E±0°.10, h10km, Error ellipse: s-maj=14.4km s-min=8.4km az=141.0*
*IDC **02** 21:19:44.4±5.1, 30°.79N×83°.36E, h0km, mb3.3/3, mb1 3.4/5, mb1mx3.3/25, mbtmp3.3/5, ML3.4/2, Error ellipse: s-maj=114.7km s-min=30.8km az=60.0*
*NEIC **02** 21:19:45.8±0.4, 30°.82N×83°.35E, h10km, mb3.6/1, Error ellipse: s-maj=9.5km s-min=5.6km az=51.0*
ISC 02 21:19:45.8±0.6, **30°.82N**±0°.08×**83°.36E**±0°.10, **h10**km, **n18**, σ**0**:**52**/18, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**12.62**	**291**	*e*Pn	**Pn**	**21 22 45.2**	**-0.2**
UCH	**Uchtor**	**13.42**	**330**	Pn	**Pn**	**21 22 56.3**	**+0.1**
TKM2	**Tokmak 2**	**13.58**	**335**	*e*Pn	**Pn**	**21 22 58.5**	**+0.2**
EKS2	**Erkin-Say**	**14.09**	**330**	*e*Pn	**Pn**	**21 23 05.5**	**+0.1**
1.2nm,0.6s							
MK31	**Makanchi Array**	**15.97**	**357**	*e*Pn	**Pn**	**21 23 30.5**	**0.0**
MKAR	**Makanchi Array**	**15.97**	**357**	Pn	**Pn**	**21 23 29.8**	**-0.8**
0.1nm,0.3s,baz=170,slow=11,SNR=4.5							
CHTO	**Chiang Mai**	**18.49**	**127**	P	**Pn**	**21 24 03.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**18.73**	**127**	P	**Pn**	**21 24 04.5**	**-0.6**
0.1nm,0.3s,baz=310,slow=12,SNR=6.3							
KURK	**Kurchatov**	**20.19**	**351**	P	**P**	**21 24 19.6**	**-0.9**
0.7nm,0.4s,baz=177,slow=9.7,SNR=7.8							
KURK	**Kurchatov**	**20.19**	**351**	*e*P	**P**	**21 24 20.6**	**+0.2**
2.2nm,0.8s							
ENH	**Enshi**	**22.49**	**85**	P	**P**	**21 24 44.6**	**-0.8**
ZALV	**Zalesovo Beam**	**23.14**	**2**	P	**P**	**21 24 51.9**	**-0.1**
0.3nm,0.3s,baz=183,slow=10.0,SNR=3.9							
ZALV	**Zalesovo Beam**	**23.14**	**2**	P	**P**	**21 24 51.9**	**-0.1**
PALK	**Pallekele**	**23.56**	**187**	*e*P	**P**	**21 24 56.5**	**-0.2**
SONM	**Songino Array**	**24.48**	**40**	P	**P**	**21 25 06.0**	**+1.1**
0.3nm,0.8s,baz=230,slow=9.2,SNR=5.2							
MALT	**Malatya**	**37.46**	**294**	P	**P**	**21 26 59.6**	**+0.2**
STU	**Stuttgart**	**57.48**	**311**	*e*P	**P**	**21 29 35.0**	**+0.1**
6.3nm,0.3s							
SDPT	**Sand Point**	**78.36**	**32**	*e*P	**P**	**21 31 46.7**	**+0.5**

*ISCJB **02** 21:22:30.1±0.3, 27°.01N±0°.05×126°.27E±0°.04, h148km±4km, mb3.7/14, Error ellipse: s-maj=8.6km s-min=3.3km az=147.9*
*JMA **02** 21:22:31.1±0.2, 27°.08N×126°.22E, h144km±4km, M3.7*
*NEIC **02** 21:22:31.8±0.7, 26°.97N×126°.24E, h147km±8km, mb4.0/7, Error ellipse: s-maj=10.0km s-min=8.3km az=146.0*
*IDC **02** 21:22:37.0±3.5, 27°.09N×126°.24E, h199km±36km, mb3.2/10, mb1 3.3/12, mb1mx3.2/25, mbtmp3.1/12, Error ellipse: s-maj=24.7km s-min=12.7km az=72.0*
ISC 02 21:22:31.2±0.3, **27°.02N**±0°.04×**126°.26E**±0°.03, **h142**km±4km, **n54**, σ**1**:**04**/80, **mb3.7**/14, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.84**	**146**	P	**Pn**	**21 22 54.6**	**+0.8**
JKE				*e*S	**Sn**	**21 23 12.0**	**+1.0**
JAGN	**Aguni-jima**	**0.98**	**116**	P	**Pn**	**21 22 55.7**	**+0.8**
JAGN				S	**Sn**	**21 23 14.0**	**+1.0**
NAH1	**Naha**	**1.52**	**122**	P	**Pn**	**21 23 01.4**	**+1.1**
NAH1				S	**Sn**	**21 23 22.4**	**-0.1**
JIH	**Iheya**	**1.52**	**89**	P	**Pn**	**21 23 01.1**	**+0.8**
JIH				S	**Sn**	**21 23 22.5**	**0.0**
JJT2	**Tamagusuku 2**	**1.60**	**123**	P	**Pn**	**21 23 02.5**	**+1.4**
JJT2				*e*S	**Sn**	**21 23 25.2**	**+1.2**
JOW	**Kunigami**	**1.81**	**96**	*e*Pn	**Pn**	**21 23 03.9**	**+0.4**
JOW				*e*S	**Sn**	**21 23 26.7**	**-1.6**
JOW	**Kunigami**	**1.81**	**96**	P	**Pn**	**21 23 04.1**	**+0.6**
JOW				S	**Sn**	**21 23 26.9**	**-1.3**
JMJ	**Miyako jima 2**	**2.37**	**202**	P	**Pn**	**21 23 11.1**	**+0.8**
JMJ				*e*S	**Sn**	**21 23 40.5**	**+0.2**
JOGS	**Gusukube**	**2.38**	**199**	P	**Pn**	**21 23 11.5**	**+1.0**
JOGS				*e*S	**Sn**	**21 23 41.0**	**+0.3**
JTK	**Tokunoshima**	**2.51**	**72**	P	**Pn**	**21 23 11.8**	**-0.1**
JTK				S	**Sn**	**21 23 41.3**	**-2.0**
JTJ	**Tarama**	**2.76**	**211**	P	**Pn**	**21 23 15.6**	**+0.4**
JTJ				*e*S	**Sn**	**21 23 48.0**	**-1.1**
JIJ	**Ishigaki jima**	**3.27**	**216**	P	**Pn**	**21 23 21.2**	**-0.5**
JIJ				*e*S	**Sn**	**21 23 58.4**	**-2.3**
JAM	**Amami Oshima**	**3.27**	**64**	P	**Pn**	**21 23 21.1**	**-0.5**
JAM				S	**Sn**	**21 23 58.2**	**-2.5**
JKRS	**Kuro-shima**	**3.44**	**217**	P	**Pn**	**21 23 23.9**	**0.0**
JKRS				*e*S	**Sn**	**21 24 04.0**	**-0.7**
IRIF	**Iriomote-Funau**	**3.52**	**221**	P	**Pn**	**21 23 24.8**	**-0.1**
IRIF				*e*S	**Sn**	**21 24 06.5**	**-0.1**
JZK	**Kikaishima**	**3.53**	**68**	P	**Pn**	**21 23 25.0**	**0.0**
JZK				S	**Sn**	**21 24 06.1**	**-0.7**
HATJ	**Hateruma jima**	**3.70**	**217**	P	**Pn**	**21 23 27.1**	**-0.1**
HATJ				*e*S	**Sn**	**21 24 08.8**	**-1.9**
YOJ	**Yonaguni jima**	**3.89**	**230**	P	**Pn**	**21 23 31.0**	**+1.3**
YOJ				*e*S	**Sn**	**21 24 13.9**	**-1.3**
JMZ	**Minamidaito 2**	**4.60**	**104**	P	**Pn**	**21 23 37.8**	**-1.4**
JMZ				*e*S	**Sn**	**21 24 25.7**	**-6.4**
TATO	**Taipei**	**4.76**	**246**	*e*Pn	**Pn**	**21 23 43.6**	**+2.4**
TATO				*e*Sn	**Sn**	**21 24 44.3**	**+8.6**
YHNB	**Yeheng**	**4.99**	**243**	*e*Pn	**Pn**	**21 23 46.5**	**+2.2**
YHNB				*e*Sn	**Sn**	**21 24 38.7**	**-2.6**
NACB	**Ninganchiao**	**5.08**	**237**	*e*Pn	**Pn**	**21 23 45.4**	**-0.2**
NACB				*e*Sn	**Sn**	**21 24 43.9**	**+0.4**
YULB	**Yu-li**	**5.77**	**232**	*e*Pn	**Pn**	**21 23 52.9**	**-1.9**
YULB				Sn	**Sn**	**21 24 55.7**	**-4.2**
SSLB	**Suanglung**	**5.78**	**237**	*e*Pn	**Pn**	**21 23 54.3**	**-0.6**
SSLB				*e*Sn	**Sn**	**21 25 00.4**	**+0.1**
TWG	**Pinlang**	**6.30**	**230**	*e*Pn	**Pn**	**21 23 58.7**	**-3.2**
16nm,0.4s							
TWG				*e*Sn	**Sn**	**21 25 06.9**	**-5.8**
TPUB	**Ta-pu**	**6.31**	**235**	*e*Pn	**Pn**	**21 24 02.9**	**+0.9**
TPUB				*e*Sn	**Sn**	**21 25 13.2**	**+0.3**
KSRS	**Korea Array**	**10.49**	**7**	P	**Pn**	**21 25 01.9**	**+4.2**
0.3nm,0.3s,baz=181,slow=11,SNR=7.6							
MJAR	**Matsushiro Arr**	**13.89**	**44**	P	**Pn**	**21 25 45.4**	**+3.5**
0.2nm,0.3s,baz=228,slow=12,SNR=5.1							
MDJ	**Mudanjiang**	**17.76**	**8**	*e*P	**Pn**	**21 26 28.8**	**-0.6**
GUMO	**Guam**	**21.94**	**124**	*e*P	**P**	**21 27 13.2**	**-0.3**
32nm,0.7s,mb4.9							
SONM	**Songino Array**	**25.95**	**328**	P	**P**	**21 27 52.0**	**+1.8**
0.5nm,0.7s,mb3.2,baz=141,slow=10,SNR=4.3							
CHTO	**Chiang Mai**	**26.41**	**258**	*e*P	**P**	**21 27 55.0**	**+0.3**
KSM	**Kuching**	**29.66**	**214**	*e*P	**P**	**21 28 23.8**	**+0.2**
TLY	**Talaya**	**29.96**	**331**	*e*P	**P**	**21 28 26.0**	**+0.1**
LSA	**Lhasa**	**30.94**	**283**	*e*P	**P**	**21 28 35.8**	**+1.0**
0.9nm,0.4s,mb3.9							
MKAR	**Makanchi Array**	**39.70**	**312**	P	**P**	**21 29 49.0**	**-0.4**
0.6nm,0.5s,mb3.5,baz=97,slow=10,SNR=12							
MKAR	**Makanchi Array**	**39.70**	**312**	P	**P**	**21 29 49.0**	**-0.4**
ZALV	**Zalesovo Beam**	**40.55**	**323**	P	**P**	**21 29 55.8**	**-0.6**
0.4nm,0.3s,mb3.5,baz=101,slow=9.4,SNR=3.8							
KURK	**Kurchatov**	**43.03**	**316**	P	**P**	**21 30 15.2**	**-1.4**
0.4nm,0.3s,mb3.5,baz=108,slow=9.4,SNR=2.7							
KURK	**Kurchatov**	**43.03**	**316**	*e*P	**P**	**21 30 16.2**	**-0.3**
1.3nm,0.7s,mb3.7							
UCH	**Uchtor**	**44.54**	**304**	*e*P	**P**	**21 30 29.5**	**+0.9**
AAK	**Ala-Archa**	**44.57**	**304**	*e*P	**P**	**21 30 29.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**44.86**	**181**	P	**P**	**21 30 31.7**	**+0.3**
1.2nm,0.9s,mb3.5,baz=21,slow=14,SNR=2.6							
FITZ	**Fitzroy Crossi**	**44.86**	**181**	*e*P	**P**	**21 30 31.0**	**-0.4**
0.6nm,0.6s,mb3.4							
WRA	**Warramunga Arr**	**47.34**	**170**	P	**P**	**21 30 50.5**	**-0.3**
0.5nm,0.5s,mb3.4,baz=351,slow=7.8,SNR=5.4							
WB2	**Warramunga Arr**	**47.34**	**170**	*e*P	**P**	**21 30 50.6**	**-0.2**
PALK	**Pallekele**	**47.43**	**254**	*e*P	**P**	**21 30 51.5**	**-0.2**
7.1nm,0.9s,mb4.3							
BRVK	**Borovoye**	**48.58**	**318**	*e*P	**P**	**21 31 00.0**	**0.0**
KBL	**Kabul**	**49.17**	**293**	*e*P	**P**	**21 31 05.3**	**+0.5**
0.5nm,0.4s,mb3.5							
ASAR	**Alice Springs**	**50.93**	**171**	P	**P**	**21 31 19.7**	**+1.7**
0.7nm,0.5s,mb3.6,baz=360,slow=15,SNR=12							
STKA	**Stephens Creek**	**60.37**	**165**	P	**P**	**21 32 25.1**	**-0.1**
0.8nm,0.5s,mb3.8,baz=333,slow=9.0,SNR=3.1							
STKA	**Stephens Creek**	**60.37**	**165**	P	**P**	**21 32 25.1**	**-0.1**
ILAR	**Eielson Array**	**64.58**	**28**	P	**P**	**21 32 51.5**	**-1.3**
0.3nm,0.6s,mb3.3,baz=297,slow=10,SNR=4.1							
YKA	**Yellowknife Ar**	**78.54**	**24**	P	**P**	**21 34 15.8**	**-0.6**
1.0nm,0.7s,mb3.6,baz=302,slow=5.7,SNR=7.4							

*ISCJB **02** 21:24:34.2±0.6, 34°.10N±0°.04×69°.51E±0°.07, h10km, Error ellipse: s-maj=9.2km s-min=4.2km az=145.2*
*IDC **02** 21:24:35.3±4.4, 34°.07N×69°.54E, h0km, mb4.3/2, mb1 3.9/6, mb1mx3.5/26, mbtmp3.9/6, ML3.5/4, Error ellipse: s-maj=127.0km s-min=22.9km az=133.0*
*NEIC **02** 21:24:36.8±6.3, 34°.11N×69°.39E, h10km, mb3.1/2, Error ellipse: s-maj=74.8km s-min=17.1km az=191.0*
ISC 02 21:24:35.9±0.7, **34°.06N**±0°.04×**69°.43E**±0°.07, **h10**km, **n29**, σ**1**:**43**/41, **2C-1D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.58**	**326**	↑*i*Pg	**Pg**	**21 24 45.7**	**-1.5**
KBL				*e*Sg	**Sg**	**21 24 52.3**	**-2.5**
SDNR	**Sundarnagar**	**6.84**	**110**	*e*PKP	**Pn**	**21 26 17.5**	**+1.3**
SDNR				*e*S	**Sn**	**21 27 34.5**	**+0.4**
KSH	**Kashi**	**7.56**	**42**	Pn	**Pn**	**21 26 23.3**	**-2.8**
KSH				Sn	**Sn**	**21 27 40.7**	**-11**
KSH				smax			
comp=N,13nm,0.4s							
KSH				smax			
comp=E,15nm,0.5s							
KHET	**Khetri**	**8.09**	**136**	*e*S	**Sn**	**21 28 00.8**	**-4.1**
KHET				AML	AML	21 29 06.1	
comp=E,4.6nm,0.1s							
KHET				AML	AML	21 29 06.1	
comp=N,10nm,0.1s							
AYAN	**Aya Nagar**	**8.61**	**128**	*e*PKP	**Pn**	**21 26 42.7**	**+2.1**
AYAN				*e*S	**Sn**	**21 28 13.3**	**-4.5**
AML	**Almayashu**	**8.73**	**21**	*e*Pn	**Pn**	**21 26 44.4**	**+2.3**
comp=N,12nm,0.5s							
AML				*e*Sn	**Sn**	**21 28 22.0**	**+1.5**
SONA	**Sohna**	**8.74**	**129**	*e*PKP	**Pn**	**21 26 43.1**	**+0.8**
SONA				*e*S	**Sn**	**21 28 14.7**	**-6.2**
SONA				AML	AML	21 29 30.2	
comp=E,13nm,0.4s							
SONA				AML	AML	21 29 36.0	
comp=N,8.1nm,0.4s							
KK31	**Karatay Array**	**9.07**	**5**	⇓Pn	**Pn**	**21 26 48.1**	**+1.3**
comp=N,0.8nm,0.3s,baz=188,slow=13,SNR=16							
KK31				⇑Sn	**Sn**	**21 28 26.6**	**-2.3**
comp=N,4.7nm,0.8s,baz=194,slow=28,SNR=3.6							
KKAR	**Karatay Array**	**9.07**	**5**	*e*Pn	**Pn**	**21 26 48.0**	**+1.2**
comp=N,2.1nm,0.4s							
KKAR				*e*Sn	**Sn**	**21 28 28.7**	**-0.2**
EKS2	**Erkin-Say**	**9.24**	**20**	Pn	**Pn**	**21 26 48.1**	**-1.0**
EKS2				*e*Sn	**Sn**	**21 28 39.0**	**+5.9**
AAK	**Ala-Archa**	**9.44**	**23**	Pn	**Pn**	**21 26 54.0**	**+2.2**
comp=N,0.0nm,0.3s,baz=196,slow=15,SNR=4.5							
AAK				Sn	**Sn**	**21 28 37.9**	**0.0**
comp=N,0.0nm,0.3s,baz=125,slow=18,SNR=2.1							
AAK	**Ala-Archa**	**9.44**	**23**	*e*Pn	**Pn**	**21 26 53.4**	**+1.5**
AAK				*e*Sn	**Sn**	**21 28 42.7**	**+4.8**
TKM2	**Tokmak 2**	**10.08**	**27**	Pn	**Pn**	**21 26 60.0**	**-0.6**
comp=N,2.0nm,0.6s							
TKM2				*e*Sn	**Sn**	**21 29 03.1**	**+10**
DANN	**Dangsing**	**13.51**	**111**	*e*P	**Pn**	**21 27 46.7**	**-0.9**
KOLN	**Koldanda**	**13.68**	**113**	*e*P	**Pn**	**21 27 50.8**	**+0.9**
GKN	**Gorkha**	**14.36**	**111**	*e*P	**Pn**	**21 27 57.3**	**-1.9**
comp=N,4.5nm,0.3s							
DMN	**Daman**	**14.91**	**111**	*e*P	**Pn**	**21 28 05.1**	**-1.6**
KKN	**Kakani**	**14.96**	**110**	*e*P	**Pn**	**21 28 05.4**	**-2.0**
PKI	**Pulchoki**	**15.16**	**111**	*e*P	**Pn**	**21 28 08.8**	**-1.3**
comp=N,11nm,0.5s							
MK31	**Makanchi Array**	**16.02**	**34**	*e*Pn	**Pn**	**21 28 21.4**	**+0.2**
MKAR	**Makanchi Array**	**16.02**	**34**	Pn	**Pn**	**21 28 22.9**	**+1.7**
comp=N,0.2nm,0.3s,baz=216,slow=11,SNR=8.8							
MKAR	**Makanchi Array**	**16.02**	**34**	Pn	**Pn**	**21 28 22.9**	**+1.7**
RAMN	**Ramite**	**16.39**	**111**	*e*P	**Pn**	**21 28 25.2**	**-0.9**
comp=N,6.0nm,0.4s							
ABKAR	**Akbulak array**	**16.74**	**338**	*e*Pn	**Pn**	**21 28 31.8**	**+1.5**
comp=N,0.5nm,0.3s							
KURK	**Kurchatov**	**17.95**	**19**	P	**Pn**	**21 28 45.5**	**+0.1**
comp=N,0.0nm,0.3s,baz=206,slow=11,SNR=2.9							
KURK	**Kurchatov**	**17.95**	**19**	*e*Pn	**Pn**	**21 28 46.4**	**+1.0**
comp=N,0.8nm,0.6s							
BVAR	**Borovoye Array**	**18.97**	**2**	P	**Pn**	**21 28 58.0**	**+0.1**
comp=N,0.3nm,0.3s,baz=153,slow=9.7,SNR=4.3							
ZALV	**Zalesovo Beam**	**22.66**	**24**	P	**P**	**21 29 35.7**	**-1.3**
comp=N,1.1nm,0.4s,baz=224,slow=11,SNR=6.4							
TORD	**Torodi Ar. Bea**	**64.38**	**269**	P	**P**	**21 35 14.1**	**+1.7**
comp=N,3.6nm,0.3s,baz=40,slow=5.0,SNR=4.7							

*ISCJB **02** 21:37:36.8±2.9, 6°.07S±0°.06×75°.12W±0°.08, h15km±22km, mb4.0/11, Error ellipse: s-maj=15.0km s-min=7.9km az=153.7*
*IDC **02** 21:37:40.8±0.8, 6°.07S×75°.18W, h26km±4km, mb3.7/6, mb1 3.9/10, mb1mx3.8/19, mbtmp3.8/10, ML3.8/4, MS3.3/3, Ms1 3.3/3, ms1mx2.8/31, Error ellipse: s-maj=24.5km s-min=17.8km az=48.0*
*NEIC **02** 21:37:40.3±1.8, 6°.07S×75°.15W, h24km±13km, mb4.2/5, Error ellipse: s-maj=9.8km s-min=5.1km az=74.0*
ISC 02 21:37:40.8±2.8, **6°.11S**±0°.05×**75°.22W**±0°.07, **h27**km±22km, **n33**, σ**0**:**68**/27, **mb4.0**/11, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.31**	**252**	Pn	**Pn**	**21 38 30.9**	**+0.1**
5.0nm,0.3s,baz=86,slow=8.0,SNR=20							
ATAH				Lg		21 39 19.8	
22nm,0.3s,baz=273,slow=21,SNR=8.8							
ATAH				LR	LR	21 40 01.7	
comp=Z,370nm,19.6s,baz=331,slow=42							
NNA	**Nana**	**6.06**	**195**	Pn	**Pn**	**21 39 09.4**	**+0.8**
4.8nm,0.3s,baz=351,slow=5.5,SNR=8.2							
NNA				Sn	**Sn**	**21 40 15.2**	**-1.9**
11nm,0.3s,baz=248,slow=16,SNR=6.2							
NNA	**Nana**	**6.06**	**195**	*e*Pn	**Pn**	**21 39 08.8**	**+0.2**
NNA				*e*Sn	**Sn**	**21 40 14.9**	**-2.2**
OTAV	**Otavalo**	**7.08**	**333**	Pn	**Pn**	**21 39 28.8**	**+6.2**
ROSC	**El Rosal**	**10.93**	**5**	Lg		21 43 20.5	
1.3nm,0.3s,baz=270,slow=20,SNR=2.3							
ROSC				LR	LR	21 45 13.7	
comp=Z,90nm,21.0s,baz=206,slow=42							
ROSC	**El Rosal**	**10.93**	**5**	Pn	**Pn**	**21 40 15.3**	**-0.1**
LPAZ	**La Paz**	**12.27**	**146**	Pn	**Pn**	**21 40 33.8**	**0.0**
0.2nm,0.3s,baz=320,slow=10.0,SNR=5.8							
LPAZ				Lg		21 44 00.3	
0.2nm,0.3s,baz=179,slow=16,SNR=3.3							
LPAZ	**La Paz**	**12.27**	**146**	Pn	**Pn**	**21 40 33.8**	**0.0**
LPAZ				*e*Sn	**Sn**	**21 42 50.0**	**+0.1**
LPAZ				Lg		21 44 00.3	
SIV	**San Ignacio**	**17.00**	**126**	Pn	**Pn**	**21 41 35.9**	**-0.8**
0.3nm,0.3s,baz=295,slow=12,SNR=9.3							
SIV				Lg		21 46 34.8	
0.3nm,0.3s,baz=54,slow=23,SNR=3.9							
JTS	**JuntasAbangare**	**18.95**	**329**	P	**Pn**	**21 41 59.9**	**-0.9**
PCRV	**Puerto La Cruz**	**19.31**	**33**	LR	LR	21 50 39.8	
comp=Z,193nm,18.2s,baz=177,slow=40							
LCO	**Las Campanas**	**23.18**	**170**	P	**P**	**21 42 46.3**	**+0.9**
CFAA	**Coronel Fontan**	**26.20**	**166**	P	**P**	**21 43 14.2**	**+1.0**
0.3nm,0.5s,mb3.1,baz=315,slow=14,SNR=3.5							
TRQA	**Tornquist**	**34.00**	**161**	*e*P	**P**	**21 44 22.2**	**-0.1**
5.7nm,1.1s,mb4.4							
PLCA	**Paso Flores**	**34.73**	**174**	*e*P	**P**	**21 44 28.9**	**+0.4**
1.2nm,0.7s,mb3.9							
RPN	**Rapa Nui**	**38.58**	**233**	*e*P	**P**	**21 45 02.5**	**+0.9**
24nm,0.7s,mb5.0							
TXAR	**Lajitas Array**	**44.60**	**324**	P	**P**	**21 45 51.7**	**+0.8**
0.4nm,0.8s,mb3.3,baz=185,slow=6.2,SNR=3.4							
TXAR				pP	pP	21 45 59.9	+0.7
0.4nm,0.6s,baz=129,slow=7.1,SNR=3.7							
WMOK	**Wichita Mounta**	**46.31**	**333**	*e*P	**P**	**21 46 03.9**	**-0.4**
1.2nm,0.6s,mb4.0							
ANMO	**Albuquerque**	**50.34**	**326**	pP	pP	21 46 45.0	+1.1
2.0nm,0.8s,baz=160,slow=7.0,SNR=3.7							
ANMO	**Albuquerque**	**50.34**	**326**	*e*P	**P**	**21 46 35.7**	**+0.3**
2.6nm,0.9s,mb4.3							
PDAR	**Pinedale Array**	**57.78**	**331**	PcP	PcP	21 48 22.7	+0.7
0.4nm,0.7s,baz=87,slow=5.5,SNR=3.0							
NVAR	**Mina Array Bea**	**59.67**	**322**	PcP	PcP	21 48 29.6	-0.1
0.4nm,0.4s,baz=120,slow=5.4,SNR=3.1							
DBIC	**Dimbokro**	**71.36**	**81**	P	**P**	**21 48 58.7**	**-0.2**
7.3nm,1.0s,mb4.6,baz=259,slow=5.2,SNR=4.9							
DBIC	**Dimbokro**	**71.36**	**81**	P	**P**	**21 48 58.7**	**-0.2**
YKA	**Yellowknife Ar**	**74.74**	**342**	P	**P**	**21 49 17.6**	**-0.2**
0.3nm,0.5s,mb3.5,baz=142,slow=6.1,SNR=3.6							
YKA				pP	pP	21 49 25.5	-1.1
0.6nm,0.7s,baz=138,slow=6.5,SNR=4.1							
YKA	**Yellowknife Ar**	**74.74**	**342**	P	**P**	**21 49 17.6**	**-0.2**
YKA				pP	pP	21 49 25.5	-1.1
TORD	**Torodi Ar. Bea**	**78.73**	**75**	P	**P**	**21 49 41.2**	**-0.2**
1.4nm,0.8s,mb3.9,baz=269,slow=5.2,SNR=20							
TORD				pP	pP	21 49 50.0	-0.2
1.6nm,1.0s,baz=281,slow=6.0,SNR=4.4							
TORD	**Torodi Ar. Bea**	**78.73**	**75**	P	**P**	**21 49 41.2**	**-0.2**
TORD				pP	pP	21 49 50.0	-0.2
ILAR	**Eielson Array**	**87.79**	**336**	P	**P**	**21 50 26.6**	**-0.4**
0.7nm,0.9s,mb3.9,baz=140,slow=3.3,SNR=5.8							
ZALV	**Zalesovo Beam**	**129.62**	**15**	PKP	PKPdf	21 56 47.3	+0.1
0.3nm,0.3s,baz=318,slow=1.9,SNR=3.1							
ZALV				pPKP	pPKPdf	21 56 55.7	-0.7
0.7nm,0.5s,baz=344,slow=4.8,SNR=3.3							
ZALV	**Zalesovo Beam**	**129.62**	**15**	PKP	PKPdf	21 56 47.3	+0.1
ZALV				pPKP	pPKPdf	21 56 55.7	-0.7
MKAR	**Makanchi Array**	**135.08**	**22**	PKP	PKPdf	21 56 58.0	+0.3
0.3nm,0.2s,baz=357,slow=2.9,SNR=2.6							
MKAR				pPKP	pPKPdf	21 57 07.2	+0.4
0.2nm,0.2s,baz=308,slow=3.5,SNR=1.1							
WRA	**Warramunga Arr**	**141.07**	**228**	PKP	PKPdf	21 57 08.8	-0.8
0.5nm,0.5s,baz=148,slow=2.0,SNR=3.0							

KRSC 02 21:38:21.0±1.1, **49°.09N×156°.07E, h5**km±5km, **ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.81**	**350**	*e*P	Pn	21 38 53.8	+1.0
ALID				*i* S	Sn	21 39 17.6	+1.4
AVH	**Avacha**	**4.50**	**21**	P	Pn	21 39 33.7	+3.9
GNL	**Ganaly**	**4.76**	**14**	P	Pn	21 39 35.5	+2.2
MKZ	**Mys Kozlova**	**6.50**	**30**	*e*P	Pn	21 39 59.2	+2.0
MKZ				*e*S	Sn	21 41 13.0	+1.4
KBTR	**Krutoberegovo**	**8.22**	**27**	P	Pn	21 40 23.6	+2.8

WEL 02 21:43:50.9±0.1, **37°.81S×176°.80E, h5**km, **ML3.8/9, 1C, Error ellipse: s-maj=0.8km s-min=0.7km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.20**	**260**	PG	Pg	21 43 55.1	+0.3
OPRZ				SG	Sg	21 43 58.3	+0.8
MARZ	**Manawahe**	**0.20**	**210**	PG	Pg	21 43 55.2	+0.4
MARZ				SG	Sg	21 43 58.3	+0.7
EDRZ	**Edgecumbe**	**0.30**	**190**	PG	Pg	21 43 57.2	+0.5
LIRZ	**Lichenste

BIA				*e*Lg		21 45 25.3	
	comp=N,6.0nm,0.2s						
BIA				*e*Lg		21 45 25.4	
	comp=E,8.0nm,0.2s						
FNA	**Florina**	**1.07 254**		P	**Pg**	**21 45 11.2**	**0.0**
FNA				S	**Sg**	**21 45 26.6**	**+1.4**
FNA	**Florina**	**1.07 254**		P	**Pg**	**21 45 11.2**	**0.0**
FNA				S	**Sg**	**21 45 26.6**	**+1.4**
KRUS	**Krusevo**	**1.16 285**		*e*Pg	**Pn**	**21 45 11.6**	**-0.9**
OUR	**Ouranopolis**	**1.21 128**		P	**Pn**	**21 45 12.8**	**-0.4**
OUR				S	**Sb**	**21 45 30.1**	**+1.3**
OUR	**Ouranopolis**	**1.21 128**		P	**Pn**	**21 45 12.8**	**-0.4**
OUR				S	**Sb**	**21 45 30.1**	**+1.3**
KAVA	**Kavala**	**1.35 93**		P	**Pn**	**21 45 15.3**	**+0.2**
KAVA				S	**Sb**	**21 45 34.2**	**+1.3**
KAVA	**Kavala**	**1.35 93**		P	**Pn**	**21 45 15.3**	**+0.2**
KAVA				S	**Sb**	**21 45 34.2**	**+1.3**
PAIG	**Paliouri**	**1.36 148**		P	**Pn**	**21 45 14.9**	**-0.4**
PAIG				S	**Sb**	**21 45 34.5**	**+1.2**
PAIG	**Paliouri**	**1.36 148**		P	**Pn**	**21 45 14.9**	**-0.4**
PAIG				S	**Sb**	**21 45 34.5**	**+1.2**
NEO	**Neokhori**	**1.81 168**		*e*Pb	**Pn**	**21 45 20.9**	**-0.7**
NEO	**Neokhori**	**1.81 168**		*e*PB	**Pn**	**21 45 20.9**	**-0.7**
NEO	**Neokhori**	**1.81 168**		*e*Pb	**Pn**	**21 45 20.9**	**-0.7**

IDC 02 22:03:13.2±4.4, 29°.89S×178°.16W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.8/15, mbtmp3.8/3, Error ellipse: s-maj=199.3km s-min=67.0km az=161.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.47**	**256**	P	P	22 10 02.8	0.0
	0.5nm,0.4s,baz=103,slow=11,SNR=3.2						
ASAR	**Alice Springs**	**43.00**	**266**	P	P	22 11 13.9	-0.6
	0.7nm,0.7s,baz=100,slow=7.3,SNR=6.3						
WRA	**Warramunga Arr**	**43.95**	**272**	P	P	22 11 22.5	+0.4
	1.0nm,0.7s,baz=110,slow=8.1,SNR=9.3						
FINES	**FINESS Array B**	**144.62**	**340**	PKP	PKPdf	22 22 50.5	-0.5
	2.0nm,0.7s,baz=53,slow=5.4,SNR=12						

*NEIC **02** 22:07:17.8, 16°.14N×98°.42W, h8km, MD3.5(MEX), After MEX.*

MEX 02 22:07:17.4±0.9, 16°.11N×98°.41W, h10km±9km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.39**	**44**	*i* P	Pg	22 07 24.4	-0.7
PNIG				*i* S	Sg	22 07 30.6	+0.4
PNIG	**Pinotepa**	**0.39**	**44**	*i* P	Pg	22 07 24.4	-0.7
PNIG				*i* S	Sg	22 07 30.6	+0.4
ACX	**Acapulco**	**1.59**	**299**	*i* P	Pn	22 07 42.0	-3.6
ACX				*i* S	Sn	22 08 02.0	-4.2
ACX	**Acapulco**	**1.59**	**299**	*i* P	Pn	22 07 42.0	-3.6
ACX				*i* S	Sn	22 08 02.0	-4.2
UTMO	**Huajuapan**	**1.81**	**19**	*i* P	Pn	22 07 45.9	-2.7
UTMO				*i* S	Sn	22 08 06.8	-4.8
VHO	**Vista Hermosa**	**1.87**	**59**	*i* P	Pn	22 07 49.9	+0.4
VHO				*i* S	Sn	22 08 09.0	-4.1
VHO	**Vista Hermosa**	**1.87**	**59**	*i* P	Pn	22 07 49.9	+0.4
VHO				*i* S	Sn	22 08 09.0	-4.1
CAIG	**El Cayaco**	**2.02**	**298**	*e*P	Pn	22 07 49.3	-2.2
CAIG				*i* S	Sn	22 08 12.8	-4.0
CAIG	**El Cayaco**	**2.02**	**298**	*e*P	Pn	22 07 49.3	-2.2
CAIG				*i* S	Sn	22 08 12.8	-4.0
PPM	**Popocatepetl**	**2.95**	**356**	*i* P	Pn	22 08 03.1	-1.2
PPM				*i* S	Sn	22 08 39.1	-0.8
PPM	**Popocatepetl**	**2.95**	**356**	*i* P	Pn	22 08 03.1	-1.2
PPM				*i* S	Sn	22 08 39.1	-0.8

IDC 02 22:12:46.8±2.5, 7°.28S×128°.44E, h0km, mb3.7/1, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=287.7km s-min=31.2km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.83**	**156**	Pn	Pn	22 16 03.1	-1.1
	0.6nm,0.3s,baz=334,slow=13,SNR=16						
WRA				Sn	Sn	22 18 24.8	-14
	0.7nm,0.3s,baz=335,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.12**	**163**	P	Pn	22 16 48.6	+1.0
	0.2nm,0.3s,baz=338,slow=9.6,SNR=13						
ASAR				S	Sn	22 19 47.3	-11
	0.2nm,0.3s,baz=352,slow=26,SNR=5.8						
MKAR	**Makanchi Array**	**67.62**	**328**	P	P	22 23 45.5	+0.1
	0.3nm,0.4s,baz=115,slow=7.7,SNR=8.2						

*ISCJB **02** 22:31:27.7±1.3, 16°.1S±0°.1×177°.6W±0°.1, h445km±13km, mb3.4/8, Error ellipse: s-maj=23.1km s-min=17.0km az=27.2*

*NEIC **02** 22:31:28.4±1.1, 16°.06S×177°.56W, h442km±11km, mb3.7/3, Error ellipse: s-maj=17.4km s-min=12.8km az=116.0*

*IDC **02** 22:31:29.1±11.0, 16°.02S×177°.50W, h451km±142km, mb3.2/7, mb1 3.4/7, mb1mx3.2/17, mbtmp3.2/7, Error ellipse: s-maj=56.0km s-min=24.7km az=178.0*

ISC 02 22:31:28.5±1.3, 16°.1S±0°.1×177°.6W±0°.1, h441km±14km, n18, σ0°83/17, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.51**	**248**	*e*Pn	**P**	**22 32 46.9**	**-0.9**
FUNA	**Funafuti**	**8.12**	**337**	P	**P**	**22 33 26.4**	**+1.1**
URZ	**Urewera**	**22.61**	**191**	P	**P**	**22 35 53.7**	**-0.3**
	10nm,0.8s,mb4.3,baz=42,slow=15,SNR=3.1						
URZ	**Urewera**	**22.61**	**191**	*e*P	**P**	**22 35 53.6**	**-0.4**
	6.2nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**40.24**	**239**	P	**P**	**22 38 27.6**	**+2.1**
	1.3nm,0.7s,mb3.3,baz=72,slow=9.6,SNR=3.3						
STKA	**Stephens Creek**	**40.24**	**239**	*e*P	**P**	**22 38 26.4**	**+0.9**
	0.2nm,0.4s,mb2.8						
WB2	**Warramunga Arr**	**45.77**	**258**	*e*P	**P**	**22 39 09.1**	**-0.2**
WRA	**Warramunga Arr**	**45.78**	**258**	P	**P**	**22 39 09.0**	**-0.4**
	0.5nm,0.6s,mb3.0,baz=92,slow=6.7,SNR=3.2						
ASAR	**Alice Springs**	**46.09**	**252**	P	**P**	**22 39 12.3**	**+0.7**
	2.0nm,0.5s,mb3.7,baz=86,slow=8.6,SNR=28						
SSLB	**Suanglung**	**71.92**	**302**	*e*P	**P**	**22 42 05.6**	**-0.7**
KSM	**Kuching**	**73.26**	**277**	*e*P	**P**	**22 42 14.1**	**-0.2**
QSPA	**South Pole Qui**	**73.99**	**180**	P	**P**	**22 42 17.3**	**+0.1**
NVAR	**Mina Array Bea**	**77.54**	**44**	P	**P**	**22 42 37.7**	**0.0**
	1.1nm,0.4s,mb3.8,baz=240,slow=12,SNR=6.6						
NVAR	**Mina Array Bea**	**77.54**	**44**	P	**P**	**22 42 37.7**	**0.0**
ILAR	**Eielson Array**	**83.91**	**13**	P	**P**	**22 43 08.3**	**-2.0**
	0.2nm,0.4s,mb3.2,baz=221,slow=5.4,SNR=6.1						
TXAR	**Lajitas Array**	**84.33**	**57**	P	**P**	**22 43 13.9**	**+0.7**
	0.2nm,0.6s,mb3.0,baz=221,slow=7.4,SNR=4.4						
PLCA	**Paso Flores**	**92.02**	**133**	*e*P	**P**	**22 43 49.7**	**+0.4**
	0.3nm,0.4s,mb3.6						
BRTR	**Keskin Array B**	**144.02**	**317**	PKP	PKPdf	22 50 11.6	-1.5
	0.9nm,0.8s,baz=126,slow=2.1,SNR=5.4						

*KISR **02** 22:32:12.6±0.6, 32°.22N×46°.27E, h34km±591km, ML2.9*

*ISCJB **02** 22:32:19.0±1.3, 32°.22N±0°.04×47°.46E±0°.05, h13km±9km, Error ellipse: s-maj=7.7km s-min=5.6km az=138.5*

*CSEM **02** 22:32:18.9±0.7, 32°.23N×47°.48E, h2km, ML3.4, Error ellipse: s-maj=22.8km s-min=11.2km az=128.0*

*TEH **02** 22:32:22.3, 32°.22N×47°.44E, h28km*

ISC 02 22:32:19.5±1.4, 32°.20N±0°.04×47°.43E±0°.05, h8km±10km, n29, σ0°68/37, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.16**	**94**	*e*Pg	**Pg**	**22 32 40.3**	**-1.6**
SHGR				*e*Sg	**Sg**	**22 32 56.8**	**-0.2**
IKOM	**Komasi**	**1.97**	**2**	*e*Pn	**Pn**	**22 32 53.5**	**+0.3**
IKOM				*e*Sg	**Sg**	**22 33 23.7**	**+0.9**
IKOM				*e*		22 33 24.4	
	comp=Z,4μm,0.2s						
MIB	**Mutribah**	**2.39**	**182**	*e*P	**Pn**	**22 32 59.1**	**+0.1**
MIB				*e*S	**Sn**	**22 33 34.2**	**+5.7**
MIB				AML	AML	22 33 36.5	
	comp=Z,103nm,0.6s						
MIB	**Mutribah**	**2.39**	**182**	*e*P	**Pn**	**22 32 59.1**	**+0.1**
MIB				*e*S	**Sn**	**22 33 34.2**	**+5.7**
IDHR	**Dehrash**	**2.64**	**341**	*e*Pn	**Pn**	**22 33 02.4**	**0.0**
IDHR				*e*		22 33 46.3	
	comp=Z,2μm,0.2s						
UMR	**Umm Al-Rimmam**	**2.65**	**175**	*e*P	**Pn**	**22 33 04.6**	**+2.0**
UMR	**Umm Al-Rimmam**	**2.65**	**175**	*e*P	**Pn**	**22 33 04.6**	**+2.0**
ILIN	**Lien**	**2.74**	**352**	*e*Pn	**Pn**	**22 33 04.4**	**+0.6**
ILIN				*e*		22 33 55.9	
	comp=N,2μm,0.2s						
BHD	**Baghdad**	**2.79**	**293**	*ex*	**Pn**	**22 33 04.0**	**-0.4**
BHD				*ex*	**Sn**	**22 33 37.0**	**-1.2**
NAY	**Al-Naaiem**	**2.95**	**183**	*e*P	**Pn**	**22 33 06.4**	**-0.3**
NAY				*e*S	**Sn**	**22 33 46.9**	**+4.6**
NAY				AML	AML	22 33 51.8	
	comp=Z,17nm,0.5s						
NAY	**Al-Naaiem**	**2.95**	**183**	*e*P	**Pn**	**22 33 06.4**	**-0.3**
NAY				*e*S	**Sn**	**22 33 46.9**	**+4.7**
IPIR	**Pirpir**	**2.96**	**80**	*e*	**Sg**	**22 33 58.3**	**+3.6**
	comp=Z,1μm,0.3s						
IPIR				*e*Pn	**Pn**	**22 33 07.4**	**+0.5**
ASAO	**Ashtian**	**3.19**	**42**	*e*Pn	**Pn**	**22 33 10.6**	**+0.6**
IKLH	**Kolahrood**	**3.67**	**71**	*e*Pn	**Pn**	**22 33 16.8**	**+0.3**
IKLH				*e*		22 34 15.7	
	comp=Z,760nm,0.2s						
IRAZ	**Razeghan**	**3.81**	**32**	*e*Pn	**Pn**	**22 33 18.7**	**+0.2**
IRAZ				*e*		22 33 24.0	
	comp=Z,905nm,0.2s						
IGAR	**Gharneh**	**3.91**	**86**	*e*Pn	**Pn**	**22 33 19.8**	**0.0**
IGAR				*e*		22 34 12.6	
	comp=Z,826nm,0.2s						
GHVR	**GHOM**	**3.95**	**54**	*e*Pn	**Pn**	**22 33 19.6**	**-0.8**
IZEF	**Zefreh**	**4.19**	**79**	*e*Pn	**Pn**	**22 33 23.9**	**+0.1**
IZEF				*e*		22 34 34.8	
	comp=Z,250nm,0.3s						
IMHD	**Mahdasht**	**4.39**	**37**	*e*Pn	**Pn**	**22 33 26.4**	**-0.1**
IMHD				*e*		22 33 41.3	
	comp=Z,388nm,0.1s						
ISFB	**Sefidab**	**4.56**	**61**	*e*Pn	**Pn**	**22 33 28.8**	**0.0**
ISFB				*e*		22 34 57.2	
	comp=Z,184nm,0.3s						
NASN	**Na'in**	**4.58**	**81**	*e*Pn	**Pn**	**22 33 28.3**	**-0.8**
IDMV	**Damavand**	**5.09**	**47**	*e*Pn	**Pn**	**22 33 35.7**	**-0.5**
IDMV				*e*		22 34 03.9	
	comp=Z,177nm,0.3s						
ISAD	**Sadrabad**	**5.32**	**91**	*e*Pn	**Pn**	**22 33 39.3**	**+0.1**
ISAD				*e*		22 34 42.5	
	comp=Z,255nm,0.3s						
ILAS	**Lasjerd**	**5.59**	**54**	*e*Pn	**Pn**	**22 33 42.6**	**-0.3**
ILAS				*e*		22 33 47.0	
	comp=Z,167nm,0.2s						
IFIR	**Firoozkooh**	**5.60**	**51**	*e*Pn	**Pn**	**22 33 42.8**	**-0.3**
IFIR				*e*		22 34 02.5	
	comp=Z,128nm,0.2s						
ISRV	**Sarvestan**	**5.64**	**118**	*e*Pn	**Pn**	**22 33 43.8**	**+0.2**
ICHK	**Chekchek**	**5.91**	**88**	*e*Pn	**Pn**	**22 33 47.2**	**-0.2**
ICHK				*e*		22 34 02.2	
	comp=Z,176nm,0.2s						
ISHM	**Shahmirzad**	**6.05**	**52**	*e*Pn	**Pn**	**22 33 49.5**	**+0.2**
ISHM				*e*		22 34 04.1	
	comp=Z,222nm,0.2s						
IMEH	**Mehriz**	**6.17**	**96**	*e*Pn	**Pn**	**22 33 50.9**	**0.0**
IMEH				*e*		22 35 07.2	
	comp=Z,69nm,0.2s						

*NEIC **02** 23:06:25.6, 18°.18N×67°.63W, h2km, MD3.3(RSPR), After RSPR.*

RSPR 02 23:06:25.6, 18°.18N×67°.63W, h2km±2km, MD3.3/13, 11C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**0.27**	**255**	‖ *i*P	Pg	23 06 31.4	+0.5
MPR	**Mayaguez**	**0.47**	**86**	‖ *e*P	Pg	23 06 34.9	+0.3
LSP	**Las Mesas**	**0.52**	**91**	⇑ *i*P	Pg	23 06 35.5	0.0
CRPR	**Cabo Rojo, PR**	**0.53**	**109**	‖ *e*P	Pg	23 06 35.9	+0.2
CRPR				*e*S	Sg	23 06 43.9	+1.4
AGPR	**Aguadilla, PR**	**0.57**	**60**	⇑ *i*P	Pg	23 06 36.8	+0.3
AGPR				*e*S	Sg	23 06 45.1	+1.1
GBPR	**Guanica, Bosqu**	**0.74**	**106**	‖ *e*P	Pg	23 06 39.2	-0.7
GBPR				*e*S	Sg	23 06 50.4	+0.8
LRS	**Lares**	**0.75**	**82**	⇑ *e*P	Pg	23 06 39.5	-0.7
LRS				*e*S	Sg	23 06 51.1	+1.2
AOPR	**Arecibo Observ**	**0.85**	**79**	‖ *e*P	Pg	23 06 41.3	-0.6
OBIP	**Obispado Ponce**	**0.98**	**98**	‖ *e*P	Pg	23 06 43.2	-1.3
CELP	**Cerrillos**	**1.00**	**96**	⇑ *e*P	Pg	23 06 43.2	-1.7
CELP				*e*S	Sg	23 06 57.0	-1.0
ICM	**Isla Caja Muer**	**1.09**	**105**	⇑ *e*P	Pg	23 06 45.6	-1.0
SJG	**San Juan**	**1.41**	**93**	⇑ *e*P	Pn	23 06 50.3	-2.0
SJG				*e*S	Sg	23 07 10.1	-0.9
SJG	**San Juan**	**1.41**	**93**	⇑ *e*P	Pn	23 06 51.6	-0.7
SJG	**San Juan**	**1.41**	**93**	⇑ *e*P	Pn	23 06 51.6	-0.7
CBYP	**Canovanas**	**1.69**	**87**	⇑ *e*P	Pn	23 06 55.5	-0.6
HUMP	**Col San Antoni**	**1.69**	**91**	⇑ *e*P	Pn	23 06 55.2	-1.0
MTP	**Monte Pirata**	**1.98**	**92**	⇑ *e*P	Pn	23 06 59.8	-0.3
SDDR	**Presa de Saban**	**3.56**	**283**	*e*Pn	Pn	23 07 24.2	+2.3
SDDR				Sn	Sn	23 08 04.6	+0.1

*IDC **02** 23:10:46.0±0.4, 0°.96N×126°.10E, h0km, mb4.6/24, mb1 4.7/25, mb1mx4.6/28, mbtmp4.6/25, ML4.3/1, MS3.6/6, Ms1 3.6/6, ms1mx3.2/26, Error ellipse: s-maj=19.6km s-min=9.6km az=74.0*

*MOS **02** 23:10:49.4±0.9, 0°.95N×126°.10E, h33km, mb5.0/21, Error ellipse: s-maj=12.9km s-min=6.6km az=114.2*

*DJA **02** 23:10:52, 0°.98N×126°.14E, h8km, MLv5.1/8*

*BJI **02** 23:10:53.2, 1°.05N×125°.99E, h51km, mB4.9/12, mb4.8/28, Ms4.2/5, Ms7 3.9/4*

*ISCJB **02** 23:10:52.9±0.5, 0°.96N±0°.03×126°.12E±0°.04, h64km±5km, mb4.8/67, Error ellipse: s-maj=6.2km s-min=4.2km az=154.7*

*NEIC **02** 23:10:54.2±0.8, 0°.88N×126°.18E, h65km±8km, mb4.7/24, Error ellipse: s-maj=6.6km s-min=4.2km az=70.0*

ISC 02 23:10:54.8±0.5, 0°.93N±0°.03×126°.16E±0°.04, h67km±4km, n148, σ0°96/152, mb4.6/67, 6C-3D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**97**	P	**Pn**	**23 11 14.0**	**-1.9**
MNI	**Manado**	**1.42**	**291**	P	**Pn**	**23 11 15.4**	**-3.2**
LBMI	**Labuha**	**2.05**	**139**	P	**Pn**	**23 11 26.5**	**-0.6**
LBMI				S	**Sn**	**23 11 53.8**	**+2.1**
SGSI	**Sangihe**	**2.81**	**347**	P	**Pn**	**23 11 35.9**	**-1.6**
SGSI				S	**Sn**	**23 12 11.2**	**+0.9**
LUWI	**Luwuk**	**3.92**	**240**	P	**Pn**	**23 11 52.4**	**-0.1**
LUWI				S	**Sn**	**23 12 39.0**	**+1.8**
NLAI	**Namlea**	**4.24**	**167**	P	**Pn**	**23 11 56.1**	**-0.9**
GSPH	**General Santos**	**5.27**	**347**	⇑ *i*P	**Pn**	**23 12 08.9**	**-2.1**
KDI	**Kendari**	**6.01**	**216**	P	**Pn**	**23 12 20.5**	**-0.6**
	0.6nm2μm159nm,0.8s						
KDI				S	**Sn**	**23 13 34.9**	**+6.3**
	0.6nm2μm159nm,0.8s						
KDI	**Kendari**	**6.01**	**216**	P	**Pn**	**23 12 20.6**	**-0.5**
	2μm159nm,0.8s						
DAV	**Davao City (W)**	**6.13**	**355**	Pn	**Pn**	**23 12 24.7**	**+1.8**
	48nm,0.3s,baz=68,slow=4.6,SNR=6.5						
BBSI	**Bau Bau**	**7.31**	**209**	P	**Pn**	**23 12 39.7**	**+0.7**
	1.0nm3μm355nm,1.0s						
BKSI	**Bulukumba**	**8.66**	**224**	P	**Pn**	**23 12 57.7**	**+0.3**
	986nm71nm,0.7s						
TLE	**Tual**	**9.25**	**135**	P	**Pn**	**23 13 06.4**	**+0.8**
	157nm,1.3s						
TLE	**Tual**	**9.25**	**135**	P	**Pn**	**23 13 14.2**	**+8.6**
BAKI	**Biak**	**10.16**	**102**	P	**Pn**	**23 13 20.8**	**+2.8**
KAKA	**Kakadu**	**14.91**	**156**	*e*Pn	**Pn**	**23 14 18.3**	**-3.6**
	90nm,0.6s						
KAKA				*e*Sn	**Sn**	**23 17 08.4**	**+2.2**
KSM	**Kuching**	**15.86**	**272**	*e*Pn	**Pn**	**23 14 34.7**	**+0.6**
	35nm,0.9s						
KNA	**Kununurra**	**16.77**	**171**	*e*P	**Pn**	**23 14 45.2**	**-0.2**
	95nm,1.2s						
FITZ	**Fitzroy Crossi**	**18.92**	**182**	P	**Pn**	**23 15 09.3**	**-2.2**
	0.8nm,0.3s,baz=26,slow=8.8,SNR=28						
FITZ	**Fitzroy Crossi**	**18.92**	**182**	*e*P	**Pn**	**23 15 09.0**	**-2.5**
	38nm,1.1s						
WRA	**Warramunga Arr**	**22.23**	**159**	P	**P**	**23 15 45.3**	**-0.8**
	49nm,0.7s,mb4.9,baz=337,slow=11,SNR=95						
WRA				S	**S**	**23 19 44.6**	**-2.4**
	12nm,1.1s,baz=338,slow=19,SNR=6.6						
WB2	**Warramunga Arr**	**22.24**	**159**	*e*Pn	**P**	**23 15 45.0**	**-1.1**
WB2				*e*S	**S**	**23 19 46.8**	**-0.3**
GUMO	**Guam**	**22.39**	**55**	P	**P**	**23 15 47.4**	**-0.3**
	18nm,0.3s,mb4.9,baz=182,slow=15,SNR=4.4						
GUMO				LR	LR	23 23 13.2	
	comp=Z,182nm,21.7s,baz=197,slow=33						
COEN	**Coen**	**22.42**	**132**	*e*P	**P**	**23 15 48.0**	**-0.1**
COEN	**Coen**	**22.42**	**132**	*e*P	**P**	**23 15 48.0**	**0.0**
	227nm,1.0s,mb5.5						
COEN				*e*S	**S**	**23 19 49.1**	**-1.1**
MBWA	**Marble Bar**	**22.83**	**196**	*e*P	**P**	**23 15 50.8**	**-1.5**
MBWA	**Marble Bar**	**22.83**	**196**	*e*P	**P**	**23 15 51.3**	**-1.1**
	22nm,0.9s,mb4.5						
PMG	**Port Moresby**	**23.29**	**117**	*c i*P	**P**	**23 15 57.1**	**+0.1**
PMG				pmax	pmax		
	comp=Z,39nm,1.2s						
QIZ	**Qiongzhong**	**24.08**	**319**	P	**P**	**23 16 00.5**	**-3.6**
QIZ				S	**S**	**23 20 14.3**	**-2.7**
QIZ				sS	sS	23 20 30.3	-14
QIZ				pmax	pmax		
	comp=Z,39nm,3.9s						
QIZ				LR	LR		
	comp=N,210nm,17.5s						
QIZ				LR	LR		
	comp=E,85nm,21.9s						
QIZ				LR	LR		
	comp=Z,170nm,8.6s						
IPM	**Ipoh**	**25.35**	**278**	*e*P	**P**	**23 16 15.8**	**-0.1**
	comp=Z,22nm,1.1s,mb4.5						
ASAR	**Alice Springs**	**25.58**	**163**	P	**P**	**23 16 17.8**	**+0.1**
	comp=Z,11nm,0.6s,mb4.5,baz=349,slow=7.6,SNR=66						
ASAR				PcP	PcP	23 19 48.1	+0.6
	comp=Z,0.7nm,0.4s,baz=0.6,slow=2.1,SNR=4.3						
ASAR				S	**S**	**23 20 48.5**	**+7.7**
	comp=Z,2.0nm,0.9s,baz=350,slow=20,SNR=5.8						
JOW	**Kunigami**	**25.84**	**4**	*e*P	**P**	**23 16 20.6**	**+0.6**
	comp=Z,16nm,0.7s,mb4.6						
MEEK	**Meekatharra**	**28.36**	**194**	*e*P	**P**	**23 16 42.1**	**-0.5**
FORT	**Forrest**	**31.58**	**177**	*e*P	**P**	**23 17 10.6**	**-0.5**
	comp=Z,25nm,0.7s,mb5.0						
CMAR	**Chiang Mai Arr**	**31.89**	**305**	P	**P**	**23 17 13.4**	**-0.6**
	comp=Z,1.4nm,0.8s,mb3.7,baz=133,slow=8.7,SNR=9.8						
CMAR				ScP	ScP	23 23 46.2	+5.1
	comp=Z,0.4nm,0.4s,baz=116,slow=1.9,SNR=6.9						
CMAR				LR	LR	23 30 31.1	
	comp=Z,56nm,19.4s,baz=120,slow=37						
CHTO	**Chiang Mai**	**32.07**	**305**	*e*P	**P**	**23 17 15.0**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
CHTO	**Chiang Mai**	**32.07**	**305**	*e*P	**P**	**23 17 14.9**	**-0.6**
	comp=Z,6.6nm,1.0s,mb4.3						
ENH	**Enshi**	**33.21**	**333**	*e*P	**P**	**23 17 24.9**	**-0.4**
NWAO	**Narrogin (SRO)**	**34.71**	**193**	P	**P**	**23 17 37.5**	**-0.8**
	comp=Z,7.3nm,0.7s,mb4.6,baz=45,slow=12,SNR=3.5						
BBOO	**Buckleboo**	**34.83**	**165**	*e*P	**P**	**23 17 39.3**	**-0.1**
	comp=Z,8.1nm,0.6s,mb4.7						
HNR	**Honiara**	**35.18**	**108**	P	**P**	**23 17 41.4**	**-1.2**
	comp=Z,56nm,0.5s,mb5.7,baz=0.0,slow=1.0,SNR=3.6						
STKA	**Stephens Creek**	**35.75**	**157**	P	**P**	**23 17 47.6**	**+0.3**
	comp=Z,16nm,0.8s,mb5.0,baz=334,slow=8.6,SNR=22						
STKA	**Stephens Creek**	**35.75**	**157**	*e*P	**P**	**23 17 47.6**	**+0.3**
	comp=Z,11nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**35.75**	**157**	*e*P	**P**	**23 17 47.1**	**-0.2**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**35.75**	**157**	*e*P	**P**	**23 17 47.1**	**-0.2**
	comp=Z,3.0nm,0.8s,mb4.3						
KSRS	**Korea Array**	**36.38**	**2**	P	**P**	**23 17 52.8**	**+0.1**
	comp=Z,5.2nm,0.6s,mb4.6,baz=180,slow=9.7,SNR=25						
XAN	**Xi'an**	**36.69**	**336**	P	**P**	**23 17 54.6**	**-0.6**
XAN				pP	pP	23 18 03.5	-8.3
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
MJAR	**Matsushiro Arr**	**37.15**	**16**	P	**P**	**23 17 58.4**	**-0.8**
	comp=Z,11nm,0.7s,mb4.9,baz=186,slow=9.3,SNR=26						
MAJO	**Matsushiro**	**37.15**	**16**	*e*P	**P**	**23 17 58.5**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
MAJO	**Matsushiro**	**37.15**	**16**	*e*P	**P**	**23 17 58.5**	**-0.7**
	comp=Z,9.1nm,0.6s,mb4.9						
MAT	**Matsushiro**	**37.15**	**16**	P	**P**	**23 17 58.3**	**-0.9**
CMSA	**Cobar Meteorol**	**37.22**	**152**	*e*P	**P**	**23 18 00.6**	**+0.8**
ARMA	**Armidale**	**39.49**	**144**	*e*P	**P**	**23 18 20.4**	**+1.5**
BJT	**Baijiatuau**	**39.96**	**348**	*e*P	**P**	**23 18 22.1**	**-0.5**
LZH	**Lanzhou**	**40.65**	**332**	*e*P	**P**	**23 18 30.0**	**+1.5**
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MDJ	**Mudanjiang**	**43.61**	**4**	P	**P**	**23 18 53.4**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.2						
MDJ				pmax	pmax		
	comp=Z,38nm,4.9s						
MDJ	**Mudanjiang**	**43.61**	**4**	*e*P	**P**	**23 18 52.3**	**-0.1**
	comp=Z,41nm,0.9s,mb5.2						
LSA	**Lhasa**	**43.91**	**314**	P	**P**	**23 18 56.7**	**+1.6**
**LS

EKS2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
EKS2 Erkin-Say 62.55 319 *eP* **P 23 21 12.1 +0.4**
comp=Z,6.4nm,0.8s,mb4.6
KBL Kabul 62.80 309 *eP* **P 23 21 13.9 +0.4**
KBL pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KBL Kabul 62.80 309 *eP* **P 23 21 13.9 +0.3**
comp=Z,5.0nm,0.6s,mb4.6
ZALV Zalesovo Beam 62.83 334 P **P 23 21 12.2 -1.1**
comp=Z,1.9nm,0.4s,mb4.4,baz=121,slow=6.2,SNR=6.2
ZALV LR LR 23 51 33.8
comp=Z,42nm,21.3s,baz=250,slow=39
KURK Kurchatov 63.80 328 P **P 23 21 19.0 -0.8**
comp=Z,7.9nm,0.7s,mb4.6,baz=127,slow=6.0,SNR=16
KURK Kurchatov 63.80 328*c iP* **P 23 21 19.3 -0.5**
KURK pmax pmax
comp=Z,14nm,0.7s,mb4.9
NVS Novosibirsk 64.11 334 *eP* **P 23 21 17.9 -3.9**
SEY Seymchan 64.87 13⇑ *eP* **P 23 21 28.1 +1.5**
KKAR Karatay Array 64.90 318 *eP* **P 23 21 26.8 -0.4**
KKAR pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
KKAR Karatay Array 64.90 318 *eP* **P 23 21 26.8 -0.4**
comp=Z,2.0nm,0.6s,mb4.1
BVAR Borovoye Array 69.36 328 P **P 23 21 54.9 -0.3**
comp=Z,2.4nm,0.5s,mb4.3,baz=130,slow=6.0,SNR=14
BRVK Borovoye 69.43 328*ceP* **P 23 21 55.4 -0.3**
BRVK pmax pmax
comp=Z,12nm,1.0s,mb4.7
BRVK Borovoye 69.43 328 *eP* **P 23 21 55.6 0.0**
comp=Z,17nm,1.1s,mb4.8
ABKAR Abkulak array 73.96 321 *eP* **P 23 22 22.2 -0.8**
comp=Z,1.4nm,0.4s,mb4.0
AKTK Aktyubinsk 75.50 322 P **P 23 22 31.7 -0.2**
AKTO Aktyubinsk 75.50 322 P **P 23 22 31.7 -0.1**
comp=Z,1.6nm,0.3s,mb4.2,baz=107,slow=9.0,SNR=5.8
SVE Sverdlovsk 76.05 329⇓ *eP* **P 23 22 35.0 +0.2**
SVE pmax pmax
comp=Z,18nm,0.9s,mb4.8
ARU Arti 77.00 328*d iP* **P 23 22 39.3 -0.9**
ARU 23 25 28.4
ARU S S 23 32 23.5 +0.3
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.7
ARU Arti 77.00 328 *eP* **P 23 22 39.4 -0.7**
comp=Z,13nm,0.8s,mb4.7
SOKR Solikamsk 78.86 331 *eP* **P 23 22 47.5 -3.0**
SOKR pmax pmax
comp=Z,20nm,1.4s,mb4.8
MAW Mawson 80.95 200 P **P 23 23 01.8 +0.2**
comp=Z,2.5nm,0.8s,mb4.1,baz=14,slow=6.1,SNR=4.5
MAW LR LR 23 57 20.1
comp=Z,86nm,21.4s,baz=251,slow=34
MAW Mawson 80.95 200 P **P 23 23 01.8 +0.2**
MAW LR LR 23 57 20.1
DGRG David-gareji 82.48 312 P **P 23 23 10.6 +0.4**
MTA Mtatsminda 82.93 312 P **P 23 23 13.1 +0.6**
TBLG Delisi 82.98 312 P **P 23 23 13.5 +0.7**
TBLG Delisi 82.98 312 P **P 23 23 13.5 +0.8**
TTA Tatalina 83.64 27 *eP* **P 23 23 16.2 +0.5**
TTA pmax pmax
comp=Z,34nm,1.3s,mb5.0
TTA Tatalina 83.64 27 *eP* **P 23 23 16.2 +0.5**
comp=Z,34nm,1.3s,mb5.0
ZEI Tsey 83.69 313 *eP* **P 23 23 16.4 0.0**
ZEI pmax pmax
comp=Z,17nm,1.0s,mb4.8
KDAK Kodiak Island 84.55 32 P **P 23 23 19.6 -0.9**
comp=Z,24nm,1.1s,mb5.0,baz=211,slow=8.1,SNR=2.3
VRHR Novokhopersk 85.84 321 *eP* **P 23 23 26.7 -0.4**
VRHR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
SLKM Skilak Lake 86.04 30 P **P 23 23 27.9 +0.1**
COLD Coldfoot 86.68 23 *eP* **P 23 23 31.7 +0.9**
comp=E,8.7nm,1.0s,mb4.6
VORD Divnogorie 87.31 321 *eP* **P 23 23 34.3 +0.1**
VORD pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
VORD pmax pmax
comp=N,6.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 87.39 321 *eP* **P 23 23 35.3 +0.7**
VSR pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
VSR pmax pmax
comp=N,1.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,0.5s
KLMR Klimovskoe 87.56 331 *eP* **P 23 23 37.7 +2.5**
KLMR pmax pmax
comp=Z,22nm,1.6s,mb4.9
MALT Malatya 87.65 308 *eP* **P 23 23 36.6 +0.4**
MALT pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
MALT Malatya 87.65 308 *eP* **P 23 23 36.5 +0.4**
comp=Z,3.5nm,0.9s,mb4.4
ILAR Eielson Array 87.86 25 P **P 23 23 35.6 -1.0**
comp=Z,0.9nm,0.6s,mb4.0,baz=253,slow=4.4,SNR=10
ASF Jabal al Asfar 88.89 302 P **P 23 23 43.0 +0.8**
comp=Z,1.7nm,0.7s,mb4.2,baz=352,slow=1.7,SNR=3.7
OBN Obninsk 89.01 325⇓ *eP* **P 23 23 42.3 +0.1**
OBN pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
QSPA South Pole Qui 90.85 180 P **P 23 23 51.3 +1.0**
comp=Z,1.6nm,0.8s,mb4.2,baz=61,slow=2.4,SNR=7.1
QSPA South Pole Qui 90.85 180 P **P 23 23 51.3 +1.0**
BRTR Keskin Array B 91.36 310 P **P 23 23 53.4 -0.1**
comp=Z,0.6nm,0.8s,mb3.8,baz=114,slow=8.5,SNR=4.1
ARCES ARCESS Array B 92.86 340 LR LR 00 08 09.5
comp=Z,22nm,20.9s,baz=239,slow=37
INK Inuvik 92.96 21 P **P 23 24 00.4 +0.1**
comp=Z,4.9nm,1.1s,mb4.7,baz=277,slow=5.3,SNR=6.3
FINES FINESS Array B 94.02 332 P **P 23 24 06.5 +1.3**
comp=Z,0.9nm,0.5s,mb4.3,baz=70,slow=6.3,SNR=6.1
BUR08 Bucovina Ar. S 96.70 318 *eP* **P 23 24 19.0 +1.1**
TORD Torodi Ar. Bea 123.20 286 PKP PKPdf 23 29 45.6 +0.7
comp=Z,1.6nm,1.1s,baz=80,slow=1.6,SNR=15
TORD PKKPbc PKKPbc 23 39 36.8 +1.5
comp=Z,0.9nm,0.7s,baz=308,slow=2.2,SNR=5.6
SCHQ Schefferville 123.41 9 PKP PKPdf 23 29 44.5 +0.3
comp=Z,1.2nm,0.7s,baz=23,slow=7.7,SNR=3.6
TXAR Lajitas Array 123.73 53 PKP PKPdf 23 29 46.9 +1.3
comp=Z,0.6nm,0.8s,baz=318,slow=1.2,SNR=4.9
TXAR Lajitas Array 123.73 53 PKP PKPdf 23 29 46.9 +1.3
LPAZ La Paz 159.23 138 PKPab PKPab 23 31 25.6 +2.0
comp=Z,1.3nm,0.7s,baz=180,slow=5.1,SNR=3.9

*ISCJB **02** 23:12:14.8±0.6, 9.°48S±0.°07×108.°60E±0.°05, h33km, mb4.2/15, Error ellipse: s-maj=10.4km s-min=6.9km az=178.0*
*IDC **02** 23:12:18.0±1.2, 9.°22S×108.°97E, h36km±6km, mb4.1/11, mb1 4.2/11, mb1mx4.0/18, mbtmp4.1/11, Error ellipse: s-maj=34.2km s-min=18.6km az=47.0*
*DJA **02** 23:12:17, 9.°32S×108.°70E, h20km, MLv4.2/10*
*NEIC **02** 23:12:18.0±0.4, 9.°11S×109.°02E, h35km, mb4.4/5, Error ellipse: s-maj=14.3km s-min=8.6km az=70.0*
ISC 02 23:12:17.8±0.5, 9.°39S±0.°06×108.°66E±0.°05, h35km, (h39km±1.4km:pP-P), n43, σ1°22/43, mb4.2/15, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**2.01**	**335**	P		**Pn**	**23 12 48.6**	**-0.6**
CISI	**Cisompet, Garu**	**2.01**	**335**	P		**Pn**	**23 12 51.4**	**+2.2**
	5μm477nm,0.8s						
YOGI	**Yogyakarta**	**2.25**	**46**	P		**Pn**	**23 12 52.8**	**+0.2**
BJII	**Banjamegara**	**2.30**	**27**	P		**Pn**	**23 12 53.8**	**+0.6**
BJII	**Banjamegara**	**2.30**	**27**	P		**Pn**	**23 12 54.0**	**+0.8**
UGM	**Wanagama**	**2.36**	**52**	P		**Pn**	**23 12 53.9**	**-0.1**
UGM				S		**Sn**	**23 13 21.7**	**-0.1**
LEM	**Lembang**	**2.75**	**338**	P		**Pn**	**23 13 01.9**	**+2.5**
	3μm316nm,0.8s						
PCJI	**Pacitan**	**2.76**	**65**	P		**Pn**	**23 13 00.1**	**+0.6**
SMRI	**Semarang**	**2.92**	**37**	P		**Pn**	**23 13 04.0**	**+2.2**
PWJI	**Pagerwojo**	**3.39**	**67**	P		**Pn**	**23 13 08.0**	**-0.3**
DBJI	**Dramaga**	**3.40**	**326**	P		**Pn**	**23 13 13.0**	**+4.7**
	2μm72nm,0.8s						
NGJI	**Ngawi**	**3.43**	**54**	P		**Pn**	**23 13 10.8**	**+2.1**
SJI	**Sawahan**	**3.49**	**62**	P		**Pn**	**23 13 10.3**	**+0.7**
GMJI	**Gumukmas**	**4.86**	**77**	P		**Pn**	**23 13 27.8**	**-0.6**
IGBI	**Denpasar**	**6.43**	**85**	P		**Pn**	**23 13 50.4**	**+0.4**
	0.4nm91nm,1.4s						
SRBI	**Singaraja**	**6.61**	**79**	P		**Pn**	**23 13 53.0**	**+0.5**
	0.3nm59nm,0.7s						
KHKI	**Kahang-Kahang**	**6.94**	**82**	P		**Pn**	**23 13 56.1**	**-1.0**
KLBR	**Kellerberrin**	**23.65**	**160**	*eP*		**P**	**23 17 26.7**	**+0.7**
	35nm,1.5s,mb4.6						
NWAO	**Narrogin (SRO)**	**24.72**	**163**	*eP*		**P**	**23 17 38.2**	**+2.4**
	5.1nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**26.92**	**116**	P		**P**	**23 17 53.9**	**-2.0**
	2.0nm,0.6s,mb3.8,baz=289,slow=11,SNR=2.5						
CMAR	**Chiang Mai Arr**	**29.29**	**341**	P		**P**	**23 18 16.1**	**-0.9**
	1.0nm,0.6s,mb3.7,baz=172,slow=9.0,SNR=4.6						
YHNB	**Yeheng**	**36.06**	**20**	P		**P**	**23 19 13.4**	**-2.7**
STKA	**Stephens Creek**	**37.83**	**131**	P		**P**	**23 19 29.8**	**-1.4**
	5.3nm,0.6s,mb4.5,baz=299,slow=10,SNR=3.8						
STKA	**Stephens Creek**	**37.83**	**131**	*eP*		**P**	**23 19 29.9**	**-1.3**
	1.2nm,0.7s,mb3.7						
ENH	**Enshi**	**39.44**	**1**	*eP*		**P**	**23 19 43.1**	**-1.6**
	6.7nm,0.8s,mb4.4						
MAJO	**Matsushiro**	**53.47**	**30**	P		**P**	**23 21 30.8**	**-3.8**
SONM	**Songino Array**	**57.01**	**358**	P		**P**	**23 21 59.1**	**-0.8**
	1.2nm,0.5s,mb4.2,baz=177,slow=8.3,SNR=5.6						
SONM				pP		pP	23 22 10.4	-0.1
	2.0nm,0.9s,baz=170,slow=8.4,SNR=3.5						
ULN	**Ulaanbaatar**	**57.02**	**359**	P		**P**	**23 21 58.7**	**-1.3**
UCH	**Uchtor**	**60.13**	**331**	P		**P**	**23 22 28.8**	**+1.0**
TKM2	**Tokmak 2**	**60.17**	**332**	*eP*		**P**	**23 22 21.1**	**-0.9**
	3.2nm,0.6s,mb4.5						
MK31	**Makanchi Array**	**60.68**	**340**	*eP*		**P**	**23 22 25.0**	**-0.4**
MKAR	**Makanchi Array**	**60.68**	**340**	P		**P**	**23 22 24.9**	**-0.5**
	2.7nm,0.5s,mb4.6,baz=146,slow=7.4,SNR=4.4						
MKAR				pP		pP	23 22 36.2	+0.1
	3.4nm,0.7s,baz=140,slow=7.7,SNR=3.9						
MKAR	**Makanchi Array**	**60.68**	**340**	P		**P**	**23 22 24.9**	**-0.5**
MKAR				pP		pP	23 22 36.2	+0.1
KURK	**Kurchatov**	**65.30**	**339**	P		**P**	**23 22 55.6**	**-0.4**
	1.3nm,0.3s,mb4.4,baz=145,slow=5.6,SNR=4.6						
KURK	**Kurchatov**	**65.30**	**339**	*eP*		**P**	**23 22 55.0**	**-1.1**
	3.2nm,0.7s,mb4.5						
ZALV	**Zalesovo Beam**	**66.25**	**345**	P		**P**	**23 23 00.7**	**-1.4**
	1.2nm,0.5s,mb4.2,baz=134,slow=6.2,SNR=3.3						
BVAR	**Borovoye Array**	**70.20**	**337**	P		**P**	**23 23 27.0**	**+0.1**
	1.9nm,0.5s,mb4.2,baz=145,slow=8.6,SNR=4.5						
BVAR				pP		pP	23 23 37.5	-0.2
	2.3nm,0.7s,baz=142,slow=7.3,SNR=2.5						
KMBO	**Kilima Mbogo**	**71.47**	**272**	P		**P**	**23 23 38.4**	**+2.9**
	1.1nm,0.5s,mb4.1,baz=0.0,slow=20,SNR=2.7						
KMBO	**Kilima Mbogo**	**71.47**	**272**	*eP*		**P**	**23 23 37.7**	**+2.1**
PETK	**Petropavlovsk-**	**74.89**	**28**	P		**P**	**23 23 54.3**	**-0.5**
	7.9nm,1.2s,mb4.5,baz=205,slow=6.4,SNR=2.5						
BRTR	**Keskin Array B**	**84.64**	**312**	P		**P**	**23 24 48.1**	**+0.2**
	1.2nm,0.8s,mb4.1,baz=126,slow=6.3,SNR=4.2						
TSUM	**Tsumeb**	**87.97**	**251**	*eP*		**P**	**23 25 06.3**	**+1.5**
YKA	**Yellowknife Ar**	**118.50**	**21**	PKP		PKPdf	23 31 01.0	-0.4
	0.3nm,0.6s,baz=336,slow=2.7,SNR=4.5						

*IDC **02** 23:12:38.3±1.8, 26.°65N×96.°12E, h0km, mb4.1/6, mb1 4.1/7, mb1mx3.7/24, mbtmp4.0/7, ML3.8/1, Error ellipse: s-maj=58.9km s-min=29.4km az=72.0*
ISC 02 23:12:46.0±2.1, 26.°5N±0.°2×96.°2E±0.°1, h76km±33km, n10, σ0°82/12, mb4.0/6, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**2.64**	**230**	*e*PKP		**Pn**	**23 13 27.0**	**+0.6**
IMP				*e*S		**Sn**	**23 13 58.0**	**+0.5**
SHL	**Shillong**	**3.96**	**257**	*e*PN		**Pn**	**23 13 45.0**	**+0.7**
SHL				*e*SN		**Sn**	**23 14 27.0**	**-2.5**
CMAR	**Chiang Mai Arr**	**8.42**	**162**	Pn		**Pn**	**23 14 44.8**	**-0.5**
	0.3nm,0.3s,baz=336,slow=13,SNR=20						
SONM	**Songino Array**	**22.75**	**18**	P		**P**	**23 17 41.0**	**-0.8**
	0.1nm,0.3s,baz=182,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**23.03**	**335**	P		**P**	**23 17 45.5**	**+0.9**
	1.7nm,0.4s,mb3.7,baz=142,slow=9.5,SNR=10.0						
KURK	**Kurchatov**	**27.64**	**336**	P		**P**	**23 18 26.3**	**-0.1**
	0.7nm,0.2s,mb3.8,baz=142,slow=10,SNR=3.1						
ZALV	**Zalesovo Beam**	**28.67**	**346**	P		**P**	**23 18 35.6**	**+0.2**
	0.8nm,0.4s,mb3.7,baz=162,slow=8.2,SNR=5.6						
BVAR	**Borovoye Array**	**32.73**	**331**	P		**P**	**23 19 11.9**	**+0.6**
	1.0nm,0.5s,mb3.9,baz=128,slow=12,SNR=6.1						
FINES	**FINESS Array B**	**57.59**	**328**	P		**P**	**23 22 27.4**	**-0.2**
	2.6nm,1.0s,mb4.2,baz=103,slow=12,SNR=3.6						
ARCES	**ARCESS Array B**	**58.67**	**337**	P		**P**	**23 22 34.6**	**-0.5**
	3.2nm,0.9s,mb4.3,baz=77,slow=5.5,SNR=5.3						

*IDC **02** 23:17:07.9±0.7, 0.°99N×126.°04E, h0km, mb4.0/13, mb1 4.1/14, mb1mx4.0/22, mbtmp4.0/14, ML3.7/1, Error ellipse: s-maj=48.3km s-min=14.0km az=70.0*
*ISCJB **02** 23:17:13.6±1.8, 0.°94N±0.°05×125.°98E±0.°09, h58km±17km, mb4.2/20, Error ellipse: s-maj=14.8km s-min=8.3km az=161.8*
*NEIC **02** 23:17:14.7±1.1, 0.°93N×126.°02E, h53km±11km, mb4.4/9, Error ellipse: s-maj=9.6km s-min=5.4km az=71.0*
ISC 02 23:17:14.5±1.4, 0.°92N±0.°05×126.°03E±0.°08, h51km±14km, n41, σ0°80/40, mb4.2/20, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**6.13**	**356**	*e*Pn		**Pn**	**23 18 43.4**	**+0.8**
KSM	**Kuching**	**15.73**	**272**	*e*Pn		**Pn**	**23 20 53.5**	**+0.6**
FITZ	**Fitzroy Crossi**	**18.90**	**181**	P		**Pn**	**23 21 29.8**	**-2.3**
	0.2nm,0.3s,baz=356,slow=10,SNR=3.7						
WRA	**Warramunga Arr**	**22.27**	**159**	P		**P**	**23 22 07.5**	**0.0**
	5.7nm,0.5s,mb4.2,baz=339,slow=11,SNR=10						
WRA	**Warramunga Arr**	**22.27**	**159**	P		**P**	**23 22 07.5**	**0.0**
WB2	**Warramunga Arr**	**22.28**	**159**	*eP*		**P**	**23 22 07.0**	**-0.5**
GUMO	**Guam**	**22.50**	**55**	P		**P**	**23 22 09.4**	**-0.6**
MBWA	**Marble Bar**	**22.79**	**195**	*eP*		**P**	**23 22 12.4**	**-0.5**
	12nm,1.1s,mb4.3						
TPUB	**Ta-pu**	**22.86**	**347**	*eP*		**P**	**23 22 12.8**	**-0.9**
	17nm,0.6s,mb4.6						
PMG	**Port Moresby**	**23.41**	**116**	*eP*		**P**	**23 22 20.8**	**+1.5**
YHNB	**Yeheng**	**24.04**	**350**	P		**P**	**23 22 24.8**	**-0.2**
ASAR	**Alice Springs**	**25.61**	**163**	P		**P**	**23 22 40.7**	**+1.5**
	2.2nm,0.4s,mb4.0,baz=347,slow=12,SNR=21						
CMAR	**Chiang Mai Arr**	**31.79**	**305**	P		**P**	**23 23 34.8**	**+0.3**
	0.5nm,0.4s,mb3.7,baz=130,slow=9.8,SNR=3.2						
CHTO	**Chiang Mai**	**31.97**	**305**	P		**P**	**23 23 33.8**	**-2.2**
STKA	**Stephens Creek**	**35.79**	**157**	P		**P**	**23 24 09.6**	**+0.6**
	1.7nm,0.6s,mb4.2,baz=336,slow=11,SNR=3.7						
STKA	**Stephens Creek**	**35.79**	**157**	*eP*		**P**	**23 24 09.0**	**+0.1**
	2.3nm,1.2s,mb4.0						
KSRS	**Korea Array**	**36.40**	**3**	P		**P**	**23 24 14.2**	**+0.1**
	1.1nm,0.6s,mb3.9,baz=183,slow=11,SNR=4.0						
PALK	**Pallekele**	**45.62**	**279**	P		**P**	**23 25 30.8**	**+0.4**
HIA	**Hailar**	**48.47**	**355**	*eP*		**P**	**23 25 52.2**	**+0.2**
ULN	**Ulaanbaatar**	**49.58**	**343**	*eP*		**P**	**23 26 00.7**	**+0.3**
	1.6nm,0.6s,mb4.2						
SONM	**Songino Array**	**49.74**	**343**	P		**P**	**23 26 00.5**	**-1.2**
	0.8nm,0.8s,mb3.8,baz=160,slow=7.1,SNR=5.0						
MK31	**Makanchi Array**	**59.48**	**327**	*eP*		**P**	**23 27 11.8**	**-0.5**
MKAR	**Makanchi Array**	**59.48**	**327**	P		**P**	**23 27 12.5**	**+0.2**
	0.9nm,0.4s,mb4.1,baz=120,slow=8.4,SNR=8.5						
MKAR	**Makanchi Array**	**59.48**	**327**	P		**P**	**23 27 12.5**	**+0.2**
TKM2	**Tokmak 2**	**61.41**	**320**	*eP*		**P**	**23 27 25.9**	**+0.4**
	1.8nm,0.8s,mb4.2						
KBL	**Kabul**	**62.70**	**309**	*eP*		**P**	**23 27 35.5**	**+1.1**
	1.9nm,0.4s,mb4.6						
ZALV	**Zalesovo Beam**	**62.78**	**334**	P		**P**	**23 27 34.2**	**-0.3**
	0.8nm,0.7s,mb4.0,baz=146,slow=10,SNR=3.5						
KURK	**Kurchatov**	**63.74**	**329**	P		**P**	**23 27 40.8**	**-0.2**
	1.6nm,0.5s,mb4.3,baz=125,slow=6.1,SNR=7.0						
KURK	**Kurchatov**	**63.74**	**329**	*eP*		**P**	**23 27 41.0**	**+0.1**
	2.5nm,0.4s,mb4.6						
CASY	**Casey**	**67.96**	**187**	*eP*		**P**	**23 28 08.0**	**+0.2**
	12nm,1.1s,mb4.8						
BVAR	**Borovoye Array**	**69.30**	**328**	P		**P**	**23 28 16.6**	**+0.2**
	1.5nm,0.8s,mb4.0,baz=134,slow=11,SNR=7.1						
BRVK	**Borovoye**	**69.37**	**328**	*eP*		**P**	**23 28 17.0**	**+0.2**
AKTK	**Aktyubinsk**	**75.43**	**322**	P		**P**	**23 28 54.0**	**+1.0**
AKTO	**Aktyubinsk**	**75.43**	**322**	P		**P**	**23 28 54.0**	**+1.0**
	0.7nm,0.5s,mb3.9,baz=109,slow=12,SNR=4.3						
ARU	**Arti**	**76.94**	**328**	*eP*		**P**	**23 29 01.0**	**-0.4**
	2.6nm,0.5s,mb4.4						
SBA	**Scott Base**	**81.66**	**172**	P		**P**	**23 29 26.6**	**-0.3**
GNI	**Garni**	**82.75**	**310**	*eP*		**P**	**23 29 32.9**	**-0.3**
COLA	**College**	**87.52**	**25**	*eP*		**P**	**23 29 55.2**	**-1.4**
ILAR	**Eielson Array**	**87.93**	**25**	P		**P**	**23 29 58.5**	**0.0**
	0.5nm,1.1s,mb3.7,baz=328,slow=3.3,SNR=3.5						
QSPA	**South Pole Qui**	**90.84**	**180**	P		**P**	**23 30 12.2**	**+0.3**
	0.8nm,0.9s,mb4.0,baz=113,slow=3.6,SNR=3.6						
TORD	**Torodi Ar. Bea**	**123.08**	**286**	PKP		PKPdf	23 36 08.0	+1.5
	0.2nm,0.5s,baz=62,slow=1.9,SNR=4.1						

*NEIC **02** 23:24:35.6, 31.°08S×71.°62W, h35km, ML3.4(GUC), After GUC.*
GUC 02 23:24:35.6±0.5, 31.°08S×71.°62W, h35km±3km, MD3.7, ML3.4, 5C-10D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**0.54**	**100**	*i*P		Pn	23 24 47.0	+0.3
CMCH				*i*S		Sn	23 24 55.2	+0.5
CMCH	**Combarbala**	**0.54**	**100**	*i*P		Pn	23 24 47.0	+0.3
CMCH				*i*S		Sn	23 24 55.2	+0.5
CMCH				AML	AML		23 24 57.5	
	comp=N,2μm,0.4s						
OVCH	**Ovalle**	**0.59**	**38**	*i*P		Pn	23 24 47.8	+0.2
OVCH				*i*S		Sn	23 24 56.2	+0.3
OVCH	**Ovalle**	**0.59**	**38**	*i*P		Pn	23 24 47.8	+0.2
OVCH				*i*S		Sn	23 24 56.2	+0.3
OVCH				AML	AML		23 24 56.7	
	comp=N,6μm,0.2s						
CHNG	**Los Chungos**	**0.81**	**173**	*i*P		Pn	23 24 49.9	-0.6
CHNG				*i*S		Sn	23 25 01.2	0.0
TLL	**Tololo Astrono**	**1.15**	**38**	AML	AML		23 25 09.2	
	comp=N,3μm,0.6s						
JACH	**Jahuel**	**1.82**	**152**	*i*P		Pn	23 25 06.1	+1.7
JACH				*i*S		Sn	23 25 29.4	+3.2
JACH	**Jahuel**	**1.82**	**152**	*i*P		Pn	23 25 06.1	+1.7
JACH				*i*S		Sn	23 25 29.4	+3.2
ROCH	**El Roble**	**1.96**	**165**	*i*P		Pn	23 25 08.2	+2.0
ROCH				*i*S		Sn	23 25 33.4	+3.8
ROCH				AML	AML		23 25 39.6	
	comp=N,270nm,0.5s						
PEL	**Peldehue**	**2.20**	**159**	*i*P		Pn	23 25 11.3	+1.6
PEL				*i*S		Sn	23 25 38.3	+2.6
PEL				AML	AML		23 25 46.7	
	comp=N,373nm,0.3s						
LCO	**Las Campanas**	**2.21**	**21**	*e*Pn		Pn	23 25 09.1	-0.7
LCO				*e*Sn		Sn	23 25 34.0	-1.9
FCH	**Farellones**	**2.51**	**154**	*i*P		Pn	23 25 16.1	+2.3
FCH				*i*S		Sn	23 25 46.8	+3.6
FCH	**Farellones**	**2.51**	**154**	*i*P		Pn	23 25 16.1	+2.3
FCH				*i*S		Sn	23 25 46.8	+3.6
FCH				AML	AML		23 25 47.5	
	comp=E,214nm,0.2s						
PCH	**Pirque**	**2.70**	**160**	*e*P		Pn	23 25 18.3	+1.8
PCH	**Pirque**	**2.70**	**160**	*e*P		Pn	23 25 18.3	+1.8
LNV	**Longovilo**	**2.87**	**177**	*i*P		Pn	23 25 20.1	+1.2
LNV	**Longovilo**	**2.87**	**177**	*i*P		Pn	23 25 20.1	+1.2
LMEL	**Las Melosas**	**3.01**	**157**	*e*P		Pn	23 25 23.1	+2.3
LMEL				*i*S		Sn	23 25 58.8	+3.2
LMEL	**Las Melosas**	**3.01**	**157**	*e*P		Pn	23 25 23.1	+2.3
LMEL				*i*S		Sn	23 25 58.8	+3.2
LMEL				AML	AML		23 26 08.3	
	comp=N,104nm,0.2s						
CACH	**El Canelo**	**3.15**	**164**	*i*P		Pn	23 25 24.9	+2.3
CACH	**El Canelo**	**3.15**	**164**	*i*P		Pn	23 25 24.9	+2.3

*TIR **02** 23:27:05.8±2.5, 41.°13N×19.°98E, h7km±999km, ML2.8*
*SKO **02** 23:27:05.9, 41.°10N×19.°99E, h8km*
*THE **02** 23:27:06.3, 41.°17N×20.°13E, h0km±4km, ML2.4/2, Error ellipse: s-maj=4.5km s-min=1.0km az=36.0*
*ISCJB **02** 23:27:06.3±0.3, 41.°12N±0.°02×20.°08E±0.°03, h10km, Error ellipse: s-maj=3.9km s-min=2.1km az=145.2*
*CSEM **02** 23:27:06.4±0.3, 41.°07N×20.°06E, h2km, ML2.4/2, Error ellipse: s-maj=8.8km s-min=3.9km az=58.0*
*PDG **02** 23:27:07.5±0.1, 41.°17N×19.°94E, h3km±1km, ML2.6/9, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*
*NEIC **02** 23:27:07.5, 41.°17N×19.°94E, h3km, ML2.6(PDG), After PDG.*
ISC 02 23:27:06.0±0.6, 41.°07N±0.°03×20.°01E±0.°04, h2km±5km, n46, σ1°33/87, 11C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.29**	**338**	P		**Pg**	**23 27 10.6**	**-1.1**
TIR				S		**Sg**	**23 27 16.1**	**+0.6**
TIR	**Tirane**	**0.29**	**338**	P		**Pg**	**23 27 10.6**	**-1.1**
TIR				S		**Sg**	**23 27 16.1**	**+0.6**
KBN	**Korca**	**0.74**	**127**	*i* PG		**Pg**	**23 27 20.3**	**+0.1**
KBN				*i* SG		**Sg**	**23 27 34.1**	**+4.3**
KBN	**Korca**	**0.74**	**127**	*i* Pg		**Pg**	**23 27 20.3**	**+0.1**
	SNR=91						
PUK	**Puka**	**0.97**	**355**	*i* PG		**Pg**	**23 27 23.5**	**-1.2**
PUK				*i* SG		**Sg**	**23 27 39.1**	**+1.8**
PUK	**Puka**	**0.97**	**355**	*i* Pg		**Pg**	**23 27 23.5**	**-1.2**
	SNR=91						
PUK				*i* Sg		**Sg**	**23 27 39.1**	**+1.8**
	SNR=91						
KRUS	**Krusevo**	**0.98**	**72**	*e*Pg		**Pg**	**23 27 23.5**	**-1.3**
KRUS				*e*Sg		**Sg**	**23 27 37.6**	**+0.1**
BIA	**Bitola**	**1.00**	**93**	P		**Pg**	**23 27 23.8**	**-1.3**
BIA	**Bitola**	**1.00**	**93**	*e*Pg		**Pg**	**23 27 24.1**	**-1.0**
BIA				*e*Sg		**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLE	Pljevlja	2.30	349	⇑*i*Pn	Pn	23 27 46.5	+1.6
PLE				*e*Sn	Sg	23 28 16.9	-3.0
STON	Ston	2.49	317	*e*Pn	Pn	23 27 44.7	-2.8
STON				Sn	Sn	23 28 17.0	-1.4
STON	Ston	2.49	317	*e*Pn	Pn	23 27 44.6	-2.9
STON				Sn	Sn	23 28 17.0	-1.4
BBLS	Lazići	2.83	351	*e*Pn	Pn	23 27 57.8	+5.7
BBLS				*e*Sn	Sn	23 28 31.0	+4.3
DIVS	Divibare	3.02	360	*e*Pn	Pn	23 27 57.3	+2.5
DIVS				*e*Sn	Sn	23 28 36.1	+4.5
NVLJ	Novalja	5.14	314	⇑*i*Pn	Pn	23 28 21.7	-2.3
NVLJ				Sn	Sn	23 29 20.4	-3.4

WEL 02 23:27:53.5±0.3, 41°.40S×172°.84E, h109km±3km, ML3.7/14, 4C-13D, Error ellipse: s-maj=2.3km s-min=2.0km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	Tophouse	0.37	173	⇑PN	Pn	23 28 09.4	0.0
THZ				SN	Sn	23 28 20.6	-0.8
NNZ	Nelson	0.44	66	⇓PN	Pn	23 28 09.8	0.0
NNZ				SN	Sn	23 28 21.5	-0.6
QRZ	Quartz Range	0.62	337	⇑PN	Pn	23 28 11.0	0.0
QRZ				SN	Sn	23 28 22.9	-1.3
TUWZ	Tuamarina	0.83	93	PN	Pn	23 28 13.1	+0.2
BSWZ	Blackbirch Sta	0.84	113	PN	Pn	23 28 13.2	+0.2
DSZ	Denniston Nort	0.85	246	PN	Pn	23 28 12.8	-0.3
DUWZ	D'Urville Isla	1.01	54	⇓PN	Pn	23 28 15.4	+0.7
TCW	Tory Channel	1.10	81	⇓PN	Pn	23 28 15.9	+0.3
KHZ	Kahutara	1.15	153	⇑PN	Pn	23 28 16.1	0.0
SNZO	South Karori	1.41	87	⇓PN	Pn	23 28 18.5	-0.6
LTZ	Lake Taylor	1.45	197	⇑PN	Pn	23 28 19.6	+0.1
WEL	Wellington	1.46	86	PN	Pn	23 28 19.3	-0.4
BHW	Baring Head	1.53	91	⇓PN	Pn	23 28 19.7	-0.8
KIW	Kapiti Island	1.65	72	⇓PN	Pn	23 28 21.9	-0.1
CAW	Cannon Point	1.70	81	⇓PN	Pn	23 28 22.0	-0.7
MSWZ	Moikau Station	1.81	91	⇓PN	Pn	23 28 22.9	-1.1
PLWZ	Palliser	1.82	96	⇓PN	Pn	23 28 23.0	-1.2
OGWZ	Otaki Gorge	1.85	73	PN	Pn	23 28 24.0	-0.5
PAWZ	Paruwai Farm	1.94	90	⇓PN	Pn	23 28 24.3	-1.3
MTW	Mount Morrison	2.02	84	⇓PN	Pn	23 28 25.3	-1.3
HOWZ	Holdsworth Sta	2.08	77	⇓PN	Pn	23 28 26.3	-1.1
TRWZ	Traveller	2.14	91	PN	Pn	23 28 26.9	-1.3
MRZ	Mangatainoka R	2.20	71	⇓PN	Pn	23 28 27.8	-1.1
DFE	Dawson Falls	2.28	25	PN	Pn	23 28 31.0	+0.9
WVZ	Waitaha Valley	2.29	222	PN	Pn	23 28 29.7	-0.5
MQZ	McQueen's Vall	2.31	183	PN	Pn	23 28 28.8	-1.6
WAZ	Wanganui	2.31	46	PN	Pn	23 28 31.7	+1.3
TMWZ	Te Maipa	2.32	84	PN	Pn	23 28 29.0	-1.5
PKE	Pukeiti	2.37	22	PN	Pn	23 28 32.4	+1.3
TIWZ	Tintock	2.38	76	PN	Pn	23 28 29.8	-1.5
BFZ	Birch Farm	2.67	76	PN	Pn	23 28 33.4	-1.7
VRZ	Vera Road	2.70	34	PN	Pn	23 28 36.6	+1.1
TSZ	Takapari Road	2.72	62	PN	Pn	23 28 34.6	-1.1
DVHZ	Dannevirke	2.75	68	PN	Pn	23 28 34.2	-1.9
WNVZ	Wahianoa	2.95	46	PN	Pn	23 28 38.8	0.0
PNHZ	Pukenui	2.95	61	PN	Pn	23 28 37.2	-1.6
MOVZ	Moawhango	2.98	49	PN	Pn	23 28 38.6	-0.6
BHHZ	Black Hill Sta	3.11	53	PN	Pn	23 28 39.9	-1.0
FOZ	Fox Glacier	3.18	226	PN	Pn	23 28 39.8	-2.0
HIZ	Hauiti	3.27	29	PN	Pn	23 28 43.3	+0.3
LBZ	Lake Benmore	3.57	212	PN	Pn	23 28 44.9	-2.0
BKZ	Black Stump Fm	3.57	53	PN	Pn	23 28 43.3	-3.7
ODZ	Otahua Downs	3.98	203	PN	Pn	23 28 51.0	-1.5
WKZ	Wanaka	4.43	218	PN	Pn	23 28 56.2	-2.3
EAZ	Earnscleugh	4.62	213	PN	Pn	23 28 59.4	-1.6
MKAZ	Moumakai	4.64	24	PN	Pn	23 29 02.7	+1.3
MWZ	Matawai	4.73	51	PN	Pn	23 29 00.3	-2.3
TUZ	Tuapeka	5.12	206	PN	Pn	23 29 07.0	-0.8
SYZ	Scrubby Hill	5.79	206	PN	Pn	23 29 15.4	-1.5

IDC 02 23:28:33.3±2.5, 14°.99S×175°.55W, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.9/16, mbtmp3.9/4, MS3.8/7, Ms1 3.8/7, ms1mx3.6/13, Error ellipse: s-maj=161.3km s-min=27.3km az=142.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	18.46	245	*e*P	Pn	23 32 54.3	+3.6
	52nm,1.3s						
DZM				*e*LR	LR	23 37 24.7	
	797nm,25.8s						
HNR	Honiara	24.57	280	LR	LR	23 42 32.3	
	comp=Z,243nm,18.5s,baz=137,slow=34						
PPT	Papeete	25.06	99	*e*LR	LR	23 39 38.8	
	334nm,25.5s						
TBI	Tubuai	25.98	113	*e*T		23 59 19.3	
	5.8nm,0.2s						
TAOE	Nuku Hiva Isla	35.14	84	*e*LR	LR	23 44 18.7	
	444nm,32.8s						
RKT	Rikitea	39.09	108	*e*T		00 15 45.3	
	2.2nm,0.2s						
STKA	Stephens Creek	42.45	239	P	P	23 36 31.7	+1.5
	2.2nm,0.7s,baz=108,slow=6.4,SNR=3.7						
STKA				LR	LR	23 51 01.4	
	comp=Z,182nm,19.2s,baz=25,slow=32						
ASAR	Alice Springs	48.27	252	P	P	23 37 14.8	-1.7
	2.9nm,0.9s,baz=87,slow=8.3,SNR=12						
PETK	Petropavlovsk-	71.62	343	LR	LR	00 05 23.8	
	comp=Z,34nm,20.5s,baz=339,slow=31						
KSRS	Korea Array	74.42	316	LR	LR	00 11 50.9	
	comp=Z,35nm,18.7s,baz=212,slow=35						
NVAR	Mina Array Bea	75.43	43	P	P	23 40 18.4	-0.8
	0.3nm,0.3s,baz=220,slow=6.8,SNR=4.7						
TXAR	Lajitas Array	82.12	57	LR	LR	00 08 56.7	
	comp=Z,74nm,19.9s,baz=180,slow=30						
ILAR	Eielson Array	82.46	12	P	P	23 40 58.1	+1.0
	0.2nm,0.8s,baz=213,slow=6.5,SNR=4.1						
PDAR	Pinedale Array	83.36	43	LR	LR	00 16 06.3	
	comp=Z,57nm,18.1s,baz=162,slow=34						
SONM	Songino Array	93.16	319	LR	LR	00 20 09.8	
	comp=Z,45nm,19.7s,baz=257,slow=33						
BRTR	Keskin Array B	144.52	320	PKP	PKPdf	23 48 14.1	+2.1
	1.5nm,0.9s,baz=77,slow=1.0,SNR=7.1						

*IDC **02** 23:30:10.9±3.6, 30°.92N×141°.16E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.6/23, mbtmp3.6/7, ML3.5/2, MS3.4/1, Ms1 3.5/1, ms1mx2.6/22, Error ellipse: s-maj=145.4km s-min=20.2km az=69.0*
*ISCJB **02** 23:30:11.7±0.9, 31°.20N±0°.05×142°.0E±0°.2, h57km±9km, mb3.8/8, Error ellipse: s-maj=24.9km s-min=5.9km az=164.0*
*JMA **02** 23:30:12.1±0.3, 31°.20N×141°.88E, h42km, M3.9*
*NEIC **02** 23:30:12.6±1.9, 31°.21N×141°.91E, h45km±17km, mb4.0/4, Error ellipse: s-maj=32.0km s-min=12.7km az=68.0*

ISC 02 23:30:13.2±0.9, 31°.22N±0°.06×142°.1E±0°.2, h53km±8km, n26, σ0°.98/32, mb3.8/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	3.56	344	P	Pn	23 31 05.2	-0.7
BSO1				*e*S	Sn	23 31 46.5	-0.3
BSO2	Boso 2	3.71	342	*e*S	Sn	23 31 49.6	-0.8
BSO3	Boso 3	3.83	340	P	Pn	23 31 09.9	+0.3
BSO3				*e*S	Sn	23 31 54.0	+0.8
CBIJ	Chichi jima	4.11	179	Pn	Pn	23 31 13.2	-0.3
	6.0nm,0.3s,baz=289,slow=18,SNR=3.8						
CBIJ				Sn	Sn	23 31 55.7	-4.5
	3.3nm,0.3s,baz=305,slow=19,SNR=2.7						
CBIJ	Chichi jima	4.11	179	P	Pn	23 31 14.1	+0.6
CBIJ				*e*S	Sn	23 31 59.1	-1.1
JOD2	Odawara 2	4.77	329	P	Pn	23 31 23.9	+1.4
JRY	Ryogami san	5.49	331	P	Pn	23 31 33.0	+0.6
JRY				*e*S	Sn	23 32 33.8	-0.4
MJAR	Matsushiro Arr	6.23	329	Pn	Pn	23 31 42.5	-0.1
	1.4nm,0.3s,baz=149,slow=12,SNR=5.4						
MAJO	Matsushiro	6.23	329	*e*Pn	Pn	23 31 41.3	-1.3
MAJO				*e*Sn	Sn	23 32 52.8	+0.3
MAT	Matsushiro	6.23	329	P	Pn	23 31 42.9	+0.3
MAT				*e*S	Sn	23 32 52.6	+0.2
MAT	Matsushiro	6.23	329	P	Pn	23 31 43.8	+1.2
INCN	Inchon	14.24	300	Pn	Pn	23 33 27.4	-4.5
GUMO	Guam	17.73	171	P	Pn	23 34 15.5	-0.8
SONM	Songino Array	31.83	312	P	P	23 36 33.7	+1.0
	0.3nm,0.9s,mb3.1,baz=109,slow=7.8,SNR=2.3						
MKAR	Makanchi Array	47.90	307	P	P	23 38 47.5	+1.5
	0.4nm,0.2s,mb4.0,baz=91,slow=12,SNR=3.0						
KURK	Kurchatov	50.13	312	P	P	23 39 04.5	+1.5
	0.5nm,0.5s,mb3.8,baz=86,slow=6.9,SNR=2.7						
KURK	Kurchatov	50.13	312	*e*P	P	23 39 00.8	-2.2
	1.2nm,0.8s,mb4.0						
CTAO	Charters Tower	51.16	175	P	P	23 39 10.8	-0.2
WRA	Warramunga Arr	51.41	189	P	P	23 39 14.1	+1.2
	0.4nm,0.4s,mb3.8,baz=5.8,slow=7.7,SNR=4.7						
TKM2	Tokmak 2	53.09	303	*e*P	P	23 39 24.1	-1.2
	1.1nm,0.8s,mb3.8						
ILAR	Eielson Array	54.15	30	LR	LR	00 03 10.1	
	comp=Z,31nm,18.7s,baz=306,slow=36						
EKS2	Erkin-Say	54.46	303	*e*P	P	23 39 33.1	-2.0
	0.7nm,0.5s,mb3.9						
AML	Almayashu	54.63	302	*e*P	P	23 39 35.9	-0.6
ASAR	Alice Springs	55.14	189	P	P	23 39 41.9	+1.7
	0.3nm,0.5s,mb3.6,baz=11,slow=6.6,SNR=5.8						
ARU	Arti	61.18	321	*e*P	P	23 40 21.0	-1.0
	2.2nm,0.6s,mb4.5						
DLBC	Dease Lake	62.90	36	P	P	23 40 33.8	+0.2

*CSEM **02** 23:32:31.2, 37°.27N×56°.97E, h10km, ML3.5, After TEH*

TEH 02 23:32:31.2, 37°.27N×56°.97E, h10km, 3C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHV	Shirvan	0.64	65	⇑*e*Pg	Pg	23 32 42.9	-0.7
ISHV				*e*Sg	Sg	23 32 51.9	-0.1
ISHV				*e*		23 32 54.2	
	comp=Z,39μm,0.2s						
ISHV	Shirvan	0.64	65	⇑*e*Pg	Pg	23 32 42.9	-0.7
ISHV				*e*Sg	Sg	23 32 51.9	-0.1
ISFR	Sfrayin	0.85	104	⇓*e*Pg	Pg	23 32 46.4	-1.1
ISFR				*e*		23 32 51.4	
	comp=Z,15μm,0.1s						
ISFR				*e*Sg	Sg	23 32 57.6	-1.0
ISFR	Sfrayin	0.85	104	⇓*e*Pg	Pg	23 32 46.4	-1.1
ISFR				*e*Sg	Sg	23 32 57.6	-1.0
IQHU	Qucahn	1.27	98	*e*Pg	Pg	23 32 53.7	-1.8
IQHU				*e*		23 32 56.1	
	comp=Z,11μm,0.1s						
IQHU	Qucahn	1.27	98	*e*Pg	Pg	23 32 53.7	-1.8
IKRD	Kardeh	1.33	111	*e*	Sn	23 33 10.0	-3.5
	comp=Z,3μm,0.2s						
IKRD				*e*Pn	Sg	23 33 07.3	-6.7
IEMG	Emamgholi	1.35	83	*e*Pg	Pg	23 32 55.1	-2.0
IEMG				*e*		23 32 58.5	
	comp=Z,10μm,0.1s						
IEMG				*e*Sg	Sg	23 33 13.0	-1.5
IEMG	Emamgholi	1.35	83	*e*Pg	Pg	23 32 55.1	-2.0
IEMG				*e*Sg	Sg	23 33 13.0	-1.5
IAKL	Akhelmad	1.58	114	⇑*e*Pn	Pn	23 32 59.0	-0.2
IAKL				*e*Sg	Sg	23 33 21.3	-0.6
IAKL				*e*		23 33 26.8	
	comp=Z,8μm,0.1s						
IPAY	Payeh	1.82	116	*e*Pn	Pn	23 33 02.9	+0.4
IPAY				*e*		23 33 38.6	
	comp=Z,5μm,0.1s						
IPAY	Payeh	1.82	116	*e*Pn	Pn	23 33 02.9	+0.4
ISRO	Mashad	2.22	115	*e*	Sg	23 33 49.7	+7.1
	comp=Z,3μm,0.2s						
ISRO				*e*Pn	Pn	23 33 08.4	+0.3
MHI	Mashad	2.22	115	*e*Pn	Pn	23 33 09.5	+1.4
IMOG	Moghan	2.23	121	*e*	Pg	23 33 15.3	+1.4
	comp=Z,2μm,0.1s						
IMOG				*e*Pn	Pn	23 33 08.8	+0.6
IGLO	Ghaloghah	2.63	254	*e*Pn	Pn	23 33 13.7	0.0
IGLO				*e*Sg	Sg	23 33 53.8	-2.0
IGLO				*e*		23 34 04.1	
	comp=Z,3μm,0.3s						
IGLO	Ghaloghah	2.63	254	*e*Pn	Pn	23 33 13.7	0.0
IGLO				*e*Sg	Sg	23 33 53.8	-2.0
IMYA	Miami	2.68	109	*e*Pn	Pn	23 33 15.4	+1.0
IMYA				*e*		23 33 21.5	
	comp=Z,2μm,0.2s						
IMYA	Miami	2.68	109	*e*Pn	Pn	23 33 15.4	+1.0
IKIA	Kiasar	2.85	249	*e*Pn	Pn	23 33 18.5	+1.8
IKIA				*e*		23 33 34.2	
	comp=Z,827nm,0.1s						
IKIA	Kiasar	2.85	249	*e*Pn	Pn	23 33 18.5	+1.8
IANJ	Anjilo	3.05	235	*e*Pn	Pn	23 33 19.4	-0.1
IANJ				*e*		23 34 14.3	
	comp=Z,1μm,0.2s						
IANJ	Anjilo	3.05	235	*e*Pn	Pn	23 33 19.4	-0.1
ISHM	Shahmirzad	3.30	245	*e*Pn	Pn	23 33 22.8	-0.2
ISHM				*e*		23 34 22.6	
	comp=Z,1μm,0.3s						
ISHM	Shahmirzad	3.30	245	*e*Pn	Pn	23 33 22.8	-0.2
IALA	Alasht	3.55	252	*e*Pn	Pn	23 33 26.1	-0.2
IALA				*e*		23 34 27.8	
	comp=Z,2μm,0.2s						
IALA	Alasht	3.55	252	*e*Pn	Pn	23 33 26.1	-0.2
ILAS	Lasjerd	3.75	241	*e*Pn	Pn	23 33 28.7	-0.4
ILAS				*e*		23 34 34.2	
	comp=Z,458nm,0.2s						
ILAS	Lasjerd	3.75	241	*e*Pn	Pn	23 33 28.7	-0.4
IFIR	Firoozkooh	3.77	246	*e*Pn	Pn	23 33 29.2	-0.2
IFIR				*e*		23 33 31.4	
	comp=Z,665nm,0.1s						
IFIR	Firoozkooh	3.77	246	*e*Pn	Pn	23 33 29.2	-0.2
IPRN	Peran	3.86	256	*e*Pn	Pn	23 33 31.3	+0.7
IPRN				*e*		23 34 43.6	
	comp=Z,980nm,0.3s						
IPRN	Peran	3.86	256	*e*Pn	Pn	23 33 31.3	+0.7
IDMV	Damavand	4.33	249	*e*Pn	Pn	23 33 36.5	-0.5
IDMV				*e*		23 33 54.5	
	comp=Z,378nm,0.2s						
IDMV	Damavand	4.33	249	*e*Pn	Pn	23 33 36.5	-0.5
ICHK	Chekchek	5.44	204	*e*Pn	Pn	23 33 51.8	-0.5
ICHK				*e*		23 33 52.8	
	comp=Z,233nm,0.1s						
ICHK	Chekchek	5.44	204	*e*Pn	Pn	23 33 51.8	-0.5
IBAF	Bafgh	5.78	192	*e*Pn	Pn	23 33 55.9	-1.2
IBAF				*e*		23 33 59.4	
	comp=Z,95nm,0.1s						
IBAF	Bafgh	5.78	192	*e*Pn	Pn	23 33 55.9	-1.2
IZEF	Zefreh	5.79	222	*e*Pn	Pn	23 33 56.3	-0.8
IZEF				*e*		23 35 51.9	
	comp=Z,82nm,0.3s						
IZEF	Zefreh	5.79	222	*e*Pn	Pn	23 33 56.3	-0.8
IKLH	Kolahrood	5.91	230	*e*Pn	Pn	23 33 58.2	-0.7
IKLH				*e*		23 35 58.3	
	comp=Z,82nm,0.2s						
IKLH	Kolahrood	5.91	230	*e*Pn	Pn	23 33 58.2	-0.7
IPIR	Pirpir	6.77	229	*e*Pn	Pn	23 34 10.3	-0.3
IPIR				*e*		23 34 14.2	
	comp=Z,196nm,0.1s						
IPIR	Pirpir	6.77	229	*e*Pn	Pn	23 34 10.3	-0.3

IDC 03 00:17:37.5±2.2, 0°.75N×127°.01E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/17, mbtmp3.3/3, Error ellipse: s-maj=190.8km s-min=25.4km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.78	161	P	P	00 22 30.7	-0.4
	0.3nm,0.3s,baz=340,slow=11,SNR=3.6						
ASAR	Alice Springs	25.18	165	P	P	00 23 05.2	+0.4
	0.3nm,0.4s,baz=347,slow=11,SNR=6.0						
MKAR	Makanchi Array	60.16	326	P	P	00 27 47.1	0.0
	0.2nm,0.4s,baz=126,slow=7.1,SNR=3.6						

*ISCJB **03** 00:41:57.1±0.6, 7°.52S±0°.06×119°.45E±0°.06, h279km±6km, mb4.0/19, Error ellipse: s-maj=12.3km s-min=5.4km az=42.8*
*DJA **03** 00:42:00, 7°.83S×119°.34E, h258km, mb4.5/7*
*NEIC **03** 00:42:00.4±1.2, 7°.71S×119°.40E, h306km±15km, mb4.2/7, Error ellipse: s-maj=17.5km s-min=6.9km az=51.0*
*IDC **03** 00:42:01.9±2.4, 7°.77S×119°.31E, h320km±25km, mb3.4/9, mb1 3.6/11, mb1mx3.4/19, mbtmp3.4/11, Error ellipse: s-maj=37.9km s-min=8.0km az=55.0*

ISC 03 00:41:58.5±0.5, 7°.66S±0°.05×119°.41E±0°.05, h282km±6km, n47, σ0°.82/55, mb4.0/19, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	2.18	156	P	Pn	00 42 45.9	+0.6
WSI				S	S	00 43 18.5	-3.9
MMRI	Maumere	2.96	109	P	Pn	00 42 52.1	-0.6
KHKI	Kahang-Kahang	3.83	259	P	Pn	00 43 00.9	-1.1
SRBI	Singaraja	4.18	264	P	Pn	00 43 05.1	-0.8
IGBI	Denpasar	4.38	254	P	Pn	00 43 07.6	-0.5
PWJI	Pagerwojo	7.54	267	P	Pn	00 43 46.8	+0.4
	0.4nm1μm30nm,2.1s						
PCJI	Pacitan	8.17	266	P	Pn	00 43 54.1	-0.1
	155nm,0.6s						
UGM	Wanagama	8.81	268	P	Pn	00 44 01.6	-0.5
	135nm,1.8s						
BJII	Banjamegara	9.62	271	P	Pn	00 44 13.1	+0.9
	30nm,1.2s						
FITZ	Fitzroy Crossi	12.02	150	P	Pn	00 44 42.2	+0.5
	1.0nm,0.3s,baz=338,slow=6.6,SNR=20						
FITZ				S	S	00 46 57.5	+1.8
	1.9nm,0.3s,baz=287,slow=20,SNR=8.6						
FITZ	Fitzroy Crossi	12.02	150	*e*Pn	Pn	00 44 42.0	+0.3
FITZ				*e*S	S	00 46 57.1	+1.5
FITZ	Fitzroy Crossi	12.02	150	P	Pn	00 44 42.7	+1.0
	33nm,1.0s						
KNA	Kununurra	12.19	132	P	Pn	00 44 42.8	-0.9
	1μm148nm,0.8s						
SBUM	Sibu	12.34	324	P	Pn	00 44 49.4	+3.7
KSM	Kuching	12.84	315	*e*Pn	Pn	00 44 54.0	+2.3
	9.5nm,0.8s						
MBWA	Marble Bar	13.43	179	*e*P	Pn	00 44 59.7	+0.9
MBWA				*e*S	S	00 47 27.3	0.0
KAKA	Kakadu	13.77	112	*e*P	Pn	00 45 01.6	-1.4
	56nm,0.6s						
KAKA				*e*S	S	00 47 34.9	-0.3
WRA	Warramunga Arr	18.93	132	P	P	00 45 59.8	+0.5
	1.8nm,0.3s,baz=305,slow=12,SNR=58						
WRA				S	S	00 49 18.1	-1.0
	0.3nm,0.3s,baz=295,slow=20,SNR=5.3						
WB2	Warramunga Arr	18.94	132	*e*P	P	00 45 59.7	+0.3
WB2				*e*S	S	00 49 14.8	-4.6
ASAR	Alice Springs	21.13	140	P	P	00 46 23.1	+1.0
	4.2nm,0.3s,mb4.2,baz=316,slow=8.6,SNR=70						
ASAR				S	S	00 49 56.5	-1.6
	0.4nm,0.6s,baz=324,slow=21,SNR=3.3						
STKA	Stephens Creek	31.74	142	P	P	00 47 58.0	+1.3
	1.3nm,0.6s,mb3.6,baz=312,slow=9.9,SNR=3.7						
STKA	Stephens Creek	31.74	142	*e*P	P	00 47 57.0	+0.3
	0.7nm,0.7s,mb3.3						
YHNB	Yeheng	32.19	3	P	P	00 48 01.3	+0.7
CMAR	Chiang Mai Arr	32.88	322	P	P	00 48 07.2	+0.5
	0.7nm,0.3s,mb3.6,baz=141,slow=5.8,SNR=5.0						
KSRS	Korea Array	45.58	9	P	P	00 49 51.4	+0.5
	1.6nm,0.6s,mb3.6,baz=191,slow=8.9,SNR=6.3						
LSA	Lhasa	46.02	325	P	P	00 49 54.9	+0.3
ODAN	Odare	46.27	319	*e*P	P	00 49 56.4	-0.1
	6.4nm,0.5s,mb4.2						
RAMN	Ramite	46.85	318	*e*P	P	00 50 01.3	+0.4
	7.8nm,0.5s,mb4.3						
PKI	Pulchoki	48.05	318	*e*P	P	00 50 09.7	-0.4
	7.5nm,0.4s,mb4.3						
GKN	Gorkha	48.85	318	*e*P	P	00 50 15.8	-0.4
	13nm,0.4s,mb4.6						
KOLN	Koldanda	49.39	317	*e*P	P	00 50 19.5	-0.8
	10.0nm,0.5s,mb4.4						
DANN	Dangsing	49.66	318	*e*P	P	00 50 21.8	-0.5
	26nm,0.5s,mb4.8						
ULN	Ulaanbaatar	56.35	350	*e*P	P	00 51 10.5	0.0
SONM	Songino Array	56.44	350	P	P	00 51 12.4	+1.3
	0.8nm,0.5s,mb3.4,baz=165,slow=6.0,SNR=5.3						
TLY	Talaya	60.64	349	P	P	00 51 39.6	-0.3
KBL	Kabul	63.44	315	*e*P	P	00 51 56.9	-1.8
	2.7nm,0.6s,mb4.0						
MK31	Makanchi Array	63.46	332	*e*P	P	00 51 58.8	+0.2
MKAR	Makanchi Array	63.46	332	P	P	00 51 58.7	0.0
	1.9nm,0.6s,mb3.9,baz=144,slow=7.3,SNR=16						
TKM2	Tokmak 2	64.18	326	*e*P	P	00 52 03.1	-0.3
	1.7nm,0.5s,mb3.9						
UCH	Uchtor	64.35	324	P	P	00 52 04.7	+0.2
AAK	Ala-Archa	64.62	325	*e*P	P	00 52 06.1	-0.2
	2.0nm,0.5s,mb4.0						
EKS2	Erkin-Say	65.05	324	*e*P	P	00 52 09.2	+0.1
ZALV	Zalesovo Beam	67.94	339	P	P	00 52 25.8	-1.2
	0.5nm,0.3s,mb3.6,baz=142,slow=4.9,SNR=4.0						
KURK	Kurchatov	67.98	333	P	P	00 52 27.1	-0.3
	0.7nm,0.3s,mb3.9,baz=139,slow=6.1,SNR=3.1						
PETK	Petropavlovsk-	68.69	24	P	P	00 52 32.6	+0.9
	2.2nm,0.7s,mb4.0,baz=190,slow=7.3,SNR=3.0						
BRVK	Borovoye	73.39	332	P	P	00 52 59.9	+0.2
GNI	Garni	83.35	312	*e*P	P	00 53 53.6	-0.8
	10nm,1.3s,mb4.5						

*IPEC **03** 00:51:17.5±0.3, 51°.63N×16°.15E, h0km, ML2.5/4, Error ellipse: s-maj=4.4km s-min=1.8km az=82.0*
*ISCJB **03** 00:51:17.3±0.4, 51°.49N±0°.02×16°.02E±0°.02, h0km, Error ellipse: s-maj=3.3km s-min=1.9km az=13.5*
*NEIC **03** 00:51:18.6±0.5, 51°.58N×16°.03E, h5km, ML3.0(SZGRF), ML3.0(PRU), Error ellipse: s-maj=7.1km s-min=3.6km az=203.0*
*CSEM **03** 00:51:18.5±0.1, 51°.54N×16°.01E, h2km, ML3.5/10, Error ellipse: s-maj=3.2km s-min=2.1km az=14.0*
*PRU **03** 00:51:19.2, 51°.53N×16°.03E, h0km*
*BGR **03** 00:51:19.8±0.3, 51°.52N×16°.00E, h1

CLL			*i*			00 51 58.0	
CLL			*e*Sg		Sg	00 52 19.0	-0.3
comp=Z,32nm,0.6s							
CLL	**Collm**	**1.90 264**	Pn		**Pn**	**00 51 51.1**	**-0.8**
RAC	**Raciborz**	**2.02 136**	*e*Pg		**Pg**	**00 51 56.1**	**-0.8**
RAC			*e*Sg		**Sg**	**00 52 23.9**	**+0.9**
MORC	**Moravsky Berou**	**2.02 151**	*e*Pn		**Pn**	**00 51 53.2**	**-0.4**
MORC	**Moravsky Berou**	**2.02 151**	*e*Pn		**Pn**	**00 51 52.8**	**-0.8**
MORC			*e*Sn		**Sn**	**00 52 20.0**	**+0.5**
MORC	**Moravsky Berou**	**2.02 151**	⇑*i*P		**Pn**	**00 51 53.1**	**-0.5**
MORC	**Moravsky Berou**	**2.02 151**	Pn		**Pn**	**00 51 53.2**	**-0.4**
MORC			*e*Sn		**Sn**	**00 52 20.0**	**+0.5**
MORC			S		**Sn**	**00 52 22.0**	**+2.5**
OKC	**Ostrava-Krasne**	**2.18 141**	P		**Pn**	**00 51 55.0**	**-0.8**
OKC	**Ostrava-Krasne**	**2.18 141**	*e*PN		**Pn**	**00 51 54.8**	**-1.0**
OKC			*e*PG		**Pg**	**00 51 59.1**	**-1.0**
OKC			*e*SG		**Sg**	**00 52 28.3**	**-0.1**
OKC	**Ostrava-Krasne**	**2.18 141**	P		**Pn**	**00 51 55.0**	**-0.8**
VRAC	**Vranov**	**2.27 170**	P		**Pn**	**00 51 58.3**	**+1.2**
VRAC	**Vranov**	**2.27 170**	⇓*i*P		**Pn**	**00 51 57.8**	**+0.8**
VRAC	**Vranov**	**2.27 170**	S		**Sn**	**00 52 30.6**	**+4.9**
VRAC	**Vranov**	**2.27 170**	*e*Pn		**Pn**	**00 51 57.5**	**+0.5**
VRAC	**Vranov**	**2.27 170**	P		**Pn**	**00 51 58.3**	**+1.3**
VRAC			*e*Sg		**Sg**	**00 52 30.5**	**-0.7**
comp=Z,14nm,0.2s,baz=353							
KRUC	**Moravsky**	**2.50 174**	P		**Pn**	**00 52 00.7**	**+0.5**
KRUC	**Moravsky**	**2.50 174**	*e*Pn		**Pn**	**00 52 00.7**	**+0.6**
baz=357							
KRUC			*e*Sg		**Sg**	**00 52 38.3**	**-0.3**
comp=Z,21nm,0.4s,baz=357							
TANN	**Tannenbergstha**	**2.52 245**	*e*Pn		**Pn**	**00 52 00.5**	**+0.2**
TANN			*e*Sg		**Sg**	**00 52 38.1**	**-0.9**
TANN	**Tannenbergstha**	**2.52 245**	Pn		**Pn**	**00 52 00.5**	**+0.1**
TANN			Sg		**Sg**	**00 52 38.1**	**-0.9**
WERD	**Werda**	**2.59 246**	*e*Pn		**Pn**	**00 52 01.3**	**-0.1**
WERD	**Werda**	**2.59 246**	Pn		**Pn**	**00 52 01.3**	**-0.1**
GUNZ	**Gunzen**	**2.61 244**	*e*Pn		**Pn**	**00 52 01.8**	**+0.1**
GUNZ			*e*Sg		**Sg**	**00 52 41.9**	**-0.3**
GUNZ	**Gunzen**	**2.61 244**	Pn		**Pn**	**00 52 01.8**	**+0.1**
GUNZ			Sg		**Sg**	**00 52 41.9**	**-0.3**
NKC	**Novy Kostel**	**2.61 241**	P		**Pn**	**00 52 02.0**	**+0.3**
NKC	**Novy Kostel**	**2.61 241**	*e*PG		**Pg**	**00 52 07.8**	**-0.5**
NKC			*e*SG		**Sg**	**00 52 43.5**	**+1.3**
comp=Z,72nm,0.5s							
NKC	**Novy Kostel**	**2.61 241**	P		**Pn**	**00 52 02.0**	**+0.3**
NKC	**Novy Kostel**	**2.61 241**	Pg		**Pg**	**00 52 07.8**	**-0.5**
NKC			Sg		**Sg**	**00 52 43.5**	**+1.3**
comp=Z,72nm,0.5s							
WERN	**Wernitzgruen**	**2.62 243**	*e*Pn		**Pn**	**00 52 02.3**	**+0.4**
WERN			*e*Pg		**Pg**	**00 52 09.2**	**+0.7**
WERN	**Wernitzgruen**	**2.62 243**	Pn		**Pn**	**00 52 02.3**	**+0.4**
OJC	**Ojcow**	**2.74 118**	*e*Pg		**Pg**	**00 52 09.9**	**-0.9**
OJC			*e*Sg		**Sg**	**00 52 46.0**	**-0.3**
OJC	**Ojcow**	**2.74 118**	*e*Pg		**Pg**	**00 52 10.0**	**-0.8**
OJC			*e*Sg		**Sg**	**00 52 46.6**	**+0.3**
OJC	**Ojcow**	**2.74 118**	Pg		**Pg**	**00 52 10.0**	**-0.8**
OJC			Sg		**Sg**	**00 52 46.6**	**+0.3**
KHC	**Kasperske Hory**	**2.88 214**	*e*Pn		**Pn**	**00 52 05.3**	**0.0**
KHC			*e*Sg		**Sg**	**00 52 52.0**	**+1.4**
KHC	**Kasperske Hory**	**2.88 214**	*e*PN		**Pn**	**00 52 05.1**	**-0.2**
KHC			*e*PG		**Pg**	**00 52 11.6**	**-1.8**
KHC			*e*SG		**Sg**	**00 52 49.1**	**-1.6**
comp=Z,15nm,0.4s							
KHC	**Kasperske Hory**	**2.88 214**	*e*Pn		**Pn**	**00 52 05.3**	**0.0**
KHC	**Kasperske Hory**	**2.88 214**	Pg		**Pg**	**00 52 11.6**	**-1.8**
KHC			*e*Sg		**Sg**	**00 52 52.0**	**+1.3**
MGBB	**Grossbuechelbe**	**2.88 238**	⇑*i*Pn		**Pn**	**00 52 06.0**	**+0.6**
MGBB	**Grossbuechelbe**	**2.88 238**	Pn		**Pn**	**00 52 06.0**	**+0.6**
JAVC	**Velka Javorina**	**2.89 158**	P		**Pn**	**00 52 06.7**	**+1.1**
JAVC	**Velka Javorina**	**2.89 158**	P		**Pn**	**00 52 06.7**	**+1.1**
JAVC			*e*Sg		**Sg**	**00 52 52.1**	**+0.9**
comp=Z,32nm,0.8s							
MOX	**Moxa**	**2.92 254**	*e*PN		**Pn**	**00 52 05.7**	**-0.2**
MOX			*e*PG		**Pg**	**00 52 13.9**	**-0.2**
MOX			*e*SG		**Sg**	**00 52 53.3**	**+1.4**
MOX	**Moxa**	**2.92 254**	⇑*e*Pn		**Pn**	**00 52 05.7**	**-0.2**
MOX			⇑*e*Pg		**Pg**	**00 52 13.9**	**-0.2**
MOX			*e*Sg		**Sg**	**00 52 52.6**	**+0.7**
MOX	**Moxa**	**2.92 254**	Pn		**Pn**	**00 52 05.7**	**-0.2**
MOX	**Moxa**	**2.92 254**	Pg		**Pg**	**00 52 13.9**	**-0.2**
MOX			Sg		**Sg**	**00 52 52.6**	**+0.7**
WET	**Wettzell**	**3.13 221**	*e*Pn		**Pn**	**00 52 08.9**	**+0.1**
WET			*e*Sg		**Sg**	**00 52 57.7**	**-1.2**
WET	**Wettzell**	**3.13 221**	*e*Pn		**Pn**	**00 52 08.9**	**0.0**
WET			*e*Sg		**Sg**	**00 52 57.7**	**-1.2**
WET	**Wettzell**	**3.13 221**	Pn		**Pn**	**00 52 08.9**	**0.0**
WET			Sg		**Sg**	**00 52 57.7**	**-1.2**
MODS	**Modra-Piesok**	**3.28 165**	*e*Pn		**Pn**	**00 52 10.4**	**-0.5**
MODS			*e*			00 52 20.7	
MODS			*e*Sg		**Sg**	**00 53 04.4**	**+0.8**
MODS	**Modra-Piesok**	**3.28 165**	*e*PN		**Pn**	**00 52 10.4**	**-0.5**
MODS			*e*			00 52 20.7	
MODS	**Modra-Piesok**	**3.28 165**	*e*SG		**Sg**	**00 53 04.4**	**+0.8**
MODS	**Modra-Piesok**	**3.28 165**	*e*Pn		**Pn**	**00 52 10.4**	**-0.5**
MODS			*e*Sg		**Sg**	**00 53 04.4**	**+0.8**
KOLL	**Kolacno**	**3.35 152**	*e*Pn		**Pn**	**00 52 12.7**	**+0.9**
KOLL			*e*			00 52 21.8	
KOLL			*e*Sg		**Sg**	**00 53 03.8**	**-1.9**
KOLL	**Kolacno**	**3.35 152**	*e*PN		**Pn**	**00 52 12.7**	**+0.9**
KOLL			*e*			00 52 21.8	
KOLL	**Kolacno**	**3.35 152**	*e*SG		**Sg**	**00 53 03.8**	**-1.9**
KOLL	**Kolacno**	**3.35 152**	*e*Pn		**Pn**	**00 52 12.7**	**+0.9**
KOLL			*e*Sg		**Sg**	**00 53 03.8**	**-1.9**
ZST	**Bratislava**	**3.43 168**	*e*P		**Pg**	**00 52 23.7**	**-0.2**
ZST			*e*Sg		**Sg**	**00 53 08.8**	**+0.5**
ZST	**Bratislava**	**3.43 168**	*e*		**Pg**	**00 52 23.7**	**-0.2**
ZST	**Bratislava**	**3.43 168**	*e*SG		**Sg**	**00 53 08.8**	**+0.5**
NIE	**Niedzica**	**3.48 126**	*e*P		**Pg**	**00 52 23.5**	**-1.4**
NIE			*e*S		**Sg**	**00 53 09.1**	**-0.8**
NIE	**Niedzica**	**3.48 126**	P		**Pn**	**00 52 13.5**	**0.0**
NIE	**Niedzica**	**3.48 126**	P		**Pn**	**00 52 13.5**	**-0.1**
CLZ	**Clausthal**	**3.52 277**	*e*Pn		**Pn**	**00 52 14.7**	**+0.5**
CLZ	**Clausthal**	**3.52 277**	*e*Pn		**Pn**	**00 52 14.7**	**+0.5**
CLZ	**Clausthal**	**3.52 277**	Pn		**Pn**	**00 52 14.7**	**+0.5**
VYHS	**Vyhne**	**3.56 148**	*e*Pn		**Pn**	**00 52 14.4**	**-0.3**
VYHS			*e*			00 52 27.2	
VYHS			*e*Sg		**Sg**	**00 53 11.2**	**-1.3**
VYHS	**Vyhne**	**3.56 148**	*e*PN		**Pn**	**00 52 14.4**	**-0.3**
VYHS			*e*			00 52 27.2	
VYHS	**Vyhne**	**3.56 148**	*e*SG		**Sg**	**00 53 11.2**	**-1.3**
VYHS	**Vyhne**	**3.56 148**	*e*Pn		**Pn**	**00 52 14.4**	**-0.3**
VYHS			*e*Sg		**Sg**	**00 53 11.2**	**-1.3**
GRA1	**Grafenberg Arr**	**3.57 241**	*e*Pn		**Pn**	**00 52 15.6**	**+0.7**
GRA1			*e*Sg		**Sg**	**00 53 12.6**	**-0.4**
GRA1	**Grafenberg Arr**	**3.57 241**	Pn		**Pn**	**00 52 15.6**	**+0.7**
GRA1			Sg		**Sg**	**00 53 12.6**	**-0.4**
GRF	**Grafenberg Arr**	**3.57 241**	*e*Pn		**Pn**	**00 52 15.6**	**+0.7**
GRF			*e*Sg		**Sg**	**00 53 12.6**	**-0.4**
GRF	**Grafenberg Arr**	**3.57 241**	*e*Pn		**Pn**	**00 52 15.6**	**+0.7**
GRF			*e*Sg		**Sg**	**00 53 12.6**	**-0.4**
GRF	**Grafenberg Arr**	**3.57 241**	*e*Pn		**Pn**	**00 52 15.6**	**+0.7**
GRF			*e*Sg		**Sg**	**00 53 12.6**	**-0.4**
GRFO	**Grafenberg**	**3.57 241**	*e*Pn		**Pn**	**00 52 14.5**	**-0.4**
GRFO			*e*S		**Sg**	**00 53 13.2**	**+0.2**
GRFO	**Grafenberg**	**3.57 241**	*e*Pn		**Pn**	**00 52 14.5**	**-0.4**
CONA	**Conrad Observa**	**3.62 182**	⇓*i*Pn		**Pn**	**00 52 16.2**	**+0.6**
CONA			⇑*i*Sg		**Sg**	**00 53 12.8**	**-1.8**
comp=Z,37nm,0.4s							
CONA	**Conrad Observa**	**3.62 182**	Pn		**Pn**	**00 52 16.2**	**+0.6**
CONA			Sg		**Sg**	**00 53 12.8**	**-1.8**
comp=Z,37nm,0.4s							
BSD	**Bornholm Skovb**	**3.63 350**	*i* P		**Pn**	**00 52 13.9**	**-1.8**
BSD			*e*S		**Sn**	**00 52 53.4**	**-5.9**
BSD	**Bornholm Skovb**	**3.63 350**	*i* P		**Pn**	**00 52 13.9**	**-1.8**
SNR=49							
UBBA	**Unterbreizbach**	**3.85 261**	*e*Sg		**Sg**	**00 53 20.5**	**-1.5**
UBBA	**Unterbreizbach**	**3.85 261**	Sg		**Sg**	**00 53 20.5**	**-1.5**
MOA	**Molln**	**3.87 198**	P		**Pn**	**00 52 19.5**	**+0.5**
MOA	**Molln**	**3.87 198**	⇑*i*Pn		**Pn**	**00 52 19.5**	**+0.5**
MOA			⇑*i*Sg		**Sg**	**00 53 21.5**	**-1.1**
comp=Z,16nm,0.5s							
MOA	**Molln**	**3.87 198**	Pn		**Pn**	**00 52 19.5**	**+0.5**
MOA			Sg		**Sg**	**00 53 21.5**	**-1.1**
comp=Z,16nm,0.5s							
SOP	**Sopron**	**3.88 175**	⇑*e*Pn		**Pn**	**00 52 19.7**	**+0.5**
SOP			*e*SB		**Sb**	**00 53 22.4**	**+7.3**
STHS	**Stebnicka Huta**	**3.96 121**	*e*Pn		**Pn**	**00 52 21.1**	**+0.9**
STHS			*e*			00 52 32.3	
STHS			*e*Sg		**Sg**	**00 53 26.5**	**+1.0**
STHS	**Stebnicka Huta**	**3.96 121**	*e*PN		**Pn**	**00 52 21.1**	**+0.9**
STHS			*e*			00 52 32.3	
STHS	**Stebnicka Huta**	**3.96 121**	*e*SG		**Sg**	**00 53 26.5**	**+1.0**
STHS	**Stebnicka Huta**	**3.96 121**	*e*Pn		**Pn**	**00 52 21.1**	**+0.9**
STHS			*e*Sg		**Sg**	**00 53 26.5**	**+1.0**
KECS	**Kecovo**	**4.21 135**	*e*P		**Pg**	**00 52 40.2**	**+1.3**
KECS			*e*Sg		**Sg**	**00 53 33.0**	**-0.4**
KECS	**Kecovo**	**4.21 135**	*e*		**Pg**	**00 52 40.2**	**+1.3**
KECS	**Kecovo**	**4.21 135**	*e*SG		**Sg**	**00 53 33.0**	**-0.4**
ARSA	**Arzberg**	**4.31 184**	⇑*i*Pn		**Pn**	**00 52 24.7**	**-0.4**
ARSA	**Arzberg**	**4.31 184**	Pn		**Pn**	**00 52 24.7**	**-0.4**
CRVS	**Cervenica-Dubn**	**4.39 125**	*e*P		**Pg**	**00 52 42.6**	**+0.3**
CRVS			*e*Sg		**Sg**	**00 53 38.1**	**-1.0**
CRVS	**Cervenica-Dubn**	**4.39 125**	*e*		**Pg**	**00 52 42.6**	**+0.3**
CRVS	**Cervenica-Dubn**	**4.39 125**	*e*SG		**Sg**	**00 53 38.1**	**-1.0**
PSZ	**Piszkesteto**	**4.42 144**	⇑*i*P		**Pn**	**00 52 27.1**	**+0.6**
PSZ	**Piszkesteto**	**4.42 144**	⇑*i*P		**Pn**	**00 52 27.1**	**+0.6**
KWP	**Kalwaria Pacla**	**4.68 112**	*e*Pn		**Pn**	**00 52 29.6**	**-0.5**
KWP			*e*Pg		**Pg**	**00 52 46.2**	**-1.6**
KWP			*e*Sg		**Sg**	**00 53 51.1**	**+2.7**
KWP	**Kalwaria Pacla**	**4.68 112**	⇑*i*P		**Pg**	**00 52 44.2**	**-3.6**
KWP	**Kalwaria Pacla**	**4.68 112**	S		**Sg**	**00 53 43.3**	**-5.1**
KWP	**Kalwaria Pacla**	**4.68 112**	*e*Pn		**Pn**	**00 52 29.5**	**-0.5**
KBA	**Koelnbreinsper**	**4.80 202**	P		**Pn**	**00 52 32.8**	**+1.0**
KBA	**Koelnbreinsper**	**4.80 202**	⇑*i*Pn		**Pn**	**00 52 32.7**	**+1.0**
KBA			⇑*i*Sg		**Sg**	**00 53 51.2**	**-1.2**
comp=Z,11nm,0.5s							
KBA	**Koelnbreinsper**	**4.80 202**	Pn		**Pn**	**00 52 32.7**	**+0.9**
KBA			Sg		**Sg**	**00 53 51.2**	**-1.2**
comp=Z,11nm,0.5s							
PKSM	**Moragy**	**5.61 161**	⇓*i*P		**Pn**	**00 52 43.7**	**+0.8**
PKSM	**Moragy**	**5.61 161**	⇓*i*P		**Pn**	**00 52 43.7**	**+0.8**
DRGR		**6.47 135**	⇑*i*P		**Pn**	**00 52 58.2**	**+3.5**
BURAR	**Bucovina Array**	**7.16 120**	⇑*i*P		**Pn**	**00 53 04.4**	**+0.3**
BURAR	**Bucovina Array**	**7.16 120**	⇑*i*P		**Pn**	**00 53 04.4**	**+0.3**

MAN 03 00:53:53, 17°.31N×119°.67E, h15km, mb4.1, ML3.0, MS2.7, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.95**	**166**	*e*P	Pb	00 54 10.7	-0.5
BOLP				*e*S	Sb	00 54 19.4	-4.2
SIPP	**Brgy, Tapao**	**0.97**	**51**	⇓*i*P	Pb	00 54 21.4	+10
ABRA	**Dolores**	**1.05**	**71**	*e*P	Pb	00 54 12.0	-0.9
SCZP	**Santa Cruz**	**1.54**	**171**	*e*P	Pn	00 54 19.2	-0.8
APYP	**Conner**	**1.60**	**70**	*e*P	Pn	00 54 20.0	-0.7
CVP	**Callao Caves**	**2.09**	**79**	⇑*e*P	Pn	00 54 27.6	+0.1
CVP				*i* S	Sn	00 54 52.6	-0.6
BALP	**Baler**	**2.40**	**130**	*e*P	Pn	00 54 32.8	+1.0

*ISK **03** 01:23:18.8, 37°.02N×29°.22E, h5km, MD2.8*
*ISCJB **03** 01:23:20.0±0.7, 36°.99N±0°.04×29°.21E±0°.04, h10km, Error ellipse: s-maj=6.1km s-min=4.7km az=13.5*
*DDA **03** 01:23:19.5, 37°.00N×29°.21E, h7km±4km, Md2.9*
*CSEM **03** 01:23:19.9±0.3, 37°.03N×29°.22E, h10km, MD2.8, Error ellipse: s-maj=8.3km s-min=5.7km az=16.0*

ISC 03 01:23:20.0±0.9, 36°.99N±0°.04×29°.19E±0°.05, h4km±9km, n24, σ0s78/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*PG	**Pg**	**01 23 24.8**	**-1.0**
GLHS				*e*SG	**Sg**	**01 23 30.2**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*Pg	**Pg**	**01 23 24.8**	**-1.0**
GLHS				*e*Sg	**Sg**	**01 23 30.2**	**+0.5**
GOLH	**Golhisar**	**0.39**	**51**	*i* P	**Pg**	**01 23 25.7**	**-1.7**
GOLH				*i* S	**Sg**	**01 23 32.4**	**-0.1**
GOLH	**Golhisar**	**0.39**	**51**	*i* P	**Pg**	**01 23 25.7**	**-1.7**
GOLH				*i* S	**Sg**	**01 23 32.4**	**-0.1**
ELL	**Elmali**	**0.63**	**113**	*e*PG	**Pg**	**01 23 31.3**	**-0.8**
ELL				*e*SG	**Sg**	**01 23 42.0**	**+1.7**
ELL	**Elmali**	**0.63**	**113**	*e*Pg	**Pg**	**01 23 31.3**	**-0.8**
ELL				*e*Sg	**Sg**	**01 23 42.0**	**+1.8**
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	**Pg**	**01 23 33.3**	**-0.2**
DNZL				*i* S	**Sg**	**01 23 43.8**	**+1.2**
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	**Pg**	**01 23 33.3**	**-0.2**
DNZL				*i* S	**Sg**	**01 23 43.8**	**+1.1**
YER	**Yerkesik**	**0.73**	**281**	*e*PG	**Pg**	**01 23 34.5**	**+0.4**
YER	**Yerkesik**	**0.73**	**281**	*e*Pg	**Pg**	**01 23 34.5**	**+0.4**
DENT	**Denizli**	**0.77**	**351**	*e*PG	**Pg**	**01 23 34.2**	**-0.6**
DENT	**Denizli**	**0.77**	**351**	*e*Pg	**Pg**	**01 23 34.2**	**-0.6**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pg**	**01 23 37.9**	**0.0**
KORT				*i* S	**Sg**	**01 23 54.6**	**+4.6**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pg**	**01 23 37.9**	**0.0**
MLSB	**Milas**	**1.17**	**285**	*e*PN	**Pn**	**01 23 42.6**	**-0.5**
MLSB	**Milas**	**1.17**	**285**	*e*Pn	**Pn**	**01 23 42.7**	**-0.4**
DAT	**Datca**	**1.32**	**259**	*e*PN	**Pn**	**01 23 45.7**	**+0.5**
DAT	**Datca**	**1.32**	**259**	*e*Pn	**Pn**	**01 23 45.7**	**+0.5**
KHL	**Karahalli**	**1.35**	**11**	*e*PN	**Pn**	**01 23 45.8**	**+0.1**
KHL	**Karahalli**	**1.35**	**11**	*e*Pn	**Pn**	**01 23 45.8**	**+0.1**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**01 23 46.1**	**-0.2**
KHAL				*i* S	**Sg**	**01 24 05.5**	**+0.6**
KHAL	**Karahalli**	**1.40**	**10**	*i* P	**Pn**	**01 23 46.1**	**-0.2**
KHAL				*i* S	**Sg**	**01 24 05.4**	**+0.5**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*PN	**Pn**	**01 23 48.7**	**0.0**
KULA	**Kula-Manisa**	**1.57**	**345**	*e*Pn	**Pn**	**01 23 48.7**	**0.0**

BUC 03 01:25:18.8±1.9, 45°.64N×27°.27E, h45km±14km, MD1.8/6, 13C-3D, Error ellipse: s-maj=15.0km s-min=7.7km az=97.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETR		**0.09**	**344**	⇑*i*P	Pn	01 25 26.3	+0.3
PETR				*i* S	Sn	01 25 31.0	0.0
PETR		**0.09**	**344**	⇑*i*P	Pn	01 25 26.3	+0.3
PETR		**0.09**	**344**	S	Sn	01 25 31.0	0.0
PETR		**0.09**	**344**	⇑*i*P	Pn	01 25 26.3	+0.3
ODB	**Odobesti**	**0.20**	**313**	⇑*i*P	Pn	01 25 26.4	-0.2
ODB				*i* S	Sn	01 25 31.3	-0.8
ODB	**Odobesti**	**0.20**	**313**	⇑*i*P	Pn	01 25 26.4	-0.2
ODB	**Odobesti**	**0.20**	**313**	S	Sn	01 25 31.3	-0.8
ODB	**Odobesti**	**0.20**	**313**	⇑*i*P	Pn	01 25 26.4	-0.2
GRER		**0.33**	**219**	⇑*i*P	Pn	01 25 28.0	+0.3
GRER				*i* S	Sn	01 25 34.9	+0.9
GRER		**0.33**	**219**	⇑*i*P	Pn	01 25 28.0	+0.3
GRER		**0.33**	**219**	S	Sn	01 25 34.9	+0.9
VRI	**Vrincioaia**	**0.44**	**302**	⇓*i*P	Pn	01 25 29.3	+0.3
VRI				*i* S	Sn	01 25 35.5	-0.7
VRI	**Vrincioaia**	**0.44**	**302**	⇓*i*P	Pn	01 25 29.3	+0.3
VRI	**Vrincioaia**	**0.44**	**302**	S	Sn	01 25 35.5	-0.7
VRI	**Vrincioaia**	**0.44**	**302**	⇓*i*P	Pn	01 25 29.3	+0.3
PLOR	**Plostina**	**0.48**	**297**	⇑*i*P	Pn	01 25 30.2	+0.7
PLOR				*i* S	Sn	01 25 38.2	+1.1
PLOR	**Plostina**	**0.48**	**297**	⇑*i*P	Pn	01 25 30.2	+0.7
PLOR	**Plostina**	**0.48**	**297**	S	Sn	01 25 38.2	+1.1
PLOR	**Plostina**	**0.48**	**297**	⇑*i*P	Pn	01 25 30.2	+0.7
MLR	**Muntele Rosu**	**0.94**	**262**	⇑*i*P	Pn	01 25 35.6	+0.1
MLR				*i* S	Sn	01 25 49.7	+1.9
MLR	**Muntele Rosu**	**0.94**	**262**	⇑*i*P	Pn	01 25 35.6	+0.1
MLR	**Muntele Rosu**	**0.94**	**262**	S	Sn	01 25 49.7	+1.9

*ISCJB **03** 01:34:55.1±0.7, 4°.14N±0°.06×76°.39W±0°.07, h162km±10km, mb3.5/3, Error ellipse: s-maj=11.0km s-min=9.2km az=19.2*
*NEIC **03** 01:34:55.6±0.8, 4°.16N×76°.39W, h146km±10km, Error ellipse: s-maj=14.5km s-min=12.2km az=96.0*
*IDC **03** 01:34:58.7±4.4, 4°.27N×76°.16W, h173km±44km, mb3.2/3, mb1 3.3/3, mb1mx3.0/18, mbtmp3.1/3, Error ellipse: s-maj=73.9km s-min=18.9km az=71.0*

ISC 03 01:34:56.3±0.7, 4°.15N±0°.06×76°.41W±0°.06, h152km±10km, n10, σ0s95/12, mb3.5/3, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.19**	**71**	P	**Pn**	**01 35 34.0**	**+0.3**
10.0nm,0.3s,baz=261,slow=19,SNR=22							
ROSC				S	**Sn**	**01 36 03.2**	**+0.7**
11nm,0.3s,baz=270,slow=20,SNR=8.4							
OTAV	**Otavalo**	**4.39**	**208**	*e*Pn	**Pn**	**01 36 00.7**	**-1.1**
OTAV				*e*Sn	**Sn**	**01 36 52.8**	**+0.1**
BCIP	**Isla Barro Col**	**6.04**	**326**	*e*Pn	**Pn**	**01 36 23.5**	**0.0**
24nm,0.3s							
BCIP				*e*Sn	**Sn**	**01 37 32.5**	**+0.7**
SDV	**Santo Domingo**	**7.42**	**50**	*e*Pn	**Pn**	**01 36 39.8**	**-2.2**
SDV				*e*Sn	**Sn**	**01 37 58.8**	**-6.2**
LPAZ	**La Paz**	**21.89**	**158**	P	**P**	**01 39 39.0**	**+1.7**
0.5nm,0.5s,mb3.2,baz=334,slow=8.7,SNR=4.9							
SIV	**San Ignacio**	**25.11**	**143**	P	**P**	**01 40 06.9**	**-0.3**
0.9nm,0.4s,mb3.7,baz=336,slow=11,SNR=8.9							
YKA	**Yellowknife Ar**	**64.69**	**341**	P	**P**	**01 45 17.6**	**0.0**
0.6nm,0.7s,mb3.5,baz=136,slow=6.1,SNR=11							
YKA	**Yellowknife Ar**	**64.69**	**341**	P	**P**	**01 45 17.6**	**0.0**
ASAR	**Alice Springs**	**144.91**	**234**	PKPbc	PKPdf	01 54 16.1	0.0
0.3nm,0.5s,baz=121,slow=3.6,SNR=4.1							
WRA	**Warramunga Arr**	**146.18**	**240**	PKPbc	PKPbc	01 54 19.7	0.0
0.2nm,0.3s,baz=108,slow=2.7,SNR=3.0							

*ISCJB **03** 01:40:15.8±3.6, 13°.20S±0°.08×78°.14W±0°.09, h32km±26km, mb4.0/11, Error ellipse: s-maj=14.5km s-min=13.0km az=170.7*
*NEIC **03** 01:40:18.8±2.5, 13°.10S×78°.02W, h38km±19km, mb4.4/6, Error ellipse: s-maj=33.3km s-min=10.4km az=48.0*
*IDC **03** 01:40:19.0±5.3, 13°.13S×78°.05W, h40km±39km, mb3.5/5, mb1 3.8/7, mb1mx3.7/16, mbtmp3.6/7, ML3.6/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=51.4km s-min=25.5km az=38.0*

ISC 03 01:40:19.1±2.2, 13°.25±0°.1×78°.0W±0°.1, h41km±18km, n19, σ0s59/19, mb4.0/11, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.66**	**45**	Pn	**Pn**	**01 40 44.8**	**-0.9**
27nm,0.3s,baz=232,slow=11,SNR=65							
NNA				Sn	**Sn**	**01 41 06.0**	**+0.3**
141nm,0.3s,baz=312,slow=16,SNR=27							
ATAH	**Atahualpa**	**6.00**	**357**	Pn	**Pn**	**01 41 46.4**	**+1.0**
4.2nm,0.3s,baz=152,slow=8.2,SNR=24							
ATAH				Sn	**Sn**	**01 42 53.0**	**+0.2**
3.0nm,0.3s,baz=205,slow=15,SNR=3.7							
LPAZ	**La Paz**	**10.08**	**109**	Pn	**Pn**	**01 42 41.7**	**+0.3**
0.1nm,0.3s,baz=287,slow=11,SNR=4.4							
LPAZ	**La Paz**	**10.08**	**109**	*e*Pn	**Pn**	**01 42 41.6**	**+0.2**
3.7nm,1.2s							
OTAV	**Otavalo**	**13.32**	**358**	*e*Pn	**Pn**	**01 43 24.7**	**-1.0**
ROSC	**El Rosal**	**18.27**	**12**	LR	LR	01 52 24.1	
comp=Z,56nm,21.5s,baz=187,slow=40							
HKT	**Hockley**	**46.16**	**338**	*e*P	**P**	**01 48 40.3**	**+0.5**
4.6nm,0.9s,mb4.4							
TXAR	**Lajitas Array**	**48.95**	**330**	P	**P**	**01 49 01.3**	**-0.2**
0.4nm,0.8s,mb3.5,baz=160,slow=8.2,SNR=4.9							
ANMO	**Albuqu

ISCJB ***03*** *02:21:37.9±0.5, 5°57'N±0°06×73°96'W±0°05, h128km±5km, mb3.8/23, Error ellipse: s-maj=11.1km s-min=7.3km az=141.1*
IDC ***03*** *02:21:38.5±0.6, 5°50'N×73°95'W, h121km±5km, mb3.5/9, mb1 3.8/1, mb1mx3.6/21, mbtmp3.6/11, MS2.9/1, Ms1 3.0/1, ms1mx2.5/24, Error ellipse: s-maj=19.6km s-min=13.1km az=83.0*
NEIC ***03*** *02:21:38.7±0.4, 5°50'N×73°98'W, h125km±4km, mb3.9/16, Error ellipse: s-maj=6.5km s-min=6.1km az=69.0*
ISC 03 02:21:38.9±0.5, 5°53'N±0°06×73°92'W±0°06, h124km±5km, n34, σ0°61/35, mb4.0/23, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.78**	**211**	P	**Pn**	**02 21 59.6**	**+0.2**
	489nm,0.3s,baz=320,slow=2.2,SNR=925						
ROSC				S	**Sn**	**02 22 15.1**	**+0.3**
	584nm,0.3s,baz=97,slow=19,SNR=34						
SDV	**Santo Domingo**	**4.67**	**44**	*e*Pn	**Pn**	**02 22 48.8**	**+1.3**
SDV				*e*Sn	**Sn**	**02 23 41.4**	**+0.6**
BCIP	**Isla Barro Col**	**6.89**	**302**	*e*Pn	**Pn**	**02 23 15.0**	**-2.5**
OTAV	**Otavalo**	**6.93**	**221**	*e*Pn	**Pn**	**02 23 18.4**	**+0.3**
	3.7nm,0.6s						
PCRV	**Puerto La Cruz**	**10.29**	**63**	P	**Pn**	**02 24 03.3**	**0.0**
	1.5nm,0.3s,baz=170,slow=4.6,SNR=6.3						
PCRV				S	**Sn**	**02 25 55.1**	**-1.8**
	0.9nm,0.3s,baz=336,slow=19,SNR=4.8						
ATAH	**Atahualpa**	**13.35**	**200**	P	**Pn**	**02 24 43.3**	**-0.3**
	0.5nm,0.3s,baz=83,slow=8.1,SNR=4.0						
LPAZ	**La Paz**	**22.42**	**165**	P	**P**	**02 26 27.1**	**-0.5**
	0.8nm,0.4s,mb3.4,baz=340,slow=9.3,SNR=4.8						
LPAZ				pP		02 26 52.5	
	2.5nm,0.7s,baz=341,slow=10.0,SNR=5.7						
LPAZ				LR	LR	02 36 07.9	
	comp=Z,29nm,20.0s,baz=182,slow=39						
LPAZ	**La Paz**	**22.42**	**165**	*e*P	**P**	**02 26 27.6**	**-0.1**
	1.2nm,0.6s,mb3.4						
LPAZ				*e*pP		02 26 53.5	
LPAZ				LR	LR	02 36 07.9	
SIV	**San Ignacio**	**24.88**	**149**	P	**P**	**02 26 50.0**	**-0.3**
	0.8nm,0.6s,mb3.4,baz=301,slow=8.6,SNR=6.1						
SIV				pP		02 27 15.6	
	1.2nm,0.7s,baz=340,slow=9.2,SNR=3.2						
WVT	**Waverly**	**33.03**	**339**	*e*P	**P**	**02 28 02.2**	**-0.1**
	5.8nm,1.0s,mb4.4						
TXAR	**Lajitas Array**	**36.75**	**314**	P	**P**	**02 28 34.5**	**+0.1**
	0.1nm,0.4s,mb3.1,baz=129,slow=7.8,SNR=4.6						
TXAR				PcP	PcP	02 30 54.1	-0.2
	0.2nm,0.6s,baz=141,slow=6.4,SNR=3.7						
AMTX	**Amarillo**	**38.87**	**322**	*e*P	**P**	**02 28 51.9**	**-0.3**
	8.5nm,0.4s,mb4.9						
MNTX	**Cornudas Mount**	**39.30**	**315**	*e*P	**P**	**02 28 56.0**	**+0.1**
	1.3nm,0.6s,mb3.9						
ARUT	**Antelope Range**	**48.18**	**317**	*e*P	**P**	**02 30 05.9**	**-0.9**
	0.9nm,0.5s,mb3.9						
BW06	**Boulder Array**	**48.66**	**325**	*e*P	**P**	**02 30 10.5**	**+0.1**
	1.3nm,0.8s,mb3.9						
PDAR	**Pinedale Array**	**48.66**	**325**	P	**P**	**02 30 10.6**	**+0.2**
	0.6nm,0.5s,mb3.8,baz=120,slow=8.1,SNR=7.6						
DUG	**Dugway**	**49.08**	**320**	*e*P	**P**	**02 30 13.8**	**+0.1**
	1.9nm,0.8s,mb4.1						
HWUT	**Hardware Ranch**	**49.13**	**323**	*e*P	**P**	**02 30 14.3**	**+0.4**
	1.7nm,0.8s,mb4.0						
SCHQ	**Schefferville**	**49.49**	**5**	P	**P**	**02 30 16.8**	**+0.3**
	2.4nm,0.5s,mb4.4,baz=188,slow=6.5,SNR=8.8						
LOHW	**Long Hollow**	**49.79**	**325**	*e*P	**P**	**02 30 19.0**	**0.0**
	1.6nm,0.8s,mb4.0						
TPAW	**Teton Pass**	**49.91**	**325**	*e*P	**P**	**02 30 20.3**	**+0.4**
	1.9nm,0.7s,mb4.1						
MOOW	**Moose Ponds**	**49.96**	**325**	*e*P	**P**	**02 30 20.3**	**0.0**
	1.1nm,0.8s,mb3.8						
IMW	**Indian Meadow**	**50.16**	**325**	*e*P	**P**	**02 30 22.1**	**+0.3**
	1.6nm,0.5s,mb4.2						
BOZ	**Bozeman (W)**	**51.64**	**327**	*e*P	**P**	**02 30 32.7**	**-0.1**
	1.0nm,0.6s,mb4.0						
HLID	**Hailey**	**51.98**	**323**	*e*P	**P**	**02 30 35.9**	**+0.5**
	0.8nm,0.8s,mb3.8						
WVOR	**Wild Horse Val**	**53.99**	**320**	*e*P	**P**	**02 30 50.0**	**-0.2**
	1.3nm,0.6s,mb4.1						
YKA	**Yellowknife Ar**	**64.20**	**340**	P	**P**	**02 31 59.8**	**-0.4**
	3.9nm,0.5s,mb4.5,baz=132,slow=6.2,SNR=123						
YKA				pP	pP	02 32 29.3	-1.1
	0.6nm,0.5s,baz=132,slow=6.5,SNR=2.9						
YKA	**Yellowknife Ar**	**64.20**	**340**	P	**P**	**02 31 59.8**	**-0.4**
YKA				pP	pP	02 32 29.3	-1.1
ILAR	**Eielson Array**	**77.80**	**335**	P	**P**	**02 33 22.2**	**+0.1**
	0.8nm,0.7s,mb3.6,baz=109,slow=4.5,SNR=8.8						
NOA	**NORSAR Array B**	**82.84**	**29**	P	**P**	**02 33 49.9**	**+0.7**
	2.3nm,1.1s,mb3.9,baz=284,slow=6.8,SNR=2.4						
FINES	**FINESS Array B**	**89.95**	**28**	P	**P**	**02 34 24.1**	**+0.2**
	1.2nm,0.8s,mb4.1,baz=302,slow=8.0,SNR=2.9						
BUR08	**Bucovina Ar. S**	**92.08**	**42**	*e*P	**P**	**02 34 34.2**	**+0.1**
ASAR	**Alice Springs**	**147.71**	**233**	PKPbc	PKPbc	02 41 08.6	-1.3
	0.5nm,0.5s,baz=112,slow=4.3,SNR=6.1						
ASAR				PKPab	PKPab	02 41 13.0	+0.6
	0.3nm,0.3s,baz=111,slow=3.7,SNR=4.3						
WRA	**Warramunga Arr**	**149.01**	**240**	PKPbc	PKPbc	02 41 12.4	-1.0
	0.7nm,0.4s,baz=111,slow=2.7,SNR=146						
WRA				PKPab	PKPab	02 41 16.8	-1.0
	0.6nm,0.3s,baz=119,slow=2.9,SNR=5.3						

BJI ***03*** *02:22:45.0, 37°38'N×38°15'E, h15km, mB4.8/17, mb4.7/30, Ms4.8/21, Ms7 4.4/20*
DDA ***03*** *02:22:46.1, 37°44'N×38°60'E, h24km±1km, Ml4.9*
NEIC ***03*** *02:22:47.0, 37°51'N×38°50'E, h6km, mb4.6/54, MS4.1/2, ML5.1(ISK), ML4.5(NIC), After ISK.*
NEIC Minor damage in the Adiyaman area.
IDC ***03*** *02:22:47.4±0.5, 37°51'N×38°58'E, h0km, mb4.2/19, mb1 4.2/27, mb1mx4.2/31, mbtmp4.2/27, ML4.1/7, MS4.2/27, Ms1 4.2/27, ms1mx4.2/37, Error ellipse: s-maj=11.3km s-min=8.3km az=148.0*
MOS ***03*** *02:22:47.1±1.3, 37°47'N×38°56'E, h10km, mb4.6/52, Error ellipse: s-maj=4.7km s-min=3.2km az=115.4*
CSEM ***03*** *02:22:47.6±0.1, 37°47'N×38°61'E, h2km, mb4.7/42, Ms3.9, Mw4.2, Error ellipse: s-maj=2.5km s-min=2.0km az=110.0*
ISCJB ***03*** *02:22:47.2±0.1, 37°461'N±0°010×38°58'E±0°01, h10km, mb4.5/98, MS4.2/46, Error ellipse: s-maj=1.6km s-min=1.3km az=42.9*
ISK ***03*** *02:22:47.9, 37°51'N×38°50'E, h7km, ML5.1*
NIC ***03*** *02:22:48.4±0.1, 37°59'N×38°57'E, h15km, mb4.8, ML4.5, MW3.5*
NSSC ***03*** *02:22:48, 37°45'N×38°67'E, h13km±2km*
GCMT ***03*** *02:22:52.0±0.3, 37°51'N×38°44'E, h18km±1km, MWS.0, Moment Tensor Solution. s25,c26; s77,c127; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.35±.13; $M_{\theta\theta}$-3.27±.12; $M_{\phi\phi}$3.62±.12; $M_{r\theta}$0.84±.29; $M_{\theta\phi}$-0.59±.10; $M_{\phi r}$0.05±.24; Best double couple: $M_0$3.60000×10^{16} NP1:ϕ_s219.00000°, δ79.00000°, λ-10.00000°. NP2:ϕ_s311.00000°, δ80.00000°, λ-169.00000°. Principal axes: T 3.6700, Plg0.0000°, Azm85.0000°; N -0.1300, Plg75.0000°, Azm354.0000°; P -3.5400, Plg15.0000°, Azm175.0000°; Data Used: II IU CN IC G.*
ISC 03 02:22:48.8±0.1, 37°46'N±0°01×38°60'E±0°01, h10km, (h16km±4.4km:pP-P), n863, σ1°23/972, mb4.5/98, MS4.2/46, 57C-38D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.24**	**272**	⇑*i*P	**Pg**	**02 22 51.5**	**-2.3**
ATAB				*i* S	**Sg**	**02 22 55.1**	**-1.9**
ATAB	**Bozova**	**0.24**	**272**	*i* P	**Pg**	**02 22 51.5**	**-2.2**
ATAB				*i* S	**Sg**	**02 22 55.1**	**-1.9**
GZT	**Gaziantep**	**0.83**	**263**	⇑*i*P	**Pg**	**02 23 02.3**	**-2.5**
MALT	**Malatya**	**0.86**	**351**	PG	**Pg**	**02 23 04.0**	**-1.4**
MALT				SG	**Sg**	**02 23 15.7**	**-0.9**
MALT	**Malatya**	**0.86**	**351**	Pg	**Pg**	**02 23 02.9**	**-2.5**
MALT	**Malatya**	**0.86**	**351**	P	**Pg**	**02 23 02.9**	**-2.5**
MALT	**Malatya**	**0.86**	**351**	*i* Pg	**Pg**	**02 23 04.0**	**-1.4**
MALT				*i* Sg	**Sg**	**02 23 15.7**	**-0.9**
MYA	**Malataya**	**0.87**	**351**	PG	**Pg**	**02 23 04.0**	**-1.6**
MYA	**Malataya**	**0.87**	**351**	Pg	**Pg**	**02 23 04.0**	**-1.6**
MYA	**Malataya**	**0.87**	**351**	*i* Pg	**Pg**	**02 23 04.0**	**-1.6**
AKCD	**Akcadag**	**0.99**	**328**	⇓*i*P	**Pg**	**02 23 06.2**	**-1.7**
AKCD				*i* S	**Sg**	**02 23 20.3**	**-0.4**
AKCD	**Akcadag**	**0.99**	**328**	*i* P	**Pg**	**02 23 06.2**	**-1.6**
AKCD				*i* S	**Sg**	**02 23 20.3**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.07**	**31**	PG	**Pg**	**02 23 08.6**	**-0.9**
SVRC				SG	**Sg**	**02 23 23.7**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.07**	**31**	*i* Pg	**Pg**	**02 23 08.6**	**-0.9**
SVRC				*i* Sg	**Sg**	**02 23 23.7**	**+0.3**
ELZG	**Elazig**	**1.08**	**16**	⇓*i*P	**Pg**	**02 23 07.7**	**-1.9**
ELZG				*i* S	**Sg**	**02 23 23.9**	**+0.3**
ELZG	**Elazig**	**1.08**	**16**	*i* P	**Pg**	**02 23 07.7**	**-1.9**
ELZG				*i* S	**Sg**	**02 23 23.9**	**+0.3**
GAZ	**Gaziantep**	**1.14**	**256**	PN	**Pg**	**02 23 09.2**	**-1.6**
GAZ	**Gaziantep**	**1.14**	**256**	Pn	**Pg**	**02 23 09.2**	**-1.5**
GAZ	**Gaziantep**	**1.14**	**256**	*i* Pn	**Pg**	**02 23 09.2**	**-1.5**
DRBT	**Darb Altahta**	**1.15**	**122**	⇓P	**Pn**	**02 23 06.0**	**-4.9**
DRBT	**Darb Altahta**	**1.15**	**122**	⇓*i*P	**Pn**	**02 23 06.0**	**-4.9**
DIYA	**Diyarbakir**	**1.29**	**69**	⇑*i*P	**Pn**	**02 23 11.8**	**-1.2**
DIYA				*i* S	**Sn**	**02 23 29.2**	**-1.1**
DIYA	**Diyarbakir**	**1.29**	**69**	*i* P	**Pn**	**02 23 11.8**	**-1.2**
DIYA				*i* S	**Sn**	**02 23 29.2**	**-1.1**
KMRS	**Kahramanmaras**	**1.35**	**272**	PN	**Pn**	**02 23 12.3**	**-1.4**
KMRS	**Kahramanmaras**	**1.35**	**272**	*i* Pn	**Pn**	**02 23 12.3**	**-1.4**
SLMH	**Al Salmeh**	**1.36**	**203**	⇓P	**Pn**	**02 23 12.0**	**-1.8**
SLMH	**Al Salmeh**	**1.36**	**203**	⇓*i*P	**Pn**	**02 23 12.7**	**-1.1**
KUZU	**Kuzuini**	**1.40**	**241**	⇑*i*P	**Pn**	**02 23 12.5**	**-1.9**
KUZU				*i* S	**Sn**	**02 23 32.4**	**-0.4**
KUZU	**Kuzuini**	**1.40**	**241**	*i* P	**Pn**	**02 23 12.5**	**-1.8**
KUZU				*i* S	**Sn**	**02 23 32.4**	**-0.4**
PTK	**Pertek**	**1.56**	**24**	PN	**Pn**	**02 23 16.8**	**+0.2**
PTK	**Pertek**	**1.56**	**24**	Pn	**Pn**	**02 23 16.7**	**+0.1**
PTK	**Pertek**	**1.56**	**24**	*i* Pn	**Pn**	**02 23 16.8**	**+0.2**
SFNV	**Sufian**	**1.60**	**130**	⇑P	**Pn**	**02 23 15.0**	**-2.2**
SFNV				⇑S	**Sn**	**02 23 35.0**	**-2.9**
SFNV	**Sufian**	**1.60**	**130**	⇑*i*P	**Pn**	**02 23 15.6**	**-1.6**
SFNV				⇑*i*S	**Sn**	**02 23 35.7**	**-2.2**
MNKR	**ALMNKUR**	**1.61**	**160**	⇑P	**Pn**	**02 23 16.0**	**-1.3**
MNKR				⇑S	**Sn**	**02 23 37.0**	**-1.1**
MNKR	**ALMNKUR**	**1.61**	**160**	⇑*i*P	**Pn**	**02 23 16.1**	**-1.2**
MNKR				⇑*i*S	**Sn**	**02 23 37.0**	**-1.1**
KBSD	**Kabsdagh**	**1.62**	**106**	⇑P	**Pn**	**02 23 15.0**	**-2.4**
KBSD	**Kabsdagh**	**1.62**	**106**	⇑*i*P	**Pn**	**02 23 15.7**	**-1.7**
MARD	**Mardin**	**1.75**	**94**	⇑*i*P	**Pn**	**02 23 16.5**	**-2.6**
MARD				*i* S	**Sn**	**02 23 38.5**	**-2.9**
DRWC	**Darouich**	**1.76**	**242**	⇓P	**Pn**	**02 23 17.0**	**-2.3**
DRWC				⇑S	**Sn**	**02 23 43.0**	**+1.3**
DRWC	**Darouich**	**1.76**	**242**	⇓*i*P	**Pn**	**02 23 17.7**	**-1.6**
DRWC				⇑*i*S	**Sn**	**02 23 43.3**	**+1.6**
JHLN	**Al Jahlan**	**1.79**	**184**	⇓P	**Pn**	**02 23 18.0**	**-1.8**
JHLN				⇑S	**Sn**	**02 23 42.0**	**-0.6**
JHLN	**Al Jahlan**	**1.79**	**184**	⇓*i*P	**Pn**	**02 23 18.7**	**-1.1**
JHLN				⇑*i*S	**Sn**	**02 23 42.2**	**-0.4**
ANDN	**Andirin**	**1.79**	**274**	⇑*i*P	**Pn**	**02 23 17.8**	**-2.1**
ANDN				*i* S	**Sn**	**02 23 41.5**	**-1.1**
ANDN	**Andirin**	**1.79**	**274**	*i* P	**Pn**	**02 23 17.8**	**-2.0**
ANDN				*i* S	**Sn**	**02 23 41.5**	**-1.1**
KEMA	**Kemaliye**	**1.81**	**357**	⇓*i*P	**Pn**	**02 23 19.5**	**-0.5**
KEMA				*i* S	**Sn**	**02 23 43.7**	**+0.8**
KEMA	**Kemaliye**	**1.81**	**357**	*i* P	**Pn**	**02 23 19.5**	**-0.5**
KEMA				*i* S	**Sn**	**02 23 43.7**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.93**	**310**	PN	**Pn**	**02 23 20.5**	**-1.2**
SARI	**SarD1z-Kayseri**	**1.93**	**310**	*i* Pn	**Pn**	**02 23 20.5**	**-1.2**
BINT	**Bingol**	**2.05**	**46**	*e*PN	**Pn**	**02 23 23.3**	**-0.1**
BINT	**Bingol**	**2.05**	**46**	Pn	**Pn**	**02 23 23.3**	**-0.1**
BINT	**Bingol**	**2.05**	**46**	*e*Pn	**Pn**	**02 23 23.3**	**-0.1**
COBT	**Iskenderun**	**2.10**	**244**	⇑*i*P	**Pn**	**02 23 20.8**	**-3.1**
COBT	**Iskenderun**	**2.10**	**244**	*i* P	**Pn**	**02 23 20.8**	**-3.2**
BEST	**Besiri**	**2.17**	**78**	⇑*i*P	**Pn**	**02 23 23.5**	**-1.4**
BEST				*i* S	**Sg**	**02 23 55.0**	**-3.4**
KOZT	**Kozan**	**2.20**	**271**	*e*PN	**Pn**	**02 23 24.9**	**-0.5**
KOZT	**Kozan**	**2.20**	**271**	*e*Pn	**Pn**	**02 23 24.9**	**-0.5**
BTCH	**Batrach**	**2.23**	**231**	⇓P	**Pn**	**02 23 25.0**	**-0.8**
BTCH				⇑S	**Sn**	**02 23 53.0**	**-0.4**
BTCH	**Batrach**	**2.23**	**231**	⇓*i*P	**Pn**	**02 23 25.6**	**-0.2**
BTCH				⇑*i*S	**Sn**	**02 23 54.0**	**+0.6**
CEYT	**Ceyhan**	**2.32**	**260**	*e*PN	**Pn**	**02 23 25.8**	**-1.3**
CEYT	**Ceyhan**	**2.32**	**260**	Pn	**Pn**	**02 23 25.7**	**-1.3**
CEYT	**Ceyhan**	**2.32**	**260**	*e*Pn	**Pn**	**02 23 25.8**	**-1.2**
EZC	**Erzincan**	**2.36**	**14**	*e*PN	**Pn**	**02 23 28.0**	**+0.3**
EZC	**Erzincan**	**2.36**	**14**	Pn	**Pn**	**02 23 27.9**	**+0.3**
EZC	**Erzincan**	**2.36**	**14**	P	**Pn**	**02 23 27.9**	**+0.3**
HTY	**Hatay**	**2.38**	**237**	*e*PN	**Pn**	**02 23 28.2**	**+0.2**
HTY	**Hatay**	**2.38**	**237**	Pn	**Pn**	**02 23 28.1**	**+0.2**
HTY	**Hatay**	**2.38**	**237**	Pn	**Sn**	**02 23 28.1**	**+0.2**
YURE	**YUREGIR**	**2.45**	**256**	⇑*i*P	**Pn**	**02 23 27.2**	**-1.6**
YURE				*i* S	**Sg**	**02 24 08.2**	**+0.6**
YURE	**YUREGIR**	**2.45**	**256**	*i* P	**Pn**	**02 23 27.2**	**-1.7**
YAYL	**Yayladag**	**2.46**	**235**	*i* P	**Pn**	**02 23 28.6**	**-0.3**
YAYL				*i* S	**Sg**	**02 24 04.9**	**-2.8**
YAYL	**Yayladag**	**2.46**	**235**	*i* P	**Pn**	**02 23 28.6**	**-0.3**
BNGL	**BINGOL**	**2.50**	**53**	⇑*i*P	**Pn**	**02 23 28.2**	**-1.3**
BNGL				*i* S	**Sg**	**02 24 04.3**	**-5.0**
WRDH	**Warideh**	**2.63**	**223**	⇓P	**Pn**	**02 23 30.0**	**-1.3**
WRDH				⇓S	**Sn**	**02 24 03.0**	**-0.2**
WRDH	**Warideh**	**2.63**	**223**	⇓*i*P	**Pn**	**02 23 30.1**	**-1.2**
WRDH				⇓*i*S	**Sn**	**02 24 03.7**	**+0.5**
SCER	**sogukcermik**	**2.66**	**335**	⇓*i*P	**Pn**	**02 23 31.4**	**-0.3**
SCER				*i* S	**Sn**	**02 24 06.4**	**+2.5**
SCER	**sogukcermik**	**2.66**	**335**	*i* P	**Pn**	**02 23 31.4**	**-0.3**
SCER				*i* S	**Sn**	**02 24 06.4**	**+2.5**
SLNF	**Slenfeh**	**2.67**	**226**	⇓P	**Pn**	**02 23 32.0**	**+0.1**
SLNF				⇓S	**Sn**	**02 24 04.0**	**-0.2**
SLNF	**Slenfeh**	**2.67**	**226**	⇓*i*P	**Pn**	**02 23 32.2**	**+0.3**
SLNF				⇓*i*S	**Sn**	**02 24 04.7**	**+0.5**
KFRA	**Kufra**	**2.67**	**213**	⇑P	**Pn**	**02 23 32.0**	**+0.1**
KFRA				⇑S	**Sn**	**02 24 04.0**	**-0.3**
KFRA	**Kufra**	**2.67**	**213**	⇑*i*P	**Pn**	**02 23 32.3**	**+0.4**
KFRA				⇑*i*S	**Sn**	**02 24 04.8**	**+0.5**
KRTS	**Karatas**	**2.73**	**252**	*e*PN	**Pn**	**02 23 32.6**	**0.0**
KRTS	**Karatas**	**2.73**	**252**	*e*Pn	**Pn**	**02 23 32.7**	**+0.1**
SVSK	**Karacayir**	**2.75**	**333**	*e*PN	**Pn**	**02 23 33.0**	**+0.1**
SVSK	**Karacayir**	**2.75**	**333**	Pn	**Pn**	**02 23 33.0**	**0.0**
SVSK	**Karacayir**	**2.75**	**333**	*e*Pn	**Pn**	**02 23 33.1**	**+0.1**
KARA	**Karaisali**	**2.83**	**267**	*e*PN	**Pn**	**02 23 34.3**	**+0.2**
KARA	**Karaisali**	**2.83**	**267**	*e*Pn	**Pn**	**02 23 34.3**	**+0.3**
KOPT	**Kop Dagi**	**2.95**	**30**	⇑*i*P	**Pn**	**02 23 36.5**	**+0.7**
KOPT				*i* S	**Sn**	**02 24 12.5**	**+1.2**
KOPT	**Kop Dagi**	**2.95**	**30**	*i* P	**Pn**	**02 23 36.5**	**+0.7**
KOPT				*i* S	**Sn**	**02 24 12.5**	**+1.3**
GULE	**Gulek**	**3.05**	**268**	⇑*i*P	**Pn**	**02 23 35.3**	**-1.8**
GULE	**Gulek**	**3.05**	**268**	*i* P	**Pn**	**02 23 35.3**	**-1.8**
BIDA	**Albida**	**3.06**	**218**	⇑P	**Pn**	**02 23 35.0**	**-2.2**
BIDA				⇑S	**Sn**	**02 24 14.0**	**+0.2**
BIDA	**Albida**	**3.06**	**218**	⇑*i*P	**Pn**	**02 23 35.7**	**-1.5**
BIDA				⇑*i*S	**Sn**	**02 24 14.3**	**+0.5**
GUMT	**Gumushane**	**3.07**	**13**	*e*PN	**Pn**	**02 23 38.2**	**+0.8**
GUMT	**Gumushane**	**3.07**	**13**	Pn	**Pn**	**02 23 38.1**	**+0.7**
GUMT	**Gumushane**	**3.07**	**13**	Pn	**Sn**	**02 23 38.1**	**+0.7**
TATV	**Tatvan**	**3.08**	**69**	*i* P	**Pn**	**02 23 35.5**	**-2.1**
TATV	**Tatvan**	**3.08**	**69**	*i* P	**Pn**	**02 23 35.5**	**-2.0**
RSDY	**Resadiye-TOKAT**	**3.09**	**342**	*e*PN	**Pn**	**02 23 37.7**	**0.0**
RSDY	**Resadiye-TOKAT**	**3.09**	**342**	Pn	**Pn**	**02 23 37.7**	**0.0**
RSDY	**Resadiye-TOKAT**	**3.09**	**342**	*e*Pn	**Pn**	**02 23 37.7**	**0.0**
RABH	**Abou Rabah**	**3.23**	**201**	⇑P	**Pn**	**02 23 39.0**	**-0.5**
RABH				⇑S	**Sn**	**02 24 18.0**	**+0.1**
RABH	**Abou Rabah**	**3.23**	**201**	⇑*i*P	**Pn**	**02 23 39.2**	**-0.3**
RABH				⇑*i*S	**Sn**	**02 24 18.3**	**+0.4**
AVNT	**Avonos**	**3.23**	**295**	*i* P	**Pn**	**02 23 38.0**	**-1.6**
AVNT				*i* S	**Sn**	**02 24 21.3**	**+3.2**
AVNT	**Avonos**	**3.23**	**295**	*i* P	**Pn**	**02 23 38.0**	**-1.6**
AVNT				*i* S	**Sn**	**02 24 21.3**	**+3.2**
EZM	**Erzurum**	**3.26**	**41**	*e*PN	**Pn**	**02 23 40.8**	**+0.8**
EZM	**Erzurum**	**3.26**	**41**	Pn	**Pn**	**02 23 40.7**	**+0.7**
ERZM	**Erzurum**	**3.26**	**41**	⇑*i*P	**Pn**	**02 23 39.5**	**-0.5**
ERZM	**Erzurum**	**3.26**	**41**	*i* P	**Pn**	**02 23 39.5**	**-0.5**
TOKT	**Tokat**	**3.27**	**331**	*e*PN	**Pn**	**02 23 39.9**	**-0.2**
TOKT	**Tokat**	**3.27**	**331**	Pn	**Pn**	**02 23 39.9**	**-0.2**
TOKT	**Tokat**	**3.27**	**331**	*e*Pn	**Pn**	**02 23 39.9**	**-0.2**
TOKA	**Tokat**	**3.30**	**331**	*e*P	**Pn**	**02 23 39.6**	**-0.9**
TOKA	**Tokat**	**3.30**	**331**	*e*P	**Pn**	**02 23 39.6**	**-0.9**
YOZ	**Yozgat**	**3.36**	**311**	*e*PN	**Pn**	**02 23 42.0**	**+0.5**
YOZ	**Yozgat**	**3.36**	**311**	Pn	**Pn**	**02 23 41.9**	**+0.5**
YOZ	**Yozgat**	**3.36**	**311**	Pn	**Sn**	**02 23 41.9**	**+0.5**
ESPY	**Espiye-Giresun**	**3.45**	**2**	*e*PN	**Pn**	**02 23 42.7**	**+0.1**
ESPY	**Espiye-Giresun**	**3.45**	**2**	*e*Pn	**Pn**	**02 23 42.7**	**+0.1**
ROOS	**tI_alroos**	**3.45**	**198**	⇑P	**Pn**	**02 23 41.0**	**-1.6**
ROOS				⇑S	**Sn**	**02 24 24.0**	**+0.4**
ROOS	**tI_alroos**	**3.45**	**198**	⇑*i*P	**Pn**	**02 23 41.8**	**-0.8**
ROOS				⇑*i*S	**Sn**	**02 24 24.3**	**+0.7**
GRSN	**GIRESUNGRSN**	**3.47**	**356**	*i* P	**Pn**	**02 23 41.5**	**-1.3**
GRSN	**GIRESUNGRSN**	**3.47**	**356**	*i* P	**Pn**	**02 23 41.5**	**-1.3**
ERBA	**Erbaa**	**3.52**	**337**	⇓*i*P	**Pn**	**02 23 43.1**	**-0.5**
ERBA	**Erbaa**	**3.52**	**337**	*i* P	**Pn**	**02 23 43.1**	**-0.4**
MACK	**Trabzon**	**3.59**	**14**	*i* P	**Pn**	**02 23 45.1**	**+0.5**
MACK				*i* S	**Sn**	**02 24 34.0**	**+7.0**
MACK	**Trabzon**	**3.59**	**14**	*i* P	**Pn**	**02 23 45.1**	**+0.5**
HOMI	**Horasan**	**3.65**	**44**	⇑*i*P	**Pn**	**02 23 45.2**	**-0.1**
FKH	**Fakeheh**	**3.67**	**210**	*e*P	**Pn**	**02 23 45.9**	**+0.3**
FKH	**Fakeheh**	**3.67**	**210**	*e*P	**Pn**	**02 23 45.9**	**+0.3**
MARH	**Ras Al Marh**	**3.84**	**207**	⇑P	**Pn**	**02 23 48.0**	**+0.1**
MARH				⇑S	**Sn**	**02 24 33.0**	**0.0**
MARH	**Ras Al Marh**	**3.84**	**207**	⇑*i*P	**Pn**	**02 23 48.1**	**+0.2**
MARH				⇑*i*S	**Sn**	**02 24 33.7**	**+0.7**
HWQ	**Hawqa**	**3.84**	**215**	*e*P	**Pn**	**02 23 47.4**	**-0.6**
HWQ	**Hawqa**	**3.84**	**215**	*e*P	**Pn**	**02 23 47.4**	**-0.5**
TVAN	**Van**	**3.95**	**73**	*i* P	**Pn**	**02 23 48.5**	**-0.9**
TVAN	**Van**	**3.95**	**73**	*i* P	**Pn**	**02 23 48.5**	**-0.9**
VANB	**Van**	**3.95**	**72**	*e*PN	**Pn**	**02 23 51.8**	**+2.4**
VANB	**Van**	**3.95**	**72**	Pn	**Pn**	**02 23 51.8**	**+2.3**
VANB	**Van**	**3.95**	**72**	*e*Pn	**Pn**	**02 23 51.8**	**+2.3**
CDAG	**Cicekdag**	**3.95**	**304**	P	**Pn**	**02 23 49.5**	**0.0**
CDAG	**Cicekdag**	**3.95**	**304**	⇑*i*P	**Pn**	**02 23 49.0**	**-0.5**
CDAG	**Cicekdag**	**3.95**	**304**	P	**Pn**	**02 23 49.5**	**0.0**
CUKT	**Cukurca**	**4.00**	**92**	*e*PN	**Pn**	**02 23 53.4**	**+3.2**
AGRB	**Hanur-Agry**	**4.04**	**57**	*e*PN	**Pn**	**02 23 52.8**	**+2.0**
AGRB	**Hanur-Agry**	**4.04**	**57**	*e*Pn	**Pn**	**02 23 52.8**	**+2.1**
EREN	**Erenkoy**	**4.05**	**243**	*e*PN	**Pn**	**02 23 51.0**	**+0.1**
EREN	**Erenkoy**	**4.05**	**243**	Pn	**Pn**	**02 23 51.0**	**+0.1**
EREN	**Erenkoy**	**4.05**	**243**	*e*Pn	**Pn**	**02 23 51.0**	**+0.1**
HAKT	**HAK

comp=Z,7.8nm,0.6s
ALFC S Sn 02 25 11.4 +0.8
ASF Jabal al Asfar 5.46 195 Pn Pn 02 24 09.3 -0.9
comp=Z,5.0nm,0.3s,baz=31,slow=12,SNR=41
ASF Pg Pg 02 24 26.9 -6.5
comp=Z,21nm,0.3s,baz=240,slow=17,SNR=15
ASF Lg 02 25 41.9
comp=Z,83nm,0.3s,baz=39,slow=21,SNR=9.5
ASF LR LR 02 26 45.9
comp=Z,1μm,18.6s,baz=253,slow=43
KIZT Kizilcal 5.48 287 *e*PN **Pn 02 24 11.1 +0.7**
KIZT Kizilcal 5.48 287 Pn **Pn 02 24 11.1 +0.7**
KIZT Kizilcal 5.48 287 *e*Pn **Pn 02 24 11.1 +0.7**
GNI Garni 5.50 59 *e*PN **Pn 02 24 14.2 +3.4**
GNI Garni 5.50 59 Pn **Pn 02 24 11.6 +0.8**
comp=Z,13nm,0.3s,baz=296,slow=3.4,SNR=19
GNI Pg **Pg 02 24 28.0 -6.1**
comp=Z,7.2nm,0.3s,baz=270,slow=6.1,SNR=6.6
GNI Lg 02 25 42.8
comp=Z,1.6nm,0.3s,baz=211,slow=12,SNR=2.7
GNI Garni 5.50 59*c i*P **Pn 02 24 11.2 +0.5**
GNI Garni 5.50 59 *e*Pn **Pn 02 24 11.6 +0.9**
GNI *e*Pg **Pg 02 24 30.6 -3.5**
GNI Garni 5.50 59 *i* P **Pn 02 24 11.2 +0.5**
GNI Garni 5.50 59 *e*Pn **Pn 02 24 11.6 +0.9**
GNI Garni 5.50 59 *e*Pg **Pg 02 24 30.6 -3.5**
GNI Garni 5.50 59 P **Pg 02 24 30.2 -3.9**
SNR=41
MMLI Mount Malkishu 5.65 208 Pn **Pn 02 24 13.8 +1.0**
MMLI Mount Malkishu 5.65 208 Pn **Pn 02 24 13.8 +1.0**
OFRI 'Ofer 5.67 213 Pn **Pn 02 24 14.7 +1.6**
OFRI 'Ofer 5.67 213 Pn **Pn 02 24 14.7 +1.6**
PPCY Paphos 5.67 245 P **Pn 02 24 13.0 -0.1**
PPCY Paphos 5.67 245 P **Pn 02 24 13.0 -0.1**
BZK Bozkurt 5.72 323 *e*PN **Pn 02 24 14.7 +1.0**
BZK Bozkurt 5.72 323 Pn **Pn 02 24 14.7 +1.0**
BZK Bozkurt 5.72 323 *e*Pn **Pn 02 24 14.7 +1.0**
HMDT Nahal Hemdat 5.78 207 Pn **Pn 02 24 15.7 +1.1**
HMDT Nahal Hemdat 5.78 207 Pn **Pn 02 24 15.7 +1.1**
SAFT Safranbolu 5.93 311 *e*PN **Pn 02 24 17.6 +0.9**
SAFT Safranbolu 5.93 311 Pn **Pn 02 24 17.5 +0.8**
SAFT Safranbolu 5.93 311 Pn **Pn 02 24 17.5 +0.8**
SGKT Sivrigoynuk 5.96 303 *i* P **Pn 02 24 16.4 -0.7**
SLTI Sal'it 5.97 210 Pn **Pn 02 24 19.5 +2.2**
SLTI Sal'it 5.97 210 Pn **Pn 02 24 19.5 +2.2**
BOLV Bolvadin 6.16 284 *i* P **Pn 02 24 20.3 +0.5**
SOC Sochi 6.17 8*de*P Px 02 24 30.7
SOC pmax pmax
comp=Z,92nm,0.9s
SOC MLR MLR
comp=Z,2μm,12.0s
GOR Gori 6.20 42 P **Pg 02 24 48.8 +1.3**
GOR S **Sg 02 26 13.8 +6.0**
BHD Baghdad 6.31 130 *ex* **Pn 02 24 23.0 +1.1**
BHD *ex* **Pg 02 24 53.0 +3.3**
BHD *i* x x 02 25 40.0
BHD *i* x x 02 26 00.0
BHD *i* x x 02 26 12.0
TBLG Delisi 6.38 46 *e*P **Pn 02 24 22.8 0.0**
TBLG Delisi 6.38 46 P **Pg 02 24 48.9 -2.0**
TBLG S **Sg 02 26 23.6 +10**
TBLG Delisi 6.38 46 *e*P **Pn 02 24 22.8 0.0**
MTA Mtatsminda 6.38 47 P **Pg 02 24 48.1 -2.9**
MTA S **Sg 02 26 23.5 +10**
SHUT Suhut-Afyon 6.45 282 *e*PN **Pn 02 24 25.2 +1.5**
SHUT Suhut-Afyon 6.45 282 *e*Pn **Pn 02 24 25.2 +1.5**
DSI Dead Sea 6.45 205 Pn **Pn 02 24 24.7 +0.9**
DSI Dead Sea 6.45 205 Pn **Pn 02 24 24.7 +0.9**
DGRG David-gareji 6.58 51 P **Pg 02 24 52.5 -2.4**
DGRG S **Sg 02 26 23.8 +3.7**
KORT Korkueli 6.59 268 *i* P **Pn 02 24 23.1 -2.7**
ZEI Tsey 6.68 36 *e*P **Pn 02 24 28.7 +1.8**
ZEI pmax pmax
comp=Z,18nm,1.0s
ZEI Tsey 6.68 36 *e*P **Pn 02 24 28.7 +1.8**
comp=Z,18nm,1.0s
MZDA Masada 6.69 204 Pn **Pn 02 24 27.8 +0.6**
MZDA Masada 6.69 204 Pn **Pn 02 24 27.8 +0.6**
RTMI Retamim 7.16 208 Pn **Pn 02 24 34.4 +0.8**
RTMI Retamim 7.16 208 Pn **Pn 02 24 34.4 +0.8**
KIV Kislovodsk 7.19 24 P **Pn 02 24 36.0 +2.0**
KIV *e*S **Sn 02 26 02.2 +6.6**
KIV MLR MLR
comp=Z,2μm,14.0s
KIV Kislovodsk 7.19 24 *e*Pn **Pn 02 24 35.8 +1.9**
KIV Kislovodsk 7.19 24 *e*Pn **Pn 02 24 35.8 +1.8**
ANN Anapa 7.38 354 *e*P Px 02 24 51.5
ANN pmax pmax
comp=Z,86nm,1.4s
ANN MLR MLR
comp=N,850nm,11.0s
ANN MLR MLR
comp=E,394nm,11.0s
ANN MLR MLR
comp=Z,1μm,11.0s
KZIT Kziot 7.41 209 Pn **Pn 02 24 38.3 +1.3**
KZIT Kziot 7.41 209 Pn **Pn 02 24 38.3 +1.3**
ZFRI Zfri 7.45 203 Pn **Pn 02 24 38.0 +0.4**
ZFRI Zfri 7.45 203 Pn **Pn 02 24 38.0 +0.4**
PRNI Paran 7.69 204 P **Pn 02 24 40.9 0.0**
PRNI Paran 7.69 204 P **Pn 02 24 40.9 0.0**
SUDU Sudak 7.90 341 *e*P **Pn 02 24 49.2 +5.5**
HRFI Mount Harif 7.98 203 Pn **Pn 02 24 44.8 0.0**
HRFI Mount Harif 7.98 203 Pn **Pn 02 24 44.8 0.0**
KRMI Paran Flat 8.00 205 Pn **Pn 02 24 45.4 +0.3**
KRMI Paran Flat 8.00 205 Pn **Pn 02 24 45.4 +0.3**
SIM Simferopol' 8.20 337 *e*P **Pn 02 24 53.9 +6.0**
SIM *e*S **Sn 02 26 30.3 +10**
SIM pmax pmax
comp=Z,12nm,0.4s
GOF Gofitskoye 8.29 22 *e*P **Pn 02 24 39.1 -10**
GOF pmax pmax
comp=Z,25nm,0.8s
EIL Elat 8.35 202 Pn **Pn 02 24 50.8 +0.9**
comp=Z,0.8nm,0.3s,baz=40,slow=21,SNR=7.7
EIL Pg Pn 02 25 22.0 +32
comp=Z,4.1nm,0.3s,baz=359,slow=11,SNR=9.3
EIL Lg 02 27 13.3
comp=Z,11nm,0.3s,baz=290,slow=20,SNR=6.8
EIL LR LR 02 28 09.5
comp=Z,2μm,18.0s,baz=206,slow=38
EIL Elat 8.35 202 Pn **Pn 02 24 50.3 +0.5**
EIL Elat 8.35 202 Pn **Pn 02 24 50.3 +0.5**
MAK Makhachkala 8.75 48 *e*P **Pn 02 24 59.0 +3.6**
MAK *e* 02 26 36.8
MAK MLR MLR
comp=Z,2μm,8.0s
MAK Makhachkala 8.75 48 *e*S **Sn 02 26 36.8 +2.8**
MIB Mutribah 10.55 134 *e*P **Pn 02 25 15.9 -4.2**
MIB Mutribah 10.55 134 *e*P **Pn 02 25 15.9 -4.2**
NAY Al-Naaiem 10.92 136 *e*P **Pn 02 25 21.2 -3.9**
NAY Al-Naaiem 10.92 136 *e*P **Pn 02 25 21.2 -3.9**
UMR Umm Al-Rimmam 10.96 133 *e*P **Pn 02 25 21.5 -4.1**
UMR Umm Al-Rimmam 10.96 133 *e*P **Pn 02 25 21.5 -4.2**
PAIG Paliouri 11.91 286 P **Pn 02 25 40.1 +1.4**
PAIG Paliouri 11.91 286 P **Pn 02 25 40.1 +1.4**
KIS Kishinev 11.96 326 *e*P **Pn 02 25 38.0 -1.3**
KIS *e*S **Sn 02 27 48.0 -4.7**
KIS *e*Li 02 28 30.0
KIS *e*LQ 02 29 03.0
KIS *e*LR LR 02 29 52.0
comp=Z,1μm,13.0s
KIS Kishinev 11.96 326 *e*P **Pn 02 25 38.0 -1.3**
KIS *e*S **Sn 02 27 48.0 -4.7**
KIS MLR MLR
comp=E,600nm,13.0s
KIS MLR MLR
comp=Z,1μm,13.0s
KIS MLR MLR
comp=N,1μm,12.0s
KIS MLR MLR
comp=Z,1μm,13.0s
KIS Kishinev 11.96 326 *e*P **Pn 02 25 38.0 -1.3**
KARN Karanos 12.00 265 P **Pn 02 25 37.4 -2.5**
PLG Polygyros 12.15 288 P **Pn 02 25 43.7 +1.7**
PLG Polygyros 12.15 288 P **Pn 02 25 43.7 +1.7**
VRI Vrincioaia 12.21 317‖ *i*P **Pn 02 25 48.8 +6.2**
PLOR Plostina 12.24 317⇑ *i*P **Pn 02 25 51.8 +8.7**
MLR Muntele Rosu 12.41 314‖ *i*P **Pn 02 25 50.9 +5.4**
HORT Hortiatis 12.45 289 P **Pn 02 25 51.2 +5.2**
TESR 12.66 319⇑ *i*P **Pn 02 25 48.6 -0.3**
TESR 12.66 319⇑ *i*P **Pn 02 25 48.6 -0.3**

DSF Desfina 12.72 279 P **Pn 02 25 51.7 +1.9**
DSF Desfina 12.72 279 P **Pn 02 25 51.7 +1.9**
VTS Vitosha 12.85 298‖ *i*P **Pn 02 25 55.8 +4.3**
VOIR 12.90 312⇑ *i*P **Pn 02 25 55.9 +3.8**
VAY Valandovo 12.98 292 P **Pn 02 25 55.2 +2.0**
VAY Valandovo 12.98 292 P **Pn 02 25 55.2 +2.0**
GRG Griva 13.04 291 P **Pn 02 25 56.4 +2.4**
GRG Griva 13.04 291 P **Pn 02 25 56.4 +2.4**
TRIZ Trizonia 13.08 279 P **Pn 02 25 56.4 +1.7**
TRIZ Trizonia 13.08 279 P **Pn 02 25 56.4 +1.7**
THL Klokotos Trika 13.16 284 P **Pn 02 26 07.2 +12**
EFP Efpalio 13.21 279 P **Pn 02 25 57.2 +0.8**
EFP Efpalio 13.21 279 P **Pn 02 25 57.2 +0.8**
VORD Divnogorie 13.51 2 *e*P **Pn 02 26 02.1 +1.7**
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=Z,8.0nm,0.6s
VORD pmax pmax
comp=E,40nm,0.7s
VORD Divnogorie 13.51 2 *e*P **Pn 02 26 02.1 +1.7**
VSR Storozhevoye 13.76 2 *e*P **Pn 02 26 03.3 -0.5**
VSR pmax pmax
comp=Z,5.0nm,0.6s
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.3s
VSR Storozhevoye 13.76 2 *e*P **Pn 02 26 03.3 -0.5**
comp=E,5.0nm,0.4s
FNA Florina 13.77 289 P **Pn 02 26 15.3 +11**
VRHR Novokhopersk 13.80 8 *e*P **Pn 02 26 04.0 -0.4**
VRHR pmax pmax
comp=E,5.0nm,0.6s
VRHR pmax pmax
comp=Z,5.0nm,0.6s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR Novokhopersk 13.80 8 *e*P **Pn 02 26 04.0 -0.4**
comp=N,10.0nm,0.7s
BURAR Bucovina Array 14.13 320⇑ P **Pn 02 26 09.1 +0.2**
BURAR Bucovina Array 14.13 320⇑ *i*P **Pn 02 26 09.1 +0.2**
BUR08 Bucovina Ar. S 14.16 320 *e*Pn **Pn 02 26 09.2 -0.1**
BUR08 Bucovina Ar. S 14.16 320 *e*Pn **Pn 02 26 09.2 -0.1**
GZR Gura Zlata 14.25 309⇑ *i*P **Pn 02 26 11.5 +0.9**
VLS Valsamata 14.26 278 P **Pn 02 26 12.1 +1.4**
SRN Sarande 14.73 285 *e*P **Pn 02 26 17.0 -0.1**
KIEV Kiev 14.83 336 *e*P **Pn 02 26 16.2 -2.2**
KIEV pmax pmax
comp=Z,48nm,1.4s
KIEV Kiev 14.83 336 *e*Pn **Pn 02 26 16.1 -2.3**
comp=Z,48nm,1.4s
KIEV Kiev 14.83 336 *e*Pn **Pn 02 26 16.1 -2.3**
comp=Z,48nm,1.4s
TIR Tirane 14.99 291 P **Pn 02 26 21.9 +1.3**
DRGR 15.00 313⇑ P **Pn 02 26 21.6 +0.8**
DRGR 15.00 313⇑ *i*P **Pn 02 26 21.6 +0.8**
BCI Bajram Curri 15.03 295 *e*P **Pn 02 26 24.0 +2.8**
BZS Buzias 15.08 308⇑ P **Pn 02 26 18.5 -3.3**
BZS Buzias 15.08 308⇑ *i*P **Pn 02 26 18.5 -3.3**
PUK Puka 15.09 293 *e*P **Pn 02 26 25.8 +3.8**
PUK Puka 15.09 293 *e*P **Pn 02 26 25.8 +3.8**
VAN Vannovskaya 15.46 82‖ *i*P **Pn 02 26 26.9 +0.1**
DIVS Divibare 15.56 301 P **Pn 02 26 33.7 +5.6**
DIVS Divibare 15.56 301 P **Pn 02 26 33.7 +5.6**
TTG Podgorica 15.63 295 P **Pn 02 26 31.0 +1.9**
TTG Podgorica 15.63 295 P **Pn 02 26 31.0 +1.9**
FRGS Fruska Gora 16.05 305⇑ *i*P **Pn 02 26 38.5 +4.0**
LVV L'vov 16.20 324 *e*P **Pn 02 26 41.3 +4.9**
LVV *e*S **Sn 02 29 43.7 +7.7**
LVV MLR MLR
comp=E,400nm,12.0s
LVV MLR MLR
comp=N,400nm,11.0s
LVV MLR MLR
comp=Z,400nm,11.0s
LVV L'vov 16.20 324 *e*P **Pn 02 26 41.3 +4.9**
UZH Uzhgorod 16.29 318 *e*P **Pn 02 26 44.1 +6.5**
UZH MLR MLR
comp=N,1μm,16.0s
UZH MLR MLR
comp=E,1μm,16.0s
KWP Kalwaria Pacla 16.71 322 *e*P **Pn 02 26 43.0 +0.1**
KWP pmax pmax
comp=Z,275nm,2.2s
KWP Kalwaria Pacla 16.71 322 *e*Pn **Pn 02 26 43.0 +0.2**
comp=Z,275nm,2.2s
KWP Kalwaria Pacla 16.71 322⇑ *i*P **Pn 02 26 45.3 +2.4**
KWP Kalwaria Pacla 16.71 322 *e*Pn **Pn 02 26 43.0 +0.1**
comp=Z,275nm,2.2s
KWP Kalwaria Pacla 16.71 322⇑ *i*P **Pn 02 26 45.3 +2.4**
CRVS Cervenica-Dubn 16.89 318 *e*P **Pn 02 26 48.9 +3.7**
CRVS pmax pmax
comp=Z,26nm,1.4s
CRVS Cervenica-Dubn 16.89 318 *e*P **Pn 02 26 48.9 +3.7**
comp=Z,26nm,1.4s
CRVS *e* 02 26 51.2
CRVS *e* 02 26 57.2
CRVS Cervenica-Dubn 16.89 318 *e*P **Pn 02 26 48.9 +3.7**
CRVS *e* 02 26 51.2
CRVS *e* 02 26 57.2
CRVS Cervenica-Dubn 16.89 318 *e*P **Pn 02 26 48.9 +3.7**
comp=Z,26nm,1.4s
KECS Kecovo 17.19 316 *e*P **Pn 02 26 51.0 +2.1**
KECS pmax pmax
comp=Z,5.0nm,1.0s
KECS Kecovo 17.19 316 *e*P **Pn 02 26 51.0 +2.1**
comp=Z,4.7nm,1.0s
KECS Kecovo 17.19 316 *e*P **Pn 02 26 51.0 +2.1**
PKSM Moragy 17.21 307⇑ *i*P **Pn 02 26 50.2 +1.0**
PKSM Moragy 17.21 307 P **Pn 02 26 50.0 +0.8**
PSZ Piszkesteto 17.22 313 *e*P **Pn 02 26 48.9 -0.5**
PSZ pmax pmax
comp=Z,18nm,1.3s
PSZ Piszkesteto 17.22 313 *e*Pn **Pn 02 26 48.9 -0.4**
comp=Z,18nm,1.3s
PSZ Piszkesteto 17.22 313 *e*P **Pn 02 26 48.9 -0.5**
comp=Z,18nm,1.3s
STHS Stebnicka Huta 17.32 319 *e*P **Pn 02 26 53.1 +2.6**
STHS pmax pmax
comp=Z,10.0nm,1.5s
STHS Stebnicka Huta 17.32 319 *e*P **Pn 02 26 53.1 +2.6**
comp=Z,9.7nm,1.5s
STHS Stebnicka Huta 17.32 319 *e*P **Pn 02 26 53.1 +2.6**
STHS Stebnicka Huta 17.32 319 *e*P **Pn 02 26 53.1 +2.6**
comp=Z,9.7nm,1.5s
BUD Budapest 17.53 311⇑ *e*P **Pn 02 26 54.0 +0.9**
BUD Budapest 17.53 311⇑ *e*P **Pn 02 26 54.0 +0.9**
OBN Obninsk 17.71 356⇑ *i*P **Pn 02 26 56.0 +0.7**
OBN pmax pmax
comp=Z,51nm,1.7s
OBN MLR MLR
comp=Z,700nm,17.0s
OBN Obninsk 17.71 356 *e*Pn **Pn 02 26 54.1 -1.2**
comp=Z,29nm,1.0s
OBN Obninsk 17.71 356 *e*Pn **Pn 02 26 54.1 -1.2**
comp=Z,29nm,1.0s
OBN Obninsk 17.71 356 *i* P **Pn 02 26 56.0 +0.7**
comp=Z,700nm,17.0s
NIE Niedzica 17.81 318 *e*P **Pn 02 26 58.8 +2.2**
NIE Niedzica 17.81 318 *e*P **Pn 02 26 58.8 +2.2**
ACER Acerenza 17.88 288 P **Pn 02 26 59.3 +1.8**
ACER Acerenza 17.88 288 P **Pn 02 26 59.3 +1.8**
CEL Celeste 17.94 279 *e*P **Pn 02 26 56.0 -2.4**
comp=Z,34nm,1.0s
CUC Castrocucco 17.95 285 *e*P **Pn 02 26 58.9 +0.5**
comp=Z,77nm,1.4s
CUC Castrocucco 17.95 285 *e*P **Pn 02 26 58.9 +0.5**
comp=Z,77nm,1.4s
VYHS Vyhne 18.13 314 *e*P **Pn 02 27 02.4 +1.9**
VYHS pmax pmax
comp=Z,16nm,2.0s
VYHS Vyhne 18.13 314 *e*P **Pn 02 27 02.4 +1.9**
comp=Z,16nm,2.0s
VYHS *e* 02 27 13.0
VYHS Vyhne 18.13 314 *e*P **Pn 02 27 02.4 +1.9**
VYHS *e* 02 27 13.0
VYHS Vyhne 18.13 314 *e*P **Pn 02 27 02.4 +1.9**
comp=Z,16nm,2.0s
RGNG Rignano Grg 18.22 290 P **Pn 02 27 01.4 -0.3**
RGNG Rignano Grg 18.22 290 P **Pn 02 27 01.4 -0.3**
MRLC Muro Lucano 18.22 288 P **Pn 02 27 03.5 +1.7**
MRLC Muro Lucano 18.22 288 P **Pn 02 27 03.5 +1.7**
MOS Moscow 18.29 358 *e*P **Pn 02 27 02.8 +0.3**

MOS pmax pmax
comp=Z,40nm,0.9s
MOS Moscow 18.29 358 *e*P **Pn 02 27 02.8 +0.3**
comp=Z,40nm,0.9s
KOLL Kolacno 18.42 313 *e*P **Pn 02 27 12.0 +7.9**
KOLL Kolacno 18.42 313 *e*P **Pn 02 27 12.0 +7.9**
FG5 Orsara di Pugl 18.42 289 P **Pn 02 27 06.2 +2.0**
FG5 Orsara di Pugl 18.42 289 P **Pn 02 27 06.2 +2.0**
OJC Ojcow 18.55 319 *e*P **Pn 02 27 06.4 +0.8**
OJC Ojcow 18.55 319 *e*P **Pn 02 27 06.4 +0.8**
MNK Minsk 18.57 340 *e*P **Pn 02 27 03.0 -2.9**
CSSN Cassano Irpino 18.58 288 P **Pn 02 27 07.6 +1.5**
CSSN Cassano Irpino 18.58 288 P **Pn 02 27 07.6 +1.5**
MRB1 Monte Rocchett 18.63 289 P **Pn 02 27 08.5 +1.7**
MRB1 Monte Rocchett 18.63 289 P **Pn 02 27 08.5 +1.7**
LKFR Kufra 18.68 229 *i* P **Pn 02 27 06.6 -0.9**
comp=Z,72nm,1.8s,SNR=53
PSB1 Pescosannita 18.76 289 P **Pn 02 27 09.5 +1.2**
PSB1 Pescosannita 18.76 289 P **Pn 02 27 09.5 +1.2**
KOGS Kog 18.84 306 *i* P **Pn 02 27 08.8 -0.4**
KOGS Kog 18.84 306 *i* P **Pn 02 27 08.8 -0.4**
KOGS Kog 18.84 306 *i* P **Pn 02 27 08.8 -0.4**
MODS Modra-Piesok 18.98 312 *e*P **Pn 02 27 13.9 +3.0**
MODS Modra-Piesok 18.98 312 *e*P **Pn 02 27 13.9 +3.0**
AKTK Aktyubinsk 19.00 41 P **Pn 02 27 08.7 -2.4**
AKTK LR LR 02 36 20.9
AKTK Aktyubinsk 19.00 41 P **Pn 02 27 08.7 -2.4**
comp=Z,1μm,18.3s
AKTO Aktyubinsk 19.00 41 P **Pn 02 27 08.7 -2.4**
comp=Z,0.3nm,0.3s,baz=234,slow=12,SNR=19
AKTO LR LR 02 36 20.9
comp=Z,1μm,18.3s,baz=52,slow=43
ZST Bratislava 19.00 311 *e*P **Pn 02 27 11.2 0.0**
ZST Bratislava 19.00 311 *e*P **Pn 02 27 11.2 0.0**
ZST Bratislava 19.00 311 *e*P **Pn 02 27 11.2 0.0**
SGG Gregorio Mates 19.10 289 P **Pn 02 27 12.0 -0.4**
SGG Gregorio Mates 19.10 289 P **Pn 02 27 12.0 -0.4**
SOP Sopron 19.11 309⇑ *e*P **Pn 02 27 12.5 0.0**
SOP Sopron 19.11 309⇑ *e*P **Pn 02 27 12.5 0.0**
NAZ Nazwa, Dubai 19.14 126 P **Pn 02 27 12.3 -0.7**
SNR=9.6
NAZ Nazwa, Dubai 19.14 126 P **Pn 02 27 12.3 -0.7**
SNR=9.6
VAE Valguarnera 19.19 277 P **Pn 02 27 12.9 -0.6**
comp=Z,0.2nm,0.3s,baz=28,slow=5.1,SNR=3.7
VAE LR LR 02 35 16.3
comp=Z,551nm,21.5s,baz=187,slow=39
VAE Valguarnera 19.19 277 P **Pn 02 27 12.9 -0.6**
LSRT Sirt 19.20 257 *i* P **Pn 02 27 12.2 -1.5**
comp=Z,58nm,1.2s,SNR=140
BOJS Bojanci 19.20 302 *e*P **Pn 02 27 12.8 -0.8**
BOJS *e*S **Sn 02 30 51.4 +2.7**
BOJS Bojanci 19.20 302 *e*P **Pn 02 27 12.8 -0.8**
BOJS *e*S **Sn 02 30 51.4 +2.7**
BOJS Bojanci 19.20 302 *e*P **Pn 02 27 12.8 -0.8**
BOJS *e*S **Sn 02 30 51.4 +2.7**
MIDA Miranda 19.21 290 P **Pn 02 27 13.8 +0.1**
MIDA Miranda 19.21 290 P **Pn 02 27 13.8 +0.1**
OKC Ostrava-Krasne 19.21 317 *e*P **Pn 02 27 12.8 -0.9**
OKC *e*S **Sn 02 30 51.0 +2.1**
OKC MLR MLR
comp=Z,1μm,14.9s
OKC Ostrava-Krasne 19.21 317 *e*P **Pn 02 27 12.8 -0.9**
OKC *e*S **Sn 02 30 51.0 +2.1**
OKC AMS AMS 02 36 00.0
comp=Z,1μm,14.9s
OKC Ostrava-Krasne 19.21 317 *e*P **Pn 02 27 12.8 -0.9**
comp=Z,1μm,14.9s
OKC S **Sn 02 30 51.0 +2.1**
RNI2 Rionero Sannit 19.29 290 P **Pn 02 27 15.1 +0.4**
RNI2 Rionero Sannit 19.29 290 P **Pn 02 27 15.1 +0.4**
RFI Roccamonfina 19.39 289 P **Pn 02 27 15.9 0.0**
RFI Roccamonfina 19.39 289 P **Pn 02 27 15.9 0.0**
AB31 Akbulak array 19.41 46 *i* P **Pn 02 27 13.4 -2.7**
AB31 pmax pmax
comp=Z,2.0nm,0.3s
AB31 Akbulak array 19.41 46 *i* P **Pn 02 27 13.4 -2.7**
comp=Z,2.0nm,0.3s
ABKAR Akbulak array 19.41 46 *e*P **Pn 02 27 13.6 -2.5**
comp=Z,4.7nm,0.6s
ABKAR Akbulak array 19.41 46 *e*P **Pn 02 27 13.6 -2.5**
comp=Z,4.7nm,0.6s
INTR Introdacqua 19.50 291 P **Pn 02 27 16.3 -0.9**
INTR Introdacqua 19.50 291 P **Pn 02 27 16.3 -0.9**
MORC Moravsky Berou 19.51 316 *e*P **Pn 02 27 14.5 -2.8**
MORC pmax pmax
comp=Z,34nm,1.6s
MORC Moravsky Berou 19.51 316 *e*P **Pn 02 27 14.5 -2.8**
comp=Z,34nm,1.6s
MORC Moravsky Berou 19.51 316 *e*P **Pn 02 27 14.5 -2.8**
comp=Z,34nm,1.6s
SDI San Donato 19.55 290 P **Pn 02 27 16.7 -1.1**
HATD Hatta, Dubai 19.55 125 P **Pn 02 27 18.0 0.0**
SNR=9.1
HATD Hatta, Dubai 19.55 125 P **Pn 02 27 18.0 0.0**
SNR=9.1
IDID Didziasalis 19.59 339 *e*P **Pn 02 27 15.6 -2.6**
IDID Didziasalis 19.59 339 *e*P **Pn 02 27 15.6 -2.6**
SNR=35
ASHO Ashiyiah 19.61 126 P **Pn 02 27 18.9 +0.3**
SNR=13
ASHO Ashiyiah 19.61 126 P **Pn 02 27 18.9 +0.3**
SNR=13
CONA Conrad Observa 19.64 309⇑ *i*P **Pn 02 27 18.0 -0.9**
comp=Z,13nm,1.3s
CONA Conrad Observa 19.64 309 P **Pn 02 27 18.0 -0.9**
comp=Z,13nm,1.3s
SUW Suwalki 19.67 332 *e*P **Pn 02 27 17.6 -1.5**
SUW Suwalki 19.67 332 *e*P **Pn 02 27 17.6 -1.5**
SUW Suwalki 19.67 332 *e*P **Pn 02 27 17.4 -1.7**
comp=Z,40nm,0.8s
SUW Suwalki 19.67 332 *e*P **Pn 02 27 17.6 -1.5**
LZLA Zalla 19.72 249 *i* P **Pn 02 27 19.0 -0.9**
comp=Z,74nm,1.8s,SNR=136
IIGN Ignalina 19.77 339 *e*P **Pn 02 27 17.6 -2.6**
IIGN Ignalina 19.77 339 *e*P **Pn 02 27 17.6 -2.7**
SNR=35
TERO Teramo 19.79 293 P **Pn 02 27 19.5 -1.1**
TERO Teramo 19.79 293 P **Pn 02 27 19.5 -1.1**
VRAC Vranov 19.82 314 P **Pn 02 27 18.5 -2.4**
comp=Z,0.5nm,0.3s,baz=149,slow=9.6,SNR=6.9
VRAC LR LR 02 36 22.0
comp=Z,1μm,18.3s,baz=123,slow=41
VRAC Vranov 19.82 314 P **Pn 02 27 18.5 -2.4**
VRAC pmax pmax
comp=Z,1.0nm,0.3s
VRAC MLR MLR
comp=Z,1μm,18.3s
VRAC Vranov 19.82 314 P **Pn 02 27 18.5 -2.4**
comp=Z,1μm,18.3s
CEY Cerknica 19.82 302 P **Pn 02 27 20.0 -1.0**
CEY Cerknica 19.82 302 P **Pn 02 27 20.0 -1.0**
LJU Ljubljana 19.84 303 *i* P **Pn 02 27 20.3 -1.0**
LJU *e*S **Sn 02 31 05.1 +1.0**
LJU Ljubljana 19.84 303 *i* P **Pn 02 27 20.3 -0.9**
LJU *e*S **Sn 02 31 05.0 +0.9**
LJU Ljubljana 19.84 303 *i* P **Pn 02 27 20.3 -1.0**
LJU *e*S **Sn 02 31 05.1 +1.0**
AQU L'Aquila 19.91 292 *e*P **Pn 02 27 20.7 -1.4**
AQU pmax pmax
comp=Z,64nm,1.1s
AQU L'Aquila 19.91 292 *e*P **Pn 02 27 20.7 -1.4**
comp=Z,64nm,1.1s
AQU L'Aquila 19.91 292 *e*P **Pn 02 27 20.7 -1.4**
comp=Z,64nm,1.1s
AOI Ancona 19.92 296 P **Pn 02 27 20.7 -1.5**
AOI Ancona 19.92 296 P **Pn 02 27 20.7 -1.5**
ISAL Salakas 19.99 339 *e*P **Pn 02 27 20.0 -2.9**
ISAL Salakas 19.99 339 *e*P **Pn 02 27 20.0 -2.9**
SNR=35
LMSR Misrath 20.00 262 *i* P **P 02 27 21.1 -0.4**
comp=Z,99nm,1.1s,SNR=140
FIAM Fiamignano 20.11 292 P **P 02 27 23.3 +0.7**
FIAM Fiamignano 20.11 292 P **P 02 27 23.3 +0.7**
NRCA Norcia 20.17 293 P **P 02 27 23.6 +0.3**
NRCA Norcia 20.17 293 P **P 02 27 23.6 +0.3**
CERT Cerreto 20.18 291 P **P 02 27 23.2 -0.2**
CERT Cerreto 20.18 291 P **P 02 27 23.2 -0.2**
CING Cingoli 20.18 295 P **P 02 27 23.4 0.0**
CING Cingoli 20.18 295 P **P 02 27 23.4 0.0**
FDMO Fiordimonte 20.21 294 P **P 02 27 23.6 -0.2**
FDMO Fiordimonte 20.21 294 P **P 02 27 23.6 -0.2**
VOY Vojsko 20.26 303 *e*P **P 02 27 24.2 -0.1**
VOY *e* 02 27 32.1

VOY Vojsko 20.26 303 *e*P **P** **02 27 24.2 -0.1**
VOY *e* 02 27 32.1
VOY Vojsko 20.26 303 *e*P **P** **02 27 24.2 -0.1**
SNTG Esanatoglia 20.35 295 P **P** **02 27 25.5 +0.3**
SNTG Esanatoglia 20.35 295 P **P** **02 27 25.5 +0.3**
MTCE Montecelio 20.36 291 P **P** **02 27 24.6 -0.8**
MTCE Montecelio 20.36 291 P **P** **02 27 24.6 -0.8**
RDP Rocca di Papa 20.36 290 P **P** **02 27 25.1 -0.3**
TREC Trest 20.45 313 *e*P **P** **02 27 26.3 0.0**
TREC *e*S **S** **02 31 16.1 +1.0**
TREC MLR MLR
comp=Z,1µm,15.2s,MS4.4
TREC Trest 20.45 313 *e*P **P** **02 27 26.3 0.0**
TREC *e*S **S** **02 31 16.1 +1.0**
TREC AMS AMS 02 36 30.0
comp=Z,1µm,15.2s
TREC Trest 20.45 313 *e*P **P** **02 27 26.3 0.0**
comp=Z,1µm,15.2s
TREC S **S** **02 31 16.1 +1.0**
DPC Dobruska-Polom 20.48 316 *e*P **P** **02 27 26.7 +0.1**
DPC MLR MLR
comp=Z,1µm,16.0s,MS4.3
DPC Dobruska-Polom 20.48 316 P **P** **02 27 29.9 +3.3**
DPC Dobruska-Polom 20.48 316 *e*P **P** **02 27 26.7 +0.1**
DPC *e*S **S** **02 31 20.8 +5.1**
DPC AMS AMS 02 36 30.0
comp=Z,1µm,16.0s
DPC Dobruska-Polom 20.48 316 *e*P **P** **02 27 26.7 +0.1**
comp=Z,1µm,16.0s
FSSB Fossombrone 20.53 296 P **P** **02 27 27.3 +0.1**
FSSB Fossombrone 20.53 296 P **P** **02 27 27.3 +0.1**
ASS Assisi 20.53 294 P **P** **02 27 28.0 +0.8**
MYKA Terra Mystica 20.60 304⇑*i*P **P** **02 27 28.7 +0.8**
comp=Z,25nm,1.5s
MYKA Terra Mystica 20.60 304 P **P** **02 27 28.7 +0.8**
comp=Z,25nm,1.5s
MOA Molln 20.60 308 P **P** **02 27 29.2 +1.2**
MOA Molln 20.60 308⇑*i*Pn **P** **02 27 27.6 -0.4**
comp=Z,38nm,1.3s
MOA Molln 20.60 308 P **P** **02 27 29.2 +1.2**
MURB Monte Urbino 20.65 294 P **P** **02 27 29.5 +1.0**
MURB Monte Urbino 20.65 294 P **P** **02 27 29.5 +1.0**
PTCC Patocco-Chiusa 20.73 304 P **P** **02 27 29.7 +0.4**
PTCC Patocco-Chiusa 20.73 304 P **P** **02 27 29.7 +0.4**
UPC Upice 20.73 316 *e*P **P** **02 27 25.7 -3.6**
UPC Upice 20.73 316 *e*P **P** **02 27 25.7 -3.6**
KSP Ksiaz 20.75 317 *e*P **P** **02 27 28.4 -1.1**
LJFR Jufra 20.76 253 *i* P **P** **02 27 30.0 +0.2**
comp=Z,151nm,1.4s,SNR=147
ARQ Araqi 20.86 127 P **P** **02 27 30.8 -0.1**
SNR=12
ARQ Araqi 20.86 127 P **P** **02 27 30.8 -0.2**
SNR=12
BADI Badiali 20.89 295 P **P** **02 27 32.2 +1.1**
BADI Badiali 20.89 295 P **P** **02 27 32.2 +1.1**
MGAB Montegabbione 20.91 293 P **P** **02 27 31.1 -0.2**
MGAB Montegabbione 20.91 293 P **P** **02 27 31.1 -0.2**
KBA Koelnbreinsper 20.93 305 *i* P **P** **02 27 32.3 +0.8**
comp=Z,47nm,1.0s,SNR=16
KBA Koelnbreinsper 20.93 305 P **P** **02 27 32.3 +0.8**
comp=Z,47nm,1.0s,SNR=16
LATE Laterza 21.11 292 P **P** **02 27 32.9 -0.5**
LATE Laterza 21.11 292 P **P** **02 27 32.9 -0.5**
FVI Forni Avoltri 21.16 304 P **P** **02 27 34.5 +0.5**
HOQ Hoqain 21.19 125 P **P** **02 27 34.0 -0.5**
SNR=16
HOQ Hoqain 21.19 125 P **P** **02 27 34.0 -0.4**
SNR=16
SFI Santa Sofia 21.23 296 P **P** **02 27 36.1 +1.4**
PRU Pruhonice 21.31 314 *e*P **P** **02 27 36.1 +0.5**
PRU *e*S **S** **02 31 34.0 +1.9**
PRU MLR MLR
comp=Z,900nm,11.1s,MS4.4
PRU Pruhonice 21.31 314 P **P** **02 27 39.3 +3.7**
PRU Pruhonice 21.31 314 *e*P **P** **02 27 36.1 +0.5**
PRU *e*S **S** **02 31 34.0 +1.9**
PRU AMS AMS 02 37 50.0
comp=Z,900nm,11.1s
PRU Pruhonice 21.31 314 *e*P **P** **02 27 36.1 +0.5**
comp=Z,900nm,11.1s
PRU S **S** **02 31 34.0 +1.9**
ABTA Abfaltersbach 21.38 304⇓*i*P **P** **02 27 36.9 +0.6**
comp=Z,23nm,1.6s,mb4.3
ABTA Abfaltersbach 21.38 304 P **P** **02 27 36.9 +0.6**
comp=Z,23nm,1.6s,mb4.3
VMG Vicchio 21.45 296 P **P** **02 27 38.4 +1.2**
VMG Vicchio 21.45 296 P **P** **02 27 38.4 +1.2**
KHC Kasperske Hory 21.52 311 *e*P **P** **02 27 37.6 -0.2**
KHC pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
KHC Kasperske Hory 21.52 311 *e*P **P** **02 27 37.6 -0.2**
comp=Z,5.4nm,0.8s,mb4.0
KHC Kasperske Hory 21.52 311 *e*P **P** **02 27 37.1 -0.7**
KHC *e*S **S** **02 31 39.5 +3.4**
KHC AMS AMS 02 38 00.0
comp=Z,700nm,14.9s
KHC Kasperske Hory 21.52 311 *e*P **P** **02 27 37.6 -0.2**
comp=Z,5.4nm,0.8s,mb4.0
KHC S **S** **02 31 39.5 +3.4**
PVCC Panska Ves 21.55 315 *e*P **P** **02 27 37.6 -0.5**
PVCC MLR MLR
comp=Z,1µm,16.6s,MS4.3
PVCC Panska Ves 21.55 315 *e*P **P** **02 27 37.6 -0.5**
PVCC AMS AMS 02 37 40.0
comp=Z,1µm,16.6s
PVCC Panska Ves 21.55 315 *e*P **P** **02 27 37.6 -0.5**
comp=Z,1µm,16.6s
SEI Scarperia 21.60 296 P **P** **02 27 40.1 +1.4**
SEI Scarperia 21.60 296 P **P** **02 27 40.1 +1.4**
BSY Bisya 21.72 127 P **P** **02 27 39.4 -0.8**
SNR=16
BSYO Bisya 21.75 127 P **P** **02 27 39.4 -1.1**
SNR=16
FNVD Fontana Vidola 21.78 297 P **P** **02 27 41.4 +0.7**
FNVD Fontana Vidola 21.78 297 P **P** **02 27 41.4 +0.7**
SMDO Samad 22.04 125 P **P** **02 27 43.2 -0.4**
SNR=22
SMDO Samad 22.04 125 P **P** **02 27 43.2 -0.4**
SNR=22
BRG Berggiesshubel 22.06 315 *e*P **P** **02 27 46.9 +3.3**
comp=Z,34nm,1.9s,mb4.5
BRG S **S** **02 31 43.0 -3.7**
BRG
comp=N,1µm,15.0s
BRG
comp=E,471nm,15.1s
BRG
comp=Z,1µm,15.6s
BRG Berggiesshubel 22.06 315 *e*P **P** **02 27 46.8 +3.2**
BRG S **S** **02 31 43.0 -3.7**
BRG pmax pmax
comp=Z,20nm,1.9s,mb4.2
BRG MLR MLR
comp=N,693nm,15.0s,MS4.2
BRG MLR MLR
comp=E,282nm,15.1s,MS4.2
BRG MLR MLR
comp=Z,649nm,15.6s,MS4.2
WTTA Wattenberg 22.10 305⇑*i*sP sP 02 27 44.3 -4.0
comp=Z,34nm,1.1s,SNR=12
WTTA Wattenberg 22.10 305 P **P** **02 27 44.3 +0.2**
comp=Z,34nm,1.1s,mb4.7,SNR=12
BDI Bagni Di Lucca 22.14 296 P **P** **02 27 45.4 +0.8**
VLC Villacollemand 22.31 296 *e*P **P** **02 27 47.5 +1.2**
comp=Z,26nm,1.1s,mb4.6
VLC Villacollemand 22.31 296 *e*P **P** **02 27 47.5 +1.2**
comp=Z,26nm,1.1s,mb4.6
VSU Vasula 22.40 344⇑*e*P **P** **02 27 49.1 +2.0**
VSU pmax pmax
comp=Z,16nm,0.9s,mb4.5
VSU Vasula 22.40 344 *e*P **P** **02 27 49.1 +2.0**
comp=Z,16nm,0.9s,mb4.5
MOTA Moosalm 22.47 305⇑*i*P **P** **02 27 47.3 -0.8**
comp=Z,18nm,0.8s,mb4.5,SNR=13
MOTA Moosalm 22.47 305 P **P** **02 27 47.3 -0.7**
comp=Z,18nm,0.8s,mb4.5,SNR=13
ALAS Alassa 22.50 266 *i* P **P** **02 27 48.3 -0.2**
comp=Z,140nm,1.9s,mb5.1,SNR=141
JMDO Jabal Madar 22.56 126 P **P** **02 27 50.8 +1.6**
SNR=15
JMDO Jabal Madar 22.56 126 P **P** **02 27 50.9 +1.7**
SNR=15
NKC Novy Kostel 22.63 313 *e*P **P** **02 27 49.3 -0.4**
NKC MLR MLR
comp=Z,900nm,14.9s,MS4.3
NKC Novy Kostel 22.63 313 P **P** **02 27 51.3 +1.6**
NKC Novy Kostel 22.63 313 *e*P **P** **02 27 49.3 -0.4**
NKC AMS AMS 02 38 50.0
comp=Z,900nm,14.9s
NKC Novy Kostel 22.63 313 *e*P **P** **02 27 49.3 -0.4**
comp=Z,900nm,14.9s
RETA Reutte 22.73 305⇑*i*P **P** **02 27 49.2 -1.6**
comp=Z,18nm,0.8s,mb4.5
RETA Reutte 22.73 305 P **P** **02 27 49.2 -1.6**
comp=Z,18nm,0.8s,mb4.5
CLL Collm 22.79 316⇑*i*P **P** **02 27 51.9 +0.6**
CLL *i* 02 27 58.5
CLL *e*S **S** **02 31 58.0 -2.5**
CLL pmax pmax
comp=Z,20nm,1.7s,mb4.3
CLL MLR MLR
comp=Z,1µm,17.6s,MS4.3
CLL Collm 22.79 316⇑*i*P **P** **02 27 51.9 +0.6**
comp=Z,20nm,1.7s,mb4.3
CLL *i* 02 27 58.5
CLL *i* 02 28 04.8
CLL *e*S **S** **02 31 58.0 -2.5**
CLL LR LR
comp=Z,1µm,17.6s,MS4.3
CLL Collm 22.79 316⇑*i*(P) **P** **02 27 51.9 +0.6**
comp=Z,20nm,1.7s,mb4.3
CLL *i* 02 27 58.5
CLL *i* 02 28 04.8
CLL *e*S **S** **02 31 58.0 -2.5**
CLL Lmax 02 39 00.0
CLL Collm 22.79 316 *i* P **P** **02 27 51.9 +0.6**
comp=Z,20nm,1.7s,mb4.3
VSL Villasalto 22.92 284 *e*P **P** **02 27 51.1 -1.8**
comp=Z,44nm,1.3s,mb4.7
VSL Villasalto 22.92 284 *e*P **P** **02 27 51.1 -1.8**
comp=Z,44nm,1.3s,mb4.7
WBK Wadi Bani Khal 22.96 124 P **P** **02 27 54.6 +1.2**
SNR=6.2
LUMB Murzuk 23.13 248 *i* P **P** **02 27 54.7 -0.5**
comp=Z,58nm,1.8s,mb4.7,SNR=142
DAVOX Davos/Dischmat 23.14 303 P **P** **02 27 54.3 -0.8**
comp=Z,3.6nm,0.6s,mb4.0,baz=103,slow=11,SNR=9.4
DAVOX Davos/Dischmat 23.14 303 P **P** **02 27 54.3 -0.8**
GRA1 Grafenberg Arr 23.15 311 *e*P **P** **02 27 58.3 +3.1**
comp=Z,21nm,1.7s,mb4.3
GRF Grafenberg Arr 23.15 311 *e*P **P** **02 27 58.3 +3.1**
comp=Z,21nm,1.7s,mb4.3
GRF *e*L 02 36 37.2
comp=Z,1µm,18.8s
GRF Grafenberg Arr 23.15 311 *e*P **P** **02 27 58.3 +3.1**
GRF pmax pmax
comp=Z,21nm,1.7s,mb4.3
GRF MLR MLR
comp=N,1µm,18.8s
PGF Pioggiola 23.17 292 *e*P **P** **02 27 52.9 -2.5**
comp=N,78nm,1.2s,mb4.7
PGF Pioggiola 23.17 292 *e*P **P** **02 27 52.9 -2.5**
PGF pmax pmax
comp=Z,39nm,1.2s,mb4.7
PGF Pioggiola 23.17 292 *e*P **P** **02 27 52.9 -2.5**
comp=Z,39nm,1.2s,mb4.7
PGF Pioggiola 23.17 292 *e*P **P** **02 27 52.9 -2.5**
comp=Z,39nm,1.2s,mb4.7
ARU Arti 23.21 29 *e*P **P** **02 27 55.6 -0.1**
ARU *e*PPP 02 28 30.5
ARU S **S** **02 32 10.8 +3.6**
ARU SS 02 32 44.0
ARU MLR MLR
comp=Z,1µm,16.0s,MS4.4
ARU Arti 23.21 29 *e*P **P** **02 27 55.6 -0.1**
comp=Z,18nm,0.8s,mb4.5
ARU Arti 23.21 29 *e*P **P** **02 27 55.6 -0.1**
comp=Z,18nm,0.8s,mb4.5
DAVA Damuels 23.26 304⇓*i*P **P** **02 27 54.8 -1.6**
comp=Z,32nm,1.1s,mb4.7
DAVA Damuels 23.26 304 P **P** **02 27 54.8 -1.5**
comp=Z,32nm,1.1s,mb4.7
KLMR Klimovskoe 23.42 1 *e*P **P** **02 27 58.8 +0.9**
KLMR S **S** **02 32 12.1 +1.5**
KLMR pmax pmax
comp=Z,87nm,1.7s,mb4.9
KLMR MLR MLR
comp=Z,462nm,11.0s,MS4.2
TUE Stuetta 23.43 302 *e*P **P** **02 27 57.7 -0.5**
comp=Z,12nm,1.0s,mb4.3
TUE Stuetta 23.43 302 *e*P **P** **02 27 57.7 -0.4**
comp=Z,12nm,1.0s,mb4.3
KEST Kesra 23.51 275 P **P** **02 27 59.4 +0.3**
comp=Z,2.8nm,0.7s,mb3.8,baz=57,slow=3.8,SNR=13
KEST LR LR 02 38 47.7
comp=Z,189nm,18.7s,MS3.6,baz=20,slow=41
KEST Kesra 23.51 275 *e*P **P** **02 27 59.2 +0.2**
SPAK Spaichingen-Ko 24.18 306 *e*P **P** **02 28 04.0 -1.2**
SPAK Spaichingen-Ko 24.18 306 *e*P **P** **02 28 04.0 -1.2**
SVE Sverdlovsk 24.30 30 *e*P **P** **02 28 10.0 +3.9**
SVE *e*S **S** **02 32 31.0 +6.1**
SVE pmax pmax
comp=Z,35nm,1.1s,mb4.7
SVE MLR MLR
comp=Z,1µm,16.0s,MS4.5
SBF Sospel 24.39 295 *e*P **P** **02 28 06.3 -0.8**
comp=Z,56nm,0.9s,mb4.7
SBF Sospel 24.39 295 *e*P **P** **02 28 06.3 -0.8**
SBF pmax pmax
comp=Z,28nm,0.9s,mb4.7
SBF Sospel 24.39 295 *e*P **P** **02 28 06.3 -0.8**
comp=Z,28nm,0.9s,mb4.7
SBF Sospel 24.39 295 *e*P **P** **02 28 06.3 -0.8**
comp=Z,28nm,0.9s,mb4.7
AUTN L'Aution 24.41 295 *e*P **P** **02 28 07.2 -0.1**
AUTN L'Aution 24.41 295 *e*P **P** **02 28 07.2 -0.1**
LUCF Luceram 24.46 295 *e*P **P** **02 28 07.4 -0.3**
LUCF Luceram 24.46 295 *e*P **P** **02 28 07.4 -0.3**
BFO Black Forest 24.54 306 *e*P **P** **02 28 07.4 -1.0**
BFO pmax pmax
comp=Z,27nm,1.3s,mb4.6
BFO Black Forest 24.54 306 *e*P **P** **02 28 07.4 -1.0**
comp=Z,27nm,1.3s,mb4.6
TOUF Mont Tournerai 24.54 295 *e*P **P** **02 28 08.5 0.0**
TOUF Mont Tournerai 24.54 295 *e*P **P** **02 28 08.5 0.0**
FELD Feldberg im Sc 24.63 305 *e*P **P** **02 28 10.2 +0.9**
FELD Feldberg im Sc 24.63 305 *e*P **P** **02 28 10.2 +0.9**
KBL Kabul 24.75 88 *e*P **P** **02 28 11.1 +0.6**
KBL pmax pmax
comp=Z,12nm,1.0s,mb4.4
KBL Kabul 24.75 88 *e*P **P** **02 28 11.1 +0.6**
comp=Z,12nm,1.0s,mb4.4
BBS Basel-Blauen 24.87 304 *e*P **P** **02 28 12.0 +0.6**
BBS Basel-Blauen 24.87 304 *e*P **P** **02 28 12.0 +0.6**
KK31 Karatay Array 24.90 67 *i* P **P** **02 28 11.1 -0.6**
KK31 pmax pmax
comp=Z,29nm,1.1s,mb4.7
FRF La Foret Royal 24.94 294 *e*P **P** **02 28 11.3 -0.8**
comp=Z,50nm,1.2s,mb4.6
FRF La Foret Royal 24.94 294 *e*P **P** **02 28 11.3 -0.8**
FRF pmax pmax
comp=Z,25nm,1.2s,mb4.6
FRF La Foret Royal 24.94 294 *e*P **P** **02 28 11.3 -0.8**
comp=Z,25nm,1.2s,mb4.6
FRF La Foret Royal 24.94 294 *e*P **P** **02 28 11.3 -0.8**
comp=Z,25nm,1.2s,mb4.6
MBDF Montbardon 24.94 297 *e*P **P** **02 28 11.6 -0.5**
comp=Z,24nm,0.8s,mb4.5
MBDF Montbardon 24.94 297 *e*P **P** **02 28 11.6 -0.5**
MBDF pmax pmax
comp=Z,12nm,0.8s,mb4.5
MBDF Montbardon 24.94 297 *e*P **P** **02 28 11.6 -0.5**
comp=Z,12nm,0.8s,mb4.5
MBDF Montbardon 24.94 297 *e*P **P** **02 28 11.6 -0.5**
comp=Z,12nm,0.8s,mb4.5
SOKR Solikamsk 25.03 22 *e*P **P** **02 28 22.6 +10**
SOKR pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
SOKR MLR MLR
comp=Z,270nm,14.0s,MS3.9
LMR La Mourre 25.03 294 *e*P **P** **02 28 11.8 -1.2**
comp=Z,22nm,1.1s,mb4.3
LMR La Mourre 25.03 294 *e*P **P** **02 28 11.8 -1.2**
LMR pmax pmax
comp=Z,11nm,1.1s,mb4.3
LMR La Mourre 25.03 294 *e*P **P** **02 28 11.8 -1.2**
comp=Z,11nm,1.1s,mb4.3
LMR La Mourre 25.03 294 *e*P **P** **02 28 11.8 -1.2**
comp=Z,11nm,1.1s,mb4.3
LPG La Plagne 25.05 299 *e*P **P** **02 28 13.5 +0.4**
comp=Z,30nm,0.9s,mb4.5
LPG La Plagne 25.05 299 P **P** **02 28 13.5 +0.4**
LPG La Plagne 25.05 299 *e*P **P** **02 28 13.5 +0.4**
LPG pmax pmax
comp=Z,15nm,0.9s,mb4.5
LPG La Plagne 25.05 299 *e*P **P** **02 28 13.5 +0.4**
comp=Z,15nm,0.9s,mb4.5
LPG La Plagne 25.05 299 *e*P **P** **02 28 13.5 +0.4**
comp=Z,15nm,0.9s,mb4.5
LPL La Plagne 25.06 299 *e*P **P** **02 28 13.5 +0.3**
comp=Z,29nm,1.0s,mb4.5
LPL La Plagne 25.06 299 *e*P **P** **02 28 13.5 +0.3**
LPL pmax pmax
comp=Z,15nm,1.0s,mb4.5
LPL La Plagne 25.06 299 *e*P **P** **02 28 13.5 +0.3**
comp=Z,14nm,1.0s,mb4.5
LPL La Plagne 25.06 299 *e*P **P** **02 28 13.5 +0.3**
comp=Z,14nm,1.0s,mb4.5
CDF Champ du Feu 25.24 306 *e*P **P** **02 28 14.0 -0.8**
comp=Z,30nm,1.4s,mb4.3
CDF Champ du Feu 25.24 306 *e*P **P** **02 28 14.0 -0.8**
CDF pmax pmax
comp=Z,15nm,1.4s,mb4.3
CDF Champ du Feu 25.24 306 *e*P **P** **02 28 14.0 -0.8**
comp=Z,15nm,1.4s,mb4.3
CDF Champ du Feu 25.24 306 *e*P **P** **02 28 14.0 -0.8**
comp=Z,15nm,1.4s,mb4.3
FINES FINESS Array B 25.25 346 P **P** **02 28 14.4 -0.4**
comp=Z,1.9nm,0.6s,mb3.8,baz=144,slow=10,SNR=11
FINES FINESS Array B 25.25 346 P **P** **02 28 14.4 -0.4**
FINES pmax pmax
comp=Z,2.0nm,0.6s
ECH Echery 25.27 305 *e*P **P** **02 28 14.2 -0.8**
ECH Echery 25.27 305 *e*P **P** **02 28 13.0 -2.0**
ECH pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
ECH Echery 25.27 305 *e*P **P** **02 28 13.0 -2.1**
comp=Z,10nm,0.9s,mb4.3
ECH Echery 25.27 305 *e*P **P** **02 28 14.2 -0.8**
COP Copenhagen 25.36 324 *e*S **S** **02 32 42.6 +0.7**
SNR=28
HINF Hinteralfeld 25.38 304 *e*P **P** **02 28 14.5 -1.5**
comp=Z,40nm,1.3s,mb4.5
HINF Hinteralfeld 25.38 304 *e*P **P** **02 28 14.5 -1.5**
HINF pmax pmax
comp=Z,20nm,1.3s,mb4.5
HINF Hinteralfeld 25.38 304 *e*P **P** **02 28 14.5 -1.5**
comp=Z,20nm,1.3s,mb4.5
HINF Hinteralfeld 25.38 304 *e*P **P** **02 28 14.5 -1.5**
comp=Z,20nm,1.3s,mb4.5
ORIF Oris-en-Rattie 25.59 297 *e*P **P** **02 28 18.1 +0.1**
comp=Z,50nm,1.0s,mb4.7
ORIF *e*MLR MLR
comp=Z,861nm,22.5s,MS3.9
ORIF Oris-en-Rattie 25.59 297 *e*P **P** **02 28 18.1 +0.1**
ORIF pmax pmax
comp=Z,25nm,1.0s,mb4.7
ORIF Oris-en-Rattie 25.59 297 *e*P **P** **02 28 18.1 +0.1**
comp=Z,25nm,1.0s,mb4.7
ORIF Oris-en-Rattie 25.59 297 *e*P **P** **02 28 18.1 +0.1**
comp=Z,25nm,1.0s,mb4.7
CABF La Chapelle 25.66 301 *e*P **P** **02 28 18.4 -0.3**
comp=Z,26nm,1.0s,mb4.4
CABF La Chapelle 25.66 301 *e*P **P** **02 28 18.4 -0.3**
CABF pmax pmax
comp=Z,13nm,1.0s,mb4.4
CABF La Chapelle 25.66 301 *e*P **P** **02 28 18.4 -0.3**
comp=Z,13nm,1.0s,mb4.4
CABF La Chapelle 25.66 301 *e*P **P** **02 28 18.4 -0.3**
comp=Z,13nm,1.0s,mb4.4
SMRF Simiane la Rot 25.74 295 *e*P **P** **02 28 18.6 -0.8**
comp=Z,64nm,1.4s,mb4.7
SMRF Simiane la Rot 25.74 295 *e*P **P** **02 28 18.6 -0.8**
comp=Z,64nm,1.4s,mb5.0
SMRF Simiane la Rot 25.74 295 *e*P **P** **02 28 18.6 -0.8**
comp=Z,32nm,1.4s,mb4.7
HAU Haudompre 25.75 304 *e*P **P** **02 28 17.7 -1.7**
comp=Z,21nm,0.9s,mb4.4
HAU *e*MLR MLR
comp=Z,701nm,21.0s,MS3.9
HAU Haudompre 25.75 304 *e*P **P** **02 28 17.7 -1.7**
HAU pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
HAU MLR MLR
comp=Z,700nm,21.0s,MS4.2
HAU Haudompre 25.75 304 *e*P **P** **02 28 17.7 -1.7**
comp=Z,10nm,0.9s,mb4.4
HAU LR LR
comp=Z,700nm,21.0s,MS4.2
HAU Haudompre 25.75 304 *e*P **P** **02 28 17.7 -1.7**
comp=Z,10nm,0.9s,mb4.4
KAF Kangasniemi 25.83 347 *e*P **P** **02 28 21.4 +1.4**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
KAF Kangasniemi 25.83 347 *e*p **P** **02 28 21.4 +1.4**
comp=Z,6.4nm,0.7s,mb4.3
JOF Joensuu 25.87 352 *e*P **P** **02 28 18.6 -1.8**
JOF pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
JOF Joensuu 25.87 352 *e*p **P** **02 28 18.6 -1.8**
comp=Z,8.8nm,0.7s,mb4.4
ATD Arta Tunnel 26.10 170 LR LR 02 38 08.5
comp=Z,667nm,20.4s,MS4.2,baz=183,slow=35
ZRNK Zerenda 26.18 44 P **P** **02 28 24.2 +1.0**
ZRNK pmax pmax
comp=Z,22nm,1.5s,mb4.5
VIVF Saint-Julien-l 26.44 297 *e*P **P** **02 28 24.1 -1.6**
comp=Z,32nm,1.1s,mb4.5
VIVF Saint-Julien-l 26.44 297 *e*P **P** **02 28 24.1 -1.6**
VIVF pmax pmax
comp=Z,16nm,1.1s,mb4.5
VIVF Saint-Julien-l 26.44 297 *e*P **P** **02 28 24.1 -1.6**
comp=Z,16nm,1.1s,mb4.5
VIVF Saint-Julien-l 26.44 297 *e*P **P** **02 28 24.1 -1.6**
comp=Z,16nm,1.1s,mb4.5
SSB Saint Sauveur 26.57 298 *e*P **P** **02 28 26.8 -0.1**
SSB pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
SSB Saint Sauveur 26.57 298 *e*P **P** **02 28 26.8 -0.1**
comp=Z,5.8nm,0.8s,mb4.2
SFTF Sexfontaines 26.65 304 *e*P **P** **02 28 26.9 -0.6**
SFTF Sexfontaines 26.65 304 *e*P **P** **02 28 26.9 -0.6**
MEZF Maizieres J'vi 26.70 305 *e*P **P** **02 28 27.5 -0.5**
MEZF Maizieres J'vi 26.70 305 *e*P **P** **02 28 27.5 -0.5**
BRVK Borovoye 26.93 44*c i*P **P** **02 28 30.8 +0.8**
BRVK pmax pmax
comp=Z,11nm,0.9s,mb4.4
BRVK Borovoye 26.93 44 *e*P **P** **02 28 28.4 -1.6**
comp=Z,11nm,1.0s,mb4.3
BVA0 Borovoye Array 26.97 45 P **P** **02 28 32.8 +2.4**
BVAR Borovoye Array 26.97 45 P **P** **02 28 30.5 0.0**
comp=Z,4.1nm,0.9s,mb4.0,baz=253,slow=4.5,SNR=17
BVAR Borovoye Array 26.97 45 P **P** **02 28 30.5 +0.1**
BVAR pmax pmax
comp=Z,4.0nm,0.9s
LASF Ste Croix 26.98 295 *e*P **P** **02 28 29.4 -1.2**
comp=Z,69nm,1.4s,mb4.7
LASF Ste Croix 26.98 295 *e*P **P** **02 28 29.4 -1.2**
comp=Z,34nm,1.4s,mb4.7
VOSK Vostochnaya 27.19 45 P **P** **02 28 32.2 -0.2**
VOSK pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
SMF Signal de Mont 27.20 301 *e*P **P** **02 28 30.8 -1.8**
comp=Z,36nm,1.1s,mb4.5
SMF Signal de Mont 27.20 301 *e*P **P** **02 28 30.8 -1.8**
SMF pmax pmax
comp=Z,18nm,1.1s,mb4.5
SMF Signal de Mont 27.20 301 *e*P **P** **02 28 30.8 -1.8**
comp=Z,18nm,1.1s,mb4.5
SMF Signal de Mont 27.20 301 *e*P **P** **02 28 30.8 -1.8**
comp=Z,18nm,1.1s,mb4.5
GIVF Givet 27.21 308 *e*P **P** **02 28 30.9 -1.7**
comp=Z,77nm,1.4s,mb4.7
GIVF Givet 27.21 308 *e*P **P** **02 28 30.9 -1.7**
GIVF pmax pmax
comp=Z,39nm,1.4s,mb4.7
GIVF Givet 27.21 308 *e*P **P** **02 28 30.9 -1.7**
comp=Z,39nm,1.4s,mb4.7
GIVF Givet 27.21 308 *e*P **P** **02 28 30.9 -1.7**
comp=Z,39nm,1.4s,mb4.7
EKS2 Erkin-Say 27.29 68 *e*P **P** **02 28 34.4 +1.0**
comp=Z,13nm,1.1s,mb4.4
SSF Saint Saulge 27.48 302 *e*P **P** **02 28 33.4 -1.7**
comp=Z,12nm,0.9s,mb4.1
SSF Saint Saulge 27.48 302 *e*P **P** **02 28 33.4 -1.7**
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
SSF Saint Saulge 27.48 302 *e*P **P** **02 28 33.4 -1.7**
comp=Z,5.8nm,0.9s,mb4.1

SSF	**Saint Saulge**	**27.48**	**302**	*e*P	**P**	**02 28 33.4**	**-1.7**
	comp=Z,5.8nm,0.9s,mb4.1						
AVF	**Avril sur Loir**	**27.55**	**301**	*e*P	**P**	**02 28 33.8**	**-1.9**
	comp=Z,34nm,1.4s,mb4.5						
AVF	**Avril sur Loir**	**27.55**	**301**	*e*P	**P**	**02 28 33.8**	**-1.9**
AVF				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.5						
AVF	**Avril sur Loir**	**27.55**	**301**	*e*P	**P**	**02 28 33.8**	**-1.9**
	comp=Z,17nm,1.4s,mb4.5						
AVF	**Avril sur Loir**	**27.55**	**301**	*e*P	**P**	**02 28 33.8**	**-1.9**
	comp=Z,17nm,1.4s,mb4.5						
HFS	**Hagfors**	**27.68**	**333**	P	**P**	**02 28 37.4**	**+0.7**
	comp=Z,1.2nm,0.5s,mb3.8,baz=126,slow=9.8,SNR=4.5						
HFS				LR	LR	02 41 34.4	
	comp=Z,726nm,18.6s,MS4.3,baz=138,slow=41						
HFS	**Hagfors**	**27.68**	**333**	P	**P**	**02 28 37.4**	**+0.8**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS				MLR	MLR		
	comp=Z,726nm,18.6s						
AAK	**Ala-Archa**	**27.82**	**68**	P	**P**	**02 28 38.7**	**+0.6**
	comp=Z,1.2nm,0.3s,mb3.9,baz=305,slow=6.4,SNR=7.0						
AAK				LR	LR	02 42 06.0	
	comp=Z,591nm,18.6s,MS4.2,baz=252,slow=42						
AAK	**Ala-Archa**	**27.82**	**68**	P	**P**	**02 28 38.7**	**+0.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
AAK				MLR	MLR		
	comp=Z,591nm,18.6s,MS4.2						
AAK	**Ala-Archa**	**27.82**	**68**	*e*P	**P**	**02 28 38.4**	**+0.3**
	comp=Z,41nm,1.9s,mb4.7						
AAK	**Ala-Archa**	**27.82**	**68**	P	**P**	**02 28 40.4**	**+2.3**
	SNR=7.2						
MTLF	**Montolieu**	**28.16**	**294**	*e*P	**P**	**02 28 40.5**	**-0.7**
	comp=Z,28nm,1.3s,mb4.5						
MTLF	**Montolieu**	**28.16**	**294**	*e*P	**P**	**02 28 40.5**	**-0.7**
MTLF				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.4						
MTLF	**Montolieu**	**28.16**	**294**	*e*P	**P**	**02 28 40.5**	**-0.7**
	comp=Z,14nm,1.3s,mb4.4						
MTLF	**Montolieu**	**28.16**	**294**	*e*P	**P**	**02 28 40.5**	**-0.7**
	comp=Z,14nm,1.3s,mb4.5						
TCF	**Toulx Ste Croi**	**28.29**	**300**	*e*P	**P**	**02 28 40.9**	**-1.3**
TCF	**Toulx Ste Croi**	**28.29**	**300**	*e*P	**P**	**02 28 40.9**	**-1.3**
TKM2	**Tokmak 2**	**28.63**	**67**	*e*P	**P**	**02 28 45.3**	**0.0**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**28.63**	**67**	*e*P	**P**	**02 28 45.3**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.1						
RJF	**Les Rejaudoux**	**28.70**	**298**	*e*P	**P**	**02 28 45.1**	**-0.9**
	comp=Z,90nm,1.7s,mb4.9						
RJF				*e*MLR	MLR		
	comp=Z,482nm,23.0s,MS3.7						
RJF	**Les Rejaudoux**	**28.70**	**298**	*e*P	**P**	**02 28 45.1**	**-0.9**
RJF				pmax	pmax		
	comp=Z,45nm,1.7s,mb4.9						
RJF				MLR	MLR		
	comp=Z,480nm,23.0s,MS4.0						
RJF	**Les Rejaudoux**	**28.70**	**298**	*e*P	**P**	**02 28 45.1**	**-0.9**
	comp=Z,45nm,1.7s,mb4.9						
RJF				LR	LR		
	comp=Z,480nm,23.0s,MS4.0						
RJF	**Les Rejaudoux**	**28.70**	**298**	*e*P	**P**	**02 28 45.1**	**-0.9**
	comp=Z,45nm,1.7s,mb4.9						
NAO01	**NORSAR Array S**	**29.18**	**332**	*e*P	**P**	**02 28 48.4**	**-1.7**
	comp=Z,13nm,1.1s,mb4.6						
NB2	**NORSAR Subarra**	**29.19**	**333**	P	**P**	**02 28 52.1**	**+2.0**
	comp=Z,7.1nm,1.4s,mb4.2,baz=126,slow=9.3						
NB2	**NORSAR Subarra**	**29.19**	**333**	P	**P**	**02 28 52.1**	**+2.0**
	comp=Z,7.1nm,1.4s,mb4.2,baz=126,slow=8.9,SNR=4.5						
NOA	**NORSAR Array B**	**29.19**	**333**	P	**P**	**02 28 50.4**	**+0.2**
	comp=Z,2.3nm,1.0s,mb3.9,baz=125,slow=9.3,SNR=3.3						
NOA				LR	LR	02 42 21.3	
	comp=Z,372nm,18.5s,MS4.0,baz=130,slow=40						
NOA	**NORSAR Array B**	**29.19**	**333**	P	**P**	**02 28 50.4**	**+0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NOA				MLR	MLR		
	comp=Z,372nm,18.5s						
KSH	**Kashi**	**29.20**	**74**	*e*P	**P**	**02 28 50.5**	**+0.1**
KSH				*ep*P	pP	02 28 54.8	+1.3
KSH				*es*P	sP	02 28 57.5	+2.8
KSH				*e*PP	PP	02 29 43.5	-13
KSH				*e*PcP	PcP	02 32 00.4	+2.8
KSH				*e*S	**S**	**02 33 39.1**	**-3.7**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.3						
KSH				pmax	pmax		
	comp=Z,190nm,3.4s						
KSH				LR	LR		
	comp=N,790nm,12.9s,MS4.6						
KSH				LR	LR		
	comp=E,670nm,13.7s,MS4.6						
KSH				LR	LR		
	comp=Z,770nm,18.7s,MS4.3						
MFF	**Saint Martin d**	**29.93**	**300**	*e*P	**P**	**02 28 54.6**	**-2.3**
	comp=Z,130nm,1.8s,mb5.1						
MFF	**Saint Martin d**	**29.93**	**300**	*e*P	**P**	**02 28 54.6**	**-2.3**
MFF				pmax	pmax		
	comp=Z,65nm,1.8s,mb5.1						
MFF	**Saint Martin d**	**29.93**	**300**	*e*P	**P**	**02 28 54.6**	**-2.3**
	comp=Z,65nm,1.8s,mb5.1						
MFF	**Saint Martin d**	**29.93**	**300**	*e*P	**P**	**02 28 54.6**	**-2.3**
	comp=Z,65nm,1.8s,mb5.1						
KURK	**Kurchatov**	**31.25**	**52**	P	**P**	**02 29 08.1**	**-0.4**
	comp=Z,4.9nm,0.9s,mb4.3,baz=268,slow=9.1,SNR=15						
KURK				LR	LR	02 44 01.5	
	comp=Z,1μm,18.0s,MS4.6,baz=260,slow=41						
KURK	**Kurchatov**	**31.25**	**52**	*ce*P	**P**	**02 29 08.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
KURK	**Kurchatov**	**31.25**	**52**	*e*P	**P**	**02 29 09.1**	**+0.7**
	comp=Z,11nm,1.2s,mb4.6						
TAM	**Tamanrasset**	**31.94**	**252**	*e*P	**P**	**02 29 15.5**	**+0.7**
TAM				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.6						
TAM	**Tamanrasset**	**31.94**	**252**	*e*P	**P**	**02 29 15.5**	**+0.7**
	comp=Z,12nm,1.3s,mb4.5						
ARCES	**ARCESS Array B**	**32.91**	**352**	P	**P**	**02 29 22.3**	**-0.5**
	comp=Z,4.8nm,0.9s,mb4.5,baz=159,slow=10,SNR=11						
ARCES				LR	LR	02 43 37.2	
	comp=Z,492nm,19.9s,MS4.2,baz=342,slow=38						
ARCES	**ARCESS Array B**	**32.91**	**352**	P	**P**	**02 29 22.3**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,493nm,19.9s						
ESDC	**Sonseca Array**	**33.12**	**287**	P	**P**	**02 29 24.0**	**-1.0**
	comp=Z,3.2nm,0.7s,mb4.3,baz=63,slow=9.4,SNR=15						
ESDC				LR	LR	02 43 37.5	
	comp=Z,301nm,19.9s,MS4.0,baz=50,slow=38						
EKA	**Eskdalemuir Ar**	**33.26**	**316**	P	**P**	**02 29 25.6**	**-0.3**
	comp=Z,1.6nm,0.6s,mb4.1,baz=104,slow=8.9,SNR=6.8						
EKA	**Eskdalemuir Ar**	**33.26**	**316**	P	**P**	**02 29 25.7**	**-0.3**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	**Makanchi Array**	**33.35**	**60**	*e*P	**P**	**02 29 27.5**	**+0.6**
MKAR	**Makanchi Array**	**33.35**	**60**	P	**P**	**02 29 27.4**	**+0.5**
	comp=Z,2.4nm,0.7s,mb4.3,baz=266,slow=7.7,SNR=9.1						
MKAR				LR	LR	02 45 15.1	
	comp=Z,542nm,19.2s,MS4.3,baz=273,slow=40						
MKAR	**Makanchi Array**	**33.35**	**60**	*ce*P	**P**	**02 29 27.3**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NVS	**Novosibirsk**	**34.76**	**45**	*e*P	**P**	**02 29 34.9**	**-4.1**
MDT	**Midelt**	**35.41**	**276**	LR	LR	02 47 29.5	
	comp=Z,119nm,18.3s,MS3.7,baz=75,slow=42						
ZALV	**Zalesovo Beam**	**35.52**	**47**	P	**P**	**02 29 45.3**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.3,baz=267,slow=9.4,SNR=8.9						
ZALV				LR	LR	02 46 07.2	
	comp=Z,300nm,18.0s,MS4.1,baz=79,slow=39						
ZALV	**Zalesovo Beam**	**35.52**	**47**	P	**P**	**02 29 45.3**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
ZALV				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.1						
MTE	**Manteigas**	**35.70**	**289**	*e*P	**P**	**02 29 46.7**	**-0.6**
MTE	**Manteigas**	**35.70**	**289**	*e*P	**P**	**02 29 46.7**	**-0.6**
PBAR	**Barrancos**	**35.78**	**285**	*e*P	**P**	**02 29 46.9**	**-1.1**
	comp=Z,23nm,1.8s,mb4.8						
PBAR	**Barrancos**	**35.78**	**285**	*e*P	**P**	**02 29 46.9**	**-1.1**
	comp=Z,23nm,1.8s,mb4.8						
PESTR	**Estremoz**	**36.04**	**287**	*e*P	**P**	**02 29 48.9**	**-1.4**
	comp=Z,15nm,1.2s,mb4.8						
PESTR	**Estremoz**	**36.04**	**287**	*e*P	**P**	**02 29 48.9**	**-1.4**
	comp=Z,15nm,1.2s,mb4.8						
WMQ	**Urumqi**	**37.34**	**64**	P	**P**	**02 30 02.0**	**+0.7**
WMQ				sP	sP	02 30 09.0	+3.3
WMQ				PP	PP	02 31 30.0	+3.6
WMQ				S	**S**	**02 35 49.0**	**0.0**
WMQ				SS	SS	02 38 22.0	-10
WMQ				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
WMQ				pmax	pmax		
	comp=Z,84nm,4.0s						
WMQ				LR	LR		
	comp=N,740nm,14.0s,MS4.7						
WMQ				LR	LR		
	comp=E,490nm,13.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,380nm,12.0s,MS4.4						
KMBO	**Kilima Mbogo**	**38.42**	**182**	P	**P**	**02 30 11.9**	**+1.4**
	comp=Z,4.1nm,0.9s,mb4.2,baz=0.0,slow=20,SNR=7.7						
KMBO				LR	LR	02 45 27.6	
	comp=Z,323nm,18.1s,MS4.2,baz=275,slow=35						
KMBO	**Kilima Mbogo**	**38.42**	**182**	*e*P	**P**	**02 30 11.9**	**+1.3**
KMBO				pmax	pmax		
	comp=Z,42nm,1.9s						
KMBO	**Kilima Mbogo**	**38.42**	**182**	*e*P	**P**	**02 30 11.8**	**+1.3**
	comp=Z,42nm,1.9s,mb4.8						
DANN	**Dangsing**	**38.68**	**90**	*e*P	**P**	**02 30 14.8**	**+2.0**
	comp=Z,43nm,0.8s,mb5.2						
KOLN	**Koldanda**	**38.81**	**91**	*e*P	**P**	**02 30 16.4**	**+2.5**
	comp=Z,32nm,1.1s,mb5.0						
GKN	**Gorkha**	**39.53**	**90**	*e*P	**P**	**02 30 20.2**	**+0.3**
	comp=Z,35nm,0.7s,mb5.2						
DMN	**Daman**	**40.08**	**90**	*e*P	**P**	**02 30 25.9**	**+1.4**
KKN	**Kakani**	**40.14**	**90**	*e*P	**P**	**02 30 26.7**	**+1.8**
	comp=Z,25nm,0.7s,mb5.0						
PKI	**Pulchoki**	**40.34**	**90**	*e*P	**P**	**02 30 27.8**	**+1.2**
GUN	**Gumba**	**40.56**	**89**	*e*P	**P**	**02 30 30.3**	**+1.8**
TORD	**Torodi Ar. Bea**	**40.82**	**243**	P	**P**	**02 30 29.5**	**-1.2**
	comp=Z,2.0nm,0.8s,mb3.8,baz=38,slow=8.8,SNR=12						
TORD				LR	LR	02 50 39.6	
	comp=Z,179nm,21.1s,MS3.9,baz=90,slow=41						
JMIC	**Jan Mayen**	**41.44**	**339**	LR	LR	02 49 35.1	
	comp=Z,151nm,20.0s,MS3.9,baz=85,slow=39						
RAMN	**Ramite**	**41.56**	**90**	*e*P	**P**	**02 30 36.9**	**+0.2**
	comp=Z,40nm,0.6s,mb5.2						
SPITS	**Spitsbergen Ar**	**41.88**	**353**	LR	LR	02 51 03.8	
	comp=Z,286nm,19.4s,MS4.2,baz=120,slow=41						
ODAN	**Odare**	**42.23**	**90**	*e*P	**P**	**02 30 43.8**	**+1.6**
	comp=Z,79nm,1.1s,mb5.2						
TAPN	**Taplejung**	**42.26**	**89**	*e*P	**P**	**02 30 43.5**	**+1.1**
ZAK	**Zakamensk**	**46.91**	**52**	*e*P	**P**	**02 31 20.7**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
TLY	**Talaya**	**46.93**	**51**	*e*P	**P**	**02 31 21.9**	**+2.6**
TLY				*e*		02 33 07.3	
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
TLY				MLR	MLR		
	comp=Z,297nm,18.0s,MS4.3						
GTA	**Gaotai**	**47.17**	**68**	*e*P	**P**	**02 31 22.2**	**+0.7**
GTA				pP	pP	02 31 31.4	+6.8
GTA				sP	sP	02 31 36.0	+10
GTA				S	**S**	**02 38 16.1**	**+2.0**
GTA				sS	sS	02 38 23.6	+4.4
GTA				SS	SS	02 41 34.3	-6.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
GTA				pmax	pmax		
	comp=Z,100nm,6.3s						
GTA				LR	LR		
	comp=N,310nm,22.2s,MS4.4						
GTA				LR	LR		
	comp=E,230nm,18.0s,MS4.4						
GTA				LR	LR		
	comp=Z,310nm,17.1s,MS4.3						
SONM	**Songino Array**	**49.45**	**55**	P	**P**	**02 31 39.5**	**+0.6**
	comp=Z,0.2nm,0.3s,mb3.6,baz=275,slow=5.4,SNR=4.0						
SONM				LR	LR	02 55 11.8	
	comp=Z,835nm,19.9s,MS4.7,baz=288,slow=39						
DBIC	**Dimbokro**	**49.93**	**243**	LR	LR	02 55 27.5	
	comp=Z,167nm,18.9s,MS4.1,baz=262,slow=39						
LIC	**Lamto**	**50.37**	**243**	*e*P	**P**	**02 31 45.3**	**-1.0**
LIC				*e*MLR	MLR		
	comp=Z,240nm,18.0s,MS4.0						
LIC	**Lamto**	**50.37**	**243**	*e*P	**P**	**02 31 45.3**	**-1.0**
LIC				LR	LR		
	comp=Z,120nm,18.0s,MS4.0						
LIC	**Lamto**	**50.37**	**243**	*e*P	**P**	**02 31 45.3**	**-1.0**
LZH	**Lanzhou**	**51.32**	**70**	*e*P	**P**	**02 31 56.5**	**+3.3**
LZH				pP	pP	02 31 58.5	+2.1
LZH				sP	sP	02 32 00.0	+2.4
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
LZH				LR	LR		
	comp=N,560nm,15.8s,MS4.8						
LZH				LR	LR		
	comp=E,250nm,13.6s,MS4.8						
LZH				LR	LR		
	comp=Z,400nm,17.6s,MS4.5						
CD2	**Chengdu**	**53.35**	**76**	*e*P	**P**	**02 32 10.4**	**+2.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
CD2				pmax	pmax		
	comp=Z,30nm,5.6s						
HHC	**Hu-ho-hao-te**	**55.15**	**62**	*e*P	**P**	**02 32 21.3**	**-0.1**
HHC				pP	pP	02 32 25.9	+1.3
HHC				PcP	PcP	02 33 21.5	-1.0
HHC				PP	PP	02 34 26.5	+2.0
HHC				ScP	ScP	02 37 18.9	-2.3
HHC				S	**S**	**02 40 03.5**	**-0.8**
HHC				ScS	ScS	02 42 06.5	-4.2
HHC				SS	SS	02 43 46.5	-1.4
HHC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
HHC				pmax	pmax		
	comp=Z,90nm,5.5s						
HHC				LR	LR		
	comp=N,410nm,17.3s,MS4.7						
HHC				LR	LR		
	comp=E,310nm,17.3s,MS4.7						
HHC				LR	LR		
	comp=Z,330nm,17.2s,MS4.5						
KMI	**Kunming**	**55.23**	**83**	P	**P**	**02 32 24.5**	**+2.3**
KMI				pP	pP	02 32 26.9	+1.6
KMI				PP	PP	02 34 28.7	+3.2
KMI				S	**S**	**02 40 04.3**	**-1.5**
KMI				SS	SS	02 43 47.6	-2.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
KMI				LR	LR		
	comp=N,180nm,15.3s,MS4.5						
KMI				LR	LR		
	comp=E,290nm,16.6s,MS4.5						
KMI				LR	LR		
	comp=Z,250nm,19.7s,MS4.3						
CMAR	**Chiang Mai Arr**	**55.65**	**92**	P	**P**	**02 32 24.8**	**-0.4**
	comp=Z,1.3nm,0.3s,mb4.5,baz=298,slow=9.1,SNR=5.4						
CMAR	**Chiang Mai Arr**	**55.65**	**92**	P	**P**	**02 32 24.8**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
XAN	**Xi'an**	**55.95**	**71**	P	**P**	**02 32 29.5**	**+2.3**
XAN				pP	pP	02 32 39.7	+9.3
XAN				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
GYA	**Guiyang**	**57.67**	**80**	P	**P**	**02 32 41.0**	**+1.5**
GYA				PP	PP	02 34 49.0	+1.7
GYA				ScP	ScP	02 37 31.9	-0.7
GYA				S	**S**	**02 40 37.4**	**-0.7**
GYA				SS	SS	02 44 27.4	-0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				pmax	pmax		
	comp=Z,90nm,5.3s						
GYA				LR	LR		
	comp=N,460nm,19.7s,MS4.7						
GYA				LR	LR		
	comp=E,390nm,19.9s,MS4.7						
GYA				LR	LR		
	comp=Z,450nm,18.0s,MS4.6						
BJI	**Beijing**	**58.70**	**61**	P	**P**	**02 32 45.5**	**-1.1**
BJI				PP	PP	02 34 54.8	-1.3
BJI				S	**S**	**02 40 49.7**	**-1.5**
BJI				SS	SS	02 44 44.9	+1.1
BJI				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
BJI				pmax	pmax		
	comp=Z,110nm,4.8s						
BJI				LR	LR		
	comp=N,550nm,19.8s,MS4.8						
BJI				LR	LR		
	comp=E,320nm,19.2s,MS4.8						
BJI				LR	LR		
	comp=Z,250nm,19.4s,MS4.3						
TSUM	**Tsumeb**	**59.74**	**203**	LR	LR	03 00 13.8	
	comp=Z,381nm,18.9s,MS4.5,baz=177,slow=38						
CN2	**Changchun**	**63.30**	**54**	*e*P	**P**	**02 33 17.4**	**-0.3**
LBTB	**Lobatse**	**63.34**	**193**	*e*P	**P**	**02 33 18.5**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
LBTB	**Lobatse**	**63.34**	**193**	*e*P	**P**	**02 33 18.5**	**+0.5**
	comp=Z,6.5nm,0.8s,mb4.8						
QIZ	**Qiongzhong**	**64.00**	**85**	P	**P**	**02 33 22.2**	**-0.5**
QIZ				S	**S**	**02 42 03.0**	**+3.8**
QIZ				SS	SS	02 46 12.9	+5.2
QIZ				pmax	pmax		
	comp=Z,88nm,7.1s						
QIZ				LR	LR		
	comp=N,160nm,16.5s,MS4.3						
QIZ				LR	LR		
	comp=E,96nm,19.3s,MS4.3						
QIZ				LR	LR		
	comp=Z,130nm,18.2s,MS4.2						
NJ2	**Nanjing**	**64.27**	**68**	*e*P	**P**	**02 33 24.2**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
MDJ	**Mudanjiang**	**65.54**	**52**	P	**P**	**02 33 31.4**	**-1.0**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,29nm,6.1s						
SEY	**Seymchan**	**66.94**	**27⇑**	*e*P	**P**	**02 33 41.2**	**+0.2**
KSRS	**Korea Array**	**68.03**	**59**	P	**P**	**02 33 49.9**	**+1.5**
	comp=Z,2.6nm,0.8s,mb4.3,baz=299,slow=5.3,SNR=7.4						
KSRS	**Korea Array**	**68.03**	**59**	P	**P**	**02 33 49.9**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
SCHQ	**Schefferville**	**68.19**	**323**	P	**P**	**02 33 50.2**	**+1.1**
	comp=Z,1.7nm,0.6s,mb4.3,baz=58,slow=15,SNR=3.7						
SCHQ				LR	LR	03 04 52.8	
	comp=Z,185nm,18.6s,MS4.3,baz=66,slow=37						
PETK	**Petropavlovsk-**	**75.53**	**33**	LR	LR	03 13 48.5	
	comp=Z,146nm,19.9s,MS4.3,baz=302,slow=40						
ILAR	**Eielson Array**	**78.01**	**2**	LR	LR	03 13 23.5	
	comp=Z,92nm,18.0s,MS4.2,baz=341,slow=39						
YKA	**Yellowknife Ar**	**78.08**	**348**	P	**P**	**02 34 50.0**	**+2.7**
	comp=Z,1.6nm,0.8s,mb4.0,baz=23,slow=5.7,SNR=12						
YKA	**Yellowknife Ar**	**78.08**	**348**	P	**P**	**02 34 50.0**	**+2.6**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**78.08**	**348**	P	**P**	**02 34 50.0**	**+2.7**

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*DDA **03** 02:25:16.9, 37°.49N×38°.54E, h4km±3km, Md3.4*
*ISCJB **03** 02:25:16.6±0.5, 37°.48N±0°.02×38°.58E±0°.02, h2km±4km, mb4.1/7, Error ellipse: s-maj=3.6km s-min=2.4km az=155.2*
*CSEM **03** 02:25:17.2±0.1, 37°.48N×38°.57E, h2km, MD3.4, Error ellipse: s-maj=3.5km s-min=2.6km az=125.0*
*ISK **03** 02:25:17.7, 37°.54N×38°.49E, h9km, MD3.3*
*NEIC **03** 02:25:17.0, 37°.55N×38°.47E, h8km, MD3.3(ISK), After ISK.*
*NSSC **03** 02:25:18, 37°.45N×38°.65E, h9km±3km*
*IDC **03** 02:25:19.9±6.2, 37°.31N×38°.42E, h23km±37km, mb4.0/7, mb1 4.1/8, mb1mx3.7/21, mbtmp4.0/8, ML3.5/1, Error ellipse: s-maj=63.8km s-min=23.7km az=18.0*

ISC 03 02:25:17.3±0.5, 37°.47N±0°.02×38°.58E±0°.02, h2km±4km, n91, σ0°.92/139, mb4.1/7, 15D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**		**0.23**	**271**	*i* P	**Pg**	**02 25 20.4**	**-1.3**
ATAB					*i* S	**Sg**	**02 25 24.1**	**-0.5**
ATAB	**Bozova**		**0.23**	**271**	*i* P	**Pg**	**02 25 20.4**	**-1.3**
ATAB					*i* S	**Sg**	**02 25 24.1**	**-0.6**
MALT	**Malatya**		**0.85**	**352**	*e*PG	**Pg**	**02 25 33.2**	**-0.6**
MALT					*e*SG	**Sg**	**02 25 44.9**	**+0.1**
MALT	**Malatya**		**0.85**	**352**	⇓*i* P	**Pg**	**02 25 32.6**	**-1.1**
MALT	**Malatya**		**0.85**	**352**	*e*Pg	**Pg**	**02 25 33.2**	**-0.5**
MALT					*e*Sg	**Sg**	**02 25 44.9**	**+0.1**
MYA	**Malataya**		**0.87**	**352**	*e*PG	**Pg**	**02 25 33.0**	**-1.0**
MYA	**Malataya**		**0.87**	**352**	*e*Pg	**Pg**	**02 25 33.0**	**-1.0**
AKCD	**Akcadag**		**0.98**	**328**	*i* P	**Pg**	**02 25 35.6**	**-0.5**
AKCD					*i* S	**Sg**	**02 25 48.5**	**-0.3**
AKCD	**Akcadag**		**0.98**	**328**	*i* P	**Pg**	**02 25 35.6**	**-0.5**
AKCD					*i* S	**Sg**	**02 25 48.5**	**-0.3**
SVRC	**Sivrice-ELAZID**		**1.08**	**32**	*e*PG	**Pg**	**02 25 38.2**	**+0.2**
SVRC					*e*SG	**Sg**	**02 25 53.5**	**+1.5**
SVRC	**Sivrice-ELAZID**		**1.08**	**32**	*e*Pg	**Pg**	**02 25 38.2**	**+0.2**
SVRC					*e*Sg	**Sg**	**02 25 53.5**	**+1.5**
ELZG	**Elazig**		**1.08**	**17**	*i* P	**Pg**	**02 25 38.1**	**+0.1**
ELZG					*i* S	**Sg**	**02 25 52.2**	**+0.2**
ELZG	**Elazig**		**1.08**	**17**	*i* P	**Pg**	**02 25 38.2**	**+0.2**
ELZG					*i* S	**Sg**	**02 25 52.2**	**+0.2**
GAZ	**Gaziantep**		**1.13**	**255**	*e*PG	**Pg**	**02 25 38.9**	**-0.1**
GAZ					*e*SG	**Sg**	**02 25 54.0**	**+0.4**
GAZ	**Gaziantep**		**1.13**	**255**	*e*Pg	**Pg**	**02 25 38.9**	**-0.1**
GAZ					*e*Sg	**Sg**	**02 25 54.1**	**+0.5**
DRBT	**Darb Altahta**		**1.16**	**122**	⇑P	**Pg**	**02 25 35.8**	**-4.5**
DRBT	**Darb Altahta**		**1.16**	**122**	⇑*i* P	**Pg**	**02 25 35.5**	**-4.0**
DIYA	**Diyarbakir**		**1.30**	**69**	*i* P	**Pg**	**02 25 41.9**	**-0.5**
DIYA					*i* S	**Sg**	**02 26 00.3**	**+1.1**
DIYA	**Diyarbakir**		**1.30**	**69**	*i* P	**Pg**	**02 25 41.9**	**-0.5**
DIYA					*i* S	**Sg**	**02 26 00.3**	**+1.0**
KMRS	**Kahramanmaras**		**1.34**	**272**	*e*PN	**Pn**	**02 25 42.1**	**-0.9**
KMRS				

WRDH	Warideh	2.62	222	⇓P	Pn	02 26 01.0	+0.4
WRDH				⇑S	Sn	02 26 34.0	+1.0
WRDH	Warideh	2.62	222	⇓iP	Pn	02 26 01.5	+0.9
WRDH				⇑iS	Sn	02 26 34.2	+1.2
SCER	sogukcermik	2.65	335	iP	Pn	02 26 02.7	+1.7
SCER				iS	Sg	02 26 44.0	+1.6
SCER	sogukcermik	2.65	335	iP	Pn	02 26 02.7	+1.7
SCER				iS	Sg	02 26 44.0	+1.6
SLNF	Slenfeh	2.66	226	⇑P	Pn	02 26 03.0	+1.8
SLNF				⇓S	Sn	02 26 35.0	+1.0
SLNF	Slenfeh	2.66	226	⇑iP	Pn	02 26 03.1	+1.9
SLNF				⇓iS	Sn	02 26 35.5	+1.5
KFRA	Kufra	2.67	213	⇓P	Pn	02 26 02.0	+0.7
KFRA				⇓S	Sn	02 26 34.0	-0.2
KFRA	Kufra	2.67	213	⇓iP	Pn	02 26 02.4	+1.1
KFRA				⇓iS	Sn	02 26 34.5	+0.3
KRTS	Karatas	2.71	252	ePN	Pn	02 26 02.2	+0.2
KRTS	Karatas	2.71	252	ePn	Pn	02 26 02.2	+0.3
SVSK	Karacayir	2.74	334	ePN	Pn	02 26 02.0	-0.3
SVSK	Karacayir	2.74	334	ePn	Pn	02 26 02.0	-0.3
KARA	Karaisali	2.82	267	ePN	Pn	02 26 03.4	0.0
KARA	Karaisali	2.82	267	ePn	Pn	02 26 03.4	+0.1
BIDA	Albida	3.05	217	⇑P	Pn	02 26 06.0	-0.6
BIDA				⇑S	Sn	02 26 44.0	+0.4
BIDA	Albida	3.05	217	⇑iP	Pn	02 26 06.9	+0.3
BIDA				⇑iS	Sn	02 26 44.5	+0.9
GUMT	Gumushane	3.07	13	ePN	Pn	02 26 07.0	+0.2
GUMT	Gumushane	3.07	13	ePn	Pn	02 26 07.0	+0.2
RSDY	Resadiye-TOKAT	3.09	342	ePN	Pn	02 26 06.7	-0.4
RSDY	Resadiye-TOKAT	3.09	342	ePn	Pn	02 26 06.7	-0.3
TATV	Tatvan	3.09	69	iP	Pn	02 26 09.0	+1.9
TATV				iS	Sb	02 26 51.2	0.0
TATV	Tatvan	3.09	69	iP	Pn	02 26 09.0	+1.9
TATV				iS	Sb	02 26 51.2	0.0
TOKT	Tokat	3.26	332	ePN	Pn	02 26 09.1	-0.3
TOKT	Tokat	3.26	332	ePn	Pn	02 26 09.1	-0.4
YOZ	Yozgat	3.35	311	ePN	Pn	02 26 10.2	-0.5
YOZ	Yozgat	3.35	311	ePn	Pn	02 26 10.2	-0.5
ESPY	Espiye-Giresun	3.45	2	ePN	Pn	02 26 12.1	+0.1
ESPY	Espiye-Giresun	3.45	2	ePn	Pn	02 26 12.1	+0.1
BRTR	Keskin Array B	4.48	302	Pn	Pn	02 26 26.2	0.0
	2.5nm,0.3s,baz=125,slow=17,SNR=5.0						
BRTR				Pg	Pg	02 26 40.9	-2.3
	9.3nm,0.3s,baz=128,slow=18,SNR=7.3						
FINES	FINESS Array B	25.25	346	P	P	02 30 45.7	+1.3
	2.3nm,0.6s,mb3.9,baz=153,slow=11,SNR=4.0						
KURK	Kurchatov	31.26	52	P	P	02 31 37.7	-0.5
	2.2nm,0.9s,mb4.0,baz=261,slow=8.7,SNR=3.5						
ARCES	ARCESS Array B	32.90	352	P	P	02 31 53.6	+1.2
	1.8nm,0.7s,mb4.1,baz=153,slow=12,SNR=3.3						
MKAR	Makanchi Array	33.36	60	P	P	02 31 58.0	+1.3
	2.0nm,0.7s,mb4.2,baz=264,slow=5.8,SNR=3.7						
CMAR	Chiang Mai Arr	55.66	92	P	P	02 34 55.8	+0.7
	1.5nm,0.3s,mb4.5,baz=308,slow=7.1,SNR=4.1						
SCHQ	Schefferville	68.18	323	P	P	02 36 18.3	-0.5
	1.3nm,0.6s,mb4.2,baz=90,slow=9.1,SNR=2.6						
SCHQ	Schefferville	68.18	323	P	P	02 36 18.3	-0.5
YKA	Yellowknife Ar	78.07	348	P	P	02 37 16.4	-0.7
	0.6nm,0.6s,mb3.7,baz=17,slow=5.0,SNR=5.1						

KRSC 03 03:00:16.1±0.4, 52°.46N×160°.93E, h10km±10km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.84	320	eP	Pg	03 00 32.6	+0.3
SPN				iS	Sg	03 00 44.6	+1.3
NLC	Nalytchevo	1.20	307	eP	Pb	03 00 38.2	-0.6
NLC				iS	Sb	03 00 54.7	+0.4
PET	Petropavlovsk	1.50	293	eP	Pn	03 00 43.2	+0.2
PET				iS	Sn	03 01 03.1	+0.6
AVH	Avacha	1.55	302	eP	Pn	03 00 44.0	+0.2
KII	Karymskiy	1.81	331	eP	Pn	03 00 49.1	+1.8
KII				iS	Sn	03 01 13.8	+3.5
MKZ	Mys Kozlova	2.15	12	eP	Pn	03 00 52.4	+0.4
MKZ				iS	Sn	03 01 18.1	-0.6
GNL	Ganaly	2.19	306	eP	Pn	03 00 54.3	+1.9
GNL				iS	Sn	03 01 23.0	+3.5
KBTR	Krutoberegovo	3.92	16	P	Pn	03 01 18.9	+2.7

IDC 03 03:14:16.8±2.1, 15°.26S×173°.15W, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.9/18, mbtmp3.8/6, Error ellipse: s-maj=124.9km s-min=18.3km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.89	45	Pn	Pn	03 14 49.2	-1.1
	46nm,0.3s,baz=233,slow=5.1,SNR=8.9						
AFI				Sn	Sn	03 15 08.9	-6.0
	84nm,0.3s,baz=221,slow=19,SNR=4.7						
STKA	Stephens Creek	44.32	240	P	P	03 22 28.7	0.0
	0.8nm,0.5s,baz=51,slow=9.6,SNR=3.9						
WRA	Warramunga Arr	50.11	257	P	P	03 23 13.7	-0.4
	1.1nm,0.6s,baz=91,slow=7.0,SNR=16						
ASAR	Alice Springs	50.39	252	P	P	03 23 16.1	-0.1
	1.9nm,0.5s,baz=88,slow=8.1,SNR=25						
NVAR	Mina Array Bea	74.06	42	P	P	03 25 55.2	+0.5
	0.2nm,0.7s,baz=228,slow=9.5,SNR=2.3						
PDAR	Pinedale Array	82.00	42	P	P	03 26 39.3	+0.6
	0.2nm,0.3s,baz=235,slow=3.2,SNR=4.3						
ILAR	Eielson Array	82.26	11	P	P	03 26 40.1	+0.5
	0.3nm,0.7s,baz=211,slow=5.5,SNR=3.9						
BRTR	Keskin Array B	146.21	321	PKPbc	PKPbc	03 33 59.0	-0.4
	2.0nm,0.8s,baz=86,slow=0.6,SNR=10.0						

INMG 03 03:31:34.9±1.7, 32°.61N×19°.51W, h10km, MD3.5, ML2.8, Error ellipse: s-maj=16.6km s-min=7.7km az=111.0
CSEM 03 03:31:40.1±1.3, 32°.17N×18°.70W, h10km, mb3.7/5, Error ellipse: s-maj=26.0km s-min=11.0km az=118.0
MDD 03 03:31:34.1±2.6, 32°.45N×19°.04W, h0km, mb3.7/5, 4D, Error ellipse: s-maj=26.3km s-min=10.2km az=115.0, PRIMO, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUL	Funchal	1.82	84	ePn	Pn	03 32 05.3	-1.4
FUL				eSn	Sn	03 32 29.4	-1.0
FUL				A		03 32 38.2	
	57nm,0.2s						
FUL	Funchal	1.82	84	P	Pn	03 32 05.3	-1.4
FUL				S	Sn	03 32 29.4	-1.0
	28nm,0.2s						
FUL	Funchal	1.82	84	P	Pn	03 32 05.3	-1.4
FUL				S	Sn	03 32 29.4	-1.0
	28nm,0.2s						
FUL	Funchal	1.82	84	ePn	Pn	03 32 05.3	-1.4
FUL				eSn	Sn	03 32 29.4	-1.0
	57nm,0.2s						
PMAR	Madeira	1.82	81	ePn	Pn	03 32 05.5	-1.1
PMAR				eSn	Sn	03 32 29.4	-1.0
PMAR				A		03 32 29.8	
	90nm,0.4s						
PMAR	Madeira	1.82	81	⇓P	Pn	03 32 05.5	-1.1
PMAR				S	Sn	03 32 29.4	-1.0
	45nm,0.4s						
PMAR	Madeira	1.82	81	⇓P	Pn	03 32 05.5	-1.1
PMAR				S	Sn	03 32 29.4	-1.0
	45nm,0.4s						
PMPS	Porto Santo	2.36	74	ePn	Pn	03 32 11.9	-2.2
PMPS				eSn	Sn	03 32 41.0	-2.8
PMPS				A		03 32 43.5	
	38nm,0.3s						
PMPS	Porto Santo	2.36	74	⇓P	Pn	03 32 11.9	-2.2
PMPS				S	Sn	03 32 41.0	-2.8
	19nm,0.3s						
PMPS	Porto Santo	2.36	74	⇓P	Pn	03 32 11.9	-2.2
PMPS				S	Sn	03 32 41.0	-2.8
	19nm,0.3s						
EHIG	Higuera	4.02	164	S	Sn	03 33 20.5	-4.2
	43nm,0.1s,SNR=7.9						
EHIG	Higuera	4.02	164	S	Sn	03 33 20.5	-4.2
	43nm,0.1s,SNR=7.9						
EHIG	Higuera	4.02	164	S	Sn	03 33 20.5	-4.3
	43nm,0.1s,SNR=7.9						
EBAJ	Bajamar	4.54	148	P	Pn	03 32 43.6	-0.4
	0.4nm,0.4s,SNR=7.9						
EBAJ				S	Sn	03 33 32.3	-5.2
	3.4nm,0.1s,SNR=7.9						
EBAJ	Bajamar	4.54	148	P	Pn	03 32 43.6	-0.4
	0.4nm,0.4s,SNR=7.9						
EBAJ				S	Sn	03 33 32.3	-5.2
	3.4nm,0.1s,SNR=7.9						
EBAJ	Bajamar	4.54	148	P	Pn	03 32 43.6	-0.4
	0.4nm,0.4s,SNR=7.9						
EBAJ				S	Sn	03 33 32.3	-5.2
	3.4nm,0.1s,SNR=7.9						
CHIO	Chio	4.61	155	P	Pn	03 32 43.9	-1.2
	1.6nm,0.1s,SNR=7.9						
CHIO				S	Sn	03 33 35.2	-4.2
	34nm,0.1s,SNR=7.9						
CHIO	Chio	4.61	155	P	Pn	03 32 43.9	-1.2
	1.6nm,0.1s,SNR=7.9						
CHIO				S	Sn	03 33 35.2	-4.2
	34nm,0.1s,SNR=7.9						
CHIO	Chio	4.61	155	P	Pn	03 32 43.9	-1.2
	1.6nm,0.1s,SNR=7.9						
CHIO				S	Sn	03 33 32.3	-7.1
	34nm,0.1s,SNR=7.9						
CRAJ	Montana Rajada	4.67	152	P	Pn	03 32 45.1	-0.8
	1.7nm,0.1s,SNR=7.9						
CRAJ				S	Sn	03 33 35.7	-5.2
	14nm,0.1s,SNR=7.9						
CRAJ	Montana Rajada	4.67	152	P	Pn	03 32 45.1	-0.8
	1.7nm,0.1s,SNR=7.9						
CRAJ				S	Sn	03 33 35.7	-5.2
	14nm,0.1s,SNR=7.9						
CRAJ	Montana Rajada	4.67	152	P	Pn	03 32 45.2	-0.7
	1.7nm,0.1s,SNR=7.9						
CRAJ				S	Sn	03 33 34.8	-6.0
	14nm,0.1s,SNR=7.9						
EOSO	Osorio	5.30	144	P	Pn	03 32 53.8	-0.7
	0.4nm,0.3s,SNR=7.9						
EOSO				S	Sn	03 33 51.3	-5.1
	1.9nm,0.1s,SNR=7.9						
EOSO	Osorio	5.30	144	P	Pn	03 32 53.8	-0.7
	0.4nm,0.3s,SNR=7.9						
EOSO				S	Sn	03 33 51.3	-5.1
	1.9nm,0.1s,SNR=7.9						
EOSO	Osorio	5.30	144	P	Pn	03 32 55.7	+1.1
	0.4nm,0.3s,SNR=7.9						
EOSO				S	Sn	03 33 51.3	-5.1
	1.9nm,0.1s,SNR=7.9						
CFUE	Fuerteventura	5.81	129	P	Pn	03 33 01.6	+0.1
	1.4nm,0.2s,SNR=7.9						
CFUE				S	Sn	03 34 04.3	-4.6
	3.8nm,0.1s,SNR=7.9						
CFUE	Fuerteventura	5.81	129	P	Pn	03 33 01.6	+0.1
	1.4nm,0.2s,SNR=7.9						
CFUE				S	Sn	03 34 04.3	-4.6
	3.8nm,0.1s,SNR=7.9						
CFUE	Fuerteventura	5.81	129	P	Pn	03 33 01.6	+0.1
	1.4nm,0.2s,SNR=7.9						
CFUE				S	Sn	03 34 04.3	-4.6
	3.8nm,0.1s,SNR=7.9						

IDC 03 04:04:22.1±2.8, 6°.14S×147°.95E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=64.1km s-min=42.3km az=103.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.05	223	P	Pn	04 08 45.6	-1.2
	0.3nm,0.3s,baz=50,slow=11,SNR=9.2						
ASAR	Alice Springs	22.05	216	P	P	04 09 19.0	+0.4
	1.0nm,0.6s,baz=49,slow=9.6,SNR=24						
FITZ	Fitzroy Crossi	24.80	239	P	P	04 09 45.7	-0.3
	3.4nm,0.7s,baz=52,slow=7.7,SNR=13						
STKA	Stephens Creek	26.28	192	P	P	04 09 59.8	+0.4
	0.6nm,0.3s,baz=352,slow=7.1,SNR=4.8						
TORD	Torodi Ar. Bea	146.04	284	PKPbc	PKPbc	04 24 04.3	-0.8
	0.2nm,0.6s,baz=66,slow=4.3,SNR=2.8						

IDC 03 04:16:47.3±1.2, 3°.39S×100°.36E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.1/19, mbtmp4.2/11, Error ellipse: s-maj=46.7km s-min=15.0km az=54.0
ISCJB 03 04:16:51.3±1.1, 3°.37S±0°.07×100°.45E±0°.10, h39km±9km, mb4.4/20, Error ellipse: s-maj=19.0km s-min=5.9km az=145.1
NEIC 03 04:16:52.9±0.8, 3°.32S×100°.47E, h35km, mb4.6/5, Error ellipse: s-maj=36.0km s-min=8.8km az=53.0
DJA 03 04:16:52, 3°.36S×100°.36E, h104km, MLv4.4/13
ISC 03 04:16:52.9±2.4, 3°.34S±0°.06×100°.48E±0°.09, h32km±17km, n53, σ1§15/53, mb4.4/20, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	1.59	38	P	Pn	04 17 21.0	+2.2
KRJI				S	Sn	04 17 46.0	+7.8
KRJI	Kerinci	1.59	38	P	Pb	04 17 29.6	+7.9
	3µm,0.6s						
KSI	Kapahiang	2.13	98	P	Pn	04 17 27.5	+1.2
KSI	Kapahiang	2.13	98	P	Pn	04 17 33.3	+7.0
PDSI	Padang	2.42	360	P	Pn	04 17 29.7	-0.5
PDSI				S	Sn	04 17 58.7	0.0
PDSI	Padang	2.42	360	P	Pn	04 17 29.1	-1.1
SISI	Saibi	2.44	325	P	Pn	04 17 29.2	-1.3
SISI	Saibi	2.44	325	P	Sn	04 17 50.9	-8.3
SDSI	Sungai Dareh	2.58	22	P	Pn	04 17 32.9	+0.5
SDSI	Sungai Dareh	2.58	22	P	Pn	04 17 32.5	+0.1
	8µm274nm,0.8s						
MNAI	Manna	2.67	112	P	Pn	04 17 35.8	+2.1
PPI	Padang Panjang	2.87	358	P	Pn	04 17 36.4	0.0
PPI	Padang Panjang	2.87	358	P	Pn	04 17 36.3	-0.1
	160nm,1.1s						
RGRI	Rengat	3.51	32	P	Pn	04 17 45.0	-0.2
BKNI	Bangkinang	3.69	9	P	Pn	04 17 55.3	+7.6
MDSI	Maura Dua	3.86	107	P	Pn	04 17 50.4	+0.3
LWLI	Liwa	3.94	115	P	Pn	04 17 51.8	+0.6
MNSI	Mandailing Nat	4.21	348	P	Pn	04 17 54.2	-0.7
KASI	Kota Agung	4.56	119	P	Pn	04 17 58.5	-1.2
MYKOM	Kota Tinggi	6.11	34	P	Pn	04 18 19.5	-1.6
	0.1nm22nm,0.8s						
CGJI	Cibinong	6.13	122	P	Pn	04 18 20.8	-0.5
	57nm,1.1s						
TPTI		7.34	333	P	Pn	04 18 38.4	+0.5
	0.2nm3µm35nm,1.2s						
CISI	Cisompet, Garu	8.42	120	P	Pn	04 18 52.6	-0.1
CMAR	Chiang Mai Arr	21.71	356	P	P	04 21 38.8	-2.6
	1.0nm,0.5s,mb3.5,baz=184,slow=11,SNR=10						
FITZ	Fitzroy Crossi	28.68	123	P	P	04 22 48.6	+1.4
	1.3nm,0.5s,mb3.9,baz=338,slow=7.3,SNR=7.9						
ODAN	Odare	32.58	338	eP	P	04 23 22.7	+1.2
TAPN	Taplejung	32.91	339	eP	P	04 23 24.9	+0.6
GUN	Gumba	34.11	337	eP	P	04 23 36.3	+1.5
KKN	Kakani	34.24	336	eP	P	04 23 38.5	+2.5
	15nm,0.6s,mb5.1						
GKN	Gorkha	34.70	335	eP	P	04 23 42.7	+2.8
KOLN	Koldanda	34.95	333	eP	P	04 23 45.5	+3.4
	14nm,0.6s,mb5.0						
DANN	Dangsing	35.38	334	eP	P	04 23 47.9	+2.1
	21nm,0.5s,mb5.3						
WRA	Warramunga Arr	36.92	119	P	P	04 23 57.5	-1.6
	1.5nm,0.4s,mb4.2,baz=308,slow=8.9,SNR=32						
WRA	Warramunga Arr	36.92	119	P	P	04 23 57.5	-1.6
WB2	Warramunga Arr	36.93	119	eP	P	04 23 58.8	-0.4
XAN	Xi'an	38.02	11	P	P	04 24 06.8	-1.4
XAN				pP	pP	04 24 17.0	-0.7
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
XAN				pmax	pmax		
	comp=Z,15nm,6.1s						
ASAR	Alice Springs	38.09	125	P	P	04 24 08.1	-0.9
	comp=Z,2.9nm,0.4s,mb4.3,baz=298,slow=7.8,SNR=26						
STKA	Stephens Creek	47.91	131	P	P	04 25 28.2	-0.1
	comp=Z,1.8nm,0.8s,mb4.1,baz=306,slow=9.2,SNR=4.6						
KSRS	Korea Array	47.94	30	P	P	04 25 27.8	-0.6
	comp=Z,1.4nm,0.8s,mb4.0,baz=219,slow=9.7,SNR=7.4						
SONM	Songino Array	51.23	5	P	P	04 25 53.9	+0.6
	comp=Z,7.4nm,0.6s,mb4.8,baz=190,slow=9.3,SNR=42						
TKM2	Tokmak 2	51.25	337	eP	P	04 25 54.0	+0.5
	comp=Z,3.6nm,0.4s,mb4.7						
ULN	Ulaanbaatar	51.32	6	eP	P	04 25 54.4	+0.4
	comp=Z,8.4nm,1.0s,mb4.6						
EKS2	Erkin-Say	51.77	335	eP	P	04 25 57.8	+0.3
	comp=Z,3.7nm,0.6s,mb4.5						
MK31	Makanchi Array	52.44	344	eP	P	04 26 01.9	-0.4
MKAR	Makanchi Array	52.44	344	P	P	04 26 02.4	0.0
	comp=Z,3.0nm,0.6s,mb4.4,baz=156,slow=9.3,SNR=24						
KURK	Kurchatov	57.02	344	eP	P	04 26 34.9	-0.6
	comp=Z,4.0nm,0.9s,mb4.5						
ZALV	Zalesovo Beam	58.57	349	P	P	04 26 45.9	-0.5
	comp=Z,1.5nm,0.3s,mb4.5,baz=149,slow=3.5,SNR=6.6						
ABKAR	Akbulak array	63.04	331	eP	P	04 27 15.7	-1.1
	comp=Z,2.6nm,0.6s,mb4.5						
BRTR	Keskin Array B	74.58	313	P	P	04 28 27.6	-1.3
	comp=Z,0.6nm,0.8s,mb3.6,baz=131,slow=5.9,SNR=3.2						
ARCES	ARCESS Array B	87.89	340	P	P	04 29 38.8	-0.1
	comp=Z,3.2nm,0.9s,mb4.5,baz=76,slow=5.1,SNR=3.7						
KHC	Kasperske Hory	90.47	319	eP	P	04 29 48.0	-3.5
TXAR	Lajitas Array	145.46	39	PKPbc	PKPbc	04 36 28.7	+0.2
	comp=Z,3.2nm,0.6s,baz=253,slow=0.7,SNR=62						
JCT	Junction City	146.90	33	ePKPbc	PKPbc	04 36 32.1	-0.6

IDC 03 04:34:06.5±1.6, 31°.95S×67°.93W, h0km, mb4.8/1, mb1 4.0/2, mb1mx3.7/12, mbtmp4.0/2, ML3.8/1, Error ellipse: s-maj=34.8km s-min=9.6km az=45.0, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	0.43	323	Pg	Pg	04 34 15.8	+1.0
	30nm,0.3s,baz=108,slow=13,SNR=5111						
CFAA				Lg		04 34 19.9	
	418nm,0.3s,baz=313,slow=17,SNR=654						
PLCA	Paso Flores	9.01	193	Lg		04 38 55.4	
	0.1nm,0.3s,baz=37,slow=20,SNR=1.9						
CPUP	Villa Florida	10.83	62	Pn	Pn	04 36 42.8	0.0
	0.2nm,0.3s,baz=240,slow=16,SNR=2.4						
CPUP				Lg		04 39 51.0	
	0.2nm,0.3s,baz=311,slow=20,SNR=1.9						
LPAZ	La Paz	15.60	359	Pn	Pn	04 37 52.1	+4.4
	0.1nm,0.3s,baz=163,slow=16,SNR=5.9						
TORD	Torodi Ar. Bea	80.26	68	P	P	04 46 19.2	-0.2
	0.5nm,1.1s,baz=232,slow=7.1,SNR=7.4						
WRA	Warramunga Arr	124.16	206	PKP	PKPdf	04 53 06.7	-0.9
	0.4nm,1.0s,baz=171,slow=1.4,SNR=4.8						

NEIC 03 05:03:35.7, 17°.62N×62°.11W, h69km, MD3.7(TRN), After TRN.
TRN 03 05:03:34.4, 17°.71N×62°.02W, h72km, MD3.7, M3.9(FDF), 2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.23	99	ePn	Pn	05 03 45.8	+0.6
ANWB				eSn	Sn	05 03 53.0	-0.3
BPA	Boggy Peak	0.67	166	⇓iP	Pn	05 03 51.4	+2.2
BPA				eS	Sn	05 04 01.6	+1.7
BPA	Boggy Peak	0.67	166	⇓eP	Pn	05 03 51.1	+2.0
BPA				eS	Sn	05 04 01.6	+1.7
LZG	Guadeloupe-1	1.57	171	eP	Pn	05 04 01.7	+1.3
BCG	Bois Riant Cap	1.66	166	eP	Pn	05 04 02.2	+0.7
DEG	La Desirade	1.66	146	eP	Pn	05 03 59.1	-2.4
SCG	Saint Claude	1.70	169	eP	Pn	05 04 03.4	+1.4
SCG				eS	Sn	05 04 25.8	+2.8
PHG	Guadaloupe-2	1.72	168	eP	Pn	05 04 03.2	+0.9
HMG	Houelmont	1.74	170	eP	Pn	05 04 04.4	+1.8
MGG	Marie-Galante	1.90	159	eP	Pn	05 04 04.2	-0.6
DWS	Wesley	2.23	162	eP	Pn	05 04 10.9	+1.7
DWS				eS	Sn	05 04 38.2	+2.4
DWS	Wesley	2.23	162	eP	Pn	05 04 10.9	+1.7
DWS				eS	Sn	05 04 38.2	+2.4
DLPL	La Plaine	2.47	162	eS	Sn	05 04 42.6	+1.0
MCLT	Moule a Chique	4.11	165	eP	Pn	05 04 36.8	+2.1
MCLT				eS	Sn	05 05 21.4	-0.1
MCLT	Moule a Chique	4.11	165	eP	Pn	05 04 36.8	+2.1
MCLT				eS	Sn	05 05 21.4	-0.1
SVB	Belmont	4.47	170	eP	Pn	05 04 41.8	+2.2
SVB				eS	Sn	05 05 30.4	-0.1
SVB	Belmont	4.47	170	eP	Pn	05 04 41.8	+2.2
SVB				eS	Sn	05 05 30.4	-0.1

ISK 03 05:04:34.0, 38°.27N×39°.27E, h15km, MD2.4
DDA 03 05:04:35.5, 38°.32N×39°.19E, h7km±1km, Md2.5
CSEM 03 05:04:34.9±0.7, 38°.31N×39°.25E, h10km, MD2.4, Error ellipse: s-maj=14.9km s-min=6.8km az=150.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.08	32	PG	Pg	05 04 38.0	+0.8
SVRC				SG	Sg	05 04 40.0	+1.1
SVRC	Sivrice-ELAZID	0.08	32	iPg	Pg	05 04 38.0	+0.8
SVRC				iSg	Sg	05 04 40.0	+1.1
ELZG	Elazig	0.28	312	iP	Pg	05 04 40.7	+0.1
ELZG				iS	Sg	05 04 45.9	+1.5
ELZG	Elazig	0.28	312	iP	Pg	05 04 40.7	+0.1
ELZG				iS	Sg	05 04 45.8	+1.4
PTK	Pertek	0.59	11	ePG	Pg	05 04 45.9	-0.5
PTK				eSG	Sg	05 04 56.3	+2.1
PTK	Pertek	0.59	11	ePg	Pg	05 04 45.9	-0.5
PTK				eSg	Sg	05 04 56.3	+2.1
MALT	Malatya	0.65	271	ePG	Pg	05 04 47.5	0.0
MALT				eSG	Sg	05 04 57.0	+1.0
MALT	Malatya	0.65	271	ePg	Pg	05 04 47.5	+0.1
MALT				eSg	Sg	05 04 57.0	+1.1
KEMA	Kemaliye	1.13	328	iP	Pb	05 04 45.3	-11
KEMA				iS	Sb	05 05 10.6	-0.6

ISCJB 03 05:13:49.1±1.6, 41°.79N±0°.07×80°.2E±0°.1, h10km, Error ellipse: s-maj=14.6km s-min=6.5km az=41.4
BJI 03 05:13:50.2, 41°.70N×80°.17E, h17km, ML3.3/7
NNC 03 05:13:52.7±2.0, 42°.00N×80°.03E, h0km±11km, mb3.9, mpv3.5, Error ellipse: s-maj=15.7km s-min=5.9km az=156.0
ISC 03 05:13:52.7±1.6, 41°.88N±0°.08×80°.2E±0°.1, h10km, n7, σ1§20/8, 3C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	2.71	301	⇑Sn	Sn	05 15 08.4	-0.5
	209nm,1.1s						
TKM2	Tokmak 2	3.53	289	⇓Pn	Pn	05 14 46.4	-1.2
	20nm,0.6s						
TKM2				⇑Sn	Sn	05 15 29.9	+0.7
	58nm,0.5s						
KSH	Kashi	3.96	235	Pn	Pg	05 15 06.2	-2.3
KSH				Sn	Sg	05 16 01.5	+1.8
KSH				smax			
	comp=N,25nm,0.7s						
KSH				smax			
	comp=E,34nm,0.8s						
MK31	Makanchi Array	5.15	17	⇓Pn	Pn	05 15 10.5	+0.8
	comp=E,1.3nm,0.2s,baz=200,slow=13,SNR=121						
MK31				⇓Sn	Sn	05 16 09.5	+0.3
	comp=E,1.8nm,0.2s,baz=201,slow=22,SNR=6.3						
MK31				⇓Lg		05 16 33.6	
	comp=E,5.9nm,0.5s,baz=200,slow=30,SNR=4.4						
KK31	Karatay Array	7.23	283	⇓Pg	Pg	05 16 03.4	-7.6
	comp=E,1.6nm,0.6s,baz=100,slow=16,SNR=10						
KK31				⇓Lg		05 17 39.1	
	comp=E,2.7nm,0.4s,baz=95,slow=27,SNR=6.0						
KURBB	Kurchatov Arra	8.82	353	⇓Lg		05 18 27.3	
	comp=E,2.9nm,0.3s						
KURK	Kurchatov	8.90	354	⇑Lg		05 18 30.4	
	comp=E,9.6nm,1.0s						

IDC 03 05:32:28.7±0.8, 18°.90N×121°.41E, h0km, mb3.7/8, mb1 4.0/9, mb1mx3.8/20, mbtmp3.7/9, ML3.9/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/24, Error ellipse: s-maj=29.2km s-min=18.4km az=82.0
ISCJB 03 05:32:29.6±0.5, 19°.06N±0°.04×121°.36E±0°.06, h10km, mb3.6/8, MS3.3/7, Error ellipse: s-maj=9.2km s-min=5.1km az=24.8
NEIC 03 05:32:29.9±0.8, 18°.85N×121°.26E, h10km, Error ellipse: s-maj=17.3km s-min=15.9km az=11.0
MAN 03 05:32:48, 18°.08N×120°.96E, h20km, mb4.6, ML3.4, MS3.3
ISC 03 05:32:31.0±0.5, 19°.03N±0°.04×121°.35E±0°.06, h10km, n29, σ1§37/30, mb3.6/8, MS3.3/7, 2C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.98	225	⇓iP	Pg	05 32 49.3	-0.6
PIP				eS	Sg	05 33 01.7	-1.0
APYP	Conner	1.16	185	eP	Pg	05 32 56.1	+2.7
APYP				eS	Sn	05 33 05.7	-3.6
SIPP	Brgy, Tapao	1.39	218	⇑iP	Pg	05 32 59.2	+1.6
SIPP				eS	Sg	05 33 15.8	+0.2
CVP	Callao Caves	1.39	161	⇑eP	Pg	05 33 00.8	+3.3
CVP				iS	Sg	05 33 20.4	+4.5

ABRA	**Dolores**	**1.50 204**	*e*P	**Pn**	**05 32 59.6**	**+1.6**
ABRA			*e*S	**Sn**	**05 33 08.5**	**-9.0**
CAUP	**Cauayan**	**2.12 168**	*e*P	**Pg**	**05 33 13.2**	**+1.4**
PALP	**Palanan**	**2.21 152**	*e*P	**Pg**	**05 33 13.7**	**+0.3**
BCPH	**Baguio City Da**	**2.73 196**	‖*i*P	**Pg**	**05 33 19.5**	**-3.9**
BCPH			*i* S	**Sg**	**05 33 52.4**	**-6.4**
BOLP	**Bolinao**	**2.97 208**	*e*P	**Pn**	**05 33 19.9**	**+1.8**
BALP	**Baler**	**3.28 176**	*e*P	**Pg**	**05 33 27.7**	**-6.2**
SCZP	**Santa Cruz**	**3.51 203**	*e*P	**Pg**	**05 33 31.2**	**-7.1**
TGY	**Tagaytay City**	**4.91 185**	Pn	**Pn**	**05 33 51.5**	**+6.5**
	50nm,0.3s,baz=75,slow=12,SNR=3.0					
TGY			Lg		05 35 04.6	
	57nm,0.3s,baz=207,slow=18,SNR=1.9					
QIZ	**Qiongzhong**	**10.88 272**	*e*Pn	**Pn**	**05 35 02.9**	**-4.0**
	16nm,0.6s					
DAV	**Davao City (W)**	**12.58 160**	LR	LR	05 41 22.7	
	comp=Z,213nm,18.1s,baz=291,slow=43					
KSRS	**Korea Array**	**19.24 16**	P	**Pn**	**05 36 56.0**	**-0.4**
	0.3nm,0.3s,baz=199,slow=12,SNR=5.6					
KSRS			LR	LR	05 45 10.3	
	comp=Z,54nm,18.5s,baz=230,slow=39					
CMAR	**Chiang Mai Arr**	**21.22 272**	P	**P**	**05 37 16.8**	**-0.4**
	0.7nm,0.3s,mb3.4,baz=84,slow=9.0,SNR=6.6					
CMAR			LR	LR	05 46 21.4	
	comp=Z,72nm,18.6s,MS3.1,baz=90,slow=39					
MJAR	**Matsushiro Arr**	**22.89 37**	P	**P**	**05 37 35.5**	**+0.6**
	0.9nm,0.3s,mb3.6,baz=235,slow=10,SNR=2.6					
GUMO	**Guam**	**23.20 100**	LR	LR	05 45 43.5	
	comp=Z,47nm,18.9s,MS3.0,baz=219,slow=34					
SONM	**Songino Array**	**31.21 340**	P	**P**	**05 38 51.7**	**+1.4**
	0.5nm,0.6s,mb3.5,baz=168,slow=8.8,SNR=3.0					
SONM			LR	LR	05 52 37.6	
	comp=Z,65nm,19.3s,MS3.3,baz=248,slow=39					
WRA	**Warramunga Arr**	**40.77 161**	P	**P**	**05 40 10.1**	**-2.4**
	0.7nm,0.6s,mb3.5,baz=347,slow=8.9,SNR=7.9					
WRA			PcP	PcP	05 42 13.4	-0.3
	0.9nm,0.6s,baz=341,slow=3.3,SNR=8.7					
WRA	**Warramunga Arr**	**40.77 161**	P	**P**	**05 40 10.1**	**-2.4**
WRA			PcP	PcP	05 42 13.4	-0.3
MKAR	**Makanchi Array**	**42.25 320**	P	**P**	**05 40 24.9**	**+0.5**
	0.5nm,0.7s,mb3.2,baz=126,slow=7.4,SNR=3.0					
MKAR			PcP	PcP	05 42 17.2	-1.1
	1.0nm,0.8s,baz=104,slow=4.9,SNR=4.1					
MKAR			LR	LR	05 59 03.9	
	comp=Z,37nm,19.0s,MS3.3,baz=176,slow=38					
MKAR	**Makanchi Array**	**42.25 320**	P	**P**	**05 40 24.9**	**+0.5**
MKAR			PcP	PcP	05 42 17.2	-1.1
MKAR			LR	LR	05 59 03.9	
ASAR	**Alice Springs**	**44.17 163**	P	**P**	**05 40 38.5**	**-1.6**
	1.2nm,0.6s,mb3.8,baz=345,slow=6.6,SNR=14					
ZALV	**Zalesovo Beam**	**44.70 330**	LR	LR	06 00 16.2	
	comp=Z,32nm,18.2s,MS3.3,baz=210,slow=37					
HNR	**Honiara**	**47.41 123**	LR	LR	05 57 38.6	
	comp=Z,74nm,20.2s,MS3.6,baz=166,slow=32					
ILAR	**Eielson Array**	**73.72 27**	P	**P**	**05 44 03.9**	**-1.0**
	0.2nm,0.5s,mb3.3,baz=255,slow=6.2,SNR=4.5					
NOA	**NORSAR Array B**	**82.84 333**	LR	LR	06 24 58.5	
	comp=Z,35nm,20.4s,MS3.7,baz=130,slow=38					
YKA	**Yellowknife Ar**	**87.64 23**	P	**P**	**05 45 18.9**	**-0.5**
	0.9nm,0.6s,mb4.2,baz=309,slow=4.6,SNR=15					

IDC 03 05:37:12.0±1.4, 21°.07S×173°.96W, h0^km, mb3.9/6, mb1 4.2/7, mb1mx4.0/18, mbtmp4.0/7, ML1.8/1, MS3.7/2, Ms1 3.7/2, ms1mx3.1/18, Error ellipse: s-maj=54.5km s-min=21.1km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.42**	**17**	Pn	Pn	05 39 01.3	-0.3
	1.0nm,0.3s,baz=215,slow=12,SNR=1.6						
AFI				Sn	Sn	05 40 26.3	-0.2
	3.1nm,0.3s,baz=90,slow=19,SNR=4.1						
RAR	**Rarotonga**	**13.24**	**93**	LR	LR	05 43 34.4	
	comp=Z,221nm,19.2s,baz=226,slow=29						
PPT	**Papeete**	**23.26**	**86**	LR	LR	05 49 40.4	
	comp=Z,237nm,18.3s,baz=50,slow=32						
STKA	**Stephens Creek**	**40.97**	**245**	P	P	05 44 56.8	+0.1
	1.4nm,0.7s,baz=73,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**48.07**	**257**	P	P	05 45 53.6	+0.1
	1.2nm,0.7s,baz=93,slow=8.3,SNR=12						
WRA	**Warramunga Arr**	**48.27**	**262**	P	P	05 45 54.5	-0.6
	0.6nm,0.3s,baz=94,slow=8.4,SNR=20						
WRA				PcP	PcP	05 47 22.5	+0.3
	0.4nm,0.5s,baz=98,slow=3.2,SNR=3.4						
MJAR	**Matsushiro Arr**	**72.96**	**321**	P	P	05 48 44.3	+0.9
	0.7nm,0.3s,baz=168,slow=6.2,SNR=3.0						
NVAR	**Mina Array Bea**	**78.89**	**41**	P	P	05 49 18.5	+1.3
	0.8nm,0.9s,baz=217,slow=9.1,SNR=4.2						
TXAR	**Lajitas Array**	**84.21**	**56**	P	P	05 49 45.1	-0.5
	0.4nm,0.8s,baz=201,slow=6.7,SNR=4.1						
BRTR	**Keskin Array B**	**149.98**	**314**	PKPbc	PKPbc	05 57 03.4	-1.3
	1.1nm,0.8s,baz=67,slow=3.7,SNR=4.2						

*DDA **03** 05:41:47.1, 37°.38N×38°.64E, h7^km±5^km, Md2.8*
*ISCJB **03** 05:41:49.0±0.6, 37°.43N±0°.04×38°.62E±0°.04, h10^km, Error ellipse: s-maj=6.0km s-min=3.6km az=148.5*
*CSEM **03** 05:41:49.6±0.3, 37°.49N×38°.54E, h5^km, MD2.8, Error ellipse: s-maj=8.0km s-min=2.6km az=131.0*
*ISK **03** 05:41:50.5, 37°.57N×38°.49E, h11^km, MD2.7*
ISC 03 05:41:48.3±0.9, 37°.40N±0°.04×38°.63E±0°.04, h1^km±6^km, n28, σ0°81/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.27**	**286**	*i* P	**Pg**	**05 41 53.1**	**-0.5**
ATAB				*i* S	**Sg**	**05 41 57.0**	**-0.1**
ATAB	**Bozova**	**0.27**	**286**	*i* P	**Pg**	**05 41 53.1**	**-0.5**
ATAB				*i* S	**Sg**	**05 41 57.0**	**-0.1**
MALT	**Malatya**	**0.93**	**350**	*e*Pg	**Pg**	**05 42 05.3**	**-0.8**
MALT	**Malatya**	**0.93**	**350**	*e*PG	**Pg**	**05 42 05.3**	**-0.9**
MYA	**Malataya**	**0.94**	**350**	*e*PG	**Pg**	**05 42 05.6**	**-0.8**
MYA	**Malataya**	**0.94**	**350**	*e*Pg	**Pg**	**05 42 05.6**	**-0.8**
AKCD	**Akcadag**	**1.06**	**328**	*i* P	**Pg**	**05 42 07.9**	**-0.7**
AKCD				*i* S	**Sg**	**05 42 23.7**	**+1.4**
AKCD	**Akcadag**	**1.06**	**328**	*i* P	**Pg**	**05 42 07.9**	**-0.7**
SVRC	**Sivrice-ELAZID**	**1.12**	**29**	*e*PG	**Pg**	**05 42 11.1**	**+1.3**
SVRC				*e*SG	**Sg**	**05 42 25.3**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.12**	**29**	*e*Pg	**Pg**	**05 42 11.1**	**+1.3**
SVRC				*e*Sg	**Sg**	**05 42 25.3**	**+1.0**
ELZG	**Elazig**	**1.14**	**14**	*i* P	**Pg**	**05 42 10.3**	**+0.2**
ELZG				*i* S	**Sg**	**05 42 25.0**	**+0.2**
ELZG	**Elazig**	**1.14**	**14**	*i* P	**Pg**	**05 42 10.3**	**+0.2**
ELZG				*i* S	**Sg**	**05 42 25.0**	**+0.1**
GAZ	**Gaziantep**	**1.15**	**259**	*e*PN	**Pn**	**05 42 11.4**	**-0.1**
GAZ				*e*SN	**Sn**	**05 42 27.7**	**-0.1**
GAZ	**Gaziantep**	**1.15**	**259**	*e*Pn	**Pn**	**05 42 11.4**	**-0.1**
GAZ				*e*Sn	**Sn**	**05 42 27.7**	**-0.1**
DIYA	**Diyarbakir**	**1.30**	**66**	*i* P	**Pg**	**05 42 10.4**	**-2.8**
KMRS	**Kahramanmaras**	**1.38**	**275**	*e*PN	**Pn**	**05 42 14.6**	**-0.1**
KMRS	**Kahramanmaras**	**1.38**	**275**	*e*Pn	**Pn**	**05 42 14.6**	**0.0**
KUZU	**Kuzuini**	**1.39**	**244**	*i* P	**Pn**	**05 42 15.5**	**+0.8**
KUZU				*i* S	**Sg**	**05 42 33.3**	**+0.5**
KUZU	**Kuzuini**	**1.39**	**244**	*i* P	**Pn**	**05 42 15.5**	**+0.8**
KUZU				*i* S	**Sg**	**05 42 33.3**	**+0.5**
PTK	**Pertek**	**1.61**	**22**	*e*PN	**Pn**	**05 42 18.1**	**+0.2**
PTK	**Pertek**	**1.61**	**22**	*e*Pn	**Pn**	**05 42 18.1**	**+0.3**
MARD	**Mardin**	**1.72**	**92**	*i* P	**Pn**	**05 42 19.0**	**-0.3**
MARD				*i* S	**Sn**	**05 42 42.6**	**+0.8**
KEMA	**Kemaliye**	**1.87**	**357**	*i* P	**Pn**	**05 42 20.1**	**-1.4**
KEMA				*i* S	**Sn**	**05 42 45.2**	**-0.5**
KEMA	**Kemaliye**	**1.87**	**357**	*i* P	**Pn**	**05 42 20.1**	**-1.3**
KEMA				*i* S	**Sn**	**05 42 45.2**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.99**	**311**	*e*PN	**Pn**	**05 42 22.9**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.99**	**311**	*e*Pn	**Pn**	**05 42 23.0**	**0.0**
KOZT	**Kozan**	**2.23**	**273**	*e*PN	**Pn**	**05 42 26.7**	**+0.4**
KOZT	**Kozan**	**2.23**	**273**	*e*Pn	**Pn**	**05 42 26.7**	**+0.4**

*ISCJB **03** 06:27:23.5±0.2, 24°.83N±0°.03×97°.73E±0°.02, h10^km, mb4.6/77, MS4.3/32, Error ellipse: s-maj=3.8km s-min=2.8km az=6.7*
*BJI **03** 06:27:24.2, 24°.82N×97°.80E, h25^km, mB4.9/26, mb4.6/40, ML4.9/8, Ms5.0/49, Ms7 4.6/43*
*IDC **03** 06:27:24.2±0.5, 24°.90N×97°.86E, h0^km, mb4.4/23, mb1 4.5/24, mb1mx4.5/27, mbtmp4.4/24, ML5.3/1, MS4.1/18, Ms1 4.1/18, ms1mx4.0/28, Error ellipse: s-maj=19.0km s-min=10.8km az=60.0*
*NEIC **03** 06:27:25.5±0.2, 24°.87N×97°.78E, h10^km, mb4.8/33, Error ellipse: s-maj=6.4km s-min=4.0km az=51.0*
*SZGRF **03** 06:27:25.7, 24°.57N×98°.41E, h33^km, mb4.8, Myanmar-China border region*
*GCMT **03** 06:27:26.8±0.3, 24°.84N×98°.02E, h18^km±1^km, MW5.0, Moment Tensor Solution. s22,c24; s73,c121; Moment tensor: Scale 10^16Nm; M_{rr}-0.62±.14; $M_{\theta\theta}$1.09±.13; $M_{\phi\phi}$-0.47±.12; $M_{r\theta}$-0.14±.26; $M_{\theta\phi}$3.53±.11; $M_{\phi r}$-0.36±.26; Best double couple: $M_0$3.60000×10^16 NP1:ϕ_s276.00000°, δ84.00000°, λ0.00000°. NP2:ϕ_s186.00000°, δ90.00000°, λ174.00000°. Principal axes: T 3.9500, Plg4.0000°, Azm141.0000°; N -0.6300, Plg84.0000°, Azm6.0000°; P -3.3200, Plg4.0000°, Azm231.0000°; Data Used: II IU CN IC G.*
*TEH **03** 06:27:26.0, 24°.81N×97°.66E, h10^km*
*MOS **03** 06:27:28.0±1.1, 25°.01N×97°.71E, h33^km, mb4.9/31, Error ellipse: s-maj=12.3km s-min=5.9km az=122.3*
ISC 03 06:27:25.2±0.2, 24°.81N±0°.02×97°.77E±0°.02, h10^km, n231, σ1°34/249, mb4.6/77, MS4.3/32, 8C-2D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**3.49**	**270**	*ex*	**Pn**	**06 28 23.0**	**+3.5**
IMP				*ex*	**Sg**	**06 29 17.0**	**-0.3**
KMI	**Kunming**	**4.52**	**85**	Pg	**Pg**	**06 28 47.3**	**-4.5**
KMI				Sg	**Sb**	**06 29 39.9**	**+0.7**
KMI				smax			
	comp=N,2μm,1.3s						
KMI				smax			
	comp=E,2μm,1.0s						
KMI				LR	LR		
	comp=N,33μm,7.1s						
KMI				LR	LR		
	comp=E,10μm,5.8s						
CHRT	**Chiangrai**	**5.26**	**159**	⇑PN	**Pn**	**06 28 42.5**	**-1.3**
CHRT	**Chiangrai**	**5.26**	**159**	PG	**Pb**	**06 28 52.5**	**-4.7**
CHRT				SG	**Sb**	**06 30 06.0**	**+5.6**
SHL	**Shillong**	**5.39**	**279**	*e*PKP	**Pn**	**06 28 47.5**	**+1.9**
SHL				*ex*	x	06 30 21.0	
AGT	**Agartala**	**6.02**	**263**	*ex*	**Pb**	**06 29 04.0**	**-6.2**
AGT				*ex*	x	06 29 38.0	
CHG	**Chiang Mai**	**6.07**	**169**	PG	**Pn**	**06 28 59.5**	**+4.5**
CHG				SG	**Pb**	**06 29 19.4**	**+8.4**
CHTO	**Chiang Mai**	**6.07**	**169**	*e*Pn	**Pn**	**06 28 56.0**	**+1.1**
CHTO				*e*Sg	**Sg**	**06 30 38.0**	**-2.0**
CM31	**Chiang Mai Arr**	**6.41**	**170**	*e*Pn	**Pn**	**06 29 01.2**	**+1.5**
	comp=E,536nm,0.7s						
CMAR	**Chiang Mai Arr**	**6.41**	**170**	Pn	**Pn**	**06 29 01.2**	**+1.4**
	comp=E,16nm,0.3s,baz=347,slow=12,SNR=44						
CMAR				Pg	**Pg**	**06 29 25.7**	**-2.4**
	comp=E,26nm,0.3s,baz=350,slow=18,SNR=57						
CMAR				Lg		06 30 51.4	
	comp=E,75nm,0.3s,baz=356,slow=28,SNR=8.7						
CMAR				LR	LR	06 31 53.4	
	comp=E,2μm,18.4s,baz=349,slow=42						
BDT	**Bhumibol Dam**	**7.62**	**171**	PN	**Pn**	**06 29 17.5**	**+1.2**
BDT	**Bhumibol Dam**	**7.62**	**171**	PG	**Pg**	**06 29 48.5**	**-2.6**
BDT				SG	**Sg**	**06 31 26.5**	**-3.2**
LSA	**Lhasa**	**7.64**	**311**	Pn	**Pn**	**06 29 17.1**	**+0.5**
LSA				LR	LR		
	comp=N,2μm,15.8s						
LSA				LR	LR		
	comp=E,1μm,15.3s						
LSA				LR	LR		
	comp=Z,3μm,19.0s						
LSA	**Lhasa**	**7.64**	**311**	*e*P	**Pn**	**06 29 17.5**	**+0.9**
LSA				pmax	pmax		
	comp=Z,39nm,0.6s						
LSA	**Lhasa**	**7.64**	**311**	*e*Pn	**Pn**	**06 29 17.5**	**+0.9**
	comp=Z,39nm,0.6s						
CD2	**Chengdu**	**8.06**	**40**	P	**Pn**	**06 29 23.2**	**+0.9**
CD2				smax			
	comp=N,260nm,1.5s						
CD2				smax			
	comp=E,210nm,1.6s						
CD2				LR	LR		
	comp=N,16μm,10.7s						
CD2				LR	LR		
	comp=E,13μm,10.5s						
CD2				LR	LR		
	comp=Z,8μm,11.9s						
GYA	**Guiyang**	**8.19**	**77**	P	**Pn**	**06 29 22.0**	**-2.2**
GYA				S	**Sn**	**06 30 50.7**	**-6.1**
GYA				LR	LR		
	comp=N,13μm,8.1s						
GYA				LR	LR		
	comp=E,5μm,9.0s						
GYA				LR	LR		
	comp=Z,5μm,7.5s						
CAL	**Calcutta**	**8.94**	**257**	*ex*	**Pn**	**06 29 41.6**	**+7.1**
CAL				*ex*	x	06 32 08.1	
NST	**Nakhon Sawan**	**9.36**	**166**	P	**Pn**	**06 29 39.5**	**-0.7**
TAPN	**Taplejung**	**9.39**	**288**	*e*P	**Pn**	**06 29 40.2**	**-0.4**
	comp=Z,53nm,0.4s						
ODAN	**Odare**	**9.57**	**285**	*e*P	**Pn**	**06 29 43.5**	**+0.4**
	comp=Z,62nm,0.6s						
RAMN	**Ramite**	**10.28**	**284**	*e*P	**Pn**	**06 29 52.5**	**-0.3**
	comp=Z,58nm,0.6s						
PKI	**Pulchoki**	**11.44**	**287**	*e*P	**Pn**	**06 30 07.9**	**-0.7**
	comp=Z,47nm,0.7s						
KKN	**Kakani**	**11.59**	**288**	*e*P	**Pn**	**06 30 09.8**	**-1.0**
ENH	**Enshi**	**11.73**	**60**	*e*Pn	**Pn**	**06 30 12.3**	**-0.4**
	comp=Z,49nm,0.9s						
GKN	**Gorkha**	**12.19**	**288**	*e*P	**Pn**	**06 30 17.0**	**-2.0**
	comp=Z,68nm,0.6s						
LZH	**Lanzhou**	**12.40**	**24**	*e*P	**Pn**	**06 30 24.5**	**+2.8**
LZH				pP		06 30 27.0	
LZH				sP		06 30 28.5	
LZH				S	**Sn**	**06 32 41.1**	**+1.2**
LZH				sS		06 32 50.0	
LZH				SS		06 32 55.0	
LZH				pmax	pmax		
	comp=Z,32nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,6.4s						
LZH				LR	LR		
	comp=N,7μm,11.2s						
LZH				LR	LR		
	comp=E,14μm,10.6s						
LZH				LR	LR		
	comp=Z,3μm,9.4s						
QIZ	**Qiongzhong**	**12.59**	**115**	P	**Pn**	**06 30 22.0**	**-2.5**
QIZ				S	**Sn**	**06 32 43.1**	**-1.7**
QIZ				pmax	pmax		
	comp=Z,19nm,1.3s						
QIZ				LR	LR		
	comp=N,4μm,13.4s						
QIZ				LR	LR		
	comp=E,2μm,15.0s						
QIZ				LR	LR		
	comp=Z,2μm,9.8s						
QIZ	**Qiongzhong**	**12.59**	**115**	*e*Pn	**Pn**	**06 30 22.5**	**-1.9**
	comp=Z,160nm,1.1s						
DANN	**Dangsing**	**13.02**	**289**	*e*P	**Pn**	**06 30 27.7**	**-2.6**
	comp=Z,94nm,0.9s						
KOLN	**Koldanda**	**13.05**	**286**	*e*P	**Pn**	**06 30 28.7**	**-2.0**
	comp=Z,39nm,0.7s						
XAN	**Xi'an**	**13.37**	**44**	P	**Pn**	**06 30 41.5**	**+6.5**
XAN				S	**Sn**	**06 33 10.9**	**+7.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				LR	LR		
	comp=N,3μm,12.2s						
XAN				LR	LR		
	comp=E,840nm,12.2s						
XAN				LR	LR		
	comp=Z,740nm,16.1s						
GZH	**Guangzhou**	**14.34**	**94**	P	**Pn**	**06 30 56.9**	**+8.5**
GZH				S	**Sn**	**06 33 42.0**	**+14**
GZH				LR	LR		
	comp=N,790nm,4.4s						
GZH				LR	LR		
	comp=E,2μm,7.4s						
GTA	**Gaotai**	**14.66**	**6**	*e*P	**Pn**	**06 30 58.0**	**+5.4**
GTA				pP	pP	06 31 02.8	+1.1
GTA				sP	sP	06 31 05.5	+2.4
GTA				S	**Sn**	**06 33 45.8**	**+11**
GTA				sS	sS	06 33 51.2	-7.5
GTA				SS		06 34 02.6	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,95nm,6.0s						
GTA				LR	LR		
	comp=N,2μm,10.5s						
GTA				LR	LR		
	comp=E,11μm,12.6s						
GTA				LR	LR		
	comp=Z,2μm,9.3s						
VIS	**Vishakhapatnam**	**15.19**	**245**	*i* P	**Pn**	**06 31 01.1**	**+1.2**
VIS				*i* x	x	06 33 51.1	
PTH	**Pithoragarh**	**16.32**	**291**	*ex*	**Pn**	**06 31 17.2**	**+2.7**
JBP	**Jabalpur**	**16.34**	**268**	*e*PKP	x	06 31 25.4	
JBP				*e*S	x	06 34 32.7	
JOSI	**Joshimath**	**17.11**	**294**	*e*PKP	**Pn**	**06 31 25.2**	**+0.7**
AGRA	**Agra**	**17.98**	**282**	*e*PKP	**Pn**	**06 31 34.6**	**-0.8**
DDI	**Dehra Dun**	**18.32**	**292**	*ex*	**Pn**	**06 31 37.0**	**-2.4**
KLP	**Kalpa**	**18.46**	**296**	*e*PKP	**Pn**	**06 31 38.9**	**-2.3**
KLP				AMb	AMB	06 31 45.4	
	comp=Z,52nm,1.2s						
BHPL	**Bhopal**	**18.65**	**269**	*e*PKP	**Pn**	**06 31 45.3**	**+1.7**
BHPL				AMb	AMB	06 31 52.2	
	comp=Z,112nm,1.0s						
NDI	**New Delhi**	**18.76**	**286**	*e*PKP	**Pn**	**06 31 45.0**	**+0.2**
BTO	**Baotou**	**18.79**	**30**	*e*P	**Pn**	**06 31 31.7**	**-13**
AYAN	**Aya Nagar**	**18.81**	**286**	*e*PKP	**Pn**	**06 31 45.3**	**-0.2**
SONA	**Sohna**	**18.82**	**285**	*e*PKP	**Pn**	**06 31 45.9**	**+0.3**
SONA				AMb	AMB	06 31 54.2	
	comp=Z,52nm,0.7s						
QZH	**Quanzhou**	**18.89**	**85**	*e*P	**Pn**	**06 31 47.7**	**+1.2**
QZH				S	**Sn**	**06 35 14.3**	**-3.8**
QZH				LR	LR		
	comp=E,2μm,8.5s						
QZH				LR	LR		
	comp=Z,4μm,11.9s						
HYB	**Hyderabad**	**19.37**	**251**	*i* P	**Pn**	**06 31 53.0**	**+0.8**
HYB				*e*S	**Sn**	**06 35 40.0**	**+10**
KULM	**Kulim**	**19.60**	**171**	*e*P	**Pn**	**06 31 55.2**	**+0.1**
	comp=Z,27nm,0.9s						
HHC	**Hu-ho-hao-te**	**19.71**	**32**	*e*P	**Pn**	**06 31 55.0**	**-1.2**
HHC				pP	pP	06 31 59.3	+1.7
HHC				sP	sP	06 32 02.2	+3.3
HHC				PP		06 32 14.3	
HHC				S	**Sn**	**06 35 33.0**	**-4.6**
HHC				sS	sS	06 35 40.0	-1.5
HHC				SS		06 36 02.2	
HHC				PcP	PcP	06 36 10.1	-3.3
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,300nm,6.1s						
HHC				LR	LR		
	comp=N,2μm,10.0s						
HHC				LR	LR		
	comp=E,1μm,9.1s						
HHC				LR	LR		
	comp=Z,1μm,10.5s						
NJ2	**Nanjing**	**19.88**	**64**	*e*P	**Pn**	**06 31 55.8**	**-2.5**
NJ2				pP	pP	06 32 04.3	+4.8
NJ2				sP	sP	06 32 08.1	+7.3
NJ2				PP		06 32 17.0	
NJ2				S	**Sn**	**06 35 40.0**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,420nm,4.3s						
NJ2				LR	LR		
	comp=N,4μm,10.5s						
NJ2				LR	LR		
	comp=E,2μm,10.1s						
NJ2				LR	LR		
	comp=Z,1μm,9.5s						
KHET	**Khetri**	**19.93**	**284**	*e*PKP	**Pn**	**06 31 56.7**	**-2.2**
KHET				AMb	AMB	06 32 03.2	
	comp=Z,49nm,0.9s						
TIA	**Tai'an**	**20.14**	**51**	*e*P	**P**	**06 31 57.7**	**-1.8**
TIA				S	**S**	**06 35 47.0**	**+1.4**
TIA				pmax	pmax		
	comp=Z,40nm,1.7s						
TIA				pmax	pmax		
	comp=Z,360nm,5.4s						
TIA				LR	LR		
	comp=N,2μm,14.7s,MS4.7						
TIA				LR	LR		
	comp=E,2μm,14.2s,MS4.7						
TIA				LR	LR		
	comp=Z,2μm,13.7s,MS4.7						
IPM	**Ipoh**	**20.45**	**171**	*e*P	**P**	**06 32 03.3**	**+0.3**
	comp=Z,19nm,0.6s						
WMQ	**Urumqi**	**20.68**	**339**	P	**P**	**06 32 04.0**	**-1.3**
WMQ				PP		06 32 26.0	
WMQ				S	**S**	**06 35 49.0**	**-7.2**
WMQ				PcP	PcP	06 36 15.0	-0.2
WMQ				SS		06 36 20.0	
WMQ				pmax	pmax		
	comp=Z,58nm,0.8s						
WMQ				LR	LR		
	comp=N,820nm,10.0s,MS4.6						
WMQ				LR	LR		
	comp=E,1μm,11.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,720nm,10.0s,MS4.3						
LATR	**Latur**	**20.71**	**256**	*e*PKP	**P**	**06 32 07.9**	**+2.1**
AJM	**Ajmer**	**20.91**	**280**	*e*PKP	**P**	**06 32 08.9**	**+0.9**
TPUB	**Ta-pu**	**20.93**	**89**	*e*P	**P**	**06 32 08.3**	**+0.1**
	comp=Z,20nm,0.6s						
TWG	**Pinlang**	**21.41**	**90**	*e*P	**P**	**06 32 15.9**	**+2.6**
	comp=Z,18nm,0.3s,mb4.9						
YULB	**Yu-li**	**21.52**	**89**	*e*P	**P**	**06 32 14.8**	**+0.3**
	comp=Z,20nm,1.0s,mb4.5						
SSE	**Sheshan**	**21.59**	**68**	P	**P**	**06 32 15.2**	**0.0**
SSE				S	**S**	**06 36 14.0**	**-0.4**
SSE				pmax	pmax		
	comp=Z,37nm,0.9s,mb4.8						
SSE				pmax	pmax		
	comp=Z,150nm,7.7s						
SSE				LR	LR		
	comp=N,4μm,12.4s,MS5.0						
SSE				LR	LR		
	comp=E,810nm,12.4s,MS5.0						
SSE				LR	LR		
	comp=Z,2μm,9.2s						
BJT	**Baijiatuau**	**21.64**	**41**	*e*P	**P**	**06 32 14.5**	**-1.2**
BJT				pmax	pmax		
	comp=Z,139nm,1.5s						
BJT	**Baijiatuau**	**21.64**	**41**	*e*P	**P**	**06 32 14.5**	**-1.2**
	comp=Z,139nm,1.5s,mb5.2						
BJI	**Beijing**	**21.66**	**41**	P	**P**	**06 32 14.5**	**-1.4**
BJI				pmax	pmax		
	comp=Z,43nm,1.9s,mb4.5						
BJI				pmax	pmax		
	comp=Z,280nm,3.7s						
BJI				LR	LR		
	comp=N,2μm,16.9s,MS4.8						
BJI				LR	LR		
	comp=E,2μm,15.2s

DL2 S **S** **06 37 08.7 +2.6**
DL2 pmax pmax
comp=Z,20nm,0.9s,mb4.7
DL2 pmax pmax
comp=Z,100nm,3.9s
DL2 LR LR
comp=N,650nm,12.9s,MS4.3
DL2 LR LR
comp=E,270nm,12.9s,MS4.3
DL2 LR LR
comp=Z,550nm,12.9s,MS4.2
ULHL Ulahol 24.88 320 P **P** **06 32 49.0 +1.0**
SNR=6.0
MK31 Makanchi Array 25.19 334 *e*P **P** **06 32 50.6 -0.2**
MKAR Makanchi Array 25.19 334 P **P** **06 32 50.6 -0.2**
comp=Z,7.3nm,0.7s,mb4.3,baz=144,slow=10,SNR=24
MKAR Makanchi Array 25.19 334 *i* P **P** **06 32 50.5 -0.3**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
KZA Kyzart 25.37 318 P **P** **06 32 53.6 +1.1**
SNR=7.5
KZA Kyzart 25.37 318 *e*P **P** **06 32 53.2 +0.7**
KZA pmax pmax
comp=Z,31nm,1.1s,mb4.8
KZA Kyzart 25.37 318 *e*P **P** **06 32 53.2 +0.7**
comp=Z,31nm,1.1s,mb4.8
TKM2 Tokmak 2 25.67 320 P **P** **06 32 52.1 -3.1**
SNR=7.8
TKM2 Tokmak 2 25.67 320 *e*P **P** **06 32 55.4 +0.2**
TKM2 pmax pmax
comp=Z,67nm,1.6s,mb4.9
TKM2 Tokmak 2 25.67 320 *e*P **P** **06 32 55.4 +0.2**
comp=Z,67nm,1.6s,mb4.9
KKM Kota Kinabalu 25.71 134 *e*P **P** **06 32 57.8 +2.0**
comp=Z,56nm,0.9s,mb5.1
ZAK Zakamensk 25.88 8 *e*P **P** **06 32 55.2 -1.8**
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.0
KBK Karagaybulak 25.89 319 P **P** **06 32 58.4 +1.2**
SNR=12
UCH Uchtor 25.90 318 *e*P **P** **06 32 58.1 +0.8**
UCH pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
UCH Uchtor 25.90 318 *e*P **P** **06 32 58.1 +0.7**
comp=Z,7.2nm,0.8s,mb4.2
AAK Ala-Archa 26.15 319 P **P** **06 33 00.7 +1.2**
SNR=8.2
AAK Ala-Archa 26.15 319 P **P** **06 33 00.8 +1.2**
comp=Z,6.8nm,0.8s,mb4.2,baz=113,slow=3.4,SNR=22
AAK LR LR 06 44 45.5
comp=Z,821nm,20.8s,MS4.2,baz=102,slow=40
AAK Ala-Archa 26.15 319*c i*P **P** **06 33 00.2 +0.7**
AAK pmax pmax
comp=Z,37nm,1.5s,mb4.7
AAK Ala-Archa 26.15 319 *e*P **P** **06 32 59.9 +0.4**
comp=Z,42nm,1.1s,mb4.9
KSM Kuching 26.17 151 *e*P **P** **06 33 00.5 +0.5**
comp=Z,18nm,0.9s,mb4.6
AML Almayashu 26.35 317 P **P** **06 33 02.7 +1.3**
SNR=9.0
AML Almayashu 26.35 317 *e*P **P** **06 33 02.0 +0.6**
AML pmax pmax
comp=Z,45nm,1.1s,mb4.9
AML Almayashu 26.35 317 *e*P **P** **06 33 02.0 +0.6**
comp=Z,45nm,1.1s,mb4.9
USP Ospenovka 26.52 320 P **P** **06 33 03.1 +0.2**
SNR=9.1
EKS2 Erkin-Say 26.60 318 P **P** **06 33 04.6 +1.0**
SNR=18
EKS2 Erkin-Say 26.60 318 *e*P **P** **06 33 04.0 +0.4**
EKS2 pmax pmax
comp=Z,42nm,1.1s,mb4.9
EKS2 Erkin-Say 26.60 318 *e*P **P** **06 33 04.0 +0.4**
comp=Z,42nm,1.1s,mb4.9
TLY Talaya 27.20 8 *e*P **P** **06 33 16.3 +7.4**
TLY *e* 06 33 51.1
TLY *e*S **S** **06 37 33.1 -15**
TLY *e*SSS 06 38 53.0
TLY pmax pmax
comp=Z,3.0nm,1.0s,mb3.8
TLY MLR MLR
comp=Z,488nm,16.0s,MS4.2
SNY Shenyang 27.29 45 ⇓P **P** **06 33 07.9 -1.9**
SNY S **S** **06 37 46.8 -2.4**
SNY pmax pmax
comp=Z,10.0nm,0.4s,mb4.7
SNY pmax pmax
comp=Z,160nm,3.6s
SNY LR LR
comp=N,1μm,13.5s,MS4.7
SNY LR LR
comp=E,410nm,12.5s,MS4.7
SNY LR LR
comp=Z,1μm,13.7s,MS4.6
KSRS Korea Array 28.59 57 P **P** **06 33 23.4 +1.9**
comp=Z,2.3nm,0.9s,mb3.9,baz=249,slow=8.4,SNR=6.5
KSRS LR LR 06 46 12.3
comp=Z,302nm,18.5s,MS3.9,baz=17,slow=40
KSRS Korea Array 28.59 57 P **P** **06 33 23.4 +1.9**
KSRS pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KSRS MLR MLR
comp=Z,302nm,18.5s,MS3.9
KKAR Karatay Array 28.86 316 *e*P **P** **06 33 23.6 -0.3**
CN2 Changchun 29.48 43 *e*P **P** **06 33 43.0 +14**
CN2 *es*P sP 06 33 50.0 +16
CN2 *e*S **S** **06 38 34.4 +11**
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
CN2 pmax pmax
comp=Z,400nm,5.0s
CN2 LR LR
comp=N,1μm,11.0s,MS4.8
CN2 LR LR
comp=E,1μm,11.0s,MS4.8
CN2 LR LR
comp=Z,1μm,12.0s,MS4.7
KURK Kurchatov 29.79 335 P **P** **06 33 30.2 -1.8**
comp=Z,2.7nm,0.7s,mb4.1,baz=139,slow=9.4,SNR=7.6
KURK PcP PcP 06 36 36.3 +0.9
comp=Z,1.7nm,0.8s,baz=160,slow=2.0,SNR=2.7
KURK Kurchatov 29.79 335 *e*P **P** **06 33 31.3 -0.7**
KURK pmax pmax
comp=Z,20nm,1.5s,mb4.6
KURK Kurchatov 29.79 335 *e*P **P** **06 33 31.3 -0.7**
comp=Z,20nm,1.5s,mb4.6
ZALV Zalesovo Beam 30.67 345 P **P** **06 33 39.1 -0.6**
comp=Z,6.6nm,0.6s,mb4.7,baz=169,slow=9.6,SNR=13
ZALV LR LR 06 46 29.0
comp=Z,102nm,19.8s,MS3.5,baz=230,slow=37
NVS Novosibirsk 31.87 344 *e*P **P** **06 33 46.6 -3.7**
NVS *e*S **S** **06 38 52.3 -8.6**
NVS pmax pmax
comp=Z,19nm,1.8s,mb4.6
NVS pmax pmax
comp=N,13nm,1.7s
NVS smax
comp=E,19nm,2.2s
MDJ Mudanjiang 32.48 45 P **P** **06 33 57.2 +1.4**
MDJ pP pP 06 34 00.2 +1.3
MDJ sP sP 06 34 01.5 +1.4
MDJ S **S** **06 39 13.5 +2.9**
MDJ sS sS 06 39 18.7 +3.0
MDJ ScP ScP 06 40 26.9 +0.2
MDJ PcS PcS 06 40 28.5 +0.9
MDJ pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
MDJ pmax pmax
comp=Z,19nm,3.6s
MDJ LR LR
comp=N,760nm,13.1s,MS4.7
MDJ LR LR
comp=E,580nm,14.2s,MS4.7
MDJ LR LR
comp=Z,730nm,20.5s
IMYA Miami 34.21 299 *e*P **P** **06 34 10.2 -0.8**
ISRO Mashad 34.71 298 *e*P **P** **06 34 12.4 -2.9**
BRVK Borovoye 34.99 331*c i*P **P** **06 34 16.6 -0.9**
BRVK pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
BRVK Borovoye 34.99 331 *e*P **P** **06 34 16.8 -0.7**
comp=Z,7.4nm,0.8s,mb4.7
IAKL Akhelmad 35.32 299 *e*P **P** **06 34 22.8 +2.2**
IKRD Kardeh 35.54 299 *e*P **P** **06 34 19.0 -3.5**
ISHV Shirvan 36.29 300 *e*P **P** **06 34 26.2 -2.7**
MJAR Matsushiro Arr 36.45 62 P **P** **06 34 30.1 -0.2**
comp=Z,0.8nm,0.3s,mb4.1,baz=272,slow=9.3,SNR=5.2
MJAR LR LR 06 49 01.1
comp=Z,294nm,21.3s,MS4.0,baz=275,slow=36
ABKAR Akbulak array 38.23 320 *e*P **P** **06 34 44.9 -0.3**
comp=Z,11nm,0.8s,mb4.7
IANJ Anjilo 39.11 296 *e*P **P** **06 34 52.0 -0.8**
ISHM Shahmirzad 39.64 297 *e*P **P** **06 34 55.6 -1.6**
AKTK Aktyubinsk 39.86 320 P **P** **06 34 57.7 -1.1**
AKTO Aktyubinsk 39.86 320 P **P** **06 34 57.7 -1.1**
comp=Z,2.4nm,0.4s,mb4.3,baz=129,slow=7.6,SNR=7.9
IZEF Zerfeh 40.36 292 *e*P **P** **06 34 59.8 -3.4**
IDMV Damavand 40.65 296 *e*P **P** **06 35 04.7 -0.9**
ASAJ Asahikawa 41.09 51 P **P** **06 35 09.9 +0.9**
comp=Z,17nm,0.9s,mb4.7,baz=283,slow=18,SNR=3.2
ASAJ Asahikawa 41.09 51 P **P** **06 35 10.0 +0.9**
ASAJ pmax pmax
comp=Z,17nm,0.9s
IPIR Pirpir 41.57 292 *e*P **P** **06 35 14.4 +1.1**
ARU Arti 42.43 329*c i*P **P** **06 35 19.0 -0.9**
ARU *e* 06 36 55.7
ARU S **S** **06 41 39.6 -1.7**
ARU SS SS 06 44 43.3 -6.9
ARU pmax pmax
comp=Z,31nm,1.7s,mb4.7
ARU Arti 42.43 329 *e*P **P** **06 35 18.9 -1.0**
comp=Z,56nm,1.7s,mb4.9
RDF Al-Radifah 44.73 287 *e*P **P** **06 35 42.6 +3.8**
MIB Mutribah 44.81 288 *e*P **P** **06 35 41.4 +2.0**
MIB AMb AMB 06 35 46.5
comp=Z,41nm,0.9s,mb5.3
SOKR Solikamsk 44.90 332 *e*P **P** **06 35 36.1 -3.6**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
SOKR MLR MLR
comp=Z,460nm,23.0s,MS4.3
NAY Al-Naaiem 44.95 287 *e*P **P** **06 35 42.5 +1.9**
NAY AMb AMB 06 35 47.5
comp=Z,34nm,1.1s,mb5.1
ISHB Shabestar 45.87 300 *e*P **P** **06 35 47.5 -0.3**
GNI Garni 46.61 303 P **P** **06 35 54.6 +1.0**
comp=Z,2.8nm,0.4s,mb4.6,baz=28,slow=21,SNR=4.0
GNI Garni 46.61 303*c i*P **P** **06 35 54.3 +0.7**
GNI pmax pmax
comp=Z,25nm,1.6s
GNI Garni 46.61 303 *e*P **P** **06 35 54.4 +0.8**
comp=Z,25nm,1.0s,mb5.1
ZEI Tsey 47.40 306 *e*P **P** **06 35 58.2 -1.5**
ZEI pmax pmax
comp=Z,16nm,1.0s,mb4.9
KIV Kislovodsk 48.37 308⇓*e*P **P** **06 36 06.8 -0.4**
KIV *e* 06 36 17.6
KIV pmax pmax
comp=Z,22nm,1.5s,mb5.0
KIV MLR MLR
comp=Z,300nm,16.0s,MS4.4
MBWA Marble Bar 50.43 153 *e*P **P** **06 36 22.1 -1.0**
MBWA Marble Bar 50.43 153 *e*P **P** **06 36 22.6 -0.6**
comp=Z,13nm,0.8s,mb5.0
FITZ Fitzroy Crossi 50.56 145 P **P** **06 36 25.7 +1.6**
comp=Z,12nm,0.9s,mb4.8,baz=330,slow=4.7,SNR=16
FITZ Fitzroy Crossi 50.56 145 *e*P **P** **06 36 25.6 +1.5**
comp=Z,18nm,0.8s,mb5.0
VORD Divnogorie 51.41 316 *e*P **P** **06 36 31.7 +1.5**
VORD pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,1.0s
VSR Storozhevoye 51.53 317 *e*P **P** **06 36 32.8 +1.7**
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.8s
PETK Petropavlovsk- 52.59 41 LR LR 06 59 21.3
comp=E,186nm,18.6s,MS4.2,baz=131,slow=36
MOS Moscow 53.13 322 *e*P **P** **06 36 42.6 -0.3**
MOS pmax pmax
comp=Z,52nm,0.8s,mb5.5
KLMR Klimovskoe 53.28 329 *e*P **P** **06 36 41.8 -2.1**
KLMR pmax pmax
comp=Z,59nm,1.6s,mb5.3
KLMR MLR MLR
comp=Z,618nm,19.0s,MS4.7
OBN Obninsk 53.63 321⇑*e*P **P** **06 36 46.1 -0.5**
OBN pmax pmax
comp=Z,36nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.2
BRTR Keskin Array B 55.15 302 P **P** **06 36 57.1 -0.8**
comp=Z,1.6nm,0.6s,mb4.2,baz=116,slow=8.4,SNR=6.0
BRTR LR LR 07 03 12.1
comp=Z,75nm,20.6s,MS3.8,baz=269,slow=39
BRTR Keskin Array B 55.15 302 *i* P **P** **06 36 56.5 -1.4**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
MORW Morawa 56.37 161 *e*P **P** **06 37 08.9 +2.3**
WRA Warramunga Arr 56.96 138 P **P** **06 37 09.9 -1.1**
comp=Z,14nm,1.0s,mb5.0,baz=327,slow=7.5,SNR=47
WB2 Warramunga Arr 56.97 138 *e*P **P** **06 37 11.6 +0.5**
JOF Joensuu 57.51 330 *e*P **P** **06 37 17.2 +2.8**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
JOF Joensuu 57.51 330 *e*p **P** **06 37 17.2 +2.8**
comp=Z,6.7nm,0.7s,mb4.8
AKASG Malin Array Be 57.77 316 P **P** **06 37 14.7 -1.7**
comp=Z,1.6nm,0.6s,mb4.2,baz=80,slow=6.4,SNR=6.5
ASAR Alice Springs 59.57 141 P **P** **06 37 28.2 -1.0**
comp=Z,5.7nm,0.9s,mb4.6,baz=324,slow=6.8,SNR=20
FINES FINESS Array B 59.80 328 P **P** **06 37 31.8 +1.6**
comp=Z,3.4nm,0.7s,mb4.5,baz=100,slow=7.6,SNR=6.7
FINES LR LR 07 05 31.0
comp=Z,228nm,19.8s,MS4.3,baz=91,slow=38
FINES FINESS Array B 59.80 328 P **P** **06 37 31.8 +1.5**
FINES pmax pmax
comp=Z,3.0nm,0.7s
FINES MLR MLR
comp=Z,228nm,19.8s
ARCES ARCESS Array B 60.79 337 P **P** **06 37 38.7 +1.7**
comp=Z,3.3nm,0.9s,mb4.5,baz=51,slow=7.1,SNR=4.5
ARCES LR LR 07 06 20.9
comp=Z,323nm,18.7s,MS4.5,baz=91,slow=38
ARCES ARCESS Array B 60.79 337 P **P** **06 37 38.7 +1.7**
ARCES LR LR 07 06 20.9
KMBO Kilima Mbogo 63.96 256 P **P** **06 38 01.1 +2.1**
comp=Z,1.1nm,0.6s,mb4.0,baz=24,slow=20,SNR=3.5
CTA Charters Tower 64.93 129 LR LR 07 02 49.4
comp=Z,107nm,21.8s,MS4.0,baz=227,slow=33
DPC Dobruska-Polom 65.99 316 *e*P **P** **06 38 11.6 -0.1**
DPC Dobruska-Polom 65.99 316 *e*P **P** **06 38 11.6 -0.1**
TREC Trest 66.72 315 AMS AMS 07 09 00.0
comp=Z,300nm,22.3s
CONA Conrad Observa 66.75 314⇑*i*P **P** **06 38 15.8 -0.8**
comp=Z,16nm,1.8s,mb4.8
NB2 NORSAR Subarra 66.98 328 P **P** **06 38 19.2 +1.4**
comp=Z,4.3nm,1.0s,mb4.4,baz=80,slow=6.5
NOA NORSAR Array B 66.98 328 P **P** **06 38 18.9 +1.0**
comp=Z,1.3nm,0.6s,mb4.1,baz=81,slow=6.3,SNR=3.5
NOA LR LR 07 10 01.3
comp=Z,198nm,18.2s,MS4.4,baz=80,slow=38
PRU Pruhonice 67.18 316 AMS AMS 07 20 09.0
comp=Z,200nm,17.6s
BRG Berggiesshubel 67.37 317 *e*P **P** **06 38 19.9 -0.7**
comp=Z,4.3nm,0.9s,mb4.5
BRG Berggiesshubel 67.37 317 *e*P **P** **06 38 19.9 -0.6**
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
CLL Collm 67.86 318 P **P** **06 38 24.0 +0.4**
CLL Collm 67.86 318 *e*(P) **P** **06 38 24.0 +0.4**
CLL *e* 06 52 42.0
KHC Kasperske Hory 67.97 315 *e*P **P** **06 38 27.5 +3.1**
KHC *e* 06 38 34.9
KHC MLR MLR
comp=Z,300nm,18.8s,MS4.5
KHC Kasperske Hory 67.97 315 *e*P **P** **06 38 27.5 +3.1**
KHC *ex* x 06 38 34.9
KHC AMS AMS 07 09 50.0
comp=Z,300nm,18.8s
GRA1 Grafenberg Arr 69.34 316 *e*P **P** **06 38 33.0 +0.1**
comp=Z,8.0nm,1.0s,mb4.6
GRF Grafenberg Arr 69.34 316 *e*P **P** **06 38 33.0 +0.1**
comp=Z,8.0nm,1.0s,mb4.6
GRF Grafenberg Arr 69.34 316 *e*P **P** **06 38 33.0 +0.1**
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
STKA Stephens Creek 70.21 141 P **P** **06 38 40.1 +1.7**
comp=Z,9.5nm,0.8s,mb4.8,baz=335,slow=6.3,SNR=16
STKA LR LR 07 11 43.7
comp=Z,250nm,18.7s,MS4.5,baz=22,slow=38
STKA Stephens Creek 70.21 141 *e*P **P** **06 38 40.3 +1.9**
comp=Z,2.5nm,0.8s,mb4.2
FETA Feichten 70.34 313⇑*i*P **P** **06 38 37.8 -1.3**
comp=Z,17nm,1.1s,mb4.9
CMSA Cobar Meteorol 72.37 138 *e*P **P** **06 38 54.0 +2.5**
WLF Walferdange 72.51 317 P **P** **06 38 56.8 +4.7**
comp=Z,19nm,1.4s,mb4.8
PGF Pioggiola 72.81 309 *e*P **P** **06 38 53.9 -0.2**
comp=Z,9.2nm,0.8s,mb4.5
PGF Pioggiola 72.81 309 *e*P **P** **06 38 53.9 -0.2**
PGF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
PGF Pioggiola 72.81 309 *e*P **P** **06 38 53.9 -0.2**
comp=Z,4.6nm,0.8s,mb4.5
LPL La Plagne 73.43 313 *e*P **P** **06 39 00.0 +2.3**
comp=Z,16nm,0.7s,mb4.8
LPL La Plagne 73.43 313 *e*P **P** **06 39 00.0 +2.3**
LPL pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPL La Plagne 73.43 313 *e*P **P** **06 39 00.0 +2.3**
comp=Z,7.8nm,0.7s,mb4.8
MBDF Montbardon 73.66 312 *e*P **P** **06 38 58.8 -0.3**
ORIF Oris-en-Rattie 74.20 312 *e*P **P** **06 39 02.2 0.0**
VIVF Saint-Julien-l 75.03 313 *e*P **P** **06 39 06.9 -0.1**
comp=Z,18nm,1.0s,mb4.7
VIVF Saint-Julien-l 75.03 313 *e*P **P** **06 39 06.9 -0.1**
VIVF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
VIVF Saint-Julien-l 75.03 313 *e*P **P** **06 39 06.9 -0.1**
comp=Z,8.9nm,1.0s,mb4.7
SSF Saint Saulge 75.03 315 *e*P **P** **06 39 06.9 -0.1**
comp=Z,17nm,0.9s,mb4.7
SSF Saint Saulge 75.03 315 *e*P **P** **06 39 06.9 -0.1**
SSF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SSF Saint Saulge 75.03 315 *e*P **P** **06 39 06.9 -0.1**
comp=Z,8.4nm,0.9s,mb4.7
AVF Avril sur Loir 75.22 315 *e*P **P** **06 39 08.0 -0.1**
comp=Z,18nm,1.0s,mb4.6
AVF Avril sur Loir 75.22 315 *e*P **P** **06 39 08.0 -0.1**
AVF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
AVF Avril sur Loir 75.22 315 *e*P **P** **06 39 08.0 -0.1**
comp=Z,8.8nm,1.0s,mb4.6
LASF Ste Croix 75.85 312 *e*P **P** **06 39 11.0 -0.7**
TCF Toulx Ste Croi 76.14 315 *e*P **P** **06 39 12.6 -0.8**
comp=Z,30nm,1.1s,mb4.8
TCF Toulx Ste Croi 76.14 315 *e*P **P** **06 39 12.6 -0.8**
TCF pmax pmax
comp=Z,15nm,1.1s,mb4.8
TCF Toulx Ste Croi 76.14 315 *e*P **P** **06 39 12.6 -0.8**
comp=Z,15nm,1.1s,mb4.8
BPAW Bear Paw Mtn. 76.69 25 *e*P **P** **06 39 17.8 +1.6**
comp=Z,3.7nm,0.7s,mb4.4
MTLF Montolieu 77.22 312 *e*P **P** **06 39 18.5 -1.0**
comp=Z,34nm,1.3s,mb4.8
MTLF Montolieu 77.22 312 *e*P **P** **06 39 18.5 -1.0**
MTLF pmax pmax
comp=Z,17nm,1.3s,mb4.8
MTLF Montolieu 77.22 312 *e*P **P** **06 39 18.5 -1.0**
comp=Z,17nm,1.3s,mb4.8
ILAR Eielson Array 77.86 23 P **P** **06 39 22.6 0.0**
comp=Z,1.4nm,1.0s,mb3.8,baz=297,slow=5.0,SNR=10
ILAR LR LR 07 13 58.2
comp=Z,202nm,19.4s,MS4.5,baz=135,slow=36
ETSF Etsaut 79.27 312 *e*P **P** **06 39 30.4 -0.5**
comp=Z,39nm,1.3s,mb4.9
ETSF Etsaut 79.27 312 *e*P **P** **06 39 30.4 -0.5**
ETSF pmax pmax
comp=Z,20nm,1.3s,mb4.9
ETSF Etsaut 79.27 312 *e*P **P** **06 39 30.4 -0.5**
comp=Z,20nm,1.3s,mb4.9
INK Inuvik 79.86 17 *e*P **P** **06 39 34.2 +0.6**
ESDC Sonseca Array 82.95 310 P **P** **06 39 50.5 -0.1**
comp=Z,0.2nm,0.3s,mb3.6,baz=57,slow=4.7,SNR=3.2
ESDC LR LR 07 20 45.2
comp=Z,73nm,18.9s,MS4.1,baz=95,slow=39
BOSA Boshof 87.64 237 P **P** **06 40 16.3 +2.2**
comp=Z,5.4nm,0.9s,mb4.8,baz=61,slow=8.8,SNR=6.1
BOSA LR LR 07 18 19.4
comp=Z,160nm,18.8s,MS4.5,baz=54,slow=35
BOSA Boshof 87.64 237 P **P** **06 40 16.3 +2.2**
BOSA LR LR 07 18 19.4
YKA Yellowknife Ar 89.24 14 P **P** **06 40 21.2 +0.1**
comp=Z,1.1nm,0.8s,mb4.3,baz=328,slow=4.5,SNR=9.3
YKA LR LR 07 23 10.7
comp=Z,19nm,18.2s,MS3.5,baz=40,slow=38
YKA Yellowknife Ar 89.24 14 P **P** **06 40 21.2 +0.1**
YKA LR LR 07 23 10.7
TORD Torodi Ar. Bea 89.97 284 P **P** **06 40 27.7 +2.3**
comp=Z,1.2nm,0.3s,mb4.8,baz=48,slow=3.9,SNR=5.1
MAW Mawson 95.73 193 LR LR 07 20 04.6
comp=Z,120nm,18.5s,MS4.4,baz=269,slow=33
DBIC Dimbokro 98.58 281 LR LR 07 28 50.9
comp=Z,112nm,18.9s,MS4.4,baz=70,slow=37
TXAR Lajitas Array 122.36 22 PKP PKPdf 06 46 21.4 +0.3
comp=Z,0.7nm,0.8s,baz=64,slow=2.1,SNR=4.6
SDV Santo Domingo 144.65 340 *e*PKPdf PKPdf 06 47 03.1 +0.1
ROSC El Rosal 149.53 344 PKPbc PKPbc 06 47 16.4 +0.7
comp=Z,3.3nm,0.5s,baz=291,slow=17,SNR=3.9

DJA 03 06:34:45,1°.72N×126°.28E,h103km,MLv3.8/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.44**	**131**	P	Pn	06 35 12.3	+1.6
TNTI				S	Sn	06 35 30.9	+0.8
MNI	**Manado**	**1.47**	**259**	P	Pn	06 35 13.2	+2.2
MNI				S	Sn	06 35 30.9	+0.2
SGSI	**Sangihe**	**2.09**	**339**	P	Pn	06 35 18.1	-0.8
KMSI	**Cibinong**	**2.56**	**244**	P	Pn	06 35 24.8	-0.3
LBMI	**Labuha**	**2.64**	**152**	P	Pn	06 35 24.5	-1.6
LBMI				S	Sn	06 35 44.3	-13

NIED ***03*** *06:40:00,35°.40N×135°.90E,h35km,Mw3.7 Best double couple: M*$_0$*3.62000×10*^{14} *NP1:*ϕ_s*171.00000°,*δ*70.00000°,*λ*126.00000°. NP2:*ϕ_s*286.00000°,*δ*40.00000°,*λ*31.00000°.*
ISCJB ***03*** *06:40:55.0±0.6,35°.42N±0°.05×135°.88E±0°.04,h12km±6km, Error ellipse: s-maj=8.4km s-min=5.5km az=156.4*
JMA ***03*** *06:40:55.5,35°.42N×135°.86E,h14km±1km,M3.4 Broadband fault plane solution: P waves. NP1:*
ϕ_s*294.00000°,*δ*73.00000°,*λ*10.00000°. NP2:*
ϕ_s*201.00000°,*δ*80.00000°,*λ*163.00000°. Principal axes: T Plg19.0000°, Azm156.0000°; N Plg70.0000°, Azm352.0000°; P Plg5.0000°, Azm248.0000°;*
JMA Felt I J1.

ISC 03 06:40:55.4±0.7,35°.41N±0°.04×135°.86E±0°.04,h11km±9km, n8,σ_0**9°.49/15,2C-4D,Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFM	**Mihama**	**0.15**	**42**	⇓P	**Pg**	**06 40 59.3**	**+0.4**
JFM				S	**Sg**	**06 41 01.9**	**+0.5**
JWT	**Wachi**	**0.39**	**251**	⇓P	**Pg**	**06 41 03.4**	**+0.2**
JWT				S	**Sg**	**06 41 08.5**	**+0.1**
JKY	**Yasaka**	**0.65**	**289**	⇑P	**Pg**	**06 41 08.1**	**+0.1**
JKY				S	**Sg**	**06 41 16.8**	**+0.3**
JHE	**Heguri**	**0.77**	**191**	⇑P	**Pg**	**06 41 10.3**	**0.0**
JHE				S	**Sg**	**06 41 20.5**	**+0.1**
JKS	**Kasai**	**0.93**	**243**	⇓P	**Pg**	**06 41 13.2**	**-0.2**
JKS				S	**Sg**	**06 41 25.4**	**-0.2**
JKSM	**Kasumi**	**0.99**	**280**	⇓P	**Pg**	**06 41 14.0**	**-0.4**
JKSM				S	**Sg**	**06 41 27.0**	**-0.3**
MAT	**Matsushiro**	**2.21**	**59**	P	**Pn**	**06 41 33.2**	**+1.1**
MAT	**Matsushiro**	**2.21**	**59**	P	**Pg**	**06 41 36.9**	**-1.0**
MAT				S	**Sg**	**06 42 05.9**	**-0.7**

NEIC ***03*** *07:06:02.6,31°.78S×70°.20W,h137km,MD3.4(GUC),After GUC.*

GUC 03 07:06:02.6±0.5,31°.78S×70°.20W,h137km±2km,MD3.4, ML3.5,12C-6D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.92**	**311**	⇓*iP*	Pn	07 06 26.1	+0.6
CMCH				*i* S	Sn	07 06 43.7	+0.9
CMCH	**Combarbala**	**0.92**	**311**	⇓*iP*	Pn	07 06 26.1	+0.6
CMCH				*i* S	Sn	07 06 43.7	+0.9
CMCH				AML	AML	07 06 45.0	
	comp=N,4μm,0.6s						
JACH	**Jahuel**	**0.96**	**201**	⇑*iP*	Pn	07 06 26.2	+0.4
JACH				*i* S	Sn	07 06 44.2	+0.8
JACH	**Jahuel**	**0.96**	**201**	⇑*iP*	Pn	07 06 26.2	+0.4
JACH				*i* S	Sn	07 06 44.2	+0.8
CHNG	**Los Chungos**	**1.11**	**265**	⇑*iP*	Pn	07 06 25.2	-2.0
CHNG				*i* S	Sn	07 06 44.1	-1.9
ROCH	**El Roble**	**1.37**	**210**	⇑*iP*	Pn	07 06 30.7	+0.9
ROCH				*i* S	Sn	07 06 51.9	+1.3
ROCH	**El Roble**	**1.37**	**210**	⇑*iP*	Pn	07 06 30.7	+0.9
ROCH				⇑*iP*		07 06 30.7	
ROCH				*i* S	Sn	07 06 51.9	+1.3
ROCH				*i* S	Sn	07 06 52.0	+1.4
ROCH				AML	AML	07 06 53.6	
	comp=N,567nm,0.3s						
PEL	**Peldehue**	**1.42**	**197**	*e*P	Pn	07 06 30.8	+0.5
PEL				*i* S	Sn	07 06 52.1	+0.6
PEL				AML	AML	07 06 53.4	
	comp=E,771nm,0.3s						
FCH	**Farellones**	**1.54**	**183**	⇑*iP*	Pn	07 06 32.9	+1.2
FCH				*i* S	Sn	07 06 55.8	+1.9
FCH	**Farellones**	**1.54**	**183**	⇑*iP*	Pn	07 06 32.9	+1.2
FCH				*i* S	Sn	07 06 55.8	+1.9
TLL	**Tololo Astrono**	**1.69**	**342**	⇓*iP*	Pn	07 06 34.2	+0.8
TLL				*i* S	Sn	07 06 57.9	+1.0
TLL	**Tololo Astrono**	**1.69**	**342**	⇓*iP*	Pn	07 06 34.2	+0.8
TLL				*i* S	Sn	07 06 57.9	+1.0
TLL				AML	AML	07 06 59.0	
	comp=E,236nm,0.6s						
ANTU	**Antumapu**	**1.82**	**192**	*i* P	Pn	07 06 35.3	+0.5
ANTU				*e*S	Sn	07 06 59.9	+0.4
ANTU	**Antumapu**	**1.82**	**192**	*i* P	Pn	07 06 35.3	+0.5
ANTU				*e*S	Sn	07 06 59.9	+0.4
ANTU				AML	AML	07 07 01.3	
	comp=N,808nm,0.4s						
PCH	**Pirque**	**1.85**	**188**	⇑*iP*	Pn	07 06 35.8	+0.6
PCH				*i* S	Sn	07 07 00.8	+0.6
PCH	**Pirque**	**1.85**	**188**	⇑*iP*	Pn	07 06 35.8	+0.6
PCH				*i* S	Sn	07 07 00.8	+0.6
SJCH	**San Jose de Ma**	**1.86**	**184**	*e*P	Pn	07 06 35.9	+0.7
SJCH				*e*S	Sn	07 07 01.2	+0.9
SJCH	**San Jose de Ma**	**1.86**	**184**	*e*P	Pn	07 06 35.9	+0.7
SJCH				*e*S	Sn	07 07 01.2	+0.9
SJCH				AML	AML	07 07 04.8	
	comp=N,144nm,0.1s						
TACH	**Talagante**	**1.97**	**198**	⇓*iP*	Pn	07 06 37.0	+0.5
TACH				*i* S	Sn	07 07 03.0	+0.3
TACH	**Talagante**	**1.97**	**198**	⇓*iP*	Pn	07 06 37.0	+0.5
TACH				*i* S	Sn	07 07 03.0	+0.3
LCCH	**Las Cruces**	**2.05**	**214**	*i* P	Pn	07 06 37.8	+0.3
LCCH				*i* S	Sn	07 07 04.8	+0.5
LCCH	**Las Cruces**	**2.05**	**214**	*i* P	Pn	07 06 37.8	+0.3
LCCH				*i* S	Sn	07 07 04.8	+0.5
LMEL	**Las Melosas**	**2.06**	**180**	*e*P	Pn	07 06 38.5	+0.9
LMEL				*i* S	Sn	07 07 05.5	+0.9
LMEL	**Las Melosas**	**2.06**	**180**	*e*P	Pn	07 06 38.5	+0.9
LMEL				*i* S	Sn	07 07 05.5	+0.9
LMEL				AML	AML	07 07 11.6	
	comp=N,262nm,0.2s						
CHCH	**Chadas Angostu**	**2.18**	**190**	*i* P	Pn	07 06 39.7	+0.6
CHCH				*i* S	Sn	07 07 07.7	+0.6
CHCH	**Chadas Angostu**	**2.18**	**190**	*i* P	Pn	07 06 39.7	+0.6
CHCH				*i* S	Sn	07 07 07.7	+0.6
CACH	**El Canelo**	**2.35**	**188**	*i* P	Pn	07 06 42.4	+1.2
CACH				*i* S	Sn	07 07 12.4	+1.4
CACH	**El Canelo**	**2.35**	**188**	*i* P	Pn	07 06 42.4	+1.2
CACH				*i* S	Sn	07 07 12.4	+1.4
LNV	**Longovilo**	**2.40**	**205**	⇑*iP*	Pn	07 06 42.1	+0.3
LNV				*i* S	Sn	07 07 12.2	+0.2
LNV	**Longovilo**	**2.40**	**205**	⇑*iP*	Pn	07 06 42.1	+0.3
LNV				*i* S	Sn	07 07 12.2	+0.2

IDC 03 07:31:60.0±7.1, 23°.88S×178°.39W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/17, mbtmp4.1/4, Error ellipse: s-maj=179.2km s-min=40.4km az=33.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.10**	**248**	P	P	07 39 02.8	-0.9
	1.3nm,0.4s,baz=90,slow=6.1,SNR=6.7						
ASAR	**Alice Springs**	**43.49**	**260**	P	P	07 40 05.2	-0.1
	2.2nm,0.4s,baz=92,slow=7.5,SNR=62						
WRA	**Warramunga Arr**	**43.88**	**266**	P	P	07 40 09.1	+0.6
	1.5nm,0.4s,baz=103,slow=7.7,SNR=50						
QSPA	**South Pole Qui**	**66.21**	**180**	P	P	07 42 49.6	+0.5
	0.5nm,0.6s,baz=307,slow=20,SNR=4.5						

*ISCJB **03** 07:48:50.7±0.6, 6°.81S±0°.07×143°.36E±0°.07, h10km, mb4.0/6, MS4.0/9, Error ellipse: s-maj=10.6km s-min=8.4km az=44.1*

*IDC **03** 07:48:50.9±1.1, 6°.63S×143°.45E, h0km, mb3.9/5, mb1 4.3/6, mb1mx4.0/12, mbtmp4.1/6, ML4.3/1, MS4.0/11, Ms1 4.0/11, ms1mx3.7/21, Error ellipse: s-maj=43.2km s-min=13.6km az=110.0*

*NEIC **03** 07:48:52.5±0.7, 6°.73S×143°.32E, h10km, Error ellipse: s-maj=15.7km s-min=12.3km az=114.0*

ISC 03 07:48:52.5±0.6, 6.76S±0°.07×143°.40E±0°.06, h10km, n24, σ1§23/21, mb4.0/6, MS4.0/9, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.56**	**125**	*e*Pn	**Pn**	**07 50 01.6**	**0.0**
PMG				*e*Sn	**Sn**	**07 50 54.7**	**+0.1**
COEN	**Coen**	**7.15**	**182**	*e*Pn	**Pn**	**07 50 38.5**	**+1.2**
KAKA	**Kakadu**	**12.31**	**240**	*e*Pn	**Pn**	**07 51 46.4**	**-1.5**
	40nm,0.6s						
CTA	**Charters Tower**	**13.53**	**168**	Lg		07 56 07.7	
	0.1nm,0.3s,baz=82,slow=17,SNR=4.5						
CTA				LR	LR	07 57 21.6	
	comp=Z,816nm,19.1s,baz=5.5,slow=37						
WB2	**Warramunga Arr**	**15.77**	**213**	*e*Pn	**Pn**	**07 52 34.3**	**-0.5**
WRA	**Warramunga Arr**	**15.78**	**213**	Pn	**Pn**	**07 52 31.8**	**-3.1**
	0.3nm,0.3s,baz=39,slow=11,SNR=17						
WRA				Sn	**Sn**	**07 55 36.2**	**+6.2**
	0.2nm,0.3s,baz=32,slow=24,SNR=6.2						
WRA				Lg		07 57 06.5	
	0.2nm,0.3s,baz=35,slow=28,SNR=4.7						
WRA				LR	LR	07 59 25.6	
	comp=Z,566nm,20.3s,baz=30,slow=40						
WRA	**Warramunga Arr**	**15.78**	**213**	Pn	**Pn**	**07 52 31.8**	**-3.1**
WRA				Sn	**Sn**	**07 55 36.2**	**+6.2**
WRA				Lg		07 57 06.5	
WRA				LR	LR	07 59 25.6	
ASAR	**Alice Springs**	**19.12**	**207**	P	**Pn**	**07 53 16.6**	**0.0**
	0.9nm,0.3s,baz=37,slow=10,SNR=56						
ASAR				S	**Sn**	**07 56 56.4**	**+5.3**
	0.1nm,0.3s,baz=19,slow=26,SNR=4.6						
ASAR				Lg		07 58 56.6	
	0.1nm,0.3s,baz=18,slow=29,SNR=4.5						
GUMO	**Guam**	**20.27**	**4**	LR	LR	08 01 08.2	
	comp=Z,226nm,18.1s,MS3.6,baz=123,slow=37						
FITZ	**Fitzroy Crossi**	**20.66**	**235**	P	**P**	**07 53 32.9**	**+0.3**
	5.2nm,0.6s,baz=74,slow=9.4,SNR=16						
FITZ				S	**S**	**07 57 25.3**	**+1.7**
	1.9nm,0.8s,baz=210,slow=16,SNR=2.8						
FITZ				Lg		07 59 43.5	
	33nm,1.1s,baz=167,slow=7.0,SNR=4.2						
FITZ				LR	LR	08 02 36.0	
	comp=Z,294nm,18.2s,MS3.7,baz=57,slow=40						
STKA	**Stephens Creek**	**25.04**	**184**	P	**P**	**07 54 16.6**	**-0.4**
	1.3nm,0.7s,mb3.6,baz=350,slow=12,SNR=2.6						
STKA				LR	LR	08 05 19.6	
	comp=Z,1μm,18.9s,MS4.3,baz=12,slow=39						
CBIJ	**Chichi jima**	**33.68**	**358**	LR	LR	08 09 01.1	
	comp=Z,239nm,19.4s,MS3.9,baz=111,slow=36						
NWAO	**Narrogin (SRO)**	**35.61**	**220**	LR	LR	08 11 13.0	
	comp=Z,750nm,18.1s,MS4.5,baz=218,slow=38						
MJAR	**Matsushiro Arr**	**43.35**	**354**	P	**P**	**07 56 53.6**	**-1.4**
	2.1nm,0.8s,mb3.9,baz=186,slow=9.2,SNR=8.1						
MJAR				LR	LR	08 13 30.3	
	comp=Z,73nm,19.8s,MS3.6,baz=180,slow=34						
MJAR	**Matsushiro Arr**	**43.35**	**354**	P	**P**	**07 56 53.6**	**-1.4**
MJAR				LR	LR	08 13 30.2	
KSRS	**Korea Array**	**46.30**	**343**	P	**P**	**07 57 20.6**	**+2.1**
	1.6nm,1.0s,mb3.9,baz=167,slow=11,SNR=5.8						
LZH	**Lanzhou**	**56.52**	**322**	*e*P	**P**	**07 58 37.5**	**+2.4**
LZH				pP	pP	07 58 43.8	+5.5
LZH				sP	sP	07 58 47.0	+7.5
LZH				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
PETK	**Petropavlovsk-**	**60.87**	**10**	LR	LR	08 21 10.8	
	comp=Z,52nm,20.0s,MS3.7,baz=104,slow=32						
MKAR	**Makanchi Array**	**75.84**	**322**	P	**P**	**08 00 39.0**	**0.0**
	comp=Z,0.7nm,0.7s,mb3.7,baz=98,slow=8.7,SNR=4.4						
MKAR	**Makanchi Array**	**75.84**	**322**	P	**P**	**08 00 39.0**	**0.0**
MAW	**Mawson**	**80.17**	**203**	LR	LR	08 32 20.6	
	comp=Z,87nm,19.4s,MS4.1,baz=180,slow=32						
ILAR	**Eielson Array**	**87.60**	**24**	P	**P**	**08 01 39.4**	**-1.2**
	comp=Z,0.7nm,0.8s,mb3.9,baz=273,slow=3.7,SNR=6.9						
ILAR				LR	LR	08 39 43.0	
	comp=Z,93nm,19.2s,MS4.2,baz=288,slow=35						
SIV	**San Ignacio**	**146.86**	**133**	PKPbc	PKPbc	08 08 36.8	+0.7
	comp=Z,2.6nm,1.0s,baz=225,slow=0.9,SNR=7.7						
DBIC	**Dimbokro**	**148.47**	**272**	PKPbc	PKPbc	08 08 41.0	+0.4
	comp=Z,3.5nm,0.8s,baz=315,slow=5.7,SNR=3.3						

*IGQ **03** 07:53:11.0, 1°.70S×77°.91W, h183km±2km, Mb4.2, Ms4.0, Error ellipse: s-maj=2.9km s-min=1.9km az=21.3*

*ISCJB **03** 07:53:12.4±0.3, 1°.75S±0°.04×77°.95W±0°.08, h172km±3km, mb3.4/8, Error ellipse: s-maj=12.9km s-min=5.9km az=177.1*

*NEIC **03** 07:53:13.3±0.9, 1°.73S×77°.87W, h168km±9km, MD4.1(IGQ), Error ellipse: s-maj=18.5km s-min=8.9km az=73.0*

*IDC **03** 07:53:14.5±1.9, 1°.71S×77°.74W, h179km±19km, mb3.2/8, mb1 3.5/12, mb1mx3.4/21, mbtmp3.3/12, MS2.6/1, Ms1 2.6/1, ms1mx2.3/11, Error ellipse: s-maj=24.3km s-min=13.3km az=66.0*

ISC 03 07:53:13.2±0.3, 1.74S±0°.04×77°.89W±0°.08, h167km±3km, n66, σ0§71/64, mb3.4/8, 4C-36D, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULBA	**Ulba**	**0.59**	**299**	⇓P	**Pn**	**07 53 36.7**	**-0.2**
PAT1	**Patacocha**	**0.60**	**293**	⇓S	**Sn**	**07 53 55.6**	**+0.5**
PAT1	**Patacocha**	**0.60**	**293**	⇓P	**Pn**	**07 53 37.0**	**0.0**
MACE	**Macas**	**0.60**	**211**	⇑S	**Sn**	**07 53 55.7**	**+0.5**
MACE	**Macas**	**0.60**	**211**	⇑P	**Pn**	**07 53 37.0**	**0.0**
BULB	**Ulba Tungurahu**	**0.60**	**300**	⇓S	**Sn**	**07 53 55.3**	**+0.2**
BULB	**Ulba Tungurahu**	**0.60**	**300**	⇓P	**Pn**	**07 53 37.1**	**+0.1**
BRUN	**Tungurahua Vol**	**0.61**	**301**	⇓P	**Pn**	**07 53 37.2**	**+0.1**
ARRY	**Arrayan**	**0.61**	**292**	⇓P	**Pn**	**07 53 36.7**	**-0.3**
ARRY	**Arrayan**	**0.61**	**292**	⇓S	**Sn**	**07 53 55.0**	**-0.3**
RUN5	**Runtun**	**0.63**	**301**	⇓P	**Pn**	**07 53 36.9**	**-0.3**
RETU	**Refugio**	**0.63**	**297**	⇓P	**Pn**	**07 53 37.0**	**-0.1**
BMAS	**Trigal station**	**0.64**	**292**	⇓S	**Sn**	**07 53 55.4**	**-0.1**
BMAS	**Trigal station**	**0.64**	**292**	⇓P	**Pn**	**07 53 37.3**	**+0.1**
JUI6	**Juive**	**0.66**	**298**	⇓S	**Sn**	**07 53 55.7**	**-0.1**
JUI6	**Juive**	**0.66**	**298**	⇓P	**Pn**	**07 53 37.0**	**-0.3**
BBIL	**Ulba Tungurahu**	**0.67**	**296**	⇓P	**Pn**	**07 53 37.5**	**+0.2**
BIL2	**Estacion Bilba**	**0.68**	**295**	P	**Pn**	**07 53 37.5**	**+0.1**
RIOE	**Riobamba**	**0.74**	**269**	⇑S	**Sn**	**07 53 57.6**	**+1.1**
RIOE	**Riobamba**	**0.74**	**269**	⇑P	**Pn**	**07 53 38.2**	**+0.5**
IGUA	**Igualata**	**0.79**	**288**	⇓P	**Pn**	**07 53 38.0**	**-0.1**
TAMB	**Tambo**	**1.14**	**335**	⇓P	**Pn**	**07 53 40.8**	**0.0**
BMOR	**Cotopaxi Volca**	**1.15**	**330**	⇓P	**Pn**	**07 53 41.3**	**+0.4**
MOV1	**Cotopaxi Vol s**	**1.16**	**331**	⇓P	**Pn**	**07 53 41.0**	**0.0**
COV1	**Cotopaxi Volc**	**1.16**	**337**	⇓P	**Pn**	**07 53 41.7**	**+0.7**
BTAM	**Cotopaxi Volca**	**1.17**	**334**	⇓P	**Pn**	**07 53 41.4**	**+0.3**
BVC2	**Cotopaxi Volca**	**1.20**	**334**	⇓P	**Pn**	**07 53 41.6**	**+0.4**
BREF	**Cotopaxi Volca**	**1.20**	**332**	⇓P	**Pn**	**07 53 42.0**	**+0.7**
VC1	**Cotopaxi 1**	**1.21**	**335**	⇓P	**Pn**	**07 53 41.4**	**0.0**
CAMI	**Rancho Maria**	**1.22**	**330**	P	**Pn**	**07 53 41.8**	**+0.3**
NAS2	**Nasa**	**1.23**	**332**	⇓P	**Pn**	**07 53 42.1**	**+0.5**
PITA	**Cotopaxi Volc**	**1.29**	**335**	⇓P	**Pn**	**07 53 42.0**	**-0.1**
ANTI	**Antisana**	**1.31**	**348**	⇓P	**Pn**	**07 53 42.1**	**-0.2**
CHAR	**Charly**	**1.66**	**8**	⇓P	**Pn**	**07 53 45.2**	**-0.5**
LAV4	**Lava4-Reventad**	**1.66**	**9**	⇓P	**Pn**	**07 53 44.9**	**-0.8**
CONE	**Cono NE Rev Vo**	**1.68**	**8**	P	**Pn**	**07 53 45.0**	**-0.9**
JUA2	**San Juan 2**	**1.68**	**335**	⇓P	**Pn**	**07 53 45.6**	**-0.3**
GGP	**Refugio Guagua**	**1.71**	**336**	⇓P	**Pn**	**07 53 46.0**	**-0.3**
TERV	**Terraza Guagua**	**1.71**	**335**	⇓P	**Pn**	**07 53 46.1**	**-0.2**
PINO	**Pino**	**1.73**	**335**	⇓P	**Pn**	**07 53 46.3**	**-0.2**
YANA	**Yana**	**1.75**	**337**	⇓P	**Pn**	**07 53 46.3**	**-0.4**
CAYA	**Cayambe**	**1.80**	**357**	⇓P	**Pn**	**07 53 47.3**	**0.0**
OTAV	**Otavalo**	**2.04**	**344**	*e*Pn	**Pn**	**07 53 49.4**	**-0.5**
COTA	**Cotacachi**	**2.11**	**348**	⇓P	**Pn**	**07 53 50.6**	**-0.1**
JAMA	**Jama**	**2.74**	**302**	P	**Pn**	**07 53 57.3**	**-0.9**
CHIS	**Cerro-Chispas-**	**2.92**	**284**	P	**Pn**	**07 53 57.9**	**-2.4**
ATAH	**Atahualpa**	**5.38**	**185**	P	**Pn**	**07 54 33.2**	**+1.2**
	5.7nm,0.3s,baz=4.1,slow=7.7,SNR=24						
ATAH				S	**Sn**	**07 55 32.0**	**-1.7**
	2.4nm,0.3s,baz=176,slow=19,SNR=4.3						
ATAH				LR	LR	07 56 24.8	
	comp=Z,68nm,21.4s,baz=199,slow=35						
ROSC	**El Rosal**	**7.45**	**28**	P	**Pn**	**07 55 01.6**	**+2.3**
	0.9nm,0.3s,baz=227,slow=13,SNR=3.6						
NNA	**Nana**	**10.23**	**174**	P	**Pn**	**07 55 35.5**	**-0.6**
	0.9nm,0.3s,baz=318,slow=15,SNR=3.0						
NNA				S	**Sn**	**07 57 20.7**	**-9.0**
	1.0nm,0.3s,baz=254,slow=18,SNR=2.5						
BCIP	**Isla Barro Col**	**11.01**	**350**	*e*Pn	**Pn**	**07 55 45.7**	**-0.5**
SDV	**Santo Domingo**	**12.79**	**34**	*e*Pn	**Pn**	**07 56 08.8**	**-0.4**
LPAZ	**La Paz**	**17.36**	**147**	P	**Pn**	**07 57 06.0**	**+0.5**
	0.5nm,0.3s,baz=331,slow=14,SNR=16						
SIV	**San Ignacio**	**21.80**	**131**	P	**P**	**07 57 52.2**	**+0.1**
	2.2nm,0.7s,mb3.7,baz=306,slow=9.8,SNR=14						
PLCA	**Paso Flores**	**39.38**	**171**	P	**P**	**08 00 27.7**	**+1.3**
	1.4nm,0.8s,mb3.7,baz=358,slow=12,SNR=2.8						
PLCA				PcP	PcP	08 02 32.4	+0.9
	2.4nm,0.9s,baz=0.0,slow=2.0,SNR=3.2						
TXAR	**Lajitas Array**	**39.54**	**323**	P	**P**	**08 00 29.2**	**+1.2**
	0.2nm,0.5s,mb3.0,baz=146,slow=7.8,SNR=5.8						
TXAR				PcP	PcP	08 02 33.0	+0.8
	0.5nm,0.8s,baz=66,slow=4.4,SNR=3.8						
TXAR	**Lajitas Array**	**39.54**	**323**	P	**P**	**08 00 29.2**	**+1.2**
TXAR				PcP	PcP	08 02 33.0	+0.8
PDAR	**Pinedale Array**	**52.70**	**331**	P	**P**	**08 02 10.7**	**+0.2**
	0.2nm,0.5s,mb3.1,baz=118,slow=8.6,SNR=3.7						
RLMT	**Red Lodge**	**54.35**	**333**	*e*P	**P**	**08 02 23.0**	**+0.5**
NVAR	**Mina Array Bea**	**54.62**	**321**	P	**P**	**08 02 26.2**	**+1.6**
	0.5nm,0.7s,mb3.4,baz=120,slow=6.9,SNR=4.7						
YKA	**Yellowknife Ar**	**69.80**	**343**	P	**P**	**08 04 04.0**	**-1.1**
	0.3nm,0.6s,mb3.2,baz=140,slow=6.5,SNR=5.6						
TORD	**Torodi Ar. Bea**	**80.25**	**76**	P	**P**	**08 05 04.2**	**-1.9**
	0.3nm,0.3s,mb3.4,baz=285,slow=5.8,SNR=12						
ILAR	**Eielson Array**	**82.75**	**336**	P	**P**	**08 05 17.8**	**-0.2**
	0.5nm,0.6s,mb3.4,baz=149,slow=4.6,SNR=10						
MKAR	**Makanchi Array**	**131.91**	**18**	PKP	PKPdf	08 12 06.3	-0.5
	0.2nm,0.4s,baz=349,slow=3.1,SNR=3.0						
SONM	**Songino Array**	**133.94**	**356**	PKP	PKPdf	08 12 10.0	-0.6
	0.3nm,0.5s,baz=0.0,slow=1.4,SNR=2.4						
ASAR	**Alice Springs**	**140.08**	**229**	PKhKP	PKPpre	08 12 14.3	
	0.4nm,0.7s,baz=124,slow=4.0,SNR=5.9						
ASAR				PKP	PKPdf	08 12 22.6	-0.1
	0.4nm,0.6s,baz=104,slow=2.3,SNR=5.1						
WRA	**Warramunga Arr**	**141.75**	**234**	PKhKP	PKPpre	08 12 20.6	
	0.2nm,0.3s,baz=114,slow=2.8,SNR=7.7						
WRA				PKP	PKPdf	08 12 25.9	+0.1
	0.3nm,0.4s,baz=108,slow=2.5,SNR=8.8						

*ISCJB **03** 08:07:00.2±1.3, 3°.73S±0°.04×99°.95E±0°.04, h11km±8km, mb4.7/28, MS4.5/7, Error ellipse: s-maj=8.6km s-min=4.7km az=138.3*

*IDC **03** 08:07:00.2±0.7, 3°.72S×99°.89E, h0km, mb4.4/14, mb1 4.5/14, mb1mx4.3/22, mbtmp4.4/14, MS4.1/2, Ms1 4.1/2, ms1mx3.3/26, Error ellipse: s-maj=22.3km s-min=10.8km az=53.0*

*DJA **03** 08:07:04, 3°.68S×100°.02E, h22km, MLv4.9/25*

*BJI **03** 08:07:05.0, 3°.70S×100°.00E, h35km, mB4.8/11, mb4.7/16, Ms4.8/12, Ms7 4.5/12*

*NEIC **03** 08:07:05.7±0.4, 3°.69S×100°.02E, h35km, mb4.8/10, Error ellipse: s-maj=13.6km s-min=7.0km az=64.0*

ISC 03 08:07:02.7±1.5, 3.69S±0°.04×99.98E±0°.04, h13km±9km, n91, σ1§14/86, mb4.7/28, MS4.5/7, 1C-2D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**2.17**	**43**	P	**Pn**	**08 07 39.0**	**+0.5**
SISI	**Saibi**	**2.51**	**339**	P	**Pn**	**08 07 41.7**	**-1.5**
KSI	**Kapahiang**	**2.60**	**89**	P	**Pn**	**08 07 45.7**	**+1.2**
KSI				S	**Sn**	**08 08 15.7**	**-0.4**
PDSI	**Padang**	**2.80**	**10**	P	**Pn**	**08 07 45.7**	**-1.5**
PDSI				S	**Sn**	**08 08 19.0**	**-1.9**
MNAI	**Manna**	**3.04**	**103**	P	**Pn**	**08 07 50.7**	**+0.2**
SDSI	**Sungai Dareh**	**3.10**	**28**	P	**Pn**	**08 07 50.8**	**-0.5**
PPI	**Padang Panjang**	**3.24**	**7**	P	**Pn**	**08 07 52.9**	**-0.3**
LHSI	**Lahat**	**3.54**	**92**	P	**Pn**	**08 07 57.0**	**-0.3**
BKNI	**Bangkinang**	**4.12**	**15**	P	**Pn**	**08 08 10.8**	**+5.3**
JMBI	**JAMBI**	**4.19**	**61**	P	**Pn**	**08 08 06.5**	**+0.2**
MDSI	**Maura Dua**	**4.26**	**101**	P	**Pn**	**08 08 07.1**	**-0.2**
LWLI	**Liwa**	**4.27**	**108**	P	**Pn**	**08 08 07.4**	**-0.1**
MNSI	**Mandailing Nat**	**4.47**	**355**	P	**Pn**	**08 08 10.8**	**+0.6**
KASI	**Kota Agung**	**4.85**	**112**	P	**Pn**	**08 08 15.1**	**-0.4**
KLI	**Kotabumi**	**5.00**	**104**	P	**Pn**	**08 08 15.3**	**-2.2**
BLSI	**Bandar Lampung**	**5.50**	**108**	P	**Pn**	**08 08 24.3**	**-0.1**
	2.5nm144nm,0.6s						
RBSI	**Rajabasa**	**6.12**	**111**	P	**Pn**	**08 08 33.7**	**+0.7**
	0.7nm184nm,1.0s						
PPBI	**Pangkal Pinang**	**6.33**	**76**	P	**Pn**	**08 08 36.5**	**+0.7**
	0.7nm4μm26nm,1.0s						
CGJI	**Cibinong**	**6.38**	**117**	P	**Pn**	**08 08 35.1**	**-1.4**
	0.7nm2μm190nm,1.0s						
SBJI	**Serang**	**6.58**	**112**	P	**Pn**	**08 08 38.2**	**-1.1**
	0.7nm167nm,1.0s						
MYKOM	**Kota Tinggi**	**6.67**	**35**	P	**Pn**	**08 08 46.0**	**+5.5**
	0.3nm694nm30nm,1.1s						
DBJI	**Dramaga**	**7.32**	**113**	P	**Pn**	**08 08 49.0**	**-0.3**
	0.6nm200nm,1.1s						
SKJI	**Sukabumi**	**7.33**	**117**	P	**Pn**	**08 08 51.5**	**+2.0**
	1.0nm277nm,0.8s						
CBJI	**Citeko**	**7.36**	**112**	P	**Pn**	**08 08 53.1**	**+3.2**
	2.9nm846nm,0.8s						
TPTI		**7.45**	**338**	P	**Pn**	**08 08 53.1**	**+1.9**
	0.2nm941nm36nm,0.8s						
IPM	**Ipoh**	**8.18**	**7**	*e*Pn	**Pn**	**08 09 01.9**	**+0.7**
	11nm,0.7s						
IPM	**Ipoh**	**8.18**	**7**	P	**Pn**	**08 09 01.7**	**+0.5**
	21nm,1.0s						
LEM	**Lembang**	**8.22**	**113**	P	**Pn**	**08 09 04.2**	**+2.5**
	0.8nm2μm248nm,0.8s						
CISI	**Cisompet, Garu**	**8.69**	**117**	P	**Pn**	**08 09 05.3**	**-2.9**
	4μm399nm,0.6s						
JCJI	**Jatiwangi**	**8.71**	**109**	P	**Pn**	**08 09 09.8**	**+1.3**
	6μm196nm,0.5s						
KULM	**Kulim**	**8.94**	**4**	*e*Pn	**Pn**	**08 09 10.7**	**-1.0**
UGM	**Wanagama**	**11.29**	**112**	P	**Pn**	**08 09 44.1**	**+0.2**
	122nm,2.1s						
SBUM	**Sibu**	**13.67**	**64**	P	**Pn**	**08 10 19.4**	**+3.0**
TTSI	**Tana Toraja**	**19.81**	**89**	P	**Pn**	**08 11 33.4**	**-1.4**
	31nm,1.1s						
BKSI	**Bulukumba**	**20.14**	**95**	P	**P**	**08 11 37.5**	**+0.7**
	52nm,1.1s						
MYLDM	**Lahad Datu**	**20.49**	**65**	P	**P**	**08 11 41.5**	**+0.9**
CM31	**Chiang Mai Arr**	**22.03**	**357**	*e*Pn	**P**	**08 11 56.8**	**-0.3**
	69nm,1.3s,mb4.9						
CMAR	**Chiang Mai Arr**	**22.03**	**357**	P	**P**	**08 11 56.2**	**-0.9**
	3.6nm,0.7s,mb3.9,baz=188,slow=9.6,SNR=15						
CMAR				PcP	PcP	08 15 55.7	+0.3
	0.7nm,0.3s,baz=225,slow=3.9,SNR=4.3						
CHG	**Chiang Mai**	**22.38**	**357**	⇓P	**P**	**08 12 08.6**	**+7.7**
	15nm,1.2s,mb4.3						
CHTO	**Chiang Mai**	**22.38**	**357**	*e*

TLY	Talaya	55.24	3	eP	P	08 16 36.3	+0.9
	comp=Z,8.8nm,1.3s,mb4.6						
ZALV	Zalesovo Beam	58.81	350	P	P	08 17 00.8	+0.2
	comp=Z,11nm,0.7s,mb5.0,baz=177,slow=5.5,SNR=15						
ABKAR	Akbulak array	63.11	332	eP	P	08 17 29.1	-0.8
MAW	Mawson	68.66	194	P	P	08 18 05.6	+0.2
	comp=Z,2.9nm,0.8s,mb4.2,baz=66,slow=10,SNR=4.7						
MALT	Malatya	70.46	313	eP	P	08 18 21.3	+4.2
	comp=Z,5.1nm,1.1s,mb4.4						
BRTR	Keskin Array B	74.45	313	P	P	08 18 39.7	-1.1
	comp=Z,1.9nm,0.8s,mb4.1,baz=128,slow=8.0,SNR=10						
URZ	Urewera	77.62	128	LR	LR	08 52 32.0	
	comp=Z,157nm,19.1s,MS4.3,baz=304,slow=35						
BUR08	Bucovina Ar. S	82.53	319	eP	P	08 19 26.2	+0.9
DPC	Dobruska-Polom	88.77	320	eP	P	08 19 57.5	+1.3
DPC				epP	pP	08 20 05.7	+5.2
BRG	Berggiesshubel	90.33	321	e(P)	P	08 20 13.1	+10
	comp=Z,4.8nm,0.8s,mb4.9						
KEST	Kesra	92.65	305	P	P	08 20 13.5	-1.2
	comp=Z,1.8nm,0.9s,mb4.5,baz=19,slow=5.0,SNR=4.7						
YKA	Yellowknife Ar	115.98	17	PKP	PKPdf	08 25 43.7	-1.4
	comp=Z,0.2nm,0.6s,baz=280,slow=5.3,SNR=4.0						
NVAR	Mina Array Bea	130.90	40	PKP	PKPdf	08 26 15.4	+1.0
	comp=Z,0.7nm,0.7s,baz=262,slow=1.7,SNR=6.8						
PDAR	Pinedale Array	133.05	30	PKP	PKPdf	08 26 19.9	+1.6
	comp=Z,0.1nm,0.4s,baz=50,slow=2.3,SNR=3.5						
MSU	Marysvale	134.62	36	ePKPdf	PKPdf	08 26 23.2	+1.8
CPRX	Cap Rock	143.26	35	ePKPdf	PKPdf	08 26 35.5	-1.8
GDL2	Guadalupe Moun	143.58	36	ePKPdf	PKPdf	08 26 36.4	-1.6
WCI	Wyandotte Cave	145.15	9	ePKPbc	PKPbc	08 26 39.4	-0.6
TXAR	Lajitas Array	146.03	39	PKPbc	PKPbc	08 26 43.2	+0.1
	comp=Z,5.2nm,0.7s,baz=273,slow=1.1,SNR=62						
TXAR	Lajitas Array	146.03	39	PKPbc	PKPbc	08 26 43.2	+0.1
WVT	Waverly	146.92	12	ePKPbc	PKPbc	08 26 44.9	-0.6
JCT	Junction City	147.45	33	ePKPdf	PKPdf	08 26 45.4	+0.7
JCT				ePKPbc	PKPbc	08 26 47.4	+0.2
CPCT	Cooper Cave	148.12	7	ePKPbc	PKPbc	08 26 48.3	-0.5

*THE **03** 08:10:14.4, 38°.63N×21°.71E, h18km±1km, ML1.7/5, Error ellipse: s-maj=2.8km s-min=1.0km az=27.0*
*ISCJB **03** 08:10:15.3±0.7, 38°.54N±0°.04×21°.65E±0°.05, h10km, Error ellipse: s-maj=5.6km s-min=5.1km az=155.8*
*CSEM **03** 08:10:15.1±0.3, 38°.53N×21°.70E, h20km, MD2.8, Error ellipse: s-maj=6.1km s-min=5.7km az=91.0*
*ATH **03** 08:10:16.4, 38°.51N×21°.73E, h11km±9km, MD2.8/4*
ISC 03 08:10:16.0±0.7, 38°.52N±0°.03×21°.67E±0°.05, h10km, n18, σ0.96/35, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.21	117	ePG	Pg	08 10 19.9	-0.5
EFP				eSG	Sg	08 10 22.4	-1.0
EFP	Efpalio	0.21	117	P	Pg	08 10 19.9	-0.5
EFP				S	Sg	08 10 24.2	+0.8
EFP	Efpalio	0.21	117	P	Pg	08 10 19.9	-0.5
EFP				eSg	Sg	08 10 22.4	-1.0
EFP				S	Sg	08 10 24.2	+0.8
TRIZ	Trizonia	0.35	116	P	Pg	08 10 22.2	-0.9
TRIZ				S	Sg	08 10 28.9	+1.1
TRIZ	Trizonia	0.35	116	P	Pg	08 10 22.2	-0.9
TRIZ				S	Sg	08 10 28.9	+1.1
LAKA	Lakka	0.37	139	P	Pg	08 10 23.4	0.0
LAKA				S	Sg	08 10 30.2	+1.8
LAKA	Lakka	0.37	139	P	Pg	08 10 23.4	0.0
LAKA				S	Sg	08 10 30.2	+1.8
KALE	Kalithea	0.39	109	P	Pg	08 10 22.9	-0.9
KALE				S	Sg	08 10 28.4	-0.6
KALE	Kalithea	0.39	109	P	Pg	08 10 22.9	-0.9
KALE				S	Sg	08 10 28.4	-0.6
EVR	Evrytania	0.41	16	ePB	Pg	08 10 24.3	+0.2
EVR				eSB	Sg	08 10 30.7	+1.2
EVR	Evrytania	0.41	16	ePb	Pg	08 10 24.3	+0.2
EVR				eSb	Sg	08 10 30.7	+1.2
RLS	Riolos of Patr	0.49	199	ePB	Pg	08 10 25.3	-0.3
RLS				eSB	Sg	08 10 33.8	+1.8
RLS	Riolos of Patr	0.49	199	ePb	Pg	08 10 25.3	-0.3
RLS				eSb	Sg	08 10 33.8	+1.8
GUR	Goura	0.79	138	ePG	Pg	08 10 30.4	-0.9
GUR				eSB	Sb	08 10 42.1	-0.5
GUR	Goura	0.79	138	P	Pg	08 10 30.5	-0.8
GUR				S	Sb	08 10 42.1	-0.5
GUR	Goura	0.79	138	P	Pg	08 10 30.5	-0.8
GUR				S	Sb	08 10 42.1	-0.5
KFL	Anninata	0.81	239	P	Pg	08 10 30.4	-1.2
KFL	Anninata	0.81	239	P	Pg	08 10 30.4	-1.2

IDC 03 08:13:18.2±50.0, 16°.06S×175°.24W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=937.8km s-min=165.2km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.17	240	P	P	08 21 12.8	0.0
	0.7nm,0.4s,baz=59,slow=5.9,SNR=2.8						
WRA	Warramunga Arr	47.97	257	P	P	08 21 58.8	-0.3
	0.5nm,0.6s,baz=93,slow=7.2,SNR=9.8						
ASAR	Alice Springs	48.22	252	P	P	08 22 01.1	+0.1
	2.4nm,0.6s,baz=89,slow=8.5,SNR=36						

*TAP **03** 08:20:19.6, 23°.56N×120°.67E, h11km, ML3.5, B*
*NEIC **03** 08:20:19.8±1.4, 23°.59N×120°.66E, h10km, ML4.1(TAP), Error ellipse: s-maj=17.7km s-min=7.1km az=108.0*
NEIC Recorded [3 TAP] in Yun-lin and [2 TAP] in Chia-i.
*ISCJB **03** 08:20:20.7±0.2, 23°.57N±0°.01×120°.68E±0°.02, h10km±2km, Error ellipse: s-maj=2.7km s-min=1.9km az=11.1*
ISC 03 08:20:20.8±0.2, 23°.57N±0°.01×120°.67E±0°.02, h15km±2km, n53, σ0.88/88, 8C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN5	Tsauling	0.03	8	⇓iP	Pg	08 20 22.1	-1.5
	baz=4.0						
ALS	Alishan	0.13	116	⇑iP	Pg	08 20 23.9	-0.6
	baz=111						
ALS				i S	Sg	08 20 26.9	-0.1
	baz=111						
WGK	Gukeng	0.15	319	⇑iP	Pg	08 20 24.3	-0.5
	baz=323						
WGK				S	Sg	08 20 27.9	+0.4
	baz=323						
CHY	Chiayi	0.24	253	⇑iP	Pg	08 20 25.6	-0.5
	baz=256						
CHY				i S	Sg	08 20 30.1	+0.3
	baz=256						
YUS	Yu-Shan	0.27	107	⇑iP	Pg	08 20 26.5	0.0
	baz=105						
YUS				i S	Sg	08 20 31.0	+0.6
	baz=105						
TPUB	Ta-pu	0.27	189	ePg	Pg	08 20 25.7	-0.9
TPUB				eSg	Sg	08 20 30.3	-0.3
WNT	Mingjian	0.31	2	P	Pg	08 20 27.3	0.0
	baz=3.0						
WNT				S	Sg	08 20 32.8	+1.1
	baz=3.0						
WTP	Ta-pu	0.33	190	⇓iP	Pg	08 20 26.8	-0.8
	baz=188						
WTP				S	Sg	08 20 32.3	+0.2
	baz=188						
SSLB	Suanglung	0.34	50	ePg	Pg	08 20 27.1	-0.7
SSLB				eSg	Sg	08 20 32.6	+0.2
TYC	Yuchr	0.37	27	⇓iP	Pg	08 20 28.4	0.0
	baz=26						
TYC				i S	Sg	08 20 34.8	+1.2
	baz=26						
SMLT	Sun Moon Lake	0.38	33	⇓iP	Pg	08 20 28.5	0.0
	baz=33						
SMLT				eS	Sg	08 20 34.8	+1.2
	baz=33						
CHN1	Nanshi	0.41	199	⇓iP	Pg	08 20 28.2	-0.8
	baz=200						
CHN1				S	Sg	08 20 34.9	+0.4
	baz=200						
STYT	Tauyuan	0.41	169	⇑iP	Pg	08 20 28.4	-0.7
	baz=161						
STYT				eS	Sg	08 20 34.8	+0.1
	baz=161						
WTCT	Ta-ch'eng	0.47	309	eP	Pg	08 20 29.5	-0.6
	baz=311						
WTCT				S	Sg	08 20 37.3	+0.9
	baz=311						
ELDTW	Lidau	0.49	140	⇑iP	Pg	08 20 30.0	-0.6
	baz=133						
ELDTW				eS	Sg	08 20 36.5	-0.7
	baz=133						
SGST	Jiashian	0.49	190	eP	Pg	08 20 30.2	-0.4
	baz=189						
SGST				eS	Sg	08 20 38.0	+0.8
	baz=189						
CHN3	Shinhua	0.57	210	eP	Pg	08 20 31.9	0.0
	baz=210						
TCU	Taichung	0.58	0	eP	Pg	08 20 32.0	-0.2
	baz=1.0						
TCU				eS	Sg	08 20 39.9	0.0
	baz=1.0						
SCLT	Jiali	0.59	228	eP	Pg	08 20 35.0	+2.6
	baz=229						
SCLT				eS	Sg	08 20 42.5	+2.2
	baz=229						
EHY	Hungye	0.60	96	eP	Pg	08 20 32.3	-0.2
	baz=95						
EHY				S	Sg	08 20 41.0	+0.4
	baz=95						
YULB	Yu-li	0.60	107	ePg	Pg	08 20 31.8	-0.7
YULB				eSg	Sg	08 20 40.4	-0.2
TAI1	Yung-k'ang	0.67	218	eP	Pg	08 20 33.7	-0.1
	baz=218						
ESL	Shilin	0.74	71	P	Pg	08 20 34.7	-0.5
	baz=69						
ESL				S	Sg	08 20 44.7	-0.2
	baz=69						
TWM1	Shoushan	0.78	197	⇑iP	Pg	08 20 37.1	+1.1
	baz=182						
TWM1				eS	Sg	08 20 50.3	+4.1
	baz=182						
TWQ1	Liyutan	0.78	7	⇓iP	Pg	08 20 35.9	-0.1
	baz=7.0						
TWQ1				S	Sg	08 20 47.4	+1.1
	baz=7.0						
CHKT	Chengkung	0.79	126	eP	Pg	08 20 36.4	+0.2
	baz=131						
CHKT				eS	Sg	08 20 48.5	+1.9
	baz=131						
WHF	Hehuan Shan	0.79	43	⇓iP	Pg	08 20 35.8	-0.3
	baz=42						
WHF				eS	Sg	08 20 47.1	+0.5
	baz=42						
TWT	Tachien	0.82	34	eP	Pb	08 20 35.6	-1.2
	baz=33						
TWG	Pinlang	0.83	154	ePg	Pg	08 20 36.0	-0.9
TWG				eSg	Sg	08 20 47.8	0.0
TWG	Pinlang	0.83	154	i P	Pb	08 20 36.2	-0.7
	baz=153						
TWG				S	Sb	08 20 48.3	+0.5
	baz=153						
NSY	Sanyi	0.85	5	P	Pb	08 20 37.2	+0.1
	baz=6.0						
NSY				eS	Sb	08 20 49.9	+1.5
	baz=6.0						
TTN	Taitung	0.92	152	eP	Pb	08 20 38.6	+0.2
	baz=151						
HWA	Hwalien	0.94	64	eP	Pb	08 20 38.6	-0.2
	baz=64						
TWD	Chiawan	0.99	59	P	Pb	08 20 38.9	-0.7
	baz=57						
TWD				eS	Sb	08 20 52.4	0.0
	baz=57						
ECL	Taimali	1.00	165	eP	Pb	08 20 39.3	-0.4
	baz=154						
ECL				eS	Sb	08 20 53.3	+0.6
	baz=154						
PNG	Penghu	1.03	270	⇑iP	Pb	08 20 38.3	-1.9
	baz=272						
PNG				eS	Sb	08 20 51.8	-1.7
	baz=272						
NACB	Ninganchiao	1.04	54	ePg	Pg	08 20 39.3	-1.5
NACB				eSg	Sg	08 20 53.7	-0.7
NSTT	Nanjuang	1.10	16	eP	Pb	08 20 39.9	-1.6
	baz=14						
NSTT				eS	Sb	08 20 56.3	+0.7
	baz=14						
EAST	Anshuo	1.19	172	eP	Pn	08 20 42.4	-0.4
	baz=180						
EAST				eS	Sb	08 20 59.8	+1.6
	baz=180						
SCZT	Fangliau	1.19	182	eP	Pn	08 20 42.7	-0.1
	baz=182						
TAW	Tawu	1.22	170	eP	Pn	08 20 43.0	-0.3
	baz=162						
TWP	Hsiaoliuchiu	1.25	193	eP	Pn	08 20 44.3	+0.6
	baz=213						
NSK	Sanguang	1.27	29	eP	Pn	08 20 43.1	-0.8
	baz=29						
YHNB	Yeheng	1.27	30	ePn	Pn	08 20 43.4	-0.5
YHNB				eSn	Sn	08 20 57.1	-3.6
ENA	Nanau	1.30	49	eP	Pn	08 20 44.2	-0.1
	baz=48						
ENTT	Nioudou	1.34	37	eP	Pn	08 20 44.7	-0.2
	baz=37						
TWE	Neicheng	1.46	38	eP	Pn	08 20 47.8	+1.3
	baz=37						
TWC	Suao	1.49	46	eP	Pn	08 20 46.9	-0.1
	baz=45						
TWK1	Hengchun	1.62	176	eP	Pn	08 20 50.3	+1.5
	baz=170						
NWF	Wu-fen Shan	1.81	34	eP	Pn	08 20 53.7	+2.4
	baz=32						
TWB1	Santiao Chiao	1.87	40	eP	Pn	08 20 53.5	+1.4
	baz=20						
KNM	Kinmen	2.22	293	eP	Pn	08 20 57.2	+0.3
	baz=293						
QZH	Quanzhou	2.34	306	ePn	Pn	08 20 57.3	-1.4
QZH				Sn	Sn	08 21 22.2	-4.9
QZH				smax			
	comp=N,180nm,0.3s						
QZH				smax			
	comp=E,110nm,0.6s						

*IDC **03** 08:27:35.6±0.6, 19°.59N×121°.24E, h0km, mb4.1/14, mb1 4.4/16, mb1mx4.2/24, mbtmp4.2/16, ML4.7/2, MS3.6/8, Ms1 3.6/8, ms1mx3.2/30, Error ellipse: s-maj=24.1km s-min=13.9km az=77.0*
*ISCJB **03** 08:27:41.6±0.5, 19°.68N±0°.03×121°.09E±0°.08, h51km±7km, mb4.2/18, MS3.4/6, Error ellipse: s-maj=11.9km s-min=4.9km az=0.6*
*NEIC **03** 08:27:41.1±0.6, 19°.54N×121°.14E, h36km±6km, mb4.4/6, Error ellipse: s-maj=8.7km s-min=5.6km az=93.0*
*BJI **03** 08:27:48.2, 20°.39N×120°.70E, h35km, mB4.7/6, mb4.3/14, ML3.8/2*
*MAN **03** 08:28:00, 18°.24N×120°.94E, h31km, mb4.4, ML3.3, MS3.2*
ISC 03 08:27:42.7±0.5, 19°.67N±0°.03×121°.11E±0°.07, h46km±6km, n50, σ1.26/51, mb4.2/18, MS3.4/6, 1C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	1.42	199	⇓iP	Pn	08 28 09.5	+3.5
APYP	Conner	1.80	176	eP	Pn	08 28 10.2	-1.1
APYP				eS	Sn	08 28 20.1	-13
SIPP	Brgy, Tapao	1.84	200	⇓eP	Pn	08 28 14.3	+2.4
SIPP				eS	Sn	08 28 34.9	+0.8
ABRA	Dolores	2.05	191	eP	Pn	08 28 14.4	-0.3
ABRA				eS	Sn	08 28 23.2	-16
CVP	Callao Caves	2.07	161	⇑eP	Pn	08 28 14.3	-0.7
CVP				i S	Sn	08 28 40.1	+0.5
CAUP	Cauayan	2.80	166	eP	Pn	08 28 28.1	+3.1
PALP	Palanan	2.88	154	eP	Pn	08 28 27.3	+1.2
TWG	Pinlang	3.13	359	ePn	Pn	08 28 29.1	-0.5
BCPH	Baguio City Da	3.31	189	⇓iP	Pn	08 28 30.2	-1.8
BCPH				i S	Sn	08 29 11.4	+1.2
BOLP	Bolinao	3.46	199	eP	Pn	08 28 33.7	-0.4
TPUB	Ta-pu	3.64	353	ePn	Pn	08 28 36.5	-0.1
YULB	Yu-li	3.71	3	ePn	Pn	08 28 37.7	+0.3
BALP	Baler	3.93	173	eP	Pn	08 28 42.5	+1.9
SCZP	Santa Cruz	4.04	197	eP	Pn	08 28 41.8	-0.2
SSLB	Suanglung	4.10	358	ePn	Pn	08 28 42.7	-0.1
SSLB				eSn	Sn	08 29 26.4	-3.2
YHNB	Yeheng	4.98	3	ePn	Pn	08 28 56.1	+1.1
	173nm,1.1s						
TGY	Tagaytay City	5.54	182	Pn	Pn	08 28 60.0	-2.7
	49nm,0.3s,baz=117,slow=6.8,SNR=2.0						
LUBP	Lubang	5.96	188	eP	Pn	08 29 10.9	+2.5
GZH	Guangzhou	7.99	297	P	Pn	08 29 33.1	-3.2
GZH				S	Sn	08 30 55.8	-10
GZH				smax			
	comp=N,75nm,0.7s						
GZH				smax			
	comp=E,69nm,0.8s						
QIZ	Qiongzhong	10.65	268	ePn	Pn	08 30 10.6	-2.2
	comp=E,26nm,1.0s						
DAV	Davao City (W)	13.26	160	LR	LR	08 36 37.6	
	comp=E,393nm,19.7s,baz=325,slow=41						
JNU	Nakatsue	15.99	31	eP	Pn	08 31 25.6	+1.2
	comp=E,24nm,1.1s						
KSRS	Korea Array	18.69	17	P	Pn	08 31 56.5	-1.3
	comp=E,1.0nm,0.3s,baz=201,slow=12,SNR=34						
KSRS				LR	LR	08 39 35.9	
	comp=E,222nm,18.6s,baz=187,slow=38						
BJT	Baijiatuau	20.72	349	eP	P	08 32 19.9	+0.7
	comp=E,58nm,1.0s						
CMAR	Chiang Mai Arr	20.98	270	P	P	08 32 21.3	-1.0
	comp=E,5.2nm,1.0s,baz=72,slow=8.8,SNR=19						
JHJ	Hachijo jima 2	21.38	47	LR	LR	08 41 25.3	
	comp=E,94nm,18.0s,MS3.2,baz=304,slow=39						
LZH	Lanzhou	22.31	321	eP	P	08 32 37.5	+1.2
LZH				pP		08 32 42.0	
LZH				pmax	pmax		
	comp=Z,42nm,1.5s,mb4.7						
LZH				pmax	pmax		
	comp=Z,140nm,5.2s						
MJAR	Matsushiro Arr	22.52	38	P	P	08 32 37.9	-0.7
	comp=Z,3.5nm,0.8s,mb3.8,baz=228,slow=9.6,SNR=8.7						
GUMO	Guam	23.54	101	LR	LR	08 39 47.1	
	comp=Z,71nm,21.2s,MS3.1,baz=279,slow=31						
SONM	Songino Array	30.53	340	P	P	08 33 52.8	+1.2
	comp=Z,6.0nm,0.9s,mb4.4,baz=159,slow=9.0,SNR=23						
SONM				PcP	PcP	08 36 49.6	0.0
	comp=Z,0.6nm,0.6s,baz=190,slow=5.9,SNR=3.9						
SONM				LR	LR	08 47 39.3	
	comp=Z,281nm,18.1s,MS4.0,baz=40,slow=39						
TLY	Talaya	34.76	341	eP	P	08 34 29.3	+0.7
	comp=Z,4.9nm,0.8s,mb4.5						
FITZ	Fitzroy Crossi	37.80	173	P	P	08 34 53.9	-0.8
	comp=Z,1.2nm,0.6s,mb3.8,baz=22,slow=5.4,SNR=4.5						
WRA	Warramunga Arr	41.45	161	P	P	08 35 22.5	-2.6
	comp=Z,1.6nm,0.5s,mb3.9,baz=342,slow=9.2,SNR=20						
MK31	Makanchi Array	41.62	320	eP	P	08 35 27.9	+1.7
MKAR	Makanchi Array	41.62	320	P	P	08 35 27.9	+1.7
	comp=Z,13nm,0.9s,mb4.5,baz=115,slow=9.2,SNR=36						
MKAR				LR	LR	08 55 03.1	
	comp=Z,64nm,18.3s,MS3.5,baz=267,slow=39						
PETK	Petropavlovsk-	43.69	31	LR	LR	08 54 59.8	
	comp=Z,42nm,19.9s,MS3.3,baz=38,slow=38						
ZALV	Zalesovo Beam	44.04	330	P	P	08 35 46.4	+0.6
	comp=Z,3.8nm,0.6s,mb4.3,baz=120,slow=8.7,SNR=5.9						
ZALV				LR	LR	08 55 42.5	
	comp=Z,49nm,18.9s,MS3.4,baz=117,slow=38						
ASAR	Alice Springs	44.84	163	P	P	08 35 51.1	-1.4
	comp=Z,1.8nm,0.8s,mb4.0,baz=345,slow=6.9,SNR=22						
KKAR	Karatay Array	48.24	311	eP	P	08 36 19.3	+0.3
	comp=Z,1.5nm,0.8s,mb4.1						
BRVK	Borovoye	51.24	323	eP	P	08 36 42.5	+0.8
	comp=Z,12nm,1.0s,mb4.8						
ABKAR	Akbulak array	56.59	317	eP	P	08 37 21.1	+0.3
	comp=Z,2.1nm,0.7s,mb4.3						
ILAR	Eielson Array	73.25	27	P	P	08 39 07.5	-1.3
	comp=Z,0.4nm,0.7s,mb3.5,baz=264,slow=5.0,SNR=5.0						
ARCES	ARCESS Array B	73.69	339	P	P	08 39 11.3	0.0
	comp=Z,7.1nm,1.0s,mb4.6,baz=69,slow=6.6,SNR=6.1						
FINES	FINESS Array B	75.30	330	P	P	08 39 21.1	+0.3
	comp=Z,2.1nm,0.8s,mb4.1,baz=64,slow=8.7,SNR=5.2						
BRTR	Keskin Array B	75.81	307	P	P	08 39 24.0	-0.2
	comp=Z,1.4nm,1.0s,mb3.8,baz=124,slow=2.6,SNR=4.1						
NB2	NORSAR Subarra	82.17	332	P	P	08 39 57.5	-1.0
	comp=Z,2.7nm,0.7s,mb4.3,baz=67,slow=4.8						
NOA	NORSAR Array B	82.17	332	P	P	08 39 58.3	-0.2
	comp=Z,2.3nm,0.8s,mb4.2,baz=63,slow=4.9,SNR=5.8						
YKA	Yellowknife Ar	87.14	23	P	P	08 40 23.0	-0.6
	comp=Z,1.7nm,0.8s,mb4.3,baz=309,slow=4.5,SNR=12						
TXAR	Lajitas Array	114.90	43	PKP	PKiKP	08 46 18.3	-0.8
	comp=Z,0.3nm,0.8s,baz=210,slow=1.0,SNR=3.9						
ROSC	El Rosal	151.28	34	PKPbc	PKPbc	08 47 33.3	+1.1
	comp=Z,3.2nm,0.5s,baz=290,slow=23,SNR=4.0						

IDC 03 08:32:40.8±1.6, 19°.52N×121°.36E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.4/4, Error ellipse: s-maj=40.8km s-min=29.3km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	18.77	16	P	Pn	08 37 01.4	-0.5
	0.2nm,0.3s,baz=198,slow=11,SNR=6.8						
CMAR	Chiang Mai Arr	21.23	271	P	P	08 37 28.4	-0.1
	0.3nm,0.3s,baz=81,slow=6.5,SNR=2.8						
WRA	Warramunga Arr	41.22	161	P	P	08 40 27.8	+0.2
	0.3nm,0.6s,baz=343,slow=6.9,SNR=3.3						
ASAR	Alice Springs	44.63	164	P	P	08 40 54.9	-0.3
	0.4nm,0.7s,baz=349,slow=6.8,SNR=4.0						

*ISK **03** 08:39:37.6, 39°.05N×27°.62E, h5km, MD2.7*
*CSEM **03** 08:39:37.7±0.6, 39°.07N×27°.48E, h10km, MD2.8, Error ellipse: s-maj=12.8km s-min=8.6km az=84.0*
*ISCJB **03** 08:39:38.1±0.9, 39°.06N±0°.04×27°.48E±0°.06, h10km, Error ellipse: s-maj=7.1km s-min=5.2km az=177.5*
*DDA **03** 08:39:38.4, 39°.13N×27°.57E, h7km±5km, Md2.8*
ISC 03 08:39:38.5±0.9, 39°.07N±0°.04×27°.49E±0°.06, h10km, n14, σ1.36/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.31	127	i P	Pg	08 39 44.0	-0.8
AKHS				i S	Sg	08 39 50.4	+1.5
AKHS	Akhisar	0.31	127	i P	Pg	08 39 44.0	-0.8
AKHS				i S	Sg	08 39 50.4	+1.4
BALY	Balya	0.68	8	i P	Pg	08 39 49.5	-2.2
BALY				i S	Sg	08 40 03.9	+3.3
BALY	Balya	0.68	8	i P	Pg	08 39 49.5	-2.2
BALY				i S	Sg	08 40 03.9	+3.3
IZM	Izmir	0.69	195	ePG	Pg	08 39 51.6	-0.2
IZM				eSG	Sg	08 40 03.8	+2.9
IZM	Izmir	0.69	195	ePg	Pg	08 39 51.7	-0.2
IZM				eSg	Sg	08 40 03.8	+2.9
DURS	Dursunbey	0.93	55	i P	Pg	08 39 54.8	-1.7
DURS				i S	Sg	08 40 09.9	+1.3
DURS	Dursunbey	0.93	55	i P	Pg	08 39 54.8	-1.6
DURS				i S	Sg	08 40 09.9	+1.4
DEMI	Demirci	0.95	91	i P	Pg	08 39 57.3	+0.4
DEMI				i S	Sg	08 40 09.7	+0.4
DEMI	Demirci	0.95	91	i P	Pg	08 39 57.3	+0.4
DEMI				i S	Sg	08 40 09.6	+0.3
GONE	Gonen-Balikesi	0.99	9	ePG	Pg	08 39 58.0	+0.4
GONE	Gonen-Balikesi	0.99	9	ePg	Pg	08 39 58.0	+0.4
KULA	Kula-Manisa	1.07	121	ePG	Pg	08 39 57.4	-1.6
KULA				eSG	Sg	08 40 12.1	-0.8

LPAZ La Paz 149.33 73 PKPbc PKPbc 09 11 55.4 +1.1
0.5nm,0.7s,baz=346,slow=2.3,SNR=4.0

WEL 03 08:54:46.1±0.5,39°.03S×179°.39E,h33km,ML3.9/9,3C-1D, Error ellipse: s-maj=4.7km s-min=2.7km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**1.07**	**300**	⇑PN	Pn	08 55 04.0	-0.7
MHGZ	**Mahia Peninsul**	**1.16**	**263**	PN	Pn	08 55 05.7	-0.3
MHGZ				SN	Sn	08 55 20.2	-0.4
PRGZ	**Paritu Road**	**1.18**	**275**	⇑PN	Pn	08 55 05.5	-0.7
PRGZ				SN	Sn	08 55 20.6	-0.5
PUZ	**Puketiti**	**1.30**	**317**	PN	Pn	08 55 07.7	-0.2
KNZ	**Kokohu**	**1.33**	**270**	⇓PN	Pn	08 55 07.9	-0.4
KNZ				SN	Sn	08 55 22.1	-2.9
MWZ	**Matawai**	**1.61**	**295**	⇑PN	Pn	08 55 11.4	-0.8
MXZ	**Matakaoa Point**	**1.69**	**329**	PN	Pn	08 55 14.7	+1.4
RAHZ	**Arahi**	**1.80**	**273**	PN	Pn	08 55 14.5	-0.2
NMHZ	**Naumai**	**2.01**	**267**	PN	Pn	08 55 18.8	+1.1
KAHZ	**Kahuranaki**	**2.09**	**248**	PN	Pn	08 55 20.4	+1.6
BKZ	**Black Stump Fm**	**2.26**	**266**	PN	Pn	08 55 21.7	+0.7
BKZ				SN	Sn	08 55 45.0	-2.8
PRHZ	**Porangahau**	**2.46**	**239**	PN	Pn	08 55 25.1	+1.2
TSZ	**Takapari Road**	**2.84**	**248**	PN	Pn	08 55 29.0	-0.1
KRVZ	**Karewarewa**	**2.92**	**267**	PN	Pn	08 55 30.7	+0.5
BFZ	**Birch Farm**	**2.93**	**235**	PN	Pn	08 55 29.7	-0.6

DJA 03 08:58:01,2°.18N×123°.52E,h211km,MLv4.3/9,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.51**	**119**	P	Pn	08 58 42.7	+6.9
MNI				S	S	08 58 59.6	-3.2
KMSI	**Cibinong**	**1.66**	**164**	P	Pn	08 58 38.0	+0.9
KMSI				S	S	08 59 16.4	+11
MRSI	**Marisa**	**2.31**	**223**	P	Pn	08 58 43.7	+0.1
MRSI				S	S	08 59 18.0	+1.1
SGSI	**Sangihe**	**2.50**	**53**	P	Pn	08 58 48.5	+2.9
TOLI	**Toli-Toli**	**2.92**	**249**	P	Pn	08 58 44.9	-5.4
LUWI	**Luwuk**	**3.29**	**193**	P	Pn	08 59 01.0	+6.4
TNTI	**Ternate**	**4.09**	**110**	P	Pn	08 59 00.0	-4.3
PCI	**Palu**	**4.79**	**230**	P	Pn	08 59 11.0	-2.1
LBMI	**Labuha**	**4.87**	**125**	P	Pn	08 59 10.9	-3.1

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*ISCJB **03** 09:00:45.0±0.4,59°.87N±0°.03×22°.26E±0°.05,h0km, Error ellipse: s-maj=3.8km s-min=3.6km az=28.4*
*HEL **03** 09:00:46.2±0.1,59°.82N×22°.27E,h0km,ML2.0, ML2.2(NAO), Explosion*
*CSEM **03** 09:00:46.4±0.3,59°.94N×22°.29E,h2km,ML2.2, Error ellipse: s-maj=5.6km s-min=4.4km az=164.0,Mining explosion.*
*IDC **03** 09:00:46.4±3.0,59°.84N×22°.22E,h0km,mb1 3.2/3, mb1mx3.0/24,mbtmp3.1/3,ML2.7/3, Error ellipse: s-maj=42.6km s-min=11.9km az=169.0*
*NAO **03** 09:00:46.6±1.7,59°.89N×22°.27E,ML2.2*
*BER **03** 09:00:48.7±4.6,59°.99N×22°.15E,h0km±22km, ML2.2(NAO)*

ISC 03 09:00:45.8±0.4,59°.88N±0°.03×22°.32E±0°.05,h0km,n35, σ1°19/64,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.09**	**71**	*e*P	**Pg**	**09 01 06.2**	**-0.5**
MEF				*e*S	**Sg**	**09 01 21.6**	**+0.7**
MEF	**Metsahovi**	**1.09**	**71**	*e*P	**Pg**	**09 01 06.7**	**0.0**
SNR=90							
MEF				*e*S	**Sg**	**09 01 21.5**	**+0.6**
23nm,0.7s,SNR=90							
RAF	**Rauma**	**1.18**	**347**	*e*P	**Pg**	**09 01 08.6**	**+0.2**
RAF				*e*S	**Sg**	**09 01 24.8**	**+1.1**
RAF	**Rauma**	**1.18**	**347**	P	**Pg**	**09 01 08.6**	**+0.2**
RAF				S	**Sg**	**09 01 24.8**	**+1.1**
MTSE	**Matsula**	**1.40**	**146**	*e*P	**Pn**	**09 01 10.5**	**-2.0**
MTSE				*e*S	**Sg**	**09 01 29.0**	**-1.6**
MTSE	**Matsula**	**1.40**	**146**	P	**Pn**	**09 01 10.4**	**-2.1**
MTSE				S	**Sg**	**09 01 28.9**	**-1.6**
PVF	**Pernaja**	**1.89**	**68**	*e*P	**Pn**	**09 01 20.0**	**+0.8**
PVF				*e*S	**Sn**	**09 01 44.8**	**+1.1**
PVF				MSG		09 01 49.4	
comp=Z,8.5nm,0.1s							
PVF	**Pernaja**	**1.89**	**68**	P	**Pn**	**09 01 20.0**	**+0.8**
PVF				S	**Sn**	**09 01 44.8**	**+1.1**
SLIT	**Slitere, Latvi**	**2.26**	**180**	*e*P	**Pn**	**09 01 25.2**	**+0.9**
SNR=50							
SLIT				*e*S	**Sn**	**09 01 54.8**	**+2.1**
comp=Z,108nm,0.5s,SNR=50							
FIA0	**FINESS Array S**	**2.43**	**48**	Pn	**Pn**	**09 01 28.9**	**+2.2**
baz=229,slow=14							
FIA0				Lg		09 02 01.8	
baz=224,slow=22							
FIA0	**FINESS Array S**	**2.43**	**48**	*e*PB	**Pb**	**09 01 29.8**	**-0.5**
FIA0				*e*SB	**Sb**	**09 02 01.2**	**+0.5**
FIA0				MSG		09 02 05.7	
comp=Z,5.0nm,0.1s							
FIA0	**FINESS Array S**	**2.43**	**48**	Pn	**Pn**	**09 01 28.9**	**+2.3**
baz=229,slow=13,SNR=50							
FIA0	**FINESS Array S**	**2.43**	**48**	Pb	**Pb**	**09 01 29.7**	**-0.5**
FIA0				Sb	**Sb**	**09 02 01.1**	**+0.5**
FIA0				Lg		09 02 01.8	
baz=224,slow=22							
FINES	**FINESS Array B**	**2.43**	**48**	Pn	**Pn**	**09 01 28.7**	**+2.1**
comp=Z,1.8nm,0.3s,baz=232,slow=14,SNR=23							
FINES				Sn	**Sn**	**09 02 00.9**	**+4.0**
comp=Z,5.0nm,0.3s,baz=239,slow=23,SNR=23							
KEF	**Keuruu**	**2.61**	**27**	*e*PB	**Pb**	**09 01 32.1**	**-1.3**
KEF				*e*SG	**Sg**	**09 02 07.4**	**-2.2**
KEF				MSG		09 02 08.2	
comp=Z,5.4nm,0.1s							
KEF	**Keuruu**	**2.61**	**27**	Pb	**Pb**	**09 01 32.0**	**-1.4**
KEF				Sg	**Sg**	**09 02 07.4**	**-2.2**
VSU	**Vasula**	**2.68**	**120**	*e*SB	**Sb**	**09 02 07.1**	**-0.8**
VSU	**Vasula**	**2.68**	**120**	*e*S	**Sn**	**09 02 07.0**	**+3.8**
comp=Z,40nm,0.4s,SNR=50							
VJF	**Virojoki**	**2.69**	**73**	*e*P	**Pn**	**09 01 30.8**	**+0.5**
VJF				*e*S	**Sn**	**09 02 04.6**	**+1.0**
VJF	**Virojoki**	**2.69**	**73**	P	**Pn**	**09 01 30.8**	**+0.5**
VJF				S	**Sn**	**09 02 04.5**	**+0.9**
KAF	**Kangasniemi**	**2.97**	**39**	*e*PB	**Pb**	**09 01 37.3**	**-2.1**
KAF				*e*SB	**Sb**	**09 02 16.9**	**+0.7**
KAF	**Kangasniemi**	**2.97**	**39**	Pb	**Pb**	**09 01 37.2**	**-2.2**
KAF				Sb	**Sb**	**09 02 16.8**	**+0.6**
VAF	**Ylistaro**	**3.18**	**3**	*e*PB	**Pb**	**09 01 41.4**	**-1.7**
VAF				*e*SB	**Sb**	**09 02 23.7**	**+1.3**
VAF	**Ylistaro**	**3.18**	**3**	Pb	**Pb**	**09 01 41.4**	**-1.7**
VAF				Sb	**Sb**	**09 02 23.6**	**+1.3**
HFS	**Hagfors**	**4.34**	**277**	Pn	**Pn**	**09 01 53.2**	**+0.3**
baz=97,slow=7.9							
HFS				Sn	**Sn**	**09 02 43.5**	**-0.7**
baz=104,slow=28							
HFS				Lg		09 02 56.1	
baz=90,slow=37							
HFS	**Hagfors**	**4.34**	**277**	*e*P	**Pn**	**09 01 53.2**	**+0.3**
HFS				*e*S	**Sn**	**09 02 43.5**	**-0.7**
HFS				*e*SB	**Sb**	**09 02 56.1**	**+0.5**
HFS	**Hagfors**	**4.34**	**277**	P	**Pn**	**09 01 53.2**	**+0.3**
HFS				S	**Sn**	**09 02 43.4**	**-0.7**
HFS				Sn	**Sn**	**09 02 43.5**	**-0.6**
baz=104,slow=24,SNR=50							
HFS				Sb	**Sb**	**09 02 56.1**	**+0.4**
NB2	**NORSAR Subarra**	**5.62**	**287**	Pn	**Pn**	**09 02 10.6**	**+0.1**
baz=96,slow=14							
NB2				Lg		09 03 38.1	
NB2	**NORSAR Subarra**	**5.62**	**287**	*e*P	**Pn**	**09 02 10.6**	**+0.1**
NB2				*e*SG	**Sg**	**09 03 38.1**	**-8.0**
NB2	**NORSAR Subarra**	**5.62**	**287**	P	**Pn**	**09 02 10.6**	**+0.1**
NOA	**NORSAR Array B**	**5.62**	**287**	Pn	**Pn**	**09 02 09.9**	**-0.5**
comp=Z,0.2nm,0.3s,baz=97,slow=14,SNR=3.1							
NOA				Lg		09 03 38.0	
comp=Z,0.4nm,0.3s,baz=122,slow=7.9,SNR=3.5							
ARA0	**ARCESS Array S**	**9.79**	**7**	Pn	**Pn**	**09 03 07.0**	**-0.6**
baz=190,slow=14							
ARA0				Sn	**Sn**	**09 04 51.2**	**-6.9**
baz=184,slow=28							
ARA0	**ARCESS Array S**	**9.79**	**7**	*e*P	**Pn**	**09 03 07.0**	**-0.6**
ARA0				*e*S	**Sn**	**09 04 51.2**	**-6.9**
ARA0	**ARCESS Array S**	**9.79**	**7**	Pn	**Pn**	**09 03 07.0**	**-0.6**
baz=190,slow=13,SNR=50							
ARCES	**ARCESS Array B**	**9.79**	**7**	Pn	**Pn**	**09 03 06.5**	**-1.1**
comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=6.6							

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*ISCJB **03** 09:04:28.2±1.1,44°.13N±0°.08×89°.08E±0°.09,h10km, Error ellipse: s-maj=11.5km s-min=8.8km az=0.6*
*BJI **03** 09:04:30.4,43°.72N×89°.08E,h16km,ML3.3/7*
*NNC **03** 09:04:37.0±3.1,44°.66N×88°.96E,h8km±16km,mb3.5, mpv3.2,Error ellipse: s-maj=34.7km s-min=21.2km az=31.0*

ISC 03 09:04:30.6±1.1,44°.08N±0°.08×89°.04E±0°.08,h10km,n5, σ1°12/9,3C-5D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.00**	**256**	Pg	**Pg**	**09 04 50.0**	**+0.1**
WMQ				Sg	**Sg**	**09 05 02.5**	**-0.4**
WMQ				smax			
comp=N,2μm,0.4s							
WMQ				smax			
comp=E,2μm,0.4s							
MK31	**Makanchi Array**	**5.47**	**302**	Pn	**Pn**	**09 05 53.9**	**+1.8**
comp=E,1.9nm,0.5s,baz=108,slow=14,SNR=54							
MK31				⇓Sn	**Sn**	**09 06 54.9**	**-0.1**
comp=E,3.2nm,0.3s,baz=131,slow=26,SNR=5.5							
MK31				⇓Lg		09 07 19.3	
comp=E,6.4nm,0.6s,baz=118,slow=30,SNR=6.0							
KURBB	**Kurchatov Arra**	**9.68**	**316**	⇑Pn	**Pn**	**09 06 51.0**	**+1.3**
comp=E,0.1nm,0.3s							
KURBB				⇓Sn	**Sn**	**09 08 36.1**	**-2.3**
comp=E,0.8nm,1.0s							
KURBB				⇓Lg		09 09 31.5	
comp=E,2.4nm,1.4s							
KURK	**Kurchatov**	**9.69**	**317**	⇑Pn	**Pn**	**09 06 50.1**	**+0.1**
comp=E,1.1nm,0.3s							
KURK				⇑Sn	**Sn**	**09 08 34.0**	**-4.8**
comp=E,2.2nm,0.4s							
KURK				⇓Lg		09 09 31.6	
comp=E,7.9nm,0.7s							
LZH	**Lanzhou**	**13.85**	**120**	*e*P	**Pn**	**09 07 46.0**	**-0.9**
LZH				pP		09 07 51.0	
LZH				sP		09 07 54.0	

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*ISCJB **03** 09:10:19.2±0.8,39°.59N±0°.04×29°.43E±0°.05,h0km, Error ellipse: s-maj=6.9km s-min=5.3km az=140.6*
*ISK **03** 09:10:19.7,39°.60N×29°.33E,h13km,MD2.6*
*CSEM **03** 09:10:19.5±0.5,39°.59N×29°.41E,h1km,MD2.8,Error ellipse: s-maj=10.0km s-min=7.8km az=131.0*
*DDA **03** 09:10:35.8,39°.50N×28°.76E,h3km,Md2.8*

ISC 03 09:10:19.4±0.8,39°.58N±0°.04×29°.46E±0°.05,h0km,n22, σ1°16/30,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.76**	**272**	*i* P	**Pg**	**09 10 33.5**	**-0.5**
DURS				*i* S	**Sg**	**09 10 44.9**	**+1.0**
DURS	**Dursunbey**	**0.76**	**272**	*i* P	**Pg**	**09 10 33.5**	**-0.5**
DURS				*i* S	**Sg**	**09 10 44.9**	**+1.0**
DEMI	**Demirci**	**0.79**	**228**	*i* P	**Pg**	**09 10 36.2**	**+1.8**
DEMI				*i* S	**Sg**	**09 10 52.1**	**+7.5**
DEMI	**Demirci**	**0.79**	**228**	*i* P	**Pg**	**09 10 36.2**	**+1.8**
GEMT	**Gemlik**	**0.88**	**346**	*e*Pg	**Pg**	**09 10 37.1**	**+0.8**
GEMT	**Gemlik**	**0.88**	**346**	*e*Pg	**Pg**	**09 10 37.1**	**+0.8**
MDNY	**Mudanya-Bursa**	**0.91**	**331**	*e*PG	**Pg**	**09 10 36.9**	**+0.1**
MDNY				*e*SG	**Sg**	**09 10 48.0**	**-0.5**
MDNY	**Mudanya-Bursa**	**0.91**	**331**	*e*Pg	**Pg**	**09 10 36.9**	**+0.1**
MDNY				*e*Sg	**Sg**	**09 10 48.1**	**-0.5**
YLV	**Yalova**	**0.99**	**356**	*e*PG	**Pg**	**09 10 38.1**	**-0.3**
YLV				*e*SG	**Sg**	**09 10 53.2**	**+1.9**
YLV	**Yalova**	**0.99**	**356**	*e*Pg	**Pg**	**09 10 38.1**	**-0.3**
YLV				*e*Sg	**Sg**	**09 10 53.2**	**+1.9**
ARMT	**Armutlu**	**1.09**	**335**	*e*PG	**Pg**	**09 10 39.3**	**-1.0**
ARMT	**Armutlu**	**1.09**	**335**	*e*Pg	**Pg**	**09 10 39.3**	**-1.0**
GULT	**Gulveren**	**1.18**	**43**	*e*PN	**Pn**	**09 10 42.9**	**-0.2**
GULT	**Gulveren**	**1.18**	**43**	*e*Pn	**Pn**	**09 10 42.9**	**-0.2**
BALB	**Balikesir**	**1.22**	**274**	*e*PN	**Pn**	**09 10 41.5**	**-2.2**
BALB	**Balikesir**	**1.22**	**274**	*e*Pn	**Pn**	**09 10 41.5**	**-2.2**
BALY	**Balya**	**1.43**	**277**	*i* P	**Pn**	**09 10 45.1**	**-1.5**
BALY				*i* S	**Sg**	**09 11 06.4**	**+1.0**
BALY	**Balya**	**1.43**	**277**	*i* P	**Pn**	**09 10 45.1**	**-1.5**
GONE	**Gonen-Balikesi**	**1.45**	**290**	*e*PN	**Pn**	**09 10 45.2**	**-1.6**
GONE	**Gonen-Balikesi**	**1.45**	**290**	*e*Pn	**Pn**	**09 10 45.2**	**-1.6**
SVRH	**Sivrihisar-ESK**	**1.60**	**94**	*e*PN	**Pn**	**09 10 49.8**	**+0.9**
SVRH	**Sivrihisar-ESK**	**1.60**	**94**	*e*Pn	**Pn**	**09 10 49.8**	**+0.9**

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*IDC **03** 09:17:45.7±0.8,59°.67N×30°.07W,h0km,mb3.8/11, mb1 4.0/12,mb1mx3.8/27,mbtmp3.8/12,ML4.0/1,MS3.6/18, Ms1 3.6/18,ms1mx3.5/37,Error ellipse: s-maj=28.2km s-min=16.9km az=16.0*
*ISCJB **03** 09:17:46.0±0.6,59°.96N±0°.07×29°.8W±0°.1,h10km, mb3.7/12,MS3.6/14,Error ellipse: s-maj=12.8km s-min=5.3km az=137.6*
*REY **03** 09:17:47.6,59°.34N×27°.56W,h10km,ML3.7,ML3.0*
*NEIC **03** 09:17:47.6±0.6,59°.75N×29°.86W,h10km,mb4.0/1,Error ellipse: s-maj=18.1km s-min=11.5km az=181.0*
*CSEM **03** 09:17:47.2±0.3,59°.88N×29°.76W,h10km,ML3.7,Error ellipse: s-maj=14.8km s-min=7.7km az=142.0*

ISC 03 09:17:47.8±0.5,59°.90N±0°.07×29°.7W±0°.1,h10km,n51, σ1°16/45,mb3.7/12,MS3.6/14,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRV	**Grindav??k**	**5.26**	**38**	P	**Pn**	**09 19 06.0**	**-0.3**
IGRV				S	**Sn**	**09 20 08.3**	**+1.5**
INYL	**Nylenda**	**5.26**	**36**	P	**Pn**	**09 19 06.5**	**+0.2**
IVOS	**Vogsosar**	**5.49**	**40**	P	**Pn**	**09 19 07.9**	**-1.6**
IVOS				S	**Sn**	**09 20 12.1**	**-0.5**
ISAN	**Sandskeio**	**5.67**	**39**	P	**Pn**	**09 19 11.8**	**-0.2**
ISAN				S	**Sn**	**09 20 16.9**	**-0.2**
IBJA	**Bjarnastaoir**	**5.69**	**41**	P	**Pn**	**09 19 10.9**	**-1.3**
ISOL	**Solvholt**	**5.79**	**42**	P	**Pn**	**09 19 12.6**	**-1.1**
ISOL				S	**Sn**	**09 20 18.2**	**-1.9**
IKRO	**Krokur**	**5.85**	**40**	P	**Pn**	**09 19 13.0**	**-1.4**
IKRO				S	**Sn**	**09 20 21.6**	**+0.2**
IHEI	**Heioarbar**	**5.88**	**39**	P	**Pn**	**09 19 14.8**	**0.0**
BORG	**Borgarnes**	**6.24**	**35**	Pn	**Pn**	**09 19 21.1**	**+1.3**
3.5nm,0.3s,baz=192,slow=6.6,SNR=8.9							
BORG				Sn	**Sn**	**09 20 32.1**	**+1.0**
0.6nm,0.3s,baz=108,slow=20,SNR=2.9							
BORG				LR	LR	09 20 58.8	
comp=Z,134nm,21.9s,baz=331,slow=30							
BORG	**Borgarnes**	**6.24**	**35**	Pn	**Pn**	**09 19 21.1**	**+1.3**
BORG				Sn	**Sn**	**09 20 32.2**	**+1.1**
JMIC	**Jan Mayen**	**14.08**	**29**	LR	LR	09 25 20.5	
comp=Z,194nm,19.4s,baz=270,slow=32							
EKA	**Eskdalemuir Ar**	**14.90**	**96**	Pn	**Pn**	**09 21 24.1**	**+5.9**
0.1nm,0.3s,baz=305,slow=8.7,SNR=9.0							
FRB	**Frobisher Bay**	**18.52**	**299**	LR	LR	09 28 20.5	
comp=Z,605nm,20.7s,baz=302,slow=34							
NOA	**NORSAR Array B**	**19.99**	**69**	LR	LR	09 29 22.4	
comp=Z,235nm,20.2s,baz=280,slow=34							
SCHQ	**Schefferville**	**20.44**	**272**	P	**P**	**09 22 26.9**	**+1.9**
3.7nm,1.0s,baz=57,slow=10,SNR=3.5							
SCHQ				LR	LR	09 29 04.8	
comp=Z,267nm,21.3s,MS3.6,baz=42,slow=34							
SCHQ	**Schefferville**	**20.44**	**272**	P	**P**	**09 22 26.9**	**+2.0**
HFS	**Hagfors**	**21.42**	**70**	LR	LR	09 29 54.9	
comp=Z,320nm,21.7s,MS3.7,baz=325,slow=34							
ARCES	**ARCESS Array B**	**24.56**	**44**	LR	LR	09 30 39.1	
comp=Z,121nm,20.2s,MS3.4,baz=275,slow=31							
ESDC	**Sonseca Array**	**25.91**	**130**	P	**P**	**09 23 19.2**	**-0.4**
0.4nm,0.3s,mb3.5,baz=332,slow=9.9,SNR=5.8							
ESDC	**Sonseca Array**	**25.91**	**130**	P	**P**	**09 23 19.2**	**-0.5**
DAVOX	**Davos/Dischmat**	**26.59**	**102**	LR	LR	09 33 21.4	
comp=Z,105nm,19.6s,MS3.4,baz=264,slow=35							
FINES	**FINESS Array B**	**26.68**	**62**	LR	LR	09 31 58.4	
comp=Z,113nm,19.6s,MS3.4,baz=229,slow=32							
RES	**Resolute Bay**	**27.27**	**328**	LR	LR	09 33 16.8	
comp=Z,144nm,21.9s,MS3.5,baz=64,slow=34							
VRAC	**Vranov**	**28.26**	**91**	LR	LR	09 34 22.1	
comp=Z,247nm,21.0s,MS3.8,baz=303,slow=35							
YKA	**Yellowknife Ar**	**38.20**	**312**	P	**P**	**09 25 06.6**	**-0.5**
0.6nm,0.8s,mb3.4,baz=59,slow=9.5,SNR=4.0							
YKA				LR	LR	09 40 10.0	
comp=Z,22nm,19.6s,MS3.0,baz=110,slow=35							
YKA	**Yellowknife Ar**	**38.20**	**312**	P	**P**	**09 25 06.6**	**-0.4**
BRTR	**Keskin Array B**	**43.62**	**88**	P	**P**	**09 25 53.0**	**+1.1**
2.0nm,1.0s,mb3.8,baz=348,slow=5.2,SNR=4.6							
BRTR				LR	LR	09 45 30.1	
comp=Z,103nm,19.8s,MS3.7,baz=101,slow=38							
BRTR	**Keskin Array B**	**43.62**	**88**	P	**P**	**09 25 53.0**	**+1.1**
ILAR	**Eielson Array**	**47.02**	**329**	P	**P**	**09 26 19.4**	**+0.8**
0.5nm,0.7s,mb3.5,baz=34,slow=6.0,SNR=5.8							
ILAR				PcP	PcP	09 27 50.3	-0.2
0.5nm,0.8s,baz=1.1,slow=4.1,SNR=3.9							
ILAR	**Eielson Array**	**47.02**	**329**	P	**P**	**09 26 19.4**	**+0.8**
ILAR	**Eielson Array**	**47.02**	**329**	PcP	PcP	09 27 50.3	-0.2
AKTK	**Aktyubinsk**	**47.42**	**60**	P	**P**	**09 26 23.3**	**+1.4**
AKTK	**Aktyubinsk**	**47.42**	**60**	P	**P**	**09 26 23.3**	**+1.4**
AKTO	**Aktyubinsk**	**47.42**	**60**	P	**P**	**09 26 23.3**	**+1.4**
2.1nm,0.8s,mb4.1,baz=322,slow=9.9,SNR=5.0							
ABKAR	**Akbulak array**	**49.13**	**60**	*e*P	**P**	**09 26 35.5**	**+0.4**
1.0nm,0.6s,mb4.0							
ABKAR	**Akbulak array**	**49.13**	**60**	*e*P	**P**	**09 26 35.5**	**+0.4**
1.0nm,0.6s,mb4.0							
PDAR	**Pinedale Array**	**49.47**	**288**	P	**P**	**09 26 37.4**	**-0.3**
0.4nm,0.7s,mb3.6,baz=63,slow=6.8,SNR=4.8							
PDAR				LR	LR	09 46 19.6	
comp=Z,243nm,20.6s,MS4.2,baz=71,slow=35							
PDAR	**Pinedale Array**	**49.47**	**288**	P	**P**	**09 26 37.4**	**-0.3**
BVAR	**Borovoye Array**	**50.60**	**50**	P	**P**	**09 26 47.7**	**+1.5**
0.5nm,0.4s,mb3.8,baz=308,slow=5.5,SNR=4.1							
BVAR	**Borovoye Array**	**50.60**	**50**	P	**P**	**09 26 47.7**	**+1.5**
TORD	**Torodi Ar. Bea**	**52.11**	**140**	P	**P**	**09 26 56.3**	**-1.6**
0.5nm,0.8s,mb3.5,baz=4.6,slow=7.2,SNR=3.3							
TORD	**Torodi Ar. Bea**	**52.11**	**140**	P	**P**	**09 26 56.3**	**-1.6**
ZALV	**Zalesovo Beam**	**55.05**	**41**	LR	LR	09 51 12.3	
comp=Z,32nm,20.7s,MS3.4,baz=38,slow=36							
KURK	**Kurchatov**	**55.55**	**47**	LR	LR	09 51 05.6	
comp=Z,48nm,18.8s,MS3.6,baz=290,slow=36							
NVAR	**Mina Array Bea**	**57.01**	**291**	P	**P**	**09 27 31.5**	**-1.8**
0.4nm,0.8s,mb3.5,baz=57,slow=5.8,SNR=4.4							
NVAR	**Mina Array Bea**	**57.01**	**291**	P	**P**	**09 27 31.5**	**-1.8**
TXAR	**Lajitas Array**	**57.13**	**273**	P	**P**	**09 27 32.7**	**-1.5**
0.3nm,0.7s,mb3.4,baz=74,slow=6.7,SNR=3.1							
TXAR				LR	LR	09 50 40.2	
comp=Z,93nm,18.0s,MS3.9,baz=5.0,slow=35							
TXAR	**Lajitas Array**	**57.13**	**273**	P	**P**	**09 27 32.7**	**-1.5**
MKAR	**Makanchi Array**	**60.16**	**47**	LR	LR	09 53 58.4	
comp=Z,44nm,18.6s,MS3.6,baz=351,slow=36							
CMAR	**Chiang Mai Arr**	**91.56**	**48**	P	**P**	**09 30 56.4**	**+1.7**
0.5nm,0.4s,mb4.2,baz=331,slow=5.7,SNR=2.9							
CMAR	**Chiang Mai Arr**	**91.56**	**48**	P	**P**	**09 30 56.4**	**+1.7**

DHMR 03 09:18:09.8±0.8,13°.41N×48°.84E,h2km±999km,ML3.5, 1C-2D,Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.08**	**10**	⇓*i*P	Pg	09 18 29.6	-0.9
MUKL				*i* S	Sg	09 18 45.7	+1.1
BDHA	**Al Bayda'**	**3.23**	**280**	⇓*i*P	Pn	09 19 04.9	+3.4
BDHA				*e*		09 19 05.0	
baz=102,slow=11							
BDHA				*i* S	Sn	09 19 47.2	+6.6
BDHA				AML	AML	09 19 49.1	
comp=N,204nm,0.6s							
LBOS		**3.52**	**278**	⇑*i*P	Pn	09 19 08.2	+2.7
LBOS				*i* S	Sn	09 19 53.8	+6.0

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*ISCJB **03** 09:24:36.7±1.8,18°.05S±0°.1×175°.0W±0°.1,h174km±18km, mb4.0/12,Error ellipse: s-maj=28.1km s-min=14.8km az=137.4*
*IDC **03** 09:24:37.6±2.4,18°.08S×174°.89W,h172km±23km,mb3.6/9, mb1 3.8/10,mb1mx3.7/17,mbtmp3.6/10,Error ellipse: s-maj=29.1km s-min=13.5km az=135.0*
*NEIC **03** 09:24:37.5±1.3,18°.05S×174°.93W,h170km±12km,mb4.4/2, Error ellipse: s-maj=20.8km s-min=9.5km az=137.0*

ISC 03 09:24:37.6±1.7,18°.1S±0°.1×175°.0W±0°.1,h169km±17km, n18,σ0°54/16,mb4.0/12,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.13**	**37**	P	**Pn**	**09 25 53.1**	**+0.1**
12nm,0.3s,baz=261,slow=24,SNR=17							
AFI				S	**Sn**	**09 26 45.9**	**-6.2**
82nm,0.3s,baz=42,slow=22,SNR=17							
URZ	**Urewera**	**21.30**	**197**	P	**P**	**09 29 10.7**	**-0.2**
8.1nm,0.4s,mb4.4,baz=245,slow=4.4,SNR=15							
EIDS	**Eidsvold**	**32.32**	**251**	*e*P	**P**	**09 30 49.8**	**-1.1**
17nm,1.2s,mb4.7							
CTAO	**Charters Tower**	**36.67**	**260**	*e*P	**P**	**09 31 28.9**	**+0.6**
STKA	**Stephens Creek**	**41.46**	**242**	P	**P**	**09 32 08.4**	**+0.5**
2.6nm,0.4s,mb4.2,baz=80,slow=9.2,SNR=8.3							
**STKA

TORD Torodi Ar. Bea 124.46 280 PKP PKPdf 09 45 40.9 +1.9
2.2nm,0.3s,baz=42,slow=1.5,SNR=1.6

IDC 03 09:45:37.2±5.3,6°61S×155°02E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.4/17,mbtmp3.5/4,Error ellipse: s-maj=167.5km s-min=36.0km az=113.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.06**	**235**	P	P	09 50 54.3	0.0
	0.7nm,1.1s,baz=60,slow=9.5,SNR=4.8						
ASAR	**Alice Springs**	**26.45**	**228**	P	P	09 51 16.2	+0.2
	0.2nm,0.7s,baz=61,slow=9.5,SNR=4.8						
MKAR	**Makanchi Array**	**83.13**	**319**	P	P	09 58 06.0	+0.9
	0.3nm,0.5s,baz=92,slow=6.3,SNR=4.5						
KURK	**Kurchatov**	**86.55**	**322**	P	P	09 58 21.4	-0.8
	0.4nm,0.4s,baz=100,slow=3.5,SNR=2.4						

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*ISCJB **03** 09:51:13.1±1.2,60°.1N±0°.2×30°.0W±0°.2,h10km,mb3.5/5, Error ellipse: s-maj=26.4km s-min=9.9km az=150.8*
*IDC **03** 09:51:15.1±4.4,60°.20N×30°.35W,h0km,mb3.2/5, mb1 3.6/6,mb1mx3.4/27,mbtmp3.4/6,ML3.8/1,Error ellipse: s-maj=96.9km s-min=31.9km az=143.0*
*NEIC **03** 09:51:15.0±1.3,60°.06N×30°.11W,h10km,mb4.0/1,Error ellipse: s-maj=38.4km s-min=13.4km az=166.0*
ISC 03 09:51:14.8±1.1,60°.1N±0°.2×30°.0W±0°.2,h10km,n9, σ0°90/10,mb3.5/5,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.20**	**37**	Pn	**Pn**	**09 52 46.8**	**+0.6**
	2.4nm,0.3s,baz=195,slow=11,SNR=9.0						
BORG				Sn	**Sn**	**09 53 56.7**	**-0.3**
	0.4nm,0.3s,baz=38,slow=19,SNR=2.4						
KONO	**Kongsberg**	**19.70**	**74**	*eP*	**Pn**	**09 55 45.8**	**+0.5**
SCHQ	**Schefferville**	**20.30**	**271**	P	**P**	**09 55 49.1**	**-1.3**
	0.9nm,0.7s,baz=72,slow=16,SNR=2.5						
YKA	**Yellowknife Ar**	**38.00**	**311**	P	**P**	**09 58 32.9**	**+0.6**
	0.9nm,0.9s,mb3.5,baz=52,slow=9.2,SNR=6.2						
YKA	**Yellowknife Ar**	**38.00**	**311**	P	**P**	**09 58 32.9**	**+0.6**
ILAR	**Eielson Array**	**46.82**	**328**	P	**P**	**09 59 44.1**	**+0.1**
	0.2nm,0.6s,mb3.2,baz=44,slow=7.8,SNR=4.0						
ABKAR	**Akbulak array**	**49.17**	**60**	*eP*	**P**	**10 00 01.1**	**-1.4**
	1.5nm,0.9s,mb4.0						
PDAR	**Pinedale Array**	**49.29**	**287**	P	**P**	**10 00 02.9**	**-0.5**
	0.2nm,0.5s,mb3.4,baz=65,slow=9.0,SNR=2.7						
TXAR	**Lajitas Array**	**56.98**	**272**	P	**P**	**10 01 01.9**	**+1.6**
	0.2nm,0.7s,mb3.3,baz=20,slow=11,SNR=2.8						

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*ISCJB **03** 09:51:28.2±0.2,59°.81N±0°.06×29°.90W±0°.05,h10km, mb4.3/52,MS4.7/3,Error ellipse: s-maj=8.8km s-min=3.4km az=5.9*
*IDC **03** 09:51:28.4±0.6,59°.84N×29°.95W,h0km,mb4.1/24, mb1 4.3/25,mb1mx4.2/32,mbtmp4.1/25,ML4.3/1,MS4.7/2, Ms1 4.7/2,ms1mx3.9/19,Error ellipse: s-maj=19.9km s-min=11.6km az=178.0*
*NEIC **03** 09:51:30.0±0.2,59°.76N×29°.83W,h10km,mb4.6/30,Error ellipse: s-maj=7.7km s-min=3.5km az=8.0*
ISC 03 09:51:30.1±0.2,59°.79N±0°.06×29°.85W±0°.04,h10km,n226, σ0°67/224,mb4.3/52,MS4.7/3,78C-64D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.37**	**35**	Pn	**Pn**	**09 53 03.4**	**-0.3**
	6.1nm,0.3s,baz=210,slow=11,SNR=11						
BORG				Sn	**Sn**	**09 54 12.8**	**-3.6**
	1.9nm,0.3s,baz=290,slow=23,SNR=7.5						
JMIC	**Jan Mayen**	**14.20**	**29**	AMS	AMS	10 00 03.0	
	comp=Z,2μm,11.8s						
EKA	**Eskdalemuir Ar**	**14.95**	**96**	Pn	**Pn**	**09 55 04.7**	**+3.6**
	comp=Z,0.2nm,0.3s,baz=292,slow=9.4,SNR=11						
FOO	**Floro**	**17.06**	**69**	*e*	**Pn**	**09 55 31.0**	**+2.7**
FOO	**Floro**	**17.06**	**69**	*eP*	**Pn**	**09 55 31.0**	**+2.7**
BER	**Bergen**	**17.44**	**73**	*e*	**Pn**	**09 55 37.6**	**+4.6**
BER				*eS*	**Sn**	**09 58 55.7**	**+8.8**
BER	**Bergen**	**17.44**	**73**	*eP*	**Pn**	**09 55 37.6**	**+4.6**
KONO	**Kongsberg**	**19.70**	**73**	*e*	**Pn**	**09 56 00.4**	**-0.1**
KONO				*eS*	**Sn**	**09 59 41.8**	**+0.4**
KONO				AMS	AMS	10 04 20.1	
	comp=Z,2μm,15.0s						
NOA	**NORSAR Array B**	**20.08**	**69**	P	**P**	**09 56 04.8**	**+1.6**
	comp=Z,2.8nm,0.9s,baz=292,slow=9.5,SNR=3.1						
SCHQ	**Schefferville**	**20.39**	**272**	P	**P**	**09 56 06.2**	**-0.4**
	comp=Z,4.0nm,0.6s,baz=66,slow=8.5,SNR=7.8						
SCHQ	**Schefferville**	**20.39**	**272**	P	**P**	**09 56 06.2**	**-0.4**
BAIF	**Baives**	**21.62**	**102**	*eP*	**P**	**09 56 19.1**	**-0.9**
	comp=Z,93nm,1.5s,mb4.7						
BAIF	**Baives**	**21.62**	**102**	*eP*	**P**	**09 56 19.1**	**-0.9**
	comp=Z,46nm,1.5s,mb4.7						
GIVF	**Givet**	**21.90**	**101**	*eP*	**P**	**09 56 21.5**	**-1.4**
TRO	**Tromso**	**22.37**	**44**	*eS*	**S**	**10 00 35.8**	**+2.4**
TCF	**Toulx Ste Croi**	**23.25**	**111**	*eP*	**P**	**09 56 36.6**	**-0.7**
SFTF	**Sexfontaines**	**23.26**	**104**	*eP*	**P**	**09 56 36.6**	**-0.8**
	comp=Z,60nm,1.1s,mb4.6						
SFTF	**Sexfontaines**	**23.26**	**104**	*eP*	**P**	**09 56 36.6**	**-0.8**
	comp=Z,60nm,1.1s,mb4.9						
SSF	**Saint Saulge**	**23.31**	**108**	*eP*	**P**	**09 56 36.8**	**-1.1**
LOR	**Lormes**	**23.33**	**107**	*eP*	**P**	**09 56 37.1**	**-1.1**
BGF	**Bois d'Agland**	**23.36**	**110**	*eP*	**P**	**09 56 37.6**	**-0.8**
KTK1	**Kautokeino**	**23.91**	**45**	*eS*	**S**	**10 01 00.6**	**+1.2**
KTK1				AMS	AMS	10 05 59.7	
	comp=Z,2μm,18.3s,MS4.7						
CDF	**Champ du Feu**	**24.22**	**101**	*eP*	**P**	**09 56 46.4**	**-0.1**
ARCES	**ARCESS Array B**	**24.68**	**44**	P	**P**	**09 56 51.0**	**+0.5**
	comp=Z,6.4nm,0.9s,mb4.1,baz=246,slow=8.9,SNR=6.3						
MOX	**Moxa**	**24.97**	**93**	*eP*	**P**	**09 56 52.0**	**-1.4**
	comp=Z,40nm,1.6s,mb4.7						
MOX							
	comp=Z,3μm,18.0s						
ESDC	**Sonseca Array**	**25.88**	**129**	P	**P**	**09 57 02.9**	**+1.2**
	comp=Z,0.3nm,0.3s,mb3.3,baz=332,slow=9.3,SNR=6.7						
ESLA	**Sonseca Array**	**25.88**	**129**	*eP*	**P**	**09 57 01.5**	**-0.1**
	comp=Z,18nm,1.7s,mb4.3						
FINES	**FINESS Array B**	**26.79**	**62**	P	**P**	**09 57 09.3**	**-0.4**
	comp=Z,5.5nm,0.9s,mb4.1,baz=316,slow=8.0,SNR=5.5						
PGF	**Pioggiola**	**29.28**	**109**	*eP*	**P**	**09 57 31.2**	**-0.9**
	comp=Z,30nm,1.2s,mb4.6						
PGF	**Pioggiola**	**29.28**	**109**	*eP*	**P**	**09 57 31.2**	**-0.9**
	comp=Z,15nm,1.2s,mb4.6						
KIEV	**Kiev**	**33.79**	**79**	*eP*	**P**	**09 58 10.8**	**-0.9**
	comp=Z,12nm,1.2s,mb4.7						
AKASG	**Malin Array Be**	**33.79**	**79**	P	**P**	**09 58 10.8**	**-0.9**
	comp=Z,5.4nm,0.9s,mb4.5,baz=303,slow=8.4,SNR=7.3						
KEST	**Kesra**	**34.87**	**116**	*eP*	**P**	**09 58 22.7**	**+1.6**
YKA	**Yellowknife Ar**	**38.23**	**312**	P	**P**	**09 58 49.3**	**-0.2**
	comp=Z,2.0nm,0.8s,mb3.9,baz=54,slow=9.1,SNR=12						
YKA				PcP	PcP	10 01 02.3	-1.2
	comp=Z,0.4nm,0.7s,baz=52,slow=3.5,SNR=6.6						
YKA	**Yellowknife Ar**	**38.23**	**312**	P	**P**	**09 58 49.3**	**-0.3**
YKA				PcP	PcP	10 01 02.4	-1.2
AGMN	**Agassiz Nation**	**38.79**	**283**	*eP*	**P**	**09 58 55.0**	**+0.6**
	comp=Z,5.7nm,1.1s,mb4.2						
INK	**Inuvik**	**40.85**	**326**	P	**P**	**09 59 09.9**	**-1.4**
	comp=Z,2.0nm,0.8s,mb3.8,baz=48,slow=9.3,SNR=7.1						
TKL	**Tuckaleechee C**	**42.00**	**260**	P	**P**	**09 59 21.9**	**+0.8**
	comp=Z,2.4nm,0.8s,mb3.9,baz=58,slow=16,SNR=3.5						
TKL				LR	LR	10 15 25.2	
	comp=Z,1μm,20.4s,MS4.9,baz=41,slow=34						
EDM	**Edmonton**	**43.64**	**300**	*eP*	**P**	**09 59 34.5**	**+0.3**
BRTR	**Keskin Array B**	**43.68**	**88**	P	**P**	**09 59 36.0**	**+1.4**
	comp=Z,1.8nm,0.9s,mb3.8,baz=316,slow=5.2,SNR=6.2						
CCM	**Cathedral Cave**	**43.89**	**269**	*eP*	**P**	**09 59 35.9**	**-0.5**
	comp=Z,28nm,1.4s,mb4.8						
TAM	**Tamanrasset**	**44.53**	**130**	*eP*	**P**	**09 59 43.4**	**+1.7**
	comp=Z,4.8nm,1.3s,mb4.2						
A19A	**Klindworth Far**	**44.54**	**293**	⇑P	**P**	**09 59 41.4**	**-0.1**
	baz=44						
LAO	**LASA Array**	**44.95**	**289**	*eP*	**P**	**09 59 46.0**	**+1.2**
	comp=Z,49nm,2.0s,mb5.0						
C20A	**Veseth Ranch,**	**45.06**	**291**	⇓P	**P**	**09 59 45.1**	**-0.5**
	baz=45						
A18A	**Metzger Ranch,**	**45.06**	**293**	⇑P	**P**	**09 59 45.0**	**-0.6**
	baz=45						
B18A	**Beardsley Farm**	**45.40**	**293**	⇑P	**P**	**09 59 47.2**	**-1.2**
	baz=45						
A17A	**Triple J Farms**	**45.44**	**294**	⇑P	**P**	**09 59 47.3**	**-1.3**
	baz=45						
HBAR	**Harrisburg**	**45.53**	**266**	*eP*	**P**	**09 59 48.8**	**-0.7**
C19A	**Slack Wire Ran**	**45.54**	**292**	⇓P	**P**	**09 59 48.6**	**-0.8**
	baz=45						
DAWY	**Dawson**	**45.54**	**325**	*eP*	**P**	**09 59 49.9**	**+0.7**
D20A	**Manuel Ranch,**	**45.57**	**290**	⇓P	**P**	**09 59 48.6**	**-1.0**
	baz=45						
LRAL	**Lakeview Retre**	**45.69**	**260**	*eP*	**P**	**09 59 50.7**	**-0.1**
	comp=Z,8.8nm,0.8s,mb4.7						
A16A	**West Butte Ran**	**45.85**	**295**	⇑P	**P**	**09 59 51.4**	**-0.5**
	baz=46						
D19A	**Cripps Ranch,**	**45.87**	**291**	⇓P	**P**	**09 59 51.8**	**-0.2**
	baz=46						
B17A	**L&G Farms, Che**	**45.95**	**293**	⇑P	**P**	**09 59 52.5**	**-0.2**
	baz=46,SNR=7.3						
D18A	**Linhart Farms,**	**46.28**	**292**	⇑P	**P**	**09 59 54.9**	**-0.4**
	baz=46						
B16A	**M & M Farms, S**	**46.29**	**294**	⇑P	**P**	**09 59 55.2**	**-0.1**
	baz=46,SNR=6.6						
E19A	**Rath Farm, Rou**	**46.33**	**290**	⇑P	**P**	**09 59 55.5**	**-0.2**
	baz=46						
A15A	**Johnson Ranch,**	**46.35**	**295**	⇑P	**P**	**09 59 55.3**	**-0.5**
	baz=46,SNR=6.3						
C17A	**Wharram Farm,**	**46.41**	**293**	⇓P	**P**	**09 59 55.3**	**-1.0**
	baz=46						
A14A	**Double T Ranch**	**46.67**	**296**	⇑P	**P**	**09 59 57.7**	**-0.5**
	baz=46						
D17A	**Six Diamond Ra**	**46.73**	**292**	⇓P	**P**	**09 59 58.8**	**0.0**
	baz=46						
B15A	**Bradely Ranch,**	**46.75**	**295**	⇑P	**P**	**09 59 58.7**	**-0.3**
	baz=47,SNR=6.7						
G20A	**Bridger**	**46.97**	**289**	⇑P	**P**	**09 59 59.9**	**-0.8**
	baz=47						
B14A	**Marquette Ranc**	**47.04**	**295**	⇓P	**P**	**10 00 00.9**	**-0.4**
	baz=47						
ILAR	**Eielson Array**	**47.09**	**329**	P	**P**	**10 00 01.8**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.1,baz=33,slow=7.0,SNR=26						
A13A	**Flathead Natio**	**47.15**	**296**	⇓P	**P**	**10 00 01.4**	**-0.7**
	baz=47						
C15A	**Salmond Ranch,**	**47.16**	**294**	⇓P	**P**	**10 00 02.0**	**-0.2**
	baz=47,SNR=6.7						
F18A	**Big Timber**	**47.18**	**290**	⇑P	**P**	**10 00 01.9**	**-0.5**
	baz=47						
D16A	**Dana Ranch, Ca**	**47.22**	**293**	⇑P	**P**	**10 00 02.3**	**-0.3**
	baz=47						
AKTK	**Aktyubinsk**	**47.53**	**60**	P	**P**	**10 00 05.3**	**+0.4**
AKTO	**Aktyubinsk**	**47.53**	**60**	P	**P**	**10 00 05.3**	**+0.4**
	comp=Z,4.4nm,0.6s,mb4.7,baz=321,slow=7.5,SNR=14						
G18A	**Lazy EL Ranch,**	**47.54**	**290**	⇓P	**P**	**10 00 05.4**	**+0.2**
	baz=47						
RLMT	**Red Lodge**	**47.54**	**289**	⇑P	**P**	**10 00 05.3**	**+0.2**
	baz=47						
RLMT	**Red Lodge**	**47.54**	**289**	*eP*	**P**	**10 00 05.7**	**+0.5**
	comp=Z,7.8nm,1.5s,mb4.5						
I21A	**Big Trails, Te**	**47.56**	**287**	⇑P	**P**	**10 00 04.9**	**-0.4**
	baz=47						
B13A	**Whitefish**	**47.58**	**296**	⇑P	**P**	**10 00 05.4**	**0.0**
	baz=47						
F17A	**Fitzpatrick Pl**	**47.63**	**291**	⇓P	**P**	**10 00 05.8**	**0.0**
	baz=47						
D15A	**Lincoln**	**47.66**	**293**	⇑P	**P**	**10 00 05.8**	**-0.2**
	baz=48						
C14A	**Swan Lake**	**47.69**	**295**	⇑P	**P**	**10 00 06.4**	**+0.1**
	baz=48						
MIAR	**Mount Ida**	**47.80**	**268**	*eP*	**P**	**10 00 07.2**	**0.0**
	comp=Z,18nm,1.3s,mb4.9						
SLMT	**Seeley Lake**	**47.96**	**294**	*eP*	**P**	**10 00 08.7**	**+0.3**
	comp=Z,5.9nm,0.9s,mb4.6						
J21A	**Lysite**	**47.99**	**286**	⇓P	**P**	**10 00 08.9**	**+0.3**
	baz=48						
SWMT	**Swartz Lake**	**48.00**	**295**	*eP*	**P**	**10 00 08.4**	**-0.3**
	comp=Z,6.5nm,1.2s,mb4.5						
H18A	**Shoshone NF, C**	**48.06**	**289**	⇓P	**P**	**10 00 09.0**	**-0.2**
	baz=48						
BSMT	**Bassoo Peak**	**48.11**	**296**	*eP*	**P**	**10 00 09.9**	**+0.4**
	comp=Z,4.4nm,1.1s,mb4.4						
E15A	**Deer Lodge**	**48.17**	**293**	⇓P	**P**	**10 00 09.6**	**-0.4**
	baz=48,SNR=6.1						
I19A	**Meeteetse**	**48.22**	**288**	⇓P	**P**	**10 00 10.8**	**+0.4**
	baz=48						
BOZ	**Bozeman (W)**	**48.27**	**292**	⇑P	**P**	**10 00 10.9**	**0.0**
	baz=48						
BOZ	**Bozeman (W)**	**48.27**	**292**	*eP*	**P**	**10 00 11.7**	**+0.9**
	comp=Z,5.5nm,1.3s,mb4.4						
J20A	**Shoshoni**	**48.29**	**287**	⇑P	**P**	**10 00 11.2**	**+0.2**
	baz=48						
C12B	**Naegeli Ranch,**	**48.53**	**296**	⇑P	**P**	**10 00 13.1**	**+0.3**
	baz=48						
LRM	**Limekiln Ridge**	**48.53**	**292**	*eP*	**P**	**10 00 13.6**	**+0.8**
	comp=Z,35nm,1.2s,mb5.3						
F15A	**Butte**	**48.54**	**292**	⇑P	**P**	**10 00 13.1**	**+0.2**
	baz=48						
PHWY	**Pilot Hill**	**48.55**	**283**	*eP*	**P**	**10 00 13.5**	**+0.4**
	comp=Z,14nm,0.7s,mb5.1						
E14A	**Clinton**	**48.57**	**294**	⇑P	**P**	**10 00 13.2**	**+0.1**
	baz=48						
G16A	**Moss Hill, Enn**	**48.67**	**291**	⇑P	**P**	**10 00 14.0**	**+0.1**
	baz=48						
C11A	**Tepee Creek (N**	**48.78**	**297**	⇑P	**P**	**10 00 14.2**	**-0.6**
	baz=49						
K20A	**Yellowstone Ra**	**48.94**	**287**	⇑P	**P**	**10 00 15.8**	**-0.2**
	baz=49						
D12A	**Red Ives Fores**	**48.96**	**295**	⇓P	**P**	**10 00 15.7**	**-0.4**
	baz=49						
G15A	**Dillon**	**49.04**	**292**	⇑P	**P**	**10 00 17.1**	**+0.4**
	baz=49						
N23A	**Red Feather La**	**49.10**	**283**	⇓P	**P**	**10 00 17.6**	**+0.4**
	baz=49						
ABKAR	**Akbulak array**	**49.24**	**60**	*eP*	**P**	**10 00 19.0**	**+0.8**
	comp=Z,2.9nm,0.8s,mb4.4						
IMW	**Indian Meadow**	**49.25**	**289**	*eP*	**P**	**10 00 18.9**	**+0.6**
	comp=Z,2.1nm,1.0s,mb4.1						
J18A	**Kendall Valley**	**49.33**	**288**	⇑P	**P**	**10 00 19.4**	**+0.5**
	baz=49						
BW06	**Boulder Array**	**49.44**	**288**	⇓P	**P**	**10 00 19.2**	**-0.6**
	baz=49						
PDAR	**Pinedale Array**	**49.44**	**288**	P	**P**	**10 00 19.4**	**-0.5**
	comp=Z,1.1nm,0.8s,mb3.9,baz=54,slow=7.6,SNR=8.3						
MCMT	**McKenzie Canyo**	**49.46**	**292**	*eP*	**P**	**10 00 20.7**	**+0.8**
	comp=Z,2.7nm,1.3s,mb4.1						
I16A	**Newdale**	**49.53**	**290**	⇑P	**P**	**10 00 21.2**	**+0.7**
	baz=49						
E12A	**Beaver Dam Sad**	**49.53**	**295**	⇑P	**P**	**10 00 19.9**	**-0.6**
	baz=49						
ISCO	**Idaho Springs**	**49.77**	**282**	⇓P	**P**	**10 00 22.2**	**-0.1**
	baz=50						
B08A	**Colville Reser**	**49.77**	**299**	⇓P	**P**	**10 00 22.6**	**+0.3**
	baz=50						
Q25A	**Bedland, Calha**	**49.77**	**280**	⇓P	**P**	**10 00 22.0**	**-0.4**
	baz=50						
L19A	**Farson**	**49.85**	**287**	⇓P	**P**	**10 00 22.2**	**-0.7**
	baz=50						
H14A	**Leadore**	**49.86**	**292**	⇓P	**P**	**10 00 23.1**	**+0.1**
	baz=50						
G13A	**Cobalt**	**49.91**	**293**	⇓P	**P**	**10 00 23.5**	**+0.2**
	baz=50						
O22A	**Kremmling**	**49.95**	**283**	⇓P	**P**	**10 00 23.7**	**-0.1**
	baz=50						
N21A	**Black Mountain**	**49.98**	**284**	⇑P	**P**	**10 00 24.4**	**+0.5**
	baz=50						
J16A	**Bone**	**50.05**	**289**	⇑P	**P**	**10 00 25.0**	**+0.6**
	baz=50						
WMOK	**Wichita Mounta**	**50.28**	**272**	*eP*	**P**	**10 00 26.1**	**-0.2**
	comp=Z,7.7nm,1.0s,mb4.7						
N20A	**Spence Gulch,**	**50.28**	**285**	⇑P	**P**	**10 00 26.5**	**+0.3**
	baz=50						
H13A	**Challis**	**50.32**	**292**	⇑P	**P**	**10 00 26.4**	**-0.1**
	baz=50,SNR=5.3						
J15A	**Blackfoot**	**50.34**	**290**	⇓P	**P**	**10 00 25.8**	**-0.8**
	baz=50						
R25A	**Fountain Ranch**	**50.38**	**280**	⇑P	**P**	**10 00 26.5**	**-0.6**
	baz=50						
G12A	**Big Creek, Yel**	**50.39**	**294**	⇓P	**P**	**10 00 26.0**	**-1.0**
	baz=50						
P22A	**Eagle**	**50.49**	**283**	⇓P	**P**	**10 00 27.5**	**-0.4**
	baz=50						
H12A	**Diamond D Ranc**	**50.61**	**293**	⇓P	**P**	**10 00 28.5**	**-0.2**
	baz=50						
BVAR	**Borovoye Array**	**50.71**	**50**	P	**P**	**10 00 29.7**	**+0.4**
	comp=Z,1.2nm,0.8s,mb3.9,baz=328,slow=5.4,SNR=4.9						
I13A	**Wildhorse Cree**	**50.74**	**292**	⇑P	**P**	**10 00 29.5**	**-0.2**
	baz=51						
S25A	**Robets Cordova**	**50.84**	**279**	⇓P	**P**	**10 00 30.7**	**+0.3**
	baz=51						
N18A	**Larsen Ranch,**	**50.86**	**286**	⇑P	**P**	**10 00 30.6**	**0.0**
	baz=51						
O19A	**Miners Draw (B**	**51.11**	**285**	⇑P	**P**	**10 00 32.6**	**+0.1**
	baz=51						
Q22A	**Crested Butte,**	**51.13**	**282**	⇓P	**P**	**10 00 32.8**	**+0.1**
	baz=51						
HLID	**Hailey**	**51.15**	**292**	⇑P	**P**	**10 00 32.4**	**-0.4**
	baz=51						
T25A	**Trinidad**	**51.23**	**279**	⇓P	**P**	**10 00 33.7**	**+0.2**
	baz=51						
I12A	**Atlanta**	**51.31**	**292**	⇓P	**P**	**10 00 34.3**	**+0.3**
	baz=51						
K14A	**Jones Ranch, D**	**51.34**	**290**	⇑P	**P**	**10 00 33.6**	**-0.6**
	baz=51						
N17A	**Moffit Pass**	**51.45**	**287**	⇓P	**P**	**10 00 35.4**	**+0.3**
	baz=51						
M16A	**Huntsville**	**51.55**	**288**	⇓P	**P**	**10 00 35.5**	**-0.3**
	baz=51						
O18A	**Roosevelt**	**51.57**	**286**	⇓P	**P**	**10 00 35.5**	**-0.4**
	baz=51						
U25A	**Circle Dot Ran**	**51.80**	**278**	⇓P	**P**	**10 00 38.0**	**+0.2**
	baz=52						
M15A	**Larsen Ranch,**	**51.83**	**289**	⇓P	**P**	**10 00 37.6**	**-0.2**
	baz=52						
R21A	**Cimarron**	**51.83**	**282**	⇓P	**P**	**10 00 39.0**	**+1.0**
	baz=52						
G08A	**Pilot Rock**	**51.93**	**296**	⇑P	**P**	**10 00 38.5**	**0.0**
	baz=52						
V26A	**Tequesquite Ra**	**51.97**	**277**	⇑P	**P**	**10 00 38.8**	**-0.2**
	baz=52						
TORD	**Torodi Ar. Bea**	**52.06**	**140**	P	**P**	**10 00 40.1**	**+0.3**
	comp=Z,0.5nm,0.3s,mb3.9,baz=356,slow=10,SNR=2.9						
P18A	**Preston Nutter**	**52.18**	**285**	⇑P	**P**	**10 00 40.5**	**0.0**
	baz=52						
V25A	**Rancho No Teng**	**52.35**	**278**	⇑P	**P**	**10 00 42.1**	**+0.3**
	baz=52						
Q18A	**Rafter H Ranch**	**52.53**	**285**	⇑P	**P**	**10 00 42.8**	**-0.3**
	baz=52						
W25A	**X Bar L Ranch,**	**52.76**	**277**	⇑P	**P**	**10 00 43.9**	**-1.0**
	baz=53						
MSTX	**Muleshoe**	**52.90**	**275**	⇑P	**P**	**10 00 46.2**	**+0.3**
	baz=53						
R18A	**Canyonlands Na**	**52.97**	**284**	⇑P	**P**	**10 00 45.9**	**-0.5**
	baz=53						
U22A	**Llaves**	**53.04**	**280**	⇑P	**P**	**10 00 47.8**	**+0.9**
	baz=53						
S19A	**Harvey Farm, M**	**53.10**	**283**	⇑P	**P**	**10 00 47.3**	**0.0**
	baz=53						
MVCO	**Mesa Verde**	**53.20**	**282**	⇓P	**P**	**10 00 48.8**	**+0.7**
	baz=53						
W24A	**Lazy 6 Ranch,**	**53.24**	**278**	⇑P	**P**	**10 00 49.3**	**+0.9**
	baz=53,SNR=5.4						
Y25A	**Mesa, Roswell**	**53.90**	**277**	⇓P	**P**	**10 00 52.5**	**-0.8**
	baz=54						
T18A	**Mexican Hat**	**53.94**	**283**	⇑P	**P**	**10 00 53.0**	**-0.5**
	baz=54						
WVOR	**Wild Horse Val**	**53.99**	**294**	*eP*	**P**	**10 00 53.7**	**-0.1**
	comp=Z,11nm,1.5s,mb4.5						
Z26A	**Caprock**	**54.06**	**276**	⇑P	**P**	**10 00 54.1**	**-0.4**
	baz=54,SNR=7.0						
P13A	**Bates Ranch, G**	**54.14**	**288**	⇓P	**P**	**10 00 55.7**	**+0.8**
	baz=54						
Q14A	**Sevier Lake (B**	**54.15**	**287**	⇑P	**P**	**10 00 54.2**	**-0.8**
	baz=54						
JCT	**Junction City**	**54.19**	**270**	⇓P	**P**	**10 00 54.6**	**-0.8**
	baz=54,SNR=5.5						
JCT	**Junction City**	**54.19**	**270**	*eP*	**P**	**10 00 55.1**	**-0.3**
	comp=Z,8.7nm,0.9s,mb4.7						
Y24A	**Capitan**	**54.27**	**277**	⇓P	**P**	**10 00 57.1**	**+1.1**
	baz=54						
S16A	**Weppner Ranch,**	**54.33**	**285**	⇑P	**P**	**10 00 56.6**	**+0.3**
	baz=54						
KDAK	**Kodiak Island**	**54.41**	**326**	LR	LR	10 23 28.8	
	comp=Z,410nm,21.9s,MS4.5,baz=56,slow=35						
Z25A	**Roswell**	**54.43**	**276**	⇓P	**P**	**10 00 57.1**	**0.0**
	baz=54						
U18A	**Rough Rock, Ch**	**54.50**	**283**	⇓P	**P**	**10 00 57.9**	**+0.3**
	baz=54						
126A	**Clayton Basin,**	**54.58**	**275**	⇑P	**P**	**10 00 58.4**	**+0.2**
	baz=54						
LAZ	**Ladron**	**54.75**	**279**	*eP*	**P**	**10 01 01.2**	**+1.8**
	comp=Z,3.1nm,1.3s,mb4.2						
Y22A	**Socorro**	**55.03**	**278**	⇓P	**P**	**10 01 02.0**	**+0.6**
	baz=55						
X21A	**Alamocita Cree**	**55.03**	**280**	⇑P	**P**	**10 01 01.9**	**+0.4**
	baz=55						
226A	**Malaga, Loving**	**55.09**	**275**	⇓P	**P**	**10 01 02.5**	**+0.6**
	baz=55						
GDL2	**Guadalupe Moun**	**55.11**	**275**	*eP*	**P**	**10 01 02.5**	**+0.4**
	comp=Z

KSRS	Korea Array	81.38	18	P	P		10 03 45.9	-0.8
	comp=Z,1.1nm,0.7s,mb3.9,baz=344,slow=5.9,SNR=4.9							
LPAZ	La Paz	81.91	217	P	P		10 03 49.8	+0.4
	comp=Z,0.9nm,0.9s,mb3.7,baz=63,slow=6.8,SNR=3.2							
MJAR	Matsushiro Arr	83.52	10	P	P		10 03 57.1	-0.6
	comp=Z,0.8nm,0.6s,mb4.0,baz=337,slow=6.0,SNR=4.4							
CMAR	Chiang Mai Arr	91.68	48	P	P		10 04 36.4	-1.1
	comp=Z,0.8nm,0.3s,mb4.5,baz=322,slow=5.7,SNR=4.7							
ASAR	Alice Springs	142.14	25	PKhKP	PKPpre		10 10 57.2	
	comp=Z,0.3nm,0.6s,baz=350,slow=3.1,SNR=7.9							
QSPA	South Pole Qui	149.69	180	*e*PKPbc	PKPbc		10 11 18.5	+0.6
QSPA				*e*PKPab	PKPab		10 11 25.9	+2.6
STKA	Stephens Creek	151.50	15	PKPbc	PKPbc		10 11 21.9	-1.7
	comp=Z,1.1nm,0.5s,baz=315,slow=5.7,SNR=3.5							

IDC ***03*** *09:52:45.8±0.5, 59°.85N×29°.92W, h0km, mb4.3/28, mb1 4.4/29, mb1mx4.4/34, mbtmp4.3/29, ML2.8/1, MS4.5/8, Ms1 4.5/8, ms1mx4.2/17, Error ellipse: s-maj=16.4km s-min=10.7km az=14.0*

GCMT ***03*** *09:52:45.9±0.2, 59°.81N×29°.59W, h12km, MW5.2, Moment Tensor Solution. s22,c26; s87,c156; Moment tensor: Scale 10^16^Nm; Mrr=6.99±.17; Mθθ0.78±.18; Mφφ6.21±.13; Mrθ1.48±.75; Mθφ1.33±.13; Mφr=3.29±.53; Best double couple: M0=7.60000×10^16^ NP1:φ=205.00000°, δ35.00000°, λ=67.00000°; NP2:φ=358.00000°, δ58.00000°, λ=105.00000°. Principal axes: T 7.1300, Plg12.0000°, Azm99.0000°; N 0.9800, Plg13.0000°, Azm6.0000°; P -8.1100, Plg72.0000°, Azm231.0000°; Data Used: IU II CN G IC.*

BJI ***03*** *09:52:45.8, 60°.10N×30°.10W, h7km, mB5.1/2, mb4.9/8, Ms4.6/3, Ms7 4.5/3*

CSEM ***03*** *09:52:46.4±0.1, 59°.95N×29°.86W, h2km, mb4.9/99, Ms4.7, Mw5.2, Error ellipse: s-maj=3.9km s-min=3.5km az=17.0*

ISCJB ***03*** *09:52:46.5±0.1, 60°.01N±0°.02×29°.79W±0°.02, h10km, mb4.7/143, MS4.6/27, Error ellipse: s-maj=2.7km s-min=1.7km az=0.8*

MOS ***03*** *09:52:46.2±1.2, 59°.85N×29°.91W, h10km, mb4.9/59, Error ellipse: s-maj=8.4km s-min=5.9km az=36.3*

NEIC ***03*** *09:52:47.9±0.2, 59°.91N×29°.85W, h10km, mb4.8/83, MS4.8/4, Error ellipse: s-maj=6.2km s-min=3.0km az=20.0*

REY ***03*** *09:52:48.2, 59°.45N×27°.80W, h10km, ML4.1, ML3.5*

IGIL ***03*** *09:52:52.3, 59°.87N×29°.86W, h33km, mb4.8*

SZGRF ***03*** *09:52:57.2, 59°.89N×27°.96W, h33km, mb4.8, MS4.7, North Atlantic Ocean*

ISC 03 09:52:48.3±0.1, 59°.95N±0°.02×29°.77W±0°.02, h10km, n667, σ0=0.90/669, mb4.7/143, MS4.6/27, 74C-98D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INYL	Nylenda	5.22	36	P	Pn	09 54 06.4	+0.1
INYL				S	Sn	09 55 08.4	+1.9
IGRV	Grindav??k	5.22	38	P	Pn	09 54 05.7	-0.6
IGRV				S	Sn	09 55 07.1	+0.6
IVOG	Vogar	5.32	38	P	Pn	09 54 07.4	-0.3
IVOS	Vogsosar	5.46	41	P	Pn	09 54 08.4	-1.2
IVOS				S	Sn	09 55 11.9	-0.5
ISAN	Sandskeio	5.64	40	P	Pn	09 54 10.7	-1.4
ISAN				S	Sn	09 55 17.2	+0.4
IBJA	Bjarnastaoir	5.66	41	P	Pn	09 54 10.7	-1.6
IBJA				S	Sn	09 55 16.7	-0.5
IKUD	Kuludalsa	5.73	37	P	Pn	09 54 14.2	+0.8
IKUD				S	Sn	09 55 19.8	+0.7
ISOL	Solvholt	5.76	42	P	Pn	09 54 12.6	-1.2
ISOL				S	Sn	09 55 18.5	-1.3
IKRO	Krokur	5.82	41	P	Pn	09 54 14.6	+0.1
IKRO				S	Sn	09 55 20.8	-0.3
IASM	Asmuli	5.82	44	S	Sn	09 55 19.6	-1.6
IHEI	Heioarbar	5.85	40	P	Pn	09 54 14.9	0.0
IHEI				S	Sn	09 55 23.0	+1.1
ISAU	Saurbar	5.98	43	P	Pn	09 54 14.5	-2.3
ISAU				S	Sn	09 55 24.1	-1.2
IHAU	Haukadalur	6.13	45	S	Sn	09 55 27.1	-1.7
BORG	Borgarnes	6.21	36	Pn	Pn	09 54 17.8	-2.1
	8.7nm,0.3s,baz=218,slow=17,SNR=8.3						
BORG				Sn	Sn	09 55 31.1	+0.4
	2.4nm,0.3s,baz=293,slow=20,SNR=5.4						
BORG	Borgarnes	6.21	36	P	Pn	09 54 17.8	-2.1
BORG				Sn	Sn	09 55 31.1	+0.3
IGYG	Gygjarholskot	6.24	42	P	Pn	09 54 19.8	-0.4
IGYG				S	Sn	09 55 31.6	+0.1
JMIC	Jan Mayen	14.04	29	LR	LR	10 00 09.3	
	comp=Z,2μm,18.8s,baz=36,slow=31						
EKA	Eskdalemuir Ar	14.92	96	Pn	Pn	09 56 19.2	+0.2
	0.0nm,0.3s,baz=288,slow=14,SNR=3.4						
EKA	Eskdalemuir Ar	14.92	96	Pn	Pn	09 56 19.2	+0.2
ROSF	Rostrenen	19.24	115	*e*P	Pn	09 57 12.0	-1.4
ROSF	Rostrenen	19.24	115	*e*P	Pn	09 57 12.0	-1.4
QUIF	Quistinic	19.60	116	*e*P	Pn	09 57 16.1	-1.6
	182nm,1.5s						
QUIF	Quistinic	19.60	116	*e*P	Pn	09 57 16.1	-1.6
QUIF				pmax	pmax		
	comp=Z,91nm,1.5s						
QUIF	Quistinic	19.60	116	*e*P	Pn	09 57 16.1	-1.6
	comp=Z,91nm,1.5s						
QUIF	Quistinic	19.60	116	*e*P	Pn	09 57 16.1	-1.6
	comp=Z,91nm,1.5s						
SGMF	Saint Gilles	19.62	114	*e*P	Pn	09 57 15.8	-2.2
	comp=Z,210nm,1.8s						
SGMF	Saint Gilles	19.62	114	*e*P	Pn	09 57 15.8	-2.2
SGMF				pmax	pmax		
	comp=Z,105nm,1.8s						
SGMF	Saint Gilles	19.62	114	*e*P	Pn	09 57 15.8	-2.2
	comp=Z,105nm,1.8s						
SGMF	Saint Gilles	19.62	114	*e*P	Pn	09 57 15.8	-2.2
	comp=Z,105nm,1.8s						
NB2	NORSAR Subarra	19.98	69	P	Pn	09 57 19.9	-2.3
	comp=Z,24nm,1.7s,baz=282,slow=11						
NB2	NORSAR Subarra	19.98	69	P	Pn	09 57 19.9	-2.3
NOA	NORSAR Array B	19.98	69	P	Pn	09 57 21.2	-1.0
	comp=Z,3.6nm,1.0s,baz=304,slow=9.2,SNR=4.9						
NOA	NORSAR Array B	19.98	69	P	Pn	09 57 21.2	-1.0
NOA	NORSAR Array B	19.98	69	P	Pn	09 57 21.2	-1.0
FLN	La Foliniere	20.23	111	*e*P	P	09 57 22.6	-0.6
	comp=Z,123nm,1.3s						
FLN				*e*MLR	MLR		
	comp=Z,3μm,21.2s,MS4.3						
FLN	La Foliniere	20.23	111	*e*P	P	09 57 22.6	-0.6
FLN				pmax	pmax		
	comp=Z,62nm,1.3s						
FLN				MLR	MLR		
	comp=Z,3μm,21.3s,MS4.6						
FLN	La Foliniere	20.23	111	*e*P	P	09 57 22.6	-0.6
	comp=Z,62nm,1.3s						
FLN				LR	LR		
	comp=Z,3μm,21.3s,MS4.6						
FLN	La Foliniere	20.23	111	*e*P	P	09 57 22.6	-0.6
	comp=Z,62nm,1.3s						
GRR	Gorron	20.31	112	*e*P	P	09 57 23.6	-0.5
	comp=Z,184nm,1.4s						
GRR	Gorron	20.31	112	*e*P	P	09 57 23.6	-0.5
GRR				pmax	pmax		
	comp=Z,92nm,1.4s						
GRR	Gorron	20.31	112	*e*P	P	09 57 23.6	-0.5
	comp=Z,92nm,1.4s						
GRR	Gorron	20.31	112	*e*P	P	09 57 23.6	-0.5
	comp=Z,92nm,1.4s						
SCHQ	Schefferville	20.42	272	P	P	09 57 23.9	-1.3
	comp=Z,9.3nm,0.8s,baz=54,slow=6.6,SNR=8.0						
SCHQ				LR	LR	10 03 54.0	
	comp=Z,2μm,18.8s,MS4.5,baz=67,slow=33						
SCHQ	Schefferville	20.42	272	P	P	09 57 24.0	-1.2
LDF	La Druitiere	20.51	110	*e*P	P	09 57 25.5	-0.8
LDF	La Druitiere	20.51	110	*e*P	P	09 57 25.5	-0.8
SNF	Seneffe	21.36	101	P	P	09 57 34.8	-0.7
	comp=Z,38nm,1.7s,mb4.5						
HFS	Hagfors	21.42	71	P	P	09 57 36.6	+0.6
	comp=Z,10nm,1.0s,mb4.1,baz=222,slow=2.0,SNR=5.0						
HFS				LR	LR	10 04 33.1	
	comp=Z,2μm,21.7s,MS4.5,baz=293,slow=33						
HFS	Hagfors	21.42	71	P	P	09 57 36.6	+0.6
HFS				LR	LR	10 04 33.1	
HFS	Hagfors	21.42	71	P	P	09 57 36.6	+0.6
STS	Santiago	21.45	133	P	P	09 57 35.5	-0.9
STS				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.4						
STS	Santiago	21.45	133	P	P	09 57 35.5	-0.9
	comp=Z,11nm,0.6s,mb4.4						
STS	Santiago	21.45	133	P	P	09 57 35.5	-0.9
	comp=Z,11nm,0.6s,mb4.4						
EPON	Pontenova	21.59	130	P	P	09 57 36.9	-1.1
	comp=Z,407nm,1.7s,mb5.6						
EPON	Pontenova	21.59	130	P	P	09 57 36.8	-1.2
	comp=Z,407nm,1.7s,mb5.6						
BAIF	Baives	21.62	102	*e*P	P	09 57 37.3	-0.9
	comp=Z,133nm,1.1s,mb5.0						
BAIF	Baives	21.62	102	*e*P	P	09 57 37.3	-0.9
BAIF				pmax	pmax		
	comp=Z,66nm,1.1s,mb5.0						
BAIF	Baives	21.62	102	*e*P	P	09 57 37.3	-0.9
	comp=Z,66nm,1.1s,mb5.0						
BAIF	Baives	21.62	102	*e*P	P	09 57 37.3	-0.9
	comp=Z,66nm,1.1s,mb5.0						
DOU	Dourbes	21.78	102	P	P	09 57 39.7	-0.3
	comp=Z,32nm,2.2s,mb4.4						
BEBN	Eben Emael	21.88	99	P	P	09 57 41.4	+0.4
	comp=Z,11nm,1.5s,mb4.1						
GIVF	Givet	21.89	101	*e*P	P	09 57 39.8	-1.3
	comp=Z,161nm,1.4s,mb5.0						
GIVF	Givet	21.89	101	*e*P	P	09 57 39.8	-1.3
GIVF				pmax	pmax		
	comp=Z,80nm,1.4s,mb5.0						
GIVF	Givet	21.89	101	*e*P	P	09 57 39.8	-1.3
	comp=Z,80nm,1.4s,mb5.0						
GIVF	Givet	21.89	101	*e*P	P	09 57 39.8	-1.3
	comp=Z,80nm,1.4s,mb5.0						
BCLA	Clavier	21.93	100	P	P	09 57 40.8	-0.7
	comp=Z,33nm,1.3s,mb4.6						
MFF	Saint Martin d	21.95	114	*e*P	P	09 57 40.5	-1.3
	comp=Z,152nm,1.4s,mb4.9						
MFF	Saint Martin d	21.95	114	*e*P	P	09 57 40.5	-1.3
MFF				pmax	pmax		
	comp=Z,76nm,1.4s,mb4.9						
MFF	Saint Martin d	21.95	114	*e*P	P	09 57 40.5	-1.3
	comp=Z,76nm,1.4s,mb4.9						
MFF	Saint Martin d	21.95	114	*e*P	P	09 57 40.5	-1.3
	comp=Z,76nm,1.4s,mb4.9						
MEM	Membach	22.16	99	P	P	09 57 43.9	-0.1
	comp=Z,24nm,1.5s,mb4.4						
TRO	Tromso	22.22	44	*e*P	P	09 57 49.7	+5.2
TRO	Tromso	22.22	44	*e*P	P	09 57 49.7	+5.2
TRO	Tromso	22.22	44	*e*	P	09 57 49.7	+5.2
EARI	Arriondas	22.38	127	P	P	09 57 46.2	-0.1
	comp=Z,271nm,2.2s,mb5.3						
EARI	Arriondas	22.38	127	P	P	09 57 46.2	-0.2
	comp=Z,271nm,2.2s,mb5.3						
WLF	Walferdange	22.83	101	P	P	09 57 51.8	+0.7
	comp=Z,21nm,1.7s,mb4.3						
WLF	Walferdange	22.83	101	*e*P	P	09 57 51.9	+0.8
	comp=Z,44nm,1.4s,mb4.7						
ECAL	Calabor	22.94	131	P	P	09 57 53.7	+1.4
	comp=Z,495nm,3.0s						
ECAL	Calabor	22.94	131	P	P	09 57 53.7	+1.4
	comp=Z,495nm,3.0s						
MEZF	Maizieres J'vi	23.06	104	*e*P	P	09 57 52.1	-1.5
MEZF	Maizieres J'vi	23.06	104	*e*P	P	09 57 52.1	-1.5
PVRL	Vila Real	23.16	134	*e*P	P	09 57 55.8	+1.2
	comp=Z,78nm,1.8s,mb4.8						
PVRL	Vila Real	23.16	134	*e*P	P	09 57 55.8	+1.2
	comp=Z,78nm,1.8s,mb4.8						
RUP	Ruppelstein	23.26	100	*e*P	P	09 57 56.1	+0.5
RUP	Ruppelstein	23.26	100	*e*P	P	09 57 56.1	+0.5
SFTF	Sexfontaines	23.26	105	*e*P	P	09 57 54.9	-0.8
	comp=Z,281nm,1.4s,mb5.2						
SFTF	Sexfontaines	23.26	105	*e*P	P	09 57 54.9	-0.8
	comp=Z,281nm,1.4s,mb5.5						
SFTF	Sexfontaines	23.26	105	*e*P	P	09 57 54.9	-0.8
	comp=Z,141nm,1.4s,mb5.2						
TCF	Toulx Ste Croi	23.27	112	*e*P	P	09 57 54.8	-1.0
	comp=Z,54nm,1.0s,mb4.6						
TCF	Toulx Ste Croi	23.27	112	*e*P	P	09 57 54.8	-1.0
TCF				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.6						
TCF	Toulx Ste Croi	23.27	112	*e*P	P	09 57 54.8	-1.0
	comp=Z,27nm,1.0s,mb4.6						
TCF	Toulx Ste Croi	23.27	112	*e*P	P	09 57 54.8	-1.0
	comp=Z,27nm,1.0s,mb4.6						
SSF	Saint Saulge	23.32	109	*e*P	P	09 57 55.1	-1.2
	comp=Z,59nm,1.1s,mb4.6						
SSF	Saint Saulge	23.32	109	*e*P	P	09 57 55.1	-1.2
SSF				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.6						
SSF	Saint Saulge	23.32	109	*e*P	P	09 57 55.1	-1.2
	comp=Z,30nm,1.1s,mb4.6						
SSF	Saint Saulge	23.32	109	*e*P	P	09 57 55.1	-1.2
	comp=Z,30nm,1.1s,mb4.6						
LOR	Lormes	23.34	108	*e*P	P	09 57 55.3	-1.3
	comp=Z,159nm,1.5s,mb4.9						
LOR				*e*MLR	MLR		
	comp=Z,4μm,20.5s,MS4.5						
LOR	Lormes	23.34	108	*e*P	P	09 57 55.3	-1.3
LOR				pmax	pmax		
	comp=Z,79nm,1.5s,mb4.9						
LOR				MLR	MLR		
	comp=Z,4μm,20.5s,MS4.8						
LOR	Lormes	23.34	108	*e*P	P	09 57 55.3	-1.3
	comp=Z,79nm,1.5s,mb4.9						
LOR				LR	LR		
	comp=Z,4μm,20.5s,MS4.8						
LOR	Lormes	23.34	108	*e*P	P	09 57 55.3	-1.3
	comp=Z,79nm,1.5s,mb4.9						
BGF	Bois d'Agland	23.38	110	*e*P	P	09 57 55.8	-1.1
	comp=Z,82nm,1.0s,mb4.8						
BGF	Bois d'Agland	23.38	110	*e*P	P	09 57 55.8	-1.1
BGF				pmax	pmax		
	comp=Z,41nm,1.0s,mb4.8						
BGF	Bois d'Agland	23.38	110	*e*P	P	09 57 55.8	-1.1
	comp=Z,41nm,1.0s,mb4.8						
BGF	Bois d'Agland	23.38	110	*e*P	P	09 57 55.8	-1.1
	comp=Z,41nm,1.0s,mb4.8						
ABH	Alteburg	23.38	99	*e*P	P	09 57 57.9	+1.0
ABH	Alteburg	23.38	99	*e*P	P	09 57 57.9	+1.0
AVF	Avril sur Loir	23.45	109	*e*P	P	09 57 55.5	-2.1
	comp=Z,50nm,1.1s,mb4.6						
AVF	Avril sur Loir	23.45	109	*e*P	P	09 57 55.5	-2.1
AVF				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.6						
AVF	Avril sur Loir	23.45	109	*e*P	P	09 57 55.5	-2.1
	comp=Z,25nm,1.1s,mb4.6						
AVF	Avril sur Loir	23.45	109	*e*P	P	09 57 55.5	-2.1
	comp=Z,25nm,1.1s,mb4.6						
MVO	Moncorvo	23.50	133	*e*P	P	09 57 57.7	-0.6
	comp=Z,65nm,1.6s,mb4.8						
MVO				*e*LR	LR	10 02 32.6	
	comp=Z,1μm,20.7s						
MVO	Moncorvo	23.50	133	P	P	09 57 58.8	+0.5
MVO	Moncorvo	23.50	133	*e*P	P	09 57 57.7	-0.6
	comp=Z,65nm,1.6s,mb4.8						
CLZ	Clausthal	23.59	92	*e*P	P	09 57 59.4	+0.3
	comp=Z,68nm,1.4s,mb4.9						
CLZ	Clausthal	23.59	92	*e*P	P	09 57 59.4	+0.3
CLZ				pmax	pmax		
	comp=Z,68nm,1.4s,mb4.9						
CLZ	Clausthal	23.59	92	*e*P	P	09 57 59.4	+0.3
	comp=Z,68nm,1.4s,mb4.9						
TNS	Taunus Mts	23.61	97	*e*P	P	09 58 00.2	+0.9
	comp=Z,143nm,2.0s,mb5.0						
TNS	Taunus Mts	23.61	97	*e*P	P	09 58 00.2	+0.9
TNS				pmax	pmax		
	comp=Z,143nm,2.0s,mb5.0						
TNS	Taunus Mts	23.61	97	*e*P	P	09 58 00.2	+0.9
	comp=Z,143nm,2.0s,mb5.0						
LFF	La Frestale	23.61	116	*e*P	P	09 57 58.5	-0.8
	comp=Z,194nm,1.4s,mb5.0						
LFF	La Frestale	23.61	116	*e*P	P	09 57 58.5	-0.8
LFF				pmax	pmax		
	comp=Z,97nm,1.4s,mb5.0						
LFF	La Frestale	23.61	116	*e*P	P	09 57 58.5	-0.8
	comp=Z,97nm,1.4s,mb5.0						
LFF	La Frestale	23.61	116	*e*P	P	09 57 58.5	-0.8
	comp=Z,97nm,1.4s,mb5.0						
RJF	Les Rejaudoux	23.69	114	*e*P	P	09 57 58.4	-1.6
	comp=Z,80nm,1.4s,mb4.7						
RJF				*e*MLR	MLR		
	comp=Z,3μm,18.2s,MS4.5						
RJF	Les Rejaudoux	23.69	114	*e*P	P	09 57 58.4	-1.6
RJF				pmax	pmax		
	comp=Z,40nm,1.4s,mb4.7						
RJF				MLR	MLR		
	comp=Z,3μm,18.3s,MS4.8						
RJF	Les Rejaudoux	23.69	114	*e*P	P	09 57 58.4	-1.6
	comp=Z,40nm,1.4s,mb4.7						
RJF				LR	LR		
	comp=Z,3μm,18.3s,MS4.8						
RJF	Les Rejaudoux	23.69	114	*e*P	P	09 57 58.4	-1.6
	comp=Z,40nm,1.4s,mb4.7						
THEF	They Montfort	23.71	104	*e*P	P	09 58 01.1	+1.0
THEF	They Montfort	23.71	104	*e*P	P	09 58 01.1	+1.0
SMF	Signal de Mont	23.78	109	*e*P	P	09 57 58.9	-1.9
	comp=Z,91nm,1.2s,mb4.8						
SMF	Signal de Mont	23.78	109	*e*P	P	09 57 58.9	-1.9
SMF				pmax	pmax		
	comp=Z,46nm,1.2s,mb4.8						
SMF	Signal de Mont	23.78	109	*e*P	P	09 57 58.9	-1.9
	comp=Z,46nm,1.2s,mb4.8						
SMF	Signal de Mont	23.78	109	*e*P	P	09 57 58.9	-1.9
	comp=Z,46nm,1.2s,mb4.8						
AGO	Saint Agoulin	23.88	111	*e*P	P	09 58 03.7	+2.0
AGO	Saint Agoulin	23.88	111	*e*P	P	09 58 03.7	+2.0
EALK	Alkurruntz	23.98	122	P	P	09 58 04.3	+1.7
	comp=Z,471nm,2.6s,mb5.5						
EALK	Alkurruntz	23.98	122	P	P	09 58 04.3	+1.6
	comp=Z,471nm,2.6s,mb5.5						
MTE	Manteigas	23.99	135	*e*P	P	09 58 02.8	+0.1
	comp=Z,78nm,2.4s,mb4.7						
MTE				*e*LR	LR	10 02 57.7	
	comp=Z,1μm,20.2s						
MTE	Manteigas	23.99	135	*e*P	P	09 58 02.2	-0.6
	comp=Z,44nm,1.3s,mb4.7						
MTE	Manteigas	23.99	135	*e*P	P	09 58 02.8	+0.1
	comp=Z,78nm,2.4s,mb4.7						
HAU	Haudompre	24.04	104	*e*P	P	09 58 02.2	-0.9
HAU				*e*MLR	MLR		
	comp=Z,4μm,21.5s,MS4.6						
HAU	Haudompre	24.04	104	*e*P	P	09 58 02.2	-0.9
HAU				LR	LR		
	comp=Z,4μm,21.5s,MS4.9						
HAU	Haudompre	24.04	104	*e*P	P	09 58 02.2	-0.9
PYM	Petit Puy Mans	24.05	112	*e*P	P	09 58 03.3	+0.1
PYM	Petit Puy Mans	24.05	112	*e*P	P	09 58 03.3	+0.1
PLDF	La Plantade	24.17	110	*e*P	P	09 58 06.5	+2.1
PLDF	La Plantade	24.17	110	*e*P	P	09 58 06.5	+2.1
SJPF	Ste Jean	24.19	121	*e*P	P	09 58 03.9	-0.7
	comp=Z,52nm,1.4s,mb4.5						
SJPF	Ste Jean	24.19	121	*e*P	P	09 58 03.9	-0.7
SJPF				pmax	pmax		
	comp=Z,26nm,1.4s,mb4.5						
SJPF	Ste Jean	24.19	121	*e*P	P	09 58 03.9	-0.7
	comp=Z,26nm,1.4s,mb4.5						
SJPF	Ste Jean	24.19	121	*e*P	P	09 58 03.9	-0.7
	comp=Z,26nm,1.4s,mb4.5						
CDF	Champ du Feu	24.21	102	*e*P	P	09 58 04.5	-0.3
	comp=Z,34nm,1.1s,mb4.4						
CDF	Champ du Feu	24.21	102	*e*P	P	09 58 04.5	-0.3
CDF				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.4						
CDF	Champ du Feu	24.21	102	*e*P	P	09 58 04.5	-0.3
	comp=Z,17nm,1.1s,mb4.4						
CDF	Champ du Feu	24.21	102	*e*P	P	09 58 04.5	-0.3
	comp=Z,17nm,1.1s,mb4.4						
CAF	Calviac	24.23	114	*e*P	P	09 58 03.9	-1.0
	comp=Z,38nm,1.3s,mb4.4						
CAF	Calviac	24.23	114	*e*P	P	09 58 03.9	-1.0
CAF				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.4						
CAF	Calviac	24.23	114	*e*P	P	09 58 03.9	-1.0
	comp=Z,19nm,1.3s,mb4.4						
CAF	Calviac	24.23	114	*e*P	P	09 58 03.9	-1.0
	comp=Z,19nm,1.3s,mb4.4						
ECH	Echery	24.29	102	*e*P	P	09 58 06.3	+0.9
ECH	Echery	24.29	102	*e*P	P	09 58 06.3	+0.9
PTOM	Tomar	24.38	137	*e*P	P	09 58 06.3	0.0
	comp=Z,84nm,1.0s,mb5.1						
PTOM	Tomar	24.38	137	*e*P	P	09 58 06.3	0.0
	comp=Z,84nm,1.0s,mb5.1						
PCBR	Castelo Branco	24.51	135	*e*P	P	09 58 07.9	+0.4
	comp=Z,34nm,1.1s,mb4.8						
PCBR	Castelo Branco	24.51	135	*e*P	P	09 58 07.9	+0.4
	comp=Z,34nm,1.1s,mb4.8						
ARCES	ARCESS Array B	24.53	44	P	P	09 58 07.1	-0.3
	comp=Z,9.7nm,0.9s,mb4.3,baz=294,slow=9.1,SNR=7.7						
ARCES	ARCESS Array B	24.53	44	P	P	09 58 07.1	-0.3
ETSF	Etsaut	24.65	121	*e*P	P	09 58 08.0	-0.8
	comp=Z,66nm,1.6s,mb4.6						
ETSF	Etsaut	24.65	121	*e*P	P	09 58 08.0	-0.8
ETSF				pmax	pmax		
	comp=Z,33nm,1.6s,mb4.6						
ETSF	Etsaut	24.65	121	*e*P	P	09 58 08.0	-0.8
	comp=Z,33nm,1.6s,mb4.6						
ETSF	Etsaut	24.65	121	*e*P	P	09 58 08.0	-0.8
	comp=Z,33nm,1.6s,mb4.6						
PMAFR	Mafra	24.68	139	*e*LR	LR	10 03 07.2	
	comp=Z,2μm,22.0s						
EPLA	Plasencia	24.82	133	P	P	09 58 10.1	-0.2
EPLA				pmax	pmax		
	comp=Z,198nm,3.1s						
EPLA	Plasencia	24.82	133	P	P	09 58 10.1	-0.2
	comp=Z,198nm,3.1s						
EPLA	Plasencia	24.82	133	P	P	09 58 10.1	-0.2
	comp=Z,198nm,3.1s						
CABF	La Chapelle	24.89	106	*e*P	P	09 58 09.6	-1.3
	comp=Z,65nm,1.3s,mb4.7						
CABF	La Chapelle	24.89	106	*e*P	P	09 58 09.6	-1.3
CABF				pmax	pmax		
	comp=Z,33nm,1.3s,mb4.7						
CABF	La Chapelle	24.89	106	*e*P	P	09 58 09.6	-1.3
	comp=Z,33nm,1.3s,mb4.7						
CABF	La Chapelle	24.89	106	*e*P	P	09 58 09.6	-1.3
	comp=Z,33nm,1.3s,mb4.7						
PMRV	Marv??o	24.90	136	*e*P	P	09

PESTR Estremoz 25.33 136 *e*P **P 09 58 14.5 -0.5**
comp=Z,64nm,1.5s,mb4.9
PESTR *e*LR LR 10 03 31.1
comp=Z,924nm,18.9s
PESTR Estremoz 25.33 136 *e*P **P 09 58 14.5 -0.5**
comp=Z,64nm,1.5s,mb4.9
GRA1 Grafenberg Arr 25.34 95 *e*P **P 09 58 16.4 +1.4**
comp=Z,22nm,1.0s,mb4.6
GRA1 Grafenberg Arr 25.34 95 *e*P **P 09 58 16.4 +1.4**
comp=Z,22nm,1.0s,mb4.6
GRF Grafenberg Arr 25.34 95 *e*P **P 09 58 16.4 +1.4**
comp=Z,22nm,1.0s,mb4.6
GRF *e*L 10 07 14.5
comp=Z,2µm,20.5s
GRF Grafenberg Arr 25.34 95 *e*P **P 09 58 16.4 +1.4**
comp=Z,22nm,1.0s,mb4.6
WERD Werda 25.41 93 *e*P **P 09 58 16.8 +1.2**
comp=Z,15nm,1.3s,mb4.4
EVOP Sao Brissos 25.45 138 *e*P **P 09 58 17.5 +1.3**
EVOP AMb AMB 09 58 21.0
comp=Z,30nm,2.0s,mb4.5
EVOP Sao Brissos 25.45 138 *e*P **P 09 58 15.1 -1.0**
comp=Z,12nm,1.0s,mb4.4
EVO Evora 25.49 138 *e*P **P 09 58 15.1 -1.3**
comp=Z,24nm,1.0s,mb4.4
EVO *e*MLR MLR
comp=Z,2µm,21.5s,MS4.2
VIVF Saint-Julien-I 25.50 111 *e*P **P 09 58 15.6 -0.8**
comp=Z,44nm,1.3s,mb4.5
VIVF Saint-Julien-I 25.50 111 *e*P **P 09 58 15.6 -0.8**
VIVF pmax pmax
comp=Z,22nm,1.3s,mb4.5
VIVF Saint-Julien-I 25.50 111 *e*P **P 09 58 15.6 -0.8**
comp=Z,22nm,1.3s,mb4.5
VIVF Saint-Julien-I 25.50 111 *e*P **P 09 58 15.6 -0.8**
comp=Z,22nm,1.3s,mb4.5
TANN Tannenbergstha 25.51 93 *e*P **P 09 58 17.6 +1.1**
comp=Z,12nm,1.3s,mb4.3
MTLF Montolieu 25.53 116 *e*P **P 09 58 15.3 -1.4**
comp=Z,65nm,1.4s,mb4.7
MTLF Montolieu 25.53 116 *e*P **P 09 58 15.3 -1.4**
MTLF pmax pmax
comp=Z,33nm,1.4s,mb4.7
MTLF Montolieu 25.53 116 *e*P **P 09 58 15.3 -1.4**
comp=Z,33nm,1.4s,mb4.7
MTLF Montolieu 25.53 116 *e*P **P 09 58 15.3 -1.4**
comp=Z,33nm,1.4s,mb4.7
NKC Novy Kostel 25.61 93 *e*P **P 09 58 16.9 -0.5**
NKC MLR MLR
comp=Z,3µm,17.6s,MS4.9
NKC Novy Kostel 25.61 93 *e*P **P 09 58 16.9 -0.5**
NKC AMS AMS 10 08 40.0
comp=Z,3µm,17.6s
NKC Novy Kostel 25.61 93 *e*P **P 09 58 16.9 -0.5**
comp=Z,3µm,17.6s
EBAD Badajoz 25.63 136 P **P 09 58 19.1 +1.4**
comp=Z,170nm,2.8s,mb5.1
EBAD Badajoz 25.63 136 P **P 09 58 19.1 +1.4**
comp=Z,170nm,2.8s,mb5.1
ESAC San Caprasio 25.65 122 P **P 09 58 17.2 -0.6**
comp=Z,193nm,1.7s,mb5.4
ESAC San Caprasio 25.65 122 P **P 09 58 17.2 -0.6**
comp=Z,193nm,1.7s,mb5.4
LASF Ste Croix 25.71 113 *e*P **P 09 58 17.5 -0.9**
comp=Z,78nm,1.5s,mb4.7
LASF Ste Croix 25.71 113 *e*P **P 09 58 17.5 -0.9**
comp=Z,39nm,1.5s,mb4.7
ETOR Torete 25.74 126 P **P 09 58 19.8 +1.1**
ETOR pmax pmax
comp=Z,24nm,1.0s,mb4.7
ETOR Torete 25.74 126 P **P 09 58 19.8 +1.2**
comp=Z,24nm,1.0s,mb4.7
ETOR Torete 25.74 126 P **P 09 58 19.8 +1.1**
comp=Z,24nm,1.0s,mb4.7
CSOR Sort 25.81 119 P **P 09 58 19.8 +0.5**
comp=Z,188nm,2.5s,mb5.2
CSOR Sort 25.81 119 P **P 09 58 19.8 +0.5**
comp=Z,188nm,2.5s,mb5.2
ESDC Sonseca Array 25.95 130 P **P 09 58 20.2 -0.4**
comp=Z,12nm,0.9s,mb4.4,baz=332,slow=9.3,SNR=14
ESDC Sonseca Array 25.95 130 P **P 09 58 20.9 +0.3**
comp=Z,12nm,0.9s,mb4.4
ESDC Sonseca Array 25.95 130 P **P 09 58 20.9 +0.3**
comp=Z,12nm,0.9s,mb4.4
ESLA Sonseca Array 25.95 130 *e*P **P 09 58 21.4 +0.7**
comp=Z,8.2nm,1.1s,mb4.2
ESLA Sonseca Array 25.95 130 *e*P **P 09 58 21.4 +0.8**
comp=Z,8.2nm,1.1s,mb4.2
BRG Berggiesshubel 25.97 91 *e*P **P 09 58 21.9 +1.2**
BRG Berggiesshubel 25.97 91 *e*P **P 09 58 21.4 +0.7**
comp=Z,14nm,1.3s,mb4.3
BRG
comp=N,1µm,20.1s
BRG
comp=E,708nm,14.8s
BRG
comp=Z,2µm,15.4s
BRG Berggiesshubel 25.97 91 *e*P **P 09 58 21.4 +0.7**
BRG pmax pmax
comp=Z,8.0nm,1.3s,mb4.1
BRG MLR MLR
comp=N,695nm,20.1s
BRG MLR MLR
comp=E,424nm,14.8s
BRG MLR MLR
comp=Z,2µm,15.4s,MS4.6
BRG Berggiesshubel 25.97 91 *e*P **P 09 58 21.4 +0.7**
comp=Z,2µm,15.4s
LPL La Plagne 25.99 107 *e*P **P 09 58 20.5 -0.4**
comp=Z,42nm,1.2s,mb4.5
LPL La Plagne 25.99 107 *e*P **P 09 58 20.5 -0.4**
LPL pmax pmax
comp=Z,21nm,1.2s,mb4.5
LPL La Plagne 25.99 107 *e*P **P 09 58 20.5 -0.4**
comp=Z,21nm,1.2s,mb4.5
LPL La Plagne 25.99 107 *e*P **P 09 58 20.5 -0.4**
comp=Z,21nm,1.2s,mb4.5
PBEJ Beja 25.99 138 *e*P **P 09 58 21.0 0.0**
comp=Z,46nm,1.5s,mb4.8
PBEJ Beja 25.99 138 *e*P **P 09 58 21.0 0.0**
comp=Z,46nm,1.5s,mb4.8
ORIF Oris-en-Rattie 26.02 109 *e*P **P 09 58 20.3 -0.9**
ORIF *e*MLR MLR
comp=Z,71nm,1.2s,mb4.8
comp=Z,3µm,20.0s,MS4.5
ORIF Oris-en-Rattie 26.02 109 *e*P **P 09 58 20.3 -0.9**
ORIF pmax pmax
comp=Z,36nm,1.2s,mb4.8
ORIF Oris-en-Rattie 26.02 109 *e*P **P 09 58 20.3 -0.9**
comp=Z,36nm,1.2s,mb4.8
ORIF Oris-en-Rattie 26.02 109 *e*P **P 09 58 20.3 -0.9**
comp=Z,36nm,1.2s,mb4.8
MESJ Messejana 26.04 139 *e*P **P 09 58 22.2 +0.7**
comp=Z,42nm,1.9s,mb4.7
MESJ Messejana 26.04 139 *e*P **P 09 58 22.2 +0.7**
MESJ AMb AMB 09 58 28.1
comp=Z,42nm,1.9s,mb4.6
MESJ Messejana 26.04 139 *e*P **P 09 58 22.2 +0.7**
comp=Z,42nm,1.9s,mb4.7
CLLI Llivia 26.10 118 P **P 09 58 25.2 +3.3**
PBAR Barrancos 26.14 136 *e*P **P 09 58 22.4 0.0**
comp=Z,34nm,1.3s,mb4.7
PBAR *e*LR LR 10 04 01.3
PBAR Barrancos 26.14 136 *e*P **P 09 58 22.4 0.0**
comp=Z,34nm,1.3s,mb4.7
PTEO Sao Teotonio 26.14 140 *e*P **P 09 58 23.3 +0.9**
comp=Z,89nm,1.7s,mb5.0
PTEO Sao Teotonio 26.14 140 *e*P **P 09 58 23.3 +0.9**
comp=Z,89nm,1.7s,mb5.0
PCVE Castro Verde 26.29 138 *e*P **P 09 58 23.1 -0.6**
comp=Z,37nm,1.9s,mb4.6
PCVE *e*LR LR 10 04 01.2
comp=Z,2µm,24.6s
PCVE Castro Verde 26.29 138 *e*P **P 09 58 23.1 -0.6**
comp=Z,37nm,1.9s,mb4.6
MORF Marmelete 26.39 140 *e*P **P 09 58 25.2 +0.6**
comp=Z,42nm,2.3s,mb4.6
MORF *e*LR LR 10 04 06.7
comp=Z,2µm,21.6s
MORF Marmelete 26.39 140 *e*P **P 09 58 25.0 +0.4**
MORF Marmelete 26.39 140 *e*P **P 09 58 25.2 +0.6**
comp=Z,42nm,2.3s,mb4.6
PFVI Vila Bisbo 26.49 140 *e*P **P 09 58 27.7 +2.2**
comp=Z,74nm,1.3s,mb5.0
PFVI *e*LR LR 10 04 00.0
comp=Z,1µm,22.5s
PFVI Vila Bisbo 26.49 140 *e*P **P 09 58 27.7 +2.2**
comp=Z,74nm,1.3s,mb5.0

PVCC Panska Ves 26.50 91 *e*P **P 09 58 27.7 +2.3**
PVCC MLR MLR
comp=Z,2µm,16.5s,MS4.8
PVCC Panska Ves 26.50 91 *e*P **P 09 58 27.7 +2.3**
PVCC AMS AMS 10 09 10.0
comp=Z,2µm,16.5s
PVCC Panska Ves 26.50 91 *e*P **P 09 58 27.7 +2.3**
comp=Z,2µm,16.5s
WET Wettzell 26.52 95 *e*P **P 09 58 26.8 +1.1**
comp=Z,13nm,1.4s,mb4.3
WET Wettzell 26.52 95 *e*P **P 09 58 26.8 +1.1**
WET pmax pmax
comp=Z,13nm,1.4s,mb4.3
WET Wettzell 26.52 95 *e*P **P 09 58 26.8 +1.1**
comp=Z,13nm,1.4s,mb4.3
TUE Stuetta 26.57 103 *e*P **P 09 58 27.6 +1.4**
comp=Z,25nm,1.3s,mb4.6
TUE Stuetta 26.57 103 *e*P **P 09 58 27.6 +1.5**
comp=Z,25nm,1.3s,mb4.6
MBDF Montbardon 26.59 108 *e*P **P 09 58 25.9 -0.4**
comp=Z,108nm,1.6s,mb4.8
MBDF Montbardon 26.59 108 *e*P **P 09 58 25.9 -0.4**
MBDF pmax pmax
comp=Z,54nm,1.6s,mb4.8
MBDF Montbardon 26.59 108 *e*P **P 09 58 25.9 -0.4**
comp=Z,54nm,1.6s,mb4.8
MBDF Montbardon 26.59 108 *e*P **P 09 58 25.9 -0.4**
comp=Z,54nm,1.6s,mb4.8
PVAQ Vaqueiros 26.61 138 *e*LR LR 10 04 08.6
comp=Z,2µm,18.3s
EMIN Mina Concepcio 26.64 136 P **P 09 58 26.9 +0.1**
comp=Z,63nm,1.7s,mb4.9
EMIN Mina Concepcio 26.64 136 P **P 09 58 27.0 +0.2**
comp=Z,63nm,1.7s,mb4.9
FINES FINESS Array B 26.67 62 P **P 09 58 27.1 +0.2**
comp=Z,7.0nm,0.8s,mb4.2,baz=306,slow=11,SNR=6.3
FINES FINESS Array B 26.67 62 P **P 09 58 27.1 +0.2**
PBDV Barranco-do-Ve 26.68 139 *e*LR LR 10 04 02.3
comp=Z,2µm,20.1s
PRU Pruhonice 26.82 92 *e*P **P 09 58 30.7 +2.4**
PRU MLR MLR
comp=Z,2µm,14.0s,MS4.9
PRU Pruhonice 26.82 92 *e*P **P 09 58 30.7 +2.4**
PRU AMS AMS 10 10 00.0
comp=Z,2µm,14.0s
PRU Pruhonice 26.82 92 *e*P **P 09 58 30.7 +2.4**
comp=Z,2µm,14.0s
FETA Feichten 26.87 101 ⇑*i*P **P 09 58 29.5 +0.6**
comp=Z,9.3nm,1.3s,mb4.2
FETA Feichten 26.87 101 P **P 09 58 29.5 +0.7**
comp=Z,9.3nm,1.3s,mb4.2
KHC Kasperske Hory 26.88 94 *e*P **P 09 58 27.6 -1.3**
KHC MLR MLR
comp=Z,4µm,16.1s,MS5.1
KHC Kasperske Hory 26.88 94 *e*P **P 09 58 27.6 -1.3**
KHC AMS AMS 10 09 20.0
comp=Z,4µm,16.1s
KHC Kasperske Hory 26.88 94 *e*P **P 09 58 27.6 -1.3**
comp=Z,4µm,16.1s
EADA Adamuz 27.04 132 P **P 09 58 29.8 -0.6**
comp=Z,136nm,2.3s,mb5.1
EADA Adamuz 27.04 132 P **P 09 58 29.8 -0.6**
comp=Z,136nm,2.3s,mb5.1
UPC Upice 27.23 90 *e*P **P 09 58 32.5 +0.4**
UPC Upice 27.23 90 *e*P **P 09 58 32.5 +0.4**
UPC Upice 27.23 90 *e*P **P 09 58 32.5 +0.4**
EVIA Vianos 27.42 129 P **P 09 58 32.6 -1.2**
EVIA pmax pmax
comp=Z,23nm,1.0s,mb4.7
EVIA Vianos 27.42 129 P **P 09 58 32.6 -1.2**
comp=Z,23nm,1.0s,mb4.7
EVIA Vianos 27.42 129 P **P 09 58 32.6 -1.2**
comp=Z,23nm,1.0s,mb4.7
DPC Dobruska-Polom 27.49 90 *e*P **P 09 58 34.6 +0.2**
DPC MLR MLR
comp=Z,2µm,17.3s,MS4.8
DPC Dobruska-Polom 27.49 90 *e*P **P 09 58 34.6 +0.2**
DPC AMS AMS 10 10 10.0
comp=Z,2µm,17.3s
DPC Dobruska-Polom 27.49 90 *e*P **P 09 58 34.6 +0.2**
comp=Z,2µm,17.3s
ESPR Espera 27.73 136 P **P 09 58 37.1 +0.4**
comp=Z,58nm,2.3s,mb4.8
ESPR Espera 27.73 136 P **P 09 58 37.1 +0.5**
comp=Z,58nm,2.3s,mb4.8
TREC Trest 27.73 92 AMS AMS 10 10 30.0
comp=Z,4µm,14.8s
EQES Quesada 27.93 131 P **P 09 58 37.0 -1.3**
comp=Z,222nm,3.2s
EQES Quesada 27.93 131 P **P 09 58 37.0 -1.4**
comp=Z,222nm,3.2s
ABTA Abfaltersbach 27.94 99 ⇓*i*pP pP 09 58 40.2 -1.3
comp=Z,12nm,1.3s
EHUE Huescar 28.10 130 P **P 09 58 40.9 +1.0**
EHUE pmax pmax
comp=Z,23nm,1.3s,mb4.7
EHUE Huescar 28.10 130 P **P 09 58 40.9 +1.0**
comp=Z,23nm,1.3s,mb4.7
EHUE Huescar 28.10 130 P **P 09 58 40.9 +1.0**
comp=Z,23nm,1.3s,mb4.7
VRAC Vranov 28.28 91 LR LR 10 09 32.5
comp=Z,2µm,20.0s,MS4.7,baz=309,slow=36
EMIJ Mijas 28.39 134 P **P 09 58 42.2 -0.3**
comp=Z,38nm,1.8s,mb4.7
EMIJ Mijas 28.39 134 P **P 09 58 42.2 -0.3**
comp=Z,38nm,1.8s,mb4.7
OKC Ostrava-Krasne 28.73 89 AMS AMS 10 12 00.0
comp=Z,2µm,13.6s
SOKA Soboth 29.25 97 ⇓*i*P **P 09 58 50.2 +0.2**
comp=Z,9.2nm,1.1s,mb4.4
SOKA Soboth 29.25 97 P **P 09 58 50.2 +0.1**
comp=Z,9.2nm,1.1s,mb4.4
PGF Pioggiola 29.29 109 *e*P **P 09 58 49.5 -1.0**
comp=Z,47nm,1.2s,mb4.8
PGF Pioggiola 29.29 109 *e*P **P 09 58 49.5 -1.0**
PGF pmax pmax
comp=Z,24nm,1.2s,mb4.8
PGF Pioggiola 29.29 109 *e*P **P 09 58 49.5 -1.0**
comp=Z,24nm,1.2s,mb4.8
PGF Pioggiola 29.29 109 *e*P **P 09 58 49.5 -1.0**
comp=Z,24nm,1.2s,mb4.8
VYHS Vyhne 29.94 91 *e*P **P 09 58 56.8 +0.7**
VYHS pmax pmax
comp=Z,11nm,1.7s,mb4.3
VYHS Vyhne 29.94 91 *e*P **P 09 58 56.8 +0.7**
comp=Z,11nm,1.7s,mb4.3
VYHS Vyhne 29.94 91 *e*P **P 09 58 56.8 +0.7**
VYHS Vyhne 29.94 91 *e*P **P 09 58 56.8 +0.7**
comp=Z,11nm,1.7s,mb4.3
STHS Stebnicka Huta 30.55 87 *e*P **P 09 59 03.7 +2.1**
STHS Stebnicka Huta 30.55 87 *e*P **P 09 59 03.7 +2.1**
STHS Stebnicka Huta 30.55 87 *e*P **P 09 59 03.7 +2.1**
KECS Kecovo 30.77 89 *e*P **P 09 59 03.9 +0.4**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
KECS Kecovo 30.77 89 *e*P **P 09 59 03.9 +0.4**
comp=Z,1.8nm,1.0s,mb3.9
KECS Kecovo 30.77 89 *e*P **P 09 59 03.9 +0.4**
CRVS Cervenica-Dubn 30.99 88 *e*P **P 09 59 03.6 -1.9**
CRVS Cervenica-Dubn 30.99 88 *e*P **P 09 59 03.6 -1.9**
CRVS Cervenica-Dubn 30.99 88 *e*P **P 09 59 03.6 -1.9**
PKSM Moragy 31.38 94 ⇓P **P 09 59 09.1 +0.2**
PKSM Moragy 31.38 94 ⇓*i*P **P 09 59 09.1 +0.2**
PKSM Moragy 31.38 94 P **P 09 59 09.1 +0.2**
MDT Midelt 31.82 137 P **P 09 59 12.2 -0.7**
comp=Z,3.2nm,0.9s,mb4.1,baz=336,slow=12,SNR=5.3
MDT LR LR 10 10 25.7
comp=Z,552nm,19.1s,MS4.3,baz=332,slow=33
MDT Midelt 31.82 137 P **P 09 59 12.2 -0.7**
KLMR Klimovskoe 32.79 58 *e*P **P 09 59 20.8 -0.3**
KLMR pmax pmax
comp=Z,105nm,1.7s,mb5.5
KLMR MLR MLR
comp=Z,554nm,15.0s,MS4.4
KLMR Klimovskoe 32.79 58 *e*P **P 09 59 20.8 -0.3**
comp=Z,554nm,15.0s
BZS Buzias 33.28 92 ⇑P **P 09 59 26.6 +1.0**
BZS Buzias 33.28 92 ⇑*i*P **P 09 59 26.6 +1.0**
BZS Buzias 33.28 92 P **P 09 59 26.6 +1.0**
KIEV Kiev 33.72 79 *e*P **P 09 59 29.5 +0.2**
KIEV pmax pmax
comp=Z,27nm,1.4s,mb5.0
KIEV Kiev 33.72 79 *e*P **P 09 59 29.5 +0.2**
comp=Z,27nm,1.4s,mb5.0
KIEV Kiev 33.72 79 *e*P **P 09 59 29.5 +0.2**
comp=Z,27nm,1.4s,mb5.0

AKASG Malin Array Be 33.72 79 P **P 09 59 28.0 -1.3**
comp=Z,12nm,1.0s,mb4.8,baz=303,slow=8.5,SNR=11
AKASG Malin Array Be 33.72 79 P **P 09 59 28.0 -1.3**
BURAR Bucovina Array 33.73 86 ⇑P **P 09 59 31.5 +2.1**
GZR Gura Zlata 34.02 91 ⇓P **P 09 59 34.0 +2.0**
GZR Gura Zlata 34.02 91 ⇓*i*P **P 09 59 34.0 +2.0**
GZR Gura Zlata 34.02 91 P **P 09 59 34.0 +2.0**
OBN Obninsk 34.58 68 ⇓*i*P **P 09 59 38.1 +1.3**
OBN S S 10 05 12.0 +6.5
OBN SS SS 10 07 23.0 -12
OBN pmax pmax
comp=Z,34nm,1.1s,mb5.2
OBN MLR MLR
comp=Z,400nm,13.0s,MS4.3
OBN Obninsk 34.58 68 *i*P **P 09 59 38.1 +1.3**
comp=Z,34nm,1.1s,mb5.2
KEST Kesra 34.91 116 P **P 09 59 39.4 -0.4**
comp=Z,3.9nm,1.0s,mb4.3,baz=332,slow=0.7,SNR=7.5
KEST Kesra 34.91 116 P **P 09 59 39.4 -0.4**
VOIR 35.14 89 ⇓P **P 09 59 42.6 +0.9**
VOIR 35.14 89 P **P 09 59 42.6 +0.9**
SSPA Standing Stone 35.29 259 *e*P **P 09 59 42.5 -0.5**
comp=Z,8.8nm,1.1s,mb4.6
SSPA Standing Stone 35.29 259 *e*P **P 09 59 42.5 -0.5**
comp=Z,8.8nm,1.1s,mb4.6
PLOR Plostina 35.65 87 ⇑P **P 09 59 47.0 +0.9**
PLOR Plostina 35.65 87 P **P 09 59 47.0 +0.9**
VRI Vrincioaia 35.68 87 ⇓P **P 09 59 48.3 +2.0**
VRI Vrincioaia 35.68 87 ⇓*i*P **P 09 59 48.3 +2.0**
VRI Vrincioaia 35.68 87 P **P 09 59 48.3 +2.0**
KIS Kishinev 35.95 84 *e*P **P 09 59 48.0 -0.6**
KIS *e*S **S 10 05 33.0 +6.3**
KIS *e*LQ 10 14 02.0
KIS LRM 10 15 30.0
comp=Z,500nm,15.0s
KIS Kishinev 35.95 84 *e*P **P 09 59 48.0 -0.6**
KIS *e* 09 59 53.0
KIS *e* 10 01 32.0
KIS *e*S **S 10 05 33.0 +6.3**
KIS MLR MLR
comp=Z,2µm,14.0s,MS4.9
KIS MLR MLR
comp=N,500nm,15.0s,MS4.6
KIS MLR MLR
comp=E,600nm,13.0s,MS4.6
KIS MLR MLR
comp=Z,2µm,16.0s
KIS Kishinev 35.95 84 *e*P **P 09 59 48.0 -0.6**
FFC Flin Flon 37.52 295 *i*P **P 10 00 02.5 +0.6**
FFC Flin Flon 37.52 295 *i*P **P 10 00 02.5 +0.6**
YKA Yellowknife Ar 38.15 312 P **P 10 00 06.7 -0.4**
comp=Z,4.6nm,1.0s,mb4.2,baz=54,slow=8.9,SNR=11
YKA PcP PcP 10 02 19.3 -2.2
comp=Z,0.7nm,0.8s,baz=44,slow=3.6,SNR=5.5
YKA Yellowknife Ar 38.15 312 P **P 10 00 06.7 -0.4**
YKA PcP PcP 10 02 19.3 -2.2
YKA Yellowknife Ar 38.15 312 P **P 10 00 06.7 -0.4**
YKA Yellowknife Ar 38.15 312 PcP PcP 10 02 19.3 -2.2
INK Inuvik 40.73 326 P **P 10 00 27.7 -0.9**
comp=Z,1.5nm,0.7s,mb3.7,baz=51,slow=10.0,SNR=5.8
INK PcP PcP 10 02 28.1 -1.6
comp=Z,2.7nm,0.9s,baz=32,slow=2.2,SNR=4.0
INK Inuvik 40.73 326 P **P 10 00 27.7 -0.9**
INK Inuvik 40.73 326 PcP PcP 10 02 28.1 -1.5
WCI Wyandotte Cave 41.31 264 *e*P **P 10 00 33.0 -0.7**
WCI pmax pmax
comp=Z,18nm,1.1s,mb4.6
WCI Wyandotte Cave 41.31 264 *e*P **P 10 00 33.0 -0.8**
comp=Z,18nm,1.1s,mb4.6
WCI Wyandotte Cave 41.31 264 *e*P **P 10 00 33.0 -0.7**
comp=Z,18nm,1.1s,mb4.6
ANN Anapa 41.78 80 *e*P **P 10 00 38.8 +1.3**
ANN MLR MLR
comp=N,456nm,15.0s,MS4.6
ANN MLR MLR
comp=E,496nm,15.0s,MS4.6
ANN MLR MLR
comp=Z,1µm,15.0s,MS4.8
ANN Anapa 41.78 80 *e*P **P 10 00 38.8 +1.3**
DGMT Dagmar 42.70 289 ⇑P **P 10 00 45.6 +0.6**
baz=42
ARU Arti 43.39 54*d i*P **P 10 00 52.8 +2.4**
ARU 10 02 33.9
ARU S **S 10 07 22.5 +4.6**
ARU pmax pmax
comp=Z,31nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,1µm,17.0s,MS4.8
ARU Arti 43.39 54 *e*P **P 10 00 52.2 +1.7**
comp=Z,7.3nm,0.6s,mb4.6
ARU Arti 43.39 54 *e*P **P 10 00 52.2 +1.8**
comp=Z,7.3nm,0.6s,mb4.6
ARU S **S 10 07 22.5 +4.6**
comp=Z,1µm,17.0s
EDM Edmonton 43.59 300 *e*P **P 10 00 52.1 0.0**
EDM Edmonton 43.59 300 *e*P **P 10 00 52.1 0.0**
BRTR Keskin Array B 43.63 88 P **P 10 00 52.6 0.0**
comp=Z,5.2nm,1.0s,mb4.2,baz=317,slow=6.7,SNR=13
BRTR Keskin Array B 43.63 88 P **P 10 00 52.6 0.0**
WVT Waverly 43.71 264 *e*P **P 10 00 51.7 -1.6**
WVT pmax pmax
comp=Z,12nm,1.2s,mb4.5
WVT Waverly 43.71 264 *e*P **P 10 00 51.7 -1.6**
comp=Z,12nm,1.2s,mb4.5
WVT Waverly 43.71 264 *e*P **P 10 00 51.7 -1.6**
comp=Z,12nm,1.2s,mb4.5
CCM Cathedral Cave 43.93 269 *e*P **P 10 00 54.0 -1.0**
CCM pmax pmax
comp=Z,14nm,1.0s,mb4.7
CCM Cathedral Cave 43.93 269 *e*P **P 10 00 54.0 -1.0**
comp=Z,14nm,1.0s,mb4.6
CCM Cathedral Cave 43.93 269 *e*P **P 10 00 54.0 -1.0**
comp=Z,14nm,1.0s,mb4.6
A19A Klindworth Far 44.52 293 ⇑P **P 10 00 59.6 +0.1**
baz=44
TAM Tamanrasset 44.61 131 *e*P **P 10 01 02.1 +1.5**
TAM pmax pmax
comp=Z,36nm,1.8s,mb4.9
TAM Tamanrasset 44.61 131 *e*P **P 10 01 02.1 +1.5**
comp=Z,36nm,1.8s,mb4.9
TAM Tamanrasset 44.61 131 *e*P **P 10 01 02.1 +1.5**
comp=Z,36nm,1.8s,mb4.9
LAO LASA Array 44.93 289 ⇓P **P 10 01 04.0 +1.2**
baz=45
LAO LASA Array 44.93 289 *e*P **P 10 01 03.3 +0.4**
comp=Z,37nm,1.6s,mb5.0
LAO LASA Array 44.93 289 *e*P **P 10 01 03.3 +0.4**
comp=Z,37nm,1.6s,mb5.0
KIV Kislovodsk 44.99 77 ⇓*e*P **P 10 01 05.8 +2.4**
KIV S **S 10 07 52.0 +11**
KIV pmax pmax
comp=Z,15nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,400nm,16.0s,MS4.4
KIV Kislovodsk 44.99 77 *e*P **P 10 01 05.8 +2.4**
comp=Z,15nm,1.0s,mb4.8
D21A La Casta Ranch 45.03 290 ⇓P **P 10 01 03.4 -0.2**
baz=45
C20A Veseth Ranch, 45.04 291 ⇑P **P 10 01 03.8 +0.1**
baz=45
B18A Beardsley Farm 45.38 293 ⇑P **P 10 01 06.4 0.0**
baz=45
DAWY Dawson 45.43 324 *e*P **P 10 01 06.5 -0.1**
DAWY Dawson 45.43 324 *e*P **P 10 01 06.5 -0.1**
C19A Slack Wire Ran 45.51 292 ⇓P **P 10 01 07.8 +0.3**
baz=45
D20A Manuel Ranch, 45.55 290 ⇓P **P 10 01 08.2 +0.4**
baz=45
EGMT Eagleton 45.63 292 ⇑P **P 10 01 08.9 +0.5**
baz=45
A16A West Butte Ran 45.82 294 ⇓P **P 10 01 09.4 -0.5**
baz=46
D19A Cripps Ranch, 45.85 291 ⇓P **P 10 01 10.6 +0.5**
baz=46
B17A L&G Farms, Che 45.92 293 ⇓P **P 10 01 11.0 +0.3**
baz=46
B16A M & M Farms, S 46.26 294 ⇑P **P 10 01 13.3 0.0**
baz=46,SNR=8.0
E19A Rath Farm, Rou 46.31 290 ⇑P **P 10 01 13.8 0.0**
baz=46
A15A Johnson Ranch, 46.31 295 ⇓P **P 10 01 13.6 -0.2**
baz=46,SNR=8.3
C17A Wharram Farm, 46.39 293 ⇓P **P 10 01 14.4 0.0**
baz=46,SNR=5.4
A14A Double T Ranch 46.63 296 ⇑P **P 10 01 16.3 0.0**
baz=46

D17A **Six Diamond Ra** 46.70 292 ⇓P P 10 01 17.2 +0.3
baz=46,SNR=5.1
C16A **Fuhringer Ranc** 46.72 294 ⇓P P 10 01 17.1 +0.1
baz=46
B15A **Bradely Ranch,** 46.72 295 ⇑P P 10 01 16.7 -0.3
baz=46,SNR=7.6
E18A **Harlowton** 46.77 291 ⇓P P 10 01 17.9 +0.5
baz=46,SNR=5.3
ILAR **Eielson Array** 46.96 329 P P 10 01 18.6 -0.1
comp=Z,2.4nm,0.8s,mb4.2,baz=38,slow=7.2,SNR=11
ILAR PcP PcP 10 02 49.8 -1.0
comp=Z,1.8nm,0.9s,baz=4.2,slow=2.4,SNR=6.7
ILAR **Eielson Array** 46.96 329 P P 10 01 18.6 -0.1
ILAR **Eielson Array** 46.96 329 PcP PcP 10 02 49.8 -1.0
B14A **Marquette Ranc** 47.01 295 ⇓P P 10 01 18.8 -0.4
baz=47
UALR **University of** 47.04 267 *e*P P 10 01 18.6 -1.1
comp=Z,11nm,0.8s,mb4.8
UALR **University of** 47.04 267 *e*P P 10 01 18.6 -1.1
comp=Z,11nm,0.8s,mb4.8
A13A **Flathead Natio** 47.11 296 ⇓P P 10 01 19.9 -0.1
baz=47
MALT **Malatya** 47.11 85 *e*P P 10 01 22.2 +2.0
MALT pmax pmax
comp=Z,20nm,1.3s,mb4.9
MALT **Malatya** 47.11 85 *e*P P 10 01 22.2 +2.0
comp=Z,20nm,1.3s,mb4.9
MALT **Malatya** 47.11 85 *e*P P 10 01 22.2 +2.0
comp=Z,20nm,1.3s,mb4.9
C15A **Salmond Ranch,** 47.13 294 ⇓P P 10 01 20.1 -0.1
baz=47,SNR=8.3
D16A **Dana Ranch, Ca** 47.19 293 ⇑P P 10 01 21.1 +0.4
baz=47,SNR=6.5
E17A **Martinsdale** 47.29 292 ⇓P P 10 01 21.3 -0.2
baz=47
AKTK **Aktyubinsk** 47.41 60 P P 10 01 23.3 +1.0
AKTK **Aktyubinsk** 47.41 60 P P 10 01 23.3 +1.0
AKTO **Aktyubinsk** 47.41 60 P P 10 01 23.3 +1.0
comp=Z,12nm,0.7s,mb5.0,baz=324,slow=7.9,SNR=26
J22A **Midwest** 47.46 286 ⇓P P 10 01 22.1 -0.7
baz=47
RLMT **Red Lodge** 47.53 289 ⇓P P 10 01 24.1 +0.8
baz=47
RLMT **Red Lodge** 47.53 289 *e*P P 10 01 23.8 +0.5
comp=Z,8.9nm,1.6s,mb4.5
RLMT **Red Lodge** 47.53 289 *e*P P 10 01 23.8 +0.5
comp=Z,8.9nm,1.6s,mb4.5
B13A **Whitefish** 47.54 296 P P 10 01 23.5 +0.1
baz=47,SNR=5.2
I21A **Big Trails, Te** 47.56 287 ⇑P P 10 01 23.1 -0.5
baz=47
C14A **Swan Lake** 47.66 295 ⇓P P 10 01 22.3 -2.1
baz=47
MIAR **Mount Ida** 47.84 268 *e*P P 10 01 25.3 -0.6
MIAR pmax pmax
comp=Z,41nm,1.8s,mb5.2
MIAR **Mount Ida** 47.84 268 *e*P P 10 01 25.3 -0.6
comp=Z,41nm,1.8s,mb5.2
MIAR **Mount Ida** 47.84 268 *e*P P 10 01 25.3 -0.6
comp=Z,41nm,1.8s,mb5.2
SLMT **Seeley Lake** 47.93 294 *e*P P 10 01 26.0 -0.4
comp=Z,6.6nm,0.8s,mb4.7
SLMT *e*PP PP 10 03 18.1 0.0
SLMT **Seeley Lake** 47.93 294 *e*P P 10 01 26.0 -0.4
comp=Z,6.6nm,0.8s,mb4.7
SWMT **Swartz Lake** 47.97 295 *e*P P 10 01 25.9 -0.8
comp=Z,3.9nm,0.9s,mb4.4
SWMT *e*PcP PcP 10 02 54.5 -0.2
SWMT **Swartz Lake** 47.97 295 *e*P P 10 01 25.9 -0.8
comp=Z,3.9nm,0.9s,mb4.4
J21A **Lysite** 47.98 286 ⇑P P 10 01 26.5 -0.4
baz=48
H18A **Shoshone NF, C** 48.05 289 ⇑P P 10 01 27.3 -0.1
baz=48
BSMT **Bassoo Peak** 48.07 296 *e*P P 10 01 27.8 +0.3
comp=Z,6.1nm,1.2s,mb4.5
BSMT **Bassoo Peak** 48.07 296 *e*P P 10 01 27.8 +0.3
comp=Z,6.1nm,1.2s,mb4.5
MAK **Makhachkala** 48.08 74 *e*P P 10 01 30.0 +2.4
MAK *e* 10 02 52.7
MAK *e* 10 03 20.3
MAK *e*S S 10 08 33.3 +7.6
MAK pmax pmax
comp=Z,203nm,1.5s,mb5.9
MAK MLR MLR
comp=Z,748nm,16.0s,MS4.8
MAK **Makhachkala** 48.08 74 *e*P P 10 01 30.0 +2.4
comp=Z,203nm,1.5s,mb5.9
MAK **Makhachkala** 48.08 74 *e*PcP PcP 10 02 52.7 -2.5
E15A **Deer Lodge** 48.15 293 ⇑P P 10 01 28.3 +0.2
baz=48,SNR=6.2
F16A **Kennard Place,** 48.15 292 ⇓P P 10 01 28.2 +0.1
baz=48
I19A **Meeteetse** 48.21 288 ⇓P P 10 01 28.8 +0.2
baz=48
BOZ **Bozeman (W)** 48.25 291 ⇑P P 10 01 29.6 +0.7
baz=48,SNR=5.9
BOZ **Bozeman (W)** 48.25 291 *e*P P 10 01 29.4 +0.5
BOZ pmax pmax
comp=Z,29nm,2.0s,mb5.0
BOZ **Bozeman (W)** 48.25 291 *e*P P 10 01 29.4 +0.5
comp=Z,29nm,2.0s,mb5.0
BOZ **Bozeman (W)** 48.25 291 *e*P P 10 01 29.4 +0.5
comp=Z,29nm,2.0s,mb5.0
J20A **Shoshoni** 48.28 287 ⇓P P 10 01 29.5 +0.3
baz=48,SNR=5.1
L22A **Ellis Ranch, M** 48.48 284 ⇑P P 10 01 31.1 +0.4
baz=48
D13A **Huson** 48.48 295 ⇑P P 10 01 30.1 -0.6
baz=48
C12B **Naegeli Ranch,** 48.49 296 ⇓P P 10 01 30.7 -0.1
baz=48
LRM **Limekiln Ridge** 48.51 292 *e*P P 10 01 31.3 +0.4
comp=Z,61nm,1.3s,mb5.5
LRM *e*PcP PcP 10 02 53.8 -2.8
LRM **Limekiln Ridge** 48.51 292 *e*P P 10 01 31.3 +0.4
comp=Z,61nm,1.3s,mb5.5
E14A **Clinton** 48.55 293 ⇓P P 10 01 31.1 -0.1
baz=48
G16A **Moss Hill, Enn** 48.65 291 ⇑P P 10 01 31.9 -0.1
baz=48
GNI **Garni** 48.85 79 P P 10 01 33.6 0.0
comp=Z,3.3nm,0.3s,mb4.8,baz=117,slow=2.3,SNR=6.1
GNI **Garni** 48.85 79 *c i*P P 10 01 36.4 +2.8
GNI pmax pmax
comp=Z,45nm,1.7s
GNI **Garni** 48.85 79 P P 10 01 33.7 +0.1
D12A **Red Ives Fores** 48.92 295 ⇓P P 10 01 33.5 -0.6
baz=49
K20A **Yellowstone Ra** 48.93 286 ⇓P P 10 01 33.2 -1.0
baz=49
F14A **Wisdom** 48.94 293 ⇓P P 10 01 34.2 0.0
baz=49
L21A **Rawlins** 48.98 285 ⇓P P 10 01 34.9 +0.3
baz=49
G15A **Dillon** 49.01 292 ⇓P P 10 01 35.3 +0.5
baz=49
N23A **Red Feather La** 49.10 283 ⇓P P 10 01 35.7 +0.2
baz=49
ABKAR **Akbulak array** 49.12 60 *e*P P 10 01 36.8 +1.3
comp=Z,8.4nm,0.8s,mb4.8
ABKAR *e*PcP PcP 10 02 59.0 +0.2
ABKAR **Akbulak array** 49.12 60 *e*P P 10 01 36.8 +1.3
comp=Z,8.4nm,0.8s,mb4.8
IMW **Indian Meadow** 49.24 289 *e*P P 10 01 35.8 -0.8
comp=Z,2.9nm,1.0s,mb4.3
IMW **Indian Meadow** 49.24 289 *e*P P 10 01 35.8 -0.7
comp=Z,2.9nm,1.0s,mb4.3
M21A **Separation Pea** 49.25 285 ⇑P P 10 01 36.8 +0.1
baz=49
J18A **Kendall Valley** 49.32 288 ⇓P P 10 01 37.3 +0.2
baz=49,SNR=7.4
BW06 **Boulder Array** 49.43 287 ⇑P P 10 01 37.0 -1.0
baz=49
PDAR **Pinedale Array** 49.43 287 P P 10 01 37.1 -0.9
comp=Z,2.4nm,0.9s,mb4.2,baz=59,slow=6.8,SNR=8.8
PDAR **Pinedale Array** 49.43 287 P P 10 01 37.1 -0.9
MCMT **McKenzie Canyo** 49.44 292 *e*P P 10 01 38.3 +0.2
comp=Z,12nm,1.9s,mb4.6
MCMT **McKenzie Canyo** 49.44 292 *e*P P 10 01 38.3 +0.3
comp=Z,12nm,1.9s,mb4.6
E12A **Beaver Dam Sad** 49.50 295 ⇑P P 10 01 37.7 -0.8
baz=49
I16A **Newdale** 49.51 290 ⇓P P 10 01 39.6 +0.9
baz=49
B08A **Colville Reser** 49.73 299 ⇑P P 10 01 39.9 -0.3
baz=50
M20A **Sweetwater, Wa** 49.74 285 ⇑P P 10 01 39.2 -1.2
baz=50
MMAI **Mount Meron Ar** 49.75 92 LR LR 10 23 34.0
comp=Z,293nm,20.9s,MS4.3,baz=270,slow=37
K18A **Toltan Ranch,** 49.76 288 ⇓P P 10 01 40.2 -0.4
baz=50
ISCO **Idaho Springs** 49.78 282 ⇓P P 10 01 41.4 +0.7
baz=50
H14A **Leadore** 49.84 292 ⇑P P 10 01 41.6 +0.5
baz=50
L19A **Farson** 49.84 287 ⇑P P 10 01 40.1 -1.1
baz=50
I15A **Monteview** 49.89 291 ⇑P P 10 01 42.3 +0.8
baz=50
O22A **Kremmling** 49.96 283 ⇓P P 10 01 42.1 +0.1
baz=50
N21A **Black Mountain** 49.98 284 ⇑P P 10 01 42.5 +0.3
baz=50
J16A **Bone** 50.03 289 ⇓P P 10 01 42.1 -0.4
baz=50
P23A **Jefferson** 50.22 282 ⇓P P 10 01 45.3 +1.3
baz=50
H13A **Challis** 50.29 292 ⇑P P 10 01 45.0 +0.4
baz=50,SNR=6.1
J15A **Blackfoot** 50.32 290 ⇑P P 10 01 46.0 +1.2
baz=50,SNR=7.2
I14A **Mackay** 50.40 291 ⇑P P 10 01 46.0 +0.6
baz=50
P22A **Eagle** 50.50 283 ⇓P P 10 01 45.9 -0.2
baz=50
BRVK **Borovoye** 50.51 50 ⇓*i*P P 10 01 48.2 +2.2
BRVK pmax pmax
comp=Z,11nm,1.5s,mb4.6
BRVK **Borovoye** 50.51 50 *i*P P 10 01 48.2 +2.2
comp=Z,11nm,1.5s,mb4.6
BVAR **Borovoye Array** 50.58 50 P P 10 01 46.5 0.0
comp=Z,5.1nm,1.0s,mb4.4,baz=319,slow=5.9,SNR=12
BVAR **Borovoye Array** 50.58 50 P P 10 01 46.5 -0.1
H12A **Diamond D Ranc** 50.58 293 ⇓P P 10 01 46.6 -0.1
baz=50
N19A **John Jarvie Ra** 50.68 286 ⇓P P 10 01 46.9 -0.6
baz=50
I13A **Wildhorse Cree** 50.72 292 ⇑P P 10 01 47.0 -0.8
baz=50
O19A **Miners Draw (B** 51.11 285 ⇓P P 10 01 50.7 -0.1
baz=51,SNR=6.2
HLID **Hailey** 51.13 292 ⇓P P 10 01 51.1 +0.3
baz=51
Q22A **Crested Butte,** 51.14 282 ⇓P P 10 01 51.4 +0.4
baz=51
ASF **Jabal al Asfar** 51.17 92 P P 10 01 50.8 -0.6
comp=Z,2.9nm,0.8s,mb4.3,baz=289,slow=8.3,SNR=4.1
ASF LR LR 10 25 57.6
comp=Z,504nm,18.6s,MS4.6,baz=9.4,slow=39
T25A **Trinidad** 51.24 279 ⇓P P 10 01 51.8 0.0
baz=51
I12A **Atlanta** 51.29 292 ⇑P P 10 01 52.1 0.0
baz=51
K14A **Jones Ranch, D** 51.33 290 ⇓P P 10 01 52.8 +0.4
baz=51
R22A **Saguache, Gunn** 51.55 282 ⇑P P 10 01 55.1 +1.0
baz=51
M15A **Larsen Ranch,** 51.81 288 ⇓P P 10 01 55.7 -0.3
baz=52
S22A **4UR Ranch, Cre** 51.97 281 ⇑P P 10 01 58.0 +0.8
baz=52
TORD **Torodi Ar. Bea** 52.16 140 P P 10 01 57.1 -1.8
comp=Z,3.8nm,0.8s,mb4.4,baz=342,slow=7.2,SNR=7.7
V25A **Rancho No Teng** 52.37 278 ⇓P P 10 02 00.1 -0.1
baz=52
V24A **Rampart Ranch,** 52.78 278 ⇑P P 10 02 04.0 +0.7
baz=53
R18A **Canyonlands Na** 52.97 284 ⇓P P 10 02 05.3 +0.7
baz=53
MVCO **Mesa Verde** 53.21 282 ⇑P P 10 02 06.9 +0.5
baz=53
W24A **Lazy 6 Ranch,** 53.26 278 ⇑P P 10 02 07.4 +0.6
baz=53
R17A **Hanksville Air** 53.34 285 ⇑P P 10 02 06.9 -0.5
baz=53
S18A **Hurst Farm, Bl** 53.57 284 ⇑P P 10 02 09.2 +0.1
baz=53,SNR=6.0
NVS **Novosibirsk** 53.76 41 *e*P P 10 02 09.2 -1.0
NVS pmax pmax
comp=Z,19nm,1.8s,mb4.7
NVS pmax pmax
comp=N,2.0nm,0.8s
NVS pmax pmax
comp=E,8.0nm,1.3s
NVS **Novosibirsk** 53.76 41 *e*P P 10 02 09.2 -1.0
comp=E,2.0nm,0.8s,mb4.1
H04A **Detroit Lake** 53.81 298 ⇓P P 10 02 10.3 -0.4
baz=54
O12A **Currie** 53.84 289 ⇓P P 10 02 11.9 +0.9
baz=54
T18A **Mexican Hat** 53.94 283 ⇑P P 10 02 12.1 +0.3
baz=54
WVOR **Wild Horse Val** 53.96 294 *e*P P 10 02 11.2 -0.7
WVOR *e* 10 04 15.9
WVOR pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
WVOR **Wild Horse Val** 53.96 294 *e*P P 10 02 11.2 -0.7
comp=Z,8.5nm,1.4s,mb4.5
WVOR *e*PP PP 10 04 15.9 +3.1
WVOR **Wild Horse Val** 53.96 294 *e*P P 10 02 11.2 -0.7
comp=Z,8.5nm,1.4s,mb4.5
Z26A **Caprock** 54.09 276 ⇓P P 10 02 12.0 -0.9
baz=54
X23A **Hourglass Bar** 54.15 278 ⇑P P 10 02 14.1 +0.8
baz=54
JCT **Junction City** 54.23 270 ⇓P P 10 02 12.9 -1.1
baz=54
JCT **Junction City** 54.23 270 *e*P P 10 02 12.6 -1.4
JCT pmax pmax
comp=Z,13nm,0.9s,mb4.9
JCT **Junction City** 54.23 270 *e*P P 10 02 12.6 -1.3
comp=Z,13nm,0.9s,mb4.9
JCT **Junction City** 54.23 270 *e*P P 10 02 12.6 -1.4
comp=Z,13nm,0.9s,mb4.9
Y24A **Capitan** 54.29 277 ⇑P P 10 02 14.7 +0.4
baz=54
S16A **Weppnner Ranch,** 54.32 285 ⇓P P 10 02 14.4 -0.2
baz=54
Q13A **Wheeler Ranch,** 54.52 288 ⇓P P 10 02 15.8 -0.2
baz=54
LAZ **Ladron** 54.76 279 *e*P P 10 02 18.6 +0.8
comp=Z,3.7nm,1.3s,mb4.2
LAZ **Ladron** 54.76 279 *e*P P 10 02 18.6 +0.8
comp=Z,3.7nm,1.3s,mb4.2
Y22A **Socorro** 55.05 278 ⇓P P 10 02 20.5 +0.7
baz=55
226A **Malaga, Loving** 55.12 275 ⇑P P 10 02 19.6 -0.8
baz=55
GDL2 **Guadalupe Moun** 55.14 275 *e*P P 10 02 20.0 -0.5
comp=Z,2.9nm,0.9s,mb4.3
GDL2 **Guadalupe Moun** 55.14 275 *e*P P 10 02 20.0 -0.5
comp=Z,2.9nm,0.9s,mb4.3
MOD **Modoc** 55.15 295 *e*P P 10 02 20.1 -0.4
comp=Z,40nm,1.8s,mb5.1
MOD **Modoc** 55.15 295 *e*P P 10 02 20.1 -0.4
comp=Z,40nm,1.8s,mb5.1
124A **Stringfield Ra** 55.28 276 ⇓P P 10 02 21.2 -0.3
baz=55
R12A **Pony Springs,** 55.30 288 ⇓P P 10 02 22.2 +0.6
baz=55
X20A **Quemado** 55.32 280 ⇓P P 10 02 23.2 +1.4
baz=55
Y21A **Point of Rocks** 55.34 279 ⇓P P 10 02 22.4 +0.4
baz=55
U16A **Tuba City** 55.34 283 ⇑P P 10 02 22.2 +0.2
baz=55
Q11A **Duckwater** 55.39 289 ⇓P P 10 02 22.7 +0.5
baz=55
225A **Deer Hill, Car** 55.44 275 ⇓P P 10 02 22.5 -0.2
baz=55
428A **Kincaid Ranch,** 55.48 273 ⇑P P 10 02 22.7 -0.3
baz=55,SNR=7.9
KURK **Kurchatov** 55.52 47 P P 10 02 22.6 -0.4
comp=Z,4.6nm,1.0s,mb4.5,baz=320,slow=7.5,SNR=9.3
KURK **Kurchatov** 55.52 47 ⇓*i*P P 10 02 23.3 +0.3
KURK pmax pmax
comp=Z,12nm,1.8s,mb4.6
KURK **Kurchatov** 55.52 47 *i*P P 10 02 23.3 +0.3
comp=Z,12nm,1.8s,mb4.6
Z22A **Elephant Butte** 55.59 278 ⇑P P 10 02 23.2 -0.6
baz=55
326A **Caldwell Ranch** 55.66 274 ⇑P P 10 02 24.1 -0.2
baz=56
U15A **North Rim** 55.69 284 ⇑P P 10 02 23.6 -0.9
baz=56
427A **Hayter Ranch,** 55.74 273 ⇓P P 10 02 24.4 -0.5
baz=56
R11A **Troy Canyon, C** 55.75 288 ⇓P P 10 02 23.8 -1.0
baz=56
Q10A **Clear Creek Ra** 55.76 289 ⇓P P 10 02 25.8 +0.9
baz=56
Y20A **Horse Springs,** 55.77 280 ⇓P P 10 02 26.0 +1.0
baz=56
224A **Cornudas Mount** 55.82 276 ⇑P P 10 02 25.0 -0.4
baz=56
WUAZ **Wupatki** 55.96 283 ⇑P P 10 02 27.0 +0.6
baz=56
T13A **Saint George** 56.00 286 ⇓P P 10 02 27.6 +0.9
baz=56
MNTX **Cornudas Mount** 56.05 276 ⇓P P 10 02 26.3 -0.9
baz=56
V15A **Kaibab Nationa** 56.11 284 ⇑P P 10 02 28.0 +0.5
baz=56
R10A **Warm Springs** 56.14 289 ⇑P P 10 02 28.7 +1.1
baz=56
Y19A **Nutrioso** 56.17 280 ⇑P P 10 02 28.7 +0.8
baz=56,SNR=7.4
426A **McDonald Obser** 56.21 274 ⇓P P 10 02 27.1 -1.1
baz=56
S11A **Rachel** 56.39 288 ⇓P P 10 02 29.9 +0.5
baz=56
527A **Woodward Ranch** 56.42 273 ⇓P P 10 02 28.2 -1.5
baz=56,SNR=6.8
DBIC **Dimbokro** 56.42 150 P P 10 02 28.4 -1.5
comp=Z,7.4nm,1.1s,mb4.6,baz=341,slow=9.0,SNR=3.4
DBIC **Dimbokro** 56.42 150 P P 10 02 28.4 -1.5
DBIC **Dimbokro** 56.42 150 P P 10 02 28.4 -1.5
T11A **Corn Creek, Al** 56.46 287 ⇑P P 10 02 30.4 +0.5
baz=56
U13A **Pakoon Wash** 56.51 286 ⇓P P 10 02 30.6 +0.3
baz=56
Z20A **Nine Sixteen R** 56.52 279 ⇓P P 10 02 30.9 +0.5
baz=56
S10A **Tonopah Range,** 56.57 289 ⇑P P 10 02 31.0 +0.3
baz=56
V14A **Boquillas Ranc** 56.72 285 ⇑P P 10 02 31.9 +0.1
baz=56
526A **Mary Lane Ranc** 56.73 273 ⇑P P 10 02 32.1 +0.1
baz=56,SNR=5.7
627A **Terlingua Ranc** 56.87 272 ⇓P P 10 02 32.4 -0.6
baz=57,SNR=7.3
WCN **Washoe City** 56.96 292 ⇑P P 10 02 33.4 0.0
baz=57,SNR=7.1
V13A **Grand Canyon W** 56.97 285 ⇓P P 10 02 33.6 +0.1
baz=57
NVAR **Mina Array Bea** 56.98 291 P P 10 02 33.1 -0.5
comp=Z,0.9nm,0.7s,mb3.9,baz=56,slow=5.2,SNR=6.3
NVAR **Mina Array Bea** 56.98 291 P P 10 02 33.1 -0.5
TXAR **Lajitas Array** 57.11 272 P P 10 02 33.4 -1.3
comp=Z,1.4nm,0.9s,mb4.0,baz=55,slow=6.6,SNR=7.1
TXAR **Lajitas Array** 57.11 272 P P 10 02 33.4 -1.2
626A **Big Bend Ranch** 57.16 273 P P 10 02 34.9 -0.1
baz=57,SNR=12
Y16A **Circle Bar Ran** 57.33 282 ⇓P P 10 02 36.8 +0.7
baz=57
SEY **Seymchan** 57.43 359 *c e*P P 10 02 36.1 -0.3
SEY **Seymchan** 57.43 359 *e*P P 10 02 36.1 -0.3
220A **Playas Peak, P** 57.46 278 ⇑P P 10 02 36.5 -0.5
baz=57
Y15A **Casa Rosa Ranc** 57.69 283 ⇑P P 10 02 39.1 +0.4
baz=58
219A **White Tail Can** 57.74 279 ⇓P P 10 02 40.0 +0.9
baz=58
FURC **Furnace Creek,** 57.86 288 ⇓P P 10 02 39.9 0.0
baz=58
320A **Kipp Ranch, An** 57.92 278 ⇓P P 10 02 40.7 +0.4
baz=58
117A **Oracle** 58.02 281 ⇑P P 10 02 41.4 +0.4
baz=58
MPMC **Manual Prospec** 58.49 288 ⇑P P 10 02 44.6 +0.4
baz=58,SNR=5.2
318A **Bisbee** 58.56 279 ⇓P P 10 02 44.8 -0.1
baz=58
115A **Sonoran Desert** 58.65 282 ⇓P P 10 02 45.6 +0.2
baz=58
217A **Green Valley** 58.70 280 ⇓P P 10 02 46.2 +0.4
baz=58
GSC **Goldstone** 58.77 287 ⇑P P 10 02 46.3 0.0
baz=59
ISA **Isabella** 59.28 289 ⇑P P 10 02 49.4 -0.4
baz=59,SNR=5.2
113A **Mohawk Valley,** 59.35 283 ⇑P P 10 02 50.0 -0.3
baz=59
BELC **Belle Mtn. Jos** 59.44 286 ⇓P P 10 02 51.2 +0.3
baz=59
BC3 **Big Chuckawall** 59.45 285 ⇓P P 10 02 51.3 +0.4
baz=59
214A **Organ Pipe Nat** 59.54 282 ⇑P P 10 02 51.1 -0.5
baz=59
GLA **Glamis** 59.64 284 ⇑P P 10 02 51.9 -0.4
baz=59
EKS2 **Erkin-Say** 60.23 56 *e*P P 10 02 59.9 +3.7
EKS2 pmax pmax
comp=Z,16nm,1.3s,mb4.9
EKS2 **Erkin-Say** 60.23 56 *e*P P 10 02 59.9 +3.7
comp=Z,16nm,1.3s,mb4.9
AAK **Ala-Archa** 60.55 55 ⇓*e*P P 10 03 01.4 +3.0
AAK pmax pmax
comp=Z,8.0nm,1.8s,mb4.5
AAK **Ala-Archa** 60.55 55 *e*P P 10 03 01.4 +3.0
comp=Z,8.0nm,1.8s,mb4.5
AML **Almayashu** 60.63 56 *e*P P 10 03 02.1 +3.1
AML pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
AML **Almayashu** 60.63 56 *e*P P 10 03 02.1 +3.1
comp=Z,5.0nm,1.0s,mb4.6
AML **Almayashu** 60.63 56 *e*P P 10 03 02.1 +3.1
comp=Z,5.0nm,1.0s,mb4.6
ZAK **Zakamensk** 63.65 31 *e*P P 10 03 19.4 +0.4
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
ZAK **Zakamensk** 63.65 31 *e*P P 10 03 19.4 +0.4
comp=Z,5.0nm,1.1s,mb4.5
SONM **Songino Array** 66.80 31 P P 10 03 39.3 -0.2
comp=Z,1.2nm,0.9s,mb3.9,baz=316,slow=10,SNR=3.8
SONM **Songino Array** 66.80 31 P P 10 03 39.3 -0.2
KSRS **Korea Array** 81.21 18 P P 10 05 03.4 -0.6
comp=Z,0.9nm,0.7s,mb3.8,baz=350,slow=4.9,SNR=4.2
KSRS LR LR 10 43 55.1
comp=Z,119nm,19.1s,MS4.3,baz=213,slow=38
LPAZ **La Paz** 82.06 217 P P 10 05 07.2 -1.4
comp=Z,1.2nm,0.8s,mb3.9,baz=32,slow=9.7,SNR=5.1
LPAZ **La Paz** 82.06 217 P P 10 05 07.2 -1.3
MJAR **Matsushiro Arr** 83.34 10 P P 10 05 14.1 -1.1
comp=Z,5.3nm,1.0s,mb4.5,baz=340,slow=5.3,SNR=6.5
MJAR **Matsushiro Arr** 83.34 10 P P 10 05 14.1 -1.0
NJ2 **Nanjing** 84.75 26 *e*P P 10 05 24.2 +1.8
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.4
CMAR **Chiang Mai Arr** 91.54 48 P P 10 05 55.5 +0.4
comp=Z,3.2nm,0.8s,mb4.7,baz=321,slow=6.3,SNR=11
CMAR **Chiang Mai Arr** 91.54 48 P P 10 05 55.5 +0.4
QIZ **Qiongzhong** 94.73 38 P P 10 06 07.2 -2.6
QIZ S S 10 17 16.4 -6.7
QIZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
QIZ LR LR
comp=N,130nm,22.1s
QIZ LR LR
comp=Z,280nm,16.2s
TAOE **Nuku Hiva Isla** 107.78 283 *e*LR LR 10 42 59.6
comp=Z,508nm,25.7s
PPT **Papeete** 119.86 287 *e*LR LR 10 48 33.5
comp=Z,409nm,21.2s
DZM **Mont Dzumac** 140.45 336 *e*LR LR 10 58 05.8
comp=Z,214nm,24.2s
ASAR **Alice Springs** 141.97 25 PKhKP PKPpre 10 12 13.4
comp=Z,1.2nm,0.8s,baz=0.8,slow=2.4,SNR=9.1
MAW **Mawson** 143.81 140 PKP PKPdf 10 12 19.1 -2.7
comp=Z,1.9nm,0.7s,baz=250,slow=4.6,SNR=6.6
STKA **Stephens Creek** 151.33 15 PKPbc PKPbc 10 12 40.2 -1.2
comp=Z,3.7nm,0.7s,baz=46,slow=2.0,SNR=6.5

*NEIC **03** 09:55:56.9±5.2, 18°.08S×169°.05E, h189km±36km, mb4.3/3, Error ellipse: s-maj=63.7km s-min=53.4km az=88.0*
*IDC **03** 09:56:08.6±26.0, 18°.35S×168°.48E, h270km±218km, mb3.9/7, mb1 4.0/7, mb1mx3.6/17, mbtmp3.9/7, Error ellipse: s-maj=134.0km s-min=59.9km az=79.0*

ISC 03 09:55:58.9±2.9, 18°.4S±0°.3×169°.1E±0°.3, h208km±25km, n20, σ1§05/22, mb4.3/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.45**	**214**	*e*P	**Pn**	09 57 05.4	**-1.1**
DZM	**Mont Dzumac**	**4.45**	**214**	*e*Pn	**Pn**	09 57 06.3	**-0.2**
DZM				*e*S	**Sn**	09 58 00.2	**+0.3**
NOUC	**Port Laguerre**	**4.55**	**215**	*e*P	**Pn**	09 57 07.2	**-0.6**
NOUC				*e*S	**Sn**	09 58 02.7	**+0.5**
EIDS	**Eidsvold**	**18.11**	**244**	*e*P	**P**	09 59 56.9	**+1.4**
	5.8nm,0.6s						
ARMA	**Armidale**	**19.90**	**230**	P	**P**	10 00 17.6	**+3.0**
	17nm,1.1s						
CTA	**Charters Tower**	**21.64**	**262**	P	**P**	10 00 33.7	**+0.5**
	3.3nm,0.3s,mb4.3,baz=92,slow=11,SNR=7.8						
CTA	**Charters Tower**	**21.64**	**262**	*e*P	**P**	10 00 33.8	**+0.6**
	3.2nm,0.4s,mb4.2						
CTA	**Charters Tower**	**21.64**	**262**	P	**P**	10 00 33.7	**+0.5**
CTAO	**Charters Tower**	**21.64**	**262**	*e*P	**P**	10 00 32.4	**-0.8**
	4.6nm,0.4s,mb4.4						
MTSU	**Mount Surprise**	**23.54**	**267**	*e*P	**P**	10 00 51.7	**+1.1**
	84nm,1.5s,mb5.2						
CMSA	**Cobar Meteorol**	**24.88**	**234**	*e*P	**P**	10 01 02.0	**-0.7**
STKA	**Stephens Creek**	**28.21**	**236**	P	**P**	10 01 31.9	**-0.5**
	4.3nm,0.6s,mb4.2,baz=62,slow=6.9,SNR=15						
STKA	**Stephens Creek**	**28.21**	**236**	*e*P	**P**	10 01 32.2	**-0.2**
	3.7nm,0.7s,mb4.1						
WB2	**Warramunga Arr**	**32.83**	**262**	*e*P	**P**	10 02 11.2	**-1.9**
WRA	**Warramunga Arr**	**32.84**	**262**	P	**P**	10 02 11.9	**-1.4**
	2.9nm,0.4s,mb4.2,baz=86,slow=8.5,SNR=126						
ASAR	**Alice Springs**	**33.22**	**255**	P	**P**	10 02 15.7	**-0.8**
	26nm,0.5s,mb5.0,baz=82,slow=8.8,SNR=745						
FITZ	**Fitzroy Crossi**	**41.21**	**263**	P	**P**	10 03 23.0	**-0.6**
	9.8nm,0.6s,mb4.4,baz=104,slow=6.1,SNR=48						
FITZ	**Fitzroy Crossi**	**41.21**	**263**	*e*P	**P**	10 03 23.5	**-0.1**
	12nm,0.4s,mb4.7						
CMAR	**Chiang Mai Arr**	**78.03**	**294**	P	**P**	10 07 35.6	**+0.7**
	0.3nm,0.3s,mb3.4,baz=139,slow=4.3,SNR=4.4						
SONM	**Songino Array**	**86.45**	**323**	P	**P**	10 08 19.1	**+1.2**
	0.7nm,0.6s,mb3.6,baz=131,slow=4.4,SNR=3.6						

*ISCJB **03** 09:57:07.6±1.2, 59°.8N±0°.2×30°.2W±0°.2, h10km, mb3.7/6, Error ellipse: s-maj=28.8km s-min=13.9km az=8.0*
*IDC **03** 09:57:07.3±2.0, 59°.70N×30°.22W, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.6/30, mbtmp3.8/8, ML3.4/1, Error ellipse: s-maj=56.0km s-min=21.6km az=7.0*
*NEIC **03** 09:57:09.0±0.9, 59°.75N×30°.26W, h10km, Error ellipse: s-maj=24.1km s-min=11.3km az=187.0*

ISC 03 09:57:09.2±1.2, 59°.8N±0°.2×30°.2W±0°.2, h10km, n11, σ0§70/10, mb3.7/6, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.49**	**36**	Pn	**Pn**	09 58 44.7	**+0.2**
	0.8nm,0.3s,baz=243,slow=9.0,SNR=5.3						
BORG	**Borgarnes**	**6.49**	**36**	Pn	**Pn**	09 58 44.8	**+0.2**
EKA	**Eskdalemuir Ar**	**15.13**	**95**	Pn	**Pn**	10 00 43.6	**+1.0**
	0.1nm,0.3s,baz=302,slow=8.7,SNR=6.3						
YKA	**Yellowknife Ar**	**38.10**	**312**	P	**P**	10 04 28.5	**+1.0**
	0.7nm,0.9s,mb3.4,baz=55,slow=9.7,SNR=4.5						
BRTR	**Keskin Array B**	**43.86**	**88**	P	**P**	10 05 14.8	**-0.5**
	1.0nm,0.9s,mb3.5,baz=334,slow=9.6,SNR=3.4						
ILAR	**Eielson Array**	**47.00**	**328**	P	**P**	10 05 39.4	**-0.4**
	1.2nm,0.9s,mb3.8,baz=34,slow=6.4,SNR=9.1						
AKTK	**Aktyubinsk**	**47.69**	**60**	P	**P**	10 05 44.5	**-0.9**
AKTO	**Aktyubinsk**	**47.69**	**60**	P	**P**	10 05 44.5	**-0.9**
	1.1nm,0.3s,mb4.3,baz=334,slow=7.2,SNR=4.1						
PDAR	**Pinedale Array**	**49.27**	**287**	P	**P**	10 05 57.5	**-0.2**
	0.3nm,0.8s,mb3.4,baz=70,slow=5.9,SNR=3.6						
BVAR	**Borovoye Array**	**50.86**	**50**	P	**P**	10 06 10.3	**+0.7**
	0.5nm,0.6s,mb3.6,baz=316,slow=10,SNR=3.2						
RPZ	**Rata Peaks**	**159.37**	**312**	*e*PKPab	PKPab	10 17 44.1	-0.3

*ISCJB **03** 09:57:48.6±0.5, 32°.34N±0°.04×105°.53E±0°.06, h10km, mb3.8/3, Error ellipse: s-maj=7.2km s-min=4.7km az=26.6*
*IDC **03** 09:57:49.3±1.4, 32°.37N×105°.57E, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.6/24, mbtmp3.6/5, ML3.9/2, MS3.5/2, Ms1 3.5/2, ms1mx2.4/43, Error ellipse: s-maj=62.3km s-min=24.8km az=60.0*
*BJI **03** 09:57:49.7, 32°.54N×105°.36E, h17km, ML3.8/9*

ISC 03 09:57:50.5±0.5, 32°.40N±0°.03×105°.51E±0°.05, h10km, n14, σ1§20/23, mb3.8/3, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.11**	**226**	*e*Pn	**Pn**	09 58 25.6	**-0.2**
CD2				Pg	**Pg**	09 58 28.7	**-2.2**
CD2				Sg	**Sg**	09 58 56.4	**-1.8**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,1μm,0.7s						
XAN	**Xi'an**	**3.29**	**59**	Pn	**Pn**	09 58 43.3	**+1.2**
XAN				Pg	**Pg**	09 58 53.5	**-0.1**
XAN				Sn	**Sn**	09 59 19.9	**-1.4**
XAN				Sg	**Sg**	09 59 33.9	**-2.4**
XAN				smax			
	comp=N,400nm,1.0s						
XAN				smax			
	comp=E,210nm,0.8s						
LZH	**Lanzhou**	**3.93**	**340**	Pn	**Pn**	09 58 52.0	**+1.1**
LZH				Pg	**Pg**	09 58 59.1	**-6.7**
LZH				Sn	**Sn**	09 59 37.1	**+0.1**
LZH				Sg	**Sg**	09 59 46.2	**-10**
LZH				smax			
	comp=N,470nm,0.6s						
LZH				smax			
	comp=E,970nm,0.6s						
GYA	**Guiyang**	**6.00**	**170⇑**	*i*Pn	**Pn**	09 59 21.0	**+1.6**
GYA				Sn	**Sn**	10 00 35.6	**+7.4**
GYA				Sg	**Sg**	10 01 04.7	**+1.4**
GYA				smax			
	comp=N,80nm,0.9s						
GYA				smax			
	comp=E,40nm,0.8s						
WHN	**Wuhan**	**7.77**	**101**	*e*P	**Pn**	09 59 38.7	**-5.0**
GTA	**Gaotai**	**8.38**	**328**	*e*P	Px	10 00 04.4	
GTA				pP		10 00 08.6	
GTA				sP		10 00 11.9	
GTA				S	**Sb**	10 01 41.6	**-14**
GTA				sS		10 01 45.5	
GTA				SS		10 01 55.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,130nm,6.6s						
GTA				LR	LR		
	comp=N,200nm,12.6s						
GTA				LR	LR		
	comp=E,330nm,11.7s						
GTA				LR	LR		
	comp=Z,220nm,9.6s						
CMAR	**Chiang Mai Arr**	**15.09**	**205**	Pn	**Pn**	10 01 23.4	**-0.4**
	comp=Z,0.4nm,0.3s,baz=14,slow=12,SNR=4.0						
SONM	**Songino Array**	**15.43**	**2**	Pn	**Pn**	10 01 29.0	**+0.9**
	comp=Z,0.2nm,0.3s,baz=147,slow=14,SNR=2.4						
SONM				LR	LR	10 07 54.0	
	comp=Z,55nm,20.1s,baz=271,slow=39						
MKAR	**Makanchi Array**	**22.84**	**316**	P	**P**	10 02 54.6	**+0.9**
	comp=Z,2.3nm,0.8s,mb3.6,baz=103,slow=12,SNR=7.2						
MKAR	**Makanchi Array**	**22.84**	**316**	P	**P**	10 02 54.6	**+1.0**
MKAR	**Makanchi Array**	**22.84**	**316**	P	**P**	10 02 54.6	**+0.9**
WRA	**Warramunga Arr**	**58.91**	**148**	P	**P**	10 07 50.0	**+0.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=342,slow=7.3,SNR=8.9						
ASAR	**Alice Springs**	**62.00**	**150**	P	**P**	10 08 11.1	**+0.2**
	comp=Z,0.5nm,0.6s,mb3.8,baz=331,slow=6.4,SNR=6.7						
FRB	**Frobisher Bay**	**84.07**	**357**	LR	LR	10 51 57.0	
	comp=Z,96nm,19.8s,baz=63,slow=39						

*ISCJB **03** 09:58:59.8±1.6, 59°.98N±0°.08×29°.6W±0°.2, h8km±12km, mb3.7/7, Error ellipse: s-maj=19.4km s-min=9.1km az=35.4*
*IDC **03** 09:59:00.1±1.5, 59°.91N×29°.68W, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/27, mbtmp3.7/7, ML4.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.9/31, Error ellipse: s-maj=34.8km s-min=23.5km az=31.0*
*NEIC **03** 09:59:01.3±1.1, 59°.85N×29°.74W, h10km, mb4.2/1, Error ellipse: s-maj=24.7km s-min=18.0km az=32.0*
*CSEM **03** 09:59:01.0±0.4, 59°.91N×29°.65W, h10km, ML3.5, Error ellipse: s-maj=16.0km s-min=8.7km az=127.0*
*REY **03** 09:59:02.1, 59°.43N×27°.58W, h10km, ML3.5, ML3.4*

ISC 03 09:59:00.5±2.0, 59°.91N±0°.08×29°.6W±0°.2, h3km±14km, n31, σ0§95/41, mb3.7/7, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRV	**Grindav??k**	**5.20**	**37**	P	**Pn**	10 00 18.7	**-0.4**
INYL	**Nylenda**	**5.21**	**36**	P	**Pn**	10 00 19.8	**+0.7**
IVOG	**Vogar**	**5.30**	**37**	P	**Pn**	10 00 20.3	**-0.2**
IVOS	**Vogsosar**	**5.44**	**40**	P	**Pn**	10 00 22.3	**0.0**
IVOS				S	**Sn**	10 01 24.4	**-0.9**
ISAN	**Sandskeio**	**5.62**	**39**	P	**Pn**	10 00 24.6	**-0.2**
ISAN				S	**Sn**	10 01 30.3	**+0.5**
IBJA	**Bjarnastaoir**	**5.63**	**41**	P	**Pn**	10 00 24.5	**-0.5**
IBJA				S	**Sn**	10 01 28.7	**-1.4**
ISOL	**Solvholt**	**5.74**	**42**	P	**Pn**	10 00 25.6	**-0.9**
ISOL				S	**Sn**	10 01 31.5	**-1.2**
IKRO	**Krokur**	**5.79**	**40**	P	**Pn**	10 00 26.9	**-0.3**
IKRO				S	**Sn**	10 01 33.9	**-0.2**
IHEI	**Heioarbar**	**5.83**	**39**	P	**Pn**	10 00 27.8	**+0.1**
IHEI				S	**Sn**	10 01 35.6	**+0.7**
ISAU	**Saurbar**	**5.96**	**43**	P	**Pn**	10 00 28.7	**-0.8**
BORG	**Borgarnes**	**6.19**	**35**	Pn	**Pn**	10 00 35.0	**+2.3**
	3.5nm,0.3s,baz=193,slow=7.8,SNR=8.6						
BORG				Sn	**Sn**	10 01 44.4	**+0.5**
	0.3nm,0.3s,baz=253,slow=19,SNR=4.5						
BORG				LR	LR	10 01 53.9	
	comp=Z,204nm,19.7s,baz=105,slow=28						
BORG	**Borgarnes**	**6.19**	**35**	Pn	**Pn**	10 00 35.0	**+2.3**
BORG				Sn	**Sn**	10 01 44.4	**+0.5**
BORG	**Borgarnes**	**6.19**	**35**	*e*Sg	**Pn**	10 00 34.5	**+1.8**
IASB	**`sbjarnarst**	**6.19**	**35**	P	**Pn**	10 00 34.7	**+2.0**
IASB				S	**Sn**	10 01 46.2	**+2.3**
IGVG	**Gygjarholskot**	**6.21**	**41**	P	**Pn**	10 00 31.9	**-1.1**
IGVG				S	**Sn**	10 01 44.9	**+0.5**
EKA	**Eskdalemuir Ar**	**14.84**	**96**	Pn	**Pn**	10 02 35.0	**+4.1**
	baz=304,slow=9.0,SNR=5.2						
ESDC	**Sonseca Array**	**25.87**	**130**	P	**P**	10 04 34.1	**+1.0**
	0.3nm,0.3s,mb3.4,baz=336,slow=10,SNR=4.4						
ESDC	**Sonseca Array**	**25.87**	**130**	P	**P**	10 04 34.1	**+1.0**
YKA	**Yellowknife Ar**	**38.24**	**312**	P	**P**	10 06 19.7	**-1.4**
	0.6nm,0.9s,mb3.3,baz=62,slow=8.7,SNR=3.9						
YKA	**Yellowknife Ar**	**38.24**	**312**	P	**P**	10 06 19.8	**-1.4**
BRTR	**Keskin Array B**	**43.55**	**88**	P	**P**	10 07 05.5	**+0.3**
	0.7nm,0.7s,mb3.5,baz=352,slow=9.5,SNR=3.2						
BRTR	**Keskin Array B**	**43.55**	**88**	P	**P**	10 07 05.5	**+0.3**
ILAR	**Eielson Array**	**47.04**	**329**	P	**P**	10 07 34.0	**+1.4**
	0.5nm,0.9s,mb3.5,baz=33,slow=5.3,SNR=4.2						
ILAR	**Eielson Array**	**47.04**	**329**	P	**P**	10 07 34.0	**+1.4**
AKTK	**Aktyubinsk**	**47.36**	**60**	P	**P**	10 07 35.0	**-0.2**
AKTK	**Aktyubinsk**	**47.36**	**60**	P	**P**	10 07 35.0	**-0.2**
AKTO	**Aktyubinsk**	**47.36**	**60**	P	**P**	10 07 35.0	**-0.2**
	1.2nm,0.4s,mb4.2,baz=325,slow=5.9,SNR=4.3						
ABKAR	**Akbulak array**	**49.07**	**60**	*e*P	**P**	10 07 47.8	**-0.6**
	2.2nm,0.8s,mb4.2						
ABKAR	**Akbulak array**	**49.07**	**60**	*e*P	**P**	10 07 47.8	**-0.7**
	2.2nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**60.10**	**47**	P	**P**	10 09 08.0	**-0.6**
	0.4nm,0.7s,mb3.6,baz=359,slow=4.1,SNR=4.7						
MKAR	**Makanchi Array**	**60.10**	**47**	P	**P**	10 09 08.0	**-0.6**

*DDA **03** 10:12:50.6, 37°.89N×27°.05E, h7km±4km, Md2.9*
*ATH **03** 10:12:51.5, 37°.71N×27°.16E, h13km, MD3.1/3*
*ISCJB **03** 10:12:54.1±0.5, 37°.87N±0°.02×27°.08E±0°.05, h10km, Error ellipse: s-maj=6.2km s-min=3.4km az=170.3*
*ISK **03** 10:12:54.8, 37°.92N×27°.19E, h8km, MD2.8*
*CSEM **03** 10:12:55.0±0.3, 37°.91N×27°.20E, h5km, MD2.8, Error ellipse: s-maj=8.4km s-min=4.4km az=70.0*

ISC 03 10:12:54.2±0.6, 37°.88N±0°.03×27°.10E±0°.05, h0km±5km, n45, σ1§24/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.27**	**231**	*e*PG	**Pg**	10 12 57.1	**-2.2**
SMG	**Samos**	**0.27**	**231**	*e*Pg	**Pg**	10 12 57.1	**-2.2**
IZM	**Izmir**	**0.54**	**14**	*e*PG	**Pg**	10 13 04.7	**+0.1**
IZM				*e*SG	**Sg**	10 13 11.7	**+0.2**
IZM	**Izmir**	**0.54**	**14**	*e*Pg	**Pg**	10 13 04.7	**+0.2**
IZM				*e*Sg	**Sg**	10 13 11.7	**+0.2**
AYDN	**Tasoluk**	**0.65**	**109**	*i*P	**Pg**	10 13 04.4	**-2.3**
AYDN				*i*S	**Sg**	10 13 16.7	**+1.5**
AYDN	**Tasoluk**	**0.65**	**109**	*i*P	**Pg**	10 13 04.4	**-2.3**
AYDN				*i*S	**Sg**	10 13 16.7	**+1.5**
MLSB	**Milas**	**0.79**	**137**	*e*PG	**Pg**	10 13 10.9	**+1.6**
MLSB	**Milas**	**0.79**	**137**	*e*Pg	**Pg**	10 13 10.9	**+1.6**
BODT	**Bodrum**	**0.83**	**168**	*e*PG	**Pg**	10 13 11.6	**+1.5**
BODT				*e*SG	**Sg**	10 13 23.8	**+2.9**
BODT	**Bodrum**	**0.83**	**168**	*e*Pg	**Pg**	10 13 11.6	**+1.5**
BODT				*e*Sg	**Sg**	10 13 23.8	**+3.0**
BDRM	**Kayabasi**	**0.85**	**161**	*i*P	**Pg**	10 13 07.2	**-3.4**
BDRM				*i*S	**Sg**	10 13 20.4	**-1.3**
BDRM	**Kayabasi**	**0.85**	**161**	*i*P	**Pg**	10 13 07.2	**-3.4**
BDRM				*i*S	**Sg**	10 13 20.4	**-1.2**
CHOS	**Chios island**	**0.97**	**302**	*e*PB	**Pb**	10 13 09.4	**-4.5**
CHOS				*e*SB	**Sb**	10 13 28.1	**+0.9**
AKHS	**Akhisar**	**1.15**	**29**	*i*P	**Pg**	10 13 12.3	**-3.9**
AKHS				*i*S	**Sg**	10 13 31.2	**+0.1**
AKHS	**Akhisar**	**1.15**	**29**	*i*P	**Pg**	10 13 12.3	**-3.9**
AKHS				*i*S	**Sg**	10 13 31.2	**+0.1**
AKS	**Akhisar**	**1.15**	**29**	*e*PG	**Pg**	10 13 16.0	**-0.3**
AKS	**Akhisar**	**1.15**	**29**	*e*Pg	**Pg**	10 13 16.0	**-0.2**
YER	**Yerkesik**	**1.20**	**128**	*e*PN	**Pn**	10 13 16.9	**-1.3**
YER	**Yerkesik**	**1.20**	**128**	*e*Pn	**Pn**	10 13 16.9	**-1.3**
DAT	**Datca**	**1.21**	**161**	*e*PN	**Pn**	10 13 19.2	**+0.9**
DAT	**Datca**	**1.21**	**161**	*e*Pn	**Pn**	10 13 19.2	**+0.9**
KULA	**Kula-Manisa**	**1.39**	**62**	*e*PN	**Pn**	10 13 19.8	**-0.9**
KULA	**Kula-Manisa**	**1.39**	**62**	*e*Pn	**Pn**	10 13 19.8	**-1.0**
PRK	**Paraskevi**	**1.52**	**335**	*e*PG	**Pg**	10 13 23.7	**+0.4**
PRK	**Paraskevi**	**1.52**	**335**	*e*Pg	**Pg**	10 13 23.7	**+0.4**
DNZL	**Cakiroluk**	**1.55**	**96**	*i*P	**Pn**	10 13 21.8	**-1.3**
DNZL				*i*S	**Sn**	10 13 47.0	**+3.1**
DNZL	**Cakiroluk**	**1.55**	**96**	*i*P	**Pn**	10 13 21.8	**-1.3**
BALB	**Balikesir**	**1.86**	**19**	*e*PN	**Pn**	10 13 27.0	**-0.3**
BALB	**Balikesir**	**1.86**	**19**	*e*Pn	**Pn**	10 13 27.0	**-0.4**
BALY	**Balya**	**1.91**	**12**	*i*P	**Pn**	10 13 25.2	**-2.7**
BALY				*i*S	**Sn**	10 13 53.8	**+1.2**
BALY	**Balya**	**1.91**	**12**	*i*P	**Pn**	10 13 25.2	**-2.7**
BALY				*i*S	**Sn**	10 13 53.8	**+1.2**
KHL	**Karahalli**	**1.96**	**76**	*e*PN	**Pn**	10 13 28.4	**-0.3**
KHL	**Karahalli**	**1.96**	**76**	*e*Pn	**Pn**	10 13 28.4	**-0.3**
EZN	**Ezine**	**2.04**	**343**	*e*PN	**Pn**	10 13 29.8	**0.0**
EZN	**Ezine**	**2.04**	**343**	*e*Pn	**Pn**	10 13 29.8	**0.0**
GONE	**Gonen-Balikesi**	**2.21**	**12**	*e*PN	**Pn**	10 13 32.6	**+0.4**
GONE	**Gonen-Balikesi**	**2.21**	**12**	*e*Pn	**Pn**	10 13 32.6	**+0.4**
GELI	**Tayfur-Gelibol**	**2.56**	**349**	*e*PN	**Pn**	10 13 37.6	**+0.6**
GELI	**Tayfur-Gelibol**	**2.56**	**349**	*e*Pn	**Pn**	10 13 37.6	**+0.6**
ALT	**Altintas**	**2.64**	**63**	*e*PN	**Pn**	10 13 37.2	**-0.8**
ALT	**Altintas**	**2.64**	**63**	*e*Pn	**Pn**	10 13 37.2	**-0.8**
ERIK	**Erikli-Kesan**	**2.83**	**351**	*e*PN	**Pn**	10 13 40.9	**+0.3**
ERIK	**Erikli-Kesan**	**2.83**	**351**	*e*Pn	**Pn**	10 13 40.9	**+0.3**
YLV	**Yalova**	**3.21**	**33**	*e*PN	**Pn**	10 13 46.1	**+0.2**
YLV	**Yalova**	**3.21**	**33**	*e*Pn	**Pn**	10 13 46.1	**+0.2**

*ISCJB **03** 10:15:30.7±0.8, 37°.90N±0°.03×27°.12E±0°.06, h5km±8km, Error ellipse: s-maj=8.2km s-min=4.9km az=2.8*
*ISK **03** 10:15:30.8, 37°.91N×27°.19E, h5km, MD2.6*
*CSEM **03** 10:15:31.0±0.3, 37°.92N×27°.16E, h5km, MD2.6, Error ellipse: s-maj=8.1km s-min=5.9km az=86.0*
*ATH **03** 10:15:32.4, 37°.83N×26°.95E, h26km, MD2.9/3*

ISC 03 10:15:31.4±0.6, 37°.91N±0°.03×27°.16E±0°.05, h7km±7km, n24, σ0§81/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.32**	**231**	*e*PB	**Pg**	10 15 37.1	**-0.6**
SMG				*e*SB	**Sg**	10 15 42.2	**+0.2**
SMG	**Samos**	**0.32**	**231**	*e*Pb	**Pg**	10 15 37.1	**-0.6**
SMG				*e*Sb	**Sg**	10 15 42.2	**+0.2**
IZM	**Izmir**	**0.49**	**10**	*e*PG	**Pg**	10 15 40.9	**0.0**
IZM				*e*SG	**Sg**	10 15 47.8	**+0.5**
IZM	**Izmir**	**0.49**	**10**	*e*Pg	**Pg**	10 15 40.9	**0.0**
IZM				*e*Sg	**Sg**	10 15 47.8	**+0.5**
MLSB	**Milas**	**0.79**	**141**	*e*PG	**Pg**	10 15 46.2	**-0.4**
MLSB				*e*SG	**Sg**	10 15 57.1	**+0.2**
MLSB	**Milas**	**0.79**	**141**	*e*Pg	**Pg**	10 15 46.2	**-0.4**
MLSB				*e*Sg	**Sg**	10 15 57.1	**+0.2**
BODT	**Bodrum**	**0.86**	**172**	*e*PG	**Pg**	10 15 47.8	**-0.1**
BODT				*e*SG	**Sg**	10 15 59.3	**+0.2**
BODT	**Bodrum**	**0.86**	**172**	*e*Pg	**Pg**	10 15 47.8	**-0.1**
BODT				*e*Sg	**Sg**	10 15 59.3	**+0.2**
CHOS	**Chios island**	**0.99**	**299**	*e*PN	**Pn**	10 15 49.6	**-2.0**
CHOS	**Chios island**	**0.99**	**299**	*e*Pn	**Pn**	10 15 49.6	**-2.0**
AKS	**Akhisar**	**1.09**	**28**	*e*PN	**Pn**	10 15 51.9	**-1.2**
AKS	**Akhisar**	**1.09**	**28**	*e*Pn	**Pn**	10 15 51.9	**-1.2**
YER	**Yerkesik**	**1.19**	**131**	*e*PN	**Pn**	10 15 53.8	**-0.6**
YER	**Yerkesik**	**1.19**	**131**	*e*Pn	**Pn**	10 15 53.8	**-0.6**
DAT	**Datca**	**1.23**	**164**	*e*PN	**Pn**	10 15 55.1	**+0.2**
DAT	**Datca**	**1.23**	**164**	*e*Pn	**Pn**	10 15 55.2	**+0.2**
KULA	**Kula-Manisa**	**1.33**	**63**	*e*PN	**Pn**	10 15 56.5	**+0.2**
KULA	**Kula-Manisa**	**1.33**	**63**	*e*Pn	**Pn**	10 15 56.5	**+0.2**
PRK	**Paraskevi**	**1.50**	**333**	*e*PN	**Pn**	10 16 00.1	**+1.4**
PRK	**Paraskevi**	**1.50**	**333**	*e*Pn	**Pn**	10 16 00.1	**+1.4**
APE	**Apeiranthos**	**1.54**	**237**	*e*PN	**Pn**	10 16 00.7	**+1.4**
APE	**Apeiranthos**	**1.54**	**237**	*e*Pn	**Pn**	10 16 00.7	**+1.4**
KHL	**Karahalli**	**1.91**	**77**	*e*PN	**Pn**	10 16 04.8	**+0.5**
KHL	**Karahalli**	**1.91**	**77**	*e*Pn	**Pn**	10 16 04.8	**+0.5**

*ATH **03** 10:25:42.6, 37°.61N×26°.93E, h38km±1km, MD3.1/3*
*DDA **03** 10:25:43.1, 37°.92N×27°.11E, h14km±2km, Md3.0*
*ISK **03** 10:25:43.6, 37°.91N×27°.14E, h5km, ML3.2*
*ISCJB **03** 10:25:44.0±0.3, 37°.88N±0°.02×27°.09E±0°.03, h10km, Error ellipse: s-maj=3.7km s-min=2.5km az=169.5*
*CSEM **03** 10:25:44.1±0.1, 37°.90N×27°.14E, h5km, ML3.2, Error ellipse: s-maj=4.4km s-min=2.7km az=75.0*

ISC 03 10:25:43.9±0.5, 37°.90N±0°.02×27°.09E±0°.03, h3km±4km, n72, σ1§09/106, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.28**	**226**	*e*PB	**Pg**	10 25 49.5	**+0.3**
SMG				*e*SB	**Sg**	10 25 54.2	**+1.4**
SMG	**Samos**	**0.28**	**226**	*e*Pb	**Pg**	10 25 49.5	**+0.3**
SMG				*e*Sb	**Sg**	10 25 54.2	**+1.4**
IZM	**Izmir**	**0.51**	**16**	*e*PG	**Pg**	10 25 53.4	**-0.3**
IZM				*e*SG	**Sg**	10 26 00.9	**+0.5**
IZM	**Izmir**	**0.51**	**16**	*e*Pg	**Pg**	10 25 53.4	**-0.4**
IZM				*e*Sg	**Sg**	10 26 00.9	**+0.5**
AYDN	**Tasoluk**	**0.67**	**111**	*i*P	**Pg**	10 25 56.4	**-0.4**
AYDN				*i*S	**Sg**	10 26 05.3	**-0.3**
AYDN	**Tasoluk**	**0.67**	**111**	*i*P	**Pg**	10 25 56.4	**-0.4**
AYDN				*i*S	**Sg**	10 26 05.3	**-0.2**
MLSB	**Milas**	**0.82**	**138**	*e*PG	**Pg**	10 26 00.2	**+0.6**
MLSB				*e*SG	**Sg**	10 26 10.5	**+0.3**
MLSB	**Milas**	**0.82**	**138**	*e*Pg	**Pg**	10 26 00.2	**+0.6**
MLSB				*e*Sg	**Sg**	10 26 10.5	**+0.3**
BODT	**Bodrum**	**0.86**	**168**	*e*PG	**Pg**	10 26 00.1	**-0.2**
BODT				*e*SG	**Sg**	10 26 12.3	**+0.8**
BODT	**Bodrum**	**0.86**	**168**	*e*Pg	**Pg**	10 26 00.1	**-0.3**
BODT				*e*Sg	**Sg**	10 26 12.3	**+0.8**
BDRM	**Kayabasi**	**0.88**	**161**	*i*P	**Pg**	10 26 00.2	**-0.7**
BDRM				*i*S	**Sg**	10 26 12.0	**-0.3**
BDRM	**Kayabasi**	**0.88**	**161**	*i*P	**Pg**	10 26 00.2	**-0.7**
BDRM				*i*S	**Sg**	10 26 12.0	**-0.3**
CHOS	**Chios island**	**0.95**	**301**	*e*PN	**Pn**	10 26 02.3	**-1.8**
CHOS				*e*SN	**Sn**	10 26 16.9	**-1.3**
CHOS	**Chios island**	**0.95**	**301**	*e*Pn	**Pn**	10 26 02.3	**-1.8**
CHOS				*e*Sn	**Sn**	10 26 16.9	**-1.3**
AKHS	**Akhisar**

IZM				*e*Sg	Sg	10 27 19.4	-0.3
AYDN	**Tasoluk**	**0.64**	**110**	*i* P	Pg	10 27 14.8	+0.1
AYDN				*i* S	Sg	10 27 23.9	+0.9
AYDN	**Tasoluk**	**0.64**	**110**	*i* P	Pg	10 27 14.9	+0.2
AYDN				*i* S	Sg	10 27 23.9	+0.9
MLSB	**Milas**	**0.78**	**138**	*e*PG	Pg	10 27 17.3	-0.1
MLSB	**Milas**	**0.78**	**138**	*e*Pg	Pg	10 27 17.3	-0.1
BODT	**Bodrum**	**0.83**	**170**	*e*PG	Pg	10 27 17.6	-0.8
BODT	**Bodrum**	**0.83**	**170**	*e*Pg	Pg	10 27 17.6	-0.8
BDRM	**Kayabasi**	**0.85**	**163**	*i* P	Pg	10 27 18.9	+0.1
BDRM				*i* S	Sg	10 27 30.8	+0.9
BDRM	**Kayabasi**	**0.85**	**163**	*i* P	Pg	10 27 18.9	+0.1
BDRM				*i* S	Sg	10 27 30.8	+0.9
CHOS	**Chios island**	**0.99**	**301**	*e*PG	Pg	10 27 20.2	-1.2
CHOS				*e*SB	Sb	10 27 34.9	+0.4
CHOS	**Chios island**	**0.99**	**301**	*e*Pg	Pg	10 27 20.2	-1.2
CHOS				*e*Sb	Sb	10 27 34.9	+0.4
AKHS	**Akhisar**	**1.13**	**28**	*i* P	Pb	10 27 23.2	-0.9
AKHS				*i* S	Sb	10 27 38.4	-0.3
AKHS	**Akhisar**	**1.13**	**28**	*i* P	Pb	10 27 23.2	-0.8
AKHS				*i* S	Sb	10 27 38.4	-0.4
AKS	**Akhisar**	**1.13**	**28**	*e*PN	Pn	10 27 23.5	-0.7
AKS				*e*SN	Sn	10 27 39.1	-0.7
AKS	**Akhisar**	**1.13**	**28**	*e*Pn	Pn	10 27 23.5	-0.7
AKS				*e*Sn	Sn	10 27 39.1	-0.7
YER	**Yerkesik**	**1.18**	**129**	*e*PN	Pn	10 27 23.8	-1.0
YER				*e*SN	Sn	10 27 40.5	-0.4
YER	**Yerkesik**	**1.18**	**129**	*e*Pn	Pn	10 27 23.8	-1.1
YER				*e*Sn	Sn	10 27 40.5	-0.4
DAT	**Datca**	**1.20**	**163**	*e*PN	Pn	10 27 24.0	-1.2
DAT	**Datca**	**1.20**	**163**	*e*Pn	Pn	10 27 24.0	-1.2
KULA	**Kula-Manisa**	**1.36**	**62**	*e*PN	Pn	10 27 27.2	-0.2
KULA	**Kula-Manisa**	**1.36**	**62**	*e*Pn	Pn	10 27 27.2	-0.2
AYVA	**Ayvalik**	**1.47**	**347**	*i* P	Pn	10 27 29.7	+0.9
AYVA				*i* S	Sn	10 27 46.9	-1.1
AYVA	**Ayvalik**	**1.47**	**347**	*i* P	Pn	10 27 29.7	+0.9
AYVA				*i* S	Sn	10 27 46.9	-1.1
APE	**Apeiranthos**	**1.51**	**238**	*e*PN	Pn	10 27 29.5	+0.2
APE	**Apeiranthos**	**1.51**	**238**	*e*Pn	Pn	10 27 29.5	+0.2
DENT	**Denizli**	**1.51**	**94**	*e*PN	Pn	10 27 28.8	-0.7
DENT	**Denizli**	**1.51**	**94**	*e*Pn	Pn	10 27 28.8	-0.6
PRK	**Paraskevi**	**1.52**	**334**	*e*PB	Pb	10 27 30.1	-0.5
PRK				*e*SB	Sb	10 27 50.8	+0.9
PRK	**Paraskevi**	**1.52**	**334**	*e*Pb	Pb	10 27 30.1	-0.5
PRK				*e*Sb	Sb	10 27 50.8	+0.9
DEMI	**Demirci**	**1.70**	**47**	*i* P	Pn	10 27 34.2	+2.1
DEMI				*i* S	Sn	10 27 54.5	+0.7
DEMI	**Demirci**	**1.70**	**47**	*i* P	Pn	10 27 34.2	+2.1
DEMI				*i* S	Sn	10 27 54.5	+0.6
BALB	**Balikesir**	**1.85**	**18**	*e*PN	Pn	10 27 33.6	-0.5
BALB	**Balikesir**	**1.85**	**18**	*e*Pn	Pn	10 27 33.7	-0.4
BALY	**Balya**	**1.90**	**12**	*i* P	Pn	10 27 36.2	+1.5
BALY				*i* S	Sn	10 28 03.7	+5.0
BALY	**Balya**	**1.90**	**12**	*i* P	Pn	10 27 36.2	+1.5
KHL	**Karahalli**	**1.94**	**76**	*e*PN	Pn	10 27 35.5	+0.1
KHL	**Karahalli**	**1.94**	**76**	*e*Pn	Pn	10 27 35.5	+0.2
DURS	**Dursunbey**	**2.02**	**31**	*i* P	Pn	10 27 38.5	+2.1
DURS				*i* S	Sn	10 28 07.0	+5.4
DURS	**Dursunbey**	**2.02**	**31**	*i* P	Pn	10 27 38.5	+2.2
EZN	**Ezine**	**2.04**	**342**	*e*PN	Pn	10 27 36.8	+0.1
EZN	**Ezine**	**2.04**	**342**	*e*Pn	Pn	10 27 36.8	+0.1
GDZ	**Gediz**	**2.21**	**56**	*i* P	Pn	10 27 43.9	+4.9
GDZ				*i* S	Sn	10 28 11.1	+4.8
GONE	**Gonen-Balikesi**	**2.21**	**11**	*e*PN	Pn	10 27 38.7	-0.3
GONE	**Gonen-Balikesi**	**2.21**	**11**	*e*Pn	Pn	10 27 38.7	-0.3
ELL	**Elmali**	**2.49**	**116**	*e*PN	Pn	10 27 41.9	-1.0
ELL	**Elmali**	**2.49**	**116**	*e*Pn	Pn	10 27 41.9	-0.9
GADA	**Gvkgeada**	**2.50**	**338**	*e*PN	Pn	10 27 43.2	+0.3
GADA	**Gvkgeada**	**2.50**	**338**	*e*Pn	Pn	10 27 43.3	+0.3
LPK	**Lapseki**	**2.51**	**354**	*e*PN	Pn	10 27 42.3	-0.7
LPK	**Lapseki**	**2.51**	**354**	*e*Pn	Pn	10 27 42.3	-0.8
GELI	**Tayfur-Gelibol**	**2.57**	**349**	*e*PN	Pn	10 27 43.7	-0.2
GELI	**Tayfur-Gelibol**	**2.57**	**349**	*e*Pn	Pn	10 27 43.7	-0.2
ALT	**Altintas**	**2.62**	**62**	*e*PN	Pn	10 27 45.0	+0.4
ALT	**Altintas**	**2.62**	**62**	*e*Pn	Pn	10 27 45.0	+0.4
RKY	**Sarkoy-Tekirda**	**2.80**	**1**	*e*PN	Pn	10 27 47.4	+0.2
RKY	**Sarkoy-Tekirda**	**2.80**	**1**	*e*Pn	Pn	10 27 47.4	+0.2
ERIK	**Erikli-Kesan**	**2.83**	**350**	*e*PN	Pn	10 27 48.3	+0.8
ERIK	**Erikli-Kesan**	**2.83**	**350**	*e*Pn	Pn	10 27 48.3	+0.8
GULT	**Gulveren**	**3.67**	**45**	*e*PN	Pn	10 28 00.2	+1.2
GULT	**Gulveren**	**3.67**	**45**	*e*Pn	Pn	10 28 00.2	+1.2

KRSC 03 10:33:38.3±0.6, 51°.52N×157°.57E, h86km±75km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**0.91**	**327**	*e*P	Pn	10 33 58.4	+1.8
MIPR				*i* S	Sn	10 34 13.6	+3.2
ALID	**Alaid**	**1.43**	**244**	*e*P	Pn	10 34 02.6	-0.3
PET	**Petropavlovsk**	**1.65**	**23**	P	Pn	10 34 08.6	+2.9
PET				*i* S	Sn	10 34 31.3	+4.8
AVH	**Avacha**	**1.89**	**22**	*e*P	Pn	10 34 11.1	+2.3
NLC	**Nalytchevo**	**1.98**	**33**	*e*P	Pn	10 34 11.6	+1.6
NLC				*i* S	Sn	10 34 35.9	+1.7
SPN	**Mys Shipunski**	**2.18**	**43**	*e*P	Pn	10 34 16.0	+3.3
SPN				*i* S	Sn	10 34 42.8	+3.8
GNL	**Ganaly**	**2.19**	**6**	*e*P	Pn	10 34 15.0	+2.2
MKZ	**Mys Kozlova**	**3.94**	**38**	*e*P	Pn	10 34 37.5	+1.1
MKZ				*i* S	Sn	10 35 22.0	+0.5
KBTR	**Krutoberegovo**	**5.63**	**31**	*e*P	Pn	10 35 00.3	+1.0

*THE **03** 10:39:07.7, 38°.30N×21°.75E, h1km±1km, ML3.5/8, Error ellipse: s-maj=1.3km s-min=0.6km az=172.0*
*IDC **03** 10:39:07.3±1.3, 38°.53N×21°.78E, h0km, mb4.1/5, mb1 4.0/6, mb1mx3.6/25, mbtmp4.0/6, ML3.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/46, Error ellipse: s-maj=40.5km s-min=23.1km az=149.0*
*CSEM **03** 10:39:07.6±0.2, 38°.28N×21°.79E, h5km, ML3.5/8, Error ellipse: s-maj=3.9km s-min=3.2km az=45.0*
*ISCJB **03** 10:39:07.4±0.3, 38°.28N±0°.02×21°.76E±0°.02, h8km±2km, mb3.9/6, Error ellipse: s-maj=3.1km s-min=2.6km az=136.7*
*ATH **03** 10:39:07.0, 38°.32N×21°.75E, h16km, MD3.3/22, ML3.3*
*NEIC **03** 10:39:07.0, 38°.32N×21°.76E, h14km, mb3.8/1, ML3.5(THE), ML3.3(ATH), After ATH.*

ISC 03 10:39:07.9±0.3, 38°.28N±0°.02×21°.77E±0°.02, h5km±2km, n147, σ1§15/205, mb3.9/6, 6C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.01**	**78**	*e*PB	Pg	10 39 08.9	+0.1
UPR	**University Cam**	**0.01**	**78**	P	Pg	10 39 08.9	+0.1
UPR				S	Sg	10 39 09.8	+0.4
UPR	**University Cam**	**0.01**	**78**	P	Pg	10 39 08.9	+0.1
UPR				S	Sg	10 39 09.8	+0.4
UPR				*e*Sg	Sg	10 39 10.6	+1.2
LAKA	**Lakka**	**0.17**	**104**	P	Pg	10 39 11.4	+0.1
LAKA				S	Sg	10 39 14.4	+0.9
LAKA	**Lakka**	**0.17**	**104**	P	Pg	10 39 11.4	+0.1
LAKA				S	Sg	10 39 14.4	+0.9
EFP	**Efpalio**	**0.18**	**37**	*e*PB	Pg	10 39 11.1	-0.4
EFP				*e*SB	Sg	10 39 14.2	+0.3
EFP	**Efpalio**	**0.18**	**37**	P	Pg	10 39 11.1	-0.4
EFP				S	Sg	10 39 14.3	+0.4
EFP	**Efpalio**	**0.18**	**37**	P	Pg	10 39 11.1	-0.4
EFP				S	Sg	10 39 14.3	+0.4
TRIZ	**Trizonia**	**0.25**	**70**	P	Pg	10 39 12.7	-0.1
TRIZ				S	Sg	10 39 16.5	+0.3
TRIZ	**Trizonia**	**0.25**	**70**	P	Pg	10 39 12.7	-0.1
TRIZ				S	Sg	10 39 16.5	+0.3
KALE	**Kalithea**	**0.31**	**69**	P	Pg	10 39 13.7	-0.2
KALE				S	Sg	10 39 18.6	+0.6
KALE	**Kalithea**	**0.31**	**69**	P	Pg	10 39 13.7	-0.2
KALE				S	Sg	10 39 18.6	+0.6
RLS	**Riolos of Patr**	**0.33**	**227**	*e*Pb	Pg	10 39 14.5	+0.3
RLS				*e*Sb	Sg	10 39 19.5	+1.1
RLS	**Riolos of Patr**	**0.33**	**227**	*e*PB	Pg	10 39 14.5	+0.3
RLS				*e*SB	Sg	10 39 19.5	+1.1
RLS	**Riolos of Patr**	**0.33**	**227**	*e*Pb	Pg	10 39 14.5	+0.3
RLS				*e*Sb	Sg	10 39 19.5	+1.1
GUR	**Goura**	**0.57**	**127**	*e*PB	Pg	10 39 18.4	-0.4
GUR				*e*SN	Sg	10 39 27.5	+1.3
GUR	**Goura**	**0.57**	**127**	P	Pg	10 39 18.4	-0.4
GUR				S	Sg	10 39 27.9	+1.7
GUR	**Goura**	**0.57**	**127**	P	Pg	10 39 18.4	-0.4
GUR				*e*Sb	Sg	10 39 27.5	+1.3
GUR				S	Sg	10 39 27.9	+1.7
DSF	**Desfina**	**0.61**	**77**	P	Pg	10 39 18.7	-0.9
DSF	**Desfina**	**0.61**	**77**	P	Pg	10 39 18.7	-0.9
EVR	**Evrytania**	**0.64**	**3**	*e*Pb	Pg	10 39 18.8	-1.3
EVR				*e*Sb	Sg	10 39 27.4	-1.0
EVR	**Evrytania**	**0.64**	**3**	*e*PN	Pg	10 39 18.8	-1.3
EVR				*e*SN	Sg	10 39 27.4	-1.0
EVR	**Evrytania**	**0.64**	**3**	*e*Pb	Pg	10 39 18.8	-1.3
EVR				*e*Sb	Sg	10 39 27.4	-1.0
KFL	**Anninata**	**0.79**	**258**	P	Pg	10 39 23.1	0.0
KFL	**Anninata**	**0.79**	**258**	P	Pg	10 39 23.1	0.0
VLS	**Valsamata**	**0.93**	**264**	*e*Pg	Pg	10 39 24.5	-1.3
VLS				*e*Sb	Sb	10 39 37.8	-1.5
VLS	**Valsamata**	**0.93**	**264**	*e*PN	Pg	10 39 24.5	-1.3
VLS				*e*SN	Sb	10 39 37.8	-1.5
VLS	**Valsamata**	**0.93**	**264**	P	Pg	10 39 24.7	-1.1
VLS				S	Sg	10 39 38.3	+0.4
VLS	**Valsamata**	**0.93**	**264**	P	Pg	10 39 24.7	-1.1
VLS				*e*Sb	Sb	10 39 37.8	-1.5
VLS				S	Sg	10 39 38.3	+0.4
LTK	**Loutraki**	**0.98**	**105**	*e*PN	Pn	10 39 26.0	-2.3
LTK				*e*SN	Sb	10 39 39.8	-0.8
LTK	**Loutraki**	**0.98**	**105**	P	Pg	10 39 26.2	-0.5
LTK				S	Sg	10 39 40.8	+1.4
LTK	**Loutraki**	**0.98**	**105**	P	Pg	10 39 26.2	-0.5
LTK				*e*Sb	Sb	10 39 39.8	-0.8
LTK				S	Sg	10 39 40.8	+1.4
LKD2	**Lefkada island**	**1.01**	**301**	P	Pg	10 39 25.9	-1.3
LKD2				S	Sg	10 39 39.9	-0.4
LKD2	**Lefkada island**	**1.01**	**301**	P	Pg	10 39 25.9	-1.3
LKD2				S	Sg	10 39 39.9	-0.4
VLX	**Vlachokerasia**	**1.03**	**152**	*e*PB	Pg	10 39 26.6	-1.0
VLX				*e*SN	Sb	10 39 42.2	+0.2
VLX	**Vlachokerasia**	**1.03**	**152**	P	Pg	10 39 27.1	-0.5
VLX				S	Sg	10 39 42.6	+1.6
VLX	**Vlachokerasia**	**1.03**	**152**	*e*Pg	Pg	10 39 26.6	-1.0
VLX	**Vlachokerasia**	**1.03**	**152**	P	Pg	10 39 27.1	-0.5
VLX				*e*Sb	Sb	10 39 42.2	+0.2
VLX				S	Sg	10 39 42.6	+1.6
LKR	**Lokris**	**1.03**	**69**	*e*Pg	Pg	10 39 25.9	-1.8
LKR				*e*Sb	Sb	10 39 41.2	-1.0
LKR	**Lokris**	**1.03**	**69**	*e*PB	Pg	10 39 25.9	-1.8
LKR				*e*SN	Sb	10 39 41.2	-1.0
LKR	**Lokris**	**1.03**	**69**	P	Pg	10 39 26.4	-1.3
LKR				S	Sg	10 39 42.1	+0.9
LKR	**Lokris**	**1.03**	**69**	*e*Pg	Pg	10 39 25.9	-1.8
LKR	**Lokris**	**1.03**	**69**	P	Pg	10 39 26.4	-1.3
LKR				*e*Sb	Sb	10 39 41.2	-1.0
LKR				S	Sg	10 39 42.1	+0.9
ATAL	**Atalanti**	**1.07**	**67**	P	Pg	10 39 26.1	-2.2
ATAL	**Atalanti**	**1.07**	**67**	P	Pg	10 39 26.1	-2.2
ITM	**Ithomi**	**1.11**	**173**	*e*Pb	Pb	10 39 29.0	-0.5
ITM	**Ithomi**	**1.11**	**173**	*e*PN	Pb	10 39 29.0	-0.5
ITM	**Ithomi**	**1.11**	**173**	P	Pg	10 39 28.6	-0.5
ITM	**Ithomi**	**1.11**	**173**	P	Pg	10 39 28.6	-0.5
ITM	**Ithomi**	**1.11**	**173**	*e*Pb	Pb	10 39 29.0	-0.5
THL	**Klokotos Trika**	**1.30**	**8**	*e*PN	Pn	10 39 30.9	-1.8
THL	**Klokotos Trika**	**1.30**	**8**	P	Pn	10 39 31.8	-0.9
THL				S	Sg	10 39 50.6	+1.0
THL	**Klokotos Trika**	**1.30**	**8**	*e*Pb	Pn	10 39 30.9	-1.8
THL	**Klokotos Trika**	**1.30**	**8**	P	Pn	10 39 31.8	-0.9
THL				S	Sg	10 39 50.6	+1.0
PYL	**PYLOS**	**1.38**	**181**	*e*PN	Pn	10 39 33.5	-0.4
PYL	**PYLOS**	**1.38**	**181**	P	Pn	10 39 33.4	-0.5
PYL	**PYLOS**	**1.38**	**181**	P	Pn	10 39 33.4	-0.5
DID	**Didima**	**1.40**	**123**	*e*PN	Pn	10 39 33.6	-0.4
DID				*e*SN	Sn	10 39 52.7	-0.1
DID	**Didima**	**1.40**	**123**	P	Pn	10 39 33.5	-0.5
DID	**Didima**	**1.40**	**123**	P	Pn	10 39 33.5	-0.5
DID				*e*Sb	Sn	10 39 52.7	-0.1
NAIG	**Nisos Aigina**	**1.46**	**110**	*e*Pb	Pn	10 39 34.9	0.0
NAIG	**Nisos Aigina**	**1.46**	**110**	*e*PN	Pn	10 39 34.9	0.0
NAIG	**Nisos Aigina**	**1.46**	**110**	*e*Pb	Pn	10 39 34.9	0.0
NEO	**Neokhori**	**1.53**	**48**	*e*Pg	Pn	10 39 34.9	-1.0
NEO	**Neokhori**	**1.53**	**48**	*e*PN	Pn	10 39 34.9	-1.0
NEO	**Neokhori**	**1.53**	**48**	*e*Pg	Pn	10 39 34.9	-1.0
JAN	**Janina**	**1.55**	**333**	*e*Pb	Pn	10 39 35.4	-0.8
JAN	**Janina**	**1.55**	**333**	*e*PN	Pn	10 39 35.4	-0.8
JAN	**Janina**	**1.55**	**333**	*e*Pb	Pn	10 39 35.4	-0.8
ATH	**Athens Observa**	**1.57**	**101**	*e*Pb	Pn	10 39 36.8	+0.4
ATH	**Athens Observa**	**1.57**	**101**	*e*PN	Pn	10 39 36.8	+0.4
ATH	**Athens Observa**	**1.57**	**101**	*e*Pb	Pn	10 39 36.8	+0.4
VLY	**Voula,Athens**	**1.66**	**104**	*e*Pb	Pn	10 39 37.7	+0.1
VLY	**Voula,Athens**	**1.66**	**104**	*e*PN	Pn	10 39 37.7	+0.1
VLY	**Voula,Athens**	**1.66**	**104**	*e*Pb	Pn	10 39 37.7	+0.1
PTL	**Penteli**	**1.67**	**97**	*e*Pb	Pn	10 39 37.5	-0.3
PTL	**Penteli**	**1.67**	**97**	*e*PN	Pn	10 39 37.5	-0.3
PTL	**Penteli**	**1.67**	**97**	*e*Pb	Pn	10 39 37.5	-0.3
VLI	**Veliai**	**1.82**	**149**	*e*Pn	Pn	10 39 40.2	+0.4
VLI	**Veliai**	**1.82**	**149**	*e*PN	Pn	10 39 40.2	+0.4
VLI	**Veliai**	**1.82**	**149**	*e*Pn	Pn	10 39 40.2	+0.4
AOS	**Alonnisos**	**1.88**	**61**	P	Pn	10 39 39.9	-0.7
AOS	**Alonnisos**	**1.88**	**61**	P	Pn	10 39 39.2	-1.4
AOS	**Alonnisos**	**1.88**	**61**	P	Pn	10 39 39.9	-0.7
LIT	**Litokhoron**	**1.90**	**17**	*e*Pn	Pn	10 39 40.7	-0.3
LIT	**Litokhoron**	**1.90**	**17**	*e*PN	Pn	10 39 40.7	-0.3
LIT	**Litokhoron**	**1.90**	**17**	P	Pn	10 39 40.9	-0.1
LIT				S	Sn	10 40 06.0	+0.6
LIT	**Litokhoron**	**1.90**	**17**	P	Pn	10 39 40.9	-0.1
LIT				S	Sn	10 40 06.0	+0.6
KEK	**Kerkira**	**2.10**	**314**	P	Pn	10 39 44.7	+1.0
KEK	**Kerkira**	**2.10**	**314**	P	Pn	10 39 42.9	-0.8
KEK	**Kerkira**	**2.10**	**314**	P	Pn	10 39 42.9	-0.8
SRN	**Sarande**	**2.11**	**320**	*i* PN	Sn	10 40 04.1	-5.2
SRN				*i* SN	Sg	10 40 30.4	+15
PAIG	**Paliouri**	**2.22**	**42**	P	Pn	10 39 44.1	-1.2
PAIG	**Paliouri**	**2.22**	**42**	P	Pn	10 39 44.1	-1.2
KYTH	**Kithira**	**2.24**	**153**	*e*Pg	Pg	10 39 48.7	-2.1
KYTH	**Kithira**	**2.24**	**153**	*e*Pg	Pg	10 39 48.7	-2.1
KBN	**Korca**	**2.46**	**342**	*i* PN	Pg	10 40 06.0	+11
KBN				*i* SN	Sg	10 40 30.8	+3.9
PLG	**Polygyros**	**2.46**	**31**	P	Pn	10 39 50.0	+1.3
PLG	**Polygyros**	**2.46**	**31**	P	Pn	10 39 50.0	+1.3
FNA	**Florina**	**2.52**	**353**	P	Pn	10 39 51.1	+1.6
FNA	**Florina**	**2.52**	**353**	P	Pn	10 39 51.1	+1.6
OUR	**Ouranopolis**	**2.67**	**39**	P	Pn	10 39 51.4	-0.2
OUR	**Ouranopolis**	**2.67**	**39**	P	Pn	10 39 51.4	-0.2
GRG	**Griva**	**2.72**	**10**	P	Pn	10 39 53.7	+1.5
GRG	**Griva**	**2.72**	**10**	P	Pn	10 39 52.6	+0.4
GRG	**Griva**	**2.72**	**10**	P	Pn	10 39 52.6	+0.4
BIA	**Bitola**	**2.76**	**353**	*e*Pn	Pn	10 39 56.8	+4.0
BIA				*e*Sg	Sg	10 40 32.4	-4.0
SOH	**Sokhos**	**2.82**	**25**	*e*Pn	Pn	10 39 53.7	+0.1
SOH	**Sokhos**	**2.82**	**25**	*e*PN	Pn	10 39 53.7	+0.1
SOH	**Sokhos**	**2.82**	**25**	P	Pn	10 39 53.7	+0.1
SOH	**Sokhos**	**2.82**	**25**	P	Pn	10 39 53.7	+0.1
KNT	**Kendrikon**	**3.01**	**16**	P	Pn	10 39 56.3	+0.1
KNT	**Kendrikon**	**3.01**	**16**	P	Pn	10 39 56.3	+0.1
VAY	**Valandovo**	**3.10**	**11**	*e*Pn	Pn	10 39 59.1	+1.6
VAY				*e*Sg	Sn	10 40 33.9	-1.0
KRUS	**Krusevo**	**3.11**	**353**	*e*Pn	Pn	10 39 59.0	+1.4
APE	**Apeiranthos**	**3.22**	**111**	‖*i*P	Pn	10 40 00.5	+1.4
APE	**Apeiranthos**	**3.22**	**111**	‖*i*P	Pn	10 40 00.5	+1.4
TIR	**Tirane**	**3.40**	**335**	*e*Pg	Pg	10 40 12.6	-0.4
TIR	**Tirane**	**3.40**	**335**	*e*Pg	Pg	10 40 12.6	-0.4
PUK	**Puka**	**4.02**	**340**	*i* PN	Pn	10 40 12.2	+2.0
PUK				*i* SN	Sn	10 40 58.3	+0.7
PUK	**Puka**	**4.02**	**340**	*i* Pn	Pn	10 40 12.2	+2.0
PUK				*i* Sn	Sn	10 40 58.3	+0.6
BCI	**Bajram Curri**	**4.28**	**343**	*i* PN	Pn	10 40 16.1	+2.4
BCI				*i* SN	Sn	10 41 10.3	+6.2
BCI	**Bajram Curri**	**4.28**	**343**	*i* Pn	Pn	10 40 16.1	+2.4
VTS	**Vitosha**	**4.44**	**14**	‖*i*P	Pn	10 40 17.0	+1.1
VTS	**Vitosha**	**4.44**	**14**	‖*i*P	Pn	10 40 17.0	+1.1
CUC	**Castrocucco**	**4.93**	**292**	*e*Pn	Pn	10 40 24.4	+1.7
CUC				*e*Sn	Sn	10 41 22.7	+2.6
CUC	**Castrocucco**	**4.93**	**292**	*e*Pn	Pn	10 40 24.4	+1.7
CUC				*e*Sn	Sn	10 41 22.7	+2.6
STON	**Ston**	**5.53**	**327**	⇑*i*Pn	Pn	10 40 28.0	-2.9
STON				Sn	Sn	10 41 30.5	-4.4
MLR	**Muntele Rosu**	**7.85**	**22**	⇑*i*P	Pn	10 41 06.1	+3.4
NVLJ	**Novalja**	**8.14**	**323**	*e*Pn	Pn	10 41 06.0	-0.6
NVLJ				Sn	Sn	10 42 35.1	-3.9
NVLJ	**Novalja**	**8.14**	**323**	*e*Pn	Pn	10 41 06.0	-0.6
PLOR	**Plostina**	**8.39**	**24**	⇑*i*P	Pn	10 41 12.7	+2.6
PLOR	**Plostina**	**8.39**	**24**	⇑*i*P	Pn	10 41 12.7	+2.6
VRI	**Vrincioaia**	**8.43**	**24**	⇑*i*P	Pn	10 41 12.8	+2.2
VRI	**Vrincioaia**	**8.43**	**24**	⇑*i*P	Pn	10 41 12.8	+2.2
BRTR	**Keskin Array B**	**9.36**	**77**	Pn	Pn	10 41 24.1	+0.7
	0.3nm,0.3s,baz=263,slow=12,SNR=5.7						
BRTR	**Keskin Array B**	**9.36**	**77**	Pn	**Pn**	**10 41 24.0**	**+0.6**
EKA	**Eskdalemuir Ar**	**23.92**	**324**	P	**P**	**10 44 21.4**	**-1.2**
	1.3nm,0.7s,mb3.5,baz=127,slow=9.4,SNR=3.8						
EKA	**Eskdalemuir Ar**	**23.92**	**324**	P	**P**	**10 44 21.4**	**-1.2**
TORD	**Torodi Ar. Bea**	**30.74**	**221**	P	**P**	**10 45 26.0**	**+1.9**
	1.2nm,0.4s,mb4.1,baz=32,slow=9.0,SNR=2.7						
JMIC	**Jan Mayen**	**36.33**	**344**	LR	LR	11 00 48.4	
	comp=Z,48nm,22.0s,baz=69,slow=36						
KKAR	**Karatay Array**	**36.85**	**67**	*e*P	**P**	**10 46 17.0**	**-0.1**
	0.8nm,0.5s,mb3.8						
KURK	**Kurchatov**	**41.43**	**54**	P	**P**	**10 46 53.2**	**-2.0**
	0.4nm,0.3s,mb3.6,baz=275,slow=9.1,SNR=4.1						
KURK	**Kurchatov**	**41.43**	**54**	P	**P**	**10 46 53.2**	**-2.0**
MKAR	**Makanchi Array**	**44.41**	**59**	P	**P**	**10 47 18.8**	**-0.6**
	1.8nm,0.5s,mb4.0,baz=277,slow=6.9,SNR=11						
ZALV	**Zalesovo Beam**	**44.89**	**48**	P	**P**	**10 47 21.2**	**-1.9**
	1.3nm,0.4s,mb4.1,baz=277,slow=9.3,SNR=4.8						
ZALV	**Zalesovo Beam**	**44.89**	**48**	P	**P**	**10 47 21.2**	**-1.9**

IDC 03 10:57:24.6±2.7, 6°.89S×155°.36E, h54km±9km, mb3.4/4, mb1 3.5/4, mb1mx3.3/15, mbtmp3.4/4, MS3.0/2, Ms1 3.0/2, ms1mx2.8/22, Error ellipse: s-maj=76.7km s-min=23.3km az=117.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.20**	**119**	LR	LR	11 00 09.6	
	comp=Z,134nm,21.1s,baz=30,slow=32						
CTA	**Charters Tower**	**15.82**	**213**	LR	LR	11 05 22.5	
	comp=Z,74nm,18.5s,baz=52,slow=30						
WRA	**Warramunga Arr**	**24.18**	**235**	P	P	11 02 36.7	+0.7
	1.0nm,0.5s,baz=62,slow=9.4,SNR=7.1						
WRA				pP	pP	11 02 50.5	+1.0
	1.7nm,0.8s,baz=60,slow=9.6,SNR=7.6						
ASAR	**Alice Springs**	**26.52**	**229**	P	P	11 02 56.0	-1.2
	0.1nm,0.3s,baz=64,slow=9.2,SNR=4.0						
CMAR	**Chiang Mai Arr**	**61.07**	**295**	pP	pP	11 07 49.2	+1.1
	1.4nm,0.8s,baz=114,slow=4.9,SNR=4.3						
SONM	**Songino Array**	**69.44**	**327**	P	P	11 08

Moment Tensor Solution. s110,c241; s85,c122;
Moment tensor: Scale 10^{18}Nm; M_{rr}-1.31±.02;
$M_{\theta\theta}$-0.54±.03; $M_{\phi\phi}$1.85±.03; $M_{r\theta}$-1.60±.03; $M_{\theta\phi}$-0.09±.02;
$M_{r\phi}$2.39±.02; Best double couple: $M_0$3.30000×10^{18}
NP1:ϕ_s150.00000°,δ78.00000°,λ-108.00000°. Principal axes:
T 3.3300, Plg30.0000°, Azm255.0000°; N -0.0300,
Plg17.0000°, Azm154.0000°; P -3.3000, Plg54.0000°,
Azm39.0000°; Data Used: II IU CN IC G.
*BGS **03** 11:25:22.8±1.3,25.06S×61.88W,h570km,mb5.4*
ISC 03 11:25:14.6±0.1,26.83S±0.02×63.19W±0.02,h571km,
h571km±.7km:pP-P,n1961,σ0=82/1290,mb5.9/366,
158C-382D,Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SPCH	**San Pedro de A**	**5.99**	**310**	*e*P		**P**	**11 26 53.6**	**-0.6**
CFAA	**Coronel Fontan**	**6.49**	**222**	P		**P**	**11 26 58.0**	**-0.4**
	807nm,0.3s,baz=48,slow=9.0							
CFAA				S		**S**	**11 28 21.9**	**-1.6**
	34nm,0.3s,baz=148,slow=22,SNR=35							
CFAA	**Coronel Fontan**	**6.49**	**222**	P		**P**	**11 26 58.0**	**-0.4**
CFAA				S		**S**	**11 28 21.9**	**-1.6**
LCO	**Las Campanas**	**6.99**	**250**	*e*Pn		**P**	**11 27 02.1**	**-1.1**
	7μm,0.9s							
LCO				*e*Sn		**S**	**11 28 27.8**	**-4.4**
MACH	**Maria Elena**	**7.55**	**306**	↓*i*P		**P**	**11 27 07.0**	**-1.6**
MACH				*i* S		**S**	**11 28 37.7**	**-4.4**
MECH	**Mejillones**	**7.56**	**298**	↑*i*P		**P**	**11 27 07.2**	**-1.5**
MECH				*i* S		**S**	**11 28 38.4**	**-3.7**
OVCH	**Ovalle**	**7.97**	**240**	↓*i*P		**P**	**11 27 10.7**	**-1.9**
OVCH				*i* S		**S**	**11 28 45.6**	**-3.7**
CMCH	**Combarbala**	**8.09**	**236**	↑*i*P		**P**	**11 27 11.7**	**-2.0**
CMCH				*i* S		**S**	**11 28 48.5**	**-3.0**
JACH	**Jahuel**	**8.68**	**226**	↑*i*P		**P**	**11 27 18.9**	**-0.5**
PEL	**Peldehue**	**9.04**	**224**	↑*i*P		**P**	**11 27 22.0**	**-1.0**
PEL				*i* S		**S**	**11 29 05.5**	**-3.0**
ROCH	**El Roble**	**9.13**	**226**	↓*i*P		**P**	**11 27 22.5**	**-1.4**
ROCH				*i* S		**S**	**11 29 07.7**	**-2.6**
FSR	**Penalolen**	**9.17**	**222**	*e*P		**P**	**11 27 23.7**	**-0.7**
SJCH	**San Jose de Ma**	**9.19**	**221**	*e*P		**P**	**11 27 24.3**	**-0.2**
LPA	**La Plata**	**9.23**	**152**	*c i*P		**P**	**11 27 26.0**	**+1.1**
LPA				*i* S		**S**	**11 29 17.0**	**+5.0**
SAN	**Santiago**	**9.24**	**223**	↑*i*P		**P**	**11 27 24.0**	**-1.0**
LMEL	**Las Melosas**	**9.25**	**219**	↓*i*P		**P**	**11 27 24.9**	**-0.2**
LMEL				*i* S		**S**	**11 29 11.7**	**-0.7**
PCH	**Pirque**	**9.27**	**221**	↑*i*P		**P**	**11 27 24.5**	**-0.7**
ANTU	**Antumapu**	**9.30**	**222**	*e*P		**P**	**11 27 24.6**	**-1.0**
TACH	**Talagante**	**9.54**	**223**	↓*i*P		**P**	**11 27 26.3**	**-1.8**
CACH	**El Canelo**	**9.67**	**220**	↓*i*P		**P**	**11 27 28.5**	**-0.8**
LCCH	**Las Cruces**	**9.82**	**226**	↑*i*P		**P**	**11 27 29.1**	**-1.8**
LNV	**Longovilo**	**10.04**	**223**	↓*i*P		**P**	**11 27 30.9**	**-2.1**
SIV	**San Ignacio**	**10.96**	**11**	P		**P**	**11 27 42.1**	**-0.7**
	256nm,0.3s,baz=208,slow=9.7,SNR=4804							
SIV				S		**S**	**11 29 44.2**	**-0.2**
	baz=213,slow=23,SNR=6.4							
TALC	**Talca**	**11.19**	**218**	↓*i*P		**P**	**11 27 42.8**	**-1.9**
TRQA	**Tornquist**	**11.24**	**175**	*e*Pn		**P**	**11 27 43.2**	**-2.0**
	689nm,0.8s							
TRQA				*e*Sn		**S**	**11 29 43.2**	**-5.9**
LPAZ	**La Paz**	**11.45**	**335**	P		**P**	**11 27 46.4**	**-1.3**
	288nm,0.3s,baz=151,slow=7.5,SNR=2912							
LPAZ				S		**S**	**11 29 47.2**	**-6.3**
	88nm,0.3s,baz=291,slow=20,SNR=8.4							
LPAZ	**La Paz**	**11.45**	**335**	P		**P**	**11 27 46.4**	**-1.3**
LPAZ				S		**S**	**11 29 47.2**	**-6.3**
LPAZ				pmax		pmax		
	comp=Z,288nm,0.3s							
LPAZ				smax				
	comp=N,88nm,0.3s							
LPAZ	**La Paz**	**11.45**	**335**	*e*Pn		**P**	**11 27 46.4**	**-1.3**
LPAZ				*e*Sn		**S**	**11 29 48.2**	**-5.3**
SPB	**Sao Paulo**	**14.63**	**81**	*e*Pn		**P**	**11 28 20.2**	**+0.2**
	comp=N,4μm,0.9s							
PLCA	**Paso Flores**	**15.15**	**202**	P		**P**	**11 28 23.0**	**-2.0**
	comp=N,68nm,0.3s,baz=19,slow=11,SNR=566							
PLCA				S		**S**	**11 30 57.0**	**-3.8**
	baz=343,slow=19,SNR=1.8							
PLCA				PcP		PcP	11 32 50.7	+0.2
	comp=N,6.6nm,0.3s,baz=18,slow=3.2,SNR=3.5							
PLCA	**Paso Flores**	**15.15**	**202**	*e*Pn		**P**	**11 28 22.9**	**-2.1**
	comp=N,27nm,0.8s							
PLCA				*e*Sn		**S**	**11 31 01.1**	**+0.4**
PLCA				*e*PcP		PcP	11 32 52.5	+2.1
PLCA				*e*ScP		ScP	11 35 32.0	+1.0
CAM4	**Nova Friburgo**	**19.27**	**81**	↓*i*P		**P**	**11 29 04.3**	**+1.2**
CAM4				*i*			11 29 05.6	
CAM4				*i*			11 29 06.5	
CAM4				*i*			11 29 08.3	
CAM4				*i*			11 29 11.0	
CAM4				*i*			11 29 15.1	
CAM4				*i*			11 29 21.0	
CAM4				*i*			11 29 26.2	
CAM4				*i*			11 31 20.4	
CAM4				*i*			11 32 12.9	
CAM4				*i*			11 32 18.5	
CAM4				*i*			11 32 32.2	
CAM4				*i*			11 32 58.4	
NNA	**Nana**	**19.56**	**316**	P		**P**	**11 29 04.3**	**-1.5**
	comp=N,27nm,0.3s,baz=158,slow=8.1,SNR=110							
NNA				S		**S**	**11 32 07.9**	**-5.4**
	comp=N,3.3nm,0.3s,baz=301,slow=18,SNR=8.7							
NNA				PcP		PcP	11 32 58.9	+0.7
	comp=N,6.6nm,0.3s,baz=135,slow=5.7,SNR=4.3							
NNA				ScP		ScP	11 35 39.6	-1.2
	comp=N,3.8nm,0.3s,baz=272,slow=1.7,SNR=7.3							
NNA	**Nana**	**19.56**	**316**	*e*P		**P**	**11 29 04.2**	**-1.6**
	comp=N,322nm,0.8s							
NNA				*e*PcP		PcP	11 32 58.9	+0.6
NNA	**Nana**	**19.56**	**316**	P		**P**	**11 29 04.0**	**-1.8**
	comp=N,3μm,0.8s,SNR=37							
ATAH	**Atahualpa**	**24.34**	**321**	P		**P**	**11 29 49.2**	**+0.6**
	comp=N,170nm,0.8s,mb5.7,baz=166,slow=7.6,SNR=90							
ATAH				S		**S**	**11 33 27.7**	**-1.0**
	comp=N,31nm,1.0s,baz=308,slow=20,SNR=4.1							
ATAH				ScP		ScP	11 35 53.2	+0.1
	comp=N,42nm,1.1s,baz=90,slow=1.0,SNR=4.4							
USHA	**Ushuaia**	**28.24**	**186**	P		**P**	**11 30 22.0**	**-0.2**
	comp=N,583nm,0.6s,mb6.4,baz=356,slow=7.5,SNR=697							
USHA				PcP		PcP	11 33 17.6	+0.9
	comp=N,99nm,0.8s,baz=23,slow=3.5,SNR=3.7							
OTAV	**Otavalo**	**30.66**	**329**	*e*P		**P**	**11 30 44.4**	**+0.7**
	comp=N,363nm,0.8s,mb6.0							
OTAV				*e*PcP		PcP	11 33 25.3	+1.5
OTAV				*e*ScP		ScP	11 36 14.2	+1.4
ROSC	**El Rosal**	**33.29**	**339**	P		**P**	**11 31 05.5**	**-0.6**
	comp=N,516nm,0.7s,mb6.2,baz=137,slow=2.6,SNR=140							
ROSC	**El Rosal**	**33.29**	**339**	*e*P		**P**	**11 31 05.3**	**-0.7**
RCBR	**Riachuelo**	**33.35**	**56**	*e*P		**P**	**11 31 06.8**	**+0.2**
	comp=N,2μm,1.9s,mb6.4							
RCBR				*e*			11 32 44.7	
RCBR				*e*PcP		PcP	11 33 30.2	-1.2
RCBR				*e*ScP		ScP	11 36 23.3	+1.3
SDV	**Santo Domingo**	**36.23**	**347**	*e*P		**P**	**11 31 28.0**	**-2.5**
	comp=N,988nm,1.1s,mb6.2							
PAYG	**Puerto Ayora**	**36.80**	**311**	*e*P		**P**	**11 31 35.2**	**0.0**
	comp=N,480nm,1.3s,mb5.9							
PAYG				*e*PcP		PcP	11 33 42.3	+0.6
PCRV	**Puerto La Cruz**	**36.81**	**358**	P		**P**	**11 31 34.2**	**-1.0**
	comp=N,709nm,0.8s,mb6.2,baz=168,slow=3.3,SNR=188							
PCRV				PcP		PcP	11 33 42.3	+0.7
	comp=N,28nm,0.5s,baz=331,slow=4.3,SNR=2.8							
PCRV				S		**S**	**11 36 33.0**	**-6.6**
	comp=N,15nm,0.6s,baz=99,slow=19,SNR=5.0							
PCRV	**Puerto La Cruz**	**36.81**	**358**	P		**P**	**11 31 34.2**	**-1.0**
PCRV				PcP		PcP	11 33 42.3	+0.7
PCRV				S		**S**	**11 36 33.0**	**-6.6**
TPP	**Pointe-a-Pierr**	**36.96**	**3**	*e*P		**P**	**11 31 37.2**	**+0.7**
TBH	**Brigand Hill**	**37.15**	**3**	*e*P		**P**	**11 31 37.6**	**-0.4**
TRN	**Trinidad (W)**	**37.29**	**3**	*e*P		**P**	**11 31 38.7**	**-0.5**
BOT	**Bacolet**	**37.84**	**4**	*e*P		**P**	**11 31 43.4**	**-0.2**
TPR	**Prospect**	**37.86**	**4**	↓*e*P		**P**	**11 31 43.3**	**-0.5**
PMSA	**Palmer Station**	**37.95**	**181**	P		**P**	**11 31 45.0**	**+1.2**
	comp=N,294nm,0.8s,mb5.9,baz=8.0,slow=7.2,SNR=97							
PMSA				PcP		PcP	11 33 45.7	+1.3
	comp=N,68nm,0.7s,baz=27,slow=3.2,SNR=4.3							
PMSA				S		**S**	**11 36 58.3**	**+3.1**
	comp=N,30nm,0.9s,baz=284,slow=21,SNR=9.3							
PMSA	**Palmer Station**	**37.95**	**181**	*e*P		**P**	**11 31 44.9**	**+1.1**
	comp=N,350nm,0.8s,mb5.9							
PMSA				*e*pP			11 33 19.5	
PMSA				*e*ScP		ScP	11 36 39.6	+1.4
GRGR	**Grenville**	**38.76**	**2**	*e*P		**P**	**11 31 49.5**	**-1.5**
	comp=N,2μm,0.7s,mb6.7							
GRW	**Mount Saint Ca**	**38.78**	**2**	↓*e*P		**P**	**11 31 50.9**	**-0.4**
GRSS	**Sisters**	**38.92**	**2**	↓*e*P		**P**	**11 31 51.5**	**-0.8**
GRCU	**Cariacou**	**39.10**	**3**	*e*P		**P**	**11 31 52.9**	**-0.9**
BCIP	**Isla Barro Col**	**39.26**	**333**	*e*P		**P**	**11 31 54.9**	**-0.2**
	comp=N,5μm,2.1s,mb6.7							
BCIP				*e*PcP		PcP	11 33 48.8	-0.6
BBGH	**Gun Hill**	**39.89**	**6**	*e*P		**P**	**11 31 59.9**	**-0.2**
	comp=N,307nm,0.9s,mb5.8							
SSV	**Crater Summit**	**39.96**	**3**	↓*e*P		**P**	**11 31 59.6**	**-1.1**
BRU2	**Volcan**	**40.15**	**329**	*e*P		**P**	**11 32 02.7**	**+0.5**
BRU2					AML	AML	11 33 39.5	
ACR	**Cerro Adams**	**40.24**	**328**	*e*P		**P**	**11 32 03.7**	**+0.7**
MCLT	**Moule a Chique**	**40.35**	**3**	↓*e*P		**P**	**11 32 02.0**	**-1.8**
RPN	**Rapa Nui**	**40.94**	**259**	P		**P**	**11 32 09.0**	**+0.6**
	comp=N,4μm,1.1s,mb6.8,SNR=7.9							
RPN	**Rapa Nui**	**40.94**	**259**	*e*P		**P**	**11 32 08.5**	**+0.1**
RPN				pmax		pmax		
	comp=Z,2μm,1.5s,mb6.4							
RPN	**Rapa Nui**	**40.94**	**259**	*e*P		**P**	**11 32 08.5**	**+0.1**
	comp=Z,2μm,1.5s,mb6.4							
BUS	**Buena Vista**	**41.31**	**328**	*e*P		**P**	**11 32 12.6**	**+1.2**
FDF	**Fort de France**	**41.36**	**3**	*e*P		**P**	**11 32 09.9**	**-1.9**
FDF				*e*			11 33 55.9	
FDF				*e*S		**S**	**11 37 41.3**	**-4.7**
FDF				pmax		pmax		
	comp=Z,1μm,0.8s,mb6.5							
FDF	**Fort de France**	**41.36**	**3**	*e*P		**P**	**11 32 09.9**	**-1.9**
	comp=Z,1μm,0.8s,mb6.5							
FDF				*e*PcP		PcP	11 33 55.9	-0.3
FDF				*e*ScP		ScP	11 36 53.8	+1.6
FDF				*e*S		**S**	**11 37 41.3**	**-4.7**
QCR	**Quepos**	**41.39**	**328**	*e*P		**P**	**11 32 12.5**	**+0.5**
URSC	**Urasca**	**41.56**	**329**	*e*P		**P**	**11 32 14.2**	**+0.8**
LAJ	**Bijagual**	**41.75**	**328**	*e*P		**P**	**11 32 16.1**	**+1.2**
SJS	**Escuela Geolog**	**41.78**	**328**	*e*P		**P**	**11 32 17.0**	**+1.8**
PRS1	**Puriscal**	**41.95**	**328**	*e*P		**P**	**11 32 17.2**	**+0.8**
CGA2	**Cerro Gallo 2**	**42.05**	**328**	↓*e*P		**P**	**11 32 18.4**	**+1.1**
JCR	**Jicaral**	**42.22**	**327**	↓*e*P		**P**	**11 32 19.0**	**+0.4**
JTS	**JuntasAbangare**	**42.52**	**327**	P		**P**	**11 32 21.7**	**+0.8**
	comp=Z,3μm,0.4s,mb7.2,SNR=66							
JTS	**JuntasAbangare**	**42.52**	**327**	*e*P		**P**	**11 32 21.3**	**+0.4**
JTS				pmax		pmax		
	comp=Z,503nm,0.8s							
JTS	**JuntasAbangare**	**42.52**	**327**	*e*P		**P**	**11 32 21.2**	**+0.3**
	comp=Z,503nm,0.8s,mb6.1							
VCR	**Vista de Mar**	**42.71**	**326**	*e*P		**P**	**11 32 22.8**	**+0.4**
BPA	**Boggy Peak**	**43.63**	**2**	*e*P		**P**	**11 32 27.0**	**-2.5**
TRIS	**Tristan da Cun**	**43.91**	**117**	*e*P		**P**	**11 32 32.9**	**+1.4**
	comp=Z,347nm,0.7s,mb6.0							
ANWB	**Willy Bob**	**44.25**	**2**	*e*P		**P**	**11 32 30.6**	**-3.7**
	comp=Z,715nm,0.6s,mb6.4							
ANWB				*e*PcP		PcP	11 34 06.0	-0.1
ANWB				*e*ScP		ScP	11 37 06.1	+2.1
CDVI	**St. Croix**	**44.34**	**358**	*e*P		**P**	**11 32 32.0**	**-3.0**
	comp=Z,1μm,0.8s,mb6.5							
CDVI				*e*PP		PP	11 34 28.8	-0.8
CDVI				*e*ScP		ScP	11 37 06.2	+1.8
ICM	**Isla Caja Muer**	**44.57**	**355**	*e*P		**P**	**11 32 34.6**	**-2.2**
ICM				*e*PP		PP	11 34 29.6	-2.1
ICM				*e*S		**S**	**11 38 26.4**	**-5.2**
MTP	**Monte Pirata**	**44.72**	**357**	*e*P		**P**	**11 32 34.5**	**-3.4**
	comp=Z,168nm,0.5s,mb5.8							
MTP				*e*PcP		PcP	11 34 07.9	+0.2
CRPR	**Cabo Rojo, PR**	**44.73**	**355**	*e*P		**P**	**11 32 35.9**	**-2.0**
	comp=Z,467nm,0.6s,mb6.2							
CRPR				*e*PP		PP	11 34 31.2	-1.9
CRPR				*e*ScP		ScP	11 37 06.8	+0.8
BOAB	**BOACO BROADBAN**	**44.73**	**328**	*i* P		**P**	**11 32 36.8**	**-1.2**
BOAB					AML	AML	11 34 23.6	
	comp=N,6.9nm,1.9s							
MGAN	**Managua**	**44.75**	**327**	*e*P		**P**	**11 32 36.6**	**-1.5**
CELP	**Cerrillos**	**44.76**	**355**	*e*P		**P**	**11 32 35.5**	**-2.6**
CELP				*e*PP		PP	11 34 31.2	-2.2
TISN	**Laguna Tiscapa**	**44.76**	**327**	*e*P		**P**	**11 32 35.7**	**-2.5**
SJG	**San Juan**	**44.77**	**356**	P		**P**	**11 32 35.4**	**-2.8**
	comp=N,406nm,0.7s,mb6.0,baz=159,slow=2.9,SNR=90							
SJG				PP		PP	11 34 31.6	-1.8
	comp=N,152nm,0.9s,baz=185,slow=2.5,SNR=5.5							
SJG				S		**S**	**11 38 26.2**	**-8.2**
	comp=N,86nm,0.9s,baz=331,slow=19,SNR=20							
SJG	**San Juan**	**44.77**	**356**	P		**P**	**11 32 35.4**	**-2.8**
SJG							11 34 31.6	
SJG				S		**S**	**11 38 26.2**	**-8.1**
SJG				pmax		pmax		
	comp=Z,406nm,0.7s							
SJG				pmax		pmax		
	comp=Z,152nm,0.9s							
SJG				smax				
	comp=N,86nm,0.9s							
SJG	**San Juan**	**44.77**	**356**	*e*P		**P**	**11 32 35.1**	**-3.1**
	comp=N,338nm,0.8s,mb5.9							
SJG				*e*PP		PP	11 34 31.1	-2.3
SJG	**San Juan**	**44.77**	**356**	*e*P		**P**	**11 32 34.4**	**-3.8**
HUMP	**Col San Antoni**	**44.78**	**356**	*e*P		**P**	**11 32 35.0**	**-3.3**
	comp=N,279nm,1.0s,mb5.8							
XAVN	**Gruta Xavier**	**44.79**	**327**	*e*P		**P**	**11 32 36.3**	**-2.1**
CSAN		**44.87**	**327**	*e*P		**P**	**11 32 37.4**	**-1.7**
LSP	**Las Mesas**	**44.90**	**355**	*e*P		**P**	**11 32 36.6**	**-2.6**
LSP				*e*PP		PP	11 34 32.7	-1.9
CBYP	**Canovanas**	**44.91**	**356**	*e*P		**P**	**11 32 36.0**	**-3.2**
	comp=N,911nm,1.0s,mb6.3							
CBYP				*e*PcP		PcP	11 34 07.8	-0.6
CBYP				*e*PP		PP	11 34 32.6	-2.1
MPR	**Mayaguez**	**44.94**	**355**	*e*P		**P**	**11 32 37.2**	**-2.3**
STVI	**Saint Thomas**	**44.94**	**358**	*e*P		**P**	**11 32 35.8**	**-3.7**
STVI				*e*PcP		PcP	11 34 07.8	-0.7
STVI				*e*PP		PP	11 34 32.4	-2.6
COPN	**Copaltepe**	**44.95**	**327**	*e*P		**P**	**11 32 38.0**	**-1.7**
LRS	**Lares**	**44.99**	**355**	*e*P		**P**	**11 32 36.9**	**-3.1**
LRS				*e*PcP		PcP	11 34 07.7	-1.0
AOPR	**Arecibo Observ**	**45.04**	**355**	*e*P		**P**	**11 32 37.0**	**-3.3**
AGP	**Aguadilla**	**45.13**	**355**	*e*P		**P**	**11 32 38.3**	**-2.7**
AGPR	**Aguadilla, PR**	**45.19**	**355**	*e*P		**P**	**11 32 37.8**	**-3.6**
	comp=N,321nm,0.3s,mb6.3							
AGPR				*e*S		**S**	**11 38 32.7**	**-7.6**
LEON	**Leon**	**45.30**	**326**	*i* P		**P**	**11 32 40.8**	**-1.6**
SDDR	**Presa de Saban**	**46.21**	**349**	*e*P		**P**	**11 32 46.7**	**-2.5**
SDDR				*e*PcP		PcP	11 34 13.8	+0.8
HOJ	**Hope**	**46.47**	**342**	*i* P		**P**	**11 32 50.7**	**-0.4**
CMJ	**Castle Mountai**	**46.49**	**343**	↑*i*P		**P**	**11 32 50.0**	**-1.3**
CNCH	**Conchagua**	**46.50**	**326**	*e*P		**P**	**11 32 50.2**	**-1.3**
GWJ	**Greenwich**	**46.53**	**342**	↑*i*P		**P**	**11 32 50.6**	**-1.0**
STH	**Stony Hill**	**46.55**	**342**	↓*i*P		**P**	**11 32 50.4**	**-1.4**
MCJ	**Malvern**	**46.66**	**341**	↑*i*P		**P**	**11 32 52.1**	**-0.5**
BNJ	**Bonny Gate**	**46.83**	**342**	*i* P		**P**	**11 32 52.3**	**-1.5**
BLLM	**Bellamira**	**46.85**	**326**	*e*P		**P**	**11 32 53.4**	**-0.7**
VSM	**San Miguel**	**46.85**	**326**	*e*P		**P**	**11 32 53.4**	**-0.7**
TGUH	**Tegucigalpa,Un**	**46.89**	**327**	*e*P		**P**	**11 32 53.0**	**-1.5**
	comp=N,400nm,0.9s,mb6.0							
TGUH				*e*S		**S**	**11 39 04.6**	**+0.4**
MTDJ	**Mount Denham**	**46.90**	**341**	*e*P		**P**	**11 32 53.4**	**-1.0**
	comp=N,729nm,0.8s,mb6.3							
MTDJ				*e*PP		PP	11 34 51.8	-0.9
BBJ	**Bamboo Saint A**	**46.97**	**342**	↓*i*P		**P**	**11 32 53.4**	**-1.6**
CAHU	**Cacacuatique**	**47.11**	**326**	*e*P		**P**	**11 32 55.0**	**-1.0**
SNVI	**San Vicente**	**47.30**	**325**	*e*P		**P**	**11 32 57.3**	**-0.1**
LFRS	**El Faro**	**47.42**	**325**	*e*P		**P**	**11 32 57.6**	**-0.8**
BOQS	**Boqueron**	**47.62**	**325**	*e*P		**P**	**11 32 59.8**	**-0.1**
SBLS	**San Blas**	**47.89**	**324**	*e*P		**P**	**11 33 01.5**	**-0.4**
GTBY	**Guantanamo Bay**	**47.89**	**345**	*e*P		**P**	**11 33 00.2**	**-1.6**
	comp=N,631nm,0.8s,mb6.2							
RBDL	**Robledal**	**48.15**	**324**	*e*P		**P**	**11 33 03.3**	**-0.5**
GRTK	**Grand Turk**	**48.67**	**350**	*e*P		**P**	**11 33 06.2**	**-1.4**
	comp=N,929nm,1.1s,mb6.2							
GRTK				*e*PcP		PcP	11 34 21.5	-0.3
CCIG	**Comitan**	**51.25**	**323**	*i* P		**P**	**11 33 24.7**	**-1.8**
TEIG	**Tepich**	**52.72**	**330**	*e*P		**P**	**11 33 35.3**	**-1.7**
	comp=N,513nm,0.4s,mb6.2							
TEIG				*e*PcP		PcP	11 34 37.0	-0.1
TEIG				*e*ScP		ScP	11 37 40.4	+0.3
HUIG	**Huatulco**	**53.06**	**319**	*i* P		**P**	**11 33 38.7**	**-0.7**
VNA3	**Neumayer Olymp**	**53.37**	**161**	*e*P		**P**	**11 33 39.0**	**-1.9**
VNA3				*e*		pP	11 35 27.1	-1.4
CMIG	**Matias Romero**	**53.41**	**321**	P		**P**	**11 33 40.7**	**-1.2**
	comp=N,82nm,0.5s,mb5.3,baz=126,slow=4.9,SNR=164							
CMIG				PcP		PcP	11 34 39.5	-0.3
	comp=N,38nm,0.7s,baz=82,slow=5.9,SNR=4.2							
CMIG				S		**S**	**11 40 28.6**	**-3.5**
	comp=N,22nm,0.9s,baz=257,slow=19,SNR=9.0							
CMIG	**Matias Romero**	**53.41**	**321**	P		**P**	**11 33 40.7**	**-1.2**
CMIG				PcP		PcP	11 34 39.5	-0.3
CMIG				S		**S**	**11 40 28.6**	**-3.5**
VNA1	**Neumayer--Stat**	**53.53**	**160**	*e*P		**P**	**11 33 40.6**	**-1.4**
VNA1				*e*		pP	11 35 28.8	-0.9
VNA2	**Neumayer--Watz**	**53.91**	**160**	*e*P		**P**	**11 33 42.9**	**-1.8**
	baz=294,slow=9.0							
VNA2				*e*		pP	11 35 31.3	-1.3
VNA2				*e*			11 41 15.7	
SHEL	**Horse Pasture**	**54.19**	**91**	P		**P**	**11 33 48.7**	**+1.2**
	comp=N,4μm,0.9s,mb6.7,SNR=8.9							
SHEL	**Horse Pasture**	**54.19**	**91**	*e*P		**P**	**11 33 48.6**	**+1.1**
SHEL				*e*			11 34 42.9	
SHEL				*e*PP		pP	11 35 36.8	+1.2
SHEL				pmax		pmax		
	comp=Z,642nm,0.9s,mb6.0							
SHEL	**Horse Pasture**	**54.19**	**91**	*e*P		**P**	**11 33 48.6**	**+1.1**
	comp=Z,642nm,0.9s,mb6.0							
SHEL				*e*PcP		PcP	11 34 42.9	-0.1
SHEL				*e*pP		pP	11 35 36.8	+1.2
VHO	**Vista Hermosa**	**54.45**	**319**	*i* P		**P**	**11 33 48.6**	**-0.7**
PNIG	**Pinotepa**	**54.74**	**318**	*i* P		**P**	**11 33 51.3**	**0.0**
ACX	**Acapulco**	**56.16**	**316**	*i* P		**P**	**11 34 01.2**	**+0.1**
LVIG	**Laguna Verde**	**56.39**	**322**	*i* P		**P**	**11 34 01.5**	**-1.1**
CAIG	**El Cayaco**	**56.55**	**316**	*i* P		**P**	**11 34 03.5**	**-0.3**
SACV	**Santiago Islan**	**56.61**	**48**	P		**P**	**11 34 04.4**	**+0.2**
	comp=Z,2μm,0.8s,mb6.4,SNR=9.5							
PLIG	**Platanillo**	**57.12**	**318**	*i* P		**P**	**11 34 08.0**	**+0.4**
PPM	**Popocatepetl**	**57.12**	**319**	*i* P		**P**	**11 34 09.0**	**+1.3**
DWPF	**Disney**	**57.37**	**341**	*e*P		**P**	**11 34 08.4**	**-0.7**
	comp=Z,310nm,0.8s,mb5.6							
IIO	**Organos**	**57.59**	**320**	*i* P		**P**	**11 34 12.0**	**+1.2**
PBVM	**Pinon**	**57.68**	**319**	*i* P		**P**	**11 34 11.9**	**+0.5**
ZIIG	**Zihuatanejo**	**57.72**	**316**	*i* P		**P**	**11 34 11.5**	**-0.3**
SZVM	**Salazar**	**57.76**	**319**	*i* P		**P**	**11 34 12.5**	**+0.5**
PTVM	**Pico Tres Padr**	**57.82**	**319**	*i* P		**P**	**11 34 12.9**	**+0.6**
BBSR	**BB Station**	**58.89**	**359**	*e*P		**P**	**11 34 18.5**	**-0.8**
	comp=Z,2μm,0.8s,mb6.3							
MOIG	**Morelia**	**59.12**	**317**	*i* P		**P**	**11 34 21.6**	**+0.4**
MAIT	**Maitri**	**59.96**	**158**	*e*P		**P**	**11 34 27.2**	**+1.2**
MAIT				*i* SG		pP	11 36 18.6	+1.2
MAIT				*e*S		Px	11 36 19.4	
NVL	**N'lazarevskaya**	**60.00**	**158**	*d i*P		**P**	**11 34 27.5**	**+1.3**
NVL				*i* S		**S**	**11 41 49.8**	**-5.2**
NVL				*i*			11 42 12.0	
NVL				pmax		pmax		
	comp=Z,2μm,1.0s,mb6.3							
SFJM	**Santa Fe**	**60.86**	**317**	*i* P		**P**	**11 34 33.6**	**+1.0**
BBTS	**Babate**	**61.27**	**53**	P		**P**	**11 34 35.9**	**+0.5**
	comp=Z,436nm,0.9s,mb5.8,baz=226,slow

comp=Z,12µm,0.8s
JCT ePcP PcP 11 35 33.9 -0.1
HALT Halls 67.11 337 eP **P 11 35 10.8 -1.2**
SDMD Soldier's Deli 67.12 349 eP **P 11 35 11.9 0.0**
comp=Z,409nm,0.8s,mb6.0
UALR University of 67.20 334 eP **P 11 35 11.5 -1.1**
comp=Z,386nm,0.8s,mb6.0
UALR eS S 11 43 19.7 -3.0
HBAR Harrisburg 67.25 336 eP **P 11 35 11.8 -1.1**
UTMT University of 67.33 338 eP **P 11 35 11.8 -1.5**
comp=Z,1µm,0.8s,mb6.5
UTMT eS S 11 43 21.8 -2.4
GNAR Gosnell 67.39 337 eP **P 11 35 13.2 -0.5**
comp=Z,25µm,0.8s
MIAR Mount Ida 67.48 333 eP **P 11 35 13.5 -0.8**
MIAR pmax pmax
comp=Z,213nm,0.6s,mb5.8
MIAR Mount Ida 67.48 333 eP **P 11 35 13.5 -0.8**
comp=Z,213nm,0.6s,mb5.8
PVMO Portageville 67.68 337 eP **P 11 35 14.7 -0.8**
comp=Z,4µm,0.9s,mb6.9
PVMO epP pP 11 37 13.8 +2.8
PVMO eS S 11 43 26.7 -1.7
628A Black Gap, Mar 67.69 323 ⇓P **P 11 35 15.8 +0.1**
baz=68,SNR=338
PARMO Parma 67.93 337 eP **P 11 35 16.2 -0.7**
627A Terlingua Ranc 67.93 323 ⇓P **P 11 35 16.9 -0.3**
baz=68,SNR=366
MCWV Mont Chateau 67.94 346 eP **P 11 35 17.0 0.0**
comp=Z,612nm,0.8s,mb6.2
TXAR Lajitas Array 67.99 322 P **P 11 35 16.9 -0.6**
comp=Z,63nm,0.5s,mb5.4,baz=150,slow=7.7,SNR=1055
TXAR S S 11 43 28.8 -3.5
comp=Z,0.9nm,0.7s,baz=67,slow=12,SNR=2.4
TXAR PKP2bc 12 03 28.8
comp=Z,16nm,1.2s,baz=297,slow=1.1,SNR=16
TXAR P4KPbc 12 12 02.0
comp=Z,0.5nm,0.8s,baz=131,slow=7.7,SNR=5.2
TXAR Lajitas Array 67.99 322 P **P 11 35 16.9 -0.6**
TXAR S S 11 43 28.8 -3.5
TXAR ⇑e 12 03 28.8
BRNJ Basking Ridge 67.99 351 eP **P 11 35 17.6 +0.3**
comp=Z,473nm,0.8s,mb6.1
CPNY Central Park 68.02 351 eP **P 11 35 17.3 -0.1**
comp=Z,432nm,1.4s,mb5.8
LPIG La Paz 68.07 314 i P **P 11 35 17.7 -0.4**
528A Cox Ranch, San 68.17 324 ⇑P **P 11 35 18.1 -0.5**
baz=68,SNR=251
PAL Palisades 68.22 351 eP **P 11 35 18.2 -0.4**
PAL pmax pmax
comp=Z,266nm,0.9s,mb5.8
PAL Palisades 68.22 351 eP **P 11 35 18.2 -0.4**
comp=Z,266nm,0.9s,mb5.8
YLE Yale 68.40 352 eP **P 11 35 19.9 +0.2**
comp=Z,623nm,0.8s,mb6.2
626A Big Bend Ranch 68.42 322 ⇑P **P 11 35 20.3 +0.2**
baz=69,SNR=559
USIN University of 68.42 339 eP **P 11 35 17.9 -2.0**
comp=Z,307nm,0.6s,mb6.0
SSPA Standing Stone 68.50 348 eP **P 11 35 20.4 +0.1**
comp=Z,299nm,0.8s,mb5.9
SSPA epP pP 11 37 16.2 +0.1
428A Kincaid Ranch, 68.56 324 P **P 11 35 20.8 -0.1**
baz=69,SNR=374
527A Woodward Ranch 68.59 323 P **P 11 35 20.8 -0.4**
baz=69,SNR=246
SIUC Southern Illin 68.69 338 eP **P 11 35 19.9 -1.6**
comp=Z,562nm,0.5s,mb6.3
526A Mary Lane Ranc 68.79 322 ⇑P **P 11 35 22.4 +0.1**
baz=69,SNR=361
BRYW Bryant College 68.83 353 eP **P 11 35 22.1 -0.3**
comp=Z,844nm,0.9s,mb6.3
427A Hayter Ranch, 69.03 324 ⇑P **P 11 35 23.4 -0.3**
baz=69,SNR=512
328A Wristen Ranch, 69.14 324 ⇑P **P 11 35 24.0 -0.4**
baz=69,SNR=693
BLO Bloomington 69.18 341 eP **P 11 35 22.9 -1.6**
BLO e*PP pP 11 37 22.4 +1.8
BLO pmax pmax
comp=Z,584nm,0.8s,mb6.2
BLO Bloomington 69.18 341 eP **P 11 35 22.9 -1.5**
comp=Z,584nm,0.8s,mb6.2
BLO epP pP 11 37 22.4 +1.8
ACSO Alum Creek Sta 69.21 344 eP **P 11 35 23.6 -1.0**
comp=Z,581nm,0.8s,mb6.2
ACSO epP pP 11 37 18.9 -1.9
426A McDonald Obser 69.23 323 ⇑P **P 11 35 25.0 +0.1**
baz=69,SNR=464
OLIL Olney 69.26 339 eP **P 11 35 23.1 -1.9**
comp=Z,441nm,0.8s,mb6.0
WES Weston 69.28 354 eP **P 11 35 25.0 +0.1**
WES e 11 38 07.5
WES pmax pmax
comp=Z,195nm,0.8s,mb5.7
WES Weston 69.28 354 eP **P 11 35 25.0 +0.1**
comp=Z,195nm,0.8s,mb5.7
WES ePP PP 11 38 07.5 -1.3
QUA2 Belchertown 69.28 353 eP **P 11 35 24.9 -0.1**
comp=Z,242nm,0.8s,mb5.8
FVM French Village 69.35 337 eP **P 11 35 24.1 -1.4**
FVM e*PP pP 11 37 20.8 -0.9
FVM pmax pmax
comp=Z,825nm,0.8s,mb6.3
FVM French Village 69.35 337 eP **P 11 35 24.1 -1.4**
comp=Z,825nm,0.8s,mb6.3
FVM epP pP 11 37 20.8 -0.9
327A Balmorhea Ranc 69.49 324 ⇑P **P 11 35 26.5 0.0**
baz=70,SNR=37
SYO Syowa Base 69.67 158 ⇑i P **P 11 35 26.4 -0.6**
BINY Binghamton 69.69 350 eP **P 11 35 27.5 0.0**
comp=Z,559nm,0.8s,mb6.1
BINY epP pP 11 37 25.4 +1.6
BINY ePP PP 11 38 12.3 0.0
CCM Cathedral Cave 69.70 337 eP **P 11 35 26.1 -1.5**
CCM e*PP pP 11 37 23.0 -1.0
CCM pmax pmax
comp=Z,528nm,0.6s,mb6.2
CCM Cathedral Cave 69.70 337 eP **P 11 35 26.1 -1.5**
comp=Z,528nm,0.6s,mb6.2
CCM epP pP 11 37 23.0 -1.0
326A Caldwell Ranch 69.70 323 ⇑P **P 11 35 27.6 -0.2**
baz=70,SNR=220
425A Indio Mountain 69.84 322 ⇓P **P 11 35 28.1 -0.4**
baz=70,SNR=267
SLM Saint Louis 69.87 338 eP **P 11 35 26.8 -1.8**
SLM pmax pmax
comp=Z,383nm,0.8s,mb6.0
SLM Saint Louis 69.87 338 eP **P 11 35 26.8 -1.7**
comp=Z,383nm,0.8s,mb6.0
TRY Troy 69.88 352 eP **P 11 35 29.0 +0.4**
comp=Z,726nm,0.8s,mb6.3
227A Bennet, Jal 69.89 324 ⇑P **P 11 35 28.9 0.0**
baz=70,SNR=223
WMOK Wichita Mounta 69.89 329 eP **P 11 35 27.4 -1.4**
WMOK e 11 35 45.5
WMOK pmax pmax
comp=Z,92nm,0.6s,mb5.5
WMOK Wichita Mounta 69.89 329 eP **P 11 35 27.4 -1.4**
comp=Z,92nm,0.6s,mb5.5
WMOK ePcP PcP 11 35 45.5 -1.2
ALLY Alegheny Colle 69.92 347 eP **P 11 35 28.4 -0.4**
comp=Z,805nm,0.7s,mb6.4
EHIG Higuera 70.21 42 P **P 11 35 30.8 0.0**
comp=Z,3µm,1.8s,mb6.5
325A Bean Ranch, Si 70.28 323 ⇑P **P 11 35 30.6 -0.6**
baz=70,SNR=672
ERPA Erie 70.33 347 eP **P 11 35 31.1 -0.2**
comp=Z,2µm,0.6s,mb6.8
226A Malaga, Loving 70.35 324 ⇑P **P 11 35 31.7 +0.1**
baz=70,SNR=164
FFD Franklin Falls 70.38 353 eP **P 11 35 32.1 +0.6**
comp=Z,416nm,0.9s,mb6.0
CLNB Carlsbad 70.39 324 eP **P 11 35 31.7 -0.1**
comp=Z,68nm,0.6s,mb5.3
CLNB ePcP PcP 11 35 49.7 +0.7
127A Arkansas Junct 70.44 325 ⇑P **P 11 35 31.6 -0.6**
baz=71,SNR=94
ACCN Adirondack Com 70.53 352 eP **P 11 35 32.3 0.0**
comp=Z,169nm,0.8s,mb5.6
GDL2 Guadalupe Moun 70.60 324 eP **P 11 35 32.8 -0.3**
comp=Z,75nm,0.7s,mb5.3
324A Moseley Ranch, 70.61 322 ⇑P **P 11 35 32.0 -1.2**
baz=71,SNR=420
HNH Hanover 70.68 353 eP **P 11 35 33.0 -0.2**
comp=Z,529nm,0.9s,mb6.1
HNH epP pP 11 37 31.4 +1.2
MNTX Cornudas Mount 70.75 323 ⇓P **P 11 35 32.7 -1.3**
baz=71,SNR=271
MNTX Cornudas Mount 70.75 323 eP **P 11 35 32.4 -1.6**
comp=Z,33nm,0.5s,mb5.1
MNTX epP pP 11 37 32.0 +1.2
MNTX eS S 11 44 02.9 -0.8
126A Clayton Basin, 70.77 324 ⇑P **P 11 35 33.7 -0.3**
baz=71,SNR=233
225A Deer Hill, Car 70.77 323 ⇓P **P 11 35 33.6 -0.5**
baz=71,SNR=317
Z27A Tatum 70.88 325 ⇓P **P 11 35 33.9 -0.8**
baz=71,SNR=237
CPRX Cap Rock 70.99 325 eP **P 11 35 35.0 -0.3**
comp=Z,195nm,0.7s,mb5.7
CPRX ePcP PcP 11 35 52.0 +0.5
MDV Middlebury 71.07 352 eP **P 11 35 35.7 +0.1**
EBAJ Bajamar 71.08 43 P **P 11 35 36.2 +0.2**
comp=Z,3µm,2.4s,mb6.3
125A Gardner Draw, 71.11 324 ⇑P **P 11 35 35.1 -0.9**
baz=71,SNR=204
224A Cornudas Mount 71.12 323 ⇓P **P 11 35 35.4 -0.8**
baz=71,SNR=448
LBNH Lisbon 71.17 353 eP **P 11 35 36.5 +0.4**
LBNH e 11 38 23.2
LBNH pmax pmax
comp=Z,308nm,0.8s,mb5.9
LBNH Lisbon 71.17 353 eP **P 11 35 36.5 +0.4**
comp=Z,308nm,0.8s,mb5.9
LBNH ePP PP 11 38 23.1 -1.6
MSTX Muleshoe 71.17 326 ⇑P **P 11 35 36.0 -0.4**
baz=71,SNR=433
NCB Newcomb 71.17 352 eP **P 11 35 36.3 +0.1**
comp=Z,267nm,0.8s,mb5.8
NCB epP pP 11 37 36.0 +2.7
EOSO Osorio 71.22 44 ⇓P **P 11 35 37.0 +0.2**
comp=Z,5µm,2.2s,mb6.7
Z26A Caprock 71.23 325 ⇑P **P 11 35 36.5 -0.3**
baz=71,SNR=571
WVL Waterville 71.29 355 eP **P 11 35 36.2 -0.6**
comp=Z,575nm,0.8s,mb6.2
HDIL Hopedale 71.30 339 eP **P 11 35 35.6 -1.4**
comp=Z,827nm,0.8s,mb6.3
EMMW East Machias 71.30 357 eP **P 11 35 36.4 -0.5**
comp=Z,1µm,0.8s,mb6.5
EMMW ePP PP 11 38 22.2 -3.6
Y27A Causey 71.30 326 ⇓P **P 11 35 36.4 -0.8**
baz=72,SNR=101
AAM Ann Arbor 71.33 344 eP **P 11 35 36.0 -1.1**
AAM e*PP pP 11 37 35.1 +0.8
AAM pmax pmax
comp=Z,148nm,0.6s,mb5.7
AAM Ann Arbor 71.33 344 eP **P 11 35 36.0 -1.1**
comp=Z,148nm,0.6s,mb5.7
AAM epP pP 11 37 35.1 +0.8
AMTX Amarillo 71.37 327 ⇓P **P 11 35 37.0 -0.5**
baz=72,SNR=100
AMTX Amarillo 71.37 327 eP **P 11 35 36.9 -0.6**
comp=Z,277nm,0.8s,mb5.8
AMTX epP pP 11 37 37.0 +2.3
SUR Sutherland 71.44 117 P **P 11 35 40.0 +1.8**
comp=Z,269nm,0.6s,mb6.0,baz=249,slow=5.5,SNR=255
SUR pP pP 11 37 37.5 +2.3
comp=Z,85nm,1.0s,baz=270,slow=3.1,SNR=3.9
SUR Sutherland 71.44 117 eP **P 11 35 39.8 +1.6**
comp=Z,678nm,1.0s,mb6.1
SUR epP pP 11 37 38.0 +2.7
SUR Sutherland 71.44 117 P **P 11 35 39.2 +1.0**
comp=Z,3µm,0.6s
SUR Sutherland 71.44 117 P **P 11 35 40.3 +2.1**
SNR=11
SBA Scott Base 71.52 190 eP **P 11 35 39.7 +1.9**
SBA e*PP pP 11 37 35.2 +0.3
SBA pmax pmax
comp=Z,47nm,0.5s,mb5.2
SBA Scott Base 71.52 190 eP **P 11 35 39.6 +1.8**
comp=Z,47nm,0.5s,mb5.2
SBA epP pP 11 37 35.2 +0.3
223A Chaparral, Ant 71.56 322 ⇓P **P 11 35 39.0 +0.3**
baz=72,SNR=9.8
124A Stringfield Ra 71.56 323 ⇑P **P 11 35 38.5 -0.2**
baz=72,SNR=121
Z25A Roswell 71.62 324 ⇓P **P 11 35 38.4 -0.6**
baz=72,SNR=169
Y26A Elida 71.67 325 ⇓P **P 11 35 38.8 -0.4**
baz=72,SNR=71
LONY Lake Ozonia 71.86 351 eP **P 11 35 40.1 0.0**
comp=Z,328nm,0.9s,mb5.8
LONY epP pP 11 37 38.1 +0.6
X27A F and S Farms, 71.88 326 ⇓P **P 11 35 39.9 -0.6**
baz=72,SNR=60
FRNY Flat Rock 71.95 352 eP **P 11 35 40.8 +0.2**
comp=Z,269nm,0.8s,mb5.7
FRNY epP pP 11 37 39.5 +1.5
123A Bell Site, Whi 71.95 323 ⇓P **P 11 35 41.0 0.0**
baz=72,SNR=23
PKME Peaks-Kenny Pk 71.96 355 eP **P 11 35 41.1 +0.4**
comp=Z,75nm,1.6s,mb4.9
Z24A Sheeppen Canyo 72.00 324 ⇓P **P 11 35 41.2 0.0**
baz=72,SNR=393
222A Williams Famil 72.00 322 ⇑P **P 11 35 41.7 +0.4**
baz=72,SNR=164
Y25A Mesa, Roswell 72.11 325 ⇑P **P 11 35 41.2 -0.6**
baz=72,SNR=164
X26A CR and CF Fran 72.16 326 ⇑P **P 11 35 42.2 +0.1**
baz=72,SNR=346
320A Kipp Ranch, An 72.23 320 ⇓P **P 11 35 43.2 +0.6**
baz=72,SNR=136
MSNY Massena 72.27 351 eP **P 11 35 42.5 0.0**
comp=Z,2µm,0.9s,mb6.5
MSNY ePcP PcP 11 35 55.8 -0.9
221A Mesquite Ranch 72.31 321 ⇓P **P 11 35 43.8 +0.8**
baz=72,SNR=104
122A Conniff Cattle 72.40 322 ⇑P **P 11 35 44.5 +0.9**
baz=73,SNR=18
Z23A Rita Site, Whi 72.41 323 ⇑P **P 11 35 44.4 +0.8**
baz=73,SNR=308
Y24A Capitan 72.50 324 ⇑P **P 11 35 43.8 -0.3**
baz=73,SNR=91
W26A Owens Ranch, T 72.56 326 ⇓P **P 11 35 44.5 +0.1**
baz=73,SNR=149
X25A Clemmons Ranch 72.57 325 ⇓P **P 11 35 44.0 -0.4**
baz=73,SNR=60
PCAN Candelaria 72.63 28 eP **P 11 35 45.2 +0.5**
comp=Z,439nm,0.8s,mb5.9
CALA Caldeira 72.64 28 eP **P 11 35 45.9 +1.2**
KSU1 Kansas State U 72.64 333 eP **P 11 35 43.8 -1.0**
comp=Z,781nm,0.7s,mb6.2
220A Playas Peak, P 72.65 321 ⇓P **P 11 35 45.4 +0.4**
baz=73,SNR=195
PCED Cedros 72.68 28 eP **P 11 35 45.6 +0.6**
comp=Z,148nm,0.6s,mb5.6
PICO Pico 72.68 28 eP **P 11 35 46.6 +1.6**
319A Douglas 72.69 320 ⇑P **P 11 35 46.0 +0.7**
baz=73,SNR=271
121A Cookes Peak, D 72.71 322 ⇑P **P 11 35 46.1 +0.8**
baz=73,SNR=152
PPNO Prainha do Nor 72.73 28 eP **P 11 35 46.1 +0.8**
comp=Z,263nm,1.1s,mb5.6
SADO Sadowa 72.73 348 P **P 11 35 44.4 -0.7**
comp=Z,285nm,0.5s,mb6.0,baz=187,slow=5.3,SNR=305
SADO pP pP 11 37 43.6 +0.7
comp=Z,22nm,0.8s,baz=200,slow=12,SNR=1.6
SADO S S 11 44 20.6 -4.5
comp=Z,6.2nm,0.9s,baz=310,slow=15,SNR=7.4
SADO Sadowa 72.73 348 P **P 11 35 44.4 -0.7**
SADO pP pP 11 37 43.6 +0.7
SADO S S 11 44 20.6 -4.5
PID Ribeirinha 72.76 28 eP **P 11 35 46.2 +0.7**
Z22A Elephant Butte 72.80 323 ⇑P **P 11 35 46.6 +0.8**
baz=73,SNR=122
Y23A Lovelace Mesa, 72.83 324 ⇓P **P 11 35 46.4 +0.4**
baz=73,SNR=224
PSMA Santa Maria 72.89 31 eP **P 11 35 45.9 -0.3**
comp=Z,874nm,1.4s,mb6.0
PSMN Pico do Norte, 72.92 31 eP **P 11 35 46.3 -0.1**
PMAN Manadas 72.94 28 eP **P 11 35 47.4 +0.9**
comp=Z,1µm,0.7s,mb6.4
ROSA Rosais 72.94 28 eP **P 11 35 47.6 +1.1**
X24A Lazy VL Ranch, 73.00 325 ⇑P **P 11 35 47.0 +0.1**
baz=73,SNR=273
W25A X Bar L Ranch, 73.01 326 ⇓P **P 11 35 46.8 -0.2**
baz=73,SNR=122
V26A Tequesquite Ra 73.13 326 ⇓P **P 11 35 47.5 -0.1**
baz=73,SNR=222
219A White Tail Can 73.14 320 ⇑P **P 11 35 48.3 +0.5**
baz=73,SNR=335
318A Bisbee 73.15 319 ⇓P **P 11 35 48.4 +0.5**
baz=73,SNR=288
120A U Bar Ranch, L 73.19 321 ⇓P **P 11 35 48.8 +0.8**
baz=73,SNR=106
EFAM Famara 73.22 44 ⇓P **P 11 35 48.9 +0.6**
comp=Z,5µm,3.0s
Z21A St. Cloud Mine 73.23 322 ⇓P **P 11 35 49.2 +0.9**
baz=73,SNR=43
PDA Ponta Delgada 73.26 30 eP **P 11 35 48.3 0.0**
PQI Presque Isle 73.28 357 eP **P 11 35 48.6 +0.4**
comp=Z,570nm,0.8s,mb6.0
PSET Sete Cidades 73.29 30 eP **P 11 35 48.3 -0.2**
comp=Z,150nm,0.7s,mb5.5
BNM Barren Site 73.31 323 eP **P 11 35 49.4 +0.7**
comp=Z,75nm,0.7s,mb5.2
ADH Angra Heroismo 73.32 29 eP **P 11 35 49.2 +0.6**
comp=Z,735nm,0.9s,mb6.1
Y22A Socorro 73.32 323 ⇑P **P 11 35 49.2 +0.4**
baz=74,SNR=87
CMLA Cha da Macela 73.33 30 eP **P 11 35 50.4 +1.6**
CMLA pmax pmax
comp=Z,150nm,0.6s,mb5.6
CMLA Cha da Macela 73.33 30 eP **P 11 35 50.4 +1.6**
comp=Z,150nm,0.6s,mb5.6
X23A Hourglass Bar 73.40 324 ⇓P **P 11 35 50.1 +0.8**
baz=74,SNR=39
Y22D IRIS PASSCAL I 73.40 323 ⇑P **P 11 35 50.3 +1.1**
baz=74,SNR=8.9
LPM Los Pinos Moun 73.43 324 eP **P 11 35 49.8 +0.4**
comp=Z,106nm,0.9s,mb5.3
W24A Lazy 6 Ranch, 73.48 325 ⇑P **P 11 35 49.8 +0.1**
baz=74,SNR=317
LENM Lemitar 73.50 323 eP **P 11 35 49.9 +0.1**
comp=Z,60nm,0.8s,mb5.1
LENM eS S 11 44 37.8 +3.6
218A Dragoon 73.57 320 ⇓P **P 11 35 50.8 +0.6**
baz=74,SNR=189
V25A Rancho No Teng 73.58 326 ⇓P **P 11 35 50.3 +0.1**
baz=74,SNR=353
Z20A Nine Sixteen R 73.59 321 ⇑P **P 11 35 51.2 +0.9**
baz=74,SNR=150
TSUM Tsumeb 73.61 104 eP **P 11 35 51.7 +0.9**
comp=Z,446nm,1.0s,mb5.8
TSUM epP pP 11 37 51.2 +2.3
CBKS Cedar Bluff 73.70 331 ⇑P **P 11 35 51.2 +0.4**
baz=74,SNR=242
CBKS Cedar Bluff 73.70 331 eP **P 11 35 51.0 +0.2**
CBKS e*PP pP 11 37 48.1 -0.9
CBKS eS S 11 44 34.7 -1.4
CBKS pmax pmax
comp=Z,1µm,0.8s,mb6.5
CBKS Cedar Bluff 73.70 331 eP **P 11 35 51.0 +0.2**
comp=Z,1µm,0.8s,mb6.5
CBKS epP pP 11 37 48.1 -1.0
CBKS eS S 11 44 34.7 -1.5
119A Ashpeak Ranch, 73.73 321 ⇑P **P 11 35 51.8 +0.7**
baz=74,SNR=73
JFWS Jewell Farm 73.74 340 eP **P 11 35 49.9 -1.0**
JFWS e*PP pP 11 37 50.3 +1.2
JFWS pmax pmax
comp=Z,991nm,0.6s,mb6.4
JFWS Jewell Farm 73.74 340 eP **P 11 35 49.9 -1.0**
comp=Z,991nm,0.6s,mb6.4
JFWS epP pP 11 37 50.3 +1.2
FUL Funchal 73.74 39 i P **P 11 35 51.1 -0.1**
comp=Z,652nm,1.5s,mb5.8
Y21A Point of Rocks 73.76 323 ⇑P **P 11 35 52.4 +1.2**
baz=74,SNR=191
LAZ Ladron 73.77 323 eP **P 11 35 52.0 +0.6**
comp=Z,86nm,1.0s,mb5.1
X22A Bernardo 73.78 323 ⇓P **P 11 35 52.5 +1.1**
baz=74
PMAR Madeira 73.80 39 i P **P 11 35 51.3 -0.2**
comp=Z,528nm,1.4s,mb5.8
PMAR epP pP 11 37 52.8 +3.1
V24A Rampart Ranch, 73.82 325 ⇑P **P 11 35 51.6 +0.1**
baz=74,SNR=173
ANMO Albuquerque 73.83 324 P **P 11 35 51.0 -0.7**
comp=Z,142nm,0.7s,mb5.5,baz=141,slow=7.0,SNR=620
ANMO pP pP 11 37 49.9 0.0
comp=Z,8.3nm,0.8s,baz=76,slow=12,SNR=2.0
ANMO sP sP 11 38 46.6 -1.9
comp=Z,20nm,0.8s,baz=147,slow=9.9,SNR=3.7
ANMO S S 11 44 35.6 -2.1
comp=Z,8.5nm,1.1s,baz=22,slow=21,SNR=26
ANMO Albuquerque 73.83 324 P **P 11 35 51.0 -0.6**
ANMO *PP pP 11 37 49.9 0.0
ANMO *SP sP 11 38 46.6 -1.9
ANMO S S 11 44 35.6 -2.1
ANMO pmax pmax
comp=Z,142nm,0.7s
ANMO smax
comp=N,9.0nm,1.1s
ANMO Albuquerque 73.83 324 eP **P 11 35 52.1 +0.4**
comp=N,182nm,0.8s,mb5.6
W23A Werner Place, 73.83 324 ⇑P **P 11 35 52.3 +0.7**
baz=74,SNR=313
217A Green Valley 73.88 319 ⇑P **P 11 35 52.3 +0.3**
baz=74,SNR=162
U25A Circle Dot Ran 73.91 326 ⇓P **P 11 35 52.4 +0.3**
baz=74,SNR=213
118A Homack Ranch, 74.02 320 ⇑P **P 11 35 53.1 +0.4**
baz=74,SNR=199
Y20A Horse Springs, 74.07 322 ⇓P **P 11 35 54.0 +1.0**
baz=74,SNR=189
Z19A T-Link Ranch, 74.10 321 ⇑P **P 11 35 54.2 +1.0**
baz=74,SNR=44
W22A Albuquerque 74.14 324 ⇑P **P 11 35 54.4 +1.0**
baz=74,SNR=78
X21A Alamocita Cree 74.15 323 ⇓P **P 11 35 54.6 +1.1**
baz=74,SNR=335
V23A Ortiz Mt. (NFS 74.30 325 ⇑P **P 11 35 55.1 +0.9**
baz=74,SNR=145
U24A Moreno Valley 74.36 326 ⇓P **P 11 35 55.4 +0.8**
baz=74,SNR=99
PMPS Porto Santo 74.37 40 eP **P 11 35 54.8 +0.1**
comp=N,785nm,2.1s,mb5.8
Z18A Geronimo 74.38 321 ⇓P **P 11 35 55.4 +0.6**
baz=75,SNR=80
117A Oracle 74.41 320 ⇓P **P 11 35 55.4 +0.4**
baz=75,SNR=268
216A Three Points, 74.42 319 ⇓P **P 11 35 55.5 +0.5**
baz=75,SNR=132
TAOE Nuku Hiva Isla 74.46 268 ⇑i P **P 11 35 56.3 +0.6**
comp=N,2µm,1.2s,mb6.3
TAOE eLR LR 11 59 31.3
comp=N,1µm,24.1s
TAOE Nuku Hiva Isla 74.46 268 eP **P 11 35 57.0 +1.3**
comp=N,871nm,1.4s,mb6.0
TORD Torodi Ar. Bea 74.46 66 P **P 11 35 55.5 -0.1**
comp=N,751nm,0.7s,mb6.3,baz=255,slow=5.4,SNR=869
TORD pP pP 11 37 54.9 +0.9
comp=N,80nm,0.7s,baz=251,slow=6.1,SNR=5.3
TORD S S 11 44 43.7 -1.6
comp=N,11nm,0.8s,baz=242,slow=11,SNR=6.8
TORD PKKP PKKPdf 11 54 57.1 -5.8
comp=N,1.6nm,0.7s,baz=43,slow=4.7,SNR=5.4
TORD PKPPKP 12 03 17.5
comp=N,2.6nm,1.1s,baz=61,slow=2.5,SNR=4.9
TORD Torodi Ar. Bea 74.46 66 P **P 11 35 55.5 -0.1**
TORD pP pP 11 37 54.9 +0.9
TORD S S 11 44 43.7 -1.6
TORD PKKP PKKPdf 11 54 57.1 -5.8
TORD P'P' 12 03 17.5
T25A Trinidad 74.50 327 ⇑P **P 11 35 56.1 +0.8**
baz=75,SNR=248
W21A San Fidel 74.58 323 ⇓P **P 11 35 56.9 +1.0**
baz=75,SNR=216
Y19A Nutrioso 74.59 322 ⇓P **P 11 35 57.2 +1.2**
baz=75,SNR=421
X20A Quemado 74.61 323 ⇓P **P 11 35 57.1 +1.0**
baz=75,SNR=263
U23A El Rito 74.75 325 ⇑P **P 11 35 57.8 +1.0**
baz=75,SNR=123
T24A Torres, Weston 74.76 326 ⇓P **P 11 35 57.9 +1.0**
baz=75,SNR=168
Z17A San Carlos Hig 74.78 320 P **P 11 35 57.5 +0.5**
baz=75,SNR=32
V22A San Miguel Ran 74.80 324 ⇑P **P 11 35 58.4 +1.3**
baz=75,SNR=468
Y18A Canyon Day Jun 74.89 321 P **P 11 35 58.2 +0.6**
baz=75,SNR=154
S25A Robets Cordova 74.92 327 P **P 11 35 58.4 +0.7**
baz=75,SNR=388
116A Eloy 74.96 319 ⇓P **P 11 35 58.6 +0.5**
baz=75,SNR=173
W20A Ramah 75.05 323 P **P 11 35 59.2 +0.8**
baz=75,SNR=148

V21A Milan 75.10 324 P **P** **11 35 59.8 +1.0**
baz=75,SNR=212
U22A Llaves 75.13 325 P **P** **11 36 00.1 +1.2**
baz=75,SNR=230
214A Organ Pipe Nat 75.19 318 ⇓P **P** **11 35 60.0 +0.7**
baz=75,SNR=306
T23A Casias Ranch, 75.22 326 P **P** **11 36 00.2 +0.8**
baz=75,SNR=167
R25A Fountain Ranch 75.23 328 ⇓P **P** **11 35 59.8 +0.4**
baz=75,SNR=113
S24A Houchin Ranch, 75.29 327 P **P** **11 36 00.9 +1.1**
baz=76,SNR=296
Y17A Roosevelt 75.29 320 ⇑P **P** **11 36 00.8 +0.9**
baz=76,SNR=386
Z16A Peralta Trail, 75.36 320 P **P** **11 36 00.8 +0.5**
baz=76,SNR=13
115A Sonoran Desert 75.37 319 ⇑P **P** **11 36 00.9 +0.5**
baz=76
X18A Snowflake 75.40 322 P **P** **11 36 01.4 +0.9**
baz=76,SNR=189
SDCO Great Sand Dun 75.51 327 ⇓P **P** **11 36 01.8 +0.8**
baz=76,SNR=530
SDCO Great Sand Dun 75.51 327 *e*P **P** **11 36 01.5 +0.6**
comp=N,261nm,1.6s,mb5.4
W19A Sanders 75.52 322 P **P** **11 36 01.9 +0.8**
baz=76,SNR=91
V20A Brimhall 75.54 323 P **P** **11 36 01.8 +0.7**
baz=76,SNR=95
U21A Nageezi 75.59 324 P **P** **11 36 02.3 +0.8**
baz=76,SNR=233
T22A Edith 75.64 325 ⇑P **P** **11 36 02.7 +1.0**
baz=76,SNR=212
R24A Sanders Place, 75.70 327 P **P** **11 36 03.0 +1.0**
baz=76,SNR=297
W18A Petrified Fore 75.71 322 P **P** **11 36 02.9 +0.8**
baz=76,SNR=75
S23A Nye Farm, Mont 75.73 326 P **P** **11 36 03.1 +1.0**
baz=76,SNR=67
X17A Forest Lakes 75.73 321 P **P** **11 36 03.5 +1.1**
baz=76,SNR=190
Z15A Gila River Ind 75.75 319 ⇑P **P** **11 36 03.0 +0.6**
baz=76,SNR=27
V19A Window Rock 75.78 323 P **P** **11 36 03.4 +0.9**
baz=76,SNR=98
Y16A Circle Bar Ran 75.78 320 P **P** **11 36 03.5 +0.9**
baz=76,SNR=225
114A Black Gap (USA 75.79 318 ⇑P **P** **11 36 03.1 +0.5**
baz=76,SNR=248
Q25A Bedland, Calha 75.83 328 P **P** **11 36 03.1 +0.4**
baz=76,SNR=170
T21A Navajo Lake 75.95 325 P **P** **11 36 04.3 +0.8**
baz=76,SNR=83
U20A Newcomb 76.00 324 P **P** **11 36 04.3 +0.6**
baz=76,SNR=87
X16A Lo Mia Camp, P 76.15 321 ⇑P **P** **11 36 05.7 +1.1**
baz=76,SNR=531
S22A 4UR Ranch, Cre 76.17 326 ⇓P **P** **11 36 05.4 +0.7**
baz=76,SNR=280
W17A Winslow 76.22 321 ⇑P **P** **11 36 05.8 +0.8**
baz=76,SNR=42
V18A Ganado 76.26 322 P **P** **11 36 05.7 +0.5**
baz=76,SNR=164
Z14A Wintersburg 76.26 319 ⇑P **P** **11 36 05.6 +0.3**
baz=76,SNR=33
P25A Willow Gulch B 76.27 329 P **P** **11 36 06.1 +1.0**
baz=76,SNR=136
Q24A Divide 76.30 328 P **P** **11 36 06.1 +0.8**
baz=76,SNR=302
U19A Dine' College, 76.30 323 P **P** **11 36 05.5 +0.1**
baz=76,SNR=111
COWI Conover 76.31 342 *e*P **P** **11 36 04.7 -0.5**
comp=N,242nm,0.7s,mb5.7
COWI *e*pP pP 11 38 06.1 +1.6
Y15A Casa Rosa Ranc 76.33 320 P **P** **11 36 06.2 +0.6**
baz=76,SNR=266
113A Mohawk Valley, 76.33 318 P **P** **11 36 05.7 +0.1**
baz=76,SNR=216
BOSA Boshof 76.40 115 P **P** **11 36 06.8 +0.6**
comp=N,280nm,0.4s,mb6.1,baz=252,slow=4.8,SNR=739
BOSA pP pP 11 38 06.7 +1.2
comp=N,60nm,0.9s,baz=270,slow=6.4,SNR=3.1
BOSA S S 11 45 07.0 +1.1
comp=N,16nm,1.0s,baz=24,slow=19,SNR=8.5
BOSA PKKPbc PKKPbc 11 55 13.2 +0.8
comp=N,4.0nm,0.7s,baz=279,slow=3.6,SNR=3.1
BOSA Boshof 76.40 115 P **P** **11 36 06.9 +0.6**
BOSA *PP pP 11 38 06.7 +1.2
BOSA S S 11 45 07.0 +1.1
BOSA pmax pmax
comp=Z,280nm,0.4s,mb6.0
BOSA smax
comp=N,17nm,1.0s
BOSA Boshof 76.40 115 *e*P **P** **11 36 06.8 +0.5**
comp=N,851nm,0.9s,mb6.2
OGNE Ogallala 76.46 331 P **P** **11 36 06.5 +0.3**
baz=77,SNR=92
OGNE Ogallala 76.46 331 *e*P **P** **11 36 06.1 0.0**
comp=N,369nm,0.8s,mb5.9
OGNE *e*pP pP 11 38 07.3 +1.8
R22A Saguache, Gunn 76.51 326 ⇑P **P** **11 36 07.5 +1.1**
baz=77,SNR=153
Z13A Yuma Proving G 76.57 318 P **P** **11 36 07.4 +0.5**
baz=77,SNR=315
Q23A Hartsel 76.58 327 ⇓P **P** **11 36 07.4 +0.5**
baz=77,SNR=108
S21A Coal Bank Pass 76.60 325 ⇓P **P** **11 36 07.9 +0.9**
baz=77,SNR=229
T19A Beclabito 76.61 324 ⇑P **P** **11 36 07.7 +0.7**
baz=77,SNR=203
P24A Kohler Place, 76.61 328 ⇑P **P** **11 36 07.8 +0.8**
baz=77,SNR=45
MVCO Mesa Verde 76.62 324 ⇑P **P** **11 36 07.9 +0.8**
baz=77,SNR=251
MVCO Mesa Verde 76.62 324 *e*P **P** **11 36 07.7 +0.6**
comp=N,277nm,0.8s,mb5.7
MVCO *e*pP pP 11 38 06.5 0.0
MVCO *e*S S 11 45 07.7 +0.1
ECSD EROS Data Cent 76.62 336 *e*P **P** **11 36 06.0 -1.0**
comp=N,569nm,0.8s,mb6.0
ECSD *e*pP pP 11 38 05.1 -1.3
X15A Humboldt 76.66 320 P **P** **11 36 08.2 +0.9**
baz=77,SNR=303
112A Yuma 76.66 317 ⇓P **P** **11 36 07.5 +0.1**
baz=77,SNR=14
TBI Tubuai 76.68 250 ⇓*i*P **P** **11 36 09.6 +1.7**
comp=N,1μm,1.1s,mb6.2
W16A Flagstaff 76.69 321 P **P** **11 36 08.8 +1.3**
baz=77,SNR=221
Y14A Wickenburg 76.71 319 P **P** **11 36 08.1 +0.5**
baz=77,SNR=258
O25A Wiggins 76.72 329 P **P** **11 36 08.7 +1.1**
baz=77,SNR=183
U18A Rough Rock, Ch 76.75 323 P **P** **11 36 08.7 +0.9**
baz=77,SNR=246
WUAZ Wupatki 76.91 321 P **P** **11 36 09.7 +1.0**
baz=77,SNR=154
WUAZ Wupatki 76.91 321 *e*P **P** **11 36 09.5 +0.8**
comp=N,305nm,1.0s,mb5.7
WUAZ *e*pP pP 11 38 11.2 +2.9
P23A Jefferson 76.95 327 P **P** **11 36 09.8 +1.0**
baz=77,SNR=66
R21A Cimarron 77.01 326 P **P** **11 36 10.1 +0.9**
baz=77,SNR=160
S20A Disappointment 77.02 325 P **P** **11 36 10.5 +1.3**
baz=77,SNR=248
X14A Yava 77.02 320 P **P** **11 36 10.2 +0.8**
baz=77,SNR=155
Q22A Crested Butte, 77.07 326 P **P** **11 36 10.6 +1.1**
baz=77,SNR=246
Y13A Salome 77.10 319 P **P** **11 36 10.4 +0.6**
baz=77,SNR=218
GLA Glamis 77.17 318 ⇑P **P** **11 36 10.4 +0.3**
baz=77,SNR=53
GLA Glamis 77.17 318 *e*P **P** **11 36 10.4 +0.2**
GLA *e*PP pP 11 38 09.0 -0.8
GLA pmax pmax
comp=Z,151nm,0.9s,mb5.4
GLA Glamis 77.17 318 *e*P **P** **11 36 10.4 +0.2**
comp=Z,151nm,0.9s,mb5.4
GLA *e*pP pP 11 38 09.0 -0.8
W15A Williams 77.17 321 P **P** **11 36 11.3 +1.1**
baz=77,SNR=87
O24A Longmont 77.17 328 P **P** **11 36 10.8 +0.7**
baz=77,SNR=12
ISCO Idaho Springs 77.17 328 ⇓P **P** **11 36 10.8 +0.7**
baz=77,SNR=305
ISCO Idaho Springs 77.17 328 *e*P **P** **11 36 10.7 +0.6**
ISCO *e*PP pP 11 38 12.5 +2.8
ISCO pmax pmax
comp=Z,216nm,0.8s,mb5.6
ISCO Idaho Springs 77.17 328 *e*P **P** **11 36 10.7 +0.6**
comp=Z,216nm,0.8s,mb5.6
ISCO *e*pP pP 11 38 12.5 +2.8
U16A Tuba City 77.23 322 P **P** **11 36 11.4 +0.9**
baz=77,SNR=147
T18A Mexican Hat 77.29 323 P **P** **11 36 11.1 +0.3**
baz=78,SNR=360
R20A Redvale 77.30 325 P **P** **11 36 11.9 +1.2**
baz=78,SNR=469
U17A Shonto 77.31 323 ⇓P **P** **11 36 11.6 +0.7**
baz=78
SMCO Snowmass 77.35 327 *e*P **P** **11 36 12.2 +1.1**
comp=Z,60nm,0.5s,mb5.3
SMCO *e*pP pP 11 38 11.1 +0.3
PV01 Paradox Valley 77.35 325 *e*P **P** **11 36 11.8 +0.7**
comp=Z,20nm,0.3s,mb5.0
S19A Harvey Farm, M 77.36 324 P **P** **11 36 11.7 +0.6**
baz=78,SNR=535
Q21A Lamborn Mesa, 77.38 326 P **P** **11 36 12.0 +0.8**
baz=78,SNR=167
Y12C Blythe 77.47 318 P **P** **11 36 12.2 +0.4**
baz=78,SNR=117
P22A Eagle 77.57 327 P **P** **11 36 12.9 +0.7**
baz=78,SNR=158
V15A Kaibab Nationa 77.58 321 P **P** **11 36 13.5 +1.2**
baz=78,SNR=489
N24A Carr 77.64 329 P **P** **11 36 13.4 +0.8**
baz=78,SNR=75
O23A Lake Granby, G 77.64 328 P **P** **11 36 13.4 +0.8**
baz=78,SNR=215
X13A Yucca 77.65 319 ⇑P **P** **11 36 13.4 +0.6**
baz=78
W14A Seligman 77.66 320 P **P** **11 36 13.8 +1.0**
baz=78,SNR=322
DVTC Desert V Tower 77.67 316 P **P** **11 36 13.4 +0.5**
baz=78,SNR=48
SWSC Sam W. Stewart 77.68 317 P **P** **11 36 13.3 +0.4**
baz=78,SNR=18
T17A Navajo Res., N 77.68 323 P **P** **11 36 14.2 +1.3**
baz=78,SNR=211
MAW Mawson 77.70 162 P **P** **11 36 13.3 +0.8**
comp=Z,520nm,0.8s,mb5.9,baz=225,slow=6.5,SNR=691
MAW pP pP 11 38 13.3 +1.1
comp=Z,217nm,0.9s,baz=231,slow=6.6,SNR=13
MAW PKKPbc PKKPbc 11 55 07.5 -3.6
comp=Z,3.4nm,0.9s,baz=25,slow=7.8,SNR=3.9
MAW PKPPKP 12 03 02.3
comp=Z,2.4nm,0.7s,baz=28,slow=3.1,SNR=4.8
MAW Mawson 77.70 162 ⇓*i*P **P** **11 36 13.3 +0.8**
comp=Z,361nm,0.6s,mb5.9
MAW *e*pP pP 11 38 12.9 +0.7
MAW Mawson 77.70 162 P **P** **11 36 13.3 +0.8**
MAW *PP pP 11 38 13.3 +1.1
MAW pmax pmax
comp=Z,520nm,0.8s
MAW Mawson 77.70 162 *e*P **P** **11 36 13.2 +0.7**
comp=Z,3.4nm,0.8s
MAW *e*pP pP 11 38 11.0 -1.2
MEH Mehetia 77.70 256 *e*P **P** **11 36 14.2 +0.7**
comp=Z,2μm,1.5s,mb6.2
MEH *e*pP pP 11 38 12.1 -1.2
comp=Z,710nm,1.4s
PV04 Paradox Valley 77.72 325 *e*P **P** **11 36 13.5 +0.4**
S18A Hurst Farm, Bl 77.76 324 P **P** **11 36 14.3 +1.1**
baz=78,SNR=629
R19A Curley Farm, L 77.83 325 P **P** **11 36 14.1 +0.5**
baz=78,SNR=269
Q20A Ridgley Place, 77.84 326 P **P** **11 36 14.1 +0.4**
baz=78,SNR=27
P21A Newcastle 77.85 326 P **P** **11 36 14.7 +1.0**
baz=78,SNR=138
O22A Kremmling 77.90 327 P **P** **11 36 14.5 +0.5**
baz=78,SNR=234
BC3 Big Chuckawall 77.96 318 P **P** **11 36 14.8 +0.3**
baz=78,SNR=143
V14A Boquillas Ranc 77.97 320 ⇑P **P** **11 36 15.6 +1.2**
baz=78,SNR=335
MONP Monument Peak 78.03 316 P **P** **11 36 15.3 +0.5**
baz=78,SNR=106
BAR Barrett 78.04 316 *e*P **P** **11 36 14.9 0.0**
comp=Z,151nm,0.8s,mb5.4
BAR *e*PcP PcP 11 36 22.0 0.0
BAR *e*pP pP 11 38 18.5 +3.6
T16A Glen Canyon Da 78.06 322 P **P** **11 36 15.8 +0.9**
baz=78,SNR=78
U15A North Rim 78.08 321 ⇓P **P** **11 36 16.4 +1.3**
baz=78,SNR=508
U15A ⇓P 11 55 10.8
baz=78
LBTB Lobatse 78.12 112 *e*P **P** **11 36 16.1 +0.5**
LBTB *e*PP pP 11 38 18.1 +2.5
LBTB pmax pmax
comp=Z,818nm,0.9s,mb6.1
LBTB Lobatse 78.12 112 *e*P **P** **11 36 16.1 +0.4**
comp=Z,818nm,0.9s,mb6.1
LBTB *e*pP pP 11 38 18.1 +2.5
M24A Cheyenne 78.12 329 P **P** **11 36 16.1 +1.0**
baz=78,SNR=333
IRM Iron Mountain 78.13 318 P **P** **11 36 15.7 +0.4**
baz=78,SNR=169
S17A Black Ridge (B 78.15 323 P **P** **11 36 16.1 +0.7**
baz=78,SNR=145
N23A Red Feather La 78.19 328 P **P** **11 36 16.2 +0.7**
baz=78,SNR=152
R18A Canyonlands Na 78.23 324 P **P** **11 36 16.1 +0.3**
baz=78,SNR=135
NEE2 Needles Airpor 78.24 319 ⇓P **P** **11 36 16.0 +0.1**
baz=78,SNR=20
PHWY Pilot Hill 78.28 329 *e*P **P** **11 36 16.3 +0.3**
comp=Z,5.7nm,0.9s
PHWY *e*pP pP 11 38 19.1 +3.0
P20A De Beque 78.30 326 P **P** **11 36 17.0 +0.9**
baz=78,SNR=596
Q19A Hogan Spring (78.33 325 ⇑P **P** **11 36 16.7 +0.4**
baz=78,SNR=240
Q19A ⇓P 11 55 09.4
baz=78
N22A Wattenberg Ran 78.36 328 P **P** **11 36 17.4 +1.0**
baz=79,SNR=243
O21A Pagoda 78.39 327 P **P** **11 36 17.8 +1.1**
baz=79,SNR=121
109C Camp Elliot, M 78.45 316 ⇓P **P** **11 36 17.0 -0.1**
baz=79,SNR=7.7
BELC Belle Mtn. Jos 78.53 318 P **P** **11 36 18.0 +0.5**
baz=79,SNR=142
BELC ⇓P 11 55 09.4
baz=79
PFO Pinyon Flat Ob 78.54 317 P **P** **11 36 18.0 +0.5**
comp=Z,784nm,0.9s,mb6.0,SNR=75
PFO Pinyon Flat Ob 78.54 317 P **P** **11 36 18.1 +0.6**
baz=79,SNR=122
PFO ⇓P 11 55 09.5
baz=79
PFO Pinyon Flat Ob 78.54 317 *e*P **P** **11 36 18.0 +0.5**
PFO *e*PP pP 11 38 21.3 +3.6
PFO pmax pmax
comp=Z,133nm,0.9s,mb5.3
PFO Pinyon Flat Ob 78.54 317 *e*P **P** **11 36 18.0 +0.5**
comp=Z,133nm,0.9s,mb5.3
PFO *e*pP pP 11 38 21.3 +3.6
T15A Red Dirt Ranch 78.56 322 P **P** **11 36 18.6 +1.1**
baz=79,SNR=568
U14A Mt Trumbull 78.58 321 P **P** **11 36 18.8 +1.1**
baz=79,SNR=420
U14A ⇓P 11 55 09.5
baz=79
L24A Wheatland 78.63 330 ⇓P **P** **11 36 18.3 +0.5**
baz=79,SNR=23
V13A Grand Canyon W 78.63 320 P **P** **11 36 18.6 +0.6**
baz=79,SNR=232
S16A Weppner Ranch, 78.64 323 P **P** **11 36 18.3 +0.3**
baz=79,SNR=165
EYMN Ely 78.66 341 *e*P **P** **11 36 17.1 -0.8**
comp=Z,342nm,0.8s,mb5.7
EYMN *e*PcP PcP 11 36 23.6 -0.7
EYMN *e*pP pP 11 38 18.4 +0.3
R17A Hanksville Air 78.68 324 P **P** **11 36 18.6 +0.4**
baz=79,SNR=471
P19A Cripple Cowboy 78.70 326 P **P** **11 36 19.1 +0.9**
baz=79,SNR=520
O20A White River Ci 78.71 326 P **P** **11 36 18.9 +0.7**
baz=79,SNR=283
O20A ⇑P 11 55 08.8
baz=79
LDFC Landfair 78.74 319 *e*P **P** **11 36 19.4 +0.8**
comp=Z,261nm,0.8s,mb5.6
LDFC *e*pP pP 11 38 21.1 +2.2
LDFC *e*S S 11 45 31.2 +1.2
PMOR Pomariorio Ree 78.74 259 ⇓*i*P **P** **11 36 21.0 +1.9**
comp=Z,953nm,1.1s,mb6.1
W12A Cal Nev Ari 78.76 319 P **P** **11 36 19.1 +0.4**
baz=79,SNR=16
N21A Black Mountain 78.84 327 P **P** **11 36 19.8 +0.9**
baz=79,SNR=139
N21A ⇓P 11 55 08.1
baz=79
GMRC Granite Mounta 78.86 318 P **P** **11 36 20.0 +0.8**
baz=79,SNR=280
GMRC ⇑P 11 55 08.5
baz=79
Q18A Rafter H Ranch 78.89 325 P **P** **11 36 19.8 +0.5**
baz=79,SNR=153
M22A Cedar Creek Ra 78.89 328 P **P** **11 36 19.9 +0.7**
baz=79,SNR=98
TIAR Tiarei 78.94 256 *e*P **P** **11 36 21.3 +1.2**
comp=Z,310nm,1.0s,mb5.6
TIAR *e*pP pP 11 38 21.5 +1.1
comp=Z,197nm,1.0s
T14A Hurricane 78.98 321 P **P** **11 36 20.6 +0.8**
baz=79,SNR=300
MURC Murrieta 78.99 317 ⇓P **P** **11 36 20.2 +0.2**
baz=79,SNR=49
R16A Teasdale 78.99 323 ⇑P **P** **11 36 20.1 +0.3**
baz=79,SNR=214
U13A Pakoon Wash 79.02 320 P **P** **11 36 20.8 +0.8**
baz=79,SNR=165
S15A Panguitch 79.03 322 ⇑P **P** **11 36 20.8 +0.8**
baz=79,SNR=120
L23A Garrett 79.04 329 P **P** **11 36 20.2 +0.2**
baz=79,SNR=91
L23A ⇑P 11 55 06.7
baz=79
V12A Nelson 79.04 319 P **P** **11 36 20.4 +0.3**
baz=79,SNR=165
V12A ⇓P 11 55 07.9
baz=79
SRU San Rafael 79.10 324 P **P** **11 36 20.8 +0.4**
baz=79,SNR=548
SRU San Rafael 79.10 324 *e*P **P** **11 36 20.6 +0.2**
SRU *e*PP pP 11 38 22.3 +1.5
SRU pmax pmax
comp=Z,29nm,0.9s
SRU San Rafael 79.10 324 *e*P **P** **11 36 20.6 +0.2**
comp=Z,29nm,0.9s
SRU *e*pP pP 11 38 22.3 +1.5
PAE Paea 79.10 256 ⇓*i*P **P** **11 36 21.7 +0.7**
comp=Z,91nm,1.1s,mb5.0
PAE *e*pP pP 11 38 21.5 +0.2
comp=Z,38nm,1.0s
PAE Paea 79.10 256 ⇓*i*P **P** **11 36 21.7 +0.7**
PAE *e*PP pP 11 38 21.5 +0.2
PAE pmax pmax
comp=Z,91nm,1.1s,mb5.0
PPT Papeete 79.14 256 ⇓*i*P **P** **11 36 23.1 +1.9**
comp=Z,303nm,1.1s,mb5.5
PPT *e*pP pP 11 38 21.6 +0.1
comp=Z,216nm,1.3s
PPT *e*S S 11 45 34.0 -0.9
comp=Z,3μm,24.9s
PPT *e*LR LR 12 01 42.9
comp=Z,2μm,24.0s
PPT Papeete 79.14 256 P **P** **11 36 22.2 +1.0**
comp=Z,209nm,0.8s,mb5.5,baz=117,slow=5.6,SNR=10
PPT Papeete 79.14 256 P **P** **11 36 22.2 +1.0**
PPT pmax pmax
comp=Z,209nm,0.8s
N20A Spence Gulch, 79.25 327 P **P** **11 36 21.6 +0.5**
baz=79,SNR=187
BBRC Big Bear Solar 79.26 317 P **P** **11 36 22.2 +0.9**
baz=79,SNR=60
BBRC ⇓P 11 55 07.2
baz=79
O19A Miners Draw (B 79.27 326 P **P** **11 36 21.8 +0.5**
baz=80,SNR=167
Q16A Castle Valley 79.29 324 P **P** **11 36 22.0 +0.6**
baz=80,SNR=110
HEC Hector,Ludlow 79.30 318 P **P** **11 36 22.2 +0.7**
baz=80,SNR=114
L22A Ellis Ranch, M 79.31 329 P **P** **11 36 22.3 +0.9**
baz=80,SNR=63
P18A Preston Nutter 79.34 325 P **P** **11 36 22.6 +0.9**
baz=80,SNR=493
P18A ⇑P 11 55 08.1
baz=80
U12A Valley of Fire 79.36 320 P **P** **11 36 22.3 +0.5**
baz=80,SNR=143
R15A Junction 79.37 323 P **P** **11 36 22.5 +0.7**
baz=80,SNR=126
RWWY Rawlins 79.41 328 *e*P **P** **11 36 22.4 +0.5**
comp=Z,488nm,0.8s,mb5.9
RWWY *e*pP pP 11 38 21.7 -0.8
SCI San Clemente I 79.41 315 ⇑P **P** **11 36 22.1 0.0**
baz=80,SNR=20
T13A Saint George 79.41 321 ⇑P **P** **11 36 23.0 +1.0**
baz=80,SNR=308
M21A Separation Pea 79.42 328 ⇓P **P** **11 36 22.6 +0.7**
baz=80,SNR=231
M21A ⇓P 11 55 06.2
baz=80
V11A Goodsprings 79.46 319 P **P** **11 36 22.8 +0.4**
baz=80,SNR=59
TUQ Turquoise Moun 79.47 319 P **P** **11 36 22.9 +0.5**
baz=80,SNR=125
P17A Butcher Ranch, 79.48 324 P **P** **11 36 22.8 +0.4**
baz=80,SNR=156
CCUT Cedar City 79.49 322 *e*P **P** **11 36 23.6 +1.2**
comp=Z,13nm,0.9s
CCUT *e*pP pP 11 38 21.8 -1.2
S14A Cedar City 79.53 322 P **P** **11 36 23.6 +0.9**
baz=80,SNR=120
MSU Marysvale 79.53 323 *e*P **P** **11 36 23.5 +0.9**
comp=Z,15nm,0.9s
MSU *e*pP pP 11 38 26.5 +3.2
TMUT Trail Mountain 79.59 324 *e*P **P** **11 36 23.6 +0.6**
comp=Z,232nm,1.0s,mb5.5
TMUT *e*pP pP 11 38 25.3 +1.7
CIS Catalina Islan 79.60 316 P **P** **11 36 23.3 +0.1**
baz=80,SNR=44
T12A Moapa 79.66 320 ⇑P **P** **11 36 23.6 +0.1**
baz=80,SNR=10.0
O18A Roosevelt 79.69 325 P **P** **11 36 24.2 +0.8**
baz=80,SNR=175
L21A Rawlins 79.69 328 P **P** **11 36 23.7 +0.3**
baz=80,SNR=395
L21A ⇑P 11 55 05.5
baz=80
BFSC Mount Baldy Ra 79.70 317 ⇑P **P** **11 36 23.7 0.0**
baz=80,SNR=66
ARUT Antelope Range 79.70 322 *e*P **P** **11 36 24.4 +0.8**
ARUT *e*PP pP 11 38 27.4 +3.1
ARUT pmax pmax
comp=Z,379nm,0.9s,mb5.7
ARUT Antelope Range 79.70 322 *e*P **P** **11 36 24.4 +0.8**
comp=Z,379nm,0.9s,mb5.7
ARUT *e*pP pP 11 38 27.4 +3.2
M20A Sweetwater, Wa 79.72 327 P **P** **11 36 24.1 +0.5**
baz=80,SNR=273
RRX Edison Barstow 79.73 318 ⇑P **P** **11 36 24.5 +0.7**
baz=80,SNR=5.5
FMP Fort Macarthur 79.74 316 P **P** **11 36 24.2 +0.3**
baz=80,SNR=9.0
N19A John Jarvie Ra 79.75 326 ⇑P **P** **11 36 24.2 +0.4**
baz=80,SNR=320
N19A ⇓P 11 55 05.9
baz=80
SHPR Sheep Range 79.77 320 *e*P **P** **11 36 24.6 +0.6**
comp=Z,182nm,1.0s,mb5.4
SHPR *e*pP pP 11 38 26.4 +1.7
S13A Holt Ranch, En 79.78 321 P **P** **11 36 25.1 +1.0**
baz=80,SNR=982
S13A P 11 55 06.2
baz=80,SNR=6.7
K22A Casper 79.83 329 P **P** **11 36 24.4 +0.3**
baz=80,SNR=107
R14A James Farms, M 79.83 322 P **P** **11 36 25.4 +1.2**
baz=80,SNR=67
U11A Corn Creek 79.84 320 P **P** **11 36 25.2 +0.9**
baz=80,SNR=24
GSC Goldstone 79.90 318 P **P** **11 36 25.1 +0.4**
baz=80,SNR=102
GSC ⇑P 11 55 06.4
baz=80,SNR=6.2
GSC Goldstone 79.90 318 *e*P **P** **11 36 25.0 +0.3**

GSC e*PP pP 11 38 27.8 +2.3
GSC pmax pmax
comp=Z,148nm,1.1s,mb5.2
GSC Goldstone 79.90 318 eP **P 11 36 25.0 +0.3**
comp=Z,148nm,1.1s,mb5.2
GSC epP pP 11 38 27.8 +2.4
MWC Mount Wilson 79.93 317 eP **P 11 36 24.7 -0.2**
MWC pmax pmax
comp=Z,217nm,1.0s,mb5.4
MWC Mount Wilson 79.93 317 eP **P 11 36 24.7 -0.2**
comp=Z,217nm,1.0s,mb5.4
PASC Pasadena Art C 79.98 316 eP **P 11 36 25.0 -0.1**
comp=Z,723nm,1.0s,mb6.0
Q15A Fillmore 80.00 323 P **P 11 36 25.9 +0.8**
baz=80,SNR=202
SHOC Shoshone 80.00 319 ⇑P **P 11 36 25.2 0.0**
baz=80,SNR=53
SHOC P PKKPdf 11 55 06.2 +11
baz=80,SNR=8.1
O17A Robinson Place 80.01 325 P **P 11 36 26.1 +1.0**
baz=80,SNR=985
N18A Larsen Ranch, 80.06 326 P **P 11 36 25.6 +0.2**
baz=80,SNR=174
P16A Fountain Green 80.06 324 P **P 11 36 26.2 +0.8**
baz=80,SNR=52
DECC Green Verdugo 80.12 316 ⇓P **P 11 36 26.1 +0.3**
baz=80,SNR=8.9
K21A Alcova 80.16 329 P **P 11 36 26.3 +0.4**
baz=80,SNR=304
L20A Wamsutter 80.19 328 ⇓P **P 11 36 26.5 +0.5**
baz=80,SNR=268
L20A ⇑P PKKPdf 11 55 05.1 +10
baz=80
M19A Rock Springs 80.20 327 P **P 11 36 26.4 +0.3**
baz=80,SNR=62
R13A O'Grain Ranch, 80.27 322 ⇑P **P 11 36 27.7 +1.2**
baz=80,SNR=192
T11A Corn Creek, Al 80.31 320 ⇑P **P 11 36 27.7 +0.9**
baz=80
AGMN Agassiz Nation 80.32 339 eP **P 11 36 26.1 -0.5**
comp=Z,605nm,0.6s,mb6.1
AGMN epP pP 11 38 27.1 -0.4
MPU Maple Canyon 80.34 324 eP **P 11 36 27.1 +0.2**
comp=Z,200nm,0.8s,mb5.5
MPU epP pP 11 38 29.4 +1.6
P15A Leamington 80.36 324 P **P 11 36 27.4 +0.4**
baz=80,SNR=45
S12A Delamar Landin 80.36 321 P **P 11 36 28.1 +1.1**
baz=80,SNR=191
S12A ⇓P PKKPdf 11 55 05.6 +11
baz=80,SNR=5.9
U10A Ash Meadows, A 80.39 319 P **P 11 36 27.9 +0.7**
baz=81,SNR=79
U10A ⇓P PKKPdf 11 55 05.4 +11
baz=80,SNR=6.3
J22A Midwest 80.41 330 P **P 11 36 26.7 -0.4**
baz=81,SNR=178
J22A ⇓P PKKPdf 11 55 03.7 +8.4
baz=81
DAU Daniels Canyon 80.44 325 eP **P 11 36 28.1 +0.7**
DAU e*PP pP 11 38 31.8 +3.5
DAU pmax pmax
comp=Z,275nm,1.0s,mb5.5
DAU Daniels Canyon 80.44 325 eP **P 11 36 28.1 +0.7**
comp=Z,275nm,1.0s,mb5.5
DAU epP pP 11 38 31.8 +3.4
Q14A Sevier Lake (B 80.47 323 P **P 11 36 28.5 +0.9**
baz=81,SNR=224
BLG Laguna Peak 80.48 316 ⇓P **P 11 36 27.5 -0.3**
baz=81,SNR=20
NLU North Lily Min 80.53 324 eP **P 11 36 28.3 +0.5**
comp=Z,248nm,1.3s,mb5.5
NLU epP pP 11 38 30.9 +2.0
LRMC Laurel Mountai 80.55 318 P **P 11 36 28.2 +0.1**
baz=81,SNR=41
M18A Lyman 80.59 326 P **P 11 36 28.2 0.0**
baz=81,SNR=145
OSI Osito Adit 80.60 316 ⇑P **P 11 36 28.6 +0.3**
baz=81
OSI Osito Adit 80.60 316 eP **P 11 36 28.2 -0.1**
comp=Z,81nm,0.8s,mb5.2
OSI epP pP 11 38 33.3 +3.9
N17A Moffit Pass 80.62 325 P **P 11 36 29.1 +0.8**
baz=81,SNR=593
JLU Jordanelle 80.68 325 eP **P 11 36 29.2 +0.6**
comp=Z,1.7nm,0.4s
JLU epP pP 11 38 31.8 +2.2
K20A Yellowstone Ra 80.69 328 P **P 11 36 28.4 -0.1**
baz=81,SNR=224
K20A ⇑P PKKPdf 11 55 04.0 +9.3
baz=81
FURC Furnace Creek, 80.73 319 P **P 11 36 29.4 +0.5**
baz=81,SNR=87
R12A Pony Springs, 80.73 321 P **P 11 36 30.0 +1.0**
baz=81,SNR=529
L19A Farson 80.75 327 P **P 11 36 29.5 +0.6**
baz=81,SNR=415
BSC Santa Cruz Isl 80.76 315 P **P 11 36 29.2 0.0**
baz=81,SNR=44
P14A Drum Mountains 80.79 323 P **P 11 36 30.2 +1.0**
baz=81,SNR=449
P14A P PKKPdf 11 55 04.5 +10
baz=81,SNR=8.9
J21A Lysite 80.80 329 ⇑P **P 11 36 29.2 +0.1**
baz=81,SNR=134
J21A ⇓P PKKPdf 11 55 03.2 +8.6
baz=81
MPMC Manual Prospec 80.83 318 P **P 11 36 29.6 +0.1**
baz=81,SNR=87
MPMC ⇓P PKKPdf 11 55 04.2 +10
baz=81,SNR=9.0
Q13A Wheeler Ranch, 80.85 322 P **P 11 36 30.2 +0.7**
baz=81,SNR=344
Q13A ⇑P PKKPdf 11 55 03.7 +9.5
baz=81,SNR=8.3
N16A Rees Ranch, Co 80.88 325 P **P 11 36 30.4 +0.8**
baz=81,SNR=109
S11A Rachel 80.89 320 P **P 11 36 31.0 +1.2**
baz=81,SNR=26
S11A P PKKPdf 11 55 04.3 +10
baz=81,SNR=7.1
CTU Camp Tracy 80.90 325 eP **P 11 36 29.8 +0.1**
comp=Z,77nm,0.8s,mb5.2
CTU epP pP 11 38 34.8 +3.8
M17A Scullys Gap (B 80.93 326 ⇑P **P 11 36 30.0 +0.2**
baz=81,SNR=109
L18A Fontenelle, Gr 80.95 327 ⇓P **P 11 36 30.4 +0.4**
baz=81,SNR=279
O15A The Old Anders 80.97 324 ⇑P **P 11 36 30.7 +0.5**
baz=81,SNR=64
ARVC Arvin 81.01 317 ⇓P **P 11 36 30.4 0.0**
baz=81,SNR=12
K19A Absolon Red Bu 81.06 328 P **P 11 36 30.3 -0.2**
baz=81,SNR=322
K19A ⇓P PKKPdf 11 55 02.3 +8.2
baz=81
NOQ North Oquirrh 81.06 325 eP **P 11 36 30.5 -0.1**
comp=Z,122nm,0.8s,mb5.4
NOQ epP pP 11 38 34.6 +2.8
I21A Big Trails, Te 81.09 329 ⇓P **P 11 36 30.4 -0.2**
baz=81
I21A ⇓P PKKPdf 11 55 02.7 +8.6
baz=81
DUG Dugway 81.09 324 P **P 11 36 31.1 +0.4**
baz=81,SNR=233
DUG P PKKPdf 11 55 03.8 +10
baz=81,SNR=8.7
DUG Dugway 81.09 324 eP **P 11 36 31.0 +0.3**
DUG e*PP pP 11 38 31.8 -0.2
DUG pmax pmax
comp=Z,130nm,0.8s,mb5.4
DUG Dugway 81.09 324 eP **P 11 36 31.0 +0.3**
comp=Z,130nm,0.8s,mb5.4
DUG epP pP 11 38 31.8 -0.2
J20A Shoshoni 81.10 329 ⇓P **P 11 36 31.1 +0.4**
baz=81,SNR=174
J20A ⇓P PKKPdf 11 55 02.7 +8.7
baz=81
SBC Santa Barbara 81.10 316 ⇓P **P 11 36 30.9 0.0**
baz=81,SNR=6.5
ISA Isabella 81.15 317 P **P 11 36 31.6 +0.4**
baz=81,SNR=116
ISA Isabella 81.15 317 eP **P 11 36 31.5 +0.4**
ISA e*PP pP 11 38 32.2 -0.2
ISA eS S 11 45 54.2 -0.3
ISA pmax pmax
comp=Z,131nm,1.1s,mb5.3
ISA Isabella 81.15 317 eP **P 11 36 31.5 +0.3**
comp=Z,130nm,1.1s,mb5.3
ISA epP pP 11 38 32.2 -0.2
ISA eS S 11 45 54.2 -0.3
P13A Bates Ranch, G 81.20 323 P **P 11 36 32.1 +0.8**
baz=81,SNR=251
R11A Troy Canyon, C 81.29 321 P **P 11 36 32.6 +0.8**
baz=82,SNR=377
R11A P PKKPdf 11 55 03.0 +10
baz=82,SNR=28
M16A Huntsville 81.30 325 P **P 11 36 31.9 +0.2**
baz=82,SNR=489
BW06 Boulder Array 81.35 327 ⇑P **P 11 36 31.9 -0.1**
baz=82,SNR=254
BW06 ⇑P PKKPdf 11 55 01.8 +8.2
baz=82
BW06 Boulder Array 81.35 327 eP **P 11 36 31.6 -0.4**
comp=Z,136nm,0.8s,mb5.4
BW06 epP pP 11 38 33.5 +0.2
PDAR Pinedale Array 81.35 327 P **P 11 36 31.8 -0.3**
comp=Z,113nm,0.6s,mb5.5,baz=134,slow=8.0,SNR=1101
PDAR pP pP 11 38 33.5 +0.1
comp=Z,10nm,0.8s,baz=129,slow=7.7,SNR=3.1
PDAR S S 11 45 54.8 -1.5
comp=Z,3.2nm,1.0s,baz=123,slow=6.6,SNR=3.9
PDAR PKKPbc PKKPbc 11 55 01.6 -1.4
comp=Z,4.8nm,0.6s,baz=81,slow=0.9,SNR=17
PDAR PKPPKP 12 03 02.2
comp=Z,1.8nm,1.0s,baz=225,slow=0.2,SNR=5.1
Q12A Willow Creek R 81.36 322 ⇑P **P 11 36 32.7 +0.6**
baz=82,SNR=154
MDT Midelt 81.37 47 P **P 11 36 33.2 +0.9**
comp=Z,117nm,0.8s,mb5.4,baz=235,slow=5.0,SNR=301
MDT pP pP 11 38 34.5 +0.8
comp=Z,25nm,0.8s,baz=180,slow=3.0,SNR=3.8
SCHQ Schefferville 81.39 358 P **P 11 36 31.4 -0.4**
comp=Z,292nm,0.8s,mb5.8,baz=171,slow=4.3,SNR=355
SCHQ S S 11 45 54.2 -1.8
comp=Z,10.0nm,1.1s,baz=73,slow=20,SNR=13
SCHQ PKKPbc PKKPbc 11 55 01.9 -1.8
comp=Z,8.8nm,0.8s,baz=34,slow=3.6,SNR=9.1
SCHQ PKPPKP 12 03 02.1
comp=Z,4.4nm,0.8s,baz=301,slow=2.7,SNR=4.2
SCHQ Schefferville 81.39 358 P **P 11 36 31.4 -0.4**
SCHQ S S 11 45 54.2 -1.8
SCHQ PKKPbc PKKPbc 11 55 01.9 -1.8
SCHQ P'P' 12 03 02.1
GRAC Grapevine Rang 81.39 319 ⇓P **P 11 36 32.8 +0.4**
baz=82,SNR=21
CWC Cottonwood Cre 81.43 318 ⇑P **P 11 36 32.9 +0.3**
baz=82,SNR=18
N15A Stansbury Isla 81.44 324 ⇓P **P 11 36 32.8 +0.3**
baz=82,SNR=336
N15A P PKKPdf 11 55 02.5 +9.2
baz=82,SNR=5.3
HWUT Hardware Ranch 81.48 325 eP **P 11 36 32.6 -0.1**
comp=Z,35nm,0.5s,mb5.0
HWUT epP pP 11 38 33.8 -0.2
HWUT eS S 11 45 56.2 -1.3
K18A Toltan Ranch, 81.49 327 ⇓P **P 11 36 33.5 +0.8**
baz=82,SNR=744
J19A Crowheart 81.49 328 P **P 11 36 32.7 0.0**
baz=82,SNR=227
L17A Cokeville 81.50 326 P **P 11 36 32.8 0.0**
baz=82,SNR=245
S10A Tonopah Range, 81.57 320 P **P 11 36 33.7 +0.4**
baz=82,SNR=176
S10A P PKKPdf 11 55 02.8 +10
baz=82,SNR=15
I20A Worland 81.58 329 P **P 11 36 33.0 -0.1**
baz=82,SNR=450
I20A ⇑P PKKPdf 11 55 01.4 +8.1
baz=82
PFVI Vila Bisbo 81.59 41 i P **P 11 36 33.5 +0.1**
comp=Z,479nm,1.5s,mb5.7
PFVI Vila Bisbo 81.59 41 ePP PP 11 39 49.1 -1.9
PFVI i S S 11 45 57.9 -1.0
PFVI i P 11 49 35.7
PFVI Vila Bisbo 81.59 41 ⇓P **P 11 36 33.6 +0.2**
H21A Big Horn, Sher 81.61 330 P **P 11 36 32.7 -0.6**
baz=82,SNR=301
VES Vestal, Richgr 81.64 317 P **P 11 36 33.7 +0.1**
baz=82,SNR=48
R10A Warm Springs 81.66 320 P **P 11 36 34.7 +1.0**
baz=82,SNR=420
R10A P PKKPdf 11 55 02.6 +10
baz=82,SNR=5.3
Q11A Duckwater 81.68 321 P **P 11 36 34.3 +0.5**
baz=82,SNR=204
Q11A P PKKPdf 11 55 01.9 +9.1
baz=82,SNR=10
SPUT South Promonto 81.71 325 eP **P 11 36 34.1 +0.2**
comp=Z,333nm,0.8s,mb5.8
SPUT epP pP 11 38 36.5 +1.1
L16A Fish Haven 81.71 326 ⇓P **P 11 36 34.0 +0.2**
baz=82,SNR=383
BGU Big Grassy Mou 81.73 324 eP **P 11 36 34.0 0.0**
comp=Z,3.8nm,0.3s
BGU epP pP 11 38 36.6 +1.1
MORF Marmelete 81.81 41 i P **P 11 36 34.8 +0.3**
comp=Z,401nm,1.3s,mb5.7
MORF epP pP 11 38 36.5 +0.5
MORF Marmelete 81.81 41 ePP PP 11 39 50.3 -2.5
MORF i S S 11 46 01.4 +0.3
MORF i P 11 49 39.5
MORF Marmelete 81.81 41 eP **P 11 36 34.7 +0.2**
MORF e 11 39 50.4
MORF eS S 11 46 01.5 +0.4
M15A Larsen Ranch, 81.82 325 P **P 11 36 34.4 0.0**
baz=82,SNR=517
SMMC Simmler 81.85 316 P **P 11 36 35.3 +0.6**
baz=82,SNR=39
J18A Kendall Valley 81.91 327 ⇑P **P 11 36 34.9 +0.1**
baz=82,SNR=400
PTEO Sao Teotonio 81.93 41 i P **P 11 36 35.5 +0.4**
comp=Z,751nm,1.5s,mb5.9
PTEO epP pP 11 38 38.1 +1.4
PTEO Sao Teotonio 81.93 41 ePP PP 11 39 52.1 -1.7
TIN Tinemaha 81.93 319 P **P 11 36 35.7 +0.6**
baz=82,SNR=23
H20A Greybull 81.94 329 P **P 11 36 34.4 -0.6**
baz=82,SNR=130
H20A ⇓P PKKPdf 11 55 01.0 +8.3
baz=82
K17A Gardner Place, 82.00 327 ⇑P **P 11 36 35.4 +0.1**
baz=82,SNR=225
RCTC Rector, Farmer 82.04 317 P **P 11 36 34.8 -0.9**
baz=82,SNR=19
I19A Meeteetse 82.05 329 ⇓P **P 11 36 35.2 -0.3**
baz=82
I19A ⇑P PKKPdf 11 55 01.3 +8.8
baz=82
Q10A Clear Creek Ra 82.08 321 P **P 11 36 36.5 +0.6**
baz=82,SNR=164
Q10A P PKKPdf 11 55 01.2 +9.1
baz=82,SNR=6.4
AHID Auburn Hatcher 82.10 327 eP **P 11 36 35.6 -0.2**
comp=Z,292nm,0.9s,mb5.7
AHID epP pP 11 38 38.6 +1.1
AHID eS S 11 46 01.5 -2.2
G21A Lodge Grass 82.15 330 P **P 11 36 35.7 -0.3**
baz=82,SNR=145
O12A Currie 82.18 323 P **P 11 36 36.5 +0.2**
baz=82,SNR=158
O12A P PKKPdf 11 55 01.1 +9.1
baz=82,SNR=10
I18A Diamond G Ranc 82.18 328 P **P 11 36 36.5 +0.3**
baz=82,SNR=238
L15A Malad City 82.19 325 P **P 11 36 36.1 -0.1**
baz=82,SNR=489
PBDV Barranco-do-Ve 82.19 41 i P **P 11 36 36.9 +0.5**
comp=Z,592nm,1.8s,mb5.7
PBDV epP pP 11 38 39.2 +1.1
PBDV Barranco-do-Ve 82.19 41 ePP PP 11 39 54.4 -1.5
PBDV i S S 11 46 03.2 -1.7
PBDV i P 11 49 41.5
HVU Hansel Valley 82.22 325 eP **P 11 36 36.2 -0.3**
HVU e*PP pP 11 38 39.4 +1.3
HVU pmax pmax
comp=Z,149nm,0.7s,mb5.5
HVU Hansel Valley 82.22 325 eP **P 11 36 36.2 -0.2**
comp=Z,149nm,0.7s,mb5.5
HVU epP pP 11 38 39.4 +1.3
P11A Circle Ranch, 82.23 322 ⇑P **P 11 36 37.1 +0.5**
baz=82,SNR=82
J17A Brown Place, J 82.36 327 P **P 11 36 37.4 +0.3**
baz=82,SNR=137
J17A P PKKPdf 11 55 00.9 +9.0
baz=82,SNR=6.0
PCVE Castro Verde 82.39 41 i P **P 11 36 37.7 +0.3**
comp=Z,471nm,2.1s,mb5.5
PCVE epP pP 11 38 41.3 +2.1
PCVE Castro Verde 82.39 41 ePP PP 11 39 55.4 -2.1
PCVE i S S 11 46 03.2 -3.7
PCVE i P 11 49 43.6
K16A Soda Springs 82.39 326 P **P 11 36 37.8 +0.5**
baz=83,SNR=222
MESJ Messejana 82.42 41 ePP PP 11 39 55.2 -2.5
MESJ eS S 11 46 05.7 -1.5
MESJ A 11 59 53.4
comp=Z,1μm,21.2s
MESJ Messejana 82.42 41 eP **P 11 36 38.0 +0.5**
MESJ ePP PP 11 39 55.2 -2.5
MESJ eS S 11 46 05.7 -1.5
MESJ eS S 11 46 05.8 -1.4
MESJ AMS AMS 11 59 53.4
comp=Z,1μm,21.2s
MESJ Messejana 82.42 41 eP **P 11 36 38.0 +0.4**
MESJ e 11 39 55.2
REDW Red Top Meadow 82.42 327 eP **P 11 36 37.3 -0.2**
comp=Z,83nm,0.5s,mb5.4
REDW epP pP 11 38 40.1 +0.9
PVAQ Vaqueiros 82.43 41 i P **P 11 36 38.0 +0.4**
comp=Z,604nm,1.8s,mb5.7
PVAQ epP pP 11 38 40.5 +1.1
PVAQ Vaqueiros 82.43 41 ePP PP 11 39 55.6 -2.2
PVAQ i S S 11 46 05.1 -2.1
PVAQ i P 11 49 44.3
SNOW Snow King Moun 82.45 327 eP **P 11 36 37.6 0.0**
comp=Z,97nm,0.8s,mb5.3
SNOW epP pP 11 38 39.5 +0.2
SNOW eS S 11 46 07.7 +0.5
LIS Lisbon 82.48 40 eP **P 11 36 38.3 +0.4**
LIS eS S 11 46 06.0 -1.7
LIS A 11 59 48.5
comp=Z,971nm,17.1s
LOHW Long Hollow 82.49 327 eP **P 11 36 37.7 -0.1**
comp=Z,85nm,2.0s,mb4.8
LOHW epP pP 11 38 39.4 -0.2
H19A Powell 82.53 329 P **P 11 36 37.7 -0.2**
baz=83,SNR=95
H19A P PKKPdf 11 55 00.4 +8.7
baz=83,SNR=11
TPAW Teton Pass 82.57 327 eP **P 11 36 38.2 0.0**
comp=Z,5.3nm,2.2s
TPAW epP pP 11 38 38.7 -1.3
PMAFR Mafra 82.57 39 i P **P 11 36 38.6 +0.3**
comp=Z,596nm,1.9s,mb5.8
PMAFR Mafra 82.57 39 ePP PP 11 39 57.3 -1.6
PMAFR i S S 11 46 06.4 -2.2
F21A Absaloka Mine, 82.58 331 P **P 11 36 37.9 -0.3**
baz=83,SNR=56
G20A Bridger 82.60 330 ⇑P **P 11 36 37.7 -0.6**
baz=83,SNR=300
RRI2 Red Ridge 82.64 327 eP **P 11 36 38.6 +0.1**
comp=Z,49nm,2.3s
RRI2 epP pP 11 38 40.1 -0.3
RRI2 eS S 11 46 11.3 +2.2
L14A Malta 82.64 325 P **P 11 36 38.4 -0.2**
baz=83,SNR=161
EGRO El Granado 82.65 41 ⇓P **P 11 36 39.2 +0.4**
comp=Z,2μm,1.6s,mb6.3
MOOW Moose Ponds 82.66 327 eP **P 11 36 38.4 -0.3**
comp=Z,9.4nm,1.6s
MOOW epP pP 11 38 39.8 -0.7
MOOW eS S 11 46 07.3 -1.9
P10A Eureka 82.67 321 ⇓P **P 11 36 39.4 +0.6**
baz=83
P10A ⇑P PKKPdf 11 54 59.7 +8.6
baz=83
MLAC Mammoth Lakes 82.68 319 P **P 11 36 39.5 +0.7**
baz=83,SNR=26
I17A Pilgrim Ck. 82.71 328 P **P 11 36 39.5 +0.7**
baz=83,SNR=77
SFS San Fernando 82.72 43 eP **P 11 36 40.0 +0.9**
SFS pmax pmax
comp=Z,393nm,1.0s,mb5.9
SFS San Fernando 82.72 43 eP **P 11 36 40.0 +0.9**
comp=Z,393nm,1.0s,mb5.9
J16A Bone 82.73 327 P **P 11 36 39.1 +0.1**
baz=83,SNR=198
TAM Tamanrasset 82.74 60 eP **P 11 36 40.3 +0.8**
TAM e*PP pP 11 38 42.0 +0.6
TAM e*SP sP 11 39 40.3 +1.2
TAM pmax pmax
comp=Z,338nm,0.9s,mb5.9
TAM Tamanrasset 82.74 60 eP **P 11 36 40.3 +0.8**
comp=Z,338nm,0.9s,mb5.9
TAM epP pP 11 38 42.0 +0.6
TAM esP sP 11 39 40.3 +1.2
K15A Arbon 82.76 326 P **P 11 36 39.3 +0.2**
baz=83,SNR=394
PBEJ Beja 82.76 41 i P **P 11 36 39.6 +0.3**
comp=Z,609nm,1.7s,mb5.8
PBEJ Beja 82.76 41 ePP PP 11 39 58.9 -1.5
DCID1 Drake Creek 82.76 327 eP **P 11 36 39.2 +0.1**
comp=Z,113nm,0.8s,mb5.5
DCID1 epP pP 11 38 40.1 -0.9
H18A Shoshone NF, C 82.85 329 P **P 11 36 39.3 -0.2**
baz=83,SNR=402
IMW Indian Meadow 82.87 327 eP **P 11 36 39.8 +0.2**
comp=Z,128nm,2.2s,mb5.1
IMW epP pP 11 38 42.8 +1.2
IMW eS S 11 46 04.7 -6.6
LAO LASA Array 82.87 332 P **P 11 36 39.3 -0.3**
baz=83,SNR=75
LAO LASA Array 82.87 332 eP **P 11 36 38.9 -0.7**
comp=Z,230nm,1.3s,mb5.5
LAO epP pP 11 38 40.4 -1.2
FLWY Flagg Ranch 82.89 328 eP **P 11 36 39.9 +0.2**
comp=Z,151nm,0.8s,mb5.6
FLWY epP pP 11 38 41.7 0.0
FLWY eS S 11 46 11.3 -0.2
NVAR Mina Array Bea 82.90 320 P **P 11 36 40.1 +0.2**
comp=Z,57nm,0.9s,mb5.1,baz=144,slow=5.2,SNR=320
NVAR pP pP 11 38 42.3 +0.4
comp=Z,6.7nm,0.7s,baz=134,slow=4.3,SNR=1.6
NVAR S S 11 46 11.1 -0.8
comp=Z,0.8nm,0.9s,baz=229,slow=14,SNR=2.9
NVAR PKKPbc PKKPbc 11 54 59.7 +0.5
comp=Z,4.6nm,0.7s,baz=288,slow=2.0,SNR=15
NVAR PKPPKP 12 03 00.5
comp=Z,1.7nm,1.0s,baz=282,slow=2.1,SNR=4.6
NVAR Mina Array Bea 82.90 320 P **P 11 36 40.1 +0.2**
NVAR pP pP 11 38 42.3 +0.4
NVAR S S 11 46 11.1 -0.8
NVAR PKKPbc PKKPbc 11 54 59.7 +0.5
NVAR P'P' 12 03 00.5
EVOP Sao Brissos 82.94 40 eP **P 11 36 40.6 +0.5**
EVOP eS S 11 46 08.4 -3.9
EVOP eS S 11 46 08.5 -3.8
EVOP AMS AMS 11 59 58.8
comp=Z,1μm,13.6s
EVOP Sao Brissos 82.94 40 eP **P 11 36 40.6 +0.4**
EVOP eS S 11 46 08.4 -3.9
K14A Jones Ranch, D 82.98 325 P **P 11 36 40.1 -0.2**
baz=83,SNR=178
RLMT Red Lodge 83.00 329 P **P 11 36 40.2 0.0**
baz=83,SNR=204
RLMT Red Lodge 83.00 329 eP **P 11 36 40.1 -0.2**
comp=Z,394nm,0.4s,mb6.3
RLMT epP pP 11 38 41.9 -0.4
EVO Evora 83.01 40 ⇓i P **P 11 36 40.3 -0.2**
comp=Z,578nm,0.9s,mb5.8
EVO epP pP 11 38 42.5 0.0
EVO eMLR MLR
comp=Z,1μm,23.0s
EVO Evora 83.01 40 i P **P 11 36 40.5 0.0**
comp=Z,490nm,2.0s,mb5.7
EVO Evora 83.01 40 ePP PP 11 40 00.6 -1.8
F20A Billings 83.02 330 P **P 11 36 39.8 -0.6**
baz=83,SNR=109
LKWY Lake 83.11 328 eP **P 11 36 41.6 +0.8**
LKWY eS S 11 46 16.2 +2.6
LKWY pmax pmax
comp=Z,75nm,0.8s,mb5.3
LKWY Lake 83.11 328 eP **P 11 36 41.6 +0.8**
comp=Z,74nm,0.8s,mb5.3
LKWY eS S 11 46 16.2 +2.6
I16A Newdale 83.11 327 P **P 11 36 41.2 +0.3**
baz=83,SNR=177
E21A Keefer Ranch, 83.12 331 P **P 11 36 40.5 -0.3**

baz=83,SNR=66
ESPR Espera 83.19 43 ⇓P **P 11 36 42.0 +0.6**
comp=Z,658nm,1.2s,mb6.0
J15A Blackfoot 83.23 326 P **P 11 36 41.9 +0.4**
baz=83,SNR=191
J15A P PKKPdf 11 54 59.1 +8.7
baz=83,SNR=9.8
YFT Old Faithful 83.23 328 *e*P **P 11 36 42.5 +1.1**
comp=Z,99nm,0.7s,mb5.5
YFT *ep*P pP 11 38 46.0 +2.5
G18A Lazy EL Ranch, 83.29 329 P **P 11 36 41.4 -0.3**
baz=84,SNR=212
EMIN Mina Concepcio 83.29 42 ⇓P **P 11 36 42.2 +0.3**
comp=Z,1μm,1.3s,mb6.3
PBAR Barrancos 83.34 41 *i* P **P 11 36 42.2 0.0**
comp=Z,514nm,1.8s,mb5.8
PBAR *ep*P pP 11 38 45.3 +1.0
PBAR Barrancos 83.34 41 *e*PP PP 11 40 03.6 -1.5
PBAR *i* S S 11 46 10.8 -5.4
PBAR *i* P 11 49 52.8
YNR Norris Junctio 83.35 328 *e*P **P 11 36 42.3 +0.3**
comp=Z,44nm,0.7s,mb5.1
YNR *ep*P pP 11 38 46.1 +2.0
F19A Roth Farm, Mol 83.41 330 ⇑P **P 11 36 41.9 -0.4**
baz=84,SNR=331
F19A P PKKPdf 11 54 57.7 +7.4
baz=84,SNR=5.3
YMR Madison River 83.45 328 *e*P **P 11 36 43.1 +0.5**
comp=Z,220nm,0.8s,mb5.7
YMR *ep*P pP 11 38 44.8 +0.1
DGMT Dagmar 83.47 334 P **P 11 36 42.8 +0.2**
baz=84,SNR=202
DGMT Dagmar 83.47 334 *e*P **P 11 36 42.6 0.0**
comp=Z,74nm,0.8s,mb5.3
DGMT *ep*P pP 11 38 45.0 +0.3
PESTR Estremoz 83.48 40 *i* P **P 11 36 43.2 +0.4**
comp=Z,847nm,1.3s,mb6.1
PESTR *ep*P pP 11 38 43.7 -1.3
PESTR *i* S S 11 46 11.3 -6.3
PESTR *i* P 11 49 55.0
D21A La Casta Ranch 83.50 332 P **P 11 36 42.5 -0.2**
baz=84,SNR=385
D21A ⇑P PKKPdf 11 54 57.6 +7.4
baz=84
PTOM Tomar 83.52 39 *i* P **P 11 36 43.1 +0.1**
comp=Z,1μm,1.9s,mb6.1
PTOM Tomar 83.52 39 *e*PP PP 11 40 04.5 -2.0
E20A Meyer Farm, Mu 83.55 331 ⇑P **P 11 36 42.7 -0.3**
baz=84
WAKR Walker 83.61 319 *e*P **P 11 36 44.2 +0.7**
comp=Z,172nm,1.0s,mb5.5
WAKR *ep*P pP 11 38 47.7 +2.0
H16A Russell Place, 83.61 328 P **P 11 36 43.7 +0.3**
baz=84,SNR=64
H16A P PKKPdf 11 54 58.4 +8.6
baz=84,SNR=9.1
BMN Battle Mountai 83.65 322 *e*P **P 11 36 42.5 -1.1**
BMN *e**PP pP 11 38 48.8 +2.9
BMN pmax pmax
comp=Z,62nm,1.1s,mb5.0
BMN Battle Mountai 83.65 322 *e*P **P 11 36 42.5 -1.1**
comp=Z,62nm,1.1s,mb5.0
BMN *ep*P pP 11 38 48.8 +3.0
EMIJ Mijas 83.66 44 ⇓P **P 11 36 43.8 0.0**
comp=Z,1μm,2.0s,mb6.2
SAO San Andreas Ge 83.68 317 *e*P **P 11 36 43.0 -0.9**
SAO pmax pmax
comp=Z,43nm,1.0s,mb4.9
SAO San Andreas Ge 83.68 317 *e*P **P 11 36 43.0 -0.9**
comp=Z,43nm,1.0s,mb4.9
GCMT Greycliff 83.69 329 *e*P **P 11 36 43.4 -0.3**
comp=Z,130nm,0.9s,mb5.5
GCMT *ep*P pP 11 38 47.0 +1.0
I15A Monteview 83.69 327 P **P 11 36 44.5 +0.8**
baz=84,SNR=196
J14A Carey 83.72 326 P **P 11 36 44.6 +0.7**
baz=84,SNR=248
J14A ⇓P PKKPdf 11 54 57.4 +7.9
baz=84,SNR=5.3
EBAD Badajoz 83.74 41 ⇓P **P 11 36 44.5 +0.4**
comp=Z,2μm,1.9s,mb6.4
F18A Big Timber 83.80 329 P **P 11 36 44.0 -0.3**
baz=84,SNR=284
F18A P PKKPdf 11 54 57.0 +7.5
baz=84,SNR=9.8
E19A Rath Farm, Rou 83.81 330 P **P 11 36 43.9 -0.4**
baz=84,SNR=221
G17A Pierce Place, 83.83 328 P **P 11 36 44.7 +0.3**
baz=84,SNR=30
G17A ⇑P PKKPdf 11 54 57.3 +7.8
baz=84,SNR=5.9
CMB Columbia Colle 83.86 318 *e*P **P 11 36 44.2 -0.6**
CMB *e**PP pP 11 38 45.3 -1.8
CMB *e*S S 11 46 17.8 -3.5
CMB pmax pmax
comp=Z,38nm,0.8s,mb5.0
CMB Columbia Colle 83.86 318 *e*P **P 11 36 44.1 -0.6**
comp=Z,38nm,0.8s,mb5.0
CMB *ep*P pP 11 38 45.3 -1.8
CMB *e*S S 11 46 17.8 -3.5
PMRV Marv??o 83.97 40 *i* P **P 11 36 45.0 -0.2**
comp=Z,489nm,1.2s,mb5.9
PMRV Marv??o 83.97 40 *e*PP PP 11 40 08.3 -1.8
PMRV *i* S S 11 46 15.1 -7.2
PMRV *i* P 11 49 58.1
D20A Manuel Ranch, 84.01 331 P **P 11 36 44.7 -0.5**
baz=84,SNR=344
J13A Cove Ranch, Pi 84.10 325 P **P 11 36 46.4 +0.6**
baz=84,SNR=546
J13A ⇑P PKKPdf 11 54 56.4 +7.5
baz=84
I14A Mackay 84.12 326 P **P 11 36 46.8 +0.9**
baz=84,SNR=334
PCBR Castelo Branco 84.20 40 *i* P **P 11 36 46.0 -0.3**
comp=Z,523nm,1.1s,mb6.0
H15A Lima 84.22 327 P **P 11 36 47.0 +0.6**
baz=84,SNR=158
F17A Fitzpatrick Pl 84.23 329 P **P 11 36 46.5 +0.2**
baz=84,SNR=173
F17A P PKKPdf 11 54 56.1 +7.3
baz=84,SNR=8.1
ECAB El Cabril 84.24 42 ⇓P **P 11 36 46.5 -0.1**
comp=Z,900nm,1.5s,mb6.1
G16A Moss Hill, Enn 84.27 328 P **P 11 36 46.4 -0.2**
baz=84,SNR=61
G16A P PKKPdf 11 54 56.0 +7.2
baz=84,SNR=12
WCN Washoe City 84.33 319 P **P 11 36 47.6 +0.6**
baz=84,SNR=65
WCN Washoe City 84.33 319 *e*P **P 11 36 47.4 +0.4**
WCN *e**PP pP 11 38 48.6 -0.9
WCN pmax pmax
comp=Z,76nm,1.0s,mb5.2
WCN Washoe City 84.33 319 *e*P **P 11 36 47.4 +0.4**
comp=Z,76nm,1.0s,mb5.2
WCN *ep*P pP 11 38 48.6 -0.9
HLID Hailey 84.34 325 P **P 11 36 47.8 +0.8**
baz=84,SNR=831
HLID Hailey 84.34 325 *e*P **P 11 36 47.6 +0.6**
comp=Z,416nm,0.8s,mb6.0
HLID *ep*P pP 11 38 49.9 +0.5
EALB Alboran 84.35 45 ⇓P **P 11 36 46.8 -0.4**
comp=Z,3μm,2.1s,mb6.5
PAHR Pah Rah Range 84.38 320 *e*P **P 11 36 47.7 +0.4**
comp=Z,300nm,0.9s,mb5.8
PAHR *ep*P pP 11 38 51.3 +1.6
D19A Cripps Ranch, 84.39 331 ⇓P **P 11 36 46.5 -0.6**
baz=85
E18A Harlowton 84.39 330 ⇑P **P 11 36 46.7 -0.4**
baz=85
E18A ⇓P PKKPdf 11 54 55.9 +7.3
baz=85
ELOJ Sierra Loja 84.41 44 ⇓P **P 11 36 47.9 +0.4**
ELOJ pmax pmax
comp=Z,330nm,1.1s,mb5.8
ELOJ Sierra Loja 84.41 44 ⇓P **P 11 36 47.9 +0.4**
comp=Z,330nm,1.1s,mb5.8
C20A Veseth Ranch, 84.43 331 P **P 11 36 46.5 -0.8**
baz=85,SNR=132
C20A ⇓P PKKPdf 11 54 55.2 +6.6
baz=85,SNR=12
I13A Wildhorse Cree 84.44 326 P **P 11 36 48.3 +0.8**
baz=85,SNR=498
I13A ⇓P PKKPdf 11 54 55.9 +7.6
baz=85
MCMT McKenzie Canyo 84.48 327 *e*P **P 11 36 48.0 +0.5**
comp=Z,121nm,0.9s,mb5.4
MCMT *ep*P pP 11 38 52.1 +2.0
BOZ Bozeman (W) 84.50 328 P **P 11 36 47.1 -0.5**
baz=85,SNR=61
BOZ P PKKPdf 11 54 55.5 +7.1
baz=85,SNR=7.9
BOZ Bozeman (W) 84.50 328 *e*P **P 11 36 46.9 -0.8**
BOZ *e**PP pP 11 38 49.8 -0.4
BOZ *e*S S 11 46 20.3 -6.8
BOZ pmax pmax
comp=Z,23nm,0.8s,mb4.8
BOZ Bozeman (W) 84.50 328 *e*P **P 11 36 46.9 -0.8**
comp=Z,23nm,0.8s,mb4.8
BOZ *ep*P pP 11 38 49.8 -0.5
BOZ *e*S S 11 46 20.3 -6.7
MTE Manteigas 84.53 39 *i* P **P 11 36 47.8 -0.2**
comp=Z,884nm,1.5s,mb6.1
MTE *ep*P pP 11 38 52.1 +1.5
MTE *i* S S 11 46 18.0 -10
MTE *i* P 11 50 07.8
MTE Manteigas 84.53 39 *e*P **P 11 36 47.9 -0.1**
comp=Z,470nm,0.9s,mb6.0
MTE *ep*P pP 11 38 49.2 -1.4
MTE *es*P sP 11 39 47.2 -0.9
ERON Agron 84.54 44 ⇓P **P 11 36 47.8 -0.3**
comp=Z,105nm,0.7s,mb5.5
G15A Dillon 84.55 327 ⇑P **P 11 36 48.1 +0.2**
baz=85,SNR=129
G15A P PKKPdf 11 54 55.8 +7.6
baz=85,SNR=10
EGUA Guajares 84.58 44 ⇓P **P 11 36 47.5 -0.8**
EGUA pmax pmax
comp=Z,437nm,0.8s,mb6.0
EGUA Guajares 84.58 44 ⇓P **P 11 36 47.5 -0.8**
comp=Z,437nm,0.8s,mb6.0
H14A Leadore 84.58 327 P **P 11 36 48.7 +0.6**
baz=85,SNR=214
F16A Kennard Place, 84.59 328 P **P 11 36 47.9 -0.3**
baz=85,SNR=39
ELUQ Luque 84.61 43 ⇓P **P 11 36 48.9 +0.5**
ELUQ pmax pmax
comp=Z,587nm,0.9s,mb6.1
ELUQ Luque 84.61 43 ⇓P **P 11 36 48.9 +0.4**
comp=Z,587nm,0.9s,mb6.1
E17A Martinsdale 84.74 329 P **P 11 36 48.7 -0.2**
baz=85,SNR=185
DLMT Dillon 84.75 327 *e*P **P 11 36 48.9 0.0**
comp=Z,240nm,1.1s,mb5.6
DLMT *ep*P pP 11 38 51.1 -0.4
SAC San Andreas 84.80 317 *e*P **P 11 36 49.3 -0.1**
SAC pmax pmax
comp=Z,202nm,1.0s,mb5.6
SAC San Andreas 84.80 317 *e*P **P 11 36 49.2 -0.1**
comp=Z,202nm,1.0s,mb5.6
EADA Adamuz 84.81 43 ⇓P **P 11 36 49.2 -0.1**
comp=Z,642nm,2.0s,mb5.8
D18A Linhart Farms, 84.82 330 P **P 11 36 48.7 -0.5**
baz=85,SNR=96
D18A P PKKPdf 11 54 54.5 +6.6
baz=85,SNR=5.5
ECOG Cogollos-Vega 84.86 44 P **P 11 36 49.4 -0.2**
ECOG pmax pmax
comp=Z,419nm,1.3s,mb5.8
ECOG Cogollos-Vega 84.86 44 P **P 11 36 49.4 -0.3**
comp=Z,419nm,1.3s,mb5.8
I12A Atlanta 84.88 325 P **P 11 36 50.1 +0.6**
baz=85,SNR=474
I12A ⇑P PKKPdf 11 54 54.9 +7.3
baz=85
C19A Slack Wire Ran 84.90 331 P **P 11 36 49.0 -0.6**
baz=85,SNR=68
C19A P PKKPdf 11 54 54.6 +6.9
baz=85,SNR=8.2
OLHC Oulhaca 84.95 46 P **P 11 36 50.5 +0.3**
MFID Camas Ranch 84.97 324 P **P 11 36 50.3 +0.3**
baz=85,SNR=116
H13A Challis 84.98 326 P **P 11 36 50.6 +0.6**
baz=85,SNR=618
LRM Limekiln Ridge 85.01 328 *e*P **P 11 36 50.2 0.0**
comp=Z,209nm,0.9s,mb5.7
LRM *ep*P pP 11 38 54.1 +1.1
PVRL Vila Real 85.03 39 *i* P **P 11 36 50.4 0.0**
comp=Z,1μm,1.7s,mb6.1
EBER Berja 85.04 44 ⇓P **P 11 36 50.4 -0.2**
comp=Z,3μm,3.3s
F15A Butte 85.05 328 P **P 11 36 50.6 +0.2**
baz=85,SNR=311
G14A Jackson 85.08 327 P **P 11 36 50.9 +0.4**
baz=85,SNR=56
EZAM Zamans 85.08 37 P **P 11 36 50.3 -0.3**
EZAM pmax pmax
comp=Z,211nm,0.4s,mb6.0
EZAM Zamans 85.08 37 P **P 11 36 50.3 -0.3**
comp=Z,211nm,0.4s,mb6.0
PCAB Cabril 85.15 38 *i* P **P 11 36 50.8 -0.1**
comp=Z,820nm,1.7s,mb6.0
PCAB *ep*P pP 11 38 54.8 +1.1
EPLA Plasencia 85.15 40 ⇓P **P 11 36 50.1 -0.9**
EPLA pmax pmax
comp=Z,3μm,2.3s,mb6.4
EPLA Plasencia 85.15 40 ⇓P **P 11 36 50.1 -0.9**
comp=Z,3μm,2.3s,mb6.4
MIR Mirnyy 85.17 171 ⇓*i* P **P 11 36 51.0 +0.3**
MIR *i* pP 11 38 51.0 -2.4
MIR *e*S S 11 46 18.0 -15
MIR pmax pmax
comp=Z,254nm,1.4s,mb5.6
MIR pmax pmax
comp=Z,505nm,2.0s,mb5.7
MIR smax
comp=N,4μm,10.0s
MIR smax
comp=E,6μm,11.0s
E16A East Helena 85.17 329 P **P 11 36 50.9 -0.1**
baz=85,SNR=107
D17A Six Diamond Ra 85.18 330 P **P 11 36 50.6 -0.4**
baz=85,SNR=183
D17A ⇓P PKKPdf 11 54 53.2 +6.0
baz=85,SNR=5.5
ELOB Lobios 85.23 38 ⇓P **P 11 36 51.2 -0.1**
comp=E,3μm,2.2s,mb6.4
H12A Diamond D Ranc 85.27 326 P **P 11 36 51.8 +0.4**
baz=86,SNR=218
H12A ⇑P PKKPdf 11 54 53.3 +6.4
baz=85
EBAN Banos Encina 85.28 43 ⇓P **P 11 36 51.8 +0.1**
EBAN pmax pmax
comp=Z,357nm,1.0s,mb5.8
EBAN Banos Encina 85.28 43 ⇓P **P 11 36 51.8 +0.2**
comp=Z,357nm,1.0s,mb5.8
MVO Moncorvo 85.34 39 *i* P **P 11 36 52.0 +0.1**
comp=Z,938nm,1.2s,mb6.2
MVO *ep*P pP 11 38 55.4 +0.7
MVO *i* S S 11 46 22.4 -13
MVO Moncorvo 85.34 39 ⇓P **P 11 36 52.1 +0.2**
G13A Cobalt 85.35 326 P **P 11 36 52.4 +0.6**
baz=86,SNR=858
HRY Holter Researc 85.38 329 *e*P **P 11 36 51.8 -0.1**
comp=Z,138nm,0.9s,mb5.5
EGMT Eagleton 85.43 331 ⇓P **P 11 36 51.5 -0.6**
baz=86,SNR=49
EGMT P PKKPdf 11 54 52.9 +6.0
baz=86,SNR=13
EGMT Eagleton 85.43 331 *e*P **P 11 36 51.3 -0.8**
comp=Z,295nm,1.3s,mb5.7
EGMT *ep*P pP 11 38 54.8 -0.2
EGMT *es*P S 11 46 29.3 -6.6
MCCM Marconi Confer 85.44 317 *e*P **P 11 36 51.7 -0.7**
comp=Z,166nm,0.9s,mb5.6
MCCM *ep*P pP 11 38 55.6 +0.2
F14A Wisdom 85.44 327 P **P 11 36 52.9 +0.6**
baz=86,SNR=176
EMAZ Mazaricos 85.48 37 ⇓P **P 11 36 52.0 -0.5**
comp=Z,2μm,2.4s,mb6.2
D16A Dana Ranch, Ca 85.48 329 P **P 11 36 52.5 +0.1**
baz=86,SNR=265
D16A ⇑P PKKPdf 11 54 52.4 +5.8
baz=86,SNR=11
EQES Quesada 85.49 44 ⇓P **P 11 36 52.0 -0.7**
comp=Z,1μm,2.3s,mb6.1
ENIJ Nijar 85.51 45 ⇓P **P 11 36 52.2 -0.6**
ENIJ pmax pmax
comp=Z,691nm,1.3s,mb6.1
ENIJ Nijar 85.51 45 ⇓P **P 11 36 52.2 -0.6**
comp=Z,691nm,1.3s,mb6.1
E15A Deer Lodge 85.55 328 P **P 11 36 52.6 -0.1**
baz=86,SNR=91
C17A Wharram Farm, 85.58 330 P **P 11 36 52.0 -0.8**
baz=86,SNR=122
C17A P PKKPdf 11 54 52.0 +5.4
baz=86,SNR=5.8
STS Santiago 85.66 37 P **P 11 36 53.5 +0.1**
STS pmax pmax
comp=Z,141nm,1.0s,mb5.5
STS Santiago 85.66 37 P **P 11 36 53.5 +0.1**
comp=Z,141nm,1.0s,mb5.5
A19A Klindworth Far 85.69 332 ⇓P **P 11 36 52.6 -0.7**
baz=86
B18A Beardsley Farm 85.72 331 P **P 11 36 53.1 -0.4**
baz=86,SNR=126
B18A ⇑P PKKPdf 11 54 52.1 +5.7
baz=86,SNR=12
WVOR Wild Horse Val 85.79 322 *e*P **P 11 36 53.8 -0.2**
comp=Z,4μm,1.0s
WVOR *ep*P pP 11 38 56.7 -0.4
WVOR *es*S S 11 46 37.0 -2.6
EHUE Huescar 85.80 44 P **P 11 36 52.7 -1.4**
EHUE pmax pmax
comp=Z,183nm,1.1s,mb5.6
EHUE Huescar 85.80 44 P **P 11 36 52.7 -1.4**
comp=Z,183nm,1.1s,mb5.6
ODJA Bouhanifia 85.83 47 P **P 11 36 57.5 +3.2**
PAB San Pablo 85.83 42 *e*P **P 11 36 54.2 0.0**
PAB pmax pmax
comp=Z,1μm,1.8s,mb6.2
PAB San Pablo 85.83 42 *e*P **P 11 36 54.2 -0.1**
comp=Z,1μm,1.8s,mb6.2
G12A Big Creek, Yel 85.92 326 ⇓P **P 11 36 54.5 0.0**
baz=86
PBRG Braganca 85.92 39 *i* P **P 11 36 54.7 +0.1**
comp=Z,591nm,1.8s,mb5.9
D15A Lincoln 85.94 329 ⇑P **P 11 36 55.0 +0.4**
baz=86,SNR=230
E14A Clinton 85.94 328 P **P 11 36 55.0 +0.4**
baz=86,SNR=260
ECAL Calabor 86.02 39 ⇓P **P 11 36 55.1 0.0**
comp=Z,2μm,1.7s,mb6.4
B17A L&G Farms, Che 86.09 330 ⇓P **P 11 36 54.5 -0.7**
baz=86,SNR=95
B17A P PKKPdf 11 54 51.2 +5.5
baz=86,SNR=7.3
ERUA La Rua 86.09 38 ⇓P **P 11 36 55.4 0.0**
ERUA pmax pmax
comp=Z,94nm,0.6s,mb5.6
ERUA La Rua 86.09 38 ⇓P **P 11 36 55.4 0.0**
comp=Z,94nm,0.6s,mb5.6
HOPS Hopland 86.09 317 *e*P **P 11 36 55.6 +0.1**
comp=Z,74nm,1.1s,mb5.2
ESDC Sonseca Array 86.14 42 P **P 11 36 55.9 +0.1**
comp=Z,77nm,0.7s,mb5.5,baz=237,slow=4.6,SNR=123
ESDC pP pP 11 38 59.8 +0.9
comp=Z,10nm,0.8s,baz=214,slow=5.9,SNR=3.7
ESDC Sonseca Array 86.14 42 ⇓P **P 11 36 55.8 +0.1**
comp=Z,181nm,0.8s,mb5.8
ESLA Sonseca Array 86.14 42 *e*P **P 11 36 55.8 +0.1**
comp=Z,43nm,0.9s,mb5.1
C16A Fuhringer Ranc 86.15 330 ⇓P **P 11 36 55.1 -0.4**
baz=86,SNR=120
A18A Metzger Ranch, 86.15 331 P **P 11 36 54.7 -0.8**
baz=86,SNR=124
A18A ⇓P PKKPdf 11 54 50.8 +5.2
baz=86,SNR=9.8
CHMT Chamberlain Mo 86.19 328 *e*P **P 11 36 55.7 0.0**
comp=Z,222nm,0.8s,mb5.8
E13A Victor 86.29 327 ⇓P **P 11 36 56.7 +0.5**
baz=86,SNR=558
E13A ⇑P PKKPdf 11 54 50.4 +5.2
baz=86
OJBR Djebel Berber 86.30 47 P **P 11 36 52.0 -4.6**
F12A Elk City 86.33 326 P **P 11 36 56.4 -0.1**
baz=86,SNR=258
F12A ⇑P PKKPdf 11 54 50.5 +5.3
baz=86
J08A Circle Bar Ran 86.33 323 P **P 11 36 56.9 +0.4**
baz=86,SNR=485
J08A ⇓P PKKPdf 11 54 52.0 +7.0
baz=86
MOD Modoc 86.36 321 *e*P **P 11 36 56.7 0.0**
comp=Z,184nm,1.0s,mb5.7
MOD *ep*P pP 11 38 59.2 -0.8
EVIA Vianos 86.36 43 ⇓P **P 11 36 56.7 -0.1**
EVIA pmax pmax
comp=Z,174nm,0.6s,mb5.9
EVIA Vianos 86.36 43 ⇓P **P 11 36 56.7 -0.1**
comp=Z,174nm,0.6s,mb5.9
D14A Greenough 86.43 328 P **P 11 36 56.9 0.0**
baz=87,SNR=144
MSO Missoula 86.45 328 P **P 11 36 57.1 +0.1**
baz=87,SNR=88
MSO Missoula 86.45 328 *e*P **P 11 36 57.0 0.0**
comp=Z,276nm,1.6s,mb5.6
MSO *ep*P pP 11 39 00.4 0.0
MSO *es*P sP 11 39 59.7 +2.0
C15A Salmond Ranch, 86.52 329 P **P 11 36 57.4 +0.1**
baz=87,SNR=440
C15A ⇓P PKKPdf 11 54 49.1 +4.2
baz=87
OJGS Djebel Guires 86.52 47 P **P 11 36 51.5 -6.1**
A17A Triple J Farms 86.53 331 P **P 11 36 57.0 -0.4**
baz=87,SNR=272
A17A P PKKPdf 11 54 49.7 +4.7
baz=87,SNR=7.7
SLMT Seeley Lake 86.54 328 *e*P **P 11 36 57.3 -0.1**
comp=Z,131nm,0.8s,mb5.6
B16A M & M Farms, S 86.58 330 P **P 11 36 57.0 -0.5**
baz=87,SNR=24
B16A ⇑P PKKPdf 11 54 49.6 +4.8
baz=87,SNR=6.8
GUD Guadarrama 86.64 41 P **P 11 36 58.1 0.0**
GUD pmax pmax
comp=Z,77nm,0.9s,mb5.3
GUD Guadarrama 86.64 41 P **P 11 36 58.1 0.0**
comp=Z,77nm,0.9s,mb5.3
CART Cartagena 86.65 45 *e*P **P 11 36 57.1 -1.1**
comp=Z,1μm,1.9s,mb6.2
CART *ep*P pP 11 39 00.6 -1.0
CART *es*P sP 11 39 58.3 -0.6
CART *e*PP PP 11 40 30.3 -1.2
EMUR La Murta 86.65 44 ⇓P **P 11 36 57.3 -0.9**
comp=Z,2μm,3.6s
EPON Pontenova 86.72 37 ⇓P **P 11 36 58.0 -0.3**
comp=Z,2μm,2.5s,mb6.4
OKGL Djebel Kef Gue 86.77 47 P **P 11 36 51.0 -7.8**
WDC Whiskeytown Da 86.78 319 *e*P **P 11 36 57.3 -1.4**
WDC pmax pmax
comp=Z,125nm,0.8s,mb5.6
WDC Whiskeytown Da 86.78 319 *e*P **P 11 36 57.3 -1.4**
comp=Z,125nm,0.8s,mb5.6
ETRT Tiaret 86.81 48 P **P 11 37 00.3 +1.3**
KCPM Cahto Peak 86.84 318 *e*P **P 11 36 59.8 +0.8**
comp=Z,133nm,1.2s,mb5.4
KIPM Iron Peak 86.85 318 *e*P **P 11 36 59.8 +0.7**
comp=Z,240nm,1.0s,mb5.8
D13A Huson 86.89 328 P **P 11 36 59.1 +0.1**
baz=87,SNR=242
D13A ⇑P PKKPdf 11 54 48.0 +3.8
baz=87
B15A Bradely Ranch, 86.89 330 P **P 11 36 58.1 -0.9**
baz=87,SNR=130
B15A ⇓P PKKPdf 11 54 48.8 +4.5
baz=87
A16A West Butte Ran 86.93 330 P **P 11 36 59.0 -0.2**
baz=87,SNR=487
A16A ⇓P PKKPdf 11 54 49.0 +4.8
baz=87
E12A Beaver Dam Sad 86.95 327 ⇓P **P 11 36 59.1 -0.3**
baz=87
ETOB Tobarra 86.95 44 P **P 11 36 59.5 -0.1**
comp=Z,868nm,1.7s,mb6.1
SWMT Swartz Lake 86.97 328 *e*P **P 11 36 59.3 -0.1**
comp=Z,170nm,0.8s,mb5.7
EANR 'Ain N'Sour 87.01 47 P **P 11 37 01.4 +1.5**
C14A Swan Lake 87.04 329 ⇓P **P 11 36 60.0 +0.2**
baz=87
CASY Casey 87.06 177 ⇓*i* P **P 11 37 00.5 +0.8**
CASY *ep*P pP 11 39 01.7 -1.4
CASY Casey 87.06 177 *e*P **P 11 37 00.3 +0.6**
comp=Z,454nm,0.9s,mb6.1
CASY *ep*P pP 11 39 02.0 -1.2
K05A Summer Lake 87.23 321 P **P 11 37 01.4 +0.7**
baz=87,SNR=141
K05A ⇓P PKKPdf 11 54 49.8 +6.4
baz=87
YBMT Yellow Bay 87.23 328 *e*P **P 11 37 00.4 -0.2**
comp=Z,219nm,0.9s,mb5.8

B14A Marquette Ranc 87.25 329 P P 11 36 59.9 -0.8
baz=87,SNR=81
JTMT Jette 87.28 328 eP P 11 37 00.9 +0.1
comp=Z,181nm,0.6s,mb5.9
D12A Red Ives Fores 87.29 327 ⇑P P 11 37 00.7 -0.3
baz=88
ECHA Ech Chlef 87.31 47 P P 11 37 02.3 +1.0
I07A Izee 87.36 323 P P 11 37 01.6 +0.2
baz=88,SNR=112
C13A Hot Springs 87.36 328 P P 11 37 01.4 +0.1
baz=88,SNR=168
C13A ⇑P PKKPdf 11 54 48.0 +4.6
baz=88
HOG Hogback Mounta 87.37 321 P P 11 37 01.6 +0.2
A15A Johnson Ranch, 87.46 330 ⇑P P 11 37 00.6 -1.1
baz=88,SNR=67
A15A ⇑P PKKPdf 11 54 47.5 +4.2
baz=88
F10A Beach Ranch, E 87.46 326 P P 11 37 01.4 -0.4
baz=88,SNR=133
F10A ⇓P PKKPdf 11 54 48.6 +5.5
baz=88
EBNR Beni Rached 87.50 47 P P 11 37 03.8 +1.6
BSMT Bassoo Peak 87.59 328 eP P 11 37 02.3 0.0
comp=Z,222nm,0.8s,mb5.9
YBH Yreka Blue Hor 87.62 320 P P 11 37 01.6 -1.0
comp=Z,85nm,0.8s,mb5.5,baz=94,slow=2.5,SNR=151
YBH pP pP 11 39 06.3 -0.1
comp=Z,10nm,1.0s,baz=2.1,slow=4.7,SNR=2.9
YBH PKKPbc PKKPbc 11 54 49.2 +1.0
comp=Z,4.5nm,0.6s,baz=46,slow=1.4,SNR=15
YBH Yreka Blue Hor 87.62 320 eP P 11 37 01.4 -1.2
YBH e*PP pP 11 39 04.3 -2.1
YBH pmax pmax
comp=Z,94nm,0.9s
YBH Yreka Blue Hor 87.62 320 eP P 11 37 01.4 -1.2
comp=Z,94nm,0.9s,mb5.5
YBH epP pP 11 39 04.3 -2.0
KHMM Horse Mountain 87.67 319 eP P 11 37 03.3 +0.4
comp=Z,185nm,0.8s,mb5.9
EARI Arriondas 87.76 38 P P 11 37 03.4 +0.2
comp=Z,2μm,3.3s
A14A Double T Ranch 87.77 330 ⇓P P 11 37 02.6 -0.5
baz=88,SNR=152
FFC Flin Flon 87.80 339 P P 11 37 02.7 -0.4
comp=Z,1μm,0.8s,mb6.7,SNR=78
FFC Flin Flon 87.80 339 i P P 11 37 02.6 -0.5
FFC Flin Flon 87.80 339 eP P 11 37 02.4 -0.7
comp=Z,212nm,0.9s,mb5.9
FFC epP pP 11 39 06.8 -0.1
FFC eS S 11 46 56.6 -1.3
EBEN Beniarda 87.81 44 ⇓P P 11 37 03.7 +0.1
comp=Z,811nm,1.8s,mb6.2
B13A Whitefish 87.81 329 P P 11 37 03.2 -0.1
baz=88,SNR=222
B13A ⇓P PKKPdf 11 54 47.3 +4.6
baz=88
C12B Naegeli Ranch, 87.81 328 P P 11 37 03.2 -0.2
baz=88,SNR=107
G08A Pilot Rock 87.89 324 P P 11 37 03.5 -0.3
baz=88,SNR=52
G08A ⇑P PKKPdf 11 54 48.0 +5.6
baz=88
ECHE Chera 87.89 43 ⇓P P 11 37 04.2 +0.3
ECHE pmax pmax
comp=Z,206nm,1.0s,mb5.8
ECHE Chera 87.89 43 ⇓P P 11 37 04.2 +0.3
comp=Z,206nm,1.0s,mb5.8
LNOR Lincton Mounta 87.93 325 eP P 11 37 02.5 -1.5
LNOR e 11 40 42.2
LNOR pmax pmax
comp=Z,13nm,0.6s,mb4.8
LNOR Lincton Mounta 87.93 325 eP P 11 37 02.5 -1.5
comp=Z,13nm,0.6s,mb4.8
LNOR ePP PP 11 40 42.2 +0.8
ETOR Torete 87.99 42 P P 11 37 03.9 -0.5
ETOR pmax pmax
comp=Z,257nm,0.6s,mb6.1
ETOR Torete 87.99 42 P P 11 37 03.9 -0.4
comp=Z,257nm,0.6s,mb6.1
WALA Waterton Lakes 88.05 329 eP P 11 37 04.1 -0.3
comp=Z,6.9nm,0.8s
WALA epP pP 11 39 08.0 -0.3
WALA ePP PP 11 40 43.5 +1.2
KRMB Red Mountain 88.18 319 eP P 11 37 05.5 +0.3
comp=Z,210nm,0.9s,mb5.9
KRMB epP pP 11 39 10.1 +0.9
A13A Flathead Natio 88.19 329 P P 11 37 05.4 +0.3
baz=88,SNR=522
A13A ⇓P PKKPdf 11 54 46.5 +4.5
baz=88
VIPM Ingram Point 88.25 323 P P 11 37 05.9 +0.4
C11A Tepee Creek (N 88.28 327 ⇓P P 11 37 05.1 -0.4
baz=88
C11A ⇑P PKKPdf 11 54 46.3 +4.5
baz=88
E09A Wood Farm, Sta 88.30 326 ⇓P P 11 37 04.6 -1.0
baz=88,SNR=21
HUMO Hull Mountain 88.31 320 eP P 11 37 04.9 -0.9
comp=Z,32nm,0.8s,mb5.1
EMHD Djebel Mahouad 88.38 48 P P 11 37 07.6 +1.3
B12A Libby 88.41 328 P P 11 37 06.2 +0.1
baz=89,SNR=40
EMOS Mosqueruela 88.66 43 ⇓P P 11 37 08.2 +0.6
comp=Z,458nm,1.4s,mb6.1
ELAN Lanestosa 88.71 39 ⇓P P 11 37 07.8 +0.1
comp=Z,364nm,0.9s,mb6.2
G06A Carlson Farm, 88.73 323 ⇑P P 11 37 07.7 0.0
baz=89,SNR=50
A12A Yaak River Ran 88.76 328 ⇑P P 11 37 07.6 -0.2
baz=89
ABA Alger-Bouzarea 88.78 47 P P 11 37 09.8 +1.7
KBO Bosley Butte 88.80 319 eP P 11 37 08.7 +0.6
comp=Z,180nm,1.0s,mb5.9
KBO epP pP 11 39 11.9 -0.3
HAWA Hanford 88.92 325 eP P 11 37 08.0 -0.6
comp=Z,74nm,0.8s,mb5.6
HAWA epP pP 11 39 12.8 +0.1
RSW Rattlesnake Hi 88.95 325 eP P 11 37 08.6 -0.1
comp=Z,35nm,0.6s,mb5.4
EIBI Ibiza 88.98 45 P P 11 37 09.1 +0.1
comp=Z,2μm,2.1s,mb6.6
NEW Newport 88.99 327 P P 11 37 07.7 -1.2
baz=89,SNR=74
NEW ⇓P PKKPdf 11 54 44.4 +3.9
baz=89
NEW Newport 88.99 327 eP P 11 37 07.4 -1.4
NEW e*PP pP 11 39 10.4 -2.6
NEW pmax pmax
comp=Z,40nm,0.6s
NEW Newport 88.99 327 eP P 11 37 07.4 -1.4
comp=Z,40nm,0.6s,mb5.4
NEW epP pP 11 39 10.4 -2.6
WRD Warden 89.00 325 P P 11 37 09.1 +0.1
FCC Fort Churchill 89.06 344 eP P 11 37 08.2 -0.7
comp=Z,8.5nm,0.8s
FCC epP pP 11 39 13.1 +0.1
FCC esP sP 11 40 09.6 -0.5
D08A Wollman Farm, 89.06 326 P P 11 37 08.8 -0.4
baz=89,SNR=64
D08A ⇑P PKKPdf 11 54 44.3 +3.9
baz=89
BROR Big Rock Looko 89.09 322 P P 11 37 08.7 -0.7
OD2 Odessa Site #2 89.18 326 P P 11 37 09.2 -0.5
E07A Sunnyside 89.20 325 ⇓P P 11 37 09.6 -0.2
baz=89,SNR=9.5
H04A Detroit Lake 89.21 322 P P 11 37 09.3 -0.7
baz=89,SNR=73
VFP Flag Point 89.23 323 P P 11 37 10.1 +0.1
C09A Chrisman Ranch 89.24 326 ⇓P P 11 37 09.7 -0.3
baz=89,SNR=150
KEBM Edson Butte 89.27 320 eP P 11 37 10.4 +0.2
comp=Z,234nm,1.0s,mb6.0
HOOD Mount Hood Mea 89.33 323 eP P 11 37 10.3 -0.2
comp=Z,105nm,0.9s,mb5.7
HOOD epP pP 11 39 15.6 +0.8
ESAC San Caprasio 89.49 42 ⇓P P 11 37 11.7 +0.4
comp=Z,573nm,1.2s,mb6.3
ERTA Horta de San J 89.51 43 ⇓P P 11 37 11.9 +0.5
comp=Z,2μm,1.9s,mb6.5
G04A Mulino 89.70 323 P P 11 37 12.0 -0.2
baz=90,SNR=81
ELIZ Elizondo 89.75 40 ⇓P P 11 37 12.6 +0.1
ELIZ pmax pmax
comp=Z,119nm,1.1s,mb5.6
ELIZ Elizondo 89.75 40 ⇓P P 11 37 12.6 +0.1
comp=Z,119nm,1.1s,mb5.6

COR Corvallis 89.76 322 eP P 11 37 12.6 +0.1
COR e*PP pP 11 39 16.4 -0.5
COR pmax pmax
comp=Z,220nm,0.8s,mb6.0
COR Corvallis 89.76 322 eP P 11 37 12.6 +0.1
comp=Z,220nm,0.8s,mb6.0
COR epP pP 11 39 16.4 -0.5
EALK Alkurruntz 89.80 40 ⇓P P 11 37 12.8 0.0
comp=Z,1μm,2.7s,mb6.3
SJPF Ste Jean 89.90 40 ⇓i P P 11 37 13.5 +0.3
comp=Z,578nm,1.2s,mb6.0
SJPF epP pP 11 39 17.0 -0.5
SJPF Ste Jean 89.90 40 ⇓i P P 11 37 13.5 +0.3
SJPF e*PP pP 11 39 17.0 -0.5
SJPF pmax pmax
comp=Z,289nm,1.2s,mb6.0
SJPF Ste Jean 89.90 40 ⇓i P P 11 37 13.5 +0.3
comp=Z,289nm,1.2s,mb6.0
SJPF epP pP 11 39 17.0 -0.5
OSSF Osses 89.96 40 eP P 11 37 13.2 -0.3
CKHR Kef el Ahmar 89.98 49 P P 11 37 15.0 +1.2
WTV Waterville 90.01 326 P P 11 37 12.8 -0.7
SET Setif 90.01 49 P P 11 37 15.0 +1.1
ORDF Ordiarp 90.12 40 eP P 11 37 13.7 -0.5
ETW Entiat 90.14 325 P P 11 37 13.7 -0.5
F04A Amboy 90.14 323 P P 11 37 13.4 -0.8
baz=90,SNR=85
F04A ⇑P PKKPdf 11 54 42.3 +3.9
baz=90
B08A Colville Reser 90.14 326 P P 11 37 13.0 -1.1
baz=90,SNR=33
B08A ⇓P PKKPdf 11 54 41.0 +2.5
baz=90
ETSF Etsaut 90.15 41 ⇓i P P 11 37 14.7 +0.4
comp=Z,373nm,1.2s,mb5.8
ETSF Etsaut 90.15 41 ⇓i P P 11 37 14.7 +0.4
ETSF pmax pmax
comp=Z,187nm,1.2s,mb5.8
ETSF Etsaut 90.15 41 ⇓i P P 11 37 14.7 +0.4
comp=Z,187nm,1.2s,mb5.8
EPOB Poblet 90.20 43 ⇓P P 11 37 14.4 -0.2
comp=Z,998nm,2.6s,mb6.2
ETOS Mallorca 90.34 45 ⇓P P 11 37 15.8 +0.5
comp=Z,1μm,2.4s,mb6.4
LON Longmire 90.34 324 eP P 11 37 13.8 -1.3
LON e*PP pP 11 39 19.0 -0.6
LON pmax pmax
comp=Z,261nm,0.3s,mb6.5
LON Longmire 90.34 324 eP P 11 37 13.8 -1.3
comp=Z,261nm,0.3s,mb6.5
LON epP pP 11 39 19.0 -0.6
REYF Montagne du Re 90.35 41 eP P 11 37 15.7 +0.4
HEBO Mount Hebo 90.41 322 eP P 11 37 15.6 +0.2
comp=Z,114nm,0.8s,mb5.8
EBIE Bielsa 90.43 41 ⇓P P 11 37 16.2 +0.6
comp=Z,988nm,2.6s,mb6.2
NLW Nelson Butte 90.45 326 P P 11 37 14.7 -0.9
VIEF Viey 90.48 41 eP P 11 37 16.4 +0.5
DFRA Djebel Bou Aff 90.52 49 P P 11 37 17.9 +1.7
LABF Labassere 90.61 41 eP P 11 37 16.8 +0.3
CTEI Djebel Teioual 90.61 49 P P 11 37 17.3 +0.6
RESF Ens 90.62 41 eP P 11 37 17.2 +0.7
D05A Enumclaw 90.72 324 P P 11 37 16.0 -0.8
baz=91,SNR=27
F03A Seaside 90.75 323 ⇓P P 11 37 17.0 -0.1
baz=91,SNR=12
F03A ⇑P PKKPdf 11 54 41.4 +4.1
baz=91
EPF Esparros 90.76 41 ⇓i P P 11 37 17.2 +0.1
comp=Z,203nm,1.0s,mb5.7
EPF Esparros 90.76 41 ⇓i P P 11 37 17.2 +0.1
EPF pmax pmax
comp=Z,102nm,1.0s,mb5.7
EPF Esparros 90.76 41 ⇓i P P 11 37 17.2 +0.1
comp=Z,102nm,1.0s,mb5.7
CASM Ain Smara 90.78 49 P P 11 37 18.2 +0.8
EMIR Miracle 90.80 42 ⇓P P 11 37 17.5 +0.1
comp=Z,20nm,1.1s,mb5.0
EDM Edmonton 90.83 333 eP P 11 37 15.9 -1.3
EDM e*PP pP 11 39 20.1 -1.6
CSOR Sort 90.84 42 ⇓P P 11 37 18.2 +0.7
comp=Z,2μm,2.2s,mb6.6
MELF Melles 90.91 41 eP P 11 37 18.6 +0.7
CKFL Kef-Lekhel 91.01 49 P P 11 37 19.1 +0.6
SALF Salau 91.10 42 eP P 11 37 19.6 +0.9
VAL Valentia 91.10 30 ⇓i P P 11 37 17.2 -1.3
E03A Lebam 91.14 323 ⇑P P 11 37 18.4 -0.4
baz=91,SNR=25
MLS Moulis 91.16 41 eP P 11 37 19.4 +0.4
CFON Fontmartina 91.26 43 ⇓P P 11 37 19.4 -0.1
comp=Z,619nm,1.6s,mb6.3
RPW Rockport 91.29 325 eP P 11 37 18.0 -1.5
comp=Z,37nm,0.7s,mb5.4
CAEH 'Ain El Ouahch 91.30 49 P P 11 37 20.3 +0.5
B06A Marblemount 91.32 326 P P 11 37 18.4 -1.2
baz=92,SNR=32
B06A ⇑P PKKPdf 11 54 38.5 +2.2
baz=92
JCW Jim Creek 91.34 325 P P 11 37 18.4 -1.3
VALF Valcebollere 91.38 42 eP P 11 37 20.4 +0.4
CLLI Llivia 91.40 42 ⇓P P 11 37 20.8 +0.7
ABSA Djebel Ababsia 91.46 50 P P 11 37 21.0 +0.4
CMAH Djebel Manchou 91.61 49 P P 11 37 21.4 +0.2
CARF Carcanieres 91.62 42 eP P 11 37 21.5 +0.4
QUIF Quistinic 91.83 36 ⇓i P P 11 37 21.0 -0.9
comp=Z,712nm,1.3s,mb6.2
QUIF Quistinic 91.83 36 ⇓i P P 11 37 21.0 -0.9
QUIF pmax pmax
comp=Z,356nm,1.3s,mb6.2
QUIF Quistinic 91.83 36 ⇓i P P 11 37 21.0 -0.9
comp=Z,356nm,1.3s,mb6.2
NLWA Neilton Lookou 91.84 324 eP P 11 37 21.5 -0.5
comp=Z,128nm,1.6s,mb5.7
EJON La Jonquera 91.93 43 ⇓P P 11 37 22.7 +0.1
comp=Z,1μm,2.4s,mb6.6
A05A Maple Falls 91.94 326 P P 11 37 21.4 -1.0
baz=92,SNR=59
A05A ⇓P PKKPdf 11 54 36.8 +1.5
baz=92
SJAF Saint Jean de 91.95 43 eP P 11 37 22.4 -0.3
ROSF Rostrenen 92.04 35 ⇓i P P 11 37 22.0 -0.9
comp=Z,383nm,0.8s,mb6.2
ROSF epP pP 11 39 27.4 -0.1
ROSF Rostrenen 92.04 35 ⇓i P P 11 37 22.0 -0.9
ROSF e*PP pP 11 39 27.4 -0.1
ROSF pmax pmax
comp=Z,191nm,0.8s,mb6.2
ROSF Rostrenen 92.04 35 ⇓i P P 11 37 22.0 -0.9
comp=Z,191nm,0.8s,mb6.2
ROSF epP pP 11 39 27.4 -0.1
MTLF Montolieu 92.05 42 ⇓i P P 11 37 22.5 -0.6
comp=Z,410nm,1.4s,mb6.0
MTLF epP pP 11 39 27.5 -0.2
MTLF Montolieu 92.05 42 ⇓i P P 11 37 22.5 -0.6
MTLF e*PP pP 11 39 27.5 -0.2
MTLF pmax pmax
comp=Z,205nm,1.4s,mb6.0
MTLF Montolieu 92.05 42 ⇓i P P 11 37 22.5 -0.6
comp=Z,205nm,1.4s,mb6.0
MTLF epP pP 11 39 27.5 -0.2
LFF La Frestale 92.13 40 ⇓i P P 11 37 23.1 -0.3
comp=Z,315nm,0.6s,mb6.2
LFF La Frestale 92.13 40 ⇓i P P 11 37 23.1 -0.3
LFF pmax pmax
comp=Z,157nm,0.6s,mb6.2
LFF La Frestale 92.13 40 ⇓i P P 11 37 23.1 -0.3
comp=Z,157nm,0.6s,mb6.2
CCA1 Carnmenellis 92.25 33 P P 11 37 22.3 -1.6
CCA1 AMB AMB 11 37 23.0
comp=Z,226nm,1.9s,mb5.9
CCA1 Carnmenellis 92.25 33 eP P 11 37 22.3 -1.6
CCA1 AMB AMB 11 37 23.0
comp=Z,226nm,1.9s,mb5.9
SGMF Saint Gilles 92.36 36 ⇓i P P 11 37 23.3 -1.1
comp=Z,238nm,1.1s,mb5.8
SGMF Saint Gilles 92.36 36 ⇓i P P 11 37 23.3 -1.1
SGMF pmax pmax
comp=Z,119nm,1.1s,mb5.8
SGMF Saint Gilles 92.36 36 ⇓i P P 11 37 23.3 -1.1
comp=Z,119nm,1.1s,mb5.8
PGC Sidney 92.41 325 eP P 11 37 23.4 -1.1
comp=Z,2.3nm,0.8s
KEST Kesra 92.46 51 P P 11 37 25.8 +0.6
comp=Z,29nm,0.8s,mb5.4,baz=191,slow=2.0,SNR=88
KEST pP pP 11 39 30.9 +1.1
comp=Z,6.5nm,0.8s,baz=234,slow=1.5,SNR=2.9
KEST S SKSac 11 47 03.6 -0.5
comp=Z,2.4nm,0.9s,baz=19,slow=24,SNR=3.6
KEST PKKPbc PKKPbc 11 54 36.4 +0.6
comp=Z,6.0nm,0.7s,baz=25,slow=0.5,SNR=18
KEST Kesra 92.46 51 eP P 11 37 25.7 +0.5
KEST epP pP 11 39 29.6 -0.1
MFF Saint Martin d 92.63 38 ⇓i P P 11 37 25.2 -0.5
comp=Z,538nm,1.2s,mb6.1
MFF epP pP 11 39 31.3 +1.0
MFF Saint Martin d 92.63 38 ⇓i P P 11 37 25.2 -0.5
MFF e*PP pP 11 39 31.3 +1.0
MFF pmax pmax
comp=Z,269nm,1.3s,mb6.1
MFF Saint Martin d 92.63 38 ⇓i P P 11 37 25.2 -0.5
comp=Z,269nm,1.3s,mb6.1
MFF epP pP 11 39 31.3 +1.0
RJF Les Rejaudoux 92.79 40 ⇓i P P 11 37 25.8 -0.6
comp=Z,272nm,1.1s,mb5.9
RJF eMLR MLR
comp=Z,1μm,18.8s
RJF Les Rejaudoux 92.79 40 ⇓i P P 11 37 25.8 -0.6
RJF pmax pmax
comp=Z,136nm,1.1s,mb5.9
RJF MLR MLR
comp=Z,1μm,18.8s
RJF Les Rejaudoux 92.79 40 ⇓i P P 11 37 25.8 -0.6
comp=Z,136nm,1.1s,mb5.9
RJF LR LR
comp=Z,1μm,18.8s
CAF Calviac 92.88 40 ⇓i P P 11 37 26.6 -0.3
comp=Z,311nm,1.2s,mb5.9
CAF Calviac 92.88 40 ⇓i P P 11 37 26.6 -0.3
CAF pmax pmax
comp=Z,155nm,1.2s,mb5.9
CAF Calviac 92.88 40 ⇓i P P 11 37 26.6 -0.3
comp=Z,155nm,1.2s,mb5.9
JSA Saint Aubin 93.14 35 P P 11 37 26.2 -1.7
JSA AMB AMB 11 37 27.0
comp=Z,206nm,2.1s,mb5.8
JSA Saint Aubin 93.14 35 eP P 11 37 26.2 -1.7
JSA AMB AMB 11 37 27.0
comp=Z,206nm,2.1s,mb5.8
GRR Gorron 93.33 36 ⇓i P P 11 37 27.8 -1.0
comp=Z,308nm,1.1s,mb6.0
GRR epP pP 11 39 32.9 -0.6
comp=Z,53nm,0.9s
GRR Gorron 93.33 36 ⇓i P P 11 37 27.8 -1.0
GRR e*PP pP 11 39 32.9 -0.6
GRR pmax pmax
comp=Z,154nm,1.1s,mb6.0
GRR Gorron 93.33 36 ⇓i P P 11 37 27.8 -1.0
comp=Z,154nm,1.1s,mb6.0
GRR epP pP 11 39 32.9 -0.6
LASF Ste Croix 93.44 42 ⇓i P P 11 37 29.3 -0.2
comp=Z,199nm,1.2s,mb5.7
VERF Verneugheol 93.60 40 eP P 11 37 30.0 -0.1
DLF Lyons Farm 93.68 30 ⇓i P P 11 37 29.3 -1.0
DSB Dublin 93.72 30 eP P 11 37 29.5 -1.0
comp=Z,52nm,0.6s,mb5.8
DSB epP pP 11 39 35.6 +0.4
FLN La Foliniere 93.76 36 ⇓i P P 11 37 29.7 -1.1
comp=Z,123nm,0.8s,mb5.8
FLN eMLR MLR
comp=Z,778nm,19.8s
FLN La Foliniere 93.76 36 ⇓i P P 11 37 29.7 -1.1
FLN pmax pmax
comp=Z,62nm,0.8s,mb5.8
FLN MLR MLR
comp=Z,780nm,19.8s
FLN La Foliniere 93.76 36 ⇓i P P 11 37 29.7 -1.1
comp=Z,62nm,0.8s,mb5.8
FLN LR LR
comp=Z,780nm,19.8s
TCF Toulx Ste Croi 93.76 39 ⇓i P P 11 37 30.2 -0.6
comp=Z,276nm,1.2s,mb6.0
TCF epP pP 11 39 34.4 -1.2
TCF Toulx Ste Croi 93.76 39 ⇓i P P 11 37 30.2 -0.6
TCF e*PP pP 11 39 34.4 -1.2
TCF pmax pmax
comp=Z,138nm,1.2s,mb6.0
TCF Toulx Ste Croi 93.76 39 ⇓i P P 11 37 30.2 -0.6
comp=Z,138nm,1.2s,mb6.0
TCF epP pP 11 39 34.4 -1.2
LDF La Druitiere 93.84 36 ⇓i P P 11 37 30.2 -1.0
comp=Z,74nm,0.5s,mb5.7
LDF epP pP 11 39 35.3 -0.6
LDF La Druitiere 93.84 36 ⇓i P P 11 37 30.2 -1.0
LDF e*PP pP 11 39 35.3 -0.6
LDF pmax pmax
comp=Z,37nm,0.5s,mb5.8
LDF La Druitiere 93.84 36 ⇓i P P 11 37 30.2 -1.0
comp=Z,37nm,0.5s,mb5.8
LDF epP pP 11 39 35.3 -0.6
PYM Petit Puy Mans 93.90 40 eP P 11 37 32.6 +1.1
RPZ Rata Peaks 93.98 216 eP P 11 37 32.6 +0.5
comp=Z,134nm,1.1s,mb6.0
AGO Saint Agoulin 94.14 40 eP P 11 37 33.7 +1.1
BGF Bois d'Agland 94.27 39 ⇓i P P 11 37 32.7 -0.5
comp=Z,438nm,1.2s,mb6.2
BGF epP pP 11 39 37.9 0.0
BGF Bois d'Agland 94.27 39 ⇓i P P 11 37 32.7 -0.5
BGF e*PP pP 11 39 37.9 0.0
BGF pmax pmax
comp=Z,219nm,1.2s,mb6.2
BGF Bois d'Agland 94.27 39 ⇓i P P 11 37 32.7 -0.5
comp=Z,219nm,1.2s,mb6.2
BGF epP pP 11 39 37.9 0.0
HGH Gray Hill 94.35 33 P P 11 37 32.0 -1.4
HGH Gray Hill 94.35 33 ⇓eP P 11 37 32.0 -1.4
VIVF Saint-Julien-l 94.36 41 ⇓i P P 11 37 33.7 +0.1
comp=Z,283nm,1.2s,mb6.0
VIVF Saint-Julien-l 94.36 41 ⇓i P P 11 37 33.7 +0.1
VIVF pmax pmax
comp=Z,141nm,1.2s,mb6.0
VIVF Saint-Julien-l 94.36 41 ⇓i P P 11 37 33.7 +0.1
comp=Z,141nm,1.2s,mb6.0
PLDF La Plantade 94.38 40 eP P 11 37 34.9 +1.2
HTR Trewern Hill 94.41 32 P P 11 37 32.1 -1.6
HTR Trewern Hill 94.41 32 ⇓eP P 11 37 32.1 -1.6
SMRF Simiane la Rot 94.42 42 ⇓i P P 11 37 34.4 +0.5
comp=Z,377nm,1.2s,mb6.1
SMRF Simiane la Rot 94.42 42 ⇓i P P 11 37 34.4 +0.5
comp=Z,377nm,1.2s,mb6.4
VSL Villasalto 94.43 48 eP P 11 37 33.9 -0.2
comp=Z,49nm,0.8s,mb5.7
VSL esP sP 11 40 35.1 -0.6
VSL ePP PP 11 41 27.0 -5.0
MCH1 Michaelchurch 94.49 33 P P 11 37 32.3 -1.7
MCH1 AMB AMB 11 37 34.7
comp=Z,154nm,3.5s
MCH1 Michaelchurch 94.49 33 eP P 11 37 32.3 -1.7
MCH1 AMB AMB 11 37 34.7
comp=Z,154nm,3.5s
SSB Saint Sauveur 94.52 41 eP P 11 37 34.7 +0.4
SSB e*SP sP 11 40 34.9 -1.1
SSB e 11 41 31.9
SSB pmax pmax
comp=Z,152nm,0.9s,mb6.1
SSB Saint Sauveur 94.52 41 eP P 11 37 34.7 +0.3
comp=Z,152nm,0.9s,mb6.1
SSB esP sP 11 40 34.9 -1.1
SSB ePP PP 11 41 31.9 -0.7
HYF Humbligny 94.56 39 ⇓i P P 11 37 34.0 -0.5
GMM Mts of Mourne 94.57 30 P P 11 37 33.1 -1.1
GMM Mts of Mourne 94.57 30 ⇓eP P 11 37 33.1 -1.1
OCF Saint Nazaire 94.58 42 eP P 11 37 35.3 +0.7
OG26 St.-Nazaire-De 94.58 42 eP P 11 37 35.3 +0.7
LMR La Mourre 94.63 43 ⇓i P P 11 37 34.8 -0.1
comp=Z,401nm,1.1s,mb6.2
LMR epP pP 11 39 39.5 -0.2
LMR La Mourre 94.63 43 ⇓i P P 11 37 34.8 -0.1
LMR e*PP pP 11 39 39.5 -0.2
LMR pmax pmax
comp=Z,201nm,1.1s,mb6.2
LMR La Mourre 94.63 43 ⇓i P P 11 37 34.8 -0.1
comp=Z,201nm,1.1s,mb6.2
LMR epP pP 11 39 39.5 -0.2
AVF Avril sur Loir 94.69 39 ⇓i P P 11 37 34.4 -0.7
comp=Z,290nm,1.1s,mb6.0
AVF Avril sur Loir 94.69 39 ⇓i P P 11 37 34.4 -0.7
AVF pmax pmax
comp=Z,145nm,1.1s,mb6.0
AVF Avril sur Loir 94.69 39 ⇓i P P 11 37 34.4 -0.7
comp=Z,145nm,1.1s,mb6.0

FRF	**La Foret Royal**	**94.84**	**43**	⇓*iP*	**P**	**11 37 35.8**	**0.0**	
	comp=Z,334nm,1.2s,mb6.0							
FRF				*epP*	pP	11 39 40.6	-0.1	
FRF	**La Foret Royal**	**94.84**	**43**	⇓*iP*	**P**	**11 37 35.8**	**0.0**	
FRF				*e**PP	pP	11 39 40.6	-0.1	
FRF				pmax	pmax			
	comp=Z,167nm,1.2s,mb6.0							
FRF	**La Foret Royal**	**94.84**	**43**	⇓*iP*	**P**	**11 37 35.8**	**0.0**	
	comp=Z,167nm,1.2s,mb6.0							
FRF				*epP*	pP	11 39 40.6	-0.1	
SMF	**Signal de Mont**	**94.89**	**40**	⇓*iP*	**P**	**11 37 35.7**	**-0.2**	
	comp=Z,612nm,1.1s,mb6.4							
SMF				*epP*	pP	11 39 40.1	-0.7	
SMF	**Signal de Mont**	**94.89**	**40**	⇓*iP*	**P**	**11 37 35.7**	**-0.2**	
SMF				*e**PP	pP	11 39 40.1	-0.7	
SMF				pmax	pmax			
	comp=Z,306nm,1.0s,mb6.4							
SMF	**Signal de Mont**	**94.89**	**40**	⇓*iP*	**P**	**11 37 35.7**	**-0.2**	
	comp=Z,306nm,1.0s,mb6.4							
SMF				*epP*	pP	11 39 40.1	-0.7	
SSF	**Saint Saulge**	**94.93**	**39**	⇓*iP*	**P**	**11 37 35.3**	**-0.8**	
	comp=Z,164nm,0.7s,mb6.0							
SSF	**Saint Saulge**	**94.93**	**39**	⇓*iP*	**P**	**11 37 35.3**	**-0.8**	
SSF				pmax	pmax			
	comp=Z,82nm,0.7s,mb6.0							
SSF	**Saint Saulge**	**94.93**	**39**	⇓*iP*	**P**	**11 37 35.3**	**-0.8**	
	comp=Z,82nm,0.7s,mb6.0							
CALN	**Calern**	**95.09**	**43**	*eP*	**P**	**11 37 37.5**	**+0.5**	
ORIF	**Oris-en-Rattie**	**95.11**	**42**	⇓*iP*	**P**	**11 37 37.5**	**+0.5**	
	comp=Z,202nm,0.7s,mb6.1							
ORIF				*epP*	pP	11 39 43.7	+1.8	
ORIF				*e*MLR	MLR			
	comp=Z,805nm,21.0s							
ORIF	**Oris-en-Rattie**	**95.11**	**42**	⇓*iP*	**P**	**11 37 37.5**	**+0.5**	
ORIF				*e**PP	pP	11 39 43.7	+1.8	
ORIF				pmax	pmax			
	comp=Z,101nm,0.7s,mb6.1							
ORIF	**Oris-en-Rattie**	**95.11**	**42**	⇓*iP*	**P**	**11 37 37.5**	**+0.5**	
	comp=Z,101nm,0.7s,mb6.1							
ORIF				*epP*	pP	11 39 43.7	+1.8	
GRN	**Grenoble**	**95.21**	**41**	*eP*	**P**	**11 37 38.2**	**+0.7**	
LOR	**Lormes**	**95.25**	**39**	⇓*iP*	**P**	**11 37 36.8**	**-0.8**	
	comp=Z,334nm,1.1s,mb6.1							
LOR				*epP*	pP	11 39 41.3	-1.1	
LOR				*e*MLR	MLR			
	comp=Z,810nm,19.2s							
LOR	**Lormes**	**95.25**	**39**	⇓*iP*	**P**	**11 37 36.8**	**-0.8**	
LOR				*e**PP	pP	11 39 41.3	-1.1	
LOR				pmax	pmax			
	comp=Z,167nm,1.1s,mb6.1							
LOR				MLR	MLR			
	comp=Z,810nm,19.3s							
LOR	**Lormes**	**95.25**	**39**	⇓*iP*	**P**	**11 37 36.8**	**-0.8**	
	comp=Z,167nm,1.1s,mb6.1							
LOR				*epP*	pP	11 39 41.3	-1.1	
LOR				LR	LR			
	comp=Z,810nm,19.3s							
GIM	**North Isle of**	**95.26**	**30**	P	**P**	**11 37 36.5**	**-1.0**	
GIM	**North Isle of**	**95.26**	**30**	*eP*	**P**	**11 37 36.5**	**-1.0**	
MVIF	**Mont Vial**	**95.33**	**43**	*eP*	**P**	**11 37 38.7**	**+0.7**	
REVF	**Revere**	**95.38**	**43**	*eP*	**P**	**11 37 38.5**	**+0.2**	
GDM	**Grand'Maison**	**95.41**	**42**	*eP*	**P**	**11 37 38.5**	**+0.1**	
SURF	**Saint Ours**	**95.44**	**43**	*eP*	**P**	**11 37 39.5**	**+1.0**	
LUCF	**Luceram**	**95.45**	**43**	*eP*	**P**	**11 37 39.0**	**+0.4**	
TOUF	**Mont Tournerai**	**95.45**	**43**	*eP*	**P**	**11 37 39.0**	**+0.4**	
SBF	**Sospel**	**95.49**	**43**	⇓*iP*	**P**	**11 37 38.8**	**+0.1**	
	comp=Z,372nm,1.0s,mb6.2							
SBF	**Sospel**	**95.49**	**43**	⇓*iP*	**P**	**11 37 38.8**	**+0.1**	
SBF				pmax	pmax			
	comp=Z,186nm,1.0s,mb6.2							
SBF	**Sospel**	**95.49**	**43**	⇓*iP*	**P**	**11 37 38.8**	**+0.1**	
	comp=Z,186nm,1.0s,mb6.2							
GAL1	**Galloway**	**95.53**	**30**	P	**P**	**11 37 37.1**	**-1.5**	
GAL1				AMB	AMB	11 37 37.7		
	comp=Z,102nm,1.2s,mb5.9							
GAL1	**Galloway**	**95.53**	**30**	*eP*	**P**	**11 37 37.1**	**-1.5**	
GAL1				AMB	AMB	11 37 37.7		
	comp=Z,102nm,1.2s,mb5.9							
MBDF	**Montbardon**	**95.54**	**42**	⇓*iP*	**P**	**11 37 39.4**	**+0.4**	
	comp=Z,236nm,1.2s,mb6.0							
MBDF	**Montbardon**	**95.54**	**42**	⇓*iP*	**P**	**11 37 39.4**	**+0.4**	
MBDF				pmax	pmax			
	comp=Z,118nm,1.2s,mb6.0							
MBDF	**Montbardon**	**95.54**	**42**	⇓*iP*	**P**	**11 37 39.4**	**+0.4**	
	comp=Z,118nm,1.2s,mb6.0							
STNC	**Stoke**	**95.55**	**32**	P	**P**	**11 37 37.7**	**-1.1**	
STNC				AMB	AMB	11 37 38.9		
	comp=Z,253nm,2.3s,mb6.0							
STNC	**Stoke**	**95.55**	**32**	*eP*	**P**	**11 37 37.7**	**-1.1**	
STNC				AMB	AMB	11 37 38.9		
	comp=Z,253nm,2.3s,mb6.0							
AUTN	**L'Aution**	**95.55**	**43**	*eP*	**P**	**11 37 39.5**	**+0.5**	
SAOF	**Saorge**	**95.62**	**43**	*eP*	**P**	**11 37 39.7**	**+0.3**	
CWF	**Charnwood Fore**	**95.76**	**33**	P	**P**	**11 37 37.5**	**-2.3**	
CWF				AMB	AMB	11 37 38.6		
	comp=Z,169nm,1.9s,mb5.9							
CWF	**Charnwood Fore**	**95.76**	**33**	*eP*	**P**	**11 37 37.5**	**-2.3**	
CWF				AMB	AMB	11 37 38.6		
	comp=Z,169nm,1.9s,mb5.9							
PGF	**Pioggiola**	**95.77**	**45**	⇓*iP*	**P**	**11 37 40.0**	**0.0**	
	comp=Z,130nm,1.2s,mb5.7							
PGF				*epP*	pP	11 39 45.1	+0.1	
PGF	**Pioggiola**	**95.77**	**45**	⇓*iP*	**P**	**11 37 40.0**	**0.0**	
PGF				*e**PP	pP	11 39 45.1	+0.1	
PGF				pmax	pmax			
	comp=Z,65nm,1.2s,mb5.7							
PGF	**Pioggiola**	**95.77**	**45**	⇓*iP*	**P**	**11 37 40.0**	**0.0**	
	comp=Z,65nm,1.2s,mb5.7							
PGF				*epP*	pP	11 39 45.1	+0.1	
XDE	**Dent Fell**	**95.84**	**30**	P	**P**	**11 37 39.1**	**-0.9**	
XDE	**Dent Fell**	**95.84**	**30**	⇓*eP*	**P**	**11 37 39.1**	**-0.9**	
GCD	**Castle Douglas**	**95.86**	**30**	P	**P**	**11 37 38.8**	**-1.3**	
GCD	**Castle Douglas**	**95.86**	**30**	⇓*eP*	**P**	**11 37 38.8**	**-1.3**	
LPL	**La Plagne**	**95.94**	**42**	⇓*iP*	**P**	**11 37 41.4**	**+0.6**	
	comp=Z,155nm,0.7s,mb6.0							
LPL	**La Plagne**	**95.94**	**42**	⇓*iP*	**P**	**11 37 41.4**	**+0.6**	
LPL				pmax	pmax			
	comp=Z,78nm,0.7s,mb6.0							
LPL	**La Plagne**	**95.94**	**42**	⇓*iP*	**P**	**11 37 41.4**	**+0.6**	
	comp=Z,78nm,0.7s,mb6.0							
LPG	**La Plagne**	**95.95**	**42**	⇓*iP*	**P**	**11 37 41.6**	**+0.8**	
	comp=Z,173nm,0.7s,mb6.1							
LPG	**La Plagne**	**95.95**	**42**	⇓*iP*	**P**	**11 37 41.6**	**+0.8**	
LPG				pmax	pmax			
	comp=Z,86nm,0.7s,mb6.1							
LPG	**La Plagne**	**95.95**	**42**	⇓*iP*	**P**	**11 37 41.6**	**+0.8**	
	comp=Z,86nm,0.7s,mb6.1							
CABF	**La Chapelle**	**96.16**	**40**	⇓*iP*	**P**	**11 37 41.5**	**-0.2**	
	comp=Z,288nm,1.1s,mb6.1							
CABF				*epP*	pP	11 39 47.8	+1.2	
CABF	**La Chapelle**	**96.16**	**40**	⇓*iP*	**P**	**11 37 41.5**	**-0.2**	
CABF				*e**PP	pP	11 39 47.8	+1.2	
CABF				pmax	pmax			
	comp=Z,144nm,1.1s,mb6.1							
CABF	**La Chapelle**	**96.16**	**40**	⇓*iP*	**P**	**11 37 41.5**	**-0.2**	
	comp=Z,144nm,1.1s,mb6.1							
CABF				*epP*	pP	11 39 47.8	+1.2	
PGBU	**Glenifferbraes**	**96.23**	**29**	P	**P**	**11 37 40.1**	**-1.7**	
PGBU				AMB	AMB	11 37 41.7		
	comp=Z,164nm,1.9s,mb5.9							
PGBU	**Glenifferbraes**	**96.23**	**29**	*eP*	**P**	**11 37 40.1**	**-1.7**	
PGBU				AMB	AMB	11 37 41.7		
	comp=Z,164nm,1.9s,mb5.9							
HPK	**Haverah Park**	**96.36**	**32**	P	**P**	**11 37 41.3**	**-1.1**	
HPK				AMB	AMB	11 37 42.5		
	comp=Z,170nm,1.8s,mb6.0							
HPK	**Haverah Park**	**96.36**	**32**	*eP*	**P**	**11 37 41.3**	**-1.1**	
HPK				AMB	AMB	11 37 42.5		
	comp=Z,170nm,1.8s,mb6.0							
KAR1	**Arisaig**	**96.38**	**28**	P	**P**	**11 37 41.1**	**-1.3**	
KAR1	**Arisaig**	**96.38**	**28**	⇓*eP*	**P**	**11 37 41.1**	**-1.3**	
KSK	**Scoval**	**96.38**	**27**	P	**P**	**11 37 42.0**	**-0.5**	
KSK	**Scoval**	**96.38**	**27**	*eP*	**P**	**11 37 42.0**	**-0.5**	
ECK	**Cauldkaine Hil**	**96.43**	**30**	P	**P**	**11 37 41.4**	**-1.3**	
ECK	**Cauldkaine Hil**	**96.43**	**30**	⇓*eP*	**P**	**11 37 41.4**	**-1.3**	
SFTF	**Sexfontaines**	**96.43**	**39**	⇓*iP*	**P**	**11 37 42.0**	**-0.9**	
	comp=Z,318nm,1.2s,mb6.1							
SFTF	**Sexfontaines**	**96.43**	**39**	⇓*iP*	**P**	**11 37 42.0**	**-0.9**	
	comp=Z,318nm,1.2s,mb6.4							
ESK	**Eskdalemuir**	**96.48**	**30**	P	**P**	**11 37 41.6**	**-1.3**	
ESK	**Eskdalemuir**	**96.48**	**30**	AMB	AMB	11 37 41.6		
	comp=Z,123nm,1.9s,mb5.8							
ESK				*eP*		11 37 41.6		
ESK	**Eskdalemuir**	**96.48**	**30**	*i* P	**P**	**11 37 42.1**	**-0.8**	
ESK	**Eskdalemuir**	**96.48**	**30**	*eP*	**P**	**11 37 41.6**	**-1.3**	
	comp=Z,39nm,0.6s,mb5.8							
EAB	**Aberfoyle**	**96.54**	**29**	P	**P**	**11 37 42.0**	**-1.1**	
EAB	**Aberfoyle**	**96.54**	**29**	⇓*eP*	**P**	**11 37 42.0**	**-1.1**	
MEZF	**Maizieres J'vi**	**96.60**	**38**	⇓*iP*	**P**	**11 37 43.0**	**-0.6**	
	comp=Z,125nm,0.6s,mb6.0							
MEZF	**Maizieres J'vi**	**96.60**	**38**	⇓*iP*	**P**	**11 37 43.0**	**-0.6**	
	comp=Z,125nm,0.6s,mb6.3							
XAL	**Allendale**	**96.64**	**31**	P	**P**	**11 37 42.5**	**-1.1**	
XAL	**Allendale**	**96.64**	**31**	⇓*eP*	**P**	**11 37 42.5**	**-1.1**	
RRH	**Rhenigidale**	**96.69**	**27**	P	**P**	**11 37 42.3**	**-1.5**	
RRH	**Rhenigidale**	**96.69**	**27**	⇓*eP*	**P**	**11 37 42.3**	**-1.5**	
EAU	**Auchinoon**	**96.71**	**29**	P	**P**	**11 37 42.5**	**-1.4**	
EAU	**Auchinoon**	**96.71**	**29**	⇓*eP*	**P**	**11 37 42.5**	**-1.4**	
KPL	**Plockton**	**96.73**	**27**	P	**P**	**11 37 42.5**	**-1.5**	
KPL				AMB	AMB	11 37 43.5		
	comp=Z,101nm,2.1s,mb5.7							
KPL	**Plockton**	**96.73**	**27**	*eP*	**P**	**11 37 42.5**	**-1.5**	
KPL				AMB	AMB	11 37 43.5		
	comp=Z,101nm,2.1s,mb5.7							
KSB	**Sheil Bridge**	**96.74**	**28**	P	**P**	**11 37 42.7**	**-1.3**	
KSB	**Sheil Bridge**	**96.74**	**28**	⇓*eP*	**P**	**11 37 42.7**	**-1.3**	
EBL	**Broad Law**	**96.84**	**30**	P	**P**	**11 37 43.1**	**-1.3**	
EBL	**Broad Law**	**96.84**	**30**	⇓*eP*	**P**	**11 37 43.1**	**-1.3**	
BORG	**Borgarnes**	**96.90**	**17**	*eP*	**P**	**11 37 45.4**	**+0.9**	
BORG				pmax	pmax			
	comp=Z,49nm,0.8s							
BORG	**Borgarnes**	**96.90**	**17**	*eP*	**P**	**11 37 45.4**	**+0.9**	
	comp=Z,49nm,0.8s,mb5.8							
AEU	**East Anglia Un**	**96.93**	**34**	P	**P**	**11 37 43.9**	**-1.1**	
AEU	**East Anglia Un**	**96.93**	**34**	*eP*	**P**	**11 37 43.9**	**-1.1**	
EBH	**Black Hill**	**96.93**	**29**	P	**P**	**11 37 43.5**	**-1.4**	
EBH	**Black Hill**	**96.93**	**29**	⇓*eP*	**P**	**11 37 43.5**	**-1.4**	
THEF	**They Montfort**	**96.97**	**39**	*eP*	**P**	**11 37 45.0**	**-0.3**	
KAC	**Achnashellach**	**96.98**	**27**	P	**P**	**11 37 43.4**	**-1.7**	
KAC	**Achnashellach**	**96.98**	**27**	⇓*eP*	**P**	**11 37 43.4**	**-1.7**	
LOMF	**Lomont**	**96.98**	**40**	*eP*	**P**	**11 37 45.0**	**-0.4**	
BAIF	**Baives**	**97.00**	**37**	⇓*iP*	**P**	**11 37 44.5**	**-0.9**	
	comp=Z,136nm,1.0s,mb5.8							
BAIF	**Baives**	**97.00**	**37**	⇓*iP*	**P**	**11 37 44.5**	**-0.9**	
BAIF				pmax	pmax			
	comp=Z,68nm,1.0s,mb5.8							
BAIF	**Baives**	**97.00**	**37**	⇓*iP*	**P**	**11 37 44.5**	**-0.9**	
	comp=Z,68nm,1.0s,mb5.8							
RRR	**Rubha Reidh**	**97.00**	**27**	P	**P**	**11 37 43.8**	**-1.4**	
RRR	**Rubha Reidh**	**97.00**	**27**	⇓*eP*	**P**	**11 37 43.8**	**-1.4**	
HAU	**Haudompre**	**97.06**	**39**	⇓*iP*	**P**	**11 37 45.0**	**-0.7**	
	comp=Z,173nm,1.0s,mb6.0							
HAU				*e*MLR	MLR			
	comp=Z,728nm,20.5s							
HAU	**Haudompre**	**97.06**	**39**	⇓*iP*	**P**	**11 37 45.0**	**-0.7**	
HAU				pmax	pmax			
	comp=Z,87nm,1.0s,mb5.9							
HAU				MLR	MLR			
	comp=Z,730nm,20.5s							
HAU	**Haudompre**	**97.06**	**39**	⇓*iP*	**P**	**11 37 45.0**	**-0.7**	
	comp=Z,86nm,1.0s,mb5.9							
HAU				LR	LR			
	comp=Z,730nm,20.5s							
ESY	**Stoneypath**	**97.12**	**30**	P	**P**	**11 37 44.6**	**-1.2**	
ESY	**Stoneypath**	**97.12**	**30**	⇓*eP*	**P**	**11 37 44.6**	**-1.2**	
DOU	**Dourbes**	**97.23**	**37**	P	**P**	**11 37 46.0**	**-0.4**	
	comp=Z,80nm,2.1s,mb5.6							
DOU				PP	PP	11 41 47.9	-5.1	
HINF	**Hinteralfeld**	**97.25**	**40**	⇓*iP*	**P**	**11 37 45.8**	**-0.7**	
	comp=Z,143nm,1.0s,mb5.9							
HINF				*epP*	pP	11 39 51.2	-0.4	
HINF	**Hinteralfeld**	**97.25**	**40**	⇓*iP*	**P**	**11 37 45.8**	**-0.7**	
HINF				*e**PP	pP	11 39 51.2	-0.4	
HINF				pmax	pmax			
	comp=Z,72nm,1.0s,mb5.9							
HINF	**Hinteralfeld**	**97.25**	**40**	⇓*iP*	**P**	**11 37 45.8**	**-0.7**	
	comp=Z,72nm,1.0s,mb5.8							
HINF				*epP*	pP	11 39 51.2	-0.4	
SNF	**Seneffe**	**97.29**	**36**	P	**P**	**11 37 46.2**	**-0.4**	
MDO	**Dochfour**	**97.33**	**28**	P	**P**	**11 37 45.2**	**-1.4**	
MDO	**Dochfour**	**97.33**	**28**	⇓*eP*	**P**	**11 37 45.2**	**-1.4**	
GIVF	**Givet**	**97.36**	**37**	⇓*iP*	**P**	**11 37 46.3**	**-0.6**	
	comp=Z,127nm,0.7s,mb6.0							
GIVF				*epP*	pP	11 39 52.4	+0.3	
GIVF	**Givet**	**97.36**	**37**	⇓*iP*	**P**	**11 37 46.3**	**-0.6**	
GIVF				*e**PP	pP	11 39 52.4	+0.3	
GIVF				pmax	pmax			
	comp=Z,63nm,0.7s,mb6.0							
GIVF	**Givet**	**97.36**	**37**	⇓*iP*	**P**	**11 37 46.3**	**-0.6**	
	comp=Z,64nm,0.7s,mb6.0							
GIVF				*epP*	pP	11 39 52.4	+0.3	
MOF	**Molkenrain**	**97.42**	**40**	*eP*	**P**	**11 37 47.0**	**-0.3**	
BBS	**Basel-Blauen**	**97.44**	**40**	*eP*	**P**	**11 37 47.4**	**0.0**	
UCC	**Uccle**	**97.49**	**36**	P	**P**	**11 37 46.2**	**-1.3**	
UCC				PP	PP	11 41 49.1	-5.9	
RSC	**Scourie**	**97.58**	**27**	P	Pdif	11 37 46.7	-1.6	
RSC	**Scourie**	**97.58**	**27**	⇓*eP*	Pdif	11 37 46.7	-1.6	
ECH	**Echery**	**97.63**	**39**	*eP*	Pdif	11 37 48.0	-0.5	
ECH	**Echery**	**97.63**	**39**	*eP*	Pdif	11 37 47.9	-0.6	
ECH				*e*		11 41 52.2		
ECH				pmax	pmax			
	comp=Z,90nm,0.9s,mb6.1							
ECH	**Echery**	**97.63**	**39**	*eP*	Pdif	11 37 47.9	-0.5	
	comp=Z,90nm,0.9s							
ECH				*ePP*	PP	11 41 52.2	-3.8	
MVH1	**Achvaich**	**97.71**	**27**	P	Pdif	11 37 47.1	-1.7	
MVH1	**Achvaich**	**97.71**	**27**	⇓*eP*	Pdif	11 37 47.1	-1.7	
BCLA	**Clavier**	**97.79**	**37**	P	Pdif	11 37 48.4	-0.7	
	comp=Z,55nm,1.8s							
BCLA				PP	PP	11 41 53.1	-4.1	
CDF	**Champ du Feu**	**97.80**	**39**	⇓*iP*	Pdif	11 37 48.4	-0.8	
	comp=Z,271nm,1.1s							
CDF	**Champ du Feu**	**97.80**	**39**	⇓*iP*	Pdif	11 37 48.4	-0.8	
CDF				pmax	pmax			
	comp=Z,135nm,1.1s,mb6.2							
CDF	**Champ du Feu**	**97.80**	**39**	⇓*iP*	Pdif	11 37 48.4	-0.8	
	comp=Z,135nm,1.1s							
MME1	**Meikle Cairn**	**97.84**	**28**	P	Pdif	11 37 47.2	-2.2	
MME1	**Meikle Cairn**	**97.84**	**28**	⇓*eP*	Pdif	11 37 47.2	-2.2	
WLF	**Walferdange**	**97.84**	**38**	P	Pdif	11 37 49.4	-0.1	
	comp=Z,12nm,1.3s							
WLF	**Walferdange**	**97.84**	**38**	*ePdiff*	Pdif	11 37 49.5	+0.1	
WLF				*epPdiff*		11 39 55.3		
WLF				*e*		11 54 53.0		
WLF	**Walferdange**	**97.84**	**38**	*eP*	Pdif	11 37 49.2	-0.2	
WLF				pmax	pmax			
	comp=Z,162nm,0.9s,mb6.4							
WLF	**Walferdange**	**97.84**	**38**	*ePdif*	Pdif	11 37 49.2	-0.2	
	comp=Z,162nm,0.9s							
LIBD	**Limburg**	**97.85**	**40**	*eP*	Pdif	11 37 49.4	-0.1	
MCD	**Coleburn Disti**	**97.88**	**28**	P	Pdif	11 37 47.9	-1.7	
MCD				AMB	AMB	11 37 51.6		
	comp=Z,131nm,3.7s							
MCD	**Coleburn Disti**	**97.88**	**28**	*eP*	Pdif	11 37 47.9	-1.7	
MCD				AMB	AMB	11 37 51.6		
	comp=Z,131nm,3.7s							
FELD	**Feldberg im Sc**	**97.94**	**40**	*eP*	Pdif	11 37 49.5	-0.3	
YKA	**Yellowknife Ar**	**97.98**	**339**	P	Pdif	11 37 48.5	-1.5	
	comp=Z,38nm,0.6s,baz=126,slow=4.5,SNR=457							
YKA				pP	pP	11 39 55.0	+0.4	
	comp=Z,8.1nm,0.6s,baz=129,slow=4.3,SNR=10							
YKA				sP	sP	11 40 53.3	+1.9	
	comp=Z,6.0nm,0.7s,baz=120,slow=11,SNR=4.0							
YKA				PKIKP	PKiKP	11 42 19.0	+0.1	
	comp=Z,2.5nm,0.7s,baz=144,slow=1.6,SNR=8.5							
YKA				PKKPbc	PKKPbc	11 54 18.5	-3.6	
	comp=Z,0.8nm,0.4s,baz=318,slow=3.1,SNR=4.6							
YKA				SKKP		11 56 55.9		
	comp=Z,8.5nm,1.0s,baz=326,slow=4.5,SNR=11							
YKA				PKPPKP		12 02 33.3		
	comp=Z,0.8nm,0.8s,baz=298,slow=2.7,SNR=3.9							
YKA	**Yellowknife Ar**	**97.98**	**339**	P	Pdif	11 37 48.5	-1.5	
YKA				*PP	pP	11 39 55.0	+0.4	
YKA				*SP	sP	11 40 53.3	+1.9	
YKA				pmax	pmax			
	comp=Z,38nm,0.6s							
YKA	**Yellowknife Ar**	**97.98**	**339**	P	Pdif	11 37 48.5	-1.5	
YKA				pP	pP	11 39 55.0	+0.4	
YKA				sP	sP	11 40 53.3	+1.9	
TUE	**Stuetta**	**98.00**	**42**	*ePdif*	Pdif	11 37 50.1	-0.1	
	comp=Z,50nm,0.6s							
BEBN	**Eben Emael**	**98.19**	**37**	P	Pdif	11 37 50.2	-0.7	
BEBN				PP	PP	11 41 56.5	-3.7	
MEM	**Membach**	**98.27**	**37**	P	Pdif	11 37 50.9	-0.4	
MEM				PKKP	PP	11 41 56.6	-4.3	
HGN	**Heimansgroeve**	**98.31**	**37**	⇓*eP*	Pdif	11 37 50.8	-0.7	
	comp=Z,77nm,1.3s							
HGN	**Heimansgroeve**	**98.31**	**37**	*ePP*	PP	11 41 57.2	-3.9	
BFO	**Black Forest**	**98.36**	**40**	*ePdiff*	Pdif	11 37 51.4	-0.3	
BFO				*epPdiff*		11 39 57.3		
BFO				*ePP*	PP	11 41 57.8	-3.7	
RUP	**Ruppelstein**	**98.36**	**38**	*eP*	Pdif	11 37 51.7	0.0	
LANF	**Langenberg**	**98.40**	**39**	*eP*	Pdif	11 37 51.3	-0.6	
AQU	**L'Aquila**	**98.50**	**47**	*eP*	Pdif	11 37 52.3	0.0	
SPAK	**Spaichingen-Ko**	**98.50**	**40**	*eP*	Pdif	11 37 52.0	-0.4	
ABPO	**Ambohimpanom**	**98.60**	**116**	*eP*	Pdif	11 37 51.9	-0.9	
ABPO				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb5.2							
ABPO	**Ambohimpanom**	**98.60**	**116**	*ePdif*	Pdif	11 37 51.9	-0.9	
	comp=Z,10nm,0.9s							
DAVA	**Damuels**	**98.73**	**41**	*i* Pdiff	Pdif	11 37 53.4	+0.1	
	comp=Z,68nm,0.8s,SNR=23							
KMBO	**Kilima Mbogo**	**98.81**	**96**	P	Pdif	11 37 56.5	+2.7	
	comp=Z,1.3nm,0.5s,baz=180,slow=24,SNR=6.9							
KMBO	**Kilima Mbogo**	**98.81**	**96**	*ePdif*	Pdif	11 37 57.1	+3.4	
	comp=Z,34nm,1.6s							
CUC	**Castrocucco**	**99.00**	**50**	*ePdif*	Pdif	11 37 53.6	-1.0	
	comp=Z,19nm,1.4s							
CUC				*epP*	pP	11 39 59.8	0.0	
CUC				*esP*	sP	11 40 56.0	-0.6	
CUC				*ePP*	PP	11 41 55.3	-11	
STU	**Stuttgart**	**99.08**	**40**	*ePdif*	Pdif	11 37 54.9	0.0	
STU				*ePP*	PP	11 42 02.9	-4.0	
STU	**Stuttgart**	**99.08**	**40**	*eP*	Pdif	11 37 54.6	-0.3	
STU				*e*		11 42 02.2		
STU				pmax	pmax			
	comp=Z,70nm,1.0s,mb6.0							
STU	**Stuttgart**	**99.08**	**40**	*ePdif*	Pdif	11 37 54.6	-0.3	
	comp=Z,70nm,1.0s							
STU				*ePP*	PP	11 42 02.2	-4.8	
FETA	**Feichten**	**99.10**	**42**	*i* Pdiff	Pdif	11 37 55.1	+0.1	
	comp=Z,52nm,1.0s,SNR=21							
RETA	**Reutte**	**99.35**	**41**	⇓*iPdif*	Pdif	11 37 56.1	0.0	
	comp=Z,122nm,2.2s,SNR=17							
BUG	**Bochum--Univer**	**99.39**	**37**	*ePdif*	Pdif	11 37 55.9	-0.4	
BUG				*ePP*	PP	11 42 05.7	-3.5	
TNS	**Taunus Mts**	**99.40**	**38**	*ePdif*	Pdif	11 37 56.4	+0.1	
TNS				*ePP*	PP	11 42 05.4	-3.9	
WTSB	**Winterswijk**	**99.41**	**36**	⇓*eP*	Pdif	11 37 55.9	-0.5	
	comp=Z,138nm,2.0s							
WTSB	**Winterswijk**	**99.41**	**36**	*ePP*	PP	11 42 04.5	-4.9	
MOTA	**Moosalm**	**99.48**	**42**	⇓*iPdif*	Pdif	11 37 56.7	0.0	
	comp=Z,34nm,0.7s,SNR=17							
WATA	**Walderalm**	**99.75**	**42**	⇓*iPdif*	Pdif	11 37 57.9	-0.1	
	comp=Z,6.9nm,0.6s							
WTTA	**Wattenberg**	**99.75**	**42**	⇓*iPdif*	Pdif	11 37 58.0	+0.1	
	comp=Z,64nm,1.0s,SNR=22							
FUR	**Furstenfeldbru**	**99.98**	**41**	*ePdif*	Pdif	11 37 59.1	+0.2	
FUR				*ePP*	PP	11 42 10.2	-3.5	
FUR				*e*		11 54 43.8		
FUR	**Furstenfeldbru**	**99.98**	**41**	*eP*	Pdif	11 37 59.1	+

comp=Z,35nm,1.4s,SNR=12
WERN Wernitzgruen 101.63 39 *e*Pdiff Pdif 11 38 06.7 +0.5
WERN *e*PP PP 11 42 22.4 -3.4
WERN *e* 11 54 36.4
GUNZ Gunzen 101.64 39 *e*Pdiff Pdif 11 38 06.6 +0.3
GUNZ *e*PP PP 11 42 22.3 -3.6
GUNZ *e* 11 54 36.3
NKC Novy Kostel 101.64 39 *e*P Pdif 11 38 06.3 0.0
NKC *e* 11 47 54.5
NKC Novy Kostel 101.64 39 *e*PDIFF Pdif 11 38 06.3 0.0
NKC *ex* x 11 41 08.2
NKC *e*PP PP 11 42 20.2 -5.8
NKC *e*SKS 11 47 54.5
WERD Werda 101.66 39 *e*Pdiff Pdif 11 38 06.7 +0.3
WERD *e*PP PP 11 42 22.4 -3.7
WERD *e* 11 54 36.0
GEC2 GERESS Array S 101.72 41 *e*Pdiff Pdif 11 38 06.5 -0.2
GEC2 *e* 11 54 35.9
NEUB Neuenburg 101.72 38 *e*Pdiff Pdif 11 38 07.1 +0.4
NEUB *e*PP PP 11 42 22.5 -4.0
NEUB *e* 11 54 35.3
TANN Tannenbergstha 101.73 39 *e*Pdiff Pdif 11 38 07.2 +0.5
TANN *e*PP PP 11 42 23.1 -3.5
TANN *e* 11 54 35.7
KHC Kasperske Hory 101.78 41 *e*P Pdif 11 38 06.2 -0.7
KHC *e* 11 47 52.2
KHC *e*PS PS 11 51 46.9 -2.5
KHC Kasperske Hory 101.78 41 *e*Pdif Pdif 11 38 06.2 -0.8
comp=Z,5.3nm,0.8s
KHC Kasperske Hory 101.78 41 *e*PDIFF Pdif 11 38 06.2 -0.7
KHC *e*pP 11 40 13.6
KHC *e*sP 11 41 08.1
KHC *e*PP PP 11 42 20.5 -6.5
KHC *e*SKP 11 45 05.3
KHC *e*SKS 11 47 52.2
KHC *e*PS PS 11 51 46.9 -2.5
KHC *e*PKKP PKKPbc 11 54 10.5 -0.4
ARSA Arzberg 102.09 43 *i* Pdiff Pdif 11 38 08.2 -0.1
comp=Z,25nm,1.6s,SNR=7.5
CLL Collm 102.45 39 *e*Pdiff Pdif 11 38 10.1 +0.2
CLL *e*PP PP 11 42 27.8 -4.1
CLL *e* 11 54 32.2
CLL Collm 102.45 39 *i* P Pdif 11 38 09.7 -0.2
CLL *e* 11 47 56.0
CLL pmax pmax
comp=Z,89nm,1.7s
CLL Collm 102.45 39 *i* Pdif Pdif 11 38 09.7 -0.2
comp=Z,89nm,1.7s
CLL *i* PP PP 11 42 26.8 -5.1
CLL *e*SKS 11 47 56.0
CLL *e*PKKP PKKPbc 11 54 09.0 0.0
CLL Collm 102.45 39⇓ *i* Pdif Pdif 11 38 09.7 -0.2
comp=Z,89nm,1.7s
CLL *i* 11 38 14.9
CLL *e*pPdif 11 40 14.0
CLL *e*sPdif 11 41 13.0
CLL *i* PP PP 11 42 26.8 -5.1
comp=Z,328nm,2.2s
CLL *e*PPlp 11 42 31.0
comp=Z,400nm,24.5s
CLL *e*pPP 11 44 13.0
CLL *e*PPP 11 44 50.0
CLL *e*sPP 11 45 20.0
CLL *e*SKSac SKSac 11 47 56.0 +2.3
CLL *e*SP SP 11 50 42.0 -1.6
CLL *e*PS PS 11 51 47.0 -8.9
CLL *e*sSdiff 11 52 59.0
CLL *e*PKKPbc PKKPbc 11 54 09.0 0.0
CLL *e*sPS 11 54 28.0
CLL *e*SS SS 11 56 27.0 -1.3
CLL *e*sSS 11 59 42.0
CLL *e*SSS 12 00 18.0
CLL *e*SSSS 12 03 48.0
CLL Collm 102.45 39⇑ *i*(P) PKKPdf 11 54 32.0 +16
comp=Z,19nm,1.2s
CLL *e* 11 56 35.0
CONA Conrad Observa 102.60 43⇑ *i* Pdiff Pdif 11 38 10.5 0.0
comp=Z,29nm,1.9s,SNR=10.0
PRA Prague 102.70 40 PDIFF Pdif 11 38 12.0 +1.0
PRA PP PP 11 42 31.0 -2.8
PRA SKS 11 47 59.0
PRU Pruhonice 102.73 40 *e*P Pdif 11 38 11.9 +0.7
PRU *e* 11 42 29.9
PRU *e* 11 47 58.7
PRU *e*PS PS 11 51 53.2 -5.3
PRU Pruhonice 102.73 40 *e*PDIFF Pdif 11 38 11.9 +0.7
PRU *ex* x 11 40 24.5
PRU *e*sP 11 41 12.4
PRU *e*PP PP 11 42 29.9 -4.1
PRU *ex* x 11 45 22.4
PRU *e*SKS 11 47 58.7
PRU *e*PS PS 11 51 53.2 -5.3
PRU *e*PKKP PKKPbc 11 54 08.4 +0.2
BRG Berggiesshubel 102.78 39 *e*Pdiff Pdif 11 38 11.6 +0.2
BRG *e*PP PP 11 42 30.4 -4.0
BRG *e* 11 54 31.0
BRG Berggiesshubel 102.78 39 *e*PDIF Pdif 11 38 11.5 +0.1
comp=Z,38nm,1.6s
BRG pP 11 40 11.0
BRG sP 11 41 13.0
BRG PP PP 11 42 29.0 -5.4
BRG SKS 11 47 57.0
BRG *e*PKKP PKKPbc 11 54 07.9 -0.2
comp=Z,6.5nm,0.7s
BRG SS SS 11 56 28.0 -4.9
BRG Berggiesshubel 102.78 39 *e*P Pdif 11 38 11.5 +0.1
BRG 11 47 57.0
BRG SS SS 11 56 28.0 -4.9
BRG pmax pmax
comp=Z,23nm,1.6s
MUD Monsted U'grnd 102.89 33 *i* P Pdif 11 38 10.7 -1.2
MUD Monsted U'grnd 102.89 33 *i* P Pdif 11 38 10.7 -1.2
MUD *i* 11 41 13.3
SOP Sopron 102.92 43⇓ *e*P Pdif 11 38 12.0 0.0
TREC Trest 102.97 41 *e*P Pdif 11 38 12.3 +0.1
TREC *e*PS PS 11 51 55.2 -5.6
TREC Trest 102.97 41 *e*PDIFF Pdif 11 38 12.3 +0.1
TREC *e*sP 11 41 14.9
TREC *e*PP PP 11 42 29.3 -6.5
TREC *ex* x 11 45 21.4
TREC *e*PS PS 11 51 55.2 -5.6
PVCC Panska Ves 102.98 40 *e*sP 11 41 11.9
PVCC *e*PP PP 11 42 30.4 -5.4
PVCC *e*SKS 11 47 58.4
BER Bergen 103.13 28 *e*P Pdif 11 38 11.9 -1.1
BER *e*PP PP 11 42 33.5 -3.2
BER *e*SKS 11 47 56.7
RES Resolute Bay 103.34 352 PKKPbc PKKPbc 11 54 05.8 -1.3
comp=Z,29nm,1.0s,baz=5.7,slow=2.2,SNR=4.9
RUE Ruedersdorf 103.41 38 *e*PP PP 11 42 34.7 -4.2
ZST Bratislava 103.47 43 *e*PP PP 11 42 35.3 -4.1
FOO Floro 103.64 27 *e*P Pdif 11 38 13.7 -1.5
FOO *e*PP PP 11 42 37.0 -3.3
MODS Modra-Piesok 103.65 43 *e*P Pdif 11 38 16.6 +1.4
MODS *e* 11 42 36.7
MODS Modra-Piesok 103.65 43 PDIF Pdif 11 38 16.6 +1.4
MODS *e*PP PP 11 42 36.7 -4.1
UPC Upice 103.81 40 *e*P Pdif 11 38 16.4 +0.5
UPC Upice 103.81 40 *e*PDIFF Pdif 11 38 16.4 +0.5
UPC *e*PP PP 11 42 35.5 -6.4
DPC Dobruska-Polom 103.92 40 *e*P Pdif 11 38 16.9 +0.5
DPC *e* 11 48 03.3
DPC *e*PS PS 11 52 00.6 -8.9
DPC Dobruska-Polom 103.92 40 *e*PDIFF Pdif 11 38 16.9 +0.5
DPC *e*pP 11 40 22.0
DPC *e*sP 11 41 19.1
DPC *e*PP PP 11 42 36.9 -5.8
DPC *ex* x 11 45 31.2
DPC *e*SKS 11 48 03.3
DPC *e*PS PS 11 52 00.6 -8.9
DPC *ex* x 11 54 25.7
COP Copenhagen 104.14 34 *i* P Pdif 11 38 18.7 +1.3
COP Copenhagen 104.14 34 *i* P Pdif 11 38 18.7 +1.3
MORC Moravsky Berou 104.39 41 *e*P Pdif 11 38 18.3 -0.2
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 104.39 41 *e*Pdif Pdif 11 38 18.3 -0.2
comp=Z,4.7nm,0.8s
MORC Moravsky Berou 104.39 41⇑ *i* P PKKPbc 11 54 03.7 +0.4
KONO Kongsberg 104.62 30 *e*P Pdif 11 38 20.0 +0.4
KONO *e*PP PP 11 42 46.2 -1.4
KONO *e*SKS 11 48 03.7
VYHS Vyhne 104.64 43 *e*Pdif Pdif 11 38 20.0 +0.3
VYHS *e* 11 42 31.7
VYHS *e* 11 42 43.0
VYHS *e* 11 54 22.7
VYHS *e* 11 56 27.0
VYHS *e* 11 58 11.4
VYHS Vyhne 104.64 43 PDIF Pdif 11 38 20.0 +0.3
VYHS *e* 11 42 31.7
VYHS *e*PP PP 11 42 43.0 -5.0
VYHS *e* 11 54 22.7
VYHS *e* 11 56 27.0
VYHS *e* 11 58 11.4
JMIC Jan Mayen 104.76 16 *e*P Pdif 11 38 22.0 +1.8
OKC Ostrava-Krasne 104.77 41 *e*PP PP 11 42 41.8 -7.1
OKC *ex* x 11 45 36.9
OKC *e*SKS SKSac 11 48 07.3 +3.0
OKC *e*XSKS 11 52 04.5
PSZ Piszkesteto 105.06 44⇓ *e*P Pdif 11 38 21.5 0.0
VTS Vitosha 105.15 50⇓ *i*P PKKPdf 11 54 21.5 +11
BSD Bornholm Skovb 105.17 36 *i* P Pdif 11 38 22.9 +0.9
BSD Bornholm Skovb 105.17 36 *i* P Pdif 11 38 22.9 +0.9
KECS Kecovo 105.64 43 *e*Pdif Pdif 11 38 26.0 +1.9
KECS *e* 11 54 18.5
KECS Kecovo 105.64 43 PDIF Pdif 11 38 26.0 +1.9
KECS *e* 11 54 18.5
OJC Ojcow 105.90 42 *e*Pdiff Pdif 11 38 25.9 +0.6
OJC *e*PP PP 11 42 53.1 -4.0
OJC *e*SKSac SKSac 11 48 11.6 +2.3
NB2 NORSAR Subarra105.98 29 P Pdif 11 38 25.2 -0.4
comp=Z,128nm,2.0s,baz=246,slow=4.8
NOA NORSAR Array B 105.98 29 Pdiff Pdif 11 38 24.9 -0.6
comp=Z,1.7nm,0.7s,baz=239,slow=4.7,SNR=5.4
NOA PKiKP PKiKP 11 42 33.4 -0.1
comp=Z,2.7nm,0.8s,baz=247,slow=2.1,SNR=5.5
NOA PP PP 11 42 53.8 -3.6
comp=Z,7.8nm,1.0s,baz=241,slow=7.1,SNR=3.5
NOA PKKP PKKPbc 11 54 11.1 +12
comp=Z,14nm,0.8s,baz=64,slow=4.5,SNR=22
NOA NORSAR Array B 105.98 29 P Pdif 11 38 25.0 -0.6
NOA 11 42 53.8
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA pmax pmax
comp=Z,8.0nm,1.0s
DRGR 106.40 46⇓ *i*P PKKPab 11 54 15.0 +1.8
CRVS Cervenica-Dubn 106.40 43 *e*P Pdif 11 38 28.7 +1.2
CRVS *e* 11 42 58.1
CRVS Cervenica-Dubn 106.40 43 *e*Pdif Pdif 11 38 28.7 +1.2
CRVS *e* 11 42 58.1
CRVS *e* 11 44 51.9
CRVS *e* 11 54 15.5
CRVS *e* 11 56 19.0
CRVS *e* 11 58 03.6
CRVS Cervenica-Dubn 106.40 43 PDIF Pdif 11 38 28.7 +1.2
CRVS *e*PP PP 11 42 58.1 -2.7
CRVS *e* 11 44 51.9
CRVS *e* 11 54 15.5
CRVS *e* 11 56 19.0
CRVS *e* 11 58 03.6
KWP Kalwaria Pacla 107.43 43⇑ *i*P PKKPab 11 54 11.1 +2.6
INK Inuvik 107.75 338 PKKPbc PKKPbc 11 53 52.3 -1.2
comp=Z,28nm,0.6s,baz=318,slow=4.1,SNR=58
INK PKKP PKKPbc 11 54 07.6 +14
comp=Z,15nm,0.9s,baz=318,slow=2.7,SNR=6.3
INK Inuvik 107.75 338 *e*P Pdif 11 38 31.9 -1.6
INK pmax pmax
comp=Z,6.0nm,0.8s
INK Inuvik 107.75 338 *e*Pdif Pdif 11 38 31.9 -1.5
comp=Z,5.9nm,0.8s
DAWY Dawson 108.03 333 *e*Pdif Pdif 11 38 33.3 -1.4
MLR Muntele Rosu 108.04 48⇑ *i*P PKKPab 11 54 08.6 +2.6
BUR08 Bucovina Ar. S 108.29 45 *e*Pdif Pdif 11 38 37.0 +1.1
BURAR Bucovina Array 108.29 45⇓ *i*P PKKPab 11 54 07.3 +2.5
PLOR Plostina 108.62 48⇑ *i*P PKiKP 11 42 38.1 -0.8
VRI Vrincioaia 108.68 48⇓ *i*P PKiKP 11 42 37.7 -1.3
VRI Vrincioaia 108.68 48⇑ *i*P PKKPab 11 54 05.4 +2.3
EGAK Eagle 109.01 334 *e*Pdif Pdif 11 38 37.8 -1.2
comp=Z,3.6nm,0.8s
SUW Suwalki 109.21 39 *e*PKP PKiKP 11 42 39.7 0.0
SUW Suwalki 109.21 39 *e*PKPdf PKiKP 11 42 39.4 -0.3
BOLV Bolvadin 109.28 56 *i* P PKiKP 11 42 40.3 0.0
TIRR Tirgusor 109.35 49 *e*PKPdf PKiKP 11 42 39.8 -0.5
TIRR Tirgusor 109.35 49⇑ *i*P PKiKP 11 42 40.1 -0.2
MENT Mentasta 109.39 331 *e*PKPdf PKiKP 11 42 39.5 -0.2
CFR Carcaliu 109.39 49⇓ *i*P PKiKP 11 42 40.0 -0.3
DOT Dot Lake 109.78 332 *e*PKPdf PKiKP 11 42 39.9 -0.6
CSS Prodhromos 109.84 60 *e*PKPdf PKiKP 11 42 41.4 -0.2
CSS *e*PP PP 11 43 21.9 -3.9
TLCR 109.85 49⇑ *i*P PKiKP 11 42 36.3 -4.9
KIS Kishinev 110.41 47 *e*PKP PKiKP 11 42 40.0 -2.2
KIS Kishinev 110.41 47 *e*PP PP 11 43 23.0 -6.5
KIS *e*pPKP 11 44 40.0
KIS *i* SKS SKSac 11 48 26.0 -2.5
KIS *i* SKKS SKKSac 11 49 29.0 -2.9
KIS Kishinev 110.41 47 *e*PKIKP PKiKP 11 42 40.0 -2.2
KIS *i* 11 48 26.0
KIS *i* 11 53 13.0
BBAL Bala 111.14 55 *i* P PKiKP 11 42 43.7 -0.2
ILAR Eielson Array 111.32 333 Pdiff Pdif 11 38 48.1 -1.2
comp=Z,0.8nm,0.7s,baz=152,slow=2.7,SNR=8.8
ILAR pPdiff 11 40 52.1
comp=Z,1.9nm,0.8s,baz=84,slow=4.6,SNR=4.2
ILAR PKiKP PKiKP 11 42 42.6 -0.8
comp=Z,7.6nm,1.0s,baz=183,slow=1.1,SNR=20
ILAR *e*PP PP 11 43 33.6 -1.8
comp=Z,15nm,0.8s,baz=119,slow=5.3,SNR=4.7
ILAR PKKPbc PKKPbc 11 53 40.1 -2.0
comp=Z,4.0nm,0.7s,baz=278,slow=2.9,SNR=9.9
ILAR PKKPab PKKPab 11 53 51.1 +0.2
comp=Z,4.7nm,1.0s,baz=283,slow=4.1,SNR=5.8
ILAR Eielson Array 111.32 333 P Pdif 11 38 48.2 -1.1
ILAR *i* 11 42 42.6
ILAR 11 43 33.6
ILAR pmax pmax
comp=Z,1.0nm,0.7s
RC01 Rabbit Creek A 111.48 329 *e*PKPdf PKiKP 11 42 43.0 -0.8
RC01 *e*SKPdf SKPdf 11 45 25.3 -0.2
BRTR Keskin Array B 111.58 55 Pdiff Pdif 11 39 03.0 +13
comp=Z,0.9nm,0.7s,baz=231,slow=5.5,SNR=4.2
BRTR PKiKP PKiKP 11 42 43.5 -1.1
comp=Z,14nm,0.7s,baz=212,slow=2.6,SNR=33
BRTR PP PP 11 43 39.0 +1.0
comp=Z,8.9nm,0.9s,baz=224,slow=5.5,SNR=5.2
BRTR PKKPab PKKPab 11 53 51.5 +0.9
comp=Z,4.3nm,0.9s,baz=86,slow=3.8,SNR=7.1
BRTR Keskin Array B 111.58 55 P Pdif 11 39 03.1 +13
BRTR *i* 11 42 43.6
BRTR 11 43 39.0
BRTR pmax pmax
comp=Z,1.0nm,0.7s
DZM Mont Dzumac 111.66 230 *e*PP PP 11 43 31.8 -6.0
comp=Z,502nm,26.8s
DZM *e*SKSac SKSac 11 48 29.7 -5.2
comp=Z,1μm,26.4s
DZM *e*SP SP 11 52 11.0 -3.2
comp=Z,5μm,28.0s
DZM *e*SS SS 11 58 37.3 +6.7
comp=Z,2μm,33.6s
KIEV Kiev 111.73 43 *e*PKIKP PKiKP 11 42 43.3 -1.3
COLA College 111.74 333 *e*PKIKP PKiKP 11 42 42.1 -2.1
MCK McKinley 111.87 331 *e*PKIKP PKiKP 11 42 44.0 -0.5
KDAK Kodiak Island 111.96 325 PKiKP PKiKP 11 42 43.4 -1.4
comp=Z,13nm,0.7s,baz=135,slow=4.3,SNR=3.6
KDAK PKKPbc PKKPbc 11 53 40.0 +0.1
comp=Z,26nm,0.8s,baz=251,slow=2.4,SNR=11
KDAK Kodiak Island 111.96 325 *i* PKIKP PKiKP 11 42 43.4 -1.4
KDAK pmax pmax
comp=Z,13nm,0.7s
MNK Minsk 111.96 39 *e*PKIKP PKiKP 11 42 43.0 -1.9
MNK pmax pmax
comp=Z,190nm,1.5s
MICGM Minsk 111.99 39 *e*P PKiKP 11 42 43.0 -2.0
CDAG Cicekdag 112.09 56 *i* P PKiKP 11 42 44.8 -0.8
TRO Tromso 112.19 22 *e*PP PP 11 43 40.7 -0.7
TRO *e*SS SS 11 58 37.3 0.0
AVNT Avonos 112.20 57 *i* P PKiKP 11 42 45.0 -0.8
YURE YUREGIR 112.20 59 *i* P PKiKP 11 42 46.4 +0.4
YAYL Yayladag 112.33 60 *i* P PKiKP 11 42 46.7 +0.5
TRF Thorofare Moun 112.38 331 *e*PKPdf PKiKP 11 42 43.9 -1.5
TRF *e*PP PP 11 43 40.3 -2.6
BPAW Bear Paw Mtn. 112.84 332 *e*PKPdf PKiKP 11 42 46.1 -0.2
FINES FINESS Array B 112.84 31 Pdiff Pdif 11 38 49.1 -7.1
comp=Z,3.7nm,0.9s,baz=220,slow=13,SNR=3.7
FINES PKiKP PKiKP 11 42 46.0 -0.4
comp=Z,11nm,0.8s,baz=27,slow=0.4,SNR=11
FINES PP PP 11 43 39.8 -6.4
comp=Z,2.4nm,0.6s,baz=8.5,slow=2.8,SNR=2.2
FINES PKKPbc PKKPbc 11 53 35.5 -1.5
comp=Z,10nm,0.5s,baz=72,slow=3.7,SNR=22
FINES PKKPab PKKPab 11 53 44.8 +0.5
comp=Z,16nm,0.7s,baz=96,slow=5.7,SNR=11
FINES FINESS Array B 112.84 31 P Pdif 11 38 49.1 -7.0
FINES *i* 11 42 46.0
FINES 11 53 35.5
FINES 11 53 44.8
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 112.84 31 Pdif Pdif 11 38 49.0 -7.1
FINES PKPdf PKiKP 11 42 46.0 -0.4
FINES PP PP 11 43 39.8 -6.4
FINES PKKPbc PKKPbc 11 53 35.5 -1.5
FINES PKKPab PKKPab 11 53 44.8 +0.6
ANDN Andirin 112.97 58 *i* P PKiKP 11 42 47.5 +0.1
PPLA Purkeypile 113.07 330 *e*PKPdf PKiKP 11 42 46.1 -0.7
KAF Kangasniemi 113.11 31 *e*PKIKP PKiKP 11 42 44.9 -2.0
KAF Kangasniemi 113.11 31 *e*p PS 11 53 33.8 +0.7
comp=Z,12nm,0.5s
COLD Coldfoot 113.29 335 *e*PKPdf PKiKP 11 42 47.1 +0.1
KBS Kingsbay 113.34 12 *e* PP 11 43 38.3 -11
SIM Simferopol' 113.38 50 *d* PKIKP PKiKP 11 42 47.7 -0.2
SIM *e* 11 52 35.0
SIM pmax pmax
comp=Z,44nm,0.8s
KTK1 Kautokeino 113.50 23 *e*PP PP 11 43 50.0 -0.6
ARCES ARCESS Array B 114.40 23 Pdiff Pdif 11 39 08.9 +5.9
comp=Z,4.4nm,0.9s,baz=347,slow=3.7,SNR=5.8
ARCES PKP PKiKP 11 42 47.8 -1.4
comp=Z,5.0nm,0.4s,baz=235,slow=4.1,SNR=71
ARCES PP PP 11 43 53.9 -2.9
comp=Z,11nm,0.9s,baz=247,slow=5.9,SNR=6.0
ARCES PKKPbc PKKPbc 11 53 29.7 -2.3
comp=Z,26nm,0.5s,baz=89,slow=3.8,SNR=80
ARCES PKKPab PKKPab 11 53 36.2 -0.9
comp=Z,48nm,0.8s,baz=85,slow=7.4,SNR=20
ARCES SKKPbc 11 56 20.8
comp=Z,4.8nm,0.7s,baz=89,slow=3.3,SNR=4.6
ARCES ARCESS Array B 114.40 23 Pdif Pdif 11 39 08.9 +5.9
ARCES PKP PKiKP 11 42 47.8 -1.4
ARCES PP PP 11 43 53.9 -2.9
ARCES PKKPbc PKKPbc 11 53 29.7 -2.3
ARCES PKKPab PKKPab 11 53 36.2 -0.9
ARCES SKKPbc 11 56 20.8
MALT Malatya 114.76 58 *e*PKPdf PKPdf 11 42 51.0 +0.2
MALT *e*PP PP 11 43 52.4 -7.7
MALT Malatya 114.76 58⇑ *i*P PKPdf 11 42 51.0 +0.2
MALT Malatya 114.76 58⇑ *i*P PKKPab 11 53 38.7 +2.1
MALT Malatya 114.76 58 P PKPdf 11 42 50.9 +0.1
KEV Kevo 114.96 23 *e*PKIKP PKPdf 11 42 49.4 -0.8
KEV Kevo 114.96 23 *e*p PKKPbc 11 53 25.4 -4.7
JOF Joensuu 115.55 30 *e*PKIKP PKPdf 11 42 50.7 -0.8
JOF Joensuu 115.55 30 *e*p PKKPbc 11 53 26.5 -1.5
comp=Z,6.3nm,0.6s
ANN Anapa 115.63 51 *i* PKIKP PKPdf 11 42 51.6 -0.7
ANN *e* 11 44 01.8
ANN *e* 11 44 59.8
ANN *e* 11 48 48.8
ANN pmax pmax
comp=Z,130nm,1.5s
KOPT Kop Dagi 116.74 57 *i* P PKPdf 11 42 56.0 +1.5
BEST Besiri 116.82 59 *i* P PKPdf 11 42 55.7 +0.9
SOC Sochi 116.97 53 *e*PKIKP PKPdf 11 42 54.7 -0.2
SOC *e* 11 44 14.6
SOC *e*PPP 11 46 48.7
SOC *e*SSS 12 04 10.1
SOC pmax pmax
comp=Z,91nm,0.6s
APA Apatity 117.00 25⇑ *i*PKIKP PKPdf 11 42 53.6 -0.6
APA *e*PS SP 11 53 07.0 +6.0
APA *e*SS SKKSdf 12 00 00.0 -8.1
APA pmax pmax
comp=Z,40nm,0.8s
STKA Stephens Creek 117.02 204 PKP PKPdf 11 42 55.1 -0.4
comp=Z,21nm,0.8s,baz=126,slow=2.0,SNR=30
STKA PP PP 11 44 15.8 +1.6
comp=Z,4.6nm,0.7s,baz=130,slow=14,SNR=4.3
STKA PKKPbc PKKPbc 11 53 20.1 -3.0
comp=Z,16nm,0.6s,baz=342,slow=4.5,SNR=27
STKA Stephens Creek 117.02 204 *e*PKPdf PKPdf 11 42 55.0 -0.5
STKA *e*PP PP 11 44 13.3 -0.9
STKA *e*SKPdf SKPdf 11 45 36.7 -0.5
OBN Obninsk 117.03 39κ *i*PKIKP PKPdf 11 42 54.1 -0.5
OBN *i* 11 48 53.1
OBN *e* 11 54 04.6
OBN SS SS 11 59 41.8 +1.1
OBN pmax pmax
comp=Z,255nm,1.6s
OBN Obninsk 117.03 39 *e*PKPdf PKPdf 11 42 54.1 -0.5
OBN *e*PP PP 11 44 11.6 -3.7
MOS Moscow 117.72 39 *e*PKIKP PKPdf 11 42 53.9 -2.0
MOS *e*PPP 11 46 52.2
MOS *e* 11 48 53.3
MOS pmax pmax
comp=Z,300nm,1.3s
MOS pmax pmax
comp=Z,155nm,0.8s
DBAD Bademkaya 117.85 56 *i* P PKPdf 11 42 57.1 +0.4
DBOC Borcka 117.90 55 *i* P PKPdf 11 42 56.6 -0.1
BBOO Buckleboo 117.93 198 *e*PKPdf PKPdf 11 42 55.8 -1.5
BBOO *e*PP PP 11 44 19.3 -1.0
VSR Storozhevoye 117.99 44 *d* PKIKP PKPdf 11 42 55.5 -1.1
VSR *e*PPP 11 47 08.6
VSR *e* 11 48 54.9
VSR pmax pmax
comp=Z,80nm,0.7s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,300nm,8.2s
VSR pmax pmax
comp=N,80nm,11.0s
VSR pmax pmax
comp=E,180nm,8.8s
DAGI Agillar 118.03 56 *i* P PKPdf 11 42 57.3 +0.3
VORD Divnogorie 118.03 44 *i* PKIKP PKPdf 11 42 55.7 -1.0
VORD *e* 11 48 54.9
VORD pmax pmax
comp=Z,80nm,0.8s
VORD pmax pmax
comp=N,80nm,0.7s
VORD pmax pmax
comp=E,50nm,0.6s
ARTV Artvin 118.06 56 *i* P PKPdf 11 42 56.3 -0.7
AKUT Akutan 118.52 319 *e*PKPdf PKPdf 11 42 57.0 -0.5
UNV Unalaska Valle 118.92 319 *e*PKPdf PKPdf 11 42 57.3 -0.9
DIGO Kars 118.98 57 *i* P PKPdf 11 42 58.3 -0.6
KIV Kislovodsk 119.15 53κ *i*PKIKP PKPdf 11 42 58.9 -0.2
KIV *i* 11 44 34.4
KIV *i* 11 49 03.0
KIV *i* 11 49 18.2
KIV *i* PS PS 11 54 40.3 +13
KIV pmax pmax
comp=Z,118nm,0.8s
KIV Kislovodsk 119.15 53 *e*PKPdf PKPdf 11 42 59.2 +0.1
KIV Kislovodsk 119.15 53 PKPdf PKPdf 11 42 59.2 +0.1
SNR=16
KLMR Klimovskoe 119.19 33 *d* PKIKP PKPdf 11 42 58.5 -0.1
KLMR *e* 11 44 25.9
KLMR pmax pmax
comp=Z,287nm,1.3s
RDF Al-Radifah 119.57 70 *e*P PKPdf 11 43 00.6 +0.2
RDF AMb AMB 11 43 01.4
comp=Z,98nm,0.9s
MIB Mutribah 119.63 69 *e*P PKPdf 11 43 00.2 -0.3
MIB AMb AMB 11 43 01.0
comp=Z,87nm,0.7s
ZEI Tsey 119.81 54 *i* PKIKP PKPdf 11 42 59.9 -0.5
ZEI pmax pmax
comp=Z,48nm,0.8s
GOR Gori 119.82 55 P PKPdf 11 43 02.6 +2.2
QRN Al-Qurain 119.83 71 *e*P PKPdf 11 43 00.4 -0.5
UMR Umm Al-Rimmam119.88 70 *e*P PKPdf 11 43 00.7 -0.2
UMR AMb AMB 11 43 02.0
comp=Z,201nm,0.7s
GNI Garni 119.95 57 *d* PKIKP PKPdf 11 43 01.1 +0.4

GNI	**Garni**	**119.95**	**57**	*e*PKPdf	PKPdf	11 43 01.2	+0.5
GNI	**Garni**	**119.95**	**57**	PKPdf	PKPdf	11 43 01.6	+0.9
	SNR=11						
TBLG	**Delisi**	**120.24**	**56**	PKIKP	PKPdf	11 43 01.4	+0.2
TBLG	**Delisi**	**120.24**	**56**	P	PKPdf	11 43 01.4	+0.2
MTA	**Mtatsminda**	**120.27**	**56**	P	PKPdf	11 43 02.6	+1.3
NWAO	**Narrogin (SRO)**	**120.57**	**180**	PKP	PKPdf	11 43 01.2	-1.1
	comp=Z,29nm,0.6s,baz=179,slow=3.7,SNR=34						
NWAO				PP	PP	11 44 36.8	-1.2
	comp=Z,18nm,0.9s,baz=157,slow=7.6,SNR=4.0						
NWAO				PKKPbc	PKKPbc	11 53 09.9	-0.7
	comp=Z,7.7nm,0.6s,baz=21,slow=3.1,SNR=9.2						
NWAO	**Narrogin (SRO)**	**120.57**	**180**	PKIKP	PKPdf	11 43 01.3	-1.0
NWAO						11 44 36.8	
NWAO				pmax	pmax		
	comp=Z,29nm,0.6s						
NWAO				pmax	pmax		
	comp=Z,19nm,0.9s						
DGRG	**David-gareji**	**120.66**	**56**	P	PKPdf	11 43 02.6	+0.5
FORT	**Forrest**	**121.72**	**191**	*e*PKP	PKPdf	11 42 56.6	-8.0
	comp=Z,72nm,0.5s						
FORT				*e*PKKP	PKKPbc	11 53 02.5	-4.0
FORT	**Forrest**	**121.72**	**191**	*e*PKPdf	PKPdf	11 43 04.0	-0.6
KLBR	**Kellerberrin**	**121.90**	**181**	*e*PKP	PKPdf	11 43 03.9	-1.0
	comp=Z,70nm,0.6s						
KLBR				*e*PP	PP	11 44 38.8	-8.0
KLBR				*e*SKP		11 45 45.9	
KLBR				*e*		11 46 30.1	
KLBR				*e*PKKP	PKKPbc	11 53 02.8	-3.0
MIDW	**Midway**	**122.28**	**288**	*e*PKPdf	PKPdf	11 43 05.4	-0.2
MAK	**Makhachkala**	**122.46**	**54**	*i* PKIKP	PKPdf	11 43 07.8	+2.3
MAK				*e*		11 45 14.4	
MAK				*e*PPP		11 47 40.3	
MAK				*e*		11 49 10.0	
MAK				*e*		11 49 27.2	
MAK				*e*PS	PS	11 54 54.9	-1.7
MAK				pmax	pmax		
	comp=Z,280nm,1.4s						
CTA	**Charters Tower**	**125.32**	**214**	PKP	PKPdf	11 43 11.4	-0.3
	comp=Z,83nm,0.8s,baz=193,slow=1.4,SNR=53						
CTA				pPKP	pPKPdf	11 45 22.4	-2.0
	comp=Z,44nm,1.1s,baz=182,slow=2.1,SNR=6.6						
CTA				PKKPbc	PKKPbc	11 52 53.1	+0.8
	comp=Z,8.1nm,0.7s,baz=279,slow=5.3,SNR=7.4						
CTA	**Charters Tower**	**125.32**	**214**	PKP	PKPdf	11 43 11.4	-0.3
CTA				pPKP	pPKPdf	11 45 22.4	-2.0
CTA				PKKPbc	PKKPbc	11 52 53.1	+0.8
CTAO	**Charters Tower**	**125.32**	**214**	*e*PKIKP	PKPdf	11 43 11.6	-0.1
CTAO				*e*		11 45 09.0	
NAZ	**Nazwa, Dubai**	**125.44**	**77**	PKPdf	PKPdf	11 43 11.7	-0.1
	SNR=12						
ASHO	**Ashiyiah**	**125.71**	**78**	PKPdf	PKPdf	11 43 11.9	-0.4
	SNR=9.2						
ARQ	**Araqi**	**125.73**	**80**	PKPdf	PKPdf	11 43 12.0	-0.4
	SNR=12						
HATD	**Hatta, Dubai**	**125.81**	**78**	PKPdf	PKPdf	11 43 11.9	-0.5
	SNR=8.0						
BSY	**Bisya**	**126.15**	**80**	PKPdf	PKPdf	11 43 12.9	-0.3
	SNR=13						
HOQ	**Hoqain**	**126.49**	**80**	PKPdf	PKPdf	11 43 12.8	-1.0
	SNR=11						
JMDO	**Jabal Madar**	**126.84**	**81**	PKPdf	PKPdf	11 43 13.4	-1.1
	SNR=15						
SMDO	**Samad**	**126.99**	**80**	PKPdf	PKPdf	11 43 14.5	-0.3
	SNR=32						
ASAR	**Alice Springs**	**127.15**	**200**	Pdiff	Pdif	11 40 06.9	+7.2
	comp=Z,0.3nm,0.7s,baz=155,slow=5.0,SNR=5.5						
ASAR				PKP	PKPdf	11 43 14.8	-0.4
	comp=Z,171nm,0.7s,baz=138,slow=1.8,SNR=176						
ASAR				pPKP	pPKPdf	11 45 25.9	-1.9
	comp=Z,28nm,1.0s,baz=150,slow=3.5,SNR=7.9						
ASAR				PKKPbc		11 52 44.2	
	comp=Z,9.3nm,0.6s,baz=342,slow=3.3,SNR=43						
ASAR				PKKP		11 53 26.6	
	comp=Z,1.7nm,0.4s,baz=356,slow=1.8,SNR=7.8						
ASAR				SKKPbc		11 55 40.6	
	comp=Z,2.1nm,0.7s,baz=356,slow=2.7,SNR=4.2						
ASAR	**Alice Springs**	**127.15**	**200**	P	Pdif	11 40 06.9	+7.2
ASAR						11 43 14.8	
ASAR						11 45 25.9	
ASAR				S		11 55 40.7	
ASAR				pmax	pmax		
	comp=Z,171nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,28nm,1.0s						
WBK	**Wadi Bani Khal**	**127.67**	**81**	PKPdf	PKPdf	11 43 16.4	+0.3
	SNR=28						
SOKR	**Solikamsk**	**127.86**	**34***d*	*i* PKIKP	PKPdf	11 43 15.5	+0.2
SOKR				pmax	pmax		
	comp=Z,150nm,1.0s						
BILL	**Bilibino**	**129.38**	**338**	*e*PKIKP	PKPdf	11 43 18.1	+0.2
BILL	**Bilibino**	**129.38**	**338**	*e*PKPdf	PKPdf	11 43 18.1	+0.2
ARU	**Arti**	**129.39**	**38**	*i* PKIKP	PKPdf	11 43 18.5	+0.2
ARU						11 45 30.8	
ARU	**Arti**	**129.39**	**38**	*e*PKPdf	PKPdf	11 43 18.7	+0.4
SVE	**Sverdlovsk**	**130.43**	**37**	*e*PKIKP	PKPdf	11 43 20.4	+0.2
WB2	**Warramunga Arr**	**130.49**	**202**	*e*PKPdf	PKPdf	11 43 21.5	-0.1
WB2				*ep*PKPdf	pPKPdf	11 45 33.8	-0.5
WB2				*e*SKPdf	SKPbc	11 45 51.6	-0.9
WRA	**Warramunga Arr**	**130.50**	**202**	Pdiff	Pdif	11 40 21.2	+6.6
	comp=Z,0.5nm,0.8s,baz=170,slow=3.9,SNR=4.5						
WRA				PKhKP	PKPpre	11 43 13.4	
	comp=Z,16nm,0.6s,baz=232,slow=1.4,SNR=32						
WRA				PKP	PKPdf	11 43 21.6	0.0
	comp=Z,123nm,0.8s,baz=172,slow=1.5,SNR=100						
WRA				pPKP	pPKPdf	11 45 33.5	-0.8
	comp=Z,108nm,1.2s,baz=173,slow=1.5,SNR=12						
WRA				SKPbc	SKPbc	11 45 51.1	-1.4
	comp=Z,438nm,0.9s,baz=159,slow=3.6,SNR=54						
WRA				PKKPbc		11 52 30.6	
	comp=Z,1.8nm,0.5s,baz=336,slow=4.1,SNR=11						
WRA	**Warramunga Arr**	**130.50**	**202**	P	Pdif	11 40 21.2	+6.6
WRA						11 43 21.6	
WRA						11 45 33.5	
WRA						11 45 51.1	
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA				pmax	pmax		
	comp=Z,123nm,0.8s						
WRA	**Warramunga Arr**	**130.50**	**202**	Pdif	Pdif	11 40 21.2	+6.6
WRA				PKP	PKPdf	11 43 13.4	-8.2
WRA				PKP	PKPdf	11 43 21.6	0.0
WRA				pPKP	pPKPdf	11 45 33.5	-0.8
WRA				SKPbc	SKPbc	11 45 51.1	-1.4
WRA				PKKPbc		11 52 30.6	
AB31	**Akbulak array**	**131.24**	**47**	*i* PKHKP	PKPpre	11 43 03.3	
AB31				pmax	pmax		
	comp=Z,30nm,0.4s						
ABKAR	**Akbulak array**	**131.24**	**47**	*e*PKPdf	PKPdf	11 43 22.6	+0.7
ABKAR				*ep*PKPdf	pPKPdf	11 45 35.8	+1.0
COEN	**Coen**	**132.04**	**215**	*e*PKPdf	PKPdf	11 43 24.5	-0.1
COEN				*e*SKPbc	SKPbc	11 45 58.4	+0.3
COEN	**Coen**	**132.04**	**215**	P	pPKPdf	11 45 37.7	+0.4
COEN	**Coen**	**132.04**	**215**	P	PKPdf	11 43 24.4	-0.2
MBWA	**Marble Bar**	**132.21**	**184**	*e*PKPdf	PKPdf	11 43 24.7	-0.1
MBWA				*e*SKPbc	SKPbc	11 45 59.1	+0.6
MBWA				*e*PKKPdf	PKKPdf	11 53 16.3	-1.5
MBWA	**Marble Bar**	**132.21**	**184**	P	pPKPdf	11 45 36.9	-0.6
PMG	**Port Moresby**	**133.47**	**223***c*	*i* PKIKP	PKPdf	11 43 28.4	+1.1
PMG	**Port Moresby**	**133.47**	**223**	P	pPKPdf	11 45 40.6	+0.5
HMDM	**Hanimaadhoo**	**134.03**	**108**	P	PKPdf	11 43 30.6	+2.2
FITZ	**Fitzroy Crossi**	**134.52**	**192**	PKhKP	PKPpre	11 43 22.2	
	comp=Z,6.8nm,0.6s,baz=234,slow=11,SNR=8.4						
FITZ				PKP	PKPdf	11 43 29.2	0.0
	comp=Z,50nm,0.5s,baz=211,slow=2.5,SNR=53						
FITZ				pPKP	pPKPdf	11 45 41.7	-0.2
	comp=Z,24nm,1.1s,baz=259,slow=0.8,SNR=4.1						
FITZ				SKPbc	SKPbc	11 46 05.9	-0.2
	comp=Z,77nm,0.5s,baz=200,slow=3.2,SNR=25						
FITZ	**Fitzroy Crossi**	**134.52**	**192**	P	pPKPdf	11 45 42.6	+0.7
FITZ	**Fitzroy Crossi**	**134.52**	**192**	P		11 45 42.4	
TIXI	**Tiksi**	**134.64**	**355***d*	*i* PKIKP	PKPdf	11 43 26.9	-0.8
TIXI				*e*		11 49 47.8	
TIXI				*e*SS	SS	12 03 12.9	-3.4
TIXI				pmax	pmax		
	comp=Z,89nm,1.4s						
TIXI	**Tiksi**	**134.64**	**355**	*e*PKPdf	PKPdf	11 43 26.4	-1.3
KNA	**Kununurra**	**136.11**	**197**	P	pPKPdf	11 45 46.9	+2.0
BRVK	**Borovoye**	**136.81**	**40***d*	*i* PKIKP	PKPdf	11 43 33.1	+0.8
BRVK	**Borovoye**	**136.81**	**40**	*e*PKPdf	PKPdf	11 43 32.5	+0.2
BRVK				*ep*PKPdf	pPKPdf	11 45 45.8	+0.7
BRVK				*e*SKPbc	SKPbc	11 46 12.4	+0.5
BRVK	**Borovoye**	**136.81**	**40**	PKPdf	PKPdf	11 43 33.4	+1.1
	SNR=20						
BVAR	**Borovoye Array**	**136.88**	**40**	SKPbc	SKPbc	11 46 12.0	-0.1
	comp=Z,9.9nm,0.5s,baz=294,slow=3.9,SNR=5.2						
BVAR				SKKPbc		11 55 04.4	
	comp=Z,15nm,0.9s,baz=100,slow=4.6,SNR=4.1						
SEY	**Seymchan**	**137.03**	**337**	*i* PKIKP	PKPdf	11 43 33.9	+1.5
VOSK	**Vostochnaya**	**137.31**	**40**	PKHKP	PKPpre	11 43 21.6	
VOSK				pmax	pmax		
	comp=Z,150nm,0.9s						
BHJ	**Bhuj**	**137.32**	**84**	*e*PKP	PKPdf	11 43 31.5	-2.7
KAKA	**Kakadu**	**137.86**	**203**	*e*PKP	PKPpre	11 43 23.7	
	comp=Z,60nm,0.6s						
KAKA				*e*SKP		11 46 16.0	
KAKA				*e*		11 49 19.0	
KAKA	**Kakadu**	**137.86**	**203**	*e*PKPdf	PKPpre	11 43 24.9	
KAKA				*e*SKPbc	SKPbc	11 46 15.5	-0.7
TRD	**Trivandrum**	**138.12**	**108**	*e*PKP	PKPdf	11 43 34.6	-1.3
KBL	**Kabul**	**138.52**	**67**	*e*PKPdf	PKPpre	11 43 26.6	
KBL				*e*		11 46 17.6	
CHM	**Chimkent**	**138.71**	**56**	*e*PKPdf	PKPdf	11 43 39.7	+3.6
CHM				*e*SKPab		11 46 28.7	
KK31	**Karatay Array**	**139.28**	**54**	*i* PKHKP	PKPpre	11 43 27.9	
KK31				pmax	pmax		
	comp=Z,28nm,0.6s						
KKAR	**Karatay Array**	**139.28**	**54**	*e*PKPdf	PKPpre	11 43 28.3	
KKAR				*e*SKPbc	SKPbc	11 46 19.3	+0.1
PET	**Petropavlovsk**	**139.45**	**322**	*e*PKHKP	PKPpre	11 43 24.6	
PET				*e*		11 46 38.2	
PET				pmax	pmax		
	comp=Z,300nm,15.3s						
PET				pmax	pmax		
	comp=Z,600nm,5.3s						
PET	**Petropavlovsk**	**139.45**	**322**	*e*PKPdf	PKPpre	11 43 29.4	
PET				*ep*PKPdf	pPKPdf	11 45 49.6	-0.4
PET				*e*SKPbc	SKPbc	11 46 18.2	-1.0
KAD	**Karad**	**139.54**	**95**	*e*PKP	PKPdf	11 43 38.2	-0.2
POO	**Poona**	**139.67**	**93**	*ex*	x	11 43 32.8	
PETK	**Petropavlovsk-**	**139.94**	**322**	PKhKP	PKPpre	11 43 30.4	
	comp=Z,17nm,0.7s,baz=78,slow=7.6,SNR=32						
PETK				PKP	PKPdf	11 43 38.0	0.0
	comp=Z,86nm,0.8s,baz=88,slow=5.6,SNR=37						
PETK				SKPbc	SKPbc	11 46 19.1	-1.5
	comp=Z,46nm,1.0s,baz=81,slow=9.3,SNR=8.5						
PETK	**Petropavlovsk-**	**139.94**	**322**	PKHKP	PKPpre	11 43 30.4	
PETK						11 43 38.0	
PETK				pmax	pmax		
	comp=Z,17nm,0.7s						
PETK				pmax	pmax		
	comp=Z,87nm,0.8s						
PETK				pmax	pmax		
	comp=N,46nm,1.0s						
PALK	**Pallekele**	**140.59**	**113**	*i* PKHKP	PKPpre	11 43 35.3	
PALK	**Pallekele**	**140.59**	**113**	*e*PKPdf	PKPpre	11 43 34.7	
PALK	**Pallekele**	**140.59**	**113**	PKPdf	PKPdf	11 43 42.0	+1.6
	SNR=10.0						
EKS2	**Erkin-Say**	**141.72**	**54**	P	PKPdf	11 43 37.5	-4.0
	SNR=151						
EKS2	**Erkin-Say**	**141.72**	**54**	P		11 54 47.8	
	SNR=18						
EKS2	**Erkin-Say**	**141.72**	**54**	*e*PKPdf	PKPdf	11 43 37.5	-4.0
AML	**Almayashu**	**141.75**	**55**	P	PKPdf	11 43 38.9	-2.7
	SNR=37						
AML	**Almayashu**	**141.75**	**55**	P		11 54 48.3	
	SNR=40						
AML	**Almayashu**	**141.75**	**55**	*e*PKPdf	PKPdf	11 43 37.9	-3.7
SKR	**Severo-Kuril's**	**141.83**	**319**	*e*PKHKP	PKPpre	11 43 37.0	
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,1μm,4.0s						
LATR	**Latur**	**142.04**	**94**	*ex*	PKPdf	11 43 38.4	-4.4
USP	**Ospenovka**	**142.12**	**53**	P	PKPdf	11 43 38.4	-3.8
	SNR=125						
USP	**Ospenovka**	**142.12**	**53**	P		11 54 45.5	
	SNR=8.9						
AAK	**Ala-Archa**	**142.24**	**54**	P	PKPdf	11 43 39.7	-2.7
	SNR=98						
AAK	**Ala-Archa**	**142.24**	**54**	PKP	PKPdf	11 43 40.3	-2.1
	comp=Z,140nm,0.5s,baz=312,slow=0.4,SNR=230						
AAK				SKPbc	SKPbc	11 46 25.4	-1.4
	comp=Z,16nm,0.5s,baz=338,slow=5.4,SNR=2.8						
AAK				SKKPbc		11 54 45.7	
	comp=Z,28nm,0.8s,baz=133,slow=2.4,SNR=27						
AAK	**Ala-Archa**	**142.24**	**54***d*	*i* PKHKP	PKPdf	11 43 38.7	-3.8
AAK	**Ala-Archa**	**142.24**	**54**	*e*PKPdf	PKPdf	11 43 39.6	-2.9
AAK				*ep*PKPdf	pPKPdf	11 45 55.6	+0.2
AAK				*e*SKPbc	SKPbc	11 46 25.6	-1.1
AAK	**Ala-Archa**	**142.24**	**54**	PKPdf	PKPdf	11 43 39.8	-2.6
	SNR=170						
UCH	**Uchtor**	**142.33**	**55**	P	PKPdf	11 43 40.7	-2.0
	SNR=28						
UCH	**Uchtor**	**142.33**	**55**	P		11 54 46.4	
	SNR=11						
UCH	**Uchtor**	**142.33**	**55**	*e*PKPdf	PKPdf	11 43 40.8	-1.8
CHMS	**Chumysh**	**142.35**	**54**	P	PKPdf	11 43 39.9	-2.8
	SNR=115						
CHMS	**Chumysh**	**142.35**	**54**	P		11 54 44.8	
	SNR=15						
AJM	**Ajmer**	**142.44**	**81**	*e*PKP	PKPdf	11 43 40.3	-0.3
KURK	**Kurchatov**	**142.47**	**40**	PKP	PKPdf	11 43 40.4	-2.2
	comp=Z,239nm,0.8s,baz=296,slow=3.5,SNR=74						
KURK				SKPbc	SKPbc	11 46 23.8	-3.2
	comp=Z,15nm,0.5s,baz=309,slow=2.6,SNR=2.0						
KURK				SKKPbc		11 54 43.8	
	comp=Z,3.7nm,0.9s,baz=114,slow=4.2,SNR=5.1						
KURK	**Kurchatov**	**142.47**	**40***d*	*i* PKHKP	PKPdf	11 43 39.1	-3.5
KURK	**Kurchatov**	**142.47**	**40**	*e*PKPdf	PKPdf	11 43 39.7	-2.9
KURK				*ep*PKPdf	pPKPdf	11 45 55.6	0.0
KURK	**Kurchatov**	**142.47**	**40**	PKPdf	PKPdf	11 43 39.3	-3.3
	SNR=217						
KBK	**Karagaybulak**	**142.56**	**54**	P	PKPdf	11 43 41.0	-2.1
	SNR=99						
KBK	**Karagaybulak**	**142.56**	**54**	P		11 54 44.3	
	SNR=9.7						
NVS	**Novosibirsk**	**142.83**	**32**	*e*PKHKP	PKPpre	11 43 39.4	
NVS				pmax	pmax		
	comp=Z,1μm,1.0s						
NVS				pmax	pmax		
	comp=N,157nm,0.6s						
NVS				pmax	pmax		
	comp=E,228nm,0.6s						
KZA	**Kyzart**	**142.89**	**55**	P	PKPdf	11 43 42.7	-1.0
	SNR=398						
KZA	**Kyzart**	**142.89**	**55**	P		11 54 43.5	
	SNR=16						
KZA	**Kyzart**	**142.89**	**55**	*e*PKPdf	PKPdf	11 43 42.6	-1.0
KZA				*ep*PKPdf	pPKPdf	11 45 58.5	+1.9
KZA				*e*SKPbc	SKPbc	11 46 29.8	+1.4
TKM2	**Tokmak 2**	**142.98**	**53**	P	PKPdf	11 43 41.9	-1.8
	SNR=603						
TKM2	**Tokmak 2**	**142.98**	**53**	P		11 54 42.3	
	SNR=15						
TKM2	**Tokmak 2**	**142.98**	**53**	*e*PKPdf	PKPdf	11 43 41.6	-2.2
TKM2				*ep*PKPdf	pPKPdf	11 45 57.3	+0.6
TKM2				*e*SKPbc	SKPbc	11 46 29.2	+0.7
MDRS	**Chennai**	**143.15**	**105**	*ex*	PKPdf	11 43 40.2	-4.7
AKL	**Akola**	**143.19**	**91**	*i*,*i*P	PKPdf	11 43 43.2	-1.5
AKL				*ex*	x	11 43 46.0	
	comp=Z,2μm,1.3s						
HYB	**Hyderabad**	**143.46**	**97**	*i* PKP	PKPdf	11 43 43.5	-1.9
	comp=Z,319nm,0.5s						
HYB				*ep*PKP	pPKPdf	11 45 57.0	-1.3
HYB				*e*SKKP		11 54 39.5	
WSI	**Waingapu**	**143.56**	**186**	P	PKPdf	11 43 45.0	-0.7
ULHL	**Ulahol**	**143.59**	**54**	P	PKPdf	11 43 44.8	0.0
	SNR=330						
ULHL	**Ulahol**	**143.59**	**54**	P		11 54 40.2	
	SNR=15						
KHET	**Khetri**	**143.72**	**78**	*e*PKP	PKPdf	11 43 44.0	-1.5
YAK	**Yakutsk**	**143.76**	**350***d*	*i* PKIKP	PKPdf	11 43 43.2	-1.3
YAK				*e*		11 47 01.6	
YAK				*e*		11 50 04.3	
YAK				pmax	pmax		
	comp=Z,2μm,0.9s						
YAK				pmax	pmax		
	comp=E,71nm,1.0s						
YAK				pmax	pmax		
	comp=N,148nm,0.9s						
YAK				pmax	pmax		
	comp=Z,791nm,2.2s						
YAK				pmax	pmax		
	comp=N,486nm,2.0s						
YAK				pmax	pmax		
	comp=E,121nm,1.9s						
YAK	**Yakutsk**	**143.76**	**350**	*e*PKPbc	PKPdf	11 43 43.3	-1.2
YAK				*e*SKPbc	SKPbc	11 46 30.0	+0.2
KSH	**Kashi**	**143.85**	**59**	*e*PKP	PKPdf	11 43 42.5	-2.9
KSH				AMB	AMB		
	comp=Z,710nm,1.2s						
ZAA0	**Zalesovo Array**	**144.10**	**32**	*e*PKPbc	PKPdf	11 43 44.9	-0.4
ZAA0				*ep*PKPdf	pPKPdf	11 45 58.2	-0.1
ZALV	**Zalesovo Beam**	**144.10**	**32**	PKP	PKPdf	11 43 45.1	-0.3
	comp=Z,756nm,0.5s,baz=303,slow=4.2,SNR=1831						
ZALV				pPKP	pPKPdf	11 45 57.6	-0.8
	comp=Z,245nm,1.1s,baz=289,slow=4.5,SNR=8.4						
ZALV				SKPbc	SKPbc	11 46 30.9	+0.1
	comp=Z,90nm,0.8s,baz=302,slow=2.5,SNR=3.6						
ZALV				SKKPbc		11 54 34.6	
	comp=Z,14nm,0.8s,baz=142,slow=4.1,SNR=8.0						
ZALV	**Zalesovo Beam**	**144.10**	**32**	PKIKP	PKPdf	11 43 45.1	-0.3
ZALV						11 45 57.6	
ZALV				pmax	pmax		
	comp=Z,756nm,0.5s						
DLH	**Dalhousie**	**144.22**	**71**	*e*PKP	PKPdf	11 43 46.0	-0.3
DLH				*ex*	x	11 44 02.0	
TLE	**Tual**	**144.23**	**208**	P	pPKPdf	11 45 59.7	-0.1
TLE	**Tual**	**144.23**	**208**	P	PKPdf	11 43 47.8	+0.9
BHPL	**Bhopal**	**144.24**	**87**	*e*PKP	PKPdf	11 43 46.0	-0.5
MMRI	**Maumere**	**144.35**	**189**	P	PKPdf	11 43 46.5	-0.6
IGBI	**Denpasar**	**144.53**	**177**	P	PKPdf	11 43 48.3	+0.9
BHK	**Bhakra**	**144.56**	**73**	*e*PKP	PKPdf	11 43 45.2	-1.7
BHK				*ex*	x	11 44 17.8	
CISI	**Cisompet, Garu**	**144.72**	**164**	P	pPKPdf	11 45 57.6	-3.1
CISI	**Cisompet, Garu**	**144.72**	**164**	P	PKPdf	11 43 48.0	+0.3
PCJI	**Pacitan**	**144.76**	**170**	P	pPKPdf	11 45 58.9	-1.8
PCJI	**Pacitan**	**144.76**	**170**	P	PKPdf	11 43 48.1	+0.3
JAGI	**Jajag, Banyuwa**	**144.82**	**175**	P	PKPdf	11 43 47.6	-0.3
CLJI	**Cilicap**	**144.84**	**167**	P	PKPdf	11 43 49.1	+1.2
SONA	**Sohna**	**144.85**	**78**	*e*PKP	PKPdf	11 43 47.6	+0.1
SKJI	**Sukabumi**	**144.93**	**162**	P	pPKPdf	11 45 58.6	-2.4
SKJI	**Sukabumi**	**144.93**	**162**	P	PKPdf	11 43 48.5	+0.4
UGM	**Wanagama**	**144.93**	**169**	P	pPKPdf	11 45 58.3	-2.7
	comp=Z,7μmcomp=Z,538nm,1.4s						
UGM	**Wanagama**	**144.93**	**169**	P	pPKPdf	11 45 58.4	-2.6
UGM	**Wanagama**	**144.93**	**169**	P	PKPdf	11 43 48.7	+0.6
NBBI	**Negara**	**144.95**	**176**	P	PKPdf	11 43 48.8	+0.7
GMJI	**Gumukmas**	**144.96**	**174**	P	pPKPdf	11 45 58.9	-2.2
GMJI	**Gumukmas**	**144.96**	**174**	P	pPKPdf	11 45 59.1	-2.0
GMJI	**Gumukmas**	**144.96**	**174**	P	PKPdf	11 43 48.8	+0.7
KRKI	**Karangkates**	**144.97**	**172**	P	pPKPdf	11 45 58.8	-2.3
	comp=Z,750nm,1.4s						
KRKI	**Karangkates**	**144.97**	**172**	P	pPKPdf	11 45 59.5	-1.6
KRKI	**Karangkates**	**144.97**	**172**	P	PKPdf	11 43 49.2	+1.1
YOGI	**Yogyakarta**	**144.99**	**169**	P	pPKPdf	11 45 59.9	-1.2
YOGI	**Yogyakarta**	**144.99**	**169**	P	PKPdf	11 43 48.7	+0.5
KHKI	**Kahang-Kahang**	**145.00**	**178**	P	PKPdf	11 43 48.0	-0.2
PWJI	**Pagerwojo**	**145.02**	**171**	P	pPKPdf	11 45 58.0	-3.2
	comp=Z,6μmcomp=Z,425nm,1.2s						
PWJI	**Pagerwojo**	**145.02**	**171**	P	pPKPdf	11 45 59.9	-1.3
PWJI	**Pagerwojo**	**145.02**	**171**	P	PKPdf	11 43 48.4	+0.2
NDI	**New Delhi**	**145.02**	**78**	*e*PKP	PKPdf	11 43 47.0	-0.8
NDI				*ex*	x	11 54 32.0	
SDNR	**Sundarnagar**	**145.04**	**73**	*e*PKP	PKPdf	11 43 47.9	+0.2
SDNR				*ex*	x	11 45 59.5	
CGJI	**Cibinong**	**145.05**	**160**	P	pPKPdf	11 45 58.8	-2.5
CGJI	**Cibinong**	**145.05**	**160**	P	pPKPdf	11 45 58.7	-2.6
CGJI	**Cibinong**	**145.05**	**160**	P	PKPdf	11 43 48.4	+0.1
BYJI	**Banyuwangi**	**145.09**	**176**	P	PKPdf	11 43 48.7	+0.4
SMLA	**Simla**	**145.19**	**73**	*i* P	PKPdf	11 43 48.0	0.0
SRBI	**Singaraja**	**145.26**	**177**	P	pPKPdf	11 45 59.4	-2.2
SRBI	**Singaraja**	**145.26**	**177**	P	PKPdf	11 43 49.7	+1.1
SJI	**Sawahan**	**145.30**	**171**	P	pPKPdf	11 45 59.9	-1.8
SJI	**Sawahan**	**145.30**	**171**	P	PKPdf	11 43 49.1	+0.4
BJII	**Banjamegara**	**145.35**	**168**	P	pPKPdf	11 46 00.2	-1.6
BJII	**Banjamegara**	**145.35**	**168**	P	pPKPdf	11 46 00.2	-1.6
BJII	**Banjamegara**	**145.35**	**168**	P	PKPdf	11 43 49.4	+0.6
LEM	**Lembang**	**145.38**	**164**	P	pPKPdf	11 46 01.8	0.0
	comp=Z,956nm,1.4s						
LEM	**Lembang**

PTH	**Pithoragarh**	**147.72**	**77**	*e*PKP	PKPdf	11 43 53.4	+1.2
PTH				*ex*	x	11 46 07.4	
VIS	**Vishakhapatnam**	**147.80**	**99**	*e*PKP	PKPdf	11 43 51.5	-1.2
VIS				*i* x	x	11 46 08.4	
BKSI	**Bulukumba**	**147.88**	**186**	P	pPKPbc	11 46 07.0	-0.8
BKSI	**Bulukumba**	**147.88**	**186**	P	pPKPbc	11 46 06.7	-1.1
BKSI	**Bulukumba**	**147.88**	**186**	P	PKPdf	11 43 53.6	+0.6
PDSI	**Padang**	**148.24**	**148**	P	pPKPbc	11 46 08.3	-0.6
	comp=Z,2μm,1.3s						
PDSI	**Padang**	**148.24**	**148**	P	pPKPbc	11 46 08.6	-0.3
PDSI	**Padang**	**148.24**	**148**	P	PKPdf	11 43 53.4	-0.2
NLAI	**Namlea**	**148.50**	**200**	P	pPKPbc	11 46 08.1	-1.5
NLAI	**Namlea**	**148.50**	**200**	P	pPKPbc	11 46 08.4	-1.2
NLAI	**Namlea**	**148.50**	**200**	P	PKPdf	11 43 55.8	+1.8
ALBI	**Allahabad**	**148.58**	**85**	*ex*	PKPdf	11 43 55.0	+1.2
PPI	**Padang Panjang**	**148.60**	**147**	P	pPKPbc	11 46 10.5	+0.6
	comp=Z,620nm,1.4s						
PPI	**Padang Panjang**	**148.60**	**147**	P	pPKPbc	11 46 09.4	-0.5
PPI	**Padang Panjang**	**148.60**	**147**	P	PKPdf	11 43 54.1	-0.1
SDSI	**Sungai Dareh**	**148.67**	**149**	P	pPKPbc	11 46 09.3	-0.8
SDSI	**Sungai Dareh**	**148.67**	**149**	P	pPKPdf	11 46 07.0	-0.4
SDSI	**Sungai Dareh**	**148.67**	**149**	P	PKPdf	11 43 52.9	-1.4
KDI	**Kendari**	**148.88**	**191**	P	pPKPdf	11 46 08.6	+0.8
KDI	**Kendari**	**148.88**	**191**	P	pPKPdf	11 46 08.9	+1.1
KDI	**Kendari**	**148.88**	**191**	P	PKPdf	11 43 55.6	+1.0
SPSI	**Sidrap Palu**	**149.25**	**186**	P	pPKPbc	11 46 11.0	-0.7
SPSI	**Sidrap Palu**	**149.25**	**186**	P	pPKPbc	11 46 11.2	-0.5
SPSI	**Sidrap Palu**	**149.25**	**186**	P	PKPdf	11 43 55.8	+0.6
MNSI	**Mandailing Nat**	**149.27**	**145**	P	pPKPbc	11 46 12.0	+0.3
MNSI	**Mandailing Nat**	**149.27**	**145**	P	pPKPdf	11 46 11.2	+2.8
MNSI	**Mandailing Nat**	**149.27**	**145**	P	PKPdf	11 43 55.2	-0.1
TPI	**Tanjungpandan**	**149.29**	**162**	P	pPKPdf	11 46 11.7	+3.3
TPI	**Tanjungpandan**	**149.29**	**162**	P	PKPdf	11 43 55.9	+0.6
PPBI	**Pangkal Pinang**	**149.39**	**159**	P	pPKPdf	11 46 12.0	+3.4
PPBI	**Pangkal Pinang**	**149.39**	**159**	P	PKPdf	11 43 55.5	+0.1
CLNS	**Chul'man**	**149.46**	**351**	*e*PKHKP	PKPdf	11 43 54.6	+0.5
CLNS				pmax	pmax		
	comp=Z,422nm,0.9s						
CLNS				pmax	pmax		
	comp=N,100nm,0.9s						
CLNS				pmax	pmax		
	comp=E,39nm,0.9s						
SBSI	**Sibolga**	**149.54**	**143**	P	pPKPdf	11 46 09.7	+0.9
SBSI	**Sibolga**	**149.54**	**143**	P	PKPdf	11 43 56.1	+0.4
BKNI	**Bangkinang**	**149.60**	**148**	P	pPKPbc	11 46 12.0	-0.6
BKNI	**Bangkinang**	**149.60**	**148**	P	pPKPbc	11 46 11.5	-1.1
BKNI	**Bangkinang**	**149.60**	**148**	P	PKPdf	11 43 55.3	-0.5
RGRI	**Rengat**	**149.60**	**150**	P	pPKPdf	11 46 12.3	+3.4
RGRI	**Rengat**	**149.60**	**150**	P	PKPdf	11 43 55.9	+0.1
TPTI		**149.96**	**138**	P	pPKPdf	11 46 11.0	+1.5
TPTI		**149.96**	**138**	P	pPKPdf	11 46 10.5	+1.0
TPTI		**149.96**	**138**	P	PKPdf	11 43 56.0	-0.3
KBKI	**Kotabaru**	**150.04**	**179**	P	pPKPdf	11 46 12.3	+2.7
KBKI	**Kotabaru**	**150.04**	**179**	P	PKPbc	11 44 01.7	-0.4
TTSI	**Tana Toraja**	**150.16**	**186**	P	pPKPdf	11 46 10.4	+0.6
TTSI	**Tana Toraja**	**150.16**	**186**	P	PKPdf	11 43 57.3	+0.7
PBKI	**Pangkalan Bun**	**150.22**	**170**	P	pPKPdf	11 46 12.5	+2.6
PBKI	**Pangkalan Bun**	**150.22**	**170**	P	PKPdf	11 43 57.5	+0.8
KOLN	**Koldanda**	**150.52**	**80**	*e*P	PKPdf	11 43 57.0	+0.3
	comp=E,748nm,0.7s						
GUMO	**Guam**	**150.64**	**249**	PKP	PKPdf	11 43 56.9	-0.3
	comp=E,89nm,0.9s,baz=143,slow=8.0,SNR=6.4						
GUMO				PKPbc	PKPbc	11 44 02.8	-0.5
	comp=E,375nm,0.5s,baz=173,slow=4.9,SNR=60						
GUMO				pPKPbc	pPKPbc	11 46 13.7	-1.5
	comp=E,596nm,1.1s,baz=173,slow=3.0,SNR=13						
GUMO	**Guam**	**150.64**	**249**	PKIKP	PKPdf	11 43 56.9	-0.3
GUMO						11 44 02.8	
GUMO				pmax	pmax		
	comp=Z,89nm,0.9s						
GUMO				pmax	pmax		
	comp=Z,375nm,0.5s						
GUMO	**Guam**	**150.64**	**249**	*e*PKPdf	PKPdf	11 43 56.4	-0.9
GUMO				*e*PKPbc	PKPbc	11 44 02.3	-1.1
GUMO				*e*PKPab	PKPab	11 44 13.1	+0.2
DANN	**Dangsing**	**150.72**	**79**	*e*P	PKPdf	11 43 58.0	+1.0
	comp=Z,2μm,0.8s						
LBMI	**Labuha**	**150.81**	**202**	P	pPKPdf	11 46 12.4	+1.5
LBMI	**Labuha**	**150.81**	**202**	P	pPKPdf	11 46 12.3	+1.4
LBMI	**Labuha**	**150.81**	**202**	P	PKPdf	11 43 57.7	+0.1
BWNR	**Bhubaneshwar**	**150.90**	**96**	*e*PKP	PKPdf	11 43 57.0	-0.5
BWNR				*ex*	x	11 45 14.0	
TSI	**Tuntungan**	**150.97**	**140**	P	pPKPbc	11 46 16.2	+0.2
TSI	**Tuntungan**	**150.97**	**140**	P	pPKPdf	11 46 11.8	+0.7
YUK	**Yuzh-Kuril'sk**	**150.97**	**314**	⇓*i*PKIKP	PKPdf	11 43 49.8	-7.1
YUK				*i*		11 45 57.9	
YUK				*i*		11 47 00.0	
YUK				*i* SS	SS	12 06 26.2	+2.5
WMQ	**Urumqi**	**151.03**	**47**	PKPbc	PKPdf	11 43 58.0	+1.0
WMQ				pPKP	pPKPdf	11 46 06.0	-4.3
WMQ				sPKP		11 46 58.0	
WMQ				PP	PP	11 47 50.0	+2.4
WMQ				SKS	SKSdf	11 50 13.0	+2.2
WMQ				SKKS	SKKSac	11 53 44.0	+3.0
WMQ				SS	SS	12 06 26.0	+1.6
WMQ				AMB	AMB		
	comp=Z,880nm,11.0s						
YSS	**Yuzh-Sakhalins**	**151.34**	**321**	κ *i*PKIKP	PKPdf	11 43 57.0	-0.4
YSS				*i*		11 44 03.5	
YSS				*e*		11 44 13.8	
YSS				*e*		11 46 10.0	
YSS				*e*		11 47 10.0	
YSS				*e*		11 47 44.0	
YSS				*e*		12 06 26.0	
YSS				pmax	pmax		
	comp=Z,110nm,1.0s						
YSS				pmax	pmax		
	comp=Z,1μm,6.0s						
YSS				pmax	pmax		
	comp=Z,530nm,1.0s						
YSS				pmax	pmax		
	comp=Z,900nm,4.0s						
YSS	**Yuzh-Sakhalins**	**151.34**	**321**	*e*PKPdf	PKPdf	11 43 56.7	-0.6
YSS				*e*PKPbc	PKPbc	11 44 03.7	-0.3
YSS				*e*PKPab	PKPab	11 44 14.5	-0.5
GKN	**Gorkha**	**151.46**	**80**	*e*P	PKPdf	11 43 58.3	+0.1
LUWI	**Luwuk**	**151.70**	**193**	P	pPKPdf	11 46 14.0	+1.7
LUWI	**Luwuk**	**151.70**	**193**	P	PKPdf	11 43 59.7	+0.7
DMN	**Daman**	**151.84**	**81**	*e*P	PKPdf	11 43 59.2	+0.5
KKN	**Kakani**	**152.01**	**81**	*e*P	PKPdf	11 43 59.2	+0.2
	comp=Z,857nm,0.9s						
PKIN	**Phulchoki**	**152.09**	**81**	*e*P	PKPdf	11 43 59.5	+0.4
	comp=Z,382nm,0.8s						
PKI	**Pulchoki**	**152.10**	**81**	*e*P	PKPdf	11 43 59.4	+0.3
	comp=Z,447nm,0.7s						
KGM	**Kluang**	**152.14**	**150**	P	PKPdf	11 44 00.4	+0.8
MYKOM	**Kota Tinggi**	**152.17**	**151**	P	PKPdf	11 44 00.1	+0.5
MYKOM	**Kota Tinggi**	**152.17**	**151**	P	pPKPdf	11 46 13.5	+0.5
MYKOM	**Kota Tinggi**	**152.17**	**151**	P	PKPdf	11 44 00.0	+0.3
TNTI	**Ternate**	**152.17**	**203**	P	pPKPdf	11 46 11.5	-1.5
TNTI	**Ternate**	**152.17**	**203**	P	pPKPdf	11 46 13.0	0.0
TNTI	**Ternate**	**152.17**	**203**	P	PKPdf	11 43 59.1	-0.6
PCI	**Palu**	**152.27**	**187**	P	PKPdf	11 44 01.4	+1.6
FRIM	**Kepong**	**152.40**	**146**	P	PKPdf	11 44 00.9	+0.9
MOY	**Mondy**	**152.46**	**22**	*e*PKIKP	PKPdf	11 43 59.6	+0.8
MOY				pmax	pmax		
	comp=Z,585nm,2.2s						
GUN	**Gumba**	**152.55**	**81**	*e*P	PKPdf	11 44 00.3	+0.5
JMP	**Maruseppu**	**152.57**	**316**	P	PKPdf	11 43 58.7	-0.6
JWK2	**Keihoku**	**152.76**	**319**	P	PKPdf	11 44 07.2	+7.7
JIRN	**Jiri**	**152.80**	**81**	*e*P	PKPdf	11 44 00.4	+0.3
STKI	**Sintang**	**152.90**	**168**	P	pPKPdf	11 46 13.8	-0.3
STKI	**Sintang**	**152.90**	**168**	P	PKPdf	11 44 01.5	+0.8
IRK	**Irkutsk**	**152.92**	**17**	*e*PKIKP	PKPdf	11 44 00.0	+0.5
IRK				*e*		11 46 15.2	
IRK				*e*		11 47 59.9	
IRK				pmax	pmax		
	comp=Z,880nm,2.1s						
ASAJ	**Asahikawa**	**152.99**	**316**	PKP	PKPdf	11 44 00.2	+0.4
	comp=Z,89nm,1.0s,baz=256,slow=9.0,SNR=37						
ASAJ				PKPbc	PKPbc	11 44 07.6	-0.1
	comp=Z,132nm,0.9s,baz=273,slow=1.4,SNR=21						
ASAJ				PKPab	PKPab	11 44 22.1	0.0
	comp=Z,97nm,0.9s,baz=61,slow=4.0,SNR=6.4						
ASAJ				pPKP	pPKPdf	11 46 14.7	+1.4
	comp=Z,45nm,1.0s,baz=235,slow=6.3,SNR=6.2						
ASAJ	**Asahikawa**	**152.99**	**316**	PKIKP	PKPdf	11 44 00.3	+0.4
ASAJ						11 44 07.6	
ASAJ						11 44 22.1	
ASAJ						11 46 14.7	
ASAJ				pmax	pmax		
	comp=Z,89nm,1.0s						
ASAJ				pmax	pmax		
	comp=Z,132nm,0.9s						
ASAJ	**Asahikawa**	**152.99**	**316**	*e*PKPdf	PKPdf	11 43 59.7	-0.1
ASAJ				*e*PKPbc	PKPbc	11 44 07.9	+0.1
ASAJ				*e*PKPab	PKPab	11 44 21.6	-0.4
ASAJ	**Asahikawa**	**152.99**	**316**	P	PKPdf	11 44 00.4	+0.5
KMSI	**Cibinong**	**153.00**	**196**	P	pPKPbc	11 46 20.1	-0.7
KMSI	**Cibinong**	**153.00**	**196**	P	PKPdf	11 44 00.9	0.0
RAMN	**Ramite**	**153.09**	**83**	*e*P	PKPdf	11 44 01.2	+0.6
	comp=Z,606nm,0.7s						
IPM	**Ipoh**	**153.14**	**143**	P	PKPdf	11 44 01.6	+0.6
IPM	**Ipoh**	**153.14**	**143**	*e*PKPdf	PKPdf	11 44 00.9	-0.2
IPM				*e*PKPbc	PKPbc	11 44 08.9	-0.1
IPM				*e*PKPab	PKPab	11 44 23.9	+0.4
IPM	**Ipoh**	**153.14**	**143**	P	pPKPbc	11 46 20.9	-0.2
IPM	**Ipoh**	**153.14**	**143**	P	pPKPdf	11 46 14.6	+0.2
IPM	**Ipoh**	**153.14**	**143**	P	PKPdf	11 44 01.3	+0.3
TLY	**Talaya**	**153.26**	**18**	*i* PKIKP	PKPdf	11 43 59.2	-0.8
TLY				*e*		11 44 06.9	
TLY				*e*		11 44 21.1	
TLY				*e*		11 46 15.2	
TLY				pmax	pmax		
	comp=Z,40nm,1.0s						
TLY	**Talaya**	**153.26**	**18**	*e*PKPdf	PKPdf	11 44 00.5	+0.5
TLY				*e*PKPbc	PKPbc	11 44 08.8	+0.8
TLY				*e*PKPab	PKPab	11 44 23.0	+0.1
TLY				*e*pPKPdf	pPKPdf	11 46 12.1	-1.3
TLY				*e*PP	PP	11 47 55.6	-3.6
TLY	**Talaya**	**153.26**	**18**	PKPdf	PKPdf	11 44 01.1	+1.1
	SNR=33						
MRSI	**Marisa**	**153.34**	**192**	P	pPKPdf	11 46 14.8	+0.1
MRSI	**Marisa**	**153.34**	**192**	P	PKPdf	11 44 00.1	-1.2
MNI	**Manado**	**153.61**	**198**	P	pPKPdf	11 46 15.2	+0.1
MNI	**Manado**	**153.61**	**198**	P	pPKPdf	11 46 16.9	+1.8
MNI	**Manado**	**153.61**	**198**	P	PKPdf	11 44 01.9	+0.2
KULM	**Kulim**	**153.61**	**141**	P	PKPdf	11 44 02.3	+0.6
KULM	**Kulim**	**153.61**	**141**	*e*PKPdf	PKPdf	11 44 01.6	-0.1
KULM				*e*PKPbc	PKPbc	11 44 09.8	-0.2
KULM				*e*PKPab	PKPab	11 44 25.3	-0.2
KULM				*e*pPKPdf	pPKPbc	11 46 15.4	-6.8
KULM				*e*PP	PP	11 47 58.9	-2.8
KULM	**Kulim**	**153.61**	**141**	P	pPKPbc	11 46 22.1	-0.1
KULM	**Kulim**	**153.61**	**141**	P	pPKPdf	11 46 15.9	+0.8
KULM	**Kulim**	**153.61**	**141**	P	PKPdf	11 44 02.2	+0.5
ERM	**Erimo**	**153.65**	**312**	*e*PKIKP	PKPdf	11 44 00.2	-0.7
ERM				*e*		11 44 08.8	
ERM				*e*		11 44 24.9	
JEM	**Erimo**	**153.65**	**312**	P	PKPdf	11 44 02.0	+1.1
ODAN	**Odare**	**153.78**	**83**	*e*P	PKPdf	11 44 02.1	+0.6
CAL	**Calcutta**	**153.80**	**93**	⇓*i*P	PKPdf	11 44 00.4	-1.3
CAL				*ex*	x	11 46 17.7	
KSM	**Kuching**	**154.03**	**165**	P	PKPdf	11 44 02.8	+0.5
KSM	**Kuching**	**154.03**	**165**	*e*PKPdf	PKPdf	11 44 01.9	-0.4
KSM				*e*PKPbc	PKPbc	11 44 10.7	-0.2
KSM				*e*PKPab	PKPab	11 44 26.8	-0.4
KSM				*e*pPKPdf	pPKPdf	11 46 12.4	-3.3
KSM	**Kuching**	**154.03**	**165**	P	pPKPdf	11 46 17.0	+1.3
KSM	**Kuching**	**154.03**	**165**	P	PKPdf	11 44 02.7	+0.4
TAPN	**Taplejung**	**154.11**	**82**	*e*P	PKPdf	11 44 02.6	+0.6
	comp=Z,321nm,1.1s						
HABR	**Khabarovsk**	**154.14**	**331**	*d i* PKIKP	PKPdf	11 44 01.6	+0.3
HABR						11 46 12.5	
HABR				*e*		11 48 03.5	
HABR						11 50 16.4	
HABR				*e*PPP		11 51 39.7	
HABR				*e*SS	SS	12 06 58.1	+1.2
HABR				*e*SSS		12 12 59.3	
HABR				pmax	pmax		
	comp=Z,270nm,1.7s						
HABR				pmax	pmax		
	comp=N,68nm,1.7s						
HABR				pmax	pmax		
	comp=E,81nm,1.7s						
ZAK	**Zakamensk**	**154.30**	**20**	*e*PKIKP	PKPdf	11 44 01.6	+0.1
ZAK				*e*		11 44 27.9	
ZAK				*e*		11 46 17.2	
ZAK				*e*		11 48 05.4	
ZAK				pmax	pmax		
	comp=Z,21nm,1.0s						
CIT	**Chita**	**154.72**	**5**	*e*PKIKP	PKPdf	11 44 03.0	+1.0
CIT				*e*		11 44 29.9	
CIT				*e*		11 46 17.3	
CIT				*e*		11 48 05.9	
CIT				pmax	pmax		
	comp=Z,940nm,2.0s						
KLR	**Kul'dur**	**154.82**	**337**	⇑*i*PKIKP	PKPdf	11 43 57.8	-4.4
KLR				*e*		11 44 07.2	
KLR				*e*		11 44 26.0	
KLR				pmax	pmax		
	comp=Z,1μm,8.5s						
KTGM	**Kuala Trenggan**	**154.95**	**146**	P	PKPdf	11 44 04.3	+0.7
JSH	**Shimam**	**155.35**	**316**	P	PKPdf	11 44 02.7	-0.5
SBUM	**Sibu**	**155.36**	**169**	P	pPKPbc	11 46 25.5	-0.5
SBUM	**Sibu**	**155.36**	**169**	P	PKPdf	11 44 04.6	+0.5
JOM	**Ohasama**	**156.02**	**308**	P	PKPab	11 44 45.7	+10
JMM	**Marumori**	**157.00**	**305**	P	PKPdf	11 44 05.2	-0.3
LSA	**Lhasa**	**157.24**	**77**	*e*PKIKP	PKPdf	11 44 07.6	+1.6
LSA				*e*		11 44 41.1	
CBIJ	**Chichi jima**	**157.39**	**276**	PKPab	PKPab	11 44 41.6	0.0
	comp=Z,299nm,0.9s,baz=285,slow=3.2,SNR=8.8						
CBIJ				SKP		11 46 45.2	
	comp=Z,428nm,1.2s,baz=62,slow=4.2,SNR=7.7						
CBIJ	**Chichi jima**	**157.39**	**276**	P	PKPab	11 44 41.6	0.0
HIA	**Hailar**	**157.48**	**355**	*e*PKIKP	PKPdf	11 44 05.1	-0.6
HIA				*e*		11 44 39.2	
SONM	**Songino Array**	**157.50**	**19**	PKP	PKPdf	11 44 06.2	+0.5
	comp=Z,40nm,0.9s,baz=270,slow=0.8,SNR=179						
SONM				PKPab	PKPab	11 44 41.0	-0.3
	comp=Z,41nm,0.6s,baz=308,slow=2.8,SNR=21						
SONM				pPKP	pPKPdf	11 46 17.8	-1.6
	comp=Z,14nm,0.9s,baz=284,slow=1.4,SNR=3.1						
SONM				PP	PP	11 48 18.7	-3.8
	comp=Z,8.7nm,0.9s,baz=270,slow=1.3,SNR=3.2						
SONM	**Songino Array**	**157.50**	**19**	PKIKP	PKPdf	11 44 06.2	+0.5
SONM						11 44 41.0	
SONM						11 46 17.8	
SONM						11 48 18.7	
SONM				pmax	pmax		
	comp=Z,40nm,0.9s						
SONM				pmax	pmax		
	comp=Z,41nm,0.6s						
JYA	**Atsumi**	**157.50**	**307**	P	PKPdf	11 44 10.8	+4.7
SHL	**Shillong**	**157.61**	**88**	*e*PKP	PKPdf	11 44 06.0	-0.6
SHL				*ex*	x	11 46 22.0	
ULN	**Ulaanbaatar**	**157.65**	**17**	*e*PKIKP	PKPdf	11 44 06.3	+0.4
ULN				*e*		11 44 41.6	
ULN				*e*		11 46 20.3	
ULN				*e*		11 48 20.7	
ULN	**Ulaanbaatar**	**157.65**	**17**	PKPdf	PKPdf	11 44 06.8	+0.9
	SNR=62						
JYT	**Yasato**	**158.02**	**301**	P	PKPdf	11 44 06.4	-0.4
MYLDM	**Lahad Datu**	**158.41**	**185**	P	PKPdf	11 44 09.4	+1.5
JSD	**Sado**	**158.77**	**307**	P	PKPdf	11 44 07.2	-0.4
JRY	**Ryogami san**	**159.07**	**301**	P	PKPdf	11 44 07.8	-0.2
JHJ	**Hachijo jima 2**	**159.15**	**293**	PKPab	PKPab	11 44 48.0	-1.2
	comp=Z,113nm,0.9s,baz=262,slow=9.4,SNR=4.0						
JOD2	**Odawara 2**	**159.17**	**299**	P	PKPdf	11 44 07.3	-0.8
IMP	**Imphal**	**159.31**	**91**	*e*PKP	PKPdf	11 44 08.0	-0.6
IMP				*ex*	x	11 46 22.0	
KKM	**Kota Kinabalu**	**159.32**	**178**	P	PKPab	11 44 51.6	+1.6
MJAR	**Matsushiro Arr**	**159.41**	**303**	PKP	PKPdf	11 44 07.4	-1.0
	comp=Z,11nm,0.9s,baz=69,slow=0.6,SNR=28						
MJAR				PKPab	PKPab	11 44 49.6	-0.5
	comp=Z,60nm,0.9s,baz=72,slow=2.3,SNR=32						
MJAR				pPKP	pPKPdf	11 46 22.1	0.0
	comp=Z,28nm,1.3s,baz=153,slow=0.9,SNR=4.8						
MJAR				pPKPab	pPKPab	11 46 55.6	-0.3
	comp=Z,30nm,1.2s,baz=28,slow=1.2,SNR=3.6						
MJAR	**Matsushiro Arr**	**159.41**	**303**	PKIKP	PKPdf	11 44 07.4	-1.0
MJAR						11 44 49.6	
MJAR						11 46 22.2	
MJAR				pmax	pmax		
	comp=Z,11nm,0.9s						
MJAR				pmax	pmax		
	comp=Z,61nm,0.9s						
MAJO	**Matsushiro**	**159.41**	**303**	*e*PKIKP	PKPdf	11 44 07.3	-1.1
MAJO				*e*		11 44 48.8	
MAJO				*e*		11 46 20.8	
MAT	**Matsushiro**	**159.41**	**303**	P	PKPdf	11 44 07.9	-0.5
MDJ	**Mudanjiang**	**159.49**	**333**	PKP	PKPdf	11 44 07.1	-1.1
MDJ				pPKP	pPKPdf	11 46 21.7	-0.2
MDJ				PP	PP	11 48 29.9	-3.4
MDJ	**Mudanjiang**	**159.49**	**333**	*e*PKPdf	PKPdf	11 44 07.2	-1.0
MDJ				*e*PKPab	PKPab	11 44 49.5	-0.5
GTA	**Gaotai**	**161.07**	**44**	PKP	PKPdf	11 44 10.5	+0.4
GTA				PKPab	PKPab	11 44 57.9	+0.7
GTA				pPKP	pPKPdf	11 46 24.3	+0.4
GTA				sPKP		11 47 10.6	
GTA				PP	PP	11 48 42.8	+0.5
GTA				SKKS	SKKSac	11 54 33.1	-1.1
GTA				SS	SS	12 08 07.9	-2.8
GTA				AMB	AMB		
	comp=Z,1μm,9.0s						
CM31	**Chiang Mai Arr**	**161.54**	**113**	*e*PKPdf	PKPdf	11 44 11.5	+0.3
CM31				*e*PP	PP	11 48 44.7	-0.8
CMAR	**Chiang Mai Arr**	**161.54**	**113**	PKP	PKPdf	11 44 11.6	+0.4
	comp=Z,27nm,0.9s,baz=253,slow=2.4,SNR=152						
CMAR				PKPab	PKPab	11 45 00.1	+0.1
	comp=Z,44nm,0.9s,baz=248,slow=4.5,SNR=24						
CMAR				pPKP	pPKPdf	11 46 26.4	+1.3
	comp=Z,58nm,1.3s,baz=252,slow=1.8,SNR=6.1						
CMAR				PP	PP	11 48 45.4	-0.1
	comp=Z,14nm,1.0s,baz=252,slow=6.3,SNR=6.3						
CMAR	**Chiang Mai Arr**	**161.54**	**113**	PKIKP	PKPdf	11 44 11.6	+0.4
CMAR						11 45 00.1	
CMAR						11 46 26.4	
CMAR						11 48 45.4	
CMAR				pmax	pmax		
	comp=Z,27nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,44nm,0.9s						
CN2	**Changchun**	**161.68**	**340**	*e*PKP	PKPdf	11 44 09.6	-1.0
CN2				PKPab	PKPab	11 44 59.1	-0.6
CN2				pPKP	pPKPdf	11 46 18.2	-6.2
CN2				PP	PP	11 48 42.4	-2.4
CN2				SKKS	SKKSac	11 54 34.7	-2.2
CN2				SS	SS	12 08 14.4	-1.2
CN2				AMB	AMB		
	comp=Z,300nm,8.0s						
CHG	**Chiang Mai**	**161.72**	**112**	P	PKPdf	11 44 04.0	-7.3
	comp=Z,15nm,1.2s						
CHTO	**Chiang Mai**	**161.72**	**112**	*e*PKIKP	PKPdf	11 44 11.5	+0.2
CHTO				*e*		11 45 00.3	
CHTO				*e*		11 46 25.1	
CHTO				*e*		11 48 43.6	
CHTO	**Chiang Mai**	**161.72**	**112**	PKPdf	PKPdf	11 44 11.8	+0.5
	SNR=59						
JAD	**Aida**	**163.06**	**303**	P	PKPdf	11 44 12.6	+0.4
JMN	**Monobe**	**163.74**	**299**	P	PKPdf	11 44 13.2	+0.3
JHS	**Saijyo**	**163.82**	**304**	P	PKPdf	11 44 13.1	+0.2
SNY	**Shenyang**	**164.04**	**341**	⇓PKP	PKPdf	11 44 12.8	-0.1
SNY				pPKP	pPKPdf	11 46 21.5	-5.3
SNY				PP	PP	11 48 54.6	-2.4
SNY				AMB	AMB		
	comp=Z,2μm,6.7s						
BTO	**Baotou**	**165.15**	**21**	*e*PKP	PKPdf	11 44 13.2	-0.7
HHC	**Hu-ho-hao-te**	**165.36**	**16**	⇓PKP	PKPdf	11 44 14.8	+0.8
HHC				PKPab	PKPab	11 45 15.2	-0.8
HHC				pPKP	pPKPdf	11 46 29.0	+0.9
HHC				sPKP		11 47 15.5	
HHC				PKS		11 47 46.4	
HHC				PP	PP	11 49 02.6	-1.1
HHC				SKS	SKSdf	11 50 26.4	+1.7
HHC				SKKS	SKKSac	11 54 57.7	+2.1
HHC				AMB	AMB		
	comp=Z,1μm,10.2s						
LZH	**Lanzhou**	**165.61**	**47**	⇑PKP	PKPdf	11 44 15.1	+0.7
LZH				pPKP	pPKPdf	11 46 29.8	+1.4
LZH				sPKP		11 47 22.0	
LZH				PP	PP	11 49 02.0	-4.0
LZH				SKKS	SKKSac	11 54 57.0	-0.3
LZH				AMB	AMB		
	comp=Z,2μm,4.0s						
KSRS	**Korea Array**	**165.84**	**321**	PKP	PKPdf	11 44 14.2	-0.3
	comp=Z,21nm,0.9s,baz=272,slow=0.5,SNR=88						
KSRS				PKPab	PKPab	11 45 18.4	+0.1
	comp=Z,24nm,0.9s,baz=51,slow=4.4,SNR=20						
KSRS				pPKP	pPKPdf	11 46 29.4	+0.9
	comp=Z,80nm,1.2s,baz=56,slow=0.5,SNR=12						
KSRS				pPKPab	pPKPab	11 47 21.2	-2.6
	comp=Z,6.1nm,1.0s,baz=94,sl

TWG				*e*PKPab	PKPab	11 45 53.9	-2.9
TWG				*ep*PKPdf	pPKPdf	11 46 32.6	-1.3
YULB	**Yu-li**	**174.68**	**231**	*e*PKPdf	PKPdf	11 44 18.2	-1.6
YULB				*e*PKPab	PKPab	11 45 57.3	-0.6
YULB				*e*PP	PP	11 49 55.0	+4.3
TPUB	**Ta-pu**	**175.06**	**225**	*e*PKPdf	PKPdf	11 44 20.4	+0.5
TPUB				*e*PKPab	PKPab	11 45 58.4	-1.2
SSLB	**Suanglung**	**175.18**	**232**	*e*PKPdf	PKPdf	11 44 19.9	-0.1
YHNB	**Yeheng**	**175.35**	**243**	*e*PKPdf	PKPdf	11 44 19.4	-0.6
YHNB				*ep*PKPdf	pPKPdf	11 46 34.1	-0.1
WHN	**Wuhan**	**175.72**	**30** ⇓	PKP	PKPdf	11 44 19.7	-0.2
WHN				PKPab	PKPab	11 46 00.7	-1.5
WHN				pPKP	pPKPdf	11 46 33.6	-0.6
WHN				PP	PP	11 49 50.8	-4.1
WHN				SKKS	SKKSac	11 55 44.8	-1.3
WHN				SS	SS	12 10 33.5	-0.6
QZH	**Quanzhou**	**177.53**	**221**	⇑PKP	PKPdf	11 44 18.4	-2.0
QZH				PKPab		11 46 10.1	
QZH				pPKP	pPKPdf	11 46 29.7	-5.0
QZH				PP	PP	11 50 03.0	-0.6
QZH				SKKS	SKKSac	11 55 54.0	-0.8
QZH				AMB	AMB		

comp=Z,1μm,4.0s

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*ISCJB **03** 11:46:52.9±0.8, 38°.30N±0°.06×22°.41E±0°.05, h22km±8km, Error ellipse: s-maj=9.3km s-min=6.4km az=4.8*
*CSEM **03** 11:46:52.5±0.2, 38°.32N×22°.40E, h20km, ML1.4/3, Error ellipse: s-maj=6.0km s-min=3.9km az=33.0*
*THE **03** 11:46:52.8, 38°.31N×22°.41E, h22km±2km, ML1.4/3, Error ellipse: s-maj=2.3km s-min=0.7km az=33.0*
*ATH **03** 11:46:53.4, 38°.23N×22°.30E, h24km±4km, MD2.7/3*
ISC 03 11:46:53.4±0.6, 38°.30N±0°.04×22°.38E±0°.04, h20km±4km, n16, σ0s66/31, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSF	**Desfina**	**0.16**	**47**	P	**Pg**	**11 46 57.6**	**-0.4**
DSF				S	**Sg**	**11 47 00.5**	**-0.7**
DSF	**Desfina**	**0.16**	**47**	P	**Pg**	**11 46 57.6**	**-0.4**
DSF				S	**Sg**	**11 47 00.5**	**-0.7**
KALE	**Kalithea**	**0.21**	**296**	P	**Pg**	**11 46 58.2**	**-0.5**
KALE				S	**Sg**	**11 47 02.5**	**+0.3**
KALE	**Kalithea**	**0.21**	**296**	P	**Pg**	**11 46 58.2**	**-0.5**
KALE				S	**Sg**	**11 47 02.5**	**+0.3**
TRIZ	**Trizonia**	**0.25**	**285**	P	**Pg**	**11 46 58.9**	**-0.4**
TRIZ				S	**Sg**	**11 47 04.3**	**+1.1**
TRIZ	**Trizonia**	**0.25**	**285**	P	**Pg**	**11 46 58.9**	**-0.4**
TRIZ				S	**Sg**	**11 47 04.3**	**+1.1**
LAKA	**Lakka**	**0.32**	**259**	P	**Pg**	**11 46 59.7**	**-0.7**
LAKA				S	**Sg**	**11 47 05.6**	**+0.4**
LAKA	**Lakka**	**0.32**	**259**	P	**Pg**	**11 46 59.7**	**-0.7**
LAKA				S	**Sg**	**11 47 05.6**	**+0.4**
GUR	**Goura**	**0.36**	**184**	*e*PB	**Pb**	**11 47 00.8**	**-0.4**
GUR				*e*SB		11 47 05.4	
GUR	**Goura**	**0.36**	**184**	P	**Pg**	**11 47 00.7**	**-0.5**
GUR				S	**Sg**	**11 47 06.9**	**+0.5**
GUR	**Goura**	**0.36**	**184**	*e*Pb	**Pb**	**11 47 00.8**	**-0.4**
GUR				*e*Sb		11 47 05.4	
GUR				S	**Sg**	**11 47 06.9**	**+0.5**
EFP	**Efpalio**	**0.39**	**289**	*e*PB	**Pb**	**11 47 01.5**	**-0.2**
EFP				*e*SB	**Sb**	**11 47 07.3**	**0.0**
EFP	**Efpalio**	**0.39**	**289**	P	**Pg**	**11 47 01.3**	**-0.4**
EFP				S	**Sg**	**11 47 08.0**	**+0.8**
EFP	**Efpalio**	**0.39**	**289**	*e*Pb	**Pb**	**11 47 01.5**	**-0.2**
EFP				*e*Sb	**Sb**	**11 47 07.3**	**0.0**
EFP				S	**Sg**	**11 47 08.0**	**+0.8**
LTK	**Loutraki**	**0.54**	**121**	*e*PN	**Pb**	**11 47 04.7**	**+0.4**
LTK				*e*SN	**Sb**	**11 47 13.4**	**+1.8**
LTK	**Loutraki**	**0.54**	**121**	*e*Pn	**Pb**	**11 47 04.7**	**+0.4**

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*ISCJB **03** 11:59:43.6±1.8, 13°.29N±0°.06×120°.22E±0°.08, h3km±13km, mb3.8/6, Error ellipse: s-maj=14.2km s-min=8.9km az=23.5*
*IDC **03** 11:59:43.7±1.1, 13°.43N×120°.71E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/23, mbtmp3.7/6, MS3.8/1, Ms1 3.8/1, ms1mx3.3/31, Error ellipse: s-maj=58.9km s-min=18.0km az=62.0*
*MAN **03** 11:59:44, 13°.34N×120°.24E, h2km, mb4.1, ML2.9, MS2.7*
ISC 03 11:59:44.5±1.8, 13°.27N±0°.07×120°.28E±0°.09, h0km±13km, n13, σ1s15/13, mb3.7/6, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.46**	**356**	*e*P	**Pg**	**11 59 51.9**	**-1.4**
TGY	**Tagaytay City**	**1.04**	**38** ⇑	*e*P	**Pg**	**12 00 04.0**	**-0.5**
TGY				*i* S	**Sg**	**12 00 20.2**	**+2.2**
BOAC	**Boac**	**1.53**	**83**	*e*P	**Pn**	**12 00 12.9**	**-0.2**
ENPP	**El Nido**	**2.22**	**202**	*e*P	**Pn**	**12 00 23.2**	**+0.7**
CUYO	**Cuyo Island**	**2.51**	**163**	*e*P	**Pn**	**12 00 27.1**	**+0.6**
BALP	**Baler**	**2.75**	**27**	*e*P	**Pn**	**12 00 29.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**21.16**	**287**	P	**P**	**12 04 34.0**	**+2.7**
	0.6nm,0.3s,mb3.4,baz=94,slow=8.2,SNR=3.9						
CBIJ	**Chichi jima**	**24.68**	**53**	LR	LR	12 14 15.9	
	comp=Z,227nm,19.1s,baz=144,slow=36						
WRA	**Warramunga Arr**	**35.79**	**157**	P	**P**	**12 06 44.3**	**-1.3**
	1.2nm,0.6s,mb3.9,baz=335,slow=9.6,SNR=16						
SONM	**Songino Array**	**36.35**	**344**	P	**P**	**12 06 48.4**	**-1.7**
	1.0nm,0.6s,mb3.8,baz=159,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**39.05**	**160**	P	**P**	**12 07 12.8**	**-0.4**
	1.1nm,0.6s,mb3.7,baz=342,slow=7.1,SNR=34						
KURK	**Kurchatov**	**50.32**	**327**	P	**P**	**12 08 42.9**	**0.0**
	0.3nm,0.3s,mb3.8,baz=123,slow=6.7,SNR=2.9						
BVAR	**Borovoye Array**	**55.90**	**326**	P	**P**	**12 09 24.8**	**+0.9**
	0.7nm,0.6s,mb3.9,baz=101,slow=7.7,SNR=3.8						

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*MAN **03** 12:01:36, 13°.83N×119°.94E, h42km, mb4.5, ML3.4, MS3.3*
*IDC **03** 12:01:38.0±1.2, 13°.49N×120°.69E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/22, mbtmp4.0/5, MS4.3/1, Ms1 4.3/1, ms1mx3.3/33, Error ellipse: s-maj=62.6km s-min=19.7km az=61.0*
*ISCJB **03** 12:01:38.5±1.7, 13°.33N±0°.06×120°.10E±0°.09, h10km±12km, mb4.2/4, Error ellipse: s-maj=15.2km s-min=8.9km az=22.5*
ISC 03 12:01:39.4±1.9, 13°.33N±0°.07×120°.17E±0°.10, h6km±13km, n14, σ0s84/14, mb4.0/5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.41**	**10**	*e*P	**Pg**	**12 01 46.7**	**-0.7**
TGY	**Tagaytay City**	**1.07**	**44** ⇓	*e*P	**Pg**	**12 01 59.6**	**-0.4**
TGY				*i* S	**Sg**	**12 02 14.8**	**+0.8**
BOAC	**Boac**	**1.64**	**85**	*e*P	**Pn**	**12 02 07.2**	**-1.4**
OTRP	**Odiongan**	**2.04**	**118**	*e*P	**Pn**	**12 02 15.7**	**+1.4**
ENPP	**El Nido**	**2.23**	**199**	*e*P	**Pn**	**12 02 17.9**	**+1.1**
CUYO	**Cuyo Island**	**2.60**	**161**	*e*P	**Pn**	**12 02 21.7**	**-0.2**
BALP	**Baler**	**2.76**	**29**	*e*P	**Pn**	**12 02 24.8**	**+0.7**
APYP	**Conner**	**4.63**	**13**	*e*P	**Pn**	**12 02 39.8**	**-10**
CMAR	**Chiang Mai Arr**	**21.04**	**287**	P	**P**	**12 06 28.4**	**+4.3**
	2.0nm,1.0s,mb3.4,baz=95,slow=10,SNR=5.0						
WRA	**Warramunga Arr**	**35.88**	**157**	P	**P**	**12 08 39.1**	**-1.1**
	3.6nm,0.6s,mb4.5,baz=335,slow=9.6,SNR=25						
SONM	**Songino Array**	**36.27**	**344**	P	**P**	**12 08 43.3**	**-0.1**
	0.9nm,0.5s,mb3.9,baz=158,slow=9.0,SNR=3.5						
ASAR	**Alice Springs**	**39.14**	**160**	P	**P**	**12 09 07.5**	**-0.4**
	5.0nm,0.6s,mb4.4,baz=339,slow=6.4,SNR=25						
HNR	**Honiara**	**45.51**	**118**	LR	LR	12 27 34.7	
	comp=Z,312nm,19.6s,baz=323,slow=34						
KURK	**Kurchatov**	**50.21**	**327**	P	**P**	**12 10 36.2**	**+0.2**
	1.0nm,0.7s,mb3.9,baz=125,slow=8.4,SNR=5.5						

IDC 03 12:07:45.7±4.5, 57°.15S×139°.62W, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.7/11, mbtmp3.8/2, Error ellipse: s-maj=769.5km s-min=78.1km az=164.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**68.57**	**259**	P	P	12 18 51.7	+1.6
	0.3nm,0.7s,baz=142,slow=4.7,SNR=5.8						
WRA	**Warramunga Arr**	**71.36**	**262**	P	P	12 19 06.5	-0.7
	2.1nm,0.8s,baz=158,slow=4.1,SNR=15						
MKAR	**Makanchi Array**	**152.61**	**266**	PKPbc	PKPbc	12 27 41.1	-1.9
	1.9nm,0.7s,baz=120,slow=1.4,SNR=12						
ZALV	**Zalesovo Beam**	**155.00**	**282**	PKPbc	PKPbc	12 27 50.1	+2.3
	1.8nm,0.7s,baz=122,slow=1.9,SNR=6.5						

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*ISCJB **03** 12:12:19.4±0.9, 18°.1S±0°.1×178°.1W±0°.1, h602km±12km, mb4.1/15, Error ellipse: s-maj=27.2km s-min=13.9km az=135.5*
*IDC **03** 12:12:19.3±1.8, 17°.94S×178°.14W, h575km±25km, mb3.5/12, mb1 3.7/13, mb1mx3.5/20, mbtmp3.5/13, Error ellipse: s-maj=27.6km s-min=14.3km az=131.0*
*NEIC **03** 12:12:20.2±0.7, 18°.00S×178°.10W, h593km±9km, mb4.4/2, Error ellipse: s-maj=22.2km s-min=11.7km az=139.0*
ISC 03 12:12:20.3±0.9, 18°.0S±0°.1×178°.1W±0°.1, h595km±11km, n27, σ0s69/26, mb4.1/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.72**	**274**	*e*P	**P**	**12 13 44.2**	**+0.7**
AFI	**Afiamalu**	**7.29**	**57**	P	**P**	**12 14 12.4**	**-0.5**
	5.8nm,0.3s,baz=116,slow=14,SNR=6.1						
URZ	**Urewera**	**20.60**	**191**	P	**P**	**12 16 19.1**	**-0.3**
	4.4nm,0.4s,baz=277,slow=7.0,SNR=6.7						
EIDS	**Eidsvold**	**29.54**	**250**	*e*P	**P**	**12 17 37.7**	**-0.7**
	5.6nm,0.6s,mb4.4						
ARMA	**Armidale**	**30.17**	**240**	*e*P	**P**	**12 17 44.4**	**+0.7**
	8.5nm,0.8s,mb4.4						
CTA	**Charters Tower**	**33.76**	**261**	P	**P**	**12 18 13.8**	**-0.5**
	9.4nm,0.6s,mb4.6,baz=87,slow=12,SNR=9.6						
CMSA	**Cobar Meteorol**	**35.38**	**241**	*e*P	**P**	**12 18 28.1**	**+0.5**
QLP	**Quilpie**	**35.81**	**249**	*e*P	**P**	**12 18 31.0**	**-0.1**
COEN	**Coen**	**37.44**	**270**	*e*P	**P**	**12 18 44.7**	**0.0**
STKA	**Stephens Creek**	**38.87**	**241**	P	**P**	**12 18 57.2**	**+1.3**
	11nm,0.6s,mb4.5,baz=88,slow=8.2,SNR=27						
STKA	**Stephens Creek**	**38.87**	**241**	*e*P	**P**	**12 18 56.9**	**+0.9**
	6.9nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**38.87**	**241**	P	**P**	**12 18 57.2**	**+1.2**
BBOO	**Buckleboo**	**43.64**	**241**	*e*P	**P**	**12 19 34.0**	**+0.4**
	9.3nm,0.5s,mb4.6						
WB2	**Warramunga Arr**	**44.93**	**260**	*e*P	**P**	**12 19 42.6**	**-1.0**
WRA	**Warramunga Arr**	**44.94**	**260**	P	**P**	**12 19 42.7**	**-1.0**
	7.6nm,0.5s,mb4.5,baz=94,slow=7.4,SNR=311						
WRA	**Warramunga Arr**	**44.94**	**260**	P	**P**	**12 19 42.7**	**-1.0**
ASAR	**Alice Springs**	**45.08**	**254**	P	**P**	**12 19 44.7**	**-0.1**
	46nm,0.6s,mb5.2,baz=87,slow=8.7,SNR=846						
ASAR				PcP	PcP	12 21 13.3	+0.8
	1.7nm,0.7s,baz=100,slow=4.7,SNR=4.7						
KAKA	**Kakadu**	**47.92**	**269**	*e*P	**P**	**12 20 05.4**	**-0.8**
	13nm,0.5s,mb4.7						
KAKA	**Kakadu**	**47.92**	**269**	*e*P	**P**	**12 20 05.1**	**-1.1**
	21nm,0.4s,mb5.0						
FITZ	**Fitzroy Crossi**	**53.34**	**261**	P	**P**	**12 20 45.2**	**-0.3**
	1.8nm,0.6s,mb3.6,baz=97,slow=8.9,SNR=12						
MJAR	**Matsushiro Arr**	**68.20**	**323**	P	**P**	**12 22 21.6**	**-0.8**
	1.7nm,0.5s,mb3.7,baz=152,slow=5.7,SNR=5.9						
PETK	**Petropavlovsk-**	**73.88**	**345**	P	**P**	**12 22 55.2**	**0.0**
	1.8nm,0.8s,mb3.7,baz=111,slow=10.0,SNR=2.5						
KSRS	**Korea Array**	**75.01**	**318**	P	**P**	**12 23 02.8**	**+0.9**
	0.3nm,0.3s,mb3.2,baz=126,slow=7.6,SNR=3.2						
ILAR	**Eielson Array**	**85.92**	**13**	P	**P**	**12 23 57.6**	**-0.1**
	0.2nm,0.4s,mb3.1,baz=220,slow=5.3,SNR=12						
CMAR	**Chiang Mai Arr**	**89.24**	**290**	P	**P**	**12 24 15.6**	**+1.3**
	1.9nm,1.0s,mb3.9,baz=108,slow=3.4,SNR=9.2						
SONM	**Songino Array**	**93.86**	**319**	P	**P**	**12 24 35.7**	**+0.8**
	0.2nm,0.3s,mb3.7,baz=99,slow=3.6,SNR=2.2						
BRTR	**Keskin Array B**	**145.10**	**315**	PKP	PKPdf	12 30 52.6	+1.7
	1.8nm,0.6s,baz=128,slow=3.8,SNR=10						

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*BJI **03** 12:15:58.0, 10°.37S×161°.62E, h95km, mB5.2/21, mb5.1/45*
*ISCJB **03** 12:15:59.5±0.1, 10°.34S±0°.04×161°.20E±0°.03, h89km, mb5.2/123, Error ellipse: s-maj=5.3km s-min=3.9km az=164.9*
*IDC **03** 12:16:00.5±0.5, 10°.42S×161°.45E, h95km±4km, mb4.8/24, mb1 4.9/24, mb1mx4.9/25, mbtmp4.8/24, MS4.1/9, Ms1 4.1/9, ms1mx3.8/26, Error ellipse: s-maj=10.4km s-min=7.7km az=43.0*
*NEIC **03** 12:16:00.4±0.2, 10°.36S×161°.40E, mb5.3/75, Error ellipse: s-maj=6.4km s-min=4.7km az=137.0*
*MOS **03** 12:16:03.4±0.7, 10°.29S×161°.12E, h127km, mb5.3/33, Error ellipse: s-maj=11.4km s-min=8.8km az=89.6*
ISC 03 12:16:01.2±0.1, 10°.37S±0°.03×161°.30E±0°.03, h91km, h91km±.7km: pP-P, n409, σ0s69/374, mb5.2/123, 30C-28D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.62**	**305**	P	**Pn**	**12 16 30.9**	**+2.3**
	4μm,0.3s,baz=142,slow=7.2,SNR=266						
HNR				S	**Sn**	**12 16 52.9**	**+3.6**
	3μm,0.3s,baz=158,slow=21,SNR=16						
NOUC	**Port Laguerre**	**12.62**	**158**	*e*P	**Pn**	**12 18 56.8**	**-0.5**
NOUC				*e*S	**Sn**	**12 21 10.8**	**-5.2**
DZM	**Mont Dzumac**	**12.64**	**158**	*e*P	**Pn**	**12 18 57.1**	**-0.6**
DZM				*e*S	**Sn**	**12 21 10.2**	**-6.4**
DZM	**Mont Dzumac**	**12.64**	**158**	*e*Pn	**Pn**	**12 18 56.7**	**-1.0**
DZM				*e*Sn	**Sn**	**12 21 10.2**	**-6.5**
CTA	**Charters Tower**	**17.43**	**235**	P	**Pn**	**12 20 02.2**	**+3.6**
	2.7nm,0.3s,baz=63,slow=11,SNR=24						
CTA				LR	LR	12 25 36.8	
	comp=Z,370nm,20.3s,baz=306,slow=33						
CTA	**Charters Tower**	**17.43**	**235**	*e*P	**Pn**	**12 20 01.7**	**+3.1**
	50nm,1.0s						
CTA				*e*S	**S**	**12 22 58.9**	**-14**
CTA	**Charters Tower**	**17.43**	**235**	P	**Pn**	**12 20 02.2**	**+3.6**
CTA				LR	LR	12 25 36.8	
CTAO	**Charters Tower**	**17.43**	**235**	*e*P	**Pn**	**12 20 01.8**	**+3.2**
CTAO				*e*		12 23 13.0	
CTAO				pmax	pmax		
	comp=Z,112nm,1.1s						
CTAO	**Charters Tower**	**17.43**	**235**	*e*Pn	**Pn**	**12 20 01.8**	**+3.2**
	comp=Z,112nm,1.1s						
CTAO				*e*Sn	**Sn**	**12 23 13.0**	**+0.5**
EIDS	**Eidsvold**	**17.80**	**212**	*e*P	**Pn**	**12 20 04.3**	**+1.3**
	comp=Z,548nm,2.9s						
MSVF	**Nonsavu**	**17.81**	**116**	*e*P	**Pn**	**12 20 02.4**	**-0.9**
	comp=Z,154nm,1.5s						
COEN	**Coen**	**18.07**	**257**	*e*P	**Pn**	**12 20 09.1**	**+2.6**
	comp=Z,755nm,1.5s						
ARMA	**Armidale**	**21.89**	**203**	*e*P	**P**	**12 20 46.4**	**-0.4**
ARMA	**Armidale**	**21.89**	**203**	*e*P	**P**	**12 20 47.1**	**+0.2**
	comp=Z,72nm,1.0s,mb5.0						
AFI	**Afiamalu**	**26.55**	**100**	LR	LR	12 31 05.2	
	comp=Z,212nm,18.2s,baz=136,slow=34						
CNB	**Canberra Magne**	**27.11**	**202**	*e*P	**P**	**12 21 35.5**	**-0.1**
WB2	**Warramunga Arr**	**27.66**	**247**	*e*P	**P**	**12 21 41.1**	**+0.4**
WRA	**Warramunga Arr**	**27.67**	**247**	P	**P**	**12 21 40.6**	**-0.2**
	comp=Z,7.6nm,0.5s,mb4.5,baz=75,slow=9.3,SNR=27						
WRA				pP	pP	12 22 04.8	+3.5
	comp=Z,15nm,0.8s,baz=76,slow=9.2,SNR=5.4						
WRA				PcP	PcP	12 24 54.7	-1.3
	comp=Z,2.3nm,0.6s,baz=71,slow=3.3,SNR=5.1						
WRA				ScP	ScP	12 28 28.0	-0.7
	comp=Z,1.0nm,0.7s,baz=74,slow=3.7,SNR=6.1						
WRA				LR	LR	12 31 34.9	
	comp=Z,242nm,20.5s,baz=180,slow=34						
WRA				PKiKP	PKiKP	12 32 29.3	-3.4
	comp=Z,0.4nm,0.7s,baz=322,slow=0.5,SNR=6.1						
WRA	**Warramunga Arr**	**27.67**	**247**	P	**P**	**12 21 40.6**	**-0.2**
WRA				*PP	pP	12 22 04.8	+3.4
WRA						12 24 54.7	
WRA	**Warramunga Arr**	**27.67**	**247**	P	**P**	**12 21 40.6**	**-0.2**
WRA				pP	pP	12 22 04.8	+3.5
WRA				PcP	PcP	12 24 54.7	-1.3
WRA				ScP	ScP	12 28 28.0	-0.7
WRA				LR	LR	12 31 34.9	
STKA	**Stephens Creek**	**28.12**	**217**	P	**P**	**12 21 44.0**	**-0.6**
	comp=Z,6.4nm,0.6s,mb4.3,baz=24,slow=8.1,SNR=13						
STKA				LR	LR	12 32 23.1	
	comp=Z,645nm,18.0s,baz=330,slow=35						
STKA	**Stephens Creek**	**28.12**	**217**	*e*P	**P**	**12 21 43.8**	**-0.8**
	comp=Z,8.6nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**28.12**	**217**	*e*P	**P**	**12 21 44.7**	**+0.1**
	comp=Z,43nm,2.7s,mb4.5						
KAKA	**Kakadu**	**28.37**	**262**	*e*P	**P**	**12 21 46.9**	**-0.1**
	comp=Z,16nm,0.6s,mb4.7						
KAKA	**Kakadu**	**28.37**	**262**	*e*P	**P**	**12 21 47.5**	**+0.4**
	comp=Z,52nm,0.7s,mb5.2						
GUMO	**Guam**	**28.85**	**325**	P	**P**	**12 21 50.2**	**-1.0**
	comp=Z,7.0nm,0.3s,mb4.7,baz=166,slow=19,SNR=2.8						
GUMO				LR	LR	12 32 29.4	
	comp=Z,432nm,21.7s,baz=97,slow=34						
ASAR	**Alice Springs**	**29.27**	**240**	P	**P**	**12 21 54.3**	**-0.7**
	comp=Z,3.6nm,0.5s,mb4.3,baz=70,slow=9.6,SNR=13						
ASAR				sP	sP	12 22 28.7	+2.5
	comp=Z,10nm,0.8s,baz=70,slow=9.7,SNR=5.7						
ASAR				ScP	ScP	12 28 32.5	-1.1
	comp=Z,0.5nm,0.5s,baz=76,slow=3.0,SNR=5.6						
ASAR				PKiKP	PKiKP	12 32 29.9	-3.7
	comp=Z,0.5nm,0.8s,baz=58,slow=2.1,SNR=4.6						
ASAR	**Alice Springs**	**29.27**	**240**	P	**P**	**12 21 54.3**	**-0.7**
ASAR				sP	sP	12 22 28.7	+2.5
ASAR				ScP	ScP	12 28 32.5	-1.1
TOO	**Toolangi**	**30.60**	**205**	*e*P	**P**	**12 22 06.6**	**+0.1**
URZ	**Urewera**	**31.19**	**156**	P	**P**	**12 22 10.9**	**-0.8**
	comp=Z,6.1nm,0.6s,mb4.5,baz=287,slow=2.7,SNR=7.3						
KNA	**Kununurra**	**32.12**	**257**	*e*P	**P**	**12 22 20.5**	**+0.4**
	comp=Z,64nm,1.1s,mb5.3						
BBOO	**Buckleboo**	**32.24**	**222**	*e*P	**P**	**12 22 21.0**	**0.0**
	comp=Z,19nm,1.1s,mb4.7						
BBOO	**Buckleboo**	**32.24**	**222**	*e*P	**P**	**12 22 21.0**	**0.0**
	comp=Z,92nm,1.1s,mb5.4						
RPZ	**Rata Peaks**	**34.29**	**167**	P	**P**	**12 22 37.5**	**-1.2**
	comp=Z,17nm,1.0s,mb4.8,baz=355,slow=7.1,SNR=2.9						
FITZ	**Fitzroy Crossi**	**35.36**	**253**	P	**P**	**12 22 48.3**	**0.0**
	comp=Z,10nm,0.5s,mb4.9,baz=78,slow=7.8,SNR=23						
FITZ				pP	pP	12 23 12.0	+2.7
	comp=Z,13nm,0.9s,baz=64,slow=6.7,SNR=3.5						
FITZ				LR	LR	12 37 10.0	
	comp=Z,362nm,19.3s,baz=146,slow=36						
FITZ	**Fitzroy Crossi**	**35.36**	**253**	*e*P	**P**	**12 22 48.0**	**-0.3**
	comp=Z,21nm,0.5s,mb5.2						
FORT	**Forrest**	**36.94**	**232**	*e*P	**P**	**12 23 01.2**	**-0.4**
	comp=Z,28nm,0.9s,mb5.2						
FORT	**Forrest**	**36.94**	**232**	*e*P	**P**	**12 23 01.7**	**+0.1**
	comp=Z,49nm,1.0s,mb5.4						
RAR	**Rarotonga**	**38.88**	**111**	LR	LR	12 34 04.4	
	comp=Z,226nm,22.0s,baz=74,slow=28						
MBWA	**Marble Bar**	**41.30**	**250**	*e*P	**P**	**12 23 37.7**	**-0.4**
MBWA	**Marble Bar**	**41.30**	**250**	*e*P	**P**	**12 23 37.6**	**-0.5**
	comp=Z,16nm,0.6s,mb5.0						
CBIJ	**Chichi jima**	**41.60**	**334**	P	**P**	**12 23 39.6**	**-0.8**
	comp=Z,93nm,0.7s,mb5.6,baz=233,slow=16,SNR=3.4						
MYLDM	**Lahad Datu**	**45.33**	**288**	P	**P**	**12 24 12.3**	**+1.6**
KLBR	**Kellerberrin**	**45.43**	**236**	*e*P	**P**	**12 24 10.3**	**-0.9**
	comp=Z,26nm,1.1s,mb4.9						
NWAO	**Narrogin (SRO)**	**46.27**	**234**	P	**P**	**12 24 17.6**	**-0.1**
	comp=Z,19nm,0.9s,mb4.8,baz=71,slow=6.7,SNR=9.7						
NWAO	**Narrogin (SRO)**	**46.27**	**234**	*e*P	**P**	**12 24 17.5**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,48nm,1.3s						
NWAO	**Narrogin (SRO)**	**46.27**	**234**	*e*P	**P**	**12 24 17.5**	**-0.3**
	comp=Z,48nm,1.3s,mb5.1						
SDKM	**Sandakan**	**46.71**	**288**	P	**P**	**12 24 24.1**	**+2.6**
KKM	**Kota Kinabalu**	**47.77**	**288**	*e*P	**P**	**12 24 30.1**	**+0.4**
JHJ	**Hachijo jima 2**	**47.86**	**335**	P	**P**	**12 24 30.7**	**+0.7**
	comp=Z,75nm,0.9s,mb5.5,baz=66,slow=10.0,SNR=5.7						
MJAR	**Matsushiro Arr**	**51.47**	**336**	P	**P**	**12 24 57.0**	**-0.3**
	comp=Z,12nm,0.7s,mb5.1,baz=169,slow=8.8,SNR=40						
MAJO	**Matsushiro**	**51.47**	**336**	*e*P	**P**	**12 24 56.5**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.3						
MAJO	**Matsushiro**	**51.47**	**336**	*e*P	**P**	**12 24 56.5**	**-0.9**
	comp=Z,25nm,0.7s,mb5.3						
MAT	**Matsushiro**	**51.47**	**336**	P	**P**	**12 24 57.1**	**-0.3**
POHA	**Pohakuloa**	**51.99**	**55**	*e*P	**P**	**12 25 01.3**	**-0.2**
	comp=Z,161nm,1.2s,mb5.9						
TPUB	**Ta-pu**	**51.99**	**310**	*e*P	**P**	**12 25 01.1**	**-0.4**
	comp=Z,27nm,0.9s,mb5.3						
JNU	**Nakatsue**	**52.06**	**327**	*e*P	**P**	**12 25 02.7**	**+0.9**
	comp=Z,31nm,1.3s,mb5.2						
KSM	**Kuching**	**52.08**	**280**	*e*P	**P**	**12 25 01.8**	**-0.6**
	comp=Z,31nm,0.8s,mb5.4						
YHNB	**Yeheng**	**52.24**	**312**	*e*P	**P**	**12 25 03.5**	**+0.2**
	comp=Z,20nm,0.9s,mb5.2						
ASAJ	**Asahikawa**	**56.82**	**344**	*e*P	**P**	**12 25 36.9**	**+0.8**
	comp=Z,28nm,0.9s,mb5.3						
KSRS	**Korea Array**	**56.93**	**329**	P	**P**	**12 25 37.2**	**+0.2**
	comp=Z,21nm,0.9s,mb5.2,baz=142,slow=7.1,SNR=74

KMI PP PP 12 29 18.9 +4.8
KMI S S 12 35 28.6 -3.6
KMI SS SS 12 39 49.0 -4.0
KMI pmax pmax
comp=Z,22nm,1.3s,mb4.8
KMI LR LR
comp=N,300nm,25.0s
KMI LR LR
comp=E,280nm,30.0s
KMI LR LR
comp=Z,450nm,39.9s
CM31 Chiang Mai Arr 67.85 295 *e*P **P 12 26 50.9 +0.6**
comp=Z,26nm,1.0s,mb5.0
CMAR Chiang Mai Arr 67.85 295 P **P 12 26 50.4 +0.2**
comp=Z,12nm,0.7s,mb4.8,baz=116,slow=4.6,SNR=71
CMAR PKPPKP 12 55 09.4
comp=Z,1.7nm,0.9s,baz=283,slow=4.7,SNR=9.1
CMAR LR LR 12 56 27.0
comp=Z,155nm,20.4s,baz=340,slow=36
CHTO Chiang Mai 67.97 295 *e*P **P 12 26 51.0 0.0**
CHTO pmax pmax
comp=Z,27nm,1.1s,mb5.0
CHTO Chiang Mai 67.97 295 *e*P **P 12 26 51.0 0.0**
comp=Z,27nm,1.1s,mb5.0
NIKO Nikolski 68.05 19 *e*P **P 12 26 50.2 -0.6**
comp=Z,213nm,1.2s,mb5.8
NIKO *e*pP pP 12 27 12.9 -1.1
HHC Hu-ho-hao-te 68.53 322 *e*P **P 12 26 54.8 +0.7**
HHC PcP PcP 12 27 18.4 -0.2
HHC PP PP 12 29 30.8 +4.2
HHC ScP 12 31 07.4
HHC PcS 12 31 22.3
HHC S S 12 35 45.4 -3.8
HHC ScS ScS 12 36 38.5 -7.2
HHC SS SS 12 40 15.7 +0.4
HHC pmax pmax
comp=Z,28nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,120nm,5.8s
HHC LR LR
comp=N,310nm,13.1s
HHC LR LR
comp=E,310nm,14.1s
HHC LR LR
comp=Z,470nm,15.2s
CD2 Chengdu 68.75 309 *e*P **P 12 26 55.9 +0.3**
CD2 PP PP 12 29 33.0 +4.3
CD2 S S 12 35 48.8 -3.3
CD2 SS SS 12 40 19.9 +1.0
CD2 pmax pmax
comp=Z,30nm,1.0s,mb5.1
CD2 pmax pmax
comp=Z,290nm,5.9s
BTO Baotou 69.35 321 *e*P **P 12 26 57.9 -1.2**
UNV Unalaska Valle 69.55 20 *e*P **P 12 26 59.1 -0.9**
comp=Z,55nm,1.2s,mb5.3
AKUT Akutan 70.03 20 *e*P **P 12 27 02.3 -0.7**
comp=Z,90nm,1.5s,mb5.4
LZH Lanzhou 71.10 314 *e*P **P 12 27 10.5 +0.6**
LZH pmax pmax
comp=Z,56nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,230nm,7.2s
MIR Mirnyy 71.97 203⇑ *i*P **P 12 27 14.4 -0.2**
MIR pmax pmax
comp=Z,115nm,1.4s,mb5.5
SDPT Sand Point 72.86 22 *e*P **P 12 27 18.8 -1.2**
comp=Z,109nm,1.0s,mb5.6
CLNS Chul'man 73.39 340 *e*P **P 12 27 23.5 +0.4**
CLNS pmax pmax
comp=N,15nm,0.9s
CLNS pmax pmax
comp=Z,31nm,0.9s,mb5.1
CLNS pmax pmax
comp=E,7.0nm,0.8s
SEY Seymchan 73.40 356 *d i*P **P 12 27 21.8 -1.2**
ULN Ulaanbaatar 75.23 326 *e*P **P 12 27 34.5 +0.5**
ULN *e**SP sP 12 28 10.3 +2.9
ULN pmax pmax
comp=Z,43nm,0.8s,mb5.2
ULN Ulaanbaatar 75.23 326 *e*P **P 12 27 34.5 +0.5**
comp=Z,43nm,0.8s,mb5.2
ULN *e*pP pP 12 27 58.1 +0.6
ULN *e*sP sP 12 28 10.3 +2.9
GTA Gaotai 75.47 315 P **P 12 27 36.3 +0.7**
GTA S S 12 37 01.5 -7.2
GTA pmax pmax
comp=Z,48nm,1.3s,mb5.1
GTA pmax pmax
comp=Z,350nm,9.2s
GTA LR LR
comp=N,260nm,18.1s
GTA LR LR
comp=E,270nm,19.9s
GTA LR LR
comp=Z,390nm,23.5s
SONM Songino Array 75.58 325 P **P 12 27 36.4 +0.5**
comp=Z,41nm,0.7s,mb5.3,baz=142,slow=5.8,SNR=187
SONM pP pP 12 27 59.8 +0.2
comp=Z,11nm,0.8s,baz=137,slow=6.3,SNR=4.3
YAK Yakutsk 76.27 345 *c i*P **P 12 27 39.7 +0.1**
YAK *e* 12 27 50.2
YAK *e* 12 30 27.5
YAK *e*S S 12 37 17.2 +0.6
YAK *e* 12 37 42.7
YAK *e**SS sS 12 38 00.3 +3.3
YAK pmax pmax
comp=Z,93nm,0.9s,mb5.5
YAK pmax pmax
comp=N,21nm,0.9s
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=Z,29nm,1.9s,mb4.7
YAK pmax pmax
comp=E,22nm,2.1s
YAK pmax pmax
comp=N,26nm,1.6s
YAK smax
comp=E,76nm,2.8s
YAK smax
comp=N,72nm,2.0s
YAK Yakutsk 76.27 345 *e*P **P 12 27 39.3 -0.3**
comp=N,120nm,0.7s,mb5.7
YAK *e*pP pP 12 28 02.4 -0.8
OHAK Old Harbor 76.95 23 *e*P **P 12 27 43.4 -0.1**
comp=N,148nm,1.2s,mb5.6
KDAK Kodiak Island 77.62 23 P **P 12 27 46.9 -0.3**
comp=N,70nm,0.9s,mb5.4,baz=235,slow=3.5,SNR=17
KDAK Kodiak Island 77.62 23 *i*P **P 12 27 47.0 -0.2**
KDAK Kodiak Island 77.62 23 P **P 12 27 46.9 -0.3**
KDAK Kodiak Island 77.62 23 P **P 12 27 47.0 -0.2**
comp=N,461nm,0.9s,mb6.2,SNR=6.3
BILL Bilibino 78.28 2 *e*P **P 12 27 50.2 -0.5**
BILL pmax pmax
comp=Z,83nm,1.1s,mb5.4
BILL Bilibino 78.28 2 *e*P **P 12 27 50.2 -0.5**
comp=Z,83nm,1.1s,mb5.4
BILL *e*pP pP 12 28 13.0 -1.5
ZAK Zakamensk 78.68 326 *e*P **P 12 27 52.1 -1.2**
SVW2 Sparrevohn 78.89 20 *e*P **P 12 27 54.4 +0.2**
comp=Z,156nm,0.7s,mb6.0
TLY Talaya 79.17 328 *e*P **P 12 27 55.2 -0.7**
TLY pmax pmax
comp=Z,198nm,0.3s,mb6.4
TLY Talaya 79.17 328 *e*P **P 12 27 55.2 -0.7**
comp=Z,198nm,0.3s,mb6.4
TLY Talaya 79.17 328 P **P 12 27 55.8 -0.1**
comp=Z,2μm,0.3s,SNR=76
RSO Redoubt South 79.41 21 *e*P **P 12 27 56.7 -0.3**
TTA Tatalina 80.10 18 *e*P **P 12 28 01.3 +0.6**
TTA pmax pmax
comp=Z,71nm,1.2s,mb5.4
TTA Tatalina 80.10 18 *e*P **P 12 28 01.3 +0.6**
comp=Z,71nm,1.2s,mb5.4
TTA *e*pP pP 12 28 24.5 0.0
SLKM Skilak Lake 80.36 22 *e*P **P 12 28 01.9 -0.3**
SLKM *e*PcP PcP 12 28 09.7 +0.7
TAPN Taplejung 80.47 300 *e*P **P 12 28 03.6 +0.1**
MOY Mondy 80.58 327 *e*P **P 12 28 02.8 -0.7**
MOY pmax pmax
comp=Z,29nm,1.9s,mb4.8
ODAN Odare 80.60 300 *e*P **P 12 28 03.6 -0.6**
comp=Z,41nm,1.0s,mb5.2
PPLA Purkeypile 81.30 20 *e*P **P 12 28 06.6 -0.5**
comp=Z,62nm,1.6s,mb5.2
RAMN Ramite 81.31 299 *e*P **P 12 28 07.7 -0.3**
PMR Palmer 81.48 22 *e*P **P 12 28 07.5 -0.6**
PMR pmax pmax
comp=Z,45nm,1.1s,mb5.2
PMR Palmer 81.48 22 *e*P **P 12 28 07.5 -0.6**
comp=Z,45nm,1.1s,mb5.2
SML Sawmill 81.91 22 *e*P **P 12 28 09.7 -0.7**
comp=Z,11nm,1.0s,mb4.7
SML *e*pP pP 12 28 34.3 0.0
PALK Pallekele 82.13 279 *i*P **P 12 28 14.0 +1.4**
GUN Gumba 82.19 300 *e*P **P 12 28 12.3 -0.3**
comp=Z,27nm,0.8s,mb5.1
TRF Thorofare Moun 82.31 20 *e*P **P 12 28 11.5 -0.9**
comp=Z,27nm,0.9s,mb5.1
PKI Pulchoki 82.50 300 *e*P **P 12 28 14.1 -0.1**
BPAW Bear Paw Mtn. 82.52 19 *e*P **P 12 28 12.3 -1.2**
comp=Z,40nm,1.2s,mb5.1
BPAW *e*pP pP 12 28 35.3 -2.1
KKN Kakani 82.66 300 *e*P **P 12 28 14.0 -1.1**
DMN Daman 82.76 300 *e*P **P 12 28 15.3 -0.3**
MCK McKinley 82.95 20 *e*P **P 12 28 15.0 -0.7**
MCK *e**SP sP 12 28 48.7 -0.7
MCK pmax pmax
comp=Z,132nm,1.1s,mb5.7
MCK McKinley 82.95 20 *e*P **P 12 28 15.0 -0.7**
comp=Z,132nm,1.1s,mb5.7
MCK *e*pP pP 12 28 38.9 -0.7
MCK *e*sP sP 12 28 48.7 -0.7
GKN Gorkha 83.27 300 *e*P **P 12 28 17.3 -0.9**
comp=Z,107nm,1.0s,mb5.7
PAX Paxson 83.68 22 *e*P **P 12 28 19.1 -0.4**
PAX pmax pmax
comp=Z,99nm,2.0s,mb5.3
PAX Paxson 83.68 22 *e*P **P 12 28 19.1 -0.4**
comp=Z,99nm,2.0s,mb5.3
MAW Mawson 83.69 202 P **P 12 28 18.6 -1.1**
comp=Z,18nm,1.0s,mb4.9,baz=94,slow=6.3,SNR=27
MAW pP pP 12 28 42.5 -1.1
comp=Z,29nm,1.2s,baz=100,slow=6.4,SNR=5.9
MAW LR LR 13 02 19.2
comp=Z,110nm,18.4s,baz=297,slow=33
MAW Mawson 83.69 202 *e*P **P 12 28 18.5 -1.1**
comp=Z,19nm,1.1s,mb4.8
COLA College 84.05 19 *e*P **P 12 28 20.0 -1.4**
COLA pmax pmax
comp=Z,45nm,0.8s,mb5.3
COLA College 84.05 19 *e*P **P 12 28 19.9 -1.4**
comp=Z,45nm,0.8s,mb5.3
COLA *e*pP pP 12 28 44.4 -0.9
KOLN Koldanda 84.09 299 *e*P **P 12 28 21.0 -1.4**
comp=Z,37nm,0.7s,mb5.3
DANN Dangsing 84.11 300 *e*P **P 12 28 21.8 -0.7**
comp=Z,36nm,0.6s,mb5.4
MENT Mentasta 84.30 22 *e*P **P 12 28 22.6 0.0**
ILAR Eielson Array 84.31 20 P **P 12 28 21.1 -1.5**
comp=Z,16nm,0.8s,mb4.9,baz=252,slow=4.7,SNR=118
ILAR pP pP 12 28 45.5 -1.1
comp=Z,9.5nm,1.1s,baz=251,slow=4.7,SNR=3.2
TIXI Tiksi 84.64 350 *e*P **P 12 28 23.5 -0.7**
TIXI pmax pmax
comp=Z,43nm,1.9s,mb5.0
TIXI Tiksi 84.64 350 *e*P **P 12 28 22.6 -1.6**
comp=Z,92nm,1.6s,mb5.5
TIXI *e*pP pP 12 28 46.4 -1.8
COLD Coldfoot 84.89 17 *e*P **P 12 28 25.6 +0.1**
comp=Z,9.3nm,1.0s,mb4.7
COLD *e*pP pP 12 28 48.4 -1.1
WMQ Urumqi 85.54 316 P **P 12 28 29.0 -0.3**
WMQ PP PP 12 31 51.0 +1.7
WMQ SKS 12 38 37.0
WMQ SS SS 12 44 29.0 -2.7
WMQ pmax pmax
comp=Z,24nm,1.2s,mb5.0
WMQ pmax pmax
comp=Z,740nm,8.0s
WMQ LR LR
comp=N,320nm,20.0s
WMQ LR LR
comp=E,520nm,20.0s
WMQ LR LR
comp=Z,400nm,20.0s
SKAG Skagway 85.90 27 *e*P **P 12 28 30.5 -0.2**
comp=Z,8.5nm,0.6s,mb4.8
WRAK Wrangell Islan 85.95 31 *e*P **P 12 28 31.2 +0.2**
comp=Z,9.9nm,1.0s,mb4.7
SAO San Andreas Ge 86.11 52 *e*P **P 12 28 32.4 +0.1**
SAO *e**SP sP 12 29 05.2 -0.9
SAO pmax pmax
comp=Z,25nm,1.2s,mb5.0
SAO San Andreas Ge 86.11 52 *e*P **P 12 28 32.4 +0.1**
comp=Z,25nm,1.2s,mb5.0
SAO *e*pP pP 12 28 56.0 -0.4
SAO *e*sP sP 12 29 05.2 -0.9
EGAK Eagle 86.29 21 *e*P **P 12 28 32.3 -0.2**
comp=Z,102nm,1.2s,mb5.6
EGAK *e*pP pP 12 28 55.9 -0.7
WDC Whiskeytown Da 86.36 48 *e*P **P 12 28 33.3 -0.1**
WDC pmax pmax
comp=Z,16nm,1.1s,mb4.9
WDC Whiskeytown Da 86.36 48 *e*P **P 12 28 33.3 -0.1**
comp=Z,16nm,1.1s,mb4.9
WDC *e*pP pP 12 28 55.5 -2.0
YBH Yreka Blue Hor 86.57 47 *e*P **P 12 28 34.6 +0.1**
YBH pmax pmax
comp=Z,48nm,1.4s
YBH Yreka Blue Hor 86.57 47 *e*P **P 12 28 34.6 +0.2**
comp=Z,48nm,1.4s,mb5.2
YBH *e*pP pP 12 28 58.2 -0.3
HUMO Hull Mountain 86.66 46 *e*P **P 12 28 34.8 0.0**
comp=Z,31nm,1.0s,mb5.2
HUMO *e*pP pP 12 28 59.3 +0.4
CMB Columbia Colle 87.27 51 *e*P **P 12 28 37.2 -0.7**
CMB pmax pmax
comp=Z,15nm,1.1s,mb4.8
CMB Columbia Colle 87.27 51 *e*P **P 12 28 37.2 -0.7**
comp=Z,15nm,1.1s,mb4.8
CMB *e*pP pP 12 29 00.5 -1.6
E03A Lebam 87.43 42 P **P 12 28 39.0 +0.6**
baz=88,SNR=5.4
CIS Catalina Islan 87.66 56 P **P 12 28 39.7 -0.2**
baz=88,SNR=5.8
VES Vestal, Richgr 87.71 53 P **P 12 28 39.8 -0.2**
baz=88,SNR=7.6
G04A Mulino 87.75 43 P **P 12 28 41.0 +1.0**
baz=88,SNR=7.3
H04A Detroit Lake 87.80 44⇓ P **P 12 28 39.8 -0.4**
baz=88,SNR=8.7
PASC Pasadena Art C 88.02 55 *e*P **P 12 28 41.6 0.0**
comp=Z,43nm,1.0s,mb5.4
PASC *e*pP pP 12 29 04.9 -0.9
MWC Mount Wilson 88.14 55 *e*P **P 12 28 41.9 -0.2**
MWC pmax pmax
comp=Z,66nm,1.1s,mb5.6
MWC Mount Wilson 88.14 55 *e*P **P 12 28 41.9 -0.2**
comp=Z,66nm,1.1s,mb5.6
MWC *e*pP pP 12 29 05.9 -0.5
PGC Sidney 88.15 40 *e*P **P 12 28 41.5 -0.4**
comp=Z,1.5nm,1.2s
ISA Isabella 88.15 53 P **P 12 28 42.4 +0.3**
baz=88,SNR=16
MOD Modoc 88.35 47 *e*P **P 12 28 42.7 -0.3**
comp=Z,20nm,1.1s,mb5.1
MOD *e*pP pP 12 29 07.2 0.0
BFSC Mount Baldy Ra 88.46 55 P **P 12 28 43.8 +0.1**
baz=89,SNR=13
LON Longmire 88.64 42 *e*P **P 12 28 43.8 -0.4**
LON pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
LON Longmire 88.64 42 *e*P **P 12 28 43.8 -0.4**
comp=Z,5.6nm,0.9s,mb4.6
LON *e*pP pP 12 29 07.8 -0.6
CWC Cottonwood Cre 88.65 53 P **P 12 28 44.9 +0.4**
baz=89,SNR=13
D05A Enumclaw 88.65 42 P **P 12 28 44.9 +0.7**
baz=89,SNR=6.2
MURC Murrieta 88.69 56 P **P 12 28 44.8 +0.1**
baz=89,SNR=5.5
LRMC Laurel Mountai 88.73 54⇓ P **P 12 28 45.1 +0.2**
baz=89,SNR=17
NVAR Mina Array Bea 88.95 51 P **P 12 28 46.2 +0.3**
comp=Z,20nm,1.0s,mb5.1,baz=237,slow=5.9,SNR=52
NVAR pP pP 12 29 10.2 +0.2
comp=Z,3.9nm,0.9s,baz=232,slow=6.2,SNR=2.8
NVAR Mina Array Bea 88.95 51 P **P 12 28 46.2 +0.3**
NVAR pP pP 12 29 10.2 +0.2
G06A Carlson Farm, 89.01 44⇑ P **P 12 28 45.9 -0.1**
baz=89,SNR=6.3
MPMC Manual Prospec 89.02 53⇑ P **P 12 28 46.2 0.0**
baz=89,SNR=32
MONP Monument Peak 89.16 56 P **P 12 28 47.3 +0.3**
baz=89,SNR=25
PFO Pinyon Flat Ob 89.29 56 P **P 12 28 47.0 -0.6**
comp=Z,77nm,1.0s,mb5.7,SNR=6.0
PFO Pinyon Flat Ob 89.29 56 P **P 12 28 47.9 +0.3**
baz=89,SNR=9.1
RPW Rockport 89.32 40 *e*P **P 12 28 46.9 -0.5**
comp=Z,4.7nm,0.5s,mb4.8
GRAC Grapevine Rang 89.33 52⇑ P **P 12 28 47.6 -0.1**
baz=90,SNR=17
DVTC Desert V Tower 89.38 57⇓ P **P 12 28 48.4 +0.3**
baz=90,SNR=7.6
GSC Goldstone 89.39 54 P **P 12 28 48.3 +0.3**
baz=90,SNR=15
GSC Goldstone 89.39 54 *e*P **P 12 28 48.2 +0.2**
GSC pmax pmax
comp=Z,32nm,1.3s,mb5.2
GSC Goldstone 89.39 54 *e*P **P 12 28 48.2 +0.2**
comp=Z,32nm,1.3s,mb5.2
GSC *e*pP pP 12 29 12.1 -0.2
I07A Izee 89.48 45 P **P 12 28 48.5 +0.2**
baz=90,SNR=25
FURC Furnace Creek, 89.61 53 P **P 12 28 49.0 0.0**
baz=90,SNR=56
HEC Hector,Ludlow 89.67 55⇓ P **P 12 28 49.8 +0.5**
baz=90,SNR=5.2
WVOR Wild Horse Val 89.68 47 *e*P **P 12 28 49.1 -0.1**
WVOR pmax pmax
comp=Z,72nm,1.3s,mb5.6
WVOR Wild Horse Val 89.68 47 *e*P **P 12 28 49.1 -0.1**
comp=Z,72nm,1.3s,mb5.6
WVOR *e*pP pP 12 29 13.9 +0.4
SWSC Sam W. Stewart 89.69 57⇓ P **P 12 28 49.4 -0.1**
baz=90,SNR=14
BELC Belle Mtn. Jos 89.75 55⇑ P **P 12 28 49.8 +0.1**
baz=90,SNR=42
ETW Entiat 89.85 42 *e*P **P 12 28 49.5 -0.4**
comp=Z,17nm,0.9s,mb5.2
SHOC Shoshone 89.94 54 P **P 12 28 50.9 +0.3**
baz=90,SNR=7.4
U10A Ash Meadows, A 90.02 53⇑ P **P 12 28 51.0 +0.1**
baz=90,SNR=24
RSW Rattlesnake Hi 90.02 43 *e*P **P 12 28 50.8 +0.1**
comp=Z,6.6nm,0.4s,mb5.1
J08A Circle Bar Ran 90.03 46 P **P 12 28 51.0 +0.2**
baz=90,SNR=36
MK31 Makanchi Array 90.06 318 *e*P **P 12 28 50.0 -0.9**
MK31 *e*pP pP 12 29 13.7 -1.4
MKAR Makanchi Array 90.06 318 P **P 12 28 49.8 -1.1**
comp=Z,13nm,0.5s,mb5.3,baz=90,slow=6.3,SNR=132
MKAR pP pP 12 29 13.9 -1.2
comp=Z,1.5nm,0.4s,baz=99,slow=7.5,SNR=2.3
HAWA Hanford 90.06 43 *e*P **P 12 28 51.0 +0.1**
comp=Z,8.0nm,0.8s,mb4.9
HAWA *e*pP pP 12 29 15.0 -0.1
BC3 Big Chuckawall 90.12 56 P **P 12 28 51.4 -0.1**
baz=90,SNR=22
TUQ Turquoise Moun 90.12 54 P **P 12 28 51.3 -0.2**
baz=90,SNR=34
S10A Tonopah Range, 90.14 52 P **P 12 28 51.6 +0.1**
baz=90,SNR=70
G08A Pilot Rock 90.17 44 P **P 12 28 51.8 +0.4**
baz=90,SNR=20
GMRC Granite Mounta 90.19 55 P **P 12 28 51.6 -0.1**
baz=90,SNR=32
BMN Battle Mountai 90.24 49 *e*P **P 12 28 52.3 +0.4**
BMN pmax pmax
comp=Z,34nm,1.0s,mb5.4
BMN Battle Mountai 90.24 49 *e*P **P 12 28 52.3 +0.5**
comp=Z,34nm,1.0s,mb5.4
BMN *e*pP pP 12 29 16.4 +0.3
R10A Warm Springs 90.45 51 P **P 12 28 53.2 +0.4**
baz=91,SNR=33
ZALV Zalesovo Beam 90.47 325 P **P 12 28 50.4 -2.2**
comp=Z,4.0nm,0.5s,mb4.8,baz=116,slow=5.6,SNR=19
ZALV pP pP 12 29 14.5 -2.3
comp=Z,1.0nm,0.7s,baz=93,slow=6.1,SNR=1.4
ZALV Zalesovo Beam 90.47 325 P **P 12 28 50.4 -2.2**
ZALV pP pP 12 29 14.5 -2.3
IRM Iron Mountain 90.47 55 P **P 12 28 52.8 -0.3**
baz=91,SNR=31
Q10A Clear Creek Ra 90.50 51⇓ P **P 12 28 53.3 +0.2**
baz=91,SNR=19
GLA Glamis 90.51 57⇓ P **P 12 28 53.5 +0.2**
baz=91,SNR=9.2
GLA Glamis 90.51 57 *e*P **P 12 28 53.2 -0.1**
GLA pmax pmax
comp=Z,67nm,1.4s,mb5.6
GLA Glamis 90.51 57 *e*P **P 12 28 53.2 0.0**
comp=Z,67nm,1.4s,mb5.6
V11A Goodsprings 90.60 54⇓ P **P 12 28 53.9 +0.2**
baz=91,SNR=20
D08A Wollman Farm, 90.63 42 P **P 12 28 53.7 +0.2**
baz=91,SNR=12
B08A Colville Reser 90.69 41 P **P 12 28 53.0 -0.8**
baz=91,SNR=20
INK Inuvik 90.71 20 *e*P **P 12 28 52.9 -0.5**
INK pmax pmax
comp=Z,17nm,1.2s
INK Inuvik 90.71 20 *e*P **P 12 28 52.9 -0.5**
comp=Z,17nm,1.2s,mb5.0
INK *e*pP pP 12 29 16.1 -1.5
S11A Rachel 90.74 52 P **P 12 28 54.2 0.0**
baz=91,SNR=15
OD2 Odessa Site #2 90.86 42 *e*P **P 12 28 54.0 -0.5**
comp=Z,82nm,1.2s,mb5.7
OD2 *e*pP pP 12 29 18.6 -0.1
Y12C Blythe 90.90 56 P **P 12 28 55.0 -0.1**
baz=91,SNR=12
R11A Troy Canyon, C 91.01 51 P **P 12 28 55.5 -0.1**
baz=91,SNR=41
E09A Wood Farm, Sta 91.02 43 P **P 12 28 55.1 -0.2**
baz=91,SNR=24
V12A Nelson 91.04 54 P **P 12 28 55.7 0.0**
baz=91,SNR=18
Q11A Duckwater 91.07 51 P **P 12 28 55.9 +0.2**
baz=91,SNR=48
SYO Syowa Base 91.12 198⇑ *e*PcP PcP 12 28 56.2 -0.2
P11A Circle Ranch, 91.14 50⇓ P **P 12 28 56.7 +0.6**
baz=91,SNR=17
C09A Chrisman Ranch 91.24 42⇓ P **P 12 28 56.0 -0.3**
baz=91,SNR=11
S12A Delamar Landin 91.43 52 P **P 12 28 58.0 +0.6**
baz=92,SNR=40
U12A Valley of Fire 91.43 53 P **P 12 28 58.0 +0.6**
baz=92,SNR=15
Y13A Salome 91.48 56 P **P 12 28 58.3 +0.5**
baz=92,SNR=10
Z13A Yuma Proving G 91.50 57 P **P 12 28 57.9 0.0**
baz=92,SNR=17
F10A Beach Ranch, E 91.51 44 P **P 12 28 57.2 -0.4**
baz=92,SNR=48
NVS Novosibirsk 91.61 326 *e*P **P 12 28 54.3 -3.6**
NVS pmax pmax
comp=N,5.0nm,1.2s
NVS pmax pmax
comp=E,10.0nm,1.2s
NVS pmax pmax
comp=Z,18nm,1.2s,mb5.2
Q12A Willow Creek R 91.74 51 P **P 12 28 59.2 +0.4**
baz=92,SNR=18
V13A Grand Canyon W 91.75 54 P **P 12 28 58.9 -0.1**
baz=92,SNR=32
R12A Pony Springs, 91.76 52 P **P 12 28 59.8 +0.8**
baz=92,SNR=35
U13A Pakoon Wash 91.88 53 P **P 12 29 00.1 +0.6**
baz=92,SNR=21
MFID Camas Ranch 91.92 46 P **P 12 28 59.7 +0.1**
baz=92,SNR=21
214A Organ Pipe Nat 91.96 58 P **P 12 29 00.7 +0.7**
baz=92,SNR=8.3
T13A Saint George 92.05 53 P **P 12 29 01.2 +0.9**
baz=92,SNR=16
114A Black Gap (USA 92.05 57 P **P 12 29 01.0 +0.6**
baz=92,SNR=6.4
O12A Currie 92.05 50 P **P 12 29 00.9 +0.7**
baz=92,SNR=24
NEW Newport 92.10 41 P **P 12 28 59.8 -0.5**
baz=92,SNR=21
NEW Newport 92.10 41 *e*P **P 12 28 59.8 -0.5**
NEW pmax pmax
comp=Z,31nm,1.1s
NEW Newport 92.10 41 *e*P **P 12 28 59.8 -0.5**
comp=Z,31nm,1.1s,mb5.4

NEW *e*pP pP 12 29 24.1 -0.5
S13A Holt Ranch, En 92.19 52 ⇑P **P 12 29 01.6 +0.6**
baz=92,SNR=14
R13A O'Grain Ranch, 92.22 52 P **P 12 29 02.1 +1.0**
baz=92,SNR=14
Q13A Wheeler Ranch, 92.34 51 P **P 12 29 02.3 +0.7**
baz=92,SNR=18
W14A Seligman 92.35 55 P **P 12 29 02.5 +0.7**
baz=92,SNR=13
X14A Yava 92.37 56 P **P 12 29 02.5 +0.7**
baz=92,SNR=7.9
V14A Boquillas Ranc 92.41 54 ⇓P **P 12 29 02.5 +0.4**
baz=92,SNR=8.2
P13A Bates Ranch, G 92.44 50 P **P 12 29 02.8 +0.7**
baz=93,SNR=32
I12A Atlanta 92.49 46 P **P 12 29 02.4 +0.2**
baz=93,SNR=42
U14A Mt Trumbull 92.50 54 ⇑P **P 12 29 02.9 +0.5**
baz=93,SNR=26
Y15A Casa Rosa Ranc 92.72 56 ⇑P **P 12 29 03.3 -0.3**
baz=93,SNR=9.9
F12A Elk City 92.81 44 P **P 12 29 03.0 -0.7**
baz=93,SNR=48
H12A Diamond D Ranc 92.84 45 P **P 12 29 03.6 -0.2**
baz=93,SNR=25
X15A Humboldt 92.90 56 P **P 12 29 04.4 +0.1**
baz=93,SNR=9.7
Q14A Sevier Lake (B 92.91 51 P **P 12 29 04.4 +0.1**
baz=93,SNR=18
HLID Hailey 92.95 46 ⇑P **P 12 29 04.9 +0.6**
baz=93,SNR=42
HLID Hailey 92.95 46 *e*P **P 12 29 04.3 -0.1**
comp=Z,24nm,1.1s,mb5.4
HLID *e*pP pP 12 29 28.6 -0.1
HLID *e*PP PP 12 32 45.1 -3.2
J13A Cove Ranch, Pi 93.09 47 P **P 12 29 05.8 +0.9**
baz=93,SNR=25
216A Three Points, 93.10 58 P **P 12 29 06.1 +0.8**
baz=93,SNR=6.3
P14A Drum Mountains 93.18 51 ⇑P **P 12 29 05.8 +0.3**
baz=93,SNR=10
V15A Kaibab Nationa 93.19 54 P **P 12 29 06.6 +1.0**
baz=93,SNR=8.8
U15A North Rim 93.21 54 ⇓P **P 12 29 06.4 +0.7**
baz=93,SNR=11
I13A Wildhorse Cree 93.23 46 P **P 12 29 06.1 +0.5**
baz=93,SNR=64
T15A Red Dirt Ranch 93.24 53 ⇓P **P 12 29 06.2 +0.3**
baz=93,SNR=5.5
H13A Challis 93.26 45 P **P 12 29 06.0 +0.2**
baz=93,SNR=64
KURK Kurchatov 93.34 321 P **P 12 29 04.0 -2.0**
comp=Z,81nm,1.2s,mb5.9,SNR=8.5
KURK Kurchatov 93.34 321 *d iP* **P 12 29 04.0 -2.0**
KURK pmax pmax
comp=Z,21nm,1.2s,mb5.3
G13A Cobalt 93.38 45 P **P 12 29 06.1 -0.2**
baz=94,SNR=37
Y16A Circle Bar Ran 93.41 56 ⇑P **P 12 29 07.1 +0.4**
baz=94,SNR=7.9
DUG Dugway 93.49 50 P **P 12 29 07.3 +0.4**
baz=94,SNR=5.9
L14A Malta 93.51 48 P **P 12 29 07.7 +0.7**
baz=94,SNR=18
X16A Lo Mia Camp, P 93.54 56 ⇑P **P 12 29 07.2 0.0**
baz=94,SNR=5.8
J14A Carey 93.55 47 P **P 12 29 08.1 +1.0**
baz=94,SNR=6.9
217A Green Valley 93.60 59 ⇑P **P 12 29 07.8 +0.2**
baz=94,SNR=12
K14A Jones Ranch, D 93.65 48 P **P 12 29 08.0 +0.4**
baz=94,SNR=5.6
E13A Victor 93.67 44 P **P 12 29 07.8 +0.2**
baz=94,SNR=12
I14A Mackay 93.71 46 ⇑P **P 12 29 08.4 +0.5**
baz=94,SNR=19
WUAZ Wupatki 93.78 55 *e*P **P 12 29 08.2 -0.1**
comp=Z,6.6nm,1.1s,mb4.9
WUAZ *e*pP pP 12 29 31.8 -0.8
117A Oracle 93.80 58 ⇑P **P 12 29 08.6 +0.1**
baz=94,SNR=13
H14A Leadore 93.90 46 P **P 12 29 09.1 +0.4**
baz=94,SNR=33
Y17A Roosevelt 93.90 57 ⇑P **P 12 29 09.0 0.0**
baz=94,SNR=6.8
G14A Jackson 93.95 45 ⇑P **P 12 29 08.8 -0.1**
baz=94,SNR=7.5
M15A Larsen Ranch, 93.99 49 P **P 12 29 09.3 +0.1**
baz=94,SNR=7.0
X17A Forest Lakes 94.04 56 P **P 12 29 10.3 +0.7**
baz=94,SNR=12
318A Bisbee 94.23 59 P **P 12 29 10.6 0.0**
baz=94,SNR=5.4
J15A Blackfoot 94.34 47 ⇓P **P 12 29 11.3 +0.6**
baz=94,SNR=8.3
H15A Lima 94.40 46 P **P 12 29 11.8 +0.8**
baz=94,SNR=45
I15A Monteview 94.41 46 P **P 12 29 11.9 +0.9**
baz=94,SNR=9.9
118A Homack Ranch, 94.45 58 P **P 12 29 12.0 +0.5**
baz=94,SNR=6.9
Q16A Castle Valley 94.52 51 ⇓P **P 12 29 12.7 +1.0**
baz=95,SNR=5.9
Y18A Canyon Day Jun 94.58 57 ⇑P **P 12 29 12.4 +0.3**
baz=95,SNR=5.9
G15A Dillon 94.61 45 ⇓P **P 12 29 11.9 0.0**
baz=95,SNR=22
B14A Marquette Ranc 94.64 42 ⇓P **P 12 29 11.2 -0.8**
baz=95,SNR=7.6
E15A Deer Lodge 94.72 44 P **P 12 29 12.1 -0.3**
baz=95,SNR=12
F15A Butte 94.72 44 P **P 12 29 12.4 0.0**
baz=95,SNR=12
X18A Snowflake 94.77 56 P **P 12 29 13.4 +0.5**
baz=95,SNR=6.6
R17A Hanksville Air 94.79 52 P **P 12 29 13.3 +0.4**
baz=95,SNR=12
319A Douglas 94.82 59 P **P 12 29 13.9 +0.7**
baz=95,SNR=7.2
J16A Bone 94.91 47 P **P 12 29 13.9 +0.5**
baz=95,SNR=6.9
219A White Tail Can 94.94 59 P **P 12 29 13.6 -0.2**
baz=95,SNR=12
C15A Salmond Ranch, 94.98 42 ⇓P **P 12 29 12.9 -0.6**
baz=95,SNR=19
G16A Moss Hill, Enn 95.10 45 P **P 12 29 14.2 +0.1**
baz=95,SNR=13
B15A Bradely Ranch, 95.10 42 ⇓P **P 12 29 13.0 -1.1**
baz=95,SNR=6.7
I16A Newdale 95.10 46 ⇑P **P 12 29 14.9 +0.7**
baz=95,SNR=11
A15A Johnson Ranch, 95.10 41 ⇓P **P 12 29 13.9 -0.1**
baz=95,SNR=14
Y19A Nutrioso 95.25 57 ⇓P **P 12 29 15.0 -0.2**
baz=95,SNR=12
BOZ Bozeman (W) 95.28 45 ⇑P **P 12 29 15.2 +0.2**
baz=95,SNR=16
BOZ Bozeman (W) 95.28 45 *e*P **P 12 29 14.8 -0.2**
BOZ pmax pmax
comp=Z,14nm,1.3s,mb5.2
BOZ Bozeman (W) 95.28 45 *e*P **P 12 29 14.8 -0.2**
comp=Z,14nm,1.3s,mb5.2
BOZ *e*pP pP 12 29 39.1 -0.2
E16A East Helena 95.40 44 P **P 12 29 15.8 +0.3**
baz=96,SNR=6.6
H16A Russell Place, 95.40 46 P **P 12 29 16.2 +0.6**
baz=96,SNR=16
320A Kipp Ranch, An 95.45 59 ⇑P **P 12 29 16.7 +0.6**
baz=96,SNR=5.8
C16A Fuhringer Ranc 95.55 43 P **P 12 29 15.7 -0.5**
baz=96,SNR=13
D16A Dana Ranch, Ca 95.56 43 P **P 12 29 16.3 +0.1**
baz=96,SNR=5.8
U19A Dine' College, 95.64 54 P **P 12 29 17.8 +0.9**
baz=96,SNR=7.3
A16A West Butte Ran 95.83 41 ⇑P **P 12 29 16.6 -0.8**
baz=96,SNR=20
G17A Pierce Place, 95.85 45 ⇑P **P 12 29 18.4 +0.8**
baz=96,SNR=6.0
E17A Martinsdale 95.94 44 P **P 12 29 18.2 +0.2**
baz=96,SNR=9.9
X20A Quemado 95.95 56 ⇑P **P 12 29 19.0 +0.7**
baz=96,SNR=7.8
Y20A Horse Springs, 95.96 57 ⇓P **P 12 29 19.1 +0.7**
baz=96,SNR=5.1
F17A Fitzpatrick Pl 96.00 45 P **P 12 29 19.1 +0.8**
baz=96,SNR=16
D17A Six Diamond Ra 96.16 43 P **P 12 29 19.1 +0.1**
baz=96,SNR=6.1
C17A Wharram Farm, 96.18 43 P **P 12 29 18.3 -0.7**
baz=96,SNR=21
B17A L&G Farms, Che 96.26 42 ⇓P **P 12 29 18.6 -0.7**
baz=96,SNR=9.6
PDAR Pinedale Array 96.32 48 P **P 12 29 19.2 -0.6**
comp=Z,2.6nm,0.8s,mb4.7,baz=199,slow=2.3,SNR=18
YKA Yellowknife Ar 96.39 28 P **P 12 29 17.9 -1.7**
comp=Z,6.0nm,0.6s,mb5.2,baz=260,slow=4.7,SNR=95
YKA PKKP PKKPbc 12 46 01.8 -5.5
comp=Z,0.2nm,0.5s,baz=65,slow=2.6,SNR=4.5
YKA Yellowknife Ar 96.39 28 P **P 12 29 17.9 -1.7**
YKA PKKP PKKPbc 12 46 01.8 -5.5
A17A Triple J Farms 96.42 42 P **P 12 29 19.9 -0.2**
baz=96,SNR=31
Y21A Point of Rocks 96.56 57 P **P 12 29 21.9 +0.8**
baz=97,SNR=6.8
F18A Big Timber 96.65 45 P **P 12 29 21.9 +0.7**
baz=97,SNR=9.1
U21A Nageezi 96.90 54 ⇓P **P 12 29 22.5 -0.1**
baz=97,SNR=9.6
EGMT Eagleton 96.91 43 ⇑P **P 12 29 22.1 -0.2**
baz=97,SNR=8.8
EGMT Eagleton 96.91 43 *e*P **P 12 29 22.2 -0.1**
comp=Z,30nm,1.0s,mb5.7
EGMT *e*pP pP 12 29 46.5 -0.1
B18A Beardsley Farm 96.95 42 ⇑P **P 12 29 22.1 -0.4**
baz=97,SNR=10
A18A Metzger Ranch, 96.97 42 ⇓P **P 12 29 21.4 -1.2**
baz=97,SNR=11
F19A Roth Farm, Mol 97.18 45 ⇑P **P 12 29 23.8 +0.2**
baz=97,SNR=9.2
E19A Rath Farm, Rou 97.36 44 P **P 12 29 24.9 +0.5**
baz=98,SNR=16
ANMO Albuquerque 97.67 56 *e*P **P 12 29 25.9 -0.2**
ANMO pmax pmax
comp=Z,6.0nm,1.0s
ANMO Albuquerque 97.67 56 *e*P **P 12 29 25.9 -0.2**
comp=Z,6.3nm,1.0s,mb5.1
BRVK Borovoye 98.80 322 *i* P **P 12 29 29.0 -1.7**
BRVK pmax pmax
comp=Z,12nm,1.5s,mb5.2
LAO LASA Array 99.14 44 *e*P **P 12 29 32.2 -0.2**
comp=Z,23nm,1.0s,mb5.7
TXAR Lajitas Array 99.35 62 P **P 12 29 32.9 -0.9**
comp=Z,0.9nm,1.0s,mb4.3,baz=5.7,slow=2.7,SNR=3.8
TXAR PP PP 12 33 35.2 -3.0
comp=Z,3.0nm,1.2s,baz=256,slow=5.0,SNR=10
TXAR Lajitas Array 99.35 62 P **P 12 29 32.9 -0.9**
TXAR PP PP 12 33 35.2 -3.0
ARCES ARCESS Array B 114.54 344 PKP PKiKP 12 34 27.7 -2.5
comp=Z,4.2nm,1.0s,baz=86,slow=1.9,SNR=19
SCHQ Schefferville 121.72 30 PKP PKPdf 12 34 41.3 -3.0
comp=Z,2.2nm,0.5s,baz=142,slow=1.9,SNR=7.6
AKASG Malin Array Be 123.86 325 PKP PKPdf 12 34 46.8 -1.9
comp=Z,1.0nm,0.4s,baz=67,slow=2.1,SNR=9.1
LPAZ La Paz 124.38 118 PKP PKPdf 12 34 50.1 -0.5
comp=Z,1.4nm,0.5s,baz=272,slow=2.8,SNR=7.0
NOA NORSAR Array B 124.83 343 PKP PKPdf 12 34 48.4 -1.7
comp=Z,1.1nm,0.7s,baz=39,slow=2.0,SNR=2.9
BRTR Keskin Array B 125.27 312 PKP PKPdf 12 34 49.5 -2.1
comp=Z,0.9nm,0.6s,baz=90,slow=2.7,SNR=5.4
SSF Saint Saulge 138.87 337 *e*PKIKP PKPdf 12 35 14.2 -2.8
comp=Z,21nm,1.2s
PGF Pioggiola 139.83 328 *e*PKIKP PKPdf 12 35 16.4 -2.6
comp=Z,32nm,1.0s
EPF Esparros 143.47 336 *e*PKIKP PKPdf 12 35 21.9 -3.5
ETSF Etsaut 143.93 337 *e*PKIKP PKPdf 12 35 22.2 -4.1
comp=Z,62nm,1.2s
SJPF Ste Jean 144.00 338 *e*PKIKP PKPdf 12 35 23.2 -3.2
comp=Z,62nm,1.3s
KEST Kesra 144.14 319 PKP PKPdf 12 35 24.5 -2.3
comp=Z,5.7nm,0.9s,baz=318,slow=0.8,SNR=15
CMAH Djebel Manchou 144.77 322 P PKPdf 12 35 25.5 -2.4
ABSA Djebel Ababsia 144.97 322 P PKPdf 12 35 27.0 -1.3
CKFL Kef-Lekhel 145.34 322 P PKPbc 12 35 28.0 -0.9
CASM Ain Smara 145.57 323 P PKPdf 12 35 28.9 -0.4
DFRA Djebel Bou Aff 145.74 323 P PKPdf 12 35 29.7 +0.1
CTEI Djebel Teioual 145.76 322 P PKPdf 12 35 29.7 +0.1
PBRG Braganca 146.97 343 *e*PKP PKPdf 12 35 32.7 +1.2
MVO Moncorvo 147.64 343 *e*PKP PKPdf 12 35 34.1 +1.5
PVRL Vila Real 147.72 344 *e*PKP PKPbc 12 35 35.4 -0.3
ESDC Sonseca Array 148.00 338 PKPbc PKPbc 12 35 35.8 -0.7
comp=Z,2.5nm,0.6s,baz=15,slow=3.2,SNR=16
ESLA Sonseca Array 148.00 338 *e*PKPdf PKPdf 12 35 33.3 0.0
MTE Manteigas 148.50 344 *e*PKP PKPbc 12 35 37.0 -0.7
MTE Manteigas 148.50 344 *e*PKPbc PKPbc 12 35 37.2 -0.5
PCBR Castelo Branco 149.00 343 *e*PKP PKPbc 12 35 38.4 -0.6
PMRV Marv??o 149.35 343 *e*PKPdf PKPbc 12 35 39.1 -0.8
PTOM Tomar 149.46 344 *e*PKPdf PKPbc 12 35 39.5 -0.7
PESTR Estremoz 149.93 343 *e*PKPdf PKPbc 12 35 40.9 -0.4
PESTR Estremoz 149.93 343 *i* PKPab PKPab 12 35 48.5 +1.4
PMAFR Mafra 150.31 345 *e*PKPab PKPab 12 35 48.8 +0.1
EVO Evora 150.36 343 *e*PKPdf PKPbc 12 35 41.2 -1.2
EVO Evora 150.36 343 *i* PKPab PKPab 12 35 49.4 +0.5
PBAR Barrancos 150.40 341 *e*PKPdf PKPbc 12 35 41.8 -0.7
PBAR Barrancos 150.40 341 *i* PKPab PKPab 12 35 49.7 +0.7
PBEJ Beja 150.79 342 *e*PKPdf PKPbc 12 35 42.9 -0.5
PBEJ Beja 150.79 342 *i* PKPab PKPab 12 35 51.0 +0.3
PCVE Castro Verde 151.20 342 *e*PKPdf PKPbc 12 35 44.0 -0.4
PVAQ Vaqueiros 151.32 342 *e*PKPab PKPab 12 35 52.9 0.0
PTEO Sao Teotonio 151.49 343 *e*PKPab PKPab 12 35 53.9 +0.3
TORD Torodi Ar. Bea 159.84 280 PKP PKPdf 12 35 48.7 -1.9
comp=Z,4.2nm,1.0s,baz=16,slow=0.7,SNR=12
TORD PKPab PKPab 12 36 28.8 -1.4
comp=Z,11nm,1.2s,baz=80,slow=4.3,SNR=13
TORD Torodi Ar. Bea 159.84 280 PKP PKPdf 12 35 48.7 -1.9
TORD PKPab PKPab 12 36 28.8 -1.4
DBIC Dimbokro 165.83 256 PKP PKPdf 12 35 54.5 -2.0
comp=Z,7.9nm,1.1s,baz=152,slow=5.4,SNR=3.8
DBIC PKPab PKPab 12 36 55.9 -0.6
comp=Z,2.5nm,0.7s,baz=197,slow=1.1,SNR=4.4
DBIC Dimbokro 165.83 256 PKP PKPdf 12 35 54.5 -2.0
DBIC PKPab PKPab 12 36 55.9 -0.6

BUC 03 12:34:30.8±0.7, 45°.66N×25°.97E, h90km, MD2.7/3, 2C-6D, Error ellipse: s-maj=40.9km s-min=9.2km az=339.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.17**	**187**	⇓*i*P		Pn	12 34 44.0	+0.3
MLR				*i* S		Sn	12 34 53.5	+0.3
MLR	**Muntele Rosu**	**0.17**	**187**	⇓*i*P		Pn	12 34 44.0	+0.3
MLR	**Muntele Rosu**	**0.17**	**187**	S		Sn	12 34 53.5	+0.3
PLOR	**Plostina**	**0.51**	**68**	⇑*i*P		Pn	12 34 46.2	+0.6
PLOR				*i* S		Sn	12 34 56.7	+0.1
PLOR	**Plostina**	**0.51**	**68**	⇑*i*P		Pn	12 34 46.2	+0.6
PLOR	**Plostina**	**0.51**	**68**	S		Sn	12 34 56.7	+0.1
VRI	**Vrincioaia**	**0.56**	**69**	⇓*i*P		Pn	12 34 46.1	+0.1
VRI				*i* S		Sn	12 34 57.6	+0.2
VRI	**Vrincioaia**	**0.56**	**69**	⇓*i*P		Pn	12 34 46.1	+0.1
VRI	**Vrincioaia**	**0.56**	**69**	S		Sn	12 34 57.6	+0.2
VOIR		**0.69**	**251**	⇓*i*P		Pn	12 34 48.3	+1.2
VOIR				*i* S		Sn	12 34 59.5	+0.1
VOIR		**0.69**	**251**	S		Sn	12 34 59.5	+0.1
VOIR		**0.69**	**251**	⇓*i*P		Pn	12 34 48.3	+1.2

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*IDC **03** 12:35:23.3±10.0, 7°.24S×129°.14E, h131km±97km, mb3.4/3, mb1 3.8/6, mb1mx3.5/17, mbtmp3.6/6, ML4.1/3, Error ellipse: s-maj=102.1km s-min=24.0km az=53.0*
*NEIC **03** 12:35:25.2±2.6, 7°.25S×129°.04E, h144km±26km, mb4.2/1, Error ellipse: s-maj=36.8km s-min=19.3km az=60.0*
ISC 03 12:35:25.5±1.9, 7°.4S±0°.1×129°.1E±0°.1, h144km±19km, n13, σ1°43/20, mb3.7/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.24**	**148**	*e*P		**Pn**	**12 36 57.5**	**+2.1**
5.4nm,0.1s								
KAKA				*e*S		**Sn**	**12 38 04.0**	**-1.7**
KAKA	**Kakadu**	**6.24**	**148**	*e*Pn		**Pn**	**12 36 57.6**	**+2.2**
73nm,0.5s								
KAKA				*e*Sn		**Sn**	**12 38 04.5**	**-1.2**
KNA	**Kununurra**	**8.33**	**182**	*e*P		**Pn**	**12 37 25.3**	**+2.0**
16nm,0.6s								
KNA				*e*S		**Sn**	**12 38 54.0**	**-1.9**
FITZ	**Fitzroy Crossi**	**11.18**	**197**	P		**Pn**	**12 38 01.6**	**+0.4**
0.8nm,0.3s,baz=35,slow=8.5,SNR=43								
FITZ				S		**Sn**	**12 39 57.9**	**-6.9**
0.7nm,0.3s,baz=80,slow=17,SNR=2.7								
FITZ	**Fitzroy Crossi**	**11.18**	**197**	*e*P		**Pn**	**12 38 01.5**	**+0.3**
6.1nm,0.4s								
FITZ				*e*S		**Sn**	**12 39 58.5**	**-6.3**
WRA	**Warramunga Arr**	**13.49**	**158**	P		**Pn**	**12 38 29.8**	**-1.4**
0.7nm,0.3s,baz=326,slow=14,SNR=36								
WRA				S		**Sn**	**12 40 53.4**	**-7.0**
1.7nm,0.3s,baz=333,slow=22,SNR=8.8								
WB2	**Warramunga Arr**	**13.49**	**158**	*e*Pn		**Pn**	**12 38 31.2**	**-0.1**
ASAR	**Alice Springs**	**16.84**	**165**	P		**Pn**	**12 39 14.5**	**+1.6**
2.3nm,0.3s,baz=344,slow=10,SNR=234								
ASAR				S		**S**	**12 42 20.2**	**-0.1**
0.4nm,0.3s,baz=342,slow=24,SNR=7.3								
FORT	**Forrest**	**23.30**	**182**	*e*P		**P**	**12 40 22.7**	**+2.1**
5.9nm,0.7s,mb4.1								
STKA	**Stephens Creek**	**27.02**	**156**	P		**P**	**12 40 54.5**	**+0.3**
1.3nm,0.5s,mb3.9,baz=330,slow=11,SNR=3.4								
STKA	**Stephens Creek**	**27.02**	**156**	*e*P		**P**	**12 40 54.0**	**-0.2**
1.0nm,0.4s,mb3.8								
CMAR	**Chiang Mai Arr**	**39.29**	**311**	P		**P**	**12 42 40.0**	**-0.6**
0.6nm,0.6s,mb3.4,baz=145,slow=7.4,SNR=5.8								
MKAR	**Makanchi Array**	**68.05**	**327**	P		**P**	**12 46 07.3**	**-2.1**
0.2nm,0.3s,mb3.3,baz=115,slow=14,SNR=2.6								

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*IDC **03** 13:02:22.3±0.9, 10°.51S×75°.21W, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.9/17, mbtmp3.9/7, ML4.1/2, Error ellipse: s-maj=27.9km s-min=15.4km az=140.0*
*NEIC **03** 13:02:24.6±0.6, 10°.44S×75°.23W, h15km, ML3.9(LIM), Error ellipse: s-maj=18.0km s-min=13.1km az=208.0*
NEIC Felt [II] at Oxapampa.
*ISCJB **03** 13:02:29.6±1.4, 10°.8S±0°.1×75°.3W±0°.1, h81km±18km, mb3.7/5, Error ellipse: s-maj=20.9km s-min=14.5km az=33.8*
ISC 03 13:02:31.5±1.2, 10°.8S±0°.1×75°.4W±0°.1, h83km±16km, n16, σ0°80/13, mb3.7/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.87**	**231**	Pn		**Pn**	**13 03 00.1**	**-1.6**
84nm,0.3s,baz=55,slow=11,SNR=62								
NNA				Sn		**Sn**	**13 03 25.8**	**+1.1**
76nm,0.3s,baz=334,slow=21,SNR=11								
NNA				Lg			13 03 30.8	
290nm,0.3s,baz=195,slow=15,SNR=19								
NNA	**Nana**	**1.87**	**231**	*e*P		**Pn**	**13 03 00.0**	**-1.7**
NNA				*e*S		**Sn**	**13 03 25.7**	**+1.0**
NNA				Lg			13 03 30.8	
ATAH	**Atahualpa**	**4.73**	**320**	Pn		**Pn**	**13 03 40.9**	**+0.5**
23nm,0.3s,baz=154,slow=5.1,SNR=84								
ATAH				Lg			13 04 39.2	
1.9nm,0.3s,baz=38,slow=19,SNR=1.5								
LPAZ	**La Paz**	**8.88**	**129**	Pn		**Pn**	**13 04 36.9**	**-0.1**
0.1nm,0.3s,baz=330,slow=15,SNR=4.2								
LPAZ				Lg			13 07 02.6	
0.1nm,0.3s,baz=168,slow=16,SNR=4.0								
LPAZ	**La Paz**	**8.88**	**129**	*e*P		**Pn**	**13 04 37.1**	**+0.1**
LPAZ				Lg			13 07 02.6	
SIV	**San Ignacio**	**14.81**	**112**	Pn		**Pn**	**13 05 51.9**	**-4.8**
0.3nm,0.3s,baz=270,slow=15,SNR=5.5								
SIV				Lg			13 10 06.3	
0.3nm,0.3s,baz=244,slow=21,SNR=5.8								
TXAR	**Lajitas Array**	**48.36**	**326**	P		**P**	**13 11 05.4**	**+0.4**
0.3nm,0.7s,mb3.2,baz=154,slow=8.1,SNR=4.4								
PDAR	**Pinedale Array**	**61.82**	**332**	P		**P**	**13 12 40.6**	**-1.1**
0.2nm,0.4s,mb3.5,baz=107,slow=5.0,SNR=3.7								
DBIC	**Dimbokro**	**72.28**	**79**	P		**P**	**13 13 49.1**	**+0.5**
4.2nm,1.2s,mb4.2,baz=280,slow=6.1,SNR=2.4								
YKA	**Yellowknife Ar**	**79.15**	**343**	P		**P**	**13 14 26.5**	**-0.2**
0.5nm,0.8s,mb3.4,baz=144,slow=6.1,SNR=4.6								
TORD	**Torodi Ar. Bea**	**80.07**	**75**	P		**P**	**13 14 33.3**	**+0.5**
1.4nm,0.4s,mb4.2,baz=271,slow=5.5,SNR=4.6								
ZALV	**Zalesovo Beam**	**134.16**	**16**	PKP	PKPdf		13 21 40.7	+1.4
0.5nm,0.4s,baz=319,slow=4.2,SNR=2.5								
ASAR	**Alice Springs**	**135.36**	**220**	PKP	PKiKP		13 21 45.7	+1.6
0.4nm,0.8s,baz=123,slow=2.3,SNR=6.9								
WRA	**Warramunga Arr**	**137.71**	**224**	PKP	PKiKP		13 21 50.3	+1.3
0.9nm,0.8s,baz=127,slow=2.1,SNR=9.0								
SONM	**Songino Array**	**143.07**	**358**	PKhKP	PKPpre		13 21 54.8	
0.3nm,0.8s,baz=15,slow=6.0,SNR=2.4								
KSRS	**Korea Array**	**146.21**	**326**	PKPbc	PKiKP		13 22 05.9	0.0
1.2nm,0.8s,baz=53,slow=3.5,SNR=5.6								

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*MAN **03** 13:29:48, 13°.31N×120°.27E, h1km, mb4.6, ML3.4, MS3.4*
*ISCJB **03** 13:29:51.7±0.6, 13°.32N±0°.04×120°.3E±0°.1, h52km±8km, mb4.0/9, Error ellipse: s-maj=17.1km s-min=7.2km az=177.0*
*IDC **03** 13:29:51.6±3.3, 13°.36N×120°.42E, h33km±29km, mb3.8/9, mb1 3.9/9, mb1mx3.7/23, mbtmp3.8/9, Error ellipse: s-maj=39.2km s-min=14.2km az=69.0*
*NEIC **03** 13:29:53.4±1.5, 13°.44N×120°.55E, h54km±16km, mb4.5/1, Error ellipse: s-maj=24.4km s-min=9.8km az=65.0*
ISC 03 13:29:52.9±0.7, 13°.31N±0°.05×120°.3E±0°.1, h45km±9km, n24, σ1°01/24, mb4.0/9, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.42**	**357**	*e*P		**Pn**	**13 29 56.0**	**-6.9**
TGY	**Tagaytay City**	**1.02**	**39**	Pp		**Pn**	**13 30 08.0**	**-2.8**
744nm,0.3s,baz=217,slow=2.3,SNR=27								
TGY				Lg			13 30 22.0	
727nm,0.3s,baz=171,slow=5.7,SNR=15								
TGY	**Tagaytay City**	**1.02**	**39**	⇓*e*P		**Pn**	**13 30 08.1**	**-2.7**
BUSP	**Coron**	**1.30**	**183**	*e*P		**Pn**	**13 30 14.1**	**-0.5**
OTRP	**Odiongan**	**1.95**	**119**	*e*P		**Pn**	**13 30 26.4**	**+2.8**
ENPP	**El Nido**	**2.25**	**202**	*e*P		**Pn**	**13 30 27.2**	**-0.5**
SCZP	**Santa Cruz**	**2.48**	**352**	*e*P		**Pn**	**13 30 31.0**	**+0.2**
CUYO	**Cuyo Island**	**2.55**	**163**	*e*P		**Pn**	**13 30 31.1**	**-0.7**
BALP	**Baler**	**2.73**	**27**	*e*P		**Pn**	**13 30 33.9**	**-0.3**
BOLP	**Bolinao**	**3.07**	**354**	*e*P		**Pn**	**13 30 38.5**	**-0.5**
GUIM	**Jordan**	**3.50**	**139**	*e*P		**Pn**	**13 30 45.3**	**+0.4**
CAUP	**Cauayan**	**3.91**	**22**	*e*P		**Pn**	**13 30 51.0**	**+0.5**
APYP	**Conner**	**4.62**	**12**	*e*P		**Pn**	**13 31 01.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**21.14**	**287**	P		**P**	**13 34 36.5**	**+2.3**
1.0nm,0.7s,mb3.2,baz=101,slow=8.2,SNR=9.0								
WRA	**Warramunga Arr**	**35.83**	**157**	P		**P**	**13 36 48.1**	**-0.2**
3.3nm,0.6s,mb4.5,baz=336,slow=9.6,SNR=47								
WB2	**Warramunga Arr**	**35.83**	**157**	*e*P		**P**	**13 36 48.2**	**-0.2**
WB2				*e*			13 36 52.3	
SONM	**Songino Array**	**36.31**	**344**	P		**P**	**13 36 52.3**	**+0.1**
2.1nm,0.7s,mb4.2,baz=159,slow=9.6,SNR=15								
ASAR	**Alice Springs**	**39.09**	**160**	P		**P**	**13 37 16.7**	**+0.8**
3.3nm,0.5s,mb4.3,baz=341,slow=6.9,SNR=110								
NWAO	**Narrogin (SRO)**	**46.06**	**184**	P		**P**	**13 38 12.0**	**-0.4**
2.4nm,0.7s,mb4.2,baz=2.4,slow=10,SNR=2.1								
MKAR	**Makanchi Array**	**46.10**	**324**	P		**P**	**13 38 13.3**	**+0.7**
0.5nm,0.6s,mb3.6,baz=128,slow=7.9,SNR=5.0								
ZALV	**Zalesovo Beam**	**49.21**	**333**	P		**P**	**13 38 35.7**	**-0.9**
0.4nm,0.4s,mb3.8,baz=124,slow=8.9,SNR=2.5								
KURK	**Kurchatov**	**50.28**	**327**	P		**P**	**13 38 47.7**	**+0.9**
0.8nm,0.4s,mb4.1,baz=132,slow=7.4,SNR=10								
KURK	**Kurchatov**	**50.28**	**327**	*e*P		**P**	**13 38 44.5**	**-0.3**
3.2nm,0.7s,mb4.5								
ARCES	**ARCESS Array B**	**79.30**	**339**	P		**P**	**13 41 51.6**	**-1.7**
2.8nm,0.9s,mb4.2,baz=91,slow=7.4,SNR=4.1								

BJI 03 13:43:44.4, 42°.75N×124°.16E, h18km, ML3.5/7, 1C, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SNY	**Shenyang**	**1.02**	**205**	⇑Pg		Pg	13 44 01.6	-2.5
SNY				Sg		Sg	13 44 13.1	-4.4
SNY				smax				
comp=N,4μm,0.3s								
SNY				smax				
comp=E,3μm,0.4s								
CN2	**Changchun**	**1.41**	**41**	*e*Pg		Pg	13 44 09.6	-2.0
CN2				Sg		Sg	13 44 29.0	-1

az=15.6
DJA ***03*** *13:58:47.3″80S×126″16E, h35km, MLv4.7/14*
ISC 03 13:58:44.9±2.0, 3°89S±0°03×126°21E±0°03, h15km±13km, n50, σ1s20/54, mb4.1/15, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.10**	**54**	P	**Pb**	**13 59 05.4**	**-0.2**
NLAI				S	**Sb**	**13 59 18.9**	**-0.8**
KDI	**Kendari**	**3.58**	**269**	P	**Pn**	**13 59 39.0**	**-0.9**
KDI				S	**Sn**	**14 00 19.7**	**-2.2**
BNDI	**Bandanaira**	**3.74**	**100**	P	**Pn**	**13 59 43.4**	**+1.4**
BBSI	**Bau Bau**	**3.96**	**246**	P	**Pn**	**13 59 47.1**	**+2.1**
LUWI	**Luwuk**	**4.45**	**309**	P	**Pn**	**13 59 50.8**	**-1.0**
LUWI				S	**Sn**	**14 00 38.5**	**-4.9**
TNTI	**Ternate**	**4.78**	**14**	P	**Pn**	**13 59 57.7**	**+1.4**
TNTI				S	**Sn**	**14 00 53.5**	**+2.1**
KMSI	**Cibinong**	**4.96**	**333**	P	**Pn**	**13 59 54.7**	**-4.2**
APSI	**Ampana**	**5.43**	**303**	P	**Pn**	**14 00 04.9**	**-0.4**
MRSI	**Marisa**	**6.08**	**315**	P	**Pn**	**14 00 13.9**	**-0.4**
	0.5nm1μm119nm,0.7s						
MMRI	**Maumere**	**6.15**	**220**	P	**Pn**	**14 00 15.8**	**+0.7**
	0.2nm68nm,0.9s						
BKSI	**Bulukumba**	**6.23**	**257**	P	**Pn**	**14 00 17.8**	**+1.5**
	0.2nm659nm70nm,0.6s						
BKSI				S	**Sn**	**14 01 28.4**	**+1.1**
	0.2nm659nm70nm,0.6s						
TTSI	**Tana Toraja**	**6.43**	**277**	P	**Pn**	**14 00 20.7**	**+1.6**
	0.1nm435nm26nm,0.9s						
TLE	**Tual**	**6.73**	**105**	P	**Pn**	**14 00 26.5**	**+3.3**
	1.4nm418nm,0.8s						
KAKA	**Kakadu**	**10.71**	**145**	*e*P	**Pn**	**14 01 16.0**	**-1.8**
	12nm,0.5s						
KAKA	**Kakadu**	**10.71**	**145**	*e*P	**Pn**	**14 01 16.1**	**-1.7**
	36nm,0.6s						
KAKA	**Kakadu**	**10.71**	**145**	P	**Pn**	**14 01 20.2**	**+2.4**
	286nm30nm,0.6s						
MYLDM	**Lahad Datu**	**11.85**	**319**	P	**Pn**	**14 01 33.0**	**-0.5**
KNA	**Kununurra**	**12.05**	**168**	*e*P	**Pn**	**14 01 34.9**	**-1.2**
	8.8nm,0.7s						
KKM	**Kota Kinabalu**	**14.04**	**315**	P	**Pn**	**14 02 01.2**	**-2.1**
FITZ	**Fitzroy Crossi**	**14.13**	**182**	Pn	**Pn**	**14 02 03.3**	**-1.3**
	0.2nm,0.3s,baz=21,slow=9.4,SNR=10						
FITZ				LR	LR	14 07 53.8	
	comp=Z,135nm,21.1s,baz=359,slow=39						
FITZ	**Fitzroy Crossi**	**14.13**	**182**	*e*P	**Pn**	**14 02 03.1**	**-1.5**
	7.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**14.13**	**182**	*e*P	**Pn**	**14 02 03.1**	**-1.4**
FITZ				LR	LR	14 07 53.8	
WRA	**Warramunga Arr**	**17.81**	**154**	P	**Pn**	**14 02 51.3**	**-1.0**
	0.5nm,0.3s,baz=332,slow=12,SNR=36						
WB2	**Warramunga Arr**	**17.82**	**154**	*e*P	**Pn**	**14 02 51.5**	**-0.9**
MBWA	**Marble Bar**	**18.28**	**200**	*e*P	**Pn**	**14 03 00.0**	**+1.9**
MBWA	**Marble Bar**	**18.28**	**200**	*e*P	**Pn**	**14 03 00.0**	**+2.0**
COEN	**Coen**	**19.50**	**122**	*e*P	**Pn**	**14 03 11.7**	**-1.1**
COEN	**Coen**	**19.50**	**122**	*e*P	**Pn**	**14 03 11.7**	**-1.1**
	201nm,0.9s						
ASAR	**Alice Springs**	**21.02**	**160**	P	**P**	**14 03 29.9**	**+1.9**
	20nm,0.8s,mb4.5,baz=344,slow=12,SNR=119						
MEEK	**Meekatharra**	**23.76**	**197**	*e*P	**P**	**14 03 56.8**	**0.0**
FORT	**Forrest**	**26.80**	**176**	*e*P	**P**	**14 04 24.7**	**+0.3**
	16nm,0.7s,mb4.7						
NWAO	**Narrogin (SNO)**	**30.08**	**195**	P	**P**	**14 04 53.7**	**0.0**
	9.1nm,1.1s,mb4.4,baz=61,slow=10,SNR=2.8						
BBOO	**Buckleboo**	**30.21**	**163**	*e*P	**P**	**14 04 54.8**	**0.0**
	8.9nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**31.37**	**154**	P	**P**	**14 05 05.6**	**+0.6**
	2.4nm,0.5s,mb4.3,baz=322,slow=9.5,SNR=7.0						
STKA	**Stephens Creek**	**31.37**	**154**	*e*P	**P**	**14 05 05.0**	**0.0**
	3.8nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**31.37**	**154**	*e*P	**P**	**14 05 05.0**	**-0.1**
CMSA	**Cobar Meteorol**	**33.05**	**149**	*e*P	**P**	**14 05 19.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**34.86**	**310**	*e*P	**P**	**14 05 36.2**	**+0.5**
	1.6nm,0.7s,mb4.1,baz=139,slow=6.9,SNR=13						
CMAR				LR	LR	14 19 08.1	
	comp=Z,92nm,20.6s,baz=288,slow=35						
CHTO	**Chiang Mai**	**35.07**	**311**	*e*P	**P**	**14 05 38.4**	**+0.9**
	7.6nm,1.0s,mb4.6						
XAN	**Xi'an**	**41.10**	**338**	P	**P**	**14 06 28.5**	**+0.3**
XAN				pP	pP	14 06 35.6	+2.6
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
KSRS	**Korea Array**	**41.16**	**2**	P	**P**	**14 06 28.8**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.5,baz=175,slow=9.9,SNR=6.4						
MJAR	**Matsushiro Arr**	**41.76**	**15**	P	**P**	**14 06 36.4**	**+2.9**
	comp=Z,1.0nm,0.6s,mb3.6,baz=194,slow=9.9,SNR=2.8						
SONM	**Songino Array**	**54.37**	**344**	P	**P**	**14 08 10.8**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.7,baz=127,slow=3.3,SNR=4.3						
MK31	**Makanchi Array**	**63.59**	**328**	*e*P	**P**	**14 09 14.2**	**-0.8**
MKAR	**Makanchi Array**	**63.59**	**328**	P	**P**	**14 09 14.8**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.9,baz=119,slow=7.4,SNR=9.7						
KBL	**Kabul**	**65.89**	**311**	*e*P	**P**	**14 09 30.2**	**0.0**
ZALV	**Zalesovo Beam**	**67.17**	**335**	P	**P**	**14 09 35.6**	**-2.4**
	comp=Z,0.5nm,0.5s,mb3.8,baz=120,slow=5.6,SNR=3.7						
KURK	**Kurchatov**	**67.93**	**330**	*e*P	**P**	**14 09 42.0**	**-0.9**
	comp=Z,5.0nm,1.0s,mb4.5						
ILAR	**Eielson Array**	**92.17**	**25**	P	**P**	**14 11 52.5**	**-1.0**
	comp=Z,0.2nm,0.7s,mb3.6,baz=242,slow=4.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**124.47**	**283**	PKP	PKPdf	14 17 41.8	-2.7
	comp=Z,0.6nm,0.8s,baz=68,slow=4.4,SNR=3.2						

ISCJB ***03*** *14:22:48.2±0.8, 10°69N±0°06×86°61W±0°06, h10km, mb3.6/3, Error ellipse: s-maj=10.5km s-min=5.3km az=42.9*
CASC ***03*** *14:22:48.2±3.0, 10°67N×86°57W, h0km±15km, MD4.1, ML3.8*
IDC ***03*** *14:22:49.5±2.5, 11°61N×85°67W, h0km, mb3.8/3, mb1 4.3/3, mb1mx3.7/18, mbtmp3.8/3, Error ellipse: s-maj=169.8km s-min=51.1km az=49.0*
ISC 03 14:22:49.2±0.8, 10°73N±0°06×86°54W±0°06, h10km, n28, σ1s07/28, mb3.6/3, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.88**	**49**	*e*P	**Pg**	**14 23 07.1**	**+0.9**
GBS3	**Finca Las Im¯¡**	**1.06**	**87**	*i* P	**Pg**	**14 23 08.8**	**-0.9**
VCR	**Vista de Mar**	**1.07**	**124**	*e*P	**Pg**	**14 23 08.6**	**-1.3**
BUEV	**Buena Vista**	**1.11**	**86**	*i* P	**Pb**	**14 23 10.1**	**-0.5**
BUEV				*i* S	**Sb**	**14 23 25.9**	**+0.8**
GB1A	**Borinquen Arri**	**1.12**	**85**	*i* P	**Pb**	**14 23 10.4**	**-0.3**
CONN	**Concepcion**	**1.22**	**47**	*e*P	**Pn**	**14 23 12.5**	**+0.1**
CONN				AML	AML	14 23 38.3	
	comp=Z,2μm,0.6s						
LIM1	**Limonal**	**1.26**	**91**	*i* P	**Pn**	**14 23 12.2**	**-0.7**
TICN	**Ticuantepe**	**1.33**	**13**	*e*P	**Pn**	**14 23 15.1**	**+1.2**
CUI	**Cuipilapa**	**1.35**	**93**	*i* P	**Pn**	**14 23 13.4**	**-0.8**
XAVN	**Gruta Xavier**	**1.43**	**8**	*e*P	**Pn**	**14 23 14.8**	**-0.4**
XAVN				*e*S	**Sn**	**14 23 39.1**	**+5.0**
TISN	**Laguna Tiscapa**	**1.43**	**11**	*e*P	**Pn**	**14 23 16.7**	**+1.4**
COPN	**Copaltepe**	**1.45**	**358**	*e*P	**Pn**	**14 23 14.8**	**-0.7**
COPN				AML	AML	14 23 42.2	
	comp=Z,1μm,0.6s						
CSAN		**1.45**	**4**	*e*P	**Pn**	**14 23 14.9**	**-0.7**
CSAN				AML	AML	14 23 44.5	
	comp=Z,10μm,0.7s						
HUEN		**1.64**	**13**	*e*P	**Pn**	**14 23 17.7**	**-0.5**
HUEN				AML	AML	14 23 52.5	
	comp=Z,200nm,0.6s						
JCR	**Jicaral**	**1.65**	**122**	*e*P	**Pn**	**14 23 17.0**	**-1.3**
MOMN	**Momotombo**	**1.67**	**360**	*e*P	**Pn**	**14 23 18.1**	**-0.5**
BOAB	**BOACO BROADBAN**	**1.91**	**26**	*e*P	**Pn**	**14 23 21.3**	**-0.6**
CGA2	**Cerro Gallo 2**	**2.16**	**109**	*e*P	**Pn**	**14 23 25.8**	**+0.6**
PRS1	**Puriscal**	**2.31**	**108**	*e*P	**Pn**	**14 23 27.6**	**+0.2**
LAJ	**Bijagual**	**2.53**	**110**	*e*P	**Pn**	**14 23 26.9**	**-3.5**
URSC	**Urasca**	**2.86**	**108**	*e*P	**Pn**	**14 23 37.8**	**+2.9**
BUS	**Buena Vista**	**2.97**	**113**	*e*P	**Pn**	**14 23 37.9**	**+1.4**
ACR	**Cerro Adams**	**3.91**	**122**	*e*P	**Pn**	**14 23 51.6**	**+2.2**
TXAR	**Lajitas Array**	**24.47**	**322**	P	**P**	**14 28 08.2**	**-0.4**
	comp=Z,1.7nm,0.6s,mb3.6,baz=135,slow=10.0,SNR=26						
PDAR	**Pinedale Array**	**37.71**	**332**	P	**P**	**14 30 04.2**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.5,baz=124,slow=8.1,SNR=5.0						
NVAR	**Mina Array Bea**	**39.58**	**320**	P	**P**	**14 30 22.9**	**+2.1**
	comp=Z,0.9nm,0.7s,mb3.6,baz=137,slow=7.9,SNR=6.3						
NVAR				PcP	PcP	14 32 30.1	+2.0
	comp=Z,0.6nm,0.7s,baz=115,slow=5.3,SNR=4.9						
WRA	**Warramunga Arr**	**139.62**	**252**	PKP	PKPdf	14 42 21.0	+2.8
	comp=Z,0.4nm,0.9s,baz=94,slow=2.1,SNR=4.1						
CMAR	**Chiang Mai Arr**	**150.50**	**349**	PKPbc	PKPbc	14 42 41.6	-0.6
	comp=Z,0.2nm,0.4s,baz=332,slow=3.4,SNR=4.8						

NIED ***03*** *14:32:00, 33°40N×130°90E, h8km, Mw3.9 Best double couple: M0 8.66000×10^14 NP1:φ=73.00000°, δ=58.00000°, λ=-129.00000°. NP2:φ=310.00000°, δ=49.00000°, λ=-45.00000°.*
NEIC ***03*** *14:32:06.8±3.3, 33°44N×131°03E, h5km±18km, mb4.1/2, Error ellipse: s-maj=30.7km s-min=11.7km az=67.0*
NEIC Felt at Fukuma and Hita. Recorded [3 JMA] in Fukuoka and Oita; [2 JMA] in Saga; [1 JMA] in Kumamoto, Miyazaki, Nagasaki and Yamaguchi. Felt info added from CIIM reports.
IDC ***03*** *14:32:06.8±0.9, 33°23N×130°59E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.6/22, mbtmp3.6/8, ML3.3/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/28, Error ellipse: s-maj=31.3km s-min=15.0km az=64.0*
ISCJB ***03*** *14:32:07.5±0.8, 33°38N±0°03×130°9E±0°1, h17km±5km, mb3.7/9, Error ellipse: s-maj=14.9km s-min=5.1km az=173.1*
JMA ***03*** *14:32:07.6, 33°38N×130°90E, h13km, M4.0 Broadband fault plane solution: P waves. NP1:φ=317.00000°, δ=46.00000°, λ=-40.00000°. NP2:φ=78.00000°, δ=63.00000°, λ=-128.00000°. Principal axes: T Plg10.0000°, Azm194.0000°; N Plg33.0000°, Azm97.0000°; P Plg55.0000°, Azm298.0000°;*
JMA Felt III J1.
ISC 03 14:32:07.8±0.9, 33°38N±0°03×130°9E±0°1, h8km±5km, n23, σ0s77/29, mb3.7/9, 4C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**0.26**	**184**	*e*Pg	**Pg**	**14 32 12.8**	**0.0**
JNU				*e*Sg	**Sg**	**14 32 16.5**	**+0.2**
JNU	**Nakatsue**	**0.26**	**184**	⇑P	**Pg**	**14 32 12.9**	**0.0**
JNU				S	**Sg**	**14 32 16.5**	**+0.2**
JFA	**Akaike**	**0.34**	**346**	⇑P	**Pg**	**14 32 14.7**	**+0.2**
JFA				S	**Sg**	**14 32 19.4**	**+0.3**
JTA	**Tamana**	**0.51**	**217**	⇑P	**Pg**	**14 32 17.5**	**-0.2**
JTA				S	**Sg**	**14 32 24.5**	**0.0**
JIU2	**Izumi 2**	**0.83**	**185**	⇑P	**Pg**	**14 32 23.2**	**-0.6**
JIU2				S	**Sg**	**14 32 34.6**	**0.0**
JII	**Iki**	**1.06**	**293**	⇓P	**Pg**	**14 32 27.3**	**-0.8**
KSRS	**Korea Array**	**4.74**	**330**	Pn	**Pn**	**14 33 20.2**	**+0.8**
	1.3nm,0.3s,baz=146,slow=15,SNR=17						
KSRS				Pg	**Pg**	**14 33 34.2**	**-4.3**
	2.4nm,0.3s,baz=143,slow=16,SNR=19						
KSRS				Sn	**Sn**	**14 34 14.1**	**-0.4**
	2.3nm,0.3s,baz=147,slow=20,SNR=8.3						
KSRS				Lg		14 34 35.1	
	7.0nm,0.3s,baz=148,slow=30,SNR=7.0						
KSRS				LR	LR	14 35 29.5	
	comp=Z,156nm,18.9s,baz=150,slow=43						
MAT	**Matsushiro**	**6.78**	**60**	P	**Sg**	**14 35 40.5**	**-4.9**
JOW	**Kunigami**	**6.91**	**200**	*e*P	**Pn**	**14 33 51.8**	**+2.5**
ULN	**Ulaanbaatar**	**23.05**	**316**	*e*P	**P**	**14 37 14.8**	**+1.4**
	2.0nm,0.6s,mb3.7						
SONM	**Songino Array**	**23.42**	**315**	P	**P**	**14 37 18.0**	**+0.7**
	1.6nm,0.8s,mb3.5,baz=132,slow=9.1,SNR=10						
DAV	**Davao City (W)**	**26.64**	**192**	LR	LR	14 48 12.0	
	comp=Z,40nm,18.7s,baz=174,slow=36						
ZALV	**Zalesovo Beam**	**38.30**	**317**	P	**P**	**14 39 28.4**	**-0.1**
	0.6nm,0.5s,mb3.6,baz=97,slow=10,SNR=3.0						
MK31	**Makanchi Array**	**38.92**	**305**	*e*P	**P**	**14 39 33.5**	**-0.3**
MKAR	**Makanchi Array**	**38.92**	**305**	P	**P**	**14 39 33.3**	**-0.6**
	0.5nm,0.3s,mb3.8,baz=95,slow=10,SNR=8.3						
KURK	**Kurchatov**	**41.57**	**311**	*e*P	**P**	**14 39 55.6**	**-0.1**
WRA	**Warramunga Arr**	**53.12**	**176**	P	**P**	**14 41 24.8**	**-1.2**
	0.5nm,0.8s,mb3.5,baz=356,slow=8.1,SNR=5.0						
ABKAR	**Akbulak array**	**53.66**	**310**	*e*P	**P**	**14 41 29.6**	**-0.1**
	2.2nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**56.80**	**177**	P	**P**	**14 41 52.6**	**+0.1**
	0.7nm,0.9s,mb3.7,baz=3.1,slow=6.0,SNR=7.1						
ILAR	**Eielson Array**	**57.09**	**30**	P	**P**	**14 41 58.0**	**+3.9**
	0.2nm,0.7s,mb3.3,baz=297,slow=8.5,SNR=3.1						
BRTR	**Keskin Array B**	**74.51**	**307**	P	**P**	**14 43 45.5**	**-1.3**
	0.5nm,0.5s,mb3.7,baz=116,slow=2.9,SNR=4.2						
NVAR	**Mina Array Bea**	**83.94**	**48**	P	**P**	**14 44 38.6**	**+0.2**
	baz=278,slow=2.6,SNR=2.4						
NVAR	**Mina Array Bea**	**83.94**	**48**	P	**P**	**14 44 38.6**	**+0.2**

NDI ***03*** *14:50:25.7±5.8, 30°94N×83°38E, h10km, ML3.5, mb3.5(NEIC)*
ISCJB ***03*** *14:50:31.2±0.5, 30°66N±0°06×82°82E±0°06, h10km, mb3.4/8, Error ellipse: s-maj=10.1km s-min=5.8km az=145.9*
IDC ***03*** *14:50:31.2±1.5, 30°63N×82°78E, h0km, mb3.5/8, mb1 3.8/10, mb1mx3.6/28, mbtmp3.6/10, ML3.5/2, Error ellipse: s-maj=48.6km s-min=19.6km az=59.0*
NEIC ***03*** *14:50:33.1±0.9, 30°72N×82°82E, h10km, mb3.5/1, Error ellipse: s-maj=20.4km s-min=10.5km az=37.0*
ISC 03 14:50:33.1±0.5, 30°72N±0°06×82°83E±0°06, h10km, n23, σ0s98/26, mb3.4/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**2.55**	**243**	*e*PKP	**Pg**	**14 51 28.1**	**+6.2**
PTH				*e*S	**Sg**	**14 52 07.0**	**+12**
JOSI	**Joshimath**	**2.82**	**268**	*e*PKP	**Pn**	**14 51 19.6**	**+1.3**
JOSI				*e*x	x	14 51 38.2	
JOSI				AML	AML	14 51 45.7	
	comp=E,201nm,0.8s						
JOSI				AML	AML	14 51 51.6	
	comp=N,157nm,0.5s						
AYAN	**Aya Nagar**	**5.44**	**247**	*e*PKP	**Pn**	**14 51 53.3**	**-1.0**
AGRA	**Agra**	**5.51**	**232**	*e*x	**Pg**	**14 52 21.3**	**+2.5**
AGRA				*e*S	**Sn**	**14 52 57.9**	**-0.9**
AGRA				AML	AML	14 53 52.6	
	comp=N,56nm,0.3s						
AGRA				AML	AML	14 53 55.7	
	comp=E,69nm,0.3s						
SONA	**Sohna**	**5.58**	**245**	*e*PKP	**Pn**	**14 51 55.9**	**-0.3**
KHET	**Khetri**	**6.67**	**248**	*e*x	**Pb**	**14 52 22.9**	**-6.3**
KHET				*e*S	**Sn**	**14 53 27.1**	**-0.1**
LSA	**Lhasa**	**7.27**	**96**	P	**Pn**	**14 52 19.0**	**-0.4**
LSA	**Lhasa**	**7.27**	**96**	*e*P	**Pn**	**14 52 19.1**	**-0.4**
	comp=E,9.8nm,0.9s						
NIL	**Nilore**	**8.63**	**292**	P	**Pn**	**14 52 36.1**	**-1.9**
MKAR	**Makanchi Array**	**16.06**	**359**	Pn	**Pn**	**14 54 17.6**	**-1.3**
	comp=E,0.0nm,0.3s,baz=143,slow=12,SNR=2.9						
CMAR	**Chiang Mai Arr**	**19.04**	**126**	P	**Pn**	**14 54 56.4**	**+0.1**
	comp=E,0.2nm,0.3s,baz=299,slow=8.8,SNR=4.1						
KURK	**Kurchatov**	**20.22**	**352**	P	**P**	**14 55 09.1**	**+1.0**
	comp=E,2.7nm,1.0s,baz=173,slow=10,SNR=11						
KURK	**Kurchatov**	**20.22**	**352**	*e*P	**P**	**14 55 08.0**	**-0.2**
ZALV	**Zalesovo Beam**	**23.26**	**3**	P	**P**	**14 55 40.5**	**-0.1**
	comp=E,0.8nm,0.6s,mb3.4,baz=189,slow=8.7,SNR=3.7						
BVAR	**Borovoye Array**	**24.07**	**341**	P	**P**	**14 55 48.6**	**+0.2**
	comp=E,0.5nm,0.4s,mb3.3,baz=141,slow=9.6,SNR=3.6						
SONM	**Songino Array**	**24.85**	**40**	P	**P**	**14 55 55.9**	**+0.3**
	comp=E,0.4nm,0.6s,mb3.1,baz=218,slow=9.1,SNR=3.4						
SONM	**Songino Array**	**24.85**	**40**	P	**P**	**14 55 55.9**	**+0.3**
ABKAR	**Akbulak array**	**25.34**	**323**	P	**P**	**14 56 02.7**	**+2.7**
	comp=E,0.5nm,0.4s,mb3.4						
AKTK	**Aktyubinsk**	**27.04**	**324**	P	**P**	**14 56 15.4**	**0.0**
AKTO	**Aktyubinsk**	**27.04**	**324**	P	**P**	**14 56 15.4**	**0.0**
	comp=E,0.7nm,0.5s,mb3.4,baz=166,slow=4.2,SNR=1.8						
WRA	**Warramunga Arr**	**70.61**	**129**	P	**P**	**15 01 48.2**	**-0.7**
	comp=E,0.5nm,0.6s,mb3.6,baz=326,slow=6.2,SNR=13						
ILAR	**Eielson Array**	**77.26**	**20**	P	**P**	**15 02 27.6**	**+0.4**
	comp=E,0.6nm,0.8s,mb3.6,baz=315,slow=5.3,SNR=6.2						
YKA	**Yellowknife Ar**	**86.06**	**8**	P	**P**	**15 03 14.1**	**+0.4**
	comp=E,0.2nm,0.5s,mb3.6,baz=339,slow=5.0,SNR=3.2						

IDC 03 14:54:18.5±2.7, 15°36S×65°80E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/21, mbtmp3.8/4, ML4.4/1, MS3.7/1, Ms1 3.6/1, ms1mx2.8/25, Error ellipse: s-maj=81.2km s-min=32.4km az=165.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.09**	**257**	P	Pn	14 58 31.7	+0.2
	1.2nm,0.3s,baz=61,slow=13,SNR=6.9						
OPO				S	Sn	15 01 50.9	-3.1
	0.3nm,0.3s,baz=253,slow=19,SNR=3.2						
MAW	**Mawson**	**52.24**	**181**	P	P	15 03 30.9	-0.1
	1.6nm,0.9s,baz=353,slow=8.1,SNR=2.5						
MAW				LR	LR	15 19 00.0	
	comp=Z,86nm,21.6s,baz=139,slow=28						
ASAR	**Alice Springs**	**64.22**	**109**	P	P	15 04 55.0	-0.6
	0.4nm,0.7s,baz=274,slow=6.1,SNR=8.7						
WRA	**Warramunga Arr**	**65.08**	**105**	P	P	15 05 02.3	+0.9
	0.7nm,0.8s,baz=267,slow=6.0,SNR=6.5						

ISCJB ***03*** *15:04:22.3±1.0, 7°02N±0°08×72°76W±0°07, h180km±8km, mb3.5/2, Error ellipse: s-maj=12.5km s-min=11.3km az=2.1*
FUNV ***03*** *15:04:22.0, 6°91N×72°98W, h179km, MW2.9*
NEIC ***03*** *15:04:22.0±0.9, 6°69N×72°95W, h172km±12km, Error ellipse: s-maj=54.3km s-min=14.0km az=127.0*
IDC ***03*** *15:04:24.1±2.6, 6°83N×73°70W, h174km±18km, mb3.3/2, mb1 3.4/3, mb1mx3.1/18, mbtmp3.3/3, Error ellipse: s-maj=132.5km s-min=26.7km az=101.0*
ISC 03 15:04:22.6±0.9, 6°95N±0°07×72°79W±0°07, h168km±8km, n17, σ1s31/25, mb3.5/2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.02**	**28**	*e*P	**Pn**	**15 04 50.6**	**+1.3**
CAPV				*e*S	**Sn**	**15 05 11.5**	**+1.6**
SOCV	**Socops**	**2.33**	**55**	*e*P	**Pn**	**15 05 04.5**	**+1.9**
SOCV				*e*S	**Sn**	**15 05 34.4**	**+0.8**
VIGV	**El Vigia**	**2.35**	**37**	*e*P	**Pn**	**15 05 04.5**	**+1.6**
VIGV				*e*S	**Sn**	**15 05 33.9**	**-0.1**
ROSC	**El Rosal**	**2.58**	**216**	P	**Pn**	**15 05 02.9**	**-2.8**
	14nm,0.3s,baz=271,slow=23,SNR=28						
ROSC				S	**Sn**	**15 05 31.5**	**-7.5**
	27nm,0.3s,baz=102,slow=16,SNR=8.0						
ROSC	**El Rosal**	**2.58**	**216**	*e*Pn	**Pn**	**15 05 02.3**	**-3.4**
ROSC				*e*Sn	**Sn**	**15 05 26.6**	**-12**
SDV	**Santo Domingo**	**2.88**	**48**	*e*Pn	**Pn**	**15 05 12.3**	**+3.2**
ELOV	**Elorza**	**3.28**	**89**	*e*P	**Pn**	**15 05 15.0**	**+0.8**
ELOV				*e*S	**Sn**	**15 05 54.0**	**-0.3**
VIRV	**Villa del Rosa**	**3.55**	**6**	*e*P	**Pn**	**15 05 16.4**	**-1.2**
VIRV				*e*S	**Sn**	**15 05 57.1**	**-3.4**
SANV	**Sanarito**	**4.10**	**52**	*e*S	**Sn**	**15 06 11.9**	**-1.1**
CURV	**Curarigua**	**4.13**	**42**	*e*P	**Pn**	**15 05 25.5**	**+0.5**
CURV				*e*S	**Sn**	**15 06 13.0**	**-0.9**
SIQV	**Siquisique**	**4.71**	**39**	*e*P	**Pn**	**15 05 32.5**	**-0.1**
SIQV				*e*S	**Sn**	**15 06 25.7**	**-1.6**
BAUV	**El Baul**	**5.10**	**67**	*e*P	**Pn**	**15 05 37.4**	**-0.3**
BAUV				*e*S	**Sn**	**15 06 34.6**	**-1.8**
CAOV	**Caicara del Or**	**6.43**	**86**	*e*P	**Pn**	**15 05 55.6**	**+0.5**
SCHQ	**Schefferville**	**47.98**	**5**	P	**P**	**15 12 46.3**	**+2.1**
	1.5nm,0.5s,mb3.9,baz=196,slow=7.4,SNR=3.8						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**15 14 32.6**	**-0.3**
	0.2nm,0.5s,mb3.2,baz=134,slow=6.5,SNR=4.2						
ASAR	**Alice Springs**	**149.45**	**234**	PKPbc	PKPbc	15 23 51.1	-1.5
	0.3nm,0.6s,baz=121,slow=3.7,SNR=6.4						
WRA	**Warramunga Arr**	**150.69**	**241**	PKPbc	PKPbc	15 23 54.1	-1.6
	0.6nm,0.9s,baz=109,slow=2.3,SNR=9.0						

CSEM ***03*** *15:04:57.9±0.3, 50°29N×18°82E, h2km, ML3.0/4, Error ellipse: s-maj=7.7km s-min=3.4km az=9.0*
PRU ***03*** *15:04:59.1, 50°25N×18°80E, h0km*
WAR 03 15:04:58.3, 50°23N×18°91E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.57**	**91**	*e*Pg	Pg	15 05 09.7	+0.5
OJC				*e*Sg	Sg	15 05 17.8	+1.2
OJC	**Ojcow**	**0.57**	**91**	*e*Pg	Pg	15 05 09.7	+0.5
OJC				*e*Sg	Sg	15 05 17.8	+1.2
OKC	**Ostrava-Krasne**	**0.63**	**232**	*e*PG	Pg	15 05 10.0	-0.3
OKC				*e*SG	Sg	15 05 18.2	-0.3
	comp=Z,44nm,0.4s						
OKC	**Ostrava-Krasne**	**0.63**	**232**	Pg	Pg	15 05 10.0	-0.3
OKC				Sg	Sg	15 05 18.2	-0.3
	comp=Z,44nm,0.4s						
MORC	**Moravsky Berou**	**0.99**	**243**	*e*Pg	Pg	15 05 16.8	-0.5
MORC				*e*Sg	Sg	15 05 29.6	-0.5
NIE	**Niedzica**	**1.22**	**131**	*e*Pg	Pg	15 05 22.2	+0.6

KURK	**Kurchatov**	**68.40**	**332**	P	**P**	**15 22 13.3**	**-0.4**
	0.2nm,0.5s,mb2.9,baz=139,slow=5.8,SNR=2.9						

*ISCJB **03** 15:20:38.4±0.6, 32°.38N±0°.05×104°.96E±0°.06, h10km, mb3.3/5, Error ellipse: s-maj=8.4km s-min=5.1km az=37.4*
*IDC **03** 15:20:39.6±1.1, 32°.28N×104°.61E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.4/23, mbtmp3.4/5, Error ellipse: s-maj=186.8km s-min=19.2km az=56.0*
*BJI **03** 15:20:44.0, 32°.54N×104°.82E, h17km, ML3.3/11*
ISC 03 15:20:40.5±0.6, 32°.44N±0°.04×104°.85E±0°.06, h10km, n9, σ0s99/15, mb3.3/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.78**	**212**	Pn	**Pg**	**15 21 14.5**	**-0.2**
CD2				Sg	**Sg**	**15 21 37.1**	**-0.8**
CD2				smax			
	comp=N,2μm,0.6s						
CD2				smax			
	comp=E,880nm,0.7s						
LZH	**Lanzhou**	**3.73**	**347**	Pn	**Pb**	**15 21 46.4**	**-0.2**
LZH				Pg	**Pg**	**15 21 59.0**	**+6.9**
LZH				Sn	**Sn**	**15 22 23.3**	**+1.1**
LZH				Sg	**Sg**	**15 22 38.4**	**-2.1**
LZH				smax			
	comp=N,140nm,0.5s						
LZH				smax			
	comp=E,180nm,0.8s						
LZH				LR	LR		
	comp=N,220nm,5.5s						
LZH				LR	LR		
	comp=E,230nm,4.6s						
LZH				LR	LR		
	comp=Z,280nm,4.0s						
XAN	**Xi'an**	**3.77**	**64**	Pn	**Pn**	**15 21 42.6**	**+3.9**
XAN				Pg	**Pg**	**15 21 51.2**	**-1.6**
XAN				Sg	**Sg**	**15 22 41.8**	**+0.1**
XAN				smax			
	comp=N,110nm,1.0s						
XAN				smax			
	comp=E,43nm,0.9s						
GTA	**Gaotai**	**8.06**	**331**	*e*P	**Pb**	**15 23 09.4**	**+9.1**
GTA				pP		15 23 13.1	
GTA				sP		15 23 16.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**22.42**	**316**	P	**P**	**15 25 39.0**	**-0.3**
	comp=Z,0.4nm,0.7s,mb3.0,baz=126,slow=7.3,SNR=2.4						
ZALV	**Zalesovo Beam**	**25.82**	**332**	P	**P**	**15 26 13.2**	**+1.5**
	comp=Z,0.5nm,0.4s,mb3.4,baz=141,slow=9.3,SNR=3.3						
KURK	**Kurchatov**	**26.58**	**321**	P	**P**	**15 26 19.1**	**+0.4**
	comp=Z,0.5nm,0.8s,mb3.1,baz=119,slow=9.6,SNR=3.9						
WRA	**Warramunga Arr**	**59.24**	**147**	P	**P**	**15 30 42.6**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.7,baz=342,slow=7.4,SNR=3.6						
ASAR	**Alice Springs**	**62.31**	**150**	P	**P**	**15 31 03.5**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.6,baz=336,slow=6.4,SNR=4.0						

*ISCJB **03** 15:30:51.9±0.3, 47°.04N±0°.02×9°.41E±0°.02, h13km±3km, Error ellipse: s-maj=3.1km s-min=2.2km az=177.8*
*CSEM **03** 15:30:52.4±0.1, 47°.02N×9°.45E, h10km, ML2.7/12, Error ellipse: s-maj=2.0km s-min=1.4km az=165.0*
*NEIC **03** 15:30:52.5, 47°.05N×9°.48E, h7km, ML2.5(LDG), ML2.3(ZUR), ML2.3(SFTR), After ZUR.*
*ZUR **03** 15:30:52.5, 47°.04N×9°.47E, h7km±1km, ML2.3/14*
*VIE **03** 15:30:52.1±0.7, 47°.03N×9°.39E, h10km±4km, mb1.6/4, ML2.7/6, Error ellipse: s-maj=4.4km s-min=3.0km az=107.0 5 km SW of Sargans*
*LDG **03** 15:30:52.8±0.1, 47°.04N×9°.49E, h2km, Ml2.5/7, Error ellipse: s-maj=1.4km s-min=0.9km az=82.0*
*BGR **03** 15:30:54.2±0.7, 47°.10N×9°.48E, h10km, ML2.2/7, Error ellipse: s-maj=7.8km s-min=3.3km az=24.0*
*STR **03** 15:30:54.3±0.7, 47°.10N×9°.41E, h10km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 03 15:30:52.7±0.2, 47°.04N±0°.02×9°.44E±0°.02, h12km±3km, n99, σ0s85/162, 35C-14D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLONS	**Plons/SG**	**0.04**	**289**	⇑*i*Pg	**Pg**	**15 30 54.6**	**-0.3**
	12μm,0.3s						
PLONS				*i* Sg	**Sg**	**15 30 55.9**	**-0.6**
	12μm,0.3s						
PLONS	**Plons/SG**	**0.04**	**289**	⇑*i*Pg	**Pg**	**15 30 54.6**	**-0.3**
PLONS				*i* Sg	**Sg**	**15 30 55.9**	**-0.6**
LIENZ	**Kamor/St.Gall**	**0.26**	**9**	⇑*i*Pg	**Pg**	**15 30 57.7**	**-0.4**
	1μm,0.3s						
LIENZ	**Kamor/St.Gall**	**0.26**	**9**	⇑*i*Pg	**Pg**	**15 30 57.7**	**-0.4**
LIENZ				*e*Sg	**Sg**	**15 31 01.3**	**-0.5**
LIENZ	**Kamor/St.Gall**	**0.26**	**9**	⇑*i*Pg	**Pg**	**15 30 57.7**	**-0.4**
	1μm,0.3s						
LIENZ				*e*Sg	**Sg**	**15 31 01.3**	**-0.5**
LLS	**Linth-Limmern**	**0.35**	**237**	⇑*i*Pg	**Pg**	**15 31 00.0**	**+0.3**
	410nm,0.2s						
LLS				*e*Sg	**Sg**	**15 31 05.1**	**+0.7**
	410nm,0.2s						
LLS	**Linth-Limmern**	**0.35**	**237**	⇑*i*Pg	**Pg**	**15 31 00.0**	**+0.3**
	410nm,0.2s						
LLS				*e*Sg	**Sg**	**15 31 05.1**	**+0.7**
	410nm,0.2s						
DAVA	**Damuels**	**0.39**	**50**	*e*Pg	**Pg**	**15 30 60.0**	**-0.5**
DAVA				*e*Sg	**Sg**	**15 31 05.7**	**0.0**
DAVA	**Damuels**	**0.39**	**50**	⇑*i*Pg	**Pg**	**15 30 59.9**	**-0.6**
	6.0nm,0.1s						
DAVA				⇑*i*Sg	**Sg**	**15 31 06.0**	**+0.2**
	82nm,0.2s						
DAVA	**Damuels**	**0.39**	**50**	Pg	**Pg**	**15 31 00.0**	**-0.5**
DAVA				Sg	**Sg**	**15 31 05.7**	**-0.1**
DAVOX	**Davos/Dischmat**	**0.40**	**130**	⇓*i*Pg	**Pg**	**15 31 00.4**	**-0.2**
	233nm,2.0s						
DAVOX	**Davos/Dischmat**	**0.40**	**130**	*e*Pg	**Pg**	**15 31 00.4**	**-0.2**
DAVOX	**Davos/Dischmat**	**0.40**	**130**	⇓*i*Pg	**Pg**	**15 31 00.4**	**-0.2**
	233nm,2.0s						
WILA	**Wila**	**0.52**	**317**	⇓*i*Pg	**Pg**	**15 31 03.6**	**+0.7**
	375nm,0.2s						
WILA				*e*Sg	**Sg**	**15 31 11.3**	**+1.5**
	375nm,0.2s						
WILA	**Wila**	**0.52**	**317**	⇓*i*Pg	**Pg**	**15 31 03.6**	**+0.7**
WILA				*e*Sg	**Sg**	**15 31 11.2**	**+1.4**
WILA	**Wila**	**0.52**	**317**	⇓*i*Pg	**Pg**	**15 31 03.6**	**+0.7**
	375nm,0.2s						
WILA				*e*Sg	**Sg**	**15 31 11.3**	**+1.5**
	375nm,0.2s						
MUO	**Muotathal**	**0.55**	**263**	⇑*i*Pg	**Pg**	**15 31 04.0**	**+0.6**
	393nm,2.0s						
MUO	**Muotathal**	**0.55**	**263**	⇑*i*Pg	**Pg**	**15 31 04.0**	**+0.6**
	393nm,2.0s						
VDL	**Val di Lei**	**0.55**	**179**	⇑*i*Pg	**Pg**	**15 31 03.9**	**+0.4**
	116nm,0.3s						
VDL				*i* Sg	**Sg**	**15 31 11.4**	**+0.6**
	116nm,0.3s						
VDL	**Val di Lei**	**0.55**	**179**	⇑*i*Pg	**Pg**	**15 31 03.9**	**+0.4**
VDL				*e*Sg	**Sg**	**15 31 11.3**	**+0.5**
VDL	**Val di Lei**	**0.55**	**179**	⇑*i*Pg	**Pg**	**15 31 03.9**	**+0.4**
	116nm,0.3s						
VDL				*i* Sg	**Sg**	**15 31 11.4**	**+0.6**
	116nm,0.3s						
WEIN	**Weingarten**	**0.58**	**328**	⇑*i*Pg	**Pg**	**15 31 04.6**	**+0.6**
	17nm,0.2s						
WEIN	**Weingarten**	**0.58**	**328**	⇑*i*Pg	**Pg**	**15 31 04.6**	**+0.6**
	17nm,0.2s						
ZUR	**Degenried**	**0.67**	**300**	⇓*i*Pg	**Pg**	**15 31 06.4**	**+0.7**
	168nm,0.3s						
ZUR	**Degenried**	**0.67**	**300**	⇓*i*Pg	**Pg**	**15 31 06.4**	**+0.7**
	168nm,0.3s						
OBER	**Oberstdorf**	**0.69**	**57**	⇓*i*PgD	**Pg**	**15 31 05.9**	**-0.2**
OBER				⇓*i*Sg	**Sg**	**15 31 16.2**	**+1.0**
OBER	**Oberstdorf**	**0.69**	**57**	Pg	**Pg**	**15 31 05.9**	**-0.2**
OBER				Sg	**Sg**	**15 31 16.2**	**+1.0**
BNALP	**Bannalp**	**0.71**	**257**	⇓*i*Pg	**Pg**	**15 31 07.0**	**+0.5**
	9.5nm,0.2s						
BNALP	**Bannalp**	**0.71**	**257**	*e*Pg	**Pg**	**15 31 06.9**	**+0.4**
BNALP	**Bannalp**	**0.71**	**257**	⇓*i*Pg	**Pg**	**15 31 07.0**	**+0.5**
	9.5nm,0.2s						
FUSIO	**Fusio**	**0.79**	**223**	⇑*i*Pg	**Pg**	**15 31 08.4**	**+0.5**
	33nm,0.2s						
FUSIO	**Fusio**	**0.79**	**223**	⇑*i*Pg	**Pg**	**15 31 08.6**	**+0.7**
FUSIO	**Fusio**	**0.79**	**223**	⇑*i*Pg	**Pg**	**15 31 08.4**	**+0.5**
	33nm,0.2s						
FLACH	**Flaach**	**0.80**	**313**	⇑*i*Pg	**Pg**	**15 31 08.7**	**+0.6**
	149nm,0.2s						
FLACH	**Flaach**	**0.80**	**313**	⇑*i*Pg	**Pg**	**15 31 08.7**	**+0.6**
	149nm,0.2s						
TRULL	**Truellikon**	**0.80**	**320**	⇑*i*Pg	**Pg**	**15 31 08.6**	**+0.5**
	58nm,0.2s						
TRULL	**Truellikon**	**0.80**	**320**	⇑*i*Pg	**Pg**	**15 31 08.4**	**+0.3**
TRULL	**Truellikon**	**0.80**	**320**	⇑*i*Pg	**Pg**	**15 31 08.6**	**+0.5**
	58nm,0.2s						
FETA	**Feichten**	**0.89**	**91**	⇓*e*Pg	**Pg**	**15 31 09.0**	**-0.7**
	0.7nm,0.2s						
FETA				⇑*i*Sg	**Sg**	**15 31 21.5**	**+0.2**
	6.8nm,0.3s						
FETA	**Feichten**	**0.89**	**91**	Pg	**Pg**	**15 31 09.0**	**-0.8**
	0.7nm,0.2s						
FETA				Sg	**Sg**	**15 31 21.5**	**+0.2**
	6.8nm,0.3s						
HASLI	**Hasliberg/Brie**	**0.92**	**253**	*e*Pg	**Pg**	**15 31 10.9**	**+0.4**
HASLI	**Hasliberg/Brie**	**0.92**	**253**	*e*Pg	**Pg**	**15 31 10.9**	**+0.4**
SLE	**Schleitheim**	**0.97**	**319**	⇑*i*Pg	**Pg**	**15 31 11.5**	**+0.1**
	228nm,0.3s						
SLE	**Schleitheim**	**0.97**	**319**	⇑*i*Pg	**Pg**	**15 31 11.5**	**+0.1**
	228nm,0.3s						
RETA	**Reutte**	**1.01**	**63**	⇑*i*Pg	**Pg**	**15 31 12.4**	**+0.2**
	1.6nm,0.1s						
RETA				⇑*e*Sg	**Sg**	**15 31 29.1**	**+3.8**
	15nm,0.1s						
RETA	**Reutte**	**1.01**	**63**	Pg	**Pg**	**15 31 12.4**	**+0.3**
	1.6nm,0.1s						
RETA				Sg	**Sg**	**15 31 29.1**	**+3.8**
	15nm,0.1s						
SPAK	**Spaichingen-Ko**	**1.15**	**338**	Pg	**Pg**	**15 31 15.4**	**+0.5**
SPAK				Sg	**Sg**	**15 31 30.1**	**+0.2**
SPAK	**Spaichingen-Ko**	**1.15**	**338**	Pg	**Pg**	**15 31 15.4**	**+0.5**
SPAK				Sg	**Sg**	**15 31 30.1**	**+0.2**
MOTA	**Moosalm**	**1.18**	**74**	⇑*i*Pn	**Pn**	**15 31 15.4**	**+0.5**
	8.6nm,0.2s						
MOTA				⇑*i*Sg	**Sg**	**15 31 34.1**	**+3.5**
	45nm,0.2s						
MOTA	**Moosalm**	**1.18**	**74**	Pn	**Pn**	**15 31 15.4**	**+0.4**
	8.6nm,0.2s						
MOTA				Sg	**Sg**	**15 31 34.1**	**+3.4**
	45nm,0.2s						
FELD	**Feldberg im Sc**	**1.28**	**311**	Pg	**Pg**	**15 31 17.1**	**-0.3**
FELD				Sg	**Sg**	**15 31 34.6**	**+0.5**
FELD	**Feldberg im Sc**	**1.28**	**311**	Pg	**Pg**	**15 31 17.1**	**-0.3**
FELD				Sg	**Sg**	**15 31 34.6**	**+0.5**
BBS	**Basel-Blauen**	**1.38**	**289**	Pg	**Pg**	**15 31 19.5**	**+0.3**
BBS				Sg	**Sg**	**15 31 38.7**	**+1.6**
BBS	**Basel-Blauen**	**1.38**	**289**	Pg	**Pg**	**15 31 19.5**	**+0.3**
BBS				Sg	**Sg**	**15 31 38.7**	**+1.6**
WATA	**Walderalm**	**1.49**	**78**	⇑*e*Pg	**Pg**	**15 31 20.9**	**-0.4**
	2.3nm,0.1s						
WATA				⇓*e*Sg	**Sg**	**15 31 42.7**	**+2.0**
	6.6nm,0.1s						
WATA	**Walderalm**	**1.49**	**78**	Pg	**Pg**	**15 31 20.9**	**-0.4**
	2.3nm,0.1s						
WATA				Sg	**Sg**	**15 31 42.7**	**+2.1**
	6.6nm,0.1s						
BFO	**Black Forest**	**1.50**	**330**	*e*Pg	**Pg**	**15 31 21.3**	**-0.1**
BFO				*e*Sg	**Sg**	**15 31 40.6**	**-0.2**
WTTA	**Wattenberg**	**1.52**	**81**	*e*Pg	**Pg**	**15 31 22.0**	**+0.1**
WTTA				*e*Sg	**Sg**	**15 31 42.7**	**+1.1**
WTTA	**Wattenberg**	**1.52**	**81**	⇑*i*Pg	**Pg**	**15 31 22.0**	**+0.1**
	2.5nm,0.1s						
WTTA				⇓*i*Sg	**Sg**	**15 31 43.0**	**+1.5**
	15nm,0.3s						
WTTA	**Wattenberg**	**1.52**	**81**	Pg	**Pg**	**15 31 22.0**	**+0.2**
	2.5nm,0.1s						
WTTA				Sg	**Sg**	**15 31 42.7**	**+1.1**
SCE	**Schlegeis**	**1.56**	**89**	⇑*i*Pn	**Pg**	**15 31 22.7**	**+0.2**
SCE				⇑*i*Sn	**Sg**	**15 31 44.7**	**+2.0**
SCE	**Schlegeis**	**1.56**	**89**	Pn	**Pg**	**15 31 22.7**	**+0.2**
SCE				Sn	**Sg**	**15 31 44.7**	**+2.0**
STU	**Stuttgart**	**1.74**	**355**	*e*Sg	**Sg**	**15 31 48.1**	**-0.7**
STU	**Stuttgart**	**1.74**	**355**	Sg	**Sg**	**15 31 48.1**	**-0.7**
HINF	**Hinteralfeld**	**1.92**	**295**	*e*Pg	**Pg**	**15 31 28.8**	**-0.7**
HINF				*e*Sg	**Sg**	**15 31 54.5**	**+0.1**
	6.1nm,0.3s						
HINF	**Hinteralfeld**	**1.92**	**295**	*e*Pn	**Pn**	**15 31 25.2**	**0.0**
HINF				*e*Pg	**Pg**	**15 31 28.8**	**-0.7**
HINF				*e*Sg	**Sg**	**15 31 54.5**	**+0.1**
HINF	**Hinteralfeld**	**1.92**	**295**	*e*Sg	**Sg**	**15 31 54.5**	**+0.1**
	3.0nm,0.3s						
CDF	**Champ du Feu**	**2.00**	**314**	*e*Pg	**Pg**	**15 31 30.7**	**-0.4**
CDF				*e*Sg	**Sg**	**15 31 56.7**	**-0.4**
	9.1nm,0.4s						
CDF	**Champ du Feu**	**2.00**	**314**	*e*Pn	**Pn**	**15 31 26.1**	**-0.2**
CDF				*e*Pg	**Pg**	**15 31 30.7**	**-0.4**
CDF				*e*Sg	**Sg**	**15 31 56.7**	**-0.4**
CDF	**Champ du Feu**	**2.00**	**314**	*e*Sg	**Sg**	**15 31 56.7**	**-0.4**
	4.6nm,0.4s						
HAU	**Haudompre**	**2.31**	**296**	*e*Pg	**Pg**	**15 31 36.2**	**-0.7**
HAU				*e*Sg	**Sg**	**15 32 06.2**	**-0.6**
	7.6nm,0.3s						
HAU	**Haudompre**	**2.31**	**296**	*e*Pn	**Pn**	**15 31 30.5**	**0.0**
HAU				*e*Pg	**Pg**	**15 31 36.2**	**-0.7**
HAU				*e*Sg	**Sg**	**15 32 06.2**	**-0.6**
HAU	**Haudompre**	**2.31**	**296**	*e*Sg	**Sg**	**15 32 06.2**	**-0.6**
	3.8nm,0.3s						
CABF	**La Chapelle**	**2.34**	**261**	*e*Pg	**Pg**	**15 31 37.1**	**-0.4**
CABF				*e*Sg	**Sg**	**15 32 07.6**	**-0.2**
	3.3nm,0.2s						
CABF	**La Chapelle**	**2.34**	**261**	*e*Pn	**Pn**	**15 31 31.0**	**+0.1**
CABF				*e*Pg	**Pg**	**15 31 37.1**	**-0.4**
CABF				*e*Sg	**Sg**	**15 32 07.6**	**-0.2**
CABF	**La Chapelle**	**2.34**	**261**	*e*Pn	**Pn**	**15 31 31.0**	**+0.1**
CABF	**La Chapelle**	**2.34**	**261**	*e*Pg	**Pg**	**15 31 37.1**	**-0.4**
CABF				*e*Sg	**Sg**	**15 32 07.6**	**-0.2**
	1.6nm,0.2s						
RJOB	**Jochberg**	**2.39**	**72**	*e*Pn	**Pn**	**15 31 31.7**	**+0.1**
RJOB				*e*Sg	**Sg**	**15 32 10.2**	**+0.8**
RJOB	**Jochberg**	**2.39**	**72**	Pn	**Pn**	**15 31 31.7**	**+0.1**
RJOB				Sg	**Sg**	**15 32 10.2**	**+0.8**
LPL	**La Plagne**	**2.41**	**232**	*e*Pg	**Pg**	**15 31 38.6**	**-0.3**
LPL				*e*Sg	**Sg**	**15 32 09.8**	**-0.4**
	6.4nm,0.5s						
LPL	**La Plagne**	**2.41**	**232**	*e*Pg	**Pg**	**15 31 38.6**	**-0.3**
LPL				*e*Sg	**Sg**	**15 32 09.8**	**-0.4**
	3.2nm,0.5s						
KBA	**Koelnbreinsper**	**2.67**	**88**	*e*Sg	**Sg**	**15 32 16.6**	**-1.9**
KBA	**Koelnbreinsper**	**2.67**	**88**	Sg	**Sg**	**15 32 16.6**	**-1.9**
MBDF	**Montbardon**	**2.97**	**220**	*e*Pg	**Pg**	**15 31 48.2**	**-1.3**
MBDF				*e*Sg	**Sg**	**15 32 26.6**	**-1.3**
	5.8nm,0.5s						
MBDF	**Montbardon**	**2.97**	**220**	*e*Pn	**Pn**	**15 31 39.5**	**0.0**
MBDF				*e*Pg	**Pg**	**15 31 48.2**	**-1.3**
MBDF				*e*Sg	**Sg**	**15 32 26.6**	**-1.3**
MBDF	**Montbardon**	**2.97**	**220**	*e*Pn	**Pn**	**15 31 39.5**	**0.0**
MBDF	**Montbardon**	**2.97**	**220**	*e*Pg	**Pg**	**15 31 48.2**	**-1.3**
MBDF				*e*Sg	**Sg**	**15 32 26.6**	**-1.3**
	2.9nm,0.5s						
WET	**Wettzell**	**3.13**	**46**	*e*Pn	**Pn**	**15 31 41.4**	**-0.3**
WET				*e*Sg	**Sg**	**15 32 31.5**	**-1.6**
WET	**Wettzell**	**3.13**	**46**	Pn	**Pn**	**15 31 41.4**	**-0.3**
WET				Sg	**Sg**	**15 32 31.5**	**-1.5**
ORIF	**Oris-en-Rattie**	**3.26**	**231**	*e*Pg	**Pg**	**15 31 54.0**	**-1.1**
ORIF				*e*Sg	**Sg**	**15 32 36.4**	**-1.0**
	3.5nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.26**	**231**	*e*Pg	**Pg**	**15 31 54.0**	**-1.1**
ORIF				*e*Sg	**Sg**	**15 32 36.4**	**-1.0**
	1.8nm,0.4s						
ROTZ	**Rotzenmuhle**	**3.30**	**33**	*e*Sg	**Sg**	**15 32 36.0**	**-2.5**
ROTZ	**Rotzenmuhle**	**3.30**	**33**	Sg	**Sg**	**15 32 36.0**	**-2.5**
MOA	**Molln**	**3.38**	**74**	*e*Sg	**Sg**	**15 32 39.9**	**-1.2**
MOA	**Molln**	**3.38**	**74**	Sg	**Sg**	**15 32 39.9**	**-1.2**
GEC2	**GERESS Array S**	**3.39**	**56**	*e*Pn	**Pn**	**15 31 45.8**	**+0.4**
GEC2				*e*Sg	**Sg**	**15 32 38.6**	**-2.9**
GEC2	**GERESS Array S**	**3.39**	**56**	Pn	**Pn**	**15 31 45.8**	**+0.4**
AVF	**Avril sur Loir**	**4.18**	**269**	*e*P	**Pn**	**15 31 59.5**	**+3.3**
AVF	**Avril sur Loir**	**4.18**	**269**	*e*P	**Pn**	**15 31 59.5**	**+3.3**

*IDC **03** 15:47:49.4±1.6, 1°.95N×127°.40E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/18, mbtmp4.0/5, ML4.3/1, Error ellipse: s-maj=96.2km s-min=22.0km az=68.0*
*NEIC **03** 15:47:54.6±0.8, 1°.90N×127°.33E, h35km, Error ellipse: s-maj=27.8km s-min=8.6km az=57.0*
*ISCJB **03** 15:48:01.5±1.2, 1°.89N±0°.08×127°.3E±0°.1, h122km±10km, mb3.9/4, Error ellipse: s-maj=18.5km s-min=10.4km az=148.6*
*DJA **03** 15:48:08, 1°.49N×127°.07E, h81km, MLv4.7/6*
ISC 03 15:48:03.3±1.1, 1°.80N±0°.08×127°.26E±0°.09, h122km±9km, n21, σ0s97/26, mb3.9/4, 1C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.02**	**174**	P	**Pn**	**15 48 26.2**	**+0.4**
MNI	**Manado**	**2.45**	**262**	P	**Pn**	**15 48 42.6**	**+0.1**
MNI				S	**Sn**	**15 49 11.6**	**-1.0**
KMSI	**Cibinong**	**3.50**	**250**	P	**Pn**	**15 48 56.9**	**+0.7**
NLAI	**Namlea**	**5.00**	**182**	P	**Pn**	**15 49 16.4**	**0.0**
LUWI	**Luwuk**	**5.30**	**238**	P	**Pn**	**15 49 20.4**	**0.0**
LUWI				S	**Sn**	**15 50 17.1**	**-3.3**
MRSI	**Marisa**	**5.48**	**256**	P	**Pn**	**15 49 24.7**	**+1.9**
	0.3nm42nm,0.5s						
KDI	**Kendari**	**7.36**	**219**	P	**Pn**	**15 49 48.3**	**+0.1**
	956nm84nm,0.7s						
IPIL	**Ipil**	**7.57**	**322**	⇓*e*P	**Pn**	**15 49 49.0**	**-2.0**
IPIL	**Ipil**	**7.57**	**322**	⇓*e*P	**Sn**	**15 51 03.0**	**-12**
MYLDM	**Lahad Datu**	**9.37**	**291**	P	**Pn**	**15 50 18.8**	**+3.4**
BKSI	**Bulukumba**	**10.04**	**225**	P	**Pn**	**15 50 25.1**	**+0.7**
KKM	**Kota Kinabalu**	**11.80**	**291**	*e*Pn	**Pn**	**15 50 40.9**	**-6.9**
FITZ	**Fitzroy Crossi**	**19.84**	**185**	P	**P**	**15 52 24.3**	**-0.3**
	0.6nm,0.3s,baz=21,slow=8.8,SNR=21						
FITZ	**Fitzroy Crossi**	**19.84**	**185**	*e*P	**P**	**15 52 24.0**	**-0.6**
WRA	**Warramunga Arr**	**22.69**	**163**	P	**P**	**15 52 54.2**	**-0.6**
	6.0nm,0.6s,mb4.1,baz=341,slow=11,SNR=74						
WRA				S	**S**	**15 56 52.3**	**-1.5**
	1.0nm,0.8s,baz=344,slow=20,SNR=6.1						
WRA	**Warramunga Arr**	**22.69**	**163**	P	**P**	**15 52 54.2**	**-0.6**
WRA				S	**S**	**15 56 52.3**	**-1.5**
WB2	**Warramunga Arr**	**22.70**	**162**	*e*P	**P**	**15 52 54.1**	**-0.7**
ASAR	**Alice Springs**	**26.12**	**166**	P	**P**	**15 53 25.9**	**0.0**
	0.5nm,0.3s,mb3.4,baz=344,slow=7.7,SNR=20						
ASAR				S	**S**	**15 57 49.4**	**+0.8**
	0.2nm,0.7s,baz=353,slow=19,SNR=2.9						
STKA	**Stephens Creek**	**36.15**	**159**	P	**P**	**15 54 54.1**	**+0.3**
	1.2nm,0.4s,mb4.2,baz=339,slow=9.2,SNR=11						
MK31	**Makanchi Array**	**59.44**	**326**	*e*P	**P**	**15 57 53.6**	**+0.6**
MKAR	**Makanchi Array**	**59.44**	**326**	P	**P**	**15 57 53.8**	**+0.7**
	0.5nm,0.5s,mb3.8,baz=111,slow=7.5,SNR=8.7						

IDC 03 15:57:02.5±5.0, 16°.50S×175°.00W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=165.2km s-min=98.6km az=154.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.16**	**241**	P	P	16 04 57.5	+0.5
	2.0nm,1.1s,baz=84,slow=10,SNR=2.4						
WRA	**Warramunga Arr**	**48.10**	**258**	P	P	16 05 44.1	-0.3
	0.5nm,0.4s,baz=95,slow=7.1,SNR=26						
ASAR	**Alice Springs**	**48.31**	**253**	P	P	16 05 45.5	-0.4
	0.8nm,0.4s,baz=91,slow=8.0,SNR=49						
ASAR				PcP	PcP	16 07 12.8	-0.1
	0.3nm,0.6s,baz=103,slow=4.0,SNR=5.5						

*NEIC **03** 16:23:31.2, 17°.39N×100°.96W, h37km, MD4.0(MEX), After MEX.*
MEX 03 16:23:31.2±0.6, 17°.39N×100°.96W, h37km±13km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.53**	**294**	*i* P	Pn	16 23 40.6	-1.7
ZIIG				*i* S	Sn	16 23 48.0	-2.0
ZIIG	**Zihuatanejo**	**0.53**	**294**	*i* P	Pn	16 23 40.6	-1.7
ZIIG				*i* S	Sn	16 23 48.0	-2.0
CAIG	**El Cayaco**	**0.74**	**117**	*i* P	Pn	16 23 43.3	-1.9
CAIG				*i* S	Sn	16 23 53.1	-2.2
CAIG	**El Cayaco**	**0.74**	**117**	*i* P	Pn	16 23 43.3	-1.9
CAIG				*i* S	Sn	16 23 53.1	-2.2
ACX	**Acapulco**	**1.18**	**116**	*i* P	Pn	16 23 49.7	-1.4
ACX				*i* S	Sn	16 24 01.7	-4.2
ACX	**Acapulco**	**1.18**	**116**	*i* P	Pn	16 23 49.7	-1.4
ACX				*i* S	Sn	16 24 01.7	-4.2
MEIG	**Mezcala**	**1.38**	**67**	*i* P	Pn	16 23 52.1	-1.9
MEIG				*i* S	Sn	16 24 08.6	-2.4
PLIG	**Platanillo**	**1.71**	**54**	*i* P	Pn	16 23 57.5	-0.9
PLIG				*i* S	Sn	16 24 17.3	-1.8
PLIG	**Platanillo**	**1.71**	**54**	*i* P	Pn	16 23 57.5	-0.9
PLIG				*i* S	Sn	16 24 17.3	-1.8
MOIG	**Morelia**	**2.28**	**355**	*e*P	Pn	16 24 05.2	-1.1
MOIG				*i* S	Sn	16 24 30.8	-2.5
MOIG	**Morelia**	**2.

YER	**Yerkesik**	**0.54**	**272**	*e*PG	**Pg**	**18 01 15.2**	**-0.1**
YER				*e*SG	**Sg**	**18 01 23.1**	**+0.7**
YER	**Yerkesik**	**0.54**	**272**	*e*Pg	**Pg**	**18 01 15.2**	**-0.1**
YER				*e*Sg	**Sg**	**18 01 23.1**	**+0.7**
DNZL	**Cakiroluk**	**0.58**	**7**	*i* P	**Pg**	**18 01 14.8**	**-1.2**
DNZL				*i* S	**Sg**	**18 01 25.0**	**+1.4**
DNZL	**Cakiroluk**	**0.58**	**7**	*i* P	**Pg**	**18 01 14.8**	**-1.2**
DNZL				*i* S	**Sg**	**18 01 25.0**	**+1.3**
DENT	**Denizli**	**0.64**	**5**	*e*PG	**Pg**	**18 01 16.0**	**-1.2**
DENT	**Denizli**	**0.64**	**5**	*e*Pg	**Pg**	**18 01 16.0**	**-1.2**
ELL	**Elmali**	**0.84**	**115**	*e*PG	**Pg**	**18 01 20.2**	**-0.7**
ELL	**Elmali**	**0.84**	**115**	*e*Pg	**Pg**	**18 01 20.2**	**-0.7**
MLSB	**Milas**	**0.96**	**281**	*e*PG	**Pg**	**18 01 22.0**	**-1.2**
MLSB	**Milas**	**0.96**	**281**	*e*Pg	**Pg**	**18 01 22.0**	**-1.2**
AKAS	**Kas**	**1.02**	**149**	*i* P	**Pb**	**18 01 24.1**	**-0.1**
AKAS				*i* S	**Sg**	**18 01 41.5**	**+3.9**
AKAS	**Kas**	**1.02**	**149**	*i* P	**Pb**	**18 01 24.0**	**-0.2**
AYDN	**Tasoluk**	**1.02**	**303**	*i* P	**Pb**	**18 01 23.9**	**-0.3**
AYDN				*i* S	**Sg**	**18 01 39.1**	**+1.5**
AYDN	**Tasoluk**	**1.02**	**303**	*i* P	**Pb**	**18 01 23.9**	**-0.3**
AYDN				*i* S	**Sg**	**18 01 39.1**	**+1.5**
KORT	**Korkueli**	**1.12**	**95**	*i* P	**Pb**	**18 01 27.8**	**+1.9**
KORT				*i* S	**Sb**	**18 01 44.6**	**+4.2**
KORT	**Korkueli**	**1.12**	**95**	*i* P	**Pb**	**18 01 27.8**	**+1.9**
DAT	**Datca**	**1.17**	**251**	*e*PN	**Pn**	**18 01 26.5**	**-0.3**
DAT	**Datca**	**1.17**	**251**	*e*Pn	**Pn**	**18 01 26.5**	**-0.3**
BDRM	**Kayabasi**	**1.21**	**268**	*i* P	**Pn**	**18 01 27.8**	**+0.4**
BDRM				*i* S	**Sb**	**18 01 44.0**	**+0.9**
BDRM	**Kayabasi**	**1.21**	**268**	*i* P	**Pn**	**18 01 27.8**	**+0.4**
BDRM				*i* S	**Sb**	**18 01 44.0**	**+0.9**
KHL	**Karahalli**	**1.29**	**20**	*e*PN	**Pn**	**18 01 28.0**	**-0.4**
KHL	**Karahalli**	**1.29**	**20**	*e*Pn	**Pn**	**18 01 28.0**	**-0.4**
BODT	**Bodrum**	**1.32**	**268**	*e*PN	**Pn**	**18 01 28.3**	**-0.5**
BODT	**Bodrum**	**1.32**	**268**	*e*Pn	**Pn**	**18 01 28.3**	**-0.5**
KHAL	**Karahalli**	**1.32**	**18**	*i* P	**Pn**	**18 01 28.3**	**-0.6**
KHAL				*i* S	**Sb**	**18 01 46.9**	**+0.6**
KHAL	**Karahalli**	**1.32**	**18**	*i* P	**Pn**	**18 01 28.3**	**-0.6**
KHAL				*i* S	**Sb**	**18 01 46.9**	**+0.6**
KULA	**Kula-Manisa**	**1.42**	**350**	*e*PN	**Pn**	**18 01 29.4**	**-0.8**
KULA	**Kula-Manisa**	**1.42**	**350**	*e*Pn	**Pn**	**18 01 29.4**	**-0.8**
SUTC	**Sutluce-Ispart**	**1.67**	**77**	*e*PN	**Pn**	**18 01 33.8**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.67**	**77**	*e*Pn	**Pn**	**18 01 33.8**	**+0.2**

ISCJB ***03*** *18:01:28.9±0.4, 43°.84N×0°.03×105°.21W±0°.05, h0km, Error ellipse: s-maj=5.4km s-min=4.3km az=179.1*
IDC ***03*** *18:01:29.7±2.2, 43°.79N×105°.34W, h0km, mb4.4/1, mb1 3.9/4, mb1mx3.6/24, mbtmp3.6/4, ML3.8/3, MS2.8/1, Ms1 2.8/1, ms1mx2.2/35, Error ellipse: s-maj=55.9km s-min=13.0km az=149.0*
NEIC ***03*** *18:01:30.8±0.3, 43°.80N×105°.22W, h0km, ML3.2, Error ellipse: s-maj=4.5km s-min=4.4km az=65.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.
ISC 03 18:01:30.8±0.4, 43°.82N±0°.03×105°.21W±0°.05, h0km, n45, σ1°04/48, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**70**	*e*Pg	**Pg**	**18 01 48.7**	**+0.6**
PHWY	**Pilot Hill**	**2.52**	**184**	*e*Pn	**Pn**	**18 02 12.1**	**-1.0**
RWWY	**Rawlins**	**2.59**	**215**	*e*Pn	**Pn**	**18 02 14.1**	**+0.2**
LAO	**LASA Array**	**2.96**	**346**	*e*Pn	**Pn**	**18 02 19.2**	**+0.2**
LAO				*e*Pg	**Pg**	**18 02 28.5**	**+1.1**
LAO				*e*Sg	**Sg**	**18 03 04.9**	**-0.8**
RLMT	**Red Lodge**	**3.18**	**296**	*e*Pn	**Pn**	**18 02 22.0**	**0.0**
BW06	**Boulder Array**	**3.34**	**253**	*e*Pn	**Pn**	**18 02 23.9**	**-0.4**
PDAR	**Pinedale Array**	**3.34**	**253**	Pn	**Pn**	**18 02 24.4**	**+0.1**
	4.3nm,0.3s,baz=70,slow=16,SNR=44						
PDAR				Pg	**Pg**	**18 02 32.2**	**-2.6**
	11nm,0.3s,baz=53,slow=18,SNR=23						
PDAR				Lg		18 03 10.2	
	9.7nm,0.3s,baz=225,slow=29,SNR=8.2						
OGNE	**Ogallala**	**3.72**	**140**	*e*Pn	**Pn**	**18 02 29.6**	**+0.2**
GCMT	**Greycliff**	**3.73**	**303**	*e*Pn	**Pn**	**18 02 29.7**	**+0.1**
LOHW	**Long Hollow**	**3.91**	**269**	*e*Pn	**Pn**	**18 02 32.8**	**+0.7**
FLWY	**Flagg Ranch**	**3.97**	**276**	*e*P	**Pn**	**18 02 42.8**	**+10**
MOOW	**Moose Ponds**	**4.01**	**271**	*e*Pn	**Pn**	**18 02 36.7**	**+3.3**
YNR	**Norris Junctio**	**4.03**	**285**	*e*Pn	**Pn**	**18 02 34.6**	**+1.0**
ISCO	**Idaho Springs**	**4.03**	**184**	*e*Pn	**Pn**	**18 02 33.4**	**-0.3**
SNOW	**Snow King Moun**	**4.04**	**267**	*e*Pn	**Pn**	**18 02 37.4**	**+3.6**
REDW	**Red Top Meadow**	**4.12**	**266**	*e*Pn	**Pn**	**18 02 38.9**	**+4.0**
IMW	**Indian Meadow**	**4.14**	**273**	*e*Pn	**Pn**	**18 02 36.4**	**+1.1**
TPAW	**Teton Pass**	**4.18**	**267**	*e*Pn	**Pn**	**18 02 37.5**	**+1.8**
AHID	**Auburn Hatcher**	**4.42**	**258**	*e*Pn	**Pn**	**18 02 41.0**	**+1.9**
RRI2	**Red Ridge**	**4.46**	**266**	*e*Pn	**Pn**	**18 02 39.5**	**-0.2**
DGMT	**Dagmar**	**4.70**	**8**	*e*Pn	**Pn**	**18 02 44.7**	**+1.7**
SMCO	**Snowmass**	**4.82**	**196**	Pn	**Pn**	**18 02 45.0**	**+0.4**
BOZ	**Bozeman (W)**	**4.92**	**294**	*e*Pn	**Pn**	**18 02 45.8**	**-0.2**
HWUT	**Hardware Ranch**	**5.18**	**247**	*e*Pn	**Pn**	**18 02 48.6**	**-0.8**
EGMT	**Eagleton**	**5.26**	**325**	*e*Pn	**Pn**	**18 02 49.9**	**-0.7**
HRY	**Holter Researc**	**5.49**	**304**	*e*Pn	**Pn**	**18 02 53.5**	**-0.2**
LRM	**Limekiln Ridge**	**5.52**	**294**	*e*Pn	**Pn**	**18 02 54.2**	**0.0**
MCMT	**McKenzie Canyo**	**5.57**	**283**	*e*Pg	**Pg**	**18 03 14.2**	**-3.3**
DAU	**Daniels Canyon**	**5.64**	**235**	*e*Pn	**Pn**	**18 02 57.0**	**+1.2**
SDCO	**Great Sand Dun**	**6.07**	**182**	*e*Pn	**Pn**	**18 03 01.6**	**-0.2**
PV04	**Paradox Valley**	**6.10**	**208**	*e*Pn	**Pn**	**18 03 01.9**	**-0.2**
SRU	**San Rafael**	**6.17**	**222**	*e*Pn	**Pn**	**18 03 01.4**	**-1.7**
PV01	**Paradox Valley**	**6.22**	**205**	*e*Pn	**Pn**	**18 03 04.2**	**+0.4**
ECSD	**EROS Data Cent**	**6.23**	**88**	*e*Pn	**Pn**	**18 03 04.3**	**+0.4**
CHMT	**Chamberlain Mo**	**6.45**	**301**	*e*Pn	**Pn**	**18 03 06.5**	**-0.5**
BGU	**Big Grassy Mou**	**6.47**	**246**	*e*Pn	**Pn**	**18 03 06.9**	**-0.4**
DUG	**Dugway**	**6.72**	**240**	*e*Pn	**Pn**	**18 03 08.9**	**-1.7**
SLMT	**Seeley Lake**	**6.75**	**303**	*e*Pn	**Pn**	**18 03 09.5**	**-1.5**
SWMT	**Swartz Lake**	**7.17**	**304**	*e*Pn	**Pn**	**18 03 16.0**	**-0.9**
JTMT	**Jette**	**7.46**	**305**	*e*Pn	**Pn**	**18 03 21.1**	**+0.4**
AGMN	**Agassiz Nation**	**7.89**	**52**	*e*Pn	**Pn**	**18 03 25.7**	**-1.0**
AGMN				*e*Pg	**Pg**	**18 03 56.0**	**-6.0**
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn	**Pn**	**18 04 14.4**	**+1.7**
	0.1nm,0.3s,baz=56,slow=13,SNR=3.0						
SADO	**Sadowa**	**18.67**	**78**	LR	LR	18 12 39.0	
	comp=Z,29nm,21.4s,baz=289,slow=36						
YKA	**Yellowknife Ar**	**19.50**	**347**	P	**Pn**	**18 05 59.6**	**-0.7**
	0.2nm,0.3s,baz=163,slow=13,SNR=8.3						
ARCES	**ARCESS Array B**	**61.33**	**18**	P	**P**	**18 11 46.3**	**-1.3**
	4.3nm,1.0s,baz=323,slow=5.2,SNR=3.6						

DDA ***03*** *18:06:32.7, 35°.14N×33°.20E, h5km±1km, Md3.1*
ISCJB ***03*** *18:06:33.8±0.8, 35°.06N±0°.05×33°.11E±0°.04, h53km±7km, Error ellipse: s-maj=8.8km s-min=5.7km az=8.8*
ISK ***03*** *18:06:33.6, 35°.05N×33°.12E, h49km, MD3.1*
NEIC ***03*** *18:06:34.4, 35°.06N×33°.12E, h42km, MD3.1 (ISK), After NIC.*
CSEM ***03*** *18:06:34.3±0.4, 35°.03N×33°.14E, h42km±4km, Mw3.2, Error ellipse: s-maj=8.4km s-min=4.6km az=177.0*
NIC ***03*** *18:06:34.4±0.2, 35°.06N×33°.12E, h42km, ML3.0, MW3.2*
ISC 03 18:06:34.4±0.8, 35°.05N±0°.05×33°.10E±0°.04, h48km±7km, n39, σ0°85/61, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAMC	**Mammari**	**0.16**	**37**	P	**Pn**	**18 06 41.5**	**-0.8**
MAMC	**Mammari**	**0.16**	**37**	P	**Pn**	**18 06 41.5**	**-0.8**
LEF	**Lefka**	**0.19**	**293**	*e*PG	**Pn**	**18 06 42.2**	**-0.2**
LEF				*e*SG	**Sn**	**18 06 49.1**	**+1.0**
LEF	**Lefka**	**0.19**	**293**	*e*Pg	**Pn**	**18 06 42.2**	**-0.2**
LEF				*e*Sg	**Sn**	**18 06 49.1**	**+0.9**
CSS	**Prodhromos**	**0.20**	**114**	P	**Pn**	**18 06 41.6**	**-1.0**
	16nm,0.3s						
CSS				S	**Sn**	**18 06 48.0**	**-0.3**
CSS	**Prodhromos**	**0.20**	**114**	*e*PG	**Pn**	**18 06 41.6**	**-0.9**
CSS				*e*SG	**Sn**	**18 06 48.4**	**0.0**
CSS	**Prodhromos**	**0.20**	**114**	*e*Pg	**Pn**	**18 06 41.7**	**-0.9**
CSS				S	**Sn**	**18 06 48.0**	**-0.3**
CSS				*e*Sg	**Sn**	**18 06 48.4**	**+0.1**
SZAC	**Souni-Zanaja**	**0.34**	**212**	P	**Pn**	**18 06 43.8**	**+0.1**
SZAC	**Souni-Zanaja**	**0.34**	**212**	P	**Pn**	**18 06 43.8**	**+0.1**
LFK	**Lefkose**	**0.42**	**56**	*e*PG	**Pn**	**18 06 44.0**	**-0.6**
LFK				*e*SG	**Sn**	**18 06 52.6**	**+0.7**
LFK	**Lefkose**	**0.42**	**56**	*e*Pg	**Pn**	**18 06 44.0**	**-0.6**
LFK				*e*Sg	**Sn**	**18 06 52.6**	**+0.7**
ALFC	**Alevga**	**0.43**	**285**	P	**Pn**	**18 06 44.5**	**-0.2**
	40nm,0.1s						
ALFC				S	**Sn**	**18 06 52.3**	**+0.3**
ALFC	**Alevga**	**0.43**	**285**	P	**Pn**	**18 06 44.5**	**-0.2**
	40nm,0.1s						
ALFC				S	**Sn**	**18 06 52.3**	**+0.3**
PPCY	**Paphos**	**0.64**	**256**	P	**Pn**	**18 06 47.3**	**0.0**
PPCY	**Paphos**	**0.64**	**256**	P	**Pn**	**18 06 47.3**	**0.0**
PHNC	**Paralimni**	**0.76**	**93**	P	**Pn**	**18 06 48.7**	**-0.2**
	9.2nm,0.3s						
PHNC				S	**Sn**	**18 06 59.9**	**+0.5**
PHNC	**Paralimni**	**0.76**	**93**	P	**Pn**	**18 06 48.7**	**-0.2**
	9.2nm,0.3s						
PHNC				S	**Sn**	**18 06 59.9**	**+0.5**
EREN	**Erenkoy**	**1.00**	**61**	*e*PG	**Pn**	**18 06 52.3**	**+0.3**
EREN	**Erenkoy**	**1.00**	**61**	*e*Pg	**Pn**	**18 06 52.3**	**+0.3**
IKL	**Isikli**	**1.28**	**22**	*e*PN	**Pn**	**18 06 54.8**	**-1.1**
IKL				*e*SN	**Sn**	**18 07 11.2**	**-0.6**
IKL	**Isikli**	**1.28**	**22**	*e*Pn	**Pn**	**18 06 54.8**	**-1.1**
IKL				*e*Sn	**Sn**	**18 07 11.3**	**-0.6**
GAZI	**Gazipasa**	**1.35**	**332**	*i* P	**Pn**	**18 06 56.4**	**-0.4**
GAZI				*i* S	**Sn**	**18 07 13.0**	**-0.5**
GAZI	**Gazipasa**	**1.35**	**332**	*i* P	**Pn**	**18 06 56.4**	**-0.4**
GAZI				*i* S	**Sn**	**18 07 13.0**	**-0.5**
ERMK	**Ermenek**	**1.60**	**355**	*i* P	**Pn**	**18 06 57.9**	**-2.4**
ERMK				*i* S	**Sn**	**18 07 18.3**	**-1.4**
ERMK	**Ermenek**	**1.60**	**355**	*i* P	**Pn**	**18 06 57.9**	**-2.3**
ERMK				*i* S	**Sn**	**18 07 18.3**	**-1.4**
HDMB	**Hadim**	**1.98**	**346**	*e*PN	**Pn**	**18 07 06.4**	**+1.0**
HDMB	**Hadim**	**1.98**	**346**	*e*Pn	**Pn**	**18 07 06.4**	**+1.0**
KRTS	**Karatas**	**2.39**	**50**	*e*PN	**Pn**	**18 07 11.6**	**+0.5**
KRTS	**Karatas**	**2.39**	**50**	*e*Pn	**Pn**	**18 07 11.6**	**+0.5**
GULE	**Gulek**	**2.61**	**31**	*i* P	**Pn**	**18 07 15.1**	**+1.0**
GULE				*i* S	**Sn**	**18 07 46.4**	**+1.8**
GULE	**Gulek**	**2.61**	**31**	*i* P	**Pn**	**18 07 15.1**	**+1.0**
GULE				*i* S	**Sn**	**18 07 46.4**	**+1.9**
YAYL	**Yayladag**	**2.64**	**67**	*i* P	**Pn**	**18 07 13.9**	**-0.6**
YAYL				*i* S	**Sn**	**18 07 44.7**	**-0.6**
YAYL	**Yayladag**	**2.64**	**67**	*i* P	**Pn**	**18 07 13.9**	**-0.6**
YAYL				*i* S	**Sn**	**18 07 44.7**	**-0.6**
KARA	**Karaisali**	**2.72**	**35**	*e*PN	**Pn**	**18 07 16.1**	**+0.6**
KARA	**Karaisali**	**2.72**	**35**	*e*Pn	**Pn**	**18 07 16.1**	**+0.6**
KONT	**Konya--Tatoy**	**2.96**	**349**	*e*PN	**Pn**	**18 07 19.8**	**+1.0**
KONT	**Konya--Tatoy**	**2.96**	**349**	*e*Pn	**Pn**	**18 07 19.8**	**+1.0**
SUTC	**Sutluce-Ispart**	**2.96**	**326**	*e*PN	**Pn**	**18 07 20.2**	**+1.3**
SUTC	**Sutluce-Ispart**	**2.96**	**326**	*e*Pn	**Pn**	**18 07 20.2**	**+1.3**

IDC ***03*** *18:31:23.4±1.2, 3°.75S×142°.41E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.9/16, mbtmp4.1/7, ML4.5/1, Error ellipse: s-maj=47.9km s-min=20.3km az=101.0*
ISCJB ***03*** *18:31:37.2±4.3, 4°.0S±0°.2×142°.0E±0°.2, h126km±45km, mb3.8/6, Error ellipse: s-maj=40.9km s-min=21.1km az=41.7*
NEIC ***03*** *18:31:39.5±2.5, 4°.03S×142°.12E, h135km±25km, Error ellipse: s-maj=23.0km s-min=13.6km az=131.0*
ISC 03 18:31:38.3±3.7, 4°.0S±0°.2×142°.0E±0°.2, h121km±39km, n12, σ0°78/11, mb3.8/6, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.40**	**137**	*e*P	**Pn**	**18 33 24.1**	**+0.3**
WB2	**Warramunga Arr**	**17.53**	**205**	*e*P	**Pn**	**18 35 34.4**	**-0.9**
WRA	**Warramunga Arr**	**17.54**	**205**	P	**Pn**	**18 35 34.7**	**-0.6**
	1.6nm,0.3s,baz=24,slow=11,SNR=62						
ASAR	**Alice Springs**	**21.07**	**201**	P	**P**	**18 36 13.1**	**+0.1**
	4.2nm,0.5s,mb4.0,baz=31,slow=8.8,SNR=64						
FITZ	**Fitzroy Crossi**	**21.31**	**228**	P	**P**	**18 36 16.0**	**+0.4**
	2.2nm,0.6s,mb3.7,baz=54,slow=8.4,SNR=12						
STKA	**Stephens Creek**	**27.74**	**181**	P	**P**	**18 37 16.8**	**+1.3**
	0.8nm,0.4s,mb3.6,baz=349,slow=12,SNR=3.6						
STKA	**Stephens Creek**	**27.74**	**181**	*e*P	**P**	**18 37 15.8**	**+0.3**
MKAR	**Makanchi Array**	**72.84**	**322**	P	**P**	**18 42 55.0**	**+1.2**
	0.8nm,0.6s,mb3.7,baz=103,slow=7.4,SNR=10						
ZALV	**Zalesovo Beam**	**74.72**	**329**	P	**P**	**18 43 04.6**	**-0.1**
	0.8nm,0.4s,mb3.8,baz=117,slow=6.5,SNR=4.9						
ZALV	**Zalesovo Beam**	**74.72**	**329**	P	**P**	**18 43 04.6**	**-0.1**
ILAR	**Eielson Array**	**85.63**	**24**	P	**P**	**18 44 01.6**	**-1.4**
	1.3nm,0.7s,mb4.0,baz=259,slow=4.5,SNR=16						
LPAZ	**La Paz**	**144.00**	**125**	PKP	PKPdf	18 51 00.7	+0.2
	1.0nm,0.5s,baz=41,slow=6.9,SNR=5.1						

IDC 03 18:48:23.4±4.1, 30°.03S×177°.74W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/15, mbtmp3.7/3, Error ellipse: s-maj=190.7km s-min=62.4km az=161.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.78**	**256**	P	P	18 55 16.0	+0.3
	0.5nm,0.4s,baz=92,slow=9.7,SNR=4.0						
ASAR	**Alice Springs**	**43.36**	**266**	P	P	18 56 27.4	-0.2
	0.5nm,0.7s,baz=105,slow=7.6,SNR=12						
WRA	**Warramunga Arr**	**44.31**	**272**	P	P	18 56 35.2	-0.1
	0.5nm,0.3s,baz=111,slow=8.1,SNR=16						
FINES	**FINESS Array B**	**144.87**	**340**	PKP	PKPdf	19 08 01.1	-0.5
	1.9nm,0.7s,baz=47,slow=4.5,SNR=10						

MAN 03 18:51:57, 16°.78N×119°.83E, h24km, mb4.2, ML3.0, MS2.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.40**	**169**	*e*P	Pb	18 52 08.0	+2.5
BOLP				*e*S	Sb	18 52 12.8	+1.5
BCPH	**Baguio City Da**	**0.82**	**119**	⇑*i*P	Pb	18 52 12.3	-0.2
BCPH				*i* S	Sb	18 52 21.0	-2.1
SCZP	**Santa Cruz**	**1.00**	**176**	*e*P	Pn	18 52 15.4	-0.1
SCZP				*e*S	Sb	18 52 24.1	-4.2
ABRA	**Dolores**	**1.21**	**44**	*e*P	Pn	18 52 18.8	+0.4
APYP	**Conner**	**1.73**	**51**	*e*P	Pn	18 52 26.6	+1.1
CAUP	**Cauayan**	**1.91**	**85**	*e*P	Pn	18 52 29.9	+1.8
BALP	**Baler**	**1.96**	**121**	*e*P	Pn	18 52 30.0	+1.2

NIED ***03*** *18:55:00, 24°.10N×122°.40E, h29km, Mw4.0 Best double couple: M=9.75000×10^14 NP1:φ=70.00000°, δ=85.00000°, λ=69.00000° NP2:φ=328.00000°, δ=21.00000°, λ=167.00000°.*
IDC ***03*** *18:55:28.9±1.0, 23°.92N×122°.11E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.0/22, mbtmp4.1/10, ML3.9/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/28, Error ellipse: s-maj=60.4km s-min=17.4km az=67.0*
BJI ***03*** *18:55:29.9, 24°.13N×122°.38E, h8km, mb3.7/4, ML3.3/3*
ISCJB ***03*** *18:55:31.6±0.4, 23°.90N±0°.02×122°.49E±0°.02, h21km±3km, mb4.0/12, Error ellipse: s-maj=3.0km s-min=2.2km az=156.7*
NEIC ***03*** *18:55:31.7±2.7, 23°.99N×122°.44E, h22km±17km, mb4.2/2, Error ellipse: s-maj=18.8km s-min=8.5km az=84.0*
TAP ***03*** *18:55:32.1, 23°.97N×122°.47E, h28km, ML4.3, C*
JMA ***03*** *18:55:33.2±0.2, 24°.08N×122°.43E, h38km, M3.9*
ISC 03 18:55:31.1±0.5, 23°.91N±0°.02×122°.47E±0°.01, h11km±3km, n92, σ1°06/147, mb4.0/12, 3C-10D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.73**	**42**	P	**Pg**	**18 55 46.0**	**+0.7**
YOJ				S	**Sg**	**18 55 54.8**	**-0.2**
HWA	**Hwalien**	**0.80**	**275**	P	**Pg**	**18 55 47.0**	**+0.5**
	baz=257						
HWA				*e*S	**Sg**	**18 55 57.8**	**+0.8**
	baz=257						
TWD	**Chiawan**	**0.82**	**282**	*i* P	**Pg**	**18 55 46.9**	**0.0**
	baz=278						
TWD				S	**Sg**	**18 55 57.9**	**+0.2**
	baz=278						
ENA	**Nanau**	**0.84**	**308**	⇑*i*P	**Pg**	**18 55 47.3**	**-0.1**
	baz=304						
NACB	**Ninganchiao**	**0.84**	**288**	*e*P	**Pg**	**18 55 46.7**	**-0.7**
TWC	**Suao**	**0.90**	**321**	⇑*i*P	**Pg**	**18 55 47.9**	**-0.6**
	baz=319						
TWC				*e*S	**Sg**	**18 55 59.9**	**-0.2**
	baz=319						
ESL	**Shilin**	**0.96**	**264**	*i* P	**Pg**	**18 55 48.7**	**-0.9**
	baz=249						
ESL				*e*S	**Sg**	**18 55 59.6**	**-2.4**
	baz=249						
ILA	**Ilan**	**1.08**	**322**	P	**Pb**	**18 55 51.8**	**0.0**
	baz=309						
ILA				S	**Sb**	**18 56 06.3**	**+0.5**
	baz=309						
TWE	**Neicheng**	**1.09**	**318**	*i* P	**Pb**	**18 55 51.6**	**-0.3**
	baz=316						
TWE				S	**Sb**	**18 56 06.5**	**+0.4**
	baz=316						
ENTT	**Nioudou**	**1.10**	**311**	⇓*i*P	**Pb**	**18 55 51.8**	**-0.3**
	baz=309						
ENTT				*e*S	**Sb**	**18 56 06.9**	**+0.4**
	baz=309						
WHF	**Hehuan Shan**	**1.13**	**282**	⇓*i*P	**Pb**	**18 55 52.0**	**-0.6**
	baz=266						
WHF				S	**Sb**	**18 56 06.4**	**-0.9**
	baz=266						
EHY	**Hungye**	**1.13**	**249**	*i* P	**Pb**	**18 55 51.9**	**-0.7**
	baz=246						
EHY				*e*S	**Sb**	**18 56 05.8**	**-1.5**
	baz=246						
TWB1	**Santiao Chiao**	**1.18**	**338**	⇓*i*P	**Pb**	**18 55 52.6**	**-0.9**
	baz=353						
TWB1				*e*S	**Sb**	**18 56 08.5**	**-0.2**
	baz=353						
YULB	**Yu-li**	**1.20**	**245**	*e*Pn	**Pn**	**18 55 52.7**	**-1.0**
IRIF	**Iriomote-Funau**	**1.22**	**70**	P	**Pn**	**18 55 54.2**	**+0.1**
IRIF				*e*S	**Sb**	**18 56 10.3**	**+0.3**
HATJ	**Hateruma jima**	**1.23**	**83**	P	**Pn**	**18 55 54.7**	**+0.6**
HATJ				S	**Sb**	**18 56 11.2**	**+1.1**
TWT	**Tachien**	**1.23**	**286**	P	**Pn**	**18 55 54.1**	**-0.1**
	baz=271						
TWT				*e*S	**Sb**	**18 56 10.6**	**+0.3**
	baz=271						
YHNB	**Yeheng**	**1.25**	**307**	*e*Pn	**Pn**	**18 55 53.5**	**-1.0**
NSK	**Sanguang**	**1.27**	**307**	⇓*i*P	**Pn**	**18 55 54.2**	**-0.5**
	baz=290						
NSK				*e*S	**Sb**	**18 56 11.4**	**+0.1**
	baz=290						
CHKT	**Chengkung**	**1.30**	**232**	*e*P	**Pn**	**18 55 53.9**	**-1.2**
	baz=218						
CHKT				*e*S	**Sb**	**18 56 09.3**	**-2.9**
	baz=218						
NWF	**Wu-fen Shan**	**1.31**	**331**	*i* P	**Pn**	**18 55 54.9**	**-0.5**
	baz=330						
NWF				S	**Sb**	**18 56 12.9**	**+0.3**
	baz=330						
TWA	**Mucha**	**1.34**	**323**	⇓*i*P	**Pn**	**18 55 55.6**	**-0.1**
	baz=321						
TWA				*e*S	**Sb**	**18 56 13.8**	**+0.6**
	baz=321						
TATO	**Taipei**	**1.39**	**320**	*e*Pn	**Pn**	**18 55 56.0**	**-0.4**
SSLB	**Suanglung**	**1.40**	**265**	*e*Pn	**Pn**	**18 55 55.5**	**-1.0**
TAP1	**Taipei**	**1.42**	**323**	*e*P	**Pn**	**18 55 56.5**	**-0.3**
	baz=320						
TAP1				*e*S	**Sn**	**18 56 15.4**	**0.0**
	baz=320						
SMLT	**Sun Moon Lake**	**1.44**	**269**	*e*S	**Sn**	**18 56 14.7**	**-1.3**
	baz=266						
JKRS	**Kuro-shima**	**1.44**	**77**	P	**Pn**	**18 55 57.8**	**+0.7**
JKRS				*e*S	**Sn**	**18 56 17.0**	**+1.0**
YUS	**Yu-Shan**	**1.46**	**254**	*e*S	**Sn**	**18 56 15.7**	**-0.7**
	baz=251						
TYC	**Yuchr**	**1.48**	**270**	⇓*i*P	**Pn**	**18 55 57.4**	**-0.2**
	baz=267						
TYC				*e*S	**Sn**	**18 56 15.5**	**-1.4**
	baz=267						
ELDTW	**Lidau**	**1.52**	**242**	*i* P	**Pn**	**18 55 57.4**	**-0.8**
	baz=240						
ELDTW				*e*S	**Sn**	**18 56 15.3**	**-2.6**
	baz=240						
NSTT	**Nanjuang**	**1.52**	**298**	*i* P	**Pn**	**18 55 58.7**	**+0.5**
	baz=296						
NSTT				*e*S	**Sn**	**18 56 17.8**	**-0.2**
	baz=296						
TWS1	**Kuangyinshan**	**1.52**	**321**	P	**Pn**	**18 55 58.1**	**-0.1**
	baz=337						
TWS1				*e*S	**Sn**	**18 56 17.9**	**-0.2**
	baz=337						
TWY	**Chenhua**	**1.57**	**330**	P	**Pn**	**18 55 58.7**	**-0.2**
	baz=329						
TWY				*e*S	**Sn**	**18 56 19.2**	**0.0**
	baz=329						
NCU	**National Centr**

SCLT			S		Sn	18 56 37.0 +1.8
	baz=249					
TAI1	**Yung-k'ang**	**2.24 248**	*e*P		**Pn**	**18 56 08.8 +0.8**
	baz=260					
TAI1			*e*S		**Sn**	**18 56 37.1 +1.5**
	baz=260					
SCZT	**Fangliau**	**2.29 228**	*e*P		**Pn**	**18 56 10.7 +1.9**
	baz=232					
TSEB	**Hengchuen, Pin**	**2.47 216**	*e*P		**Pn**	**18 56 12.3 +1.0**
	baz=217					
TSEB			*e*S		**Sn**	**18 56 41.6 +0.1**
	baz=217					
HEN	**Hengchun**	**2.48 220**	*e*P		**Pn**	**18 56 11.7 +0.3**
	baz=220					
HEN			*e*S		**Sn**	**18 56 41.0 -0.6**
	baz=220					
TWK1	**Hengchun**	**2.49 218**	P		**Pn**	**18 56 11.9 +0.3**
	baz=218					
TWK1			S		**Sn**	**18 56 41.4 -0.5**
	baz=218					
TWP	**Hsiaoliuchiu**	**2.49 232**	*e*P		**Pn**	**18 56 14.5 +3.0**
	baz=245					
PNG	**Penghu**	**2.70 263**	P		**Pn**	**18 56 14.6 +0.3**
	baz=261					
PNG			*e*S		**Sn**	**18 56 46.2 -0.7**
	baz=261					
JMJ	**Miyako jima 2**	**2.72 70**	*e*S		**Sn**	**18 56 47.0 -0.7**
JOGS	**Gusukube**	**2.81 72**	P		**Pn**	**18 56 17.4 +1.5**
QZH	**Quanzhou**	**3.68 287**⇑	*i*Pn		**Pn**	**18 56 26.2 -1.7**
QZH			Sn		**Sn**	**18 57 06.0 -5.4**
QZH			smax			
	comp=N,150nm,0.2s					
QZH			smax			
	comp=E,190nm,0.4s					
KNM	**Kinmen**	**3.72 279**	P		**Pn**	**18 56 29.4 +0.9**
	baz=275					
KNM			*e*S		**Sn**	**18 57 11.5 -0.8**
	baz=275					
JKE	**Kume jima 2**	**4.59 58**	P		**Pn**	**18 56 40.5 +0.1**
JIH	**Iheya**	**5.86 57**	P		**Pn**	**18 56 57.5 -0.3**
JOW	**Kunigami**	**6.00 60**	P		**Pn**	**18 56 58.5 -1.3**
KSRS	**Korea Array**	**14.28 18**	Pn		**Pn**	**18 58 55.0 +1.8**
	comp=E,0.6nm,0.3s,baz=198,slow=12,SNR=29					
DAV	**Davao City (W)**	**17.01 169**	LR		LR	19 07 16.8
	comp=E,52nm,19.5s,baz=38,slow=41					
GTA	**Gaotai**	**24.61 314**	*e*P		**P**	**19 00 50.3 -1.0**
GTA			pP			19 00 54.7
GTA			sP		sP	19 00 57.4 +1.2
GTA			pmax		pmax	
	comp=Z,4.0nm,1.2s,mb3.8					
SONM	**Songino Array**	**27.09 336**	P		**P**	**19 01 11.5 -2.1**
	comp=Z,1.7nm,0.6s,mb3.7,baz=152,slow=9.4,SNR=11					
MK31	**Makanchi Array**	**39.35 316**	*e*Pn		**P**	**19 02 58.6 -1.8**
MKAR	**Makanchi Array**	**39.35 316**	P		**P**	**19 02 58.8 -1.5**
	comp=Z,1.5nm,0.4s,mb4.1,baz=102,slow=9.4,SNR=44					
ZAA0	**Zalesovo Array**	**41.12 327**	*e*Pn		**P**	**19 03 11.9 -2.9**
ZALV	**Zalesovo Beam**	**41.12 327**	P		**P**	**19 03 12.2 -2.7**
	comp=Z,4.2nm,0.7s,mb4.2,baz=109,slow=7.6,SNR=14					
TKM2	**Tokmak 2**	**42.86 308**	*e*Pn		**P**	**19 03 28.7 -0.6**
	comp=Z,6.9nm,0.9s,mb4.4					
KURK	**Kurchatov**	**43.06 320**	P		**P**	**19 03 27.7 -3.1**
	comp=Z,0.9nm,0.4s,mb3.9,baz=112,slow=9.3,SNR=12					
KURK	**Kurchatov**	**43.06 320**	*e*P		**P**	**19 03 28.3 -2.5**
AML	**Almayashu**	**44.11 307**	*e*Pn		**P**	**19 03 40.1 +0.7**
	comp=Z,2.3nm,0.8s,mb4.0					
WRA	**Warramunga Arr**	**45.10 164**	P		**P**	**19 03 47.1 -0.3**
	comp=Z,0.7nm,0.9s,mb3.5,baz=346,slow=8.9,SNR=7.8					
ASAR	**Alice Springs**	**48.58 166**	P		**P**	**19 04 15.2 +0.7**
	comp=Z,1.3nm,1.0s,mb3.9,baz=344,slow=7.1,SNR=9.0					
ARCES	**ARCESS Array B**	**70.23 338**	P		**P**	**19 06 42.6 -1.1**
	comp=Z,4.2nm,0.9s,mb4.3,baz=56,slow=13,SNR=3.0					
FINES	**FINESS Array B**	**72.27 330**	P		**P**	**19 06 55.0 -1.2**
	comp=Z,2.8nm,0.9s,mb4.2,baz=38,slow=7.0,SNR=3.7					
BRTR	**Keskin Array B**	**74.28 307**	P		**P**	**19 07 07.5 -1.0**
	comp=Z,1.6nm,0.9s,mb4.0,baz=101,slow=6.4,SNR=8.6					

*JMA **03** 19:23:36.7±0.3,23°.58N×121°.67E,h85km,M2.2*
*TAP **03** 19:23:36.1,23°.71N×121°.60E,h9km,ML3.5,C*
ISC 03 19:23:35.6±0.5,23°.67N±0°.02×121°.73E±0°.02,h1km±5km, n55,σ1°.06/92,2C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.17**	**282**⇓	*i*P	**Pg**	**19 23 38.3**	**-0.6**
	baz=264						
TEGC				*i* S	**Sg**	**19 23 40.3**	**-1.0**
	baz=264						
ESF	**Shoufeng Towns**	**0.28**	**315**	*e*P	**Pg**	**19 23 40.1**	**-0.9**
	baz=325						
ESF				S	**Sg**	**19 23 43.9**	**-0.8**
	baz=325						
ESL	**Shilin**	**0.30**	**298**⇓	*i*P	**Pg**	**19 23 40.3**	**-1.1**
	baz=297						
ESL				S	**Sg**	**19 23 43.2**	**-2.1**
	baz=297						
HWA	**Hwalien**	**0.32**	**340**⇓	*i*P	**Pg**	**19 23 42.4**	**+0.6**
HWA				*i* S	**Sg**	**19 23 48.2**	**+2.1**
EHY	**Hungye**	**0.41**	**246**⇓	*i*P	**Pg**	**19 23 43.4**	**0.0**
	baz=244						
EHY				*e*S	**Sg**	**19 23 49.9**	**+1.2**
	baz=244						
TWD	**Chiawan**	**0.42**	**344**⇑	*i*P	**Pg**	**19 23 44.0**	**+0.2**
	baz=12						
WHF	**Hehuan Shan**	**0.63**	**318**⇓	*i*P	**Pg**	**19 23 46.9**	**-0.9**
	baz=313						
WHF				S	**Sg**	**19 23 54.4**	**-1.5**
	baz=313						
CHKT	**Chengkung**	**0.66**	**210**	⇑P	**Pg**	**19 23 48.9**	**+0.7**
	baz=201						
CHKT				*e*S	**Sg**	**19 23 58.9**	**+2.1**
	baz=201						
YUS	**Yu-Shan**	**0.73**	**256**⇓	*i*P	**Pg**	**19 23 49.6**	**-0.1**
	baz=262						
YUS				S	**Sg**	**19 23 59.7**	**+0.5**
	baz=262						
ENA	**Nanau**	**0.75**	**1**	*i* P	**Pg**	**19 23 50.3**	**+0.2**
	baz=19						
ENA				S	**Sg**	**19 24 01.3**	**+1.4**
	baz=19						
TWT	**Tachien**	**0.77**	**319**	P	**Pg**	**19 23 49.6**	**-0.7**
	baz=313						
TWT				S	**Sg**	**19 23 58.9**	**-1.4**
	baz=313						
SMLT	**Sun Moon Lake**	**0.79**	**286**⇓	*i*P	**Pg**	**19 23 49.7**	**-1.0**
	baz=285						
ELDTW	**Lidau**	**0.81**	**234**	*i* P	**Pg**	**19 23 50.3**	**-0.8**
	baz=228						
TYC	**Yuchr**	**0.83**	**286**⇓	*i*P	**Pg**	**19 23 50.4**	**-1.1**
	baz=286						
ALS	**Alishan**	**0.86**	**259**	⇓P	**Pg**	**19 23 51.9**	**-0.2**
	baz=256						
TWC	**Suao**	**0.94**	**7**	P	**Pg**	**19 23 54.3**	**+0.6**
	baz=12						
TWC				S	**Sg**	**19 24 07.8**	**+2.0**
	baz=12						
CHN5	**Tsauling**	**0.96**	**266**⇓	*i*P	**Pg**	**19 23 53.8**	**-0.3**
	baz=255						
CHN5				*e*S	**Sg**	**19 24 07.3**	**+0.8**
	baz=255						
ENTT	**Nioudou**	**0.97**	**351**	P	**Pg**	**19 23 53.9**	**-0.4**
	baz=357						
ENTT				S	**Sg**	**19 24 06.8**	**-0.2**
	baz=357						
WNT	**Mingjian**	**0.98**	**282**	⇓P	**Pg**	**19 23 54.3**	**0.0**
	baz=281						
WNT				*e*S	**Sg**	**19 24 08.1**	**+1.1**
	baz=281						
STYT	**Tauyuan**	**1.02**	**241**	P	**Pg**	**19 23 54.7**	**-0.6**
	baz=230						
STYT				*e*S	**Sg**	**19 24 09.5**	**+0.9**
	baz=230						
TWG	**Pinlang**	**1.04**	**215**	P	**Pg**	**19 23 53.9**	**-1.6**
	baz=210						
TWG				S	**Sg**	**19 24 08.5**	**-0.5**
	baz=210						
TWE	**Neicheng**	**1.05**	**357**	P	**Pg**	**19 23 55.9**	**+0.2**
	baz=9.0						
TWE				*e*S	**Sg**	**19 24 11.2**	**+1.9**
	baz=9.0						
NSK	**Sanguang**	**1.05**	**342**⇓	*i*P	**Pg**	**19 23 55.8**	**-0.1**
	baz=347						
NSK				S	**Sg**	**19 24 09.4**	**-0.2**
	baz=347						
TTN	**Taitung**	**1.06**	**210**	*e*P	**Pg**	**19 23 55.6**	**-0.3**
	baz=185						
WGK	**Gukeng**	**1.07**	**271**	*e*P	**Pg**	**19 23 55.7**	**-0.3**
	baz=268						
WGK				*e*S	**Sg**	**19 24 10.4**	**+0.5**
	baz=268						
TCU	**Taichung**	**1.07**	**296**⇓	P	**Pg**	**19 23 56.0**	**-0.2**
	baz=278						
TCU				*e*S	**Sg**	**19 24 10.8**	**+0.8**
	baz=278						
TWQ1	**Liyutan**	**1.10**	**308**	P	**Pg**	**19 23 56.2**	**-0.5**
	baz=309						
TWQ1				*e*S	**Sg**	**19 24 10.7**	**-0.3**
	baz=309						
WTP	**Ta-pu**	**1.10**	**248**⇓	*i*P	**Pg**	**19 23 56.4**	**-0.4**
	baz=244						
WTP				S	**Sg**	**19 24 11.7**	**+0.5**
	baz=244						
NSY	**Sanyi**	**1.15**	**310**	P	**Pg**	**19 23 57.1**	**-0.6**
	baz=311						
NSY				S	**Sg**	**19 24 13.3**	**+0.7**
	baz=311						
NSTT	**Nanjuang**	**1.16**	**325**	P	**Pg**	**19 23 57.2**	**-0.7**
	baz=328						
NSTT				S	**Sg**	**19 24 12.1**	**-0.9**
	baz=328						
CHN1	**Nanshi**	**1.20**	**246**⇓	*i*P	**Pg**	**19 23 58.2**	**-0.5**
	baz=242						
CHN1				S	**Sg**	**19 24 15.7**	**+1.4**
	baz=242						
SGST	**Jiashian**	**1.20**	**241**	*e*P	**Pg**	**19 23 57.9**	**-0.8**
	baz=238						
SGST				*e*S	**Sg**	**19 24 17.2**	**+3.0**
	baz=238						
CHY	**Chiayi**	**1.21**	**262**	*e*P	**Pg**	**19 23 58.2**	**-0.6**
	baz=271						
CHY				*e*S	**Sg**	**19 24 15.1**	**+0.7**
	baz=271						
ECL	**Taimali**	**1.28**	**214**	*e*P	**Pg**	**19 23 57.6**	**-2.6**
	baz=211						
TWA	**Mucha**	**1.31**	**354**	*e*P	**Pg**	**19 23 57.8**	**-3.0**
	baz=358						
WTCT	**Ta-ch'eng**	**1.34**	**279**	*e*P	**Pg**	**19 24 00.2**	**-1.0**
	baz=276						
WTCT				*e*S	**Sg**	**19 24 19.3**	**+0.7**
	baz=276						
TWB1	**Santiao Chiao**	**1.35**	**10**	*e*P	**Pg**	**19 24 02.3**	**+0.7**
	baz=14						
TAP1	**Taipei**	**1.37**	**352**	*e*P	**Pg**	**19 24 02.8**	**+0.8**
	baz=359						
TAP1				*e*S	**Sg**	**19 24 20.6**	**+0.8**
	baz=359						
CHN3	**Shinhua**	**1.38**	**245**	*e*P	**Pn**	**19 24 01.1**	**-1.0**
	baz=240						
CHN3				*e*S	**Sg**	**19 24 23.1**	**+3.1**
	baz=240						
NWF	**Wu-fen Shan**	**1.39**	**2**	*e*P	**Pn**	**19 24 02.3**	**+0.1**
	baz=12						
NWF				*e*S	**Sg**	**19 24 23.2**	**+2.8**
	baz=12						
YOJ	**Yonaguni jima**	**1.41**	**56**	P	**Pn**	**19 24 02.7**	**+0.2**
YOJ				*e*S	**Sg**	**19 24 22.0**	**+0.9**
TWS1	**Kuangyinshan**	**1.45**	**349**	*e*P	**Pn**	**19 24 03.7**	**+0.7**
	baz=13						
TWS1				*e*S	**Sg**	**19 24 22.0**	**-0.3**
	baz=13						
TWM1	**Shoushan**	**1.47**	**235**	*e*P	**Pn**	**19 24 04.3**	**+1.1**
	baz=249						
SGLT	**Jiouru**	**1.48**	**231**	*e*P	**Pn**	**19 24 04.7**	**+1.4**
	baz=229						
EAST	**Anshuo**	**1.52**	**212**	*e*P	**Pn**	**19 24 01.5**	**-2.4**
	baz=196						
LAY	**Lan-yu**	**1.63**	**186**	*e*P	**Pn**	**19 24 02.1**	**-3.4**
	baz=181						
SCZT	**Fangliau**	**1.65**	**218**	*e*P	**Pn**	**19 24 05.6**	**0.0**
	baz=199						
SCZT				*e*S	**Sn**	**19 24 28.1**	**+0.7**
	baz=199						
TWP	**Hsiaoliuchiu**	**1.82**	**224**	*e*P	**Pn**	**19 24 10.8**	**+2.7**
	baz=219						
HEN	**Hengchun**	**1.89**	**209**	*e*P	**Pn**	**19 24 10.6**	**+1.5**
	baz=197						
TWK1	**Hengchun**	**1.92**	**206**	*e*P	**Pn**	**19 24 10.3**	**+0.9**
	baz=188						
HATJ	**Hateruma jima**	**1.94**	**78**	P	**Pn**	**19 24 09.3**	**-0.5**
HATJ				*e*S	**Sn**	**19 24 34.2**	**-0.6**
IRIF	**Iriomote-Funau**	**1.95**	**70**	P	**Pn**	**19 24 09.7**	**-0.1**
IRIF				*e*S	**Sn**	**19 24 34.9**	**-0.1**
PNG	**Penghu**	**1.99**	**267**	*e*P	**Pn**	**19 24 07.9**	**-2.6**
	baz=263						
JKRS	**Kuro-shima**	**2.16**	**74**	P	**Pn**	**19 24 12.8**	**0.0**
JIJ	**Ishigaki jima**	**2.31**	**72**	P	**Pn**	**19 24 14.3**	**-0.6**
JIJ				*e*S	**Sn**	**19 24 43.1**	**-0.9**

*NIED **03** 20:10:00,23°.50N×144°.40E,h17km,Mw3.9 Best double couple: M0:8.60000×10^14 NP1:φ0:175.00000°,δ80.00000°, λ12.00000°. NP2:φ0:83.00000°,δ78.00000°,λ170.00000°.*
*IDC **03** 20:10:28.9±0.9,23°.09N×144°.63E,h0km,mb3.6/9, mb1 3.9/12,mb1mx3.8/23,mbtmp3.8/12,ML4.1/3,MS2.9/1, Ms1 2.9/1,ms1mx2.2/24,Error ellipse: s-maj=34.6km s-min=16.3km az=80.0*
*JMA **03** 20:10:36.9±0.2,23°.51N×144°.43E,h75km,M4.7*
ISC 03 20:10:38.4±1.9,23°.38N±0°.08×144°.0E±0°.2,h85km±20km, n25,σ1°.00/35,mb3.6/8,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.64**	**333**	P	**Pn**	**20 11 33.2**	**+0.7**
JHHJ				S	**Sn**	**20 12 15.8**	**+1.4**
CBIJ	**Chichi jima**	**4.06**	**336**	Pn	**Pn**	**20 11 37.5**	**-0.6**
	22nm,0.3s,baz=148,slow=15,SNR=17						
CBIJ				Sn	**Sn**	**20 12 23.5**	**-0.9**
	134nm,0.3s,baz=90,slow=20,SNR=37						
CBIJ	**Chichi jima**	**4.06**	**336**	P	**Pn**	**20 11 38.4**	**+0.3**
CBIJ				*e*S	**Sn**	**20 12 25.1**	**+0.7**
JHJ	**Hachijo jima 2**	**10.40**	**340**	Pn	**Pn**	**20 13 04.0**	**-0.4**
	2.4nm,0.3s,baz=90,slow=20,SNR=6.4						
JHJ				Sn	**Sn**	**20 14 53.6**	**-5.5**
	7.1nm,0.3s,baz=73,slow=20,SNR=4.7						
BSO1	**Boso 1**	**11.54**	**347**	P	**Pn**	**20 13 18.8**	**-1.3**
BSO1				*e*S	**Sn**	**20 15 23.3**	**-3.8**
BSO3	**Boso 3**	**11.79**	**346**	P	**Pn**	**20 13 23.7**	**+0.3**
BSO4	**Boso 4**	**12.01**	**345**	*e*S	**Sn**	**20 15 36.6**	**-1.7**
TATJ	**Tateyama 2**	**12.16**	**344**	P	**Pn**	**20 13 28.9**	**+0.5**
TATJ				*e*S	**Sn**	**20 15 41.8**	**-0.2**
JNY	**Yasuok**	**13.08**	**337**	P	**Pn**	**20 13 44.6**	**+3.8**
JHU	**Hanno**	**13.09**	**343**	P	**Pn**	**20 13 41.5**	**+0.6**
JHU				*e*S	**Sn**	**20 16 00.5**	**-4.2**
JRY	**Ryogami san**	**13.35**	**342**	P	**Pn**	**20 13 43.7**	**-0.6**
JRY				S	**Sn**	**20 16 07.1**	**-3.9**
JHO	**Hitachi**	**13.52**	**348**	P	**Pn**	**20 13 46.0**	**-0.5**
JHO				S	**Sn**	**20 16 07.5**	**-7.6**
JAG	**Ashikaga**	**13.59**	**344**	P	**Pn**	**20 13 48.4**	**+1.0**
MJAR	**Matsushiro Arr**	**14.05**	**340**	Pn	**Pn**	**20 13 53.4**	**+0.1**
	1.0nm,0.3s,baz=160,slow=10,SNR=8.7						
MAT	**Matsushiro**	**14.05**	**340**	P	**Pn**	**20 13 52.9**	**-0.5**
JMM	**Marumori**	**14.70**	**350**	P	**Pn**	**20 14 02.9**	**+1.0**
JMM				S	**Sn**	**20 16 37.2**	**-6.5**
KSRS	**Korea Array**	**19.70**	**319**	P	**Pn**	**20 15 04.7**	**+1.7**
	2.1nm,0.7s,baz=134,slow=12,SNR=9.2						
KSRS				LR	LR	20 22 14.7	
	comp=Z,34nm,21.1s,baz=115,slow=35						
SONM	**Songino Array**	**38.57**	**319**	P	**P**	**20 17 59.8**	**+7.1**
	0.4nm,0.6s,mb3.5,baz=120,slow=8.5,SNR=2.5						
WRA	**Warramunga Arr**	**44.08**	**193**	P	**P**	**20 18 37.6**	**-0.5**
	1.1nm,0.7s,mb3.7,baz=16,slow=9.0,SNR=22						
ASAR	**Alice Springs**	**47.79**	**193**	P	**P**	**20 19 06.2**	**-1.0**
	0.5nm,0.6s,mb3.5,baz=14,slow=8.6,SNR=13						
ZALV	**Zalesovo Beam**	**53.39**	**321**	P	**P**	**20 19 56.0**	**+7.0**
	0.3nm,0.3s,mb3.8,baz=106,slow=9.2,SNR=2.4						
MKAR	**Makanchi Array**	**54.15**	**312**	P	**P**	**20 20 00.8**	**+6.1**
	0.1nm,0.4s,mb3.2,baz=94,slow=8.4,SNR=4.7						
STKA	**Stephens Creek**	**54.99**	**183**	P	**P**	**20 20 00.1**	**-0.8**
	1.0nm,0.6s,mb4.0,baz=350,slow=11,SNR=3.2						
ILAR	**Eielson Array**	**60.20**	**27**	P	**P**	**20 20 37.1**	**+0.1**
	0.3nm,0.7s,mb3.4,baz=275,slow=4.4,SNR=3.2						
NVAR	**Mina Array Bea**	**81.50**	**52**	P	**P**	**20 22 48.4**	**+1.9**
	0.3nm,0.5s,mb3.4,baz=282,slow=4.2,SNR=3.9						

WEL 03 20:17:54.1±0.8,36°.04S×177°.46E,h220km±15km,ML3.8/8, Error ellipse: s-maj=16.0km s-min=13.8km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**2.13**	**163**	PN	Pn	20 18 35.6	+0.2
PUZ				SN	S	20 19 06.0	-1.9
URZ	**Urewera**	**2.24**	**187**	PN	Pn	20 18 37.2	+0.7
URZ				SN	S	20 19 08.8	-1.0
MWZ	**Matawai**	**2.30**	**179**	PN	Pn	20 18 37.5	+0.4
MWZ				SN	S	20 19 09.8	-1.1
CNGZ	**Carnagh Statio**	**2.52**	**166**	PN	Pn	20 18 40.0	+0.6
KNZ	**Kokohu**	**2.98**	**177**	PN	Pn	20 18 44.2	-0.3
NMHZ	**Naumai**	**3.10**	**189**	PN	Pn	20 18 46.8	+0.9
NMHZ				SN	S	20 19 27.6	+0.8
MHGZ	**Mahia Peninsul**	**3.13**	**174**	PN	Pn	20 18 46.4	+0.1
WNVZ	**Wahianoa**	**3.60**	**204**	PN	Pn	20 18 52.2	+0.4
BHHZ	**Black Hill Sta**	**3.62**	**197**	PN	Pn	20 18 51.5	-0.5
CKHZ	**Cape Kidnapper**	**3.63**	**185**	PN	Pn	20 18 51.5	-0.6
KAHZ	**Kahuranaki**	**3.78**	**187**	PN	Pn	20 18 53.4	-0.5
PNHZ	**Pukenui**	**4.00**	**194**	PN	Pn	20 18 55.5	-1.1
PXZ	**Pawanui**	**4.02**	**187**	PN	Pn	20 18 55.2	-1.5
TSZ	**Takapari Road**	**4.19**	**196**	PN	Pn	20 18 57.6	-1.3
PRHZ	**Porangahau**	**4.28**	**188**	PN	Pn	20 18 58.5	-1.4
BFZ	**Birch Farm**	**4.74**	**191**	PN	Pn	20 19 03.7	-1.9
MRZ	**Mangatainoka R**	**4.85**	**197**	PN	Pn	20 19 04.7	-2.4
HOWZ	**Holdsworth Sta**	**5.09**	**197**	PN	Pn	20 19 07.2	-2.8
OGWZ	**Otaki Gorge**	**5.10**	**200**	PN	Pn	20 19 07.8	-2.4
KIW	**Kapiti Island**	**5.22**	**202**	PN	Pn	20 19 09.5	-2.2
CAW	**Cannon Point**	**5.40**	**200**	PN	Pn	20 19 10.9	-3.0
TCW	**Tory Channel**	**5.74**	**205**	PN	Pn	20 19 16.0	-2.3
THZ	**Tophouse**	**6.73**	**210**	PN	Pn	20 19 31.5	+0.6

MAN 03 20:20:18,11°.60N×125°.45E,h28km,mb4.1,ML2.9,MS2.7, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.01**	**256**	*e*P	Pb	20 20 23.4	+0.7
CNP	**Catarman**	**1.18**	**320**	*e*P	Pn	20 20 39.8	+1.1
CNP				*e*S	Sn	20 20 54.9	+1.1
MSLP	**Maasin**	**1.57**	**202**	*e*P	Pn	20 20 45.6	+1.6
MSLP				*e*S	Sn	20 21 01.2	-2.2

IDC 03 20:25:14.0±11.0,4°.09N×127°.13E,h149km±111km, mb3.2/4,mb1 3.3/4,mb1mx3.1/19,mbtmp3.2/4,Error ellipse: s-maj=149.7km s-min=21.7km az=64.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.91**	**164**	P	P	20 30 23.2	0.0
	0.7nm,0.4s,baz=343,slow=10,SNR=23						
ASAR	**Alice Springs**	**28.37**	**167**	P	P	20 30 54.9	+0.7
	0.2nm,0.7s,baz=349,slow=7.0,SNR=6.4						
ASAR				PcP	PcP	20 34 03.0	-0.2
	0.1nm,0.4s,baz=356,slow=2.1,SNR=5.4						
STKA	**Stephens Creek**	**38.33**	**160**	P	P	20 32 19.6	-0.7
	0.6nm,0.4s,baz=354,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**57.49**	**325**	P	P	20 34 47.5	0.0
	0.5nm,0.4s,baz=114,slow=7.9,SNR=12						

*ISCJB **03** 20:37:13.4±0.3,22°.91N±0°.01×121°.45E±0°.02,h25km±3km, Error ellipse: s-maj=3.2km s-min=2.4km az=15.3*
*TAP **03** 20:37:13.2,22°.92N×121°.41E,h20km±1km,ML3.5,C*
*JMA **03** 20:37:15.1±0.3,22°.85N×121°.55E,h68km,M2.8*
ISC 03 20:37:13.2±0.4,22°.92N±0°.01×121°.44E±0°.02,h16km±2km, n58,σ0°.73/110,5C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.20**	**339**⇓	*i*P	**Pg**	**20 37 19.0**	**+1.2**
	baz=349						
CHKT				S	**Sg**	**20 37 22.3**	**+1.3**
	baz=349						
TTN	**Taitung**	**0.32**	**239**	*e*P	**Pg**	**20 37 20.6**	**+0.8**
	baz=235						
TTN				*e*S	**Sg**	**20 37 24.9**	**+0.6**
	baz=235						
TWG	**Pinlang**	**0.35**	**255**	*i* P	**Pg**	**20 37 21.0**	**+0.6**
	baz=252						
TWG				*i* S	**Sg**	**20 37 25.9**	**+0.6**
	baz=252						
ELDTW	**Lidau**	**0.48**	**305**⇑	*i*P	**Pg**	**20 37 22.0**	**-0.7**
	baz=307						
ELDTW				*e*S	**Sg**	**20 37 29.0**	**-0.1**
	baz=307						
ECL	**Taimali**	**0.55**	**235**	*i* P	**Pg**	**20 37 23.8**	**-0.2**
	baz=232						
ECL				S	**Sg**	**20 37 30.9**	**-0.5**
	baz=232						
EHY	**Hungye**	**0.60**	**349**	*i* P	**Pg**	**20 37 24.2**	**-0.7**
	baz=352						
EHY				*e*S	**Sg**	**20 37 33.8**	**+0.8**
	baz=352						
STYT	**Tauyuan**	**0.68**	**291**⇑	*i*P	**Pg**	**20 37 25.5**	**-0.9**
	baz=292						
STYT				S	**Sg**	**20 37 33.7**	**-1.7**
	baz=292						
YUS	**Yu-Shan**	**0.73**	**322**	*i* P	**Pg**	**20 37 26.8**	**-0.6**
	baz=323						
YUS				*e*S	**Sg**	**20 37 35.5**	**-1.5**
	baz=323						
TAW	**Tawu**	**0.75**	**222**	*e*P	**Pg**	**20 37 27.4**	**-0.4**
	baz=219						
TAW				*e*S	**Sg**	**20 37 37.9**	**+0.2**
	baz=219						
EAST	**Anshuo**	**0.76**	**226**	*e*P	**Pg**	**20 37 27.6**	**-0.5**
	baz=223						
EAST				*e*S	**Sg**	**20 37 38.1**	**0.0**
	baz=223						
SGST	**Jiashian**	**0.81**	**282**⇑	*i*P	**Pb**	**20 37 28.6**	**-0.2**
	baz=282						
SGST				*e*S	**Sb**	**20 37 39.6**	**+0.1**
	baz=282						
WTP	**Ta-pu**	**0.83**	**294**	*i* P	**Pb**	**20 37 28.8**	**-0.4**
	baz=294						
WTP				*e*S	**Sb**	**20 37 40.4**	**+0.2**
	baz=294						
ALS	**Alishan**	**0.83**	**315**⇑	*i*P	**Pb**	**20 37 28.8**	**-0.5**
	baz=317						
ALS				S	**Sb**	**20 37 39.1**	**-1.1**
	baz=317						
LAY	**Lan-yu**	**0.88**	**173**	*i* P	**Pb**	**20 37 30.0**	**-0.1**
	baz=171						
LAY				*e*S	**Sb**	**20 37 43.0**	**+1.4**
	baz=171						
CHN1	**Nanshi**	**0.88**	**288**	P	**Pb**	**20 37 30.1**	**0.0**
	baz=288

WGK S **Sb** **20 37 49.2 +0.9**
baz=314
HEN Hengchun 1.11 216 *i* P **Pb** **20 37 33.7 -0.4**
HEN baz=214 *e*S **Sb** **20 37 49.3 +0.9**
baz=214
TYC Yuchr 1.12 332 *e*P **Pb** **20 37 34.3 +0.1**
TYC baz=333 S **Sb** **20 37 49.2 +0.6**
baz=333
TAI1 Yung-k'ang 1.12 277 *e*P **Pb** **20 37 33.2 -1.1**
TAI1 baz=276 *e*S **Sb** **20 37 49.2 +0.6**
baz=276
TSEB Hengchuen, Pin 1.13 206 *e*P **Pb** **20 37 33.8 -0.5**
TSEB baz=206 S **Sb** **20 37 49.7 +1.0**
baz=206
TWK1 Hengchun 1.13 211 *e*P **Pn** **20 37 33.6 -0.8**
TWK1 baz=209 *e*S **Sb** **20 37 49.2 +0.4**
baz=209
TWP Hsiaoliuchiu 1.15 241 *e*P **Pn** **20 37 33.9 -0.7**
TWP baz=239 *e*S **Sb** **20 37 49.3 0.0**
baz=239
TWD Chiawan 1.17 7 *e*P **Pn** **20 37 34.6 -0.2**
TWD baz=8.0 *e*S **Sb** **20 37 50.9 +1.0**
baz=8.0
SCLT Jiali 1.18 283 *e*P **Pn** **20 37 34.3 -0.7**
SCLT baz=282 *e*S **Sb** **20 37 50.1 -0.1**
baz=282
WNT Mingjian 1.18 324 *e*P **Pn** **20 37 34.6 -0.5**
WNT baz=325 S **Sb** **20 37 50.9 +0.6**
baz=325
WHF Hehuan Shan 1.23 353 P **Pn** **20 37 34.9 -0.9**
WHF baz=354 *e*S **Sb** **20 37 49.3 -2.5**
baz=354
TWT Tachien 1.35 350 *e*P **Pn** **20 37 37.2 -0.2**
TWT baz=350 *e*S **Sn** **20 37 52.8 -2.2**
baz=350
TCU Taichung 1.41 330 *e*P **Pn** **20 37 37.9 -0.3**
TCU baz=331 *e*S **Sn** **20 37 56.4 -0.1**
baz=331
ENA Nanau 1.53 10 *e*P **Pn** **20 37 38.6 -1.3**
baz=11
TWQ1 Liyutan 1.55 337 *e*P **Pn** **20 37 40.3 +0.1**
TWQ1 baz=337 *e*S **Sn** **20 38 00.3 +0.3**
baz=337
NSY Sanyi 1.62 337 *e*P **Pn** **20 37 40.9 -0.1**
NSY baz=338 *e*S **Sn** **20 38 01.5 -0.1**
baz=338
ENTT Nioudou 1.72 4 *e*P **Pn** **20 37 42.6 +0.1**
ENTT baz=5.0 *e*S **Sn** **20 38 04.8 +0.6**
baz=5.0
TWC Suao 1.73 12 *e*P **Pn** **20 37 42.8 +0.2**
TWC baz=13 *e*S **Sn** **20 38 04.8 +0.4**
baz=13
NSK Sanguang 1.75 358 *e*P **Pn** **20 37 43.0 +0.1**
NSK baz=358 *e*S **Sn** **20 38 05.0 0.0**
baz=358
NSTT Nanjuang 1.75 347 *e*P **Pn** **20 37 43.8 +0.8**
NSTT baz=347 *e*S **Sn** **20 38 05.8 +0.9**
baz=347
TWE Neicheng 1.81 7 *e*P **Pn** **20 37 44.3 +0.6**
TWE baz=7.0 *e*S **Sn** **20 38 06.5 +0.2**
baz=7.0
PNG Penghu 1.85 291 *e*P **Pn** **20 37 43.5 -0.8**
PNG baz=290 *e*S **Sn** **20 38 06.0 -1.4**
baz=290
TWA Mucha 2.06 4 *e*P **Pn** **20 37 47.5 +0.4**
TWA baz=4.0 *e*S **Sn** **20 38 13.3 +0.8**
baz=4.0
YOJ Yonaguni jima 2.11 43 P **Pn** **20 37 48.5 +0.7**
YOJ *e*S **Sn** **20 38 13.7 0.0**
TWB1 Santiao Chiao 2.14 13 *e*S **Sn** **20 38 15.4 +0.8**
baz=14
NWF Wu-fen Shan 2.17 8 *e*P **Pn** **20 37 49.1 +0.5**
baz=9.0
TWS1 Kuangyinshan 2.17 359 *e*P **Pn** **20 37 49.1 +0.4**
TWS1 *e*S **Sn** **20 38 15.6 +0.2**
HATJ Hateruma jima 2.45 62 P **Pn** **20 37 52.7 +0.2**
HATJ S **Sn** **20 38 21.1 -1.0**
IRIF Iriomote-Funau 2.53 56 P **Pn** **20 37 54.3 +0.7**
IRIF S **Sn** **20 38 23.6 -0.5**
JKRS Kuro-shima 2.70 60 P **Pn** **20 37 56.5 +0.6**
JKRS S **Sn** **20 38 27.5 -0.8**
JIJ Ishigaki jima 2.87 59 P **Pn** **20 37 58.3 +0.1**
JIJ S **Sn** **20 38 30.6 -1.8**
KNM Kinmen 3.14 299 *e*P **Pn** **20 38 02.6 +0.7**
baz=297
JTJ Tarama 3.45 59 P **Pn** **20 38 06.8 +0.6**
JTJ S **Sn** **20 38 46.4 -0.3**

ISCJB ***03*** *20:40:13.7±3.2, 11.°0S±0.°1×162.°1E±0.°2, h89km±24km, mb3.6/9, Error ellipse: s-maj=32.6km s-min=18.9km az=13.1*
IDC ***03*** *20:40:14.0±4.8, 10.°95S×162.°12E, h81km±36km, mb3.5/8, mb1 3.8/10, mb1mx3.6/20, mbtmp3.6/10, MS3.4/2, Ms1 3.4/2, ms1mx3.0/15, Error ellipse: s-maj=38.4km s-min=21.5km az=109.0*
NEIC ***03*** *20:40:14.1±2.1, 10.°85S×162.°05E, h80km±16km, mb4.4/2, Error ellipse: s-maj=22.4km s-min=11.5km az=115.0*

ISC 03 20:40:14.2±3.1, 10.°9S±0.°1×162.°1E±0.°2, h80km±24km, n16, σ0s79/14, mb3.6/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.60**	**305**	P	**Pn**	**20 40 52.5**	**-1.6**
	95nm,0.3s,baz=153,slow=12,SNR=17						
HNR				S	**Sn**	**20 41 26.2**	**+1.3**
	247nm,0.3s,baz=15,slow=20,SNR=10						
HNR				LR	LR	20 41 50.8	
	comp=Z,400nm,21.1s,baz=313,slow=37						
CTA	**Charters Tower**	**17.76**	**237**	P	**Pn**	**20 44 16.1**	**-0.1**
	0.6nm,0.3s,baz=68,slow=14,SNR=10						
CTAO	**Charters Tower**	**17.76**	**237**	*e*P	**Pn**	**20 44 16.9**	**+0.6**
	18nm,0.8s						
STKA	**Stephens Creek**	**28.16**	**219**	P	**P**	**20 45 59.5**	**+0.5**
	1.5nm,0.8s,mb3.6,baz=56,slow=11,SNR=3.8						
STKA				LR	LR	20 56 23.2	
	comp=Z,175nm,19.7s,baz=205,slow=34						
STKA	**Stephens Creek**	**28.16**	**219**	*e*P	**P**	**20 45 59.0**	**0.0**
STKA				LR	LR	20 56 23.2	
WRA	**Warramunga Arr**	**28.18**	**248**	P	**P**	**20 45 58.7**	**-0.6**
	0.9nm,0.6s,mb3.5,baz=77,slow=9.4,SNR=13						
WRA				PcP	PcP	20 49 10.4	-1.1
	0.2nm,0.6s,baz=76,slow=3.1,SNR=3.8						
ASAR	**Alice Springs**	**29.68**	**241**	P	**P**	**20 46 13.1**	**+0.5**
	0.3nm,0.5s,mb3.2,baz=62,slow=10.0,SNR=7.0						
ASAR				PcP	PcP	20 49 15.2	-0.1
	1.4nm,1.1s,baz=76,slow=3.9,SNR=4.5						
FITZ	**Fitzroy Crossi**	**35.96**	**254**	P	**P**	**20 47 06.5**	**-0.9**
	2.3nm,0.6s,mb4.3,baz=92,slow=8.7,SNR=14						
CMAR	**Chiang Mai Arr**	**68.81**	**295**	P	**P**	**20 51 10.4**	**0.0**
	0.2nm,0.4s,mb3.3,baz=99,slow=4.7,SNR=4.5						
SONM	**Songino Array**	**76.50**	**325**	P	**P**	**20 51 54.7**	**-0.7**
	0.5nm,0.6s,mb3.4,baz=129,slow=3.9,SNR=3.4						
QSPA	**South Pole Qui**	**79.06**	**180**	*e*P	**P**	**20 52 09.9**	**+0.8**
	6.5nm,1.1s,mb4.4						
DIB	**Dawson Inlet,**	**84.54**	**33**	T		22 25 49.9	
	SNR=27						
NVAR	**Mina Array Bea**	**88.70**	**51**	P	**P**	**20 52 59.6**	**+0.6**
	0.3nm,0.5s,mb3.6,baz=238,slow=5.2,SNR=3.2						
MKAR	**Makanchi Array**	**91.01**	**317**	P	**P**	**20 53 09.5**	**0.0**
	0.3nm,0.7s,mb3.5,baz=104,slow=4.5,SNR=3.1						
BOSA	**Boshof**	**122.69**	**226**	PKP	PKPdf	20 59 01.4	**0.0**
	1.9nm,0.6s,baz=150,slow=3.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**160.72**	**279**	PKP	PKPdf	21 00 05.4	-0.5
	0.5nm,0.7s,baz=70,slow=1.7,SNR=2.9						

IDC ***03*** *21:13:20.2±2.4, 41.°46S×173.°46E, h53km±20km, mb3.4/2, mb1 3.7/3, mb1mx3.5/12, mbtmp3.5/3, ML3.9/2, Error ellipse: s-maj=30.2km s-min=16.6km az=125.0*
ISCJB ***03*** *21:13:21.1±0.2, 41.°58S±0.°03×173.°59E±0.°04, h80km±4km, mb3.7/3, Error ellipse: s-maj=6.5km s-min=3.1km az=38.7*
WEL ***03*** *21:13:22.7±0.1, 41.°48S×173.°52E, h62km±1km, ML4.5/21, Error ellipse: s-maj=1.3km s-min=1.1km az=0.0*
WEL Felt from Wellington to West Coast, maximum reported intensity MM 5.
NEIC ***03*** *21:13:22.4, 41.°48S×173.°52E, h64km, mb3.9/1, ML4.5(WEL), After WEL.*
NEIC Felt [IV] at Blenheim, Nelson and Picton. Felt in the northern part of the South Island and the southern part of the North Island.

ISC 03 21:13:22.3±0.2, 41.°57S±0.°03×173.°59E±0.°04, h71km±4km, n101, σ1s01/102, mb3.7/3, 5C-18D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.26**	**124**	⇑PN	**Pn**	**21 13 33.6**	**+0.4**
BSWZ				SN	**Sn**	**21 13 41.5**	**+0.3**
TUWZ	**Tuamarina**	**0.30**	**62**	⇑PN	**Pn**	**21 13 33.1**	**-0.4**
TUWZ				SN	**Sn**	**21 13 40.3**	**-1.4**
NNZ	**Nelson**	**0.39**	**336**	⇑PN	**Pn**	**21 13 32.5**	**-1.6**
NNZ				SN	**Sn**	**21 13 39.7**	**-3.1**
CMWZ	**Cape Campbell**	**0.50**	**111**	PN	**Pn**	**21 13 36.3**	**+1.2**
THZ	**Tophouse**	**0.55**	**249**	⇓PN	**Pn**	**21 13 34.8**	**-0.8**
TCW	**Tory Channel**	**0.63**	**55**	PN	**Pn**	**21 13 36.6**	**+0.2**
DUWZ	**D'Urville Isla**	**0.81**	**18**	⇓PN	**Pn**	**21 13 38.0**	**-0.4**
KHZ	**Kahutara**	**0.84**	**183**	⇑PN	**Pn**	**21 13 40.0**	**+1.1**
KHZ	**Kahutara**	**0.84**	**183**	*e*Pn	**Pn**	**21 13 40.2**	**+1.3**
KHZ				*e*Sn	**Sn**	**21 13 53.1**	**+1.9**
SNZO	**South Karori**	**0.88**	**73**	⇓PN	**Pn**	**21 13 39.7**	**+0.5**
SNZO	**South Karori**	**0.88**	**73**	*e*Pn	**Pn**	**21 13 39.7**	**+0.4**
SNZO				*e*Sn	**Sn**	**21 13 53.1**	**+1.2**
WEL	**Wellington**	**0.93**	**72**	PN	**Pn**	**21 13 40.5**	**+0.6**
BHW	**Baring Head**	**0.98**	**81**	⇓PN	**Pn**	**21 13 40.8**	**+0.4**
QRZ	**Quartz Range**	**1.09**	**313**	⇑PN	**Pn**	**21 13 40.8**	**-1.2**
CAW	**Cannon Point**	**1.21**	**68**	⇓PN	**Pn**	**21 13 43.6**	**+0.2**
KIW	**Kapiti Island**	**1.22**	**55**	⇓PN	**Pn**	**21 13 44.1**	**+0.5**
PLWZ	**Palliser**	**1.25**	**90**	⇓PN	**Pn**	**21 13 44.0**	**+0.1**
MSWZ	**Moikau Station**	**1.26**	**83**	⇓PN	**Pn**	**21 13 44.1**	**+0.1**
DSZ	**Denniston Nort**	**1.35**	**262**	⇓PN	**Pn**	**21 13 44.8**	**-0.5**
PAWZ	**Paruwai Farm**	**1.39**	**83**	⇓PN	**Pn**	**21 13 45.6**	**-0.2**
OGWZ	**Otaki Gorge**	**1.41**	**58**	⇓PN	**Pn**	**21 13 46.3**	**+0.2**
MTW	**Mount Morrison**	**1.50**	**75**	⇓PN	**Pn**	**21 13 46.9**	**-0.3**
LTZ	**Lake Taylor**	**1.56**	**219**	PN	**Pn**	**21 13 48.3**	**+0.3**
TRWZ	**Traveller**	**1.58**	**84**	⇓PN	**Pn**	**21 13 48.0**	**-0.3**
HOWZ	**Holdsworth Sta**	**1.60**	**66**	⇓PN	**Pn**	**21 13 48.2**	**-0.4**
MRZ	**Mangatainoka R**	**1.76**	**59**	⇓PN	**Pn**	**21 13 50.2**	**-0.4**
TMWZ	**Te Maipa**	**1.79**	**76**	⇓PN	**Pn**	**21 13 50.5**	**-0.6**
TIWZ	**Tintock**	**1.91**	**66**	⇓PN	**Pn**	**21 13 51.9**	**-0.7**
POWZ	**Post Office Ro**	**2.03**	**55**	PN	**Pn**	**21 13 53.5**	**-0.7**
WAZ	**Wanganui**	**2.10**	**31**	PN	**Pn**	**21 13 56.4**	**+1.2**
CRLZ	**Canterbury Las**	**2.13**	**199**	PN	**Pn**	**21 13 55.2**	**-0.4**
BFZ	**Birch Farm**	**2.19**	**67**	PN	**Pn**	**21 13 55.2**	**-1.3**
MQZ	**McQueen's Vall**	**2.24**	**198**	PN	**Pn**	**21 13 56.1**	**-1.1**
NRZ	**Ngariki Road**	**2.25**	**7**	PN	**Pn**	**21 13 58.5**	**+1.3**
DFE	**Dawson Falls**	**2.28**	**10**	PN	**Pn**	**21 13 58.8**	**+1.2**
DVHZ	**Dannevirke**	**2.33**	**58**	⇓PN	**Pn**	**21 13 57.1**	**-1.3**
NEZ	**North Egmont**	**2.33**	**10**	PN	**Pn**	**21 13 59.6**	**+1.2**
TSZ	**Takapari Road**	**2.35**	**51**	PN	**Pn**	**21 13 57.8**	**-0.8**
PKE	**Pukeiti**	**2.39**	**7**	PN	**Pn**	**21 14 00.3**	**+1.1**
MHEZ	**Mangahewa**	**2.56**	**13**	PN	**Pn**	**21 14 02.8**	**+1.4**
PNHZ	**Pukenui**	**2.58**	**51**	PN	**Pn**	**21 14 00.7**	**-1.1**
WVZ	**Waitaha Valley**	**2.60**	**234**	PN	**Pn**	**21 14 02.3**	**+0.4**
VRZ	**Vera Road**	**2.60**	**20**	PN	**Pn**	**21 14 03.5**	**+1.5**
MTVZ	**Mangateitei**	**2.61**	**34**	PN	**Pn**	**21 14 02.8**	**+0.6**
PKVZ	**Pokaka**	**2.64**	**31**	PN	**Pn**	**21 14 03.8**	**+1.2**
PRHZ	**Porangahau**	**2.65**	**62**	PN	**Pn**	**21 14 01.2**	**-1.5**
WNVZ	**Wahianoa**	**2.71**	**35**	PN	**Pn**	**21 14 04.1**	**+0.5**
MOVZ	**Moawhango**	**2.72**	**38**	PN	**Pn**	**21 14 03.4**	**-0.2**
FWVZ	**Far West T-bar**	**2.76**	**34**	PN	**Pn**	**21 14 04.7**	**+0.5**
TUVZ	**Tukino**	**2.79**	**35**	PN	**Pn**	**21 14 05.2**	**+0.6**
WPVZ	**Whakapapa**	**2.80**	**33**	PN	**Pn**	**21 14 05.4**	**+0.8**
BHHZ	**Black Hill Sta**	**2.81**	**43**	PN	**Pn**	**21 14 04.3**	**-0.5**
NGZ	**Ngauruhoe**	**2.84**	**33**	PN	**Pn**	**21 14 05.8**	**+0.5**
RPZ	**Rata Peaks**	**2.84**	**220**	PN	**Pn**	**21 14 05.6**	**+0.2**
RPZ	**Rata Peaks**	**2.84**	**220**	P	**Pn**	**21 14 04.9**	**-0.5**
	42nm,0.3s,baz=321,slow=3.1,SNR=57						
RPZ				S	**Sn**	**21 14 37.0**	**-1.4**
	32nm,0.3s,baz=29,slow=10,SNR=4.8						
RPZ	**Rata Peaks**	**2.84**	**220**	*e*Pn	**Pn**	**21 14 05.9**	**+0.6**
RPZ				*e*Sn	**Sn**	**21 14 40.3**	**+1.9**
TWVZ	**Taurewa**	**2.87**	**30**	PN	**Pn**	**21 14 05.8**	**+0.2**
OTVZ	**Oturere**	**2.88**	**34**	PN	**Pn**	**21 14 06.3**	**+0.5**
WTVZ	**West Tongariro**	**2.89**	**33**	PN	**Pn**	**21 14 06.2**	**+0.2**
PXZ	**Pawanui**	**2.92**	**59**	PN	**Pn**	**21 14 04.6**	**-1.8**
KRVZ	**Karewarewa**	**2.93**	**33**	PN	**Pn**	**21 14 06.7**	**+0.2**
KATZ	**Kakaramea**	**3.05**	**33**	PN	**Pn**	**21 14 09.5**	**+1.4**
KAHZ	**Kahuranaki**	**3.06**	**56**	PN	**Pn**	**21 14 06.7**	**-1.6**
RATZ	**Rangitukua**	**3.17**	**32**	PN	**Pn**	**21 14 13.3**	**+3.4**
HIZ	**Hauiti**	**3.21**	**18**	PN	**Pn**	**21 14 10.8**	**+0.5**
BKZ	**Black Stump Fm**	**3.27**	**44**	PN	**Pn**	**21 14 09.7**	**-1.4**
WATZ	**Wairara**	**3.30**	**31**	PN	**Pn**	**21 14 13.8**	**+2.3**
NMHZ	**Naumai**	**3.48**	**46**	PN	**Pn**	**21 14 12.6**	**-1.4**
FOZ	**Fox Glacier**	**3.50**	**234**	PN	**Pn**	**21 14 12.8**	**-1.4**
LBZ	**Lake Benmore**	**3.76**	**220**	PN	**Pn**	**21 14 16.4**	**-1.4**
ODZ	**Otahua Downs**	**4.08**	**211**	PN	**Pn**	**21 14 21.0**	**-1.2**
ODZ	**Otahua Downs**	**4.08**	**211**	*e*Pn	**Pn**	**21 14 23.0**	**+0.9**
ODZ				*e*Sn	**Sn**	**21 15 09.1**	**+0.5**
TOZ	**Tahuroa Road**	**4.11**	**22**	PN	**Pn**	**21 14 23.6**	**+1.0**
URZ	**Urewera**	**4.27**	**40**	PN	**Pn**	**21 14 22.2**	**-2.7**
URZ	**Urewera**	**4.27**	**40**	P	**Pn**	**21 14 22.0**	**-2.8**
	2.5nm,0.3s,baz=242,slow=7.2,SNR=17						
URZ	**Urewera**	**4.27**	**40**	*e*Pn	**Pn**	**21 14 24.0**	**-0.8**
URZ				Sn	**Sn**	**21 15 12.6**	**-0.8**
JCZ	**Jackson Bay**	**4.34**	**233**	PN	**Pn**	**21 14 26.2**	**+0.5**
MWZ	**Matawai**	**4.43**	**44**	PN	**Pn**	**21 14 24.0**	**-2.9**
WTAZ	**Waiatarua**	**4.70**	**10**	PN	**Pn**	**21 14 31.1**	**+0.5**
KUZ	**Kuautunu**	**5.09**	**20**	PN	**Pn**	**21 14 36.4**	**+0.4**
MSZ	**Milford Sound**	**5.17**	**231**	PN	**Pn**	**21 14 37.6**	**+0.6**
WCZ	**Waipu Caves**	**5.66**	**6**	PN	**Pn**	**21 14 44.0**	**+0.3**
SYZ	**Scrubby Hill**	**5.91**	**211**	PN	**Pn**	**21 14 47.1**	**0.0**
OUZ	**Omahuta**	**6.34**	**0**	PN	**Pn**	**21 14 53.7**	**+0.6**
OUZ	**Omahuta**	**6.34**	**0**	*e*Pn	**Pn**	**21 14 54.1**	**+1.0**
OUZ				*e*Sn	**Sn**	**21 16 00.5**	**-3.6**
APZ	**The Paps**	**6.62**	**216**	PN	**Pn**	**21 14 57.4**	**+0.6**
CTZ	**Chatham Island**	**7.54**	**110**	PN	**Pn**	**21 15 08.8**	**-0.5**
ASAR	**Alice Springs**	**37.51**	**286**	P	**P**	**21 20 27.9**	**-1.4**
	0.3nm,0.5s,mb3.4,baz=127,slow=7.2,SNR=11						
WB2	**Warramunga Arr**	**39.57**	**291**	*e*P	**P**	**21 20 45.5**	**-1.0**
WRA	**Warramunga Arr**	**39.58**	**291**	P	**P**	**21 20 45.2**	**-1.5**
	0.8nm,0.5s,mb3.8,baz=134,slow=8.2,SNR=19						
CASY	**Casey**	**42.09**	**213**	*e*P	**P**	**21 21 07.6**	**+0.9**
	2.9nm,1.3s,mb3.9						
QSPA	**South Pole Qui**	**48.55**	**180**	P	**P**	**21 21 59.5**	**+1.8**
LIC	**Lamto**	**144.78**	**182**	*e*P	PKPdf	21 32 51.5	+0.1
	66nm,1.6s						
KIC	**Kosan Boka**	**144.91**	**183**	*e*P	PKPdf	21 32 51.8	+0.2
	170nm,2.1s						
TIC	**Toumodi**	**145.20**	**182**	*e*P	PKPbc	21 32 53.5	+1.7
	6.1nm,0.2s						
DBIC	**Dimbokro**	**145.22**	**183**	PKPbc	PKPbc	21 32 52.7	+0.8
	3.7nm,0.8s,baz=170,slow=3.2,SNR=6.1						
ARCES	**ARCESS Array B**	**147.44**	**340**	PKPbc	PKPbc	21 32 57.4	+0.5
	3.6nm,0.9s,baz=42,slow=1.5,SNR=4.2						
ARCES	**ARCESS Array B**	**147.44**	**340**	PKPbc	PKPbc	21 32 57.4	+0.5
BRTR	**Keskin Array B**	**149.74**	**280**	PKPbc	PKPbc	21 33 03.0	-0.7
	0.5nm,0.6s,baz=120,slow=1.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**150.81**	**196**	PKPbc	PKPbc	21 33 06.2	-0.7
	0.4nm,0.4s,baz=160,slow=3.1,SNR=21						
FINES	**FINESS Array B**	**152.11**	**327**	PKPbc	PKPbc	21 33 06.8	-1.7
	3.9nm,1.0s,baz=17,slow=5.1,SNR=3.2						

BJI ***03*** *21:21:19.9, 15.°64S×168.°48E, h145km, mB4.8/4, mb4.6/13*
IDC ***03*** *21:21:20.4±2.3, 15.°58S×167.°75E, h113km±18km, mb4.3/17, mb1 4.4/18, mb1mx4.3/22, mbtmp4.3/18, Error ellipse: s-maj=17.9km s-min=12.6km az=81.0*
ISCJB ***03*** *21:21:21.7±0.9, 15.°62S±0.°04×167.°66E±0.°06, h138km±9km, mb4.4/31, Error ellipse: s-maj=10.1km s-min=6.8km az=159.7*
NOU ***03*** *21:21:21.1±1.3, 15.°38S×167.°05E, h30km±999km, MD3.7, ML3.9*
NEIC ***03*** *21:21:21.1±1.0, 15.°55S×167.°71E, h116km±8km, mb4.7/19, Error ellipse: s-maj=7.8km s-min=7.0km az=205.0*

ISC 03 21:21:22.4±0.9, 15.°60S±0.°04×167.°72E±0.°06, h129km±8km, n147, σ0s98/66, mb4.4/31, 2C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.55**	**190**	*e*P	**Pn**	**21 22 56.8**	**+0.4**
DZM				*e*S	**Sn**	**21 24 09.3**	**-0.4**
DZM				AMP		21 24 15.4	
	comp=Z,842nm,4.1s						
NOUC	**Port Laguerre**	**6.61**	**191**	*e*P	**Pn**	**21 22 57.9**	**+0.8**
NOUC				*e*S	**Sn**	**21 24 09.4**	**-1.6**
NOUC				AMP		21 24 14.7	
	comp=Z,44nm,2.5s						
NORM	**Noumea**	**6.70**	**190**	*e*P	**Pn**	**21 22 59.9**	**+1.6**
MVNO	**Noumea**	**6.75**	**190**	*e*P	**Pn**	**21 23 01.2**	**+2.2**
MVNO				*e*S	**Sn**	**21 24 13.8**	**-0.7**
HNR	**Honiara**	**9.75**	**308**	P	**Pn**	**21 23 39.5**	**+0.1**
	comp=Z,12nm,0.3s,baz=155,slow=11,SNR=6.6						
HNR				S	**Sn**	**21 25 28.2**	**+1.1**
	comp=Z,1.8nm,0.3s,baz=216,slow=19,SNR=2.4						
HNR	**Honiara**	**9.75**	**308**	*e*Pn	**Pn**	**21 23 38.3**	**-1.2**
HNR				Sn	**Sn**	**21 25 26.1**	**-1.1**
MSVF	**Nonsavu**	**10.13**	**104**	*e*Pn	**Pn**	**21 23 43.6**	**-0.9**
	comp=Z,62nm,1.0s						
EIDS	**Eidsvold**	**18.35**	**235**	*e*P	**P**	**21 25 29.1**	**+2.1**
EIDS	**Eidsvold**	**18.35**	**235**	*e*P	**P**	**21 25 28.0**	**+1.0**
	comp=Z,34nm,0.9s						
CTA	**Charters Tower**	**20.91**	**255**	P	**P**	**21 25 53.9**	**-0.8**
	comp=Z,14nm,0.7s,baz=86,slow=13,SNR=11						
CTAO	**Charters Tower**	**20.91**	**255**	*e*P	**P**	**21 25 55.4**	**+0.6**
	comp=Z,15nm,0.8s						
PMG	**Port Moresby**	**20.98**	**285**	*e*P	**P**	**21 25 54.5**	**-1.1**
	comp=Z,16nm,0.8s						
URZ	**Urewera**	**24.05**	**162**	P	**P**	**21 26 25.0**	**-0.5**
	comp=Z,18nm,0.8s,mb4.6,baz=329,slow=7.0,SNR=7.1						
URZ	**Urewera**	**24.05**	**162**	*e*P	**P**	**21 26 27.0**	**+1.4**
	comp=Z,13nm,0.6s,mb4.6						
RPZ	**Rata Peaks**	**28.17**	**175**	P	**P**	**21 27 02.8**	**+0.2**
	comp=Z,14nm,0.6s,mb4.8,baz=331,slow=9.6,SNR=7.1						
STKA	**Stephens Creek**	**28.77**	**231**	P	**P**	**21 27 07.7**	**-0.4**
	comp=Z,4.7nm,0.6s,mb4.4,baz=49,slow=7.0,SNR=20						
STKA				PcP	PcP	21 30 15.3	+0.3
	comp=Z,5.8nm,0.7s,baz=79,slow=4.2,SNR=10						
STKA	**Stephens Creek**	**28.77**	**231**	*e*P	**P**	**21 27 09.0**	**+1.0**
	comp=Z,0.8nm,0.4s,mb3.8						
STKA				PcP	PcP	21 30 15.3	+0.3
STKA				*e*PcP	PcP	21 30 15.6	+0.5
WB2	**Warramunga Arr**	**32.03**	**257**	*e*P	**P**	**21 27 35.5**	**-1.5**
WRA	**Warramunga Arr**	**32.05**	**257**	P	**P**	**21 27 35.9**	**-1.2**
	comp=Z,5.8nm,0.6s,mb4.5,baz=86,slow=9.0,SNR=88						
WRA				PcP	PcP	21 30 23.5	-0.4
	comp=Z,3.0nm,0.9s,baz=86,slow=2.9,SNR=9.8						
WRA				S	**S**	**21 32 35.6**	**-4.2**
	comp=Z,1.1nm,0.9s,baz=92,slow=13,SNR=4.3						
WRA				ScP	ScP	21 33 56.7	+1.1
	comp=Z,0.8nm,0.9s,baz=83,slow=3.4,SNR=3.3						
WRA				PKiKP	PKiKP	21 37 50.8	-1.2
	comp=Z,0.4nm,0.5s,baz=8.8,slow=0.6,SNR=7.0						
WRA	**Warramunga Arr**	**32.05**	**257**	P	**P**	**21 27 35.9**	**-1.2**
WRA				PcP	PcP	21 30 23.4	-0.4
WRA				S	**S**	**21 32 35.5**	**-4.2**
WRA				ScP	ScP	21 33 56.7	+1.1
ASAR	**Alice Springs**	**32.78**	**250**	P	**P**	**21 27 42.6**	**-0.8**
	comp=Z,12nm,0.5s,mb4.8,baz=78,slow=9.1,SNR=161						
ASAR				PcP	PcP	21 30 25.3	-0.5
	comp=Z,2.6nm,0.8s,baz=91,slow=3.7,SNR=11						
ASAR				ScP	ScP	21 33 59.4	+1.3
	comp=Z,1.7nm,0.9s,baz=95,slow=3.5,SNR=8.8						
ASAR				PKiKP	PKiKP	21 37 51.0	-1.4
	comp=Z,0.7nm,0.9s,baz=100,slow=2.2,SNR=3.9						
ASAR	**Alice Springs**	**32.78**	**250**	P	**P**	**21 27 42.6**	**-0.8**
ASAR				PcP	PcP	21 30 25.3	-0.5
ASAR				ScP	ScP	21 33 59.4	+1.3
GUMO	**Guam**	**36.76**	**321**	P	**P**	**21 28 17.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**40.29**	**260**	*e*P	**P**	**21 28 46.9**	**-0.3**
	comp=Z,39nm,0.4s,mb5.4						
FITZ	**Fitzroy Crossi**	**40.29**	**260**	*e*P	**P**	**21 28 47.1**	**-0.1**
	comp=Z,28nm,0.6s,mb5.1						
MBWA	**Marble Bar**	**45.74**	**256**	*e*P	**P**	**21 29 31.2**	**+0.2**
	comp=Z,14nm,1.2s,mb4.5						
MBWA				*e*PcP	PcP	21 31 05.6	-1.2
NWAO	**Narrogin (SRO)**	**48.68**	**240**	*e*P	**P**	**21 29 53.4**	**-0.3**
	comp=Z,5.9nm,0.6s,mb4.4						
MJAR	**Matsushiro Arr**	**58.87**	**332**	P	**P**	**21 31 06.3**	**-1.3**
	comp=Z,3.2nm,0.7s,mb4.3,baz=165,slow=4.1,SNR=9.4						
KSM	**Kuching**	**59.20**	**281**	*e*P	**P**	**21 31 10.3**	**-0.1**
YULB	**Yu-li**	**59.67**	**310**	*e*P	**P**	**21 31 13.1**	**-0.4**
	comp=Z,3.1nm,0.6s,mb4.3						
TPUB	**Ta-pu**	**60.12**	**309**	*e*P	**P**	**21 31 16.1**	**-0.4**
SSLB	**Suanglung**	**60.16**	**310**	*e*P	**P**	**21 31 16.2**	**-0.6**
	comp=Z,6.2nm,0.6s,mb4.6						
YHNB	**Yeheng**	**60.37**	**311**	*e*P	**

comp=Z,2.3nm,0.8s,baz=30,slow=2.0,SNR=6.9
BRTR Keskin Array B 133.40 310 PKP PKPdf 21 40 24.9 +1.3
comp=Z,2.7nm,0.6s,baz=142,slow=5.1,SNR=16
CSS Prodhromos 134.91 304 *e*PKPdf PKPdf 21 40 28.0 +1.5
BUR08 Bucovina Ar. S 135.55 324 *e*PKPdf PKPdf 21 40 28.4 +1.1
KOLS Kolonicke sedl 136.40 327 *e*PKP PKPdf 21 40 30.7 +1.9
CRVS Cervenica-Dubn 136.84 328 *e*PKP PKPdf 21 40 31.2 +1.5
VYHS Vyhne 138.44 329 *e*PKP PKPdf 21 40 35.5 +2.9
MODS Modra-Piesok 139.29 330 *e*PKP PKPdf 21 40 36.7 +2.5
RUP Ruppelstein 142.52 339 *e*P PKPdf 21 40 43.4 +3.4
FETA Feichten 143.29 333 ⇓*i*PKPdf PKPdf 21 40 39.7 -1.7
comp=Z,1.1nm,0.8s
DAVA Damuels 143.44 334 ⇑*i*PKPdf PKPdf 21 40 40.3 -1.4
comp=Z,6.1nm,0.6s
CDF Champ du Feu 143.53 338 *e*PKP1 PKPdf 21 40 39.6 -2.2
comp=Z,18nm,0.9s
FELD Feldberg im Sc 143.71 337 *e*P PKPdf 21 40 40.6 -1.5
MOF Molkenrain 144.06 338 PKP PKPdf 21 40 41.0 -1.7
MOF Molkenrain 144.06 338 *e*P PKPdf 21 40 41.0 -1.7
HINF Hinteralfeld 144.19 338 *e*PKP1 PKPdf 21 40 41.6 -1.4
comp=Z,13nm,0.6s
HAU Haudompre 144.21 338 *e*PKP1 PKPdf 21 40 41.9 -1.1
comp=Z,35nm,0.8s
MEZF Maizieres J'vi 144.22 340 *e*PKP1 PKPdf 21 40 42.3 -0.7
comp=Z,29nm,0.7s
BBS Basel-Blauen 144.24 337 *e*P PKPdf 21 40 41.9 -1.2
TUE Stuetta 144.31 334 *e*PKPdf PKPdf 21 40 42.6 -0.6
SFTF Sexfontaines 144.49 340 *e*PKP1 PKPdf 21 40 43.1 -0.4
comp=Z,87nm,0.8s
LOMF Lomont 144.59 337 PKP PKPdf 21 40 43.2 -0.5
LOMF Lomont 144.59 337 *e*P PKPdf 21 40 43.2 -0.5
AQU L'Aquila 145.39 326 *e*PKPdf PKPdf 21 40 45.3 +0.1
CABF La Chapelle 145.49 337 *e*PKP1 PKPbc 21 40 45.9 +0.4
comp=Z,136nm,1.0s
CUC Castrocucco 145.50 320 *e*PKPdf PKPdf 21 40 45.1 -0.3
FLN La Foliniere 145.53 346 *e*PKP1 PKPbc 21 40 46.0 +0.4
comp=Z,90nm,0.8s
LDF La Druitiere 145.61 346 *e*PKP1 PKPbc 21 40 46.1 +0.3
comp=Z,28nm,0.6s
LOR Lormes 145.69 340 *e*PKP1 PKPbc 21 40 46.9 +0.8
comp=Z,69nm,1.0s
GRR Gorron 145.97 346 *e*PKP1 PKPbc 21 40 47.5 +0.6
comp=Z,88nm,0.9s
SSF Saint Saulge 145.99 341 *e*PKP1 PKPbc 21 40 47.9 +0.9
comp=Z,60nm,0.7s
HYF Humbligny 146.07 342 *e*PKP1 PKPbc 21 40 48.4 +1.1
LPL La Plagne 146.16 336 *e*PKP1 PKPbc 21 40 48.9 +1.3
comp=Z,24nm,0.7s
LPG La Plagne 146.16 336 *e*PKP1 PKPbc 21 40 49.0 +1.4
comp=Z,37nm,0.7s
SMF Signal de Mont 146.25 340 *e*PKP1 PKPbc 21 40 48.4 +0.6
comp=Z,48nm,0.8s
AVF Avril sur Loir 146.28 341 *e*PKP1 PKPbc 21 40 48.4 +0.5
comp=Z,28nm,0.7s
CEL Celeste 146.46 318 *e*PKPdf PKPdf 21 40 47.1 -0.1
SGMF Saint Gilles 146.46 348 *e*PKP1 PKPbc 21 40 48.8 +0.4
comp=Z,47nm,0.8s
ROSF Rostrenen 146.52 349 *e*PKP1 PKPbc 21 40 50.0 +1.5
BGF Bois d'Agland 146.65 341 *e*PKP1 PKPbc 21 40 49.6 +0.6
comp=Z,44nm,0.6s
MBDF Montbardon 146.79 335 *e*PKP1 PKPbc 21 40 50.0 +0.6
comp=Z,19nm,0.7s
QUIF Quistinic 146.90 349 *e*PKP1 PKPbc 21 40 49.8 +0.1
PLDF La Plantade 146.91 340 PKP PKPbc 21 40 50.9 +1.2
PLDF La Plantade 146.91 340 *e*P PKPbc 21 40 50.9 +1.2
ORIF Oris-en-Rattie 146.99 336 *e*PKP1 PKPbc 21 40 50.9 +0.9
comp=Z,31nm,0.7s
AGO Saint Agoulin 147.00 340 PKP PKPbc 21 40 51.1 +1.1
AGO Saint Agoulin 147.00 340 *e*P PKPbc 21 40 51.1 +1.1
SAOF Saorge 147.06 333 PKP PKPbc 21 40 50.6 +0.4
SAOF Saorge 147.06 333 *e*P PKPbc 21 40 50.6 +0.4
TCF Toulx Ste Croi 147.09 341 *e*PKP1 PKPbc 21 40 50.9 +0.7
comp=Z,47nm,1.0s
AUTN L'Aution 147.10 333 PKP PKPbc 21 40 51.0 +0.6
AUTN L'Aution 147.10 333 *e*P PKPbc 21 40 51.0 +0.6
TOUF Mont Tournerai 147.17 334 PKP PKPbc 21 40 51.2 +0.7
TOUF Mont Tournerai 147.17 334 *e*P PKPbc 21 40 51.2 +0.7
SSB Saint Sauveur 147.19 338 *e*PKP PKPbc 21 40 50.7 +0.1
SBF Sospel 147.21 333 *e*PKP1 PKPbc 21 40 50.9 +0.3
comp=Z,58nm,0.8s
PYM Petit Puy Mans 147.31 340 PKP PKPbc 21 40 52.0 +1.1
PYM Petit Puy Mans 147.31 340 *e*P PKPbc 21 40 52.0 +1.1
MFF Saint Martin d 147.47 344 *e*PKP1 PKPbc 21 40 51.8 +0.5
comp=Z,53nm,0.8s
VIVF Saint-Julien-l 147.50 337 *e*PKP1 PKPbc 21 40 52.1 +0.7
comp=Z,30nm,1.0s
PGF Pioggiola 147.52 330 *e*PKP1 PKPbc 21 40 51.9 +0.4
comp=Z,77nm,1.0s
FRF La Foret Royal 147.79 334 *e*PKP1 PKPbc 21 40 52.5 +0.3
comp=Z,63nm,1.0s
SMRF Simiane la Rot 147.89 335 *e*PKP1 PKPbc 21 40 53.5 +1.0
comp=Z,86nm,1.2s
LMR La Mourre 148.03 334 *e*PKP1 PKPbc 21 40 53.2 +0.3
comp=Z,50nm,1.0s
RJF Les Rejaudoux 148.18 341 *e*PKP1 PKPbc 21 40 53.9 +0.7
comp=Z,44nm,1.0s
CAF Calviac 148.35 340 *e*PKP1 PKPbc 21 40 54.6 +0.9
comp=Z,39nm,1.0s
LASF Ste Croix 148.47 337 *e*PKP1 PKPbc 21 40 54.8 +0.8
comp=Z,76nm,1.0s
LFF La Frestale 148.75 342 *e*PKP1 PKPbc 21 40 55.4 +0.7
comp=Z,33nm,0.8s
MTLF Montolieu 149.70 339 *e*PKP1 PKPbc 21 40 57.8 +0.7
comp=Z,31nm,0.9s
EPF Esparros 150.60 341 *e*PKP1 PKPbc 21 41 00.4 +1.1
comp=Z,16nm,0.7s
SJPF Ste Jean 150.99 343 *e*PKP1 PKPbc 21 41 01.1 +0.9
comp=Z,23nm,0.8s
ETSF Etsaut 150.99 342 *e*PKP1 PKPbc 21 41 01.4 +1.2
comp=Z,30nm,0.7s
KEST Kesra 152.15 320 PKPbc PKPbc 21 41 04.0 +0.9
comp=Z,11nm,0.8s,baz=118,slow=2.8,SNR=38
KEST Kesra 152.15 320 PKPbc PKPbc 21 41 04.0 +0.9
ESDC Sonseca Array 154.93 345 PKPbc PKPbc 21 41 08.5 -0.4
comp=Z,0.1nm,0.4s,baz=2.8,slow=3.2,SNR=3.4
ESDC PKPab PKPab 21 41 24.3 -0.4
comp=Z,1.3nm,0.9s,baz=15,slow=3.3,SNR=6.5
TORD Torodi Ar. Bea 166.24 262 PKP PKPdf 21 41 12.6 -0.6
comp=Z,1.2nm,0.6s,baz=148,slow=1.6,SNR=18
TORD PKPab PKPab 21 42 14.2 -0.7
comp=Z,1.5nm,0.7s,baz=102,slow=3.4,SNR=7.1

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*CASC **03** 21:32:20.4±2.5, 10°.60N×86°.74W, h0km±15km, MD4.4, ML3.8, mb4.5(NEIC)*
*ISCJB **03** 21:32:27.3±0.5, 10°.87N±0°.05×86°.33W±0°.06, h64km±4km, mb4.4/32, Error ellipse: s-maj=11.1km s-min=4.9km az=142.7*
*IDC **03** 21:32:27.6±8.7, 11°.19N×86°.24W, h33km±63km, mb4.0/11, mb1 4.3/11, mb1mx4.0/22, mbtmp4.0/11, MS3.5/5, Ms1 3.5/5, ms1mx3.2/27, Error ellipse: s-maj=38.3km s-min=18.9km az=54.0*
*NEIC **03** 21:32:27.2±1.0, 11°.00N×86°.34W, h38km±10km, mb4.5/24, Error ellipse: s-maj=11.5km s-min=7.6km az=70.0*
ISC 03 21:32:28.2±0.5, 10°.90N±0°.05×86°.31W±0°.06, h52km±5km, n129, σ0°.94/119, mb4.4/32, MS3.5/3, 24C-17D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID Op	Time ISC	Res h m s	Res ISC
SSN	**San Juan del S**	**0.60**	**49**	*e*P	**Pn**	**21 32 41.8**	**+0.9**	
NY14	**Universidad de**	**0.81**	**108**	*i* P	**Pn**	**21 32 43.1**	**-0.4**	
GBS3	**Finca Las lm¨¡**	**0.85**	**98**	*i* P	**Pn**	**21 32 45.9**	**+1.8**	
GBS3				*i* S	**Sn**	**21 33 04.5**	**+8.8**	
LAPC	**Finca la Perla**	**0.88**	**99**	*i* P	**Pn**	**21 32 43.4**	**-1.0**	
BUEV	**Buena Vista**	**0.90**	**97**	*i* P	**Pn**	**21 32 45.5**	**+0.8**	
GB1A	**Boringuen Arri**	**0.90**	**95**	*i* P	**Pn**	**21 32 45.0**	**+0.2**	
CONN	**Concepcion**	**0.94**	**46**	⇑*e*P	**Pn**	**21 32 47.2**	**+1.9**	
GPS1	**Guardaparques**	**0.96**	**98**	*i* P	**Pn**	**21 32 45.1**	**-0.4**	
VCR	**Vista de Mar**	**1.02**	**139**	*e*P	**Pn**	**21 32 43.3**	**-3.0**	
LIM1	**Limonal**	**1.06**	**101**	*i* P	**Pn**	**21 32 46.0**	**-0.9**	
CRUN	**El Crucero**	**1.07**	**1**	*e*P	**Pn**	**21 32 48.1**	**+1.1**	
GUAB	**Guayabo de Bag**	**1.08**	**100**	*i* P	**Pn**	**21 32 46.8**	**-0.3**	
MESS	**Mesas**	**1.11**	**98**	*i* P	**Pn**	**21 32 47.2**	**-0.3**	
TICN	**Ticuantepe**	**1.13**	**4**	*e*P	**Pn**	**21 32 48.7**	**+1.0**	
CUI	**Cuipilapa**	**1.16**	**102**	*i* P	**Pn**	**21 32 48.5**	**+0.4**	
MGAN	**Managua**	**1.24**	**3**	*e*P	**Pn**	**21 32 49.6**	**+0.4**	
XAVN	**Gruta Xavier**	**1.24**	**359**	*e*P	**Pn**	**21 32 49.3**	**+0.1**	
WILN	**Americas 2**	**1.25**	**6**	*e*P	**Pn**	**21 32 49.9**	**+0.4**	
CSAN		**1.28**	**355**	*e*P	**Pn**	**21 32 49.5**	**-0.3**	
COPN	**Copaltepe**	**1.30**	**348**	*e*P	**Pn**	**21 32 49.6**	**-0.5**	
COPN				AML	AML	21 33 20.2		
	comp=Z,3μm,0.7s							
HUEN		**1.43**	**6**	*e*P	**Pn**	**21 32 52.2**	**+0.3**	
JTS	**JuntasAbangare**	**1.47**	**114**	*e*Pn	**Pn**	**21 32 51.6**	**-0.8**	
MOMN	**Momotombo**	**1.51**	**352**	*e*P	**Pn**	**21 32 52.9**	**0.0**	
JCR	**Jicaral**	**1.58**	**131**	*e*P	**Pn**	**21 32 51.6**	**-2.2**	
LEON	**Leon**	**1.61**	**339**	⇑*e*P	**Pn**	**21 32 53.1**	**-1.2**	
CNGN	**Cerro Negro**	**1.63**	**347**	*e*P	**Pn**	**21 32 53.8**	**-0.7**	
CNGN				AML	AML	21 33 39.4		
	comp=Z,468nm,0.6s							
TELN	**Telica**	**1.76**	**343**	*e*P	**Pn**	**21 32 55.8**	**-0.6**	
CGA2	**Cerro Gallo 2**	**2.02**	**116**	*e*P	**Pn**	**21 32 59.8**	**-0.1**	
PRS1	**Puriscal**	**2.17**	**115**	*e*P	**Pn**	**21 33 02.0**	**+0.1**	
LAJ	**Bijagual**	**2.39**	**115**	*e*P	**Pn**	**21 32 59.7**	**-5.3**	
SJS	**Escuela Geolog**	**2.42**	**113**	*e*P	**Pn**	**21 33 06.1**	**+0.8**	
QCR	**Quepos**	**2.58**	**125**	*e*P	**Pn**	**21 33 06.2**	**-1.3**	
URSC	**Urasca**	**2.71**	**113**	*e*P	**Pn**	**21 33 11.9**	**+2.6**	
BUS	**Buena Vista**	**2.85**	**118**	*e*P	**Pn**	**21 33 12.0**	**+0.7**	
TGUH	**Tegucigalpa,Un**	**3.27**	**343**	*e*Pn	**Pn**	**21 33 14.1**	**-2.9**	
ACR	**Cerro Adams**	**3.82**	**126**	*e*P	**Pn**	**21 33 20.1**	**-4.5**	
PAYG	**Puerto Ayora**	**12.16**	**199**	Pn	**Pn**	**21 35 19.3**	**+0.5**	
ROSC	**El Rosal**	**13.30**	**116**	LR	LR	21 40 01.8		
	comp=Z,156nm,19.8s,baz=277,slow=34							
SDV	**Santo Domingo**	**15.58**	**96**	*e*Pn	**Pn**	**21 36 04.6**	**0.0**	
	comp=Z,10.0nm,1.0s							
ATAH	**Atahualpa**	**19.58**	**156**	LR	LR	21 43 32.6		
	comp=Z,234nm,18.8s,baz=185,slow=34							
HKT	**Hockley**	**20.92**	**336**	*e*P	**P**	**21 37 06.3**	**-0.2**	
	comp=Z,25nm,1.3s							
LRAL	**Lakeview Retre**	**22.04**	**358**	*e*P	**P**	**21 37 16.3**	**-2.2**	
	comp=Z,13nm,0.7s,mb4.5							
GOGA	**Godfrey**	**22.55**	**6**	*e*P	**P**	**21 37 21.5**	**-2.4**	
	comp=Z,21nm,1.0s,mb4.5							
OXF	**Oxford**	**23.67**	**354**	*e*P	**P**	**21 37 34.5**	**-0.5**	
	comp=Z,41nm,0.9s,mb4.8							
JSC	**Jenkinsville**	**23.72**	**10**	*e*P	**P**	**21 37 37.0**	**+1.5**	
628A	**Black Gap, Mar**	**24.10**	**322**	⇑P	**P**	**21 37 38.8**	**-0.3**	
	baz=24,SNR=12							
SWET	**Sewanee**	**24.20**	**1**	*e*P	**P**	**21 37 38.7**	**-1.3**	
627A	**Terlingua Ranc**	**24.38**	**322**	⇑P	**P**	**21 37 41.6**	**-0.1**	
	baz=24,SNR=12							
MIAR	**Mount Ida**	**24.45**	**345**	*e*P	**P**	**21 37 41.6**	**-0.5**	
	comp=Z,14nm,1.3s,mb4.2							
TXAR	**Lajitas Array**	**24.47**	**321**	P	**P**	**21 37 42.4**	**0.0**	
	comp=Z,6.5nm,0.7s,mb4.2,baz=137,slow=11,SNR=80							
TXAR				PcP	PcP	21 41 22.8	+2.6	
	comp=Z,0.6nm,0.6s,baz=141,slow=4.6,SNR=5.4							
TXAR				LR	LR	21 49 16.3		
	comp=Z,75nm,20.6s,MS3.2,baz=0.0,slow=42							
CPCT	**Cooper Cave**	**24.49**	**4**	*e*P	**P**	**21 37 44.0**	**+1.4**	
528A	**Cox Ranch, San**	**24.54**	**324**	⇓P	**P**	**21 37 42.3**	**-0.7**	
	baz=24							
TKL	**Tuckaleechee C**	**24.75**	**5**	P	**P**	**21 37 44.9**	**0.0**	
	comp=Z,8.1nm,0.9s,mb4.3,baz=173,slow=10,SNR=6.1							
428A	**Kincaid Ranch,**	**24.90**	**325**	⇑P	**P**	**21 37 46.8**	**+0.5**	
	baz=25							
626A	**Big Bend Ranch**	**24.91**	**321**	⇑P	**P**	**21 37 46.0**	**-0.5**	
	baz=25,SNR=11							
527A	**Woodward Ranch**	**25.01**	**322**	⇑P	**P**	**21 37 47.9**	**+0.5**	
	baz=25							
526A	**Mary Lane Ranc**	**25.24**	**322**	⇑P	**P**	**21 37 49.9**	**+0.5**	
	baz=25							
427A	**Hayter Ranch,**	**25.40**	**324**	⇓P	**P**	**21 37 52.1**	**+1.2**	
	baz=25							
328A	**Wristen Ranch,**	**25.47**	**326**	P	**P**	**21 37 51.5**	**0.0**	
	baz=25,SNR=8.9							
426A	**McDonald Obser**	**25.64**	**323**	⇑P	**P**	**21 37 54.4**	**+1.3**	
	baz=26							
425A	**Indio Mountain**	**26.30**	**322**	⇑P	**P**	**21 37 58.4**	**-0.6**	
	baz=26							
WMOK	**Wichita Mounta**	**26.31**	**336**	*e*P	**P**	**21 38 00.5**	**+1.5**	
	comp=Z,18nm,0.9s,mb4.6							
226A	**Malaga, Loving**	**26.70**	**325**	⇓P	**P**	**21 38 03.1**	**+0.5**	
	baz=27							
325A	**Bean Ranch, Si**	**26.70**	**322**	⇓P	**P**	**21 38 02.1**	**-0.6**	
	baz=27							
BLA	**Blacksburg**	**26.73**	**11**	*e*P	**P**	**21 38 02.3**	**-0.5**	
	comp=Z,12nm,1.0s,mb4.4							
127A	**Arkansas Junct**	**26.75**	**327**	⇓P	**P**	**21 38 03.1**	**0.0**	
	baz=27							
Z27A	**Tatum**	**27.17**	**328**	⇑P	**P**	**21 38 06.1**	**-0.7**	
	baz=27							
MNTX	**Cornudas Mount**	**27.18**	**322**	⇓P	**P**	**21 38 06.1**	**-0.9**	
	baz=27							
WCI	**Wyandotte Cave**	**27.21**	**0**	*e*P	**P**	**21 38 07.2**	**+0.1**	
	comp=Z,13nm,0.8s,mb4.5							
CCM	**Cathedral Cave**	**27.39**	**352**	*e*P	**P**	**21 38 07.8**	**-1.0**	
	comp=Z,8.5nm,0.7s,mb4.4							
125A	**Gardner Draw,**	**27.46**	**325**	⇑P	**P**	**21 38 09.0**	**-0.4**	
	baz=27							
MSTX	**Muleshoe**	**27.46**	**329**	⇑P	**P**	**21 38 09.0**	**-0.4**	
	baz=27							
224A	**Cornudas Mount**	**27.54**	**323**	⇑P	**P**	**21 38 09.6**	**-0.5**	
	baz=28							
Y27A	**Causey**	**27.59**	**329**	⇑P	**P**	**21 38 09.8**	**-0.7**	
	baz=28							
AMTX	**Amarillo**	**27.68**	**332**	⇓P	**P**	**21 38 10.9**	**-0.5**	
	baz=28							
124A	**Stringfield Ra**	**27.94**	**324**	⇑P	**P**	**21 38 13.9**	**+0.1**	
	baz=28,SNR=5.0							
Y26A	**Elida**	**27.96**	**328**	⇓P	**P**	**21 38 14.5**	**+0.6**	
	baz=28							
Y25A	**Mesa, Roswell**	**28.42**	**327**	⇓P	**P**	**21 38 18.7**	**+0.7**	
	baz=28							
Y24A	**Capitan**	**28.83**	**326**	⇓P	**P**	**21 38 21.7**	**+0.1**	
	baz=29,SNR=6.7							
Y23A	**Lovelace Mesa,**	**29.18**	**325**	⇓P	**P**	**21 38 24.8**	**0.0**	
	baz=29							
W25A	**X Bar L Ranch,**	**29.30**	**329**	⇑P	**P**	**21 38 25.7**	**-0.1**	
	baz=29							
ACSO	**Alum Creek Sta**	**29.36**	**5**	*e*P	**P**	**21 38 26.6**	**+0.4**	
	comp=Z,19nm,0.8s,mb4.9							
HDIL	**Hopedale**	**29.65**	**355**	*e*P	**P**	**21 38 28.0**	**-0.8**	
	comp=Z,19nm,0.7s,mb4.9							
V25A	**Rancho No Teng**	**29.86**	**329**	⇓P	**P**	**21 38 30.6**	**-0.1**	
	baz=30							
ANMO	**Albuquerque**	**30.16**	**326**	P	**P**	**21 38 33.9**	**+0.5**	
	comp=Z,1.3nm,0.5s,mb3.9,baz=148,slow=3.4,SNR=5.5							
ANMO	**Albuquerque**	**30.16**	**326**	*e*P	**P**	**21 38 33.5**	**+0.1**	
	comp=Z,2.8nm,0.8s,mb4.0							
U25A	**Circle Dot Ran**	**30.20**	**330**	⇑P	**P**	**21 38 34.6**	**+0.8**	
	baz=30							
SSPA	**Standing Stone**	**30.54**	**13**	*e*P	**P**	**21 38 37.2**	**+0.6**	
	comp=Z,10nm,0.7s,mb4.8							
U23A	**El Rito**	**31.05**	**328**	⇑P	**P**	**21 38 42.1**	**+0.9**	
	baz=31,SNR=5.6							
ERPA	**Erie**	**31.58**	**9**	*e*P	**P**	**21 38 46.4**	**+0.5**	
	comp=Z,29nm,0.8s,mb5.2							
JFWS	**Jewell Farm**	**32.07**	**355**	*e*P	**P**	**21 38 49.4**	**-0.8**	
	comp=Z,19nm,0.8s,mb5.0							
BINY	**Binghamton**	**32.46**	**14**	*e*P	**P**	**21 38 54.8**	**+1.3**	
	comp=Z,16nm,0.8s,mb4.9							
S21A	**Coal Bank Pass**	**32.89**	**328**	⇓P	**P**	**21 38 57.8**	**+0.4**	
	baz=33							
MVCO	**Mesa Verde**	**32.94**	**326**	⇓P	**P**	**21 38 58.3**	**+0.5**	
	baz=33							
T19A	**Beclabito**	**32.95**	**325**	⇑P	**P**	**21 38 58.5**	**+0.6**	
	baz=33							
Z13A	**Yuma Proving G**	**33.50**	**316**	⇑P	**P**	**21 39 03.9**	**+1.2**	
	baz=34							
T18A	**Mexican Hat**	**33.65**	**325**	⇑P	**P**	**21 39 04.2**	**+0.2**	
	baz=34							
S19A	**Harvey Farm, M**	**33.67**	**326**	⇑P	**P**	**21 39 04.8**	**+0.5**	
	baz=34							
U16A	**Tuba City**	**33.70**	**322**	⇑P	**P**	**21 39 05.7**	**+1.2**	
	baz=34							
ECSD	**EROS Data Cent**	**33.91**	**347**	*e*P	**P**	**21 39 04.8**	**-1.3**	
	comp=Z,7.5nm,0.8s,mb4.7							
S18A	**Hurst Farm, Bl**	**34.11**	**325**	⇓P	**P**	**21 39 08.5**	**+0.5**	
	baz=34,SNR=8.6							
SADO	**Sadowa**	**34.30**	**9**	P	**P**	**21 39 09.4**	**-0.2**	
	comp=Z,9.5nm,0.8s,mb4.8,baz=207,slow=6.8,SNR=6.8							
R18A	**Canyonlands Na**	**34.55**	**326**	⇓P	**P**	**21 39 12.1**	**+0.3**	
	baz=34							
SRU	**San Rafael**	**35.41**	**327**	*e*P	**P**	**21 39 20.7**	**+1.4**	
	comp=Z,4.2nm,0.7s,mb4.5							
P18A	**Preston Nutter**	**35.64**	**327**	⇓P	**P**	**21 39 22.0**	**+0.8**	
	baz=36							
SIV	**San Ignacio**	**36.58**	**137**	P	**P**	**21 39 32.3**	**+2.8**	
	comp=Z,1.8nm,0.6s,mb4.0,baz=320,slow=11,SNR=10							
SIV				PcP	PcP	21 41 54.1	+2.1	
	comp=Z,1.3nm,0.7s,baz=352,slow=7.1,SNR=4.8							
PDAR	**Pinedale Array**	**37.65**	**332**	P	**P**	**21 39 37.3**	**-1.0**	
	comp=Z,1.3nm,0.6s,mb3.8,baz=128,slow=10,SNR=9.1							
HWUT	**Hardware Ranch**	**37.77**	**329**	*e*P	**P**	**21 39 39.2**	**-0.1**	
	comp=Z,4.6nm,0.9s,mb4.2							
AGMN	**Agassiz Nation**	**38.12**	**350**	*e*P	**P**	**21 39 41.2**	**-1.0**	
	comp=Z,1.3nm,1.1s,mb4.6							
TPAW	**Teton Pass**	**38.86**	**331**	*e*P	**P**	**21 39 46.8**	**-1.6**	
	comp=Z,4.1nm,0.9s,mb4.2							
NVAR	**Mina Array Bea**	**39.59**	**319**	P	**P**	**21 39 56.0**	**+1.3**	
	comp=Z,3.9nm,0.8s,mb4.2,baz=134,slow=7.7,SNR=21							
NVAR				PcP	PcP	21 42 03.2	+2.1	
	comp=Z,2.1nm,0.7s,baz=137,slow=3.7,SNR=11							
H15A	**Lima**	**40.52**	**331**	P	**P**	**21 40 03.6**	**+1.4**	
	baz=40,SNR=5.9							
MCMT	**McKenzie Canyo**	**40.77**	**331**	*e*P	**P**	**21 40 05.2**	**+0.9**	
	comp=Z,1.4nm,0.7s,mb3.7							
WVOR	**Wild Horse Val**	**42.20**	**324**	*e*P	**P**	**21 40 15.8**	**-0.2**	
	comp=Z,2.8nm,0.8s,mb3.9							
F12A	**Elk City**	**42.61**	**330**	P	**P**	**21 40 19.2**	**-0.1**	
	baz=43,SNR=9.9							
A15A	**Johnson Ranch,**	**43.87**	**335**	P	**P**	**21 40 29.5**	**+0.1**	
	baz=44,SNR=5.6							
SCHQ	**Schefferville**	**46.45**	**15**	P	**P**	**21 40 48.0**	**-1.8**	
	comp=Z,2.3nm,0.6s,mb4.3,baz=200,slow=16,SNR=5.1							
SCHQ				LR	LR	22 01 07.9		
	comp=Z,125nm,19.8s,MS3.9,baz=134,slow=37							
YKA	**Yellowknife Ar**	**55.39**	**344**	P	**P**	**21 41 54.7**	**-2.1**	
	comp=Z,1.3nm,0.8s,mb4.0,baz=136,slow=7.9,SNR=12							
INK	**Inuvik**	**65.00**	**342**	P	**P**	**21 43 01.4**	**-1.1**	
	comp=Z,2.2nm,0.9s,mb4.2,baz=116,slow=7.0,SNR=4.6							
ILAR	**Eielson Array**	**67.88**	**336**	P	**P**	**21 43 19.7**	**-1.2**	
	comp=Z,1.6nm,1.0s,mb4.0,baz=124,slow=4.1,SNR=9.1							
NOA	**NORSAR Array B**	**84.17**	**29**	LR	LR	22 18 43.5		
	comp=Z,22nm,20.9s,MS3.5,baz=180,slow=33							
MKAR	**Makanchi Array**	**121.67**	**9**	PKP	PKPdf	21 51 15.8	-0.6	
	comp=Z,0.2nm,0.5s,baz=281,slow=2.3,SNR=3.3							
KSRS	**Korea Array**	**122.17**	**328**	PKP	PKPdf	21 51 18.5	+0.8	
	comp=Z,1.7nm,0.8s,baz=2.4,slow=2.0,SNR=7.2							
STKA	**Stephens Creek**	**131.22**	**237**	PKP	PKPdf	21 51 35.7	+0.6	
	comp=Z,1.4nm,0.7s,baz=162,slow=6.4,SNR=2.4							
STKA	**Stephens Creek**	**131.22**	**237**	PKP	PKPdf	21 51 35.7	+0.6	
ASAR	**Alice Springs**	**139.70**	**246**	PKP	PKPdf	21 51 51.3	+0.2	
	comp=Z,0.6nm,0.7s,baz=97,slow=2.4,SNR=3.4							
WRA	**Warramunga Arr**	**139.88**	**252**	PKP	PKPdf	21 51 51.9	+0.5	
	comp=Z,0.8nm,0.7s,baz=90,slow=2.6,SNR=4.8							
WRA	**Warramunga Arr**	**139.88**	**252**	PKP	PKPdf	21 51 51.9	+0.5	
CMAR	**Chiang Mai Arr**	**150.37**	**350**	PKP	PKPdf	21 52 10.4	+0.8	
	comp=Z,0.8nm,0.9s,baz=315,slow=2.3,SNR=7.0							
CMAR				PKPbc	PKPbc	21 52 15.8	+1.1	
	comp=Z,2.0nm,0.8s,baz=319,slow=2.2,SNR=15							
CMAR				PKPab	PKPab	21 52 22.6	+1.6	
	comp=Z,0.7nm,0.9s,baz=310,slow=2.5,SNR=7.9							

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*SZGRF **03** 21:52:27.6, 17°.68S×175°.91W, h33km, Tonga Islands*
*ISCJB **03** 21:53:34.3±0.7, 18°.1S±0°.1×178°.25W±0°.09, h663km±7km, mb3.8/18, Error ellipse: s-maj=17.3km s-min=11.7km az=157.4*
*NEIC **03** 21:53:34.2±0.7, 17°.95S×178°.27W, h638km±7km, mb4.0/8, Error ellipse: s-maj=15.2km s-min=9.7km az=153.0*
*IDC **03** 21:53:35.0±3.0, 17°.98S×178°.24W, h652km±36km, mb3.2/12, mb1 3.5/7, mb1mx3.4/17, mbtmp3.2/12, Error ellipse: s-maj=33.5km s-min=14.4km az=146.0*
ISC 03 21:53:35.0±0.7, 18°.0S±0°.1×178°.24W±0°.09, h650km±7km, n65, σ0°.71/30, mb3.8/18, 4C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	Time ISC	Res h m s	Res ISC
MSVF	**Nonsavu**	**3.55**	**273**	*e*P	**P**	**21 54 58.3**	**-3.0**	
MSVF				*e*S	**S**	**21 56 12.2**	**+0.5**	
AFI	**Afiamalu**	**7.42**	**58**	P	**P**	**21 55 31.3**	**+0.4**	
URZ	**Urewera**	**20.61**	**190**	P	**P**	**21 57 32.5**	**+0.7**	
CTAO	**Charters Tower**	**33.60**	**261**	*e*P	**P**	**21 59 24.6**	**-0.1**	
	4.3nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**38.74**	**241**	P	**P**	**22 00 06.7**	**+0.2**	
	6.9nm,0.8s,mb4.2,baz=80,slow=12,SNR=14							
STKA	**Stephens Creek**	**38.74**	**241**	*e*P	**P**	**22 00 06.8**	**+0.4**	
	1.3n

Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.23**	**260**	P	P	22 03 53.0	+0.4
	2.2nm,0.3s,baz=95,slow=10,SNR=3.5						
STKA	**Stephens Creek**	**38.52**	**241**	P	P	22 04 35.9	-0.1
	3.2nm,0.8s,baz=87,slow=11,SNR=6.0						
WRA	**Warramunga Arr**	**44.42**	**259**	P	P	22 05 22.4	-0.2
	2.0nm,0.5s,baz=96,slow=7.1,SNR=23						
ASAR	**Alice Springs**	**44.60**	**254**	P	P	22 05 23.6	-0.5
	12nm,0.6s,baz=88,slow=8.6,SNR=108						
FITZ	**Fitzroy Crossi**	**52.81**	**260**	P	P	22 06 25.1	+0.4
	0.8nm,0.4s,baz=54,slow=8.7,SNR=3.2						
ILAR	**Eielson Array**	**85.72**	**13**	P	P	22 09 39.5	-0.2
	0.4nm,0.5s,baz=216,slow=5.7,SNR=4.5						
TXAR	**Lajitas Array**	**86.09**	**58**	P	P	22 09 42.8	+0.4
	1.0nm,0.8s,baz=213,slow=6.5,SNR=9.6						
PDAR	**Pinedale Array**	**87.36**	**44**	P	P	22 09 48.0	0.0
	0.7nm,0.7s,baz=225,slow=1.9,SNR=4.1						

IDC 03 22:01:37.8±2.1, 6°.32S×129°.93E, h0km, mb3.9/1, mb1 3.9/4, mb1mx3.6/17, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=95.3km s-min=27.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.44**	**199**	Pn	Pn	22 04 38.1	+1.8
	0.1nm,0.3s,baz=30,slow=13,SNR=7.5						
FITZ				Sn	Sn	22 06 41.9	-14
	0.6nm,0.3s,baz=68,slow=19,SNR=6.1						
WRA	**Warramunga Arr**	**14.20**	**163**	Pn	Pn	22 04 59.3	-1.1
	0.6nm,0.3s,baz=342,slow=13,SNR=14						
WRA				Sn	Sn	22 07 26.5	-12
	0.3nm,0.3s,baz=336,slow=21,SNR=5.1						
ASAR	**Alice Springs**	**17.67**	**168**	P	Pn	22 05 45.0	-0.5
	0.3nm,0.3s,baz=346,slow=9.4,SNR=9.6						
MKAR	**Makanchi Array**	**67.62**	**327**	P	P	22 12 36.6	+0.1
	0.5nm,0.4s,baz=117,slow=7.6,SNR=16						

*ISK **03** 22:04:56.1, 39°.48N×37°.52E, h4km, MD2.7*
*CSEM **03** 22:04:57.4±0.2, 39°.56N×37°.59E, h5km, MD2.8, Error ellipse: s-maj=7.8km s-min=3.3km az=29.0*
*DDA **03** 22:04:57.4, 39°.57N×37°.60E, h7km±1km, Md2.8*
*ISCJB **03** 22:04:58.2±0.7, 39°.61N±0°.06×37°.61E±0°.05, h10km, Error ellipse: s-maj=8.8km s-min=4.1km az=28.3*
ISC 03 22:04:58.2±0.9, 39°.58N±0°.06×37°.61E±0°.05, h2km±11km, n12, σ0.9 86/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCER	**sogukcermik**	**0.47**	**307**	*eP*	**Pg**	**22 05 06.4**	**-0.8**
SCER				*eS*	**Sg**	**22 05 13.8**	**+0.5**
SCER	**sogukcermik**	**0.47**	**307**	*eP*	**Pg**	**22 05 06.4**	**-0.8**
SCER				*eS*	**Sg**	**22 05 13.8**	**+0.5**
SVSK	**Karacayir**	**0.58**	**306**	*e*PG	**Pg**	**22 05 08.3**	**-1.0**
SVSK				*e*SG	**Sg**	**22 05 17.3**	**+0.4**
SVSK	**Karacayir**	**0.58**	**306**	*e*Pg	**Pg**	**22 05 08.3**	**-1.1**
SVSK				*e*Sg	**Sg**	**22 05 17.3**	**+0.4**
KEMA	**Kemaliye**	**0.75**	**114**	*eP*	**Pg**	**22 05 12.0**	**-0.6**
KEMA				*eS*	**Sg**	**22 05 23.3**	**+0.9**
KEMA	**Kemaliye**	**0.75**	**114**	*eP*	**Pg**	**22 05 12.0**	**-0.6**
KEMA				*eS*	**Sg**	**22 05 23.3**	**+1.0**
SUSE	**Susehri**	**0.78**	**36**	*eP*	**Pg**	**22 05 12.7**	**-0.4**
SUSE				*eS*	**Sg**	**22 05 24.1**	**+0.9**
SUSE	**Susehri**	**0.78**	**36**	*eP*	**Pg**	**22 05 12.7**	**-0.4**
SUSE				*eS*	**Sg**	**22 05 24.1**	**+0.9**
SARI	**SarD1z-Kayseri**	**1.15**	**219**	*e*PN	**Pn**	**22 05 22.9**	**+1.6**
SARI	**SarD1z-Kayseri**	**1.15**	**219**	*e*Pn	**Pn**	**22 05 22.9**	**+1.6**
PTK	**Pertek**	**1.54**	**116**	*e*PN	**Pn**	**22 05 25.6**	**-1.1**
PTK				*e*SN	**Sn**	**22 05 47.1**	**-0.3**
PTK	**Pertek**	**1.54**	**116**	*e*Pn	**Pn**	**22 05 25.7**	**-1.1**
PTK				*e*Sn	**Sn**	**22 05 47.1**	**-0.3**

*IDC **03** 22:09:13.6±1.6, 1°.87S×133°.14E, h0km, mb3.8/3, mb1 4.1/5, mb1mx3.7/19, mbtmp4.0/5, ML3.9/2, Error ellipse: s-maj=58.6km s-min=22.7km az=70.0*
*ISCJB **03** 22:09:19.5±2.8, 2°.05S±0°.06×133°.00E±0°.10, h62km±27km, mb3.7/6, Error ellipse: s-maj=16.0km s-min=9.9km az=170.9*
*NEIC **03** 22:09:19.8±1.8, 1°.95S×133°.04E, h44km±18km, mb3.6/4, Error ellipse: s-maj=9.6km s-min=7.3km az=65.0*
ISC 03 22:09:19.1±2.2, 1°.97S±0°.08×133°.0E±0°.1, h37km±22km, n17, σ0.6 62/22, mb3.7/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**17.60**	**204**	P	**Pn**	**22 13 21.5**	**-0.1**
	0.3nm,0.3s,baz=36,slow=10,SNR=10						
FITZ				S	**S**	**22 16 28.8**	**-14**
	0.2nm,0.3s,baz=190,slow=16,SNR=4.4						
FITZ	**Fitzroy Crossi**	**17.60**	**204**	*e*Pn	**Pn**	**22 13 21.9**	**+0.3**
	2.9nm,0.7s						
FITZ				*e*Sn	**Sn**	**22 16 30.4**	**-6.2**
WRA	**Warramunga Arr**	**17.91**	**176**	P	**Pn**	**22 13 24.4**	**-1.0**
	0.4nm,0.3s,baz=356,slow=11,SNR=22						
WRA				S	**S**	**22 16 33.8**	**-16**
	0.3nm,0.3s,baz=354,slow=24,SNR=5.6						
WB2	**Warramunga Arr**	**17.91**	**176**	*e*Pn	**Pn**	**22 13 26.1**	**+0.7**
WB2				*e*Sn	**Sn**	**22 16 37.0**	**-7.2**
KKM	**Kota Kinabalu**	**18.58**	**295**	P	**Pn**	**22 13 33.5**	**-0.1**
GUMO	**Guam**	**19.41**	**37**	*eP*	**Pn**	**22 13 42.0**	**-1.5**
ASAR	**Alice Springs**	**21.59**	**178**	P	**P**	**22 14 06.7**	**+1.0**
	3.6nm,0.9s,mb3.8,baz=3.8,slow=12,SNR=27						
ASAR				S	**S**	**22 18 01.8**	**-1.2**
	1.2nm,0.7s,baz=352,slow=24,SNR=5.5						
CTA	**Charters Tower**	**22.16**	**145**	P	**P**	**22 14 12.0**	**+0.1**
	1.1nm,0.3s,mb3.8,baz=311,slow=9.3,SNR=2.4						
HNR	**Honiara**	**27.77**	**107**	P	**P**	**22 15 04.7**	**0.0**
STKA	**Stephens Creek**	**30.83**	**166**	*eP*	**P**	**22 15 32.3**	**+0.7**
	0.1nm,0.5s,mb2.9						
COCO	**West Island**	**37.28**	**252**	P	**P**	**22 16 27.6**	**-0.2**
MCQ	**Macquarie Isla**	**56.49**	**162**	*eP*	**P**	**22 18 57.4**	**+0.1**
MKAR	**Makanchi Array**	**65.81**	**324**	P	**P**	**22 20 00.8**	**+0.2**
	1.0nm,0.7s,mb4.0,baz=118,slow=8.0,SNR=9.4						
CASY	**Casey**	**66.13**	**190**	*eP*	**P**	**22 20 01.7**	**-0.5**
	1.8nm,0.9s,mb4.1						
EKS2	**Erkin-Say**	**69.28**	**317**	*eP*	**P**	**22 20 22.7**	**+0.2**
	0.5nm,0.5s,mb3.7						
KURK	**Kurchatov**	**69.91**	**327**	P	**P**	**22 20 26.6**	**+0.3**
KBL	**Kabul**	**69.97**	**308**	*eP*	**P**	**22 20 26.8**	**-0.2**

*ISCJB **03** 22:21:05.2±3.2, 58°.43S±0°.10×26°.1W±0°.1, h83km±31km, mb4.1/14, Error ellipse: s-maj=16.6km s-min=11.2km az=13.2*
*IDC **03** 22:21:08.7±5.8, 58°.58S×26°.26W, h106km±53km, mb3.8/12, mb1 3.9/12, mb1mx3.8/18, mbtmp3.8/12, Error ellipse: s-maj=20.0km s-min=14.9km az=14.0*
*NEIC **03** 22:21:12.4±2.6, 58°.38S×26°.26W, h136km±25km, mb4.4/9, Error ellipse: s-maj=10.2km s-min=7.4km az=186.0*
ISC 03 22:21:07.0±2.8, 58°.5S±0°.1×26°.2W±0°.1, h85km±28km, n38, σ0.9 95/34, mb4.1/14, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.34**	**156**	*eP*	**Pn**	**22 24 25.1**	**-0.4**
VNA1				*eS*	**Sn**	**22 26 51.0**	**-12**
VNA2	**Neumayer--Watz**	**14.74**	**155**	*eP*	**Pn**	**22 24 29.8**	**-0.8**
	baz=315,slow=14						
VNA2				*eS*	**Sn**	**22 27 00.3**	**-12**
PMSA	**Palmer Station**	**18.82**	**235**	*eP*	**Pn**	**22 25 22.1**	**+1.1**
	11nm,0.6s						
USHA	**Ushuaia**	**23.22**	**261**	P	**P**	**22 26 06.3**	**0.0**
	5.5nm,0.6s,mb4.0,baz=98,slow=14,SNR=5.2						
USHA				S	**S**	**22 29 55.8**	**-16**
	8.7nm,0.8s,baz=280,slow=11,SNR=4.9						
TRQA	**Tornquist**	**30.83**	**296**	*eP*	**P**	**22 27 14.7**	**+0.1**
	6.8nm,1.0s,mb4.3						
QSPA	**South Pole Qui**	**31.77**	**180**	P	**P**	**22 27 22.6**	**+0.2**
	1.6nm,0.5s,mb4.0,baz=174,slow=10,SNR=11						
QSPA	**South Pole Qui**	**31.77**	**180**	*eP*	**P**	**22 27 23.6**	**+1.2**
	1.4nm,0.6s,mb3.9						
PLCA	**Paso Flores**	**33.02**	**283**	P	**P**	**22 27 33.8**	**+0.1**
	2.6nm,0.6s,mb4.2,baz=124,slow=10,SNR=8.7						
PLCA	**Paso Flores**	**33.02**	**283**	*eP*	**P**	**22 27 33.3**	**-0.5**
	11nm,1.2s,mb4.6						
MAW	**Mawson**	**37.89**	**141**	P	**P**	**22 28 13.1**	**-2.0**
	0.7nm,0.4s,mb3.9,baz=247,slow=13,SNR=2.9						
MAW	**Mawson**	**37.89**	**141**	*eP*	**P**	**22 28 15.6**	**+0.5**
	0.3nm,0.7s,mb3.2						
CPUP	**Villa Florida**	**38.84**	**312**	P	**P**	**22 28 22.5**	**-1.1**
	0.6nm,0.4s,mb3.8,baz=153,slow=6.7,SNR=3.1						
CPUP	**Villa Florida**	**38.84**	**312**	*eP*	**P**	**22 28 24.3**	**+0.7**
	13nm,0.6s,mb4.9						
CFAA	**Coronel Fontan**	**39.05**	**295**	P	**P**	**22 28 24.2**	**-1.1**
	0.3nm,0.6s,mb3.3,baz=153,slow=11,SNR=4.8						
CFAA				PcP	PcP	22 30 32.1	-1.4
	0.2nm,0.5s,baz=71,slow=3.0,SNR=3.8						
SUR	**Sutherland**	**40.83**	**71**	P	**P**	**22 28 41.9**	**+1.9**
SBA	**Scott Base**	**43.69**	**184**	P	**P**	**22 29 04.9**	**+2.2**
SHEL	**Horse Pasture**	**45.08**	**28**	P	**P**	**22 29 13.4**	**-1.0**
BOSA	**Boshof**	**46.11**	**73**	P	**P**	**22 29 22.7**	**+0.3**
	3.5nm,0.6s,mb4.3,baz=205,slow=8.2,SNR=11						
BOSA	**Boshof**	**46.11**	**73**	*eP*	**P**	**22 29 22.5**	**+0.1**
	16nm,1.4s,mb4.6						
LBTB	**Lobatse**	**49.25**	**70**	P	**P**	**22 29 46.9**	**+0.1**
	3.5nm,0.8s,mb4.4,baz=230,slow=8.4,SNR=5.7						
LBTB	**Lobatse**	**49.25**	**70**	*eP*	**P**	**22 29 47.1**	**+0.4**
	3.2nm,0.6s,mb4.4						
TSUM	**Tsumeb**	**50.45**	**58**	P	**P**	**22 29 55.6**	**-0.3**
LPAZ	**La Paz**	**52.23**	**306**	P	**P**	**22 30 09.3**	**+0.1**
	0.9nm,0.5s,mb4.1,baz=166,slow=8.0,SNR=5.5						
LPAZ	**La Paz**	**52.23**	**306**	*eP*	**P**	**22 30 09.6**	**+0.4**
	1.0nm,0.6s,mb4.0						
ABPO	**Ambohimpanom**	**65.32**	**86**	P	**P**	**22 31 39.8**	**-0.1**
DBIC	**Dimbokro**	**67.17**	**23**	P	**P**	**22 31 52.6**	**+0.9**
	3.1nm,0.9s,mb4.1,baz=188,slow=7.1,SNR=2.8						
TOA0	**Torodi Ar. Sit**	**74.92**	**28**	P	**P**	**22 32 38.5**	**0.0**
TORD	**Torodi Ar. Bea**	**74.92**	**28**	P	**P**	**22 32 38.7**	**+0.3**
	1.0nm,0.4s,mb3.9,baz=198,slow=6.3,SNR=20						
MSEY	**Mahe Island**	**81.67**	**85**	*eP*	**P**	**22 33 16.1**	**+0.3**
	39nm,0.9s,mb5.2						
SJG	**San Juan**	**83.10**	**322**	P	**P**	**22 33 22.4**	**-0.6**
ASAR	**Alice Springs**	**96.51**	**162**	P	**P**	**22 34 24.4**	**-2.4**
	0.2nm,0.5s,mb3.8,baz=188,slow=4.3,SNR=4.8						
FINES	**FINESS Array B**	**126.28**	**28**	PKP	PKPdf	22 39 56.8	-1.2
	2.0nm,0.8s,baz=207,slow=1.6,SNR=5.1						
ARCES	**ARCESS Array B**	**133.00**	**22**	PKP	PKPdf	22 40 09.7	-0.8
	6.2nm,1.1s,baz=230,slow=2.2,SNR=4.6						
YKA	**Yellowknife Ar**	**138.32**	**316**	PKP	PKPdf	22 40 18.8	-1.8
	0.6nm,0.7s,baz=133,slow=2.6,SNR=4.3						
ZALV	**Zalesovo Beam**	**142.90**	**66**	PKhKP	PKPpre	22 40 25.3	
	0.3nm,0.4s,baz=256,slow=5.8,SNR=2.7						
ZALV	**Zalesovo Beam**	**142.90**	**66**	PKP	PKPpre	22 40 25.3	
INK	**Inuvik**	**148.00**	**318**	PKPbc	PKPbc	22 40 40.0	-0.7
	0.9nm,0.5s,baz=58,slow=3.5,SNR=4.2						
ILAR	**Eielson Array**	**152.10**	**308**	PKPbc	PKPbc	22 40 50.1	-0.6
	0.6nm,0.3s,baz=157,slow=1.8,SNR=9.4						

*IDC **03** 22:34:35.9±0.7, 1°.29N×97°.12E, h0km, mb4.5/16, mb1 4.5/17, mb1mx4.3/26, mbtmp4.5/17, ML4.6/1, MS4.0/5, Ms1 4.0/5, ms1mx3.5/27, Error ellipse: s-maj=28.3km s-min=13.6km az=56.0*
*DJA **03** 22:34:38, 1°.29N×96°.97E, h5km, MLv4.9/10*
*MOS **03** 22:34:38.9±0.9, 1°.33N×97°.25E, h33km, mb5.1/22, Error ellipse: s-maj=12.7km s-min=6.0km az=106.1*
*BJI **03** 22:34:38.5, 1°.12N×97°.36E, h34km, mB4.9/26, mb5.0/35, Ms4.7/25, Ms7 4.6/24*
*NEIC **03** 22:34:39.8±1.7, 1°.31N×97°.15E, h26km±12km, mb4.8/22, Error ellipse: s-maj=6.0km s-min=4.8km az=56.0*
NEIC Felt [III] at Gunungsitoli.
*ISCJB **03** 22:34:41.2±0.6, 1°.27N±0°.04×97°.14E±0°.04, h53km±5km, mb4.9/77, MS4.4/16, Error ellipse: s-maj=7.2km s-min=4.7km az=140.3*
ISC 03 22:34:42.7±0.6, 1°.26N±0°.03×97°.13E±0°.04, h49km±5km, h28km±3.0km: pP-P, n177, σ0.9 98/179, mb4.9/77, MS4.4/16, 11C-6D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.99**	**1**	P	**Pn**	**22 35 11.5**	**-2.4**
TPTI				S	**Sn**	**22 35 37.9**	**+0.2**
MNSI	**Mandailing Nat**	**2.49**	**101**	P	**Pn**	**22 35 20.8**	**-0.1**
MNSI				S	**Sn**	**22 35 55.0**	**+4.9**
TSI	**Tuntungan**	**2.65**	**33**	P	**Pn**	**22 35 22.6**	**-0.4**
SISI	**Saibi**	**3.23**	**143**	P	**Pn**	**22 35 31.6**	**+0.6**
PPI	**Padang Panjang**	**3.69**	**118**	P	**Pn**	**22 35 37.4**	**+0.2**
PDSI	**Padang**	**3.97**	**123**	P	**Pn**	**22 35 41.2**	**+0.1**
BKNI	**Bangkinang**	**4.02**	**103**	P	**Pn**	**22 35 42.5**	**+0.7**
SDSI	**Sungai Dareh**	**4.82**	**117**	P	**Pn**	**22 35 55.0**	**+2.2**
FRIM	**Kepong**	**4.90**	**66**	P	**Pn**	**22 35 54.1**	**+0.2**
IPM	**Ipoh**	**5.04**	**51**	P	**Pn**	**22 35 56.3**	**+0.5**
IPM	**Ipoh**	**5.04**	**51**	*e*Pn	**Pn**	**22 35 55.2**	**-0.6**
	184nm,0.8s						
IPM	**Ipoh**	**5.04**	**51**	P	**Pn**	**22 35 55.0**	**-0.8**
	0.9nm2μm207nm,0.8s						
KULM	**Kulim**	**5.33**	**41**	P	**Pn**	**22 35 59.2**	**-0.6**
KULM	**Kulim**	**5.33**	**41**	*e*Pn	**Pn**	**22 35 58.2**	**-1.5**
	111nm,0.7s						
KULM	**Kulim**	**5.33**	**41**	P	**Pn**	**22 35 58.7**	**-1.1**
	0.8nm2μm164nm,1.1s						
KGM	**Kluang**	**6.23**	**83**	P	**Pn**	**22 36 12.8**	**+0.6**
MYKOM	**Kota Tinggi**	**6.74**	**85**	P	**Pn**	**22 36 19.9**	**+0.7**
MYKOM	**Kota Tinggi**	**6.74**	**85**	P	**Pn**	**22 36 19.2**	**0.0**
	0.4nm682nm48nm,1.4s						
KTGM	**Kuala Trenggan**	**7.23**	**56**	P	**Pn**	**22 36 25.8**	**-0.1**
MDSI	**Maura Dua**	**9.07**	**129**	P	**Pn**	**22 36 49.9**	**-1.2**
	33nm,0.8s						
KLSI		**9.62**	**128**	P	**Pn**	**22 36 57.8**	**-0.9**
	47nm,1.0s						
TPI	**Tanjungpandan**	**11.25**	**111**	P	**Pn**	**22 37 21.6**	**+0.6**
	16nm,1.5s						
KSM	**Kuching**	**13.18**	**89**	*e*Pn	**Pn**	**22 37 45.6**	**-1.8**
	20nm,0.6s						
KSM	**Kuching**	**13.18**	**89**	P	Px	22 37 59.0	
COCO	**West Island**	**13.37**	**181**	*eP*	**Pn**	**22 37 49.0**	**-0.8**
STKI	**Sintang**	**14.40**	**95**	P	**Pn**	**22 38 06.2**	**+2.4**
SBUM	**Sibu**	**15.13**	**85**	P	**Pn**	**22 38 14.9**	**+1.4**
SBUM	**Sibu**	**15.13**	**85**	P	**Pn**	**22 38 14.5**	**+1.1**
	479nm32nm,1.3s						
BDT	**Bhumibol Dam**	**15.99**	**7**	P	**Pn**	**22 38 25.5**	**+1.0**
BTM	**Bintulu**	**16.06**	**83**	P	**Pn**	**22 38 27.4**	**+2.0**
CM31	**Chiang Mai Arr**	**17.18**	**6**	*e*Pn	**Pn**	**22 38 35.7**	**-3.7**
	4.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**17.18**	**6**	P	**Pn**	**22 38 36.9**	**-2.6**
	0.8nm,0.3s,baz=191,slow=12,SNR=32						
CMAR				LR	LR	22 45 46.4	
	comp=Z,661nm,18.7s,baz=189,slow=39						
PALK	**Pallekele**	**17.43**	**291**	*eP*	**Pn**	**22 38 41.5**	**-1.0**
PALK				pmax	pmax		
	comp=Z,13nm,0.9s						
PALK	**Pallekele**	**17.43**	**291**	*e*Pn	**Pn**	**22 38 41.5**	**-1.1**
	comp=Z,14nm,0.9s						
CHTO	**Chiang Mai**	**17.54**	**6**	*eP*	**Pn**	**22 38 40.6**	**-3.2**
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	**Chiang Mai**	**17.54**	**6**	*e*Pn	**Pn**	**22 38 40.6**	**-3.2**
	comp=Z,14nm,0.8s						
CHRT	**Chiangrai**	**18.68**	**8**	⇓P	**Pn**	**22 38 55.5**	**-2.2**
	comp=Z,116nm,0.9s						
KKM	**Kota Kinabalu**	**19.63**	**76**	P	**Pn**	**22 39 08.2**	**-0.9**
KKM	**Kota Kinabalu**	**19.63**	**76**	*e*Pn	**Pn**	**22 39 07.1**	**-2.0**
	comp=Z,56nm,1.1s						
KKM	**Kota Kinabalu**	**19.63**	**76**	P	**Pn**	**22 39 09.6**	**+0.5**
	comp=Z,46nm,1.2s						
KDM	**Kudat**	**20.43**	**73**	P	**P**	**22 39 17.0**	**+0.8**
SDKM	**Sandakan**	**20.49**	**77**	P	**P**	**22 39 17.8**	**+1.0**
TSM	**Tawau**	**20.93**	**81**	P	**P**	**22 39 22.1**	**+0.5**
VIS	**Vishakhapatnam**	**21.25**	**321**	*i* P	**P**	**22 39 26.8**	**+1.9**
VIS				*ex*	x	22 39 37.7	
	comp=Z,55nm,1.4s						
VIS				*i* S	**S**	**22 43 23.4**	**+4.9**
TRD	**Trivandrum**	**21.34**	**290**	⇑*ex*	x	22 42 25.0	
QIZ	**Qiongzhong**	**21.61**	**34**	P	**P**	**22 39 27.8**	**-1.0**
QIZ				pP		22 39 35.4	
QIZ				sP	sP	22 39 40.0	-6.5
QIZ				S	**S**	**22 43 27.6**	**+2.0**
QIZ				sS	sS	22 43 39.2	-5.1
QIZ				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.5						
QIZ				pmax	pmax		
	comp=Z,100nm,4.6s						
QIZ				LR	LR		
	comp=N,640nm,15.2s,MS4.2						
QIZ				LR	LR		
	comp=E,200nm,13.0s,MS4.2						
QIZ				LR	LR		
	comp=Z,560nm,14.6s,MS4.1						
MYLDM	**Lahad Datu**	**21.69**	**79**	P	**P**	**22 39 31.2**	**+1.5**
BKSI	**Bulukumba**	**23.88**	**106**	P	**P**	**22 40 00.6**	**+8.6**
KMI	**Kunming**	**24.34**	**12**	⇑P	**P**	**22 39 57.2**	**+1.2**
KMI				pP		22 40 03.3	
KMI				sP	sP	22 40 06.1	-8.4
KMI				sS	sS	22 44 32.3	-1.0
KMI				pmax	pmax		
	comp=Z,77nm,1.2s,mb5.0						
KMI				pmax	pmax		
	comp=Z,270nm,3.1s						
KMI				LR	LR		
	comp=N,2μm,14.5s,MS4.8						
KMI				LR	LR		
	comp=E,1μm,14.5s,MS4.8						
KMI				LR	LR		
	comp=Z,2μm,13.6s,MS4.8						
SHL	**Shillong**	**24.69**	**349**	⇑*iP*	**P**	**22 40 00.0**	**+0.8**
GYA	**Guiyang**	**26.68**	**19**	⇑*iP*	**P**	**22 40 16.6**	**-0.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.7						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
GYA				LR	LR		
	comp=N,810nm,18.0s,MS4.5						
GYA				LR	LR		
	comp=E,780nm,19.0s,MS4.5						
GYA				LR	LR		
	comp=Z,980nm,18.0s,MS4.4						
GZH	**Guangzhou**	**26.81**	**35**	P	**P**	**22 40 23.8**	**+5.3**
GZH				S	**S**	**22 45 06.6**	**+15**
GZH				LR	LR		
	comp=N,470nm,15.1s,MS4.5						
GZH				LR	LR		
	comp=E,820nm,13.1s,MS4.5						
GZH				LR	LR		
	comp=Z,1μm,14.9s,MS4.6						
ODAN	**Odare**	**27.12**	**341**	*eP*	**P**	**22 40 22.3**	**+1.1**
	comp=Z,94nm,0.8s,mb5.3						
TAPN	**Taplejung**	**27.47**	**342**	*eP*	**P**	**22 40 25.8**	**+1.4**
	comp=Z,174nm,0.9s,mb5.6						
RAMN	**Ramite**	**27.47**	**339**	*eP*	**P**	**22 40 26.0**	**+1.6**
	comp=Z,56nm,0.8s,mb5.2						
PKI	**Pulchoki**	**28.47**	**338**	*eP*	**P**	**22 40 34.2**	**+0.9**
	comp=Z,54nm,1.0s,mb5.1						
PKIN	**Phulchoki**	**28.48**	**338**	*eP*	**P**	**22 40 34.3**	**+0.9**
	comp=Z,47nm,1.1s,mb5.0						
GUN	**Gumba**	**28.61**	**339**	*eP*	**P**	**22 40 35.5**	**+1.0**
	comp=Z,73nm,0.8s,mb5.5						
DMN	**Daman**	**28.62**	**337**	*eP*	**P**	**22 40 35.6**	**+1.0**
	comp=Z,47nm,0.8s,mb5.3						
KKN	**Kakani**	**28.72**	**338**	*eP*	**P**	**22 40 36.4**	**+0.9**
	comp=Z,109nm,1.3s,mb5.4						
LSA	**Lhasa**	**28.85**	**349**	P	**P**	**22 40 38.0**	**+1.4**
GKN	**Gorkha**	**29.16**	**337**	*eP*	**P**	**22 40 40.3**	**+0.9**
	comp=Z,88nm,1.1s,mb5.4						
KOLN	**Koldanda**	**29.37**	**335**	*eP*	**P**	**22 40 42.4**	**+1.1**
	comp=Z,40nm,0.7s,mb5.2						
DANN	**Dangsing**	**29.82**	**336**	*eP*	**P**	**22 40 46.4**	**+1.2**
	comp=Z,38nm,0.8s,mb5.2						
CD2	**Chengdu**	**30.15**	**11**	*eP*	**P**	**22 40 47.1**	**-1.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
CD2				pmax	pmax		
	comp=Z,100nm,5.6s						
TPUB	**Ta-pu**	**31.62**	**44**	*eP*	**P**	**22 41 00.1**	**-1.1**
	comp=Z,21nm,0.8s,mb5.0						
AGRA	**Agra**	**31.71**	**326**	*e*PKP	**P**	**22 40 59.9**	**-2.0**
YULB	**Yu-li**	**32.15**	**45**	*eP*	**P**	**22 41 04.6**	**-1.3**
	comp=Z,16nm,0.8s,mb4.9						
SSLB	**Suanglung**	**32.16**	**44**	*eP*	**P**	**22 41 05.5**	**-0.5**
	comp=Z,42nm,1.0s,mb5.2						
SONA	**Sohna**	**32.98**	**326**	*e*PKP	**P**	**22 41 13.0**	**-0.1**
SONA				AMb	AMB	22 41 18.8	
	comp=Z,12nm,0.2s,mb5.5						
YHNB	**Yeheng**	**33.03**	**43**	*eP*	**P**	**22 41 13.1**	**-0.5**
	comp=Z,14nm,1.0s,mb4.8						
AYAN	**Aya Nagar**	**33.14**	**327**	*e*PKP	**P**	**22 41 15.3**	**+0.9**
AYAN				AMb	AMB	22 41 18.3	
	comp=Z,6.9nm,0.3s,mb5.1						
WHN	**Wuhan**	**33.39**	**28**	⇓P	**P**	**22 41 17.1**	**+0.4**
WHN				S	**S**	**22 46 31.0**	**-3.5**
WHN				LR	LR		
	comp=N,580nm,13.2s,MS4.9						
WHN				LR	LR		
	comp=E,2μm,17.1s,MS4.9						
WHN				LR	LR		
	comp=Z,2μm,13.8s,MS4.9						
JOSI	**Joshimath**	**33.57**	**332**	*e*PKP	**P**	**22 41 17.9**	**-0.3**
KHET	**Khetri**	**33.57**	**324**	*e*PKP	**P**	**22 41 19.2**	**+0.9**
KHET				AMb	AMB	22 41 25.6	
	comp=Z,8.7nm,0.6s,mb4

HHC LR LR
comp=Z,270nm,16.2s,MS4.2
WRA Warramunga Arr 42.13 122 P **P 22 42 29.5 -1.0**
comp=Z,4.6nm,0.8s,mb4.1,baz=300,slow=9.1,SNR=8.9
WB2 Warramunga Arr 42.14 122 *eP* **P 22 42 30.7 +0.1**
KBL Kabul 42.23 325 *eP* **P 22 42 31.2 0.0**
KBL pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
KBL Kabul 42.23 325 *eP* **P 22 42 31.2 0.0**
comp=Z,3.9nm,0.8s,mb4.1
WMQ Urumqi 43.20 350 P **P 22 42 40.0 +1.1**
WMQ pmax pmax
comp=Z,25nm,1.0s,mb4.9
ASAR Alice Springs 43.49 127 P **P 22 42 41.3 -0.2**
comp=Z,4.4nm,0.9s,mb4.2,baz=299,slow=7.8,SNR=4.3
ASAR PcP PcP 22 44 28.5 -0.4
comp=Z,1.2nm,0.9s,baz=305,slow=3.3,SNR=4.3
ASAR S **S 22 49 07.3 +0.3**
comp=Z,0.4nm,0.8s,baz=292,slow=13,SNR=4.8
JNU Nakatsue 44.81 41 *eP* **P 22 42 51.3 -0.7**
comp=Z,28nm,1.4s,mb4.9
UCH Uchtor 45.57 336 *eP* **P 22 42 58.0 +0.2**
TKM2 Tokmak 2 45.74 338 P **P 22 43 00.3 +1.2**
TKM2 pmax pmax
comp=Z,13nm,1.1s,mb4.8
TKM2 Tokmak 2 45.74 338 *eP* **P 22 42 58.9 -0.2**
comp=Z,13nm,1.0s,mb4.8
AML Almayashu 45.82 336 *eP* **P 22 43 00.6 +0.8**
AML pmax pmax
comp=Z,21nm,1.0s,mb5.0
AML Almayashu 45.82 336 *eP* **P 22 43 00.6 +0.8**
comp=Z,21nm,1.0s,mb5.0
KSRS Korea Array 45.84 35 P **P 22 42 59.6 -0.5**
comp=Z,22nm,0.9s,mb5.1,baz=223,slow=9.0,SNR=85
KSRS LR LR 23 02 44.0
comp=Z,161nm,21.1s,MS3.9,baz=230,slow=37
AAK Ala-Archa 45.92 337⇓ *eP* **P 22 43 02.2 +1.6**
AAK Ala-Archa 45.92 337 *eP* **P 22 42 59.6 -0.9**
comp=Z,8.8nm,0.9s,mb4.7
EKS2 Erkin-Say 46.23 336 *eP* **P 22 43 02.0 -1.0**
EKS2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
EKS2 Erkin-Say 46.23 336 *eP* **P 22 43 02.0 -1.0**
comp=Z,8.0nm,0.8s,mb4.7
SNY Shenyang 46.88 27 ⇓*P* **P 22 43 08.5 +0.3**
SNY pmax pmax
comp=Z,22nm,0.7s,mb5.2
SNY pmax pmax
comp=Z,120nm,3.5s
SNY LR LR
comp=N,360nm,15.9s,MS4.7
SNY LR LR
comp=E,470nm,15.2s,MS4.7
SNY LR LR
comp=Z,590nm,16.1s,MS4.6
SONM Songino Array 47.08 9 P **P 22 43 09.9 +0.3**
comp=Z,15nm,0.8s,mb4.9,baz=190,slow=8.6,SNR=35
MK31 Makanchi Array 47.17 346 *eP* **P 22 43 10.7 +0.4**
MK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
MK31 Makanchi Array 47.17 346 *eP* **P 22 43 10.6 +0.3**
MKAR Makanchi Array 47.17 346 P **P 22 43 10.4 +0.1**
comp=Z,5.1nm,0.5s,mb4.7,baz=160,slow=8.9,SNR=103
MKAR Makanchi Array 47.17 346 *iP* **P 22 43 10.8 +0.5**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
ULN Ulaanbaatar 47.21 9 *eP* **P 22 43 10.6 0.0**
ULN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ULN Ulaanbaatar 47.21 9 *eP* **P 22 43 10.6 0.0**
comp=Z,9.2nm,0.8s,mb4.8
KK31 Karatay Array 47.97 334 *iP* **P 22 43 17.2 +0.6**
KKAR Karatay Array 47.97 334 *eP* **P 22 43 17.4 +0.8**
KKAR pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KKAR Karatay Array 47.97 334 *eP* **P 22 43 17.4 +0.8**
comp=Z,6.9nm,0.8s,mb4.7
GUMO Guam 48.79 73 LR LR 23 06 16.0
comp=Z,46nm,19.1s,MS3.5,baz=85,slow=39
ZAK Zakamensk 49.22 5 *eP* **P 22 43 26.5 +0.4**
ZAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TLY Talaya 50.54 5 P **P 22 43 36.8 +0.7**
MJAR Matsushiro Arr 51.69 42 P **P 22 43 44.9 -0.1**
comp=Z,2.0nm,0.5s,mb4.3,baz=231,slow=4.9,SNR=4.7
KURK Kurchatov 51.72 345 P **P 22 43 44.8 -0.1**
comp=Z,6.9nm,0.6s,mb4.8,baz=162,slow=7.1,SNR=15
KURK Kurchatov 51.72 345 *cP* **P 22 43 45.4 +0.5**
KURK pmax pmax
comp=Z,13nm,0.9s,mb4.9
KURK Kurchatov 51.72 345 P **P 22 43 45.7 +0.8**
SNR=6.6
VLA Vladivostok 51.96 32 *deP* **P 22 43 44.2 -2.6**
VLA 22 44 56.2
VLA *e* 22 45 42.6
VLA S **S 22 51 07.1 +0.6**
VLA pmax pmax
comp=Z,58nm,1.3s,mb5.3
STKA Stephens Creek 53.45 132 P **P 22 43 58.9 +0.8**
comp=Z,5.7nm,0.9s,mb4.5,baz=317,slow=9.1,SNR=6.7
STKA LR LR 23 09 07.0
comp=Z,430nm,21.7s,MS4.5,baz=118,slow=39
STKA Stephens Creek 53.45 132 *eP* **P 22 43 57.1 -1.0**
STKA pmax pmax
comp=Z,1.0nm,0.8s
STKA Stephens Creek 53.45 132 *eP* **P 22 43 57.1 -1.0**
comp=Z,1.4nm,0.8s,mb3.9
STKA LR LR 23 09 07.0
ZAA0 Zalesovo Array 53.49 351 *eP* **P 22 43 58.2 +0.3**
ZALV Zalesovo Beam 53.49 351 P **P 22 43 58.1 +0.2**
comp=Z,12nm,0.4s,mb5.2,baz=166,slow=6.5,SNR=83
ZALV LR LR 23 09 13.0
comp=Z,106nm,18.2s,MS3.9,baz=75,slow=39
NVS Novosibirsk 54.60 350⇑ *iP* **P 22 44 04.7 -1.4**
NVS pmax pmax
comp=Z,12nm,0.8s,mb5.0
NVS pmax pmax
comp=N,6.0nm,0.6s
NVS pmax pmax
comp=E,5.0nm,0.6s
VOSK Vostochnaya 55.72 341 P **P 22 44 12.9 -1.3**
VOSK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BVAR Borovoye Array 56.17 341 P **P 22 44 16.7 -0.6**
comp=Z,6.7nm,0.7s,mb4.8,baz=144,slow=8.9,SNR=39
KLR Kul'dur 56.23 27 *eP* **P 22 44 15.0 -2.9**
KLR pmax pmax
comp=Z,36nm,1.0s,mb5.4
BRVK Borovoye 56.23 341 *cP* **P 22 44 17.6 -0.2**
BRVK pmax pmax
comp=Z,12nm,1.1s,mb4.8
BRVK Borovoye 56.23 341 *eP* **P 22 44 17.7 -0.1**
comp=Z,6.5nm,0.7s,mb4.8
AB31 Akbulak array 57.43 332 *iP* **P 22 44 26.3 -0.1**
AB31 pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
ABKAR Akbulak array 57.43 332 *eP* **P 22 44 26.4 0.0**
comp=Z,11nm,0.7s,mb5.0
AKTK Aktyubinsk 59.15 332 P **P 22 44 37.4 -0.9**
AKTO Aktyubinsk 59.15 332 P **P 22 44 37.4 -0.9**
comp=Z,3.8nm,0.7s,mb4.5,baz=122,slow=7.9,SNR=11
YSS Yuzh-Sakhalins 60.34 34 P **P 22 44 45.2 -1.4**
VANB Van 61.52 314 *eP* **P 22 44 54.0 -0.8**
SVE Sverdlovsk 62.61 338⇑ *eP* **P 22 45 02.2 +0.5**
SVE pmax pmax
comp=Z,18nm,1.1s,mb5.1
ZEI Tsey 62.91 319 *eP* **P 22 44 59.0 -5.0**
ZEI pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
ARU Arti 63.10 337 *cP* **P 22 45 04.5 -0.5**
ARU *e* 22 47 20.1
ARU S **S 22 53 36.8 +4.6**
ARU SS SS 22 57 39.8 +0.9
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.9
ARU Arti 63.10 337 *eP* **P 22 45 04.7 -0.3**
comp=Z,4.0nm,0.8s,mb4.6
KIV Kislovodsk 64.22 319⇑ *eP* **P 22 45 12.2 -0.4**
KIV *PP pP 22 45 21.0 -5.5
KIV *SP sP 22 45 27.0 -5.1
KIV 22 45 45.0
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
KIV Kislovodsk 64.22 319 *eP* **P 22 45 12.9 +0.2**
YAK Yakutsk 65.38 16 *eP* **P 22 45 19.5 -0.3**
YAK pmax pmax
comp=Z,72nm,1.4s,mb5.5
YAK pmax pmax
comp=E,13nm,1.2s
YAK pmax pmax
comp=N,11nm,0.9s
YAK Yakutsk 65.38 16 *eP* **P 22 45 19.1 -0.8**
VRHR Novokhopersk 68.04 326 *eP* **P 22 45 41.5 +4.5**
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR pmax pmax
comp=N,30nm,1.5s
BRTR Keskin Array B 69.02 312 P **P 22 45 42.6 -0.7**
comp=N,0.6nm,0.7s,mb3.6,baz=141,slow=6.7,SNR=4.4
BRTR Keskin Array B 69.02 312 *iP* **P 22 45 44.2 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
VORD Divnogorie 69.30 325 *eP* **P 22 45 44.4 -0.5**
VORD pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
VORD pmax pmax
comp=N,30nm,0.9s
VORD pmax pmax
comp=E,70nm,0.7s
VSR Storozhevoye 69.48 325 *eP* **P 22 45 44.5 -1.5**
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,9.0nm,1.2s
PRGR Permogore 71.56 337⇑ *iP* **P 22 45 58.1 -0.3**
PRGR pmax pmax
comp=Z,16nm,0.9s,mb5.0
PET Petropavlovsk 72.22 34 *eP* **P 22 46 02.9 +0.3**
PET pmax pmax
comp=Z,18nm,0.8s,mb5.0
OBN Obninsk 72.53 328 *eP* **P 22 46 04.3 -0.1**
OBN *PP pP 22 46 14.0 -4.5
OBN *SP sP 22 46 19.0 -5.0
OBN pP 22 46 21.0 +2.5
OBN pmax pmax
comp=Z,26nm,1.6s,mb4.9
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
KLMR Klimovskoe 73.67 334 *eP* **P 22 46 10.2 -0.8**
KLMR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
SEY Seymchan 73.73 23⇓ *eP* **P 22 46 11.0 -0.3**
LBTB Lobatse 73.85 244 P **P 22 46 13.7 +0.9**
TIRR Tirgusor 74.03 316 *eP* **P 22 46 12.7 -0.8**
AKASG Malin Array Be 75.17 322 P **P 22 46 19.7 -0.3**
comp=Z,1.4nm,0.6s,mb4.1,baz=94,slow=4.6,SNR=5.7
BUR08 Bucovina Ar. S 76.95 319 *eP* **P 22 46 30.1 0.0**
SUW Suwalki 79.58 325 P **P 22 46 44.3 -0.2**
FINES FINESS Array B 79.91 333 P **P 22 46 45.6 -0.5**
comp=Z,3.5nm,0.9s,mb4.3,baz=107,slow=4.8,SNR=9.8
PSZ Piszkesteto 80.52 318 *eP* **P 22 46 49.4 -0.3**
TSUM Tsumeb 80.54 250 *eP* **P 22 46 50.8 +0.3**
ARCES ARCESS Array B 82.46 340 P **P 22 46 59.6 0.0**
comp=Z,2.5nm,0.8s,mb4.2,baz=98,slow=5.5,SNR=15
ARCES ARCESS Array B 82.46 340 P **P 22 46 59.6 0.0**
AQU L'Aquila 84.51 312 P **P 22 47 11.0 +0.3**
BRG Berggiesshubel 84.72 321 *eP* **P 22 47 19.2 +7.7**
comp=Z,6.8nm,1.1s,mb4.7
BRG Berggiesshubel 84.72 321 *eP* **P 22 47 19.2 +7.7**
BRG pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
VSL Villasalto 87.47 309 P **P 22 47 25.5 +0.2**
WLF Walferdange 89.68 319 P **P 22 47 35.7 +0.1**
ESK Eskdalemuir 94.85 326 *eP* **P 22 47 58.4 -0.9**
NVAR Mina Array Bea 128.78 36 PKP PKPdf 22 53 47.1 +2.0
comp=Z,0.9nm,0.9s,baz=256,slow=2.5,SNR=5.4
TXAR Lajitas Array 143.66 32 PKP PKPdf 22 54 11.8 -1.1
comp=Z,1.1nm,0.9s,baz=225,slow=2.1,SNR=9.6
CPUP Villa Florida 145.00 222 PKPbc PKPdf 22 54 16.1 +0.7
comp=Z,0.5nm,0.3s,baz=335,slow=1.8,SNR=3.8
CFAA Coronel Fontan 146.80 203 PKPbc PKPbc 22 54 21.5 +1.4
comp=Z,0.6nm,0.7s,baz=146,slow=3.6,SNR=3.8
CFAA Coronel Fontan 146.80 203 PKPbc PKPbc 22 54 21.5 +1.4

BGS ***03*** *22:43:00.2±1.6, 31°.08N×48°.19E, h6km±999km, mb5.4*
BJI ***03*** *22:43:09.3, 32°.31N×46°.55E, h36km, mB5.2/31, mb5.0/48, Ms4.9/39, Ms7 4.7/39*
ISCJB ***03*** *22:43:10.8±0.1, 32°.31N±0°.01×47°.30E±0°.01, h10km, mb5.1/317, MS4.3/57, Error ellipse: s-maj=2.0km s-min=1.4km az=22.6*
CSEM ***03*** *22:43:12.7±0.1, 32°.34N×47°.30E, h10km, mb5.1/99, Ms4.0, Mw5.1, Error ellipse: s-maj=2.7km s-min=1.8km az=11.0*
NEIC ***03*** *22:43:13.0, 32°.30N×47°.20E, h8km, mb5.1/152, ML4.9(THR), MN5.0(TEH), After TEH.*
TEH ***03*** *22:43:13.7, 32°.30N×47°.23E, h8km*
SGS ***03*** *22:43:14.9, 32°.26N×47°.39E, h0km*
IDC ***03*** *22:43:14.5±1.5, 32°.52N×47°.36E, h21km±9km, mb4.7/36, mb1 4.8/42, mb1mx4.8/42, mbtmp4.7/42, ML4.1/4, MS4.2/21, Ms1 4.2/21, ms1mx4.0/37, Error ellipse: s-maj=7.8km s-min=7.2km az=149.0*
MOS ***03*** *22:43:14.3±1.0, 32°.40N×47°.34E, h33km, mb5.3/111, MS4.2/40, Error ellipse: s-maj=6.9km s-min=3.0km az=124.8*
THR ***03*** *22:43:15.4±0.8, 32°.50N×47°.39E, h14km±7km, ML4.9*
OMAN ***03*** *22:43:15.4±0.1, 32°.05N×47°.04E, h43km, Error ellipse: s-maj=3.7km s-min=1.0km az=243.0*
GCMT ***03*** *22:43:16.8±0.2, 32°.44N×47°.10E, h12km, MW5.1, Moment Tensor Solution. s38,c52; s76,c138; Moment tensor: Scale 10^{16}Nm; M_{rr}4.56±.13; $M_{\theta\theta}$-3.92±.11; $M_{\phi\phi}$-0.64±.13; $M_{r\theta}$1.60±.39; $M_{\theta\phi}$3.27±.10; $M_{\phi r}$-1.51±.48; Best double couple: $M_0$5.70000×10^{16} NP1:ϕ_s294.00000°, δ34.00000°, λ78.00000°. NP2:ϕ_s128.00000°, δ57.00000°, λ98.00000°. Principal axes: T 5.0400, Plg77.0000°, Azm63.0000°; N 1.3200, Plg7.0000°, Azm304.0000°; P -6.3700, Plg11.0000°, Azm212.0000°; Data Used: II IU IC G CN.*
SZGRF ***03*** *22:43:25.8, 33°.01N×46°.12E, h33km, mb5.3, MS4.1, Iran-Iraq border region*
DJA ***03*** *22:43:26, 30°.31N×49°.05E, h10km, mb5.6/23*
ISC 03 22:43:12.8±0.1, 32°.32N±0°.01×47°.29E±0°.01, h10km, (h46km±3.2km:pP-P), n1685, σ0°.99/1753, mb5.1/317, MS4.3/57, 355C-31D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.30**	**99**	Pg		**Pg**	**Pg**	**22 43 38.7**	**+1.0**
SHGR	**Shooshtar-Gavs**	**1.30**	**99**	*e*Pg		**Pg**	**Pg**	**22 43 38.7**	**+1.0**
SHGR				AML		AML	AML	22 44 02.8	
comp=N,24μm,0.8s									
SHGR	**Shooshtar-Gavs**	**1.30**	**99**	*e*Pg		**Pg**	**Pg**	**22 43 38.7**	**+1.0**
IKOM	**Komasi**	**1.86**	**6**	Pn		**Pn**	**Pn**	**22 43 46.2**	**+1.5**
IKOM				Sg		**Sg**	**Sg**	**22 44 12.9**	**+0.3**
IKOM	**Komasi**	**1.86**	**6**	*e*Pn		**Pn**	**Pn**	**22 43 46.3**	**+1.6**
IKOM				*e*Sg		**Sg**	**Sg**	**22 44 13.0**	**+0.4**
IKOM				*e*				22 44 14.5	
comp=Z,27μm,0.4s									
IKOM	**Komasi**	**1.86**	**6**	*e*Pn		**Pn**	**Pn**	**22 43 46.3**	**+1.6**
IKOM				*e*Sg		**Sg**	**Sg**	**22 44 13.0**	**+0.4**
IGHG	**Ghaleghazi**	**2.10**	**344**	Pn		**Pn**	**Pn**	**22 43 49.5**	**+1.6**
IGHG				Sg		**Sg**	**Sg**	**22 44 19.5**	**-0.6**
IGHG	**Ghaleghazi**	**2.10**	**344**	*e*Pn		**Pn**	**Pn**	**22 43 49.5**	**+1.6**
IGHG				*e*Sg		**Sg**	**Sg**	**22 44 19.5**	**-0.6**
IGHG				*e*				22 44 29.7	
comp=Z,94μm,0.4s									
IGHG	**Ghaleghazi**	**2.10**	**344**	*e*Pn		**Pn**	**Pn**	**22 43 49.5**	**+1.6**
IGHG				*e*Sg		**Sg**	**Sg**	**22 44 19.5**	**-0.6**
IVIS	**Veis**	**2.23**	**351**	Pn		**Pn**	**Pn**	**22 43 51.0**	**+1.2**
IVIS				Sg		**Sg**	**Sg**	**22 44 22.7**	**-1.9**
IVIS	**Veis**	**2.23**	**351**⇑	*e*Pn		**Pn**	**Pn**	**22 43 51.1**	**+1.3**
IVIS				*e*Sg		**Sg**	**Sg**	**22 44 22.7**	**-1.9**
IVIS				*e*				22 44 25.5	
comp=Z,72μm,0.3s									
IVIS	**Veis**	**2.23**	**351**⇑	*e*Pn		**Pn**	**Pn**	**22 43 51.1**	**+1.3**
IVIS				*e*Sg		**Sg**	**Sg**	**22 44 22.7**	**-1.9**
IDHR	**Dehrash**	**2.49**	**343**	Pn		**Pn**	**Pn**	**22 43 54.5**	**+1.1**
IDHR				Sg		**Sg**	**Sg**	**22 44 32.2**	**-0.7**
IDHR	**Dehrash**	**2.49**	**343**	*e*Pn		**Pn**	**Pn**	**22 43 54.6**	**+1.2**
IDHR				*e*Sg		**Sg**	**Sg**	**22 44 32.3**	**-0.6**
IDHR	**Dehrash**	**2.49**	**343**	*e*Pn		**Pn**	**Pn**	**22 43 54.6**	**+1.2**
IDHR				*e*Sg		**Sg**	**Sg**	**22 44 32.3**	**-0.6**
MIB	**Mutribah**	**2.51**	**179**	*e*P		**Pn**	**Pn**	**22 43 57.6**	**+4.0**
MIB				AML		AML	AML	22 44 31.9	
comp=Z,3μm,0.6s									
MIB	**Mutribah**	**2.51**	**179**	*e*P		**Pn**	**Pn**	**22 43 57.6**	**+4.0**
ILIN	**Lien**	**2.61**	**354**	Pn		**Pn**	**Pn**	**22 43 56.3**	**+1.3**
ILIN	**Lien**	**2.61**	**354**⇓	*e*Pn		**Pn**	**Pn**	**22 43 56.4**	**+1.4**
ILIN				*e*				22 44 39.6	
comp=N,12μm,0.4s									
ILIN	**Lien**	**2.61**	**354**⇓	*e*Pn		**Pn**	**Pn**	**22 43 56.4**	**+1.4**
BHD	**Baghdad**	**2.63**	**292**	*ex*		**Pn**	**Pn**	**22 43 56.0**	**+0.8**
BHD				*ex*		x	x	22 44 06.0	
BHD				*i* x		x	x	22 44 29.0	
BHD				*i* x		x	x	22 44 35.0	
BHD				*i* x		x	x	22 44 42.0	
SNGE	**Sanandaj**	**2.77**	**1**	Pn		**Pn**	**Pn**	**22 43 59.0**	**+1.8**
SNGE	**Sanandaj**	**2.77**	**1**	*e*Pn		**Pn**	**Pn**	**22 43 59.1**	**+1.9**
SNGE				*e*Sg		**Sg**	**Sg**	**22 44 36.4**	**-5.3**
SNGE				AML		AML	AML	22 44 50.7	
comp=E,8μm,0.8s									
SNGE	**Sanandaj**	**2.77**	**1**	Pn		**Pn**	**Pn**	**22 43 59.0**	**+1.8**
NAY	**Al-Naaiem**	**3.06**	**181**	*e*P		**Pn**	**Pn**	**22 44 04.9**	**+3.7**
NAY	**Al-Naaiem**	**3.06**	**181**	*e*P		**Pn**	**Pn**	**22 44 04.9**	**+3.7**
IPIR	**Pirpir**	**3.07**	**82**	Pn		**Pn**	**Pn**	**22 44 03.4**	**+2.1**
IPIR	**Pirpir**	**3.07**	**82**	*e*Pn		**Pn**	**Pn**	**22 44 03.4**	**+2.1**
IPIR				*e*				22 44 57.7	
comp=Z,34μm,0.3s									
IPIR	**Pirpir**	**3.07**	**82**	*e*Pn		**Pn**	**Pn**	**22 44 03.4**	**+2.1**
KBD	**Kabd**	**3.15**	**174**	*e*P		**Pn**	**Pn**	**22 44 06.1**	**+3.6**
KBD				AML		AML	AML	22 44 50.6	
comp=Z,556nm,0.4s									
KBD	**Kabd**	**3.15**	**174**	*e*P		**Pn**	**Pn**	**22 44 06.1**	**+3.7**
ASAO	**Ashtian**	**3.19**	**45**	Pn		**Pn**	**Pn**	**22 44 05.0**	**+2.0**
ASAO	**Ashtian**	**3.19**	**45**	*e*Pn		**Pn**	**Pn**	**22 44 05.0**	**+2.0**
ASAO				AML		AML	AML	22 44 59.7	
comp=N,4μm,0.7s									
ASAO	**Ashtian**	**3.19**	**45**	*e*Pn		**Pn**	**Pn**	**22 44 05.0**	**+2.0**
RDF	**Al-Radifah**	**3.39**	**176**	*e*P		**Pn**	**Pn**	**22 44 09.8**	**+4.1**
RDF				AML		AML	AML	22 44 56.1	
comp=Z,1μm,0.5s									
RDF	**Al-Radifah**	**3.39**	**176**	*e*P		**Pn**	**Pn**	**22 44 09.8**	**+4.1**
QRN	**Al-Qurain**	**3.60**	**171**	*e*P		**Pn**	**Pn**	**22 44 12.3**	**+3.7**
IKLH	**Kolahrood**	**3.75**	**73**	Pn		**Pn**	**Pn**	**22 44 12.4**	**+1.7**
IKLH	**Kolahrood**	**3.75**	**73**	*e*Pn		**Pn**	**Pn**	**22 44 12.4**	**+1.7**
IKLH				*e*				22 45 29.4	
comp=Z,23μm,0.3s									
IKLH	**Kolahrood**	**3.75**	**73**	*e*Pn		**Pn**	**Pn**	**22 44 12.4**	**+1.7**
IRAZ	**Razeghan**	**3.78**	**35**	Pn		**Pn**	**Pn**	**22 44 13.0**	**+1.9**
IRAZ	**Razeghan**	**3.78**	**35**⇓	*e*Pn		**Pn**	**Pn**	**22 44 13.0**	**+1.9**
IRAZ				*e*				22 44 24.6	
comp=Z,46μm,0.2s									
IRAZ	**Razeghan**	**3.78**	**35**⇓	*e*Pn		**Pn**	**Pn**	**22 44 13.0**	**+1.9**
GHVR	**GHOM**	**3.99**	**56**	Pn		**Pn**	**Pn**	**22 44 15.5**	**+1.6**
GHVR	**GHOM**	**3.99**	**56**	*e*Pn		**Pn**	**Pn**	**22 44 15.5**	**+1.6**
GHVR				AML		AML	AML	22 45 24.3	
comp=N,1μm,0.6s									
GHVR				AML		AML	AML	22 45 31.5	
comp=E,1μm,0.7s									
GHVR	**GHOM**	**3.99**	**56**	*e*Pn		**Pn**	**Pn**	**22 44 15.5**	**+1.6**
IGAR	**Gharneh**	**4.03**	**88**	*e*Pn		**Pn**	**Pn**	**22 44 15.7**	**+1.3**
IGAR				*e*				22 45 08.8	
comp=Z,10μm,0.1s									
KFJS		**4.16**	**172**	P		**Pn**	**Pn**	**22 44 18.8**	**+2.5**
KFJS		**4.16**	**172**	P		**Pn**	**Pn**	**22 44 18.8**	**+2.5**
KFJS				S		**Sn**	**Sn**	**22 45 09.1**	**+4.2**
IZEF	**Zefreh**	**4.29**	**81**	Pn		**Pn**	**Pn**	**22 44 19.7**	**+1.5**
IZEF	**Zefreh**	**4.29**	**81**⇑	*e*Pn		**Pn**	**Pn**	**22 44 19.7**	**+1.5**
IZEF				*e*				22 44 33.6	
comp=Z,8μm,0.3s									
IZEF	**Zefreh**	**4.29**	**81**⇑	*e*Pn		**Pn**	**Pn**	**22 44 19.7**	**+1.5**
IMHD	**Mahdasht**	**4.38**	**39**	Pn		**Pn**	**Pn**	**22 44 20.6**	**+1.3**
IMHD	**Mahdasht**	**4.38**	**39**	*e*Pn		**Pn**	**Pn**	**22 44 20.6**	**+1.3**
IMHD				*e*				22 44 33.3	
comp=Z,17μm,0.3s									
IMHD	**Mahdasht**	**4.38**	**39**	*e*Pn		**Pn**	**Pn**	**22 44 20.6**	**+1.3**
IR3	**Iran Long-Peri**	**4.42**	**44**	*e*Pn		**Pn**	**Pn**	**22 44 21.3**	**+1.4**
IR3	**Iran Long-Peri**	**4.42**	**44**	*e*Pn		**Pn**	**Pn**	**22 44 21.3**	**+1.4**
ZNJK	**Zanjan**	**4.49**	**15**	*e*Pn		**Pn**	**Pn**	**22 44 22.8**	**+1.9**
ZNJK				*e*Sg		**Sg**	**Sg**	**22 45 28.8**	**-8.2**
ZNJK	**Zanjan**	**4.49**	**15**	*e*Pn		**Pn**	**Pn**	**22 44 22.8**	**+1.9**
IVRN	**Varamin**	**4.56**	**53**	*e*Pn		**Pn**	**Pn**	**22 44 23.1**	**+1.2**
IVRN	**Varamin**	**4.56**	**53**	*e*Pn		**Pn**	**Pn**	**22 44 23.1**	**+1.2**
ISFB	**Sefidab**	**4.62**	**63**	Pn		**Pn**	**Pn**	**22 44 23.2**	**+0.6**
ISFB	**Sefidab**	**4.62**	**63**	*e*Pn		**Pn**	**Pn**	**22 44 23.3**	**+0.7**
ISFB				*e*				22 44 39.0	
comp=Z,8μm,0.3s									
ISFB	**Sefidab**	**4.62**	**63**	*e*Pn		**Pn**	**Pn**	**22 44 23.3**	**+0.7**
THKV	**Tehran--Karaj**	**4.66**	**39**	Pn		**Pn**	**Pn**	**22 44 25.0**	**+1.8**
THKV	**Tehran--Karaj**	**4.66**	**39**	*e*Pn		**Pn**	**Pn**	**22 44 25.1**	**+1.8**
THKV	**Tehran--Karaj**	**4.66**	**39**	Pn		**Pn**	**Pn**	**22 44 25.0**	**+1.8**
CHTH	**Charan**	**4.79**	**41**	*e*Pn		**Pn**	**Pn**	**22 44 26.0**	**+1.0**
IDMV	**Damavand**	**5.11**	**49**	Pn		**Pn**	**Pn**	**22 44 30.3**	**+0.9**
IDMV	**Damavand**	**5.11**	**49**	*e*Pn		**Pn**	**Pn**	**22 44 30.3**	**+0.9**
IDMV				*e*				22 46 00.7	
comp=Z,12μm,0.4s									
IDMV	**Damavand**	**5.11**	**49**	*e*Pn		**Pn**	**Pn**	**22 44 30.3**	**+0.9**
ASYS		**5.43**	**209**	P		**Pn**	**Pn**	**22 44 34.7**	**+0.9**
ASYS		**5.43**	**209**	P		**Pn**	**Pn**	**22 44 34.7**	**+0.8**
ASYS				S		**Sn**	**Sn**	**22 45 37.4**	**+0.9**
ISAD	**Sadrabad**	**5.44**	**93**	Pn		**Pn**	**Pn**	**22 44 35.3**	**+1.3**
ISAD	**Sadrabad**	**5.44**	**93**	*e*Pn		**Pn**	**Pn**	**22 44 35.3**	**+1.3**
ISAD				*e*				22 46 26.4	
comp=Z,6μm,0.4s									
ISAD	**Sadrabad**	**5.44**	**93**	*e*Pn		**Pn**	**Pn**	**22 44 35.3**	**+1.3**
IAZR	**Azarshahr**	**5.46**	**349**	Pn		**Pn**	**Pn**	**22 44 34.8**	**+0.7**
IAZR	**Azarshahr**	**5.46**	**349**	*e*Pn		**Pn**	**Pn**	**22 44 34.9**	**+0.8**
IAZR				*e*				22 46 23.3	
comp=Z,46μm,0.6s									
IAZR	**Azarshahr**	**5.46**	**349**	*e*Pn		**Pn**	**Pn**	**22 44 34.9**	**+0.8**
ISRB	**Sarab**	**5.50**	**3**	Pn		**Pn**	**Pn**	**22 44 35.9**	**+1.1**
ISRB	**Sarab**	**5.50**	**3**⇓	*e*Pn		**Pn**	**Pn**	**22 44 36.0**	**+1.2**
ISRB				*e*				22 45 00.6	
comp=Z,10μm,0.4s									
ISRB	**Sarab**	**5.50**	**3**⇓	*e*Pn		**Pn**	**Pn**	**22 44 36.0**	**+1.2**
IPAR	**Pars**	**5.52**	**115**	Pn		**Pn**	**Pn**	**22 44 36.0**	**+0.9**
IPAR	**Pars**	**5.52**	**115**	*e*Pn		**Pn**	**Pn**	**22 44 36.0**	**+0.9**
IPAR				*e*				22 46 50.4	
comp=Z,5μm,0.4s									
IPAR	**Pars**	**5.52**	**115**	*e*Pn		**Pn**	**Pn**	**22 44 36.0**	**+0.9**
IFIR	**Firoozkooh**	**5.62**	**52**	Pn		**Pn**	**Pn**	**22 44 37.6**	**+1.2**
IFIR	**Firoozkooh**	**5.62**	**52**	*e*Pn		**Pn**	**Pn**	**22 44 37.7**	**+1.3**
IFIR				*e*				22 45 01.5	
comp=Z,4μm,0.2s									
IFIR	**Firoozkooh**	**5.62**	**52**	*e*Pn		**Pn**	**Pn**	**22 44 37.7**	**+1.3**
IFTB	**Fath-abad**	**5.73**	**353**	*e*Pn		**Pn**	**Pn**	**22 44 38.7**

comp=Z,8μm,0.1s
IMRD Marand 6.51 349 *e*Pn **Pn 22 44 49.4 +0.8**
BOQSS 6.68 164 S **Sn 22 46 07.7 +0.5**
BOQSS 6.68 164 P **Pn 22 44 52.3 +1.3**
IBAF Bafgh 7.07 94 Pn **Pn 22 44 57.0 +0.6**
IBAF Bafgh 7.07 94 *e*Pn **Pn 22 44 57.0 +0.6**
IBAF *e* 22 45 38.5
comp=Z,1μm,0.2s
IBAF Bafgh 7.07 94 *e*Pn **Pn 22 44 57.0 +0.6**
CLDR Caldiran 7.34 339 *e*P **Pn 22 45 00.4 +0.4**
CLDR Caldiran 7.34 339 *e*P **Pn 22 45 00.4 +0.4**
AGRB Hanur-Agry 8.04 336 *e*P **Pn 22 45 08.6 -0.9**
AGRB Hanur-Agry 8.04 336 *e*P **Pn 22 45 08.6 -0.9**
SLWS 8.05 158 P **Pn 22 45 10.0 +0.2**
SLWS 8.05 158 P **Pn 22 45 10.0 +0.2**
SLWS S **Sn 22 46 39.3 -1.6**
GNI Garni 8.08 346 *e*P **Pn 22 45 11.7 +1.6**
GNI Garni 8.08 346 Pn **Pn 22 45 11.4 +1.3**
comp=Z,1.9nm,0.3s,baz=164,slow=1.0,SNR=14
GNI Lg 22 47 27.4
baz=180,slow=20,SNR=1.9
GNI LR LR 22 48 25.3
comp=Z,2μm,18.8s,baz=159,slow=39
GNI Garni 8.08 346 P **Pn 22 45 11.4 +1.3**
GNI pmax pmax
comp=Z,2.0nm,0.3s
GNI MLR MLR
comp=Z,2μm,18.8s
GNI Garni 8.08 346 *e*Pn **Pn 22 45 13.2 +3.0**
GNI Lg 22 47 27.4
GNI LR LR 22 48 25.3
GNI Garni 8.08 346 P **Pn 22 45 11.4 +1.3**
comp=Z,2μm,18.8s
GNI Garni 8.08 346 *e*Pn **Pn 22 45 13.2 +3.1**
BNGL BINGOL 8.29 325 *e*P **Pn 22 45 11.8 -1.3**
DIGO Kars 8.67 340⇑ *i*P **Pn 22 45 19.2 +1.0**
DIGO Kars 8.67 340 *i*P **Pn 22 45 19.2 +0.9**
ASF Jabal al Asfar 8.80 272 Pn **Pn 22 45 19.5 -0.6**
comp=Z,3.9nm,0.3s,baz=320,slow=14,SNR=48
ASF Sn **Sn 22 46 54.2 -5.2**
comp=Z,8.7nm,0.3s,baz=0.0,slow=20,SNR=3.7
ASF Lg 22 47 54.6
comp=Z,15nm,0.3s,baz=323,slow=20,SNR=6.5
ASF LR LR 22 49 37.3
comp=Z,778nm,18.5s,baz=319,slow=43
ASF Jabal al Asfar 8.80 272 P **Pn 22 45 19.5 -0.6**
ASF pmax pmax
comp=Z,4.0nm,0.3s
ASF MLR MLR
comp=Z,778nm,18.5s
BTHS 8.82 158 S **Sn 22 46 55.3 -4.4**
BTHS 8.82 158 P **Pn 22 45 20.4 +0.1**
BTHS 8.82 158 P **Pn 22 45 20.4 +0.1**
SVRC Sivrice-ELAZID 8.89 315 *e*P **Pn 22 45 21.2 -0.1**
SVRC Sivrice-ELAZID 8.89 315 *e*P **Pn 22 45 21.2 0.0**
KARS Kars 8.96 339 *e*P **Pn 22 45 23.8 +1.7**
KARS Kars 8.96 339 *e*P **Pn 22 45 23.8 +1.6**
ATAB Bozova 9.00 307 *e*P **Pn 22 45 24.2 +1.5**
ATAB Bozova 9.00 307 *e*P **Pn 22 45 24.2 +1.5**
PTK Pertek 9.18 318 *e*P **Pn 22 45 23.8 -1.4**
DGRG David-gareji 9.24 351 P **Pn 22 45 28.4 +2.3**
MALT Malatya 9.39 312 *e*P **Pn 22 45 30.3 +2.2**
MALT Malatya 9.39 312 *e*Pn **Pn 22 45 28.4 +0.4**
MALT Sn **Sn 22 47 11.9 -1.8**
MALT Malatya 9.39 312 P **Pn 22 45 28.9 +0.8**
comp=Z,1μmcomp=Z,68nm,1.1s
MALT Malatya 9.39 312 *e*P **Pn 22 45 28.4 +0.3**
MALT S **Sn 22 47 11.9 -1.8**
MYA Malataya 9.40 312 *e*P **Pn 22 45 29.8 +1.6**
MYA Malataya 9.40 312 *e*P **Pn 22 45 29.8 +1.6**
KOPT Kop Dagi 9.44 326⇓ *i*P **Pn 22 45 33.8 +5.1**
MTA Mtatsminda 9.57 349 P **Pn 22 45 32.0 +1.4**
GAZ Gaziantep 9.60 303 *e*P **Pn 22 45 41.7 +11**
TBLG Delisi 9.61 349 P **Pn 22 45 34.5 +3.4**
TBLG Delisi 9.61 349 P **Pn 22 45 34.5 +3.4**
TBLG Delisi 9.61 349 P **Pn 22 45 34.5 +3.4**
DDEM Demirkent 9.64 334⇑ *i*P **Pn 22 45 34.6 +3.0**
DDEM Demirkent 9.64 334 *i*P **Pn 22 45 34.6 +3.0**
DAGI Agillar 9.75 335⇑ *i*P **Pn 22 45 36.3 +3.3**
DBAD Bademkaya 9.77 334 *e*P **Pn 22 45 36.5 +3.2**
DBAD Bademkaya 9.77 334 *e*P **Pn 22 45 36.5 +3.2**
EZC Erzincan 9.81 321 *e*P **Pn 22 45 34.4 +0.6**
EZC Erzincan 9.81 321 *e*P **Pn 22 45 34.4 +0.6**
ARTV Artvin 9.84 336⇑ *i*P **Pn 22 45 36.6 +2.4**
ARTV Artvin 9.84 336 *i*P **Pn 22 45 36.6 +2.4**
IKOO Kooshah 9.91 86 *e*Pn **Pn 22 45 36.0 +0.7**
IKOO Kooshah 9.91 86 *e*Pn **Pn 22 45 36.0 +0.7**
KMRS Kahramanmaras 9.97 304 *e*P **Pn 22 45 44.4 +8.3**
GOR Gori 9.98 346 P **Pn 22 45 39.4 +3.3**
ISFR Sfrayin 10.00 59 Pn **Pn 22 45 37.9 +1.4**
ISFR Sfrayin 10.00 59 *e*Pn **Pn 22 45 37.9 +1.4**
ISFR Sfrayin 10.00 59 *e*Pn **Pn 22 45 37.9 +1.4**
MMAI Mount Meron Ar 10.04 277 Pn **Pn 22 45 36.4 -0.6**
comp=Z,2.0nm,0.3s,baz=86,slow=16,SNR=15
MMAI Sn **Sn 22 47 27.7 -2.1**
comp=Z,9.7nm,0.3s,baz=66,slow=21,SNR=4.6
MMAI Lg 22 48 41.3
comp=Z,20nm,0.3s,baz=94,slow=38,SNR=5.8
DBOC Borcka 10.07 335⇑ *i*P **Pn 22 45 40.3 +2.9**
DBOC Borcka 10.07 335 *i*P **Pn 22 45 40.3 +2.9**
KELT Kelkit 10.15 323⇑ *i*P **Pn 22 45 41.0 +2.4**
KELT Kelkit 10.15 323 *i*P **Pn 22 45 41.0 +2.5**
BCA Borcka 10.17 335 *e*P **Pn 22 45 38.0 -0.8**
BCA Borcka 10.17 335 *e*P **Pn 22 45 38.0 -0.8**
LYLS 10.24 180 P **Pn 22 45 39.1 -0.7**
LYLS 10.24 180 P **Pn 22 45 39.1 -0.7**
IKRD Kardeh 10.27 61 Pn **Pn 22 45 51.2 +11**
IKRD Kardeh 10.27 61 *e*Pn **Pn 22 45 51.2 +11**
IKRD *e* 22 46 07.0
comp=Z,430nm,0.4s
NAZ Nazwa, Dubai 10.36 133 P **Pn 22 45 42.2 +0.7**
SNR=26
NAZ Nazwa, Dubai 10.36 133 P **Pn 22 45 42.2 +0.7**
SNR=26
IAKL Akhelmad 10.39 63 Pn **Pn 22 45 42.2 +0.4**
IAKL Akhelmad 10.39 63 *e*Pn **Pn 22 45 42.3 +0.5**
IAKL *e* 22 46 01.8
comp=Z,375nm,0.3s
ANDN Andirin 10.40 303 *e*P **Pn 22 45 46.1 +4.2**
ASUD Al Ashush, Dub 10.43 135 P **Pn 22 45 43.9 +1.6**
SNR=7.9
ASUD Al Ashush, Dub 10.43 135 P **Pn 22 45 43.9 +1.5**
SNR=7.9
IMON Monand 10.46 82 *e*Pn **Pn 22 45 43.9 +1.1**
IMON Monand 10.46 82 *e*Pn **Pn 22 45 43.9 +1.1**
ABKT Ailbek 10.49 55 Pn **Pn 22 45 45.0 +1.9**
comp=Z,265nm,1.0s,SNR=13
MACK Trabzon 10.51 327⇑ *i*P **Pn 22 45 45.5 +2.0**
MACK Trabzon 10.51 327 *i*P **Pn 22 45 45.5 +2.1**
IPAY Payeh 10.52 64 Pn **Pn 22 45 44.3 +0.8**
IPAY Payeh 10.52 64 *e*Pn **Pn 22 45 44.3 +0.8**
IPAY *e* 22 46 06.2
comp=Z,591nm,0.4s
IPAY Payeh 10.52 64 *e*Pn **Pn 22 45 44.3 +0.8**
CEYT Ceyhan 10.59 299 *e*P **Pn 22 45 55.6 +11**
MAK Makhachkala 10.63 1 *e*P **Pn 22 45 49.2 +4.2**
MAK *e* 22 47 49.2
MAK MLR MLR
comp=Z,3μm,13.0s
IEMG Emamgholi 10.63 58 Pn **Pn 22 45 45.8 +0.7**
IEMG Emamgholi 10.63 58 *e*Pn **Pn 22 45 45.8 +0.7**
IEMG Emamgholi 10.63 58 *e*Pn **Pn 22 45 45.8 +0.7**
IMOG Moghan 10.67 66 Pn **Pn 22 45 46.6 +1.0**
IMOG Moghan 10.67 66 *e*Pn **Pn 22 45 46.7 +1.1**
IMOG *e* 22 46 03.1
comp=Z,656nm,0.3s
IMOG Moghan 10.67 66 *e*Pn **Pn 22 45 46.7 +1.1**
SARI SarD1z-Kayseri 10.71 309 *e*P **Pn 22 45 53.0 +6.8**
KRTS Karatas 10.71 297 *e*P Px 22 46 01.6
KOZT Kozan 10.72 302 *e*P **Pn 22 45 55.6 +9.2**
HRFI Mount Harif 10.74 261 P **Pn 22 45 52.7 +6.1**
SUSE Susehri 10.76 320⇓ *i*P **Pn 22 45 48.4 +1.6**
SUSE Susehri 10.76 320 *i*P **Pn 22 45 48.4 +1.6**
HATD Hatta, Dubai 10.77 132 P **Pn 22 45 47.1 0.0**
SNR=11
HATD Hatta, Dubai 10.77 132 P **Pn 22 45 47.1 0.0**
SNR=11
ZEI Tsey 10.77 347 *e*P **Pn 22 45 51.3 +4.3**
ZEI pmax pmax
comp=Z,45nm,1.7s
ZEI MLR MLR
comp=Z,1μm,9.0s
ASHO Ashiyiah 10.83 132 P **Pn 22 45 47.0 -0.9**
SNR=32
ASHO Ashiyiah 10.83 132 P **Pn 22 45 47.0 -0.8**
SNR=32
ISRO Mashad 10.83 65 *e*Pn **Pn 22 45 48.5 +0.6**
ISRO Mashad 10.83 65 *e*Pn **Pn 22 45 48.5 +0.6**
EIL Elat 10.91 259 Pn **Pn 22 45 49.2 +0.3**
comp=Z,2.2nm,0.3s,baz=96,slow=6.7,SNR=14
EIL Lg 22 49 05.2
comp=Z,8.5nm,0.3s,baz=90,slow=20,SNR=4.5
EIL Elat 10.91 259 Pn **Pn 22 45 49.2 +0.2**
ESPY Espiye-Giresun 10.99 324 *e*P **Pn 22 45 50.3 +0.3**
ESPY Espiye-Giresun 10.99 324 *e*P **Pn 22 45 50.3 +0.3**
KARA Karaisali 11.20 299 *e*P **Pn 22 46 02.9 +10**
SVSK Karacayir 11.25 315 *e*P **Pn 22 45 56.3 +2.7**
SVSK Karacayir 11.25 315 *e*P **Pn 22 45 56.3 +2.7**
IMYA Miami 11.33 66 Pn **Pn 22 45 55.4 +0.7**
IMYA Miami 11.33 66 *e*Pn **Pn 22 45 55.4 +0.7**
IMYA *e* 22 46 18.8
comp=Z,570nm,0.3s
IMYA Miami 11.33 66 *e*Pn **Pn 22 45 55.4 +0.7**
RSDY Resadiye-TOKAT 11.37 318 *e*P **Pn 22 45 55.0 -0.3**
RSDY Resadiye-TOKAT 11.37 318 *e*P **Pn 22 45 55.0 -0.2**
GULE Gulek 11.41 299 *e*P **Pn 22 45 54.9 -0.9**
GULE Gulek 11.41 299 *e*P **Pn 22 45 54.9 -0.9**
ERBA Erbaa 11.89 318⇑ *i*P **Pn 22 46 04.9 +2.7**
ERBA Erbaa 11.89 318 *i*P **Pn 22 46 04.9 +2.6**
CSS Prodhromos 11.93 287 *e*Pn **Pn 22 46 04.1 +1.2**
CSS Sn **Sn 22 48 22.7 +6.7**
CSS Prodhromos 11.93 287 *e*Pn **Pn 22 46 04.1 +1.2**
AVNT Avonos 12.00 306 *e*P **Pn 22 46 07.0 +3.2**
AVNT Avonos 12.00 306 *e*P **Pn 22 46 07.0 +3.2**
ARQ Araqi 12.11 135 P **Pn 22 46 05.2 -0.2**
SNR=27
ARQ Araqi 12.11 135 P **Pn 22 46 05.2 -0.2**
SNR=27
KIV Kislovodsk 12.17 344α *i*P **Pn 22 46 09.0 +2.9**
KIV S **Sn 22 48 32.0 +10**
KIV pmax pmax
comp=Z,120nm,1.3s
KIV MLR MLR
comp=Z,500nm,14.0s
KIV Kislovodsk 12.17 344 *e*Pn **Pn 22 46 07.3 +1.3**
KIV Kislovodsk 12.17 344 Pn **Pn 22 46 09.1 +3.0**
comp=Z,417nm,1.2s,SNR=11
KIV Kislovodsk 12.17 344 *e*Pn **Pn 22 46 07.3 +1.2**
KIV Kislovodsk 12.17 344 *i*P **Pn 22 46 09.0 +2.9**
comp=Z,120nm,1.3s
KIV Kislovodsk 12.17 344 P **Pn 22 46 09.9 +3.9**
SNR=12
HOQ Hoqain 12.41 132 P **Pn 22 46 08.3 -1.2**
SNR=16
HOQ Hoqain 12.41 132 P **Pn 22 46 08.3 -1.2**
SNR=16
ERMK Ermenek 12.62 294⇓ *i*P **Pn 22 46 14.4 +2.1**
ERMK Ermenek 12.62 294 *i*P **Pn 22 46 14.4 +2.1**
SOC Sochi 12.73 334c *i*P **Pn 22 46 14.9 +1.2**
SOC *e* 22 48 35.7
SOC pmax pmax
comp=Z,102nm,1.1s
SOC MLR MLR
comp=Z,3μm,14.0s
SOC Sochi 12.73 334 *i*P **Pn 22 46 14.9 +1.2**
comp=Z,102nm,1.1s
SOC *e*S **Sn 22 48 35.7 +0.3**
comp=Z,3μm,14.0s
CDAG Cicekdag 12.74 308 *e*P **Pn 22 46 12.2 -1.8**
CORM Corum 12.87 311 *e*P **Pn 22 46 18.2 +2.5**
CORM Corum 12.87 311 *e*P **Pn 22 46 18.2 +2.5**
BSY Bisya 12.96 135 P **Pn 22 46 16.4 -0.7**
SNR=20
GAZI Gazipasa 12.98 292 *e*P **Pn 22 46 19.4 +2.1**
GAZI Gazipasa 12.98 292 *e*P **Pn 22 46 19.4 +2.1**
BSYO Bisya 13.00 135 P **Pn 22 46 16.4 -1.2**
SNR=20
SMDO Samad 13.26 131 P **Pn 22 46 20.2 -0.9**
SNR=18
SMDO Samad 13.26 131 P **Pn 22 46 20.2 -0.9**
SNR=18
BRTR Keskin Array B 13.28 308 Pn **Pn 22 46 20.3 -1.0**
comp=Z,0.2nm,0.3s,baz=125,slow=12,SNR=30
BRTR Lg 22 50 20.1
comp=Z,0.0nm,0.3s,baz=132,slow=28,SNR=2.6
BRTR Keskin Array B 13.28 308c*e*P **Pn 22 46 23.7 +2.4**
BRTR pmax pmax
comp=Z,28nm,1.1s
BRTR Keskin Array B 13.28 308 Pn **Pn 22 46 20.3 -1.0**
BRTR Keskin Array B 13.28 308 *e*P **Pn 22 46 23.7 +2.4**
comp=Z,28nm,1.1s
BBAL Bala 13.54 306⇑ *i*P **Pn 22 46 27.9 +3.0**
BBAL Bala 13.54 306 *i*P **Pn 22 46 27.9 +3.0**
JMDO Jabal Madar 13.79 133 P **Pn 22 46 26.8 -1.7**
SNR=17
KDHN Kadinhani 13.83 301⇑ *i*P **Pn 22 46 31.7 +2.9**
KDHN Kadinhani 13.83 301 *i*P **Pn 22 46 31.7 +2.9**
WBK Wadi Bani Khal 14.17 130 P **Pn 22 46 33.7 +0.2**
SNR=8.3
ANN Anapa 14.64 331c *i*P **Pn 22 46 40.7 +0.9**
ANN *e*S **Sn 22 49 26.6 +4.5**
ANN pmax pmax
comp=Z,83nm,1.2s
ANN MLR MLR
comp=N,2μm,16.0s
ANN MLR MLR
comp=E,2μm,16.0s
ANN MLR MLR
comp=Z,2μm,16.0s
BOLV Bolvadin 14.75 300 *e*P **Pn 22 46 43.7 +2.3**
AKAS Kas 15.13 290 *e*P **Pn 22 46 47.1 +0.5**
RBK Rabkut 16.02 155 P **Pn 22 46 56.3 -1.9**
SNR=7.2
SIM Simferopol' 16.25 325 *e*P **Pn 22 47 02.7 +1.7**
SIM *e*S **Sn 22 50 05.1 +3.8**
SIM pmax pmax
comp=Z,69nm,0.4s
SIM MLR MLR
comp=Z,700nm,16.6s
SIM Simferopol' 16.25 325 *e*P **Pn 22 47 02.7 +1.7**
comp=Z,69nm,0.4s
AKHS Akhisar 17.12 298⇑ *i*P **Pn 22 47 13.0 +0.9**
AKHS Akhisar 17.12 298 *i*P **Pn 22 47 13.0 +0.9**
BALY Balya 17.53 300 *e*P **Pn 22 47 15.1 -2.1**
BLCB Balcova 17.58 296 P **Pn 22 47 18.1 +0.3**
BLCB Balcova 17.58 296 P **Pn 22 47 18.1 +0.3**
KBL Kabul 18.29 77⇑ *i*P **Pn 22 47 27.3 +0.6**
KBL *e* 22 50 49.2
KBL pmax pmax
comp=Z,47nm,1.0s
KBL Kabul 18.29 77⇑ *i*P **Pn 22 47 27.3 +0.6**
comp=Z,47nm,1.0s
KBL *e*Sn **Sn 22 50 49.2 -1.8**
KBL Kabul 18.29 77 *i*P **Pn 22 47 27.3 +0.6**
comp=Z,47nm,1.0s
KBL *e*Sn **Sn 22 50 49.2 -1.7**
CHOS Chios island 18.33 295 P **Pn 22 47 27.6 +0.5**
CHOS Chios island 18.33 295 P **Pn 22 47 27.6 +0.5**
LAST Lasithi 18.36 285 P **Pn 22 47 28.6 +1.2**
LAST Lasithi 18.36 285 P **Pn 22 47 28.6 +1.2**
PRK Paraskevi 18.38 298 P **Pn 22 47 28.1 +0.4**
PRK Paraskevi 18.38 298 P **Pn 22 47 28.1 +0.4**
LBOS 18.46 186 *e*P **Pn 22 47 30.2 +1.4**
APE Apeiranthos 18.50 291⇑ P **Pn 22 47 29.5 +0.4**
APE Apeiranthos 18.50 291 P **Pn 22 47 29.3 +0.2**
APE Apeiranthos 18.50 291⇑ *i*P **Pn 22 47 29.5 +0.4**
APE Apeiranthos 18.50 291 P **Pn 22 47 29.5 +0.4**
THR3 Thira Island, 18.52 289 P **Pn 22 47 29.2 -0.2**
THR3 Thira Island, 18.52 289 P **Pn 22 47 29.2 -0.2**
THR5 Thira Island, 18.56 289 P **Pn 22 47 30.1 +0.2**
THR5 Thira Island, 18.56 289 P **Pn 22 47 30.1 +0.2**
PSN Preselentsi 18.80 313 P **Pn 22 47 33.1 +0.3**
PSN Preselentsi 18.80 313 P **Pn 22 47 33.1 +0.3**
SIVA Sivas 18.90 284 P **Pn 22 47 34.1 +0.1**
SIVA Sivas 18.90 284 P **Pn 22 47 34.1 +0.1**
ALN Alexandroupoli 19.05 303 *e*P **Pn 22 47 36.2 +0.4**
ALN Alexandroupoli 19.05 303 P **Pn 22 47 35.9 +0.1**
ALN Alexandroupoli 19.05 303 P **Pn 22 47 35.9 +0.1**
PRD Provadia 19.06 310 P **Pn 22 47 36.2 +0.2**
PRD Provadia 19.06 310 P **Pn 22 47 36.2 +0.2**
TIRR Tirgusor 19.07 315⇑ P **Pn 22 47 35.0 -1.1**
TIRR Tirgusor 19.07 315⇑ *i*P **Pn 22 47 35.0 -1.1**
TIRR Tirgusor 19.07 315 P **Pn 22 47 35.0 -1.1**
VRHR Novokhopersk 19.22 349 *e*P **Pn 22 47 36.2 -1.6**
VRHR *e*S **Sn 22 51 08.3 -4.8**
VRHR pmax pmax
comp=Z,90nm,0.6s
VRHR pmax pmax
comp=N,70nm,1.3s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR smax
comp=E,130nm,1.0s
VRHR smax
comp=Z,10.0nm,0.6s
VRHR smax
comp=N,70nm,0.8s
VRHR Novokhopersk 19.22 349 *e*P **Pn 22 47 36.2 -1.6**
comp=N,70nm,1.3s
TLCR 19.25 317⇑ P **Pn 22 47 38.2 +0.1**
TLCR 19.25 317⇑ *i*P **Pn 22 47 38.2 +0.1**
TLCR 19.25 317 P **Pn 22 47 38.2 +0.1**
LIA Limnos Island 19.37 299 P **Pn 22 47 39.5 -0.1**
LIA Limnos Island 19.37 299 P **Pn 22 47 39.5 -0.1**
AB31 Akbulak array 19.40 26 P **Pn 22 47 38.0 -1.9**
AB31 pmax pmax
comp=Z,12nm,0.4s
AB31 Akbulak array 19.40 26 P **Pn 22 47 38.0 -1.9**
comp=Z,12nm,0.4s
ABKAR Akbulak array 19.40 26⇑ *e*P **Pn 22 47 37.9 -2.1**
ABKAR *e*S **Sn 22 51 11.5 -6.0**
ABKAR Akbulak array 19.40 26⇑ *e*P **Pn 22 47 37.9 -2.0**
VAM Vamos 19.41 285 *e*P **Pn 22 47 40.2 0.0**
VORD Divnogorie 19.55 345 *e*P **Pn 22 47 38.7 -3.0**
VORD pmax pmax
comp=Z,130nm,1.1s
VORD pmax pmax
comp=N,230nm,0.9s
VORD pmax pmax
comp=E,120nm,1.6s
VORD Divnogorie 19.55 345 *e*P **Pn 22 47 38.7 -3.0**
comp=E,230nm,0.9s
CFR Carcaliu 19.64 316⇑ P **Pn 22 47 41.3 -1.5**
CFR Carcaliu 19.64 316⇑ *i*P **Pn 22 47 41.3 -1.5**
CFR Carcaliu 19.64 316 P **Pn 22 47 41.3 -1.5**
KARN Karanos 19.64 285 P **Pn 22 47 42.2 -0.8**
KARN Karanos 19.64 285 P **Pn 22 47 42.2 -0.8**
KDZ Kurdzhali 19.76 304 P **Pn 22 47 43.7 -0.6**
KDZ Kurdzhali 19.76 304 P **Pn 22 47 43.7 -0.6**
AKTK Aktyubinsk 19.77 21 P **Pn 22 47 41.1 -3.2**
AKTK S **Sn 22 51 19.2 -7.2**
AKTK Aktyubinsk 19.77 21 P **Pn 22 47 41.2 -3.2**
comp=E,4.0nm,0.3s
AKTO Aktyubinsk 19.77 21 P **Pn 22 47 41.1 -3.2**
comp=E,4.3nm,0.3s,baz=202,slow=12,SNR=39
AKTO S **Sn 22 51 19.2 -7.2**
comp=E,0.2nm,0.3s,baz=168,slow=20,SNR=2.0
AKTO Aktyubinsk 19.77 21 P **Pn 22 47 41.2 -3.2**
AKTO S **Sn 22 51 19.2 -7.2**
AKTO pmax pmax
comp=Z,4.0nm,0.3s
LTBQ Tobruq 19.77 276 *i*P **Pn 22 47 42.9 -1.7**
comp=Z,160nm,1.3s,SNR=38
LTBQ *e*S **Sn 22 51 26.5 -0.3**
SNR=45
VSR Storozhevoye 19.81 345c *i*P **Pn 22 47 41.0 -3.8**
VSR *e*S **Sn 22 51 20.7 -6.5**
VSR pmax pmax
comp=Z,100nm,0.5s
VSR pmax pmax
comp=N,140nm,1.0s
VSR pmax pmax
comp=E,60nm,1.0s
VSR smax
comp=E,240nm,1.5s
VSR smax
comp=Z,70nm,2.7s
VSR smax
comp=N,170nm,1.0s
VSR MLR MLR
comp=Z,790nm,11.0s
VSR MLR MLR
comp=N,570nm,13.0s
VSR MLR MLR
comp=E,810nm,17.0s
VSR Storozhevoye 19.81 345 *i*P **Pn 22 47 41.0 -3.8**
comp=E,100nm,0.5s
DIM Dimitrovgrad 19.82 306 P **Pn 22 47 44.3 -0.7**
DIM Dimitrovgrad 19.82 306 P **Pn 22 47 44.3 -0.7**
PTL Penteli 19.96 293 *e*P **Pn 22 47 46.4 -0.3**
VLY Voula,Athens 19.98 293 *e*P **Pn 22 47 46.1 -0.9**
ATHU Athens Univers 20.01 293 P **P 22 47 47.8 +2.3**
ATHU Athens Univers 20.01 293 P **P 22 47 47.8 +2.3**
SZH Strazhica 20.05 309 P **P 22 47 46.5 +0.5**
SZH Strazhica 20.05 309 P **P 22 47 46.5 +0.5**
ATH Athens Observa 20.06 293 *e*P **P 22 47 47.3 +1.2**
AOS Alonnisos 20.16 296 P **P 22 47 48.4 +1.2**
AOS Alonnisos 20.16 296 P **P 22 47 48.4 +1.2**
KAVA Kavala 20.18 302 P **P 22 47 47.3 -0.1**
KAVA Kavala 20.18 302 P **P 22 47 47.3 -0.1**
NAIG Nisos Aigina 20.21 292 *e*P **P 22 47 47.7 0.0**
RZN Rozhen 20.26 304 P **P 22 47 49.0 +0.7**
RZN Rozhen 20.26 304 P **P 22 47 49.0 +0.7**
VOR Voronezh 20.28 345 *e*P **P 22 47 50.0 +1.6**
VOR *e*S **S 22 51 31.0 -4.7**
VOR pmax pmax
comp=Z,500nm,1.0s
VOR Voronezh 20.28 345 *e*P **P 22 47 50.0 +1.6**
comp=Z,500nm,1.0s
VOR *e*S **S 22 51 31.0 -4.7**
KIS Kishinev 20.35 321 *e*P **P 22 47 47.0 -2.2**
KIS *e*S **S 22 51 34.0 -3.1**
KIS LRM 22 59 40.0
comp=Z,700nm,12.0s
KIS Kishinev 20.35 321 *e*P **P 22 47 47.0 -2.2**
KIS *e*S **S 22 51 34.0 -3.1**
KIS *i* 22 51 50.0
KIS MLR MLR
comp=E,600nm,13.0s
KIS MLR MLR
comp=Z,800nm,13.0s,MS4.3
KIS MLR MLR
comp=Z,700nm,12.0s
KIS Kishinev 20.35 321 P **P 22 47 48.5 -0.7**
KIS Kishinev 20.35 321⇑ *i*P **P 22 47 53.7 +4.5**
KIS Kishinev 20.35 321 *e*P **P 22 47 47.0 -2.2**
KIS *e*S **S 22 51 34.0 -3.1**
DID Didima 20.37 291 *e*P **P 22 47 49.3 -0.2**
DID Didima 20.37 291 P **P 22 47 49.1 -0.4**
DID Didima 20.37 291 P **P 22 47 49.1 -0.4**
OUR Ouranopolis 20.37 300 P **P 22 47 49.3 -0.2**
OUR Ouranopolis 20.37 300 P **P 22 47 49.3 -0.2**
KYTH Kithira 20.41 288 *e*P **P 22 47 49.5 -0.4**
PLD Plovdiv 20.42 305 P **P 22 47 48.8 -1.2**
PLD Plovdiv 20.42 305 P **P 22 47 50.4 +0.4**
PLD Plovdiv 20.42 305 P **P 22 47 48.8 -1.2**
PVL Pavlikeni 20.42 308 P **P 22 47 51.5 +1.5**
PVL Pavlikeni 20.42 308 P **P 22 47 51.5 +1.5**
GRER 20.43 316⇑ *i*P **P 22 47 52.6 +2.5**
GRER 20.43 316⇑ *i*P **P 22 47 52.6 +2.5**
PETR 20.47 317⇓ *i*P **P 22 47 52.5 +2.0**
PETR 20.47 317⇓ *i*P **P 22 47 52.5 +2.0**
PAIG Paliouri 20.49 298 P **P 22 47 51.0 +0.2**
PAIG Paliouri 20.49 298 P **P 22 47 51.0 +0.2**
SULR 20.50 313 P **P 22 47 50.8 -0.1**
SULR 20.50 313⇑ *i*P **P 22 47 51.2 +0.3**
SULR 20.50 313 P **P 22 47 50.8 -0.1**
VLI Veliai 20.52 289 *e*P **P 22 47 50.7 -0.4**
ZIMR 20.59 310⇑ P **P 22 47 53.2 +1.4**
ZIMR 20.59 310⇑ *i*P **P 22 47 53.2 +1.4**
THW Thamme Wali 20.61 82 P **P 22 47 51.4 -0.8**
LTK Loutraki 20.65 293 *e*P **P 22 47 52.8 +0.2**
LTK Loutraki 20.65 293 P **P 22 47 52.4 -0.2**
LTK Loutraki 20.65 293 P **P 22 47 52.4 -0.2**
CEP Cherat 20.68 79 P **P 22 47 52.3 -0.6**
NEO Neokhori 20.69 296 *e*P **P 22 47 54.1 +1.2**
ATAL Atalanti 20.72 295 P **P 22 47 54.1 +0.8**
ATAL Atalanti 20.72 295 P **P 22 47 54.1 +0.8**
LKR Lokris 20.73 295 *e*P **P 22 47 54.1 +0.7**
LKR Lokris 20.73 295 P **P 22 47 53.8 +0.4**
LKR Lokris 20.73 295 P **P 22 47 53.8 +0.4**
NVR Nevrokopi 20.75 302 *e*P **P 22 47 54.3 +0.7**
PLG Polygyros 20.78 299 *e*P **P 22 47 54.8 +0.9**
PLG Polygyros 20.78 299 P **P 22 47 54.3 +0.4**
PLG Polygyros 20.78 299 P **P 22 47 54.3 +0.4**
VRI Vrincioaia 20.84 316⇑ P **P 22 47 54.5 0.0**
VRI Vrincioaia 20.84 316⇑ *i*P **P 22 47 54.5 0.0**
VRI Vrincioaia 20.84 316 P **P 22 47 54.5 0.0**
SRS Serrai 20.88 302 P **P 22 47 55.2 +0.2**
SRS Serrai 20.88 302 P **P 22 47 55.2 +0.2**

PLOR Plostina 20.88 316 ⇑P P 22 47 55.5 +0.6
PLOR Plostina 20.88 316⇑*i*P P 22 47 55.5 +0.6
PLOR Plostina 20.88 316 P P 22 47 55.5 +0.6
MMB Musomiste 20.93 303 *i* P P 22 47 55.5 0.0
MMB Musomiste 20.93 303 *i* P P 22 47 55.5 0.0
PGB Panagyurishte 20.95 306 P P 22 47 56.8 +1.1
PGB Panagyurishte 20.95 306 P P 22 47 56.8 +1.1
SOH Sokhos 20.96 301 *e*P P 22 47 57.0 +1.1
SOH Sokhos 20.96 301 P P 22 47 56.7 +0.8
SOH Sokhos 20.96 301 P P 22 47 56.7 +0.8
VLX Vlachokerasia 21.03 291 *e*P P 22 47 56.4 -0.3
VLX Vlachokerasia 21.03 291 P P 22 47 55.8 -0.9
VLX Vlachokerasia 21.03 291 P P 22 47 55.8 -0.9
DSF Desfina 21.06 294 P P 22 47 56.7 -0.2
DSF Desfina 21.06 294 P P 22 47 56.7 -0.2
ATD Arta Tunnel 21.09 192 P P 22 47 59.2 +1.8
comp=Z,7.8nm,0.9s,mb4.0,baz=6.2,slow=4.3,SNR=5.1
ATD S S 22 51 57.9 +5.7
comp=Z,3.3nm,0.8s,baz=107,slow=19,SNR=1.6
ATD Arta Tunnel 21.09 192 P P 22 47 59.2 +1.8
ATD S S 22 51 57.9 +5.7
ATD Arta Tunnel 21.09 192 P P 22 47 59.2 +1.8
HORT Hortiatis 21.09 300 P P 22 47 57.9 +0.6
HORT Hortiatis 21.09 300 P P 22 47 57.9 +0.6
MLR Muntele Rosu 21.11 315 ⇑P P 22 47 58.4 +1.0
MLR Muntele Rosu 21.11 315⇑*i*P P 22 47 58.4 +1.0
MLR Muntele Rosu 21.11 315 P P 22 47 58.4 +1.0
GUR Goura 21.13 292 *e*P P 22 47 56.8 -0.9
GUR Goura 21.13 292 P P 22 47 56.8 -0.9
GUR Goura 21.13 292 P P 22 47 56.8 -0.9
IAS Iasi 21.14 320⇑*i*P P 22 48 01.5 +3.7
IAS Iasi 21.14 320 P P 22 47 57.7 -0.1
THE Thessaloniki 21.20 300 P P 22 47 58.7 +0.3
THE Thessaloniki 21.20 300 P P 22 47 58.7 +0.3
KK31 Karatay Array 21.23 53 *i* P P 22 47 57.8 -0.9
KK31 pmax pmax
comp=Z,39nm,0.7s,mb4.8
KK31 Karatay Array 21.23 53 *i* P P 22 47 57.8 -0.9
comp=Z,39nm,0.7s,mb4.8
KKAR Karatay Array 21.23 53 *e*P P 22 47 58.2 -0.6
comp=Z,0.4nm,0.7s
KKAR Karatay Array 21.23 53 *e*P P 22 47 58.2 -0.5
KALE Kalithea 21.35 294 P P 22 48 00.0 -0.1
KALE Kalithea 21.35 294 P P 22 48 00.0 -0.1
ITM Ithomi 21.37 290 *e*P P 22 47 59.9 -0.4
ITM Ithomi 21.37 290 P P 22 47 59.6 -0.7
ITM Ithomi 21.37 290 P P 22 47 59.6 -0.7
KNT Kendrikon 21.39 301 P P 22 48 00.3 -0.2
KNT Kendrikon 21.39 301 P P 22 48 00.5 0.0
TRIZ Trizonia 21.40 293 P P 22 47 59.9 -0.8
TRIZ Trizonia 21.40 293 P P 22 47 59.9 -0.8
LIT Litokhoron 21.42 298 *e*P P 22 48 01.2 +0.4
LIT Litokhoron 21.42 298 P P 22 48 00.9 +0.1
LIT Litokhoron 21.42 298 P P 22 48 01.3 +0.5
LAKA Lakka 21.46 293 P P 22 48 00.5 -0.7
LAKA Lakka 21.46 293 P P 22 48 00.5 -0.7
KKB Krupnik 21.47 303 P P 22 48 00.7 -0.7
KKB Krupnik 21.47 303 P P 22 48 00.7 -0.7
PYL PYLOS 21.49 289 *e*P P 22 48 00.4 -1.2
PYL PYLOS 21.49 289 P P 22 48 00.0 -1.6
PYL PYLOS 21.49 289 P P 22 48 00.0 -1.6
EFP Efpalio 21.54 294 *e*P P 22 48 01.6 -0.5
EFP Efpalio 21.54 294 P P 22 48 01.8 -0.3
EFP Efpalio 21.54 294 P P 22 48 01.8 -0.3
UPR University Cam 21.61 293 *e*P P 22 48 02.8 -0.1
VOIR 21.62 314⇓*i*P P 22 48 04.2 +1.3
VOIR 21.62 314 P P 22 48 03.8 +0.9
VTS Vitosha 21.62 305 P P 22 48 02.9 -0.1
VTS Vitosha 21.62 305⇑*i*P P 22 48 03.1 +0.1
VTS Vitosha 21.62 305 P P 22 48 03.2 +0.2
VTS Vitosha 21.62 305 P P 22 48 03.1 +0.1
THL Klokotos Trika 21.66 297 *e*P P 22 48 01.7 -1.7
THL Klokotos Trika 21.66 297 P P 22 48 03.1 -0.3
THL Klokotos Trika 21.66 297 P P 22 48 03.1 -0.3
VAY Valandovo 21.68 301 P P 22 48 02.4 -1.1
VAY Valandovo 21.68 301 *e*P P 22 48 02.3 -1.2
VAY Valandovo 21.68 301 P P 22 48 03.9 +0.4
DOPR Dopca 21.69 315⇓*i*P P 22 48 05.1 +1.5
DOPR Dopca 21.69 315⇓*i*P P 22 48 05.1 +1.5
GRG Griva 21.70 300 P P 22 48 03.5 -0.3
GRG Griva 21.70 300 P P 22 48 03.5 -0.3
CHCP Chirah Chowk 21.82 79 P P 22 48 05.2 +0.1
RLS Riolos of Patr 21.83 292 *e*P P 22 48 03.8 -1.5
CRAR CRAIOVA 21.90 310 P P 22 48 06.8 +0.9
CRAR CRAIOVA 21.90 310 P P 22 48 06.8 +0.9
KZN Kozani 22.00 298 *e*P P 22 48 06.8 -0.3
KZN Kozani 22.00 298 P P 22 48 06.7 -0.4
KZN Kozani 22.00 298 P P 22 48 06.7 -0.4
DESE Dese 22.25 200 *e*P P 22 48 14.4 +4.5
DESE *e*S S 22 52 24.1 +9.2
KFL Anninata 22.37 292 P P 22 48 09.4 -1.6
KFL Anninata 22.37 292 P P 22 48 09.4 -1.6
FNA Florina 22.41 299 P P 22 48 10.9 -0.5
FNA Florina 22.41 299 P P 22 48 10.9 -0.5
BIA Bitola 22.50 300 P P 22 48 12.5 +0.1
BIA Bitola 22.50 300 *e*P P 22 48 11.6 -0.8
BIA Bitola 22.50 300 P P 22 48 12.5 +0.1
VLS Valsamata 22.53 292 *e*P P 22 48 10.9 -1.9
VLS Valsamata 22.53 292 P P 22 48 10.8 -1.9
VLS Valsamata 22.53 292 P P 22 48 10.8 -1.9
JAN Janina 22.56 296 *e*P P 22 48 12.9 -0.1
NEST Nestorio 22.56 298 P P 22 48 12.4 -0.6
NEST Nestorio 22.56 298 P P 22 48 12.4 -0.6
KMPD K-Podol'skiy 22.57 322 P P 22 48 11.0 -2.0
KRUS Krusevo 22.64 301 *e*P P 22 48 12.8 -1.1
BARS Barje 22.67 305⇑*i*P P 22 48 13.2 -0.9
LKFR Kufra 22.68 255 *i* P P 22 48 13.9 -0.5
comp=Z,96nm,1.3s,mb5.1,SNR=34
BURAR Bucovina Array 22.68 319 ⇑P P 22 48 14.2 0.0
BURAR Bucovina Array 22.68 319⇑*i*P P 22 48 14.2 0.0
BURAR Bucovina Array 22.68 319⇑*i*P P 22 48 14.2 0.0
AKASG Malin Array Be 22.70 329 P P 22 48 11.9 -2.5
comp=Z,27nm,0.6s,mb4.8,baz=137,slow=9.3,SNR=41
AKASG S S 22 52 16.8 -6.3
comp=Z,6.5nm,0.9s,baz=136,slow=20,SNR=6.7
AKASG Malin Array Be 22.70 329 P P 22 48 11.9 -2.5
AKASG S S 22 52 16.8 -6.3
AKASG pmax pmax
comp=Z,27nm,0.6s
AKASG smax
comp=N,7.0nm,0.9s
BUR08 Bucovina Ar. S 22.70 319 *e*P P 22 48 14.5 +0.1
BUR08 *e*S S 22 52 16.4 -6.8
BUR08 Bucovina Ar. S 22.70 319 *e*P P 22 48 14.5 0.0
KIEV Kiev 22.70 329⇑*e*P P 22 48 12.6 -1.8
KIEV 22 52 10.4
KIEV S S 22 52 20.5 -2.6
KIEV pmax pmax
comp=Z,67nm,0.6s,mb5.2
KIEV Kiev 22.70 329⇑*e*P P 22 48 12.6 -1.8
comp=Z,67nm,0.6s,mb5.2
KIEV PcP PcP 22 52 10.4 +3.9
KIEV S S 22 52 20.5 -2.6
KIEV Kiev 22.70 329 *e*P P 22 48 12.6 -1.8
comp=Z,67nm,0.6s,mb5.2
KIEV S S 22 52 20.5 -2.6
KBN Korca 22.80 299 *i* P P 22 48 14.9 -0.7
KBN Korca 22.80 299 *i* P P 22 48 14.9 -0.7
BOLS Boljevac 22.93 307⇑*i*P P 22 48 15.9 -0.9
GZR Gura Zlata 23.02 312 P P 22 48 17.0 -0.8
GZR Gura Zlata 23.02 312⇑*i*P P 22 48 16.6 -1.2
GZR Gura Zlata 23.02 312 P P 22 48 17.0 -0.8
LJBD Adjabya 23.09 274 *i* P P 22 48 17.5 -1.2
comp=Z,509nm,1.3s,mb5.8,SNR=33
AML Almayashu 23.12 57 P P 22 48 19.2 +0.3
SNR=25
AML Almayashu 23.12 57 *e*P P 22 48 19.2 +0.3
comp=Z,16nm,0.4s,mb4.8
AML Almayashu 23.12 57 *e*P P 22 48 19.2 +0.3
comp=Z,16nm,0.4s,mb4.8
SRN Sarande 23.24 297 *i* P P 22 48 14.6 -5.7
EKS2 Erkin-Say 23.33 56 P P 22 48 21.4 +0.3
SNR=17
EKS2 Erkin-Say 23.33 56⇑*e*P P 22 48 21.5 +0.3
comp=Z,17nm,0.7s,mb4.6
EKS2 *e*S S 22 52 32.8 -0.7
EKS2 Erkin-Say 23.33 56⇑*e*P P 22 48 21.5 +0.4
comp=Z,17nm,0.7s,mb4.6
EKS2 *e*S S 22 52 32.8 -0.7
KEK Kerkira 23.37 296 *e*P P 22 48 20.1 -1.5
KEK Kerkira 23.37 296 P P 22 48 19.6 -2.0
KEK Kerkira 23.37 296 P P 22 48 19.6 -2.0
SVIS Svilajnac 23.58 308⇑*i*P P 22 48 23.8 +0.1
TIR Tirane 23.65 300 *e*P P 22 48 23.9 -0.4
TIR S S 22 52 40.1 +1.4
TIR pmax pmax
comp=Z,165nm,1.0s,mb5.4
TIR Tirane 23.65 300 *e*P P 22 48 23.9 -0.5
comp=Z,165nm,1.0s,mb5.4
TIR S S 22 52 40.1 +1.4
TIR Tirane 23.65 300 *e*P P 22 48 23.9 -0.4
comp=Z,165nm,1.0s,mb5.4
BMR Baia Mare 23.69 317⇑*i*P P 22 48 25.4 +0.8
BMR Baia Mare 23.69 317 P P 22 48 25.3 +0.7
DRGR 23.70 315⇑P P 22 48 24.8 0.0
DRGR 23.70 315⇑*i*P P 22 48 24.8 0.0
DRGR 23.70 315 P P 22 48 24.8 0.0
UCH Uchtor 23.73 58 *e*P P 22 48 25.0 -0.1
comp=Z,6.8nm,0.8s,mb4.1
UCH Uchtor 23.73 58 *e*P P 22 48 25.0 -0.1
comp=Z,6.8nm,0.8s,mb4.1
BCI Bajram Curri 23.76 303 *i* P P 22 48 23.3 -2.1
BCI Bajram Curri 23.76 303 *i* P P 22 48 23.3 -2.1
PUK Puka 23.80 302 *i* P P 22 48 24.6 -1.2
PUK Puka 23.80 302 *i* P P 22 48 24.6 -1.1
AAK Ala-Archa 23.83 57 P P 22 48 28.0 +2.1
SNR=6.9
AAK Ala-Archa 23.83 57 P P 22 48 26.0 0.0
comp=Z,3.9nm,0.4s,mb4.2,baz=225,slow=5.7,SNR=11
AAK PcP PcP 22 52 09.1 +0.1
comp=Z,3.9nm,0.6s,baz=117,slow=1.2,SNR=3.7
AAK S S 22 52 41.7 +0.1
comp=Z,1.0nm,0.3s,baz=153,slow=16,SNR=1.7
AAK Ala-Archa 23.83 57 P P 22 48 26.0 0.0
AAK 22 52 09.1
AAK S S 22 52 41.7 +0.1
AAK smax
comp=N,1.0nm,0.3s
AAK Ala-Archa 23.83 57 *e*P P 22 48 25.3 -0.7
comp=N,77nm,1.8s,mb4.8
AAK Ala-Archa 23.83 57 P P 22 48 27.9 +1.9
comp=N,80nm,1.0s,mb5.1,SNR=6.4
AAK Ala-Archa 23.83 57 *e*P P 22 48 25.3 -0.7
comp=N,77nm,1.8s,mb4.8
AAK Ala-Archa 23.83 57 PcP PcP 22 52 09.1 +0.1
AAK Ala-Archa 23.83 57 P P 22 48 27.1 +1.2
SNR=12
BZS Buzias 23.85 311 ⇓P P 22 48 25.2 -0.9
BZS Buzias 23.85 311⇓*i*P P 22 48 25.2 -0.9
BZS Buzias 23.85 311 P P 22 48 25.2 -0.9
OBN Obninsk 24.01 345⇑*e*P P 22 48 26.4 -1.1
OBN *i* 22 48 31.5
OBN *i* *PP 22 48 39.0
OBN *i* S S 22 52 43.4 -0.9
OBN SS 22 53 36.0
OBN pmax pmax
comp=Z,306nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,900nm,16.0s,MS4.3
OBN Obninsk 24.01 345 *e*P P 22 48 26.8 -0.7
comp=Z,590nm,1.8s,mb5.7
OBN *e*S S 22 52 41.7 -2.6
OBN Obninsk 24.01 345 P P 22 48 26.9 -0.6
comp=Z,794nm,1.4s,mb6.0,SNR=6.5
OBN Obninsk 24.01 345 *e*P P 22 48 26.4 -1.1
comp=Z,306nm,1.7s,mb5.5
OBN *e*S S 22 52 41.7 -2.6
USP Ospenovka 24.02 55 P P 22 48 28.1 +0.4
SNR=50
IVA Berane 24.03 304 P P 22 48 28.0 +0.2
IVA Berane 24.03 304 P P 22 48 28.0 +0.2
TRUS Trudelj 24.11 307⇑*i*P P 22 48 27.1 -1.4
CHMS Chumysh 24.12 56 P P 22 48 28.9 +0.3
SNR=18
TIM Timisoara 24.15 311 P P 22 48 30.4 +1.5
TIM Timisoara 24.15 311⇓*i*P P 22 48 31.0 +2.1
TIM Timisoara 24.15 311 P P 22 48 30.4 +1.5
KBK Karagaybulak 24.16 57 P P 22 48 30.3 +1.4
SNR=20
ULC Ulcinj 24.24 301 P P 22 48 29.0 -0.8
KSH Kashi 24.25 65 *e*P P 22 48 27.3 -2.6
KSH *e*pP 22 48 41.6
KSH *e*PP 22 49 02.7
KSH *e*S S 22 52 35.9 -13
KSH *e*sS sS 22 52 59.7 +6.2
KSH pmax pmax
comp=Z,34nm,1.0s,mb4.7
KSH pmax pmax
comp=Z,640nm,2.6s,mb5.6
KSH LR LR
comp=N,4μm,11.2s,MS5.3
KSH LR LR
comp=E,5μm,10.8s,MS5.3
KSH LR LR
comp=Z,4μm,17.6s
DIVS Divibare 24.34 307 P P 22 48 29.9 -0.8
DIVS Divibare 24.34 307 P P 22 48 29.9 -0.8
TTG Podgorica 24.36 302 P P 22 48 30.0 -0.8
TTG Podgorica 24.36 302 P P 22 48 30.0 -0.8
MOS Moscow 24.38 347 *e*P P 22 48 27.7 -3.1
MOS *e*PPP 22 49 07.0
MOS *e*S S 22 52 45.5 -4.7
MOS *e*SS 22 53 34.6
MOS *e*SSS 22 53 53.1
MOS pmax pmax
comp=Z,1μm,2.1s,mb5.9
MOS pmax pmax
comp=Z,403nm,1.5s,mb5.6
MOS smax
comp=E,500nm,2.1s
MOS smax
comp=N,700nm,2.3s
TRPA Tarpa 24.48 317⇑*i*P P 22 48 32.3 +0.5
TRPA Tarpa 24.48 317⇑*i*P P 22 48 32.3 +0.5
AAE Adis Abeba 24.48 201 *e*P P 22 48 36.5 +4.3
AJM Ajmer 24.50 97 *e*PKP P 22 48 33.0 +0.8
PLE Pljevlja 24.51 305 P P 22 48 33.0 +0.8
BUM Brajici-Budva 24.58 302 P P 22 48 33.0 +0.2
BUM Brajici-Budva 24.58 302 P P 22 48 33.0 +0.2
LVV L'vov 24.60 322 *e*P P 22 48 32.8 -0.1
BBLS Lazići 24.67 306⇑*i*P P 22 48 33.6 0.0
TKM2 Tokmak 2 24.69 57 P P 22 48 34.7 +0.9
SNR=14
TKM2 Tokmak 2 24.69 57 *e*P P 22 48 34.0 +0.2
TKM2 22 52 10.3
TKM2 pmax pmax
comp=Z,29nm,0.7s,mb4.9
TKM2 Tokmak 2 24.69 57 *e*P P 22 48 34.0 +0.2
comp=Z,29nm,0.7s,mb4.9
TKM2 PcP PcP 22 52 10.3 -0.5
TKM2 Tokmak 2 24.69 57 *e*P P 22 48 34.0 +0.2
comp=Z,29nm,0.7s,mb4.9
TKM2 Tokmak 2 24.69 57 PcP PcP 22 52 10.3 -0.5
UPM Unac-Piva 24.82 304 P P 22 48 35.0 0.0
UPM Unac-Piva 24.82 304 P P 22 48 35.0 0.0
FRGS Fruska Gora 24.84 309⇑*i*P P 22 48 35.6 +0.4
UZH Uzhgorod 24.88 318 *e*P P 22 48 36.1 +0.6
UZH *e* 22 48 45.5
UZH *e* 22 48 50.3
UZH *e* 22 49 19.9
UZH *e* 22 52 17.1
UZH *e*S S 22 52 54.1 -4.3
UZH *e* 22 54 15.3
UZH MLR MLR
comp=N,400nm,13.5s,MS4.4
UZH MLR MLR
comp=E,800nm,13.5s,MS4.4
UZH Uzhgorod 24.88 318 *i* P P 22 48 36.7 +1.2
UZH Uzhgorod 24.88 318 *e*P P 22 48 36.1 +0.6
UZH *e*S S 22 52 54.1 -4.3
HCY Herceg Novi 24.91 302 P P 22 48 35.0 -0.8
KHET Khetri 24.98 92 *e*PKP P 22 48 36.6 0.0
KHET AMb AMB 22 48 42.2
comp=Z,9.6nm,0.5s,mb4.6
KOLS Kolonicke sedl 25.05 319 *e*P P 22 48 38.5 +1.5
KOLS pmax pmax
comp=Z,150nm,1.3s,mb5.4
KOLS Kolonicke sedl 25.05 319 *e*P P 22 48 38.5 +1.5
comp=Z,150nm,1.3s,mb5.4
KOLS Kolonicke sedl 25.05 319 *e*P P 22 48 38.5 +1.5
KOLS Kolonicke sedl 25.05 319 *e*P P 22 48 38.5 +1.5
comp=Z,150nm,1.3s,mb5.4
SDNR Sundarnagar 25.18 84 *e*PKP P 22 48 38.5 +0.1
KWP Kalwaria Pacla 25.19 321 *i* P P 22 48 39.4 +1.1
KWP *e*S S 22 53 11.2 +7.8
KWP Kalwaria Pacla 25.19 321 ⇑P P 22 48 39.2 +0.9
KWP Kalwaria Pacla 25.19 321⇑*e*P P 22 48 39.4 +1.0
comp=Z,165nm,0.6s,mb5.7
KWP *e*S S 22 53 08.1 +4.7
KWP Kalwaria Pacla 25.19 321⇑*i*P P 22 48 39.2 +0.9
KWP Kalwaria Pacla 25.19 321 P P 22 48 39.2 +0.9
PE1 Pezze di Greco 25.35 298 *e*P P 22 48 39.0 -0.8
ARU Arti 25.35 15*c i*P P 22 48 39.2 -0.5
ARU *e* 22 49 15.4
ARU *e*PPP 22 49 24.3
ARU S S 22 53 04.3 -1.5
ARU SS 22 53 58.4
ARU SSS 22 54 12.9
ARU pmax pmax
comp=Z,187nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,647nm,21.0s,MS4.1
ARU Arti 25.35 15⇑*e*P P 22 48 39.0 -0.6
comp=Z,376nm,1.8s,mb5.6
ARU *e*S S 22 53 06.3 +0.5
ARU Arti 25.35 15 P P 22 48 39.4 -0.3
comp=Z,487nm,0.7s,mb6.1,SNR=41
ARU Arti 25.35 15⇑*e*P P 22 48 39.0 -0.7
comp=Z,376nm,1.8s,mb5.6
ARU S S 22 53 04.3 -1.5
CRVS Cervenica-Dubn 25.49 318 *e*P P 22 48 42.1 +1.1
CRVS pmax pmax
comp=Z,65nm,0.8s,mb5.2
CRVS Cervenica-Dubn 25.49 318 *e*P P 22 48 42.1 +1.1
comp=Z,65nm,0.8s,mb5.2
CRVS Cervenica-Dubn 25.49 318 *e*P P 22 48 42.1 +1.1
CRVS Cervenica-Dubn 25.49 318 *e*P P 22 48 42.1 +1.1
comp=Z,65nm,0.8s,mb5.2
PKS6 Bocsa 25.56 312⇓*e*P P 22 48 43.4 +1.7
STON Ston 25.58 303 P P 22 48 40.2 -1.8
STON Ston 25.58 303 *i* P P 22 48 40.1 -1.8
PKS2 Kecel 25.74 312⇓*e*P P 22 48 44.9 +1.6
BAI Bari 25.80 299 *e*P P 22 48 43.0 -1.0
KECS Kecovo 25.84 317 *e*P P 22 48 45.4 +1.2
KECS pmax pmax
comp=Z,86nm,0.8s,mb5.3
KECS Kecovo 25.84 317 *e*P P 22 48 45.4 +1.2
comp=Z,86nm,0.8s,mb5.3
KECS Kecovo 25.84 317 *e*P P 22 48 45.4 +1.2
LZLA Zalla 25.86 269 *i* P P 22 48 46.9 +2.3
comp=Z,94nm,1.6s,mb5.1,SNR=32
STHS Stebnicka Huta 25.88 319 *e*P P 22 48 46.2 +1.7
STHS pmax pmax
comp=Z,30nm,0.9s,mb4.8
STHS Stebnicka Huta 25.88 319 *e*P P 22 48 46.2 +1.7
comp=Z,30nm,0.9s,mb4.8
STHS Stebnicka Huta 25.88 319 *e*P P 22 48 46.2 +1.7
STHS Stebnicka Huta 25.88 319 *e*P P 22 48 46.2 +1.7
comp=Z,30nm,0.9s,mb4.8
SG1 Sgolgore (BA) 25.91 298 *e*P P 22 48 45.0 +0.1
PSZ Piszkesteto 25.92 315 ⇑P P 22 48 45.7 +0.7
PSZ Piszkesteto 25.92 315⇑*e*P P 22 48 45.3 +0.3
comp=Z,76nm,1.2s,mb5.1
PSZ *e*S S 22 53 28.8 +14
PSZ Piszkesteto 25.92 315⇑*i*P P 22 48 45.7 +0.7
PSZ Piszkesteto 25.92 315⇑*e*P P 22 48 45.6 +0.6
PSZ Piszkesteto 25.92 315⇑*e*P P 22 48 45.3 +0.3
comp=Z,76nm,1.2s,mb5.1
AYAN Aya Nagar 25.98 91 *e*PKP P 22 48 46.2 +0.5
AYAN AMb AMB 22 48 49.5
comp=Z,59nm,0.8s,mb5.2
PKSM Moragy 25.99 311 ⇑P P 22 48 46.2 +0.6
PKSM Moragy 25.99 311⇑*i*P P 22 48 46.2 +0.6
PKSM Moragy 25.99 311 P P 22 48 46.0 +0.4
PKS7 Kunszentmiklos 25.99 313⇓*e*P P 22 48 46.9 +1.3
NDI New Delhi 26.00 90 *e*PKP P 22 48 45.0 -0.9
SONA Sohna 26.01 91 *e*PKP P 22 48 46.2 +0.2
SONA AMb AMB 22 48 49.7
comp=Z,46nm,0.6s,mb5.2
MICGM Minsk 26.11 334 *e*P P 22 48 45.0 -1.5
MNK Minsk 26.12 334 *e*P P 22 48 45.0 -1.7
MNK pmax pmax
comp=E,560nm,1.0s
MNK Minsk 26.12 334 *e*P P 22 48 45.0 -1.7
RHK3 Tenkes 26.13 310⇓*e*P P 22 48 47.5 +0.7
SVE Sverdlovsk 26.19 17⇓*e*P P 22 48 47.0 -0.3
SVE pmax pmax
comp=Z,112nm,1.4s,mb5.2
SVE Sverdlovsk 26.19 17 *e*P P 22 48 47.0 -0.3
comp=Z,112nm,1.4s,mb5.2
CEL Celeste 26.22 292 P P 22 48 48.0 +0.2
CEL Celeste 26.22 292 P P 22 48 48.0 +0.2
PENC Penc 26.24 314⇓*e*P P 22 48 46.9 -0.9
KLP Kalpa 26.25 83 *e*PKP P 22 48 48.8 +0.7
KLP AMb AMB 22 48 54.6
comp=Z,75nm,1.2s,mb5.1
CDT Castel del Mon 26.25 298 *e*P P 22 48 48.0 0.0
BUD Budapest 26.26 313⇑*e*P P 22 48 49.0 +1.0
BUD Budapest 26.26 313⇑*e*P P 22 48 49.0 +1.0
PKS9 Tamasi 26.37 311⇓*e*P P 22 48 50.1 +1.1
NIE Niedzica 26.40 318 *e*P P 22 48 50.3 +1.0
NIE Niedzica 26.40 318 P P 22 48 50.4 +1.1
NIE Niedzica 26.40 318 *e*P P 22 48 50.3 +1.0
CUC Castrocucco 26.44 296 P P 22 48 51.0 +1.2
CUC Castrocucco 26.44 296 P P 22 48 51.0 +1.2
BLY Banja Luka 26.46 307 P P 22 48 50.0 +0.1
BLY Banja Luka 26.46 307 P P 22 48 50.0 +0.1
BRVK Borovoye 26.54 32*c i*P P 22 48 50.0 -0.5
BRVK pmax pmax
comp=Z,35nm,0.7s,mb5.0
BRVK Borovoye 26.54 32⇑*e*P P 22 48 50.1 -0.4
comp=Z,46nm,1.0s,mb5.0
BRVK *e*S S 22 53 22.4 -2.2
BRVK Borovoye 26.54 32 *i* P P 22 48 50.0 -0.5
comp=Z,35nm,0.7s,mb5.0
BRVK *e*S S 22 53 22.4 -2.2
BRVK Borovoye 26.54 32 P P 22 48 50.5 0.0
SNR=16
BVA0 Borovoye Array 26.56 32 *i* P P 22 48 50.2 -0.5
BVA0 Borovoye Array 26.56 32 *i* P P 22 48 50.2 -0.5
BVAR Borovoye Array 26.56 32 P P 22 48 49.8 -0.9
comp=Z,36nm,0.8s,mb5.0,baz=218,slow=9.1,SNR=115
BVAR PcP PcP 22 52 14.7 -0.2
comp=Z,13nm,0.7s,baz=227,slow=1.9,SNR=9.9
BVAR S S 22 53 24.0 -1.0
comp=Z,1.2nm,0.8s,baz=262,slow=19,SNR=2.5
BVAR ScP ScP 22 55 53.0 -2.0
comp=Z,2.1nm,0.7s,baz=241,slow=1.5,SNR=5.4
BVAR Borovoye Array 26.56 32 P P 22 48 49.8 -0.9
BVAR 22 52 14.7
BVAR S S 22 53 24.0 -1.0
BVAR pmax pmax
comp=Z,37nm,0.8s
BVAR smax
comp=N,1.0nm,0.8s
BVAR Borovoye Array 26.56 32 P P 22 48 49.8 -0.9
comp=N,37nm,0.8s,mb5.0
BVAR Borovoye Array 26.56 32 PcP PcP 22 52 14.7 -0.2
BVAR S S 22 53 24.0 -1.0
comp=N,1.0nm,0.8s
PKSG 26.61 313⇓*e*P P 22 48 52.5 +1.3
VOSK Vostochnaya 26.63 33 P P 22 48 50.2 -1.1
VOSK pmax pmax
comp=Z,25nm,1.2s,mb4.6
VOSK Vostochnaya 26.63 33 P P 22 48 50.2 -1.1
comp=Z,25nm,1.2s,mb4.6
SGRT San Giovanni R 26.76 300 P P 22 48 55.0 +2.4
SGRT San Giovanni R 26.76 300 P P 22 48 55.0 +2.4
VYHS Vyhne 26.82 315 *e*P P 22 48 53.7 +0.7
VYHS pmax pmax
comp=Z,28nm,1.6s,mb4.5
VYHS Vyhne 26.82 315 *e*P P 22 48 53.7 +0.7
comp=Z,28nm,1.6s,mb4.5
VYHS Vyhne 26.82 315 *e*P P 22 48 53.7 +0.7
VYHS Vyhne 26.82 315 *e*P P 22 48 53.7 +0.7
comp=Z,28nm,1.6s,mb4.5
LIKS Likavka 26.91 317 *e*P P 22 48 54.9 +1.0
LIKS pmax pmax
comp=Z,101nm,1.2s,mb5.2

LIKS Likavka 26.91 317 *eP* **P 22 48 54.9 +1.0**
comp=Z,101nm,1.2s,mb5.2
LIKS Likavka 26.91 317 *eP* **P 22 48 54.9 +1.0**
LIKS Likavka 26.91 317 *eP* **P 22 48 54.9 +1.0**
comp=Z,101nm,1.2s,mb5.2
OJC Ojcow 27.09 319 *eP* **P 22 48 55.8 +0.3**
OJC Ojcow 27.09 319 P **P 22 48 55.8 +0.3**
KOLL Kolacno 27.11 315 *eP* **P 22 48 56.3 +0.6**
KOLL Kolacno 27.11 315 *eP* **P 22 48 56.3 +0.6**
KOLL Kolacno 27.11 315 *eP* **P 22 48 56.3 +0.6**
IDID Didziasalis 27.16 334 *eP* **P 22 48 56.1 +0.1**
IDID AMB AMB 22 48 59.9
comp=Z,52nm,0.9s,mb5.0
IDID Didziasalis 27.16 334 *eP* **P 22 48 56.1 +0.1**
comp=Z,52nm,0.9s,mb5.0,SNR=28
LJFR Jufra 27.20 272 *i P* **P 22 48 58.2 +1.5**
comp=Z,99nm,1.5s,mb5.1,SNR=152
SISC Sisak 27.23 308 P **P 22 48 56.9 +0.2**
SISC Sisak 27.23 308 *i P* **P 22 48 56.9 +0.1**
BEHE Becsehely 27.29 310⇑ *eP* **P 22 48 58.5 +1.2**
VAE Valguarnera 27.37 290 P **P 22 48 58.8 +0.7**
comp=Z,13nm,0.8s,mb4.5,baz=94,slow=14,SNR=4.0
VAE S **S 22 53 38.8 +0.8**
comp=Z,1.1nm,0.4s,baz=83,slow=16,SNR=1.7
VAE Valguarnera 27.37 290 P **P 22 48 58.8 +0.7**
VAE S **S 22 53 38.8 +0.8**
VAE Valguarnera 27.37 290 P **P 22 48 58.8 +0.7**
IIGN Ignalina 27.38 333 *eP* **P 22 48 58.3 +0.3**
IIGN AMB AMB 22 49 02.4
comp=Z,80nm,1.0s,mb5.2
IIGN Ignalina 27.38 333 *eP* **P 22 48 58.3 +0.3**
comp=Z,80nm,1.0s,mb5.2,SNR=28
JOSI Joshimath 27.54 85 *e*PKP **P 22 49 00.5 +0.8**
POO Poona 27.55 113 *ex* x 22 49 04.0
WAR Warsaw 27.57 324 *eP* **P 22 49 00.1 +0.4**
WAR Warsaw 27.57 324 *eP* **P 22 49 00.1 +0.4**
ISAL Salakas 27.58 334 *eP* **P 22 49 00.0 +0.2**
ISAL AMB AMB 22 49 04.2
comp=Z,64nm,0.9s,mb5.3
ISAL Salakas 27.58 334 *eP* **P 22 49 00.0 +0.2**
comp=Z,64nm,0.9s,mb5.3,SNR=28
KOGS Kog 27.62 310 *i P* **P 22 49 01.0 +0.7**
KOGS Kog 27.62 310 *i P* **P 22 49 01.0 +0.7**
SUW Suwalki 27.67 329 *i P* **P 22 49 00.4 -0.2**
SUW *eS* **S 22 53 48.9 +6.4**
SUW LMZ 23 00 40.0
comp=Z,500nm,23.0s
SUW Suwalki 27.67 329⇑ *eP* **P 22 49 00.1 -0.5**
comp=Z,141nm,1.0s,mb5.5
SUW *e*PcP PcP 22 52 18.5 +1.0
SUW *eS* **S 22 53 42.2 -0.3**
SUW Suwalki 27.67 329⇑ *eP* **P 22 49 00.1 -0.5**
comp=Z,141nm,1.0s,mb5.5
SUW Suwalki 27.67 329 *e*PcP PcP 22 52 18.5 +1.0
MODS Modra-Piesok 27.70 314 *eP* **P 22 49 02.0 +1.0**
MODS Modra-Piesok 27.70 314 *eP* **P 22 49 02.0 +1.0**
MODS Modra-Piesok 27.70 314 *eP* **P 22 49 02.0 +1.0**
ZST Bratislava 27.73 314 *eP* **P 22 49 01.8 +0.5**
ZST pmax pmax
comp=Z,14nm,0.7s,mb4.7
ZST Bratislava 27.73 314 *eP* **P 22 49 01.8 +0.5**
comp=Z,14nm,0.7s,mb4.7
ZST Bratislava 27.73 314 *eP* **P 22 49 01.8 +0.5**
ZST Bratislava 27.73 314 *eP* **P 22 49 01.8 +0.5**
comp=Z,14nm,0.7s,mb4.7
OKC Ostrava-Krasne 27.83 318⇑ *iP* **P 22 49 02.5 +0.3**
OKC MLR MLR
comp=Z,600nm,12.8s,MS4.4
OKC Ostrava-Krasne 27.83 318 P **P 22 49 02.3 +0.1**
OKC Ostrava-Krasne 27.83 318⇑ *iP* **P 22 49 02.5 +0.3**
OKC *ex* x 22 54 09.4
OKC AMS AMS 23 03 20.0
comp=Z,600nm,12.8s
OKC Ostrava-Krasne 27.83 318 P **P 22 49 02.3 +0.1**
SOP Sopron 27.87 312⇑ *eP* **P 22 49 03.0 +0.5**
SOP Sopron 27.87 312⇑ *eP* **P 22 49 03.0 +0.5**
GOLS Golise 27.89 309 *i P* **P 22 49 03.5 +0.8**
GOLS Golise 27.89 309 *i P* **P 22 49 03.5 +0.8**
RAC Raciborz 27.92 318 *eP* **P 22 49 03.6 +0.7**
RAC Raciborz 27.92 318 *eP* **P 22 49 03.6 +0.7**
SOKR Solikamsk 27.99 10*c i P* **P 22 49 03.3 -0.1**
SOKR pmax pmax
comp=Z,70nm,1.5s,mb5.1
SOKR MLR MLR
comp=Z,670nm,19.0s,MS4.2
SOKR Solikamsk 27.99 10 *i P* **P 22 49 03.3 -0.1**
comp=Z,670nm,19.0s
BOJS Bojanci 27.99 307 *eP* **P 22 49 04.1 +0.5**
BOJS Bojanci 27.99 307 *eP* **P 22 49 04.1 +0.5**
NVLJ Novalja 27.99 305 P **P 22 49 03.2 -0.4**
NVLJ Novalja 27.99 305 *i P* **P 22 49 03.2 -0.4**
MORC Moravsky Berou 28.15 317⇑ *iP* **P 22 49 05.2 +0.2**
MORC Moravsky Berou 28.15 317 P **P 22 49 05.2 +0.2**
ARSA Arzberg 28.37 311 P **P 22 49 07.7 +0.7**
ARSA Arzberg 28.37 311 *i P* **P 22 49 07.7 +0.8**
comp=Z,24nm,1.2s,mb4.7,SNR=12
ARSA Arzberg 28.37 311 P **P 22 49 07.7 +0.7**
CONA Conrad Observa 28.40 312⇑ *iP* **P 22 49 07.7 +0.5**
comp=Z,34nm,1.5s,mb4.8,SNR=12
CONA Conrad Observa 28.40 312 P **P 22 49 07.7 +0.5**
comp=Z,34nm,1.5s,mb4.8,SNR=12
SOKA Soboth 28.49 310⇑ *iP* **P 22 49 08.8 +0.7**
comp=Z,27nm,1.3s,mb4.7
SOKA Soboth 28.49 310 P **P 22 49 08.8 +0.7**
comp=Z,27nm,1.3s,mb4.7
VRAC Vranov 28.50 316 P **P 22 49 08.3 +0.2**
comp=Z,17nm,0.8s,mb4.8,baz=118,slow=9.3,SNR=26
VRAC LR LR 23 02 33.0
comp=Z,445nm,18.3s,MS4.1,baz=345,slow=41
VRAC Vranov 28.50 316 P **P 22 49 08.3 +0.2**
VRAC pmax pmax
comp=Z,17nm,0.8s
VRAC MLR MLR
comp=Z,445nm,18.3s
VRAC Vranov 28.50 316⇑ *iP* **P 22 49 08.7 +0.6**
VRAC Vranov 28.50 316 P **P 22 49 08.3 +0.2**
comp=Z,445nm,18.3s
AQU L'Aquila 28.58 300 *eP* **P 22 49 10.3 +1.4**
AQU *e* 22 52 19.7
AQU pmax pmax
comp=Z,41nm,1.0s,mb5.1
AQU L'Aquila 28.58 300 *eP* **P 22 49 10.3 +1.4**
comp=Z,41nm,1.0s,mb5.1
AQU *e*PcP PcP 22 52 19.7 -0.3
AQU L'Aquila 28.58 300⇑ *iP* **P 22 49 14.6 +5.7**
AQU L'Aquila 28.58 300 *eP* **P 22 49 10.3 +1.4**
comp=Z,41nm,1.0s,mb5.1
LJU Ljubljana 28.63 308 *i P* **P 22 49 10.3 +1.0**
LJU Ljubljana 28.63 308 *i P* **P 22 49 10.3 +1.0**
OBKA Obir 28.76 309⇑ *eP* **P 22 49 10.3 -0.1**
comp=Z,47nm,1.2s,mb5.1,SNR=14
OBKA Obir 28.76 309 P **P 22 49 10.3 -0.1**
comp=Z,47nm,1.2s,mb5.1,SNR=14
LUMB Murzuk 28.98 266 *i P* **P 22 49 13.9 +1.3**
comp=Z,73nm,1.5s,mb5.2,SNR=152
KLMR Klimovskoe 29.00 352*c iP* **P 22 49 10.8 -1.6**
KLMR *eS* **S 22 53 53.9 -9.3**
KLMR pmax pmax
comp=Z,123nm,1.3s,mb5.5
KLMR pmax pmax
comp=Z,105nm,4.5s
KLMR MLR MLR
comp=Z,765nm,13.0s,MS4.5
KLMR Klimovskoe 29.00 352 *i P* **P 22 49 10.8 -1.6**
comp=Z,765nm,13.0s
VOY Vojsko 29.05 308 *eP* **P 22 49 13.4 +0.4**
VOY *e* 22 49 20.8
VOY *e* 22 49 45.4
VOY Vojsko 29.05 308 *eP* **P 22 49 13.4 +0.4**
VOY *e* 22 49 20.8
VOY *e* 22 49 45.4
DPC Dobruska-Polom 29.11 317⇑ *iP* **P 22 49 13.9 +0.4**
DPC MLR MLR
comp=Z,600nm,14.9s,MS4.3
DPC Dobruska-Polom 29.11 317 P **P 22 49 13.6 +0.1**
DPC Dobruska-Polom 29.11 317⇑ *iP* **P 22 49 13.9 +0.4**
DPC AMS AMS 23 04 20.0
comp=Z,600nm,14.9s
DPC Dobruska-Polom 29.11 317 P **P 22 49 13.6 +0.1**
CADS Cadrg 29.21 308 *i P* **P 22 49 14.4 -0.1**
CADS Cadrg 29.21 308 *i P* **P 22 49 14.4 -0.1**
PRGR Permogore 29.35 358⇓ *iP* **P 22 49 12.5 -3.0**
PRGR *eS* **S 22 54 05.0 -3.7**
PRGR *e*SS SS 22 55 34.5 -39
PRGR pmax pmax
comp=Z,19nm,0.5s,mb5.1
KSP Ksiaz 29.35 318 *eP* **P 22 49 15.8 +0.1**
KSP Ksiaz 29.35 318 P **P 22 49 16.4 +0.7**
KSP Ksiaz 29.35 318⇑ *eP* **P 22 49 15.7 0.0**
UPC Upice 29.36 317⇑ *iP* **P 22 49 16.2 +0.5**
UPC *e* 22 49 25.4
UPC Upice 29.36 317⇑ *iP* **P 22 49 16.2 +0.5**
UPC *ex* x 22 49 25.4
UPC Upice 29.36 317 *i P* **P 22 49 16.2 +0.5**
MOA Molln 29.37 312 P **P 22 49 16.4 +0.5**
MOA Molln 29.37 312⇑ *iP* **P 22 49 16.6 +0.7**
comp=Z,45nm,0.7s,mb5.3,SNR=55
MOA Molln 29.37 312 P **P 22 49 16.4 +0.5**
MYKA Terra Mystica 29.39 309⇑ *iP* **P 22 49 17.8 +1.8**
comp=Z,11nm,0.7s,mb4.7
MYKA Terra Mystica 29.39 309 P **P 22 49 17.8 +1.8**
comp=Z,11nm,0.7s,mb4.7
KURK Kurchatov 29.49 42 P **P 22 49 14.9 -1.9**
comp=Z,42nm,0.7s,mb5.3,baz=247,slow=9.3,SNR=19
KURK PcP PcP 22 52 20.8 -1.3
comp=Z,4.8nm,0.6s,baz=243,slow=3.1,SNR=5.1
KURK LR LR 23 02 37.3
comp=Z,447nm,19.5s,MS4.1,baz=245,slow=40
KURK Kurchatov 29.49 42*c iP* **P 22 49 17.0 +0.2**
KURK pmax pmax
comp=Z,59nm,0.7s,mb5.4
KURK Kurchatov 29.49 42⇑ *eP* **P 22 49 17.2 +0.4**
comp=Z,59nm,0.8s,mb5.4
KURK *e*PcP PcP 22 52 20.2 -1.9
KURK Kurchatov 29.49 42 *i P* **P 22 49 17.0 +0.2**
comp=Z,59nm,0.7s,mb5.4
KURK Kurchatov 29.49 42 *e*PcP PcP 22 52 20.2 -1.9
KURK Kurchatov 29.49 42 P **P 22 49 17.5 +0.7**
SNR=26
KBA Koelnbreinsper 29.72 310⇑ *iP* **P 22 49 19.9 +0.9**
comp=Z,39nm,0.8s,mb5.2,SNR=18
KBA Koelnbreinsper 29.72 310 P **P 22 49 19.6 +0.7**
PRU Pruhonice 30.00 316⇑ *iP* **P 22 49 22.2 +0.8**
PRU MLR MLR
comp=Z,500nm,12.6s,MS4.3
PRU Pruhonice 30.00 316⇑ *iP* **P 22 49 22.2 +0.8**
PRU *eS* **S 22 54 26.1 +7.0**
PRU AMS AMS 23 04 50.0
comp=Z,500nm,12.6s
PRU Pruhonice 30.00 316 *i P* **P 22 49 22.2 +0.8**
comp=Z,500nm,12.6s
GKP Gorka Klasztor 30.05 323 *eP* **P 22 49 21.8 -0.1**
GKP *eS* **S 22 54 20.4 +0.6**
GKP Gorka Klasztor 30.05 323⇑ *eP* **P 22 49 21.7 -0.1**
GKP *eS* **S 22 54 20.4 +0.5**
GKP Gorka Klasztor 30.05 323 P **P 22 49 22.3 +0.5**
GKP Gorka Klasztor 30.05 323⇑ *eP* **P 22 49 21.7 -0.1**
GEC2 GERESS Array S 30.07 313 *eP* **P 22 49 22.0 -0.1**
comp=Z,19nm,0.9s,mb4.8
GEC2 GERESS Array S 30.07 313 *eP* **P 22 49 22.0 -0.1**
GEC2 pmax pmax
comp=Z,19nm,0.9s,mb4.8
GEC2 GERESS Array S 30.07 313 *eP* **P 22 49 22.0 -0.1**
comp=Z,19nm,0.9s,mb4.8
ABTA Abfaltersbach 30.17 309⇑ *iP* **P 22 49 23.6 +0.7**
comp=Z,35nm,1.1s,mb5.0,SNR=16
ABTA Abfaltersbach 30.17 309 P **P 22 49 23.6 +0.7**
comp=Z,35nm,1.1s,mb5.0,SNR=16
PVCC Panska Ves 30.20 317⇑ *iP* **P 22 49 23.3 +0.1**
PVCC MLR MLR
comp=Z,400nm,10.6s,MS4.3
PVCC Panska Ves 30.20 317 P **P 22 49 23.4 +0.2**
PVCC Panska Ves 30.20 317⇑ *iP* **P 22 49 23.3 +0.1**
PVCC AMS AMS 23 06 30.0
comp=Z,400nm,10.6s
PVCC Panska Ves 30.20 317 *i P* **P 22 49 23.3 +0.1**
comp=Z,400nm,10.6s
KHC Kasperske Hory 30.25 314⇑ *iP* **P 22 49 23.4 -0.2**
KHC *e* 22 49 29.5
KHC MLR MLR
comp=Z,500nm,13.9s,MS4.3
KHC Kasperske Hory 30.25 314⇑ *eP* **P 22 49 23.4 -0.3**
comp=Z,37nm,1.4s,mb4.9
KHC Kasperske Hory 30.25 314⇑ *iP* **P 22 49 23.4 -0.2**
KHC *e*pP pP 22 49 29.5 +2.8
KHC AMS AMS 23 05 20.0
comp=Z,500nm,13.9s
KHC Kasperske Hory 30.25 314 *i P* **P 22 49 23.4 -0.2**
comp=Z,500nm,13.9s
RJOB Jochberg 30.27 311 *eP* **P 22 49 24.0 +0.1**
comp=Z,29nm,1.1s,mb4.9
MK31 Makanchi Array 30.33 51 *i P* **P 22 49 24.4 0.0**
MK31 pmax pmax
comp=Z,34nm,0.8s,mb5.1
MK31 Makanchi Array 30.33 51⇑ *eP* **P 22 49 24.4 0.0**
MK31 PP PP 22 50 34.0 +1.3
MK31 *e*PcP PcP 22 52 23.7 -0.7
MK31 Makanchi Array 30.33 51 *i P* **P 22 49 24.4 0.0**
comp=Z,34nm,0.8s,mb5.1
MKAR Makanchi Array 30.33 51 P **P 22 49 24.3 -0.1**
comp=Z,25nm,0.7s,mb5.0,baz=248,slow=11,SNR=104
MKAR PcP PcP 22 52 23.2 -1.1
comp=Z,3.7nm,0.7s,baz=254,slow=4.7,SNR=4.4
MKAR Makanchi Array 30.33 51 P **P 22 49 24.3 -0.1**
MKAR 22 52 23.2
MKAR pmax pmax
comp=Z,25nm,0.7s
MKAR Makanchi Array 30.33 51 P **P 22 49 24.3 -0.1**
MKAR PcP PcP 22 52 23.2 -1.1
MKAR Makanchi Array 30.33 51 P **P 22 49 24.3 -0.1**
comp=Z,25nm,0.7s,mb5.0
MKAR Makanchi Array 30.33 51 PcP PcP 22 52 23.2 -1.2
SLIT Slitere, Latvi 30.53 333 *eP* **P 22 49 25.4 -0.6**
comp=Z,606nm,1.2s,mb6.3,SNR=28
WET Wettzell 30.68 313 *eP* **P 22 49 26.8 -0.7**
comp=Z,16nm,1.0s,mb4.8
WET Wettzell 30.68 313 *eP* **P 22 49 26.8 -0.7**
WET pmax pmax
comp=Z,16nm,1.0s,mb4.8
WET Wettzell 30.68 313 *eP* **P 22 49 26.8 -0.7**
comp=Z,16nm,1.0s,mb4.8
BRG Berggiesshubel 30.71 317 *eP* **P 22 49 27.5 -0.1**
comp=Z,28nm,1.1s,mb5.0
BRG
comp=N,362nm,17.8s
BRG
comp=E,384nm,13.1s
BRG
comp=Z,468nm,13.6s
BRG Berggiesshubel 30.71 317 *eP* **P 22 49 27.5 -0.1**
BRG pmax pmax
comp=Z,17nm,1.1s,mb4.8
BRG MLR MLR
comp=N,217nm,17.8s,MS4.1
BRG MLR MLR
comp=E,230nm,13.1s,MS4.1
BRG MLR MLR
comp=Z,280nm,13.6s,MS4.1
BRG Berggiesshubel 30.71 317 *eP* **P 22 49 27.5 -0.1**
comp=Z,280nm,13.6s
WTTA Wattenberg 30.89 309⇑ *iP* **P 22 49 29.6 +0.3**
comp=Z,71nm,0.9s,mb5.5,SNR=22
WTTA Wattenberg 30.89 309 P **P 22 49 29.4 +0.1**
WATA Walderalm 30.95 309 *i P* **P 22 49 29.9 +0.1**
comp=Z,28nm,0.7s,mb5.2,SNR=15
WATA Walderalm 30.95 309 P **P 22 49 29.8 0.0**
VLC Villacollemand 31.05 303⇑ *eP* **P 22 49 31.0 +0.2**
comp=Z,26nm,0.6s,mb5.2
VLC *eS* **S 22 54 30.1 -5.7**
VLC Villacollemand 31.05 303⇑ *eP* **P 22 49 31.0 +0.2**
comp=Z,26nm,0.6s,mb5.2
SQTA Sankt Quirin 31.16 309⇑ *iP* **P 22 49 31.8 +0.2**
SQTA Sankt Quirin 31.16 309 P **P 22 49 31.8 +0.1**
MOTA Moosalm 31.26 309⇑ *iP* **P 22 49 32.4 -0.1**
comp=Z,53nm,0.8s,mb5.4,SNR=38
MOTA Moosalm 31.26 309 P **P 22 49 32.4 -0.2**
comp=Z,53nm,0.8s,mb5.4,SNR=38
ROTZ Rotzenmuhle 31.31 314 *eP* **P 22 49 33.5 +0.5**
comp=Z,147nm,1.6s,mb5.6
NKC Novy Kostel 31.34 315⇑ *iP* **P 22 49 33.5 +0.3**
NKC MLR MLR
comp=Z,700nm,13.2s,MS4.5
NKC Novy Kostel 31.34 315⇑ *iP* **P 22 49 33.5 +0.3**
NKC AMS AMS 23 05 50.0
comp=Z,700nm,13.2s
NKC Novy Kostel 31.34 315 *i P* **P 22 49 33.5 +0.3**
comp=Z,700nm,13.2s
VSL Villasalto 31.36 294⇑ *eP* **P 22 49 34.5 +1.0**
comp=Z,22nm,0.7s,mb5.1
VSL Villasalto 31.36 294⇑ *eP* **P 22 49 34.5 +1.0**
comp=Z,22nm,0.7s,mb5.1
FUR Furstenfeldbru 31.38 311 *eP* **P 22 49 33.8 +0.2**
comp=Z,269nm,0.7s,mb6.2
FUR Furstenfeldbru 31.38 311 *eP* **P 22 49 33.8 +0.2**
TANN Tannenbergstha 31.39 315 *eP* **P 22 49 33.6 -0.1**
comp=Z,31nm,1.8s,mb4.8
WERN Wernitzgruen 31.40 315 *eP* **P 22 49 34.1 +0.4**
comp=Z,38nm,1.4s,mb5.0
FETA Feichten 31.42 309⇑ *iP* **P 22 49 34.3 +0.4**
comp=Z,58nm,1.0s,mb5.3,SNR=23
FETA Feichten 31.42 309 P **P 22 49 34.3 +0.3**
comp=Z,58nm,1.0s,mb5.3,SNR=23
CLL Collm 31.43 317 *eP* **P 22 49 33.9 -0.1**
comp=Z,37nm,1.1s,mb5.1
CLL Collm 31.43 317⇑ *iP* **P 22 49 33.7 -0.3**
CLL *i* 22 49 44.0
CLL pmax pmax
comp=Z,37nm,1.1s,mb5.1
CLL Collm 31.43 317⇑ *iP* **P 22 49 33.7 -0.3**
comp=Z,37nm,1.1s,mb5.1
CLL *i* 22 49 41.6
CLL *i* 22 49 44.0
CLL Collm 31.43 317⇑ *iP* **P 22 49 33.7 -0.3**
comp=Z,37nm,1.1s,mb5.1
CLL *i* 22 49 41.6
CLL *i* 22 49 44.0
CLL *e*PcP PcP 22 52 27.0 -0.2
CLL LmH 23 03 00.0
comp=N,500nm,19.3s
CLL LmH 23 03 00.0
comp=E,300nm,18.3s
CLL Collm 31.43 317 *i P* **P 22 49 33.7 -0.3**
comp=E,37nm,1.1s,mb5.1
GUNZ Gunzen 31.45 315 *eP* **P 22 49 34.3 +0.1**
RUE Ruedersdorf 31.49 320 *eP* **P 22 49 34.5 0.0**
RUE Ruedersdorf 31.49 320⇑ *eP* **P 22 49 34.0 -0.5**
comp=E,34nm,0.6s,mb5.4
RUE Ruedersdorf 31.49 320⇑ *eP* **P 22 49 34.0 -0.5**
comp=E,34nm,0.6s,mb5.4
KEST Kesra 31.50 287 P **P 22 49 35.8 +1.0**
comp=E,6.5nm,0.9s,mb4.4,baz=79,slow=6.4,SNR=14
KEST Kesra 31.50 287 P **P 22 49 35.8 +1.0**
RETA Reutte 31.52 309⇓ *iP* **P 22 49 34.3 -0.6**
comp=E,17nm,0.7s,mb5.0,SNR=11
RETA Reutte 31.52 309 P **P 22 49 34.3 -0.6**
comp=E,17nm,0.7s,mb5.0,SNR=11
PLN Plauen 31.60 315 *eP* **P 22 49 35.4 -0.1**
DANN Dangsing 31.63 87 *eP* **P 22 49 37.0 +1.0**
comp=E,195nm,0.9s,mb6.0
KOLN Koldanda 31.66 89 *eP* **P 22 49 36.5 +0.2**
comp=E,41nm,0.8s,mb5.3
MEF Metsahovi 31.74 338 *eP* **P 22 49 35.8 -0.8**
comp=E,77nm,1.3s,mb5.4,SNR=28
PGF Pioggiola 31.84 300⇑ *iP* **P 22 49 37.7 0.0**
comp=E,19nm,0.7s,mb4.7
PGF Pioggiola 31.84 300⇑ *iP* **P 22 49 37.7 0.0**
PGF pmax pmax
comp=E,10.0nm,0.7s,mb4.8
PGF Pioggiola 31.84 300⇑ *iP* **P 22 49 37.7 0.0**
comp=Z,9.6nm,0.7s,mb4.7
PGF Pioggiola 31.84 300⇑ *iP* **P 22 49 37.7 0.0**
comp=Z,9.6nm,0.7s,mb4.7
GRA1 Grafenberg Arr 31.89 314 *eP* **P 22 49 38.4 +0.3**
comp=Z,194nm,1.4s,mb5.7
GRA1 LR LR
comp=Z,400nm,21.5s,MS4.1
GRA1 Grafenberg Arr 31.89 314 *eP* **P 22 49 38.4 +0.3**
comp=Z,400nm,21.5s
GRF Grafenberg Arr 31.89 314 *eP* **P 22 49 38.4 +0.3**
comp=Z,194nm,1.4s,mb5.7
GRF *e*L 23 05 35.2
comp=Z,421nm,21.5s
GRF Grafenberg Arr 31.89 314 *eP* **P 22 49 38.4 +0.3**
GRF pmax pmax
comp=Z,194nm,1.4s,mb5.7
GRF MLR MLR
comp=Z,400nm,21.5s,MS4.1
GRF Grafenberg Arr 31.89 314 *eP* **P 22 49 38.4 +0.3**
GRF pmax pmax
comp=Z,194nm,1.4s,mb5.7
GRF MLR MLR
comp=Z,400nm,21.5s,MS4.1
GRF Grafenberg Arr 31.89 314 *eP* **P 22 49 38.4 +0.3**
comp=Z,400nm,21.5s
GRFO Grafenberg 31.89 314⇑ *eP* **P 22 49 37.5 -0.6**
GRFO pmax pmax
comp=Z,88nm,1.0s,mb5.5
GRFO Grafenberg 31.89 314⇑ *eP* **P 22 49 37.5 -0.6**
comp=Z,88nm,1.0s,mb5.5
GRFO Grafenberg 31.89 314 *eP* **P 22 49 37.5 -0.6**
comp=Z,88nm,1.0s,mb5.5
DAVOX Davos/Dischmat 31.93 308 P **P 22 49 38.4 0.0**
comp=Z,12nm,0.7s,mb4.8,baz=106,slow=12,SNR=17
DAVOX S **S 22 54 50.8 +1.4**
comp=Z,1.6nm,0.7s,baz=331,slow=19,SNR=1.9
DAVOX Davos/Dischmat 31.93 308 P **P 22 49 38.4 0.0**
MOX Moxa 31.98 315 *eP* **P 22 49 38.4 -0.5**
comp=Z,18nm,1.2s,mb4.8
MOX Moxa 31.98 315 *eP* **P 22 49 38.8 -0.1**
comp=Z,15nm,1.1s,mb4.7
MOX Moxa 31.98 315 *eP* **P 22 49 38.4 -0.5**
MOX pmax pmax
comp=Z,18nm,1.2s,mb4.8
MOX Moxa 31.98 315 *eP* **P 22 49 38.4 -0.5**
comp=Z,18nm,1.2s,mb4.8
UBR Ueberruh 32.00 310 P **P 22 49 38.8 -0.3**
UBR Ueberruh 32.00 310 P **P 22 49 38.8 -0.3**
DAVA Damuels 32.05 309 P **P 22 49 39.3 -0.2**
DAVA Damuels 32.05 309⇑ *iP* **P 22 49 39.5 0.0**
comp=Z,46nm,0.6s,mb5.5,SNR=28
DAVA Damuels 32.05 309 P **P 22 49 39.3 -0.2**
NEUB Neuenburg 32.10 317 *eP* **P 22 49 39.9 0.0**
comp=Z,30nm,0.6s,mb5.3
HDH Heidenheim-Cha 32.18 311 P **P 22 49 40.1 -0.6**
HDH Heidenheim-Cha 32.18 311 P **P 22 49 40.1 -0.6**
BSD Bornholm Skovb 32.19 325⇑ *iP* **P 22 49 39.4 -1.2**
BSD pmax pmax
comp=Z,72nm,0.9s,mb5.5
BSD MLR MLR
comp=Z,480nm,14.0s,MS4.3
BSD Bornholm Skovb 32.19 325 P **P 22 49 40.3 -0.3**
BSD Bornholm Skovb 32.19 325⇑ *iP* **P 22 49 39.4 -1.2**
comp=Z,72nm,0.9s,mb5.5
BSD
comp=Z,480nm,14.0s
BSD Bornholm Skovb 32.19 325 *i P* **P 22 49 39.4 -1.2**
comp=Z,480nm,14.0s
TUE Stuetta 32.22 307 *eP* **P 22 49 40.8 -0.2**
comp=Z,24nm,0.9s,mb5.0
TUE Stuetta 32.22 307 *eP* **P 22 49 40.8 -0.2**
comp=Z,24nm,0.9s,mb5.0
FINES FINESS Array B 32.23 341 P **P 22 49 39.6 -1.4**
comp=Z,15nm,0.6s,mb5.0,baz=141,slow=9.0,SNR=64
FINES PP PP 22 50 39.6 -14
comp=Z,12nm,0.6s,baz=135,slow=14,SNR=5.7
FINES LR LR 23 04 24.9
comp=Z,692nm,19.4s,MS4.4,baz=140,slow=40
FINES FINESS Array B 32.23 341 P **P 22 49 39.6 -1.3**
comp=Z,692nm,19.5s
JOF Joensuu 32.26 346 *eP* **P 22 49 38.7 -2.5**
JOF pmax pmax
comp=Z,29nm,0.6s,mb5.3
JOF Joensuu 32.26 346 *ep* **P 22 49 38.7 -2.5**
comp=Z,29nm,0.6s,mb5.3
JOF Joensuu 32.26 346 *eP* **P 22 49 38.7 -2.5**
comp=Z,29nm,0.6s,mb5.3
GKN Gorkha 32.47 88 *eP* **P 22 49 43.6 +0.2**
comp=Z,114nm,0.7s,mb5.8
BUCH Bad Urach 32.69 311 P **P 22 49 44.6 -0.5**
BUCH Bad Urach 32.69 311 P **P 22 49 44.6 -0.5**
RGN Rugen 32.70 323 P **P 22 49 47.3 +2.2**
RGN Rugen 32.70 323 P **P 22 49 47.3 +2.2**
KAF Kangasniemi 32.72 342 *eP* **P 22 49 43.5 -1.7**
KAF pmax pmax
comp=Z,11nm,0.6s,mb5.0
KAF Kangasniemi 32.72 342 *ep* **P 22 49 43.5 -1.7**
comp=Z,11nm,0.6s,mb5.0
KAF Kangasniemi 32.72 342 *eP* **P 22 49 43.5 -1.7**
comp=Z,11nm,0.6s,mb5.0
GUT Gutenstein 32.74 310 P **P 22 49 45.4 -0.2**
GUT Gutenstein 32.74 310 P **P 22 49 45.4 -0.2**
SISB Singen-Schiene 32.75 309 P **P 22 49 45.9 +0.3**
SISB Singen-Schiene 32.75 309 P **P 22 49 45.9 +0.3**
SIND Sindeldorf 32.78 312 P **P 22 49 45.2 -0.7**
SIND Sindeldorf 32.78 312 P **P 22 49 45.2 -0.7**
STU Stuttgart 32.88 311 *eP* **P 22 49 45.7 -1.1**

comp=Z,59nm,1.7s,mb5.2
SPAK Spaichingen-Ko 32.97 310 *e*P **P 22 49 47.3 -0.2**
SPAK Spaichingen-Ko 32.97 310 *e*P **P 22 49 47.3 -0.2**
DMN Daman 32.98 88 *e*P **P 22 49 48.4 +0.5**
comp=Z,86nm,0.8s,mb5.7
UBBA Unterbreizbach 33.01 315 *e*P **P 22 49 47.8 0.0**
comp=Z,58nm,1.8s,mb5.2
SAOF Saorge 33.05 302 *e*P **P 22 49 48.5 +0.2**
SAOF Saorge 33.05 302 *e*P **P 22 49 48.5 +0.2**
KKN Kakani 33.08 88 *e*P **P 22 49 48.9 +0.2**
comp=Z,111nm,0.6s,mb6.0
LBG Lerchenberg 33.10 311 P **P 22 49 48.1 -0.6**
LBG Lerchenberg 33.10 311 P **P 22 49 48.1 -0.6**
SBF Sospel 33.12 302⇑*i*P **P 22 49 49.1 +0.2**
comp=Z,114nm,0.8s,mb5.6
SBF Sospel 33.12 302⇑*i*P **P 22 49 49.1 +0.2**
SBF pmax pmax
comp=Z,57nm,0.8s,mb5.5
SBF Sospel 33.12 302⇑*i*P **P 22 49 49.1 +0.2**
comp=Z,57nm,0.8s,mb5.5
SBF Sospel 33.12 302⇑*i*P **P 22 49 49.1 +0.2**
comp=Z,57nm,0.8s,mb5.6
AUTN L'Aution 33.14 302 *e*P **P 22 49 49.8 +0.7**
AUTN L'Aution 33.14 302 *e*P **P 22 49 49.8 +0.7**
CLZ Clausthal 33.15 317 *e*P **P 22 49 49.6 +0.5**
comp=Z,61nm,0.7s,mb5.6
CLZ Clausthal 33.15 317 *e*P **P 22 49 49.6 +0.5**
CLZ pmax pmax
comp=Z,61nm,0.7s,mb5.6
CLZ Clausthal 33.15 317 *e*P **P 22 49 49.6 +0.5**
comp=Z,61nm,0.7s,mb5.6
LUCF Luceram 33.18 302 *e*P **P 22 49 50.0 +0.5**
LUCF Luceram 33.18 302 *e*P **P 22 49 50.0 +0.5**
RAF Rauma 33.20 337 *e*P **P 22 49 48.7 -0.7**
comp=Z,140nm,1.6s,mb5.7,SNR=27
PKIN Phulchoki 33.24 88 *e*P **P 22 49 50.7 +0.5**
comp=Z,132nm,0.7s,mb6.0
PKI Pulchoki 33.25 88 *e*P **P 22 49 50.7 +0.4**
comp=Z,100nm,0.7s,mb5.9
TOUF Mont Tournerai 33.27 302 *e*P **P 22 49 51.1 +0.9**
TOUF Mont Tournerai 33.27 302 *e*P **P 22 49 51.1 +0.9**
BFO Black Forest 33.32 310 *e*P **P 22 49 51.0 +0.4**
BFO *e* 22 51 06.3
BFO *e* 22 52 31.5
BFO pmax pmax
comp=Z,13nm,0.8s,mb4.9
BFO Black Forest 33.32 310 *e*P **P 22 49 51.0 +0.4**
comp=Z,13nm,0.8s,mb4.9
BFO *e*PP PP 22 51 06.3 +0.4
BFO *e*PcP PcP 22 52 31.5 -0.9
BFO Black Forest 33.32 310 *e*P **P 22 49 51.0 +0.4**
comp=Z,13nm,0.8s,mb4.9
MVIF Mont Vial 33.32 302 *e*P **P 22 49 51.3 +0.6**
MVIF Mont Vial 33.32 302 *e*P **P 22 49 51.3 +0.6**
TOD Tromm 33.36 313 *e*P **P 22 49 50.5 -0.4**
TOD Tromm 33.36 313 *e*P **P 22 49 50.5 -0.4**
SWS Schriesheim-Wi 33.39 312 P **P 22 49 50.8 -0.4**
SWS Schriesheim-Wi 33.39 312 P **P 22 49 50.8 -0.4**
FELD Feldberg im Sc 33.42 309 *e*P **P 22 49 50.9 -0.6**
FELD Feldberg im Sc 33.42 309 *e*P **P 22 49 50.9 -0.6**
KIZ Kirchzarten 33.50 309 P **P 22 49 51.8 -0.4**
KIZ Kirchzarten 33.50 309 P **P 22 49 51.8 -0.4**
WMQ Urumqi 33.51 58 P **P 22 49 53.0 +0.6**
WMQ pP pP 22 50 08.0 +13
WMQ PP PP 22 51 06.0 -2.1
WMQ PcP PcP 22 52 33.0 -0.1
WMQ S **S 22 55 09.0 -5.1**
WMQ ScP ScP 22 56 11.0 -6.7
WMQ pmax pmax
comp=Z,24nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,140nm,4.0s
WMQ LR LR
comp=N,820nm,14.0s,MS4.7
WMQ LR LR
comp=E,570nm,14.0s,MS4.7
WMQ LR LR
comp=Z,530nm,14.0s,MS4.4
NRDL Niedersach Rie 33.54 318 *e*P **P 22 49 52.3 -0.2**
comp=Z,50nm,0.9s,mb5.4
GUN Gumba 33.55 87 *e*P **P 22 49 53.7 +0.8**
comp=Z,296nm,0.9s,mb6.2
FRF La Foret Royal 33.65 301⇑*i*P **P 22 49 53.6 0.0**
comp=Z,27nm,0.9s,mb4.9
FRF La Foret Royal 33.65 301⇑*i*P **P 22 49 53.6 0.0**
FRF pmax pmax
comp=Z,13nm,0.9s,mb4.9
FRF La Foret Royal 33.65 301⇑*i*P **P 22 49 53.6 0.0**
comp=Z,13nm,0.9s,mb4.9
FRF La Foret Royal 33.65 301⇑*i*P **P 22 49 53.6 0.0**
comp=Z,13nm,0.9s,mb4.9
BBS Basel-Blauen 33.66 308 *e*P **P 22 49 53.2 -0.4**
BBS Basel-Blauen 33.66 308 *e*P **P 22 49 53.2 -0.4**
COP Copenhagen 33.70 324⇑*i*P **P 22 49 54.7 +0.9**
COP pmax pmax
comp=Z,60nm,0.9s,mb5.5
COP MLR MLR
comp=Z,240nm,14.0s,MS4.1
COP Copenhagen 33.70 324⇑*i*P **P 22 49 54.7 +0.9**
comp=Z,60nm,0.9s,mb5.5
COP
comp=Z,240nm,14.0s
COP Copenhagen 33.70 324⇑*i*P **P 22 49 54.7 +0.9**
comp=Z,60nm,0.9s,mb5.5
MBDF Montbardon 33.70 303⇑*i*P **P 22 49 53.9 0.0**
comp=Z,44nm,0.5s,mb5.3
MBDF Montbardon 33.70 303⇑*i*P **P 22 49 53.9 0.0**
MBDF pmax pmax
comp=Z,22nm,0.5s,mb5.3
MBDF Montbardon 33.70 303⇑*i*P **P 22 49 53.9 0.0**
comp=Z,22nm,0.5s,mb5.3
MBDF Montbardon 33.70 303⇑*i*P **P 22 49 53.9 0.0**
comp=Z,22nm,0.5s,mb5.3
LMR La Mourre 33.73 301⇑*i*P **P 22 49 54.0 -0.3**
comp=Z,8.8nm,0.7s,mb4.5
LMR La Mourre 33.73 301⇑*i*P **P 22 49 54.0 -0.3**
comp=Z,4.4nm,0.7s,mb4.5
LMR La Mourre 33.73 301⇑*i*P **P 22 49 54.0 -0.3**
comp=Z,4.4nm,0.7s,mb4.5
TNS Taunus Mts 33.76 314 *e*P **P 22 49 54.3 -0.1**
comp=Z,60nm,1.3s,mb5.4
TNS Taunus Mts 33.76 314 *e*P **P 22 49 54.3 -0.1**
TNS pmax pmax
comp=Z,60nm,1.3s,mb5.4
TNS Taunus Mts 33.76 314 *e*P **P 22 49 54.3 -0.1**
comp=Z,60nm,1.3s,mb5.4
LANF Langenberg 33.82 311 *e*P **P 22 49 53.7 -1.2**
LANF Langenberg 33.82 311 *e*P **P 22 49 53.7 -1.2**
LPG La Plagne 33.82 305⇑*i*P **P 22 49 55.1 +0.1**
comp=Z,75nm,0.6s,mb5.5
LPG La Plagne 33.82 305⇑*i*P **P 22 49 55.1 +0.1**
LPG pmax pmax
comp=Z,37nm,0.6s,mb5.5
LPG La Plagne 33.82 305⇑*i*P **P 22 49 55.1 +0.1**
comp=Z,38nm,0.6s,mb5.5
LPG La Plagne 33.82 305⇑*i*P **P 22 49 55.1 +0.1**
comp=Z,38nm,0.6s,mb5.5
LPL La Plagne 33.83 305⇑*i*P **P 22 49 55.1 0.0**
comp=Z,52nm,0.7s,mb5.3
LPL La Plagne 33.83 305⇑*i*P **P 22 49 55.1 0.0**
LPL pmax pmax
comp=Z,26nm,0.7s,mb5.3
LPL La Plagne 33.83 305⇑*i*P **P 22 49 55.1 0.0**
comp=Z,26nm,0.7s,mb5.3
LPL La Plagne 33.83 305⇑*i*P **P 22 49 55.1 0.0**
comp=Z,26nm,0.7s,mb5.3
NVS Novosibirsk 33.85 38⇑*i*P **P 22 49 53.1 -2.0**
NVS *e* 22 52 29.9
NVS *e*S **S 22 55 16.0 -3.1**
NVS pmax pmax
comp=N,18nm,1.1s
NVS pmax pmax
comp=E,17nm,1.1s
NVS pmax pmax
comp=Z,52nm,1.1s,mb5.4
NVS smax
comp=N,19nm,1.5s
NVS smax
comp=E,19nm,1.5s
NVS Novosibirsk 33.85 38 *i*P **P 22 49 53.1 -2.0**
NVS *e*S **S 22 55 16.0 -3.1**
MOF Molkenrain 33.99 309 *e*P **P 22 49 55.7 -0.8**
MOF Molkenrain 33.99 309 *e*P **P 22 49 55.7 -0.8**
CDF Champ du Feu 34.02 310⇑*i*P **P 22 49 55.7 -1.0**
comp=E,24nm,0.8s,mb4.9
CDF Champ du Feu 34.02 310⇑*i*P **P 22 49 55.7 -1.0**
CDF pmax pmax
comp=Z,12nm,0.8s,mb4.9
CDF Champ du Feu 34.02 310⇑*i*P **P 22 49 55.7 -1.0**
comp=Z,12nm,0.8s,mb4.9
CDF Champ du Feu 34.02 310⇑*i*P **P 22 49 55.7 -1.0**
comp=Z,12nm,0.8s,mb4.9
ECH Echery 34.05 310 *e*P **P 22 49 56.1 -0.9**
ECH Echery 34.05 310 *e*P **P 22 49 56.1 -0.9**
LOMF Lomont 34.09 308 *e*P **P 22 49 57.2 -0.1**
LOMF Lomont 34.09 308 *e*P **P 22 49 57.2 -0.1**
HINF Hinteralfeld 34.17 309⇑*i*P **P 22 49 57.4 -0.6**
comp=Z,43nm,0.7s,mb5.2
HINF Hinteralfeld 34.17 309⇑*i*P **P 22 49 57.4 -0.6**
HINF pmax pmax
comp=Z,22nm,0.7s,mb5.2
HINF Hinteralfeld 34.17 309⇑*i*P **P 22 49 57.4 -0.6**
comp=Z,22nm,0.7s,mb5.2
HINF Hinteralfeld 34.17 309⇑*i*P **P 22 49 57.4 -0.6**
comp=Z,22nm,0.7s,mb5.2
ABH Alteburg 34.22 313 P **P 22 49 58.3 -0.1**
ABH Alteburg 34.22 313 P **P 22 49 58.3 -0.1**
ZALV Zalesovo Beam 34.30 40 P **P 22 49 57.9 -1.2**
comp=Z,19nm,0.4s,mb5.3,baz=249,slow=8.0,SNR=126
ZALV PcP PcP 22 52 33.7 -1.4
comp=Z,4.2nm,0.6s,baz=244,slow=4.0,SNR=4.4
ZALV S **S 22 55 19.0 -7.1**
comp=Z,0.3nm,0.3s,baz=245,slow=14,SNR=2.1
ZALV Zalesovo Beam 34.30 40 P **P 22 49 57.9 -1.2**
ZALV 22 52 33.7
ZALV S **S 22 55 19.0 -7.2**
ZALV pmax pmax
comp=Z,19nm,0.4s,mb5.4
ZALV Zalesovo Beam 34.30 40 P **P 22 49 57.9 -1.2**
ZALV PcP PcP 22 52 33.7 -1.4
ZALV S **S 22 55 19.1 -7.1**
ORIF Oris-en-Rattie 34.35 304⇑*i*P **P 22 49 58.4 -1.2**
comp=Z,18nm,0.6s,mb4.9
ORIF *e*MLR MLR
comp=Z,319nm,22.8s,MS3.7
ORIF Oris-en-Rattie 34.35 304⇑*i*P **P 22 49 58.4 -1.2**
ORIF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
ORIF Oris-en-Rattie 34.35 304⇑*i*P **P 22 49 58.4 -1.2**
comp=Z,8.8nm,0.6s,mb4.9
ORIF Oris-en-Rattie 34.35 304⇑*i*P **P 22 49 58.4 -1.2**
comp=Z,8.8nm,0.6s,mb4.9
CABF La Chapelle 34.45 307⇑*i*P **P 22 50 00.5 0.0**
comp=Z,242nm,0.9s,mb5.8
CABF La Chapelle 34.45 307⇑*i*P **P 22 50 00.5 0.0**
CABF pmax pmax
comp=Z,121nm,0.9s,mb5.8
CABF La Chapelle 34.45 307⇑*i*P **P 22 50 00.5 0.0**
comp=Z,121nm,0.9s,mb5.8
CABF La Chapelle 34.45 307⇑*i*P **P 22 50 00.5 0.0**
comp=Z,121nm,0.9s,mb5.8
RAMN Ramite 34.45 89 *e*P **P 22 50 00.4 -0.3**
comp=Z,92nm,0.7s,mb5.8
SMRF Simiane la Rot 34.47 302 *e*P **P 22 50 00.6 0.0**
comp=Z,13nm,0.8s,mb4.6
SMRF Simiane la Rot 34.47 302 *e*P **P 22 50 00.6 0.0**
comp=Z,13nm,0.8s,mb4.9
SMRF Simiane la Rot 34.47 302 *e*P **P 22 50 00.6 0.0**
comp=Z,6.4nm,0.8s,mb4.6
RUP Ruppelstein 34.48 312 *e*P **P 22 49 59.7 -0.9**
RUP Ruppelstein 34.48 312 *e*P **P 22 49 59.7 -0.9**
HAU Haudompre 34.54 309⇑*i*P **P 22 50 00.4 -0.8**
comp=Z,74nm,0.9s,mb5.3
HAU *e*MLR MLR
comp=Z,289nm,18.8s,MS3.7
HAU Haudompre 34.54 309⇑*i*P **P 22 50 00.4 -0.8**
HAU pmax pmax
comp=Z,37nm,0.9s,mb5.3
HAU MLR MLR
comp=Z,290nm,18.8s,MS4.0
HAU Haudompre 34.54 309⇑*i*P **P 22 50 00.4 -0.8**
comp=Z,37nm,0.9s,mb5.3
HAU LR LR
comp=Z,290nm,18.8s,MS4.0
HAU Haudompre 34.54 309⇑*i*P **P 22 50 00.4 -0.8**
comp=Z,37nm,0.9s,mb5.3
KMBO Kilima Mbogo 34.59 198 P **P 22 50 04.3 +2.4**
comp=Z,1.3nm,0.8s,mb3.9,baz=0.0,slow=20,SNR=4.5
KMBO Kilima Mbogo 34.59 198 *e*P **P 22 50 03.5 +1.5**
KMBO Kilima Mbogo 34.59 198 *e*P **P 22 50 03.5 +1.5**
THEF They Montfort 34.82 309 *e*P **P 22 50 02.4 -1.2**
THEF They Montfort 34.82 309 *e*P **P 22 50 02.4 -1.2**
IBBN Ibbenburen 34.82 317 *e*P **P 22 50 04.6 +1.0**
comp=Z,62nm,0.9s,mb5.5
BUG Bochum--Univer 34.83 315 *e*P **P 22 50 04.2 +0.5**
comp=Z,55nm,1.3s,mb5.3
WLF Walferdange 35.04 312 P **P 22 50 05.0 -0.4**
comp=Z,35nm,1.4s,mb5.1
WLF Walferdange 35.04 312 *e*P **P 22 50 05.1 -0.4**
comp=Z,62nm,1.2s,mb5.4
WLF Walferdange 35.04 312 *e*P **P 22 50 04.9 -0.6**
WLF pmax pmax
comp=Z,43nm,0.9s,mb5.4
WLF Walferdange 35.04 312 *e*P **P 22 50 04.9 -0.6**
comp=Z,43nm,0.9s,mb5.4
WLF Walferdange 35.04 312 *e*P **P 22 50 04.9 -0.6**
comp=Z,43nm,0.9s,mb5.4
ODAN Odare 35.15 88 *e*P **P 22 50 06.6 -0.1**
comp=Z,26nm,0.5s,mb5.4
VIVF Saint-Julien-l 35.20 303 *e*P **P 22 50 06.2 -0.7**
comp=Z,236nm,1.7s,mb5.5
VIVF Saint-Julien-l 35.20 303 *e*P **P 22 50 06.2 -0.7**
VIVF pmax pmax
comp=Z,118nm,1.7s,mb5.5
VIVF Saint-Julien-l 35.20 303 *e*P **P 22 50 06.2 -0.7**
comp=Z,118nm,1.7s,mb5.5
VIVF Saint-Julien-l 35.20 303 *e*P **P 22 50 06.2 -0.7**
comp=Z,118nm,1.7s,mb5.5
TAPN Taplejung 35.27 87 *e*P **P 22 50 07.7 0.0**
MEM Membach 35.37 313 P **P 22 50 09.4 +1.1**
comp=Z,12nm,1.4s,mb4.6
MEM Membach 35.37 313 P **P 22 50 09.4 +1.1**
comp=Z,12nm,1.4s,mb4.6
SFTF Sexfontaines 35.44 309⇑*i*P **P 22 50 08.5 -0.5**
comp=Z,180nm,1.2s,mb5.6
SFTF Sexfontaines 35.44 309⇑*i*P **P 22 50 08.5 -0.5**
comp=Z,180nm,1.2s,mb5.9
SFTF Sexfontaines 35.44 309⇑*i*P **P 22 50 08.5 -0.5**
comp=Z,90nm,1.2s,mb5.6
MEZF Maizieres J'vi 35.49 310⇑*i*P **P 22 50 09.0 -0.4**
comp=Z,227nm,1.0s,mb5.8
MEZF Maizieres J'vi 35.49 310⇑*i*P **P 22 50 09.0 -0.4**
comp=Z,227nm,1.0s,mb6.1
MEZF Maizieres J'vi 35.49 310⇑*i*P **P 22 50 09.0 -0.4**
comp=Z,114nm,1.0s,mb5.8
HFS Hagfors 35.55 332 P **P 22 50 09.2 -0.5**
comp=Z,95nm,0.5s,mb6.0,baz=126,slow=9.1,SNR=416
HFS S **S 22 55 39.9 -5.2**
comp=Z,4.7nm,0.9s,baz=45,slow=20,SNR=2.5
HFS LR LR 23 05 44.9
comp=Z,332nm,20.6s,MS4.1,baz=122,slow=38
HFS Hagfors 35.55 332 P **P 22 50 09.2 -0.6**
HFS S **S 22 55 39.9 -5.3**
HFS smax
comp=N,5.0nm,1.0s
HFS MLR MLR
comp=Z,332nm,20.6s
HFS Hagfors 35.55 332 P **P 22 50 09.2 -0.6**
HFA0 Hagfors New Ar 35.56 332 P **P 22 50 08.0 -1.8**
HFA0 Hagfors New Ar 35.56 332 P **P 22 50 08.0 -1.8**
MUD Monsted U'grnd 35.67 324⇑*i*P **P 22 50 12.0 +1.1**
MUD Monsted U'grnd 35.67 324⇑*i*P **P 22 50 12.0 +1.1**
comp=Z,99nm,0.7s,mb5.8
MUD Monsted U'grnd 35.67 324⇑*i*P **P 22 50 12.0 +1.1**
comp=Z,99nm,0.7s,mb5.8
LASF Ste Croix 35.71 302⇑*i*P **P 22 50 10.7 -0.7**
comp=Z,40nm,0.9s,mb5.0
LASF Ste Croix 35.71 302⇑*i*P **P 22 50 10.7 -0.7**
comp=Z,20nm,0.9s,mb5.0
BCLA Clavier 35.75 313 P **P 22 50 10.9 -0.7**
BCLA Clavier 35.75 313 P **P 22 50 10.8 -0.8**
GIVF Givet 35.98 312⇑*i*P **P 22 50 13.3 -0.2**
comp=Z,48nm,0.8s,mb5.2
GIVF Givet 35.98 312⇑*i*P **P 22 50 13.3 -0.2**
GIVF pmax pmax
comp=Z,24nm,0.8s,mb5.2
GIVF Givet 35.98 312⇑*i*P **P 22 50 13.3 -0.2**
comp=Z,24nm,0.8s,mb5.2
GIVF Givet 35.98 312⇑*i*P **P 22 50 13.3 -0.2**
comp=Z,24nm,0.8s,mb5.2
SMF Signal de Mont 35.99 306⇑*i*P **P 22 50 13.1 -0.6**
comp=Z,159nm,0.7s,mb5.8
SMF Signal de Mont 35.99 306⇑*i*P **P 22 50 13.1 -0.6**
SMF pmax pmax
comp=Z,79nm,0.7s,mb5.8
SMF Signal de Mont 35.99 306⇑*i*P **P 22 50 13.1 -0.6**
comp=Z,79nm,0.7s,mb5.8
SMF Signal de Mont 35.99 306⇑*i*P **P 22 50 13.1 -0.6**
comp=Z,79nm,0.7s,mb5.8
PLDF La Plantade 36.05 305 *e*P **P 22 50 13.5 -0.8**
PLDF La Plantade 36.05 305 *e*P **P 22 50 13.5 -0.8**
LOR Lormes 36.06 307⇑*i*P **P 22 50 13.5 -0.8**
comp=Z,60nm,0.8s,mb5.2
LOR *e*MLR MLR
comp=Z,343nm,19.5s,MS3.8
LOR Lormes 36.06 307⇑*i*P **P 22 50 13.5 -0.8**
LOR pmax pmax
comp=Z,30nm,0.8s,mb5.3
LOR MLR MLR
comp=Z,340nm,19.5s,MS4.1
LOR Lormes 36.06 307⇑*i*P **P 22 50 13.5 -0.8**
comp=Z,30nm,0.8s,mb5.3
LOR LR LR
comp=Z,340nm,19.5s,MS4.1
LOR Lormes 36.06 307⇑*i*P **P 22 50 13.5 -0.8**
comp=Z,30nm,0.8s,mb5.2
APA Apatity 36.22 351⇓*i*P **P 22 50 15.2 -0.2**
APA *e* 22 55 56.0
APA pmax pmax
comp=Z,33nm,0.9s,mb5.3
APA MLR MLR
comp=Z,600nm,14.0s,MS4.5
APA Apatity 36.22 351 *i*P **P 22 50 15.2 -0.2**
comp=Z,600nm,14.0s
SSF Saint Saulge 36.27 307⇑*i*P **P 22 50 15.5 -0.6**
comp=Z,118nm,0.9s,mb5.5
SSF Saint Saulge 36.27 307⇑*i*P **P 22 50 15.5 -0.6**
SSF pmax pmax
comp=Z,59nm,0.9s,mb5.5
SSF Saint Saulge 36.27 307⇑*i*P **P 22 50 15.5 -0.6**
comp=Z,59nm,0.9s,mb5.5
SSF Saint Saulge 36.27 307⇑*i*P **P 22 50 15.5 -0.6**
comp=Z,59nm,0.9s,mb5.5
AVF Avril sur Loir 36.34 306⇑*i*P **P 22 50 15.9 -0.8**
comp=Z,60nm,0.8s,mb5.3
AVF Avril sur Loir 36.34 306⇑*i*P **P 22 50 15.9 -0.8**
AVF pmax pmax
comp=Z,30nm,0.8s,mb5.3
AVF Avril sur Loir 36.34 306⇑*i*P **P 22 50 15.9 -0.8**
comp=Z,30nm,0.8s,mb5.3
AVF Avril sur Loir 36.34 306⇑*i*P **P 22 50 15.9 -0.8**
comp=Z,30nm,0.8s,mb5.3
BAIF Baives 36.35 312 *e*P **P 22 50 15.8 -1.0**
comp=Z,64nm,0.9s,mb5.3
BAIF Baives 36.35 312 *e*P **P 22 50 15.8 -1.0**
BAIF pmax pmax
comp=Z,32nm,0.9s,mb5.2
BAIF Baives 36.35 312 *e*P **P 22 50 15.8 -1.0**
comp=Z,32nm,0.9s,mb5.2
BAIF Baives 36.35 312 *e*P **P 22 50 15.8 -1.0**
comp=Z,32nm,0.9s,mb5.3
AGO Saint Agoulin 36.40 305 *e*P **P 22 50 16.2 -1.1**
AGO Saint Agoulin 36.40 305 *e*P **P 22 50 16.2 -1.1**
PYM Petit Puy Mans 36.46 305 *e*P **P 22 50 16.7 -1.0**
PYM Petit Puy Mans 36.46 305 *e*P **P 22 50 16.7 -1.0**
BGF Bois d'Agland 36.66 306⇑*i*P **P 22 50 18.7 -0.7**
comp=Z,59nm,0.8s,mb5.2
BGF Bois d'Agland 36.66 306⇑*i*P **P 22 50 18.7 -0.7**
BGF pmax pmax
comp=Z,29nm,0.8s,mb5.2
BGF Bois d'Agland 36.66 306⇑*i*P **P 22 50 18.7 -0.7**
comp=Z,29nm,0.8s,mb5.2
BGF Bois d'Agland 36.66 306⇑*i*P **P 22 50 18.7 -0.7**
comp=Z,29nm,0.8s,mb5.2
OSL Oslo 36.67 330 *e*P **P 22 50 19.2 -0.2**
OSL Oslo 36.67 330 *e*P **P 22 50 19.2 -0.2**
SNR=27
MTLF Montolieu 36.86 301⇑*i*P **P 22 50 20.8 -0.4**
comp=Z,8.8nm,0.7s,mb4.4
MTLF Montolieu 36.86 301⇑*i*P **P 22 50 20.8 -0.4**
comp=Z,4.4nm,0.7s,mb4.4
MTLF Montolieu 36.86 301⇑*i*P **P 22 50 20.8 -0.4**
comp=Z,4.4nm,0.7s,mb4.4
HYF Humbligny 36.89 307 *e*P **P 22 50 21.3 -0.1**
HYF Humbligny 36.89 307 *e*P **P 22 50 21.3 -0.1**
KONO Kongsberg 37.00 329 *e*P **P 22 50 21.7 -0.5**
KONO pmax pmax
comp=Z,33nm,0.6s,mb5.3
KONO Kongsberg 37.00 329 *e*P **P 22 50 21.7 -0.5**
comp=Z,33nm,0.6s,mb5.3
KONO Kongsberg 37.00 329 *e*P **P 22 50 21.7 -0.5**
comp=Z,33nm,0.6s,mb5.3
CAF Calviac 37.05 303⇑*i*P **P 22 50 22.3 -0.5**
comp=Z,10nm,0.8s,mb4.4
CAF Calviac 37.05 303⇑*i*P **P 22 50 22.3 -0.5**
CAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
CAF Calviac 37.05 303⇑*i*P **P 22 50 22.3 -0.5**
comp=Z,5.2nm,0.8s,mb4.4
CAF Calviac 37.05 303⇑*i*P **P 22 50 22.3 -0.5**
comp=Z,5.2nm,0.8s,mb4.4
TCF Toulx Ste Croi 37.06 305⇑*i*P **P 22 50 22.4 -0.5**
comp=Z,45nm,1.1s,mb4.9
TCF Toulx Ste Croi 37.06 305⇑*i*P **P 22 50 22.4 -0.5**
TCF pmax pmax
comp=Z,22nm,1.1s,mb4.9
TCF Toulx Ste Croi 37.06 305⇑*i*P **P 22 50 22.4 -0.5**
comp=Z,22nm,1.1s,mb4.9
TCF Toulx Ste Croi 37.06 305⇑*i*P **P 22 50 22.4 -0.5**
comp=Z,22nm,1.1s,mb4.9
NB2 NORSAR Subarra 37.07 332 P **P 22 50 21.0 -1.8**
NB2 NORSAR Subarra 37.07 332 P **P 22 50 21.0 -1.8**
NOA NORSAR Array B 37.07 332 P **P 22 50 21.4 -1.3**
comp=Z,19nm,0.6s,mb5.1,baz=123,slow=8.9,SNR=84
NOA PP PP 22 51 45.5 -1.7
comp=Z,8.9nm,0.8s,baz=128,slow=11,SNR=3.8
NOA S **S 22 56 09.2 +0.8**
comp=Z,6.3nm,0.9s,baz=124,slow=16,SNR=3.4
NOA LR LR 23 06 41.5
comp=Z,323nm,20.7s,MS4.1,baz=125,slow=38
NOA NORSAR Array B 37.07 332 P **P 22 50 21.4 -1.4**
NOA 22 51 45.5
NOA S **S 22 56 09.3 +0.8**
NOA pmax pmax
comp=Z,19nm,0.6s
NOA pmax pmax
comp=Z,9.0nm,0.8s
NOA smax
comp=N,6.0nm,0.9s
NOA MLR MLR
comp=Z,323nm,20.7s
NOA NORSAR Array B 37.07 332 P **P 22 50 21.4 -1.4**
comp=Z,19nm,0.6s,mb5.1
NOA NORSAR Array B 37.07 332 PP PP 22 51 45.5 -1.6
NAO01 NORSAR Array S 37.10 331 *e*P **P 22 50 22.6 -0.4**
NAO01 NORSAR Array S 37.10 331 *e*P **P 22 50 22.6 -0.4**
RJF Les Rejaudoux 37.46 304⇑*i*P **P 22 50 26.0 -0.3**
comp=Z,52nm,1.0s,mb5.0
RJF *e*MLR MLR
comp=Z,330nm,18.8s,MS3.9
RJF Les Rejaudoux 37.46 304⇑*i*P **P 22 50 26.0 -0.3**
RJF pmax pmax
comp=Z,26nm,1.0s,mb5.0
RJF MLR MLR
comp=Z,330nm,18.8s,MS4.2
RJF Les Rejaudoux 37.46 304⇑*i*P **P 22 50 26.0 -0.3**
comp=Z,26nm,1.0s,mb5.0
RJF LR LR
comp=Z,330nm,18.8s,MS4.2
RJF Les Rejaudoux 37.46 304⇑*i*P **P 22 50 26.0 -0.3**
comp=Z,26nm,1.0s,mb5.0
LSA Lhasa 37.49 82 P **P 22 50 27.3 +0.5**
LSA pmax pmax
comp=Z,40nm,1.3s,mb5.1
CSOR Sort 37.64 299 P **P 22 50 28.6 +0.8**
comp=Z,38nm,1.1s,mb5.0
CSOR Sort 37.64 299 P **P 22 50 28.6 +0.8**
comp=Z,38nm,1.1s,mb5.0
LFF La Frestale 37.99 303⇑*i*P **P 22 50 30.3 -0.4**
comp=Z,37nm,0.7s,mb4.9
LFF La Frestale 37.99 303⇑*i*P **P 22 50 30.3 -0.4**
LFF pmax pmax
comp=Z,18nm,0.7s,mb4.9
LFF La Frestale 37.99 303⇑*i*P **P 22 50 30.3 -0.4**
comp=Z,18nm,0.7s,mb4.9
LFF La Frestale 37.99 303⇑*i*P **P 22 50 30.3 -0.4**
comp=Z,18nm,0.7s,mb4.9
TAM Tamanrasset 38.02 266 *e*P **P 22 50 32.7 +1.4**

TAM e 22 51 58.2
TAM pmax pmax
comp=Z,132nm,1.7s,mb5.4
TAM Tamanrasset 38.02 266 eP **P 22 50 32.7 +1.4**
comp=Z,132nm,1.7s,mb5.4
TAM ePP PP 22 51 58.1 0.0
TAM Tamanrasset 38.02 266 eP **P 22 50 32.7 +1.4**
comp=Z,132nm,1.7s,mb5.4
EPF Esparros 38.22 300⇑ iP **P 22 50 31.3 -1.5**
comp=Z,7.7nm,0.7s,mb4.3
EPF Esparros 38.22 300⇑ iP **P 22 50 31.3 -1.5**
EPF pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
EPF Esparros 38.22 300⇑ iP **P 22 50 31.3 -1.5**
comp=Z,3.8nm,0.6s,mb4.3
EPF Esparros 38.22 300⇑ iP **P 22 50 31.3 -1.5**
comp=Z,3.8nm,0.7s,mb4.3
ERTA Horta de San J 38.27 297 P **P 22 50 34.3 +1.2**
comp=Z,11nm,0.6s,mb4.8
ERTA Horta de San J 38.27 297 P **P 22 50 34.3 +1.2**
comp=Z,11nm,0.6s,mb4.8
BLS5 Blasjo 38.30 327⇑ iP **P 22 50 33.6 +0.4**
BLS5 AMB AMB 22 50 44.2
comp=Z,105nm,3.4s
BLS5 Blasjo 38.30 327⇑ iP **P 22 50 33.6 +0.4**
comp=Z,105nm,3.4s,SNR=26
EBIE Bielsa 38.37 299 P **P 22 50 34.2 +0.3**
comp=Z,7.5nm,0.7s,mb4.5
EBIE Bielsa 38.37 299 P **P 22 50 34.2 +0.2**
comp=Z,7.5nm,0.7s,mb4.5
ODD1 Odda 38.45 328⇑ iP **P 22 50 35.2 +0.8**
ODD1 AMB AMB 22 50 40.5
comp=Z,107nm,1.6s,mb5.3
ODD1 Odda 38.45 328⇑ iP **P 22 50 35.2 +0.8**
comp=Z,107nm,1.6s,mb5.3,SNR=26
MFF Saint Martin d 38.72 306⇑ iP **P 22 50 35.8 -1.0**
comp=Z,41nm,0.9s,mb4.8
MFF Saint Martin d 38.72 306⇑ iP **P 22 50 35.8 -1.0**
MFF pmax pmax
comp=Z,20nm,0.9s,mb4.8
MFF Saint Martin d 38.72 306⇑ iP **P 22 50 35.8 -1.0**
comp=Z,20nm,0.9s,mb4.9
MFF Saint Martin d 38.72 306⇑ iP **P 22 50 35.8 -1.0**
comp=Z,20nm,0.9s,mb4.8
AEU East Anglia Un 38.74 315 eP **P 22 50 37.1 +0.1**
AEU East Anglia Un 38.74 315 eP **P 22 50 37.1 +0.1**
ESAC San Caprasio 38.84 298 P **P 22 50 38.4 +0.4**
comp=Z,35nm,0.7s,mb5.2
ESAC San Caprasio 38.84 298 P **P 22 50 38.4 +0.4**
comp=Z,35nm,0.7s,mb5.2
NSS Namsos 38.88 337⇑ iP **P 22 50 36.5 -1.4**
NSS AMB AMB 22 50 55.7
comp=Z,112nm,2.7s,mb5.1
NSS Namsos 38.88 337⇑ iP **P 22 50 36.5 -1.5**
comp=Z,112nm,2.7s,mb5.1,SNR=26
ETSF Etsaut 38.88 300⇑ iP **P 22 50 38.3 0.0**
comp=Z,21nm,0.9s,mb4.6
ETSF Etsaut 38.88 300⇑ iP **P 22 50 38.3 0.0**
ETSF pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
ETSF Etsaut 38.88 300⇑ iP **P 22 50 38.3 0.0**
comp=Z,10nm,0.9s,mb4.6
ETSF Etsaut 38.88 300⇑ iP **P 22 50 38.3 0.0**
comp=Z,10nm,0.9s,mb4.6
LDF La Druitiere 38.90 309⇑ iP **P 22 50 37.1 -1.2**
comp=Z,33nm,0.6s,mb5.0
LDF La Druitiere 38.90 309⇑ iP **P 22 50 37.1 -1.2**
LDF pmax pmax
comp=Z,17nm,0.6s,mb5.0
LDF La Druitiere 38.90 309⇑ iP **P 22 50 37.1 -1.2**
comp=Z,17nm,0.6s,mb4.9
LDF La Druitiere 38.90 309⇑ iP **P 22 50 37.1 -1.2**
comp=Z,17nm,0.6s,mb5.0
EMOS Mosqueruela 38.91 296 P **P 22 50 40.1 +1.6**
comp=Z,14nm,0.6s,mb4.8
EMOS Mosqueruela 38.91 296 P **P 22 50 40.1 +1.5**
comp=Z,14nm,0.6s,mb4.8
FLN La Foliniere 39.15 309⇑ iP **P 22 50 39.3 -1.2**
comp=Z,122nm,1.0s,mb5.3
FLN eMLR MLR
comp=Z,472nm,20.8s,MS4.0
FLN La Foliniere 39.15 309⇑ iP **P 22 50 39.3 -1.2**
FLN pmax pmax
comp=Z,61nm,1.0s,mb5.3
FLN MLR MLR
comp=Z,470nm,20.8s,MS4.3
FLN La Foliniere 39.15 309⇑ iP **P 22 50 39.3 -1.2**
comp=Z,61nm,1.0s,mb5.3
FLN LR LR
comp=Z,470nm,20.8s,MS4.3
FLN La Foliniere 39.15 309⇑ iP **P 22 50 39.3 -1.2**
comp=Z,61nm,1.0s,mb5.3
KEV Kevo 39.17 349 eP **P 22 50 38.6 -1.8**
KEV pmax pmax
comp=Z,21nm,0.6s,mb5.0
KEV Kevo 39.17 349 eP **P 22 50 39.5 -0.9**
comp=Z,26nm,0.6s,mb5.1
KEV ePP PP 22 52 08.7 -1.3
KEV Kevo 39.17 349 ep **P 22 50 38.6 -1.8**
comp=Z,21nm,0.6s,mb5.0
KEV Kevo 39.17 349 eP **P 22 50 38.6 -1.8**
comp=Z,21nm,0.6s,mb5.0
MOR8 Moi Rana 39.18 340 eP **P 22 50 39.7 -0.8**
MOR8 Moi Rana 39.18 340 eP **P 22 50 39.7 -0.8**
SNR=26
KTK1 Kautokeino 39.20 347⇑ iP **P 22 50 39.7 -0.9**
KTK1 AMB AMB 22 50 52.3
comp=Z,160nm,2.9s,mb5.2
KTK1 Kautokeino 39.20 347⇑ iP **P 22 50 39.7 -0.9**
comp=Z,160nm,2.9s,mb5.2,SNR=26
ARCES ARCESS Array B 39.23 348 P **P 22 50 39.8 -1.1**
comp=Z,12nm,0.4s,mb5.0,baz=158,slow=9.7,SNR=179
ARCES PP PP 22 52 05.3 -5.3
comp=Z,3.0nm,0.6s,baz=146,slow=13,SNR=2.5
ARCES PcP PcP 22 52 49.3 -0.4
comp=Z,7.5nm,0.7s,baz=165,slow=3.7,SNR=3.8
ARCES LR LR 23 09 18.7
comp=Z,230nm,20.9s,MS4.0,baz=325,slow=40
ARCES ARCESS Array B 39.23 348 P **P 22 50 39.8 -1.1**
ARCES 22 52 49.3
ARCES pmax pmax
comp=Z,12nm,0.4s
ARCES MLR MLR
comp=Z,230nm,20.9s
ARCES ARCESS Array B 39.23 348 P **P 22 50 39.8 -1.1**
ARCES PP PP 22 52 05.3 -5.3
ARCES PcP PcP 22 52 49.3 -0.4
ARCES LR LR 23 09 18.8
ARCES ARCESS Array B 39.23 348 P **P 22 50 39.8 -1.1**
comp=Z,12nm,0.4s,mb5.0
ARCES ARCESS Array B 39.23 348 PcP PcP 22 52 49.3 -0.4
comp=Z,230nm,20.9s
ARE0 ARCESS Array S 39.23 348 eP **P 22 50 39.8 -1.0**
ARE0 ARCESS Array S 39.23 348 eP **P 22 50 39.8 -1.1**
RUND Rundenannen 39.23 328 eP **P 22 50 40.5 -0.5**
RUND Rundenannen 39.23 328 eP **P 22 50 40.5 -0.5**
BER Bergen 39.24 328 eP **P 22 50 41.2 +0.2**
BER Bergen 39.24 328 eP **P 22 50 41.2 +0.2**
SNR=26
ASK Askoy 39.34 328 eP **P 22 50 41.3 -0.6**
GRR Gorron 39.36 308⇑ iP **P 22 50 41.2 -1.0**
comp=Z,111nm,1.0s,mb5.3
GRR Gorron 39.36 308⇑ iP **P 22 50 41.2 -1.0**
GRR pmax pmax
comp=Z,56nm,1.0s,mb5.2
GRR Gorron 39.36 308⇑ iP **P 22 50 41.2 -1.0**
comp=Z,56nm,1.0s,mb5.2
GRR Gorron 39.36 308⇑ iP **P 22 50 41.2 -1.0**
comp=Z,56nm,1.0s,mb5.3
SJPF Ste Jean 39.37 300⇑ iP **P 22 50 42.2 -0.2**
comp=Z,24nm,0.6s,mb4.8
SJPF Ste Jean 39.37 300⇑ iP **P 22 50 42.2 -0.2**
SJPF pmax pmax
comp=Z,12nm,0.6s,mb4.8
SJPF Ste Jean 39.37 300⇑ iP **P 22 50 42.2 -0.2**
comp=Z,12nm,0.6s,mb4.8
SJPF Ste Jean 39.37 300⇑ iP **P 22 50 42.2 -0.2**
comp=Z,12nm,0.6s,mb4.8
SHL Shillong 39.38 88⇑ iP **P 22 50 42.5 -0.2**
SHL ex x 22 56 35.0
CART Cartagena 39.58 291 eP **P 22 50 44.3 +0.1**
CART Cartagena 39.58 291 eP **P 22 50 44.3 +0.1**
FLOS Flostrand 39.61 339 eP **P 22 50 43.4 -0.7**
STOK Stokkvaagen 39.72 339 eP **P 22 50 44.7 -0.2**
STOK Stokkvaagen 39.72 339 eP **P 22 50 44.7 -0.2**
EMUR La Murta 39.74 292 P **P 22 50 44.9 -0.6**
comp=Z,77nm,1.7s,mb5.2
EMUR La Murta 39.74 292 P **P 22 50 44.9 -0.6**
comp=Z,77nm,1.7s,mb5.2
PALK Pallekele 39.82 121 eP **P 22 50 46.8 +0.4**
PALK Pallekele 39.82 121 eP **P 22 50 46.8 +0.4**
ETOB Tobarra 39.89 293 P **P 22 50 48.0 +1.3**
comp=Z,10nm,0.8s,mb4.6
ETOB Tobarra 39.89 293 P **P 22 50 48.0 +1.3**
comp=Z,10nm,0.8s,mb4.6
FOO Floro 39.92 330 eP **P 22 50 45.8 -0.8**
FOO Floro 39.92 330 eP **P 22 50 45.8 -0.9**
SNR=26
ETOR Torete 40.08 297 P **P 22 50 47.7 -0.6**
comp=Z,3.4nm,0.9s,mb4.1
ETOR Torete 40.08 297 P **P 22 50 47.7 -0.6**
CWF Charnwood Fore 40.28 315 AMB AMB 22 50 48.9
comp=Z,58nm,0.7s,mb5.4
CWF eP 22 50 49.1
CWF Charnwood Fore 40.28 315 AMB AMB 22 50 48.9
comp=Z,58nm,0.7s,mb5.4
JSA Saint Aubin 40.30 310 P **P 22 50 48.9 -1.1**
JSA Saint Aubin 40.30 310 AMB AMB 22 50 48.3
comp=Z,124nm,1.6s,mb5.4
JSA eP 22 50 48.9
JSA Saint Aubin 40.30 310 AMB AMB 22 50 48.3
comp=Z,124nm,1.6s,mb5.4
JSA Saint Aubin 40.30 310 eP **P 22 50 48.9 -1.2**
SWN1 Swindon 40.37 313⇑ eP **P 22 50 50.6 +0.1**
SWN1 AMB AMB 22 50 50.7
comp=Z,174nm,1.1s,mb5.7
SWN1 Swindon 40.37 313⇑ eP **P 22 50 50.6 0.0**
SGMF Saint Gilles 40.48 308⇑ iP **P 22 50 50.5 -1.0**
comp=Z,85nm,0.9s,mb5.2
SGMF Saint Gilles 40.48 308⇑ iP **P 22 50 50.5 -1.0**
SGMF pmax pmax
comp=Z,43nm,0.9s,mb5.2
SGMF Saint Gilles 40.48 308⇑ iP **P 22 50 50.5 -1.0**
comp=Z,43nm,0.9s,mb5.2
SGMF Saint Gilles 40.48 308⇑ iP **P 22 50 50.5 -1.0**
comp=Z,43nm,0.9s,mb5.2
TRO Tromso 40.60 345⇑ iP **P 22 50 51.2 -1.0**
TRO AMB AMB 22 50 56.6
comp=Z,51nm,2.4s,mb4.7
TRO Tromso 40.60 345⇑ iP **P 22 50 51.2 -1.1**
comp=Z,51nm,2.4s,mb4.7,SNR=26
EVIA Vianos 40.63 293 P **P 22 50 52.3 -0.6**
EVIA pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
EVIA Vianos 40.63 293 P **P 22 50 52.3 -0.6**
comp=Z,10nm,0.7s,mb4.6
EVIA Vianos 40.63 293 P **P 22 50 52.3 -0.6**
comp=Z,10.0nm,0.7s,mb4.5
HPK Haverah Park 40.71 317⇑ eP **P 22 50 53.0 -0.3**
HPK Haverah Park 40.71 317⇑ eP **P 22 50 53.0 -0.3**
QUIF Quistinic 40.86 308 eP **P 22 50 53.4 -1.3**
comp=Z,65nm,0.7s,mb5.1
QUIF Quistinic 40.86 308 eP **P 22 50 53.4 -1.3**
QUIF pmax pmax
comp=Z,33nm,0.7s,mb5.1
QUIF Quistinic 40.86 308 eP **P 22 50 53.4 -1.3**
comp=Z,33nm,0.7s,mb5.1
QUIF Quistinic 40.86 308 eP **P 22 50 53.4 -1.3**
comp=Z,33nm,0.7s,mb5.1
ROSF Rostrenen 40.96 308⇑ iP **P 22 50 54.3 -1.2**
comp=Z,51nm,0.7s,mb5.0
ROSF Rostrenen 40.96 308⇑ iP **P 22 50 54.3 -1.2**
ROSF pmax pmax
comp=Z,25nm,0.7s,mb5.0
ROSF Rostrenen 40.96 308⇑ iP **P 22 50 54.3 -1.2**
comp=Z,26nm,0.7s,mb5.0
ROSF Rostrenen 40.96 308⇑ iP **P 22 50 54.3 -1.2**
comp=Z,26nm,0.7s,mb5.0
ELAN Lanestosa 40.98 300 P **P 22 50 55.7 0.0**
comp=Z,7.6nm,0.7s,mb4.4
ELAN Lanestosa 40.98 300 P **P 22 50 55.7 0.0**
comp=Z,7.6nm,0.7s,mb4.4
HGH Gray Hill 41.01 313 eP **P 22 50 54.6 -1.2**
HGH Gray Hill 41.01 313 eP **P 22 50 54.6 -1.2**
EBER Berja 41.17 291 P **P 22 50 58.2 +0.8**
comp=Z,11nm,0.7s,mb4.6
EBER Berja 41.17 291 P **P 22 50 58.2 +0.8**
comp=Z,11nm,0.7s,mb4.6
MCH1 Michaelchurch 41.18 314⇑ eP **P 22 50 56.6 -0.6**
MCH1 AMB AMB 22 50 57.3
comp=Z,93nm,0.7s,mb5.5
MCH1 Michaelchurch 41.18 314⇑ eP **P 22 50 56.7 -0.5**
EQES Quesada 41.18 292 P **P 22 51 00.2 +2.7**
comp=Z,5.3nm,0.6s,mb4.3
XAL Allendale 41.23 318⇑ iP **P 22 50 57.7 0.0**
XAL Allendale 41.23 318⇑ iP **P 22 50 57.7 +0.1**
HTR Trewern Hill 41.36 314⇑ eP **P 22 50 57.9 -0.8**
HTR Trewern Hill 41.36 314⇑ eP **P 22 50 57.9 -0.8**
HEX Exmoor 41.55 312⇑ iP **P 22 51 00.0 -0.3**
HEX Exmoor 41.55 312⇑ iP **P 22 51 00.0 -0.3**
ESDC Sonseca Array 41.64 295 P **P 22 51 01.1 -0.1**
comp=Z,2.9nm,0.5s,mb4.1,baz=75,slow=8.5,SNR=26
ESDC PcP PcP 22 52 58.1 +0.1
comp=Z,2.0nm,0.7s,baz=63,slow=4.2,SNR=4.9
ESDC Sonseca Array 41.64 295 P **P 22 51 01.3 +0.1**
comp=Z,3.5nm,0.6s,mb4.2
ESDC Sonseca Array 41.64 295 P **P 22 51 01.3 +0.1**
comp=Z,3.5nm,0.6s,mb4.2
ESLA Sonseca Array 41.64 295 eP **P 22 51 01.4 +0.2**
comp=Z,3.6nm,1.1s,mb3.9
ESLA ePP PP 22 52 37.6 +0.3
ESLA Sonseca Array 41.64 295 eP **P 22 51 01.4 +0.2**
comp=Z,3.5nm,1.1s,mb3.9
ECOG Cogollos-Vega 41.65 291 P **P 22 51 01.4 +0.1**
ECOG pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
ECOG Cogollos-Vega 41.65 291 P **P 22 51 01.4 +0.1**
comp=Z,6.0nm,0.5s,mb4.5
ECOG Cogollos-Vega 41.65 291 P **P 22 51 01.4 +0.1**
comp=Z,6.0nm,0.5s,mb4.5
GUD Guadarrama 41.69 297 P **P 22 51 02.1 +0.5**
GUD Guadarrama 41.69 297 P **P 22 51 02.1 +0.5**
EBAN Banos Encina 41.69 293 P **P 22 51 02.3 +0.6**
comp=Z,6.3nm,0.6s,mb4.4
EBAN Banos Encina 41.69 293 P **P 22 51 02.3 +0.7**
ESY Stoneypath 41.69 320⇑ iP **P 22 51 01.3 -0.1**
ESY Stoneypath 41.69 320⇑ iP **P 22 51 01.3 -0.1**
EGUA Guajares 41.72 291 P **P 22 51 01.1 -0.8**
EGUA pmax pmax
comp=Z,104nm,0.9s,mb5.5
EGUA Guajares 41.72 291 P **P 22 51 01.1 -0.7**
comp=Z,104nm,0.9s,mb5.5
EGUA Guajares 41.72 291 P **P 22 51 01.1 -0.8**
comp=Z,104nm,0.9s,mb5.5
ECK Cauldkaine Hil 41.81 318⇑ iP **P 22 51 02.0 -0.4**
ECK Cauldkaine Hil 41.81 318⇑ iP **P 22 51 02.0 -0.4**
EKA Eskdalemuir Ar 41.87 319 P **P 22 51 02.3 -0.5**
comp=Z,35nm,0.6s,mb5.1,baz=105,slow=8.6,SNR=137
EKA Eskdalemuir Ar 41.87 319 P **P 22 51 02.3 -0.5**
EKA pmax pmax
comp=Z,35nm,0.6s
EKA Eskdalemuir Ar 41.87 319 P **P 22 51 02.3 -0.5**
comp=Z,35nm,0.6s,mb5.2
ERON Agron 41.88 291 P **P 22 51 02.6 -0.6**
ERON Agron 41.88 291 P **P 22 51 02.6 -0.6**
ESK Eskdalemuir 41.89 319 AMB AMB 22 51 01.6
comp=Z,67nm,2.2s,mb4.9
ESK ⇑eP 22 51 02.3
ESK Eskdalemuir 41.89 319 iP **P 22 51 03.4 +0.4**
ESK Eskdalemuir 41.89 319 eP **P 22 51 02.3 -0.7**
comp=Z,36nm,0.7s,mb5.1
ESK ePcP PcP 22 52 59.1 +0.6
ESK Eskdalemuir 41.89 319 AMB AMB 22 51 01.6
comp=Z,67nm,2.2s,mb4.9
ESK Eskdalemuir 41.89 319 ePcP PcP 22 52 59.1 +0.6
XDE Dent Fell 41.89 317 eP **P 22 51 02.9 -0.1**
XDE Dent Fell 41.89 317 eP **P 22 51 02.9 -0.1**
EBL Broad Law 41.89 319⇑ iP **P 22 51 03.1 0.0**
EBL Broad Law 41.89 319⇑ iP **P 22 51 03.1 +0.1**
PAB San Pablo 41.95 295 eP **P 22 51 03.9 +0.2**
PAB e 22 52 41.6
PAB e 22 52 58.3
PAB pmax pmax
comp=Z,42nm,1.7s,mb4.8
PAB San Pablo 41.95 295 eP **P 22 51 03.9 +0.1**
comp=Z,42nm,1.7s,mb4.8
PAB ePP PP 22 52 41.6 +0.9
PAB ePcP PcP 22 52 58.2 -0.8
PAB San Pablo 41.95 295 eP **P 22 51 03.9 +0.2**
comp=Z,42nm,1.7s,mb4.8
EDI Edinburgh 42.01 320⇑ eP **P 22 51 02.9 -1.1**
EDI AMB AMB 22 51 04.9
comp=Z,96nm,1.8s,mb5.1
EDI Edinburgh 42.01 320⇑ eP **P 22 51 02.9 -1.0**
ELOJ Sierra Loja 42.13 291 P **P 22 51 04.6 -0.7**
comp=Z,4.2nm,1.0s,mb4.0
ELOJ Sierra Loja 42.13 291 P **P 22 51 04.6 -0.6**
EAU Auchinoon 42.13 319⇑ iP **P 22 51 04.8 -0.2**
EAU Auchinoon 42.13 319⇑ iP **P 22 51 04.8 -0.2**
LRW Lerwick 42.13 326⇑ eP **P 22 51 04.6 -0.4**
LRW AMB AMB 22 51 08.8
comp=Z,166nm,2.0s,mb5.3
LRW Lerwick 42.13 326⇑ eP **P 22 51 04.6 -0.3**
ELUQ Luque 42.15 292 P **P 22 51 04.4 -1.0**
ELUQ pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
ELUQ Luque 42.15 292 P **P 22 51 04.4 -1.0**
comp=Z,6.0nm,0.4s,mb4.6
ELUQ Luque 42.15 292 P **P 22 51 04.4 -1.0**
comp=Z,6.0nm,0.4s,mb4.6
MME1 Meikle Cairn 42.21 322⇑ iP **P 22 51 05.5 -0.1**
MME1 Meikle Cairn 42.21 322⇑ iP **P 22 51 05.5 -0.1**
EBH Black Hill 42.25 320⇑ iP **P 22 51 05.4 -0.6**
EBH Black Hill 42.25 320⇑ iP **P 22 51 05.4 -0.6**
EARI Arriondas 42.27 301 P **P 22 51 06.7 +0.4**
comp=Z,41nm,0.7s,mb5.2
EARI Arriondas 42.27 301 P **P 22 51 06.7 +0.4**
comp=Z,41nm,0.7s,mb5.2
EADA Adamuz 42.31 293 P **P 22 51 06.8 +0.2**
comp=Z,76nm,1.5s,mb5.1
EADA Adamuz 42.31 293 P **P 22 51 06.8 +0.1**
comp=Z,76nm,1.5s,mb5.1
WAL1 Walls 42.38 326⇑ eP **P 22 51 06.0 -0.9**
WAL1 Walls 42.38 326⇑ eP **P 22 51 06.0 -0.9**
MCD Coleburn Disti 42.43 322⇑ iP **P 22 51 07.3 -0.1**
MCD Coleburn Disti 42.43 322⇑ iP **P 22 51 07.3 -0.1**
GAL1 Galloway 42.65 318⇑ eP **P 22 51 09.1 -0.2**
GAL1 AMB AMB 22 51 12.2
comp=Z,66nm,1.2s,mb5.2
GAL1 Galloway 42.65 318⇑ eP **P 22 51 09.1 -0.1**
GTA Gaotai 42.65 65 eP **P 22 51 09.9 +0.4**
GTA pP pP 22 51 22.0 +9.4
GTA sP sP 22 51 27.2 +13
GTA S **S** **22 57 28.3 -4.3**
GTA sS sS 22 57 49.4 +12
GTA pmax pmax
comp=Z,16nm,1.3s,mb4.6
GTA pmax pmax
comp=Z,160nm,6.5s
GTA LR LR
comp=N,680nm,19.6s
GTA LR LR
comp=E,680nm,14.3s
GTA LR LR
comp=Z,480nm,13.7s
EAB Aberfoyle 42.69 320⇑ eP **P 22 51 08.4 -1.2**
EAB Aberfoyle 42.69 320⇑ eP **P 22 51 08.4 -1.2**
PGBU Glenifferbraes 42.70 319 eP **P 22 51 09.2 -0.4**
PGBU AMB AMB 22 51 10.8
comp=Z,156nm,2.8s,mb5.2
EMIJ Mijas 42.72 291 P **P 22 51 09.7 -0.3**
comp=Z,15nm,0.7s,mb4.8
EMIJ Mijas 42.72 291 P **P 22 51 09.7 -0.3**
comp=Z,15nm,0.7s,mb4.8
MVH1 Achvaich 42.99 322⇑ iP **P 22 51 11.5 -0.4**
MVH1 Achvaich 42.99 322⇑ iP **P 22 51 11.5 -0.5**
EPLA Plasencia 43.21 296 P **P 22 51 12.3 -1.7**
EPLA pmax pmax
comp=Z,50nm,1.5s,mb5.0
EPLA Plasencia 43.21 296 P **P 22 51 12.3 -1.7**
comp=Z,50nm,1.5s,mb5.0
EPLA Plasencia 43.21 296 P **P 22 51 12.3 -1.7**
comp=Z,50nm,1.5s,mb5.0
MOY Mondy 43.25 47 eP **P 22 51 15.0 +0.9**
MOY pmax pmax
comp=Z,56nm,2.2s,mb4.9
MOY Mondy 43.25 47 eP **P 22 51 15.0 +0.9**
comp=Z,56nm,2.2s,mb4.9
GMM Mts of Mourne 43.27 317 eP **P 22 51 13.9 -0.3**
GMM Mts of Mourne 43.27 317 eP **P 22 51 13.9 -0.3**
ZFT Errachidia 43.35 284 iP **P 22 51 16.0 +0.8**
DSB Dublin 43.38 315 eP **P 22 51 15.1 -0.1**
comp=Z,37nm,0.7s,mb5.2
DSB Dublin 43.38 315 eP **P 22 51 15.1 -0.1**
comp=Z,37nm,0.7s,mb5.2
DLF Lyons Farm 43.48 315⇑ iP **P 22 51 15.6 -0.4**
KAC Achnashellach 43.48 321⇑ eP **P 22 51 15.4 -0.5**
KAC Achnashellach 43.48 321⇑ eP **P 22 51 15.4 -0.5**
ECAL Calabor 43.50 299 P **P 22 51 17.1 +0.8**
comp=Z,52nm,1.2s,mb5.1
ECAL Calabor 43.50 299 P **P 22 51 17.1 +0.8**
comp=Z,52nm,1.2s,mb5.1
PBRG Braganca 43.52 299 eP **P 22 51 16.9 +0.5**
comp=Z,53nm,2.0s,mb4.9
PBRG Braganca 43.52 299 eP **P 22 51 16.9 +0.5**
comp=Z,53nm,2.0s,mb4.9
ESPR Espera 43.52 291 P **P 22 51 14.5 -2.1**
comp=Z,30nm,1.5s,mb4.8
ESPR Espera 43.52 291 P **P 22 51 14.5 -2.0**
comp=Z,30nm,1.5s,mb4.8
RSC Scourie 43.60 323⇑ iP **P 22 51 16.6 -0.3**
RSC Scourie 43.60 323⇑ iP **P 22 51 16.5 -0.4**
KPL Plockton 43.64 321 eP **P 22 51 16.5 -0.7**
KPL AMB AMB 22 51 23.4
comp=Z,78nm,2.6s,mb5.0
KPL Plockton 43.64 321 eP **P 22 51 16.5 -0.7**
KAR1 Arisaig 43.65 321⇑ iP **P 22 51 17.0 -0.2**
KAR1 Arisaig 43.65 321⇑ iP **P 22 51 17.0 -0.3**
CZD Col de Zad 43.67 286 iP **P 22 51 20.0 +2.2**
ERUA La Rua 43.76 299 P **P 22 51 17.5 -0.9**
ERUA pmax pmax
comp=Z,21nm,0.8s,mb4.9
ERUA La Rua 43.76 299 P **P 22 51 17.5 -0.9**
comp=Z,21nm,0.8s,mb4.9
ERUA La Rua 43.76 299 P **P 22 51 17.5 -0.9**
comp=Z,21nm,0.8s,mb4.9
MVO Moncorvo 43.80 298 eP **P 22 51 19.1 +0.4**
comp=Z,40nm,1.3s,mb5.0
MVO Moncorvo 43.80 298 P **P 22 51 19.0 +0.3**
MVO Moncorvo 43.80 298 P **P 22 51 19.0 +0.3**
RRR Rubha Reidh 43.83 322⇑ eP **P 22 51 18.1 -0.6**
RRR Rubha Reidh 43.83 322⇑ eP **P 22 51 18.1 -0.6**
EMIN Mina Concepcio 44.01 293 P **P 22 51 20.7 +0.3**
comp=Z,3.4nm,0.6s,mb4.2
EMIN Mina Concepcio 44.01 293 P **P 22 51 20.7 +0.3**
comp=Z,3.4nm,0.6s,mb4.2
EBAD Badajoz 44.11 294 P **P 22 51 21.2 0.0**
comp=Z,5.6nm,0.7s,mb4.4
EBAD Badajoz 44.11 294 P **P 22 51 21.2 0.0**
comp=Z,5.6nm,0.7s,mb4.4
PBAR Barrancos 44.22 293 eP **P 22 51 22.4 +0.2**
comp=Z,48nm,1.5s,mb5.0
PBAR eLQ 23 04 05.9
PBAR eLR LR 23 06 54.6
comp=Z,150nm,16.0s
PBAR Barrancos 44.22 293 eP **P 22 51 22.4 +0.2**
comp=Z,48nm,1.5s,mb5.0
MTE Manteigas 44.28 297 eP **P 22 51 23.6 +1.0**
comp=Z,66nm,1.4s,mb5.2
MTE eLQ 23 01 33.4
MTE eLR LR 23 04 14.6
comp=Z,233nm,16.0s
MTE Manteigas 44.28 297 eP **P 22 51 23.6 +1.0**
comp=Z,45nm,1.3s,mb5.0
MTE Manteigas 44.28 297 eP **P 22 51 23.6 +1.0**
comp=Z,66nm,1.4s,mb5.2
PMRV Marv??o 44.30 295 eP **P 22 51 23.0 +0.2**
comp=Z,36nm,1.7s,mb4.8
PMRV Marv??o 44.30 295 eP **P 22 51 22.9 +0.1**
PMRV Marv??o 44.30 295 eP **P 22 51 22.9 +0.1**
RRH Rhenigidale 44.30 322⇑ iP **P 22 51 22.1 -0.4**
RRH Rhenigidale 44.30 322⇑ iP **P 22 51 22.1 -0.4**
PVRL Vila Real 44.30 298 eP **P 22 51 23.0 +0.3**
comp=Z,58nm,1.9s,mb5.0
PVRL Vila Real 44.30 298 eP **P 22 51 23.0 +0.3**
comp=Z,58nm,1.9s,mb5.0
PCBR Castelo Branco 44.31 296 eP **P 22 51 23.5 +0.7**
comp=Z,44nm,1.3s,mb5.0
PCBR Castelo Branco 44.31 296 eP **P 22 51 23.5 +0.7**
comp=Z,44nm,1.3s,mb5.0
PCAB Cabril 44.48 299 eP **P 22 51 25.2 +1.0**
comp=Z,65nm,1.5s,mb5.1
PCAB Cabril 44.48 299 eP **P 22 51 25.2 +1.0**
comp=Z,65nm,1.5s,mb5.1
ELOB Lobios 44.49 299 P **P 22 51 25.0 +0.7**
comp=Z,26nm,0.9s,mb5.0

ELOB Lobios 44.49 299 P **P** **22 51 25.0 +0.7**
comp=Z,26nm,0.9s,mb5.0
PESTR Estremoz 44.54 294 *e*P **P** **22 51 24.6 -0.1**
comp=Z,28nm,1.9s,mb4.8
PESTR *e*LQ 23 01 18.6
PESTR Estremoz 44.54 294 *e*P **P** **22 51 24.6 -0.1**
comp=Z,28nm,1.9s,mb4.8
KIB El Ksiba 44.60 285 *e*P **P** **22 51 24.0 -1.2**
ZAK Zakamensk 44.61 49⇑*i*P **P** **22 51 25.5 +0.4**
ZAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
ZAK Zakamensk 44.61 49 *i* P **P** **22 51 25.5 +0.4**
comp=Z,6.0nm,1.2s,mb4.3
EGRO El Granado 44.68 293 P **P** **22 51 25.6 -0.2**
comp=Z,12nm,1.1s,mb4.7
EGRO El Granado 44.68 293 P **P** **22 51 25.6 -0.2**
comp=Z,12nm,1.1s,mb4.7
STS Santiago 44.75 300 P **P** **22 51 26.7 +0.4**
STS pmax pmax
comp=Z,20nm,0.7s,mb5.1
STS Santiago 44.75 300 P **P** **22 51 26.7 +0.4**
comp=Z,20nm,0.7s,mb5.1
STS Santiago 44.75 300 P **P** **22 51 26.7 +0.4**
comp=Z,20nm,0.7s,mb5.1
PVAQ Vaqueiros 44.89 292 *e*P **P** **22 51 28.4 +0.9**
comp=Z,21nm,1.5s,mb4.7
PVAQ *e*LQ 23 01 37.2
PVAQ Vaqueiros 44.89 292 *e*P **P** **22 51 28.4 +0.9**
comp=Z,21nm,1.5s,mb4.7
PBEJ Beja 44.89 293 *e*P **P** **22 51 27.7 +0.2**
comp=Z,51nm,1.6s,mb5.1
PBEJ Beja 44.89 293 *e*P **P** **22 51 27.7 +0.2**
comp=Z,51nm,1.6s,mb5.1
TLY Talaya 44.90 47 *e*P **P** **22 51 27.1 -0.2**
TLY pmax pmax
comp=Z,12nm,1.0s,mb4.7
TLY Talaya 44.90 47 *e*P **P** **22 51 27.1 -0.2**
comp=Z,12nm,1.0s,mb4.7
TLY Talaya 44.90 47 *e*P **P** **22 51 27.1 -0.2**
comp=Z,12nm,1.0s,mb4.7
EVO Evora 44.92 294⇑*i*P **P** **22 51 28.4 +0.7**
comp=Z,68nm,1.5s,mb5.0
EVO *e*MLR MLR
comp=Z,280nm,17.8s,MS3.9
EVOP Sao Brissos 45.00 294⇑*i*P **P** **22 51 28.4 0.0**
comp=Z,34nm,1.5s,mb5.0
PTOM Tomar 45.05 296 *e*P **P** **22 51 29.5 +0.8**
comp=Z,54nm,1.4s,mb5.2
PTOM Tomar 45.05 296 *e*P **P** **22 51 29.5 +0.8**
comp=Z,54nm,1.4s,mb5.2
EMAZ Mazaricos 45.05 300 P **P** **22 51 29.2 +0.5**
comp=Z,49nm,0.7s,mb5.5
EMAZ Mazaricos 45.05 300 P **P** **22 51 29.2 +0.5**
comp=Z,49nm,0.7s,mb5.5
PBDV Barranco-do-Ve 45.08 292 *e*P **P** **22 51 36.8 +7.8**
IRK Irkutsk 45.31 46 *e*P **P** **22 51 29.3 -1.3**
IRK *e* 22 53 09.4
IRK pmax pmax
comp=Z,82nm,1.8s,mb5.3
IRK Irkutsk 45.31 46 *e*P **P** **22 51 29.3 -1.3**
comp=Z,82nm,1.8s,mb5.3
IRK Irkutsk 45.31 46 *e*PcP PcP 22 53 09.4 -0.8
TORD Torodi Ar. Bea 45.78 256 P **P** **22 51 34.7 -0.1**
comp=Z,16nm,0.8s,mb5.0,baz=56,slow=7.2,SNR=110
TORD LR LR 23 10 03.8
comp=Z,201nm,21.2s,MS4.0,baz=50,slow=35
PFVI Vila Bisbo 45.81 292 *e*P **P** **22 51 34.7 -0.1**
comp=Z,42nm,1.2s,mb5.2
PFVI Vila Bisbo 45.81 292 *e*P **P** **22 51 34.6 -0.2**
PFVI Vila Bisbo 45.81 292 *e*P **P** **22 51 34.6 -0.2**
LZH Lanzhou 46.37 69 *e*P **P** **22 51 39.7 +0.5**
LZH pP pP 22 51 54.5 +12
LZH pmax pmax
comp=Z,37nm,1.1s,mb5.2
LZH pmax pmax
comp=Z,190nm,6.1s
LZH LR LR
comp=N,1μm,16.6s,MS5.0
LZH LR LR
comp=E,420nm,13.2s,MS5.0
LZH LR LR
comp=Z,750nm,18.3s
SONM Songino Array 46.68 53 P **P** **22 51 39.7 -1.8**
comp=Z,4.3nm,0.8s,mb4.4,baz=273,slow=11,SNR=14
SONM PcP PcP 22 53 13.4 -1.7
comp=Z,3.1nm,0.7s,baz=262,slow=4.9,SNR=4.2
SONM Songino Array 46.68 53 P **P** **22 51 39.7 -1.8**
SONM 22 53 13.4
SONM pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 46.68 53 P **P** **22 51 39.7 -1.8**
comp=Z,4.0nm,0.8s,mb4.4
SONM Songino Array 46.68 53 PcP PcP 22 53 13.4 -1.7
ULN Ulaanbaatar 47.12 53 *e*P **P** **22 51 45.0 +0.1**
ULN pmax pmax
comp=Z,25nm,0.9s,mb5.1
ULN Ulaanbaatar 47.12 53 *e*P **P** **22 51 45.0 +0.1**
comp=Z,25nm,0.9s,mb5.1
ULN Ulaanbaatar 47.12 53 *e*P **P** **22 51 45.0 +0.1**
comp=Z,25nm,0.9s,mb5.1
ULN Ulaanbaatar 47.12 53 P **P** **22 51 45.5 +0.5**
SNR=14
CD2 Chengdu 47.63 76 *e*P **P** **22 51 48.7 -0.4**
CD2 pP pP 22 52 02.7 +10
CD2 sP sP 22 52 07.2 +14
CD2 PP PP 22 53 39.7 -0.9
CD2 S **S** **22 58 38.6 -6.2**
CD2 sS sS 22 58 59.6 +10
CD2 pmax pmax
comp=Z,40nm,1.0s,mb5.4
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,1μm,22.6s
CD2 LR LR
comp=E,580nm,15.3s
CD2 LR LR
comp=Z,480nm,16.7s
SPITS Spitsbergen Ar 47.90 352 P **P** **22 51 49.7 -0.9**
comp=Z,22nm,0.5s,mb5.5,baz=142,slow=9.8,SNR=50
SPITS Spitsbergen Ar 47.90 352 P **P** **22 51 49.7 -0.9**
SPITS pmax pmax
comp=Z,22nm,0.5s
SPITS Spitsbergen Ar 47.90 352 P **P** **22 51 49.7 -0.9**
comp=Z,22nm,0.5s,mb5.4
CHTO Chiang Mai 48.08 93 *e*P **P** **22 51 52.3 -0.5**
CHTO *e* 22 53 45.4
CHTO pmax pmax
comp=Z,25nm,1.2s,mb5.1
CHTO Chiang Mai 48.08 93 *e*P **P** **22 51 52.3 -0.5**
comp=Z,25nm,1.2s,mb5.1
CHTO *e*PP PP 22 53 45.4 +0.5
CHTO Chiang Mai 48.08 93 *e*P **P** **22 51 52.3 -0.5**
comp=Z,25nm,1.2s,mb5.1
CHTO Chiang Mai 48.08 93 P **P** **22 51 52.7 -0.1**
SNR=12
CM31 Chiang Mai Arr 48.24 94 *e*P **P** **22 51 53.0 -1.0**
CM31 *e*PcP PcP 22 53 21.2 +0.1
CM31 *e*PP PP 22 53 46.1 -0.2
CM31 Chiang Mai Arr 48.24 94 *e*P **P** **22 51 53.0 -1.0**
CMAR Chiang Mai Arr 48.24 94 P **P** **22 51 53.0 -1.0**
comp=Z,5.6nm,0.8s,mb4.6,baz=294,slow=8.2,SNR=40
CMAR PcP PcP 22 53 20.2 -0.9
comp=Z,4.2nm,0.7s,baz=294,slow=4.7,SNR=7.1
CMAR PP PP 22 53 45.6 -0.8
comp=Z,4.1nm,0.9s,baz=296,slow=9.0,SNR=4.1
CMAR LR LR 23 16 12.3
comp=Z,145nm,19.4s,MS4.0,baz=289,slow=41
CMAR Chiang Mai Arr 48.24 94 P **P** **22 51 53.0 -1.0**
CMAR 22 53 20.2
CMAR 22 53 45.6
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CMAR MLR MLR
comp=Z,145nm,19.4s
CMAR Chiang Mai Arr 48.24 94 P **P** **22 51 53.0 -1.0**
comp=Z,6.0nm,0.8s,mb4.7
CMAR Chiang Mai Arr 48.24 94 PcP PcP 22 53 20.2 -0.9
KMI Kunming 48.71 84⇑P **P** **22 51 57.2 -0.3**
KMI pP pP 22 52 13.3 +13
KMI PcP PcP 22 53 24.2 +1.5
KMI PP PP 22 53 52.3 +1.7
KMI S **S** **22 58 55.2 -5.0**
KMI sS sS 22 59 20.2 +15
KMI SS SS 23 02 22.0 -8.4
KMI pmax pmax
comp=Z,36nm,0.9s,mb5.4
KMI pmax pmax
comp=Z,520nm,12.2s
KMI LR LR
comp=N,660nm,20.2s,MS4.7
KMI LR LR
comp=E,310nm,21.3s,MS4.7
KMI LR LR
comp=Z,450nm,17.2s,MS4.5
BDT Bhumibol Dam 48.85 95 P **P** **22 51 57.5 -1.2**
comp=Z,14nm,0.1s,mb6.0
KBS Kingsbay 49.04 351⇑*e*P **P** **22 51 59.7 +0.3**
KBS pmax pmax
comp=Z,43nm,1.2s,mb5.3
KBS Kingsbay 49.04 351 *e*P **P** **22 51 58.4 -1.0**
comp=Z,18nm,1.4s,mb4.9,SNR=46
OPO Ambohidratompo 50.60 180 P **P** **22 52 13.1 +1.3**
comp=Z,3.2nm,0.9s,mb4.2,baz=0.0,slow=3.0,SNR=4.9
OPO Ambohidratompo 50.60 180 P **P** **22 52 13.1 +1.3**
XAN Xi'an 50.91 70 P **P** **22 52 13.6 -0.6**
XAN pP pP 22 52 21.3 +3.9
XAN pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CIT Chita 51.03 47 *e*P **P** **22 52 15.4 +0.6**
CIT Chita 51.03 47 *e*P **P** **22 52 15.4 +0.6**
HHC Hu-ho-hao-te 51.29 61 *e*P **P** **22 52 17.1 +0.2**
HHC pP pP 22 52 29.7 +10
HHC sP sP 22 52 34.9 +14
HHC PcP PcP 22 53 32.5 +0.6
HHC PP PP 22 54 14.6 +0.9
HHC ScP ScP 22 57 23.9 -4.6
HHC S **S** **22 59 32.4 -3.4**
HHC sS sS 22 59 51.9 +11
HHC ScS ScS 23 02 00.5 -7.1
HHC pmax pmax
comp=Z,18nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,140nm,5.2s
HHC LR LR
comp=N,520nm,16.1s,MS4.8
HHC LR LR
comp=E,320nm,12.7s,MS4.8
HHC LR LR
comp=Z,440nm,13.5s,MS4.7
BORG Borgarnes 52.19 330 *e*P **P** **22 52 22.7 -0.6**
BORG Borgarnes 52.19 330 *e*P **P** **22 52 22.7 -0.6**
DBIC Dimbokro 54.72 254 P **P** **22 52 42.6 0.0**
comp=Z,12nm,0.9s,mb5.0,baz=46,slow=9.9,SNR=11
DBIC LR LR 23 19 03.1
comp=Z,506nm,20.3s,MS4.6,baz=30,slow=39
DBIC Dimbokro 54.72 254 P **P** **22 52 42.6 0.0**
DBIC pmax pmax
comp=Z,13nm,0.9s
DBIC MLR MLR
comp=Z,506nm,20.3s
DBIC Dimbokro 54.72 254 *e*P **P** **22 52 43.0 +0.4**
comp=Z,20nm,1.0s,mb5.1
DBIC *e*PP PP 22 54 45.1 -0.2
DBIC Dimbokro 54.72 254 P **P** **22 52 42.6 0.0**
comp=Z,506nm,20.3s
DBIC Dimbokro 54.72 254 *e*PP PP 22 54 45.1 -0.2
KIC Kosan Boka 54.81 253 *e*P **P** **22 52 43.3 +0.1**
comp=Z,63nm,0.9s,mb5.6
KIC Kosan Boka 54.81 253 *e*P **P** **22 52 43.3 +0.1**
comp=Z,63nm,0.9s,mb5.6
TIC Toumodi 54.87 254 *e*P **P** **22 52 43.4 -0.3**
comp=Z,163nm,1.7s,mb5.8
TIC Toumodi 54.87 254 *e*P **P** **22 52 43.4 -0.3**
BJI Beijing 54.90 61 P **P** **22 52 42.7 -0.9**
BJI S **S** **23 00 15.6 -9.4**
BJI pmax pmax
comp=Z,16nm,0.6s,mb5.2
BJI pmax pmax
comp=Z,190nm,5.3s
BJI LR LR
comp=N,670nm,20.9s,MS4.7
BJI LR LR
comp=E,230nm,20.9s,MS4.7
BJI LR LR
comp=Z,280nm,32.0s
LIC Lamto 55.12 254 *e*P **P** **22 52 45.4 -0.1**
comp=Z,90nm,1.0s,mb5.8
LIC Lamto 55.12 254⇑*i*P **P** **22 52 45.4 -0.1**
comp=Z,66nm,1.0s,mb5.3
LIC *e*MLR MLR
comp=Z,620nm,17.8s,MS4.4
LIC Lamto 55.12 254⇑*i*P **P** **22 52 45.4 -0.1**
comp=Z,33nm,1.0s,mb5.3
LIC LR LR
comp=Z,310nm,17.8s,MS4.4
LIC Lamto 55.12 254⇑*i*P **P** **22 52 45.4 -0.1**
comp=Z,33nm,1.0s,mb5.3
WHN Wuhan 56.38 73⇓P **P** **22 52 54.1 -0.2**
WHN *e*S **S** **23 00 49.4 +4.4**
WHN LR LR
comp=Z,900nm,16.6s,MS4.9
KULM Kulim 56.50 107 *e*P **P** **22 52 54.6 -0.9**
comp=Z,50nm,0.8s,mb5.6
KULM Kulim 56.50 107 P **P** **22 52 54.3 -1.1**
comp=Z,706nmcomp=Z,80nm,0.9s,mb5.8
KULM Kulim 56.50 107 P **P** **22 52 54.2 -1.2**
comp=Z,706nmcomp=Z,80nm,0.9s,mb5.8
KULM Kulim 56.50 107 *e*P **P** **22 52 54.6 -0.8**
comp=Z,50nm,0.8s,mb5.6
CLNS Chul'man 57.02 40 *e*P **P** **22 52 57.4 -1.1**
CLNS pmax pmax
comp=Z,31nm,1.1s,mb5.2
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS pmax pmax
comp=N,10.0nm,1.1s
CLNS Chul'man 57.02 40 *e*P **P** **22 52 57.4 -1.1**
comp=N,10.0nm,1.1s,mb4.8
TIXI Tiksi 57.05 22 *e*P **P** **22 52 56.8 -1.7**
TIXI pmax pmax
comp=Z,24nm,1.2s,mb5.1
TIXI MLR MLR
comp=Z,591nm,15.0s,MS4.8
TIXI Tiksi 57.05 22 *e*P **P** **22 52 56.8 -1.7**
comp=Z,591nm,15.0s
QIZ Qiongzhong 57.21 87 P **P** **22 53 00.0 -0.4**
QIZ *e*S **S** **23 00 53.2 -3.1**
QIZ pmax pmax
comp=Z,35nm,1.0s,mb5.3
QIZ LR LR
comp=N,210nm,17.9s
QIZ LR LR
comp=Z,210nm,22.2s,MS4.2
IPM Ipoh 57.28 107 *e*P **P** **22 52 59.5 -1.4**
comp=Z,67nm,0.8s,mb5.7
IPM Ipoh 57.28 107 P **P** **22 52 59.5 -1.4**
comp=Z,772nmcomp=Z,94nm,1.0s,mb5.8
IPM Ipoh 57.28 107 P **P** **22 52 59.6 -1.3**
comp=Z,774nmcomp=Z,94nm,1.0s,mb5.8
SUMG Summit 58.25 339 *e*P **P** **22 53 07.1 +0.2**
comp=Z,34nm,0.7s,mb5.5
SUMG Summit 58.25 339⇑*i*P **P** **22 53 07.6 +0.7**
comp=Z,27nm,0.7s,mb5.4
SUMG Summit 58.25 339 *e*P **P** **22 53 07.1 +0.2**
comp=Z,34nm,0.7s,mb5.5
MNSI Mandailing Nat 58.32 112 P **P** **22 53 07.9 -0.3**
comp=Z,33nm,0.8s,mb5.4
MNSI Mandailing Nat 58.32 112 P **P** **22 53 08.0 -0.2**
comp=Z,33nm,0.8s,mb5.4
YAK Yakutsk 58.53 33 *e*P **P** **22 53 06.8 -2.2**
YAK pmax pmax
comp=Z,32nm,0.9s,mb5.3
YAK pmax pmax
comp=E,20nm,1.3s
YAK Yakutsk 58.53 33 *e*P **P** **22 53 07.6 -1.4**
YAK Yakutsk 58.53 33 *e*P **P** **22 53 06.8 -2.2**
comp=E,32nm,0.9s,mb5.3
TSUM Tsumeb 58.59 213 *e*P **P** **22 53 10.2 +0.3**
comp=E,8.8nm,0.9s,mb4.8
TSUM Tsumeb 58.59 213 *e*P **P** **22 53 10.2 +0.3**
comp=E,8.8nm,0.9s,mb4.8
NJ2 Nanjing 59.45 69 *e*P **P** **22 53 15.2 -0.7**
NJ2 pP pP 22 53 24.6 +5.5
NJ2 sP sP 22 53 28.4 +8.1
NJ2 PP PP 22 55 27.8 +0.8
NJ2 S **S** **23 01 20.0 -5.2**
NJ2 pmax pmax
comp=Z,50nm,1.0s,mb5.5
NJ2 pmax pmax
comp=Z,90nm,5.2s
NJ2 LR LR
comp=N,380nm,21.3s,MS4.6
NJ2 LR LR
comp=E,430nm,24.8s,MS4.6
NJ2 LR LR
comp=Z,580nm,22.3s,MS4.7
PPI Padang Panjang 59.73 112 P **P** **22 53 17.8 -0.2**
comp=Z,40nm,0.9s,mb5.4
PPI Padang Panjang 59.73 112 P **P** **22 53 17.9 -0.1**
comp=Z,40nm,0.9s,mb5.4
BKNI Bangkinang 59.76 111 P **P** **22 53 17.8 -0.4**
comp=Z,2μmcomp=Z,187nm,0.8s,mb6.2
BKNI Bangkinang 59.76 111 P **P** **22 53 18.0 -0.2**
comp=Z,2μmcomp=Z,188nm,0.8s,mb6.2
PDSI Padang 60.06 113 P **P** **22 53 20.0 -0.3**
comp=Z,2μmcomp=Z,120nm,0.9s,mb5.9
PDSI Padang 60.06 113 P **P** **22 53 20.2 -0.1**
comp=Z,2μmcomp=Z,120nm,0.9s,mb5.9
CN2 Changchun 60.48 55 *e*P **P** **22 53 23.8 +1.0**
CN2 *e*S **S** **23 01 30.9 -7.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=N,400nm,15.0s,MS4.8
CN2 LR LR
comp=E,400nm,15.0s,MS4.8
CN2 LR LR
comp=Z,500nm,16.0s,MS4.8
LBTB Lobatse 60.65 203 *e*P **P** **22 53 25.5 +1.5**
LBTB *e* 22 54 08.2
LBTB 22 55 38.7
LBTB pmax pmax
comp=Z,16nm,0.8s,mb5.2
LBTB Lobatse 60.65 203 *e*P **P** **22 53 25.5 +1.5**
comp=Z,16nm,0.8s,mb5.2
LBTB *e*PcP PcP 22 54 08.2 0.0
LBTB PP PP 22 55 38.7 +0.7
LBTB Lobatse 60.65 203 *e*P **P** **22 53 25.5 +1.5**
comp=Z,16nm,0.8s,mb5.2
ALE Alert 60.66 352 P **P** **22 53 23.0 -0.4**
comp=Z,140nm,0.7s,mb6.2,SNR=9.2
SDSI Sungai Dareh 60.83 112 P **P** **22 53 24.2 -1.4**
comp=Z,2μmcomp=Z,218nm,0.7s,mb6.4
SDSI Sungai Dareh 60.83 112 P **P** **22 53 24.2 -1.4**
comp=Z,2μmcomp=Z,218nm,0.7s,mb6.4
MYKOM Kota Tinggi 61.13 108 P **P** **22 53 26.5 -1.1**
comp=Z,36nm,0.9s,mb5.5
MYKOM Kota Tinggi 61.13 108 P **P** **22 53 27.0 -0.6**
comp=Z,36nm,0.9s,mb5.5
KLR Kul'dur 62.91 47 *e*P **P** **22 53 33.7 -5.4**
MDJ Mudanjiang 63.04 53 P **P** **22 53 37.7 -2.3**
MDJ pP pP 22 53 51.5 +8.3
MDJ sP sP 22 53 57.5 +13
MDJ S **S** **23 02 02.4 -8.1**
MDJ sS sS 23 02 26.3 +10
MDJ ScS ScS 23 03 25.5 -7.5
MDJ pmax pmax
comp=Z,7.0nm,1.5s,mb4.6
MDJ pmax pmax
comp=Z,57nm,5.1s
MDJ LR LR
comp=N,270nm,16.4s,MS4.6
MDJ LR LR
comp=E,190nm,18.3s,MS4.6
MDJ LR LR
comp=Z,430nm,15.9s,MS4.7
KSI Kapahiang 63.43 113 P **P** **22 53 45.8 +2.8**
comp=Z,140nm,0.9s,mb6.1
BOSA Boshof 64.11 202 P **P** **22 53 48.0 +0.9**
comp=Z,16nm,0.8s,mb5.1,baz=17,slow=7.4,SNR=20
BOSA LR LR 23 22 26.0
comp=Z,338nm,19.6s,MS4.5,baz=24,slow=37
BOSA Boshof 64.11 202 *e*P **P** **22 53 47.7 +0.6**
BOSA pmax pmax
comp=Z,16nm,0.8s,mb5.1
BOSA Boshof 64.11 202 *e*P **P** **22 53 47.7 +0.6**
comp=Z,16nm,0.8s,mb5.1
BOSA Boshof 64.11 202 *e*P **P** **22 53 47.7 +0.6**
comp=Z,16nm,0.8s,mb5.1
TPUB Ta-pu 64.38 78 *e*P **P** **22 53 48.9 -0.3**
comp=Z,44nm,0.8s,mb5.5
TPUB Ta-pu 64.38 78 *e*P **P** **22 53 48.9 -0.3**
comp=Z,44nm,0.8s,mb5.5
YHNB Yeheng 64.40 76 *e*P **P** **22 53 48.6 -0.7**
YHNB Yeheng 64.40 76 *e*P **P** **22 53 48.6 -0.7**
KSRS Korea Array 64.42 61 P **P** **22 53 47.3 -1.9**
comp=Z,9.2nm,0.7s,mb5.0,baz=285,slow=7.2,SNR=46
KSRS LR LR 23 25 03.9
comp=Z,289nm,19.8s,MS4.5,baz=286,slow=39
KSRS Korea Array 64.42 61 P **P** **22 53 47.3 -1.9**
KSRS pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KSRS MLR MLR
comp=Z,289nm,19.8s,MS4.5
KSRS Korea Array 64.42 61 P **P** **22 53 47.3 -1.9**
comp=Z,289nm,19.8s
SSLB Suanglung 64.44 77 *e*P **P** **22 53 49.8 +0.2**
comp=Z,19nm,1.0s,mb5.1
SSLB Suanglung 64.44 77 *e*P **P** **22 53 49.8 +0.2**
comp=Z,19nm,1.0s,mb5.1
YULB Yu-li 64.89 77 *e*P **P** **22 53 51.9 -0.6**
comp=Z,30nm,0.9s,mb5.3
YULB Yu-li 64.89 77 *e*P **P** **22 53 51.9 -0.6**
comp=Z,30nm,0.9s,mb5.3
MDSI Maura Dua 65.18 113 P **P** **22 53 52.6 -1.9**
comp=Z,27nm,0.9s,mb5.3
MDSI Maura Dua 65.18 113 P **P** **22 53 52.0 -2.5**
comp=Z,27nm,0.9s,mb5.3
LWLI Liwa 65.42 114 P **P** **22 53 57.6 +1.6**
comp=Z,113nm,0.6s,mb6.1
LWLI Liwa 65.42 114 P **P** **22 53 56.6 +0.6**
comp=Z,112nm,0.6s,mb6.1
KSM Kuching 66.57 104 *e*P **P** **22 54 02.2 -1.2**
comp=Z,9.6nm,0.7s,mb4.9
KSM Kuching 66.57 104 P **P** **22 54 02.2 -1.3**
comp=Z,29nm,1.0s,mb5.3
KSM Kuching 66.57 104 *e*P **P** **22 54 02.2 -1.3**
comp=Z,9.6nm,0.7s,mb4.9
TPI Tanjungpandan 66.87 109 P **P** **22 54 05.0 -0.4**
comp=Z,250nmcomp=Z,20nm,0.9s,mb5.1
TPI Tanjungpandan 66.87 109 P **P** **22 54 05.6 +0.2**
comp=Z,250nmcomp=Z,20nm,0.9s,mb5.1
SEY Seymchan 68.15 28⇓*i*P **P** **22 54 12.2 -0.5**
SEY Seymchan 68.15 28 *i* P **P** **22 54 12.2 -0.5**
STKI Sintang 68.33 104 P **P** **22 54 14.8 +0.2**
comp=Z,50nm,0.9s,mb5.5
STKI Sintang 68.33 104 P **P** **22 54 14.9 +0.3**
comp=Z,50nm,0.9s,mb5.5
KKM Kota Kinabalu 69.00 96⇑*e*P **P** **22 54 18.8 0.0**
comp=Z,83nm,0.8s,mb5.7
KKM Kota Kinabalu 69.00 96 P **P** **22 54 18.8 0.0**
comp=Z,955nmcomp=Z,115nm,0.8s,mb5.9
KKM Kota Kinabalu 69.00 96 P **P** **22 54 18.9 +0.1**
comp=Z,955nmcomp=Z,115nm,0.8s,mb5.9
KKM Kota Kinabalu 69.00 96⇑*e*P **P** **22 54 18.8 0.0**
comp=Z,83nm,0.8s,mb5.7
SUR Sutherland 69.04 204 *e*P **P** **22 54 19.5 +0.9**
SUR Sutherland 69.04 204 *e*P **P** **22 54 19.5 +1.0**
CISI Cisompet, Garu 69.91 113 P **P** **22 54 22.9 -1.5**
comp=Z,2μmcomp=Z,87nm,1.1s,mb5.6
CISI Cisompet, Garu 69.91 113 P **P** **22 54 22.4 -2.0**
comp=Z,2μmcomp=Z,87nm,1.1s,mb5.6
RES Resolute Bay 70.42 350 *e*P **P** **22 54 26.8 +0.2**
RES Resolute Bay 70.42 350 *e*P **P** **22 54 26.8 +0.2**
YSS Yuzh-Sakhalins 70.59 46*e*P **P** **22 54 26.5 -1.6**
YSS *e* 22 54 36.3
YSS *e* 22 54 51.7
YSS *e*S S 23 03 40.0 -1.7
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.5
YSS MLR MLR
comp=Z,200nm,15.0s,MS4.5
YSS Yuzh-Sakhalins 70.59 46 *e*P **P** **22 54 27.3 -0.8**
comp=Z,63nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 70.59 46 *e*P **P** **22 54 26.5 -1.6**
comp=Z,70nm,1.0s,mb5.5
MYLDM Lahad Datu 71.38 96 P **P** **22 54 35.1 +1.7**
comp=Z,24nm,1.4s,mb5.0
MYLDM Lahad Datu 71.38 96 P **P** **22 54 33.3 -0.1**
comp=Z,24nm,1.4s,mb5.0
ASAJ Asahikawa 71.78 49 LR LR 23 28 08.3
comp=Z,213nm,21.2s,MS4.4,baz=351,slow=38
FRB Frobisher Bay 71.79 335 P **P** **22 54 34.5 -0.5**
comp=Z,33nm,0.6s,mb5.4,baz=51,slow=7.9,SNR=50
FRB Frobisher Bay 71.79 335 P **P** **22 54 34.6 -0.5**
FRB pmax pmax

comp=Z,33nm,0.6s
FRB Frobisher Bay 71.79 335 P **P 22 54 34.5 -0.6**
MAJO Matsushiro 72.27 58 *e*P **P 22 54 37.3 -1.2**
MAJO pmax pmax
comp=Z,34nm,1.7s,mb5.0
MAJO Matsushiro 72.27 58 *e*P **P 22 54 37.2 -1.2**
comp=Z,34nm,1.7s,mb5.0
MAJO Matsushiro 72.27 58 *e*P **P 22 54 37.2 -1.3**
comp=Z,34nm,1.7s,mb5.0
MAT Matsushiro 72.27 58 P **P 22 54 36.3 -2.2**
MAT S S 23 04 04.0 +2.4
MJAR Matsushiro Arr 72.28 58 P **P 22 54 36.9 -1.5**
comp=Z,1.6nm,0.3s,mb4.4,baz=291,slow=6.3,SNR=9.9
MJAR LR LR 23 29 35.5
comp=Z,172nm,18.3s,MS4.4,baz=320,slow=38
MJAR Matsushiro Arr 72.28 58 P **P 22 54 36.9 -1.6**
MJAR pmax pmax
comp=Z,2.0nm,0.4s
MJAR MLR MLR
comp=Z,172nm,18.3s
MJAR Matsushiro Arr 72.28 58 P **P 22 54 36.9 -1.6**
comp=Z,172nm,18.3s
PETK Petropavlovsk- 75.73 36 P **P 22 54 55.8 -2.6**
comp=Z,8.4nm,0.9s,mb4.7,baz=247,slow=1.1,SNR=3.7
PETK LR LR 23 32 07.3
comp=Z,186nm,19.9s,MS4.4,baz=304,slow=39
PETK Petropavlovsk- 75.73 36 P **P 22 54 55.8 -2.6**
PETK pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
PETK MLR MLR
comp=Z,186nm,19.9s,MS4.4
PETK Petropavlovsk- 75.73 36 P **P 22 54 55.8 -2.6**
comp=Z,186nm,19.9s
SCHQ Schefferville 76.48 327 P **P 22 55 01.7 -0.9**
comp=Z,21nm,0.7s,mb5.2,baz=46,slow=6.7,SNR=30
SCHQ Schefferville 76.48 327 P **P 22 55 01.7 -0.9**
SCHQ Schefferville 76.48 327 P **P 22 55 01.7 -0.9**
INK Inuvik 79.68 0 P **P 22 55 18.6 -1.5**
comp=Z,5.4nm,0.7s,mb4.6,baz=13,slow=4.8,SNR=18
INK Inuvik 79.68 0 P **P 22 55 18.6 -1.5**
INK pmax pmax
comp=Z,5.0nm,0.7s
INK Inuvik 79.68 0 *e*P **P 22 55 19.1 -1.0**
comp=Z,8.8nm,0.8s,mb4.7
INK Inuvik 79.68 0 P **P 22 55 18.6 -1.5**
comp=Z,5.0nm,0.7s,mb4.5
KDI Kendari 79.78 101 P **P 22 55 22.0 +0.4**
comp=Z,56nm,0.9s,mb5.5
KDI Kendari 79.78 101 P **P 22 55 20.3 -1.3**
comp=Z,56nm,0.9s,mb5.5
COLD Coldfoot 79.88 7 *e*P **P 22 55 20.9 -0.4**
comp=Z,8.4nm,0.8s,mb4.7
COLD *e*PP PP 22 58 20.2 -1.7
COLD Coldfoot 79.88 7 *e*P **P 22 55 20.9 -0.3**
comp=Z,8.4nm,0.8s,mb4.7
LBMI Labuha 82.07 96 P **P 22 55 38.5 +4.7**
comp=Z,36nm,0.9s,mb5.3
LBMI Labuha 82.07 96 P **P 22 55 33.3 -0.5**
comp=Z,36nm,0.9s,mb5.3
COLA College 82.41 6 *e*P **P 22 55 33.9 -0.8**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
COLA College 82.41 6 *e*P **P 22 55 33.9 -0.8**
comp=Z,8.7nm,0.8s,mb4.7
COLA College 82.41 6 *e*P **P 22 55 33.9 -0.8**
comp=Z,9.0nm,0.8s,mb4.8
ILAR Eielson Array 82.60 6 P **P 22 55 34.2 -1.4**
comp=Z,3.6nm,0.7s,mb4.5,baz=328,slow=3.9,SNR=32
ILAR PP PP 22 58 43.1 -1.2
comp=Z,0.7nm,0.5s,baz=344,slow=5.6,SNR=6.1
ILAR Eielson Array 82.60 6 P **P 22 55 34.3 -1.4**
ILAR 22 58 43.1
ILAR pmax pmax
comp=Z,4.0nm,0.7s
ILAR pmax pmax
comp=Z,1.0nm,0.5s
ILAR Eielson Array 82.60 6 P **P 22 55 34.2 -1.4**
ILAR PP PP 22 58 43.1 -1.2
ILAR Eielson Array 82.60 6 P **P 22 55 34.2 -1.5**
ILAR Eielson Array 82.60 6 PP PP 22 58 43.1 -1.2
BPAW Bear Paw Mtn. 82.83 8 *e*P **P 22 55 37.3 +0.4**
comp=Z,40nm,1.4s,mb5.2
BPAW Bear Paw Mtn. 82.83 8 *e*P **P 22 55 37.3 +0.4**
comp=Z,40nm,1.4s,mb5.2
EGAK Eagle 83.00 4 *e*P **P 22 55 37.6 -0.2**
comp=Z,14nm,0.9s,mb5.0
EGAK *e*PP PP 22 58 47.9 +0.3
EGAK Eagle 83.00 4 *e*P **P 22 55 37.6 -0.2**
comp=Z,14nm,0.9s,mb5.0
MCK McKinley 83.41 7 *e*P **P 22 55 39.2 -0.7**
MCK pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
MCK McKinley 83.41 7 *e*P **P 22 55 39.1 -0.8**
comp=Z,6.7nm,0.9s,mb4.7
MCK McKinley 83.41 7 *e*P **P 22 55 39.2 -0.7**
comp=Z,7.0nm,0.9s,mb4.7
FCC Fort Churchill 83.72 341 *e*P **P 22 55 42.1 +0.5**
FCC Fort Churchill 83.72 341 *e*P **P 22 55 42.0 +0.4**
DAWY Dawson 83.80 3 *e*P **P 22 55 41.8 -0.2**
DAWY Dawson 83.80 3 *e*P **P 22 55 41.8 -0.1**
DOT Dot Lake 83.94 5 *e*P **P 22 55 42.3 -0.3**
comp=Z,35nm,0.8s,mb5.5
DOT Dot Lake 83.94 5 *e*P **P 22 55 42.3 -0.3**
comp=Z,35nm,0.8s,mb5.5
YKA Yellowknife Ar 84.40 352 P **P 22 55 43.9 -1.1**
comp=Z,6.3nm,0.7s,mb4.8,baz=17,slow=5.7,SNR=39
YKA LR LR 23 40 20.3
comp=Z,16nm,19.4s,MS3.4,baz=315,slow=41
YKA Yellowknife Ar 84.40 352 P **P 22 55 43.9 -1.1**
YKA pmax pmax
comp=Z,6.0nm,0.7s
YKA Yellowknife Ar 84.40 352 P **P 22 55 43.9 -1.1**
YKA LR LR 23 40 20.3
YKA Yellowknife Ar 84.40 352 P **P 22 55 43.9 -1.1**
comp=Z,6.0nm,0.7s,mb4.8
MENT Mentasta 84.67 5 *e*P **P 22 55 45.1 -1.2**
MENT Mentasta 84.67 5 *e*P **P 22 55 45.1 -1.2**
PMR Palmer 85.48 8 *e*P **P 22 55 49.7 -0.7**
PMR Palmer 85.48 8 *e*P **P 22 55 49.7 -0.7**
LBNH Lisbon 85.82 321 *e*P **P 22 55 51.7 -0.8**
LBNH pmax pmax
comp=Z,17nm,0.8s,mb5.3
LBNH Lisbon 85.82 321 *e*P **P 22 55 51.7 -0.8**
comp=Z,17nm,0.8s,mb5.3
LBNH Lisbon 85.82 321 *e*P **P 22 55 51.7 -0.8**
comp=Z,17nm,0.8s,mb5.3
SLKM Skilak Lake 86.40 9 *e*P **P 22 55 54.6 -0.4**
SLKM Skilak Lake 86.40 9 *e*P **P 22 55 54.6 -0.4**
LONY Lake Ozonia 86.95 323 *e*P **P 22 55 58.5 +0.4**
comp=Z,18nm,1.0s,mb5.3
LONY Lake Ozonia 86.95 323 *e*P **P 22 55 58.5 +0.4**
comp=Z,18nm,1.0s,mb5.3
HYT Haines Junctio 87.11 2 *e*P **P 22 55 59.3 +0.8**
HYT Haines Junctio 87.11 2 *e*P **P 22 55 59.3 +0.8**
MBWA Marble Bar 87.28 117 *e*P **P 22 55 59.6 -0.3**
comp=Z,9.8nm,0.8s,mb5.1
MBWA Marble Bar 87.28 117 *e*P **P 22 55 59.6 -0.3**
comp=Z,9.8nm,0.8s,mb5.1
ACCN Adirondack Com 87.33 321 *e*P **P 22 56 01.3 +1.4**
comp=Z,66nm,1.9s,mb5.5
ACCN Adirondack Com 87.33 321 *e*P **P 22 56 01.3 +1.4**
comp=Z,66nm,1.9s,mb5.5
RCBR Riachuelo 87.35 261 *e*P **P 22 56 00.3 -0.2**
RCBR Riachuelo 87.35 261 *e*P **P 22 56 00.3 -0.2**
SKAG Skagway 88.54 1 *e*P **P 22 56 06.2 +0.8**
comp=Z,161nm,2.2s,mb6.0
SKAG Skagway 88.54 1 *e*P **P 22 56 06.2 +0.8**
comp=Z,161nm,2.2s,mb6.0
SADO Sadowa 89.13 325 P **P 22 56 07.2 -1.2**
comp=Z,7.2nm,0.9s,mb5.0,baz=63,slow=4.5,SNR=4.3
SADO LR LR 23 38 12.0
comp=Z,131nm,19.9s,MS4.3,baz=16,slow=37
SADO Sadowa 89.13 325 P **P 22 56 07.2 -1.2**
FFC Flin Flon 89.36 343 *i* P **P 22 56 09.3 0.0**
FFC Flin Flon 89.36 343 *e*P **P 22 56 08.8 -0.5**
comp=Z,13nm,0.8s,mb5.3
FFC Flin Flon 89.36 343 *e*P **P 22 56 08.8 -0.5**
comp=Z,13nm,0.8s,mb5.3
DLBC Dease Lake 89.56 359 P **P 22 56 08.5 -1.7**
comp=Z,9.4nm,0.6s,mb5.3,baz=350,slow=6.1,SNR=13
DLBC LR LR 23 40 20.0
comp=Z,212nm,21.4s,MS4.5,baz=316,slow=38
DLBC Dease Lake 89.56 359 *e*P **P 22 56 08.8 -1.4**
DLBC Dease Lake 89.56 359 *e*P **P 22 56 08.8 -1.4**
KNA Kununurra 91.30 108 P **P 22 56 19.1 +0.2**
comp=Z,739nmcomp=Z,86nm,0.9s,mb6.1
KNA Kununurra 91.30 108 P **P 22 56 18.7 -0.2**
comp=Z,737nmcomp=Z,87nm,0.9s,mb6.1
EYMN Ely 91.97 334 *e*P **P 22 56 21.6 0.0**
comp=Z,44nm,1.5s,mb5.6
EYMN Ely 91.97 334 *e*P **P 22 56 21.6 0.0**
comp=Z,44nm,1.5s,mb5.6
KAKA Kakadu 92.67 103 *e*P **P 22 56 25.4 +0.1**
comp=Z,36nm,0.7s,mb5.9
KAKA Kakadu 92.67 103 P **P 22 56 28.3 +3.0**
KAKA Kakadu 92.67 103 P **P 22 56 26.9 +1.6**
EDM Edmonton 93.17 348 *e*P **P 22 56 26.8 -0.2**
EDM Edmonton 93.17 348 *e*P **P 22 56 26.8 -0.2**
AGMN Agassiz Nation 93.23 336 *e*P **P 22 56 27.1 -0.3**
comp=Z,7.5nm,0.8s,mb5.2
AGMN Agassiz Nation 93.23 336 *e*P **P 22 56 27.1 -0.3**
comp=Z,7.5nm,0.8s,mb5.2
ACSO Alum Creek Sta 94.40 324 *e*P **P 22 56 32.1 -0.8**
ACSO Alum Creek Sta 94.40 324 *e*P **P 22 56 32.2 -0.8**
DGMT Dagmar 95.63 341 *e*P **P 22 56 39.5 +1.2**
comp=Z,42nm,1.4s,mb5.7
DGMT Dagmar 95.63 341 *e*P **P 22 56 39.5 +1.1**
comp=Z,42nm,1.4s,mb5.7
BBB Bella Bella 95.76 357 LR LR 23 43 17.6
comp=Z,101nm,18.2s,MS4.3,baz=184,slow=38
WALA Waterton Lakes 97.27 348 *e*P **P 22 56 45.1 -0.7**
WALA Waterton Lakes 97.27 348 *e*P **P 22 56 45.1 -0.7**
ECSD EROS Data Cent 97.44 334 *e*P **P 22 56 46.9 +0.2**
comp=Z,17nm,1.7s,mb5.2
ECSD EROS Data Cent 97.44 334 *e*P **P 22 56 46.8 +0.1**
comp=Z,17nm,1.7s,mb5.2
WRA Warramunga Arr 98.01 108 P **P 22 56 48.7 -0.9**
comp=Z,2.3nm,0.8s,mb4.8,baz=310,slow=4.3,SNR=7.4
WRA PP PP 23 00 51.8 +3.0
comp=Z,0.4nm,0.3s,baz=298,slow=9.0,SNR=6.1
WRA Warramunga Arr 98.01 108 P **P 22 56 48.7 -0.9**
WRA 23 00 51.8
WRA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 98.01 108 P **P 22 56 48.7 -0.9**
comp=Z,2.0nm,0.8s,mb4.7
WB2 Warramunga Arr 98.02 108 *e*P **P 22 56 49.5 -0.2**
WB2 Warramunga Arr 98.02 108 *e*P **P 22 56 49.5 -0.1**
TKL Tuckaleechee C 98.29 322 LR LR 23 43 02.8
comp=Z,102nm,20.1s,MS4.3,baz=265,slow=37
NEW Newport 98.58 350 *e*P **P 22 56 51.5 -0.2**
NEW Newport 98.58 350 *e*P **P 22 56 51.5 -0.2**
SJG San Juan 98.97 298 P **P 22 56 53.2 -0.8**
SJG San Juan 98.97 298 P **P 22 56 53.2 -0.8**
ASAR Alice Springs 99.59 112 P **P 22 56 54.7 -1.8**
comp=Z,2.9nm,0.9s,mb4.7,baz=302,slow=4.2,SNR=13
ASAR PP PP 23 01 00.5 -0.3
comp=Z,0.8nm,0.9s,baz=297,slow=6.1,SNR=4.1
ASAR Alice Springs 99.59 112 P **P 22 56 54.7 -1.9**
ASAR 23 01 00.5
ASAR pmax pmax
comp=Z,3.0nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,1.0s
ASAR Alice Springs 99.59 112 P **P 22 56 54.7 -1.9**
comp=Z,3.0nm,0.9s,mb4.7
ASAR Alice Springs 99.59 112 PP PP 23 01 00.5 -0.3
WMOK Wichita Mounta 106.07 331 PKiKP PKiKP 23 01 34.6 -2.8
WMOK Wichita Mounta 106.07 331 PKiKP PKiKP 23 01 34.6 -2.8
ANMO Albuquerque 108.69 337 P Pdif 22 57 36.9 +0.1
LPAZ La Paz 119.82 269 PKP PKPdf 23 02 04.2 +0.4
comp=Z,0.6nm,0.3s,baz=106,slow=1.9,SNR=5.4
LPAZ La Paz 119.82 269 PKIKP PKPdf 23 02 04.2 +0.4
LPAZ pmax pmax
comp=Z,1.0nm,0.3s
LPAZ La Paz 119.82 269 PKP PKPdf 23 02 04.2 +0.4
QSPA South Pole Qui 122.15 180 *e*PKPdf PKPdf 23 02 06.6 +0.1
PMSA Palmer Station 127.79 210 PKP PKPdf 23 02 18.3 +0.7
comp=Z,4.4nm,0.8s,baz=106,slow=3.8,SNR=5.6
PLCA Paso Flores 130.26 242 PKP PKPdf 23 02 22.8 -0.3
comp=Z,3.6nm,1.2s,baz=135,slow=1.4,SNR=2.6
PLCA Paso Flores 130.26 242 PKIKP PKPdf 23 02 22.8 -0.3
PLCA pmax pmax
comp=Z,4.0nm,1.2s
PLCA Paso Flores 130.26 242 PKP PKPdf 23 02 22.8 -0.3

WEL 03 22:51:34.4±0.5, 38°.55S×175°.76E, h147km±3km, ML3.7/17, Error ellipse: s-maj=4.2km s-min=3.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.58**	**205**	PN	Pn	22 51 56.1	+0.4
WTVZ	**West Tongariro**	**0.58**	**193**	PN	Pn	22 51 56.2	+0.4
WTVZ				SN	Sn	22 52 12.4	+0.3
WPVZ	**Whakapapa**	**0.68**	**194**	PN	Pn	22 51 56.8	+0.4
WNVZ	**Wahianoa**	**0.79**	**189**	PN	Pn	22 51 57.6	+0.5
BKZ	**Black Stump Fm**	**0.84**	**137**	PN	Pn	22 51 57.7	+0.2
MOVZ	**Moawhango**	**0.86**	**180**	PN	Pn	22 51 57.7	0.0
MOVZ				SN	Sn	22 52 14.6	-0.9
BHHZ	**Black Hill Sta**	**0.97**	**166**	PN	Pn	22 51 58.5	0.0
BHHZ				SN	Sn	22 52 16.1	-0.9
NMHZ	**Naumai**	**0.99**	**124**	PN	Pn	22 51 59.9	+1.2
NMHZ				SN	Sn	22 52 19.1	+1.8
URZ	**Urewera**	**1.10**	**75**	PN	Pn	22 51 59.2	-0.6
URZ				SN	Sn	22 52 18.2	-0.8
MCHZ	**McNeill Hill**	**1.16**	**141**	PN	Pn	22 52 01.1	+0.9
WAZ	**Wanganui**	**1.35**	**206**	PN	Pn	22 52 01.9	-0.2
MWZ	**Matawai**	**1.41**	**82**	PN	Pn	22 52 02.5	-0.2
PNHZ	**Pukenui**	**1.41**	**166**	PN	Pn	22 52 02.6	-0.1
TSZ	**Takapari Road**	**1.52**	**174**	PN	Pn	22 52 03.5	-0.4
KAHZ	**Kahuranaki**	**1.52**	**145**	PN	Pn	22 52 04.2	+0.3
KNZ	**Kokohu**	**1.57**	**108**	PN	Pn	22 52 04.4	0.0
WPHZ	**Waipukurau**	**1.60**	**161**	PN	Pn	22 52 04.6	-0.3
PXZ	**Pawanui**	**1.71**	**150**	PN	Pn	22 52 05.7	-0.3
DVHZ	**Dannevirke**	**1.78**	**170**	PN	Pn	22 52 05.8	-0.9
MHGZ	**Mahia Peninsul**	**1.78**	**110**	PN	Pn	22 52 06.9	+0.1
POWZ	**Post Office Ro**	**1.84**	**180**	PN	Pn	22 52 06.4	-1.0
PRHZ	**Porangahau**	**1.85**	**159**	PN	Pn	22 52 07.0	-0.5
MRZ	**Mangatainoka R**	**2.12**	**184**	PN	Pn	22 52 09.1	-1.6
BFZ	**Birch Farm**	**2.16**	**170**	PN	Pn	22 52 09.9	-1.4
TIWZ	**Tintock**	**2.23**	**178**	PN	Pn	22 52 10.5	-1.5
OGWZ	**Otaki Gorge**	**2.31**	**191**	PN	Pn	22 52 11.3	-1.7
HOWZ	**Holdsworth Sta**	**2.35**	**184**	PN	Pn	22 52 11.5	-2.0
KIW	**Kapiti Island**	**2.40**	**196**	PN	Pn	22 52 12.0	-2.1
TMWZ	**Te Maipa**	**2.56**	**178**	PN	Pn	22 52 14.0	-2.0
CAW	**Cannon Point**	**2.61**	**192**	PN	Pn	22 52 14.4	-2.3
MTW	**Mount Morrison**	**2.62**	**184**	PN	Pn	22 52 14.2	-2.5
PAWZ	**Paruwai Farm**	**2.84**	**185**	PN	Pn	22 52 16.9	-2.7
TRWZ	**Traveller**	**2.85**	**181**	PN	Pn	22 52 17.1	-2.5
SNZO	**South Karori**	**2.88**	**196**	PN	Pn	22 52 17.1	-2.9
MSWZ	**Moikau Station**	**2.89**	**188**	PN	Pn	22 52 17.4	-2.8
TCW	**Tory Channel**	**2.90**	**203**	PN	Pn	22 52 17.6	-2.7
BHW	**Baring Head**	**2.94**	**193**	PN	Pn	22 52 17.8	-3.0
PLWZ	**Palliser**	**3.04**	**187**	PN	Pn	22 52 19.0	-3.1
NNZ	**Nelson**	**3.23**	**214**	PN	Pn	22 52 21.5	-3.1
QRZ	**Quartz Range**	**3.37**	**227**	PN	Pn	22 52 22.7	-3.7
BSWZ	**Blackbirch Sta**	**3.48**	**204**	PN	Pn	22 52 24.6	-3.1
THZ	**Tophouse**	**3.88**	**213**	PN	Pn	22 52 29.4	-3.6
KHZ	**Kahutara**	**4.22**	**203**	PN	Pn	22 52 33.8	-3.6
MQZ	**McQueen's Vall**	**5.66**	**203**	PN	Pn	22 52 50.7	-5.8

*TIR **03** 22:58:07.0±3.6, 40°.75N×20°.49E, h0km±999km, ML3.1*
*ISCJB **03** 22:58:12.5±0.5, 40°.69N±0°.03×20°.75E±0°.04, h11km±5km, Error ellipse: s-maj=5.2km s-min=4.7km az=135.1*
*THE **03** 22:58:12.5, 40°.67N×20°.74E, h16km±1km, ML2.4/2, Error ellipse: s-maj=1.2km s-min=0.5km az=73.0*
*CSEM **03** 22:58:12.3±0.2, 40°.67N×20°.73E, h12km, ML3.1, Error ellipse: s-maj=5.0km s-min=3.7km az=41.0*
*SKO **03** 22:58:12.9, 40°.76N×20°.79E, h21km*
ISC 03 22:58:12.8±0.6, 40°.69N±0°.03×20°.74E±0°.04, h13km±7km, n20, σ0°.89/35, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.07**	**152**	*i* PG	**Pg**	**22 58 14.8**	**-0.6**
KBN				*i* SG	**Sg**	**22 58 17.2**	**-0.1**
KBN	**Korca**	**0.07**	**152**	*i* Pg	**Pg**	**22 58 14.8**	**-0.6**
KBN				*i* Sg	**Sg**	**22 58 17.2**	**-0.1**
NEST	**Nestorio**	**0.36**	**139**	P	**Pg**	**22 58 19.4**	**-0.6**
NEST				S	**Sg**	**22 58 25.0**	**+0.2**
NEST	**Nestorio**	**0.36**	**139**	P	**Pg**	**22 58 19.4**	**-0.6**
NEST				S	**Sg**	**22 58 25.0**	**+0.2**
FNA	**Florina**	**0.49**	**78**	P	**Pg**	**22 58 22.4**	**0.0**
FNA				S	**Sg**	**22 58 30.2**	**+1.2**
FNA	**Florina**	**0.49**	**78**	P	**Pg**	**22 58 22.4**	**0.0**
FNA				S	**Sg**	**22 58 30.2**	**+1.2**
BIA	**Bitola**	**0.55**	**53**	P	**Pg**	**22 58 22.9**	**-0.7**
BIA				S	**Sg**	**22 58 31.9**	**+1.0**
BIA	**Bitola**	**0.55**	**53**	*e*Pg	**Pg**	**22 58 22.9**	**-0.7**
BIA				*e*Sg	**Sg**	**22 58 31.9**	**+1.0**
BIA				*e*Lg		22 58 32.5	
BIA	comp=N,48nm,0.3s			*e*Lg		22 58 32.5	
BIA	comp=E,44nm,0.2s						
BIA	**Bitola**	**0.55**	**53**	P	**Pg**	**22 58 22.9**	**-0.7**
BIA				S	**Sg**	**22 58 31.9**	**+1.0**
KRUS	**Krusevo**	**0.78**	**29**	*e*Pg	**Pg**	**22 58 26.9**	**-1.0**
KZN	**Kozani**	**0.87**	**116**	P	**Pg**	**22 58 28.9**	**-0.7**
KZN				S	**Sg**	**22 58 41.4**	**+0.4**
KZN	**Kozani**	**0.87**	**116**	P	**Pg**	**22 58 28.9**	**-0.7**
KZN				S	**Sg**	**22 58 41.4**	**+0.4**
TIR	**Tirane**	**0.94**	**315**	P	**Pb**	**22 58 30.1**	**-0.8**
TIR				S	**Sb**	**22 58 43.7**	**+0.5**
TIR	**Tirane**	**0.94**	**315**	P	**Pb**	**22 58 30.1**	**-0.8**
TIR				S	**Sb**	**22 58 43.7**	**+0.5**
SRN	**Sarande**	**0.99**	**215**	*i* PG	**Pg**	**22 58 31.3**	**-0.6**
SRN				*i* SG	**Sg**	**22 58 46.2**	**+1.6**
SRN	**Sarande**	**0.99**	**215**	*i* Pg	**Pg**	**22 58 31.3**	**-0.5**
SRN	SNR=90						
PUK	**Puka**	**1.50**	**335**	*i* PG	**Pg**	**22 58 42.4**	**+0.9**
PUK				*i* SG	**Sg**	**22 59 04.5**	**+3.5**
PUK	**Puka**	**1.50**	**335**	*i* Pg	**Pg**	**22 58 42.4**	**+0.8**
PUK	SNR=90						
BCI	**Bajram Curri**	**1.75**	**343**	*i* PG	**Pg**	**22 58 45.1**	**-1.3**
BCI	**Bajram Curri**	**1.75**	**343**	*i* Pg	**Pg**	**22 58 45.1**	**-1.3**
	SNR=90						

DJA 03 23:03:45, 0°.35N×98°.45E, h20km, MLv3.9/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.21**	**69**	P	Pn	23 04 03.7	-3.1
MNSI				S	Sb	23 04 22.2	-0.3
SISI	**Saibi**	**1.78**	**159**	P	Pn	23 04 13.8	-0.9
SISI				S	Sn	23 04 37.5	+0.7
PPI	**Padang Panjang**	**2.10**	**112**	P	Pn	23 04 16.9	-2.2
PPI				S	Sn	23 04 45.9	+1.2
PDSI	**Padang**	**2.37**	**122**	P	Pn	23 04 24.7	+1.9
BKNI	**Bangkinang**	**2.59**	**91**	P	Pn	23 04 29.8	+4.0
SDSI	**Sungai Dareh**	**3.24**	**113**	P	Pn	23 04 37.4	+2.7

*TIR **03** 23:03:59.5±4.0, 40°.63N×20°.71E, h0km±999km, ML3.4*
*ATH **03** 23:04:03.8, 40°.76N×20°.75E, h14km±2km, MD3.5/13*
*NEIC **03** 23:04:03.8, 40°.76N×20°.75E, h14km, MD3.5(ATH), After ATH.*
*ISCJB **03** 23:04:04.4±0.4, 40°.70N±0°.02×20°.72E±0°.03, h5km±3km, Error ellipse: s-maj=3.2km s-min=2.9km az=12.3*
*CSEM **03** 23:04:05.1±0.1, 40°.69N×20°.75E, h5km, ML3.4, Error ellipse: s-maj=2.5km s-min=2.5km az=41.0*
*THE **03** 23:04:05.7, 40°.69N×20°.77E, h4km±1km, ML2.3/7, Error ellipse: s-maj=1.4km s-min=0.8km az=265.0*
*SKO **03** 23:04:06.0, 40°.67N×20°.74E, h2km, M2.2, ML2.5*
ISC 03 23:04:05.3±0.3, 40°.68N±0°.02×20°.74E±0°.02, h7km±2km, n106, σ0°.99/169, 1C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.07**	**145**	*i* PG	**Pg**	**23 04 07.2**	**+0.1**
KBN				*i* SG	**Sg**	**23 04 09.4**	**+1.1**
KBN	**Korca**	**0.07**	**145**	Pg	**Pg**	**23 04 07.0**	**-0.1**
KBN				Sg	**Sg**	**23 04 09.3**	**+1.0**
KBN	**Korca**	**0.07**	**145**	*i* Pg	**Pg**	**23 04 07.2**	**+0.1**
KBN	SNR=92			Sg	**Sg**	**23 04 09.3**	**+1.0**
NEST	**Nestorio**	**0.36**	**138**	P	**Pg**	**23 04 11.8**	**-0.5**
NEST				S	**Sg**	**23 04 17.8**	**+0.8**
NEST	**Nestorio**	**0.36**	**138**	P	**Pg**	**23 04 11.8**	**-0.5**
NEST				S	**Sg**	**23 04 17.8**	**+0.8**
FNA	**Florina**	**0.50**	**78**	P	**Pg**	**23 04 14.2**	**-0.7**
FNA	**Florina**	**0.50**	**78**	P	**Pg**	**23 04 14.7**	**-0.2**
FNA				S	**Sg**	**23 04 22.6**	**+1.2**
FNA	**Florina**	**0.50**	**78**	P	**Pg**	**23 04 14.7**	**-0.2**
FNA				S	**Sg**	**23 04 22.6**	**+1.2**
LSK	**Leskovik**	**0.54**	**191**	*i* PG	**Pg**	**23 04 16.0**	**+0.3**
LSK				*i* SG	**Sg**	**23 04 22.8**	**+0.1**
LSK	**Leskovik**	**0.54**	**191**	*i* Pg	**Pg**	**23 04 16.0**	**+0.3**
LSK	SNR=91						
LSK	SNR=91			*i* Sg	**Sg**	**23 04 22.8**	**0.0**
BIA	**Bitola**	**0.56**	**53**	P	**Pg**	**23 04 15.3**	**-0.8**
BIA				S	**Sg**	**23 04 24.3**	**+0.9**
BIA	**Bitola**	**0.56**	**53**	*e*Pg	**Pg**	**23 04 15.4**	**-0.8**
BIA				*e*Sg	**Sg**	**23 04 23.9**	**+0.4**
BIA				*e*Lg		23 04 24.9	
BIA	comp=N,169nm,0.3s						
BIA	comp=E,164nm,0.3s			*e*Lg		23 04 25.0	
BIA	**Bitola**	**0.56**	**53**	P	**Pg**	**23 04 15.3**	**-0.8**
BIA				S	**Sg**	**23 04 24.3**	**+0.9**
KRUS	**Krusevo**	**0.79**	**29**	*e*Pg	**Pg**	**23 04 19.2**	**-1.3**
KZN	**Kozani**	**0.87**	**115**	*e*Pb	**Pb**	**23 04 20.9**	**-1.9**
KZN				*e*Sb	**Sb**	**23 04 34.3**	**-0.4**
KZN	**Kozani**	**0.87**	**115**	*e*PB	**Pb**	**23 04 20.9**	**-1.9**
KZN				*e*SB	**Sb**	**23 04 34.3**	**-0.4**
KZN	**Kozani**	**0.87**	**115**	P	**Pg**	**23 04 21.3**	**-0.8**
KZN				S	**Sg**	**23 04 33.9**	**+0.5**
KZN	**Kozani**	**0.87**	**115**	*e*Pb	**Pb**	**23 04 20.9**	**-1.9**
KZN	**Kozani**	**0.87**	**115**	P	**Pg**	**23 04 21.3**	**-0.8**
KZN				S	**Sg**	**23 04 33.9**	**+0.5**
KZN				*e*Sb	**Sb**	**23 04 34.3**	**-0.4**
TIR	**Tirane**	**0.94**	**316**	P	**Pg**	**23 04 27.0**	**+3.7**
TIR	**Tirane**	**0.94**	**316**	P	**Pg**	**23 04 23.6**	**+0.3**
TIR				S	**Sg**	**23 04 36.8**	**+1.3**
TIR	**Tirane**	**0.94**	**316**	P	**Pg**	**23 04 23.6**	**+0.3**
TIR				S	**Sg**	**23 04 36.8**	**+1.3**
SRN	**Sarande**	**0.98**	**215**	*i* PG	**Pg**	**23 04 23.0**	**-1.0**
SRN				*i* SG	**Sg**	**23 04 37.5**	**+0.8**
SRN	**Sarande**	**0.98**	**215**	Pg	**Pg**	**23 04 23.2**	**-0.9**
SRN				Sg	**Sg**	**23 04 38.1**	**+1.3**
SRN	**Sarande**	**0.98**	**215**	Pg	**Pg**	**23 04 23.2**	**-0.9**
SRN				*i* Sg	**Sg**	**23 04 37.5**	**+0.7**
JAN	**Janina**	**1.03**	**175**	*e*Pg	**Pg**	**23 04 24.0**	**-1.0**
JAN				*e*Sb	**Sb**	**23 04 39.1**	**0.0**
JAN	**Janina**	**1.03**	**175**	*e*PG	**Pg**	**23 04 24.0**	**-1.0**
JAN				*e*SB	**Sb**	**23 04 39.1**	**0.0**
JAN	**Janina**	**1.03**	**175**	*e*Pg	**Pg**	**23 04 24.0**	**-1.0**
JAN				*e*Sb	**Sb**	**23 04 39.1**	**0.0**
KEK	**Kerkira**	**1.20**	**217**	*e*Pb	**Pb**	**23 04 28.6**	**+0.2**
KEK				*e*Sb	**Sb**	**23 04 45.2**	**+1.0**
KEK	**Kerkira**	**1.20**	**217**	*e*PB	**Pb**	**23 04 28.6**	**+0.2**
KEK				*e*SB	**Sb**	**23 04 45.2**	**+1.0**
KEK	**Kerkira**	**1.20**	**217**	P	**Pg**	**23 04 28.9**	**+0.5**
KEK				S	**Sg**	**23 04 47.4**	**+3.4**
KEK	**Kerkira**	**1.20**	**217**	*e*Pb	**Pb**	**23 04 28.6**	**+0

THL	**Klokotos Trika**	**1.48**	**138**	P	**Pn**	**23 04 31.6**	**-0.9**
THL				S	**Sn**	**23 04 52.2**	**+0.1**
THL	**Klokotos Trika**	**1.48**	**138**	P	**Pn**	**23 04 31.6**	**-0.9**
THL				S	**Sn**	**23 04 52.2**	**+0.1**
THL				*e*Sb	**Sb**	**23 04 53.1**	**+0.8**
PUK	**Puka**	**1.50**	**335**	*i* PG	**Pg**	**23 04 35.4**	**+1.3**
PUK				*i* SG	**Sg**	**23 04 56.7**	**+3.1**
PUK	**Puka**	**1.50**	**335**	Pg	**Pg**	**23 04 35.0**	**+0.9**
PUK				Sg	**Sg**	**23 04 56.5**	**+2.9**
PUK	**Puka**	**1.50**	**335**	Pg	**Pg**	**23 04 35.0**	**+0.9**
PUK				Sg	**Sg**	**23 04 56.5**	**+2.9**
VAY	**Valandovo**	**1.53**	**65**	P	**Pn**	**23 04 31.7**	**-1.4**
VAY				S	**Sn**	**23 04 53.9**	**+0.7**
VAY	**Valandovo**	**1.53**	**65**	*e*Pg	**Pg**	**23 04 33.7**	**-1.0**
VAY				*e*Sg	**Sg**	**23 04 54.9**	**+0.4**
VAY				*e*Lg		23 04 55.2	
	comp=E,37nm,0.6s						
VAY				*e*Lg		23 04 55.3	
	comp=N,126nm,1.2s						
VAY	**Valandovo**	**1.53**	**65**	P	**Pn**	**23 04 31.7**	**-1.4**
VAY				S	**Sn**	**23 04 53.9**	**+0.7**
KNT	**Kendrikon**	**1.71**	**73**	P	**Pn**	**23 04 35.2**	**-0.3**
KNT				S	**Sn**	**23 04 58.3**	**+0.7**
KNT	**Kendrikon**	**1.71**	**73**	P	**Pn**	**23 04 35.2**	**-0.3**
KNT				S	**Sn**	**23 04 58.3**	**+0.7**
BCI	**Bajram Curri**	**1.76**	**344**	*i* PG	**Pg**	**23 04 39.2**	**+0.2**
BCI	**Bajram Curri**	**1.76**	**344**	Pg	**Pg**	**23 04 39.0**	**0.0**
BCI	**Bajram Curri**	**1.76**	**344**	Pg	**Pg**	**23 04 39.0**	**0.0**
HORT	**Hortiatis**	**1.80**	**92**	P	**Pn**	**23 04 36.2**	**-0.6**
HORT	**Hortiatis**	**1.80**	**92**	P	**Pn**	**23 04 36.2**	**-0.6**
EVR	**Evrytania**	**1.95**	**155**	*e*Pg	**Pg**	**23 04 40.4**	**-2.2**
EVR	**Evrytania**	**1.95**	**155**	*e*PG	**Pg**	**23 04 40.4**	**-2.2**
EVR	**Evrytania**	**1.95**	**155**	*e*Pg	**Pg**	**23 04 40.4**	**-2.2**
SOH	**Sokhos**	**2.00**	**85**	*e*Pn	**Pn**	**23 04 38.7**	**-0.8**
SOH				*e*Sn	**Sn**	**23 05 04.3**	**-0.4**
SOH	**Sokhos**	**2.00**	**85**	*e*PN	**Pn**	**23 04 38.7**	**-0.8**
SOH				*e*SN	**Sn**	**23 05 04.3**	**-0.4**
SOH	**Sokhos**	**2.00**	**85**	P	**Pn**	**23 04 39.6**	**+0.1**
SOH				S	**Sn**	**23 05 05.9**	**+1.2**
SOH	**Sokhos**	**2.00**	**85**	*e*Pn	**Pn**	**23 04 38.7**	**-0.8**
SOH	**Sokhos**	**2.00**	**85**	P	**Pn**	**23 04 39.6**	**+0.1**
SOH				*e*Sn	**Sn**	**23 05 04.3**	**-0.4**
SOH				S	**Sn**	**23 05 05.9**	**+1.2**
PLG	**Polygyros**	**2.09**	**98**	*e*Pn	**Pn**	**23 04 40.7**	**-0.1**
PLG				*e*Sg	**Sg**	**23 05 07.3**	**-5.1**
PLG	**Polygyros**	**2.09**	**98**	*e*PN	**Pn**	**23 04 40.7**	**-0.1**
PLG				*e*SG	**Sg**	**23 05 07.3**	**-5.1**
PLG	**Polygyros**	**2.09**	**98**	P	**Pn**	**23 04 40.8**	**0.0**
PLG				S	**Sn**	**23 05 07.7**	**+0.7**
PLG	**Polygyros**	**2.09**	**98**	P	**Pn**	**23 04 40.8**	**0.0**
PLG				S	**Sn**	**23 05 07.7**	**+0.7**
BARS	**Barje**	**2.28**	**20**	⇑*i* Pn	**Pn**	**23 04 43.3**	**-0.1**
NEO	**Neokhori**	**2.35**	**125**	*e*Pb	**Pb**	**23 04 43.6**	**-4.4**
NEO	**Neokhori**	**2.35**	**125**	*e*PB	**Pb**	**23 04 43.6**	**-4.4**
NEO	**Neokhori**	**2.35**	**125**	*e*Pb	**Pb**	**23 04 43.6**	**-4.4**
PAIG	**Paliouri**	**2.37**	**108**	P	**Pn**	**23 04 45.0**	**+0.3**
PAIG	**Paliouri**	**2.37**	**108**	P	**Pn**	**23 04 45.0**	**+0.3**
EFP	**Efpalio**	**2.43**	**158**	*e*Pg	**Pg**	**23 04 49.1**	**-2.7**
NVR	**Nevrokopi**	**2.46**	**73**	*e*Pb	**Pb**	**23 04 44.6**	**-5.2**
NVR	**Nevrokopi**	**2.46**	**73**	*e*PB	**Pb**	**23 04 44.6**	**-5.2**
OUR	**Ouranopolis**	**2.50**	**97**	P	**Pn**	**23 04 47.1**	**+0.7**
OUR	**Ouranopolis**	**2.50**	**97**	P	**Pn**	**23 04 47.1**	**+0.7**
VLS	**Valsamata**	**2.50**	**183**	*e*Pn	**Pn**	**23 04 47.9**	**+1.4**
VLS	**Valsamata**	**2.50**	**183**	*e*PN	**Pn**	**23 04 47.9**	**+1.4**
VLS	**Valsamata**	**2.50**	**183**	*e*Pn	**Pn**	**23 04 47.9**	**+1.4**
LKR	**Lokris**	**2.68**	**139**	*e*Pn	**Pn**	**23 04 48.7**	**-0.1**
LKR	**Lokris**	**2.68**	**139**	*e*PN	**Pn**	**23 04 48.7**	**-0.1**
LKR	**Lokris**	**2.68**	**139**	*e*Pn	**Pn**	**23 04 48.7**	**-0.1**
RLS	**Riolos of Patr**	**2.68**	**168**	*e*Pb	**Pb**	**23 04 51.0**	**-2.6**
RLS	**Riolos of Patr**	**2.68**	**168**	*e*PB	**Pb**	**23 04 51.0**	**-2.6**
RLS	**Riolos of Patr**	**2.68**	**168**	*e*Pb	**Pb**	**23 04 51.0**	**-2.6**
GUR	**Goura**	**3.01**	**155**	*e*PB	**Pb**	**23 04 55.3**	**-4.0**
GUR	**Goura**	**3.01**	**155**	*e*Pb	**Pb**	**23 04 55.3**	**-4.0**
STON	**Ston**	**3.15**	**315**	*i* Pn	**Pn**	**23 04 54.9**	**-0.5**
STON				Sn	**Sn**	**23 05 32.8**	**-0.5**
STON	**Ston**	**3.15**	**315**	*i* Pn	**Pn**	**23 04 54.8**	**-0.6**
STON				Sn	**Sn**	**23 05 32.7**	**-0.6**
LTK	**Loutraki**	**3.17**	**146**	*e*PN	**Pn**	**23 04 55.9**	**+0.3**
LTK	**Loutraki**	**3.17**	**146**	*e*Pn	**Pn**	**23 04 55.9**	**+0.3**
ITM	**Ithomi**	**3.62**	**165**	*e*Pn	**Pn**	**23 05 03.1**	**+1.3**
ITM	**Ithomi**	**3.62**	**165**	*e*PN	**Pn**	**23 05 03.1**	**+1.3**
ITM	**Ithomi**	**3.62**	**165**	*e*Pn	**Pn**	**23 05 03.1**	**+1.3**
DID	**Didima**	**3.72**	**148**	*e*PN	**Pn**	**23 05 04.0**	**+0.8**
DID	**Didima**	**3.72**	**148**	*e*Pn	**Pn**	**23 05 04.0**	**+0.8**
CUC	**Castrocucco**	**3.82**	**261**	P	**Pn**	**23 05 09.4**	**+4.8**
CUC	**Castrocucco**	**3.82**	**261**	P	**Pn**	**23 05 09.4**	**+4.8**
PYL	**PYLOS**	**3.86**	**168**	*e*PN	**Pn**	**23 05 06.1**	**+1.0**
PYL	**PYLOS**	**3.86**	**168**	*e*Pn	**Pn**	**23 05 06.1**	**+1.0**
NVLJ	**Novalja**	**5.81**	**314**	*e*Pn	**Pn**	**23 05 31.1**	**-0.8**
NVLJ				Sn	**Sn**	**23 06 37.3**	**-1.4**
NVLJ	**Novalja**	**5.81**	**314**	*e*Pn	**Pn**	**23 05 31.1**	**-0.8**
NVLJ				Sn	**Sn**	**23 06 37.3**	**-1.5**

NIED ***03*** *23:11:00, 24.°10N×122.°30E, h26km, Mw3.9 Best double couple: M₀6.91000×10¹⁴ NP1:φ₀231.00000°, δ70.00000°, λ-55.00000°. NP2:φ₀348.00000°, δ39.00000°, λ-147.00000°.*
IDC ***03*** *23:11:40.2±1.1, 23.°94N×121.°77E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.7/22, mbtmp3.7/9, ML3.5/1, Error ellipse: s-maj=68.3km s-min=17.1km az=65.0*
ISCJB ***03*** *23:11:43.6±0.4, 24.°05N±0.°02×122.°33E±0.°02, h21km±3km, mb3.7/12, Error ellipse: s-maj=3.0km s-min=2.2km az=149.1*
TAP ***03*** *23:11:44.4, 24.°12N×122.°27E, h25km, ML4.1, C*
JMA ***03*** *23:11:45.0±0.3, 24.°15N×122.°29E, h33km, M3.9*
NEIC ***03*** *23:11:45.2±1.2, 24.°09N×122.°25E, h38km±10km, mb3.7/4, Error ellipse: s-maj=15.3km s-min=6.8km az=76.0*
ISC 03 23:11:43.6±0.4, 24.°08N±0.°02×122.°32E±0.°02, h16km±2km, n89, σ1§12/147, mb3.7/12, 3C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.63**	**304**	P	**Pg**	**23 11 55.8**	**-0.2**
	baz=308						
ENA				*e*S	**Sg**	**23 12 04.7**	**+0.3**
	baz=308						
HWA	**Hwalien**	**0.66**	**261**	*e*P	**Pg**	**23 11 57.2**	**+0.7**
	baz=257						
HWA				*e*S	**Sg**	**23 12 05.8**	**+0.6**
	baz=257						
TWD	**Chiawan**	**0.66**	**270**	P	**Pg**	**23 11 56.7**	**+0.2**
	baz=267						
TWD				*e*S	**Sg**	**23 12 05.9**	**+0.6**
	baz=267						
NACB	**Ninganchiao**	**0.67**	**279**	*e*P	**Pg**	**23 11 56.6**	**-0.1**
NACB				*e*S	**Sg**	**23 12 06.4**	**+0.9**
TWC	**Suao**	**0.68**	**321**	⇑*i* P	**Pg**	**23 11 56.3**	**-0.6**
	baz=324						
TWC				S	**Sg**	**23 12 04.4**	**-1.6**
	baz=324						
YOJ	**Yonaguni jima**	**0.74**	**59**	P	**Pg**	**23 11 58.9**	**+0.8**
YOJ				S	**Sg**	**23 12 08.5**	**+0.5**
ESL	**Shilin**	**0.85**	**252**	P	**Pb**	**23 11 59.2**	**-0.8**
	baz=236						
ESL				*e*S	**Sb**	**23 12 10.5**	**-0.7**
	baz=236						
ILA	**Ilan**	**0.86**	**323**	*e*P	**Pb**	**23 12 00.5**	**+0.3**
	baz=323						
ILA				*e*S	**Sb**	**23 12 11.7**	**+0.2**
	baz=323						
TWE	**Neicheng**	**0.87**	**318**	P	**Pb**	**23 12 00.1**	**-0.3**
	baz=317						
TWE				*e*S	**Sb**	**23 12 11.2**	**-0.7**
	baz=317						
ENTT	**Nioudou**	**0.88**	**310**	⇓*i* P	**Pb**	**23 12 00.6**	**0.0**
	baz=316						
ENTT				S	**Sb**	**23 12 11.6**	**-0.6**
	baz=316						
WHF	**Hehuan Shan**	**0.96**	**274**	⇓*i* P	**Pb**	**23 12 01.6**	**-0.3**
	baz=261						
WHF				*e*S	**Sb**	**23 12 14.3**	**-0.2**
	baz=261						
TWB1	**Santiao Chiao**	**0.97**	**342**	P	**Pb**	**23 12 02.0**	**-0.1**
	baz=355						
TWB1				S	**Sb**	**23 12 14.1**	**-0.8**
	baz=355						
YHNB	**Yeheng**	**1.04**	**305**	*e*P	**Pb**	**23 12 02.9**	**-0.4**
YHNB				*e*S	**Sb**	**23 12 14.7**	**-2.0**
TWT	**Tachien**	**1.05**	**280**	P	**Pb**	**23 12 03.7**	**+0.2**
	baz=265						
NSK	**Sanguang**	**1.06**	**305**	⇓*i* P	**Pb**	**23 12 03.3**	**-0.3**
	baz=291						
NSK				*e*S	**Sb**	**23 12 16.7**	**-0.4**
	baz=291						
EHY	**Hungye**	**1.07**	**238**	*e*P	**Pb**	**23 12 02.6**	**-1.2**
	baz=228						
EHY				*e*S	**Sb**	**23 12 15.9**	**-1.7**
	baz=228						
NWF	**Wu-fen Shan**	**1.10**	**334**	P	**Pb**	**23 12 04.2**	**-0.2**
	baz=333						
NWF				S	**Sb**	**23 12 18.2**	**-0.3**
	baz=333						
TWA	**Mucha**	**1.12**	**324**	P	**Pb**	**23 12 05.3**	**+0.7**
	baz=333						
TWA				*e*S	**Sb**	**23 12 19.5**	**+0.5**
	baz=333						
YULB	**Yu-li**	**1.15**	**234**	*e*Pn	**Pn**	**23 12 03.8**	**-1.3**
YULB				Sn	**Sn**	**23 12 16.6**	**-4.1**
TATO	**Taipei**	**1.17**	**320**	*e*Pn	**Pn**	**23 12 05.3**	**-0.1**
TATO				*e*Sn	**Sn**	**23 12 18.4**	**-2.6**
TAP1	**Taipei**	**1.20**	**323**	*e*P	**Pn**	**23 12 07.0**	**+1.2**
	baz=321						
TAP1				S	**Sb**	**23 12 22.1**	**+0.8**
	baz=321						
SSLB	**Suanglung**	**1.28**	**257**	*e*Pn	**Pn**	**23 12 06.1**	**-0.7**
SSLB				Sn	**Sn**	**23 12 22.3**	**-1.3**
CHKT	**Chengkung**	**1.31**	**222**	⇑*i* P	**Pn**	**23 12 05.6**	**-1.7**
	baz=209						
CHKT				*e*S	**Sb**	**23 12 20.8**	**-3.6**
	baz=209						
TWS1	**Kuangyinshan**	**1.31**	**322**	P	**Pn**	**23 12 07.6**	**+0.3**
	baz=332						
TWS1				*e*S	**Sb**	**23 12 24.2**	**-0.2**
	baz=332						
IRIF	**Iriomote-Funau**	**1.32**	**78**	P	**Pn**	**23 12 08.1**	**+0.7**
IRIF				*e*S	**Sn**	**23 12 25.6**	**+0.9**
NSTT	**Nanjuang**	**1.32**	**295**	P	**Pn**	**23 12 07.8**	**+0.4**
	baz=293						
NSTT				*e*S	**Sn**	**23 12 24.8**	**+0.1**
	baz=293						
TYC	**Yuchr**	**1.34**	**263**	⇓*i* P	**Pn**	**23 12 07.5**	**-0.3**
	baz=251						
TYC				*e*S	**Sn**	**23 12 23.8**	**-1.5**
	baz=251						
NCU	**National Centr**	**1.36**	**311**	*e*P	**Pn**	**23 12 08.4**	**+0.4**
	baz=309						
NCU				*e*S	**Sn**	**23 12 26.7**	**+1.0**
	baz=309						
TWY	**Chenhua**	**1.36**	**332**	P	**Pn**	**23 12 08.6**	**+0.6**
	baz=330						
TWY				*e*S	**Sn**	**23 12 26.1**	**+0.4**
	baz=330						
HATJ	**Hateruma jima**	**1.36**	**91**	P	**Pn**	**23 12 08.7**	**+0.7**
YUS	**Yu-Shan**	**1.38**	**245**	⇑*i* P	**Pn**	**23 12 08.2**	**0.0**
	baz=244						
YUS				*e*S	**Sn**	**23 12 25.3**	**-0.9**
	baz=244						
HSN	**Hsinchu**	**1.42**	**301**	*e*P	**Pn**	**23 12 09.5**	**+0.6**
	baz=300						
HSN				*e*S	**Sn**	**23 12 28.1**	**+0.8**
	baz=300						
TWQ1	**Liyutan**	**1.43**	**281**	*e*P	**Pn**	**23 12 09.9**	**+0.9**
	baz=280						
NSY	**Sanyi**	**1.46**	**284**	P	**Pn**	**23 12 10.6**	**+1.3**
	baz=282						
NSY				*e*S	**Sn**	**23 12 29.3**	**+1.2**
	baz=282						
ELDTW	**Lidau**	**1.48**	**234**	*e*P	**Pn**	**23 12 08.5**	**-1.2**
	baz=232						
ALS	**Alishan**	**1.49**	**248**	*i* P	**Pn**	**23 12 10.2**	**+0.4**
	baz=247						
ALS				*e*S	**Sn**	**23 12 28.7**	**-0.3**
	baz=247						
TCU	**Taichung**	**1.50**	**273**	*e*P	**Pn**	**23 12 11.0**	**+1.1**
	baz=271						
TCU				*e*S	**Sn**	**23 12 30.5**	**+1.4**
	baz=271						
WNT	**Mingjian**	**1.50**	**263**	*e*P	**Pn**	**23 12 11.1**	**+1.2**
	baz=261						
WNT				*e*S	**Sn**	**23 12 30.4**	**+1.1**
	baz=261						
JKRS	**Kuro-shima**	**1.56**	**84**	P	**Pn**	**23 12 11.6**	**+0.9**
JKRS				S	**Sn**	**23 12 32.7**	**+2.2**
CHN5	**Tsauling**	**1.57**	**253**	*i* P	**Pn**	**23 12 11.7**	**+0.8**
	baz=241						
CHN5				*e*S	**Sn**	**23 12 31.3**	**+0.4**
	baz=241						
WGK	**Gukeng**	**1.65**	**257**	*e*P	**Pn**	**23 12 13.5**	**+1.5**
	baz=242						
WGK				*e*S	**Sn**	**23 12 34.3**	**+1.4**
	baz=242						
TWG	**Pinlang**	**1.69**	**223**	*e*Pn	**Pn**	**23 12 10.9**	**-1.6**
TWG				*e*Sn	**Sn**	**23 12 30.4**	**-3.5**
TWG	**Pinlang**	**1.69**	**223**	P	**Pn**	**23 12 11.1**	**-1.4**
	baz=222						
TWG				*e*S	**Sn**	**23 12 30.9**	**-3.0**
	baz=222						
JIJ	**Ishigaki jima**	**1.69**	**80**	P	**Pn**	**23 12 12.8**	**+0.2**
JIJ				S	**Sn**	**23 12 34.2**	**+0.3**
STYT	**Tauyuan**	**1.69**	**238**	P	**Pn**	**23 12 12.6**	**0.0**
	baz=237						
STYT				*e*S	**Sn**	**23 12 33.8**	**-0.1**
	baz=237						
TTN	**Taitung**	**1.70**	**219**	*e*P	**Pn**	**23 12 12.0**	**-0.6**
	baz=219						
TTN				*e*S	**Sn**	**23 12 33.4**	**-0.6**
	baz=219						
TPUB	**Ta-pu**	**1.73**	**244**	*e*Pn	**Pn**	**23 12 13.2**	**+0.1**
TPUB				Sn	**Sn**	**23 12 34.6**	**-0.1**
WTP	**Ta-pu**	**1.77**	**242**	P	**Pn**	**23 12 14.3**	**+0.7**
	baz=242						
WTP				*e*S	**Sn**	**23 12 36.3**	**+0.6**
	baz=242						
CHY	**Chiayi**	**1.82**	**252**	*e*P	**Pn**	**23 12 15.7**	**+1.3**
	baz=251						
CHY				*e*S	**Sn**	**23 12 39.0**	**+1.8**
	baz=251						
CHN1	**Nanshi**	**1.86**	**242**	P	**Pn**	**23 12 16.2**	**+1.3**
	baz=241						
CHN1				S	**Sn**	**23 12 39.8**	**+1.7**
	baz=241						
SGST	**Jiashian**	**1.87**	**238**	*e*P	**Pn**	**23 12 16.7**	**+1.6**
	baz=238						
SGST				S	**Sn**	**23 12 40.7**	**+2.4**
	baz=238						
WTCT	**Ta-ch'eng**	**1.87**	**264**	*e*S	**Sn**	**23 12 39.6**	**+1.3**
	baz=276						
ECL	**Taimali**	**1.93**	**221**	*e*P	**Pn**	**23 12 14.3**	**-1.5**
	baz=221						
ECL				*e*S	**Sn**	**23 12 36.8**	**-3.0**
	baz=221						
CHN3	**Shinhua**	**2.05**	**241**	*e*S	**Sn**	**23 12 45.7**	**+3.0**
	baz=241						
TWM1	**Shoushan**	**2.14**	**235**	*e*P	**Pn**	**23 12 21.6**	**+2.9**
	baz=233						
TWM1				*e*S	**Sn**	**23 12 47.6**	**+2.7**
	baz=233						
SCLT	**Jiali**	**2.14**	**246**	*e*S	**Sn**	**23 12 46.4**	**+1.4**
	baz=245						
LAY	**Lan-yu**	**2.15**	**199**	P	**Pn**	**23 12 17.0**	**-1.8**
	baz=199						
TAW	**Tawu**	**2.15**	**218**	*e*P	**Pn**	**23 12 18.5**	**-0.3**
	baz=218						
TAW				*e*S	**Sn**	**23 12 42.7**	**-2.6**
	baz=218						
EAST	**Anshuo**	**2.16**	**219**	*e*P	**Pn**	**23 12 18.0**	**-1.0**
	baz=218						
TAI1	**Yung-k'ang**	**2.17**	**242**	*e*S	**Sn**	**23 12 47.7**	**+1.8**
	baz=242						
JTJ	**Tarama**	**2.25**	**75**	P	**Pn**	**23 12 21.0**	**+0.8**
JTJ				S	**Sn**	**23 12 48.1**	**+0.5**
SCZT	**Fangliau**	**2.30**	**223**	*e*P	**Pn**	**23 12 22.1**	**+1.1**
	baz=218						
SCZT				*e*S	**Sn**	**23 12 50.9**	**+1.9**
	baz=218						
TWP	**Hsiaoliuchiu**	**2.49**	**227**	*e*P	**Pn**	**23 12 27.7**	**+4.2**
	baz=215						
TWP				*e*S	**Sn**	**23 12 56.1**	**+2.6**
	baz=215						
HEN	**Hengchun**	**2.52**	**215**	*e*P	**Pn**	**23 12 24.1**	**+0.2**
	baz=224						
HEN				*e*S	**Sn**	**23 12 54.2**	**-0.1**
	baz=224						
TSEB	**Hengchuen, Pin**	**2.53**	**211**	*e*P	**Pn**	**23 12 24.4**	**+0.3**
	baz=214						
TSEB				*e*S	**Sn**	**23 12 54.6**	**+0.1**
	baz=214						
TWK1	**Hengchun**	**2.54**	**214**	*e*P	**Pn**	**23 12 23.7**	**-0.5**
	baz=222						
TWK1				*e*S	**Sn**	**23 12 53.6**	**-1.2**
	baz=222						
PNG	**Penghu**	**2.58**	**259**	*e*P	**Pn**	**23 12 25.1**	**+0.3**
	baz=258						
PNG				*e*S	**Sn**	**23 12 55.0**	**-0.8**
	baz=258						
JMJ	**Miyako jima 2**	**2.81**	**74**	S	**Sn**	**23 13 02.4**	**+0.8**
QZH	**Quanzhou**	**3.50**	**285**	Pn	**Pn**	**23 12 35.6**	**-1.8**
QZH				Sn	**Sn**	**23 13 07.6**	**-11**
QZH				smax			
	comp=N,170nm,0.8s						
QZH				smax			
	comp=E,110nm,0.6s						
KNM	**Kinmen**	**3.56**	**276**	*e*P	**Pn**	**23 12 39.2**	**+0.9**
	baz=275						
KSRS	**Korea Array**	**14.17**	**19**	Pn	**Pn**	**23 15 06.8**	**+3.1**
	comp=E,0.2nm,0.3s,baz=191,slow=11,SNR=2.8						
ULN	**Ulaanbaatar**	**26.66**	**337**	*e*P	**P**	**23 17 20.1**	**-1.6**
	comp=E,0.8nm,0.4s,mb3.6						
SONM	**Songino Array**	**26.88**	**336**	P	**P**	**23 17 22.3**	**-1.4**
	comp=E,1.0nm,0.6s,mb3.5,baz=140,slow=9.2,SNR=2.6						
MKAR	**Makanchi Array**	**39.13**	**316**	P	**P**	**23 19 07.3**	**-3.1**
	comp=E,0.6nm,0.7s,mb3.4,baz=97,slow=8.9,SNR=5.5						
PET	**Petropavlovsk**	**39.82**	**34**	P	**P**	**23 19 14.5**	**-1.5**
ZALV	**Zalesovo Beam**	**40.90**	**327**	P	**P**	**23 19 21.3**	**-3.6**
	comp=E,0.5nm,0.5s,mb3.4,baz=113,slow=10,SNR=4.3						
ZALV	**Zalesovo Beam**	**40.90**	**327**	P	**P**	**23 19 21.3**	**-3.6**
FITZ	**Fitzroy Crossi**	**42.05**	**175**	*e*P	**P**	**23 19 33.4**	**-1.2**
	comp=E,4.1nm,1.1s,mb4.0						
TKM2	**Tokmak 2**	**42.64**	**308**	*e*P	**P**	**23 19 38.7**	**-0.7**
KURK	**Kurchatov**	**42.84**	**320**	P	**P**	**23 19 38.3**	**-2.5**
	comp=E,0.2nm,0.3s,mb3.4,baz=108,slow=9.7,SNR=3.2						
AAK	**Ala-Archa**	**43.39**	**307**	P	**P**	**23 19 44.0**	**-1.4**
AML	**Almayashu**	**43.90**	**306**	*e*P	**P**	**23 19 48.3**	**-1.2**
	comp=E,0.7nm,0.5s,mb3.6						
EKS2	**Erkin-Say**	**43.92**	**307**	*e*P	**P**	**23 19 48.6**	**-1.1**
	comp=E,0.8nm,0.6s,mb3.6						
WRA	**Warramunga Arr**	**45.29**	**164**	P	**P**	**23 19 59.1**	**-1.6**
	comp=E,1.4nm,0.7s,mb3.9,baz=348,slow=8.7,SNR=5.9						
WB2	**Warramunga Arr**	**45.30**	**164**	*e*P	**P**	**23 20 00.3**	**-0.5**
KBL	**Kabul**	**47.14**	**296**	P	**P**	**23 20 13.9**	**-1.4**
ASAR	**Alice Springs**	**48.77**	**166**	P	**P**	**23 20 27.5**	**-0.5**
	comp=E,0.6nm,0.8s,mb3.7,baz=353,slow=12,SNR=7.2						
STKA	**Stephens Creek**	**58.61**	**161**	P	**P**	**23 21 39.3**	**-0.6**
	comp=E,1.5nm,0.6s,mb4.2,baz=327,slow=9.0,SNR=4.5						
BRTR	**Keskin Array B**	**74.07**	**307**	P	**P**	**23 23 17.6**	**-1.4**
	comp=E,0.4nm,0.6s,mb3.5,baz=119,slow=3.8,SNR=2.5						

IDC ***03*** *23:14:39.3±2.0, 32.°33N×47.°28E, h0km, mb4.0/5, mb1 4.0/5, mb1mx3.6/23, mbtmp4.0/5, Error ellipse: s-maj=62.7km s-min=24.4km az=153.0*
ISCJB ***03*** *23:14:39.6±0.4, 32.°34N±0.°02×47.°12E±0.°05, h10km, mb3.7/9, Error ellipse: s-maj=6.2km s-min=3.4km az=177.4*
KISR ***03*** *23:14:43.3±0.9, 32.°48N×47.°72E, h44km±999km, ML3.0*
SGS ***03*** *23:14:43.3, 32.°47N×47.°37E, h12km*
TEH ***03*** *23:14:43.8, 32.°35N×47.°30E, h8km*
CSEM ***03*** *23:14:43.5±0.3, 32.°42N×47.°35E, h10km, mb3.9/5, Error ellipse: s-maj=9.6km s-min=5.7km az=86.0*
NEIC ***03*** *23:14:45.5, 32.°41N×47.°36E, h15km, mb3.8/6, MN3.4(TEH), After TEH.*
ISC 03 23:14:42.1±0.3, 32.°35N±0.°02×47.°21E±0.°05, h10km, n90, σ1§31/106, mb3.7/9, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.84**	**8**	Pn	**Pn**	**23 15 15.3**	**+1.6**
IKOM				Sg	**Sg**	**23 15 41.5**	**+0.3**
IKOM	**Komasi**	**1.84**	**8**	*e*Pn	**Pn**	**23 15 15.3**	**+1.6**
IKOM				*e*Sg	**Sg**	**23 15 41.6**	**+0.4**
IKOM				*e*		23 15 47.7	
	comp=Z,8μm,0.3s						
IKOM	**Komasi**	**1.84**	**8**	*e*Pn	**Pn**	**23 15 15.3**	**+1.6**
IKOM				*e*Sg	**Sg**	**23 15 41.6**	**+0.4**
IGHG	**Ghaleghazi**	**2.05**	**345**	Pn	**Pg**	**23 15 19.7**	**-1.7**
IGHG	**Ghaleghazi**	**2.05**	**345**	*e*Pn	**Pg**	**23 15 19.2**	**-2.2**
IGHG				*e*		23 15 57.5	
	comp=Z,5μm,0.2s						
IGHG	**Ghaleghazi**	**2.05**	**345**	*e*Pn	**Pg**	**23 15 19.2**	**-2.2**
IVIS	**Veis**	**2.19**	**352**	Pn	**Pn**	**23 15 21.5**	**+2.9**
IVIS				Sg	**Sg**	**23 15 51.9**	**-0.7**
IVIS	**Veis**	**2.19**	**352**	*e*Pn	**Pn**	**23 15 20.5**	**+1.9**
IVIS				*e*Sg	**Sg**	**23 15 51.1**	**-1.5**
IVIS				*e*		23 15 59.4	
	comp=Z,3μm,0.2s						
IVIS	**Veis**	**2.19**	**352**	*e*Pn	**Pn**	**23 15 20.5**	**+1.9**
IVIS				*e*Sg	**Sg**	**23 15 51.1**	**-1.5**
IDHR	**Dehrash**	**2.44**	**344**	Pn	**Pn**	**23 15 24.4**	**+2.3**
IDHR				Sg	**Sg**	**23 16 01.1**	**+0.4**
IDHR	**Dehrash**	**2.44**	**344**	*e*Pn	**Pn**	**23 15 24.2**	**+2.1**
IDHR				*e*Sg	**Sg**	**23 16 01.0**	**+0.3**
IDHR				*e*		23 16 03.0	
	comp

	comp=Z,237nm,0.1s							
IDMV	Damavand	5.14	50	*e*Pn		Pn	23 15 59.5	+0.4
ASYS		5.43	208	S		Sn	23 17 05.8	0.0
ASYS		5.43	208	P		Pn	23 16 04.7	+1.5
ASYS		5.43	208	P		Pn	23 16 04.7	+1.6
ISRB	Sarab	5.48	4	Pn		Pn	23 16 05.4	+1.7
ISRB	Sarab	5.48	4	*e*Pn		Pn	23 16 04.9	+1.2
IPAR	Pars	5.59	115	*e*Pn		Pn	23 16 05.7	+0.3
IPAR	Pars	5.59	115	*e*Pn		Pn	23 16 05.7	+0.3
IFIR	Firoozkooh	5.65	53	Pn		Pn	23 16 06.3	+0.1
IFIR	Firoozkooh	5.65	53	*e*		Pg	23 16 27.9	-2.5
	comp=Z,188nm,0.2s							
IFIR				*e*Pn		Pn	23 16 06.4	+0.2
IHRS	Heris	5.96	359	Pn		Pn	23 16 13.0	+2.7
IHRS	Heris	5.96	359	*e*Pn		Pn	23 16 11.7	+1.4
IHRS				*e*			23 17 09.8	
	comp=Z,69nm,0.4s							
ISHB	Shabestar	6.06	348	Pn		Pn	23 16 13.2	+1.4
ISHB	Shabestar	6.06	348	*e*Pn		Pn	23 16 13.2	+1.4
ISHB				*e*			23 16 33.9	
	comp=Z,94nm,0.4s							
GNI	Garni	8.04	346	Pn		Pn	23 16 37.7	-1.2
HRDDS		9.59	167	S		Sn	23 18 44.2	-4.0
HRDDS		9.59	167	P		Pn	23 17 00.5	+0.2
LYLS		10.27	180	P		Pn	23 17 08.4	-1.2
KIV	Kislovodsk	12.12	344	*e*Pn		Pn	23 17 33.9	-0.9
ABKAR	Akbulak array	19.40	26	*e*P		Pn	23 19 08.6	-0.6
	comp=Z,0.6nm,0.4s							
ABKAR	Akbulak array	19.40	26	*e*P		Pn	23 19 08.6	-0.7
	comp=Z,0.6nm,0.4s							
KKAR	Karatay Array	21.26	53	*e*P		P	23 19 26.5	-2.0
	comp=Z,1.3nm,0.8s,mb3.3							
KKAR	Karatay Array	21.26	53	*e*P		P	23 19 26.5	-1.9
	comp=Z,1.3nm,0.8s,mb3.3							
AAK	Ala-Archa	23.86	57	*e*P		P	23 19 54.2	-1.4
	comp=Z,1.9nm,0.3s,mb4.0							
AAK	Ala-Archa	23.86	57	*e*P		P	23 19 54.2	-1.4
	comp=Z,1.9nm,0.3s,mb4.0							
TKM2	Tokmak 2	24.72	57	P		P	23 20 01.7	-1.8
TKM2	Tokmak 2	24.72	57	P		P	23 20 01.7	-1.8
ARU	Arti	25.34	15	*e*P		P	23 20 08.1	-0.8
	comp=Z,1.2nm,0.5s,mb3.7							
ARU	Arti	25.34	15	*e*P		P	23 20 08.1	-0.8
	comp=Z,1.1nm,0.5s,mb3.6							
PSZ	Piszkesteto	25.86	315	P		P	23 20 13.2	-0.5
PSZ	Piszkesteto	25.86	315	P		P	23 20 13.2	-0.5
BRVK	Borovoye	26.54	32	*e*P		P	23 20 18.9	-1.0
	comp=Z,1.3nm,0.4s,mb3.8							
BRVK	Borovoye	26.54	32	*e*P		P	23 20 18.9	-1.0
	comp=Z,1.3nm,0.4s,mb3.8							
KURK	Kurchatov	29.51	42	P		P	23 20 44.9	-1.5
	comp=Z,0.8nm,0.6s,mb3.6,baz=246,slow=9.6,SNR=9.1							
KURK	Kurchatov	29.51	42	*e*P		P	23 20 45.6	-0.7
	comp=Z,1.7nm,0.5s,mb4.0							
KURK	Kurchatov	29.51	42	*e*P		P	23 20 45.6	-0.8
	comp=Z,1.7nm,0.5s,mb4.0							
MK31	Makanchi Array	30.36	51	P		P	23 20 52.9	-1.1
MK31	Makanchi Array	30.36	51	P		P	23 20 52.9	-1.1
MKAR	Makanchi Array	30.36	51	P		P	23 20 53.0	-1.0
	comp=Z,0.3nm,0.4s,mb3.3,baz=244,slow=7.2,SNR=6.1							
MKAR	Makanchi Array	30.36	51	P		P	23 20 53.0	-1.0
FINES	FINESS Array B	32.18	341	P		P	23 21 09.0	-0.8
	comp=Z,1.3nm,0.7s,mb3.9,baz=141,slow=9.0,SNR=3.1							
FINES	FINESS Array B	32.18	341	P		P	23 21 09.0	-0.8
ZALV	Zalesovo Beam	34.32	40	P		P	23 21 25.7	-2.9
	comp=Z,0.5nm,0.4s,mb3.8,baz=250,slow=8.6,SNR=3.0							
TORD	Torodi Ar. Bea	45.73	256	P		P	23 23 02.7	-1.0
	comp=Z,0.4nm,0.7s,mb3.5,baz=50,slow=9.5,SNR=2.9							
TORD	Torodi Ar. Bea	45.73	256	P		P	23 23 02.7	-1.0

NEIC ***03*** *23:17:01.5, 19°.11N×68°.58W, h165km, MD3.8(RSPR), After RSPR.*

RSPR 03 23:17:01.5, 19°.11N×68°.58W, h165km±3km, MD3.8/9, 6C-7D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMN1	Samana, DR	0.66	277	↓*e*P	Pn	23 17 24.7	-0.6
SMN1				*e*S	Sn	23 17 43.6	+0.1
AGPR	Aguadilla, PR	1.53	114	↓*e*P	Pn	23 17 33.2	+0.8
LSP	Las Mesas	1.69	123	↑*e*P	Pn	23 17 34.7	+0.5
CRPR	Cabo Rojo, PR	1.77	128	↑*e*P	Pn	23 17 34.1	-0.9
LRS	Lares	1.83	116	↓*e*P	Pn	23 17 36.1	+0.4
LRS				*e*S	Sn	23 18 02.3	+0.3
AOPR	Arecibo Observ	1.89	113	↑*e*P	Pn	23 17 37.4	+1.1
AOPR				*e*S	Sn	23 18 04.2	+1.1
GBPR	Guanica, Bosqu	1.97	125	*e*S	Sn	23 18 04.9	+0.2
OBIP	Obispado Ponce	2.15	119	↓*e*P	Pn	23 17 39.6	+0.4
OBIP				*e*S	Sn	23 18 09.0	+0.6
CELP	Cerrillos	2.16	118	↓*e*P	Pn	23 17 39.5	+0.2
CELP				*e*S	Sn	23 18 10.4	+1.9
SJG	San Juan	2.51	113	*e*S	Sn	23 18 15.6	-0.2
SJG	San Juan	2.51	113	↑*e*P	Pn	23 17 43.2	-0.2
SDDR	Presa de Saban	2.57	268	*e*Pn	Pn	23 17 40.5	-3.6
SDDR				*e*Sn	Sn	23 18 13.3	-3.7
CBYP	Canovanas	2.71	107	↑*e*P	Pn	23 17 45.7	-0.2
CBYP				*e*S	Sn	23 18 21.0	+0.8
HUMP	Col San Antoni	2.76	110	↑*e*P	Pn	23 17 46.4	-0.1
HUMP				*e*S	Sn	23 18 21.1	-0.2
MTP	Monte Pirata	3.04	109	↓*e*P	Pn	23 17 50.6	+0.6
STVI	Saint Thomas	3.52	102	↑*e*P	Pn	23 17 57.9	+1.9
STVI				*e*S	Sn	23 18 40.4	+2.1

NEIC ***03*** *23:28:56.2, 59°.87N×140°.16W, h1km, ML3.0(PGC), ML2.9(AEIC), After PGC.*

PGC 03 23:28:56.2±2.7, 59°.87N×140°.16W, h1km, ML3.0/5, 74km northwest of Yakutat, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNL	Peninsula	0.43	117	P	Pg	23 29 06.3	+1.7
PNL				S	Sg	23 29 13.3	+3.2
DHAK	Deception Hill	1.26	127	P	Pg	23 29 21.1	+0.7
HYT	Haines Junctio	1.63	53	Pn	Pn	23 29 25.4	-0.6
HYT				Sg	Sg	23 29 46.7	-1.9
HYT	Haines Junctio	1.63	53	↑Pn	Pn	23 29 25.4	-0.6
HYT				↑Sg	Sg	23 29 46.7	-1.9
PLBC	Pleasant Camp	1.97	100	Pn	Pn	23 29 30.5	-0.1
PLBC				Sg	Sg	23 29 56.8	-2.5
PLBC	Pleasant Camp	1.97	100	↑Pn	Pn	23 29 30.5	-0.1
PLBC				↑Sg	Sg	23 29 56.8	-2.5
WHY	Whitehorse	2.75	71	Pn	Pn	23 29 41.0	-0.3
WHY				Sn	Sn	23 30 14.3	-0.8
WHY				Sg	Sg	23 30 21.2	-3.2
WHY	Whitehorse	2.75	71	↑Pn	Pn	23 29 41.0	-0.3
WHY				↑Sn	Sn	23 30 14.3	-0.8
WHY				↑Sg	Sg	23 30 21.2	-3.2
BCA3	Beaver Creek A	3.30	347	P	Pn	23 29 47.6	-1.4
DAWY	Dawson	4.23	5	*e*Pn	Pn	23 30 03.4	+1.7
DAWY				Sg	Sg	23 31 07.2	-4.7
DLBC	Dease Lake	5.41	101	Sg	Sg	23 31 43.9	-5.9
DLBC	Dease Lake	5.41	101	↑Sg	Sg	23 31 43.9	-5.9

IDC ***03*** *23:35:08.8±4.8, 38°.01N×75°.34E, h87km±43km, mb3.6/7, mb1 3.5/13, mb1mx3.4/29, mbtmp3.4/13, Error ellipse: s-maj=39.5km s-min=20.1km az=16.0*

ISCJB ***03*** *23:35:11.0±0.4, 38°.24N±0°.02×75°.51E±0°.06, h123km±7km, mb3.6/8, Error ellipse: s-maj=8.4km s-min=3.8km az=168.4*

BJI ***03*** *23:35:12.2, 38°.30N×75°.51E, h131km*

NEIC ***03*** *23:35:12.5±1.4, 38°.27N×75°.37E, h119km±12km, mb3.4/3, Error ellipse: s-maj=16.0km s-min=12.4km az=130.0*

NNC ***03*** *23:35:14.4±2.9, 38°.61N×74°.99E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=23.1km s-min=16.2km az=152.0*

ISC 03 23:35:11.3±0.4, 38°.15N±0°.03×75°.39E±0°.06, h111km±6km, n51, σ1§39/68, mb3.6/8, 4C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.44	18	↑*i*P	Pn	23 35 33.9	-3.5
KSH				S	Sn	23 35 49.0	-8.3
KSH				smax			
	comp=N,4μm,0.4s						
KSH				smax			
	comp=E,2μm,0.3s						
UCH	Uchtor	4.13	351	P	Pn	23 36 13.3	+1.0
	SNR=6.3						
AML	Almayashu	4.18	342	P	Pn	23 36 13.6	+0.5
	SNR=38						
KBK	Karagaybulak	4.51	356	P	Pn	23 36 19.5	+1.9
	SNR=12						
AAK	Ala-Archa	4.53	352	P	Pn	23 36 18.6	+0.9
	SNR=11						
AAK	Ala-Archa	4.53	352	P	Pn	23 36 18.1	+0.3
	comp=E,0.1nm,0.3s,baz=155,slow=9.5,SNR=26						
AAK				S	Sn	23 37 06.0	-3.3
	comp=E,0.1nm,0.3s,baz=323,slow=20,SNR=6.9						
AAK	Ala-Archa	4.53	352	P	Pn	23 36 18.1	+0.3
AAK				S	Sn	23 37 06.0	-3.3
EKS2	Erkin-Say	4.67	345	P	Pn	23 36 20.7	+1.0
	SNR=12						
EKS2	Erkin-Say	4.67	345	*e*Pn	Pn	23 36 20.2	+0.6
EKS2				*e*Sn	Sn	23 37 13.2	+0.5
TKM2	Tokmak 2	4.77	2	⇑Pn	Pn	23 36 21.7	+0.7
	comp=E,7.7nm,0.6s						
TKM2				⇑Sn	Sn	23 37 14.2	-0.9
	comp=E,21nm,0.7s						
TKM2	Tokmak 2	4.77	2	P	Pn	23 36 22.6	+1.6
	SNR=12						
TKM2	Tokmak 2	4.77	2	*e*Pn	Pn	23 36 21.9	+0.9
TKM2				*e*Sn	Sn	23 37 15.7	+0.6
CHCP	Chirah Chowk	4.80	202	⇓P	Pn	23 36 26.9	+5.4
CHMS	Chumysh	4.87	354	P	Pn	23 36 23.1	+0.7
	SNR=5.4						
CEP	Cherat	5.16	214	P	Pn	23 36 30.5	+4.2
CEP				S	Sn	23 37 29.0	+4.4
THW	Thamme Wali	6.12	210	⇑P	Pn	23 36 43.0	+3.7
KK31	Karatay Array	6.18	325	⇓Pn	Pn	23 36 39.6	-0.5
	comp=E,1.4nm,0.3s,baz=132,slow=12,SNR=73						
KK31				⇓Sn	Sn	23 37 45.8	-3.6
	comp=E,14nm,0.3s,baz=137,slow=25,SNR=14						
KKAR	Karatay Array	6.18	325	*e*Pn	Pn	23 36 39.4	-0.7
KKAR				*e*Sn	Sn	23 37 45.8	-3.6
KBL	Kabul	6.26	237	*e*Pn	Pn	23 36 44.1	+2.9
	comp=E,52nm,0.3s						
KBL				*e*Sn	Sn	23 37 50.0	-1.4
KLP	Kalpa	7.01	160	*e*PKP	Pn	23 36 54.0	+2.6
KLP				*e*S	Sn	23 38 07.8	-1.7
SMLA	Simla	7.16	168	*i*P	Pn	23 36 55.1	+1.8
SMLA				*i*S	Sn	23 38 08.4	-4.7
DDI	Dehra Dun	8.11	163	*ex*	Sn	23 38 40.0	+3.6
JOSI	Joshimath	8.32	154	*e*PKP	Pn	23 37 11.8	+2.6
JOSI				*e*S	Sn	23 38 38.6	-2.8
AYAN	Aya Nagar	9.75	171	*e*PKP	Pn	23 37 29.6	+1.0
AYAN				*e*S	Sn	23 39 09.7	-6.5
AYAN				AML	AML	23 39 14.8	
	comp=Z,8.6nm,0.2s						
SONA	Sohna	9.97	171	*e*PKP	Pn	23 37 31.6	0.0
SONA				*e*S	Sn	23 39 15.1	-6.5
SONA				AML	AML	23 39 22.1	
	comp=E,33nm,0.6s						
SONA				AML	AML	23 39 25.3	
	comp=N,17nm,0.2s						
MKAR	Makanchi Array	10.03	28	P	Pn	23 37 31.5	-0.6
	comp=N,0.1nm,0.3s,baz=200,slow=14,SNR=7.2						
KHET	Khetri	10.05	178	*e*PKP	Pn	23 37 33.7	+1.0
KHET				*e*S	Sn	23 39 17.3	-6.2
KOLN	Koldanda	12.43	144	*e*P	Pn	23 38 02.8	-1.5
	comp=N,8.2nm,0.4s						
GKN	Gorkha	12.74	140	*e*P	Pn	23 38 07.8	-0.6
	comp=N,9.2nm,0.4s						
KURK	Kurchatov	12.77	9	P	Pn	23 38 06.5	-2.1
	comp=N,0.0nm,0.3s,baz=195,slow=10,SNR=2.9						
KKN	Kakani	13.24	138	*e*P	Pn	23 38 14.5	-0.5
	comp=N,1.5nm,0.4s						
DMN	Daman	13.30	139	*e*P	Pn	23 38 15.9	+0.2
	comp=N,4.9nm,0.3s						
PKI	Pulchoki	13.49	139	*e*P	Pn	23 38 18.3	+0.1
	comp=N,6.8nm,0.4s						
RAMN	Ramite	14.62	137	*e*P	Pn	23 38 32.8	+0.1
	comp=N,6.0nm,0.3s						
ODAN	Odare	15.12	135	*e*P	Pn	23 38 38.9	-0.2
BVAR	Borovoye Array	15.28	348	P	Pn	23 38 39.2	-1.5
	comp=N,0.2nm,0.3s,baz=153,slow=13,SNR=2.7						
BRVK	Borovoye	15.32	348	*e*Pn	Pn	23 38 40.6	-0.7
	comp=N,1.5nm,0.6s						
AB31	Akbulak array	15.71	320	⇓P	Pn	23 38 48.8	+2.5
	comp=N,0.4nm,0.4s,baz=113,slow=15,SNR=13						
ABKAR	Akbulak array	15.71	320	*e*Pn	Pn	23 38 43.3	-3.0
	comp=N,0.8nm,0.4s						
ABKAR				*e*Sn	Sn	23 41 26.9	-13
ZALV	Zalesovo Beam	17.08	19	P	Pn	23 39 02.0	-1.0
	comp=N,0.3nm,0.3s,baz=211,slow=11,SNR=6.6						
AKTK	Aktyubinsk	17.43	320	P	Pn	23 39 05.8	-1.4
AKTO	Aktyubinsk	17.43	320	P	Pn	23 39 05.8	-1.4
	comp=N,0.1nm,0.3s,baz=130,slow=16,SNR=8.3						
ARU	Arti	21.45	334	*e*P	P	23 39 52.6	+2.2
	comp=N,2.6nm,0.9s,mb3.6						
SONM	Songino Array	24.51	57	P	P	23 40 22.4	+2.2
	comp=N,1.1nm,0.6s,mb3.5,baz=262,slow=10.0,SNR=3.0						
BRTR	Keskin Array B	32.31	286	P	P	23 41 30.9	+1.3
	comp=N,0.8nm,0.7s,mb3.6,baz=88,slow=7.8,SNR=6.5						
FINES	FINESS Array B	38.15	324	P	P	23 42 20.1	+0.7
	comp=N,2.5nm,0.8s,mb4.1,baz=116,slow=8.3,SNR=4.7						
ARCES	ARCESS Array B	41.02	336	P	P	23 42 43.7	+0.6
	comp=N,0.9nm,0.7s,mb3.7,baz=106,slow=9.5,SNR=4.9						
TORD	Torodi Ar. Bea	69.23	271	P	P	23 46 05.3	-1.2
	comp=N,0.5nm,0.4s,mb3.7,baz=64,slow=5.0,SNR=3.8						
TORD	Torodi Ar. Bea	69.23	271	P	P	23 46 05.3	-1.2
WRA	Warramunga Arr	79.98	125	P	P	23 47 08.1	-0.3
	comp=N,0.5nm,0.6s,mb3.5,baz=323,slow=5.0,SNR=2.9						
ASAR	Alice Springs	82.41	128	P	P	23 47 21.3	+0.1
	comp=N,0.5nm,0.6s,mb3.5,baz=316,slow=5.2,SNR=4.9						

TIR ***03*** *23:46:55.3±3.5, 40°.65N×20°.73E, h6km±999km, ML3.5*

ISCJB ***03*** *23:47:00.6±0.4, 40°.71N±0°.02×20°.72E±0°.03, h0km±4km, Error ellipse: s-maj=3.8km s-min=3.4km az=41.1*

SKO ***03*** *23:47:00.9, 40°.72N×20°.75E, h15km, M1.8, ML2.2*

NEIC ***03*** *23:47:01.1, 40°.74N×20°.81E, h7km, MD3.6(ATH), After ATH.*

THE ***03*** *23:47:01.1, 40°.68N×20°.72E, h0km±1km, ML2.1/6, Error ellipse: s-maj=1.6km s-min=0.6km az=272.0*

CSEM ***03*** *23:47:01.2±0.2, 40°.66N×20°.71E, h8km, ML3.5, Error ellipse: s-maj=3.9km s-min=3.0km az=43.0*

ATH ***03*** *23:47:01.7, 40°.69N×20°.82E, h5km, MD3.5/8*

ISC 03 23:47:01.4±0.4, 40°.69N±0°.02×20°.72E±0°.03, h6km±3km, n66, σ1§17/100, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	Korca	0.09	140	*i*PG	Pg	23 47 03.5	+0.1
KBN				*i*SG	Sg	23 47 05.8	+1.1
KBN	Korca	0.09	140	Pg	Pg	23 47 03.5	+0.2
KBN				Sg	Sg	23 47 05.5	+0.8
KBN	Korca	0.09	140	*i*Pg	Pg	23 47 03.5	+0.2
	SNR=92						
KBN				Sg	Sg	23 47 05.5	+0.8
NEST	Nestorio	0.37	137	P	Pg	23 47 08.1	-0.5
NEST				S	Sg	23 47 13.3	-0.2
NEST	Nestorio	0.37	137	P	Pg	23 47 08.1	-0.5
NEST				S	Sg	23 47 13.3	-0.2
FNA	Florina	0.51	79	P	Pg	23 47 11.0	-0.3
FNA				S	Sg	23 47 18.9	+1.0
FNA	Florina	0.51	79	P	Pg	23 47 11.0	-0.3
FNA				S	Sg	23 47 18.9	+1.0
KRUS	Krusevo	0.79	31	*e*Pg	Pg	23 47 15.5	-1.1
KZN	Kozani	0.89	115	*e*Pb	Pb	23 47 17.7	-1.6
KZN	Kozani	0.89	115	*e*PB	Pb	23 47 17.7	-1.6
KZN	Kozani	0.89	115	P	Pg	23 47 17.5	-1.0
KZN				S	Sg	23 47 31.5	+1.4
KZN	Kozani	0.89	115	P	Pg	23 47 17.5	-1.0
KZN	Kozani	0.89	115	*e*Pb	Pb	23 47 17.7	-1.6
KZN				S	Sg	23 47 31.5	+1.4
TIR	Tirane	0.92	316	P	Pg	23 47 18.5	-0.6
TIR				S	Sg	23 47 32.3	+1.3
TIR	Tirane	0.92	316	P	Pg	23 47 18.5	-0.6
TIR				S	Sg	23 47 32.3	+1.3
SRN	Sarande	0.97	214	*i*PG	Pg	23 47 19.1	-1.0
SRN				*i*SG	Sg	23 47 34.1	+1.4
SRN	Sarande	0.97	214	Pg	Pg	23 47 19.0	-1.1
SRN				Sg	Sg	23 47 35.6	+2.8
SRN	Sarande	0.97	214	Pg	Pg	23 47 19.0	-1.1
SRN				Sg	Sg	23 47 35.6	+2.8
JAN	Janina	1.04	174	*e*Pg	Pg	23 47 21.4	+0.1
JAN	Janina	1.04	174	*e*PB	Pg	23 47 21.4	+0.1
JAN	Janina	1.04	174	*e*Pg	Pg	23 47 21.4	+0.1
KEK	Kerkira	1.20	216	*e*Pb	Pb	23 47 25.5	+1.0
KEK	Kerkira	1.20	216	*e*PB	Pb	23 47 25.5	+1.0
KEK	Kerkira	1.20	216	P	Pg	23 47 23.7	-0.7
KEK				S	Sg	23 47 41.6	+1.6
KEK	Kerkira	1.20	216	P	Pg	23 47 23.7	-0.7
KEK	Kerkira	1.20	216	*e*Pb	Pb	23 47 25.5	+1.0
KEK				S	Sg	23 47 41.6	+1.6
GRG	Griva	1.31	78	P	Pn	23 47 25.1	-1.1
GRG				S	Sb	23 47 44.2	+0.8
GRG	Griva	1.31	78	P	Pn	23 47 25.1	-1.1
GRG				S	Sb	23 47 44.2	+0.8
LIT	Litokhoron	1.48	113	*e*Pb	Pb	23 47 28.4	-0.9
LIT	Litokhoron	1.48	113	*e*PB	Pb	23 47 28.4	-0.9
LIT	Litokhoron	1.48	113	P	Pn	23 47 27.9	-0.6
LIT				S	Sn	23 47 49.7	+1.6
LIT	Litokhoron	1.48	113	P	Pn	23 47 27.9	-0.6
LIT	Litokhoron	1.48	113	*e*Pb	Pb	23 47 28.4	-0.9
LIT				S	Sn	23 47 49.7	+1.6
PUK	Puka	1.49	336	*i*PG	Pg	23 47 30.7	+0.8
PUK				*i*SG	Sg	23 47 51.7	+2.4
PUK	Puka	1.49	336	Pg	Pg	23 47 31.6	+1.7
PUK				Sg	Sg	23 47 53.3	+4.1
PUK	Puka	1.49	336	*i*Pg	Pg	23 47 30.7	+0.8
	SNR=90						
PUK				*i*Sg	Sg	23 47 51.7	+2.5
THL	Klokotos Trika	1.50	138	*e*PG	Pg	23 47 28.5	-1.7
THL	Klokotos Trika	1.50	138	P	Pn	23 47 27.9	-0.9
THL				S	Sn	23 47 49.8	+1.1
THL	Klokotos Trika	1.50	138	P	Pn	23 47 27.9	-0.9
THL	Klokotos Trika	1.50	138	*e*Pg	Pg	23 47 28.5	-1.7
THL				S	Sn	23 47 49.8	+1.1
VAY	Valandovo	1.54	65	P	Pn	23 47 29.7	+0.3
VAY				S	Sn	23 47 50.9	+1.2
VAY	Valandovo	1.54	65	*e*Pg	Pg	23 47 29.6	-1.3
VAY				*e*Sg	Sg	23 47 50.2	-0.7
VAY				*e*Lg		23 47 51.4	
	comp=E,23nm,0.7s						
VAY				*e*Lg		23 47 51.6	
	comp=N,36nm,0.7s						
VAY	Valandovo	1.54	65	P	Pn	23 47 29.7	+0.3
VAY				S	Sn	23 47 50.9	+1.2
KNT	Kendrikon	1.72	73	P	Pn	23 47 31.6	-0.3
KNT				S	Sn	23 47 54.6	+0.5
KNT	Kendrikon	1.72	73	P	Pn	23 47 31.6	-0.3
KNT				S	Sn	23 47 54.6	+0.5
BCI	Bajram Curri	1.75	344	*i*PG	Pg	23 47 34.7	-0.1
BCI	Bajram Curri	1.75	344	Pg	Pg	23 47 35.7	+0.8
BCI	Bajram Curri	1.75	344	Pg	Pg	23 47 35.7	+0.8
EVR	Evrytania	1.96	154	*e*Pg	Pg	23 47 38.5	-0.5
EVR	Evrytania	1.96	154	*e*PN	Pg	23 47 38.5	-0.5
EVR	Evrytania	1.96	154	*e*Pg	Pg	23 47 38.5	-0.5
SOH	Sokhos	2.01	85	*e*Pn	Pn	23 47 36.0	+0.2
SOH	Sokhos	2.01	85	*e*Pn	Pn	23 47 36.0	+0.2
PLG	Polygyros	2.10	98	*e*Pn	Pn	23 47 34.0	-3.2
PLG				*e*Sn	Sn	23 48 04.4	+0.8
PLG	Polygyros	2.10	98	*e*Pn	Pn	23 47 34.0	-3.2
PLG				*e*Sn	Sn	23 48 04.4	+0.8
BARS	Barje	2.28	21	*i*Pn	Pn	23 47 39.7	+0.1
NEO	Neokhori	2.37	125	*e*Pb	Pb	23 47 40.4	-4.1
NEO	Neokhori	2.37	125	*e*Pb	Pb	23 47 40.4	-4.1
EFP	Efpalio	2.44	157	*e*PN	Pn	23 47 45.2	+3.4
EFP	Efpalio	2.44	157	*e*Pn	Pn	23 47 45.2	+3.4
NVR	Nevrokopi	2.47	73	*e*Pg	Pn	23 47 44.2	+2.0
NVR	Nevrokopi	2.47	73	*e*PN	Pn	23 47 44.2	+2.0
VLS	Valsamata	2.51	182	*e*Pb	Pb	23 47 44.3	-2.6
VLS	Valsamata	2.51	182	*e*Pb	Pb	23 47 44.3	-2.6
STON	Ston	3.14	315	*i*Pn	Pn	23 47 50.2	-1.1
STON				Sn	Sn	23 48 27.0	-2.1
STON	Ston	3.14	315	*i*Pn	Pn	23 47 50.2	-1.1
STON				Sn	Sn	23 48 27.0	-2.1

BJI ***04*** *00:05:48.7, 30°.71N×103°.36E, h20km, ML3.6/9*

ISC 04 00:05:54.7±0.9, 30°.82N±0°.04×103°.87E±0°.06, h10km, n4, σ1§31/11, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.13	313	↓*i*Pg	Pg	00 05 55.6	-2.1
CD2				Sg	Sg	00 06 02.1	+2.3
CD2				smax			
	comp=N,7μm,0.5s						
CD2				smax			
	comp=E,4μm,0.7s						
GYA	Guiyang	4.99	150	*e*Pn	Pn	00 07 05.5	-4.2
GYA				Sn	Sn	00 08 08.3	+0.8
GYA				Sg	Sg	00 08 34.4	-0.7
GYA				smax			
	comp=N,80nm,0.9s						
GYA				smax			
	comp=E,70nm,0.8s						
LZH	Lanzhou	5.25	360	Pg	Pg	00 07 43.8	+8.6
LZH

KIW	Kapiti Island	9.90	210	PN	Pn	00 48 28.2	-2.5
CAW	Cannon Point	10.04	209	PN	Pn	00 48 30.0	-2.6
SNZO	South Karori	10.36	209	*e*Pn	Pn	00 48 39.8	+2.8
TCW	Tory Channel	10.46	211	PN	Pn	00 48 35.4	-2.9
KHZ	Kahutara	11.77	210	PN	Pn	00 48 52.9	-3.3
DZM	Mont Dzumac	16.82	304	*e*LR	LR	00 53 49.3	
	771nm,25.2s						
RAR	Rarotonga	20.13	61	P	P	00 50 42.6	+0.9
PPT	Papeete	30.05	68	*e*LR	LR	00 59 53.3	
	258nm,29.5s						
STKA	Stephens Creek	33.58	260	P	P	00 52 48.5	+1.1
	1.5nm,0.8s,mb4.0,baz=112,slow=14,SNR=3.3						
STKA				LR	LR	01 04 18.7	
	comp=Z,168nm,19.3s,MS3.8,baz=27,slow=32						
STKA	Stephens Creek	33.58	260	*e*P	P	00 52 48.6	+1.2
	3.8nm,1.7s,mb4.0						
STKA				LR	LR	01 04 18.7	
CTA	Charters Tower	33.69	283	P	P	00 52 48.3	-0.1
	2.2nm,0.3s,mb4.5,baz=137,slow=10.0,SNR=4.1						
CTA				LR	LR	01 02 47.5	
	comp=Z,140nm,20.7s,MS3.7,baz=59,slow=30						
CTAO	Charters Tower	33.69	283	*e*P	P	00 52 49.2	+0.8
	7.9nm,0.8s,mb4.7						
PMG	Port Moresby	39.07	298	*e*P	P	00 53 33.4	-1.0
ASAR	Alice Springs	42.54	269	P	P	00 54 02.9	0.0
	5.5nm,0.8s,mb4.3,baz=109,slow=7.7,SNR=33						
WB2	Warramunga Arr	43.71	275	*e*P	P	00 54 12.0	-0.4
WRA	Warramunga Arr	43.72	275	P	P	00 54 12.2	-0.3
	9.9nm,0.4s,mb4.8,baz=113,slow=7.7,SNR=33						
SBA	Scott Base	45.98	184	*e*P	P	00 54 34.3	+4.6
	3.9nm,0.8s,mb4.4						
FITZ	Fitzroy Crossi	51.89	272	*e*P	P	00 55 14.9	-0.9
	5.6nm,0.9s,mb4.5						
QSPA	South Pole Qui	57.69	180	P	P	00 56 01.0	+4.1
	5.0nm,0.5s,mb4.8,baz=44,slow=2.5,SNR=14						
QSPA	South Pole Qui	57.69	180	*e*P	P	00 56 01.1	+4.2
	6.0nm,0.8s,mb4.7						
MIDW	Midway	60.32	1	P	P	00 56 14.7	-1.0
MAW	Mawson	70.24	201	P	P	00 57 21.3	+1.8
	3.1nm,1.0s,mb4.2,baz=122,slow=8.7,SNR=4.9						
MAW	Mawson	70.24	201	*e*P	P	00 57 20.9	+1.4
	0.4nm,0.6s,mb3.5						
SYO	Syowa Base	75.03	193‖	*e*P	P	00 57 47.6	-0.4
VNA2	Neumayer--Watz	76.75	177	*e*	P	00 57 57.0	-0.7
	baz=170,slow=4.1						
VNA2				*e*		00 58 02.4	
VNA1	Neumayer--Stat	76.98	177	*e*	P	00 57 59.0	0.0
VNA1				*e*		00 58 04.3	
COCO	West Island	79.04	263	P	P	00 58 11.4	-0.1
YULB	Yu-li	79.84	306	*e*P	P	00 58 15.1	-0.3
PLCA	Paso Flores	81.49	133	pP	pP	00 58 38.1	+1.9
	1.4nm,0.7s,baz=225,slow=1.4,SNR=2.9						
KSRS	Korea Array	85.57	320	pP	pP	00 58 57.5	+0.5
	0.9nm,0.6s,baz=134,slow=7.0,SNR=5.1						
KSRS				LR	LR	01 30 50.0	
	comp=Z,38nm,19.5s,MS3.8,baz=236,slow=31						
NVAR	Mina Array Bea	90.06	43	P	P	00 59 07.9	+1.5
	2.1nm,0.9s,mb4.5,baz=222,slow=8.3,SNR=11						
TXAR	Lajitas Array	93.90	58	LR	LR	01 35 12.6	
	comp=Z,51nm,18.6s,MS4.0,baz=185,slow=31						
CPUP	Villa Florida	99.11	129	LR	LR	01 37 33.9	
	comp=Z,50nm,18.4s,MS4.0,baz=82,slow=31						
KEV	Kevo	139.98	346	*e*pkp	pPKPdf	01 05 53.3	+6.9
ARCES	ARCESS Array B	140.45	347	PKhKP	PKPpre	01 05 27.6	
	3.7nm,1.1s,baz=45,slow=1.5,SNR=3.6						
ARCES				PKP	PKPdf	01 05 34.9	0.0
	6.0nm,1.1s,baz=79,slow=1.9,SNR=6.5						
JOF	Joensuu	144.10	337	*e*pkp	PKPdf	01 05 35.7	-5.8
KAF	Kangasniemi	146.27	339	*e*pkp	PKPdf	01 05 44.2	-1.1
FINES	FINESS Array B	146.86	338	PKPbc	PKPbc	01 05 47.0	-1.2
	7.4nm,0.7s,baz=54,slow=3.7,SNR=24						
NOA	NORSAR Array B	150.67	350	PKPbc	PKPbc	01 05 57.4	-0.6
	2.0nm,0.6s,baz=15,slow=4.1,SNR=6.9						
NOA	NORSAR Array B	150.67	350	PKPbc	PKPbc	01 05 57.4	-0.6
BRTR	Keskin Array B	153.06	295	PKPbc	PKPbc	01 06 03.2	-0.9
	1.5nm,1.1s,baz=67,slow=3.7,SNR=3.7						
BRTR				pPKPbc	pPKPbc	01 06 17.7	+1.2
	0.6nm,0.6s,baz=142,slow=4.7,SNR=3.9						
BRTR	Keskin Array B	153.06	295	PKPbc	PKPbc	01 06 03.2	-0.9
BRTR				pPKPbc	pPKPbc	01 06 17.7	+1.2
TORD	Torodi Ar. Bea	160.81	181	PKP	PKPdf	01 06 08.0	+0.6
	0.9nm,1.1s,baz=212,slow=1.4,SNR=3.7						
TORD				PKPab	PKPab	01 06 50.6	+1.2
	1.0nm,0.7s,baz=159,slow=4.0,SNR=11						

*ISCJB **04** 01:19:21.6±0.3, 39°.56N±0°.01×23°.87E±0°.03, h21km±4km, Error ellipse: s-maj=3.6km s-min=2.5km az=4.4*
*ATH **04** 01:19:21.7, 39°.55N×23°.82E, h36km±3km, MD3.5/25, ML2.5*
*NEIC **04** 01:19:21.7, 39°.55N×23°.82E, h37km, MG2.5(ATH), After ATH.*
*CSEM **04** 01:19:21.4±0.1, 39°.57N×23°.88E, h15km, ML2.3/16, Error ellipse: s-maj=2.7km s-min=1.9km az=96.0*
*THE **04** 01:19:21.7, 39°.57N×23°.86E, h15km±1km, ML2.3/16, Error ellipse: s-maj=1.3km s-min=0.6km az=84.0*

ISC 04 01:19:21.7±0.5, 39°.57N±0°.01×23°.88E±0°.03, h17km±3km, n128, σ0°76/178, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	Paliouri	0.39	337	P	Pg	01 19 29.1	-0.6
PAIG	Paliouri	0.39	337	P	Pg	01 19 29.5	-0.2
PAIG				S	Sg	01 19 34.9	-0.2
PAIG	Paliouri	0.39	337	P	Pg	01 19 29.1	-0.6
PAIG				S	Sg	01 19 34.9	-0.2
AOS	Alonnisos	0.40	180	P	Pg	01 19 29.5	-0.3
AOS				S	Sg	01 19 35.7	+0.5
AOS	Alonnisos	0.40	180	P	Pg	01 19 29.5	-0.3
AOS				S	Sg	01 19 35.7	+0.5
NEO	Neokhori	0.57	243	*e*Pn	Pg	01 19 33.1	+0.2
NEO				*e*Sn	Sg	01 19 41.5	+1.0
NEO	Neokhori	0.57	243	*e*PN	Pg	01 19 33.1	+0.2
NEO				*e*SN	Sg	01 19 41.5	+1.0
NEO	Neokhori	0.57	243	*e*Pn	Pg	01 19 33.1	+0.2
OUR	Ouranopolis	0.77	6	P	Pb	01 19 35.6	-1.1
OUR	Ouranopolis	0.77	6	P	Pb	01 19 35.9	-0.8
OUR				S	Sb	01 19 46.7	-0.2
OUR	Ouranopolis	0.77	6	P	Pb	01 19 35.9	-0.8
OUR				S	Sb	01 19 46.7	-0.2
PLG	Polygyros	0.87	338	*e*Pb	Pb	01 19 37.7	-0.7
PLG				*e*Sn	Sn	01 19 50.8	-0.8
PLG	Polygyros	0.87	338	*e*PB	Pb	01 19 37.7	-0.7
PLG				*e*SN	Sn	01 19 50.8	-0.8
PLG	Polygyros	0.87	338	P	Pb	01 19 37.7	-0.7
PLG				S	Sb	01 19 49.6	-0.2
PLG	Polygyros	0.87	338	P	Pb	01 19 37.7	-0.7
PLG				S	Sb	01 19 49.6	-0.2
PLG				*e*Sn	Sn	01 19 50.8	-0.8
LIA	Limnos Island	1.06	71	*e*Pb	Pb	01 19 41.3	-0.3
LIA	Limnos Island	1.06	71	*e*PB	Pb	01 19 41.3	-0.3
LIA	Limnos Island	1.06	71	P	Pb	01 19 41.3	-0.3
LIA				S	Sb	01 19 56.1	+0.8
LIA	Limnos Island	1.06	71	P	Pb	01 19 41.3	-0.3
LIA				S	Sb	01 19 56.1	+0.8
ATAL	Atalanti	1.10	218	P	Pb	01 19 41.8	-0.4
ATAL				S	Sb	01 19 56.7	+0.4
ATAL	Atalanti	1.10	218	P	Pb	01 19 41.8	-0.4
ATAL				S	Sb	01 19 56.7	+0.4
LKR	Lokris	1.14	217	*e*Pn	Pn	01 19 42.4	-0.5
LKR	Lokris	1.14	217	*e*PN	Pn	01 19 42.4	-0.5
LKR	Lokris	1.14	217	P	Pn	01 19 42.3	-0.6
LKR				S	Sb	01 19 57.4	-0.1
LKR	Lokris	1.14	217	P	Pn	01 19 42.3	-0.6
LKR				S	Sb	01 19 57.4	-0.1
HORT	Hortiatis	1.19	330	P	Pn	01 19 44.0	+0.4
HORT	Hortiatis	1.19	330	P	Pn	01 19 43.3	-0.3
HORT				S	Sb	01 19 59.0	0.0
HORT	Hortiatis	1.19	330	P	Pn	01 19 43.3	-0.3
HORT				S	Sb	01 19 59.0	0.0
LIT	Litokhoron	1.19	297	*e*Pn	Pn	01 19 43.4	-0.2
LIT	Litokhoron	1.19	297	*e*PN	Pn	01 19 43.4	-0.2
LIT	Litokhoron	1.19	297	P	Pn	01 19 43.3	-0.3
LIT				S	Sb	01 19 59.6	+0.6
LIT	Litokhoron	1.19	297	*e*Pn	Pn	01 19 43.4	-0.2
LIT				S	Sb	01 19 59.6	+0.6
THE	Thessaloniki	1.27	327	P	Pn	01 19 46.3	+1.5
THE	Thessaloniki	1.27	327	P	Pn	01 19 46.3	+1.5
SOH	Sokhos	1.32	342	*e*Pn	Pn	01 19 45.4	+0.1
SOH	Sokhos	1.32	342	*e*PN	Pn	01 19 45.4	+0.1
SOH	Sokhos	1.32	342	P	Pn	01 19 45.5	+0.2
SOH				S	Sn	01 20 02.1	-0.4
SOH	Sokhos	1.32	342	*e*Pn	Pn	01 19 45.4	+0.1
SOH				S	Sn	01 20 02.1	-0.4
THL	Klokotos Trika	1.44	271	*e*PN	Pn	01 19 46.6	-0.4
THL	Klokotos Trika	1.44	271	P	Pn	01 19 46.8	-0.2
THL				S	Sn	01 20 05.6	+0.1
THL	Klokotos Trika	1.44	271	P	Pn	01 19 46.8	-0.2
THL				S	Sn	01 20 05.6	+0.1
KAVA	Kavala	1.51	19	P	Pn	01 19 47.6	-0.4
KAVA				S	Sn	01 20 08.2	+0.9
KAVA	Kavala	1.51	19	P	Pn	01 19 47.6	-0.4
KAVA				S	Sn	01 20 08.2	+0.9
PTL	Penteli	1.52	180	*e*Pn	Pn	01 19 47.1	-1.0
PTL				*e*Sn	Sn	01 20 06.8	-0.6
PTL	Penteli	1.52	180	*e*PN	Pn	01 19 47.1	-1.0
PTL				*e*SN	Sn	01 20 06.8	-0.6
PTL	Penteli	1.52	180	*e*Pn	Pn	01 19 47.1	-1.0
PTL				*e*Sn	Sn	01 20 06.8	-0.6
DSF	Desfina	1.56	223	P	Pn	01 19 48.1	-0.6
DSF				S	Sn	01 20 07.8	-0.7
DSF	Desfina	1.56	223	P	Pn	01 19 48.1	-0.6
DSF				S	Sn	01 20 07.8	-0.7
SRS	Serrai	1.56	352	P	Pn	01 19 49.0	+0.2
SRS	Serrai	1.56	352	P	Pn	01 19 48.9	+0.1
SRS				S	Sn	01 20 08.6	0.0
SRS	Serrai	1.56	352	P	Pn	01 19 48.9	+0.1
SRS				S	Sn	01 20 08.6	0.0
SIGR	SIGRI	1.57	102	P	Pn	01 19 51.9	+3.0
SIGR	SIGRI	1.57	102	P	Pn	01 19 51.9	+3.0
ATH	Athens Observa	1.60	185	*e*Pn	Pn	01 19 49.0	-0.2
ATH	Athens Observa	1.60	185	*e*PN	Pn	01 19 49.0	-0.2
ATH	Athens Observa	1.60	185	*e*Pn	Pn	01 19 49.0	-0.2
LTK	Loutraki	1.70	205	*e*PN	Pn	01 19 50.3	-0.3
LTK	Loutraki	1.70	205	P	Pn	01 19 50.3	-0.1
LTK				S	Sn	01 20 12.4	+0.5
LTK	Loutraki	1.70	205	*e*Pn	Pn	01 19 50.3	-0.3
LTK				S	Sn	01 20 12.4	+0.5
VLY	Voula,Athens	1.71	182	*e*Pn	Pn	01 19 50.7	-0.1
VLY				*e*Sn	Sn	01 20 12.8	+0.5
VLY	Voula,Athens	1.71	182	*e*PN	Pn	01 19 50.7	-0.1
VLY				*e*SN	Sn	01 20 12.8	+0.5
VLY	Voula,Athens	1.71	182	*e*Pn	Pn	01 19 50.7	-0.1
VLY				*e*Sn	Sn	01 20 12.8	+0.5
EVR	Evrytania	1.73	249	*e*Pn	Pn	01 19 48.7	-2.3
EVR	Evrytania	1.73	249	*e*Pn	Pn	01 19 48.7	-2.3
KNT	Kendrikon	1.76	335	P	Pn	01 19 52.7	+1.2
KNT				S	Sn	01 20 14.0	+0.5
KNT	Kendrikon	1.76	335	P	Pn	01 19 52.7	+1.2
KNT				S	Sn	01 20 14.0	+0.5
NVR	Nevrokopi	1.78	360	*e*Pn	Pn	01 19 51.6	-0.1
NVR	Nevrokopi	1.78	360	*e*PN	Pn	01 19 51.6	-0.1
NVR	Nevrokopi	1.78	360	*e*Pn	Pn	01 19 51.6	-0.1
GRG	Griva	1.79	321	P	Pn	01 19 52.8	+1.0
GRG	Griva	1.79	321	P	Pn	01 19 52.8	+1.0
NAIG	Nisos Aigina	1.83	190	*e*Pn	Pn	01 19 51.8	-0.6
NAIG	Nisos Aigina	1.83	190	*e*PN	Pn	01 19 51.8	-0.6
NAIG	Nisos Aigina	1.83	190	*e*Pn	Pn	01 19 51.8	-0.6
PRK	Paraskevi	1.88	99	*e*Pb	Pb	01 19 54.9	-0.8
PRK	Paraskevi	1.88	99	*e*PB	Pb	01 19 54.9	-0.8
PRK	Paraskevi	1.88	99	P	Pn	01 19 53.8	+0.7
PRK				S	Sn	01 20 16.3	-0.2
PRK	Paraskevi	1.88	99	P	Pn	01 19 53.8	+0.7
PRK	Paraskevi	1.88	99	*e*Pb	Pb	01 19 54.9	-0.8
PRK				S	Sn	01 20 16.3	-0.2
EFP	Efpalio	1.91	234	*e*Pn	Pn	01 19 53.1	-0.4
EFP	Efpalio	1.91	234	P	Pn	01 19 54.0	+0.5
EFP	Efpalio	1.91	234	*e*Pn	Pn	01 19 53.1	-0.4
EFP	Efpalio	1.91	234	P	Pn	01 19 54.0	+0.5
VAY	Valandovo	2.02	331	*i*Pn	Pn	01 19 59.1	+4.2
VAY				*e*Sg	Sg	01 20 27.8	+1.2
GUR	Goura	2.02	217	*e*PN	Pn	01 19 54.5	-0.5
GUR	Goura	2.02	217	P	Pn	01 19 55.1	+0.1
GUR				S	Sn	01 20 20.9	+1.0
GUR	Goura	2.02	217	*e*Pn	Pn	01 19 54.5	-0.5
GUR	Goura	2.02	217	P	Pn	01 19 55.1	+0.1
GUR				S	Sn	01 20 20.9	+1.0
CHOS	Chios island	2.07	124	*e*PN	Pn	01 19 55.6	-0.1
CHOS	Chios island	2.07	124	*e*Pn	Pn	01 19 55.6	-0.1
DID	Didima	2.12	194	*e*PN	Pn	01 19 55.8	-0.6
DID	Didima	2.12	194	P	Pn	01 19 56.0	-0.4
DID				S	Sn	01 20 21.6	-0.7
DID	Didima	2.12	194	P	Pn	01 19 56.0	-0.4
DID				S	Sn	01 20 21.6	-0.7
ALN	Alexandroupoli	2.13	51	*e*Pb	Pb	01 19 58.2	-1.6
ALN	Alexandroupoli	2.13	51	*e*PB	Pb	01 19 58.2	-1.6
ALN	Alexandroupoli	2.13	51	P	Pn	01 19 56.3	-0.2
ALN	Alexandroupoli	2.13	51	P	Pn	01 19 56.3	-0.2
ALN	Alexandroupoli	2.13	51	*e*Pb	Pb	01 19 58.2	-1.6
JAN	Janina	2.34	273	*e*Pb	Pb	01 20 02.1	-1.3
JAN	Janina	2.34	273	*e*Pb	Pb	01 20 02.1	-1.3
RLS	Riolos of Patr	2.41	232	*e*Pn	Pn	01 20 00.0	-0.4
RLS	Riolos of Patr	2.41	232	*e*PN	Pn	01 20 00.0	-0.4
RLS	Riolos of Patr	2.41	232	*e*Pn	Pn	01 20 00.0	-0.4
VLX	Vlachokerasia	2.49	209	*e*PN	Pn	01 20 02.0	+0.5
VLX	Vlachokerasia	2.49	209	*e*Pn	Pn	01 20 02.0	+0.5
KRUS	Krusevo	2.69	313	*e*Pn	Pn	01 20 04.8	+0.5
APE	Apeiranthos	2.81	152	*e*Pn	Pn	01 20 06.4	+0.5
APE	Apeiranthos	2.81	152	*e*PN	Pn	01 20 06.4	+0.5
APE	Apeiranthos	2.81	152	*e*Pn	Pn	01 20 06.4	+0.5
ITM	Ithomi	2.83	213	*e*Pn	Pn	01 20 06.3	+0.1
ITM	Ithomi	2.83	213	*e*PN	Pn	01 20 06.3	+0.1
ITM	Ithomi	2.83	213	*e*Pn	Pn	01 20 06.3	+0.1
VLS	Valsamata	2.92	243	*e*Pn	Pn	01 20 07.0	-0.3
VLS	Valsamata	2.92	243	*e*PN	Pn	01 20 07.0	-0.3
VLS	Valsamata	2.92	243	*e*Pn	Pn	01 20 07.0	-0.3
VLI	Veliai	2.94	195	*e*Pn	Pn	01 20 06.9	-0.8
VLI	Veliai	2.94	195	*e*PN	Pn	01 20 06.9	-0.8
VLI	Veliai	2.94	195	*e*Pn	Pn	01 20 06.9	-0.8
PYL	PYLOS	3.15	213	*e*PN	Pn	01 20 11.6	+1.0
PYL	PYLOS	3.15	213	*e*Pn	Pn	01 20 11.6	+1.0
KYTH	Kithira	3.35	192	*e*Pn	Pn	01 20 13.3	0.0
KYTH	Kithira	3.35	192	*e*PN	Pn	01 20 13.3	0.0
KYTH	Kithira	3.35	192	*e*Pn	Pn	01 20 13.3	0.0
KARN	Karanos	4.16	180	*e*PN	Pn	01 20 26.0	+1.6
KARN	Karanos	4.16	180	*e*Pn	Pn	01 20 26.0	+1.6
LAST	Lasithi	4.58	163	*e*Pn	Pn	01 20 32.0	+1.8
LAST	Lasithi	4.58	163	*e*PN	Pn	01 20 32.0	+1.8
LAST	Lasithi	4.58	163	*e*Pn	Pn	01 20 32.0	+1.8

JMA 04 01:33:45.6±0.7, 44°.54N×149°.32E, h30km, M4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.84	247	P	Pn	01 34 27.6	-1.2
NEM2				*e*S	Sn	01 34 58.8	-3.1
JRA	Rausu	3.08	260	P	Pn	01 34 33.3	+1.2
JAR	Ashorobuto	4.20	255	P	Pn	01 34 48.7	+1.2
JOB	Onbets	4.30	250	P	Pn	01 34 48.7	-0.2
JOB				*e*S	Sn	01 35 36.4	-1.6
JMP	Maruseppu	4.31	265	P	Pn	01 34 51.7	+2.6
JCH	Churui	4.74	248	P	Pn	01 34 55.1	+0.2
JCH				*e*S	Sn	01 35 45.7	-3.1
JEM	Erimo	5.16	243	P	Pn	01 35 01.3	+0.6
JNBK	Urakawa-nobuka	5.29	247	P	Pn	01 35 02.6	+0.1
JBT2	Biratori 2	5.34	253	P	Pn	01 35 04.4	+1.1
JNB	Noboribetsu	6.37	254	P	Pn	01 35 18.3	+1.0
JKB	Kayabe	6.61	249	P	Pn	01 35 20.4	-0.2
JANG	Nango	7.12	237	P	Pn	01 35 25.0	-2.6
JANG				*e*S	Sn	01 36 35.6	-12
JTM	Tenmabayashi	7.14	241	P	Pn	01 35 27.7	-0.3
OFUJ	Ofunato	7.90	229	P	Pn	01 35 35.3	-3.0

*NEIC **04** 01:49:44.0±4.9, 6°.02S×106°.32E, h76km±43km, mb4.0/1, Error ellipse: s-maj=45.2km s-min=10.9km az=50.0*
NEIC Felt [III] at Pinang.
*ISCJB **04** 01:49:46.0±0.5, 6°.54S±0°.09×106°.06E±0°.08, h114km±4km, mb4.0/11, Error ellipse: s-maj=19.5km s-min=6.0km az=38.8*
*DJA **04** 01:49:49, 6°.69S×105°.95E, h41km, MLv4.2/12*
*IDC **04** 01:49:51.4±3.5, 5°.91S×106°.57E, h142km±31km, mb3.8/11, mb1 3.9/11, mb1mx3.7/22, mbtmp3.8/11, Error ellipse: s-maj=61.7km s-min=10.5km az=46.0*

ISC 04 01:49:46.9±0.5, 6°.52S±0°.10×106°.07E±0°.08, h109km±3km, n30, σ1°30/33, mb4.0/11, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	Serang	0.40	9	P	Pn	01 50 01.6	-1.5
DBJI	Dramaga	0.68	93	P	Pn	01 50 04.1	-0.8
SKJI	Sukabumi	0.69	135	P	Pn	01 50 03.7	-1.3
SKJI				S	Sn	01 50 18.0	-0.7
RBSI	Rajabasa	0.74	334	P	Pn	01 50 05.1	-0.5
RBSI				S	Sn	01 50 17.8	-1.8
CBJI	Citeko	0.78	83	P	Pn	01 50 05.7	-0.2
CBJI				S	Sn	01 50 21.1	+0.9
BLSI	Bandar Lampung	1.41	324	P	Pn	01 50 13.0	+0.5
LEM	Lembang	1.57	101	P	Pn	01 50 17.0	+2.6
KASI	Kota Agung	1.85	302	P	Pn	01 50 18.5	+0.6
CISI	Cisompet, Garu	2.02	121	P	Pn	01 50 19.6	-0.4
CISI				S	Sn	01 50 45.2	-0.2
KLI	Kotabumi	2.04	324	P	Pn	01 50 21.5	+1.2
LWLI	Liwa	2.49	307	P	Pn	01 50 27.6	+1.4
MDSI	Maura Dua	2.76	317	P	Pn	01 50 31.4	+1.7
BJII	Banjamegara	3.70	103	P	Pn	01 50 46.1	+3.9
TPI	Tanjungpandan	4.06	23	P	Pn	01 50 49.5	+2.5
FITZ	Fitzroy Crossi	22.29	123	P	P	01 54 35.7	+0.3
	5.6nm,0.9s,mb3.9,baz=273,slow=4.7,SNR=8.3						
FITZ	Fitzroy Crossi	22.29	123	*e*P	P	01 54 35.8	+0.4
	5.6nm,0.9s,mb3.9						
KAKA	Kakadu	26.70	105	*e*P	P	01 55 14.6	-1.6
WRA	Warramunga Arr	30.51	119	P	P	01 55 50.9	+0.9
	3.2nm,0.7s,mb4.1,baz=293,slow=10.0,SNR=9.8						
WRA				PcP	PcP	01 58 47.6	+1.0
	0.3nm,0.3s,baz=314,slow=2.1,SNR=7.3						
WB2	Warramunga Arr	30.52	119	*e*P	P	01 55 50.6	+0.6
ASAR	Alice Springs	31.72	125	P	P	01 56 01.7	+1.2
	0.9nm,0.4s,mb3.8,baz=297,slow=7.5,SNR=18						
ASAR				S	S	02 01 01.1	-1.3
	0.8nm,0.7s,baz=291,slow=15,SNR=6.7						
STKA	Stephens Creek	41.65	132	P	P	01 57 26.3	+1.7
	8.2nm,0.5s,mb4.7,baz=311,slow=8.4,SNR=23						
MKAR	Makanchi Array	57.12	341	P	P	01 59 20.2	-1.7
	1.4nm,0.6s,mb4.2,baz=143,slow=8.1,SNR=12						
KURK	Kurchatov	61.74	341	P	P	01 59 51.8	-1.8
	0.8nm,0.5s,mb4.0,baz=155,slow=6.0,SNR=3.3						
ZALV	Zalesovo Beam	62.84	346	P	P	01 59 58.8	-2.1
	0.3nm,0.5s,mb3.5,baz=144,slow=6.1,SNR=3.5						
BVAR	Borovoye Array	66.57	337	P	P	02 00 23.5	-1.6
	1.1nm,0.5s,mb3.9,baz=142,slow=9.0,SNR=7.5						
MMAI	Mount Meron Ar	77.57	306	P	P	02 01 33.1	+2.0
	1.0nm,0.5s,mb3.8,baz=76,slow=7.6,SNR=2.8						
BRTR	Keskin Array B	80.82	312	P	P	02 01 48.8	+0.1
	1.2nm,0.6s,mb3.9,baz=142,slow=6.5,SNR=8.6						
ARCES	ARCESS Array B	92.77	340	P	P	02 02 45.8	-0.6
	2.0nm,0.9s,mb4.4,baz=127,slow=5.9,SNR=3.3						
TXAR	Lajitas Array	143.93	47	PKP	PKPdf	02 09 10.2	+0.1
	0.2nm,0.5s,baz=318,slow=1.7,SNR=5.3						
TKL	Tuckaleechee C	149.62	16	*e*PKPbc	PKPbc	02 09 24.5	+0.4

*IDC **04** 01:55:28.8±16.0, 36°.92N×21°.88E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.7/4, Error ellipse: s-maj=316.2km s-min=47.9km az=30.0*
*ISCJB **04** 01:55:28.6±0.7, 36°.59N±0°.03×21°.16E±0°.03, h26km±6km, mb3.6/4, Error ellipse: s-maj=5.8km s-min=4.5km az=14.0*
*CSEM **04** 01:55:29.8±0.2, 36°.62N×21°.29E, h15km, MD3.7, Error ellipse: s-maj=5.0km s-min=4.1km az=31.0*
*ATH **04** 01:55:30.7, 36°.69N×21°.37E, h32km±2km, MD3.7/24*
*THE **04** 01:55:30.2, 36°.55N×21°.35E, h18km±3km, ML3.3/6, Error ellipse: s-maj=5.5km s-min=2.2km az=189.0*
*NEIC **04** 01:55:31.4, 36°.71N×21°.43E, h34km, ML3.1(ATH), After ATH.*

ISC 04 01:55:29.8±0.9, 36°.61N±0°.04×21°.24E±0°.03, h19km±7km, n174, σ1°08/198, mb3.6/4, 1C-5D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.49	54	‖*i*PB	Pg	01 55 39.5	-0.3
PYL	PYLOS	0.49	54	P	Pg	01 55 39

JAN	Janina	3.06	354	*e*PN	Pn	01 56 18.5	+1.3
JAN	Janina	3.06	354	*e*Pn	Pn	01 56 18.5	+1.3
NEO	Neokhori	3.12	30	*e*Pn	Pn	01 56 17.9	-0.1
NEO	Neokhori	3.12	30	*e*PN	Pn	01 56 17.9	-0.1
NEO	Neokhori	3.12	30	*e*Pn	Pn	01 56 17.9	-0.1
AOS	Alonnisos	3.30	38	P	Pn	01 56 19.6	-0.9
AOS	Alonnisos	3.30	38	P	Pn	01 56 19.5	-1.0
AOS	Alonnisos	3.30	38	P	Pn	01 56 19.6	-0.9
KEK	Kerkira	3.30	340	*e*Pn	Pn	01 56 21.4	+0.9
KEK	Kerkira	3.30	340	*e*PN	Pn	01 56 21.4	+0.9
KEK	Kerkira	3.30	340	P	Pn	01 56 21.1	+0.6
KEK	Kerkira	3.30	340	P	Pn	01 56 21.1	+0.6
KEK	Kerkira	3.30	340	*e*Pn	Pn	01 56 21.4	+0.9
LIT	Litokhoron	3.62	15	*e*Pn	Pn	01 56 25.1	+0.2
LIT				*e*Sn	Sn	01 57 06.3	-0.9
LIT	Litokhoron	3.62	15	*e*PN	Pn	01 56 25.1	+0.2
LIT				*e*SN	Sn	01 57 06.3	-0.9
LIT	Litokhoron	3.62	15	P	Pn	01 56 25.1	+0.2
LIT	Litokhoron	3.62	15	P	Pn	01 56 25.1	+0.2
LIT				*e*Sn	Sn	01 57 06.3	-0.9
KZN	Kozani	3.72	6	*e*Pn	Pn	01 56 27.4	+1.2
KZN	Kozani	3.72	6	*e*PN	Pn	01 56 27.4	+1.2
KZN	Kozani	3.72	6	P	Pn	01 56 27.4	+1.2
KZN	Kozani	3.72	6	P	Pn	01 56 27.4	+1.2
LAST	Lasithi	3.73	111	*e*Pn	Pn	01 56 28.0	+1.6
LAST	Lasithi	3.73	111	*e*PN	Pn	01 56 28.0	+1.6
LAST	Lasithi	3.73	111	*e*Pn	Pn	01 56 28.0	+1.6
NPS	Neapolis	3.79	109	*e*Pb	Pb	01 56 32.9	-3.2
NEST	Nestorio	3.81	358	P	Pn	01 56 29.3	+1.9
NEST	Nestorio	3.81	358	P	Pn	01 56 29.3	+1.9
PAIG	Paliouri	3.83	29	P	Pn	01 56 27.1	-0.7
PAIG	Paliouri	3.83	29	P	Pn	01 56 27.1	-0.7
PLG	Polygyros	4.14	24	*e*Pn	Pn	01 56 31.6	-0.4
PLG	Polygyros	4.14	24	*e*PN	Pn	01 56 31.6	-0.4
PLG	Polygyros	4.14	24	P	Pn	01 56 31.9	-0.1
PLG	Polygyros	4.14	24	*e*Pn	Pn	01 56 31.6	-0.4
PLG	Polygyros	4.14	24	P	Pn	01 56 31.9	-0.1
FNA	Florina	4.17	1	P	Pn	01 56 32.9	+0.4
FNA	Florina	4.17	1	P	Pn	01 56 32.9	+0.4
FNA	Florina	4.17	1	P	Pn	01 56 32.9	+0.4
THE	Thessaloniki	4.24	18	P	Pn	01 56 34.5	+1.1
THE	Thessaloniki	4.24	18	P	Pn	01 56 34.5	+1.1
HORT	Hortiatis	4.24	19	P	Pn	01 56 33.1	-0.3
HORT	Hortiatis	4.24	19	P	Pn	01 56 33.1	-0.3
OUR	Ouranopolis	4.30	29	P	Pn	01 56 33.4	-0.8
OUR	Ouranopolis	4.30	29	P	Pn	01 56 33.6	-0.6
OUR	Ouranopolis	4.30	29	P	Pn	01 56 33.6	-0.6
BIA	Bitola	4.41	1	*e*Pn	Pn	01 56 36.2	+0.5
BIA				*e*Sg	Sn	01 57 23.5	-3.0
GRG	Griva	4.44	11	P	Pn	01 56 36.1	0.0
GRG	Griva	4.44	11	P	Pn	01 56 36.3	+0.2
GRG	Griva	4.44	11	P	Pn	01 56 36.3	+0.2
SOH	Sokhos	4.52	21	*e*Pn	Pn	01 56 37.6	+0.3
SOH	Sokhos	4.52	21	*e*PN	Pn	01 56 37.6	+0.3
SOH	Sokhos	4.52	21	P	Pn	01 56 37.7	+0.4
SOH	Sokhos	4.52	21	*e*Pn	Pn	01 56 37.6	+0.3
CEL	Celeste	4.57	293	*e*Pn	Pn	01 56 39.7	+1.8
CEL				*e*S	Sn	01 57 28.1	-2.3
CEL	Celeste	4.57	293	*e*Pn	Pn	01 56 39.7	+1.8
CEL				*e*S	Sn	01 57 28.1	-2.3
KNT	Kendrikon	4.73	15	P	Pn	01 56 40.4	+0.3
KNT	Kendrikon	4.73	15	P	Pn	01 56 40.4	+0.3
KRUS	Krusevo	4.76	0	*i* Pn	Pn	01 56 40.2	-0.3
VAY	Valandovo	4.82	12	*e*Pn	Pn	01 56 40.8	-0.6
VAY				*e*Sg	Sn	01 57 30.4	-6.3
SRS	Serrai	4.86	21	P	Pn	01 56 41.6	-0.4
SRS	Serrai	4.86	21	P	Pn	01 56 41.6	-0.4
PE1	Pezze di Greco	5.15	326	*e*Pn	Pn	01 56 46.5	+0.6
NVR	Nevrokopi	5.16	23	P	Pn	01 56 46.0	0.0
NVR	Nevrokopi	5.16	23	P	Pn	01 56 46.0	0.0
MMB	Musomiste	5.34	20	P	Pn	01 56 47.8	-0.7
MMB	Musomiste	5.34	20	P	Pn	01 56 47.8	-0.7
MMB	Musomiste	5.34	20	P	Pn	01 56 47.8	-0.7
KKB	Krupnik	5.44	15	P	Pn	01 56 49.8	-0.1
KKB	Krupnik	5.44	15	P	Pn	01 56 49.8	-0.1
KKB	Krupnik	5.44	15	P	Pn	01 56 49.8	-0.1
CUC	Castrocucco 4.5nm,0.4s	5.45	310	*e*Pn	Pn	01 56 52.5	+2.5
CUC				*e*S	Sn	01 57 50.4	-1.7
CUC	Castrocucco 4.5nm,0.4s	5.45	310	*e*Pn	Pn	01 56 52.5	+2.5
SG1	Sgolgore (BA)	5.53	321	*e*Pn	Pn	01 56 51.6	+0.5
BAI	Bari	5.64	324	*e*Pn	Pn	01 56 53.1	+0.5
LJBD	Adjabya SNR=23	5.75	189	*i* P	Pn	01 56 54.0	-0.1
RZN	Rozhen	5.75	27	P	Pn	01 56 54.4	+0.3
RZN	Rozhen	5.75	27	P	Pn	01 56 54.4	+0.3
RZN	Rozhen	5.75	27	P	Pn	01 56 54.4	+0.3
CDT	Castel del Mon	5.92	321	*e*Pn	Pn	01 56 57.0	+0.6
BARS	Barje	6.22	4	⇓*i*PN	Pn	01 57 00.1	-0.5
STON	Ston	6.83	338	*e*Pn	Pn	01 57 06.1	-2.8
STON				Sn	Sn	01 58 17.1	-9.0
BBLS	Lazići	7.39	350	*e*Pn	Pn	01 57 16.2	-0.4
DIVS	Divibare	7.54	353	⇓*i*PN	Pn	01 57 17.4	-1.4
NVLJ	Novalja	9.31	331	*e*Pn	Pn	01 57 42.7	-0.2
NVLJ				Sn	Sn	01 59 20.2	-6.8
NVLJ	Novalja	9.31	331	*e*Pn	Pn	01 57 42.7	-0.2
BOJS	Bojanci	9.97	335	*i* Pn	Pn	01 57 51.6	-0.5
BOJS	Bojanci	9.97	335	*i* Pn	Pn	01 57 51.6	-0.5
BOJS	Bojanci	9.97	335	*i* Pn	Pn	01 57 51.6	-0.4
CRES	Cresnjev	10.19	337	*i* Pn	Pn	01 57 53.7	-1.3
CRES	Cresnjev	10.19	337	*i* Pn	Pn	01 57 53.7	-1.3
CRES	Cresnjev	10.19	337	*i* Pn	Pn	01 57 53.7	-1.3
FINES	FINESS Array B 3.2nm,0.9s,mb3.9,baz=167,slow=11,SNR=7.2	25.05	5	P	P	02 00 51.2	-1.4
FINES	FINESS Array B	25.05	5	P	P	02 00 51.2	-1.4
FINES	FINESS Array B	25.05	5	P	P	02 00 51.2	-1.4
NOA	NORSAR Array B 0.5nm,0.5s,mb3.3,baz=156,slow=8.9,SNR=2.7	25.27	349	P	P	02 00 54.7	+0.1
NOA	NORSAR Array B	25.27	349	P	P	02 00 54.7	+0.1
MKAR	Makanchi Array 0.2nm,0.4s,mb3.4,baz=274,slow=8.4,SNR=4.3	45.65	57	P	P	02 03 46.0	-3.0
ZALV	Zalesovo Beam 0.8nm,0.4s,mb4.0,baz=272,slow=8.8,SNR=3.5	46.33	47	P	P	02 03 51.7	-2.6
ZALV	Zalesovo Beam	46.33	47	P	P	02 03 51.7	-2.6

*IDC **04** 01:59:06.5±2.4, 36°.84N×72°.29E, h0km, mb3.9/4, mb1 3.9/10, mb1mx3.7/27, mbtmp3.8/10, ML3.6/6, Error ellipse: s-maj=48.7km s-min=20.2km az=137.0*
*ISCJB **04** 01:59:20.0±0.5, 37°.52N±0°.03×71°.98E±0°.10, h103km±10km, mb3.5/4, Error ellipse: s-maj=13.1km s-min=4.4km az=7.2*
*NNC **04** 01:59:21.4±10.0, 37°.85N×71°.93E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=78.7km s-min=56.6km az=169.0*
*NEIC **04** 01:59:25.0±3.9, 37°.76N×72°.08E, h144km±23km, mb4.0/1, Error ellipse: s-maj=47.8km s-min=18.4km az=172.0*
ISC 04 01:59:21.5±0.4, 37°.52N±0°.03×72°.0E±0°.1, h100km±9km, n37, σ1°30/50, mb3.5/4, 6C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.68	181	P	Pn	02 00 17.9	+1.5
CEP				S	Sn	02 00 57.0	-1.9
KSH	Kashi	3.73	56	Pn	Pn	02 00 11.8	-5.2
KSH				Sn	Sn	02 00 48.4	-12
KSH	comp=N,630nm,0.4s			smax			
KSH	comp=E,650nm,0.4s			smax			
CHCP	Chirah Chowk	3.99	164	⇓P	Pn	02 00 21.6	+1.0
THW	Thamme Wali	4.71	182	P	Pn	02 00 30.3	0.0
THW				S	Sn	02 01 23.0	-0.8
AML	Almayashu SNR=33	4.80	16	P	Pn	02 00 32.6	+1.1
AML	Almayashu	4.80	16	*e*Pn	Pn	02 00 32.4	+1.0
AML				*e*S	Sn	02 01 23.0	-2.8
UCH	Uchtor SNR=8.6	5.10	22	P	Sn	02 01 33.8	+0.7
UCH	Uchtor	5.10	22	*e*Pn	Pn	02 00 36.6	+1.1
UCH				*e*S	Sn	02 01 32.2	-0.9
EKS2	Erkin-Say SNR=18	5.33	15	P	Pn	02 00 39.7	+1.2
EKS2	Erkin-Say	5.33	15	*e*Pn	Pn	02 00 39.6	+1.0
EKS2				*e*S	Sn	02 01 33.0	-5.6
AAK	Ala-Archa SNR=12	5.47	20	P	Pn	02 00 41.8	+1.3
AAK	Ala-Archa comp=E,0.1nm,0.3s,baz=187,slow=6.4,SNR=20	5.47	20	Pn	Pn	02 00 42.0	+1.5
AAK				Sn	Sn	02 01 41.3	-0.8
AAK	Ala-Archa comp=E,0.0nm,0.3s,baz=322,slow=22,SNR=18	5.47	20	*e*Pg	Pn	02 00 41.4	+0.9
AAK				*e*S	Sn	02 01 41.9	-0.2
SARP	Sargodha	5.61	174	P	Pn	02 00 41.2	-1.3
KBK	Karagaybulak SNR=5.3	5.62	23	P	Pn	02 00 45.1	+2.5
KK31	Karatay Array comp=E,1.5nm,0.2s,baz=174,slow=13,SNR=110	5.69	349	⇑Pn	Pn	02 00 44.9	+1.4
KK31				⇑Sn	Sn	02 01 46.7	-0.7
KKAR	Karatay Array comp=E,8.5nm,0.4s,baz=172,slow=21,SNR=10	5.69	349	*e*Pn	Pn	02 00 45.0	+1.5
KKAR				*e*S	Sn	02 01 45.9	-1.5
ULHL	Ulahol SNR=17	5.76	34	P	Pn	02 00 44.5	+0.1
CHMS	Chumysh SNR=9.8	5.88	20	P	Pn	02 00 47.1	+1.1
USP	Ospenovka SNR=10	6.07	18	P	Pn	02 00 49.1	+0.6
TKM2	Tokmak 2 comp=E,3.1nm,0.5s	6.08	26	⇑Pn	Pn	02 00 47.9	-0.8
TKM2				⇑Sn	Sn	02 01 54.9	-1.9
TKM2	Tokmak 2 comp=E,5.7nm,0.6s	6.08	26	P	Pn	02 00 49.5	+0.8
TKM2	Tokmak 2 comp=E,4.8nm,0.5s	6.08	26	*e*Pn	Pn	02 00 44.5	-4.3
MKAR	Makanchi Array comp=E,0.1nm,0.3s,baz=222,slow=12,SNR=8.0	12.02	36	Pn	Pn	02 02 07.0	-2.3
KURK	Kurchatov comp=E,0.1nm,0.3s,baz=208,slow=9.7,SNR=4.2	14.03	18	Pn	Pn	02 02 30.9	-4.7
AB31	Akbulak array comp=E,0.1nm,0.2s,baz=170,slow=10,SNR=13	14.61	327	⇑P	Pn	02 02 41.7	-1.3
BVA0	Borovoye Array comp=E,0.2nm,0.4s,baz=164,slow=12,SNR=8.7	15.55	356	⇑P	Pn	02 02 56.8	+1.9
BVAR	Borovoye Array comp=E,0.2nm,0.3s,baz=161,slow=11,SNR=2.6	15.55	356	Pn	Pn	02 02 52.1	-2.8
BVAR	Borovoye Array	15.55	356	Pn	Pn	02 02 52.1	-2.8
AKTK	Aktyubinsk	16.32	327	Pn	Pn	02 03 03.9	-0.6
AKTK				Sn	Sn	02 05 56.0	-9.1
AKTO	Aktyubinsk comp=E,0.5nm,0.3s,baz=136,slow=7.0,SNR=6.9	16.32	327	Pn	Pn	02 03 03.9	-0.6
AKTO				Sn	Sn	02 05 56.0	-9.1
ZALV	Zalesovo Beam comp=E,0.1nm,0.3s,baz=232,slow=12,SNR=3.8	18.68	24	P	P	02 03 30.5	-1.0
BRTR	Keskin Array B comp=E,0.7nm,0.3s,baz=219,slow=11,SNR=11	29.87	286	P	P	02 05 19.1	-0.3
BRTR	Keskin Array B comp=E,0.3nm,0.3s,mb3.4,baz=96,slow=7.7,SNR=3.3	29.87	286	P	P	02 05 19.1	-0.3
FINES	FINESS Array B comp=E,1.3nm,0.6s,mb4.0,baz=122,slow=9.9,SNR=5.3	37.08	325	P	P	02 06 23.3	+1.7
FINES	FINESS Array B	37.08	325	P	P	02 06 23.3	+1.6
TORD	Torodi Ar. Bea comp=E,0.4nm,0.5s,mb3.5,baz=68,slow=5.8,SNR=10	66.50	269	P	P	02 10 00.7	-0.1
YKA	Yellowknife Ar comp=E,0.2nm,0.6s,mb3.2,baz=349,slow=5.3,SNR=3.6	80.20	3	P	P	02 11 21.2	+0.8

*IDC **04** 02:03:18.4±1.3, 2°.70S×100°.94E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.1/22, mbtmp4.2/12, Error ellipse: s-maj=69.4km s-min=14.8km az=52.0*
*DJA **04** 02:03:26, 2°.68S×100°.89E, h16km, MLv4.3/6*
*ISCJB **04** 02:03:27.2±0.9, 2°.61S±0°.09×101°.1E±0°.1, h82km±7km, mb4.1/14, Error ellipse: s-maj=21.8km s-min=7.9km az=140.9*
*NEIC **04** 02:03:29.7±2.7, 2°.63S×101°.13E, h89km±20km, mb4.3/2, Error ellipse: s-maj=42.5km s-min=7.6km az=52.0*
ISC 04 02:03:28.1±0.9, 2°.63S±0°.09×101°.0E±0°.1, h73km±7km, n25, σ0°90/26, mb4.1/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	0.68	38	P	Pn	02 03 41.3	-1.7
KRJI				S	Sn	02 03 53.6	-0.4
SDSI	Sungai Dareh	1.73	13	P	Pn	02 03 55.9	-0.3
PDSI	Padang	1.80	341	P	Pn	02 03 56.2	-1.0
PDSI				S	Sn	02 04 20.4	+1.2
PPI	Padang Panjang	2.25	343	P	Pn	02 04 03.4	+0.2
SISI	Saibi	2.34	304	P	Pn	02 04 03.4	-1.0
MNAI	Manna	2.57	132	P	Pn	02 04 09.1	+1.5
MDSI	Maura Dua	3.64	121	P	Pn	02 04 23.7	+1.6
KULM	Kulim	7.87	357	Pn	Pn	02 05 21.7	+1.7
FITZ	Fitzroy Crossi 2.4nm,0.8s,mb3.9,baz=311,slow=9.3,SNR=5.4	28.60	124	P	P	02 09 15.9	-1.9
WRA	Warramunga Arr 0.8nm,0.3s,mb4.2,baz=300,slow=8.6,SNR=6.7	36.78	120	P	P	02 10 28.3	-0.8
ASAR	Alice Springs 1.6nm,0.4s,mb4.2,baz=301,slow=8.1,SNR=28	38.05	126	P	P	02 10 39.4	-0.4
STKA	Stephens Creek 1.2nm,0.4s,mb4.0,baz=325,slow=6.6,SNR=5.7	47.96	132	P	P	02 12 00.1	+0.3
SONM	Songino Array 1.8nm,0.6s,mb4.2,baz=194,slow=10.0,SNR=7.0	50.47	5	P	P	02 12 19.2	+0.7
EKS2	Erkin-Say 1.4nm,0.4s,mb4.3	51.37	334	*e*P	P	02 12 26.3	+0.9
EKS2				*e*PcP	PcP	02 13 34.4	-4.9
MK31	Makanchi Array	51.91	344	*e*P	P	02 12 29.1	-0.2
MKAR	Makanchi Array 3.8nm,0.6s,mb4.6,baz=150,slow=8.4,SNR=34	51.91	344	P	P	02 12 29.3	0.0
KURK	Kurchatov 2.4nm,0.8s,mb4.3,baz=159,slow=7.1,SNR=6.2	56.50	343	P	P	02 13 02.4	-0.3
ZALV	Zalesovo Beam 4.7nm,0.5s,mb4.8,baz=172,slow=4.5,SNR=25	57.98	349	P	P	02 13 11.9	-1.0
BVAR	Borovoye Array 0.9nm,0.5s,mb4.1,baz=144,slow=10,SNR=4.3	61.13	339	P	P	02 13 34.9	+0.2
ABKAR	Akbulak array 2.7nm,0.8s,mb4.2	62.69	331	*e*P	P	02 13 44.8	-0.5
AKTK	Aktyubinsk	64.40	331	P	P	02 13 56.9	+0.4
BRTR	Keskin Array B 0.5nm,0.5s,mb3.5,baz=130,slow=7.6,SNR=3.7	74.51	312	P	P	02 14 59.0	0.0
FINES	FINESS Array B 1.3nm,0.8s,mb3.9,baz=108,slow=4.5,SNR=3.3	85.15	332	P	P	02 15 56.3	+0.2
ARCES	ARCESS Array B 1.3nm,0.8s,mb3.9,baz=98,slow=6.3,SNR=9.7	87.41	340	P	P	02 16 07.5	+0.5
TXAR	Lajitas Array 1.6nm,0.5s,baz=229,slow=0.9,SNR=62	144.55	39	PKP	PKPdf	02 22 56.4	-0.6

*KRSC **04** 02:04:08.9±0.5, 50°.86N×157°.91E, h49km±39km, ML4.6*
*ISCJB **04** 02:04:09.7±0.7, 50°.93N±0°.06×157°.60E±0°.09, h70km±4km, mb4.0/22, Error ellipse: s-maj=12.4km s-min=4.5km az=136.8*
*MOS **04** 02:04:09.8±0.8, 51°.03N×157°.47E, h44km, mb4.3/14, Error ellipse: s-maj=17.1km s-min=6.5km az=76.5*
MOS Felt (II) at Severo-Kuril'sk.
*IDC **04** 02:04:10.6±0.8, 51°.18N×157°.34E, h54km±6km, mb3.7/16, mb1 3.8/16, mb1mx3.7/27, mbtmp3.7/16, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=21.3km s-min=14.0km az=155.0*
*NEIC **04** 02:04:12.8±1.3, 51°.13N×157°.39E, h76km±9km, mb4.3/5, Error ellipse: s-maj=14.1km s-min=9.9km az=163.0*
ISC 04 02:04:11.1±0.7, 50°.95N±0°.06×157°.55E±0°.08, h66km±4km, h59km±2.1km: pP-P, n79, σ1°02/92, mb4.0/22, 2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.95	254	⇓*i*PN	Pn	02 04 28.3	-0.4
SKR				*i* S	Sn	02 04 40.0	-1.8
SKR	comp=N,90nm,0.2s			pmax	pmax		
SKR	comp=E,260nm,0.2s			pmax	pmax		
SKR	comp=Z,640nm,0.2s			pmax	pmax		
SKR	comp=Z,1μm,2.0s			smax			
SKR	comp=N,10μm,0.2s			smax			
SKR	comp=E,10μm,0.2s			smax			
SKR	comp=N,5μm,2.0s			smax			
SKR	comp=E,4μm,2.0s			smax			
ALID	Alaid	1.27	267	*e*P	Pn	02 04 32.4	-0.4
ALID				*i* S	Sn	02 04 49.0	-0.1
MIPR	Malaya Ipel'ka	1.42	340	*e*P	Pn	02 04 35.4	+0.6
MIPR				*i* S	Sn	02 04 54.7	+2.1
GRL	Gorelyy	1.64	11	*e*P	Pn	02 04 38.0	+0.3
GRL				*i* S	Sn	02 04 58.7	+0.9
PETK	Petropavlovsk- comp=E,12nm,0.3s,baz=158,slow=15,SNR=73	2.16	2	P	Pn	02 04 45.5	+0.6
PETK				S	Sn	02 05 15.8	+5.3
	comp=E,9.2nm,0.3s,baz=211,slow=22,SNR=5.5						
PET	Petropavlovsk	2.19	18	*e*P	Pn	02 04 45.2	+0.1
PET				*i* S	Sn	02 05 12.2	+1.1
PET	Petropavlovsk	2.19	18	⇓*i*PN	Pn	02 04 45.1	0.0
PET				*i* S	Sn	02 05 12.0	+0.9
PET	comp=Z,100nm,0.5s			pmax	pmax		
PET	comp=Z,108nm,0.5s			pmax	pmax		
PET	comp=E,969nm,0.6s			smax			
PET	comp=N,841nm,0.6s			smax			
PET	comp=Z,200nm,15.0s			MLR	MLR		
PET	Petropavlovsk	2.19	18	*e*Pn	Pn	02 04 44.4	-0.7
PET				*e*S	Sn	02 05 11.3	+0.2
AVH	Avacha	2.43	17	*e*P	Pn	02 04 49.7	+1.3
AVH				*i* S	Sn	02 05 19.9	+2.8
NLC	Nalytchevo	2.48	26	*e*P	Pn	02 04 47.6	-1.6
NLC				*i* S	Sn	02 05 16.7	-1.7
SPN	Mys Shipunski	2.64	34	*e*P	Pn	02 04 51.1	-0.2
SPN				*i* S	Sn	02 05 21.0	-1.1
GNL	Ganaly	2.76	5	*e*P	Pn	02 04 54.3	+1.4
KII	Karymskiy	3.30	20	*e*P	Pn	02 05 01.3	+1.0
MKZ	Mys Kozlova	4.41	34	*e*P	Pn	02 05 15.0	-0.5
MKZ				*i* S	Sn	02 06 03.6	-1.9
SRDR	Sredinnyy	5.53	13	*e*P	Pn	02 05 34.8	+4.1
KBTR	Krutoberegovo	6.13	29	*e*P	Pn	02 05 39.5	+0.6
KBTR				*i* S	Sn	02 06 47.0	-0.5
BKI	Bering	6.62	47	*e*P	Pn	02 05 44.9	-0.8
BKI				*i* S	Sn	02 06 52.7	-6.9
YUK	Yuzh-Kuril'sk	10.50	233	*e*PN	Pn	02 06 38.8	+0.1
ERM	Erimo	13.33	233	*e*PN	Pn	02 07 17.6	+0.4
BILL	Bilibino	17.67	11	*e*P	Pn	02 08 11.6	-0.7
BILL	comp=Z,4.0nm,1.0s			pmax	pmax		
MJAR	Matsushiro Arr comp=Z,49nm,20.4s,baz=65,slow=35	19.98	231	LR	LR	02 15 58.5	
ILAR	Eielson Array comp=Z,1.0nm,0.8s,mb3.6,baz=259,slow=7.8,SNR=14	31.45	43	P	P	02 10 26.0	+0.3
ILAR				pP	pP	02 10 39.7	-2.1
ILAR	comp=Z,0.4nm,0.7s,baz=271,slow=8.0,SNR=3.5			sP	sP	02 10 44.8	-4.8
ILAR	comp=Z,0.9nm,0.8s,baz=265,slow=7.8,SNR=6.8						
ILAR	Eielson Array	31.45	43	P	P	02 10 26.0	+0.3
ILAR				*PP	pP	02 10 39.7	-2.1
ILAR				*SP	sP	02 10 44.8	-4.8
ILAR	comp=Z,1.0nm,0.8s			pmax	pmax		
INK	Inuvik	36.53	36	P	P	02 11 10.1	+0.5
INK	comp=Z,1.2nm,0.6s,mb4.0,baz=269,slow=11,SNR=2.8						
INK	Inuvik	36.53	36	P	P	02 11 10.1	+0.5
INK	comp=Z,1.0nm,0.6s			pmax	pmax		
ZALV	Zalesovo Beam comp=Z,0.4nm,0.4s,mb3.5,baz=45,slow=7.0,SNR=3.6	42.63	304	P	P	02 11 58.4	-2.1
ZALV	Zalesovo Beam	42.63	304	*e*P	P	02 12 00.9	+0.5
YKA	Yellowknife Ar comp=Z,1.1nm,0.7s,mb3.7,baz=299,slow=7.7,SNR=8.8	45.81	40	P	P	02 12 25.6	-0.1
KURK	Kurchatov comp=Z,0.9nm,0.4s,mb3.9,baz=64,slow=7.4,SNR=7.5	47.54	302	P	P	02 12 38.7	-0.7
KURK	Kurchatov	47.54	302	P	P	02 12 38.7	-0.7
KURK	comp=Z,1.0nm,0.4s,mb4.0			pmax	pmax		
KURK	Kurchatov	47.54	302	P	P	02 12 38.7	-0.7
MKAR	Makanchi Array comp=Z,0.5nm,0.4s,mb3.7,baz=63,slow=6.9,SNR=8.9	47.67	296	P	P	02 12 39.3	-1.2
MKAR	Makanchi Array	47.67	296	*e*P	P	02 12 39.0	-1.5
MKAR	comp=Z,1.0nm,0.4s			pmax	pmax		
SPITS	Spitsbergen Ar comp=Z,1.3nm,0.4s,mb4.2,baz=18,slow=6.8,SNR=6.7	48.98	350	P	P	02 12 49.3	-0.9
SPITS	Spitsbergen Ar	48.98	350	P	P	02 12 49.3	-0.9
SPITS	comp=Z,1.0nm,0.4s			pmax	pmax		
BVAR	Borovoye Array comp=Z,0.8nm,0.4s,mb4.0,baz=45,slow=5.4,SNR=4.9	50.49	309	P	P	02 12 59.9	-2.0
BVAR	Borovoye Array	50.49	309	P	P	02 12 59.9	-2.0
BVAR	comp=Z,1.0nm,0.4s			pmax	pmax		
CMAR	Chiang Mai Arr comp=Z,3.0nm,0.7s,mb4.4,baz=25,slow=7.0,SNR=22	56.19	257	P	P	02 13 45.4	+1.3
CMAR	Chiang Mai Arr	56.19	257	P	P	02 13 45.4	+1.3
CMAR	comp=Z,3.0nm,0.7s			pmax	pmax		
NVAR	Mina Array Bea comp=Z,0.3nm,0.6s,mb3.5,baz=302,slow=10,SNR=2.7	57.99	67	P	P	02 13 58.3	+1.7
AKTO	Aktyubinsk comp=Z,0.6nm,0.4s,mb4.0,baz=78,slow=6.6,SNR=3.7	58.10	312	P	P	02 13 56.9	-0.3
AKTO	Aktyubinsk	58.10	312	P	P	02 13 56.9	-0.3
AKTO	comp=Z,1.0nm,0.4s,mb4.2			pmax	pmax		
FINES	FINESS Array B	61.45	336	P	P	02 14 19.1	-0.8
FINES	comp=Z,6.3nm,1.0s,mb4.6,baz=35,slow=7.0,SNR=7.5 FINESS Array B	61.45	336	P	P	02 14 19.2	-0.8
FINES	comp=Z,6.0nm,1.0s			pmax	pmax		
NOA	NORSAR Array B comp=Z,0.5nm,0.5s,mb3.6,baz=15,slow=5.5,SNR=3.5	65.14	343	P	P	02 14 43.7	-0.7
NOA	NORSAR Array B	65.14	343	P	P	02 14 43.7	-0.7
NOA	comp=Z,1.0nm,0.5s			pmax	pmax		
TXAR	Lajitas Array

NWAO Narrogin (SRO) 90.77 213 P P 02 17 07.8 +1.4
comp=Z,12nm,1.0s,mb5.0,baz=19,slow=18,SNR=3.4

IDC 04 03:01:11.7±2.4, 7°.92S×118°.40E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, ML3.5/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/24, Error ellipse: s-maj=211.5km s-min=22.5km az=54.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.33**	**146**	Pn	Pn	03 04 08.5	-0.1
	0.1nm,0.3s,baz=330,slow=16,SNR=3.5						
FITZ				Sn	Sn	03 06 21.1	-5.7
	0.1nm,0.3s,baz=253,slow=14,SNR=3.5						
FITZ				LR	LR	03 09 31.0	
	comp=Z,65nm,21.9s,baz=59,slow=40						
WRA	**Warramunga Arr**	**19.52**	**129**	P	Pn	03 05 40.4	-1.6
	0.2nm,0.3s,baz=306,slow=12,SNR=5.7						
ASAR	**Alice Springs**	**21.59**	**138**	P	P	03 06 03.8	+0.6
	0.8nm,0.6s,baz=309,slow=9.6,SNR=7.5						
MKAR	**Makanchi Array**	**63.23**	**333**	P	P	03 11 42.2	+0.3
	0.6nm,0.5s,baz=138,slow=7.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**67.83**	**339**	P	P	03 12 11.2	-0.3
	0.4nm,0.3s,baz=152,slow=6.5,SNR=2.9						

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*ISCJB **04** 03:03:14.6±0.5, 38°.81N±0°.03×39°.02E±0°.04, h4km±7km, Error ellipse: s-maj=5.9km s-min=4.2km az=25.0*
*CSEM **04** 03:03:14.2±0.2, 38°.81N×39°.04E, h15km, MD2.6, Error ellipse: s-maj=3.9km s-min=3.2km az=106.0*
*DDA **04** 03:03:14.3, 38°.81N×39°.01E, h7km±3km, Md2.9*
*ISK **04** 03:03:14.0, 38°.81N×39°.02E, h5km, MD2.6*
ISC 04 03:03:14.9±0.5, 38°.81N±0°.03×39°.03E±0°.04, h9km±7km, n21, σ0°.83/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.29**	**74**	*e*PG	**Pg**	**03 03 20.2**	**-0.5**
PTK				*e*SG	**Sg**	**03 03 25.0**	**+0.3**
PTK	**Pertek**	**0.29**	**74**	*e*Pg	**Pg**	**03 03 20.2**	**-0.5**
PTK				*e*Sg	**Sg**	**03 03 25.0**	**+0.3**
ELZG	**Elazig**	**0.31**	**187**	*i* P	**Pg**	**03 03 21.3**	**+0.2**
ELZG				*i* S	**Sg**	**03 03 26.3**	**+1.0**
ELZG	**Elazig**	**0.31**	**187**	*i* P	**Pg**	**03 03 21.3**	**+0.2**
ELZG				*i* S	**Sg**	**03 03 26.3**	**+1.0**
SVRC	**Sivrice-ELAZID**	**0.48**	**153**	*e*PG	**Pg**	**03 03 24.2**	**0.0**
SVRC				*e*SG	**Sg**	**03 03 31.1**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.48**	**153**	*e*Pg	**Pg**	**03 03 24.2**	**-0.1**
SVRC				*e*Sg	**Sg**	**03 03 31.2**	**+0.6**
KEMA	**Kemaliye**	**0.62**	**318**	*i* P	**Pg**	**03 03 26.4**	**-0.6**
KEMA				*i* S	**Sg**	**03 03 36.2**	**+1.2**
KEMA	**Kemaliye**	**0.62**	**318**	*i* P	**Pg**	**03 03 26.4**	**-0.5**
KEMA				*i* S	**Sg**	**03 03 36.2**	**+1.1**
MYA	**Malataya**	**0.68**	**225**	*e*PG	**Pg**	**03 03 27.3**	**-0.7**
MYA	**Malataya**	**0.68**	**225**	*e*Pg	**Pg**	**03 03 27.3**	**-0.7**
MALT	**Malatya**	**0.69**	**224**	*e*PG	**Pg**	**03 03 27.5**	**-0.6**
MALT				*e*SG	**Sg**	**03 03 37.3**	**+0.3**
MALT	**Malatya**	**0.69**	**224**	*e*Pg	**Pg**	**03 03 27.5**	**-0.6**
MALT				*e*Sg	**Sg**	**03 03 37.3**	**+0.2**
EZC	**Erzincan**	**0.97**	**15**	*e*PG	**Pg**	**03 03 33.2**	**-0.5**
AKCD	**Akcadag**	**1.01**	**240**	*i* P	**Pg**	**03 03 33.8**	**-0.5**
AKCD				*i* S	**Sg**	**03 03 47.4**	**0.0**
AKCD	**Akcadag**	**1.01**	**240**	*i* P	**Pg**	**03 03 33.8**	**-0.5**
AKCD				*i* S	**Sg**	**03 03 47.4**	**0.0**
KELT	**Kelkit**	**1.35**	**7**	*i* P	**Pn**	**03 03 38.9**	**-1.0**
KELT				*i* S	**Sb**	**03 03 58.4**	**+0.7**
KELT	**Kelkit**	**1.35**	**7**	*i* P	**Pn**	**03 03 38.9**	**-1.1**
KELT				*i* S	**Sb**	**03 03 58.4**	**+0.6**
SUSE	**Susehri**	**1.54**	**336**	*i* P	**Pn**	**03 03 40.5**	**-2.1**
SUSE				*i* S	**Sn**	**03 04 04.3**	**+1.7**
SUSE	**Susehri**	**1.54**	**336**	*i* P	**Pn**	**03 03 40.5**	**-2.0**
SUSE				*i* S	**Sn**	**03 04 04.3**	**+1.6**
GUMT	**Gumushane**	**1.69**	**12**	*e*PN	**Pn**	**03 03 45.0**	**+0.5**
TOKA	**Tokat**	**2.49**	**308**	*i* P	**Pn**	**03 04 00.1**	**+4.5**

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*ISCJB **04** 03:19:23.0±0.6, 15°.86S±0°.08×69°.49W±0°.08, h253km±6km, mb3.2/5, Error ellipse: s-maj=15.3km s-min=9.2km az=135.3*
*IDC **04** 03:19:23.8±1.0, 15°.71S×69°.38W, h242km±7km, mb3.2/5, mb1 3.3/8, mb1mx3.2/20, mbtmp3.1/8, Error ellipse: s-maj=35.4km s-min=18.1km az=38.0*
*NEIC **04** 03:19:24.5±0.7, 15°.76S×69°.35W, h248km±7km, mb4.2/1, Error ellipse: s-maj=17.7km s-min=9.6km az=215.0*
ISC 04 03:19:24.5±0.7, 15°.95S±0°.1×69°.4W±0°.1, h253km±7km, n16, σ0°.81/19, mb3.2/5, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.27**	**108**	P	**Pn**	**03 20 01.8**	**+0.2**
	64nm,0.3s,baz=284,slow=4.9,SNR=1422						
LPAZ				S	**S**	**03 20 29.9**	**-0.7**
	14nm,0.3s,baz=27,slow=24,SNR=16						
LPAZ	**La Paz**	**1.27**	**108**	*e*Pn	**Pn**	**03 20 01.6**	**+0.1**
LPAZ				*e*S	**S**	**03 20 30.7**	**+0.1**
SIV	**San Ignacio**	**8.01**	**92**	P	**Pn**	**03 21 17.7**	**-0.3**
	1.0nm,0.3s,baz=285,slow=10,SNR=15						
NNA	**Nana**	**8.21**	**297**	S	**S**	**03 22 47.1**	**-7.0**
	2.2nm,0.3s,baz=196,slow=7.4,SNR=3.8						
NNA	**Nana**	**8.21**	**297**	Pn	**Pn**	**03 21 21.0**	**+0.4**
NNA				*e*S	**S**	**03 22 47.4**	**-6.8**
CPUP	**Villa Florida**	**15.30**	**135**	P	**Pn**	**03 22 48.6**	**+0.4**
	0.6nm,0.3s,baz=310,slow=10,SNR=9.0						
CPUP	**Villa Florida**	**15.30**	**135**	*e*P	**Pn**	**03 22 48.5**	**+0.3**
	7.1nm,0.6s						
CFAA	**Coronel Fontan**	**15.67**	**176**	P	**Pn**	**03 22 52.9**	**+0.4**
	0.1nm,0.3s,baz=345,slow=12,SNR=10						
CFAA				S	**S**	**03 25 39.8**	**-3.5**
	0.0nm,0.3s,baz=7.0,slow=2.4,SNR=3.6						
TXAR	**Lajitas Array**	**55.83**	**324**	P	**P**	**03 28 35.1**	**-0.9**
	0.1nm,0.6s,mb2.5,baz=150,slow=11,SNR=3.1						
DBIC	**Dimbokro**	**67.70**	**76**	P	**P**	**03 29 54.7**	**-0.6**
	1.0nm,0.3s,mb3.9,baz=218,slow=15,SNR=4.7						
DBIC	**Dimbokro**	**67.70**	**76**	P	**P**	**03 29 54.7**	**-0.6**
PDAR	**Pinedale Array**	**69.07**	**329**	P	**P**	**03 30 03.3**	**+0.2**
	0.2nm,0.3s,mb3.2,baz=138,slow=4.2,SNR=1.8						
TSUM	**Tsumeb**	**82.13**	**108**	P	**P**	**03 31 19.5**	**+1.9**
	0.8nm,0.7s,mb3.5,baz=296,slow=15,SNR=5.5						
YKA	**Yellowknife Ar**	**85.78**	**341**	P	**P**	**03 31 34.5**	**-0.5**
	0.3nm,0.7s,mb3.1,baz=130,slow=4.6,SNR=4.7						
YKA	**Yellowknife Ar**	**85.78**	**341**	P	**P**	**03 31 34.5**	**-0.5**
ZALV	**Zalesovo Beam**	**137.04**	**22**	PKP	PKPdf	03 38 17.9	+0.8
	0.9nm,0.6s,baz=306,slow=3.3,SNR=3.5						

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*CSEM **04** 03:34:24.2±1.2, 49°.89N×18°.59E, h1km, Error ellipse: s-maj=20.2km s-min=15.2km az=125.0*
PRU 04 03:34:24.8, 49°.85N×18°.59E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.29**	**268**	*e*PG	Pg	03 34 30.4	+0.1
OKC				*e*SG	Sg	03 34 34.1	+0.1
	comp=Z,9.8nm,0.5s						
OKC	**Ostrava-Krasne**	**0.29**	**268**	Pg	Pg	03 34 30.4	+0.1
OKC				Sg	Sg	03 34 34.1	+0.1
	comp=Z,9.8nm,0.5s						
MORC	**Moravsky Berou**	**0.68**	**264**	*e*Pg	Pg	03 34 37.5	-0.4
MORC				*e*Sg	Sg	03 34 46.1	-0.6
VRAC	**Vranov**	**1.41**	**248**	*e*Sg	Sg	03 35 08.7	-1.3
DPC	**Dobruska-Polom**	**1.54**	**290**	*e*PG	Pg	03 34 53.1	-1.3
DPC				*e*SG	Sg	03 35 14.1	-0.3
DPC	**Dobruska-Polom**	**1.54**	**290**	Pg	Pg	03 34 53.1	-1.3
DPC				Sg	Sg	03 35 14.1	-0.3

IDC 04 03:47:40.6±1.1, 21°.16N×45°.80W, h0km, mb3.9/6, mb1 4.2/6, mb1mx3.8/22, mbtmp3.9/6, MS3.4/1, Ms1 3.4/1, ms1mx2.7/27, Error ellipse: s-maj=39.9km s-min=25.2km az=54.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**42.12**	**104**	P	P	03 55 34.8	-0.1
	3.8nm,0.8s,baz=306,slow=5.2,SNR=3.8						
BORG	**Borgarnes**	**46.48**	**14**	LR	LR	04 10 46.8	
	comp=Z,41nm,21.6s,baz=128,slow=30						
CPUP	**Villa Florida**	**48.51**	**194**	P	P	03 56 25.3	-0.1
	2.1nm,1.0s,baz=32,slow=9.2,SNR=2.0						
TXAR	**Lajitas Array**	**52.52**	**291**	P	P	03 56 55.6	-0.3
	0.3nm,0.9s,baz=77,slow=9.7,SNR=2.8						
PDAR	**Pinedale Array**	**56.86**	**308**	P	P	03 57 27.9	+0.8
	0.9nm,1.0s,baz=96,slow=8.3,SNR=4.6						
YKA	**Yellowknife Ar**	**61.67**	**331**	P	P	03 57 59.4	-0.7
	0.9nm,0.8s,baz=96,slow=7.4,SNR=7.7						
ILAR	**Eielson Array**	**75.68**	**334**	P	P	03 59 28.0	+0.5
	2.0nm,0.9s,baz=73,slow=4.4,SNR=16						

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*ISCJB **04** 03:51:11.5±1.1, 37°.51S±0°.07×177°.87E±0°.08, h90km±8km, Error ellipse: s-maj=11.8km s-min=9.8km az=30.4*
*WEL **04** 03:51:13.7±0.3, 37°.44S×177°.77E, h65km±3km, ML3.5/3, Error ellipse: s-maj=2.2km s-min=2.1km az=0.0*
ISC 04 03:51:12.3±1.1, 37°.51S±0°.07×177°.86E±0°.08, h85km±8km, n43, σ1°.23/48, 2D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.36**	**99**	P*	**Pn**	**03 51 25.1**	**-0.3**
MXZ				S*	**Sn**	**03 51 34.8**	**-0.4**
WIZ	**White Island**	**0.54**	**268**	P*	**Pn**	**03 51 25.5**	**-1.2**
MWZ	**Matawai**	**0.87**	**198**	⇓P*	**Pn**	**03 51 30.7**	**+0.6**
MWZ				S*	**Sn**	**03 51 43.6**	**+0.2**
URZ	**Urewera**	**0.96**	**218**	⇓P*	**Pn**	**03 51 31.2**	**+0.1**
URZ				S*	**Sn**	**03 51 44.6**	**-0.6**
MARZ	**Manawahe**	**1.06**	**243**	P*	**Pn**	**03 51 31.9**	**-0.3**
EDRZ	**Edgecumbe**	**1.07**	**236**	P*	**Pn**	**03 51 32.9**	**+0.5**
OPRZ	**Ohinepanea**	**1.09**	**252**	P*	**Pn**	**03 51 32.0**	**-0.7**
OPRZ				S*	**Sn**	**03 51 46.0**	**-2.0**
MKRZ	**Makatiti**	**1.27**	**240**	P*	**Pn**	**03 51 35.7**	**+0.8**
TARZ	**Mount Tarawera**	**1.30**	**235**	P*	**Pn**	**03 51 36.2**	**+1.0**
RRRZ	**Republican Roa**	**1.35**	**232**	P*	**Pn**	**03 51 36.4**	**+0.5**
KARZ	**Kaharoa**	**1.38**	**248**	P*	**Pn**	**03 51 36.3**	**+0.1**
PRGZ	**Paritu Road**	**1.42**	**179**	PN	**Pn**	**03 51 37.8**	**+1.1**
KNZ	**Kokohu**	**1.52**	**186**	PN	**Pn**	**03 51 38.7**	**+0.7**
PRRZ	**Plateau Road**	**1.52**	**229**	P*	**Pn**	**03 51 38.4**	**+0.3**
MHGZ	**Mahia Peninsul**	**1.65**	**179**	PN	**Pn**	**03 51 40.8**	**+1.1**
NMHZ	**Naumai**	**1.79**	**207**	PN	**Pn**	**03 51 43.4**	**+1.8**
BKZ	**Black Stump Fm**	**1.98**	**213**	P*	**Pn**	**03 51 45.1**	**+1.1**
MCHZ	**McNeill Hill**	**2.14**	**205**	PN	**Pn**	**03 51 47.1**	**+1.0**
MKAZ	**Moumakai**	**2.18**	**280**	PN	**Pn**	**03 51 46.5**	**-0.2**
CKHZ	**Cape Kidnapper**	**2.24**	**196**	PN	**Pn**	**03 51 47.8**	**+0.4**
KRVZ	**Karewarewa**	**2.36**	**227**	P*	**Pn**	**03 51 50.9**	**+1.9**
OTVZ	**Oturere**	**2.39**	**226**	P*	**Pn**	**03 51 51.1**	**+1.6**
WTVZ	**West Tongariro**	**2.40**	**227**	P*	**Pn**	**03 51 51.5**	**+1.8**
KAHZ	**Kahuranaki**	**2.41**	**198**	PN	**Pn**	**03 51 50.2**	**+0.4**
BHHZ	**Black Hill Sta**	**2.43**	**215**	P*	**Pn**	**03 51 51.3**	**+1.3**
NGZ	**Ngauruhoe**	**2.44**	**226**	P*	**Pn**	**03 51 51.8**	**+1.7**
TUVZ	**Tukino**	**2.47**	**224**	P*	**Pn**	**03 51 51.9**	**+1.3**
MOVZ	**Moawhango**	**2.52**	**220**	P*	**Pn**	**03 51 52.0**	**+0.8**
WNVZ	**Wahianoa**	**2.54**	**224**	P*	**Pn**	**03 51 52.8**	**+1.2**
PXZ	**Pawanui**	**2.64**	**197**	PN	**Pn**	**03 51 52.2**	**-0.6**
PXZ				SN	**Sn**	**03 52 24.2**	**+0.2**
TSZ	**Takapari Road**	**2.95**	**210**	PN	**Pn**	**03 51 56.4**	**-0.6**
DVHZ	**Dannevirke**	**3.09**	**205**	PN	**Pn**	**03 51 57.5**	**-1.4**
WAZ	**Wanganui**	**3.18**	**224**	PN	**Pn**	**03 52 01.5**	**+1.3**
BFZ	**Birch Farm**	**3.41**	**201**	PN	**Pn**	**03 52 02.1**	**-1.1**
TIWZ	**Tintock**	**3.61**	**205**	PN	**Pn**	**03 52 04.4**	**-1.5**
MRZ	**Mangatainoka R**	**3.62**	**209**	PN	**Pn**	**03 52 03.5**	**-2.6**
HOWZ	**Holdsworth Sta**	**3.85**	**208**	PN	**Pn**	**03 52 06.8**	**-2.3**
TMWZ	**Te Maipa**	**3.91**	**202**	PN	**Pn**	**03 52 07.8**	**-2.2**
OGWZ	**Otaki Gorge**	**3.91**	**211**	PN	**Pn**	**03 52 08.4**	**-1.6**
KIW	**Kapiti Island**	**4.06**	**213**	PN	**Pn**	**03 52 10.3**	**-1.7**
MTW	**Mount Morrison**	**4.08**	**206**	PN	**Pn**	**03 52 09.9**	**-2.4**
TCW	**Tory Channel**	**4.63**	**216**	PN	**Pn**	**03 52 17.3**	**-2.4**
TUWZ	**Tuamarina**	**4.95**	**217**	PN	**Pn**	**03 52 22.7**	**-1.5**

IDC 04 03:51:14.1±4.5, 21°.37N×45°.61W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/22, mbtmp3.8/4, Error ellipse: s-maj=156.9km s-min=35.3km az=95.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**43.46**	**212**	P	P	03 59 19.7	+0.6
	2.3nm,1.2s,baz=32,slow=9.3,SNR=4.0						
PDAR	**Pinedale Array**	**56.87**	**308**	P	P	04 01 01.0	+0.3
	0.2nm,0.3s,baz=96,slow=5.6,SNR=2.5						
YKA	**Yellowknife Ar**	**61.57**	**330**	P	P	04 01 33.1	+0.2
	0.4nm,0.8s,baz=97,slow=8.2,SNR=3.6						
ILAR	**Eielson Array**	**75.57**	**334**	P	P	04 03 00.2	0.0
	1.5nm,1.0s,baz=72,slow=5.2,SNR=7.4						

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*ISCJB **04** 04:04:22.1±1.5, 15°.5S±0°.1×174°.6W±0°.2, h162km±14km, mb3.8/14, Error ellipse: s-maj=29.1km s-min=13.8km az=39.6*
*IDC **04** 04:04:23.2±1.5, 15°.47S×174°.58W, h159km±15km, mb3.7/12, mb1 3.9/13, mb1mx3.8/19, mbtmp3.7/13, MS3.5/2, Ms1 3.5/2, ms1mx3.0/20, Error ellipse: s-maj=30.0km s-min=12.6km az=137.0*
*NEIC **04** 04:04:23.9±1.3, 15°.45S×174°.64W, h166km±12km, mb4.1/3, Error ellipse: s-maj=21.3km s-min=10.0km az=128.0*
ISC 04 04:04:23.4±1.4, 15°.5S±0°.1×174°.6W±0°.2, h160km±14km, n27, σ0°.90/22, mb3.8/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.15**	**60**	P	**Pn**	**04 05 14.4**	**+1.4**
	36nm,0.3s,baz=238,slow=0.5,SNR=21						
AFI				S	**Sn**	**04 05 50.9**	**-0.6**
	45nm,0.3s,baz=237,slow=23,SNR=10						
AFI				LR	LR	04 06 02.0	
	comp=Z,247nm,18.5s,baz=107,slow=32						
AFI	**Afiamalu**	**3.15**	**60**	*e*Pn	**Pn**	**04 05 14.2**	**+1.1**
AFI				*e*S	**Sn**	**04 05 50.3**	**-1.1**
AFI				LR	LR	04 06 02.0	
URZ	**Urewera**	**23.83**	**196**	P	**P**	**04 09 21.0**	**-0.8**
	5.3nm,0.5s,mb4.4,baz=0.5,slow=9.9,SNR=6.0						
RPZ	**Rata Peaks**	**30.68**	**201**	P	**P**	**04 10 22.4**	**-0.4**
	6.1nm,0.5s,mb4.6,baz=350,slow=17,SNR=2.7						
STKA	**Stephens Creek**	**43.00**	**240**	P	**P**	**04 12 07.1**	**+0.1**
	0.5nm,0.3s,mb3.6,baz=36,slow=8.7,SNR=4.4						
STKA				PcP	PcP	04 13 55.7	+1.2
	1.6nm,0.7s,baz=90,slow=3.0,SNR=3.9						
STKA	**Stephens Creek**	**43.00**	**240**	P	**P**	**04 12 07.1**	**+0.1**
STKA				PcP	PcP	04 13 55.7	+1.1
WRA	**Warramunga Arr**	**48.70**	**257**	P	**P**	**04 12 51.9**	**-0.1**
	1.0nm,0.6s,mb3.6,baz=90,slow=7.0,SNR=13						
WRA				PcP	PcP	04 14 14.5	-0.2
	0.9nm,1.0s,baz=91,slow=3.8,SNR=5.2						
WRA	**Warramunga Arr**	**48.70**	**257**	P	**P**	**04 12 51.9**	**-0.1**
WRA				PcP	PcP	04 14 14.5	-0.2
ASAR	**Alice Springs**	**48.99**	**252**	P	**P**	**04 12 53.6**	**-0.4**
	4.9nm,0.7s,mb4.2,baz=87,slow=8.2,SNR=51						
ASAR				PcP	PcP	04 14 15.7	-0.1
	1.3nm,0.8s,baz=87,slow=5.5,SNR=5.1						
CASY	**Casey**	**69.85**	**205**	*e*P	**P**	**04 15 16.7**	**+0.3**
	1.6nm,0.5s,mb4.0						
QSPA	**South Pole Qui**	**74.55**	**180**	*e*P	**P**	**04 15 45.8**	**+1.7**
	4.5nm,0.7s,mb4.2						
NVAR	**Mina Array Bea**	**75.17**	**43**	P	**P**	**04 15 48.0**	**-0.2**
	0.3nm,0.6s,mb3.1,baz=229,slow=8.2,SNR=3.0						
TXAR	**Lajitas Array**	**81.62**	**57**	P	**P**	**04 16 23.8**	**0.0**
	0.3nm,0.8s,mb3.0,baz=245,slow=3.9,SNR=3.8						
ILAR	**Eielson Array**	**82.76**	**12**	P	**P**	**04 16 27.6**	**-1.4**
	0.3nm,0.6s,mb3.2,baz=227,slow=6.0,SNR=4.6						
PDAR	**Pinedale Array**	**83.10**	**42**	P	**P**	**04 16 30.9**	**-0.3**
	0.8nm,0.7s,mb3.6,baz=236,slow=2.9,SNR=7.1						
MAW	**Mawson**	**87.34**	**199**	P	**P**	**04 16 52.9**	**+1.0**
	5.5nm,0.7s,mb4.5,baz=132,slow=8.9,SNR=14						
MAW	**Mawson**	**87.34**	**199**	*e*P	**P**	**04 16 52.5**	**+0.6**
	2.3nm,1.1s,mb3.9						
YKA	**Yellowknife Ar**	**90.64**	**24**	P	**P**	**04 17 08.9**	**+1.6**
	0.6nm,0.9s,mb3.6,baz=251,slow=4.2,SNR=3.5						
CMAR	**Chiang Mai Arr**	**91.56**	**289**	P	**P**	**04 17 12.8**	**+0.3**
	0.5nm,0.3s,mb4.0,baz=108,slow=2.9,SNR=5.7						
VNA2	**Neumayer--Watz**	**93.35**	**176**	*e*	**P**	**04 17 18.3**	**-1.5**
	baz=210,slow=3.8						
NNA	**Nana**	**94.15**	**104**	LR	LR	04 50 33.0	
	comp=Z,80nm,21.4s,baz=220,slow=29						
MKAR	**Makanchi Array**	**110.07**	**315**	PKiKP	PKiKP	04 22 34.5	-1.4
	0.2nm,0.4s,baz=59,slow=0.4,SNR=4.6						
ARCES	**ARCESS Array B**	**124.54**	**352**	PKP	PKPdf	04 23 02.2	-0.8
	0.6nm,0.5s,baz=129,slow=1.7,SNR=5.4						
ARCES	**ARCESS Array B**	**124.54**	**352**	PKP	PKPdf	04 23 02.2	-0.8
KMBO	**Kilima Mbogo**	**144.46**	**245**	PKP	PKPdf	04 23 41.2	-0.5
	0.7nm,0.4s,baz=360,slow=24,SNR=7.2						
KMBO	**Kilima Mbogo**	**144.46**	**245**	PKP	PKPdf	04 23 41.2	-0.5
BRTR	**Keskin Array B**	**145.50**	**320**	PKPbc	PKPbc	04 23 42.9	-0.2
	1.6nm,0.7s,baz=101,slow=2.3,SNR=7.9						

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*DDA **04** 04:20:33.0, 36°.98N×29°.15E, h7km±5km, Md3.4*
*ISK **04** 04:20:33.8, 37°.05N×29°.10E, h7km, MD3.3*
*ATH **04** 04:20:33.5, 36°.98N×29°.09E, h19km, MD3.4/4*
*CSEM **04** 04:20:33.7±0.1, 37°.00N×29°.08E, h2km, MD3.3, Error ellipse: s-maj=3.9km s-min=2.8km az=10.0*
*ISCJB **04** 04:20:34.3±0.3, 37°.00N±0°.02×29°.10E±0°.02, h10km, Error ellipse: s-maj=3.5km s-min=2.6km az=13.3*
ISC 04 04:20:34.3±0.4, 37°.00N±0°.02×29°.08E±0°.02, h5km±3km, n79, σ1°.09/109, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.37**	**65**	*e*PG	**Pg**	**04 20 40.2**	**-1.2**
GLHS				*e*SG	**Sg**	**04 20 46.6**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.37**	**65**	*e*Pg	**Pg**	**04 20 40.2**	**-1.2**
GLHS				*e*Sg	**Sg**	**04 20 46.6**	**+0.4**
GOLH	**Golhisar**	**0.45**	**59**	*i* P	**Pg**	**04 20 40.9**	**-2.1**
GOLH				*i* S	**Sg**	**04 20 48.2**	**-0.7**
GOLH	**Golhisar**	**0.45**	**59**	*i* P	**Pg**	**04 20 40.9**	**-2.1**
GOLH				*i* S	**Sg**	**04 20 48.2**	**-0.7**
YER	**Yerkesik**	**0.65**	**282**	*e*PG	**Pg**	**04 20 47.1**	**+0.2**
YER				*e*SG	**Sg**	**04 20 56.9**	**+1.6**
YER	**Yerkesik**	**0.65**	**282**	*e*Pg	**Pg**	**04 20 47.1**	**+0.3**
YER				*e*Sg	**Sg**	**04 20 56.9**	**+1.6**
DNZL	**Cakiroluk**	**0.69**	**358**	*i* P	**Pg**	**04 20 46.9**	**-0.6**
DNZL				*i* S	**Sg**	**04 20 57.7**	**+1.3**
DNZL	**Cakiroluk**	**0.69**	**358**	*i* P	**Pg**	**04 20 46.9**	**-0.6**
DNZL				*i* S	**Sg**	**04 20 57.7**	**+1.3**
ELL	**Elmali**	**0.71**	**111**	*e*PG	**Pg**	**04 20 47.9**	**-0.1**
ELL				*e*SG	**Sg**	**04 20 58.2**	**+1.0**
ELL	**Elmali**	**0.71**	**111**	*e*Pg	**Pg**	**04 20 47.9**	**-0.1**
ELL				*e*Sg	**Sg**	**04 20 58.2**	**+1.0**
DENT	**Denizli**	**0.75**	**357**	*e*PG	**Pg**	**04 20 47.6**	**-1.1**
DENT	**Denizli**	**0.75**	**357**	*e*Pg	**Pg**	**04 20 47.6**	**-1.2**
AKAS	**Kas**	**0.88**	**151**	*i* P	**Pg**	**04 20 49.0**	**-2.2**
AKAS				*i* S	**Sg**	**04 21 03.3**	**+0.8**
AKAS	**Kas**	**0.88**	**151**	*i* P	**Pg**	**04 20 49.0**	**-2.1**
AKAS				*i* S	**Sg**	**04 21 03.3**	**+0.8**
KSL	**Kastellorizon**	**0.94**	**154**	*e*PN	**Pn**	**04 20 51.1**	**-3.1**
KORT	**Korkueli**	**1.02**	**90**	*i* P	**Pg**	**04 20 53.0**	**-0.9**
KORT				*i* S	**Sg**	**04 21 09.7**	**+2.7**
KORT	**Korkueli**	**1.02**	**90**	*i* P	**Pg**	**04 20 53.0**	**-0.8**
KORT				*i* S	**Sg**	**04 21 09.7**	**+2.7**
MLSB	**Milas**	**1.08**	**286**	*e*PN	**Pn**	**04 20 55.2**	**-0.9**
MLSB	**Milas**	**1.08**	**286**	*e*Pn	**Pn**	**04 20 55.2**	**-0.9**
ARG	**Arkhangelos**	**1.10**	**225**	*e*PN	**Pn**	**04 20 54.3**	**-2.0**
ARG	**Arkhangelos**	**1.10**	**225**	*e*Pn	**Pn**	**04 20 54.3**	**-2.0**
AYDN	**Tasoluk**	**1.16**	**305**	*i* P	**Pg**	**04 20 56.0**	**-0.5**
AYDN				*i* S	**Sg**	**04 21 13.7**	**+2.0**
AYDN	**Tasoluk**	**1.16**	**305**	*i* P	**Pg**	**04 20 56.0**	**-0.6**
AYDN				*i* S	**Sg**	**04 21 13.7**	**+2.0**
DAT	**Datca**	**1.23**	**258**	*e*PN	**Pn**	**04 20 58.1**	**-0.2**
DAT	**Datca**	**1.23**	**258**	*e*Pn	**Pn**	**04 20 58.1**	**-0.1**
ANTB	**Antalya**	**1.27**	**94**	*e*PN	**Pn**	**04 20 58.0**	**-0.6**
ANTB	**Antalya**	**1.27**	**94**	*e*Pn	**Pn**	**04 20 58.0**	**-0.6**
BCK	**Bucak**	**1.29**	**69**	*e*PN	**Pn**	**04 20 58.0**	**-1.0**
BCK	**Bucak**	**1.29**	**69**	*e*Pn	**Pn**	**04 20 58.0**	**-1.0**
BDRM	**Kayabasi**	**1.31**	**273**	*i* P	**Pn**	**04 20 59.1**	**-0.2**
BDRM	

ELL				*e*SG		**Sg**	**04 54 46.1 +0.8**
ELL	**Elmali**	**0.68**	**107**	*e*Pg		**Pg**	**04 54 35.8 -0.7**
ELL				*e*Sg		**Sg**	**04 54 46.1 +0.9**
YER	**Yerkesik**	**0.68**	**286**	*e*PG		**Pg**	**04 54 35.8 -0.8**
YER				*e*SG		**Sg**	**04 54 46.5 +1.0**
YER	**Yerkesik**	**0.68**	**286**	*e*Pg		**Pg**	**04 54 35.8 -0.8**
YER				*e*Sg		**Sg**	**04 54 46.5 +1.0**
DNZL	**Cakiroluk**	**0.74**	**356**	*i* P		**Pg**	**04 54 36.9 -0.7**
DNZL				*i* S		**Sg**	**04 54 48.0 +0.7**
DNZL	**Cakiroluk**	**0.74**	**356**	*i* P		**Pg**	**04 54 36.9 -0.8**
DNZL				*i* S		**Sg**	**04 54 48.0 +0.7**
DENT	**Denizli**	**0.80**	**356**	*e*PG		**Pg**	**04 54 37.8 -1.1**
DENT	**Denizli**	**0.80**	**356**	*e*Pg		**Pg**	**04 54 37.8 -1.1**
AKAS	**Kas**	**0.82**	**151**	*i* P		**Pg**	**04 54 39.6 +0.3**
AKAS				*i* S		**Sg**	**04 54 55.8 +5.9**
AKAS	**Kas**	**0.82**	**151**	*i* P		**Pg**	**04 54 39.6 +0.4**
KORT	**Korkueli**	**1.00**	**87**	*i* P		**Pg**	**04 54 43.5 +0.8**
KORT				*i* S		**Sg**	**04 54 59.0 +3.4**
KORT	**Korkueli**	**1.00**	**87**	*i* P		**Pg**	**04 54 43.5 +0.9**
KORT				*i* S		**Sg**	**04 54 59.0 +3.4**
MLSB	**Milas**	**1.12**	**288**	*e*PN		**Pn**	**04 54 44.1 -1.6**
MLSB	**Milas**	**1.12**	**288**	*e*Pn		**Pn**	**04 54 44.1 -1.6**
AYDN	**Tasoluk**	**1.21**	**306**	*i* P		**Pg**	**04 54 46.4 -0.2**
AYDN				*i* S		**Sg**	**04 55 03.9 +1.6**
AYDN	**Tasoluk**	**1.21**	**306**	*i* P		**Pg**	**04 54 46.4 -0.2**
AYDN				*i* S		**Sg**	**04 55 03.9 +1.6**
DAT	**Datca**	**1.25**	**260**	*e*PN		**Pn**	**04 54 46.6 -0.9**
DAT	**Datca**	**1.25**	**260**	*e*Pn		**Pn**	**04 54 46.6 -0.9**
BDRM	**Kayabasi**	**1.33**	**275**	*i* P		**Pn**	**04 54 49.2 +0.6**
BDRM				*i* S		**Sb**	**04 55 07.2 +0.9**
BDRM	**Kayabasi**	**1.33**	**275**	*i* P		**Pn**	**04 54 49.2 +0.5**
BDRM				*i* S		**Sb**	**04 55 07.2 +0.9**
KHL	**Karahalli**	**1.41**	**13**	*e*PN		**Pn**	**04 54 49.1 -0.6**
KHL	**Karahalli**	**1.41**	**13**	*e*Pn		**Pn**	**04 54 49.1 -0.6**
BODT	**Bodrum**	**1.44**	**275**	*e*PN		**Pn**	**04 54 49.7 -0.4**
BODT	**Bodrum**	**1.44**	**275**	*e*Pn		**Pn**	**04 54 49.7 -0.4**
KHAL	**Karahalli**	**1.45**	**12**	*i* P		**Pn**	**04 54 50.1 -0.1**
KHAL				*i* S		**Sb**	**04 55 10.8 +1.2**
KHAL	**Karahalli**	**1.45**	**12**	*i* P		**Pn**	**04 54 50.2 -0.1**
KHAL				*i* S		**Sb**	**04 55 10.8 +1.2**
KULA	**Kula-Manisa**	**1.60**	**347**	*e*PN		**Pn**	**04 54 51.9 -0.5**
KULA	**Kula-Manisa**	**1.60**	**347**	*e*Pn		**Pn**	**04 54 51.9 -0.4**
SUTC	**Sutluce-Ispart**	**1.60**	**70**	*e*PN		**Pn**	**04 54 52.6 +0.3**
SUTC	**Sutluce-Ispart**	**1.60**	**70**	*e*Pn		**Pn**	**04 54 52.6 +0.3**
HDMB	**Hadim**	**2.71**	**89**	*e*PN		**Pn**	**04 55 08.5 +0.9**
HDMB	**Hadim**	**2.71**	**89**	*e*Pn		**Pn**	**04 55 08.5 +0.9**

*IDC **04** 05:13:17.2±0.7, 38°.46N×30°.34W, h0km, mb3.8/15, mb1 4.0/15, mb1mx3.9/25, mbtmp3.8/15, MS4.0/27, Ms1 4.0/27, ms1mx3.9/35, Error ellipse: s-maj=18.4km s-min=14.8km az=5.0*
*ISCJB **04** 05:13:18.5±1.2, 38°.25N±0°.06×30°.07W±0°.04, h23km±7km, mb3.9/19, MS4.0/27, Error ellipse: s-maj=10.5km s-min=5.3km az=7.3*
*PDA **04** 05:13:18.7±1.1, 38°.43N×30°.39W, h10km, MD4.2, ML4.1, Error ellipse: s-maj=7.6km s-min=5.7km az=4.0*
*CSEM **04** 05:13:18.6±0.2, 38°.32N×30°.01W, h10km, ML4.1, Error ellipse: s-maj=10.2km s-min=4.6km az=5.0*
*NEIC **04** 05:13:18.8±0.6, 38°.42N×30°.30W, h10km, mb4.6/3, Error ellipse: s-maj=13.9km s-min=10.0km az=194.0*
ISC 04 05:13:19.3±1.2, 38°.37N±0°.06×30°.00W±0°.04, h13km±7km, n81, σ1°07/98, mb3.9/19, MS4.0/27, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.04**	**78**	*e*P	**Pb**	**05 13 39.0**	**-0.2**
CALA				*e*S	**Sg**	**05 13 53.4**	**+0.4**
CALA				*e*T		05 14 56.9	
CALA	**Caldeira**	**1.04**	**78**	*e*P	**Pb**	**05 13 39.0**	**-0.2**
CALA				*e*S	**Sg**	**05 13 53.4**	**+0.4**
PCED	**Cedros**	**1.05**	**75**	*e*P	**Pb**	**05 13 38.4**	**-1.0**
PCED				*e*S	**Sb**	**05 13 53.3**	**+0.2**
PCED				A		05 13 56.0	
	2μm,0.3s						
PCED				*e*T		05 14 57.0	
PCED	**Cedros**	**1.05**	**75**	*e*P	**Pb**	**05 13 38.4**	**-1.0**
PCED				*e*S	**Sb**	**05 13 53.3**	**+0.2**
HOR	**Horta**	**1.09**	**81**	*e*P	**Pb**	**05 13 39.5**	**-0.5**
HOR				*e*S	**Sb**	**05 13 55.3**	**+1.2**
HOR				*e*T		05 15 06.0	
HOR	**Horta**	**1.09**	**81**	*e*P	**Pb**	**05 13 39.5**	**-0.5**
HOR				*e*S	**Sb**	**05 13 55.3**	**+1.2**
PCAN	**Candelaria**	**1.19**	**85**	*e*P	**Pn**	**05 13 40.9**	**-0.8**
PCAN				*e*S	**Sb**	**05 13 57.6**	**+0.4**
PCAN				A		05 13 58.7	
	796nm,0.3s						
PCAN				*e*T		05 15 08.0	
PCAN	**Candelaria**	**1.19**	**85**	*e*P	**Pn**	**05 13 40.9**	**-0.8**
PCAN				*e*S	**Sb**	**05 13 57.6**	**+0.4**
PICO	**Pico**	**1.24**	**84**	*e*P	**Pn**	**05 13 42.2**	**-0.2**
PICO				*e*S	**Sb**	**05 13 59.0**	**+0.4**
PICO				*e*T		05 15 14.1	
PICO	**Pico**	**1.24**	**84**	*e*P	**Pn**	**05 13 42.2**	**-0.2**
PICO				*e*S	**Sb**	**05 13 59.0**	**+0.4**
ROSA	**Rosais**	**1.42**	**75**	*e*P	**Pn**	**05 13 44.0**	**-0.9**
ROSA				*e*S	**Sn**	**05 14 02.8**	**-0.7**
ROSA				*e*T		05 15 18.4	
ROSA	**Rosais**	**1.42**	**75**	*e*P	**Pn**	**05 13 44.0**	**-0.9**
ROSA				*e*S	**Sn**	**05 14 02.8**	**-0.7**
PID	**Ribeirinha**	**1.48**	**87**	*e*P	**Pn**	**05 13 45.0**	**-0.7**
PID				*e*S	**Sn**	**05 14 04.7**	**-0.2**
PID				*e*T		05 15 19.8	
PID	**Ribeirinha**	**1.48**	**87**	*e*P	**Pn**	**05 13 45.0**	**-0.7**
PID				*e*S	**Sn**	**05 14 04.7**	**-0.2**
PMAN	**Manadas**	**1.52**	**80**	*e*P	**Pn**	**05 13 45.0**	**-1.3**
PMAN				*e*S	**Sn**	**05 14 05.8**	**-0.1**
PMAN				A		05 14 08.5	
	701nm,0.3s						
PMAN				*e*T		05 15 20.3	
PMAN	**Manadas**	**1.52**	**80**	*e*P	**Pn**	**05 13 45.0**	**-1.3**
PMAN				*e*S	**Sn**	**05 14 05.8**	**-0.1**
ADH	**Angra Heroismo**	**2.19**	**82**	*e*P	**Pn**	**05 13 54.9**	**-0.5**
ADH				*e*S	**Sn**	**05 14 22.1**	**-0.3**
ADH				A		05 14 24.7	
	534nm,0.3s						
ADH				*e*T		05 15 15.9	
ADH	**Angra Heroismo**	**2.19**	**82**	*e*P	**Pn**	**05 13 54.9**	**-0.5**
ADH				*e*S	**Sn**	**05 14 22.1**	**-0.3**
PSET	**Sete Cidades**	**3.42**	**98**	*e*P	**Pn**	**05 14 12.2**	**-0.2**
PSET				*e*S	**Sn**	**05 14 51.8**	**-1.0**
PSET				A		05 14 55.1	
	27nm,0.4s						
PSET	**Sete Cidades**	**3.42**	**98**	*e*P	**Pn**	**05 14 12.2**	**-0.2**
PSET				*e*S	**Sn**	**05 14 51.8**	**-1.0**
PDA	**Ponta Delgada**	**3.48**	**99**	*e*P	**Pn**	**05 14 12.8**	**-0.4**
PDA				*e*S	**Sn**	**05 14 53.6**	**-0.6**
PDA	**Ponta Delgada**	**3.48**	**99**	*e*P	**Pn**	**05 14 12.8**	**-0.4**
PDA				*e*S	**Sn**	**05 14 53.6**	**-0.6**
GRON	**Grota Negra**	**3.58**	**98**	*e*P	**Pn**	**05 14 16.4**	**+1.9**
GRON				*e*S	**Sn**	**05 14 59.1**	**+2.5**
GRON				A		05 15 00.1	
	11nm,0.3s						
CMLA	**Cha da Macela**	**3.58**	**98**	*e*Pn	**Pn**	**05 14 14.4**	**-0.2**
CMLA				*e*Sn	**Sn**	**05 15 00.8**	**+4.0**
CMLA	**Cha da Macela**	**3.58**	**98**	*e*Pn	**Pn**	**05 14 14.4**	**-0.2**
CMLA				*e*Sn	**Sn**	**05 15 00.8**	**+4.0**
BART	**Pico Bartolome**	**3.86**	**97**	*e*P	**Pn**	**05 14 18.0**	**-0.4**
BART				*e*S	**Sn**	**05 15 02.9**	**-0.7**
BART				A		05 15 06.9	
	44nm,0.3s						
BART	**Pico Bartolome**	**3.86**	**97**	*e*P	**Pn**	**05 14 18.0**	**-0.4**
BART				*e*S	**Sn**	**05 15 02.9**	**-0.7**
PSMA	**Santa Maria**	**4.10**	**108**	*e*P	**Pn**	**05 14 20.9**	**-0.8**
PSMA				*e*S	**Sn**	**05 15 08.6**	**-1.0**
PSMA				A		05 15 10.9	
	47nm,0.2s						
PSMN	**Pico do Norte,**	**4.15**	**108**	*e*P	**Pn**	**05 14 21.2**	**-1.1**
PSMN				*e*S	**Sn**	**05 15 09.4**	**-1.3**
PSMN	**Pico do Norte,**	**4.15**	**108**	*e*P	**Pn**	**05 14 21.2**	**-1.1**
PSMN				*e*S	**Sn**	**05 15 09.4**	**-1.3**
PMAR	**Madeira**	**12.05**	**114**	*e*P	**Pn**	**05 16 11.4**	**+0.6**
PMAR				*e*S	x	05 16 14.1	
PMAR				A		05 16 15.6	
	25nm,0.4s						
FUL	**Funchal**	**12.11**	**114**	*e*P	**Pn**	**05 16 12.1**	**+0.5**
FUL				*e*S	x	05 16 15.2	
ESDC	**Sonseca Array**	**20.25**	**78**	P	**P**	**05 17 57.5**	**+3.1**
	0.9nm,0.7s,baz=284,slow=9.6,SNR=2.8						
ESDC				LR	LR	05 24 28.2	
	comp=Z,233nm,18.6s,MS3.6,baz=265,slow=33						
MDT	**Midelt**	**21.34**	**97**	P	**P**	**05 18 10.1**	**+3.9**
	1.3nm,0.8s,mb3.3,baz=266,slow=8.3,SNR=4.1						
MDT				LR	LR	05 24 57.4	
	comp=Z,485nm,18.6s,MS3.9,baz=301,slow=32						
MDT	**Midelt**	**21.34**	**97**	P	**P**	**05 18 10.1**	**+3.9**
MDT				LR	LR	05 24 57.4	
EKA	**Eskdalemuir Ar**	**24.76**	**38**	P	**P**	**05 18 40.9**	**+0.5**
	2.2nm,1.0s,mb3.6,baz=238,slow=8.2,SNR=4.0						
EKA	**Eskdalemuir Ar**	**24.76**	**38**	P	**P**	**05 18 40.9**	**+0.5**
BBTS	**Babate**	**26.45**	**150**	P	**P**	**05 18 58.2**	**+2.1**
	42nm,1.2s,mb4.9,baz=347,slow=0.5,SNR=2.7						
BBTS				LR	LR	05 26 53.6	
	comp=Z,282nm,21.6s,MS3.8,baz=130,slow=31						
BBTS	**Babate**	**26.45**	**150**	P	**P**	**05 18 58.2**	**+2.1**
BBTS				LR	LR	05 26 53.6	
BORG	**Borgarnes**	**26.91**	**8**	LR	LR	05 26 36.5	
	comp=Z,262nm,20.1s,MS3.8,baz=287,slow=30						
SCHQ	**Schefferville**	**29.75**	**316**	LR	LR	05 30 22.0	
	comp=Z,313nm,18.2s,MS4.0,baz=343,slow=35						
GRA1	**Grafenberg Arr**	**31.35**	**55**	*e*P	**P**	**05 19 41.7**	**+2.3**
	8.0nm,0.9s,mb4.5						
GRA1	**Grafenberg Arr**	**31.35**	**55**	*e*P	**P**	**05 19 41.7**	**+2.3**
	8.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**31.35**	**55**	*e*P	**P**	**05 19 41.7**	**+2.3**
	comp=Z,8.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**31.35**	**55**	*e*P	**P**	**05 19 41.7**	**+2.3**
	comp=Z,8.0nm,0.9s,mb4.5						
KEST	**Kesra**	**31.35**	**82**	LR	LR	05 30 27.3	
	comp=Z,71nm,19.8s,MS3.3,baz=273,slow=33						
TAM	**Tamanrasset**	**34.06**	**107**	*e*P	**P**	**05 20 06.6**	**+3.2**
	comp=Z,6.4nm,1.3s,mb4.4						
NOA	**NORSAR Array B**	**34.13**	**35**	P	**P**	**05 20 04.8**	**+1.2**
	comp=Z,1.3nm,0.7s,mb3.9,baz=246,slow=8.8,SNR=3.5						
NOA				LR	LR	05 32 15.4	
	comp=Z,85nm,19.2s,MS3.5,baz=265,slow=33						
NOA	**NORSAR Array B**	**34.13**	**35**	P	**P**	**05 20 04.8**	**+1.2**
SADO	**Sadowa**	**36.85**	**296**	LR	LR	05 33 16.6	
	comp=Z,250nm,21.8s,MS4.0,baz=98,slow=33						
TORD	**Torodi Ar. Bea**	**37.70**	**123**	P	**P**	**05 20 36.0**	**+1.4**
	comp=Z,6.4nm,1.1s,mb4.3,baz=315,slow=7.4,SNR=22						
TORD				LR	LR	05 35 26.7	
	comp=Z,244nm,18.1s,MS4.0,baz=160,slow=35						
DBIC	**Dimbokro**	**38.91**	**138**	LR	LR	05 35 02.4	
	comp=Z,373nm,18.6s,MS4.2,baz=276,slow=33						
FINES	**FINESS Array B**	**41.16**	**37**	P	**P**	**05 21 03.5**	**+0.6**
	comp=Z,1.7nm,0.6s,mb3.9,baz=253,slow=7.1,SNR=3.4						
FINES				LR	LR	05 37 31.1	
	comp=Z,84nm,21.0s,MS3.6,baz=282,slow=35						
FINES	**FINESS Array B**	**41.16**	**37**	P	**P**	**05 21 03.5**	**+0.5**
ARCES	**ARCESS Array B**	**42.67**	**25**	P	**P**	**05 21 15.1**	**-0.2**
	comp=Z,4.3nm,1.0s,mb4.1,baz=258,slow=5.7,SNR=4.6						
ARCES				LR	LR	05 35 48.0	
	comp=Z,133nm,19.2s,MS3.9,baz=273,slow=32						
ARCES	**ARCESS Array B**	**42.67**	**25**	P	**P**	**05 21 15.1**	**-0.2**
AKASG	**Malin Array Be**	**42.88**	**53**	P	**P**	**05 21 17.6**	**+0.4**
	comp=Z,1.4nm,0.6s,mb3.8,baz=269,slow=8.7,SNR=11						
AKASG	**Malin Array Be**	**42.88**	**53**	P	**P**	**05 21 17.5**	**+0.3**
BRTR	**Keskin Array B**	**48.50**	**67**	P	**P**	**05 22 03.9**	**+2.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=278,slow=5.1,SNR=3.8						
BRTR	**Keskin Array B**	**48.50**	**67**	P	**P**	**05 22 03.8**	**+2.0**
ROSC	**El Rosal**	**52.25**	**242**	LR	LR	05 42 22.3	
	comp=Z,104nm,18.1s,MS3.9,baz=185,slow=34						
YKA	**Yellowknife Ar**	**54.42**	**325**	P	**P**	**05 22 45.1**	**-0.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=74,slow=7.3,SNR=4.3						
YKA				LR	LR	05 43 21.8	
	comp=Z,16nm,19.1s,MS3.1,baz=190,slow=33						
YKA	**Yellowknife Ar**	**54.42**	**325**	P	**P**	**05 22 45.1**	**-0.7**
PDAR	**Pinedale Array**	**58.46**	**302**	P	**P**	**05 23 13.0**	**-1.9**
	comp=Z,0.8nm,0.9s,mb3.8,baz=70,slow=8.9,SNR=5.5						
PDAR				LR	LR	05 46 48.4	
	comp=Z,335nm,21.4s,MS4.4,baz=80,slow=35						
PDAR	**Pinedale Array**	**58.46**	**302**	P	**P**	**05 23 13.0**	**-1.8**
INK	**Inuvik**	**59.63**	**335**	LR	LR	05 45 52.4	
	comp=Z,170nm,20.4s,MS4.2,baz=308,slow=33						
TXAR	**Lajitas Array**	**60.38**	**285**	P	**P**	**05 23 25.2**	**-3.1**
	comp=Z,0.4nm,0.7s,mb3.6,baz=95,slow=5.0,SNR=5.2						
TXAR				LR	LR	05 50 06.8	
	comp=Z,126nm,18.6s,MS4.1,baz=5.0,slow=37						
DLBC	**Dease Lake**	**63.01**	**324**	LR	LR	05 49 24.0	
	comp=Z,209nm,19.7s,MS4.3,baz=70,slow=34						
LPAZ	**La Paz**	**65.07**	**221**	P	**P**	**05 23 59.7**	**+0.1**
	comp=Z,1.5nm,1.0s,mb4.0,baz=40,slow=8.9,SNR=3.1						
LPAZ				LR	LR	05 48 45.5	
	comp=Z,109nm,19.8s,MS4.0,baz=264,slow=33						
LPAZ	**La Paz**	**65.07**	**221**	P	**P**	**05 23 59.7**	**+0.1**
LPAZ				LR	LR	05 48 45.5	
LPAZ	**La Paz**	**65.07**	**221**	P	**P**	**05 23 59.7**	**+0.1**
BBB	**Bella Bella**	**65.24**	**318**	LR	LR	05 51 49.3	
	comp=Z,197nm,19.0s,MS4.3,baz=267,slow=36						
ILAR	**Eielson Array**	**66.03**	**335**	P	**P**	**05 24 03.4**	**-1.9**
	comp=Z,0.7nm,0.8s,mb3.7,baz=41,slow=5.2,SNR=7.9						
ILAR				LR	LR	05 49 48.3	
	comp=Z,136nm,18.2s,MS4.2,baz=72,slow=33						
NVAR	**Mina Array Bea**	**66.36**	**301**	P	**P**	**05 24 08.0**	**+0.1**
	comp=Z,0.2nm,0.5s,mb3.4,baz=74,slow=6.8,SNR=2.5						
NVAR	**Mina Array Bea**	**66.36**	**301**	P	**P**	**05 24 07.9**	**+0.1**
YBH	**Yreka Blue Hor**	**67.53**	**306**	LR	LR	05 52 56.8	
	comp=Z,185nm,20.8s,MS4.3,baz=52,slow=35						
ZALV	**Zalesovo Beam**	**72.33**	**34**	P	**P**	**05 24 44.7**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=289,slow=4.4,SNR=3.2						
ZALV				LR	LR	05 57 41.3	
	comp=Z,26nm,18.3s,MS3.5,baz=251,slow=37						
KMBO	**Kilima Mbogo**	**73.03**	**105**	LR	LR	05 56 31.2	
	comp=Z,148nm,20.1s,MS4.3,baz=268,slow=35						
MKAR	**Makanchi Array**	**75.86**	**41**	P	**P**	**05 25 05.8**	**+0.6**
	comp=Z,0.9nm,0.6s,mb3.9,baz=337,slow=5.0,SNR=5.1						
MKAR				LR	LR	05 59 06.0	
	comp=Z,116nm,18.4s,MS4.2,baz=342,slow=36						
BOSA	**Boshof**	**84.30**	**133**	LR	LR	06 03 26.2	
	comp=Z,163nm,18.3s,MS4.5,baz=340,slow=36						
PETK	**Petropavlovsk-**	**88.65**	**355**	LR	LR	06 06 08.1	
	comp=Z,61nm,18.1s,MS4.1,baz=140,slow=36						

*NEIC **04** 05:17:37.8, 38°.92N×25°.90E, h21km, MD3.4(ISK), MD3.1(ATH), After ATH.*
*ISK **04** 05:17:37.7, 38°.91N×26°.01E, h13km, MD3.5*
*ATH **04** 05:17:37.5, 38°.94N×25°.82E, h15km±8km, MD3.1/4*
*DDA **04** 05:17:37.1, 38°.86N×25°.95E, h6km±7km, Md3.3*
*ISCJB **04** 05:17:38.3±0.5, 38°.89N±0°.02×25°.99E±0°.03, h11km±3km, Error ellipse: s-maj=4.7km s-min=2.9km az=160.6*
*CSEM **04** 05:17:38.4±0.1, 38°.88N×25°.99E, h12km, ML2.7/6, Error ellipse: s-maj=3.3km s-min=2.0km az=71.0*
*THE **04** 05:17:38.8, 38°.88N×25°.99E, h9km±2km, ML2.7/6, Error ellipse: s-maj=2.4km s-min=0.9km az=88.0*
ISC 04 05:17:38.7±0.5, 38°.89N±0°.02×25°.99E±0°.04, h13km±3km, n77, σ0°73/113, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.34**	**343**	P	**Pg**	**05 17 45.8**	**+0.2**
SIGR				S	**Sg**	**05 17 50.5**	**+0.3**
SIGR	**SIGRI**	**0.34**	**343**	P	**Pg**	**05 17 45.8**	**+0.2**
SIGR				S	**Sg**	**05 17 50.5**	**+0.3**
PRK	**Paraskevi**	**0.42**	**32**	*e*Pb	**Pg**	**05 17 46.8**	**-0.3**
PRK				*e*Sb	**Sg**	**05 17 53.5**	**+0.8**
PRK	**Paraskevi**	**0.42**	**32**	*e*PB	**Pg**	**05 17 46.8**	**-0.3**
PRK				*e*SB	**Sg**	**05 17 53.5**	**+0.8**
PRK	**Paraskevi**	**0.42**	**32**	P	**Pg**	**05 17 46.8**	**-0.3**
PRK				S	**Sg**	**05 17 53.3**	**+0.6**
PRK	**Paraskevi**	**0.42**	**32**	P	**Pg**	**05 17 46.8**	**-0.3**
PRK				S	**Sg**	**05 17 53.3**	**+0.6**
CHOS	**Chios island**	**0.50**	**174**	*e*PN	**Pg**	**05 17 48.8**	**+0.2**
CHOS	**Chios island**	**0.50**	**174**	P	**Pg**	**05 17 48.8**	**+0.2**
CHOS				S	**Sg**	**05 17 56.3**	**+1.0**
CHOS	**Chios island**	**0.50**	**174**	P	**Pg**	**05 17 48.8**	**+0.2**
CHOS				S	**Sg**	**05 17 56.3**	**+1.0**
AYVA	**Ayvalik**	**0.69**	**52**	*i* P	**Pg**	**05 17 51.7**	**-0.4**
AYVA				*i* S	**Sg**	**05 18 01.1**	**-0.1**
AYVA	**Ayvalik**	**0.69**	**52**	*i* P	**Pg**	**05 17 51.7**	**-0.4**
AYVA				*i* S	**Sg**	**05 18 01.1**	**-0.1**
URLA	**Izmir**	**0.71**	**138**	*i* P	**Pg**	**05 17 50.4**	**-2.1**
URLA				*i* S	**Sg**	**05 18 02.5**	**+0.7**
URLA	**Izmir**	**0.71**	**138**	*i* P	**Pg**	**05 17 50.4**	**-2.1**
URLA				*i* S	**Sg**	**05 18 02.5**	**+0.7**
BOZC	**Bozcaada**	**0.95**	**3**	*i* P	**Pg**	**05 17 57.4**	**+0.3**
BOZC				*i* P		05 17 57.4	
BOZC				*i* S	**Sg**	**05 18 10.6**	**+1.0**
BOZC				*i* S	**Sg**	**05 18 10.6**	**+1.0**
BLCB	**Balcova**	**0.97**	**121**	*e*PG	**Pg**	**05 17 57.0**	**-0.4**
BLCB				*e*SG	**Sg**	**05 18 10.3**	**+0.4**
BLCB	**Balcova**	**0.97**	**121**	P	**Pb**	**05 17 56.7**	**-0.6**
BLCB				S	**Sg**	**05 18 09.8**	**-0.2**
BLCB	**Balcova**	**0.97**	**121**	P	**Pb**	**05 17 56.7**	**-0.6**
BLCB	**Balcova**	**0.97**	**121**	*e*Pg	**Pg**	**05 17 57.0**	**-0.4**
BLCB				S	**Sg**	**05 18 09.8**	**-0.2**
BLCB				*e*Sg	**Sg**	**05 18 10.4**	**+0.4**
EZN	**Ezine**	**0.97**	**16**	*e*PG	**Pg**	**05 17 56.9**	**-0.6**
EZN				*e*SG	**Sg**	**05 18 10.0**	**-0.2**
EZN	**Ezine**	**0.97**	**16**	*e*Pg	**Pg**	**05 17 56.9**	**-0.6**
EZN				*e*Sg	**Sg**	**05 18 10.0**	**-0.2**
IZM	**Izmir**	**1.11**	**116**	*e*PN	**Pn**	**05 17 59.1**	**-0.9**
LIA	**Limnos Island**	**1.19**	**329**	P	**Pn**	**05 18 01.5**	**+0.5**
LIA				S	**Sb**	**05 18 16.9**	**+0.6**
LIA	**Limnos Island**	**1.19**	**329**	P	**Pn**	**05 18 01.5**	**+0.5**
LIA				S	**Sb**	**05 18 16.9**	**+0.6**
GADA	**Gvkgeada**	**1.30**	**357**	*e*PN	**Pn**	**05 18 02.4**	**-0.3**
GADA				*e*SN	**Sn**	**05 18 19.2**	**-0.7**
GADA	**Gvkgeada**	**1.30**	**357**	*e*Pn	**Pn**	**05 18 02.4**	**-0.2**
GADA				*e*Sn	**Sn**	**05 18 19.2**	**-0.7**
SMG	**Samos**	**1.35**	**150**	*e*Pb	**Pb**	**05 18 02.8**	**-1.1**
SMG	**Samos**	**1.35**	**150**	*e*Pb	**Pb**	**05 18 02.8**	**-1.1**
SMG				*e*Sn	**Sn**	**05 18 24.4**	**+3.3**
AKHS	**Akhisar**	**1.43**	**90**	*i* P	**Pn**	**05 18 05.0**	**+0.6**
AKHS				*i* S	**Sn**	**05 18 25.6**	**+2.7**
AKHS	**Akhisar**	**1.43**	**90**	*i* P	**Pn**	**05 18 04.9**	**+0.6**
AKHS				*i* S	**Sn**	**05 18 25.6**	**+2.7**
AKS	**Akhisar**	**1.43**	**90**	*e*PN	**Pn**	**05 18 04.0**	**-0.3**
AKS	**Akhisar**	**1.43**	**90**	*e*Pn	**Pn**	**05 18 04.0**	**-0.3**
BALY	**Balya**	**1.53**	**56**	*i* P	**Pn**	**05 18 05.7**	**0.0**
BALY				*i* S	**Sn**	**05 18 24.6**	**-0.8**
BALY	**Balya**	**1.53**	**56**	*i* P	**Pn**	**05 18 05.7**	**0.0**
BALY				*i* S	**Sn**	**05 18 24.6**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.56**	**14**	*e*PN	**Pn**	**05 18 05.7**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.56**	**14**	*e*Pn	**Pn**	**05 18 05.7**	**-0.4**
LPK	**Lapseki**	**1.60**	**22**	*e*PN	**Pn**	**05 18 05.8**	**-0.9**
LPK	**Lapseki**	**1.60**	**22**	*e*Pn	**Pn**	**05 18 05.8**	**-0.9**
BALB	**Balikesir**	**1.65**	**62**	*e*PN	**Pn**	**05 18 06.9**	**-0.5**
BALB	**Balikesir**	**1.65**	**62**	*e*Pn	**Pn**	**05 18 06.9**	**-0.5**
AOS	**Alonnisos**	**1.67**	**280**	P	**Pn**	**05 18 07.8**	**+0.2**
AOS				S	**Sn**	**05 18 28.5**	**-0.3**
AOS	**Alonnisos**	**1.67**	**280**	P	**Pn**	**05 18 07.8**	**+0.2**
AOS				S	**Sn**	**05 18 28.5**	**-0.3**
GONE	**Gonen-Balikesi**	**1.75**	**48**	*e*PN	**Pn**	**05 18 08.4**	**-0.4**
GONE	**Gonen-Balikesi**	**1.75**	**48**	*e*Pn	**Pn**	**05 18 08.4**	**-0.4**
ERIK	**Erikli-Kesan**	**1.83**	**13**	*e*PN	**Pn**	**05 18 09.2**	**-0.6**
ERIK	**Erikli-Kesan**	**1.83**	**13**	*e*Pn	**Pn**	**05 18 09.2**	**-0.6**
APE	**Apeiranthos**	**1.85**	**191**	*e*PN	**Pn**	**05 18 09.9**	**-0.2**
APE	**Apeiranthos**	**1.85**	**191**	*e*Pn	**Pn**	**05 18 09.9**	**-0.2**
ENEZ	**Enez**	**1.85**	**4**	*e*PN	**Pn**	**05 18 09.8**	**-0.3**
ENEZ	**Enez**	**1.85**	**4**	*e*Pn	**Pn**	**05 18

WNVZ	Wahianoa	7.68	206	PN	Pn	05 40 26.7	+3.9
MOVZ	Moawhango	7.70	205	PN	Pn	05 40 25.3	+2.3
KAHZ	Kahuranaki	7.71	198	PN	Pn	05 40 24.5	+1.4
PNHZ	Pukenui	8.01	201	PN	Pn	05 40 27.8	+0.6
TSZ	Takapari Road	8.21	202	ePN	Pn	05 40 29.9	-0.1
BFZ	Birch Farm	8.70	199	PN	Pn	05 40 35.9	-0.8
BFZ				SN	Sx	05 42 10.3	
TIWZ	Tintock	8.89	200	PN	Pn	05 40 39.8	+0.5
HOWZ	Holdsworth Sta	9.12	202	PN	Pn	05 40 40.8	-1.5
HOWZ				SN	Sx	05 42 21.9	
OGWZ	Otaki Gorge	9.16	203	PN	Pn	05 40 41.6	-1.2
TMWZ	Te Maipa	9.20	200	PN	Pn	05 40 42.4	-0.9
KIW	Kapiti Island	9.29	204	PN	Pn	05 40 42.8	-1.8
MTW	Mount Morrison	9.36	201	PN	Pn	05 40 43.8	-1.7
CAW	Cannon Point	9.45	203	PN	Pn	05 40 44.4	-2.4
DUWZ	D'Urville Isla	9.61	209	PN	Pn	05 40 49.4	+0.5
MSWZ	Moikau Station	9.67	201	PN	Pn	05 40 48.8	-1.0
PLWZ	Palliser	9.81	201	PN	Pn	05 40 50.1	-1.6
TCW	Tory Channel	9.82	206	PN	Pn	05 40 50.3	-1.5
NNZ	Nelson	10.18	209	PN	Pn	05 40 55.9	-0.7
BSWZ	Blackbirch Sta	10.40	206	PN	Pn	05 40 58.6	-1.2
THZ	Tophouse	10.83	209	PN	Pn	05 41 03.9	-1.6
KHZ	Kahutara	11.14	205	PN	Pn	05 41 07.7	-2.1
LTZ	Lake Taylor	11.94	208	PN	Pn	05 41 17.9	-2.5
ASAR	Alice Springs	41.30	270	P	P	05 46 10.8	+1.3
	0.3nm,0.3s,mb3.6,baz=107,slow=8.7,SNR=3.7						
WRA	Warramunga Arr	42.48	276	P	P	05 46 20.1	+1.0
	0.9nm,0.6s,mb3.6,baz=113,slow=7.9,SNR=6.9						
FINES	FINESS Array B	146.44	337	PKPbc	PKPdf	05 57 59.6	-1.2
	1.2nm,0.4s,baz=45,slow=4.1,SNR=11						
TORD	Torodi Ar. Bea	160.69	185	PKPab	PKPab	05 59 02.5	-2.0
	0.2nm,0.6s,baz=188,slow=2.9,SNR=3.2						

*CSEM **04** 05:53:02.9, 38.67N×30.36W, h5km, ML2.6, After PDA*

PDA 04 05:53:02.9±1.1, 38.67N×30.36W, h5km, MD3.5, ML2.6, Error ellipse: s-maj=39.1km s-min=11.1km az=5.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	Cedros	1.30	91	eP	Pn	05 53 22.4	-5.3
PCED				eS	Sg	05 53 37.5	-7.2
PCED				A		05 53 38.5	
	41nm,0.3s						
PCED	Cedros	1.30	91	eP	Pn	05 53 22.4	-5.3
PCED				eS	Sg	05 53 37.5	-7.2
CALA	Caldeira	1.30	93	eS	Sg	05 53 37.6	-7.2
CALA	Caldeira	1.30	93	eS	Sg	05 53 37.6	-7.2
HOR	Horta	1.36	96	eS	Sb	05 53 39.6	-7.0
HOR	Horta	1.36	96	eS	Sb	05 53 39.6	-7.0
PCAN	Candelaria	1.48	97	eS	Sn	05 53 41.4	-8.6
PCAN				A		05 53 43.9	
	23nm,0.1s						
PCAN	Candelaria	1.48	97	eS	Sn	05 53 41.4	-8.6
PICO	Pico	1.53	96	eP	Pn	05 53 26.0	-4.8
PICO				eS	Sn	05 53 43.6	-7.4
PICO	Pico	1.53	96	eP	Pn	05 53 26.0	-4.8
PICO				eS	Sn	05 53 43.6	-7.4
ROSA	Rosais	1.66	88	eP	Pn	05 53 28.2	-4.4
ROSA				eS	Sn	05 53 46.4	-7.9
ROSA	Rosais	1.66	88	eP	Pn	05 53 28.2	-4.4
ROSA				eS	Sn	05 53 46.4	-7.9
PMAN	Manadas	1.78	91	eS	Sn	05 53 49.8	-7.5
PMAN				A		05 53 50.8	
	22nm,0.2s						
PMAN	Manadas	1.78	91	eS	Sn	05 53 49.8	-7.5

IDC 04 06:10:27.1±1.7, 15.73S×69.46W, h175km±20km, mb3.8/2, mb1 3.6/4, mb1mx3.2/17, mbtmp3.5/4, Error ellipse: s-maj=136.8km s-min=20.3km az=18.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	1.40	114	P	Pn	06 10 58.3	+0.6
	34nm,0.3s,baz=282,slow=8.3,SNR=909						
LPAZ				S	Sn	06 11 22.4	+1.2
	3.6nm,0.3s,baz=56,slow=18,SNR=4.4						
NNA	Nana	8.07	296	P	Pn	06 12 20.4	-1.1
	1.1nm,0.3s,baz=116,slow=14,SNR=3.1						
NNA				S	Sn	06 13 47.7	-4.2
	0.9nm,0.3s,baz=197,slow=20,SNR=3.1						
SIV	San Ignacio	8.08	93	P	Pn	06 12 23.3	+1.9
	0.4nm,0.3s,baz=284,slow=12,SNR=7.1						
SIV				S	Sn	06 13 49.9	-2.0
	0.1nm,0.3s,baz=225,slow=12,SNR=3.4						
TORD	Torodi Ar. Bea	75.99	72	P	P	06 21 54.4	-1.0
	1.0nm,0.6s,baz=248,slow=5.6,SNR=14						
YKA	Yellowknife Ar	85.59	341	P	P	06 22 45.9	+0.7
	0.3nm,0.5s,baz=137,slow=5.4,SNR=8.4						
SONM	Songino Array	147.80	5	PKPbc	PKPbc	06 29 52.0	+0.7
	1.3nm,0.5s,baz=332,slow=3.0,SNR=6.3						

*NEIC **04** 06:18:52.1, 30.01S×71.92W, h35km, mb4.5/1, ML4.0(GUC), After GUC.*

GUC 04 06:18:52.1±1.1, 30.01S×71.92W, h35km±22km, ML4.0, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.86	134	eP	Pn	06 19 07.6	-0.1
OVCH				i S	Sn	06 19 19.7	+0.6
OVCH	Ovalle	0.86	134	eP	Pn	06 19 07.6	-0.1
OVCH				i S	Sn	06 19 19.7	+0.6
OVCH				AML	AML	06 19 22.0	
	comp=N,5μm,0.3s						
CMCH	Combarbala	1.40	146	eP	Pn	06 19 16.2	+1.0
CMCH				i S	Sn	06 19 35.6	+3.1
CMCH	Combarbala	1.40	146	eP	Pn	06 19 16.2	+1.0
CMCH				i S	Sn	06 19 35.6	+3.1
CMCH				AML	AML	06 19 39.7	
	comp=N,5μm,0.8s						
LCO	Las Campanas	1.45	47	ePn	Pn	06 19 16.0	+0.2
LCO				eSn	Sn	06 19 35.5	+1.8
CHNG	Los Chungos	1.90	169	eP	Pn	06 19 19.0	-3.0
CHNG				i S	Sn	06 19 42.5	-2.2
ROCH	El Roble	3.05	166	eP	Pn	06 19 39.7	+1.9
ROCH				i S	Sn	06 20 16.0	+2.8
ROCH				AML	AML	06 20 34.6	
	comp=E,268nm,0.8s						
PEL	Peldehue	3.30	162	eP	Pn	06 19 43.1	+1.9
PEL				i S	Sn	06 20 22.6	+3.4
PEL				AML	AML	06 20 45.8	
	comp=E,480nm,0.7s						
FCH	Farellones	3.59	158	eP	Pn	06 19 44.1	-1.1
FCH				i S	Sn	06 20 31.9	+5.5
TACH	Talagante	3.73	167	P	Pn	06 19 49.1	+2.0
TACH	Talagante	3.73	167	eP	Pn	06 19 49.1	+2.0
PCH	Pirque	3.79	162	eP	Pn	06 19 50.0	+1.9
PCH	Pirque	3.79	162	eP	Pn	06 19 50.0	+1.9
LMEL	Las Melosas	4.09	160	P	Pn	06 19 55.1	+2.9
LMEL	Las Melosas	4.09	160	eP	Pn	06 19 55.1	+2.9
NNA	Nana	18.51	345	eP	Pn	06 23 08.8	+3.1
	comp=E,12nm,0.3s						

*IDC **04** 06:21:43.9±0.8, 10.84N×85.72W, h0km, mb4.0/9, mb1 4.2/11, mb1mx4.1/21, mbtmp4.0/11, ML3.9/1, MS3.3/7, Ms1 3.2/7, ms1mx3.1/24, Error ellipse: s-maj=36.4km s-min=15.1km az=58.0*

*CASC **04** 06:21:50.0±1.9, 10.65N×85.86W, h17km±6km, MD3.6, ML3.4, mb4.3(NEIC)*

*NEIC **04** 06:21:52.1±0.6, 10.60N×85.79W, mb4.3/16, Error ellipse: s-maj=15.1km s-min=7.3km az=45.0*

NEIC Felt [II] at Challa. Also felt at Santa Cruz.

ISC 04 06:21:50.1±0.5, 10.61N±0.03×85.84W±0.03, h29km±4km, n87, σ1.15/95, mb4.2/24, MS3.7/8, 2C-7D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	Universidad de	0.30	82	i P	Pb	06 21 57.7	+0.2
GBS3	Finca Las Im¨¡	0.42	65	i P	Pb	06 21 58.5	-0.7
GBS3				i S	Sb	06 22 05.8	+0.4
LAPC	Finca la Perla	0.43	68	||i P	Pb	06 21 58.6	-0.8
BUEV	Buena Vista	0.47	66	i P	Pb	06 21 59.2	-0.7
GB1A	Borinquen Arri	0.48	64	i P	Pb	06 21 59.5	-0.7
GB1A				i S	Sb	06 22 07.3	+0.2
GPS3	Bodega del ICE	0.49	73	i P	Pb	06 21 59.6	-0.7
GPS2	Hotel Rinc¨‡n	0.50	73	i P	Pb	06 21 59.8	-0.7
A490	San Lazaro	0.50	132	||i P	Pb	06 22 00.8	+0.2
A490				i S	Sb	06 22 09.2	+1.6
GPS1	Guardaparques	0.51	71	i P	Pb	06 21 59.9	-0.8
GPS1				i S	Sb	06 22 08.2	+0.3
VCR	Vista de Mar	0.52	157	||i P	Pb	06 22 01.2	+0.3
LIM1	Limonal	0.59	81	||i P	Pb	06 22 00.9	-0.9
GUAB	Guayabo de Bag	0.61	81	||i P	Pb	06 22 01.2	-1.1
COLC	Colonia	0.63	85	||i P	Pb	06 22 01.6	-1.0
COLC				i S	Sb	06 22 11.2	0.0
MESS	Mesas	0.65	78	||i P	Pb	06 22 01.9	-1.0
MESS				i S	Sb	06 22 11.6	-0.1
CUI	Cuipilapa	0.67	86	i P	Pb	06 22 02.3	-0.9
PTEN	Parque Tenorio	0.85	83	i P	Pn	06 22 06.3	+0.2
PTEN				i S	Sb	06 22 19.0	+1.7
JTS	JuntasAbangare	0.93	110	ePn	Pn	06 22 06.8	-0.5
JTS				eSn	Sn	06 22 19.9	+0.3
JCR	Jicaral	1.04	136	||eP	Pn	06 22 08.4	-0.3
JCR				eS	Sn	06 22 24.2	+1.8
CASO	Castillo	1.10	99	i P	Pn	06 22 09.3	-0.3
CRUN	El Crucero	1.44	342	eP	Pn	06 22 15.5	+1.2
TICN	Ticuantepe	1.47	345	eP	Pn	06 22 15.5	+0.8
CGA2	Cerro Gallo 2	1.48	113	||eP	Pn	06 22 15.8	+1.0
CGA2				eS	Sn	06 22 37.1	+4.0
MGAN	Managua	1.58	345	eP	Pn	06 22 16.5	+0.3
MGAN				eS	Sn	06 22 36.4	+0.7
TISN	Laguna Tiscapa	1.58	345	eP	Pn	06 22 16.6	+0.3
TISN				eS	Sn	06 22 38.8	+3.0
PRS1	Puriscal	1.63	112	eP	Pn	06 22 17.8	+0.9
CSAN		1.67	340	eP	Pn	06 22 17.6	+0.2
COPN	Copaltepe	1.73	335	eP	Pn	06 22 18.5	+0.2
BOAB	BOACO BROADBAN	.84	5	eP	Pn	06 22 19.7	-0.1
BOAB				eS	Sn	06 22 42.7	+0.6
LAJ	Bijagual	1.85	113	eP	Pn	06 22 15.9	-3.9
SJS	Escuela Geolog	1.88	111	eP	Pn	06 22 22.1	+1.8
QCR	Quepos	2.03	125	eP	Pn	06 22 24.2	+1.9
CNGN	Cerro Negro	2.06	336	eP	Pn	06 22 22.9	+0.1
CNGN				eS	Sn	06 22 51.1	+3.6
LEON	Leon	2.07	330	eP	Pn	06 22 23.1	+0.1
URSC	Urasca	2.17	111	eP	Pn	06 22 26.7	+2.3
BUS	Buena Vista	2.30	117	eP	Pn	06 22 29.3	+3.2
ACR	Cerro Adams	3.27	126	eP	Pn	06 22 41.4	+1.9
CNCH	Conchagua	3.29	324	eP	Pn	06 22 40.4	+0.6
BLLM	Bellamira	3.67	320	eP	Pn	06 22 45.3	+0.4
BLLM				eS	Sn	06 23 28.4	+1.2
VSM	San Miguel	3.68	320	eP	Pn	06 22 46.8	+1.8
TGUH	Tegucigalpa,Un	3.70	338	ePn	Pn	06 22 46.8	+1.4
TGUH	Tegucigalpa,Un	3.70	338	eP	Pn	06 22 46.7	+1.3
CAHU	Cacacuatique	3.91	324	eP	Pn	06 22 49.0	+0.8
CAHU				eS	Sn	06 23 34.7	+1.6
LFRS	El Faro	4.35	314	eP	Pn	06 22 54.5	+0.2
LFRS				eS	Sn	06 23 45.2	+1.2
LBRS	Las Brisas	4.41	315	eP	Pn	06 22 56.2	+1.0
RBDL	Robledal	5.12	313	eP	Pn	06 23 06.9	+2.0
BCIP	Isla Barro Col	6.09	103	ePn	Pn	06 23 18.6	+0.5
CMIG	Matias Romero	10.89	307	Pn	Pn	06 24 22.0	-2.1
CMIG	Matias Romero	10.89	307	Pn	Pn	06 24 22.0	-2.1
MTDJ	Mount Denham	11.05	46	ePn	Pn	06 24 27.9	+1.6
ROSC	El Rosal	12.75	116	LR	LR	06 30 20.1	
	comp=Z,41nm,18.7s,baz=174,slow=40						
ATAH	Atahualpa	19.12	157	P	Pn	06 26 11.7	-0.3
	0.4nm,0.3s,baz=331,slow=19,SNR=2.4						
ATAH				LR	LR	06 32 38.2	
	comp=Z,116nm,21.5s,baz=169,slow=34						
KVTX	Kingsville	20.31	328	eP	P	06 26 23.1	-0.7
	18nm,0.6s						
SJG	San Juan	20.47	66	LR	LR	06 33 01.5	
	comp=Z,96nm,20.3s,MS3.1,baz=289,slow=33						
PCRV	Puerto La Cruz	20.86	89	P	P	06 26 28.8	-1.2
	1.7nm,0.4s,baz=241,slow=13,SNR=3.0						
HKT	Hockley	21.38	336	eP	P	06 26 35.8	+0.4
	8.9nm,1.2s,mb4.0						
HKT				epP		06 26 50.4	
LRAL	Lakeview Retre	22.34	357	eP	P	06 26 46.1	+0.4
	34nm,1.9s,mb4.5						
GOGA	Godfrey	22.80	5	P	P	06 26 49.8	-0.7
	56nm,2.0s,mb4.7						
JCT	Junction City	23.66	329	eP	P	06 26 57.0	-2.2
	3.6nm,0.6s,mb4.0						
SWET	Sewanee	24.50	360	eP	P	06 27 06.1	-0.8
CPCT	Cooper Cave	24.76	3	eP	P	06 27 09.3	+0.1
UALR	University of	24.78	347	eP	P	06 27 08.5	-1.0
	11nm,0.9s,mb4.4						
MIAR	Mount Ida	24.85	345	eP	P	06 27 07.9	-2.2
	6.9nm,0.8s,mb4.2						
TXAR	Lajitas Array	24.99	321	P	P	06 27 10.1	-1.4
	8.6nm,0.7s,mb4.4,baz=139,slow=10,SNR=36						
TXAR				PcP	PcP	06 30 45.2	-1.1
	0.4nm,0.8s,baz=161,slow=5.7,SNR=3.1						
TXAR				ScP	ScP	06 34 23.1	-0.4
	0.5nm,1.0s,baz=119,slow=5.2,SNR=3.6						
TKL	Tuckaleechee C	25.01	4	P	P	06 27 09.9	-1.6
	3.5nm,0.6s,mb4.1,baz=181,slow=13,SNR=7.1						
TKL				LR	LR	06 37 58.4	
	comp=Z,85nm,18.7s,MS3.3,baz=282,slow=39						
WMOK	Wichita Mounta	26.77	336	eP	P	06 27 27.5	0.0
	11nm,1.3s,mb4.2						
WCI	Wyandotte Cave	27.51	359	eP	P	06 27 33.0	-1.1
	7.6nm,0.8s,mb4.4						
ACSO	Alum Creek Sta	29.61	4	eP	P	06 27 51.7	-1.1
	7.8nm,0.4s,mb4.8						
ANMO	Albuquerque	30.66	325	eP	P	06 28 01.2	-1.0
	2.5nm,0.9s,mb4.0						
ANMO				epP	pP	06 28 17.3	+6.7
SDCO	Great Sand Dun	32.28	330	eP	P	06 28 15.4	-1.0
	28nm,2.3s,mb4.7						
SMCO	Snowmass	34.12	330	eP	P	06 28 33.8	+1.4
	6.0nm,1.4s,mb4.3						
SRU	San Rafael	35.91	326	eP	P	06 28 46.4	-1.5
	2.7nm,0.8s,mb4.2						
SIV	San Ignacio	36.05	137	P	P	06 28 49.1	-0.2
	1.5nm,0.8s,mb4.0,baz=321,slow=8.4,SNR=6.0						
PDAR	Pinedale Array	38.13	331	P	P	06 29 04.5	-2.3
	0.4nm,0.4s,mb3.5,baz=128,slow=9.7,SNR=4.3						
REDW	Red Top Meadow	39.20	331	eP	P	06 29 13.9	-1.7
	7.2nm,1.3s,mb4.2						
WVOR	Wild Horse Val	42.71	324	eP	P	06 29 42.9	-1.7
	4.1nm,0.9s,mb4.2						
WVOR				epP	pP	06 29 58.4	+5.2
RPN	Rapa Nui	43.89	211	LR	LR	06 43 55.6	
	comp=Z,83nm,20.2s,MS3.6,baz=59,slow=30						
CPUP	Villa Florida	46.00	143	P	P	06 30 09.2	-1.9
	1.9nm,0.9s,mb4.0,baz=350,slow=11,SNR=3.0						
SCHQ	Schefferville	46.61	15	P	P	06 30 11.1	-4.4
	4.7nm,0.7s,mb4.5,baz=227,slow=5.3,SNR=11						
SCHQ				LR	LR	06 49 57.8	
	comp=Z,79nm,18.1s,MS3.7,baz=343,slow=36						
PLCA	Paso Flores	53.00	165	P	P	06 31 03.3	-0.9
	2.6nm,0.8s,mb4.2,baz=344,slow=12,SNR=5.3						
YKA	Yellowknife Ar	55.80	344	P	P	06 31 20.3	-4.0
	0.8nm,0.9s,mb3.8,baz=143,slow=6.8,SNR=6.8						
YKA				LR	LR	06 58 38.6	
	comp=Z,4.1nm,18.1s,MS2.5,baz=10.0,slow=40						
ILAR	Eielson Array	68.33	336	P	P	06 32 45.4	-3.0
	0.7nm,0.8s,mb3.8,baz=125,slow=4.2,SNR=11						
BJI	Beijing	125.63	339	PKP	PKPdf	06 40 45.0	-4.2
BJI				SS	SS	06 59 32.5	-4.3
BJI				LR	LR		
	comp=N,70nm,27.2s,MS4.4						
BJI				LR	LR		
	comp=E,89nm,27.0s,MS4.4						
BJI				LR	LR		
	comp=Z,30nm,23.5s,MS3.9						
HHC	Hu-ho-hao-te	126.33	344	ePKP	PKPdf	06 40 46.3	-4.2
HHC				PP	PP	06 42 46.2	+1.9
HHC				PKS		06 44 21.6	
HHC				SKS	SKSdf	06 47 47.2	-13
HHC				SKKS	SKKSac	06 49 28.2	-13
HHC				SS	SS	06 59 37.8	-7.6
HHC				AMB	AMB		
	comp=Z,50nm,5.8s						
HHC				LR	LR		
	comp=Z,98nm,15.4s,MS4.6						
LZH	Lanzhou	132.67	349	ePKP	PKPdf	06 40 59.0	-3.7
LZH				sPKP		06 41 24.8	
LZH				LR	LR		
	comp=N,120nm,17.8s,MS4.8						
LZH				LR	LR		
	comp=E,93nm,18.3s,MS4.8						
LZH				LR	LR		
	comp=Z,140nm,20.0s,MS4.7						
ASAR	Alice Springs	140.00	246	PKP	PKPdf	06 41 14.9	-1.7
	comp=Z,0.9nm,0.8s,baz=98,slow=1.8,SNR=7.7						
WRA	Warramunga Arr	140.23	252	PKhKP	PKPpre	06 41 07.5	
	comp=Z,0.5nm,0.8s,baz=100,slow=3.0,SNR=2.9						
WRA				PKP	PKPdf	06 41 15.4	-1.6
	comp=Z,1.0nm,0.8s,baz=90,slow=1.3,SNR=8.2						
CMAR	Chiang Mai Arr	150.74	351	PKPbc	PKPbc	06 41 37.4	-3.2
	comp=Z,0.5nm,0.3s,baz=348,slow=4.0,SNR=4.2						

*ISCJB **04** 06:31:53.1±1.0, 7.07S±0.08×126.0E±0.1, h492km±17km, mb3.6/6, Error ellipse: s-maj=18.7km s-min=8.9km az=146.6*

*IDC **04** 06:31:53.5±1.9, 7.09S×125.98E, h482km±24km, mb3.2/6, mb1 3.2/9, mb1mx3.1/17, mbtmp3.1/9, Error ellipse: s-maj=33.3km s-min=10.2km az=68.0*

*NEIC **04** 06:31:54.0±0.7, 7.07S×126.00E, h492km±9km, mb4.5/4, Error ellipse: s-maj=16.2km s-min=7.6km az=224.0*

ISC 04 06:31:53.7±0.9, 7.13S±0.08×126.0E±0.1, h486km±14km, n18, σ0.93/18, mb3.6/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	6.54	288	eP	P	06 33 35.9	+1.1
	14nm,0.7s						
KAKA	Kakadu	8.44	132	eP	P	06 33 55.2	+0.7
	27nm,0.7s						
FITZ	Fitzroy Crossi	10.91	182	P	P	06 34 21.6	+0.9
	0.6nm,0.3s,baz=22,slow=8.9,SNR=18						
FITZ				S	S	06 36 20.1	-1.6
	0.1nm,0.3s,baz=195,slow=20,SNR=5.7						
WRA	Warramunga Arr	15.10	148	P	P	06 35 04.3	-1.0
	0.5nm,0.3s,baz=333,slow=9.7,SNR=24						
WRA				S	S	06 37 41.8	-1.5
	0.1nm,0.3s,baz=316,slow=21,SNR=3.8						
KSM	Kuching	17.82	298	eP	P	06 35 32.3	-1.0
	5.4nm,0.6s						
ASAR	Alice Springs	18.12	156	P	P	06 35 36.7	+0.8
	0.4nm,0.3s,baz=347,slow=14,SNR=31						
ASAR				S	S	06 38 39.0	+1.7
	0.1nm,0.3s,baz=338,slow=20,SNR=8.6						
COEN	Coen	18.21	113	eP	P	06 35 36.7	-0.1
	53nm,0.9s						
PMG	Port Moresby	21.08	98	eP	P	06 36 02.9	-0.2
STKA	Stephens Creek	28.61	151	P	P	06 37 10.8	+1.1
	1.1nm,0.4s,mb3.6,baz=351,slow=6.4,SNR=4.3						
STKA	Stephens Creek	28.61	151	P	P	06 37 10.8	+1.1
CMAR	Chiang Mai Arr	36.85	314	P	P	06 38 20.1	0.0
	1.0nm,0.3s,mb3.7,baz=143,slow=6.3,SNR=9.4						
KSRS	Korea Array	44.39	2	P	P	06 39 20.1	+0.1
	1.4nm,0.7s,mb3.5,baz=172,slow=11,SNR=5.4						
MJAR	Matsushiro Arr	44.93	14	P	P	06 39 23.6	-0.7
	4.6nm,1.0s,mb3.9,baz=188,slow=9.6,SNR=4.6						
MKAR	Makanchi Array	66.20	329	P	P	06 41 52.7	+0.2
	0.3nm,0.5s,mb3.2,baz=134,slow=6.2,SNR=3.4						
ZALV	Zalesovo Beam	69.99	336	P	P	06 42 14.7	-0.8
	1.4nm,0.5s,mb3.8,baz=129,slow=5.1,SNR=6.6						
TORD	Torodi Ar. Bea	124.92	281	PKP	PKPdf	06 49 58.4	-0.5
	0.4nm,0.7s,baz=50,slow=2.3,SNR=2.9						
CPUP	Villa Florida	146.59	175	PKPbc	PKPbc	06 50 40.9	0.0
	2.0nm,0.9s,baz=206,slow=14,SNR=3.0						
LPAZ	La Paz	152.87	149	PKPbc	PKPbc	06 50 57.6	+1.4
	0.6nm,0.4s,baz=133,slow=8.3,SNR=6.6						

JMA 04 06:46:24.5±0.2, 32.33N×140.49E, h21km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.96	324	P	Pb	06 46 42.1	-0.4
JHJ2				S	Sb	06 46 55.7	+0.9
JKO	Kozu shima	2.17	329	P	Pn	06 47 00.8	+1.4
BSO1	Boso 1	2.35	10	P	Pn	06 47 00.9	-1.0
BSO1				S	Sn	06 47 28.8	-1.3
BSO2	Boso 2	2.42	5	S	Sn	06 47 32.5	+0.6
BSO3	Boso 3	2.46	0	P	Pn	06 47 03.7	+0.3
BSO3				S	Sn	06 47 34.0	+1.1
JIM2	Oshima 3	2.54	340	P	Pn	06 47 06.7	+2.2
JIM2				S	Sn	06 47 36.5	+1.7
BSO4	Boso 4	2.66	357	P	Pn	06 47 07.4	+1.3
BSO4				S	Sn	06 47 39.2	+1.6
TATJ	Tateyama 2	2.74	350	eS	Sn	06 47 42.3	+2.6
JYO	Yokosk	2.97	347	eS	Sn	06 47 47.0	+1.7
JOD2	Odawara 2	3.15	339	P	Pn	06 47 13.7	+0.8
JOD2				S	Sn	06 47 50.7	+0.9
JHU	Hanno	3.65	344	P	Pn	06 47 21.2	+1.4
JHU				S	Sn	06 48 04.2	+2.0
JRY	Ryogami san	3.91	341	P	Pn	06 47 25.8	+2.6
JRY				S	Sn	06 48 10.4	+1.9
JAG	Ashikaga	4.17	348	P	Pn	06 47 28.2	+1.3
JAG				S	Sn	06 48 15.3	+0.2
MAT	Matsushiro	4.61	336	P	Pn	06 47 35.8	+2.9
MAT				S	Sn	06 48 30.4	+4.7

*IDC **04** 06:46:17.9±1.2, 9.87N×125.61E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.7/21, mbtmp3.7/8, MS2.9/2, Ms1 3.0/2, ms1mx2.6/29, Error ellipse: s-maj=122.2km s-min=16.9km az=70.0*

*MAN **04** 06:46:22, 10.01N×126.32E, h0km, mb4.6, ML3.5, MS3.5*

*ISCJB **04** 06:46:23.5±2.6, 10.1N±0.1×126.3E±0.2, h66km±22km, mb3.6/8, Error ellipse: s-maj=40.8km s-min=11.3km az=154.6*

ISC 04 06:46:25.0±2.7, 10.1N±0.1×126.3E±0.2, h61km±25km, n15, σ1.22/18, mb3.6/8, 1D, Philippine Islands region

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

0.6nm,0.5s,mb3.9,baz=305,slow=8.7,SNR=7.6
ASAR Alice Springs 52.05 131 P **P 06 55 53.8 +0.1**
0.4nm,0.6s,mb3.5,baz=307,slow=6.6,SNR=8.6

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*CSEM **04** 07:02:18.8, 38°.54N×30°.28W, h10km, ML2.8, After PDA*
PDA 04 07:02:18.8±1.0, 38°.54N×30°.28W, h10km, MD3.6, ML2.8, Error ellipse: s-maj=27.8km s-min=8.0km az=177.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.24**	**88**	*eP*	Pn	07 02 38.1	-4.1
CALA				*eS*	Sb	07 02 51.7	-6.6
CALA	**Caldeira**	**1.24**	**88**	*eP*	Pn	07 02 38.1	-4.1
CALA				*eS*	Sb	07 02 51.7	-6.6
PCED	**Cedros**	**1.24**	**85**	*eP*	Pn	07 02 37.7	-4.5
PCED				*eS*	Sb	07 02 51.7	-6.7
PCED				A		07 02 54.8	
	83nm,0.3s						
PCED	**Cedros**	**1.24**	**85**	*eP*	Pn	07 02 37.7	-4.5
PCED				*eS*	Sb	07 02 51.7	-6.7
HOR	**Horta**	**1.30**	**90**	*eS*	Sb	07 02 52.9	-7.1
HOR	**Horta**	**1.30**	**90**	*eS*	Sb	07 02 52.9	-7.1
PCAN	**Candelaria**	**1.41**	**93**	*eP*	Pn	07 02 39.2	-5.3
PCAN				*eS*	Sn	07 02 56.0	-7.2
PCAN				A		07 02 58.4	
	44nm,0.2s						
PCAN	**Candelaria**	**1.41**	**93**	*eP*	Pn	07 02 39.2	-5.3
PCAN				*eS*	Sn	07 02 56.0	-7.2
PICO	**Pico**	**1.46**	**91**	*eP*	Pn	07 02 41.0	-4.2
PICO				*eS*	Sn	07 02 57.1	-7.2
PICO	**Pico**	**1.46**	**91**	*eP*	Pn	07 02 41.0	-4.2
PICO				*eS*	Sn	07 02 57.1	-7.2
ROSA	**Rosais**	**1.61**	**83**	*eP*	Pn	07 02 42.6	-4.7
ROSA				*eS*	Sn	07 03 00.3	-7.8
ROSA	**Rosais**	**1.61**	**83**	*eP*	Pn	07 02 42.6	-4.7
ROSA				*eS*	Sn	07 03 00.3	-7.8
PMAN	**Manadas**	**1.72**	**86**	*eS*	Sn	07 03 03.5	-7.3
PMAN				A		07 03 04.6	
	21nm,0.3s						
PMAN	**Manadas**	**1.72**	**86**	*eS*	Sn	07 03 03.5	-7.3

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*ISCJB **04** 07:02:27.2±0.9, 9°.92S±0°.07×74°.00W±0°.09, h161km±13km, mb3.2/6, Error ellipse: s-maj=15.6km s-min=8.9km az=145.3*
*IDC **04** 07:02:27.2±0.8, 9°.91S×73°.95W, h148km±8km, mb3.0/4, mb1 3.4/9, mb1mx3.4/20, mbtmp3.3/9, Error ellipse: s-maj=12.4km s-min=11.8km az=32.0*
*NEIC **04** 07:02:27.3±0.4, 9°.90S×73°.95W, mb4.1/1, Error ellipse: s-maj=10.9km s-min=6.4km az=61.0*
ISC 04 07:02:28.0±0.9, 9°.93S±0°.07×73°.97W±0°.09, h155km±13km, h150km±3.3km; pP-P, n15, σ0s46/15, mb3.2/6, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.48**	**234**	P	**Pn**	**07 03 21.5**	**-0.1**
	18nm,0.3s,baz=65,slow=8.1,SNR=60						
NNA				S	**Sn**	**07 04 03.1**	**-0.1**
	46nm,0.3s,baz=173,slow=23,SNR=17						
ATAH	**Atahualpa**	**5.18**	**302**	P	**Pn**	**07 03 43.1**	**-0.7**
	12nm,0.3s,baz=107,slow=5.2,SNR=114						
ATAH				S	**Sn**	**07 04 43.8**	**+0.7**
	9.7nm,0.3s,baz=218,slow=11,SNR=4.5						
LPAZ	**La Paz**	**8.50**	**139**	P	**Pn**	**07 04 28.5**	**+0.5**
	0.3nm,0.3s,baz=292,slow=9.6,SNR=9.7						
OTAV	**Otavalo**	**11.04**	**336**	*e*Pn	**Pn**	**07 05 01.0**	**-0.6**
	4.6nm,0.8s						
SIV	**San Ignacio**	**13.94**	**117**	P	**Pn**	**07 05 38.7**	**-0.3**
	0.7nm,0.3s,baz=296,slow=12,SNR=25						
ROSC	**El Rosal**	**14.69**	**359**	P	**Pn**	**07 05 49.1**	**+0.6**
	0.2nm,0.3s,baz=252,slow=20,SNR=2.0						
CFAA	**Coronel Fontan**	**22.21**	**167**	P	**P**	**07 07 12.4**	**+0.4**
	0.2nm,0.7s,mb2.7,baz=358,slow=10,SNR=3.9						
CPUP	**Villa Florida**	**22.68**	**138**	P	**P**	**07 07 16.4**	**0.0**
	1.0nm,0.7s,mb3.4,baz=306,slow=12,SNR=4.6						
TXAR	**Lajitas Array**	**48.41**	**325**	P	**P**	**07 10 54.4**	**-0.2**
	0.3nm,0.4s,mb3.2,baz=148,slow=9.3,SNR=8.9						
TXAR				pP	pP	07 11 27.5	-2.0
	0.5nm,1.0s,baz=160,slow=7.8,SNR=1.8						
PDAR	**Pinedale Array**	**61.70**	**331**	P	**P**	**07 12 30.3**	**+0.7**
	0.2nm,0.3s,mb3.4,baz=128,slow=8.1,SNR=2.2						
TORD	**Torodi Ar. Bea**	**78.53**	**74**	P	**P**	**07 14 12.4**	**-0.4**
	0.3nm,0.6s,mb3.1,baz=239,slow=5.0,SNR=5.3						
TORD				pP	pP	07 14 48.5	-2.4
	1.0nm,0.9s,baz=234,slow=3.6,SNR=3.3						
YKA	**Yellowknife Ar**	**78.73**	**342**	P	**P**	**07 14 12.5**	**-0.3**
	0.3nm,0.4s,mb3.3,baz=141,slow=5.8,SNR=7.4						
YKA				pP	pP	07 14 50.6	-0.3
	0.4nm,0.6s,baz=140,slow=5.6,SNR=3.0						
YKA	**Yellowknife Ar**	**78.73**	**342**	P	**P**	**07 14 12.5**	**-0.3**
YKA				pP	pP	07 14 50.6	-0.3
ASAR	**Alice Springs**	**136.90**	**219**	PKP	PKPdf	07 21 33.3	+0.1
	0.3nm,0.7s,baz=102,slow=1.8,SNR=3.8						
WRA	**Warramunga Arr**	**139.28**	**223**	PKP	PKPdf	07 21 38.0	+0.5
	0.4nm,0.4s,baz=126,slow=2.0,SNR=7.6						

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*IDC **04** 07:04:36.6±1.8, 55°.42S×27°.89W, h0km, mb4.0/1, mb1 4.2/1, mb1mx3.7/13, mbtmp4.0/1, Error ellipse: s-maj=80.0km s-min=34.4km az=7.0*
*ISCJB **04** 07:04:40.4±1.7, 55°.3S±0°.2×28°.1W±0°.4, h35km, mb3.9/4, Error ellipse: s-maj=39.7km s-min=24.8km az=34.5*
*NEIC **04** 07:04:42.3±0.9, 55°.20S×28°.01W, h35km, mb4.5/2, Error ellipse: s-maj=25.6km s-min=20.6km az=143.0*
ISC 04 07:04:42.8±1.7, 55°.2S±0°.2×28°.1W±0°.4, h35km, n9, σ1s54/6, mb3.9/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**20.09**	**227**	P	**P**	**07 09 12.8**	**-0.1**
	12nm,1.0s						
CPUP	**Villa Florida**	**35.85**	**312**	*eP*	**P**	**07 11 37.8**	**-1.1**
	14nm,1.3s,mb4.7						
CFAA	**Coronel Fontan**	**36.74**	**293**	P	**P**	**07 11 46.0**	**-0.5**
	0.2nm,0.8s,mb3.0,baz=166,slow=5.1,SNR=4.5						
LPAZ	**La Paz**	**49.45**	**306**	P	**P**	**07 13 31.7**	**+2.4**
	1.2nm,0.6s,mb4.1,baz=167,slow=8.8,SNR=6.5						
LPAZ	**La Paz**	**49.45**	**306**	P	**P**	**07 13 31.7**	**+2.4**
TORD	**Torodi Ar. Bea**	**72.56**	**30**	P	**P**	**07 16 06.0**	**-0.1**
	0.5nm,0.7s,mb3.6,baz=202,slow=6.9,SNR=5.9						
YKA	**Yellowknife Ar**	**135.18**	**319**	PKP	PKPdf	07 23 56.9	0.0
	0.4nm,0.8s,baz=124,slow=1.7,SNR=3.3						
ILAR	**Eielson Array**	**149.15**	**313**	PKPbc	PKPbc	07 24 25.8	0.0
	1.5nm,0.8s,baz=130,slow=1.8,SNR=10						
SONM	**Songino Array**	**151.19**	**86**	PKPbc	PKPbc	07 24 30.3	-0.9
	0.6nm,0.5s,baz=215,slow=4.8,SNR=3.7						

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*KRSC **04** 07:15:10.0±0.7, 55°.40N×160°.88E, h177km±26km, ML4.1*
*MOS **04** 07:15:10.7±0.8, 55°.46N×160°.70E, h171km, mb4.2/1, Error ellipse: s-maj=29.4km s-min=12.5km az=75.9*
*ISCJB **04** 07:15:11.2±0.4, 55°.41N±0°.04×160°.84E±0°.09, h172km±3km, mb3.2/7, Error ellipse: s-maj=9.1km s-min=4.7km az=26.5*
*IDC **04** 07:15:12.0±2.4, 55°.64N×160°.35E, h168km±27km, mb2.9/7, mb1 3.2/8, mb1mx3.0/24, mbtmp2.9/8, Error ellipse: s-maj=38.3km s-min=21.6km az=152.0*
*NEIC **04** 07:15:12.1±1.3, 55°.61N×160°.42E, h169km±15km, Error ellipse: s-maj=24.1km s-min=11.8km az=165.0*
ISC 04 07:15:12.2±0.4, 55°.41N±0°.03×160°.82E±0°.09, h168km±3km, n31, σ0s85/47, mb3.2/7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZMR	**Bezymyannaya**	**0.56**	**341**	*eP*	**Pn**	**07 15 35.8**	**0.0**
BZMR				*i* S	**Sn**	**07 15 54.7**	**+0.7**
ZLN	**Zelenaya**	**0.61**	**359**	*eP*	**Pn**	**07 15 36.5**	**+0.5**
ZLN				*i* S	**Sn**	**07 15 55.7**	**+1.3**
KPT	**Kopyto**	**0.66**	**329**	*eP*	**Pn**	**07 15 35.7**	**-0.6**
CIRR	**Tsirk**	**0.71**	**357**	*eP*	**Pn**	**07 15 36.5**	**-0.1**
CIRR				*i* S	**Sn**	**07 15 55.9**	**+0.5**
KRSR	**Krestovskiy**	**0.83**	**350**	*eP*	**Pn**	**07 15 37.1**	**-0.2**
KRSR				*i* S	**Sn**	**07 15 56.9**	**+0.2**
KOZR	**Kozyr**	**0.84**	**322**	PN	**Pn**	**07 15 37.0**	**-0.4**
KOZ	**Kozyrevsk**	**0.85**	**321**	*eP*	**Pn**	**07 15 37.0**	**-0.5**
KLY	**Klyuchi**	**0.92**	**354**	*eP*	**Pn**	**07 15 37.5**	**-0.5**
KLY				*i* S	**Sn**	**07 15 57.6**	**-0.2**
MKZ	**Mys Kozlova**	**1.00**	**148**	*eP*	**Pn**	**07 15 38.1**	**-0.5**
MKZ				*i* S	**Sn**	**07 15 58.7**	**-0.2**
SRDR	**Sredinnyy**	**1.11**	**326**	*eP*	**Pn**	**07 15 38.6**	**-0.8**
SMKR	**Semkarok**	**1.23**	**17**	*eP*	**Pn**	**07 15 40.4**	**-0.2**
SMKR				*i* S	**Sn**	**07 16 02.9**	**+0.4**
SRKR	**Sorokina**	**1.27**	**9**	*eP*	**Pn**	**07 15 40.6**	**-0.2**
SRKR				*i* S	**Sn**	**07 16 03.1**	**+0.1**
KBTR	**Krutoberegovo**	**1.39**	**54**	*eP*	**Pn**	**07 15 41.4**	**-0.6**
KBTR				*i* S	**Sn**	**07 16 03.9**	**-1.0**
KII	**Karymskiy**	**1.58**	**211**	*eP*	**Pn**	**07 15 44.5**	**+0.5**
KII				*i* S	**Sn**	**07 16 10.2**	**+1.9**
SPN	**Mys Shipunski**	**2.36**	**192**	*eP*	**Pn**	**07 15 51.1**	**-1.4**
SPN				*i* S	**Sn**	**07 16 21.0**	**-2.6**
GNL	**Ganaly**	**2.40**	**226**	*eP*	**Pn**	**07 15 53.2**	**+0.3**
NLC	**Nalytchevo**	**2.40**	**202**	*eP*	**Pn**	**07 15 52.5**	**-0.5**
NLC				*i* S	**Sn**	**07 16 23.5**	**-1.0**
AVH	**Avacha**	**2.47**	**210**	*eP*	**Pn**	**07 15 54.8**	**+1.0**
AVH				*i* S	**Sn**	**07 16 27.3**	**+1.4**
PET	**Petropavlovsk**	**2.70**	**209**	*eP*	**Pn**	**07 15 56.8**	**+0.2**
PET				*i* S	**Sn**	**07 16 30.8**	**-0.2**
PETK	**Petropavlovsk-**	**2.94**	**220**	P	**Pn**	**07 15 59.8**	**+0.3**
	0.8nm,0.3s,baz=65,slow=15,SNR=7.5						
PETK				S	**Sn**	**07 16 45.2**	**+9.1**
	0.9nm,0.3s,baz=91,slow=19,SNR=5.0						
BKI	**Bering**	**2.95**	**92**	*eP*	**Pn**	**07 16 00.0**	**+0.4**
BKI				*i* S	**Sn**	**07 16 36.2**	**-0.2**
AMKA	**Amchitka**	**11.74**	**102**	*e*Pn	**Pn**	**07 17 57.9**	**+3.5**
ILAR	**Eielson Array**	**26.92**	**48**	P	**P**	**07 20 36.9**	**-0.4**
	0.3nm,0.9s,mb2.9,baz=256,slow=7.9,SNR=4.9						
YKA	**Yellowknife Ar**	**41.19**	**45**	P	**P**	**07 22 39.8**	**+0.1**
	0.3nm,0.5s,mb3.2,baz=300,slow=8.0,SNR=5.1						
YKA	**Yellowknife Ar**	**41.19**	**45**	P	**P**	**07 22 39.8**	**+0.1**
KURK	**Kurchatov**	**46.90**	**300**	P	**P**	**07 23 23.0**	**-2.3**
	0.5nm,0.4s,mb3.5,baz=53,slow=7.7,SNR=3.3						
KURK	**Kurchatov**	**46.90**	**300**	P	**P**	**07 23 23.0**	**-2.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
NVAR	**Mina Array Bea**	**54.59**	**72**	P	**P**	**07 24 24.6**	**+1.7**
	comp=Z,0.4nm,0.5s,mb3.4,baz=308,slow=7.3,SNR=4.0						
PDAR	**Pinedale Array**	**56.05**	**63**	P	**P**	**07 24 33.4**	**+0.1**
	comp=Z,0.1nm,0.4s,mb3.0,baz=297,slow=4.0,SNR=2.8						
TXAR	**Lajitas Array**	**69.36**	**68**	P	**P**	**07 26 02.5**	**+1.0**
	comp=Z,0.2nm,0.4s,mb3.2,baz=291,slow=5.4,SNR=5.4						
ASAR	**Alice Springs**	**82.04**	**205**	P	**P**	**07 27 13.4**	**+0.1**
	comp=Z,0.1nm,0.4s,mb2.8,baz=23,slow=5.0,SNR=2.6						

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*NEIC **04** 07:24:48.6, 22°.64S×69°.82W, h42km, MG3.5(GUC), After GUC.*
GUC 04 07:24:48.6±1.5, 22°.64S×69°.82W, h42km±15km, ML3.5, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.45**	**7**	*e*P	Pn	07 24 59.1	+0.3
MACH				*i* S	Sn	07 25 06.8	+0.8
TOCH	**Tocopilla**	**0.65**	**327**	*e*P	Pn	07 25 01.5	0.0
TOCH				*i* S	Sn	07 25 11.2	+0.5
TOCH				AML	AML	07 25 11.8	
	comp=E,6μm,0.3s						
MECH	**Mejillones**	**0.74**	**232**	*e*P	Pn	07 25 02.3	-0.3
MECH				*i* S	Sn	07 25 13.3	+0.5
MECH				*i* S	Sn	07 25 13.9	+1.1
MECH				AML	AML	07 25 18.2	
	comp=E,2μm,0.5s						
ANCH	**Antofagasta**	**1.17**	**208**	*e*P	Pn	07 25 03.6	-4.9
ANCH				*i* S	Sn	07 25 18.4	-4.9
ANCH	**Antofagasta**	**1.17**	**208**	*e*P	Pn	07 25 03.6	-4.9
ANCH				*i* S	Sn	07 25 18.4	-4.9
SPCH	**San Pedro de A**	**1.51**	**100**	*e*P	Pn	07 25 16.7	+3.5
SPCH				*e*S	Sn	07 25 37.6	+5.8
SPCH	**San Pedro de A**	**1.51**	**100**	*e*P	Pn	07 25 16.7	+3.5
SPCH				*e*S	Sn	07 25 37.6	+5.8
LCO	**Las Campanas**	**6.39**	**187**	*e*Pn	Pn	07 26 21.1	+0.9
LPAZ	**La Paz**	**6.52**	**14**	*e*Pn	Pn	07 26 25.6	+3.6
	comp=E,2.2nm,0.4s						
NNA	**Nana**	**12.54**	**327**	*e*Pn	Pn	07 27 44.2	-0.2

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*IDC **04** 08:07:46.1±1.0, 0°.24S×124°.20E, h0km, mb4.1/6, mb1 4.3/7, mb1mx4.0/19, mbtmp4.1/7, ML3.2/1, MS3.0/1, Ms1 3.2/1, ms1mx2.5/28, Error ellipse: s-maj=54.3km s-min=18.1km az=67.0*
*ISCJB **04** 08:07:50.7±0.6, 0°.19S±0°.04×124°.30E±0°.05, h51km±8km, mb4.2/10, Error ellipse: s-maj=8.2km s-min=6.9km az=162.5*
*DJA **04** 08:07:51, 0°.01N×124°.36E, h52km, MLv4.7/9*
*NEIC **04** 08:07:52.7±1.8, 0°.22S×124°.33E, h53km±19km, mb4.6/4, Error ellipse: s-maj=16.7km s-min=7.9km az=50.0*
ISC 04 08:07:51.9±0.6, 0°.16S±0°.04×124°.32E±0°.05, h44km±9km, n27, σ1s03/29, mb4.2/10, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.81**	**335**	P	**Pn**	**08 08 05.7**	**-1.2**
KMSI				S	**Sn**	**08 08 17.0**	**-0.7**
MNI	**Manado**	**1.67**	**18**	P	**Pn**	**08 08 20.5**	**+1.8**
LUWI	**Luwuk**	**1.78**	**241**	P	**Pn**	**08 08 20.2**	**0.0**
MRSI	**Marisa**	**2.46**	**285**	P	**Pn**	**08 08 27.1**	**-2.5**
TNTI	**Ternate**	**3.18**	**73**	P	Px	08 08 50.0	
LBMI	**Labuha**	**3.21**	**99**	P	**Pn**	**08 08 39.4**	**-0.5**
TOLI	**Toli-Toli**	**3.75**	**290**	P	**Pn**	**08 08 46.6**	**-0.7**
NLAI	**Namlea**	**4.13**	**138**	P	**Pn**	**08 08 52.8**	**+0.3**
KDI	**Kendari**	**4.14**	**204**	P	**Pn**	**08 08 53.2**	**+0.6**
TTSI	**Tana Toraja**	**5.34**	**237**	P	**Pn**	**08 09 10.6**	**+1.5**
	1.0nm3μm212nm,0.4s						
SPSI	**Sidrap Palu**	**5.92**	**230**	P	**Pn**	**08 09 19.0**	**+2.0**
BKSI	**Bulukumba**	**6.62**	**219**	P	**Pn**	**08 09 27.7**	**+0.9**
KAPI	**Kappang**	**6.64**	**223**	*e*Pn	**Pn**	**08 09 27.7**	**+0.7**
	53nm,0.5s						
KAPI				*e*Sn	**Sn**	**08 10 39.7**	**-1.7**
KSM	**Kuching**	**14.11**	**277**	*e*Pn	**Pn**	**08 11 09.8**	**+0.6**
	19nm,0.8s						
KAKA	**Kakadu**	**14.84**	**147**	*e*Pn	**Pn**	**08 11 18.6**	**-0.4**
	39nm,0.7s						
KAKA				*e*Sn	**Sn**	**08 14 02.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**17.88**	**176**	Pn	**Pn**	**08 11 54.2**	**-3.1**
	0.1nm,0.3s,baz=27,slow=11,SNR=2.5						
FITZ	**Fitzroy Crossi**	**17.88**	**176**	*e*P	**Pn**	**08 11 56.4**	**-0.9**
MBWA	**Marble Bar**	**21.35**	**192**	*e*P	**P**	**08 12 35.5**	**+0.1**
	18nm,1.4s,mb4.2						
WRA	**Warramunga Arr**	**21.97**	**154**	P	**P**	**08 12 40.8**	**-1.3**
	4.4nm,0.5s,mb4.1,baz=334,slow=11,SNR=47						
COEN	**Coen**	**23.16**	**127**	*e*P	**P**	**08 12 55.1**	**+0.3**
	91nm,1.2s,mb5.1						
ASAR	**Alice Springs**	**25.15**	**159**	P	**P**	**08 13 13.1**	**0.0**
	6.6nm,0.7s,mb4.3,baz=333,slow=6.8,SNR=84						
ASAR				PcP	PcP	08 16 47.4	+0.9
	0.4nm,0.4s,baz=355,slow=1.7,SNR=5.7						
CTAO	**Charters Tower**	**29.21**	**134**	*e*P	**P**	**08 13 47.9**	**-1.7**
	18nm,1.4s,mb4.6						
FORT	**Forrest**	**30.66**	**174**	*e*P	**P**	**08 14 02.2**	**-0.1**
	10.0nm,0.6s,mb4.8						
CMAR	**Chiang Mai Arr**	**31.05**	**308**	P	**P**	**08 14 06.1**	**+0.2**
	0.3nm,0.3s,mb3.6,baz=133,slow=6.3,SNR=2.7						
CMAR				LR	LR	08 26 52.5	
	comp=Z,28nm,18.7s,baz=125,slow=37						
STKA	**Stephens Creek**	**35.52**	**154**	P	**P**	**08 14 45.4**	**+0.7**
	1.3nm,0.3s,mb4.3,baz=302,slow=7.5,SNR=7.5						
MJAR	**Matsushiro Arr**	**38.72**	**18**	P	**P**	**08 15 12.9**	**+1.2**
	0.7nm,0.4s,mb3.7,baz=197,slow=9.5,SNR=3.2						
MKAR	**Makanchi Array**	**59.45**	**328**	P	**P**	**08 17 50.3**	**+0.2**
	0.3nm,0.3s,mb3.8,baz=118,slow=9.9,SNR=5.0						

JMA 04 08:07:53.2±0.8, 44°.76N×148°.95E, h30km, M3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.70**	**240**	P	Pn	08 08 33.2	-1.3
NEM2				*e*S	Sn	08 09 03.1	-3.0
JRA	**Rausu**	**2.87**	**255**	P	Pn	08 08 38.3	+1.5
JTKR	**Abashiri--Toko**	**3.70**	**259**	P	Pn	08 08 50.6	+2.3
JAR	**Ashorobuto**	**4.01**	**250**	P	Pn	08 08 53.7	+1.1
JAR				*e*S	Sn	08 09 39.0	+0.5
JOB	**Onbets**	**4.14**	**245**	P	Pn	08 08 54.5	+0.2
JOB				*e*S	Sn	08 09 40.0	-1.7
JCH	**Churui**	**4.58**	**244**	P	Pn	08 09 00.3	-0.1
JCH				*e*S	Sn	08 09 50.0	-2.6
JEM	**Erimo**	**5.03**	**239**	P	Pn	08 09 06.8	+0.2
JNBK	**Urakawa-nobuka**	**5.14**	**243**	P	Pn	08 09 07.8	-0.3
JBT2	**Biratori 2**	**5.16**	**250**	P	Pn	08 09 09.5	+1.1
JNB	**Noboribetsu**	**6.18**	**251**	P	Pn	08 09 23.2	+0.8
JKB	**Kayabe**	**6.45**	**246**	P	Pn	08 09 25.3	-0.7
JKB				*e*S	Sn	08 10 31.1	-7.4

IDC 04 08:35:42.1±6.9, 18°.25S×177°.29W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.6/16, mbtmp3.4/3, Error ellipse: s-maj=300.1km s-min=36.7km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.62**	**260**	P	P	08 44 04.4	-0.2
	0.3nm,0.4s,baz=96,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**45.73**	**255**	P	P	08 44 05.4	+0.1
	0.3nm,0.4s,baz=88,slow=7.9,SNR=10						
ILAR	**Eielson Array**	**85.99**	**13**	P	P	08 48 23.9	+0.1
	0.3nm,0.9s,baz=211,slow=5.7,SNR=6.4						

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*IDC **04** 08:42:43.2±1.9, 32°.43N×47°.26E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.6/26, mbtmp3.7/11, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx1.9/39, Error ellipse: s-maj=45.0km s-min=20.5km az=159.0*
*NEIC **04** 08:42:44.6±0.7, 32°.33N×47°.21E, h10km, mb3.6/1, ML3.3(THR), Error ellipse: s-maj=12.4km s-min=7.0km az=175.0*
*KISR **04** 08:42:45.0±0.8, 32°.05N×45°.82E, h18km±999km, ML2.9*
*CSEM **04** 08:42:46.0±0.2, 32°.43N×47°.23E, h10km, ML3.3, Error ellipse: s-maj=7.9km s-min=5.7km az=85.0*
*TEH **04** 08:42:47.0, 32°.39N×47°.23E, h11km*
ISC 04 08:42:46.4±1.1, 32°.43N±0°.03×47°.23E±0°.04, h12km±7km, n60, σ1s23/74, mb3.6/10, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.37**	**103**	*e*Pg	**Pg**	**08 43 11.0**	**-1.7**
SHGR	**Shooshtar-Gavs**	**1.37**	**103**	*e*Pg	**Pg**	**08 43 11.2**	**-1.5**
IKOM	**Komasi**	**1.75**	**8**	*e*Pn	**Pn**	**08 43 18.1**	**+1.4**
IKOM				*e*Sg	**Sg**	**08 43 43.6**	**+0.8**
IKOM				*e*		08 43 47.0	
	comp=Z,11μm,0.2s						
IKOM	**Komasi**	**1.75**	**8**	*e*Pn	**Pn**	**08 43 18.1**	**+1.4**
IKOM				*e*Sg	**Sg**	**08 43 43.6**	**+0.8**
IGHG	**Ghaleghazi**	**1.97**	**344**	*e*Pn	**Pn**	**08 43 21.3**	**+1.6**
IGHG				*e*		08 44 00.3	
	comp=Z,8μm,0.3s						
IGHG	**Ghaleghazi**	**1.97**	**344**	*e*Pn	**Pn**	**08 43 21.3**	**+1.6**
IVIS	**Veis**	**2.11**	**351**	*e*Pn	**Pn**	**08 43 22.5**	**+0.9**
IVIS				*e*Sg	**Sg**	**08 43 53.8**	**-0.5**
IVIS				*e*		08 44 02.4	
	comp=Z,4μm,0.3s						
IVIS	**Veis**	**2.11**	**351**	*e*Pn	**Pn**	**08 43 22.5**	**+0.9**
IVIS				*e*Sg	**Sg**	**08 43 53.8**	**-0.5**
IDHR	**Dehrash**	**2.37**	**343**	*e*Pn	**Pn**	**08 43 25.9**	**+0.8**
IDHR				*e*		08 44 09.4	
	comp=Z,7μm,0.3s						
IDHR	**Dehrash**	**2.37**	**343**	*e*Pn	**Pn**	**08 43 25.9**	**+0.8**
ILIN	**Lien**	**2.49**	**355**	*e*Pn	**Pn**	**08 43 28.9**	**+2.1**
ILIN				*e*Sn	**Sn**	**08 43 58.3**	**+1.2**
ILIN				*e*		08 44 12.9	
	comp=E,4μm,0.3s						
ILIN	**Lien**	**2.49**	**355**	*e*Pn	**Pn**	**08 43 28.9**	**+2.1**
ILIN				*e*Sn	**Sn**	**08 43 58.3**	**+1.2**
BHD	**Baghdad**	**2.54**	**290**	*ex*	**Pb**	**08 43 31.0**	**-1.0**
BHD				*i* x	**Sb**	**08 44 04.0**	**+0.8**
BHD				*i* x	**Sg**	**08 44 16.0**	**+7.9**
MIB	**Mutribah**	**2.62**	**178**	*e*P	**Pn**	**08 43 28.9**	**+0.3**
MIB				*e*S	**Sn**	**08 44 02.5**	**+2.1**
MIB				AML	AML	08 44 04.9	
	comp=Z,80nm,0.6s						
MIB	**Mutribah**	**2.62**	**178**	*e*P	**Pn**	**08 43 28.9**	**+0.3**
MIB				*e*S	**Sn**	**08 44 02.5**	**+2.1**
SNGE	**Sanandaj**	**2.65**	**2**	*e*Pn	**Pn**	**08 43 30.0**	**+0.9**
SNGE				*e*Sg	**Sg**	**08 44 07.0**	**-4.7**
SNGE	**Sanandaj**	**2.65**	**2**	*e*Pn	**Pn**	**08 43 30.0**	**+0.9**
IPIR	**Pirpir**	**3.10**	**84**	*e*Pn	**Pn**	**08 43 36.1**	**+0.9**
IPIR				*e*		08 44 42.2	
	comp=N,1μm,0.4s						
IPIR	**Pirpir**	**3.10**	**84**	*e*Pn	**Pn**	**08 43 36.1**	**+0.9**
ASAO	**Ashtian**	**3.15**	**47**	*e*Pn	**Pn**	**08 43 36.0**	**+0.2**
ASAO	**Ashtian**	**3.15**	**47**	*e*Pn	**Pn**	**08 43 36.7**	**+0.9**
NAY	**Al-Naaiem**	**3.17**	**180**	*e*P	**Pn**	**08 43 36.0**	**-0.2**
NAY				*e*S	**Sn**	**08 44 13.4**	**-0.6**
NAY				AML	AML	08 44 17.3	
	comp=Z,16nm,0.5s						
NAY	**Al-Naaiem**	**3.17**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA2	**Neumayer--Watz**	**17.49**	**157**	*e*	P	09 08 19.5	-3.5
QSPA	**South Pole Qui**	**34.19**	**180**	P	P	09 10 58.0	+0.4
	1.9nm,0.7s,baz=223,slow=4.3,SNR=14						
QSPA	**South Pole Qui**	**34.19**	**180**	P	P	09 10 58.0	+0.4
QSPA				*eP*		09 10 58.9	
BOSA	**Boshof**	**46.75**	**77**	P	P	09 12 40.4	-0.1
	3.0nm,1.1s,baz=207,slow=18,SNR=2.7						
BOSA	**Boshof**	**46.75**	**77**	P	P	09 12 40.4	-0.1
LPAZ	**La Paz**	**49.74**	**307**	P	P	09 13 04.0	+0.6
	1.6nm,0.4s,baz=141,slow=4.2,SNR=15						
LPAZ	**La Paz**	**49.74**	**307**	P	P	09 13 04.0	+0.6
TORD	**Torodi Ar. Bea**	**73.46**	**31**	P	P	09 15 41.6	+0.4
	1.2nm,0.4s,baz=199,slow=6.2,SNR=3.6						
YKA	**Yellowknife Ar**	**135.64**	**319**	PKP	PKPdf	09 23 25.0	-0.1
	0.2nm,0.4s,baz=127,slow=2.4,SNR=9.2						
ILAR	**Eielson Array**	**149.53**	**312**	PKPbc	PKPbc	09 23 54.1	-0.2
	1.5nm,0.8s,baz=122,slow=1.6,SNR=18						
KDAK	**Kodiak Island**	**150.11**	**297**	PKPbc	PKPbc	09 23 55.0	-0.8
	2.2nm,0.5s,baz=173,slow=0.6,SNR=3.9						

IDC ***04*** *09:13:30.4±0.8, 51°.72N×97°.73E, h0km, mb3.9/10, mb1 3.9/15, mb1mx3.8/28, mbtmp3.8/15, ML3.3/5, MS3.2/7, Ms1 3.3/7, ms1mx3.0/38, Error ellipse: s-maj=24.4km s-min=11.9km az=4.0*
ISCJB ***04*** *09:13:30.8±0.4, 51°.67N±0°.07×97°.64E±0°.04, h10km, mb3.8/11, MS3.2/3, Error ellipse: s-maj=10.6km s-min=3.7km az=2.8*
MOS ***04*** *09:13:31.5±2.5, 51°.68N×97°.57E, h15km, mb4.0/7, Error ellipse: s-maj=16.4km s-min=9.4km az=13.9*
ASRS ***04*** *09:13:34.6±2.4, 52°.20N×97°.47E, h15km, Ms3.9/3*
BJI ***04*** *09:13:35.8, 51°.79N×98°.10E, h42km, mB4.4/1, mb4.1/3, Ms4.0/1, Ms7 3.6/4*
NEIC ***04*** *09:13:36.1±0.9, 51°.71N×97°.63E, h41km±10km, mb3.5/1, Error ellipse: s-maj=18.3km s-min=7.9km az=189.0*
ISC 04 09:13:32.4±0.4, 51°.79N±0°.07×97°.65E±0°.04, h10km, n54, σ1§45/60, mb3.8/11, MS3.2/3, 1C-3D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORL	**Orlik**	**1.53**	**60**	⇓*i* PN	**Pn**	**09 13 56.9**	**-2.8**
ORL				pmax	pmax		
	comp=Z,401nm,0.2s						
MOY	**Mondy**	**2.08**	**92**	*e*PN	**Pn**	**09 14 04.7**	**-2.7**
MOY				pmax	pmax		
	comp=Z,279nm,0.5s						
ARS	**Arshan**	**2.96**	**86**	*e*PN	**Pn**	**09 14 20.8**	**+1.3**
ARS				*e*		09 14 58.1	
ARS				pmax	pmax		
	comp=Z,209nm,0.3s						
ARS				smax			
	comp=E,7μm,0.8s						
ORY	**Orie**	**3.56**	**336**	⇓*i* PN	**Pb**	**09 14 34.8**	**-0.7**
ORY				*e*		09 14 47.2	
ORY				*e*		09 15 20.9	
ORY						09 15 31.0	
TLY	**Talaya**	**3.73**	**89**	*e*PN	**Pn**	**09 14 33.1**	**+3.1**
TLY				*e*		09 15 19.4	
TLY				pmax	pmax		
	comp=Z,200nm,0.3s						
TLY				smax			
	comp=N,570nm,0.8s						
TLY	**Talaya**	**3.73**	**89**	*e*Pn	**Pn**	**09 14 32.7**	**+2.8**
TLY				*e*Sn	**Sn**	**09 15 19.9**	**+6.0**
ZAK	**Zakamensk**	**3.82**	**109**	*e*PN	**Pn**	**09 14 34.3**	**+3.1**
CERR	**Cheremushki**	**3.97**	**288**	*e*PN	**Pn**	**09 14 36.5**	**+3.2**
CERR				*i*		09 14 42.6	
CERR				*i*		09 15 31.5	
CERR	**Cheremushki**	**3.97**	**288**	*i* Pg	**Pb**	**09 14 42.6**	**+0.1**
CERR				*i* Sg	**Sb**	**09 15 31.5**	**+1.0**
IRK	**Irkutsk**	**4.12**	**81**	*e*PN	**Pn**	**09 14 40.8**	**+5.5**
IRK				*e*		09 15 30.0	
IRK				pmax	pmax		
	comp=Z,134nm,0.1s						
IRK				smax			
	comp=N,3μm,1.2s						
TRG	**Tyrgan**	**5.43**	**76**	*e*PN	**Pb**	**09 15 06.8**	**-0.5**
TRG				*e*	**Sb**	**09 16 12.9**	**+0.5**
TRG				pmax	pmax		
	comp=Z,58nm,0.8s						
TRG				smax			
	comp=N,1μm,1.4s						
KAB	**Kabansk**	**5.58**	**84**	*e*PN	**Pb**	**09 15 07.6**	**-2.2**
KAB				*e*	**Sb**	**09 16 17.6**	**+0.9**
KAB				pmax	pmax		
	comp=Z,154nm,0.3s						
KAB				smax			
	comp=N,3μm,1.9s						
TASR	**Tashtagol**	**6.08**	**283**	*e*PN	**Pg**	**09 15 22.6**	**-6.1**
TASR	**Tashtagol**	**6.08**	**283**	*e*Pg	**Pg**	**09 15 22.6**	**-6.1**
OGRR	**Ongureny**	**6.32**	**69**	*e*PN	**Pn**	**09 15 01.5**	**-4.1**
OGRR				*e*		09 16 40.0	
OGRR				pmax	pmax		
	comp=Z,30nm,0.3s						
OGRR				smax			
	comp=N,813nm,1.4s						
AKAR	**Aktash**	**6.49**	**261**	*e*PN	**Pn**	**09 15 14.2**	**+6.2**
AKAR				*e*		09 15 31.1	
AKAR				*e*		09 16 26.9	
AKAR	**Aktash**	**6.49**	**261**	*e*Pg	**Pg**	**09 15 31.1**	**-5.6**
AKAR				*e*Sg	**Sg**	**09 16 57.3**	**-3.4**
SONM	**Songino Array**	**6.90**	**122**	Pn	**Pn**	**09 15 13.7**	**+0.1**
	comp=N,0.4nm,0.3s,baz=300,slow=14,SNR=4.4						
SONM				Pg	**Pg**	**09 15 29.0**	**-16**
	comp=N,3.1nm,0.3s,baz=300,slow=18,SNR=46						
SONM				Lg		09 16 59.5	
	comp=N,6.1nm,0.3s,baz=292,slow=28,SNR=11						
SONM				LR	LR	09 17 54.5	
	comp=N,170nm,20.0s,baz=165,slow=39						
SONM	**Songino Array**	**6.90**	**122**	Pn	**Pn**	**09 15 13.7**	**+0.1**
SONM				Pg	**Pg**	**09 15 29.0**	**-16**
SONM				Lg		09 16 59.5	
SONM				LR	LR	09 17 54.5	
ELT	**Yel'tsovka**	**7.12**	**286**	*e*PN	**Pn**	**09 15 14.2**	**-2.3**
ELT	**Yel'tsovka**	**7.12**	**286**	*e*Pn	**Pn**	**09 15 14.2**	**-2.3**
ELT				*e*Sn	**Sn**	**09 16 35.4**	**-2.0**
ZAA0	**Zalesovo Array**	**8.06**	**291**	*e*Pn	**Pn**	**09 15 30.4**	**+0.9**
ZALV	**Zalesovo Beam**	**8.06**	**291**	Pn	**Pn**	**09 15 31.0**	**+1.6**
	comp=N,0.3nm,0.3s,baz=103,slow=12,SNR=3.9						
ZALV				Pg	Pn	09 15 59.5	+30
	comp=N,1.2nm,0.3s,baz=103,slow=14,SNR=12						
ZALV				Lg		09 17 43.5	
	comp=N,2.8nm,0.3s,baz=105,slow=23,SNR=9.3						
ZALV				LR	LR	09 18 43.9	
	comp=N,127nm,18.1s,baz=196,slow=39						
UKR	**Ust'-Kan**	**8.11**	**269**	*e*Sg	Sx	09 17 41.3	
MKAR	**Makanchi Array**	**11.20**	**250**	Pn	**Pn**	**09 16 12.3**	**-0.1**
	comp=N,0.1nm,0.3s,baz=63,slow=16,SNR=2.5						
MKAR				Pg	Pn	09 16 54.2	+42
	comp=N,0.2nm,0.3s,baz=70,slow=16,SNR=4.5						
MKAR				Lg		09 19 26.5	
	comp=N,0.4nm,0.3s,baz=50,slow=29,SNR=6.0						
MKAR				LR	LR	09 20 40.3	
	comp=N,178nm,18.2s,baz=51,slow=38						
MKAR	**Makanchi Array**	**11.20**	**250**	Pn	**Pn**	**09 16 12.3**	**-0.1**
MKAR				Pg	Pn	09 16 54.2	+42
MKAR				Lg		09 19 26.5	
MKAR				LR	LR	09 20 40.3	
KURK	**Kurchatov**	**11.97**	**272**	Pn	**Pn**	**09 16 23.5**	**+0.5**
	comp=N,0.1nm,0.3s,baz=72,slow=15,SNR=3.1						
KURK				Lg		09 19 52.3	
	comp=N,0.1nm,0.3s,baz=80,slow=31,SNR=7.4						
KURK				LR	LR	09 21 03.2	
	comp=N,147nm,18.2s,baz=85,slow=37						
GTA	**Gaotai**	**12.47**	**172**	*e*P	**Pn**	**09 16 35.1**	**+5.3**
GTA				pP		09 16 39.1	
GTA				sP		09 16 41.9	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				LR	LR		
	comp=Z,130nm,7.6s						
BVAR	**Borovoye Array**	**16.65**	**285**	Pn	**Pn**	**09 17 24.4**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=82,slow=12,SNR=2.2						
BRVK	**Borovoye**	**16.71**	**285**	⇑*e*P	**Pn**	**09 17 30.2**	**+3.8**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
AAK	**Ala-Archa**	**18.14**	**249**	Lg		09 23 09.2	
	comp=Z,0.0nm,0.3s,baz=203,slow=14,SNR=1.4						
AAK				LR	LR	09 24 54.6	
	comp=Z,133nm,19.5s,baz=204,slow=38						
AAK	**Ala-Archa**	**18.14**	**249**	*i* P	**Pn**	**09 17 53.5**	**+9.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
EKS2	**Erkin-Say**	**18.54**	**250**	*e*P	**Pn**	**09 17 50.5**	**+1.4**
	comp=Z,2.1nm,0.6s						
ARU	**Arti**	**23.15**	**297**	*d i* P	**P**	**09 18 40.4**	**+1.8**
ARU				S	**S**	**09 22 52.2**	**+2.5**
ARU				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.2						
ARU				MLR	MLR		
	comp=Z,117nm,15.0s,MS3.5						
AKTK	**Aktyubinsk**	**24.71**	**283**	P	**P**	**09 18 54.0**	**+0.6**
AKTO	**Aktyubinsk**	**24.71**	**283**	P	**P**	**09 18 54.0**	**+0.5**
	comp=Z,1.8nm,0.6s,mb3.8,baz=81,slow=9.8,SNR=6.4						
AKTO	**Aktyubinsk**	**24.71**	**283**	P	**P**	**09 18 54.0**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
KSRS	**Korea Array**	**25.65**	**112**	P	**P**	**09 19 02.2**	**+0.1**
	comp=Z,1.3nm,0.8s,mb3.5,baz=320,slow=8.8,SNR=6.1						
MJAR	**Matsushiro Arr**	**32.37**	**102**	LR	LR	09 32 15.1	
	comp=Z,36nm,20.9s,MS3.0,baz=80,slow=35						
PETK	**Petropavlovsk-**	**35.69**	**64**	P	**P**	**09 20 31.0**	**+0.5**
	comp=Z,5.8nm,0.9s,mb4.5,baz=307,slow=11,SNR=3.2						
PETK	**Petropavlovsk-**	**35.69**	**64**	P	**P**	**09 20 31.0**	**+0.5**
PETK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
BRTR	**Keskin Array B**	**44.87**	**281**	P	**P**	**09 21 48.0**	**+1.3**
	comp=Z,1.1nm,0.9s,mb3.7,baz=74,slow=9.1,SNR=6.0						
BRTR	**Keskin Array B**	**44.87**	**281**	*i* P	**P**	**09 21 48.7**	**+2.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**44.87**	**281**	P	**P**	**09 21 48.0**	**+1.3**
NB2	**NORSAR Subarra**	**45.30**	**317**	P	**P**	**09 21 50.4**	**+0.6**
	comp=Z,1.1nm,0.5s,mb3.9,baz=60,slow=7.9						
NOA	**NORSAR Array B**	**45.30**	**317**	P	**P**	**09 21 50.2**	**+0.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=60,slow=7.8,SNR=3.9						
NOA				LR	LR	09 41 37.9	
	comp=Z,23nm,20.8s,MS3.1,baz=210,slow=37						
NOA	**NORSAR Array B**	**45.30**	**317**	P	**P**	**09 21 50.2**	**+0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,23nm,20.8s						
ILAR	**Eielson Array**	**53.59**	**29**	P	**P**	**09 22 51.5**	**-1.5**
	comp=Z,0.3nm,0.9s,mb3.2,baz=286,slow=3.4,SNR=3.3						
KEST	**Kesra**	**61.93**	**293**	P	**P**	**09 23 50.2**	**-1.8**
	comp=Z,0.7nm,0.6s,mb4.0,baz=66,slow=16,SNR=2.7						
WRA	**Warramunga Arr**	**78.30**	**145**	P	**P**	**09 25 30.0**	**-2.4**
	comp=Z,0.5nm,0.9s,mb3.4,baz=347,slow=6.1,SNR=3.4						
WRA	**Warramunga Arr**	**78.30**	**145**	P	**P**	**09 25 30.0**	**-2.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**81.58**	**147**	P	**P**	**09 25 48.8**	**-1.3**
	comp=Z,0.8nm,1.0s,mb3.6,baz=2.5,slow=6.5,SNR=3.5						
ASAR	**Alice Springs**	**81.58**	**147**	P	**P**	**09 25 48.8**	**-1.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**83.44**	**283**	P	**P**	**09 26 00.0**	**-0.1**
	comp=Z,0.4nm,0.9s,mb3.5,baz=35,slow=5.0,SNR=3.0						

BJI ***04*** *09:34:08.7, 11°.78S×166°.91E, h147km, mB5.0/18, mb4.9/39*
ISCJB ***04*** *09:34:09.8±0.2, 12°.12S±0°.04×166°.65E±0°.04, h160km, mb4.8/65, Error ellipse: s-maj=6.2km s-min=4.9km az=154.4*
IDC ***04*** *09:34:10.1±0.5, 12°.08S×166°.77E, h155km±4km, mb4.3/21, mb1 4.5/22, mb1mx4.5/23, mbtmp4.4/22, MS4.1/6, Ms1 4.1/6, ms1mx3.8/31, Error ellipse: s-maj=13.2km s-min=10.0km az=122.0*
NEIC ***04*** *09:34:10.4±0.2, 12°.09S×166°.77E, mb4.9/36, Error ellipse: s-maj=8.1km s-min=5.5km az=154.0*
ISC 04 09:34:11.5±0.2, 12°.11S±0°.05×166°.70E±0°.04, h162km, h162km±1.4km: pP-P, n192, σ0§73/164, mb4.8/65, 21C-24D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.15**	**291**	P	**Pn**	**09 35 53.9**	**+0.3**
	24nm,0.3s,baz=6.2,slow=7.3,SNR=11						
HNR	**Honiara**	**7.15**	**291**	*e*Pn	**Pn**	**09 35 54.3**	**+0.7**
	830nm,1.0s						
DZM	**Mont Dzumac**	**9.91**	**181**	*e*P	**Pn**	**09 36 30.5**	**+0.3**
DZM				*e*S	**Sn**	**09 38 16.6**	**-3.5**
FUNA	**Funafuti**	**12.80**	**75**	*e*Pn	**Pn**	**09 37 05.0**	**-2.7**
PMG	**Port Moresby**	**19.39**	**276**	*e*P	**P**	**09 38 26.2**	**+1.1**
	33nm,1.0s						
EIDS	**Eidsvold**	**19.79**	**226**	*e*P	**P**	**09 38 31.0**	**+1.7**
	26nm,1.1s						
CTA	**Charters Tower**	**21.17**	**245**	P	**P**	**09 38 44.1**	**-0.1**
	35nm,0.7s,mb4.8,baz=75,slow=12,SNR=54						
CTAO	**Charters Tower**	**21.17**	**245**	*e*P	**P**	**09 38 44.5**	**+0.3**
	38nm,0.8s,mb4.8						
RAO	**Raoul Island**	**22.27**	**142**	*e*P	**P**	**09 38 52.6**	**-2.9**
	470nm,0.5s						
STKA	**Stephens Creek**	**30.35**	**226**	P	**P**	**09 40 08.3**	**+0.3**
	5.1nm,0.8s,mb4.3,baz=32,slow=11,SNR=12						
STKA				pP	pP	09 40 40.1	-1.9
	10nm,1.0s,baz=38,slow=6.3,SNR=6.8						
STKA	**Stephens Creek**	**30.35**	**226**	P	**P**	**09 40 08.3**	**+0.3**
STKA				*e*P		09 40 08.6	
STKA				pP	pP	09 40 40.1	-1.9
RPZ	**Rata Peaks**	**31.72**	**174**	P	**P**	**09 40 20.2**	**+0.3**
	21nm,0.6s,mb5.1,baz=130,slow=4.2,SNR=15						
WRA	**Warramunga Arr**	**32.02**	**252**	P	**P**	**09 40 22.1**	**-0.8**
	5.1nm,0.9s,mb4.2,baz=82,slow=8.8,SNR=20						
WRA				pP	pP	09 40 55.4	-1.6
	2.9nm,0.8s,baz=80,slow=9.0,SNR=4.3						
ASAR	**Alice Springs**	**33.18**	**245**	P	**P**	**09 40 31.9**	**-1.0**
	5.4nm,0.7s,mb4.4,baz=72,slow=9.2,SNR=43						
ASAR				pP	pP	09 41 06.5	-0.6
	8.8nm,0.8s,baz=76,slow=9.5,SNR=11						
ASAR				PcP	PcP	09 43 11.2	-0.8
	0.8nm,0.5s,baz=71,slow=3.0,SNR=4.4						
RAR	**Rarotonga**	**33.31**	**110**	LR	LR	09 51 11.0	
	comp=Z,745nm,19.3s,baz=158,slow=31						
GUMO	**Guam**	**33.47**	**319**	P	**P**	**09 40 34.7**	**-0.8**
	29nm,0.5s,mb5.2,baz=198,slow=22,SNR=4.8						
BBOO	**Buckleboo**	**34.82**	**229**	*e*P	**P**	**09 40 46.7**	**-0.2**
	100nm,1.5s,mb5.2						
BBOO				*e*pP	pP	09 41 22.2	+0.9
FITZ	**Fitzroy Crossi**	**40.03**	**256**	P	**P**	**09 41 30.5**	**-0.4**
	6.1nm,0.8s,mb4.3,baz=90,slow=4.5,SNR=9.3						
FITZ				pP	pP	09 42 05.5	-0.6
	7.0nm,0.7s,baz=102,slow=6.1,SNR=5.3						
FORT	**Forrest**	**40.22**	**236**	*e*P	**P**	**09 41 32.4**	**0.0**
	27nm,0.9s,mb4.9						
FORT				*e*pP	pP	09 42 08.1	+0.5
MBWA	**Marble Bar**	**45.76**	**252**	*e*P	**P**	**09 42 17.2**	**+0.2**
	15nm,0.9s,mb4.6						
MBWA				*e*pP	pP	09 42 48.6	-4.4
KKM	**Kota Kinabalu**	**53.34**	**287**	*e*P	**P**	**09 43 14.3**	**-0.2**
	16nm,1.0s,mb4.7						
MJAR	**Matsushiro Arr**	**55.34**	**332**	P	**P**	**09 43 26.9**	**-1.6**
	9.3nm,0.7s,mb4.6,baz=166,slow=8.7,SNR=17						
MAJO	**Matsushiro**	**55.34**	**332**	*e*P	**P**	**09 43 27.6**	**-0.9**
	13nm,0.9s,mb4.7						
MAT	**Matsushiro**	**55.34**	**332**	P	**P**	**09 43 27.3**	**-1.2**
TPUB	**Ta-pu**	**57.19**	**308**	*e*P	**P**	**09 43 41.1**	**-0.8**
	18nm,0.9s,mb4.9						
YHNB	**Yeheng**	**57.38**	**310**	*e*P	**P**	**09 43 42.4**	**-0.8**
	16nm,0.8s,mb4.9						
ASAJ	**Asahikawa**	**60.10**	**340**	*e*P	**P**	**09 44 01.9**	**+0.3**
	2.4nm,0.4s,mb4.4						
PTCN	**Pitairn Islan**	**60.81**	**112**	*e*P	**P**	**09 44 02.3**	**-4.6**
	1μm,0.7s						
KSRS	**Korea Array**	**61.28**	**325**	P	**P**	**09 44 09.2**	**-0.5**
	5.4nm,0.7s,mb4.5,baz=137,slow=7.4,SNR=30						
KSRS				PcP	PcP	09 44 50.9	+0.4
	1.3nm,0.7s,baz=138,slow=4.2,SNR=2.5						
YSS	**Yuzh-Sakhalins**	**62.58**	**342**	*e*P	**P**	**09 44 13.9**	**-4.3**
	26nm,1.0s,mb5.0						
NJ2	**Nanjing**	**63.43**	**315**	*e*P	**P**	**09 44 24.1**	**0.0**
NJ2				pP	pP	09 45 02.0	-0.3
NJ2				S	**S**	**09 52 45.5**	**+1.3**
NJ2				ScS	ScS	09 54 01.0	-0.8
NJ2				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.5						
NJ2				pmax	pmax		
	comp=Z,80nm,7.1s						
NJ2				LR	LR		
	comp=N,180nm,19.8s						
NJ2				LR	LR		
	comp=E,270nm,23.6s						
NJ2				LR	LR		
	comp=Z,330nm,21.1s						
QIZ	**Qiongzhong**	**64.00**	**298**	P	**P**	**09 44 28.6**	**+0.5**
QIZ				S	**S**	**09 52 49.5**	**-2.3**
QIZ				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
PETK	**Petropavlovsk-**	**65.41**	**354**	P	**P**	**09 44 36.1**	**-0.4**
	comp=Z,5.5nm,0.8s,mb4.4,baz=138,slow=6.3,SNR=5.3						
PETK				LR	LR	10 08 13.6	
	comp=Z,135nm,21.8s,baz=258,slow=31						
MDJ	**Mudanjiang**	**65.72**	**332**	P	**P**	**09 44 38.8**	**+0.1**
MDJ				PcP	PcP	09 45 07.5	-1.1
MDJ				pP	pP	09 45 16.6	-0.6
MDJ				PP	PP	09 47 06.9	+1.3
MDJ				S	S	09 53 14.6	+2.8
MDJ				ScS	ScS	09 54 19.4	+0.5
MDJ				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,49nm,2.8s,mb4.8						
MDJ	**Mudanjiang**	**65.72**	**332**	*e*P	**P**	**09 44 39.0**	**+0.3**
	comp=Z,17nm,1.0s,mb4.8						
CASY	**Casey**	**65.74**	**202**	*e*P	**P**	**09 44 37.7**	**-0.8**
SBA	**Scott Base**	**65.74**	**180**	*e*P	**P**	**09 44 39.3**	**+0.9**
	comp=Z,58nm,2.2s,mb5.0						
CN2	**Changchun**	**67.13**	**329**	*e*P	**P**	**09 44 52.8**	**+5.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
ENH	**Enshi**	**69.29**	**309**	*e*P	**P**	**09 45 01.1**	**-0.3**
	comp=Z,40nm,1.0s,mb5.1						
GYA	**Guiyang**	**69.79**	**304**	P	**P**	**09 45 06.0**	**+1.5**
GYA				PcP	PcP	09 45 27.8	+1.7
GYA				PP	PP	09 47 45.3	+4.1
GYA				S	S	09 54 01.0	+0.1
GYA				SKS		09 54 47.6	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
GYA				pmax	pmax		
	comp=Z,130nm,5.8s						
BJI	**Beijing**	**69.89**	**321**	P	**P**	**09 45 05.0**	**+0.1**
BJI				S	S	09 54 02.3	+0.7
BJI				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
BJI				pmax	pmax		
	comp=Z,110nm,3.8s						
BJI				LR	LR		
	comp=N,440nm,17.0s						
BJI				LR	LR		
	comp=E,400nm,18.5s						
BJI				LR	LR		
	comp=Z,270nm,22.8s						
XAN	**Xi'an**	**71.52**	**312**	P	**P**	**09 45 14.9**	**0.0**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
KMI	**Kunming**	**72.47**	**301**	P	**P**	**09 45 21.9**	**+1.2**
KMI				PcP	PcP	09 45 39.9	+2.3
KMI				pP	pP	09 46 01.1	+1.2
KMI				PP	PP	09 48 08.1	+3.8
KMI				S	S	09 54 32.4	+0.5
KMI				SS	SS	09 59 16.9	+2.5
KMI				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.8						
KMI				pmax	pmax		
	comp=Z,41nm,3.1s						
KMI				LR	LR		
	comp=N,250nm,18.4s						
KMI				LR	LR		
	comp=E,250nm,18.4s						
KMI				LR	LR		
	comp=Z,210nm,24.8s						
HHC	**Hu-ho-hao-te**	**73.24**	**319**	*e*P	**P**	**09 45 26.9**	**+2.0**
HHC				PcP	PcP	09 45 42.9	+2.4
HHC				PP	PP	09 48 14.8	+4.3
HHC				S	S	09 54 41.0	+1.0
HHC				ScS	ScS	09 55 16.9	-1.5
HHC				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.0						
HHC				pmax	pmax		
	comp=Z,120nm,4.7s						
HHC				LR	LR		
	comp=N,960nm,15.3s						
HHC				LR	LR		
	comp=E,340nm,15.7s						
HHC				LR	LR		
	comp=Z,200nm,18.1s						
CM31	**Chiang Mai Arr**	**73.39**	**294**	*e*P	**P**	**09 45 27.5**	**+1.2**
	comp=Z,2.6nm,0.3s,mb4.4						
CMAR	**Chiang Mai Arr**	**73.39**	**294**	P	**P**	**09 45 26.6**	**+0.3**
	comp=Z,7.8nm,0.8s,mb4.5,baz=127,slow=4.5,SNR=36						
CMAR				pP	pP	09 46 04.2	-1.3
	comp=Z,2.8nm,0.8s,baz=117,slow=4.2,SNR=2.7						
CHTO	**Chiang Mai**	**73.51**	**294**	*e*P	**P**	**09 45 27.2**	**+0.2**
	comp=Z,18nm,1.0s,mb4.8						
CD2	**Chengdu**	**73.99**	**307**	*e*P	x	09 45 09.6	
CD2				pP	pP	09 46 08.8	0.0
CD2				sP	sP	09 46 26.1	0.0
CD2				PP	PP	09 48 19.8	+2.7
CD2				S	S	09 54 49.3	+0.5
CD2				sS	sS	09 55 58.7	+1.7
CD2				SS	SS	09 59 43.0	+5.7
CD2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
CD2				pmax	pmax		
	comp=Z,110nm,7.2s						
LZH	**Lanzhou**	**76.16**	**312**	⇓P	**P**	**09 45 43.0**	**+1.2**
LZH				PP	PP	09 48 39.2	+3.9
LZH				*e*S	S	09 55 13.1	+0.5
LZH				SS	SS	10 00 12.9	+2.9
LZH				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.1						
LZH				pmax	pmax		
	comp=Z,150nm,5.3s						
LZH				LR	LR		
	comp=N,330nm,15.0s						
LZH				LR	LR		
	comp=E,300nm,14.5s						
LZH				LR	LR		
	comp=Z,360nm,19.2s						
QSPA	**South Pole Qui**	**77.91**	**180**	P	**P**	**09 45 50.6**	**-0.3**
	comp=Z,9.9nm,0.9s,mb4.5,baz=12,slow=1.1,SNR=41						
QSPA				pP	pP	09 46 27.6	-3.0
	comp=Z,6.9

PAHR Pah Rah Range 85.61 48 *eP* **P 09 46 32.0 +0.1**
comp=Z,178nm,1.1s,mb5.7
PAHR *epP pP* 09 47 11.5 -0.8
MPMC Manual Prospec 85.86 52 ⇑P **P 09 46 33.1 0.0**
baz=86
NVAR Mina Array Bea 85.99 50 P **P 09 46 33.1 -0.6**
comp=Z,3.6nm,0.9s,mb4.1,baz=229,slow=8.4,SNR=20
NVAR *pP pP* 09 47 12.1 -2.1
comp=Z,5.1nm,1.0s,baz=228,slow=8.4,SNR=6.0
EGAK Eagle 86.05 20 *eP* **P 09 46 32.6 -0.8**
comp=Z,121nm,0.8s,mb5.7
GSC Goldstone 86.16 53 *eP* **P 09 46 34.5 -0.1**
GSC *epP pP* 09 47 17.2 +2.1
GRAC Grapevine Rang 86.24 51 P **P 09 46 35.2 +0.2**
baz=86,SNR=6.0
HEC Hector,Ludlow 86.39 53 ⇑P **P 09 46 35.7 -0.1**
baz=86
BELC Belle Mtn. Jos 86.41 54 ⇑P **P 09 46 35.7 -0.2**
baz=86
FURC Furnace Creek, 86.47 52 P **P 09 46 35.9 -0.3**
baz=86,SNR=8.7
U10A Ash Meadows, A 86.86 52 ⇓P **P 09 46 37.8 -0.2**
baz=87,SNR=5.6
TUQ Turquoise Moun 86.89 53 ⇑P **P 09 46 38.0 -0.2**
baz=87
GMRC Granite Mounta 86.90 54 ⇓P **P 09 46 38.1 -0.2**
baz=87
I07A Izee 87.00 44 ⇓P **P 09 46 38.6 +0.1**
baz=87
WVOR Wild Horse Val 87.05 46 *eP* **P 09 46 38.8 0.0**
comp=Z,6.0nm,1.4s,mb4.2
GLA Glamis 87.07 55 *eP* **P 09 46 39.7 +0.6**
comp=Z,138nm,1.1s,mb5.7
GLA *epP pP* 09 47 22.0 +2.4
S10A Tonopah Range, 87.11 50 ⇑P **P 09 46 39.2 0.0**
baz=87,SNR=5.5
IRM Iron Mountain 87.13 54 ⇑P **P 09 46 39.1 -0.3**
baz=87
V11A Goodsprings 87.39 53 ⇓P **P 09 46 40.6 +0.1**
baz=88
LDFC Landfair 87.42 53 *eP* **P 09 46 41.1 +0.4**
LDFC *epP pP* 09 47 23.9 +2.5
R10A Warm Springs 87.44 50 ⇓P **P 09 46 40.5 -0.3**
baz=88
HAWA Hanford 87.77 42 *eP* **P 09 46 41.8 -0.3**
comp=Z,127nm,0.9s,mb5.8
HAWA *epP pP* 09 47 21.2 -1.5
SHPR Sheep Range 87.79 52 *eP* **P 09 46 42.8 +0.3**
SHPR *epP pP* 09 47 25.1 +2.1
T11A Corn Creek, Al 87.95 51 P **P 09 46 43.5 +0.3**
baz=88,SNR=5.4
R11A Troy Canyon, C 88.00 50 ⇓P **P 09 46 43.2 -0.2**
baz=88,SNR=5.4
Z13A Yuma Proving G 88.06 56 P **P 09 46 44.1 +0.3**
baz=88,SNR=6.7
Y13A Salome 88.08 55 P **P 09 46 44.2 +0.3**
baz=88,SNR=7.3
Q11A Duckwater 88.09 50 P **P 09 46 43.8 0.0**
baz=88,SNR=11
S12A Delamar Landin 88.34 51 ⇑P **P 09 46 44.6 -0.5**
baz=88,SNR=7.5
214A Organ Pipe Nat 88.41 57 ⇓P **P 09 46 45.5 0.0**
baz=88,SNR=6.7
V13A Grand Canyon W 88.52 53 P **P 09 46 46.2 +0.3**
baz=89,SNR=5.9
U13A Pakoon Wash 88.69 52 P **P 09 46 47.0 +0.3**
baz=89,SNR=7.4
R12A Pony Springs, 88.73 50 ⇓P **P 09 46 47.1 +0.3**
baz=89,SNR=12
Q12A Willow Creek R 88.76 50 P **P 09 46 47.5 +0.5**
baz=89,SNR=6.0
T13A Saint George 88.90 52 ⇓P **P 09 46 48.0 +0.3**
baz=89
X14A Yava 89.01 55 P **P 09 46 49.0 +0.8**
baz=89,SNR=9.1
S13A Holt Ranch, En 89.09 51 ⇓P **P 09 46 49.0 +0.5**
baz=89,SNR=6.2
V14A Boquillas Ranc 89.15 53 P **P 09 46 49.6 +0.7**
baz=89,SNR=7.2
R13A O'Grain Ranch, 89.17 51 P **P 09 46 49.7 +0.8**
baz=89,SNR=5.6
U14A Mt Trumbull 89.30 53 P **P 09 46 50.0 +0.5**
baz=89,SNR=14
Y15A Casa Rosa Ranc 89.32 55 ⇑P **P 09 46 49.7 0.0**
baz=89,SNR=7.6
Q13A Wheeler Ranch, 89.35 50 P **P 09 46 50.1 +0.4**
baz=89,SNR=9.0
ARUT Antelope Range 89.47 51 *eP* **P 09 46 50.6 +0.3**
comp=Z,2.7nm,0.9s,mb4.2
ARUT *epP pP* 09 47 34.0 +3.0
P13A Bates Ranch, G 89.49 50 P **P 09 46 50.5 +0.2**
baz=90,SNR=16
X15A Humboldt 89.54 55 ⇓P **P 09 46 51.1 +0.4**
baz=90,SNR=9.7
216A Three Points, 89.54 57 ⇓P **P 09 46 51.5 +0.8**
baz=90,SNR=5.3
I12A Atlanta 89.91 45 ⇑P **P 09 46 52.3 +0.1**
baz=90
Q14A Sevier Lake (B 89.91 50 P **P 09 46 52.5 +0.2**
baz=90,SNR=11
V15A Kaibab Nationa 89.93 53 P **P 09 46 53.0 +0.5**
baz=90,SNR=7.4
NEW Newport 89.93 40 *eP* **P 09 46 51.6 -0.6**
comp=Z,2.4nm,0.8s,mb4.2
NEW *epP pP* 09 47 31.6 -1.4
Y16A Circle Bar Ran 89.99 55 P **P 09 46 53.7 +0.8**
baz=90,SNR=6.8
U15A North Rim 89.99 53 P **P 09 46 53.4 +0.6**
baz=90,SNR=14
217A Green Valley 90.01 58 P **P 09 46 53.5 +0.5**
baz=90,SNR=8.2
X16A Lo Mia Camp, P 90.15 55 P **P 09 46 54.5 +0.8**
baz=90,SNR=9.0
G12A Big Creek, Yel 90.17 44 ⇓P **P 09 46 53.2 -0.2**
baz=90
117A Oracle 90.27 57 P **P 09 46 54.8 +0.6**
baz=90,SNR=6.3
HLID Hailey 90.34 46 *eP* **P 09 46 54.6 +0.4**
comp=Z,1.8nm,0.3s,mb4.5
C11A Tepee Creek (N 90.36 41 ⇓P **P 09 46 54.2 0.0**
baz=90
F12A Elk City 90.40 43 ⇓P **P 09 46 53.7 -0.7**
baz=90
WMQ Urumqi 90.50 315 *eP* **P 09 46 55.5 +0.5**
WMQ *pmax pmax*
comp=Z,21nm,1.0s,mb5.1
318A Bisbee 90.61 58 ⇓P **P 09 46 56.1 +0.3**
baz=91,SNR=10
MSU Marysvale 90.62 51 *eP* **P 09 46 56.7 +1.0**
X17A Forest Lakes 90.64 55 ⇓P **P 09 46 56.7 +0.8**
baz=91,SNR=7.5
I13A Wildhorse Cree 90.65 45 ⇓P **P 09 46 55.7 0.0**
baz=91
218A Dragoon 90.69 58 ⇑P **P 09 46 56.9 +0.7**
baz=91,SNR=8.7
U16A Tuba City 90.83 53 ⇑P **P 09 46 57.2 +0.5**
baz=91,SNR=7.0
S16A Weppner Ranch, 90.86 52 P **P 09 46 57.1 +0.3**
baz=91,SNR=5.1
G13A Cobalt 90.90 44 ⇑P **P 09 46 56.5 -0.3**
baz=91
HVU Hansel Valley 91.02 48 *eP* **P 09 46 57.3 -0.2**
comp=Z,180nm,1.1s
HVU *epP pP* 09 47 38.3 +0.1
NLU North Lily Min 91.06 49 *eP* **P 09 46 58.0 +0.3**
comp=Z,74nm,1.1s,mb5.6
NLU *epP pP* 09 47 39.3 +0.9
R16A Teasdale 91.09 51 ⇑P **P 09 46 58.7 +0.9**
baz=91,SNR=5.5
Y18A Canyon Day Jun 91.13 56 ⇑P **P 09 46 58.4 +0.2**
baz=91,SNR=5.5
319A Douglas 91.19 58 P **P 09 46 58.9 +0.4**
baz=91,SNR=7.6
T17A Navajo Res., N 91.29 53 P **P 09 46 59.2 +0.4**
baz=91,SNR=5.5
219A White Tail Can 91.35 58 P **P 09 46 59.4 +0.2**
baz=91,SNR=8.8
H14A Leadore 91.36 45 ⇑P **P 09 46 59.2 +0.3**
baz=91
L15A Malad City 91.36 47 ⇑P **P 09 46 59.0 0.0**
baz=91
J15A Blackfoot 91.69 46 ⇓P **P 09 47 01.1 +0.6**
baz=92
Y19A Nutrioso 91.80 56 P **P 09 47 02.2 +1.0**
baz=92,SNR=5.2
320A Kipp Ranch, An 91.81 58 ⇑P **P 09 47 02.0 +0.7**
baz=92,SNR=9.7
HWUT Hardware Ranch 91.86 48 *eP* **P 09 47 00.8 -0.6**

DLMT Dillon 92.08 44 *eP* **P 09 47 02.5 +0.2**
comp=Z,101nm,1.0s,mb5.8
DLMT *epP pP* 09 47 43.0 0.0
U19A Dine' College, 92.37 54 ⇓P **P 09 47 03.9 +0.1**
baz=92
PV10 Paradox Valley 92.98 52 *eP* **P 09 47 06.6 +0.1**
comp=Z,37nm,0.8s,mb5.6
PV01 Paradox Valley 93.28 52 *eP* **P 09 47 06.8 -1.2**
comp=Z,91nm,0.9s,mb5.9
PDAR Pinedale Array 93.58 47 P **P 09 47 09.7 +0.5**
comp=Z,0.6nm,0.8s,mb3.8,baz=210,slow=8.6,SNR=4.6
PDAR *pP pP* 09 47 49.0 -1.0
comp=Z,1.2nm,1.1s,baz=268,slow=4.2,SNR=3.7
U21A Nageezi 93.62 54 ⇑P **P 09 47 09.5 -0.2**
baz=94
ANMO Albuquerque 94.27 55 LR LR 10 29 28.9
comp=Z,146nm,18.0s,baz=260,slow=35
ANMO Albuquerque 94.27 55 *eP* **P 09 47 12.2 -0.4**
comp=Z,1.3nm,0.9s,mb4.1
MK31 Makanchi Array 94.93 317 *eP* **P 09 47 14.9 -0.4**
MKAR Makanchi Array 94.93 317 P **P 09 47 14.6 -0.7**
comp=Z,16nm,0.7s,mb5.3,baz=93,slow=6.5,SNR=132
MKAR *pP pP* 09 47 52.9 -3.3
comp=Z,0.7nm,0.4s,baz=90,slow=6.0,SNR=1.4
MKAR *PKKPbc PKKPbc* 10 04 07.7 -4.5
comp=Z,0.2nm,0.2s,baz=267,slow=3.2,SNR=4.1
MKAR Makanchi Array 94.93 317 P **P 09 47 14.6 -0.7**
MKAR *pP pP* 09 47 52.9 -3.2
MKAR *PKKPbc PKKPbc* 10 04 07.7 -4.6
ZAA0 Zalesovo Array 94.96 324 *eP* **P 09 47 13.8 -1.5**
ZALV Zalesovo Beam 94.96 324 P **P 09 47 13.6 -1.7**
comp=Z,3.0nm,0.7s,mb4.6,baz=114,slow=3.9,SNR=14
YKA Yellowknife Ar 95.48 27 P **P 09 47 15.1 -2.4**
comp=Z,0.5nm,0.5s,mb4.0,baz=259,slow=4.9,SNR=9.2
YKA *pP pP* 09 47 55.4 -2.9
comp=Z,0.3nm,0.5s,baz=258,slow=4.8,SNR=3.2
YKA *LR LR* 10 29 18.4
comp=Z,13nm,18.2s,baz=110,slow=35
TXAR Lajitas Array 95.51 61 P **P 09 47 17.5 -0.9**
comp=Z,1.1nm,0.8s,mb4.2,baz=230,slow=5.4,SNR=16
VNA2 Neumayer--Watz 97.07 182 *eP* **P 09 47 20.4 -4.2**
VNA1 Neumayer--Stat 97.37 182 *eP* **P 09 47 21.3 -4.7**
ARCES ARCESS Array B 117.59 346 *PKP PKPdf* 09 52 36.5 -1.1
comp=Z,3.2nm,0.5s,baz=92,slow=2.0,SNR=39
FINES FINESS Array B 123.10 339 *PKP PKPdf* 09 52 46.8 -1.5
comp=Z,1.8nm,0.4s,baz=90,slow=3.8,SNR=7.7
MALT Malatya 127.25 309 *ePKPdf PKPdf* 09 52 55.9 -1.1
NOA NORSAR Array B 127.96 345 *PKP PKPdf* 09 52 57.3 -0.4
comp=Z,1.2nm,0.6s,baz=32,slow=1.9,SNR=3.7
BRTR Keskin Array B 130.37 312 *PKP PKPdf* 09 53 02.5 -0.4
comp=Z,0.9nm,0.6s,baz=131,slow=3.6,SNR=5.6
CLL Collm 135.45 337 *ePKPdf PKPdf* 09 53 13.0 +0.9
CLL *e(SS)* 10 13 06.0
CLL *e* 10 16 12.0
CLL *e* 10 21 12.0
CLL *LmV* 11 01 00.0
comp=Z,100nm,19.4s
AVF Avril sur Loir 142.68 341 *ePKP1 PKPdf* 09 53 21.6 -3.9
ORIF Oris-en-Rattie 143.41 337 *ePKP1 PKPdf* 09 53 24.0 -2.8
comp=Z,34nm,0.7s
TCF Toulx Ste Croi 143.48 342 *ePKP1 PKPdf* 09 53 23.9 -3.0
SBF Sospel 143.66 334 *ePKP1 PKPdf* 09 53 24.0 -3.3
comp=Z,73nm,0.8s
MFF Saint Martin d 143.86 345 *ePKP1 PKPdf* 09 53 25.1 -2.4
comp=Z,36nm,0.8s
VIVF Saint-Julien-l 143.92 338 *ePKP1 PKPdf* 09 53 25.6 -2.1
comp=Z,45nm,0.9s
PGF Pioggiola 144.01 332 *ePKP1 PKPdf* 09 53 25.4 -2.5
comp=Z,45nm,0.8s
FRF La Foret Royal *ePKP1 PKPdf* 09 53 26.1 -2.2
comp=Z,87nm,0.9s
SMRF Simiane la Rot 144.32 336 *ePKP1 PKPdf* 09 53 27.0 -1.4
comp=Z,38nm,0.8s
LMR La Mourre 144.48 335 *ePKP1 PKPdf* 09 53 27.0 -1.7
comp=Z,64nm,0.7s
RJF Les Rejaudoux 144.58 342 *ePKP1 PKPdf* 09 53 27.5 -1.3
comp=Z,35nm,0.8s
CAF Calviac 144.75 341 *ePKP1 PKPdf* 09 53 28.4 -0.7
comp=Z,49nm,1.0s
LASF Ste Croix 144.89 338 *ePKP1 PKPdf* 09 53 28.9 -0.5
comp=Z,81nm,1.0s
LFF La Frestale 145.14 342 *ePKP1 PKPbc* 09 53 29.3 -0.4
comp=Z,48nm,0.8s
MTLF Montolieu 146.11 340 *ePKP1 PKPbc* 09 53 32.4 -0.3
comp=Z,32nm,0.8s
VSL Villasalto 146.13 328 *ePKPbc PKPbc* 09 53 32.7 -0.2
KEST Kesra 148.82 323 *PKPbc PKPbc* 09 53 40.2 -0.1
comp=Z,7.5nm,0.8s,baz=78,slow=0.8,SNR=24
KEST Kesra 148.82 323 *ePKPbc PKPbc* 09 53 40.7 +0.3
ESDC Sonseca Array 151.33 345 *PKPbc PKPbc* 09 53 46.2 0.0
comp=Z,3.1nm,0.7s,baz=13,slow=2.4,SNR=13
ESDC *PKPab PKPab* 09 53 54.9 +0.1
comp=Z,2.4nm,0.5s,baz=17,slow=4.2,SNR=8.1
ESLA Sonseca Array 151.33 345 *ePKPdf PKPbc* 09 53 46.3 +0.1
TORD Torodi Ar. Bea 165.33 276 *PKPab PKPab* 09 54 55.2 -1.0
comp=Z,1.7nm,0.9s,baz=92,slow=4.7,SNR=5.4

IDC ***04*** *09:37:01.9±0.5, 12°.17S×167°.08E, h255km±4km, mb5.0/26, mb1 5.1/27, mb1mx5.1/28, mbtmp5.0/27, Error ellipse: s-maj=7.9km s-min=6.9km az=121.0*
ISCJB ***04*** *09:37:02.4±0.1, 12°.26S±0°.02×167°.03E±0°.02, h270km, mb5.4/220, Error ellipse: s-maj=3.0km s-min=2.6km az=44.2*
BJI ***04*** *09:37:02.8, 11°.88S×167°.01E, h264km, mB5.2/33, mb5.2/54*
MOS ***04*** *09:37:02.4±1.2, 11°.99S×167°.08E, h261km, mb5.6/53, MS4.3/5, Error ellipse: s-maj=7.6km s-min=6.7km az=74.8*
NEIC ***04*** *09:37:04.0±0.1, 12°.14S×167°.10E, mb5.5/174, MW5.7, MW5.6, Error ellipse: s-maj=5.0km s-min=3.5km az=157.0, Moment Tensor Solution. s51 Moment tensor: Scale 10^{17}Nm; M_{rr}=4.27; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-4.08; $M_{r\theta}$1.19; $M_{\theta\phi}$-0.43; $M_{\phi r}$-1.54; Best double couple: M_0=4.60000×10^{17} NP1: ϕ_s=20.00000°, δ37.00000°, λ114.00000°. NP2: ϕ_s171.00000°, δ56.00000°, λ73.00000°. Principal axes: T 4.8500, Plg72.0000°, Azm36.0000°; N -0.4900, Plg14.0000°, Azm180.0000°; P -4.3700, Plg9.0000°, Azm273.0000°;*
GCMT ***04*** *09:37:05.6±0.1, 12°.17S×167°.04E, h261km, MW5.7, Moment Tensor Solution. s99,c193; s44,c44; Moment tensor: Scale 10^{17}Nm; M_{rr}2.80±.04; $M_{\theta\theta}$-0.19±.04; $M_{\phi\phi}$-2.62±.04; $M_{r\theta}$1.62±.05; $M_{\theta\phi}$-1.25±.04; $M_{\phi r}$-1.73±.04; Best double couple: $M_0$3.80000×10^{17} NP1:ϕ_s47.00000°, δ42.00000°, λ134.00000°. NP2:ϕ_s174.00000°, δ62.00000°, λ58.00000°. Principal axes: T 4.1600, Plg60.0000°, Azm36.0000°; N -0.8200, Plg28.0000°, Azm190.0000°; P -3.3400, Plg11.0000°, Azm286.0000°; Data Used: II IU IC G CN. Surface waves: sta=111, comp=213, per= 50.*

ISC 04 09:37:04.0±0.1, 12°.21S±0°.02×167°.07E±0°.02, h272km, h272km±1.7km; pP-P, n1174, σ0°68/850, mb5.4/220, 97C-110D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.52**	**291**	P	**Pn**	**09 38 50.0**	**-1.6**
	37nm,0.3s,baz=227,slow=2.0,SNR=19						
HNR				S	**S**	**09 40 19.3**	**+1.0**
	baz=103,slow=9.0,SNR=1.0						
HNR	**Honiara**	**7.52**	**291**	P	**Pn**	**09 38 50.0**	**-1.5**
HNR				S	**S**	**09 40 19.3**	**+1.0**
HNR				pmax	pmax		
	comp=Z,37nm,0.3s						
HNR	**Honiara**	**7.52**	**291**	*e*Pn	**Pn**	**09 38 50.7**	**-0.8**
	comp=Z,3μm,1.0s						
DZM	**Mont Dzumac**	**9.82**	**183**	*e*Pn	**Pn**	**09 39 19.6**	**-0.5**
	comp=Z,27nm,0.3s						
NOUC	**Port Laguerre**	**9.86**	**184**	*e*P	**Pn**	**09 39 19.9**	**-0.8**
NOUC				*e*S	**S**	**09 41 13.7**	**+1.9**
MSVF	**Nonsavu**	**11.94**	**119**	*e*Pn	**Pn**	**09 39 47.0**	**+0.6**
	comp=Z,223nm,0.9s						
MSVF	**Nonsavu**	**11.94**	**119**	Pn	**Pn**	**09 39 47.8**	**+1.3**
	comp=Z,2μm,0.9s,SNR=16						
FUNA	**Funafuti**	**12.48**	**74**	*e*Pn	**Pn**	**09 39 51.7**	**-1.4**
	comp=Z,2μm,1.3s						
PMG	**Port Moresby**	**19.75**	**276**	*d iP*	**P**	**09 41 14.3**	**+0.1**
PMG	**Port Moresby**	**19.75**	**276**	*e*P	**P**	**09 41 14.6**	**+0.4**
	comp=Z,373nm,1.0s						
EIDS	**Eidsvold**	**19.98**	**227**	*e*P	**P**	**09 41 17.4**	**+1.0**
	comp=Z,512nm,1.1s						
AFI	**Afiamalu**	**20.68**	**97**	P	**P**	**09 41 21.9**	**-2.0**
	comp=Z,207nm,1.0s,baz=116,slow=23,SNR=8.2						
AFI	**Afiamalu**	**20.68**	**97**	*e*P	**P**	**09 41 22.5**	**-1.4**
AFI				pmax	pmax		
	comp=Z,181nm,0.9s						
AFI	**Afiamalu**	**20.68**	**97**	*e*P	**P**	**09 41 22.5**	**-1.4**
	comp=Z,181nm,0.9s						
CTA	**Charters Tower**	**21.45**	**246**	P	**P**	**09 41 31.7**	**+0.4**
	comp=Z,123nm,0.8s,mb5.3,baz=75,slow=12,SNR=86						
CTA				S	**S**	**09 45 17.2**	**+6.8**
	comp=Z,1.5nm,0.4s,baz=185,slow=22,SNR=0.8						
CTA				ScP	ScP	09 48 37.2	+2.9
	comp=Z,4.6nm,0.8s,baz=187,slow=4.6,SNR=3.8						
CTA	**Charters Tower**	**21.45**	**246**	*e*P	**P**	**09 41 31.9**	**+0.5**
	comp=Z,103nm,1.1s,mb5.1						
CTA				*e*S	**S**	**09 45 17.5**	**+7.1**
CTA	**Charters Tower**	**21.45**	**246**	P	**P**	**09 41 31.7**	**+0.3**
CTA				S	**S**	**09 45 17.2**	**+6.8**
CTA	**Charters Tower**	**21.45**	**246**	P	**P**	**09 41 31.7**	**+0.4**
CTA				S	**S**	**09 45 17.2**	**+6.8**
CTA				ScP	ScP	09 48 37.2	+2.9
CTAO	**Charters Tower**	**21.45**	**246**	*e*P	**P**	**09 41 32.3**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,403nm,1.3s,mb5.6						
CTAO	**Charters Tower**	**21.45**	**246**	*e*P	**P**	**09 41 32.3**	**+1.0**
	comp=Z,403nm,1.3s,mb5.6						
ARMA	**Armidale**	**23.08**	**216**	*e*P	**P**	**09 41 47.6**	**+1.5**
ARMA				*e*S	**S**	**09 45 46.6**	**+10**
ARMA	**Armidale**	**23.08**	**216**	*e*P	**P**	**09 41 47.6**	**+1.5**
	comp=Z,150nm,0.9s,mb5.3						
COEN	**Coen**	**23.34**	**263**	*e*P	**P**	**09 41 49.7**	**+1.1**
	comp=Z,862nm,0.9s,mb6.1						
OUZ	**Omahuta**	**23.66**	**167**	*e*P	**P**	**09 41 52.3**	**+1.1**
	comp=Z,44nm,0.9s,mb4.8						
URZ	**Urewera**	**27.44**	**163**	P	**P**	**09 42 24.6**	**-0.5**
	comp=Z,7.9nm,0.3s,mb4.7,baz=34,slow=5.3,SNR=17						
URZ				S	**S**	**09 46 47.1**	**+2.0**
	comp=Z,5.6nm,0.5s,baz=84,slow=22,SNR=2.0						
URZ	**Urewera**	**27.44**	**163**	*e*P	**P**	**09 42 24.7**	**-0.4**
URZ	**Urewera**	**27.44**	**163**	PN	**P**	**09 42 23.9**	**-1.2**
PUZ	**Puketiti**	**27.62**	**161**	PN	**P**	**09 42 25.6**	**-1.1**
MWZ	**Matawai**	**27.64**	**162**	PN	**P**	**09 42 26.0**	**-0.8**
FWVZ	**Far West T-bar**	**27.96**	**166**	PN	**P**	**09 42 31.3**	**+1.6**
TUVZ	**Tukino**	**28.00**	**166**	PN	**P**	**09 42 32.3**	**+2.2**
RAHZ	**Arahi**	**28.05**	**163**	PN	**P**	**09 42 29.5**	**-0.9**
BKZ	**Black Stump Fm**	**28.12**	**164**	PN	**P**	**09 42 30.2**	**-0.9**
NMHZ	**Naumai**	**28.14**	**164**	PN	**P**	**09 42 30.6**	**-0.6**
BHHZ	**Black Hill Sta**	**28.31**	**165**	PN	**P**	**09 42 32.0**	**-0.8**
KNZ	**Kokohu**	**28.31**	**162**	PN	**P**	**09 42 32.4**	**-0.4**
WAZ	**Wanganui**	**28.31**	**167**	PN	**P**	**09 42 34.5**	**+1.7**
MCHZ	**McNeill Hill**	**28.43**	**164**	PN	**P**	**09 42 34.2**	**+0.4**
KAHZ	**Kahuranaki**	**28.81**	**164**	PN	**P**	**09 42 35.9**	**-1.3**
TSZ	**Takapari Road**	**28.83**	**166**	PN	**P**	**09 42 37.1**	**-0.2**
WPHZ	**Waipukurau**	**28.95**	**165**	PN	**P**	**09 42 38.1**	**-0.3**
PXZ	**Pawanui**	**29.03**	**164**	PN	**P**	**09 42 38.8**	**-0.3**
DVHZ	**Dannevirke**	**29.10**	**166**	PN	**P**	**09 42 38.0**	**-1.7**
MRZ	**Mangatainoka R**	**29.31**	**167**	PN	**P**	**09 42 40.2**	**-1.4**
KIW	**Kapiti Island**	**29.36**	**168**	PN	**P**	**09 42 41.3**	**-0.7**
OGWZ	**Otaki Gorge**	**29.37**	**167**	PN	**P**	**09 42 41.3**	**-0.8**
NNZ	**Nelson**	**29.42**	**170**	PN	**P**	**09 42 43.7**	**+1.2**
BFZ	**Birch Farm**	**29.48**	**166**	PN	**P**	**09 42 41.2**	**-2.0**
HOWZ	**Holdsworth Sta**	**29.52**	**167**	PN	**P**	**09 42 41.9**	**-1.5**
TCW	**Tory Channel**	**29.57**	**169**	PN	**P**	**09 42 43.4**	**-0.4**
CAW	**Cannon Point**	**29.63**	**168**	PN	**P**	**09 42 43.5**	**-0.9**
TUWZ	**Tuamarina**	**29.72**	**170**	PN	**P**	**09 42 44.9**	**-0.3**
SNZO	**South Karori**	**29.75**	**168**	*e*P	**P**	**09 42 45.0**	**-0.4**
	comp=Z,140nm,1.0s,mb5.5						
SNZO	**South Karori**	**29.75**	**168**	PN	**P**	**09 42 44.5**	**-0.9**
MTW	**Mount Morrison**	**29.77**	**167**	PN	**P**	**09 42 44.5**	**-1.1**
TMWZ	**Te Maipa**	**29.81**	**167**	PN	**P**	**09 42 44.6**	**-1.3**
THZ	**Tophouse**	**29.88**	**171**	PN	**P**	**09 42 46.4**	**-0.2**
MSWZ	**Moikau Station**	**29.96**	**168**	PN	**P**	**09 42 46.1**	**-1.2**
PAWZ	**Paruwai Farm**	**29.96**	**167**	*e*PN	**P**	**09 42 46.2**	**-1.1**
TRWZ	**Traveller**	**30.04**	**167**	PN	**P**	**09 42 46.3**	**-1.7**
STKA	**Stephens Creek**	**30.53**	**226**	P	**P**	**09 42 53.6**	**+1.2**
	comp=Z,20nm,0.3s,mb5.1,baz=42,slow=8.2,SNR=62						
STKA				S	**S**	**09 47 35.5**	**+1.9**
	comp=Z,7.6nm,1.0s,baz=194,slow=17,SNR=3.9						
STKA				ScP	ScP	09 49 03.7	+3.1
	comp=Z,5.0nm,0.8s,baz=2.1,slow=4.6,SNR=3.0						
STKA	**Stephens Creek**	**30.53**	**226**	*e*P	**P**	**09 42 53.5**	**+1.1**
	comp=Z,38nm,1.1s,mb4.8						
STKA				*e*S	**S**	**09 47 34.8**	**+1.2**
STKA	**Stephens Creek**	**30.53**	**226**	*e*P	**P**	**09 42 53.7**	**+1.2**
	comp=Z,25nm,1.3s,mb4.6						
KHZ	**Kahutara**	**30.61**	**171**	*e*P	**P**	**09 42 52.9**	**-0.1**
	comp=Z,42nm,0.3s,mb5.5						
KHZ	**Kahutara**	**30.61**	**171**	PN	**P**	**09 42 51.9**	**-1.1**
LTZ	**Lake Taylor**	**30.79**	**173**	PN	**P**	**09 42 54.5**	**0.0**
WVZ	**Waitaha Valley**	**30.91**	**175**	PN	**P**	**09 42 56.5**	**+0.9**
FOZ	**Fox Glacier**	**31.32**	**176**	PN	**P**	**09 42 59.3**	**+0.2**
RPZ	**Rata Peaks**	**31.58**	**174**	P	**P**	**09 43 02.1**	**+0.6**
	comp=Z,65nm,0.6s,mb5.3,baz=339,slow=2.0,SNR=43						
TOO	**Toolangi**	**31.79**	**214**	*e*P	**P**	**09 43 03.0**	**-0.3**
LBZ	**Lake Benmore**	**32.17**	**176**	PN	**P**	**09 43 06.0**	**-0.6**
WB2	**Warramunga Arr**	**32.32**	**252**	*e*P	**P**	**09 43 07.9**	**-0.3**
WRA	**Warramunga Arr**	**32.33**	**252**	P	**P**	**09 43 07.7**	**-0.6**
	comp=Z,30nm,0.4s,mb5.2,baz=84,slow=8.9,SNR=110						
WRA				PP	PP	09 44 27.6	0.0
	comp=Z,18nm,0.9s,baz=80,slow=10,SNR=8.0						
WRA				S	**S**	**09 47 58.7**	**-3.1**
	comp=Z,1.5nm,0.8s,baz=347,slow=4.7,SNR=3.2						
WRA				ScP	ScP	09 49 10.1	+3.2
	comp=Z,6.9nm,0.9s,baz=80,slow=3.7,SNR=9.4						
WRA				PKiKP	PKiKP	09 53 15.7	-0.8
	comp=Z,1.8nm,1.1s,baz=4.3,slow=0.6,SNR=4.6						
WRA				P3KPbc		10 14 29.6	
	comp=Z,1.5nm,0.9s,baz=254,slow=2.6,SNR=8.8						
WRA	**Warramunga Arr**	**32.33**	**252**	P	**P**	**09 43 07.7**	**-0.6**
WRA						09 44 27.6	
WRA				S	**S**	**09 47 58.7**	**-3.1**
WRA	**Warramunga Arr**	**32.33**	**252**	P	**P**	**09 43 07.7**	**-0.6**
WRA				PP	PP	09 44 27.6	0.0
WRA				S	**S**	**09 47 58.6**	**-3.2**
WRA				ScP	ScP	09 49 10.1	+3.2
ODZ	**Otahua Downs**	**32.86**	**175**	*e*P	**P**	**09 43 13.1**	**+0.5**
	comp=Z,180nm,1.1s,mb5.5						
ODZ	**Otahua Downs**	**32.86**	**175**	PN	**P**	**09 43 12.0**	**-0.5**
EAZ	**Earnscleugh**	**32.96**	**177**	PN	**P**	**09 43 13.3**	**-0.1**
ASAR	**Alice Springs**	**33.46**	**245**	P	**P**	**09 43 17.5**	**-0.5**
	comp=Z,25nm,0.4s,mb5.1,baz=68,slow=9.9,SNR=116						
ASAR				pP	pP	09 44 09.0	-2.9
	comp=Z,15nm,0.8s,baz=78,slow=9.7,SNR=3.1						
ASAR				S	**S**	**09 48 17.5**	**-1.6**
	comp=Z,3.1nm,0.9s,baz=79,slow=17,SNR=5.6						
ASAR				ScP	ScP	09 49 13.8	+3.0
	comp=Z,13nm,1.0s,baz=87,slow=3.7,SNR=17						
ASAR				P3KPbc		10 14 24.8	
	comp=Z,2.0nm,0.9s,baz=253,slow=4.1,SNR=15						
ASAR	**Alice Springs**	**33.46**	**245**	P	**P**	**09 43 17.5**	**-0.5**
ASAR				*PP	pP	09 44 09.0	-2.8
ASAR				S	**S**	**09 48 17.5**	**-1.6**
ASAR	**Alice Springs**	**33.46**	**245**	P	**P**	**09 43 17.5**	**-0.5**
ASAR				pP	pP	09 44 09.0	-2.9
ASAR				S	**S**	**09 48 17.5**	**-1.6**
ASAR				ScP	ScP	09 49 13.8	+3.0
ASAR				*e*		10 14 24.8	
WHZ	**Wether Hill Ro**	**33.58**	**179**	PN	**P**	**09 43 18.2**	**-0.5**
TUZ	**Tuapeka**	**33.70**	**177**	PN	**P**	**09 43 19.9**	**+0.1**
GUMO	**Guam**	**33.79**	**319**	P	**P**	**

comp=Z,316nm,0.6s,mb5.8
PPT Papeete 42.17 103 *e*S **S 09 50 21.3 -8.6**
comp=Z,654nm,26.0s
MIDW Midway 42.92 20 *e*P **P 09 44 35.3 -1.1**
comp=Z,257nm,1.4s,mb5.3
MEH Mehetia 43.61 103 *e*P **P 09 44 40.7 -1.5**
comp=Z,556nm,1.2s,mb5.7
PMOR Pomariorio Ree 43.81 99 *e*P **P 09 44 43.8 0.0**
comp=Z,758nm,1.3s,mb5.8
CBIJ Chichi jima 45.94 329 P **P 09 44 59.4 -0.9**
comp=Z,225nm,0.9s,mb5.5,baz=258,slow=19,SNR=14
MBWA Marble Bar 46.06 252 *e*P **P 09 45 02.7 +1.3**
comp=Z,50nm,0.8s,mb4.9
MBWA *e*pP pP 09 45 57.4 -1.0
KAPI Kappang 47.27 274 *e*P **P 09 45 11.4 +0.6**
comp=Z,71nm,0.8s,mb5.0
KAPI *e*pP pP 09 46 14.0 +5.8
KIP Kipapa 47.89 46 *e*P **P 09 45 14.6 -0.8**
KIP pmax pmax
comp=Z,121nm,1.1s,mb5.1
KIP Kipapa 47.89 46 *e*P **P 09 45 14.6 -0.8**
comp=Z,121nm,1.1s,mb5.1
POHA Pohakuloa 48.63 50 *e*P **P 09 45 20.5 -0.6**
comp=Z,60nm,0.8s,mb5.0
KLBR Kellerberrin 49.20 239 *e*P **P 09 45 24.2 -1.0**
comp=Z,27nm,0.5s,mb4.8
NWAO Narrogin (SRO) 49.90 237 P **P 09 45 30.3 -0.2**
comp=Z,36nm,0.6s,mb4.9,baz=80,slow=6.1,SNR=42
NWAO Narrogin (SRO) 49.90 237 *e*P **P 09 45 30.4 -0.1**
comp=Z,29nm,0.6s,mb4.8
NWAO *e*pP pP 09 46 27.4 -1.1
MYLDM Lahad Datu 51.28 287 P **P 09 45 42.0 +0.9**
TSM Tawau 51.58 286 P **P 09 45 43.9 +0.7**
TAOE Nuku Hiva Isla 51.94 92 *e*P **P 09 45 44.3 -1.6**
comp=Z,477nm,1.2s,mb5.7
TAOE *e*S **S 09 52 42.6 -5.2**
comp=Z,389nm,25.6s
SDKM Sandakan 52.66 287 P **P 09 45 51.3 +0.1**
KDM Kudat 53.44 288 P **P 09 45 57.5 +0.6**
KKM Kota Kinabalu 53.71 287 P **P 09 45 59.4 +0.6**
KKM Kota Kinabalu 53.71 287 *e*P **P 09 45 59.3 +0.5**
comp=Z,54nm,0.6s,mb5.1
KKM *e*pP pP 09 46 57.0 -0.7
JOW Kunigami 54.09 316 *e*P **P 09 46 02.1 +0.9**
comp=Z,38nm,0.8s,mb4.8
SJI Sawahan 54.57 269 P pP 09 47 05.2 +1.1
PCJI Pacitan 55.08 268 P pP 09 47 10.5 +2.7
MJAR Matsushiro Arr 55.60 332 P **P 09 46 10.3 -1.5**
comp=Z,55nm,0.8s,mb5.0,baz=167,slow=8.2,SNR=85
MJAR PcP PcP 09 47 06.8 -1.2
comp=Z,15nm,1.0s,baz=152,slow=3.7,SNR=4.8
MAJO Matsushiro 55.60 332 *e*P **P 09 46 10.9 -1.0**
MAJO pmax pmax
comp=Z,61nm,0.8s,mb5.1
MAJO Matsushiro 55.60 332 *e*P **P 09 46 10.9 -1.0**
comp=Z,61nm,0.8s,mb5.1
MAT Matsushiro 55.60 332 P **P 09 46 10.3 -1.6**
MAT S **S 09 53 35.0 -1.0**
BTM Bintulu 55.78 282 P **P 09 46 14.6 +1.0**
RKT Rikitea 55.97 110 *e*S **S 09 53 36.4 -5.1**
comp=Z,1μm,32.5s
BJII Banjamegara 56.65 269 P **P 09 46 25.0 +5.3**
JNU Nakatsue 56.78 324 *e*P **P 09 46 19.5 -0.7**
comp=Z,34nm,0.8s,mb4.8
TWG Pinlang 56.94 308 *e*P **P 09 46 20.4 -1.1**
comp=Z,35nm,1.0s,mb4.7
YULB Yu-li 57.07 308 *e*P **P 09 46 21.9 -0.6**
comp=Z,18nm,0.7s,mb4.6
NACB Ninganchiao 57.28 309 *e*P **P 09 46 23.4 -0.5**
comp=Z,39nm,0.9s,mb4.8
TPUB Ta-pu 57.54 308 *e*P **P 09 46 24.7 -1.0**
comp=Z,64nm,1.0s,mb5.0
SSLB Suanglung 57.55 309 *e*P **P 09 46 25.0 -0.8**
comp=Z,29nm,0.6s,mb4.9
SSLB *e*PcP PcP 09 47 15.3 -0.7
YHNB Yeheng 57.72 310 *e*P **P 09 46 26.4 -0.5**
comp=Z,51nm,0.8s,mb5.0
ERM Erimo 58.27 339 *d i*P **P 09 46 30.1 -0.3**
ERM Erimo 58.27 339 *e*P **P 09 46 30.0 -0.4**
comp=Z,24nm,0.7s,mb4.7
LEM Lembang 58.78 269 P **P 09 46 35.4 +0.9**
YUK Yuzh-Kuril'sk 59.22 342 ⇑*i*P **P 09 46 27.4 -9.4**
YUK *i* 09 47 17.0
YUK *i* SP 09 47 53.7
YUK *i* S **S 09 54 22.1 -0.6**
YUK *i* *SS sS 09 55 59.2 -10
TPI Tanjungpandan 59.54 274 P **P 09 46 41.4 +1.7**
DBJI Dramaga 59.68 270 P **P 09 46 42.7 +2.0**
QZH Quanzhou 59.99 308 ⇑*i*P **P 09 46 41.3 -1.2**
QZH S **S 09 54 34.0 +0.8**
QZH pmax pmax
comp=Z,100nm,1.0s,mb5.3
QZH pmax pmax
comp=Z,640nm,3.3s
QZH LR LR
comp=N,420nm,11.0s
QZH LR LR
comp=E,390nm,13.0s
QZH LR LR
comp=Z,1μm,22.0s
ASAJ Asahikawa 60.32 340 *e*P **P 09 46 44.1 -0.2**
comp=Z,28nm,0.8s,mb4.8
CGJI Cibinong 60.70 269 P **P 09 46 47.0 -0.6**
PPBI Pangkal Pinang 61.15 274 P **P 09 46 52.1 +1.5**
KSRS Korea Array 61.57 325 P **P 09 46 52.4 -0.4**
comp=Z,24nm,0.9s,mb4.8,baz=141,slow=6.6,SNR=58
KSRS PcP PcP 09 47 32.4 +0.7
comp=Z,13nm,1.1s,baz=140,slow=4.6,SNR=5.5
KSRS Korea Array 61.57 325 P **P 09 46 52.4 -0.4**
KSRS 09 47 32.4
KSRS pmax pmax
comp=Z,24nm,0.9s,mb4.8
SSE Sheshan 61.59 316 P **P 09 46 52.8 -0.3**
SSE sP sP 09 48 24.0 +0.6
SSE S **S 09 54 54.0 +0.8**
SSE pmax pmax
comp=Z,70nm,0.8s,mb5.3
SSE pmax pmax
comp=Z,210nm,5.2s
SSE LR LR
comp=N,300nm,20.0s
SSE LR LR
comp=E,230nm,20.2s
SSE LR LR
comp=Z,480nm,21.7s
KASI Kota Agung 62.07 270 P **P 09 46 57.4 +0.7**
INCN Inchon 62.32 324 *e*P **P 09 46 58.1 +0.3**
comp=Z,116nm,1.3s,mb5.3
MDSI Maura Dua 62.58 271 P **P 09 46 59.5 -0.6**
LWLI Liwa 62.59 271 P **P 09 47 08.0 +7.8**
YSS Yuzh-Sakhalins 62.79 342 *j e*P **P 09 47 01.3 +0.6**
YSS *e* 09 47 38.0
YSS *e**SP sP 09 48 26.0 -5.2
YSS *e*S **S 09 55 10.0 +2.4**
YSS pmax pmax
comp=N,60nm,1.0s
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,220nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 62.79 342 *e*P **P 09 47 01.3 +0.6**
comp=Z,282nm,1.1s,mb5.8
GZH Guangzhou 63.21 304 P **P 09 47 03.7 -0.3**
GZH S **S 09 55 17.6 +3.9**
GZH pmax pmax
comp=Z,290nm,3.8s
SKR Severo-Kuril's 63.36 352 *e*P **P 09 47 04.0 -0.3**
SKR *e* 09 56 32.0
SKR pmax pmax
comp=Z,150nm,0.9s,mb5.6
SKR pmax pmax
comp=Z,1μm,4.0s
NJ2 Nanjing 63.76 315 *e*P **P 09 47 07.5 +0.1**
NJ2 pP pP 09 48 12.2 +3.7
NJ2 S **S 09 55 17.0 -3.1**
NJ2 ScS ScS 09 56 25.0 -8.9
NJ2 pmax pmax
comp=Z,50nm,0.6s,mb5.3
NJ2 pmax pmax
comp=Z,80nm,7.1s
NJ2 LR LR
comp=N,6μm,25.8s
NJ2 LR LR
comp=E,7μm,23.6s
NJ2 LR LR
comp=Z,9μm,22.1s

VLA Vladivostok 63.77 332 ⇓*i*P **P 09 47 06.0 -1.2**
VLA *e* 09 47 39.3
VLA S **S 09 55 17.5 -2.3**
VLA pmax pmax
comp=Z,211nm,1.9s,mb5.5
QIZ Qiongzhong 64.37 298 P **P 09 47 09.4 -2.2**
QIZ pP pP 09 48 10.2 -2.6
QIZ sP sP 09 48 34.6 -7.7
QIZ S **S 09 55 25.4 -2.6**
QIZ pmax pmax
comp=Z,10.0nm,1.3s,mb4.3
QIZ pmax pmax
comp=Z,160nm,9.4s
QIZ Qiongzhong 64.37 298 *e*P **P 09 47 12.8 +1.3**
comp=Z,24nm,0.5s,mb5.1
SMY Shemya 64.96 5 *e*P **P 09 47 14.6 -0.1**
SMY pmax pmax
comp=Z,319nm,1.4s,mb5.8
SMY Shemya 64.96 5 *e*P **P 09 47 14.6 0.0**
comp=Z,319nm,1.4s,mb5.8
PET Petropavlovsk 65.37 354 *e*P **P 09 47 16.8 -0.5**
PET *e**SP sP 09 48 44.8 -3.3
PET *e*S S 09 55 38.7 -0.2
PET *e*SS SS 09 59 57.7 -0.5
PET pmax pmax
comp=Z,600nm,3.3s
PET pmax pmax
comp=Z,80nm,1.4s,mb5.2
PET pmax pmax
comp=Z,300nm,15.4s
PET MLR MLR
comp=Z,200nm,18.0s
PET Petropavlovsk 65.37 354 *e*P **P 09 47 16.8 -0.5**
comp=Z,120nm,1.3s,mb5.4
PETK Petropavlovsk- 65.55 354 P **P 09 47 18.2 -0.3**
comp=Z,46nm,0.9s,mb5.2,baz=133,slow=8.2,SNR=26
SBA Scott Base 65.64 180 *e*P **P 09 47 20.6 +1.9**
SBA pmax pmax
comp=Z,613nm,2.6s,mb5.9
SBA Scott Base 65.64 180 *e*P **P 09 47 20.6 +1.8**
comp=Z,613nm,2.6s,mb5.9
CASY Casey 65.77 202 *e*P **P 09 47 19.4 -0.3**
CASY Casey 65.77 202 *e*P **P 09 47 19.3 -0.5**
comp=Z,140nm,1.4s,mb5.5
MDJ Mudanjiang 65.98 332 P **P 09 47 21.7 +0.3**
MDJ PcP PcP 09 47 49.5 -0.2
MDJ pP pP 09 48 22.2 -0.7
MDJ sP sP 09 48 50.5 -1.8
MDJ PP PP 09 49 51.6 +0.9
MDJ S S 09 55 48.9 +2.2
MDJ ScS ScS 09 56 51.4 +0.9
MDJ SS SS 10 00 06.4 -1.6
MDJ pmax pmax
comp=Z,88nm,1.2s,mb5.4
MDJ pmax pmax
comp=Z,430nm,5.6s
MDJ Mudanjiang 65.98 332 *e*P **P 09 47 22.0 +0.6**
comp=Z,101nm,1.1s,mb5.5
WHN Wuhan 66.13 311 P **P 09 47 22.0 -0.7**
WHN S S 09 55 46.6 -2.4
WHN LR LR
comp=N,500nm,19.1s
WHN LR LR
comp=E,940nm,23.1s
WHN LR LR
comp=Z,440nm,20.5s
ATKA Atka Island 66.16 12 *e*P **P 09 47 21.2 -1.1**
DL2 Dalian 66.19 323 ⇑P **P 09 47 22.3 -0.5**
DL2 pP pP 09 48 25.6 +1.2
DL2 S S 09 55 50.2 +0.9
DL2 pmax pmax
comp=Z,50nm,1.2s,mb5.1
DL2 pmax pmax
comp=Z,180nm,5.8s
HABR Khabarovsk 66.75 337 *de*P **P 09 47 25.7 -0.4**
HABR *e* 09 47 50.8
HABR *e**PP pP 09 48 27.5 -0.3
HABR *e* 09 49 54.9
HABR *e*S S 09 55 54.9 -0.8
HABR *e*S S 09 55 55.8 +0.1
HABR *e* 09 56 53.1
HABR *e*SS SS 10 00 17.3 -2.4
HABR pmax pmax
comp=Z,1μm,3.0s
HABR pmax pmax
comp=Z,497nm,1.8s,mb5.9
HABR pmax pmax
comp=E,97nm,1.1s
HABR pmax pmax
comp=N,141nm,1.9s
HABR MLR MLR
comp=Z,119nm,18.0s
SNY Shenyang 67.02 326 ⇓P **P 09 47 29.4 +1.4**
SNY pP pP 09 48 27.5 -2.2
SNY S S 09 56 02.5 +3.3
SNY SS SS 10 00 21.0 -3.1
SNY pmax pmax
comp=Z,37nm,1.1s,mb5.0
SNY pmax pmax
comp=Z,370nm,10.2s
SNY LR LR
comp=N,250nm,12.9s
SNY LR LR
comp=E,240nm,16.9s
SNY LR LR
comp=Z,180nm,16.7s
CN2 Changchun 67.41 329 *e*P **P 09 47 31.2 +0.8**
CN2 *e*S S 09 56 03.1 -0.6
CN2 *e*SS SS 10 00 31.9 +1.9
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
CN2 pmax pmax
comp=Z,200nm,4.0s
IPM Ipoh 67.70 280 *e*P **P 09 47 32.8 -0.1**
comp=Z,35nm,0.8s,mb5.1
IPM Ipoh 67.70 280 P pP 09 48 37.3 +2.6
NIKO Nikolski 68.14 15 *e*P **P 09 47 33.6 -1.1**
comp=Z,285nm,0.9s,mb6.0
KULM Kulim 68.27 281 *e*P **P 09 47 36.5 +0.1**
comp=Z,12nm,0.7s,mb4.7
KLR Kul'dur 68.64 336 *e*P **P 09 47 34.2 -3.7**
KLR *e* 09 49 00.0
KLR *e*S S 09 56 15.5 -2.5
KLR *e* 09 57 14.5
KLR *e* 10 00 48.5
KLR pmax pmax
comp=E,120nm,1.8s
KLR pmax pmax
comp=Z,270nm,1.8s,mb5.7
KLR smax
comp=N,1μm,8.0s
KLR smax
comp=E,500nm,8.0s
UNV Unalaska Valle 69.55 16 *e*P **P 09 47 41.7 -1.7**
comp=E,75nm,0.9s,mb5.4
ENH Enshi 69.64 309 *e*P **P 09 47 44.0 -0.4**
comp=E,107nm,0.9s,mb5.6
AKUT Akutan 70.01 17 *e*P **P 09 47 45.2 -0.9**
comp=E,89nm,0.8s,mb5.5
GYA Guiyang 70.14 304 ⇑*i*P **P 09 47 47.8 +0.2**
GYA PcP PcP 09 48 09.0 +1.3
GYA pP pP 09 48 52.6 +2.7
GYA sP sP 09 49 22.4 +3.3
GYA PP PP 09 50 29.2 +2.2
GYA S S 09 56 35.9 -0.6
GYA SKS 09 57 19.2
GYA ScS ScS 09 57 21.8 -2.2
GYA SS SS 10 01 12.9 +0.2
GYA pmax pmax
comp=Z,30nm,0.7s,mb5.1
GYA pmax pmax
comp=Z,230nm,5.9s
GYA LR LR
comp=N,4μm,19.1s
GYA LR LR
comp=E,3μm,19.8s
GYA LR LR
comp=Z,5μm,20.6s
BJT Baijiatuan 70.19 321 *e*P **P 09 47 47.7 +0.1**
BJT pmax pmax
comp=Z,49nm,0.8s
BJT Baijiatuan 70.19 321 *e*P **P 09 47 47.7 +0.1**
comp=Z,49nm,0.8s,mb5.3
BJI Beijing 70.20 321 P **P 09 47 47.5 -0.1**
BJI S S 09 56 33.0 -3.6

BJI pmax pmax
comp=Z,50nm,0.9s,mb5.2
BJI pmax pmax
comp=Z,390nm,3.5s
BJI LR LR
comp=N,440nm,20.4s
BJI LR LR
comp=E,400nm,17.1s
BJI LR LR
comp=Z,170nm,35.7s
TIY Taiyuan 71.29 317 *e*P **P 09 47 54.8 +0.6**
TIY pP pP 09 48 55.3 -1.5
TIY S S 09 56 45.9 -3.4
TIY LR LR
comp=N,240nm,14.2s
TIY LR LR
comp=E,190nm,10.0s
TIY LR LR
comp=Z,130nm,11.3s
SPIA Saint Paul Isl 71.64 13 *e*P **P 09 47 55.1 -0.7**
comp=Z,426nm,1.0s,mb6.0
XAN Xi'an 71.86 312 P **P 09 47 57.8 +0.1**
XAN S S 09 56 45.8 -10
XAN pmax pmax
comp=Z,16nm,0.7s,mb4.8
XAN pmax pmax
comp=Z,80nm,4.9s
XAN LR LR
comp=N,100nm,22.2s
XAN LR LR
comp=E,88nm,23.1s
XAN LR LR
comp=Z,110nm,28.9s
MIR Mirnyy 72.53 204 ⇓*i*P **P 09 48 01.6 +0.5**
MIR pmax pmax
comp=Z,139nm,1.4s,mb5.4
SDPT Sand Point 72.62 19 *e*P **P 09 47 59.8 -1.9**
comp=Z,110nm,1.1s,mb5.4
KMI Kunming 72.83 301 P **P 09 48 05.0 +1.4**
KMI pP pP 09 49 09.9 +3.5
KMI PP PP 09 50 52.2 +2.3
KMI S S 09 57 09.9 +2.7
KMI SKS 09 57 37.1
KMI ScS ScS 09 57 43.0 -2.4
KMI SS SS 10 01 55.6 +1.8
KMI pmax pmax
comp=Z,55nm,0.7s,mb5.3
KMI LR LR
comp=N,250nm,22.2s
KMI LR LR
comp=E,250nm,23.5s
KMI LR LR
comp=Z,210nm,32.2s
HHC Hu-ho-hao-te 73.56 319 *e*P **P 09 48 08.5 +1.0**
HHC PcP PcP 09 48 23.5 +1.6
HHC pP pP 09 49 08.1 -2.3
HHC sP sP 09 49 34.9 -4.5
HHC PP PP 09 50 58.4 +2.6
HHC S S 09 57 14.6 -0.1
HHC pmax pmax
comp=Z,48nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,440nm,6.2s
HHC LR LR
comp=N,960nm,15.5s
HHC LR LR
comp=E,630nm,15.4s
HHC LR LR
comp=Z,200nm,17.5s
CM31 Chiang Mai Arr 73.76 293 *e*P **P 09 48 10.6 +1.4**
comp=Z,26nm,0.7s,mb5.0
CMAR Chiang Mai Arr 73.76 293 P **P 09 48 09.8 +0.7**
comp=Z,27nm,0.8s,mb4.9,baz=124,slow=4.5,SNR=81
CMAR pP pP 09 49 07.8 -4.2
comp=Z,7.3nm,1.0s,baz=116,slow=4.5,SNR=2.7
CMAR S S 09 57 21.5 +3.6
comp=Z,0.5nm,0.3s,baz=118,slow=15,SNR=1.3
CHTO Chiang Mai 73.88 294 *e*P **P 09 48 10.0 +0.2**
CHTO pmax pmax
comp=Z,114nm,1.7s,mb5.2
CHTO Chiang Mai 73.88 294 *e*P **P 09 48 10.0 +0.2**
comp=Z,114nm,1.7s,mb5.2
HIA Hailar 74.02 330 *e*P **P 09 48 10.0 0.0**
HIA pmax pmax
comp=Z,66nm,1.1s
HIA Hailar 74.02 330 *e*P **P 09 48 10.0 0.0**
comp=Z,66nm,1.1s,mb5.2
CHGN Chignik 74.07 19 *e*P **P 09 48 08.8 -1.3**
CD2 Chengdu 74.34 307 ⇑*i*P **P 09 48 12.6 +0.4**
CD2 pP pP 09 49 19.1 +3.8
CD2 PP PP 09 51 04.9 +2.3
CD2 S S 09 57 22.0 -1.8
CD2 SS SS 10 02 18.7 +2.2
CD2 pmax pmax
comp=Z,70nm,1.2s,mb5.2
CD2 pmax pmax
comp=Z,460nm,7.1s
BTO Baotou 74.42 318 *e*P **P 09 48 12.8 +0.3**
LZH Lanzhou 76.50 312 ⇑P **P 09 48 25.6 +1.3**
LZH pP pP 09 49 31.0 +3.2
LZH PP PP 09 51 22.7 +2.1
LZH S S 09 57 47.0 -0.3
LZH SS SS 10 02 50.0 +1.0
LZH pmax pmax
comp=Z,390nm,1.6s,mb5.8
LZH pmax pmax
comp=Z,660nm,6.2s
OHAK Old Harbor 76.52 21 *e*P **P 09 48 23.6 -0.4**
comp=Z,193nm,1.0s,mb5.8
CLNS Chul'man 77.14 338 *e*P **P 09 48 27.5 +0.1**
CLNS *e* 09 48 34.8
CLNS *e* 09 51 25.3
CLNS *e*PPP 09 53 15.2
CLNS *e*S S 09 57 54.5 +1.2
CLNS *e* 09 58 55.1
CLNS *e*SS SS 10 03 00.4 +2.7
CLNS pmax pmax
comp=Z,60nm,0.9s,mb5.3
CLNS pmax pmax
comp=E,13nm,1.0s
CLNS pmax pmax
comp=N,32nm,1.2s
CLNS pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=E,4.0nm,1.1s
CLNS smax
comp=N,469nm,11.4s
CLNS smax
comp=E,404nm,12.5s
KDAK Kodiak Island 77.19 21 P **P 09 48 27.1 -0.6**
comp=E,75nm,0.9s,mb5.4,baz=195,slow=2.7,SNR=27
KDAK Kodiak Island 77.19 21 *e*P **P 09 48 26.8 -0.9**
comp=E,86nm,1.0s,mb5.4
QSPA South Pole Qui 77.80 180 P **P 09 48 31.2 +0.4**
comp=E,60nm,0.8s,mb5.4,baz=359,slow=1.3,SNR=83
QSPA S S 09 58 03.6 +3.7
comp=E,5.1nm,1.0s,baz=332,slow=22,SNR=11
QSPA South Pole Qui 77.80 180 *e*P **P 09 48 31.1 +0.3**
comp=E,174nm,1.2s,mb5.7
QSPA S S 09 58 03.6 +3.7
RSO Redoubt South 79.19 19 *e*P **P 09 48 38.6 0.0**
YAK Yakutsk 79.58 343 *e*P **P 09 48 39.8 -0.8**
YAK pmax pmax
comp=Z,155nm,1.2s,mb5.6
YAK pmax pmax
comp=N,37nm,1.4s
YAK pmax pmax
comp=E,17nm,0.9s
YAK Yakutsk 79.58 343 *e*P **P 09 48 40.0 -0.6**
comp=E,147nm,1.0s,mb5.7
ULN Ulaanbaatar 80.00 324 *e*P **P 09 48 44.2 +1.0**
ULN pmax pmax
comp=Z,107nm,1.3s,mb5.4
ULN Ulaanbaatar 80.00 324 *e*P **P 09 48 44.2 +1.0**
comp=Z,107nm,1.3s,mb5.4
SEW Seward 80.01 20 *e*P **P 09 48 42.0 -0.9**
comp=Z,74nm,0.9s,mb5.4
BILL Bilibino 80.04 360 *e*P **P 09 48 42.7 -0.3**
BILL *e* 09 48 47.8
BILL *e**PP pP 09 49 45.3 -1.7
BILL *e**SP sP 09 50 16.6 +0.8
BILL *e*S S 09 58 22.2 -1.4
BILL pmax pmax

comp=Z,181nm,1.0s,mb5.8
BILL Bilibino 80.04 360 eP P **09 48 42.9 -0.1**
comp=Z,214nm,1.0s,mb5.8
SLKM Skilak Lake 80.05 20 eP P **09 48 42.1 -1.1**
TTA Tatalina 80.17 16 eP P **09 48 43.8 0.0**
TTA pmax pmax
comp=Z,62nm,0.8s,mb5.4
TTA Tatalina 80.17 16 eP P **09 48 43.8 0.0**
comp=Z,62nm,0.8s,mb5.4
SONM Songino Array 80.37 323 P P **09 48 45.1 -0.1**
comp=Z,17nm,0.8s,mb4.8,baz=136,slow=4.6,SNR=53
SONM S S 09 58 31.0 +3.2
comp=Z,0.2nm,0.3s,baz=353,slow=31,SNR=1.4
RC01 Rabbit Creek A 80.64 20 eP P **09 48 45.8 -0.5**
comp=Z,191nm,1.1s,mb5.7
GTA Gaotai 80.80 314 ⇑P P **09 48 48.6 +1.0**
GTA pP pP 09 49 48.1 -3.7
GTA S S 09 58 29.5 -3.1
GTA SKS 09 58 35.2
GTA SS SS 10 03 51.6 -1.5
GTA pmax pmax
comp=Z,53nm,1.1s,mb5.2
GTA pmax pmax
comp=Z,490nm,3.8s
GTA LR LR
comp=N,220nm,17.3s
GTA LR LR
comp=E,170nm,14.7s
GTA LR LR
comp=Z,290nm,23.5s
PMR Palmer 81.21 20 eP P **09 48 48.1 -1.2**
PMR pmax pmax
comp=Z,120nm,1.0s,mb5.6
PMR Palmer 81.21 20 eP P **09 48 48.1 -1.1**
comp=Z,120nm,1.0s,mb5.6
PPLA Purkeypile 81.23 18 eP P **09 48 48.5 -0.9**
comp=Z,27nm,0.7s,mb5.1
SML Sawmill 81.63 20 eP P **09 48 51.0 -0.4**
SML pmax pmax
comp=Z,49nm,1.2s,mb5.1
SML Sawmill 81.63 20 eP P **09 48 51.0 -0.4**
comp=Z,49nm,1.2s,mb5.1
SHL Shillong 82.21 298 ePKP P **09 48 56.0 +0.7**
SHL eS S 09 58 50.0 +2.4
TRF Thorofare Moun 82.22 18 eP P **09 48 53.6 -0.8**
comp=Z,79nm,0.8s,mb5.5
MCCM Marconi Confer 82.32 48 eP P **09 48 55.8 +0.2**
comp=Z,139nm,0.8s,mb5.7
KCPM Cahto Peak 82.39 47 eP P **09 48 57.0 +1.0**
comp=Z,127nm,1.0s,mb5.6
HOPS Hopland 82.50 48 eP P **09 48 57.2 +0.7**
comp=Z,190nm,1.1s,mb5.7
HOPS epP pP 09 50 03.4 +2.5
BPAW Bear Paw Mtn. 82.50 17 eP P **09 48 54.5 -1.4**
comp=Z,37nm,1.0s,mb5.2
KIPM Iron Peak 82.51 47 eP P **09 48 56.9 +0.3**
comp=Z,201nm,1.0s,mb5.9
KHMM Horse Mountain 82.75 46 eP P **09 48 59.1 +1.4**
comp=Z,179nm,1.0s,mb5.8
KHMM epP pP 09 50 02.9 +0.7
MCK McKinley 82.84 18 eP P **09 48 56.7 -0.9**
MCK pmax pmax
comp=Z,173nm,1.1s,mb5.8
MCK McKinley 82.84 18 eP P **09 48 56.7 -0.9**
comp=Z,173nm,1.1s,mb5.8
SAO San Andreas Ge 82.88 50 eP P **09 48 58.5 0.0**
SAO pmax pmax
comp=Z,85nm,1.0s,mb5.5
SAO San Andreas Ge 82.88 50 eP P **09 48 58.5 0.0**
comp=Z,85nm,1.0s,mb5.5
SAO epP pP 09 50 05.8 +2.9
KRMB Red Mountain 82.88 45 eP P **09 48 58.9 +0.5**
comp=Z,119nm,1.2s,mb5.6
KEBM Edson Butte 83.12 44 eP P **09 49 00.3 +0.7**
comp=Z,159nm,1.0s,mb5.8
BSC Santa Cruz Isl 83.31 53 ⇓P P **09 49 00.9 +0.1**
baz=83
PAX Paxson 83.40 20 eP P **09 48 59.9 -0.6**
PAX pmax pmax
comp=Z,165nm,1.5s,mb5.6
PAX Paxson 83.40 20 eP P **09 48 59.9 -0.7**
comp=Z,165nm,1.5s,mb5.6
PNL Peninsula 83.47 24 eP P **09 49 00.4 -0.5**
comp=Z,164nm,1.1s,mb5.8
PKM Peak Mountain 83.47 52 ⇑P P **09 49 02.2 +0.7**
baz=84,SNR=23
SMMC Simmler 83.47 52 ⇓P P **09 49 02.0 +0.4**
baz=84,SNR=12
WDC Whiskeytown Da 83.47 46 eP P **09 49 01.0 -0.4**
WDC e*PP pP 09 50 07.3 +1.3
WDC pmax pmax
comp=Z,187nm,1.4s,mb5.7
WDC Whiskeytown Da 83.47 46 eP P **09 49 01.0 -0.5**
comp=Z,187nm,1.4s,mb5.7
WDC epP pP 09 50 07.3 +1.3
IRK Irkutsk 83.74 327 eP P **09 49 01.2 -1.3**
IRK pmax pmax
comp=Z,104nm,1.5s,mb5.4
OHCM Honcut 83.77 48 eP P **09 49 02.2 -0.8**
OHCM epP pP 09 50 08.0 +0.4
YBH Yreka Blue Hor 83.79 45 eP P **09 49 03.5 +0.5**
YBH e*PP pP 09 50 08.6 +1.0
YBH pmax pmax
comp=Z,175nm,0.9s
YBH Yreka Blue Hor 83.79 45 eP P **09 49 03.5 +0.5**
comp=Z,175nm,0.9s,mb5.9
YBH epP pP 09 50 08.6 +0.9
TLY Talaya 83.81 326 eP P **09 49 01.8 -1.1**
TLY pmax pmax
comp=Z,54nm,0.9s,mb5.4
TLY MLR MLR
comp=Z,86nm,20.0s
TLY Talaya 83.81 326 eP P **09 49 02.2 -0.6**
comp=Z,185nm,1.6s,mb5.7
TLY Talaya 83.81 326 P P **09 49 02.1 -0.8**
comp=Z,314nm,0.8s,mb6.2,SNR=13
SCI San Clemente I 83.84 55 P P **09 49 03.8 +0.3**
baz=84,SNR=6.6
HUMO Hull Mountain 83.95 44 eP P **09 49 04.2 +0.4**
comp=Z,189nm,0.9s,mb5.9
HUMO epP pP 09 50 07.4 -1.1
MENT Mentasta 83.96 20 eP P **09 49 02.9 -0.4**
COLA College 83.99 18 eP P **09 49 01.9 -1.6**
COLA pmax pmax
comp=Z,268nm,0.9s,mb6.1
COLA College 83.99 18 eP P **09 49 01.9 -1.6**
comp=Z,268nm,0.9s,mb6.1
LSA Lhasa 84.07 302 eP P **09 49 05.8 +1.1**
LSA pmax pmax
comp=Z,17nm,0.8s,mb4.9
LSA Lhasa 84.07 302 eP P **09 49 05.8 +1.1**
comp=Z,17nm,0.8s,mb4.9
CIS Catalina Islan 84.09 54 ⇓P P **09 49 04.1 -0.7**
baz=84,SNR=6.0
CMB Columbia Colle 84.11 49 eP P **09 49 04.1 -0.6**
CMB pmax pmax
comp=Z,88nm,0.9s,mb5.6
CMB Columbia Colle 84.11 49 eP P **09 49 04.1 -0.6**
comp=Z,88nm,0.9s,mb5.6
MAW Mawson 84.13 202 P P **09 49 04.7 +0.4**
comp=Z,42nm,1.1s,mb5.2,baz=100,slow=6.1,SNR=34
MAW pP pP 09 50 05.4 -3.5
comp=Z,21nm,1.1s,baz=96,slow=4.3,SNR=2.3
ILAR Eielson Array 84.21 18 P P **09 49 02.9 -1.7**
comp=Z,170nm,0.7s,mb6.0,baz=239,slow=5.4,SNR=418
FMP Fort Macarthur 84.28 54 ⇓P P **09 49 06.1 +0.4**
baz=84
ARVC Arvin 84.31 52 P P **09 49 06.3 +0.5**
baz=84,SNR=12
DOT Dot Lake 84.33 20 eP P **09 49 04.8 -0.4**
comp=Z,427nm,0.9s,mb6.3
VES Vestal, Richgr 84.35 52 P P **09 49 05.3 -0.7**
baz=84,SNR=24
RCTC Rector, Farmer 84.39 51 P P **09 49 05.7 -0.4**
baz=84,SNR=14
DECC Green Verdugo 84.42 53 ⇓P P **09 49 06.5 +0.1**
baz=84
HEBO Mount Hebo 84.44 42 eP P **09 49 07.6 +1.4**
comp=Z,261nm,1.0s,mb6.0
COR Corvallis 84.48 42 eP P **09 49 07.4 +1.0**
COR pmax pmax
comp=Z,153nm,1.1s,mb5.7
COR Corvallis 84.48 42 eP P **09 49 07.4 +1.0**
comp=Z,153nm,1.1s,mb5.7
PASC Pasadena Art C 84.51 53 eP P **09 49 06.6 -0.2**
PASC epP pP 09 50 11.7 +0.2

MWC Mount Wilson 84.62 53 eP P **09 49 06.8 -0.6**
MWC pmax pmax
comp=Z,78nm,1.0s,mb5.5
MWC Mount Wilson 84.62 53 eP P **09 49 06.8 -0.6**
comp=Z,78nm,1.0s,mb5.5
MWC epP pP 09 50 14.3 +2.2
WRAK Wrangell Islan 84.72 29 eP P **09 49 06.9 -0.4**
comp=Z,75nm,0.9s,mb5.5
WRAK epP pP 09 50 08.7 -3.4
ISA Isabella 84.76 52 P P **09 49 07.6 -0.5**
baz=85,SNR=60
ISA Isabella 84.76 52 eP P **09 49 07.5 -0.5**
ISA e*PP pP 09 50 13.8 +1.0
ISA pmax pmax
comp=Z,89nm,1.1s,mb5.5
ISA Isabella 84.76 52 eP P **09 49 07.5 -0.6**
comp=Z,89nm,1.1s,mb5.5
ISA epP pP 09 50 13.8 +1.0
F03A Seaside 84.85 41 ⇑P P **09 49 08.8 +0.6**
baz=85,SNR=16
EDW2 Edwards Air Fo 84.89 53 P P **09 49 08.3 -0.4**
baz=85,SNR=76
HYT Haines Junctio 84.92 24 eP P **09 49 07.7 -0.5**
BFSC Mount Baldy Ra 84.94 54 P P **09 49 08.3 -0.7**
baz=85,SNR=40
109C Camp Elliot, M 84.96 55 ⇑P P **09 49 09.1 0.0**
baz=85,SNR=11
WAKR Walker 84.97 49 eP P **09 49 09.0 -0.1**
WAKR epP pP 09 50 12.9 -0.9
WCN Washoe City 85.01 48 P P **09 49 09.2 0.0**
baz=85,SNR=70
WCN Washoe City 85.01 48 eP P **09 49 09.0 -0.2**
WCN e*PP pP 09 50 13.2 -0.8
WCN pmax pmax
comp=Z,79nm,1.1s,mb5.5
WCN Washoe City 85.01 48 eP P **09 49 09.0 -0.2**
comp=Z,79nm,1.1s,mb5.5
WCN epP pP 09 50 13.2 -0.8
SKAG Skagway 85.02 26 eP P **09 49 08.4 -0.3**
comp=Z,138nm,1.4s,mb5.6
COLD Coldfoot 85.07 15 eP P **09 49 08.8 -0.1**
comp=Z,138nm,1.0s,mb5.7
E03A Lebam 85.09 40 P P **09 49 09.7 +0.3**
baz=85,SNR=62
MURC Murrieta 85.11 54 ⇑P P **09 49 09.8 0.0**
baz=85,SNR=14
MLAC Mammoth Lakes 85.13 50 ⇑P P **09 49 10.6 +0.8**
baz=85,SNR=30
NLWA Neilton Lookou 85.23 40 eP P **09 49 10.3 +0.2**
comp=Z,99nm,1.1s,mb5.5
MTUM Tungsten Hills 85.24 50 eP P **09 49 10.3 -0.1**
MTUM epP pP 09 50 16.0 +0.8
BAR Barrett 85.25 55 eP P **09 49 09.9 -0.6**
comp=Z,74nm,1.4s,mb5.3
BAR epP pP 09 50 17.3 +2.0
H04A Detroit Lake 85.26 43 ⇑P P **09 49 09.7 -0.5**
baz=85,SNR=43
G04A Mulino 85.26 42 ⇓P P **09 49 10.5 +0.3**
baz=85,SNR=54
MOY Mondy 85.27 325 eP P **09 49 10.5 +0.4**
MOY pmax pmax
comp=Z,112nm,3.7s
LRMC Laurel Mountai 85.31 52 P P **09 49 10.4 -0.4**
baz=85,SNR=64
CWC Cottonwood Cre 85.31 51 P P **09 49 11.0 +0.3**
baz=85,SNR=15
TIN Tinemaha 85.40 51 P P **09 49 11.5 +0.3**
baz=85,SNR=20
K05A Summer Lake 85.41 45 P P **09 49 11.3 +0.2**
baz=85,SNR=82
PAHR Pah Rah Range 85.42 48 eP P **09 49 10.7 -0.5**
comp=Z,178nm,1.1s,mb5.8
PAHR epP pP 09 50 16.4 +0.3
MONP Monument Peak 85.51 55 P P **09 49 11.6 -0.2**
baz=86,SNR=48
MOD Modoc 85.53 46 eP P **09 49 11.3 -0.4**
comp=Z,145nm,1.1s,mb5.7
BBRC Big Bear Solar 85.53 54 P P **09 49 11.9 0.0**
baz=86,SNR=25
F04A Amboy 85.58 41 ⇓P P **09 49 11.2 -0.6**
baz=86,SNR=38
LVP Lakeview Peak 85.64 41 P P **09 49 11.8 -0.3**
MPMC Manual Prospec 85.64 52 P P **09 49 12.2 -0.2**
baz=86,SNR=73
DVTC Desert V Tower 85.70 55 ⇓P P **09 49 13.4 +0.6**
baz=86,SNR=16
PFO Pinyon Flat Ob 85.70 54 P P **09 49 12.8 +0.1**
baz=86,SNR=22
PFO Pinyon Flat Ob 85.70 54 eP P **09 49 12.6 -0.1**
PFO e*PP pP 09 50 19.7 +2.1
PFO pmax pmax
comp=Z,95nm,1.5s,mb5.4
PFO Pinyon Flat Ob 85.70 54 eP P **09 49 12.6 -0.1**
comp=Z,95nm,1.5s,mb5.4
PFO epP pP 09 50 19.7 +2.1
NVAR Mina Array Bea 85.79 49 P P **09 49 12.5 -0.5**
comp=Z,54nm,0.8s,mb5.4,baz=231,slow=7.7,SNR=184
NVAR pP pP 09 50 15.3 -2.6
comp=Z,20nm,1.1s,baz=238,slow=5.9,SNR=3.2
NVAR Mina Array Bea 85.79 49 P P **09 49 12.5 -0.5**
NVAR pP pP 09 50 15.3 -2.6
HDW Hoodsport 85.84 40 P P **09 49 13.1 0.0**
HOOD Mount Hood Mea 85.85 42 eP P **09 49 13.6 +0.4**
comp=Z,147nm,1.0s,mb5.8
GSC Goldstone 85.94 53 P P **09 49 14.0 +0.1**
baz=86,SNR=41
GSC Goldstone 85.94 53 eP P **09 49 13.7 -0.1**
GSC pmax pmax
comp=Z,91nm,1.4s,mb5.4
GSC Goldstone 85.94 53 eP P **09 49 13.7 -0.2**
comp=Z,91nm,1.4s,mb5.4
VFP Flag Point 85.97 42 P P **09 49 13.2 -0.5**
PGC Sidney 85.99 39 eP P **09 49 13.5 -0.3**
comp=Z,11nm,1.3s,mb4.5
EGAK Eagle 86.03 20 eP P **09 49 12.3 -1.3**
comp=Z,121nm,0.8s,mb5.8
SWSC Sam W. Stewart 86.03 55 P P **09 49 14.0 -0.3**
baz=86,SNR=22
GRAC Grapevine Rang 86.03 51 P P **09 49 14.1 -0.2**
baz=86,SNR=58
HEC Hector,Ludlow 86.17 53 P P **09 49 14.1 -0.8**
baz=86,SNR=48
DAWY Dawson 86.18 21 eP P **09 49 13.4 -0.9**
BELC Belle Mtn. Jos 86.18 54 P P **09 49 14.9 -0.1**
baz=86,SNR=80
VIPM Ingram Point 86.23 43 P P **09 49 14.6 -0.5**
FURC Furnace Creek, 86.26 52 P P **09 49 15.0 -0.4**
baz=86,SNR=102
LON Longmire 86.28 41 eP P **09 49 14.9 -0.3**
LON pmax pmax
comp=Z,48nm,1.1s,mb5.2
LON Longmire 86.28 41 eP P **09 49 14.9 -0.3**
comp=Z,48nm,1.1s,mb5.2
TAPN Taplejung 86.30 299 eP P **09 49 16.6 +0.8**
comp=Z,162nm,1.4s,mb5.7
D05A Enumclaw 86.33 40 P P **09 49 16.1 +0.7**
baz=86,SNR=73
WPW White Pass 86.43 41 P P **09 49 15.5 -0.4**
FMW Mount Fremont 86.44 41 P P **09 49 15.7 -0.2**
ODAN Odare 86.44 298 eP P **09 49 16.6 +0.1**
comp=Z,109nm,0.8s,mb5.8
G06A Carlson Farm, 86.48 42 ⇑P P **09 49 15.9 -0.3**
baz=86,SNR=21
BC3 Big Chuckawall 86.51 55 P P **09 49 16.7 0.0**
baz=86,SNR=49
SHOC Shoshone 86.53 52 P P **09 49 16.2 -0.5**
baz=87,SNR=51
U10A Ash Meadows, A 86.65 52 P P **09 49 17.7 +0.4**
baz=87,SNR=37
TUQ Turquoise Moun 86.67 53 P P **09 49 17.0 -0.3**
baz=87,SNR=71
GMRC Granite Mounta 86.68 54 P P **09 49 17.1 -0.3**
baz=87,SNR=56
JCW Jim Creek 86.75 39 P P **09 49 17.0 -0.5**
DLBC Dease Lake 86.82 28 eP P **09 49 16.5 -1.1**
I07A Izee 86.83 44 P P **09 49 17.9 0.0**
baz=87,SNR=172
GLA Glamis 86.84 55 P P **09 49 18.6 +0.3**
baz=87,SNR=49
GLA Glamis 86.84 55 eP P **09 49 18.4 +0.1**
GLA e*PP pP 09 50 24.6 +1.3
GLA pmax pmax
comp=Z,138nm,1.1s,mb5.7
GLA Glamis 86.84 55 eP P **09 49 18.4 +0.2**
comp=Z,138nm,1.1s,mb5.7
GLA epP pP 09 50 24.6 +1.3

WVOR Wild Horse Val 86.87 46 eP P **09 49 17.8 -0.4**
WVOR pmax pmax
comp=Z,432nm,1.7s,mb6.0
WVOR Wild Horse Val 86.87 46 eP P **09 49 17.8 -0.4**
comp=Z,432nm,1.7s,mb6.0
112A Yuma 86.89 56 P P **09 49 19.3 +0.8**
baz=87,SNR=19
IRM Iron Mountain 86.90 54 P P **09 49 18.3 -0.2**
baz=87,SNR=77
S10A Tonopah Range, 86.91 50 P P **09 49 18.2 -0.2**
baz=87,SNR=68
A05A Maple Falls 86.96 39 P P **09 49 17.6 -0.8**
baz=87,SNR=20
B06A Marblemount 87.14 39 P P **09 49 19.1 -0.3**
baz=87,SNR=15
RAMN Ramite 87.15 298 eP P **09 49 19.9 0.0**
comp=Z,37nm,0.7s,mb5.3
V11A Goodsprings 87.17 53 P P **09 49 19.6 -0.1**
baz=87,SNR=28
LDFC Landfair 87.20 53 eP P **09 49 20.0 +0.1**
LDFC epP pP 09 50 25.8 +0.7
BMN Battle Mountai 87.22 48 eP P **09 49 19.8 -0.1**
BMN pmax pmax
comp=Z,330nm,1.9s,mb5.8
BMN Battle Mountai 87.22 48 eP P **09 49 19.8 -0.1**
comp=Z,330nm,1.9s,mb5.8
R10A Warm Springs 87.24 50 P P **09 49 20.0 0.0**
baz=87,SNR=53
Y12C Blythe 87.28 55 P P **09 49 20.8 +0.4**
baz=87,SNR=43
J08A Circle Bar Ran 87.29 45 P P **09 49 19.9 -0.2**
baz=87,SNR=157
Q10A Clear Creek Ra 87.33 50 P P **09 49 20.7 +0.3**
baz=87,SNR=23
U11A Corn Creek 87.38 52 ⇑P P **09 49 21.6 +0.9**
baz=87,SNR=10.0
W12A Cal Nev Ari 87.45 53 ⇓P P **09 49 21.6 +0.5**
baz=88,SNR=18
S11A Rachel 87.46 51 P P **09 49 21.2 +0.1**
baz=88,SNR=27
E07A Sunnyside 87.47 41 ⇑P P **09 49 21.3 +0.4**
baz=88
TIXI Tiksi 87.48 349 eP P **09 49 19.4 -1.0**
TIXI eS S 09 59 38.7 +1.3
TIXI pmax pmax
comp=Z,112nm,1.4s,mb5.5
TIXI Tiksi 87.48 349 eP P **09 49 21.5 +1.1**
comp=Z,96nm,1.2s,mb5.5
NEE2 Needles Airpor 87.50 54 ⇓P P **09 49 21.5 +0.2**
baz=88,SNR=8.5
P10A Eureka 87.53 49 ⇑P P **09 49 22.0 +0.7**
baz=88
ETW Entiat 87.53 40 eP P **09 49 20.6 -0.6**
SHPR Sheep Range 87.57 52 eP P **09 49 21.6 -0.1**
SHPR epP pP 09 50 28.2 +1.4
RSW Rattlesnake Hi 87.58 42 eP P **09 49 21.4 0.0**
V12A Nelson 87.59 53 P P **09 49 21.6 -0.1**
baz=88,SNR=56
G08A Pilot Rock 87.61 43 ⇑P P **09 49 21.7 +0.1**
baz=88
HAWA Hanford 87.61 42 eP P **09 49 21.3 -0.3**
comp=Z,127nm,0.9s,mb5.8
113A Mohawk Valley, 87.62 56 P P **09 49 21.9 0.0**
baz=88,SNR=31
NLW Nelson Butte 87.70 40 P P **09 49 21.2 -0.8**
T11A Corn Creek, Al 87.74 51 P P **09 49 22.4 0.0**
baz=88,SNR=66
R11A Troy Canyon, C 87.79 50 P P **09 49 22.9 +0.2**
baz=88,SNR=87
Z13A Yuma Proving G 87.82 56 P P **09 49 23.1 +0.2**
baz=88,SNR=58
Y13A Salome 87.86 55 P P **09 49 23.3 +0.2**
baz=88,SNR=45
Q11A Duckwater 87.89 50 P P **09 49 23.0 -0.1**
baz=88,SNR=144
T12A Moapa 87.98 52 P P **09 49 24.1 +0.5**
baz=88,SNR=21
PALK Pallekele 87.99 278 eP P **09 49 24.2 +0.1**
PALK pmax pmax
comp=Z,17nm,0.9s,mb4.9
PALK Pallekele 87.99 278 eP P **09 49 24.2 +0.1**
comp=Z,17nm,0.9s,mb4.9
GUN Gumba 88.01 299 eP P **09 49 24.2 +0.3**
comp=Z,108nm,1.1s,mb5.6
P11A Circle Ranch, 88.03 49 P P **09 49 24.3 +0.6**
baz=88,SNR=44
U12A Valley of Fire 88.03 52 P P **09 49 24.0 +0.2**
baz=88,SNR=38
X13A Yucca 88.07 54 ⇓P P **09 49 23.7 -0.4**
baz=88
S12A Delamar Landin 88.13 51 P P **09 49 24.7 +0.4**
baz=88,SNR=80
214A Organ Pipe Nat 88.17 57 P P **09 49 24.9 +0.3**
baz=88,SNR=50
D08A Wollman Farm, 88.24 41 P P **09 49 24.3 -0.2**
baz=88,SNR=44
LNOR Lincoln Mounta 88.25 42 eP P **09 49 24.4 -0.2**
V13A Grand Canyon W 88.30 53 P P **09 49 24.9 -0.2**
baz=88,SNR=89
114A Black Gap (USA 88.33 56 P P **09 49 25.5 +0.2**
baz=88,SNR=46
PKI Pulchoki 88.33 299 eP P **09 49 25.3 -0.1**
comp=Z,80nm,0.8s,mb5.6
B08A Colville Reser 88.42 40 ⇓P P **09 49 24.9 -0.4**
baz=88,SNR=74
Z14A Wintersburg 88.44 56 ⇓P P **09 49 26.1 +0.3**
baz=88,SNR=17
U13A Pakoon Wash 88.47 52 P P **09 49 26.1 +0.2**
baz=88,SNR=81
OD2 Odessa Site #2 88.49 41 eP P **09 49 25.7 0.0**
KKN Kakani 88.50 299 eP P **09 49 26.1 -0.1**
comp=Z,62nm,0.8s,mb5.5
R12A Pony Springs, 88.52 50 P P **09 49 26.1 +0.1**
baz=88,SNR=148
Y14A Wickenburg 88.55 55 P P **09 49 26.6 +0.3**
baz=89,SNR=26
E09A Wood Farm, Sta 88.56 42 P P **09 49 26.0 0.0**
baz=89,SNR=75
Q12A Willow Creek R 88.56 50 P P **09 49 26.1 -0.1**
baz=89,SNR=103
DMN Daman 88.60 298 eP P **09 49 26.8 +0.1**
comp=Z,138nm,0.8s,mb5.9
T13A Saint George 88.69 52 ⇑P P **09 49 27.3 +0.5**
baz=89
X14A Yava 88.78 54 P P **09 49 27.8 +0.4**
baz=89,SNR=70
W14A Seligman 88.83 54 P P **09 49 28.5 +0.9**
baz=89,SNR=62
115A Sonoran Desert 88.85 56 ⇑P P **09 49 27.9 +0.1**
baz=89
S13A Holt Ranch, En 88.88 51 P P **09 49 28.0 +0.2**
baz=89,SNR=93
C09A Chrisman Ranch 88.90 41 P P **09 49 27.1 -0.5**
baz=89,SNR=20
V14A Boquillas Ranc 88.93 53 P P **09 49 28.3 +0.3**
baz=89,SNR=82
R13A O'Grain Ranch, 88.96 51 P P **09 49 28.4 +0.3**
baz=89,SNR=78
F10A Beach Ranch, E 88.98 43 P P **09 49 27.6 -0.5**
baz=89,SNR=125
Z15A Gila River Ind 89.06 56 ⇑P P **09 49 29.0 +0.2**
baz=89,SNR=18
U14A Mt Trumbull 89.08 53 P P **09 49 29.2 +0.4**
baz=89,SNR=219
Y15A Casa Rosa Ranc 89.09 55 P P **09 49 29.1 +0.2**
baz=89,SNR=78
GKN Gorkha 89.10 299 eP P **09 49 28.4 -0.6**
comp=Z,86nm,0.9s,mb5.6
MFID Camas Ranch 89.14 45 P P **09 49 28.5 -0.4**
baz=89,SNR=100
Q13A Wheeler Ranch, 89.14 50 P P **09 49 29.1 +0.1**
baz=89,SNR=130
116A Eloy 89.24 57 P P **09 49 30.4 +0.8**
baz=89,SNR=56
CCUT Cedar City 89.25 51 eP P **09 49 29.9 +0.4**
comp=Z,103nm,1.1s,mb5.6
ARUT Antelope Range 89.25 51 eP P **09 49 29.2 -0.3**
ARUT pmax pmax
comp=Z,80nm,1.1s,mb5.5
ARUT Antelope Range 89.25 51 eP P **09 49 29.1 -0.4**
comp=Z,80nm,1.1s,mb5.5
P13A Bates Ranch, G 89.29 49 P P **09 49 29.8 +0.2**
baz=89,SNR=203
216A Three Points, 89.30 57 P P **09 49 30.9 +1.0**
baz=89,SNR=44
X15A Humboldt 89.31 55 P P **09 49 30.2 +0.4**
baz=89,SNR=87
T14A Hurricane 89.33 52 P P **09 49 30.1 +0.2**

baz=89,SNR=98
S14A **Cedar City** 89.45 51 P P 09 49 31.2 +0.7
baz=90,SNR=27
W15A **Williams** 89.47 54 ⇓P P 09 49 32.0 +1.4
baz=90,SNR=9.7
Z16A **Peralta Trail,** 89.66 56 P P 09 49 31.8 +0.3
baz=90,SNR=43
V15A **Kaibab Nationa** 89.71 53 P P 09 49 32.3 +0.6
baz=90,SNR=87
Q14A **Sevier Lake (B** 89.71 50 P P 09 49 31.8 +0.2
baz=90,SNR=200
R14A **James Farms, M** 89.71 51 P P 09 49 32.6 +1.0
baz=90,SNR=16
I12A **Atlanta** 89.73 45 ⇓P P 09 49 31.4 -0.2
baz=90,SNR=134
Y16A **Circle Bar Ran** 89.76 55 P P 09 49 32.9 +0.9
baz=90,SNR=99
217A **Green Valley** 89.77 58 P P 09 49 32.6 +0.5
baz=90,SNR=78
U15A **North Rim** 89.77 53 P P 09 49 32.6 +0.6
baz=90,SNR=143
NEW **Newport** 89.78 40 P P 09 49 31.1 -0.6
baz=90,SNR=108
NEW **Newport** 89.78 40 *e*P P 09 49 31.1 -0.6
NEW pmax pmax
comp=Z,115nm,1.0s
NEW **Newport** 89.78 40 *e*P P 09 49 31.1 -0.7
comp=Z,115nm,1.0s,mb5.7
T15A **Red Dirt Ranch** 89.86 52 P P 09 49 32.5 +0.2
baz=90,SNR=63
X16A **Lo Mia Camp, P** 89.92 55 P P 09 49 33.1 +0.4
baz=90,SNR=91
TUC **Tucson** 89.93 57 *e*P P 09 49 32.7 -0.1
TUC *e**PP pP 09 50 37.9 -0.3
TUC pmax pmax
comp=Z,80nm,1.2s,mb5.4
TUC **Tucson** 89.93 57 *e*P P 09 49 32.7 -0.1
comp=Z,80nm,1.2s,mb5.4
TUC *e*pP pP 09 50 37.9 -0.3
DANN **Dangsing** 89.94 299 *e*P P 09 49 32.1 -0.8
comp=Z,53nm,0.8s,mb5.4
KOLN **Koldanda** 89.94 298 *e*P P 09 49 32.3 -0.6
comp=Z,24nm,0.9s,mb5.0
G12A **Big Creek, Yel** 90.00 44 ⇑P P 09 49 32.6 -0.2
baz=90
W16A **Flagstaff** 90.03 54 ⇑P P 09 49 33.4 +0.2
baz=90,SNR=43
P14A **Drum Mountains** 90.03 50 P P 09 49 32.8 -0.3
baz=90,SNR=82
117A **Oracle** 90.03 57 P P 09 49 33.7 +0.5
baz=90,SNR=81
S15A **Panguitch** 90.05 52 P P 09 49 34.2 +1.0
baz=90,SNR=31
H12A **Diamond D Ranc** 90.14 44 ⇓P P 09 49 33.4 -0.1
baz=90,SNR=14
HLID **Hailey** 90.17 45 P P 09 49 33.8 +0.2
baz=90,SNR=139
HLID **Hailey** 90.17 45 *e*P P 09 49 33.8 +0.1
comp=Z,93nm,1.0s,mb5.6
C11A **Tepee Creek (N** 90.20 41 ⇓P P 09 49 33.6 -0.1
baz=90
E12A **Beaver Dam Sad** 90.22 42 ⇓P P 09 49 33.2 -0.6
baz=90
Y17A **Roosevelt** 90.22 56 P P 09 49 34.9 +0.7
baz=90,SNR=43
F12A **Elk City** 90.23 43 P P 09 49 33.2 -0.7
baz=90,SNR=216
R15A **Junction** 90.25 51 P P 09 49 35.3 +1.2
baz=90,SNR=20
WUAZ **Wupatki** 90.26 54 P P 09 49 34.6 +0.3
baz=90,SNR=48
WUAZ **Wupatki** 90.26 54 *e*P P 09 49 34.5 +0.2
comp=Z,82nm,1.0s,mb5.5
J13A **Cove Ranch, Pi** 90.28 46 P P 09 49 34.5 +0.3
baz=90,SNR=87
318A **Bisbee** 90.37 58 P P 09 49 35.2 +0.3
baz=90,SNR=83
DUG **Dugway** 90.38 49 P P 09 49 34.5 -0.2
baz=90,SNR=67
DUG **Dugway** 90.38 49 *e*P P 09 49 34.3 -0.4
DUG pmax pmax
comp=Z,126nm,1.5s,mb5.5
DUG **Dugway** 90.38 49 *e*P P 09 49 34.3 -0.4
comp=Z,126nm,1.5s,mb5.5
Q15A **Fillmore** 90.38 50 ⇓P P 09 49 34.4 -0.3
baz=90,SNR=25
MSU **Marysvale** 90.41 51 *e*P P 09 49 35.5 +0.6
X17A **Forest Lakes** 90.41 55 P P 09 49 35.7 +0.7
baz=90,SNR=88
BGU **Big Grassy Mou** 90.42 48 *e*P P 09 49 34.5 -0.3
comp=Z,64nm,1.0s,mb5.4
Z17A **San Carlos Hig** 90.42 56 P P 09 49 36.0 +1.0
baz=90,SNR=12
218A **Dragoon** 90.45 57 P P 09 49 35.7 +0.5
baz=90,SNR=100
I13A **Wildhorse Cree** 90.47 45 P P 09 49 35.3 +0.3
baz=90,SNR=228
T16A **Glen Canyon Da** 90.53 52 P P 09 49 36.5 +1.1
baz=90,SNR=16
D12A **Red Ives Fores** 90.55 42 ⇑P P 09 49 34.8 -0.5
baz=91
H13A **Challis** 90.56 45 P P 09 49 35.4 0.0
baz=91,SNR=192
L14A **Malta** 90.57 47 P P 09 49 35.7 +0.2
baz=91,SNR=193
INK **Inuvik** 90.58 19 *e*P P 09 49 33.4 -1.6
INK pmax pmax
comp=Z,38nm,1.6s
INK **Inuvik** 90.58 19 *e*P P 09 49 33.4 -1.6
comp=Z,38nm,1.6s,mb5.0
U16A **Tuba City** 90.61 53 P P 09 49 36.2 +0.3
baz=91,SNR=66
P15A **Leamington** 90.61 50 P P 09 49 36.2 +0.4
baz=91,SNR=16
S16A **Weppner Ranch,** 90.65 52 P P 09 49 36.0 0.0
baz=91,SNR=66
O15A **The Old Anders** 90.66 49 P P 09 49 36.6 +0.7
baz=91,SNR=34
C12B **Naegeli Ranch,** 90.67 41 P P 09 49 35.5 -0.4
baz=91,SNR=46
W17A **Winslow** 90.67 54 ⇓P P 09 49 37.3 +1.1
baz=91,SNR=11
118A **Homack Ranch,** 90.67 57 ⇑P P 09 49 36.7 +0.5
baz=91
J14A **Carey** 90.72 46 ⇓P P 09 49 36.7 +0.5
baz=91,SNR=59
G13A **Cobalt** 90.73 44 P P 09 49 35.9 -0.2
baz=91,SNR=130
Z18A **Geronimo** 90.73 56 P P 09 49 37.0 +0.5
baz=91,SNR=12
K14A **Jones Ranch, D** 90.75 47 P P 09 49 36.6 +0.2
baz=91,SNR=167
N15A **Stansbury Isla** 90.78 48 P P 09 49 36.5 0.0
baz=91,SNR=47
B12A **Libby** 90.82 40 ⇑P P 09 49 36.6 +0.1
baz=91
HVU **Hansel Valley** 90.83 47 *e*P P 09 49 37.2 +0.4
HVU pmax pmax
comp=Z,180nm,1.1s,mb5.8
HVU **Hansel Valley** 90.83 47 *e*P P 09 49 37.2 +0.4
comp=Z,180nm,1.1s,mb5.8
WMQ **Urumqi** 90.83 315 P P 09 49 36.0 -0.7
WMQ pP pP 09 50 45.0 +2.8
WMQ PP PP 09 53 18.0 +1.1
WMQ SKS 09 59 38.0
WMQ SS SS 10 06 16.0 -3.5
WMQ pmax pmax
comp=Z,61nm,1.2s,mb5.3
WMQ pmax pmax
comp=Z,160nm,9.0s
WMQ LR LR
comp=N,260nm,25.0s
WMQ LR LR
comp=E,480nm,25.0s
WMQ LR LR
comp=Z,320nm,25.0s
NLU **North Lily Min** 90.86 49 *e*P P 09 49 37.3 +0.4
comp=Z,74nm,1.1s,mb5.4
NLU *e*pP pP 09 50 41.6 -0.8
R16A **Teasdale** 90.88 51 P P 09 49 37.8 +0.7
baz=91,SNR=90
Y18A **Canyon Day Jun** 90.90 56 P P 09 49 37.7 +0.5
baz=91,SNR=42
A12A **Yaak River Ran** 90.92 40 P P 09 49 37.0 0.0
baz=91,SNR=53
I14A **Mackay** 90.94 45 P P 09 49 37.5 +0.3
baz=91,SNR=135
319A **Douglas** 90.94 58 P P 09 49 38.4 +0.9
baz=91,SNR=60
SPUT **South Promonto** 90.94 48 *e*P P 09 49 37.7 +0.4
comp=Z,93nm,1.3s,mb5.5
M15A **Larsen Ranch,** 90.98 48 P P 09 49 37.7 +0.2
baz=91,SNR=86
NOQ **North Oquirrh** 91.01 49 *e*P P 09 49 38.3 +0.7
comp=Z,80nm,1.1s,mb5.5
SYO **Syowa Base** 91.05 197⇑ *e*P P 09 49 34.4 -2.9
T17A **Navajo Res., N** 91.07 52 P P 09 49 38.3 +0.3
baz=91,SNR=82
P16A **Fountain Green** 91.08 50 P P 09 49 38.8 +0.9
baz=91,SNR=16
U17A **Shonto** 91.09 53 ⇑P P 09 49 38.5 +0.5
baz=91
219A **White Tail Can** 91.11 58 P P 09 49 38.5 +0.2
baz=91,SNR=106
E13A **Victor** 91.14 43 ⇓P P 09 49 37.2 -0.8
baz=91,SNR=63
X18A **Snowflake** 91.14 55 P P 09 49 38.6 +0.2
baz=91,SNR=41
D13A **Huson** 91.15 42 P P 09 49 37.4 -0.6
baz=91,SNR=35
BSMT **Bassoo Peak** 91.15 41 *e*P P 09 49 37.5 -0.5
L15A **Malad City** 91.17 47 P P 09 49 38.1 -0.2
baz=91,SNR=76
H14A **Leadore** 91.18 45 P P 09 49 38.5 +0.1
baz=91,SNR=144
MPU **Maple Canyon** 91.20 49 *e*P P 09 49 39.2 +0.7
comp=Z,80nm,1.2s,mb5.4
MPU *e*pP pP 09 50 43.7 -0.3
S17A **Black Ridge (B** 91.23 52 P P 09 49 38.6 -0.1
baz=91,SNR=35
C13A **Hot Springs** 91.24 41 P P 09 49 37.7 -0.8
baz=91,SNR=37
K15A **Arbon** 91.25 47 P P 09 49 38.9 +0.2
baz=91,SNR=41
119A **Ashpeak Ranch,** 91.25 57 ⇑P P 09 49 39.3 +0.4
baz=91,SNR=15
Q16A **Castle Valley** 91.27 51 P P 09 49 39.3 +0.5
baz=91,SNR=25
CTU **Camp Tracy** 91.29 49 *e*P P 09 49 39.6 +0.7
comp=Z,77nm,1.2s,mb5.4
G14A **Jackson** 91.29 44 P P 09 49 38.7 -0.1
baz=91,SNR=84
TMUT **Trail Mountain** 91.34 50 *e*P P 09 49 40.0 +0.8
comp=Z,471nm,2.4s,mb5.9
MSO **Missoula** 91.41 42 P P 09 49 38.7 -0.6
baz=91,SNR=21
MSO **Missoula** 91.41 42 *e*P P 09 49 38.6 -0.7
comp=Z,12nm,0.8s,mb4.8
V18A **Ganado** 91.44 54 P P 09 49 40.0 +0.3
baz=92,SNR=38
JTMT **Jette** 91.45 41 *e*P P 09 49 38.8 -0.6
BLMT **Blacktail Moun** 91.47 41 *e*P P 09 49 39.5 0.0
JLU **Jordanelle** 91.49 49 *e*P P 09 49 39.7 -0.1
comp=Z,170nm,1.8s,mb5.6
R17A **Hanksville Air** 91.50 51 P P 09 49 39.9 0.0
baz=92,SNR=70
J15A **Blackfoot** 91.51 46 P P 09 49 40.4 +0.5
baz=92,SNR=58
B13A **Whitefish** 91.51 41 P P 09 49 39.6 -0.1
baz=92,SNR=57
F14A **Wisdom** 91.51 43 ⇑P P 09 49 39.5 -0.3
baz=92,SNR=32
M16A **Huntsville** 91.54 48 ⇑P P 09 49 39.9 -0.2
baz=92,SNR=16
320A **Kipp Ranch, An** 91.56 58 P P 09 49 41.0 +0.6
baz=92,SNR=92
SWMT **Swartz Lake** 91.56 42 *e*P P 09 49 39.6 -0.4
Y19A **Nutrioso** 91.57 56 P P 09 49 41.1 +0.7
baz=92,SNR=52
N16A **Rees Ranch, Co** 91.57 49 ⇓P P 09 49 40.5 +0.3
baz=92,SNR=22
DAU **Daniels Canyon** 91.59 49 *e*P P 09 49 40.5 +0.2
E14A **Clinton** 91.59 43 P P 09 49 39.6 -0.6
baz=92,SNR=53
MCMT **McKenzie Canyo** 91.60 45 *e*P P 09 49 40.1 -0.1
comp=Z,26nm,1.2s,mb5.0
I15A **Monteview** 91.63 45 ⇓P P 09 49 40.9 +0.5
baz=92,SNR=52
YBMT **Yellow Bay** 91.66 41 *e*P P 09 49 39.9 -0.5
HWUT **Hardware Ranch** 91.66 48 *e*P P 09 49 40.3 -0.3
comp=Z,99nm,1.7s,mb5.5
U18A **Rough Rock, Ch** 91.66 53 ⇑P P 09 49 40.5 -0.2
baz=92,SNR=31
H15A **Lima** 91.68 45 P P 09 49 40.8 +0.2
baz=92,SNR=113
220A **Playas Peak, P** 91.69 58 ⇓P P 09 49 41.4 +0.4
baz=92,SNR=24
A13A **Flathead Natio** 91.70 40 ⇑P P 09 49 40.7 +0.1
baz=92
P17A **Butcher Ranch,** 91.74 50 ⇑P P 09 49 41.6 +0.6
baz=92,SNR=9.4
120A **U Bar Ranch, L** 91.75 57 P P 09 49 42.0 +0.7
baz=92,SNR=15
D14A **Greenough** 91.77 42 P P 09 49 40.2 -0.7
baz=92,SNR=40
C14A **Swan Lake** 91.80 42 ⇓P P 09 49 40.7 -0.4
baz=92
SRU **San Rafael** 91.81 50 ⇓P P 09 49 41.2 -0.1
baz=92,SNR=18
SRU **San Rafael** 91.81 50 *e*P P 09 49 41.3 0.0
SRU pmax pmax
comp=Z,40nm,1.4s,mb5.2
SRU **San Rafael** 91.81 50 *e*P P 09 49 41.2 -0.1
comp=Z,40nm,1.4s,mb5.2
SLMT **Seeley Lake** 91.82 42 *e*P P 09 49 40.5 -0.7
T18A **Mexican Hat** 91.83 53 P P 09 49 41.4 -0.1
baz=92,SNR=53
L16A **Fish Haven** 91.86 48 P P 09 49 41.6 +0.1
baz=92,SNR=20
S18A **Hurst Farm, Bl** 91.87 52 ⇓P P 09 49 42.2 +0.5
baz=92,SNR=40
CHMT **Chamberlain Mo** 91.89 42 *e*P P 09 49 40.7 -0.8
DLMT **Dillon** 91.91 44 *e*P P 09 49 42.0 +0.3
comp=Z,101nm,1.0s,mb5.7
Z20A **Nine Sixteen R** 91.91 57 ⇓P P 09 49 42.8 +0.8
baz=92,SNR=19
O17A **Robinson Place** 91.92 49 P P 09 49 42.1 +0.3
baz=92,SNR=32
G15A **Dillon** 91.93 44 ⇓P P 09 49 42.1 +0.4
baz=92
K16A **Soda Springs** 91.96 47 ⇑P P 09 49 42.4 +0.5
baz=92,SNR=28
N17A **Moffit Pass** 92.03 49 P P 09 49 42.4 +0.1
baz=92,SNR=8.0
J16A **Bone** 92.05 46 P P 09 49 43.1 +0.7
baz=92,SNR=57
WALA **Waterton Lakes** 92.05 40 *e*P P 09 49 42.0 -0.2
comp=Z,3.0nm,1.2s
Q18A **Rafter H Ranch** 92.10 51 P P 09 49 42.5 -0.2
baz=92,SNR=9.7
F15A **Butte** 92.11 44 P P 09 49 42.6 +0.1
baz=92,SNR=36
R18A **Canyonlands Na** 92.11 51 P P 09 49 43.0 +0.2
baz=92,SNR=43
LRM **Limekiln Ridge** 92.13 44 *e*P P 09 49 42.7 0.0
P18A **Preston Nutter** 92.14 50 ⇑P P 09 49 42.9 0.0
baz=92,SNR=20
U19A **Dine' College,** 92.15 53 P P 09 49 43.1 +0.1
baz=92,SNR=78
E15A **Deer Lodge** 92.16 43 P P 09 49 42.4 -0.4
baz=92,SNR=40
HYB **Hyderabad** 92.20 287 *i* P P 09 49 42.0 -1.6
Y20A **Horse Springs,** 92.27 56 ⇓P P 09 49 44.2 +0.6
baz=92,SNR=27
B14A **Marquette Ranc** 92.27 41 P P 09 49 43.0 -0.2
baz=92,SNR=73
RRI2 **Red Ridge** 92.28 46 *e*P P 09 49 43.8 +0.4
comp=Z,54nm,1.1s,mb5.4
M17A **Scullys Gap (B** 92.28 48 P P 09 49 43.4 -0.1
baz=92,SNR=6.5
I16A **Newdale** 92.29 46 P P 09 49 43.7 +0.3
baz=92,SNR=47
X20A **Quemado** 92.31 55 P P 09 49 44.6 +0.8
baz=92,SNR=22
221A **Mesquite Ranch** 92.33 58 ⇓P P 09 49 45.0 +1.0
baz=92,SNR=14
A14A **Double T Ranch** 92.34 40 P P 09 49 43.6 +0.1
baz=92,SNR=33
D15A **Lincoln** 92.41 42 ⇑P P 09 49 43.6 -0.3
baz=92,SNR=28
K17A **Gardner Place,** 92.41 47 P P 09 49 44.3 +0.2
baz=92,SNR=10
G16A **Moss Hill, Enn** 92.42 44 P P 09 49 43.8 -0.2
baz=92,SNR=54
T19A **Beclabito** 92.42 53 ⇑P P 09 49 44.4 +0.1
baz=92,SNR=19
DCID1 **Drake Creek** 92.44 46 *e*P P 09 49 44.0 -0.1
comp=Z,94nm,0.4s,mb6.1
121A **Cookes Peak, D** 92.44 57 P P 09 49 45.0 +0.6
baz=92,SNR=21
W20A **Ramah** 92.44 55 ⇓P P 09 49 44.9 +0.6
baz=92,SNR=21
O18A **Roosevelt** 92.47 49 ⇑P P 09 49 44.8 +0.5
baz=92
C15A **Salmond Ranch,** 92.54 42 P P 09 49 44.3 -0.2
baz=93,SNR=138
S19A **Harvey Farm, M** 92.54 52 ⇓P P 09 49 44.5 -0.2
baz=93,SNR=27
TPAW **Teton Pass** 92.57 46 *e*P P 09 49 45.1 +0.4
comp=Z,186nm,2.3s,mb5.6
R19A **Curley Farm, L** 92.57 52 P P 09 49 44.5 -0.4
baz=93,SNR=31
REDW **Red Top Meadow** 92.61 46 *e*P P 09 49 45.1 +0.2
comp=Z,81nm,1.5s,mb5.4
V20A **Brimhall** 92.62 54 P P 09 49 46.1 +1.0
baz=93,SNR=6.8
BOZ **Bozeman (W)** 92.64 44 P P 09 49 45.3 +0.3
baz=93,SNR=62
BOZ **Bozeman (W)** 92.64 44 *e*P P 09 49 44.3 -0.7
BOZ pmax pmax
comp=Z,48nm,1.1s,mb5.3
BOZ **Bozeman (W)** 92.64 44 *e*P P 09 49 44.3 -0.7
comp=Z,48nm,1.1s,mb5.3
H16A **Russell Place,** 92.67 45 P P 09 49 46.1 +1.0
baz=93,SNR=45
F16A **Kennard Place,** 92.68 44 P P 09 49 45.6 +0.4
baz=93,SNR=67
IMW **Indian Meadow** 92.68 46 *e*P P 09 49 45.7 +0.4
comp=Z,34nm,0.9s,mb5.3
SNOW **Snow King Moun** 92.70 46 *e*P P 09 49 45.6 +0.2
comp=Z,28nm,1.0s,mb5.2
M18A **Lyman** 92.71 48 P P 09 49 45.5 +0.1
baz=93,SNR=16
Z21A **St. Cloud Mine** 92.71 57 ⇑P P 09 49 46.7 +1.1
baz=93,SNR=10
J17A **Brown Place, J** 92.71 46 P P 09 49 45.4 0.0
baz=93,SNR=23
B15A **Bradely Ranch,** 92.71 41 P P 09 49 44.6 -0.7
baz=93,SNR=42
Q19A **Hogan Spring (** 92.73 51 ⇓P P 09 49 45.6 0.0
baz=93,SNR=18
PV10 **Paradox Valley** 92.76 51 *e*P P 09 49 45.5 -0.3
comp=Z,608nm,0.9s
HRY **Holter Researc** 92.78 43 *e*P P 09 49 45.8 +0.1
A15A **Johnson Ranch,** 92.78 41 P P 09 49 45.2 -0.4
baz=93,SNR=52
MOOW **Moose Ponds** 92.78 46 *e*P P 09 49 45.8 +0.1
comp=Z,22nm,1.0s,mb5.0
E16A **East Helena** 92.83 43 ⇓P P 09 49 46.1 +0.3
baz=93,SNR=17
LOHW **Long Hollow** 92.85 46 *e*P P 09 49 46.3 +0.3
comp=Z,25nm,1.1s,mb5.0
YMR **Madison River** 92.85 45 *e*P P 09 49 46.9 +0.9
comp=Z,42nm,1.0s,mb5.3
Y21A **Point of Rocks** 92.86 56 P P 09 49 47.1 +0.8
baz=93,SNR=40
X21A **Alamocita Cree** 92.86 56 ⇓P P 09 49 46.9 +0.6
baz=93,SNR=14
PV04 **Paradox Valley** 92.87 51 *e*P P 09 49 46.4 +0.2
N18A **Larsen Ranch,** 92.89 49 ⇑P P 09 49 46.1 -0.2
baz=93
YFT **Old Faithful** 92.89 45 *e*P P 09 49 47.6 +1.4
comp=Z,34nm,0.9s,mb5.3
FLWY **Flagg Ranch** 92.89 46 *e*P P 09 49 46.6 +0.4
comp=Z,34nm,1.0s,mb5.2
MVCO **Mesa Verde** 92.92 53 ⇓P P 09 49 46.3 -0.2
baz=93,SNR=17
MVCO **Mesa Verde** 92.92 53 *e*P P 09 49 46.7 +0.2
comp=Z,18nm,1.0s,mb5.0
I17A **Pilgrim Ck.** 92.94 46 ⇓P P 09 49 47.2 +0.8
baz=93,SNR=12
K18A **Toltan Ranch,** 93.01 47 ⇓P P 09 49 46.9 +0.1
baz=93,SNR=14
D16A **Dana Ranch, Ca** 93.05 43 P P 09 49 47.0 +0.2
baz=93,SNR=21
H17A **Grant Village** 93.06 45 P P 09 49 48.6 +1.6
baz=93,SNR=37
YNR **Norris Junctio** 93.06 45 *e*P P 09 49 49.9 +3.0
comp=Z,16nm,1.0s,mb4.9
PV01 **Paradox Valley** 93.07 52 *e*P P 09 49 47.3 +0.1
comp=Z,2µm,1.0s
P19A **Cripple Cowboy** 93.09 50 P P 09 49 47.5 +0.2
baz=93,SNR=22
C16A **Fuhringer Ranc** 93.11 42 P P 09 49 46.7 -0.4
baz=93,SNR=34
122A **Conniff Cattle** 93.13 57 ⇓P P 09 49 47.9 +0.4
baz=93,SNR=13
O19A **Miners Draw (B** 93.14 50 P P 09 49 47.4 -0.1
baz=93,SNR=14
S20A **Disappointment** 93.16 52 ⇑P P 09 49 48.1 +0.5
baz=93,SNR=26
J18A **Kendall Valley** 93.17 47 P P 09 49 47.5 0.0
baz=93,SNR=36
G17A **Pierce Place,** 93.17 44 ⇑P P 09 49 48.4 +0.9
baz=93,SNR=30
LKWY **Lake** 93.22 45 *e*P P 09 49 50.2 +2.5
LKWY pmax pmax
comp=Z,24nm,1.0s,mb5.1
LKWY **Lake** 93.22 45 *e*P P 09 49 50.2 +2.5
comp=Z,24nm,1.0s,mb5.1
R20A **Redvale** 93.23 52 ⇓P P 09 49 48.3 +0.4
baz=93,SNR=20
N19A **John Jarvie Ra** 93.24 49 P P 09 49 47.6 -0.3
baz=93,SNR=5.4
Z22A **Elephant Butte** 93.28 57 P P 09 49 48.0 -0.2
baz=93,SNR=55
B16A **M & M Farms, S** 93.29 41 ⇓P P 09 49 47.6 -0.3
baz=93
F17A **Fitzpatrick Pl** 93.36 44 ⇑P P 09 49 49.2 +0.9
baz=93,SNR=49
E17A **Martinsdale** 93.37 43 ⇑P P 09 49 48.6 +0.2
baz=93,SNR=21
LAZ **Ladron** 93.38 56 *e*P P 09 49 49.4 +0.7
comp=Z,9.0nm,1.2s,mb4.6
L19A **Farson** 93.38 48 P P 09 49 48.6 +0.1
baz=93,SNR=20
BW06 **Boulder Array** 93.39 47 ⇓P P 09 49 48.7 +0.2
baz=93,SNR=21
BW06 **Boulder Array** 93.39 47 *e*P P 09 49 48.0 -0.5
comp=Z,29nm,1.3s,mb5.0
PDAR **Pinedale Array** 93.39 47 P P 09 49 47.5 -1.0
comp=Z,10nm,0.9s,mb4.7,baz=211,slow=2.6,SNR=45
PDAR pP pP 09 50 51.4 -2.8
comp=Z,1.7nm,1.0s,baz=227,slow=3.5,SNR=1.4
PDAR PKiKP PKiKP 09 54 34.5 +1.3
comp=Z,0.8nm,0.7s,baz=263,slow=2.5,SNR=4.3
PDAR **Pinedale Array** 93.39 47 P P 09 49 47.5 -1.0
PDAR pP pP 09 50 51.4 -2.8
U21A **Nageezi** 93.40 54 ⇓P P 09 49 49.0 +0.3
baz=93,SNR=48
Y22A **Socorro** 93.42 56 P P 09 49 48.5 -0.3
baz=93,SNR=24
I18A **Diamond G Ranc** 93.42 46 ⇑P P 09 49 49.0 +0.4
baz=93,SNR=30
LENM **Lemitar** 93.46 56 *e*P P 09 49 50.0 +0.9
Q20A **Ridgley Place,** 93.46 51 P P 09 49 48.9 -0.1
baz=94,SNR=28
A16A **West Butte Ran** 93.50 41 ⇑P P 09 49 48.2 -0.7
baz=94
P20A **De Beque** 93.51 51 P P 09 49 48.8 -0.4
baz=94,SNR=30
EDM **Edmonton** 93.53 36 *e*P P 09 49 48.6 -0.3
S21A **Coal Bank Pass** 93.56 52 P P 09 49 49.6 +0.2
baz=94,SNR=50
T21A **Navajo Lake** 93.62 53 ⇑P P 09 49 50.3 +0.5
baz=94,SNR=6.7
D17A **Six Diamond Ra** 93.65 43 ⇓P P 09 49 49.8 +0.2
baz=94,SNR=22
C17A **Wharram Farm,** 93.71 42 ⇓P P 09 49 49.7 -0.2
baz=94,SNR=39
BNM **Barren Site** 93.74 56 *e*P P 09 49 50.5 +0.2
comp=Z,25nm,1.3s,mb5.1
BNM *e*pP pP 09 50 54.6 -1.4
H18A **Shoshone NF, C** 93.76 45 ⇑P P 09 49 51.0 +0.8
baz=94,SNR=9.0
O20A **White River Ci** 93.76 50 ⇑P P 09 49 50.1 -0.2
baz=94,SNR=13
LPM **Los Pinos Moun** 93.77 56 *e*P P 09 49 51.1 +0.6
B17A **L&G Farms, Che** 93.85 42 P P 09 49 50.2 -0.3
baz=94,SNR=51
J19A **Crowheart** 93.86 47 P P 09 49 50.5 -0.2
baz=94,SNR=15
Z23A **Rita Site, Whi** 93.88 57 P P 09 49 51.1 +0.1
baz=94,SNR=14

N20A **Spence Gulch, 93.90 49** P **P 09 49 50.7 -0.2**
baz=94,SNR=11
R21A **Cimarron 93.90 52** P **P 09 49 50.9 -0.1**
baz=94,SNR=61
K19A **Absolon Red Bu 93.91 47** P **P 09 49 50.3 -0.7**
baz=94,SNR=20
G18A **Lazy EL Ranch, 93.97 45** ⇑P **P 09 49 51.4 +0.2**
baz=94,SNR=10
Q21A **Lamborn Mesa, 93.98 51** P **P 09 49 51.2 -0.1**
baz=94,SNR=27
F18A **Big Timber 94.00 44** ⇓P **P 09 49 52.0 +0.7**
baz=94,SNR=21
GCMT **Greycliff 94.01 44** *e*P **P 09 49 52.2 +0.9**
comp=Z,13nm,1.2s,mb4.8
U22A **Llaves 94.02 54** P **P 09 49 52.3 +0.7**
baz=94,SNR=12
E18A **Harlowton 94.02 43** ⇓P **P 09 49 52.3 +1.0**
baz=94,SNR=37
ANMO **Albuquerque 94.04 55** *e*P **P 09 49 50.9 -0.8**
ANMO pmax pmax
comp=Z,12nm,0.9s
ANMO **Albuquerque 94.04 55** *e*P **P 09 49 50.9 -0.8**
comp=Z,12nm,0.9s,mb4.9
A17A **Triple J Farms 94.07 41** P **P 09 49 51.4 -0.1**
baz=94,SNR=62
I19A **Meeteetse 94.08 46** ⇓P **P 09 49 52.3 +0.6**
baz=94,SNR=15
L20A **Wamsutter 94.10 48** ⇓P **P 09 49 52.4 +0.6**
baz=94,SNR=9.1
T22A **Edith 94.12 53** ⇓P **P 09 49 52.1 +0.1**
baz=94,SNR=9.6
324A **Moseley Ranch, 94.12 59** P **P 09 49 51.4 -0.8**
baz=94,SNR=14
RLMT **Red Lodge 94.13 45** ⇑P **P 09 49 52.6 +0.7**
baz=94,SNR=19
RLMT **Red Lodge 94.13 45** *e*P **P 09 49 53.8 +1.9**
comp=Z,33nm,1.4s,mb5.2
Y23A **Lovelace Mesa, 94.16 56** ⇑P **P 09 49 52.3 0.0**
baz=94,SNR=11
X23A **Hourglass Bar 94.18 56** ⇑P **P 09 49 52.7 +0.3**
baz=94,SNR=12
PMSA **Palmer Station 94.19 160** *e*P **P 09 49 52.1 +0.2**
comp=Z,96nm,1.4s,mb5.6
224A **Cornudas Mount 94.22 58** P **P 09 49 52.6 0.0**
baz=94,SNR=24
P21A **Newcastle 94.23 51** ⇓P **P 09 49 52.6 +0.2**
baz=94,SNR=19
H19A **Powell 94.23 45** ⇑P **P 09 49 53.3 +1.0**
baz=94,SNR=28
K20A **Yellowstone Ra 94.24 47** ⇓P **P 09 49 51.8 -0.7**
baz=94,SNR=8.7
D18A **Linhart Farms, 94.24 43** ⇓P **P 09 49 52.7 +0.4**
baz=94,SNR=17
MNTX **Cornudas Mount 94.26 59** ⇑P **P 09 49 52.6 -0.2**
baz=94
MNTX **Cornudas Mount 94.26 59** *e*P **P 09 49 52.2 -0.6**
comp=Z,28nm,1.5s,mb5.1
MNTX *e*pP pP 09 50 58.6 +0.2
S22A **4UR Ranch, Cre 94.33 52** P **P 09 49 53.0 +0.1**
baz=94,SNR=41
W23A **Werner Place, 94.33 55** ⇑P **P 09 49 52.6 -0.4**
baz=94,SNR=9.2
124A **Stringfield Ra 94.40 58** P **P 09 49 53.5 +0.1**
baz=94,SNR=9.9
425A **Indio Mountain 94.41 60** P **P 09 49 53.2 -0.3**
baz=94,SNR=12
V23A **Ortiz Mt. (NFS 94.42 55** ⇓P **P 09 49 53.8 +0.3**
baz=94,SNR=9.3
N21A **Black Mountain 94.43 49** P **P 09 49 53.6 +0.2**
baz=94,SNR=28
EGMT **Eagleton 94.46 42** ⇑P **P 09 49 53.8 +0.5**
baz=94,SNR=25
EGMT **Eagleton 94.46 42** *e*P **P 09 49 53.7 +0.4**
comp=Z,51nm,1.0s,mb5.5
R22A **Saguache, Gunn 94.48 52** ⇓P **P 09 49 53.8 +0.1**
baz=94,SNR=19
Q22A **Crested Butte, 94.50 51** P **P 09 49 54.1 +0.4**
baz=94,SNR=57
SMCO **Snowmass 94.51 51** *e*P **P 09 49 55.0 +1.2**
comp=Z,24nm,1.1s,mb5.2
F19A **Roth Farm, Mol 94.52 44** P **P 09 49 54.5 +0.9**
baz=94,SNR=16
B18A **Beardsley Farm 94.53 42** P **P 09 49 53.4 -0.2**
baz=94,SNR=31
U23A **El Rito 94.54 54** P **P 09 49 54.1 +0.2**
baz=94,SNR=14
325A **Bean Ranch, Si 94.54 59** P **P 09 49 54.0 -0.1**
baz=94,SNR=11
J20A **Shoshoni 94.57 47** ⇓P **P 09 49 54.5 +0.5**
baz=95,SNR=18
Z24A **Sheeppen Canyo 94.60 57** ⇑P **P 09 49 54.3 0.0**
baz=95,SNR=6.4
A18A **Metzger Ranch, 94.61 41** ⇓P **P 09 49 53.7 -0.3**
baz=95,SNR=27
Y24A **Capitan 94.66 56** ⇓P **P 09 49 54.4 -0.2**
baz=95,SNR=17
I20A **Worland 94.67 46** ⇑P **P 09 49 54.3 -0.1**
baz=95,SNR=10
M21A **Separation Pea 94.73 49** ⇓P **P 09 49 54.4 -0.3**
baz=95,SNR=7.3
E19A **Rath Farm, Rou 94.76 44** P **P 09 49 55.7 +1.0**
baz=95,SNR=17
P22A **Eagle 94.76 51** P **P 09 49 55.0 +0.2**
baz=95,SNR=27
T23A **Casias Ranch, 94.80 53** ⇓P **P 09 49 55.6 +0.5**
baz=95,SNR=6.2
225A **Deer Hill, Car 94.81 58** ⇑P **P 09 49 55.3 0.0**
baz=95,SNR=10.0
D19A **Cripps Ranch, 94.85 43** P **P 09 49 55.3 +0.2**
baz=95,SNR=50
RWWY **Rawlins 94.86 49** *e*P **P 09 49 55.1 -0.1**
comp=Z,101nm,2.3s,mb5.5
C19A **Slack Wire Ran 94.86 42** ⇑P **P 09 49 55.7 +0.6**
baz=95,SNR=17
G20A **Bridger 94.88 45** P **P 09 49 56.1 +0.8**
baz=95,SNR=12
626A **Big Bend Ranch 94.89 61** ⇑P **P 09 49 55.7 0.0**
baz=95,SNR=15
W24A **Lazy 6 Ranch, 94.94 55** ⇓P **P 09 49 55.6 -0.2**
baz=95,SNR=22
S23A **Nye Farm, Mont 94.96 53** ⇓P **P 09 49 56.6 +0.7**
baz=95,SNR=6.3
K21A **Alcova 95.02 48** P **P 09 49 55.6 -0.3**
baz=95,SNR=12
526A **Mary Lane Ranc 95.03 60** ⇑P **P 09 49 56.1 -0.2**
baz=95,SNR=7.1
J21A **Lysite 95.03 47** P **P 09 49 56.0 0.0**
baz=95,SNR=20
O22A **Kremmling 95.04 50** ⇑P **P 09 49 56.1 -0.1**
baz=95,SNR=26
F20A **Billings 95.05 44** ⇓P **P 09 49 56.5 +0.4**
baz=95,SNR=6.6
125A **Gardner Draw, 95.05 58** ⇓P **P 09 49 56.4 0.0**
baz=95,SNR=8.6
B19A **Brinkman Farms 95.09 42** ⇑P **P 09 49 55.9 -0.3**
baz=95
Z25A **Roswell 95.12 57** ⇑P **P 09 49 56.6 -0.1**
baz=95,SNR=11
V24A **Rampart Ranch, 95.15 55** P **P 09 49 57.0 +0.3**
baz=95,SNR=15
426A **McDonald Obser 95.20 60** P **P 09 49 56.7 -0.4**
baz=95,SNR=17
GDL2 **Guadalupe Moun 95.21 58** *e*P **P 09 49 56.9 -0.2**
E20A **Meyer Farm, Mu 95.21 44** P **P 09 49 57.9 +1.2**
baz=95,SNR=16
I21A **Big Trails, Te 95.23 46** P **P 09 49 56.4 -0.5**
baz=95,SNR=14
N22A **Wattenberg Ran 95.23 50** ⇓P **P 09 49 57.3 +0.3**
baz=95,SNR=11
M22A **Cedar Creek Ra 95.25 49** P **P 09 49 57.6 +0.6**
baz=95,SNR=5.3
TXAR **Lajitas Array 95.25 61** P **P 09 49 56.6 -0.8**
comp=Z,8.7nm,0.8s,mb5.0,baz=225,slow=5.6,SNR=96
TXAR PP PP 09 53 48.6 -3.1
comp=Z,1.0nm,0.9s,baz=251,slow=7.7,SNR=4.0
TXAR PKKPbc PKKPbc 10 06 49.9 -0.5
comp=Z,0.2nm,0.6s,baz=93,slow=4.3,SNR=3.8
TXAR **Lajitas Array 95.25 61** P **P 09 49 56.6 -0.8**
TXAR 09 53 48.6
MK31 **Makanchi Array 95.25 317** *e*P **P 09 49 56.7 -0.3**
MKAR **Makanchi Array 95.25 317** P **P 09 49 56.6 -0.4**
comp=Z,39nm,0.7s,mb5.7,baz=96,slow=6.3,SNR=160
MKAR PKiKP PKiKP 09 54 36.4 +0.1
comp=Z,0.5nm,0.3s,baz=197,slow=1.9,SNR=3.4
MKAR S SKSac 10 00 08.8 +2.7
comp=Z,0.3nm,0.2s,baz=91,slow=6.1,SNR=5.1
MKAR PKKPbc PKKPbc 10 06 47.7 -3.4
comp=Z,1.8nm,0.7s,baz=282,slow=2.4,SNR=13

MKAR tx tx 10 07 52.3
comp=Z,0.2nm,0.3s,baz=318,slow=3.3,SNR=7.8
ZAA0 **Zalesovo Array 95.26 324** *e*P **P 09 49 55.0 -1.7**
ZALV **Zalesovo Beam 95.26 324** P **P 09 49 55.5 -1.3**
comp=Z,8.1nm,0.9s,mb4.9,baz=108,slow=4.8,SNR=23
Y25A **Mesa, Roswell 95.27 57** P **P 09 49 56.8 -0.5**
baz=95,SNR=13
A19A **Klindworth Far 95.32 41** ⇑P **P 09 49 56.8 -0.4**
baz=95
Q23A **Hartsel 95.33 52** ⇓P **P 09 49 57.5 0.0**
baz=95
D20A **Manuel Ranch, 95.33 43** ⇓P **P 09 49 57.1 -0.2**
baz=95,SNR=26
SDCO **Great Sand Dun 95.36 53** ⇑P **P 09 49 57.6 -0.1**
baz=95,SNR=15
SDCO **Great Sand Dun 95.36 53** *e*P **P 09 49 57.2 -0.4**
comp=Z,10nm,1.2s,mb4.8
SDCO *e*pP pP 09 51 05.0 +1.7
326A **Caldwell Ranch 95.36 59** ⇓P **P 09 49 57.5 -0.3**
baz=95
226A **Malaga, Loving 95.40 59** P **P 09 49 57.3 -0.7**
baz=95,SNR=12
X25A **Clemmons Ranch 95.41 56** ⇓P **P 09 49 57.4 -0.6**
baz=95,SNR=6.0
YKA **Yellowknife Ar 95.41 27** P **P 09 49 54.8 -2.5**
comp=Z,17nm,0.6s,mb5.4,baz=258,slow=5.0,SNR=158
YKA pP pP 09 50 57.5 -5.4
comp=Z,1.3nm,1.0s,baz=266,slow=20,SNR=1.6
YKA PP PP 09 53 44.9 -7.1
comp=Z,2.7nm,1.0s,baz=253,slow=7.6,SNR=6.9
YKA PKiKP PKiKP 09 54 35.1 -1.0
comp=Z,0.4nm,0.4s,baz=252,slow=1.5,SNR=14
YKA Yellowknife Ar 95.41 27 P **P 09 49 54.8 -2.5**
YKA *PP pP 09 50 57.5 -5.5
YKA Yellowknife Ar 95.41 27 P **P 09 49 54.8 -2.5**
YKA pP pP 09 50 57.5 -5.4
YKA PP PP 09 53 44.9 -7.1
527A **Woodward Ranch 95.45 60** P **P 09 49 57.8 -0.5**
baz=95,SNR=14
L22A **Ellis Ranch, M 95.49 48** ⇓P **P 09 49 58.4 +0.2**
baz=96,SNR=6.8
NVL **N'lazarevskaya 95.50 188** *e*P **P 09 49 56.5 -1.2**
NVL pmax pmax
comp=Z,15nm,0.9s,mb5.1
627A **Terlingua Ranc 95.51 61** ⇓P **P 09 49 58.4 -0.1**
baz=96,SNR=12
O23A **Lake Granby, G 95.52 50** ⇑P **P 09 49 58.6 +0.2**
baz=96,SNR=16
C20A **Veseth Ranch, 95.55 43** P **P 09 49 58.2 0.0**
baz=96,SNR=20
K22A **Casper 95.55 48** P **P 09 49 58.5 +0.1**
baz=96,SNR=9.6
S24A **Houchin Ranch, 95.56 53** P **P 09 49 59.0 +0.4**
baz=96,SNR=13
T24A **Torres, Weston 95.58 53** ⇑P **P 09 49 58.5 -0.1**
baz=96,SNR=6.7
N23A **Red Feather La 95.63 50** ⇓P **P 09 49 59.1 +0.2**
baz=96,SNR=15
ISCO **Idaho Springs 95.67 51** ⇑P **P 09 49 58.9 -0.1**
baz=96,SNR=13
ISCO **Idaho Springs 95.67 51** *e*P **P 09 49 59.3 +0.3**
ISCO pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ISCO Idaho Springs 95.67 51 *e*P **P 09 49 59.3 +0.3**
comp=Z,9.5nm,0.8s,mb5.0
V25A **Rancho No Teng 95.69 55** P **P 09 49 58.8 -0.4**
baz=96,SNR=10
W25A **X Bar L Ranch, 95.70 55** ⇓P **P 09 49 58.8 -0.5**
baz=96,SNR=14
Z26A **Caprock 95.73 57** P **P 09 49 59.1 -0.4**
baz=96,SNR=15
J22A **Midwest 95.73 47** ⇑P **P 09 49 58.8 -0.5**
baz=96,SNR=8.8
427A **Hayter Ranch, 95.76 60** ⇑P **P 09 49 59.3 -0.4**
baz=96
CPRX **Cap Rock 95.78 58** *e*P **P 09 49 58.7 -0.9**
comp=Z,20nm,1.0s,mb5.2
Q24A **Divide 95.86 52** ⇑P **P 09 49 59.9 0.0**
baz=96,SNR=22
E21A **Keefer Ranch, 95.93 44** P **P 09 50 00.8 +0.8**
baz=96,SNR=16
628A **Black Gap, Mar 95.95 61** ⇑P **P 09 50 00.3 -0.2**
baz=96,SNR=11
U25A **Circle Dot Ran 95.96 54** ⇓P **P 09 50 00.1 -0.3**
baz=96
Y26A **Elida 95.98 57** P **P 09 50 00.3 -0.3**
baz=96,SNR=5.1
L23A **Garrett 96.05 48** P **P 09 50 00.7 0.0**
baz=96,SNR=6.4
PHWY **Pilot Hill 96.07 49** *e*P **P 09 50 00.8 0.0**
comp=Z,5.8nm,0.8s,mb4.8
D21A **La Casta Ranch 96.09 43** ⇓P **P 09 50 00.9 +0.1**
baz=96,SNR=9.9
127A **Arkansas Junct 96.13 58** P **P 09 50 00.6 -0.7**
baz=96,SNR=12
528A **Cox Ranch, San 96.16 61** P **P 09 50 01.0 -0.5**
baz=96,SNR=19
S25A **Robets Cordova 96.17 53** P **P 09 50 01.3 0.0**
baz=96,SNR=22
V26A **Tequesquite Ra 96.35 55** P **P 09 50 01.8 -0.4**
baz=96,SNR=6.2
328A **Wristen Ranch, 96.36 59** ⇑P **P 09 50 01.3 -1.0**
baz=96,SNR=6.8
R25A **Fountain Ranch 96.38 52** ⇓P **P 09 50 02.3 +0.1**
baz=96,SNR=8.9
Y27A **Causey 96.51 57** ⇑P **P 09 50 01.5 -1.5**
baz=96,SNR=14
LAO **LASA Array 96.54 44** ⇓P **P 09 50 03.7 +0.9**
baz=96,SNR=11
LAO **LASA Array 96.54 44** *e*P **P 09 50 03.8 +1.0**
comp=Z,38nm,1.2s,mb5.5
Q25A **Bedland, Calha 96.55 52** P **P 09 50 03.2 +0.2**
baz=96,SNR=9.8
X27A **F and S Farms, 96.70 56** P **P 09 50 03.7 -0.1**
baz=97,SNR=5.8
RSSD **Black Hills 97.60 47** *e*P **P 09 50 08.4 +0.8**
AMTX **Amarillo 97.89 56** ⇑Pdiff **P 09 50 08.8 -0.4**
baz=98
AMTX **Amarillo 97.89 56** *e*P **P 09 50 08.5 -0.6**
comp=Z,23nm,1.0s,mb5.5
DGMT **Dagmar 98.19 42** ⇓Pdiff **P 09 50 10.1 -0.1**
baz=98
DGMT **Dagmar 98.19 42** *e*P **P 09 50 10.7 +0.5**
comp=Z,17nm,0.8s,mb5.4
KSH **Kashi 98.49 309** *e*P **P 09 50 13.6 +1.9**
KSH *e*PP PP 09 54 19.4 +3.2
KSH *e*SKS 10 00 22.7
KSH *e*S S 10 01 11.4 -4.8
KSH *e*sS sS 10 03 14.1 +0.9
KSH *e*SS SS 10 08 04.4 -3.8
KSH pmax pmax
comp=Z,2.0nm,0.4s,mb4.8
KSH LR LR
comp=N,460nm,10.4s
KSH LR LR
comp=E,480nm,13.0s
KSH LR LR
comp=Z,440nm,17.2s
JCT Junction City 98.75 61 ⇓Pdiff **P 09 50 11.6 -1.6**
baz=99
JCT Junction City 98.75 61 *e*P **P 09 50 11.8 -1.3**
JCT pmax pmax
comp=Z,20nm,0.9s,mb5.5
JCT Junction City 98.75 61 *e*P **P 09 50 11.8 -1.3**
comp=Z,20nm,0.9s,mb5.4
AAK **Ala-Archa 100.03 312** ⇓*e*P Pdif 09 50 19.2 +0.8
WMOK **Wichita Mounta 100.22 57** *e*P Pdif 09 50 20.0 +0.8
FFC **Flin Flon 100.41 36** *i* P Pdif 09 50 19.3 -0.7
FFC **Flin Flon 100.41 36** *e*Pdif Pdif 09 50 18.8 -1.2
comp=Z,33nm,1.0s
EKS2 **Erkin-Say 100.56 311** *e*Pdif Pdif 09 50 21.7 +1.0
comp=Z,4.0nm,1.2s
SVE **Sverdlovsk 109.12 326** *e*P Pdif 09 50 53.2 -5.6
SVE pmax pmax
comp=Z,15nm,0.6s
ARU **Arti 110.31 326** *e*PKIKP PKiKP 09 55 03.0 -0.4
ARU **Arti 110.31 326** *e*PKPdif PKiKP 09 55 03.0 -0.4
BLA **Blacksburg 115.18 55** *e*PKIKP PKPdf 09 55 12.6 -0.7
PRGR **Permogore 115.36 333** *e*PKIKP PKPdf 09 55 11.7 -1.2
PRGR pmax pmax
comp=Z,13nm,0.7s
SSPA **Standing Stone 116.83 51** *e*PKPdf PKPdf 09 55 15.0 -1.4
APA **Apatity 116.95 342** ⇑*i*PKIKP PKPdf 09 55 15.0 -0.8
APA pmax pmax
comp=Z,30nm,1.1s
KEV **Kevo 117.26 345** *e*PKIKP PKPdf 09 55 15.0 -1.4
KEV **Kevo 117.26 345** *e*pkp PKPdf 09 55 15.0 -1.4

ARCES **ARCESS Array B 117.78 346** PKP PKPdf 09 55 16.6 -0.8
comp=Z,15nm,0.4s,baz=91,slow=2.2,SNR=127
ARCES PKKPbc PKKPbc 10 05 37.4 -4.8
comp=Z,3.4nm,0.8s,baz=177,slow=3.1,SNR=14
ARCES **ARCESS Array B 117.78 346** PKP PKPdf 09 55 16.6 -0.8
ARCES PKKPbc PKKPbc 10 05 37.4 -4.8
BINY **Binghamton 118.03 49** *e*PKPdf PKPdf 09 55 17.7 -1.0
LPAZ **La Paz 118.51 116** PKP PKPdf 09 55 20.1 -0.2
comp=Z,2.2nm,0.8s,baz=174,slow=1.7,SNR=9.3
LPAZ pPKP pPKPdf 09 56 26.2 -3.0
comp=Z,5.5nm,1.2s,baz=342,slow=3.6,SNR=4.5
LPAZ PKKPbc PKKPbc 10 05 38.1 +0.1
comp=Z,1.2nm,0.8s,baz=68,slow=6.3,SNR=5.4
LPAZ **La Paz 118.51 116** PKIKP PKPdf 09 55 20.2 -0.1
LPAZ 09 56 26.2
NCB **Newcomb 118.98 46** *e*PKPdf PKPdf 09 55 19.6 -0.8
MDV **Middlebury 119.71 46** *e*PKPdf PKPdf 09 55 21.1 -0.7
PAL **Palisades 119.76 50** *e*PKIKP PKPdf 09 55 21.6 -0.4
SCHQ **Schefferville 120.31 33** PKP PKPdf 09 55 22.0 -0.7
comp=Z,15nm,0.7s,baz=335,slow=2.1,SNR=12
JOF **Joensuu 120.50 338** *e*PKIKP PKPdf 09 55 20.8 -2.0
JOF **Joensuu 120.50 338** *e*pkp PKPdf 09 55 20.8 -2.0
QRN **Al-Qurain 121.25 296** *e*P PKPdf 09 55 24.7 -0.6
QRN AMb AMB 09 55 27.6
comp=Z,105nm,1.1s
BRYW **Bryant College 121.33 48** *e*PKPdf PKPdf 09 55 24.2 -0.8
RDF **Al-Radifah 121.56 296** *e*P PKPdf 09 55 25.8 -0.1
RDF AMb AMB 09 55 28.8
comp=Z,78nm,1.1s
MIB **Mutribah 121.69 297** *e*P PKPdf 09 55 25.6 -0.5
MIB AMb AMB 09 55 28.3
comp=Z,84nm,1.2s
NAY **Al-Naaiem 121.81 297** *e*P PKPdf 09 55 25.8 -0.5
NAY AMb AMB 09 55 27.9
comp=Z,30nm,1.1s
CPUP **Villa Florida 122.29 132** PKP PKPdf 09 55 26.3 -1.1
comp=Z,2.1nm,0.6s,baz=281,slow=4.1,SNR=7.3
CPUP pPKP pPKPdf 09 56 31.3 -5.0
comp=Z,1.8nm,0.8s,baz=220,slow=3.2,SNR=4.6
CPUP PKKPbc PKKPbc 10 05 21.9 -2.5
comp=Z,1.9nm,0.7s,baz=35,slow=7.1,SNR=3.8
CPUP **Villa Florida 122.29 132** PKIKP PKPdf 09 55 26.3 -1.1
CPUP 09 56 31.3
GNI **Garni 122.39 310** *c i*PKIKP PKPdf 09 55 27.6 +0.5
GNI pmax pmax
comp=Z,63nm,1.7s
GNI **Garni 122.39 310** *e*PKPdf PKPdf 09 55 27.9 +0.8
ZEI **Tsey 122.42 313** *i* PKIKP PKPdf 09 55 26.7 -0.4
ZEI pmax pmax
comp=Z,19nm,1.0s
OBN **Obninsk 122.47 329** *i* PKIKP PKPdf 09 55 27.0 +0.2
OBN *e* 09 56 34.3
OBN *e* 09 57 05.3
OBN *e* 10 01 59.6
OBN *e*PS PS 10 07 04.6 -1.3
OBN *e*SS SS 10 13 24.3 -1.3
OBN pmax pmax
comp=Z,25nm,1.1s
PQI **Presque Isle 122.53 42** *e*PKPdf PKPdf 09 55 25.8 -1.4
VSR **Storozhevoye 122.76 324** *e*PKIKP PKPdf 09 55 27.4 -0.1
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,10.0nm,0.9s
VORD **Divnogorie 122.79 324** *e*PKIKP PKPdf 09 55 27.5 0.0
VORD pmax pmax
comp=Z,20nm,1.2s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.7s
KAF **Kangasniemi 122.79 339** *e*PKIKP PKPdf 09 55 25.5 -1.7
KAF **Kangasniemi 122.79 339** *e*pkp PKPdf 09 55 25.5 -1.7
KIV **Kislovodsk 122.97 315** *i* PKIKP PKPdf 09 55 28.8 +0.7
KIV *e* 09 56 37.2
KIV pmax pmax
comp=Z,11nm,0.9s
FINES **FINESS Array B 123.33 339** PKP PKPdf 09 55 27.8 -0.4
comp=Z,6.6nm,0.3s,baz=78,slow=1.7,SNR=27
VSU **Vasula 125.06 336** ⇑*i*PKIKP PKPdf 09 55 31.9 +0.3
BOSA **Boshof 125.13 222** PKP PKPdf 09 55 33.1 +0.3
comp=Z,3.9nm,0.8s,baz=110,slow=1.4,SNR=6.2
BOSA PKKPbc 10 05 11.8
comp=Z,4.8nm,0.9s,baz=255,slow=7.8,SNR=5.6
BOSA Boshof 125.13 222 PKP PKPdf 09 55 33.1 +0.3
BOSA PKKPbc 10 05 11.8
ANN **Anapa 126.27 317** *i* PKHKP PKPre 09 55 18.1
ANN *e* 09 55 34.0
ANN pmax pmax
comp=Z,30nm,1.5s
MALT **Malatya 127.59 309** *e*PKPdf PKPdf 09 55 38.0 +0.9
MALT **Malatya 127.59 309** ⇑*i*P PKPdf 09 55 38.0 +0.9
NB2 **NORSAR Subarra 128.16 345** PKPdf PKPdf 09 55 37.3 -0.2
comp=Z,20nm,1.0s,baz=31,slow=1.9
NB2 **NORSAR Subarra 128.16 345** PKPdf PKPdf 09 55 37.3 -0.2
baz=31,slow=1.9
NOA **NORSAR Array B 128.16 345** PKP PKPdf 09 55 37.3 -0.1
comp=Z,7.7nm,0.6s,baz=32,slow=2.0,SNR=26
NOA **NORSAR Array B 128.16 345** PKIKP PKPdf 09 55 37.3 -0.2
NOA pmax pmax
comp=Z,8.0nm,0.6s
KMBO **Kilima Mbogo 128.45 259** PKP PKPdf 09 55 41.0 +1.5
comp=Z,1.9nm,0.8s,baz=0.1,slow=24,SNR=5.3
KMBO **Kilima Mbogo 128.45 259** PKP PKPdf 09 55 41.0 +1.5
KMBO *e*PKPdf PKPdf 09 55 41.6 +2.1
KIEV **Kiev 128.56 327** *e*PKIKP PKPdf 09 55 39.0 +0.4
SUW **Suwalki 129.48 333** *e*PKIKP PKPdf 09 55 40.7 +0.5
BRTR **Keskin Array B 130.70 312** PP PP 09 57 54.6 -7.3
comp=Z,1.2nm,0.8s,baz=66,slow=3.6,SNR=3.0
BRTR SKPbc SKPbc 09 58 45.0 +3.9
comp=Z,7.3nm,0.7s,baz=100,slow=2.9,SNR=26
TIRR **Tirgusor 132.25 320** ⇓*i*P SKPdf 09 58 52.7 -2.1
BUR08 **Bucovina Ar. S 132.44 326** *e*PKPdf PKPdf 09 55 47.5 +1.5
BUR08 *e*SKPdf SKPdf 09 58 53.7 -1.4
BURAR **Bucovina Array 132.45 325** ⇓PKIKP PKPdf 09 55 48.0 +1.9
BURAR **Bucovina Array 132.45 325** ⇓*i*P PKPdf 09 55 48.0 +1.9
BURAR **Bucovina Array 132.45 325** ⇑*i*P SKPdf 09 58 55.2 +0.1
CSS **Prodhromos 132.46 306** *e*PKPdf PKPdf 09 55 46.9 +0.4
VRI **Vrincioaia 132.55 323** ⇓PKIKP PKPdf 09 55 47.9 +1.6
VRI **Vrincioaia 132.55 323** ⇓*i*P PKPdf 09 55 47.9 +1.6
VRI **Vrincioaia 132.55 323** ⇑*i*P SKPdf 09 58 53.6 -1.7
KWP **Kalwaria Pacla 132.56 329** *e*PKIKP PKPdf 09 55 46.9 +0.7
PLOR **Plostina 132.61 323** ⇑*i*P SKPdf 09 58 54.0 -1.4
MLR **Muntele Rosu 133.22 323** ⇓PKIKP PKPdf 09 55 47.6 0.0
MLR **Muntele Rosu 133.22 323** ⇓*i*P PKPdf 09 55 47.6 0.0
MLR **Muntele Rosu 133.22 323** ⇑*i*P SKPdf 09 58 55.4 -1.2
KOLS **Kolonicke sedl 133.22 329** *e*PKP PKPdf 09 55 48.8 +1.3
KOLS *e* 09 58 56.4
KOLS **Kolonicke sedl 133.22 329** *e*PKP PKPdf 09 55 48.8 +1.3
KOLS *e*SKPDF 09 58 56.4
STHS **Stebnicka Huta 133.43 330** *e*PKIKP PKPdf 09 55 48.9 +1.1
STHS **Stebnicka Huta 133.43 330** *e*PKP PKPdf 09 55 48.9 +1.1
PRD **Provadia 133.50 319** *i* P PKPdf 09 55 48.1 -0.1
OJC **Ojcow 133.59 331** *e*PKPdf PKPdf 09 55 48.9 +0.8
CRVS **Cervenica-Dubn 133.65 329** *e*PKP PKPdf 09 55 49.1 +0.8
CRVS *e* 09 58 57.8
CRVS **Cervenica-Dubn 133.65 329** *e*PKP PKPdf 09 55 49.1 +0.8
CRVS *e*SKPDF 09 58 57.8
VOIR **133.78 323** ⇓PKIKP PKPdf 09 55 50.5 +1.9
VOIR **133.78 323** ⇓*i*P PKPdf 09 55 50.5 +1.9
VOIR **133.78 323** ⇓*i*P SKPdf 09 58 58.6 +1.0
NIE **Niedzica 133.88 330** *e*PKPdf PKPdf 09 55 50.0 +1.3
DRGR **134.32 326** ⇑PKIKP PKPdf 09 55 50.4 +0.8
DRGR **134.32 326** ⇑*i*P PKPdf 09 55 50.4 +0.8
DRGR **134.32 326** ⇑*i*P SKPdf 09 59 00.2 +1.7
SZH **Strazhica 134.40 320** *i* P PKPdf 09 55 48.9 -0.9
KECS **Kecovo 134.42 329** *e*PKP PKPdf 09 55 50.4 +0.7
KECS *e* 09 59 00.0
KECS **Kecovo 134.42 329** *e*PKP PKPdf 09 55 50.4 +0.7
KECS *e*SKPDF 09 59 00.0
OKC **Ostrava-Krasne 134.62 332** *e*PKIKP PKPdf 09 55 51.2 +1.2
OKC **Ostrava-Krasne 134.62 332** *e*PKPdf PKPdf 09 55 51.2 +1.2
PVL **Pavlikeni 134.80 320** *i* P PKPdf 09 55 50.4 -0.2
MORC **Moravsky Berou 134.94 332** *e*PKIKP PKPdf 09 55 51.2 +0.6
MORC **Moravsky Berou 134.94 332** ⇑*i*P PKPdf 09 55 51.6 +1.0
DPC **Dobruska-Polom 135.06 334** *e*PKIKP PKPdf 09 55 52.4 +1.5
DPC **Dobruska-Polom 135.06 334** *e*PKPdf PKPdf 09 55 52.4 +1.5
UPC **Upice 135.08 334** *e*PKIKP PKPdf 09 55 52.2 +1.3
UPC **Upice 135.08 334** *e*PKPdf PKPdf 09 55 52.2 +1.3
PSZ **Piszkesteto 135.09 329** *e*PKIKP PKPdf 09 55 52.2 +1.2
PSZ **Piszkesteto 135.09 329** ⇑*i*P PKPdf 09 55 52.5 +1.5

PSZ	Piszkesteto	135.09 329	‖	ePKP	PKPdf	09 55 52.3	+1.3
GZR	Gura Zlata	135.12 324		PKIKP	PKPdf	09 55 51.8	+0.7
GZR	Gura Zlata	135.12 324	‖	iP	PKPdf	09 55 51.4	+0.3
VYHS	Vyhne	135.22 330		ePKP	PKPdf	09 55 52.0	+0.8
VYHS				e		09 59 02.9	
VYHS	Vyhne	135.22 330		ePKP	PKPdf	09 55 52.0	+0.8
VYHS				eSKPDF		09 59 02.9	
KOLL	Kolacno	135.38 331		ePKIKP	PKPdf	09 55 52.3	+0.8
KOLL	Kolacno	135.38 331		ePKP	PKPdf	09 55 52.3	+0.8
BZS	Buzias	135.63 325	⇑	PKIKP	PKPdf	09 55 52.7	+0.6
BZS	Buzias	135.63 325	⇑	iP	PKPdf	09 55 52.7	+0.6
BRG	Berggiesshubel	135.66 336		ePKPdf	PKPdf	09 55 52.5	+0.5
BRG	Berggiesshubel	135.66 336		ePKP	PKPpre	09 55 40.8	
	comp=Z,5.3nm,1.0s						
BRG				i		09 55 52.6	
	comp=Z,46nm,1.5s						
BRG				epPKP	pPKPdf	09 56 59.0	-1.9
	comp=Z,4.7nm,1.0s						
BRG				SKP		09 58 35.0	
BRG	Berggiesshubel	135.66 336		ePKHKP	PKPpre	09 55 40.8	
BRG				i		09 55 52.6	
BRG				e		09 56 59.0	
BRG						09 58 35.0	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,27nm,1.5s						
PVCC	Panska Ves	135.67 335		ePKIKP	PKPdf	09 55 53.1	+1.1
PVCC	Panska Ves	135.67 335		ePKPdf	PKPdf	09 55 53.1	+1.1
CLL	Collm	135.69 337		ePKPdf	PKPdf	09 55 52.1	+0.1
CLL	Collm	135.69 337		iPKIKP	PKPdf	09 55 52.3	+0.3
CLL				i		09 58 33.0	
CLL				pmax	pmax		
	comp=Z,24nm,1.1s						
CLL				pmax	pmax		
	comp=Z,19nm,1.3s						
CLL	Collm	135.69 337		iPKP	PKPdf	09 55 52.3	+0.3
CLL				iPP	PP	09 58 33.0	+0.4
CLL	Collm	135.69 337		iPP	PKPdf	09 55 52.3	+0.3
	comp=Z,24nm,1.1s						
VRAC	Vranov	135.70 332	‖	PKIKP	PKPdf	09 55 53.5	+1.4
VRAC	Vranov	135.70 332	‖	iP	PKPdf	09 55 53.5	+1.4
FBE	Freiberg	135.85 336		ePKPdf	PKPdf	09 55 53.1	+0.8
RZN	Rozhen	135.98 319		iP	PKPdf	09 55 51.4	-1.5
PRA	Prague	136.07 335		PKPdf	PKPdf	09 55 55.0	+2.2
PRU	Pruhonice	136.09 335		ePKIKP	PKPdf	09 55 54.3	+1.5
PRU	Pruhonice	136.09 335		ePKPdf	PKPdf	09 55 54.3	+1.5
TREC	Trest	136.21 333		ePKIKP	PKPdf	09 55 54.2	+1.2
TREC	Trest	136.21 333		ePKPdf	PKPdf	09 55 54.2	+1.2
CLZ	Clausthal	136.21 339		ePKPdf	PKPdf	09 55 53.6	+0.6
ZST	Bratislava	136.26 331		ePKIKP	PKPdf	09 55 54.6	+1.4
ZST	Bratislava	136.26 331		ePKP	PKPdf	09 55 54.6	+1.4
VTS	Vitosha	136.45 321	‖	PKIKP	PKPdf	09 55 54.4	+0.7
VTS	Vitosha	136.45 321	‖	iP	PKPdf	09 55 54.4	+0.7
VTS	Vitosha	136.45 321	‖	iP		09 59 06.2	
VTS	Vitosha	136.45 321		iP	PKPdf	09 55 53.0	-0.7
TANN	Tannenbergstha	136.60 336		ePKPdf	PKPdf	09 55 54.4	+0.7
WERD	Werda	136.64 337		ePKPdf	PKPdf	09 55 54.3	+0.5
MMB	Musomiste	136.66 319		iP	PKPdf	09 55 52.7	-1.4
IBBN	Ibbenburen	136.68 342		ePKPdf	PKPdf	09 55 54.3	+0.5
WERN	Wernitzgruen	136.74 336		ePKPdf	PKPdf	09 55 54.8	+0.8
MOX	Moxa	136.74 337		ePKP	PKPdf	09 55 54.7	+0.7
	comp=Z,38nm,1.8s						
MOX	Moxa	136.74 337		ePKPdf	PKPdf	09 55 54.4	+0.4
MOX	Moxa	136.74 337		ePKIKP	PKPdf	09 55 54.7	+0.7
MOX				pmax	pmax		
	comp=Z,38nm,1.8s						
NKC	Novy Kostel	136.75 336		ePKIKP	PKPdf	09 55 56.2	+2.2
NKC	Novy Kostel	136.75 336		ePKPdf	PKPdf	09 55 56.2	+2.2
PKSM	Moragy	136.86 328	‖	PKIKP	PKPdf	09 55 53.6	-0.7
PKSM	Moragy	136.86 328	‖	iP	PKPdf	09 55 53.6	-0.7
SOP	Sopron	136.88 331	‖	ePKP	PKPdf	09 55 54.6	+0.3
KKB	Krupnik	136.92 320		iP	PKPdf	09 55 53.5	-1.1
KHC	Kasperske Hory	137.15 334		ePKIKP	PKPdf	09 55 55.2	+0.4
KHC	Kasperske Hory	137.15 334		ePKPdf	PKPdf	09 55 55.3	+0.5
KHC	Kasperske Hory	137.15 334		ePKPdf	PKPdf	09 55 55.2	+0.4
GEC2	GERESS Array S	137.32 334		ePKPdf	PKPdf	09 55 55.6	+0.5
WET	Wettzell	137.43 335		ePKPdf	PKPdf	09 55 55.9	+0.6
BUG	Bochum--Univer	137.58 341		ePKPdf	PKPdf	09 55 55.8	+0.3
GRA1	Grafenberg Arr	137.66 337		ePKPdf	PKPdf	09 55 56.3	+0.6
GRF	Grafenberg Arr	137.66 337		ePKPdf	PKPdf	09 55 56.3	+0.6
TNS	Taunus Mts	138.24 339		ePKPdf	PKPdf	09 55 57.4	+0.7
MEM	Membach	138.70 342		PKP	PKPdf	09 55 58.1	+0.5
LJU	Ljubljana	139.03 331		iPKIKP	PKPdf	09 56 01.2	+2.9
LJU	Ljubljana	139.03 331		iPKPdf	PKPdf	09 56 01.2	+2.9
BOJS	Bojanci	139.07 330		iPKPdf	PKPdf	09 55 59.2	+0.7
BOJS				e		09 56 31.9	
BOJS				ipPKPdf	pPKPdf	09 57 08.4	+1.0
BOJS	Bojanci	139.07 330		iPKPdf	PKPdf	09 55 59.2	+0.7
BOJS				e		09 56 31.9	
BOJS				ipPKPdf	pPKPdf	09 57 08.4	+1.0
BCLA	Clavier	139.08 342		PKP	PKPdf	09 55 59.8	+1.5
STU	Stuttgart	139.18 338		ePKIKP	PKPdf	09 55 59.4	+1.3
JAVS	Javornik	139.36 331		iPKPdf	PKPdf	09 55 59.6	+0.6
JAVS				ipPKPdf	pPKPdf	09 57 08.8	+0.8
JAVS	Javornik	139.36 331		iPKPdf	PKPdf	09 55 59.6	+0.6
JAVS				ipPKPdf	pPKPdf	09 57 08.8	+0.8
WLF	Walferdange	139.48 341		PKP	PKPdf	09 56 00.9	+1.9
WLF	Walferdange	139.48 341		ePKPdf	PKPdf	09 56 00.9	+1.9
GIVF	Givet	139.50 342		ePKP1	PKPdf	09 55 58.8	-0.3
LANF	Langenberg	139.51 339		PKP	PKPdf	09 56 00.1	+1.0
LANF	Langenberg	139.51 339		PKP	PKPdf	09 55 59.2	+0.1
DOU	Dourbes	139.57 343		PKP	PKPdf	09 55 59.2	0.0
MOF	Molkenrain	140.71 339		PKP	PKPdf	09 56 01.4	+0.1
THEF	They Montfort	140.78 340		PKP	PKPdf	09 56 01.4	0.0
SFTF	Sexfontaines	141.11 341		ePKP1	PKPdf	09 55 59.3	-2.7
CABF	La Chapelle	142.14 339		ePKP1	PKPdf	09 56 00.6	-3.3
	comp=Z,240nm,1.5s						
AQU	L'Aquila	142.24 328	⇑	PKIKP	PKPdf	09 56 01.1	-3.1
AQU	L'Aquila	142.24 328	⇑	iP	PKPdf	09 56 01.0	-3.2
LOR	Lormes	142.31 341		ePKP1	PKPdf	09 55 59.9	-4.3
	comp=Z,111nm,1.4s						
LOR				eMLR	MLR		
	comp=Z,166nm,22.4s						
LOR	Lormes	142.31 341		ePKP	PKPdf	09 55 59.9	-4.3
LOR				LR	LR		
	comp=Z,170nm,22.4s						
SSF	Saint Saulge	142.61 341		ePKP1	PKPdf	09 56 01.1	-3.6
	comp=Z,110nm,1.2s						
LPL	La Plagne	142.82 337		ePKP1	PKPdf	09 56 02.1	-3.1
LPG	La Plagne	142.83 337		ePKP1	PKPdf	09 56 02.2	-3.0
SMF	Signal de Mont	142.87 341		ePKP1	PKPdf	09 56 01.8	-3.4
AVF	Avril sur Loir	142.90 341		ePKP1	PKPdf	09 56 01.7	-3.6
SGMF	Saint Gilles	143.04 348		ePKP1	PKPdf	09 56 02.6	-2.9
BGF	Bois d'Agland	143.26 342		ePKP1	PKPdf	09 56 03.1	-2.8
	comp=Z,141nm,1.2s						
OG22	Abries	143.32 336		PKP	PKPdf	09 56 04.1	-2.0
OG22	Abries	143.32 336		PKP	PKPdf	09 56 03.0	-3.1
GDM	Grand'Maison	143.32 337		PKP	PKPdf	09 56 04.1	-2.0
GRN	Grenoble	143.43 338		PKP	PKPdf	09 56 04.4	-1.8
MBDF	Montbardon	143.47 336		ePKP1	PKPdf	09 56 03.6	-2.7
	comp=Z,66nm,0.8s						
CEL	Celeste	143.50 320		ePKPdf	PKPdf	09 56 04.0	-2.6
PLDF	La Plantade	143.54 340		PKP	PKPdf	09 56 04.6	-1.8
PLDF	La Plantade	143.54 340		PKP	PKPdf	09 56 04.8	-1.6
AGO	Saint Agoulin	143.62 341		PKP	PKPdf	09 56 04.6	-2.0
AGO	Saint Agoulin	143.62 341		PKP	PKPdf	09 56 04.8	-1.8
ORIF	Oris-en-Rattie	143.65 337		ePKP1	PKPdf	09 56 04.8	-1.8
	comp=Z,210nm,0.8s						
ORIF				eMLR	MLR		
	comp=Z,207nm,23.0s						
SURF	Saint Ours	143.66 336		PKP	PKPdf	09 56 04.7	-2.0
TCF	Toulx Ste Croi	143.70 342		ePKP1	PKPdf	09 56 04.5	-2.2
	comp=Z,234nm,1.3s						
SAOF	Saorge	143.76 335		PKP	PKPdf	09 56 04.2	-2.7
AUTN	L'Aution	143.81 335		PKP	PKPdf	09 56 04.6	-2.3
SSB	Saint Sauveur	143.83 339		PKP	PKPdf	09 56 05.1	-1.8
SSB	Saint Sauveur	143.83 339		ePKPdf	PKPdf	09 56 05.9	-1.0
TOUF	Mont Tournerai	143.87 335		PKP	PKPdf	09 56 04.6	-2.4
SBF	Sospel	143.91 335		ePKP1	PKPdf	09 56 04.9	-2.2
	comp=Z,455nm,0.8s						
LUCF	Luceram	143.93 335		PKP	PKPdf	09 56 04.8	-2.4
PYM	Petit Puy Mans	143.93 341		PKP	PKPdf	09 56 05.3	-1.8
PYM	Petit Puy Mans	143.93 341		PKP	PKPdf	09 56 05.1	-2.0
MVIF	Mont Vial	144.00 335		PKP	PKPdf	09 56 04.8	-2.5
REVF	Revere	144.04 335		PKP	PKPdf	09 56 05.7	-1.7
MFF	Saint Martin d	144.06 345		ePKP1	PKPdf	09 56 05.6	-1.7
	comp=Z,428nm,1.2s						
VIVF	Saint-Julien-l	144.15 338		ePKP1	PKPdf	09 56 06.4	-1.1
	comp=Z,530nm,1.4s						
OCF	Saint Nazaire	144.16 338		PKP	PKPdf	09 56 06.4	-1.1
OG26	St.-Nazaire-De	144.16 338		PKP	PKPdf	09 56 06.4	-1.1
CALN	Calern	144.23 335		PKP	PKPdf	09 56 06.3	-1.4
PGF	Pioggiola	144.27 332		ePKP1	PKPdf	09 56 06.4	-1.4
	comp=Z,447nm,0.9s						
FRF	La Foret Royal	144.49 335		ePKP1	PKPdf	09 56 07.0	-1.1
	comp=Z,360nm,0.9s						
SMRF	Simiane la Rot	144.57 337		ePKP1	PKPdf	09 56 07.8	-0.5
	comp=Z,215nm,1.0s						
LMR	La Mourre	144.73 335		ePKP1	PKPdf	09 56 07.8	-0.8
	comp=Z,860nm,1.3s						
RJF	Les Rejaudoux	144.79 342		ePKP1	PKPdf	09 56 08.3	-0.3
	comp=Z,838nm,1.2s						
RJF				eMLR	MLR		
	comp=Z,89nm,21.8s						
RJF	Les Rejaudoux	144.79 342		ePKP	PKPdf	09 56 08.3	-0.3
RJF				LR	LR		
	comp=Z,90nm,21.8s						
CAF	Calviac	144.97 341		ePKP1	PKPdf	09 56 09.1	+0.2
	comp=Z,410nm,1.4s						
LASF	Ste Croix	145.12 339		ePKP1	PKPbc	09 56 09.4	+0.1
MTLF	Montolieu	146.33 340		ePKP1	PKPbc	09 56 11.9	-1.1
	comp=Z,288nm,1.2s						
VSL	Villasalto	146.41 328		ePKPdf	PKPdf	09 56 12.1	+0.5
SJAF	Saint Jean de	146.85 338		PKP	PKPdf	09 56 12.2	0.0
EJON	La Jonquera	146.88 338		PKP	PKPdf	09 56 12.4	+0.2
CARF	Carcanieres	146.92 339		PKP	PKPdf	09 56 13.9	+1.6
CARF	Carcanieres	146.92 339		PKP	PKPdf	09 56 10.6	-1.7
MLS	Moulis	147.04 341		PKP	PKPdf	09 56 14.2	+1.7
MLS	Moulis	147.04 341		PKP	PKPdf	09 56 13.2	+0.7
CLLI	Llivia	147.18 339		PKP	PKPdf	09 56 12.7	0.0
SALF	Salau	147.19 341		PKP	PKPbc	09 56 15.7	+0.3
EPF	Esparros	147.21 342		ePKP1	PKPbc	09 56 13.5	-1.9
	comp=Z,90nm,1.1s						
VALF	Valcebollere	147.23 339		PKP	PKPdf	09 56 14.0	+1.2
LABF	Labassere	147.28 342		PKP	PKPdf	09 56 14.2	+1.3
LABF	Labassere	147.28 342		PKP	PKPdf	09 56 11.9	-1.0
REYF	Montagne du Re	147.39 343		PKP	PKPdf	09 56 14.3	+1.2
RESF	Ens	147.41 342		PKP	PKPbc	09 56 16.5	+0.5
RESF	Ens	147.41 342		PKP	PKPdf	09 56 14.7	+1.6
VIEF	Viey	147.44 342		PKP	PKPdf	09 56 13.7	+0.5
CSOR	Sort	147.55 340		PKP	PKPdf	09 56 12.8	-0.6
EALK	Alkurruntz	147.56 344		PKP	PKPbc	09 56 15.9	-0.5
EBIE	Bielsa	147.59 342		PKP	PKPdf	09 56 13.6	+0.2
SJPF	Ste Jean	147.59 344		ePKP1	PKPdf	09 56 13.6	+0.2
	comp=Z,120nm,1.3s						
LARF	Larrau	147.59 344		PKP	PKPdf	09 56 15.0	+1.6
ETSF	Etsaut	147.60 343		ePKP1	PKPdf	09 56 14.6	+1.2
	comp=Z,103nm,1.0s						
ELIZ	Elizondo	147.62 344		PKP2	PKPbc	09 56 16.4	-0.1
CFON	Fontmartina	147.65 338		PKP	PKPdf	09 56 14.7	+1.1
EMIR	Miracle	147.83 340		PKP	PKPbc	09 56 16.0	-1.1
ELAN	Lanestosa	148.02 347		PKP	PKPdf	09 56 14.2	+0.1
EARI	Arriondas	148.31 349		PKP	PKPbc	09 56 19.4	+1.1
EPOB	Poblet	148.49 340		PKP	PKPbc	09 56 19.1	+0.2
EPON	Pontenova	148.60 352		PKP	PKPbc	09 56 18.1	-1.0
ESAC	San Caprasio	148.65 342		PKP	PKPdf	09 56 16.3	+1.1
ERTA	Horta de San J	149.09 340		PKP	PKPdf	09 56 16.9	+1.0
KEST	Kesra	149.12 323		PKP	PKPdf	09 56 17.1	+0.9
	comp=Z,37nm,0.9s,baz=17,slow=2.0,SNR=9.0						
KEST				PKPbc	PKPbc	09 56 20.9	+0.3
	comp=Z,30nm,0.7s,baz=278,slow=1.4,SNR=56						
KEST	Kesra	149.12 323		PKP	PKPdf	09 56 17.1	+0.9
KEST				PKPbc	PKPbc	09 56 20.9	+0.3
STS	Santiago	149.21 354		PKHKP	PKPpre	09 56 16.9	
ERUA	La Rua	149.51 352		PKHKP	PKPpre	09 56 19.1	
CMAH	Djebel Manchou	149.57 326		P	PKPdf	09 56 13.7	-3.1
CAEH	'Ain El Ouahch	149.76 327		P	PKPdf	09 56 14.9	-2.2
ABSA	Djebel Ababsia	149.80 326		P	PKPdf	09 56 14.1	-3.1
EMOS	Mosqueruela	149.89 341		PKP	PKPbc	09 56 19.3	-3.0
ECAL	Calabor	149.90 351		PKP	PKPbc	09 56 19.9	-2.4
ETOR	Torete	149.94 343		PKHKP	PKPpre	09 56 17.9	
PBRG	Braganca	150.03 351		ePKPbc	PKPbc	09 56 23.1	+0.5
CKFL	Kef-Lekhel	150.12 327		P	PKPdf	09 56 15.4	-2.3
ELOB	Lobios	150.15 353		PKP	PKPbc	09 56 23.4	+0.5
PCED	Cedros	150.18 25		ePKP	PKPbc	09 56 23.8	+0.7
ROSA	Rosais	150.30 25		ePKP	PKPbc	09 56 23.8	+0.4
HOR	Horta	150.30 25		ePKP	PKPbc	09 56 23.4	0.0
PCAB	Cabril	150.31 353		ePKPdf	PKPdf	09 56 19.1	+1.3
PCAB	Cabril	150.31 353		ePKPbc	PKPbc	09 56 23.9	+0.6
CASM	Ain Smara	150.34 327		P	PKPdf	09 56 15.7	-2.4
PCAN	Candelaria	150.41 25		ePKP	PKPbc	09 56 23.8	+0.2
PMAN	Manadas	150.43 25		ePKP	PKPbc	09 56 24.5	+0.8
DFRA	Djebel Bou Aff	150.45 328		P	PKPdf	09 56 16.0	-2.2
CTEI	Djebel Teioual	150.53 327		P	PKPdf	09 56 15.8	-2.6
PID	Ribeirinha	150.58 25		ePKP	PKPbc	09 56 25.4	+1.4
GUD	Guadarrama	150.65 346		PKIKP	PKPdf	09 56 19.5	+1.1
PVRL	Vila Real	150.69 352		ePKPbc	PKPbc	09 56 25.0	+0.8
MVO	Moncorvo	150.70 351		ePKPdf	PKPdf	09 56 19.6	+1.2
MVO	Moncorvo	150.70 351		ePKPbc	PKPbc	09 56 25.3	+1.1
MVO	Moncorvo	150.70 351		PKP	PKPdf	09 56 19.7	+1.2
ECHE	Chera	150.75 341		PKIKP	PKPdf	09 56 19.8	+1.2
ADH	Angra Heroismo	150.75 23		ePKP	PKPbc	09 56 26.1	+1.7
PTO	Porto	150.94 353		ePKPbc	PKPbc	09 56 25.1	+0.3
SET	Setif	150.96 328		P	PKPdf	09 56 20.0	+1.0
RCBR	Riachuelo	150.97 127		ePKPbc	PKPbc	09 56 24.9	-0.8
CKHR	Kef el Ahmar	151.04 328		P	PKPdf	09 56 17.2	-1.9
EBEN	Beniarda	151.30 339		PKP	PKPbc	09 56 26.6	+0.9
ESDC	Sonseca Array	151.52 345		PKP	PKPdf	09 56 20.1	+0.3
	comp=Z,3.6nm,0.9s,baz=352,slow=2.8,SNR=13						
ESDC				PKPbc	PKPbc	09 56 26.3	+0.1
	comp=Z,26nm,0.8s,baz=11,slow=2.8,SNR=46						
ESDC				PKPab	PKPab	09 56 35.1	-0.4
	comp=Z,24nm,0.7s,baz=13,slow=3.5,SNR=19						
ESDC				PP	PP	10 00 05.6	-1.2
	comp=Z,1.2nm,0.6s,baz=13,slow=6.3,SNR=5.9						
ESDC	Sonseca Array	151.52 345		PKP	PKPdf	09 56 20.1	+0.4
ESLA	Sonseca Array	151.52 345		ePKPdf	PKPdf	09 56 19.9	+0.2
ESLA				ePKPbc	PKPbc	09 56 26.5	+0.3
ESLA				ePKPab	PKPab	09 56 35.2	-0.4
MTE	Manteigas	151.53 351		ePKPdf	PKPdf	09 56 20.9	+1.2
MTE	Manteigas	151.53 351		ePKPbc	PKPbc	09 56 27.1	+1.0
MTE	Manteigas	151.53 351		ePKPdf	PKPdf	09 56 20.7	+1.0
MTE				ePKPbc	PKPbc	09 56 26.9	+0.8
EPLA	Plasencia	151.61 349		PKIKP	PKPdf	09 56 19.3	-0.6
PAB	San Pablo	151.74 346		ePKPdf	PKPdf	09 56 21.0	+1.0
PAB				ePKPbc	PKPbc	09 56 27.6	+1.0
PAB				ePKPab	PKPab	09 56 37.3	+0.9
ETOB	Tobarra	151.79 341		PKP	PKPdf	09 56 21.2	+1.0
PCBR	Castelo Branco	152.06 351		ePKPdf	PKPdf	09 56 21.6	+1.1
PCBR	Castelo Branco	152.06 351		ePKPbc	PKPbc	09 56 27.9	+0.5
PCBR				iP		09 56 39.3	
EVIA	Vianos	152.09 342		PKIKP	PKPdf	09 56 21.7	+1.1
PDA	Ponta Delgada	152.14 22		ePKP	PKPbc	09 56 27.8	+0.2
EMHD	Djebel Mahouad	152.15 332		P	PKPbc	09 56 29.3	+1.6
BART	Pico Bartolome	152.29 21		ePKP	PKPbc	09 56 28.5	+0.6
EMUR	La Murta	152.42 340		PKP	PKPbc	09 56 28.5	+0.3
PMRV	Marv??o	152.45 351		ePKPdf	PKPdf	09 56 21.9	+0.8
PMRV	Marv??o	152.45 351		ePKPbc	PKPbc	09 56 28.9	+0.6
PMRV				iP		09 56 40.7	
EBNR	Beni Rached	152.71 334		P	PKPbc	09 56 29.7	+0.8
EHUE	Huescar	152.88 342		PKIKP	PKPdf	09 56 22.2	+0.4
EBAN	Banos Encina	152.90 344		PKIKP	PKPdf	09 56 22.4	+0.6
PSMA	Santa Maria	153.00 22		ePKP	PKPbc	09 56 29.9	+0.4
PSMN	Pico do Norte,	153.02 22		ePKP	PKPbc	09 56 29.8	+0.2
PESTR	Estremoz	153.03 351		ePKPdf	PKPdf	09 56 23.3	+1.3
PESTR	Estremoz	153.03 351		ePKPbc	PKPbc	09 56 29.9	+0.4
PESTR				iP		09 56 42.9	
EQES	Quesada	153.03 343		PKP	PKPdf	09 56 22.9	+0.9
EBAD	Badajoz	153.05 350		PKP	PKPdf	09 56 22.8	+0.7
EADA	Adamuz	153.10 345		PKP	PKPdf	09 56 23.4	+1.3
PMAFR	Mafra	153.17 354		ePKPbc	PKPbc	09 56 31.1	+1.3
PMAFR				iP		09 56 43.6	
EANR	'Ain N'Sour	153.19 334		P	PKPdf	09 56 23.6	+1.3
LIS	Lisbon	153.39 353		eP	PKPdf	09 56 22.5	0.0
LIS	Lisbon	153.39 353		eP	PKPdf	09 56 22.5	0.0
EVO	Evora	153.43 351		ePKIKP	PKPdf	09 56 22.4	-0.2
	comp=Z,140nm,1.5s						
EVO				eMLR	MLR		
	comp=Z,170nm,19.8s						
EVO	Evora	153.43 351		ePKPdf	PKPdf	09 56 23.3	+0.7
EVO	Evora	153.43 351		ePKPbc	PKPbc	09 56 31.0	+0.6
EVO				iP		09 56 45.0	
EVOP	Sao Brissos	153.45 352		eP	PKPdf	09 56 21.9	-0.7
ETRT	Tiaret	153.57 333		P	PKPdf	09 56 24.5	+1.6
PBEJ	Beja	153.90 351		ePKPdf	PKPdf	09 56 24.8	+1.5
PBEJ	Beja	153.90 351		ePKPbc	PKPbc	09 56 32.2	+0.8
PBEJ				iP		09 56 47.1	
EMIN	Mina Concepcio	153.94 349		PKP	PKPdf	09 56 24.7	+1.4
EGUA	Guajares	154.08 343		PKIKP	PKPdf	09 56 23.8	+0.2
MESJ	Messejana	154.14 351		eP	PKPdf	09 56 23.8	+0.2
MESJ	Messejana	154.14 351		eP	PKPdf	09 56 23.8	+0.2
PCVE	Castro Verde	154.31 351		ePKPdf	PKPdf	09 56 25.2	+1.3
PCVE	Castro Verde	154.31 351		ePKPbc	PKPbc	09 56 33.6	+1.3
PCVE				iP		09 56 48.3	
EGRO	El Granado	154.32 350		PKP	PKPdf	09 56 25.8	+2.0
PVAQ	Vaqueiros	154.49 350		ePKPdf	PKPdf	09 56 25.4	+1.3
PVAQ	Vaqueiros	154.49 350		ePKPbc	PKPbc	09 56 33.6	+0.9
PVAQ				iP		09 56 49.5	
ESPR	Espera	154.64 347		PKP	PKPdf	09 56 26.3	+2.0
PBDV	Barranco-do-Ve	154.68 351		ePKPdf	PKPdf	09 56 25.8	+1.4
PBDV				iP		09 56 50.7	
MORF	Marmelete	154.72 352		ePKPdf	PKPdf	09 56 24.2	-0.2
MORF				iP		09 56 50.3	
FUL	Funchal	159.35 10		iP	PKPab	09 56 55.2	-14
TAM	Tamanrasset	159.52 303		ePKIKP	PKPdf	09 56 32.7	+1.8
TORD	Torodi Ar. Bea	165.70 275		PKP	PKPdf	09 56 36.2	-0.9
	comp=Z,19nm,1.0s,baz=9.9,slow=0.7,SNR=40						
TORD				PKPab	PKPab	09 57 37.9	0.0
	comp=Z,13nm,1.0s,baz=82,slow=3.1,SNR=16						
TORD				pPKPab	pPKPab	09 58 39.9	-4.0
	comp=Z,6.4nm,1.2s,baz=92,slow=4.5,SNR=3.5						
TORD	Torodi Ar. Bea	165.70 275		PKP	PKPdf	09 56 36.2	-0.9
TORD				PKPab	PKPab	09 57 37.9	0.0
TORD				pPKPab	pPKPab	09 58 39.9	-4.0
LIC	Lamto	170.19 233		ePKIKP	PKPdf	09 56 39.4	-0.9
	comp=Z,138nm,1.6s						
DBIC	Dimbokro	170.32 236		PKP	PKPdf	09 56 39.5	-0.8
	comp=Z,3.9nm,0.9s,baz=295,slow=9.4,SNR=4.0						
DBIC				PKPab	PKPab	09 57 58.4	+0.1
	comp=Z,1.9nm,0.6s,baz=106,slow=7.6,SNR=4.0						

NIED ***04*** *09:51:00,44.°00N×147.°90E,h17km,Mw4.2 Best double couple: M₀2.10000×10¹⁵ NP1:φ=146.00000°,δ87.00000°, λ13.00000°. NP2:φ=56.00000°,δ77.00000°,λ177.00000°.*

JMA 04 09:51:51.9±0.3,43.°98N×147.°87E,h0km,M3.9,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.66	249	P	Pn	09 52 22.4	+0.2
NEM2				eS	Sn	09 52 44.6	+0.3
JRA	Rausu	1.98	270	P	Pn	09 52 27.2	+0.5
JRA				eS	Sn	09 52 53.4	+1.2
JNK	Nakash	2.32	261	P	Pn	09 52 31.9	+0.7
JNK				eS	Sn	09 53 01.2	+0.8
JAK	Akkeshi	2.51	248	P	Pn	09 52 34.6	+0.7
JAK				eS	Sn	09 53 06.1	+0.9
JTKR	Abashiri--Toko	2.86	271	P	Pn	09 52 40.1	+1.4
JAR	Ashorobuto	3.05	258	P	Pn	09 52 42.8	+1.4
JOB	Onbets	3.13	251	P	Pn	09 52 43.

JAK	Akkeshi	2.66 250	P	Pn	10 16 24.4	+1.3
JAK			eS	Sn	10 16 57.0	+1.0
JTKR	Abashiri--Toko	3.03 271	P	Pn	10 16 30.3	+2.2
JAR	Ashorobuto	3.21 259	P	Pn	10 16 32.3	+1.6
JAR			eS	Sn	10 17 12.2	+2.5
JCH	Churui	3.71 250	P	Pn	10 16 38.7	+1.1
JCH			eS	Sn	10 17 23.8	+1.8
JKK2	Kamakawa 2	3.87 270	P	Pn	10 16 42.5	+2.8
JNBK	Urakawa-nobuka	4.26 248	P	Pn	10 16 46.9	+1.8
JNBK			eS	Sn	10 17 37.5	+2.0
JKB	Kayabe	5.59 251	P	Pn	10 17 05.1	+1.8
JKB			eS	Sn	10 18 09.4	+1.1
JOT	Ohata	5.80 246	P	Pn	10 17 07.8	+1.5
JOT			eS	Sn	10 18 13.4	-0.2

*ISCJB **04** 10:22:11.0±0.5, 54°.92S±0°.08×33°.1W±0°.2, h10km, mb4.0/10, Error ellipse: s-maj=15.5km s-min=9.8km az=147.4*
*IDC **04** 10:22:11.5±0.7, 54°.89S×33°.10W, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/17, mbtmp4.1/11, ML4.8/1, Error ellipse: s-maj=23.6km s-min=17.8km az=45.0*
*NEIC **04** 10:22:12.8±0.3, 54°.88S×33°.07W, h10km, Error ellipse: s-maj=10.0km s-min=8.9km az=218.0*

ISC 04 10:22:12.9±0.5, 54°.94S±0°.08×33°.1W±0°.2, h10km, n22, σ0s74/17, mb4.0/10, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	Palmer Station	18.21	225	P	Pn	10 26 26.3	+0.9
	0.3nm,0.3s,baz=82,slow=9.8,SNR=3.7						
VNA1	Neumayer--Stat	19.15	155	e	Pn	10 26 35.1	-1.7
VNA3	Neumayer Olymp	19.24	157	e	Pn	10 26 37.1	-0.7
VNA2	Neumayer--Watz	19.55	155	e	Pn	10 26 41.9	+0.3
	baz=313,slow=9.8						
PLCA	Paso Flores	28.51	284	P	P	10 28 07.7	-0.5
	4.5nm,0.9s,mb4.2,baz=142,slow=7.4,SNR=4.7						
PLCA	Paso Flores	28.51	284	P	P	10 28 07.7	-0.5
CPUP	Villa Florida	33.66	318	P	P	10 28 53.3	-0.4
	0.4nm,0.3s,mb3.8,baz=117,slow=11,SNR=2.8						
CFAA	Coronel Fontan	34.08	299	P	P	10 28 56.5	-0.8
	0.2nm,0.6s,mb3.2,baz=153,slow=9.3,SNR=3.8						
QSPA	South Pole Qui	35.31	180	P	P	10 29 08.7	+1.3
	4.4nm,1.0s,mb4.4,baz=199,slow=4.9,SNR=12						
QSPA	South Pole Qui	35.31	180	P	P	10 29 08.7	+1.3
MAW	Mawson	42.98	146	P	P	10 30 11.6	0.0
	2.1nm,0.7s,mb4.0,baz=272,slow=14,SNR=5.2						
SIV	San Ignacio	44.48	320	P	P	10 30 24.0	-0.2
	0.9nm,0.8s,mb3.6,baz=160,slow=9.7,SNR=6.6						
LPAZ	La Paz	47.07	311	P	P	10 30 45.1	+0.5
	3.5nm,0.7s,mb4.4,baz=138,slow=4.7,SNR=18						
BOSA	Boshof	49.03	82	P	P	10 31 00.3	+0.5
	1.9nm,0.7s,mb4.2,baz=254,slow=7.4,SNR=2.7						
BOSA	Boshof	49.03	82	P	P	10 31 00.3	+0.5
DBIC	Dimbokro	65.74	31	P	P	10 32 57.6	-0.1
	1.5nm,0.7s,mb4.1,baz=184,slow=9.4,SNR=3.0						
TORD	Torodi Ar. Bea	73.91	35	P	P	10 33 48.6	+0.7
	1.3nm,0.8s,mb3.9,baz=197,slow=5.5,SNR=6.0						
YKA	Yellowknife Ar	133.16	321	PKP	PKPdf	10 41 26.8	-0.4
	0.5nm,0.7s,baz=133,slow=2.3,SNR=8.0						
MKAR	Makanchi Array	139.74	74	PKP	PKPdf	10 41 39.0	-0.9
	0.2nm,0.2s,baz=238,slow=2.7,SNR=2.3						
ZALV	Zalesovo Beam	144.91	65	PKP	PKPdf	10 41 48.5	-0.4
	1.1nm,0.6s,baz=221,slow=4.8,SNR=4.5						
ILAR	Eielson Array	146.92	314	PKPbc	PKPbc	10 41 53.6	-0.4
	5.1nm,0.7s,baz=127,slow=2.0,SNR=71						
SONM	Songino Array	154.01	89	PKPbc	PKPbc	10 42 11.3	-0.3
	0.5nm,0.6s,baz=209,slow=2.6,SNR=2.9						

IDC 04 10:52:41.6±2.6, 21°.61N×143°.30E, h284km±29km, mb3.1/6, mb1 3.4/7, mb1mx3.0/22, mbtmp3.2/7, Error ellipse: s-maj=57.0km s-min=14.0km az=105.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	5.56	350	P	Pn	10 54 06.5	+1.4
	4.5nm,0.3s,baz=200,slow=18,SNR=3.0						
CBIJ				S	S	10 55 11.7	-0.6
	8.2nm,0.3s,baz=154,slow=22,SNR=5.9						
WRA	Warramunga Arr	42.21	193	P	P	11 00 07.3	0.0
	0.9nm,0.5s,baz=14,slow=9.0,SNR=56						
FITZ	Fitzroy Crossi	43.09	205	P	P	11 00 13.9	-0.4
	1.5nm,0.8s,baz=22,slow=5.4,SNR=5.0						
ASAR	Alice Springs	45.92	192	P	P	11 00 36.5	-0.1
	0.3nm,0.6s,baz=15,slow=10,SNR=8.9						
YKA	Yellowknife Ar	76.49	28	P	P	11 04 00.2	+0.1
	0.4nm,0.5s,baz=292,slow=6.0,SNR=6.2						
ARCES	ARCESS Array B	79.04	342	P	P	11 04 14.1	0.0
	1.8nm,0.8s,baz=74,slow=6.7,SNR=4.0						
NVAR	Mina Array Bea	83.12	52	P	P	11 04 36.6	+0.5
	0.4nm,0.8s,baz=270,slow=4.4,SNR=3.2						

*IDC **04** 11:06:03.7±4.7, 21°.18S×179°.19W, h576km±37km, mb3.0/7, mb1 3.2/7, mb1mx3.0/18, mbtmp3.0/7, Error ellipse: s-maj=91.1km s-min=28.5km az=141.0*
*ISCJB **04** 11:06:05.9±4.8, 21°.3S±0°.7×179°.3W±0°.6, h617km±26km, mb3.7/7, Error ellipse: s-maj=133.4km s-min=28.1km az=139.3*
*NEIC **04** 11:06:06.0±3.9, 21°.39S×179°.21W, h607km±21km, Error ellipse: s-maj=98.5km s-min=21.7km az=140.0*

ISC 04 11:06:06.2±5.0, 21°.4S±0°.7×179°.2W±0°.6, h608km±27km, n11, σ0s69/10, mb3.7/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.45	324	P	P	11 07 35.6	+0.1
CTA	Charters Tower	32.28	266	P	P	11 11 46.8	-0.2
	1.5nm,0.3s,mb4.1,baz=81,slow=10,SNR=4.1						
CTAO	Charters Tower	32.28	266	P	P	11 11 47.1	+0.1
STKA	Stephens Creek	36.38	245	P	P	11 12 21.5	+0.5
	0.7nm,0.5s,mb3.4,baz=101,slow=16,SNR=2.5						
ASAR	Alice Springs	43.22	258	P	P	11 13 15.4	-0.1
	2.1nm,0.6s,mb3.9,baz=96,slow=7.9,SNR=43						
ASAR				PcP	PcP	11 14 51.2	+0.6
	0.3nm,0.6s,baz=109,slow=3.9,SNR=4.4						
ASAR				ScP	ScP	11 17 47.8	+2.9
	0.3nm,0.7s,baz=102,slow=4.4,SNR=4.4						
WB2	Warramunga Arr	43.35	263	eP	P	11 13 16.0	-0.6
WRA	Warramunga Arr	43.36	263	P	P	11 13 16.1	-0.6
	0.9nm,0.3s,mb3.8,baz=96,slow=7.4,SNR=87						
FITZ	Fitzroy Crossi	51.79	263	P	P	11 14 19.2	-0.3
	1.2nm,0.4s,mb3.6,baz=94,slow=6.9,SNR=10						
CMAR	Chiang Mai Arr	89.34	290	P	P	11 18 01.2	+1.7
	0.2nm,0.3s,mb3.5,baz=120,slow=4.1,SNR=5.3						
ILAR	Eielson Array	89.42	13	P	P	11 17 58.1	-0.7
	0.3nm,0.5s,mb3.4,baz=214,slow=4.8,SNR=8.9						
BRTR	Keskin Array B	146.56	311	PKPbc	PKPbc	11 24 39.7	-1.0
	0.8nm,0.7s,baz=87,slow=3.0,SNR=3.7						

*ISCJB **04** 11:14:35.1±2.2, 19°.4S±0°.6×177°.8W±0°.3, h566km±19km, mb3.5/7, Error ellipse: s-maj=94.9km s-min=16.0km az=156.1*
*IDC **04** 11:14:35.9±5.9, 19°.25S×177°.82W, h561km±70km, mb3.1/7, mb1 3.4/7, mb1mx3.1/17, mbtmp3.1/7, Error ellipse: s-maj=86.4km s-min=24.2km az=157.0*
*NEIC **04** 11:14:35.8±1.6, 19°.40S×177°.76W, h562km±13km, Error ellipse: s-maj=67.7km s-min=11.7km az=156.0*

ISC 04 11:14:35.9±2.2, 19°.4S±0°.6×177°.8W±0°.3, h561km±18km, n12, σ0s58/11, mb3.5/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.31	292	eP	P	11 16 01.1	+0.3
AFI	Afiamalu	7.93	47	P	P	11 16 33.1	-0.2
CTAO	Charters Tower	33.83	263	eP	P	11 20 32.4	0.0
STKA	Stephens Creek	38.47	243	P	P	11 21 11.4	+1.0
	0.9nm,0.4s,mb3.7,baz=74,slow=11,SNR=6.4						
WB2	Warramunga Arr	44.97	261	eP	P	11 22 01.0	-0.8
WRA	Warramunga Arr	44.98	261	P	P	11 22 01.1	-0.8
	4.1nm,0.8s,mb4.0,baz=97,slow=7.8,SNR=60						
WRA				PcP	PcP	11 23 30.4	-0.6
	0.2nm,0.4s,baz=99,slow=3.5,SNR=4.6						
ASAR	Alice Springs	44.99	256	P	P	11 22 01.6	-0.4
	4.9nm,0.7s,mb4.2,baz=86,slow=8.8,SNR=66						
ASAR				PcP	PcP	11 23 30.5	-0.5
	0.6nm,0.7s,baz=106,slow=4.1,SNR=4.6						
FITZ	Fitzroy Crossi	53.40	262	P	P	11 23 03.8	-0.2
	1.1nm,0.5s,mb3.4,baz=41,slow=14,SNR=5.7						
NVAR	Mina Array Bea	80.09	43	P	P	11 25 47.8	0.0
	0.3nm,0.6s,mb2.8,baz=223,slow=8.6,SNR=3.4						
TXAR	Lajitas Array	86.29	57	P	P	11 26 18.9	0.0
	0.3nm,0.7s,mb3.0,baz=210,slow=7.2,SNR=6.0						
CMAR	Chiang Mai Arr	89.96	289	P	P	11 26 37.4	+1.1
	0.8nm,0.8s,mb3.6,baz=129,slow=3.0,SNR=5.5						
BRTR	Keskin Array B	146.27	314	PKPbc	PKPbc	11 33 12.9	-1.2
	0.4nm,0.6s,baz=116,slow=3.4,SNR=3.8						

*ISCJB **04** 11:29:20.6±1.2, 15°.35N±0°.08×95°.72W±0°.04, h30km±8km, Error ellipse: s-maj=14.2km s-min=5.4km az=17.5*
*MEX **04** 11:29:22.7±0.7, 15°.31N×95°.75W, h20km±6km, MD3.9*
*NEIC **04** 11:29:22.7, 15°.31N×95°.75W, h20km, MD3.9(MEX), After MEX.*

ISC 04 11:29:20.9±1.4, 15°.35N±0°.09×95°.72W±0°.04, h22km±10km, n17, σ0s81/33, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.56	318	iP	Pb	11 29 31.8	-0.3
HUIG				iS	Sb	11 29 39.3	-0.4
HUIG	Huatulco	0.56	318	iP	Pb	11 29 31.8	-0.3
HUIG				iS	Sb	11 29 39.3	-0.4
CMIG	Matias Romero	1.91	25	iP	Pn	11 29 52.5	+0.4
CMIG				iS	Sn	11 30 14.3	-1.2
CMIG	Matias Romero	1.91	25	iP	Pn	11 29 52.5	+0.4
CMIG				iS	Sn	11 30 14.3	-1.2
VHO	Vista Hermosa	1.97	330	iP	Pn	11 29 53.2	+0.2
VHO				iS	Sn	11 30 16.6	-0.4
VHO	Vista Hermosa	1.97	330	iP	Pn	11 29 53.2	+0.2
VHO				iS	Sn	11 30 16.6	-0.4
PCIG		2.43	81	eP	Pn	11 29 59.2	-0.1
PCIG				iS	Sn	11 30 28.3	-0.2
PNIG	Pinotepa	2.54	294	iP	Pn	11 30 00.3	-0.6
PNIG				iS	Sn	11 30 29.1	-1.9
PNIG	Pinotepa	2.54	294	iP	Pn	11 30 00.3	-0.6
PNIG				iS	Sn	11 30 29.1	-1.9
UTMO	Huajuapan	3.18	321	iP	Pn	11 30 09.9	+0.4
UTMO				iS	Sn	11 30 47.1	+0.3
TPIG	Tehuac#an	3.44	333	iS	Sn	11 30 53.6	+0.4
CCIG	Comitan	3.57	74	iP	Pn	11 30 15.7	+0.7
CCIG				iS	Sn	11 30 56.1	-0.4
CCIG	Comitan	3.57	74	iP	Pn	11 30 15.7	+0.7
CCIG				iS	Sn	11 30 56.1	-0.4
PPM	Popocatepetl	4.62	323	iP	Pn	11 30 31.1	+1.6
PPM				iS	Sn	11 31 23.9	+1.3
PPM	Popocatepetl	4.62	323	iP	Pn	11 30 31.1	+1.6
PPM				iS	Sn	11 31 23.9	+1.3
CAIG	El Cayaco	4.69	292	eP	Pn	11 30 34.6	+4.2
CAIG				iS	Sn	11 31 18.0	-6.1
CAIG	El Cayaco	4.69	292	eP	Pn	11 30 34.6	+4.2
CAIG				iS	Sn	11 31 18.0	-6.1

*NEIC **04** 11:56:50.9, 16°.01N×97°.57W, h16km, MD3.9(MEX), After MEX.*

MEX 04 11:56:50.9±1.2, 16°.01N×97°.57W, h16km±46km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.66	305	iP	Pg	11 57 01.3	-2.6
PNIG				iS	Sg	11 57 09.3	-3.3
PNIG	Pinotepa	0.66	305	iP	Pg	11 57 01.3	-2.6
PNIG				iS	Sg	11 57 09.3	-3.3
VHO	Vista Hermosa	1.32	37	iP	Pn	11 57 11.8	-2.9
VHO				iS	Sn	11 57 25.3	-6.7
VHO	Vista Hermosa	1.32	37	iP	Pn	11 57 11.8	-2.9
VHO				iS	Sn	11 57 25.3	-6.7
HUIG	Huatulco	1.42	100	iP	Pn	11 57 12.2	-3.9
HUIG				iS	Sn	11 57 29.3	-5.2
HUIG	Huatulco	1.42	100	iP	Pn	11 57 12.2	-3.9
HUIG				iS	Sn	11 57 29.3	-5.2
UTMO	Huajuapan	1.82	353	eP	Pn	11 57 19.7	-1.9
UTMO				iS	Sn	11 57 40.6	-3.7
ACX	Acapulco	2.36	291	iP	Pn	11 57 26.6	-2.3
ACX				iS	Sn	11 57 54.3	-3.3
ACX	Acapulco	2.36	291	iP	Pn	11 57 26.6	-2.3
ACX				iS	Sn	11 57 54.3	-3.3
TPIG	Tehuac#an	2.40	5	iP	Pn	11 57 26.6	-3.0
TPIG				iS	Sn	11 57 54.1	-4.5
MEIG	Mezcala	2.73	314	eP	Pn	11 57 32.1	-2.0
MEIG				iS	Sn	11 58 03.1	-3.8
CAIG	El Cayaco	2.79	292	iP	Pn	11 57 31.9	-2.9
CAIG				iS	Sn	11 58 03.0	-5.2
CAIG	El Cayaco	2.79	292	iP	Pn	11 57 31.9	-2.9
CAIG				iS	Sn	11 58 03.0	-5.2
PLIG	Platanillo	3.00	322	eP	Pn	11 57 35.0	-2.8
PLIG				iS	Sn	11 58 09.5	-4.0
PLIG	Platanillo	3.00	322	eP	Pn	11 57 35.0	-2.8
PLIG				iS	Sn	11 58 09.5	-4.0
PPM	Popocatepetl	3.20	342	iP	Pn	11 57 37.9	-2.6
PPM				iS	Sn	11 58 15.5	-2.9
PPM	Popocatepetl	3.20	342	iP	Pn	11 57 37.9	-2.6
PPM				iS	Sn	11 58 15.5	-2.9
MZVM		3.53	334	eP	Pn	11 57 43.0	-2.1
MZVM				iS	Sn	11 58 22.9	-3.7
SZVM	Salazar	3.72	333	eP	Pn	11 57 45.3	-2.4
SZVM				iS	Sn	11 58 27.5	-3.6
SZVM	Salazar	3.72	333	eP	Pn	11 57 45.3	-2.4
SZVM				iS	Sn	11 58 27.5	-3.6
IIO	Organos	3.73	343	eP	Pn	11 57 45.4	-2.3
IIO				iS	Sn	11 58 27.9	-3.4
IIO	Organos	3.73	343	eP	Pn	11 57 45.4	-2.3
IIO				iS	Sn	11 58 27.9	-3.4
LVIG	Laguna Verde	3.85	16	eP	Pn	11 57 47.2	-2.2
LVIG				iS	Sn	11 58 30.2	-4.1
LVIG	Laguna Verde	3.85	16	eP	Pn	11 57 47.2	-2.2
LVIG				iS	Sn	11 58 30.2	-4.1
CCIG	Comitan	5.22	86	iP	Pn	11 58 05.0	-3.4
CCIG				iS	Sn	11 59 11.4	+3.1
CCIG	Comitan	5.22	86	iP	Pn	11 58 05.0	-3.4
CCIG				iS	Sn	11 59 11.4	+3.1

*ISCJB **04** 11:57:42.3±1.9, 5°.1S±0°.1×146°.9E±0°.2, h132km±17km, mb3.9/4, Error ellipse: s-maj=30.1km s-min=18.1km az=34.5*
*NEIC **04** 11:57:42.2±2.6, 5°.02S×146°.93E, h119km±22km, Error ellipse: s-maj=24.7km s-min=19.7km az=161.0*
*IDC **04** 11:57:48.8±2.8, 5°.33S×146°.96E, h180km±26km, mb3.7/4, mb1 3.9/6, mb1mx3.5/17, mbtmp3.7/6, Error ellipse: s-maj=44.5km s-min=15.3km az=122.0*

ISC 04 11:57:45.0±2.1, 5°.2S±0°.2×147°.0E±0°.2, h144km±17km, n13, σ1s00/16, mb3.9/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.17	177	ePn	Pn	11 58 45.4	-2.0
PMG				eSn	Sn	11 59 28.5	-7.4
COEN	Coen	9.45	203	ePn	Pn	11 59 59.1	+1.2
CTA	Charters Tower	14.80	183	P	Pn	12 01 08.4	+1.2
	0.2nm,0.3s,baz=9.1,slow=14,SNR=6.5						
CTAO	Charters Tower	14.80	183	ePn	Pn	12 01 08.7	+1.4
KAKA	Kakadu	16.15	242	ePn	Pn	12 01 23.4	-0.6
WB2	Warramunga Arr	19.10	219	eP	P	12 01 57.1	+0.4
WRA	Warramunga Arr	19.11	219	P	P	12 01 56.9	+0.1
	1.9nm,0.3s,baz=45,slow=9.7,SNR=139						
WRA				S	S	12 05 21.9	-4.1
	baz=40,slow=20,SNR=5.6						
ASAR	Alice Springs	22.24	213	P	P	12 02 29.8	-0.5
	9.6nm,0.5s,mb4.5,baz=50,slow=8.5,SNR=289						
ASAR				S	S	12 06 23.2	-1.5
	2.3nm,0.8s,baz=33,slow=23,SNR=14						
FITZ	Fitzroy Crossi	24.45	237	P	P	12 02 51.6	+0.9
	10nm,0.4s,mb4.7,baz=64,slow=7.4,SNR=59						
FITZ	Fitzroy Crossi	24.45	237	eP	P	12 02 51.5	+0.8
STKA	Stephens Creek	27.00	190	P	P	12 03 14.0	+0.6
	0.9nm,0.4s,mb3.7,baz=350,slow=17,SNR=2.6						
STKA	Stephens Creek	27.00	190	P	P	12 03 14.0	+0.6
ILAR	Eielson Array	84.78	23	P	P	12 10 02.3	-0.5
	0.2nm,0.8s,mb2.9,baz=260,slow=5.4,SNR=3.8						

IDC 04 12:09:28.7±2.8, 1°.91N×96°.90E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.6/22, mbtmp3.6/7, ML4.4/1, Error ellipse: s-maj=115.3km s-min=21.3km az=59.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.57	7	Pn	Pn	12 13 22.0	-0.6
	0.5nm,0.3s,baz=198,slow=12,SNR=7.8						
WRA	Warramunga Arr	42.66	122	P	P	12 17 27.7	+0.3
	0.3nm,0.9s,baz=302,slow=9.4,SNR=3.7						
ASAR	Alice Springs	44.06	127	P	P	12 17 38.1	-0.5
	0.2nm,0.6s,baz=299,slow=7.9,SNR=3.7						
SONM	Songino Array	46.48	9	P	P	12 17 57.9	+0.4
	0.3nm,0.3s,baz=206,slow=16,SNR=2.4						
MKAR	Makanchi Array	46.49	346	P	P	12 17 57.4	-0.2
	0.3nm,0.3s,baz=153,slow=8.2,SNR=6.3						
KURK	Kurchatov	51.04	345	P	P	12 18 32.2	-0.3
	0.5nm,0.6s,baz=162,slow=7.4,SNR=2.8						
ZALV	Zalesovo Beam	52.82	351	P	P	12 18 45.6	-0.1
	1.3nm,0.6s,baz=180,slow=7.3,SNR=6.0						

*ATH **04** 12:20:04.1, 36°.65N×21°.30E, h26km±3km, MD3.2/9*
*ISCJB **04** 12:20:07.1±1.2, 36°.69N±0°.06×21°.51E±0°.08, h26km±5km, Error ellipse: s-maj=11.0km s-min=10.1km az=13.4*
*CSEM **04** 12:20:07.1±0.4, 36°.69N×21°.48E, h20km, MD3.2, Error ellipse: s-maj=8.4km s-min=6.5km az=35.0*
*THE **04** 12:20:08.2, 36°.72N×21°.55E, h19km±1km, Error ellipse: s-maj=3.0km s-min=1.4km az=141.0*

ISC 04 12:20:07.1±1.3, 36°.68N±0°.06×21°.51E±0°.08, h21km±7km, n45, σ0s98/59, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.29	41	ePB	Pb	12 20 13.4	-0.3
PYL				eSB	Sb	12 20 19.5	+1.4
PYL	PYLOS	0.29	41	P	Pb	12 20 13.5	-0.2
PYL	PYLOS	0.29	41	P	Pb	12 20 13.5	-0.2
PYL				eSb	Sb	12 20 19.5	+1.4
ITM	Ithomi	0.60	34	ePN	Pn	12 20 18.6	-1.8
ITM				eSN	Sb	12 20 29.1	+2.1
ITM	Ithomi	0.60	34	P	Pb	12 20 18.8	-0.2
ITM				S	Sb	12 20 27.4	+0.4
ITM	Ithomi	0.60	34	P	Pb	12 20 18.8	-0.2
ITM				S	Sb	12 20 27.4	+0.4
VLX	Vlachokerasia	0.98	45	ePN	Pn	12 20 25.2	-0.4
VLX				eSN	Sn	12 20 42.0	+3.2
VLX	Vlachokerasia	0.98	45	P	Pb	12 20 25.5	+0.1
VLX				S	Sb	12 20 38.0	+0.1
VLX	Vlachokerasia	0.98	45	ePn	Pn	12 20 25.2	-0.4
VLX	Vlachokerasia	0.98	45	P	Pb	12 20 25.5	+0.1
VLX				S	Sb	12 20 38.0	+0.1
VLX				eSn	Sn	12 20 42.0	+3.2
VLI	Veliai	1.15	88	ePN	Pn	12 20 29.1	+1.2
VLI	Veliai	1.15	88	ePn	Pn	12 20 29.1	+1.2
KYTH	Kithira	1.29	107	ePN	Pn	12 20 30.9	+1.0
KYTH	Kithira	1.29	107	ePn	Pn	12 20 30.9	+1.0
GUR	Goura	1.42	28	ePN	Pn	12 20 32.0	+0.4
GUR	Goura	1.42	28	P	Pn	12 20 31.7	+0.1
GUR				S	Sn	12 20 49.8	+0.1
GUR	Goura	1.42	28	P	Pn	12 20 31.7	+0.1
GUR	Goura	1.42	28	ePn	Pn	12 20 32.0	+0.4
GUR				S	Sn	12 20 49.8	+0.1
KFL	Anninata	1.54	338	P	Pn	12 20 34.0	+0.7
KFL	Anninata	1.54	338	P	Pn	12 20 34.0	+0.7
LAKA	Lakka	1.60	13	P	Pn	12 20 34.2	+0.1
LAKA				S	Sn	12 20 54.5	+0.3
LAKA	Lakka	1.60	13	P	Pn	12 20 34.2	+0.1
LAKA				S	Sn	12 20 54.5	+0.3
DID	Didima	1.61	59	ePB	Pb	12 20 34.2	-1.9
DID	Didima	1.61	59	P	Pn	12 20 34.4	+0.2
DID	Didima	1.61	59	P	Pn	12 20 34.4	+0.2
VLS	Valsamata	1.67	334	P	Pn	12 20 34.6	-0.4
VLS	Valsamata	1.67	334	P	Pn	12 20 34.6	-0.4
TRIZ	Trizonia	1.74	15	P	Pn	12 20 36.7	+0.6
TRIZ	Trizonia	1.74	15	P	Pn	12 20 36.7	+0.6
EFP	Efpalio	1.77	10	ePN	Pn	12 20 37.2	+0.7
EFP	Efpalio	1.77	10	P	Pn	12 20 37.4	+0.9
EFP	Efpalio	1.77	10	ePn	Pn	12 20 37.2	+0.7
LTK	Loutraki	1.78	40	ePB	Pb	12 20 36.4	-2.5
LTK	Loutraki	1.78	40	P	Pn	12 20 36.5	0.0
LTK				S	Sn	12 20 56.8	-1.6
LTK	Loutraki	1.78	40	P	Pn	12 20 36.5	0.0
KALE	Kalithea	1.78	16	P	Pn	12 20 37.2	+0.6
KALE	Kalithea	1.78	16	P	Pn	12 20 37.2	+0.6
DSF	Desfina	1.91	25	P	Pn	12 20 38.0	-0.4
DSF	Desfina	1.91	25	P	Pn	12 20 38.0	-0.4
LKR	Lokris	2.30	31	P	Pn	12 20 43.4	-0.3
LKR	Lokris	2.30	31	P	Pn	12 20 43.4	-0.3
ATAL	Atalanti	2.34	30	P	Pn	12 20 44.6	+0.3
ATAL	Atalanti	2.34	30	P	Pn	12 20 44.6	+0.3
AOS	Alonnisos	3.12	36	P	Pn	12 20 53.6	-1.3
AOS	Alonnisos	3.12	36	P	Pn	12 20 53.6	-1.3

IDC 04 12:27:13.7±47.0, 15°.33S×179°.62W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.8/16, mbtmp4.3/3, Error ellipse: s-maj=863.9km s-min=146.7km az=75.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.92	238	P	P	12 34 42.0	+0.5
	3.6nm,0.8s,baz=58,slow=8.2,SNR=7.1						
WRA	Warramunga Arr	44.01	257	P	P	12 35 22.7	-0.7
	0.3nm,0.4s,baz=94,slow=7.6,SNR=10.0						
ASAR	Alice Springs	44.43	252	P	P	12 35 26.7	0.0
	6.7nm,0.3s,baz=84,slow=8.4,SNR=333						

*NIED **04** 12:43:00, 37°.00N×141°.80E, h20km, Mw4.2 Best double couple: M0=2.25000×10^15 NP

JHJ	**Hachijo jima 2**	**4.17**	**203**	Pn	**Pn**	**12 44 46.6**	**+0.4**
	23nm,0.3s,baz=256,slow=4.2,SNR=30						
JHJ				Sn	**Sn**	**12 45 33.4**	**-1.1**
	130nm,0.3s,baz=229,slow=24,SNR=10						
ASAJ	**Asahikawa**	**7.16**	**5**	Pn	**Pn**	**12 45 27.2**	**+0.1**
	1.3nm,0.3s,baz=204,slow=10,SNR=16						
ASAJ				LR	LR	12 49 01.9	
	comp=Z,174nm,20.2s,baz=183,slow=45						
ASAJ	**Asahikawa**	**7.16**	**5**	P	**Pn**	**12 45 27.3**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,174nm,20.2s						
ASAJ	**Asahikawa**	**7.16**	**5**	*e*Pn	**Pn**	**12 45 27.4**	**+0.3**
	comp=Z,67nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**7.71**	**23⇑**	*i*P	**Pn**	**12 45 26.6**	**-8.1**
YUK				pmax	pmax		
	comp=Z,64nm,0.6s						
YUK				pmax	pmax		
	comp=N,23nm,0.3s						
YUK				pmax	pmax		
	comp=E,23nm,0.6s						
YUK				pmax	pmax		
	comp=Z,40nm,0.5s						
KUR	**Kuril'sk**	**9.45**	**27**	P	**Pn**	**12 46 03.0**	**+4.5**
JNU	**Nakatsue**	**9.70**	**250**	*e*Pn	**Pn**	**12 46 02.5**	**+0.5**
	comp=Z,12nm,0.8s						
CBIJ	**Chichi jima**	**9.87**	**178**	Pn	**Pn**	**12 46 03.2**	**-1.1**
	comp=Z,5.6nm,0.3s,baz=271,slow=18,SNR=3.5						
CBIJ				Sn	**Sn**	**12 47 46.8**	**-7.9**
	comp=Z,13nm,0.3s,baz=286,slow=23,SNR=5.7						
KSRS	**Korea Array**	**11.03**	**277**	Pn	**Pn**	**12 46 19.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=140,slow=31,SNR=3.5						
KSRS				LR	LR	12 50 19.4	
	comp=Z,240nm,19.6s,baz=151,slow=36						
MDJ	**Mudanjiang**	**11.94**	**313**	*e*Pn	**Pn**	**12 46 35.9**	**+3.2**
	comp=Z,8.0nm,0.6s						
SKR	**Severo-Kuril's**	**17.14**	**32**	*e*P	**Pn**	**12 47 50.0**	**+8.2**
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
PETK	**Petropavlovsk-**	**19.60**	**30**	P	**Pn**	**12 48 12.4**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=222,slow=7.6,SNR=11						
PETK				LR	LR	12 54 43.0	
	comp=Z,47nm,20.1s,baz=207,slow=34						
GUMO	**Guam**	**23.46**	**172**	LR	LR	12 56 27.8	
	comp=Z,36nm,19.1s,baz=84,slow=33						
ENH	**Enshi**	**27.59**	**265**	*e*P	**P**	**12 49 28.3**	**-1.2**
	comp=Z,15nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**27.60**	**304**	*e*P	**P**	**12 49 29.5**	**0.0**
ULN				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.4						
ULN	**Ulaanbaatar**	**27.60**	**304**	*e*P	**P**	**12 49 29.5**	**0.0**
	comp=Z,12nm,1.2s,mb4.4						
SONM	**Songino Array**	**28.03**	**304**	P	**P**	**12 49 33.0**	**-0.4**
	comp=Z,8.9nm,0.7s,mb4.5,baz=102,slow=9.2,SNR=33						
ZAK	**Zakamensk**	**30.50**	**308**	*e*P	**P**	**12 49 55.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
GTA	**Gaotai**	**32.83**	**287**	*e*P	**P**	**12 50 15.8**	**0.0**
GTA				pP	pP	12 50 20.4	-0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CMAR	**Chiang Mai Arr**	**41.73**	**256**	P	**P**	**12 51 30.8**	**-0.8**
	comp=Z,2.3nm,0.8s,mb3.9,baz=46,slow=5.8,SNR=14						
ZAA0	**Zalesovo Array**	**42.14**	**312**	*e*P	**P**	**12 51 34.4**	**0.0**
ZALV	**Zalesovo Beam**	**42.14**	**312**	P	**P**	**12 51 34.4**	**-0.1**
	comp=Z,7.3nm,0.7s,mb4.4,baz=93,slow=6.8,SNR=24						
ZALV				PcP	PcP	12 53 27.7	-0.9
	comp=Z,1.1nm,0.5s,baz=66,slow=3.6,SNR=3.6						
ZALV				ScP	ScP	12 57 20.6	+2.4
	comp=Z,1.0nm,0.7s,baz=100,slow=1.7,SNR=4.3						
ZALV	**Zalesovo Beam**	**42.14**	**312**	P	**P**	**12 51 34.4**	**0.0**
ZALV						12 53 27.7	
MK31	**Makanchi Array**	**44.37**	**302**	*e*P	**P**	**12 51 52.4**	**-0.1**
MKAR	**Makanchi Array**	**44.37**	**302**	P	**P**	**12 51 52.5**	**0.0**
	comp=Z,6.4nm,0.8s,mb4.4,baz=89,slow=9.8,SNR=42						
MKAR	**Makanchi Array**	**44.37**	**302**	*i* P	**P**	**12 51 52.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	**Kurchatov**	**46.17**	**308**	P	**P**	**12 52 06.6**	**-0.2**
	comp=Z,11nm,0.6s,mb5.0,baz=82,slow=7.8,SNR=4.3						
KURK	**Kurchatov**	**46.17**	**308***c*	*i* P	**P**	**12 52 06.1**	**-0.7**
KURK				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
TAPN	**Taplejung**	**46.20**	**274**	*e*P	**P**	**12 52 07.8**	**+0.4**
	comp=Z,10nm,0.6s,mb5.0						
ODAN	**Odare**	**46.67**	**274**	*e*P	**P**	**12 52 11.3**	**+0.2**
	comp=Z,17nm,0.7s,mb5.1						
RAMN	**Ramite**	**47.27**	**274**	*e*P	**P**	**12 52 15.8**	**+0.1**
	comp=Z,44nm,0.9s,mb5.4						
GUN	**Gumba**	**47.42**	**276**	*e*P	**P**	**12 52 17.6**	**+0.7**
	comp=Z,18nm,0.5s,mb5.3						
PKI	**Pulchoki**	**47.94**	**276**	*e*P	**P**	**12 52 21.4**	**+0.5**
	comp=Z,12nm,0.5s,mb5.2						
KKN	**Kakani**	**47.95**	**276**	*e*P	**P**	**12 52 21.4**	**+0.4**
	comp=Z,14nm,0.6s,mb5.2						
DMN	**Daman**	**48.17**	**276**	*e*P	**P**	**12 52 22.9**	**+0.2**
	comp=Z,7.8nm,0.7s,mb4.9						
GKN	**Gorkha**	**48.37**	**277**	*e*P	**P**	**12 52 24.4**	**+0.2**
	comp=Z,21nm,0.7s,mb5.3						
DANN	**Dangsing**	**48.91**	**277**	*e*P	**P**	**12 52 29.0**	**+0.6**
	comp=Z,42nm,0.7s,mb5.6						
KOLN	**Koldanda**	**49.29**	**277**	*e*P	**P**	**12 52 32.3**	**+1.0**
	comp=Z,7.5nm,0.5s,mb5.0						
ILAR	**Eielson Array**	**49.40**	**32**	P	**P**	**12 52 31.8**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=261,slow=6.1,SNR=12						
TKM2	**Tokmak 2**	**49.88**	**299**	*e*P	**P**	**12 52 36.4**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
TKM2	**Tokmak 2**	**49.88**	**299**	*e*P	**P**	**12 52 36.4**	**+0.8**
	comp=Z,5.5nm,0.6s,mb4.8						
BVAR	**Borovoye Array**	**50.80**	**312**	P	**P**	**12 52 41.5**	**-0.8**
	comp=Z,1.5nm,0.6s,mb4.1,baz=74,slow=8.0,SNR=2.0						
BRVK	**Borovoye**	**50.85**	**312⇓**	*e*P	**P**	**12 52 42.8**	**0.0**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
EKS2	**Erkin-Say**	**51.24**	**299**	*e*P	**P**	**12 52 46.3**	**+0.4**
	comp=Z,1.7nm,0.6s,mb4.2						
AML	**Almayashu**	**51.46**	**298**	*e*P	**P**	**12 52 48.4**	**+0.8**
	comp=Z,6.0nm,0.6s,mb4.7						
KKAR	**Karatay Array**	**53.38**	**300**	*e*P	**P**	**12 53 01.6**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
KKAR	**Karatay Array**	**53.38**	**300**	*e*P	**P**	**12 53 01.6**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.3						
INK	**Inuvik**	**54.32**	**27**	P	**P**	**12 53 08.7**	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.9,baz=308,slow=7.7,SNR=4.8						
FITZ	**Fitzroy Crossi**	**56.85**	**198**	P	**P**	**12 53 26.7**	**-0.3**
	comp=Z,1.8nm,0.5s,mb4.3,baz=5.8,slow=7.1,SNR=11						
WRA	**Warramunga Arr**	**57.05**	**188**	P	**P**	**12 53 27.1**	**-1.2**
	comp=Z,1.8nm,0.5s,mb4.4,baz=6.2,slow=7.4,SNR=52						
AKTK	**Aktyubinsk**	**58.90**	**312**	P	**P**	**12 53 40.7**	**-0.4**
AKTO	**Aktyubinsk**	**58.90**	**312**	P	**P**	**12 53 40.7**	**-0.4**
	comp=Z,1.6nm,0.5s,mb4.3,baz=65,slow=14,SNR=3.8						
ASAR	**Alice Springs**	**60.77**	**188**	P	**P**	**12 53 53.5**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.2,baz=13,slow=6.0,SNR=19						
KEV	**Kevo**	**63.58**	**339**	*e*P	**P**	**12 54 10.2**	**-2.3**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
YKA	**Yellowknife Ar**	**63.72**	**30**	P	**P**	**12 54 13.7**	**+0.2**
	comp=Z,0.3nm,0.7s,mb3.5,baz=296,slow=7.3,SNR=3.2						
ARCES	**ARCESS Array B**	**64.14**	**339**	P	**P**	**12 54 16.0**	**-0.2**
	comp=Z,2.0nm,0.5s,mb4.4,baz=62,slow=8.8,SNR=17						
JOF	**Joensuu**	**66.13**	**332**	*e*P	**P**	**12 54 27.9**	**-1.3**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
OBN	**Obninsk**	**68.29**	**323**	*e*P	**P**	**12 54 43.1**	**+0.1**
OBN				*e*		12 57 08.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KAF	**Kangasniemi**	**68.47**	**333**	*e*P	**P**	**12 54 43.0**	**-1.0**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
FINES	**FINESS Array B**	**68.98**	**332**	P	**P**	**12 54 46.8**	**-0.4**
	comp=Z,1.1nm,0.5s,mb5.0,baz=39,slow=8.6,SNR=32						
KIV	**Kislovodsk**	**71.14**	**311**	*e*P	**P**	**12 55 02.4**	**+1.7**
KIV				*e*		12 57 35.7	
KIV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
NB2	**NORSAR Subarra**	**74.33**	**337**	P	**P**	**12 55 19.2**	**-0.2**
	comp=Z,2.6nm,0.6s,mb4.3,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**74.33**	**337**	P	**P**	**12 55 19.4**	**0.0**
	comp=Z,3.3nm,0.6s,mb4.4,baz=38,slow=6.0,SNR=12						
NVAR	**Mina Array Bea**	**74.81**	**53**	P	**P**	**12 55 25.3**	**+2.7**
	comp=Z,0.4nm,0.6s,mb3.5,baz=298,slow=6.6,SNR=2.6						
BRTR	**Keskin Array B**	**79.08**	**312**	P	**P**	**12 55 46.7**	**+0.1**
	comp=Z,1.1nm,0.8s,mb3.8,baz=85,slow=2.6,SNR=6.2						
BRTR	**Keskin Array B**	**79.08**	**312**	*i* P	**P**	**12 55 46.7**	**+0.1**
TXAR	**Lajitas Array**	**89.95**	**53**	P	**P**	**12 56 42.2**	**+0.4**
	comp=Z,0.3nm,0.7s,mb3.7,baz=286,slow=3.6,SNR=3.0						
TXAR	**Lajitas Array**	**89.95**	**53**	P	**P**	**12 56 42.2**	**+0.4**
KEST	**Kesra**	**95.22**	**323**	P	**P**	**12 57 06.8**	**+0.8**
	comp=Z,0.8nm,0.5s,mb4.4,baz=16,slow=3.9,SNR=4.0						

NIED ***04*** *12:44:00,44.°20N×140.°10E,h230km,Mw4.1 Best double couple: M0 1.63000×10^15 NP1:φs 7.00000°, δ88.00000°,λ-14.00000°. NP2:φs 97.00000°,δ76.00000°, λ-178.00000°.*

BJI ***04*** *12:44:54.2,44.°20N×140.°10E,h241km,mB4.4/4,mb4.3/7*

ISCJB ***04*** *12:44:55.7±1.0,44.°11N±0.°05×140.°16E±0.°10, h246km±8km, Error ellipse: s-maj=11.8km s-min=8.2km az=23.6*

JMA ***04*** *12:44:56.2±0.2,44.°18N×140.°08E,h241km±2km,M3.9*

NEIC ***04*** *12:44:56.3,44.°18N×140.°08E,h241km,MG3.9(JMA), After JMA.*

ISC 04 12:44:56.3±1.0,44.°11N±0.°06×140.°17E±0.°10,h244km±8km, n18,σ0.9°67/28,4C-5D,Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**0.79**	**164**	⇓P	**Pn**	**12 45 29.8**	**+0.2**
JSK				*e*S	**S**	**12 45 55.4**	**-0.3**
JYG	**Yagishiri**	**0.96**	**70**	⇓P	**Pn**	**12 45 30.1**	**-0.2**
JYG				*e*S	**S**	**12 45 56.4**	**-0.7**
JHR	**Hokuryu**	**1.18**	**108**	⇓P	**Pn**	**12 45 32.4**	**+0.7**
JSS	**Shosan**	**1.24**	**76**	⇓P	**Pn**	**12 45 32.7**	**+0.6**
JSS				*e*S	**S**	**12 46 00.8**	**+0.6**
JEW	**Eniwo**	**1.57**	**143**	⇓P	**Pn**	**12 45 35.2**	**+0.6**
JWK2	**Keihoku**	**1.72**	**45**	⇑P	**Pn**	**12 45 36.2**	**+0.5**
JWK2				*e*S	**S**	**12 46 07.6**	**+0.8**
ASAJ	**Asahikawa**	**1.75**	**89**	*e*Pn	**Pn**	**12 45 36.1**	**+0.2**
JKK2	**Kamakawa 2**	**1.88**	**96**	P	**Pn**	**12 45 37.5**	**+0.4**
JKK2				*e*S	**S**	**12 46 09.3**	**+0.2**
JSE	**Soyaes**	**1.92**	**63**	⇑P	**Pn**	**12 45 37.4**	**-0.1**
JSE				*e*S	**S**	**12 46 09.2**	**-0.7**
JFR	**Furan**	**2.00**	**117**	P	**Pn**	**12 45 38.4**	**+0.2**
JOSM	**Okushiri--Mats**	**2.09**	**194**	*e*S	**S**	**12 46 12.9**	**+0.1**
JTKR	**Abashiri--Toko**	**2.70**	**92**	P	**Pn**	**12 45 45.6**	**+0.5**
JTKR				*e*S	**S**	**12 46 23.6**	**0.0**
JAR	**Ashorobuto**	**2.73**	**106**	P	**Pn**	**12 45 46.1**	**+0.6**
ERM	**Erimo**	**3.03**	**133**	*e*Pn	**Pn**	**12 45 49.5**	**+0.8**
ERM				*e*Sn	**S**	**12 46 27.8**	**-2.3**
YSS	**Yuzh-Sakhalins**	**3.38**	**32***a*	*i* P	**Pn**	**12 45 51.7**	**-0.8**
YSS				pmax	pmax		
	comp=N,160nm,1.0s						
YSS				pmax	pmax		
	comp=E,120nm,1.0s						
YSS				pmax	pmax		
	comp=Z,220nm,1.0s						
YSS	**Yuzh-Sakhalins**	**3.38**	**32**	*e*Pn	**Pn**	**12 45 51.7**	**-0.8**
YSS				*e*Sn	**S**	**12 46 36.0**	**-1.0**
JANG	**Nango**	**3.86**	**165**	P	**Pn**	**12 45 57.4**	**-0.9**
JANG				*e*S	**S**	**12 46 42.7**	**-4.6**
MDJ	**Mudanjiang**	**7.60**	**278**	*e*Pn	**Pn**	**12 46 43.9**	**-0.5**
	comp=Z,8.0nm,0.6s						

IDC 04 12:46:20.0±3.9,6.°63S×150.°22E,h0km,mb3.0/2, mb1 3.4/2,mb1mx3.3/15,mbtmp3.1/2,Error ellipse: s-maj=132.4km s-min=51.9km az=118.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.32**	**228**	P	P	12 50 57.2	-0.6
	0.7nm,0.5s,baz=53,slow=11,SNR=10.0						
ASAR	**Alice Springs**	**23.08**	**221**	P	P	12 51 27.4	0.0
	0.2nm,0.3s,baz=57,slow=9.2,SNR=5.5						
TORD	**Torodi Ar. Bea**	**148.35**	**284**	PKPbc	PKPbc	13 06 09.3	-0.1
	3.0nm,0.9s,baz=67,slow=3.7,SNR=2.7						

BJI ***04*** *12:53:08.8,30.°38N×80.°40E,h10km,mB4.8/25,mb4.9/55, Ms4.8/58,Ms7 4.5/53*

IDC ***04*** *12:53:08.8±0.4,30.°24N×80.°34E,h0km,mb4.8/29, mb1 4.9/30,mb1mx4.9/32,mbtmp4.8/30,ML4.1/1,MS4.3/18, Ms1 4.3/18,ms1mx4.0/33,Error ellipse: s-maj=13.1km s-min=10.9km az=25.0*

LDG ***04*** *12:53:08.5±0.1,30.°37N×80.°44E,h10km,Mb5.2/31, Ms4.0/8,Error ellipse: s-maj=13.6km s-min=3.7km az=56.0*

ISCJB ***04*** *12:53:09.8±0.7,30.°25N±0.°02×80.°38E±0.°02,h11km±4km, mb5.0/181,MS4.4/65,Error ellipse: s-maj=3.3km s-min=2.3km az=23.8*

NEIC ***04*** *12:53:11.3±0.2,30.°28N×80.°35E,h10km,mb5.1/96, MS4.2/7,Error ellipse: s-maj=4.9km s-min=3.2km az=24.0*

NEIC Felt at Bageshwar, Chamoli, Champawat, Dehra Dun, Pithoragarh and Uttarkashi, India.

NDI ***04*** *12:53:11.2±3.8,30.°22N×80.°37E,h10km,ML5.2, mb5.1(NEIC)*

DMN ***04*** *12:53:12.5±1.0,30.°34N×80.°21E,h10km,Ml5.8/2,Error ellipse: s-maj=28.4km s-min=18.9km az=9.0*

MOS ***04*** *12:53:12.7±1.1,30.°17N×80.°37E,h33km,mb5.2/94, MS4.3/40,Error ellipse: s-maj=7.2km s-min=3.5km az=130.4*

GCMT ***04*** *12:53:14.5±0.3,30.°08N×80.°24E,h23km±1km,MW5.0, Moment Tensor Solution. s18,c25; s57,c90; Moment tensor: Scale 10^16Nm; Mrr-1.23±.21; Mθθ-2.28±.14; Mφφ3.52±.17; Mrθ1.62±.27; Mrφ1.52±.11; Mθφ0.56±.22; Best double couple: M0 3.80000×10^16 NP1:φs 333.00000°, δ59.00000°,λ-163.00000°. NP2:φs 234.00000°, δ75.00000°,λ-32.00000°. Principal axes: T 4.0700, Plg11.0000°, Azm286.0000°; N -0.4800, Plg55.0000°, Azm32.0000°; P -3.5800, Plg33.0000°, Azm189.0000°; Data Used: II IC G IU CN.*

ISC 04 12:53:11.3±0.7,30.°24N±0.°02×80.°38E±0.°02,h9km±4km, h11km±2.5km:pP-P,n581,σ1.9s20/615,mb5.0/181,MS4.4/65, 52C-23D,Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**0.70**	**192**	*e*PKP	**Pg**	**12 53 22.1**	**-2.7**
PTH				*e*S	**Sg**	**12 53 34.1**	**+0.1**
JOSI	**Joshimath**	**0.78**	**294**	*e*PKP	**Pg**	**12 53 22.0**	**-4.2**
JOSI				*e*S	**Sg**	**12 53 31.6**	**-4.7**
JOSI				AML	AML	12 53 38.5	
	comp=E,146μm,0.7s						
JOSI				AML	AML	12 53 39.8	
	comp=N,120μm,0.6s						
LGTI	**Lohaghat**	**0.80**	**189**	*e*PKP	**Pg**	**12 53 26.5**	**-0.1**
DDI	**Dehra Dun**	**2.01**	**273**	*i* P	**Pn**	**12 53 44.5**	**-0.9**
DDI				*ex*	x	12 54 02.8	
KLP	**Kalpa**	**2.24**	**306**	*e*PKP	**Pn**	**12 53 49.8**	**+1.2**
KLP				*e*S	**Sn**	**12 54 17.2**	**+0.9**
KLP				AML	AML	12 54 23.0	
	comp=E,25μm,0.5s						
KLP				AML	AML	12 54 24.6	
	comp=N,19μm,1.2s						
SMLA	**Simla**	**2.91**	**289**	*i* P	**Pn**	**12 53 57.5**	**-0.2**
SMLA				*i* S	**Sn**	**12 54 32.3**	**-0.5**
SMLA				⇓		12 54 39.5	
	comp=E,73μm,0.4s						
SMLA				⇓		12 54 44.6	
	comp=N,80μm,0.5s						
KKR	**Kurukshetra**	**3.10**	**266**	*e*PKP	**Pn**	**12 54 01.5**	**+1.1**
PYUN	**Piuthan**	**3.12**	**132**	*e*Pn	**Pn**	**12 54 03.0**	**+2.3**
NDI	**New Delhi**	**3.17**	**241**	*e*PKP	**Pn**	**12 54 00.0**	**-1.3**
NDI				*ex*	x	12 54 33.0	
SDNR	**Sundarnagar**	**3.19**	**294**	*e*PKP	**Pn**	**12 54 03.1**	**+1.5**
SDNR				*ex*	x	12 54 41.5	
SONA	**Sohna**	**3.50**	**236**	*e*PKP	**Pn**	**12 54 06.5**	**+0.6**
SONA				*e*S	**Sn**	**12 54 45.5**	**-1.9**
DANN	**Dangsing**	**3.50**	**122**	*e*Pn	**Pn**	**12 54 08.1**	**+2.2**
BHK	**Bhakra**	**3.61**	**290**	*ex*	**Pn**	**12 54 05.0**	**-2.3**
BHK				*ex*	x	12 54 59.2	
KOLN	**Koldanda**	**3.74**	**130**	*e*Pn	**Pn**	**12 54 10.3**	**+1.1**
KOLN	**Koldanda**	**3.74**	**130**	*e*Pn	**Pn**	**12 54 11.1**	**+1.9**
KUDL	**Kundal**	**3.99**	**239**	*e*PKP	**Pn**	**12 54 06.7**	**-6.0**
KUDL				*e*S	**Sn**	**12 54 52.6**	**-6.9**
GKN	**Gorkha**	**4.34**	**120**	*e*Pn	**Pn**	**12 54 19.3**	**+1.9**
KHET	**Khetri**	**4.55**	**243**	*e*PKP	**Pn**	**12 54 19.4**	**-0.9**
KHET				*e*S	**Sn**	**12 55 10.5**	**-2.7**
DMN	**Daman**	**4.90**	**121**	*e*Pn	**Pn**	**12 54 26.7**	**+1.6**
KKN	**Kakani**	**4.94**	**118**	*e*Pn	**Pn**	**12 54 27.1**	**+1.5**
JHNI	**Jhansi**	**5.03**	**199**	*e*PKP	**Pn**	**12 54 27.0**	**+0.1**
JHNI				*ex*	x	12 55 27.0	
ALBI	**Allahabad**	**5.07**	**165**	*ex*	**Pn**	**12 54 24.5**	**-3.0**
ALBI				*ex*	x	12 54 44.5	
PKIN	**Phulchoki**	**5.13**	**120**	*e*Pn	**Pn**	**12 54 30.3**	**+2.0**
PKI	**Pulchoki**	**5.15**	**120**	*e*Pn	**Pn**	**12 54 30.0**	**+1.5**
JMU	**Jammu**	**5.29**	**299**	*e*PKP	**Pn**	**12 54 36.5**	**+6.0**
JMU				*e*S	**Sn**	**12 55 32.5**	**+0.9**
GUN	**Gumba**	**5.34**	**114**	*e*Pn	**Pn**	**12 54 32.5**	**+1.3**
GUN	**Gumba**	**5.34**	**114**	*e*Pn	**Pn**	**12 54 33.7**	**+2.5**
RAMN	**Ramite**	**6.37**	**119**	*e*Pn	**Pn**	**12 54 45.9**	**+0.5**
RAMN				*e*Sn	**Sn**	**12 55 56.7**	**-1.6**
	comp=N,5μm,0.7s						
SARP	**Sargodha**	**6.82**	**286**	P	**Pn**	**12 54 50.5**	**-1.0**
SARP				S	**Sn**	**12 56 04.0**	**-5.3**
CHCP	**Chirah Chowk**	**6.94**	**301**	⇑P	**Pn**	**12 54 52.2**	**-0.9**
ODAN	**Odare**	**7.02**	**117**	*e*Pn	**Pn**	**12 54 55.8**	**+1.5**
TAPN	**Taplejung**	**7.05**	**112**	*e*Pn	**Pn**	**12 54 55.8**	**+1.2**
TAPN				*e*Sn	**Sn**	**12 56 13.7**	**-1.1**
	comp=N,1μm,0.6s						
JBP	**Jabalpur**	**7.06**	**183**	*ex*	**Pn**	**12 54 56.7**	**+2.0**
JBP				*ex*	x	12 56 14.7	
BHPL	**Bhopal**	**7.46**	**201**	*e*PKP	**Pn**	**12 54 59.5**	**-0.8**
BHPL				*e*S	**Sn**	**12 56 18.9**	**-6.1**
THW	**Thamme Wali**	**7.80**	**291**	P	**Pn**	**12 55 04.1**	**-0.9**
SLGI	**Shiliguri**	**7.90**	**115**	*ex*	x	12 55 14.5	
CEP	**Cherat**	**8.03**	**299**	P	**Pn**	**12 55 05.4**	**-2.7**
CEP				S	**Sn**	**12 56 35.0**	**-4.0**
BOK	**Bokaro**	**8.08**	**141**	*ex*	**Pn**	**12 55 05.0**	**-3.8**
BOK				*e*S	**Sn**	**12 56 35.0**	**-5.3**
NGP	**Nagpur**	**9.13**	**188**	*e*PKP	**Pn**	**12 55 21.7**	**-1.6**
LSA	**Lhasa**	**9.36**	**91**	*e*P	**Pn**	**12 55 28.3**	**+2.0**
LSA				*e*		12 57 09.8	
LSA				pmax	pmax		
	comp=Z,185nm,0.6s						
LSA	**Lhasa**	**9.36**	**91**	*e*Pn	**Pn**	**12 55 28.3**	**+2.0**
	comp=Z,185nm,0.6s						
LSA				*e*Sn	**Sn**	**12 57 09.8**	**-1.9**
KSH	**Kashi**	**9.93**	**340**	*e*P	**Pn**	**12 55 30.1**	**-4.1**
KSH				smax			
	comp=N,280nm,1.0s						
KSH				smax			
	comp=E,350nm,0.7s						
AKL	**Akola**	**9.97**	**199⇓**	*i* P	**Pn**	**12 55 33.1**	**-1.7**
AKL				*i* x	x	12 57 22.2	
CAL	**Calcutta**	**10.47**	**135**	*e*PKP	Px	12 55 54.4	
CAL				*e*S	**Sn**	**12 57 38.5**	**-0.5**
KBL	**Kabul**	**10.50**	**297**	*e*Pn	**Pn**	**12 55 40.1**	**-1.8**
KBL				*e*Sn	**Sn**	**12 57 37.3**	**-2.4**
BWNR	**Bhubaneshwar**	**11.05**	**152**	*ex*	**Pn**	**12 55 45.0**	**-4.5**
BWNR				*ex*	x	12 57 38.0	
SHL	**Shillong**	**11.19**	**112⇑**	*i* P	**Pn**	**12 55 50.0**	**-1.4**
SHL				*ex*	x	12 56 04.0	
BHV	**Bhavnagar**	**11.24**	**223**	*e*PKP	**Pn**	**12 55 49.0**	**-3.1**
AGT	**Agartala**	**11.57**	**121**	*ex*	**Pn**	**12 55 48.0**	**-8.6**
AGT				*ex*	x	12 56 25.0	
BHJ	**Bhuj**	**11.84**	**237**	*e*PKP	**Pn**	**12 55 58.8**	**-1.6**
BHJ				*e*S	**Sn**	**12 58 01.8**	**-11**
LATR	**Latur**	**12.28**	**197**	*e*PKP	**Pn**	**12 56 03.0**	**-3.3**
LATR				*ex*	x	12 58 09.0	
ULHL	**Ulahol**	**12.43**	**346**	P	**Pn**	**12 56 08.2**	**-0.1**
	SNR=20						
KZA	**Kyzart**	**12.51**	**342**	P	**Pn**	**12 56 07.5**	**-1.9**
	SNR=42						
KZA	**Kyzart**	**12.51**	**342**	*e*Pn	**Pn**	**12 56 08.1**	**-1.4**
	comp=E,113nm,0.9s						
VIS	**Vishakhapatnam**	**12.75**	**167**	*e*PKP	**Pn**	**12 56 10.8**	**-2.1**
VIS				*e*S	**Sn**	**12 58 23.2**	**-12**
UCH	**Uchtor**	**12.86**	**340**	P	**Pn**	**12 56 12.7**	**-1.5**
	SNR=15						
UCH	**Uchtor**	**12.86**	**340**	*e*Pn	**Pn**	**12 56 12.4**	**-1.8**
	comp=E,31nm,0.8s						
UCH				*e*Sn	**Sn**	**12 58 27.2**	**-10**
HYB	**Hyderabad**	**12.88**	**188**	*i* P	**Pn**	**12 56 10.5**	**-4.0**
	comp=E,157nm,0.8s						
HYB				*e*PP		12 56 18.0	
HYB				*e*S	**Sn**	**12 58 40.0**	**+2.0

CD2	**Chengdu**	**20.14**	**82**	*e*P	**P**	**12 57 44.8 -0.9**
CD2				pP		12 57 49.2
CD2				sP	sP	12 57 52.6 +3.2
CD2				PP		12 58 04.0
CD2				S	**S**	**13 01 24.3 -7.6**
CD2				sS	sS	13 01 29.8 -6.1
CD2				SS		13 01 52.1
CD2				pmax	pmax	
	comp=Z,80nm,1.3s					
CD2				pmax	pmax	
	comp=Z,130nm,5.2s					
CD2				LR	LR	
	comp=N,2μm,13.2s					
CD2				LR	LR	
	comp=E,2μm,9.5s					
CD2				LR	LR	
	comp=Z,2μm,9.6s					
CHG	**Chiang Mai**	**20.33**	**120**	⇑P	**P**	**12 57 46.7 -1.1**
	comp=Z,54nm,0.9s					
CHTO	**Chiang Mai**	**20.33**	**120**	*e*P	**P**	**12 57 47.1 -0.7**
CHTO				pmax	pmax	
	comp=Z,33nm,0.7s					
CHTO	**Chiang Mai**	**20.33**	**120**	*e*P	**P**	**12 57 47.1 -0.7**
	comp=Z,33nm,0.7s					
CHTO	**Chiang Mai**	**20.33**	**120**	P	**P**	**12 57 47.6 -0.2**
	SNR=34					
CHRT	**Chiangrai**	**20.36**	**116**	⇓P	**P**	**12 57 45.5 -2.6**
	comp=Z,658nm,0.6s					
KMI	**Kunming**	**20.43**	**99**	P	**P**	**12 57 48.4 -0.5**
KMI				pP		12 57 51.4
KMI				sP	sP	12 57 52.8 +0.1
KMI				PP		12 58 11.5
KMI				S	**S**	**13 01 31.7 -6.2**
KMI				SS		13 02 03.2
KMI				pmax	pmax	
	comp=Z,42nm,1.5s					
KMI				pmax	pmax	
	comp=Z,230nm,3.1s					
KMI				LR	LR	
	comp=N,590nm,10.7s,MS4.4					
KMI				LR	LR	
	comp=E,770nm,14.7s,MS4.4					
KMI				LR	LR	
	comp=Z,800nm,11.2s,MS4.3					
LZH	**Lanzhou**	**20.47**	**67**	⇑P	**P**	**12 57 49.6 +0.4**
LZH				pP		12 57 52.3
LZH				sP	sP	12 57 54.2 +1.3
LZH				S	**S**	**13 01 33.6 -4.8**
LZH				sS	sS	13 01 39.5 -3.0
LZH				SS		13 02 03.7
LZH				pmax	pmax	
	comp=Z,93nm,1.1s					
LZH				pmax	pmax	
	comp=Z,230nm,4.5s					
LZH				LR	LR	
	comp=N,4μm,12.8s,MS5.0					
LZH				LR	LR	
	comp=E,880nm,10.7s,MS5.0					
LZH				LR	LR	
	comp=Z,4μm,13.0s,MS5.0					
KURK	**Kurchatov**	**20.49**	**357**	P	**P**	**12 57 48.3 -1.1**
	comp=Z,2μm,0.9s,SNR=78					
KURK	**Kurchatov**	**20.49**	**357**	P	**P**	**12 57 46.4 -3.0**
	comp=Z,145nm,0.8s,baz=180,slow=10,SNR=103					
KURK				LR	LR	13 06 19.9
	comp=Z,663nm,18.3s,MS4.0,baz=195,slow=39					
KURK	**Kurchatov**	**20.49**	**357**	*ce*P	**P**	**12 57 47.7 -1.7**
KURK				pmax	pmax	
	comp=Z,329nm,1.2s					
KURK				MLR	MLR	
	comp=Z,674nm,18.0s,MS4.0					
KURK	**Kurchatov**	**20.49**	**357**	*e*P	**P**	**12 57 48.2 -1.2**
	comp=Z,225nm,0.9s					
KURK	**Kurchatov**	**20.49**	**357**	P	**P**	**12 57 47.9 -1.4**
	SNR=103					
CM31	**Chiang Mai Arr**	**20.55**	**121**	*e*P	**P**	**12 57 50.5 +0.3**
	comp=Z,98nm,0.8s					
CMAR	**Chiang Mai Arr**	**20.55**	**121**	P	**P**	**12 57 50.4 +0.2**
	comp=Z,39nm,0.9s,baz=306,slow=11,SNR=133					
CMAR				PcP	PcP	13 02 01.7 +0.2
	comp=Z,1.1nm,0.3s,baz=304,slow=2.1,SNR=4.7					
CMAR				ScP	ScP	13 05 37.2 -1.0
	comp=Z,0.8nm,0.3s,baz=284,slow=3.2,SNR=4.2					
WBK	**Wadi Bani Khal**	**20.61**	**253**	P	**P**	**12 57 52.3 +1.5**
	SNR=10					
SMDO	**Samad**	**21.18**	**256**	P	**P**	**12 58 03.0 +5.9**
	SNR=18					
BDT	**Bhumibol Dam**	**21.36**	**123**	⇑P	**P**	**12 57 59.0 0.0**
	comp=Z,38nm,1.0s,mb4.7					
JMDO	**Jabal Madar**	**21.43**	**254**	P	**P**	**12 58 01.3 +1.6**
	SNR=11					
HOQ	**Hoqain**	**21.60**	**258**	P	**P**	**12 58 07.8 +6.3**
	SNR=7.6					
BANOM	**Banah**	**21.67**	**264**	P	**P**	**12 58 04.0 +1.8**
	SNR=10					
TRD	**Trivandrum**	**21.86**	**189**	*e*PKP	**P**	**12 58 04.8 +0.4**
BSY	**Bisya**	**22.03**	**256**	P	**P**	**12 58 09.0 +2.9**
	SNR=9.6					
HATD	**Hatta, Dubai**	**22.15**	**262**	P	**P**	**12 58 09.9 +2.5**
	SNR=8.9					
ASHO	**Ashiyiah**	**22.26**	**261**	P	**P**	**12 58 12.4 +3.8**
	SNR=33					
ARQ	**Araqi**	**22.36**	**258**	P	**P**	**12 58 11.4 +1.8**
	SNR=20					
NAZ	**Nazwa, Dubai**	**22.50**	**263**	P	**P**	**12 58 14.0 +2.8**
	SNR=19					
PALK	**Pallekele**	**22.85**	**179**	*e*P	**P**	**12 58 15.3 +0.4**
PALK				pmax	pmax	
	comp=Z,65nm,1.1s,mb5.0					
PALK	**Pallekele**	**22.85**	**179**	*e*P	**P**	**12 58 15.3 +0.4**
	comp=Z,65nm,1.1s,mb5.0					
NST	**Nakhon Sawan**	**23.20**	**124**	P	**P**	**12 58 17.0 -1.7**
	comp=Z,50nm,1.0s,mb4.9					
GYA	**Guiyang**	**23.42**	**93**	⇑*i*P	**P**	**12 58 18.9 -1.9**
GYA				PP		12 58 53.2
GYA				PcP	PcP	13 02 08.9 +1.8
GYA				S	**S**	**13 02 25.0 -9.0**
GYA				SS		13 03 18.0
GYA				ScP	ScP	13 05 46.8 +1.4
GYA				pmax	pmax	
	comp=Z,40nm,0.8s,mb4.9					
GYA				pmax	pmax	
	comp=Z,120nm,4.9s					
GYA				LR	LR	
	comp=N,400nm,9.9s					
GYA				LR	LR	
	comp=E,350nm,11.8s					
GYA				LR	LR	
	comp=Z,520nm,11.2s,MS4.2					
ZAA0	**Zalesovo Array**	**23.91**	**6**	*e*P	**P**	**12 58 24.4 -0.9**
ZALV	**Zalesovo Beam**	**23.91**	**6**	P	**P**	**12 58 24.0 -1.2**
	comp=Z,64nm,0.7s,mb5.2,baz=191,slow=9.8,SNR=87					
ZALV	**Zalesovo Beam**	**23.91**	**6**	P	**P**	**12 58 24.0 -1.2**
ZALV				pmax	pmax	
	comp=Z,64nm,0.7s,mb5.2					
ZALV	**Zalesovo Beam**	**23.91**	**6**	P	**P**	**12 58 24.0 -1.2**
BVAR	**Borovoye Array**	**23.91**	**345**	P	**P**	**12 58 24.0 -1.3**
	comp=Z,15nm,0.4s,mb4.8,baz=147,slow=11,SNR=38					
BVAR	**Borovoye Array**	**23.91**	**345**	P	**P**	**12 58 24.0 -1.3**
BVAR				pmax	pmax	
	comp=Z,15nm,0.4s					
BRVK	**Borovoye**	**23.97**	**345**	P	**P**	**12 58 25.7 -0.1**
	comp=Z,273nm,0.8s,mb5.7,SNR=13					
BRVK	**Borovoye**	**23.97**	**345**	*ce*P	**P**	**12 58 24.5 -1.3**
BRVK				pmax	pmax	
	comp=Z,111nm,2.5s,mb4.8					
BRVK				MLR	MLR	
	comp=Z,1μm,17.0s,MS4.5					
BRVK	**Borovoye**	**23.97**	**345**	*e*P	**P**	**12 58 25.4 -0.3**
	comp=Z,360nm,2.2s,mb5.4					
BRVK	**Borovoye**	**23.97**	**345**	P	**P**	**12 58 24.1 -1.6**
	SNR=28					
XAN	**Xi'an**	**24.43**	**74**	P	**P**	**12 58 28.5 -1.7**
XAN				S	**S**	**13 02 47.1 -3.1**
XAN				pmax	pmax	
	comp=Z,34nm,0.5s,mb5.0					
XAN				LR	LR	
	comp=N,430nm,11.1s,MS4.3					
XAN				LR	LR	
	comp=E,280nm,11.1s,MS4.3					
XAN				LR	LR	
	comp=Z,280nm,11.1s,MS4.0					
ABKAR	**Akbulak array**	**24.51**	**327**	*e*P	**P**	**12 58 30.1 -0.7**
	comp=Z,22nm,0.6s,mb4.9					
NVS	**Novosibirsk**	**24.67**	**4**	⇑*i*P	**P**	**12 58 30.5 -1.7**
NVS				*e*		12 58 38.8
NVS				*e*		12 59 02.3
NVS				*i*S	**S**	**13 02 54.3 +0.6**
NVS				pmax	pmax	
	comp=N,52nm,1.6s					
NVS				pmax	pmax	
	comp=E,20nm,1.6s					
NVS				pmax	pmax	
	comp=Z,77nm,1.6s,mb5.0					
NVS				smax		
	comp=N,30nm,2.0s					
NVS				smax		
	comp=E,22nm,2.0s					
ENH	**Enshi**	**25.11**	**83**	*e*P	**P**	**12 58 35.8 -0.7**
	comp=E,29nm,0.6s,mb5.0					
BTO	**Baotou**	**26.16**	**59**	*e*P	**P**	**12 58 45.2 -0.7**
AKTK	**Aktyubinsk**	**26.23**	**327**	P	**P**	**12 58 44.8 -1.6**
AKTK				LR	LR	13 10 12.2
AKTO	**Aktyubinsk**	**26.23**	**327**	P	**P**	**12 58 44.8 -1.6**
	comp=E,15nm,0.9s,mb4.5,baz=121,slow=10,SNR=27					
AKTO				LR	LR	13 10 12.2
	comp=E,1μm,19.9s,MS4.5,baz=304,slow=39					
AKTO	**Aktyubinsk**	**26.23**	**327**	P	**P**	**12 58 44.8 -1.6**
AKTO				pmax	pmax	
	comp=Z,15nm,0.9s,mb4.5					
AKTO				MLR	MLR	
	comp=Z,1μm,19.9s,MS4.5					
ZAK	**Zakamensk**	**26.45**	**34**	*e*P	**P**	**12 58 49.6 +1.2**
ZAK				pmax	pmax	
	comp=Z,8.0nm,1.2s,mb4.1					
SONM	**Songino Array**	**26.58**	**41**	P	**P**	**12 58 50.0 +0.4**
	comp=Z,18nm,0.8s,mb4.7,baz=231,slow=8.4,SNR=25					
SONM				PcP	PcP	13 02 14.3 +0.5
	comp=Z,3.3nm,0.8s,baz=212,slow=3.2,SNR=4.6					
SONM				LR	LR	13 10 17.2
	comp=Z,678nm,20.7s,MS4.2,baz=237,slow=39					
SONM	**Songino Array**	**26.58**	**41**	P	**P**	**12 58 50.0 +0.4**
SONM						13 02 14.3
SONM				pmax	pmax	
	comp=Z,18nm,0.8s					
SONM				MLR	MLR	
	comp=Z,678nm,20.7s					
ULN	**Ulaanbaatar**	**26.98**	**42**	*e*P	**P**	**12 58 55.8 +2.7**
ULN				pmax	pmax	
	comp=Z,24nm,1.0s,mb4.7					
ULN	**Ulaanbaatar**	**26.98**	**42**	*e*P	**P**	**12 58 55.8 +2.6**
	comp=Z,24nm,1.0s,mb4.7					
ULN	**Ulaanbaatar**	**26.98**	**42**	P	**P**	**12 58 56.5 +3.3**
	SNR=7.6					
UBT	**Ubonrachathani**	**27.10**	**118**	⇑P	**P**	**12 58 55.7 +1.2**
HHC	**Hu-ho-hao-te**	**27.36**	**59**	*e*P	**P**	**12 58 58.0 +1.3**
HHC				pP	pP	12 59 02.3 +2.9
HHC				sP	sP	12 59 05.1 +4.6
HHC				PP		12 59 45.4
HHC				PcP	PcP	13 02 17.3 +1.6
HHC				S	**S**	**13 03 36.2 -0.4**
HHC				sS	sS	13 03 43.8 +2.7
HHC				SS		13 04 52.8
HHC				ScP	ScP	13 05 55.1 -1.3
HHC				pmax	pmax	
	comp=Z,18nm,1.1s,mb4.5					
HHC				pmax	pmax	
	comp=Z,150nm,5.4s					
HHC				LR	LR	
	comp=N,3μm,16.1s,MS5.0					
HHC				LR	LR	
	comp=E,1μm,14.1s,MS5.0					
HHC				LR	LR	
	comp=Z,810nm,14.5s,MS4.4					
TLY	**Talaya**	**27.48**	**32**	*e*P	**P**	**12 59 02.1 +4.4**
TLY				*e*S	**S**	**13 03 34.5 -3.8**
TLY				pmax	pmax	
	comp=Z,8.0nm,1.3s,mb4.1					
TLY				MLR	MLR	
	comp=Z,283nm,18.0s,MS3.9					
UMR	**Umm Al-Rimmam**	**28.28**	**277**	*e*P	**P**	**12 59 04.7 -0.3**
UMR				AMb	AMB	12 59 12.8
	comp=Z,154nm,0.9s,mb5.6					
MIB	**Mutribah**	**28.56**	**278**	*e*P	**P**	**12 59 07.2 -0.3**
MIB				AMb	AMB	12 59 16.4
	comp=Z,262nm,0.8s,mb6.0					
NAY	**Al-Naaiem**	**28.74**	**276**	*e*P	**P**	**12 59 08.9 -0.2**
NAY				AMb	AMB	12 59 17.7
	comp=Z,44nm,0.9s,mb5.2					
QIZ	**Qiongzhong**	**28.93**	**106**	P	**P**	**12 59 12.2 +1.3**
QIZ				S	**S**	**13 04 04.2 +2.5**
QIZ				sS	sS	13 04 09.7 +3.5
QIZ				pmax	pmax	
	comp=Z,15nm,1.7s,mb4.5					
QIZ				LR	LR	
	comp=N,370nm,11.5s					
QIZ				LR	LR	
	comp=Z,450nm,12.1s,MS4.3					
WHN	**Wuhan**	**29.24**	**81**	P	**P**	**12 59 13.0 -0.6**
WHN				S	**S**	**13 04 05.0 -1.5**
WHN				LR	LR	
	comp=N,3μm,13.0s,MS5.1					
WHN				LR	LR	
	comp=E,1μm,12.6s,MS5.1					
WHN				LR	LR	
	comp=Z,2μm,26.9s					
SVE	**Sverdlovsk**	**29.96**	**338**	⇑*e*P	**P**	**12 59 21.7 +2.1**
SVE				*e*S	**S**	**13 04 18.3 +1.1**
SVE				pmax	pmax	
	comp=Z,14nm,0.9s,mb4.7					
SVE				MLR	MLR	
	comp=Z,654nm,12.0s,MS4.5					
GZH	**Guangzhou**	**30.23**	**96**	P	**P**	**12 59 21.7 -0.7**
GZH				S	**S**	**13 04 19.9 -2.2**
GZH				LR	LR	
	comp=N,400nm,13.2s,MS4.4					
GZH				LR	LR	
	comp=E,460nm,14.7s,MS4.4					
GZH				LR	LR	
	comp=Z,520nm,17.3s,MS4.2					
DGRG	**David-gareji**	**30.31**	**301**	P	**P**	**12 59 23.7 +0.8**
ARU	**Arti**	**30.35**	**336**	*d*P	**P**	**12 59 24.5 +1.5**
ARU				*e*		13 00 19.8
ARU				S	**S**	**13 04 26.8 +3.6**
ARU				SS	SS	13 06 00.3 -32
ARU				pmax	pmax	
	comp=Z,27nm,1.0s,mb4.9					
ARU				MLR	MLR	
	comp=Z,578nm,14.0s,MS4.4					
ARU	**Arti**	**30.35**	**336**	*e*P	**P**	**12 59 23.1 0.0**
	comp=Z,21nm,0.8s,mb4.9					
ARU	**Arti**	**30.35**	**336**	P	**P**	**12 59 23.8 +0.8**
	comp=Z,165nm,0.8s,mb5.8,SNR=5.0					
GNI	**Garni**	**30.58**	**299**	*e*P	**P**	**12 59 27.4 +2.1**
GNI				pmax	pmax	
	comp=Z,32nm,0.8s					
GNI	**Garni**	**30.58**	**299**	*c i*P	**P**	**12 59 27.7 +2.4**
GNI				pmax	pmax	
	comp=Z,58nm,1.2s					
GNI				MLR	MLR	
	comp=Z,307nm,21.0s					
GNI	**Garni**	**30.58**	**299**	*e*P	**P**	**12 59 27.4 +2.1**
	comp=Z,32nm,0.8s,mb5.2					
BJT	**Baijiatuau**	**30.68**	**62**	*e*P	**P**	**12 59 26.3 +0.1**
BJT				pmax	pmax	
	comp=Z,40nm,0.9s					
BJT	**Baijiatuau**	**30.68**	**62**	*e*P	**P**	**12 59 26.3 +0.2**
	comp=Z,40nm,0.9s,mb5.2					
BJI	**Beijing**	**30.68**	**62**	P	**P**	**12 59 26.4 +0.2**
BJI				S	**S**	**13 04 29.6 +0.7**
BJI				pmax	pmax	
	comp=Z,25nm,1.1s,mb5.0					
BJI				pmax	pmax	
	comp=Z,44nm,3.5s					
BJI				LR	LR	
	comp=N,3μm,16.0s,MS5.0					
BJI				LR	LR	
	comp=E,890nm,16.6s,MS5.0					
BJI				LR	LR	
	comp=Z,330nm,21.0s,MS4.0					
MTA	**Mtatsminda**	**30.78**	**302**	P	**P**	**12 59 28.4 +1.3**
TBLG	**Delisi**	**30.83**	**302**	P	**P**	**12 59 29.4 +1.9**
TBLG	**Delisi**	**30.83**	**302**	P	**P**	**12 59 29.4 +1.9**
ZEI	**Tsey**	**31.64**	**303**	*e*P	**P**	**12 59 35.6 +1.0**
ZEI				pmax	pmax	
	comp=Z,24nm,0.7s,mb5.1					
IPM	**Ipoh**	**32.19**	**139**	*e*P	**P**	**12 59 41.2 +1.4**
	comp=Z,11nm,0.8s,mb4.8					
KIV	**Kislovodsk**	**32.74**	**305**	⇑*e*P	**P**	**12 59 46.3 +2.0**
KIV				*e*		13 00 49.6
KIV				*e*		13 02 29.7
KIV				pmax	pmax	
	comp=Z,22nm,0.6s,mb5.3					
KIV				MLR	MLR	
	comp=Z,600nm,17.0s,MS4.4					
KIV	**Kislovodsk**	**32.74**	**305**	*e*P	**P**	**12 59 45.4 +1.1**
	comp=Z,30nm,0.8s,mb5.3					
NJ2	**Nanjing**	**32.86**	**77**	*e*P	**P**	**12 59 48.8 +3.3**
NJ2				pP	pP	12 59 53.1 +4.9
NJ2				sP	sP	12 59 55.7 +6.3
NJ2				pmax	pmax	
	comp=Z,10.0nm,0.6s,mb4.9					
NJ2				pmax	pmax	
	comp=Z,100nm,4.6s					
NJ2				LR	LR	
	comp=N,410nm,22.8s,MS4.3					
NJ2				LR	LR	
	comp=E,550nm,20.8s,MS4.3					
NJ2				LR	LR	
	comp=Z,730nm,21.4s,MS4.3					
SOKR	**Solikamsk**	**33.38**	**338**	*d i*P	**P**	**12 59 52.1 +2.4**
SOKR				pmax	pmax	
	comp=Z,40nm,0.9s,mb5.3					
SOKR				MLR	MLR	
	comp=Z,380nm,16.0s,MS4.2					
DL2	**Dalian**	**34.80**	**64**	P	**P**	**13 00 01.8 -0.5**
DL2				*e*S	**S**	**13 05 32.3 -0.7**
DL2				pmax	pmax	
	comp=Z,50nm,0.6s,mb5.6					
DL2				LR	LR	
	comp=N,680nm,18.2s,MS4.5					
DL2				LR	LR	
	comp=E,360nm,16.1s,MS4.5					
DL2				LR	LR	
	comp=Z,450nm,13.3s,MS4.4					
SSE	**Sheshan**	**34.97**	**78**	P	**P**	**13 00 05.1 +1.3**
SSE				S	**S**	**13 05 35.2 -0.6**
SSE				sS	sS	13 05 40.7 +0.4
SSE				pmax	pmax	
	comp=Z,52nm,0.7s,mb5.6					
SSE				pmax	pmax	
	comp=Z,42nm,3.7s					
SSE				LR	LR	
	comp=N,940nm,18.2s,MS4.6					
SSE				LR	LR	
	comp=E,210nm,18.1s,MS4.6					
SSE				LR	LR	
	comp=Z,610nm,11.9s					
HIA	**Hailar**	**35.22**	**46**	*e*P	**P**	**13 00 06.6 +0.8**
HIA				pmax	pmax	
	comp=Z,21nm,0.8s					
HIA	**Hailar**	**35.22**	**46**	*e*P	**P**	**13 00 06.5 +0.8**
	comp=Z,21nm,0.8s,mb5.1					
MALT	**Malatya**	**35.35**	**295**	⇑P	**P**	**13 00 07.3 +0.3**
MALT	**Malatya**	**35.35**	**295**	*e*P	**P**	**13 00 07.0 0.0**
	comp=Z,102nm,1.7s,mb5.5					
MALT	**Malatya**	**35.35**	**295**	⇑*i*P	**P**	**13 00 07.3 +0.3**
VRHR	**Novokhopersk**	**35.47**	**317**	*e*P	**P**	**13 00 08.7 +0.9**
VRHR				pmax	pmax	
	comp=Z,30nm,0.6s,mb5.4					
VRHR				pmax	pmax	
	comp=N,10.0nm,0.9s					
VRHR				pmax	pmax	
	comp=E,10.0nm,0.9s					
TPUB	**Ta-pu**	**36.45**	**91**	*e*P	**P**	**13 00 16.6 0.0**
	comp=E,24nm,0.8s,mb5.2					
SSLB	**Suanglung**	**36.57**	**90**	*e*P	**P**	**13 00 18.7 +1.0**
	comp=E,9.3nm,0.6s,mb4.8					
ANN	**Anapa**	**36.59**	**306**	*e*P	**P**	**13 00 15.5 -2.1**
ANN				*e**PP	pP	13 00 25.2 +4.8
ANN				*e*		13 01 37.7
ANN				*e*S	**S**	**13 05 54.4 -6.0**
ANN				pmax	pmax	
	comp=Z,25nm,0.7s,mb5.2					
ANN				MLR	MLR	
	comp=N,390nm,17.0s,MS4.5					
ANN				MLR	MLR	
	comp=E,656nm,17.0s,MS4.5					
ANN				MLR	MLR	
	comp=Z,386nm,17.0s,MS4.2					
VORD	**Divnogorie**	**36.81**	**316**	*e*P	**P**	**13 00 20.0 +0.7**
VORD				pmax	pmax	
	comp=N,10.0nm,0.7s					
VORD				pmax	pmax	
	comp=Z,20nm,0.7s,mb5.1					
VORD				pmax	pmax	
	comp=E,40nm,1.0s					
VSR	**Storozhevoye**	**36.96**	**316**	*e*P	**P**	**13 00 21.0 +0.4**
VSR				pmax	pmax	
	comp=Z,20nm,0.7s,mb5.1					
VSR				pmax	pmax	
	comp=N,10.0nm,1.1s					
VSR				pmax	pmax	
	comp=E,30nm,1.0s					
VSR				MLR	MLR	
	comp=Z,560nm,18.0s,MS4.4					
VSR				MLR	MLR	
	comp=N,230nm,13.0s,MS4.3					
VSR				MLR	MLR	
	comp=E,300nm,17.0s,MS4.3					
YULB	**Yu-li**	**37.00**	**91**	*e*P	**P**	**13 00 21.6 +0.4**
	comp=E,33nm,1.0s,mb5.1					
NACB	**Ninganchiao**	**37.00**	**89**	*e*P	**P**	**13 00 22.0 +0.7**
	comp=E,41nm,0.8s,mb5.3					
CN2	**Changchun**	**37.98**	**56**	*e*P	**P**	**13 00 27.3 -2.1**
CN2				PP	PP	13 01 56.4 +0.3
CN2				*e*S	**S**	**13 06 17.3 -4.2**
CN2				pmax	pmax	
	comp=Z,10.0nm,0.7s,mb4.7					
CN2				pmax	pmax	
	comp=Z,90nm,14.0s					
CN2				LR	LR	
	comp=N,1μm,16.0s,MS4.8					
CN2				LR	LR	
	comp=E,500nm,16.0s,MS4.8					
CN2				LR	LR	
	comp=Z,500nm,17.0s,MS4.4					
PRGR	**Permogore**	**38.76**	**334**	*e*P	**P**	**13 00 32.4 -3.2**
PRGR				pmax	pmax	
	comp=Z,28nm,0.8s,mb5.0					
INCN	**Inchon**	**38.77**	**67**	*e*P	**P**	**13 00 35.2 -0.9**
	comp=Z,43nm,0.8s,mb5.2					
BRTR	**Keskin Array B**	**39.07**	**297**	P	**P**	**13 00 36.9 -1.7**
	comp=Z,10.0nm,0.7s,mb4.7,baz=111,slow=6.8,SNR=36					
BRTR	**Keskin Array B**	**39.07**	**297**	*i* P	**P**	**13 00 37.7 -0.9**
BRTR				pmax	pmax	
	comp=Z,10.0nm,0.7s					
EIL	**Elat**	**39.16**	**281**	P	**P**	**13 00 38.6 -0.9**
	comp=Z,7.5nm,0.8s,mb4.5,baz=341,slow=1.6,SNR=5.3					
MOS	**Moscow**	**39.41**	**323**	*e*P	**P**	**13 00 43.0 +1.8**
MOS				*e*		13 02 12.7
MOS				pmax	pmax	
	comp=Z,39nm,1.0s,mb5.1					
ATD	**Arta Tunnel**	**39.46**	**250**	P	**P**	**13 00 40.4 -1.7**
	comp=Z,3.5nm,0.3s,mb4.5,baz=146,slow=20,SNR=2.7					
OBN	**Obninsk**	**39.74**	**322**	⇑*e*P	**P**	**13 00 44.3 +0.3**
OBN				*e*S	**S**	**13 06 45.6 -2.1**
OBN				pmax	pmax	
	comp=Z,64nm,1.7s,mb5.1					
OBN				MLR	MLR	
	comp=Z,500nm,19.0s,MS4.4					
KSRS	**Korea Array**	**39.79**	**67**	P	**P**	**13 00 43.0 -1.7**
	comp=Z,14nm,0.6s,mb4.9,baz=273,slow=8.9,SNR=55					
KSRS				PcP	PcP	13 02 50.5 -0.2
	comp=Z,2.4nm,1.0s,baz=226,slow=1.1,SNR=4.2					
KSRS				ScP	ScP	13 06 38.5 -1.4
	comp=Z,1.4nm,0.8s,baz=281,slow=4.6,SNR=5.2					
KSRS				LR	LR	13 18 45.7
	comp=Z,436nm,19.3s,MS4.3,baz=98,slow=39					
KSRS	**Korea Array**	**39.79**	**67**	P	**P**	**13 00 43.0 -1.7**
KSRS						13 02 50.6
KSRS						13 06 38.6
KSRS				pmax	pmax	
	comp=Z,14nm,0.6s,mb4.9					
KSRS				MLR	MLR	
	comp=Z,436nm,19.3s,MS4.3					
CLNS	**Chul'man**	**40.73**	**36**	*e*P	**P**	**13 00 51.6 -0.5**
CLNS				pmax	pmax	
	comp=Z,13nm,1.1s,mb4.5					
CLNS				pmax	pmax	
	comp=E,13nm,1.1s					
CLNS				pmax	pmax	
	comp=N,4.0nm,0.8s					
CLNS				MLR	MLR	
	comp=E,440nm,14.0s,MS4.5					
CLNS				MLR	MLR	
	comp=Z,314nm,12.0s,MS4.4					
CLNS				MLR	MLR	

comp=N,205nm,12.0s,MS4.5
KLMR Klimovskoe 40.77 331 *e*P **P 13 00 51.6 -0.8**
KLMR pmax pmax
comp=Z,485nm,16.1s
MDJ Mudanjiang 41.02 55 P **P 13 00 54.3 -0.4**
MDJ pP pP 13 00 57.4 -0.1
MDJ sP sP 13 00 58.8 +0.2
MDJ PP PP 13 02 26.3 -2.9
MDJ PcP PcP 13 02 54.5 -0.1
MDJ S **S 13 07 06.5 -0.5**
MDJ pmax pmax
comp=Z,7.0nm,1.3s,mb4.1
MDJ pmax pmax
comp=Z,86nm,5.3s
MDJ LR LR
comp=N,670nm,14.1s,MS4.7
MDJ LR LR
comp=E,200nm,11.5s,MS4.7
MDJ LR LR
comp=Z,470nm,14.9s,MS4.5
MDJ Mudanjiang 41.02 55 *e*P **P 13 00 54.4 -0.3**
comp=Z,4.2nm,0.5s,mb4.3
KKM Kota Kinabalu 41.40 118 *e*P **P 13 00 57.8 -0.3**
JOW Kunigami 41.97 82 *e*P **P 13 01 06.2 +3.5**
comp=Z,12nm,0.9s,mb4.5
TLCR 42.72 305 ⇓P **P 13 01 08.4 -0.2**
TLCR 42.72 305 ⇓*i*P **P 13 01 08.4 -0.2**
KIS Kishinev 42.81 308 *e*P **P 13 01 08.0 -1.3**
KIS *e*S **S 13 07 29.0 -4.6**
KIS *e*L 13 19 08.0
KIS LRM 13 21 54.0
comp=Z,300nm,18.0s
KIS Kishinev 42.81 308 *e*P **P 13 01 08.0 -1.3**
KIS *e*S **S 13 07 29.0 -4.6**
KIS MLR MLR
comp=Z,300nm,18.0s,MS4.2
KIS MLR MLR
comp=Z,300nm,18.0s
KLR Kul'dur 42.90 49 *e*P **P 13 01 05.8 -4.2**
KLR MLR MLR
comp=N,500nm,13.0s,MS5.0
KLR MLR MLR
comp=E,1μm,13.0s,MS5.0
KLR MLR MLR
comp=Z,2μm,13.0s,MS5.1
AKASG Malin Array Be 42.95 313 P **P 13 01 09.3 -1.1**
comp=Z,15nm,0.7s,mb4.9,baz=77,slow=7.0,SNR=51
AKASG Malin Array Be 42.95 313 P **P 13 01 09.3 -1.1**
AKASG pmax pmax
comp=Z,15nm,0.7s
AKBB Malin Array Si 42.95 313 *e*P **P 13 01 09.7 -0.7**
KIEV Kiev 42.96 313 *e*P **P 13 01 10.6 +0.1**
KIEV pmax pmax
comp=Z,30nm,0.8s,mb5.1
KIEV Kiev 42.96 313 *e*P **P 13 01 10.6 +0.1**
comp=Z,30nm,0.8s,mb5.1
TIRR Tirgusor 42.98 304 ⇑P **P 13 01 11.6 +0.9**
TIRR Tirgusor 42.98 304 ⇑*i*P **P 13 01 11.6 +0.9**
CFR Carcaliu 43.20 305 ⇑P **P 13 01 13.1 +0.6**
CFR Carcaliu 43.20 305 ⇑*i*P **P 13 01 13.1 +0.6**
PRD Provadia 43.71 302 *i* P **P 13 01 17.8 +1.1**
VRI Vrincioaia 44.20 306 ⇑P **P 13 01 21.7 +1.1**
VRI Vrincioaia 44.20 306 ⇑*i*P **P 13 01 21.7 +1.1**
PLOR Plostina 44.26 306 P **P 13 01 21.6 +0.6**
PLOR Plostina 44.26 306 ⇑P **P 13 01 22.4 +1.4**
PLOR Plostina 44.26 306 ⇑*i*P **P 13 01 22.4 +1.4**
MICGM Minsk 44.41 319 *e*P **P 13 01 22.0 -0.1**
MNK Minsk 44.44 319 *e*P **P 13 01 22.0 -0.3**
MLR Muntele Rosu 44.75 306 ⇓P **P 13 01 26.2 +1.3**
MLR Muntele Rosu 44.75 306 ⇓*i*P **P 13 01 26.2 +1.3**
YAK Yakutsk 44.93 30 *e*P **P 13 01 27.6 +1.5**
YAK pmax pmax
comp=Z,59nm,1.1s,mb5.3
YAK pmax pmax
comp=N,12nm,0.9s
YAK pmax pmax
comp=E,24nm,1.1s
YAK Yakutsk 44.93 30 *e*P **P 13 01 26.9 +0.8**
HABR Khabarovsk 45.00 50 *e*P **P 13 01 28.7 +1.8**
HABR *SS sS 13 08 09.9 -0.2
HABR *e*SSS 13 12 10.2
HABR pmax pmax
comp=E,27nm,1.9s
HABR pmax pmax
comp=Z,15nm,0.9s,mb4.8
HABR pmax pmax
comp=N,5.0nm,0.7s
HABR MLR MLR
comp=Z,375nm,16.0s,MS4.4
DOPR Dopca 45.14 306 ⇓*i*P **P 13 01 29.6 +1.6**
JOF Joensuu 45.17 331 *e*P **P 13 01 26.8 -1.2**
JOF pmax pmax
comp=Z,50nm,0.7s,mb5.5
JOF Joensuu 45.17 331 *e*p **P 13 01 26.8 -1.2**
comp=Z,50nm,0.7s,mb5.5
IDID Didziasalis 45.22 320 *e*P **P 13 01 29.1 +0.6**
IDID AMB AMB 13 01 31.9
comp=Z,12nm,0.7s,mb4.8
PVL Pavlikeni 45.22 302 *i* P **P 13 01 30.7 +2.0**
KDZ Kurdzhali 45.24 300 *i* P **P 13 01 30.0 +1.1**
BURAR Bucovina Array 45.30 309 ⇓P **P 13 01 30.4 +1.2**
BURAR Bucovina Array 45.30 309 ⇓*i*P **P 13 01 30.4 +1.2**
BUR08 Bucovina Ar. S 45.31 309 *e*P **P 13 01 29.5 +0.2**
VOIR 45.38 306 ⇓P **P 13 01 30.9 +1.0**
VOIR 45.38 306 ⇓*i*P **P 13 01 30.9 +1.0**
IIGN Ignalina 45.51 320 *e*P **P 13 01 31.7 +0.8**
IIGN AMB AMB 13 01 34.4
comp=Z,19nm,1.0s,mb5.0
ISAL Salakas 45.61 320 *e*P **P 13 01 32.6 +1.0**
ISAL AMB AMB 13 01 35.2
comp=Z,19nm,0.8s,mb5.1
RZN Rozhen 45.77 300 *i* P **P 13 01 33.8 +0.7**
VSU Vasula 45.90 324 *i* P **P 13 01 31.5 -2.3**
PGB Panagyurishte 46.11 302 *i* P **P 13 01 37.4 +1.6**
LVZ Lovozero 46.18 338 *d*i P **P 13 01 37.5 +1.6**
LVZ pmax pmax
comp=Z,57nm,0.7s,mb5.6
LVZ MLR MLR
comp=Z,381nm,17.0s,MS4.4
LVZ Lovozero 46.18 338 P **P 13 01 36.3 +0.4**
comp=Z,450nm,0.8s,mb6.5,SNR=6.1
LVV L'vov 46.18 312 *e*P **P 13 01 36.9 +0.7**
APA Apatity 46.42 337 ⇑*i*P **P 13 01 39.5 +1.7**
APA pmax pmax
comp=Z,21nm,1.0s,mb5.0
APA MLR MLR
comp=Z,1μm,11.0s,MS5.1
BMR Baia Mare 46.46 309 P **P 13 01 40.9 +2.5**
VTS Vitosha 46.82 302 ⇑P **P 13 01 41.7 +0.4**
VTS Vitosha 46.82 302 ⇑*i*P **P 13 01 41.7 +0.4**
VTS Vitosha 46.82 302 *i* P **P 13 01 41.7 +0.4**
KKB Krupnik 46.97 301 *i* P **P 13 01 43.1 +0.6**
GZR Gura Zlata 46.98 306 ⇑P **P 13 01 44.0 +1.5**
GZR Gura Zlata 46.98 306 ⇑*i*P **P 13 01 44.0 +1.5**
FINES FINESS Array B 46.99 328 P **P 13 01 40.7 -1.7**
comp=Z,23nm,0.7s,mb5.2,baz=103,slow=8.8,SNR=32
FINES LR LR 13 22 54.8
comp=Z,781nm,21.8s,MS4.6,baz=107,slow=38
FINES FINESS Array B 46.99 328 P **P 13 01 40.7 -1.7**
FINES pmax pmax
comp=Z,23nm,0.7s
FINES MLR MLR
comp=Z,781nm,21.8s
DRGR 46.99 307 P **P 13 01 44.8 +2.2**
DRGR 46.99 307 ⇑*i*P **P 13 01 44.4 +1.8**
KWP Kalwaria Pacla 47.03 311 *e*P **P 13 01 43.6 +0.7**
KWP Kalwaria Pacla 47.03 311 *e*P **P 13 01 43.2 +0.3**
KWP pmax pmax
comp=Z,137nm,1.0s,mb5.8
KWP Kalwaria Pacla 47.03 311 *e*P **P 13 01 43.2 +0.3**
comp=Z,137nm,1.0s,mb5.8
KWP Kalwaria Pacla 47.03 311 ⇑*i*P **P 13 01 44.4 +1.5**
SUW Suwalki 47.06 317 *e*P **P 13 01 43.8 +0.8**
SUW Suwalki 47.06 317 *e*P **P 13 01 43.5 +0.5**
KAF Kangasniemi 47.08 329 *e*P **P 13 01 42.6 -0.5**
KAF pmax pmax
comp=Z,16nm,0.7s,mb5.1
KAF Kangasniemi 47.08 329 *e*p **P 13 01 42.6 -0.5**
comp=Z,16nm,0.7s,mb5.1
TRPA Tarpa 47.11 309 ⇓*i*P **P 13 01 44.7 +1.2**
UZH Uzhgorod 47.28 310 ⇑*i*P **P 13 01 46.3 +1.5**
UZH *e* 13 01 53.5
UZH *i* 13 03 37.5
UZH *i* 13 08 54.0
UZH *e* 13 11 59.5
KOLS Kolonicke sedl 47.30 310 *e*P **P 13 01 46.2 +1.2**
KOLS pmax pmax
comp=Z,13nm,1.2s,mb4.7
KOLS Kolonicke sedl 47.30 310 *e*P **P 13 01 46.2 +1.2**
comp=Z,13nm,1.2s,mb4.7
KOLS Kolonicke sedl 47.30 310 *e*P **P 13 01 46.2 +1.2**
VAY Valandovo 47.40 300 *e*P **P 13 01 45.2 -0.7**
BZS Buzias 47.79 306 ⇑P **P 13 01 50.1 +1.3**
BZS Buzias 47.79 306 ⇑*i*P **P 13 01 50.1 +1.3**
CRVS Cervenica-Dubn 47.83 310 *e*P **P 13 01 51.8 +2.7**
CRVS pmax pmax
comp=Z,12nm,1.0s,mb4.9
CRVS Cervenica-Dubn 47.83 310 *e*P **P 13 01 51.8 +2.7**
comp=Z,12nm,1.0s,mb4.9
CRVS Cervenica-Dubn 47.83 310 *e*P **P 13 01 51.8 +2.7**
STHS Stebnicka Huta 47.98 311 *e*P **P 13 01 50.8 +0.5**
STHS pmax pmax
comp=Z,12nm,0.7s,mb5.0
STHS Stebnicka Huta 47.98 311 *e*P **P 13 01 50.8 +0.5**
comp=Z,12nm,0.7s,mb5.0
STHS Stebnicka Huta 47.98 311 *e*P **P 13 01 50.8 +0.5**
MAJO Matsushiro 48.07 66 *e*P **P 13 01 51.5 +0.3**
MJAR Matsushiro Arr 48.07 66 P **P 13 01 50.1 -1.1**
comp=Z,2.2nm,0.6s,mb4.3,baz=300,slow=13,SNR=6.0
MJAR LR LR 13 23 05.3
comp=Z,243nm,21.6s,MS4.1,baz=265,slow=37
MJAR Matsushiro Arr 48.07 66 P **P 13 01 50.1 -1.1**
MJAR pmax pmax
comp=Z,2.0nm,0.6s
MJAR MLR MLR
comp=Z,243nm,21.6s
SKO Skopje 48.18 301 *e*P **P 13 01 49.6 -2.3**
DAV Davao City (W) 48.20 109 LR LR 13 24 52.0
comp=Z,168nm,20.0s,MS4.0,baz=19,slow=40
KRUS Krusevo 48.39 300 *e*P **P 13 01 51.8 -1.7**
KECS Kecovo 48.48 310 *e*P **P 13 01 55.3 +1.2**
KECS pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KECS Kecovo 48.48 310 *e*P **P 13 01 55.3 +1.2**
comp=Z,6.1nm,0.9s,mb4.6
KECS Kecovo 48.48 310 *e*P **P 13 01 55.3 +1.2**
NIE Niedzica 48.59 311 *e*P **P 13 01 56.0 +1.1**
PSZ Piszkesteto 48.89 309 *e*P **P 13 01 57.6 +0.3**
PSZ pmax pmax
comp=Z,15nm,0.9s,mb5.0
PSZ Piszkesteto 48.89 309 *e*P **P 13 01 57.6 +0.4**
comp=Z,15nm,0.9s,mb5.0
PSZ Piszkesteto 48.89 309 ⇑*i*P **P 13 01 59.2 +1.9**
PSZ Piszkesteto 48.89 309 ⇓*e*P **P 13 01 57.6 +0.3**
OJC Ojcow 48.92 312 *e*P **P 13 01 58.1 +0.6**
TIXI Tiksi 48.93 18 *e*P **P 13 01 57.8 +0.5**
TIXI pmax pmax
comp=Z,37nm,1.0s,mb5.4
TIXI MLR MLR
comp=Z,750nm,17.0s,MS4.8
TIXI Tiksi 48.93 18 *e*P **P 13 01 56.9 -0.4**
comp=Z,25nm,0.8s,mb5.3
KEV Kevo 49.50 338 *e*P **P 13 02 01.6 0.0**
KEV pmax pmax
comp=Z,46nm,0.8s,mb5.6
KEV Kevo 49.50 338 *e*P **P 13 02 01.6 0.0**
comp=Z,46nm,0.8s,mb5.6
KEV Kevo 49.50 338 *e*p **P 13 02 00.9 -0.7**
comp=Z,38nm,0.7s,mb5.5
VYHS Vyhne 49.58 310 *e*P **P 13 02 03.0 +0.5**
VYHS pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
VYHS Vyhne 49.58 310 *e*P **P 13 02 03.0 +0.5**
comp=Z,7.4nm,1.3s,mb4.6
VYHS Vyhne 49.58 310 *e*P **P 13 02 03.0 +0.5**
KOLL Kolacno 49.86 310 *e*P **P 13 02 05.0 +0.3**
KOLL Kolacno 49.86 310 *e*P **P 13 02 05.0 +0.3**
ARCES ARCESS Array B 49.89 338 P **P 13 02 04.0 -0.7**
comp=Z,72nm,0.8s,mb5.8,baz=101,slow=5.9,SNR=77
ARCES LR LR 13 23 28.3
comp=Z,341nm,20.1s,MS4.3,baz=293,slow=36
ARCES ARCESS Array B 49.89 338 P **P 13 02 04.0 -0.6**
ARCES pmax pmax
comp=Z,72nm,0.8s
ARCES MLR MLR
comp=Z,341nm,20.1s
ARCES ARCESS Array B 49.89 338 P **P 13 02 04.0 -0.7**
ARCES LR LR 13 23 28.3
ARE0 ARCESS Array S 49.89 338 *e*P **P 13 02 04.2 -0.4**
OKC Ostrava-Krasne 49.99 312 *e*P **P 13 02 05.6 -0.1**
OKC MLR MLR
comp=Z,200nm,16.0s,MS4.2
OKC Ostrava-Krasne 49.99 312 *e*P **P 13 02 05.6 -0.1**
OKC AMS AMS 13 24 10.0
comp=Z,200nm,16.0s
YSS Yuzh-Sakhalins 50.21 52 *e*P **P 13 02 08.3 +0.9**
YSS MLR MLR
comp=E,500nm,15.0s
YSS MLR MLR
comp=Z,500nm,15.0s,MS4.7
ASAJ Asahikawa 50.34 56 *e*P **P 13 02 08.0 -0.5**
comp=Z,6.9nm,1.3s,mb4.5
MORC Moravsky Berou 50.38 312 *e*P **P 13 02 08.6 -0.1**
MORC pmax pmax
comp=Z,18nm,0.8s,mb5.2
MORC Moravsky Berou 50.38 312 *e*P **P 13 02 08.6 0.0**
comp=Z,18nm,0.8s,mb5.2
MORC Moravsky Berou 50.38 312 ⇓*i*P **P 13 02 10.1 +1.4**
KTK1 Kautokeino 50.46 337 *e*P **P 13 02 07.9 -1.1**
KTK1 AMB AMB 13 02 11.4
comp=Z,102nm,0.8s,mb5.9
ZST Bratislava 50.74 309 *e*P **P 13 02 12.6 +1.2**
ZST pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ZST Bratislava 50.74 309 *e*P **P 13 02 12.6 +1.2**
comp=Z,10nm,1.0s,mb4.7
ZST Bratislava 50.74 309 *e*P **P 13 02 12.6 +1.2**
ERM Erimo 51.01 58 *i* P **P 13 02 14.9 +1.4**
VRAC Vranov 51.02 311 ⇑P **P 13 02 14.8 +1.3**
VRAC Vranov 51.02 311 ⇑*i*P **P 13 02 14.8 +1.3**
SOP Sopron 51.14 309 ⇑*e*P **P 13 02 14.9 +0.5**
DPC Dobruska-Polom 51.15 312 *e*P **P 13 02 15.1 +0.7**
DPC MLR MLR
comp=Z,200nm,15.0s,MS4.3
DPC Dobruska-Polom 51.15 312 *e*P **P 13 02 15.1 +0.7**
DPC AMS AMS 13 26 40.0
comp=Z,200nm,15.0s
UPC Upice 51.34 313 *e*P **P 13 02 17.6 +1.7**
UPC Upice 51.34 313 *e*P **P 13 02 17.6 +1.7**
KMBO Kilima Mbogo 51.56 241 P **P 13 02 18.1 +0.1**
comp=Z,18nm,1.0s,mb4.9,baz=1.6,slow=24,SNR=11
KMBO LR LR 13 24 26.1
comp=Z,149nm,19.4s,MS4.0,baz=90,slow=36
KMBO Kilima Mbogo 51.56 241 *e*P **P 13 02 17.7 -0.3**
KMBO pmax pmax
comp=Z,20nm,1.1s
KMBO Kilima Mbogo 51.56 241 *e*P **P 13 02 17.7 -0.3**
comp=Z,20nm,1.1s,mb5.0
CONA Conrad Observa 51.59 309 ⇓*i*P **P 13 02 17.9 +0.1**
comp=Z,35nm,1.0s,mb5.3
CSNA Conrad Observa 51.60 309 ⇓*i*P **P 13 02 17.9 +0.1**
comp=Z,32nm,1.0s,mb5.2
TREC Trest 51.74 311 *e*P **P 13 02 19.3 +0.4**
TREC MLR MLR
comp=Z,300nm,13.8s,MS4.5
TREC Trest 51.74 311 *e*P **P 13 02 19.3 +0.4**
TREC AMS AMS 13 25 10.0
comp=Z,300nm,13.8s
ARSA Arzberg 51.88 308 ⇑*i*pP **P 13 02 20.3 +0.4**
comp=Z,13nm,1.0s,mb4.8
TRO Tromso 52.11 337 *e*P **P 13 02 21.8 +0.5**
TRO AMB AMB 13 02 26.2
comp=Z,57nm,2.1s,mb5.1
PERS Pernice 52.22 308 *i* P **P 13 02 22.9 +0.5**
PERS Pernice 52.22 308 *i* P **P 13 02 22.9 +0.5**
BOJS Bojanci 52.25 306 *i* P **P 13 02 23.2 +0.4**
BOJS Bojanci 52.25 306 *i* P **P 13 02 23.2 +0.4**
PVCC Panska Ves 52.26 313 *e*P **P 13 02 24.4 +1.7**
PVCC MLR MLR
comp=Z,300nm,13.9s,MS4.5
PVCC Panska Ves 52.26 313 *e*P **P 13 02 24.4 +1.7**
PVCC AMS AMS 13 28 10.0
comp=Z,300nm,13.9s
SOKA Soboth 52.27 308 ⇑*i*pP **P 13 02 23.5 +0.7**
comp=Z,25nm,0.8s,mb5.2
PRU Pruhonice 52.31 312 *e*P **P 13 02 25.3 +2.2**
PRU MLR MLR
comp=Z,200nm,12.0s,MS4.4
PRU Pruhonice 52.31 312 *e*P **P 13 02 25.3 +2.2**
PRU AMS AMS 13 25 20.0
comp=Z,200nm,12.0s
OBKA Obir 52.62 308 ⇑*i*P **P 13 02 24.2 -1.2**
comp=Z,20nm,0.9s,mb5.0
BRG Berggiesshubel 52.64 313 *i* P **P 13 02 25.4 -0.2**
comp=Z,24nm,0.9s,mb5.1
BRG *e*PCP pP 13 02 26.7 -1.7
comp=Z,24nm,0.9s
BRG *e*PKPPKP 13 32 49.5
comp=Z,2.5nm,1.0s
BRG
comp=N,277nm,11.8s
BRG
comp=E,174nm,13.1s
BRG
comp=Z,339nm,14.3s
MOA Molln 52.67 309 ⇑*i*P **P 13 02 25.8 0.0**
comp=Z,22nm,1.1s,mb5.0
CUC Castrocucco 52.68 299 *e*P **P 13 02 25.8 -0.2**
comp=Z,11nm,0.8s,mb4.8
CEL Celeste 52.96 297 *e*P **P 13 02 27.7 -0.4**
comp=Z,18nm,0.9s,mb5.0
KHC Kasperske Hory 53.01 311 *e*P **P 13 02 28.5 +0.2**
KHC pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KHC Kasperske Hory 53.01 311 *e*P **P 13 02 28.5 +0.3**
comp=Z,9.1nm,0.9s,mb4.7
KHC Kasperske Hory 53.01 311 *e*P **P 13 02 29.6 +1.3**
KHC AMS AMS 13 25 30.0
comp=Z,300nm,23.9s
JAVS Javornik 53.03 307 *i* P **P 13 02 29.5 +1.0**
JAVS Javornik 53.03 307 *i* P **P 13 02 29.5 +1.0**
MOR8 Moi Rana 53.04 332 *e*P **P 13 02 28.1 -0.2**
VOY Vojsko 53.13 307 *e*P **P 13 02 29.0 -0.2**
VOY *e* pP 13 02 31.1 -1.0
VOY *e* 13 02 38.4
VOY Vojsko 53.13 307 *e*P **P 13 02 29.0 -0.2**
VOY *e* pP 13 02 31.1 -1.0
VOY *e* 13 02 38.4
CLL Collm 53.20 314 *e*P **P 13 02 30.0 +0.3**
CLL *e* 13 02 37.0
CLL pmax pmax
comp=Z,14nm,1.3s,mb4.7
CLL MLR MLR
comp=Z,400nm,20.2s,MS4.5
CLL Collm 53.20 314 *e*P **P 13 02 30.0 +0.3**
comp=Z,14nm,1.3s,mb4.7
CLL *e* 13 02 37.0
CLL LR LR
comp=Z,400nm,20.2s,MS4.5
CLL Collm 53.20 314 *e*P **P 13 02 30.0 +0.3**
comp=Z,14nm,1.3s,mb4.7
CLL *e*(sP) sP 13 02 37.0 +3.4
CLL Lm 13 29 00.0
comp=Z,400nm,20.2s
MYKA Terra Mystica 53.23 308 ⇑*i*pP **P 13 02 31.8 +1.9**
comp=Z,9.2nm,0.7s,mb4.8
KBA Koelnbreinsper 53.38 308 ⇑*i*pP **P 13 02 32.8 +1.8**
comp=Z,12nm,1.1s,mb4.7
NKC Novy Kostel 53.64 312 *e*P **P 13 02 34.4 +1.5**
NKC MLR MLR
comp=Z,300nm,13.5s,MS4.5
NKC Novy Kostel 53.64 312 *e*P **P 13 02 34.4 +1.5**
NKC AMS AMS 13 26 50.0
comp=Z,300nm,13.5s
ABTA Abfaltersbach 53.98 308 ⇑*i*P **P 13 02 33.5 -2.0**
comp=Z,9.5nm,0.9s,mb4.7
NB2 NORSAR Subarra 54.02 326 P **P 13 02 34.1 -1.4**
comp=Z,22nm,0.8s,mb5.2,baz=92,slow=7.4
NOA NORSAR Array B 54.02 326 P **P 13 02 34.5 -0.9**
comp=Z,18nm,0.8s,mb5.1,baz=92,slow=7.2,SNR=46
NOA LR LR 13 26 50.5
comp=Z,607nm,19.2s,MS4.7,baz=95,slow=37
NOA NORSAR Array B 54.02 326 P **P 13 02 34.6 -0.9**
NOA pmax pmax
comp=Z,18nm,0.8s
NOA MLR MLR
comp=Z,607nm,19.2s
AQU L'Aquila 54.04 303 *e*P **P 13 02 37.1 +1.1**
AQU pmax pmax
comp=Z,15nm,0.6s,mb5.1
AQU L'Aquila 54.04 303 *e*P **P 13 02 37.1 +1.1**
comp=Z,15nm,0.6s,mb5.1
MOX Moxa 54.13 313 *e*P **P 13 02 35.5 -1.0**
comp=Z,24nm,1.2s,mb5.0
MOX
comp=Z,300nm,17.0s
MOX Moxa 54.13 313 *e*P **P 13 02 35.5 -1.0**
MOX pmax pmax
comp=Z,24nm,1.2s,mb5.0
MOX MLR MLR
comp=Z,300nm,17.0s,MS4.4
GRA1 Grafenberg Arr 54.48 312 *e*P **P 13 02 39.4 +0.4**
comp=Z,20nm,1.1s,mb5.0
GRA1 LR LR
comp=Z,200nm,20.6s,MS4.2
GRF Grafenberg Arr 54.48 312 *e*P **P 13 02 39.4 +0.4**
comp=Z,20nm,1.1s,mb5.0
GRF *e*L 13 26 38.4
comp=Z,213nm,20.6s
GRF Grafenberg Arr 54.48 312 *e*P **P 13 02 39.4 +0.4**
GRF pmax pmax
comp=Z,20nm,1.1s,mb5.0
GRF MLR MLR
comp=Z,200nm,20.6s,MS4.2
GRF Grafenberg Arr 54.48 312 *e*P **P 13 02 39.4 +0.4**
GRF pmax pmax
comp=Z,20nm,1.1s,mb5.0
GRF MLR MLR
comp=Z,200nm,20.6s,MS4.2
WTTA Wattenberg 54.51 309 ⇑*i*P **P 13 02 38.7 -0.6**
comp=Z,20nm,1.0s,mb5.1
WATA Walderalm 54.54 309 ⇑*i*P **P 13 02 39.5 0.0**
comp=Z,8.3nm,0.6s,mb5.0
SQTA Sankt Quirin 54.80 309 ⇑*i*P **P 13 02 41.5 0.0**
MOTA Moosalm 54.86 309 *i* P **P 13 02 41.0 -0.8**
comp=Z,22nm,0.7s,mb5.3,SNR=12
RETA Reutte 55.06 309 ⇑*i*pP **P 13 02 43.7 +0.4**
comp=Z,16nm,1.0s,mb5.0
FETA Feichten 55.16 309 ⇓*i*P **P 13 02 43.0 -1.0**
comp=Z,12nm,0.6s,mb5.1
DAVA Damuels 55.69 309 ⇑*i*P **P 13 02 47.5 -0.4**
comp=Z,31nm,0.8s,mb5.4,SNR=7.0
TUE Stuetta 56.18 308 *e*P **P 13 02 52.0 +0.6**
comp=Z,8.7nm,0.6s,mb5.0
SPAK Spaichingen-Ko 56.29 310 *e*P **P 13 02 52.7 +0.6**
KBS Kingsbay 56.42 348 *e*P **P 13 02 54.3 +1.7**
KBS Kingsbay 56.42 348 *c*e**P 13 02 54.7 +2.1**
KBS pmax pmax
comp=Z,35nm,1.7s,mb5.1
LANF Langenberg 56.79 311 *e*P **P 13 02 56.0 +0.3**
FELD Feldberg im Sc 56.84 310 *e*P **P 13 02 55.7 -0.4**
CDF Champ du Feu 57.23 311 *e*P **P 13 02 58.2 -0.6**
BBS Basel-Blauen 57.25 310 *e*P **P 13 03 00.3 +1.4**
ECH Echery 57.34 310 *e*P **P 13 03 00.3 +0.7**
MOF Molkenrain 57.43 310 *e*P **P 13 03 00.1 -0.1**
HINF Hinteralfeld 57.62 310 *e*P **P 13 03 00.6 -0.9**
comp=Z,38nm,0.7s,mb5.2
HINF Hinteralfeld 57.62 310 *e*P **P 13 03 00.6 -0.9**
HINF pmax pmax
comp=Z,19nm,0.7s,mb5.2
HINF Hinteralfeld 57.62 310 *e*P **P 13 03 00.6 -0.9**
comp=Z,19nm,0.7s,mb5.2
MEM Membach 57.67 313 P **P 13 03 03.3 +1.4**
comp=Z,9.2nm,1.1s,mb4.7
WLF Walferdange 57.74 312 P **P 13 03 03.9 +1.5**
SAOF Saorge 57.91 306 *e*P **P 13 03 04.4 +0.7**
HAU Haudompre 57.92 310 *e*P **P 13 03 02.7 -0.9**
comp=Z,52nm,0.9s,mb5.3
HAU *e*MLR MLR
comp=Z,192nm,18.5s,MS3.9
HAU Haudompre 57.92 310 *e*P **P 13 03 02.7 -0.9**
HAU pmax pmax
comp=Z,26nm,0.9s,mb5.3
HAU MLR MLR
comp=Z,190nm,18.5s,MS4.2
HAU Haudompre 57.92 310 *e*P **P 13 03 02.7 -0.9**
comp=Z,26nm,0.9s,mb5.3
HAU LR LR
comp=Z,190nm,18.5s,MS4.2
AUTN L'Aution 58.00 306 *e*P **P 13 03 05.8 +1.5**
SBF Sospel 58.02 305 *e*P **P 13 03 04.1 -0.4**
comp=Z,68nm,1.0s,mb5.3
SBF Sospel 58.02 305 *e*P **P 13 03 04.1 -0.4**
SBF pmax pmax
comp=Z,34nm,1.0s,mb5.3

SBF Sospel 58.02 305 *e*P **P 13 03 04.1 -0.4**
comp=Z,34nm,1.0s,mb5.3
LUCF Luceram 58.08 305 *e*P **P 13 03 06.8 +2.0**
REVF Revere 58.10 305 *e*P **P 13 03 03.9 -1.1**
TOUF Mont Tournerai 58.12 306 *e*P **P 13 03 04.7 -0.4**
LPG La Plagne 58.15 307 *e*P **P 13 03 05.2 -0.1**
comp=Z,87nm,0.7s,mb5.6
LPG La Plagne 58.15 307 *e*P **P 13 03 05.2 -0.1**
LPG pmax pmax
comp=Z,44nm,0.7s,mb5.6
LPG La Plagne 58.15 307 *e*P **P 13 03 05.2 -0.1**
comp=Z,44nm,0.7s,mb5.6
LPL La Plagne 58.16 307 *e*P **P 13 03 05.3 -0.1**
comp=Z,76nm,0.6s,mb5.6
LPL La Plagne 58.16 307 *e*P **P 13 03 05.3 -0.1**
LPL pmax pmax
comp=Z,38nm,0.6s,mb5.6
LPL La Plagne 58.16 307 *e*P **P 13 03 05.3 -0.1**
comp=Z,38nm,0.6s,mb5.6
MBDF Montbardon 58.30 307 *e*P **P 13 03 05.4 -1.0**
comp=Z,26nm,0.7s,mb5.1
MBDF Montbardon 58.30 307 *e*P **P 13 03 05.4 -1.0**
MBDF pmax pmax
comp=Z,13nm,0.7s,mb5.1
MBDF Montbardon 58.30 307 *e*P **P 13 03 05.4 -1.0**
comp=Z,13nm,0.7s,mb5.1
CABF La Chapelle 58.37 309 *e*P **P 13 03 06.3 -0.5**
comp=Z,28nm,0.8s,mb5.0
CABF La Chapelle 58.37 309 *e*P **P 13 03 06.3 -0.5**
CABF pmax pmax
comp=Z,14nm,0.8s,mb5.0
CABF La Chapelle 58.37 309 *e*P **P 13 03 06.3 -0.5**
comp=Z,14nm,0.8s,mb5.0
CALN Calern 58.43 305 *e*P **P 13 03 08.3 +1.0**
GIVF Givet 58.51 313 *e*P **P 13 03 07.3 -0.4**
comp=Z,29nm,0.7s,mb5.1
GIVF Givet 58.51 313 *e*P **P 13 03 07.3 -0.4**
GIVF pmax pmax
comp=Z,14nm,0.7s,mb5.1
GIVF Givet 58.51 313 *e*P **P 13 03 07.3 -0.4**
comp=Z,14nm,0.7s,mb5.1
FRF La Foret Royal 58.65 305 *e*P **P 13 03 07.9 -0.9**
comp=Z,36nm,0.9s,mb5.1
FRF La Foret Royal 58.65 305 *e*P **P 13 03 07.9 -0.9**
FRF pmax pmax
comp=Z,18nm,0.9s,mb5.1
FRF La Foret Royal 58.65 305 *e*P **P 13 03 07.9 -0.9**
comp=Z,18nm,0.9s,mb5.1
DOU Dourbes 58.66 313 P **P 13 03 10.0 +1.3**
KEST Kesra 58.66 296 P **P 13 03 07.5 -1.5**
comp=Z,4.3nm,0.9s,mb4.5,baz=331,slow=2.3,SNR=13
MEZF Maizieres J'vi 58.67 311 *e*P **P 13 03 08.3 -0.6**
ORIF Oris-en-Rattie 58.87 307 *e*P **P 13 03 09.9 -0.5**
comp=Z,28nm,0.9s,mb5.0
ORIF *e*MLR MLR
comp=Z,252nm,22.0s,MS4.0
ORIF Oris-en-Rattie 58.87 307 *e*P **P 13 03 09.9 -0.5**
ORIF pmax pmax
comp=Z,14nm,0.9s,mb5.0
ORIF Oris-en-Rattie 58.87 307 *e*P **P 13 03 09.9 -0.5**
comp=Z,14nm,0.9s,mb5.0
BAIF Baives 58.91 313 *e*P **P 13 03 10.0 -0.5**
comp=Z,23nm,0.7s,mb5.0
BAIF Baives 58.91 313 *e*P **P 13 03 10.0 -0.5**
BAIF pmax pmax
comp=Z,12nm,0.7s,mb5.0
BAIF Baives 58.91 313 *e*P **P 13 03 10.0 -0.5**
comp=Z,12nm,0.7s,mb5.0
PETK Petropavlovsk- 59.05 43 P **P 13 03 10.0 -1.4**
comp=Z,3.4nm,0.6s,mb4.6,baz=345,slow=1.5,SNR=14
PETK Petropavlovsk- 59.05 43 P **P 13 03 10.0 -1.4**
PETK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
SMRF Simiane la Rot 59.30 306 *e*P **P 13 03 13.3 -0.1**
comp=Z,23nm,0.9s,mb4.9
SMRF Simiane la Rot 59.30 306 *e*P **P 13 03 13.3 -0.1**
comp=Z,23nm,0.9s,mb5.2
PET Petropavlovsk 59.63 43 *e*P **P 13 03 09.0 -6.4**
PET *e*S **S 13 11 14.8 -11**
PET *e*SS SS 13 15 13.4 -7.3
PET MLR MLR
comp=Z,300nm,18.0s,MS4.5
SSB Saint Sauveur 59.71 308 *e*P **P 13 03 15.6 -0.6**
SSB pmax pmax
comp=Z,15nm,0.8s,mb5.1
SSB Saint Sauveur 59.71 308 *e*P **P 13 03 15.6 -0.6**
comp=Z,15nm,0.8s,mb5.1
LOR Lormes 59.72 310 *e*P **P 13 03 14.8 -1.4**
comp=Z,17nm,0.8s,mb4.8,baz=80
LOR *e*MLR MLR
comp=Z,232nm,21.2s,MS4.0
LOR Lormes 59.72 310 *e*P **P 13 03 14.8 -1.4**
LOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LOR MLR MLR
comp=Z,230nm,21.3s,MS4.3
LOR Lormes 59.72 310 *e*P **P 13 03 14.8 -1.4**
comp=Z,8.4nm,0.8s,mb4.8
LOR LR LR
comp=Z,230nm,21.3s,MS4.3
VIVF Saint-Julien-l 59.72 307 *e*P **P 13 03 15.6 -0.7**
comp=Z,20nm,0.8s,mb4.9
VIVF Saint-Julien-l 59.72 307 *e*P **P 13 03 15.6 -0.7**
VIVF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VIVF Saint-Julien-l 59.72 307 *e*P **P 13 03 15.6 -0.7**
comp=Z,10.0nm,0.8s,mb4.9
SMF Signal de Mont 59.87 309 *e*P **P 13 03 16.2 -1.0**
comp=Z,49nm,0.9s,mb5.2
SMF Signal de Mont 59.87 309 *e*P **P 13 03 16.2 -1.0**
SMF pmax pmax
comp=Z,25nm,0.9s,mb5.2
SMF Signal de Mont 59.87 309 *e*P **P 13 03 16.2 -1.0**
comp=Z,24nm,0.9s,mb5.2
SSF Saint Saulge 60.00 310 *e*P **P 13 03 17.0 -1.1**
comp=Z,41nm,0.9s,mb5.2
SSF Saint Saulge 60.00 310 *e*P **P 13 03 17.0 -1.1**
SSF pmax pmax
comp=Z,20nm,0.9s,mb5.2
SSF Saint Saulge 60.00 310 *e*P **P 13 03 17.0 -1.1**
comp=Z,20nm,0.9s,mb5.2
AVF Avril sur Loir 60.16 309 *e*P **P 13 03 18.1 -1.1**
comp=Z,37nm,0.9s,mb5.1
AVF Avril sur Loir 60.16 309 *e*P **P 13 03 18.1 -1.1**
AVF pmax pmax
comp=Z,18nm,0.9s,mb5.1
AVF Avril sur Loir 60.16 309 *e*P **P 13 03 18.1 -1.1**
comp=Z,18nm,0.9s,mb5.1
PLDF La Plantade 60.18 309 *e*P **P 13 03 19.8 +0.5**
LASF Ste Croix 60.48 306 *e*P **P 13 03 21.1 -0.4**
comp=Z,46nm,1.0s,mb5.2
AGO Saint Agoulin 60.49 309 *e*P **P 13 03 21.4 -0.1**
BILL Bilibino 60.81 25[illegible] *e*P **P 13 03 25.2 +1.9**
BILL *e* 13 04 10.6
BILL *e* 13 05 35.0
BILL *e*SS SS 13 15 32.4 -6.4
BILL pmax pmax
comp=Z,25nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.3
BILL Bilibino 60.81 25 *e*P **P 13 03 23.9 +0.6**
comp=Z,13nm,0.6s,mb5.2
TCF Toulx Ste Croi 61.05 309 *e*P **P 13 03 24.7 -0.6**
comp=Z,47nm,0.9s,mb5.3
TCF Toulx Ste Croi 61.05 309 *e*P **P 13 03 24.7 -0.6**
TCF pmax pmax
comp=Z,24nm,0.9s,mb5.3
TCF Toulx Ste Croi 61.05 309 *e*P **P 13 03 24.7 -0.6**
comp=Z,24nm,0.9s,mb5.3
CAF Calviac 61.50 308 *e*P **P 13 03 28.0 -0.4**
comp=Z,26nm,0.7s,mb5.1
CAF Calviac 61.50 308 *e*P **P 13 03 28.0 -0.4**
CAF pmax pmax
comp=Z,13nm,0.7s,mb5.2
CAF Calviac 61.50 308 *e*P **P 13 03 28.0 -0.4**
comp=Z,13nm,0.7s,mb5.2
MTLF Montolieu 61.82 306 *e*P **P 13 03 30.0 -0.6**
comp=Z,13nm,0.8s,mb4.8
MTLF Montolieu 61.82 306 *e*P **P 13 03 30.0 -0.6**
MTLF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
MTLF Montolieu 61.82 306 *e*P **P 13 03 30.0 -0.6**
comp=Z,6.6nm,0.8s,mb4.8
LDF La Druitiere 62.00 312 *e*P **P 13 03 31.3 -0.4**
comp=Z,34nm,0.7s,mb5.3
LDF La Druitiere 62.00 312 *e*P **P 13 03 31.3 -0.4**
LDF pmax pmax
comp=Z,17nm,0.7s,mb5.3
LDF La Druitiere 62.00 312 *e*P **P 13 03 31.3 -0.4**
comp=Z,17nm,0.7s,mb5.3
FLN La Foliniere 62.18 312 *e*P **P 13 03 32.3 -0.6**
FLN *e*MLR MLR
comp=Z,157nm,19.5s,MS3.9
FLN La Foliniere 62.18 312 *e*P **P 13 03 32.3 -0.6**
FLN LR LR
comp=Z,160nm,19.5s,MS4.2
LFF La Frestale 62.40 308 *e*P **P 13 03 33.9 -0.5**
comp=Z,28nm,0.6s,mb5.3
LFF La Frestale 62.40 308 *e*P **P 13 03 33.9 -0.5**
LFF pmax pmax
comp=Z,14nm,0.6s,mb5.3
LFF La Frestale 62.40 308 *e*P **P 13 03 33.9 -0.5**
comp=Z,14nm,0.6s,mb5.3
GRR Gorron 62.52 312 *e*P **P 13 03 33.8 -1.4**
MFF Saint Martin d 62.54 310 *e*P **P 13 03 34.0 -1.3**
comp=Z,24nm,0.8s,mb5.1
MFF Saint Martin d 62.54 310 *e*P **P 13 03 34.0 -1.3**
MFF pmax pmax
comp=Z,12nm,0.8s,mb5.1
MFF Saint Martin d 62.54 310 *e*P **P 13 03 34.0 -1.3**
comp=Z,12nm,0.8s,mb5.1
EPF Esparros 63.23 306 *e*P **P 13 03 39.2 -0.8**
SGMF Saint Gilles 63.65 312 *e*P **P 13 03 41.7 -1.0**
comp=Z,74nm,1.1s,mb5.3
SGMF Saint Gilles 63.65 312 *e*P **P 13 03 41.7 -1.0**
SGMF pmax pmax
comp=Z,37nm,1.1s,mb5.3
SGMF Saint Gilles 63.65 312 *e*P **P 13 03 41.7 -1.0**
comp=Z,37nm,1.1s,mb5.3
ETSF Etsaut 63.90 306 *e*P **P 13 03 44.1 -0.3**
comp=Z,23nm,0.8s,mb5.0
ETSF Etsaut 63.90 306 *e*P **P 13 03 44.1 -0.3**
ETSF pmax pmax
comp=Z,12nm,0.8s,mb5.0
ETSF Etsaut 63.90 306 *e*P **P 13 03 44.1 -0.3**
comp=Z,12nm,0.8s,mb5.0
ROSF Rostrenen 64.08 312 *e*P **P 13 03 44.3 -1.2**
SJPF Ste Jean 64.29 306 *e*P **P 13 03 46.7 -0.3**
FITZ Fitzroy Crossi 64.87 132 LR LR 13 33 01.6
comp=Z,122nm,21.7s,MS4.1,baz=312,slow=37
KNA Kununurra 65.28 128 *e*P **P 13 03 54.6 +0.9**
comp=Z,25nm,1.0s,mb5.2
KAKA Kakadu 65.82 122 *e*P **P 13 03 58.9 +1.7**
comp=Z,13nm,0.6s,mb5.2
KAKA Kakadu 65.82 122 *e*P **P 13 03 57.8 +0.5**
comp=Z,103nm,1.2s,mb5.7
TAM Tamanrasset 66.32 283 *e*P **P 13 04 00.2 -0.3**
TAM pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TAM Tamanrasset 66.32 283 *e*P **P 13 04 00.2 -0.3**
comp=Z,3.7nm,0.8s,mb4.5
ESDC Sonseca Array 67.39 304 P **P 13 04 06.1 -1.0**
comp=Z,4.6nm,0.7s,mb4.6,baz=60,slow=6.8,SNR=14
ESLA Sonseca Array 67.39 304 *e*P **P 13 04 06.8 -0.2**
comp=Z,2.2nm,0.9s,mb4.2
PAB San Pablo 67.71 304 *e*P **P 13 04 08.7 -0.4**
PAB pmax pmax
comp=Z,22nm,1.1s,mb5.1
PAB San Pablo 67.71 304 *e*P **P 13 04 08.7 -0.4**
comp=Z,22nm,1.1s,mb5.1
MVO Moncorvo 69.02 306 *e*P **P 13 04 19.6 +2.4**
comp=Z,28nm,0.9s,mb5.2
SUMG Summit 69.39 344 *e*P **P 13 04 19.2 +0.3**
comp=Z,14nm,1.0s,mb4.8
MTE Manteigas 69.67 306 *e*P **P 13 04 22.6 +1.3**
comp=Z,24nm,1.5s,mb4.9
PBAR Barrancos 70.18 303 *e*P **P 13 04 25.0 +0.6**
comp=Z,27nm,1.7s,mb4.9
PBEJ Beja 70.83 303 *e*P **P 13 04 29.9 +1.4**
comp=Z,15nm,1.0s,mb4.9
WRA Warramunga Arr 71.99 127 P **P 13 04 34.2 -1.3**
comp=Z,20nm,0.9s,mb5.0,baz=321,slow=6.0,SNR=25
WRA Warramunga Arr 71.99 127 P **P 13 04 34.3 -1.3**
WRA pmax pmax
comp=Z,20nm,0.9s
WB2 Warramunga Arr 72.00 127 *e*P **P 13 04 35.2 -0.4**
AMKA Amchitka 72.16 41 *e*P **P 13 04 36.0 -0.1**
comp=Z,57nm,0.8s,mb5.6
TORD Torodi Ar. Bea 73.82 276 P **P 13 04 44.6 -2.0**
comp=Z,3.4nm,0.6s,mb4.4,baz=50,slow=4.3,SNR=9.0
TORD LR LR 13 41 23.4
comp=Z,292nm,19.0s,MS4.6,baz=160,slow=39
ASAR Alice Springs 74.23 130 P **P 13 04 48.0 -0.8**
comp=Z,5.4nm,0.7s,mb4.6,baz=315,slow=6.0,SNR=20
ASAR Alice Springs 74.23 130 P **P 13 04 48.0 -0.8**
ASAR pmax pmax
comp=Z,5.0nm,0.7s
COLD Coldfoot 75.66 18 *e*P **P 13 04 56.7 +0.3**
comp=Z,34nm,0.6s,mb5.5
LBTB Lobatse 75.99 230 *e*P **P 13 04 57.5 -1.4**
LBTB pmax pmax
comp=Z,16nm,0.9s,mb5.0
LBTB Lobatse 75.99 230 *e*P **P 13 04 57.5 -1.4**
comp=Z,16nm,0.9s,mb5.0
BPAW Bear Paw Mtn. 77.71 21 *e*P **P 13 05 07.8 -0.2**
comp=Z,7.5nm,0.9s,mb4.6
TSUM Tsumeb 77.88 239 LR LR 13 40 32.5
comp=Z,140nm,19.1s,MS4.3,baz=145,slow=36
TSUM Tsumeb 77.88 239 *e*P **P 13 05 08.9 -0.7**
comp=Z,14nm,1.0s,mb4.9
COLA College 78.05 19 *e*P **P 13 05 09.3 -0.6**
COLA pmax pmax
comp=Z,13nm,0.9s,mb4.9
COLA College 78.05 19 *e*P **P 13 05 09.3 -0.7**
comp=Z,13nm,0.9s,mb4.9
MTSU Mount Surprise 78.08 119 *e*P **P 13 05 11.1 +0.3**
comp=Z,52nm,1.4s,mb5.3
PPLA Purkeypile 78.20 22 *e*P **P 13 05 10.2 -0.6**
comp=Z,11nm,1.0s,mb4.7
ILAR Eielson Array 78.40 19 P **P 13 05 11.3 -0.6**
comp=Z,6.9nm,0.8s,mb4.6,baz=304,slow=4.6,SNR=35
ILAR PP PP 13 08 07.2 -1.1
comp=Z,2.3nm,0.8s,baz=312,slow=6.7,SNR=8.4
ILAR Eielson Array 78.40 19 P **P 13 05 11.3 -0.6**
ILAR 13 08 07.3
ILAR pmax pmax
comp=Z,7.0nm,0.8s
ILAR pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 78.57 12 P **P 13 05 12.4 -0.3**
comp=Z,5.3nm,0.6s,mb4.7,baz=347,slow=4.9,SNR=14
INK Inuvik 78.57 12 P **P 13 05 12.4 -0.3**
INK pmax pmax
comp=Z,5.0nm,0.6s
INK Inuvik 78.57 12 *e*P **P 13 05 12.6 -0.2**
comp=Z,17nm,1.1s,mb4.9
BOSA Boshof 78.68 227 P **P 13 05 12.6 -1.3**
comp=Z,11nm,0.8s,mb4.8,baz=74,slow=6.3,SNR=10
BOSA LR LR 13 38 25.5
comp=Z,176nm,18.6s,MS4.4,baz=348,slow=34
EGAK Eagle 79.91 17 *e*P **P 13 05 19.8 -0.3**
comp=Z,7.3nm,0.9s,mb4.6
DOT Dot Lake 80.05 18 *e*P **P 13 05 21.4 +0.5**
comp=Z,33nm,0.7s,mb5.4
PMR Palmer 80.13 22 *e*P **P 13 05 21.3 -0.1**
PMR pmax pmax
comp=Z,58nm,1.6s,mb5.3
PMR Palmer 80.13 22 *e*P **P 13 05 21.3 -0.1**
comp=Z,58nm,1.6s,mb5.3
PAX Paxson 80.19 19 *e*P **P 13 05 21.9 +0.2**
PAX pmax pmax
comp=Z,15nm,1.3s,mb4.8
PAX Paxson 80.19 19 *e*P **P 13 05 21.9 +0.3**
comp=Z,15nm,1.3s,mb4.8
SML Sawmill 80.22 21 *e*P **P 13 05 21.8 0.0**
SML pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SML Sawmill 80.22 21 *e*P **P 13 05 21.8 -0.1**
comp=Z,3.8nm,0.7s,mb4.4
SLKM Skilak Lake 80.58 23 *e*P **P 13 05 23.0 -0.8**
CTA Charters Tower 80.71 120 P **P 13 05 24.8 -0.3**
comp=Z,7.3nm,0.6s,mb4.8,baz=303,slow=6.2,SNR=8.8
CTA Charters Tower 80.71 120 P **P 13 05 24.8 -0.3**
CTA pmax pmax
comp=Z,7.0nm,0.6s
CTA Charters Tower 80.71 120 P **P 13 05 24.8 -0.3**
CTAO Charters Tower 80.71 120 *e*P **P 13 05 25.4 +0.3**
CTAO pmax pmax
comp=Z,41nm,1.2s,mb5.2
CTAO Charters Tower 80.71 120 *e*P **P 13 05 25.4 +0.3**
comp=Z,41nm,1.2s,mb5.2
MENT Mentasta 80.71 19 *e*P **P 13 05 26.6 +2.2**
DAWY Dawson 80.93 17 *e*P **P 13 05 24.9 -0.8**
KDAK Kodiak Island 81.72 26 *e*P **P 13 05 29.8 -0.1**
KDAK pmax pmax
comp=Z,55nm,1.3s,mb5.3
KDAK Kodiak Island 81.72 26 *e*P **P 13 05 29.8 -0.1**
comp=Z,55nm,1.3s,mb5.3
KDAK Kodiak Island 81.72 26 P **P 13 05 31.6 +1.7**
comp=Z,161nm,1.3s,mb5.8,SNR=6.5
OHAK Old Harbor 81.86 26 *e*P **P 13 05 31.1 +0.4**
comp=Z,52nm,1.4s,mb5.3
BBOO Buckleboo 81.91 135 *e*P **P 13 05 31.1 -0.1**
comp=Z,10nm,1.7s,mb4.5
BBOO Buckleboo 81.91 135 *e*P **P 13 05 31.6 +0.5**
comp=Z,38nm,1.0s,mb5.3
DBIC Dimbokro 82.58 273 P **P 13 05 33.8 -1.4**
comp=Z,19nm,0.7s,mb5.2,baz=48,slow=7.8,SNR=14
DBIC Dimbokro 82.58 273 P **P 13 05 33.8 -1.4**
DBIC pmax pmax
comp=Z,19nm,0.7s
KIC Kosan Boka 82.63 273 *e*PKP1 **P 13 05 35.6 +0.1**
comp=Z,45nm,0.8s,mb5.5
TIC Toumodi 82.73 273 *e*PKP1 **P 13 05 36.2 +0.2**
comp=Z,27nm,0.4s,mb5.6
LIC Lamto 82.94 273 *e*PKP1 **P 13 05 36.2 -0.9**
comp=Z,43nm,0.7s,mb5.6
LIC Lamto 82.94 273 *e*P **P 13 05 37.8 +0.7**
comp=Z,27nm,0.7s,mb5.1
LIC *e*MLR MLR
comp=Z,234nm,19.5s,MS4.3
LIC Lamto 82.94 273 *e*P **P 13 05 37.8 +0.7**
comp=Z,13nm,0.7s,mb5.1
LIC LR LR
comp=Z,120nm,19.5s,MS4.3
QLP Quilpie 83.20 126 *e*P **P 13 05 37.6 -0.4**
SUR Sutherland 84.04 227 LR LR 13 38 09.5
comp=Z,280nm,20.2s,MS4.6,baz=202,slow=32
STKA Stephens Creek 84.77 132 P **P 13 05 44.7 -1.2**
comp=Z,7.2nm,0.7s,mb4.9,baz=323,slow=5.3,SNR=14
STKA LR LR 13 44 35.2
comp=Z,182nm,21.7s,MS4.4,baz=22,slow=36
STKA Stephens Creek 84.77 132 *e*P **P 13 05 44.5 -1.4**
comp=Z,4.6nm,0.6s,mb4.8
STKA Stephens Creek 84.77 132 *e*P **P 13 05 45.5 -0.4**
comp=Z,2.0nm,0.8s,mb4.3
YKA Yellowknife Ar 86.81 7 P **P 13 05 54.1 -1.5**
comp=Z,2.3nm,0.5s,mb4.6,baz=337,slow=5.2,SNR=33
YKA LR LR 13 48 39.5
comp=Z,12nm,18.6s,MS3.3,baz=135,slow=38
CMSA Cobar Meteorol 87.26 129 *e*P **P 13 05 57.4 -0.9**
EIDS Eidsvold 87.41 121 *e*P **P 13 06 00.0 +0.9**
BBTS Babate 88.56 286 LR LR 13 47 33.5
comp=Z,163nm,19.1s,MS4.5,baz=242,slow=37
TOO Toolangi 90.85 134 *e*P **P 13 06 14.7 -0.4**
MNTX Cornudas Mount 118.16 6 *e*PKPdf PKPdf 13 12 00.0 +0.9
TXAR Lajitas Array 120.63 4 PKP PKPdf 13 12 04.0 +0.1
comp=Z,0.7nm,0.6s,baz=188,slow=1.2,SNR=7.2
TXAR Lajitas Array 120.63 4 PKIKP PKPdf 13 12 04.0 +0.1
TXAR pmax pmax
comp=Z,1.0nm,0.6s
CPUP Villa Florida 142.71 265 PKP PKPdf 13 12 42.0 -3.4
comp=Z,0.5nm,0.3s,baz=83,slow=4.4,SNR=4.9
CPUP Villa Florida 142.71 265 PKIKP PKPdf 13 12 42.0 -3.3
CPUP pmax pmax
comp=Z,1.0nm,0.3s
LPAZ La Paz 148.04 289 PKPbc PKPbc 13 12 58.5 +0.7
comp=Z,8.7nm,1.2s,baz=62,slow=2.9,SNR=11
LPAZ La Paz 148.04 289 PKP2 PKPbc 13 12 58.5 +0.7
LPAZ pmax pmax
comp=Z,9.0nm,1.2s
LPAZ La Paz 148.04 289 *e*PKPdf PKPdf 13 12 54.2 -0.5
TRQA Tornquist 148.06 246 *e*PKPbc PKPbc 13 12 57.1 -0.2
PLCA Paso Flores 154.23 238 PKPbc PKPbc 13 13 10.8 -0.8
comp=Z,1.8nm,0.8s,baz=248,slow=3.1,SNR=2.9
PLCA Paso Flores 154.23 238 PKIKP PKPbc 13 13 10.9 -0.8
PLCA pmax pmax
comp=Z,2.0nm,0.8s

IDC ***04*** *12:57:56.4±1.1, 6°.33S×150°.58E, h0km, mb4.2/7, mb1 4.4/8, mb1mx4.0/17, mbtmp4.1/8, ML3.6/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/23, Error ellipse: s-maj=46.6km s-min=19.8km az=122.0*

NEIC ***04*** *12:57:58.0±1.5, 6°.30S×150°.60E, h10km, Error ellipse: s-maj=29.6km s-min=15.0km az=95.0*

ISCJB ***04*** *12:58:01.4±3.3, 6°.4S±0°.2×150°.5E±0°.2, h47km±29km, mb4.0/6, Error ellipse: s-maj=33.6km s-min=21.9km az=37.3*

ISC 04 12:58:01.6±5.2, 6°.4S±0°.2×150°.6E±0°.2, h34km±38km, n15, σ0961/14, mb4.0/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.55**	**228**	*e*Pn	**Pn**	**12 59 08.9**	**+0.7**
PMG				*e*Sn	**Sn**	**13 00 00.4**	**+0.6**
COEN	**Coen**	**10.49**	**224**	Pn	**Pn**	**13 00 29.1**	**-0.6**
CTA	**Charters Tower**	**14.27**	**197**	Pn	**Pn**	**13 01 21.5**	**+0.1**
0.2nm,0.3s,baz=76,slow=11,SNR=3.2							
CTA				LR	LR	13 06 26.4	
comp=Z,107nm,20.4s,baz=37,slow=36							
CTAO	**Charters Tower**	**14.27**	**197**	*e*Pn	**Pn**	**13 01 22.2**	**+0.8**
24nm,1.5s							
WB2	**Warramunga Arr**	**20.76**	**228**	*e*P	**P**	**13 02 39.3**	**-0.5**
WRA	**Warramunga Arr**	**20.77**	**228**	P	**P**	**13 02 39.7**	**-0.1**
11nm,0.7s,baz=52,slow=11,SNR=132							
ASAR	**Alice Springs**	**23.52**	**221**	P	**P**	**13 03 08.3**	**-0.7**
2.1nm,0.4s,mb4.0,baz=57,slow=9.5,SNR=39							
STKA	**Stephens Creek**	**26.73**	**197**	P	**P**	**13 03 37.8**	**-0.3**
5.5nm,1.0s,mb4.1,baz=11,slow=7.6,SNR=7.0							
FITZ	**Fitzroy Crossi**	**26.99**	**242**	P	**P**	**13 03 40.2**	**-0.4**
3.1nm,0.5s,mb4.1,baz=60,slow=8.1,SNR=22							
FITZ	**Fitzroy Crossi**	**26.99**	**242**	*e*P	**P**	**13 03 40.1**	**-0.5**
6.9nm,0.5s,mb4.4							
URZ	**Urewera**	**39.81**	**147**	LR	LR	13 19 56.0	
comp=Z,180nm,19.4s,baz=67,slow=33							
SONM	**Songino Array**	**66.51**	**329**	P	**P**	**13 08 48.5**	**+0.5**
0.6nm,0.8s,mb3.7,baz=123,slow=5.3,SNR=3.2							
ILAR	**Eielson Array**	**84.44**	**22**	P	**P**	**13 10 29.8**	**-0.7**
0.7nm,1.0s,mb3.8,baz=256,slow=3.6,SNR=3.4							
NVAR	**Mina Array Bea**	**94.77**	**52**	P	**P**	**13 11 21.1**	**+1.1**
1.4nm,0.8s,mb4.5,baz=252,slow=6.5,SNR=10							
TORD	**Torodi Ar. Bea**	**148.65**	**285**	PKPbc	PKPbc	13 17 45.4	-1.0
1.2nm,0.7s,baz=46,slow=4.2,SNR=4.2							

BJI ***04*** *13:06:22.3, 0°.61S×127°.87E, h139km, mB5.0/17, mb4.8/37*

ISCJB ***04*** *13:06:29.7±0.3, 0°.30N±0°.02×127°.37E±0°.03, h132km±3km, mb4.7/67, Error ellipse: s-maj=5.3km s-min=3.4km az=168.1*

IDC ***04*** *13:06:31.7±1.5, 0°.24N×127°.36E, h141km±13km, mb4.3/22, mb1 4.3/24, mb1mx4.3/28, mbtmp4.3/24, Error ellipse: s-maj=15.7km s-min=6.6km az=79.0*

NEIC ***04*** *13:06:31.6±1.0, 0°.28N×127°.39E, h139km±10km, mb4.8/23, Error ellipse: s-maj=8.8km s-min=5.1km az=74.0*

DJA ***04*** *13:06:32, 0°.20N×127°.17E, h103km, mb5.3/12*

ISC 04 13:06:30.7±0.3, 0°.28N±0°.02×127°.37E±0°.03, h125km±2km, h125km±1.1km: pP-P, n134, σ1913/157, mb4.8/67, 6C-2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.49**	**360**	P	**Pn**	**13 06 50.1**	**+0.8**
TNTI				S	**Sn**	**13 07 04.3**	**+1.0**
LBMI	**Labuha**	**0.92**	**172**	P	**Pn**	**13 06 53.6**	**+1.1**
LBMI				S	**Sn**	**13 07 11.2**	**+2.2**
MNI	**Manado**	**2.78**	**295**	P	**Pn**	**13 07 14.5**	**+0.1**
MNI				S	**Sn**	**13 07 46.8**	**-1.2**
KMSI	**Cibinong**	**3.40**	**275**	P	**Pn**	**13 07 22.2**	**-0.3**
KMSI				S	**Sn**	**13 08 00.0**	**-2.5**
NLAI	**Namlea**	**3.50**	**184**	P	**Pn**	**13 07 24.5**	**+0.7**
NLAI				S	**Sn**	**13 08 03.1**	**-1.8**
SGSI	**Sangihe**	**3.85**	**332**	P	**Pn**	**13 07 28.0**	**-0.5**
SGSI				S	**Sn**	**13 08 10.8**	**-2.4**
LUWI	**Luwuk**	**4.78**	**254**	P	**Pn**	**13 07 40.2**	**-0.6**
LUWI				S	**Sn**	**13 08 30.7**	**-4.6**
MRSI	**Marisa**	**5.43**	**272**	P	**Pn**	**13 07 47.7**	**-1.9**
713nm,0.4s							
APSI	**Ampana**	**5.84**	**258**	S	**Sn**	**13 08 56.1**	**-4.8**
GSPH	**General Santos**	**6.26**	**337**	*e*P	**Pn**	**13 07 59.7**	**-1.0**
KDI	**Kendari**	**6.34**	**228**	P	**Pn**	**13 08 01.8**	**-0.1**
1.4nm6μm202nm,1.1s							
KDI				S	**Sn**	**13 09 09.2**	**-3.8**
1.4nm6μm202nm,1.1s							
TOLI	**Toli-Toli**	**6.63**	**277**	P	**Pn**	**13 08 05.6**	**-0.1**
5.0nm360nm,0.5s							

TOLI S **Sn** **13 09 20.9 +1.0**
5.0nm360nm,0.5s
MATI **Mati** **6.72 351** *eP* **Pn** **13 08 05.2 -1.8**
DAV **Davao City (W)** **6.98 345** P **Pn** **13 08 12.8 +2.3**
28nm,0.3s,baz=218,slow=13,SNR=2.2
DAV S **Sn** **13 09 27.7 -0.8**
105nm,0.3s,baz=250,slow=24,SNR=4.6
DMPH **Davao City--Mi** **7.01 345⇑** *eP* **Pn** **13 08 10.6 -0.3**
DMPH *eS* **Sn** **13 09 20.8 -8.5**
KCP **Kidapawan** **7.06 341⇓** *eP* **Pn** **13 08 12.6 +1.0**
KCP *i S* **Sn** **13 09 31.0 +0.5**
BBSI **Bau Bau** **7.46 220** P **Pn** **13 08 18.6 +1.5**
1.2nm4μm313nm,1.1s
BUKP **Musuan** **7.89 343** *eP* **Pn** **13 08 24.5 +1.6**
TLE **Tual** **7.95 138** P **Pn** **13 08 26.2 +2.5**
153nm,2.2s
TTSI **Tana Toraja** **8.23 246** P **Pn** **13 08 27.5 0.0**
7μm204nm,0.5s
TTSI S **Sn** **13 09 55.7 -3.2**
7μm204nm,0.5s
ZMPH **Zamboanga City** **8.48 322⇑** *eP* **Pn** **13 08 31.1 +0.3**
PAGZ **Pagadian** **8.51 332** *eP* **Pn** **13 08 30.7 -0.4**
CGP **Cagayan de Oro** **8.55 342** *eP* **Sn** **13 10 02.4 -4.1**
BUTP **Butuan** **8.81 349** *eP* **Pn** **13 08 35.6 +0.3**
BAKI **Biak** **8.86 99** P **Pn** **13 08 39.9 +4.0**
8μm588nm,1.4s
IPIL **Ipil** **8.86 327** *eP* **Pn** **13 08 35.6 -0.4**
IPIL **Ipil** **8.86 327⇑** *eP* **Sn** **13 10 08.0 -6.1**
BKSI **Bulukumba** **9.12 232** P **Pn** **13 08 41.0 +1.5**
6μm437nm,0.5s
BKSI S **Sn** **13 10 17.9 -2.6**
6μm437nm,0.5s
KAPI **Kappang** **9.24 235** *eP* **Pn** **13 08 42.9 +1.8**
130nm,0.4s
MYLDM **Lahad Datu** **10.11 299** P **Pn** **13 08 53.2 +0.5**
4μm366nm,1.3s
TSM **Tawau** **10.29 293** P **Pn** **13 08 54.5 -0.6**
GUIM **Jordan** **11.33 335** *eP* **Pn** **13 09 07.1 -1.8**
SDKM **Sandakan** **11.47 298** P **Pn** **13 09 11.0 +0.2**
KBKI **Kotabaru** **11.74 252** S **Sn** **13 11 27.6 +3.6**
KKM **Kota Kinabalu** **12.52 297** P **Pn** **13 09 24.3 -0.3**
KKM **Kota Kinabalu** **12.52 297** P **Pn** **13 09 23.8 -0.8**
1μm106nm,1.2s
KAKA **Kakadu** **13.85 159** *eP* **Pn** **13 09 39.6 -2.2**
80nm,0.9s
KAKA **Kakadu** **13.85 159** *eP* **Pn** **13 09 39.4 -2.4**
311nm,0.9s
KAKA **Kakadu** **13.85 159** P **Pn** **13 09 39.9 -1.9**
1μm158nm,1.1s
KHKI **Kahang-Kahang** **14.53 234** P **Pn** **13 09 49.4 -1.0**
KSM **Kuching** **17.10 274** P **Pn** **13 10 23.1 +0.8**
KSM **Kuching** **17.10 274** *eP* **Pn** **13 10 22.1 -0.2**
33nm,0.6s
FITZ **Fitzroy Crossi** **18.34 185** P **P** **13 10 35.1 -0.5**
0.8nm,0.3s,baz=11,slow=6.2,SNR=16
FITZ S **S** **13 13 55.4 -3.4**
0.2nm,0.3s,baz=275,slow=9.9,SNR=5.3
FITZ **Fitzroy Crossi** **18.34 185** *eP* **P** **13 10 34.7 -0.9**
7.7nm,0.4s
COEN **Coen** **21.09 133** *eP* **P** **13 11 05.1 -0.3**
COEN **Coen** **21.09 133** *eP* **P** **13 11 05.6 +0.2**
608nm,1.4s,mb5.7
WRA **Warramunga Arr** **21.22 162** P **P** **13 11 05.9 -0.8**
25nm,0.3s,mb5.0,baz=339,slow=11,SNR=318
WRA S **S** **13 14 53.4 -2.2**
5.4nm,0.9s,baz=340,slow=15,SNR=11
WRA ScP ScP 13 18 31.4 -1.2
1.0nm,0.9s,baz=337,slow=3.1,SNR=4.4
GUMO **Guam** **21.80 52** P **P** **13 11 12.9 0.0**
40nm,0.6s,mb5.0,baz=174,slow=10,SNR=6.8
TWG **Pinlang** **23.23 345** *eP* **P** **13 11 24.0 -2.9**
24nm,0.4s,mb4.9
MYKOM **Kota Tinggi** **23.56 274** P **P** **13 11 31.2 +1.1**
YULB **Yu-li** **23.72 346** *eP* **P** **13 11 29.6 -1.8**
18nm,0.9s,mb4.4
TPUB **Ta-pu** **23.80 344** *eP* **P** **13 11 31.4 -0.8**
28nm,0.6s,mb4.8
KGM **Kluang** **24.11 274** P **P** **13 11 36.7 +1.7**
SSLB **Suanglung** **24.19 346** *eP* **P** **13 11 34.8 -0.8**
70nm,1.0s,mb5.0
ASAR **Alice Springs** **24.63 165** P **P** **13 11 39.6 0.0**
11nm,0.4s,mb4.7,baz=344,slow=7.0,SNR=156
ASAR S **S** **13 15 50.1 -1.8**
2.3nm,0.9s,baz=343,slow=17,SNR=5.0
ASAR ScP ScP 13 18 39.6 -2.0
0.7nm,0.8s,baz=319,slow=1.4,SNR=4.4
KTGM **Kuala Trenggan** **24.71 282** P **P** **13 11 43.0 +2.5**
YHNB **Yeheng** **24.93 347** *eP* **P** **13 11 41.5 -0.9**
31nm,0.6s,mb4.9
QIZ **Qiongzhong** **25.36 318** P **P** **13 11 47.0 +0.7**
QIZ pmax pmax
comp=Z,12nm,1.1s,mb4.2
FRIM **Kepong** **25.89 277** P **P** **13 11 52.5 +1.3**
JOW **Kunigami** **26.42 2** *eP* **P** **13 11 56.1 +0.3**
comp=Z,43nm,0.9s,mb4.9
IPM **Ipoh** **26.64 279** P **P** **13 11 58.6 +0.6**
KULM **Kulim** **27.14 281** P **P** **13 12 03.1 +0.7**
CTA **Charters Tower** **27.42 139** P **P** **13 12 05.5 +0.6**
comp=Z,2.9nm,0.5s,mb4.1,baz=322,slow=9.6,SNR=4.3
CBIJ **Chichi jima** **30.23 27** P **P** **13 12 28.2 -1.4**
comp=Z,38nm,0.4s,mb5.4,baz=242,slow=19,SNR=8.7
FORT **Forrest** **30.89 179** *eP* **P** **13 12 34.9 -0.5**
comp=Z,12nm,0.6s,mb4.8
QLP **Quilpie** **31.26 150** *eP* **P** **13 12 38.5 -0.2**
WHN **Wuhan** **32.55 339** P **P** **13 12 51.2 +1.3**
NJ2 **Nanjing** **32.61 347** *eP* **P** **13 12 51.8 +1.3**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA **Guiyang** **32.79 324** P **P** **13 12 54.7 +2.6**
GYA pP pP 13 13 21.4 +1.9
GYA sP sP 13 13 35.6 +1.6
GYA PP PP 13 14 08.7 -0.1
GYA S **S** **13 18 01.9 +1.9**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,4.8s
KLBR **Kellerberrin** **32.98 195** *eP* **P** **13 12 53.8 +0.1**
comp=Z,68nm,1.9s,mb5.2
CMAR **Chiang Mai Arr** **33.25 305** P **P** **13 12 55.3 -1.0**
comp=Z,0.8nm,0.3s,mb4.0,baz=128,slow=7.6,SNR=11
CMAR ScP ScP 13 19 07.6 -1.4
comp=Z,0.5nm,0.4s,baz=134,slow=2.3,SNR=5.3
BBOO **Buckleboo** **33.91 167** *eP* **P** **13 13 01.6 -0.2**
comp=Z,17nm,0.4s,mb5.2
KMI **Kunming** **34.31 318** P **P** **13 13 10.0 +4.7**
KMI pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
ENH **Enshi** **34.34 332** *eP* **P** **13 13 06.2 +0.7**
comp=Z,16nm,1.1s,mb4.8
NWAO **Narrogin (SRO)** **34.38 195** P **P** **13 13 06.0 +0.2**
comp=Z,5.2nm,0.5s,mb4.6,baz=10,slow=6.2,SNR=7.4
JHJ **Hachijo jima 2** **34.70 18** P **P** **13 13 07.2 -1.4**
comp=Z,17nm,0.3s,mb5.3,baz=213,slow=15,SNR=5.6
STKA **Stephens Creek** **34.70 158** P **P** **13 13 08.7 +0.1**
comp=Z,16nm,0.4s,mb5.2,baz=335,slow=7.9,SNR=92
STKA **Stephens Creek** **34.70 158** *eP* **P** **13 13 08.6 0.0**
comp=Z,13nm,0.4s,mb5.1
KSRS **Korea Array** **37.00 1** P **P** **13 13 28.2 +0.1**
comp=Z,8.8nm,0.6s,mb4.9,baz=180,slow=10.0,SNR=45
KSRS ScP ScP 13 19 19.4 -2.7
comp=Z,0.3nm,0.4s,baz=151,slow=2.8,SNR=4.5
MAJO **Matsushiro** **37.46 14** *eP* **P** **13 13 30.4 -1.6**
comp=Z,17nm,0.7s,mb5.1
MAT **Matsushiro** **37.46 14** P **P** **13 13 30.6 -1.4**
MAT S **S** **13 19 24.0 +13**
MJAR **Matsushiro Arr** **37.46 14** P **P** **13 13 30.5 -1.6**
comp=Z,8.1nm,0.5s,mb4.9,baz=183,slow=9.4,SNR=28
XAN **Xi'an** **37.78 335** P **P** **13 13 34.9 +0.1**
XAN pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
ARMA **Armidale** **38.27 145** *eP* **P** **13 13 40.3 +1.4**
ARPS **Mount Arapiles** **39.23 162** *eP* **P** **13 13 47.5 +0.7**
comp=Z,75nm,1.0s,mb5.5
BJT **Baijiatuan** **40.85 347** *eP* **P** **13 13 59.6 -0.6**
comp=Z,10nm,0.4s,mb5.0
BJI **Beijing** **40.87 347** P **P** **13 13 59.9 -0.4**
BJI S **S** **13 20 03.2 +0.8**
BJI SS SS 13 23 09.2 +0.2
BJI pmax pmax
comp=Z,20nm,0.7s,mb5.1
BJI pmax pmax
comp=Z,320nm,10.8s
BJI LR LR
comp=N,130nm,27.6s
BJI LR LR
comp=E,120nm,25.4s
BJI LR LR
comp=Z,32nm,20.9s
SNY **Shenyang** **41.50 356** ⇑P **P** **13 14 05.2 -0.3**
SNY pmax pmax
comp=Z,18nm,0.7s,mb4.9
LZH **Lanzhou** **41.80 331** ⇑P **P** **13 14 08.1 +0.1**
LZH pP pP 13 14 36.5 +0.2
LZH sP sP 13 14 51.2 +0.7
LZH PP PP 13 15 50.3 +3.0
LZH S **S** **13 20 17.0 +0.8**
LZH pmax pmax
comp=Z,49nm,1.3s,mb5.1
LZH pmax pmax
comp=Z,200nm,4.5s
LZH LR LR
comp=N,380nm,13.5s
LZH LR LR
comp=E,300nm,14.0s
LZH LR LR
comp=Z,510nm,18.0s
HHC **Hu-ho-hao-te** **42.86 342** *eP* **P** **13 14 18.2 +1.7**
HHC pP pP 13 14 46.6 +1.7
HHC sP sP 13 15 01.3 +2.2
HHC PP PP 13 16 02.5 +4.0
HHC S **S** **13 20 34.7 +3.1**
HHC SS SS 13 23 44.2 -3.7
HHC ScS ScS 13 24 02.7 -1.6
HHC pmax pmax
comp=Z,18nm,1.1s,mb4.7
HHC pmax pmax
comp=Z,200nm,6.6s
HHC LR LR
comp=N,180nm,18.4s
HHC LR LR
comp=E,180nm,15.9s
HHC LR LR
comp=Z,150nm,16.3s
CN2 **Changchun** **43.37 358** *eP* **P** **13 14 19.0 -1.5**
MDJ **Mudanjiang** **44.19 2** P **P** **13 14 27.1 0.0**
MDJ pmax pmax
comp=Z,26nm,1.1s,mb4.9
MDJ pmax pmax
comp=Z,120nm,5.6s
MDJ **Mudanjiang** **44.19 2** *eP* **P** **13 14 27.2 +0.1**
comp=Z,26nm,0.9s,mb5.0
LSA **Lhasa** **45.23 314** *eP* **P** **13 14 37.4 +1.8**
comp=Z,4.8nm,0.4s,mb4.6
ASAJ **Asahikawa** **45.71 15** *eP* **P** **13 14 39.2 +0.1**
comp=Z,15nm,1.2s,mb4.6
GTA **Gaotai** **46.38 330** ⇑P **P** **13 14 45.4 +0.9**
GTA pP pP 13 15 13.4 +0.1
GTA sP sP 13 15 27.4 0.0
GTA S **S** **13 21 26.1 +3.5**
GTA SS SS 13 24 48.3 -1.7
GTA pmax pmax
comp=Z,11nm,1.0s,mb4.5
GTA pmax pmax
comp=Z,130nm,4.5s
GTA LR LR
comp=N,91nm,14.5s
GTA LR LR
comp=E,96nm,14.5s
GTA LR LR
comp=Z,75nm,18.3s
TAPN **Taplejung** **46.61 309** *eP* **P** **13 14 47.5 +1.0**
comp=Z,9.7nm,0.4s,mb4.9
ODAN **Odare** **46.63 308** *eP* **P** **13 14 48.0 +1.3**
RAMN **Ramite** **47.30 308** *eP* **P** **13 14 53.6 +1.8**
comp=Z,25nm,0.6s,mb5.1
GUN **Gumba** **48.31 308** *eP* **P** **13 15 01.1 +1.5**
comp=Z,14nm,0.4s,mb5.1
YSS **Yuzh-Sakhalins** **48.40 14** *eP* **P** **13 15 00.1 +0.1**
comp=Z,8.6nm,0.3s,mb5.1
PKI **Pulchoki** **48.52 308** *eP* **P** **13 15 02.0 +0.7**
comp=Z,6.1nm,0.3s,mb5.0
KKN **Kakani** **48.72 308** *eP* **P** **13 15 03.4 +0.6**
DMN **Daman** **48.78 307** *eP* **P** **13 15 04.6 +1.4**
comp=Z,18nm,0.9s,mb5.0
GKN **Gorkha** **49.33 308** *eP* **P** **13 15 08.6 +1.2**
comp=Z,13nm,0.8s,mb4.9
KOLN **Koldanda** **50.05 307** *eP* **P** **13 15 14.0 +1.1**
comp=Z,35nm,0.7s,mb5.4
DANN **Dangsing** **50.17 308** *eP* **P** **13 15 14.8 +1.0**
comp=Z,35nm,0.7s,mb5.4
ULN **Ulaanbaatar** **50.58 342** *eP* **P** **13 15 15.9 -0.5**
comp=Z,17nm,0.9s,mb5.1
SONM **Songino Array** **50.76 342** P **P** **13 15 18.1 +0.3**
comp=Z,7.0nm,0.8s,mb4.7,baz=152,slow=8.0,SNR=34
HYB **Hyderabad** **50.94 292** *i P* **P** **13 15 19.0 -0.8**
WMQ **Urumqi** **55.91 326** *eP* **P** **13 15 56.0 +0.4**
WMQ pmax pmax
comp=Z,21nm,1.0s,mb5.1
PETK **Petropavlovsk-** **58.39 21** P **P** **13 16 13.2 +0.4**
comp=Z,9.1nm,0.5s,mb5.1,baz=188,slow=4.8,SNR=104
URZ **Urewera** **59.62 136** P **P** **13 16 21.4 -0.2**
comp=Z,7.9nm,0.6s,mb4.9,baz=174,slow=3.8,SNR=8.7
MK31 **Makanchi Array** **60.75 326** *eP* **P** **13 16 28.9 -0.2**
MKAR **Makanchi Array** **60.75 326** P **P** **13 16 29.2 0.0**
comp=Z,3.1nm,0.3s,mb4.8,baz=114,slow=8.0,SNR=51
MKAR **Makanchi Array** **60.75 326** P **P** **13 16 29.2 0.0**
YAK **Yakutsk** **61.62 1** *eP* **P** **13 16 34.7 0.0**
comp=Z,58nm,0.6s,mb5.8
TKM2 **Tokmak 2** **62.76 320** *eP* **P** **13 16 43.0 +0.3**
comp=Z,2.0nm,0.6s,mb4.2
EKS2 **Erkin-Say** **63.83 319** *eP* **P** **13 16 50.4 +0.6**
comp=Z,5.0nm,1.2s,mb4.2
ZALV **Zalesovo Beam** **63.94 334** P **P** **13 16 49.0 -1.3**
comp=Z,6.0nm,0.9s,mb4.4,baz=106,slow=5.3,SNR=14
ZALV **Zalesovo Beam** **63.94 334** P **P** **13 16 49.0 -1.3**
KURK **Kurchatov** **64.98 328** P **P** **13 16 56.6 -0.5**
baz=128,slow=6.1
KURK **Kurchatov** **64.98 328** *eP* **P** **13 16 56.6 -0.6**
comp=Z,15nm,0.9s,mb4.8
BVAR **Borovoye Array** **70.55 328** P **P** **13 17 31.5 -0.4**
comp=Z,4.8nm,0.9s,mb4.3,baz=125,slow=7.4,SNR=18
BRVK **Borovoye** **70.62 328** *eP* **P** **13 17 31.7 -0.7**
comp=Z,11nm,1.3s,mb4.5
ABKAR **Abkulak array** **75.22 321** *eP* **P** **13 17 58.7 -0.9**
comp=Z,0.8nm,0.4s,mb3.8
AKTK **Aktyubinsk** **76.75 322** P **P** **13 18 07.7 -0.6**
AKTO **Aktyubinsk** **76.75 322** P **P** **13 18 07.7 -0.6**
comp=Z,1.3nm,0.3s,mb4.1,baz=111,slow=7.9,SNR=6.0
MAW **Mawson** **80.76 201** P **P** **13 18 29.3 -0.6**
comp=Z,2.2nm,0.6s,mb4.1,baz=56,slow=6.7,SNR=4.7
KDAK **Kodiak Island** **84.46 32** P **P** **13 18 49.5 +0.3**
comp=Z,3.4nm,0.5s,mb4.4,baz=268,slow=1.9,SNR=4.1
SLKM **Skilak Lake** **86.02 29** *eP* **P** **13 18 56.4 -0.5**
COLD **Coldfoot** **86.81 23** *eP* **P** **13 19 00.4 -0.3**
comp=Z,4.3nm,0.8s,mb4.4
ILAR **Eielson Array** **87.93 25** P **P** **13 19 04.1 -1.9**
comp=Z,0.6nm,0.7s,mb3.8,baz=248,slow=4.7,SNR=14
ARCES **ARCESS Array B** **93.89 340** P **P** **13 19 32.0 -1.7**
comp=Z,0.9nm,0.3s,mb4.5,baz=84,slow=6.6,SNR=23

*NEIC **04** 13:12:35.4, 14.°39N×93.°66W, h18km, MD3.8(MEX), After MEX.*

MEX 04 13:12:35.4±1.4, 14.°39N×93.°66W, h18km±72km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.37**	**18**	*i* P	Pn	13 12 57.1	-2.5
PCIG				*i* S	Sn	13 13 11.2	-6.1
THIG		**1.44**	**69**	*i* P	Pn	13 12 56.6	-4.0
THIG				*i* S	Sn	13 13 14.7	-4.3
CCIG	**Comitan**	**2.38**	**38**	*i* P	Pn	13 13 11.4	-2.2
CCIG				*i* S	Sn	13 13 39.9	-2.4
CCIG	**Comitan**	**2.38**	**38**	*i* P	Pn	13 13 11.4	-2.2
CCIG				*i* S	Sn	13 13 39.9	-2.4
SCX	**San Cristobal**	**2.53**	**23**	*i* P	Pn	13 13 13.8	-1.8
SCX				*i* S	Sn	13 13 43.9	-2.0
SCX	**San Cristobal**	**2.53**	**23**	*i* P	Pn	13 13 13.8	-1.8
SCX				*i* S	Sn	13 13 43.9	-2.0
HUIG	**Huatulco**	**2.73**	**300**	*eP*	Pn	13 13 17.2	-1.2
HUIG				*i* S	Sn	13 13 46.3	-4.6
HUIG	**Huatulco**	**2.73**	**300**	*eP*	Pn	13 13 17.2	-1.2
HUIG				*i* S	Sn	13 13 46.3	-4.6
PNIG	**Pinotepa**	**4.75**	**295**	*eP*	Pn	13 13 45.0	-1.0
PNIG				*i* S	Sn	13 14 36.6	-4.0
PNIG	**Pinotepa**	**4.75**	**295**	*eP*	Pn	13 13 45.0	-1.0
PNIG				*i* S	Sn	13 14 36.6	-4.0
UTMO	**Huajuapan**	**5.25**	**311**	*eP*	Pn	13 13 51.2	-1.7
UTMO				*i* S	Sn	13 14 50.2	-2.8

*NEIC **04** 13:22:32.1, 14.°07N×93.°67W, h17km, MD3.9(MEX), After MEX.*

MEX 04 13:22:32.1±0.7, 14.°07N×93.°67W, h17km±32km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.60**	**58**	*i* P	Pn	13 22 55.7	-3.9
THIG				*i* S	Sn	13 23 15.0	-4.9
PCIG		**1.69**	**15**	*i* P	Pn	13 22 57.8	-3.1
PCIG				*i* S	Sn	13 23 16.6	-5.5
CCIG	**Comitan**	**2.66**	**34**	*i* P	Pn	13 23 12.2	-2.0
CCIG				*i* S	Sn	13 23 42.9	-3.1
CCIG	**Comitan**	**2.66**	**34**	*i* P	Pn	13 23 12.2	-2.0
CCIG				*i* S	Sn	13 23 42.9	-3.1
TGIG		**2.75**	**11**	*i* P	Pn	13 23 13.4	-2.1
TGIG				*i* S	Sn	13 23 44.4	-3.9
SCX	**San Cristobal**	**2.84**	**21**	*i* P	Pn	13 23 14.9	-1.8
SCX				*i* S	Sn	13 23 47.2	-3.3
SCX	**San Cristobal**	**2.84**	**21**	*i* P	Pn	13 23 14.9	-1.8
SCX				*i* S	Sn	13 23 47.2	-3.3
HUIG	**Huatulco**	**2.90**	**306**	*eP*	Pn	13 23 15.3	-2.2
HUIG				*i* S	Sn	13 23 46.7	-5.3
HUIG	**Huatulco**	**2.90**	**306**	*eP*	Pn	13 23 15.3	-2.2
HUIG				*i* S	Sn	13 23 46.7	-5.3
VHO	**Vista Hermosa**	**4.20**	**316**	*eP*	Pn	13 23 33.9	-1.5
VHO				*i* S	Sn	13 24 20.8	-3.3
VHO	**Vista Hermosa**	**4.20**	**316**	*eP*	Pn	13 23 33.9	-1.5
VHO				*i* S	Sn	13 24 20.8	-3.3
PNIG	**Pinotepa**	**4.88**	**299**	*i* P	Pn	13 23 45.9	+1.1
PNIG				*i* S	Sn	13 24 37.2	-3.8
PNIG	**Pinotepa**	**4.88**	**299**	*i* P	Pn	13 23 45.9	+1.1
PNIG				*i* S	Sn	13 24 37.2	-3.8
UTMO	**Huajuapan**	**5.46**	**314**	*eP*	Pn	13 23 51.4	-1.3
UTMO				*i* S	Sn	13 24 51.8	-3.4
PPM	**Popocatepetl**	**6.88**	**317**	*eP*	Pn	13 24 08.2	-4.0
PPM				*i* S	Sn	13 25 28.5	-1.7
PPM	**Popocatepetl**	**6.88**	**317**	*eP*	Pn	13 24 08.2	-4.0
PPM				*i* S	Sn	13 25 28.5	-1.7

IDC 04 13:51:39.0±2.2, 6.°84S×128.°94E, h0km, mb3.5/1, mb1 4.1/4, mb1mx3.6/17, mbtmp3.9/4, ML3.9/3, Error ellipse: s-maj=79.9km s-min=29.7km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.65**	**196**	Pn	Pn	13 54 24.4	-2.2
	0.6nm,0.3s,baz=17,slow=9.3,SNR=32						
FITZ				Sn	Sn	13 56 21.0	-16
	1.1nm,0.3s,baz=227,slow=21,SNR=6.1						
WRA	**Warramunga Arr**	**14.04**	**159**	Pn	Pn	13 55 00.1	+0.7
	0.6nm,0.3s,baz=339,slow=14,SNR=26						
WRA				Sn	Sn	13 57 25.8	-10
	1.3nm,0.3s,baz=333,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.40**	**165**	P	Pn	13 55 44.8	+1.4
	0.6nm,0.3s,baz=342,slow=11,SNR=88						
ASAR				S	Sn	13 58 46.2	-12
	0.4nm,0.3s,baz=329,slow=23,SNR=7.3						
MKAR	**Makanchi Array**	**67.52**	**327**	P	P	14 02 37.2	+0.2
	0.2nm,0.3s,baz=127,slow=5.0,SNR=2.5						

*ISK **04** 14:28:48.9, 35.°41N×27.°93E, h10km, MD3.3*
*CSEM **04** 14:28:50.1±0.5, 35.°44N±27.°91E, h7km, MD3.4, Error ellipse: s-maj=15.5km s-min=5.8km az=144.0*
*ISCJB **04** 14:28:50.5±0.9, 35.°44N±0.°05×27.°89E±0.°05, h10km±6km, Error ellipse: s-maj=9.6km s-min=5.5km az=159.3*
*NEIC **04** 14:28:51.5, 35.°34N×27.°79E, h14km, MD3.4(ATH), MD3.4(ISK), After ATH.*
*ATH **04** 14:28:51.0, 35.°31N×27.°81E, h12km, MD3.4/6*
*THE **04** 14:28:56.3, 35.°67N×27.°55E, h0km±1km, Error ellipse: s-maj=4.6km s-min=1.7km az=147.0*
*DDA **04** 14:29:01.2, 36.°41N×28.°33E, h7km±6km, Md3.2*

ISC 04 14:28:51.3±0.9, 35.°43N±0.°05×27.°86E±0.°05, h12km±6km, n52, σ0.°95/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.58**	**281**	*e*Pb	**Pg**	**14 29 02.3**	**-0.4**
KARP				*e*Sb	**Sg**	**14 29 10.5**	**+0.1**
KARP	**Karpathos**	**0.58**	**281**	*e*PB	**Pg**	**14 29 02.3**	**-0.4**
KARP				*e*SB	**Sg**	**14 29 10.5**	**+0.1**
KARP	**Karpathos**	**0.58**	**281**	*e*Pb	**Pg**	**14 29 02.3**	**-0.4**
KARP				*e*Sb	**Sg**	**14 29 10.5**	**+0.1**
ARG	**Arkhangelos**	**0.81**	**15**	*e*Pg	**Pg**	**14 29 08.9**	**+1.9**
ARG				*e*Sb	**Sg**	**14 29 22.0**	**+4.4**
ARG	**Arkhangelos**	**0.81**	**15**	*e*PB	**Pg**	**14 29 08.9**	**+1.9**
ARG				*e*SB	**Sg**	**14 29 22.0**	**+4.4**
DAT	**Datca**	**1.31**	**350**	*e*PN	**Pn**	**14 29 15.3**	**-0.1**
DAT				*e*SN	**Sn**	**14 29 33.1**	**+0.2**
DAT	**Datca**	**1.31**	**350**	*e*Pn	**Pn**	**14 29 15.3**	**-0.1**
DAT				*e*Sn	**Sn**	**14 29 33.1**	**+0.3**
ZKR	**Zakros**	**1.39**	**257**	*e*Pg	**Pb**	**14 29 15.9**	**-1.1**
ZKR	**Zakros**	**1.39**	**257**	*e*PB	**Pb**	**14 29 15.9**	**-1.1**
ZKR	**Zakros**	**1.39**	**257**	*e*Pg	**Pb**	**14 29 15.9**	**-1.1**
AKAS	**Kas**	**1.62**	**60**	*i* P	**Pn**	**14 29 20.5**	**+0.8**
AKAS				*i* S	**Sn**	**14 29 36.9**	**-3.6**
AKAS	**Kas**	**1.62**	**60**	*i* P	**Pn**	**14 29 20.5**	**+0.8**
AKAS				*i* S	**Sn**	**14 29 36.9**	**-3.6**
BDRM	**Kayabasi**	**1.67**	**348**	*i* P	**Pn**	**14 29 20.0**	**-0.2**
BDRM				*i* S	**Sn**	**14 29 41.0**	**-0.4**
BDRM	**Kayabasi**	**1.67**	**348**	*i* P	**Pn**	**14 29 20.0**	**-0.2**
BDRM				*i* S	**Sn**	**14 29 41.0**	**-0.5**
BODT	**Bodrum**	**1.69**	**345**	*e*PN	**Pn**	**14 29 19.6**	**-0.9**
BODT				*e*SN	**Sn**	**14 29 42.6**	**+0.5**
BODT	**Bodrum**	**1.69**	**345**	*e*Pn	**Pn**	**14 29 19.6**	**-0.9**
BODT				*e*Sn	**Sn**	**14 29 42.6**	**+0.6**
YER	**Yerkesik**	**1.73**	**11**	*e*PN	**Pn**	**14 29 20.1**	**-1.0**
YER	**Yerkesik**	**1.73**	**11**	*e*Pn	**Pn**	**14 29 20.1**	**-1.0**
NPS	**Neapolis**	**1.85**	**265**	*e*Pg	**Pg**	**14 29 24.5**	**-2.2**
NPS	**Neapolis**	**1.85**	**265**	*e*PG	**Pg**	**14 29 24.5**	**-2.2**
NPS	**Neapolis**	**1.85**	**265**	*e*Pg	**Pg**	**14 29 24.5**	**-2.2**
MLSB	**Milas**	**1.86**	**358**	*e*PN	**Pn**	**14 29 22.0**	**-0.9**
MLSB	**Milas**	**1.86**	**358**	*e*Pn	**Pn**	**14 29 22.0**	**-0.9**
XRY	**Khrisi**	**1.86**	**253**	*e*Pn	**Pn**	**14 29 24.0**	**+1.1**
XRY	**Khrisi**	**1.86**	**253**	*e*PN	**Pn**	**14 29 24.0**	**+1.1**
XRY	**Khrisi**	**1.86**	**253**	*e*Pn	**Pn**	**14 29 24.0**	**+1.1**
LAST	**Lasithi**	**1.97**	**263**	*e*Pn	**Pn**	**14 29 25.6**	**+1.2**
LAST	**Lasithi**	**1.97**	**263**	*e*PN	**Pn**	**14 29 25.6**	**+1.2**
LAST	**Lasithi**	**1.97**	**263**	*e*Pn	**Pn**	**14 29 25.6**	**+1.2**
ELL	**Elmali**	**2.11**	**51**	*e*PN	**Pn**	**14 29 25.1**	**-1.3**
ELL	**Elmali**	**2.11**	**51**	*e*Pn	**Pn**	**14 29 25.1**	**-1.3**
GLHS	**Glhisar (BURDU**	**2.17**	**37**	*e*PN	**Pn**	**14 29 26.1**	**-1.1**
GLHS	**Glhisar (BURDU**	**2.17**	**37**	*e*Pn	**Pn**	**14 29 26.1**	**-1.0**
AYDN	**Tasoluk**	**2.22**	**0**	*i* P	**Pn**	**14 29 28.9**	**+0.9**
GOLH	**Golhisar**	**2.26**	**37**	*i* P	**Pn**	**14 29 29.5**	**+1.1**
GOLH	**Golhisar**	**2.26**	**37**	*i* P	**Pn**	**14 29 29.5**	**+1.1**
DNZL	**Cakiroluk**	**2.44**	**23**	*i* P	**Pn**	**14 29 31.1**	**+0.2**
DNZL				*i* S	**Pg**	**14 29 38.5**	**+0.3**
APE	**Apeiranthos**	**2.50**	**312**	*e*PN	**Pn**	**14 29 31.5**	**-0.1**
APE	**Apeiranthos**	**2.50**	**312**	*e*Pn	**Pn**	**14 29 31.5**	**-0.1**
DENT	**Denizli**	**2.50**	**22**	*e*PN	**Pn**	**14 29 31.0**	**-0.7**
DENT	**Denizli**	**2.50**	**22**	*e*Pn	**Pn**	**14 29 31.0**	**-0.7**
KORT	**Korkueli**	**2.55**	**51**	*i* P	**Pn**	**14 29 33.2**	**+0.8**
KORT	**Korkueli**	**2.55**	**51**	*i* P	**Pn**	**14 29 33.2**	**+0.9**
KULA	**Kula-Manisa**	**3.14**	**11**	*e*PN	**Pn**	**14 29 40.1**	**-0.4**
KULA	**Kula-Manisa**	**3.14**	**11**	*e*Pn	**Pn**	**14 29 40.1**	**-0.4**
KHL	**Karahalli**	**3.18**	**24**	*e*PN	**Pn**	**14 29 40.4**	**-0.6**
KHL	**Karahalli**	**3.18**	**24**	*e*Pn	**Pn**	**14 29 40.4**	**-0.6**
KHAL	**Karahalli**	**3.21**	**23**	*i* P	**Pn**	**14 29 41.9**	**+0.4**
KARN	**Karanos**	**3.22**	**271**	*e*PN

KARA	Karaisali	0.49	148	*e*Pg	Pg	14 29 15.2 +0.3
KARA				*e*Sg	Sg	14 29 22.7 +1.4
KOZT	Kozan	0.90	103	*e*PG	Pg	14 29 21.7 -0.9
KOZT				*e*SG	Sg	14 29 35.7 +1.5
KOZT	Kozan	0.90	103	*e*Pg	Pg	14 29 21.7 -0.9
KOZT				*e*Sg	Sg	14 29 35.7 +1.5
AVNT	Avonos	1.10	5	*i* P	Pg	14 29 26.6 0.0
AVNT				*i* S	Sg	14 29 42.5 +1.7
AVNT	Avonos	1.10	5	*i* P	Pg	14 29 26.6 +0.1
AVNT				*i* S	Sg	14 29 42.5 +1.7
SARI	SarD1z-Kayseri	1.84	57	*e*PN	Pn	14 29 33.1 -4.6
SARI	SarD1z-Kayseri	1.84	57	*e*Pn	Pn	14 29 33.1 -4.6

IDC 04 14:29:06.2±2.1, 6°43S×129°04E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.2/17, mbtmp3.2/4, ML2.9/3, MS3.5/1, Ms1 3.5/1, ms1mx2.8/16, Error ellipse: s-maj=82.8km s-min=28.5km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.07	196	Pn	Pn	14 31 59.2	-0.3
	0.1nm,0.3s,baz=21,slow=9.1,SNR=8.9						
FITZ				Sn	Sn	14 33 54.2	-21
	0.2nm,0.3s,baz=134,slow=10.0,SNR=6.7						
WRA	Warramunga Arr	14.38	160	Pn	Pn	14 32 31.2	0.0
	0.1nm,0.3s,baz=339,slow=13,SNR=5.1						
WRA				Sn	Sn	14 34 49.6	-22
	0.1nm,0.3s,baz=324,slow=24,SNR=4.8						
ASAR	Alice Springs	17.76	165	P	Pn	14 33 15.4	+0.4
	0.0nm,0.3s,baz=338,slow=9.7,SNR=6.8						
SONM	Songino Array	57.61	342	LR	LR	15 03 18.0	
	comp=Z,44nm,20.9s,baz=240,slow=36						
MKAR	Makanchi Array	67.23	327	P	P	14 40 02.5	+0.1
	0.1nm,0.3s,baz=126,slow=8.3,SNR=5.1						

DJA 04 14:30:41, 0°55N×123°33E, h256km, MLv3.5/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.65	88	P	Pn	14 31 15.5	+0.4
MRSI	Marisa	1.39	267	P	Pn	14 31 19.6	+0.5
MRSI				S	S	14 31 50.1	+1.0
LUWI	Luwuk	1.68	199	P	Pn	14 31 20.8	-0.5
LUWI				S	S	14 31 52.4	-0.7
APSI	Ampana	2.22	229	P	Pn	14 31 26.5	+0.5
APSI				S	S	14 32 02.3	+0.7
TOLI	Toli-Toli	2.60	283	P	Pn	14 31 29.6	-0.1

IDC 04 14:34:41.9±1.1, 10°35S×123°89E, h0km, mb3.8/5, mb1 3.9/8, mb1mx3.7/17, mbtmp3.7/8, ML3.5/3, MS3.2/2, Ms1 3.1/2, ms1mx2.8/22, Error ellipse: s-maj=94.6km s-min=18.9km az=60.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	7.89	168	Pn	Pn	14 36 36.6	-1.4
	0.2nm,0.3s,baz=10,slow=8.4,SNR=6.9						
FITZ				Sn	Sn	14 38 00.6	-7.5
	1.3nm,0.3s,baz=118,slow=15,SNR=6.1						
FITZ				LR	LR	14 40 01.8	
	comp=Z,103nm,22.0s,baz=5.7,slow=41						
WRA	Warramunga Arr	13.87	135	Pn	Pn	14 37 59.4	-0.5
	0.3nm,0.3s,baz=307,slow=14,SNR=16						
WRA				Sn	Sn	14 40 27.3	-7.5
	0.4nm,0.3s,baz=308,slow=25,SNR=9.1						
ASAR	Alice Springs	16.33	145	Pn	Pn	14 38 32.5	-0.2
	0.5nm,0.3s,baz=321,slow=12,SNR=50						
ASAR				Sn	Sn	14 41 27.2	-7.3
	0.1nm,0.3s,baz=320,slow=23,SNR=13						
STKA	Stephens Creek	26.97	145	P	P	14 40 26.5	+1.2
	0.9nm,0.6s,baz=353,slow=13,SNR=3.5						
STKA				LR	LR	14 52 26.3	
	comp=Z,80nm,21.4s,baz=25,slow=40						
CMAR	Chiang Mai Arr	37.76	319	P	P	14 42 01.3	+1.4
	0.3nm,0.6s,baz=129,slow=7.2,SNR=3.4						
SONM	Songino Array	59.97	346	P	P	14 44 50.4	+0.4
	0.5nm,0.8s,baz=157,slow=7.8,SNR=3.3						
MKAR	Makanchi Array	67.92	331	P	P	14 45 41.7	-0.6
	1.5nm,0.8s,baz=133,slow=7.6,SNR=13						
ZALV	Zalesovo Beam	72.09	337	P	P	14 46 07.5	-0.3
	1.1nm,0.4s,baz=137,slow=5.0,SNR=6.2						

*ISCJB **04** 14:35:16.8±1.0, 18°40S±0°07×68°93W±0°08, h152km±10km, mb3.8/6, Error ellipse: s-maj=13.2km s-min=11.6km az=157.4*
*IDC **04** 14:35:16.8±1.5, 18°43S×68°99W, h135km±13km, mb3.7/6, mb1 3.9/10, mb1mx3.7/18, mbtmp3.7/10, Error ellipse: s-maj=18.1km s-min=14.5km az=63.0*
*NEIC **04** 14:35:16.6±0.9, 18°42S×69°02W, h134km±10km, mb4.6/1, Error ellipse: s-maj=13.4km s-min=9.2km az=68.0*
ISC 04 14:35:17.5±0.9, 18°43S±0°07×68°94W±0°09, h143km±10km, n15, σ0°86/16, mb3.8/6, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.27	20	P	Pn	14 35 56.1	+0.7
	13nm,0.3s,baz=167,slow=6.5,SNR=296						
LPAZ				S	Sn	14 36 25.2	+0.7
	8.5nm,0.3s,baz=283,slow=24,SNR=10.0						
SIV	San Ignacio	7.90	73	P	Pn	14 37 09.6	0.0
	2.3nm,0.3s,baz=262,slow=11,SNR=32						
SIV				S	Sn	14 38 36.9	-0.8
	0.2nm,0.3s,baz=191,slow=22,SNR=8.4						
NNA	Nana	9.96	309	P	Pn	14 37 34.5	-2.6
	4.3nm,0.3s,baz=157,slow=9.2,SNR=6.6						
NNA	Nana	9.96	309	*e*P	Pn	14 37 34.2	-2.9
CFAA	Coronel Fontan	13.13	177	P	Pn	14 38 19.3	+0.8
	0.0nm,0.3s,baz=12,slow=11,SNR=6.7						
CPUP	Villa Florida	13.30	128	P	Pn	14 38 19.5	-1.3
	0.4nm,0.3s,baz=297,slow=18,SNR=2.6						
TRQA	Tornquist	20.48	164	*e*P	P	14 39 44.5	+0.5
	24nm,0.9s						
PLCA	Paso Flores	22.27	183	P	P	14 40 03.0	+0.1
	6.1nm,1.2s,mb3.9,baz=339,slow=12,SNR=2.6						
TXAR	Lajitas Array	58.12	324	P	P	14 44 55.5	-0.7
	0.2nm,0.6s,mb3.1,baz=179,slow=7.8,SNR=2.8						
DBIC	Dimbokro	67.92	75	P	P	14 46 01.1	-0.2
	4.2nm,0.7s,mb4.3,baz=213,slow=6.1,SNR=5.2						
NVAR	Mina Array Bea	73.08	321	P	P	14 46 32.5	+0.4
	0.8nm,0.6s,mb3.6,baz=139,slow=6.7,SNR=7.1						
TORD	Torodi Ar. Bea	76.37	71	P	P	14 46 52.5	+1.0
	1.3nm,0.3s,mb4.0,baz=255,slow=5.8,SNR=2.6						
YKA	Yellowknife Ar	88.30	341	P	P	14 47 52.5	+0.3
	1.4nm,0.7s,mb3.9,baz=132,slow=5.1,SNR=12						
YKA				pP	pP	14 48 26.6	-2.0
	0.7nm,0.7s,baz=138,slow=5.3,SNR=3.7						
YKA	Yellowknife Ar	88.30	341	P	P	14 47 52.5	+0.3
YKA				pP	pP	14 48 26.6	-2.0
SONM	Songino Array	150.43	6	PKPbc	PKPbc	14 54 53.6	+1.6
	0.9nm,0.6s,baz=354,slow=1.5,SNR=6.7						

*WEL **04** 14:44:36.0±0.3, 36°54S×178°12E, h91km±3km, ML4.1/8, Error ellipse: s-maj=3.8km s-min=2.9km az=90.0*
ISC 04 14:44:35.3±2.0, 36°7S±0°1×178°2E±0°2, h127km±12km, n27, σ1°17/32, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.86	173	P*	Pn	14 44 56.3	-0.3
MXZ				S*	Sn	14 45 11.0	-1.9
MXZ				S*	Sn	14 45 11.3	-1.6
PUZ	Puketiti	1.36	177	PN	Pn	14 45 02.1	+0.5
PUZ				SN	Sn	14 45 21.0	-0.8
PUZ				SN	Sn	14 45 22.2	+0.5
MWZ	Matawai	1.70	197	PN	Pn	14 45 06.4	+0.9
MWZ				SN	Sn	14 45 28.8	+0.2
URZ	Urewera	1.77	208	PN	Pn	14 45 06.7	+0.5
CNGZ	Carnagh Statio	1.77	179	PN	Pn	14 45 07.5	+1.2
KUZ	Kuaotunu	1.98	268	PN	Pn	14 45 07.3	-1.4
PRGZ	Paritu Road	2.22	186	PN	Pn	14 45 12.4	+0.6
KNZ	Kokohu	2.34	190	PN	Pn	14 45 13.4	+0.1
ALRZ	Allen Road	2.36	218	PN	Pn	14 45 15.6	+2.1
RAHZ	Arahi	2.37	201	PN	Pn	14 45 14.9	+1.2
MHGZ	Mahia Peninsul	2.45	185	PN	Pn	14 45 15.2	+0.6
NMHZ	Naumai	2.62	204	PN	Pn	14 45 17.9	+1.1
MCHZ	McNeill Hill	2.97	203	PN	Pn	14 45 23.0	+1.6
BHHZ	Black Hill Sta	3.24	210	PN	Pn	14 45 25.9	+1.0
KAHZ	Kahuranaki	3.25	198	*e*PN	Pn	14 45 24.8	-0.1
WNVZ	Wahianoa	3.31	217	PN	Pn	14 45 28.7	+2.8
MTVZ	Mangateitei	3.42	218	PN	Pn	14 45 29.1	+1.8
PXZ	Pawanui	3.48	197	PN	Pn	14 45 27.0	-1.0
PRHZ	Porangahau	3.75	198	PN	Pn	14 45 30.6	-1.0
BFZ	Birch Farm	4.24	200	PN	Pn	14 45 36.8	-1.3
MRZ	Mangatainoka R	4.44	206	PN	Pn	14 45 39.1	-1.7
TIWZ	Tintock	4.44	203	PN	Pn	14 45 40.7	-0.1
HOWZ	Holdsworth Sta	4.67	206	PN	Pn	14 45 42.3	-1.6
KIW	Kapiti Island	4.87	211	PN	Pn	14 45 45.1	-1.4
MTW	Mount Morrison	4.91	204	PN	Pn	14 45 45.8	-1.2
CAW	Cannon Point	5.02	208	PN	Pn	14 45 47.3	-1.2
NNZ	Nelson	5.85	218	PN	Pn	14 45 59.5	-0.2

IDC 04 15:29:29.6±1.9, 4°52S×144°04E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.6/16, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=70.8km s-min=22.4km az=109.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.01	211	P	Pn	15 33 41.5	0.0
	0.2nm,0.3s,baz=34,slow=14,SNR=9.8						
ASAR	Alice Springs	21.40	206	P	P	15 34 20.4	+1.2
	0.4nm,0.8s,baz=34,slow=12,SNR=5.5						
FITZ	Fitzroy Crossi	22.50	232	P	P	15 34 30.3	-0.7
	1.3nm,0.7s,baz=34,slow=7.9,SNR=6.4						
KSRS	Korea Array	44.37	342	P	P	15 37 43.0	+1.1
	0.8nm,0.7s,baz=162,slow=8.7,SNR=4.5						
ZALV	Zalesovo Beam	76.20	328	P	P	15 41 19.3	-0.4
	0.6nm,0.6s,baz=132,slow=6.0,SNR=2.7						
ILAR	Eielson Array	85.30	24	P	P	15 42 07.5	-0.6
	0.3nm,0.7s,baz=268,slow=4.3,SNR=4.2						

*ISCJB **04** 15:31:22.6±0.4, 11°46S±0°04×112°20E±0°06, h10km, mb4.1/17, MS3.4/2, Error ellipse: s-maj=9.1km s-min=4.9km az=167.1*
*IDC **04** 15:31:25.0±1.1, 11°26S×112°41E, h0km, mb4.1/11, mb1 4.2/12, mb1mx4.1/21, mbtmp4.1/12, ML4.5/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/26, Error ellipse: s-maj=38.8km s-min=11.5km az=46.0*
*NEIC **04** 15:31:24.5±0.5, 11°64S×112°07E, h10km, mb4.3/7, Error ellipse: s-maj=24.0km s-min=8.6km az=50.0*
*DJA **04** 15:31:29, 11°09S×112°14E, h10km, MLv4.8/12*
ISC 04 15:31:24.5±0.4, 11°43S±0°04×112°20E±0°06, h10km, n43, σ1°53/56, mb4.1/17, MS3.4/2, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	Karangkates	3.26	4	P	Pn	15 32 15.6	-0.1
KRKI				S	Sn	15 32 55.2	+0.7
GMJI	Gumukmas	3.37	21	P	Pn	15 32 18.2	+1.1
PCJI	Pacitan	3.37	342	P	Pn	15 32 15.2	-2.0
PCJI				S	Sn	15 32 31.5	-26
PWJI	Pagerwojo	3.41	353	P	Pn	15 32 16.2	-1.5
PWJI				S	Sn	15 32 55.3	-2.9
JAGI	Jajag, Banyuwa	3.51	33	P	Pn	15 32 21.3	+2.1
JAGI				S	Sn	15 32 59.3	-1.5
SJI	Sawahan	3.69	353	P	Pn	15 32 21.0	-0.7
SJI				S	Sn	15 33 02.4	-2.9
BYJI	Banyuwangi	3.84	34	P	Pn	15 32 27.0	+3.4
UGM	Wanagama	3.86	335	P	Pn	15 32 23.5	-0.5
IGBI	Denpasar	3.89	48	P	Pn	15 32 22.1	-2.3
NGJI	Ngawi	4.10	350	P	Pn	15 32 29.4	+2.2
SRBI	Singaraja	4.46	42	P	Pn	15 32 35.4	+3.3
KHKI	Kahang-Kahang	4.53	48	P	Pn	15 32 37.3	+4.1
BJII	Banjamegara	4.75	329	P	Pn	15 32 37.1	+0.9
CISI	Cisompet, Garu	5.79	311	P	Pb	15 33 05.5	-0.1
XMIS	Christmas Isla	6.50	278	*e*P	Pn	15 32 56.0	-4.2
XMIS				*e*S	Sn	15 34 00.8	-14
GIRL	Giralia	11.32	170	*e*P	Pn	15 34 04.2	-2.2
	236nm,0.6s						
MBWA	Marble Bar	12.07	144	*e*P	Pn	15 34 13.6	-3.1
MBWA				*e*S	Sn	15 36 14.8	-17
MBWA	Marble Bar	12.07	144	*e*Pn	Pn	15 34 13.2	-3.5
	14nm,0.5s						
MBWA				*e*Sn	Sn	15 36 13.7	-18
FITZ	Fitzroy Crossi	14.59	119	Pn	Pn	15 34 50.0	-1.0
	1.5nm,0.3s,baz=269,slow=7.1,SNR=24						
FITZ				Sn	Sn	15 37 18.1	-15
	0.5nm,0.3s,baz=45,slow=7.6,SNR=4.5						
FITZ				LR	LR	15 40 15.1	
	comp=Z,75nm,19.1s,baz=265,slow=37						
FITZ	Fitzroy Crossi	14.59	119	*e*P	Pn	15 34 49.5	-1.6
	6.7nm,0.3s						
FITZ				*e*S	Sn	15 37 17.9	-15
FITZ	Fitzroy Crossi	14.59	119	Pn	Pn	15 34 50.0	-1.0
FITZ				Sn	Sn	15 37 18.1	-15
FITZ				LR	LR	15 40 15.1	
MEEK	Meekatharra	16.29	159	*e*P	Pn	15 35 10.1	-3.4
MEEK				*e*S	Sn	15 37 54.4	-20
NWAO	Narrogin (SRO)	21.89	169	P	P	15 36 22.5	+4.8
	11nm,1.1s,mb4.2,baz=153,slow=23,SNR=2.3						
NWAO				S	S	15 40 13.4	-6.2
	7.8nm,0.6s,baz=263,slow=14,SNR=4.2						
NWAO				LR	LR	15 43 55.5	
	comp=Z,51nm,20.8s,MS2.9,baz=8.1,slow=34						
NWAO	Narrogin (SRO)	21.89	169	P	P	15 36 16.2	-1.5
	18nm,1.1s,mb4.4						
NWAO				*e*S	S	15 39 53.9	-26
NWAO				S	S	15 40 13.4	-6.2
NWAO				LR	LR	15 43 55.5	
WRA	Warramunga Arr	22.91	114	P	P	15 36 29.2	+0.5
	7.3nm,0.7s,mb4.2,baz=288,slow=11,SNR=33						
WRA				S	S	15 40 40.1	+1.2
	0.8nm,0.8s,baz=276,slow=24,SNR=3.9						
ASAR	Alice Springs	23.97	123	P	P	15 36 40.2	+1.0
	4.5nm,0.7s,mb4.0,baz=302,slow=9.4,SNR=54						
ASAR				S	S	15 40 59.1	+3.1
	0.5nm,0.7s,baz=293,slow=17,SNR=2.7						
FORT	Forrest	24.23	145	*e*P	P	15 36 42.4	+0.9
	13nm,0.6s,mb4.5						
CMAR	Chiang Mai Arr	32.45	336	P	P	15 37 56.2	+1.1
	2.9nm,0.8s,mb4.1,baz=172,slow=7.6,SNR=17						
CHTO	Chiang Mai	32.77	336	P	P	15 38 01.5	+3.6
	1.9nm,0.7s,mb4.1						
CTA	Charters Tower	33.83	109	P	P	15 38 09.2	+1.9
	3.3nm,0.5s,mb4.5,baz=296,slow=9.3,SNR=5.9						
CTAO	Charters Tower	33.83	109	*e*P	P	15 38 09.0	+1.7
	3.3nm,0.6s,mb4.4						
STKA	Stephens Creek	33.88	131	P	P	15 38 09.8	+2.3
	9.2nm,0.7s,mb4.8,baz=310,slow=8.3,SNR=32						
KSRS	Korea Array	50.81	16	P	P	15 40 26.6	+1.5
	0.6nm,0.8s,mb3.5,baz=138,slow=39,SNR=4.3						
SONM	Songino Array	59.22	355	P	P	15 41 28.3	+2.6
	0.6nm,0.6s,mb3.8,baz=169,slow=6.0,SNR=4.3						
TKM2	Tomak 2	63.60	331	*e*P	P	15 41 55.8	+0.3
	1.8nm,0.6s,mb4.3						
MKAR	Makanchi Array	63.84	338	P	P	15 41 58.4	+1.4
	0.5nm,0.5s,mb3.8,baz=140,slow=9.6,SNR=3.0						
EKS2	Erkin-Say	64.30	329	*e*P	P	15 42 00.1	0.0
	1.9nm,0.8s,mb4.2						
ZALV	Zalesovo Beam	69.16	343	P	P	15 42 31.2	+0.4
	0.6nm,0.6s,mb3.7,baz=48,slow=2.2,SNR=3.1						
ATD	Arta Tunnel	72.56	286	LR	LR	16 10 00.5	
	comp=Z,61nm,18.5s,MS3.9,baz=159,slow=32						
ABKAR	Akbulak array	75.85	328	*e*P	P	15 43 10.7	-0.2
	1.2nm,0.6s,mb4.0						
QSPA	South Pole Qui	78.59	180	*e*P	P	15 43 26.8	+1.0
	2.9nm,1.1s,mb4.1						
BRTR	Keskin Array B	88.59	311	P	P	15 44 18.9	+1.1
	0.3nm,0.6s,mb3.8,baz=318,slow=45,SNR=3.1						
JCT	Junction City	144.80	53	*e*PKPdf	PKPdf	15 51 02.9	+0.6

*NSSP **04** 15:45:06.6, 38°45N×45°13E, h13km, ML3.0*
*ISK **04** 15:46:07.9, 38°44N×45°02E, h5km, MD3.2*
*ISCJB **04** 15:46:08.4±0.5, 38°36N±0°04×45°12E±0°04, h10km, Error ellipse: s-maj=6.7km s-min=3.4km az=33.3*
*TEH **04** 15:46:08.0, 38°47N×45°07E, h3km*
*CSEM **04** 15:46:09.1±0.3, 38°35N×45°04E, h10km, ML3.6, Error ellipse: s-maj=12.5km s-min=7.2km az=28.0*
ISC 04 15:46:09.0±0.5, 38°35N±0°04×45°09E±0°04, h10km, n24, σ1°36/37, 3C-2D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITBZ	Tabriz	0.84	97	*e*Pg	Pg	15 46 22.7	-2.5
ITBZ				*e*		15 46 27.2	
	comp=Z,7μm,0.1s						
ITBZ				*e*Sg	Sg	15 46 36.1	-0.1
IAZR	Azarshahr	0.97	133	*e*Pg	Pg	15 46 27.3	-0.4
IAZR				*e*Sg	Sg	15 46 41.5	+1.2
IAZR				*e*		15 46 51.4	
	comp=Z,22μm,0.2s						
IAZR	Azarshahr	0.97	133	*e*Pg	Pg	15 46 27.3	-0.4
IAZR				*e*Sg	Sg	15 46 41.5	+1.2
IFTB	Fath-abad	1.08	107	*e*Pg	Pg	15 46 28.4	-1.4
IFTB				*e*		15 46 31.8	
	comp=Z,78μm,0.1s						
IFTB				*e*Sg	Sg	15 46 43.0	-0.9
CLDR	Caldiran	1.21	311	*e*PN	Pn	15 46 29.6	-2.4
CLDR				*e*SN	Sn	15 46 46.4	-2.1
CLDR	Caldiran	1.21	311	*e*Pn	Pn	15 46 29.6	-2.4
CLDR				*e*Sn	Sn	15 46 46.4	-2.1
VANB	Van	1.35	281	*e*PN	Pn	15 46 33.4	-0.5
VANB				*e*SN	Sn	15 46 53.1	+1.1
VANB	Van	1.35	281	*e*Pn	Pn	15 46 33.4	-0.6
VANB				*e*Sn	Sn	15 46 53.1	+1.1
GRS	Goris	1.51	40	P	Pg	15 46 45.0	+7.1
GRS				S	Sn	15 46 58.0	+2.3
IHRS	Heris	1.54	90	*e*Pn	Pn	15 46 36.8	+0.3
IHRS				*e*		15 46 39.3	
	comp=Z,7μm,0.1s						
CUKT	Cukurca	1.60	227	*e*PN	Pn	15 46 38.6	+1.2
CUKT	Cukurca	1.60	227	*e*Pn	Pn	15 46 38.6	+1.2
GNI	Garni	1.82	352	*e*PN	Pn	15 46 40.8	+0.4
GNI	Garni	1.82	352	⇑*i*P	Pn	15 46 42.0	+1.7
GNI				⇓*i*S	Sg	15 47 07.8	+0.3
GNI	Garni	1.82	352	*e*Pn	Pn	15 46 40.8	+0.4
GNI	Garni	1.82	352	⇑P	Pn	15 46 42.0	+1.6
GNI				S	Sg	15 47 07.8	+0.3
VADZ	Vardenis	1.89	15	*e*P	Pn	15 46 43.0	+1.6
VADZ				⇓S	Sn	15 47 07.0	+1.7
AGRB	Hanur-Agry	2.04	308	*e*PN	Pn	15 46 43.5	+0.1
AGRB	Hanur-Agry	2.04	308	*e*Pn	Pn	15 46 43.5	+0.1
ISRB	Sarab	2.10	104	*e*Pn	Pn	15 46 44.8	+0.6
ISRB				*e*		15 46 51.8	
	comp=Z,1μm,0.1s						
ISRB	Sarab	2.10	104	*e*Pn	Pn	15 46 44.8	+0.6
DGRG	David-gareji	3.11	4	P	Pg	15 47 03.0	-5.5
DGRG				S	Sg	15 47 45.6	-3.2
MTA	Mtatsminda	3.35	356	P	Sg	15 47 51.4	-5.3
TBLG	Delisi	3.39	356	P	Sg	15 47 52.8	-5.1

*MOS **04** 15:49:31.5±1.7, 51°70N×157°59E, h67km, mb4.2/3, Error ellipse: s-maj=26.8km s-min=9.7km az=71.1*
*KRSC **04** 15:49:32.2±0.9, 51°56N×158°15E, h72km±68km, ML4.3*
*ISCJB **04** 15:49:33.0±0.7, 51°61N±0°08×158°0E±0°1, h88km±7km, mb3.5/8, Error ellipse: s-maj=16.6km s-min=5.5km az=137.9*
*NEIC **04** 15:49:35.9±1.3, 51°91N×157°77E, h102km±11km, mb4.1/2, Error ellipse: s-maj=20.6km s-min=12.0km az=154.0*
*IDC **04** 15:49:36.2±2.2, 51°79N×157°63E, h107km±21km, mb3.1/7, mb1 3.5/7, mb1mx3.2/22, mbtmp3.1/7, Error ellipse: s-maj=38.1km s-min=18.8km az=144.0*
ISC 04 15:49:34.0±0.7, 51°58N±0°08×158°0E±0°1, h77km±8km, n30, σ0°98/40, mb3.5/8, 2C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	0.97	2	*e*P	Pn	15 49 52.4	-0.1
GRL				*e*S	Sn	15 50 06.6	+0.3
MIPR	Malaya Ipel'ka	1.05	312	*e*P	Pn	15 49 52.7	-0.7
MIPR				*e*S	Sn	15 50 07.6	-0.4
PET	Petropavlovsk	1.49	15	*e*P	Pn	15 49 58.8	-0.2
PET				*e*S	Sn	15 50 18.5	+0.5
PET	Petropavlovsk	1.49	15	⇑*i*PN	Pn	15 49 58.8	-0.2
PET				*e*S	Sn	15 50 18.3	+0.3
PET				pmax	pmax		
	comp=Z,105nm,0.4s						
PET				smax			
	comp=N,569nm,0.6s						
PET	Petropavlovsk	1.49	15	*e*Pn	Pn	15 49 58.5	-0.6
PET				*e*Sn	Sn	15 50 16.1	-1.9
SKR	Severo-Kuril's	1.50	234	⇑*i*PN	Pn	15 49 59.4	+0.2
SKR				*e*		15 50 08.1	
SKR				pmax	pmax		
	comp=N,40nm,0.4s						
SKR				pmax	pmax		
	comp=E,80nm,0.4s						
SKR				pmax	pmax		
	comp=Z,160nm,0.4s						
SKR				smax			
	comp=E,1μm,0.5s						
SKR				smax			
	comp=N,2μm,1.0s						
SKR				smax			
	comp=E,2μm,1.0s						
PETK	Petropavlovsk-	1.54	353	P	Pn	15 49 59.4	-0.3
	comp=E,14nm,0.3s,baz=175,slow=5.5,SNR=143						
PETK				S	Sn	15 50 19.6	+0.5
	comp=E,13nm,0.3s,baz=216,slow=28,SNR=7.6						
ALID	Alaid	1.71	246	*e*P	Pn	15 50 01.4	-0.5
ALID				*e*S	Sn	15 50 22.8	-0.4
AVH	Avacha	1.74	14	*e*P	Pn	15 50 03.2	+0.9
NLC	Nalytchevo	1.78	26	*e*P	Pn	15 50 01.6	-1.2
NLC				*e*S	Sn	15 50 23.0	-1.8
SPN	Mys Shipunski	1.95	38	*e*P	Pn	15 50 05.3	+0.3
SPN				*e*S	Sn	15 50 29.4	+0.7
GNL	Ganaly	2.12	359	*e*P	Pn	15 50 07.7	+0.4
KII	Karymskiy	2.60	19	*e*P	Pn	15 50 15.7	+1.9
MKZ	Mys Kozlova	3.72	35	*e*P	Pn	15 50 28.5	-0.5
MKZ				*e*S	Sn	15 51 10.6	-1.0
SRDR	Sredinnyy	4.85	11	*e*P	Pn	15 50 46.4	+2.1
KBTR	Krutoberegovo	5.43	30	*e*P	Pn	15 50 53.6	+1.4
BKI	Bering	5.98	50	*e*S	Sn	15 51 59.6	-7.0
YA

SHUT				*e*Sg	**Sg**	**15 50 40.3**	**-8.7**
DURS	**Dursunbey**	**1.06 317**		*i* P	**Pb**	**15 50 41.1**	**+1.6**
DURS	**Dursunbey**	**1.06 317**		*i* P	**Pb**	**15 50 41.1**	**+1.7**
DNZL	**Cakiroluk**	**1.17 194**		*i* P	**Pb**	**15 50 39.7**	**-1.6**
DNZL	**Cakiroluk**	**1.17 194**		*i* P	**Pb**	**15 50 39.7**	**-1.6**
BOLV	**Bolvadin**	**1.21**	**95**	*i* P	**Pn**	**15 50 41.4**	**-0.5**
BOLV				*i* S	**Sb**	**15 50 50.3**	**-7.2**
BOLV	**Bolvadin**	**1.21**	**95**	*i* P	**Pn**	**15 50 41.4**	**-0.5**
AKHS	**Akhisar**	**1.25 273**		*i* P	**Pn**	**15 50 35.0**	**-7.5**
AKHS				*i* S	**Pn**	**15 50 44.1**	**+1.7**
AKHS	**Akhisar**	**1.25 273**		*i* P	**Pn**	**15 50 35.0**	**-7.5**
AKHS				*i* S	**Pn**	**15 50 44.2**	**+1.7**
BALY	**Balya**	**1.66 304**		*i* P	**Pn**	**15 50 47.9**	**-0.2**
BALY				*i* S	**Sn**	**15 51 04.6**	**-4.9**
BALY	**Balya**	**1.66 304**		*i* P	**Pn**	**15 50 47.9**	**-0.3**
BALY				*i* S	**Sn**	**15 51 04.6**	**-5.0**
AYDN	**Tasoluk**	**1.68 226**		*i* P	**Pn**	**15 50 40.6**	**-7.8**
AYDN				*i* S	**Sn**	**15 50 58.1**	**-12**
AYDN	**Tasoluk**	**1.68 226**		*i* P	**Pn**	**15 50 40.6**	**-7.8**
AYDN				*i* S	**Sn**	**15 50 58.1**	**-12**
SVRH	**Sivrihisar-ESK**	**1.75**	**69**	*e*PN	**Pn**	**15 50 50.1**	**+0.7**
SVRH	**Sivrihisar-ESK**	**1.75**	**69**	*e*Pn	**Pn**	**15 50 50.1**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.84 137**		*e*PN	**Pn**	**15 50 53.0**	**+2.4**
SUTC	**Sutluce-Ispart**	**1.84 137**		*e*Pn	**Pn**	**15 50 53.0**	**+2.4**
KIZT	**Kizilcal**	**1.93**	**88**	*e*PN	**Pn**	**15 50 52.0**	**+0.2**
KIZT	**Kizilcal**	**1.93**	**88**	*e*Pn	**Pn**	**15 50 52.0**	**+0.2**
KONT	**Konya--Tatoy**	**2.48 110**		*e*PN	**Pn**	**15 51 00.0**	**+0.7**
KONT	**Konya--Tatoy**	**2.48 110**		*e*Pn	**Pn**	**15 51 00.0**	**+0.7**

BJI ***04*** *15:52:03.1,29°.99N×82°.81E,h12km,mB4.6/4,mb4.2/16, Ms4.2/7,Ms7 4.0/7*
ISCJB ***04*** *15:52:09.2±2.1,30°.80N±0°.04×83°.35E±0°.04,h5km±14km, mb4.0/24,MS3.5/2,Error ellipse: s-maj=6.8km s-min=6.4km az=14.4*
IDC ***04*** *15:52:10.0±0.7,30°.69N×83°.46E,h0km,mb4.0/18, mb1 4.1/21,mb1mx4.0/28,mbtmp4.0/21,ML3.4/3,MS3.6/4, Ms1 3.6/4,ms1mx3.2/34,Error ellipse: s-maj=20.2km s-min=14.2km az=39.0*
NEIC ***04*** *15:52:11.2±3.7,30°.78N×83°.36E,h7km±23km,mb4.2/10, Error ellipse: s-maj=14.3km s-min=7.8km az=219.0*
NDI ***04*** *15:52:14.9±3.1,30°.77N×83°.12E,h10km,ML4.1, mb4.2(NEIC)*
ISC 04 15:52:11.0±2.1,30°.80N±0°.04×83°.41E±0°.04,h4km±14km, n64,σ1§12/71,mb4.0/24,MS3.5/2,1C,Xizang

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JOSI	**Joshimath**	**3.33**	**267**	*e*PKP	**Pn**	**15 53 08.5**	**+4.7**
JOSI				*e*S	**Sn**	**15 53 44.5**	**+0.7**
JOSI				AML	AML	15 54 05.2	
	comp=E,1μm,0.7s						
JOSI				AML	AML	15 54 11.0	
	comp=N,876nm,0.6s						
KLP	**Kalpa**	**4.48**	**281**	*e*PKP	**Pn**	**15 53 19.9**	**+0.2**
KLP				*e*S	**Sn**	**15 54 07.0**	**-5.3**
DDI	**Dehra Dun**	**4.64**	**265**	*e*x	**Pn**	**15 53 25.0**	**+3.1**
DDI				*e*S	**Sn**	**15 54 09.0**	**-7.2**
SDNR	**Sundarnagar**	**5.56**	**279**	*e*x	x	15 53 47.5	
SDNR				*e*x	x	15 55 29.5	
NDI	**New Delhi**	**5.79**	**250**	*e*PKP	**Pn**	**15 53 38.0**	**+0.4**
NDI				*e*x	x	15 54 45.0	
NDI				*e*x	x	15 54 45.0	
SONA	**Sohna**	**6.07**	**247**	*e*PKP	**Pn**	**15 53 41.0**	**-0.5**
SONA				*e*S	**Sn**	**15 54 46.0**	**-5.5**
KUDL	**Kundal**	**6.59**	**248**	*e*PKP	**Pn**	**15 53 47.1**	**-1.6**
KUDL				*e*S	**Sn**	**15 54 56.3**	**-7.9**
LSA	**Lhasa**	**6.78**	**97**	*e*Pn	**Pn**	**15 53 55.5**	**+4.2**
	comp=N,43nm,1.0s						
KHET	**Khetri**	**7.17**	**250**	*e*PKP	**Pn**	**15 53 57.0**	**+0.4**
KHET				*e*S	**Sn**	**15 55 09.4**	**-9.0**
AJM	**Ajmer**	**8.82**	**243**	*e*PKP	**Pn**	**15 54 20.0**	**+0.7**
AJM				*e*x	x	15 55 56.0	
BHPL	**Bhopal**	**9.23**	**217**	*e*PKP	**Pn**	**15 54 24.9**	**0.0**
BHPL				*e*x	x	15 55 48.9	
KSH	**Kashi**	**10.61**	**327**	*e*P	**Pn**	**15 54 43.4**	**-0.3**
KSH				*e*pP		15 54 50.5	
KSH				*e*PP		15 54 52.1	
KSH				*e*sP		15 54 55.3	
KSH				*e*S	**Sn**	**15 56 41.8**	**-1.2**
KSH				*e*sS		15 56 53.1	
KSH				*e*SS		15 56 55.7	
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				LR	LR		
	comp=N,1μm,7.9s						
KSH				LR	LR		
	comp=E,2μm,7.3s						
KSH				LR	LR		
	comp=Z,1μm,10.1s						
AKL	**Akola**	**11.59**	**211⇑**	*i*P	**Pn**	**15 54 56.2**	**-1.0**
AKL				*i* x	x	15 57 00.8	
KBL	**Kabul**	**12.67**	**291**	*e*Pn	**Pn**	**15 55 11.7**	**-0.2**
	comp=Z,4.7nm,0.5s						
KBL				*e*Sn	**Sn**	**15 57 28.1**	**-5.3**
KZA	**Kyzart**	**13.02**	**332**	*e*Pn	**Pn**	**15 55 13.2**	**-3.6**
	comp=Z,2.7nm,0.8s						
UCH	**Uchtor**	**13.45**	**330**	*e*Pn	**Pn**	**15 55 24.1**	**+1.6**
	comp=Z,7.1nm,0.9s						
TKM2	**Tokmak 2**	**13.61**	**335**	*e*Pn	**Pn**	**15 55 24.8**	**+0.1**
	comp=Z,2.6nm,0.8s						
AML	**Almayashu**	**13.73**	**328**	Pn	**Pn**	**15 55 25.1**	**-1.3**
	comp=Z,15nm,1.3s						
AAK	**Ala-Archa**	**13.79**	**331**	Pn	**Pn**	**15 55 29.1**	**+1.9**
	comp=Z,0.0nm,0.3s,baz=344,slow=11,SNR=3.4						
AAK				LR	LR	16 00 58.9	
	comp=Z,206nm,21.0s,baz=148,slow=38						
AAK	**Ala-Archa**	**13.79**	**331**	*e*Pn	**Pn**	**15 55 27.9**	**+0.7**
AAK				LR	LR	16 00 58.9	
HYB	**Hyderabad**	**14.04**	**199**	*i* P	**Pn**	**15 55 26.5**	**-4.2**
EKS2	**Erkin-Say**	**14.12**	**330**	*e*Pn	**Pn**	**15 55 30.8**	**-0.9**
	comp=Z,3.7nm,0.6s						
POO	**Poona**	**14.98**	**218**	*e*PKP	**Pn**	**15 55 45.0**	**+1.4**
GTA	**Gaotai**	**15.92**	**53**	*e*P	**Pn**	**15 56 01.1**	**+5.3**
GTA				pP	pP	15 56 05.9	+5.2
GTA				sP	sP	15 56 09.0	+7.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA				LR	LR		
	comp=N,550nm,14.5s						
GTA				LR	LR		
	comp=E,270nm,14.7s						
GTA				LR	LR		
	comp=Z,230nm,9.5s						
MK31	**Makanchi Array**	**15.99**	**357**	*e*Pn	**Pn**	**15 55 55.5**	**-1.2**
MKAR	**Makanchi Array**	**15.99**	**357**	Pn	**Pn**	**15 55 55.4**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=182,slow=12,SNR=8.0						
MKAR	**Makanchi Array**	**15.99**	**357**	Pn	**Pn**	**15 55 55.4**	**-1.3**
KKAR	**Karatay Array**	**16.01**	**324**	*e*Pn	**Pn**	**15 55 54.8**	**-2.1**
	comp=Z,3.2nm,0.8s						
KKAR				*e*Sn	**Sn**	**15 58 47.3**	**-7.5**
LZH	**Lanzhou**	**17.84**	**67**	*e*P	**Pn**	**15 56 22.0**	**+1.9**
LZH				pP	pP	15 56 27.5	+5.4
LZH				sP	sP	15 56 29.0	+6.4
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
KMI	**Kunming**	**17.98**	**104**	P	**Pn**	**15 56 20.5**	**-1.4**
KMI				pP	pP	15 56 23.8	+0.1
KMI				sP	sP	15 56 25.5	+1.3
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,110nm,6.1s						
KMI				LR	LR		
	comp=N,360nm,11.1s						
KMI				LR	LR		
	comp=E,520nm,14.6s						
KMI				LR	LR		
	comp=Z,740nm,17.0s						
CHTO	**Chiang Mai**	**18.45**	**127**	*e*Pn	**Pn**	**15 56 27.1**	**-0.6**
	comp=Z,5.2nm,1.0s						
CM31	**Chiang Mai Arr**	**18.69**	**128**	*e*P	**Pn**	**15 56 26.5**	**-4.1**
	comp=Z,11nm,1.4s						
CMAR	**Chiang Mai Arr**	**18.69**	**128**	P	**Pn**	**15 56 28.7**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=310,slow=12,SNR=23						
CMAR				LR	LR	16 04 40.9	
	comp=Z,141nm,18.3s,baz=317,slow=40						
KURK	**Kurchatov**	**20.21**	**351**	P	**P**	**15 56 46.4**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=174,slow=10,SNR=32						
ZALV	**Zalesovo Beam**	**23.15**	**2**	P	**P**	**15 57 17.8**	**-0.4**
	comp=Z,2.0nm,0.5s,mb3.8,baz=203,slow=9.8,SNR=12						
ZALV	**Zalesovo Beam**	**23.15**	**2**	P	**P**	**15 57 17.8**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
ZALV	**Zalesovo Beam**	**23.15**	**2**	P	**P**	**15 57 17.8**	**-0.4**
BVAR	**Borovoye Array**	**24.15**	**341**	P	**P**	**15 57 28.6**	**+0.6**
	comp=Z,2.1nm,0.7s,mb3.7,baz=146,slow=11,SNR=8.2						
SONM	**Songino Array**	**24.46**	**39**	P	**P**	**15 57 31.2**	**+0.4**
	comp=Z,2.0nm,0.8s,mb3.6,baz=233,slow=9.7,SNR=10						
SONM				LR	LR	16 07 58.6	
	comp=Z,134nm,20.7s,MS3.4,baz=228,slow=39						
ULN	**Ulaanbaatar**	**24.84**	**40**	*e*P	**P**	**15 57 35.4**	**+1.2**
	comp=Z,4.8nm,0.9s,mb4.0						
ABKAR	**Akbulak array**	**25.57**	**323**	*e*P	**P**	**15 57 41.3**	**+0.4**
	comp=Z,3.2nm,0.6s,mb4.0						
AKTK	**Aktyubinsk**	**27.28**	**323**	P	**P**	**15 57 57.4**	**+1.1**
AKTK				LR	LR	16 09 53.0	
AKTO	**Aktyubinsk**	**27.28**	**323**	P	**P**	**15 57 57.4**	**+1.1**
	comp=Z,0.7nm,0.4s,mb3.5,baz=128,slow=17,SNR=4.0						
AKTO				LR	LR	16 09 53.0	
	comp=Z,126nm,18.4s,MS3.5,baz=298,slow=39						
KSRS	**Korea Array**	**37.17**	**67**	P	**P**	**15 59 22.8**	**-0.3**
	comp=Z,1.7nm,0.7s,mb4.0,baz=273,slow=9.0,SNR=11						
MALT	**Malatya**	**37.50**	**294**	*e*P	**P**	**15 59 27.6**	**+1.7**
	comp=Z,3.3nm,1.3s,mb3.9						
BRTR	**Keskin Array B**	**41.16**	**297**	P	**P**	**15 59 58.0**	**+1.6**
	comp=Z,0.3nm,0.5s,mb3.2,baz=91,slow=13,SNR=5.1						
FINES	**FINESS Array B**	**47.93**	**327**	P	**P**	**16 00 51.1**	**+0.9**
	comp=Z,0.8nm,0.3s,mb4.2,baz=324,slow=37,SNR=7.5						
KEV	**Kevo**	**49.95**	**338**	P	**P**	**16 01 05.3**	**-0.3**
	comp=Z,12nm,1.0s,mb4.9						
ARCES	**ARCESS Array B**	**50.38**	**337**	P	**P**	**16 01 09.7**	**+0.9**
	comp=Z,1.4nm,0.5s,mb4.2,baz=98,slow=8.4,SNR=14						
KMBO	**Kilima Mbogo**	**54.13**	**243**	*e*P	**P**	**16 01 37.5**	**0.0**
	comp=Z,5.0nm,1.1s,mb4.4						
NOA	**NORSAR Array B**	**55.03**	**326**	P	**P**	**16 01 44.5**	**+1.1**
	comp=Z,0.9nm,0.8s,mb3.9,baz=61,slow=8.1,SNR=3.3						
NOA	**NORSAR Array B**	**55.03**	**326**	P	**P**	**16 01 44.5**	**+1.1**
PETK	**Petropavlovsk-**	**56.84**	**44**	P	**P**	**16 01 58.0**	**+1.6**
	comp=Z,3.6nm,0.9s,mb4.4,baz=269,slow=7.2,SNR=2.8						
KEST	**Kesra**	**60.76**	**296**	P	**P**	**16 02 23.6**	**-0.5**
	comp=Z,1.2nm,0.8s,mb4.1,baz=353,slow=5.7,SNR=5.0						
WRA	**Warramunga Arr**	**70.28**	**129**	P	**P**	**16 03 24.5**	**-1.2**
	comp=Z,1.7nm,0.7s,mb4.1,baz=323,slow=6.3,SNR=16						
ASAR	**Alice Springs**	**72.63**	**132**	P	**P**	**16 03 38.9**	**-0.9**
	comp=Z,0.6nm,0.9s,mb3.5,baz=324,slow=5.8,SNR=5.5						
RES	**Resolute Bay**	**74.77**	**360**	P	**P**	**16 03 49.6**	**-2.1**
	comp=Z,18nm,1.1s,mb4.9						
TORD	**Torodi Ar. Bea**	**76.36**	**277**	P	**P**	**16 04 00.7**	**-1.1**
	comp=Z,1.0nm,0.7s,mb3.8,baz=52,slow=4.9,SNR=5.4						
ILAR	**Eielson Array**	**77.01**	**20**	P	**P**	**16 04 04.5**	**-0.1**
	comp=Z,1.5nm,0.8s,mb4.0,baz=303,slow=5.1,SNR=17						
INK	**Inuvik**	**77.45**	**13**	*e*P	**P**	**16 04 01.8**	**-5.2**
	comp=Z,3.8nm,1.0s,mb4.3						
DBIC	**Dimbokro**	**85.14**	**275**	P	**P**	**16 04 50.4**	**+1.5**
	comp=Z,1.2nm,0.5s,mb4.3,baz=106,slow=7.4,SNR=3.4						
DBIC	**Dimbokro**	**85.14**	**275**	P	**P**	**16 04 50.4**	**+1.5**
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**85.91**	**8**	P	**P**	**16 04 50.9**	**-0.9**
	comp=Z,0.9nm,0.7s,mb4.1,baz=337,slow=5.4,SNR=5.4						
CPUP	**Villa Florida**	**145.35**	**267**	PKPbc	PKPbc	16 11 49.9	-0.5
	comp=Z,0.5nm,0.4s,baz=164,slow=3.6,SNR=3.3						

IDC ***04*** *16:09:47.1±0.4,31°.55S×177°.71W,h0km,mb4.7/21, mb1 4.8/23,mb1mx4.8/25,mbtmp4.7/23,ML2.5/1,MS5.7/10, Ms1 5.7/10,ms1mx5.5/21,Error ellipse: s-maj=16.0km s-min=13.2km az=3.0*
BJI ***04*** *16:09:49.7,31°.62S×177°.82W,h23km,mB5.8/34, mb5.3/39,Ms5.7/44,Ms7 5.5/44*
ISCJB ***04*** *16:09:50.9±0.1,31°.84S±0°.03×177°.81W±0°.04,h33km, mb5.3/80,MS5.8/216,Error ellipse: s-maj=6.0km s-min=3.5km az=39.0*
NEIC ***04*** *16:09:51.4±3.2,31°.56S×177°.81W,h26km±21km,mb5.5/51, MS5.9/184,MW5.7,Error ellipse: s-maj=10.3km s-min=7.0km az=150.0*
MOS ***04*** *16:09:52.0±1.4,31°.47S×177°.76W,h33km,mb5.7/22, MS5.7/39,Error ellipse: s-maj=13.2km s-min=9.7km az=87.0*
GCMT ***04*** *16:09:54.6±0.1,31°.71S×177°.19W,h12km,MW5.8, Moment Tensor Solution. s94,c196; s73,c87; Moment tensor: Scale 10^17^Nm; M_{rr}4.41±.03; $M_{\theta\theta}$0.02±.03; $M_{\phi\phi}$-4.43±.03; $M_{r\theta}$0.92±.10; $M_{\theta\phi}$-1.08±.03; $M_{\phi r}$4.77±.10; Best double couple: $M_0$6.70000×10^17^ NP1:ϕ_s195.00000°, δ22.00000°,λ93.00000°. NP2:ϕ_s11.00000°,δ68.00000°, λ89.00000°. Principal axes: T 6.5200, Plg67.0000°, Azm279.0000°; N 0.2600, Plg1.0000°, Azm12.0000°; P -6.7800, Plg23.0000°, Azm102.0000°; Data Used: II IU IC G CN. Surface waves: sta=115, comp=244, per= 50.*
SZGRF ***04*** *16:09:55.4,32°.03S×176°.77W,h76km,South of Kermadec Islands*
ISC 04 16:09:52.7±0.1,31°.82S±0°.03×177°.79W±0°.04,h35km, (h21km,2.6km:pP-P),n659,σ1§04/268,mb5.3/80, MS5.8/216,77C-37D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.56**	**357**	*e*Pn	**Pn**	**16 10 26.7**	**-5.0**
RAO				*e*Sn	**Sn**	**16 10 59.9**	**-1.7**
PUZ	**Puketiti**	**7.04**	**206**	*e*PN	**Pn**	**16 11 29.5**	**-3.7**
PUZ				SN	**Sn**	**16 12 50.8**	**-1.2**
CNGZ	**Carnagh Statio**	**7.42**	**205**	*e*PN	**Pn**	**16 11 34.7**	**-3.7**
CNGZ				SN	**Sn**	**16 13 01.8**	**+0.4**
MWZ	**Matawai**	**7.55**	**209**	*e*PN	**Pn**	**16 11 37.2**	**-3.1**
MWZ				SN	**Sn**	**16 13 03.7**	**-0.9**
URZ	**Urewera**	**7.67**	**212**	Pn	**Pn**	**16 11 39.1**	**-2.8**
	1.1nm,0.3s,baz=27,slow=7.6,SNR=14						
URZ				Sn	**Sn**	**16 13 07.8**	**+0.3**
	14nm,0.3s,baz=139,slow=23,SNR=14						
URZ	**Urewera**	**7.67**	**212**	*e*Pn	**Pn**	**16 11 39.4**	**-2.5**
	257nm,1.1s						
URZ				*e*Sn	**Sn**	**16 13 07.7**	**+0.1**
URZ	**Urewera**	**7.67**	**212**	*e*PN	**Pn**	**16 11 38.2**	**-3.7**
URZ				SN	**Sn**	**16 13 06.8**	**-0.8**
WCZ	**Waipu Caves**	**7.73**	**236**	*e*PN	**Pn**	**16 11 49.6**	**+6.9**
OUZ	**Omahuta**	**7.96**	**242**	*e*Pn	**Pn**	**16 11 50.8**	**+4.9**
	236nm,1.0s						
KNZ	**Kokohu**	**8.09**	**206**	*e*PN	**Pn**	**16 11 44.9**	**-2.7**
KNZ				SN	**Sn**	**16 13 14.5**	**-3.3**
NMHZ	**Naumai**	**8.50**	**210**	*e*PN	**Pn**	**16 11 50.5**	**-2.8**
NMHZ				SN	**Sn**	**16 13 28.8**	**+0.9**
BKZ	**Black Stump Fm**	**8.69**	**211**	*e*PN	**Pn**	**16 11 51.4**	**-4.5**
BKZ				SN	**Sn**	**16 13 31.8**	**-0.8**
MCHZ	**McNeill Hill**	**8.84**	**209**	SN	Sx	16 13 36.1	
CKHZ	**Cape Kidnapper**	**8.87**	**207**	SN	Sx	16 13 35.6	
KAHZ	**Kahuranaki**	**9.06**	**207**	*e*PN	**Pn**	**16 11 54.9**	**-6.0**
PXZ	**Pawanui**	**9.28**	**206**	SN	Sx	16 13 42.3	
PNHZ	**Pukenui**	**9.44**	**209**	SN	Sx	16 13 48.3	
WPHZ	**Waipukurau**	**9.47**	**208**	SN	Sx	16 13 47.7	
DVHZ	**Dannevirke**	**9.78**	**208**	*e*SN	Sx	16 13 54.0	
POWZ	**Post Office Ro**	**10.02**	**210**	SN	Sx	16 14 01.0	
BFZ	**Birch Farm**	**10.07**	**207**	*e*PN	**Pn**	**16 12 08.5**	**-6.3**
TIWZ	**Tintock**	**10.29**	**208**	SN	Sx	16 14 06.6	
MRZ	**Mangatainoka R**	**10.32**	**209**	PN	**Pn**	**16 12 13.0**	**-5.3**
MRZ				SN	Sx	16 14 07.0	
HOWZ	**Holdsworth Sta**	**10.55**	**209**	SN	Sx	16 14 12.0	
TMWZ	**Te Maipa**	**10.57**	**207**	SN	Sx	16 14 13.0	
MTW	**Mount Morrison**	**10.77**	**208**	SN	Sx	16 14 16.2	
PAWZ	**Paruwai Farm**	**10.99**	**208**	SN	Sx	16 14 22.3	
PLWZ	**Palliser**	**11.22**	**208**	SN	Sx	16 14 27.3	
SNZO	**South Karori**	**11.23**	**210**	*e*Pn	**Pn**	**16 12 28.6**	**-2.0**
SNZO				*e*Sn	Sx	16 14 28.9	
TUWZ	**Tuamarina**	**11.66**	**212**	SN	Sx	16 14 39.9	
CTZ	**Chatham Island**	**11.94**	**176**	SN	Sx	16 14 38.5	
KHZ	**Kahutara**	**12.64**	**211**	SN	Sx	16 15 00.4	
CRLZ	**Canterbury Las**	**13.97**	**210**	SN	Sx	16 15 32.5	
MQZ	**McQueen's Vall**	**14.06**	**210**	SN	Sx	16 15 31.0	
WVZ	**Waitaha Valley**	**14.46**	**216**	SN	Sx	16 15 42.7	
MSVF	**Nonsavu**	**14.52**	**344**	*e*Pn	**Pn**	**16 13 11.9**	**-3.8**
	596nm,1.9s						
RPZ	**Rata Peaks**	**14.78**	**213**	Pn	**Pn**	**16 13 15.2**	**-3.9**
	1.3nm,0.3s,baz=42,slow=3.0,SNR=6.5						
RPZ				Sn	Sx	16 15 50.1	
	1.7nm,0.3s,baz=325,slow=19,SNR=8.2						
RPZ	**Rata Peaks**	**14.78**	**213**	*e*Pn	**Pn**	**16 13 14.4**	**-4.7**
	103nm,1.1s						
RPZ				*e*Sn	Sx	16 15 47.0	
ODZ	**Otahua Downs**	**16.00**	**211**	*e*Pn	**Pn**	**16 13 28.8**	**-6.1**
	315nm,1.0s						
ODZ				*e*Sn	Sx	16 16 05.9	
DZM	**Mont Dzumac**	**17.07**	**301**	*e*Pn	**Pn**	**16 13 52.5**	**+3.9**
	640nm,1.6s						
DZM				*e*LQ		16 17 15.3	
	29μm,28.9s						
DZM				*e*LR	LR	16 17 56.0	
	51μm,25.6s						
DZM	**Mont Dzumac**	**17.07**	**301**	*e*P	**Pn**	**16 13 52.4**	**+3.8**
NOUC	**Port Laguerre**	**17.15**	**300**	*e*P	**Pn**	**16 13 52.9**	**+3.2**
AFI	**Afiamalu**	**18.66**	**19**	P	**Pn**	**16 14 02.0**	**-6.2**
	0.8nm,0.3s,baz=29,slow=19,SNR=2.4						
AFI				S	**S**	**16 17 24.7**	**-14**
	2.4nm,0.3s,baz=3.0,slow=15,SNR=2.6						
AFI	**Afiamalu**	**18.66**	**19**	*e*P	**Pn**	**16 14 04.4**	**-3.8**
AFI				pmax	pmax		
	comp=Z,99nm,0.8s						
AFI	**Afiamalu**	**18.66**	**19**	*e*P	**Pn**	**16 14 04.4**	**-3.8**
	comp=Z,99nm,0.8s						
RAR	**Rarotonga**	**19.24**	**61**	P	**Pn**	**16 14 10.3**	**-5.0**
	comp=Z,2.8nm,0.3s,baz=251,slow=7.8,SNR=4.4						
RAR				S	Sx	16 17 29.9	
	comp=Z,1.5nm,0.3s,baz=69,slow=18,SNR=2.5						
RAR				LR	LR	16 20 32.0	
	comp=Z,18μm,18.7s,baz=236,slow=34						
RAR	**Rarotonga**	**19.24**	**61**	P	**Pn**	**16 14 08.9**	**-6.4**
RAR				pmax	pmax		
	comp=Z,90nm,0.9s						
RAR	**Rarotonga**	**19.24**	**61**	P	**Pn**	**16 14 08.9**	**-6.4**
	comp=Z,90nm,0.9s						
FUNA	**Funafuti**	**23.34**	**352**	PFAKE		16 15 10.0	+12
FUNA				LR	LR		
	comp=Z,52μm,19.0s,MS6.0						
ARMA	**Armidale**	**26.18**	**265**	*e*P	**P**	**16 15 28.4**	**+4.4**
CNB	**Canberra Magne**	**27.52**	**254**	*e*P	**P**	**16 15 40.1**	**+4.1**
CAN	**Canberra**	**27.82**	**254**	PFAKE		16 15 50.0	+11
CAN				LR	LR		
	comp=Z,21μm,20.0s,MS5.7						
EIDS	**Eidsvold**	**28.02**	**275**	*e*P	**P**	**16 15 41.9**	**+1.3**
	comp=Z,76nm,1.2s,mb5.2						
PPT	**Papeete**	**29.19**	**68**	*e*S	Px	16 20 21.5	
	comp=Z,2μm,23.0s						
PPT				*e*LQ		16 21 28.2	
	comp=Z,18μm,24.8s						
PPT				*e*LR	LR	16 22 47.5	
	comp=Z,13μm,20.8s,baz=238						
PPT	**Papeete**	**29.19**	**68**	LR	LR	16 25 38.4	
	comp=Z,14μm,18.7s,MS5.6,baz=245,slow=33						
HNR	**Honiara**	**30.37**	**312**	P	**P**	**16 16 01.6**	**+0.2**
	comp=Z,48nm,0.7s,mb5.3,baz=233,slow=5.1,SNR=3.8						
HNR				S	**S**	**16 20 58.5**	**-1.3**
	comp=Z,38nm,0.9s,baz=330,slow=8.1,SNR=1.9						
HNR	**Honiara**	**30.37**	**312**	*e*P	**P**	**16 15 56.9**	**-4.6**
HNR				P		16 16 01.6	
HNR				S	**S**	**16 20 58.5**	**-1.3**
HNR				LR	LR		
	comp=Z,10μm,20.0s,MS5.5						
TOO	**Toolangi**	**30.60**	**249**	*e*P	**P**	**16 16 05.4**	**+2.1**
CTA	**Charters Tower**	**34.23**	**281**	P	**P**	**16 16 34.5**	**-0.7**
	comp=Z,34nm,0.7s,mb5.4,baz=108,slow=11,SNR=32						
CTA				PcP	PcP	16 19 12.0	+0.6
	comp=Z,2.6nm,0.3s,baz=90,slow=4.0,SNR=2.2						
CTA				S	**S**	**16 21 56.6**	**-3.1**
	comp=Z,1.4nm,0.4s,baz=233,slow=5.1,SNR=2.6						
CTA	**Charters Tower**	**34.23**	**281**	*e*P	**P**	**16 16 38.0**	**+2.8**
	comp=Z,57nm,1.1s,mb5.4						
CTA				*e*S	**S**	**16 21 53.0**	**-6.8**
CTA	**Charters Tower**	**34.23**	**281**	P	**P**	**16 16 34.5**	**-0.7**
CTA				PcP	PcP	16 19 12.0	+0.6
CTA				S	**S**	**16 21 56.6**	**-3.1**
CTAO	**Charters Tower**	**34.23**	**281⇑**	*e*P	**P**	**16 16 36.6**	**+1.4**
CTAO				*e*S	**S**	**16 21 59.4**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,237nm,1.4s,mb5.9						
CTAO				MLR	MLR		
	comp=Z,22μm,19.0s,MS5.9						
CTAO	**Charters Tower**	**34.23**	**281⇑**	*e*P	**P**	**16 16 36.6**	**+1.3**
	comp=Z,237nm,1.4s,mb5.9						
CTAO				*e*S	**S**	**16 21 59.4**	**-0.4**
CTAO				LR	LR		
	comp=Z,22μm,19.0s,MS5.9						
STKA	**Stephens Creek**	**34.36**	**259**	P	**P**	**16 16 37.4**	**+1.1**
	comp=Z,8.5nm,0.5s,mb4.9,baz=96,slow=10,SNR=61			

comp=Z,94nm,1.4s,mb5.5
CASY LR LR
comp=Z,8μm,19.0s,MS5.8
KLBR Kellerberrin 54.07 252 *e*P **P 16 19 13.4 -0.6**
comp=Z,54nm,1.4s,mb5.3
NWAO Narrogin (SRO) 54.08 250 PFAKE 16 19 30.0 +16
NWAO LR LR
comp=Z,7μm,20.0s,MS5.7
POHA Pohakuloa 55.54 26 PFAKE 16 19 40.0 +15
POHA LR LR
comp=Z,7μm,19.0s,MS5.8
KIP Kipapa 56.22 22 PFAKE 16 19 40.0 +11
KIP LR LR
comp=Z,4μm,20.0s,MS5.5
MBWA Marble Bar 56.26 265 *e*P **P 16 19 29.4 -0.5**
MBWA *e*S **S 16 27 23.3 +5.7**
MBWA Marble Bar 56.26 265 *e*P **P 16 19 28.9 -1.0**
comp=Z,29nm,1.1s,mb5.2
MBWA LR LR
comp=Z,11μm,20.0s,MS6.0
GUMO Guam 57.61 316 PFAKE 16 19 50.0 +11
GUMO LR LR
comp=Z,4μm,21.0s,MS5.5
QSPA South Pole Qui 58.30 180 P **P 16 19 45.8 +2.4**
comp=Z,20nm,0.8s,mb5.2,baz=42,slow=2.7,SNR=34
QSPA South Pole Qui 58.30 180 P **P 16 19 45.8 +2.4**
QSPA LR LR
comp=Z,15μm,19.0s,MS6.1
RPN Rapa Nui 58.90 105 PFAKE 16 20 00.0 +12
RPN LR LR
comp=Z,8μm,20.0s,MS5.9
MIDW Midway 59.70 0 PFAKE 16 20 00.0 +6.4
MIDW LR LR
comp=Z,10μm,20.0s,MS6.0
MIR Mirnyy 60.95 207 ⇓*i*P **P 16 20 03.8 +2.0**
MIR *e*S **S 16 28 22.0 +4.7**
MIR 16 29 54.0
MIR pmax pmax
comp=Z,216nm,2.0s,mb5.9
MIR smax
comp=N,4μm,14.0s
MIR smax
comp=E,2μm,8.0s
MIR MLR MLR
comp=N,6μm,16.0s,MS6.0
MIR MLR MLR
comp=E,6μm,16.0s,MS6.0
MIR MLR MLR
comp=Z,8μm,16.0s,MS6.0
KAPI Kappang 64.04 281 PFAKE 16 20 30.0 +6.7
KAPI LR LR
comp=Z,8μm,20.0s,MS5.9
DAV Davao City (W) 66.39 295 PFAKE 16 20 50.0 +12
DAV LR LR
comp=Z,2μm,19.0s,MS5.4
DAV Davao City (W) 66.39 295⇑*e*P **P 16 20 36.1 -2.4**
PMSA Palmer Station 70.91 155 P **P 16 21 07.2 +1.3**
comp=Z,5.9nm,0.9s,mb4.5,baz=256,slow=4.2,SNR=2.9
PMSA Palmer Station 70.91 155 P **P 16 21 07.2 +1.3**
PMSA LR LR
comp=Z,7μm,20.0s,MS5.9
MAW Mawson 71.05 201 P **P 16 21 09.0 +2.3**
comp=Z,4.4nm,0.8s,mb4.4,baz=114,slow=7.8,SNR=9.4
MAW Mawson 71.05 201 *e*P **P 16 21 08.8 +2.1**
comp=Z,21nm,1.3s,mb4.9
KKM Kota Kinabalu 73.17 288 PFAKE 16 21 30.0 +10
KKM LR LR
comp=Z,3μm,19.0s,MS5.6
KSM Kuching 75.47 281 *e*P **P 16 21 33.9 +0.2**
comp=Z,12nm,0.9s,mb4.8
KSM LR LR
comp=Z,3μm,20.0s,MS5.5
SYO Syowa Base 75.78 193⇓*e*P **P 16 21 34.0 -0.5**
SYO Syowa Base 75.78 193⇓*i*pP pP 16 21 43.0 -2.4
VNA3 Neumayer Olymp 76.89 176 *e*P **P 16 21 37.6 -3.1**
VNA2 Neumayer--Watz 77.32 177 *e*P **P 16 21 40.5 -2.7**
baz=173,slow=4.4
MAIT Maitri 77.47 183 *e*P **P 16 21 44.9 +0.8**
MAIT *e* 16 22 01.5
NVL N'lazarevskaya 77.48 183 *d i*P **P 16 21 45.8 +1.7**
NVL *e* 16 21 51.2
NVL *e**PP pP 16 22 01.0 +6.0
NVL *e* 16 24 44.6
NVL *i* S S 16 31 37.4 +5.3
NVL *e* 16 32 12.6
NVL *e* 16 39 56.5
NVL pmax pmax
comp=Z,50nm,1.4s,mb5.2
NVL MLR MLR
comp=Z,2μm,19.0s,MS5.5
PAF Port-aux-Franc 79.14 218 PFAKE 16 22 10.0 +16
PAF LR LR
comp=Z,16μm,19.0s,MS6.4
MJAR Matsushiro Arr 79.50 325 P **P 16 21 54.1 -1.5**
comp=Z,1.7nm,0.9s,baz=149,slow=5.4,SNR=5.4
MJAR LR LR 16 53 30.9
comp=Z,2μm,21.1s,MS5.5,baz=110,slow=33
MAJO Matsushiro 79.50 325 *e*P **P 16 21 52.1 -3.5**
MAJO pmax pmax
comp=Z,25nm,1.3s,mb5.0
MAJO MLR MLR
comp=Z,3μm,21.0s,MS5.6
MAJO Matsushiro 79.50 325 *e*P **P 16 21 52.1 -3.5**
comp=Z,25nm,1.3s,mb5.0
MAJO LR LR
comp=Z,3μm,21.0s,MS5.6
MAT Matsushiro 79.50 325 P **P 16 21 53.9 -1.7**
MAT S S 16 31 57.0 +2.5
COCO West Island 79.80 262 PFAKE 16 22 10.0 +12
COCO LR LR
comp=Z,8μm,20.0s,MS6.1
SSLB Suanglung 80.53 305 *e*P **P 16 21 59.2 -2.2**
comp=Z,9.8nm,0.6s,mb4.9
YHNB Yeheng 80.81 306 PFAKE 16 22 10.0 +7.1
YHNB LR LR
comp=Z,2μm,21.0s,MS5.4
TATO Taipei 80.94 307 PFAKE 16 22 10.0 +6.4
TATO LR LR
comp=Z,2μm,21.0s,MS5.5
PLCA Paso Flores 81.41 133 P **P 16 22 06.1 +0.1**
comp=Z,6.1nm,1.0s,mb4.5,baz=194,slow=6.0,SNR=5.4
PLCA LR LR 16 50 41.0
comp=Z,7μm,20.6s,MS6.0,baz=237,slow=30
PLCA Paso Flores 81.41 133 *e*P **P 16 22 05.6 -0.5**
PLCA pmax pmax
comp=Z,16nm,1.1s
PLCA MLR MLR
comp=Z,8μm,20.0s
PLCA Paso Flores 81.41 133 *e*P **P 16 22 05.5 -0.5**
comp=Z,16nm,1.1s,mb4.9
PLCA LR LR
comp=Z,8μm,20.0s,MS6.1
ERM Erimo 81.79 332 PFAKE 16 22 20.0 +12
ERM LR LR
comp=Z,6μm,20.0s,MS6.0
YUK Yuzh-Kuril'sk 82.46 334 *i*P **P 16 22 03.5 -7.7**
YUK *i* S S 16 32 30.8 +5.8
YUK *e*SS SS 16 37 44.0 -3.4
YUK pmax pmax
comp=Z,870nm,2.0s,mb6.3
YUK pmax pmax
comp=Z,172nm,2.0s,mb5.6
YUK smax
comp=N,720nm,3.0s
YUK smax
comp=E,190nm,3.0s
QZH Quanzhou 82.91 305⇑*i*P **P 16 22 12.6 -1.4**
QZH S S 16 32 27.0 -3.4
QZH LR LR
comp=N,2μm,17.4s,MS5.7
QZH LR LR
comp=E,2μm,17.2s,MS5.7
QZH LR LR
comp=Z,2μm,22.0s,MS5.5
ASAJ Asahikawa 83.77 332 P **P 16 22 18.1 +0.1**
comp=Z,6.9nm,0.7s,mb4.9,baz=211,slow=5.0,SNR=9.3
ASAJ Asahikawa 83.77 332 *e*P **P 16 22 18.4 +0.4**
comp=Z,100nm,2.0s,mb5.6
SSE Sheshan 85.17 311 P **P 16 22 24.5 -0.9**
SSE PP PP 16 25 45.6 +2.1
SSE S S 16 32 52.6 -0.2
SSE pmax pmax
comp=Z,28nm,0.7s,mb5.5
SSE pmax pmax
comp=Z,340nm,8.3s
SSE LR LR
comp=N,650nm,22.5s,MS5.2
SSE LR LR
comp=E,770nm,22.4s,MS5.2
SSE LR LR
comp=Z,1μm,19.4s,MS5.4
GZH Guangzhou 85.52 301 P **P 16 22 28.3 +1.0**
GZH S S 16 32 54.8 -1.8
GZH LR LR
comp=N,440nm,17.1s,MS5.2
GZH LR LR
comp=E,720nm,19.6s,MS5.2
GZH LR LR
comp=Z,2μm,18.6s,MS5.4
KSRS Korea Array 85.54 320 P **P 16 22 26.2 -0.8**
comp=Z,1.0nm,0.7s,mb4.2,baz=141,slow=4.6,SNR=6.2
KSRS LR LR 16 55 37.3
comp=Z,1μm,20.8s,MS5.3,baz=130,slow=32
KULM Kulim 85.62 279 P **P 16 22 28.1 0.0**
KULM LR LR
comp=Z,5μm,21.0s,MS5.9
QIZ Qiongzhong 85.76 295 P **P 16 22 28.0 -0.6**
QIZ pP pP 16 22 36.9 -2.8
QIZ sP sP 16 22 43.8 +0.1
QIZ PP PP 16 25 49.9 +1.5
QIZ S S 16 32 56.4 -2.7
QIZ sS sS 16 33 12.8 -4.6
QIZ LR LR
comp=N,1μm,20.0s,MS5.4
QIZ LR LR
comp=E,800nm,20.3s,MS5.4
QIZ LR LR
comp=Z,900nm,26.4s
QIZ Qiongzhong 85.76 295 PFAKE 16 22 40.0 +11
QIZ LR LR
comp=Z,2μm,19.0s,MS5.5
YSS Yuzh-Sakhalins 86.09 334 *αe*P **P 16 22 30.0 +0.5**
YSS *e**PP pP 16 22 44.5 +3.9
YSS *e*S S 16 32 55.0 -6.1
YSS *e*PPS 16 34 08.0
YSS pmax pmax
comp=Z,260nm,2.0s,mb6.1
YSS pmax pmax
comp=E,130nm,1.9s
YSS MLR MLR
comp=N,2μm,19.0s,MS5.7
YSS MLR MLR
comp=Z,3μm,19.0s,MS5.7
YSS MLR MLR
comp=E,2μm,18.0s,MS5.7
YSS Yuzh-Sakhalins 86.09 334 *e*P **P 16 22 30.1 +0.6**
comp=E,168nm,1.6s,mb6.0
YSS LR LR
comp=Z,2μm,20.0s,MS5.5
SAO San Andreas Ge 86.20 42 PFAKE 16 22 40.0 +10
SAO LR LR
comp=Z,8μm,19.0s,MS6.1
INCN Inchon 86.28 319 PFAKE 16 22 40.0 +9.3
INCN LR LR
comp=Z,2μm,19.0s,MS5.5
MCCM Marconi Confer 86.38 40 PFAKE 16 22 40.0 +8.8
MCCM LR LR
comp=Z,5μm,19.0s,MS6.0
MONP Monument Peak 86.58 48⇑P **P 16 22 33.0 +0.7**
baz=87
HOPS Hopland 86.88 40 PFAKE 16 22 40.0 +6.4
HOPS LR LR
comp=Z,7μm,20.0s,MS6.1
EDW2 Edwards Air Fo 86.94 45⇑P **P 16 22 33.6 -0.4**
baz=87,SNR=8.7
PET Petropavlovsk 86.94 346 PFAKE 16 22 40.0 +6.5
PET LR LR
comp=Z,4μm,20.0s,MS5.8
PFO Pinyon Flat Ob 87.03 47 *e*P **P 16 22 33.0 -1.5**
PFO pmax pmax
comp=Z,94nm,2.3s,mb5.6
PFO MLR MLR
comp=Z,8μm,19.0s,MS6.1
PFO Pinyon Flat Ob 87.03 47 *e*P **P 16 22 33.0 -1.5**
comp=Z,94nm,2.3s,mb5.6
PFO LR LR
comp=Z,8μm,19.0s,MS6.1
ISA Isabella 87.17 45⇑P **P 16 22 34.7 -0.4**
baz=87,SNR=11
ISA Isabella 87.17 45 *e*P **P 16 22 34.8 -0.3**
ISA pmax pmax
comp=Z,138nm,1.9s,mb5.9
ISA Isabella 87.17 45 *e*P **P 16 22 34.8 -0.4**
comp=Z,138nm,1.9s,mb5.9
PETK Petropavlovsk- 87.22 345 P **P 16 22 34.3 -0.6**
comp=Z,9.2nm,0.9s,mb5.0,baz=119,slow=6.9,SNR=8.4
NJ2 Nanjing 87.30 311 *e*P **P 16 22 37.8 +2.0**
NJ2 pP pP 16 22 44.2 -2.7
NJ2 sP sP 16 22 46.8 -4.1
NJ2 S S 16 33 14.5 +1.0
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
NJ2 pmax pmax
comp=Z,450nm,10.2s
NJ2 LR LR
comp=N,1μm,22.5s,MS5.3
NJ2 LR LR
comp=E,690nm,25.7s,MS5.3
NJ2 LR LR
comp=Z,1μm,26.3s,MS5.2
LRMC Laurel Mountai 87.52 45⇑P **P 16 22 37.0 +0.2**
baz=88,SNR=9.2
PAYG Puerto Ayora 87.52 89 PFAKE 16 22 50.0 +13
PAYG LR LR
comp=Z,5μm,21.0s,MS5.9
BELC Belle Mtn. Jos 87.57 47⇑P **P 16 22 37.9 +0.8**
baz=88,SNR=6.0
BC3 Big Chuckawall 87.69 48 P **P 16 22 38.1 +0.5**
baz=88,SNR=12
CMB Columbia Colle 87.69 42 *e*P **P 16 22 36.9 -0.7**
CMB pmax pmax
comp=Z,38nm,1.5s,mb5.4
CMB MLR MLR
comp=Z,8μm,19.0s,MS6.1
CMB Columbia Colle 87.69 42 *e*P **P 16 22 36.9 -0.7**
comp=Z,38nm,1.5s,mb5.4
CMB LR LR
comp=Z,8μm,19.0s,MS6.1
GLA Glamis 87.69 48 *e*P **P 16 22 37.6 -0.1**
GLA pmax pmax
comp=Z,325nm,2.5s,mb6.1
GLA Glamis 87.69 48 *e*P **P 16 22 37.6 -0.1**
comp=Z,325nm,2.5s,mb6.1
GSC Goldstone 87.94 46⇑P **P 16 22 38.7 -0.1**
baz=88,SNR=7.3
GSC Goldstone 87.94 46 *e*P **P 16 22 38.5 -0.3**
GSC pmax pmax
comp=Z,128nm,1.9s,mb5.8
GSC Goldstone 87.94 46 *e*P **P 16 22 38.5 -0.3**
comp=Z,128nm,1.9s,mb5.8
MPMC Manual Prospec 88.03 45 P **P 16 22 39.3 +0.1**
baz=88,SNR=15
LCO Las Campanas 88.05 123 PFAKE 16 22 50.0 +10
LCO LR LR
comp=Z,6μm,20.0s,MS6.0
SDPT Sand Point 88.07 10 *e*P **P 16 22 39.0 +0.1**
comp=Z,165nm,1.8s,mb6.0
DAC Darwin (Calif) 88.11 45 PFAKE 16 22 50.0 +10
DAC LR LR
comp=Z,6μm,19.0s,MS6.0
IRM Iron Mountain 88.21 47⇓P **P 16 22 40.1 -0.1**
baz=88,SNR=19
GMRC Granite Mounta 88.30 47⇑P **P 16 22 41.0 +0.5**
baz=88,SNR=7.7
WDC Whiskeytown Da 88.30 39 *e*P **P 16 22 39.6 -0.8**
WDC pmax pmax
comp=Z,76nm,1.8s,mb5.6
WDC MLR MLR
comp=Z,5μm,20.0s,MS5.9
WDC Whiskeytown Da 88.30 39 *e*P **P 16 22 39.6 -0.8**
comp=Z,76nm,1.8s,mb5.6
WDC LR LR
comp=Z,5μm,20.0s,MS5.9
TRQA Tornquist 88.31 135 P **P 16 22 42.3 +1.5**
comp=Z,41nm,1.5s,mb5.4
TRQA LR LR
comp=Z,4μm,20.0s,MS5.8
Z13A Yuma Proving G 88.54 49⇑P **P 16 22 42.0 +0.3**
baz=89,SNR=8.7
WAKR Walker 88.55 42 *e*P **P 16 22 41.3 -0.4**
comp=Z,174nm,2.1s,mb6.0
TUQ Turquoise Moun 88.56 46⇓P **P 16 22 42.4 +0.6**
baz=89,SNR=6.1
GRAC Grapevine Rang 88.73 44⇑P **P 16 22 42.6 +0.1**
baz=89,SNR=7.6
Y13A Salome 88.82 48⇑P **P 16 22 42.4 -0.7**
baz=89,SNR=5.2
LDFC Landfair 88.83 47 *e*P **P 16 22 41.8 -1.3**
comp=Z,71nm,1.4s,mb5.8
YBH Yreka Blue Hor 89.03 38 P **P 16 22 43.4 -0.4**
comp=Z,2.1nm,0.7s,mb4.6,baz=157,slow=13,SNR=4.1
YBH Yreka Blue Hor 89.03 38 P **P 16 22 43.4 -0.4**
YBH LR LR
comp=Z,3μm,19.0s,MS5.8
NVAR Mina Array Bea 89.15 43 P **P 16 22 44.1 -0.3**
comp=Z,2.2nm,0.8s,mb4.5,baz=217,slow=7.1,SNR=16
WHN Wuhan 89.34 307 P **P 16 22 46.0 +0.5**
WHN LR LR
comp=N,2μm,18.6s,MS5.8
WHN LR LR
comp=E,2μm,16.9s,MS5.8
WHN LR LR
comp=Z,3μm,17.0s,MS5.8
PAHR Pah Rah Range 89.41 41 *e*P **P 16 22 45.5 -0.2**
comp=Z,41nm,1.9s,mb5.4
V12A Nelson 89.42 46⇓P **P 16 22 44.4 -1.3**
baz=90,SNR=5.8
Y14A Wickenburg 89.43 49⇓P **P 16 22 46.0 +0.1**
baz=90,SNR=5.7
217A Green Valley 89.50 52⇑P **P 16 22 46.3 +0.1**
baz=90,SNR=7.8
HUMO Hull Mountain 89.53 37 *e*P **P 16 22 47.6 +1.5**
comp=Z,40nm,1.6s,mb5.5
HUMO LR LR
comp=Z,3μm,20.0s,MS5.7
TPH Tonopah 89.54 43 PFAKE 16 23 00.0 +14
TPH LR LR
comp=Z,4μm,19.0s,MS5.8
SHPR Sheep Range 89.73 46 *e*P **P 16 22 47.4 +0.2**
comp=Z,90nm,2.0s,mb5.8
S10A Tonopah Range, 89.81 44⇑P **P 16 22 46.9 -0.6**
baz=90,SNR=13
TUC Tucson 89.85 51 *e*P **P 16 22 47.7 -0.2**
TUC pmax pmax
comp=Z,113nm,2.1s,mb5.8
TUC MLR MLR
comp=Z,3μm,19.0s,MS5.8
TUC Tucson 89.85 51 *e*P **P 16 22 47.7 -0.2**
comp=Z,113nm,2.1s,mb5.8
TUC LR LR
comp=Z,3μm,19.0s,MS5.8
Y15A Casa Rosa Ranc 89.87 49⇓P **P 16 22 47.9 0.0**
baz=90,SNR=8.3
MDJ Mudanjiang 89.89 325 P **P 16 22 47.7 0.0**
MDJ pP pP 16 22 54.4 -4.5
MDJ sP sP 16 22 57.0 -5.9
MDJ PP PP 16 26 20.6 -0.6
MDJ S S 16 33 40.0 +2.6
MDJ SS SS 16 39 30.1 -6.3
MDJ pmax pmax
comp=Z,22nm,2.2s,mb5.1
MDJ pmax pmax
comp=Z,350nm,7.5s
MDJ LR LR
comp=N,1μm,19.0s,MS5.4
MDJ LR LR
comp=E,1μm,19.4s,MS5.4
MDJ LR LR
comp=Z,3μm,17.6s,MS5.7
MDJ Mudanjiang 89.89 325 *e*P **P 16 22 47.5 -0.2**
comp=Z,67nm,1.4s,mb5.8
MDJ LR LR
comp=Z,3μm,19.0s,MS5.7
V13A Grand Canyon W 90.03 47⇑P **P 16 22 48.4 -0.2**
baz=90,SNR=10
117A Oracle 90.04 51 P **P 16 22 49.9 +1.1**
baz=90,SNR=7.3
U12A Valley of Fire 90.07 46 P **P 16 22 49.5 +0.7**
baz=90,SNR=5.7
DL2 Dalian 90.11 317⇑P **P 16 22 49.3 +0.4**
DL2 SKS 16 33 19.5
DL2 S S 16 33 43.0 +3.3
DL2 pmax pmax
comp=Z,20nm,1.2s,mb5.3
DL2 pmax pmax
comp=Z,260nm,7.1s
DL2 LR LR
comp=N,620nm,20.9s,MS5.3
DL2 LR LR
comp=E,910nm,20.3s,MS5.3
DL2 LR LR
comp=Z,1μm,21.0s,MS5.4
S11A Rachel 90.13 45⇓P **P 16 22 49.1 +0.1**
baz=90,SNR=5.1
T11A Corn Creek, Al 90.18 45⇓P **P 16 22 49.5 +0.2**
baz=90
W14A Seligman 90.19 48 P **P 16 22 49.9 +0.5**
baz=90,SNR=17
X15A Humboldt 90.27 49⇓P **P 16 22 50.2 +0.5**
baz=90,SNR=8.0
319A Douglas 90.29 53⇓P **P 16 22 49.8 -0.1**
baz=90
HABR Khabarovsk 90.36 331 *de*P **P 16 22 48.7 -1.1**
HABR *e* 16 26 19.9
HABR *e*S SKSac 16 33 12.0 -6.1
HABR 16 33 38.2
HABR *e*SSS 16 43 09.6
HABR pmax pmax
comp=Z,149nm,1.9s,mb6.0
HABR pmax pmax
comp=N,37nm,2.0s
HABR pmax pmax
comp=E,44nm,1.9s
HABR pmax pmax
comp=Z,458nm,2.3s,mb6.4
HABR MLR MLR
comp=Z,1μm,17.0s,MS5.5
Y16A Circle Bar Ran 90.37 50⇓P **P 16 22 51.3 +1.0**
baz=90
U13A Pakoon Wash 90.41 46⇑P **P 16 22 50.7 +0.3**
baz=90,SNR=9.2
MOD Modoc 90.43 39 *e*P **P 16 22 49.1 -1.2**
comp=Z,19nm,1.4s,mb5.2
MOD LR LR
comp=Z,6μm,20.0s,MS6.0
V14A Boquillas Ranc 90.44 47⇑P **P 16 22 50.7 +0.2**
baz=90,SNR=11
118A Homack Ranch, 90.60 51⇓P **P 16 22 52.0 +0.7**
baz=91
S12A Delamar Landin 90.64 45⇓P **P 16 22 52.2 +0.7**
baz=91
Y17A Roosevelt 90.67 50⇑P **P 16 22 52.4 +0.7**
baz=91,SNR=5.8
R11A Troy Canyon, C 90.69 44⇑P **P 16 22 51.3 -0.3**
baz=91
X16A Lo Mia Camp, P 90.73 49⇓P **P 16 22 52.8 +0.9**
baz=91,SNR=8.0
320A Kipp Ranch, An 90.77 53⇑P **P 16 22 52.4 +0.2**
baz=91
COR Corvallis 90.78 36 PFAKE 16 23 00.0 +8.1
COR LR LR
comp=Z,6μm,19.0s,MS6.1
U14A Mt Trumbull 90.89 47 P **P 16 22 53.3 +0.6**
baz=91,SNR=14
SNY Shenyang 91.00 320⇓P **P 16 22 53.7 +0.7**
SNY pmax pmax
comp=Z,28nm,1.5s,mb5.4
TIA Tai'an 91.06 313 *e*P **P 16 22 54.3 +0.9**
TIA pmax pmax
comp=Z,30nm,1.4s,mb5.4
BMN Battle Mountai 91.12 42 *e*P **P 16 22 54.1 +0.5**
BMN pmax pmax
comp=Z,55nm,1.9s,mb5.6
BMN MLR MLR
comp=Z,7μm,19.0s,MS6.1
BMN Battle Mountai 91.12 42 *e*P **P 16 22 54.1 +0.6**
comp=Z,54nm,1.9s,mb5.6
BMN LR LR
comp=Z,7μm,19.0s,MS6.1
V15A Kaibab Nationa 91.14 48 P **P 16 22 54.5 +0.7**
baz=91,SNR=9.0
S13A Holt Ranch, En 91.22 46⇑P **P 16 22 54.8 +0.6**
baz=91
R12A Pony Springs, 91.25 45⇑P **P 16 22 54.8 +0.5**
baz=91
U15A North Rim 91.45 47 P **P 16 22 56.0 +0.8**
baz=92,SNR=12
WUAZ Wupatki 91.46 48 *e*P **P 16 22 55.2 -0.1**
comp=Z,38nm,1.8s,mb5.4
WUAZ LR LR

comp=Z,4µm,20.0s,MS5.9
CCUT Cedar City 91.50 46 *e*P **P 16 22 55.4 0.0**
comp=Z,39nm,1.9s,mb5.4
WVOR Wild Horse Val 91.69 39 *e*P **P 16 22 55.2 -1.0**
WVOR pmax pmax
comp=Z,80nm,2.1s,mb5.7
WVOR MLR MLR
comp=Z,6µm,20.0s,MS6.0
WVOR Wild Horse Val 91.69 39 *e*P **P 16 22 55.2 -0.9**
comp=Z,80nm,2.1s,mb5.7
WVOR LR LR
comp=Z,6µm,20.0s,MS6.0
KDAK Kodiak Island 91.74 13 P **P 16 22 54.2 -1.8**
comp=Z,6.6nm,0.8s,mb5.0,baz=261,slow=3.2,SNR=4.8
KDAK Kodiak Island 91.74 13 P **P 16 22 54.2 -1.8**
KDAK LR LR
comp=Z,3µm,20.0s,MS5.8
Y19A Nutrioso 91.88 51 P **P 16 22 58.0 +0.7**
baz=92,SNR=7.0
P13A Bates Ranch, G 92.33 44 ⇑P **P 16 22 59.4 +0.2**
baz=92
KLR Kul'dur 92.34 330 *e*P **P 16 22 55.4 -3.6**
KLR *e*S SKSac 16 33 27.0 -2.3
KLR *e* 16 33 54.0
KLR pmax pmax
comp=Z,90nm,2.0s,mb5.8
I07A Izee 92.36 38 ⇑P **P 16 22 59.3 0.0**
baz=92
GYA Guiyang 92.41 300 P **P 16 23 01.0 +1.1**
GYA PP PP 16 26 43.5 +2.0
GYA SKS 16 33 30.9
GYA S S 16 34 01.0 -0.2
GYA SS SS 16 40 15.6 +2.2
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,280nm,6.9s
GYA LR LR
comp=N,9µm,21.9s,MS6.2
GYA LR LR
comp=E,4µm,22.8s,MS6.2
GYA LR LR
comp=Z,9µm,23.2s,MS6.1
Y20A Horse Springs, 92.42 51 ⇑P **P 16 22 59.5 -0.3**
baz=92
Q14A Sevier Lake (B 92.47 45 ⇑P **P 16 23 00.2 +0.3**
baz=92
NLWA Neilton Lookou 92.54 33 PFAKE 16 23 10.0 +10
NLWA LR LR
comp=Z,6µm,20.0s,MS6.0
ENH Enshi 92.55 304 *e*P **P 16 23 01.1 +0.6**
comp=Z,64nm,1.4s,mb5.9
ENH LR LR
comp=Z,1µm,20.0s,MS5.4
G06A Carlson Farm, 92.58 36 ⇑P **P 16 22 59.7 -0.5**
baz=93
X20A Quemado 92.73 51 ⇓P **P 16 23 01.5 +0.3**
baz=93
626A Big Bend Ranch 92.79 57 ⇑P **P 16 23 01.2 -0.4**
baz=93
MSU Marysvale 92.84 46 *e*P **P 16 23 02.0 +0.4**
MSU pmax pmax
comp=Z,13nm,1.6s,mb5.1
MSU Marysvale 92.84 46 *e*P **P 16 23 02.0 +0.4**
comp=Z,13nm,1.6s,mb5.1
NNA Nana 92.86 106 PFAKE 16 23 10.0 +7.6
NNA LR LR
comp=Z,4µm,20.0s,MS5.9
Z22A Elephant Butte 92.98 52 ⇑P **P 16 23 02.3 -0.1**
baz=93
TXAR Lajitas Array 93.00 57 P **P 16 23 01.9 -0.6**
comp=Z,2.9nm,1.2s,mb4.6,baz=217,slow=6.1,SNR=9.2
TXAR LR LR 16 57 38.6
comp=Z,5µm,19.4s,MS6.0,baz=265,slow=31
TXAR Lajitas Array 93.00 57 P **P 16 23 01.9 -0.6**
TXAR LR LR 16 57 38.6
526A Mary Lane Ranc 93.11 56 ⇑P **P 16 23 02.8 -0.3**
baz=93
X21A Alamocita Cree 93.14 51 ⇑P **P 16 23 01.6 -1.5**
baz=93
MNTX Cornudas Mount 93.15 54 ⇑P **P 16 23 02.6 -0.6**
baz=93
MNTX Cornudas Mount 93.15 54 *e*P **P 16 23 03.2 0.0**
comp=Z,51nm,2.5s,mb5.5
MNTX LR LR
comp=Z,2µm,20.0s,MS5.6
325A Bean Ranch, Si 93.25 55 ⇑P **P 16 23 02.8 -0.9**
baz=93
G08A Pilot Rock 93.47 37 ⇑P **P 16 23 04.0 -0.3**
baz=94
DUG Dugway 93.52 44 PFAKE 16 23 20.0 +15
DUG LR LR
comp=Z,6µm,19.0s,MS6.1
RSW Rattlesnake Hi 93.91 36 *e*P **P 16 23 05.3 -1.0**
HAWA Hanford 93.93 36 *e*P **P 16 23 06.5 +0.1**
comp=Z,5.0nm,1.0s,mb4.9
HAWA LR LR
comp=Z,5µm,19.0s,MS6.0
CM31 Chiang Mai Arr 94.04 289 P **P 16 23 09.1 +1.5**
CM31 LR LR
comp=Z,690nm,19.0s,MS5.1
CMAR Chiang Mai Arr 94.04 289 P **P 16 23 07.3 -0.2**
comp=Z,0.3nm,0.6s,baz=130,slow=2.8,SNR=3.5
CMAR PP PP 16 26 54.9 +0.5
comp=Z,0.2nm,0.4s,baz=149,slow=3.8,SNR=3.7
BJT Baijiatuau 94.05 315 *e*P **P 16 23 08.1 +1.0**
BJT pmax pmax
comp=Z,14nm,0.9s
BJT MLR MLR
comp=Z,3µm,21.0s
BJT Baijiatuau 94.05 315 *e*P **P 16 23 08.1 +1.0**
comp=Z,14nm,0.9s,mb5.4
BJT LR LR
comp=Z,3µm,21.0s,MS5.7
BJI Beijing 94.05 315 P **P 16 23 07.8 +0.6**
BJI SKS 16 33 40.6
BJI S S 16 34 17.4 +2.3
BJI SS SS 16 40 38.6 +2.1
BJI pmax pmax
comp=Z,14nm,1.7s,mb5.1
BJI pmax pmax
comp=Z,250nm,3.8s
BJI LR LR
comp=N,2µm,19.5s,MS5.7
BJI LR LR
comp=E,2µm,20.4s,MS5.7
BJI LR LR
comp=Z,2µm,36.2s
CHTO Chiang Mai 94.22 289 *e*P **P 16 23 10.1 +1.7**
CHTO pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
CHTO MLR MLR
comp=Z,2µm,19.0s,MS5.7
CHTO Chiang Mai 94.22 289 *e*P **P 16 23 10.1 +1.7**
comp=Z,2.4nm,0.9s,mb4.6
CHTO LR LR
comp=Z,2µm,19.0s,MS5.7
ANMO Albuquerque 94.32 51 P **P 16 23 07.5 -1.0**
comp=Z,0.8nm,0.6s,mb4.3,baz=283,slow=0.3,SNR=6.5
ANMO Albuquerque 94.32 51 P **P 16 23 07.5 -1.0**
ANMO LR LR
comp=Z,4µm,20.0s,MS5.9
MVCO Mesa Verde 94.33 48 PFAKE 16 23 20.0 +11
MVCO LR LR
comp=Z,5µm,20.0s,MS6.0
ETW Entiat 94.38 35 *e*P **P 16 23 09.1 +0.6**
comp=Z,34nm,1.7s,mb5.5
I12A Atlanta 94.51 40 ⇓P **P 16 23 08.8 -0.4**
baz=95
HVU Hansel Valley 94.55 43 *e*P **P 16 23 08.7 -0.7**
HVU pmax pmax
comp=Z,27nm,1.8s,mb5.4
HVU Hansel Valley 94.55 43 *e*P **P 16 23 08.7 -0.7**
comp=Z,27nm,1.8s,mb5.4
KMI Kunming 94.62 297 P **P 16 23 11.4 +1.3**
KMI pP pP 16 23 18.6 -2.7
KMI sP sP 16 23 21.2 -4.1
KMI PP PP 16 27 00.0 +1.2
KMI SKS 16 33 43.0
KMI S S 16 34 20.2 -0.5
KMI sS sS 16 34 30.8 -8.4
KMI SS SS 16 40 48.4 +3.4
KMI pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
KMI pmax pmax
comp=Z,150nm,7.0s
KMI LR LR
comp=N,1µm,19.6s,MS5.6
KMI LR LR
comp=E,2µm,22.0s,MS5.6
KMI LR LR
comp=Z,2µm,14.4s
HLID Hailey 94.75 41 *e*P **P 16 23 09.4 -0.8**
comp=Z,12nm,1.4s,mb5.1
HLID LR LR
comp=Z,4µm,19.0s,MS5.9
J13A Cove Ranch, Pi 94.78 41 ⇓P **P 16 23 10.4 0.0**
baz=95
F10A Beach Ranch, E 94.83 38 ⇑P **P 16 23 09.7 -0.9**
baz=95
TIY Taiyuan 94.94 312 *e*P **P 16 23 12.0 +0.7**
TIY SKS 16 33 46.8
TIY S S 16 34 22.2 -0.8
TIY pmax pmax
comp=Z,330nm,10.0s
TIY LR LR
comp=N,1µm,20.2s,MS5.5
TIY LR LR
comp=E,1µm,20.5s,MS5.5
TIY LR LR
comp=Z,2µm,21.7s,MS5.6
OD2 Odessa Site #2 95.03 36 *e*P **P 16 23 11.2 -0.2**
comp=Z,13nm,1.3s,mb5.2
J14A Carey 95.10 41 ⇑P **P 16 23 12.2 +0.3**
baz=95
HWUT Hardware Ranch 95.14 44 P **P 16 23 11.6 -0.6**
HWUT LR LR
comp=Z,5µm,19.0s,MS6.0
H12A Diamond D Ranc 95.15 40 ⇑P **P 16 23 11.3 -0.7**
baz=95
G12A Big Creek, Yel 95.27 39 ⇑P **P 16 23 12.6 0.0**
baz=95
WRAK Wrangell Islan 95.98 23 PFAKE 16 23 30.0 +14
WRAK LR LR
comp=Z,3µm,19.0s,MS5.7
AHID Auburn Hatcher 96.13 43 PFAKE 16 23 30.0 +13
AHID LR LR
comp=Z,5µm,20.0s,MS6.0
KVTX Kingsville 96.24 62 PFAKE 16 23 30.0 +13
KVTX LR LR
comp=Z,3µm,19.0s,MS5.7
NEW Newport 96.41 36 PFAKE 16 23 30.0 +12
NEW LR LR
comp=Z,6µm,20.0s,MS6.1
JCT Junction City 96.42 58 PFAKE 16 23 30.0 +12
JCT LR LR
comp=Z,7µm,20.0s,MS6.2
MCMT McKenzie Canyo 96.43 40 *e*P **P 16 23 18.5 +0.6**
comp=Z,0.4nm,0.6s
SDCO Great Sand Dun 96.57 49 *e*P **P 16 23 19.0 +0.3**
SDCO LR LR
comp=Z,3µm,19.0s,MS5.8
TPAW Teton Pass 96.66 42 *e*P **P 16 23 17.4 -1.6**
CD2 Chengdu 96.99 302 *e*P **P 16 23 22.0 +1.2**
CD2 PP PP 16 27 20.8 +3.7
CD2 SKS 16 33 52.5
CD2 S S 16 34 36.2 -4.8
CD2 SS SS 16 41 17.6 -0.9
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.8
CD2 pmax pmax
comp=Z,230nm,10.2s
CD2 LR LR
comp=N,2µm,18.0s
CD2 LR LR
comp=Z,2µm,19.0s,MS5.7
BW06 Boulder Array 97.03 44 PFAKE 16 23 30.0 +9.3
BW06 LR LR
comp=Z,5µm,19.0s,MS6.0
PDAR Pinedale Array 97.03 44 P **P 16 23 20.1 -0.6**
comp=Z,0.5nm,0.7s,baz=242,slow=3.2,SNR=4.5
MSO Missoula 97.11 38 PFAKE 16 23 30.0 +9.1
MSO LR LR
comp=Z,4µm,19.0s,MS6.0
LRM Limekiln Ridge 97.27 40 *e*P **P 16 23 21.9 +0.2**
HHC Hu-ho-hao-te 97.34 314 *e*P **P 16 23 23.0 +0.9**
HHC pP pP 16 23 29.5 -3.8
HHC sP sP 16 23 32.2 -5.1
HHC PP PP 16 27 24.9 +5.3
HHC SKS 16 33 58.4
HHC S S 16 34 44.9 +1.4
HHC sS sS 16 34 55.1 -7.0
HHC pmax pmax
comp=Z,26nm,1.0s,mb5.6
HHC pmax pmax
comp=Z,200nm,5.4s
HHC LR LR
comp=N,720nm,15.7s,MS5.4
HHC LR LR
comp=E,810nm,17.8s,MS5.4
HHC LR LR
comp=Z,1µm,19.2s,MS5.3
LPAZ La Paz 97.40 114 P **P 16 23 23.8 +0.8**
comp=Z,0.8nm,0.7s,mb4.2,baz=0.0,slow=4.0,SNR=2.6
LPAZ LR LR 17 00 27.8
comp=Z,1µm,18.8s,MS5.5,baz=179,slow=31
AMTX Amarillo 97.50 54 PFAKE 16 23 30.0 +7.0
AMTX LR LR
comp=Z,4µm,20.0s,MS5.9
BOZ Bozeman (W) 97.61 40 *e*P **P 16 23 21.9 -1.3**
BOZ pmax pmax
comp=Z,4.0nm,1.3s,mb4.8
BOZ MLR MLR
comp=Z,3µm,20.0s,MS5.7
BOZ Bozeman (W) 97.61 40 *e*P **P 16 23 21.9 -1.3**
comp=Z,4.0nm,1.3s,mb4.8
BOZ LR LR
comp=Z,3µm,20.0s,MS5.7
LKWY Lake 97.64 42 PFAKE 16 23 30.0 +6.6
LKWY LR LR
comp=Z,7µm,19.0s,MS6.2
ISCO Idaho Springs 97.68 48 PFAKE 16 23 30.0 +6.3
ISCO LR LR
comp=Z,4µm,20.0s,MS5.9
TGUH Tegucigalpa,Un 97.70 78 PFAKE 16 23 40.0 +16
TGUH LR LR
comp=Z,4µm,20.0s,MS5.9
JTS JuntasAbangare 97.73 83 PFAKE 16 23 40.0 +15
JTS LR LR
comp=Z,3µm,20.0s,MS5.8
HIA Hailar 97.97 324 PFAKE 16 23 30.0 +5.3
HIA LR LR
comp=Z,3µm,20.0s,MS5.8
OTAV Otavalo 98.06 95 PFAKE 16 23 40.0 +14
OTAV LR LR
comp=Z,2µm,20.0s,MS5.5
WALA Waterton Lakes 98.54 37 *e*P **P 16 23 29.2 +1.9**
RLMT Red Lodge 98.61 42 PFAKE 16 23 40.0 +12
RLMT LR LR
comp=Z,6µm,19.0s,MS6.1
CPUP Villa Florida 98.97 128 LR LR 17 02 52.7
comp=Z,2µm,18.5s,MS5.6,baz=194,slow=32
HKT Hockley 99.04 60 PFAKE 16 23 40.0 +10
HKT LR LR
comp=Z,3µm,20.0s,MS5.8
COLA College 99.17 12 PFAKE 16 23 40.0 +10
COLA LR LR
comp=Z,3µm,20.0s,MS5.8
ILAR Eielson Array 99.26 13 PP PP 16 27 31.8 -2.0
comp=Z,0.2nm,0.4s,baz=196,slow=13,SNR=3.1
WMOK Wichita Mounta 99.43 55 PFAKE 16 23 40.0 +8.3
WMOK LR LR
comp=Z,4µm,20.0s,MS5.9
LZH Lanzhou 99.71 306 *e*P Pdif 16 23 33.2 +0.3
LZH pP pP 16 23 41.3 -2.7
LZH sP 16 23 44.5
LZH PP PP 16 27 39.0 +1.2
LZH SKS 16 34 10.0
LZH S S 16 34 58.5 -5.3
LZH sS sS 16 35 14.5 -7.9
LZH SS SS 16 41 56.6 +0.1
LZH pmax pmax
comp=Z,25nm,1.5s,mb5.4
LZH pmax pmax
comp=Z,190nm,7.3s
LZH LR LR
comp=N,2µm,18.5s,MS5.8
LZH LR LR
comp=E,2µm,19.0s,MS5.8
LZH LR LR
comp=Z,2µm,19.5s,MS5.7
TEIG Tepich 99.99 72 PFAKE 16 23 50.0 +16
TEIG LR LR
comp=Z,2µm,20.0s,MS5.7
EGMT Eagleton 100.08 39 PFAKE 16 23 40.0 +5.5
EGMT LR LR
comp=Z,6µm,19.0s,MS6.1
BILL Bilibino 100.26 354 P Pdif 16 23 32.6 -2.8
BILL *e* 16 27 37.6
BILL *e*SS SS 16 41 57.3 -5.7
BILL pmax pmax
comp=Z,4.0nm,1.4s
BILL Bilibino 100.26 354 PFAKE 16 23 40.0 +4.6
BILL LR LR
comp=Z,4µm,20.0s,MS6.0
EGAK Eagle 100.44 15 PFAKE 16 23 50.0 +14
EGAK LR LR
comp=Z,4µm,19.0s,MS6.0
OGNE Ogallala 100.59 48 PFAKE 16 23 50.0 +13
OGNE LR LR
comp=Z,6µm,20.0s,MS6.1
NATX Nacogdoches 100.84 59 PFAKE 16 23 50.0 +12
NATX LR LR
comp=Z,5µm,20.0s,MS6.0
CBKS Cedar Bluff 100.94 51 PFAKE 16 23 50.0 +12
CBKS LR LR
comp=Z,5µm,19.0s,MS6.0
RSSD Black Hills 101.09 45 PFAKE 16 23 50.0 +11
RSSD LR LR
comp=Z,6µm,19.0s,MS6.2
LAO LASA Array 101.25 42 PFAKE 16 23 50.0 +10
LAO LR LR
comp=Z,4µm,19.0s,MS5.9
BCIP Isla Barro Col 101.50 86 PFAKE 16 23 50.0 +9.2
BCIP LR LR
comp=Z,4µm,20.0s,MS5.9
DGAR Diego Garcia 102.60 253 PFAKE 16 24 00.0 +14
DGAR LR LR
comp=Z,3µm,20.0s,MS5.8
YAK Yakutsk 102.62 337 PFAKE 16 24 00.0 +14
YAK LR LR
comp=Z,2µm,20.0s,MS5.7
MIAR Mount Ida 103.02 57 PFAKE 16 24 00.0 +12
MIAR LR LR
comp=Z,4µm,20.0s,MS5.9
KSU1 Kansas State U 103.17 52 PFAKE 16 24 00.0 +12
KSU1 LR LR
comp=Z,4µm,19.0s,MS6.0
DGMT Dagmar 103.39 41 PFAKE 16 24 00.0 +11
DGMT LR LR
comp=Z,3µm,19.0s,MS5.9
ULN Ulaanbaatar 103.95 318 PFAKE 16 24 00.0 +8.3
ULN LR LR
comp=Z,2µm,20.0s,MS5.7
VBMS Vicksburg 104.12 61 PFAKE 16 24 00.0 +7.5
VBMS LR LR
comp=Z,3µm,19.0s,MS5.8
SONM Songino Array 104.31 318 PP PP 16 28 14.0 +1.8
comp=Z,0.3nm,0.5s,baz=131,slow=4.4,SNR=4.2
SONM PKKP PKKPbc 16 39 46.2 +5.2
comp=Z,0.3nm,0.7s,baz=300,slow=4.3,SNR=3.5
CAL Calcutta 104.67 288 *ex* x 16 28 19.1
CAL *ex* x 16 34 23.8
ECSD EROS Data Cent 105.47 48 PFAKE 16 28 20.0 +8.3
ECSD LR LR
comp=Z,6µm,19.0s,MS6.2
LSA Lhasa 105.80 295 PFAKE 16 28 20.0 +7.2
LSA LR LR
comp=Z,2µm,21.0s,MS5.5
BRAL Brewton 106.16 63 PFAKE 16 28 20.0 +6.6
BRAL LR LR
comp=Z,2µm,19.0s,MS5.6
CCM Cathedral Cave 106.35 55 PFAKE 16 28 20.0 +6.5
CCM LR LR
comp=Z,4µm,20.0s,MS5.9
RER Riviere de l'E 106.50 232 PFAKE 16 28 30.0 +16
RER LR LR
comp=Z,4µm,20.0s,MS6.0
LRAL Lakeview Retre 107.13 62 PFAKE 16 28 30.0 +15
LRAL LR LR
comp=Z,2µm,20.0s,MS5.7
SPB Sao Paulo 107.28 133 PFAKE 16 28 30.0 +14
SPB LR LR
comp=Z,5µm,20.0s,MS6.0
TLY Talaya 107.79 320 PFAKE 16 28 30.0 +14
TLY LR LR
comp=Z,3µm,19.0s,MS5.8
FFC Flin Flon 107.83 36 PFAKE 16 28 30.0 +14
FFC LR LR
comp=Z,5µm,19.0s,MS6.1
MTDJ Mount Denham 107.89 79 PFAKE 16 28 30.0 +13
MTDJ LR LR
comp=Z,5µm,20.0s,MS6.0
WVT Waverly 107.91 58 PFAKE 16 28 30.0 +14
WVT LR LR
comp=Z,3µm,20.0s,MS5.8
AGMN Agassiz Nation 108.10 44 PFAKE 16 28 30.0 +14
AGMN LR LR
comp=Z,4µm,19.0s,MS6.0
HDIL Hopedale 108.83 54 PFAKE 16 28 30.0 +12
HDIL LR LR
comp=Z,2µm,19.0s,MS5.8
SDV Santo Domingo 109.19 91 PFAKE 16 28 30.0 +10
SDV LR LR
comp=Z,1µm,19.0s,MS5.5
JFWS Jewell Farm 109.21 51 PFAKE 16 28 30.0 +11
JFWS LR LR
comp=Z,3µm,20.0s,MS5.8
DWPF Disney 109.22 68 PFAKE 16 28 30.0 +11
DWPF LR LR
comp=Z,2µm,20.0s,MS5.6
TIXI Tiksi 109.67 344 PFAKE 16 28 30.0 +11
TIXI LR LR
comp=Z,3µm,19.0s,MS6.0
WCI Wyandotte Cave 109.92 57 PFAKE 16 28 30.0 +10
WCI LR LR
comp=Z,6µm,20.0s,MS6.2
GOGA Godfrey 109.95 63 PFAKE 16 28 30.0 +10
GOGA LR LR
comp=Z,3µm,20.0s,MS5.9
TRIS Tristan da Cun 110.14 168 PFAKE 16 28 30.0 +9.1
TRIS LR LR
comp=Z,3µm,20.0s,MS5.9
EYMN Ely 110.57 46 PFAKE 16 28 30.0 +8.9
EYMN LR LR
comp=Z,3µm,20.0s,MS5.9
GTBY Guantanamo Bay 110.70 79 PFAKE 16 28 30.0 +7.8
GTBY LR LR
comp=Z,2µm,20.0s,MS5.7
COWI Conover 111.27 48 PFAKE 16 28 30.0 +7.5
COWI LR LR
comp=Z,5µm,19.0s,MS6.1
NHSC New Hope 112.32 64 PFAKE 16 28 40.0 +15
NHSC LR LR
comp=Z,2µm,20.0s,MS5.7
ACSO Alum Creek Sta 113.09 56 PFAKE 16 28 40.0 +14
ACSO LR LR
comp=Z,8µm,20.0s,MS6.3
AAM Ann Arbor 113.41 54 PFAKE 16 28 40.0 +13
AAM LR LR
comp=Z,3µm,19.0s,MS5.9
SDDR Presa de Saban 113.48 82 PFAKE 16 28 40.0 +12
SDDR LR LR
comp=Z,2µm,20.0s,MS5.7
ABPO Ambohimpanom 113.55 227 PFAKE 16 28 40.0 +12
ABPO LR LR
comp=Z,4µm,19.0s,MS6.0
GLMI Grayling 113.71 51 PFAKE 16 28 40.0 +13
GLMI LR LR
comp=Z,4µm,20.0s,MS6.0
BLA Blacksburg 113.77 60 PFAKE 16 28 40.0 +12
BLA LR LR
comp=Z,3µm,20.0s,MS5.9
SUR Sutherland 113.78 197 PFAKE 16 28 40.0 +12
SUR LR LR
comp=Z,9µm,19.0s,MS6.4
WMQ Urumqi 114.24 308 *e*P Pdif 16 24 41.0 +3.5
WMQ PP PP 16 29 31.0 +6.6
WMQ SKS SKSdf 16 35 39.0 +1.5
WMQ S Sdif 16 37 04.0 -1.0
WMQ S SS 16 45 15.0 +1.5
WMQ AMB AMB
comp=Z,240nm,10.0s
WMQ LR LR
comp=N,790nm,25.0s,MS5.4
WMQ LR LR
comp=E,770nm,25.0s,MS5.4

WMQ LR LR
comp=Z,1µm,25.0s,MS5.4
CNNC Cliffs of the 114.91 63 PFAKE 16 28 40.0 +10
CNNC LR LR
comp=Z,2µm,19.0s,MS5.7
MCWV Mont Chateau 115.11 58 PFAKE 16 28 40.0 +10
MCWV LR LR
comp=Z,6µm,20.0s,MS6.2
ERPA Erie 115.88 55 PFAKE 16 28 40.0 +8.6
ERPA LR LR
comp=Z,3µm,20.0s,MS5.9
BOSA Boshof 116.03 203 PFAKE 16 28 40.0 +7.7
BOSA LR LR
comp=Z,456nm,19.0s,MS5.1
CBN Corbin 116.38 60 PFAKE 16 28 40.0 +7.5
CBN LR LR
comp=Z,2µm,20.0s,MS5.7
SJG San Juan 117.43 85 PFAKE 16 28 50.0 +15
SJG LR LR
comp=Z,2µm,20.0s,MS5.6
GRGR Grenville 118.44 93 PFAKE 16 28 50.0 +13
GRGR LR LR
comp=Z,1µm,19.0s,MS5.6
BINY Binghamton 118.72 56 PFAKE 16 28 50.0 +13
BINY LR LR
comp=Z,7µm,20.0s,MS6.3
MK31 Makanchi Array 118.81 309 *e*PKIKP PKPdf 16 28 36.3 -0.6
MKAR Makanchi Array 118.81 309 PKP PKPdf 16 28 36.1 -0.8
comp=Z,0.5nm,0.5s,baz=194,slow=1.0,SNR=8.7
ZALV Zalesovo Beam 119.20 318 PKP PKPdf 16 28 36.4 -1.0
comp=Z,0.4nm,0.5s,baz=158,slow=1.6,SNR=3.1
LBTB Lobatse 119.23 204 PFAKE 16 28 50.0 +11
LBTB LR LR
comp=Z,1µm,21.0s,MS5.5
FDF Fort de France 120.12 91 PFAKE 16 28 50.0 +10
FDF LR LR
comp=Z,1µm,19.0s,MS5.5
NVS Novosibirsk 120.32 319 *e*PKIKP PKPdf 16 28 37.5 -2.0
NVS *e* 16 35 31.3
NVS pmax pmax
comp=E,20nm,2.0s
LONY Lake Ozonia 120.41 54 PFAKE 16 28 50.0 +10
LONY LR LR
comp=Z,3µm,19.0s,MS5.9
NCB Newcomb 120.47 55 PFAKE 16 28 50.0 +10
NCB LR LR
comp=Z,3µm,19.0s,MS6.0
BBGH Gun Hill 120.72 93 PFAKE 16 28 50.0 +8.5
BBGH LR LR
comp=Z,2µm,21.0s,MS5.8
ANWB Willy Bob 120.94 87 PFAKE 16 28 50.0 +8.1
ANWB LR LR
comp=Z,2µm,20.0s,MS5.7
NIL Nilore 121.34 293 PFAKE 16 28 50.0 +7.8
NIL LR LR
comp=Z,113nm,21.0s,MS4.5
LBNH Lisbon 122.14 55 PFAKE 16 28 50.0 +6.6
LBNH LR LR
comp=Z,4µm,19.0s,MS6.1
KURK Kurchatov 122.15 313 PKP PKPdf 16 28 42.0 -1.3
comp=Z,1.4nm,0.6s,baz=110,slow=1.9,SNR=15
KURK Kurchatov 122.15 313 *e*PKPdf PKPdf 16 28 42.8 -0.4
KURK LR LR
comp=Z,2µm,19.0s,MS5.8
KURK Kurchatov 122.15 313 P PKPdf 16 28 43.2 0.0
SNR=6.3
TKM2 Tokmak 2 122.33 304 *e*PKIKP PKPdf 16 28 43.6 -0.2
TKM2 MLR MLR
comp=Z,2µm,21.0s,MS5.7
KZA Kyzart 122.36 303 *e*PKPdf PKPdf 16 28 44.9 +1.0
AAK Ala-Archa 123.04 303 *c i*PKIKP PKPdf 16 28 44.6 -0.6
AAK MLR MLR
comp=Z,803nm,22.0s,MS5.3
AAK Ala-Archa 123.04 303 PFAKE 16 29 00.0 +15
AAK LR LR
comp=Z,3µm,20.0s,MS5.9
AML Almayashu 123.49 302 *e*PKPdf PKPdf 16 28 45.9 -0.2
AML LR LR
comp=Z,2µm,20.0s,MS5.8
EKS2 Erkin-Say 123.56 303 *e*PKPdf PKPdf 16 28 42.6 -3.6
EKS2 LR LR
comp=Z,2µm,20.0s,MS5.8
BBSR BB Station 124.20 70 PFAKE 16 29 00.0 +12
BBSR LR LR
comp=Z,2µm,19.0s,MS5.7
PKME Peaks-Kenny Pk 124.20 54 PFAKE 16 29 00.0 +13
PKME LR LR
comp=Z,3µm,19.0s,MS6.0
KBL Kabul 124.93 292 *e*PKIKP PKPdf 16 28 50.2 +1.1
KKAR Karatay Array 126.00 303 *e*PKIKP PKPdf 16 28 51.2 +0.4
TSUM Tsumeb 127.18 198 PFAKE 16 29 10.0 +16
TSUM LR LR
comp=Z,6µm,19.0s,MS6.3
BVAR Borovoye Array 127.54 315 PKP PKPdf 16 28 52.7 -0.8
comp=Z,1.0nm,0.5s,baz=90,slow=1.5,SNR=11
BRVK Borovoye 127.60 315 *c i*PKIKP PKPdf 16 28 52.9 -0.7
BRVK MLR MLR
comp=Z,1µm,21.0s,MS5.6
BRVK Borovoye 127.60 315 *e*PKPdf PKPdf 16 28 52.5 -1.0
BRVK LR LR
comp=Z,2µm,20.0s,MS5.7
BRVK Borovoye 127.60 315 P PKPdf 16 28 53.5 0.0
SNR=6.6
RCBR Riachuelo 127.84 129 PFAKE 16 29 10.0 +15
RCBR LR LR
comp=Z,5µm,20.0s,MS6.2
SHEL Horse Pasture 131.89 170 PFAKE 16 29 20.0 +17
SHEL LR LR
comp=Z,4µm,20.0s,MS6.1
KBS Kingsbay 132.60 357 *e*SS SS 16 49 07.7 +3.7
KBS AMS AMS 17 25 27.8
comp=Z,977nm,20.0s,MS5.5
KBS Kingsbay 132.60 357 PFAKE 16 29 10.0 +7.6
KBS LR LR
comp=Z,1µm,20.0s,MS5.6
KMBO Kilima Mbogo 133.37 232 PKP PKPdf 16 29 06.3 +0.5
comp=Z,0.7nm,0.4s,baz=181,slow=24,SNR=4.5
KMBO Kilima Mbogo 133.37 232 *i*PKIKP PKPdf 16 29 08.1 +2.3
KMBO Kilima Mbogo 133.37 232 *e*PKPdf PKPdf 16 29 07.8 +2.0
KMBO *e*SKP 16 32 37.5
KMBO LR LR
comp=Z,5µm,20.0s,MS6.2
ARU Arti 134.29 320 *i*PKIKP PKPdf 16 29 06.1 0.0
ARU 16 31 33.9
ARU Arti 134.29 320 *e*PKPdf PKPdf 16 29 03.1 -3.0
ARU *e*SKP 16 32 39.1
ARU LR LR
comp=Z,2µm,19.0s,MS5.8
VAN Vannovskaya 134.32 294 *e*PKIKP PKPdf 16 29 06.8 0.0
SOKR Solikamsk 134.65 324 *i*PKIKP pPKPdf 16 29 21.0 +2.8
SOKR pmax pmax
comp=Z,10.0nm,0.8s
MBAR Mbarara 137.94 225 PFAKE 16 29 30.0 +16
MBAR LR LR
comp=Z,872nm,22.0s,MS5.5
LVZ Lovozero 139.24 342 PFAKE 16 29 30.0 +15
LVZ LR LR
comp=Z,2µm,19.0s,MS5.9
KEV Kevo 139.54 347 PFAKE 16 29 30.0 +15
KEV LR LR
comp=Z,3µm,20.0s,MS6.0
ARCES ARCESS Array B 140.01 348 PKP PKPdf 16 29 13.8 -2.6
comp=Z,2.5nm,0.7s,baz=46,slow=3.5,SNR=6.4
ARCES ARCESS Array B 140.01 348 PKP PKPdf 16 29 13.8 -2.6
JMIC Jan Mayen 140.33 5 *e*PKPdf PKiKP 16 29 24.9 +5.4
JMIC *e*SS SS 16 50 36.7 +0.6
KTK1 Kautokeino 140.87 348 *e* PKPdf 16 29 04.8 -13
TRO Tromso 140.97 351 *e*PKPdf PKiKP 16 29 27.9 +7.1
TRO *e*PP PP 16 32 22.5 +3.2
TRO *e*SS SS 16 50 46.7 +3.0
KLMR Klimovskoe 142.09 331 *e*PKIKP PKPdf 16 29 18.3 -2.0
KLMR pmax pmax
comp=Z,33nm,1.7s
KLMR MLR MLR
comp=Z,3µm,23.0s,MS5.9
MAK Makhachkala 142.74 300 *i*PKHKP PKPpre 16 29 16.4
JOF Joensuu 143.79 338 *e*PKIKP PKPdf 16 29 25.7 +2.4
JOF Joensuu 143.79 338 *e*pkp PKPdf 16 29 25.7 +2.4
BORG Borgarnes 143.97 17 PFAKE 16 29 30.0 +6.5
BORG LR LR
comp=Z,3µm,20.0s,MS6.0
DGRG David-gareji 144.37 298 P PKPdf 16 29 23.0 -2.0
BHD Baghdad 144.59 284 *i* x PKPdf 16 29 23.0 -2.6
MTA Mtatsminda 144.80 298 P PKPdf 16 29 24.9 -0.8
TBLG Delisi 144.84 299 PKIKP PKPdf 16 29 26.0 +0.2
TBLG Delisi 144.84 299 P PKPdf 16 29 26.0 +0.2
GNI Garni 144.87 296 *e*P PKPdf 16 29 25.6 -0.2
GNI Garni 144.87 296 *c i*PKIKP PKPdf 16 29 26.0 +0.1
GNI MLR MLR
comp=Z,998nm,21.0s
GNI Garni 144.87 296 *e*PKPdf PKPdf 16 29 25.5 -0.3
GNI LR LR
comp=Z,2µm,20.0s,MS5.8
VRHR Novokhopersk 145.28 315 *e*PKIKP PKPdf 16 29 25.5 -0.7
VRHR pmax pmax
comp=Z,60nm,1.7s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
GOR Gori 145.29 299 P PKPbc 16 29 27.6 +1.2
ZEI Tsey 145.40 300 *i*PKIKP PKPab 16 29 30.7 +3.8
ZEI pmax pmax
comp=Z,276nm,1.9s
CLDR Caldiran 145.50 294 *e*P PKPdf 16 29 26.6 -0.4
MOS Moscow 145.59 325 *e*PKP2 PKPdf 16 29 24.1 -2.5
MOS pmax pmax
comp=Z,577nm,2.0s
MOS pmax pmax
comp=Z,1µm,2.1s
CUKT Cukurca 145.67 291 *e*P PKPdf 16 29 27.4 0.0
GOF Gofitskoye 145.76 305 *e*PKHKP PKPpre 16 29 13.5
GOF pmax pmax
comp=Z,100nm,1.7s
VANB Van 145.90 293 *e*P PKPdf 16 29 28.0 +0.3
KAF Kangasniemi 145.94 340 *e*PKP2 PKPdf 16 29 26.4 -0.6
KAF Kangasniemi 145.94 340 *e*pkp PKPdf 16 29 26.4 -0.6
KARS Kars 146.13 297 *e*P PKPdf 16 29 29.8 +1.8
KIV Kislovodsk 146.16 303 *i*PKP2 PKPab 16 29 29.2 -0.5
KIV pmax pmax
comp=Z,54nm,2.1s
KIV Kislovodsk 146.16 303 *e*PKPdf PKPdf 16 29 29.1 +1.1
KIV LR LR
comp=Z,3µm,20.0s,MS6.0
AGRB Hanur-Agry 146.22 295 *e*P PKPdf 16 29 30.8 +2.6
OBN Obninsk 146.43 324 *c i*PKP2 PKPab 16 29 29.1 -1.3
OBN *e* 16 32 58.1
OBN *e*SS SS 16 51 40.2 -7.1
OBN pmax pmax
comp=Z,129nm,1.7s
OBN Obninsk 146.43 324 *e*PKPdf PKPdf 16 29 28.6 +0.6
OBN LR LR
comp=Z,3µm,20.0s,MS6.1
VOR Voronezh 146.48 317 *e*PKIKP PKPdf 16 29 27.0 -1.2
VOR pmax pmax
comp=Z,500nm,2.0s
FINES FINESS Array B 146.53 339 PKPbc PKPbc 16 29 27.7 -1.9
comp=Z,16nm,0.7s,baz=31,slow=2.8,SNR=24
FINES FINESS Array B 146.53 339 PKPbc PKPdf 16 29 27.7 -0.4
VSR Storozhevoye 146.69 316 *e*PKP2 PKPdf 16 29 29.5 +0.9
VSR pmax pmax
comp=Z,530nm,1.6s
VSR pmax pmax
comp=N,40nm,1.8s
VSR pmax pmax
comp=E,220nm,2.2s
NSS Namsos 146.70 352 *e*PKPdf PKPab 16 29 31.9 +0.8
NSS Namsos 146.70 352 *e*P PKPab 16 29 31.8 +0.6
VORD Divnogorie 146.71 316 *e*PKP2 PKPdf 16 29 29.5 +0.8
VORD pmax pmax
comp=Z,550nm,2.3s
VORD pmax pmax
comp=N,120nm,2.5s
VORD pmax pmax
comp=E,70nm,1.4s
BCA Borcka 147.19 298 *e*P PKPdf 16 29 31.2 +1.4
EZM Erzurum 147.47 295 *e*P PKPab 16 29 35.0 0.0
BINT Bingol 148.17 294 *e*P PKPab 16 29 36.4 -1.4
SOC Sochi 148.34 303 *c i*PKP2 PKPbc 16 29 34.6 -0.5
SOC *e* 16 33 12.3
SOC pmax pmax
comp=Z,108nm,1.8s
VSU Vasula 148.59 335 *c i*PKP2 PKPbc 16 29 34.7 -0.5
GUMT Gumushane 148.88 297 *e*P PKPbc 16 29 38.2 +1.7
EZC Erzincan 149.02 295 *e*P PKPbc 16 29 39.2 +2.3
PTK Pertek 149.02 294 *e*P PKPbc 16 29 37.3 +0.3
MOL Molde 149.04 355 *e*SS SS 16 52 15.4 -0.2
SVRC Sivrice-ELAZID 149.10 293 *e*P PKPbc 16 29 39.1 +1.9
ESPY Espiye-Giresun 149.41 298 *e*P PKPbc 16 29 36.4 -1.5
ANN Anapa 149.72 305 *i*PKHKP PKPpre 16 29 35.5
ANN pmax pmax
comp=Z,120nm,1.9s
MALT Malatya 149.79 293 *e*P PKPbc 16 29 39.6 +0.7
MALT Malatya 149.79 293 ⇑PKP2 PKPbc 16 29 40.0 +1.1
MALT Malatya 149.79 293 *e*PKPdf PKPdf 16 29 33.9 -0.3
MALT *e*PKPbc PKPbc 16 29 39.8 +0.9
MALT LR LR
comp=Z,3µm,21.0s,MS6.1
MALT Malatya 149.79 293 ⇑*i*P PKPbc 16 29 40.0 +1.1
FOO Floro 150.15 357 *e*PKPdf PKPbc 16 29 41.0 +2.0
NB2 NORSAR Subarra 150.17 351 PKP PKPbc 16 29 38.4 -0.7
baz=17,slow=2.6
NB2 NORSAR Subarra 150.17 351 PKP2 PKPbc 16 29 38.4 -0.7
NB2 NORSAR Subarra 150.17 351 PKPab PKPbc 16 29 38.4 -0.7
NOA NORSAR Array B 150.17 351 PKP PKPdf 16 29 33.0 -1.0
comp=Z,1.4nm,1.1s,baz=21,slow=1.4,SNR=2.6
NOA PKPbc PKPbc 16 29 38.8 -0.3
comp=Z,3.1nm,0.7s,baz=13,slow=4.1,SNR=6.6
MICGM Minsk 150.89 329 *e*PKP PKPbc 16 29 39.0 -2.0
MNK Minsk 150.91 329 *e*PKIKP PKPbc 16 29 39.0 -2.0
MNK *e* 16 33 18.0
NACGM Naroch 151.10 330 *e*PKP PKPbc 16 29 40.0 -1.5
BER Bergen 151.35 357 *e* PKPab 16 29 52.6 +2.5
BER *e*SS SS 16 52 43.1 +1.8
HWQ Hawqa 151.69 284 *e*P PKPbc 16 29 43.7 +0.2
KONO Kongsberg 151.72 352 *e* PKPab 16 29 52.6 +0.9
KONO *e*SS SS 16 52 47.1 +1.6
KONO AMS AMS 17 39 51.4
comp=Z,2µm,19.9s,MS5.8
KONO Kongsberg 151.72 352 PFAKE 16 29 50.0 +14
KONO LR LR
comp=Z,2µm,21.0s,MS6.0
BHL Bhannes 151.90 283 *e*P PKPbc 16 29 44.8 +0.8
KIEV Kiev 152.53 321 *e*PKIKP PKPbc 16 29 42.8 -2.1
KIEV MLR MLR
comp=Z,2µm,20.0s,MS6.0
BRTR Keskin Array B 153.41 296 PKP PKPdf 16 29 38.9 -0.7
comp=Z,0.2nm,0.4s,baz=315,slow=0.8,SNR=3.5
BRTR PKPbc PKPbc 16 29 46.2 -0.9
comp=Z,2.5nm,0.8s,baz=59,slow=0.8,SNR=9.1
LIC Lamto 153.66 164 *e*P PKPab 16 29 53.4 -7.6
comp=Z,90nm,1.6s
KIC Kosan Boka 153.85 164 *e*P PKPbc 16 29 52.0 +3.1
comp=Z,45nm,0.9s
CSS Prodhromos 153.88 285 *e*PKPbc PKPbc 16 29 48.9 +0.5
CSS LR LR
comp=Z,3µm,20.0s,MS6.1
TIC Toumodi 154.06 163 *e*P PKPbc 16 29 52.7 +3.3
comp=Z,11nm,0.2s
DBIC Dimbokro 154.13 164 PKPab PKPab 16 30 02.0 -1.0
comp=Z,10.0nm,1.0s,baz=122,slow=7.7,SNR=5.0
DBIC Dimbokro 154.13 164 PKPab PKPab 16 30 02.0 -1.0
DBIC LR LR
comp=Z,2µm,19.0s,MS5.9
KIS Kishinev 154.62 314 *e*PKP1 PKPbc 16 29 48.0 -1.5
KIS *e*pPKP pPKPab 16 30 08.0 -7.6
KIS Kishinev 154.62 314 *e*PKP2 PKPab 16 30 16.0 +12
KIS Kishinev 154.62 314 *e*PP PP 16 34 00.0 +20
KIS Kishinev 154.62 314 *e*PKIKP PKPdf 16 29 48.0 +7.0
KIS *e* 16 29 56.0
KIS *e* 16 46 43.0
MUD Monsted U'grnd 154.89 351 *i* P PKPab 16 29 56.3 -8.8
MUD
comp=Z,2µm,15.0s
BSD Bornholm Skovb 155.03 343 *i* P PKPab 16 29 59.3 -6.5
BSD
comp=Z,1µm,16.0s
COP Copenhagen 155.07 346 *i*PKP2 PKPab 16 30 01.1 -4.8
COP MLR MLR
comp=Z,820nm,22.0s,MS5.5
COP Copenhagen 155.07 346 *i* P PKPab 16 30 01.1 -4.8
COP
comp=Z,810nm,22.0s
TLCR 155.40 310 ⇑PKP2 PKPab 16 30 07.7 -0.1
TLCR 155.40 310 ⇑*i*P PKPab 16 30 07.7 -0.1
CFR Carcaliu 155.84 311 ⇓PKP2 PKPab 16 30 11.9 +2.3
CFR Carcaliu 155.84 311 ⇓*i*P PKPab 16 30 11.9 +2.3
TIRR Tirgusor 155.95 309 *e*PKP2 PKPab 16 30 07.9 -2.2
TIRR Tirgusor 155.95 309 ⇓*i*P PKPab 16 30 08.3 -1.8
ESK Eskdalemuir 156.20 8 PFAKE 16 29 50.0 +7.1
ESK LR LR
comp=Z,2µm,20.0s,MS6.0
BUR08 Bucovina Ar. S 156.41 319 *e*PKPab PKPab 16 30 11.3 -0.7
BURAR Bucovina Array 156.42 319 ⇑PKP2 PKPab 16 30 11.6 -0.4
BURAR Bucovina Array 156.42 319 ⇑*i*P PKPab 16 30 11.6 -0.4
VRI Vrincioaia 156.43 314 ⇓PKP2 PKPab 16 30 13.0 +0.9
VRI Vrincioaia 156.43 314 ⇓*i*P PKPab 16 30 13.0 +0.9
PLOR Plostina 156.48 314 ⇑PKP2 PKPab 16 30 15.7 +3.3
PLOR Plostina 156.48 314 ⇑*i*P PKPab 16 30 15.7 +3.3
KWP Kalwaria Pacla 156.50 325 PFAKE 16 29 50.0 +6.5
KWP LR LR
comp=Z,3µm,21.0s,MS6.1
CMLA Cha da Macela 156.51 68 PFAKE 16 29 50.0 +6.1
CMLA LR LR
comp=Z,3µm,20.0s,MS6.2
MLR Muntele Rosu 157.09 313 ⇓PKP2 PKPab 16 30 15.5 +0.5
MLR Muntele Rosu 157.09 313 ⇓*i*P PKPab 16 30 15.5 +0.5
KOLS Kolonicke sedl 157.18 324 *e*PKP PKPdf 16 29 43.8 -0.6
KOLS *e* 16 30 15.8
KOLS Kolonicke sedl 157.18 324 *e*PKP PKPdf 16 29 43.8 -0.6
KOLS *e* 16 30 15.8
SULR 157.26 311 ⇑*i*P PKPab 16 30 16.0 +0.2
STHS Stebnicka Huta 157.35 326 *e*PKP2 PKPab 16 30 17.6 +1.6
STHS Stebnicka Huta 157.35 326 *e*PKP PKPab 16 30 17.6 +1.6
UZH Uzhgorod 157.37 324 *e*PKIKP PKPdf 16 29 48.5 +3.9
UZH *e* 16 36 49.3
UZH MLR MLR
comp=E,570nm,21.0s
UZH MLR MLR
comp=Z,810nm,21.0s,MS5.5
OJC Ojcow 157.43 330 *e*PKPdf PKPdf 16 29 45.8 +1.2
OJC *e*PKPab PKPab 16 30 16.8 +0.6
TRPA Tarpa 157.56 322 ⇑*i*P PKPab 16 30 17.4 +0.5
CRVS Cervenica-Dubn 157.60 325 *e*PKP PKPdf 16 29 45.7 +0.8
CRVS *e* 16 30 17.8
CRVS Cervenica-Dubn 157.60 325 *e*PKP PKPdf 16 29 45.7 +0.8
CRVS *e* 16 30 17.8
VOIR 157.66 314 ⇓PKP2 PKPab 16 30 15.5 -2.0
VOIR 157.66 314 ⇓*i*P PKPab 16 30 15.5 -2.0
NIE Niedzica 157.78 328 *e*PKPab PKPab 16 30 17.9 +0.1
DRGR 158.29 319 PKP2 PKPab 16 30 20.7 +0.6
DRGR 158.29 319 ⇑*i*P PKPab 16 30 20.8 +0.7
KECS Kecovo 158.36 326 *e*PKP2 PKPab 16 30 20.7 +0.4
KECS Kecovo 158.36 326 *e*PKP PKPab 16 30 20.7 +0.4
OKC Ostrava-Krasne 158.41 331 *es*PKP 16 30 00.5
OKC *e*PKPAB PKPab 16 30 20.9 +0.4
OKC *ex* x 16 34 28.9
OKC *e*SKKS SKKSac 16 40 43.7 -3.1
OKC *ex* x 16 45 20.4
OKC *ex* x 16 47 18.4
OKC AMS AMS 17 49 40.0
comp=Z,2µm,20.2s
UPC Upice 158.69 335 *e*PKP2 PKPab 16 30 22.5 +0.8
UPC Upice 158.69 335 *e*PKPAB PKPab 16 30 22.5 +0.8
MORC Moravsky Berou 158.70 332 ⇑PKP2 PKPab 16 30 18.0 -3.8
MORC Moravsky Berou 158.70 332 ⇑*i*P PKPab 16 30 18.0 -3.8
DPC Dobruska-Polom 158.71 335 *ex* x 16 30 07.4
DPC *e*PKPAB PKPab 16 30 22.5 +0.7
DPC *ex* x 16 34 24.1
DPC *e*SKKS SKKSac 16 40 53.7 +5.3
DPC *ex* x 16 44 48.3
DPC *ex* x 16 47 29.6
DPC *e*SS SS 16 54 02.0 +0.4
DPC AMS AMS 17 42 00.0
comp=Z,2µm,22.8s
CLL Collm 158.96 341 *e*PKPdf PKPdf 16 29 45.6 -0.8
CLL *e*PKPab PKPab 16 30 22.5 -0.3
CLL Collm 158.96 341 *e*PKIKP PKPdf 16 29 45.0 -1.4
CLL *i* 16 30 22.1
CLL pmax pmax
comp=Z,45nm,2.0s
CLL MLR MLR
comp=Z,2µm,18.1s,MS6.1
CLL Collm 158.96 341 *e*PKPdf PKPdf 16 29 45.0 -1.4
comp=Z,45nm,2.0s
CLL *e* 16 30 06.0
CLL *i* PKPab PKPab 16 30 22.1 -0.7
comp=Z,97nm,2.0s
CLL *i* pPKPab pPKPab 16 30 37.8 +3.8
CLL *i* 16 30 45.9
CLL *e*PP PP 16 34 00.0 -3.3
comp=Z,32nm,2.0s
CLL *e*PPP 16 37 42.0
CLL *e* 16 40 44.0
CLL *e*SKKSac SKKSac 16 40 58.0 +8.4
CLL *e* 16 43 00.0
CLL *e*PSKS 16 44 27.0
CLL *e*PPS 16 47 20.0
CLL *e*SS SS 16 54 04.0 0.0
CLL *e*PSS 16 54 58.0
CLL *e*(SSS) 16 59 51.0
CLL *e*SSSS 17 04 05.0
CLL LmH 17 56 00.0
comp=N,2µm,19.3s
CLL LmH 17 56 00.0
comp=E,1µm,20.1s
CLL LmV 18 10 00.0
comp=Z,2µm,18.1s
PSZ Piszkesteto 159.03 325 ⇑PKP2 PKPab 16 30 23.8 +0.5
PSZ Piszkesteto 159.03 325 PFAKE 16 30 00.0 +13
PSZ LR LR
comp=Z,3µm,20.0s,MS6.2
PSZ Piszkesteto 159.03 325 ⇑*i*P PKPab 16 30 23.8 +0.5
PSZ Piszkesteto 159.03 325 ⇓*e*PKP PKPab 16 30 23.3 0.0
GZR Gura Zlata 159.05 316 ⇑PKP2 PKPab 16 30 23.5 0.0
GZR Gura Zlata 159.05 316 ⇑*i*P PKPab 16 30 23.5 0.0
BRG Berggiesshubel 159.07 339 *e*PKPab PKPab 16 30 23.2 -0.1
BRG Berggiesshubel 159.07 339 *e*PKP PKPab 16 30 22.5 -0.8
comp=Z,95nm,1.9s
BRG *i* 16 30 29.0
BRG *e* 16 30 47.7
comp=Z,28nm,1.5s
BRG *e* 16 30 56.8
comp=Z,92nm,2.2s
BRG PP PP 16 34 18.0 +14
BRG *i* 16 44 22.0
BRG *i* 16 47 32.0
BRG
comp=N,1µm,21.3s
BRG
comp=E,524nm,21.4s
BRG
comp=Z,2µm,20.2s
BRG Berggiesshubel 159.07 339 *e*PKP2 PKPab 16 30 22.5 -0.8
BRG pmax pmax
comp=Z,57nm,1.9s
BRG MLR MLR
comp=N,777nm,21.3s,MS5.5
BRG MLR MLR
comp=E,314nm,21.4s,MS5.5
BRG MLR MLR
comp=Z,1µm,20.2s,MS5.7
VYHS Vyhne 159.12 328 *e*PKIKP PKPdf 16 29 47.3 +0.6
VYHS *e* 16 30 23.6
VYHS Vyhne 159.12 328 *e*PKP PKPdf 16 29 47.3 +0.6
VYHS *e* 16 30 23.6
PVCC Panska Ves 159.17 337 *e* PKPab 16 30 24.5 +0.7
PVCC *e* 16 47 30.3
PVCC MLR MLR
comp=Z,2µm,19.3s,MS6.0
PVCC Panska Ves 159.17 337 *ex* x 16 30 05.4
PVCC *e*PKPAB PKPab 16 30 24.5 +0.7
PVCC *ex* x 16 34 25.3
PVCC *ex* x 16 47 30.3
PVCC AMS AMS 17 48 40.0
comp=Z,2µm,19.3s
FBE Freiberg 159.20 340 *e*PKPdf PKPdf 16 29 46.0 -0.7
FBE *e*PKPab PKPab 16 30 24.0 +0.1
NEUB Neuenburg 159.38 343 *e*PKPab PKPab 16 30 24.4 -0.2
VRAC Vranov 159.45 332 ⇓PKP2 PKPab 16 30 25.6 +0.6
VRAC Vranov 159.45 332 ⇓*i*P PKPab 16 30 25.5 +0.5
BZS Buzias 159.60 318 ⇑PKP2 PKPab 16 30 15.6 -10
BZS Buzias 159.60 318 ⇑*i*P PKPab 16 30 15.6 -10
PRA Prague 159.61 337 PKPAB PKPab 16 30 29.0 +3.3
PRA AMS AMS 17 54 00.0
PRU Pruhonice 159.64 337 *ex* x 16 30 07.8
PRU *e*PKPAB PKPab 16 30 28.2 +2.4
PRU *ex* x 16 34 18.7
PRU *ex* x 16 41 03.8
PRU *ex* x 16 45 30.6
PRU *ex* x 16 47 39.2

PRU *e*SS SS 16 54 10.1 -1.3
PRU AMS AMS 17 53 20.0
comp=Z,2µm,19.4s
BUD Budapest 159.76 325 ⇓*e*PKP PKPab 16 30 26.3 -0.2
TREC Trest 159.89 334 *e*x x 16 30 06.2
TREC *e*PKPAB PKPab 16 30 27.7 +0.8
TREC *e*x x 16 34 19.8
TREC *e*x x 16 45 26.8
TREC *e*x x 16 47 39.7
TREC AMS AMS 17 53 00.0
comp=Z,3µm,19.7s
TANN Tannenbergstha 159.91 341 *e*PKPab PKPab 16 30 26.7 -0.3
WERD Werda 159.93 341 *e*PKPab PKPab 16 30 26.9 -0.1
MOX Moxa 159.93 342 *e*PKP PKPdf 16 29 48.0 +0.4
MOX *e* 16 30 24.4
comp=Z,68nm,2.1s
MOX *e* 16 30 24.4
comp=Z,2µm,21.0s
MOX Moxa 159.93 342 *e*PKPdf PKPdf 16 29 48.4 +0.8
MOX Moxa 159.93 342 *e*PKIKP PKPdf 16 29 48.0 +0.4
MOX *e* 16 30 24.4
MOX pmax pmax
comp=Z,68nm,2.1s
MOX MLR MLR
comp=Z,2µm,21.0s,MS5.9
PLN Plauen 159.93 341 *e*PKPab PKPab 16 30 27.2 +0.1
GUNZ Gunzen 160.00 341 *e*PKPab PKPab 16 30 27.5 +0.2
WERN Wernitzgruen 160.05 341 *e*PKPab PKPab 16 30 27.7 +0.1
NKC Novy Kostel 160.08 340 *e*x x 16 30 07.0
NKC *e*PKPAB PKPab 16 30 28.2 +0.5
NKC *e*x x 16 34 22.2
NKC *e*SKKS SKKSac 16 41 00.1 +4.7
NKC *e*x x 16 45 10.7
NKC *e*x x 16 47 44.8
NKC *e*SKSSKS 16 54 39.9
NKC AMS AMS 17 52 50.0
comp=Z,2µm,18.3s
UBBA Unterbreizbach 160.15 345 *e*PKPab PKPab 16 30 27.4 -0.6
VTS Vitosha 160.17 309 ⇓PKIKP PKPdf 16 29 46.4 -1.7
VTS Vitosha 160.17 309 ⇓*i*P PKPdf 16 29 46.4 -1.7
VTS Vitosha 160.17 309 *i* P PKPab 16 30 27.7 -0.8
MMB Musomiste 160.23 306 *i* P PKPab 16 30 28.5 -0.3
KKB Krupnik 160.56 307 *i* P PKPab 16 30 33.8 +3.6
KHC Kasperske Hory 160.70 337 *e*sPKP 16 30 04.6
KHC *e*PKPAB PKPab 16 30 30.7 +0.2
KHC *e*PP PP 16 34 21.0 +8.2
KHC *e*SKKS SKKSac 16 41 00.5 +1.8
KHC *e*x x 16 45 24.9
KHC *e*x x 16 47 38.8
KHC *e*x x 16 54 03.2
KHC AMS AMS 17 56 10.0
comp=Z,3µm,18.1s
SOP Sopron 160.74 329 ⇑*e* PKPab 16 30 21.7 -9.0
PKSM Moragy 160.83 323 ⇑PKIKP PKPdf 16 29 47.3 -1.4
PKSM Moragy 160.83 323 ⇑*i*P PKPdf 16 29 47.3 -1.4
CONA Conrad Observa 160.84 331 ⇑*i*PKPab PKPab 16 30 31.1 0.0
BEBN Eben Emael 160.86 353 PKPab PKPab 16 30 29.8 -1.3
GEC2 GERESS Array S 160.91 336 *e*PKPab PKPab 16 30 31.3 -0.1
GRF Grafenberg Arr 160.91 342 *e*PKPab PKPab 16 30 31.3 0.0
GRF *e*pPKPab pPKPab 16 30 52.3 +10
WET Wettzell 160.92 338 *e*PKPdf PKPdf 16 29 49.6 +0.9
WET *e*PKPab PKPab 16 30 31.6 +0.2
MEM Membach 161.01 353 PKPab PKPab 16 30 30.9 -0.9
SNF Seneffe 161.26 356 PKPab PKPab 16 30 31.5 -1.3
TORD Torodi Ar. Bea 161.41 178 PKP PKPdf 16 29 49.5 -0.8
comp=Z,5.2nm,1.2s,baz=207,slow=1.5,SNR=7.8
TORD PKPab PKPab 16 30 35.0 +0.6
comp=Z,5.7nm,1.0s,baz=183,slow=2.2,SNR=7.8
TORD Torodi Ar. Bea 161.41 178 PKP PKPdf 16 29 49.5 -0.8
TORD PKPab PKPab 16 30 35.0 +0.6
ARSA Arzberg 161.52 330 ⇑*i*PKPab PKPab 16 30 32.4 -1.7
comp=Z,25nm,1.8s
WLF Walferdange 161.93 352 PKPab PKPab 16 30 35.4 -0.3
WLF Walferdange 161.93 352 *e*PKPab PKPab 16 30 35.4 -0.4
WLF Walferdange 161.93 352 PFAKE 16 30 00.0 +10
WLF LR LR
comp=Z,3µm,20.0s
RJOB Jochberg 162.17 336 *e*PKPab PKPab 16 30 37.2 +0.3
PERS Pernice 162.18 330 *e*PKPdf PKPdf 16 30 08.4 +18
PERS *e* 16 34 58.0
PERS Pernice 162.18 330 *e*PKPdf PKPdf 16 30 08.4 +18
PERS *e* 16 34 58.0
FUR Furstenfeldbru 162.28 340 *e*PKPab PKPab 16 30 38.0 +0.6
BFO Black Forest 162.86 346 *e*PKPab PKPab 16 30 39.3 -0.6
BFO Black Forest 162.86 346 PFAKE 16 30 00.0 +9.3
BFO LR LR
comp=Z,2µm,19.0s
VISS Visnje 162.94 329 *e*PKPdf PKPdf 16 30 07.0 +16
VISS *e* 16 35 03.6
VISS Visnje 162.94 329 *e*PKPdf PKPdf 16 30 07.0 +16
VISS *e* 16 35 03.6
BOJS Bojanci 162.99 327 *e*PKPdf PKPdf 16 30 08.1 +17
BOJS *e* 16 35 04.0
BOJS Bojanci 162.99 327 *e*PKPdf PKPdf 16 30 08.1 +17
BOJS *e* 16 35 04.0
RETA Reutte 163.04 340 ⇑*i*PKPab PKPab 16 30 40.3 -0.4
comp=Z,30nm,1.9s,SNR=6.9
ECH Echery 163.19 348 PFAKE 16 30 00.0 +8.9
ECH LR LR
comp=Z,3µm,19.0s
JAVS Javornik 163.21 330 *e*PKPdf PKPdf 16 30 07.8 +17
JAVS Javornik 163.21 330 *e*PKPdf PKPdf 16 30 07.8 +17
DAVA Damuels 163.47 341 ⇑*i*PKPab PKPab 16 30 41.2 -1.4
comp=Z,32nm,1.8s
TRI Trieste 163.48 330 PFAKE 16 30 00.0 +8.6
TRI LR LR
comp=Z,3µm,20.0s
TUE Stuetta 164.36 341 PFAKE 16 30 00.0 +7.8
TUE LR LR
comp=Z,3µm,19.0s
VLC Villacollemand 166.10 335 PFAKE 16 30 00.0 +6.2
VLC LR LR
comp=Z,3µm,19.0s
AQU L'Aquila 166.22 323 PFAKE 16 30 00.0 +6.1
AQU LR LR
comp=Z,4µm,21.0s
CUC Castrocucco 166.29 310 PFAKE 16 30 00.0 +6.0
CUC LR LR
comp=Z,2µm,22.0s
SSB Saint Sauveur 166.43 353 PFAKE 16 30 00.0 +6.0
SSB LR LR
comp=Z,3µm,19.0s
CEL Celeste 167.08 304 PFAKE 16 30 10.0 +15
CEL LR LR
comp=Z,4µm,19.0s
MVO Moncorvo 168.08 36 *e*PKPdf PKPdf 16 29 55.4 +0.1
MVO *e*LR LR 17 37 07.8
comp=Z,3µm,18.0s
PMAFR Mafra 168.23 50 *e*LR LR 17 37 27.1
comp=Z,4µm,20.0s
MTE Manteigas 168.36 40 *e*PKPdf PKPdf 16 29 57.0 +1.5
MTE *e*LQ 17 38 08.0
MTE *e*LR LR 17 42 43.6
comp=Z,4µm,20.0s
MTE Manteigas 168.36 40 PFAKE 16 30 10.0 +14
MTE LR LR
comp=Z,4µm,20.0s
PTOM Tomar 168.38 45 *e*PKPdf PKPdf 16 29 56.3 +0.7
LIS Lisbon 168.45 50 *e*PP PP 16 34 53.4 -0.8
LIS *e*SS SS 16 55 44.2 +0.7
LIS Lisbon 168.45 50 *e*PP PP 16 34 53.4 -0.8
LIS *e*SS SS 16 55 44.2 +0.8
LIS AMS AMS 18 01 22.5
comp=E,4µm,19.8s
WDD Wield Dalam 169.00 295 PFAKE 16 30 10.0 +14
WDD LR LR
comp=Z,5µm,19.0s
PMRV Marv??o 169.11 43 *e*PKPdf PKPdf 16 29 56.7 +0.7
PMRV *e*LR LR 17 38 07.8
comp=Z,4µm,20.0s
EVOP Sao Brissos 169.22 49 *e*PP PP 16 34 57.7 -0.3
EVOP *e*SS SS 16 55 51.5 +0.4
EVOP *e*SS SS 16 55 52.1 +1.1
EVOP AMS AMS 17 52 35.3
comp=Z,4µm,18.6s
EVO Evora 169.28 48 *e*PKPdf PKPdf 16 29 57.9 +1.7
PTEO Sao Teotonio 169.34 55 *e*PKPdf PKPdf 16 29 58.0 +1.7
PESTR Estremoz 169.35 46 *e*PKPdf PKPdf 16 29 58.0 +1.8
PESTR *e*LR LR 17 35 51.3
comp=Z,3µm,18.0s
PFVI Vila Bisbo 169.46 57 *e*PKPdf PKPdf 16 29 58.0 +1.7
PFVI *e*LR LR 17 37 44.4
comp=Z,3µm,18.0s

MORF Marmelete 169.50 56 *e*PKPdf PKPdf 16 29 58.4 +2.0
MORF *e*LR LR 17 38 34.4
comp=Z,3µm,20.0s
MORF Marmelete 169.50 56 *e*PKIKP PKPdf 16 29 56.2 -0.2
MORF *e* 16 34 58.5
MORF *e*SS SS 16 55 54.0 -0.3
MESJ Messejana 169.53 52 *e*PP PP 16 34 59.1 -0.6
MESJ *e*SS SS 16 55 54.7 +0.3
MESJ A 18 04 54.7
comp=Z,3µm,15.2s
MESJ Messejana 169.53 52 *e*P PKPdf 16 29 55.9 -0.4
MESJ *e*PP PP 16 34 59.1 -0.6
MESJ *e*SS SS 16 55 54.7 +0.3
MESJ *e*SS SS 16 55 55.0 +0.5
MESJ Messejana 169.53 52 *e*PKIKP PKPdf 16 29 55.9 -0.5
MESJ *e* 16 34 59.1
MESJ *e*SS SS 16 55 54.7 +0.3
MESJ Messejana 169.53 52 AMS AMS 18 04 54.7
comp=Z,3µm,15.2s
PCVE Castro Verde 169.76 53 *e*LR LR 17 43 45.3
comp=Z,3µm,18.0s
PBDV Barranco-do-Ve 170.04 54 *e*PKPdf PKPdf 16 29 58.8 +2.1
PBDV *e*LR LR 17 39 15.6
comp=Z,4µm,18.0s
PVAQ Vaqueiros 170.10 53 *e*LR LR 17 43 04.4
comp=Z,3µm,18.0s
PBAR Barrancos 170.11 48 *e*PKPdf PKPdf 16 29 58.8 +2.1
PBAR *e*LR LR 17 35 49.1
comp=Z,3µm,20.0s
VSL Villasalto 170.37 325 PFAKE 16 30 10.0 +13
VSL LR LR
comp=Z,4µm,19.0s
PAB San Pablo 170.62 33 PFAKE 16 30 10.0 +13
PAB LR LR
comp=Z,3µm,19.0s
ESDC Sonseca Array 170.69 31 PKP PKPdf 16 29 56.7 -0.3
comp=Z,0.2nm,0.3s,baz=143,slow=0.6,SNR=7.7
ESDC Sonseca Array 170.69 31 PKP PKPdf 16 29 56.7 -0.3
SFS San Fernando 171.62 54 PFAKE 16 30 10.0 +12
SFS LR LR
comp=Z,12µm,19.0s
KEST Kesra 172.89 305 PKP PKPdf 16 29 57.0 -1.1
comp=Z,1.3nm,0.7s,baz=292,slow=1.5,SNR=4.9
KEST PKPab PKPab 16 31 24.9 +0.1
comp=Z,2.4nm,0.9s,baz=90,slow=0.7,SNR=5.5

SKHL ***04*** *16:15:55.5±0.4, 46°.60N×153°.40E, h35km±4km, mb5.0/5*
IDC ***04*** *16:15:58.8±0.5, 47°.13N×152°.64E, h45km±4km, mb3.7/19, mb1 4.0/20, mb1mx3.9/25, mbtmp3.8/20, Error ellipse: s-maj=17.3km s-min=11.2km az=148.0*
JMA ***04*** *16:15:58.1±0.9, 46°.86N×153°.08E, h30km, M4.7*
ISCJB ***04*** *16:15:59.3±0.8, 47°.00N±0°.06×152°.79E±0°.08, h73km±7km, mb4.2/30, Error ellipse: s-maj=11.9km s-min=6.1km az=141.0*
MOS ***04*** *16:16:00.4±0.9, 47°.12N×152°.69E, h79km, mb4.2/15, Error ellipse: s-maj=13.2km s-min=8.8km az=60.8*
BJI ***04*** *16:16:01.9, 47°.10N×152°.70E, h86km, mB4.8/7, mb4.4/9, Ms4.5/4, Ms7 4.4/4*
NEIC ***04*** *16:16:03.0±0.8, 47°.13N×152°.70E, h86km±7km, mb4.5/10, Error ellipse: s-maj=10.4km s-min=5.3km az=149.0*
ISC 04 16:16:01.2±0.7, 47°.01N±0°.06×152°.77E±0°.08, h71km±6km, h53km±1.9km; pP-P, n111, σ1§23/116, mb4.2/30, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.85**	**244**	⇑*i*PN	**Pn**	**16 16 57.3**	**-0.6**
KUR				pmax	pmax		
comp=Z,230nm,0.3s							
KUR				pmax	pmax		
comp=E,100nm,0.3s							
KUR				smax			
comp=N,2µm,2.0s							
KUR				smax			
comp=E,2µm,2.0s							
KUR				smax			
comp=N,910nm,0.8s							
KUR				smax			
comp=E,430nm,0.8s							
KUR	**Kuril'sk**	**3.85**	**244**	⇑*i*P	**Pn**	**16 16 57.3**	**-0.6**
KUR				AMB	AMB	16 16 59.0	
comp=E,110nm,0.3s							
KUR				AMB	AMB	16 16 59.0	
comp=E,100nm,0.3s							
KUR				AMB	AMB	16 16 59.0	
comp=E,230nm,0.3s							
KUR				*e*S	**Sn**	**16 17 44.0**	**+2.2**
KUR				A		16 17 45.0	
comp=E,2µm,1.8s							
KUR				A		16 17 45.0	
comp=E,2µm,1.8s							
KUR				A		16 17 54.5	
comp=E,550nm,0.6s							
KUR				A		16 17 54.5	
comp=E,350nm,0.6s							
YUK	**Yuzh-Kuril'sk**	**5.69**	**241**	*i* PN	**Pn**	**16 17 23.6**	**+0.5**
YUK				pmax	pmax		
comp=E,66nm,0.2s							
YUK				pmax	pmax		
comp=Z,327nm,0.2s							
YUK				pmax	pmax		
comp=N,99nm,0.3s							
YUK				pmax	pmax		
comp=Z,60nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**5.69**	**241**	⇓*i*P	**Pn**	**16 17 23.6**	**+0.5**
YUK				AMB	AMB	16 17 27.5	
comp=Z,180nm,0.4s							
YUK				*i* S	**Sn**	**16 18 29.4**	**+2.3**
YUK				A		16 18 45.2	
comp=Z,380nm,0.5s							
YUK				A		16 18 45.2	
comp=Z,330nm,0.5s							
NEM2	**Nemuro 2**	**6.16**	**236**	P	**Pn**	**16 17 27.7**	**-1.8**
NEM2				*e*S	**Sn**	**16 18 33.4**	**-5.1**
JRA	**Rausu**	**6.19**	**243**	P	**Pn**	**16 17 30.9**	**+0.9**
JNK	**Nakash**	**6.63**	**242**	P	**Pn**	**16 17 36.1**	**+0.2**
YSS	**Yuzh-Sakhalins**	**6.85**	**273**	*e*PN	**Pn**	**16 17 41.0**	**+2.1**
YSS				*e*S	**Sn**	**16 18 57.9**	**+2.5**
YSS				pmax	pmax		
comp=Z,20nm,0.6s							
YSS	**Yuzh-Sakhalins**	**6.85**	**273**	*e*Pn	**Pn**	**16 17 41.0**	**+2.0**
comp=Z,21nm,0.6s							
YSS				*e*Sn	**Sn**	**16 18 58.5**	**+3.1**
YSS	**Yuzh-Sakhalins**	**6.85**	**273**	*e*P	**Pn**	**16 17 41.0**	**+2.1**
YSS				AMB	AMB	16 17 42.0	
comp=Z,20nm,0.6s							
YSS				*e*S	**Sn**	**16 18 57.9**	**+2.5**
PETK	**Petropavlovsk-**	**6.88**	**26**	P	**Pn**	**16 17 39.7**	**+0.5**
comp=Z,0.7nm,0.3s,baz=176,slow=11,SNR=24							
PETK	**Petropavlovsk-**	**6.88**	**26**	PN	**Pn**	**16 17 39.7**	**+0.5**
PETK				pmax	pmax		
comp=Z,1.0nm,0.3s							
PETK	**Petropavlovsk-**	**6.88**	**26**	P	**Pn**	**16 17 39.7**	**+0.5**
JTKR	**Abashiri--Toko**	**6.93**	**247**	P	**Pn**	**16 17 41.2**	**+1.2**
JAK	**Akkeshi**	**6.99**	**238**	P	**Pn**	**16 17 38.8**	**-2.0**
JAK				*e*S	**Sn**	**16 18 54.0**	**-4.8**
PET	**Petropavlovsk**	**7.11**	**30**	*e*PN	**Pn**	**16 17 43.9**	**+1.5**
PET				*e*S	**Sn**	**16 18 56.9**	**-4.7**
PET	**Petropavlovsk**	**7.11**	**30**	*e*P	**Pn**	**16 17 42.0**	**-0.4**
comp=Z,15nm,0.7s							
PET	**Petropavlovsk**	**7.11**	**30**	*e*P	**Pn**	**16 17 42.6**	**+0.2**
JMP	**Maruseppu**	**7.26**	**249**	P	**Pn**	**16 17 46.8**	**+2.3**
JAR	**Ashorobuto**	**7.37**	**243**	P	**Pn**	**16 17 46.4**	**+0.4**
UGL	**Uglegorsk**	**7.46**	**290**	*e*P	**Pn**	**16 17 50.0**	**+2.7**
UGL				AMB	AMB	16 17 51.5	
comp=Z,96nm,0.8s							
JOB	**Onbets**	**7.55**	**240**	P	**Pn**	**16 17 47.7**	**-0.8**
JOB				*e*S	**Sn**	**16 19 09.1**	**-3.4**
TYV	**Tymovskoe**	**7.69**	**304**	*e*P	**Pn**	**16 17 49.0**	**-1.4**
TYV				AMB	AMB	16 17 50.0	
comp=Z,11nm,0.8s							
TYV				AMB	AMB	16 17 50.0	
comp=Z,26nm,1.0s							
TYV				AMB	AMB	16 17 50.0	
comp=Z,44nm,1.0s							
ASAJ	**Asahikawa**	**7.70**	**252**	P	**Pn**	**16 17 52.9**	**+2.3**
comp=Z,1.5nm,0.3s,baz=84,slow=12,SNR=20							
ASAJ	**Asahikawa**	**7.70**	**252**	PN	**Pn**	**16 17 52.9**	**+2.3**
ASAJ				pmax	pmax		
comp=Z,2.0nm,0.3s							
ASAJ	**Asahikawa**	**7.70**	**252**	*e*P	**Pn**	**16 17 53.0**	**+2.5**
comp=Z,13nm,0.9s							

ASAJ	**Asahikawa**	**7.70**	**252**	P	**Pn**	**16 17 53.1**	**+2.5**
JKK2	**Kamakawa 2**	**7.71**	**250**	P	**Pn**	**16 17 52.8**	**+2.1**
JWK2	**Keihoku**	**7.74**	**261**	P	**Pn**	**16 17 55.8**	**+4.8**
JCH	**Churui**	**8.00**	**240**	P	**Pn**	**16 17 53.3**	**-1.4**
JCH				*e*S	**Sn**	**16 19 18.2**	**-5.4**
JFR	**Furan**	**8.16**	**246**	P	**Pn**	**16 17 58.2**	**+1.3**
JEM	**Erimo**	**8.49**	**237**	P	**Pn**	**16 18 00.5**	**-0.8**
JBT2	**Biratori 2**	**8.51**	**244**	P	**Pn**	**16 18 01.0**	**-0.6**
JNBK	**Urakawa-nobuka**	**8.56**	**240**	P	**Pn**	**16 18 00.1**	**-2.2**
JNB	**Noboribetsu**	**9.50**	**246**	P	**Pn**	**16 18 14.3**	**-0.8**
JKB	**Kayabe**	**9.83**	**243**	P	**Pn**	**16 18 17.0**	**-2.6**
JKB				*e*S	**Sn**	**16 20 00.4**	**-7.8**
JSH	**Shimam**	**10.04**	**249**	P	**Pn**	**16 18 22.8**	**+0.4**
JYM2	**Yakumo 2**	**10.11**	**246**	P	**Pn**	**16 18 22.2**	**-1.2**
JTM	**Tenmabayashi**	**10.48**	**238**	P	**Pn**	**16 18 25.0**	**-3.5**
JANG	**Nango**	**10.50**	**235**	P	**Pn**	**16 18 24.1**	**-4.7**
JANG				*e*S	**Sn**	**16 20 12.8**	**-12**
JOSM	**Okushiri--Mats**	**10.69**	**247**	P	**Pn**	**16 18 29.7**	**-1.6**
JRG	**Rokugo**	**11.67**	**234**	P	**Pn**	**16 18 41.0**	**-3.7**
MAJO	**Matsushiro**	**15.06**	**231**	*e*P	**Pn**	**16 19 34.4**	**+4.6**
MAJO				pmax	pmax		
comp=Z,7.0nm,0.5s							
MAJO	**Matsushiro**	**15.06**	**231**	*e*P	**Pn**	**16 19 34.4**	**+4.6**
comp=Z,7.1nm,0.5s							
MJAR	**Matsushiro Arr**	**15.06**	**231**	P	**Pn**	**16 19 29.9**	**+0.2**
comp=Z,0.3nm,0.3s,baz=44,slow=8.9,SNR=3.3							
MDJ	**Mudanjiang**	**16.32**	**270**	P	**Pn**	**16 19 46.1**	**+0.4**
comp=Z,8.0nm,0.9s							
YAK	**Yakutsk**	**19.97**	**327**	*e*P	**Pn**	**16 20 31.0**	**+1.4**
YAK				pmax	pmax		
comp=Z,6.0nm,0.6s							
YAK	**Yakutsk**	**19.97**	**327**	*e*P	**Pn**	**16 20 27.5**	**-2.1**
comp=Z,12nm,0.6s							
KSRS	**Korea Array**	**20.65**	**251**	P	**P**	**16 20 36.4**	**+1.5**
comp=Z,3.7nm,0.6s,baz=54,slow=11,SNR=17							
KSRS	**Korea Array**	**20.65**	**251**	*e*P	**P**	**16 20 36.7**	**+1.8**
KSRS				pmax	pmax		
comp=Z,4.0nm,0.6s							
BILL	**Bilibino**	**22.19**	**13**	*e*P	**P**	**16 20 50.7**	**-0.3**
BILL				pmax	pmax		
comp=Z,3.0nm,0.9s,mb3.6							
SONM	**Songino Array**	**31.02**	**289**	P	**P**	**16 22 10.1**	**-1.7**
comp=Z,0.2nm,0.6s,mb3.1,baz=77,slow=6.4,SNR=2.3							
KDAK	**Kodiak Island**	**34.12**	**51**	P	**P**	**16 22 38.0**	**-0.8**
comp=Z,4.7nm,0.6s,mb4.5,baz=151,slow=11,SNR=5.5							
KDAK	**Kodiak Island**	**34.12**	**51**	*i* P	**P**	**16 22 38.5**	**-0.3**
ILAR	**Eielson Array**	**36.49**	**39**	P	**P**	**16 22 59.2**	**+0.2**
comp=Z,1.0nm,0.7s,mb3.9,baz=261,slow=6.7,SNR=12							
ILAR	**Eielson Array**	**36.49**	**39**	P	**P**	**16 22 59.2**	**+0.2**
ILAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
INK	**Inuvik**	**41.56**	**33**	P	**P**	**16 23 42.1**	**+0.9**
comp=Z,2.0nm,0.6s,mb4.0,baz=299,slow=11,SNR=4.4							
INK	**Inuvik**	**41.56**	**33**	P	**P**	**16 23 42.1**	**+0.9**
INK				pmax	pmax		
comp=Z,2.0nm,0.6s							
ZALV	**Zalesovo Beam**	**42.27**	**305**	PcP	PcP	16 25 39.6	-0.1
comp=Z,1.3nm,0.4s,baz=66,slow=3.6,SNR=9.3							
MK31	**Makanchi Array**	**46.61**	**297**	*e*P	**P**	**16 24 20.4**	**-1.5**
MK31				*e*		16 25 54.5	
MKAR	**Makanchi Array**	**46.61**	**297**	P	**P**	**16 24 21.4**	**-0.5**
comp=Z,0.6nm,0.7s,mb3.5,baz=67,slow=7.8,SNR=8.5							
MKAR				PcP	PcP	16 25 54.5	-0.2
comp=Z,1.0nm,0.5s,baz=68,slow=2.5,SNR=12							
MKAR	**Makanchi Array**	**46.61**	**297**	*e*P	**P**	**16 24 21.1**	**-0.8**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
KURK	**Kurchatov**	**47.02**	**303**	P	**P**	**16 24 24.6**	**-0.4**
comp=Z,0.7nm,0.4s,mb3.7,baz=69,slow=8.6,SNR=10							
KURK				PcP	PcP	16 25 56.0	0.0
comp=Z,0.9nm,0.6s,baz=67,slow=3.6,SNR=5.1							
KURK	**Kurchatov**	**47.02**	**303**	P	**P**	**16 24 24.6**	**-0.4**
KURK						16 25 56.1	
KURK				pmax	pmax		
comp=Z,1.0nm,0.4s,mb3.9							
LSA	**Lhasa**	**50.02**	**273**	*e*P	**P**	**16 24 49.6**	**+1.2**
BVAR	**Borovoye Array**	**50.51**	**309**	P	**P**	**16 24 51.9**	**+0.2**
comp=Z,0.5nm,0.3s,mb4.0,baz=59,slow=7.6,SNR=4.3							
BVAR				PcP	PcP	16 26 08.6	-0.1
comp=Z,2.0nm,0.5s,baz=85,slow=2.9,SNR=9.9							
BVAR	**Borovoye Array**	**50.51**	**309**	P	**P**	**16 24 51.9**	**+0.2**
BVAR						16 26 08.6	
BVAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
BRVK	**Borovoye**	**50.55**	**309**	*e*P	**P**	**16 24 52.5**	**+0.5**
BRVK				pmax	pmax		
comp=Z,1.0nm,0.5s,mb4.1							
BRVK	**Borovoye**	**50.55**	**309**	*e*P	**P**	**16 24 52.5**	**+0.5**
comp=Z,1.4nm,0.5s,mb4.2							
YKA	**Yellowknife Ar**	**50.85**	**37**	P	**P**	**16 24 54.6**	**+0.4**
comp=Z,0.6nm,0.5s,mb3.9,baz=296,slow=7.0,SNR=5.7							
YKA				pP	pP	16 25 07.6	-4.5
comp=Z,1.4nm,0.7s,baz=296,slow=6.8,SNR=7.7							
YKA				PcP	PcP	16 26 10.0	+0.2
comp=Z,0.6nm,0.6s,baz=304,slow=3.8,SNR=3.7							
YKA	**Yellowknife Ar**	**50.85**	**37**	P	**P**	**16 24 54.6**	**+0.4**
YKA						16 26 10.0	
YKA				pmax	pmax		
comp=Z,1.0nm,0.5s							
YKA	**Yellowknife Ar**	**50.85**	**37**	P	**P**	**16 24 54.6**	**+0.4**
YKA				pP	pP	16 25 07.6	-4.5
YKA				PcP	PcP	16 26 10.0	+0.2
CM31	**Chiang Mai Arr**	**52.20**	**256**	P	**P**	**16 25 04.7**	**-0.2**
comp=Z,1.8nm,0.7s,mb4.2							
CMAR	**Chiang Mai Arr**	**52.20**	**256**	P	**P**	**16 25 06.0**	**+1.1**
comp=Z,1.1nm,0.8s,mb3.9,baz=31,slow=7.8,SNR=7.5							
CMAR	**Chiang Mai Arr**	**52.20**	**256**	P	**P**	**16 25 06.0**	**+1.2**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
TAPN	**Taplejung**	**53.85**	**273**	*e*P	**P**	**16 25 16.4**	**-0.4**
comp=Z,9.8nm,0.7s,mb5.0							
ODAN	**Odare**	**54.38**	**273**	*e*P	**P**	**16 25 20.0**	**-0.7**
comp=Z,5.4nm,0.5s,mb4.8							
ARU	**Arti**	**54.66**	**317**	P	**P**	**16 25 21.9**	**-0.4**
RAMN	**Ramite**	**54.86**	**273**	*e*P	**P**	**16 25 24.0**	**-0.2**
comp=Z,7.6nm,0.3s,mb5.2							
KKN	**Kakani**	**55.23**	**275**	*e*P	**P**	**16 25 26.9**	**+0.1**
comp=Z,2.6nm,0.3s,mb4.7							
PKI	**Pulchoki**	**55.28**	**275**	*e*P	**P**	**16 25 27.9**	**+0.7**
PKIN	**Phulchoki**	**55.28**	**275**	*e*P	**P**	**16 25 27.8**	**+0.6**
comp=Z,8.1nm,0.7s,mb4.9							
DMN	**Daman**	**55.46**	**275**	*e*P	**P**	**16 25 29.3**	**+0.8**
comp=Z,7.0nm,0.5s,mb5.0							
GKN	**Gorkha**	**55.53**	**276**	*e*P	**P**	**16 25 29.1**	**+0.1**
comp=Z,4.5nm,0.4s,mb4.8							
DANN	**Dangsing**	**55.91**	**276**	*e*P	**P**	**16 25 32.7**	**+1.0**
comp=Z,9.0nm,0.5s,mb5.1							
KOLN	**Koldanda**	**56.39**	**276**	*e*P	**P**	**16 25 35.6**	**+0.5**
ARCES	**ARCESS Array B**	**57.53**	**341**	P	**P**	**16 25 41.4**	**-1.1**
comp=Z,2.6nm,0.9s,mb4.2,baz=30,slow=8.4,SNR=4.4							
ARCES	**ARCESS Array B**	**57.53**	**341**	P	**P**	**16 25 41.4**	**-1.1**
ARCES				pmax	pmax		
comp=Z,3.0nm,0.9s							
ABKAR	**Akbulak array**	**58.08**	**310**	*e*P	**P**	**16 25 44.9**	**-1.8**
comp=Z,0.8nm,0.3s,mb4.2							
NVAR	**Mina Array Bea**	**62.52**	**62**	P	**P**	**16 26 18.6**	**+1.4**
comp=Z,1.3nm,0.7s,mb4.0,baz=282,slow=7.2,SNR=6.7							
FINES	**FINESS Array B**	**63.70**	**335**	P	**P**	**16 26 23.1**	**-1.5**
comp=Z,1.6nm,0.4s,mb4.2,baz=32,slow=6.2,SNR=12							
FINES	**FINESS Array B**	**63.70**	**335**	P	**P**	**16 26 23.1**	**-1.5**
FINES				pmax	pmax		
comp=Z,2.0nm,0.4s							
PDAR	**Pinedale Array**	**64.78**	**54**	P	**P**	**16 26 33.0**	**+1.0**
comp=Z,1.2nm,0.6s,mb3.9,baz=295,slow=1.6,SNR=10							
PDAR				sP	sP	16 26 50.9	-7.7
comp=Z,1.9nm,0.8s,baz=342,slow=1.7,SNR=8.7							
NB2	**NORSAR Subarra**	**67.90**	**341**	P	**P**	**16 26 50.9**	**-0.7**
comp=Z,1.4nm,0.6s,mb4.0,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**67.90**	**341**	P	**P**	**16 26 51.2**	**-0.4**
comp=Z,1.6nm,0.5s,mb4.1,baz=28,slow=6.4,SNR=7.3							
NOA	**NORSAR Array

comp=Z,3.4nm,0.5s,mb4.3,baz=298,slow=4.3,SNR=48
TXAR pP pP 16 28 04.7 -3.9
comp=Z,2.5nm,0.7s,baz=303,slow=4.1,SNR=10
TXAR sP sP 16 28 07.6 -8.8
comp=Z,0.4nm,0.4s,baz=310,slow=6.5,SNR=8.6
TXAR Lajitas Array 77.57 60 P P 16 27 50.2 +0.8
TXAR *PP pP 16 28 04.7 -3.9
TXAR *SP sP 16 28 07.6 -8.8
TXAR pmax pmax
comp=Z,3.0nm,0.5s
TXAR Lajitas Array 77.57 60 P P 16 27 50.2 +0.8
TXAR pP pP 16 28 04.7 -3.9
TXAR sP sP 16 28 07.6 -8.8
BRTR Keskin Array B 78.04 316 P P 16 27 51.7 -0.2
comp=Z,0.9nm,0.8s,mb3.5,baz=76,slow=5.2,SNR=6.3
BRTR Keskin Array B 78.04 316 P P 16 27 51.7 -0.2
BRTR pmax pmax
comp=Z,1.0nm,0.8s
TAM Tamanrasset 104.49 329 *e*PKIKP Pdif 16 29 57.4 -1.0
TAM MLR MLR
comp=Z,4μm,20.0s
TAM Tamanrasset 104.49 329 *e*P Pdif 16 29 57.4 -1.0
PLCA Paso Flores 148.47 95 PKPbc PKPbc 16 35 39.1 0.0
comp=Z,1.3nm,0.7s,baz=337,slow=8.5,SNR=3.9
PLCA Paso Flores 148.47 95 PKP2 PKPbc 16 35 39.1 0.0
PLCA pmax pmax
comp=Z,1.0nm,0.7s
CPUP Villa Florida 148.54 60 PKPbc PKPbc 16 35 39.5 -0.3
comp=Z,0.8nm,0.6s,baz=326,slow=3.6,SNR=3.4
CPUP Villa Florida 148.54 60 PKP2 PKPbc 16 35 39.5 -0.2
CPUP pmax pmax
comp=Z,1.0nm,0.6s

*IDC **04** 16:43:06.7±14.0, 40°.34N×141°.41E, h162km±91km, mb3.2/4, mb1 3.2/5, mb1mx3.0/21, mbtmp3.1/5, Error ellipse: s-maj=203.1km s-min=21.7km az=64.0*
JMA 04 16:42:45.7±0.1, 41°.09N×143°.36E, h62km±4km, M3.2, 3C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.94**	**351**	⇓P	Pn	16 43 02.8	-0.2
JEM				*e*S	Sn	16 43 16.4	+0.6
JNBK	**Urakawa-nobuka**	**1.27**	**339**	⇓P	Pn	16 43 08.0	+0.6
JNBK				*e*S	Sn	16 43 24.9	+1.3
JCH	**Churui**	**1.52**	**0**	P	Pn	16 43 11.3	+0.6
JCH				S	Sn	16 43 30.0	+0.4
JANG	**Nango**	**1.57**	**244**	P	Pn	16 43 11.8	+0.4
JANG				*e*S	Sn	16 43 31.7	+0.9
JTM	**Tenmabayashi**	**1.76**	**261**	⇑P	Pn	16 43 15.4	+1.5
JTM				S	Sn	16 43 36.4	+1.1
JOT	**Ohata**	**1.77**	**280**	⇓P	Pn	16 43 15.0	+1.0
JOT				*e*S	Sn	16 43 36.4	+0.9
JOB	**Onbets**	**1.85**	**11**	P	Pn	16 43 15.6	+0.5
JOB				S	Sn	16 43 37.9	+0.5
JKB	**Kayabe**	**1.92**	**295**	P	Pn	16 43 17.6	+1.5
JKB				*e*S	Sn	16 43 40.6	+1.4
JAK	**Akkeshi**	**2.15**	**27**	⇑P	Pn	16 43 19.2	0.0
JAK				*e*S	Sn	16 43 44.2	-0.5
JFR	**Furan**	**2.15**	**345**	P	Pn	16 43 20.2	+1.0
JFR				*e*S	Sn	16 43 45.8	+1.1
JAR	**Ashorobuto**	**2.23**	**8**	⇑P	Pn	16 43 20.6	+0.4
JAR				*e*S	Sn	16 43 46.6	0.0
JEW	**Eniwo**	**2.26**	**321**	P	Pn	16 43 23.1	+2.5
JEW				*e*S	Sn	16 43 51.5	+4.2
JOM	**Ohasama**	**2.26**	**225**	⇓P	Pn	16 43 22.5	+1.8
JOM				*e*S	Sn	16 43 49.0	+1.6
JMK	**Ichinoseki**	**2.69**	**218**	P	Pn	16 43 28.1	+1.5
JMK				*e*S	Sn	16 43 59.0	+0.9
MJAR	**Matsushiro Arr**	**6.07**	**223**	P	Pn	16 44 14.4	+1.7
	0.3nm,0.3s,baz=30,slow=14,SNR=3.6						
SONM	**Songino Array**	**27.04**	**297**	P	P	16 48 25.6	+3.8
	0.4nm,0.5s,baz=100,slow=7.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**40.42**	**309**	P	P	16 50 23.3	+5.7
	1.5nm,0.7s,baz=89,slow=9.2,SNR=6.9						
MKAR	**Makanchi Array**	**43.37**	**299**	P	P	16 50 44.3	+2.6
	0.4nm,0.2s,baz=83,slow=9.1,SNR=4.9						
WRA	**Warramunga Arr**	**61.29**	**190**	P	P	16 52 58.4	+3.8
	0.6nm,1.1s,baz=6.7,slow=7.3,SNR=3.0						

IDC 04 16:54:13.6±2.9, 17°.87S×176°.29W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.7/17, mbtmp4.1/4, ML2.6/1, Error ellipse: s-maj=154.4km s-min=31.4km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.86**	**48**	Pn	Pn	16 55 41.9	+0.2
	9.5nm,0.3s,baz=224,slow=22,SNR=10						
AFI				Sn	Sn	16 56 34.9	-15
	10nm,0.3s,baz=150,slow=22,SNR=6.2						
STKA	**Stephens Creek**	**40.42**	**242**	P	P	17 01 54.4	+0.7
	1.0nm,0.6s,baz=73,slow=14,SNR=2.8						
WRA	**Warramunga Arr**	**46.62**	**259**	P	P	17 02 43.3	-0.7
	0.5nm,0.5s,baz=96,slow=7.4,SNR=24						
ASAR	**Alice Springs**	**46.74**	**254**	P	P	17 02 45.0	+0.1
	4.0nm,0.6s,baz=91,slow=8.0,SNR=101						

IDC 04 17:03:06.0±4.5, 0°.17S×17°.37W, h0km, mb4.0/1, mb1 4.1/2, mb1mx3.5/22, mbtmp4.2/2, ML4.3/1, Error ellipse: s-maj=102.7km s-min=30.2km az=106.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**14.21**	**61**	Pn	Pn	17 06 29.8	+1.1
	1.3nm,0.3s,baz=229,slow=9.3,SNR=12						
TORD	**Torodi Ar. Bea**	**23.07**	**54**	P	P	17 08 12.9	-0.4
	2.5nm,1.0s,baz=232,slow=9.6,SNR=6.8						
WRA	**Warramunga Arr**	**145.83**	**127**	PKPbc	PKPbc	17 22 47.6	-0.5
	0.4nm,1.0s,baz=240,slow=2.3,SNR=3.2						

*KRSC **04** 17:07:57.3±0.3, 55°.76N×161°.26E, h164km±23km, ML4.0*
*ISCJB **04** 17:07:58.7±1.0, 55°.75N±0°.05×161°.25E±0°.08, h157km±8km, Error ellipse: s-maj=8.6km s-min=6.7km az=139.5*
*MOS **04** 17:07:58.6±0.5, 55°.77N×161°.14E, h152km, mb4.2/1, Error ellipse: s-maj=41.8km s-min=17.1km az=80.4*
ISC 04 17:07:58.9±1.0, 55°.77N±0°.05×161°.25E±0°.08, h160km±7km, n20, σ0s73/38, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.35**	**315**	*e*P	Pn	17 08 21.0	+0.3
ZLN				*e*S	Sn	17 08 38.4	+0.9
CIRR	**Tsirk**	**0.44**	**321**	*e*P	Pn	17 08 21.2	+0.1
CIRR				*e*S	Sn	17 08 38.8	+0.7
BZMR	**Bezymyannaya**	**0.46**	**291**	*e*P	Pn	17 08 21.3	+0.2
BZMR				*e*S	Sn	17 08 38.8	+0.6
KRSR	**Krestovskiy**	**0.59**	**320**	*e*P	Pn	17 08 21.4	-0.4
KRSR				*e*S	Sn	17 08 38.9	-0.4
KPT	**Kopyto**	**0.61**	**289**	*e*P	Pn	17 08 21.6	-0.3
KPT				*e*S	Sn	17 08 39.4	-0.1
KLY	**Klyuchi**	**0.64**	**329**	*e*P	Pn	17 08 21.5	-0.5
KLY				*e*S	Sn	17 08 38.9	-0.9
BDR	**Baidarnaya**	**0.80**	**359**	*e*S	Sn	17 08 42.3	+0.7
KOZR	**Kozyr**	**0.81**	**292**	PN	Pn	17 08 22.8	-0.4
KOZR				S	Sn	17 08 42.2	+0.4
SMKR	**Semkarok**	**0.82**	**9**	*e*P	Pn	17 08 23.3	+0.1
SMKR				*e*S	Sn	17 08 42.1	+0.2
KOZ	**Kozyrevsk**	**0.82**	**291**	*e*P	Pn	17 08 22.8	-0.4
KOZ				*e*S	Sn	17 08 42.2	+0.3
KBTR	**Krutoberegovo**	**0.99**	**63**	*e*P	Pn	17 08 24.2	-0.3
KBTR				*e*S	Sn	17 08 43.0	-1.1
SRDR	**Sredinnyy**	**1.02**	**303**	*e*P	Pn	17 08 24.1	-0.6
SRDR				*e*S	Sn	17 08 43.5	-1.0
MKZ	**Mys Kozlova**	**1.25**	**167**	*e*P	Pn	17 08 26.7	-0.1
MKZ				*e*S	Sn	17 08 48.4	+0.3
BKI	**Bering**	**2.75**	**100**	*e*P	Pn	17 08 44.4	+0.9
BKI				*e*S	Sn	17 09 18.4	+0.5
SPN	**Mys Shipunski**	**2.77**	**195**	*e*P	Pn	17 08 42.8	-1.0
SPN				*e*S	Sn	17 09 15.9	-2.6
GNL	**Ganaly**	**2.83**	**224**	*e*P	Pn	17 08 45.2	+0.7
GNL				*e*S	Sn	17 09 21.5	+1.8
NLC	**Nalytchevo**	**2.83**	**204**	*e*P	Pn	17 08 44.4	-0.1
NLC				*e*S	Sn	17 09 18.9	-0.9
AVH	**Avacha**	**2.91**	**211**	*e*P	Pn	17 08 46.4	+1.0
PET	**Petropavlovsk**	**3.14**	**210**	*e*P	Pn	17 08 48.8	+0.4
PET				*e*S	Sn	17 09 26.7	0.0
PET	**Petropavlovsk**	**3.14**	**210**	PN	Pn	17 08 49.1	+0.7
PET				S	Sn	17 09 26.7	0.0

*IDC **04** 17:09:35.3±1.1, 13°.38N×122°.58E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, Error ellipse: s-maj=53.2km s-min=18.4km az=64.0*
*MAN **04** 17:09:35, 13°.83N×123°.01E, h21km, mb4.6, ML3.5, MS3.4*
*ISCJB **04** 17:09:36.9±0.5, 13°.78N±0°.04×122°.96E±0°.07, h33km, mb3.8/1, Error ellipse: s-maj=9.7km s-min=4.9km az=171.5*
*NEIC **04** 17:09:40.6±0.8, 13°.38N×122°.53E, h35km, mb4.2/4, Error ellipse: s-maj=36.2km s-min=12.4km az=67.0*
ISC 04 17:09:38.4±0.6, 13°.75N±0°.04×122°.92E±0°.07, h35km, n31, σ1s41/35, mb3.8/11, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.49**	**209**	*e*P	Pn	17 09 47.1	-1.7
AUQP				*e*S	Sn	17 09 55.2	-0.9
BOAC	**Boac**	**1.08**	**255**	*e*P	Pn	17 09 55.8	-1.3
BOAC				*e*S	Pn	17 10 01.8	+4.6
POLP	**Polilio Island**	**1.36**	**316**	*e*P	Pn	17 09 58.7	-2.3
MMPH	**Masbate**	**1.54**	**154**	⇓*e*P	Pn	17 10 03.2	-0.3
MMPH				*i* S	Sn	17 10 27.7	+5.5
OTRP	**Odiongan**	**1.63**	**213**	*e*P	Pn	17 10 04.9	+0.2
BALP	**Baler**	**2.37**	**327**	*e*P	Pn	17 10 13.2	-1.6
LUBP	**Lubang**	**2.60**	**270**	*e*P	Pn	17 10 17.6	-0.3
GUIM	**Jordan**	**3.12**	**186**	*e*P	Pn	17 10 28.0	+2.8
OCLP	**Ormoc**	**3.15**	**148**	*e*P	Pn	17 10 24.7	-0.8
BUSP	**Coron**	**3.17**	**237**	*e*P	Pn	17 10 26.5	+0.7
PALP	**Palanan**	**3.33**	**352**	*e*P	Pn	17 10 25.8	-2.2
CAUP	**Cauayan**	**3.35**	**342**	*e*P	Pn	17 10 26.8	-1.5
CUYO	**Cuyo Island**	**3.43**	**213**	*e*P	Pn	17 10 29.7	+0.3
BCPH	**Baguio City Da**	**3.46**	**319**	⇓*i*P	Pn	17 10 28.8	-1.0
BCPH				*i* S	Sn	17 11 13.7	+4.1
SCZP	**Santa Cruz**	**3.54**	**305**	*e*P	Pn	17 10 33.4	+2.5
BOLP	**Bolinao**	**3.91**	**312**	*e*P	Pn	17 10 36.3	+0.3
MSLP	**Maasin**	**4.06**	**152**	*e*P	Pn	17 10 49.1	+11
APYP	**Conner**	**4.40**	**339**	*e*P	Pn	17 10 41.4	-1.3
ABRA	**Dolores**	**4.42**	**332**	*e*P	Pn	17 10 43.1	0.0
CMAR	**Chiang Mai Arr**	**23.50**	**285**	P	P	17 14 45.1	-0.4
	1.6nm,0.7s,mb3.5,baz=99,slow=7.7,SNR=16						
MBWA	**Marble Bar**	**34.83**	**185**	P	P	17 16 26.1	-0.1
WRA	**Warramunga Arr**	**35.31**	**161**	P	P	17 16 29.3	-1.1
	0.4nm,0.5s,mb3.6,baz=346,slow=9.1,SNR=7.3						
SONM	**Songino Array**	**36.66**	**341**	P	P	17 16 46.1	+4.5
	0.3nm,0.6s,mb3.3,baz=150,slow=9.3,SNR=4.4						
ASAR	**Alice Springs**	**38.70**	**164**	P	P	17 16 59.8	+0.6
	0.4nm,0.6s,mb3.3,baz=344,slow=7.0,SNR=8.8						
MKAR	**Makanchi Array**	**47.29**	**322**	P	P	17 18 10.6	+2.2
	0.2nm,0.3s,mb3.5,baz=120,slow=8.3,SNR=6.3						
ZALV	**Zalesovo Beam**	**50.02**	**332**	P	P	17 18 31.8	+2.5
	0.3nm,0.4s,mb3.6,baz=153,slow=7.9,SNR=3.0						
KURK	**Kurchatov**	**51.36**	**325**	*e*P	P	17 18 43.0	+3.5
	3.2nm,0.8s,mb4.3						
KKAR	**Karatay Array**	**53.49**	**314**	*e*P	P	17 18 55.2	-0.2
	1.4nm,0.8s,mb3.9						
BRVK	**Borovoye**	**57.03**	**325**	P	P	17 19 23.9	+3.2
	2.5nm,0.6s,mb4.3						
ABKAR	**Akbulak array**	**62.12**	**319**	*e*P	P	17 19 59.1	+3.3
	0.8nm,0.7s,mb4.0						
ARCES	**ARCESS Array B**	**79.81**	**339**	P	P	17 21 47.5	+4.7
	8.1nm,1.2s,mb4.5,baz=88,slow=6.2,SNR=4.7						

*IDC **04** 17:38:08.3±3.4, 29°.90N×79°.27E, h0km, mb3.2/5, mb1 3.5/6, mb1mx3.3/25, mbtmp3.4/6, ML3.7/1, Error ellipse: s-maj=119.6km s-min=23.3km az=70.0*
*ISCJB **04** 17:38:13.2±1.2, 30°.23N±0°.04×80°.43E±0°.06, h16km±10km, mb3.2/3, Error ellipse: s-maj=8.3km s-min=7.3km az=168.0*
*NDI **04** 17:38:15.0±5.0, 30°.28N×80°.34E, h10km, ML3.3*
ISC 04 17:38:12.7±1.2, 30°.23N±0°.04×80°.45E±0°.06, h3km±8km, n21, σ1s25/30, mb3.2/3, 2D, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**0.71**	**197**	*e*PKP	Pg	17 38 24.9	-1.3
PTH				*e*S	Sg	17 38 35.6	+0.2
JOSI	**Joshimath**	**0.84**	**293**	*e*PKP	Pg	17 38 25.7	-3.0
JOSI				*e*S	Sg	17 38 33.6	-5.9
JOSI				AML	AML	17 38 38.1	
	comp=N,2μm,0.4s						
JOSI				AML	AML	17 38 39.9	
	comp=E,2μm,0.6s						
DDI	**Dehra Dun**	**2.07**	**273**	*e*PKP	Pn	17 38 47.5	-0.8
DDI				*ex*	x	17 39 03.5	
KLP	**Kalpa**	**2.29**	**305**	*e*PKP	Pn	17 38 52.6	+1.3
KLP				*e*S	Sn	17 39 19.8	-0.2
KLP				AML	AML	17 39 25.9	
	comp=E,597nm,0.8s						
KLP				AML	AML	17 39 26.5	
	comp=N,420nm,1.2s						
SMLA	**Simla**	**2.97**	**288**	*i* P	Pn	17 39 00.9	+0.3
SMLA				*i* S	Sn	17 39 34.3	-2.4
SMLA				⇓		17 39 38.8	
	comp=N,1μm,0.4s						
SMLA				⇓		17 39 39.5	
	comp=E,2μm,0.3s						
BISR	**Bishrakh**	**3.10**	**239**	*e*PKP	Pn	17 39 03.2	+0.8
NDI	**New Delhi**	**3.21**	**242**	*ex*	Pb	17 39 11.0	+0.7
NDI				*ex*	Sb	17 39 52.0	+2.1
SDNR	**Sundarnagar**	**3.25**	**294**	*e*PKP	Pn	17 39 06.5	+2.0
SDNR				*ex*	x	17 39 48.1	
SONA	**Sohna**	**3.54**	**237**	*e*PKP	Pn	17 39 08.8	+0.3
SONA				*e*S	Sn	17 39 50.5	-0.4
SONA				AML	AML	17 40 12.7	
	comp=N,55nm,0.4s						
SONA				AML	AML	17 40 13.3	
	comp=E,82nm,0.6s						
KUDL	**Kundal**	**4.04**	**240**	*ex*	Pn	17 39 19.1	+3.8
KUDL				*e*S	Sn	17 40 01.8	-1.3
KUDL				AML	AML	17 40 14.4	
	comp=E,36nm,0.9s						
KHET	**Khetri**	**4.60**	**243**	*e*PKP	Pn	17 39 24.3	+1.3
KHET				*e*S	Sn	17 40 12.2	-4.7
KHET				AML	AML	17 40 36.6	
	comp=E,34nm,0.7s						
KHET				AML	AML	17 40 36.8	
	comp=N,38nm,0.2s						
CHCP	**Chirah Chowk**	**7.00**	**301**	P	Pn	17 39 57.6	+1.6
BHPL	**Bhopal**	**7.47**	**202**	*e*PKP	Pn	17 39 59.2	-3.3
BHPL				*e*S	Sn	17 41 22.1	-5.6
THW	**Thamme Wali**	**7.86**	**291**	P	Pn	17 40 07.1	-0.7
CEP	**Cherat**	**8.09**	**298**	P	Pn	17 40 11.1	+0.2
MKAR	**Makanchi Array**	**16.60**	**4**	Pn	Pn	17 42 06.8	+0.6
	comp=N,0.2nm,0.3s,baz=192,slow=12,SNR=18						
CMAR	**Chiang Mai Arr**	**20.49**	**121**	P	P	17 42 56.2	+4.4
	comp=N,0.4nm,0.6s,baz=300,slow=12,SNR=3.8						
KURK	**Kurchatov**	**20.51**	**357**	P	P	17 42 50.1	-1.6
	comp=N,1.7nm,0.7s,baz=181,slow=11,SNR=17						
ZALV	**Zalesovo Beam**	**23.91**	**6**	P	P	17 43 27.4	-0.1
	comp=N,0.4nm,0.4s,mb3.2,baz=180,slow=5.8,SNR=3.4						
WRA	**Warramunga Arr**	**71.94**	**127**	P	P	17 49 36.5	-1.0
	comp=N,0.2nm,0.7s,mb3.2,baz=321,slow=6.3,SNR=2.3						
ASAR	**Alice Springs**	**74.18**	**130**	P	P	17 49 51.6	+0.9
	comp=N,0.3nm,0.8s,mb3.3,baz=312,slow=6.2,SNR=4.9						

*IDC **04** 17:49:48.5±2.3, 40°.30N×51°.71E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.4/25, mbtmp3.5/6, ML4.2/2, Error ellipse: s-maj=33.7km s-min=25.0km az=139.0*
*CSEM **04** 17:49:51.7±0.5, 40°.33N×51°.67E, h30km, mb3.5/1, Error ellipse: s-maj=22.5km s-min=5.5km az=158.0*
*ISCJB **04** 17:49:52.9±0.6, 40°.84N±0°.06×51°.45E±0°.05, h33km, mb3.4/4, Error ellipse: s-maj=10.0km s-min=3.2km az=156.1*
*NEIC **04** 17:49:53.1±1.4, 40°.48N×51°.60E, h35km, mb3.5/1, Error ellipse: s-maj=27.3km s-min=11.6km az=168.0*
*NNC **04** 17:49:57.2±3.4, 40°.88N×52°.21E, h0km, mb3.5, Error ellipse: s-maj=45.5km s-min=21.7km az=90.0*
ISC 04 17:49:53.9±0.6, 40°.64N±0°.07×51°.51E±0°.04, h35km, n44, σ1s20/54, mb3.4/4, 5C-3D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**1.06**	**258**	S	Sn	17 50 27.4	+1.6
NDR	**Nardaran**	**1.16**	**268**	P	Pn	17 50 15.9	+2.2
	SNR=12						
GOBA	**Gobu**	**1.38**	**261**	P	Pn	17 50 17.7	+1.1
GOBA				S	Sn	17 50 35.0	+1.4
SIZA	**Siyzn**	**2.03**	**283**	P	Pn	17 50 28.1	+2.5
	SNR=6.5						
ALIB	**Äli-Bayra**	**2.03**	**251**	S	Sn	17 50 48.5	-1.3
PQL	**Pirkuli**	**2.22**	**275**	P	Pn	17 50 29.2	+0.9
	SNR=3.7						
IML	**Ismayilli**	**2.54**	**275**	P	Pn	17 50 32.9	+0.3
	SNR=4.0						
GLBA	**Cililabad**	**2.77**	**241**	P	Pn	17 50 33.2	-2.6
	SNR=4.4						
GLBA				S	Sn	17 51 03.5	-4.6
SEKA	**Sheki**	**3.32**	**281**	P	Pn	17 50 44.0	+0.7
	SNR=6.7						
BRDA	**Brd**	**3.33**	**265**	P	Pn	17 50 43.2	-0.2
BRDA				S	Sn	17 51 20.5	-1.2
GANJ	**Ganja**	**3.95**	**272**	P	Pn	17 50 50.4	-1.6
	SNR=3.4						
DGRG	**David-gareji**	**4.71**	**282**	P	Pn	17 51 02.0	-0.5
DGRG				S	Sn	17 51 55.8	-0.1
MTA	**Mtatsminda**	**5.18**	**284**	P	Pn	17 51 08.4	-0.5
MTA				S	Sn	17 52 06.7	-0.7
TBLG	**Delisi**	**5.23**	**284**	P	Pn	17 51 09.3	-0.3
TBLG				S	Sn	17 52 07.0	-1.5
AB31	**Akbulak array**	**10.48**	**32**	⇑Pn	Pn	17 52 22.9	+1.4
	0.8nm,0.3s,baz=211,slow=13,SNR=43						
AB31				⇑Sn	Sn	17 54 16.9	-0.7
	0.5nm,0.2s,baz=144,slow=41,SNR=4.9						
AB31	**Akbulak array**	**10.48**	**32**	Pn	Pn	17 52 22.9	+1.4
	0.8nm,0.3s,baz=211,SNR=43						
ABKAR	**Akbulak array**	**10.48**	**32**	*e*P	Pn	17 52 21.1	-0.4
	2.6nm,0.3s						
ABKAR	**Akbulak array**	**10.48**	**32**	*e*P	Pn	17 52 21.1	-0.4
	2.6nm,0.3s						
AKTK	**Aktyubinsk**	**10.80**	**23**	Pn	Pn	17 52 26.8	+0.9
AKTK				Sn	Sn	17 54 23.0	-2.5
AKTK	**Aktyubinsk**	**10.80**	**23**	Pn	Pn	17 52 26.8	+0.9
AKTO	**Aktyubinsk**	**10.80**	**23**	⇑Pn	Pn	17 52 26.8	+0.9
	0.5nm,0.3s						
AKTO				⇑Sn	Sn	17 54 24.4	-1.0
	0.7nm,0.5s						
AKTO	**Aktyubinsk**	**10.80**	**23**	Pn	Pn	17 52 26.8	+0.9
	2.5nm,0.3s,baz=202,slow=12,SNR=45						
AKTO				Sn	Sn	17 54 23.0	-2.5
	1.2nm,0.3s,baz=12,slow=24,SNR=9.5						
AKTO	**Aktyubinsk**	**10.80**	**23**	Pn	Pn	17 52 26.8	+0.9
	0.5nm,0.3s						
BRTR	**Keskin Array B**	**13.70**	**272**	Pn	Pn	17 53 04.9	-0.7
	0.0nm,0.3s,baz=106,slow=5.1,SNR=2.1						
BRTR	**Keskin Array B**	**13.70**	**272**	Pn	Pn	17 53 04.9	-0.7
KK31	**Karatay Array**	**14.37**	**74**	⇑P	Pn	17 53 13.6	-1.1
	0.1nm,0.3s,baz=275,slow=15,SNR=3.7						
KKAR	**Karatay Array**	**14.37**	**74**	*e*P	Pn	17 53 13.8	-0.9
ZRNK	**Zerenda**	**17.12**	**38**	⇓P	Pn	17 53 50.6	+0.3
	1.3nm,0.5s						
BRVK	**Borovoye**	**17.80**	**39**	*e*P	Pn	17 53 57.9	-0.8
BRVK	**Borovoye**	**17.80**	**39**	*e*P	Pn	17 53 57.9	-0.7
BVA0	**Borovoye Array**	**17.83**	**40**	⇓P	Pn	17 53 59.8	+0.8
	0.3nm,0.7s,baz=222,slow=12,SNR=9.8						
BVAR	**Borovoye Array**	**17.83**	**40**	P	Pn	17 53 59.0	0.0
	0.5nm,0.3s,baz=229,slow=13,SNR=13						
BVAR	**Borovoye Array**	**17.83**	**40**	P	Pn	17 53 59.8	+0.8
	0.3nm,0.7s,SNR=9.8						
VOSK	**Vostochnaya**	**17.94**	**41**	⇓P	Pn	17 54 01.9	+1.5
	0.9nm,0.5s						
VOSK	**Vostochnaya**	**17.94**	**41**	P	Pn	17 54 01.9	+1.5
	0.9nm,0.5s						
KURK	**Kurchatov**	**21.34**	**53**	P	P	17 54 37.3	-0.5
	0.2nm,0.2s,mb3.0,baz=257,slow=11,SNR=2.7						
KURK	**Kurchatov**	**21.34**	**53**	*e*P	P	17 54 38.9	+1.1
	1.8nm,0.9s,mb3.4						
KURK	**Kurchatov**	**21.34**	**53**	*e*P	P	17 54 38.9	+1.1
	1.8nm,0.9s,mb3.4						
MKAR	**Makanchi Array**	**22.99**	**64**	P	P	17 54 54.3	-1.0
	0.5nm,0.6s,mb3.1,baz=257,slow=9.0,SNR=5.0						
MKAR	**Makanchi Array**	**22.99**	**64**	P	P	17 54 54.3	-1.0
ZALV	**Zalesovo Beam**	**25.94**	**48**	P	P	17 55 22.7	-0.1
	0.4nm,0.5s,mb3.2,baz=261,slow=7.2,SNR=3.0						
FINES	**FINESS Array B**	**25.95**	**332**	P	P	17 55 25.4	+2.7
	3.2nm,0.9s,mb3.9,baz=133,slow=12,SNR=4.4						
FINES	**FINESS Array B**	**25.95**	**332**	P	P	17 55 25.4	+2.7
FINES	**FINESS Array B**	**25.95**	**332**	P	P	17 55 25.4	+2.7

*IDC **04** 17:55:49.8±0.6, 53°.14N×167°.01W, h0km, mb4.0/24, mb1 4.2/25, mb1mx4.2/31, mbtmp4.0/25, ML4.2/1, MS4.2/13, Ms1 4.2/13, ms1mx3.9/46, Error ellipse: s-maj=19.7km s-min=11.0km az=175.0*
*BJI **04** 17:55:51.6, 53°.00N×166°.70W, h25km, mB5.2/4, mb4.5/6, Ms4.7/3, Ms7 4.3/3*
*NEIC **04** 17:55:53.6, 53°.05N×166°.72W, h25km, ML4.5(PMR), ML4.3(AEIC), After AEIC.*
*ISCJB **04** 17:55:55.3±0.7, 53°.23N±0°.07×166°.87W±0°.05, h50km±6km, mb4.1/29, MS4.2/14, Error ellipse: s-maj=11.8km s-min=4.8km az=168.7*
ISC 04 17:55:56.5±0.7, 53°.23N±0°.07×166°.87W±0°.05, h43km±6km, n86, σ0s92/78, mb4.1/29, MS4.2/14, 17C-9D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.65**	**20**	P	Pn	17 56 07.9	-1.5
UNV				S	Sn	17 56 20.0	+1.4
AKUT	**Akutan**	**1.12**	**36**	*e*P	Pn	17 56 13.8	-1.9
NIKO	**Nikolski**	**1.22**	**259**	*e*P	Pn	17 56 15.8	-1.3
NIKO				S	Sn

G13A	**Cobalt**	34.67	82	⇑P	P	18 02 41.9	+0.3
	baz=34,SNR=5.2						
C16A	**Fuhringer Ranc**	34.72	76	P	P	18 02 42.5	+0.5
	baz=34,SNR=21						
B17A	**L&G Farms, Che**	35.03	75	⇑P	P	18 02 44.5	-0.2
	baz=35,SNR=8.5						
C17A	**Wharram Farm,**	35.38	76	⇑P	P	18 02 46.8	-0.9
	baz=35						
EGMT	**Eagleton**	35.77	75	⇓P	P	18 02 50.7	-0.3
	baz=36						
BOZ	**Bozeman (W)**	35.91	79	⇓P	P	18 02 50.9	-1.3
	baz=36,SNR=6.0						
E17A	**Martinsdale**	35.93	78	⇑P	P	18 02 53.5	+1.1
	baz=36						
B19A	**Brinkman Farms**	36.02	74	⇑P	P	18 02 52.9	-0.2
	baz=36						
D18A	**Linhart Farms,**	36.16	76	⇑P	P	18 02 55.2	+0.8
	baz=36,SNR=8.7						
NVAR	**Mina Array Bea**	36.19	94	P	P	18 02 55.1	+0.4
	1.5nm,0.7s,mb4.0,baz=298,slow=7.8,SNR=12						
NVAR				PcP	PcP	18 05 20.3	+0.9
	0.4nm,0.6s,baz=330,slow=1.5,SNR=3.2						
C19A	**Slack Wire Ran**	36.33	75	⇑P	P	18 02 56.5	+0.7
	baz=36,SNR=16						
C20A	**Veseth Ranch,**	36.94	74	P	P	18 03 01.9	+0.8
	baz=37,SNR=9.6						
E19A	**Rath Farm, Rou**	37.15	76	⇓P	P	18 03 03.3	+0.5
	baz=37,SNR=7.3						
D20A	**Manuel Ranch,**	37.19	75	⇓P	P	18 03 03.5	+0.4
	baz=37,SNR=5.4						
RLMT	**Red Lodge**	37.59	79	⇑P	P	18 03 06.7	+0.1
	baz=37,SNR=5.5						
R11A	**Troy Canyon, C**	37.87	92	⇑P	P	18 03 09.2	+0.2
	baz=38						
F20A	**Billings**	37.88	77	⇑P	P	18 03 09.2	+0.2
	baz=38						
PDAR	**Pinedale Array**	38.77	82	P	P	18 03 16.4	0.0
	2.1nm,0.8s,mb3.9,baz=308,slow=4.9,SNR=14						
Q14A	**Sevier Lake (B**	38.85	89	⇑P	P	18 03 17.8	+0.5
	baz=39,SNR=5.0						
MJAR	**Matsushiro Arr**	41.24	269	P	P	18 03 35.6	-1.4
	0.7nm,0.5s,mb3.6,baz=39,slow=4.7,SNR=4.2						
MJAR				LR	LR	18 18 05.2	
	comp=Z,238nm,19.8s,MS4.1,baz=35,slow=32						
T19A	**Beclabito**	42.81	89	⇓P	P	18 03 49.2	-0.6
	baz=43,SNR=9.5						
U21A	**Nageezi**	43.90	88	⇓P	P	18 03 58.1	-0.5
	baz=44,SNR=10						
CBIJ	**Chichi jima**	45.59	256	LR	LR	18 19 54.5	
	comp=Z,138nm,20.3s,MS3.9,baz=132,slow=32						
ANMO	**Albuquerque**	45.61	88	P	P	18 04 11.7	-0.6
	0.8nm,0.5s,mb3.9,baz=0.0,slow=4.0,SNR=3.1						
KSRS	**Korea Array**	46.80	278	P	P	18 04 21.1	-0.5
	1.1nm,0.8s,mb3.8,baz=59,slow=7.5,SNR=4.9						
KSRS				LR	LR	18 21 43.5	
	comp=Z,189nm,21.4s,MS4.0,baz=340,slow=33						
MNTX	**Cornudas Mount**	48.52	91	⇓P	P	18 04 34.8	-0.2
	baz=48,SNR=6.0						
TXAR	**Lajitas Array**	51.24	92	P	P	18 04 55.4	-0.2
	1.5nm,0.7s,mb4.0,baz=300,slow=5.5,SNR=19						
TXAR	**Lajitas Array**	51.24	92	P	P	18 04 55.4	-0.2
BJI	**Beijing**	51.95	288	P	P	18 05 00.0	-0.9
BJI				S	S	18 12 22.1	+1.4
BJI				SS	SS	18 16 00.7	+3.2
BJI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BJI				pmax	pmax		
	comp=Z,170nm,9.2s						
BJI				LR	LR		
	comp=N,590nm,21.5s,MS4.7						
BJI				LR	LR		
	comp=E,530nm,21.5s,MS4.7						
BJI				LR	LR		
	comp=Z,320nm,20.7s,MS4.3						
SONM	**Songino Array**	52.15	302	P	P	18 05 01.6	-0.6
	comp=Z,0.4nm,0.5s,mb3.6,baz=106,slow=4.7,SNR=4.6						
SONM				PcP	PcP	18 06 13.9	+0.4
	comp=Z,1.4nm,0.8s,baz=48,slow=2.3,SNR=4.8						
SONM				ScP	ScP	18 10 08.8	+2.2
	comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=3.5						
NJ2	**Nanjing**	55.92	279	*e*P	P	18 05 32.9	+3.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
ARCES	**ARCESS Array B**	57.21	355	PcP	PcP	18 06 32.4	-0.1
	comp=Z,2.0nm,0.7s,baz=0.0,slow=3.6,SNR=5.2						
ZALV	**Zalesovo Beam**	57.80	318	P	P	18 05 41.7	-1.2
	comp=Z,0.4nm,0.4s,mb3.8,baz=44,slow=8.5,SNR=3.1						
ZALV				PcP	PcP	18 06 34.9	-0.2
	comp=Z,1.2nm,0.6s,baz=34,slow=2.3,SNR=4.6						
ZALV				LR	LR	18 32 30.1	
	comp=Z,631nm,18.9s,MS4.8,baz=285,slow=38						
LZH	**Lanzhou**	61.66	293	*e*P	P	18 06 11.7	+2.0
LZH				sP	sP	18 06 20.8	-6.3
LZH				*e*PP	PP	18 08 29.9	+4.5
LZH				pmax	pmax		
	comp=Z,17nm,1.4s,mb5.0						
LZH				pmax	pmax		
	comp=Z,49nm,6.0s						
LZH				LR	LR		
	comp=N,110nm,15.3s						
LZH				LR	LR		
	comp=Z,170nm,18.6s,MS4.2						
KURK	**Kurchatov**	62.72	319	P	P	18 06 16.8	+0.2
	comp=Z,0.3nm,0.3s,mb3.9,baz=43,slow=7.8,SNR=3.4						
KURK				LR	LR	18 35 24.3	
	comp=Z,361nm,20.3s,MS4.5,baz=355,slow=38						
BVAR	**Borovoye Array**	63.87	326	P	P	18 06 23.4	-0.7
	comp=Z,2.3nm,0.5s,mb4.5,baz=51,slow=6.8,SNR=13						
MKAR	**Makanchi Array**	64.30	315	P	P	18 06 26.2	-0.8
	comp=Z,0.8nm,0.7s,mb3.8,baz=1.5,slow=3.3,SNR=10						
FINES	**FINESS Array B**	65.21	353	P	P	18 06 32.0	-0.7
	comp=Z,1.9nm,0.9s,mb4.1,baz=20,slow=6.1,SNR=5.8						
TAOE	**Nuku Hiva Isla**	65.89	151	*e*LR	LR	18 26 25.6	
	comp=Z,457nm,23.1s						
HFS	**Hagfors**	66.98	360	LR	LR	18 35 43.3	
	comp=Z,249nm,19.4s,MS4.4,baz=329,slow=36						
GYA	**Guiyang**	67.21	284	P	P	18 06 47.0	+0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
KMI	**Kunming**	70.50	286	P	P	18 07 07.6	+1.0
KMI				pP	pP	18 07 17.4	-1.9
KMI				sP	sP	18 07 21.0	-3.2
KMI				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.2						
PPT	**Papeete**	72.07	163	*e*S	S	18 16 43.3	+8.8
	comp=Z,161nm,24.2s						
PPT				*e*LR	LR	18 29 10.7	
	comp=Z,333nm,23.8s						
PPT	**Papeete**	72.07	163	LR	LR	18 30 54.5	
	comp=Z,400nm,21.5s,MS4.7,baz=2.4,slow=29						
RAR	**Rarotonga**	74.39	173	LR	LR	18 36 32.8	
	comp=Z,305nm,19.6s,MS4.6,baz=62,slow=33						
CMAR	**Chiang Mai Arr**	77.89	284	P	P	18 07 49.8	+0.1
	comp=Z,2.4nm,0.6s,mb4.3,baz=20,slow=5.5,SNR=26						
DZM	**Mont Dzumac**	78.48	205	*e*LR	LR	18 32 17.0	
	comp=Z,337nm,21.7s						
RKT	**Rikitea**	80.92	150	*e*LR	LR	18 33 32.5	
	comp=Z,472nm,27.0s						
BRTR	**Keskin Array B**	85.73	344	P	P	18 08 31.1	+0.4
	comp=Z,2.2nm,0.8s,mb4.4,baz=0.0,slow=1.2,SNR=14						
ESDC	**Sonseca Array**	86.29	13	P	P	18 08 33.9	+0.4
	comp=Z,0.2nm,0.4s,mb3.7,baz=348,slow=4.5,SNR=4.1						
WRA	**Warramunga Arr**	88.73	234	P	P	18 08 44.1	-1.1
	comp=Z,1.4nm,0.9s,mb4.3,baz=36,slow=6.0,SNR=10						
FITZ	**Fitzroy Crossi**	91.60	242	P	P	18 08 57.8	-0.9
	comp=Z,1.6nm,1.0s,mb4.3,baz=342,slow=3.2,SNR=3.1						
ASAR	**Alice Springs**	92.12	232	P	P	18 09 00.6	-0.3
	comp=Z,1.0nm,1.0s,mb4.1,baz=26,slow=3.8,SNR=6.7						
QSPA	**South Pole Qui**	143.00	180	PKhKP	PKPpre	18 15 19.7	
	comp=Z,1.0nm,0.4s,baz=322,slow=1.5,SNR=14						
MAW	**Mawson**	152.50	219	PKPab	PKPab	18 15 55.4	-1.6
	comp=Z,2.6nm,0.8s,baz=82,slow=7.1,SNR=4.5						

*CSEM **04** 17:59:43.8, 39°.10N×28°.84W, h15km, ML2.7, After PDA*

PDA 04 17:59:43.8±1.0, 39°.10N×28°.84W, h15km, MD3.5, ML2.7, Error ellipse: s-maj=11.0km s-min=8.3km az=74.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	0.48	167	*e*P	Pg	17 59 52.2	-1.2
PCED				*e*S	Sg	17 59 58.3	-1.5
PCED				A		18 00 00.4	
	134nm,0.2s						
PCED	**Cedros**	0.48	167	*e*P	Pg	17 59 52.2	-1.2
PCED				*e*S	Sg	17 59 58.3	-1.5
CALA	**Caldeira**	0.53	168	*e*P	Pg	17 59 52.4	-1.8
CALA	**Caldeira**	0.53	168	*e*P	Pg	17 59 52.4	-1.8
HOR	**Horta**	0.59	164	*e*P	Pg	17 59 53.1	-2.4
HOR				*e*S	Sg	17 59 59.9	-3.5
HOR	**Horta**	0.59	164	*e*P	Pg	17 59 53.1	-2.4
HOR				*e*S	Sg	17 59 59.9	-3.5
ROSA	**Rosais**	0.60	129	*e*S	Sg	18 00 00.7	-2.9
ROSA	**Rosais**	0.60	129	*e*S	Sg	18 00 00.7	-2.9
PICO	**Pico**	0.68	151	*e*P	Pg	17 59 54.3	-2.8
PICO				*e*S	Sg	18 00 03.6	-2.4
PICO	**Pico**	0.68	151	*e*P	Pg	17 59 54.3	-2.8
PICO				*e*S	Sg	18 00 03.6	-2.4
PCAN	**Candelaria**	0.69	156	*e*P	Pg	17 59 54.6	-2.7
PCAN				*e*S	Sg	18 00 02.6	-3.9
PCAN				A		18 00 06.1	
	74nm,0.3s						
PCAN	**Candelaria**	0.69	156	*e*P	Pg	17 59 54.6	-2.7
PCAN				*e*S	Sg	18 00 02.6	-3.9
PMAN	**Manadas**	0.75	128	*e*P	Pg	18 00 03.3	+4.9

DJA 04 18:05:53, 8°.05S×106°.78E, h25km, MLv3.5/6, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	1.06	348	P	Pn	18 06 11.8	-0.5
SKJI				S	Sb	18 06 25.4	-0.8
CISI	**Cisompet, Garu**	1.14	64	P	Pn	18 06 12.6	-0.7
LEM	**Lembang**	1.47	34	P	Pn	18 06 18.6	+0.6
LEM				S	Sn	18 06 37.3	+0.9
DBJI	**Dramaga**	1.49	359	P	Pn	18 06 18.8	+0.6
DBJI				S	Sn	18 06 36.7	-0.1
CMJI	**Cimerak**	1.67	81	P	Pn	18 06 20.3	-0.4
CGJI	**Cibinong**	1.79	323	P	Pn	18 06 22.7	+0.4

*ISCJB **04** 18:18:55.3±1.0, 3°.79S±0°.04×129°.70E±0°.06, h33km±9km, mb4.6/29, Error ellipse: s-maj=12.0km s-min=5.3km az=150.1*
*BJI **04** 18:18:55.3, 3°.70S×129°.80E, h25km, mB4.6/2, mb4.7/8, Ms4.8/1, Ms7 4.4/1*
*NEIC **04** 18:18:56.3±4.4, 3°.70S×129°.75E, h25km±34km, mb4.7/10, Error ellipse: s-maj=14.7km s-min=8.3km az=217.0*
*IDC **04** 18:18:57.5±2.6, 3°.92S×129°.54E, h34km±19km, mb4.1/12, mb1 4.2/14, mb1mx4.1/21, mbtmp4.1/14, ML4.0/1, Error ellipse: s-maj=32.3km s-min=10.7km az=73.0*
*DJA **04** 18:18:57, 3°.77S×129°.59E, h9km, mb5.2/15*

ISC 04 18:18:57.9±0.8, 3°.79S±0°.05×129°.71E±0°.06, h39km±7km, n65, σ0s99/68, mb4.6/29, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	0.76	165	P	Pn	18 19 12.3	+0.1
NLAI	**Namlea**	2.66	282	P	Pn	18 19 36.9	-1.4
TLE	**Tual**	3.54	121	P	Pn	18 19 54.2	+3.8
TNTI	**Ternate**	5.10	333	P	Pn	18 20 11.2	-0.6
	0.3nm914nm97nm,0.7s						
KDI	**Kendari**	7.07	268	P	Pn	18 20 38.9	-0.1
	0.3nm90nm,0.9s						
MNI	**Manado**	7.12	317	P	Pn	18 20 38.6	-1.0
	0.6nm2μm97nm,0.8s						
KMSI	**Cibinong**	7.18	307	P	Pn	18 20 40.0	-0.4
BBSI	**Bau Bau**	7.31	256	P	Pn	18 20 44.1	+1.8
	0.6nm2μm198nm,1.0s						
LUWI	**Luwuk**	7.45	291	P	Pn	18 20 46.5	+2.4
	5.2nm530nm,0.6s						
LUWI				S	x	18 21 11.5	
	5.2nm530nm,0.6s						
APSI	**Ampana**	8.54	289	P	Pn	18 20 58.3	-0.9
MRSI	**Marisa**	8.84	298	P	Pn	18 21 03.6	+0.3
	6μm274nm,0.4s						
KAKA	**Kakadu**	9.27	163	*e*P	Pn	18 21 09.3	+0.2
	13nm,0.4s						
KAKA				*e*S	Sn	18 22 52.3	+0.1
KAKA	**Kakadu**	9.27	163	*e*Pn	Pn	18 21 08.8	-0.4
	65nm,0.6s						
KAKA	**Kakadu**	9.27	163	P	Pn	18 21 09.2	+0.1
	562nm46nm,0.7s						
BKSI	**Bulukumba**	9.68	261	P	Pn	18 21 15.8	+1.1
	761nm65nm,0.6s						
TTSI	**Tana Toraja**	9.90	274	P	Pn	18 21 19.2	+1.4
	962nm50nm,1.1s						
KAPI	**Kappang**	10.00	263	*e*Pn	Pn	18 21 20.0	+0.8
	55nm,0.6s						
TOLI	**Toli-Toli**	10.15	299	P	Pn	18 21 21.3	0.0
	5μm119nm,0.6s						
KNA	**Kununurra**	11.92	184	*e*P	Pn	18 21 45.4	-0.1
	32nm,0.8s						
KNA	**Kununurra**	11.92	184	P	Pn	18 21 45.2	-0.3
	909nm139nm,0.8s						
MYLDM	**Lahad Datu**	14.30	308	P	Pn	18 22 16.7	-1.3
	28nm,1.0s						
FITZ	**Fitzroy Crossi**	14.77	195	Pn	Pn	18 22 22.1	-2.2
	0.5nm,0.3s,baz=35,slow=11,SNR=22						
FITZ	**Fitzroy Crossi**	14.77	195	*e*P	Pn	18 22 22.2	-2.1
	13nm,0.5s						
FITZ	**Fitzroy Crossi**	14.77	195	P	Pn	18 22 23.4	-0.9
	25nm,0.7s						
WRA	**Warramunga Arr**	16.68	165	Pn	Pn	18 22 46.4	-2.5
	0.4nm,0.3s,baz=351,slow=13,SNR=23						
WRA				Sn	Sn	18 25 44.0	-9.2
	0.3nm,0.3s,baz=346,slow=22,SNR=4.9						
COEN	**Coen**	16.70	128	*e*P	Pn	18 22 47.8	-1.3
COEN	**Coen**	16.70	128	*e*P	Pn	18 22 47.7	-1.4
	62nm,0.7s						
COEN	**Coen**	16.70	128	P	Pn	18 22 53.0	+3.9
MBWA	**Marble Bar**	19.81	209	*e*P	Pn	18 23 25.5	-1.5
MBWA	**Marble Bar**	19.81	209	*e*P	Pn	18 23 25.4	-1.6
	11nm,0.9s						
ASAR	**Alice Springs**	20.18	169	P	P	18 23 29.4	+0.2
	4.7nm,0.4s,baz=350,slow=10,SNR=71						
ASAR				S	S	18 27 10.5	-3.2
	1.4nm,0.7s,baz=354,slow=24,SNR=4.4						
ASAR				PcP	PcP	18 27 43.5	+0.6
	1.4nm,0.6s,baz=3.4,slow=2.9,SNR=6.0						
ASAR				ScP	ScP	18 31 17.4	+0.9
	1.2nm,0.7s,baz=336,slow=2.1,SNR=8.9						
MTSU	**Mount Surprise**	20.20	136	*e*P	P	18 23 32.1	+2.6
	65nm,0.8s						
CTA	**Charters Tower**	22.86	136	P	P	18 23 59.6	+1.5
	4.1nm,0.5s,mb4.1,baz=329,slow=5.9,SNR=3.2						
CTAO	**Charters Tower**	22.86	136	P	P	18 24 00.3	+2.2
IPM	**Ipoh**	29.81	286	*e*P	P	18 25 01.2	-0.3
	15nm,0.6s,mb4.9						
STKA	**Stephens Creek**	30.09	160	P	P	18 25 04.4	+0.6
	1.0nm,0.5s,mb3.8,baz=318,slow=11,SNR=6.7						
STKA				ScP	ScP	18 31 45.2	+0.9
	2.0nm,0.7s,baz=297,slow=4.5,SNR=3.9						
CMAR	**Chiang Mai Arr**	37.51	307	P	P	18 26 09.0	+0.6
	8.9nm,0.5s,mb4.7,baz=135,slow=7.3,SNR=79						
CMAR				PcP	PcP	18 28 27.6	+1.4
	0.9nm,0.7s,baz=178,slow=2.6,SNR=5.1						
CHTO	**Chiang Mai**	37.70	308	*e*P	P	18 26 10.2	+0.1
	16nm,0.7s,mb4.9						
KMI	**Kunming**	38.88	319	P	P	18 26 20.3	+0.5
KMI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
MAJO	**Matsushiro**	40.90	10	*e*P	P	18 26 33.6	-2.8
	comp=Z,7.7nm,0.8s,mb4.4						
MAT	**Matsushiro**	40.90	10	P	P	18 26 36.0	-0.4
MJAR	**Matsushiro Arr**	40.90	10	P	P	18 26 36.2	-0.2
	comp=Z,3.8nm,0.9s,mb4.0,baz=184,slow=9.1,SNR=9.9						
KSRS	**Korea Array**	41.06	358	P	P	18 26 37.8	0.0
	comp=Z,0.9nm,0.6s,mb3.6,baz=175,slow=9.7,SNR=6.8						
LZH	**Lanzhou**	46.46	331	*e*P	P	18 27 25.6	+4.4
LZH				pP	pP	18 27 31.0	-1.4
LZH				sP	sP	18 27 33.4	-3.6
LZH				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
LSA	**Lhasa**	49.72	315	*e*P	P	18 27 47.3	+0.8
	comp=Z,7.5nm,0.6s,mb4.9						
ODAN	**Odare**	50.97	309	*e*P	P	18 27 55.8	-0.2
	comp=Z,21nm,0.7s,mb5.2						
TAPN	**Taplejung**	50.98	310	*e*P	P	18 27 55.9	-0.1
GTA	**Gaotai**	51.04	330	*e*P	P	18 27 57.0	+0.7
GTA				pP	pP	18 28 03.9	-3.7
GTA				sP	sP	18 28 06.8	-5.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
RAMN	**Ramite**	51.63	309	*e*P	P	18 28 01.1	+0.2
	comp=Z,48nm,0.5s,mb5.7						
GUN	**Gumba**	52.66	310	*e*P	P	18 28 08.5	-0.1
	comp=Z,37nm,0.6s,mb5.5						
DMN	**Daman**	53.11	309	*e*P	P	18 28 11.7	-0.2
	comp=Z,10nm,0.5s,mb5.0						
GKN	**Gorkha**	53.66	309	*e*P	P	18 28 15.5	-0.5
	comp=Z,18nm,0.6s,mb5.2						
KOLN	**Koldanda**	54.36	308	*e*P	P	18 28 20.9	-0.2
	comp=Z,27nm,0.7s,mb5.3						
DANN	**Dangsing**	54.51	309	*e*P	P	18 28 21.9	-0.2
	comp=Z,40nm,0.8s,mb5.5						
ULN	**Ulaanbaatar**	55.14	342	*e*P	P	18 28 26.0	-0.3
	comp=Z,2.6nm,0.8s,mb4.3						
SONM	**Songino Array**	55.32	341	P	P	18 28 28.4	+0.8
	comp=Z,1.8nm,1.0s,mb4.1,baz=174,slow=4.6,SNR=9.2						
PETK	**Petropavlovsk-**	61.39	19	P	P	18 29 12.9	+3.0
	comp=Z,3.9nm,0.9s,mb4.5,baz=53,slow=4.7,SNR=3.7						
MKAR	**Makanchi Array**	65.40	326	P	P	18 29 36.6	+0.1
	comp=Z,3.3nm,0.5s,mb4.7,baz=116,slow=8.3,SNR=57						
YAK	**Yakutsk**	65.63	360	*e*P	P	18 29 38.4	+0.7
	comp=Z,7.1nm,0.7s,mb4.8						
ZALV	**Zalesovo Beam**	68.59	333	P	P	18 29 56.0	-0.6
	comp=Z,2.2nm,0.7s,mb4.2,baz=115,slow=5.8,SNR=11						
KURK	**Kurchatov**	69.64	328	P	P	18 30 03.3	+0.1
	comp=Z,6.9nm,0.7s,mb4.7,baz=134,slow=4.1,SNR=4.4						
ABKAR	**Akbulak array**	79.83	321	*e*P	P	18 31 01.9	-0.4
	comp=Z,3.4nm,0.6s,mb4.5						
AKTK	**Aktyubinsk**	81.37	322	P	P	18 31 10.2	-0.3
AKTO	**Aktyubinsk**	81.37	322	P	P	18 31 10.2	-0.4
	comp=Z,2.4nm,0.8s,mb4.2,baz=101,slow=4.8						
ARU	**Arti**	82.84	328	*e*P	P	18 31 17.9	-0.2
	comp=Z,5.4nm,1.0s,mb4.5						

*IDC **04** 18:27:38.5±6.1, 12°.02S×166°.69E, h128km±45km, mb3.7/10, mb1 3.8/11, mb1mx3.7/19, mbtmp3.7/11, MS4.2/1, Ms1 4.2/1, ms1mx3.4/25, Error ellipse: s-maj=48.4km s-min=20.6km az=112.0*
*ISCJB **04** 18:27:39.5±5.8, 12°.15±0°.2×166°.6E±0°.4, h150km±39km, mb3.9/11, Error ellipse: s-maj=62.9km s-min=22.5km az=20.6*
*NEIC **04** 18:27:40.3±3.8, 11°.99S×166°.63E, h144km±26km, Error ellipse: s-maj=37.1km s-min=14.8km az=114.0*

ISC 04 18:27:39.9±5.5, 12°.0S±0°.2×166°.7E±0°.4, h141km±36km, n16, σ0s59/13, mb3.9/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	7.07	291	P	Pn	18 29 21.2	+0.2
	2.8nm,0.3s,baz=72,slow=3.2,SNR=2.7						
STKA	**Stephens Creek**	30.37	225	P	P	18 33 38.8	+0.2
	1.3nm,0.7s,mb3.8,baz=68,slow=4.7,SNR=3.3						
WRA	**Warramunga Arr**	32.00	252	P	P	18 33 52.7	-0.4
	0.4nm,0.6s,mb3.3,baz=84,slow=8.8,SNR=4.5						
WRA				PcP	PcP	18 36 40.4	+0.6
	0.5nm,0.7s,baz=78,slow=2.5,SNR=6.5						
WRA	**Warramunga Arr**	32.00	252	P	P	18 33 52.7	-0.4
WRA				PcP	PcP	18 36 40.4	+0.6
ASAR	**Alice Springs**	33.17	245	P	P	18 34 02.9	-0.3
	0.7nm,0.6s,mb3.6,baz=66,slow=10,SNR=17						
ASAR				pP	pP	18 34 31.1	-2.4
	1.0nm,0.7s,baz=73,slow=10,SNR=4.4						
ASAR				PcP	PcP	18 36 43.3	+0.3
	0.7nm,0.7s,baz=77,slow=2.5,SNR=13						
GUMO	**Guam**	33.37	319	P	P	18 34 03.8	-1.2
	81nm,1.0s,mb5.4,baz=65,slow=8.2,SNR=4.6						
FITZ	**Fitzroy Crossi**	40.00	256	P	P	18 35 01.0	-0.2
	1.9nm,1.0s,mb3.7,baz=135,slow=5.9,SNR=5.1						
NWAO	**Narrogin (SRO)**	49.67	237	LR	LR	18 57 51.7	
	comp=Z,261nm,21.0s,baz=178,slow=36						
KSRS	**Korea Array**	61.18	325	P	P	18 37 40.3	+0.6
	0.6nm,0.7s,mb3.5,baz=150,slow=5.3,SNR=4.9						
CMAR	**Chiang Mai Arr**	73.31	294	P	P	18 38 57.7	+1.1
	1.5nm,0.8s,mb3.8,baz=123,slow=4.5,SNR=13						
SONM	**Songino Array**	79.97	324	P	P	18 39 33.7	+0.4
	0.6nm,0.4s,mb3.6,baz=147,slow=5.7,SNR=7.8						
ILAR	**Eielson Array**	84.15	18	P	P	18 39 54.5	-0.3
	0.6nm,0.6s,mb3.5,baz=226,slow=6.6,SNR=8.3						
MKAR	**Makanchi Array**	94.83	317	P	P	18 40 46.1	+0.3
	2.3nm,0.6s,mb4.6,baz=89,slow=6.8,SNR=24						
ZALV	**Zalesovo Beam**	94.86	324	P	P	18 40 45.1	-0.5
	0.8nm,0.7s,mb4.1,baz=113,slow=3.9,SNR=4.5						
ARCES	**ARCESS Array B**	117.49	346	PKP	PKPdf	18 46 08.1	-0.2
	2.6nm,0.9s,baz=0.0,slow=1.3,SNR=4.6						
KEST	**Kesra**	148.72	323	PKPbc	PKPbc	18 47 11.6	+0.6
	0.8nm,0.8s,baz=309,slow=8.1,SNR=4.1						

*IDC **04** 18:30:53.4±1.8, 30°.94N×83°.57E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.4/25, mbtmp3.4/7, ML3.6/2, Error ellipse: s-maj=58.1km s-min=21.8km az=62.0*
*ISCJB **04** 18:30:57.3±2.8, 31°.0N±0°.1×83°.6E±0°.2, h42km±34km, mb3.4/4, Error ellipse: s-maj=26.1km s-min=17.3km az=150.0*

ISC 04 18:30:58.3±5.7, 31°.1N±0°.1×83°.7E±0°.1, h30km±48km, n9, σ0s76/9, mb3.4/4, Xizang

| Code | Station Name | Δ° | AZ° | Phase ID Op | ISC | Time h m s | Res ISC |
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KDAK	Kodiak Island	41.10	324	P	P	18 39 12.6	+0.7
	0.9nm,0.3s,mb3.9,baz=101,slow=10,SNR=3.2						
KDAK	Kodiak Island	41.10	324	P	P	18 39 12.6	+0.7
KURK	Kurchatov	42.24	70	P	P	18 39 22.9	+1.6
	1.6nm,0.7s,mb3.8,baz=339,slow=7.5,SNR=3.8						
KURK	Kurchatov	42.24	70	P	P	18 39 22.9	+1.6
BRTR	Keskin Array B	44.14	119	P	P	18 39 38.8	+2.0
	0.3nm,0.6s,mb3.2,baz=319,slow=4.2,SNR=2.6						
BRTR	Keskin Array B	44.14	119	P	P	18 39 38.8	+2.0
MKAR	Makanchi Array	46.69	68	P	P	18 39 57.8	+0.9
	0.3nm,0.4s,mb3.6,baz=354,slow=5.5,SNR=10.0						
TXAR	Lajitas Array	60.47	271	P	P	18 41 37.6	-0.5
	0.6nm,0.7s,mb3.7,baz=42,slow=6.2,SNR=8.3						
TXAR	Lajitas Array	60.47	271	P	P	18 41 37.7	-0.4

*ISCJB **04** 18:40:07.8±0.6, 36.°95N±0.°04×29.°11E±0.°03, h10km, Error ellipse: s-maj=5.7km s-min=3.8km az=7.5*
*CSEM **04** 18:40:07.5±0.3, 36.°95N×29.°11E, h8km, MD2.6, Error ellipse: s-maj=6.3km s-min=5.0km az=10.0*
*DDA **04** 18:40:07.8, 36.°98N×29.°14E, h6km±4km, Md2.8*
*ISK **04** 18:40:07.2, 37.°03N×29.°12E, h23km, MD2.6*
ISC 04 18:40:08.1±0.7, **36.°96N**±0.°04×**29.°10E**±0.°04, **h7**km±7km, **n20**, σ0.°95/34, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.38	58	*e*PG	Pg	18 40 14.9	-0.5
GLHS				*e*SG	Sg	18 40 20.7	+0.4
GLHS	Glhisar (BURDU	0.38	58	*e*Pg	Pg	18 40 14.9	-0.5
GLHS				*e*Sg	Sg	18 40 20.7	+0.4
GOLH	Golhisar	0.46	53	*i* P	Pg	18 40 15.5	-1.5
GOLH				*i* S	Sg	18 40 22.9	-0.3
GOLH	Golhisar	0.46	53	*i* P	Pg	18 40 15.5	-1.5
GOLH				*i* S	Sg	18 40 22.9	-0.2
YER	Yerkesik	0.68	286	*e*PG	Pg	18 40 21.1	0.0
YER				*e*SG	Sg	18 40 31.1	+1.2
YER	Yerkesik	0.68	286	*e*Pg	Pg	18 40 21.1	0.0
YER				*e*Sg	Sg	18 40 31.1	+1.2
ELL	Elmali	0.68	107	*e*PG	Pg	18 40 21.5	+0.4
ELL				*e*SG	Sg	18 40 32.0	+2.0
ELL	Elmali	0.68	107	*e*Pg	Pg	18 40 21.5	+0.3
DNZL	Cakiroluk	0.73	357	*i* P	Pg	18 40 21.4	-0.8
DNZL				*i* S	Sg	18 40 32.6	+0.8
DNZL	Cakiroluk	0.73	357	*i* P	Pg	18 40 21.4	-0.8
DNZL				*i* S	Sg	18 40 32.6	+0.9
DENT	Denizli	0.80	356	*e*PG	Pg	18 40 22.1	-1.4
DENT	Denizli	0.80	356	*e*Pg	Pg	18 40 22.1	-1.3
AKAS	Kas	0.83	150	*i* P	Pg	18 40 23.7	-0.3
AKAS				*i* S	Sg	18 40 41.7	+7.0
AKAS	Kas	0.83	150	*i* P	Pg	18 40 23.7	-0.3
AYDN	Tasoluk	1.20	306	*i* P	Pb	18 40 31.5	+0.3
AYDN				*i* S	Sb	18 40 47.7	+0.8
AYDN	Tasoluk	1.20	306	*i* P	Pb	18 40 31.5	+0.3
AYDN				*i* S	Sb	18 40 47.7	+0.8
DAT	Datca	1.24	260	*e*PN	Pn	18 40 29.9	-2.0
DAT	Datca	1.24	260	*e*Pn	Pn	18 40 29.9	-2.0
KHAL	Karahalli	1.45	12	*i* P	Pn	18 40 34.9	+0.2
KHAL				*i* S	Sn	18 40 54.5	+0.5
KHAL	Karahalli	1.45	12	*i* P	Pn	18 40 34.8	+0.1
KHAL				*i* S	Sn	18 40 54.5	+0.6

*DMN **04** 18:46:55.8±4.0, 31.°39N×83.°26E, h10km, Mb5.0/3, Error ellipse: s-maj=95.8km s-min=10.6km az=156.0*
*IDC **04** 18:47:01.4±2.9, 30.°53N×83.°06E, h0km, mb3.2/4, mb1 3.4/6, mb1mx3.3/25, mbtmp3.2/6, ML3.3/2, Error ellipse: s-maj=87.7km s-min=22.4km az=69.0*
*ISCJB **04** 18:47:05.0±0.5, 30.°80N±0.°05×83.°49E±0.°05, h10km, mb3.3/4, Error ellipse: s-maj=8.2km s-min=4.9km az=25.5*
*NEIC **04** 18:47:04.7±1.4, 30.°55N×83.°30E, h10km, mb3.7/2, Error ellipse: s-maj=31.2km s-min=13.4km az=46.0*
*NDI **04** 18:47:12.5±2.0, 30.°46N×83.°30E, h10km, ML3.6, mb3.7(NEIC)*
ISC 04 18:47:06.6±0.5, **30.°76N**±0.°06×**83.°48E**±0.°05, **h10**km, **n27**, σ**1**§**13**/29, **mb3.3**/4, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	2.42	174	*e*P	Pn	18 47 46.2	+0.1
	352nm,0.4s						
GKN	Gorkha	2.93	160	*e*P	Pn	18 47 53.2	0.0
	121nm,0.6s						
KOLN	Koldanda	2.98	178	*e*P	Pn	18 47 53.8	-0.1
	106nm,0.5s						
PTH	Pithoragarh	3.08	248	*e*PKP	Pn	18 47 57.7	+2.5
PTH				*ex*	x	18 48 37.2	
KKN	Kakani	3.35	152	*e*P	Pn	18 47 59.5	+0.5
	62nm,0.5s						
JOSI	Joshimath	3.39	268	*e*PKP	Pn	18 48 00.5	+1.0
JOSI				*e*S	Sn	18 48 38.6	-1.1
DMN	Daman	3.45	155	*e*P	Pn	18 48 00.9	+0.6
	125nm,0.7s						
GUN	Gumba	3.53	143	*e*P	Pn	18 48 01.2	-0.2
PKI	Pulchoki	3.60	152	*e*P	Pn	18 48 02.5	+0.1
	58nm,0.6s						
KLP	Kalpa	4.55	281	*e*PKP	Pn	18 48 21.5	+6.0
KLP				*e*S	Sn	18 49 09.3	+0.9
RAMN	Ramite	4.68	144	*e*P	Pn	18 48 17.6	+0.3
	57nm,0.8s						
DDI	Dehra Dun	4.70	266	*ex*	Pn	18 48 18.5	+0.9
TAPN	Taplejung	5.03	132	*e*P	Pn	18 48 21.9	-0.1
	11nm,0.4s						
ODAN	Odare	5.18	138	*e*P	Pn	18 48 24.8	+0.6
	72nm,0.6s						
AGRA	Agra	5.99	235	*ex*	x	18 50 09.7	
AGRA				AML	AML	18 50 13.8	
	comp=E,89nm,0.4s						
AGRA				AML	AML	18 50 13.9	
	comp=N,77nm,0.4s						
SONA	Sohna	6.11	247	*ex*	Pn	18 48 35.6	-1.4
SONA				*e*S	Sn	18 49 42.9	-4.1
LSA	Lhasa	6.72	97	*e*P	Pn	18 48 47.9	+2.6
	comp=N,8.1nm,0.9s						
KHET	Khetri	7.21	250	*ex*	x	18 48 35.0	
KHET				*e*S	Sn	18 50 08.2	-5.8
MKAR	Makanchi Array	16.03	357	Pn	Pn	18 50 48.7	-3.4
	comp=N,0.1nm,0.3s,baz=208,slow=21,SNR=3.0						
CMAR	Chiang Mai Arr	18.62	128	P	Pn	18 51 22.4	-2.2
	comp=N,0.1nm,0.3s,baz=303,slow=11,SNR=7.8						
KURK	Kurchatov	20.26	351	P	P	18 51 37.6	-4.4
	comp=N,0.7nm,0.8s,baz=173,slow=10,SNR=4.9						
KURK	Kurchatov	20.26	351	*e*P	P	18 51 41.9	-0.1
	comp=N,2.5nm,0.8s						
ENH	Enshi	22.39	85	*e*P	P	18 52 03.9	-1.3
ZALV	Zalesovo Beam	23.19	2	P	P	18 52 13.9	+0.5
	comp=N,0.3nm,0.4s,mb3.1,baz=209,slow=12,SNR=2.5						
SONM	Songino Array	24.45	39	P	P	18 52 25.4	-0.1
	comp=N,0.4nm,0.7s,mb2.9,baz=234,slow=9.0,SNR=3.7						
ABKAR	Akbulak array	25.64	323	*e*P	P	18 52 36.1	-0.1
	comp=N,1.5nm,0.8s,mb3.6						
WRA	Warramunga Arr	70.20	129	P	P	18 58 17.1	-2.8
	comp=N,0.4nm,0.5s,mb3.6,baz=325,slow=6.4,SNR=11						

*IDC **04** 18:47:53.8±0.6, 30.°09N×42.°51W, h0km, mb4.3/27, mb1 4.4/27, mb1mx4.4/33, mbtmp4.3/27, MS4.5/25, Ms1 4.5/25, ms1mx4.5/30, Error ellipse: s-maj=15.6km s-min=12.5km az=170.0*
*ISCJB **04** 18:47:54.0±0.3, 30.°17N±0.°07×42.°63W±0.°03, h10km, mb4.7/114, MS4.6/36, Error ellipse: s-maj=10.2km s-min=3.1km az=173.6*
*BJI **04** 18:47:54.3, 30.°10N×42.°60W, h10km, mB5.5/4, mb5.2/1, Ms5.1/3, Ms7 4.7/4*
*NEIC **04** 18:47:55.3±0.3, 30.°10N×42.°59W, h10km, mb4.8/77, Error ellipse: s-maj=9.6km s-min=4.0km az=172.0*
*GCMT **04** 18:47:59.5±0.2, 30.°17N×42.°57W, h12km, MW5.4, Moment Tensor Solution. s65,c97; s95,c186; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.45±.03; $M_{\theta\theta}$0.79±.03; $M_{\phi\phi}$-0.34±.03; $M_{r\theta}$-0.65±.07; $M_{\theta\phi}$1.20±.02; $M_{\phi r}$-0.63±.06; Best double couple: $M_0$1.50000×10^{17} NP1:ϕ_s285.00000°, δ59.00000°, λ-1.00000°. NP2:ϕ_s16.00000°, δ89.00000°, λ-148.00000°. Principal axes: T 1.8900, Plg21.0000°, Azm146.0000°; N -0.7100, Plg58.0000°, Azm18.0000°; P -1.1800, Plg23.0000°, Azm245.0000°; Data Used: II IU IC G CN.*
ISC 04 18:47:56.0±0.3, **30.°16N**±0.°07×**42.°60W**±0.°03, **h10**km, **n278**, σ**1**§**02**/263, **mb4.7**/114, **MS4.6**/36, **41C-33D, Northern**

Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	San Juan	24.56	246	LR	LR	19 00 31.6	
	comp=Z,2μm,21.8s,MS4.5,baz=87,slow=31						
BBTS	Babate	28.51	117	LR	LR	19 02 40.3	
	comp=Z,2μm,18.8s,MS4.7,baz=55,slow=31						
PMAFR	Mafra	28.68	63	*e*LR	LR	19 01 08.2	
	991nm,20.8s						
PFVI	Vila Bisbo	28.85	67	*e*LR	LR	19 01 02.8	
	2μm,16.9s						
PTEO	Sao Teotonio	28.97	66	*e*P	P	18 53 56.9	+1.2
MORF	Marmelete	29.01	67	*e*LR	LR	19 01 05.1	
	2μm,20.0s						
PCVE	Castro Verde	29.52	66	*e*P	P	18 54 02.1	+1.6
PCVE				*e*LR	LR	19 01 20.8	
	2μm,18.9s						
PBDV	Barranco-do-Ve	29.57	67	*e*P	P	18 54 01.9	+0.8
	43nm,1.6s,mb4.9						
PBDV				*e*LR	LR	19 01 19.7	
	2μm,18.2s						
EVO	Evora	29.62	64	⇑*i*P	P	18 54 00.4	-1.0
	33nm,1.2s,mb4.6						
EVO				*e*MLR	MLR		
	comp=Z,1μm,21.2s,MS4.2						
PBEJ	Beja	29.68	65	*e*P	P	18 54 02.6	+0.6
PVAQ	Vaqueiros	29.75	67	*e*LR	LR	19 00 56.1	
	comp=Z,2μm,18.0s						
PESTR	Estremoz	29.98	64	*e*LR	LR	19 01 44.0	
	comp=Z,97nm,19.4s						
SCHQ	Schefferville	30.16	332	P	P	18 54 05.2	-0.8
	comp=Z,9.0nm,0.7s,mb4.6,baz=123,slow=10.0,SNR=7.3						
SCHQ				LR	LR	19 04 56.0	
	comp=Z,2μm,21.2s,MS4.6,baz=112,slow=34						
SCHQ	Schefferville	30.16	332	P	P	18 54 05.2	-0.8
SCHQ				LR	LR	19 04 56.0	
PCBR	Castelo Branco	30.18	62	*e*P	P	18 54 06.7	+0.3
	comp=Z,30nm,1.6s,mb4.8						
PMRV	Marv??o	30.20	63	*e*P	P	18 54 06.6	+0.1
	comp=Z,27nm,1.5s,mb4.8						
PMRV				*e*LR	LR	19 01 42.7	
	comp=Z,852nm,21.2s						
MTE	Manteigas	30.21	61	*e*LR	LR	19 01 52.8	
	comp=Z,1μm,20.0s						
PBAR	Barrancos	30.35	65	*e*P	P	18 54 07.0	-0.9
	comp=Z,30nm,1.6s,mb4.8						
PBAR				*e*LR	LR	19 01 50.3	
	comp=Z,1μm,17.9s						
MVO	Moncorvo	30.72	59	*e*P	P	18 54 11.6	+0.5
MVO				*e*LR	LR	19 02 03.7	
	comp=Z,1μm,20.3s						
ESDC	Sonseca Array	32.86	63	P	P	18 54 28.3	-1.6
	comp=Z,2.9nm,1.0s,mb4.2,baz=260,slow=8.5,SNR=11						
ESDC				LR	LR	19 04 36.2	
	comp=Z,692nm,20.2s,MS4.3,baz=265,slow=30						
SDV	Santo Domingo	33.68	237	*e*P	P	18 54 37.6	+0.2
	comp=Z,16nm,0.8s,mb5.0						
TKL	Tuckaleechee C	34.82	290	P	P	18 54 48.2	+1.1
	comp=Z,2.0nm,0.7s,mb4.2,baz=79,slow=16,SNR=2.6						
TKL	Tuckaleechee C	34.82	290	P	P	18 54 48.2	+1.1
SJPF	Ste Jean	35.28	57	*e*P	P	18 54 51.3	+0.4
	comp=Z,40nm,1.3s,mb4.9						
SJPF	Ste Jean	35.28	57	*e*P	P	18 54 51.3	+0.4
	comp=Z,20nm,1.3s,mb4.9						
ETSF	Etsaut	35.74	57	*e*P	P	18 54 55.2	+0.3
	comp=Z,90nm,1.8s,mb5.1						
ETSF	Etsaut	35.74	57	*e*P	P	18 54 55.2	+0.3
	comp=Z,45nm,1.8s,mb5.1						
EPF	Esparros	36.41	57	*e*P	P	18 54 59.7	-0.9
	comp=Z,38nm,1.4s,mb4.8						
EPF	Esparros	36.41	57	*e*P	P	18 54 59.7	-0.9
	comp=Z,19nm,1.4s,mb4.8						
GRR	Gorron	36.54	48	*e*P	P	18 55 02.1	+0.4
	comp=Z,42nm,1.1s,mb4.9						
GRR	Gorron	36.54	48	*e*P	P	18 55 02.1	+0.4
	comp=Z,21nm,1.1s,mb4.9						
MFF	Saint Martin d	36.61	51	*e*P	P	18 55 02.7	+0.4
	comp=Z,106nm,1.5s,mb5.1						
MFF	Saint Martin d	36.61	51	*e*P	P	18 55 02.7	+0.4
	comp=Z,53nm,1.5s,mb5.2						
LFF	La Frestale	36.94	54	*e*P	P	18 55 05.1	0.0
	comp=Z,65nm,1.3s,mb5.0						
LFF	La Frestale	36.94	54	*e*P	P	18 55 05.1	0.0
	comp=Z,32nm,1.3s,mb5.0						
LDF	La Druitiere	37.07	48	*e*P	P	18 55 06.2	0.0
	comp=Z,7.9nm,0.7s,mb4.4						
LDF	La Druitiere	37.07	48	*e*P	P	18 55 06.2	0.0
	comp=Z,4.0nm,0.7s,mb4.4						
BORG	Borgarnes	37.08	15	P	P	18 55 06.4	+0.3
	comp=Z,5.8nm,0.7s,mb4.5,baz=239,slow=5.9,SNR=2.0						
RJF	Les Rejaudoux	37.53	54	*e*P	P	18 55 10.1	-0.1
	comp=Z,66nm,1.5s,mb4.8						
RJF				*e*MLR	MLR		
	comp=Z,2μm,19.2s,MS4.5						
RJF	Les Rejaudoux	37.53	54	*e*P	P	18 55 10.1	-0.1
	comp=Z,33nm,1.5s,mb4.8						
RJF				LR	LR		
	comp=Z,2μm,19.3s,MS4.8						
EKA	Eskdalemuir Ar	37.59	37	P	P	18 55 10.2	-0.3
	comp=Z,4.7nm,1.1s,mb4.1,baz=257,slow=6.8,SNR=5.4						
MTLF	Montolieu	37.80	57	*e*P	P	18 55 12.3	-0.2
	comp=Z,68nm,1.6s,mb4.8						
MTLF	Montolieu	37.80	57	*e*P	P	18 55 12.3	-0.2
	comp=Z,34nm,1.6s,mb4.8						
CAF	Calviac	37.87	54	*e*P	P	18 55 13.0	0.0
BGF	Bois d'Agland	38.64	52	*e*P	P	18 55 19.2	-0.3
AVF	Avril sur Loir	39.02	52	*e*P	P	18 55 22.5	-0.1
	comp=Z,57nm,1.6s,mb4.7						
AVF	Avril sur Loir	39.02	52	*e*P	P	18 55 22.5	-0.1
	comp=Z,28nm,1.6s,mb4.8						
LASF	Ste Croix	39.05	56	*e*P	P	18 55 23.4	+0.4
	comp=Z,68nm,1.5s,mb4.9						
ROSC	El Rosal	39.10	236	LR	LR	19 10 41.9	
	comp=Z,841nm,19.6s,MS4.6,baz=11,slow=35						
SSF	Saint Saulge	39.16	51	*e*P	P	18 55 24.0	+0.1
	comp=Z,30nm,1.2s,mb4.6						
SSF	Saint Saulge	39.16	51	*e*P	P	18 55 24.0	+0.1
	comp=Z,15nm,1.2s,mb4.6						
SMF	Signal de Mont	39.33	52	*e*P	P	18 55 24.4	-0.9
	comp=Z,59nm,1.1s,mb4.9						
SMF	Signal de Mont	39.33	52	*e*P	P	18 55 24.4	-0.9
	comp=Z,30nm,1.1s,mb4.9						
LOR	Lormes	39.43	51	*e*P	P	18 55 26.1	0.0
	comp=Z,51nm,1.4s,mb4.8						
LOR				*e*MLR	MLR		
	comp=Z,611nm,21.2s,MS4.1						
LOR	Lormes	39.43	51	*e*P	P	18 55 26.1	0.0
	comp=Z,25nm,1.4s,mb4.8						
LOR				LR	LR		
	comp=Z,610nm,21.3s,MS4.4						
VIVF	Saint-Julien-l	39.70	55	*e*P	P	18 55 27.1	-1.3
	comp=Z,24nm,1.3s,mb4.5						
VIVF	Saint-Julien-l	39.70	55	*e*P	P	18 55 27.1	-1.3
	comp=Z,12nm,1.3s,mb4.5						
SMRF	Simiane la Rot	40.28	56	*e*P	P	18 55 33.4	+0.2
	comp=Z,59nm,1.4s,mb4.8						
SMRF	Simiane la Rot	40.28	56	*e*P	P	18 55 33.4	+0.2
	comp=Z,59nm,1.4s,mb5.1						
SFTF	Sexfontaines	40.36	50	*e*P	P	18 55 33.8	0.0
	comp=Z,61nm,1.2s,mb4.9						
SFTF	Sexfontaines	40.36	50	*e*P	P	18 55 33.8	0.0
	comp=Z,61nm,1.2s,mb5.2						
MEZF	Maizieres J'vi	40.42	49	*e*P	P	18 55 34.8	+0.5
	comp=Z,40nm,0.9s,mb4.9						
MEZF	Maizieres J'vi	40.42	49	*e*P	P	18 55 34.8	+0.5
	comp=Z,40nm,0.9s,mb5.2						
ORIF	Oris-en-Rattie	40.56	55	*e*P	P	18 55 35.1	-0.4
	comp=Z,44nm,1.5s,mb4.6						
ORIF				*e*MLR	MLR		
	comp=Z,815nm,18.2s,MS4.3						
ORIF	Oris-en-Rattie	40.56	55	*e*P	P	18 55 35.1	-0.4
	comp=Z,22nm,1.5s,mb4.6						
CCM	Cathedral Cave	40.66	295	*e*P	P	18 55 36.4	-0.1
	comp=Z,23nm,1.5s,mb4.6						
CABF	La Chapelle	40.86	52	*e*P	P	18 55 37.4	-0.6
	comp=Z,79nm,1.4s,mb4.9						
CABF	La Chapelle	40.86	52	*e*P	P	18 55 37.4	-0.6
	comp=Z,40nm,1.4s,mb4.8						
FRF	La Foret Royal	41.04	57	*e*P	P	18 55 38.7	-0.8
	comp=Z,88nm,1.4s,mb4.9						
FRF	La Foret Royal	41.04	57	*e*P	P	18 55 38.7	-0.8
	comp=Z,44nm,1.4s,mb4.9						
HAU	Haudompre	41.20	50	*e*P	P	18 55 40.6	-0.2
	comp=Z,53nm,1.3s,mb4.7						
HAU				*e*MLR	MLR		
	comp=Z,809nm,18.0s,MS4.3						
HAU	Haudompre	41.20	50	*e*P	P	18 55 40.6	-0.2
	comp=Z,26nm,1.3s,mb4.7						
HAU				LR	LR		
	comp=Z,810nm,18.0s,MS4.6						
LPL	La Plagne	41.21	54	*e*P	P	18 55 41.9	+1.1
	comp=Z,36nm,1.4s,mb4.5						
LPL	La Plagne	41.21	54	*e*P	P	18 55 41.9	+1.1
	comp=Z,18nm,1.4s,mb4.5						
LPG	La Plagne	41.22	54	*e*P	P	18 55 39.5	-1.4
	comp=Z,30nm,1.3s,mb4.5						
LPG	La Plagne	41.22	54	*e*P	P	18 55 39.5	-1.4
	comp=Z,15nm,1.3s,mb4.5						
HINF	Hinteralfeld	41.52	51	*e*P	P	18 55 42.0	-1.3
	comp=Z,71nm,1.8s,mb4.7						
HINF	Hinteralfeld	41.52	51	*e*P	P	18 55 42.0	-1.3
	comp=Z,35nm,1.8s,mb4.7						
SBF	Sospel	41.62	57	*e*P	P	18 55 43.7	-0.5
	comp=Z,54nm,1.1s,mb4.8						
SBF	Sospel	41.62	57	*e*P	P	18 55 43.7	-0.5
	comp=Z,27nm,1.1s,mb4.8						
CDF	Champ du Feu	41.87	50	*e*P	P	18 55 45.7	-0.5
	comp=Z,44nm,1.3s,mb4.6						
CDF	Champ du Feu	41.87	50	*e*P	P	18 55 45.7	-0.5
	comp=Z,22nm,1.3s,mb4.6						
DBIC	Dimbokro	42.44	116	P	P	18 55 48.9	-2.4
	comp=Z,6.4nm,0.8s,mb4.3,baz=294,slow=9.5,SNR=5.3						
DBIC				LR	LR	19 10 33.8	
	comp=Z,2μm,20.4s,MS4.9,baz=284,slow=32						
BFO	Black Forest	42.56	50	*e*P	P	18 55 52.1	+0.2
	comp=Z,21nm,1.2s,mb4.7						
LIC	Lamto	42.58	116	*e*P	P	18 55 47.3	-5.1
	comp=Z,52nm,1.1s,mb4.9						
LIC				*e*MLR	MLR		
	comp=Z,2μm,19.5s,MS4.8						
LIC	Lamto	42.58	116	*e*P	P	18 55 47.3	-5.1
	comp=Z,26nm,1.1s,mb4.9						
LIC				LR	LR		
	comp=Z,1μm,19.5s,MS4.8						
MIAR	Mount Ida	42.92	290	P	P	18 55 58.2	+3.2
TUE	Stuetta	43.09	53	*e*P	P	18 55 56.0	-0.2
	comp=Z,24nm,1.3s,mb4.8						
TAM	Tamanrasset	43.44	88	*e*P	P	18 55 56.6	-2.7
	comp=Z,7.7nm,1.2s,mb4.3						
DAVOX	Davos/Dischmat	43.48	52	P	P	18 55 59.5	+0.2
	comp=Z,4.4nm,0.8s,mb4.2,baz=293,slow=7.8,SNR=5.0						
KEST	Kesra	43.53	68	P	P	18 55 58.9	-1.0
	comp=Z,13nm,1.2s,mb4.5,baz=197,slow=3.1,SNR=12						
KEST				LR	LR	19 10 48.8	
	comp=Z,173nm,21.1s,MS3.9,baz=192,slow=32						
FETA	Feichten	44.07	52	⇑*i*P	P	18 56 03.8	-0.3
	comp=Z,16nm,1.2s,mb4.6						
TORD	Torodi Ar. Bea	44.20	103	P	P	18 56 02.1	-3.4
	comp=Z,8.1nm,1.0s,mb4.4,baz=308,slow=7.3,SNR=11						
TORD				LR	LR	19 12 03.9	
	comp=Z,550nm,20.7s,MS4.5,baz=5.0,slow=33						
TORD	Torodi Ar. Bea	44.20	103	P	P	18 56 02.1	-3.4
TORD				LR	LR	19 12 03.9	
GRA1	Grafenberg Arr	44.59	48	*e*P	P	18 56 08.2	0.0
	comp=Z,15nm,1.3s,mb4.7						
GRF	Grafenberg Arr	44.59	48	*e*P	P	18 56 08.2	0.0
	comp=Z,15nm,1.3s,mb4.7						
WTTA	Wattenberg	44.70	52	⇓*i*sP	sP	18 56 11.8	-1.7
	comp=Z,30nm,1.5s						
OTAV	Otavalo	45.25	236	*e*P	P	18 56 13.8	-0.1
	comp=Z,8.3nm,0.8s,mb4.6						
ABTA	Abfaltersbach	45.28	53	⇑*i*P	P	18 56 14.0	+0.2
	comp=Z,27nm,1.2s,mb5.0						
NKC	Novy Kostel	45.42	48	*e*P	P	18 56 16.5	+1.7
NKC				*e*S	S	19 03 00.3	+4.3
NKC				AMS	AMS	19 12 10.0	
	comp=Z,1μm,18.7s						
CLL	Collm	45.87	46	*i* P	P	18 56 17.7	-0.6
	comp=Z,18nm,1.4s,mb4.8						
CLL				*i*		18 56 27.9	
CLL				*e*S	S	19 03 06.0	+3.6
CLL				LR	LR		
	comp=Z,800nm,19.9s,MS4.7						
AQU	L'Aquila	46.01	59	*e*P	P	18 56 19.7	+0.1
	comp=Z,29nm,0.9s,mb5.2						
AQU	L'Aquila	46.01	59	⇑*i*P	P	18 56 24.9	+5.3
KHC	Kasperske Hory	46.09	49	*e*P	P	18 56 20.1	0.0
	comp=Z,13nm,1.4s,mb4.7						
KHC	Kasperske Hory	46.09	49	*e*P	P	18 56 20.4	+0.3
KHC				*e*S	S	19 03 09.2	+3.7
KHC				AMS	AMS	19 11 40.0	
	comp=Z,500nm,17.3s						
BRG	Berggiesshubel	46.43	47	*e*P	P	18 56 24.2	+1.5
	comp=Z,14nm,1.7s,mb4.6						
BRG				*e*		18 56 33.5	
	comp=Z,9.0nm,1.3s						
BRG				S	S	19 03 12.0	+1.6
BRG				SS	SS	19 06 37.0	+1.2
BRG							
	comp=N,371nm,14.6s						
BRG							
	comp=E,1μm,18.5s						
BRG							
	comp=Z,2μm,16.9s						
NB2	NORSAR Subarra	46.72	33	P	P	18 56 27.0	+2.1
	comp=Z,36nm,1.7s,mb5.0,baz=250,slow=7.9						
NOA	NORSAR Array B	46.72	33	P	P	18 56 24.5	-0.4
	comp=Z,2.1nm,0.9s,mb4.1,baz=253,slow=7.8,SNR=4.0						
NOA				LR	LR	19 12 32.7	
	comp=Z,367nm,20.7s,MS4.3,baz=260,slow=32						
PRU	Pruhonice	46.75	48	*e

KWP Kalwaria Pacla 52.04 49 *eP* **P 18 57 06.5 +0.8**
comp=Z,22nm,1.4s,mb4.9
KWP Kalwaria Pacla 52.04 49⇓*iP* **P 18 57 06.9 +1.2**
I21A Big Trails, Te 52.20 304 ⇓P **P 18 57 06.0 -1.0**
baz=52,SNR=5.8
Z25A Roswell 52.25 291 ⇓P **P 18 57 08.0 +0.5**
baz=52
LPAZ La Paz 52.32 212 P **P 18 57 08.2 +0.2**
comp=Z,4.8nm,1.0s,mb4.4,baz=33,slow=10,SNR=9.7
LPAZ LR LR 19 17 09.4
comp=Z,977nm,21.7s,MS4.8,baz=215,slow=34
J21A Lysite 52.38 304 ⇑P **P 18 57 07.9 -0.4**
baz=52
D20A Manuel Ranch, 52.41 308 ⇑P **P 18 57 09.1 +0.6**
baz=52
TXAR Lajitas Array 52.45 285 P **P 18 57 09.5 +0.4**
comp=Z,2.4nm,0.9s,mb4.1,baz=97,slow=6.4,SNR=11
TXAR LR LR 19 18 14.0
comp=Z,306nm,19.1s,MS4.4,baz=330,slow=35
J20A Shoshoni 52.84 304 ⇑P **P 18 57 10.7 -1.0**
baz=53,SNR=7.0
S22A 4UR Ranch, Cre 52.90 296 ⇑P **P 18 57 11.9 -0.3**
baz=53,SNR=5.2
D19A Cripps Ranch, 52.91 308 ⇓P **P 18 57 11.4 -0.8**
baz=53,SNR=5.4
124A Stringfield Ra 52.99 290 ⇓P **P 18 57 13.4 +0.4**
baz=53,SNR=8.5
F19A Roth Farm, Mol 53.10 307 ⇓P **P 18 57 12.8 -0.8**
baz=53,SNR=5.8
T22A Edith 53.12 296 ⇓P **P 18 57 14.9 +1.1**
baz=53,SNR=9.0
KKB Krupnik 53.22 58 *iP* **P 18 57 16.3 +1.8**
ANMO Albuquerque 53.24 293 *eP* **P 18 57 14.8 0.0**
comp=Z,25nm,1.6s,mb4.9
N20A Spence Gulch, 53.39 301 ⇓P **P 18 57 17.5 +1.7**
baz=53,SNR=5.7
RLMT Red Lodge 53.43 306 *eP* **P 18 57 14.7 -1.3**
comp=Z,6.8nm,1.0s,mb4.5
K19A Absolon Red Bu 53.47 303 ⇑P **P 18 57 15.5 -0.9**
baz=53,SNR=5.9
Z23A Rita Site, Whi 53.48 291 ⇓P **P 18 57 16.5 -0.1**
baz=53,SNR=8.3
LPM Los Pinos Moun 53.53 292 *eP* **P 18 57 19.1 +2.1**
comp=Z,14nm,1.2s,mb4.8
J19A Crowheart 53.55 304 ⇓P **P 18 57 16.3 -0.7**
baz=53,SNR=8.0
BNM Barren Site 53.57 292 *eP* **P 18 57 18.1 +0.8**
comp=Z,23nm,1.3s,mb4.9
GCMT Greycliff 53.61 307 *eP* **P 18 57 17.3 -0.1**
F18A Big Timber 53.63 307 ⇓P **P 18 57 16.4 -1.1**
baz=54,SNR=5.4
MMB Musomiste 53.74 58 *iP* **P 18 57 20.1 +1.7**
LENM Lemitar 53.84 292 P **P 18 57 17.1 -2.1**
comp=Z,17nm,1.2s,mb4.9
FINES FINESS Array B 53.86 34 P **P 18 57 19.4 +0.4**
comp=Z,3.6nm,0.7s,mb4.4,baz=246,slow=5.3,SNR=13
FINES LR LR 19 17 20.2
comp=Z,249nm,19.3s,MS4.3,baz=270,slow=33
BURAR Bucovina Array 53.89 51⇓*iP* **P 18 57 18.4 -1.0**
PGB Panagyurishte 53.89 57 *iP* **P 18 57 21.5 +2.0**
LAZ Ladron 53.92 293 *eP* **P 18 57 21.0 +1.2**
comp=Z,13nm,1.5s,mb4.6
BW06 Boulder Array 54.00 303 ⇓P **P 18 57 19.5 -0.8**
baz=54,SNR=6.3
PDAR Pinedale Array 54.00 303 P **P 18 57 19.8 -0.5**
comp=Z,8.9nm,0.8s,mb4.7,baz=80,slow=6.9,SNR=28
PDAR LR LR 19 18 38.4
comp=Z,1μm,19.2s,MS5.0,baz=89,slow=34
KAF Kangasniemi 54.00 33 *ep* **P 18 57 19.8 -0.2**
comp=Z,4.4nm,0.7s,mb4.5
VOIR 54.06 54⇑*iP* **P 18 57 21.9 +1.2**
Z22A Elephant Butte 54.07 291 ⇑P **P 18 57 20.0 -1.0**
baz=54,SNR=6.4
C17A Wharram Farm, 54.12 309 ⇑P **P 18 57 20.3 -0.7**
baz=54
D17A Six Diamond Ra 54.13 309 ⇓P **P 18 57 20.9 -0.3**
baz=54
J18A Kendall Valley 54.26 304 ⇑P **P 18 57 21.9 -0.2**
baz=54,SNR=6.0
N18A Larsen Ranch, 54.41 301 ⇑P **P 18 57 22.7 -0.6**
baz=54,SNR=7.0
X21A Alamocita Cree 54.42 293 ⇓P **P 18 57 24.4 +1.0**
baz=54,SNR=5.3
ARCES ARCESS Array B 54.44 24 P **P 18 57 22.3 -0.8**
comp=Z,4.2nm,0.9s,mb4.4,baz=282,slow=1.1,SNR=7.2
ARCES LR LR 19 14 58.7
comp=Z,483nm,20.1s,MS4.6,baz=90,slow=30
ARCES ARCESS Array B 54.44 24 P **P 18 57 22.3 -0.8**
ARCES LR LR 19 14 58.7
Y21A Point of Rocks 54.45 292 ⇑P **P 18 57 25.5 +1.8**
baz=54,SNR=10
A16A West Butte Ran 54.52 311 ⇑P **P 18 57 23.0 -0.9**
baz=54
LOHW Long Hollow 54.61 304 *eP* **P 18 57 23.9 -0.8**
Z21A St. Cloud Mine 54.63 291 ⇑P **P 18 57 27.6 +2.6**
baz=54,SNR=5.6
MLR Muntele Rosu 54.68 53⇑*iP* **P 18 57 26.5 +1.3**
MOOW Moose Ponds 54.69 304 *eP* **P 18 57 23.6 -1.6**
comp=Z,3.4nm,0.9s,mb4.4
C16A Fuhringer Ranc 54.76 310 ⇓P **P 18 57 25.3 -0.4**
baz=55,SNR=5.7
IMW Indian Meadow 54.80 305 *eP* **P 18 57 23.8 -2.3**
REDW Red Top Meadow 54.83 304 *eP* **P 18 57 25.4 -0.9**
comp=Z,9.6nm,1.1s,mb4.7
TPAW Teton Pass 54.88 304 *eP* **P 18 57 26.1 -0.6**
comp=Z,25nm,1.4s,mb5.0
H16A Russell Place, 54.88 306 ⇑P **P 18 57 27.8 +1.1**
baz=55,SNR=7.4
X20A Quemado 54.97 293 ⇓P **P 18 57 29.4 +1.9**
baz=55,SNR=7.5
KDZ Kurdzhali 54.97 58 *iP* **P 18 57 27.8 +0.4**
BOZ Bozeman (W) 54.99 307 *eP* **P 18 57 24.7 -2.8**
Y20A Horse Springs, 55.04 292 ⇓P **P 18 57 29.4 +1.4**
baz=55,SNR=8.6
SZH Strazhica 55.05 56 *iP* **P 18 57 25.2 -2.7**
PLOR Plostina 55.11 53⇓*iP* **P 18 57 28.4 +0.1**
P18A Preston Nutter 55.12 299 ⇑P **P 18 57 28.5 0.0**
baz=55,SNR=6.1
R18A Canyonlands Na 55.12 298 ⇑P **P 18 57 29.9 +1.4**
baz=55,SNR=8.2
Q18A Rafter H Ranch 55.15 299 ⇑P **P 18 57 29.6 +0.9**
baz=55,SNR=7.0
VRI Vrincioaia 55.16 53⇓*iP* **P 18 57 28.4 -0.3**
RRI2 Red Ridge 55.17 304 *eP* **P 18 57 28.2 -0.6**
EDM Edmonton 55.17 316 *eP* **P 18 57 26.9 -1.7**
B15A Bradely Ranch, 55.23 310 ⇑P **P 18 57 27.9 -1.2**
baz=55,SNR=7.6
C15A Salmond Ranch, 55.34 310 ⇓P **P 18 57 29.5 -0.4**
baz=55,SNR=5.8
D15A Lincoln 55.39 309 ⇑P **P 18 57 31.7 +1.5**
baz=55
SRU San Rafael 55.44 299 ⇑P **P 18 57 31.6 +0.8**
baz=55,SNR=7.4
SRU San Rafael 55.44 299 *eP* **P 18 57 31.7 +0.9**
comp=Z,10nm,1.0s,mb4.8
YKA Yellowknife Ar 55.46 328 P **P 18 57 28.7 -1.8**
comp=Z,1.4nm,0.8s,mb4.0,baz=89,slow=7.7,SNR=8.0
120A U Bar Ranch, L 55.62 291 ⇑P **P 18 57 33.1 +0.9**
baz=56
HWUT Hardware Ranch 55.68 302 *eP* **P 18 57 31.6 -0.9**
Y19A Nutrioso 55.73 293 ⇑P **P 18 57 33.5 +0.6**
baz=56,SNR=5.5
MCMT McKenzie Canyo 55.98 306 P **P 18 57 35.1 +0.5**
comp=Z,2.2nm,1.2s,mb4.1
SLMT Seeley Lake 56.01 309 *eP* **P 18 57 34.4 -0.4**
comp=Z,9.1nm,0.9s,mb4.8
KIEV Kiev 56.10 47 *eP* **P 18 57 34.9 -0.4**
comp=Z,27nm,1.5s,mb5.1
SWMT Swartz Lake 56.31 309 *eP* **P 18 57 36.4 -0.4**
comp=Z,4.1nm,0.9s,mb4.5
JOF Joensuu 56.34 32 *ep* **P 18 57 35.9 -0.9**
comp=Z,1.7nm,0.5s,mb4.3
NLU North Lily Min 56.42 300 *eP* **P 18 57 37.6 -0.1**
comp=Z,5.1nm,0.8s,mb4.6
MSU Marysvale 56.84 299 *eP* **P 18 57 41.8 +1.1**
comp=Z,7.9nm,1.1s,mb4.7
BGU Big Grassy Mou 56.91 302 *eP* **P 18 57 40.5 -0.7**
comp=Z,5.0nm,1.0s,mb4.5
DUG Dugway 56.91 301 ⇑P **P 18 57 41.4 +0.1**
baz=57,SNR=7.1
DUG Dugway 56.91 301 *eP* **P 18 57 41.0 -0.3**
comp=Z,31nm,1.6s,mb5.1
318A Bisbee 57.04 290 ⇓P **P 18 57 45.2 +2.8**
baz=57,SNR=6.4
P14A Drum Mountains 57.25 300 ⇓P **P 18 57 43.9 +0.2**
baz=57,SNR=7.0
TUC Tucson 57.42 291 P **P 18 57 47.2 +2.1**
comp=Z,8.0nm,1.2s,mb4.6
H12A Diamond D Ranc 57.44 306 ⇓P **P 18 57 45.2 +0.2**
baz=57,SNR=7.8
U15A North Rim 57.46 296 ⇓P **P 18 57 44.4 -0.8**
baz=57,SNR=6.4
217A Green Valley 57.61 291 ⇑P **P 18 57 46.7 +0.4**
baz=58,SNR=5.6
P13A Bates Ranch, G 57.99 300 ⇑P **P 18 57 49.2 +0.3**
baz=58,SNR=6.3
U14A Mt Trumbull 58.15 296 ⇑P **P 18 57 51.4 +1.3**
baz=58,SNR=7.3
NEW Newport 58.24 311 ⇑P **P 18 57 50.3 -0.3**
baz=58,SNR=5.6
NEW Newport 58.24 311 *eP* **P 18 57 49.4 -1.1**
comp=Z,12nm,0.9s,mb4.9
V14A Boquillas Ranc 58.31 296 ⇓P **P 18 57 51.9 +0.7**
baz=58,SNR=6.3
MFID Camas Ranch 58.37 305 ⇑P **P 18 57 51.6 +0.1**
baz=58,SNR=8.1
R11A Troy Canyon, C 59.46 299 ⇓P **P 18 57 58.9 -0.3**
baz=59,SNR=7.0
OBN Obninsk 59.82 41 *eP* **P 18 57 58.2 -3.2**
comp=Z,38nm,1.1s,mb5.3
HAWA Hanford 60.25 309 *eP* **P 18 58 02.8 -1.7**
comp=Z,1.6nm,0.3s,mb4.5
S10A Tonopah Range, 60.35 299 ⇓P **P 18 58 05.9 +0.7**
baz=60,SNR=6.9
ETW Entiat 60.49 311 *eP* **P 18 58 07.2 +1.1**
comp=Z,6.8nm,0.6s,mb4.8
WVOR Wild Horse Val 60.61 304 *eP* **P 18 58 07.6 +0.6**
comp=Z,8.2nm,1.3s,mb4.7
NVAR Mina Array Bea 61.49 300 P **P 18 58 12.8 -0.2**
comp=Z,2.0nm,0.8s,mb4.3,baz=74,slow=6.7,SNR=13
BRTR Keskin Array B 61.50 58 P **P 18 58 11.5 -1.6**
comp=Z,2.2nm,0.8s,mb4.4,baz=271,slow=4.9,SNR=13
BRTR LR LR 19 24 11.7
comp=Z,169nm,18.3s,MS4.2,baz=124,slow=35
MOD Modoc 61.95 304 *eP* **P 18 58 17.2 +1.2**
comp=Z,13nm,1.3s,mb4.9
INK Inuvik 62.69 335 P **P 18 58 20.1 -0.4**
comp=Z,4.6nm,0.6s,mb4.8,baz=62,slow=6.4,SNR=4.9
INK Inuvik 62.69 335 *eP* **P 18 58 19.6 -0.9**
comp=Z,14nm,1.0s,mb5.1
NLWA Neilton Lookou 62.87 311 *eP* **P 18 58 22.5 +0.4**
comp=Z,44nm,1.3s,mb5.4
MALT Malatya 65.49 59 *eP* **P 18 58 37.4 -2.0**
comp=Z,13nm,1.2s,mb4.8
CFAA Coronel Fontan 66.07 204 LR LR 19 26 17.5
comp=Z,76nm,22.0s,MS3.9,baz=352,slow=35
DAWY Dawson 66.18 331 *eP* **P 18 58 42.3 -1.2**
ILAR Eielson Array 68.90 334 P **P 18 59 00.1 -0.5**
comp=Z,1.1nm,0.9s,mb3.8,baz=56,slow=3.7,SNR=11
ILAR LR LR 19 29 14.5
comp=Z,1μm,19.0s,MS5.2,baz=83,slow=36
ARU Arti 71.19 35 P **P 18 59 18.0 +3.2**
comp=Z,20nm,1.4s,mb4.9
PPLA Purkeypile 71.86 333 *eP* **P 18 59 18.4 -0.4**
comp=Z,52nm,1.6s,mb5.2
AKTK Aktyubinsk 73.60 41 P **P 18 59 29.4 0.0**
AKTK LR LR 19 30 32.9
AKTO Aktyubinsk 73.60 41 P **P 18 59 29.4 0.0**
comp=Z,1.6nm,0.8s,mb4.0,baz=297,slow=5.6,SNR=7.2
AKTO LR LR 19 30 32.9
comp=Z,489nm,19.4s,MS4.8,baz=309,slow=35
PLCA Paso Flores 75.14 202 P **P 18 59 39.0 +0.9**
comp=Z,1.4nm,0.7s,mb4.0,baz=345,slow=12,SNR=3.2
PLCA LR LR 19 30 29.3
comp=Z,400nm,21.4s,MS4.7,baz=282,slow=34
ABKAR Akbulak array 75.26 41 *eP* **P 18 59 39.7 +0.7**
comp=Z,4.1nm,1.0s,mb4.3
BRVK Borovoye 78.74 35 *eP* **P 18 59 57.8 -0.7**
comp=Z,11nm,1.1s,mb4.7
BVAR Borovoye Array 78.81 35 P **P 18 59 59.5 +0.6**
comp=Z,0.9nm,0.7s,mb3.8,baz=329,slow=5.0,SNR=5.1
BVAR LR LR 19 31 50.6
comp=Z,48nm,19.2s,MS3.8,baz=119,slow=34
KURK Kurchatov 84.23 33 P **P 19 00 27.3 -0.4**
comp=Z,1.4nm,0.8s,mb4.2,baz=314,slow=5.1,SNR=5.8
KURK Kurchatov 84.23 33 *eP* **P 19 00 26.7 -1.0**
comp=Z,9.9nm,1.1s,mb4.8
ZALV Zalesovo Beam 84.72 28 P **P 19 00 30.7 +0.6**
comp=Z,1.0nm,0.6s,mb4.1,baz=297,slow=6.5,SNR=6.2
ZALV LR LR 19 39 33.5
comp=Z,137nm,19.1s,MS4.4,baz=101,slow=37
ZALV Zalesovo Beam 84.72 28 P **P 19 00 30.7 +0.6**
ZALV LR LR 19 39 33.5
KKAR Karatay Array 84.76 43 P **P 19 00 31.0 +0.5**
comp=Z,3.2nm,1.0s,mb4.4
BOSA Boshof 87.19 125 LR LR 19 37 12.3
comp=Z,381nm,19.2s,MS4.8,baz=317,slow=34
AML Almayashu 87.21 42 P **P 19 00 47.4 +4.7**
MKAR Makanchi Array 88.69 34 LR LR 19 39 56.9
comp=Z,546nm,19.4s,MS5.0,baz=318,slow=35
WMQ Urumqi 93.47 34 *eP* **P 19 01 11.0 -0.9**
PETK Petropavlovsk- 95.22 348 LR LR 19 42 25.6
comp=Z,194nm,20.1s,MS4.6,baz=28,slow=34
SONM Songino Array 97.52 20 LR LR 19 45 43.0
comp=Z,220nm,20.1s,MS4.6,baz=258,slow=36
HHC Hu-ho-hao-te 105.41 20 *ePdif* Pdif 19 02 06.2 +0.8
HHC PP PP 19 06 30.1 +4.1
HHC S Sdif 19 13 58.6 -2.6
HHC SS SS 19 21 23.9 +2.1
HHC AMB AMB
comp=Z,140nm,7.3s
HHC LR LR
comp=Z,200nm,18.8s,MS4.7
CN2 Changchun 105.59 9 *ePdif* Pdif 19 02 03.6 -2.6
LZH Lanzhou 106.95 28 *ePdif* Pdif 19 02 12.0 -0.3
LZH *ePP* PP 19 06 40.2 +2.6
LZH LR LR
comp=N,170nm,17.5s
LZH LR LR
comp=Z,200nm,19.6s,MS4.7
BJI Beijing 107.43 17 Pdif Pdif 19 02 11.4 -3.0
BJI LR LR
comp=N,340nm,14.4s,MS5.1
BJI LR LR
comp=E,170nm,12.2s,MS5.1
BJI LR LR
comp=Z,280nm,20.6s
KMI Kunming 115.77 35 PKP PKPdf 19 06 37.1 -2.2
KMI sPKP 19 06 41.8
KMI PP PP 19 07 43.3 +2.1
KMI SS SS 19 23 39.2 -2.1
KMI AMB AMB
comp=Z,130nm,9.9s
KMI LR LR
comp=N,170nm,17.1s,MS4.8
KMI LR LR
comp=E,150nm,20.9s,MS4.8
KMI LR LR
comp=Z,220nm,23.3s,MS4.7
GYA Guiyang 116.48 31 *ePdif* Pdif 19 02 52.4 -2.2
GYA PKP PKPdf 19 06 37.8 -2.8
GYA PP PP 19 07 47.6 +1.5
GYA AMB AMB
comp=Z,90nm,7.9s
CMAR Chiang Mai Arr 119.11 43 PKP PKPdf 19 06 45.6 -0.2
comp=Z,0.3nm,0.7s,baz=299,slow=3.7,SNR=3.5

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*ISCJB **04** 19:23:14.2±0.6, 18°.4S±0°.1×71°.2W±0°.1, h34km, mb4.1/9, Error ellipse: s-maj=16.8km s-min=15.6km az=175.1*
*IDC **04** 19:23:15.4±0.8, 18°.42S×71°.19W, h31km±5km, mb4.0/9, mb1 4.2/10, mb1mx4.0/16, mbtmp4.0/10, ML4.2/1, MS3.6/2, Ms1 3.6/2, ms1mx3.0/29, Error ellipse: s-maj=24.7km s-min=17.3km az=78.0*
*NEIC **04** 19:23:15.8±0.6, 18°.48S×71°.32W, mb4.2/1, Error ellipse: s-maj=16.6km s-min=14.4km az=132.0*
ISC 04 19:23:16.5±0.6, 18°.5S±0°.1×71°.3W±0°.1, h36km, h36km±3.1km:pP-P, n18, σ1§11/12, mb4.1/9, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LPAZ	**La Paz**	**3.74**	**55**	Pn		**Pn**	**19 24 13.4**	**+1.7**
	3.3nm,0.3s,baz=235,slow=8.0,SNR=63							
LPAZ				LR		LR	19 25 51.1	
	comp=Z,502nm,18.0s,baz=279,slow=43							
SIV	**San Ignacio**	**10.09**	**77**	Pn		**Pn**	**19 25 38.2**	**-0.8**
	1.1nm,0.3s,baz=263,slow=13,SNR=21							
PLCA	**Paso Flores**	**22.18**	**178**	P		**P**	**19 28 08.8**	**-0.5**
	2.9nm,0.9s,mb3.7,baz=341,slow=11,SNR=4.5							
PCRV	**Puerto La Cruz**	**29.23**	**14**	LR		LR	19 42 10.0	
	comp=Z,170nm,19.6s,baz=95,slow=39							
PMSA	**Palmer Station**	**46.51**	**176**	P		**P**	**19 31 41.3**	**+1.4**
	5.9nm,0.5s,mb4.8,baz=11,slow=16,SNR=5.6							
TXAR	**Lajitas Array**	**56.88**	**326**	P		**P**	**19 32 57.0**	**-0.8**
	0.6nm,0.7s,mb3.8,baz=152,slow=8.1,SNR=8.0							
DBIC	**Dimbokro**	**70.11**	**76**	P		**P**	**19 34 25.8**	**+0.1**
	6.2nm,1.1s,mb4.5,baz=225,slow=10.0,SNR=2.7							
PDAR	**Pinedale Array**	**70.39**	**331**	P		**P**	**19 34 27.3**	**+0.5**
	0.3nm,0.7s,mb3.3,baz=116,slow=8.1,SNR=3.3							
QSPA	**South Pole Qui**	**71.69**	**180**	P		**P**	**19 34 34.1**	**-0.1**
	1.1nm,0.6s,mb4.0,baz=178,slow=2.2,SNR=9.6							
QSPA				pP		pP	19 34 44.2	-1.0
	2.7nm,1.0s,baz=149,slow=4.2,SNR=3.5							
QSPA	**South Pole Qui**	**71.69**	**180**	*eP*		**P**	**19 34 34.5**	**+0.4**
	1.6nm,0.6s,mb4.1							
QSPA				pP		pP	19 34 44.2	-1.0
NVAR	**Mina Array Bea**	**71.74**	**323**	P		**P**	**19 34 36.1**	**+1.0**
	0.3nm,0.3s,mb3.7,baz=159,slow=6.4,SNR=2.4							
TORD	**Torodi Ar. Bea**	**78.52**	**72**	P		**P**	**19 35 11.8**	**-2.8**
	1.6nm,0.6s,mb4.2,baz=253,slow=5.1,SNR=11							
TORD				pP		pP	19 35 24.1	-1.8
	1.6nm,0.7s,baz=266,slow=4.4,SNR=7.5							
YKA	**Yellowknife Ar**	**87.62**	**341**	P		**P**	**19 35 59.4**	**-1.2**
	2.5nm,0.7s,mb4.6,baz=135,slow=4.8,SNR=26							
YKA				pP		pP	19 36 09.3	-2.6
	0.7nm,0.7s,baz=135,slow=4.6,SNR=3.6							
WRA	**Warramunga Arr**	**134.27**	**215**	PKP		PKPdf	19 42 30.2	-1.1
	0.5nm,0.8s,baz=160,slow=1.7,SNR=3.7							
ZALV	**Zalesovo Beam**	**140.10**	**22**	PKP		PKPdf	19 42 40.5	-0.4
	1.1nm,0.6s,baz=289,slow=2.6,SNR=6.2							
MKAR	**Makanchi Array**	**144.40**	**32**	PKP		PKPdf	19 42 46.3	-2.5
	0.5nm,0.4s,baz=327,slow=3.9,SNR=7.4							
MJAR	**Matsushiro Arr**	**148.42**	**311**	PKPbc		PKPbc	19 42 59.4	-0.1
	3.3nm,0.8s,baz=105,slow=1.4,SNR=11							
SONM	**Songino Array**	**150.67**	**3**	PKPbc		PKPbc	19 43 04.2	-0.5
	1.7nm,0.9s,baz=323,slow=0.5,SNR=10							

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*ISK **04** 19:53:47.0, 35°.70N×27°.76E, h29km, MD3.0*
*ATH **04** 19:53:48.3, 35°.70N×28°.09E, h31km±17km, MD3.2/3*
*ISCJB **04** 19:53:49.7±0.8, 35°.86N±0°.05×27°.97E±0°.05, h55km±9km, Error ellipse: s-maj=8.0km s-min=6.8km az=144.7*
*DDA **04** 19:53:49.8, 36°.09N×28°.16E, h10km±3km, Md3.2*
*CSEM **04** 19:53:51.1±0.3, 35°.92N×27°.87E, h40km, MD3.0, Error ellipse: s-maj=7.9km s-min=5.7km az=132.0*
ISC 04 19:53:50.4±0.7, 35°.85N±0°.04×27°.96E±0°.05, h49km±12km, n38, σ1§01/55, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG	**Arkhangelos**	**0.39**	**20**	*e*PN		**Pn**	**19 54 00.1**	**-0.2**
ARG				*e*SN		**Sn**	**19 54 07.4**	**+0.1**
ARG	**Arkhangelos**	**0.39**	**20**	*e*Pn		**Pn**	**19 54 00.1**	**-0.2**
ARG				*e*Sn		**Sn**	**19 54 07.4**	**+0.1**
KARP	**Karpathos**	**0.72**	**245**	*e*PN		**Pn**	**19 54 03.9**	**-0.4**
KARP				*e*SN		**Sn**	**19 54 15.1**	**+0.6**
KARP	**Karpathos**	**0.72**	**245**	*e*Pn		**Pn**	**19 54 03.9**	**-0.4**
KARP				*e*Sn		**Sn**	**19 54 15.1**	**+0.6**
DAT	**Datca**	**0.93**	**340**	*e*PG		**Pn**	**19 54 06.7**	**-0.4**
DAT				*e*SG		**Sn**	**19 54 19.8**	**+0.4**
DAT	**Datca**	**0.93**	**340**	*e*Pg		**Pn**	**19 54 06.7**	**-0.4**
DAT				*e*Sg		**Sn**	**19 54 19.8**	**+0.4**
BDRM	**Kayabasi**	**1.28**	**341**	*i* P		**Pn**	**19 54 11.6**	**-0.3**
BDRM				*i* S		**Sn**	**19 54 26.3**	**-1.6**
BDRM	**Kayabasi**	**1.28**	**341**	*i* P		**Pn**	**19 54 11.6**	**-0.3**
BDRM				*i* S		**Sn**	**19 54 26.3**	**-1.6**
YER	**Yerkesik**	**1.31**	**11**	*e*PN		**Pn**	**19 54 12.5**	**+0.2**
YER				*e*SN		**Sn**	**19 54 31.1**	**+2.6**
YER	**Yerkesik**	**1.31**	**11**	*e*Pn		**Pn**	**19 54 12.5**	**+0.3**
BODT	**Bodrum**	**1.32**	**337**	*e*PN		**Pn**	**19 54 11.3**	**-1.1**
BODT				*e*SN		**Sn**	**19 54 28.3**	**-0.5**
BODT	**Bodrum**	**1.32**	**337**	*e*Pn		**Pn**	**19 54 11.3**	**-1.1**
BODT				*e*Sn		**Sn**	**19 54 28.3**	**-0.5**
AKAS	**Kas**	**1.38**	**74**	*i* P		**Pn**	**19 54 11.8**	**-1.5**
AKAS				*i* S		**Sn**	**19 54 28.5**	**-1.9**
AKAS	**Kas**	**1.38**	**74**	*i* P		**Pn**	**19 54 11.8**	**-1.5**
AKAS				*i* S		**Sn**	**19 54 28.5**	**-1.9**
MLSB	**Milas**	**1.45**	**354**	*e*PN		**Pn**	**19 54 14.1**	**-0.1**
MLSB	**Milas**	**1.45**	**354**	*e*Pn		**Pn**	**19 54 14.1**	**-0.1**
GLHS	**Glhisar (BURDU**	**1.79**	**43**	*e*PN		**Pn**	**19 54 19.8**	**+0.9**
GLHS	**Glhisar (BURDU**	**1.79**	**43**	*e*Pn		**Pn**	**19 54 19.8**	**+0.9**
AYDN	**Tasoluk**	**1.81**	**358**	*i* P		**Pn**	**19 54 20.0**	**+1.0**
AYDN				*i* S		**Sn**	**19 54 41.6**	**+0.8**
AYDN	**Tasoluk**	**1.81**	**358**	*i* P		**Pn**	**19 54 20.0**	**+0.9**
AYDN				*i* S		**Sn**	**19 54 41.6**	**+0.8**
ELL	**Elmali**	**1.81**	**60**	*e*PN		**Pn**	**19 54 20.2**	**+1.2**
ELL	**Elmali**	**1.81**	**60**	*e*Pn		**Pn**	**19 54 20.3**	**+1.2**
GOLH	**Golhisar**	**1.89**	**42**	*i* P		**Pn**	**19 54 20.7**	**+0.6**
GOLH	**Golhisar**	**1.89**	**42**	*i* P		**Pn**	**19 54 20.7**	**+0.5**
NPS	**Neapolis**	**2.01**	**254**	*e*PN		**Pn**	**19 54 21.8**	**0.0**
NPS	**Neapolis**	**2.01**	**254**	*e*Pn		**Pn**	**19 54 21.8**	**0.0**
DNZL	**Cakiroluk**	**2.03**	**25**	*i* P		**Pn**	**19 54 26.1**	**+4.0**
DNZL	**Cakiroluk**	**2.03**	**25**	*i* P		**Pn**	**19 54 26.1**	**+4.0**
KULA	**Kula-Manisa**	**2.71**	**12**	*e*PN		**Pn**	**19 54 32.4**	**+0.9**
KULA	**Kula-Manisa**	**2.71**	**12**	*e*Pn		**Pn**	**19 54 32.4**	**+0.9**
KHL	**Karahalli**	**2.76**	**26**	*e*PN		**Pn**	**19 54 33.4**	**+1.3**
KHL	**Karahalli**	**2.76**	**26**	*e*Pn		**Pn**	**19 54 33.4**	**+1.2**
KHAL	**Karahalli**	**2.79**	**25**	*i* P		**Pn**	**19 54 31.8**	**-0.8**
KHAL	**Karahalli**	**2.79**	**25**	*i* P		**Pn**	**19 54 31.8**	**-0.8**
AKHS	**Akhisar**	**3.02**	**358**	*i* P		**Pn**	**19 54 34.8**	**-0.9**
AKHS	**Akhisar**	**3.02**	**358**	*i* P		**Pn**	**19 54 34.8**	**-0.9**
BALY	**Balya**	**3.89**	**356**	*i* P		**Pn**	**19 54 48.7**	**+1.0**
BALY				*i* S		**Sn**	**19 55 30.3**	**-1.7**
BALY	**Balya**	**3.89**	**356**	*i* P		**Pn**	**19 54 48.7**	**+1.1**
BALY				*i* S		**Sn**	**19 55 30.3**	**-1.7**

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*NIED **04** 19:54:00.31°.50N×141°.90E, h11km, Mw4.2 Best double couple: M0=2.07000×10¹⁵ NP1:φ=142.00000°, δ=77.00000°, λ=-87.00000°. NP2:φ=311.00000°, δ=14.00000°, λ=-100.00000°.*
*IDC **04** 19:54:20.4±0.8, 31°.39N×141°.76E, h0km, mb3.9/11, mb1 4.0/14, mb1mx3.9/25, mbtmp3.9/14, ML3.8/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/40, Error ellipse: s-maj=26.4km s-min=15.4km az=73.0*
*NEIC **04** 19:54:21.9±5.7, 31°.36N×141°.75E, h11km±34km, mb4.5/4, MW4.1(NIED), Error ellipse: s-maj=17.5km s-min=12.6km az=84.0*
*ISCJB **04** 19:54:22.9±0.5, 31°.45N±0°.04×141°.8E±0°.1, h33km, mb4.0/14, Error ellipse: s-maj=15.8km s-min=4.1km az=164.8*
*JMA **04** 19:54:22.3±0.2, 31°.50N×141°.92E, h41km, M3.7*
ISC 04 19:54:25.0±0.5, 31°.46N±0°.04×141°.9E±0°.1, h35km, n36, σ1§15/43, mb4.0/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHJ2	**Mitsune**	**2.40**	**314**	P		**Pn**	**19 55 00.3**	**-1.4**
JHJ	**Hachijo jima 2**	**2.42**	**314**	Pn		**Pn**	**19 55 00.3**	**-1.8**
	15nm,0.3s,baz=72,slow=23,SNR=5.0							
JHJ				Sn		**Sn**	**19 55 25.6**	**-4.8**
	18nm,0.3s,baz=62,slow=24,SNR=4.4							
JHJ				LR		LR	19 55 34.3	
	comp=Z,369nm,19.2s,baz=186,slow=31							
BSO1	**Boso 1**	**3.27**	**347**	P		**Pn**	**19 55 12.5**	**-1.2**
BSO1				S		**Sn**	**19 55 49.9**	**-1.5**
BSO3	**Boso 3**	**3.52**	**341**	P		**Pn**	**19 55 16.1**	**-1.1**
BSO3				S		**Sn**	**19 55 55.8**	**-1.8**
BSO4	**Boso 4**	**3.75**	**340**	P		**Pn**	**19 55 20.7**	**+0.5**
CBIJ	**Chichi jima**	**4.36**	**176**	Pn		**Pn**	**19 55 28.4**	**-0.4**
	14nm,0.3s,baz=268,slow=22,SNR=13							
CBIJ				Sn		**Sn**	**19 56 17.1**	**-1.2**
	3.2nm,0.3s,baz=229,slow=11,SNR=3.0							
CBIJ	**Chichi jima**	**4.36**	**176**	P		**Pn**	**19 55 28.1**	**-0.6**
JOD2	**Odawara 2**	**4.45**	**329**	P	

ASAJ LR LR 20 01 24.2
comp=Z,80nm,21.4s,baz=168,slow=33
KSRS Korea Array 12.96 301 LR LR 20 01 31.9
comp=Z,118nm,20.9s,baz=50,slow=33
SONM Songino Array 31.50 312 P P 20 00 44.6 +1.3
1.2nm,0.7s,mb3.8,baz=121,slow=8.4,SNR=9.0
CMAR Chiang Mai Arr 40.77 262 P P 20 02 01.5 -1.4
0.3nm,0.5s,mb3.1,baz=55,slow=7.8,SNR=3.5
CMAR Chiang Mai Arr 40.77 262 P P 20 02 01.5 -1.4
ZALV Zalesovo Beam 46.08 316 P P 20 02 45.8 +0.6
1.2nm,0.7s,mb4.0,baz=110,slow=8.5,SNR=6.2
MKAR Makanchi Array 47.57 307 P P 20 02 57.5 +0.5
1.4nm,0.8s,mb4.1,baz=91,slow=9.6,SNR=7.9
MKAR PcP PcP 20 04 26.0 -0.5
0.2nm,0.6s,baz=72,slow=4.7,SNR=2.2
KURK Kurchatov 49.80 312 P P 20 03 14.9 +0.8
1.7nm,0.6s,mb4.2,baz=87,slow=7.3,SNR=7.4
KURK Kurchatov 49.80 312 *eP* **P 20 03 14.0 -0.1**
4.1nm,0.9s,mb4.5
WRA Warramunga Arr 51.62 189 P P 20 03 27.8 -0.3
2.2nm,0.6s,mb4.3,baz=6.0,slow=7.7,SNR=55
WRA LR LR 20 24 07.4
comp=Z,149nm,19.3s,baz=210,slow=35
ILAR Eielson Array 54.05 30 P P 20 03 46.2 +0.7
0.5nm,0.9s,mb3.4,baz=267,slow=6.2,SNR=7.4
ASAR Alice Springs 55.34 189 P P 20 03 55.3 0.0
1.3nm,0.6s,mb4.2,baz=16,slow=14,SNR=33
KKAR Karatay Array 56.38 304 *eP* **P 20 04 03.6 +0.9**
3.9nm,1.0s,mb4.4
ARU Arti 60.85 321 *eP* **P 20 04 33.2 -0.3**
4.3nm,0.8s,mb4.6
ABKAR Akbulak array 61.90 313 *eP* **P 20 04 40.8 0.0**
1.5nm,0.4s,mb4.5
NOA NORSAR Array B 79.47 338 P P 20 06 28.3 +0.8
1.7nm,0.9s,mb4.0,baz=40,slow=5.2,SNR=3.6
BRTR Keskin Array B 82.85 312 P P 20 06 48.1 +2.2
0.8nm,1.0s,mb3.7,baz=130,slow=4.3,SNR=3.6
TXAR Lajitas Array 93.20 53 P P 20 07 38.2 +2.3
0.7nm,0.7s,mb4.2,baz=283,slow=3.3,SNR=9.9
TXAR Lajitas Array 93.20 53 P P 20 07 38.2 +2.2

SKO ***04*** *20:15:07.1,40.°72N×19.°68E,h3km*
CSEM ***04*** *20:15:08.8±0.3,40.°90N×19.°62E,h20km,ML2.3/3,Error ellipse: s-maj=6.1km s-min=3.5km az=76.0*
ISCJB ***04*** *20:15:09.2±0.7,40.°91N±0.°03×19.°66E±0.°05,h24km±5km, Error ellipse: s-maj=6.5km s-min=4.7km az=174.8*
THE ***04*** *20:15:09.7,40.°85N×19.°81E,h5km±1km,ML2.3/3,Error ellipse: s-maj=1.5km s-min=0.8km az=286.0*
TIR ***04*** *20:15:09.5±1.5,40.°86N×19.°78E,h26km±123km,ML3.3*
ISC 04 20:15:09.3±0.7,**40.°87N**±0.°02×**19.°72E**±0.°05,**h13**km±4km,
n40,σ0°**96**/72,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.49**	**13**	P	**Pg**	**20 15 18.9**	**0.0**
TIR				S	**Sg**	**20 15 26.4**	**+1.0**
TIR	**Tirane**	**0.49**	**13**	P	**Pg**	**20 15 18.9**	**0.0**
TIR				S	**Sg**	**20 15 26.4**	**+1.0**
KBN	**Korca**	**0.85**	**107**	*i* PG	**Pg**	**20 15 24.3**	**-1.4**
KBN				*i* SG	**Sg**	**20 15 37.9**	**+1.0**
KBN	**Korca**	**0.85**	**107**	*i* Pg	**Pg**	**20 15 24.3**	**-1.5**
	SNR=97						
KBN				*i* Sg	**Sg**	**20 15 37.9**	**+1.0**
	SNR=97						
SRN	**Sarande**	**1.02**	**168**	*e*PG	**Pg**	**20 15 29.1**	**+0.2**
SRN				*i* SG	**Sg**	**20 15 43.2**	**+1.1**
SRN	**Sarande**	**1.02**	**168**	*e*Pg	**Pg**	**20 15 29.1**	**+0.2**
	SNR=95						
SRN				*i* Sg	**Sg**	**20 15 43.2**	**+1.1**
	SNR=95						
NEST	**Nestorio**	**1.11**	**114**	P	**Pb**	**20 15 28.9**	**-1.5**
NEST				S	**Sb**	**20 15 44.6**	**-0.2**
NEST	**Nestorio**	**1.11**	**114**	P	**Pb**	**20 15 28.9**	**-1.5**
NEST				S	**Sb**	**20 15 44.6**	**-0.2**
KEK	**Kerkira**	**1.16**	**177**	P	**Pn**	**20 15 31.2**	**-0.1**
KEK				S	**Sb**	**20 15 47.1**	**+0.9**
KEK	**Kerkira**	**1.16**	**177**	P	**Pn**	**20 15 31.2**	**-0.1**
KEK				S	**Sb**	**20 15 47.1**	**+0.9**
PUK	**Puka**	**1.18**	**6**	*e*PG	**Pg**	**20 15 32.0**	**+0.1**
PUK				*i* SG	**Sg**	**20 15 49.2**	**+1.9**
PUK	**Puka**	**1.18**	**6**	*e*Pg	**Pg**	**20 15 32.0**	**+0.1**
	SNR=94						
PUK				*i* Sg	**Sg**	**20 15 49.2**	**+2.0**
	SNR=94						
BIA	**Bitola**	**1.23**	**83**	P	**Pn**	**20 15 31.5**	**-0.7**
BIA				S	**Sb**	**20 15 48.5**	**+0.4**
BIA	**Bitola**	**1.23**	**83**	*e*Pg	**Pg**	**20 15 29.9**	**-3.0**
BIA				*e*Sg	**Sg**	**20 15 48.3**	**-0.5**
BIA	**Bitola**	**1.23**	**83**	P	**Pn**	**20 15 31.5**	**-0.7**
BIA				S	**Sb**	**20 15 48.5**	**+0.4**
KRUS	**Krusevo**	**1.26**	**66**	*e*Pg	**Pg**	**20 15 30.9**	**-2.6**
KRUS				*e*Sg	**Sg**	**20 15 49.8**	**-0.1**
FNA	**Florina**	**1.26**	**94**	P	**Pn**	**20 15 31.7**	**-1.0**
FNA				S	**Sb**	**20 15 50.1**	**+1.0**
FNA	**Florina**	**1.26**	**94**	P	**Pn**	**20 15 31.7**	**-1.0**
FNA				S	**Sb**	**20 15 50.1**	**+1.0**
IGT	**Igoumenitsa**	**1.42**	**160**	P	**Pn**	**20 15 35.7**	**+0.9**
IGT				S	**Sn**	**20 15 54.2**	**+0.8**
IGT	**Igoumenitsa**	**1.42**	**160**	P	**Pn**	**20 15 35.7**	**+0.9**
IGT				S	**Sn**	**20 15 54.2**	**+0.8**
BCI	**Bajram Curri**	**1.52**	**10**	*e*PG	**Pg**	**20 15 37.5**	**-0.9**
BCI				*i* SG	**Sg**	**20 15 59.8**	**+1.7**
BCI	**Bajram Curri**	**1.52**	**10**	*e*Pg	**Pg**	**20 15 37.5**	**-0.9**
	SNR=93						
BCI				*i* Sg	**Sg**	**20 15 59.8**	**+1.7**
	SNR=93						
KZN	**Kozani**	**1.66**	**109**	P	**Pn**	**20 15 38.7**	**+0.5**
KZN				S	**Sn**	**20 15 59.1**	**-0.3**
KZN	**Kozani**	**1.66**	**109**	P	**Pn**	**20 15 38.7**	**+0.5**
KZN				S	**Sn**	**20 15 59.1**	**-0.3**
GRG	**Griva**	**2.04**	**87**	P	**Pn**	**20 15 43.3**	**0.0**
GRG				S	**Sn**	**20 16 08.9**	**+0.3**
GRG	**Griva**	**2.04**	**87**	P	**Pn**	**20 15 43.3**	**0.0**
GRG				S	**Sn**	**20 16 08.9**	**+0.3**
THL	**Klokotos Trika**	**2.19**	**126**	P	**Pn**	**20 15 44.8**	**-0.7**
THL				S	**Sn**	**20 16 13.1**	**+0.6**
THL	**Klokotos Trika**	**2.19**	**126**	P	**Pn**	**20 15 44.8**	**-0.7**
THL				S	**Sn**	**20 16 13.1**	**+0.6**
LIT	**Litokhoron**	**2.25**	**109**	P	**Pn**	**20 15 46.3**	**0.0**
LIT	**Litokhoron**	**2.25**	**109**	P	**Pn**	**20 15 46.3**	**0.0**
KNT	**Kendrikon**	**2.42**	**82**	P	**Pn**	**20 15 48.9**	**+0.2**
KNT				S	**Sn**	**20 16 19.2**	**+1.0**
KNT	**Kendrikon**	**2.42**	**82**	P	**Pn**	**20 15 48.9**	**+0.2**
KNT				S	**Sn**	**20 16 19.2**	**+1.0**
STON	**Ston**	**2.50**	**324**	*e*Pn	**Pn**	**20 15 46.1**	**-3.6**
STON				Sn	**Sn**	**20 16 15.3**	**-4.7**
STON	**Ston**	**2.50**	**324**	*e*Pn	**Pn**	**20 15 46.1**	**-3.6**
STON				Sn	**Sn**	**20 16 15.3**	**-4.8**
HORT	**Hortiatis**	**2.58**	**95**	P	**Pn**	**20 15 50.4**	**-0.5**
HORT	**Hortiatis**	**2.58**	**95**	P	**Pn**	**20 15 50.4**	**-0.5**
PAIG	**Paliouri**	**3.17**	**106**	P	**Pn**	**20 15 58.5**	**-0.4**
PAIG	**Paliouri**	**3.17**	**106**	P	**Pn**	**20 15 58.5**	**-0.4**
AOS	**Alonnisos**	**3.62**	**117**	P	**Pn**	**20 16 04.4**	**-0.7**
AOS	**Alonnisos**	**3.62**	**117**	P	**Pn**	**20 16 04.4**	**-0.7**

BJI ***04*** *20:19:56.8,31.°11N×103.°73E,h13km,mb3.8/1,ML3.6/12, Ms3.8/4,Ms7 3.5/2*
IDC ***04*** *20:19:56.2±0.9,31.°11N×103.°80E,h0km,mb3.6/8, mb1 3.8/10,mb1mx3.6/24,mbtmp3.6/10,ML3.4/2,Error ellipse: s-maj=34.8km s-min=17.5km az=63.0*
NEIC ***04*** *20:19:58.9±4.1,31.°09N×103.°82E,h16km±27km,mb3.7/1, Error ellipse: s-maj=13.2km s-min=8.3km az=68.0*
ISC 04 20:19:57.0±0.8,**31.°12N**±0.°03×**103.°76E**±0.°06,**h3**km±6km,
n20,σ1°**05**/28,**mb3.6**/7,**1C,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.21**	**179**	⇑ *i* Pg	**Pg**	**20 20 03.3**	**+2.3**
CD2				Sg	**Sg**	**20 20 08.5**	**+4.7**
CD2				smax			
	comp=N,18μm,0.7s						
CD2				smax			
	comp=E,23μm,0.6s						
LZH	**Lanzhou**	**4.95**	**1**	Pg	**Pg**	**20 21 31.2**	**-0.7**
LZH				Sg	**Sg**	**20 22 35.0**	**-1.0**
LZH				smax			
	comp=N,130nm,1.1s						
LZH				smax			
	comp=E,61nm,1.0s						
LZH				LR	LR		
	comp=N,310nm,5.3s						
LZH				LR	LR		
	comp=E,880nm,8.2s						
LZH				LR	LR		
	comp=Z,890nm,8.6s						
ENH	**Enshi**	**5.01**	**98**	*e*P	**Pn**	**20 21 12.2**	**-0.8**
XAN	**Xi'an**	**5.24**	**55**	Pn	**Pn**	**20 21 17.1**	**+0.9**
XAN				Pg	**Pg**	**20 21 35.5**	**-1.9**
XAN				Sn	**Sn**	**20 22 18.9**	**+1.8**
XAN				Sg	**Sg**	**20 22 49.2**	**+3.9**
XAN				smax			
	comp=N,100nm,0.9s						
XAN				smax			
	comp=E,43nm,1.0s						
GYA	**Guiyang**	**5.30**	**151**	Pn	**Pn**	**20 21 21.1**	**+4.1**
GYA				Pg	**Pg**	**20 21 37.7**	**-0.9**
GYA				Sn	**Sn**	**20 22 26.9**	**+8.3**
GYA				Sg	**Sg**	**20 22 46.3**	**-1.0**
GYA				smax			
	comp=N,160nm,0.8s						
GYA				smax			
	comp=E,110nm,0.8s						
KMI	**Kunming**	**6.04**	**189**	Pn	**Pn**	**20 21 26.9**	**-0.3**
KMI				Sn	**Sn**	**20 22 36.7**	**-0.2**
KMI				smax			
	comp=N,28nm,1.1s						
KMI				smax			
	comp=E,30nm,1.1s						
KMI				LR	LR		
	comp=N,230nm,5.1s						
KMI				LR	LR		
	comp=E,640nm,7.4s						
GTA	**Gaotai**	**8.87**	**340**	*e*P	Px	20 22 41.7	
GTA				pP		20 22 46.1	
GTA				sP		20 22 49.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WHN	**Wuhan**	**9.13**	**91**	P	**Pn**	**20 22 09.5**	**0.0**
CMAR	**Chiang Mai Arr**	**13.34**	**200**	Pn	**Pn**	**20 23 08.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=12,slow=12,SNR=6.2						
SONM	**Songino Array**	**16.81**	**6**	Pn	**Pn**	**20 23 54.8**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=187,slow=9.2,SNR=6.0						
KSRS	**Korea Array**	**20.91**	**66**	P	**P**	**20 24 39.0**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=257,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**22.77**	**319**	P	**P**	**20 25 00.9**	**+0.5**
	comp=Z,0.4nm,0.2s,mb3.4,baz=126,slow=12,SNR=8.8						
ZALV	**Zalesovo Beam**	**26.58**	**335**	P	**P**	**20 25 36.0**	**0.0**
	comp=Z,1.0nm,0.7s,mb3.4,baz=138,slow=9.2,SNR=3.4						
KURK	**Kurchatov**	**27.05**	**324**	P	**P**	**20 25 39.3**	**-1.1**
	comp=Z,0.4nm,0.2s,mb3.5,baz=128,slow=9.5,SNR=3.6						
KURK	**Kurchatov**	**27.05**	**324**	*e*P	**P**	**20 25 40.3**	**-0.1**
	comp=Z,1.2nm,0.7s,mb3.5						
WRA	**Warramunga Arr**	**58.66**	**146**	P	**P**	**20 29 54.8**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.0,baz=338,slow=7.5,SNR=14						
WB2	**Warramunga Arr**	**58.66**	**146**	*e*P	**P**	**20 29 54.8**	**-0.8**
ASAR	**Alice Springs**	**61.66**	**148**	P	**P**	**20 30 16.0**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.7,baz=326,slow=5.3,SNR=5.2						
STKA	**Stephens Creek**	**72.19**	**147**	P	**P**	**20 31 23.1**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=301,slow=12,SNR=2.8						
YKA	**Yellowknife Ar**	**81.76**	**17**	P	**P**	**20 32 17.5**	**+0.9**
	comp=Z,0.3nm,0.7s,mb3.4,baz=326,slow=5.2,SNR=2.8						

ISCJB ***04*** *20:32:02.3±0.6,60.°04N±0.°05×151.°5W±0.°1,h93km±11km, Error ellipse: s-maj=9.7km s-min=7.5km az=27.0*
NEIC ***04*** *20:32:05.1,60.°04N×151.°39W,h68km,ML3.2(PMR), ML3.1(AEIC),After AEIC.*
IDC ***04*** *20:32:10.7±2.4,60.°22N×149.°55W,h0km,mb3.5/1, mb1 3.7/3,mb1mx3.3/23,mbtmp3.4/3,ML3.5/2,Error ellipse: s-maj=32.0km s-min=24.0km az=119.0*
ISC 04 20:32:03.7±0.6,**60.°02N**±0.°05×**151.°5W**±0.°1,**h79**km±13km,
n30,σ0°**67**/33,**Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLKM	**Skilak Lake**	**0.79**	**51**	P	**Pn**	**20 32 19.9**	**-0.2**
SEW	**Seward**	**1.01**	**85**	P	**Pn**	**20 32 22.4**	**-0.3**
FIB	**Fire Island**	**1.31**	**28**	P	**Pn**	**20 32 27.4**	**+0.9**
FIB				S	**Sn**	**20 32 45.3**	**+1.7**
RC01	**Rabbit Creek A**	**1.37**	**38**	P	**Pn**	**20 32 27.2**	**0.0**
RC01				S	**Sn**	**20 32 44.2**	**-0.7**
PMR	**Palmer**	**1.94**	**35**	*e*P	**Pn**	**20 32 34.2**	**-0.5**
SVW2	**Sparrevohn**	**2.30**	**300**	*e*P	**Pn**	**20 32 39.3**	**-0.2**
KDAK	**Kodiak Island**	**2.32**	**195**	P	**Pn**	**20 32 39.5**	**-0.3**
SML	**Sawmill**	**2.35**	**39**	P	**Pn**	**20 32 39.9**	**-0.3**
SML				S	**Sn**	**20 33 07.0**	**-1.1**
MID	**Middleton Isla**	**2.66**	**101**	P	**Pn**	**20 32 44.9**	**+0.6**
SCM	**Sheep Creek Mo**	**2.71**	**46**	P	**Pn**	**20 32 45.0**	**0.0**
PPLA	**Purkeypile**	**2.91**	**353**	P	**Pn**	**20 32 47.9**	**+0.3**
OHAK	**Old Harbor**	**2.97**	**200**	*e*P	**Pn**	**20 32 48.0**	**-0.5**
TRF	**Thorofare Moun**	**3.48**	**9**	P	**Pn**	**20 32 55.7**	**+0.3**
RND	**Reindeer**	**3.61**	**19**	P	**Pn**	**20 32 58.0**	**+0.8**
TT01	**Tatalina**	**3.63**	**325**	P	**Pn**	**20 32 57.6**	**+0.2**
DHY	**Denali Highway**	**3.63**	**31**	P	**Pn**	**20 32 57.9**	**+0.4**
TTA	**Tatalina**	**3.64**	**325**	*e*P	**Pn**	**20 32 57.7**	**+0.1**
CHUM	**Lake Minchumin**	**3.89**	**354**	P	**Pn**	**20 33 00.7**	**-0.3**
MCK	**McKinley**	**3.91**	**17**	P	**Pn**	**20 33 01.9**	**+0.7**
BPAW	**Bear Paw Mtn.**	**4.10**	**3**	P	**Pn**	**20 33 04.1**	**+0.3**
PAX	**Paxson**	**4.12**	**42**	P	**Pn**	**20 33 04.5**	**+0.4**
DOT	**Dot Lake**	**5.05**	**41**	*e*P	**Pn**	**20 33 16.2**	**-0.5**
	38nm,0.5s						
COLA	**College**	**5.15**	**17**	P	**Pn**	**20 33 18.4**	**+0.4**
MDM	**Murphy Dome**	**5.17**	**15**	P	**Pn**	**20 33 18.9**	**+0.4**
ILAR	**Eielson Array**	**5.22**	**22**	Pn	**Pn**	**20 33 18.9**	**-0.2**
	2.7nm,0.3s,baz=204,slow=14,SNR=154						
ILAR				Sn	**Sn**	**20 34 15.0**	**-2.7**
	6.1nm,0.3s,baz=200,slow=24,SNR=17						
IM3	**Indian Mountai**	**6.07**	**351**	P	**Pn**	**20 33 29.8**	**-0.9**
COLD	**Coldfoot**	**7.25**	**4**	P	**Pn**	**20 33 46.8**	**0.0**
BM3	**Burnt Mountain**	**8.02**	**19**	P	**Pn**	**20 33 56.7**	**-0.4**
YKA	**Yellowknife Ar**	**17.73**	**66**	Pn	**Pn**	**20 36 05.5**	**+0.6**
	0.2nm,0.3s,baz=275,slow=9.8,SNR=13						
SONM	**Songino Array**	**55.40**	**307**	P	pP	20 41 52.0	+2.9
	0.3nm,0.7s,baz=34,slow=7.3,SNR=4.1						

ISCJB ***04*** *20:33:36.3±0.8,25.°86N±0.°07×94.°81E±0.°04,h82km±9km, mb4.0/18,Error ellipse: s-maj=11.8km s-min=5.4km az=19.4*
BJI ***04*** *20:33:37.5,26.°19N×95.°08E,h74km,mB4.3/1,mb4.1/4*
NEIC ***04*** *20:33:38.0±0.3,26.°02N×95.°13E,mb4.4/2,Error ellipse: s-maj=15.4km s-min=5.3km az=61.0*
IDC ***04*** *20:33:38.2±3.7,26.°02N×95.°18E,h83km±35km,mb3.7/16, mb1 3.8/17,mb1mx3.6/29,mbtmp3.7/17,Error ellipse: s-maj=29.4km s-min=12.5km az=58.0*
ISC 04 20:33:38.1±0.6,**25.°95N**±0.°07×**94.°86E**±0.°04,**h78**km±7km,
n44,σ1°**13**/57,**mb4.0**/18,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.44**	**216**	*e*PKP	**Pn**	**20 34 05.0**	**+2.5**
IMP				*e*S	**Sn**	**20 34 27.0**	**+6.1**
SHL	**Shillong**	**2.71**	**263**	*e*PN	**Pn**	**20 34 23.5**	**+3.9**
SHL				*e*SN	**Sn**	**20 34 56.0**	**+4.6**
LSA	**Lhasa**	**4.98**	**319**	*e*P	**Pn**	**20 34 51.4**	**+1.1**
	42nm,0.5s						
TAPN	**Taplejung**	**6.55**	**284**	*e*Pn	**Pn**	**20 35 12.8**	**+1.0**
TAPN				*e*Sn	**Sn**	**20 36 25.1**	**0.0**
	106nm,0.3s						
ODAN	**Odare**	**6.76**	**279**	*e*Pn	**Pn**	**20 35 15.6**	**+0.9**
ODAN				*e*Sn	**Sn**	**20 36 32.1**	**+1.8**
	200nm,0.4s						
KMI	**Kunming**	**7.16**	**95**	P	**Pn**	**20 35 19.3**	**-0.9**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
RAMN	**Ramite**	**7.47**	**279**	*e*Pn	**Pn**	**20 35 26.1**	**+1.7**
RAMN				*e*Sn	**Sn**	**20 36 48.5**	**+0.8**
	comp=Z,124nm,0.5s						
CHTO	**Chiang Mai**	**8.04**	**151**	*e*P	**Pn**	**20 35 31.9**	**-0.4**
	comp=Z,2.4nm,0.5s						
GUN	**Gumba**	**8.25**	**286**	*e*Pn	**Pn**	**20 35 34.5**	**-0.6**
GUN				*e*Sn	**Sn**	**20 37 05.2**	**-1.5**
	comp=Z,103nm,0.4s						
CMAR	**Chiang Mai Arr**	**8.36**	**152**	P	**Pn**	**20 35 36.1**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=331,slow=14,SNR=24						
PKI	**Pulchoki**	**8.60**	**283**	*e*Pn	**Pn**	**20 35 40.1**	**+0.2**
PKI				*e*Sn	**Sn**	**20 37 14.8**	**-0.5**
	comp=Z,50nm,0.3s						
PKIN	**Phulchoki**	**8.62**	**283**	*e*Pn	**Pn**	**20 35 40.5**	**+0.5**
PKIN				*e*Sn	**Sn**	**20 37 13.6**	**-2.0**
	comp=Z,178nm,0.5s						
KKN	**Kakani**	**8.75**	**284**	*e*Pn	**Pn**	**20 35 42.6**	**+0.7**
KKN				*e*Sn	**Sn**	**20 37 17.3**	**-1.6**
	comp=Z,47nm,0.2s						
DMN	**Daman**	**8.88**	**283**	*e*Pn	**Pn**	**20 35 43.9**	**+0.3**
DMN				*e*Sn	**Sn**	**20 37 20.6**	**-1.3**
GKN	**Gorkha**	**9.35**	**285**	*e*Pn	**Pn**	**20 35 50.4**	**+0.4**
GKN				*e*Sn	**Sn**	**20 37 30.8**	**-2.7**
DANN	**Dangsing**	**10.18**	**286**	*e*Pn	**Pn**	**20 36 00.1**	**-1.2**
DANN				*e*Sn	**Sn**	**20 37 49.2**	**-4.4**
KOLN	**Koldanda**	**10.22**	**283**	*e*Pn	**Pn**	**20 36 01.1**	**-0.8**
KOLN				*e*Sn	**Sn**	**20 37 51.5**	**-3.3**
	comp=Z,54nm,0.4s						
XAN	**Xi'an**	**14.60**	**53**	P	**Pn**	**20 37 00.6**	**+0.1**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	**Makanchi Array**	**23.08**	**338**	*e*P	**P**	**20 38 35.8**	**-1.1**
MKAR	**Makanchi Array**	**23.08**	**338**	P	**P**	**20 38 36.2**	**-0.7**
	comp=Z,1.2nm,0.5s,mb3.5,baz=148,slow=9.7,SNR=20						
MKAR	**Makanchi Array**	**23.08**	**338**	P	**P**	**20 38 36.2**	**-0.8**
TPUB	**Ta-pu**	**23.56**	**91**	*e*P	**P**	**20 38 35.0**	**-6.6**
	comp=Z,16nm,0.7s,mb4.5						
SONM	**Songino Array**	**23.66**	**20**	P	**P**	**20 38 40.8**	**-1.4**
	comp=Z,0.5nm,0.7s,mb3.0,baz=203,slow=8.5,SNR=3.3						
KURK	**Kurchatov**	**27.69**	**338**	P	**P**	**20 39 18.2**	**-0.5**
	comp=Z,0.7nm,0.3s,mb3.7,baz=152,slow=8.8,SNR=3.1						
KURK	**Kurchatov**	**27.69**	**338**	*e*P	**P**	**20 39 18.9**	**+0.3**
ZALV	**Zalesovo Beam**	**28.95**	**348**	P	**P**	**20 39 30.0**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.5,baz=156,slow=8.6,SNR=3.7						
BVAR	**Borovoye Array**	**32.67**	**332**	P	**P**	**20 40 03.3**	**+0.7**
	comp=Z,1.2nm,0.4s,mb4.1,baz=133,slow=11,SNR=8.4						
ABKAR	**Akbulak array**	**35.66**	**320**	*e*P	**P**	**20 40 29.2**	**+0.7**
	comp=Z,1.3nm,0.4s,mb4.2						
AKTK	**Aktyubinsk**	**37.31**	**321**	P	**P**	**20 40 43.4**	**+0.9**
AKTO	**Aktyubinsk**	**37.31**	**321**	P	**P**	**20 40 43.4**	**+0.9**
	comp=Z,0.6nm,0.3s,mb3.9,baz=108,slow=7.2,SNR=5.1						
BRTR	**Keskin Array B**	**52.32**	**301**	P	**P**	**20 42 43.1**	**+1.2**
	comp=Z,1.3nm,0.6s,mb4.1,baz=117,slow=8.2,SNR=9.5						
AKASG	**Malin Array Be**	**55.11**	**315**	P	**P**	**20 43 01.8**	**-0.2**
	comp=Z,1.3nm,0.3s,mb4.4,baz=80,slow=7.0,SNR=5.7						
FINES	**FINESS Array B**	**57.44**	**328**	P	**P**	**20 43 18.9**	**+0.4**
	comp=Z,1.1nm,0.4s,mb4.3,baz=95,slow=7.0,SNR=15						
ARCES	**ARCESS Array B**	**58.73**	**337**	P	**P**	**20 43 28.1**	**+0.8**
	comp=Z,2.2nm,1.0s,mb4.2,baz=108,slow=5.8,SNR=3.5						
WRA	**Warramunga Arr**	**59.59**	**136**	P	**P**	**20 43 32.2**	**-1.7**
	comp=Z,1.8nm,0.4s,mb4.5,baz=322,slow=7.4,SNR=68						
WRA				pP	pP	20 43 52.5	-1.4
	comp=Z,0.6nm,0.7s,baz=321,slow=7.5,SNR=3.6						
WRA	**Warramunga Arr**	**59.59**	**136**	P	**P**	**20 43 32.2**	**-1.7**
WRA				pP	pP	20 43 52.5	-1.4
KMBO	**Kilima Mbogo**	**61.73**	**253**	P	**P**	**20 43 50.7**	**+2.0**
	comp=Z,0.7nm,0.4s,mb4.0,baz=0.6,slow=24,SNR=4.2						
KMBO	**Kilima Mbogo**	**61.73**	**253**	P	**P**	**20 43 50.7**	**+2.0**
ASAR	**Alice Springs**	**62.13**	**139**	P	**P**	**20 43 49.9**	**-1.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=324,slow=6.4,SNR=28						
ASAR				pP	pP	20 44 11.0	-0.2
	comp=Z,0.7nm,0.7s,baz=323,slow=6.5,SNR=6.5						
NWAO	**Narrogin (SRO)**	**62.30**	**159**	*e*P	**P**	**20 43 50.2**	**-1.8**
NB2	**NORSAR Subarra**	**64.62**	**328**	P	**P**	**20 44 06.8**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.8,baz=80,slow=6.9						
NOA	**NORSAR Array B**	**64.62**	**328**	P	**P**	**20 44 07.4**	**+0.4**
	comp=Z,1.4nm,0.7s,mb3.9,baz=81,slow=6.7,SNR=5.1						
DAVOX	**Davos/Dischmat**	**68.27**	**313**	P	**P**	**20 44 31.1**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.0,baz=29,slow=19,SNR=3.3						
TORD	**Torodi Ar. Bea**	**87.14**	**283**	P	**P**	**20 46 17.2**	**+1.2**
	comp=Z,0.7nm,1.1s,mb3.5,baz=55,slow=5.0,SNR=4.6						

NDI ***04*** *20:55:38.8±7.0,30.°87N×83.°55E,h10km,ML3.6, mb3.6(NEIC)*
IDC ***04*** *20:55:43.1±0.9,30.°66N×83.°27E,h0km,mb3.8/13, mb1 3.9/15,mb1mx3.8/28,mbtmp3.8/15,ML3.1/1,MS3.3/2, Ms1 3.4/2,ms1mx2.8/30,Error ellipse: s-maj=27.4km s-min=15.7km az=53.0*
ISCJB ***04*** *20:55:44.7±2.2,30.°54N±0.°06×83.°08E±0.°04,h24km±17km, mb3.7/13,MS3.3/2,Error ellipse: s-maj=10.8km s-min=5.7km az=176.4*
BJI ***04*** *20:55:44.0,30.°45N×82.°97E,h30km,mB4.4/3,mb3.9/6, Ms3.9/3,Ms7 3.7/3*
NEIC ***04*** *20:55:44.5±6.8,30.°74N×83.°19E,h6km±43km,mb3.6/2, Error ellipse: s-maj=25.7km s-min=10.4km az=45.0*
ISC 04 20:55:46.3±2.4,**30.°64N**±0.°06×**83.°11E**±0.°04,**h21**km±19km,
n33,σ1°**07**/37,**mb3.7**/13,**MS3.3**/2,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**2.73**	**247**	*e*PKP	**Pn**	**20 56 37.0**

AKTK	Aktyubinsk	27.25	324	P	P	21 01 29.6 +0.8
AKTO	Aktyubinsk	27.25	324	P	P	21 01 29.6 +0.8
	comp=Z,0.8nm,0.6s,mb3.4,baz=153,slow=5.6,SNR=4.2					
KSRS	Korea Array	37.48	67	P	P	21 02 56.5 -1.9
	comp=Z,1.4nm,0.6s,mb4.0,baz=275,slow=9.9,SNR=7.6					
KSRS				LR	LR	21 19 04.4
	comp=Z,51nm,18.1s,MS3.4,baz=183,slow=38					
FINES	FINESS Array B	47.93	327	P	P	21 04 23.6 +0.8
	comp=Z,1.3nm,0.8s,mb4.0,baz=88,slow=9.9,SNR=4.7					
ARCES	ARCESS Array B	50.42	337	P	P	21 04 42.8 +0.9
	comp=Z,1.7nm,0.8s,mb4.1,baz=105,slow=10,SNR=4.8					
NOA	NORSAR Array B	55.02	326	LR	LR	21 29 55.2
	comp=Z,22nm,18.2s,MS3.3,baz=90,slow=37					
WRA	Warramunga Arr	70.38	129	P	P	21 06 58.8 -0.2
	comp=Z,1.0nm,0.5s,mb4.0,baz=325,slow=6.2,SNR=23					
ASAR	Alice Springs	72.72	132	P	P	21 07 12.4 -0.6
	comp=Z,0.2nm,0.6s,mb3.2,baz=328,slow=6.3,SNR=3.2					
TORD	Torodi Ar. Bea	76.11	277	P	P	21 07 34.2 +1.2
	comp=Z,0.4nm,0.6s,mb3.5,baz=31,slow=5.6,SNR=5.0					
TORD	Torodi Ar. Bea	76.11	277	P	P	21 07 34.2 +1.2
ILAR	Eielson Array	77.25	20	P	P	21 07 38.4 -0.3
	comp=Z,0.8nm,0.9s,mb3.6,baz=309,slow=6.0,SNR=6.5					
YKA	Yellowknife Ar	86.11	8	P	P	21 08 24.4 -1.0
	comp=Z,0.3nm,0.5s,mb3.8,baz=339,slow=5.2,SNR=3.9					

*CSEM **04** 20:56:46.5, 39°.01N×29°.11W, h0km, ML3.1, After PDA*

PDA 04 20:56:46.5±1.0, 39°.01N×29°.11W, h0km, MD3.6, ML3.1, Error ellipse: s-maj=6.1km s-min=4.0km az=77.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	Cedros	0.50	140	eP	Pg	20 56 55.4	-0.6
PCED				eS	Sg	20 57 02.3	-0.2
PCED				A		20 57 04.4	
	632nm,0.3s						
PCED	Cedros	0.50	140	eP	Pg	20 56 55.4	-0.6
PCED				eS	Sg	20 57 02.3	-0.2
CALA	Caldeira	0.54	144	eP	Pg	20 56 56.2	-0.5
CALA				eS	Sg	20 57 03.3	-0.4
CALA	Caldeira	0.54	144	eP	Pg	20 56 56.2	-0.5
CALA				eS	Sg	20 57 03.3	-0.4
HOR	Horta	0.61	142	eP	Pg	20 56 57.5	-0.7
HOR				eS	Sg	20 57 05.4	-0.8
HOR	Horta	0.61	142	eP	Pg	20 56 57.5	-0.7
HOR				eS	Sg	20 57 05.4	-0.8
PCAN	Candelaria	0.73	138	eP	Pg	20 56 58.8	-1.7
PCAN				eS	Sg	20 57 08.7	-1.3
PCAN				A		20 57 10.7	
	862nm,0.2s						
PCAN	Candelaria	0.73	138	eP	Pg	20 56 58.8	-1.7
PCAN				eS	Sg	20 57 08.7	-1.3
ROSA	Rosais	0.74	113	eP	Pg	20 56 58.9	-1.7
ROSA				eS	Sg	20 57 08.4	-1.8
ROSA	Rosais	0.74	113	eP	Pg	20 56 58.9	-1.7
ROSA				eS	Sg	20 57 08.4	-1.8
PICO	Pico	0.74	134	eP	Pg	20 56 59.4	-1.3
PICO				eS	Sg	20 57 09.1	-1.1
PICO	Pico	0.74	134	eP	Pg	20 56 59.4	-1.3
PICO				eS	Sg	20 57 09.1	-1.1
PMAN	Manadas	0.88	115	eP	Pg	20 57 00.8	-2.6
PMAN				eS	Sg	20 57 12.4	-2.4
PMAN				A		20 57 14.2	
	201nm,0.2s						
PMAN	Manadas	0.88	115	eP	Pg	20 57 00.8	-2.6
PMAN				eS	Sg	20 57 12.4	-2.4
PID	Ribeirinha	0.96	126	eP	Pg	20 57 02.3	-2.6
PID				eS	Sg	20 57 14.2	-3.2
PID	Ribeirinha	0.96	126	eP	Pg	20 57 02.3	-2.6
PID				eS	Sg	20 57 14.2	-3.2
ADH	Angra Heroismo	1.51	103	eP	Pn	20 57 09.6	-5.1
ADH				eS	Sg	20 57 27.2	-7.7
ADH				A		20 57 28.7	
	32nm,0.2s						
ADH	Angra Heroismo	1.51	103	eP	Pn	20 57 09.6	-5.1
ADH				eS	Sg	20 57 27.2	-7.7
PSET	Sete Cidades	2.91	113	eP	Pn	20 57 29.9	-4.2
PSET				eS	Sn	20 58 01.7	-8.1
PSET				A		20 58 03.5	
	3.0nm,0.3s						
PSET	Sete Cidades	2.91	113	eP	Pn	20 57 29.9	-4.2
PSET				eS	Sn	20 58 01.7	-8.1
GRON	Grota Negra	3.07	113	eP	Pn	20 57 33.5	-2.8
CMLA	Cha da Macela	3.08	113	eP	Pn	20 57 32.2	-4.2
CMLA				eS	Sn	20 58 06.0	-7.9
CMLA				A		20 58 13.3	
	24nm,0.3s						
CMLA	Cha da Macela	3.08	113	eP	Pn	20 57 32.2	-4.2
CMLA				eS	Sn	20 58 06.0	-7.9
BART	Pico Bartolome	3.33	111	eP	Pn	20 57 35.3	-4.5
BART	Pico Bartolome	3.33	111	eP	Pn	20 57 35.3	-4.5
PSMA	Santa Maria	3.73	121	eP	Pn	20 57 41.0	-4.3
PSMA				eS	Sn	20 58 21.1	-8.9
PSMA				A		20 58 22.3	
	7.8nm,0.2s						
PSMN	Pico do Norte,	3.77	121	eP	Pn	20 57 40.8	-5.1
PSMN				eS	Sn	20 58 20.9	-10
PSMN	Pico do Norte,	3.77	121	eP	Pn	20 57 40.8	-5.1
PSMN				eS	Sn	20 58 20.9	-10

*NEIC **04** 21:00:34.9, 18°.08N×101°.49W, h71km, MD3.9(MEX), After MEX.*

MEX 04 21:00:34.9±1.0, 18°.08N×101°.49W, h71km±16km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.47	178	iP	Pn	21 00 45.5	-2.1
ZIIG				iS	Sn	21 00 55.8	-1.1
ZIIG	Zihuatanejo	0.47	178	iP	Pn	21 00 45.5	-2.1
ZIIG				iS	Sn	21 00 55.8	-1.1
CAIG	El Cayaco	1.55	131	iP	Pn	21 00 59.5	-1.1
CAIG				iS	Sn	21 01 17.9	-2.1
CAIG	El Cayaco	1.55	131	iP	Pn	21 00 59.5	-1.1
CAIG				iS	Sn	21 01 17.9	-2.1
ACX	Acapulco	1.96	128	iP	Pn	21 01 04.8	-1.4
ACX				iS	Sn	21 01 26.3	-3.6
ACX	Acapulco	1.96	128	iP	Pn	21 01 04.8	-1.4
ACX				iS	Sn	21 01 26.3	-3.6
SZVM	Salazar	2.35	58	eP	Pn	21 01 10.9	-0.4
SZVM				iS	Sn	21 01 37.1	-2.0
SZVM	Salazar	2.35	58	eP	Pn	21 01 10.9	-0.4
SZVM				iS	Sn	21 01 37.1	-2.0
MZVM		2.41	62	iP	Pn	21 01 11.3	-0.8
MZVM				iS	Sn	21 01 37.9	-2.7
SFJM	Santa Fe	2.81	329	eP	Pn	21 01 20.1	+2.6
SFJM	Santa Fe	2.81	329	eP	Pn	21 01 20.1	+2.6
PPM	Popocatepetl	2.88	70	eP	Pn	21 01 18.6	+0.1
PPM				iS	Sn	21 01 49.8	-2.3
PPM	Popocatepetl	2.88	70	eP	Pn	21 01 18.6	+0.1
PPM				iS	Sn	21 01 49.8	-2.3
IIO	Organos	3.02	60	eP	Pn	21 01 20.0	-0.4
IIO				iS	Sn	21 01 53.9	-1.5
IIO	Organos	3.02	60	eP	Pn	21 01 20.0	-0.4
IIO				iS	Sn	21 01 53.9	-1.5
UTMO	Huajuapan	3.51	94	iP	Pn	21 01 26.2	-0.9
UTMO				iS	Sn	21 02 05.4	-2.1
PNIG	Pinotepa	3.62	117	eP	Pn	21 01 27.8	-0.9
PNIG				iS	Sn	21 02 09.4	-0.7
PNIG	Pinotepa	3.62	117	eP	Pn	21 01 27.8	-0.9
PNIG				iS	Sn	21 02 09.4	-0.7

*ISCJB **04** 21:17:45.3±1.4, 43°.7N±0°.2×147°.7E±0°.2, h33km, mb3.7/5, Error ellipse: s-maj=36.1km s-min=7.2km az=153.5*
*JMA **04** 21:17:46.2±0.3, 43°.64N×147°.45E, h15km±4km, M3.3*
*IDC **04** 21:17:50.1±3.9, 45°.25N×147°.01E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/20, mbtmp3.6/4, ML2.5/1, Error ellipse: s-maj=106.4km s-min=27.9km az=158.0*
*NEIC **04** 21:17:55.1±0.5, 45°.26N×146°.90E, h35km, mb4.2/2, Error ellipse: s-maj=12.6km s-min=7.8km az=151.0*

ISC 04 21:17:47.5±1.3, 43°.8N±0°.2×147°.6E±0°.2, h35km, n24, σ1°08/22, mb3.7/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.39	252	P	Pn	21 18 09.3	-1.1
NEM2				eS	Sn	21 18 25.9	-1.7
JRA	Rausu	1.77	275	P	Pn	21 18 16.0	+0.4
JNK	Nakash	2.07	265	P	Pn	21 18 19.5	-0.3
JAK	Akkeshi	2.24	250	P	Pn	21 18 21.9	-0.2
JTKR	Abashiri--Toko	2.65	275	P	Pn	21 18 28.8	+1.2
JAR	Ashorobuto	2.80	261	P	Pn	21 18 30.4	+0.6
JCH	Churui	3.29	250	eS	Sn	21 19 14.9	+0.5
ASAJ	Asahikawa	3.60	277	Pn	Pn	21 18 43.2	+2.5
	0.3nm,0.3s,baz=67,slow=18,SNR=2.9						
ASAJ	Asahikawa	3.60	277	ePn	Pn	21 18 43.4	+2.7
JNBK	Urakawa-nobuka	3.84	248	P	Pn	21 18 45.3	+1.2
MDJ	Mudanjiang	12.92	280	ePn	Pn	21 20 46.7	-1.8
INCN	Inchon	17.07	255	Pn	Pn	21 21 51.0	+7.6
HIA	Hailar	19.84	296	eP	Pn	21 22 12.0	-4.9
YULB	Yu-li	29.68	235	eP	pP	21 24 01.6	+1.6
	1.3nm,0.6s						
COLD	Coldfoot	39.94	32	P	P	21 25 17.1	-0.7
QIZ	Qiongzhong	40.06	244	eP	pP	21 25 29.2	-0.4
ILAR	Eielson Array	41.27	36	P	P	21 25 29.1	+0.3
	0.4nm,0.8s,mb3.1,baz=289,slow=9.7,SNR=6.3						
MKAR	Makanchi Array	44.82	298	P	P	21 25 58.3	+0.5
	0.3nm,0.2s,mb3.7,baz=72,slow=9.5,SNR=3.2						
LSA	Lhasa	46.49	272	P	P	21 26 15.4	+4.3
EKS2	Erkin-Say	52.05	296	eP	P	21 26 53.7	+0.1
YKA	Yellowknife Ar	55.59	34	P	P	21 27 19.6	+0.5
	0.2nm,0.5s,mb3.4,baz=300,slow=6.4,SNR=2.3						
CTAO	Charters Tower	63.59	181	P	sP	21 28 31.3	+1.9
FINES	FINESS Array B	64.96	333	P	P	21 28 21.0	-2.2
	1.2nm,0.7s,mb4.1,baz=54,slow=9.8,SNR=7.6						
KIV	Kislovodsk	69.95	312	eP	P	21 28 55.3	+0.3
	2.4nm,0.5s,mb4.4						

KRSC 04 21:33:34.4±1.3, 51°.81N×157°.79E, h189km±78km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVH	Avacha	1.57	21	eP	Pn	21 34 09.5	+1.9
AVH				eS	Sn	21 34 35.2	+1.6
SPN	Mys Shipunski	1.88	46	eS	Sn	21 34 39.2	+0.2
GNL	Ganaly	1.89	3	eP	Pn	21 34 12.0	+1.2
MKZ	Mys Kozlova	3.63	39	eP	Pn	21 34 33.2	+2.2
MKZ				eS	Sn	21 35 15.3	-0.1

IDC 04 21:34:39.5±45.0, 16°.09S×172°.48W, h0km, mb4.5/3, mb1 4.7/3, mb1mx4.0/18, mbtmp4.5/3, Error ellipse: s-maj=879.4km s-min=164.6km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNB	Canberra Magne	39.04	233	eP	P	21 42 10.7	+2.5
CMSA	Cobar Meteorol	40.98	240	eP	P	21 42 24.9	+0.6
QLP	Quilpie	41.48	248	eP	P	21 42 28.1	-0.4
COEN	Coen	42.83	267	eP	P	21 42 42.3	+2.7
STKA	Stephens Creek	44.47	241	P	P	21 42 52.9	+0.2
	4.4nm,0.7s,baz=100,slow=8.5,SNR=11						
STKA	Stephens Creek	44.47	241	eP	P	21 42 53.4	+0.7
	3.9nm,0.9s						
BBOO	Buckleboo	49.24	240	eP	P	21 43 30.1	+0.1
	2.9nm,0.3s						
WRA	Warramunga Arr	50.55	257	P	P	21 43 40.1	-0.1
	2.5nm,0.4s,baz=95,slow=7.1,SNR=136						
ASAR	Alice Springs	50.75	252	P	P	21 43 41.5	-0.2
	7.1nm,0.6s,baz=90,slow=8.1,SNR=100						
FORT	Forrest	55.90	244	eP	P	21 44 19.1	-0.4
	7.7nm,0.6s						
MBWA	Marble Bar	64.02	254	eP	P	21 45 15.8	+0.3

*NEIC **04** 21:39:29.0±1.6, 13°.69N×91°.29W, h35km±11km, mb4.7/100, Error ellipse: s-maj=8.6km s-min=4.9km az=212.0*
*CASC **04** 21:39:29.8±2.6, 13°.66N×91°.36W, h35km±18km, MD4.4, ML4.6, mb4.7(NEIC)*
*ISCJB **04** 21:39:30.8±0.4, 13°.72N±0°.04×91°.21W±0°.03, h61km±3km, mb4.6/107, Error ellipse: s-maj=7.0km s-min=2.8km az=33.4*
*GCMT **04** 21:39:31.1±0.2, 13°.54N×91°.57W, h29km, MW5.2, Moment Tensor Solution. s72,c116; s78,c131; Moment tensor: Scale 10^{16}Nm; M_{rr}6.40±.21; $M_{\theta\theta}$-6.06±.16; $M_{\phi\phi}$-0.34±.19; $M_{r\theta}$4.51±.22; $M_{\theta\phi}$2.94±.11; $M_{\phi r}$-2.88±.29; Best double couple: $M_0$8.70000×10^{16} NP1:ϕ_s285.00000°, δ27.00000°, λ77.00000°. NP2:ϕ_s119.00000°, δ64.00000°, λ96.00000°. Principal axes: T 8.2900, Plg70.0000°, Azm43.0000°; N 0.8100, Plg6.0000°, Azm297.0000°; P -9.1100, Plg19.0000°, Azm205.0000°; Data Used: II IU IC G CN.*
*BJI **04** 21:39:32.4, 13°.80N×91°.00W, h81km, mB5.1/7, Ms5.0/5, Ms7 4.8/7*
*IDC **04** 21:39:35.7±3.6, 13°.97N×90°.90W, h92km±32km, mb4.2/15, mb1 4.4/17, mb1mx4.2/24, mbtmp4.2/17, MS4.4/18, Ms1 4.5/18, ms1mx4.3/25, Error ellipse: s-maj=26.1km s-min=10.8km az=56.0*

ISC 04 21:39:32.5±0.3, 13°.80N±0°.03×91°.17W±0°.03, h55km±3km, n430, σ1°03/413, mb4.6/107, MS4.4/23, 61C-59D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.68	319	∥iP	Pn	21 39 43.4	-3.0
FUG	Fuego 3	0.72	27	eP	Pn	21 39 45.8	-1.0
IXG	Ixpaco	0.79	62	∥eP	Pn	21 39 47.1	-0.5
FG6		0.80	20	eP	Pn	21 39 47.7	-0.2
PCG	Pacaya	0.80	43	∥eP	Pn	21 39 48.4	+0.5
TP2	Tecpan 2	0.98	9	∥eP	Pn	21 39 50.4	+0.2
GCG	Guatemala City	0.99	39	eP	Pn	21 39 51.9	+1.5
GCG				eS	Sn	21 40 10.5	+7.0
NBG	Las Nubes	1.12	46	eP	Pn	21 39 53.5	+1.5
RBDL	Robledal	1.48	78	⇑iP	Pn	21 39 56.8	0.0
SBLS	San Blas	1.51	88	eP	Pn	21 39 56.2	-1.0
THIG		1.52	316	iP	Pn	21 39 49.4	-8.1
THIG				iS	Sn	21 40 12.1	-4.2
BOQS	Boqueron	1.84	92	iP	Pn	21 40 01.1	-0.7
BOQS				eS	Sn	21 40 26.1	+2.2
SNET	Serv Nac Est T	1.89	93	eP	Pn	21 40 02.2	-0.2
SNET				AML	AML	21 40 34.8	
	comp=Z,12μm,0.5s						
MRL	Marmol	1.91	49	∥eP	Pn	21 40 04.8	+2.2
SNVI	San Vicente	2.28	95	eP	Pn	21 40 07.8	+0.1
SNVI				eS	Sn	21 40 36.1	+1.5
CCIG	Comitan	2.63	339	iP	Pn	21 40 05.3	-7.4
CCIG				iS	Sn	21 40 48.0	+4.6
PCIG		2.74	314	iP	Pn	21 40 10.4	-3.7
PCIG				iS	Sn	21 40 38.6	-7.3
VSM	San Miguel	2.84	97	eP	Pn	21 40 16.4	+1.0
CAHU	Cacacuatique	2.88	90	eP	Pn	21 40 15.8	-0.1
SCX	San Cristobal	3.24	334	eP	Pn	21 40 12.1	-8.8
SCX				iS	Sn	21 41 05.5	+7.3
CNCH	Conchagua	3.29	99	eP	Pn	21 40 22.2	+0.6
TGUH	Tegucigalpa,Un	3.79	86	ePn	Pn	21 40 28.4	-0.2
CNGN	Cerro Negro	4.55	106	eP	Pn	21 40 37.8	-1.1
CNGN				eS	Sn	21 41 31.9	+1.5
CNGN				AML	AML	21 41 52.3	
	comp=E,1μm,0.4s						
MOMN	Momotombo	4.72	107	eP	Pn	21 40 41.1	-0.2
COPN	Copaltepe	4.75	109	eP	Pn	21 40 40.9	-0.7
CSAN		4.90	109	eP	Pn	21 40 43.5	-0.2
XAVN	Gruta Xavier	5.00	109	eP	Pn	21 40 45.5	+0.4
TISN	Laguna Tiscapa	5.06	108	eP	Pn	21 40 44.6	-1.3
MGAN	Managua	5.08	108	eP	Pn	21 40 47.4	+1.3
MGAN				AML	AML	21 42 02.9	
	comp=N,1μm,0.6s						
CRUN	El Crucero	5.08	110	eP	Pn	21 40 46.9	+0.7
HUEN		5.09	106	eP	Pn	21 40 45.8	-0.5
WILN	Americas 2	5.13	108	eP	Pn	21 40 45.8	-1.0
TICN	Ticuantepe	5.13	110	eP	Pn	21 40 47.3	+0.4
BOAB	BOACO BROADBAN	5.53	103	eP	Pn	21 40 50.9	-1.5
BOAB				eS	Sn	21 41 56.4	+1.8
OXX	Oaxaca	6.27	302	eP	Pn	21 40 55.9	-6.5
OXX				iS	Sn	21 42 09.6	-3.1
VHO	Vista Hermosa	6.27	302	iP	Pn	21 41 00.8	-1.7
VHO				iS	Sn	21 42 14.6	+1.8
VCR	Vista de Mar	6.54	123	eP	Pn	21 41 06.0	-0.2
TEIG	Tepich	6.96	23	ePn	Pn	21 41 12.6	+0.7
JTS	JuntasAbangare	7.01	119	ePn	Pn	21 41 11.1	-1.6
JCR	Jicaral	7.12	123	eP	Pn	21 41 13.3	-0.8
PNIG	Pinotepa	7.19	292	iP	Pn	21 41 11.7	-3.5
PNIG				iS	Sn	21 42 31.1	-4.4
CGA2	Cerro Gallo 2	7.57	119	eP	Pn	21 41 21.1	+0.8
PRS1	Puriscal	7.71	119	eP	Pn	21 41 23.4	+1.1
LAJ	Bijagual	7.94	119	eP	Pn	21 41 21.4	-3.9
URSC	Urasca	8.24	118	eP	Pn	21 41 31.0	+1.4
BUS	Buena Vista	8.40	119	eP	Pn	21 41 33.8	+2.1
PPM	Popocatepetl	8.86	307	iP	Pn	21 41 32.5	-5.5
PPM				eP		21 41 34.2	
PPM				iS	Sn	21 43 23.9	+7.5
ACX	Acapulco	8.92	291	eP	Pn	21 41 28.5	-10
ACX				iS	Sn	21 43 14.4	-3.3
PLIG	Platanillo	9.21	301	eP	Pn	21 41 41.5	-1.3
PLIG				iS	Sn	21 43 24.9	-0.2
IIO	Organos	9.24	310	eP	Pn	21 41 44.0	+0.8
IIO				iS	Sn	21 43 25.6	-0.2
ACR	Cerro Adams	9.37	122	eP	Pn	21 41 46.3	+1.3
PTVM	Pico Tres Padr	9.54	308	eP	Pn	21 41 41.6	-5.6
PTVM				iS	Sn	21 43 31.2	-1.8
SZVM	Salazar	9.59	306	eP	Pn	21 41 43.4	-4.6
SZVM				iS	Sn	21 43 31.2	-3.1
ZIIG	Zihuatanejo	10.61	292	iP	Pn	21 41 57.9	-4.0
ZIIG				iS	Sn	21 44 00.7	+1.5
BCIP	Isla Barro Col	12.03	111	Pn	Pn	21 42 20.1	-1.1
BCIP				Sn	Sn	21 44 29.0	-4.9
SFJM	Santa Fe	13.14	302	eP	Pn	21 42 31.5	-4.9
MTDJ	Mount Denham	13.83	70	ePn	Pn	21 42 45.9	0.0
	comp=N,44nm,0.5s						
HKT	Hockley	16.64	346	ePn	Pn	21 43 23.6	+1.6
	comp=N,6.7nm,0.8s						
DWPF	Disney	16.88	31	P	Pn	21 43 24.1	-1.0
NATX	Nacogdoches	18.16	350	eP	Pn	21 43 41.1	+0.3
	comp=N,23nm,0.7s						
VBMS	Vicksburg	18.34	2	eP	Pn	21 43 45.3	+2.4
	comp=N,80nm,0.8s						
JCT	Junction City	18.41	336	eP	Pn	21 43 44.1	+0.3
	comp=N,13nm,0.7s						
JCT				eS	S	21 47 11.5	+1.7
OTAV	Otavalo	18.45	136	eP	Pn	21 43 43.9	-0.5
	comp=N,11nm,1.1s						
OTAV				ePn	Pn	21 43 44.4	-0.1
ROSC	El Rosal	18.83	117	P	Pn	21 43 48.8	-0.3
	comp=N,1.3nm,0.3s,baz=278,slow=1.9,SNR=8.6						
ROSC	El Rosal	18.83	117	eP	Pn	21 43 48.9	-0.2
ROSC				e		21 43 52.3	
628A	Black Gap, Mar	19.01	327	P	Pn	21 43 51.0	-0.1
	baz=19,SNR=34						
627A	Terlingua Ranc	19.25	326	P	Pn	21 43 53.5	-0.4
	baz=19,SNR=62						
TXAR	Lajitas Array	19.31	325	P	Pn	21 43 53.8	-0.9
	comp=N,1.0nm,0.3s,baz=153,slow=12,SNR=157						
TXAR				LR	LR	21 52 42.4	
	comp=N,446nm,19.7s,baz=335,slow=41						
528A	Cox Ranch, San	19.49	328	P	Pn	21 43 55.7	-1.2
	baz=20,SNR=22						
LRAL	Lakeview Retre	19.52	11	eP	Pn	21 43 56.7	-0.4
	comp=N,3.3nm,0.9s						
626A	Big Bend Ranch	19.74	325	P	Pn	21 43 58.6	-1.1
	baz=20,SNR=81						
428A	Kincaid Ranch,	19.90	330	P	Pn	21 44 00.8	-0.8
	baz=20,SNR=12						
527A	Woodward Ranch	19.91	327	⇑P	Pn	21 44 02.0	+0.2
	baz=20,SNR=20						
526A	Mary Lane Ranc	20.10	326	⇓P	P	21 44 03.4	+1.6
	baz=20,SNR=33						
427A	Hayter Ranch,	20.36	328	P	P	21 44 05.5	+1.0
	baz=20,SNR=16						
328A	Wristen Ranch,	20.50	330	⇓P	P	21 44 06.5	+0.4
	baz=21,SNR=123						
426A	McDonald Obser	20.54	327	P	P	21 44 07.7	+1.2
	baz=21,SNR=32						
OXF	Oxford	20.68	4	eP	P	21 44 07.6	-0.4
	comp=N,44nm,0.9s						
SDV	Santo Domingo	20.72	101	eP	P	21 44 07.2	-1.3
	comp=N,13nm,0.6s						
GOGA	Godfrey	20.74	18	eP	P	21 44 08.7	+0.1
	comp=N,26nm,0.8s						
MIAR	Mount Ida	20.77	354	eP	P	21 44 08.1	-0.8
	comp=N,19nm,0.9s						
UALR	University of	20.91	357	eP	P	21 44 11.0	+0.6
	comp=N,6nm,0.7s						
326A	Caldwell Ranch	21.03	328	P	P	21 44 12.1	+0.3
	baz=21,SNR=103						
425A	Indio Mountain	21.15	325	P	P	21 44 12.7	-0.4
	baz=21,SNR=87						
227A	Bennet, Jal	21.25	331	⇓P	P	21 44 14.1	0.0
	baz=21,SNR=27						
325A	Bean Ranch, Si	21.59	326	P	P	21 44 17.2	-0.6
	baz=22,SNR=35						
226A	Malaga, Loving	21.69	329	P	P	21 44 18.9	0.0
	baz=22,SNR=16						
CLNB	Carlsbad	21.74	330	eP	P	21 44 18.8	-0.6
	comp=N,31nm,0.7s,mb4.8						
127A	Arkansas Junct	21.83	331	P	P	21 44 19.6	-0.8
	baz=22,SNR=8.7						
SWET	Sewanee	21.84	12	eP	P	21 44 19.6	-0.8
	comp=N,26nm,0.8s,mb4.7						
324A	Moseley Ranch,	21.93	326	P	P	21 44 20.6	-0.8
	baz=22,SNR=35						
GDL2	Guadalupe Moun	21.93	329	eP	P	21 44 21.1	-0.3
MNTX	Cornudas Mount	22.07	326	P	P	21 44 21.4	-1.5
	baz=22,SNR=167						
MNTX	Cornudas Mount	22.07	326	eP	P	21 44 21.3	-1.6
	comp=N,45nm,0.8s,mb5.0						
225A	Deer Hill, Car	22.09	328	P	P	21 44 22.9	-0.3
	baz=22,SNR=85						
126A	Clayton Basin,	22.12	330	⇓P	P	21 44 22.3	-1.1
	baz=22,SNR=7.6						
JSC	Jenkinsville	22.28	22	eP	P	21 44 25.0	-0.1
JSC				ePcP	PcP	21 48 14.3	-5.2
JSC				eScP	ScP	21 51 44.4	-8.1
Z27A	Tatum	22.30	333	P	P	21 44 23.8	-1.6
	baz=22,SNR=31						
CPRX	Cap Rock	22.37	331	eP	P	21 44 25.4	-0.6
	comp=N,36nm,0.8s,mb4.8						
CPCT	Cooper Cave	22.37	14	eP	P	21 44 26.0	0.0
WVT	Waverly	22.43	7	eP

319A **Douglas** 24.13 319 ⇓P P 21 44 44.0 +0.6
baz=24,SNR=9.9
Y23A **Lovelace Mesa,** 24.16 329 P P 21 44 43.8 +0.1
baz=24,SNR=67
ATAH **Atahualpa** 24.36 148 P P 21 44 46.7 +1.1
comp=N,12nm,0.8s,mb4.4,baz=348,slow=4.3,SNR=8.4
ATAH LR LR 21 53 03.1
comp=N,1µm,18.5s,MS4.5,baz=136,slow=33
X24A **Lazy VL Ranch,** 24.37 330 ⇓P P 21 44 45.8 +0.3
baz=24,SNR=5.8
219A **White Tail Can** 24.54 321 P P 21 44 47.5 +0.3
baz=25,SNR=31
120A **U Bar Ranch, L** 24.54 322 P P 21 44 49.3 +2.1
baz=25,SNR=26
318A **Bisbee** 24.62 319 P P 21 44 48.5 +0.7
baz=25,SNR=22
BNM **Barren Site** 24.63 328 eP P 21 44 47.7 -0.2
comp=N,27nm,0.8s,mb4.8
Y22A **Socorro** 24.64 327 ⇑P P 21 44 48.6 +0.6
baz=25,SNR=19
WCI **Wyandotte Cave** 24.71 9 eP P 21 44 46.5 -2.0
comp=N,20nm,0.8s,mb4.7
SLM **Saint Louis** 24.75 2 eP P 21 44 49.1 +0.2
comp=N,41nm,0.5s,mb5.2
X23A **Hourglass Bar** 24.75 329 ⇓P P 21 44 49.5 +0.6
baz=25,SNR=7.5
LPM **Los Pinos Moun** 24.76 328 eP P 21 44 49.6 +0.5
comp=N,17nm,0.8s,mb4.6
LENM **Lemitar** 24.82 327 eP P 21 44 49.7 0.0
comp=N,26nm,0.9s,mb4.8
Z20A **Nine Sixteen R** 24.93 323 ⇓P P 21 44 52.6 +2.0
baz=25,SNR=7.5
OLIL **Olney** 24.98 6 eP P 21 44 50.8 -0.2
comp=N,22nm,0.7s,mb4.8
218A **Dragoon** 25.02 319 ⇓P P 21 44 52.2 +0.8
baz=25,SNR=16
V25A **Rancho No Teng** 25.05 334 ⇓P P 21 44 52.7 +1.1
baz=25,SNR=15
Y21A **Point of Rocks** 25.07 326 ⇑P P 21 44 53.1 +1.1
baz=25,SNR=27
LAZ **Ladron** 25.09 328 eP P 21 44 52.1 +0.1
comp=N,9.4nm,0.8s,mb4.4
119A **Ashpeak Ranch,** 25.10 322 ⇑P P 21 44 53.1 +1.0
baz=25,SNR=17
ANMO **Albuquerque** 25.18 329 P P 21 44 52.8 -0.1
comp=N,9.9nm,0.8s,mb4.4,baz=156,slow=13,SNR=25
ANMO **Albuquerque** 25.18 329 eP P 21 44 52.4 -0.4
comp=N,9.0nm,0.7s,mb4.4
W23A **Werner Place,** 25.19 330 ⇓P P 21 44 54.8 +1.8
baz=25,SNR=5.4
V24A **Rampart Ranch,** 25.25 332 ⇓P P 21 44 54.3 +0.8
baz=25,SNR=6.0
217A **Green Valley** 25.38 318 ⇓P P 21 44 55.3 +0.6
baz=26,SNR=10
Y20A **Horse Springs,** 25.39 325 ⇑P P 21 44 55.5 +0.8
baz=26,SNR=48
118A **Homack Ranch,** 25.42 321 ⇓P P 21 44 55.2 +0.1
baz=26,SNR=11
U25A **Circle Dot Ran** 25.44 335 P P 21 44 55.8 +0.6
baz=26,SNR=15
X21A **Alamocita Cree** 25.46 327 ⇑P P 21 44 56.8 +1.3
baz=26,SNR=69
KSU1 **Kansas State U** 25.65 350 P P 21 44 55.9 -1.2
comp=N,8.9nm,0.5s,mb4.5
TUC **Tucson** 25.70 319 eP P 21 44 58.5 +0.9
comp=N,12nm,0.9s,mb4.4
Y19A **Nutrioso** 25.92 324 ⇓P P 21 45 00.0 +0.5
baz=26,SNR=7.5
X20A **Quemado** 25.92 326 ⇓P P 21 45 01.0 +1.4
baz=26,SNR=17
V22A **San Miguel Ran** 26.17 330 ⇑P P 21 45 02.3 +0.5
baz=26,SNR=5.5
Y18A **Canyon Day Jun** 26.24 322 ⇓P P 21 45 04.6 +2.1
baz=26,SNR=15
T24A **Torres, Weston** 26.28 334 P P 21 45 04.2 +1.4
baz=26,SNR=15
W20A **Ramah** 26.36 327 ⇑P P 21 45 04.8 +1.2
baz=26,SNR=13
S25A **Robets Cordova** 26.53 336 P P 21 45 05.6 +0.5
baz=27,SNR=8.3
214A **Organ Pipe Nat** 26.81 316 ⇓P P 21 45 07.4 -0.3
baz=27,SNR=8.2
V20A **Brimhall** 26.86 328 ⇑P P 21 45 08.7 +0.6
baz=27
115A **Sonoran Desert** 26.89 318 ⇓P P 21 45 09.0 +0.6
baz=27,SNR=10
R25A **Fountain Ranch** 26.90 337 P P 21 45 08.9 +0.6
baz=27,SNR=5.5
SDCO **Great Sand Dun** 27.04 334 ⇓P P 21 45 09.9 +0.3
baz=27
SDCO **Great Sand Dun** 27.04 334 eP P 21 45 10.1 +0.4
comp=N,2.6nm,0.8s,mb3.8
X17A **Forest Lakes** 27.09 322 ⇓P P 21 45 11.4 +1.2
baz=27
ACSO **Alum Creek Sta** 27.29 14 eP P 21 45 09.8 -2.1
comp=N,20nm,0.6s,mb4.8
U20A **Newcomb** 27.33 328 ⇓P P 21 45 13.1 +0.8
baz=28
X16A **Lo Mia Camp, P** 27.53 322 ⇓P P 21 45 14.7 +0.6
baz=28,SNR=7.3
S22A **4UR Ranch, Cre** 27.62 333 ⇑P P 21 45 15.2 +0.4
baz=28,SNR=7.6
U19A **Dine' College,** 27.62 327 ⇑P P 21 45 15.2 +0.3
baz=28,SNR=5.8
Y15A **Casa Rosa Ranc** 27.76 320 ⇑P P 21 45 16.6 +0.4
baz=28,SNR=10
MVCO **Mesa Verde** 27.97 330 eP P 21 45 18.3 +0.3
comp=N,15nm,0.8s,mb4.7
Z13A **Yuma Proving G** 28.14 317 ⇓P P 21 45 19.7 +0.2
baz=28,SNR=5.7
Y14A **Wickenburg** 28.18 319 ⇑P P 21 45 21.0 +1.2
baz=28
WUAZ **Wupatki** 28.25 323 ⇑P P 21 45 23.4 +2.9
baz=28,SNR=8.0
WUAZ **Wupatki** 28.25 323 eP P 21 45 22.0 +1.5
comp=N,11nm,0.8s,mb4.5
S20A **Disappointment** 28.39 331 ⇑P P 21 45 24.1 +2.3
baz=29,SNR=6.0
U16A **Tuba City** 28.55 325 ⇑P P 21 45 24.3 +1.1
baz=29,SNR=8.1
P23A **Jefferson** 28.57 336 ⇑P P 21 45 24.2 +0.9
baz=29
T18A **Mexican Hat** 28.61 328 ⇓P P 21 45 24.3 +0.6
baz=29,SNR=5.0
S19A **Harvey Farm, M** 28.70 329 ⇑P P 21 45 25.1 +0.6
baz=29,SNR=10
PV01 **Paradox Valley** 28.74 331 eP P 21 45 24.7 -0.1
GLA **Glamis** 28.83 316 eP P 21 45 27.8 +2.1
comp=N,1.5nm,1.0s,mb3.7
ISCO **Idaho Springs** 28.84 337 eP P 21 45 26.3 +0.6
comp=N,2.4nm,0.6s,mb4.1
ISCO ePcP PcP 21 48 36.5 +2.2
V15A **Kaibab Nationa** 28.93 323 ⇑P P 21 45 27.8 +1.3
baz=29,SNR=12
T17A **Navajo Res., N** 29.00 326 ⇓P P 21 45 27.9 +0.8
baz=29,SNR=10
W14A **Seligman** 29.06 321 ⇑P P 21 45 28.7 +1.0
baz=29,SNR=6.7
S18A **Hurst Farm, Bl** 29.09 328 ⇓P P 21 45 28.3 +0.3
baz=29,SNR=12
PV04 **Paradox Valley** 29.10 331 eP P 21 45 28.4 +0.4
X13A **Yucca** 29.12 319 ⇓P P 21 45 28.8 +0.6
baz=29
SSPA **Standing Stone** 29.15 21 eP P 21 45 27.4 -1.1
comp=N,4.8nm,0.6s,mb4.4
PV10 **Paradox Valley** 29.15 330 eP P 21 45 24.8 -3.7
NNA **Nana** 29.30 150 LR LR 21 54 60.0
comp=N,641nm,21.4s,MS4.2,baz=334,slow=32
V14A **Boquillas Ranc** 29.35 322 ⇑P P 21 45 29.9 -0.4
baz=30,SNR=9.9
U15A **North Rim** 29.42 324 ⇑P P 21 45 31.6 +0.8
baz=30,SNR=6.7
O22A **Kremmling** 29.52 336 ⇑P P 21 45 32.4 +0.6
baz=30
R18A **Canyonlands Na** 29.58 329 P P 21 45 32.4 +0.1
baz=30,SNR=9.1
BC3 **Big Chuckawall** 29.61 316 ⇓P P 21 45 32.6 0.0
baz=30,SNR=7.4
T15A **Red Dirt Ranch** 29.89 324 ⇑P P 21 45 36.0 +1.1
baz=30,SNR=8.1
S16A **Weppner Ranch,** 29.96 326 ⇓P P 21 45 36.7 +1.0
baz=30,SNR=10
R17A **Hanksville Air** 30.01 328 ⇑P P 21 45 37.3 +1.1
baz=30,SNR=6.5
V13A **Grand Canyon W** 30.03 321 ⇑P P 21 45 36.8 +0.5
baz=30,SNR=6.9
ECSD **EROS Data Cent** 30.19 352 eP P 21 45 37.9 +0.3
comp=N,1.3nm,1.9s

R16A **Teasdale** 30.31 327 ⇓P P 21 45 40.0 +1.2
baz=30,SNR=21
T14A **Hurricane** 30.32 324 ⇑P P 21 45 40.2 +1.4
baz=30,SNR=8.7
U13A **Pakoon Wash** 30.39 322 ⇑P P 21 45 40.4 +0.9
baz=31,SNR=12
GMRC **Granite Mounta** 30.42 318 ⇓P P 21 45 40.9 +1.1
baz=31,SNR=7.2
V12A **Nelson** 30.49 320 P P 21 45 41.1 +0.8
baz=31,SNR=10
Q16A **Castle Valley** 30.63 328 ⇑P P 21 45 42.4 +0.8
baz=31,SNR=6.0
R15A **Junction** 30.68 326 ⇑P P 21 45 43.7 +1.7
baz=31,SNR=5.9
T13A **Saint George** 30.77 323 ⇑P P 21 45 44.0 +1.2
baz=31,SNR=7.7
N20A **Spence Gulch,** 30.79 334 P P 21 45 43.5 +0.5
baz=31,SNR=17
CCUT **Cedar City** 30.82 324 eP P 21 45 45.5 +2.3
comp=N,10.0nm,0.9s,mb4.7
P17A **Butcher Ranch,** 30.84 330 P P 21 45 44.3 +1.0
baz=31,SNR=7.1
MSU **Marysvale** 30.85 327 eP P 21 45 44.0 +0.5
comp=N,10nm,0.7s,mb4.8
ARUT **Antelope Range** 31.02 324 eP P 21 45 46.1 +1.0
comp=N,23nm,0.8s,mb5.1
S13A **Holt Ranch, En** 31.12 324 ⇓P P 21 45 47.1 +1.2
baz=31,SNR=18
SHPR **Sheep Range** 31.18 321 eP P 21 45 47.1 +0.7
O17A **Robinson Place** 31.39 331 ⇓P P 21 45 49.3 +1.0
baz=32,SNR=6.6
R13A **O'Grain Ranch,** 31.60 324 P P 21 45 52.2 +2.1
baz=32,SNR=16
MPU **Maple Canyon** 31.69 329 eP P 21 45 51.1 +0.2
comp=N,12nm,0.7s,mb4.8
Q14A **Sevier Lake (B** 31.79 326 ⇑P P 21 45 53.2 +1.5
baz=32,SNR=14
DAU **Daniels Canyon** 31.81 330 eP P 21 45 51.9 0.0
comp=N,7.3nm,0.7s,mb4.6
U10A **Ash Meadows, A** 31.85 319 ⇓P P 21 45 53.5 +1.2
baz=32,SNR=5.7
R12A **Pony Springs,** 32.06 324 ⇑P P 21 45 55.8 +1.7
baz=32,SNR=15
P14A **Drum Mountains** 32.11 327 ⇑P P 21 45 55.4 +0.8
baz=32,SNR=17
RSSD **Black Hills** 32.16 342 P P 21 45 54.2 -0.7
COWI **Conover** 32.24 3 eP P 21 45 52.9 -2.7
comp=N,9.4nm,0.6s,mb4.8
M17A **Scullys Gap (B** 32.37 332 ⇓P P 21 45 56.1 -0.7
baz=32,SNR=14
MPMC **Manual Prospec** 32.38 318 ⇑P P 21 45 56.8 -0.2
baz=32,SNR=9.6
DUG **Dugway** 32.42 328 eP P 21 45 57.6 +0.3
comp=N,1.3nm,1.0s,mb3.7
P13A **Bates Ranch, G** 32.52 326 P P 21 45 59.6 +1.5
baz=33,SNR=48
R11A **Troy Canyon, C** 32.64 323 P P 21 46 00.6 +1.3
baz=33,SNR=5.8
N15A **Stansbury Isla** 32.80 329 P P 21 46 01.1 +0.5
baz=33,SNR=15
ISA **Isabella** 32.80 316 eP P 21 46 03.3 +2.6
HWUT **Hardware Ranch** 32.89 331 eP P 21 46 01.5 +0.1
comp=N,13nm,0.8s,mb4.9
HWUT ePcP PcP 21 48 45.3 +0.4
BW06 **Boulder Array** 32.94 335 eP P 21 46 03.0 +1.2
comp=N,28nm,2.6s,mb4.7
PDAR **Pinedale Array** 32.94 335 P P 21 46 01.3 -0.4
comp=N,1.2nm,0.6s,mb4.0,baz=129,slow=8.8,SNR=11
PDAR PcP PcP 21 48 44.0 -1.1
comp=N,1.1nm,0.6s,baz=144,slow=4.1,SNR=7.4
PDAR LR LR 22 01 49.3
comp=N,446nm,20.4s,MS4.2,baz=151,slow=40
L17A **Cokeville** 32.96 333 P P 21 46 01.6 -0.4
baz=33,SNR=12
S10A **Tonopah Range,** 32.97 321 ⇑P P 21 46 03.4 +1.3
baz=33,SNR=11
Q11A **Duckwater** 33.02 324 ⇓P P 21 46 03.5 +1.0
baz=33,SNR=21
R10A **Warm Springs** 33.03 322 ⇓P P 21 46 04.3 +1.7
baz=33,SNR=5.5
BGU **Big Grassy Mou** 33.08 329 eP P 21 46 03.1 +0.1
comp=N,11nm,0.8s,mb4.8
BGU ePcP PcP 21 48 45.2 -0.2
SPUT **South Promonto** 33.08 330 eP P 21 46 03.4 +0.3
comp=N,7.5nm,0.8s,mb4.7
L16A **Fish Haven** 33.15 332 P P 21 46 03.5 -0.1
baz=33,SNR=6.3
M15A **Larsen Ranch,** 33.20 330 P P 21 46 04.5 +0.5
baz=33,SNR=14
I20A **Worland** 33.37 337 P P 21 46 05.4 -0.1
baz=34,SNR=9.2
NCB **Newcomb** 33.38 22 eP P 21 46 04.4 -1.3
comp=N,6.9nm,0.7s,mb4.7
Q10A **Clear Creek Ra** 33.44 323 ⇓P P 21 46 07.7 +1.5
baz=34
L15A **Malad City** 33.58 331 ⇓P P 21 46 06.4 -1.0
baz=34,SNR=9.1
HVU **Hansel Valley** 33.60 330 eP P 21 46 06.9 -0.6
comp=N,6.4nm,0.6s,mb4.7
I19A **Meeteetse** 33.77 337 ⇑P P 21 46 09.2 +0.2
baz=34,SNR=6.2
REDW **Red Top Meadow** 33.97 334 eP P 21 46 10.6 -0.2
comp=N,18nm,0.9s,mb5.0
REDW ePcP PcP 21 48 52.3 +4.4
P10A **Eureka** 34.00 324 ⇓P P 21 46 13.0 +1.9
baz=34,SNR=6.0
SNOW **Snow King Moun** 34.01 334 eP P 21 46 11.2 +0.2
comp=N,16nm,0.5s,mb5.2
L14A **Malta** 34.02 330 P P 21 46 11.6 +0.4
baz=34,SNR=25
EYMN **Ely** 34.04 360 eP P 21 46 08.8 -2.5
comp=N,7.1nm,0.6s,mb4.8
LOHW **Long Hollow** 34.07 334 eP P 21 46 11.0 -0.6
comp=N,5.2nm,0.6s,mb4.6
TPAW **Teton Pass** 34.11 334 eP P 21 46 11.5 -0.4
comp=N,12nm,0.9s,mb4.8
RRI2 **Red Ridge** 34.16 333 eP P 21 46 13.2 +0.9
comp=N,7.8nm,0.9s,mb4.6
K15A **Arbon** 34.18 331 P P 21 46 12.8 +0.2
baz=34,SNR=9.8
MOOW **Moose Ponds** 34.24 334 eP P 21 46 12.3 -0.8
comp=N,2.6nm,0.7s,mb4.3
NVAR **Mina Array Bea** 34.33 321 P P 21 46 14.8 +0.9
comp=N,14nm,0.7s,mb5.0,baz=135,slow=8.2,SNR=76
NVAR PcP PcP 21 48 47.8 -1.3
comp=N,3.1nm,0.8s,baz=128,slow=3.6,SNR=6.1
FRNY **Flat Rock** 34.36 22 eP P 21 46 11.8 -2.3
comp=N,3.8nm,0.6s,mb4.5
K14A **Jones Ranch, D** 34.37 331 ⇓P P 21 46 14.3 +0.1
baz=34,SNR=11
IMW **Indian Meadow** 34.44 334 eP P 21 46 13.4 -1.4
comp=N,4.3nm,0.7s,mb4.5
IMW ePcP PcP 21 48 50.2 +1.0
H18A **Shoshone NF, C** 34.57 336 P P 21 46 15.2 -0.7
baz=35,SNR=15
AGMN **Agassiz Nation** 34.61 354 eP P 21 46 14.8 -1.4
comp=N,5.9nm,0.6s,mb4.7
J15A **Blackfoot** 34.69 332 P P 21 46 17.2 +0.3
baz=35,SNR=6.1
BMN **Battle Mountai** 34.98 324 eP P 21 46 20.7 +1.2
comp=N,13nm,0.7s,mb5.0
G18A **Lazy EL Ranch,** 35.07 337 P P 21 46 19.5 -0.7
baz=35,SNR=6.8
WAKR **Walker** 35.08 320 eP P 21 46 22.5 +2.1
comp=N,3.9nm,0.6s,mb4.5
J14A **Carey** 35.13 331 P P 21 46 21.2 +0.5
baz=35,SNR=16
CMB **Columbia Colle** 35.41 318 eP P 21 46 23.2 0.0
comp=N,3.0nm,0.7s,mb4.3
I14A **Mackay** 35.57 332 P P 21 46 25.5 +1.0
baz=36,SNR=11
F18A **Big Timber** 35.62 338 P P 21 46 24.4 -0.6
baz=36,SNR=7.2
HLID **Hailey** 35.74 331 ⇓P P 21 46 26.9 +0.9
baz=36,SNR=13
HLID **Hailey** 35.74 331 eP P 21 46 25.7 -0.3
comp=N,8.5nm,0.8s,mb4.7
HLID ePcP PcP 21 48 53.7 +0.7
H15A **Lima** 35.75 333 ⇑P P 21 46 27.2 +1.1
baz=36,SNR=11
I13A **Wildhorse Cree** 35.86 331 ⇓P P 21 46 28.1 +1.0
baz=36,SNR=23
MCMT **McKenzie Canyo** 36.00 333 eP P 21 46 28.9 +0.6
comp=N,12nm,0.8s,mb4.9
H14A **Leadore** 36.06 333 ⇑P P 21 46 29.4 +0.6
baz=36,SNR=13
G15A **Dillon** 36.12 334 P P 21 46 29.9 +0.7
baz=36,SNR=8.4

BOZ **Bozeman (W)** 36.15 335 eP P 21 46 29.2 -0.3
comp=N,1.4nm,0.7s,mb4.0
DGMT **Dagmar** 36.21 345 ⇑P P 21 46 29.4 -0.5
baz=36
DGMT **Dagmar** 36.21 345 eP P 21 46 28.6 -1.4
comp=N,10nm,0.6s,mb4.9
I12A **Atlanta** 36.26 330 P P 21 46 31.0 +0.6
baz=36,SNR=47
MFID **Camas Ranch** 36.32 329 ⇓P P 21 46 31.9 +0.9
baz=36,SNR=7.0
DLMT **Dillon** 36.32 334 eP P 21 46 30.7 -0.2
comp=N,12nm,1.0s,mb4.8
D19A **Cripps Ranch,** 36.41 340 ⇑P P 21 46 30.6 -1.1
baz=37,SNR=5.3
H13A **Challis** 36.42 332 P P 21 46 32.4 +0.5
baz=37,SNR=32
LRM **Limekiln Ridge** 36.63 335 eP P 21 46 33.0 -0.5
comp=N,53nm,0.8s,mb5.4
F15A **Butte** 36.66 335 ⇑P P 21 46 33.5 -0.3
baz=37,SNR=10.0
H12A **Diamond D Ranc** 36.69 331 P P 21 46 34.6 +0.5
baz=37,SNR=33
G13A **Cobalt** 36.82 332 ⇓P P 21 46 34.5 -0.8
baz=37,SNR=11
D17A **Six Diamond Ra** 37.04 338 ⇑P P 21 46 36.0 -1.0
baz=37
WVOR **Wild Horse Val** 37.10 326 eP P 21 46 37.6 -0.1
comp=N,18nm,0.9s,mb4.9
E15A **Deer Lodge** 37.19 335 P P 21 46 38.1 -0.2
baz=37,SNR=7.3
D16A **Dana Ranch, Ca** 37.26 337 ⇓P P 21 46 38.2 -0.7
baz=37
G12A **Big Creek, Yel** 37.35 331 ⇑P P 21 46 39.4 -0.3
baz=38
C17A **Wharram Farm,** 37.47 338 ⇑P P 21 46 40.3 -0.4
baz=38,SNR=7.1
LPAZ **La Paz** 37.58 142 P P 21 46 41.2 -0.8
comp=N,2.4nm,0.7s,mb4.0,baz=331,slow=7.0,SNR=11
LPAZ LR LR 22 01 58.3
comp=N,557nm,20.4s,MS4.3,baz=326,slow=36
LPAZ **La Paz** 37.58 142 eP P 21 46 40.2 -1.7
comp=N,3.5nm,0.8s,mb4.1
J08A **Circle Bar Ran** 37.64 327 P P 21 46 43.0 +0.8
baz=38,SNR=23
D15A **Lincoln** 37.65 336 ⇓P P 21 46 42.4 +0.2
baz=38,SNR=7.5
MOD **Modoc** 37.70 324 eP P 21 46 41.7 -1.0
comp=N,3.1nm,0.6s,mb4.2
MOD ePcP PcP 21 48 58.5 -0.5
F12A **Elk City** 37.79 332 P P 21 46 43.4 -0.1
baz=38,SNR=47
E13A **Victor** 37.85 334 P P 21 46 43.6 -0.4
baz=38,SNR=11
C16A **Fuhringer Ranc** 37.97 337 ⇑P P 21 46 45.2 +0.3
baz=38,SNR=11
MSO **Missoula** 38.05 334 P P 21 46 45.8 +0.1
comp=N,3.9nm,0.7s,mb4.2
D14A **Greenough** 38.08 335 P P 21 46 45.5 -0.3
baz=38,SNR=8.2
C15A **Salmond Ranch,** 38.28 337 ⇑P P 21 46 48.1 +0.6
baz=38,SNR=5.9
E12A **Beaver Dam Sad** 38.44 333 ⇑P P 21 46 47.9 -0.9
baz=39
B16A **M & M Farms, S** 38.47 338 ⇓P P 21 46 49.2 +0.1
baz=39
D13A **Huson** 38.48 334 P P 21 46 48.7 -0.5
baz=39,SNR=17
A17A **Triple J Farms** 38.56 339 ⇓P P 21 46 49.0 -0.8
baz=39,SNR=6.5
SWMT **Swartz Lake** 38.62 335 eP P 21 46 49.6 -0.7
comp=N,3.7nm,0.8s,mb4.2
I07A **Izee** 38.68 327 ⇓P P 21 46 50.9 0.0
baz=39,SNR=17
D12A **Red Ives Fores** 38.83 333 ⇑P P 21 46 50.9 -1.2
baz=39
F10A **Beach Ranch, E** 38.87 331 P P 21 46 51.9 -0.6
baz=39,SNR=35
YBMT **Yellow Bay** 38.91 335 eP P 21 46 52.5 -0.3
comp=N,3.9nm,0.8s,mb4.2
JTMT **Jette** 38.92 335 eP P 21 46 51.9 -1.0
comp=N,2.8nm,0.6s,mb4.2
C13A **Hot Springs** 38.99 335 ⇑P P 21 46 52.6 -0.8
baz=39,SNR=5.9
YBH **Yreka Blue Hor** 39.02 322 P P 21 46 52.9 -0.8
comp=N,3.6nm,0.6s,mb4.3,baz=61,slow=12,SNR=8.0
KHMM **Horse Mountain** 39.15 320 eP P 21 46 54.7 -0.3
comp=N,10nm,0.8s,mb4.6
BSMT **Bassoo Peak** 39.21 335 eP P 21 46 54.3 -1.0
comp=N,3.2nm,0.8s,mb4.1
G08A **Pilot Rock** 39.23 329 ⇓P P 21 46 55.6 +0.1
baz=39
LNOR **Lincton Mounta** 39.30 330 eP P 21 46 55.5 -0.6
comp=N,5.8nm,0.7s,mb4.4
A15A **Johnson Ranch,** 39.32 338 ⇓P P 21 46 55.8 -0.4
baz=40,SNR=6.8
B13A **Whitefish** 39.50 336 P P 21 46 57.5 -0.2
baz=40,SNR=5.2
VIPM **Ingram Point** 39.56 326 P P 21 46 58.5 +0.2
A14A **Double T Ranch** 39.57 337 P P 21 46 58.1 -0.1
baz=40,SNR=11
E09A **Wood Farm, Sta** 39.70 331 ⇑P P 21 46 59.6 +0.2
baz=40,SNR=6.8
C11A **Tepee Creek (N** 39.83 334 ⇑P P 21 46 60.0 -0.5
baz=40
HAWA **Hanford** 40.29 329 eP P 21 47 03.6 -0.6
comp=N,5.3nm,0.7s,mb4.4
BROR **Big Rock Looko** 40.41 325 P P 21 47 05.1 -0.3
D08A **Wollman Farm,** 40.46 331 ⇓P P 21 47 06.3 +0.6
baz=41,SNR=5.8
H04A **Detroit Lake** 40.53 326 ⇑P P 21 47 05.9 -0.4
baz=41,SNR=14
NEW **Newport** 40.53 333 eP P 21 47 04.9 -1.3
comp=N,4.5nm,0.6s,mb4.3
VFP **Flag Point** 40.55 327 P P 21 47 07.3 +0.9
OD2 **Odessa Site #2** 40.60 331 eP P 21 47 05.8 -1.0
comp=N,23nm,0.8s,mb4.8
C09A **Chrisman Ranch** 40.70 332 P P 21 47 07.9 +0.2
baz=41,SNR=10.0
ETW **Entiat** 41.52 330 eP P 21 47 14.3 -0.1
comp=N,10nm,0.8s,mb4.5
LON **Longmire** 41.68 328 eP P 21 47 15.5 -0.2
comp=N,15nm,0.8s,mb4.7
WRW **Wenatchee Ridg** 41.97 330 P P 21 47 18.9 +0.8
SIV **San Ignacio** 41.97 134 P P 21 47 16.6 -1.9
comp=N,6.0nm,0.7s,mb4.3,baz=310,slow=8.9,SNR=37
RPW **Rockport** 42.68 330 eP P 21 47 22.4 -1.4
JCW **Jim Creek** 42.71 330 eP P 21 47 23.1 -1.0
comp=N,32nm,1.0s,mb5.0
GNW **Green Mountain** 42.73 328 eP P 21 47 25.1 +0.8
comp=N,0.6nm,0.8s,mb3.4
EDM **Edmonton** 43.08 341 eP P 21 47 25.6 -1.4
NLWA **Neilton Lookou** 43.16 328 eP P 21 47 27.0 -0.8
comp=N,21nm,1.0s,mb4.8
PGC **Sidney** 43.77 329 eP P 21 47 32.3 -0.3
comp=N,1.3nm,1.0s,mb3.6
RPN **Rapa Nui** 44.34 203 LR LR 22 01 08.3
comp=N,834nm,20.1s,MS4.7,baz=31,slow=29
SCHQ **Schefferville** 45.13 20 P P 21 47 40.9 -2.5
comp=N,16nm,0.9s,mb4.8,baz=209,slow=4.9,SNR=9.4
SCHQ LR LR 22 07 37.4
comp=N,1µm,18.5s,MS4.8,baz=102,slow=38
CFAA **Coronel Fontan** 50.23 154 LR LR 22 05 21.2
comp=N,42nm,22.0s,MS3.4,baz=331,slow=31
YKA **Yellowknife Ar** 51.40 346 P P 21 48 29.4 -2.1
comp=N,6.4nm,0.6s,mb4.8,baz=149,slow=7.6,SNR=64
YKA PcP PcP 21 49 44.1 -1.4
comp=N,1.3nm,0.6s,baz=152,slow=3.8,SNR=7.5
YKA LR LR 22 14 52.5
comp=N,26nm,19.0s,MS3.3,baz=205,slow=41
YKA **Yellowknife Ar** 51.40 346 P P 21 48 29.4 -2.1
YKA PcP PcP 21 49 44.1 -1.4
YKA LR LR 22 14 52.5
DLBC **Dease Lake** 53.16 336 eP P 21 48 45.3 +0.7
TAOE **Nuku Hiva Isla** 53.56 248 eS S 21 56 25.0 +7.0
comp=N,476nm,25.8s
TAOE eLR LR 22 03 54.7
comp=N,628nm,25.6s
RKT **Rikitea** 56.43 230 eLR LR 22 05 56.8
comp=N,717nm,27.0s
PLCA **Paso Flores** 57.53 162 LR LR 22 09 08.1
comp=N,509nm,20.1s,MS4.6,baz=150,slow=31
PLCA **Paso Flores** 57.53 162 P P 21 49 14.1 -2.2
comp=N,3.9nm,1.1s,mb4.3
RCBR **Riachuelo** 58.22 106 eP P 21 49 20.1 -1.5
comp=N,29nm,1.1s,mb5.2
INK **Inuvik** 60.85 343 LR LR 22 19 52.8
comp=N,223nm,20.5s,MS4.3,baz=295,slow=40
INK **Inuvik** 60.85 343 eP P 21 49 36.6 -2.3

comp=N,5.7nm,0.6s,mb4.9
RES Resolute Bay 60.91 359 *eP* **P 21 49 37.2 -2.0**
EGAK Eagle 61.19 338 *eP* **P 21 49 39.1 -2.2**
comp=N,4.6nm,0.7s,mb4.7
DOT Dot Lake 61.72 336 *eP* **P 21 49 44.4 -0.5**
comp=N,30nm,1.4s,mb5.2
PAX Paxson 61.97 335 *eP* **P 21 49 45.1 -1.5**
comp=N,6.3nm,0.6s,mb4.9
SML Sawmill 62.69 333 *eP* **P 21 49 50.5 -0.9**
comp=N,2.8nm,0.7s,mb4.5
PMR Palmer 62.95 333 *eP* **P 21 49 51.6 -1.5**
comp=N,12nm,0.6s,mb5.2
RC01 Rabbit Creek A 63.04 332 *eP* **P 21 49 52.2 -1.5**
comp=N,26nm,0.9s,mb5.4
SLKM Skilak Lake 63.05 332 *eP* **P 21 49 52.9 -0.8**
KDAK Kodiak Island 63.30 328 P **P 21 49 54.8 -0.8**
comp=N,7.6nm,0.6s,mb5.0,baz=117,slow=5.2,SNR=7.2
ILAR Eielson Array 63.34 337 P **P 21 49 54.2 -1.4**
comp=N,5.2nm,0.8s,mb4.7,baz=173,slow=5.2,SNR=42
ILAR PcP PcP 21 50 31.4 -0.9
comp=N,2.0nm,0.9s,baz=151,slow=1.4,SNR=4.1
ILAR LR LR 22 19 48.5
comp=N,512nm,20.3s,MS4.7,baz=317,slow=38
MCK McKinley 63.71 335 *eP* **P 21 49 56.0 -2.1**
comp=N,14nm,1.0s,mb4.9
TRF Thorofare Moun 64.16 335 *eP* **P 21 49 59.9 -1.2**
comp=N,20nm,0.8s,mb5.2
RSO Redoubt South 64.21 331 *eP* **P 21 50 00.4 -1.1**
comp=N,88nm,0.7s,mb5.9
BPAW Bear Paw Mtn. 64.69 335 *eP* **P 21 50 03.0 -1.5**
comp=N,14nm,0.8s,mb5.0
PPLA Purkeypile 64.76 334 *eP* **P 21 50 03.3 -1.7**
comp=N,6.6nm,0.5s,mb4.9
PPT Papeete 65.52 243 *eS* S 21 59 00.0 +8.1
comp=N,187nm,24.0s
PPT *e*LR LR 22 09 42.4
comp=N,699nm,24.0s,baz=59
PPT Papeete 65.52 243 LR LR 22 13 12.7
comp=N,554nm,18.4s,MS4.8,baz=155,slow=31
COLD Coldfoot 65.61 338 *eP* **P 21 50 10.3 -0.1**
comp=N,4.2nm,0.8s,mb4.5
CHGN Chignik 66.03 326 *eP* **P 21 50 12.5 -0.8**
TTA Tatalina 66.44 333 *eP* **P 21 50 13.6 -2.2**
comp=N,15nm,0.8s,mb5.1
SDPT Sand Point 67.00 325 *eP* **P 21 50 17.1 -2.4**
ESDC Sonseca Array 79.21 52 P **P 21 51 28.6 -3.3**
comp=N,0.8nm,0.6s,mb3.8,baz=296,slow=5.1,SNR=4.5
ESLA Sonseca Array 79.21 52 *eP* **P 21 51 31.1 -0.9**
comp=N,3.1nm,1.3s,mb4.1
NOA NORSAR Array B 83.93 29 P **P 21 51 53.4 -3.1**
comp=N,1.3nm,0.8s,mb4.1,baz=290,slow=5.1,SNR=4.0
NOA LR LR 22 29 35.1
comp=N,109nm,19.1s,MS4.2,baz=305,slow=36
DBIC Dimbokro 84.87 84 LR LR 22 24 43.1
comp=N,331nm,18.8s,MS4.8,baz=326,slow=32
DBIC Dimbokro 84.87 84 *eP* **P 21 51 59.0 -3.1**
comp=N,8.0nm,1.1s,mb4.8
ARCES ARCESS Array B 86.07 18 P **P 21 52 04.6 -2.4**
comp=N,1.6nm,0.7s,mb4.4,baz=286,slow=3.3,SNR=9.3
ARCES LR LR 22 31 12.3
comp=N,275nm,18.6s,MS4.7,baz=123,slow=36
TORD Torodi Ar. Bea 89.64 77 LR LR 22 30 15.5
comp=N,227nm,18.2s,MS4.6,baz=265,slow=34
FINES FINESS Array B 90.33 25 LR LR 22 33 48.5
comp=N,201nm,19.2s,MS4.6,baz=310,slow=36
PETK Petropavlovsk- 91.26 326 LR LR 22 36 34.6
comp=N,73nm,21.4s,MS4.1,baz=254,slow=38
ZALV Zalesovo Beam 112.43 3 PKiKP PKiKP 21 57 59.8 -2.6
comp=N,0.8nm,0.5s,baz=354,slow=3.3,SNR=4.7
SONM Songino Array 116.67 347 PKP PKPdf 21 58 09.6 -1.1
comp=N,0.6nm,0.7s,baz=14,slow=0.8,SNR=3.7
KSRS Korea Array 117.16 326 PKP PKPdf 21 58 11.6 -0.3
comp=N,0.5nm,0.5s,baz=36,slow=2.4,SNR=3.4
MKAR Makanchi Array 119.40 5 PKP PKPdf 21 58 14.0 -1.9
comp=N,0.3nm,0.2s,baz=349,slow=2.9,SNR=5.9
BOSA Boshof 119.55 115 PKP PKPdf 21 58 16.0 -0.7
comp=N,1.8nm,0.7s,baz=57,slow=14,SNR=3.8
BOSA Boshof 119.55 115 PKP PKPdf 21 58 16.0 -0.7
BJI Beijing 120.70 336 PKP PKPdf 21 58 17.0 -1.7
BJI SKS SKSac 22 05 16.6 +4.4
BJI SS SS 22 16 09.8 -1.7
BJI LR LR
comp=N,180nm,28.0s,MS4.6
BJI LR LR
comp=E,91nm,25.9s,MS4.6
BJI LR LR
comp=Z,140nm,25.8s,MS4.5
HHC Hu-ho-hao-te 121.68 340 *e*PKP PKPdf 21 58 16.3 -4.3
HHC sPKP 21 58 53.7
HHC PP PP 21 59 52.9 +0.4
HHC PKS 22 01 51.7
HHC SKS SKSac 22 05 17.2 +1.7
HHC SS SS 22 16 18.9 -5.0
HHC AMB AMB
comp=Z,140nm,6.5s
HHC LR LR
comp=N,180nm,20.4s,MS4.8
HHC LR LR
comp=E,140nm,19.0s,MS4.8
HHC LR LR
comp=Z,220nm,18.0s,MS4.8
WMQ Urumqi 122.65 1 *e*PKP PKPdf 21 58 18.0 -4.3
GTA Gaotai 126.08 349 PKP PKPdf 21 58 29.3 +0.2
NJ2 Nanjing 126.09 328 *e*PKP PKPdf 21 58 26.3 -3.0
LZH Lanzhou 128.39 344 *e*PKP PKPdf 21 58 29.6 -4.0
LZH sPKP 21 59 05.1
LZH LR LR
comp=E,150nm,18.0s
LZH LR LR
comp=Z,220nm,20.2s,MS4.8
STKA Stephens Creek 128.66 240 PKP PKPdf 21 58 32.5 -1.6
comp=Z,1.2nm,0.7s,baz=115,slow=17,SNR=5.1
CD2 Chengdu 133.28 342 *e*PKP PKPdf 21 58 37.9 -5.1
WRA Warramunga Arr 136.12 256 PKP PKPdf 21 58 47.0 -1.5
comp=Z,1.9nm,0.7s,baz=86,slow=1.9,SNR=17
ASAR Alice Springs 136.36 250 PKP PKPdf 21 58 47.7 -1.1
comp=Z,1.3nm,0.8s,baz=101,slow=2.3,SNR=13
GYA Guiyang 136.38 337 *e*Pdif Pdif 21 55 50.8 -2.6
GYA PKP PKPdf 21 58 45.9 -3.0
GYA sPKP 21 59 20.0
GYA PP PP 22 01 30.4 +1.7
GYA AMB AMB
comp=Z,90nm,7.8s
LSA Lhasa 136.69 357 *e*PKPdf PKPdf 21 58 48.8 -0.6
KMI Kunming 139.00 341 PKP PKPdf 21 58 51.5 -2.3
KMI sPKP 21 59 24.1
KMI PP PP 22 01 47.4 +2.5
KMI SKS SKSdf 22 05 51.4 -8.6
KMI SS SS 22 19 54.2 -2.2
KMI AMB AMB
comp=Z,65nm,5.3s
KMI LR LR
comp=N,150nm,22.4s,MS4.8
KMI LR LR
comp=E,93nm,18.5s,MS4.8
KMI LR LR
comp=Z,160nm,19.5s,MS4.8
QIZ Qiongzhong 141.36 327 PKP PKPdf 21 58 53.5 -4.7
QIZ SS SS 22 20 26.1 +1.2
QIZ LR LR
comp=N,150nm,16.4s
QIZ LR LR
comp=Z,120nm,22.4s
CHG Chiang Mai 146.09 343 ⇑P PKPdf 21 59 05.4 -1.0
comp=Z,18nm,0.9s
CHTO Chiang Mai 146.09 343 *e*PKPdf PKPdf 21 59 05.5 -1.0
CM31 Chiang Mai Arr 146.43 342 *e*PKP PKPdf 21 59 06.5 -0.5
CMAR Chiang Mai Arr 146.43 342 PKPbc PKPbc 21 59 07.0 -1.4
comp=Z,17nm,0.7s,baz=348,slow=3.4,SNR=82
HYB Hyderabad 147.36 18 *i* PKP PKPdf 21 59 10.0 +1.4
BDT Bhumibol Dam 147.56 342 P PKPdf 21 59 11.0 +2.1
NST Nakhon Sawan 148.65 339 P PKPbc 21 59 14.5 0.0

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*TRN **04** 21:46:18.9, 11°.51N×62°.00W, h142km, MD3.6*
*NEIC **04** 21:46:18.9, 11°.51N×62°.00W, h142km, MD3.6(TRN), After TRN.*
*FUNV **04** 21:46:19.9, 11°.52N×61°.97W, h127km, MW3.6*

ISC 04 21:46:18.6±0.7, 11°.51N±0°.03×62°.06W±0°.03, h134km±6km, n34, σ0°87/65, 8C-2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRGR	**Grenville**	**0.74**	**33**	*e*P	**Pn**	**21 46 39.9**	**+0.2**
GRGR				*e*S	**Sn**	**21 46 55.6**	**-0.2**
GRW	**Mount Saint Ca**	**0.76**	**31**	*e*P	**Pn**	**21 46 41.5**	**+1.6**
GRW				*e*S	**Sn**	**21 46 56.9**	**+0.9**
GRW	**Mount Saint Ca**	**0.76**	**31**	*e*P	**Pn**	**21 46 41.5**	**+1.6**
GRW				*e*S	**Sn**	**21 46 56.9**	**+0.9**
TCE	**Chacachacare**	**0.86**	**159**	*e*P	**Pn**	**21 46 41.9**	**+1.1**
TCE				*e*S	**Sn**	**21 46 57.7**	**+0.2**
TCE	**Chacachacare**	**0.86**	**159**	*e*P	**Pn**	**21 46 41.9**	**+1.1**
TCE				*e*S	**Sn**	**21 46 57.7**	**+0.2**
GUIV	**Guiria**	**0.87**	**191**	⇑*i*P	**Pn**	**21 46 41.0**	**+0.2**
GUIV				*e*S	**Sn**	**21 46 56.8**	**-0.8**
ITEV	**Isla Los Testi**	**1.06**	**262**	*e*P	**Pn**	**21 46 42.9**	**+0.4**
ITEV				*e*S	**Sn**	**21 47 01.0**	**+0.4**
TRN	**Trinidad (W)**	**1.07**	**143**⇑	*e*P	**Pn**	**21 46 43.8**	**+1.2**
TRN				*e*S	**Sn**	**21 47 00.2**	**-0.6**
TRN	**Trinidad (W)**	**1.07**	**143**⇑	*e*P	**Pn**	**21 46 43.8**	**+1.2**
TRN				*e*S	**Sn**	**21 47 00.2**	**-0.6**
TPR	**Prospect**	**1.30**	**104**⇑	*e*P	**Pn**	**21 46 45.6**	**+0.7**
TPR				*e*S	**Sn**	**21 47 04.9**	**+0.1**
TPR	**Prospect**	**1.30**	**104**⇑	*e*P	**Pn**	**21 46 45.6**	**+0.7**
TPR				*e*S	**Sn**	**21 47 04.9**	**+0.1**
TPP	**Pointe-a-Pierr**	**1.33**	**153**	*e*P	**Pn**	**21 46 45.6**	**+0.4**
TPP				*e*S	**Sn**	**21 47 05.5**	**+0.1**
TPP	**Pointe-a-Pierr**	**1.33**	**153**	*e*P	**Pn**	**21 46 45.6**	**+0.4**
TPP				*e*S	**Sn**	**21 47 05.5**	**+0.1**
BOT	**Bacolet**	**1.36**	**104**	*e*P	**Pn**	**21 46 46.0**	**+0.5**
BOT				*e*S	**Sn**	**21 47 06.2**	**+0.2**
BOT	**Bacolet**	**1.36**	**104**	*e*P	**Pn**	**21 46 46.0**	**+0.5**
BOT				*e*S	**Sn**	**21 47 06.2**	**+0.2**
TBH	**Brigand Hill**	**1.41**	**136**⇑	*e*P	**Pn**	**21 46 47.4**	**+1.3**
TBH				*e*S	**Sn**	**21 47 06.4**	**-0.6**
TBH	**Brigand Hill**	**1.41**	**136**⇑	*e*P	**Pn**	**21 46 47.4**	**+1.3**
TBH				*e*S	**Sn**	**21 47 06.4**	**-0.6**
CRUV	**Carupano**	**1.42**	**234**⇓	*i*P	**Pn**	**21 46 46.8**	**+0.6**
CRUV				*e*S	**Sn**	**21 47 07.1**	**-0.1**
TOSP	**Speyside**	**1.51**	**98**	*e*P	**Pn**	**21 46 46.6**	**-0.5**
TOSP				*e*S	**Sn**	**21 47 07.4**	**-1.5**
GUNV	**Guanoco**	**1.60**	**213**⇓	*i*P	**Pn**	**21 46 49.1**	**+1.0**
GUNV				*e*S	**Sn**	**21 47 10.3**	**-0.4**
FCV	**Fort Charlotte**	**1.82**	**26**	*e*S	**Sn**	**21 47 15.6**	**+0.3**
SVB	**Belmont**	**1.92**	**24**	*e*P	**Pn**	**21 46 51.9**	**0.0**
SVB				*e*S	**Sn**	**21 47 16.7**	**-0.7**
SVB	**Belmont**	**1.92**	**24**	*e*P	**Pn**	**21 46 51.9**	**0.0**
SVB				*e*S	**Sn**	**21 47 16.7**	**-0.7**
SSV	**Crater Summit**	**2.00**	**25**	*e*S	**Sn**	**21 47 18.6**	**-0.4**
MCLT	**Moule a Chique**	**2.44**	**26**	*e*P	**Pn**	**21 46 57.8**	**-0.5**
MCLT				*e*S	**Sn**	**21 47 27.4**	**-1.5**
MCLT	**Moule a Chique**	**2.44**	**26**	*e*P	**Pn**	**21 46 57.8**	**-0.5**
MCLT				*e*S	**Sn**	**21 47 27.4**	**-1.5**
IBAV	**Isla La Blanqu**	**2.48**	**277**⇑	*i*P	**Pn**	**21 46 59.8**	**+0.9**
IBAV				*e*S	**Sn**	**21 47 30.1**	**+0.3**
SLB	**Belfond**	**2.51**	**23**	*e*S	**Sn**	**21 47 29.3**	**-1.1**
PCRV	**Puerto La Cruz**	**2.86**	**243**	*e*P	**Pn**	**21 47 04.4**	**+0.8**
PCRV				*e*S	**Sn**	**21 47 37.0**	**-1.3**
RIOV	**Rio Grande**	**3.43**	**176**	*e*P	**Pn**	**21 47 11.6**	**+0.6**
RIOV				*e*S	**Sn**	**21 47 49.2**	**-2.3**
CUPV	**Cœpira**	**3.94**	**249**	*e*P	**Pn**	**21 47 18.8**	**+1.1**
CUPV				*e*S	**Sn**	**21 48 02.5**	**-1.0**
MERV	**Las Mercedes**	**4.73**	**242**	*e*P	**Pn**	**21 47 28.6**	**+0.3**
MERV				*e*S	**Sn**	**21 48 19.6**	**-2.8**
CAOV	**Caicara del Or**	**5.91**	**226**	*e*P	**Pn**	**21 47 43.6**	**-0.5**
CAOV				*e*S	**Sn**	**21 48 45.7**	**-5.0**
BAUV	**El Baul**	**6.42**	**247**	*e*P	**Pn**	**21 47 50.3**	**-0.5**
BAUV				*e*S	**Sn**	**21 48 58.1**	**-4.8**

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*IDC **04** 21:46:29.8±1.6, 14°.00N×90°.72W, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.9/20, mbtmp3.8/6, ML4.1/1, Error ellipse: s-maj=123.1km s-min=23.8km az=51.0*
*ISCJB **04** 21:46:31.8±1.4, 13°.42N±0°.06×91°.52W±0°.03, h25km±10km, mb3.8/8, Error ellipse: s-maj=10.2km s-min=4.0km az=21.2*
*CASC **04** 21:46:33.9±2.6, 13°.61N×91°.48W, h53km±78km, MD3.7, ML3.9, mb3.8(NEIC)*
*NEIC **04** 21:46:37.1±0.9, 13°.82N×91°.61W, h35km, mb3.8/4, Error ellipse: s-maj=21.4km s-min=8.8km az=211.0*

ISC 04 21:46:32.4±1.3, 13°.51N±0°.06×91°.46W±0°.03, h13km±8km, n64, σ1°07/75, mb3.8/8, 12C-7D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.82**	**348**	*e*P	**Pg**	**21 46 49.5**	**+1.2**
FUG	**Fuego 3**	**1.11**	**33**	*e*P	**Pb**	**21 46 52.9**	**-0.6**
IXG	**Ixpaco**	**1.18**	**56**	*e*P	**Pb**	**21 46 53.2**	**-1.5**
FG6		**1.19**	**28**	*e*P	**Pn**	**21 46 53.8**	**-0.9**
PCG	**Pacaya**	**1.21**	**43**	*e*P	**Pn**	**21 46 54.4**	**-0.6**
TP2	**Tecpan 2**	**1.34**	**18**	*e*P	**Pn**	**21 46 56.3**	**-0.5**
NBG	**Las Nubes**	**1.52**	**45**	*e*P	**Pn**	**21 46 59.4**	**+0.1**
THIG		**1.60**	**331**	*i* P	**Pn**	**21 46 56.2**	**-4.1**
THIG				*i* S	**Sn**	**21 47 18.5**	**-2.4**
RTR	**El Retiro**	**1.81**	**77**	*e*P	**Pn**	**21 47 02.3**	**-0.9**
RTR				*e*S	**Sn**	**21 47 27.4**	**+1.4**
SBLS	**San Blas**	**1.82**	**79**	*e*P	**Pn**	**21 47 02.2**	**-1.2**
SBLS				*e*S	**Sn**	**21 47 27.1**	**+0.8**
RBDL	**Robledal**	**1.82**	**70**	*e*P	**Pn**	**21 47 02.9**	**-0.5**
SNJE	**San Jose**	**1.84**	**78**	*i* P	**Pn**	**21 47 02.8**	**-0.9**
BOQS	**Boqueron**	**2.13**	**84**	*i* P	**Pn**	**21 47 07.0**	**-0.6**
BOQS				*e*S	**Sn**	**21 47 35.2**	**+1.2**
SNET	**Serv Nac Est T**	**2.17**	**85**	*e*P	**Pn**	**21 47 08.1**	**-0.1**
MTO2	**Montecristo 2**	**2.22**	**66**	*e*P	**Pn**	**21 47 08.7**	**-0.2**
MRL	**Marmol**	**2.31**	**48**	*e*P	**Pn**	**21 47 11.0**	**+0.8**
SNVI	**San Vicente**	**2.55**	**87**	*e*P	**Pn**	**21 47 13.3**	**-0.1**
PCIG		**2.77**	**322**	*i* P	**Pn**	**21 47 15.7**	**-0.8**
PCIG				*i* S	**Sn**	**21 47 49.6**	**-0.3**
CCIG	**Comitan**	**2.84**	**347**	*i* P	**Pn**	**21 47 18.6**	**+1.3**
CCIG				*i* S	**Sn**	**21 47 55.1**	**+3.7**
VSM	**San Miguel**	**3.10**	**91**	*e*P	**Pn**	**21 47 23.3**	**+2.3**
CAHU	**Cacacuatique**	**3.17**	**85**	*e*P	**Pn**	**21 47 21.5**	**-0.5**
SCX	**San Cristobal**	**3.41**	**341**	*e*P	**Pn**	**21 47 26.0**	**+0.8**
SCX				*i* S	**Sn**	**21 48 06.4**	**+0.9**
CNCH	**Conchagua**	**3.54**	**93**	*e*P	**Pn**	**21 47 27.8**	**+0.8**
CNCH				AML	AML	21 48 24.1	
comp=Z,454nm,0.5s							
TGUH	**Tegucigalpa,Un**	**4.10**	**82**	*e*Pn	**Pn**	**21 47 39.8**	**+5.0**
COPN	**Copaltepe**	**4.93**	**105**	*e*P	**Pn**	**21 47 46.7**	**+0.5**
COPN				*e*S	**Sn**	**21 48 38.4**	**-4.7**
VHO	**Vista Hermosa**	**6.20**	**306**	*i* P	**Pn**	**21 48 09.9**	**+6.3**
VHO				*i* S	**Sn**	**21 49 19.1**	**+4.6**
PNIG	**Pinotepa**	**7.05**	**295**	*e*P	**Pn**	**21 48 15.7**	**+0.4**
PNIG				*i* S	**Sn**	**21 49 36.5**	**+1.1**
JTS	**JuntasAbangare**	**7.12**	**116**	*e*Pn	**Pn**	**21 48 24.6**	**+8.2**
JTS				Sn	**Sn**	**21 49 46.4**	**+9.1**
TEIG	**Tepich**	**7.34**	**24**	*e*Pn	**Pn**	**21 48 19.1**	**-0.3**
comp=Z,11nm,1.1s							
PPM	**Popocatepetl**	**8.83**	**310**	*e*P	**Pn**	**21 48 42.3**	**+2.6**
PPM				*i* S	**Sn**	**21 50 29.6**	**+11**
BCIP	**Isla Barro Col**	**12.18**	**110**	*e*Pn	**Pn**	**21 49 32.2**	**+6.4**
MTDJ	**Mount Denham**	**14.19**	**69**	*e*Pn	**Pn**	**21 49 56.2**	**+3.1**
comp=Z,9.6nm,0.6s							
OTAV	**Otavalo**	**18.43**	**135**	P	**Pn**	**21 50 51.8**	**+4.0**
TXAR	**Lajitas Array**	**19.40**	**326**	P	**Pn**	**21 50 58.4**	**-0.9**
comp=Z,0.1nm,0.3s,baz=155,slow=13,SNR=13							
626A	**Big Bend Ranch**	**19.82**	**326**	⇓P	**Pn**	**21 51 04.1**	**-0.3**
baz=20							
328A	**Wristen Ranch,**	**20.62**	**331**	⇓P	**P**	**21 51 12.1**	**+0.5**
baz=20,SNR=13							
326A	**Caldwell Ranch**	**21.14**	**329**	⇑P	**P**	**21 51 18.0**	**+0.9**
baz=21,SNR=16							
425A	**Indio Mountain**	**21.24**	**326**	⇑P	**P**	**21 51 18.9**	**+0.7**
baz=21,SNR=5.2							
WMOK	**Wichita Mounta**	**22.15**	**344**	P	**P**	**21 51 27.1**	**-0.8**
comp=Z,1.0nm,0.5s,mb3.5							
MNTX	**Cornudas Mount**	**22.16**	**327**	⇑P	**P**	**21 51 27.8**	**-0.3**
baz=22,SNR=9.5							
MNTX	**Cornudas Mount**	**22.16**	**327**	*e*P	**P**	**21 51 28.0**	**-0.1**
comp=Z,4.9nm,0.8s,mb4.0							
225A	**Deer Hill, Car**	**22.20**	**329**	⇑P	**P**	**21 51 28.9**	**+0.4**
baz=22,SNR=6.6							
224A	**Cornudas Mount**	**22.53**	**327**	⇓P	**P**	**21 51 32.2**	**+0.1**
baz=22,SNR=9.7							
Z26A	**Caprock**	**22.75**	**332**	⇑P	**P**	**21 51 33.2**	**-1.0**
baz=22,SNR=5.3							
124A	**Stringfield Ra**	**22.99**	**329**	⇑P	**P**	**21 51 37.6**	**+0.7**
baz=23,SNR=13							
Y23A	**Lovelace Mesa,**	**24.27**	**329**	⇓P	**P**	**21 51 49.7**	**+0.4**
baz=24,SNR=6.4							
Y21A	**Point of Rocks**	**25.17**	**327**	⇑P	**P**	**21 51 58.8**	**+1.3**
baz=25,SNR=6.5							
ANMO	**Albuquerque**	**25.29**	**330**	P	**P**	**21 51 57.6**	**-1.0**
comp=Z,1.0nm,0.5s,mb3.6,baz=146,slow=11,SNR=3.4							
ANMO	**Albuquerque**	**25.29**	**330**	*e*P	**P**	**21 51 56.5**	**-2.2**
comp=Z,1.0nm,0.6s,mb3.5							
Y20A	**Horse Springs,**	**25.47**	**326**	⇓P	**P**	**21 52 00.1**	**-0.1**
baz=25,SNR=6.4							
X21A	**Alamocita Cree**	**25.56**	**327**	⇑P	**P**	**21 52 02.3**	**+1.3**
baz=25,SNR=8.4							
GLA	**Glamis**	**28.85**	**316**	P	**P**	**21 52 29.7**	**-0.9**
P13A	**Bates Ranch, G**	**32.61**	**327**	⇑P	**P**	**21 53 04.8**	**+1.0**
baz=32,SNR=5.6							
NVAR	**Mina Array Bea**	**34.38**	**321**	P	**P**	**21 53 20.1**	**+0.8**
comp=Z,1.5nm,0.7s,mb4.0,baz=134,slow=8.0,SNR=6.9							
I13A	**Wildhorse Cree**	**35.99**	**332**	⇑P	**P**	**21 53 33.7**	**+0.7**
baz=36,SNR=5.9							
MCMT	**McKenzie Canyo**	**36.14**	**334**	*e*P	**P**	**21 53 31.8**	**-2.5**
comp=Z,2.3nm,1.0s,mb4.1							
I12A	**Atlanta**	**36.38**	**331**	⇑P	**P**	**21 53 36.0**	**-0.3**
baz=36,SNR=8.4							
H13A	**Challis**	**36.55**	**332**	⇑P	**P**	**21 53 38.0**	**+0.2**
baz=36,SNR=6.1							
F12A	**Elk City**	**37.92**	**333**	⇓P	**P**	**21 53 48.6**	**-0.8**
baz=38,SNR=7.5							
F10A	**Beach Ranch, E**	**38.99**	**331**	⇓P	**P**	**21 53 57.9**	**-0.5**
baz=39,SNR=5.3							
SIV	**San Ignacio**	**41.97**	**133**	P	**P**	**21 54 21.3**	**-2.1**
comp=Z,0.6nm,0.4s,mb3.5,baz=299,slow=10,SNR=5.2							
YKA	**Yellowknife Ar**	**51.62**	**347**	P	**P**	**21 55 35.0**	**-3.3**
comp=Z,0.5nm,0.4s,mb3.8,baz=149,slow=7.7,SNR=6.3							
ILAR	**Eielson Array**	**63.50**	**337**	P	**P**	**21 56 60.0**	**-2.0**
comp=Z,1.3nm,0.9s,mb4.0,baz=144,slow=5.0,SNR=8.0							
CMAR	**Chiang Mai Arr**	**146.62**	**342**	PKPbc	PKPbc	22 06 13.4	-1.2
comp=Z,2.6nm,0.9s,baz=349,slow=4.1,SNR=16							

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*IDC **04** 21:50:21.5±2.6, 52°.92N×171°.36E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/24, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=77.0km s-min=32.1km az=0.0*
*KRSC **04** 21:50:21.1±3.7, 52°.38N×170°.50E, h5km±5km, ML4.4*
*ISCJB **04** 21:50:23.2±3.0, 52°.5N±0°.3×170°.8E±0°.2, h50km±31km, mb3.6/3, Error ellipse: s-maj=43.1km s-min=18.9km az=2.7*

ISC 04 21:50:24.8±2.7, 52°.5N±0°.3×171°.0E±0°.2, h41km±29km, n8, σ1°03/10, mb3.6/3, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**5.86**	**294**	*e*P	**Pn**	**21 51 50.0**	**+1.0**
MKZ				*i* S	**Sn**	**21 52 54.7**	**-0.2**
KBTR	**Krutoberegovo**	**6.01**	**311**	*e*P	**Pn**	**21 51 51.7**	**+0.6**
AVH	**Avacha**	**7.43**	**280**	P	**Pn**	**21 52 09.3**	**-1.2**
GNL	**Ganaly**	**7.92**	**284**	P	**Pn**	**21 52 17.0**	**-0.2**
PETK	**Petropavlovsk-**	**8.06**	**279**	Pn	**Pn**	**21 52 22.6**	**+3.6**
0.4nm,0.3s,baz=93,slow=18,SNR=4.1							
PETK				Sn	**Sn**	**21 53 48.4**	**-0.4**
0.6nm,0.3s,baz=102,slow=34,SNR=3.5							
ILAR	**Eielson Array**	**24.57**	**44**	P	**P**	**21 55 38.3**	**-2.1**
0.4nm,0.5s,mb3.2,baz=247,slow=7.9,SNR=6.3							
TXAR	**Lajitas Array**	**64.60**	**74**	P	**P**	**22 00 58.6**	**+0.9**
0.4nm,0.4s,mb3.8,baz=314,slow=4.3,SNR=7.1							
NOA	**NORSAR Array B**	**65.62**	**349**	P	**P**	**22 01 04.5**	**+0.6**
0.6nm,0.6s,mb3.8,baz=18,slow=6.5,SNR=2.5							

ISC 04 22:02:23.1±0.7, 46°.00N±0°.05×12°.35E±0°.04, h10km, n11, σ0°61/19, 2C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAE	**Caneva**	**0.06**	**86**	*e*Pg	**Pg**	**22 02 24.8**	**-0.4**
CAE				*e*Sg	**Sg**	**22 02 26.3**	**-0.4**
VARN	**Col Varnada, M**	**0.17**	**267**⇓	*i*Pg	**Pg**	**22 02 27.0**	**+0.3**
VARN				*i* Sg	**Sg**	**22 02 30.3**	**+1.1**
MLNI	**Malnisio**	**0.24**	**51**⇓	*e*Pg	**Pg**	**22 02 27.6**	**-0.3**
MLNI				*e*Sg	**Sg**	**22 02 31.9**	**+0.7**
CIMO	**Cimolais**	**0.31**	**12**⇓	*e*Pg	**Pg**	**22 02 28.5**	**-0.8**
CIMO				*e*Sg	**Sg**	**22 02 33.6**	**0.0**
SABO	**M.te Sabotino**	**0.87**	**91**	*e*Pg	**Pg**	**22 02 39.8**	**-0.1**
SABO				*e*Sg	**Sg**	**22 02 52.3**	**+1.0**
DRE	**Drenchia**	**0.92**	**79**⇑	*e*Pg	**Pg**	**22 02 39.9**	**-0.8**
DRE				*e*Sg	**Sg**	**22 02 53.2**	**+0.5**
ACOM	**Acomizza, Ital**	**0.98**	**56**	*e*Pg	**Pg**	**22 02 41.2**	**-0.7**
CADS	**Cadrg**	**0.99**	**76**	*i* Sg	**Sg**	**22 02 55.7**	**+0.6**
TRI	**Trieste**	**1.03**	**106**⇑	*e*Pg	**Pg**	**22 02 42.0**	**-0.9**
VOJS	**Vojsko**	**1.07**	**88**	*i* Pg	**Pg**	**22 02 43.1**	**-0.6**
VOJS				*i* Sg	**Sg**	**22 02 57.8**	**+0.3**
VOJS							
comp=Z,3.0nm,0.1s							
GORS	**Gorjuse**	**1.19**	**74**	*i* Pg	**Pg**	**22 02 45.8**	**-0.1**
GORS				*i* Sg	**Sg**	**22 03 02.0**	**+0.6**
GORS							
comp=Z,1.0nm,0.1s							

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*ISCJB **04** 22:13:43.9±1.4, 14°.73N±0°.06×41°.89E±0°.08, h10km, Error ellipse: s-maj=13.6km s-min=5.5km az=147.1*
*DHMR **04** 22:13:46.8±1.1, 14°.59N×42°.22E, h5km±11km, ML3.4*
*CSEM **04** 22:13:46.3±0.7, 14°.70N×41°.83E, h30km, ML3.4, Error ellipse: s-maj=16.3km s-min=6.3km az=60.0*
*SGS **04** 22:13:48.6, 14°.74N×41°.92E, h24km*

ISC 04 22:13:44.8±1.3, 14°.75N±0°.06×41°.88E±0°.08, h10km, n16, σ1°06/28, 2C-1D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAJJ	**Hajjah**	**1.91**	**60**	*i* P	**Pn**	**22 14 17.9**	**+0.4**
HAJJ				*i* S	**Sn**	**22 14 43.2**	**+1.7**
HAJJ				AML	AML	22 14 45.9	
comp=Z,654nm,0.5s							
HAJJ	**Hajjah**	**1.91**	**60**	*i* P	**Pn**	**22 14 17.9**	**+0.5**
HA

Ml2.3/12, Error ellipse: s-maj=2.2km s-min=1.9km az=139.0
*LDG **04** 22:50:17.4±0.1, 44°.25N×11°.24E, h10km, Ml2.6/8, Error ellipse: s-maj=3.6km s-min=2.6km az=33.0*
ISC 04 22:50:16.0±0.2, 44°.36N±0°.01×11°.29E±0°.03, h10km, n81, σ1§04/141, 3C-5D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTRZ	**Monterenzio**	**0.13**	**82**	Pg	**Pg**	**22 50 20.9**	**+1.9**
MTRZ				Sg	**Sg**	**22 50 24.1**	**+3.0**
	4µm,0.3s						
MTRZ	**Monterenzio**	**0.13**	**82**	Pg	**Pg**	**22 50 20.9**	**+1.9**
MTRZ				Sg	**Sg**	**22 50 24.1**	**+3.0**
	4µm,0.3s						
FNVD	**Fontana Vidola**	**0.23**	**212**	Pg	**Pg**	**22 50 21.1**	**+0.4**
FNVD				Sg	**Sg**	**22 50 24.9**	**+1.1**
	4µm,0.4s						
FNVD	**Fontana Vidola**	**0.23**	**212**	Pg	**Pg**	**22 50 21.1**	**+0.4**
FNVD				Sg	**Sg**	**22 50 24.9**	**+1.1**
	4µm,0.4s						
SEI	**Scarperia**	**0.31**	**171**	Pg	**Pg**	**22 50 21.8**	**-0.4**
SEI				Sg	**Sg**	**22 50 26.5**	**+0.2**
	673nm,0.2s						
SEI	**Scarperia**	**0.31**	**171**	Pg	**Pg**	**22 50 21.8**	**-0.4**
SEI				Sg	**Sg**	**22 50 26.5**	**+0.2**
	673nm,0.2s						
FIU	**Minerbio Fiu**	**0.31**	**27**	Pg	**Pg**	**22 50 26.5**	**+4.2**
FIU				Sg	**Sg**	**22 50 32.9**	**+6.4**
	799nm,0.5s						
FIU	**Minerbio Fiu**	**0.31**	**27**	Pg	**Pg**	**22 50 26.5**	**+4.2**
CMPO	**Campotto Po**	**0.43**	**59**	Pg	**Pg**	**22 50 27.9**	**+3.5**
	807nm,1.4s						
CMPO	**Campotto Po**	**0.43**	**59**	Pg	**Pg**	**22 50 27.9**	**+3.5**
	807nm,1.4s						
VMG	**Vicchio**	**0.44**	**155**	⇑*i* Pg	**Pg**	**22 50 23.7**	**-0.9**
VMG				Sg	**Sg**	**22 50 29.6**	**-0.8**
	69nm,0.2s						
VMG	**Vicchio**	**0.44**	**155**	⇑*i* Pg	**Pg**	**22 50 23.7**	**-0.9**
VMG				Sg	**Sg**	**22 50 29.6**	**-0.8**
	69nm,0.2s						
BDI	**Bagni Di Lucca**	**0.58**	**239**	Pg	**Pg**	**22 50 28.3**	**+1.0**
BDI				Sg	**Sg**	**22 50 36.2**	**+1.3**
	113nm,0.6s						
BDI	**Bagni Di Lucca**	**0.58**	**239**	Pg	**Pg**	**22 50 28.3**	**+1.0**
BDI				Sg	**Sg**	**22 50 36.2**	**+1.3**
	113nm,0.6s						
SFI	**Santa Sofia**	**0.61**	**138**	Pg	**Pg**	**22 50 26.9**	**-0.8**
SFI				Sg	**Sg**	**22 50 35.4**	**-0.3**
	82nm,0.5s						
SFI	**Santa Sofia**	**0.61**	**138**	Pg	**Pg**	**22 50 26.9**	**-0.8**
SFI				Sg	**Sg**	**22 50 35.4**	**-0.3**
	82nm,0.5s						
CRMI	**Carmignano**	**0.61**	**202**	Pg	**Pg**	**22 50 28.0**	**+0.1**
CRMI				Sg	**Sg**	**22 50 36.2**	**+0.2**
	111nm,0.6s						
CRMI	**Carmignano**	**0.61**	**202**	Pg	**Pg**	**22 50 28.0**	**+0.1**
CRMI				Sg	**Sg**	**22 50 36.2**	**+0.2**
	111nm,0.6s						
ASQU	**Asqua**	**0.67**	**147**	Pg	**Pg**	**22 50 27.8**	**-1.1**
ASQU				Sg	**Sg**	**22 50 37.0**	**-0.6**
	70nm,0.3s						
ASQU	**Asqua**	**0.67**	**147**	Pg	**Pg**	**22 50 27.8**	**-1.1**
ASQU				Sg	**Sg**	**22 50 37.0**	**-0.6**
	70nm,0.3s						
VLC	**Villacollemand**	**0.68**	**253**	Pg	**Pg**	**22 50 29.4**	**+0.2**
	81nm,1.0s						
VLC	**Villacollemand**	**0.68**	**253**	Pg	**Pg**	**22 50 29.4**	**+0.2**
	81nm,1.0s						
MAIM	**Mastiano**	**0.73**	**233**	Pg	**Pg**	**22 50 31.1**	**+1.0**
MAIM				Sg	**Sg**	**22 50 40.9**	**+1.3**
	48nm,0.4s						
MAIM	**Mastiano**	**0.73**	**233**	Pg	**Pg**	**22 50 31.1**	**+1.0**
MAIM				Sg	**Sg**	**22 50 40.9**	**+1.3**
	48nm,0.4s						
PII	**Pisa**	**0.84**	**221**	Pg	**Pg**	**22 50 32.0**	**-0.3**
PII				Sg	**Sg**	**22 50 43.8**	**+0.6**
	117nm,0.3s						
PII	**Pisa**	**0.84**	**221**	Pg	**Pg**	**22 50 32.0**	**-0.3**
PII				Sg	**Sg**	**22 50 43.8**	**+0.6**
	117nm,0.3s						
ADRI	**Adria, Italy**	**0.85**	**37**	⇑*e* Pg	**Pg**	**22 50 35.1**	**+2.6**
ADRI				*e* Sg	**Sg**	**22 50 49.3**	**+5.7**
ADRI	**Adria, Italy**	**0.85**	**37**	*e* Pg	**Pg**	**22 50 35.1**	**+2.6**
ADRI				*e* Sg	**Sg**	**22 50 49.3**	**+5.7**
CSNT	**Castellina Chi**	**0.89**	**180**	Pg	**Pg**	**22 50 32.2**	**-0.9**
CSNT				Sg	**Sg**	**22 50 45.1**	**+0.5**
	57nm,0.5s						
CSNT	**Castellina Chi**	**0.89**	**180**	Pg	**Pg**	**22 50 32.2**	**-0.9**
CSNT				Sg	**Sg**	**22 50 45.1**	**+0.5**
	57nm,0.5s						
PARC	**Parchiule**	**0.99**	**136**	Pg	**Pg**	**22 50 35.9**	**+0.9**
	56nm,0.5s						
PARC	**Parchiule**	**0.99**	**136**	Pg	**Pg**	**22 50 35.9**	**+0.9**
	56nm,0.5s						
TEOL	**Teolo**	**1.04**	**15**	⇓*e* Pg	**Pg**	**22 50 36.7**	**+0.7**
TEOL				*e* Sg	**Sg**	**22 50 51.9**	**+2.5**
TEOL	**Teolo**	**1.04**	**15**	*e* Pg	**Pg**	**22 50 36.7**	**+0.8**
TEOL				*e* Sg	**Sg**	**22 50 51.9**	**+2.5**
VARN	**Col Varnada, M**	**1.73**	**19**	⇓*e* Pg	**Pn**	**22 50 46.0**	**-0.1**
VARN				*e* Sg	**Sn**	**22 51 08.5**	**+0.2**
VARN	**Col Varnada, M**	**1.73**	**19**	*e* Pg	**Pn**	**22 50 46.0**	**-0.1**
MLNI	**Malnisio**	**2.02**	**27**	⇓*e* Pg	**Pn**	**22 50 50.5**	**+0.4**
MLNI				*e* Sg	**Sn**	**22 51 15.3**	**0.0**
CIMO	**Cimolais**	**2.11**	**22**	*e* Pg	**Pn**	**22 50 51.1**	**-0.2**
CIMO				*e* Sg	**Sn**	**22 51 17.4**	**-0.3**
SKDS	**Skadanscina**	**2.27**	**58**	*i* Pn	**Pn**	**22 50 52.6**	**-1.0**
SKDS				*e* Sn	**Sn**	**22 51 21.1**	**-0.4**
SABO	**M.te Sabotino**	**2.30**	**44**	*e* Pg	**Pn**	**22 50 53.9**	**-0.1**
SABO				*e* Sg	**Sn**	**22 51 22.7**	**+0.4**
VINO	**Villanova**	**2.36**	**36**	⇓*e* Pg	**Pn**	**22 50 54.2**	**-0.6**
VINO				*e* Sg	**Sn**	**22 51 23.6**	**-0.1**
ROBS	**Robic**	**2.45**	**39**	*i* Pn	**Pn**	**22 50 55.9**	**-0.1**
ROBS				*e* Sn	**Sn**	**22 51 26.1**	**+0.1**
ROBS	**Robic**	**2.45**	**39**	Pn	**Pn**	**22 50 55.9**	**-0.1**
ROBS				*e* Sn	**Sn**	**22 51 26.1**	**+0.1**
DRE	**Drenchia**	**2.46**	**42**	⇓*i* Pg	**Pn**	**22 50 56.0**	**-0.1**
DRE				*e* Sg	**Sn**	**22 51 26.3**	**+0.1**
PGF	**Pioggiola**	**2.46**	**223**	*e* Pn	**Pn**	**22 50 54.1**	**-2.1**
PGF	**Pioggiola**	**2.46**	**223**	*e* P	**Pn**	**22 50 56.9**	**+0.7**
PGF				*e* Sn	**Sn**	**22 51 22.0**	**-4.3**
	13nm,0.5s						
PGF	**Pioggiola**	**2.46**	**223**	*e* Pn	**Pn**	**22 50 54.1**	**-2.1**
PGF	**Pioggiola**	**2.46**	**223**	*e* P	**Pn**	**22 50 56.9**	**+0.7**
PGF				*e* Sn	**Sn**	**22 51 22.0**	**-4.3**
	6.6nm,0.5s						
VOJS	**Vojsko**	**2.48**	**47**	*i* Pn	**Pn**	**22 50 56.3**	**-0.1**
VOJS				*e* Sn	**Sn**	**22 51 26.8**	**0.0**
VOJS	**Vojsko**	**2.48**	**47**	*i* Pn	**Pn**	**22 50 56.3**	**-0.1**
VOJS				*e* Sn	**Sn**	**22 51 26.8**	**+0.1**
CADS	**Cadrg**	**2.54**	**42**	*e* Pn	**Pn**	**22 50 57.3**	**0.0**
CADS				*e* Sn	**Sn**	**22 51 28.5**	**+0.2**
CADS	**Cadrg**	**2.54**	**42**	*e* Pn	**Pn**	**22 50 57.3**	**0.0**
CADS				*e* Sn	**Sn**	**22 51 28.5**	**+0.2**
NVLJ	**Novalja**	**2.57**	**84**	*e* Pn	**Pn**	**22 50 57.7**	**0.0**
NVLJ				Sn	**Sn**	**22 51 27.6**	**-1.4**
NVLJ	**Novalja**	**2.57**	**84**	*e* Pn	**Pn**	**22 50 57.6**	**-0.1**
NVLJ				Sn	**Sn**	**22 51 27.6**	**-1.4**
ACOM	**Acomizza, Ital**	**2.69**	**35**	*e* Pg	**Pn**	**22 51 00.4**	**+1.1**
SBF	**Sospel**	**2.82**	**261**	*e* Pn	**Pn**	**22 50 59.5**	**-1.6**
SBF	**Sospel**	**2.82**	**261**	*e* P	**Pn**	**22 51 03.1**	**+2.0**
SBF				*e* Sn	**Sn**	**22 51 31.6**	**-3.5**
	10nm,0.5s						
SBF	**Sospel**	**2.82**	**261**	*e* Pn	**Pn**	**22 50 59.5**	**-1.6**
SBF	**Sospel**	**2.82**	**261**	*e* P	**Pn**	**22 51 03.1**	**+2.0**
SBF				*e* Sn	**Sn**	**22 51 31.6**	**-3.5**
	5.2nm,0.5s						
MBDF	**Montbardon**	**3.25**	**278**	*e* Pn	**Pn**	**22 51 06.4**	**-0.6**
MBDF	**Montbardon**	**3.25**	**278**	*e* P	**Pn**	**22 51 09.7**	**+2.7**
MBDF				*e* Sn	**Sn**	**22 51 42.9**	**-2.9**
	2.3nm,0.5s						
MBDF	**Montbardon**	**3.25**	**278**	*e* Pn	**Pn**	**22 51 06.4**	**-0.6**
MBDF	**Montbardon**	**3.25**	**278**	*e* P	**Pn**	**22 51 09.7**	**+2.7**
MBDF				*e* Sn	**Sn**	**22 51 42.9**	**-2.9**
	1.1nm,0.5s						
FRF	**La Foret Royal**	**3.45**	**258**	*e* Pn	**Pn**	**22 51 09.3**	**-0.4**
FRF				*e* Sn	**Sn**	**22 51 46.3**	**-4.3**
	3.2nm,0.3s						
FRF	**La Foret Royal**	**3.45**	**258**	*e* Pn	**Pn**	**22 51 09.3**	**-0.4**
FRF				*e* Sn	**Sn**	**22 51 46.3**	**-4.3**
	1.6nm,0.3s						
LMR	**La Mourre**	**3.61**	**255**	*e* Pn	**Pn**	**22 51 10.7**	**-1.2**
LMR				*e* Sn	**Sn**	**22 51 50.2**	**-4.3**
	1.3nm,0.2s						
LMR	**La Mourre**	**3.61**	**255**	*e* Pn	**Pn**	**22 51 10.7**	**-1.2**
LMR				*e* Sn	**Sn**	**22 51 50.2**	**-4.3**
	0.6nm,0.2s						
CABF	**La Chapelle**	**4.30**	**303**	*e* Pn	**Pn**	**22 51 21.1**	**-0.3**
CABF	**La Chapelle**	**4.30**	**303**	*e* Pn	**Pn**	**22 51 21.1**	**-0.3**
HINF	**Hinteralfeld**	**4.63**	**320**	*e* Pn	**Pn**	**22 51 26.3**	**+0.3**
HINF				*e* Sn	**Sn**	**22 52 17.5**	**-2.3**
	2.7nm,0.4s						
HINF	**Hinteralfeld**	**4.63**	**320**	*e* Pn	**Pn**	**22 51 26.3**	**+0.3**
HINF				*e* Sn	**Sn**	**22 52 17.5**	**-2.3**
	1.4nm,0.4s						
STON	**Ston**	**4.88**	**106**	*e* Pn	**Pn**	**22 51 28.0**	**-1.5**
STON				Sn	**Sn**	**22 52 21.8**	**-4.2**
STON	**Ston**	**4.88**	**106**	*e* Pn	**Pn**	**22 51 28.0**	**-1.5**
STON				Sn	**Sn**	**22 52 21.8**	**-4.2**
CDF	**Champ du Feu**	**4.91**	**327**	*e* Pn	**Pn**	**22 51 30.2**	**+0.4**
CDF				*e* Sn	**Sn**	**22 52 24.5**	**-2.2**
	1.3nm,0.3s						
CDF	**Champ du Feu**	**4.91**	**327**	*e* Pn	**Pn**	**22 51 30.2**	**+0.4**
CDF				*e* Sn	**Sn**	**22 52 24.5**	**-2.2**
	0.6nm,0.3s						
HAU	**Haudompre**	**5.01**	**318**	*e* Pn	**Pn**	**22 51 31.4**	**+0.3**
HAU				*e* Sn	**Sn**	**22 52 26.3**	**-2.7**
	4.3nm,0.3s						
HAU	**Haudompre**	**5.01**	**318**	*e* Pn	**Pn**	**22 51 31.4**	**+0.3**
HAU				*e* Sn	**Sn**	**22 52 26.3**	**-2.7**
	2.2nm,0.3s						
SMF	**Signal de Mont**	**5.71**	**296**	*e* Pn	**Pn**	**22 51 40.9**	**+0.1**
SMF	**Signal de Mont**	**5.71**	**296**	*e* Pn	**Pn**	**22 51 40.9**	**+0.1**
LOR	**Lormes**	**5.95**	**302**	*e* Pn	**Pn**	**22 51 44.9**	**+0.8**
	baz=123						
LOR	**Lormes**	**5.95**	**302**	*e* Pn	**Pn**	**22 51 44.9**	**+0.8**
	baz=123						

*DDA **04** 22:54:31.6, 37°.46N×38°.58E, h24km±1km, Ml4.8*
*ISCJB **04** 22:54:32.3±0.5, 37°.43N±0°.01×38°.60E±0°.02, h11km±3km, mb3.6/9, Error ellipse: s-maj=2.9km s-min=1.9km az=38.2*
*IDC **04** 22:54:32.3±0.8, 37°.49N×38°.62E, h0km, mb3.7/8, mb1 3.7/14, mb1mx3.6/29, mbtmp3.7/14, ML3.4/4, MS3.0/2, Ms1 3.0/2, ms1mx2.4/34, Error ellipse: s-maj=14.6km s-min=10.0km az=139.0*
*ISK **04** 22:54:32.3, 37°.45N×38°.56E, h11km, ML4.3*
*NEIC **04** 22:54:32.3, 37°.47N×38°.54E, h10km, ML4.3(ISK), After ISK.*
*CSEM **04** 22:54:33.2±0.1, 37°.47N×38°.57E, h5km, ML4.3, Error ellipse: s-maj=2.8km s-min=1.9km az=115.0*
*NSSC **04** 22:54:33, 37°.50N×38°.62E, h12km±1km*
ISC 04 22:54:32.7±0.5, 37°.43N±0°.01×38°.60E±0°.02, h5km±3km, n256, σ1§02/333, mb3.6/9, 20C-42D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.24**	**281**	⇑*i* P	**Pg**	**22 54 36.9**	**-0.6**
ATAB				*i* S	**Sg**	**22 54 40.0**	**-0.7**
ATAB	**Bozova**	**0.24**	**281**	*i* P	**Pg**	**22 54 36.8**	**-0.6**
ATAB				*i* S	**Sg**	**22 54 40.0**	**-0.6**
GZT	**Gaziantep**	**0.82**	**265**	⇑*i* P	**Pg**	**22 54 47.8**	**-0.7**
GZT				*i* S	**Sg**	**22 55 04.5**	**+5.3**
MALT	**Malatya**	**0.90**	**351**	PG	**Pg**	**22 54 49.1**	**-0.8**
MALT				SG	**Sg**	**22 55 02.4**	**+0.9**
MALT	**Malatya**	**0.90**	**351**	*i* Pg	**Pg**	**22 54 49.1**	**-0.8**
MALT				*i* Sg	**Sg**	**22 55 02.4**	**+0.9**
MYA	**Malataya**	**0.91**	**351**	PG	**Pg**	**22 54 49.3**	**-0.8**
MYA	**Malataya**	**0.91**	**351**	*i* Pg	**Pg**	**22 54 49.3**	**-0.8**
AKCD	**Akcadag**	**1.02**	**329**	⇓*i* P	**Pg**	**22 54 51.4**	**-0.8**
AKCD				*i* S	**Sg**	**22 55 04.0**	**-1.4**
AKCD	**Akcadag**	**1.02**	**329**	*i* P	**Pg**	**22 54 51.4**	**-0.9**
AKCD				*i* S	**Sg**	**22 55 04.1**	**-1.4**
SVRC	**Sivrice-ELAZID**	**1.10**	**30**	PN	**Pn**	**22 54 53.7**	**-1.1**
SVRC				SN	**Sn**	**22 55 09.0**	**-1.5**
SVRC	**Sivrice-ELAZID**	**1.10**	**30**	*i* Pn	**Pn**	**22 54 53.7**	**-1.2**
SVRC				*i* Sn	**Sn**	**22 55 09.0**	**-1.5**
ELZG	**Elazig**	**1.11**	**16**	P	**Pg**	**22 54 53.2**	**-0.9**
ELZG				S	**Sg**	**22 55 08.8**	**+0.3**
ELZG	**Elazig**	**1.11**	**16**	⇓*i* P	**Pg**	**22 54 53.0**	**-1.1**
ELZG				*i* S	**Sg**	**22 55 07.3**	**-1.2**
ELZG	**Elazig**	**1.11**	**16**	P	**Pg**	**22 54 53.2**	**-0.9**
ELZG				S	**Sg**	**22 55 08.8**	**+0.3**
GAZ	**Gaziantep**	**1.13**	**258**	PN	**Pn**	**22 54 54.4**	**-0.8**
GAZ				SN	**Sn**	**22 55 10.2**	**-1.0**
GAZ	**Gaziantep**	**1.13**	**258**	Pn	**Pn**	**22 54 54.5**	**-0.7**
GAZ	**Gaziantep**	**1.13**	**258**	Pn	**Pn**	**22 54 54.5**	**-0.7**
GAZ				*i* Sn	**Sn**	**22 55 10.2**	**-1.0**
DIYA	**Diyarbakir**	**1.31**	**67**	⇑*i* P	**Pn**	**22 54 57.0**	**-0.6**
DIYA				*i* S	**Sg**	**22 55 14.3**	**-0.5**
DIYA	**Diyarbakir**	**1.31**	**67**	*i* P	**Pn**	**22 54 57.0**	**-0.6**
DIYA				*i* S	**Sg**	**22 55 14.3**	**-0.4**
SLMH	**Al Salmeh**	**1.32**	**204**	⇓P	**Pn**	**22 54 57.0**	**-0.8**
SLMH				⇓S	**Sg**	**22 55 16.0**	**+0.8**
SLMH	**Al Salmeh**	**1.32**	**204**	⇓*i* P	**Pn**	**22 54 57.8**	**0.0**
SLMH				⇓*i* S	**Sg**	**22 55 16.2**	**+1.0**
KMRS	**Kahramanmaras**	**1.35**	**274**	PN	**Pn**	**22 54 56.8**	**-1.4**
KMRS	**Kahramanmaras**	**1.35**	**274**	*i* Pn	**Pn**	**22 54 56.8**	**-1.4**
KUZU	**Kuzuini**	**1.38**	**242**	⇑*i* P	**Pn**	**22 54 57.9**	**-0.7**
KUZU				*i* S	**Sb**	**22 55 17.9**	**+1.0**
MNKR	**ALMNKUR**	**1.58**	**160**	⇓P	**Pn**	**22 55 01.0**	**-0.3**
MNKR				⇓S	**Sn**	**22 55 21.0**	**-1.1**
MNKR	**ALMNKUR**	**1.58**	**160**	⇓*i* P	**Pn**	**22 55 01.1**	**-0.2**
MNKR				⇓*i* S	**Sn**	**22 55 21.6**	**-0.5**
SFNV	**Sufian**	**1.58**	**129**	⇑P	**Pn**	**22 55 01.0**	**-0.3**
SFNV	**Sufian**	**1.58**	**129**	⇑*i* P	**Pn**	**22 55 01.3**	**0.0**
PTK	**Pertek**	**1.59**	**23**	*e* PN	**Pn**	**22 55 00.9**	**-0.7**
PTK	**Pertek**	**1.59**	**23**	*e* Pn	**Pn**	**22 55 00.9**	**-0.7**
DRWC	**Darouich**	**1.74**	**243**	⇓P	**Pn**	**22 55 02.0**	**-1.6**
DRWC				⇓S	**Sn**	**22 55 26.0**	**-0.2**
DRWC	**Darouich**	**1.74**	**243**	⇓*i* P	**Pn**	**22 55 03.0**	**-0.6**
DRWC				⇓*i* S	**Sn**	**22 55 26.1**	**-0.1**
MARD	**Mardin**	**1.74**	**93**	⇑*i* P	**Pn**	**22 55 01.8**	**-1.9**
MARD				*i* S	**Sn**	**22 55 23.4**	**-2.8**
JHLN	**Al Jahlan**	**1.75**	**184**	⇓P	**Pn**	**22 55 04.0**	**+0.2**
JHLN				⇓S	**Sn**	**22 55 27.0**	**+0.5**
JHLN	**Al Jahlan**	**1.75**	**184**	⇓*i* P	**Pn**	**22 55 04.0**	**+0.2**
JHLN				⇓*i* S	**Sn**	**22 55 27.7**	**+1.2**
ANDN	**Andirin**	**1.80**	**276**	⇑*i* P	**Pn**	**22 55 03.0**	**-1.4**
ANDN				*i* S	**Sn**	**22 55 26.7**	**-0.9**
ANDN	**Andirin**	**1.80**	**276**	*i* P	**Pn**	**22 55 03.0**	**-1.4**
ANDN				*i* S	**Sn**	**22 55 26.7**	**-0.9**
KEMA	**Kemaliye**	**1.84**	**358**	⇓*i* P	**Pn**	**22 55 04.7**	**-0.3**
KEMA				*i* S	**Sn**	**22 55 28.1**	**-0.6**
KEMA	**Kemaliye**	**1.84**	**358**	*i* P	**Pn**	**22 55 04.7**	**-0.3**
KEMA				*i* S	**Sn**	**22 55 28.1**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.95**	**310**	*e* PN	**Pn**	**22 55 05.7**	**-0.8**
SARI	**SarD1z-Kayseri**	**1.95**	**310**	*e* Pn	**Pn**	**22 55 05.7**	**-0.8**
BSHR	**Al Beshri**	**2.01**	**150**	⇓P	**Pn**	**22 55 03.0**	**-4.3**
BSHR				⇓S	**Sn**	**22 55 23.0**	**-10**
BINT	**Bingol**	**2.08**	**45**	*e* PN	**Pn**	**22 55 08.3**	**+0.1**
BINT	**Bingol**	**2.08**	**45**	*e* Pn	**Pn**	**22 55 08.3**	**0.0**
COBT	**Iskenderun**	**2.08**	**245**	⇑*i* P	**Pn**	**22 55 05.8**	**-2.4**
COBT				*i* S	**Sn**	**22 55 27.9**	**-6.6**
COBT	**Iskenderun**	**2.08**	**245**	*i* P	**Pn**	**22 55 05.8**	**-2.5**
PINB	**Pinarbasi**	**2.13**	**306**	⇑*i* P	**Pn**	**22 55 09.3**	**+0.2**
PINB				*i* S	**Sn**	**22 55 35.4**	**-0.5**
PINB	**Pinarbasi**	**2.13**	**306**	*i* P	**Pn**	**22 55 09.3**	**+0.3**
PINB				*i* S	**Sn**	**22 55 35.4**	**-0.5**
BEST	**Besiri**	**2.17**	**77**	⇑*i* P	**Pn**	**22 55 08.8**	**-0.7**
BEST				*i* S	**Sn**	**22 55 40.2**	**+3.6**
KOZT	**Kozan**	**2.21**	**272**	*e* PN	**Pn**	**22 55 09.2**	**-0.7**
KOZT	**Kozan**	**2.21**	**272**	*e* Pn	**Pn**	**22 55 09.3**	**-0.7**
BTCH	**Batrach**	**2.21**	**232**	⇑P	**Pn**	**22 55 10.0**	**0.0**
BTCH				⇑S	**Sn**	**22 55 37.0**	**-0.7**
BTCH	**Batrach**	**2.21**	**232**	⇑*i* P	**Pn**	**22 55 10.8**	**+0.8**
BTCH				⇑*i* S	**Sn**	**22 55 37.4**	**-0.3**
CEYT	**Ceyhan**	**2.31**	**261**	*e* PN	**Pn**	**22 55 10.9**	**-0.5**
CEYT	**Ceyhan**	**2.31**	**261**	*e* Pn	**Pn**	**22 55 11.0**	**-0.4**
HTY	**Hatay**	**2.36**	**237**	*e* PN	**Pn**	**22 55 11.4**	**-0.8**
HTY	**Hatay**	**2.36**	**237**	*e* Pn	**Pn**	**22 55 11.4**	**-0.8**
EZC	**Erzincan**	**2.40**	**14**	*e* PN	**Pn**	**22 55 12.7**	**+0.1**
EZC	**Erzincan**	**2.40**	**14**	Pn	**Pn**	**22 55 13.5**	**+0.9**
EZC	**Erzincan**	**2.40**	**14**	Pn	**Pn**	**22 55 13.5**	**+0.9**
YAYL	**Yayladag**	**2.43**	**236**	*i* P	**Pn**	**22 55 13.7**	**+0.6**
YAYL				*i* S	**Sn**	**22 55 44.3**	**+1.0**
YAYL	**Yayladag**	**2.43**	**236**	*i* P	**Pn**	**22 55 13.7**	**+0.6**
YAYL				*i* S	**Sn**	**22 55 44.3**	**+1.0**
YURE	**YUREGIR**	**2.44**	**257**	*i* P	**Pn**	**22 55 13.4**	**+0.1**
YURE	**YUREGIR**	**2.44**	**257**	*i* P	**Pn**	**22 55 13.4**	**+0.1**
BNGL	**BINGOL**	**2.52**	**52**	⇑*i* P	**Pn**	**22 55 13.4**	**-0.9**
BNGL				*i* S	**Sn**	**22 55 45.0**	**-0.6**
WRDH	**Warideh**	**2.60**	**223**	⇓P	**Pn**	**22 55 16.0**	**+0.6**
WRDH				⇓S	**Sn**	**22 55 47.0**	**-0.4**
WRDH	**Warideh**	**2.60**	**223**	⇓*i* P	**Pn**	**22 55 16.4**	**+1.0**
WRDH				⇓*i* S	**Sn**	**22 55 47.4**	**0.0**
KFRA	**Kufra**	**2.64**	**214**	⇑P	**Pn**	**22 55 17.0**	**+1.0**
KFRA				⇑S	**Sn**	**22 55 48.0**	**-0.4**
KFRA	**Kufra**	**2.64**	**214**	⇑*i* P	**Pn**	**22 55 17.7**	**+1.7**
KFRA				⇑*i* S	**Sn**	**22 55 48.8**	**+0.4**
SLNF	**Slenfeh**	**2.64**	**227**	⇑P	**Pn**	**22 55 17.0**	**+1.0**
SLNF				⇑S	**Sn**	**22 55 48.0**	**-0.5**
SLNF	**Slenfeh**	**2.64**	**227**	⇑*i* P	**Pn**	**22 55 17.3**	**+1.3**
SLNF				⇑*i* S	**Sn**	**22 55 48.4**	**-0.1**
SCER	**sogukcermik**	**2.69**	**335**	⇓*i* P	**Pn**	**22 55 17.3**	**+0.6**
SCER				*i* S	**Sn**	**22 55 56.1**	**+6.5**
SCER	**sogukcermik**	**2.69**	**335**	*i* P	**Pn**	**22 55 17.3**	**+0.7**
KRTS	**Karatas**	**2.71**	**253**	*e* PN	**Pn**	**22 55 17.0**	**0.0**
KRTS	**Karatas**	**2.71**	**253**	*e* Pn	**Pn**	**22 55 17.0**	**0.0**
KELT	**Kelkit**	**2.77**	**11**	P	**Pn**	**22 55 18.6**	**+0.9**
KELT	**Kelkit**	**2.77**	**11**	*i* P	**Pn**	**22 55 17.2**	**-0.5**
KELT				*i* S	**Sn**	**22 55 56.7**	**+5.2**
KELT	**Kelkit**	**2.77**	**11**	P	**Pn**	**22 55 18.6**	**+0.9**
SVSK	**Karacayir**	**2.79**	**334**	*e* PN	**Pn**	**22 55 18.2**	**+0.3**
SVSK	**Karacayir**	**2.79**	**334**	*e* Pn	**Pn**	**22 55 18.2**	**+0.3**
SUSE	**Susehri**	**2.80**	**354**	*i* P	**Pn**	**22 55 17.7**	**-0.4**
SUSE				*i* S	**Sn**	**22 55 54.8**	**+2.5**
SUSE	**Susehri**	**2.80**	**354**	*i* P	**Pn**	**22 55 17.7**	**-0.4**
SUSE				*i* S	**Sn**	**22 55 54.8**	**+2.6**
KARA	**Karaisali**	**2.83**	**268**	*e* PN	**Pn**	**22 55 18.1**	**-0.5**
KARA	**Karaisali**	**2.83**	**268**	*e* Pn	**Pn**	**22 55 18.1**	**-0.4**
KOPT	**Kop Dagi**	**2.98**	**29**	*i* P	**Pn**	**22 55 21.7**	**+1.0**
KOPT				*i* S	**Sn**	**22 56 01.4**	**+4.5**
KOPT	**Kop Dagi**	**2.98**	**29**	*i* P	**Pn**	**22 55 21.7**	**+1.0**
KOPT				*i* S	**Sn**	**22 56 01.4**	**+4.5**
BIDA	**Albida**	**3.03**	**218**	⇓P	**Pn**	**22 55 22.0**	**+0.7**
BIDA				⇓S	**Sn**	**22 55 57.0**	**-1.0**
BIDA	**Albida**	**3.03**	**218**	⇓*i* P	**Pn**	**22 55 22.0**	**+0.7**
BIDA				⇓*i* S	**Sn**	**22 55 57.0**	**-1.0**
GULE	**Gulek**	**3.05**	**268**	*i* P	**Pn**	**22 55 21.4**	**-0.2**
GULE	**Gulek**	**3.05**	**268**	*i* P	**Pn**	**22 55 21.4**	**-0.2**
TATV	**Tatvan**	**3.10**	**68**	*i* P	**Pn**	**22 55 23.2**	**+1.0**
TATV	**Tatvan**	**3.10**	**68**	*i* P	**Pn**	**22 55 23.2**	**+1.0**
GUMT	**Gumushane**	**3.11**	**13**	*e* PN	**Pn**	**22 55 22.9**	**+0.6**
GUMT	**Gumushane**	**3

HDMB	Hadim	4.90	266	*e*PN	Pn	22 55 48.5	+1.5
HDMB	Hadim	4.90	266	*e*Pn	Pn	22 55 48.5	+1.5
CSS	Prodhromos	4.92	242	*e*PN	Pn	22 55 49.3	+2.0
CSS	Prodhromos	4.92	242	*e*Pn	Pn	22 55 49.3	+2.0
SALA	Sala	4.95	199	⇑P	Pn	22 55 48.0	+0.3
SALA				⇑S	Sn	22 56 44.0	-1.2
SALA	Sala	4.95	199	⇑*i*P	Pn	22 55 48.7	+1.0
SALA				⇑*i*S	Sn	22 56 44.0	-1.2
KONT	Konya--Tatoy	4.97	278	*e*PN	Pn	22 55 48.9	+0.8
KONT	Konya--Tatoy	4.97	278	Pn	Pn	22 55 48.8	+0.8
CANT	Cankiri	5.01	311	*e*PN	Pn	22 55 49.2	+0.7
TOS	Tosya	5.06	317	*e*PN	Pn	22 55 49.9	+0.7
TOS	Tosya	5.06	317	*e*Pn	Pn	22 55 49.9	+0.7
MMAI	Mount Meron Ar	5.12	212	Pn	Pn	22 55 52.8	+2.8
	12nm,0.3s,baz=58,slow=14,SNR=55						
MMAI				Lg		22 57 15.4	
	47nm,0.3s,baz=23,slow=22,SNR=6.2						
GAZI	Gazipasa	5.18	259	P	Pn	22 55 51.2	+0.4
GAZI	Gazipasa	5.18	259	*i* P	Pn	22 55 51.0	+0.2
GAZI	Gazipasa	5.18	259	P	Pn	22 55 51.2	+0.4
LOD	Lodumlu	5.18	300	*e*PN	Pn	22 55 51.5	+0.6
LOD	Lodumlu	5.18	300	*e*Pn	Pn	22 55 51.5	+0.6
KDHN	Kadinhani	5.24	284	*i* P	Pn	22 55 51.4	-0.3
KDHN	Kadinhani	5.24	284	*i* P	Pn	22 55 51.4	-0.2
ILGA	Ilgaz	5.24	315	*i* P	Pn	22 55 52.5	+0.8
ILGA	Ilgaz	5.24	315	*i* P	Pn	22 55 52.5	+0.8
ASF	Jabal al Asfar	5.42	195	Pn	Pn	22 55 55.1	+0.9
	1.9nm,0.3s,baz=244,slow=5.8,SNR=19						
ASF				Pg	Pg	22 56 12.7	-3.9
	5.8nm,0.3s,baz=232,slow=20,SNR=11						
ASF				Lg		22 57 26.2	
	16nm,0.3s,baz=66,slow=21,SNR=6.6						
GNI	Garni	5.52	59	*e*PN	Pn	22 55 57.3	+1.8
GNI	Garni	5.52	59	Pn	Pn	22 55 56.6	+1.1
	1.5nm,0.3s,baz=263,slow=2.6,SNR=13						
GNI				Pg	Pg	22 56 13.9	-4.4
	1.4nm,0.3s,baz=269,slow=5.7,SNR=6.9						
GNI				LR	LR	22 58 17.9	
	comp=Z,149nm,21.3s,baz=235,slow=41						
GNI	Garni	5.52	59	Pn	Pn	22 55 57.3	+1.8
GNI				Pg	Pg	22 56 13.9	-4.4
GNI				LR	LR	22 58 17.9	
GNI	Garni	5.52	59	*e*Pn	Pn	22 55 57.3	+1.8
BZK	Bozkurt	5.75	323	*e*PN	Pn	22 55 59.6	+0.9
BZK	Bozkurt	5.75	323	*e*Pn	Pn	22 55 59.6	+0.9
GOR	Gori	6.23	41	P	Pg	22 56 30.8	-1.2
BHD	Baghdad	6.29	130	*ex*	Pn	22 56 04.0	-2.1
BHD				*ex*	x	22 57 23.0	
BHD				*ex*	x	22 57 42.0	
BHD				*ex*	x	22 57 55.0	
BHD				*i* x	x	22 58 02.0	
TBLG	Delisi	6.40	46	P	Pb	22 56 26.5	+1.9
MTA	Mtatsminda	6.41	46	P	Pn	22 56 07.6	-0.2
DGRG	David-gareji	6.61	50	P	Pn	22 56 20.0	+10
EIL	Elat	8.31	203	Pn	Pn	22 56 35.6	+1.8
	0.2nm,0.3s,baz=9.5,slow=12,SNR=2.9						
EIL				Pg	Pg	22 57 06.0	-5.8
	0.6nm,0.3s,baz=102,slow=8.9,SNR=4.5						
EIL				Lg		22 59 00.3	
	2.6nm,0.3s,baz=304,slow=13,SNR=4.5						
EIL				LR	LR	23 00 07.4	
	comp=Z,104nm,21.9s,baz=276,slow=40						
EIL	Elat	8.31	203	Pn	Pn	22 56 35.7	+1.8
VRI	Vrincioaia	12.23	317	⇑*i*P	Px	22 57 39.5	
MLR	Muntele Rosu	12.44	314	⇓*i*P	Px	22 57 42.7	
BURAR	Bucovina Array	14.16	320	⇑*i*P	Pn	22 57 58.7	+4.9
BUR08	Bucovina Ar. S	14.19	320	*e*Pn	Pn	22 57 51.5	-2.7
GZR	Gura Zlata	14.28	309	⇑*i*P	Pn	22 57 56.3	+0.9
DRGR		15.03	314	⇑*i*P	Pn	22 58 11.6	+5.9
DRGR		15.03	314	⇑*i*P	Pn	22 58 11.6	+5.9
KWP	Kalwaria Pacla	16.74	322	⇓*i*P	Pn	22 58 32.3	+4.5
KWP	Kalwaria Pacla	16.74	322	⇓*i*P	Pn	22 58 32.3	+4.5
PKSM	Moragy	17.24	307	⇑*i*P	Pn	22 58 37.7	+3.6
PKSM	Moragy	17.24	307	⇑*i*P	Pn	22 58 37.7	+3.6
AKTK	Aktyubinsk	19.02	41	P	Pn	22 58 54.5	-1.6
AKTK	Aktyubinsk	19.02	41	P	Pn	22 58 54.5	-1.5
AKTO	Aktyubinsk	19.02	41	P	Pn	22 58 54.5	-1.6
	0.1nm,0.3s,baz=239,slow=9.3,SNR=5.3						
ABKAR	Akbulak array	19.44	46	*e*P	Pn	22 58 59.9	-1.1
	1.0nm,0.6s						
ABKAR	Akbulak array	19.44	46	*e*P	Pn	22 58 59.9	-1.1
	0.9nm,0.6s						
CLL	Collm	22.81	316	*e*P	P	22 59 35.0	-1.2
KEST	Kesra	23.51	275	P	P	22 59 44.1	+0.4
	0.7nm,0.8s,mb3.1,baz=101,slow=10,SNR=3.3						
KEST	Kesra	23.51	275	P	P	22 59 44.1	+0.3
KKAR	Karatay Array	24.91	67	*e*P	P	22 59 56.8	+0.3
	2.1nm,0.8s,mb3.7						
FINES	FINESS Array B	25.29	346	P	P	22 59 59.5	-0.3
	1.9nm,0.8s,mb3.7,baz=140,slow=8.9,SNR=2.9						
FINES	FINESS Array B	25.29	346	P	P	22 59 59.5	-0.3
BVAR	Borovoye Array	27.00	45	P	P	23 00 15.9	+0.5
	0.7nm,0.7s,mb3.3,baz=222,slow=8.0,SNR=5.8						
BVAR	Borovoye Array	27.00	45	P	P	23 00 15.9	+0.6
KURK	Kurchatov	31.27	52	P	P	23 00 53.4	0.0
	0.5nm,0.3s,mb3.9,baz=264,slow=8.6,SNR=2.6						
KURK	Kurchatov	31.27	52	P	P	23 00 53.4	+0.1
ARCES	ARCESS Array B	32.94	352	P	P	23 01 08.5	+0.7
	1.2nm,0.7s,mb3.9,baz=160,slow=11,SNR=3.5						
ARCES	ARCESS Array B	32.94	352	P	P	23 01 08.5	+0.7
ESDC	Sonseca Array	33.14	287	P	P	23 01 08.7	-1.1
	0.6nm,0.7s,mb3.6,baz=71,slow=9.0,SNR=3.3						
ESDC	Sonseca Array	33.14	287	P	P	23 01 08.7	-1.1
EKA	Eskdalemuir Ar	33.28	316	P	P	23 01 10.8	-0.1
	0.8nm,0.9s,mb3.6,baz=75,slow=8.6,SNR=3.1						
EKA	Eskdalemuir Ar	33.28	316	P	P	23 01 10.9	0.0
MKAR	Makanchi Array	33.37	60	P	P	23 01 11.4	-0.3
	1.0nm,0.6s,mb4.0,baz=269,slow=7.2,SNR=8.3						
MKAR	Makanchi Array	33.37	60	P	P	23 01 11.4	-0.3

*BJI **04** 22:56:47.2, 4.°98S×137.°79E, h12km, mB5.0/3, mb4.6/11*
*IDC **04** 22:56:50.4±0.7, 4.°28S×137.°63E, h0km, mb4.2/13,*
mb1 4.5/16, mb1mx4.4/19, mbtmp4.4/16, ML4.5/1, MS3.7/5,
Ms1 3.7/5, ms1mx3.4/22, Error ellipse: s-maj=29.3km
s-min=14.2km az=82.0
*NEIC **04** 22:56:52.6±4.1, 4.°40S×137.°46E, h12km±26km, mb4.7/14,*
Error ellipse: s-maj=9.3km s-min=8.1km az=90.0
*ISCJB **04** 22:56:53.5±0.9, 4.°47S±0.°03×137.°61E±0.°04, h33km±8km,*
mb4.7/39, MS3.8/3, Error ellipse: s-maj=7.2km
s-min=4.4km az=162.3
*DJA **04** 22:56:54, 4.°37S×137.°65E, h10km, mb5.1/11*
ISC 04 22:56:56.1±0.6, **4.°42S**±0.°03×**137.°60E**±0.°04, **h37**km±6km,
n86, σ1§**03**/95, **mb4.7**/39, **MS3.8**/3, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	Biak	3.54	335	P	Pn	22 57 47.8	-0.8
BAKI				S	Sn	22 58 29.5	+0.3
TLE	Tual	4.99	256	P	Pn	22 58 10.5	+1.9
	1.3nm260nm,0.9s						
KAKA	Kakadu	9.69	211	*e*Pn	Pn	22 59 11.6	-1.5
	5.7nm,0.3s						
KAKA				*e*Sn	Sn	23 01 01.0	+0.3
KAKA	Kakadu	9.69	211	P	Pn	22 59 13.1	0.0
	2μm207nm,0.6s						
PMG	Port Moresby	10.71	118	*e*Pn	Pn	22 59 28.4	+1.4
	31nm,0.8s						
PMG				*e*Sn	Sn	23 01 26.2	+0.5
PMG	Port Moresby	10.71	118	P	Pn	22 59 28.7	+1.7
	44nm,0.8s						
LBMI	Labuha	10.76	290	P	Pn	22 59 26.9	-0.9
	1μm72nm,1.2s						
COEN	Coen	10.96	150	*e*Pn	Pn	22 59 30.4	-0.1
	180nm,0.7s						
COEN				*e*Sn	Sn	23 01 29.8	-2.0
COEN	Coen	10.96	150	P	Pn	22 59 29.4	-1.1
	3μm122nm,0.8s						
KNA	Kununurra	14.22	217	P	Pn	23 00 11.7	-3.4
	2μm257nm,0.8s						
KMSI	Cibinong	14.48	290	P	Pn	23 00 19.7	+1.0
	4μm165nm,0.7s						
WB2	Warramunga Arr	15.75	191	*e*Pn	Pn	23 00 31.4	-3.9
WB2				*e*Sn	Sn	23 03 24.1	-4.8
WRA	Warramunga Arr	15.75	191	Pn	Pn	23 00 31.5	-3.9
	2.3nm,0.3s,baz=0.4,slow=13,SNR=23						
WRA				Sn	Sn	23 03 23.6	-5.3
	2.1nm,0.3s,baz=13,slow=22,SNR=6.0						
WRA				Lg		23 05 09.9	
	1.9nm,0.3s,baz=359,slow=31,SNR=3.4						
MRSI	Marisa	16.38	287	P	Pn	23 00 46.4	+2.9
	40nm,0.9s						
BKSI	Bulukumba	17.44	266	P	Pn	23 00 58.2	+1.5
	23nm,1.0s						
CTA	Charters Tower	17.71	152	P	Pn	23 01 01.2	+1.2
	1.1nm,0.3s,baz=323,slow=10,SNR=13						
CTA				S	S	23 04 11.3	-11
	0.5nm,0.3s,baz=297,slow=4.5,SNR=3.2						
CTA				Lg		23 06 16.0	
	0.3nm,0.3s,baz=236,slow=22,SNR=3.7						
CTA	Charters Tower	17.71	152	P	Pn	23 01 01.2	+1.2
CTA				S	S	23 04 11.3	-11
CTA				Lg		23 06 16.0	
CTAO	Charters Tower	17.71	152	*e*Pn	Pn	23 01 01.1	+1.1
	28nm,1.0s						
CTAO				*e*Sn	Sn	23 04 17.2	+0.7
FITZ	Fitzroy Crossi	17.94	220	P	Pn	23 01 01.8	-1.0
	2.1nm,0.3s,baz=50,slow=9.5,SNR=49						
FITZ				S	S	23 04 14.2	-13
	1.8nm,0.3s,baz=179,slow=8.4,SNR=4.1						
FITZ				Lg		23 06 24.3	
	1.3nm,0.3s,baz=108,slow=19,SNR=2.6						
FITZ				LR	LR	23 08 35.3	
	comp=Z,230nm,19.8s,baz=36,slow=39						
FITZ	Fitzroy Crossi	17.94	220	*e*P	Pn	23 01 03.2	+0.4
	59nm,0.7s						
FITZ	Fitzroy Crossi	17.94	220	*e*Pn	Pn	23 01 00.6	-2.2
FITZ				*e*Sn	Sn	23 04 18.4	-3.6
FITZ				Lg		23 06 24.3	
FITZ				LR	LR	23 08 35.3	
FITZ	Fitzroy Crossi	17.94	220	P	Pn	23 01 02.8	0.0
	107nm,0.9s						
GUMO	Guam	19.29	22	LR	LR	23 08 09.7	
	comp=Z,71nm,18.5s,baz=88,slow=36						
GUMO	Guam	19.29	22	*e*P	Pn	23 01 17.9	-1.3
ASAR	Alice Springs	19.46	190	P	Pn	23 01 20.4	-0.8
	3.8nm,0.3s,baz=16,slow=8.3,SNR=142						
ASAR				S	S	23 04 51.5	-6.4
	0.5nm,0.3s,baz=4.0,slow=28,SNR=5.2						
MYLDM	Lahad Datu	21.33	296	P	P	23 01 44.7	+4.6
HNR	Honiara	22.73	104	P	P	23 01 56.5	+1.4
QLP	Quilpie	22.93	165	*e*P	P	23 01 57.8	+0.7
MBWA	Marble Bar	24.04	225	*e*P	P	23 02 08.2	+0.3
MBWA	Marble Bar	24.04	225	*e*P	P	23 02 08.2	+0.2
	35nm,1.3s,mb4.6						
MBWA				*e*S	S	23 06 24.0	+1.2
STKA	Stephens Creek	27.57	173	P	P	23 02 40.8	+1.1
	2.6nm,0.4s,mb4.2,baz=318,slow=19,SNR=4.4						
FORT	Forrest	27.72	198	*e*P	P	23 02 41.1	0.0
	16nm,0.5s,mb4.9						
FORT	Forrest	27.72	198	*e*P	P	23 02 41.6	+0.5
	43nm,0.8s,mb5.1						
KMBL	Kambalda	30.61	207	*e*P	P	23 03 06.6	-0.2
	63nm,0.5s,mb5.7						
KLBR	Kelberrin	32.83	212	*e*P	P	23 03 26.5	+0.2
	10nm,0.6s,mb4.9						
NWAO	Narrogin (SRO)	34.15	211	P	P	23 03 38.4	+0.6
	15nm,0.9s,mb4.9,baz=54,slow=12,SNR=6.6						
NWAO				LR	LR	23 18 54.9	
	comp=Z,309nm,19.3s,MS4.0,baz=207,slow=39						
NWAO	Narrogin (SRO)	34.15	211	*e*P	P	23 03 38.2	+0.4
	15nm,0.9s,mb4.9						
NWAO				LR	LR	23 18 54.9	
QIZ	Qiongzhong	35.91	311	*e*P	P	23 03 52.6	-0.5
	9.4nm,0.7s,mb4.8						
WHN	Wuhan	41.27	329	P	P	23 04 39.0	+1.1
KSRS	Korea Array	42.62	349	P	P	23 04 47.9	-1.0
	0.4nm,0.3s,mb3.6,baz=162,slow=9.0,SNR=2.8						
CM31	Chiang Mai Arr	44.36	302	*e*P	P	23 05 02.7	-0.5
	8.2nm,0.8s,mb4.5						
CMAR	Chiang Mai Arr	44.36	302	P	P	23 05 03.1	-0.1
	8.0nm,0.8s,mb4.5,baz=124,slow=6.2,SNR=58						
CHTO	Chiang Mai	44.52	302	*e*P	P	23 05 03.9	-0.6
	11nm,0.8s,mb4.7						
KMI	Kunming	44.82	313	P	P	23 05 08.2	+1.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
MDJ	Mudanjiang	49.34	352	P	P	23 05 40.6	-1.1
GTA	Gaotai	55.80	325	*e*P	P	23 06 32.2	+2.6
GTA				pP	pP	23 06 37.7	-3.0
GTA				sP	sP	23 06 41.5	-3.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
LSA	Lhasa	55.94	310	*e*P	P	23 06 31.5	+0.6
	comp=Z,5.5nm,0.8s,mb4.6						
TAPN	Taplejung	57.56	306	*e*P	P	23 06 42.7	+0.3
	comp=Z,43nm,1.0s,mb5.4						
ODAN	Odare	57.61	306	*e*P	P	23 06 43.2	+0.4
	comp=Z,30nm,0.6s,mb5.5						
RAMN	Ramite	58.29	305	*e*P	P	23 06 48.2	+0.7
	comp=Z,35nm,0.7s,mb5.5						
SONM	Songino Array	58.80	336	P	P	23 06 51.8	+1.2
	comp=Z,0.4nm,0.6s,mb3.6,baz=142,slow=7.3,SNR=2.8						
SONM				LR	LR	23 28 45.0	
	comp=Z,85nm,21.5s,MS3.8,baz=53,slow=33						
GUN	Gumba	59.27	306	*e*P	P	23 06 54.9	+0.6
	comp=Z,34nm,0.8s,mb5.4						
PKI	Pulchoki	59.51	306	*e*P	P	23 06 57.1	+1.1
	comp=Z,23nm,0.8s,mb5.3						
KKN	Kakani	59.70	306	*e*P	P	23 06 57.6	+0.3
	comp=Z,27nm,0.8s,mb5.3						
DMN	Daman	59.77	305	*e*P	P	23 06 58.4	+0.6
	comp=Z,28nm,0.7s,mb5.4						
PETK	Petropavlovsk-	59.77	14	LR	LR	23 27 50.0	
	comp=Z,46nm,21.5s,MS3.6,baz=64,slow=31						
GKN	Gorkha	60.31	306	*e*P	P	23 07 01.9	+0.4
	comp=Z,43nm,0.8s,mb5.5						
KOLN	Koldanda	61.06	305	*e*P	P	23 07 07.1	+0.5
	comp=Z,17nm,0.7s,mb5.3						
DANN	Dangsing	61.16	306	*e*P	P	23 07 07.7	+0.5
	comp=Z,19nm,0.6s,mb5.4						
CASY	Casey	64.58	192	*e*P	P	23 07 29.3	0.0
POO	Poona	66.78	292	*e*PKP	P	23 07 42.0	-2.4
MK31	Makanchi Array	70.47	323	*e*P	P	23 08 06.5	-0.4
MKAR	Makanchi Array	70.47	323	P	P	23 08 06.9	0.0
	comp=Z,1.9nm,0.5s,mb4.3,baz=112,slow=7.7,SNR=22						
ZALV	Zalesovo Beam	72.86	330	P	P	23 08 19.5	-1.5
	comp=Z,1.5nm,0.6s,mb4.1,baz=122,slow=7.1,SNR=5.9						
KZA	Kyzart	72.94	316	P	P	23 08 22.6	+0.8
	comp=Z,14nm,1.0s,mb4.9						
TKM2	Tokmak 2	73.03	317	*e*P	P	23 08 21.8	-0.6
UCH	Uchtor	73.50	316	P	P	23 08 24.6	-0.5
AAK	Ala-Archa	73.67	317	P	P	23 08 25.0	-1.1
	comp=Z,1.0nm,0.3s,mb4.2,baz=155,slow=19,SNR=2.6						
AAK	Ala-Archa	73.67	317	*e*P	P	23 08 25.9	-0.2
EKS2	Erkin-Say	74.17	317	*e*P	P	23 08 25.4	-3.6
KURK	Kurchatov	74.48	326	P	P	23 08 30.2	-0.5
	comp=Z,1.1nm,0.8s,mb3.9,baz=119,slow=5.2,SNR=3.8						
KURK	Kurchatov	74.48	326	*e*P	P	23 08 30.8	+0.2
KBL	Kabul	75.06	307	*e*P	P	23 08 34.6	+0.2
	comp=Z,4.7nm,0.8s,mb4.5						
KKAR	Karatay Array	76.57	316	*e*P	P	23 08 42.5	-0.3
	comp=Z,1.4nm,0.6s,mb4.1						
BVAR	Borovoye Array	80.08	326	P	P	23 09 01.7	-0.3
	comp=Z,1.2nm,0.5s,mb4.1,baz=118,slow=7.2,SNR=10						
MAW	Mawson	80.13	202	P	P	23 09 03.1	+1.0
	comp=Z,1.8nm,0.8s,mb4.1,baz=99,slow=3.6,SNR=4.1						
BRVK	Borovoye	80.15	326	*e*P	P	23 09 01.9	-0.4
	comp=Z,7.1nm,1.3s,mb4.4						
BRVK				*e*PcP	PcP	23 09 09.1	-0.5
ABKAR	Akbulak array	85.31	320	*e*P	P	23 09 28.2	-1.1
	comp=Z,2.3nm,0.8s,mb4.4						
QSPA	South Pole Qui	85.54	180	*e*P	P	23 09 30.2	+0.4
	comp=Z,12nm,1.2s,mb5.0						
MCK	McKinley	86.69	25	*e*P	P	23 09 36.0	+0.2
AKTK	Aktyubinsk	86.76	321	P	P	23 09 35.1	-1.3
AKTO	Aktyubinsk	86.76	321	P	P	23 09 35.1	-1.3
	comp=Z,0.6nm,0.6s,mb4.0,baz=90,slow=16,SNR=2.4						
ARU	Arti	87.61	327	P	P	23 09 38.5	-1.9
ILAR	Eielson Array	87.84	25	P	P	23 09 40.3	-0.9
	comp=Z,2.7nm,0.9s,mb4.5,baz=265,slow=4.8,SNR=26						
ARCES	ARCESS Array B 101.74	341	P	Pdif		23 10 43.3	-1.8
	comp=Z,5.0nm,1.1s,baz=79,slow=4.7,SNR=3.5						
LPAZ	La Paz	147.28	130	PKPbc	PKPbc	23 16 37.0	+0.3
	comp=Z,4.7nm,0.7s,baz=211,slow=0.9,SNR=11						

MAN 04 23:07:21, 7.°34N×126.°08E, h32km, mb4.2, ML3.0, MS2.7,
2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.43	155	*e*P	Pb	23 07 32.7	+2.3
MATI				*e*S	Sb	23 07 38.4	+1.4
DMPH	Davao City--Mi	0.62	246	⇑*e*P	Pb	23 07 34.5	+1.1
DMPH				*e*S	Sb	23 07 51.4	+10
KCP	Kidapawan	1.03	252	⇑*e*P	Pn	23 07 44.8	+5.6
KCP				*i* S	Sn	23 08 03.6	+11
BUKP	Musuan	1.14	298	*e*P	Pn	23 07 41.3	+0.6
BUKP				*e*S	Sn	23 07 53.8	-1.5
CGP	Cagayan de Oro	1.76	309	*e*P	Pn	23 07 49.7	+0.4
CGP				*i* S	Sn	23 08 13.5	+2.8

*IDC **04** 23:41:42.8±0.9, 31.°02N×103.°76E, h0km, mb3.6/11,*
mb1 3.8/13, mb1mx3.7/23, mbtmp3.6/13, ML3.3/1, MS2.9/1,
Ms1 2.9/1, ms1mx2.2/23, Error ellipse: s-maj=29.6km
s-min=18.9km az=55.0
*ISCJB **04** 23:41:43.2±0.4, 30.°92N±0.°03×103.°47E±0.°06, h10km,*
mb3.5/12, Error ellipse: s-maj=8.0km s-min=4.8km
az=176.8
*NEIC **04** 23:41:44.0±0.4, 30.°95N×103.°82E, h10km, mb3.7/2, Error*
ellipse: s-maj=11.1km s-min=7.6km az=69.0
*BJI **04** 23:41:47.0, 30.°78N×103.°78E, h14km, mb4.0/2, ML3.7/11*
ISC 04 23:41:45.3±0.4, **30.°91N**±0.°03×**103.°48E**±0.°05, **h10**km, **n27,**
σ1§**21**/33, **mb3.5**/12, **1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.24	90	⇓*i*Pg	Pg	23 41 53.2	+3.0
CD2				Sg	Sg	23 41 59.5	+6.0
CD2				smax			
	comp=N,16μm,0.7s						
CD2				smax			
	comp=E,8μm,1.0s						
LZH	Lanzhou	5.17	3	Pg	Pg	23 43 24.5	+0.1
LZH				Sg	Sg	23 44 34.9	+3.6
LZH				smax			
	comp=N,210nm,1.1s						
LZH				smax			
	comp=E,100nm,1.0s						
LZH				LR	LR		
	comp=N,860nm,6.2s						
LZH				LR	LR		
	comp=E,1μm,9.5s						
LZH				LR	LR		
	comp=Z,870nm,9.7s						
ENH	Enshi	5.22	95	Pn	Pn	23 42 57.0	-6.4
GYA	Guiyang	5.24	147	Pn	Pn	23 43 05.0	+1.2
GYA				Sn	Sn	23 44 05.2	+0.9
GYA				Sg	Sg	23 44 32.0	-1.7
GYA				smax			
	comp=N,130nm,1.0s						
GYA				smax			
	comp=E,70nm,1.0s						
XAN	Xi'an	5.56	54	Pn	Pn	23 43 09.5	+1.5
XAN				Sn	Sn	23 44 13.8	+1.8
XAN				Sg	Sg	23 44 42.5	-1.2
XAN				smax			
	comp=N,230nm,0.9s						
XAN				smax			
	comp=E,110nm,1.0s						
KMI	Kunming	5.80	187	Pn	Pn	23 43 12.0	+0.6
KMI				Sn	Sn	23 44 27.5	+9.4
KMI				smax			
	comp=N,23nm,1.0s						
KMI				smax			
	comp=E,24nm,1.1s						
GTA	Gaotai	8.99	342	*e*P	Px	23 44 30.4	
GTA				pP		23 44 36.7	
GTA				sP		23 44 39.9	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CHTO	Chiang Mai	12.73	200	Pn	Pn	23 44 47.1	+0.7
CMAR	Chiang Mai Arr	13.06	199	Pn	Pn	23 44 51.2	+0.2
	baz=12,slow=12,SNR=5.7						
SONM	Songino Array	17.05	7	Pn	Pn	23 45 42.8	-0.9
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=2.2						
KSRS	Korea Array	21.22	65	P	P	23 46 25.4	-5.8
	comp=Z,0.6nm,0.6s,mb3.1,baz=253,slow=8.7,SNR=4.6						
KSRS				LR	LR	23 54 49.5	
	comp=Z,34nm,20.6s,baz=255,slow=38						
MK31	Makanchi Array	22.78	320	*e*P	P	23 46 49.2	+1.4
MKAR	Makanchi Array	22.78	320	P	P	23 46 47.5	-0.2
	comp=Z,0.5nm,0.7s,mb3.1,baz=120,slow=9.8,SNR=6.0						
TKM2	Tokmak 2	25.19	306	P	P	23 47 12.2	+1.3
	comp=Z,1.0nm,0.7s,mb3.5						
AAK	Ala-Archa	25.87	305	P	P	23 47 18.4	+1.3
ZALV	Zalesovo Beam	26.67	335	P	P	23 47 22.5	-1.7
	comp=Z,0.4nm,0.4s,mb3.3,baz=128,slow=9.3,SNR=2.9						
KURK	Kurchatov	27.08	324	P	P	23 47 28.2	+0.2
	comp=Z,0.7nm,0.5s,mb3.4,baz=129,slow=9.0,SNR=6.6						
KURK	Kurchatov	27.08	324	*e*P	P	23 47 27.7	-0.3
	comp=Z,0.8nm,0.4s,mb3.6						
BRTR	Keskin Array B	56.37	300	P	P	23 51 27.0	+0.3
	comp=Z,0.2nm,0.4s,mb3.5,baz=97,slow=5.8,SNR=3.1						
FINES	FINESS Array B	57.43	326	P	P	23 51 32.9	-0.9
	comp=Z,5.1nm,1.1s,mb4.5,baz=104,slow=8.0,SNR=5.7

EVR	Evrytania	0.90	14	ePN	Pn	00 23 20.9	+0.5
EVR	Evrytania	0.90	14	ePn	Pn	00 23 20.9	+0.5
ITM	Ithomi	0.92	159	ePN	Pn	00 23 19.3	-1.3
ITM	Ithomi	0.92	159	ePN	Pn	00 23 19.3	-1.3
ITM	Ithomi	0.92	159	ePn	Pn	00 23 19.3	-1.3
VLX	Vlachokerasia	0.95	134	P	Pb	00 23 19.9	-0.7
VLX				S	Sb	00 23 33.7	+0.8
VLX	Vlachokerasia	0.95	134	P	Pb	00 23 19.9	-0.7
VLX				S	Sb	00 23 33.7	+0.8
LTK	Loutraki	1.14	91	P	Pn	00 23 23.7	0.0
LTK				S	Sb	00 23 39.5	+1.2
LTK	Loutraki	1.14	91	P	Pn	00 23 23.7	0.0
LTK				S	Sb	00 23 39.5	+1.2
DID	Didima	1.46	111	P	Pn	00 23 28.5	+0.4
DID				S	Sn	00 23 49.2	+2.5
DID	Didima	1.46	111	P	Pn	00 23 28.5	+0.4
DID				S	Sn	00 23 49.2	+2.5

*ISCJB **05** 01:11:20.3±1.8, 32°.51S±0°.04×71°.7W±0°.1, h17km±11km, Error ellipse: s-maj=16.1km s-min=6.9km az=169.5*
*NEIC **05** 01:11:22.0, 32°.60S×71°.61W, h23km, ML4.0(GUC), After GUC.*
NEIC Felt [II] at Papudo, Puchuncavi, Quilpue, Quintero and Vina del Mar.
*GUC **05** 01:11:22.0±0.7, 32°.60S×71°.61W, h23km±24km, MD4.2, ML4.0*

ISC 05 01:11:21.6±1.5, 32°.54S±0°.05×71°.6W±0°.1, h21km±9km, n17, σ0°78/31, 7C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.66	131	⇑iP	Pb	01 11 34.4	+0.1
ROCH				i S	Sb	01 11 43.5	+0.5
ROCH	El Roble	0.66	131	⇓iP	Pb	01 11 34.4	0.0
ROCH				⇑iP		01 11 34.4	
ROCH				i S	Sb	01 11 43.5	+0.5
ROCH				i S	Sb	01 11 43.6	+0.5
JACH	Jahuel	0.86	100	⇑iP	Pb	01 11 37.5	-0.4
JACH				i S	Sb	01 11 49.3	+0.3
JACH	Jahuel	0.86	100	⇑iP	Pb	01 11 37.5	-0.4
JACH				i S	Sb	01 11 49.3	+0.3
PEL	Peldehue	0.97	128	⇑iP	Pb	01 11 39.4	-0.4
PEL				i S	Sb	01 11 52.3	0.0
PEL				AML	AML	01 11 53.4	
	comp=E,9μm,0.3s						
ANTU	Antumapu	1.31	142	eP	Pn	01 11 44.1	-0.5
ANTU				i S	Sn	01 12 00.8	-0.8
ANTU	Antumapu	1.31	142	eP	Pn	01 11 44.1	-0.5
ANTU				i S	Sn	01 12 00.8	-0.8
FCH	Farellones	1.35	126	⇓eP	Pn	01 11 46.1	+0.8
FCH				i S	Sn	01 12 01.3	-1.3
PCH	Pirque	1.41	140	eP	Pn	01 11 45.9	-0.2
PCH	Pirque	1.41	140	eP	Pn	01 11 45.9	-0.2
LNV	Longovilo	1.42	174	⇑iP	Pn	01 11 45.1	-1.1
LNV	Longovilo	1.42	174	⇑iP	Pn	01 11 45.1	-1.1
SJCH	San Jose de Ma	1.51	137	eP	Pn	01 11 47.3	-0.2
SJCH				i S	Sn	01 12 06.7	+0.1
SJCH	San Jose de Ma	1.51	137	eP	Pn	01 11 47.3	-0.2
SJCH				i S	Sn	01 12 06.7	+0.1
CACH	El Canelo	1.78	152	eP	Pn	01 11 52.4	+1.2
CACH				i S	Sn	01 12 15.5	+2.4
CACH	El Canelo	1.78	152	eP	Pn	01 11 52.4	+1.2
CACH				i S	Sn	01 12 15.5	+2.4
LCO	Las Campanas	3.60	13	ePn	Pn	01 12 16.2	0.0
LCO				eSn	Sn	01 12 58.6	+0.3

*ISCJB **05** 01:16:59.8±1.0, 39°.39N±0°.03×20°.47E±0°.05, h5km±8km, Error ellipse: s-maj=6.1km s-min=4.9km az=18.2*
*ATH **05** 01:16:59.8, 39°.42N×20°.57E, h36km±21km, MD3.1/4*
*NEIC **05** 01:16:59.8, 39°.42N×20°.57E, h36km, MD3.1(ATH), After ATH.*
*CSEM **05** 01:17:00.1±0.3, 39°.35N×20°.51E, h8km, MD3.1, Error ellipse: s-maj=6.7km s-min=5.9km az=44.0*
*THE **05** 01:17:00.6, 39°.38N×20°.54E, h0km±2km, ML2.0/4, Error ellipse: s-maj=2.9km s-min=0.9km az=223.0*

ISC 05 01:17:00.4±0.8, 39°.36N±0°.03×20°.48E±0°.05, h9km±6km, n29, σ1°27/52, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.42	44	ePb	Pg	01 17 07.6	-1.0
JAN				eSb	Sg	01 17 14.4	+0.3
JAN	Janina	0.42	44	ePB	Pg	01 17 07.6	-1.0
JAN				eSB	Sg	01 17 14.4	+0.3
KEK	Kerkira	0.63	305	ePn	Pg	01 17 12.6	0.0
KEK				eSn	Sg	01 17 24.2	+3.3
KEK	Kerkira	0.63	305	ePN	Pg	01 17 12.6	0.0
KEK				eSN	Sg	01 17 24.2	+3.3
KEK	Kerkira	0.63	305	P	Pg	01 17 12.6	0.0
KEK				S	Sg	01 17 23.1	+2.2
KEK	Kerkira	0.63	305	P	Pg	01 17 12.6	0.0
KEK				S	Sg	01 17 23.1	+2.2
KEK				eSn	Sg	01 17 24.2	+3.3
EVR	Evrytania	1.13	112	ePn	Pn	01 17 20.9	-1.4
EVR	Evrytania	1.13	112	ePN	Pn	01 17 20.9	-1.4
EVR	Evrytania	1.13	112	ePn	Pn	01 17 20.9	-1.4
NEST	Nestorio	1.15	22	P	Pb	01 17 21.2	-1.2
NEST				S	Sg	01 17 38.1	+0.8
NEST	Nestorio	1.15	22	P	Pb	01 17 21.2	-1.2
NEST				S	Sg	01 17 38.1	+0.8
VLS	Valsamata	1.18	176	ePn	Pn	01 17 22.3	-0.7
VLS	Valsamata	1.18	176	ePN	Pn	01 17 22.3	-0.7
VLS	Valsamata	1.18	176	P	Pb	01 17 22.4	-0.5
VLS				S	Sb	01 17 41.2	+3.0
VLS	Valsamata	1.18	176	ePn	Pn	01 17 22.3	-0.7
VLS				S	Sb	01 17 41.2	+3.0
THL	Klokotos Trika	1.21	80	P	Pb	01 17 22.0	-1.4
THL				S	Sb	01 17 38.5	-0.7
THL	Klokotos Trika	1.21	80	P	Pb	01 17 22.0	-1.4
THL				S	Sb	01 17 38.5	-0.7
KFL	Anninata	1.27	169	P	Pn	01 17 25.1	+0.9
KFL	Anninata	1.27	169	P	Pn	01 17 25.1	+0.9
FNA	Florina	1.59	26	P	Pn	01 17 28.9	+0.3
FNA				S	Sn	01 17 49.7	+0.5
FNA	Florina	1.59	26	P	Pn	01 17 28.9	+0.3
FNA				S	Sn	01 17 49.7	+0.5
LIT	Litokhoron	1.72	64	P	Pn	01 17 31.1	+0.6
LIT				S	Sn	01 17 53.8	+1.2
LIT	Litokhoron	1.72	64	P	Pn	01 17 31.1	+0.6
LIT				S	Sn	01 17 53.8	+1.2
BIA	Bitola	1.79	21	ePn	Pn	01 17 33.8	+2.4
BIA				eSg	Sg	01 17 57.6	-0.1
KRUS	Krusevo	2.10	16	ePn	Pn	01 17 37.6	+2.0
KRUS				eSg	Sg	01 18 01.7	-6.1
STON	Ston	4.09	330	ePn	Pn	01 18 00.7	-2.3
STON				Sn	Sn	01 18 47.8	-3.3
STON	Ston	4.09	330	ePn	Pn	01 18 00.7	-2.3
STON				Sn	Sn	01 18 47.7	-3.3
NVLJ	Novalja	6.67	323	ePn	Pn	01 18 38.1	-0.3
NVLJ				Sn	Sn	01 19 50.4	-4.2
NVLJ	Novalja	6.67	323	ePn	Pn	01 18 38.1	-0.4
NVLJ				Sn	Sn	01 19 50.3	-4.3

*ISK **05** 01:19:58.9, 37°.12N×29°.14E, h7km, MD2.8*
*ISCJB **05** 01:19:59.4±0.6, 37°.08N±0°.04×29°.15E±0°.03, h8km±6km, Error ellipse: s-maj=6.4km s-min=4.1km az=20.0*
*CSEM **05** 01:19:59.4±0.2, 37°.10N×29°.17E, h10km, MD2.8, Error ellipse: s-maj=5.9km s-min=3.5km az=14.0*
*DDA **05** 01:19:59.4, 37°.06N×29°.17E, h7km±5km, Md3.0*

ISC 05 01:19:59.8±0.5, 37°.08N±0°.04×29°.16E±0°.03, h12km±5km, n31, σ0°93/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.28	75	ePG	Pg	01 20 04.7	-0.8
GLHS				eSG	Sg	01 20 09.8	+0.4
GLHS	Glhisar (BURDU	0.28	75	ePg	Pg	01 20 04.7	-0.9
GLHS				eSg	Sg	01 20 09.9	+0.5
GOLH	Golhisar	0.35	64	i P	Pg	01 20 05.7	-1.2
GOLH				i S	Sg	01 20 12.8	+1.1
GOLH	Golhisar	0.35	64	i S	Sg	01 20 12.8	+1.1
GOLH	Golhisar	0.35	64	i P	Pg	01 20 05.7	-1.2
DNZL	Cakiroluk	0.61	352	i P	Pg	01 20 11.6	-0.1
DNZL				i S	Sg	01 20 20.2	+0.4
DNZL	Cakiroluk	0.61	352	i P	Pg	01 20 11.6	-0.2
DNZL				i S	Sg	01 20 20.2	+0.4
ELL	Elmali	0.69	119	ePG	Pg	01 20 12.9	-0.2
ELL				eSG	Sg	01 20 23.8	+1.6
ELL	Elmali	0.69	119	ePg	Pg	01 20 12.9	-0.2
ELL				eSg	Sg	01 20 23.8	+1.6
YER	Yerkesik	0.70	274	ePG	Pg	01 20 12.4	-1.1
YER				eSG	Sg	01 20 23.1	+0.4
YER	Yerkesik	0.70	274	ePg	Pg	01 20 12.4	-1.1
YER				eSg	Sg	01 20 23.1	+0.4
AKAS	Kas	0.92	157	i P	Pg	01 20 14.1	-3.5
AKAS				i S	Sg	01 20 30.2	+0.6
AKAS	Kas	0.92	157	i P	Pg	01 20 14.1	-3.5
AKAS				i S	Sg	01 20 30.2	+0.6
KORT	Korkueli	0.96	95	i P	Pg	01 20 17.3	-1.0
KORT	Korkueli	0.96	95	i P	Pg	01 20 17.3	-1.0
MLSB	Milas	1.12	281	ePN	Pn	01 20 20.2	-1.3
MLSB	Milas	1.12	281	ePn	Pn	01 20 20.2	-1.2
AYDN	Tasoluk	1.17	300	i P	Pb	01 20 22.9	+0.9
AYDN				i S	Sb	01 20 39.0	+1.8
AYDN	Tasoluk	1.17	300	i P	Pb	01 20 23.0	+1.0
AYDN				i S	Sb	01 20 39.0	+1.8
BCK	Bucak	1.20	71	ePN	Pn	01 20 22.2	-0.3
BCK	Bucak	1.20	71	ePn	Pn	01 20 22.2	-0.3
ANTB	Antalya	1.21	98	ePN	Pn	01 20 22.9	+0.3
ANTB	Antalya	1.21	98	ePn	Pn	01 20 22.9	+0.3
KHL	Karahalli	1.27	13	ePN	Pn	01 20 22.8	-0.7
KHL	Karahalli	1.27	13	ePn	Pn	01 20 22.8	-0.7
KHAL	Karahalli	1.31	11	i P	Pn	01 20 23.3	-0.7
KHAL				i S	Sb	01 20 45.6	+4.3
KHAL	Karahalli	1.31	11	i P	Pn	01 20 23.3	-0.7
DAT	Datca	1.32	255	ePN	Pn	01 20 24.2	+0.1
DAT	Datca	1.32	255	ePn	Pn	01 20 24.2	+0.1
SUTC	Sutluce-Ispart	1.52	74	ePN	Pn	01 20 27.4	+0.6
SUTC	Sutluce-Ispart	1.52	74	ePn	Pn	01 20 27.4	+0.5

MAN 05 01:32:40, 9°.54N×125°.74E, h8km, mb3.9, ML2.7, MS2.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.34	315	eP	Pg	01 32 48.6	+1.8
SCPH				eS	Sg	01 32 59.8	+8.5
BUTP	Butuan	0.58	191	eP	Pg	01 32 52.2	+1.0
BUTP				eS	Sg	01 33 00.7	+2.0
MSLP	Maasin	1.05	305	eP	Pg	01 32 59.7	-0.5
BUKP	Musuan	1.78	202	eP	Pn	01 33 12.2	+1.1

IDC 05 01:41:23.7±2.8, 30°.11S×178°.19W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/16, mbtmp4.0/3, Error ellipse: s-maj=80.8km s-min=34.9km az=40.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.96	267	P	P	01 49 24.6	-0.1
	1.1nm,0.7s,baz=103,slow=7.6,SNR=9.4						
WRA	Warramunga Arr	43.92	272	P	P	01 49 32.4	0.0
	0.9nm,0.4s,baz=112,slow=8.0,SNR=9.1						
QSPA	South Pole Qui	60.00	180	P	P	01 51 32.0	+0.5
	2.2nm,0.8s,baz=36,slow=3.5,SNR=13						
VNA3	Neumayer Olymp	78.61	176	e	P	01 53 24.7	-2.1
VNA2	Neumayer--Watz	79.04	177	e	P	01 53 28.2	-1.0
	baz=163,slow=4.2						
FINES	FINESS Array B	144.81	340	PKP	PKiKP	02 01 01.1	-4.6
	1.3nm,0.7s,baz=64,slow=6.3,SNR=7.9						

*DDA **05** 01:57:34.1, 40°.04N×39°.77E, h25km±2km, Md3.2, Ml3.5*
*ISK **05** 01:57:34.2, 39°.99N×39°.82E, h8km, MD2.9*
*CSEM **05** 01:57:34.9±0.2, 40°.00N×39°.75E, h10km, ML3.5, Error ellipse: s-maj=4.4km s-min=3.4km az=151.0*
*ISCJB **05** 01:57:35.1±0.6, 40°.01N±0°.02×39°.76E±0°.03, h12km±5km, Error ellipse: s-maj=4.7km s-min=3.7km az=41.8*

ISC 05 01:57:35.3±0.5, 40°.01N±0°.03×39°.75E±0°.03, h12km±4km, n40, σ0°80/63, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.40	231	PG	Pg	01 57 43.6	+0.4
EZC				SG	Sg	01 57 49.8	+1.3
EZC	Erzincan	0.40	231	i Pg	Pg	01 57 43.6	+0.4
EZC				i Sg	Sg	01 57 49.8	+1.3
KELT	Kelkit	0.41	291	i P	Pg	01 57 42.9	-0.5
KELT				i S	Sg	01 57 48.7	-0.2
KELT	Kelkit	0.41	291	i P	Pg	01 57 42.9	-0.5
KELT				i S	Sg	01 57 48.7	-0.1
GUMT	Gumushane	0.50	336	PG	Pg	01 57 45.5	+0.3
GUMT				SG	Sg	01 57 52.7	+0.9
KOPT	Kop Dagi	0.57	88	i P	Pg	01 57 45.5	-1.0
KOPT				i S	Sg	01 57 54.5	+0.4
KOPT	Kop Dagi	0.57	88	i P	Pg	01 57 45.5	-1.0
KOPT				i S	Sg	01 57 54.5	+0.4
MACK	Trabzon	0.94	1	i P	Pg	01 57 53.0	-0.4
MACK				i S	Sg	01 58 04.5	-1.2
MACK	Trabzon	0.94	1	i P	Pg	01 57 53.0	-0.4
MACK				i S	Sg	01 58 04.5	-1.2
PTK	Pertek	1.15	194	ePN	Pn	01 57 56.0	-1.2
PTK				eSN	Sn	01 58 12.4	-0.3
PTK	Pertek	1.15	194	ePn	Pn	01 57 56.0	-1.2
PTK				eSn	Sn	01 58 12.4	-0.4
ESPY	Espiye-Giresun	1.20	320	ePN	Pn	01 57 57.8	-0.1
ESPY	Espiye-Giresun	1.20	320	ePn	Pn	01 57 57.8	-0.1
SUSE	Susehri	1.21	280	i P	Pn	01 57 56.7	-1.2
SUSE				i S	Sb	01 58 13.2	-0.4
SUSE	Susehri	1.21	280	i P	Pn	01 57 56.7	-1.3
SUSE				i S	Sb	01 58 13.2	-0.4
KEMA	Kemaliye	1.22	233	i P	Pn	01 57 57.8	-0.4
KEMA				i S	Sb	01 58 13.7	-0.2
KEMA	Kemaliye	1.22	233	i P	Pn	01 57 57.8	-0.4
KEMA				i S	Sb	01 58 13.7	-0.3
EZM	Erzurum	1.24	94	ePN	Pn	01 57 58.0	-0.5
BINT	Bingol	1.26	153	ePN	Pn	01 57 57.8	-1.0
BINT	Bingol	1.26	153	ePn	Pn	01 57 57.8	-1.0
BNGL	BINGOL	1.51	134	i P	Pn	01 58 01.3	-0.9
BNGL				i S	Sn	01 58 22.5	+0.9
ELZG	Elazig	1.62	202	i P	Pn	01 57 58.4	-5.3
SVRC	Sivrice-ELAZID	1.66	192	ePN	Pn	01 58 04.4	+0.2
SVRC	Sivrice-ELAZID	1.66	192	ePn	Pn	01 58 04.4	+0.2
DDEM	Demirkent	1.77	59	i P	Pn	01 58 04.4	-1.3
DDEM				i S	Sn	01 58 28.0	0.0
DDEM	Demirkent	1.77	59	i P	Pn	01 58 04.4	-1.3
DDEM				i S	Sn	01 58 28.0	-0.1
RSDY	Resadiye-TOKAT	1.90	283	ePN	Pn	01 58 08.5	+1.0
DAGI	Agillar	1.97	56	i P	Pn	01 58 09.7	+1.3
DAGI				i S	Sn	01 58 32.8	-0.2
MALT	Malatya	1.98	212	ePN	Pn	01 58 09.5	+0.9
MALT	Malatya	1.98	212	ePn	Pn	01 58 09.5	+0.9
DBOC	Borcka	1.98	47	i P	Pn	01 58 10.1	+1.5
DBOC				i S	Sn	01 58 33.6	+0.2
DBOC	Borcka	1.98	47	i P	Pn	01 58 10.1	+1.5
DBOC				i S	Sn	01 58 33.6	+0.3
BCA	Borcka	2.02	44	ePN	Pn	01 58 09.5	+0.2
BCA	Borcka	2.02	44	ePn	Pn	01 58 09.5	+0.3
ARTV	Artvin	2.03	54	i P	Pn	01 58 10.0	+0.6
ARTV				i S	Sn	01 58 35.3	+0.6
ARTV	Artvin	2.03	54	i P	Pn	01 58 10.0	+0.6
ARTV				i S	Sn	01 58 35.3	+0.6
SVSK	Karacayir	2.12	269	ePN	Pn	01 58 11.9	+1.3
SVSK	Karacayir	2.12	269	ePn	Pn	01 58 11.9	+1.4
ERBA	Erbaa	2.39	287	i P	Pn	01 58 13.5	-0.8
ERBA	Erbaa	2.39	287	i P	Pn	01 58 13.5	-0.7

*DDA **05** 02:04:11.8, 39°.22N×29°.39E, h10km±4km, Md2.9*
*ISCJB **05** 02:04:12.1±0.7, 39°.21N±0°.03×29°.39E±0°.03, h6km±6km, Error ellipse: s-maj=5.6km s-min=4.1km az=26.0*
*CSEM **05** 02:04:12.2±0.1, 39°.22N×29°.42E, h2km, MD2.9, Error ellipse: s-maj=3.1km s-min=2.9km az=112.0*
*ISK **05** 02:04:13.3, 39°.13N×29°.35E, h21km, MD2.7*

ISC 05 02:04:12.4±0.5, 39°.22N±0°.03×29°.40E±0°.03, h6km±5km, n28, σ0°75/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.14	154	i P	Pg	02 04 15.2	-0.1
GDZ				i S	Sg	02 04 17.8	+0.5
GDZ	Gediz	0.14	154	i P	Pg	02 04 15.2	-0.2
GDZ				i S	Sg	02 04 17.8	+0.5
DEMI	Demirci	0.56	252	i P	Pg	02 04 23.5	+0.3
DEMI				i S	Sg	02 04 30.3	-0.2
DEMI	Demirci	0.56	252	i P	Pg	02 04 23.5	+0.3
DEMI				i S	Sg	02 04 30.3	-0.2
DURS	Dursunbey	0.81	298	i P	Pg	02 04 27.6	-0.4
DURS				i S	Sg	02 04 38.2	-0.4
DURS	Dursunbey	0.81	298	i P	Pg	02 04 27.6	-0.4
DURS				i S	Sg	02 04 38.2	-0.4
KHAL	Karahalli	0.85	175	i P	Pg	02 04 29.1	+0.4
KHAL				i S	Sg	02 04 39.5	-0.2
KHAL	Karahalli	0.85	175	i P	Pg	02 04 29.1	+0.4
KHAL				i S	Sg	02 04 39.5	-0.2
KHL	Karahalli	0.90	174	ePG	Pg	02 04 30.4	+0.8
KHL				eSG	Sg	02 04 41.1	-0.2
KHL	Karahalli	0.90	174	ePg	Pg	02 04 30.4	+0.7
KHL				eSg	Sg	02 04 41.1	-0.2
KULA	Kula-Manisa	0.91	220	ePG	Pg	02 04 29.8	-0.1
KULA				eSG	Sg	02 04 41.5	-0.2
KULA	Kula-Manisa	0.91	220	ePg	Pg	02 04 29.8	-0.1
KULA				eSg	Sg	02 04 41.5	-0.2
BORA	Eskisehir	1.05	51	i P	Pg	02 04 31.3	-1.2
BORA				i S	Sg	02 04 45.7	-0.4
BORA	Eskisehir	1.05	51	i P	Pg	02 04 31.3	-1.2
BORA				i S	Sg	02 04 45.7	-0.4
SHUT	Suhut-Afyon	1.12	126	ePN	Pn	02 04 34.4	-0.1
SHUT				eSN	Sn	02 04 49.0	-1.1
SHUT	Suhut-Afyon	1.12	126	ePn	Pn	02 04 34.4	-0.1
SHUT				eSn	Sn	02 04 49.0	-1.2
AKHS	Akhisar	1.28	255	i P	Pn	02 04 37.0	+0.3
AKHS				i S	Sg	02 04 53.7	+0.1
AKHS	Akhisar	1.28	255	i P	Pn	02 04 37.0	+0.2
AKHS				i S	Sg	02 04 53.7	+0.1
YLV	Yalova	1.35	359	ePN	Pn	02 04 38.8	+1.1
YLV	Yalova	1.35	359	ePn	Pn	02 04 38.8	+1.1
ARMT	Armutlu	1.41	343	ePN	Pn	02 04 39.0	+0.5
ARMT	Armutlu	1.41	343	ePn	Pn	02 04 39.0	+0.5
BALY	Balya	1.47	291	i P	Pn	02 04 40.6	+1.2
BALY				i S	Sn	02 04 56.2	-2.8
BALY	Balya	1.47	291	i P	Pn	02 04 40.6	+1.2
BALY				i S	Sn	02 04 56.2	-2.8
GULT	Gulveren	1.48	35	ePN	Pn	02 04 40.9	+1.4
GULT	Gulveren	1.48	35	ePn	Pn	02 04 40.9	+1.3
GONE	Gonen-Balikesi	1.56	303	ePN	Pn	02 04 40.5	-0.1
GONE	Gonen-Balikesi	1.56	303	ePn	Pn	02 04 40.5	-0.1

DJA 05 02:06:45, 3°.99S×126°.30E, h28km, MLv4.0/6, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	1.09	47	P	Pn	02 07 04.4	-0.1
NLAI				S	Sn	02 07 17.3	-1.3
LBMI	Labuha	3.54	20	P	Pn	02 07 39.8	+1.7
LBMI				S	Sn	02 08 21.1	+2.0
KDI	Kendari	3.67	270	P	Pn	02 07 39.9	-0.1
LUWI	Luwuk	4.58	310	P	Pn	02 07 51.6	-0.9
TNTI	Ternate	4.85	13	P	Pn	02 07 58.2	+2.0

*DDA **05** 02:10:40.9, 36°.97N×29°.14E, h25km±2km, Md3.1*
*ISCJB **05** 02:10:41.7±0.6, 36°.98N±0°.03×29°.15E±0°.03, h9km±5km, Error ellipse: s-maj=5.7km s-min=4.4km az=177.4*
*CSEM **05** 02:10:41.8±0.2, 36°.98N×29°.18E, h12km, MD2.9, Error ellipse: s-maj=4.0km s-min=3.1km az=4.0*
*ISK **05** 02:10:41.5, 36°.98N×29°.16E, h15km, MD2.9*

ISC 05 02:10:42.2±0.5, 36°.99N±0°.03×29°.16E±0°.03, h13km±4km, n44, σ0°83/61, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.32	58	ePG	Pg	02 10 48.3	-0.5
GLHS				eSG	Sg	02 10 54.0	+0.8
GLHS	Glhisar (BURDU	0.32	58	ePg	Pg	02 10 48.3	-0.5
GLHS				eSg	Sg	02 10 54.0	+0.8
GOLH	Golhisar	0.41	52	i P	Pg	02 10 49.1	-1.3
GOLH				i S	Sg	02 10 55.7	-0.1
GOLH	Golhisar	0.41	52	i P	Pg	02 10 49.1	-1.3
GOLH				i S	Sg	02 10 55.7	-0.2
TURN	Turunc	0.46	256	i P	Pg	02 10 55.3	+4.1
TURN				i S	Sg	02 11 06.5	+9.1
TURN	Turunc	0.46	256	i P	Pg	02 10 55.3	+4.1
ELL	Elmali	0.65	111	ePG	Pg	02 10 54.5	-0.4
ELL	Elmali	0.65	111	ePg	Pg	02 10 54.5	-0.4
DNZL	Cakiroluk	0.71	353	i P	Pg	02 10 55.1	-0.9
DNZL				i S	Sg	02 11 05.9	+0.6
DNZL	Cakiroluk	0.71	353	i P	Pg	02 10 55.1	-0.8
DNZL				i S	Sg	02 11 05.9	+0.6
YER	Yerkesik	0.71	282	ePG	Pg	02 10 56.6	+0.5
YER				eSG	Sg	02 11 06.2	+0.8
YER	Yerkesik	0.71	282	ePg	Pg	02 10 56.6	+0.5
YER				eSg	Sg	02 11 06.3	+0.8
DENT	Denizli	0.77	353	ePG	Pg	02 10 56.8	-0.4
DENT	Denizli	0.77	353	ePg	Pg	02 10 56.8	-0.4
AKAS	Kas	0.83	154	i P	Pg	02 10 56.8	-1.6
AKAS				i S	Sg	02 11 11.3	+2.0
AKAS	Kas	0.83	154	i P	Pg	02 10 56.8	-1.6
AKAS				i S	Sg	02 11 11.3	+2.0
MLSB	Milas	1.14	286	ePN	Pn	02 11 03.0	-0.9
MLSB	Milas	1.14	286	ePn	Pn	02 11 03.0	-0.9
AYDN	Tasoluk	1.22	304	i P	Pn	02 11 05.0	+0.1
AYDN				i S	Sb	02 11 19.7	-1.1
AYDN	Tasoluk	1.22	304	i P	Pn	02 11 05.1	+0.2
AYDN				i S	Sb	02 11 19.7	-1.0
BCK	Bucak	1.24	67	ePN	Pn	02 11 04.7	-0.5
BCK	Bucak	1.24	67	ePn	Pn	02 11 04.7	-0.5
DAT	Datca	1.29	259	ePN	Pn	02 11 05.3	-0.6
DAT	Datca	1.29	259	ePn	Pn	02 11 05.3	-0.6
KHL	Karahalli	1.36	12	ePN	Pn	02 11 06.7	-0.3
KHL	Karahalli	1.36	12	ePn	Pn	02 11 06.7	-0.2
BDRM	Kayabasi	1.37	274	i P	Pn	02 11 08.2	+1.2
BDRM	

ELL	**Elmali**	**0.73**	**108**	*e*PG	**Pg**	**02 19 28.6**	**-0.2**
ELL				*e*SG	**Sg**	**02 19 39.9**	**+1.5**
ELL	**Elmali**	**0.73**	**108**	*e*Pg	**Pg**	**02 19 28.6**	**-0.3**
ELL				*e*Sg	**Sg**	**02 19 39.9**	**+1.5**
AKAS	**Kas**	**0.87**	**148**	*i* P	**Pg**	**02 19 31.3**	**-0.2**
AKAS				*i* S	**Sg**	**02 19 47.5**	**+4.7**
AKAS	**Kas**	**0.87**	**148**	*i* P	**Pg**	**02 19 31.3**	**-0.2**
AKAS				*i* S	**Sg**	**02 19 47.5**	**+4.7**
MLSB	**Milas**	**1.06**	**288**	*e*PG	**Pg**	**02 19 34.8**	**-0.4**
MLSB	**Milas**	**1.06**	**288**	*e*Pg	**Pg**	**02 19 34.8**	**-0.3**
AYDN	**Tasoluk**	**1.15**	**307**	*i* P	**Pg**	**02 19 38.1**	**+1.2**
AYDN	**Tasoluk**	**1.15**	**307**	*i* P	**Pg**	**02 19 38.1**	**+1.2**
DAT	**Datca**	**1.20**	**258**	*e*PN	**Pn**	**02 19 37.8**	**-0.5**
DAT	**Datca**	**1.20**	**258**	*e*Pn	**Pn**	**02 19 37.8**	**-0.5**
KHAL	**Karahalli**	**1.44**	**14**	*i* P	**Pn**	**02 19 41.6**	**+0.1**
KHAL				*i* S	**Sb**	**02 20 01.1**	**+0.4**
KHAL	**Karahalli**	**1.44**	**14**	*i* P	**Pn**	**02 19 41.6**	**0.0**
KHAL				*i* S	**Sb**	**02 20 01.1**	**+0.4**

ISCJB ***05*** *02:35:37.1±0.6, 42°.41S±0°.03×172°.78E±0°.04, h17km±6km, mb4.0/5, Error ellipse: s-maj=7.1km s-min=3.4km az=44.8*
WEL ***05*** *02:35:37.6±0.1, 42°.38S×172°.72E, h12km, ML5.0/63, Error ellipse: s-maj=1.2km s-min=0.8km az=90.0*
WEL Felt from Manawatu to Canterbury, maximum reported intensity MM 5.
IDC ***05*** *02:35:37.3±1.1, 42°.36S×172°.41E, h0km, mb4.0/4, mb1 4.2/4, mb1mx4.0/12, mbtmp4.0/4, Error ellipse: s-maj=31.3km s-min=21.5km az=95.0*
NEIC ***05*** *02:35:37.6, 42°.38S×172°.72E, h12km, mb3.9/1, After WEL.*
NEIC Felt [IV] at Christchurch, Hanmer Springs and Nelson; [III] at Wellington.

ISC 05 02:35:37.2±0.8, 42°.40S±0°.03×172°.74E±0°.05, h11km±6km, n74, σ1°.21/72, mb4.0/5, 2C-2D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTZ	**Lake Taylor**	**0.51**	**222**	⇑P*	**Pb**	**02 35 47.6**	**-0.6**
LTZ				S*	**Sg**	**02 35 54.5**	**+0.5**
KHZ	**Kahutara**	**0.60**	**92**	⇓P*	**Pb**	**02 35 49.8**	**+0.3**
KHZ	**Kahutara**	**0.60**	**92**	*e*Pn	**Pg**	**02 35 49.6**	**+0.8**
KHZ				*e*Sn	**Sg**	**02 35 58.1**	**+1.6**
THZ	**Tophouse**	**0.65**	**11**	⇑P*	**Pb**	**02 35 48.8**	**-1.6**
DSZ	**Denniston Nort**	**0.95**	**313**	⇓P*	**Pb**	**02 35 55.0**	**-0.7**
BSWZ	**Blackbirch Sta**	**1.09**	**51**	P*	**Pb**	**02 35 57.0**	**-0.9**
CRLZ	**Canterbury Las**	**1.18**	**184**	P*	**Pb**	**02 35 59.1**	**-0.3**
NNZ	**Nelson**	**1.28**	**22**	P*	**Pb**	**02 35 59.6**	**-1.5**
CMWZ	**Cape Campbell**	**1.28**	**60**	PN	**Pn**	**02 36 02.5**	**+1.6**
MQZ	**McQueen's Vall**	**1.31**	**183**	PN	**Pn**	**02 36 00.3**	**-0.9**
TUWZ	**Tuamarina**	**1.32**	**43**	PN	**Pn**	**02 36 01.0**	**-0.5**
QRZ	**Quartz Range**	**1.58**	**354**	PN	**Pn**	**02 36 04.9**	**-0.1**
WVZ	**Waitaha Valley**	**1.62**	**245**	PN	**Pn**	**02 36 05.9**	**+0.3**
RPZ	**Rata Peaks**	**1.80**	**223**	PN	**Pn**	**02 36 07.6**	**-0.4**
RPZ	**Rata Peaks**	**1.80**	**223**	Pn	**Pn**	**02 36 07.2**	**-0.9**
	181nm,0.3s,baz=24,slow=0.7,SNR=254						
RPZ				Sn	**Sn**	**02 36 31.6**	**+0.7**
	294nm,0.3s,baz=342,slow=9.6,SNR=10						
DUWZ	**D'Urville Isla**	**1.83**	**30**	PN	**Pn**	**02 36 08.7**	**+0.3**
SNZO	**South Karori**	**1.83**	**54**	PN	**Pn**	**02 36 08.7**	**+0.3**
SNZO	**South Karori**	**1.83**	**54**	*e*Pn	**Pn**	**02 36 08.8**	**+0.3**
BHW	**Baring Head**	**1.88**	**59**	PN	**Pn**	**02 36 09.3**	**+0.2**
WEL	**Wellington**	**1.88**	**54**	PN	**Pn**	**02 36 09.8**	**+0.7**
PLWZ	**Palliser**	**2.05**	**67**	PN	**Pn**	**02 36 11.2**	**-0.3**
MSWZ	**Moikau Station**	**2.12**	**63**	PN	**Pn**	**02 36 12.1**	**-0.3**
CAW	**Cannon Point**	**2.17**	**54**	PN	**Pn**	**02 36 14.0**	**+0.8**
KIW	**Kapiti Island**	**2.24**	**47**	PN	**Pn**	**02 36 14.8**	**+0.8**
PAWZ	**Paruwai Farm**	**2.25**	**64**	PN	**Pn**	**02 36 13.6**	**-0.6**
MTW	**Mount Morrison**	**2.41**	**60**	PN	**Pn**	**02 36 16.6**	**+0.1**
OGWZ	**Otaki Gorge**	**2.42**	**50**	PN	**Pn**	**02 36 16.8**	**+0.3**
TRWZ	**Traveller**	**2.42**	**67**	PN	**Pn**	**02 36 15.8**	**-0.8**
HOWZ	**Holdsworth Sta**	**2.57**	**55**	PN	**Pn**	**02 36 18.8**	**+0.2**
TMWZ	**Te Maipa**	**2.69**	**62**	PN	**Pn**	**02 36 19.4**	**-0.9**
LBZ	**Lake Benmore**	**2.72**	**222**	PN	**Pn**	**02 36 21.0**	**+0.3**
TIWZ	**Tintock**	**2.87**	**57**	PN	**Pn**	**02 36 21.8**	**-0.9**
POWZ	**Post Office Ro**	**3.04**	**50**	PN	**Pn**	**02 36 24.6**	**-0.5**
ODZ	**Otahua Downs**	**3.05**	**209**	*e*Pn	**Pn**	**02 36 24.1**	**-1.1**
BFZ	**Birch Farm**	**3.15**	**58**	PN	**Pn**	**02 36 24.9**	**-1.6**
DVHZ	**Dannevirke**	**3.33**	**52**	PN	**Pn**	**02 36 27.7**	**-1.3**
RAEZ	**Rainy Point**	**3.35**	**23**	PN	**Pn**	**02 36 32.4**	**+3.0**
DREZ	**Durham Road**	**3.40**	**20**	PN	**Pn**	**02 36 32.1**	**+2.1**
PNHZ	**Pukenui**	**3.61**	**48**	PN	**Pn**	**02 36 31.9**	**-1.0**
VRZ	**Vera Road**	**3.61**	**26**	PN	**Pn**	**02 36 34.7**	**+1.7**
PRHZ	**Porangahau**	**3.63**	**55**	PN	**Pn**	**02 36 31.3**	**-1.8**
WPHZ	**Waipukurau**	**3.64**	**51**	PN	**Pn**	**02 36 32.1**	**-1.2**
MTVZ	**Mangateitei**	**3.66**	**35**	PN	**Pn**	**02 36 35.2**	**+1.6**
PKVZ	**Pokaka**	**3.68**	**33**	PN	**Pn**	**02 36 35.3**	**+1.3**
MOVZ	**Moawhango**	**3.76**	**38**	PN	**Pn**	**02 36 35.1**	**+0.1**
DRZ	**Dome Shelter**	**3.79**	**35**	PN	**Pn**	**02 36 36.8**	**+1.5**
FWVZ	**Far West T-bar**	**3.80**	**35**	PN	**Pn**	**02 36 36.7**	**+1.2**
WPVZ	**Whakapapa**	**3.84**	**35**	PN	**Pn**	**02 36 37.3**	**+1.2**
BHHZ	**Black Hill Sta**	**3.85**	**42**	PN	**Pn**	**02 36 36.1**	**-0.1**
OTVZ	**Oturere**	**3.92**	**35**	PN	**Pn**	**02 36 38.4**	**+1.1**
KAHZ	**Kahuranaki**	**4.07**	**52**	PN	**Pn**	**02 36 37.5**	**-1.7**
KATZ	**Kakaramea**	**4.09**	**34**	PN	**Pn**	**02 36 41.0**	**+1.4**
NMHZ	**Naumai**	**4.52**	**44**	PN	**Pn**	**02 36 44.2**	**-1.3**
SYZ	**Scrubby Hill**	**4.87**	**211**	PN	**Pn**	**02 36 49.1**	**-1.1**
WHZ	**Wether Hill Ro**	**4.91**	**223**	PN	**Pn**	**02 36 48.3**	**-2.4**
KNZ	**Kokohu**	**5.05**	**50**	PN	**Pn**	**02 36 49.7**	**-3.0**
URZ	**Urewera**	**5.32**	**40**	Pn	**Pn**	**02 36 54.4**	**-2.0**
	7.1nm,0.3s,baz=236,slow=7.9,SNR=17						
URZ				Sn	**Sn**	**02 37 53.8**	**-3.8**
	13nm,0.3s,baz=93,slow=23,SNR=2.8						
MWZ	**Matawai**	**5.47**	**44**	PN	**Pn**	**02 36 56.2**	**-2.2**
OUZ	**Omahuta**	**7.20**	**6**	*e*Pn	**Pn**	**02 37 23.6**	**+1.3**
	105nm,0.6s						
ASAR	**Alice Springs**	**37.14**	**288**	P	**P**	**02 42 48.1**	**+0.4**
	1.2nm,0.5s,mb4.0,baz=128,slow=7.9,SNR=20						
WB2	**Warramunga Arr**	**39.28**	**293**	*e*P	**P**	**02 43 09.2**	**+3.2**
WRA	**Warramunga Arr**	**39.29**	**293**	P	**P**	**02 43 05.4**	**-0.6**
	1.0nm,0.6s,mb3.7,baz=130,slow=7.9,SNR=3.7						
CASY	**Casey**	**41.05**	**213**	*e*P	**P**	**02 43 21.6**	**+1.6**
	2.0nm,0.8s,mb3.8						
FITZ	**Fitzroy Crossi**	**46.60**	**286**	P	**P**	**02 44 05.2**	**-0.1**
	1.5nm,0.6s,mb4.1,baz=152,slow=7.2,SNR=8.7						
QSPA	**South Pole Qui**	**47.73**	**180**	P	**P**	**02 44 16.0**	**+2.8**
	6.0nm,0.9s,mb4.6,baz=49,slow=2.8,SNR=12						
VNA3	**Neumayer Olymp**	**66.65**	**179**	*e*	**P**	**02 46 28.8**	**+1.7**
VNA3				*e*		02 46 36.9	
VNA2	**Neumayer--Watz**	**66.98**	**180**	*e*	**P**	**02 46 28.5**	**-0.7**
	baz=177,slow=5.2						
VNA2				*e*	pP	02 46 32.2	-0.8
VNA1	**Neumayer--Stat**	**67.26**	**180**	*e*	**P**	**02 46 33.8**	**+2.8**
KURK	**Kurchatov**	**123.53**	**310**	PKP	PKPdf	02 54 33.3	-0.4
	0.3nm,0.3s,baz=101,slow=1.8,SNR=4.2						
DBIC	**Dimbokro**	**144.35**	**184**	PKP	PKPdf	02 55 16.4	+2.8
	1.9nm,0.6s,baz=272,slow=2.3,SNR=3.2						
ARCES	**ARCESS Array B**	**147.99**	**339**	PKPbc	PKPbc	02 55 23.6	+2.4
	2.2nm,0.7s,baz=64,slow=2.8,SNR=10						
BRTR	**Keskin Array B**	**149.25**	**279**	PKPbc	PKPbc	02 55 27.8	+2.4
	1.5nm,0.7s,baz=142,slow=5.3,SNR=10						
FINES	**FINESS Array B**	**152.44**	**325**	PKPbc	PKPbc	02 55 32.6	+0.5
	1.7nm,0.6s,baz=356,slow=5.7,SNR=7.0						
FINES				PKPab	PKPab	02 55 41.5	-1.0
	2.4nm,0.7s,baz=86,slow=2.5,SNR=4.9						
HFS	**Hagfors**	**158.10**	**331**	PKPab	PKPab	02 56 08.7	+2.0
	2.3nm,0.8s,baz=204,slow=3.3,SNR=5.1						

IDC ***05*** *03:03:07.3±1.4, 16°.30S×178°.40W, h0km, mb4.0/6, mb1 4.4/6, mb1mx4.1/15, mbtmp4.0/6, Error ellipse: s-maj=99.5km s-min=19.3km az=149.0*
ISCJB ***05*** *03:03:48.3±1.0, 17°.2S±0°.4×178°.5W±0°.2, h400km, mb3.9/10, Error ellipse: s-maj=56.7km s-min=13.8km az=148.9*

ISC 05 03:03:49.4±0.9, 17°.3S±0°.4×178°.4W±0°.2, h400km, n13, σ0°.98/13, mb3.9/10, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMSA	**Cobar Meteorol**	**35.44**	**240**	*e*P	**P**	**03 10 10.5**	**+0.7**
COEN	**Coen**	**37.08**	**270**	*e*P	**P**	**03 10 25.8**	**+2.0**
STKA	**Stephens Creek**	**38.91**	**240**	P	**P**	**03 10 39.2**	**+0.6**
	5.0nm,0.5s,mb4.1,baz=92,slow=9.7,SNR=20						
STKA	**Stephens Creek**	**38.91**	**240**	⇓*i*P	**P**	**03 10 39.3**	**+0.7**
	4.2nm,0.6s,mb4.0						
BBOO	**Buckleboo**	**43.69**	**240**	*e*P	**P**	**03 11 16.5**	**-0.5**
	5.3nm,0.3s,mb4.3						
WRA	**Warramunga Arr**	**44.72**	**259**	P	**P**	**03 11 24.6**	**-0.6**
	3.8nm,0.5s,mb4.0,baz=93,slow=6.8,SNR=100						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**03 11 26.9**	**0.0**
	31nm,0.5s,mb4.9,baz=89,slow=8.3,SNR=447						
KAKA	**Kakadu**	**47.57**	**268**	*e*P	**P**	**03 11 47.1**	**-0.1**
	5.7nm,0.3s,mb4.4						
FORT	**Forrest**	**50.25**	**244**	*e*P	**P**	**03 12 05.3**	**-1.8**
	11nm,0.6s,mb4.3						
NVAR	**Mina Array Bea**	**78.99**	**44**	P	**P**	**03 15 11.1**	**+0.8**
	0.8nm,0.7s,mb3.5,baz=222,slow=9.4,SNR=5.1						
ILAR	**Eielson Array**	**85.29**	**13**	P	**P**	**03 15 40.3**	**-1.6**
	0.1nm,0.3s,mb3.0,baz=222,slow=5.6,SNR=3.3						
TXAR	**Lajitas Array**	**85.68**	**58**	P	**P**	**03 15 45.2**	**+0.5**
	0.9nm,0.8s,mb3.5,baz=228,slow=6.2,SNR=12						
PDAR	**Pinedale Array**	**86.92**	**43**	P	**P**	**03 15 50.3**	**0.0**
	0.3nm,0.5s,mb3.3,baz=229,slow=5.7,SNR=3.8						

THR ***05*** *03:11:42.5±0.9, 29°.71N×51°.41E, h15km, ML4.2*
ISCJB ***05*** *03:11:45.7±0.2, 29°.91N±0°.02×51°.77E±0°.02, h10km, mb4.3/64, MS3.5/15, Error ellipse: s-maj=3.0km s-min=2.4km az=34.0*
CSEM ***05*** *03:11:46.2±0.1, 29°.92N×51°.75E, h2km, mb4.4/22, Ms3.5, Error ellipse: s-maj=4.6km s-min=3.5km az=31.0*
IDC ***05*** *03:11:46.3±0.7, 30°.05N×51°.73E, h0km, mb4.2/26, mb1 4.2/30, mb1mx4.2/38, mbtmp4.2/30, ML4.2/4, MS3.3/14, Ms1 3.4/14, ms1mx3.2/39, Error ellipse: s-maj=16.8km s-min=13.0km az=150.0*
TEH ***05*** *03:11:47.3, 29°.89N×51°.75E, h2km*
NEIC ***05*** *03:11:47.0, 29°.90N×51°.70E, h3km, mb4.3/26, ML4.2(THR), MN4.4(TEH), After TEH.*
SGS ***05*** *03:11:48.4, 30°.03N×52°.01E, h8km*
MOS ***05*** *03:11:49.3±1.0, 30°.02N×51°.79E, h33km, mb4.5/37, Error ellipse: s-maj=9.5km s-min=4.9km az=118.0*
OMAN ***05*** *03:12:40.9±99.0, 27°.05N×54°.99E, h10km, Error ellipse: s-maj=157.6km s-min=9.7km az=331.0*

ISC 05 03:11:47.6±0.2, 29°.93N±0°.02×51°.80E±0°.02, h10km, n369, σ1°.21/386, mb4.3/64, MS3.5/15, 10C-6D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**0.69**	**115**	Pg	**Pg**	**03 12 00.1**	**-0.8**
SHI				Sg	**Sg**	**03 12 09.2**	**-0.6**
SHI	**Shiraz**	**0.69**	**115**	*e*Pg	**Pg**	**03 12 00.1**	**-0.8**
SHI				*e*		03 12 01.1	
	comp=Z,69μm,0.1s						
SHI				*e*Sg	**Sg**	**03 12 09.3**	**-0.5**
SHI	**Shiraz**	**0.69**	**115**	P	**Pg**	**03 12 00.1**	**-0.8**
SHI				*e*Sg	**Sg**	**03 12 09.3**	**-0.5**
IPAR	**Pars**	**1.09**	**95**	Pg	**Pg**	**03 12 06.1**	**-2.5**
IPAR				Sg	**Sg**	**03 12 23.2**	**+0.5**
IPAR	**Pars**	**1.09**	**95**	*e*Sg	**Sg**	**03 12 23.2**	**+0.5**
IPAR				⇓*e*Pg	**Pg**	**03 12 06.1**	**-2.5**
IPAR				*e*		03 12 29.3	
	comp=Z,75μm,0.3s						
ISRV	**Sarvestan**	**1.27**	**115**	Pn	**Pn**	**03 12 09.8**	**-1.6**
ISRV	**Sarvestan**	**1.27**	**115**	*e*	**Pg**	**03 12 15.2**	**+3.2**
	comp=Z,84μm,0.1s						
ISRV				*e*Pn	**Pn**	**03 12 09.9**	**-1.5**
IGAR	**Gharneh**	**2.47**	**5**	⇓*e*Pn	**Pn**	**03 12 29.1**	**+1.2**
IGAR				*e*		03 12 33.9	
	comp=Z,12μm,0.3s						
ISAD	**Sadrabad**	**2.55**	**39**	Pn	**Pn**	**03 12 30.9**	**+1.8**
ISAD				Sn	**Sn**	**03 13 01.9**	**+1.7**
ISAD	**Sadrabad**	**2.55**	**39**	*e*Pn	**Pn**	**03 12 31.0**	**+1.9**
ISAD				*e*Sn	**Sn**	**03 13 01.9**	**+1.7**
ISAD				*e*		03 13 10.1	
	comp=Z,12μm,0.2s						
ISAD	**Sadrabad**	**2.55**	**39**	Pn	**Pn**	**03 12 30.9**	**+1.8**
ISAD				*e*Sn	**Sn**	**03 13 01.9**	**+1.7**
IMEH	**Mehriz**	**2.83**	**58**	Pn	**Pn**	**03 12 34.3**	**+1.5**
IMEH	**Mehriz**	**2.83**	**58**	*e*Pn	**Pn**	**03 12 34.3**	**+1.5**
IMEH				*e*		03 12 39.2	
	comp=Z,8μm,0.2s						
IMEH	**Mehriz**	**2.83**	**58**	*e*Pn	**Pn**	**03 12 34.3**	**+1.5**
IPIR	**Pirpir**	**2.85**	**344**	Pn	**Pn**	**03 12 34.7**	**+1.5**
IPIR	**Pirpir**	**2.85**	**344**	*e*Pn	**Pn**	**03 12 34.8**	**+1.6**
IPIR				*e*		03 12 48.5	
	comp=Z,9μm,0.2s						
IPIR	**Pirpir**	**2.85**	**344**	Pn	**Pn**	**03 12 34.7**	**+1.5**
NASN	**Na'in**	**2.98**	**17**	P	**Pn**	**03 12 35.0**	**0.0**
NASN	**Na'in**	**2.98**	**17**	*e*Pn	**Pn**	**03 12 35.8**	**+0.8**
NASN				AML	AML	03 13 26.7	
	comp=N,307nm,0.6s						
NASN	**Na'in**	**2.98**	**17**	P	**Pn**	**03 12 35.0**	**0.0**
IZEF	**Zefreh**	**2.99**	**9**	Pn	**Pn**	**03 12 36.1**	**+1.1**
IZEF	**Zefreh**	**2.99**	**9**	⇓*e*Pn	**Pn**	**03 12 36.2**	**+1.2**
IZEF				*e*		03 12 53.1	
	comp=Z,5μm,0.3s						
IZEF	**Zefreh**	**2.99**	**9**	Pn	**Pn**	**03 12 36.1**	**+1.1**
ICHK	**Chekchek**	**3.21**	**44**	Pn	**Pn**	**03 12 39.3**	**+1.2**
ICHK	**Chekchek**	**3.21**	**44**	*e*Pn	**Pn**	**03 12 39.3**	**+1.2**
ICHK				*e*		03 12 58.4	
	comp=Z,7μm,0.3s						
ICHK	**Chekchek**	**3.21**	**44**	*e*Pn	**Pn**	**03 12 39.3**	**+1.2**
SHGR	**Shooshtar-Gavs**	**3.37**	**311**	P	**Pn**	**03 12 34.0**	**-6.2**
SHGR	**Shooshtar-Gavs**	**3.37**	**311**	*e*Pn	**Pn**	**03 12 35.1**	**-5.2**
SHGR				AML	AML	03 13 44.2	
	comp=N,516nm,0.6s						
IKLH	**Kolahrood**	**3.38**	**357**	Pn	**Pn**	**03 12 41.1**	**+0.7**
IKLH	**Kolahrood**	**3.38**	**357**	*e*Pn	**Pn**	**03 12 41.2**	**+0.8**
IKLH				*e*		03 13 50.9	
	comp=Z,10μm,0.4s						
IKLH	**Kolahrood**	**3.38**	**357**	Pn	**Pn**	**03 12 41.1**	**+0.7**
UMR	**Umm Al-Rimmam**	**3.57**	**265**	*e*P	**Pn**	**03 12 46.0**	**+2.9**
UMR	**Umm Al-Rimmam**	**3.57**	**265**	*e*P	**Pn**	**03 12 46.0**	**+2.9**
QRN	**Al-Qurain**	**3.59**	**252**	*e*P	**Pn**	**03 12 46.4**	**+3.0**
QRN				AML	AML	03 13 31.8	
	comp=Z,404nm,0.3s						
IBAF	**Bafgh**	**3.64**	**62**	Pn	**Pn**	**03 12 45.1**	**+1.1**
IBAF	**Bafgh**	**3.64**	**62**	*e*Pn	**Pn**	**03 12 45.1**	**+1.1**
IBAF				*e*		03 12 55.3	
	comp=Z,4μm,0.2s						
IBAF	**Bafgh**	**3.64**	**62**	*e*Pn	**Pn**	**03 12 45.1**	**+1.1**
KBD	**Kabd**	**3.66**	**259**	*e*P	**Pn**	**03 12 47.2**	**+3.0**
KBD				AML	AML	03 13 33.9	
	comp=Z,318nm,0.4s						
KBD	**Kabd**	**3.66**	**259**	*e*P	**Pn**	**03 12 47.2**	**+2.9**
KFJS		**3.80**	**244**	P	**Pn**	**03 12 48.4**	**+2.1**
KFJS		**3.80**	**244**	P	**Pn**	**03 12 48.4**	**+2.2**
KFJS				S	**Sn**	**03 13 33.2**	**+2.2**
RDF	**Al-Radifah**	**3.84**	**256**	*e*P	**Pn**	**03 12 50.1**	**+3.3**
RDF	**Al-Radifah**	**3.84**	**256**	*e*P	**Pn**	**03 12 50.1**	**+3.3**
MIB	**Mutribah**	**3.88**	**269**	*e*P	**Pn**	**03 12 49.6**	**+2.3**
MIB				AML	AML	03 13 39.7	
	comp=Z,601nm,0.6s						
MIB	**Mutribah**	**3.88**	**269**	*e*P	**Pn**	**03 12 49.6**	**+2.3**
NAY	**Al-Naaiem**	**4.03**	**261**	*e*P	**Pn**	**03 12 52.1**	**+2.7**
NAY				AML	AML	03 13 45.4	
	comp=Z,274nm,0.5s						
NAY	**Al-Naaiem**	**4.03**	**261**	*e*P	**Pn**	**03 12 52.1**	**+2.7**
KRBR	**Kerman**	**4.30**	**88**	Pn	**Pn**	**03 12 54.0**	**+0.8**
KRBR	**Kerman**	**4.30**	**88**	*e*Pn	**Pn**	**03 12 54.4**	**+1.2**
KRBR				AML	AML	03 14 11.7	
	comp=N,295nm,0.8s						
KRBR				AML	AML	03 14 20.7	
	comp=E,204nm,0.7s						
KRBR	**Kerman**	**4.30**	**88**	Pn	**Pn**	**03 12 54.0**	**+0.8**
ISFB	**Sefidab**	**4.42**	**5**	Pn	**Pn**	**03 12 54.5**	**-0.2**
ISFB	**Sefidab**	**4.42**	**5**	*e*Pn	**Pn**	**03 12 54.6**	**-0.1**
ISFB				*e*		03 13 16.9	
	comp=Z,3μm,0.5s						
ISFB	**Sefidab**	**4.42**	**5**	*e*Pn	**Pn**	**03 12 54.6**	**-0.1**
GHVR	**GHOM**	**4.55**	**355**	Pn	**Pn**	**03 12 55.0**	**-1.6**
GHVR	**GHOM**	**4.55**	**355**	*e*Pn	**Pn**	**03 12 56.6**	**0.0**
GHVR	**GHOM**	**4.55**	**355**	*e*Pn	**Pn**	**03 12 55.9**	**-0.7**
BOQSS		4.58	208	P	**Pn**	**03 12 59.7**	**+2.7**
BNDS	**Bandar-Abbas**	**4.60**	**122**	Pn	**Pn**	**03 12 56.0**	**-1.2**
BNDS	**Bandar-Abbas**	**4.60**	**122**	*e*Pn	**Pn**	**03 12 56.6**	**-0.6**
BNDS	**Bandar-Abbas**	**4.60**	**122**	*e*Pn	**Pn**	**03 12 56.2**	**-1.0**
ASAO	**Ashtian**	**4.84**	**342**	Pn	**Pn**	**03 12 59.0**	**-1.5**
ASAO	**Ashtian**	**4.84**	**342**	*e*Pn	**Pn**	**03 12 59.1**	**-1.4**
IBND	**Bandar-abas**	**4.84**	**120**	*e*Pn	**Pn**	**03 13 00.6**	**0.0**
IBND	**Bandar-abas**	**4.84**	**120**	*e*Pn	**Pn**	**03 13 00.6**	**0.0**
SLWS		**5.22**	**192**	P	**Pn**	**03 13 07.5**	**+1.8**
SLWS		**5.22**	**192**	P	**Pn**	**03 13 07.5**	**+1.8**
SLWS				S	**Sn**	**03 14 05.7**	**-0.3**
ILAS	**Lasjerd**	**5.52**	**10**	Pn	**Pn**	**03 13 10.0**	**+0.1**
ILAS	**Lasjerd**	**5.52**	**10**	*e*Pn	**Pn**	**03 13 10.1**	**+0.2**
ILAS	**Lasjerd**	**5.52**	**10**	Pn	**Pn**	**03 13 10.0**	**+0.1**
IR3	**Iran Long-Peri**	**5.56**	**353**	*e*Pn	**Pn**	**03 13 10.4**	**-0.1**
IKOM	**Komasi**	**5.58**	**320**	Pn	**Pn**	**03 13 10.8**	**+0.1**
IKOM	**Komasi**	**5.58**	**320**	*e*Pn	**Pn**	**03 13 10.8**	**+0.1**
IKOM				*e*		03 13 44.5	
	comp=Z,4μm,0.3s						
IKOM	**Komasi**	**5.58**	**320**	*e*Pn	**Pn**	**03 13 10.8**	**+0.1**
BANOM	**Banah**	**5.64**	**134**	P	**Pn**	**03 13 11.1**	**-0.4**
	SNR=124						
BANOM	**Banah**	**5.64**	**134**	P	**Pn**	**03 13 11.2**	**-0.4**
	SNR=124						
IRAZ	**Razeghan**	**5.68**	**344**	Pn	**Pn**	**03 13 13.0**	**+1.0**
IRAZ	**Razeghan**	**5.68**	**344**	*e*Pn	**Pn**	**03 13 13.0**	**+1.0**
IRAZ				*e*		03 14 21.4	
	comp=Z,2μm,0.4s						
IRAZ	**Razeghan**	**5.68**	**344**	*e*Pn	**Pn**	**03 13 13.0**	**+1.0**
DAMV	**Damavand**	**5.68**	**1**	Pn	**Pn**	**03 13 12.0**	**-0.1**
DAMV	**Damavand**	**5.68**	**1**	*e*Pn	**Pn**	**03 13 12.2**	**+0.2**
DAMV	**Damavand**	**5.68**	**1**	*e*Pn	**Pn**	**03 13 12.2**	**+0.1**
IFIR	**Firoozkooh**	**5.75**	**8**	Pn	**Pn**	**03 13 12.6**	**-0.4**
IFIR	**Firoozkooh**	**5.75**	**8**	*e*Pn	**Pn**	**03 13 12.6**	**-0.4**
IFIR				*e*		03 13 17.4	
	comp=Z,2μm,0.1s						
IFIR	**Firoozkooh**	**5.75**	**8**	*e*Pn	**Pn**	**03 13 12.6**	**-0.4**
IANJ	**Anjilo**	**5.80**	**17**	Pn	**Pn**	**03 13 14.2**	**+0.5**
IANJ	**Anjilo**	**5.80**	**17**	*e*Pn	**Pn**	**03 13 14.2**	**+0.5**
IANJ	**Anjilo**	**5.80**	**17**	*e*Pn	**Pn**	**03 13 14.2**	**+0.5**
IMHD	**Mahdasht**	**5.81**	**351**	Pn	**Pn**	**03 13 12.9**	**-1.0**
IMHD	**Mahdasht**	**5.81**	**351**	*e*Pn	**Pn**	**03 13 13.0**	**-0.9**
IMHD				*e*		03 15 12.0	
	comp=Z,863nm,0.5s						
IMHD	**Mahdasht**	**5.81**	**351**	*e*Pn	**Pn**	**03 13 13.0**	**-0.9**
BTHS		**5.93**	**188**	P	**Pn**	**03 13 15.9**	**+0.4**
BTHS		**5.93**	**188**	P	**Pn**	**03 13 15.9**	**+0.4**
BTHS				S	**Sn**	**03 14 23.5**	**0.0**
ISHM	**Shahmirzad**	**5.99**	**12**	Pn	**Pn**	**03 13 16.9**	**+0.6**
ISHM	**Shahmirzad**	**5.99**	**12**	*e*Pn	**Pn**	**03 13 17.0**	**+0.7**
ISHM	**Shahmirzad**	**5.99**	**12**	Pn	**Pn**	**03 13 16.9**	**+0.6**
NAZ	**Nazwa, Dubai**	**6.00**	**144**	P	**Pn**	**03 13 18.4**	**+1.9**
	SNR=7.1						
NAZ	**Nazwa, Dubai**	**6.00**	**144**	P	**Pn**	**03 13 18.4**	**+1.9**
	SNR=7.1						
THKV	**Tehran--Karaj**	**6.01**	**353**	Pn	**Pn**	**03 13 15.0**	**-1.7**
THKV	**Tehran--Karaj**	**6.01**	**353**	*e*Pn	**Pn**	**03 13 15.7**	**-1.0**
ASUD	**Al Ashush, Dub**	**6.15**	**148**	P	**

SOC pmax pmax
comp=Z,14nm,0.9s
SOC MLR MLR
comp=Z,278nm,15.0s
BRTR Keskin Array B 17.80 308 P **Pn 03 15 55.5 +0.2**
comp=Z,0.8nm,0.3s,baz=132,slow=13,SNR=43
BRTR Keskin Array B 17.80 308 P **Pn 03 15 55.6 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.3s
BRTR Keskin Array B 17.80 308 P **Pn 03 15 55.6 +0.2**
comp=Z,1.0nm,0.3s
ILGA Ilgaz 18.40 312 *i* P **Pn 03 16 04.4 +1.6**
BOLV Bolvadin 19.29 303 *i* P **Pn 03 16 13.7 +0.1**
GOLH Golhisar 19.88 297 *i* P **Pn 03 16 19.6 -1.1**
KKAR Karatay Array 19.91 44 *e*P **Pn 03 16 19.7 -1.3**
KKAR pmax pmax
comp=Z,1.0nm,0.4s
KKAR Karatay Array 19.91 44 *e*P **Pn 03 16 19.7 -1.3**
comp=Z,1.3nm,0.4s
KKAR Karatay Array 19.91 44 *e*P **Pn 03 16 19.7 -1.3**
comp=Z,1.3nm,0.4s
KHAL Karahalli 20.25 300 *i* P **P 03 16 24.3 +1.2**
ABKAR Akbulak array 20.27 16 *e*P **P 03 16 22.1 -1.0**
comp=Z,1.5nm,0.3s
ABKAR Akbulak array 20.27 16 *e*P **P 03 16 22.1 -1.0**
comp=Z,1.5nm,0.3s
DNZL Cakiroluk 20.40 298 *i* P **P 03 16 21.9 -2.7**
GDZ Gediz 20.49 302 *i* P **P 03 16 24.5 -1.2**
AKTK Aktyubinsk 21.00 11 P **P 03 16 30.3 -0.8**
AKTK Aktyubinsk 21.00 11 P **P 03 16 30.3 -0.8**
comp=Z,3.0nm,0.4s,mb4.0
AKTO Aktyubinsk 21.00 11 P **P 03 16 30.3 -0.8**
comp=Z,2.7nm,0.3s,mb4.0,baz=190,slow=7.8,SNR=11
AKTO Aktyubinsk 21.00 11 P **P 03 16 30.3 -0.8**
AKTO pmax pmax
comp=Z,3.0nm,0.4s,mb4.0
DEMI Demirci 21.04 302 *i* P **P 03 16 31.4 -0.3**
DURS Dursunbey 21.40 303 *i* P **P 03 16 34.7 -0.8**
BUY Buyukada 21.40 307 *i* P **P 03 16 35.6 +0.1**
EKS2 Erkin-Say 21.72 48 *e*P **P 03 16 39.3 +0.4**
comp=Z,9.3nm,1.1s,mb4.1
EKS2 Erkin-Say 21.72 48 *e*P **P 03 16 39.3 +0.4**
comp=Z,9.3nm,1.1s,mb4.1
BALY Balya 22.07 303 *i* P **P 03 16 39.6 -3.0**
AAK Ala-Archa 22.17 49 P **P 03 16 45.1 +1.4**
comp=Z,1.1nm,0.3s,mb3.8,baz=227,slow=9.0,SNR=3.1
AAK LR LR 03 25 57.4
comp=Z,139nm,20.1s,MS3.4,baz=41,slow=38
AAK Ala-Archa 22.17 49 *i* P **P 03 16 49.0 +5.2**
AAK pmax pmax
comp=Z,5.0nm,1.4s,mb3.8
AAK Ala-Archa 22.17 49 *e*P **P 03 16 45.4 +1.6**
comp=Z,6.4nm,0.9s,mb4.0
AAK Ala-Archa 22.17 49 *e*P **P 03 16 45.3 +1.5**
comp=Z,6.4nm,0.9s,mb4.0
VRHR Novokhopersk 22.47 343 *e*P **P 03 16 50.7 +3.9**
VRHR *e* 03 17 04.7
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s,mb4.7
VRHR pmax pmax
comp=N,20nm,0.8s
VORD Divnogorie 23.00 339 *e*P **P 03 16 51.7 -0.7**
VORD *e*S **S 03 20 57.3 -5.5**
VORD pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
VORD smax
comp=N,160nm,3.7s
VORD smax
comp=Z,30nm,2.8s
VORD smax
comp=E,140nm,3.0s
VORD Divnogorie 23.00 339 *e*P **P 03 16 51.7 -0.7**
comp=E,160nm,3.7s
TKM2 Tokmak 2 23.03 49 *e*P **P 03 16 53.1 +0.3**
TKM2 pmax pmax
comp=Z,5.0nm,1.0s,mb3.9
TKM2 Tokmak 2 23.03 49 *e*P **P 03 16 53.1 +0.3**
comp=Z,4.5nm,1.0s,mb3.9
TKM2 Tokmak 2 23.03 49 *e*P **P 03 16 53.1 +0.3**
comp=Z,4.5nm,1.0s,mb3.9
VSR Storozhevoye 23.26 340 *e*P **P 03 16 54.6 -0.6**
VSR *e*S **S 03 21 02.9 -4.1**
VSR pmax pmax
comp=Z,5.0nm,0.4s,mb4.3
VSR pmax pmax
comp=N,6.0nm,0.9s
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR smax
comp=N,180nm,1.6s
VSR smax
comp=Z,10.0nm,1.8s
VSR smax
comp=E,40nm,1.1s
VSR Storozhevoye 23.26 340 *e*P **P 03 16 54.6 -0.6**
comp=E,180nm,1.6s,mb5.2
TIRR Tirgusor 23.50 315 *e*P **P 03 16 57.3 -0.4**
TIRR pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
TIRR Tirgusor 23.50 315 *e*P **P 03 16 57.3 -0.4**
comp=Z,6.8nm,0.8s,mb4.1
TIRR Tirgusor 23.50 315 ⇑*i*P **P 03 16 57.1 -0.6**
TIRR Tirgusor 23.50 315 *e*P **P 03 16 57.3 -0.4**
comp=Z,6.8nm,0.8s,mb4.1
ALN Alexandroupoli 23.59 305 P **P 03 16 57.9 -0.7**
AOS Alonnisos 24.69 299 P **P 03 17 09.8 +1.0**
DID Didima 24.86 295 P **P 03 17 09.7 -0.7**
VRI Vrincioaia 25.24 316 ⇓*i*P **P 03 17 14.9 +1.3**
PLOR Plostina 25.27 316 ⇑*i*P **P 03 17 15.8 +1.8**
VLX Vlachokerasia 25.52 295 P **P 03 17 15.5 -0.8**
MLR Muntele Rosu 25.53 315 ⇑*i*P **P 03 17 18.4 +2.1**
GUR Goura 25.63 296 P **P 03 17 17.8 +0.5**
LIT Litokoron 25.96 301 P **P 03 17 20.0 -0.2**
LAKA Lakka 25.97 297 P **P 03 17 20.5 +0.1**
VOIR 26.06 314 ⇑*i*P **P 03 17 22.2 +1.1**
VTS Vitosha 26.15 307 ⇑*i*P **P 03 17 19.6 -2.4**
AKASG Malin Array Be 26.76 327 P **P 03 17 25.7 -1.7**
comp=Z,2.0nm,0.4s,mb4.0,baz=134,slow=8.7,SNR=12
AKASG Malin Array Be 26.76 327 P **P 03 17 25.7 -1.7**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 26.76 327 *e*P **P 03 17 26.1 -1.3**
KIEV Kiev 26.77 327 *e*P **P 03 17 26.4 -1.0**
KIEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
KIEV Kiev 26.77 327 *e*P **P 03 17 26.4 -1.0**
comp=Z,4.7nm,0.6s,mb4.2
BRVK Borovoye 26.78 25 *e*P **P 03 17 27.2 -0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
BRVK Borovoye 26.78 25 *e*P **P 03 17 27.2 -0.3**
comp=Z,2.8nm,0.6s,mb4.0
BVAR Borovoye Array 26.79 25 P **P 03 17 27.8 +0.2**
comp=Z,2.2nm,0.6s,mb3.9,baz=205,slow=6.6,SNR=16
BVAR Borovoye Array 26.79 25 P **P 03 17 27.8 +0.2**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
KFL Anninata 26.87 296 P **P 03 17 28.2 -0.4**
FNA Florina 26.95 302 P **P 03 17 30.3 +1.1**
BUR08 Bucovina Ar. S 27.05 318 *e*P **P 03 17 31.3 +1.2**
KRUS Krusevo 27.18 303 *e*Pn **P 03 17 32.2 +0.9**
OBN Obninsk 27.43 341 ⇑*e*P **P 03 17 34.6 +1.3**
OBN *e* 03 18 20.7
OBN *e*SS 03 23 22.6
OBN pmax pmax
comp=Z,11nm,0.9s,mb4.4
OBN MLR MLR
comp=Z,100nm,26.0s,MS3.3
TIR Tirane 28.19 303 *e*P **P 03 17 41.6 +1.3**
comp=Z,36nm,0.8s,mb5.1
KURK Kurchatov 28.87 36 P **P 03 17 45.0 -1.3**
comp=Z,0.9nm,0.5s,mb3.8,baz=235,slow=9.3,SNR=6.4
KURK LR LR 03 30 29.9
comp=Z,63nm,20.7s,MS3.2,baz=220,slow=39
KURK Kurchatov 28.87 36 P **P 03 17 45.0 -1.2**
KURK pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
KURK MLR MLR
comp=Z,63nm,20.7s,MS3.2
KURK Kurchatov 28.87 36 *e*P **P 03 17 47.2 +0.9**
comp=Z,2.6nm,0.7s,mb4.1
MK31 Makanchi Array 28.99 46 *e*P **P 03 17 47.5 +0.1**
MKAR Makanchi Array 28.99 46 P **P 03 17 47.6 +0.2**
comp=Z,0.4nm,0.5s,mb3.4,baz=238,slow=7.0,SNR=4.9
MKAR LR LR 03 30 00.3
comp=Z,81nm,18.7s,MS3.4,baz=159,slow=38
CUC Castrocucco 30.97 299 *e*P **P 03 18 06.3 +1.3**
comp=Z,8.2nm,0.6s,mb4.7
PRGR Permogore 31.97 354 P **P 03 18 10.0 -3.5**
PRGR pmax pmax
comp=Z,7.0nm,0.3s,mb5.0
KLMR Klimovskoe 31.99 349 *e*P **P 03 18 12.3 -1.4**
KLMR pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
MORC Moravsky Berou 32.53 317 *e*P **P 03 18 18.7 +0.2**
MORC pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
MORC Moravsky Berou 32.53 317 *e*P **P 03 18 18.7 +0.1**
comp=Z,2.5nm,0.8s,mb4.2
VRAC Vranov 32.90 316 P **P 03 18 21.1 -0.7**
comp=Z,1.9nm,0.3s,mb4.5,baz=83,slow=3.6,SNR=3.8
VRAC LR LR 03 33 58.1
comp=Z,64nm,20.3s,MS3.3,baz=91,slow=41
VRAC Vranov 32.90 316 P **P 03 18 21.1 -0.7**
VRAC pmax pmax
comp=Z,2.0nm,0.3s
VRAC MLR MLR
comp=Z,64nm,20.3s
VSU Vasula 33.31 336 ⇓*e*P **P 03 18 25.7 +0.4**
VSU pmax pmax
comp=Z,2.0nm,0.2s,mb4.7
VSU MLR MLR
comp=Z,108nm,17.0s,MS3.6
DPC Dobruska-Polom 33.48 318 *e*P **P 03 18 27.1 +0.2**
DPC Dobruska-Polom 33.48 318 *e*P **P 03 18 27.1 +0.2**
DPC Dobruska-Polom 33.48 318 P **P 03 18 27.1 +0.2**
ZALV Zalesovo Beam 33.83 35 P **P 03 18 28.7 -1.2**
comp=Z,2.1nm,0.4s,mb4.4,baz=261,slow=8.3,SNR=5.2
ZALV LR LR 03 33 12.4
comp=Z,27nm,18.4s,MS3.0,baz=166,slow=38
ZALV Zalesovo Beam 33.83 35 P **P 03 18 28.7 -1.2**
ZALV LR LR 03 33 12.4
MOA Molln 33.84 313 ⇑*i*P **P 03 18 30.0 0.0**
comp=Z,6.2nm,1.1s,mb4.4
MOA Molln 33.84 313 P **P 03 18 30.0 0.0**
comp=Z,6.2nm,1.1s,mb4.4
PRU Pruhonice 34.40 316 *e*P **P 03 18 32.9 -1.9**
PRU Pruhonice 34.40 316 *e*P **P 03 18 32.9 -1.9**
PRU Pruhonice 34.40 316 P **P 03 18 32.9 -1.9**
KHC Kasperske Hory 34.68 314 *e*P **P 03 18 36.9 -0.4**
KHC Kasperske Hory 34.68 314 *e*P **P 03 18 37.3 0.0**
comp=Z,4.9nm,1.0s,mb4.4
KHC Kasperske Hory 34.68 314 *e*P **P 03 18 36.9 -0.4**
KHC Kasperske Hory 34.68 314 P **P 03 18 36.9 -0.4**
JOF Joensuu 35.55 344 *e*P **P 03 18 43.7 -0.9**
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
JOF Joensuu 35.55 344 *e*p **P 03 18 43.7 -0.9**
comp=Z,2.8nm,0.7s,mb4.3
MOTA Moosalm 35.75 311 ⇑*i*P **P 03 18 45.2 -1.3**
comp=Z,5.5nm,0.7s,mb4.6
MOTA Moosalm 35.75 311 P **P 03 18 45.2 -1.3**
comp=Z,5.5nm,0.7s,mb4.6
FINES FINESS Array B 35.79 339 P **P 03 18 45.3 -1.4**
comp=Z,2.8nm,0.4s,mb4.6,baz=144,slow=9.5,SNR=24
FINES LR LR 03 35 26.5
comp=Z,71nm,18.6s,MS3.5,baz=170,slow=40
FINES FINESS Array B 35.79 339 P **P 03 18 45.3 -1.4**
FINES pmax pmax
comp=Z,3.0nm,0.4s
FINES MLR MLR
comp=Z,71nm,18.6s
CLL Collm 35.79 318 *e*P **P 03 18 47.0 +0.2**
CLL Collm 35.79 318 *e*P **P 03 18 47.0 +0.2**
KEST Kesra 35.93 291 P **P 03 18 50.3 +2.1**
comp=Z,1.1nm,0.8s,mb3.9,baz=232,slow=2.5,SNR=5.0
RETA Reutte 36.01 311 ⇑*i*P **P 03 18 47.6 -1.1**
comp=Z,2.5nm,0.4s,mb4.5
RETA Reutte 36.01 311 P **P 03 18 47.6 -1.2**
comp=Z,2.5nm,0.4s,mb4.5
KAF Kangasniemi 36.24 340 *e*P **P 03 18 48.5 -2.0**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KAF Kangasniemi 36.24 340 *e*p **P 03 18 48.5 -2.0**
comp=Z,2.1nm,0.5s,mb4.3
KAF Kangasniemi 36.24 340 *e*P **P 03 18 48.5 -2.0**
comp=Z,2.1nm,0.5s,mb4.3
PGF Pioggiola 36.38 302 *e*P **P 03 18 52.2 +0.2**
PGF Pioggiola 36.38 302 *e*P **P 03 18 52.2 +0.2**
DAVOX Davos/Dischmat 36.43 309 P **P 03 18 52.4 0.0**
comp=Z,3.7nm,0.6s,mb4.5,baz=122,slow=9.4,SNR=6.7
DAVOX LR LR 03 35 58.6
comp=Z,58nm,19.2s,MS3.4,baz=267,slow=40
DAVA Damuels 36.55 310 ⇑*i*P **P 03 18 52.1 -1.2**
comp=Z,16nm,0.8s,mb4.9
DAVA Damuels 36.55 310 P **P 03 18 52.1 -1.2**
comp=Z,16nm,0.8s,mb4.9
SBF Sospel 37.66 304 *e*P **P 03 19 03.1 +0.3**
comp=Z,32nm,0.9s,mb4.8
SBF Sospel 37.66 304 *e*P **P 03 19 03.1 +0.3**
SBF pmax pmax
comp=Z,16nm,0.9s,mb4.8
SBF Sospel 37.66 304 *e*P **P 03 19 03.1 +0.3**
comp=Z,16nm,0.9s,mb4.8
SBF Sospel 37.66 304 *e*P **P 03 19 03.1 +0.3**
comp=Z,16nm,0.9s,mb4.8
MBDF Montbardon 38.23 305 *e*P **P 03 19 07.4 -0.3**
comp=Z,14nm,0.6s,mb4.6
MBDF Montbardon 38.23 305 *e*P **P 03 19 07.4 -0.3**
MBDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
MBDF Montbardon 38.23 305 *e*P **P 03 19 07.4 -0.3**
comp=Z,7.3nm,0.6s,mb4.6
MBDF Montbardon 38.23 305 *e*P **P 03 19 07.4 -0.3**
comp=Z,7.2nm,0.6s,mb4.6
LPG La Plagne 38.35 307 *e*P **P 03 19 08.6 0.0**
comp=Z,16nm,0.8s,mb4.5
LPG La Plagne 38.35 307 *e*P **P 03 19 08.6 0.0**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
LPG La Plagne 38.35 307 *e*P **P 03 19 08.6 0.0**
comp=Z,7.8nm,0.8s,mb4.5
LPG La Plagne 38.35 307 *e*P **P 03 19 08.6 0.0**
comp=Z,7.8nm,0.8s,mb4.5
LPL La Plagne 38.36 307 *e*P **P 03 19 08.6 -0.2**
comp=Z,12nm,0.8s,mb4.4
LPL La Plagne 38.36 307 *e*P **P 03 19 08.6 -0.2**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
LPL La Plagne 38.36 307 *e*P **P 03 19 08.6 -0.2**
comp=Z,6.1nm,0.8s,mb4.4
LPL La Plagne 38.36 307 *e*P **P 03 19 08.6 -0.2**
comp=Z,6.1nm,0.8s,mb4.4
CABF La Chapelle 38.97 308 *e*P **P 03 19 13.8 0.0**
comp=Z,24nm,0.8s,mb4.7
CABF La Chapelle 38.97 308 *e*P **P 03 19 13.8 0.0**
CABF pmax pmax
comp=Z,12nm,0.8s,mb4.7
CABF La Chapelle 38.97 308 *e*P **P 03 19 13.8 0.0**
comp=Z,12nm,0.8s,mb4.7
CABF La Chapelle 38.97 308 *e*P **P 03 19 13.8 0.0**
comp=Z,12nm,0.8s,mb4.7
HFS Hagfors 39.49 331 P **P 03 19 16.3 -1.7**
comp=Z,3.0nm,0.5s,mb4.3,baz=131,slow=9.3,SNR=29
HFS LR LR 03 37 38.5
comp=Z,63nm,19.2s,MS3.5,baz=119,slow=39
HFS Hagfors 39.49 331 P **P 03 19 16.3 -1.7**
HFS pmax pmax
comp=Z,3.0nm,0.5s
HFS MLR MLR
comp=Z,63nm,19.3s
HFS Hagfors 39.49 331 P **P 03 19 16.3 -1.7**
HFS LR LR 03 37 38.5
GTA Gaotai 40.20 63 *e*P **P 03 19 22.6 -1.6**
GTA pP pP 03 19 27.0 -0.3
GTA sP sP 03 19 30.2 +1.6
GTA S tx 03 25 57.2
GTA SS tx 03 29 07.4
GTA pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
GTA LR LR
comp=N,120nm,16.1s,MS4.0
GTA LR LR
comp=E,120nm,11.9s,MS4.0
GTA LR LR
comp=Z,120nm,14.7s,MS3.9
SMF Signal de Mont 40.51 308 *e*P **P 03 19 25.9 -0.7**
comp=Z,15nm,0.8s,mb4.4
SMF Signal de Mont 40.51 308 *e*P **P 03 19 25.9 -0.7**
SMF pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
SMF Signal de Mont 40.51 308 *e*P **P 03 19 25.9 -0.7**
comp=Z,7.6nm,0.8s,mb4.4
SMF Signal de Mont 40.51 308 *e*P **P 03 19 25.9 -0.7**
comp=Z,7.6nm,0.8s,mb4.4
LOR Lormes 40.57 309 *e*P **P 03 19 26.3 -0.9**
LOR Lormes 40.57 309 *e*P **P 03 19 26.3 -0.9**
SSF Saint Saulge 40.79 309 *e*P **P 03 19 28.5 -0.5**
SSF Saint Saulge 40.79 309 *e*P **P 03 19 28.5 -0.5**
NB2 NORSAR Subarra 41.01 331 P **P 03 19 28.4 -2.2**
comp=Z,1.1nm,0.5s,mb3.7,baz=121,slow=8.6
NB2 NORSAR Subarra 41.01 331 P **P 03 19 28.4 -2.2**
comp=Z,1.1nm,0.5s,mb3.7,SNR=6.5
NOA NORSAR Array B 41.01 331 P **P 03 19 28.9 -1.7**
comp=Z,1.1nm,0.6s,mb3.6,baz=121,slow=8.3,SNR=5.5
NOA LR LR 03 36 40.4
comp=Z,31nm,18.5s,MS3.2,baz=115,slow=37
NOA NORSAR Array B 41.01 331 P **P 03 19 28.9 -1.7**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,31nm,18.5s
TCF Toulx Ste Croi 41.59 307 *e*P **P 03 19 35.7 +0.1**
TCF Toulx Ste Croi 41.59 307 *e*P **P 03 19 35.7 +0.1**
TAM Tamanrasset 41.85 272 *e*P **P 03 19 39.0 +1.0**
TAM pmax pmax
comp=Z,3.0nm,1.1s,mb3.8
TAM Tamanrasset 41.85 272 *e*P **P 03 19 39.0 +1.0**
comp=Z,2.7nm,1.1s,mb3.8
KEV Kevo 42.29 347 *e*P **P 03 19 38.4 -2.6**
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
KEV Kevo 42.29 347 *e*p **P 03 19 38.4 -2.6**
comp=Z,3.2nm,0.6s,mb4.1
ARCES ARCESS Array B 42.40 347 P **P 03 19 40.1 -1.8**
comp=Z,1.1nm,0.6s,mb3.7,baz=148,slow=7.4,SNR=15
ARCES ARCESS Array B 42.40 347 P **P 03 19 40.1 -1.8**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
EPF Esparros 42.76 302 *e*P **P 03 19 44.2 -1.0**
EPF Esparros 42.76 302 *e*P **P 03 19 44.2 -1.0**
LDF La Druitiere 43.39 310 *e*P **P 03 19 49.2 -1.0**
comp=Z,3.7nm,0.5s,mb4.1
LDF La Druitiere 43.39 310 *e*P **P 03 19 49.2 -1.0**
LDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
LDF La Druitiere 43.39 310 *e*P **P 03 19 49.2 -1.0**
comp=Z,1.9nm,0.5s,mb4.1
LDF La Druitiere 43.39 310 *e*P **P 03 19 49.2 -1.0**
comp=Z,1.9nm,0.5s,mb4.1
ETSF Etsaut 43.42 302 *e*P **P 03 19 50.8 +0.3**
comp=Z,17nm,1.0s,mb4.4
ETSF Etsaut 43.42 302 *e*P **P 03 19 50.8 +0.3**
ETSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
ETSF Etsaut 43.42 302 *e*P **P 03 19 50.8 +0.3**
comp=Z,8.4nm,1.0s,mb4.4
ETSF Etsaut 43.42 302 *e*P **P 03 19 50.8 +0.3**
comp=Z,8.4nm,1.0s,mb4.4
FLN La Foliniere 43.64 311 *e*P **P 03 19 51.6 -0.6**
FLN La Foliniere 43.64 311 *e*P **P 03 19 51.6 -0.6**
SJPF Ste Jean 43.91 302 *e*P **P 03 19 54.5 0.0**
comp=Z,15nm,0.5s,mb4.7
SJPF Ste Jean 43.91 302 *e*P **P 03 19 54.5 0.0**
SJPF pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
SJPF Ste Jean 43.91 302 *e*P **P 03 19 54.5 0.0**
comp=Z,7.5nm,0.5s,mb4.7
SJPF Ste Jean 43.91 302 *e*P **P 03 19 54.5 0.0**
comp=Z,7.5nm,0.5s,mb4.7
CHTO Chiang Mai 44.08 93 *e*P **P 03 19 55.8 -0.3**
CHTO pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
CHTO Chiang Mai 44.08 93 *e*P **P 03 19 55.8 -0.3**
comp=Z,6.8nm,0.9s,mb4.4
CMAR Chiang Mai Arr 44.22 94 P **P 03 19 58.2 +1.0**
comp=Z,1.0nm,0.3s,mb4.0,baz=285,slow=9.0,SNR=5.2
CMAR LR LR 03 39 34.9
comp=Z,57nm,21.9s,MS3.5,baz=32,slow=38
CMAR Chiang Mai Arr 44.22 94 P **P 03 19 58.3 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,57nm,21.9s
ESDC Sonseca Array 46.16 298 P **P 03 20 12.0 -0.4**
comp=Z,0.8nm,0.6s,mb3.9,baz=75,slow=8.2,SNR=4.1
ESDC Sonseca Array 46.16 298 P **P 03 20 12.0 -0.4**
EKA Eskdalemuir Ar 46.19 320 P **P 03 20 11.2 -1.2**
comp=Z,2.2nm,0.7s,mb4.2,baz=103,slow=8.3,SNR=14
EKA Eskdalemuir Ar 46.19 320 P **P 03 20 11.2 -1.2**
EKA pmax pmax
comp=Z,2.0nm,0.7s
ESK Eskdalemuir 46.22 320 *i* P **P 03 20 08.8 -3.8**
MDT Midelt 47.77 289 P **P 03 20 25.7 +0.6**
comp=Z,1.2nm,0.4s,mb4.3,baz=226,slow=21,SNR=12
HHC Hu-ho-hao-te 49.07 60 *e*P **P 03 20 37.0 +2.0**
HHC PcP PcP 03 22 01.7 +3.0
HHC PP PP 03 22 30.2 +1.7
HHC ScP ScP 03 25 56.8 +2.9
HHC S **S 03 27 41.8 +1.9**
HHC ScS ScS 03 30 27.1 -0.3
HHC SS SS 03 31 07.0 -3.7
HHC pmax pmax
comp=Z,24nm,1.2s,mb5.1
HHC pmax pmax
comp=Z,73nm,6.2s
HHC LR LR
comp=N,140nm,12.4s,MS4.4
HHC LR LR
comp=E,190nm,13.9s,MS4.4
HHC LR LR
comp=Z,130nm,14.7s,MS4.0
TORD Torodi Ar. Bea 49.11 261 P **P 03 20 35.0 -0.6**
comp=Z,3.3nm,0.6s,mb4.6,baz=58,slow=6.9,SNR=5.7
SPITS Spitsbergen Ar 50.83 351 P **P 03 20 48.9 +1.0**
comp=Z,1.1nm,0.3s,mb4.2,baz=148,slow=11,SNR=5.6
SPITS Spitsbergen Ar 50.83 351 P **P 03 20 48.9 +1.1**
SPITS pmax pmax
comp=Z,1.0nm,0.3s
DBIC Dimbokro 57.91 258 P **P 03 21 41.8 +1.5**
comp=Z,6.2nm,0.9s,mb4.6,baz=59,slow=12,SNR=3.7
DBIC Dimbokro 57.91 258 P **P 03 21 41.8 +1.5**
DBIC pmax pmax
comp=Z,6.0nm,0.9s
LBTB Lobatse 60.14 208 P **P 03 21 56.2 +0.8**
comp=Z,2.8nm,0.6s,mb4.5,baz=205,slow=3.0,SNR=5.6
LBTB Lobatse 60.14 208 P **P 03 21 56.3 +0.9**
LBTB pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KSRS Korea Array 62.20 61 LR LR 03 53 03.8
comp=Z,49nm,18.3s,MS3.7,baz=259,slow=40
BOSA Boshof 63.50 206 P **P 03 22 18.2 +0.3**
comp=Z,2.1nm,0.9s,mb4.3,baz=256,slow=9.2,SNR=3.0
BOSA Boshof 63.50 206 P **P 03 22 18.3 +0.3**
BOSA pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
SCHQ Schefferville 80.55 329 P **P 03 23 58.7 -1.2**
comp=Z,3.3nm,0.9s,mb4.3,baz=50,slow=7.9,SNR=5.8
SCHQ Schefferville 80.55 329 P **P 03 23 58.7 -1.2**
INK Inuvik 81.98 2 P **P 03 24 07.3 0.0**
comp=Z,1.1nm,0.7s,mb3.9,baz=354,slow=8.8,SNR=5.2
INK Inuvik 81.98 2 P **P 03 24 07.3 0.0**
INK pmax pmax
comp=Z,1.0nm,0.7s
INK Inuvik 81.98 2 P **P 03 24 07.3 0.0**
ILAR Eielson Array 84.48 8 P **P 03 24 20.4 +0.1**
comp=Z,0.5nm,0.6s,mb3.9,baz=318,slow=3.2,SNR=9.9
ILAR Eielson Array 84.48 8 P **P 03 24 20.4 +0.1**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 87.25 354 P **P 03 24 32.6 -1.4**
comp=Z,0.4nm,0.6s,mb3.9,baz=6.7,slow=5.5,SNR=5.6

CASC 05 03:12:40.6±2.1, 13°54N×91°35W, h6km±16km, MD3.5,
Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.82**	**340**	*e*P	Pg	03 12 56.9	+0.5
FUG	**Fuego 3**	**1.03**	**29**	*e*P	Pg	03 13 00.0	-0.3
FG6		**1.11**	**24**	*e*P	Pg	03 13 00.8	-1.2
PCG	**Pacaya**	**1.11**	**40**	*e*P	Pg	03 13 01.6	-0.4
TP2	**Tecpan 2**	**1.28**	**15**	*e*P	Pn	03 13 04.0	-1.0
NBG	**Las Nubes**	**1.43**	**43**	*e*P	Pn	03 13 07.0	-0.1
SBLS	**San Blas**	**1.71**	**80**	*e*P	Pn	03 13 10.3	-0.6

RBDL	**Robledal**	**1.72**	**70**	*e*P	Pn	03 13 10.7	-0.4
SNJE	**San Jose**	**1.73**	**79**	*e*P	Pn	03 13 10.3	-1.0
BOQS	**Boqueron**	**2.02**	**84**	*e*P	Pn	03 13 16.0	+0.7
BOQS				*e*S	Sn	03 13 42.8	+1.8
MRL	**Marmol**	**2.21**	**47**	*e*P	Pn	03 13 19.7	+1.8
LFRS	**El Faro**	**2.23**	**88**	*e*P	Pn	03 13 18.1	0.0
LFRS				*e*S	Sn	03 13 47.5	+1.5

ISCJB ***05*** *03:12:43.4±1.5, 4°.2N±0°.1×122°.8E±0°.2, h596km±20km, mb4.2/18, Error ellipse: s-maj=40.1km s-min=8.5km az=150.4*
NEIC ***05*** *03:12:44.5±1.1, 4°.19N×122°.75E, h590km±14km, mb4.1/8, Error ellipse: s-maj=31.6km s-min=6.3km az=58.0*
IDC ***05*** *03:12:45.4±1.6, 4°.26N×122°.99E, h604km±20km, mb3.6/9, mb1 3.7/9, mb1mx3.3/22, mbtmp3.6/9, Error ellipse: s-maj=140.4km s-min=8.0km az=64.0*
ISC 05 03:12:44.4±1.5,**4°.2N**±0°.1×**122°.8E**±0°.2,**h587**km±19km,**n29,** σ0°.**59**/30,**mb4.2**/18,**2C, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**6.78**	**286**	*e*P	**P**	**03 14 31.9**	**0.0**
	24nm,0.7s						
KAKA	**Kakadu**	**19.36**	**150**	*e*P	**P**	**03 16 33.0**	**-0.1**
	20nm,0.6s						
KAKA	**Kakadu**	**19.36**	**150**	*e*P	**P**	**03 16 32.4**	**-0.7**
	46nm,0.6s						
FITZ	**Fitzroy Crossi**	**22.35**	**173**	*e*P	**P**	**03 16 59.8**	**-0.1**
	6.5nm,0.8s,mb4.3						
MBWA	**Marble Bar**	**25.39**	**187**	*e*P	**P**	**03 17 25.9**	**-0.9**
	5.1nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**26.56**	**155**	P	**P**	**03 17 36.6**	**-0.4**
	15nm,0.3s,mb5.1,baz=335,slow=9.7,SNR=314						
WRA				S	**S**	**03 21 27.6**	**-3.9**
	1.1nm,0.8s,baz=336,slow=15,SNR=4.5						
WRA				ScP	ScP	03 23 25.8	-0.8
	1.3nm,0.7s,baz=340,slow=3.1,SNR=11						
WB2	**Warramunga Arr**	**26.57**	**155**	*e*P	**P**	**03 17 36.4**	**-0.7**
ASAR	**Alice Springs**	**29.76**	**159**	P	**P**	**03 18 05.3**	**+0.5**
	5.8nm,0.4s,mb4.5,baz=340,slow=6.8,SNR=132						
ASAR				S	**S**	**03 22 20.8**	**-0.2**
	0.9nm,0.7s,baz=340,slow=19,SNR=6.9						
ASAR				ScP	ScP	03 23 35.8	-0.9
	1.1nm,0.4s,baz=342,slow=3.1,SNR=16						
CTAO	**Charters Tower**	**33.40**	**137**	*e*P	**P**	**03 18 35.3**	**-0.5**
	2.2nm,0.5s,mb4.0						
FORT	**Forrest**	**35.16**	**172**	⇑*i*P	**P**	**03 18 50.8**	**+0.5**
	24nm,0.6s,mb5.0						
FORT	**Forrest**	**35.16**	**172**	*e*P	**P**	**03 18 50.6**	**+0.3**
	27nm,0.7s,mb5.0						
KLBR	**Kellerberrin**	**35.92**	**187**	⇑*i*P	**P**	**03 18 56.8**	**+0.2**
	5.1nm,0.2s,mb4.7						
BBOO	**Buckleboo**	**38.92**	**162**	*e*P	**P**	**03 19 21.4**	**+0.4**
	5.7nm,0.3s,mb4.6						
STKA	**Stephens Creek**	**40.11**	**155**	P	**P**	**03 19 31.4**	**+0.9**
	3.9nm,0.4s,mb4.3,baz=334,slow=6.6,SNR=20						
STKA	**Stephens Creek**	**40.11**	**155**	*e*P	**P**	**03 19 31.3**	**+0.7**
	2.8nm,0.3s,mb4.3						
CMSA	**Cobar Meteorol**	**41.72**	**150**	*e*P	**P**	**03 19 44.6**	**+1.3**
MK31	**Makanchi Array**	**54.95**	**327**	*e*P	**P**	**03 21 21.3**	**+0.2**
MK31				*e*PcP	PcP	03 22 13.0	-0.8
MKAR	**Makanchi Array**	**54.95**	**327**	P	**P**	**03 21 21.8**	**+0.7**
	3.4nm,0.3s,mb4.1,baz=123,slow=7.7,SNR=48						
MKAR				PcP	PcP	03 22 13.5	-0.3
	1.6nm,0.5s,baz=135,slow=3.6,SNR=9.6						
EKS2	**Erkin-Say**	**57.86**	**319**	*e*P	**P**	**03 21 41.9**	**+0.8**
	1.4nm,0.5s,mb3.4						
ZALV	**Zalesovo Beam**	**58.42**	**335**	P	**P**	**03 21 44.1**	**-0.5**
	1.2nm,0.3s,mb3.4,baz=105,slow=5.5,SNR=3.4						
KURK	**Kurchatov**	**59.25**	**329**	P	**P**	**03 21 50.4**	**+0.2**
	3.5nm,0.4s,mb3.8,baz=133,slow=6.9,SNR=14						
KURK	**Kurchatov**	**59.25**	**329**	*e*P	**P**	**03 21 50.0**	**-0.2**
	6.8nm,0.5s,mb4.0						
BVAR	**Borovoye Array**	**64.80**	**328**	P	**P**	**03 22 26.3**	**+0.2**
	0.6nm,0.4s,mb3.4,baz=98,slow=7.4,SNR=3.9						
BRVK	**Borovoye**	**64.87**	**328**	*e*P	**P**	**03 22 26.2**	**-0.3**
	2.3nm,0.4s,mb4.0						
ABKAR	**Akbulak array**	**69.30**	**321**	*e*P	**P**	**03 22 53.1**	**-0.6**
	0.9nm,0.3s,mb3.7						
AKTK	**Aktyubinsk**	**70.85**	**322**	P	**P**	**03 23 02.9**	**+0.1**
AKTO	**Aktyubinsk**	**70.85**	**322**	P	**P**	**03 23 02.9**	**+0.1**
	2.4nm,0.3s,mb4.1,baz=109,slow=5.6,SNR=8.3						
FINES	**FINESS Array B**	**89.53**	**331**	P	**P**	**03 24 38.7**	**-1.1**
	1.6nm,0.5s,mb4.1,baz=35,slow=7.0,SNR=5.5						
TORD	**Torodi Ar. Bea**	**119.02**	**287**	PKP	PKPdf	03 30 27.4	-0.8
	0.3nm,0.3s,baz=57,slow=1.7,SNR=9.6						

ISCJB ***05*** *03:16:48.9±0.8, 31°.12S±0°.04×68°.30W±0°.07, h107km±8km, Error ellipse: s-maj=9.3km s-min=7.3km az=178.4*
GUC ***05*** *03:16:48.0±0.7, 31°.08S×68°.46W, h148km±38km, MD3.9, ML4.0*
IDC ***05*** *03:16:49.7±1.5, 31°.53S×68°.52W, h107km±9km, mb4.4/1, mb1 3.7/3, mb1mx3.4/14, mbtmp3.6/3, Error ellipse: s-maj=54.3km s-min=29.3km az=118.0*
NEIC ***05*** *03:16:49.1±0.7, 31°.48S×68°.72W, h106km±6km, mb3.4/1, MD3.5(SJA), Error ellipse: s-maj=21.3km s-min=10.4km az=74.0*
NEIC Felt [III] at San Juan.
ISC 05 03:16:50.1±0.8,**31°.12S**±0°.04×**68°.30W**±0°.06,**h101**km±8km,
n21, σ0°.**94**/25,**3C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.49**	**174**	P	**Pn**	**03 17 05.8**	**-0.1**
	15nm,0.3s,baz=348,slow=4.2,SNR=3453						
CFAA				S	**Sn**	**03 17 18.1**	**+0.4**
	151nm,0.3s,baz=133,slow=20,SNR=460						
JACH	**Jahuel**	**2.50**	**231**	⇑*i*P	**Pn**	**03 17 28.8**	**-0.3**
JACH				*i* S	**Sn**	**03 17 59.5**	**+0.4**
OVCH	**Ovalle**	**2.54**	**281**	*e*P	**Pn**	**03 17 28.4**	**-1.3**
OVCH				*i* S	**Sn**	**03 17 58.7**	**-1.5**
OVCH				AML	AML	03 18 05.5	
	comp=N,690nm,0.6s						
FCH	**Farellones**	**2.77**	**217**	*e*P	**Pn**	**03 17 34.5**	**+1.7**
FCH				*i* S	**Sn**	**03 18 09.0**	**+3.3**
FCH				AML	AML	03 18 13.4	
	comp=N,253nm,0.3s						
PEL	**Peldehue**	**2.86**	**224**	*e*P	**Pn**	**03 17 33.0**	**-0.9**
PEL				*i* S	**Sn**	**03 18 07.7**	**0.0**
PEL				AML	AML	03 18 08.2	
	comp=E,579nm,0.4s						
ROCH	**El Roble**	**2.95**	**231**	⇓*i*P	**Pn**	**03 17 34.6**	**-0.6**
ROCH				*i* S	**Sn**	**03 18 10.6**	**+0.7**
LCO	**Las Campanas**	**2.96**	**315**	*e*Pn	**Pn**	**03 17 36.0**	**+0.7**
LCO				*e*Sn	**Sn**	**03 18 10.7**	**+0.6**
PCH	**Pirque**	**3.12**	**216**	⇑*i*P	**Pn**	**03 17 37.3**	**-0.1**
PCH				*i* S	**Sn**	**03 18 14.1**	**+0.1**
ANTU	**Antumapu**	**3.14**	**218**	*i* S	**Sn**	**03 18 14.0**	**-0.4**
ANTU				AML	AML	03 18 15.8	
	comp=E,225nm,0.4s						
LMEL	**Las Melosas**	**3.16**	**210**	⇑*i*P	**Pn**	**03 17 37.6**	**-0.4**
LMEL				*i* S	**Sn**	**03 18 15.7**	**+0.8**
LMEL				AML	AML	03 18 29.5	
	comp=N,194nm,0.1s						
CHCH	**Chadas Angostu**	**3.44**	**215**	*i* P	**Pn**	**03 17 41.1**	**-0.6**
TRQA	**Tornquist**	**8.66**	**145**	*e*Pn	**Pn**	**03 18 51.1**	**-1.4**
	comp=N,16nm,0.7s						
PLCA	**Paso Flores**	**9.77**	**190**	P	**Pn**	**03 18 59.5**	**-7.9**
	comp=N,0.0nm,0.3s,baz=222,slow=21,SNR=3.0						
LPAZ	**La Paz**	**14.76**	**1**	P	**Pn**	**03 20 17.5**	**+3.7**
	comp=N,0.1nm,0.3s,baz=198,slow=7.3,SNR=6.1						
LPAZ	**La Paz**	**14.76**	**1**	*e*P	**Pn**	**03 20 16.5**	**+2.7**
	comp=N,2.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**80.24**	**68**	P	**P**	**03 28 50.3**	**+0.3**
	comp=N,1.1nm,0.6s,baz=279,slow=6.4,SNR=17						
ASAR	**Alice Springs**	**121.52**	**204**	PKP	PKPdf	03 35 30.5	-1.8
	comp=N,0.2nm,0.4s,baz=179,slow=6.1,SNR=2.6						
WRA	**Warramunga Arr**	**124.77**	**206**	PKP	PKPdf	03 35 36.7	-1.9
	comp=N,0.6nm,0.7s,baz=165,slow=1.6,SNR=8.3						
KURK	**Kurchatov**	**148.63**	**42**	PKPbc	PKPbc	03 36 25.0	0.0
	comp=N,0.5nm,0.5s,baz=293,slow=3.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**150.11**	**32**	PKPbc	PKPbc	03 36 27.8	-0.7
	comp=N,1.2nm,0.6s,baz=324,slow=3.4,SNR=4.4						
MKAR	**Makanchi Array**	**152.50**	**47**	PKPbc	PKPbc	03 36 34.2	-0.1
	comp=N,0.4nm,0.5s,baz=309,slow=4.2,SNR=3.9						

IDC 05 03:35:15.9±30.0,**17°.63S×178°.89W,h654**km±424km,
mb3.1/7,mb1 3.4/7,mb1mx3.2/16,**mbtmp3.1**/7,**Error ellipse: s-maj=152.4km s-min=67.3km az=20.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.37**	**241**	P	**P**	03 41 44.0	-0.1
	3.2nm,0.5s,baz=87,slow=11,SNR=16						
WRA	**Warramunga Arr**	**44.23**	**259**	P	**P**	03 42 30.4	+0.2
	1.1nm,0.3s,baz=94,slow=7.4,SNR=46						
ASAR	**Alice Springs**	**44.43**	**254**	P	**P**	03 42 32.0	+0.3
	7.0nm,0.6s,baz=87,slow=8.9,SNR=95						
NVAR	**Mina Array Bea**	**79.54**	**44**	P	**P**	03 46 17.8	+0.7
	0.7nm,0.7s,baz=218,slow=9.1,SNR=5.2						
ILAR	**Eielson Array**	**85.72**	**13**	P	**P**	03 46 47.2	0.0
	0.5nm,0.7s,baz=222,slow=5.7,SNR=6.2						
TXAR	**Lajitas Array**	**86.23**	**58**	P	**P**	03 46 51.0	+0.5
	0.9nm,0.8s,baz=226,slow=5.8,SNR=13						
PDAR	**Pinedale Array**	**87.47**	**44**	P	**P**	03 46 56.0	0.0
	0.4nm,0.6s,baz=204,slow=3.3,SNR=4.2						

BJI ***05*** *03:50:10.8, 4°.19N×123°.06E, h603km, mB4.5/9, mb4.5/15*
ISCJB ***05*** *03:50:11.3±0.2, 4°.23N±0°.03×122°.88E±0°.04, h599km±3km, mb4.5/65, Error ellipse: s-maj=6.0km s-min=4.5km az=164.0*
IDC ***05*** *03:50:12.5±0.7, 4°.26N×122°.98E, h598km±7km, mb3.7/20, mb1 3.8/21, mb1mx3.7/24, mbtmp3.7/21, Error ellipse: s-maj=12.7km s-min=6.1km az=77.0*
NEIC ***05*** *03:50:12.1±0.4, 4°.21N×122°.81E, h593km±6km, mb4.3/35, Error ellipse: s-maj=8.0km s-min=4.5km az=70.0*
DJA ***05*** *03:50:12, 4°.24N×122°.87E, h591km, mb4.9/24*
ISC 05 03:50:12.2±0.2,**4°.22N**±0°.03×**122°.87E**±0°.04,**h590**km±3km,
n148, σ0°.**87**/147,**mb4.5**/65,**7C-1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.70**	**101**	P	**P**	**03 51 27.4**	**-1.5**
GSPH	**General Santos**	**2.78**	**48**	⇑*e*P	**P**	**03 51 29.8**	**+0.4**
MNI	**Manado**	**3.39**	**144**	P	**P**	**03 51 33.7**	**+0.8**
TOLI	**Toli-Toli**	**3.71**	**214**	P	**P**	**03 51 34.8**	**-0.2**
KMSI	**Cibinong**	**3.79**	**163**	P	**P**	**03 51 35.9**	**+0.3**
MRSI	**Marisa**	**3.83**	**194**	P	**P**	**03 51 35.8**	**-0.1**
DMPH	**Davao City--Mi**	**3.87**	**43**	⇑*e*P	**P**	**03 51 36.0**	**-0.1**
DAV	**Davao City (W)**	**3.91**	**43**	P	**P**	**03 51 37.5**	**+1.2**
	51nm,0.3s,baz=251,slow=3.1,SNR=8.5						
DAV				S	**S**	**03 52 44.4**	**-0.5**
	72nm,0.3s,baz=331,slow=22,SNR=12						
MYLDM	**Lahad Datu**	**4.46**	**283**	P	**P**	**03 51 41.6**	**+1.3**
MYLDM	**Lahad Datu**	**4.46**	**283**	P	**P**	**03 51 41.1**	**+0.8**
TSM	**Tawau**	**4.99**	**271**	P	**P**	**03 51 44.1**	**-0.3**
LUWI	**Luwuk**	**5.23**	**181**	P	**P**	**03 51 44.6**	**-1.8**
	2.2nm6μm384nm,1.4s						
TNTI	**Ternate**	**5.65**	**127**	P	**P**	**03 51 49.7**	**-0.2**
	3.3nm9μm617nm,0.9s						
SDKM	**Sandakan**	**5.83**	**284**	P	**P**	**03 51 50.4**	**-1.0**
KDM	**Kudat**	**6.58**	**294**	P	**P**	**03 51 57.2**	**-0.8**
LBMI	**Labuha**	**6.68**	**136**	P	**P**	**03 51 59.1**	**+0.1**
	3.0nm3μm139nm,0.6s						
KKM	**Kota Kinabalu**	**6.88**	**286**	P	**P**	**03 52 00.3**	**-0.4**
KKM	**Kota Kinabalu**	**6.88**	**286**	*e*Pn	**P**	**03 51 59.5**	**-1.1**
	168nm,0.8s						
KKM	**Kota Kinabalu**	**6.88**	**286**	P	**P**	**03 51 59.9**	**-0.8**
	0.6nm2μm227nm,0.8s						
TTSI	**Tana Toraja**	**7.83**	**203**	P	**P**	**03 52 09.2**	**-0.5**
	0.7nm2μm256nm,1.3s						
KDI	**Kendari**	**8.13**	**182**	P	**P**	**03 52 11.5**	**-1.0**
	1μm116nm,0.8s						
NLAI	**Namlea**	**8.53**	**150**	P	**P**	**03 52 17.4**	**+1.0**
	5μm492nm,0.8s						
BBSI	**Bau Bau**	**9.65**	**182**	P	**P**	**03 52 27.3**	**0.0**
	2μm223nm,0.8s						
KAPI	**Kappang**	**9.69**	**199**	*e*Pn	**P**	**03 52 24.9**	**-2.9**
	52nm,1.0s						
BTM	**Bintulu**	**9.82**	**264**	P	**P**	**03 52 29.7**	**+0.6**
BKSI	**Bulukumba**	**9.87**	**196**	P	**P**	**03 52 28.1**	**-1.4**
	34nm,0.7s						
SBUM	**Sibu**	**10.78**	**261**	P	**P**	**03 52 39.4**	**+0.7**
SBUM	**Sibu**	**10.78**	**261**	P	**P**	**03 52 38.9**	**+0.2**
	578nm41nm,0.8s						
BNDI	**Bandanaira**	**11.17**	**141**	P	**P**	**03 52 43.3**	**+0.7**
	10μm792nm,0.7s						
MMRI	**Maumere**	**12.79**	**183**	P	**P**	**03 53 01.2**	**+2.3**
KSM	**Kuching**	**12.84**	**258**	P	**P**	**03 52 58.9**	**-0.6**
KSM	**Kuching**	**12.84**	**258**	*e*P	**P**	**03 52 58.1**	**-1.4**
	39nm,0.6s						
KSM	**Kuching**	**12.84**	**258**	P	**P**	**03 52 58.8**	**-0.7**
	705nm59nm,0.7s						
TLE	**Tual**	**13.89**	**135**	P	**P**	**03 53 11.8**	**+1.7**
TPI	**Tanjungpandan**	**16.71**	**246**	P	**P**	**03 53 36.7**	**+0.1**
	297nm25nm,0.7s						
PCJI	**Pacitan**	**16.98**	**223**	P	**P**	**03 53 38.7**	**-0.3**
BJII	**Banjamegara**	**17.44**	**229**	P	**P**	**03 53 44.8**	**+1.5**
	54nm,0.9s						
PPBI	**Pangkal Pinang**	**17.89**	**250**	P	**P**	**03 53 46.9**	**-0.4**
	22nm,0.6s						
TWG	**Pinlang**	**18.57**	**355**	*e*P	**P**	**03 53 52.5**	**-0.9**
	5.6nm,0.5s						
TPUB	**Ta-pu**	**19.09**	**354**	*e*P	**P**	**03 53 58.1**	**0.0**
	2.1nm,0.7s						
YULB	**Yu-li**	**19.12**	**356**	*e*P	**P**	**03 53 57.8**	**-0.6**
	1.0nm,0.6s						
MYKOM	**Kota Tinggi**	**19.15**	**263**	P	**P**	**03 53 59.6**	**+0.8**
KAKA	**Kakadu**	**19.32**	**151**	⇑*i*P	**P**	**03 54 00.1**	**-0.2**
	91nm,0.6s						
KAKA	**Kakadu**	**19.32**	**151**	*e*P	**P**	**03 53 59.8**	**-0.5**
	269nm,0.6s						
KAKA	**Kakadu**	**19.32**	**151**	P	**P**	**03 54 00.5**	**+0.2**
	2μm240nm,0.6s						
SSLB	**Suanglung**	**19.54**	**355**	*e*P	**P**	**03 54 03.0**	**+0.8**
	4.5nm,1.2s						
KTGM	**Kuala Trenggan**	**19.70**	**274**	P	**P**	**03 54 04.1**	**+0.3**
KLSI		**20.17**	**244**	P	**P**	**03 54 08.0**	**-0.1**
	41nm,0.6s						
YHNB	**Yeheng**	**20.38**	**356**	*e*P	**P**	**03 54 09.2**	**-0.6**
	0.6nm,0.7s						
KNA	**Kununurra**	**20.68**	**164**	P	**P**	**03 54 13.0**	**+0.4**
	2μm166nm,0.8s						
KASI	**Kota Agung**	**20.75**	**242**	P	**P**	**03 54 14.7**	**+1.4**
	80nm,0.8s						
MNAI	**Manna**	**21.65**	**247**	P	**P**	**03 54 20.9**	**-0.4**
	374nm,1.4s						
KSI	**Kapahiang**	**21.72**	**249**	P	**P**	**03 54 22.0**	**0.0**
	104nm,0.8s,mb5.5						
KULM	**Kulim**	**22.17**	**274**	*e*P	**P**	**03 54 25.4**	**-0.6**
	10nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**22.35**	**173**	P	**P**	**03 54 27.3**	**-0.2**
	13nm,0.6s,mb4.7,baz=2.1,slow=7.5,SNR=86						
FITZ				ScP	ScP	04 00 41.9	0.0
	2.7nm,0.6s,baz=329,slow=6.2,SNR=3.9						
FITZ	**Fitzroy Crossi**	**22.35**	**173**	⇑*i*P	**P**	**03 54 27.2**	**-0.2**
	23nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**22.35**	**173**	P	**P**	**03 54 27.2**	**-0.2**
	52nm,1.0s,mb5.1						
JOW	**Kunigami**	**23.07**	**12**	*e*P	**P**	**03 54 34.2**	**+0.5**
	0.2nm,0.5s						
MBWA	**Marble Bar**	**25.41**	**187**	*e*P	**P**	**03 54 53.6**	**-0.9**
	12nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**26.52**	**155**	P	**P**	**03 55 04.0**	**-0.3**
	56nm,0.4s,baz=337,slow=9.9,SNR=686						
WRA				PcP	PcP	03 58 08.1	-0.8
	2.3nm,0.5s,baz=316,slow=3.9,SNR=5.5						
WRA				S	**S**	**03 58 54.6**	**-3.7**
	7.9nm,0.8s,baz=334,slow=16,SNR=8.9						
WRA				ScP	ScP	04 00 53.1	-0.6
	3.4nm,0.5s,baz=343,slow=3.2,SNR=12						
WB2	**Warramunga Arr**	**26.53**	**155**	*e*P	**P**	**03 55 03.7**	**-0.7**
COEN	**Coen**	**27.05**	**132**	*e*P	**P**	**03 55 08.2**	**-0.8**
	32nm,0.5s,mb5.2						
COEN	**Coen**	**27.05**	**132**	P	**P**	**03 55 08.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**27.34**	**303**	P	**P**	**03 55 12.1**	**+0.5**
	1.8nm,0.6s,mb3.9,baz=122,slow=7.5,SNR=14						
CMAR				PcP	PcP	03 58 11.1	+0.1
	0.9nm,0.3s,baz=189,slow=0.7,SNR=7.0						
CMAR				ScP	ScP	04 00 55.5	-0.8
	0.8nm,0.3s,baz=187,slow=1.2,SNR=4.7						
CHTO	**Chiang Mai**	**27.51**	**304**	*e*P	**P**	**03 55 12.9**	**-0.1**
	3.2nm,0.4s,mb4.3						
PMG	**Port Moresby**	**27.73**	**119**	*e*P	**P**	**03 55 15.2**	**+0.1**
	11nm,0.7s,mb4.6						
KMI	**Kunming**	**28.39**	**319**	P	**P**	**03 55 22.2**	**+1.6**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
ENH	**Enshi**	**28.83**	**335**	*e*P	**P**	**03 55 25.1**	**+0.8**
	comp=Z,10.0nm,0.3s,mb4.9						
CBIJ	**Chichi jima**	**29.29**	**37**	P	**P**	**03 55 27.6**	**-0.7**
	comp=Z,36nm,0.6s,mb5.2,baz=259,slow=22,SNR=11						
CBIJ				S	**S**	**03 59 37.5**	**-3.5**
	comp=Z,28nm,0.6s,baz=111,slow=22,SNR=4.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**29.73**	**159**	P	**P**	**03 55 32.7**	**+0.5**
	comp=Z,21nm,0.5s,mb5.1,baz=340,slow=6.8,SNR=451						
ASAR				PcP	PcP	03 58 16.9	0.0
	comp=Z,2.2nm,0.4s,baz=342,slow=2.7,SNR=6.5						
ASAR				S	**S**	**03 59 47.0**	**-1.0**
	comp=Z,13nm,0.9s,baz=344,slow=17,SNR=30						
ASAR				ScP	ScP	04 01 03.0	-0.8
	comp=Z,4.3nm,0.6s,baz=337,slow=2.5,SNR=11						
XAN	**Xi'an**	**32.38**	**338**	P	**P**	**03 55 54.2**	**-0.4**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
XAN				pmax	pmax		
	comp=Z,12nm,3.7s						
CTA	**Charters Tower**	**33.34**	**137**	P	**P**	**03 56 04.3**	**+1.4**
	comp=Z,6.9nm,0.6s,mb4.5,baz=316,slow=10,SNR=13						
CTA				ScP	ScP	04 01 16.3	+0.2
	comp=Z,1.1nm,0.3s,baz=249,slow=8.4,SNR=3.7						
CTA	**Charters Tower**	**33.34**	**137**	*e*P	**P**	**03 56 04.2**	**+1.3**
	comp=Z,6.0nm,0.5s,mb4.5						
CTAO	**Charters Tower**	**33.34**	**137**	*e*P	**P**	**03 56 04.4**	**+1.6**
	comp=Z,26nm,2.1s,mb4.5						
KSRS	**Korea Array**	**33.40**	**7**	P	**P**	**03 56 03.4**	**+0.2**
	comp=Z,5.6nm,0.7s,mb4.3,baz=185,slow=10,SNR=30						
KSRS				PcP	PcP	03 58 27.1	+0.2
	comp=Z,0.3nm,0.3s,baz=210,slow=3.9,SNR=4.4						
KSRS				ScP	ScP	04 01 16.2	+0.2
	comp=Z,0.6nm,0.5s,baz=189,slow=2.8,SNR=4.3						
MAJO	**Matsushiro**	**35.12**	**22**	*e*P	**P**	**03 56 16.4**	**-1.1**
	comp=Z,5.9nm,0.6s,mb4.4						
MJAR	**Matsushiro Arr**	**35.12**	**22**	P	**P**	**03 56 16.8**	**-0.7**
	comp=Z,4.9nm,0.6s,mb4.3,baz=196,slow=9.3,SNR=12						
FORT	**Forrest**	**35.15**	**172**	⇑*i*P	**P**	**03 56 18.3**	**+0.5**
	comp=Z,62nm,0.5s,mb5.5						
FORT	**Forrest**	**35.15**	**172**	*e*P	**P**	**03 56 18.0**	**+0.2**
	comp=Z,50nm,0.6s,mb5.3						
FORT				*e*PcP	PcP	03 58 32.3	+0.2
KLBR	**Kellerberrin**	**35.94**	**187**	⇑*i*P	**P**	**03 56 24.1**	**-0.3**
	comp=Z,10nm,0.5s,mb4.6						
BJT	**Baijiatuao**	**36.15**	**351**	*e*P	**P**	**03 56 25.8**	**-0.1**
	comp=Z,12nm,0.4s,mb4.8						
LZH	**Lanzhou**	**36.24**	**333**	⇓P	**P**	**03 56 28.5**	**+1.8**
LZH				pP		03 58 07.6	
LZH				PP	PP	03 58 10.1	-1.7
LZH				sP	sP	03 59 12.3	-0.7
LZH				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.4						
LZH				pmax	pmax		
	comp=Z,48nm,5.0s						
NWAO	**Narrogin (SRO)**	**37.33**	**188**	P	**P**	**03 56 36.2**	**+0.5**
	comp=Z,14nm,0.7s,mb4.6,baz=2.8,slow=8.0,SNR=9.5						
HHC	**Hu-ho-hao-te**	**37.86**	**346**	*e*P	**P**	**03 56 42.2**	**+2.3**
HHC				PP	PP	03 58 29.1	+2.4
HHC				PcP	PcP	03 58 41.0	+0.7
HHC				sP	sP	03 59 31.9	+5.0
HHC				ScP	ScP	04 01 32.4	-0.1
HHC				S	**S**	**04 01 56.0**	**+6.1**
HHC				sS	sS	04 04 58.8	+5.3
HHC				SS	SS	04 05 08.6	-1.8
HHC				ScS	ScS	04 05 42.4	-1.3
HHC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,93nm,7.2s						
BBOO	**Buckleboo**	**38.89**	**162**	*e*P	**P**	**03 56 49.0**	**+0.6**
	comp=Z,68nm,1.0s,mb5.1						
LSA	**Lhasa**	**39.27**	**314**	*e*P	**P**	**03 56 52.0**	**+0.5**
	comp=Z,7.3nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**40.08**	**155**	P	**P**	**03 56 58.9**	**+1.1**
	comp=Z,17nm,0.6s,mb4.8,baz=333,slow=7.8,SNR=66						
STKA				PcP	PcP	03 58 44.1	-3.5
	comp=Z,4.2nm,0.7s,baz=321,slow=8.4,SNR=5.7						
STKA				ScP	ScP	04 01 40.2	-1.1
	comp=Z,1.0nm,0.3s,baz=347,slow=7.

comp=Z,0.9nm,0.6s,mb3.6,baz=247,slow=5.0,SNR=23
BRTR Keskin Array B 86.74 309 P **P 04 01 53.0 -1.8**
comp=Z,1.2nm,0.7s,mb3.7,baz=118,slow=5.1,SNR=9.1
ARCES ARCESS Array B 88.66 340 P **P 04 02 01.7 -1.3**
comp=Z,3.5nm,0.7s,mb4.3,baz=87,slow=5.3,SNR=16
ARCES ARCESS Array B 88.66 340 P **P 04 02 01.7 -1.3**
AKASG Malin Array Be 89.08 321 P **P 04 02 03.6 -1.8**
comp=Z,1.7nm,0.5s,mb4.1,baz=70,slow=4.6,SNR=9.3
FINES FINESS Array B 89.58 332 P **P 04 02 06.0 -1.4**
comp=Z,4.8nm,0.6s,mb4.5,baz=64,slow=5.3,SNR=13
FINES FINESS Array B 89.58 332 P **P 04 02 06.0 -1.4**
INK Inuvik 91.11 21 *eP* **P 04 02 13.6 -0.7**
comp=Z,1.8nm,0.8s,mb4.0
BUR08 Bucovina Ar. S 92.07 318 *eP* **P 04 02 18.7 -0.5**
MORC Moravsky Berou 96.62 321 *eP* **P 04 02 39.1 -0.7**
comp=Z,1.9nm,0.8s,mb4.4
NB2 NORSAR Subarra 96.62 333 P **P 04 02 37.6 -1.9**
comp=Z,1.1nm,0.6s,mb4.3,baz=72,slow=4.4
NOA NORSAR Array B 96.62 333 P **P 04 02 37.5 -2.1**
comp=Z,1.2nm,0.7s,mb4.2,baz=70,slow=4.7,SNR=4.4
NAO01 NORSAR Array S 96.84 333 *eP* **P 04 02 41.0 +0.4**
comp=Z,2.3nm,0.6s,mb4.6
TORD Torodi Ar. Bea 119.11 287 PKP PKPdf 04 07 54.9 -1.0
comp=Z,2.1nm,0.4s,baz=72,slow=1.6,SNR=44
SCHQ Schefferville 120.61 7 PKP PKPdf 04 07 57.4 -0.2
comp=Z,7.4nm,1.1s,baz=244,slow=8.3,SNR=3.8
TXAR Lajitas Array 124.29 50 PKP PKPdf 04 08 05.7 +0.3
comp=Z,0.5nm,0.7s,baz=262,slow=0.2,SNR=7.9
DBIC Dimbokro 126.71 281 PKP PKPdf 04 08 09.5 -1.0
comp=Z,4.5nm,0.9s,baz=104,slow=0.3,SNR=3.9
PLCA Paso Flores 141.69 163 PKP PKPdf 04 08 35.1 -2.5
comp=Z,3.2nm,1.0s,baz=259,slow=8.0,SNR=5.7
TRQA Tornquist 146.03 173 *e*PKPbc PKPbc 04 08 47.2 0.0
LPAZ La Paz 163.86 139 PKP PKPdf 04 09 11.1 +1.7
comp=Z,1.9nm,0.9s,baz=169,slow=2.9,SNR=5.4

*ISCJB **05** 03:54:34.7±0.4, 44°.51N±0°.03×10°.19E±0°.04, h33km±4km, Error ellipse: s-maj=5.3km s-min=4.5km az=42.6*
*CSEM **05** 03:54:34.3±0.2, 44°.53N×10°.26E, h30km, ML2.2/12, Error ellipse: s-maj=4.2km s-min=3.5km az=44.0*
*NEIC **05** 03:54:34.4, 44°.63N×10°.43E, h25km, ML2.5(LDG), After LDG.*
*LDG **05** 03:54:34.4±0.3, 44°.63N×10°.43E, h25km, Ml2.5/9, Error ellipse: s-maj=6.1km s-min=3.2km az=88.0*
*ROM **05** 03:54:35.5±0.3, 44°.48N×10°.21E, h21km±6km, Md2.0/8, Ml1.9/6, Error ellipse: s-maj=2.8km s-min=2.5km az=51.0*
ISC 05 03:54:35.2±0.4, 44°.51N±0°.03×10°.20E±0°.05, h29km±4km, n44, σ0°91/75, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERBM	**Eremo**	**0.18**	**120**	Pg	**Pb**	**03 54 39.8**	**-1.2**
ERBM				Sg	**Sb**	**03 54 44.2**	**-0.7**
	54nm,0.3s						
ERBM	**Eremo**	**0.18**	**120**	Pg	**Pb**	**03 54 39.8**	**-1.2**
ERBM				Sg	**Sb**	**03 54 44.2**	**-0.7**
	54nm,0.3s						
PRMA	**PARMA**	**0.27**	**17**	Pg	**Pb**	**03 54 41.5**	**-0.6**
PRMA				Sg	**Sb**	**03 54 47.6**	**+0.8**
	150nm,0.4s						
PRMA	**PARMA**	**0.27**	**17**	Pg	**Pb**	**03 54 41.5**	**-0.6**
PRMA				Sg	**Sb**	**03 54 47.6**	**+0.8**
	150nm,0.4s						
VLC	**Villacollemand**	**0.37**	**159**	*e*P	**Pb**	**03 54 42.7**	**-0.8**
VLC				*e*S	**Sb**	**03 54 49.4**	**+0.2**
VLC	**Villacollemand**	**0.37**	**159**	Pg	**Pb**	**03 54 42.5**	**-1.0**
VLC				Sg	**Sb**	**03 54 49.0**	**-0.2**
	79nm,0.7s						
VLC	**Villacollemand**	**0.37**	**159**	Pg	**Pb**	**03 54 42.5**	**-1.0**
VLC	**Villacollemand**	**0.37**	**159**	*e*P	**Pb**	**03 54 42.7**	**-0.8**
VLC				Sg	**Sb**	**03 54 49.0**	**-0.2**
	79nm,0.7s						
VLC				*e*S	**Sb**	**03 54 49.4**	**+0.2**
NOVE	**Novellara**	**0.47**	**52**	Pg	**Pb**	**03 54 45.1**	**+0.1**
NOVE				Sg	**Sb**	**03 54 54.1**	**+2.4**
	472nm,1.4s						
NOVE	**Novellara**	**0.47**	**52**	Pg	**Pb**	**03 54 45.1**	**+0.1**
SC2M	**Scurtabo**	**0.49**	**258**	Pg	**Pb**	**03 54 45.3**	**0.0**
SC2M				Sg	**Sb**	**03 54 53.5**	**+1.2**
	124nm,0.3s						
SC2M	**Scurtabo**	**0.49**	**258**	Pg	**Pb**	**03 54 45.3**	**0.0**
SC2M				Sg	**Sb**	**03 54 53.5**	**+1.2**
	124nm,0.3s						
BDI	**Bagni Di Lucca**	**0.53**	**147**	Pg	**Pb**	**03 54 45.5**	**-0.5**
BDI				Sg	**Sb**	**03 54 53.6**	**+0.3**
	56nm,0.8s						
BDI	**Bagni Di Lucca**	**0.53**	**147**	Pg	**Pb**	**03 54 45.5**	**-0.5**
BDI				Sg	**Sb**	**03 54 53.6**	**+0.3**
	56nm,0.8s						
MAIM	**Mastiano**	**0.63**	**161**	Pg	**Pb**	**03 54 47.6**	**0.0**
MAIM				Sg	**Sb**	**03 54 55.9**	**-0.2**
MAIM	**Mastiano**	**0.63**	**161**	Pg	**Pb**	**03 54 47.6**	**0.0**
MAIM				Sg	**Sb**	**03 54 55.9**	**-0.2**
PII	**Pisa**	**0.82**	**163**	Pg	**Pn**	**03 54 50.6**	**-0.1**
PII	**Pisa**	**0.82**	**163**	Pg	**Pn**	**03 54 50.6**	**-0.1**
	20nm,0.2s						
TEOL	**Teolo**	**1.35**	**50**	↑*i*Pg	**Pn**	**03 54 59.5**	**+1.5**
TEOL	**Teolo**	**1.35**	**50**	*i* Pg	**Pn**	**03 54 59.5**	**+1.5**
SBF	**Sospel**	**2.09**	**253**	*e*Pn	**Pn**	**03 55 08.7**	**+0.5**
SBF				*e*Sn	**Sn**	**03 55 33.2**	**0.0**
	11nm,0.5s						
SBF	**Sospel**	**2.09**	**253**	*e*Pn	**Pn**	**03 55 08.7**	**+0.5**
SBF				*e*Sn	**Sn**	**03 55 33.2**	**0.0**
	5.6nm,0.5s						
PGF	**Pioggiola**	**2.15**	**204**	*e*Pn	**Pn**	**03 55 09.5**	**+0.6**
PGF				*e*Sn	**Sn**	**03 55 34.3**	**-0.2**
	14nm,0.9s						
PGF	**Pioggiola**	**2.15**	**204**	*e*Pn	**Pn**	**03 55 09.5**	**+0.6**
PGF				*e*Sn	**Sn**	**03 55 34.3**	**-0.2**
	7.0nm,0.9s						
MBDF	**Montbardon**	**2.46**	**276**	*e*Pn	**Pn**	**03 55 14.8**	**+1.6**
MBDF				*e*Sn	**Sn**	**03 55 42.3**	**0.0**
	7.1nm,0.5s						
MBDF	**Montbardon**	**2.46**	**276**	*e*Pn	**Pn**	**03 55 14.8**	**+1.6**
MBDF				*e*Sn	**Sn**	**03 55 42.3**	**0.0**
	3.5nm,0.5s						
LPG	**La Plagne**	**2.64**	**293**	*e*Pn	**Pn**	**03 55 15.1**	**-0.6**
LPG	**La Plagne**	**2.64**	**293**	*e*Pn	**Pn**	**03 55 15.1**	**-0.6**
LPL	**La Plagne**	**2.66**	**293**	*e*Pn	**Pn**	**03 55 15.6**	**-0.4**
LPL				*e*Sn	**Sn**	**03 55 45.7**	**-1.5**
	1.4nm,0.3s						
LPL	**La Plagne**	**2.66**	**293**	*e*Pn	**Pn**	**03 55 15.6**	**-0.4**
LPL				*e*Sn	**Sn**	**03 55 45.7**	**-1.5**
	0.7nm,0.3s						
FRF	**La Foret Royal**	**2.73**	**251**	*e*Pn	**Pn**	**03 55 18.1**	**+1.1**
FRF				*e*Sn	**Sn**	**03 55 50.0**	**+1.0**
	4.6nm,0.4s						
FRF	**La Foret Royal**	**2.73**	**251**	*e*Pn	**Pn**	**03 55 18.1**	**+1.1**
FRF				*e*Sn	**Sn**	**03 55 50.0**	**+1.0**
	2.3nm,0.4s						
LMR	**La Mourre**	**2.91**	**248**	*e*Pn	**Pn**	**03 55 20.1**	**+0.6**
LMR				*e*Sn	**Sn**	**03 55 53.9**	**+0.4**
	6.8nm,0.4s						
LMR	**La Mourre**	**2.91**	**248**	*e*Pn	**Pn**	**03 55 20.1**	**+0.6**
LMR				*e*Sn	**Sn**	**03 55 53.9**	**+0.4**
	3.4nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.11**	**279**	*e*Pn	**Pn**	**03 55 21.7**	**-0.5**
ORIF				*e*Sn	**Sn**	**03 55 58.1**	**-0.2**
	3.6nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.11**	**279**	*e*Pn	**Pn**	**03 55 21.7**	**-0.5**
ORIF				*e*Sn	**Sn**	**03 55 58.1**	**-0.2**
	1.8nm,0.5s						
SMRF	**Simiane la Rot**	**3.37**	**263**	*e*Pn	**Pn**	**03 55 25.8**	**+0.1**
SMRF	**Simiane la Rot**	**3.37**	**263**	*e*Pn	**Pn**	**03 55 25.8**	**+0.1**
CABF	**La Chapelle**	**3.57**	**307**	*e*Pn	**Pn**	**03 55 26.8**	**-1.8**
CABF	**La Chapelle**	**3.57**	**307**	*e*Pn	**Pn**	**03 55 26.8**	**-1.8**
HINF	**Hinteralfeld**	**4.04**	**326**	*e*Pn	**Pn**	**03 55 32.7**	**-2.3**
HINF				*e*Sn	**Sn**	**03 56 16.6**	**-4.8**
	1.4nm,0.4s						
HINF	**Hinteralfeld**	**4.04**	**326**	*e*Pn	**Pn**	**03 55 32.7**	**-2.3**
HINF				*e*Sn	**Sn**	**03 56 16.6**	**-4.8**
	0.7nm,0.4s						
HAU	**Haudompre**	**4.40**	**324**	*e*Sn	**Sn**	**03 56 25.3**	**-4.9**
	4.7nm,0.4s						
HAU	**Haudompre**	**4.40**	**324**	*e*Sn	**Sn**	**03 56 25.3**	**-4.9**
	2.3nm,0.4s						

*DDA **05** 03:55:32.7, 36°.97N×29°.13E, h7km±5km, Md2.9*
*ISCJB **05** 03:55:33.9±0.6, 37°.01N±0°.03×29°.14E±0°.03, h7km±6km, Error ellipse: s-maj=5.8km s-min=4.4km az=7.1*

*ISK **05** 03:55:33.7, 37°.05N×29°.14E, h11km, MD2.6*
*CSEM **05** 03:55:33.7±0.2, 37°.01N×29°.16E, h10km, MD2.6, Error ellipse: s-maj=5.8km s-min=4.2km az=2.0*
ISC 05 03:55:34.6±0.5, 37°.04N±0°.03×29°.15E±0°.04, h13km±5km, n28, σ1°09/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**67**	*e*PG	**Pg**	**03 55 39.5**	**-1.3**
GLHS				*e*SG	**Sg**	**03 55 45.4**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.30**	**67**	*e*Pg	**Pg**	**03 55 39.5**	**-1.3**
GLHS				*e*Sg	**Sg**	**03 55 45.4**	**+0.4**
GOLH	**Golhisar**	**0.39**	**58**	*i* P	**Pg**	**03 55 40.7**	**-1.6**
GOLH				*i* S	**Sg**	**03 55 47.7**	**+0.2**
GOLH	**Golhisar**	**0.39**	**58**	*i* P	**Pg**	**03 55 40.7**	**-1.6**
GOLH				*i* S	**Sg**	**03 55 47.7**	**+0.2**
TURN	**Turunc**	**0.47**	**250**	*i* P	**Pg**	**03 55 46.9**	**+3.1**
TURN				*i* S	**Sg**	**03 55 57.1**	**+7.0**
TURN	**Turunc**	**0.47**	**250**	*i* P	**Pg**	**03 55 46.9**	**+3.1**
DNZL	**Cakiroluk**	**0.66**	**353**	*i* P	**Pg**	**03 55 46.3**	**-1.1**
DNZL				*i* S	**Sg**	**03 55 57.4**	**+1.2**
DNZL	**Cakiroluk**	**0.66**	**353**	*i* P	**Pg**	**03 55 46.3**	**-1.1**
DNZL				*i* S	**Sg**	**03 55 57.3**	**+1.2**
ELL	**Elmali**	**0.67**	**115**	*e*PG	**Pg**	**03 55 47.9**	**+0.2**
ELL				*e*SG	**Sg**	**03 55 57.2**	**+0.6**
ELL	**Elmali**	**0.67**	**115**	*e*Pg	**Pg**	**03 55 47.9**	**+0.2**
ELL				*e*Sg	**Sg**	**03 55 57.2**	**+0.7**
YER	**Yerkesik**	**0.70**	**278**	*e*PG	**Pg**	**03 55 48.0**	**-0.2**
YER				*e*SG	**Sg**	**03 55 57.5**	**+0.1**
YER	**Yerkesik**	**0.70**	**278**	*e*Pg	**Pg**	**03 55 48.0**	**-0.2**
YER				*e*Sg	**Sg**	**03 55 57.5**	**+0.1**
AKAS	**Kas**	**0.88**	**155**	*i* P	**Pg**	**03 55 48.9**	**-2.7**
AKAS				*i* S	**Sg**	**03 56 05.5**	**+2.4**
AKAS	**Kas**	**0.88**	**155**	*i* P	**Pg**	**03 55 48.9**	**-2.7**
AKAS				*i* S	**Sg**	**03 56 05.6**	**+2.5**
AYDN	**Tasoluk**	**1.19**	**302**	*i* P	**Pn**	**03 55 55.7**	**-1.2**
AYDN				*i* S	**Sb**	**03 56 13.4**	**+1.0**
AYDN	**Tasoluk**	**1.19**	**302**	*i* P	**Pn**	**03 55 55.7**	**-1.3**
AYDN				*i* S	**Sb**	**03 56 13.4**	**+1.0**
DAT	**Datca**	**1.30**	**257**	*e*PN	**Pn**	**03 55 58.0**	**-0.5**
DAT	**Datca**	**1.30**	**257**	*e*Pn	**Pn**	**03 55 58.0**	**-0.5**
KHL	**Karahalli**	**1.32**	**13**	*e*PN	**Pn**	**03 55 58.5**	**-0.3**
KHL	**Karahalli**	**1.32**	**13**	*e*Pn	**Pn**	**03 55 58.5**	**-0.3**
KHAL	**Karahalli**	**1.36**	**11**	*i* P	**Pn**	**03 55 59.7**	**+0.4**
KHAL				*i* S	**Sn**	**03 56 18.1**	**+0.9**
KHAL	**Karahalli**	**1.36**	**11**	*i* P	**Pn**	**03 55 59.7**	**+0.4**
KHAL				*i* S	**Sn**	**03 56 18.1**	**+0.9**
BDRM	**Kayabasi**	**1.36**	**272**	*i* P	**Pn**	**03 56 00.3**	**+0.9**
BDRM				*i* S	**Sn**	**03 56 16.4**	**-1.0**
BDRM	**Kayabasi**	**1.36**	**272**	*i* P	**Pn**	**03 56 00.3**	**+0.9**
BDRM				*i* S	**Sn**	**03 56 16.4**	**-0.9**
BODT	**Bodrum**	**1.47**	**272**	*e*PN	**Pn**	**03 56 00.3**	**-0.6**
BODT	**Bodrum**	**1.47**	**272**	*e*Pn	**Pn**	**03 56 00.3**	**-0.6**
KULA	**Kula-Manisa**	**1.53**	**345**	*e*PN	**Pn**	**03 56 02.1**	**+0.5**
KULA	**Kula-Manisa**	**1.53**	**345**	*e*Pn	**Pn**	**03 56 02.1**	**+0.5**

*DDA **05** 03:55:42.2, 37°.55N×35°.68E, h7km±7km, Md2.8*
*ISK **05** 03:55:42.3, 37°.57N×35°.69E, h11km, MD2.3*
*ISCJB **05** 03:55:43.4±0.6, 37°.52N±0°.04×35°.71E±0°.04, h17km±6km, Error ellipse: s-maj=6.6km s-min=5.4km az=0.7*
*CSEM **05** 03:55:43.0±0.1, 37°.51N×35°.72E, h16km±1km, MD2.3, Error ellipse: s-maj=3.0km s-min=2.3km az=165.0*
ISC 05 03:55:43.3±0.6, 37°.53N±0°.04×35°.71E±0°.04, h17km±4km, n16, σ0°76/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.11**	**114**	PG	**Pg**	**03 55 46.4**	**-0.5**
KOZT				SG	**Sg**	**03 55 48.5**	**-0.6**
ANDN	**Andirin**	**0.51**	**84**	*i* P	**Pg**	**03 55 53.6**	**0.0**
ANDN				*i* S	**Sg**	**03 56 01.5**	**+1.1**
ANDN	**Andirin**	**0.51**	**84**	*i* P	**Pg**	**03 55 53.6**	**+0.1**
ANDN				*i* S	**Sg**	**03 56 01.5**	**+1.1**
CEYT	**Ceyhan**	**0.52**	**176**	PG	**Pg**	**03 55 53.3**	**-0.3**
CEYT				SG	**Sg**	**03 56 02.5**	**+2.0**
CEYT	**Ceyhan**	**0.52**	**176**	*i* Pg	**Pg**	**03 55 53.3**	**-0.3**
KARA	**Karaisali**	**0.58**	**243**	*e*PG	**Pg**	**03 55 54.4**	**-0.4**
KARA				*e*SG	**Sg**	**03 56 03.1**	**+0.6**
KARA	**Karaisali**	**0.58**	**243**	*e*Pg	**Pg**	**03 55 54.4**	**-0.4**
KARA				*e*Sg	**Sg**	**03 56 03.1**	**+0.5**
GULE	**Gulek**	**0.78**	**252**	*i* P	**Pb**	**03 55 57.3**	**-1.1**
GULE				*i* S	**Sb**	**03 56 08.8**	**+0.2**
GULE	**Gulek**	**0.78**	**252**	*i* P	**Pb**	**03 55 57.3**	**-1.1**
GULE				*i* S	**Sb**	**03 56 08.8**	**+0.1**
KMRS	**Kahramanmaras**	**0.95**	**91**	*e*PG	**Pg**	**03 56 01.1**	**-0.7**
KMRS	**Kahramanmaras**	**0.95**	**91**	*e*Pg	**Pg**	**03 56 01.1**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.39**	**34**	*e*PG	**Pg**	**03 56 02.4**	**-7.7**
AVNT	**Avonos**	**1.42**	**332**	*i* P	**Pn**	**03 56 08.5**	**+0.1**
AVNT				*i* S	**Sn**	**03 56 27.6**	**+0.8**
AVNT	**Avonos**	**1.42**	**332**	*i* P	**Pn**	**03 56 08.5**	**+0.1**
AVNT				*i* S	**Sn**	**03 56 27.6**	**+0.9**
YAYL	**Yayladag**	**1.52**	**168**	*i* P	**Pn**	**03 56 09.2**	**-0.5**
YAYL				*i* S	**Sn**	**03 56 28.8**	**-0.4**
YAYL	**Yayladag**	**1.52**	**168**	*i* P	**Pn**	**03 56 09.2**	**-0.6**
YAYL				*i* S	**Sn**	**03 56 28.8**	**-0.4**

*CSEM **05** 04:14:41.9±0.3, 50°.13N×19°.03E, h0km±3km, ML3.3/8, Error ellipse: s-maj=6.0km s-min=3.2km az=7.0*
*IPEC **05** 04:14:41.4±0.2, 50°.16N×19°.10E, h0km, ML2.7/3, Error ellipse: s-maj=2.8km s-min=1.1km az=167.0*
*PRU **05** 04:14:42.8, 50°.19N×19°.02E, h0km*
*VIE **05** 04:14:45.4±0.5, 49°.83N×18°.92E, h0km, mb2.2/3, ML2.9/5, Error ellipse: s-maj=2.9km s-min=2.8km az=177.0 47 km S of Katowice Suspected Mining induced.*
WAR 05 04:14:41.6, 50°.11N×19°.16E, 13C-6D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.43**	**74**	*e*Pg	Pg	04 14 50.2	+0.4
OJC				*e*Sg	Sg	04 14 56.5	+1.2
OJC	**Ojcow**	**0.43**	**74**	*e*Pg	Pg	04 14 50.1	+0.3
	baz=262						
OKC	**Ostrava-Krasne**	**0.71**	**248**	*e*PG	Pg	04 14 55.0	-0.1
OKC				*e*SG	Sg	04 15 04.6	+0.4
	comp=Z,78nm,0.4s						
OKC	**Ostrava-Krasne**	**0.71**	**248**	Pg	Pg	04 14 55.0	-0.1
OKC				Sg	Sg	04 15 04.6	+0.4
	comp=Z,78nm,0.4s						
NIE	**Niedzica**	**1.02**	**132**	*e*Pg	Pg	04 15 01.4	+0.3
NIE				*e*Sg	Sg	04 15 16.4	+2.2
LIKS	**Likavka**	**1.06**	**182**	*e*PG	Pg	04 15 03.4	+1.6
LIKS				*e*SG	Sg	04 15 17.7	+2.2
MORC	**Moravsky Berou**	**1.09**	**253**	↑*i*P	Pg	04 15 01.8	-0.8
MORC	**Moravsky Berou**	**1.09**	**253**	↑*i*P	Pg	04 15 01.8	-0.8
MORC				*e*Sg	Sg	04 15 14.9	-1.8
	comp=Z,124nm,0.4s,baz=69						
KOLL	**Kolacno**	**1.61**	**198**	*e*	Pn	04 15 12.3	+1.1
KOLL	**Kolacno**	**1.61**	**198**	*e*SN	Sn	04 15 33.2	+0.6
KOLL	**Kolacno**	**1.61**	**198**	*e*Sn	Sn	04 15 33.2	+0.6
VYHS	**Vyhne**	**1.63**	**188**	*e*PN	Pn	04 15 10.8	-0.7
VYHS				*e*SN	Sn	04 15 32.8	-0.3
VYHS	**Vyhne**	**1.63**	**188**	*e*Pn	Pn	04 15 10.8	-0.7
VYHS				*e*Sn	Sn	04 15 32.8	-0.3
DPC	**Dobruska-Polom**	**1.84**	**279**	*e*PG	Pg	04 15 13.4	-3.4
DPC				*e*SG	Sg	04 15 37.2	-3.4
	comp=Z,56nm,0.5s						
DPC	**Dobruska-Polom**	**1.84**	**279**	*e*Pn	Pn	04 15 13.3	-1.1
	baz=95						
DPC				*e*Sg	Sg	04 15 37.9	-2.7
	baz=95						
KECS	**Kecovo**	**1.84**	**151**	*e*PN	Pn	04 15 13.8	-0.6
KECS				*e*SN	Sn	04 15 39.9	+1.5
VRAC	**Vranov**	**1.85**	**245**	↑*i*P	Pn	04 15 14.6	+0.1
VRAC	**Vranov**	**1.85**	**245**	*e*Pn	Pn	04 15 13.9	-0.6
	baz=62						
VRAC	**Vranov**	**1.85**	**245**	↑*i*P	Pn	04 15 14.6	+0.1
VRAC				*e*Sg	Sg	04 15 38.8	-2.1
	comp=Z,55nm,0.5s,baz=62						
CRVS	**Cervenica-Dubn**	**1.93**	**128**	*e*PN	Pn	04 15 18.3	+2.7
CRVS				*e*SN	Sn	04 15 42.7	+2.3
CRVS	**Cervenica-Dubn**	**1.93**	**128**	*e*Pn	Pn	04 15 18.3	+2.7
CRVS				*e*Sn	Sn	04 15 42.7	+2.3
KSP	**Ksiaz**	**1.97**	**293**	*e*Pg	Pg	04 15 18.8	-0.6
KSP				*e*Sg	Sg	04 15 44.2	-0.8
KSP	**Ksiaz**	**1.97**	**293**	*e*Pg	Pg	04 15 18.8	-0.6
KSP				*e*Sg	Sg	04 15 44.1	-0.9
KRUC	**Moravsky**	**2.08**	**241**	*e*Pn	Pn	04 15 17.8	+0.1
	baz=57						
KRUC				*e*Sn	Sn	04 15 45.3	+1.1
	comp=Z,53nm,0.5s,baz=57						
PSZ	**Piszkesteto**	**2.24**	**167**	↑*i*P	Pn	04 15 24.1	+4.2
PSZ	**Piszkesteto**	**2.24**	**167**	↑*e*Pn	Pn	04 15 20.9	+1.0
PSZ				*e*Pg	Pg	04 15 26.3	+1.8
PSZ				*e*Sn	Sn	04 15 53.6	+5.3
PSZ	**Piszkesteto**	**2.24**	**167**	↑*i*P	Pn	04 15 24.1	+4.2
ZST	**Bratislava**	**2.34**	**216**	*e*SN	Sn	04 15 52.5	+1.8
ZST	**Bratislava**	**2.34**	**216**	*e*Sn	Sn	04 15 52.5	+1.8
KOLS	**Kolonicke sedl**	**2.34**	**119**	*e*PN	Pn	04 15 25.4	+4.1
KOLS				*e*SN	Sn	04 15 53.3	+2.5
PRU	**Pruhonice**	**2.98**	**270**	*e*PG	Pg	04 15 33.7	-4.9
PRU				*e*SG	Sg	04 16 13.1	-4.1
	comp=Z,20nm,0.5s						
PRU	**Pruhonice**	**2.98**	**270**	Pg	Pg	04 15 33.7	-4.9
PRU				Sg	Sg	04 16 13.1	-4.1
	comp=Z,20nm,0.5s						
CONA	**Conrad Observa**	**3.08**	**226**	↑*i*Pn	Pn	04 15 31.1	-0.2
CONA				↓↓*i*Sn	Sn	04 16 06.8	-2.0
CONA				↑↑*i*Sg	Sg	04 16 17.1	-3.2
	comp=Z,5.5nm,0.3s						
CONA	**Conrad Observa**	**3.08**	**226**	Pn	Pn	04 15 31.1	-0.3
CONA				Sn	Sn	04 16 06.8	-2.0
CONA				Sg	Sg	04 16 17.1	-3.2
	comp=Z,5.5nm,0.3s						
KHC	**Kasperske Hory**	**3.76**	**257**	*e*PN	Pn	04 15 39.9	-0.8
KHC				*e*PG	Pg	04 15 49.2	-4.4
KHC				*e*SG	Sg	04 16 38.8	-3.4
	comp=Z,27nm,0.6s						
KHC	**Kasperske Hory**	**3.76**	**257**	Pn	Pn	04 15 39.9	-0.8
MOA	**Molln**	**3.93**	**237**	↓↓*i*Pn	Pn	04 15 43.2	0.0
MOA				↑↑*i*Sn	Sn	04 16 27.8	-2.2
DRGR		**4.07**	**143**	↓↓*i*P	Pn	04 15 46.1	+1.0
DRGR		**4.07**	**143**	↓↓*i*P	Pn	04 15 46.1	+1.0
BURAR	**Bucovina Array**	**4.71**	**120**	↓↓*i*P	Pn	04 15 57.7	+3.8
BURAR	**Bucovina Array**	**4.71**	**120**	↓↓*i*P	Pn	04 15 57.7	+3.8
MOX	**Moxa**	**4.86**	**279**	*e*SG	Sg	04 17 13.5	-4.0
KBA	**Koelnbreinsper**	**4.90**	**234**	↑↑*i*Sg	Sg	04 17 17.7	-1.3
	comp=Z,4.4nm,0.5s						
KBA	**Koelnbreinsper**	**4.90**	**234**	Sg	Sg	04 17 17.7	-1.4
	comp=Z,4.4nm,0.5s						
GZR	**Gura Zlata**	**5.31**	**151**	↑*i*P	Pn	04 16 03.1	+1.0
GZR	**Gura Zlata**	**5.31**	**151**	↑*i*P	Pn	04 16 03.1	+1.0

*DDA **05** 04:26:23.1, 36°.99N×29°.22E, h7km±5km, Md3.0*
*CSEM **05** 04:26:24.3±0.5, 36°.98N×29°.24E, h2km, MD2.3, Error ellipse: s-maj=10.4km s-min=9.4km az=121.0*
*ISK **05** 04:26:24.1, 37°.37N×29°.22E, h6km, MD2.3*
*ISCJB **05** 04:26:25.6±0.7, 37°.04N±0°.04×29°.22E±0°.04, h12km±6km, Error ellipse: s-maj=6.8km s-min=5.8km az=175.7*
ISC 05 04:26:25.6±0.7, 37°.02N±0°.03×29°.21E±0°.04, h2km±12km, n18, σ1°33/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**59**	*e*PG	**Pg**	**04 26 31.0**	**+0.1**
GLHS				*e*SG	**Sg**	**04 26 35.6**	**+1.2**
GLHS	**Glhisar (BURDU**	**0.27**	**59**	*e*Pg	**Pg**	**04 26 31.0**	**+0.2**
GLHS				*e*Sg	**Sg**	**04 26 35.6**	**+1.2**
GOLH	**Golhisar**	**0.36**	**52**	*e*P	**Pg**	**04 26 30.1**	**-2.4**
GOLH				*e*S	**Sg**	**04 26 37.2**	**+0.1**
GOLH	**Golhisar**	**0.36**	**52**	*e*P	**Pg**	**04 26 30.1**	**-2.4**
GOLH				*e*S	**Sg**	**04 26 37.2**	**+0.1**
TURN	**Turunc**	**0.50**	**254**	*e*P	**Pg**	**04 26 39.2**	**+4.0**
TURN				*e*S	**Sg**	**04 26 50.7**	**+8.9**
TURN	**Turunc**	**0.50**	**254**	*e*P	**Pg**	**04 26 39.2**	**+4.0**
TURN				*e*S	**Sg**	**04 26 50.7**	**+8.9**
ELL	**Elmali**	**0.62**	**115**	*e*PG	**Pg**	**04 26 40.1**	**+2.6**
ELL	**Elmali**	**0.62**	**115**	*e*Pg	**Pg**	**04 26 40.1**	**+2.6**
DNZL	**Cakiroluk**	**0.68**	**349**	*e*P	**Pg**	**04 26 36.3**	**-2.4**
DNZL				*e*S	**Sg**	**04 26 46.9**	**-0.7**
**D

SRDR			*e*S	Sn	04 54 06.7	+1.0
KII	**Karymskiy**	**2.09 222**	*e*P	Pn	04 54 00.2	+2.0
BKI	**Bering**	**2.42 98**	*e*P	Pn	04 54 04.1	+1.5
BKI			*e*S	Sn	04 54 31.9	+0.9
SPN	**Mys Shipunski**	**2.73 203**	*e*P	Pn	04 54 07.7	+0.8
SPN			*e*S	Sn	04 54 39.0	+0.2
NLC	**Nalytchevo**	**2.84 211**	*e*P	Pn	04 54 10.0	+1.6
NLC			*e*S	Sn	04 54 42.9	+1.4
GNL	**Ganaly**	**2.96 231**	*e*P	Pn	04 54 12.0	+2.0
AVH	**Avacha**	**2.96 218**	*e*P	Pn	04 54 12.7	+2.7
PET	**Petropavlovsk**	**3.19 217**	S	Sn	04 54 54.5	+4.6

DDA ***05*** *04:57:39.6, 39°.14N×37°.92E, h5km±1km, Md3.3, Ml3.3*
ISK ***05*** *04:57:39.8, 39°.11N×37°.86E, h11km, MD2.8*
ISCJB ***05*** *04:57:41.0±0.4, 39°.13N±0°.02×37°.91E±0°.03, h10km, Error ellipse: s-maj=4.1km s-min=3.3km az=148.3*
CSEM ***05*** *04:57:40.2±0.1, 39°.13N×37°.86E, h8km, ML3.3, Error ellipse: s-maj=2.2km s-min=1.8km az=48.0*

ISC 05 04:57:41.1±0.5, 39°.14N±0°.02×37°.92E±0°.03, h6km±5km, n35, σ1.9 06/53, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.46**	**74**	⇑*i*P	**Pg**	**04 57 50.3**	**+0.3**
KEMA				*i* S	**Sg**	**04 57 57.0**	**+0.9**
KEMA	**Kemaliye**	**0.46**	**74**	*i* P	**Pg**	**04 57 50.3**	**+0.3**
KEMA				*i* S	**Sg**	**04 57 57.0**	**+1.0**
AKCD	**Akcadag**	**0.84**	**180**	*e*P	**Pg**	**04 57 56.3**	**-1.0**
AKCD				*e*S	**Sg**	**04 58 09.6**	**+1.4**
AKCD	**Akcadag**	**0.84**	**180**	*e*P	**Pg**	**04 57 56.3**	**-1.0**
AKCD				*e*S	**Sg**	**04 58 09.6**	**+1.4**
MYA	**Malataya**	**0.90**	**154**	*e*PG	**Pg**	**04 57 57.3**	**-1.1**
MYA	**Malataya**	**0.90**	**154**	*e*Pg	**Pg**	**04 57 57.3**	**-1.1**
MALT	**Malatya**	**0.91**	**154**	*e*PG	**Pg**	**04 57 57.9**	**-0.7**
MALT				*e*SG	**Sg**	**04 58 10.8**	**+0.4**
MALT	**Malatya**	**0.91**	**154**	*e*Pg	**Pg**	**04 57 57.9**	**-0.7**
MALT				*e*Sg	**Sg**	**04 58 10.8**	**+0.3**
SCER	**sogukcermik**	**0.95**	**320**	⇑*i*P	**Pg**	**04 57 57.8**	**-1.5**
SCER				*i* S	**Sg**	**04 58 11.7**	**+0.1**
SCER	**sogukcermik**	**0.95**	**320**	*i* P	**Pg**	**04 57 57.8**	**-1.5**
SCER				*i* S	**Sg**	**04 58 11.7**	**+0.1**
ELZG	**Elazig**	**1.05**	**127**	*e*P	**Pg**	**04 58 00.7**	**-0.5**
ELZG				*e*S	**Sg**	**04 58 15.8**	**+1.0**
ELZG	**Elazig**	**1.05**	**127**	*e*P	**Pg**	**04 58 00.7**	**-0.5**
ELZG				*e*S	**Sg**	**04 58 15.8**	**+1.0**
SVSK	**Karacayir**	**1.06**	**318**	*e*PG	**Pg**	**04 58 00.0**	**-1.3**
SVSK				*e*SG	**Sg**	**04 58 15.5**	**+0.5**
SVSK	**Karacayir**	**1.06**	**318**	*e*Pg	**Pg**	**04 58 00.0**	**-1.4**
SVSK				*e*Sg	**Sg**	**04 58 15.5**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.06**	**245**	*e*PN	**Pn**	**04 58 04.5**	**+2.0**
SARI	**SarD1z-Kayseri**	**1.06**	**245**	*e*Pn	**Pn**	**04 58 04.5**	**+2.0**
SUSE	**Susehri**	**1.09**	**11**	*e*P	**Pg**	**04 58 01.3**	**-0.7**
SUSE				*e*S	**Sg**	**04 58 18.1**	**+2.0**
SUSE	**Susehri**	**1.09**	**11**	*e*P	**Pg**	**04 58 01.3**	**-0.7**
SUSE				*e*S	**Sg**	**04 58 18.1**	**+2.0**
PTK	**Pertek**	**1.17**	**102**	*e*PN	**Pn**	**04 58 02.6**	**-1.5**
PTK	**Pertek**	**1.17**	**102**	*e*Pn	**Pn**	**04 58 02.6**	**-1.4**
EZC	**Erzincan**	**1.27**	**61**	*e*PN	**Pn**	**04 58 04.8**	**-0.5**
EZC	**Erzincan**	**1.27**	**61**	*e*Pn	**Pn**	**04 58 04.8**	**-0.5**
PINB	**Pinarbasi**	**1.27**	**249**	*e*P	**Pn**	**04 58 04.3**	**-1.2**
PINB				*e*S	**Sb**	**04 58 23.6**	**+1.5**
PINB	**Pinarbasi**	**1.27**	**249**	*e*P	**Pn**	**04 58 04.3**	**-1.1**
SVRC	**Sivrice-ELAZID**	**1.32**	**125**	*e*PN	**Pn**	**04 58 05.4**	**-0.7**
SVRC	**Sivrice-ELAZID**	**1.32**	**125**	*e*Pn	**Pn**	**04 58 05.4**	**-0.7**
KELT	**Kelkit**	**1.44**	**45**	*i* P	**Pn**	**04 58 07.5**	**-0.2**
KELT				*e*S	**Sn**	**04 58 27.4**	**+0.4**
KELT	**Kelkit**	**1.44**	**45**	*i* P	**Pn**	**04 58 07.5**	**-0.2**
KELT				*e*S	**Sn**	**04 58 27.4**	**+0.4**
GUMT	**Gumushane**	**1.78**	**42**	*e*PN	**Pn**	**04 58 12.5**	**+0.1**
GUMT	**Gumushane**	**1.78**	**42**	*e*Pn	**Pn**	**04 58 12.5**	**0.0**
ESPY	**Espiye-Giresun**	**1.88**	**19**	*e*PN	**Pn**	**04 58 14.2**	**+0.4**
ESPY	**Espiye-Giresun**	**1.88**	**19**	*e*Pn	**Pn**	**04 58 14.2**	**+0.4**
YOZ	**Yozgat**	**2.08**	**285**	*e*PN	**Pn**	**04 58 15.2**	**-1.3**
YOZ	**Yozgat**	**2.08**	**285**	*e*Pn	**Pn**	**04 58 15.2**	**-1.3**
AVNT	**Avonos**	**2.42**	**262**	*e*P	**Pn**	**04 58 23.0**	**+1.8**
AVNT				*e*S	**Sn**	**04 58 56.9**	**+5.8**

BGS ***05*** *04:57:30.4±1.5, 35°.73N×72°.06E, h170km, mb5.5*
SZGRF ***05*** *04:57:44.8, 35°.91N×72°.27E, h228km, mb5.9, Pakistan*
BJI ***05*** *04:57:51.4, 36°.67N×71°.26E, h226km, mB5.0/25, mb5.3/60*
MOS ***05*** *04:57:51.0±0.9, 36°.58N×71°.24E, h222km, mb5.5/129, Error ellipse: s-maj=6.5km s-min=4.3km az=121.5*
IGIL ***05*** *04:57:51.7, 36°.56N×71°.22E, h219km, mb5.3*
ISCJB ***05*** *04:57:51.0±0.1, 36°.49N±0°.01×71°.24E±0°.01, h229km, mb5.3/403, Error ellipse: s-maj=1.9km s-min=1.4km az=19.0*
IDC ***05*** *04:57:52.3±0.3, 36°.48N×71°.30E, h236km±2km, mb5.0/35, mb1 5.0/41, mb1mx5.0/41, mbtmp5.0/41, Error ellipse: s-maj=6.9km s-min=5.4km az=171.0*
NEIC ***05*** *04:57:52.6±0.1, 36°.54N×71°.29E, mb5.3/247, MW5.3, Error ellipse: s-maj=3.4km s-min=2.1km az=184.0, Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.10000×10^{17} NP1: ϕ_s26.00000°, δ74.00000°, λ102.00000°. NP2: ϕ_s168.00000°, δ20.00000°, λ53.00000°. Principal axes: T 1.2000, Plg58.0000°, Azm313.0000°; N -0.3300, Plg11.0000°, Azm202.0000°; P -0.8700, Plg28.0000°, Azm106.0000°;*
NEIC Felt at Jalalabad and Kabul. Also felt at Khorugh, Tajikistan and at Abbotabad, Chitral, Islamabad, Lahore, Malakand, Mingora and Muzzafarabad, Pakistan.
GCMT ***05*** *04:57:53.2±0.1, 36°.52N×71°.12E, h225km±1km, MW5.4, Moment Tensor Solution. s70,c100; s95,c173; Moment tensor: Scale 10^{17}Nm; M_{rr}1.24±.02; $M_{\theta\theta}$-0.40±.03; $M_{\phi\phi}$-0.84±.03; $M_{r\theta}$0.81±.02; $M_{\theta\phi}$-0.55±.02; $M_{\phi r}$0.67±.03; Best double couple: $M_0$1.60000×10^{17} NP1: ϕ_s205.00000°, δ26.00000°, λ72.00000°. NP2: ϕ_s44.00000°, δ65.00000°, λ98.00000°. Principal axes: T 1.6500, Plg68.0000°, Azm331.0000°; N -0.0700, Plg8.0000°, Azm221.0000°; P -1.5800, Plg20.0000°, Azm128.0000°; Data Used: IU II IC G CN.*
DJA ***05*** *04:57:54, 36°.25N×71°.22E, h230km, mb5.3/31*
NNC ***05*** *04:57:58.4±3.0, 37°.13N×71°.26E, h233km±23km, mb4.8, mpv6.1, Error ellipse: s-maj=26.2km s-min=18.1km az=18.0*

ISC 05 04:57:52.7±0.1, 36°.52N±0°.01×71°.29E±0°.01, h231km, h231km±.6km: pP-P, n1391, σ0.99/1442, mb5.3/399, 302C-86D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.69**	**223**	⇑*i*PN	**Pn**	**04 58 38.8**	**-1.8**
KBL				*e*S	**S**	**04 59 15.1**	**-3.2**
CEP	**Cherat**	**2.74**	**169**	⇓P	**Pn**	**04 58 40.1**	**-1.0**
CEP				S	**S**	**04 59 18.0**	**-1.3**
CHCP	**Chirah Chowk**	**3.28**	**150**	⇓P	**Pn**	**04 58 46.7**	**-0.5**
THW	**Thamme Wali**	**3.73**	**174**	⇓P	**Pn**	**04 58 51.2**	**-1.3**
SRNI	**Srinagar**	**3.78**	**129**	*e*PKP	**Pn**	**04 58 45.0**	**-8.1**
SRNI				*e*S	**S**	**04 59 31.0**	**-10**
SARP	**Sargodha**	**4.73**	**166**	⇓P	**Pn**	**04 59 02.9**	**-1.6**
KSH	**Kashi**	**4.76**	**50**	⇓*i*P	**Pn**	**04 58 58.8**	**-6.0**
KSH				smax			
	comp=N,15μm,0.8s						
KSH				smax			
	comp=E,13μm,0.6s						
JMU	**Jammu**	**4.82**	**141**	*e*PKP	**Pn**	**04 59 03.0**	**-2.7**
JMU				*ex*	x	04 59 16.0	
AML	**Almayashu**	**5.91**	**18**	P	**Pn**	**04 59 18.0**	**-1.1**
	SNR=1870						
AML	**Almayashu**	**5.91**	**18**	*e*Pn	**Pn**	**04 59 18.1**	**-1.0**
CHM	**Chimkent**	**5.94**	**348**	⇓*i*PN	**Pn**	**04 59 31.5**	**+12**
CHM				*e*S	**S**	**05 00 27.7**	**-1.0**
UCH	**Uchtor**	**6.22**	**23**	P	**Pn**	**04 59 22.6**	**-0.5**
	SNR=218						
UCH	**Uchtor**	**6.22**	**23**	⇓*e*Pn	**Pn**	**04 59 22.4**	**-0.7**
UCH				*e*S	**S**	**05 00 30.9**	**-4.4**
KZA	**Kyzart**	**6.34**	**28**	P	**Pn**	**04 59 23.4**	**-1.3**
	SNR=189						
KZA	**Kyzart**	**6.34**	**28**	*e*Pn	**Pn**	**04 59 23.3**	**-1.3**
KZA				*e*S	**S**	**05 00 35.4**	**-2.8**
EKS2	**Erkin-Say**	**6.43**	**17**	P	**Pn**	**04 59 24.6**	**-1.1**
	SNR=941						
EKS2	**Erkin-Say**	**6.43**	**17**	⇓*i*Pn	**Pn**	**04 59 24.5**	**-1.2**
	comp=E,138nm,0.8s						
EKS2				*e*S	**S**	**05 00 34.9**	**-5.1**
AAK	**Ala-Archa**	**6.59**	**21**	P	**Pn**	**04 59 27.1**	**-0.6**
	SNR=1009						
AAK	**Ala-Archa**	**6.59**	**21**	P	**Pn**	**04 59 27.1**	**-0.7**
	comp=E,6.8nm,0.3s,baz=189,slow=8.1,SNR=1417						
AAK				S	**S**	**05 00 40.4**	**-3.4**
	comp=E,2.1nm,0.3s,baz=315,slow=19,SNR=5.4						
AAK	**Ala-Archa**	**6.59**	**21**	*d i*PN	**Pn**	**04 59 26.9**	**-0.9**
AAK				pmax	pmax		
	comp=Z,398nm,0.6s						
AAK	**Ala-Archa**	**6.59**	**21**	⇓*i*Pn	**Pn**	**04 59 26.9**	**-0.8**
AAK				*e*S	**S**	**05 00 35.5**	**-8.3**
AAK	**Ala-Archa**	**6.59**	**21**	Pn	**Pn**	**04 59 27.8**	**0.0**
	comp=Z,16μm,0.4s						
AAK	**Ala-Archa**	**6.59**	**21**	P	**Pn**	**04 59 27.2**	**-0.5**
	SNR=341						
KK31	**Karatay Array**	**6.60**	**355**	⇓P	**Pn**	**04 59 26.3**	**-1.6**
	comp=Z,867nm,0.6s,baz=187,slow=17,SNR=9094						
KK31				⇑S	**S**	**05 00 36.4**	**-7.6**
	comp=Z,2μm,0.4s,baz=186,slow=26,SNR=9.2						
KK31	**Karatay Array**	**6.60**	**355**	PN	**Pn**	**04 59 26.2**	**-1.7**
KK31				pmax	pmax		
	comp=Z,275nm,0.2s						
KKAR	**Karatay Array**	**6.60**	**355**	⇓*i*Pn	**Pn**	**04 59 26.0**	**-1.9**
KKAR				*e*S	**S**	**05 00 37.2**	**-6.9**
BHK	**Bhakra**	**6.64**	**139**	*ex*	**Pn**	**04 59 24.0**	**-4.5**
BHK				*ex*	x	05 00 24.2	
KBK	**Karagaybulak**	**6.75**	**24**	P	**Pn**	**04 59 29.3**	**-0.5**
	SNR=480						
KBK	**Karagaybulak**	**6.75**	**24**	*e*Pn	**Pn**	**04 59 29.2**	**-0.6**
SDNR	**Sundarnagar**	**6.88**	**135**	*e*PKP	**Pn**	**04 59 30.0**	**-1.6**
SDNR				*ex*	x	05 00 32.0	
ULHL	**Ulahol**	**6.89**	**32**	P	**Pn**	**04 59 30.2**	**-1.3**
	SNR=372						
CHMS	**Chumysh**	**7.00**	**21**	P	**Pn**	**04 59 31.7**	**-1.3**
	SNR=341						
USP	**Ospenovka**	**7.18**	**19**	P	**Pn**	**04 59 33.4**	**-1.9**
	SNR=177						
TKM2	**Tokmak 2**	**7.20**	**26**	⇓P	**Pn**	**04 59 34.8**	**-0.8**
	comp=Z,2μm,1.2s						
TKM2				⇑S	**S**	**05 00 54.1**	**-3.9**
	comp=Z,2μm,1.1s						
TKM2	**Tokmak 2**	**7.20**	**26**	P	**Pn**	**04 59 34.8**	**-0.8**
	SNR=1772						
TKM2	**Tokmak 2**	**7.20**	**26**	⇓*i*Pn	**Pn**	**04 59 34.8**	**-0.8**
SMLA	**Simla**	**7.27**	**136**	*i* P	**Pn**	**04 59 36.0**	**-0.5**
SMLA				*i* S	**S**	**05 00 53.4**	**-6.3**
SMLA				⇓		05 00 58.4	
	comp=N,85μm,0.4s						
SMLA				⇓		05 00 59.0	
	comp=E,73μm,0.5s						
KLP	**Kalpa**	**7.62**	**129**	*e*PKP	**Pn**	**04 59 39.8**	**-1.4**
KLP				*e*S	**S**	**05 01 02.0**	**-6.0**
KNDC	**Almaty**	**7.99**	**31**	⇓P	**Pn**	**04 59 45.3**	**-0.2**
	comp=E,1μm,0.8s						
KNDC				⇑S	**S**	**05 01 08.3**	**-7.9**
	comp=E,2μm,0.9s						
KKR	**Kurukshetra**	**8.01**	**143**	*e*PKP	**Pn**	**04 59 44.5**	**-1.7**
AAA	**Alma-Ata**	**8.02**	**31**	*i* Pn	**Pn**	**04 59 45.4**	**-0.7**
AAA				pmax	pmax		
	comp=Z,1μm,0.6s						
DDI	**Dehra Dun**	**8.38**	**136**	*e*PKP	**Pn**	**04 59 49.3**	**-1.5**
DDI				*ex*	x	05 01 22.0	
JOSI	**Joshimath**	**9.11**	**128**	*e*PKP	**Pn**	**04 59 59.2**	**-0.9**
JOSI				*e*S	**S**	**05 01 36.3**	**-6.5**
KHET	**Khetri**	**9.25**	**154**	*ex*	x	04 59 58.6	
KHET				*e*S	**S**	**05 01 36.2**	**-10**
KHET				AML	AML	05 01 54.7	
	comp=N,1μm,0.5s						
KHET				AML	AML	05 01 54.9	
	comp=E,939nm,0.4s						
NDI	**New Delhi**	**9.28**	**146**	*ex*	**Pn**	**04 59 59.0**	**-3.2**
NDI				*ex*	x	05 00 34.0	
KUDL	**Kundal**	**9.44**	**151**	*e*PKP	**Pn**	**04 59 56.3**	**-8.0**
KUDL				*e*S	**S**	**05 01 35.0**	**-16**
KUDL				AML	AML	05 01 38.2	
	comp=E,2μm,0.5s						
KUDL				AML	AML	05 01 43.8	
	comp=N,975nm,0.5s						
BISR	**Bishrakh**	**9.47**	**145**	*ex*	**Pn**	**05 00 01.7**	**-3.1**
BISR				*e*S	**S**	**05 01 41.5**	**-10**
SONA	**Sohna**	**9.59**	**148**	*ex*	**Pn**	**05 00 03.6**	**-2.6**
SONA				*e*S	**S**	**05 01 43.6**	**-11**
AJM	**Ajmer**	**10.41**	**163**	*ex*	**Pn**	**05 00 14.2**	**-2.5**
AJM				*e*S	**S**	**05 02 04.4**	**-9.1**
ABKT	**Ailbek**	**10.59**	**282**	Pn	**Pn**	**05 00 15.8**	**-3.1**
	comp=N,3μm,0.4s,SNR=79						
VAN	**Vannovskaya**	**10.60**	**282**	⇓*i*P	**Pn**	**05 00 15.1**	**-3.9**
AGRA	**Agra**	**10.85**	**147**	*ex*	**Pn**	**05 00 19.8**	**-2.5**
AGRA				*e*S	**S**	**05 02 14.3**	**-9.4**
AGRA				AML	AML	05 02 17.4	
	comp=E,2μm,0.6s						
AGRA				AML	AML	05 02 18.3	
	comp=N,2μm,0.8s						
MK31	**Makanchi Array**	**13.14**	**35**	⇓P	**Pn**	**05 00 49.7**	**-1.0**
	comp=N,371nm,0.7s,baz=210,slow=15,SNR=1995						
MK31	**Makanchi Array**	**13.14**	**35**	*e*P	**Pn**	**05 00 49.6**	**-1.1**
MK31				pmax	pmax		
	comp=Z,255nm,0.5s						
MK31	**Makanchi Array**	**13.14**	**35**	*e*Pn	**Pn**	**05 00 48.9**	**-1.8**
MKAR	**Makanchi Array**	**13.14**	**35**	P	**Pn**	**05 00 49.0**	**-1.6**
	comp=Z,11nm,0.3s,baz=213,slow=11,SNR=245						
MKAR				S	**S**	**05 03 16.9**	**+0.2**
	baz=242,slow=14,SNR=2.2						
MKAR	**Makanchi Array**	**13.14**	**35**	*ce*P	**Pn**	**05 00 49.0**	**-1.7**
MKAR				pmax	pmax		
	comp=Z,312nm,0.7s						
BHJ	**Bhuj**	**13.29**	**187**	*ex*	**Pn**	**05 00 51.9**	**-0.9**
BHJ				*e*S	**S**	**05 03 07.7**	**-13**
DANN	**Dangsing**	**13.31**	**124**	*e*P	**Pn**	**05 00 51.1**	**-1.8**
KOLN	**Koldanda**	**13.59**	**126**	*e*P	**Pn**	**05 00 54.7**	**-1.7**
GKN	**Gorkha**	**14.12**	**123**	*e*P	**Pn**	**05 01 01.0**	**-1.9**
BHPL	**Bhopal**	**14.26**	**156**	*e*PKP	**Pn**	**05 01 03.0**	**-1.7**
BHPL				*ex*	x	05 03 33.7	
WMQ	**Urumqi**	**14.50**	**55**	P	**Pn**	**05 01 07.0**	**-0.3**
WMQ				sP		05 02 03.0	
WMQ				S	**S**	**05 03 42.0**	**-5.8**
WMQ				PcP	PcP	05 06 07.0	+2.6
WMQ				ScS	ScS	05 12 55.0	+1.5
WMQ				pmax	pmax		
	comp=Z,160nm,0.8s						
WMQ				LR	LR		
	comp=N,1μm,8.0s						
WMQ				LR	LR		
	comp=E,460nm,8.0s						
WMQ				LR	LR		
	comp=Z,760nm,8.0s						
DMN	**Daman**	**14.69**	**123**	*e*P	**Pn**	**05 01 08.3**	**-1.6**
KKN	**Kakani**	**14.69**	**122**	*e*P	**Pn**	**05 01 07.8**	**-2.1**
PKIN	**Phulchoki**	**14.91**	**123**	*e*P	**Pn**	**05 01 11.5**	**-1.0**
PKI	**Pulchoki**	**14.92**	**123**	*e*P	**Pn**	**05 01 11.1**	**-1.5**
GUN	**Gumba**	**15.03**	**121**	*e*P	**Pn**	**05 01 12.4**	**-1.5**
KURBB	**Kurchatov Arra**	**15.03**	**18**	⇓P	**Pn**	**05 01 11.4**	**-2.3**
	comp=Z,40nm,0.8s						
KURK	**Kurchatov**	**15.14**	**18**	P	**Pn**	**05 01 13.8**	**-1.2**
	comp=Z,1μm,0.8s						
KURK	**Kurchatov**	**15.14**	**18**	⇑P	**Pn**	**05 01 13.3**	**-1.7**
	comp=Z,160nm,0.8s						
KURK	**Kurchatov**	**15.14**	**18**	P	**Pn**	**05 01 12.0**	**-3.0**
	comp=Z,4.5nm,0.3s,baz=208,slow=10,SNR=120						
KURK				S	**S**	**05 03 58.1**	**-4.1**
	baz=203,slow=16,SNR=3.7						
KURK	**Kurchatov**	**15.14**	**18**	*c i*P	**Pn**	**05 01 12.9**	**-2.1**
KURK				pmax	pmax		
	comp=Z,123nm,0.6s						
KURK	**Kurchatov**	**15.14**	**18**	*e*P	**Pn**	**05 01 13.0**	**-2.0**
	comp=Z,32nm,1.2s						
KURK	**Kurchatov**	**15.14**	**18**	P	**Pn**	**05 01 13.4**	**-1.6**
	SNR=124						
AB31	**Akbulak array**	**15.18**	**331**	P	**Pn**	**05 01 13.4**	**-2.1**
	comp=Z,561nm,0.6s,baz=139,slow=11,SNR=5820						
AB31				⇑S	**S**	**05 03 54.3**	**-8.8**
	comp=Z,758nm,0.9s,baz=152,slow=21,SNR=7.4						
AB31	**Akbulak array**	**15.18**	**331**	P	**Pn**	**05 01 13.4**	**-2.1**
AB31				pmax	pmax		
	comp=Z,561nm,0.6s						
ABKAR	**Akbulak array**	**15.18**	**331**	*e*P	**Pn**	**05 01 13.5**	**-2.0**
	comp=Z,556nm,0.6s						
JBP	**Jabalpur**	**15.29**	**148**	*e*PKP	**Pn**	**05 01 16.2**	**-0.9**
JBP				*ex*	x	05 03 55.4	
RAMN	**Ramite**	**16.13**	**122**	*e*P	**P**	**05 01 25.5**	**-0.5**
VOSK	**Vostochnaya**	**16.20**	**359**	⇑P	**P**	**05 01 26.0**	**-0.5**
	comp=Z,189nm,0.8s						
ZRNK	**Zerenda**	**16.51**	**355**	⇓P	**P**	**05 01 29.3**	**-0.6**
	comp=Z,542nm,1.2s						
BVA0	**Borovoye Array**	**16.52**	**358**	⇑P	**P**	**05 01 30.3**	**+0.3**
	comp=Z,24nm,0.7s						
BVA0				⇓S	**S**	**05 04 25.3**	**-5.3**
	comp=Z,78nm,1.1s,baz=167,slow=24,SNR=10.0						
BVAR	**Borovoye Array**	**16.52**	**358**	P	**P**	**05 01 30.2**	**+0.3**
	comp=Z,40nm,0.3s,baz=162,slow=10,SNR=350						
BVAR				S	**S**	**05 04 28.6**	**-2.0**
	comp=Z,5.7nm,0.3s,baz=169,slow=19,SNR=5.0						
BVAR	**Borovoye Array**	**16.52**	**358**	P	**P**	**05 01 30.2**	**+0.2**
BVAR				S	**S**	**05 04 28.6**	**-2.0**
BVAR				pmax	pmax		
	comp=Z,40nm,0.3s						
BVAR				smax			
	comp=N,6.0nm,0.3s						
AKL	**Akola**	**16.54**	**161**	⇑*i x*	**P**	**05 01 31.6**	**+1.1**
AKL				*i x*	x	05 04 28.5	
BRVK	**Borovoye**	**16.55**	**358**	P	**P**	**05 01 30.4**	**0.0**
	comp=N,2μm,1.4s						
BRVK	**Borovoye**	**16.55**	**358**	*c i*P	**P**	**05 01 30.6**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,422nm,1.2s						
BRVK	**Borovoye**	**16.55**	**358**	⇑*i*P	**P**	**05 01 30.5**	**+0.2**
	comp=Z,195nm,0.6s						
BRVK				*e*S	**S**	**05 04 28.7**	**-2.7**
BRVK	**Borovoye**	**16.55**	**358**	P	**P**	**05 01 30.9**	**+0.5**
	SNR=197						
BANOM	**Banah**	**16.59**	**235**	P	**P**	**05 01 30.4**	**-0.7**
	SNR=23						
TAPN	**Taplejung**	**16.65**	**119**	*e*P	**P**	**05 01 32.8**	**+1.0**
ODAN	**Odare**	**16.73**	**121**	*e*P	**P**	**05 01 34.1**	**+1.5**
AKTK	**Aktyubinsk**	**16.88**	**330**	P	**P**	**05 01 34.5**	**+0.5**
AKTK				S	**S**	**05 04 34.8**	**-3.1**
AKTO	**Aktyubinsk**	**16.88**	**330**	⇑P	**P**	**05 01 34.4**	**+0.4**
	comp=Z,112nm,1.1s						
AKTO				⇑S	**S**	**05 04 34.9**	**-3.0**
	comp=Z,65nm,0.8s						
AKTO	**Aktyubinsk**	**16.88**	**330**	P	**P**	**05 01 34.5**	**+0.5**
	comp=Z,50nm,0.3s,baz=142,slow=9.1,SNR=622						
AKTO				S	**S**	**05 04 34.8**	**-3.1**
	comp=Z,1.6nm,0.3s,baz=343,slow=19,SNR=3.8						
AKTO	**Aktyubinsk**	**16.88**	**330**	P	**P**	**05 01 34.5**	**+0.5**
AKTO				S	**S**	**05 04 34.8**	**-3.1**
AKTO				pmax	pmax		
	comp=Z,50nm,0.3s						
AKTO				smax			
	comp=N,2.0nm,0.3s						
HATD	**Hatta, Dubai**	**17.46**	**232**	P	**P**	**05 01 40.9**	**+0.3**
	SNR=32						
HATD	**Hatta, Dubai**	**17.46**	**232**	P	**P**	**05 01 40.7**	**+0.1**
	SNR=91						
WBK	**Wadi Bani Khal**	**17.49**	**221**	P	**P**	**05 01 42.5**	**+1.6**
	SNR=46						
ASHO	**Ashiyiah**	**17.61**	**232**	P	**P**	**05 01 42.2**	**0.0**
	SNR=69						
ASHO	**Ashiyiah**	**17.61**	**232**	P	**P**	**05 01 42.1**	**-0.1**
	SNR=233						
SMDO	**Samad**	**17.63**	**224**	P	**P**	**05 01 43.7**	**+1.2**
	SNR=26						
SMDO	**Samad**	**17.63**	**224**	P	**P**	**05 01 43.4**	**+0.9**
	SNR=49						
NAZ	**Nazwa, Dubai**	**17.65**	**234**	P	**P**	**05 01 42.3**	**-0.3**
	SNR=42						
HOQ	**Hoqain**	**17.65**	**227**	P	**P**	**05 01 42.2**	**-0.5**
	SNR=26						
HOQ	**Hoqain**	**17.65**	**227**	P	**P**	**05 01 42.6**	**-0.1**
	SNR=34						
LSA	**Lhasa**	**17.96**	**107**	⇓*i*P	**P**	**05 01 49.1**	**+3.1**
LSA				pmax	pmax		
	comp=Z,653nm,0.9s						
LSA	**Lhasa**	**17.96**	**107**	⇓*i*P	**P**	**05 01 49.0**	**+3.0**
	comp=Z,653nm,0.9s						
POO	**Poona**	**18.06**	**172**	*ex*	**P**	**05 01 47.3**	**+0.1**
POO				*ex*	x	05 05 13.1	
ASUD	**Al Ashush, Dub**	**18.12**	**234**	P	**P**	**05 01 48.2**	**+0.5**
	SNR=15						
JMDO	**Jabal Madar**	**18.15**	**223**	P	**P**	**05 01 49.2**	**+1.0**
	SNR=73						
ARQ	**Araqi**	**18.31**	**228**	P	**P**	**05 01 50.6**	**+0.8**
	SNR=38						
BSY	**Bisya**	**18.36**	**225**	P	**P**	**05 01 51.8**	**+1.4**
	SNR=49						
LATR	**Latur**	**18.62**	**164**	*ex*	**P**	**05 01 54.1**	**+0.9**
LATR				*ex*	x	05 05 19.5	
KAD	**Karad**	**19.31**	**172**	*e*PKP	**P**	**05 02 00.2**	**-0.4**
KAD				*ex*	x	05 06 24.5	
MAK	**Makhachkala**	**19.35**	**297**	*e*P	**P**	**05 01

VIS	Vishakhapatnam	21.54 147	*i* x	P	P	05 02 24.7 +0.6
VIS			*i* S	S	S	05 06 07.4 +0.7
VIS			*i* S	S	S	05 06 09.1 +2.5
ARU	Arti	21.69 341	*c iP*	P	P	05 02 24.9 -0.1
ARU			*PP			05 03 01.2
ARU			S	S	S	05 06 12.0 +3.6
ARU			SS			05 06 58.4
ARU			pmax	pmax		
	comp=Z,1μm,1.7s,mb6.1					
ARU	Arti	21.69 341	⇑*iP*	P	P	05 02 24.9 -0.2
	comp=Z,52nm,1.0s,mb5.0					
ARU			*e*			05 03 31.1
ARU	Arti	21.69 341	P	P	P	05 02 25.5 +0.5
	comp=Z,3μm,0.9s,mb6.8,SNR=44					
GOR	Gori	21.70 293	P	P	P	05 02 26.8 +1.5
CLDR	Caldiran	21.75 285	*eP*	P	P	05 02 26.7 +0.9
CLDR	Caldiran	21.75 285	P	P	P	05 02 26.6 +0.8
DYDN	Diyadin	21.91 286	⇑*iP*	P	P	05 02 29.0 +1.8
ZEI	Tsey	21.94 295	*eP*	P	P	05 02 24.2 -3.3
ZEI			pmax	pmax		
	comp=Z,153nm,0.8s,mb5.6					
HAKT	HAKKARI	22.01 281	⇑*iP*	P	P	05 02 28.3 +0.1
CUKT	Cukurca	22.12 280	*eP*	P	P	05 02 29.7 +0.5
DIGO	Kars	22.16 289	⇑*iP*	P	P	05 02 30.1 +0.6
VANB	Van	22.18 284	*eP*	P	P	05 02 31.5 +1.8
BHD	Baghdad	22.28 270	*ex*	x		05 02 23.0
BHD			*ex*	x		05 03 34.0
BHD			*ex*	x		05 06 04.0
BHD			*ex*	x		05 06 28.0
KARS	Kars	22.39 289	*eP*	P	P	05 02 34.1 +2.5
AGRB	Hanur-Agry	22.45 286	*eP*	P	P	05 02 34.7 +2.5
GTA	Gaotai	22.64 74	⇑P	P	P	05 02 36.3 +2.4
GTA			pP			05 03 17.0
GTA			sP	sP		05 03 43.5 +0.2
GTA			S	S	S	05 06 28.1 +3.9
GTA			SS			05 07 37.2
GTA			pmax	pmax		
	comp=Z,250nm,0.9s,mb5.7					
GTA			pmax	pmax		
	comp=Z,410nm,3.7s					
GTA			LR	LR		
	comp=N,470nm,13.3s					
GTA			LR	LR		
	comp=E,580nm,12.3s					
GTA			LR	LR		
	comp=Z,570nm,12.8s					
GOF	Gofitskoye	22.94 301	*eP*	P	P	05 02 40.2 +3.6
KIV	Kislovodsk	22.98 298	⇓*eP*	P	P	05 02 37.6 +0.6
KIV			*e**PP			05 03 14.7
KIV			*i* S	S	S	05 06 35.6 +6.0
KIV			pmax	pmax		
	comp=Z,219nm,1.0s,mb5.6					
KIV			MLR	MLR		
	comp=Z,700nm,16.0s					
KIV	Kislovodsk	22.98 298	⇑*iP*	P	P	05 02 37.0 0.0
	comp=Z,43nm,0.8s,mb5.0					
KIV			*e*pP			05 03 14.7
KIV			*es*P	sP		05 03 47.4 +0.5
KIV	Kislovodsk	22.98 298	P	P	P	05 02 37.9 +0.9
	comp=Z,1μm,0.7s,mb6.6,SNR=16					
KIV	Kislovodsk	22.98 298	P	P	P	05 02 37.4 +0.4
	SNR=44					
ARTV	Artvin	23.28 291	⇑*iP*	P	P	05 02 40.2 +0.5
DAGI	Agillar	23.28 290	⇑*iP*	P	P	05 02 41.3 +1.6
DDEM	Demirkent	23.40 290	⇑*iP*	P	P	05 02 42.3 +1.4
DBOC	Borcka	23.48 291	⇑*iP*	P	P	05 02 42.8 +1.2
BCA	Borcka	23.52 291	*eP*	P	P	05 02 42.3 +0.5
BCA	Borcka	23.52 291	P	P	P	05 02 43.4 +1.5
EZM	Erzurum	23.70 287	*eP*	P	P	05 02 46.7 +3.2
EZM	Erzurum	23.70 287	P	P	P	05 02 46.7 +3.1
BEST	Besiri	23.90 282	⇑*iP*	P	P	05 02 46.9 +1.5
BNGL	BINGOL	23.91 285	⇑*iP*	P	P	05 02 46.6 +1.1
RBK	Rabkut	24.23 223	P	P	P	05 02 48.9 +0.4
	SNR=16					
KOPT	Kop Dagi	24.36 288	⇑*iP*	P	P	05 02 51.4 +1.8
BINT	Bingol	24.43 285	*eP*	P	P	05 02 52.1 +1.9
BINT	Bingol	24.43 285	P	P	P	05 02 50.3 +0.1
MDRS	Chennai	24.70 159	*e*PKP	x		05 03 08.7
MDRS			*es*	x		05 07 15.2
DIY	Diyarbakir	24.72 283	P	P	P	05 02 55.2 +2.4
ABTO	Aybut	24.85 225	P	P	P	05 02 54.6 +0.4
	SNR=13					
SOC	Sochi	25.07 296	*c iP*	P	P	05 02 55.8 -0.1
SOC			*e**PP	pP		05 03 35.9 -4.3
SOC			*e*	pP		05 03 42.3 +2.1
SOC			*es*	S	S	05 06 57.6 -5.1
SOC			*e**SS	sS		05 08 21.3 -3.1
SOC			pmax	pmax		
	comp=Z,78nm,1.5s,mb5.1					
GUMT	Gumushane	25.13 289	*eP*	P	P	05 02 58.8 +2.3
GUMT	Gumushane	25.13 289	P	P	P	05 02 59.3 +2.8
EZC	Erzincan	25.25 287	*eP*	P	P	05 03 00.3 +2.7
EZC	Erzincan	25.25 287	P	P	P	05 03 00.2 +2.6
PTK	Pertek	25.28 285	*eP*	P	P	05 02 58.4 +0.6
PTK	Pertek	25.28 285	P	P	P	05 02 58.4 +0.6
KELT	Kelkit	25.31 288	⇑*iP*	P	P	05 02 59.0 +0.8
VRHR	Novokhopersk	25.67 314	⇓*eP*	P	P	05 03 00.9 -0.3
VRHR			*e**PP	pP		05 03 39.3 -7.2
VRHR			pmax	pmax		
	comp=Z,200nm,1.2s,mb5.6					
VRHR			pmax	pmax		
	comp=N,90nm,0.9s					
VRHR			pmax	pmax		
	comp=E,200nm,1.0s					
ESPY	Espiye-Giresun	25.69 290	*eP*	P	P	05 03 02.7 +1.1
MOY	Mondy	25.93 45	*eP*	P	P	05 03 05.4 +1.9
MOY			pmax	pmax		
	comp=Z,140nm,1.8s,mb5.3					
KEMA	Kemaliye	25.95 286	⇑*iP*	P	P	05 03 05.8 +1.9
MALT	Malatya	26.09 284	*eP*	P	P	05 03 06.7 +1.6
MALT	Malatya	26.09 284	⇑*iP*	P	P	05 03 06.4 +1.3
	comp=Z,22nm,0.9s,mb4.8					
MALT	Malatya	26.09 284	⇑*iP*	P	P	05 03 06.5 +1.4
MALT	Malatya	26.09 284	P	P	P	05 03 06.5 +1.4
	comp=Z,2μmcomp=Z,113nm,1.7s,mb5.2					
MYA	Malataya	26.09 284	*eP*	P	P	05 03 07.3 +2.2
MYA	Malataya	26.09 284	P	P	P	05 03 07.5 +2.4
LZH	Lanzhou	26.18 81	⇑P	P	P	05 03 07.2 +1.2
LZH			pP	pP		05 03 50.0 -1.4
LZH			PP	PP		05 04 00.5 -9.5
LZH			sP	sP		05 04 17.0 -1.4
LZH			S	S	S	05 07 21.2 +0.8
LZH			sS	sS		05 08 39.0 -3.6
LZH			SS	sS		05 08 52.3 +10
LZH			pmax	pmax		
	comp=Z,39nm,1.0s,mb5.0					
LZH			pmax	pmax		
	comp=Z,200nm,4.3s					
AKCD	Akcadag	26.48 284	⇑*iP*	P	P	05 03 10.1 +1.5
RSDY	Resadiye-TOKAT	26.77 289	*eP*	pP		05 03 57.6 +0.8
RSDY	Resadiye-TOKAT	26.77 289	P	P	P	05 03 12.7 +1.5
ZAK	Zakamensk	26.80 49	⇓*iP*	P	P	05 03 12.6 +1.3
ZAK			*e*	pP		05 03 59.3 +2.3
ZAK			pmax	pmax		
	comp=Z,43nm,0.8s,mb5.1					
ANN	Anapa	26.83 299	*c iP*	P	P	05 03 11.2 -0.4
ANN			*i* *PP	pP		05 03 56.0 -1.2
ANN			*e*			05 04 07.2
ANN			*e*PPP			05 04 16.7
ANN			*es*	S	S	05 07 30.2 -0.2
ANN			*e*SS	sS		05 09 07.5 +15
ANN			pmax	pmax		
	comp=Z,195nm,1.0s,mb5.7					
VORD	Divnogorie	27.00 312	*deP*	P	P	05 03 12.9 -0.1
VORD			*e**PP	pP		05 03 52.2 -6.5
VORD			pmax	pmax		
	comp=N,80nm,1.1s					
VORD			pmax	pmax		
	comp=Z,130nm,1.1s,mb5.5					
VORD			pmax	pmax		
	comp=E,200nm,1.0s					
SVSK	Karacayir	27.05 288	*eP*	P	P	05 03 15.3 +1.7
SVSK	Karacayir	27.05 288	P	P	P	05 03 15.3 +1.6
VSR	Storozhevoye	27.16 313	*deP*	P	P	05 03 14.2 -0.3
VSR			*e**PP	pP		05 03 54.3 -5.9
VSR			pmax	pmax		
	comp=N,90nm,1.2s					
VSR			pmax	pmax		
	comp=Z,250nm,1.2s,mb5.7					
VSR			pmax	pmax		
	comp=E,330nm,1.1s					
GAZ	Gaziantep	27.19 282	*eP*	P	P	05 03 16.4 +1.5
GAZ	Gaziantep	27.19 282	P	P	P	05 03 16.4 +1.4
VOR	Voronezh	27.32 314	P	P	P	05 03 12.0 -3.9
VOR			pmax	pmax		
	comp=Z,150nm,1.7s,mb5.3					
KMRS	Kahramanmaras	27.39 282	*eP*	P	P	05 03 17.8 +1.1
SARI	SarD1z-Kayseri	27.40 285	*eP*	P	P	05 03 19.7 +3.0
TLY	Talaya	27.46 46	*eP*	P	P	05 03 19.0 +1.8
TLY			*e*	pP		05 04 05.4 +2.5
TLY			*e*PPP			05 04 16.3
TLY			*es*S	S	S	05 07 45.0 +4.8
TLY			pmax	pmax		
	comp=Z,56nm,0.7s,mb5.3					
TLY	Talaya	27.46 46	⇑*iP*	P	P	05 03 18.9 +1.7
	comp=Z,5.0nm,0.7s,mb4.2					
TLY	Talaya	27.46 46	P	P	P	05 03 19.6 +2.4
	comp=Z,675nm,0.6s,SNR=21					
TLY	Talaya	27.46 46	P	P	P	05 03 19.5 +2.4
	SNR=14					
KVT	Kavak	27.72 290	*eP*	P	P	05 03 21.1 +1.6
KVT	Kavak	27.72 290	P	P	P	05 03 20.2 +0.6
ANDN	Andirin	27.81 283	⇑*iP*	P	P	05 03 21.4 +0.9
IRK	Irkutsk	28.02 45	*eP*	P	P	05 03 23.0 +0.9
IRK			*e*	pP		05 04 10.2 +2.2
IRK			*e*			05 06 30.4
IRK			pmax	pmax		
	comp=Z,177nm,1.5s,mb5.5					
SONM	Songino Array	28.14 55	P	P	P	05 03 24.3 +1.2
	comp=Z,40nm,0.7s,mb5.2,baz=267,slow=9.7,SNR=172					
SONM			pP	pP		05 04 10.5 +1.4
	comp=Z,30nm,0.8s,baz=259,slow=9.9,SNR=6.1					
SONM	Songino Array	28.14 55	P	P	P	05 03 24.3 +1.1
SONM			*PP	pP		05 04 10.5 +1.4
SONM			pmax	pmax		
	comp=Z,40nm,0.7s					
KOZT	Kozan	28.24 283	*eP*	P	P	05 03 25.4 +1.2
CEYT	Ceyhan	28.38 282	*eP*	P	P	05 03 26.5 +1.1
CEYT	Ceyhan	28.38 282	P	P	P	05 03 27.7 +2.3
FKH	Fakeheh	28.43 276	*eP*	P	P	05 03 27.6 +1.6
ULN	Ulaanbaatar	28.58 55	⇑*iP*	P	P	05 03 28.5 +1.4
ULN			pmax	pmax		
	comp=Z,46nm,1.6s,mb4.9					
ULN	Ulaanbaatar	28.58 55	⇑*iP*	P	P	05 03 28.5 +1.4
	comp=Z,46nm,1.6s,mb4.9					
ULN	Ulaanbaatar	28.58 55	P	P	P	05 03 28.9 +1.8
	SNR=31					
ASF	Jabal al Asfar	28.63 271	P	P	P	05 03 27.5 -0.3
	comp=Z,11nm,0.8s,mb4.5,baz=302,slow=2.5,SNR=21					
ASF			pP	pP		05 04 15.7 +2.0
	comp=Z,16nm,1.0s,baz=318,slow=5.9,SNR=4.1					
ASF	Jabal al Asfar	28.63 271	P	P	P	05 03 27.5 -0.2
ASF			*PP	pP		05 04 15.7 +2.0
ASF			pmax	pmax		
	comp=Z,11nm,0.8s					
BYBT	Boyabat	28.67 291	*eP*	P	P	05 03 28.8 +0.8
BYBT	Boyabat	28.67 291	P	P	P	05 03 28.9 +0.9
KRTS	Karatas	28.75 281	*eP*	P	P	05 03 31.7 +3.0
HWQ	Hawqa	28.80 276	*eP*	P	P	05 03 30.0 +0.8
AVNT	Avonos	28.82 286	⇑*iP*	P	P	05 03 30.2 +0.9
CORM	Corum	28.85 289	*eP*	P	P	05 03 30.6 +1.1
KARA	Karaisali	28.88 282	*eP*	P	P	05 03 31.3 +1.4
GULE	Gulek	29.09 283	⇑*iP*	P	P	05 03 33.4 +1.6
CDAG	Cicekdag	29.09 287	⇑*iP*	P	P	05 03 31.9 +0.1
BHL	Bhannes	29.13 276	*eP*	P	P	05 03 32.9 +0.7
KMI	Kunming	29.18 104	P	P	P	05 03 33.4 +0.7
KMI			pP	pP		05 04 22.6 +3.8
KMI			S	S	S	05 08 09.5 +1.8
KMI			pmax	pmax		
	comp=Z,28nm,0.9s,mb4.9					
KMI			pmax	pmax		
	comp=Z,210nm,3.8s					
KMI			LR	LR		
	comp=N,390nm,13.0s					
KMI			LR	LR		
	comp=E,180nm,13.0s					
KMI			LR	LR		
	comp=Z,250nm,13.8s					
SIM	Simferopol'	29.19 298	*ceP*	P	P	05 03 32.4 -0.1
SIM			*PP	pP		05 04 16.2 -2.4
SIM			S	S	S	05 08 12.9 +5.4
SIM			pmax	pmax		
	comp=Z,43nm,1.6s,mb4.8					
BZK	Bozkurt	29.22 292	*eP*	P	P	05 03 33.8 +1.0
BZK	Bozkurt	29.22 292	P	P	P	05 03 33.8 +0.9
TOS	Tosya	29.25 290	*eP*	P	P	05 03 34.0 +0.9
TOS	Tosya	29.25 290	P	P	P	05 03 34.4 +1.3
KSDI	Kefar Szold	29.32 274	P	P	P	05 03 35.3 +1.5
ILGA	Ilgaz	29.48 290	⇑*iP*	P	P	05 03 36.2 +1.1
MMAI	Mount Meron Ar	29.58 274	P	P	P	05 03 36.4 +0.3
	comp=Z,15nm,0.6s,mb4.8,baz=70,slow=12,SNR=18					
MMAI			PcP	PcP		05 06 35.6 +0.8
	comp=Z,6.8nm,0.5s,baz=72,slow=5.2,SNR=6.4					
MMAI			ScP	ScP		05 09 54.0 -0.5
	comp=Z,9.0nm,0.6s,baz=71,slow=6.2,SNR=4.2					
CANT	Cankiri	29.58 290	*eP*	P	P	05 03 36.6 +0.5
KAMT	Kaman	29.63 287	*eP*	P	P	05 03 36.4 0.0
BRTR	Keskin Array B	29.65 288	P	P	P	05 03 36.9 +0.2
	comp=Z,84nm,1.1s,mb5.3,baz=98,slow=7.9,SNR=251					
BRTR			pP	pP		05 04 23.9 +1.2
	comp=Z,19nm,0.8s,baz=96,slow=7.6,SNR=2.4					
BRTR	Keskin Array B	29.65 288	P	P	P	05 03 36.9 +0.3
BRTR			*PP	pP		05 04 24.0 +1.2
BRTR			pmax	pmax		
	comp=Z,85nm,1.1s					
MMLI	Mount Malkishu	29.73 273	P	P	P	05 03 39.0 +1.5
MOS	Moscow	29.79 321	*eP*	P	P	05 03 34.3 -3.4
MOS			*e**PP	pP		05 04 21.8 -2.0
MOS			*e*			05 04 39.5
MOS			*e*SS	sS		05 10 14.5 +35
MOS			pmax	pmax		
	comp=Z,539nm,1.1s,mb6.1					
MOS			pmax	pmax		
	comp=E,347nm,1.0s					
MOS			pmax	pmax		
	comp=N,146nm,1.0s					
PRGR	Permogore	29.85 335	⇓*iP*	P	P	05 03 34.4 -3.7
PRGR			*e**PP	pP		05 04 18.6 -5.7
PRGR			*e*			05 04 42.1
PRGR			*es*	S	S	05 08 16.3 -1.1
PRGR			pmax	pmax		
	comp=Z,238nm,1.0s,mb5.8					
SULT	Sultanhani-AKS	29.93 285	*eP*	P	P	05 03 41.1 +1.9
CHRT	Chiangrai	29.94 116	⇓P	P	P	05 03 39.0 -0.4
	comp=Z,421nm,1.0s,mb6.0					
CHG	Chiang Mai	30.03 119	PG	P	P	05 03 41.8 +1.6
CHG			SG	sP		05 04 51.6 -1.4
CHTO	Chiang Mai	30.03 119	*eP*	P	P	05 03 40.1 -0.1
	comp=Z,5.4nm,0.8s,mb4.2					
CHTO	Chiang Mai	30.03 119	P	P	P	05 03 40.5 +0.3
	SNR=16					
BBAL	Bala	30.06 287	⇑*iP*	P	P	05 03 40.5 +0.2
OBN	Obninsk	30.07 319	⇑*iP*	P	P	05 03 40.2 0.0
OBN			*e**PP	pP		05 04 25.7 -0.7
OBN			*i* S	S	S	05 08 18.5 -2.5
OBN			pmax	pmax		
	comp=Z,660nm,1.5s,mb6.0					
OBN			MLR	MLR		
	comp=Z,300nm,21.0s					
OBN	Obninsk	30.07 319	⇑*iP*	P	P	05 03 40.3 +0.1
	comp=Z,40nm,1.0s,mb5.0					
OBN			*e*pP	pP		05 04 25.8 -0.6
OBN	Obninsk	30.07 319	P	P	P	05 03 40.4 +0.2
	comp=Z,2μm,1.0s,SNR=9.1					
IKL	Isikli	30.15 281	*eP*	P	P	05 03 41.2 0.0
SAFT	Safranbolu	30.24 291	*eP*	P	P	05 03 43.1 +1.3
CM31	Chiang Mai Arr	30.26 119	*eP*	P	P	05 03 42.7 +0.4
	comp=Z,68nm,1.0s,mb5.2					
CMAR	Chiang Mai Arr	30.26 119	P	P	P	05 03 42.8 +0.5
	comp=Z,47nm,1.0s,mb5.1,baz=300,slow=7.8,SNR=132					
CMAR			pP	pP		05 04 28.2 -0.2
	comp=Z,20nm,0.8s,baz=312,slow=11,SNR=4.4					
CMAR	Chiang Mai Arr	30.26 119	P	P	P	05 03 42.8 +0.5
CMAR			*PP	pP		05 04 28.3 -0.2
CMAR			pmax	pmax		
	comp=Z,47nm,1.0s					
PALK	Pallekele	30.35 161	P	P	P	05 03 44.1 +1.0
	comp=Z,511nm,0.6s,mb6.3,SNR=6.5					
PALK	Pallekele	30.35 161	*i* P	P	P	05 03 44.4 +1.3
PALK	Pallekele	30.35 161	*eP*	P	P	05 03 43.9 +0.8
	comp=Z,5.6nm,0.7s,mb4.3					
PALK	Pallekele	30.35 161	P	P	P	05 03 44.2 +1.1
	SNR=5.8					
BTO	Baotou	30.39 70	*eP*	P	P	05 03 44.2 +1.0
ERMK	Ermenek	30.68 282	⇑*iP*	P	P	05 03 43.0 -2.8
XAN	Xi'an	30.70 83	P	P	P	05 03 47.1 +1.1
XAN			pP	pP		05 04 33.6 +1.4
XAN			sP	sP		05 04 59.5 +0.6
XAN			S	S	S	05 08 30.6 -0.7
XAN			sS	sS		05 09 51.1 -3.1
XAN			SS	SS		05 10 31.1 -11
XAN			pmax	pmax		
	comp=Z,18nm,0.7s,mb4.8					
XAN			LR	LR		
	comp=N,200nm,10.2s					
XAN			LR	LR		
	comp=E,79nm,12.3s					
XAN			LR	LR		
	comp=Z,83nm,10.5s					
CSS	Prodhromos	30.72 279	*eP*	P	P	05 03 45.5 -0.6
	comp=Z,7.5nm,0.9s,mb4.3					
HRFI	Mount Harif	30.86 269	P	P	P	05 03 48.5 +1.1
KONT	Konya--Tatoy	30.88 285	*eP*	P	P	05 03 48.5 +1.1
HDMB	Hadim	30.95 283	*eP*	P	P	05 03 48.1 0.0
LEF	Lefka	31.03 279	*eP*	P	P	05 03 49.9 +1.1
KZIT	Kziot	31.06 270	P	P	P	05 03 50.4 +1.2
EIL	Elat	31.06 268	P	P	P	05 03 48.5 -0.7
	comp=Z,58nm,1.0s,mb5.2,baz=45,slow=2.1,SNR=23					
KIZT	Kizilcal	31.11 286	*eP*	P	P	05 03 50.0 +0.5
BDT	Bhumibol Dam	31.12 121	⇑P	P	P	05 03 52.0 +2.2
GAZI	Gazipasa	31.23 281	⇑*iP*	P	P	05 03 50.2 -0.4
MDU	Mudurnu	31.42 290	*eP*	P	P	05 03 52.2 0.0
HHC	Hu-ho-hao-te	31.54 70	⇑P	P	P	05 03 55.1 +1.9
HHC			pP	pP		05 04 40.6 +1.0
HHC			sP	sP		05 05 06.4 +0.1
HHC			PP	PP		05 05 10.0 +0.6
HHC			PcP	PcP		05 06 41.9 +2.0
HHC			S	S	S	05 08 48.3 +4.0
HHC			ScP	ScP		05 10 02.2 +1.3
HHC			sS	sS		05 10 07.1 -0.2
HHC			PcS	PcS		05 10 25.5 +1.0
HHC			SS	SS		05 10 55.2 -6.2
HHC			ScS	ScS		05 13 59.3 +0.2
HHC			pmax	pmax		
	comp=Z,49nm,1.3s,mb4.9					
HHC			pmax	pmax		
	comp=Z,84nm,5.5s					
HHC			LR	LR		
	comp=N,470nm,10.4s					
HHC			LR	LR		
	comp=E,440nm,14.9s					
HHC			LR	LR		
	comp=Z,280nm,9.6s					
KLMR	Klimovskoe	31.58 331	*c iP*	P	P	05 03 53.3 0.0
KLMR			*e**PP	pP		05 04 38.1 -1.5
KLMR			S	S	S	05 08 43.6 -0.7
KLMR			pmax	pmax		
	comp=Z,737nm,1.4s,mb6.0					
GYA	Guiyang	31.64 98	P	P	P	05 03 55.8 +1.5
GYA			pP	pP		05 04 42.5 +1.8
GYA			sP	sP		05 05 09.0 +1.7
GYA			PP	PP		05 05 12.2 +1.5
GYA			PcP	PcP		05 06 41.7 +1.3
GYA			S	S	S	05 08 46.9 +0.8
GYA			ScP	ScP		05 10 01.7 +0.3
GYA			PcS	PcS		05 10 25.4 +0.1
GYA			ScS	ScS		05 13 59.0 -1.1
GYA			pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7					
GYA			pmax	pmax		
	comp=Z,130nm,4.9s					
BOLV	Bolvadin	31.85 286	⇑*iP*	P	P	05 03 56.3 +0.4
GULT	Gulveren	31.96 290	*eP*	P	P	05 03 57.6 +0.7
SUTC	Sutluce-Ispart	32.02 284	*eP*	P	P	05 03 57.9 +0.4
BORA	Eskisehir	32.07 289	⇑*iP*	P	P	05 03 57.8 0.0
SHUT	Suhut-Afyon	32.18 286	*eP*	P	P	05 03 59.6 +0.8
ENH	Enshi	32.34 90	*eP*	P	P	05 04 01.7 +1.3
	comp=Z,45nm,0.8s,mb5.0					
ALT	Altintas	32.44 287	*eP*	P	P	05 03 50.5 -11
CAVI	Cavuskoy	32.49 289	*eP*	P	P	05 04 02.1 +0.6
ADVT	Abdulvahap	32.55 290	*eP*	P	P	05 04 02.3 +0.3
HRT	Hereke	32.55 290	*eP*	P	P	05 04 02.3 +0.3
TIY	Taiyuan	32.65 75	*eP*	P	P	05 04 04.8 +1.9
TIY			pP	pP		05 04 50.3 +0.8
TIY			sP	sP		05 05 17.0 +0.9
TIY			S	S	S	05 09 05.3 +3.8
TIY			sS	sS		05 10 27.6 +2.9
TIY			LR	LR		
	comp=N,270nm,5.0s					
TIY			LR	LR		
	comp=E,320nm,6.3s					
TIY			LR	LR		
	comp=Z,270nm,6.0s					
YLV	Yalova	32.81 290	*eP*	P	P	05 04 04.2 -0.1
GDZ	Gediz	32.92 287	⇑*iP*	P	P	05 04 04.5 -0.8
TLCR		32.95 299	⇓P	P	P	05 04 06.5 +1.1
TLCR		32.95 299	⇓*iP*	P	P	05 04 06.5 +1.1
GEMT	Gemlik	32.96 290	*eP*	P	P	05 04 05.8 +0.3
BUY	Buyukada	32.97 291	⇑*iP*	P	P	05 04 05.4 -0.2
KLYT	Kilyos	32.98 291	*eP*	P	P	05 04 04.8 -1.0
ISK	Istanbul-Kandi	32.99 291	*eP*	P	P	05 04 04.9 -0.9
NST	Nakhon Sawan	32.99 121	⇑P	P	P	05 04 08.0 +1.9
	comp=Z,117nm,1.0s,mb5.4					
KIS	Kishinev	33.00 302	⇓*iP*	P	P	05 04 05.0 -0.8
	comp=Z,500nm,1.3s,mb5.9					
KIS			*i* pP	pP		05 04 51.0 -1.4
KIS	Kishinev	33.00 302	*i* PP	sP		05 05 16.0 -3.1
KIS			*i* S	S	S	05 09 06.0 -0.6
KIS			*e*SSS	SS		05 11 14.0 -21
KIS	Kishinev	33.00 302	⇓*iP*	P	P	05 04 05.0 -0.8
KIS			*i* *PP	pP		05 04 51.0 -1.4
KIS			*i*			05 05 16.0
KIS			*i* S	S	S	05 09 06.0 -0.6
KIS			pmax	pmax		
	comp=Z,470nm,1.3s,mb5.9					
AKASG	Malin Array Be	33.11 309	P	P	P	05 04 05.6 -1.2
	comp=Z,98nm,0.8s,mb5.4,baz=80,slow=7.5,SNR=233					
AKASG	Malin Array Be	33.11 309	P	P	P	05 04 05.6 -1.2
AKASG			pmax	pmax		
	comp=Z,98nm,0.8s					
AKASG	Malin Array Be	33.11 309	P	P	P	05 04 05.6 -1.2
AKBB	Malin Array Si	33.11 309	⇑*iP*	P	P	05 04 06.2 -0.6
KIEV	Kiev	33.12 309	⇑*iP*	P	P	05 04 06.1 -0.8
	comp=Z,37nm,1.2s,mb4.8					
BGKT	Bogazkoy	33.19 291	*eP*	P	P	05 04 08.3 +0.7
TIRR	Tirgusor	33.24 297	⇑P	P	P	05 04 08.4 +0.4
TIRR	Tirgusor	33.24 297	⇑*iP*	P	P	05 04 07.7 -0.3
	comp=Z,63nm,1.9s,mb4.8					
TIRR	Tirgusor	33.24 297	⇑*iP*	P	P	05 04 08.4 +0.4
CTKS	Kestanelik-??a	33.38 291	*eP*	P	P	05 04 07.0 -2.2
CFR	Carcaliu	33.43 299	⇑P	P	P	05 04 10.5 +0.9
CFR	Carcaliu	33.43 299	⇑*iP*	P	P	05 04 10.5 +0.9
CIT	Chita	33.47 49	*eP*	P	P	05 04 10.9 +1.1
CIT			*e*	pP		05 04 58.6 +2.2
CIT			*e*			05 06 42.9
CIT			*e*			05 09 17.2
CIT			pmax	pmax		
	comp=Z,530nm,1.4s,mb5.9					
KCTX	Karacabey (Bur	33.61 290	*eP*	P	P	05 04 11.4 +0.2
DURS	Dursunbey	33.62 288	⇑*iP*	P	P	05 04 11.1 -0.2
TRBA	At Turbah	33.63 233	*eP*	P	P	05 04 12.3 +0.7
KULA	Kula-Manisa	33.65 287	*eP*	P	P	05 04 11.9 +0.4
IAS	Iasi	33.86 302	P	P

ERIK Erikli-Kesan 34.95 291 *eP* **P 05 04 23.3 +0.6**
MLR Muntele Rosu 34.97 299 P **P 05 04 24.6 +1.8**
MLR Muntele Rosu 34.97 299⇑ *iP* **P 05 04 24.4 +1.6**
GELI Tayfur-Gelibol 35.02 290 *eP* **P 05 04 24.1 +0.8**
PUL Pulkovo 35.03 325⇑ *eP* **P 05 04 23.6 +0.5**
PUL pmax pmax
comp=Z,1μm,1.6s,mb6.1
SZH Strazhica 35.10 295 *i* P **P 05 04 24.2 +0.3**
BJT Baijiatuau 35.13 70⇑ *iP* **P 05 04 25.8 +1.6**
BJT pmax pmax
comp=Z,96nm,0.6s
BJT Baijiatuau 35.13 70⇑ *iP* **P 05 04 25.8 +1.6**
comp=Z,96nm,0.6s,mb5.5
BJI Beijing 35.13 70 P **P 05 04 25.8 +1.6**
BJI pP pP 05 05 08.1 -3.1
BJI sP sP 05 05 32.5 -5.3
BJI S **S 05 09 41.7 +2.1**
BJI pmax pmax
comp=Z,140nm,0.7s,mb5.6
BJI pmax pmax
comp=Z,140nm,4.4s
BJI LR LR
comp=N,410nm,30.0s
BJI LR LR
comp=E,300nm,28.7s
BJI LR LR
comp=Z,190nm,30.7s
ALN Alexandroupoli 35.27 291 P **P 05 04 25.3 -0.1**
DOPR Dopca 35.35 300⇑ *iP* **P 05 04 27.2 +1.2**
PRK Paraskevi 35.36 288 P **P 05 04 25.9 -0.3**
BOZC Bozcaada 35.42 289⇑ *iP* **P 05 04 27.7 +1.0**
KARP Karpathos 35.46 282 *eP* **P 05 04 27.3 +0.2**
BURAR Bucovina Array 35.47 303⇑ *iP* **P 05 04 27.5 +0.5**
IDID Didziasalis 35.48 316 *eP* **P 05 04 27.2 +0.3**
IDID AMB AMB 05 04 29.4
comp=Z,89nm,1.4s,mb5.1
BUR08 Bucovina Ar. S 35.48 303⇑ *iP* **P 05 04 27.2 +0.2**
GADA Gvkgeada 35.49 290 *eP* **P 05 04 27.0 -0.2**
VOIR 35.60 299⇑ P **P 05 04 28.7 +0.5**
VOIR 35.60 299⇑ *iP* **P 05 04 28.7 +0.5**
RDO Rodhopi 35.62 292 P **P 05 04 28.5 +0.1**
RDO Rodhopi 35.62 292 P **P 05 04 28.0 -0.4**
KDZ Kurdzhali 35.64 293 *i* P **P 05 04 28.9 +0.3**
CHOS Chios island 35.68 287 P **P 05 04 29.1 +0.1**
ATD Arta Tunnel 35.72 233 P **P 05 04 27.5 -1.9**
comp=Z,90nm,0.9s,mb5.3,baz=16,slow=4.8,SNR=20
IIGN Ignalina 35.77 316 *eP* **P 05 04 29.7 +0.3**
IIGN AMB AMB 05 04 30.8
comp=Z,97nm,1.1s,mb5.2
ISAL Salakas 35.88 317 *eP* **P 05 04 30.6 +0.2**
ISAL AMB AMB 05 04 33.0
comp=Z,87nm,1.5s,mb5.1
JOF Joensuu 35.97 330 *eP* **P 05 04 30.4 -0.6**
JOF pmax pmax
comp=Z,169nm,0.4s,mb5.9
JOF Joensuu 35.97 330 *ep* **P 05 04 30.4 -0.6**
comp=Z,169nm,0.4s,mb5.9
LIA Limnos Island 36.08 290 P **P 05 04 32.3 +0.1**
PLD Plovdiv 36.12 294 P **P 05 04 32.3 -0.3**
WHN Wuhan 36.16 87 P **P 05 04 34.1 +1.0**
WHN pP pP 05 05 23.7 +3.4
WHN sP sP 05 05 43.8 -3.0
WHN S **S 05 09 55.7 +0.2**
WHN LR LR
comp=N,690nm,16.4s
WHN LR LR
comp=E,760nm,13.1s
WHN LR LR
comp=Z,750nm,10.1s
VSU Vasula 36.31 321 *c iP* **P 05 04 33.8 -0.2**
VSU pmax pmax
comp=Z,355nm,1.0s,mb5.8
VSU Vasula 36.31 321 P **P 05 04 33.7 -0.3**
LVV L'vov 36.33 307 *d iP* **P 05 04 34.5 +0.2**
LVV *e**PP pP 05 05 20.9 -0.6
LVV *e* 05 05 45.9
LVV *e*PPP 05 05 59.7
LVV *e*S **S 05 09 57.1 -0.5**
APE Apeiranthos 36.37 285⇑ P **P 05 04 34.9 +0.1**
APE Apeiranthos 36.37 285 *eP* **P 05 04 34.6 -0.2**
APE Apeiranthos 36.37 285⇑ *iP* **P 05 04 34.9 +0.1**
KAVA Kavala 36.41 292 P **P 05 04 34.6 -0.4**
PGB Panagyurishte 36.46 294 *i* P **P 05 04 36.0 +0.5**
BMR Baia Mare 36.63 303 P **P 05 04 38.5 +1.7**
BMR Baia Mare 36.63 303⇓ *iP* **P 05 04 38.3 +1.5**
TIA Tai'an 36.64 76⇑ P **P 05 04 38.8 +1.7**
TIA pmax pmax
comp=Z,180nm,1.2s,mb5.5
NPS Neapolis 36.76 282 *eP* **P 05 04 37.8 -0.3**
XRY Khrisi 36.80 281 *eP* **P 05 04 38.0 -0.4**
MMB Musomiste 36.91 293 *i* P **P 05 04 39.5 +0.3**
OUR Ouranopolis 36.91 291 P **P 05 04 38.6 -0.7**
SRS Serrai 37.08 292 P **P 05 04 40.4 -0.3**
DEV Deva 37.09 300⇑ P **P 05 04 41.7 +1.0**
DEV Deva 37.09 300⇑ *iP* **P 05 04 41.7 +1.0**
HIA Hailar 37.09 54⇑ *iP* **P 05 04 41.9 +1.2**
HIA pmax pmax
comp=Z,41nm,0.7s
HIA Hailar 37.09 54⇑ *iP* **P 05 04 41.9 +1.2**
comp=Z,41nm,0.7s,mb5.1
VTS Vitosha 37.16 295 P **P 05 04 41.6 +0.3**
VTS Vitosha 37.16 295⇑ *iP* **P 05 04 41.6 +0.3**
VTS Vitosha 37.16 295 *i* P **P 05 04 41.7 +0.4**
DRGR 37.18 302 P **P 05 04 42.6 +1.1**
DRGR 37.18 302⇑ *iP* **P 05 04 42.3 +0.8**
KWP Kalwaria Pacla 37.18 306 *eP* **P 05 04 42.1 +0.6**
comp=Z,600nm,1.2s,mb6.0
KWP *e*pP pP 05 05 28.8 -0.1
KWP *e*sP sP 05 05 53.7 -1.6
KWP Kalwaria Pacla 37.18 306⇓ P **P 05 04 42.3 +0.9**
KWP Kalwaria Pacla 37.18 306⇑ *iP* **P 05 04 41.7 +0.3**
comp=Z,316nm,1.0s,mb5.8
KWP Kalwaria Pacla 37.18 306⇓ *iP* **P 05 04 42.3 +0.9**
AOS Alonnisos 37.20 289 P **P 05 04 41.3 -0.4**
GZR Gura Zlata 37.20 299 P **P 05 04 41.7 0.0**
GZR Gura Zlata 37.20 299⇑ *iP* **P 05 04 42.6 +0.9**
PAIG Paliouri 37.21 290 P **P 05 04 41.5 -0.3**
SUW Suwalki 37.27 313 *eP* **P 05 04 41.6 -0.5**
comp=Z,600nm,1.4s,mb5.9
SUW *e*pP pP 05 05 28.7 -0.8
SUW *e*S **S 05 10 13.9 +2.3**
SUW LMZ 05 21 47.0
comp=Z,300nm,24.2s
SUW Suwalki 37.27 313⇑ *eP* **P 05 04 41.6 -0.5**
SUW *e**PP pP 05 05 28.7 -0.8
SUW *e*S **S 05 10 13.9 +2.3**
SUW pmax pmax
comp=Z,600nm,1.4s,mb5.9
SUW MLR MLR
comp=Z,300nm,24.2s
SUW Suwalki 37.27 313⇑ *iP* **P 05 04 41.5 -0.6**
comp=Z,94nm,1.2s,mb5.2
SUW *e*pP pP 05 05 28.2 -1.3
TRPA Tarpa 37.27 304⇑ *iP* **P 05 04 42.8 +0.6**
SOH Sokhos 37.30 292 P **P 05 04 42.2 -0.4**
PLG Polygyros 37.31 291 *eP* **P 05 04 42.8 +0.2**
PLG Polygyros 37.31 291 P **P 05 04 42.6 0.0**
KKB Krupnik 37.34 293 *i* P **P 05 04 43.0 +0.1**
UZH Uzhgorod 37.44 305⇓ *iP* **P 05 04 44.0 +0.4**
UZH *e* 05 05 25.5
UZH *e* 05 05 53.0
UZH *e*S **S 05 10 15.0 +0.7**
KOLS Kolonicke sedl 37.45 305 *eP* **P 05 04 44.3 +0.6**
KOLS pmax pmax
comp=Z,74nm,1.0s,mb5.2
KOLS Kolonicke sedl 37.45 305 *eP* **P 05 04 44.3 +0.6**
comp=Z,74nm,1.0s,mb5.2
KOLS Kolonicke sedl 37.45 305 *eP* **P 05 04 44.3 +0.6**
ATHU Athens Univers 37.52 287 P **P 05 04 45.2 +0.8**
LVZ Lovozero 37.53 338 *c iP* **P 05 04 44.0 -0.1**
LVZ pmax pmax
comp=Z,310nm,1.1s,mb5.8
LVZ Lovozero 37.53 338 P **P 05 04 44.1 0.0**
comp=Z,1μm,0.9s,SNR=16
HORT Hortiatis 37.53 291 P **P 05 04 43.8 -0.7**
KNT Kendrikon 37.59 292 P **P 05 04 44.7 -0.3**
FINES FINESS Array B 37.60 326 P **P 05 04 44.9 +0.2**
comp=Z,254nm,1.0s,mb5.7,baz=109,slow=8.7,SNR=181
FINES pP pP 05 05 31.9 -0.3
comp=Z,55nm,0.9s,baz=107,slow=10,SNR=2.9
FINES FINESS Array B 37.60 326 P **P 05 04 44.9 +0.2**
FINES *PP pP 05 05 31.9 -0.3
FINES pmax pmax
comp=Z,254nm,1.0s
THE Thessaloniki 37.62 291 P **P 05 04 44.6 -0.7**
APA Apatity 37.71 337⇓ *iP* **P 05 04 45.5 -0.1**
APA *i* *PP pP 05 05 32.7 -0.4
APA *i* 05 05 58.5
APA *i* S **S 05 10 23.0 +5.1**
APA *e**SS sS 05 11 46.0 +3.6
APA pmax pmax
comp=Z,110nm,1.0s,mb5.3
APA MLR MLR
comp=Z,900nm,20.0s
KAF Kangasniemi 37.73 327 *eP* **P 05 04 44.4 -1.5**
KAF pmax pmax
comp=Z,105nm,1.0s,mb5.3
KAF Kangasniemi 37.73 327 *ep* **P 05 04 44.4 -1.5**
comp=Z,105nm,1.0s,mb5.3
VAY Valandovo 37.81 293 P **P 05 04 45.8 -1.0**
VAY Valandovo 37.81 293 *i* P **P 05 04 46.3 -0.5**
VAM Vamos 37.83 283 *eP* **P 05 04 47.1 0.0**
BSI Banda Aceh 37.92 139 P **P 05 04 55.0 +7.0**
ATAL Atalanti 37.95 288 P **P 05 04 47.0 -1.0**
LKR Lokris 37.98 288 P **P 05 04 47.0 -1.2**
CRVS Cervenica-Dubn 37.99 305 *eP* **P 05 04 48.9 +0.7**
CRVS pmax pmax
comp=Z,149nm,2.4s,mb5.1
CRVS Cervenica-Dubn 37.99 305 *eP* **P 05 04 48.9 +0.7**
comp=Z,149nm,2.4s,mb5.1
CRVS Cervenica-Dubn 37.99 305 *eP* **P 05 04 48.9 +0.7**
GRG Griva 37.99 292 P **P 05 04 47.6 -0.7**
BZS Buzias 38.00 300⇑ P **P 05 04 49.0 +0.6**
BZS Buzias 38.00 300⇑ *iP* **P 05 04 49.0 +0.6**
QIZ Qiongzhong 38.00 107 P **P 05 04 49.1 +0.4**
QIZ pP pP 05 05 36.5 +0.2
QIZ sP sP 05 06 00.3 -2.3
QIZ PP PP 05 06 21.5 +0.8
QIZ S **S 05 10 24.3 +0.9**
QIZ sS sS 05 11 48.8 +0.7
QIZ pmax pmax
comp=Z,19nm,1.3s,mb4.5
QIZ Qiongzhong 38.00 107 *eP* **P 05 04 49.7 +1.0**
comp=Z,37nm,1.3s,mb4.8
DID Didima 38.05 286 P **P 05 04 46.0 -2.9**
KARN Karanos 38.05 283 P **P 05 04 47.8 -1.1**
LIT Litokhoron 38.08 291 P **P 05 04 48.3 -0.7**
LTK Loutraki 38.14 287 P **P 05 04 47.7 -1.9**
BARS Barje 38.15 295 P **P 05 04 48.8 -0.8**
WAR Warsaw 38.38 310 *eP* **P 05 04 51.9 +0.5**
comp=Z,1μm,1.4s,mb6.3
VLI Velial 38.47 285 *eP* **P 05 04 50.5 -1.9**
KYTH Kithira 38.51 284 *eP* **P 05 04 51.6 -1.1**
THL Klokotos Trika 38.54 290 *eP* **P 05 04 52.7 -0.2**
THL Klokotos Trika 38.54 290 P **P 05 04 51.7 -1.2**
SKO Skopje 38.54 294 *eP* **P 05 04 53.1 +0.2**
GZH Guangzhou 38.58 98 P **P 05 04 53.8 +0.4**
GZH S **S 05 10 33.6 +1.6**
GZH LR LR
comp=N,340nm,11.2s
GZH LR LR
comp=E,200nm,10.7s
KZN Kozani 38.58 291 P **P 05 04 51.9 -1.3**
GUR Goura 38.64 287 P **P 05 04 51.3 -2.5**
KECS Kecovo 38.64 304 *eP* **P 05 04 54.9 +1.3**
comp=E,22nm,0.8s,mb4.8
KECS Kecovo 38.64 304 *eP* **P 05 04 54.9 +1.3**
KALE Kalithea 38.69 288 P **P 05 04 52.3 -1.9**
NIE Niedzica 38.74 306 *eP* **P 05 04 55.6 +1.2**
NIE *ep*P pP 05 05 42.2 0.0
TRIZ Trizonia 38.75 288 P **P 05 04 52.8 -1.9**
KRUS Krusevo 38.78 293 *i* P **P 05 04 54.1 -0.8**
BIA Bitola 38.78 292 P **P 05 04 55.6 +0.7**
BIA Bitola 38.78 292 *eP* **P 05 04 54.2 -0.7**
FNA Florina 38.79 292 P **P 05 04 54.2 -0.7**
GRUS Gruza 38.81 297 P **P 05 04 55.5 +0.4**
EVR Evrytania 38.83 289 *eP* **P 05 04 55.6 +0.3**
LAKA Lakka 38.85 288 P **P 05 04 53.8 -1.7**
EFP Efpalio 38.86 288 P **P 05 04 53.8 -1.8**
PSZ Piszkesteto 39.05 303 P **P 05 04 58.1 +1.1**
PSZ Piszkesteto 39.05 303⇑ *iP* **P 05 04 57.6 +0.5**
comp=E,12nm,0.8s,mb4.5
PSZ Piszkesteto 39.05 303⇑ *iP* **P 05 04 57.7 +0.7**
PSZ Piszkesteto 39.05 303⇑ *eP* **P 05 04 57.7 +0.7**
PSZ *es*P sP 05 06 09.8 -1.4
OJC Ojcow 39.08 307 *eP* **P 05 04 56.9 -0.3**
OJC *ep*P pP 05 05 42.6 -2.4
OJC *e*PcP PcP 05 07 03.3 +1.3
OJC *e*S **S 05 10 39.6 +0.8**
OJC *e*SS SS 05 13 42.2 +1.0
OJC L 05 22 47.8
comp=E,0.2nm,18.8s
OJC Ojcow 39.08 307 *eP* **P 05 04 57.2 0.0**
comp=E,7.0nm,1.1s,mb4.1
NEST Nestorio 39.10 291 P **P 05 04 56.7 -0.8**
ITM Ithomi 39.14 286 *eP* **P 05 04 56.3 -1.6**
ITM Ithomi 39.14 286 P **P 05 04 55.8 -2.1**
NJ2 Nanjing 39.24 82 *eP* **P 05 05 00.4 +1.6**
NJ2 pP pP 05 05 48.2 +1.5
NJ2 sP sP 05 06 12.6 -0.4
NJ2 PP PP 05 06 38.2 +4.2
NJ2 ScP ScP 05 10 28.4 -0.7
NJ2 S **S 05 10 43.0 +1.2**
NJ2 pmax pmax
comp=Z,140nm,0.8s,mb5.5
NJ2 LR LR
comp=N,150nm,15.1s
NJ2 LR LR
comp=E,150nm,9.6s
RLS Riolos of Patr 39.28 288 *eP* **P 05 04 58.1 -1.0**
DIVS Divibare 39.30 297 P **P 05 04 58.2 -0.9**
FRGS Fruska Gora 39.31 299 P **P 05 05 00.2 +1.0**
PYL PYLOS 39.36 286 P **P 05 04 57.2 -2.5**
DL2 Dalian 39.49 71 P **P 05 05 01.9 +1.1**
DL2 pP pP 05 05 49.6 +0.9
DL2 sP sP 05 06 13.2 -1.8
DL2 S **S 05 10 47.8 +2.5**
DL2 pmax pmax
comp=Z,50nm,0.7s,mb5.2
PVY Plav 39.52 295 P **P 05 05 03.0 +2.0**
IVA Berane 39.53 296 P **P 05 05 02.0 +0.9**
LIKS Likavka 39.54 305 *eP* **P 05 05 01.7 +0.7**
LIKS pmax pmax
comp=Z,42nm,0.7s,mb5.0
LIKS Likavka 39.54 305 *eP* **P 05 05 01.7 +0.7**
comp=Z,42nm,0.7s,mb5.0
LIKS Likavka 39.54 305 *eP* **P 05 05 01.7 +0.7**
SNG Songkhla 39.61 130 P **P 05 05 03.0 +1.0**
comp=Z,140nm,0.8s,mb5.4
BUD Budapest 39.66 303⇑ *eP* **P 05 05 02.3 +0.2**
BUD *es*P sP 05 06 14.8 -1.5
VYHS Vyhne 39.74 304 *eP* **P 05 05 03.4 +0.7**
VYHS pmax pmax
comp=Z,64nm,1.4s,mb4.9
VYHS Vyhne 39.74 304 *eP* **P 05 05 03.4 +0.7**
comp=Z,64nm,1.4s,mb4.9
VYHS Vyhne 39.74 304 *eP* **P 05 05 03.4 +0.7**
KFL Anninata 39.79 288 P **P 05 05 01.5 -1.8**
TIR Tirane 39.81 293 *eP* **P 05 05 02.6 -0.8**
TIR pmax pmax
comp=Z,31nm,0.8s,mb4.8
TIR Tirane 39.81 293 *eP* **P 05 05 02.6 -0.8**
comp=Z,31nm,0.8s,mb4.8
VLS Valsamata 39.93 288 *eP* **P 05 05 02.6 -1.8**
VLS Valsamata 39.93 288 P **P 05 05 01.9 -2.5**
KOLL Kolacno 40.02 305 *eP* **P 05 05 06.5 +1.5**
KOLL Kolacno 40.02 305 *eP* **P 05 05 06.5 +1.5**
PKSM Moragy 40.02 301 P **P 05 05 05.5 +0.4**
PKSM Moragy 40.02 301⇑ *iP* **P 05 05 05.2 +0.1**
TTG Podgorica 40.07 295 P **P 05 05 05.0 -0.5**
OKC Ostrava-Krasne 40.14 307 *eP* **P 05 05 06.5 +0.5**
OKC *ex* x 05 07 19.4
KEK Kerkira 40.18 291 *eP* **P 05 05 04.7 -1.7**
KEK Kerkira 40.18 291 P **P 05 05 04.3 -2.1**
BUM Brajici-Budva 40.35 295 P **P 05 05 07.0 -0.8**
SNY Shenyang 40.37 66⇑ P **P 05 05 08.5 +0.6**
SNY S **S 05 10 59.5 +1.3**
SNY pmax pmax
comp=Z,97nm,0.6s,mb5.4
SNY LR LR
comp=N,190nm,9.6s
SNY LR LR
comp=E,280nm,12.3s
SNY LR LR
comp=Z,270nm,12.6s
MORC Moravsky Berou 40.54 306 P **P 05 05 10.0 +0.8**
MORC Moravsky Berou 40.54 306⇑ *iP* **P 05 05 09.4 +0.2**
comp=Z,20nm,0.8s,mb4.6
MORC Moravsky Berou 40.54 306⇑ *iP* **P 05 05 09.5 +0.3**
GKP Gorka Klasztor 40.73 312 *eP* **P 05 05 11.0 +0.2**
comp=Z,1μm,1.5s,mb6.1
GKP *e*S **S 05 11 04.4 +1.1**
GKP Gorka Klasztor 40.73 312 P **P 05 05 11.1 +0.4**
CLNS Chul'man 40.74 43 *eP* **P 05 05 09.8 -0.9**
CLNS *e* 05 06 25.7
CLNS *e* 05 07 04.5
CLNS *e*SS SS 05 14 04.8 -8.9
CLNS pmax pmax
comp=Z,174nm,1.2s,mb5.4
CLNS pmax pmax
comp=E,99nm,1.3s
CLNS pmax pmax
comp=N,49nm,1.3s
MODS Modra-Piesok 40.78 304 *eP* **P 05 05 12.2 +1.0**
MODS Modra-Piesok 40.78 304 *eP* **P 05 05 12.2 +1.0**
TPTI 40.80 138 P **P 05 05 10.2 -1.5**
comp=N,2μmcomp=N,139nm,0.9s,mb5.4
KEV Kevo 40.87 338⇑ *iP* **P 05 05 12.0 +0.4**
KEV pmax pmax
comp=Z,23nm,0.9s,mb4.6
KEV Kevo 40.87 338⇑ *iP* **P 05 05 12.0 +0.4**
comp=Z,23nm,0.9s,mb4.6
KEV Kevo 40.87 338 *ep* **P 05 05 10.0 -1.6**
comp=Z,85nm,0.8s,mb5.2
ZST Bratislava 40.91 304 *eP* **P 05 05 13.5 +1.3**
ZST pmax pmax
comp=Z,30nm,0.7s,mb4.8
ZST Bratislava 40.91 304 *eP* **P 05 05 13.5 +1.3**
comp=Z,30nm,0.7s,mb4.8
ZST Bratislava 40.91 304 *eP* **P 05 05 13.5 +1.3**
KULM Kulim 41.12 132 *eP* **P 05 05 13.9 -0.4**
comp=Z,38nm,1.0s,mb4.8
KULM *ep*P pP 05 06 01.5 -1.1
KULM Kulim 41.12 132 P **P 05 05 14.8 +0.5**
comp=Z,690nmcomp=Z,34nm,1.5s,mb4.5
STON Ston 41.13 296 P **P 05 05 12.1 -2.0**
VRAC Vranov 41.17 306 P **P 05 05 13.7 -0.7**
comp=Z,116nm,0.9s,mb5.3,baz=90,slow=8.2,SNR=96
VRAC pP pP 05 06 03.2 +0.5
comp=Z,24nm,0.8s,baz=107,slow=8.7,SNR=2.5
VRAC Vranov 41.17 306 P **P 05 05 15.4 +1.0**
VRAC Vranov 41.17 306⇑ *iP* **P 05 05 15.3 +0.9**
ARCES ARCESS Array B 41.22 338 P **P 05 05 15.0 +0.6**
comp=Z,176nm,0.8s,mb5.5,baz=115,slow=8.6,SNR=562
ARCES pP pP 05 06 03.0 +0.4
comp=Z,61nm,0.7s,baz=108,slow=7.8,SNR=4.4
ARCES ARCESS Array B 41.22 338 P **P 05 05 15.0 +0.6**
ARCES *PP pP 05 06 03.1 +0.4
ARCES pmax pmax
comp=Z,176nm,0.8s
ARE0 ARCESS Array S 41.22 338⇑ *iP* **P 05 05 15.0 +0.5**
ARE0 *ep*P pP 05 06 02.9 +0.2
ARE0 *es*P sP 05 06 27.9 -1.0
DPC Dobruska-Polom 41.30 307 *eP* **P 05 05 16.2 +0.8**
DPC *e* pP 05 06 03.8 +0.1
DPC *e*S **S 05 11 12.6 +0.8**
DPC Dobruska-Polom 41.30 307 *eP* **P 05 05 16.2 +0.8**
comp=Z,40nm,0.9s,mb4.8
DPC Dobruska-Polom 41.30 307 *eP* **P 05 05 16.2 +0.8**
DPC *ep*P pP 05 06 03.8 +0.1
DPC *e*S **S 05 11 12.6 +0.8**
KSP Ksiaz 41.31 308 *eP* **P 05 05 15.8 +0.4**
comp=Z,400nm,1.7s,mb5.6
KSP *ep*P pP 05 06 01.8 -1.9
KSP *e*PP PP 05 06 56.8 +1.0
KSP LMZ 05 25 35.5
comp=Z,400nm,18.4s
KSP Ksiaz 41.31 308 P **P 05 05 16.1 +0.7**
SOP Sopron 41.31 303⇑ *eP* **P 05 05 15.9 +0.4**
SOP *es*P sP 05 06 03.6 -26
CN2 Changchun 41.40 63 *eP* **P 05 05 14.3 -2.0**
CN2 *ep*P pP 05 06 01.6 -3.0
CN2 *es*P sP 05 06 26.6 -4.2
CN2 PcP PcP 05 07 09.5 -0.1
CN2 *e*S **S 05 11 11.2 -2.1**
CN2 pmax pmax
comp=Z,20nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,300nm,5.0s
SSE Sheshan 41.44 82⇑ P **P 05 05 18.6 +1.8**
SSE pP pP 05 06 04.7 -0.5
SSE PP PP 05 06 56.3 -1.3
SSE S **S 05 11 13.8 -0.5**
SSE pmax pmax
comp=Z,130nm,0.8s,mb5.4
SSE pmax pmax
comp=Z,50nm,3.5s
SSE LR LR
comp=N,120nm,24.8s
SSE LR LR
comp=E,110nm,24.8s
SSE LR LR
comp=Z,76nm,19.2s
UPC Upice 41.49 308 *eP* **P 05 05 17.5 +0.5**
UPC *e* pP 05 06 05.9 +0.6
UPC Upice 41.49 308 *eP* **P 05 05 17.5 +0.5**
UPC *ep*P pP 05 06 05.9 +0.6
KOGS Kog 41.65 301⇑ *iP* **P 05 05 18.3 0.0**
KOGS *es*P sP 05 06 31.2 -1.6
KOGS *e* 05 07 37.0
KOGS *e* 05 08 03.3
KOGS Kog 41.65 301⇑ *iP* **P 05 05 18.3 0.0**
KOGS *es*P sP 05 06 31.2 -1.6
KOGS *e* 05 07 37.0
KOGS *e* 05 08 03.3
KTK1 Kautokeino 41.69 336⇑ *iP* **P 05 05 18.3 0.0**
KTK1 AMb AMB 05 05 19.7
comp=Z,380nm,0.9s,mb5.8
KTK1 *e*SS SS 05 14 32.9 +1.0
KTK1 Kautokeino 41.69 336⇑ *iP* **P 05 05 18.3 0.0**
comp=Z,380nm,0.9s,mb5.8
CONA Conrad Observa 41.76 304⇑ *iP* **P 05 05 19.6 +0.4**
comp=Z,190nm,1.0s,mb5.5,SNR=42
QZH Quanzhou 41.90 92 P **P 05 05 21.5 +0.9**
QZH sP sP 05 06 32.3 -2.8
QZH S **S 05 11 18.2 -2.9**
QZH ScS ScS 05 14 55.1 -2.7
QZH LR LR
comp=Z,460nm,10.5s
TREC Trest 41.90 306 *eP* **P 05 05 21.0 +0.7**
TREC *e* 05 07 40.9
TREC Trest 41.90 306 *eP* **P 05 05 21.0 +0.7**
TREC *ex* x 05 07 40.9
IPM Ipoh 41.98 132 *eP* **P 05 05 21.4 0.0**
comp=Z,16nm,0.8s,mb4.5
IPM *ep*P pP 05 06 09.2 -0.6
IPM Ipoh 41.98 132 P **P 05 05 21.5 +0.1**
comp=Z,1μmcomp=Z,74nm,1.4s,mb4.9
ARSA Arzberg 42.05 303 P **P 05 05 22.2 +0.7**
ARSA Arzberg 42.05 303⇑ *iP* **P 05 05 21.5 0.0**
comp=Z,56nm,1.2s,mb4.9,SNR=13
BSD Bornholm Skovb 42.16 315 P **P 05 05 21.6 -0.7**
BSD Bornholm Skovb 42.16 315⇑ *iP* **P 05 05 20.9 -1.4**
PERS Pernice 42.40 302 *i* P **P 05 05 24.5 +0.2**
PERS *i* sP sP 05 06 38.1 -0.9
PERS Pernice 42.40 302 *i* P **P 05 05 24.5 +0.2**
PERS *i* sP sP 05 06 38.1 -0.9
PVCC Panska Ves 42.41 308 *eP* **P 05 05 25.0 +0.6**
PVCC *e*S **S 05 11 26.1 -1.9**
SOKA Soboth 42.45 302⇑ *iP* **P 05 05 25.2 +0.4**
comp=Z,137nm,0.8s,mb5.5
BOJS Bojanci 42.46 300 *i* P **P 05 05 24.1 -0.7**
BOJS *i* sP sP 05 06 38.7 -0.8
BOJS *es*S sS 05 13 03.8 +9.0
BOJS *e*SS SS 05 15 04.9 +17
BOJS Bojanci 42.46 300 *i* P **P 05 05 24.1 -0.7**
BOJS *i* sP sP 05 06 38.7 -0.8
BOJS *es*S sS 05 13 03.8 +9.0
BOJS *e*SS SS 05 15 04.9 +17
PRU Pruhonice 42.47 307 *eP* **P 05 05 25.8 +1.0**
PRU *e* pP 05 06 14.2 +0.9
PRU *e*S **S 05 11 27.1 -1.7**
PRU Pruhonice 42.47 307 *eP* **P 05 05 25.8 +1.0**
PRU *ep*P pP 05 06 14.2 +0.9
PRU *ex* x 05 07 44.3
PRU *e*S **S 05 11 27.1 -1.7**
KTGM Kuala Trenggan 42.61 129 P **P 05 05 27.2 +0.8**
BRG Berggiesshubel 42.79 308 *eP* **P 05 05 27.7 +0.3**
comp=Z,214nm,1.0s,mb5.5

BRG Berggiesshubel 42.79 308⇑iP P 05 05 28.0 +0.6
comp=Z,214nm,1.0s,mb5.5
BRG e 05 05 32.6
comp=Z,53nm,0.9s
BRG e 05 05 42.6
comp=Z,37nm,0.9s
BRG pP pP 05 06 11.8 -4.3
comp=Z,26nm,0.9s
BRG i pP 05 06 16.5 +0.4
comp=Z,42nm,0.9s
BRG i 05 06 25.3
comp=Z,62nm,1.0s
BRG sP sP 05 06 42.8 +0.6
comp=Z,63nm,1.1s
BRG e 05 08 21.0
BRG S **S 05 11 39.0 +5.5**
BRG sS sS 05 13 03.0 +3.5
BRG e 05 15 09.0
OBKA Obir 42.81 302 P P 05 05 28.2 +0.6
OBKA Obir 42.81 302⇓iP P 05 05 28.1 +0.5
comp=Z,87nm,1.3s,mb5.0,SNR=19
RUE Ruedersdorf 42.82 311 eP P 05 05 27.4 -0.2
comp=Z,262nm,1.0s,mb5.6
RUE Ruedersdorf 42.82 311 eP P 05 05 28.1 +0.5
MOA Molln 42.84 304 P P 05 05 28.1 +0.3
MOA Molln 42.84 304⇑iP P 05 05 27.7 -0.2
comp=Z,144nm0.9s,mb5.4,SNR=63
NVLJ Novalja 42.87 299 P P 05 05 27.2 -0.9
LJU Ljubljana 42.88 301 iP P 05 05 28.5 +0.3
LJU i*PP pP 05 06 17.1 +0.2
LJU i*SP sP 05 06 42.1 -0.9
LJU Ljubljana 42.88 301 iP P 05 05 28.4 +0.2
LJU ipP pP 05 06 17.1 +0.3
LJU isP sP 05 06 42.1 -0.9
RGN Rugen 43.07 314 eP P 05 05 30.1 +0.5
comp=Z,1µm,1.2s,mb6.1
RGN Rugen 43.07 314⇑iP P 05 05 30.2 +0.7
comp=Z,986nm,1.3s,mb6.1
RGN epP pP 05 06 18.5 +0.3
CUC Castrocucco 43.10 292⇑eP P 05 05 29.8 -0.3
comp=Z,18nm,0.8s,mb4.5
GEC2 GERESS Array S 43.11 305 eP P 05 05 30.1 +0.1
comp=Z,82nm,1.4s,mb5.0
GEC2 GERESS Array S 43.11 305 eP P 05 05 30.1 +0.1
GEC2 pmax pmax
comp=Z,82nm,1.4s,mb5.0
KHC Kasperske Hory 43.16 306 eP P 05 05 30.4 0.0
KHC e pP 05 06 18.9 -0.2
KHC eS **S 05 11 40.1 +1.2**
KHC Kasperske Hory 43.16 306⇑iP P 05 05 30.4 0.0
comp=Z,7.6nm,1.1s
KHC Kasperske Hory 43.16 306 eP P 05 05 30.4 0.0
KHC epP pP 05 06 18.9 -0.2
KHC ex x 05 07 52.7
KHC eS **S 05 11 40.1 +1.2**
FBE Freiberg 43.16 308 eP P 05 05 30.9 +0.5
comp=Z,262nm,1.0s,mb5.6
HFS Hagfors 43.19 322 P P 05 05 30.3 -0.2
comp=Z,206nm,0.7s,mb5.7,baz=99,slow=9.6,SNR=269
HFS pP pP 05 06 19.1 -0.1
comp=Z,65nm,0.7s,baz=91,slow=9.6,SNR=3.5
HFS Hagfors 43.19 322 P P 05 05 30.3 -0.2
HFS *PP pP 05 06 19.1 -0.1
HFS pmax pmax
comp=Z,206nm,0.7s
HFS Hagfors 43.19 322 P P 05 05 30.3 -0.2
HFS pP pP 05 06 19.1 -0.1
HFA0 Hagfors New Ar 43.20 322 P P 05 05 29.0 -1.5
JAVS Javornik 43.23 301 iP P 05 05 29.6 -1.4
JAVS isP sP 05 06 43.5 -2.2
JAVS e 05 08 24.4
JAVS Javornik 43.23 301 iP P 05 05 29.6 -1.4
JAVS isP sP 05 06 43.5 -2.2
JAVS e 05 08 24.4
VOY Vojsko 43.32 301 eP P 05 05 30.9 -0.8
VOY e 05 05 39.2
VOY e 05 05 51.2
VOY e 05 06 26.3
VOY e 05 06 44.5
VOY Vojsko 43.32 301 eP P 05 05 30.9 -0.8
VOY e 05 05 39.2
VOY e 05 05 51.2
VOY e 05 06 26.3
VOY e 05 06 44.5
TRO Tromso 43.34 336⇑iP P 05 05 31.8 +0.2
TRO AMb AMB 05 05 33.5
comp=Z,194nm,1.2s,mb5.4
TRO esP sP 05 06 44.8 -1.6
TRO eSS SS 05 15 06.2 +2.6
TRO Tromso 43.34 336⇑iP P 05 05 31.8 +0.2
TRO pmax pmax
comp=Z,195nm,1.2s,mb5.4
TRO Tromso 43.34 336⇑iP P 05 05 31.8 +0.2
comp=Z,194nm,1.2s,mb5.4
CLL Collm 43.36 309 eP P 05 05 31.7 -0.2
comp=Z,130nm,1.0s,mb5.3
CLL Collm 43.36 309⇑iP P 05 05 31.6 -0.3
CLL i*PP pP 05 06 20.2 -0.5
CLL eS **S 05 11 44.0 +2.3**
CLL pmax pmax
comp=Z,130nm,1.0s,mb5.3
CLL Collm 43.36 309⇑iP P 05 05 31.6 -0.3
comp=Z,130nm,1.0s,mb5.3
CLL ipP pP 05 06 20.2 -0.5
CLL eS **S 05 11 44.0 +2.3**
CLL Collm 43.36 309⇑iP P 05 05 31.6 -0.3
comp=Z,130nm,1.0s,mb5.3
CLL ipP pP 05 06 20.2 -0.5
CLL e(sP) sP 05 06 42.0 -4.8
CLL ePcP PcP 05 07 15.0 -1.1
CLL ePP PP 05 07 18.0 +0.4
CLL epPP 05 07 58.0
CLL iPPP 05 08 04.5
CLL esPP 05 08 27.0
CLL eS **S 05 11 44.0 +2.3**
CLL esS sS 05 13 07.0 -0.9
CLL eScS ScS 05 15 06.0 -0.1
CLL esSS 05 16 12.0
CLL Lm 05 26 00.0
comp=Z,300nm,18.0s
CADS Cadrg 43.40 302⇑iP P 05 05 31.9 -0.5
CADS epP pP 05 06 19.1 -2.0
CADS esP sP 05 06 45.1 -2.1
CADS Cadrg 43.40 302⇑iP P 05 05 31.9 -0.5
CADS epP pP 05 06 19.1 -2.0
CADS esP sP 05 06 45.1 -2.1
MYKA Terra Mystica 43.41 302⇓iP P 05 05 32.3 -0.1
comp=Z,31nm,0.7s,mb4.9
TRI Trieste 43.46 301⇑iP P 05 05 32.4 -0.5
comp=Z,7.5nm,0.8s,mb4.2
CEL Celeste 43.48 290⇑iP P 05 05 32.5 -0.7
comp=Z,61nm,1.4s,mb4.8
KBA Koelnbreinsper 43.55 303⇑iP P 05 05 33.5 0.0
comp=Z,38nm,0.6s,mb4.9,SNR=17
COP Copenhagen 43.59 315 iP P 05 05 34.4 +0.7
COP iSS SS 05 15 05.5 -2.5
COP Copenhagen 43.59 315 iP P 05 05 34.4 +0.7
COP i 05 15 05.5
WET Wettzell 43.62 306 eP P 05 05 34.2 +0.2
comp=Z,54nm,1.3s,mb4.7
INCN Inchon 43.66 71 eP P 05 05 35.1 +0.5
comp=Z,6.1nm,0.9s
INCN Inchon 43.66 71 P P 05 05 36.0 +1.4
SNR=6.3
TANN Tannenbergstha 43.77 308 eP P 05 05 35.6 +0.4
NKC Novy Kostel 43.79 307 eP P 05 05 36.2 +0.8
NKC e pP 05 06 25.3 +1.1
NKC Novy Kostel 43.79 307 eP P 05 05 36.2 +0.8
NKC epP pP 05 06 25.3 +1.1
YAK Yakutsk 43.82 35 eP P 05 05 35.3 -0.1
YAK e*PP pP 05 06 25.5 +1.3
YAK e 05 07 19.5
YAK e 05 07 21.1
YAK eS **S 05 11 47.4 -0.7**
YAK e*SS sS 05 13 08.1 -6.3
YAK eSS SS 05 15 08.8 -2.7
YAK pmax pmax
comp=Z,282nm,0.9s,mb5.6
YAK pmax pmax
comp=E,64nm,1.1s
YAK pmax pmax
comp=N,30nm,1.0s
YAK smax
comp=E,250nm,2.0s
YAK smax
comp=N,331nm,2.2s
YAK Yakutsk 43.82 35⇑iP P 05 05 35.2 -0.2
comp=N,41nm,0.8s,mb4.8
YAK epP pP 05 06 25.4 +1.2
WERN Wernitzgruen 43.83 308 eP P 05 05 36.3 +0.6
RJOB Jochberg 43.83 304 eP P 05 05 35.5 -0.3
GUNZ Gunzen 43.85 308 eP P 05 05 36.3 +0.4
WERD Werda 43.86 308 eP P 05 05 36.2 +0.2
MOR8 Moi Rana 43.91 331⇑iP P 05 05 35.6 -0.6
MOR8 AMb AMB 05 05 36.8
comp=Z,435nm,1.1s,mb5.7
MOR8 epP pP 05 06 23.8 -1.1
MOR8 Moi Rana 43.91 331⇑iP P 05 05 35.6 -0.6
comp=Z,435nm,1.1s,mb5.7
PLN Plauen 43.95 308 eP P 05 05 37.0 +0.3
ROTZ Rotzenmuhle 43.99 307 eP P 05 05 37.9 +0.9
STEI Steigen 44.06 333 eP P 05 05 37.6 +0.3
STEI AMb AMB 05 05 38.7
comp=Z,152nm,1.0s,mb5.3
STEI esP sP 05 06 52.7 +0.4
NEUB Neuenburg 44.13 309 eP P 05 05 38.1 0.0
MNSI Mandailing Nat 44.16 137 P P 05 05 38.6 -0.1
comp=Z,131nm,1.0s,mb5.2
ABTA Abfaltersbach 44.16 302⇑iP P 05 05 37.6 -0.8
comp=Z,55nm,1.0s,mb4.8,SNR=12
MDJ Mudanjiang 44.19 61 P P 05 05 39.1 +0.4
MDJ pP pP 05 06 29.9 +2.3
MDJ PcP PcP 05 07 18.6 -0.4
MDJ ScP ScP 05 10 48.0 -0.6
MDJ S **S 05 11 53.5 -0.5**
MDJ sS sS 05 13 21.8 +1.4
MDJ pmax pmax
comp=Z,30nm,1.1s,mb4.5
MDJ pmax pmax
comp=Z,140nm,6.5s
MDJ LR LR
comp=N,150nm,28.7s
MDJ LR LR
comp=E,81nm,30.9s
MDJ LR LR
comp=Z,140nm,26.5s
MDJ Mudanjiang 44.19 61 eP P 05 05 38.1 -0.6
comp=Z,20nm,0.7s,mb4.6
YHNB Yeheng 44.26 91 eP P 05 05 40.5 +1.0
comp=Z,11nm,0.6s,mb4.3
MOX Moxa 44.28 308 eP P 05 05 39.5 +0.2
comp=Z,208nm,1.4s,mb5.3
MOX e pP 05 06 26.1 -2.1
MOX
comp=Z,200nm,21.0s
MOX Moxa 44.28 308 eP P 05 05 39.6 +0.3
comp=Z,162nm,1.1s,mb5.3
MOX Moxa 44.28 308 eP P 05 05 39.5 +0.2
MOX e pP 05 06 26.1 -2.1
MOX pmax pmax
comp=Z,208nm,1.4s,mb5.3
MOX MLR MLR
comp=Z,200nm,21.0s
TPUB Ta-pu 44.31 93 eP P 05 05 39.5 -0.4
comp=Z,15nm,0.8s,mb4.4
SSLB Suanglung 44.34 92 eP P 05 05 41.9 +1.8
comp=Z,23nm,0.6s,mb4.7
SSLB epP pP 05 06 30.8 +1.7
AQU L'Aquila 44.34 296⇑iP P 05 05 39.5 -0.4
comp=Z,15nm,1.0s,mb4.3
AQU L'Aquila 44.34 296⇑iP P 05 05 40.4 +0.5
FLOS Flostrand 44.38 331 eP P 05 05 39.9 +0.1
NB2 NORSAR Subarra 44.50 323 P P 05 05 40.4 -0.5
comp=Z,182nm,0.7s,mb5.5,baz=96,slow=7.9
NB2 NORSAR Subarra 44.50 323 P P 05 05 40.0 -0.9
NOA NORSAR Array B 44.50 323 P P 05 05 40.2 -0.7
comp=Z,252nm,0.9s,mb5.5,baz=96,slow=7.7,SNR=466
NOA pP pP 05 06 30.2 +0.4
comp=Z,43nm,0.8s,baz=96,slow=8.1,SNR=3.8
NOA sP sP 05 06 55.3 -0.6
comp=Z,42nm,0.6s,baz=97,slow=7.6,SNR=2.8
NOA NORSAR Array B 44.50 323 P P 05 05 40.2 -0.7
NOA *PP pP 05 06 30.2 +0.4
NOA *SP sP 05 06 55.3 -0.6
NOA pmax pmax
comp=Z,252nm,0.9s
KONS Konsvik 44.51 331 eP P 05 05 40.7 -0.1
STOK Stokkvaagen 44.51 331 eP P 05 05 40.5 -0.4
NSS Namsos 44.60 328⇑iP P 05 05 39.9 -1.7
GRA1 Grafenberg Arr 44.63 307 eP P 05 05 43.1 +1.0
comp=Z,505nm,1.5s,mb5.6
GRA1 epP pP 05 06 31.5 +0.5
GRF Grafenberg Arr 44.63 307 eP P 05 05 43.1 +1.0
comp=Z,505nm,1.5s,mb5.6
GRF epP pP 05 06 31.5 +0.5
GRF Grafenberg Arr 44.63 307 eP P 05 05 43.1 +1.0
GRF e*PP pP 05 06 31.5 +0.5
GRF pmax pmax
comp=Z,505nm,1.5s,mb5.6
GRFO Grafenberg 44.63 307⇑iP P 05 05 42.8 +0.7
GRFO pmax pmax
comp=Z,206nm,1.2s,mb5.3
GRFO Grafenberg 44.63 307⇑iP P 05 05 42.8 +0.8
comp=Z,206nm,1.2s,mb5.3
NAO01 NORSAR Array S 44.65 323 eP P 05 05 41.1 -0.8
comp=Z,149nm,1.0s,mb5.3
KSRS Korea Array 44.66 71 P P 05 05 42.8 +0.3
comp=Z,30nm,0.7s,mb4.8,baz=281,slow=6.6,SNR=101
KSRS pP pP 05 06 32.6 +1.2
comp=Z,27nm,1.0s,baz=280,slow=6.9,SNR=4.6
KSRS PcP PcP 05 07 17.9 -2.9
comp=Z,14nm,1.0s,baz=285,slow=4.7,SNR=6.0
KSRS ScP ScP 05 10 49.9 -0.8
comp=Z,5.1nm,0.8s,baz=290,slow=4.2,SNR=5.0
OSL Oslo 44.66 321 epP pP 05 06 31.6 +0.5
WTTA Wattenberg 44.68 303⇑iP P 05 05 41.6 -0.9
comp=Z,152nm,1.1s,mb5.2,SNR=24
WATA Walderalm 44.71 303⇑iP P 05 05 41.7 -1.0
comp=Z,40nm,0.6s,mb4.9,SNR=12
LOF Lofoten 44.73 333 eP P 05 05 42.1 -0.5
LOF AMb AMB 05 05 43.3
comp=Z,177nm,1.1s,mb5.3
LOF Lofoten 44.73 333 eP P 05 05 42.1 -0.5
comp=Z,177nm,1.1s,mb5.3
FUR Furstenfeldbru 44.79 305 eP P 05 05 43.6 +0.3
comp=Z,424nm,1.5s,mb5.5
FUR Furstenfeldbru 44.79 305 eP P 05 05 43.6 +0.3
FUR pmax pmax
comp=Z,424nm,1.5s,mb5.5
YULB Yu-li 44.80 93⇑iP P 05 05 45.8 +2.0
comp=Z,20nm,0.8s,mb4.5
VAE Valguarnera 44.83 289 P P 05 05 43.7 -0.1
comp=Z,48nm,0.9s,mb4.8,baz=85,slow=1.9,SNR=12
TWG Pinlang 44.90 93 eP P 05 05 47.2 +2.7
comp=Z,46nm,0.5s,mb5.1
TWG epP pP 05 06 36.9 +3.3
KLR Kul'dur 44.95 54⇓eP P 05 05 41.5 -3.0
KLR e pP 05 06 31.8 -1.8
KLR eS **S 05 12 03.0 -1.7**
KLR pmax pmax
comp=E,90nm,1.2s
KLR pmax pmax
comp=Z,150nm,1.2s,mb5.2
KLR smax
comp=N,800nm,7.0s
KLR smax
comp=E,500nm,7.0s
CLZ Clausthal 44.96 310 eP P 05 05 44.9 +0.3
comp=Z,236nm,1.1s,mb5.4
CLZ Clausthal 44.96 310 eP P 05 05 44.9 +0.3
CLZ pmax pmax
comp=Z,236nm,1.1s,mb5.4
MOTA Moosalm 45.02 303⇑iP P 05 05 44.1 -1.1
comp=Z,77nm,0.8s,mb5.1,SNR=26
NRDL Niedersach Rie 45.07 311 eP P 05 05 45.8 +0.4
NRDL epP pP 05 06 35.1 +0.6
KONO Kongsberg 45.22 321 eP P 05 05 46.1 -0.4
KONO eSS SS 05 15 37.0 +2.7
KONO Kongsberg 45.22 321 eP P 05 05 46.1 -0.4
KONO pmax pmax
comp=Z,82nm,0.7s,mb5.2
KONO Kongsberg 45.22 321 eP P 05 05 46.1 -0.4
comp=Z,82nm,0.7s,mb5.2
WDD Wield Dalam 45.23 287⇑iP P 05 05 46.5 -0.5
comp=Z,44nm,0.8s,mb4.8
RETA Reutte 45.23 304⇑iP P 05 05 45.6 -1.2
comp=Z,46nm,0.9s,mb4.8,SNR=15
BJO Bjornoya 45.27 343 eP P 05 05 46.7 -0.1
UBBA Unterbreizbach 45.29 308 eP P 05 05 47.2 0.0
BJO1 Bjornoya 45.32 343 eP P 05 05 46.7 -0.4
FETA Feichten 45.33 303⇑iP P 05 05 46.7 -0.9
comp=Z,100nm,1.1s,mb5.1,SNR=20
BKNI Bangkinang 45.35 136 P P 05 05 47.9 -0.3
comp=Z,2µmcomp=Z,131nm,1.2s,mb5.2
MUD Monsted U'grnd 45.41 316 iP P 05 05 48.8 +0.7
MUD iSS SS 05 15 45.7 +8.1
MUD Monsted U'grnd 45.41 316 iP P 05 05 48.8 +0.7
MUD i 05 15 45.7
HDH Heidenheim-Cha 45.44 305 P P 05 05 48.9 +0.5
UBR Ueberruh 45.64 304 P P 05 05 49.7 -0.3
PPI Padang Panjang 45.65 137 P P 05 05 50.5 +0.1
comp=Z,99nm,0.9s,mb5.1
TIXI Tiksi 45.67 22c iP P 05 05 50.0 +0.1
TIXI e pP 05 06 41.2 +2.1
TIXI pmax pmax
comp=Z,189nm,0.9s,mb5.4
TIXI Tiksi 45.67 22⇑iP P 05 05 49.8 -0.1
comp=Z,134nm,0.6s,mb5.5
TIXI epP pP 05 06 41.2 +2.1
FUORN Ofenpass-Fuorn 45.71 303 eP P 05 05 50.2 -0.4
comp=Z,12nm,0.8s,mb4.3
SIND Sindeldorf 45.72 306 P P 05 05 51.2 +0.6
MYKOM Kota Tinggi 45.81 131 P P 05 05 52.9 +1.1
MYKOM Kota Tinggi 45.81 131 P P 05 05 52.5 +0.7
comp=Z,825nmcomp=Z,49nm,1.2s,mb4.7
DAVA Damuels 45.85 304 P P 05 05 51.3 -0.4
DAVA Damuels 45.85 304⇑iP P 05 05 51.1 -0.6
comp=Z,240nm,0.7s,mb5.7,SNR=62
DAVOX Davos/Dischmat 45.94 303 P P 05 05 51.3 -1.0
comp=Z,66nm,0.7s,mb5.1,baz=109,slow=7.0,SNR=66
DAVOX pP pP 05 06 42.0 +0.4
comp=Z,24nm,0.6s,baz=98,slow=8.3,SNR=3.4
BUCH Bad Urach 46.02 305 P P 05 05 53.5 +0.6
PDSI Padang 46.06 137 P P 05 05 53.3 -0.4
comp=Z,293nm,0.4s,mb6.0
STU Stuttgart 46.07 306 eP P 05 05 53.4 +0.1
comp=Z,140nm,0.9s,mb5.3
STU Stuttgart 46.07 306⇑iP P 05 05 53.1 -0.2
STU pmax pmax
comp=Z,98nm,0.8s,mb5.2
STU Stuttgart 46.07 306⇑iP P 05 05 53.1 -0.2
comp=Z,98nm,0.8s,mb5.2
VLC Villacollemand 46.11 299 eP P 05 05 54.1 +0.4
comp=Z,57nm,0.8s,mb5.0
TOD Tromm 46.20 307 eP P 05 05 54.5 +0.2
GUT Gutenstein 46.23 305 P P 05 05 54.9 +0.3
SWS Schriesheim-Wi 46.29 307 P P 05 05 56.1 +1.1
TNS Taunus Mts 46.34 308 eP P 05 05 55.6 +0.2
comp=Z,199nm,1.2s,mb5.3
TNS Taunus Mts 46.34 308 eP P 05 05 55.6 +0.2
TNS pmax pmax
comp=Z,199nm,1.2s,mb5.3
LBG Lerchenberg 46.35 306 P P 05 05 56.3 +0.8
MOL Molde 46.35 325 eP P 05 05 54.4 -0.9
TUE Stuetta 46.36 303⇑iP P 05 05 54.8 -0.8
comp=Z,31nm,0.7s,mb4.8
SISB Singen-Schiene 46.40 304 P P 05 05 56.1 +0.2
SPAK Spaichingen-Ko 46.45 305 eP P 05 05 56.0 -0.3
IBBN Ibbenburen 46.52 311 eP P 05 05 56.9 +0.2
IBBN epP pP 05 06 45.9 -0.2
KTD Kalmit 46.71 307 eP P 05 05 58.8 +0.5
BFO Black Forest 46.71 305 eP P 05 05 57.8 -0.5
comp=Z,73nm,1.2s,mb4.9
BFO Black Forest 46.71 305 eP P 05 05 57.8 -0.5
BFO pmax pmax
comp=Z,73nm,1.2s,mb4.9
BFO Black Forest 46.71 305 P P 05 05 58.9 +0.6
comp=Z,259nm,1.1s,mb5.5,SNR=15
ODD1 Odda 46.72 321 eP P 05 05 59.1 +0.9
BLS5 Blasjo 46.81 321 eP P 05 05 59.9 +1.0
BUG Bochum--Univer 46.92 310 eP P 05 06 00.0 +0.1
comp=Z,218nm,1.0s,mb5.4
BUG epP pP 05 06 49.0 -0.4
LANF Langenberg 46.94 306 eP P 05 06 00.3 +0.2
ABH Alteburg 46.97 307 eP P 05 06 00.5 +0.2
FELD Feldberg im Sc 47.00 305 eP P 05 06 00.1 -0.5
KIZ Kirchzarten 47.05 305 P P 05 06 01.1 +0.2
WTSB Winterswijk 47.14 310⇑iP P 05 06 01.9 +0.3
comp=Z,282nm,1.3s,mb5.4
HABR Khabarovsk 47.22 54ceP P 05 06 01.8 -0.4
HABR e 05 07 27.9
HABR eS **S 05 12 38.0 +1.0**
HABR e*SS sS 05 14 01.2 -3.2
HABR e 05 15 30.6
HABR SS SS 05 16 09.6 +2.5
HABR pmax pmax
comp=Z,122nm,0.9s,mb5.2
HABR pmax pmax
comp=E,55nm,0.8s
HABR pmax pmax
comp=N,36nm,0.7s
HABR MLR MLR
comp=Z,261nm,15.0s
RUP Ruppelstein 47.31 307 eP P 05 06 03.1 +0.2
RUND Rundenannen 47.35 322 eP P 05 06 02.3 -0.7
RUND epP pP 05 06 52.7 +0.1
BER Bergen 47.37 322 eP P 05 06 03.6 +0.5
CDF Champ du Feu 47.39 306 eP P 05 06 03.2 -0.3
comp=Z,91nm,1.0s,mb4.8
CDF Champ du Feu 47.39 306 eP P 05 06 03.2 -0.3
CDF pmax pmax
comp=Z,46nm,1.0s,mb4.8
CDF Champ du Feu 47.39 306 eP P 05 06 03.2 -0.3
comp=Z,46nm,1.0s,mb4.8
BBS Basel-Blauen 47.41 304 eP P 05 06 02.7 -1.0
ASK Askoy 47.44 322 eP P 05 06 02.8 -0.9
ASK epP pP 05 06 53.4 +0.2
PGF Pioggiola 47.47 297 eP P 05 06 03.5 -0.7
comp=Z,175nm,0.8s,mb5.2
PGF epP pP 05 06 53.7 -0.1
PGF Pioggiola 47.47 297 eP P 05 06 03.5 -0.7
PGF e*PP pP 05 06 53.7 -0.1
PGF pmax pmax
comp=Z,87nm,0.8s,mb5.1
PGF Pioggiola 47.47 297 eP P 05 06 03.5 -0.7
comp=Z,87nm,0.8s,mb5.1
PGF epP pP 05 06 53.7 -0.1
ECH Echery 47.50 305 eP P 05 06 05.3 +0.9
ECH Echery 47.50 305 eP P 05 06 03.7 -0.7
ECH pmax pmax
comp=Z,60nm,1.0s,mb4.9
ECH Echery 47.50 305 eP P 05 06 03.7 -0.7
comp=Z,60nm,1.0s,mb4.9
SPITS Spitsbergen Ar 47.53 347 P P 05 06 04.4 +0.2
comp=Z,143nm,0.9s,mb5.3,baz=134,slow=13,SNR=62
SPITS Spitsbergen Ar 47.53 347 P P 05 06 04.4 +0.2
SPITS pmax pmax
comp=Z,143nm,0.9s
MOF Molkenrain 47.58 305 eP P 05 06 04.0 -1.0
SENIN Lac Senin/Sane 47.77 303 eP P 05 06 06.1 -0.4
comp=Z,20nm,0.8s,mb4.5
HINF Hinteralfeld 47.78 305 eP P 05 06 06.2 -0.3
comp=Z,207nm,0.9s,mb5.1
HINF Hinteralfeld 47.78 305 eP P 05 06 06.2 -0.3
HINF pmax pmax
comp=Z,103nm,0.9s,mb5.2
HINF Hinteralfeld 47.78 305 eP P 05 06 06.2 -0.3
comp=Z,103nm,0.9s,mb5.2
MEM Membach 47.83 309 P P 05 06 06.9 0.0
comp=Z,84nm,1.2s,mb5.0
MEM AP pP 05 06 56.9 +0.3
MEM XP sP 05 07 16.6 -5.8
HGN Heimansgroeve 47.85 309⇑iP P 05 06 07.0 0.0
comp=Z,73nm,0.9s,mb5.0
LOMF Lomont 47.88 304 eP P 05 06 06.6 -0.8
WLF Walferdange 47.90 307 P P 05 06 07.9 +0.5
comp=Z,163nm,1.2s,mb5.2
WLF AP pP 05 06 57.2 +0.2
WLF Walferdange 47.90 307 eP P 05 06 07.9 +0.5
WLF Walferdange 47.90 307⇑iP P 05 06 07.7 +0.3
WLF pmax pmax
comp=Z,58nm,1.0s,mb4.9
WLF Walferdange 47.90 307⇑iP P 05 06 07.7 +0.3
comp=Z,58nm,1.0s,mb4.9
BEBN Eben Emael 48.01 309 P P 05 06 08.3 +0.1
BEBN AP pP 05 06 57.6 -0.3
BEBN XP sP 05 07 23.1 -0.7
VSL Villasalto 48.02 293⇑iP P 05 06 07.1 -1.4
comp=Z,3.8nm,0.8s
HAU Haudompre 48.07 305 eP P 05 06 08.6 -0.2
comp=Z,179nm,0.8s,mb5.1
HAU eMLR MLR
comp=Z,160nm,19.8s
HAU Haudompre 48.07 305 eP P 05 06 08.6 -0.2

HAU pmax pmax
comp=Z,90nm,0.8s,mb5.2
HAU MLR MLR
comp=Z,160nm,19.8s
HAU Haudompre 48.07 305 *e*P **P 05 06 08.6 -0.2**
comp=Z,90nm,0.8s,mb5.2
HAU LR LR
comp=Z,160nm,19.8s
SAOF Saorge 48.13 300 *e*P **P 05 06 08.9 -0.4**
AUTN L'Aution 48.22 300 *e*P **P 05 06 10.2 +0.2**
SBF Sospel 48.25 300 *e*P **P 05 06 10.0 -0.2**
comp=Z,414nm,1.0s,mb5.4
SBF Sospel 48.25 300 *e*P **P 05 06 10.0 -0.2**
SBF pmax pmax
comp=Z,207nm,1.0s,mb5.4
SBF Sospel 48.25 300 *e*P **P 05 06 10.0 -0.2**
comp=Z,207nm,1.0s,mb5.4
THEF They Montfort 48.27 306 *e*P **P 05 06 10.2 -0.1**
LUCF Luceram 48.30 300 *e*P **P 05 06 10.5 -0.1**
BCLA Clavier 48.31 309 P **P 05 06 10.5 0.0**
comp=Z,43nm,1.5s,mb4.6
BCLA AP pP 05 07 00.8 +0.5
BCLA XP sP 05 07 27.1 +1.0
REVF Revere 48.32 299 *e*P **P 05 06 10.4 -0.4**
LPG La Plagne 48.33 302 *e*P **P 05 06 11.1 +0.3**
comp=Z,278nm,1.0s,mb5.2
LPG La Plagne 48.33 302 *e*P **P 05 06 11.1 +0.3**
LPG pmax pmax
comp=Z,139nm,1.0s,mb5.2
LPG La Plagne 48.33 302 *e*P **P 05 06 11.1 +0.3**
comp=Z,139nm,1.0s,mb5.2
TOUF Mont Tournerai 48.34 300 *e*P **P 05 06 11.0 +0.1**
LPL La Plagne 48.34 302 *e*P **P 05 06 11.2 +0.3**
comp=Z,315nm,1.1s,mb5.3
LPL La Plagne 48.34 302 *e*P **P 05 06 11.2 +0.3**
LPL pmax pmax
comp=Z,157nm,1.1s,mb5.2
LPL La Plagne 48.34 302 *e*P **P 05 06 11.2 +0.3**
comp=Z,157nm,1.1s,mb5.3
JNU Nakatsue 48.37 76⇑*iP* **P 05 06 12.0 +0.8**
comp=Z,38nm,0.9s,mb4.7
JNU *e*pP pP 05 07 03.6 +2.6
MBDF Montbardon 48.50 301 *e*P **P 05 06 11.6 -0.5**
comp=Z,112nm,0.6s,mb5.1
MBDF Montbardon 48.50 301 *e*P **P 05 06 11.6 -0.5**
MBDF pmax pmax
comp=Z,56nm,0.6s,mb5.1
MBDF Montbardon 48.50 301 *e*P **P 05 06 11.6 -0.5**
comp=Z,56nm,0.6s,mb5.1
SURF Saint Ours 48.53 300 *e*P **P 05 06 12.5 +0.2**
CABF La Chapelle 48.53 303 *e*P **P 05 06 12.4 +0.1**
comp=Z,517nm,1.2s,mb5.4
CABF La Chapelle 48.53 303 *e*P **P 05 06 12.4 +0.1**
CABF pmax pmax
comp=Z,259nm,1.2s,mb5.4
CABF La Chapelle 48.53 303 *e*P **P 05 06 12.4 +0.1**
comp=Z,259nm,1.2s,mb5.4
KBS Kingsbay 48.64 347⇑*iP* **P 05 06 13.7 +0.9**
KBS AMb AMB 05 06 15.1
comp=Z,286nm,1.7s,mb5.3
KBS *e*SS SS 05 16 34.4 +5.3
KBS Kingsbay 48.64 347*c iP* **P 05 06 13.6 +0.9**
KBS pmax pmax
comp=Z,429nm,1.2s,mb5.7
KBS Kingsbay 48.64 347⇑*iP* **P 05 06 13.6 +0.8**
comp=Z,34nm,0.9s,mb4.7
CALN Calern 48.66 299 *e*P **P 05 06 13.0 -0.3**
GIVF Givet 48.66 308 *e*P **P 05 06 13.7 +0.5**
comp=Z,508nm,1.3s,mb5.4
GIVF Givet 48.66 308 *e*P **P 05 06 13.7 +0.5**
GIVF pmax pmax
comp=Z,254nm,1.3s,mb5.4
GIVF Givet 48.66 308 *e*P **P 05 06 13.7 +0.5**
comp=Z,254nm,1.3s,mb5.4
DOU Dourbes 48.81 308 P **P 05 06 14.6 +0.2**
comp=Z,97nm,1.4s,mb4.9
DOU AP pP 05 07 04.8 +0.6
DOU XP sP 05 07 29.8 -0.3
MEZF Maizieres J'vi 48.82 306 *e*P **P 05 06 14.8 +0.3**
comp=Z,534nm,1.2s,mb5.5
MEZF Maizieres J'vi 48.82 306 *e*P **P 05 06 14.8 +0.3**
comp=Z,534nm,1.2s,mb5.8
GDM Grand'Maison 48.84 302 *e*P **P 05 06 14.1 -0.5**
JOW Kunigami 48.84 84 *e*P **P 05 06 14.6 -0.4**
comp=Z,17nm,0.6s,mb4.6
FRF La Foret Royal 48.88 299 *e*P **P 05 06 14.4 -0.6**
comp=Z,149nm,0.8s,mb5.0
FRF *e*pP pP 05 07 04.7 -0.1
FRF La Foret Royal 48.88 299 *e*P **P 05 06 14.4 -0.6**
FRF *e**PP pP 05 07 04.7 -0.1
FRF pmax pmax
comp=Z,74nm,0.8s,mb5.1
FRF La Foret Royal 48.88 299 *e*P **P 05 06 14.4 -0.6**
comp=Z,74nm,0.8s,mb5.1
FRF *e*pP pP 05 07 04.7 -0.1
SFTF Sexfontaines 48.89 306 *e*P **P 05 06 14.9 -0.1**
comp=Z,491nm,1.3s,mb5.4
SFTF Sexfontaines 48.89 306 *e*P **P 05 06 14.9 -0.1**
comp=Z,491nm,1.3s,mb5.7
SNF Seneffe 48.93 309 P **P 05 06 15.5 +0.2**
comp=Z,140nm,1.6s,mb5.0
SNF AP pP 05 07 05.8 +0.7
SNF XP sP 05 07 30.6 -0.3
KMBO Kilima Mbogo 49.01 228 P **P 05 06 15.2 -1.2**
comp=Z,58nm,0.8s,mb5.0,baz=180,slow=24,SNR=57
KMBO Kilima Mbogo 49.01 228⇑*iP* **P 05 06 17.1 +0.8**
KMBO pmax pmax
comp=Z,50nm,0.7s
KMBO Kilima Mbogo 49.01 228⇑*iP* **P 05 06 17.1 +0.8**
comp=Z,50nm,0.7s,mb5.0
KMBO Kilima Mbogo 49.01 228 P **P 05 06 17.8 +1.5**
SNR=15
LMR La Mourre 49.03 299 *e*P **P 05 06 15.3 -0.8**
comp=Z,184nm,1.5s,mb4.9
LMR La Mourre 49.03 299 *e*P **P 05 06 15.3 -0.8**
LMR pmax pmax
comp=Z,92nm,1.5s,mb4.9
LMR La Mourre 49.03 299 *e*P **P 05 06 15.3 -0.8**
comp=Z,92nm,1.5s,mb4.9
BAIF Baives 49.06 308 *e*P **P 05 06 16.8 +0.5**
comp=Z,626nm,1.2s,mb5.5
BAIF *e*pP pP 05 07 06.9 +0.7
BAIF Baives 49.06 308 *e*P **P 05 06 16.8 +0.5**
BAIF *e**PP pP 05 07 06.9 +0.7
BAIF pmax pmax
comp=Z,313nm,1.2s,mb5.5
BAIF Baives 49.06 308 *e*P **P 05 06 16.8 +0.5**
comp=Z,313nm,1.2s,mb5.5
BAIF *e*pP pP 05 07 06.9 +0.7
ORIF Oris-en-Rattie 49.07 301 *e*P **P 05 06 15.4 -1.0**
comp=Z,50nm,0.8s,mb4.6
ORIF *e*pP pP 05 07 05.0 -1.3
ORIF *e*MLR MLR
comp=Z,208nm,21.2s
ORIF Oris-en-Rattie 49.07 301 *e*P **P 05 06 15.4 -1.0**
ORIF *e**PP pP 05 07 05.0 -1.3
ORIF pmax pmax
comp=Z,25nm,0.8s,mb4.6
ORIF Oris-en-Rattie 49.07 301 *e*P **P 05 06 15.4 -1.0**
comp=Z,25nm,0.8s,mb4.6
ORIF *e*pP pP 05 07 05.0 -1.3
GRN Grenoble 49.08 302 *e*P **P 05 06 16.2 -0.3**
KEST Kesra 49.25 289 P **P 05 06 18.0 +0.1**
comp=Z,36nm,0.7s,mb4.8,baz=315,slow=1.5,SNR=164
KEST Kesra 49.25 289⇑*iP* **P 05 06 17.8 -0.1**
KEST *e*pP pP 05 07 08.4 +0.5
KSI Kapahiang 49.50 137 P **P 05 06 19.3 -0.7**
comp=Z,218nm,0.6s,mb5.7
SMRF Simiane la Rot 49.52 300 *e*P **P 05 06 19.5 -0.3**
comp=Z,112nm,1.1s,mb4.8
SMRF Simiane la Rot 49.52 300 *e*P **P 05 06 19.5 -0.3**
comp=Z,112nm,1.1s,mb5.1
LOR Lormes 49.88 305 *e*P **P 05 06 21.7 -0.7**
comp=Z,174nm,1.2s,mb5.0
LOR *e*pP pP 05 07 12.1 -0.4
LOR *e*MLR MLR
comp=Z,202nm,22.0s
LOR Lormes 49.88 305 *e*P **P 05 06 21.7 -0.7**
LOR *e**PP pP 05 07 12.1 -0.4
LOR pmax pmax
comp=Z,87nm,1.2s,mb5.0
LOR MLR MLR
comp=Z,200nm,22.0s
LOR Lormes 49.88 305 *e*P **P 05 06 21.7 -0.7**
comp=Z,87nm,1.2s,mb5.0
LOR *e*pP pP 05 07 12.1 -0.4

LOR LR LR
comp=Z,200nm,22.0s
SSB Saint Sauveur 49.90 302⇑*iP* **P 05 06 22.3 -0.3**
SSB *e**PP pP 05 07 12.9 +0.2
SSB pmax pmax
comp=Z,71nm,0.8s,mb5.0
SSB Saint Sauveur 49.90 302⇑*iP* **P 05 06 22.3 -0.3**
comp=Z,71nm,0.8s,mb5.0
SSB *e*pP pP 05 07 12.9 +0.2
VIVF Saint-Julien-I 49.91 301 *e*P **P 05 06 22.7 -0.1**
comp=Z,135nm,0.7s,mb5.1
VIVF *e*pP pP 05 07 13.1 +0.2
VIVF Saint-Julien-I 49.91 301 *e*P **P 05 06 22.7 -0.1**
VIVF *e**PP pP 05 07 13.1 +0.2
VIVF pmax pmax
comp=Z,68nm,0.7s,mb5.1
VIVF Saint-Julien-I 49.91 301 *e*P **P 05 06 22.7 -0.1**
comp=Z,68nm,0.7s,mb5.1
VIVF *e*pP pP 05 07 13.1 +0.2
SMF Signal de Mont 50.03 304 *e*P **P 05 06 23.3 -0.3**
comp=Z,429nm,1.0s,mb5.5
SMF Signal de Mont 50.03 304 *e*P **P 05 06 23.3 -0.3**
SMF pmax pmax
comp=Z,214nm,1.0s,mb5.4
SMF Signal de Mont 50.03 304 *e*P **P 05 06 23.3 -0.3**
comp=Z,214nm,1.0s,mb5.4
KSM Kuching 50.15 125 P **P 05 06 26.5 +1.6**
KSM Kuching 50.15 125 *e*P **P 05 06 25.4 +0.5**
comp=Z,5.3nm,0.8s
KSM *e*pP pP 05 07 15.0 -0.1
KSM Kuching 50.15 125 P **P 05 06 25.7 +0.8**
comp=Z,585nmcomp=Z,27nm,1.3s,mb4.4
SSF Saint Saulge 50.16 304 *e*P **P 05 06 24.1 -0.5**
comp=Z,292nm,1.2s,mb5.2
SSF Saint Saulge 50.16 304 *e*P **P 05 06 24.1 -0.5**
SSF pmax pmax
comp=Z,146nm,1.2s,mb5.2
SSF Saint Saulge 50.16 304 *e*P **P 05 06 24.1 -0.5**
comp=Z,146nm,1.2s,mb5.2
AVF Avril sur Loir 50.33 304 *e*P **P 05 06 25.4 -0.4**
comp=Z,367nm,0.9s,mb5.4
AVF *e*pP pP 05 07 15.9 -0.1
AVF Avril sur Loir 50.33 304 *e*P **P 05 06 25.4 -0.4**
AVF *e**PP pP 05 07 15.9 -0.1
AVF pmax pmax
comp=Z,184nm,0.9s,mb5.4
AVF Avril sur Loir 50.33 304 *e*P **P 05 06 25.4 -0.4**
comp=Z,184nm,0.9s,mb5.4
AVF *e*pP pP 05 07 15.9 -0.1
PPBI Pangkal Pinang 50.33 132 P **P 05 06 26.3 +0.1**
comp=Z,36nm,1.4s,mb4.5
PLDF La Plantade 50.35 303 *e*P **P 05 06 26.1 +0.1**
CMAH Djebel Manchou 50.40 290 P **P 05 06 26.3 -0.3**
AEU East Anglia Un 50.42 312 P **P 05 06 26.3 -0.1**
AEU East Anglia Un 50.42 312⇑*e*P **P 05 06 26.3 -0.1**
ABSA Djebel Ababsia 50.48 290 P **P 05 06 27.7 +0.6**
LRW Lerwick 50.62 322 P **P 05 06 26.7 -1.1**
LRW AMB AMB 05 06 26.9
comp=Z,159nm,2.5s,mb5.0
LRW Lerwick 50.62 322 *e*P **P 05 06 26.7 -1.1**
LRW AMB AMB 05 06 26.9
comp=Z,159nm,2.5s,mb5.0
AGO Saint Agoulin 50.66 303 *e*P **P 05 06 28.6 +0.3**
HYF Humbligny 50.68 305 *e*P **P 05 06 28.6 +0.1**
LASF Ste Croix 50.69 301 *e*P **P 05 06 28.7 +0.2**
comp=Z,389nm,1.1s,mb5.5
SBUM Sibu 50.72 122 P **P 05 06 30.6 +1.5**
SBUM Sibu 50.72 122 P **P 05 06 30.4 +1.3**
comp=Z,569nmcomp=Z,21nm,1.0s,mb4.5
BGF Bois d'Agland 50.72 304 *e*P **P 05 06 28.3 -0.5**
comp=Z,114nm,0.9s,mb5.0
BGF Bois d'Agland 50.72 304 *e*P **P 05 06 28.3 -0.5**
BGF pmax pmax
comp=Z,57nm,0.9s,mb5.0
BGF Bois d'Agland 50.72 304 *e*P **P 05 06 28.3 -0.5**
comp=Z,57nm,0.9s,mb5.0
ELSH Elham, Standar 50.77 310 P **P 05 06 28.7 -0.3**
ELSH AMB AMB 05 06 30.3
comp=Z,647nm,1.0s,mb6.0
ELSH Elham, Standar 50.77 310 *e*P **P 05 06 28.7 -0.3**
ELSH AMB AMB 05 06 30.3
comp=Z,647nm,1.0s,mb6.0
CAEH 'Ain El Ouahch 50.78 291 P **P 05 06 29.6 +0.2**
PYM Petit Puy Mans 50.82 303 *e*P **P 05 06 29.1 -0.4**
WAL1 Walls 50.83 322 P **P 05 06 29.2 -0.2**
WAL1 Walls 50.83 322 *e*P **P 05 06 29.2 -0.2**
KDM Kudat 50.88 114 P **P 05 06 32.5 +2.1**
CKFL Kef-Lekhel 51.01 290 P **P 05 06 30.6 -0.5**
KKM Kota Kinabalu 51.01 115 P **P 05 06 33.3 +2.0**
KKM Kota Kinabalu 51.01 115 *e*P **P 05 06 31.9 +0.5**
comp=Z,17nm,0.6s,mb4.7
KKM *e*pP pP 05 07 22.2 +0.5
KKM Kota Kinabalu 51.01 115 P **P 05 06 33.0 +1.6**
comp=Z,1µmcomp=Z,39nm,1.0s,mb4.8
TCF Toulx Ste Croi 51.22 304 *e*P **P 05 06 32.5 +0.1**
comp=Z,441nm,1.1s,mb5.5
TCF *e*pP pP 05 07 23.2 +0.4
TCF Toulx Ste Croi 51.22 304 *e*P **P 05 06 32.5 +0.1**
TCF *e**PP pP 05 07 23.2 +0.4
TCF pmax pmax
comp=Z,220nm,1.1s,mb5.5
TCF Toulx Ste Croi 51.22 304 *e*P **P 05 06 32.5 +0.1**
comp=Z,220nm,1.1s,mb5.5
TCF *e*pP pP 05 07 23.2 +0.4
CASM Ain Smara 51.23 290 P **P 05 06 32.6 -0.1**
KLSI 51.55 135 P **P 05 06 32.3 -3.0**
comp=Z,52nm,0.5s,mb5.2
DFRA Djebel Bou Aff 51.59 291 P **P 05 06 34.7 -0.7**
CAF Calviac 51.68 302 *e*P **P 05 06 36.1 +0.2**
comp=Z,240nm,1.1s,mb5.2
CAF *e*pP pP 05 07 26.9 +0.5
CAF Calviac 51.68 302 *e*P **P 05 06 36.1 +0.2**
CAF *e**PP pP 05 07 26.9 +0.5
CAF pmax pmax
comp=Z,120nm,1.1s,mb5.2
CAF Calviac 51.68 302 *e*P **P 05 06 36.1 +0.2**
comp=Z,120nm,1.1s,mb5.2
CAF *e*pP pP 05 07 26.9 +0.5
EJON La Jonquera 51.83 299 P **P 05 06 36.9 -0.2**
comp=Z,36nm,0.8s,mb4.9
HPK Haverah Park 51.84 314 P **P 05 06 36.3 -0.6**
HPK AMB AMB 05 06 37.9
comp=Z,262nm,0.9s,mb5.7
HPK Haverah Park 51.84 314 *e*P **P 05 06 36.3 -0.6**
HPK AMB AMB 05 06 37.9
comp=Z,262nm,0.9s,mb5.7
RJF Les Rejaudoux 51.95 303 *e*P **P 05 06 38.1 +0.2**
comp=Z,166nm,1.1s,mb5.1
RJF *e*pP pP 05 07 29.0 +0.6
RJF *e*MLR MLR
comp=Z,193nm,22.0s
RJF Les Rejaudoux 51.95 303 *e*P **P 05 06 38.1 +0.2**
RJF *e**PP pP 05 07 29.0 +0.6
RJF pmax pmax
comp=Z,83nm,1.1s,mb5.1
RJF MLR MLR
comp=Z,190nm,22.0s
RJF Les Rejaudoux 51.95 303 *e*P **P 05 06 38.1 +0.2**
comp=Z,83nm,1.1s,mb5.1
RJF *e*pP pP 05 07 29.0 +0.6
RJF LR LR
comp=Z,190nm,22.0s
MME1 Meikle Cairn 51.95 318 P **P 05 06 36.9 -0.8**
MME1 Meikle Cairn 51.95 318⇑*iP* **P 05 06 36.9 -0.8**
STKI Sintang 51.97 125 P **P 05 06 42.7 +4.3**
comp=Z,43nm,0.6s,mb5.0
XAL Allendale 52.00 315 P **P 05 06 37.4 -0.7**
XAL Allendale 52.00 315⇑*e*P **P 05 06 37.4 -0.7**
SDKM Sandakan 52.00 115 P **P 05 06 40.3 +1.6**
ESY Stoneypath 52.02 317 P **P 05 06 37.1 -1.1**
ESY pP 05 07 26.0 -2.7
ESY Stoneypath 52.02 317⇑*e*P **P 05 06 37.1 -1.1**
ESY *e* pP 05 07 26.0 -2.7
MTLF Montolieu 52.03 300 *e*P **P 05 06 38.3 -0.3**
comp=Z,149nm,1.1s,mb5.0
MTLF Montolieu 52.03 300 *e*P **P 05 06 38.3 -0.3**
MTLF pmax pmax
comp=Z,75nm,1.1s,mb5.0
MTLF Montolieu 52.03 300 *e*P **P 05 06 38.3 -0.3**
comp=Z,75nm,1.1s,mb5.0
MCD Coleburn Disti 52.06 319 P **P 05 06 38.2 -0.2**
MCD pP 05 07 25.8 -3.2
MCD Coleburn Disti 52.06 319⇑*iP* **P 05 06 38.2 -0.2**
MCD *e* pP 05 07 25.8 -3.2
SET Setif 52.08 291 P **P 05 06 38.0 -1.0**

LDF La Druitiere 52.15 307 *e*P **P 05 06 38.6 -0.7**
comp=Z,112nm,0.9s,mb5.0
LDF *e*pP pP 05 07 29.5 -0.3
LDF La Druitiere 52.15 307 *e*P **P 05 06 38.6 -0.7**
LDF *e**PP pP 05 07 29.5 -0.3
LDF pmax pmax
comp=Z,56nm,0.9s,mb5.0
LDF La Druitiere 52.15 307 *e*P **P 05 06 38.6 -0.7**
comp=Z,56nm,0.9s,mb5.0
LDF *e*pP pP 05 07 29.5 -0.3
EBL Broad Law 52.28 317 P **P 05 06 39.2 -1.0**
EBL Broad Law 52.28 317⇑*e*P **P 05 06 39.2 -1.0**
CARF Carcanieres 52.30 299 *e*P **P 05 06 40.0 -0.5**
EDI Edinburgh 52.33 317 P **P 05 06 38.9 -1.6**
EDI AMB AMB 05 06 40.3
comp=Z,159nm,1.2s,mb5.3
EDI Edinburgh 52.33 317 *e*P **P 05 06 38.9 -1.6**
EDI AMB AMB 05 06 40.3
comp=Z,159nm,1.2s,mb5.3
FLN La Foliniere 52.34 307 *e*P **P 05 06 40.0 -0.7**
comp=Z,232nm,0.9s,mb5.3
FLN *e*MLR MLR
comp=Z,198nm,21.0s
FLN La Foliniere 52.34 307 *e*P **P 05 06 40.0 -0.7**
FLN pmax pmax
comp=Z,116nm,0.9s,mb5.3
FLN MLR MLR
comp=Z,200nm,21.0s
FLN La Foliniere 52.34 307 *e*P **P 05 06 40.0 -0.7**
comp=Z,116nm,0.9s,mb5.3
FLN LR LR
comp=Z,200nm,21.0s
STNC Stoke 52.36 313 P **P 05 06 40.7 -0.1**
STNC AMB AMB 05 06 41.2
comp=Z,156nm,1.3s,mb5.3
STNC Stoke 52.36 313 *e*P **P 05 06 40.7 -0.1**
STNC AMB AMB 05 06 41.2
comp=Z,156nm,1.3s,mb5.3
CFON Fontmartina 52.37 298 P **P 05 06 41.5 +0.5**
comp=Z,98nm,1.0s,mb5.2
EBH Black Hill 52.44 317 P **P 05 06 40.5 -0.8**
EBH Black Hill 52.44 317⇑*e*P **P 05 06 40.5 -0.8**
ECK Cauldkaine Hil 52.45 316 P **P 05 06 40.5 -0.8**
ECK Cauldkaine Hil 52.45 316⇑*e*P **P 05 06 40.5 -0.8**
ESK Eskdalemuir 52.46 316 P **P 05 06 41.0 -0.5**
comp=Z,831nm,1.2s,mb6.0,SNR=17
ESK Eskdalemuir 52.46 316 P **P 05 06 39.7 -1.8**
ESK AMB AMB 05 06 41.3
comp=Z,177nm,1.3s,mb5.3
ESK Eskdalemuir 52.46 316⇑*e*P **P 05 06 39.7 -1.8**
ESK AMB AMB 05 06 41.3
comp=Z,177nm,1.3s,mb5.3
ESK Eskdalemuir 52.46 316 *i* P **P 05 06 41.4 -0.1**
ESK Eskdalemuir 52.46 316⇑*iP* **P 05 06 40.2 -1.2**
comp=Z,26nm,1.2s,mb4.5
ESK *e*pP pP 05 07 31.7 -0.4
VALF Valcebollere 52.46 299 *e*P **P 05 06 41.6 -0.1**
CLLI Llivia 52.47 299 P **P 05 06 41.4 -0.3**
SWN1 Swindon 52.48 311 P **P 05 06 41.0 -0.6**
SWN1 AMB AMB 05 06 42.8
comp=Z,402nm,1.0s,mb5.8
SWN1 Swindon 52.48 311 *e*P **P 05 06 41.0 -0.6**
SWN1 AMB AMB 05 06 42.8
comp=Z,402nm,1.0s,mb5.8
MVH1 Achvaich 52.49 319 P **P 05 06 40.6 -1.0**
MVH1 Achvaich 52.49 319⇑*iP* **P 05 06 40.6 -1.0**
EAU Auchinoon 52.49 317 P **P 05 06 40.1 -1.5**
EAU Auchinoon 52.49 317⇑*e*P **P 05 06 40.1 -1.5**
LFF La Frestale 52.58 303 *e*P **P 05 06 42.6 +0.1**
comp=Z,178nm,0.8s,mb5.3
LFF La Frestale 52.58 303 *e*P **P 05 06 42.6 +0.1**
LFF pmax pmax
comp=Z,89nm,0.8s,mb5.2
LFF La Frestale 52.58 303 *e*P **P 05 06 42.6 +0.1**
comp=Z,89nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 52.63 55⇑*iP* **P 05 06 42.8 0.0**
YSS *e**PP pP 05 07 35.0 +1.5
YSS *e* 05 08 40.0
YSS *e*S **S 05 13 52.0 +0.2**
YSS *e**SS sS 05 15 22.0 +1.2
YSS *e*SS SS 05 17 40.0 +7.0
YSS pmax pmax
comp=Z,190nm,1.0s,mb5.5
YSS MLR MLR
comp=Z,500nm,14.0s
YSS Yuzh-Sakhalins 52.63 55 *e*P **P 05 06 43.6 +0.8**
YSS *e*pP pP 05 07 35.1 +1.7
JMIC Jan Mayen 52.66 336 P **P 05 06 43.2 +0.5**
comp=Z,53nm,0.6s,mb5.1,baz=119,slow=6.1,SNR=3.8
MDO Dochfour 52.67 319 P **P 05 06 42.2 -0.8**
MDO pP 05 07 31.0 -2.6
MDO Dochfour 52.67 319⇑*iP* **P 05 06 42.2 -0.8**
MDO *e* pP 05 07 31.0 -2.6
GRR Gorron 52.68 307 *e*P **P 05 06 42.5 -0.7**
comp=Z,323nm,1.0s,mb5.4
GRR Gorron 52.68 307 *e*P **P 05 06 42.5 -0.7**
GRR pmax pmax
comp=Z,161nm,1.0s,mb5.4
GRR Gorron 52.68 307 *e*P **P 05 06 42.5 -0.7**
comp=Z,161nm,1.0s,mb5.4
MFF Saint Martin d 52.70 305 *e*P **P 05 06 42.7 -0.7**
comp=Z,289nm,1.1s,mb5.3
MFF Saint Martin d 52.70 305 *e*P **P 05 06 42.7 -0.7**
MFF pmax pmax
comp=Z,144nm,1.1s,mb5.3
MFF Saint Martin d 52.70 305 *e*P **P 05 06 42.7 -0.7**
comp=Z,144nm,1.1s,mb5.3
MBAR Mbarara 52.70 235 P **P 05 06 43.2 -0.6**
comp=Z,299nm,0.7s,mb5.8,SNR=18
MAJO Matsushiro 52.73 69⇑*iP* **P 05 06 43.5 -0.3**
MAJO *e*pP pP 05 07 35.3 +0.9
MAT Matsushiro 52.73 69 P **P 05 06 43.1 -0.7**
MAT S **S 05 13 53.0 -0.5**
MJAR Matsushiro Arr 52.73 69 P **P 05 06 43.5 -0.2**
comp=Z,18nm,0.8s,mb4.5,baz=283,slow=10.0,SNR=55
MJAR pP pP 05 07 35.4 +1.0
comp=Z,22nm,0.8s,baz=290,slow=10,SNR=7.9
MJAR sP sP 05 08 02.6 +2.6
comp=Z,16nm,0.9s,baz=287,slow=9.3,SNR=2.4
MJAR ScP ScP 05 11 23.8 -1.3
comp=Z,7.4nm,1.0s,baz=291,slow=5.3,SNR=4.8
MJAR Matsushiro Arr 52.73 69 P **P 05 06 43.6 -0.2**
MJAR *PP pP 05 07 35.4 +1.0
ETOS Mallorca 52.75 296 P **P 05 06 44.3 +0.5**
comp=Z,55nm,0.6s,mb5.2
XDE Dent Fell 52.79 315 P **P 05 06 43.4 -0.5**
XDE Dent Fell 52.79 315⇑*e*P **P 05 06 43.4 -0.5**
EAB Aberfoyle 52.91 317 P **P 05 06 43.9 -0.8**
EAB Aberfoyle 52.91 317 *e*P **P 05 06 43.9 -0.8**
RSC Scourie 52.92 320 P **P 05 06 43.9 -0.9**
RSC Scourie 52.92 320⇑*e*P **P 05 06 43.9 -0.9**
MLS Moulis 52.94 300 *e*P **P 05 06 44.7 -0.4**
EMIR Miracle 52.96 299 P **P 05 06 45.9 +0.6**
comp=Z,253nm,1.3s,mb5.5
HGH Gray Hill 53.06 311 P **P 05 06 44.8 -1.1**
HGH pP 05 07 34.7 -1.9
HGH Gray Hill 53.06 311⇑*iP* **P 05 06 44.8 -1.1**
HGH *e* pP 05 07 34.7 -1.9
PGBU Glenifferbraes 53.07 317 P **P 05 06 44.9 -1.0**
PGBU AMB AMB 05 06 46.9
comp=Z,212nm,1.3s,mb5.4
PGBU Glenifferbraes 53.07 317⇑*e*P **P 05 06 44.9 -1.0**
PGBU AMB AMB 05 06 46.9
comp=Z,212nm,1.3s,mb5.4
MCH1 Michaelchurch 53.09 312 P **P 05 06 45.3 -0.8**
MCH1 AMB AMB 05 06 46.9
comp=Z,377nm,0.9s,mb5.8
MCH1 Michaelchurch 53.09 312 *e*P **P 05 06 45.3 -0.8**
MCH1 AMB AMB 05 06 46.9
comp=Z,377nm,0.9s,mb5.8
CSOR Sort 53.09 299 P **P 05 06 46.5 +0.2**
comp=Z,38nm,0.6s,mb5.0
KAC Achnashellach 53.16 319 P **P 05 06 46.0 -0.5**
KAC pP 05 07 36.0 -1.2
KAC Achnashellach 53.16 319⇑*iP* **P 05 06 46.0 -0.5**
KAC *e* pP 05 07 36.0 -1.2
HTR Trewern Hill 53.23 312 P **P 05 06 46.0 -1.2**
HTR pP 05 07 36.7 -1.1
HTR Trewern Hill 53.23 312⇑*e*P **P 05 06 46.0 -1.2**
HTR *e* pP 05 07 36.7 -1.1
MYLDM Lahad Datu 53.27 114 P **P 05 06 50.4 +2.5**
comp=Z,38nm,0.8s,mb4.9
KSB Sheil Bridge 53.28 319 P **P 05 06 46.8 -0.6**
KSB Sheil Bridge 53.28 319⇑*iP* **P 05 06 46.8 -0.6**

ASAJ Asahikawa 53.35 58 P **P 05 06 48.0 -0.2**
comp=Z,13nm,0.6s,mb4.5,baz=284,slow=16,SNR=14
ASAJ Asahikawa 53.35 58 P **P 05 06 48.0 -0.1**
ASAJ pmax pmax
comp=Z,13nm,0.6s
ASAJ Asahikawa 53.35 58 *e*P **P 05 06 48.4 +0.2**
RRR Rubha Reidh 53.35 319 P **P 05 06 47.1 -0.8**
RRR Rubha Reidh 53.35 319⇑*e*P **P 05 06 47.1 -0.8**
KPL Plockton 53.38 319 P **P 05 06 47.5 -0.7**
KPL AMB AMB 05 06 49.0
comp=Z,159nm,1.4s,mb5.2
KPL Plockton 53.38 319⇑*e*P **P 05 06 47.5 -0.7**
KPL AMB AMB 05 06 49.0
comp=Z,159nm,1.4s,mb5.2
EPF Esparros 53.44 300 *e*P **P 05 06 47.6 -1.2**
comp=Z,55nm,0.7s,mb4.8
EPF Esparros 53.44 300 *e*P **P 05 06 47.6 -1.2**
EPF pmax pmax
comp=Z,27nm,0.7s,mb4.8
EPF Esparros 53.44 300 *e*P **P 05 06 47.6 -1.2**
comp=Z,27nm,0.7s,mb4.8
EPOB Poblet 53.46 298 P **P 05 06 49.0 0.0**
comp=Z,45nm,0.7s,mb5.0
RESF Ens 53.51 300 *e*P **P 05 06 49.3 0.0**
KAR1 Arisaig 53.56 318 P **P 05 06 49.1 -0.4**
KAR1 Arisaig 53.56 318⇑*i*P **P 05 06 49.1 -0.4**
LABF Labassere 53.62 300 *e*P **P 05 06 49.0 -1.1**
EBIE Bielsa 53.69 300 P **P 05 06 51.0 +0.3**
comp=Z,25nm,0.5s,mb5.0
VIEF Viey 53.70 300 *e*P **P 05 06 50.4 -0.3**
RRH Rhenigidale 53.80 320 P **P 05 06 50.7 -0.4**
RRH Rhenigidale 53.80 320⇑*e*P **P 05 06 50.7 -0.4**
SGMF Saint Gilles 53.80 307 *e*P **P 05 06 51.1 -0.3**
comp=Z,307nm,1.1s,mb5.4
SGMF Saint Gilles 53.80 307 *e*P **P 05 06 51.1 -0.3**
SGMF pmax pmax
comp=Z,154nm,1.1s,mb5.5
SGMF Saint Gilles 53.80 307 *e*P **P 05 06 51.1 -0.3**
comp=Z,154nm,1.1s,mb5.4
EMHD Djebel Mahouad 53.91 292 P **P 05 06 52.5 +0.1**
REYF Montagne du Re 53.93 301 *e*P **P 05 06 51.3 -1.1**
EIBI Ibiza 54.07 295 P **P 05 06 54.1 +0.6**
comp=Z,95nm,0.8s,mb5.4
ETSF Etsaut 54.10 300 *e*P **P 05 06 53.7 +0.1**
comp=Z,206nm,0.6s,mb5.5
ETSF *e*pP pP 05 07 44.8 +0.3
ETSF Etsaut 54.10 300 *e*P **P 05 06 53.7 +0.1**
ETSF *e**PP pP 05 07 44.8 +0.3
ETSF pmax pmax
comp=Z,103nm,0.6s,mb5.5
ETSF Etsaut 54.10 300 *e*P **P 05 06 53.7 +0.1**
comp=Z,103nm,0.6s,mb5.5
ETSF *e*pP pP 05 07 44.8 +0.3
ERTA Horta de San J 54.13 298 P **P 05 06 53.1 -0.7**
comp=Z,90nm,1.1s,mb5.2
ROSF Rostrenen 54.24 308 *e*P **P 05 06 54.0 -0.5**
comp=Z,446nm,1.1s,mb5.6
ROSF *e*pP pP 05 07 45.2 -0.2
ROSF Rostrenen 54.24 308 *e*P **P 05 06 54.0 -0.5**
ROSF *e**PP pP 05 07 45.2 -0.2
ROSF pmax pmax
comp=Z,223nm,1.1s,mb5.6
ROSF Rostrenen 54.24 308 *e*P **P 05 06 54.0 -0.5**
comp=Z,223nm,1.1s,mb5.6
ROSF *e*pP pP 05 07 45.2 -0.2
HTL Hartland 54.24 311 P **P 05 06 53.5 -1.0**
HTL AMB AMB 05 06 54.4
comp=Z,177nm,1.4s,mb5.4
HTL Hartland 54.24 311 *e*P **P 05 06 53.5 -1.0**
HTL AMB AMB 05 06 54.4
comp=Z,177nm,1.4s,mb5.4
GMM Mts of Mourne 54.26 315 P **P 05 06 53.2 -1.4**
GMM Mts of Mourne 54.26 315⇑*e*P **P 05 06 53.2 -1.4**
SEY Seymchan 54.27 34⇑*e*P **P 05 06 55.6 +1.1**
QUIF Quistinic 54.29 307 *e*P **P 05 06 54.3 -0.6**
comp=Z,188nm,1.0s,mb5.3
QUIF Quistinic 54.29 307 *e*P **P 05 06 54.3 -0.6**
QUIF pmax pmax
comp=Z,94nm,1.0s,mb5.3
QUIF Quistinic 54.29 307 *e*P **P 05 06 54.3 -0.6**
comp=Z,94nm,1.0s,mb5.3
LARF Larrau 54.36 301 *e*P **P 05 06 52.9 -2.5**
ESAC San Caprasio 54.43 299 P **P 05 06 56.2 +0.2**
comp=Z,116nm,0.7s,mb5.5
SJPF Ste Jean 54.49 301 *e*P **P 05 06 56.4 0.0**
comp=Z,37nm,0.7s,mb4.7
SJPF Ste Jean 54.49 301 *e*P **P 05 06 56.4 0.0**
SJPF pmax pmax
comp=Z,19nm,0.7s,mb4.7
SJPF Ste Jean 54.49 301 *e*P **P 05 06 56.4 0.0**
comp=Z,19nm,0.7s,mb4.7
EALK Alkurruntz 54.66 301 P **P 05 06 57.7 +0.1**
comp=Z,78nm,1.1s,mb5.2
DSB Dublin 54.76 314 *e*P **P 05 06 57.0 -1.2**
comp=Z,7.5nm,0.9s,mb4.2
DAG Danmarks Havn 54.78 344⇓*i*P **P 05 06 58.7 +0.8**
DAG *i* pP 05 07 48.0 -1.0
DAG pmax pmax
comp=Z,84nm,0.7s,mb5.4
DAG Danmarks Havn 54.78 344⇓⇓*i*P **P 05 06 58.7 +0.8**
comp=Z,84nm,0.7s,mb5.4
DAG *i* pP 05 07 48.0 -1.0
DLF Lyons Farm 54.84 314⇓*e*P **P 05 06 58.7 0.0**
EMOS Mosqueruela 54.91 298 P **P 05 07 00.2 +0.7**
comp=Z,40nm,0.7s,mb5.1
CCA1 Carnmenellis 54.93 310 P **P 05 06 57.8 -1.6**
CCA1 AMB AMB 05 06 58.9
comp=Z,196nm,0.9s,mb5.7
CCA1 Carnmenellis 54.93 310 *e*P **P 05 06 57.8 -1.6**
CCA1 AMB AMB 05 06 58.9
comp=Z,196nm,0.9s,mb5.7
EBNR Beni Rached 54.95 292 P **P 05 06 57.2 -2.6**
ECHA Ech Chlef 55.12 292 P **P 05 06 59.0 -2.0**
EBEN Beniarda 55.33 296 P **P 05 07 03.0 +0.6**
comp=Z,20nm,0.6s,mb4.8
EANR 'Ain N'Sour 55.40 292 P **P 05 07 03.0 0.0**
ETRT Tiaret 55.47 291 P **P 05 07 04.2 +0.7**
ECHE Chera 55.54 297 P **P 05 07 04.8 +0.8**
ECHE pmax pmax
comp=Z,39nm,0.6s,mb5.1
ECHE Chera 55.54 297 P **P 05 07 04.8 +0.9**
comp=Z,39nm,0.6s,mb5.1
YUK Yuzh-Kuril'sk 55.60 57⇑*i*P **P 05 07 00.0 -4.3**
YUK *PP pP 05 07 50.0 -5.5
YUK *i*S **S 05 14 32.0 +0.4**
YUK *e*SS SS 05 18 15.0 -4.9
YUK MLR MLR
comp=E,300nm,16.0s
YUK MLR MLR
comp=Z,200nm,16.0s
ETOR Torete 55.87 299 P **P 05 07 06.2 -0.1**
ETOR pmax pmax
comp=Z,14nm,1.0s,mb4.5
ETOR Torete 55.87 299 P **P 05 07 06.2 -0.1**
comp=Z,14nm,1.0s,mb4.4
ELAN Lanestosa 55.98 302 P **P 05 07 07.5 +0.5**
comp=Z,135nm,0.8s,mb5.5
ETOB Tobarra 56.31 296 P **P 05 07 10.1 +0.7**
comp=Z,56nm,0.8s,mb5.2
CART Cartagena 56.32 295 *e*P **P 05 07 09.3 -0.1**
comp=Z,217nm,0.9s,mb5.7
EMUR La Murta 56.40 295 P **P 05 07 09.9 -0.1**
comp=Z,59nm,1.1s,mb5.0
EVIA Vianos 57.00 296 P **P 05 07 14.4 +0.1**
EVIA pmax pmax
comp=Z,37nm,0.6s,mb5.2
EVIA Vianos 57.00 296 P **P 05 07 14.4 +0.1**
comp=Z,37nm,0.6s,mb5.2
SCO Scoresbysund 57.13 336⇑*i*P **P 05 07 16.0 +1.4**
SCO Scoresbysund 57.13 336⇑⇑*i*P **P 05 07 16.0 +1.4**
SCO *i* 05 20 40.5
EARI Arriondas 57.16 302 P **P 05 07 15.6 +0.3**
comp=Z,58nm,0.8s,mb5.3
EHUE Huescar 57.39 295 P **P 05 07 17.0 0.0**
EHUE pmax pmax
comp=Z,147nm,1.0s,mb5.6
EHUE Huescar 57.39 295 P **P 05 07 17.0 0.0**
comp=Z,147nm,1.0s,mb5.6
GUD Guadarrama 57.42 299 P **P 05 07 17.0 -0.1**
GUD pmax pmax
comp=Z,88nm,0.6s,mb5.6
GUD Guadarrama 57.42 299 P **P 05 07 17.0 -0.1**
comp=Z,88nm,0.6s,mb5.6
ENIJ Nijar 57.44 294 P **P 05 07 17.3 -0.1**
ENIJ pmax pmax
comp=Z,112nm,0.7s,mb5.6
ENIJ Nijar 57.44 294 P **P 05 07 17.3 -0.1**
comp=Z,112nm,0.7s,mb5.6
ESDC Sonseca Array 57.65 298 P **P 05 07 18.1 -0.6**
comp=Z,57nm,0.8s,mb5.3,baz=60,slow=7.3,SNR=150
ESDC Sonseca Array 57.65 298 P **P 05 07 18.8 0.0**
comp=Z,47nm,0.8s,mb5.2
ESLA Sonseca Array 57.65 298⇑*i*P **P 05 07 17.9 -0.8**
comp=Z,22nm,1.0s,mb4.8
EQES Quesada 57.74 296 P **P 05 07 19.6 +0.1**
comp=Z,248nm,1.2s,mb5.7
TAM Tamanrasset 57.76 276⇑*i*P **P 05 07 18.6 -1.2**
TAM pmax pmax
comp=Z,69nm,1.4s,mb5.1
TAM Tamanrasset 57.76 276⇑*i*P **P 05 07 18.6 -1.3**
comp=Z,69nm,1.4s,mb5.1
EBER Berja 57.97 295 P **P 05 07 20.9 -0.1**
comp=Z,76nm,0.7s,mb5.4
PAB Sant Pablo 57.98 298⇑*i*P **P 05 07 20.5 -0.5**
EBAN Banos Encina 58.12 296 P **P 05 07 21.8 -0.3**
EBAN pmax pmax
comp=Z,67nm,0.7s,mb5.4
EBAN Banos Encina 58.12 296 P **P 05 07 21.8 -0.2**
comp=Z,67nm,0.7s,mb5.4
ECOG Cogollos-Vega 58.31 295 P **P 05 07 22.9 -0.5**
ECOG pmax pmax
comp=Z,50nm,0.7s,mb5.2
ECOG Cogollos-Vega 58.31 295 P **P 05 07 22.9 -0.6**
comp=Z,50nm,0.7s,mb5.2
EPON Pontenova 58.47 303 P **P 05 07 23.6 -0.8**
comp=Z,84nm,0.7s,mb5.5
BILL Bilibino 58.49 26⇑*e*P **P 05 07 25.0 +0.9**
BILL *i* 05 09 36.4
BILL *e*S **S 05 15 11.6 +3.0**
BILL pmax pmax
comp=Z,193nm,1.3s,mb5.6
BILL MLR MLR
comp=Z,100nm,17.0s
BILL Bilibino 58.49 26⇑*i*P **P 05 07 25.0 +0.9**
comp=Z,249nm,1.3s,mb5.7
EGUA Guajares 58.49 295 P **P 05 07 24.1 -0.6**
EGUA pmax pmax
comp=Z,516nm,1.0s,mb6.1
EGUA Guajares 58.49 295 P **P 05 07 24.1 -0.6**
comp=Z,516nm,1.0s,mb6.1
ERON Agron 58.59 295 P **P 05 07 24.7 -0.6**
comp=Z,50nm,0.6s,mb5.3
EADA Adamuz 58.69 297 P **P 05 07 25.9 -0.1**
comp=Z,47nm,0.7s,mb5.2
BORG Borgarnes 58.70 330⇑*i*P **P 05 07 27.6 +2.0**
BORG pmax pmax
comp=Z,152nm,1.3s
BORG Borgarnes 58.70 330⇑*i*P **P 05 07 27.6 +2.0**
comp=Z,152nm,1.3s,mb5.5
BORG Borgarnes 58.70 330 P **P 05 07 28.9 +3.3**
comp=Z,544nm,0.8s,mb6.2,SNR=11
ELUQ Luque 58.71 296 P **P 05 07 25.6 -0.5**
ELUQ pmax pmax
comp=Z,178nm,1.0s,mb5.7
ELUQ Luque 58.71 296 P **P 05 07 25.6 -0.5**
comp=Z,178nm,1.0s,mb5.7
ECAL Calabor 58.72 301 P **P 05 07 26.5 +0.3**
comp=Z,71nm,0.9s,mb5.3
PBRG Braganca 58.77 301 *e*P **P 05 07 26.6 +0.1**
ELOJ Sierra Loja 58.80 295 P **P 05 07 25.8 -0.9**
ELOJ pmax pmax
comp=Z,20nm,0.7s,mb4.9
ELOJ Sierra Loja 58.80 295 P **P 05 07 25.8 -0.9**
comp=Z,20nm,0.7s,mb4.9
ERUA La Rua 58.82 302 P **P 05 07 26.5 -0.3**
ERUA pmax pmax
comp=Z,57nm,0.6s,mb5.4
ERUA La Rua 58.82 302 P **P 05 07 26.5 -0.4**
comp=Z,56nm,0.6s,mb5.4
MRSI Marisa 58.96 116 P **P 05 07 28.8 +0.6**
comp=Z,1µmcomp=Z,74nm,1.2s,mb5.2
EPLA Plasencia 59.00 299 P **P 05 07 27.5 -0.6**
EPLA pmax pmax
comp=Z,385nm,1.2s,mb5.9
EPLA Plasencia 59.00 299 P **P 05 07 27.5 -0.5**
comp=Z,385nm,1.2s,mb5.9
ALE Alert 59.05 354 P **P 05 07 28.0 +0.2**
comp=Z,338nm,0.8s,mb6.0,SNR=40
MVO Moncorvo 59.22 301 *e*P **P 05 07 29.9 +0.3**
comp=Z,108nm,1.1s,mb5.4
EMIJ Mijas 59.49 295 P **P 05 07 30.9 -0.7**
comp=Z,32nm,0.7s,mb5.1
STS Santiago 59.59 303 P **P 05 07 31.6 -0.5**
STS pmax pmax
comp=Z,83nm,1.0s,mb5.3
STS Santiago 59.59 303 P **P 05 07 31.6 -0.4**
comp=Z,83nm,1.0s,mb5.3
PVRL Vila Real 59.65 301 *e*P **P 05 07 32.7 +0.2**
comp=Z,85nm,1.7s,mb5.1
ELOB Lobios 59.66 302 P **P 05 07 33.0 +0.4**
comp=Z,82nm,0.7s,mb5.5
PCAB Cabril 59.70 302 *e*P **P 05 07 33.9 +1.1**
comp=Z,180nm,1.1s,mb5.6
ABPO Ambohimpanom 59.73 207 *e*P **P 05 07 32.6 -0.6**
ABPO *e* 05 08 17.6
ABPO *e**PP pP 05 08 25.7 +0.5
ABPO pmax pmax
comp=Z,38nm,0.9s,mb5.0
ABPO Ambohimpanom 59.73 207 *e*P **P 05 07 32.6 -0.6**
comp=Z,38nm,0.9s,mb5.0
ABPO *e*PcP PcP 05 08 17.6 +0.1
ABPO *e*pP pP 05 08 25.7 +0.5
CBIJ Chichi jima 59.77 77 P **P 05 07 30.9 -2.6**
comp=Z,44nm,0.4s,mb5.5,baz=266,slow=14,SNR=11
PETK Petropavlovsk- 59.80 44 P **P 05 07 31.9 -1.3**
comp=Z,9.6nm,0.7s,mb4.5,baz=355,slow=3.3,SNR=7.0
EMAZ Mazaricos 59.85 303 P **P 05 07 34.5 +0.6**
comp=Z,42nm,0.6s,mb5.2
MTE Manteigas 59.89 300 *e*P **P 05 07 34.4 +0.3**
comp=Z,219nm,1.6s,mb5.5
MTE Manteigas 59.89 300⇑*i*P **P 05 07 33.5 -0.6**
comp=Z,165nm,1.0s,mb5.6
TTSI Tana Toraja 59.91 120 P **P 05 07 36.2 +1.6**
comp=Z,3µmcomp=Z,38nm,0.8s,mb5.0
EZAM Zamans 59.98 302 P **P 05 07 34.3 -0.4**
comp=Z,339nm,1.4s,mb5.8
PVIS Viseu 60.00 300 *e*P **P 05 07 35.4 +0.5**
comp=Z,167nm,1.0s,mb5.6
PCBR Castelo Branco 60.07 299 *e*P **P 05 07 35.5 +0.1**
comp=Z,72nm,1.3s,mb5.1
ESPR Espera 60.15 296 P **P 05 07 35.2 -0.8**
comp=Z,42nm,0.7s,mb5.2
PMRV Marv??o 60.18 299 *e*P **P 05 07 35.7 -0.4**
comp=Z,114nm,1.6s,mb5.2
PMRV *i* P 05 08 51.7
EBAD Badajoz 60.19 298 P **P 05 07 36.2 -0.1**
comp=Z,130nm,0.7s,mb5.7
EMIN Mina Concepcio 60.36 297 P **P 05 07 37.1 -0.3**
comp=Z,54nm,0.9s,mb5.2
PBAR Barrancos 60.45 297 *i* P **P 05 07 37.3 -0.7**
PESTR Estremoz 60.55 298 *e*P **P 05 07 38.0 -0.7**
comp=Z,128nm,1.2s,mb5.4
PESTR *i* P 05 08 52.5
PTOM Tomar 60.82 299 *e*P **P 05 07 40.5 +0.1**
comp=Z,230nm,1.1s,mb5.7
EVO Evora 60.99 298⇑*i*P **P 05 07 41.4 -0.2**
EVO *e*MLR MLR
comp=Z,278nm,1.3s,mb5.4
comp=Z,228nm,20.2s
EVO Evora 60.99 298 *e*P **P 05 07 41.3 -0.3**
comp=Z,146nm,1.5s,mb5.4
EVO *i* P 05 08 57.4
KHKI Kahang-Kahang 61.01 128 P **P 05 07 40.0 -2.0**
comp=Z,55nm,0.8s,mb5.2
EGRO El Granado 61.04 297 P **P 05 07 41.9 -0.1**
comp=Z,68nm,0.8s,mb5.3
EVOP Sao Brissos 61.07 298 *e*P **P 05 07 42.6 +0.4**
EVOP AMb AMB 05 07 44.7
comp=Z,150nm,0.9s,mb5.6
EVOP *e*S **S 05 15 43.4 +1.0**
EVOP *e*S **S 05 15 43.8 +1.4**
EVOP Sao Brissos 61.07 298 *e*P **P 05 07 42.6 +0.4**
EVOP *e*S **S 05 15 43.4 +1.0**
PBEJ Beja 61.10 298 *e*P **P 05 07 42.4 0.0**
comp=Z,120nm,1.4s,mb5.3
PBEJ *i* P 05 08 57.8
PVAQ Vaqueiros 61.27 297 *i* P **P 05 07 42.6 -0.9**
comp=Z,170nm,1.4s,mb5.5
PCVE Castro Verde 61.40 297 *e*P **P 05 07 44.3 -0.1**
comp=Z,81nm,1.5s,mb5.1
PCVE *i* P 05 08 59.5
MESJ Messejana 61.44 298 *e*P **P 05 07 44.5 -0.1**
comp=Z,152nm,1.1s,mb5.5
MESJ *e*S **S 05 15 48.2 +1.2**
MESJ Messejana 61.44 298 *e*P **P 05 07 44.5 -0.1**
MESJ AMb AMB 05 07 45.9
comp=Z,152nm,1.1s,mb5.5
MESJ *e*S **S 05 15 48.2 +1.1**
PBDV Barranco-do-Ve 61.49 297 *e*P **P 05 07 44.4 -0.6**
comp=Z,203nm,1.3s,mb5.6
PBDV *i* P 05 09 00.5
PMAFR Mafra 61.71 299 *e*P **P 05 07 46.7 +0.3**
comp=Z,224nm,1.0s,mb5.8
PTEO Sao Teotonio 61.93 297 *e*P **P 05 07 47.7 -0.2**
comp=Z,150nm,1.1s,mb5.5
MORF Marmelete 61.98 297 *e*P **P 05 07 47.5 -0.7**
comp=Z,91nm,1.5s,mb5.2
MORF *i* P 05 09 02.3
MORF Marmelete 61.98 297 *e*P **P 05 07 48.2 0.0**
MORF *e*S **S 05 15 55.6 +1.8**
PFVI Vila Bisbo 62.18 297 *e*P **P 05 07 49.1 -0.5**
comp=Z,115nm,1.4s,mb5.3
PFVI *i* P 05 09 04.7
PFVI Vila Bisbo 62.18 297 P **P 05 07 50.0 +0.4**
TNTI Ternate 62.78 111 P **P 05 07 54.7 +0.9**
comp=Z,3µmcomp=Z,121nm,1.1s,mb5.4
WSI Waingapu 65.03 125 P **P 05 08 13.1 +4.7**
NLAI Namlea 65.25 115 P **P 05 08 10.6 +0.7**
comp=Z,63nm,0.9s,mb5.3
TORD Torodi Ar. Bea 65.95 269 P **P 05 08 11.8 -2.6**
comp=Z,131nm,0.8s,mb5.6,baz=48,slow=5.3,SNR=310
TORD pP pP 05 09 08.2 +0.8
comp=Z,28nm,0.8s,baz=45,slow=5.6,SNR=3.7
TORD PKP2bc 05 36 49.2
comp=Z,4.4nm,1.3s,baz=235,slow=2.6,SNR=6.8
TORD Torodi Ar. Bea 65.95 269 P **P 05 08 11.8 -2.6**
TORD pP pP 05 09 08.2 +0.8
TORD ⇑*e* 05 36 49.2
RES Resolute Bay 68.70 356⇑*i*P **P 05 08 30.8 +0.2**
RES pmax pmax
comp=Z,22nm,0.8s,mb4.8
RES Resolute Bay 68.70 356⇑*i*P **P 05 08 30.8 +0.2**
comp=Z,22nm,0.8s,mb4.8
EFAM Famara 69.47 292 P **P 05 08 36.2 0.0**
comp=Z,273nm,1.7s,mb5.6
PMAR Madeira 70.12 296 *e*P **P 05 08 40.1 +0.1**
comp=Z,344nm,1.1s,mb5.9
EOSO Osorio 71.54 292 P **P 05 08 48.7 0.0**
comp=Z,36nm,0.9s,mb5.0
EBAJ Bajamar 71.88 292 P **P 05 08 50.6 -0.1**
comp=Z,25nm,0.8s,mb4.9
AMKA Amchitka 72.21 39 *e*P **P 05 08 52.0 -0.2**
comp=Z,47nm,0.8s,mb5.2
EHIG Higuera 72.96 293 P **P 05 08 57.3 +0.3**
comp=Z,54nm,0.6s,mb5.4
MBWA Marble Bar 73.37 133 *e*P **P 05 08 59.2 -0.2**
comp=Z,56nm,1.0s,mb5.2
MBWA *e*pP pP 05 09 52.3 -1.2
INK Inuvik 73.85 9⇑*i*P **P 05 09 02.0 +0.5**
comp=Z,348nm,1.2s,mb5.9
INK *e*pP pP 05 09 55.6 -0.1
TTA Tatalina 73.92 20 *e*P **P 05 09 01.9 -0.1**
BPAW Bear Paw Mtn. 74.31 18⇑*i*P **P 05 09 04.0 -0.2**
comp=Z,118nm,1.0s,mb5.5
BPAW *e*pP pP 05 09 58.5 +0.1
COLA College 74.40 16⇑*i*P **P 05 09 04.9 +0.2**
COLA *e**PP pP 05 09 59.5 +0.5
COLA pmax pmax
comp=Z,202nm,0.9s,mb5.8
COLA College 74.40 16⇑*i*P **P 05 09 04.9 +0.2**
comp=Z,202nm,0.9s,mb5.8
COLA *e*pP pP 05 09 59.5 +0.6
ILAR Eielson Array 74.70 16 P **P 05 09 05.9 -0.5**
comp=Z,50nm,0.9s,mb5.1,baz=320,slow=4.3,SNR=342
ILAR pP pP 05 10 00.6 -0.2
comp=Z,38nm,1.1s,baz=315,slow=4.8,SNR=8.2
ILAR Eielson Array 74.70 16 P **P 05 09 05.9 -0.5**
ILAR *PP pP 05 10 00.6 -0.2
ILAR pmax pmax
comp=Z,50nm,0.9s
FITZ Fitzroy Crossi 74.72 127⇑*i*P **P 05 09 06.9 -0.3**
comp=Z,52nm,0.7s,mb5.3
FITZ *e*pP pP 05 10 01.0 -0.6
FITZ *e*S S 05 18 24.0 -0.3
FITZ Fitzroy Crossi 74.72 127⇑*i*P **P 05 09 07.3 +0.1**
comp=Z,60nm,1.1s,mb5.1
FITZ *e*pP pP 05 10 00.7 -0.9
FITZ Fitzroy Crossi 74.72 127 P **P 05 09 07.0 -0.2**
comp=Z,88nm,1.0s,mb5.3
LBTB Lobatse 74.84 222⇑*i*P **P 05 09 07.8 0.0**
LBTB *e**PP pP 05 10 02.5 +0.3
LBTB pmax pmax
comp=Z,265nm,1.4s,mb5.7
LBTB Lobatse 74.84 222⇑*i*P **P 05 09 07.8 0.0**
comp=Z,265nm,1.4s,mb5.7
LBTB *e*pP pP 05 10 02.5 +0.3
DBIC Dimbokro 74.93 267 P **P 05 09 06.5 -2.1**
comp=Z,62nm,0.5s,mb5.5,baz=29,slow=7.0,SNR=82
DBIC Dimbokro 74.93 267 *e*P **P 05 09 06.6 -2.0**
DBIC pmax pmax
comp=Z,77nm,0.6s
DBIC Dimbokro 74.93 267 *e*P **P 05 09 06.6 -2.0**
comp=Z,77nm,0.6s,mb5.5
PPLA Purkeypile 74.99 19⇑*i*P **P 05 09 08.2 0.0**
comp=Z,196nm,1.3s,mb5.6
KIC Kosan Boka 75.02 267 *e*P **P 05 09 06.8 -2.3**
comp=Z,191nm,0.6s,mb5.9
TRF Thorofare Moun 75.02 18⇑*i*P **P 05 09 07.9 -0.4**
comp=Z,19nm,0.7s,mb4.8
TIC Toumodi 75.07 267 *e*P **P 05 09 07.1 -2.4**
comp=Z,120nm,0.6s,mb5.7
TIC Toumodi 75.07 267 *e*P **P 05 09 07.1 -2.4**
TIC pmax pmax
comp=Z,120nm,0.6s,mb5.7
KNA Kununurra 75.10 123 P **P 05 09 09.3 -0.1**
comp=Z,5µmcomp=Z,631nm,0.8s,mb6.3
TSUM Tsumeb 75.11 232⇑⇑*i*P **P 05 09 09.0 -0.4**
comp=Z,46nm,0.9s,mb5.1
TSUM *e*pP pP 05 10 03.7 -0.2
MCK McKinley 75.11 17⇑*i*P **P 05 09 08.1 -0.7**
MCK pmax pmax
comp=Z,108nm,1.1s,mb5.4
MCK McKinley 75.11 17⇑*i*P **P 05 09 08.1 -0.7**
comp=Z,108nm,1.1s,mb5.4
LIC Lamto 75.33 267 *e*P **P 05 09 08.5 -2.4**
comp=Z,242nm,0.6s,mb6.0
LIC Lamto 75.33 267⇑*i*P **P 05 09 09.2 -1.7**
comp=Z,139nm,0.6s,mb5.5
LIC *e*MLR MLR
comp=Z,280nm,22.0s
LIC Lamto 75.33 267⇑*i*P **P 05 09 09.2 -1.7**
comp=Z,70nm,0.6s,mb5.5
LIC LR LR
comp=Z,140nm,22.0s
SVW2 Sparrevohn 75.50 21 *e*P **P 05 09 11.6 +0.5**
comp=Z,116nm,1.3s,mb5.3
KAKA Kakadu 75.54 118⇑*i*P **P 05 09 11.3 -0.7**
comp=Z,47nm,0.5s,mb5.4
KAKA *e*pP pP 05 10 05.7 -0.8
KAKA Kakadu 75.54 118 *e*P **P 05 09 11.4 -0.5**
comp=Z,173nm,0.6s,mb5.9
KAKA *e*pP pP 05 10 05.5 -1.0
KAKA Kakadu 75.54 118 P **P 05 09 11.5 -0.5**
comp=Z,1µmcomp=Z,144nm,0.7s,mb5.7
EGAK Eagle 75.88 14⇑*i*P **P 05 09 13.1 -0.1**
comp=Z,106nm,1.1s,mb5.4
DOT Dot Lake 76.29 15⇑*i*P **P 05 09 15.2 -0.2**
comp=Z,213nm,1.0s,mb5.7
PAX Paxson 76.58 16⇑*i*P **P 05 09 16.9 -0.2**
PAX *e**PP pP 05 10 11.6 -0.1
PAX pmax pmax
comp=Z,125nm,0.9s,mb5.5
PAX Paxson 76.58 16⇑*i*P **P 05 09 16.9 -0.2**
comp=Z,125nm,0.9s,mb5.5
PAX *e*pP pP 05 10 11.6 0.0
RSO Redoubt South 76.84 21 *e*P **P 05 09 19.5 +0.9**
DAWY Dawson 76.85 13⇑*i*P **P 05 09 18.7 +0.1**
DAWY *e*pP pP 05 10 13.4 +0.2
PMR Palmer 76.88 19 *e*P **P 05 09 18.4 -0.4**
PMR pmax pmax
comp=Z,137nm,1.2s,mb5.5
PMR Palmer 76.88 19 *e*P **P 05 09 18.4 -0.4**
comp=Z,137nm,1.2s,mb5.5
SML Sawmill 76.90 18⇑*i*P **P 05 09 18.7 -0.2**
SML *e**PP pP 05 10 13.8 +0.3
SML pmax pmax
comp=Z,57nm,0.9s,mb5.2
SML Sawmill 76.90 18⇑*i*P **P 05 09 18.7 -0.2**

comp=Z,57nm,0.9s,mb5.2
SML *e*pP pP 05 10 13.8 +0.2
UNV Unalaska Valle 77.12 31 *e*P **P 05 09 18.9 -1.4**
comp=Z,57nm,1.2s,mb5.1
UNV *e*PP PP 05 12 15.4 -1.2
RC01 Rabbit Creek A 77.14 19⇑*i*P **P 05 09 19.7 -0.6**
comp=Z,85nm,0.9s,mb5.4
RC01 *e*pP pP 05 10 14.8 -0.2
SLKM Skilak Lake 77.50 20 *e*P **P 05 09 21.7 -0.6**
SLKM *e**PP pP 05 10 16.3 -0.7
BOSA Boshof 77.91 220 P **P 05 09 22.9 -2.0**
comp=Z,33nm,0.8s,mb5.0,baz=35,slow=4.6,SNR=36
BOSA pP pP 05 10 19.8 +0.1
comp=Z,78nm,0.9s,baz=42,slow=5.4,SNR=12
BOSA Boshof 77.91 220 *e*P **P 05 09 24.4 -0.5**
BOSA *e**PP pP 05 10 19.6 -0.1
BOSA pmax pmax
comp=Z,161nm,1.1s,mb5.6
BOSA Boshof 77.91 220 *e*P **P 05 09 24.4 -0.6**
comp=Z,161nm,1.1s,mb5.6
BOSA *e*pP pP 05 10 19.6 -0.2
SEW Seward 78.05 20⇑*i*P **P 05 09 24.9 -0.4**
comp=Z,199nm,1.4s,mb5.5
SEW *e*pP pP 05 10 19.7 -0.4
SDPT Sand Point 78.37 27 *e*P **P 05 09 26.7 -0.5**
comp=Z,20nm,0.5s,mb5.0
CHGN Chignik 78.38 26 *e*P **P 05 09 25.8 -1.4**
KDAK Kodiak Island 79.09 22 P **P 05 09 31.0 -0.1**
comp=Z,1µm,0.7s,SNR=31
OHAK Old Harbor 79.34 23 *e*P **P 05 09 32.4 0.0**
comp=Z,226nm,1.0s,mb5.8
KLBR Kellerberrin 80.53 141 *e*P **P 05 09 37.9 -1.1**
comp=Z,41nm,0.9s,mb5.1
PNL Peninsula 80.86 15⇑*i*P **P 05 09 41.2 +0.8**
comp=Z,139nm,1.1s,mb5.5
PNL *e*pP pP 05 10 36.3 +0.7
PNL *e*sP sP 05 11 00.3 +0.2
YKA Yellowknife Ar 81.22 3 P **P 05 09 42.2 -0.1**
comp=Z,44nm,0.4s,mb5.4,baz=351,slow=5.4,SNR=1171
YKA pP pP 05 10 38.1 +0.6
comp=Z,40nm,0.7s,baz=348,slow=5.5,SNR=9.6
YKA sP sP 05 11 02.9 +1.0
comp=Z,55nm,0.8s,baz=350,slow=5.5,SNR=5.7
YKA S S 05 19 32.1 -0.3
comp=Z,0.7nm,0.9s,baz=314,slow=15,SNR=3.9
YKA PKKPbc PKKPbc 05 28 13.2 -2.9
comp=Z,1.1nm,0.7s,baz=170,slow=2.1,SNR=14
YKA Yellowknife Ar 81.22 3 P **P 05 09 42.2 -0.1**
YKA *PP pP 05 10 38.1 +0.6
YKA *SP sP 05 11 02.9 +0.9
YKA S S 05 19 32.1 -0.3
YKA 05 28 13.2
YKA pmax pmax
comp=Z,44nm,0.4s
YKA smax
comp=N,1.0nm,0.9s
YKA Yellowknife Ar 81.22 3 P **P 05 09 42.2 -0.1**
YKA pP pP 05 10 38.1 +0.6
YKA sP sP 05 11 02.9 +1.0
YKA S S 05 19 32.1 -0.3
YKA PKKPbc PKKPbc 05 28 13.2 -2.9
WRA Warramunga Arr 81.81 122 P **P 05 09 45.0 -0.9**
comp=N,52nm,0.4s,mb5.5,baz=325,slow=5.0,SNR=1304
WRA pP pP 05 10 40.1 -1.1
comp=N,27nm,0.9s,baz=321,slow=5.0,SNR=5.0
WRA S S 05 19 38.5 -1.1
comp=N,2.8nm,1.0s,baz=35,slow=30,SNR=6.9
WRA PKKPbc PKKPbc 05 28 15.9 +1.0
comp=N,1.1nm,0.6s,baz=129,slow=2.2,SNR=8.1
WRA Warramunga Arr 81.81 122 P **P 05 09 45.1 -0.9**
WRA *PP pP 05 10 40.2 -1.1
WRA S S 05 19 38.5 -1.1
WRA pmax pmax
comp=Z,52nm,0.4s
WRA smax
comp=N,3.0nm,1.0s
WRA Warramunga Arr 81.81 122 P **P 05 09 45.0 -0.9**
WRA pP pP 05 10 40.1 -1.1
WRA S S 05 19 38.5 -1.1
WRA PKKPbc PKKPbc 05 28 15.9 +1.0
WB2 Warramunga Arr 81.81 122⇑*i*P **P 05 09 44.8 -1.2**
WB2 *e*pP pP 05 10 40.4 -1.0
SKAG Skagway 81.86 13 *e*P **P 05 09 46.4 +0.7**
comp=N,180nm,2.4s,mb5.3
SCHQ Schefferville 82.17 337 P **P 05 09 47.5 +0.2**
comp=N,32nm,0.8s,mb5.0,baz=40,slow=5.8,SNR=28
SCHQ pP pP 05 10 42.2 -0.5
comp=N,18nm,0.8s,baz=33,slow=5.4,SNR=4.1
SCHQ Schefferville 82.17 337 P **P 05 09 47.5 +0.2**
SCHQ pP pP 05 10 42.2 -0.6
SUR Sutherland 83.22 221 *e*P **P 05 09 53.8 +0.8**
comp=N,21nm,0.9s,mb4.9
DLBC Dease Lake 83.73 11⇑*i*P **P 05 09 56.0 +0.7**
ASAR Alice Springs 84.08 125 P **P 05 09 56.6 -0.9**
comp=N,88nm,0.7s,mb5.6,baz=312,slow=4.9,SNR=798
ASAR pP pP 05 10 52.5 -0.7
comp=N,27nm,0.8s,baz=320,slow=5.5,SNR=8.0
ASAR S S 05 19 52.4 -10
comp=N,0.7nm,0.9s,baz=316,slow=6.5,SNR=5.8
ASAR PKKPbc PKKPbc 05 28 09.8 0.0
comp=N,0.8nm,0.8s,baz=121,slow=2.5,SNR=6.0
ASAR Alice Springs 84.08 125 P **P 05 09 56.6 -0.9**
ASAR *PP pP 05 10 52.5 -0.7
ASAR S S 05 19 52.4 -10
ASAR pmax pmax
comp=Z,88nm,0.7s
ASAR smax
comp=N,1.0nm,0.9s
SIT Sitka 84.11 14 *e*P **P 05 09 58.1 +0.9**
SIT pmax pmax
comp=Z,54nm,1.0s,mb5.2
SIT Sitka 84.11 14 *e*P **P 05 09 58.1 +0.9**
comp=Z,54nm,1.0s,mb5.2
COEN Coen 84.20 112⇑*i*P **P 05 09 57.2 -1.1**
comp=Z,147nm,0.7s,mb5.8
COEN *e*pP pP 05 10 54.2 +0.3
COEN Coen 84.20 112 P **P 05 09 57.4 -0.9**
comp=Z,128nm,1.0s,mb5.6
FCC Fort Churchill 84.29 352⇑*i*P **P 05 09 58.4 +0.3**
comp=Z,5.4nm,1.4s,mb4.1
PMG Port Moresby 84.39 106 *e*P **P 05 09 58.8 -0.5**
PMG pmax pmax
comp=Z,23nm,1.1s
PMG Port Moresby 84.39 106 *e*P **P 05 09 58.8 -0.5**
comp=Z,22nm,1.1s,mb4.8
PMG Port Moresby 84.39 106 P **P 05 09 59.3 0.0**
WRAK Wrangell Islan 85.27 13⇑*i*P **P 05 10 03.7 +0.6**
comp=Z,32nm,0.8s,mb5.1
WRAK *e*pP pP 05 10 59.4 +0.6
FORT Forrest 85.51 134⇑*i*P **P 05 10 03.9 -0.6**
comp=Z,199nm,0.7s,mb6.0
FORT Forrest 85.51 134 *e*P **P 05 10 03.8 -0.7**
comp=Z,197nm,0.7s,mb6.0
FFC Flin Flon 88.94 356 P **P 05 10 20.8 +0.1**
comp=Z,421nm,1.0s,mb6.2,SNR=23
FFC Flin Flon 88.94 356⇑*i*P **P 05 10 20.6 -0.1**
FFC *e**PP pP 05 11 16.6 -0.3
FFC pmax pmax
comp=Z,117nm,1.2s,mb5.6
FFC Flin Flon 88.94 356⇑*i*P **P 05 10 20.6 -0.1**
comp=Z,117nm,1.2s,mb5.6
FFC *e*pP pP 05 11 16.6 -0.3
CTA Charters Tower 90.34 115 *e*P **P 05 10 26.9 -0.8**
comp=Z,32nm,0.6s,mb5.3
CTA *e*pP pP 05 11 23.1 -0.9
CTAO Charters Tower 90.34 115⇑*i*P **P 05 10 26.7 -1.0**
CTAO *e**PP pP 05 11 23.1 -0.9
CTAO pmax pmax
comp=Z,40nm,0.6s,mb5.4
CTAO Charters Tower 90.34 115⇑*i*P **P 05 10 26.7 -1.0**
comp=Z,40nm,0.6s,mb5.4
CTAO *e*pP pP 05 11 23.1 -0.9
EDM Edmonton 90.54 3⇑*i*P **P 05 10 28.4 +0.3**
EDM *e**PP pP 05 11 24.7 +0.3
BBOO Buckleboo 91.74 130 *e*P **P 05 10 32.3 -1.6**
comp=Z,28nm,0.8s,mb5.2
FRNY Flat Rock 93.01 336 *e*P **P 05 10 39.9 +0.2**
comp=Z,9.1nm,1.2s,mb4.7
MDV Middlebury 93.61 335 *e*P **P 05 10 43.3 +0.8**
comp=Z,17µm,0.7s
A05A Maple Falls 94.03 9⇑P **P 05 10 43.9 -0.4**
baz=94
B06A Marblemount 94.58 8⇓P **P 05 10 46.8 0.0**
baz=94
STKA Stephens Creek 94.61 127 P **P 05 10 45.5 -1.6**
comp=Z,8.2nm,0.6s,mb5.0,baz=319,slow=6.2,SNR=19
STKA pP pP 05 11 43.5 -0.1
comp=Z,3.4nm,0.6s,baz=326,slow=9.2,SNR=3.0
STKA Stephens Creek 94.61 127 *e*P **P 05 10 45.7 -1.4**
comp=Z,7.3nm,0.6s,mb5.0
WALA Waterton Lakes 94.67 3 *e*P **P 05 10 47.1 -0.1**
WALA *e*pP pP 05 11 43.2 -0.5
A12A Yaak River Ran 94.70 5⇓P **P 05 10 47.6 +0.2**
baz=94,SNR=7.8
A13A Flathead Natio 94.77 4⇑P **P 05 10 48.0 +0.3**
baz=94
A14A Double T Ranch 94.78 3⇑P **P 05 10 47.9 +0.1**
baz=94,SNR=17
AGMN Agassiz Nation 94.78 351 *e*P **P 05 10 46.8 -1.0**
comp=Z,39nm,1.0s,mb5.5
AGMN *e*pP pP 05 11 43.5 -0.7
AGMN *e*sP sP 05 12 08.2 -0.1
A15A Johnson Ranch, 94.81 3⇑P **P 05 10 47.6 -0.3**
baz=94,SNR=29
JCW Jim Creek 94.84 9 P **P 05 10 48.6 +0.5**
A16A West Butte Ran 94.87 2⇓P **P 05 10 48.1 -0.1**
baz=94
A17A Triple J Farms 94.89 1 P **P 05 10 48.6 +0.3**
baz=94,SNR=37
A19A Klindworth Far 94.93 0⇓P **P 05 10 48.9 +0.5**
baz=94
A18A Metzger Ranch, 94.93 1⇓P **P 05 10 48.9 +0.5**
baz=94,SNR=36
B08A Colville Reser 94.97 7⇓P **P 05 10 49.1 +0.5**
baz=95,SNR=12
NLW Nelson Butte 95.14 8 P **P 05 10 50.0 +0.6**
NEW Newport 95.26 6⇑P **P 05 10 50.3 +0.3**
baz=95,SNR=12
NEW Newport 95.26 6⇑*i*P **P 05 10 50.0 +0.1**
NEW *e**PP pP 05 11 46.5 +0.1
NEW pmax pmax
comp=Z,19nm,1.3s
NEW Newport 95.26 6⇑*i*P **P 05 10 50.0 0.0**
comp=Z,19nm,1.3s,mb5.1
NEW *e*pP pP 05 11 46.5 +0.1
NEW *e*PP PP 05 14 36.8 -5.3
DGMT Dagmar 95.29 357 P **P 05 10 51.4 +1.3**
baz=95,SNR=5.6
DGMT Dagmar 95.29 357 *e*P **P 05 10 50.8 +0.7**
comp=Z,58nm,1.1s,mb5.6
DGMT *e*pP pP 05 11 45.0 -1.5
B13A Whitefish 95.33 4⇓P **P 05 10 51.0 +0.8**
baz=95,SNR=9.0
B14A Marquette Ranc 95.40 3⇓P **P 05 10 51.4 +0.8**
baz=95
B19A Brinkman Farms 95.40 0⇑P **P 05 10 51.2 +0.6**
baz=95
B16A M & M Farms, S 95.40 2⇑P **P 05 10 50.5 -0.1**
baz=95,SNR=6.7
B18A Beardsley Farm 95.46 1⇓P **P 05 10 51.2 +0.3**
baz=95,SNR=22
B15A Bradely Ranch, 95.47 3 P **P 05 10 50.9 -0.1**
baz=95,SNR=27
B17A L&G Farms, Che 95.55 1 P **P 05 10 51.4 +0.1**
baz=95,SNR=22
RMW Rattlesnake Mo 95.58 9 P **P 05 10 52.4 +1.0**
ETW Entiat 95.61 8 P **P 05 10 51.7 +0.2**
C09A Chrisman Ranch 95.62 6⇑P **P 05 10 52.2 +0.6**
baz=95,SNR=6.0
C11A Tepee Creek (N 95.75 5 P **P 05 10 52.9 +0.7**
baz=95,SNR=6.8
D05A Enumclaw 95.82 9⇓P **P 05 10 53.5 +1.0**
baz=95,SNR=6.2
EGMT Eagleton 95.83 1⇑P **P 05 10 53.4 +0.9**
baz=95,SNR=13
EGMT Eagleton 95.83 1⇑*i*P **P 05 10 52.4 -0.2**
comp=Z,49nm,1.3s,mb5.6
EGMT *e*pP pP 05 11 49.3 +0.4
BSMT Bassoo Peak 95.83 4 *e*P **P 05 10 53.4 +0.8**
comp=Z,36nm,1.3s,mb5.4
BSMT *e*pP pP 05 11 50.0 +1.0
C12B Naegeli Ranch, 95.93 5⇑P **P 05 10 54.0 +1.0**
baz=96,SNR=9.5
JTMT Jette 95.96 4 *e*P **P 05 10 54.3 +1.2**
comp=Z,25nm,1.6s,mb5.2
C14A Swan Lake 95.97 3⇑P **P 05 10 53.5 +0.3**
baz=96
OD2 Odessa Site #2 95.99 7 P **P 05 10 53.7 +0.4**
C15A Salmond Ranch, 96.01 3⇓P **P 05 10 53.7 +0.3**
baz=96,SNR=18
C16A Fuhringer Ranc 96.01 2⇓P **P 05 10 53.6 +0.2**
baz=96,SNR=14
C13A Hot Springs 96.02 4⇓P **P 05 10 54.0 +0.7**
baz=96,SNR=16
C21A Desert Coulee 96.02 359⇓P **P 05 10 54.2 +0.8**
baz=96
C19A Slack Wire Ran 96.12 0⇑P **P 05 10 54.2 +0.3**
baz=96,SNR=12
C20A Veseth Ranch, 96.14 360⇓P **P 05 10 54.5 +0.5**
baz=96,SNR=19
GLMI Grayling 96.15 343 *e*P **P 05 10 54.6 +0.5**
comp=Z,86nm,0.9s,mb6.0
C17A Wharram Farm, 96.21 1⇓P **P 05 10 54.4 +0.2**
baz=96,SNR=13
SWMT Swartz Lake 96.22 4 *e*P **P 05 10 53.8 -0.5**
comp=Z,18nm,1.5s,mb5.1
LON Longmire 96.28 9 *e*P **P 05 10 54.7 +0.1**
LON *e**PP pP 05 11 51.7 +0.7
LON pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
LON Longmire 96.28 9 *e*P **P 05 10 54.7 +0.1**
comp=Z,9.0nm,0.9s,mb5.0
LON *e*pP pP 05 11 51.7 +0.7
D08A Wollman Farm, 96.30 7⇑P **P 05 10 55.1 +0.4**
baz=96,SNR=6.8
SLMT Seeley Lake 96.51 3 *e*P **P 05 10 56.0 +0.3**
comp=Z,12nm,0.8s,mb5.2
SLMT *e*pP pP 05 11 52.8 +0.7
D12A Red Ives Fores 96.59 5⇑P **P 05 10 56.1 +0.1**
baz=96
D13A Huson 96.61 4⇑P **P 05 10 56.0 -0.1**
baz=96
D18A Linhart Farms, 96.66 1⇓P **P 05 10 56.9 +0.6**
baz=96,SNR=8.1
D14A Greenough 96.67 3⇑P **P 05 10 56.4 +0.1**
baz=96,SNR=11
D17A Six Diamond Ra 96.69 1⇓P **P 05 10 57.0 +0.6**
baz=96,SNR=27
D19A Cripps Ranch, 96.69 0⇑P **P 05 10 56.7 +0.3**
baz=96,SNR=15
D15A Lincoln 96.75 3⇑P **P 05 10 56.5 -0.2**
baz=96,SNR=5.9
D20A Manuel Ranch, 96.77 360⇑P **P 05 10 56.9 +0.1**
baz=96,SNR=9.3
D21A La Casta Ranch 96.78 359⇓P **P 05 10 57.5 +0.7**
baz=96,SNR=16
D16A Dana Ranch, Ca 96.79 2⇑P **P 05 10 57.3 +0.4**
baz=96,SNR=9.0
CHMT Chamberlain Mo 96.84 3 *e*P **P 05 10 57.6 +0.4**
comp=Z,23nm,1.4s,mb5.2
CHMT *e*pP pP 05 11 54.5 +0.9
CHMT *e*PP PP 05 14 49.4 -4.9
MSO Missoula 96.90 4⇓P **P 05 10 57.2 -0.1**
baz=96,SNR=7.6
MSO Missoula 96.90 4 *e*P **P 05 10 57.2 -0.1**
comp=Z,9.4nm,1.4s,mb4.8
E09A Wood Farm, Sta 96.91 7⇓P **P 05 10 57.8 +0.3**
baz=96,SNR=12
F04A Amboy 97.00 10⇓P **P 05 10 58.8 +0.9**
baz=97
HRY Holter Researc 97.10 2 *e*P **P 05 10 58.8 +0.5**
comp=Z,34nm,1.5s,mb5.3
HRY *e*pP pP 05 11 55.6 +0.8
LAO LASA Array 97.14 358 P **P 05 10 59.6 +1.1**
baz=97,SNR=14
LAO LASA Array 97.14 358 *e*P **P 05 10 59.2 +0.7**
comp=Z,30nm,1.0s,mb5.5
E13A Victor 97.27 4⇑P **P 05 10 59.3 +0.2**
baz=97
E16A East Helena 97.28 2 P **P 05 11 00.2 +1.1**
baz=97,SNR=8.3
E18A Harlowton 97.28 1⇑P **P 05 10 59.7 +0.5**
baz=97,SNR=13
E14A Clinton 97.33 3⇑P **P 05 10 59.6 +0.3**
baz=97,SNR=7.9
F07A Phinny Hill Vi 97.34 8⇑P **P 05 11 00.2 +0.8**
baz=97
E20A Meyer Farm, Mu 97.35 360⇑P **P 05 10 59.9 +0.5**
baz=97,SNR=10
E15A Deer Lodge 97.36 3⇑P **P 05 10 60.0 +0.5**
baz=97,SNR=8.6
E17A Martinsdale 97.37 1⇓P **P 05 11 00.5 +1.0**
baz=97,SNR=10
E19A Rath Farm, Rou 97.40 0⇑P **P 05 11 00.4 +0.8**
baz=97,SNR=10
F10A Beach Ranch, E 97.53 6⇑P **P 05 11 00.8 +0.6**
baz=97
F12A Elk City 97.89 5⇓P **P 05 11 01.4 -0.4**
baz=98
G06A Carlson Farm, 97.91 8⇓P **P 05 11 02.4 +0.4**
baz=98
F17A Fitzpatrick Pl 97.94 1⇑P **P 05 11 03.1 +1.0**
baz=98,SNR=8.7
F14A Wisdom 97.94 3⇑P **P 05 11 02.7 +0.6**
baz=98
F15A Butte 97.95 3⇓P **P 05 11 02.8 +0.7**
baz=98,SNR=9.8
F18A Big Timber 97.95 1⇓P **P 05 11 02.8 +0.7**
baz=98,SNR=13
LRM Limekiln Ridge 97.97 3 *e*P **P 05 11 02.9 +0.7**
comp=Z,111nm,1.5s,mb6.0
LRM *e*pP pP 05 11 59.4 +0.7
F19A Roth Farm, Mol 98.00 0⇑P **P 05 11 03.2 +0.8**
baz=98,SNR=7.6
F16A Kennard Place, 98.03 2 P **P 05 11 03.5 +1.0**
baz=98,SNR=6.6
F20A Billings 98.06 360 P **P 05 11 03.7 +1.1**
baz=98,SNR=6.1
GCMT Greycliff 98.06 1 *e*P **P 05 11 03.9 +1.3**
comp=Z,13nm,1.3s,mb5.1
BOZ Bozeman (W) 98.17 2 P **P 05 11 04.4 +1.3**
baz=98,SNR=9.1
BOZ Bozeman (W) 98.17 2⇑*i*P **P 05 11 03.7 +0.6**
BOZ *e**PP pP 05 12 00.8 +1.1
BOZ pmax pmax
comp=Z,35nm,1.9s,mb5.4
BOZ Bozeman (W) 98.17 2⇑*i*P **P 05 11 03.7 +0.6**
comp=Z,35nm,1.9s,mb5.4
BOZ *e*pP pP 05 12 00.8 +1.1
BOZ *e*PP PP 05 15 00.3 -4.1
DLMT Dillon 98.42 3 *e*P **P 05 11 05.0 +0.7**
comp=Z,39nm,1.8s,mb5.4
G16A Moss Hill, Enn 98.58 2 P **P 05 11 06.0 +1.1**
baz=98,SNR=7.8
G13A Cobalt 98.61 4⇓P **P 05 11 04.9 -0.2**
baz=98,SNR=8.8
G15A Dillon 98.62 3⇓P **P 05 11 05.8 +0.6**
baz=98,SNR=6.9
VIPM Ingram Point 98.63 9 P **P 05 11 06.3 +1.1**
G20A Bridger 98.64 360⇓P **P 05 11 06.1 +0.9**
baz=98,SNR=6.8
RLMT Red Lodge 98.73 0⇑P **P 05 11 06.7 +1.0**
baz=98,SNR=13
RLMT Red Lodge 98.73 0 *e*P **P 05 11 06.5 +0.8**
comp=Z,29nm,1.5s,mb5.4
RLMT *e*pP pP 05 12 02.6 +0.4
MCMT McKenzie Canyo 98.94 3 *e*P Pdif 05 11 07.2 +0.5
comp=Z,1.7nm,1.0s
H14A Leadore 99.13 3 P Pdif 05 11 08.2 +0.7
baz=99,SNR=6.5
H13A Challis 99.14 4⇑P Pdif 05 11 07.9 +0.4
baz=99
H15A Lima 99.16 3 P Pdif 05 11 08.8 +1.1
baz=99,SNR=5.0
H18A Shoshone NF, C 99.18 1⇓P Pdif 05 11 08.8 +1.1
baz=99
I07A Izee 99.18 8⇑P Pdif 05 11 08.8 +1.1
baz=99,SNR=5.5
H21A Big Horn, Sher 99.22 359⇓P Pdif 05 11 09.2 +1.3
baz=99
H20A Greybull 99.37 359⇑P Pdif 05 11 09.8 +1.2
baz=99
ECSD EROS Data Cent 99.37 351 *e*Pdif Pdif 05 11 08.2 -0.3
comp=Z,26nm,1.4s
ECSD *e*pP pP 05 12 04.7 -0.4
RSSD Black Hills 99.62 357 *e*P Pdif 05 11 10.3 +0.6
RSSD *e* 05 15 14.8
RSSD pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
RSSD Black Hills 99.62 357 *e*Pdif Pdif 05 11 10.3 +0.6
comp=Z,9.6nm,1.1s
RSSD *e*PP PP 05 15 14.8 -0.6
FLWY Flagg Ranch 99.76 1 *e*Pdif Pdif 05 11 12.2 +1.9
comp=Z,52nm,1.9s
FLWY *e*PP PP 05 15 15.5 -0.9
I14A Mackay 99.81 3⇓P Pdif 05 11 11.4 +0.8
baz=99,SNR=5.6
I12A Atlanta 99.85 5⇑P Pdif 05 11 11.4 +0.6
baz=99,SNR=5.1
I20A Worland 99.91 360 P Pdif 05 11 11.7 +0.7
baz=100,SNR=6.2
IMW Indian Meadow 99.94 2 *e*Pdif Pdif 05 11 12.6 +1.5
comp=Z,19nm,1.6s
I21A Big Trails, Te 100.04 359⇑P Pdif 05 11 12.3 +0.7
baz=100,SNR=11
MOOW Moose Ponds 100.09 1 *e*Pdif Pdif 05 11 12.7 +0.9
comp=Z,18nm,1.9s
MOOW *e*PP PP 05 15 14.2 -4.8
HLID Hailey 100.13 4 *e*Pdif Pdif 05 11 12.4 +0.5
LOHW Long Hollow 100.23 1 *e*Pdif Pdif 05 11 13.2 +0.8
comp=Z,0.9nm,0.7s
TPAW Teton Pass 100.34 2 *e*Pdif Pdif 05 11 14.4 +1.5
comp=Z,7.0nm,1.5s
J22A Midwest 100.42 358 P Pdif 05 11 13.8 +0.5
baz=100,SNR=9.3
J19A Crowheart 100.59 0⇑P Pdif 05 11 15.7 +1.7
baz=100,SNR=10
WVOR Wild Horse Val 100.90 7 *e*P Pdif 05 11 15.6 +0.2
WVOR pmax pmax
comp=Z,13nm,1.7s
WVOR Wild Horse Val 100.90 7 *e*Pdif Pdif 05 11 15.6 +0.2
comp=Z,13nm,1.7s
BW06 Boulder Array 101.09 1 *e*Pdif Pdif 05 11 17.1 +0.9
PDAR Pinedale Array 101.09 1 P Pdif 05 11 16.4 +0.2
comp=Z,1.2nm,0.6s,baz=70,slow=1.7,SNR=6.7
PDAR PP PP 05 15 27.6 +1.1
comp=Z,3.3nm,1.1s,baz=359,slow=8.9,SNR=4.6
PDAR PKiKP PKiKP 05 15 38.9 -1.0
comp=Z,2.1nm,0.8s,baz=35,slow=3.3,SNR=4.3
PDAR Pinedale Array 101.09 1 P Pdif 05 11 16.4 +0.2
PDAR PP PP 05 15 27.6 +1.1
HWUT Hardware Ranch 102.21 2 *e*Pdif Pdif 05 11 22.6 +1.4
comp=Z,21nm,1.5s
DUG Dugway 103.57 3 *e*P Pdif 05 11 27.7 +0.5
NVAR Mina Array Bea 104.90 8 Pdiff Pdif 05 11 33.2 +0.1
comp=Z,0.9nm,0.8s,baz=358,slow=3.3,SNR=7.3
NVAR PKiKP PKiKP 05 15 45.8 -1.2
comp=Z,1.9nm,0.8s,baz=17,slow=3.3,SNR=7.1
NVAR PKKPbc PKKPbc 05 27 14.5 -0.3
comp=Z,0.6nm,0.7s,baz=184,slow=5.8,SNR=4.6
PV01 Paradox Valley 105.72 360 *e*PKP PKiKP 05 15 51.3 +2.8
SDCO Great Sand Dun 106.05 357 *e*PKP PKiKP 05 15 47.8 -1.3
SDCO *e*PP PP 05 16 02.5 -0.8
TUC Tucson 111.50 2 *e*PKIKP PKiKP 05 15 59.9 +0.4
MNTX Cornudas Mount 112.07 357 *e*PKP PKiKP 05 16 00.9 +0.4
HKT Hockley 112.78 348 *e*PKIKP PKiKP 05 16 02.1 +0.1
HKT *e* 05 16 51.8
TXAR Lajitas Array 114.33 355 PKP PKiKP 05 16 03.6 -1.3
comp=Z,1.3nm,0.7s,baz=135,slow=0.7,SNR=10.0
TXAR PP PP 05 17 02.9 +0.1
comp=Z,2.4nm,1.0s,baz=19,slow=6.8,SNR=6.6
TXAR PKKPbc PKKPbc 05 26 43.7 -1.0
comp=Z,0.6nm,0.5s,baz=185,slow=7.2,SNR=6.8
TXAR Lajitas Array 114.33 355 PKIKP PKiKP 05 16 03.7 -1.3
TXAR 05 17 02.9
TXAR 05 26 43.7
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR pmax pmax
comp=Z,2.0nm,1.0s
TXAR Lajitas Array 114.33 355 PKP PKiKP 05 16 03.6 -1.3
TXAR PP PP 05 17 02.9 +0.1
TXAR PKKPbc PKKPbc 05 26 43.7 -1.0
QSPA South Pole Qui 126.31 180 *e*PKPdf PKPdf 05 16 25.5 -0.8
ROSC El Rosal 127.78 315 *e*PKPdf PKPdf 05 16 31.5 +0.3
OTAV Otavalo 133.90 316 *e*PKPdf PKPdf 05 16 42.4 -0.4
TRQA Tornquist 143.09 253 *e*PKPdf PKPdf 05 16 58.8 0.0
USHA Ushuaia 147.02 223 PKPbc PKPbc 05 17 06.5 -0.8
comp=Z,17nm,0.5s,baz=58,slow=1.2,SNR=33
PLCA Paso Flores 150.05 250 PKPbc PKPbc 05 17 15.1 -0.5
comp=Z,63nm,1.1s,baz=83,slow=2.1,SNR=20
PLCA Paso Flores 150.05 250 PKIKP PKPbc 05 17 15.1 -0.4
PLCA pmax pmax
comp=Z,63nm,1.1s
PLCA Paso Flores 150.05 250 *e*PKPbc PKPbc 05 17 15.1 -0.4

*MOS **05** 05:01:35.3±0.7,52°.36N×154°.37E,h364km,mb4.3/1,Error ellipse: s-maj=73.7km s-min=25.0km az=138.7*

KRSC 05 05:01:34.2±0.9, 51°.85N×155°.19E, h399km±38km, ML4.2, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.01**	**167**	*e*P	Pn	05 02 27.5	+2.3
MIPR	**Malaya Ipel'ka**	**1.06**	**66**	*e*P	Pn	05 02 26.3	+1.1
MIPR				*i* S	S	05 03 05.1	-1.5
SKR	**Severo-Kuril's**	**1.31**	**153**	*e*PN	Pn	05 02 28.1	+1.7
PET	**Petropavlovsk**	**2.42**	**60**	*e*P	Pn	05 02 34.4	+1.7
GNL	**Ganaly**	**2.49**	**41**	*e*P	Pn	05 02 33.8	+0.6
AVH	**Avacha**	**2.59**	**55**	*e*P	Pn	05 02 36.3	+2.4
NLC	**Nalytchevo**	**2.86**	**61**	*e*P	Pn	05 02 37.3	+1.3
NLC				*i* S	S	05 03 22.5	-3.7
SPN	**Mys Shipunski**	**3.21**	**65**	*e*P	Pn	05 02 40.1	+1.2
SPN				*i* S	S	05 03 26.9	-4.5
MKZ	**Mys Kozlova**	**4.78**	**53**	*e*P	Pn	05 02 54.7	+1.1
MKZ				*i* S	S	05 03 52.3	-6.0
BZMR	**Bezymyannaya**	**5.15**	**35**	*e*P	Pn	05 03 00.1	+2.6
SRDR	**Sredinnyy**	**5.21**	**29**	*e*P	Pn	05 03 00.5	+2.4
KBTR	**Krutoberegovo**	**6.26**	**43**	*e*P	Pn	05 03 10.0	+0.6
BKI	**Bering**	**7.25**	**58**	*e*P	Pn	05 03 24.3	+3.9
BKI				*i* S	S	05 04 44.3	-3.0

DDA ***05*** *05:03:37.7, 36°.97N×29°.14E, h7km±4km, Md3.1*
ISCJB ***05*** *05:03:39.7±0.5, 37°.02N±0°.03×29°.20E±0°.05, h20km±8km, Error ellipse: s-maj=6.6km s-min=5.3km az=140.0*
ISK ***05*** *05:03:39.5, 37°.08N×29°.14E, h8km, MD2.6*
CSEM ***05*** *05:03:39.4±0.3, 37°.06N×29°.24E, h20km, MD2.6, Error ellipse: s-maj=8.6km s-min=6.6km az=8.0*

ISC 05 05:03:39.4±0.5, 37°.00N±0°.03×29°.16E±0°.04, h11km±6km, n27, σ1°.05/43, 3C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**59**	*e*PG	**Pg**	**05 03 45.0**	**-0.6**
GLHS				*e*SG	**Sg**	**05 03 51.0**	**+1.2**
GLHS	**Glhisar (BURDU**	**0.31**	**59**	*e*Pg	**Pg**	**05 03 45.1**	**-0.6**
GLHS				*e*Sg	**Sg**	**05 03 51.1**	**+1.2**
GOLH	**Golhisar**	**0.40**	**53**	⇑*i*P	**Pg**	**05 03 45.5**	**-1.7**
GOLH				*i* S	**Sg**	**05 03 52.9**	**+0.3**
GOLH	**Golhisar**	**0.40**	**53**	*i* P	**Pg**	**05 03 45.5**	**-1.8**
GOLH				*i* S	**Sg**	**05 03 52.9**	**+0.3**
TURN	**Turunc**	**0.47**	**255**	*e*P	**Pg**	**05 03 52.0**	**+3.4**
TURN				*e*S	**Sg**	**05 04 01.9**	**+7.2**
TURN	**Turunc**	**0.47**	**255**	*e*P	**Pg**	**05 03 52.0**	**+3.5**
TURN				*e*S	**Sg**	**05 04 01.9**	**+7.2**
ELL	**Elmali**	**0.65**	**112**	*e*PG	**Pg**	**05 03 53.3**	**+1.4**
ELL	**Elmali**	**0.65**	**112**	*e*Pg	**Pg**	**05 03 53.3**	**+1.3**
DNZL	**Cakiroluk**	**0.70**	**352**	⇑*i*P	**Pg**	**05 03 51.5**	**-1.4**
DNZL				*i* S	**Sg**	**05 04 02.6**	**+0.5**
DNZL	**Cakiroluk**	**0.70**	**352**	*i* P	**Pg**	**05 03 51.5**	**-1.4**
DNZL				*i* S	**Sg**	**05 04 02.6**	**+0.6**
YER	**Yerkesik**	**0.72**	**281**	*e*PG	**Pg**	**05 03 53.0**	**-0.3**
YER				*e*SG	**Sg**	**05 04 03.4**	**+0.7**
YER	**Yerkesik**	**0.72**	**281**	*e*Pg	**Pg**	**05 03 53.0**	**-0.3**
YER				*e*Sg	**Sg**	**05 04 03.4**	**+0.8**
DENT	**Denizli**	**0.76**	**352**	*e*PG	**Pg**	**05 03 53.0**	**-1.1**
DENT	**Denizli**	**0.76**	**352**	*e*Pg	**Pg**	**05 03 53.0**	**-1.1**
AKAS	**Kas**	**0.84**	**155**	*e*P	**Pg**	**05 03 54.0**	**-1.6**
AKAS				*e*S	**Sg**	**05 04 06.9**	**+0.3**
AKAS	**Kas**	**0.84**	**155**	*e*P	**Pg**	**05 03 54.0**	**-1.6**
AKAS				*e*S	**Sg**	**05 04 06.9**	**+0.3**
KSL	**Kastellorizon**	**0.91**	**158**	*e*P	**Pg**	**05 03 56.7**	**-0.3**
AYDN	**Tasoluk**	**1.22**	**303**	*e*P	**Pn**	**05 04 01.5**	**-0.9**
AYDN				*e*S	**Sb**	**05 04 18.9**	**+0.7**
AYDN	**Tasoluk**	**1.22**	**303**	*e*P	**Pn**	**05 04 01.5**	**-0.9**
AYDN				*e*S	**Sb**	**05 04 19.0**	**+0.8**
DAT	**Datca**	**1.30**	**259**	*e*PN	**Pn**	**05 04 04.9**	**+1.4**
DAT	**Datca**	**1.30**	**259**	*e*Pn	**Pn**	**05 04 04.9**	**+1.4**
BDRM	**Kayabasi**	**1.38**	**273**	*e*P	**Pn**	**05 04 04.0**	**-0.6**
BDRM				*e*S	**Sn**	**05 04 21.6**	**-1.2**
BDRM	**Kayabasi**	**1.38**	**273**	*e*P	**Pn**	**05 04 04.0**	**-0.6**
BDRM				*e*S	**Sn**	**05 04 21.6**	**-1.2**
KHAL	**Karahalli**	**1.40**	**11**	⇑*i*P	**Pn**	**05 04 06.5**	**+1.6**
BODT	**Bodrum**	**1.48**	**273**	*e*PN	**Pn**	**05 04 06.6**	**+0.5**
BODT	**Bodrum**	**1.48**	**273**	*e*Pn	**Pn**	**05 04 06.6**	**+0.5**
SMG	**Samos**	**1.98**	**292**	*e*P	**Pn**	**05 04 12.7**	**-0.2**

ISCJB ***05*** *05:12:11.0±0.7, 26°.68S±0°.03×70°.65W±0°.07, h36km±6km, mb4.7/81, MS4.0/4, Error ellipse: s-maj=9.9km s-min=4.4km az=171.9*
NEIC ***05*** *05:12:12.1, 26°.70S×70°.67W, h47km, mb4.7/69, After GUC.*
NEIC Felt at Copiapo.
GUC ***05*** *05:12:12.1±1.2, 26°.70S×70°.67W, h47km±13km, ML4.9*
BJI ***05*** *05:12:13.1, 26°.70S×70°.70W, h47km, mB4.8/4, Ms4.9/3, Ms7 4.9/4*
IDC ***05*** *05:12:14.4±0.5, 26°.74S×70°.73W, h56km±3km, mb4.5/14, mb1 4.6/17, mb1mx4.5/22, mbtmp4.5/17, MS3.7/6, Ms1 3.7/6, ms1mx3.5/19, Error ellipse: s-maj=18.7km s-min=10.7km az=69.0*

ISC 05 05:12:13.2±0.6, 26°.70S±0°.03×70°.57W±0°.07, h41km±5km, h56km±1.3km: pP-P, n521, σ0°.65/484, mb4.7/81, MS4.0/4, 93C-86D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**2.31**	**183**	*e*Pn	**Pn**	**05 12 49.6**	**+0.9**
LCO				*e*Sn	**Sn**	**05 13 15.5**	**-0.4**
LCO	**Las Campanas**	**2.31**	**183**	*e*P	**Pn**	**05 12 49.1**	**+0.4**
LCO				*i* S	**Sn**	**05 13 16.4**	**+0.4**
LCO				AML	AML	05 13 20.6	
	comp=E,5μm,0.3s						
ANCH	**Antofagasta**	**3.01**	**3**	⇑*i*P	**Pn**	**05 12 53.0**	**-5.3**
ANCH				*i* S	**Sn**	**05 13 27.1**	**-6.0**
ANCH	**Antofagasta**	**3.01**	**3**	⇑*i*P	**Pn**	**05 12 53.0**	**-5.3**
ANCH				*i* S	**Sn**	**05 13 27.1**	**-6.0**
ANCH				AML	AML	05 13 28.3	
	comp=E,5μm,0.5s						
MECH	**Mejillones**	**3.58**	**2**	⇑*i*P	**Pn**	**05 13 05.9**	**-0.4**
MECH				*i* S	**Sn**	**05 13 46.4**	**-0.9**
OVCH	**Ovalle**	**3.94**	**188**	*e*P	**Pn**	**05 13 10.2**	**-0.9**
OVCH				*e*S	**Sn**	**05 13 54.3**	**-1.7**
OVCH	**Ovalle**	**3.94**	**188**	*e*P	**Pn**	**05 13 10.2**	**-0.9**
OVCH				*e*S	**Sn**	**05 13 54.3**	**-1.7**
TOCH	**Tocopilla**	**4.60**	**4**	*e*P	**Pn**	**05 13 19.1**	**-1.1**
TOCH				*e*S	**Sn**	**05 14 08.0**	**-4.3**
CFAA	**Coronel Fontan**	**5.30**	**158**	P	**Pn**	**05 13 33.2**	**+3.4**
	comp=E,2.4nm,0.3s,baz=332,slow=13,SNR=403						
CFAA				S	**Sn**	**05 14 31.1**	**+1.5**
	comp=E,5.3nm,0.3s,baz=228,slow=17,SNR=6.0						
CFAA				LR	LR	05 15 43.4	
	comp=E,74nm,20.0s,baz=61,slow=39						
LPAZ	**La Paz**	**10.60**	**13**	P	**Pn**	**05 14 43.7**	**+1.1**
	comp=E,12nm,0.3s,baz=200,slow=6.6,SNR=581						
LPAZ	**La Paz**	**10.60**	**13**	*e*Pn	**Pn**	**05 14 43.8**	**+1.1**
LPAZ	**La Paz**	**10.60**	**13**	*e*P	**Pn**	**05 14 43.8**	**+1.1**
CPUP	**Villa Florida**	**11.87**	**91**	*e*Pn	**Pn**	**05 15 03.5**	**+3.6**
TRQA	**Tornquist**	**13.44**	**150**	*e*Pn	**Pn**	**05 15 22.7**	**+1.4**
SIV	**San Ignacio**	**13.84**	**42**	P	**Pn**	**05 15 24.9**	**-2.0**
	comp=E,23nm,0.3s,baz=234,slow=9.7,SNR=338						
PLCA	**Paso Flores**	**14.00**	**180**	P	**Pn**	**05 15 27.2**	**-1.7**
	comp=E,0.2nm,0.3s,baz=5.5,slow=14,SNR=10						
PLCA	**Paso Flores**	**14.00**	**180**	*e*Pn	**Pn**	**05 15 29.0**	**+0.1**
	comp=E,18nm,1.1s						
NNA	**Nana**	**15.78**	**337**	P	**Pn**	**05 15 52.1**	**-0.5**
	comp=E,2.4nm,0.3s,baz=180,slow=9.9,SNR=6.9						
NNA				LR	LR	05 20 55.6	
	comp=E,142nm,21.9s,baz=128,slow=33						
NNA	**Nana**	**15.78**	**337**	*e*P	**Pn**	**05 15 54.0**	**+1.4**
	comp=E,12nm,0.6s						
ATAH	**Atahualpa**	**20.83**	**338**	P	**P**	**05 16 52.8**	**+1.3**
	comp=E,7.0nm,0.6s,baz=135,slow=5.0,SNR=5.3						
SPB	**Sao Paulo**	**21.17**	**87**	*e*P	**P**	**05 16 57.8**	**+2.7**
	comp=E,49nm,1.1s,mb4.8						
USHA	**Ushuaia**	**28.15**	**177**	P	**P**	**05 18 05.4**	**+4.0**
	comp=E,26nm,0.8s,mb4.9,baz=108,slow=6.1,SNR=5.9						
ROSC	**El Rosal**	**31.58**	**353**	P	**P**	**05 18 34.1**	**+2.0**
	comp=E,12nm,0.9s,mb4.7,baz=141,slow=4.3,SNR=4.4						
ROSC				LR	LR	05 31 44.3	
	comp=E,123nm,19.4s,MS3.6,baz=168,slow=37						
RPN	**Rapa Nui**	**34.48**	**260**	LR	LR	05 28 33.4	
	comp=E,255nm,19.0s,MS4.0,baz=288,slow=28						
PCRV	**Puerto La Cruz**	**37.10**	**10**	P	**P**	**05 19 19.4**	**-0.4**
	comp=E,5.7nm,0.8s,mb4.5,baz=186,slow=10,SNR=3.3						
PMSA	**Palmer Station**	**38.31**	**175**	LR	LR	05 34 28.4	
	comp=E,294nm,21.8s,MS4.1,baz=181,slow=35						
RCBR	**Riachuelo**	**39.01**	**64**	P	**P**	**05 19 37.6**	**+1.6**
	comp=E,17nm,1.1s,mb4.7,baz=85,slow=18,SNR=5.8						
VNA3	**Neumayer Olymp**	**55.70**	**160**	*e*P	**P**	**05 21 42.8**	**-2.3**
VNA3				*e*		05 21 57.4	
VNA3				*e*		05 22 05.3	
VNA1	**Neumayer--Stat**	**55.95**	**159**	*e*P	**P**	**05 21 44.9**	**-2.0**
VNA1				*e*		05 21 59.6	
VNA1				*e*		05 22 09.6	
VNA2	**Neumayer--Watz**	**56.31**	**159**	*e*P	**P**	**05 21 47.3**	**-2.1**
VNA2				*e*		05 22 01.9	
VNA2				*e*		05 22 09.7	
VNA2				*e*		05 22 43.4	
HKT	**Hockley**	**61.30**	**335**	*e*P	**P**	**05 22 24.2**	**-0.4**
	comp=E,1.8nm,1.1s,mb4.1						
MAIT	**Maitri**	**62.53**	**158**	*e*P	**P**	**05 22 33.0**	**+0.6**
MAIT				*e*		05 22 47.7	
SWET	**Sewanee**	**63.27**	**346**	*e*P	**P**	**05 22 36.0**	**-1.7**
JCT	**Junction City**	**63.36**	**332**	⇓P	**P**	**05 22 37.6**	**-0.7**
	baz=64,SNR=21						
JCT	**Junction City**	**63.36**	**332**	*e*P	**P**	**05 22 37.6**	**-0.7**
	comp=E,6.1nm,0.8s,mb4.8						
JCT				*e*		05 22 53.1	
QSPA	**South Pole Qui**	**63.52**	**180**	P	**P**	**05 22 39.4**	**+0.6**
	comp=E,15nm,0.5s,mb5.3,baz=154,slow=1.4,SNR=82						
QSPA	**South Pole Qui**	**63.52**	**180**	*e*P	**P**	**05 22 39.3**	**+0.5**
	comp=E,27nm,1.1s,mb5.2						
QSPA				*e*		05 22 54.1	
628A	**Black Gap, Mar**	**63.87**	**329**	⇓P	**P**	**05 22 42.0**	**+0.3**
	baz=64,SNR=21						
627A	**Terlingua Ranc**	**64.08**	**328**	⇑P	**P**	**05 22 42.5**	**-0.6**
	baz=64,SNR=6.9						
TXAR	**Lajitas Array**	**64.11**	**328**	P	**P**	**05 22 42.8**	**-0.5**
	comp=E,6.9nm,0.6s,mb4.8,baz=154,slow=9.6,SNR=83						
528A	**Cox Ranch, San**	**64.40**	**329**	⇓P	**P**	**05 22 44.5**	**-0.7**
	baz=65,SNR=26						
626A	**Big Bend Ranch**	**64.52**	**328**	⇑P	**P**	**05 22 46.1**	**+0.2**
	baz=65,SNR=79						
WVT	**Waverly**	**64.58**	**345**	*e*P	**P**	**05 22 44.0**	**-2.2**
	comp=E,6.7nm,0.8s,mb4.7						
MIAR	**Mount Ida**	**64.69**	**339**	*e*P	**P**	**05 22 45.9**	**-1.1**
	comp=E,17nm,1.1s,mb5.0						
527A	**Woodward Ranch**	**64.77**	**329**	⇑P	**P**	**05 22 47.1**	**-0.5**
	baz=65,SNR=18						
428A	**Kincaid Ranch,**	**64.83**	**330**	⇓P	**P**	**05 22 47.9**	**-0.1**
	baz=65,SNR=12						
526A	**Mary Lane Ranc**	**64.92**	**328**	⇓P	**P**	**05 22 48.6**	**0.0**
	baz=65,SNR=47						
427A	**Hayter Ranch,**	**65.26**	**329**	⇑P	**P**	**05 22 50.3**	**-0.4**
	baz=66,SNR=16						
426A	**McDonald Obser**	**65.40**	**329**	P	**P**	**05 22 51.7**	**0.0**
	baz=66,SNR=26						
328A	**Wristen Ranch,**	**65.44**	**330**	⇓P	**P**	**05 22 51.3**	**-0.7**
	baz=66						
327A	**Balmorhea Ranc**	**65.74**	**329**	⇑P	**P**	**05 22 53.6**	**-0.3**
	baz=66						
326A	**Caldwell Ranch**	**65.92**	**329**	⇓P	**P**	**05 22 54.6**	**-0.5**
	baz=66,SNR=18						
425A	**Indio Mountain**	**65.95**	**328**	⇑P	**P**	**05 22 54.6**	**-0.7**
	baz=66,SNR=17						
227A	**Bennet, Jal**	**66.19**	**330**	⇓P	**P**	**05 22 56.4**	**-0.4**
	baz=66,SNR=9.7						
WCI	**Wyandotte Cave**	**66.25**	**347**	*e*P	**P**	**05 22 54.5**	**-2.4**
	comp=E,6.5nm,0.7s,mb4.8						
325A	**Bean Ranch, Si**	**66.43**	**328**	⇓P	**P**	**05 22 57.7**	**-0.5**
	baz=67,SNR=43						
226A	**Malaga, Loving**	**66.60**	**329**	⇑P	**P**	**05 22 59.3**	**-0.1**
	baz=67,SNR=21						
CLNB	**Carlsbad**	**66.67**	**330**	*e*P	**P**	**05 22 59.7**	**-0.1**
	comp=E,1.3nm,0.3s,mb4.4						
WMOK	**Wichita Mounta**	**66.69**	**335**	*e*P	**P**	**05 22 58.0**	**-1.9**
	comp=E,5.3nm,1.0s,mb4.5						
324A	**Meley Ranch,**	**66.73**	**328**	⇓P	**P**	**05 22 58.9**	**-1.3**
	baz=67,SNR=21						
127A	**Arkansas Junct**	**66.78**	**330**	⇓P	**P**	**05 22 60.0**	**-0.5**
	baz=67,SNR=11						
GDL2	**Guadalupe Moun**	**66.84**	**329**	*e*P	**P**	**05 23 00.7**	**-0.2**
MNTX	**Cornudas Mount**	**66.89**	**328**	P	**P**	**05 22 59.9**	**-1.3**
	baz=67,SNR=34						
MNTX	**Cornudas Mount**	**66.89**	**328**	*e*P	**P**	**05 22 59.7**	**-1.6**
	comp=E,15nm,0.8s,mb5.1						
MNTX				*e*		05 23 15.2	
225A	**Deer Hill, Car**	**66.97**	**329**	⇓P	**P**	**05 23 01.3**	**-0.4**
	baz=67,SNR=10						
FVM	**French Village**	**66.98**	**343**	*e*P	**P**	**05 23 00.2**	**-1.5**
	comp=E,16nm,0.8s,mb5.1						
126A	**Clayton Basin,**	**67.06**	**330**	⇑P	**P**	**05 23 01.8**	**-0.5**
	baz=67,SNR=8.3						
Z27A	**Tatum**	**67.26**	**331**	⇓P	**P**	**05 23 02.9**	**-0.6**
	baz=68,SNR=14						
CCM	**Cathedral Cave**	**67.27**	**342**	*e*P	**P**	**05 23 02.1**	**-1.4**
	comp=E,8.2nm,1.4s,mb4.6						
CCM				*e*		05 23 17.0	
224A	**Cornudas Mount**	**67.27**	**328**	P	**P**	**05 23 02.7**	**-0.9**
	baz=68,SNR=19						
CPRX	**Cap Rock**	**67.31**	**330**	*e*P	**P**	**05 23 03.8**	**-0.1**
	comp=E,32nm,0.9s,mb5.3						
125A	**Gardner Draw,**	**67.36**	**329**	P	**P**	**05 23 03.2**	**-0.9**
	baz=68,SNR=31						
Z26A	**Caprock**	**67.56**	**330**	P	**P**	**05 23 05.1**	**-0.4**
	baz=68,SNR=30						
ACSO	**Alum Creek Sta**	**67.58**	**350**	*e*P	**P**	**05 23 03.7**	**-1.7**
	comp=E,11nm,0.6s,mb5.1						
MSTX	**Muleshoe**	**67.63**	**331**	P	**P**	**05 23 05.2**	**-0.7**
	baz=68,SNR=25						
Y27A	**Causey**	**67.72**	**331**	P	**P**	**05 23 05.6**	**-0.9**
	baz=68,SNR=12						
124A	**Stringfield Ra**	**67.76**	**329**	P	**P**	**05 23 06.5**	**-0.2**
	baz=68,SNR=20						
Z25A	**Roswell**	**67.90**	**330**	⇑P	**P**	**05 23 06.9**	**-0.7**
	baz=68,SNR=11						
AMTX	**Amarillo**	**67.96**	**333**	⇓P	**P**	**05 23 07.2**	**-0.7**
	baz=68						
AMTX	**Amarillo**	**67.96**	**333**	*e*P	**P**	**05 23 07.3**	**-0.6**
	comp=E,89nm,2.5s,mb5.3						
222A	**Williams Famil**	**68.05**	**327**	P	**P**	**05 23 08.8**	**+0.2**
	baz=68,SNR=12						
320A	**Kipp Ranch, An**	**68.14**	**325**	⇑P	**P**	**05 23 09.5**	**+0.4**
	baz=68,SNR=8.1						
Z24A	**Sheppen Canyo**	**68.24**	**329**	P	**P**	**05 23 09.4**	**-0.3**
	baz=68,SNR=38						
221A	**Mesquite Ranch**	**68.31**	**326**	⇓P	**P**	**05 23 10.7**	**+0.6**
	baz=68,SNR=5.8						
X27A	**F and S Farms,**	**68.35**	**332**	⇓P	**P**	**05 23 09.4**	**-1.0**
	baz=69						
Y25A	**Mesa, Roswell**	**68.43**	**330**	⇓P	**P**	**05 23 10.1**	**-0.8**
	baz=69,SNR=9.9						
122A	**Conniff Cattle**	**68.49**	**327**	⇑P	**P**	**05 23 11.8**	**+0.5**
	baz=69						
319A	**Douglas**	**68.56**	**325**	P	**P**	**05 23 12.1**	**+0.3**
	baz=69,SNR=11						
X26A	**CR and CF Fran**	**68.57**	**331**	P	**P**	**05 23 11.5**	**-0.3**
	baz=69,SNR=13						
Z23A	**Rita Site, Whi**	**68.59**	**328**	⇓P	**P**	**05 23 12.1**	**+0.2**
	baz=69,SNR=10.0						
220A	**Playas Peak, P**	**68.60**	**326**	P	**P**	**05 23 12.1**	**+0.1**
	baz=69,SNR=10						
121A	**Cookes Peak, D**	**68.74**	**327**	P	**P**	**05 23 13.3**	**+0.5**
	baz=69,SNR=7.7						
Y24A	**Capitan**	**68.77**	**329**	P	**P**	**05 23 12.8**	**-0.2**
	baz=69,SNR=6.3						
X25A	**Clemmons Ranch**	**68.93**	**330**	P	**P**	**05 23 13.2**	**-0.7**
	baz=69,SNR=6.9						
Z22A	**Elephant Butte**	**68.93**	**328**	⇓P	**P**	**05 23 14.9**	**+0.9**
	baz=69,SNR=8.2						
318A	**Bisbee**	**68.97**	**324**	⇓P	**P**	**05 23 14.4**	**0.0**
	baz=69						
W26A	**Owens Ranch, T**	**69.01**	**331**	P	**P**	**05 23 14.6**	**+0.1**
	baz=69,SNR=11						
219A	**White Tail Can**	**69.04**	**325**	P	**P**	**05 23 15.0**	**+0.3**
	baz=69,SNR=13						
Y23A	**Lovelace Mesa,**	**69.06**	**329**	P	**P**	**05 23 15.0**	**+0.2**
	baz=69,SNR=13						
120A	**U Bar Ranch, L**	**69.17**	**326**	P	**P**	**05 23 16.1**	**+0.6**
	baz=69,SNR=6.1						
X24A	**Lazy VL Ranch,**	**69.30**	**330**	P	**P**	**05 23 16.4**	**0.0**
	baz=70,SNR=5.6						
Z21A	**St. Cloud Mine**	**69.31**	**327**	P	**P**	**05 23 17.0**	**+0.6**
	baz=70,SNR=12						
W25A	**X Bar L Ranch,**	**69.42**	**331**	P	**P**	**05 23 16.5**	**-0.5**
	baz=70,SNR=16						
218A	**Dragoon**	**69.43**	**325**	P	**P**	**05 23 17.4**	**+0.3**
	baz=70,SNR=10						
Y22A	**Socorro**	**69.49**	**328**	P	**P**	**05 23 18.1**	**+0.6**
	baz=70,SNR=7.8						
BNM	**Barren Site**	**69.51**	**329**	*e*P	**P**	**05 23 17.5**	**-0.1**
	comp=E,16nm,1.5s,mb4.7						
Z20A	**Nine Sixteen R**	**69.60**	**327**	⇑P	**P**	**05 23 18.7**	**+0.5**
	baz=70,SNR=14						
V26A	**Tequesquite Ra**	**69.62**	**332**	⇑P	**P**	**05 23 17.9**	**-0.3**
	baz=70,SNR=10						
LPM	**Los Pinos Moun**	**69.64**	**329**	*e*P	**P**	**05 23 19.0**	**+0.6**
X23A	**Hourglass Bar**	**69.66**	**329**	⇑P	**P**	**05 23 18.9**	**+0.4**
	baz=70,SNR=13						
217A	**Green Valley**	**69.67**	**324**	P	**P**	**05 23 18.6**	**0.0**
	baz=70,SNR=12						
119A	**Ashpeak Ranch,**	**69.68**	**326**	⇓P	**P**	**05 23 18.9**	**+0.3**
	baz=70,SNR=5.8						
W24A	**Lazy 6 Ranch,**	**69.83**	**330**	⇑P	**P**	**05 23 19.2**	**-0.3**
	baz=70,SNR=8.8						
KSU1	**Kansas State U**	**69.83**	**339**	*e*P	**P**	**05 23 18.4**	**-1.0**
	comp=E,0.2nm,1.0s						
Y21A	**Point of Rocks**	**69.89**	**328**	⇑P	**P**	**05 23 20.6**	**+0.7**
	baz=70,SNR=14						
118A	**Homack Ranch,**	**69.92**	**325**	⇓P	**P**	**05 23 20.1**	**-0.1**
	baz=70,SNR=11						
LAZ	**Ladron**	**69.95**	**328**	*e*P	**P**	**05 23 20.5**	**+0.2**
	comp=E,11nm,1.3s,mb4.6						
LAZ				*e*		05 23 36.7	
V25A	**Rancho No Teng**	**70.01**	**331**	P	**P**	**05 23 20.5**	**-0.2**
	baz=70,SNR=21						
TUC	**Tucson**	**70.08**	**324**	*e*P	**P**	**05 23 20.9**	**-0.3**
	comp=E,16nm,1.4s,mb4.8						
Z19A	**T-Link Ranch,**	**70.08**	**326**	⇑P	**P**	**05 23 22.0**	**+0.9**
	baz=70,SNR=5.3						
ANMO	**Albuquerque**	**70.09**	**329**	P	**P**	**05 23 20.9**	**-0.3**
	comp=E,4.8nm,0.7s,mb4.5,baz=147,slow=7.9,SNR=23						
ANMO	**Albuquerque**	**70.09**	**329**	*e*P	**P**	**05 23 21.2**	**0.0**
	comp=E,23nm,1.6s,mb4.9						
ANMO				*e*		05 23 36.9	
W23A	**Werner Place,**	**70.12**	**330**	P	**P**	**05 23 21.9**	**+0.5**
	baz=70,SNR=19						
Y20A	**Horse Springs,**	**70.14**	**327**	P	**P**	**05 23 22.0**	**+0.5**
	baz=70,SNR=22						
216A	**Three Points,**	**70.19**	**324**	P	**P**	**05 23 21.9**	**+0.1**
	baz=70,SNR=6.2						
V24A	**Rampart Ranch,**	**70.20**	**331**	⇓P	**P**	**05 23 21.7**	**-0.1**
	baz=70,SNR=12						
117A	**Oracle**	**70.26**	**325**	P	**P**	**05 23 22.3**	**+0.1**
	baz=70,SNR=7.6						
X21A	**Alamocita Cree**	**70.30**	**328**	P	**P**	**05 23 23.1**	**+0.7**
	baz=70,SNR=16						
Z18A	**Geronimo**	**70.30**	**325**	⇓P	**P**	**05 23 22.9**	**+0.3**
	baz=70						
W22A	**Albuquerque**	**70.38**	**329**	⇓P	**P**	**05 23 24.1**	**+1.1**
	baz=71						
U25A	**Circle Dot Ran**	**70.40**	**332**	⇓P	**P**	**05 23 22.8**	**-0.2**
	baz=71,SNR=13						
SBA	**Scott Base**	**70.46**	**191**	*e*P	**P**	**05 23 23.5**	**+0.5**
	comp=E,3.2nm,0.9s,mb4.2						
Y19A	**Nutrioso**	**70.61**	**327**	⇑P	**P**	**05 23 25.1**	**+0.7**
	baz=71,SNR=16						
V23A	**Ortiz Mt. (NFS**	**70.62**	**330**	⇓P	**P**	**05 23 25.0**	**+0.6**
	baz=71,SNR=9.7						
CBKS	**Cedar Bluff**	**70.65**	**336**	⇑P	**P**	**05 23 24.2**	**-0.3**
	baz=71						
CBKS	**Cedar Bluff**	**70.65**	**336**	*e*P	**P**	**05 23 23.9**	**-0.6**
	comp=E,42nm,1.4s,mb5.2						
X20A	**Quemado**	**70.71**	**327**	P	**P**	**05 23 25.5**	**+0.5**
	baz=71,SNR=8.7						
U24A	**Moreno Valley**	**70.78**	**331**	⇑P	**P**	**05 23 25.7**	**+0.4**
	baz=71						
Y18A	**Canyon Day Jun**	**70.85**	**326**	⇑P	**P**	**05 23 25.7**	**-0.1**
	baz=71						
214A	**Organ Pipe Nat**	**70.88**	**323**	⇓P	**P**	**05 23 25.9**	**-0.1**
	baz=71,SNR=12						
T25A	**Trinidad**	**71.03**	**332**	⇓P	**P**	**05 23 27.4**	**+0.6**
	baz=71,SNR=6.0						
V22A	**San Miguel Ran**	**71.09**	**329**	P	**P**	**05 23 28.1**	**+0.8**
	baz=71,SNR=14						
U23A	**El Rito**	**71.11**	**330**	⇑P	**P**	**05 23 28.1**	**+0

MVCO	Mesa Verde baz=73	72.89 329	⇑P	P	05 23 38.2 +0.3
U18A	Rough Rock, Ch baz=73	72.89 328	⇓P	P	05 23 38.6 +0.7
WUAZ	Wupatki baz=73,SNR=8.7	72.90 326	P	P	05 23 38.8 +0.7
WUAZ	Wupatki comp=E,5.0nm,1.0s,mb4.4	72.90 326	eP	P	05 23 38.5 +0.4
WUAZ			e		05 23 54.6
S21A	Coal Bank Pass baz=73,SNR=5.4	72.93 330	P	P	05 23 39.1 +0.9
R22A	Saguache, Gunn baz=73	72.94 331	⇓P	P	05 23 38.9 +0.6
P25A	Willow Gulch B baz=73,SNR=11	72.95 333	⇑P	P	05 23 38.2 0.0
W15A	Williams baz=73,SNR=5.0	73.09 325	⇓P	P	05 23 40.0 +0.8
Y12C	Blythe baz=73,SNR=8.3	73.17 323	P	P	05 23 39.8 0.0
DVTC	Desert V Tower baz=73	73.22 321	⇓P	P	05 23 40.4 +0.3
SWSC	Sam W. Stewart baz=73	73.26 321	⇑P	P	05 23 40.6 +0.3
U16A	Tuba City baz=74	73.28 327	⇑P	P	05 23 40.2 -0.1
S20A	Disappointment baz=74	73.33 330	⇑P	P	05 23 41.4 +0.8
PDMCI	Parker Dam,Lak baz=74	73.39 323	⇓P	P	05 23 40.7 -0.2
R21A	Cimarron baz=74	73.41 330	⇑P	P	05 23 41.3 +0.2
O25A	Wiggins baz=74	73.44 334	⇑P	P	05 23 41.8 +0.7
X13A	Yucca baz=74	73.44 324	⇓P	P	05 23 41.1 -0.2
T18A	Mexican Hat baz=74	73.47 328	⇑P	P	05 23 41.6 +0.2
W14A	Seligman baz=74,SNR=6.5	73.53 325	P	P	05 23 42.4 +0.6
BAR	Barrett comp=E,8.9nm,0.8s,mb4.8	73.56 321	eP	P	05 23 41.7 -0.4
MONP	Monument Peak baz=74	73.57 321	⇑P	P	05 23 42.1 -0.1
BC3	Big Chuckawall baz=74,SNR=9.0	73.61 322	P	P	05 23 42.3 0.0
R20A	Redvale baz=74	73.63 330	⇓P	P	05 23 43.0 +0.7
ISCO	Idaho Springs baz=74,SNR=9.7	73.78 333	P	P	05 23 43.5 +0.4
ISCO	Idaho Springs comp=E,1.3nm,0.8s,mb3.9	73.78 333	eP	P	05 23 43.3 +0.2
Q21A	Lamborn Mesa, baz=74	73.81 331	⇑P	P	05 23 43.6 +0.3
IRM	Iron Mountain baz=74,SNR=7.6	73.82 323	P	P	05 23 43.6 0.0
O24A	Longmont baz=74	73.83 333	⇓P	P	05 23 43.8 +0.4
V14A	Boquillas Ranc baz=74,SNR=7.4	73.87 325	P	P	05 23 44.3 +0.5
S18A	Hurst Farm, Bl baz=74	73.97 328	⇑P	P	05 23 45.1 +0.8
ECSD	EROS Data Cent comp=E,0.3nm,0.8s	74.05 341	eP	P	05 23 43.5 -1.1
U15A	North Rim baz=74	74.08 326	⇓P	P	05 23 45.7 +0.7
PFO	Pinyon Flat Ob baz=74	74.13 321	⇓P	P	05 23 45.7 +0.4
BELC	Belle Mtn. Jos baz=74,SNR=5.5	74.17 322	⇑P	P	05 23 45.8 +0.2
O23A	Lake Granby, G baz=74,SNR=8.2	74.25 333	P	P	05 23 46.5 +0.6
P21A	Newcastle baz=74	74.32 331	⇓P	P	05 23 47.2 +0.8
N24A	Carr baz=75	74.35 334	⇑P	P	05 23 47.4 +0.9
V13A	Grand Canyon W baz=75,SNR=10	74.49 325	P	P	05 23 47.7 +0.3
U14A	Mt Trumbull baz=75,SNR=9.5	74.52 325	P	P	05 23 48.4 +0.9
W12A	Cal Nev Ari baz=75	74.53 324	⇑P	P	05 23 47.7 0.0
MURC	Murrieta baz=75,SNR=5.0	74.54 321	P	P	05 23 47.5 -0.2
GMRC	Granite Mounta baz=75,SNR=8.6	74.56 323	P	P	05 23 48.3 +0.4
Q19A	Hogan Spring (baz=75	74.66 330	⇓P	P	05 23 48.8 +0.6
N23A	Red Feather La baz=75,SNR=6.2	74.84 333	⇑P	P	05 23 49.5 +0.2
V12A	Nelson baz=75,SNR=10	74.85 324	⇑P	P	05 23 49.7 +0.2
M24A	Cheyenne baz=75,SNR=6.9	74.88 334	⇓P	P	05 23 50.2 +0.7
HEC	Hector,Ludlow baz=75	74.97 322	⇓P	P	05 23 50.6 +0.4
N22A	Wattenberg Ran baz=75,SNR=5.4	74.97 333	P	P	05 23 51.1 +1.1
T14A	Hurricane baz=75,SNR=6.1	74.97 326	P	P	05 23 50.8 +0.7
P19A	Cripple Cowboy baz=75	75.08 330	⇓P	P	05 23 50.8 +0.1
O20A	White River Ci baz=75,SNR=5.1	75.17 331	⇑P	P	05 23 51.8 +0.5
TUQ	Turquoise Moun baz=75,SNR=8.0	75.20 323	P	P	05 23 51.7 +0.2
U12A	Valley of Fire baz=75	75.22 325	⇑P	P	05 23 52.1 +0.4
BFSC	Mount Baldy Ra baz=75,SNR=6.4	75.26 321	P	P	05 23 51.9 0.0
T13A	Saint George baz=76	75.35 325	⇓P	P	05 23 53.0 +0.7
R15A	Junction baz=76	75.47 327	⇑P	P	05 23 53.7 +0.7
GSC	Goldstone baz=76,SNR=6.3	75.58 322	⇑P	P	05 23 53.8 +0.1
GSC	Goldstone comp=E,5.9nm,1.0s,mb4.5	75.58 322	eP	P	05 23 54.0 +0.3
SHPR	Sheep Range comp=E,18nm,1.5s,mb4.8	75.60 324	eP	P	05 23 54.0 +0.2
N20A	Spence Gulch, baz=76	75.75 331	⇑P	P	05 23 54.9 +0.4
S13A	Holt Ranch, En baz=76,SNR=8.6	75.76 326	P	P	05 23 55.6 +0.9
L23A	Garrett baz=76,SNR=5.7	75.77 334	P	P	05 23 54.6 0.0
R14A	James Farms, M baz=76	75.90 327	⇓P	P	05 23 56.3 +0.8
EDW2	Edwards Air Fo baz=76,SNR=6.3	75.92 321	P	P	05 23 55.3 -0.4
M21A	Separation Pea baz=76	76.02 332	⇑P	P	05 23 56.4 +0.4
RWWY	Rawlins comp=E,1.8nm,0.8s,mb4.0	76.02 333	eP	P	05 23 56.7 +0.6
RWWY			e	pP	05 24 11.1 +2.8
O18A	Roosevelt baz=76	76.05 330	⇓P	P	05 23 57.2 +1.0
Q15A	Fillmore baz=76	76.14 328	⇓P	P	05 23 57.4 +0.6
U10A	Ash Meadows, A baz=76,SNR=6.1	76.16 323	⇓P	P	05 23 57.5 +0.5
LRMC	Laurel Mountai baz=76,SNR=5.9	76.19 322	P	P	05 23 57.1 -0.1
T11A	Corn Creek, Al baz=76,SNR=9.7	76.19 325	P	P	05 23 57.8 +0.6
N19A	John Jarvie Ra baz=76	76.20 331	⇑P	P	05 23 57.4 +0.3
M20A	Sweetwater, Wa baz=76	76.26 332	⇓P	P	05 23 57.7 +0.2
R13A	O'Grain Ranch, baz=76	76.28 326	⇑P	P	05 23 58.6 +1.0
L21A	Rawlins baz=76,SNR=12	76.32 333	⇑P	P	05 23 58.0 +0.3
O17A	Robinson Place baz=76,SNR=5.0	76.33 329	⇑P	P	05 23 58.7 +0.9
FURC	Furnace Creek, baz=77,SNR=8.3	76.48 323	P	P	05 23 58.9 +0.1
MPMC	Manual Prospec baz=77,SNR=5.1	76.51 323	P	P	05 23 58.9 -0.1
K22A	Casper baz=77,SNR=6.8	76.55 334	⇓P	P	05 23 59.4 +0.4
Q14A	Sevier Lake (B baz=77,SNR=5.1	76.57 327	⇑P	P	05 24 00.1 +0.9
MPU	Maple Canyon comp=E,10nm,1.1s,mb4.7	76.59 329	eP	P	05 23 59.2 -0.1
M19A	Rock Springs baz=77	76.69 331	⇑P	P	05 23 59.9 0.0
R12A	Pony Springs, baz=77,SNR=8.0	76.71 326	P	P	05 24 00.9 +0.9
L20A	Wamsutter baz=77,SNR=6.6	76.75 332	P	P	05 24 00.5 +0.3
ISA	Isabella baz=77,SNR=9.6	76.76 322	P	P	05 24 00.7 +0.2
ISA	Isabella comp=E,1.5nm,0.8s,mb4.0	76.76 322	eP	P	05 24 00.6 +0.2
S11A	Rachel baz=77	76.77 325	⇓P	P	05 24 01.2 +0.7
K21A	Alcova baz=77,SNR=14	76.83 333	P	P	05 24 01.0 +0.4
RSSD	Black Hills comp=E,1.1nm,0.8s,mb3.8	76.85 336	eP	P	05 24 00.4 -0.3
RSSD			e		05 24 16.1
P14A	Drum Mountains baz=77	76.94 328	⇑P	P	05 24 01.9 +0.6
PKM	Peak Mountain baz=77	76.97 320	⇓P	P	05 24 01.9 +0.3
N17A	Moffit Pass baz=77,SNR=9.0	76.97 330	P	P	05 24 02.0 +0.6
JLU	Jordanelle comp=E,1.2nm,0.8s,mb3.9	76.98 329	eP	P	05 24 01.8 +0.3
JLU			e		05 24 17.9
M18A	Lyman baz=77,SNR=5.5	77.02 331	⇑P	P	05 24 01.5 -0.2
CWC	Cottonwood Cre baz=77	77.11 322	⇓P	P	05 24 02.8 +0.4
GRAC	Grapevine Rang baz=77	77.14 323	⇑P	P	05 24 02.7 +0.2
J22A	Midwest baz=77,SNR=13	77.17 334	P	P	05 24 02.1 -0.4
N16A	Rees Ranch, Co baz=77	77.20 329	⇓P	P	05 24 03.4 +0.6
R11A	Troy Canyon, C baz=77,SNR=7.9	77.22 325	⇑P	P	05 24 03.2 +0.3
VES	Vestal, Richgr baz=77,SNR=6.2	77.23 321	⇓P	P	05 24 02.8 -0.3
L19A	Farson baz=78,SNR=7.9	77.26 331	P	P	05 24 03.4 +0.4
DUG	Dugway baz=78,SNR=5.1	77.29 328	⇑P	P	05 24 03.5 +0.2
P13A	Bates Ranch, G baz=78,SNR=5.9	77.29 327	⇑P	P	05 24 03.8 +0.5
K20A	Yellowstone Ra baz=78,SNR=5.2	77.29 332	⇓P	P	05 24 03.0 -0.2
SMMC	Simmler baz=78	77.36 320	⇓P	P	05 24 03.8 0.0
L18A	Fontenelle, Gr baz=78,SNR=12	77.41 331	P	P	05 24 04.0 +0.1
S10A	Tonopah Range, baz=78,SNR=6.5	77.42 324	⇑P	P	05 24 04.2 +0.2
J21A	Lysite baz=78,SNR=7.3	77.50 333	P	P	05 24 04.3 0.0
R10A	Warm Springs baz=78,SNR=8.4	77.55 325	P	P	05 24 05.5 +0.8
M16A	Huntsville baz=78,SNR=5.3	77.63 330	P	P	05 24 05.0 -0.1
Q11A	Duckwater baz=78,SNR=7.0	77.64 326	P	P	05 24 05.6 +0.4
K19A	Absolon Red Bu baz=78	77.64 332	⇑P	P	05 24 04.7 -0.5
RCTC	Rector, Farmer baz=78	77.66 322	⇑P	P	05 24 05.1 -0.3
J20A	Shoshoni baz=78,SNR=7.8	77.76 333	P	P	05 24 06.2 +0.4
I21A	Big Trails, Te baz=78,SNR=15	77.83 334	P	P	05 24 05.7 -0.5
HWUT	Hardware Ranch comp=E,26nm,0.8s,mb5.2	77.83 330	eP	P	05 24 05.9 -0.3
PDAR	Pinedale Array comp=E,4.6nm,0.9s,mb4.4,baz=114,slow=4.8,SNR=20	77.89 332	P	P	05 24 06.0 -0.6
L17A	Cokeville baz=78,SNR=8.4	77.92 331	P	P	05 24 06.6 -0.1
BGU	Big Grassy Mou comp=E,19nm,1.4s,mb4.8	77.97 328	eP	P	05 24 06.6 -0.4
K18A	Toltan Ranch, baz=78,SNR=20	77.99 331	P	P	05 24 07.7 +0.5
AGMN	Agassiz Nation comp=E,2.1nm,0.7s,mb4.2	78.03 343	eP	P	05 24 06.2 -1.0
J19A	Crowheart baz=78,SNR=15	78.09 332	P	P	05 24 07.4 -0.3
L16A	Fish Haven baz=78	78.10 330	⇓P	P	05 24 07.8 +0.1
M15A	Larsen Ranch, baz=78,SNR=6.2	78.12 329	P	P	05 24 07.7 -0.2
I20A	Worland baz=78,SNR=12	78.28 333	P	P	05 24 08.6 -0.1
MLAC	Mammoth Lakes baz=79	78.40 323	⇑P	P	05 24 10.0 +0.5
H21A	Big Horn, Sher baz=79,SNR=8.1	78.41 334	P	P	05 24 08.8 -0.7
J18A	Kendall Valley baz=79,SNR=29	78.45 332	P	P	05 24 09.5 -0.2
K17A	Gardner Place, baz=79,SNR=34	78.47 331	P	P	05 24 09.6 -0.2
HVU	Hansel Valley comp=E,12nm,0.9s,mb4.8	78.52 329	eP	P	05 24 09.7 -0.4
L15A	Malad City baz=79,SNR=15	78.52 330	⇑P	P	05 24 09.9 -0.2
AHID	Auburn Hatcher comp=E,26nm,1.0s,mb5.1	78.56 331	eP	P	05 24 10.2 -0.1
P10A	Eureka baz=79	78.63 326	⇑P	P	05 24 11.2 +0.5
H20A	Greybull baz=79,SNR=15	78.67 334	P	P	05 24 10.4 -0.4
NVAR	Mina Array Bea comp=E,3.8nm,0.8s,mb4.4,baz=155,slow=6.5,SNR=29	78.70 324	P	P	05 24 10.9 -0.2
NVAR			pP	pP	05 24 27.1 +3.7
I19A	Meeteetse baz=79,SNR=15	78.70 333	P	P	05 24 11.2 +0.2
I18A	Diamond G Ranc baz=79,SNR=26	78.77 332	P	P	05 24 11.7 +0.3
K16A	Soda Springs baz=79,SNR=21	78.82 331	⇓P	P	05 24 12.4 +0.7
J17A	Brown Place, J baz=79,SNR=12	78.87 331	P	P	05 24 12.2 +0.3
REDW	Red Top Meadow comp=E,2.3nm,1.0s,mb4.1	78.93 331	eP	P	05 24 12.2 -0.1
L14A	Malta baz=79,SNR=17	78.93 329	⇑P	P	05 24 12.1 -0.2
SNOW	Snow King Moun comp=E,1.8nm,0.8s,mb4.0	78.97 331	eP	P	05 24 12.7 +0.2
G21A	Lodge Grass baz=79,SNR=6.5	78.98 335	P	P	05 24 12.6 0.0
LOHW	Long Hollow comp=E,5.9nm,1.4s,mb4.3	79.03 332	eP	P	05 24 12.8 0.0
TPAW	Teton Pass comp=E,2.7nm,0.9s,mb4.2	79.08 331	eP	P	05 24 13.1 0.0
RRI2	Red Ridge comp=E,5.4nm,1.3s,mb4.3	79.12 331	eP	P	05 24 13.4 +0.1
K15A	Arbon baz=79,SNR=13	79.12 330	P	P	05 24 13.2 -0.2
J16A	Bone baz=79,SNR=5.6	79.19 331	P	P	05 24 13.8 +0.2
MOOW	Moose Ponds comp=E,16nm,2.1s,mb4.6	79.19 332	eP	P	05 24 13.5 -0.2
H19A	Powell baz=79,SNR=8.1	79.22 333	P	P	05 24 13.8 0.0
DCID1	Drake Creek comp=E,3.3nm,1.0s,mb4.2	79.26 331	eP	P	05 24 14.7 +0.6
I17A	Pilgrim Ck. baz=80,SNR=11	79.26 332	P	P	05 24 14.8 +0.8
K14A	Jones Ranch, D baz=80,SNR=15	79.31 329	P	P	05 24 13.9 -0.5
WAKR	Walker comp=E,9.3nm,1.3s,mb4.5	79.36 323	eP	P	05 24 14.8 +0.1
G20A	Bridger baz=80,SNR=36	79.37 334	P	P	05 24 14.2 -0.5
IMW	Indian Meadow comp=E,6.2nm,1.4s,mb4.3	79.40 332	eP	P	05 24 15.0 +0.1
FLWY	Flagg Ranch comp=E,34nm,0.9s,mb5.3	79.45 332	eP	P	05 24 15.4 +0.4
H18A	Shoshone NF, C baz=80,SNR=56	79.50 333	P	P	05 24 15.3 0.0
I16A	Newdale baz=80,SNR=16	79.61 331	P	P	05 24 16.2 +0.2
J15A	Blackfoot baz=80,SNR=14	79.65 330	P	P	05 24 16.4 +0.2
RLMT	Red Lodge baz=80,SNR=16	79.70 333	P	P	05 24 16.7 +0.3
RLMT	Red Lodge	79.70 333	eP	P	05 24 16.7 +0.2
RLMT			e		05 24 32.3
YFT	Old Faithful comp=E,13nm,0.8s,mb4.9	79.80 332	eP	P	05 24 18.2 +1.2
MAW	Mawson comp=E,10nm,0.5s,mb5.0	79.80 164	⇓iP	P	05 24 17.1 +0.3
F20A	Billings baz=80	79.82 334	⇑P	P	05 24 16.9 -0.2
LAO	LASA Array baz=80,SNR=11	79.84 336	P	P	05 24 17.0 -0.2
LAO	LASA Array comp=E,30nm,1.1s,mb5.1	79.84 336	eP	P	05 24 16.6 -0.6
G18A	Lazy EL Ranch, baz=80,SNR=21	79.98 333	P	P	05 24 17.9 -0.1
YMR	Madison River comp=E,41nm,0.8s,mb5.4	80.03 332	eP	P	05 24 19.0 +0.8
YMR			e		05 24 34.6
E21A	Keefer Ranch, baz=80,SNR=7.7	80.03 335	P	P	05 24 18.1 -0.1
J14A	Carey baz=80,SNR=6.2	80.07 330	⇓P	P	05 24 18.6 +0.1
I15A	Monteview baz=80,SNR=7.7	80.15 331	P	P	05 24 19.6 +0.7
F19A	Roth Farm, Mol baz=80,SNR=9.9	80.18 334	P	P	05 24 18.8 -0.2
H16A	Russell Place, baz=80,SNR=14	80.18 332	P	P	05 24 20.0 +0.9
E20A	Meyer Farm, Mu baz=81,SNR=34	80.40 335	P	P	05 24 20.2 0.0
GCMT	Greycliff comp=E,13nm,1.0s,mb4.8	80.41 333	eP	P	05 24 19.8 -0.5
J13A	Cove Ranch, Pi baz=81,SNR=14	80.43 329	P	P	05 24 20.8 +0.3
D21A	La Casta Ranch baz=81,SNR=20	80.45 336	P	P	05 24 20.3 -0.1
G17A	Pierce Place, baz=81,SNR=6.9	80.47 333	P	P	05 24 21.3 +0.8
I14A	Mackay baz=81,SNR=17	80.52 330	P	P	05 24 21.6 +0.7
F18A	Big Timber baz=81,SNR=25	80.53 333	P	P	05 24 20.8 -0.1
TORD	Torodi Ar. Bea comp=E,6.7nm,0.8s,mb4.7,baz=267,slow=5.5,SNR=39	80.53 70	P	P	05 24 22.0 +0.3
TORD			pP	pP	05 24 37.7 +3.7
TORD	Torodi Ar. Bea comp=E,14nm,0.6s,baz=259,slow=5.0,SNR=21	80.53 70	P	P	05 24 22.0 +0.3
TORD			pP	pP	05 24 37.7 +3.7
E19A	Rath Farm, Rou baz=81,SNR=41	80.62 334	P	P	05 24 21.2 -0.2
DGMT	Dagmar baz=81,SNR=11	80.66 338	P	P	05 24 21.6 +0.1
DGMT	Dagmar comp=E,23nm,0.6s,mb5.3	80.66 338	eP	P	05 24 21.5 0.0
HLID	Hailey baz=81,SNR=34	80.67 329	P	P	05 24 22.1 +0.4
HLID	Hailey comp=E,19nm,0.9s,mb5.0	80.67 329	eP	P	05 24 21.8 +0.1
HLID			e		05 24 37.8
H15A	Lima baz=81,SNR=10.0	80.71 331	P	P	05 24 22.4 +0.5
I13A	Wildhorse Cree baz=81,SNR=32	80.81 330	⇓P	P	05 24 23.1 +0.7
G16A	Moss Hill, Enn baz=81,SNR=6.7	80.84 332	P	P	05 24 22.4 -0.1
D20A	Manuel Ranch, baz=81,SNR=18	80.89 335	P	P	05 24 22.5 -0.3
F17A	Fitzpatrick Pl baz=81,SNR=13	80.91 333	P	P	05 24 23.1 +0.2
MCMT	McKenzie Canyo comp=E,11nm,0.8s,mb4.8	80.96 331	eP	P	05 24 23.7 +0.5
MCMT			e		05 24 40.1
H14A	Leadore baz=81,SNR=20	81.02 331	P	P	05 24 24.3 +0.7
G15A	Dillon baz=81	81.08 331	⇑P	P	05 24 23.8 0.0
BOZ	Bozeman (W) baz=81,SNR=9.5	81.10 332	P	P	05 24 23.6 -0.4
BOZ	Bozeman (W) comp=E,8.7nm,1.3s,mb4.5	81.10 332	eP	P	05 24 23.3 -0.6
BOZ			e		05 24 39.8
C21A	Desert Coulee baz=81	81.12 336	⇑P	P	05 24 23.5 -0.5
E18A	Harlowton baz=81,SNR=8.5	81.15 334	⇑P	P	05 24 24.1 -0.1
I12A	Atlanta baz=81,SNR=8.9	81.18 329	⇑P	P	05 24 24.4 0.0
MFID	Camas Ranch baz=81,SNR=6.5	81.21 328	P	P	05 24 24.4 -0.1
F16A	Kennard Place, baz=81,SNR=5.7	81.21 332	P	P	05 24 24.4 -0.1
D19A	Cripps Ranch, baz=82,SNR=20	81.24 335	P	P	05 24 24.2 -0.4
DLMT	Dillon comp=E,1.5nm,0.9s,mb3.9	81.28 331	eP	P	05 24 24.9 0.0
C20A	Veseth Ranch, baz=82,SNR=10	81.36 335	P	P	05 24 24.5 -0.8
H13A	Challis baz=82,SNR=27	81.38 330	P	P	05 24 25.6 +0.2
E17A	Martinsdale baz=82,SNR=7.4	81.44 333	P	P	05 24 26.0 +0.2
G14A	Jackson baz=82	81.56 331	⇓P	P	05 24 26.6 +0.2
LRM	Limekiln Ridge	81.58 332	eP	P	05 24 26.7 +0.2
F15A	Butte baz=82,SNR=15	81.62 332	P	P	05 24 26.9 +0.2
D18A	Linhart Farms, baz=82,SNR=18	81.62 334	P	P	05 24 26.5 -0.1
H12A	Diamond D Ranc baz=82,SNR=6.6	81.63 330	⇑P	P	05 24 26.9 +0.1
C19A	Slack Wire Ran baz=82,SNR=11	81.77 335	P	P	05 24 27.0 -0.5
G13A	Cobalt baz=82,SNR=35	81.78 330	P	P	05 24 27.8 +0.3
WVOR	Wild Horse Val comp=E,8.1nm,1.1s,mb4.6	81.83 326	eP	P	05 24 26.9 -0.9
D17A	Six Diamond Ra baz=82,SNR=30	81.93 334	P	P	05 24 28.2 -0.1
F14A	Wisdom baz=82,SNR=19	81.97 331	P	P	05 24 28.9 +0.4
HRY	Holter Researc	82.04 333	eP	P	05 24 29.2 +0.3
E15A	Deer Lodge baz=82,SNR=5.3	82.14 332	P	P	05 24 29.4 0.0
D16A	Dana Ranch, Ca baz=82,SNR=27	82.18 333	P	P	05 24 29.9 +0.2
EGMT	Eagleton baz=82,SNR=6.9	82.28 335	P	P	05 24 29.4 -0.7
EGMT	Eagleton comp=E,3.6nm,0.9s,mb4.3	82.28 335	eP	P	05 24 29.2 -0.9
G12A	Big Creek, Yel baz=82,SNR=7.7	82.29 330	P	P	05 24 29.9 -0.4
B19A	Brinkman Farms baz=83	82.33 335	⇓P	P	05 24 29.7 -0.6
C17A	Wharram Farm, baz=83,SNR=22	82.35 334	P	P	05 24 30.0 -0.5
BOSA	Boshof comp=E,2.6nm,0.7s,mb4.3,baz=260,slow=6.4,SNR=4.9	82.36 118	P	P	05 24 31.5 +0.3
J08A	Circle Bar Ran baz=83,SNR=12	82.43 327	P	P	05 24 31.0 0.0
E14A	Clinton baz=83,SNR=7.5	82.50 332	P	P	05 24 31.6 +0.4
D15A	Lincoln baz=83,SNR=7.7	82.59 333	P	P	05 24 31.9 +0.2
B18A	Beardsley Farm baz=83,SNR=7.6	82.59 335	P	P	05 24 31.4 -0.4
A19A	Klindworth Far baz=83	82.65 336	⇑P	P	05 24 31.5 -0.5
F12A	Elk City baz=83,SNR=8.7	82.75 330	P	P	05 24 32.0 -0.6
CHMT	Chamberlain Mo	82.79 332	eP	P	05 24 32.6 -0.2
E13A	Victor baz=83,SNR=13	82.81 331	P	P	05 24 33.0 +0.1
C16A	Fuhringer Ranc baz=83,SNR=28	82.88 333	P	P	05 24 32.9 -0.3
B17A	L&G Farms, Che baz=83,SNR=14	82.90 334	P	P	05 24 32.6 -0.8
D14A	Greenough baz=83,SNR=6.3	83.03 332	P	P	05 24 33.8 -0.2
A18A	Metzger Ranch, baz=83,SNR=8.4	83.05 335	P	P	05 24 33.2 -0.9
SLMT	Seeley Lake	83.15 332	eP	P	05 24 34.6 0.0
K05A	Summer Lake baz=83,SNR=6.9	83.18 325	P	P	05 24 35.1 +0.2
C15A	Salmond Ranch, baz=83,SNR=28	83.21 333	P	P	05 24 35.0 +0.1
B16A	M & M Farms, S baz=84	83.36 334	⇓P	P	05 24 35.2 -0.5
E12A	Beaver Dam Sad baz=84,SNR=5.9	83.40 330	P	P	05 24 35.1 -0.8
A17A	Triple J Farms baz=84,SNR=27	83.40 335	P	P	05 24 35.3 -0.6
D13A	Huson baz=84,SNR=7.5	83.44 332	P	P	05 24 36.0 -0.2
I07A	Izee baz=84,SNR=8.3	83.47 327	P	P	05 24 36.3 -0.1
SWMT	Swartz Lake comp=E,4.1nm,0.9s,mb4.6	83.57 332	eP	P	05 24 36.5 -0.3

B15A	**Bradely Ranch,**	83.62	333	P		P	05 24 36.1 -0.9
	baz=84,SNR=28						
C14A	**Swan Lake**	83.67	332	⇑P		P	05 24 37.1 -0.2
	baz=84						
A16A	**West Butte Ran**	83.75	334	⇓P		P	05 24 37.4 -0.2
	baz=84						
D12A	**Red Ives Fores**	83.79	331	⇑P		P	05 24 37.5 -0.5
	baz=84						
F10A	**Beach Ranch, E**	83.80	329	⇓P		P	05 24 37.7 -0.3
	baz=84						
YBMT	**Yellow Bay**	83.86	332	*e*P		P	05 24 38.1 -0.1
JTMT	**Jette**	83.88	332	*e*P		P	05 24 38.0 -0.4
B14A	**Marquette Ranc**	83.94	333	P		P	05 24 38.3 -0.4
	baz=84,SNR=5.9						
C13A	**Hot Springs**	83.95	332	P		P	05 24 38.5 -0.3
	baz=84,SNR=9.9						
G08A	**Pilot Rock**	84.10	328	P		P	05 24 38.9 -0.7
	baz=84,SNR=5.1						
BLMT	**Blacktail Moun**	84.12	332	*e*P		P	05 24 39.6 0.0
BSMT	**Bassoo Peak**	84.17	332	*e*P		P	05 24 39.5 -0.4
A15A	**Johnson Ranch,**	84.22	334	P		P	05 24 38.8 -1.3
	baz=84,SNR=6.6						
LBTB	**Lobatse**	84.22	115	*e*P		P	05 24 41.4 +0.5
	comp=E,7.8nm,0.8s,mb4.9						
C12B	**Naegeli Ranch,**	84.35	331	P		P	05 24 40.5 -0.3
	baz=85,SNR=5.7						
B13A	**Whitefish**	84.44	332	P		P	05 24 40.7 -0.5
	baz=85,SNR=6.4						
A14A	**Double T Ranch**	84.49	333	⇑P		P	05 24 40.7 -0.8
	baz=85,SNR=11						
WALA	**Waterton Lakes**	84.75	333	*e*P		P	05 24 42.1 -0.7
	comp=E,0.4nm,1.0s						
WALA				*e*			05 24 58.0
C11A	**Tepee Creek (N**	84.79	331	P		P	05 24 42.1 -0.8
	baz=85,SNR=17						
A13A	**Flathead Natio**	84.86	333	⇑P		P	05 24 43.0 -0.4
	baz=85						
G06A	**Carlson Farm,**	84.86	327	⇑P		P	05 24 43.1 -0.3
	baz=85						
B12A	**Libby**	84.99	332	⇓P		P	05 24 43.7 -0.3
	baz=85						
HAWA	**Hanford**	85.18	328	*e*P		P	05 24 44.5 -0.4
	comp=E,17nm,1.2s,mb5.0						
H04A	**Detroit Lake**	85.23	326	⇓P		P	05 24 44.3 -1.0
	baz=85						
A12A	**Yaak River Ran**	85.38	332	⇑P		P	05 24 45.2 -0.7
	baz=86						
D08A	**Wollman Farm,**	85.39	329	⇓P		P	05 24 45.2 -0.8
	baz=86						
NEW	**Newport**	85.49	331	⇓P		P	05 24 44.8 -1.7
	baz=86						
NEW	**Newport**	85.49	331	*e*P		P	05 24 44.7 -1.8
	comp=E,3.8nm,0.9s,mb4.5						
OD2	**Odessa Site #2**	85.54	329	*e*P		P	05 24 46.0 -0.8
	comp=E,26nm,0.9s,mb5.5						
OD2				*e*			05 25 02.2
C09A	**Chrisman Ranch**	85.65	330	P		P	05 24 46.9 -0.4
	baz=86,SNR=8.3						
G04A	**Mulino**	85.75	326	⇓P		P	05 24 47.3 -0.5
	baz=86						
F04A	**Amboy**	86.23	327	⇑P		P	05 24 49.6 -0.6
	baz=86						
ETW	**Entiat**	86.44	329	*e*P		P	05 24 50.2 -1.0
	comp=E,12nm,0.9s,mb5.1						
LON	**Longmire**	86.52	328	*e*P		P	05 24 50.2 -1.4
	comp=E,5.3nm,1.0s,mb4.7						
D05A	**Enumclaw**	86.92	328	⇑P		P	05 24 52.6 -1.0
	baz=87						
E03A	**Lebam**	87.23	327	⇑P		P	05 24 54.3 -0.8
	baz=87						
CASY	**Casey**	87.32	180	⇓*i*P		P	05 24 55.6 +0.2
CASY	**Casey**	87.32	180	*e*P		P	05 24 55.6 +0.2
	comp=E,13nm,0.9s,mb5.2						
CASY				*e*			05 25 10.6
EDM	**Edmonton**	87.83	336	*e*P		P	05 24 55.6 -2.2
A05A	**Maple Falls**	88.26	329	⇑P		P	05 24 58.5 -1.4
	baz=88						
RPZ	**Rata Peaks**	90.03	220	P		P	05 25 06.8 -1.9
	comp=E,22nm,1.0s,mb5.4,baz=111,slow=3.4,SNR=4.7						
YKA	**Yellowknife Ar**	95.58	341	P		P	05 25 31.9 -1.6
	comp=E,3.3nm,0.8s,mb4.8,baz=138,slow=4.6,SNR=32						
YKA				pP		pP	05 25 47.8 +1.8
	comp=E,0.7nm,0.5s,baz=140,slow=4.6,SNR=3.8						
DLBC	**Dease Lake**	98.10	333	*e*P		P	05 25 44.1 -1.0
ILAR	**Eielson Array**	108.24	334	PKKPbc		PKKPbc	05 41 45.8 -3.8
	comp=E,0.3nm,0.8s,baz=294,slow=3.3,SNR=5.3						
BRTR	**Keskin Array B**	116.99	57	PKP		PKPdf	05 30 52.5 -1.1
	comp=E,0.6nm,0.7s,baz=242,slow=3.1,SNR=3.3						
ASAR	**Alice Springs**	124.62	207	PKP		PKPdf	05 31 07.2 -1.8
	comp=E,3.3nm,0.7s,baz=130,slow=1.8,SNR=30						
ASAR				pPKP		pPKPdf	05 31 23.6 +1.8
	comp=E,1.8nm,0.9s,baz=147,slow=2.2,SNR=5.3						
ASAR	**Alice Springs**	124.62	207	PKP		PKPdf	05 31 07.2 -1.8
ASAR				pPKP		pPKPdf	05 31 23.6 +1.8
WRA	**Warramunga Arr**	127.72	210	PKP		PKPdf	05 31 13.4 -1.5
	comp=E,6.4nm,0.7s,baz=156,slow=1.7,SNR=49						
WRA				pPKP		pPKPdf	05 31 29.9 +2.2
	comp=E,3.1nm,0.8s,baz=160,slow=1.7,SNR=7.4						
FITZ	**Fitzroy Crossi**	132.77	201	PKP		PKPdf	05 31 23.6 -1.0
	comp=E,4.3nm,0.6s,baz=185,slow=5.0,SNR=20						
FITZ	**Fitzroy Crossi**	132.77	201	*e*PKPdf		PKPdf	05 31 23.4 -1.1
AKTO	**Aktyubinsk**	134.46	44	PKP		PKPdf	05 31 26.1 -0.5
	comp=E,1.1nm,0.3s,baz=331,slow=2.4,SNR=6.2						
AKTO				pPKP		pPKPdf	05 31 41.9 +2.4
	comp=E,0.7nm,0.3s,baz=240,slow=23,SNR=2.0						
PETK	**Petropavlovsk-**	135.69	320	PKP		PKPdf	05 31 28.7 -0.1
	comp=E,2.4nm,0.5s,baz=108,slow=11,SNR=4.2						
ABKAR	**Akbulak array**	135.92	46	*e*PKPdf		PKPdf	05 31 29.3 -0.1
BVAR	**Borovoye Array**	140.88	37	PKP		PKPdf	05 31 38.8 +0.4
	comp=E,1.7nm,0.6s,baz=282,slow=2.9,SNR=8.9						
BVAR				pPKP		pPKPdf	05 31 54.7 +3.5
	comp=E,1.0nm,0.6s,baz=242,slow=3.2,SNR=2.4						
KKAR	**Karatay Array**	144.49	52	*e*PKPdf		PKPdf	05 31 45.4 +0.3
KAD	**Karad**	146.11	99	*e*PKP		PKPdf	05 31 49.4 +0.8
KAD				AML		AML	05 31 50.4
	comp=Z,16nm,0.6s						
KURK	**Kurchatov**	146.45	36	PKPbc		PKPbc	05 31 48.5 -1.1
	comp=Z,8.7nm,0.6s,baz=305,slow=3.3,SNR=29						
KURK				pPKPbc		pPKPbc	05 32 04.4 +2.1
	comp=Z,3.8nm,0.6s,baz=304,slow=3.2,SNR=7.3						
KURK	**Kurchatov**	146.45	36	*e*PKPdf		PKPdf	05 31 48.3 +0.1
EKS2	**Erkin-Say**	146.92	52	*e*PKPdf		PKPdf	05 31 50.2 +1.0
AML	**Almayashu**	147.02	53	*e*PKPdf		PKPdf	05 31 50.6 +1.1
ZAA0	**Zalesovo Array**	147.27	27	*e*PKPdf		PKPdf	05 31 49.5 +0.1
ZAA0				*e*PKPbc		PKPbc	05 31 51.8 -0.1
ZALV	**Zalesovo Beam**	147.27	27	PKPbc		PKPdf	05 31 49.7 +0.2
	comp=Z,43nm,0.7s,baz=288,slow=2.9,SNR=39						
ZALV				pPKPbc		pPKPab	05 32 07.9 +1.7
	comp=Z,20nm,0.8s,baz=308,slow=3.7,SNR=6.8						
AAK	**Ala-Archa**	147.44	52	PKPbc		PKPbc	05 31 51.1 -1.5
	comp=Z,7.5nm,0.5s,baz=229,slow=3.6,SNR=21						
AAK	**Ala-Archa**	147.44	52	*e*PKPdf		PKPdf	05 31 51.2 +1.1
AAK				*e*PKPbc		PKPbc	05 31 53.9 +1.2
TKM2	**Tokmak 2**	148.11	51	*e*PKPdf		PKPdf	05 31 51.9 +0.7
TKM2				*e*PKPbc		PKPbc	05 31 55.0 +0.5
KZA	**Kyzart**	148.14	52	*e*PKPbc		PKPbc	05 31 56.2 +1.7
ASAJ	**Asahikawa**	148.14	312	*e*PKPbc		PKPbc	05 31 53.5 -1.1
KSH	**Kashi**	149.38	57	P		PKPbc	05 31 58.1 +0.3
KSH				pmax		pmax	
	comp=Z,37nm,0.9s						
HYB	**Hyderabad**	150.00	102	*i*PKP		PKPbc	05 32 02.0 +2.0
MK31	**Makanchi Array**	150.65	40	*e*PKPbc		PKPbc	05 32 00.2 -0.5
MKAR	**Makanchi Array**	150.65	40	PKPbc		PKPbc	05 32 00.5 -0.2
	comp=Z,32nm,0.7s,baz=322,slow=2.2,SNR=226						
MKAR				pPKPbc		pPKPbc	05 32 16.4 +2.9
	comp=Z,15nm,0.7s,baz=328,slow=2.4,SNR=12						
MJAR	**Matsushiro Arr**	153.69	299	PKPbc		PKPbc	05 32 05.6 -2.3
	comp=Z,2.0nm,0.7s,baz=92,slow=1.1,SNR=7.0						
MAJO	**Matsushiro**	153.69	299	*e*PKPbc		PKPbc	05 32 06.6 -1.3
MAJO				*e*PKPab		PKPab	05 32 19.5 -1.3
MAT	**Matsushiro**	153.69	299	PKP		PKPbc	05 32 06.5 -1.4
CN2	**Changchun**	158.56	327	*e*PKP		PKPdf	05 32 05.8 -0.4
CN2				PP		PP	05 36 24.6 +3.2
SONM	**Songino Array**	158.77	6	PKP		PKPdf	05 32 05.2 -1.1
	comp=Z,2.5nm,0.9s,baz=9.5,slow=1.0,SNR=11						
SONM				PKPab		PKPab	05 32 42.1 +0.1
	comp=Z,1.9nm,0.8s,baz=335,slow=6.6,SNR=4.5						
SONM				SKP			05 35 39.1
	comp=Z,1.2nm,0.9s,baz=37,slow=3.6,SNR=3.7						
KSRS	**Korea Array**	161.04	309	PKP		PKPdf	05 32 08.0 -1.2
	comp=Z,1.0nm,0.4s,baz=122,slow=0.6,SNR=8.8						
KSRS				PKPab		PKPab	05 32 52.2 -0.2
	comp=Z,2.8nm,0.9s,baz=64,slow=5.1,SNR=8.6						
GTA	**Gaotai**	164.99	30	PKP		PKPdf	05 32 13.6 +0.6
HHC	**Hu-ho-hao-te**	165.77	353	*e*PKP		PKPdf	05 32 14.0 +0.4
HHC				pPKP		pPKPdf	05 32 24.8 -1.7
HHC				sPKP			05 32 28.5
HHC				PKS			05 35 45.3
HHC				PP		PP	05 37 03.7 +4.5
HHC				SKS		SKSdf	05 39 12.8 -1.7
HHC				SKKS		SKKSac	05 43 45.5 +1.3
HHC				SS		SS	05 57 36.1 +2.3
HHC				AMB		AMB	
	comp=Z,84nm,8.8s						
HHC				LR		LR	
	comp=N,75nm,19.8s						
HHC				LR		LR	
	comp=E,120nm,20.6s						
HHC				LR		LR	
	comp=Z,130nm,20.9s						
CMAR	**Chiang Mai Arr**	167.31	128	PKP		PKPdf	05 32 14.4 -1.0
	comp=Z,0.6nm,0.3s,baz=260,slow=2.1,SNR=8.4						
CMAR				SKP			05 35 33.4
	comp=Z,0.5nm,0.3s,baz=175,slow=3.1,SNR=7.0						
LZH	**Lanzhou**	169.50	26	*e*PKP		PKPdf	05 32 17.0 +0.6
LZH				pPKP		pPKPdf	05 32 31.7 +2.4
LZH				sPKP			05 32 37.1
KMI	**Kunming**	173.78	103	PKP		PKPdf	05 32 19.7 +0.3
KMI				pPKP		pPKPdf	05 32 30.9 -0.8
KMI				sPKP			05 32 36.0
GYA	**Guiyang**	177.51	95	*e*PKP		PKPdf	05 32 18.0 -1.7
GYA				pPKP		pPKPdf	05 32 32.8 +0.2
GYA				sPKP			05 32 37.9
GYA				PKPab		PKPab	05 34 06.4 +0.7
GYA				PKS			05 35 48.0
GYA				PP		PP	05 38 01.2 +1.8
GYA				AMB		AMB	
	comp=Z,90nm,7.9s						

*ISCJB **05** 05:18:48.5±0.5, 37°.40N±0°.03×71°.80E±0°.09, h112km±8km, mb3.8/6, Error ellipse: s-maj=12.1km s-min=4.8km az=11.8*

*NEIC **05** 05:18:49.6±1.1, 37°.23N×71°.97E, h116km±9km, mb4.4/4, Error ellipse: s-maj=19.9km s-min=10.9km az=116.0*

*NNC **05** 05:18:52.8±2.6, 38°.02N×71°.31E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=19.8km s-min=17.2km az=16.0*

*IDC **05** 05:18:55.1±5.0, 37°.31N×71°.97E, h168km±37km, mb3.6/6, mb1 3.5/12, mb1mx3.3/29, mbtmp3.5/12, Error ellipse: s-maj=47.8km s-min=30.9km az=162.0*

ISC 05 05:18:49.9±0.5, 37°.38N±0°.03×71°.77E±0°.10, h107km±8km, n31, σ1§36/44, mb3.8/6, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	3.55	178	⇑P	Pn	05 19 42.5	-0.6
CEP				S	Sn	05 20 24.0	-0.3
KBL	**Kabul**	3.59	219	*e*Pn	Pn	05 19 44.3	+0.6
KBL				*e*Sn	Sn	05 20 27.8	+2.6
CHCP	**Chirah Chowk**	3.91	161	P	Pn	05 19 47.4	-0.5
KSH	**Kashi**	3.93	56	Pn	Pn	05 19 41.5	-6.7
KSH				Sn	Sn	05 20 15.1	-18
KSH				smax			
	comp=N,150nm,0.4s						
KSH				smax			
	comp=E,220nm,0.4s						
AML	**Almayashu**	4.97	17	*e*Pn	Pn	05 20 02.4	+0.2
	comp=E,42nm,0.4s						
AML				*e*Sn	Sn	05 20 58.2	-0.3
SARP	**Sargodha**	5.49	172	P	Pn	05 20 06.6	-2.8
EKS2	**Erkin-Say**	5.50	16	*e*Pn	Pn	05 20 09.7	+0.4
	comp=E,3.8nm,0.3s						
AAK	**Ala-Archa**	5.65	21	P	Pn	05 20 17.3	+5.9
	comp=E,0.0nm,0.3s,baz=183,slow=7.6,SNR=8.1						
AAK				S	Sn	05 21 14.0	-1.0
	comp=E,0.1nm,0.3s,baz=318,slow=18,SNR=22						
AAK	**Ala-Archa**	5.65	21	*e*Pn	Pn	05 20 14.1	+2.7
AAK				*e*Sn	Sn	05 21 15.5	+0.5
KK31	**Karatay Array**	5.80	351	Pn	Pn	05 20 13.7	+0.3
	comp=E,5.7nm,0.3s,baz=169,slow=12,SNR=107						
KK31				⇑Sn	Sn	05 21 17.4	-1.1
	comp=E,6.9nm,0.4s,baz=170,slow=21,SNR=10						
KKAR	**Karatay Array**	5.80	351	*e*Pn	Pn	05 20 13.8	+0.4
	comp=E,15nm,0.3s						
KKAR				*e*Sn	Sn	05 21 16.7	-1.8
TKM2	**Tokmak 2**	6.26	27	⇑Pn	Pn	05 20 21.5	+1.8
	comp=E,2.0nm,0.6s						
TKM2				⇓Sn	Sn	05 21 30.1	+0.3
	comp=E,3.0nm,0.5s						
MKAR	**Makanchi Array**	12.22	36	P	Pn	05 21 44.9	+4.8
	comp=E,0.2nm,0.3s,baz=205,slow=8.8,SNR=6.7						
MKAR	**Makanchi Array**	12.22	36	P	Pn	05 21 44.9	+4.8
KURK	**Kurchatov**	14.21	18	P	Pn	05 22 08.3	+2.4
	comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=9.6						
KURK	**Kurchatov**	14.21	18	P	Pn	05 22 08.3	+2.4
AB31	**Akbulak array**	14.64	328	Pn	Pn	05 22 09.1	-2.4
	comp=E,0.5nm,0.5s,baz=130,slow=14,SNR=18						
AB31				⇓Sn	Sn	05 24 43.8	-9.1
	comp=E,2.4nm,0.6s,baz=163,slow=22,SNR=10						
ABKAR	**Akbulak array**	14.64	328	*e*Pn	Pn	05 22 09.4	-2.1
	comp=E,0.7nm,0.3s						
ABKAR				*e*Sn	Sn	05 24 40.4	-12
BVAR	**Borovoye Array**	15.68	357	P	Pn	05 22 27.8	+3.3
	comp=E,0.6nm,0.3s,baz=209,slow=8.3,SNR=3.3						
AKTK	**Aktyubinsk**	16.35	327	P	Pn	05 22 35.5	+2.6
AKTK				S	S	05 25 25.4	-14
AKTO	**Aktyubinsk**	16.35	327	⇑Pn	Pn	05 22 34.7	+1.9
	comp=E,1.0nm,0.7s						
AKTO				⇓Sn	Sn	05 25 26.2	-7.8
	comp=E,0.3nm,0.7s						
AKTO	**Aktyubinsk**	16.35	327	P	Pn	05 22 35.5	+2.6
	comp=E,1.5nm,0.3s,baz=125,slow=14,SNR=17						
AKTO				S	S	05 25 25.4	-14
	comp=E,0.4nm,0.3s,baz=30,slow=13,SNR=4.5						
ZALV	**Zalesovo Beam**	18.86	24	P	P	05 23 00.4	-1.0
	comp=E,1.4nm,0.3s,baz=214,slow=10.0,SNR=3.4						
FINES	**FINESS Array B**	37.10	325	P	P	05 25 49.4	-0.2
	comp=E,1.2nm,0.3s,mb4.3,baz=120,slow=9.5,SNR=6.9						
ARCES	**ARCESS Array B**	40.57	337	P	P	05 26 19.3	+0.9
	comp=E,1.1nm,0.4s,mb4.0,baz=116,slow=8.8,SNR=12						
ARCES	**ARCESS Array B**	40.57	337	P	P	05 26 19.3	+0.9
HFS	**Hagfors**	42.76	321	P	P	05 26 36.8	+0.5
	comp=E,2.4nm,0.4s,mb4.3,baz=98,slow=11,SNR=14						
NOA	**NORSAR Array B**	44.05	322	P	P	05 26 47.7	+1.1
	comp=E,0.6nm,0.6s,mb3.5,baz=98,slow=6.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	66.35	269	P	P	05 29 26.8	-0.6
	comp=E,0.2nm,0.4s,mb3.3,baz=50,slow=6.0,SNR=4.4						
YKA	**Yellowknife Ar**	80.34	3	P	P	05 30 47.2	-1.5
	comp=E,0.3nm,0.5s,mb3.4,baz=352,slow=5.6,SNR=6.1						
LPAZ	**La Paz**	138.91	290	PKP	PKPdf	05 38 04.7	+0.6
	comp=E,1.4nm,0.3s,baz=358,slow=6.3,SNR=11						

*ISCJB **05** 05:52:12.5±0.5, 29°.89N±0°.06×90°.47E±0°.04, h10km, mb3.8/5, MS3.1/2, Error ellipse: s-maj=9.2km s-min=5.4km az=5.9*

*IDC **05** 05:52:12.0±1.7, 29°.76N×90°.34E, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.7/25, mbtmp3.8/7, ML3.9/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/28, Error ellipse: s-maj=66.9km s-min=19.6km az=71.0*

ISC 05 05:52:14.2±0.5, 29°.89N±0°.06×90°.50E±0°.04, h10km, n20, σ1§13/22, mb3.8/5, MS3.1/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	0.60	109	Pg	Pg	05 52 24.5	-1.4
LSA				Sg	Sg	05 52 33.4	-0.3
LSA				smax			
	comp=N,100μm,0.2s						
LSA				smax			
	comp=E,97μm,0.2s						
ODAN	**Odare**	4.08	223	*e*Pn	Pn	05 53 18.8	+2.1
ODAN				*e*Sn	Sg	05 54 17.8	-7.4
	comp=E,338nm,1.0s						
SHL	**Shillong**	4.48	164	*e*PKP	Pn	05 53 23.5	+1.3
SHL				*e*S	Sg	05 54 31.0	-7.2
GUN	**Gumba**	4.50	245	*e*Pn	Pn	05 53 22.9	+0.4
RAMN	**Ramite**	4.51	230	*e*Pn	Pn	05 53 23.4	+0.7
KKN	**Kakani**	5.03	247	*e*Pn	Pn	05 53 29.7	-0.1
DMN	**Daman**	5.25	246	*e*Pn	Pn	05 53 32.8	0.0
GKN	**Gorkha**	5.47	251	*e*Pn	Pn	05 53 34.0	-1.8
IMP	**Imphal**	5.94	148	*e*PKP	Pn	05 53 45.0	+2.8
IMP				*e*S	Sn	05 54 56.0	+5.7
DANN	**Dangsing**	6.09	257	*e*Pn	Pn	05 53 42.2	-2.1
KOLN	**Koldanda**	6.41	252	*e*Pn	Pn	05 53 48.4	-0.3
CMAR	**Chiang Mai Arr**	13.74	144	Pn	Pn	05 55 28.3	-0.9
	comp=E,0.6nm,0.3s,baz=323,slow=14,SNR=9.7						
MKAR	**Makanchi Array**	18.04	342	P	Pn	05 56 25.6	+0.6
	comp=E,0.1nm,0.3s,baz=150,slow=9.8,SNR=9.3						
SONM	**Songino Array**	21.70	30	P	P	05 57 06.8	+1.6
	comp=E,5.7nm,1.0s,mb4.0,baz=215,slow=14,SNR=13						
KURK	**Kurchatov**	22.63	340	P	P	05 57 14.7	-0.4
	comp=E,0.7nm,0.7s,mb3.2,baz=149,slow=11,SNR=4.5						
ZALV	**Zalesovo Beam**	24.39	352	LR	LR	06 07 12.9	
	comp=E,32nm,19.3s,MS2.8,baz=229,slow=37						
NOA	**NORSAR Array B**	59.22	326	LR	LR	06 29 08.2	
	comp=E,27nm,18.1s,MS3.4,baz=250,slow=37						
WRA	**Warramunga Arr**	65.09	134	P	P	06 02 54.8	-0.5
	comp=E,1.2nm,0.7s,mb4.1,baz=326,slow=6.6,SNR=15						
ASAR	**Alice Springs**	67.63	137	P	P	06 03 10.9	-0.5
	comp=E,1.1nm,0.7s,mb4.0,baz=319,slow=6.6,SNR=11						
ILAR	**Eielson Array**	75.68	22	P	P	06 03 59.6	+0.3
	comp=E,0.7nm,0.9s,mb3.6,baz=290,slow=4.7,SNR=7.7						

*NEIC **05** 05:57:44.0, 17°.53N×95°.09W, h135km, MD4.0(MEX), After MEX.*

MEX 05 05:57:43.1±0.9, 17°.48N×95°.15W, h156km±17km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	1.57	255	*e*P	Pn	05 58 12.8	-1.0
VHO				*e*S	Sn	05 58 36.0	-1.4
VHO	**Vista Hermosa**	1.57	255	*e*P	Pn	05 58 13.0	-0.8
VHO				*e*S	Sn	05 58 36.0	-1.4
HUIG	**Huatulco**	1.94	209	*e*P	Pn	05 58 16.6	-1.3
HUIG				*e*S	Sn	05 58 42.6	-2.1
HUIG	**Huatulco**	1.94	209	*e*P	Pn	05 58 16.6	-1.3
HUIG				*e*S	Sn	05 58 42.6	-2.1
TGIG		2.06	110	*e*P	Pn	05 58 18.0	-1.3
TGIG				*i*S	Sn	05 58 43.7	-3.4
TPIG	**Tehuac#an**	2.30	294	*e*P	Pn	05 58 21.4	-0.8
TPIG				*e*S	Sn	05 58 50.0	-2.3
SCX	**San Cristobal**	2.52	107	*i*P	Pn	05 58 23.5	-1.2
SCX				*i*S	Sn	05 58 51.0	-5.8
SCX	**San Cristobal**	2.52	107	*i*P	Pn	05 58 23.5	-1.2
SCX				*i*S	Sn	05 58 51.0	-5.8
PCIG		2.56	133	*e*P	Pn	05 58 24.9	-0.4
PCIG				*e*S	Sn	05 58 56.1	-1.7
PNIG	**Pinotepa**	3.05	250	*i*P	Pn	05 58 28.9	-2.5
PNIG				*i*S	Sn	05 59 09.8	+1.1
PNIG	**Pinotepa**	3.05	250	*i*P	Pn	05 58 28.9	-2.5
PNIG				*i*S	Sn	05 59 08.0	-0.7
CCIG	**Comitan**	3.12	112	*i*P	Pn	05 58 31.8	-0.4
CCIG				*i*S	Sn	05 59 07.8	-2.5
CCIG	**Comitan**	3.12	112	*i*P	Pn	05 58 31.8	-0.4
CCIG				*i*S	Sn	05 59 07.8	-2.5

*NEIC **05** 06:02:20.8, 13°.43N×92°.44W, h16km, MD4.1(MEX), After MEX.*

MEX 05 06:02:20.8±0.4, 13°.43N×92°.44W, h16km±18km, MD4.1, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.48	7	*i*P	Pn	06 02 43.3	-3.5
THIG				*i*S	Sn	06 03 00.6	-5.1
PCIG		2.38	342	*i*P	Pn	06 02 56.1	-3.0
PCIG				*i*S	Sn	06 03 24.1	-3.9
CCIG	**Comitan**	2.85	6	*i*P	Pn	06 03 03.1	-2.5
CCIG				*i*S	Sn	06 03 36.6	-3.0
CCIG	**Comitan**	2.85	6	*i*P	Pn	06 03 03.1	-2.5
CCIG				*i*S	Sn	06 03 36.6	-3.0
SCX	**San Cristobal**	3.29	357	*e*P	Pn	06 03 09.8	-1.9
SCX				*i*S	Sn	06 03 47.5	-3.0
SCX	**San Cristobal**	3.29	357	*e*P	Pn	06 03 09.8	-1.9
SCX				*i*S	Sn	06 03 47.5	-3.0
TGIG		3.39	349	*i*P	Pn	06 03 11.5	-1.6
TGIG				*i*S	Sn	06 03 49.4	-3.6
HUIG	**Huatulco**	4.25	304	*i*P	Pn	06 03 23.1	-1.7
HUIG				*i*S	Sn	06 04 09.5	-4.6
HUIG	**Huatulco**	4.25	304	*i*P	Pn	06 03 23.1	-1.7
HUIG				*i*S	Sn	06 04 09.5	-4.6
CMIG	**Matias Romero**	4.34	327	*i*P	Pn	06 03 24.2	-1.9
CMIG				*i*S	Sn	06 04 13.1	-3.2
CMIG	**Matias Romero**	4.34	327	*i*P	Pn	06 03 24.2	-1.9
CMIG				*i*S	Sn	06 04 13.1	-3.2
VHO	**Vista Hermos

LZH			pP		07 29 53.7	
LZH			sP		07 29 57.0	
LZH			PP		07 30 01.2	
BVAR	**Borovoye Array**	**16.62 319**	P	**Pn**	**07 30 31.2**	**-3.6**
comp=E,0.2nm,0.3s,baz=104,slow=12,SNR=2.5						
CMAR	**Chiang Mai Arr**	**24.81 155**	P	**P**	**07 32 05.7**	**+1.6**
comp=E,0.5nm,0.3s,mb3.5,baz=339,slow=9.7,SNR=3.6						
ILAR	**Eielson Array**	**65.50 23**	P	**P**	**07 37 16.2**	**-8.5**
comp=E,0.1nm,0.3s,mb3.3,baz=318,slow=5.4,SNR=3.4						
WRA	**Warramunga Arr**	**74.60 135**	P	**P**	**07 38 20.5**	**-0.6**
comp=E,0.4nm,0.7s,mb3.5,baz=330,slow=5.1,SNR=4.3						
ASAR	**Alice Springs**	**77.46 138**	P	**P**	**07 38 37.0**	**-0.4**
comp=E,0.1nm,0.4s,mb3.1,baz=330,slow=5.4,SNR=3.4						
TORD	**Torodi Ar. Bea**	**78.92 278**	P	**P**	**07 38 45.1**	**-0.7**
comp=E,2.4nm,0.3s,mb4.6,baz=42,slow=5.8,SNR=3.1						
CTA	**Charters Tower**	**81.47 126**	P	**P**	**07 38 56.0**	**-3.3**
comp=E,1.0nm,0.3s,mb4.2,baz=307,slow=10,SNR=3.2						

NNC 05 07:41:53.5±3.0, 53°.83N×86°.06E, h0km, mb3.6, mpv3.0, 5C-5D, Error ellipse: s-maj=23.9km s-min=18.8km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.53**	**239**	⇑Pn	Pn	07 43 19.1	+2.1
KURK	2.8nm,1.2s						
				⇓Sn	Sn	07 44 20.8	-0.5
KURK	2.3nm,1.3s						
				⇓Lg		07 44 51.4	
KURBB	9.9nm,1.5s **Kurchatov Arra**	**5.63**	**238**	⇑Pn	Pn	07 43 19.4	+1.0
KURBB	0.4nm,0.5s,baz=52,slow=15						
				⇑Sn	Sn	07 44 26.7	+3.0
KURBB	0.2nm,0.5s						
				⇑Lg		07 44 55.3	
KURBB	0.6nm,0.6s,baz=50,slow=34						
MK31	**Makanchi Array**	**7.45**	**200**	Pn	Pn	07 43 46.4	+3.1
MK31	0.9nm,0.5s,baz=25,slow=12,SNR=17						
				⇓Sn	Sn	07 45 13.8	+5.4
MK31	2.9nm,1.4s,baz=245,slow=53,SNR=5.3						
				⇓Lg		07 45 48.3	
MK31	0.9nm,0.7s,baz=30,slow=29,SNR=4.3						
VOSK	**Vostochnaya**	**9.11**	**269**	⇓Pn	Pn	07 44 04.5	-1.6
VOSK	1.2nm,0.5s						
ZRNK	**Zerenda**	**10.23**	**272**	⇑Pn	Pn	07 44 18.3	-3.0
ZRNK	1.2nm,0.5s						

IDC 05 07:52:35.4±6.0, 5°.24S×152°.88E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/16, mbtmp3.5/3, Error ellipse: s-maj=104.6km s-min=75.7km az=175.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.21**	**229**	P	P	07 57 45.7	+1.4
WRA	1.1nm,0.5s,baz=53,slow=10,SNR=24						
ASAR	**Alice Springs**	**25.88**	**223**	P	P	07 58 09.1	0.0
ASAR	0.2nm,0.4s,baz=56,slow=9.1,SNR=4.8						
STKA	**Stephens Creek**	**28.53**	**200**	P	P	07 58 31.6	-1.2
STKA	0.7nm,0.7s,baz=23,slow=13,SNR=2.9						

NIED ***05*** *08:04:00, 37°.50N×142°.70E, h8km, Mw4.2 Best double couple: M₀2.63000×10¹⁵ NP1:φ₀205.00000°, δ83.00000°, λ161.00000°. NP2:φ₀297.00000°, δ71.00000°, λ7.00000°.*
ISCJB ***05*** *08:04:25.7±1.6, 37°.51N±0°.04×142°.81E±0°.05, h9km±11km, mb3.8/12, MS3.6/5, Error ellipse: s-maj=7.2km s-min=6.3km az=38.4*
IDC ***05*** *08:04:25.8±0.6, 37°.44N×142°.88E, h0km, mb3.8/12, mb1 4.0/17, mb1mx4.0/26, mbtmp3.9/17, ML3.8/5, MS3.4/8, Ms1 3.5/8, ms1mx3.2/26, Error ellipse: s-maj=17.3km s-min=15.2km az=107.0*
JMA ***05*** *08:04:26.6±0.2, 37°.52N×142°.71E, h14km±3km, M4.4*
ISC 05 08:04:27.0±1.9, 37°.53N±0°.04×142.74E±0°.06, h7km±12km, n36, σ1§16/41, mb3.8/12, MS3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.44**	**310**	P	**Pn**	**08 04 51.9**	**-1.5**
JIO				S	**Sn**	**08 05 10.7**	**-1.8**
JFK	**Kawauchi**	**1.50**	**264**	P	**Pn**	**08 04 53.0**	**-1.2**
JMM	**Marumori**	**1.58**	**283**	P	**Pn**	**08 04 54.0**	**-1.4**
ONAJ	**Iwakimizuishiy**	**1.61**	**255**	P	**Pn**	**08 04 54.4**	**-1.4**
ONAJ				S	**Sn**	**08 05 15.7**	**-1.0**
JOU	**Okura**	**1.84**	**298**	P	**Pn**	**08 04 58.8**	**-0.2**
JOU				S	**Sn**	**08 05 22.8**	**+0.3**
JMK	**Ichinoseki**	**1.86**	**320**	P	**Pn**	**08 04 58.5**	**-0.7**
JFT	**Otama**	**1.91**	**270**	P	**Pn**	**08 04 59.7**	**-0.3**
JOM	**Ohasama**	**2.25**	**330**	P	**Pn**	**08 05 04.6**	**0.0**
JYK	**Kaneyama**	**2.33**	**307**	P	**Pn**	**08 05 06.0**	**+0.3**
JAG	**Ashikaga**	**2.86**	**248**	P	**Pn**	**08 05 13.0**	**+0.1**
JAW	**Awa shima**	**2.91**	**290**	P	**Pn**	**08 05 16.3**	**+2.6**
JANG	**Nango**	**3.00**	**342**	P	**Pn**	**08 05 14.1**	**-0.7**
BSO1	**Boso 1**	**3.21**	**207**	P	**Pn**	**08 05 17.5**	**-0.3**
BSO1				S	**Sn**	**08 05 55.2**	**-1.0**
JRY	**Ryogami san**	**3.43**	**245**	P	**Pn**	**08 05 20.9**	**0.0**
MJAR	**Matsushiro Arr**	**3.76**	**256**	Pn	**Pn**	**08 05 27.1**	**+1.7**
MJAR	5.1nm,0.3s,baz=30,slow=26,SNR=26						
				Sn	**Sn**	**08 06 12.8**	**+3.0**
MJAR	3.2nm,0.3s,baz=83,slow=18,SNR=4.5						
				LR	LR	08 07 12.5	
MJAR	comp=Z,839nm,19.5s,baz=65,slow=44						
MAT	**Matsushiro**	**3.76**	**256**	P	**Pn**	**08 05 26.9**	**+1.5**
MAT				S	**Sn**	**08 06 12.3**	**+2.4**
JHJ	**Hachijo jima 2**	**5.02**	**210**	Pn	**Pn**	**08 05 43.4**	**+0.7**
JHJ	27nm,0.3s,baz=78,slow=17,SNR=12						
				Sn	**Sn**	**08 06 36.8**	**-4.2**
JHJ	26nm,0.3s,baz=60,slow=20,SNR=5.3						
ASAJ	**Asahikawa**	**6.58**	**359**	Pn	**Pn**	**08 06 05.0**	**+1.0**
ASAJ	1.0nm,0.3s,baz=221,slow=12,SNR=4.3						
				Sn	**Sn**	**08 07 17.2**	**-2.1**
ASAJ	0.2nm,0.3s,baz=357,slow=19,SNR=2.5						
CBIJ	**Chichi jima**	**10.42**	**183**	Pn	**Pn**	**08 06 54.0**	**-2.8**
CBIJ	7.2nm,0.3s,baz=277,slow=20,SNR=16						
				Sn	**Sn**	**08 08 41.0**	**-13**
CBIJ	3.4nm,0.3s,baz=288,slow=20,SNR=2.7						
KSRS	**Korea Array**	**11.78**	**274**	Pn	**Pn**	**08 07 18.7**	**+3.4**
KSRS	0.2nm,0.3s,baz=88,slow=14,SNR=4.3						
				LR	LR	08 11 35.3	
KSRS	comp=Z,73nm,19.6s,baz=335,slow=36						
PETK	**Petropavlovsk-**	**18.73**	**29**	LR	LR	08 15 26.9	
PETK	comp=Z,56nm,19.9s,baz=29,slow=35						
SONM	**Songino Array**	**28.40**	**303**	P	**P**	**08 10 22.7**	**+0.9**
SONM	0.7nm,0.6s,mb3.5,baz=99,slow=9.2,SNR=3.6						
ZALV	**Zalesovo Beam**	**42.37**	**312**	P	**P**	**08 12 22.3**	**+0.8**
ZALV	1.2nm,0.3s,mb4.0,baz=106,slow=11,SNR=1.8						
				LR	LR	08 31 03.9	
ZALV	comp=Z,21nm,18.7s,MS3.1,baz=117,slow=38						
MKAR	**Makanchi Array**	**44.76**	**302**	P	**P**	**08 12 41.8**	**+0.9**
MKAR	0.9nm,0.7s,mb3.7,baz=92,slow=9.7,SNR=4.3						
				LR	LR	08 33 12.0	
MKAR	comp=Z,19nm,18.2s,MS3.1,baz=35,slow=38						
KURK	**Kurchatov**	**46.46**	**308**	P	**P**	**08 12 54.7**	**+0.4**
KURK	2.2nm,0.7s,mb4.2,baz=82,slow=7.9,SNR=8.2						
ILAR	**Eielson Array**	**48.51**	**33**	P	**P**	**08 13 10.4**	**+0.4**
ILAR	0.4nm,0.6s,mb3.6,baz=262,slow=5.9,SNR=8.2						
WRA	**Warramunga Arr**	**57.71**	**189**	P	**P**	**08 14 17.4**	**-0.9**
WRA	4.0nm,0.8s,mb4.5,baz=8.1,slow=7.2,SNR=28						
ASAR	**Alice Springs**	**61.44**	**189**	P	**P**	**08 14 43.7**	**-0.2**
ASAR	1.3nm,0.8s,mb4.1,baz=11,slow=6.3,SNR=14						
ARCES	**ARCESS Array B**	**63.90**	**340**	LR	LR	08 49 20.1	
ARCES	comp=Z,59nm,18.2s,MS3.8,baz=291,slow=42						
FINES	**FINESS Array B**	**68.87**	**333**	P	**P**	**08 15 32.4**	**+0.6**
FINES	2.3nm,0.8s,mb4.2,baz=57,slow=10,SNR=3.6						
STKA	**Stephens Creek**	**69.06**	**181**	LR	LR	08 47 04.5	
STKA	comp=Z,117nm,19.2s,MS4.1,baz=204,slow=37						
NVAR	**Mina Array Bea**	**73.84**	**54**	P	**P**	**08 16 03.0**	**+0.6**
NVAR	0.1nm,0.3s,mb3.2,baz=274,slow=4.4,SNR=2.7						
NOA	**NORSAR Array B**	**74.13**	**338**	P	**P**	**08 16 04.7**	**+1.1**
NOA	0.5nm,0.6s,mb3.6,baz=38,slow=5.7,SNR=2.1						
				LR	LR	08 56 05.4	
NOA	comp=Z,37nm,18.3s,MS3.7,baz=185,slow=42						
PDAR	**Pinedale Array**	**76.56**	**46**	P	**P**	**08 16 17.8**	**-0.1**
PDAR	0.2nm,0.6s,mb3.2,baz=260,slow=2.6,SNR=2.8						
TXAR	**Lajitas Array**	**88.98**	**53**	P	**P**	**08 17 23.2**	**+0.6**
TXAR	0.2nm,0.6s,mb3.6,baz=249,slow=2.5,SNR=2.9						
PLCA	**Paso Flores**	**154.06**	**107**	PKPab	PKPab	08 24 38.6	-2.2
PLCA	2.6nm,1.0s,baz=236,slow=3.6,SNR=3.1						

NEIC ***05*** *08:21:57.5, 16°.08N×97°.56W, h15km, MD3.9(MEX), After MEX.*
MEX 05 08:21:57.5±0.5, 16°.08N×97°.56W, h15km±5km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.62**	**300**	*i* P	Pg	08 22 07.8	-2.0
PNIG				*i* S	Sg	08 22 16.0	-2.1
PNIG	**Pinotepa**	**0.62**	**300**	*i* P	Pg	08 22 07.8	-2.0
PNIG				*i* S	Sg	08 22 16.0	-2.1
VHO	**Vista Hermosa**	**1.27**	**39**	*i* P	Pn	08 22 17.1	-3.6
VHO				*i* S	Sb	08 22 32.2	-5.0
VHO	**Vista Hermosa**	**1.27**	**39**	*i* P	Pn	08 22 17.1	-3.6
VHO				*i* S	Sb	08 22 32.2	-5.0
OXX	**Oaxaca**	**1.28**	**39**	*i* P	Pn	08 22 17.1	-3.7
OXX				*i* S	Sb	08 22 32.8	-4.7
OXX	**Oaxaca**	**1.28**	**39**	*i* P	Pn	08 22 17.1	-3.7
OXX				*i* S	Sb	08 22 32.8	-4.7
HUIG	**Huatulco**	**1.43**	**102**	*i* P	Pn	08 22 19.5	-3.5
HUIG				*i* S	Sn	08 22 36.8	-4.7
HUIG	**Huatulco**	**1.43**	**102**	*i* P	Pn	08 22 19.5	-3.5
HUIG				*i* S	Sn	08 22 36.8	-4.7
UTMO	**Huajuapan**	**1.75**	**352**	*i* P	Pn	08 22 24.6	-2.8
UTMO				*i* S	Sn	08 22 45.1	-4.3
TPIG	**Tehuac#an**	**2.33**	**5**	*e* P	Pn	08 22 32.9	-2.4
TPIG				*i* S	Sn	08 22 59.4	-4.3
ACX	**Acapulco**	**2.34**	**290**	*i* P	Pn	08 22 33.2	-2.2
ACX				*i* S	Sn	08 23 01.4	-2.4
ACX	**Acapulco**	**2.34**	**290**	*i* P	Pn	08 22 33.2	-2.2
ACX				*i* S	Sn	08 23 01.4	-2.4
MEIG	**Mezcala**	**2.69**	**313**	*e* P	Pn	08 22 37.4	-2.8
MEIG				*i* S	Sn	08 23 09.7	-2.9
CAIG	**El Cayaco**	**2.77**	**291**	*i* P	Pn	08 22 38.7	-2.6
CAIG				*i* S	Sn	08 23 08.2	-6.3
CAIG	**El Cayaco**	**2.77**	**291**	*i* P	Pn	08 22 38.7	-2.6
CAIG				*i* S	Sn	08 23 08.2	-6.3
PLIG	**Platanillo**	**2.95**	**321**	*e* P	Pn	08 22 41.2	-2.7
PLIG				*i* S	Sn	08 23 16.4	-2.6
PLIG	**Platanillo**	**2.95**	**321**	*e* P	Pn	08 22 41.2	-2.7
PLIG				*i* S	Sn	08 23 16.4	-2.6
PPM	**Popocatepetl**	**3.14**	**341**	*i* P	Pn	08 22 44.5	-1.9
PPM				*i* S	Sn	08 23 21.4	-2.2
PPM	**Popocatepetl**	**3.14**	**341**	*i* P	Pn	08 22 44.5	-1.9
PPM				*i* S	Sn	08 23 21.4	-2.2
MZVM		**3.48**	**333**	*e* P	Pn	08 22 48.1	-3.0
MZVM				*i* S	Sn	08 23 29.8	-2.1
PBVM	**Pinon**	**3.64**	**337**	*e* P	Pn	08 22 50.8	-2.6
PBVM				*i* S	Sn	08 23 33.3	-2.7
PBVM	**Pinon**	**3.64**	**337**	*e* P	Pn	08 22 50.8	-2.6
PBVM				*i* S	Sn	08 23 33.3	-2.7
SZVM	**Salazar**	**3.66**	**332**	*e* P	Pn	08 22 51.0	-2.6
SZVM				*i* S	Sn	08 23 34.9	-1.6
SZVM	**Salazar**	**3.66**	**332**	*e* P	Pn	08 22 51.0	-2.6
SZVM				*i* S	Sn	08 23 34.9	-1.6
IIO	**Organos**	**3.66**	**343**	*e* P	Pn	08 22 52.0	-1.6
IIO				*i* S	Sn	08 23 34.3	-2.3
IIO	**Organos**	**3.66**	**343**	*e* P	Pn	08 22 52.0	-1.6
IIO				*i* S	Sn	08 23 34.3	-2.3
PTVM	**Pico Tres Padr**	**3.79**	**337**	*e* P	Pn	08 22 52.2	-3.2
PTVM				*i* S	Sn	08 23 37.7	-2.0
PTVM	**Pico Tres Padr**	**3.79**	**337**	*e* P	Pn	08 22 52.2	-3.2
PTVM				*i* S	Sn	08 23 37.7	-2.0
ZIIG	**Zihuatanejo**	**4.03**	**293**	*e* P	Pn	08 22 53.0	-5.8
ZIIG				*i* S	Sn	08 23 41.4	-4.4
ZIIG	**Zihuatanejo**	**4.03**	**293**	*e* P	Pn	08 22 53.0	-5.8
ZIIG				*i* S	Sn	08 23 41.4	-4.4

ISCJB ***05*** *08:24:12.6±0.5, 26°.36N±0°.04×101°.96E±0°.06, h10km, mb4.0/13, Error ellipse: s-maj=7.8km s-min=5.9km az=172.2*
IDC ***05*** *08:24:13.2±0.7, 26°.31N×101°.92E, h0km, mb4.0/12, mb1 4.1/13, mb1mx4.0/23, mbtmp4.0/13, Error ellipse: s-maj=28.9km s-min=13.8km az=68.0*
BJI ***05*** *08:24:15.0, 26°.23N×101°.98E, h16km, mb4.4/4, ML3.7/14*
ISC 05 08:24:14.9±0.5, 26°.35N±0°.04×101°.94E±0°.06, h10km, n23, σ1§14/28, mb4.0/13, 1C, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.42**	**149**	Pg	**Pn**	**08 24 38.1**	**-2.7**
KMI				Sg	**Sn**	**08 24 55.1**	**-4.4**
KMI				smax			
	comp=N,1μm,0.9s						
KMI				smax			
	comp=E,680nm,0.7s						
GYA	**Guiyang**	**4.24**	**87**	Pn	**Pn**	**08 25 20.8**	**+1.2**
GYA				Sn	**Sn**	**08 26 09.7**	**+0.5**
GYA				Sg	**Sg**	**08 26 22.1**	**-9.0**
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,50nm,0.8s						
CD2	**Chengdu**	**4.82**	**19**	Pn	**Pn**	**08 25 31.5**	**+4.0**
CD2				Pg	**Pg**	**08 25 44.3**	**-3.0**
CD2				Sn	**Sn**	**08 26 29.2**	**+5.8**
CD2				Sg	**Sg**	**08 26 49.8**	**+0.1**
CD2				smax			
	comp=N,220nm,1.2s						
CD2				smax			
	comp=E,290nm,1.0s						
CHRT	**Chiangrai**	**6.75**	**198**	⇑P	**Pb**	**08 26 16.0**	**+3.7**
	comp=E,105nm,1.0s						
CHG	**Chiang Mai**	**7.99**	**201**	P	Px	08 26 42.3	
CMAR	**Chiang Mai Arr**	**8.33**	**200**	Pn	**Pn**	**08 26 16.3**	**+0.5**
	baz=14,slow=12,SNR=8.6						
CMAR				Pg	Pn	08 26 48.5	+33
	comp=E,0.6nm,0.3s,baz=358,slow=16,SNR=17						
CMAR				Lg		08 28 36.9	
	comp=E,0.2nm,0.3s,baz=15,slow=29,SNR=6.7						
XAN	**Xi'an**	**9.76**	**37**	P	**Pn**	**08 26 38.8**	**+3.5**
XAN				pP		08 26 42.1	
XAN				S	**Sn**	**08 28 24.1**	**-0.9**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LZH	**Lanzhou**	**9.84**	**9**	*e* P	**Pn**	**08 26 36.5**	**0.0**
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
SONM	**Songino Array**	**21.73**	**8**	P	**P**	**08 29 06.9**	**+0.6**
	comp=Z,7.8nm,0.7s,mb4.2,baz=194,slow=12,SNR=32						
KSRS	**Korea Array**	**24.61**	**57**	P	**P**	**08 29 41.1**	**+5.8**
	comp=Z,0.4nm,0.4s,mb3.3,baz=247,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**25.66**	**328**	P	**P**	**08 29 46.1**	**+1.2**
	comp=Z,4.4nm,0.7s,mb4.1,baz=138,slow=11,SNR=36						
KURK	**Kurchatov**	**30.16**	**330**	P	**P**	**08 30 25.0**	**0.0**
	comp=Z,1.4nm,0.5s,mb3.9,baz=148,slow=7.6,SNR=9.1						
BVAR	**Borovoye Array**	**35.54**	**327**	P	**P**	**08 31 12.7**	**+0.7**
	comp=Z,1.0nm,0.4s,mb4.1,baz=126,slow=9.3,SNR=5.2						
WRA	**Warramunga Arr**	**55.73**	**142**	P	**P**	**08 33 50.7**	**-1.3**
	comp=Z,3.2nm,0.5s,mb4.6,baz=332,slow=8.2,SNR=34						
BRTR	**Keskin Array B**	**57.53**	**302**	P	**P**	**08 34 04.2**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.8,baz=112,slow=6.2,SNR=3.3						
ASAR	**Alice Springs**	**58.55**	**145**	P	**P**	**08 34 11.4**	**-0.4**
	comp=Z,1.7nm,0.8s,mb4.1,baz=332,slow=6.8,SNR=15						
FINES	**FINESS Array B**	**60.50**	**328**	P	**P**	**08 34 24.4**	**-0.4**
	comp=Z,6.7nm,1.0s,mb4.6,baz=148,slow=11,SNR=6.0						
ARCES	**ARCESS Array B**	**60.84**	**337**	P	**P**	**08 34 26.4**	**-0.6**
	comp=Z,2.1nm,0.9s,mb4.3,baz=67,slow=9.3,SNR=4.5						
NB2	**NORSAR Subarra**	**67.66**	**328**	P	**P**	**08 35 10.4**	**-1.5**
	comp=Z,0.8nm,0.5s,mb4.0,baz=76,slow=6.5						
NOA	**NORSAR Array B**	**67.66**	**328**	P	**P**	**08 35 10.7**	**-1.2**
	comp=Z,1.2nm,0.7s,mb4.1,baz=76,slow=6.3,SNR=4.4						
STKA	**Stephens Creek**	**69.16**	**144**	P	**P**	**08 35 23.1**	**+1.5**
	comp=Z,1.1nm,0.9s,mb3.8,baz=329,slow=5.8,SNR=3.0						
ILAR	**Eielson Array**	**74.94**	**24**	P	**P**	**08 35 56.6**	**+0.8**
	comp=Z,0.1nm,0.4s,mb3.1,baz=291,slow=4.6,SNR=6.0						
ROSC	**El Rosal**	**148.77**	**353**	PKPbc	PKPbc	08 44 03.4	-0.1
	comp=Z,2.0nm,0.4s,baz=102,slow=21,SNR=4.6						

ATH ***05*** *09:01:26.0, 36°.76N×20°.98E, h22km±1km, MD3.1/6*
ISCJB ***05*** *09:01:33.1±1.7, 36°.68N±0°.08×21°.5E±0°.1, h26km±8km, Error ellipse: s-maj=16.5km s-min=12.8km az=170.0*
CSEM ***05*** *09:01:33.5±0.6, 36°.74N×21°.58E, h15km, ML2.3/2, Error ellipse: s-maj=13.8km s-min=10.3km az=62.0*
THE ***05*** *09:01:34.6, 36°.69N×21°.60E, h24km±2km, ML2.3/2, Error ellipse: s-maj=5.6km s-min=2.1km az=333.0*
ISC 05 09:01:33.2±1.8, 36°.67N±0°.08×21°.5E±0°.1, h23km±9km, n30, σ1§03/37, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.30**	**41**	*e*PN	**Pb**	**09 01 38.9**	**-1.1**
PYL	**PYLOS**	**0.30**	**41**	P	**Pb**	**09 01 39.6**	**-0.4**
PYL				S	**Sb**	**09 01 45.9**	**+1.3**
PYL	**PYLOS**	**0.30**	**41**	*e*Pn	**Pb**	**09 01 38.9**	**-1.1**
PYL	**PYLOS**	**0.30**	**41**	P	**Pb**	**09 01 39.6**	**-0.4**
ITM	**Ithomi**	**0.61**	**34**	*e*PN	**Pb**	**09 01 42.4**	**-2.8**
ITM				*e*SN	**Sb**	**09 01 54.8**	**+1.4**
ITM	**Ithomi**	**0.61**	**34**	P	**Pb**	**09 01 44.5**	**-0.7**
ITM	**Ithomi**	**0.61**	**34**	*e*Pn	**Pb**	**09 01 42.4**	**-2.8**
ITM	**Ithomi**	**0.61**	**34**	P	**Pb**	**09 01 44.5**	**-0.7**
VLX	**Vlachokerasia**	**0.99**	**45**	*e*PN	**Pb**	**09 01 50.4**	**-1.3**
VLX	**Vlachokerasia**	**0.99**	**45**	P	**Pb**	**09 01 51.5**	**-0.2**
VLX				S	**Sb**	**09 02 03.5**	**-0.8**
VLX	**Vlachokerasia**	**0.99**	**45**	*e*Pn	**Pb**	**09 01 50.4**	**-1.3**
VLX	**Vlachokerasia**	**0.99**	**45**	P	**Pb**	**09 01 51.5**	**-0.2**
VLX				S	**Sb**	**09 02 03.5**	**-0.8**
VLI	**Veliai**	**1.16**	**87**	*e*PN	**Pn**	**09 01 54.5**	**+0.5**
VLI				*e*SN	**Sn**	**09 02 16.3**	**+7.2**
VLI	**Veliai**	**1.16**	**87**	*e*Pn	**Pn**	**09 01 54.5**	**+0.5**
KYTH	**Kithira**	**1.30**	**107**	*e*PN	**Pn**	**09 01 56.8**	**+0.9**
KYTH	**Kithira**	**1.30**	**107**	*e*Pn	**Pn**	**09 01 56.8**	**+0.9**
GUR	**Goura**	**1.43**	**28**	*e*PN	**Pn**	**09 01 55.4**	**-2.4**
GUR	**Goura**	**1.43**	**28**	P	**Pn**	**09 01 58.3**	**+0.6**
GUR				S	**Sn**	**09 02 15.9**	**+0.1**
GUR	**Goura**	**1.43**	**28**	*e*Pn	**Pn**	**09 01 55.4**	**-2.4**
GUR	**Goura**	**1.43**	**28**	P	**Pn**	**09 01 58.3**	**+0.6**
GUR				S	**Sn**	**09 02 15.9**	**+0.1**
KFL	**Anninata**	**1.54**	**339**	P	**Pn**	**09 02 00.0**	**+0.7**
KFL	**Anninata**	**1.54**	**339**	P	**Pn**	**09 02 00.0**	**+0.7**
DID	**Didima**	**1.62**	**59**	*e*PN	**Pn**	**09 02 00.3**	**-0.1**
DID	**Didima**	**1.62**	**59**	P	**Pn**	**09 02 00.6**	**+0.2**
DID	**Didima**	**1.62**	**59**	*e*Pn	**Pn**	**09 02 00.3**	**-0.1**
DID	**Didima**	**1.62**	**59**	P	**Pn**	**09 02 00.6**	**+0.2**
TRIZ	**Trizonia**	**1.75**	**15**	P	**Pn**	**09 02 02.9**	**+0.7**
TRIZ	**Trizonia**	**1.75**	**15**	P	**Pn**	**09 02 02.9**	**+0.7**
LTK	**Loutraki**	**1.79**	**41**	*e*PN	**Pn**	**09 02 01.1**	**-1.5**
LTK	**Loutraki**	**1.79**	**41**	*e*Pn	**Pn**	**09 02 01.1**	**-1.5**

WEL 05 09:01:47.3±0.2, 40°.24S×173°.99E, h145km±2km, ML3.8/19, Error ellipse: s-maj=1.2km s-min=0.6km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.57**	**185**	PN	Pn	09 02 08.3	0.0
DUWZ				SN	Sn	09 02 23.1	-1.3
WAZ	**Wanganui**	**0.90**	**58**	PN	Pn	09 02 11.3	+0.7
WAZ				SN	Sn	09 02 28.6	+0.1
DFE	**Dawson Falls**	**0.91**	**5**	PN	Pn	09 02 10.9	0.0
KIW	**Kapiti Island**	**0.94**	**132**	PN	Pn	09 02 11.0	0.0
KIW				SN	Sn	09 02 26.6	-2.4
NWEZ	**Newall Road**	**0.97**	**354**	PN	Pn	09 02 11.3	0.0
NWEZ				SN	Sn	09 02 29.0	-0.4
NEZ	**North Egmont**	**0.97**	**5**	PN	Pn	09 02 11.3	0.0
TCW	**Tory Channel**	**1.00**	**168**	PN	Pn	09 02 11.7	+0.3
RAEZ	**Rainy Point**	**1.00**	**18**	PN	Pn	09 02 11.6	+0.1
RAEZ				SN	Sn	09 02 30.1	+0.2
PKE	**Pukeiti**	**1.04**	**360**	PN	Pn	09 02 11.7	-0.2
PKE				SN	Sn	09 02 29.7	-0.9
DREZ	**Durham Road**	**1.06**	**9**	PN	Pn	09 02 12.0	-0.1
OGWZ	**Otaki Gorge**	**1.07**	**123**	PN	Pn	09 02 12.3	+0.2
NNZ	**Nelson**	**1.08**	**205**	PN	Pn	09 02 12.1	-0.1
MHEZ	**Mangahewa**	**1.19**	**12**	PN	Pn	09 02 13.4	+0.1
TUWZ	**Tuamarina**	**1.19**	**182**	PN	Pn	09 02 13.1	-0.2
CAW	**Cannon Point**	**1.19**	**137**	PN	Pn	09 02 13.4	+0.2
SNZO	**South Karori**	**1.20**	**153**	PN	Pn	09 02 13.4	0.0
WEL	**Wellington**	**1.20**	**151**	PN	Pn	09 02 13.5	+0.1
WEL				SN	Sn	09 02 31.4	-1.9
VRZ	**Vera Road**	**1.26**	**28**	PN	Pn	09 02 13.6	-0.3
QRZ	**Quartz Range**	**1.26**	**242**	PN	Pn

CTA	**Charters Tower**	**33.35 283**	P	**P**	**09 14 08.7**	**+0.2**
CTA			LR	LR	09 26 15.9	
CTAO	**Charters Tower**	**33.35 283**	*e*P	**P**	**09 14 09.2**	**+0.7**
	5.8nm,0.8s,mb4.5					
ASAR	**Alice Springs**	**42.18 270**	P	**P**	**09 15 22.6**	**-0.2**
	1.2nm,0.5s,mb3.9,baz=106,slow=7.1,SNR=31					
WRA	**Warramunga Arr**	**43.36 275**	P	**P**	**09 15 31.5**	**-0.8**
	2.2nm,0.4s,mb4.2,baz=113,slow=7.9,SNR=62					
FITZ	**Fitzroy Crossi**	**51.53 272**	P	**P**	**09 16 35.0**	**-0.7**
	1.0nm,0.9s,mb3.9,baz=135,slow=4.3,SNR=1.7					
QSPA	**South Pole Qui**	**57.63 180**	P	**P**	**09 17 19.7**	**+0.8**
	0.4nm,0.6s,mb3.6,baz=17,slow=2.8,SNR=8.6					
FINES	**FINESS Array B**	**146.78 338**	PKPbc	PKPbc	09 27 01.9	-7.5
	3.1nm,0.7s,baz=54,slow=3.6,SNR=5.7					
BRTR	**Keskin Array B**	**152.76 295**	PKPbc	PKPbc	09 27 20.5	-4.3
	0.6nm,0.4s,baz=110,slow=3.6,SNR=4.6					
BRTR			PKPab	PKPab	09 27 32.4	-3.7
	0.4nm,0.3s,baz=95,slow=2.9,SNR=5.6					

ATH ***05*** *09:08:54.6, 39.°91N×24.°01E, h37km±3km, MD3.0/4*
ISCJB ***05*** *09:08:57.3±0.6, 39.°95N±0.°02×23.°83E±0.°05, h5km±7km, Error ellipse: s-maj=6.5km s-min=4.1km az=0.1*
CSEM ***05*** *09:08:57.4±0.3, 39.°95N×23.°83E, h15km, ML2.2/9, Error ellipse: s-maj=7.2km s-min=4.6km az=91.0*
THE ***05*** *09:08:57.9, 39.°97N×23.°84E, h6km±2km, ML2.2/9, Error ellipse: s-maj=2.5km s-min=0.9km az=209.0*

ISC 05 09:08:57.7±0.6, 39.°95N±0.°03×23.°84E±0.°05, h10km±5km, n27, σ0.°82/50, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.12 258**		P	**Pg**	**09 09 01.2**	**+0.5**
PAIG				S	**Sg**	**09 09 03.2**	**+0.5**
PAIG	**Paliouri**	**0.12 258**		P	**Pg**	**09 09 01.2**	**+0.5**
PAIG				S	**Sg**	**09 09 03.2**	**+0.5**
OUR	**Ouranopolis**	**0.40**	**16**	P	**Pg**	**09 09 06.0**	**+0.5**
OUR				S	**Sg**	**09 09 11.6**	**+0.8**
OUR	**Ouranopolis**	**0.40**	**16**	P	**Pg**	**09 09 06.0**	**+0.5**
OUR				S	**Sg**	**09 09 11.6**	**+0.8**
PLG	**Polygyros**	**0.52 325**	*e*PN	**Pg**	**Pg**	**09 09 07.0**	**-0.8**
PLG	**Polygyros**	**0.52 325**	P	**Pg**	**Pg**	**09 09 07.1**	**-0.7**
PLG				S	**Sg**	**09 09 13.8**	**-0.8**
PLG	**Polygyros**	**0.52 325**	P	**Pg**	**Pg**	**09 09 07.1**	**-0.7**
PLG				S	**Sg**	**09 09 13.8**	**-0.8**
AOS	**Alonnisos**	**0.78 178**	P	**Pg**	**Pg**	**09 09 12.9**	**+0.1**
AOS				S	**Sg**	**09 09 24.2**	**+1.2**
AOS	**Alonnisos**	**0.78 178**	P	**Pg**	**Pg**	**09 09 12.9**	**+0.1**
AOS				S	**Sg**	**09 09 24.2**	**+1.2**
NEO	**Neokhori**	**0.80 217**	*e*PN	**Pg**	**Pg**	**09 09 11.2**	**-1.9**
NEO			*e*SN	**Sg**	**Sg**	**09 09 23.5**	**-0.1**
NEO	**Neokhori**	**0.80 217**	*e*Pn	**Pg**	**Pg**	**09 09 11.2**	**-1.9**
NEO			*e*Sn	**Sg**	**Sg**	**09 09 23.5**	**-0.1**
HORT	**Hortiatis**	**0.86 319**	P	**Pg**	**Pg**	**09 09 13.4**	**-0.8**
HORT				S	**Sg**	**09 09 26.4**	**+1.0**
HORT	**Hortiatis**	**0.86 319**	P	**Pg**	**Pg**	**09 09 13.4**	**-0.8**
HORT				S	**Sg**	**09 09 26.4**	**+1.0**
SOH	**Sokhos**	**0.94 337**	*e*PN	**Pg**	**Pg**	**09 09 14.6**	**-1.3**
SOH	**Sokhos**	**0.94 337**	P	**Pg**	**Pg**	**09 09 15.6**	**-0.3**
SOH				S	**Sg**	**09 09 27.8**	**-0.4**
SOH	**Sokhos**	**0.94 337**	*e*Pn	**Pg**	**Pg**	**09 09 14.6**	**-1.3**
SOH	**Sokhos**	**0.94 337**	P	**Pg**	**Pg**	**09 09 15.6**	**-0.3**
SOH				S	**Sg**	**09 09 27.8**	**-0.4**
LIT	**Litokhoron**	**1.05 279**	*e*PN	**Pg**	**Pg**	**09 09 16.4**	**-1.4**
LIT			*e*SN	**Sg**	**Sg**	**09 09 32.2**	**+0.8**
LIT	**Litokhoron**	**1.05 279**	P	**Pg**	**Pg**	**09 09 18.1**	**+0.3**
LIT				S	**Sg**	**09 09 32.2**	**+0.8**
LIT	**Litokhoron**	**1.05 279**	*e*Pn	**Pg**	**Pg**	**09 09 16.4**	**-1.4**
LIT	**Litokhoron**	**1.05 279**	P	**Pg**	**Pg**	**09 09 18.1**	**+0.3**
LIT				S	**Sg**	**09 09 32.2**	**+0.8**
KAVA	**Kavala**	**1.16**	**26**	P	**Pb**	**09 09 18.7**	**-1.2**
KAVA				S	**Sb**	**09 09 35.1**	**+0.1**
KAVA	**Kavala**	**1.16**	**26**	P	**Pb**	**09 09 18.7**	**-1.2**
KAVA				S	**Sb**	**09 09 35.1**	**+0.1**
SRS	**Serrai**	**1.18 351**		P	**Pb**	**09 09 20.0**	**-0.1**
SRS				S	**Sb**	**09 09 36.4**	**+1.0**
SRS	**Serrai**	**1.18 351**		P	**Pb**	**09 09 20.0**	**-0.1**
SRS				S	**Sb**	**09 09 36.4**	**+1.0**
KNT	**Kendrikon**	**1.40 330**		P	**Pn**	**09 09 23.1**	**-0.2**
KNT				S	**Sn**	**09 09 42.7**	**+0.8**
KNT	**Kendrikon**	**1.40 330**		P	**Pn**	**09 09 23.1**	**-0.2**
KNT				S	**Sn**	**09 09 42.7**	**+0.8**

IDC ***05*** *09:14:45.1±1.4, 7.°38S×150.°07E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.8/16, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=51.6km s-min=22.8km az=117.0*
ISCJB ***05*** *09:14:56.1±5.2, 7.°5S±0.°2×149.°3E±0.°3, h61km±35km, mb3.7/6, Error ellipse: s-maj=58.3km s-min=36.7km az=170.3*
NEIC ***05*** *09:14:56.0±4.3, 7.°49S×149.°39E, h51km±30km, mb3.8/1, Error ellipse: s-maj=42.9km s-min=25.7km az=79.0*

ISC 05 09:14:57.0±5.5, 7.°5S±0.°2×149.°3E±0.°4, h56km±37km, n10, σ0.°37/10, mb3.7/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.83 228**	*e*Pn	**Pn**	**09 15 40.0**	**+0.1**
WRA	**Warramunga Arr**	**19.05 228**	P	**Pn**	**09 19 16.0**	**-0.1**
	0.2nm,0.3s,baz=56,slow=11,SNR=11					
ASAR	**Alice Springs**	**21.82 221**	P	**P**	**09 19 44.6**	**-0.1**
	0.5nm,0.4s,mb3.3,baz=52,slow=9.4,SNR=13					
STKA	**Stephens Creek**	**25.28 196**	P	**P**	**09 20 17.7**	**-0.5**
	1.2nm,0.7s,mb3.5,baz=18,slow=10,SNR=2.6					
FITZ	**Fitzroy Crossi**	**25.33 243**	P	**P**	**09 20 19.6**	**+0.8**
	1.1nm,0.6s,mb3.6,baz=70,slow=7.6,SNR=2.3					
FITZ	**Fitzroy Crossi**	**25.33 243**	*e*P	**P**	**09 20 18.8**	**0.0**
	1.8nm,0.6s,mb3.8					
FITZ			P		09 20 19.6	
MKAR	**Makanchi Array**	**80.12 320**	P	**P**	**09 27 00.8**	**-0.3**
	0.2nm,0.5s,mb3.3,baz=123,slow=5.3,SNR=2.5					
QSPA	**South Pole Qui**	**82.46 180**	P	**P**	**09 27 13.5**	**+0.5**
	1.4nm,0.7s,mb4.0,baz=63,slow=2.3,SNR=8.5					
QSPA	**South Pole Qui**	**82.46 180**	P	**P**	**09 27 13.5**	**+0.5**
ILAR	**Eielson Array**	**85.98**	**23**	P	**P**	**09 27 23.7**	**-7.2**
	1.4nm,0.8s,mb4.2,baz=253,slow=5.3,SNR=13					

NNC 05 09:18:33.8±2.1, 37.°49N×70.°22E, h0km, mb3.6, mpv3.7, 5D, Error ellipse: s-maj=17.3km s-min=13.9km az=175.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.61**	**2**	Pn	Pn	09 20 01.2	+2.8
	2.4nm,0.3s,baz=179,slow=12,SNR=44						
KK31				⇓Sn	Sn	09 21 10.3	+6.7
	2.8nm,0.4s,baz=184,slow=23,SNR=10						
TKM2	**Tokmak 2**	**6.81**	**35**	⇓Pn	Pn	09 20 14.7	-0.1
	3.1nm,0.5s						
TKM2				⇓Sn	Sn	09 21 34.6	+1.6
	4.7nm,0.8s						
AB31	**Akbulak array**	**13.92 331**		Pn	Pn	09 21 52.8	+0.7
	0.2nm,0.3s,baz=172,slow=7.8,SNR=13						
AB31				Sn	Sn	09 24 29.5	+2.2
	0.8nm,0.6s,baz=152,slow=22,SNR=4.8						
AKTO	**Aktyubinsk**	**15.61 330**		⇓Pn	Pn	09 22 15.3	+0.3
	0.2nm,0.6s						
AKTO				⇓Sn	Sn	09 25 07.0	-1.5
	0.1nm,0.3s						

BUC 05 09:27:31.1±0.5, 46.°06N×25.°78E, h70km, MD2.8/3, 8C, Error ellipse: s-maj=7.7km s-min=2.9km az=337.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.58 168**		⇑*i*P	Pn	09 27 45.1	+0.4
MLR				*i* S	Sn	09 27 55.2	+0.5
MLR	**Muntele Rosu**	**0.58 168**		⇑*i*P	Pn	09 27 45.1	+0.4
MLR	**Muntele Rosu**	**0.58 168**		S	Sn	09 27 55.2	+0.5
PLOR	**Plostina**	**0.65 108**		⇑*i*P	Pn	09 27 45.8	+0.5
PLOR				*i* S	Sn	09 27 56.1	+0.2
PLOR	**Plostina**	**0.65 108**		⇑*i*P	Pn	09 27 45.8	+0.5
PLOR	**Plostina**	**0.65 108**		S	Sn	09 27 56.1	+0.2
VRI	**Vrincioaia**	**0.69 106**		⇑*i*P	Pn	09 27 46.4	+0.5
VRI				*i* S	Sn	09 27 57.5	+0.7
VRI	**Vrincioaia**	**0.69 106**		⇑*i*P	Pn	09 27 46.4	+0.5
VRI	**Vrincioaia**	**0.69 106**		S	Sn	09 27 57.5	+0.7
VOIR		**0.80 219**		⇑*i*P	Pn	09 27 47.7	+0.5
VOIR		**0.80 219**		⇑*i*P	Pn	09 27 47.7	+0.5

IDC ***05*** *09:34:26.9±7.9, 36.°23S×177.°64E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/14, mbtmp4.0/3, MS3.4/3, Ms1 3.4/3, ms1mx3.2/16, Error ellipse: s-maj=283.4km s-min=44.5km az=37.0*
ISCJB ***05*** *09:34:30.9±0.6, 37.°79S±0.°03×176.°77E±0.°04, h14km±3km, mb3.9/3, MS3.4/3, Error ellipse: s-maj=5.8km s-min=4.6km az=32.7*
NEIC ***05*** *09:34:31.3, 37.°80S×176.°79E, h5km, ML4.2(WEL), After WEL.*
NEIC Felt [IV] at Edgecumbe, Matata, Ohope and Whakatane.
WEL ***05*** *09:34:31.3±0.1, 37.°80S×176.°79E, h5km, ML4.2/28, Error ellipse: s-maj=0.8km s-min=0.7km az=0.0*
WEL Felt from Bay of Plenty to Rotorua, maximum reported intensity MM 5.

ISC 05 09:34:31.2±0.6, 37.°80S±0.°03×176.°79E±0.°04, h13km±3km, n44, σ0.°79/45, mb3.9/3, MS3.4/3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.19 256**		PG	**Pg**	**09 34 35.3**	**-0.1**
OPRZ				SG	**Sg**	**09 34 38.5**	**+0.1**
MARZ	**Manawahe**	**0.21 205**		PG	**Pg**	**09 34 35.6**	**-0.2**
MARZ				SG	**Sg**	**09 34 38.9**	**0.0**
EDRZ	**Edgecumbe**	**0.31 187**		PG	**Pg**	**09 34 37.5**	**-0.1**
EDRZ				SG	**Sg**	**09 34 41.7**	**-0.1**
LIRZ	**Lichensteins R**	**0.38 237**		PG	**Pg**	**09 34 39.3**	**+0.5**
WIZ	**White Island**	**0.42 50**		PG	**Pg**	**09 34 39.5**	**+0.1**
TGRZ	**Tauranga**	**0.42 279**		PG	**Pg**	**09 34 39.9**	**+0.4**
MKRZ	**Makatiti**	**0.42 211**		PG	**Pg**	**09 34 40.3**	**+0.7**
OMRZ	**Omania**	**0.45 227**		PG	**Pg**	**09 34 40.4**	**+0.3**
KARZ	**Kaharoa**	**0.48 242**		PG	**Pg**	**09 34 41.2**	**+0.5**
TARZ	**Mount Tarawera**	**0.49 207**		PG	**Pg**	**09 34 41.4**	**+0.6**
URZ	**Urewera**	**0.53 151**		PG	**Pg**	**09 34 41.0**	**-0.5**
URZ	**Urewera**	**0.53 151**	*e*P		**Pg**	**09 34 41.1**	**-0.5**
URZ			*e*S		**Sg**	**09 34 49.0**	**+0.5**
RRRZ	**Republican Roa**	**0.58 202**		PG	**Pg**	**09 34 42.5**	**0.0**
UTU	**Utuhina**	**0.60 231**		P*	**Pb**	**09 34 44.0**	**+0.4**
MYRZ	**Mayor Island**	**0.67 320**		P*	**Pb**	**09 34 44.7**	**0.0**
HRRZ	**Handcock Road**	**0.71 214**		P*	**Pb**	**09 34 45.7**	**+0.3**
PRRZ	**Plateau Road**	**0.77 204**		P*	**Pb**	**09 34 46.7**	**+0.4**
MWZ	**Matawai**	**0.79 133**		P*	**Pb**	**09 34 46.1**	**-0.7**
MWZ				S*	**Sb**	**09 34 57.1**	**-0.3**
ALRZ	**Allen Road**	**0.84 204**		P*	**Pb**	**09 34 47.5**	**-0.1**
TOZ	**Tahuroa Road**	**1.02 273**		P*	**Pb**	**09 34 49.5**	**-1.2**
RAHZ	**Arahi**	**1.14 168**		P*	**Pb**	**09 34 52.3**	**-0.4**
PUZ	**Puketiti**	**1.19 104**		P*	**Pb**	**09 34 53.6**	**0.0**
MXZ	**Matakaoa Point**	**1.23 79**		*e*P*	**Pb**	**09 34 53.1**	**-1.1**
WATZ	**Wairara**	**1.23 222**		P*	**Pb**	**09 34 53.6**	**-0.7**
NMHZ	**Naumai**	**1.30 179**		P*	**Pb**	**09 34 55.0**	**-0.4**
CNGZ	**Carnagh Statio**	**1.31 122**		P*	**Pb**	**09 34 56.8**	**+1.1**
BKZ	**Black Stump Fm**	**1.39 190**		P*	**Pb**	**09 34 55.0**	**-1.9**
KNZ	**Kokohu**	**1.41 151**		PN	**Pn**	**09 34 57.2**	**+0.8**
OTVZ	**Oturere**	**1.62 213**		P*	**Pb**	**09 34 59.5**	**-1.4**
MCHZ	**McNeill Hill**	**1.65 182**		PN	**Pn**	**09 35 00.8**	**+1.1**
HIZ	**Hauiti**	**1.68 244**		PN	**Pn**	**09 34 59.5**	**-0.7**
MOVZ	**Moawhango**	**1.80 206**		P*	**Pb**	**09 35 02.6**	**-1.3**
VRZ	**Vera Road**	**2.07 230**		P*	**Pb**	**09 35 05.6**	**-3.0**
PNHZ	**Pukenui**	**2.16 192**		PN	**Pn**	**09 35 07.7**	**+0.8**
TSZ	**Takapari Road**	**2.35 196**		PN	**Pn**	**09 35 10.0**	**+0.7**
WCZ	**Waipu Caves**	**2.70 313**		PN	**Pn**	**09 35 13.0**	**-1.2**
SNZO	**South Karori**	**3.86 204**		Pn	**Pn**	**09 35 31.2**	**+1.1**
CTA	**Charters Tower**	**31.82 295**		LR	LR	09 51 51.1	
	comp=Z,148nm,20.1s,MS3.7,baz=227,slow=33						
HNR	**Honiara**	**32.07 327**		LR	LR	09 50 17.6	
	comp=Z,76nm,20.0s,MS3.4,baz=122,slow=30						
ASAR	**Alice Springs**	**39.12 279**		P	**P**	**09 41 59.5**	**+1.1**
	2.0nm,0.9s,mb3.9,baz=121,slow=8.3,SNR=11						
WRA	**Warramunga Arr**	**40.81 284**		P	**P**	**09 42 13.1**	**+0.7**
	2.4nm,1.0s,mb3.8,baz=125,slow=7.1,SNR=12						
FITZ	**Fitzroy Crossi**	**48.62 279**		P	**P**	**09 43 15.9**	**+1.2**
	2.4nm,1.0s,mb4.2,baz=113,slow=7.7,SNR=2.9						
KSRS	**Korea Array**	**87.41 323**		LR	LR	10 23 22.2	
	comp=Z,10nm,19.1s,MS3.2,baz=90,slow=34						
TORD	**Torodi Ar. Bea**	**155.06 191**		PKPab	PKPab	09 54 53.8	+5.2
	0.5nm,0.9s,baz=188,slow=3.8,SNR=2.4						

IDC ***05*** *09:47:28.5±0.9, 0.°88N×125.°65E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/20, mbtmp3.8/8, ML3.6/1, Error ellipse: s-maj=53.8km s-min=15.4km az=75.0*
DJA ***05*** *09:47:35, 0.°91N×126.°05E, h11km, MLv4.0/5*
ISCJB ***05*** *09:47:36.0±0.7, 0.°93N±0.°07×126.°09E±0.°06, h75km±9km, mb3.8/7, Error ellipse: s-maj=12.1km s-min=9.1km az=25.7*

ISC 05 09:47:37.0±0.7, 0.°91N±0.°07×126.°09E±0.°06, h65km±9km, n14, σ1.°21/16, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.28**	**96**	P	**Pn**	**09 47 57.3**	**-1.6**
MNI	**Manado**	**1.36 293**		P	**Pn**	**09 47 58.7**	**-1.2**
MNI				S	**Sn**	**09 48 16.0**	**-1.2**
LBMI	**Labuha**	**2.08 137**		P	**Pn**	**09 48 11.0**	**+1.3**
KMSI	**Cibinong**	**2.14 261**		P	**Pn**	**09 48 10.4**	**0.0**
KMSI				S	**Sn**	**09 48 37.0**	**+1.1**
SGSI	**Sangihe**	**2.81 348**		P	**Pn**	**09 48 21.5**	**+1.9**
LUWI	**Luwuk**	**3.84 240**		P	**Pn**	**09 48 34.7**	**+1.0**
FITZ	**Fitzroy Crossi**	**18.90 181**		P	**Pn**	**09 51 51.9**	**-1.7**
	0.2nm,0.3s,baz=8.0,slow=10,SNR=4.8						
WRA	**Warramunga Arr**	**22.24 159**		P	**P**	**09 52 28.0**	**-0.5**
	2.8nm,0.7s,mb3.7,baz=338,slow=11,SNR=31						
ASAR	**Alice Springs**	**25.58 163**		P	**P**	**09 53 00.5**	**+0.4**
	1.0nm,0.3s,mb3.7,baz=347,slow=12,SNR=20						
STKA	**Stephens Creek**	**35.76 157**		P	**P**	**09 54 30.5**	**+0.7**
	1.2nm,0.8s,mb3.9,baz=340,slow=12,SNR=2.4						
KSRS	**Korea Array**	**36.40**	**2**	P	**P**	**09 54 36.4**	**+1.2**
	0.6nm,0.6s,mb3.7,baz=179,slow=9.1,SNR=3.6						
PETK	**Petropavlovsk-**	**58.27**	**22**	P	**P**	**09 57 25.3**	**+0.6**
	1.8nm,0.8s,mb4.2,baz=197,slow=4.5,SNR=4.9						
MKAR	**Makanchi Array**	**59.52 327**		P	**P**	**09 57 30.7**	**-2.8**
	0.3nm,0.4s,mb3.7,baz=122,slow=8.8,SNR=4.4						
KURK	**Kurchatov**	**63.78 329**		P	**P**	**09 58 01.6**	**-0.5**
	0.7nm,0.5s,mb3.8,baz=127,slow=6.6,SNR=3.5						

TAP 05 09:51:45.0, 24.°21N×119.°52E, h21km±1km, ML3.1, 1D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNG	**Penghu**	**0.64 177**		P	Pb	09 51 57.6	+0.1
	baz=177						
PNG				S	Sb	09 52 07.0	+0.9
	baz=177						
WTCT	**Ta-ch'eng**	**0.78 116**		*e*P	Pb	09 52 00.1	+0.3
	baz=117						
WTCT				*e*S	Sb	09 52 12.8	+2.9
	baz=117						
WSF	**Szhu**	**0.86 132**		*e*S	Sb	09 52 14.9	+2.6
	baz=132						
KNM	**Kinmen**	**1.01 282**		P	Pb	09 52 05.4	+1.6
	baz=280						
KNM				*e*S	Sb	09 52 20.1	+3.4
	baz=280						
TCU	**Taichung**	**1.06**	**93**	*e*P	Pn	09 52 05.4	+0.8
	baz=93						
TCU				S	Sb	09 52 20.0	+2.0
	baz=93						
CHY	**Chiayi**	**1.09 130**		*e*P	Pn	09 52 05.8	+0.8
	baz=131						
CHY				*e*S	Sb	09 52 21.5	+2.5
	baz=131						
QZH	**Quanzhou**	**1.11 311**		⇓*i*Pg	Pn	09 52 03.5	-1.8
QZH				Sg	Sb	09 52 17.2	-2.4
QZH				smax			
	comp=N,670nm,0.4s						
QZH				smax			
	comp=E,350nm,0.2s						
TWQ1	**Liyutan**	**1.15**	**83**	P	Pn	09 52 06.5	+0.7
	baz=83						
TWQ1				*e*S	Sb	09 52 21.6	+0.8
	baz=83						
CHN5	**Tsauling**	**1.23 120**		*i* P	Pn	09 52 07.8	+0.9
	baz=133						
CHN5				S	Sn	09 52 25.0	+2.3
	baz=133						
TYC	**Yuchr**	**1.26 104**		P	Pn	09 52 08.4	+1.1
	baz=104						
TYC				*e*S	Sn	09 52 25.7	+2.1
	baz=104						
ALS	**Alishan**	**1.37 120**		*i* P	Pn	09 52 10.3	+1.5
	baz=133						
ALS				*e*S	Sn	09 52 29.1	+2.9
	baz=133						
CHN1	**Nanshi**	**1.38 138**		*e*P	Pn	09 52 10.2	+1.3
	baz=138						
CHN1				*e*S	Sn	09 52 28.3	+1.7
	baz=138						
WTP	**Ta-pu**	**1.39 134**		*e*P	Pn	09 52 09.5	+0.5
	baz=134						
WTP				*e*S	Sn	09 52 28.5	+1.7
	baz=134						
NSTT	**Nanjuang**	**1.41**	**73**	*e*P	Pn	09 52 09.3	-0.1
	baz=73						
NSTT				*e*S	Sn	09 52 27.1	-0.3
	baz=73						
SGST	**Jiashian**	**1.49 139**		*e*P	Pn	09 52 11.1	+0.6
	baz=140						
SGST				*e*S	Sn	09 52 33.1	+3.9
	baz=140						
YUS	**Yu-Shan**	**1.50 118**		*e*P	Pn	09 52 11.8	+1.2
	baz=119						
YUS				*e*S	Sn	09 52 31.9	+2.5
	baz=119						
TWT	**Tachien**	**1.51**	**88**	*e*P	Pn	09 52 11.9	+1.1
	baz=77						
TWT				*e*S	Sn	09 52 29.1	-0.8
	baz=77						
WHF	**Hehuan Shan**	**1.60**	**92**	P	Pn	09 52 14.9	+2.9
	baz=92						
WHF				*e*S	Sn	09 52 34.0	+2.1
	baz=92						
NNS	**Nan Shan**	**1.71**	**82**	*e*P	Pn	09 52 16.4	+3.0
	baz=82						
ELDTW	**Lidau**	**1.71 126**		*e*P	Pn	09 52 16.3	+2.8
	baz=127						
EHY	**Hungye**	**1.79 113**		*e*P	Pn	09 52 15.6	+1.0
	baz=130						
EHY				*e*S	Sn	09 52 38.2	+1.4
	baz=130						
ESL	**Shilin**	**1.79 102**		*e*P	Pn	09 52 16.1	+1.5
	baz=103						
ESL				*e*S	Sn	09 52 37.9	+1.1
	baz=103						
TWF1	**Yuli**	**1.84 117**		*e*P	Pn	09 52 16.8	+1.5
	baz=118						
TWF1				*e*S	Sn	09 52 40.9	+2.9
	baz=118						
ENTT	**Nioudou**	**1.91**	**77**	*e*P	Pn	09 52 17.8	+1.5
	baz=77						
ENTT				*e*S	Sn	09 52 39.6	-0.1
	baz=77						

KRSC 05 10:17:25.6±0.2, 56.°21N×163.°36E, h15km±15km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.30 270**		*e*P	Pg	10 17 32.3	+0.4
KBTR				*e*S	Sg	10 17 36.5	+0.3
SMKR	**Semkarok**	**1.12 290**		*e*P	Pb	10 17 46.4	-0.2
SMKR				*e*S	Sb	10 18 02.0	+1.1
BDR	**Baidarnaya**	**1.25 288**		*e*P	Pn	10 17 48.7	+0.2
BDR				*e*S	Sb	10 18 06.0	+1.3
SRKR	**Sorokina**	**1.30 291**		*e*P	Pn	10 17 49.4	+0.3
SRKR				*e*S	Sb	10 18 06.6	+0.5
ZLN	**Zelenaya**	**1.45 263**		*e*P	Pn	10 17 52.4	+1.3
ZLN				*e*S	Sn	10 18 11.8	+2.0
KLY	**Klyuchi**	**1.51 275**		*e*P	Pn	10 17 50.8	-1.3
KLY				*e*S	Sn	10 18 09.5	-2.0
KRSR	**Krestovskiy**	**1.56 271**		*e*P	Pn	10 17 53.5	+0.8
KRSR				*e*S	Sn	10 18 14.0	+1.3
BZMR	**Bezymyannaya**	**1.63 261**		*e*P	Pn	10 17 55.3	+1.6
BZMR				*e*S	Sn	10 18 17.5	+3.1
KPT	**Kopyto**	**1.78 263**		*e*P	Pn	10 17 57.5	+1.8
BKI	**Bering**	**1.79 123**		*e*P	Pn	10 17 57.0	+1.1
MKZ	**Mys Kozlova**	**1.90 210**		*e*P	Pn	10 17 57.7	+0.3
MKZ				*e*S	Sn	10 18 21.9	+0.9
KOZ	**Kozyrevsk**	**1.96 267**		*e*P	Pn	10 18 00.1	+1.9
KOZ				*e*S	Sn	10 18 25.3	+2.8
SRDR	**Sredinnyy**	**2.04 275**		*e*P	Pn	10 18 01.3	+2.0
SRDR				*e*S	Sn	10 18 27.6	+3.2
SPN	**Mys Shipunski**	**3.67 213**		*e*S	Sn	10 19 03.6	-1.1
AVH	**Avacha**	**3.98 224**		P	Pn	10 18 29.4	+3.3
GNL	**Ganaly**	**4.01 233**		*e*P	Pn	10 18 29.2	+2.8

WEL 05 10:21:11.3±0.8, 36.°40S×177.°34E, h12km, ML3.8/8, Error ellipse: s-maj=7.9km s-min=4.7km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZ	**Kuaotunu**	**1.35 255**		PN	Pn	10 21 35.2	-0.7
KUZ				SN	Sn	10 21 51.5	-2.3
MXZ	**Matakaoa Point**	**1.40 147**		P*	Pb	10 21 34.1	-3.2
MXZ				S*	Sb	10 21 50.4	-4.6
PUZ	**Puketiti**	**1.83 157**		PN	Pn	10 21 43.2	+0.7
PUZ				SN	Sn	10 22 06.1	+0.6
URZ	**Urewera**	**1.87 186**		P*	Pb	10 21 42.8	-2.5
URZ				S*	Sb	10 22

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.76**	**246**	P	P	11 06 07.2	-1.0
	0.5nm,0.3s,baz=104,slow=9.2,SNR=3.6						
ASAR	**Alice Springs**	**43.87**	**259**	P	P	11 07 07.3	-0.1
	0.4nm,0.5s,baz=97,slow=7.6,SNR=15						
WRA	**Warramunga Arr**	**44.13**	**264**	P	P	11 07 10.0	+0.5
	1.0nm,0.3s,baz=99,slow=8.3,SNR=17						
FITZ	**Fitzroy Crossi**	**52.56**	**264**	P	P	11 08 14.6	0.0
	2.1nm,1.0s,baz=126,slow=8.7,SNR=3.3						

NSSP ***05*** *11:01:34.9, 38.°63N×45.°98E, h17km, Ms3.1*
TEH ***05*** *11:01:36.1, 38.°65N×45.°78E, h6km*
CSEM ***05*** *11:01:36.9±1.0, 38.°63N×45.°67E, h2km, ML3.1, Error ellipse: s-maj=19.7km s-min=11.6km az=28.0*
ISC 05 11:01:35.9±0.4**, 38.°64N**±0.°02×**45.°82E**±0.°04, **h1**km±6km, **n22**, σ1**°02**/40, **9C-4D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMRD	**Marand**	**0.12**	**310⇑**	*e*Pg	**Pg**	**11 01 37.9**	**-0.3**
IMRD				*e*Sg	**Sg**	**11 01 39.9**	**+0.2**
IMRD				*e*		11 01 40.6	
	comp=Z,2477μm,0.1s						
ISHB	**Shabestar**	**0.39**	**204**	*e*Pg	**Pg**	**11 01 43.1**	**-0.2**
ISHB				*e*Sg	**Sg**	**11 01 48.7**	**+0.4**
ISHB				*e*		11 01 49.1	
	comp=Z,39μm,0.1s						
ITBZ	**Tabriz**	**0.48**	**147⇑**	*e*Pg	**Pg**	**11 01 44.9**	**-0.2**
ITBZ				*e*		11 01 45.2	
	comp=Z,33μm,0.1s						
ITBZ				*e*Sg	**Sg**	**11 01 51.9**	**+0.6**
NAX	**Nakhchivan**	**0.59**	**335**	P	**Pg**	**11 01 47.0**	**-0.3**
	SNR=129						
NAX				S	**Sg**	**11 01 55.9**	**+0.9**
IFTB	**Fath-abad**	**0.77**	**144**	*e*Pg	**Pg**	**11 01 50.7**	**0.0**
GRS	**Goris**	**0.95**	**25⇑**	*i*P	**Pg**	**11 01 55.0**	**+0.8**
GRS				⇓*i*S	**Sg**	**11 02 08.0**	**+1.5**
GRS	**Goris**	**0.95**	**25**	⇑P	**Pg**	**11 01 55.0**	**+0.8**
GRS				S	**Sg**	**11 02 08.0**	**+1.5**
IAZR	**Azarshahr**	**0.97**	**172⇑**	*e*Pg	**Pg**	**11 01 53.9**	**-0.6**
IAZR				*e*		11 01 54.2	
	comp=Z,27μm,0.1s						
IAZR				*e*Sg	**Sg**	**11 02 07.4**	**+0.4**
IHRS	**Heris**	**1.01**	**108**	*e*Pg	**Pg**	**11 01 54.7**	**-0.7**
IHRS				*e*Sg	**Sg**	**11 02 09.3**	**+0.8**
IHRS				*e*		11 02 12.9	
	comp=Z,15μm,0.1s						
STKZ		**1.38**	**31⇑**	*i*P	**Pg**	**11 02 09.7**	**+7.3**
STKZ				⇑*i*S	**Sg**	**11 02 28.4**	**+8.1**
STKZ		**1.38**	**31**	⇑P	**Pg**	**11 02 09.7**	**+7.3**
STKZ				S	**Sg**	**11 02 28.4**	**+8.1**
VADZ	**Vardenis**	**1.53**	**358**	*e*P	**Pn**	**11 02 00.0**	**-4.5**
VADZ				⇑S	**Sn**	**11 02 22.0**	**-3.1**
ISRB	**Sarab**	**1.67**	**119**	*e*Sn	**Sn**	**11 02 28.6**	**+0.2**
ISRB				*e*Pn	**Pn**	**11 02 06.7**	**+0.4**
ISRB				*e*		11 02 33.1	
	comp=Z,4μm,0.1s						
GNI	**Garni**	**1.73**	**331⇓**	*i*P	**Pn**	**11 02 07.2**	**+0.1**
GNI				⇓*i*S	**Sg**	**11 02 32.4**	**+1.0**
GNI	**Garni**	**1.73**	**331**	⇓P	**Pn**	**11 02 07.2**	**+0.1**
GNI				S	**Sg**	**11 02 32.4**	**+1.0**
BRDA	**Brd**	**1.94**	**33**	P	**Pg**	**11 02 11.8**	**-1.3**
	SNR=3.1						
BRDA				S	**Sg**	**11 02 39.9**	**+1.8**
GANJ	**Ganja**	**2.04**	**11**	P	**Pg**	**11 02 13.0**	**-2.1**
	SNR=27						
GANJ				S	**Sg**	**11 02 39.8**	**-1.8**
GLBA	**Clilabad**	**2.10**	**72**	P	**Pg**	**11 02 14.1**	**-2.1**
	SNR=15						
GLBA				S	**Sg**	**11 02 43.8**	**+0.5**
DGRG	**David-gareji**	**2.83**	**353**	P	**Pb**	**11 02 26.2**	**-1.1**
DGRG				S	**Sg**	**11 03 06.3**	**-0.6**
PQL	**Pirkuli**	**3.03**	**44**	P	**Pg**	**11 02 28.6**	**-5.5**
	SNR=5.8						
MTA	**Mtatsminda**	**3.15**	**346**	P	**Sb**	**11 03 12.9**	**+1.2**
TBLG	**Delisi**	**3.20**	**345**	P	**Sb**	**11 03 14.2**	**+1.2**

IDC ***05*** *11:31:18.0±0.6, 19.°26N×121.°43E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.9/24, mbtmp3.9/13, ML4.1/1, MS3.5/7, Ms1 3.5/7, ms1mx3.1/31, Error ellipse: s-maj=29.0km s-min=13.8km az=72.0*
NEIC ***05*** *11:31:24.7±1.9, 19.°21N×121.°29E, h48km±18km, Error ellipse: s-maj=15.3km s-min=9.5km az=70.0*
MAN ***05*** *11:31:24, 19.°16N×121.°14E, h9km, mb5.0, ML4.0, MS4.1*
ISC 05 11:31:19.8±2.0**, 19.°36N**±0.°05×**121.°5E**±0.°1, **h9**km±13km, **n35**, σ1**°14**/30, **mb3.9**/13, **MS3.5**/5, **1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**1.50**	**188**	*e*P	**Pn**	**11 31 48.0**	**+1.0**
APYP				*e*S	**Sn**	**11 32 06.9**	**+0.3**
CVP	**Callao Caves**	**1.68**	**168⇑**	*e*P	**Pn**	**11 31 52.2**	**+2.7**
ABRA	**Dolores**	**1.84**	**203**	*e*P	**Pn**	**11 31 51.9**	**+0.3**
CAUP	**Cauayan**	**2.43**	**172**	*e*P	**Pg**	**11 32 04.9**	**-1.4**
PALP	**Palanan**	**2.46**	**158**	*e*P	**Pn**	**11 32 05.2**	**+5.0**
BCPH	**Baguio City Da**	**3.07**	**196⇓**	*e*P	**Pg**	**11 32 11.5**	**-7.3**
BCPH				*i* S	**Sg**	**11 32 50.1**	**-8.6**
BOLP	**Bolinao**	**3.30**	**207**	*e*P	**Pn**	**11 32 12.6**	**+0.9**
BALP	**Baler**	**3.60**	**178**	*e*P	**Pn**	**11 32 18.9**	**+3.0**
LUBP	**Lubang**	**5.71**	**192**	*e*P	**Pn**	**11 32 50.8**	**+5.9**
JOW	**Kunigami**	**9.73**	**39**	*e*Pn	**Pn**	**11 33 45.1**	**+5.1**
	3.9nm,0.6s						
DAV	**Davao City (W)**	**12.86**	**161**	LR	LR	11 39 57.6	
	comp=Z,162nm,20.2s,baz=30,slow=41						
KSRS	**Korea Array**	**18.90**	**16**	P	**Pn**	**11 35 42.1**	**+0.9**
	0.6nm,0.3s,baz=197,slow=11,SNR=17						
KSRS				LR	LR	11 44 04.0	
	comp=Z,70nm,18.8s,baz=200,slow=40						
CMAR	**Chiang Mai Arr**	**21.31**	**271**	P	**P**	**11 36 05.5**	**-1.7**
	1.1nm,0.7s,mb3.3,baz=69,slow=9.5,SNR=7.7						
GUMO	**Guam**	**23.16**	**101**	LR	LR	11 44 24.4	
	comp=Z,73nm,18.4s,MS3.2,baz=111,slow=34						
SONM	**Songino Array**	**30.93**	**340**	P	**P**	**11 37 37.7**	**+0.7**
	0.3nm,0.4s,mb3.5,baz=146,slow=10,SNR=2.7						
SONM	**Songino Array**	**30.93**	**340**	P	**P**	**11 37 37.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**37.45**	**173**	P	**P**	**11 38 32.3**	**-1.4**
	1.6nm,0.7s,mb3.9,baz=0.0,slow=4.0						
FITZ				PcP	PcP	11 40 51.6	-0.8
	1.4nm,0.8s,baz=317,slow=4.9,SNR=4.1						
FITZ				LR	LR	11 54 25.9	
	comp=Z,93nm,18.9s,MS3.6,baz=132,slow=37						
WRA	**Warramunga Arr**	**41.05**	**161**	P	**P**	**11 39 02.0**	**-1.8**
	1.0nm,0.3s,mb3.9,baz=348,slow=8.8,SNR=14						
MKAR	**Makanchi Array**	**42.06**	**320**	P	**P**	**11 39 12.4**	**+0.5**
	1.3nm,0.7s,mb3.7,baz=116,slow=9.8,SNR=9.4						
PETK	**Petropavlovsk-**	**43.78**	**31**	LR	LR	11 57 47.6	
	comp=Z,21nm,21.7s,MS3.0,baz=327,slow=36						
ASAR	**Alice Springs**	**44.45**	**164**	P	**P**	**11 39 30.6**	**-0.8**
	0.9nm,0.5s,mb3.8,baz=346,slow=6.8,SNR=28						
KURK	**Kurchatov**	**46.01**	**323**	P	**P**	**11 39 44.0**	**+0.4**
	0.8nm,0.4s,mb4.0,baz=118,slow=8.2,SNR=6.1						
KURK	**Kurchatov**	**46.01**	**323**	P	**P**	**11 39 44.0**	**+0.5**
KURK				*e*P	pP	11 39 44.6	-1.6
CTA	**Charters Tower**	**46.12**	**147**	LR	LR	11 59 19.8	
	comp=Z,129nm,18.3s,MS3.9,baz=56,slow=36						
BVAR	**Borovoye Array**	**51.61**	**323**	P	**P**	**11 40 27.2**	**+0.7**
	0.3nm,0.3s,mb3.6,baz=94,slow=13,SNR=2.3						
BBOO	**Buckleboo**	**53.72**	**165**	*e*P	**P**	**11 40 42.2**	**-0.1**
	18nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**54.48**	**159**	P	**P**	**11 40 47.2**	**-0.6**
	0.8nm,0.3s,mb4.1,baz=315,slow=11,SNR=3.0						
STKA	**Stephens Creek**	**54.48**	**159**	P	**P**	**11 40 47.2**	**-0.6**
ILAR	**Eielson Array**	**73.38**	**27**	P	**P**	**11 42 51.0**	**-0.9**
	0.3nm,0.7s,mb3.4,baz=251,slow=5.1,SNR=7.9						
ARCES	**ARCESS Array B**	**74.10**	**339**	P	**P**	**11 42 54.6**	**-1.4**
	1.3nm,0.8s,mb3.9,baz=56,slow=11,SNR=4.6						
NOA	**NORSAR Array B**	**82.60**	**333**	LR	LR	12 23 32.0	
	comp=Z,38nm,19.7s,MS3.8,baz=270,slow=38						
YKA	**Yellowknife Ar**	**87.30**	**23**	P	**P**	**11 44 07.4**	**+0.6**
	2.1nm,0.8s,mb4.4,baz=313,slow=4.8,SNR=14						
YKA	**Yellowknife Ar**	**87.30**	**23**	P	**P**	**11 44 07.4**	**+0.6**
TXAR	**Lajitas Array**	**114.91**	**43**	PKP	PKiKP	11 50 02.2	+0.5
	0.3nm,0.7s,baz=357,slow=2.5,SNR=4.8						
TXAR	**Lajitas Array**	**114.91**	**43**	PKP	PKiKP	11 50 02.2	+0.5

NIED ***05*** *11:33:00, 21.°10N×122.°20E, h5km, Mw4.1 Best double couple: M0 1.86000×10^15 NP1:φ0=230.00000°, δ81.00000°, λ-88.00000°. NP2:φ0=39.00000°, δ9.00000°, λ-101.00000°.*
JMA ***05*** *11:33:22.5±0.4, 21.°10N×122.°23E, h0km, M3.5*
ISC 05 11:33:24.1±2.1**, 21.°1N**±0.°1×**122.°1E**±0.°2, **h0**km, **n7**, σ0**°29**/12, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**3.30**	**28**	*e*S	**Sn**	**11 34 57.2**	**+0.3**
YOJ	**Yonaguni jima**	**3.41**	**14**	P	**Pn**	**11 34 19.0**	**+0.4**
YOJ				*e*S	**Sn**	**11 34 59.7**	**-0.1**
IRIF	**Iriomote-Funau**	**3.51**	**24**	P	**Pn**	**11 34 19.3**	**-0.6**
IRIF				*e*S	**Sn**	**11 35 02.3**	**+0.1**
JKRS	**Kuro-shima**	**3.54**	**29**	P	**Pn**	**11 34 20.3**	**-0.1**
JKRS				*e*S	**Sn**	**11 35 02.9**	**-0.1**
JIJ	**Ishigaki jima**	**3.71**	**30**	P	**Pn**	**11 34 22.7**	**0.0**
JIJ				*e*S	**Sn**	**11 35 06.8**	**-0.4**
JTJ	**Tarama**	**4.22**	**34**	P	**Pn**	**11 34 29.5**	**-0.2**
JTJ				*e*S	**Sn**	**11 35 19.8**	**+0.1**
JOGS	**Gusukube**	**4.71**	**39**	P	**Pn**	**11 34 36.7**	**+0.4**

NEIC ***05*** *11:39:26.9±4.4, 32.°00S×179.°94W, h382km±53km, Error ellipse: s-maj=80.0km s-min=24.6km az=180.0*
IDC ***05*** *11:39:27.8±4.6, 32.°12S×179.°98W, h391km±53km, mb3.1/5, mb1 3.2/6, mb1mx3.1/17, mbtmp3.0/6, Error ellipse: s-maj=60.6km s-min=24.4km az=6.0*
ISC 05 11:39:25.7±2.3**, 31.°9S**±0.°2×**180.°0W**±0.°2, **h359**km±34km, **n23**, σ0**°74**/28, **mb3.2**/5, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**6.29**	**193**	*e*PN	**Pn**	**11 40 59.2**	**-0.8**
PUZ				SN	**S**	**11 42 16.2**	**-0.3**
MWZ	**Matawai**	**6.70**	**197**	*e*PN	**Pn**	**11 41 04.0**	**-0.7**
MWZ				SN	**S**	**11 42 26.5**	**+1.4**
URZ	**Urewera**	**6.74**	**200**	P	**Pn**	**11 41 06.3**	**+1.2**
	1.5nm,0.3s,baz=347,slow=17,SNR=21						
URZ				S	**S**	**11 42 26.6**	**+0.6**
	3.7nm,0.3s,baz=261,slow=23,SNR=14						
URZ	**Urewera**	**6.74**	**200**	P	**Pn**	**11 41 06.3**	**+1.2**
URZ				*e*Pn	**Pn**	**11 41 06.3**	**+1.2**
URZ				S	**S**	**11 42 26.6**	**+0.6**
URZ	**Urewera**	**6.74**	**200**	*e*PN	**Pn**	**11 41 04.0**	**-1.1**
URZ				SN	**S**	**11 42 26.3**	**+0.3**
NMHZ	**Naumai**	**7.61**	**199**	*e*PN	**Pn**	**11 41 16.1**	**+1.0**
BKZ	**Black Stump Fm**	**7.76**	**201**	*e*PN	**Pn**	**11 41 16.9**	**0.0**
BKZ				SN	**S**	**11 42 46.5**	**-1.2**
BHHZ	**Black Hill Sta**	**8.19**	**202**	*e*PN	**Pn**	**11 41 22.7**	**+0.7**
WNVZ	**Wahianoa**	**8.20**	**205**	*e*PN	**Pn**	**11 41 22.1**	**0.0**
PNHZ	**Pukenui**	**8.54**	**200**	*e*PN	**Pn**	**11 41 26.1**	**0.0**
TSZ	**Takapari Road**	**8.74**	**201**	*e*PN	**Pn**	**11 41 27.7**	**-0.8**
MRZ	**Mangatainoka R**	**9.41**	**201**	PN	**Pn**	**11 41 36.2**	**-0.3**
TUWZ	**Tuamarina**	**10.65**	**205**	PN	**Pn**	**11 41 51.2**	**0.0**
NNZ	**Nelson**	**10.68**	**208**	PN	**Pn**	**11 41 51.2**	**-0.4**
CTA	**Charters Tower**	**32.42**	**283**	P	**P**	**11 45 23.7**	**+0.1**
	1.1nm,0.3s,mb3.5,baz=95,slow=8.2,SNR=2.8						
STKA	**Stephens Creek**	**32.50**	**260**	P	**P**	**11 45 25.6**	**+1.4**
	1.6nm,0.4s,mb3.6,baz=89,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**41.36**	**270**	P	**P**	**11 46 37.6**	**-0.5**
	0.4nm,0.6s,mb2.8,baz=106,slow=7.3,SNR=5.0						
WRA	**Warramunga Arr**	**42.49**	**275**	P	**P**	**11 46 46.2**	**-0.9**
	0.6nm,0.3s,mb3.1,baz=113,slow=8.0,SNR=9.9						
WRA	**Warramunga Arr**	**42.49**	**275**	P	**P**	**11 46 46.2**	**-0.9**
NVAR	**Mina Array Bea**	**90.52**	**44**	P	**P**	**11 51 47.7**	**+0.3**
	0.2nm,0.6s,mb3.2,baz=203,slow=6.6,SNR=2.4						
NVAR	**Mina Array Bea**	**90.52**	**44**	P	**P**	**11 51 47.7**	**+0.3**
FINES	**FINESS Array B**	**145.96**	**338**	PKPbc	PKPbc	11 58 21.0	-1.9
	2.5nm,0.3s,baz=48,slow=4.1,SNR=16						
BRTR	**Keskin Array B**	**151.78**	**295**	PKPbc	PKPbc	11 58 36.9	-1.2
	0.2nm,0.3s,baz=97,slow=4.8,SNR=2.4						

BJI ***05*** *11:45:16.3, 6.°88S×130.°25E, h170km, mB4.7/21, mb4.9/41*
ISCJB ***05*** *11:45:20.9±0.4, 6.°63S±0.°03×129.°95E±0.°03, h181km±3km, mb5.0/84, Error ellipse: s-maj=4.8km s-min=3.9km az=146.9*
TEH ***05*** *11:45:21.0, 6.°54S×129.°95E, h164km*
NEIC ***05*** *11:45:21.6±0.8, 6.°55S×129.°95E, h170km±7km, mb4.8/31, Error ellipse: s-maj=7.1km s-min=4.2km az=57.0*
IDC ***05*** *11:45:21.3±2.6, 6.°52S×129.°97E, h167km±24km, mb4.5/18, mb1 4.5/19, mb1mx4.5/22, mbtmp4.5/19, MS3.3/1, Ms1 3.5/1, ms1mx2.8/22, Error ellipse: s-maj=17.8km s-min=8.7km az=79.0*
DJA ***05*** *11:45:22, 6.°71S×129.°98E, h175km, Mw5.3/31*
ISC 05 11:45:21.9±0.4**, 6.°63S**±0.°03×**129.°92E**±0.°03, **h173**km±3km, **h168**km±3.5km; **pP-P, n224**, σ1**°15**/222, **mb5.0**/84, **2C-4D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.09**	**360**	P	**Pn**	**11 45 59.3**	**-0.3**
TLE	**Tual**	**2.97**	**71**	P	**Pn**	**11 46 09.9**	**0.0**
TLE				S	**Sn**	**11 46 47.0**	**-0.1**
NLAI	**Namlea**	**4.39**	**320**	P	**Pn**	**11 46 29.3**	**+1.5**
LBMI	**Labuha**	**6.42**	**338**	P	**Pn**	**11 46 53.9**	**-0.6**
	3.0nm9μm1μm,0.9s						
KAKA	**Kakadu**	**6.53**	**158⇓**	*i*P	**Pn**	**11 46 54.4**	**-1.5**
	447nm,0.3s						
KAKA				*e*S	**Sn**	**11 48 04.0**	**-5.9**
KAKA	**Kakadu**	**6.53**	**158**	*e*Pn	**Pn**	**11 46 54.5**	**-1.3**
	1μm,0.6s						
KAKA				*e*Sn	**Sn**	**11 48 04.6**	**-5.3**
KAKA	**Kakadu**	**6.53**	**158**	P	**Pn**	**11 46 54.2**	**-1.7**
	13nm1μm,0.6s						
BBSI	**Bau Bau**	**7.40**	**278**	P	**Pn**	**11 47 10.0**	**+2.7**
	1.2nm3μm373nm,1.0s						
KDI	**Kendari**	**7.74**	**290**	P	**Pn**	**11 47 13.9**	**+2.1**
	0.3nm950nm92nm,1.0s						
TNTI	**Ternate**	**7.78**	**341**	P	**Pn**	**11 47 11.6**	**-0.8**
	0.5nm138nm,0.6s						
MMRI	**Maumere**	**7.87**	**255**	P	**Pn**	**11 47 13.6**	**0.0**
	0.9nm3μm228nm,0.5s						
LUWI	**Luwuk**	**9.04**	**308**	P	**Pn**	**11 47 30.3**	**+1.3**
	1μm153nm,1.0s						
KNA	**Kununurra**	**9.13**	**187**	P	**Pn**	**11 47 28.6**	**-1.6**
	976nm,0.4s						
MNI	**Manado**	**9.49**	**328**	P	**Pn**	**11 47 37.0**	**+2.1**
	144nm,0.8s						
BKSI	**Bulukumba**	**9.83**	**277**	P	**Pn**	**11 47 40.5**	**+1.1**
	566nm52nm,0.8s						
WSI	**Waingapu**	**9.99**	**252**	P	**Pn**	**11 47 39.5**	**-2.0**
	1μm,0.5s						
KAPI	**Kappang**	**10.24**	**278**	*e*Pn	**Pn**	**11 47 45.2**	**+0.4**
MRSI	**Marisa**	**10.64**	**311**	P	**Pn**	**11 47 51.3**	**+1.3**
	586nm,0.9s						
TTSI	**Tana Toraja**	**10.68**	**289**	P	**Pn**	**11 47 55.9**	**+5.4**
	69nm,0.7s						
SGSI	**Sangihe**	**11.15**	**337**	P	**Pn**	**11 47 55.5**	**-1.1**
	3μm260nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.14**	**200**	P	**Pn**	**11 48 06.5**	**-3.0**
	14nm,0.3s,baz=33,slow=9.3,SNR=124						
FITZ				S	**Sn**	**11 50 15.0**	**-9.2**
	24nm,0.3s,baz=145,slow=16,SNR=12						
FITZ	**Fitzroy Crossi**	**12.14**	**200**	*e*P	**Pn**	**11 48 05.9**	**-3.5**
	103nm,0.4s						
FITZ				*e*S	**Sn**	**11 50 14.1**	**-10**
FITZ	**Fitzroy Crossi**	**12.14**	**200**	P	**Pn**	**11 48 06.8**	**-2.6**
	143nm,0.5s						
MTNI	**Mataram**	**13.77**	**261**	P	**Pn**	**11 48 31.1**	**+0.9**
	97nm,0.7s						
WRA	**Warramunga Arr**	**13.91**	**162**	P	**Pn**	**11 48 28.1**	**-3.7**
	17nm,0.3s,baz=341,slow=13,SNR=132						
WRA				S	**Sn**	**11 50 51.6**	**-15**
	9.9nm,0.3s,baz=339,slow=22,SNR=5.5						
WB2	**Warramunga Arr**	**13.91**	**162**	*e*Pn	**Pn**	**11 48 28.2**	**-3.7**
WB2				*e*Sn	**Sn**	**11 50 54.7**	**-12**
KBKI	**Kotabaru**	**14.10**	**283**	P	**Pn**	**11 48 35.9**	**+1.7**
	124nm,1.1s						
KHKI	**Kahang-Kahang**	**14.30**	**262**	P	**Pn**	**11 48 35.7**	**-1.0**
	1μm68nm,0.7s						
IGBI	**Denpasar**	**14.80**	**261**	P	**Pn**	**11 48 41.0**	**-2.0**
	4μm170nm,0.5s						
COEN	**Coen**	**14.93**	**120**	*e*Pn	**Pn**	**11 48 43.9**	**-0.6**
COEN				*e*Sn	**Sn**	**11 51 21.1**	**-10**
COEN	**Coen**	**14.93**	**120**	P	**Pn**	**11 48 44.5**	**0.0**
	7μm783nm,0.9s						
JAGI	**Jajag, Banyuwa**	**15.74**	**262**	P	**Pn**	**11 48 52.2**	**-2.3**
	3μm97nm,0.8s						
KMMI	**Kalianget**	**15.85**	**268**	P	**Pn**	**11 48 58.5**	**+2.7**
	3μm152nm,0.7s						
TSM	**Tawau**	**16.20**	**312**	P	**Pn**	**11 49 00.3**	**+0.2**
MYLDM	**Lahad Datu**	**16.36**	**316**	P	**Pn**	**11 49 04.1**	**+2.1**
MYLDM	**Lahad Datu**	**16.36**	**316**	P	**Pn**	**11 49 03.7**	**+1.7**
	43nm,1.0s						
GMJI	**Gumukmas**	**16.42**	**263**	P	**Pn**	**11 49 01.2**	**-1.6**
	2μm61nm,1.0s						
PMG	**Port Moresby**	**17.29**	**100**	*e*Pn	**Pn**	**11 49 14.5**	**+1.3**
	8.1nm,1.0s						
PMG	**Port Moresby**	**17.29**	**100**	P	**Pn**	**11 49 14.3**	**+1.1**
	58nm,1.1s						
ASAR	**Alice Springs**	**17.37**	**168**	P	**Pn**	**11 49 13.8**	**-0.1**
	24nm,0.3s,baz=337,slow=8.6,SNR=931						
ASAR				S	**S**	**11 52 18.1**	**-6.4**
	5.2nm,0.3s,baz=350,slow=26,SNR=5.5						
KRKI	**Karangkates**	**17.39**	**264**	P	**Pn**	**11 49 13.2**	**-1.2**
	263nm,0.6s						
MBWA	**Marble Bar**	**17.49**	**213**	*e*P	**Pn**	**11 49 24.5**	**+9.0**
MBWA	**Marble Bar**	**17.49**	**213**	*e*P	**Pn**	**11 49 15.1**	**-0.4**
	17nm,0.5s						
MBWA				*e*S	**S**	**11 52 23.3**	**-3.7**
SDKM	**Sandakan**	**17.60**	**314**	P	**Pn**	**11 49 17.1**	**+0.2**
SDKM	**Sandakan**	**17.60**	**314**	P	**Pn**	**11 49 17.6**	**+0.7**
PWJI	**Pagerwojo**	**18.02**	**264**	P	**P**	**11 49 19.3**	**-0.7**
	2μm88nm,0.9s						
SJI	**Sawahan**	**18.05**	**265**	P	**P**	**11 49 20.0**	**-0.2**
	4μm150nm,0.6s						
NGJI	**Ngawi**	**18.34**	**267**	P	**P**	**11 49 26.4**	**+3.0**
	98nm,1.0s						
KKM	**Kota Kinabalu**	**18.59**	**312**	P	**P**	**11 49 26.1**	**0.0**
KKM	**Kota Kinabalu**	**18.59**	**312**	P	**P**	**11 49 26.4**	**+0.2**
KKM	**Kota Kinabalu**	**18.59**	**312**	*e*P	**P**	**11 49 26.0**	**-0.1**
	9.3nm,0.9s						
KKM	**Kota Kinabalu**	**18.59**	**312**	P	**P**	**11 49 26.1**	**0.0**
	620nm56nm,0.9s						
PCJI	**Pacitan**	**18.65**	**264**	P	**P**	**11 49 24.6**	**-2.2**
	3μm158nm,1.3s						
KDM	**Kudat**	**18.75**	**316**	P	**P**	**11 49 28.5**	**+0.6**
BTM	**Bintulu**	**19.44**	**300**	P	**P**	**11 49 36.9**	**+1.5**
STKI	**Sintang**	**19.57**	**289**	P	**P**	**11 49 42.3**	**+5.5**
	47nm,0.7s						
SBUM	**Sibu**	**19.84**	**296**	P	**P**	**11 49 41.5**	**+1.8**
SBUM	**Sibu**	**19.84**	**296**	P	**P**	**11 49 40.8**	**+1.1**
	1μm126nm,1.1s						
BJII	**Banjamegara**	**20.07**	**267**	P	**P**	**11 49 44.2**	**+2.0**
	965nm65nm,0.8s						
CTA	**Charters Tower**	**20.74**	**132**	P	**P**	**11 49 50.6**	**+1.4**
	107nm,0.7s,baz=312,slow=11,SNR=80						
CTA	**Charters Tower**	**20.74**	**132**	*e*P	**P**	**11 49 50.3**	**+1.1**
	60nm,0.5s						
CTAO	**Charters Tower**	**20.74**	**132**	*e*P	**P**	**11 49 50.5**	**+1.3**
	11nm,0.7s						
KSM	**Kuching**	**21.17**	**292**	P	**P**	**11 49 55.5**	**+1.7**
KSM	**Kuching**	**21.17**	**292**	*e*P	**P**	**11 49 53.1**	**-0.7**
	7.1nm,0.9s,mb4.0						
CISI	**Cisompet, Garu**	**21.96**	**266**	P	**P**	**11 49 59.8**	**-2.3**
	4μm424nm,0.9s,mb5.9						
LEM	**Lembang**	**22.15**	**268**	P	**P**	**11 50 04.4**	**+0.3**
	2μm179nm,0.9s,mb5.5						
TPI	**Tanjungpandan**	**22.52**	**279**	P	**P**	**11 50 09.0**	**+1.5**
	392nm44nm,0.8s,mb4.9						
CBJI	**Citeko**	**22.92**	**269**	P	**P**	**11 50 08.5**	**-2.6**
	605nm,0.8s,mb6.0						
DBJI	**Dramaga**	**23.02**	**269**	P	**P**	**11 50 10.5**	**-1.5**
	139nm,0.9s,mb5.4						
SKJI	**Sukabumi**	**23.20**	**268**	P	**P**	**11 50 12.4**	**-1.3**
	3μm297nm,0.7s,mb5.8						
FORT	**Forrest**	**24.09**	**184**	*e*P	**P**	**11 50 21.9**	**+0.4**
	76nm,0.4s,mb5.6						
FORT	**Forrest**	**24.09**	**184**	*e*P	**P**	**11 50 22.0**	**+0.5**
	78nm,0.7s,mb5.3						
PPBI	**Pangkal Pinang**	**24.12**	**280**	P	**P**	**11 50 22.0**	**-0.1**
	3μm52nm,1.1s,mb5.0						
KLSI		**25.14**	**273**	P	**P**	**11 50 33.4**	**+2.1**
	63nm,1.1s,mb5.1						
MDSI	**Maura Dua**	**25.71**	**273**	P	**P**	**11 50 37.7**	**+1.3**
	20nm,1.1s,mb4.7						
KMBL	**

BJI pmax pmax
comp=Z,49nm,3.9s
LZH Lanzhou 49.04 332 ⇑P P 11 53 50.7 -0.7
LZH PP PP 11 55 47.2 +0.4
LZH S S **12 00 46.3 +3.5**
LZH pmax pmax
comp=Z,29nm,1.3s,mb4.8
LZH pmax pmax
comp=Z,110nm,6.7s
HHC Hu-ho-hao-te 50.17 342 ⇓P P 11 54 00.4 +0.6
HHC pP pP 11 54 37.1 -1.6
HHC PcP PcP 11 55 16.7 +0.1
HHC PP PP 11 55 59.9 +3.0
HHC ScP ScP 11 58 56.3 +0.2
HHC S S **12 01 00.3 +2.0**
HHC ScS ScS 12 03 32.1 -1.0
HHC SS SS 12 04 33.3 -0.9
HHC pmax pmax
comp=Z,15nm,1.0s,mb4.6
HHC pmax pmax
comp=Z,110nm,5.2s
HHC LR LR
comp=N,110nm,14.5s
HHC LR LR
comp=E,110nm,17.7s
HHC LR LR
comp=Z,120nm,14.9s
CN2 Changchun 50.36 356 *e*P **P 11 54 00.4 -0.8**
CN2 *e*S **S 12 01 00.5 -0.3**
CN2 pmax pmax
comp=Z,20nm,0.7s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
MDJ Mudanjiang 51.01 360 P **P 11 54 05.5 -0.5**
MDJ S **S 12 01 10.6 +0.8**
MDJ pmax pmax
comp=Z,14nm,0.8s,mb4.6
MDJ pmax pmax
comp=Z,56nm,6.8s
MDJ LR LR
comp=Z,30nm,30.1s
MDJ Mudanjiang 51.01 360 *e*P **P 11 54 05.7 -0.4**
comp=Z,19nm,1.1s,mb4.6
RPZ Rata Peaks 51.57 142 P **P 11 54 11.8 +1.5**
comp=Z,29nm,0.8s,mb5.0,baz=297,slow=2.8,SNR=15
ASAJ Asahikawa 51.79 12 P **P 11 54 11.5 -0.4**
comp=Z,6.0nm,0.4s,mb4.5,baz=231,slow=9.9,SNR=18
ASAJ Asahikawa 51.79 12 *e*P **P 11 54 11.5 -0.4**
comp=Z,1.6nm,0.4s,mb4.0
LSA Lhasa 51.88 316 *e*P **P 11 54 13.4 +0.6**
comp=Z,18nm,0.7s,mb4.8
ODAN Odare 52.96 311 *e*P **P 11 54 20.2 -0.6**
comp=Z,52nm,0.5s,mb5.5
URZ Urewera 52.97 134 P **P 11 54 20.0 -0.8**
comp=Z,14nm,1.1s,mb4.6,baz=293,slow=7.7,SNR=5.2
TAPN Taplejung 52.98 312 *e*P **P 11 54 20.6 -0.4**
comp=Z,58nm,0.4s,mb5.7
RAMN Ramite 53.60 310 *e*P **P 11 54 25.3 -0.2**
comp=Z,144nm,0.5s,mb6.0
GTA Gaotai 53.61 331 P **P 11 54 25.4 +0.1**
GTA pP pP 11 55 08.2 +3.5
GTA pmax pmax
comp=Z,27nm,0.8s,mb5.0
GUN Gumba 54.65 311 *e*P **P 11 54 32.7 -0.4**
comp=Z,78nm,0.5s,mb5.7
PKI Pulchoki 54.83 310 *e*P **P 11 54 33.5 -0.9**
comp=Z,31nm,0.4s,mb5.3
PKIN Phulchoki 54.84 310 *e*P **P 11 54 33.3 -1.1**
KKN Kakani 55.04 311 *e*P **P 11 54 35.3 -0.6**
comp=Z,29nm,0.4s,mb5.3
DMN Daman 55.08 310 *e*P **P 11 54 35.7 -0.4**
comp=Z,21nm,0.3s,mb5.3
GKN Gorkha 55.63 310 *e*P **P 11 54 39.5 -0.6**
comp=Z,82nm,0.3s,mb6.1
HYB Hyderabad 56.08 296 *i*P **P 11 54 42.0 -1.5**
KOLN Koldanda 56.30 310 *e*P **P 11 54 44.5 -0.4**
comp=Z,44nm,0.3s,mb5.8
DANN Dangsing 56.48 310 *e*P **P 11 54 45.5 -0.6**
comp=Z,26nm,0.4s,mb5.4
ULN Ulaanbaatar 57.89 342 *e*P **P 11 54 56.0 +0.4**
comp=Z,18nm,0.8s,mb5.0
ULN Ulaanbaatar 57.89 342 P **P 11 54 56.4 +0.8**
SNR=7.7
SONM Songino Array 58.07 342 P **P 11 54 57.1 +0.2**
comp=Z,2.7nm,0.3s,mb4.5,baz=153,slow=6.6,SNR=29
SONM pP pP 11 55 34.9 -1.9
comp=Z,1.0nm,0.8s,baz=209,slow=12,SNR=1.2
KAD Karad 59.98 294 *e*PKP **P 11 55 09.3 -1.3**
JOSI Joshimath 60.75 310 *e*PKP **P 11 55 15.4 -0.1**
CASY Casey 61.05 189 *e*P **P 11 55 17.8 +0.8**
comp=Z,9.0nm,1.0s,mb4.5
SONA Sohna 61.61 307⇑ *i*P **P 11 55 19.5 -1.9**
SONA AMb AMB 11 55 20.3
comp=Z,36nm,0.8s,mb5.2
KHET Khetri 62.56 306 *e*PKP **P 11 55 26.5 -1.3**
KHET AMb AMB 11 55 27.3
comp=Z,9.3nm,0.4s,mb4.9
KKR Kurukshetra 62.57 309 *e*PKP **P 11 55 26.9 -0.9**
WMQ Urumqi 63.04 327 *e*P **P 11 55 31.0 +0.4**
WMQ PP PP 11 57 53.0 +1.4
WMQ S **S 12 03 47.0 -0.4**
WMQ ScS ScS 12 05 04.0 -2.6
WMQ SS SS 12 07 57.0 +0.4
WMQ pmax pmax
comp=Z,56nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,150nm,6.0s
WMQ LR LR
comp=N,37nm,20.0s
WMQ LR LR
comp=E,54nm,20.0s
WMQ LR LR
comp=Z,29nm,20.0s
PETK Petropavlovsk- 64.00 18 P **P 11 55 37.0 +0.3**
comp=Z,5.0nm,0.6s,mb4.5,baz=197,slow=4.6,SNR=4.4
KSH Kashi 67.69 317 *e*P **P 11 56 01.3 +0.7**
KSH *e*PcP PcP 11 56 28.3 +2.1
KSH *e*PP PP 11 58 32.6 +0.3
KSH *e*PcS 12 00 31.6
KSH *e*S S 12 04 39.7 -4.5
KSH *e*ScS ScS 12 05 39.3 -3.4
KSH pmax pmax
comp=Z,44nm,1.0s,mb5.1
KSH LR LR
comp=N,93nm,4.9s
KSH LR LR
comp=E,90nm,4.6s
KSH LR LR
comp=Z,230nm,5.4s
MK31 Makanchi Array 67.87 327 *e*P **P 11 56 01.9 +0.3**
MKAR Makanchi Array 67.87 327 P **P 11 56 01.8 +0.3**
comp=Z,58nm,0.5s,mb5.6,baz=116,slow=8.4,SNR=443
YAK Yakutsk 68.46 360 *e*P **P 11 56 04.3 -0.5**
comp=Z,54nm,0.8s,mb5.3
KZA Kyzart 69.45 320 P **P 11 56 12.9 +1.4**
SNR=14
KZA Kyzart 69.45 320 *e*P **P 11 56 12.8 +1.4**
comp=Z,47nm,0.9s,mb5.2
TKM2 Tokmak 2 69.65 320 P **P 11 56 13.4 +0.8**
SNR=56
TKM2 Tokmak 2 69.65 320 *e*P **P 11 56 13.3 +0.7**
comp=Z,41nm,0.6s,mb5.3
KBK Karagaybulak 69.93 320 P **P 11 56 15.3 +1.0**
SNR=11
UCH Uchtor 70.00 319 P **P 11 56 16.3 +1.6**
SNR=6.1
UCH Uchtor 70.00 319 *e*P **P 11 56 16.4 +1.7**
comp=Z,15nm,0.9s,mb4.7
AAK Ala-Archa 70.21 320 P **P 11 56 17.1 +1.0**
SNR=22
AAK Ala-Archa 70.21 320 *e*P **P 11 56 17.0 +1.0**
comp=Z,38nm,0.8s,mb5.2
AAK Ala-Archa 70.21 320 P **P 11 56 17.2 +1.1**
SNR=19
CHMS Chumysh 70.22 320 P **P 11 56 16.3 +0.2**
SNR=11
KBL Kabul 70.47 310 *e*P **P 11 56 18.0 +0.2**
comp=Z,18nm,1.1s,mb4.7
AML Almayashu 70.48 319 P **P 11 56 19.1 +1.4**
SNR=23
AML Almayashu 70.48 319 *e*P **P 11 56 19.0 +1.3**
comp=Z,66nm,0.9s,mb5.4
USP Ospenovka 70.52 320 P **P 11 56 18.5 +0.6**
SNR=53
EKS2 Erkin-Say 70.68 320 P **P 11 56 20.1 +1.1**
SNR=53
EKS2 Erkin-Say 70.68 320 *e*P **P 11 56 19.9 +1.0**
comp=Z,44nm,0.7s,mb5.3
ZAA0 Zalesovo Array 71.22 334 *e*P **P 11 56 21.0 -0.8**
ZALV Zalesovo Beam 71.22 334 P **P 11 56 20.9 -1.0**
comp=Z,11nm,0.6s,mb4.7,baz=119,slow=4.9,SNR=22
ZALV pP pP 11 56 59.9 -3.5
comp=Z,2.7nm,0.6s,baz=156,slow=11,SNR=1.3
KURK Kurchatov 72.16 329 *e*P **P 11 56 27.4 -0.2**
comp=Z,17nm,0.6s,mb5.0
KURK Kurchatov 72.16 329 P **P 11 56 27.7 +0.1**
SNR=9.9
KKAR Karatay Array 73.01 319 *e*P **P 11 56 32.9 +0.1**
comp=Z,7.9nm,0.5s,mb4.7
MAW Mawson 75.26 201 P **P 11 56 46.6 +1.2**
comp=Z,4.6nm,0.6s,mb4.3,baz=82,slow=5.7,SNR=24
SMDO Samad 76.11 296 P **P 11 56 51.7 +0.6**
SNR=9.3
IDAH Dahanechah 77.06 306 *e*P **P 11 56 57.3 +1.1**
BRVK Borovoye 77.78 328 *e*P **P 11 56 59.4 -0.3**
comp=Z,12nm,0.8s,mb4.6
BRVK Borovoye 77.78 328 P **P 11 56 59.8 +0.1**
SNR=5.8
BANOM Banah 78.32 298 P **P 11 57 04.5 +1.2**
SNR=5.9
IAKL Akhelmad 79.05 309 *e*P **P 11 57 07.1 0.0**
IKRD Kardeh 79.28 309 *e*P **P 11 57 04.0 -4.4**
ISFR Sfrayin 79.76 309 *e*P **P 11 57 11.6 +0.7**
IBAF Bafgh 80.28 304 *e*P **P 11 57 13.7 -0.2**
ISRV Sarvestan 81.84 301 *e*P **P 11 57 22.9 +0.7**
IPAR Pars 82.00 301 *e*P **P 11 57 23.2 +0.2**
ABKAR Akbulak array 82.17 322 *e*P **P 11 57 22.4 -1.0**
comp=Z,4.3nm,0.5s,mb4.3
IANJ Anjilo 82.54 307 *e*P **P 11 57 25.6 -0.1**
ISHM Shahmirzad 83.11 307 *e*P **P 11 57 28.8 +0.2**
QSPA South Pole Qui 83.34 180 P **P 11 57 29.3 +0.4**
comp=Z,5.8nm,0.6s,mb4.5,baz=316,slow=1.4,SNR=61
IKLH Kolahrood 83.95 304 *e*P **P 11 57 33.9 +1.0**
IPRN Peran 83.96 307 *e*P **P 11 57 33.2 +0.3**
IPIR Pirpir 84.39 304 *e*P **P 11 57 36.6 +1.4**
ARU Arti 85.35 328 *e*P **P 11 57 38.6 -0.8**
comp=Z,12nm,0.8s,mb4.7
QRN Al-Qurain 86.19 299 *e*P **P 11 57 43.3 -0.9**
QRN AMb AMB 11 57 44.9
comp=Z,58nm,1.0s,mb5.3
UMR Umm Al-Rimmam 86.50 300 *e*P **P 11 57 45.0 -0.7**
UMR AMb AMB 11 57 46.4
comp=Z,46nm,1.0s,mb5.2
RDF Al-Radifah 86.54 299 *e*P **P 11 57 45.5 -0.3**
RDF AMb AMB 11 57 47.1
comp=Z,29nm,0.8s,mb5.1
NAY Al-Naaiem 86.85 300 *e*P **P 11 57 46.5 -0.9**
NAY AMb AMB 11 57 48.0
comp=Z,27nm,0.9s,mb5.1
BPAW Bear Paw Mtn. 91.17 26 *e*P **P 11 58 08.0 +1.1**
ILAR Eielson Array 93.05 25 P **P 11 58 13.2 -2.2**
comp=Z,1.1nm,0.7s,mb4.1,baz=266,slow=4.4,SNR=18
VNA2 Neumayer--Watz 97.57 193 *e*P **P 11 58 34.4 -1.7**
BRTR Keskin Array B 99.02 309 P **P 11 58 42.1 -1.1**
comp=Z,0.5nm,0.7s,mb4.1,baz=96,slow=5.1,SNR=3.6
BRTR Keskin Array B 99.02 309 P **P 11 58 42.1 -1.1**
ARCES ARCESS Array B 101.21 340 P Pdif 11 58 50.4 -2.2
comp=Z,0.7nm,0.6s,baz=83,slow=7.4,SNR=4.7
KBS Kingsbay 101.69 350 *e*Pdif Pdif 11 58 53.6 -1.2
comp=Z,36nm,0.6s
YKA Yellowknife Ar 107.45 26 PKiKP PKiKP 12 03 28.4 +0.8
comp=Z,0.2nm,0.5s,baz=303,slow=2.0,SNR=4.0
PDAR Pinedale Array 116.69 45 PKP PKPdf 12 03 46.3 +0.6
comp=Z,0.3nm,0.7s,baz=233,slow=0.9,SNR=3.1
LPL La Plagne 117.64 318 *e*PKIKP PKPdf 12 03 46.8 -0.7
CABF La Chapelle 117.67 320 *e*PKIKP PKPdf 12 03 47.5 -0.1
comp=Z,6.0nm,0.5s
MBDF Montbardon 117.88 318 *e*PKIKP PKPdf 12 03 47.2 -0.8
comp=Z,19nm,1.1s
ORIF Oris-en-Rattie 118.41 318 *e*PKIKP PKPdf 12 03 48.7 -0.3
comp=Z,6.0nm,0.6s
KEST Kesra 118.54 307 PKP PKPdf 12 03 49.1 -0.5
comp=Z,1.0nm,0.8s,baz=247,slow=7.7,SNR=3.8
SSF Saint Saulge 119.14 321 *e*PKIKP PKPdf 12 03 50.1 -0.3
comp=Z,8.6nm,0.8s
VIVF Saint-Julien-l 119.23 318 *e*PKIKP PKPdf 12 03 50.3 -0.3
BGF Bois d'Agland 119.75 321 *e*PKIKP PKPdf 12 03 51.5 -0.1
comp=Z,16nm,0.8s
MFF Saint Martin d 121.60 322 *e*PKIKP PKPdf 12 03 54.8 -0.3
comp=Z,4.7nm,0.5s
ETSF Etsaut 123.48 318 *e*PKIKP PKPdf 12 03 58.6 -0.3
TORD Torodi Ar. Bea 128.66 281 PKP PKPdf 12 04 09.3 -0.2
comp=Z,1.4nm,0.6s,baz=61,slow=1.6,SNR=9.7
TORD SKPbc 12 07 12.9
comp=Z,1.6nm,0.6s,baz=63,slow=3.5,SNR=7.1
SCHQ Schefferville 130.08 13 SKPbc SKPbc 12 07 16.8 -1.0
comp=Z,9.4nm,0.7s,baz=346,slow=4.2,SNR=10
DBIC Dimbokro 135.09 273 SKPbc SKPbc 12 07 35.3 -1.1
comp=Z,3.8nm,0.5s,baz=75,slow=3.8,SNR=8.4
CFAA Coronel Fontan 138.21 156 SKPbc SKPbc 12 07 45.4 +0.1
comp=Z,0.3nm,0.6s,baz=194,slow=3.7,SNR=5.5
BBTS Babate 146.12 286 PKPbc PKPbc 12 04 43.4 +0.7
comp=Z,24nm,0.6s,baz=97,slow=1.2,SNR=10

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*IDC **05** 11:53:09.2±1.6, 6°.90S×129°.47E, h0km, mb4.0/4, mb1 4.5/7, mb1mx4.2/17, mbtmp4.3/7, ML4.7/3, Error ellipse: s-maj=73.4km s-min=23.7km az=76.0*
*NEIC **05** 11:53:14.3±0.7, 7°.00S×129°.36E, h35km, mb4.0/1, Error ellipse: s-maj=33.3km s-min=9.2km az=74.0*
ISC 05 11:53:14.5±0.9, 7°.0S±0°.1×129°.4E±0°.3, h35km, n9, σ0.72/12, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.61**	**198**	Pn	**Pn**	**11 55 57.5**	**-0.2**
	3.4nm,0.3s,baz=42,slow=10,SNR=7.3						
FITZ				Sn	**Sn**	**11 57 54.2**	**-12**
	1.0nm,0.3s,baz=118,slow=17,SNR=3.0						
WRA	**Warramunga Arr**	**13.74**	**160**	Pn	**Pn**	**11 56 26.4**	**-0.4**
	3.7nm,0.3s,baz=329,slow=14,SNR=6.7						
WRA				Sn	**Sn**	**11 58 46.1**	**-12**
	5.7nm,0.3s,baz=338,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.13**	**166**	P	**Pn**	**11 57 11.9**	**+0.7**
	2.2nm,0.3s,baz=337,slow=9.3,SNR=8.2						
ASAR				S	**Sn**	**12 00 11.1**	**-10**
	1.4nm,0.3s,baz=346,slow=26,SNR=5.5						
CMAR	**Chiang Mai Arr**	**39.25**	**311**	P	**P**	**12 00 40.5**	**+0.6**
	1.4nm,0.7s,mb3.8,baz=137,slow=7.0,SNR=9.0						
SONM	**Songino Array**	**58.25**	**342**	P	**P**	**12 03 06.4**	**+1.0**
	0.3nm,0.5s,mb3.6,baz=134,slow=6.2,SNR=4.2						
MK31	**Makanchi Array**	**67.88**	**327**	*e*P	**P**	**12 04 09.5**	**+0.1**
MKAR	**Makanchi Array**	**67.88**	**327**	P	**P**	**12 04 09.2**	**-0.1**
	1.2nm,0.4s,mb4.2,baz=118,slow=8.1,SNR=16						
ZALV	**Zalesovo Beam**	**71.31**	**334**	P	**P**	**12 04 28.7**	**-1.6**
	0.8nm,0.3s,mb4.1,baz=108,slow=4.7,SNR=3.2						
ABKAR	**Akbulak array**	**82.12**	**322**	*e*P	**P**	**12 05 31.3**	**-0.2**
	1.3nm,0.7s,mb4.0						

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*ISCJB **05** 12:00:20.9±1.9, 16°.66S±0°.08×67°.53W±0°.07, h7km±13km, mb3.8/6, MS3.4/4, Error ellipse: s-maj=14.5km s-min=11.3km az=22.8*
*IDC **05** 12:00:21.2±0.8, 16°.74S×67°.59W, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.0/18, mbtmp4.1/7, ML5.1/1, MS3.5/4, Ms1 3.5/4, ms1mx3.1/24, Error ellipse: s-maj=24.1km s-min=9.0km az=37.0*
*NEIC **05** 12:00:23.1±0.6, 16°.69S×67°.59W, h10km, mb4.0/1, Error ellipse: s-maj=17.4km s-min=11.1km az=51.0*
ISC 05 12:00:22.3±2.0, 16°.68S±0°.08×67°.57W±0°.07, h4km±14km, n18, σ1.906/14, mb3.8/6, MS3.4/4, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**0.66**	**306**	Pg	**Pg**	**12 00 34.4**	**-0.6**
	534nm,0.3s,baz=130,slow=15,SNR=7375						
LPAZ				Lg		12 00 43.7	
	833nm,0.3s,baz=217,slow=20,SNR=39						
LPAZ	**La Paz**	**0.66**	**306**	*e*Pg	**Pg**	**12 00 34.5**	**-0.5**
LPAZ				*e*Sg	**Sg**	**12 00 43.4**	**-0.1**
LPAZ				Lg		12 00 43.7	
SIV	**San Ignacio**	**6.28**	**85**	Pn	**Pn**	**12 01 56.8**	**+1.2**
	22nm,0.3s,baz=273,slow=11,SNR=110						
SIV				Sn	**Sn**	**12 03 07.6**	**-0.3**
	30nm,0.3s,baz=1.1,slow=20,SNR=6.1						
SIV				Lg		12 03 42.6	
	27nm,0.3s,baz=173,slow=22,SNR=7.8						
CFAA	**Coronel Fontan**	**14.88**	**182**	Pn	**Pn**	**12 03 55.0**	**+1.6**
	0.1nm,0.3s,baz=359,slow=11,SNR=15						
OTAV	**Otavalo**	**19.94**	**326**	P	**Pn**	**12 04 57.0**	**0.0**
	12nm,1.6s						
ROSC	**El Rosal**	**22.41**	**342**	LR	LR	12 13 40.2	
	comp=Z,95nm,20.1s,MS3.2,baz=32,slow=36						
PLCA	**Paso Flores**	**24.11**	**186**	P	**P**	**12 05 37.5**	**-1.5**
	2.1nm,0.9s,mb3.6,baz=14,slow=13,SNR=4.4						
PLCA				LR	LR	12 16 49.0	
	comp=Z,108nm,18.9s,MS3.4,baz=286,slow=41						
RCBR	**Riachuelo**	**32.82**	**75**	LR	LR	12 21 51.8	
	comp=Z,72nm,20.7s,MS3.4,baz=223,slow=39						
CMIG	**Matias Romero**	**43.01**	**320**	P	**P**	**12 08 24.8**	**+1.6**
	1.3nm,0.4s,mb4.0,baz=211,slow=12,SNR=3.9						
TXAR	**Lajitas Array**	**57.50**	**322**	P	**P**	**12 10 13.0**	**+0.2**
	0.4nm,0.8s,mb3.5,baz=152,slow=8.3,SNR=5.1						
ULM	**Lac du Bonnet**	**71.15**	**341**	LR	LR	12 43 04.5	
	comp=Z,52nm,19.5s,MS3.8,baz=305,slow=36						
QSPA	**South Pole Qui**	**73.49**	**180**	P	**P**	**12 11 54.9**	**-0.7**
	1.6nm,0.9s,mb4.0,baz=177,slow=4.9,SNR=3.9						
QSPA	**South Pole Qui**	**73.49**	**180**	P	**P**	**12 11 54.9**	**-0.7**
TORD	**Torodi Ar. Bea**	**74.57**	**71**	P	**P**	**12 12 00.9**	**-2.1**
	1.3nm,0.9s,mb3.9,baz=261,slow=6.2,SNR=5.7						
YKA	**Yellowknife Ar**	**87.09**	**340**	P	**P**	**12 13 09.4**	**+0.6**
	0.9nm,0.9s,mb4.0,baz=132,slow=4.7,SNR=4.1						
ASAR	**Alice Springs**	**134.75**	**208**	PKP	PKPdf	12 19 43.4	+0.3
	0.2nm,0.6s,baz=132,slow=1.9,SNR=3.8						
WRA	**Warramunga Arr**	**137.72**	**211**	PKP	PKPdf	12 19 49.1	+0.4
	0.9nm,1.0s,baz=149,slow=2.0,SNR=3.7						
SONM	**Songino Array**	**148.53**	**8**	PKPbc	PKPbc	12 20 09.9	-0.5
	0.8nm,0.6s,baz=344,slow=1.3,SNR=4.8						

IDC 05 12:05:06.6±1.9, 17°.45S×69°.49W, h171km±13km, mb3.6/5, mb1 3.7/5, mb1mx3.4/15, mbtmp3.6/5, Error ellipse: s-maj=42.3km s-min=23.0km az=118.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.74**	**48**	P	Pn	12 05 40.7	+0.4
	40nm,0.3s,baz=235,slow=6.7,SNR=8.6						
LPAZ				S	Sn	12 06 07.6	+1.4
	4.0nm,0.3s,baz=37,slow=18,SNR=2.9						
PLCA	**Paso Flores**	**23.22**	**182**	P	P	12 09 58.5	+0.1
	2.0nm,0.9s,baz=356,slow=12,SNR=3.9						
DBIC	**Dimbokro**	**68.17**	**75**	P	P	12 15 49.2	+0.3
	7.9nm,1.2s,baz=243,slow=6.8,SNR=3.2						
QSPA	**South Pole Qui**	**72.72**	**180**	P	P	12 16 16.2	+0.8
	0.8nm,1.0s,baz=247,slow=3.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**76.55**	**71**	P	P	12 16 38.4	-0.1
	1.5nm,0.7s,baz=259,slow=5.6,SNR=9.1						
YKA	**Yellowknife Ar**	**87.21**	**341**	P	P	12 17 33.4	+0.3
	0.3nm,0.5s,baz=131,slow=4.6,SNR=4.6						
ASAR	**Alice Springs**	**133.18**	**210**	PKP	PKPdf	12 24 01.5	-1.2
	0.2nm,0.8s,baz=165,slow=3.8,SNR=4.1						
WRA	**Warramunga Arr**	**136.09**	**213**	PKP	PKPdf	12 24 07.6	-0.7
	0.2nm,0.7s,baz=151,slow=2.0,SNR=3.4						

GUC 05 12:08:55.4±1.0, 22°.27S×70°.08W, h68km±7km, ML3.6, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**0.21**	**328**	*e*P	Pn	12 09 05.7	-0.2
TOCH				*i*S	Sn	12 09 13.6	+0.1
TOCH				AML	AML	12 09 14.2	
	comp=E,22μm,0.1s						
MACH	**Maria Elena**	**0.31**	**76⇑**	*i*P	Pn	12 09 07.3	+0.8
MACH				*i*S	Sn	12 09 15.8	+1.3
MECH	**Mejillones**	**0.90**	**202**	*e*P	Pn	12 09 12.6	0.0
MECH				*i*S	Sn	12 09 25.9	+0.7
MECH				AML	AML	12 09 27.6	
	comp=E,1μm,0.4s						
ANCH	**Antofagasta**	**1.44**	**192⇑**	*i*P	Pn	12 09 14.4	-5.1
ANCH				*i*S	Sn	12 09 32.3	-5.3
ANCH				AML	AML	12 09 33.4	
	comp=E,557nm,0.2s						

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*NEIC **05** 12:14:57.5, 19°.49N×67°.07W, h29km, MD3.5(RSPR), After RSPR.*
RSPR 05 12:14:57.5, 19°.49N×67°.07W, h29km±28km, 8C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.02**	**182**	*e*S	Sn	12 15 26.3	-2.9
AOPR	**Arecibo Observ**	**1.18**	**165⇑**	*e*P	Pn	12 15 16.0	-2.0
AOPR				*e*S	Sn	12 15 30.4	-2.7
LSP	**Las Mesas**	**1.31**	**181⇑**	*e*P	Pn	12 15 18.4	-1.4
CRPR	**Cabo Rojo, PR**	**1.48**	**181⇑**	*e*P	Pn	12 15 20.6	-1.6
CRPR				*e*S	Sn	12 15 37.9	-2.6
CELP	**Cerrillos**	**1.48**	**162⇑**	*e*P	Pn	12 15 21.0	-1.2
CELP				*e*S	Sn	12 15 39.0	-1.6
OBIP	**Obispado Ponce**	**1.51**	**163⇑**	*e*P	Pn	12 15 21.4	-1.2
OBIP				*e*S	Sn	12 15 39.2	-2.0
HUMP	**Col San Antoni**	**1.77**	**139⇑**	*e*P	Pn	12 15 24.9	-1.3
SMN1	**Samana, DR**	**2.10**	**262⇑**	*e*P	Pn	12 15 29.0	-1.7
SMN1				*e*S	Sn	12 15 53.7	-2.2
STVI	**Saint Thomas**	**2.30**	**119⇑**	*e*P	Pn	12 15 32.1	-1.5
STVI				*e*S	Sn	12 15 58.2	-2.7

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*NIED **05** 12:20:00, 28°.40N×130°.00E, h11km, Mw3.9 Best double couple: M0=8.65000×10^14 NP1:φ=68.00000°, δ=83.00000°, λ=94.00000°. NP2:φ=215.00000°, δ=8.00000°, λ=58.00000°.*
*IDC **05** 12:20:02.1±0.9, 28°.06N×128°.33E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.7/23, mbtmp3.6/8, ML2.9/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/38, Error ellipse: s-maj=54.7km s-min=19.2km az=77.0*
*ISCJB **05** 12:20:03.9±0.6, 28°.34N±0°.04×130°.04E±0°.07, h33km, mb3.6/7, Error ellipse: s-maj=10.2km s-min=3.5km az=32.6*
*JMA **05** 12:20:03.5±0.1, 28°.36N×130°.05E, h28km±1km, M3.7*
JMA Felt II J1.
*NEIC **05** 12:20:03.6, 28°.36N×130°.05E, h28km, MG3.7(JMA), After JMA.*
ISC 05 12:20:04.5±0.7, 28°.35N±0°.04×130°.01E±0°.07, h25km±3km, n22, σ0.79/32, mb3.6/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.04**	**228**	P	**Pb**	**12 20 08.3**	**-0.6**
JZK				S	**Sb**	**12 20 12.4**	**+0.7**
JAM	**Amami Oshima**	**0.36**	**281**	P	**Pb**	**12 20 12.1**	**-0.4**
JAM				S	**Sb**	**12 20 17.7**	**-0.2**
JTK	**Tokunoshima**	**1.09**	**240**	P	**Pn**	**12 20 24.0**	**-0.2**
JTK				*e*S	**Sn**	**12 20 38.8**	**+0.3**
JNN	**Nakanoshima**	**1.50**	**355**	P	**Pn**	**12 20 29.4**	**-0.4**
JKC	**Kuchinoerabu**	**2.12**	**4**	P	**Pn**	**12 20 38.2**	**-0.1**
JKC				*e*S	**Sn**	**12 21 03.6**	**-0.2**
JOW	**Kunigami**	**2.15**	**226**	*e*Pn	**Pn**	**12 20 38.7**	**-0.1**
JOW	**Kunigami**	**2.15**	**226**	P	**Pn**	**12 20 38.8**	**-0.1**
JOW				*e*S	**Sn**	**12 21 05.8**	**+1.0**
JIH	**Iheya**	**2.23**	**235**	P	**Pn**	**12 20 39.9**	**0.0**
JIH				*e*S	**Sn**	**12 21 06.9**	**+0.2**
JTN	**Tanegashima 3**	**2.45**	**20**	P	**Pn**	**12 20 42.4**	**-0.6**
JTN				S	**Sn**	**12 21 11.5**	**-0.6**
JJT2	**Tamagusuku 2**	**2.98**	**223**	P	**Pn**	**12 20 50.1**	**-0.1**
JAGN	**Aguni-jima**	**3.02**	**235**	P	**Pn**	**12 20 50.5**	**-0.2**
JAGN				*e*S	**Sn**	**12 21 26.3**	**+0.2**
JKE	**Kume jima 2**	**3.50**	**236**	P	**Pn**	**12 20 57.1**	**-0.3**
JKE				S	**Sn**	**12 21 37.9**	**-0.2**
JNU	**Nakatsue**	**4.82**	**9**	*e*Pn	**Pn**	**12 21 16.4**	**+0.9**
JNU				*e*Sn	**Sn**	**12 22 12.9**	**+2.4**
KSRS	**Korea Array**	**9.25**	**350**	Pn	**Pn**	**12 22 18.4**	**+2.1**
	0.1nm,0.3s,baz=172,slow=14,SNR=8.5						
KSRS				LR	LR	12 26 00.9	
	comp=Z,80nm,20.1s,baz=161,slow=38						
SONM	**Songino Array**	**26.73**	**323**	P	**P**	**12 25 38.3**	**-3.6**
	0.2nm,0.3s,mb3.1,baz=123,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	**48.19**	**175**	P	**P**	**12 28 43.0**	**0.0**
	0.5nm,0.7s,mb3.7,baz=355,slow=8.4,SNR=6.1						
WRA	**Warramunga Arr**	**48.19**	**175**	P	**P**	**12 28 43.0**	**0.0**
ASAR	**Alice Springs**	**51.84**	**175**	P	**P**	**12 29 11.4**	**+0.7**
	0.3nm,0.7s,mb3.4,baz=8.5,slow=13,SNR=7.6						
ILAR	**Eielson Array**	**61.83**	**29**	P	**P**	**12 30 29.3**	**+8.2**
	0.2nm,0.9s,mb3.3,baz=291,slow=7.6,SNR=4.7						
ARCES	**ARCESS Array B**	**68.62**	**339**	P	**P**	**12 31 04.0**	**-1.0**
	2.7nm,0.9s,mb4.2,baz=76,slow=8.5,SNR=2.8						
FINES	**FINESS Array B**	**71.81**	**331**	P	**P**	**12 31 23.2**	**-1.4**
	0.9nm,0.3s,mb

*ISCJB **05** 12:20:22.9±0.5, 37°.70N±0°.03×38°.13E±0°.04, h5km±.6km, Error ellipse: s-maj=6.9km s-min=3.8km az=37.1*
*DDA **05** 12:20:22.6, 37°.67N×38°.11E, h7km±6km, Md2.8*
*ISK **05** 12:20:23.3, 37°.74N×38°.09E, h13km, MD2.7*
*CSEM **05** 12:20:23.0±0.2, 37°.67N×38°.17E, h10km, MD2.8, Error ellipse: s-maj=7.4km s-min=3.7km az=128.0*

ISC 05 12:20:23.4±0.5, 37°.69N±0°.03×38°.15E±0°.05, h10km±5km, n23, σ0°90/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.25**	**152**	*i* P	**Pg**	**12 20 27.3**	**-1.1**
ATAB				*i* S	**Sg**	**12 20 32.7**	**+0.8**
ATAB	**Bozova**	**0.25**	**152**	*i* P	**Pg**	**12 20 27.3**	**-1.1**
ATAB				*i* S	**Sg**	**12 20 32.7**	**+0.9**
GZT	**Gaziantep**	**0.57**	**235**	*i* P	**Pg**	**12 20 31.9**	**-2.6**
GZT				*i* S	**Sg**	**12 20 41.7**	**-0.3**
MALT	**Malatya**	**0.66**	**19**	*e*PG	**Pg**	**12 20 35.5**	**-0.8**
MALT				*e*SG	**Sg**	**12 20 46.0**	**+1.0**
MALT	**Malatya**	**0.66**	**19**	*e*Pg	**Pg**	**12 20 35.5**	**-0.7**
MALT				*e*Sg	**Sg**	**12 20 46.0**	**+1.1**
MYA	**Malataya**	**0.67**	**19**	*e*PG	**Pg**	**12 20 36.1**	**-0.4**
MYA				*e*SG	**Sg**	**12 20 45.7**	**+0.4**
MYA	**Malataya**	**0.67**	**19**	*e*Pg	**Pg**	**12 20 36.1**	**-0.4**
MYA				*e*Sg	**Sg**	**12 20 45.7**	**+0.4**
GAZ	**Gaziantep**	**0.91**	**236**	*e*PG	**Pg**	**12 20 41.2**	**+0.3**
GAZ				*e*SG	**Sg**	**12 20 54.5**	**+1.9**
GAZ	**Gaziantep**	**0.91**	**236**	*e*Pg	**Pg**	**12 20 41.2**	**+0.3**
GAZ				*e*Sg	**Sg**	**12 20 54.6**	**+1.9**
KMRS	**Kahramanmaras**	**1.01**	**260**	*e*PG	**Pg**	**12 20 42.1**	**-0.7**
KMRS				*e*SG	**Sg**	**12 20 56.2**	**+0.2**
KMRS	**Kahramanmaras**	**1.01**	**260**	*e*Pg	**Pg**	**12 20 42.1**	**-0.7**
KMRS				*e*Sg	**Sg**	**12 20 56.2**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.15**	**53**	*e*PN	**Pn**	**12 20 45.6**	**+0.1**
SVRC	**Sivrice-ELAZID**	**1.15**	**53**	*e*Pn	**Pn**	**12 20 45.6**	**+0.1**
KUZU	**Kuzuini**	**1.25**	**224**	*i* P	**Pn**	**12 20 46.3**	**-0.6**
KUZU				*i* S	**Sb**	**12 21 04.0**	**+0.8**
KUZU	**Kuzuini**	**1.25**	**224**	*i* P	**Pn**	**12 20 46.3**	**-0.6**
KUZU				*i* S	**Sb**	**12 21 04.0**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.51**	**311**	*e*PN	**Pn**	**12 20 49.9**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.51**	**311**	*e*Pn	**Pn**	**12 20 49.9**	**-0.6**
PTK	**Pertek**	**1.55**	**39**	*e*PN	**Pn**	**12 20 51.6**	**+0.6**
PTK	**Pertek**	**1.55**	**39**	*e*Pn	**Pn**	**12 20 51.6**	**+0.6**
SVSK	**Karacayir**	**2.40**	**338**	*e*PN	**Pn**	**12 21 03.5**	**+0.8**
SVSK	**Karacayir**	**2.40**	**338**	*e*Pn	**Pn**	**12 21 03.5**	**+0.8**
RSDY	**Resadiye-TOKAT**	**2.78**	**347**	*e*PN	**Pn**	**12 21 07.2**	**-0.7**
RSDY	**Resadiye-TOKAT**	**2.78**	**347**	*e*Pn	**Pn**	**12 21 07.2**	**-0.7**

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*ISCJB **05** 12:30:00.1±0.3, 14°.22S±0°.07×75°.8W±0°.1, h44km, mb4.4/36, MS3.8/3, Error ellipse: s-maj=15.9km s-min=6.6km az=148.6*
*NEIC **05** 12:30:01.9±0.3, 14°.22S×75°.76W, mb4.6/29, Error ellipse: s-maj=11.9km s-min=5.4km az=55.0*
NEIC Felt [III] at Ica and Pisco; [II] at Chincha Alta and Palpa.
*IDC **05** 12:30:02.0±0.6, 14°.21S×75°.69W, h44km±5km, mb4.1/8, mb1 4.2/12, mb1mx4.1/18, mbtmp4.0/12, ML3.8/4, MS3.8/5, Ms1 3.8/5, ms1mx3.5/21, Error ellipse: s-maj=28.6km s-min=13.4km az=58.0*

ISC 05 12:30:02.2±0.3, 14°.20S±0°.07×75°.7W±0°.1, h46km, h46km±.3km: pP-P, n62, σ0°74/56, mb4.4/36, MS3.8/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.48**	**332**	P	**Pn**	**12 30 39.2**	**-1.1**
	47nm,0.3s,baz=161,slow=13,SNR=67						
NNA				S	**Sn**	**12 31 13.7**	**+4.4**
	622nm,0.3s,baz=234,slow=18,SNR=23						
NNA	**Nana**	**2.48**	**332**	*e*Pn	**Pn**	**12 30 39.4**	**-0.9**
NNA				*e*Sn	**Sn**	**12 31 15.2**	**+5.9**
ATAH	**Atahualpa**	**7.52**	**339**	P	**Pn**	**12 31 50.2**	**+0.9**
	1.4nm,0.3s,baz=164,slow=3.9,SNR=8.0						
ATAH				S	**Sn**	**12 33 21.9**	**+8.5**
	3.7nm,0.3s,baz=342,slow=3.2,SNR=2.2						
ATAH				LR	LR	12 35 21.1	
	comp=Z,290nm,18.5s,baz=171,slow=42						
LPAZ	**La Paz**	**7.55**	**107**	P	**Pn**	**12 31 54.9**	**+5.1**
	6.4nm,0.3s,baz=323,slow=11,SNR=89						
LPAZ	**La Paz**	**7.55**	**107**	*e*Pn	**Pn**	**12 31 54.2**	**+4.4**
SIV	**San Ignacio**	**14.19**	**99**	P	**Pn**	**12 33 19.3**	**-1.4**
	0.2nm,0.3s,baz=274,slow=15,SNR=13						
OTAV	**Otavalo**	**14.61**	**349**	*e*Pn	**Pn**	**12 33 29.0**	**+2.8**
LCO	**Las Campanas**	**15.44**	**164**	*e*Pn	**Pn**	**12 33 37.2**	**+0.2**
	58nm,2.0s						
CFAA	**Coronel Fontan**	**18.61**	**160**	P	**Pn**	**12 34 16.4**	**-0.1**
	0.2nm,0.3s,baz=334,slow=12,SNR=32						
CFAA				LR	LR	12 40 35.5	
	comp=Z,28nm,21.6s,baz=334,slow=34						
ROSC	**El Rosal**	**18.98**	**4**	LR	LR	12 43 07.3	
	comp=Z,213nm,18.6s,baz=22,slow=41						
ROSC	**El Rosal**	**18.98**	**4**	P	**Pn**	**12 34 25.3**	**+4.3**
SDV	**Santo Domingo**	**23.47**	**13**	*e*P	**P**	**12 35 08.6**	**+0.6**
	12nm,0.7s,mb4.5						
PCRV	**Puerto La Cruz**	**26.57**	**25**	LR	LR	12 46 21.2	
	comp=Z,211nm,21.8s,MS3.6,baz=201,slow=37						
BDFB	**Brasilia**	**26.74**	**97**	P	**P**	**12 35 37.8**	**+0.1**
	4.5nm,0.7s,mb4.1						
BDFB				LR	LR	12 47 12.4	
	comp=Z,618nm,21.0s,MS4.1,slow=38						
PLCA	**Paso Flores**	**26.81**	**171**	P	**P**	**12 35 38.0**	**-0.1**
	8.5nm,0.9s,mb4.3,baz=344,slow=11,SNR=19						
PLCA				LR	LR	12 44 35.8	
	comp=Z,210nm,20.0s,MS3.7,baz=113,slow=33						
PLCA	**Paso Flores**	**26.81**	**171**	*e*P	**P**	**12 35 38.5**	**+0.5**
	0.2nm,1.0s						
TXAR	**Lajitas Array**	**51.04**	**328**	P	**P**	**12 38 59.8**	**-0.2**
	0.4nm,0.4s,mb3.8,baz=154,slow=8.7,SNR=18						
TXAR				pP	pP	12 39 12.2	-0.5
	4.7nm,1.0s,baz=152,slow=8.8,SNR=19						
WMOK	**Wichita Mounta**	**53.40**	**336**	P	**P**	**12 39 16.5**	**-0.9**
	5.7nm,1.4s,mb4.3						
WMOK				*e*	pP	12 39 28.4	-1.8
GDL2	**Guadalupe Moun**	**53.71**	**330**	P	**P**	**12 39 20.1**	**+0.4**
	3.7nm,1.0s,mb4.3						
GDL2				*e*	pP	12 39 32.3	-0.2
MNTX	**Cornudas Mount**	**53.81**	**328**	*e*P	**P**	**12 39 19.6**	**-0.8**
	4.5nm,1.2s,mb4.3						
MNTX				*e*	pP	12 39 32.1	-1.2
CPRX	**Cap Rock**	**54.15**	**331**	*e*P	**P**	**12 39 23.8**	**+0.9**
	34nm,1.1s,mb5.2						
CPRX				*e*	pP	12 39 35.4	-0.4
LAZ	**Ladron**	**56.85**	**329**	*e*P	**P**	**12 39 42.3**	**0.0**
	0.5nm,0.7s,mb3.6						
LAZ				*e*	pP	12 39 55.1	-0.2
ANMO	**Albuquerque**	**56.96**	**330**	*e*P	**P**	**12 39 42.5**	**-0.6**
	7.8nm,1.1s,mb4.7						
ANMO				*e*	pP	12 39 54.9	-1.1
SDCO	**Great Sand Dun**	**58.78**	**333**	*e*P	**P**	**12 39 55.3**	**-0.5**
	12nm,1.1s,mb4.8						
SDCO				*e*	pP	12 40 08.1	-0.8
MVCO	**Mesa Verde**	**59.75**	**330**	P	**P**	**12 40 01.8**	**-0.7**
	3.8nm,0.8s,mb4.5						
MVCO				*e*	pP	12 40 14.9	-0.6
WUAZ	**Wupatki**	**59.91**	**327**	*e*P	**P**	**12 40 04.2**	**+0.6**
	8.9nm,1.1s,mb4.7						
WUAZ				*e*pP	pP	12 40 16.5	-0.1
WUAZ				*e*sP	sP	12 40 23.1	+1.1
PV01	**Paradox Valley**	**60.52**	**331**	P	**P**	**12 40 07.6**	**-0.2**
	498nm,1.1s						
PV01				*e*	pP	12 40 20.4	-0.4
CCUT	**Cedar City**	**62.49**	**327**	*e*P	**P**	**12 40 21.8**	**+0.8**
	4.8nm,1.1s,mb4.5						
CCUT				*e*pP	pP	12 40 33.9	-0.2
ARUT	**Antelope Range**	**62.71**	**327**	*e*P	**P**	**12 40 22.5**	**0.0**
	1.1nm,0.5s,mb4.2						
ARUT				*e*	pP	12 40 35.8	+0.2
RSSD	**Black Hills**	**63.55**	**338**	*e*P	**P**	**12 40 27.8**	**-0.2**
	3.8nm,1.1s,mb4.3						
RSSD				*e*	pP	12 40 40.6	-0.5
DAU	**Daniels Canyon**	**63.59**	**330**	*e*P	**P**	**12 40 29.2**	**+0.9**
DUG	**Dugway**	**64.19**	**329**	*e*P	**P**	**12 40 32.6**	**+0.3**
	13nm,1.0s,mb4.9						
DUG				*e*	pP	12 40 45.2	-0.2
PDAR	**Pinedale Array**	**64.67**	**333**	P	**P**	**12 40 34.7**	**-0.6**
	0.6nm,0.9s,mb3.6,baz=148,slow=8.7,SNR=7.0						
PDAR				pP	pP	12 40 47.6	-0.9
	1.7nm,0.9s,baz=140,slow=7.2,SNR=7.2						
HWUT	**Hardware Ranch**	**64.67**	**331**	*e*P	**P**	**12 40 34.8**	**-0.5**
	7.4nm,0.9s,mb4.7						
AGMN	**Agassiz Nation**	**64.77**	**345**	*e*P	**P**	**12 40 34.7**	**-1.1**
	4.1nm,0.6s,mb4.6						
NVAR	**Mina Array Bea**	**65.83**	**324**	P	**P**	**12 40 43.9**	**+0.9**
	1.0nm,0.8s,mb3.9,baz=141,slow=5.4,SNR=7.7						
RRI2	**Red Ridge**	**65.92**	**332**	*e*P	**P**	**12 40 43.3**	**0.0**
	8.2nm,0.9s,mb4.8						
RRI2				*e*	pP	12 40 55.9	-0.7
IMW	**Indian Meadow**	**66.18**	**333**	*e*P	**P**	**12 40 44.7**	**-0.4**
	6.4nm,1.1s,mb4.6						
IMW				*e*	pP	12 40 57.5	-0.7
FLWY	**Flagg Ranch**	**66.22**	**333**	*e*P	**P**	**12 40 45.7**	**+0.4**
FLWY				*e*	pP	12 40 58.3	-0.2
RLMT	**Red Lodge**	**66.44**	**335**	*e*P	**P**	**12 40 46.2**	**-0.5**
	3.8nm,1.3s,mb4.3						
RLMT				*e*	pP	12 40 59.0	-0.9
ULM	**Lac du Bonnet**	**66.58**	**346**	P	**P**	**12 40 47.1**	**-0.4**
	1.1nm,0.3s,mb4.3,baz=169,slow=5.2,SNR=3.4						
HLID	**Hailey**	**67.52**	**330**	*e*P	**P**	**12 40 53.8**	**+0.2**
	2.8nm,0.9s,mb4.3						
HLID				*e*	pP	12 41 06.2	-0.6
MCMT	**McKenzie Canyo**	**67.76**	**332**	*e*P	**P**	**12 40 55.0**	**-0.1**
	1.0nm,1.1s,mb3.8						
MCMT				*e*	pP	12 41 08.4	0.0
BOZ	**Bozeman (W)**	**67.86**	**334**	*e*P	**P**	**12 40 54.8**	**-0.9**
	3.4nm,1.0s,mb4.3						
BOZ				*e*	pP	12 41 07.7	-1.2
DLMT	**Dillon**	**68.06**	**333**	P	**P**	**12 40 55.6**	**-1.4**
	7.2nm,1.1s,mb4.6						
DLMT				*e*	pP	12 41 09.6	-0.6
MOD	**Modoc**	**69.34**	**326**	*e*P	**P**	**12 41 05.3**	**+0.3**
	5.7nm,0.9s,mb4.5						
MOD				*e*pP	pP	12 41 18.0	-0.3
BSMT	**Bassoo Peak**	**70.94**	**333**	P	**P**	**12 41 15.8**	**+1.1**
BSMT				*e*	pP	12 41 28.1	+0.1
NEW	**Newport**	**72.29**	**332**	*e*P	**P**	**12 41 22.3**	**-0.4**
	7.0nm,1.1s,mb4.5						
NEW				*e*	pP	12 41 34.5	-1.6
OD2	**Odessa Site #2**	**72.38**	**331**	*e*P	**P**	**12 41 23.6**	**+0.2**
	24nm,1.1s,mb5.0						
OD2				*e*	pP	12 41 36.6	-0.1
EDM	**Edmonton**	**74.53**	**338**	*e*P	**P**	**12 41 34.7**	**-1.2**
EDM				*e*	pP	12 41 47.8	-1.5
QSPA	**South Pole Qui**	**75.95**	**180**	*e*P	**P**	**12 41 44.7**	**+1.0**
	12nm,1.1s,mb4.7						
TORD	**Torodi Ar. Bea**	**81.26**	**74**	P	**P**	**12 42 14.7**	**+0.5**
	10.0nm,0.9s,mb4.7,baz=263,slow=5.1,SNR=18						
YKA	**Yellowknife Ar**	**82.28**	**343**	pP	pP	12 42 29.9	-2.1
	2.4nm,0.9s,baz=139,slow=5.0,SNR=9.0						
DLBC	**Dease Lake**	**84.84**	**335**	P	**P**	**12 42 31.9**	**+0.3**
DLBC				*e*	pP	12 42 45.2	-0.1
TAM	**Tamanrasset**	**87.51**	**66**	*e*P	**P**	**12 42 46.9**	**+1.3**
	7.1nm,1.2s,mb4.8						
TAM				*e*pP	pP	12 43 00.7	+1.3
TAM				*e*sP	sP	12 43 05.5	+1.0
MAW	**Mawson**	**93.06**	**165**	P	**P**	**12 43 10.6**	**-0.1**
	3.4nm,0.9s,mb4.8,baz=216,slow=5.1,SNR=7.0						
MAW				pP	pP	12 43 23.4	-1.0
	1.9nm,0.9s,baz=279,slow=14,SNR=3.2						
ILAR	**Eielson Array**	**94.96**	**336**	pP	pP	12 43 31.0	-2.1
	0.6nm,0.8s,baz=140,slow=2.2,SNR=6.4						
ABKAR	**Abkulak array**	**129.65**	**37**	*e*PKPdf	PKPdf	12 49 06.9	+0.7
ASAR	**Alice Springs**	**132.55**	**218**	PKP	PKPdf	12 49 10.4	-2.2
	1.1nm,0.8s,baz=161,slow=2.3,SNR=2.7						
WRA	**Warramunga Arr**	**135.04**	**222**	PKP	PKPdf	12 49 16.6	-0.7
	1.6nm,0.9s,baz=127,slow=1.7,SNR=8.1						
SONM	**Songino Array**	**146.42**	**358**	PKPbc	PKPbc	12 49 39.1	+0.8
	10nm,1.1s,baz=339,slow=2.7,SNR=7.8						
SONM				pPKPbc	pPKPbc	12 49 52.5	+0.2
	4.7nm,0.8s,baz=349,slow=3.7,SNR=5.3						
KSRS	**Korea Array**	**148.76**	**322**	PKP	PKPdf	12 49 42.0	+0.9
	4.8nm,1.0s,baz=52,slow=2.0,SNR=9.7						
KSRS				PKPbc	PKPbc	12 49 44.9	-0.1
	5.2nm,1.0s,baz=21,slow=1.9,SNR=15						
KSRS				pPKPbc	pPKPbc	12 49 58.1	-0.9
	3.4nm,1.0s,baz=25,slow=1.6,SNR=4.8						

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*ATH **05** 12:30:50.3, 39°.13N×21°.77E, h43km±1km, MD2.9/4*
*ISCJB **05** 12:30:51.8±0.7, 39°.08N±0°.03×21°.77E±0°.09, h25km±7km, Error ellipse: s-maj=12.0km s-min=4.2km az=4.2*
*CSEM **05** 12:30:51.0±0.1, 39°.07N×21°.76E, h15km, MD2.9, Error ellipse: s-maj=4.8km s-min=2.1km az=90.0*
*THE **05** 12:30:51.5, 39°.06N×21°.81E, h15km, ML2.0/6, Error ellipse: s-maj=2.2km s-min=0.3km az=271.0*

ISC 05 12:30:51.4±0.8, 39°.07N±0°.02×21°.76E±0°.09, h16km±6km, n28, σ0°62/46, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THL	**Klokotos Trika**	**0.53**	**22**	*e*P	**Pg**	**12 31 01.3**	**-0.6**
THL				*e*S	**Sg**	**12 31 09.6**	**+0.7**
THL	**Klokotos Trika**	**0.53**	**22**	P	**Pg**	**12 31 01.4**	**-0.5**
THL				S	**Sg**	**12 31 09.7**	**+0.8**
THL	**Klokotos Trika**	**0.53**	**22**	P	**Pg**	**12 31 01.4**	**-0.5**
THL				*e*S	**Sg**	**12 31 09.6**	**+0.7**
EFP	**Efpalio**	**0.66**	**170**	*e*P	**Pg**	**12 31 04.8**	**+0.6**
EFP				*e*S	**Sg**	**12 31 15.5**	**+2.6**
EFP	**Efpalio**	**0.66**	**170**	P	**Pg**	**12 31 03.8**	**-0.4**
EFP				S	**Sg**	**12 31 13.1**	**+0.2**
EFP	**Efpalio**	**0.66**	**170**	P	**Pg**	**12 31 03.8**	**-0.4**
EFP				S	**Sg**	**12 31 13.1**	**+0.2**
KALE	**Kalithea**	**0.74**	**157**	P	**Pg**	**12 31 05.3**	**-0.6**
KALE				S	**Sg**	**12 31 16.0**	**+0.3**
KALE	**Kalithea**	**0.74**	**157**	P	**Pg**	**12 31 05.3**	**-0.6**
KALE				S	**Sg**	**12 31 16.0**	**+0.3**
TRIZ	**Trizonia**	**0.75**	**161**	P	**Pg**	**12 31 05.3**	**-0.7**
TRIZ				S	**Sg**	**12 31 16.2**	**+0.4**
TRIZ	**Trizonia**	**0.75**	**161**	P	**Pg**	**12 31 05.3**	**-0.7**
TRIZ				S	**Sg**	**12 31 16.2**	**+0.4**
LAKA	**Lakka**	**0.85**	**168**	P	**Pb**	**12 31 07.5**	**-0.2**
LAKA				S	**Sb**	**12 31 19.2**	**+0.3**
LAKA	**Lakka**	**0.85**	**168**	P	**Pb**	**12 31 07.5**	**-0.2**
LAKA				S	**Sb**	**12 31 19.2**	**+0.3**
DSF	**Desfina**	**0.89**	**138**	P	**Pb**	**12 31 07.4**	**-1.0**
DSF	**Desfina**	**0.89**	**138**	P	**Pb**	**12 31 07.4**	**-1.0**
RLS	**Riolos of Patr**	**1.04**	**193**	*e*P	**Pb**	**12 31 10.9**	**-0.1**
RLS				*e*S	**Sb**	**12 31 25.5**	**+1.1**
RLS	**Riolos of Patr**	**1.04**	**193**	*e*P	**Pb**	**12 31 10.9**	**-0.1**
RLS				*e*S	**Sb**	**12 31 25.5**	**+1.1**
LKR	**Lokris**	**1.05**	**113**	*e*P	**Pb**	**12 31 09.9**	**-1.3**
LKR	**Lokris**	**1.05**	**113**	P	**Pb**	**12 31 11.2**	**0.0**
LKR	**Lokris**	**1.05**	**113**	P	**Pb**	**12 31 11.2**	**0.0**
LIT	**Litokhoron**	**1.17**	**28**	P	**Pn**	**12 31 13.1**	**0.0**
LIT				S	**Sb**	**12 31 28.8**	**+0.7**
LIT	**Litokhoron**	**1.17**	**28**	P	**Pn**	**12 31 13.1**	**0.0**
LIT				S	**Sb**	**12 31 28.8**	**+0.7**
GUR	**Goura**	**1.22**	**158**	*e*P	**Pn**	**12 31 13.3**	**-0.5**
GUR				*e*S	**Sb**	**12 31 29.7**	**+0.1**
GUR	**Goura**	**1.22**	**158**	P	**Pn**	**12 31 14.1**	**+0.3**
GUR	**Goura**	**1.22**	**158**	*e*P	**Pn**	**12 31 13.3**	**-0.5**
GUR				*e*S	**Sb**	**12 31 29.7**	**+0.1**
VLS	**Valsamata**	**1.28**	**226**	*e*P	**Pn**	**12 31 13.9**	**-0.7**
VLS	**Valsamata**	**1.28**	**226**	*e*P	**Pn**	**12 31 13.9**	**-0.7**
NEST	**Nestorio**	**1.45**	**338**	P	**Pn**	**12 31 17.0**	**+0.1**
NEST	**Nestorio**	**1.45**	**338**	P	**Pn**	**12 31 17.0**	**+0.1**

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*LDG **05** 12:35:39.8±0.2, 12°.96S×167°.18E, h120km, Mb5.6/4, Ms4.5/9, Error ellipse: s-maj=24.5km s-min=7.5km az=88.0*
*NOU **05** 12:35:40.0±0.8, 12°.90S×166°.83E, h30km, MD4.2, ML4.5*
*BJI **05** 12:35:41.3, 12°.85S×166°.90E, h123km, mB5.5/32, mb5.3/57*
*ISCJB **05** 12:35:42.8±0.1, 13°.23S±0°.02×166°.76E±0°.03, h146km, mb5.1/126, Error ellipse: s-maj=4.0km s-min=3.4km az=23.6*
*NEIC **05** 12:35:43.5±0.1, 13°.27S×166°.97E, mb5.3/55, MW5.6, Error ellipse: s-maj=6.1km s-min=4.5km az=140.0, Moment Tensor Solution. s50 Moment tensor: Scale 10^{17}Nm; M_{rr}3.21; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-2.77; $M_{r\theta}$-0.39; $M_{\theta\phi}$-0.62; $M_{\phi r}$-0.49; Best double couple: M_o3.10000×10^{17} NP1:ϕ_s10.00000°, δ40.00000°, λ84.00000°. NP2: ϕ_s198.00000°, δ50.00000°, λ95.00000°. Principal axes: T 3.2800, Plg83.0000°, Azm142.0000°; N -0.3100, Plg4.0000°, Azm14.0000°; P -2.9800, Plg5.0000°, Azm284.0000°;*
*IDC **05** 12:35:43.1±0.6, 13°.30S×166°.93E, h141km±4km, mb4.7/21, mb1 4.8/22, mb1mx4.8/23, mbtmp4.7/22, MS4.2/10, Ms1 4.2/10, ms1mx4.0/21 Error ellipse: s-maj=10.4km s-min=9.1km az=144.0*
*MOS **05** 12:35:45.2±1.2, 13°.17S×166°.84E, h165km, mb5.2/29, MS4.6/6, Error ellipse: s-maj=8.7km s-min=7.4km az=111.2*
*GCMT **05** 12:35:46.2±0.1, 13°.24S×166°.83E, h155km, MW5.6, Moment Tensor Solution. s98, c167; s26, c26; Moment tensor: Scale 10^{17}Nm; M_{rr}2.65±.03; $M_{\theta\theta}$-0.46±.04; $M_{\phi\phi}$-2.19±.04; $M_{r\theta}$-0.23±.03; $M_{\theta\phi}$-0.48±.05; $M_{\phi r}$-1.27±.03; Best double couple: M_o2.80000×10^{17} NP1:ϕ_s16.00000°, δ31.00000°, λ93.00000°. NP2:ϕ_s193.00000°, δ59.00000°, λ88.00000°. Principal axes: T 2.9700, Plg76.0000°, Azm98.0000°; N -0.3400, Plg1.0000°, Azm193.0000°; P -2.6300, Plg14.0000°, Azm284.0000°; Data Used: II IU IC G. Surface waves: sta=102, comp=210, per= 50.*
*TEH **05** 12:35:48.0, 13°.27S×166°.81E, h173km*

ISC 05 12:35:44.4±0.1, 13°.26S±0°.02×166°.83E±0°.03, h148km, h148km±2.1km: pP-P, n516, σ0°87/345, mb5.1/126, 65C-45D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.75**	**299**	P	**Pn**	**12 37 35.6**	**+1.1**
	36nm,0.3s,baz=323,slow=1.6,SNR=36						
HNR				S	**Sn**	**12 39 05.1**	**+4.1**
	baz=344,slow=19,SNR=1.8						
HNR	**Honiara**	**7.75**	**299**	*e*Pn	**Pn**	**12 37 36.8**	**+2.2**
HNR				*e*Sn	**Sn**	**12 39 03.0**	**+2.0**
DZM	**Mont Dzumac**	**8.77**	**182**	*e*Pn	**Pn**	**12 37 49.5**	**+1.4**
	82nm,0.2s						
DZM				*e*Sn	**Sn**	**12 39 24.4**	**-1.1**
	156nm,0.3s						
DZM				*e*LR	LR	12 39 51.7	
	5μm,25.4s						
DZM	**Mont Dzumac**	**8.77**	**182**	*e*P	**Pn**	**12 37 48.4**	**+0.3**
DZM				*e*S	**Sn**	**12 39 23.5**	**-1.9**
DZM				AMP		12 39 42.2	
	comp=Z,1μm,1.6s						
NOUC	**Port Laguerre**	**8.81**	**183**	*e*P	**Pn**	**12 37 48.8**	**+0.2**
NOUC				AMP		12 39 29.9	
	comp=Z,105nm,1.4s						
BAYA	**Yate Dam**	**8.85**	**180**	*e*P	**Pn**	**12 37 49.4**	**+0.3**
BAYA				*e*S	**Sn**	**12 39 25.7**	**-1.6**
NORM	**Noumea**	**8.93**	**182**	*e*P	**Pn**	**12 37 51.2**	**+1.0**
LASL	**Noumea**	**8.93**	**182**	*e*S	**Sn**	**12 39 28.1**	**-1.2**
MVNO	**Noumea**	**8.97**	**182**	*e*P	**Pn**	**12 37 51.6**	**+0.8**
MSVF	**Nonsavu**	**11.69**	**114**	*e*Pn	**Pn**	**12 38 29.4**	**+2.7**
MSVF	**Nonsavu**	**11.69**	**114**	Pn	**Pn**	**12 38 29.0**	**+2.3**
	comp=Z,1μm,0.9s,SNR=7.2						
FUNA	**Funafuti**	**13.02**	**70**	*e*Pn	**Pn**	**12 38 46.6**	**+2.6**
EIDS	**Eidsvold**	**19.11**	**229**	*e*P	**P**	**12 39 57.9**	**+2.0**
	comp=Z,53nm,0.6s						
PMG	**Port Moresby**	**19.66**	**279**	*c*eP	**P**	**12 40 02.3**	**+0.2**
PMG				pmax	pmax		
	comp=Z,163nm,1.7s						
PMG	**Port Moresby**	**19.66**	**279**	*e*P	**P**	**12 40 04.2**	**+2.1**
	comp=Z,202nm,1.5s						
AFI	**Afiamalu**	**20.80**	**94**	P	**P**	**12 40 13.3**	**-0.9**
	comp=Z,69nm,0.8s,baz=64,slow=9.3,SNR=6.1						
CTA	**Charters Tower**	**20.84**	**248**	P	**P**	**12 40 15.8**	**+1.2**
	comp=Z,30nm,0.7s,baz=78,slow=12,SNR=50						
CTA				S	**S**	**12 43 57.8**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=278,slow=14,SNR=2.0						
CTA				PcP	PcP	12 44 17.4	+0.1
	comp=Z,5.0nm,0.6s,baz=22,slow=5.4,SNR=5.4						
CTA				ScP	ScP	12 47 40.9	+0.5
	comp=Z,4.5nm,0.6s,baz=286,slow=0.4,SNR=6.4						
CTA	**Charters Tower**	**20.84**	**248**	*e*P	**P**	**12 40 15.9**	**+1.3**
	comp=Z,25nm,0.7s						
CTA	**Charters Tower**	**20.84**	**248**	P	**P**	**12 40 15.8**	**+1.2**
CTA				S	**S**	**12 43 57.8**	**-1.1**
CTA						12 44 17.5	
CTA	**Charters Tower**	**20.84**	**248**	P	**P**	**12 40 15.8**	**+1.2**
CTA				S	**S**	**12 43 57.8**	**-1.1**
CTA				PcP	PcP	12 44 17.4	+0.1
CTA				ScP	ScP	12 47 40.9	+0.5
CTAO	**Charters Tower**	**20.84**	**248**	*e*P	**P**	**12 40 16.0**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,27nm,0.6s						
CTAO	**Charters Tower**	**20.84**	**248**	*e*P	**P**	**12 40 16.0**	**+1.4**
	comp=Z,27nm,0.6s						
ARMA	**Armidale**	**22.11**

comp=Z,23nm,0.9s,mb4.8
MBWA Marble Bar 45.54 253 *e*P **P** **12 43 50.0 +0.4**
comp=Z,34nm,0.8s,mb5.0
MBWA *e*PcP PcP 12 45 24.8 -1.1
DAV Davao City (W) 45.68 294 LR LR 13 01 13.9
comp=Z,325nm,19.5s,baz=142,slow=33
KLBR Kellerberrin 48.47 239 *e*P **P** **12 44 11.1 -1.1**
comp=Z,15nm,0.6s,mb4.8
NWAO Narrogin (SRO) 49.15 238 *e*P **P** **12 44 16.7 -0.7**
NWAO pmax pmax
comp=Z,19nm,0.4s
NWAO Narrogin (SRO) 49.15 238 *e*P **P** **12 44 16.7 -0.7**
comp=Z,19nm,0.4s,mb5.1
MYLDM Lahad Datu 51.37 288 P **P** **12 44 37.4 +3.1**
TSM Tawau 51.64 286 P **P** **12 44 34.8 -1.6**
TAOE Nuku Hiva Isla 52.14 91 *e*S **S** **12 51 47.3 -6.1**
comp=Z,407nm,25.8s
TAOE *e*LR LR 12 59 42.9
comp=Z,668nm,25.6s
SDKM Sandakan 52.75 288 P **P** **12 44 45.5 +1.0**
KKM Kota Kinabalu 53.80 288 P **P** **12 44 53.2 +1.0**
KKM Kota Kinabalu 53.80 288 *e*P **P** **12 44 52.9 +0.6**
BCPH Baguio City Da 54.38 301 ⇑*i*P **P** **12 44 42.4 -14**
JOW Kunigami 54.69 317 *e*P **P** **12 44 59.1 +0.7**
MJAR Matsushiro Arr 56.41 332 P **P** **12 45 10.3 -0.2**
comp=Z,14nm,0.5s,mb5.0,baz=169,slow=8.8,SNR=66
MAJO Matsushiro 56.42 332 *e*P **P** **12 45 10.2 -0.3**
MAT Matsushiro 56.42 332 P **P** **12 45 09.5 -1.0**
MAT S **S** **12 52 48.0 -1.9**
TWG Pinlang 57.40 308 *e*P **P** **12 45 17.3 -0.4**
comp=Z,15nm,0.7s,mb4.9
JNU Nakatsue 57.49 324 *e*P **P** **12 45 18.5 +0.4**
YULB Yu-li 57.54 309 *e*P **P** **12 45 18.6 -0.1**
comp=Z,44nm,1.3s,mb5.1
NACB Ninganchiao 57.77 310 *e*P **P** **12 45 20.6 +0.3**
TPUB Ta-pu 58.00 309 *e*P **P** **12 45 21.5 -0.5**
SSLB Suanglung 58.03 309 *e*P **P** **12 45 20.9 -1.2**
comp=Z,25nm,0.6s,mb5.2
YHNB Yeheng 58.21 310 *e*P **P** **12 45 23.4 +0.1**
comp=Z,58nm,0.6s,mb5.6
ERM Erimo 59.17 340 *e*P **P** **12 45 30.7 +1.1**
QZH Quanzhou 60.46 309 ⇑*i*P **P** **12 45 38.8 0.0**
QZH S **S** **12 53 35.9 -6.8**
QZH ScS ScS 12 55 10.0 -5.5
QZH pmax pmax
comp=Z,70nm,0.9s,mb5.5
QZH LR LR
comp=Z,930nm,22.7s
ASAJ Asahikawa 61.22 340 *e*P **P** **12 45 43.6 +0.1**
comp=Z,41nm,1.8s,mb5.0
SSE Sheshan 62.17 316 ⇑P **P** **12 45 50.6 +0.4**
SSE S **S** **12 54 00.3 -3.9**
SSE pmax pmax
comp=Z,72nm,0.7s,mb5.6
SSE pmax pmax
comp=Z,170nm,4.8s
SSE LR LR
comp=N,120nm,25.5s
SSE LR LR
comp=E,150nm,25.5s
SSE LR LR
comp=Z,180nm,26.3s
KSRS Korea Array 62.29 326 P **P** **12 45 51.1 +0.2**
comp=Z,11nm,0.6s,mb4.8,baz=138,slow=7.3,SNR=76
INCN Inchon 63.03 325 *e*P **P** **12 45 56.6 +0.8**
comp=Z,67nm,1.1s,mb5.4
GZH Guangzhou 63.60 304 P **P** **12 46 01.2 +1.4**
GZH S **S** **12 54 19.0 -3.3**
GZH pmax pmax
comp=Z,440nm,5.1s
YSS Yuzh-Sakhalins 63.71 342α *i*P **P** **12 46 01.1 +1.1**
YSS *e* pP 12 46 34.5 -0.8
YSS *e*S **S** **12 54 23.0 +0.3**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.4
YSS pmax pmax
comp=Z,500nm,4.0s
YSS Yuzh-Sakhalins 63.71 342 *e*P **P** **12 46 00.6 +0.5**
comp=Z,112nm,1.4s,mb5.5
NJ2 Nanjing 64.34 316 *e*P **P** **12 46 04.8 +0.3**
NJ2 pmax pmax
comp=Z,70nm,0.8s,mb5.5
SBA Scott Base 64.60 180 *e*P **P** **12 46 05.8 +0.4**
SBA pmax pmax
comp=Z,127nm,1.6s,mb5.5
SBA Scott Base 64.60 180 *e*P **P** **12 46 05.8 +0.3**
comp=Z,127nm,1.6s,mb5.5
QIZ Qiongzhong 64.66 299 P **P** **12 46 06.5 -0.3**
QIZ PcP PcP 12 46 39.1 -0.3
QIZ S **S** **12 54 32.1 -3.4**
QIZ SS SS 12 58 48.3 -1.1
QIZ pmax pmax
comp=Z,14nm,1.0s,mb4.8
QIZ pmax pmax
comp=Z,270nm,7.3s
CASY Casey 64.72 202 ⇑*i*P **P** **12 46 05.2 -1.2**
CASY Casey 64.72 202 *e*P **P** **12 46 05.1 -1.3**
comp=Z,26nm,1.0s,mb5.0
KGM Kluang 64.79 279 P **P** **12 46 02.4 -5.4**
AMKA Amchitka 65.28 9 *e*P **P** **12 46 10.0 -0.1**
comp=Z,25nm,1.1s,mb5.0
KTGM Kuala Trenggan 65.89 282 P **P** **12 46 16.4 +1.5**
SMY Shemya 66.02 5 *e*P **P** **12 46 16.0 +1.2**
SMY pmax pmax
comp=Z,421nm,1.4s,mb6.1
SMY Shemya 66.02 5 *e*P **P** **12 46 16.0 +1.2**
comp=Z,421nm,1.4s,mb6.1
PET Petropavlovsk 66.39 355c *i*P **P** **12 46 15.1 -2.1**
PET *e**PP pP 12 46 50.6 -2.1
PET *e*S S 12 54 48.1 -7.0
PET pmax pmax
comp=Z,500nm,3.9s
PET pmax pmax
comp=Z,44nm,0.7s,mb5.4
PET pmax pmax
comp=Z,200nm,12.4s
PET MLR MLR
comp=Z,200nm,19.0s
PET MLR MLR
comp=Z,300nm,20.0s
PETK Petropavlovsk- 66.56 354 P **P** **12 46 17.5 -0.8**
comp=Z,20nm,0.5s,mb5.2,baz=135,slow=8.3,SNR=53
PETK LR LR 13 10 11.9
comp=Z,127nm,21.2s,baz=160,slow=31
PETK Petropavlovsk- 66.56 354 P **P** **12 46 17.5 -0.8**
PETK LR LR 13 10 11.9
WHN Wuhan 66.65 312 P **P** **12 46 19.8 +0.4**
WHN S S 12 54 49.1 -10
WHN LR LR
comp=N,220nm,9.5s
WHN LR LR
comp=E,230nm,10.1s
WHN LR LR
comp=Z,670nm,23.0s
FRIM Kepong 66.74 279 P **P** **12 46 19.4 -1.0**
MDJ Mudanjiang 66.79 332 P **P** **12 46 21.0 +1.1**
MDJ pP pP 12 46 56.0 +0.5
MDJ S S 12 55 02.5 +2.1
MDJ SS SS 12 59 21.9 +0.3
MDJ pmax pmax
comp=Z,51nm,1.8s,mb5.0
MDJ pmax pmax
comp=Z,310nm,6.7s
MDJ Mudanjiang 66.79 332 *e*P **P** **12 46 20.6 +0.6**
comp=Z,98nm,1.4s,mb5.4
HABR Khabarovsk 67.62 338c*e*P **P** **12 46 25.8 +0.7**
HABR *SP sP 12 47 22.8 +6.1
HABR *e* 12 48 55.0
HABR *e*S S 12 55 10.3 +0.1
HABR 12 56 05.4
HABR *e*SS SS 12 59 33.2 -1.2
HABR pmax pmax
comp=Z,189nm,1.7s,mb5.5
HABR pmax pmax
comp=N,66nm,1.7s
HABR pmax pmax
comp=E,72nm,2.0s
IPM Ipoh 67.66 281 P **P** **12 46 26.3 +0.2**
IPM Ipoh 67.66 281 *e*P **P** **12 46 25.5 -0.6**
comp=E,25nm,0.6s,mb5.1
SNY Shenyang 67.75 326 ⇑P **P** **12 46 26.7 +0.6**
SNY S S 12 55 10.0 -2.0
SNY pmax pmax
comp=Z,41nm,0.6s,mb5.3
SNY LR LR
comp=N,260nm,21.3s
SNY LR LR
comp=E,110nm,21.9s
SNY LR LR
comp=Z,150nm,18.3s
CN2 Changchun 68.18 329 *e*P **P** **12 46 29.2 +0.5**
CN2 PcP PcP 12 46 53.6 +0.1
CN2 *e*S S 12 55 14.5 -2.4
CN2 pmax pmax
comp=Z,50nm,0.7s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
KULM Kulim 68.25 281 P **P** **12 46 31.1 +1.4**
NIKO Nikolski 69.20 15 *e*P **P** **12 46 33.1 -1.7**
comp=Z,283nm,1.2s,mb5.9
KLR Kul'dur 69.50 336 *e*P **P** **12 46 34.0 -2.7**
KLR *e*S S 12 55 29.0 -3.3
KLR pmax pmax
comp=Z,160nm,1.8s,mb5.5
ENH Enshi 70.11 309 *e*P **P** **12 46 40.7 -0.2**
comp=Z,74nm,1.1s,mb5.3
GYA Guiyang 70.54 304 ⇑*i*P **P** **12 46 44.3 +0.7**
GYA PcP PcP 12 47 06.5 +2.6
GYA PP PP 12 49 25.4 +3.4
GYA S S 12 55 42.8 -2.5
GYA SKS 12 56 25.9
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,160nm,6.9s
BJT Baijiatuau 70.85 321 *e*P **P** **12 46 45.2 0.0**
BJT pmax pmax
comp=Z,37nm,0.6s
BJT Baijiatuau 70.85 321 *e*P **P** **12 46 45.2 0.0**
comp=Z,37nm,0.6s,mb5.3
BJI Beijing 70.86 321 P **P** **12 46 45.6 +0.4**
BJI PP PP 12 49 22.0 -2.5
BJI S S 12 55 48.9 +0.3
BJI SS SS 13 00 27.3 +2.7
BJI pmax pmax
comp=Z,57nm,0.8s,mb5.3
BJI pmax pmax
comp=Z,380nm,3.5s
BJI LR LR
comp=N,240nm,18.0s
BJI LR LR
comp=E,400nm,16.8s
BJI LR LR
comp=Z,440nm,23.4s
TIY Taiyuan 71.90 317 ⇑*i*P **P** **12 46 52.8 +1.3**
TIY S S 12 55 58.3 -2.3
TIY ScS ScS 12 56 41.4 -2.2
TIY LR LR
comp=N,110nm,8.7s
TIY LR LR
comp=E,87nm,5.9s
TIY LR LR
comp=Z,240nm,27.6s
XAN Xi'an 72.39 312 P **P** **12 46 54.7 +0.2**
XAN PP PP 12 49 39.7 +2.0
XAN S S 12 56 03.1 -3.2
XAN SS SS 13 00 49.1 +0.9
XAN pmax pmax
comp=Z,14nm,1.0s,mb4.7
XAN pmax pmax
comp=Z,72nm,8.3s
KMI Kunming 73.18 302 P **P** **12 47 01.1 +1.7**
KMI S S 12 56 13.1 -2.5
KMI pmax pmax
comp=Z,62nm,1.1s,mb5.2
KMI pmax pmax
comp=Z,370nm,5.5s
KMI LR LR
comp=N,89nm,18.2s
KMI LR LR
comp=E,140nm,15.1s
KMI LR LR
comp=Z,210nm,22.2s
SDPT Sand Point 73.68 19 *e*P **P** **12 46 59.4 -2.2**
comp=Z,146nm,1.7s,mb5.4
CM31 Chiang Mai Arr 73.97 294 *e*P **P** **12 47 04.8 +0.7**
comp=Z,8.8nm,0.6s,mb4.7
CMAR Chiang Mai Arr 73.97 294 P **P** **12 47 04.8 +0.6**
comp=Z,13nm,0.7s,mb4.8,baz=131,slow=4.7,SNR=67
CMAR pP pP 12 47 40.8 +0.5
comp=Z,3.3nm,0.8s,baz=128,slow=5.5,SNR=2.0
CHG Chiang Mai 74.09 294 ⇑P **P** **12 47 05.3 +0.5**
comp=Z,30nm,1.0s,mb5.0
CHTO Chiang Mai 74.09 294 *e*P **P** **12 47 04.9 +0.1**
CHTO pmax pmax
comp=Z,50nm,1.4s,mb5.0
CHTO Chiang Mai 74.09 294 *e*P **P** **12 47 04.9 0.0**
comp=Z,50nm,1.4s,mb5.0
HHC Hu-ho-hao-te 74.20 320 ⇑P **P** **12 47 06.4 +1.4**
HHC PcP PcP 12 47 20.4 +1.2
HHC PP PP 12 49 56.6 +3.7
HHC S S 12 56 25.4 -1.0
HHC SKS 12 56 52.5
HHC ScS ScS 12 56 56.9 -5.0
HHC SS SS 13 01 17.1 +1.7
HHC pmax pmax
comp=Z,42nm,1.4s,mb5.0
HHC pmax pmax
comp=Z,400nm,5.0s
HHC LR LR
comp=N,210nm,15.3s
HHC LR LR
comp=E,670nm,19.0s
HHC LR LR
comp=Z,470nm,19.1s
HIA Hailar 74.81 330 *e*P **P** **12 47 08.3 0.0**
HIA pmax pmax
comp=Z,35nm,0.8s
HIA Hailar 74.81 330 *e*P **P** **12 47 08.3 0.0**
comp=Z,35nm,0.8s,mb5.0
BTO Baotou 75.05 319 *e*P **P** **12 47 10.4 +0.5**
CHGN Chignik 75.12 19 *e*P **P** **12 47 08.0 -1.9**
QSPA South Pole Qui 76.76 180 PKiKP PKiKP 12 52 59.5 -1.0
comp=Z,2.0nm,0.6s,baz=82,slow=2.3,SNR=8.0
QSPA PKKPbc PKKPbc 13 06 26.8 -4.0
comp=Z,1.8nm,0.6s,baz=177,slow=0.2,SNR=23
QSPA LR LR 13 16 15.8
comp=Z,122nm,19.8s,baz=46,slow=32
QSPA South Pole Qui 76.76 180 *e*P **P** **12 47 18.5 -0.4**
comp=Z,76nm,0.7s,mb5.4
SEY Seymchan 76.78 353c*e*P **P** **12 47 19.3 +0.1**
LZH Lanzhou 77.03 312 ⇑P **P** **12 47 22.2 +1.0**
LZH PP PP 12 50 20.3 +3.5
LZH S S 12 56 56.0 -1.7
LZH SS SS 13 02 00.5 +2.1
LZH pmax pmax
comp=Z,91nm,1.1s,mb5.3
LZH pmax pmax
comp=Z,420nm,5.0s
LZH LR LR
comp=N,200nm,14.5s
LZH LR LR
comp=E,290nm,17.0s
LZH LR LR
comp=Z,550nm,20.0s
OHAK Old Harbor 77.57 21 *e*P **P** **12 47 22.1 -1.6**
comp=Z,312nm,2.0s,mb5.6
CLNS Chul'man 78.02 338 *e*P **P** **12 47 17.3 -8.9**
CLNS pmax pmax
comp=Z,22nm,0.8s,mb4.8
CLNS pmax pmax
comp=N,20nm,1.0s
CLNS pmax pmax
comp=E,9.0nm,0.8s
KDAK Kodiak Island 78.25 21 *i*P **P** **12 47 27.1 -0.3**
KDAK Kodiak Island 78.25 21 *e*P **P** **12 47 26.6 -0.9**
comp=E,51nm,1.3s,mb5.0
KDAK Kodiak Island 78.25 21 P **P** **12 47 26.6 -0.8**
comp=E,157nm,1.4s,mb5.5,SNR=6.0
GAMB Gambell 78.56 10 *e*P **P** **12 47 28.7 -0.3**
comp=E,54nm,1.0s,mb5.1
RPN Rapa Nui 78.66 115 LR LR 13 16 16.9
comp=E,182nm,21.5s,baz=19,slow=31
SVW2 Sparrevohn 79.88 18 *e*P **P** **12 47 36.0 -0.3**
comp=E,77nm,1.8s,mb5.0
RSO Redoubt South 80.25 19 *e*P **P** **12 47 37.5 -0.7**
YAK Yakutsk 80.51 343 *e*P **P** **12 47 38.8 -0.8**
YAK pmax pmax
comp=Z,80nm,0.9s,mb5.3
YAK pmax pmax
comp=E,25nm,1.3s
YAK pmax pmax
comp=N,42nm,1.5s
YAK Yakutsk 80.51 343 *e*P **P** **12 47 39.5 -0.1**
comp=N,206nm,1.1s,mb5.7
ULN Ulaanbaatar 80.71 324 *e*P **P** **12 47 41.2 +0.2**
ULN pmax pmax
comp=Z,19nm,0.6s,mb4.9
ULN Ulaanbaatar 80.71 324 *e*P **P** **12 47 41.2 +0.3**
comp=Z,19nm,0.6s,mb4.9
SEW Seward 81.07 21 *e*P **P** **12 47 41.6 -1.0**
comp=Z,52nm,1.3s,mb5.0
SONM Songino Array 81.07 324 P **P** **12 47 43.0 +0.1**
comp=Z,9.1nm,0.7s,mb4.5,baz=148,slow=6.6,SNR=51
BILL Biiibino 81.08 360 ⇑*e*P **P** **12 47 41.9 -0.6**
BILL *e* 12 50 49.5
BILL *e*S S 12 57 41.3 +2.0
BILL pmax pmax
comp=Z,169nm,2.0s,mb5.3
BILL Biiibino 81.08 360 *e*P **P** **12 47 41.8 -0.7**
comp=Z,124nm,1.3s,mb5.4
SLKM Skilak Lake 81.11 20 *e*P **P** **12 47 41.3 -1.5**
TTA Tatalina 81.23 16 *e*P **P** **12 47 43.2 -0.2**
GTA Gaotai 81.35 314 P **P** **12 47 45.6 +1.0**
GTA S S 12 57 41.5 -1.8
GTA SKS 12 57 45.5
GTA pmax pmax
comp=Z,47nm,1.6s,mb4.9
GTA pmax pmax
comp=Z,420nm,4.7s
GTA LR LR
comp=N,150nm,20.4s
GTA LR LR
comp=E,150nm,19.2s
GTA LR LR
comp=Z,180nm,20.9s
RC01 Rabbit Creek A 81.70 20 *e*P **P** **12 47 45.1 -0.7**
comp=Z,68nm,1.2s,mb5.2
PMR Palmer 82.27 20 *e*P **P** **12 47 48.1 -0.8**
PMR pmax pmax
comp=Z,111nm,1.4s,mb5.3
PMR Palmer 82.27 20 *e*P **P** **12 47 48.1 -0.8**
comp=Z,111nm,1.4s,mb5.3
PPLA Purkeypile 82.29 18 *e*P **P** **12 47 48.2 -0.7**
comp=Z,18nm,1.4s,mb4.5
SML Sawmill 82.68 20 *e*P **P** **12 47 50.4 -0.6**
SML pmax pmax
comp=Z,26nm,1.3s,mb4.8
SML Sawmill 82.68 20 *e*P **P** **12 47 50.4 -0.6**
comp=Z,26nm,1.3s,mb4.8
MAW Mawson 83.08 202 P **P** **12 47 52.7 -0.4**
comp=Z,19nm,0.6s,mb5.0,baz=119,slow=5.8,SNR=69
MAW PKiKP PKiKP 12 53 11.0 +0.3
comp=Z,1.7nm,0.7s,baz=37,slow=5.8,SNR=4.8
MAW Mawson 83.08 202 ⇑*i*P **P** **12 47 52.3 -0.8**
comp=Z,15nm,0.6s,mb4.9
MAW Mawson 83.08 202 *e*P **P** **12 47 52.1 -1.0**
comp=Z,3.0nm,0.6s,mb4.2
TRF Thorofare Moun 83.28 18 *e*P **P** **12 47 53.0 -1.1**
comp=Z,101nm,1.6s,mb5.3
BPAW Bear Paw Mtn. 83.56 17 *e*P **P** **12 47 53.7 -1.8**
comp=Z,33nm,1.4s,mb4.9
MCK McKinley 83.90 18 *e*P **P** **12 47 56.2 -1.0**
comp=Z,166nm,1.3s,mb5.6
ZAK Zakamensk 84.11 325 *e*P **P** **12 47 58.1 -0.5**
LSA Lhasa 84.43 302 *e*P **P** **12 48 01.3 +0.6**
LSA pmax pmax
comp=Z,36nm,0.6s,mb5.3
LSA Lhasa 84.43 302 *e*P **P** **12 48 01.3 +0.7**
comp=Z,36nm,0.6s,mb5.3
PAX Paxson 84.45 20 *e*P **P** **12 47 59.5 -0.5**
PAX pmax pmax
comp=Z,34nm,1.4s,mb4.9
PAX Paxson 84.45 20 *e*P **P** **12 47 59.5 -0.6**
comp=Z,34nm,1.4s,mb4.9
IRK Irkutsk 84.48 327 *e*P **P** **12 47 59.8 -0.6**
IRK pmax pmax
comp=Z,100nm,2.1s,mb5.2
TLY Talaya 84.54 326 *e*P **P** **12 48 00.5 -0.2**
TLY *e*S S 12 58 09.8 -5.3
TLY pmax pmax
comp=Z,32nm,0.9s,mb5.0
TLY Talaya 84.54 326 *e*P **P** **12 48 00.6 -0.2**
comp=Z,112nm,1.5s,mb5.4
TLY Talaya 84.54 326 P **P** **12 48 01.6 +0.9**
comp=Z,282nm,0.9s,mb6.0,SNR=8.3
YBH Yreka Blue Hor 84.68 45 *e*P **P** **12 48 01.6 -0.1**
YBH pmax pmax
comp=Z,21nm,1.4s
YBH Yreka Blue Hor 84.68 45 *e*P **P** **12 48 01.6 -0.1**
comp=Z,21nm,1.4s,mb4.7
HUMO Hull Mountain 84.86 44 *e*P **P** **12 48 01.8 -0.8**
comp=Z,3.7nm,0.7s,mb4.2
CMB Columbia Colle 84.96 49 *e*P **P** **12 48 02.0 -1.2**
CMB pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
CMB Columbia Colle 84.96 49 *e*P **P** **12 48 02.0 -1.2**
comp=Z,6.9nm,0.9s,mb4.4
MENT Mentasta 85.02 20 *e*P **P** **12 48 02.5 -0.3**
COLA College 85.05 18 *e*P **P** **12 48 02.0 -1.0**
comp=Z,129nm,1.2s,mb5.5
ILAR Eielson Array 85.27 18 P **P** **12 48 01.9 -2.2**
comp=Z,22nm,0.6s,mb5.1,baz=238,slow=4.9,SNR=356
ILAR pP pP 12 48 39.5 -1.7
comp=Z,7.7nm,0.7s,baz=244,slow=5.5,SNR=2.2
ILAR PKiKP PKiKP 12 53 12.9 -1.2
comp=Z,0.5nm,0.6s,baz=269,slow=3.1,SNR=6.4
ILAR S S 12 58 14.8 -6.8
comp=Z,1.0nm,1.2s,baz=253,slow=5.2,SNR=4.7
ILAR PKKP PKKPbc 13 06 05.2 -6.9
comp=Z,0.8nm,0.5s,baz=327,slow=1.8,SNR=14
ILAR LR LR 13 23 51.3
comp=Z,209nm,19.6s,baz=128,slow=34
ILAR Eielson Array 85.27 18 P **P** **12 48 01.9 -2.2**
ILAR pP pP 12 48 39.5 -1.7
DOT Dot Lake 85.38 20 *e*P **P** **12 48 03.6 -1.0**
comp=Z,38nm,0.5s,mb5.4
ISA Isabella 85.58 52 ⇓P **P** **12 48 06.4 +0.1**
baz=86
ISA Isabella 85.58 52 *e*P **P** **12 48 05.9 -0.4**
ISA pmax pmax
comp=Z,13nm,1.4s,mb4.5
ISA Isabella 85.58 52 *e*P **P** **12 48 05.9 -0.4**
comp=Z,13nm,1.4s,mb4.5
EDW2 Edwards Air Fo 85.69 53 ⇓P **P** **12 48 07.2 +0.3**
baz=86
WRAK Wrangell Islan 85.74 29 *e*P **P** **12 48 05.5 -1.1**
comp=Z,8.6nm,0.6s,mb4.7
BFSC Mount Baldy Ra 85.74 54 ⇑P **P** **12 48 07.6 +0.4**
baz=86
WAKR Walker 85.83 49 *e*P **P** **12 48 07.4 -0.1**
comp=Z,14nm,1.2s,mb4.6
WCN Washoe City 85.88 48 ⇑P **P** **12 48 07.9 +0.2**
baz=86
WCN Washoe City 85.88 48 *e*P **P** **12 48 07.7 0.0**
WCN pmax pmax
comp=Z,17nm,1.6s,mb4.5
WCN Washoe City 85.88 48 *e*P **P** **12 48 07.7 0.0**
comp=Z,17nm,1.6s,mb4.5
MOY Mondy 85.99 325 *e*P **P** **12 48 07.7 -0.2**
MOY pmax pmax
comp=Z,114nm,3.2s
SKAG Skagway 86.06 26 *e*P **P** **12 48 07.6 -0.5**
comp=Z,12nm,1.0s,mb4.6
LRMC Laurel Mountai 86.12 52 ⇑P **P** **12 48 09.3 +0.3**
baz=86
H04A Detroit Lake 86.18 43 ⇑P **P** **12 48 08.8 -0.2**
baz=86
MONP Monument Peak 86.29 55 ⇑P **P** **12 48 10.3 +0.4**
baz=86
K05A Summer Lake 86.31 45 ⇑P **P** **12 48 10.2 +0.5**
baz=86
MOD Modoc 86.42 46 *e*P **P** **12 48 09.8 -0.4**
comp=Z,27nm,1.7s,mb4.7
MPMC Manual Prospec 86.47 52 ⇓P **P** **12 48 11.0 +0.3**
baz=86
DVTC Desert V Tower 86.48 55 ⇑P **P** **12 48 10.6 -0.2**
baz=86
PFO Pinyon Flat Ob 86.49 54 ⇓P **P** **12 48 11.5 +0.7**
baz=87
F04A Amboy 86.51 41 ⇑P **P** **12 48 11.0 +0.4**
baz=87
TAPN Taplejung 86.60 299 *e*P **P** **12 48 11.5 0.0**
comp=Z,70nm,0.9s,mb5.5
NVAR Mina Array Bea 86.64 49 P **P** **12 48 10.8 -0.7**
comp=Z,2.3nm,0.7s,mb4.1,baz=235,slow=7.9,SNR=21
NVAR pP pP 12 48 46.3 -2.4
comp=Z,1.4nm,0.7s,baz=236,slow=7.2,SNR=2.9

NVAR PKKPbc PKKPbc 13 06 04.5 -3.1
comp=Z,1.1nm,0.7s,baz=80,slow=4.1,SNR=10.0
NVAR PKPPKP 13 14 09.2
comp=Z,0.2nm,0.6s,baz=76,slow=3.8,SNR=3.1
NVAR Mina Array Bea 86.64 49 P P 12 48 10.8 -0.7
NVAR pP pP 12 48 46.3 -2.4
NVAR PKKPbc PKKPbc 13 06 04.5 -3.1
NVAR P'P' 13 14 09.2
ODAN Odare 86.74 298 *e*P **P 12 48 12.1 -0.1**
comp=Z,157nm,0.7s,mb5.9
GSC Goldstone 86.75 53 ⇑P **P 12 48 12.5 +0.4**
baz=87
SWSC Sam W. Stewart 86.81 55 ⇓P **P 12 48 12.9 +0.6**
baz=87
GNW Green Mountain 86.90 40 *e*P **P 12 48 12.0 -0.4**
comp=Z,2.3nm,0.5s,mb4.3
FURC Furnace Creek, 87.08 52 ⇓P **P 12 48 13.9 +0.3**
baz=87
EGAK Eagle 87.08 20 *e*P **P 12 48 11.5 -1.4**
comp=Z,15nm,0.5s,mb5.1
EGAK *e*pP pP 12 48 50.9 +0.6
DAWY Dawson 87.23 21 *e*P **P 12 48 12.9 -0.7**
D05A Enumclaw 87.27 40 ⇓P **P 12 48 14.4 +0.1**
baz=87
BC3 Big Chuckawall 87.30 55 ⇑P **P 12 48 15.6 +0.9**
baz=87
SHOC Shoshone 87.35 52 ⇓P **P 12 48 15.5 +0.6**
baz=87
RAMN Ramite 87.44 298 *e*P **P 12 48 15.3 -0.3**
comp=Z,72nm,0.6s,mb5.7
TUQ Turquoise Moun 87.48 53 ⇑P **P 12 48 16.0 +0.5**
baz=88
GMRC Granite Mounta 87.48 54 ⇓P **P 12 48 16.8 +1.2**
baz=88
GLA Glamis 87.62 55 ⇑P **P 12 48 17.3 +1.0**
baz=88
I07A Izee 87.74 44 ⇑P **P 12 48 16.7 +0.1**
baz=88
WVOR Wild Horse Val 87.76 46 *e*P **P 12 48 16.2 -0.5**
WVOR pmax pmax
comp=Z,14nm,1.3s,mb4.6
WVOR Wild Horse Val 87.76 46 *e*P **P 12 48 16.2 -0.5**
comp=Z,14nm,1.3s,mb4.6
PALK Pallekele 87.91 278 *i* P **P 12 48 20.3 +2.2**
R10A Warm Springs 88.08 50 ⇓P **P 12 48 19.0 +0.7**
baz=88
BMN Battle Mountai 88.09 48 *e*P **P 12 48 18.0 -0.3**
BMN pmax pmax
comp=Z,21nm,1.7s,mb4.7
BMN Battle Mountai 88.09 48 *e*P **P 12 48 18.0 -0.4**
comp=Z,21nm,1.7s,mb4.7
F07A Phinny Hill Vi 88.11 42 ⇑P **P 12 48 18.8 +0.5**
baz=88
J08A Circle Bar Ran 88.19 45 ⇑P **P 12 48 19.4 +0.6**
baz=88
GUN Gumba 88.32 299 *e*P **P 12 48 19.6 -0.1**
comp=Z,72nm,0.6s,mb5.7
113A Mohawk Valley, 88.39 56 ⇓P **P 12 48 20.0 +0.1**
baz=88
SHPR Sheep Range 88.39 52 *e*P **P 12 48 19.7 -0.1**
comp=Z,8.3nm,1.3s,mb4.4
E07A Sunnyside 88.40 41 ⇑P **P 12 48 20.4 +0.8**
baz=88
V12A Nelson 88.40 53 ⇓P **P 12 48 19.7 -0.2**
baz=88
TIXI Tiksi 88.45 349 *e*P **P 12 48 17.8 -1.5**
TIXI pmax pmax
comp=Z,37nm,1.8s,mb4.9
ETW Entiat 88.47 40 *e*P **P 12 48 19.8 -0.1**
comp=Z,9.8nm,0.7s,mb4.8
RSW Rattlesnake Hi 88.51 42 *e*P **P 12 48 20.5 +0.3**
comp=Z,15nm,0.7s,mb5.0
G08A Pilot Rock 88.53 43 ⇑P **P 12 48 20.7 +0.5**
baz=89,SNR=7.2
HAWA Hanford 88.54 42 *e*P **P 12 48 19.9 -0.4**
comp=Z,4.9nm,0.6s,mb4.6
T11A Corn Creek, Al 88.57 51 ⇓P **P 12 48 21.2 +0.5**
baz=89,SNR=6.2
Z13A Yuma Proving G 88.60 56 ⇑P **P 12 48 21.4 +0.5**
baz=89
PKI Pulchoki 88.63 299 *e*P **P 12 48 20.6 -0.6**
comp=Z,84nm,0.6s,mb5.8
R11A Troy Canyon, C 88.64 50 ⇓P **P 12 48 21.2 +0.2**
baz=89
PKIN Phulchoki 88.64 299 *e*P **P 12 48 21.3 +0.1**
comp=Z,66nm,0.6s,mb5.8
Q11A Duckwater 88.74 50 ⇑P **P 12 48 22.1 +0.7**
baz=89,SNR=8.0
KKN Kakani 88.80 299 *e*P **P 12 48 21.5 -0.4**
comp=Z,77nm,0.6s,mb5.8
X13A Yucca 88.86 54 ⇑P **P 12 48 22.9 +0.8**
baz=89
P11A Circle Ranch, 88.88 49 ⇓P **P 12 48 22.9 +0.9**
baz=89
DMN Daman 88.90 299 *e*P **P 12 48 22.2 -0.2**
comp=Z,106nm,0.6s,mb6.0
214A Organ Pipe Nat 88.93 57 ⇑P **P 12 48 22.8 +0.3**
baz=89
S12A Delamar Landin 88.96 51 ⇓P **P 12 48 23.4 +0.9**
baz=89
V13A Grand Canyon W 89.11 53 ⇓P **P 12 48 23.6 +0.4**
baz=89
D08A Wollman Farm, 89.17 41 ⇓P **P 12 48 23.8 +0.5**
baz=89
U13A Pakoon Wash 89.29 52 ⇓P **P 12 48 24.6 +0.6**
baz=89
R12A Pony Springs, 89.36 50 ⇑P **P 12 48 25.1 +0.7**
baz=89
B08A Colville Reser 89.37 40 ⇑P **P 12 48 24.3 +0.2**
baz=90
GKN Gorkha 89.40 299 *e*P **P 12 48 23.8 -1.0**
OD2 Odessa Site #2 89.42 41 *e*P **P 12 48 24.3 -0.1**
comp=Z,3.1nm,0.4s,mb4.6
E09A Wood Farm, Sta 89.49 42 P **P 12 48 25.2 +0.5**
baz=90,SNR=6.5
S13A Holt Ranch, En 89.71 51 ⇑P **P 12 48 26.7 +0.7**
baz=90
V14A Boquillas Ranc 89.73 53 ⇓P **P 12 48 26.0 -0.1**
baz=90
R13A O'Grain Ranch, 89.80 51 ⇓P **P 12 48 26.9 +0.6**
baz=90
Y15A Casa Rosa Ranc 89.87 55 ⇓P **P 12 48 27.4 +0.6**
baz=90
U14A Mt Trumbull 89.89 53 P **P 12 48 27.4 +0.5**
baz=90,SNR=6.6
F10A Beach Ranch, E 89.91 43 ⇑P **P 12 48 25.6 -1.1**
baz=90,SNR=9.2
SYO Syowa Base 89.98 197⇓*e*P **P 12 48 24.0 -2.7**
SYO Syowa Base 89.98 197⇓*e*PcP PcP 12 48 28.6 +0.7
MFID Camas Ranch 90.03 45 ⇑P **P 12 48 28.2 +0.8**
baz=90
ARUT Antelope Range 90.08 51 *e*P **P 12 48 27.3 -0.4**
ARUT pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ARUT Antelope Range 90.08 51 *e*P **P 12 48 27.3 -0.4**
comp=Z,2.5nm,0.7s,mb4.2
X15A Humboldt 90.09 55 ⇑P **P 12 48 28.4 +0.5**
baz=90
P13A Bates Ranch, G 90.14 49 ⇓P **P 12 48 28.7 +0.7**
baz=90
KOLN Koldanda 90.23 298 *e*P **P 12 48 27.9 -0.7**
comp=Z,27nm,0.7s,mb5.3
DANN Dangsing 90.24 299 *e*P **P 12 48 27.8 -0.9**
comp=Z,27nm,0.5s,mb5.4
V15A Kaibab Nationa 90.51 53 ⇓P **P 12 48 30.4 +0.7**
baz=91
217A Green Valley 90.52 58 ⇑P **P 12 48 29.7 -0.2**
baz=91
Y16A Circle Bar Ran 90.54 55 ⇓P **P 12 48 30.7 +0.8**
baz=91
Q14A Sevier Lake (B 90.55 50 P **P 12 48 30.4 +0.5**
baz=91,SNR=6.9
U15A North Rim 90.58 53 ⇓P **P 12 48 30.9 +0.9**
baz=91,SNR=7.0
I12A Atlanta 90.63 45 P **P 12 48 30.6 +0.5**
baz=91,SNR=8.5
X16A Lo Mia Camp, P 90.71 55 ⇓P **P 12 48 32.1 +1.4**
baz=91
NEW Newport 90.72 40 ⇓P **P 12 48 30.3 -0.1**
baz=91
117A Oracle 90.79 57 ⇓P **P 12 48 31.3 +0.2**
baz=91
P14A Drum Mountains 90.88 50 ⇓P **P 12 48 31.9 +0.5**
baz=91
G12A Big Creek, Yel 90.91 44 ⇑P **P 12 48 31.8 +0.5**
baz=91
H12A Diamond D Ranc 91.05 44 ⇑P **P 12 48 31.9 -0.2**
baz=91

WUAZ Wupatki 91.06 54 ⇓P **P 12 48 32.8 +0.5**
baz=91
WUAZ Wupatki 91.06 54 *e*P **P 12 48 32.1 -0.2**
comp=Z,7.5nm,1.1s,mb4.6
HLID Hailey 91.06 45 ⇑P **P 12 48 33.0 +0.9**
baz=91,SNR=6.3
HLID Hailey 91.06 45 *e*P **P 12 48 31.6 -0.5**
comp=Z,11nm,1.5s,mb4.7
C11A Tepee Creek (N 91.14 41 ⇓P **P 12 48 31.8 -0.6**
baz=91
F12A Elk City 91.14 43 P **P 12 48 31.7 -0.8**
baz=91,SNR=9.6
J13A Cove Ranch, Pi 91.17 46 ⇓P **P 12 48 33.4 +0.8**
baz=91
X17A Forest Lakes 91.19 55 ⇓P **P 12 48 33.4 +0.5**
baz=91
218A Dragoon 91.20 58 ⇓P **P 12 48 33.5 +0.5**
baz=91
MSU Marysvale 91.24 51 *e*P **P 12 48 33.7 +0.6**
MSU pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
MSU Marysvale 91.24 51 *e*P **P 12 48 33.7 +0.6**
comp=Z,4.8nm,1.0s,mb4.5
I13A Wildhorse Cree 91.37 45 ⇑P **P 12 48 34.2 +0.7**
baz=92,SNR=6.6
WMQ Urumqi 91.40 315 P **P 12 48 34.0 +0.3**
WMQ PP PP 12 52 17.0 +3.4
WMQ SKS 12 58 47.0
WMQ S S 12 59 15.0 -5.4
WMQ SS SS 13 05 29.0 -0.9
WMQ pmax pmax
comp=Z,36nm,1.2s,mb5.3
WMQ pmax pmax
comp=Z,240nm,8.0s
WMQ LR LR
comp=N,220nm,22.0s
WMQ LR LR
comp=E,140nm,22.0s
WMQ LR LR
comp=Z,140nm,22.0s
L14A Malta 91.44 47 ⇓P **P 12 48 34.4 +0.5**
baz=92
H13A Challis 91.46 45 ⇑P **P 12 48 34.6 +0.7**
baz=92
D12A Red Ives Fores 91.48 42 ⇓P **P 12 48 33.3 -0.7**
baz=92,SNR=8.7
G13A Cobalt 91.63 44 ⇓P **P 12 48 34.5 -0.2**
baz=92,SNR=5.3
INK Inuvik 91.64 19 *e*P **P 12 48 33.3 -0.9**
INK pmax pmax
comp=Z,16nm,1.7s
INK Inuvik 91.64 19 *e*P **P 12 48 33.3 -1.0**
comp=Z,16nm,1.7s,mb4.8
319A Douglas 91.68 58 ⇑P **P 12 48 35.1 -0.2**
baz=92
I14A Mackay 91.83 45 ⇑P **P 12 48 35.5 -0.2**
baz=92
219A White Tail Can 91.86 58 ⇑P **P 12 48 35.6 -0.5**
baz=92
S17A Black Ridge (B 92.06 52 ⇑P **P 12 48 37.4 +0.5**
baz=92
BSMT Bassoo Peak 92.08 41 *e*P **P 12 48 36.7 0.0**
comp=Z,3.0nm,0.8s,mb4.4
H14A Leadore 92.08 45 ⇓P **P 12 48 37.3 +0.5**
baz=92
HYB Hyderabad 92.29 287 *i* P **P 12 48 36.5 -1.9**
X19A St. Johns 92.43 55 ⇑P **P 12 48 39.0 +0.3**
baz=92
H15A Lima 92.58 45 ⇑P **P 12 48 38.8 -0.4**
baz=93
S18A Hurst Farm, Bl 92.69 52 ⇓P **P 12 48 40.1 +0.3**
baz=93
B14A Marquette Ranc 93.20 41 ⇑P **P 12 48 41.7 -0.2**
baz=93
C15A Salmond Ranch, 93.47 42 ⇑P **P 12 48 43.4 +0.3**
baz=94
PDAR Pinedale Array 94.27 47 P **P 12 48 46.9 0.0**
comp=Z,0.4nm,0.5s,baz=177,slow=2.2,SNR=4.5
PDAR PKKP PKKPbc 13 05 46.2 -2.2
comp=Z,1.4nm,0.7s,baz=87,slow=5.3,SNR=10
PDAR LR LR 13 26 30.6
comp=Z,161nm,19.3s,baz=96,slow=32
P20A De Beque 94.35 51 ⇓P **P 12 48 48.0 +0.6**
baz=94
A16A West Butte Ran 94.43 41 ⇑P **P 12 48 47.5 0.0**
baz=94
NVL N'lazarevskaya 94.44 188 *e*P **P 12 48 45.1 -2.2**
NVL pmax pmax
comp=Z,17nm,0.8s,mb5.2
NVL MLR MLR
comp=Z,527nm,20.0s
C17A Wharram Farm, 94.64 42 ⇑P **P 12 48 48.7 +0.2**
baz=95
MK31 Makanchi Array 95.85 317 *e*P **P 12 48 53.3 -0.8**
MKAR Makanchi Array 95.85 317 P **P 12 48 53.5 -0.6**
comp=Z,13nm,0.5s,mb5.5,baz=101,slow=5.7,SNR=95
MKAR pP pP 12 49 31.6 -0.1
comp=Z,3.1nm,0.7s,baz=81,slow=5.8,SNR=2.5
MKAR PP PP 12 52 43.6 -4.6
comp=Z,0.8nm,0.7s,baz=97,slow=9.9,SNR=3.7
MKAR PKiKP PKiKP 12 53 31.4 -1.1
comp=Z,0.9nm,0.5s,baz=206,slow=0.7,SNR=8.7
MKAR S SKSac 12 59 15.9 -0.5
comp=Z,0.4nm,0.6s,baz=102,slow=4.7,SNR=4.8
MKAR PKKP PKKPbc 13 05 42.0 -2.4
comp=Z,1.1nm,0.7s,baz=273,slow=2.9,SNR=7.7
MKAR Makanchi Array 95.85 317 P **P 12 48 53.5 -0.6**
MKAR *PP pP 12 49 31.6 -0.1
MKAR Makanchi Array 95.85 317 P **P 12 48 53.5 -0.5**
MKAR pP pP 12 49 31.6 -0.1
MKAR PP PP 12 52 43.6 -4.6
TXAR Lajitas Array 95.95 61 P **P 12 48 54.2 -0.7**
comp=Z,0.4nm,0.8s,baz=220,slow=8.3,SNR=3.8
TXAR PP PP 12 52 49.5 0.0
comp=Z,0.9nm,1.1s,baz=226,slow=10,SNR=4.0
TXAR PKKP PKKPbc 13 05 43.9 +0.5
comp=Z,1.0nm,0.6s,baz=102,slow=4.3,SNR=13
TXAR LR LR 13 24 43.0
comp=Z,117nm,19.7s,baz=140,slow=31
TXAR Lajitas Array 95.95 61 P **P 12 48 54.2 -0.7**
TXAR 12 52 49.5
TXAR Lajitas Array 95.95 61 P **P 12 48 54.2 -0.7**
TXAR PP PP 12 52 49.5 0.0
TXAR PKKP PKKPbc 13 05 43.9 +0.5
TXAR LR LR 13 24 43.0
ZAA0 Zalesovo Array 95.96 324 *e*P **P 12 48 53.4 -1.0**
ZALV Zalesovo Beam 95.96 324 P **P 12 48 53.3 -1.1**
comp=Z,3.4nm,0.4s,mb5.1,baz=153,slow=18,SNR=4.3
ZALV PKiKP PKiKP 12 53 33.4 +0.8
comp=Z,1.2nm,0.5s,baz=145,slow=2.8,SNR=3.9
ZALV LR LR 13 30 03.6
comp=Z,72nm,21.0s,baz=255,slow=34
YKA Yellowknife Ar 96.44 27 P **P 12 48 54.1 -2.3**
comp=Z,2.8nm,0.5s,mb4.8,baz=258,slow=4.6,SNR=36
YKA PKiKP PKiKP 12 53 34.7 +1.6
comp=Z,0.5nm,0.7s,baz=267,slow=2.2,SNR=4.7
YKA PKKP PKKPbc 13 05 39.7 -3.7
comp=Z,0.6nm,0.7s,baz=68,slow=2.7,SNR=4.0
YKA LR LR 13 31 15.9
comp=Z,15nm,18.7s,baz=175,slow=35
NVS Novosibirsk 97.07 325 *e*P **P 12 48 57.3 -2.1**
NVS *e* 12 52 53.7
NVS *e* 12 59 20.8
NVS *e*S S 13 00 06.9 -2.5
NVS pmax pmax
comp=Z,30nm,2.1s,mb5.2
NVS pmax pmax
comp=E,10.0nm,1.8s
NVS pmax pmax
comp=Z,12nm,2.0s,mb4.9
NVS smax
comp=E,33nm,3.9s
KURK Kurchatov 99.01 320 *c*e*P **P 12 49 07.3 -0.9**
KURK pmax pmax
comp=Z,12nm,1.5s,mb5.1
AAK Ala-Archa 100.55 311 P Pdif 12 49 14.0 -1.1
comp=Z,1.3nm,0.3s,baz=104,slow=4.2,SNR=3.1
BVAR Borovoye Array 104.34 322 PKiKP PKiKP 12 53 45.9 -1.6
comp=Z,0.9nm,0.5s,baz=106,slow=3.1,SNR=3.1
PLCA Paso Flores 104.52 139 PP PP 12 53 54.0 +0.7
comp=Z,0.9nm,0.7s,baz=281,slow=5.2,SNR=3.0
ARU Arti 111.05 326 *i* PKiKP PKiKP 12 53 59.4 -0.6
ARU 12 54 41.9
ARU 13 00 24.7
ARU SP SP 13 03 55.0 -1.0
ARU SS SS 13 09 59.7 -1.3
ARU Arti 111.05 326 *e*PKPdf PKiKP 12 53 59.0 -1.0

AKTK Aktyubinsk 112.09 319 PKPdf PKiKP 12 54 01.1 -1.1
AKTO Aktyubinsk 112.09 319 PKiKP PKiKP 12 54 01.1 -1.1
comp=Z,3.1nm,0.6s,baz=94,slow=2.4,SNR=14
IMEH Mehriz 115.66 299 *e*P PKPdf 12 54 08.8 -0.8
PRGR Permogore 116.18 333 PKIKP PKPdf 12 54 08.2 -1.5
PRGR pmax pmax
comp=Z,13nm,0.9s
ISRV Sarvestan 116.94 296 *e*P PKPdf 12 54 11.6 -0.5
ISFB Sefidab 117.60 302 *e*P PKPdf 12 54 12.3 -1.0
IVRN Varamin 117.99 303 *e*P PKPdf 12 54 13.5 -0.5
KEV Kevo 118.21 345 *e*PKIKP PKPdf 12 54 11.5 -1.9
KEV Kevo 118.21 345 *e*pkp PKPdf 12 54 11.5 -1.9
LPAZ La Paz 118.25 117 PKP PKPdf 12 54 13.1 -2.0
comp=Z,0.9nm,0.4s,baz=225,slow=4.2,SNR=5.7
LPAZ SKP 12 57 36.5
comp=Z,2.1nm,0.9s,baz=307,slow=3.6,SNR=4.8
LPAZ PKKPbc PKKPbc 13 04 33.1 -0.5
comp=Z,2.5nm,0.6s,baz=83,slow=1.9,SNR=9.2
ARCES ARCESS Array B 118.73 345 PKP PKPdf 12 54 13.1 -1.3
comp=Z,32nm,0.6s,baz=84,slow=1.3,SNR=108
ARCES PKKPbc PKKPbc 13 04 28.6 -4.7
comp=Z,4.7nm,0.7s,baz=224,slow=2.8,SNR=34
ARCES ARCESS Array B 118.73 345 PKP PKPdf 12 54 13.1 -1.3
ARCES PKKPbc PKKPbc 13 04 28.6 -4.7
ARE0 ARCESS Array S 118.73 345 *e*PKPdf PKPdf 12 54 13.0 -1.4
SUMG Summit 118.85 8 *e*PKPdf PKPdf 12 54 15.0 +0.4
KLMR Klimovskoe 119.19 334 *e*PKIKP PKPdf 12 54 15.1 -0.4
KLMR pmax pmax
comp=Z,55nm,1.9s
ISRB Sarab 121.00 306 *e*P PKPdf 12 54 18.0 -1.7
JOF Joensuu 121.37 338 *e*PKIKP PKPdf 12 54 18.0 -1.6
JOF Joensuu 121.37 338 *e*pkp PKPdf 12 54 18.0 -1.6
IHRS Heris 121.42 307 *e*P PKPdf 12 54 19.8 -0.7
UMR Umm Al-Rimmam 121.65 297 *e*P PKPdf 12 54 20.5 -0.7
RDF Al-Radifah 121.81 296 *e*P PKPdf 12 54 21.1 -0.4
RDF AMb AMB 12 54 24.9
comp=Z,46nm,1.1s
MIB Mutribah 121.96 297 *e*P PKPdf 12 54 20.9 -0.9
MIB AMb AMB 12 54 22.7
comp=Z,26nm,0.7s
VRHR Novokhopersk 122.07 323 *e*PKIKP PKPdf 12 54 18.3 -3.0
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,7.0nm,0.4s
NAY Al-Naaiem 122.07 296 *e*P PKPdf 12 54 21.1 -0.9
NAY AMb AMB 12 54 24.6
comp=Z,12nm,1.2s
DGRG David-gareji 122.16 311 P PKPdf 12 54 21.5 -0.4
IMRD Marand 122.40 308 *e*P PKPdf 12 54 21.4 -1.0
ISHB Shabestar 122.53 307 *e*P PKPdf 12 54 21.6 -1.0
MTA Mtatsminda 122.54 311 P PKPdf 12 54 22.8 +0.2
TBLG Delisi 122.57 311 PKIKP PKPdf 12 54 22.6 0.0
TBLG Delisi 122.57 311 P PKPdf 12 54 22.6 0.0
GNI Garni 122.88 309 PKP PKPdf 12 54 23.8 +0.6
comp=Z,3.4nm,0.3s,baz=357,slow=16,SNR=4.9
ZEI Tsey 122.96 313 *e*PKIKP PKPdf 12 54 22.7 -0.6
ZEI pmax pmax
comp=Z,6.0nm,0.4s
OBN Obninsk 123.24 328⇑*i*PKIKP PKPdf 12 54 21.8 -1.6
OBN *e* 12 56 05.2
OBN *e* 13 01 05.9
OBN *e*PS SP 13 05 38.6 -7.4
OBN *e*SS SS 13 12 50.0 +11
OBN pmax pmax
comp=Z,52nm,1.7s
VSR Storozhevoye 123.46 323 *e*PKIKP PKPdf 12 54 22.9 -1.1
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,9.0nm,0.9s
VORD Divnogorie 123.49 323 *e*PKIKP PKPdf 12 54 22.4 -1.6
VORD pmax pmax
comp=Z,30nm,0.5s
VORD pmax pmax
comp=N,170nm,0.6s
VORD pmax pmax
comp=E,330nm,0.7s
KAF Kangasniemi 123.68 339 *e*PKIKP PKPdf 12 54 22.6 -1.5
KAF Kangasniemi 123.68 339 *e*pkp PKPdf 12 54 22.6 -1.5
BOSA Boshof 124.20 221 PKP PKPdf 12 54 26.1 -0.1
comp=E,22nm,0.9s,baz=123,slow=2.0,SNR=22
BOSA Boshof 124.20 221 *e*PKPdf PKPdf 12 54 25.3 -0.9
FINES FINESS Array B 124.21 338 PKP PKPdf 12 54 24.1 -1.0
comp=E,11nm,0.7s,baz=101,slow=3.4,SNR=29
FINES PKKPbc PKKPbc 13 04 09.8 -2.6
comp=E,2.1nm,0.9s,baz=197,slow=6.0,SNR=3.7
SIV San Ignacio 124.43 120 PKP PKPdf 12 54 25.6 -1.3
comp=E,3.0nm,0.7s,baz=212,slow=1.5,SNR=15
IDID Didziasalis 127.88 332 *e*P PKPdf 12 54 32.9 +0.6
IDID AMB AMB 12 54 34.4
comp=Z,9.2nm,0.9s
ISAL Salakas 128.00 333 *e*P PKPdf 12 54 33.2 +0.6
ISAL AMB AMB 12 54 34.7
comp=Z,5.6nm,1.1s
KMBO Kilima Mbogo 128.01 258 PKP PKPdf 12 54 34.5 +0.6
comp=Z,2.1nm,0.7s,baz=180,slow=24,SNR=7.2
MALT Malatya 128.06 308 *e*PKIKP PKPdf 12 54 33.4 +0.2
IIGN Ignalina 128.09 333 *e*P PKPdf 12 54 33.4 +0.7
IIGN AMB AMB 12 54 34.9
comp=Z,9.3nm,1.2s
NB2 NORSAR Subarra 129.10 345 PKPdf PKPdf 12 54 34.2 -0.3
comp=Z,7.5nm,0.6s,baz=31,slow=1.9
NB2 NORSAR Subarra 129.10 345 PKPdf PKPdf 12 54 34.2 -0.3
baz=31,slow=1.9
NOA NORSAR Array B 129.10 345 PKP PKPdf 12 54 33.8 -0.7
comp=Z,12nm,0.6s,baz=32,slow=2.0,SNR=73
NOA SKPbc 12 57 42.2
comp=Z,7.7nm,1.1s,baz=31,slow=4.3,SNR=5.7
NOA NORSAR Array B 129.10 345 PKP PKPdf 12 54 33.8 -0.7
NOA SKPbc 12 57 42.2
KIEV Kiev 129.30 326 *e*PKIKP PKPdf 12 54 34.2 -1.0
SUW Suwalki 130.31 333 *e*PKP PKPdf 12 54 37.8 +0.8
SUW *e* 12 57 48.6
ASF Jabal al Asfar 130.61 301 PKP PKPdf 12 54 38.4 +0.2
comp=Z,3.9nm,0.7s,baz=236,slow=1.0,SNR=9.2
ASF SKPbc SKPbc 12 57 49.6 +1.1
comp=Z,8.6nm,1.0s,baz=156,slow=1.9,SNR=11
BRTR Keskin Array B 131.23 312 PKP PKPdf 12 54 38.4 -0.8
comp=Z,2.9nm,0.6s,baz=130,slow=3.0,SNR=14
BRTR PP PP 12 56 49.9 -8.8
comp=Z,0.4nm,0.4s,baz=85,slow=3.9,SNR=2.3
BRTR SKPbc SKPbc 12 57 52.4 +1.9
comp=Z,5.1nm,0.8s,baz=88,slow=3.0,SNR=19
MMAI Mount Meron Ar 131.68 302 PKP PKPdf 12 54 40.1 -0.1
comp=Z,6.3nm,0.8s,baz=74,slow=7.0,SNR=6.9
MMAI SKPbc SKPbc 12 57 54.4 +2.1
comp=Z,5.1nm,0.8s,baz=26,slow=3.7,SNR=3.9
EIL Elat 132.69 298 PKP PKPdf 12 54 42.4 +0.1
comp=Z,7.8nm,0.7s,baz=269,slow=3.1,SNR=10.0
EIL SKPbc SKPbc 12 57 58.2 +2.3
comp=Z,6.6nm,0.8s,baz=99,slow=1.9,SNR=5.4
BUR08 Bucovina Ar. S 133.17 325 *e*PKPdf PKPdf 12 54 41.7 -0.9
KWP Kalwaria Pacla 133.33 328 *e*PKP PKPdf 12 54 43.7 +0.9
KOLS Kolonicke sedl 133.99 328 *e*PKP PKPdf 12 54 44.5 +0.4
KOLS *e* 12 58 02.9
CRVS Cervenica-Dubn 134.42 328 *e*PKP PKPdf 12 54 45.2 +0.3
CRVS *e* 12 58 03.2
OKC Ostrava-Krasne 135.42 331 *e*PKIKP PKPdf 12 54 48.3 +1.6
OKC Ostrava-Krasne 135.42 331 *e*PKPdf PKPdf 12 54 48.3 +1.6
TSUM Tsumeb 135.75 224 *e*PKPdf PKPdf 12 54 47.7 -0.6
PSZ Piszkesteto 135.85 328⇓*e*PKP PKPdf 12 54 47.7 +0.1
DPC Dobruska-Polom 135.89 333 *e*PKIKP PKPdf 12 54 49.5 +1.9
DPC Dobruska-Polom 135.89 333 *e*PKPdf PKPdf 12 54 49.5 +1.9
DPC *e*SKP 12 58 08.4
UPC Upice 135.91 333 *e*PKIKP PKPdf 12 54 50.3 +2.7
UPC Upice 135.91 333 *e*PKPdf PKPdf 12 54 50.3 +2.7
UPC *e*SKP 12 58 07.5
VYHS Vyhne 136.01 329 *e*PKP PKPdf 12 54 49.3 +1.4
VYHS *e* 12 58 08.2
BRG Berggiesshubel 136.51 335 *e*PKP PKPdf 12 54 49.7 +1.0
comp=Z,16nm,0.9s
BRG SKP 12 58 10.1
comp=Z,21nm,1.2s
PVCC Panska Ves 136.51 334 *e*PKIKP PKPdf 12 54 48.8 +0.1
PVCC Panska Ves 136.51 334 *e*PKPdf PKPdf 12 54 48.8 +0.1
PVCC *e*SKP 12 58 10.0
CLL Collm 136.55 336 *e*PKIKP PKPdf 12 54 49.0 +0.2
CLL pmax pmax
comp=Z,13nm,0.9s

CLL	Collm	136.55	336	*e*PKP	PKPdf	12 54 49.0 +0.2
CLL				*i* PKP	PKPdf	12 54 51.1 +2.3
CLL				*i* SKP		12 58 09.3
PRA	Prague	136.91	334	PKPdf	PKPdf	12 54 52.0 +2.5
PRU	Pruhonice	136.93	334	*e*PKIKP	PKPdf	12 54 51.3 +1.8
PRU	Pruhonice	136.93	334	*e*PKPdf	PKPdf	12 54 51.3 +1.8
PRU				*e*SKP		12 58 11.9
TREC	Trest	137.03	333	*e*PKIKP	PKPdf	12 54 49.9 +0.2
TREC	Trest	137.03	333	*e*PKPdf	PKPdf	12 54 49.9 +0.2
NKC	Novy Kostel	137.61	336	*e*PKIKP	PKPdf	12 54 51.0 +0.2
NKC	Novy Kostel	137.61	336	*e*PKPdf	PKPdf	12 54 51.0 +0.2
NKC				*e*SKP		12 58 13.0
MOX	Moxa	137.61	337	*e*PKP	PKPdf	12 54 51.9 +1.1
	comp=Z,36nm,1.9s					
MOX	Moxa	137.61	337	*e*PKIKP	PKPdf	12 54 51.9 +1.1
MOX				pmax	pmax	
	comp=Z,36nm,1.9s					
SOP	Sopron	137.68	330	⇓*e*PKP	PKPdf	12 54 51.2 +0.2
KHC	Kasperske Hory	137.99	334	*e*PKIKP	PKPdf	12 54 51.1 -0.4
KHC	Kasperske Hory	137.99	334	*e*PKPdf	PKPdf	12 54 51.2 -0.3
KHC				*e*SKP		12 58 13.9
GRA1	Grafenberg Arr	138.52	336	*e*PKP	PKPdf	12 54 52.6 +0.1
GRF	Grafenberg Arr	138.52	336	*e*PKIKP	PKPdf	12 54 52.6 +0.1
GOLS	Golise	139.30	329	*e*PKPdf	PKPdf	12 54 53.6 -0.4
GOLS	Golise	139.30	329	*e*PKPdf	PKPdf	12 54 53.6 -0.4
MEM	Membach	139.61	341	PKP	PKPdf	12 54 54.6 +0.1
BOJS	Bojanci	139.84	329	*i* PKPdf	PKPdf	12 54 55.0 -0.1
BOJS	Bojanci	139.84	329	*i* PKPdf	PKPdf	12 54 55.0 -0.1
RUP	Ruppelstein	140.05	340	PKIKP	PKPdf	12 54 55.3 0.0
SNF	Seneffe	140.22	343	PKP	PKPdf	12 54 55.2 -0.4
GIVF	Givet	140.42	342	*e*PKP1	PKPdf	12 54 54.1 -1.8
	comp=Z,51nm,0.8s					
DOU	Dourbes	140.49	342	PKP	PKPdf	12 54 56.5 +0.4
CDF	Champ du Feu	141.06	338	*e*PKP1	PKPdf	12 54 54.0 -3.1
	comp=Z,17nm,0.8s					
HINF	Hinteralfeld	141.72	338	*e*PKP1	PKPdf	12 54 55.7 -2.6
	comp=Z,47nm,1.0s					
HAU	Haudompre	141.74	339	*e*PKP1	PKPdf	12 54 56.7 -1.7
HAU				*e*MLR	MLR	
	comp=Z,160nm,20.2s					
HAU	Haudompre	141.74	339	*e*PKP	PKPdf	12 54 56.7 -1.7
HAU				LR	LR	
	comp=Z,160nm,20.3s					
MEZF	Maizieres J'vi	141.75	340	*e*PKP1	PKPdf	12 54 57.9 -0.5
	comp=Z,51nm,0.9s					
TUE	Stuetta	141.85	335	*e*PKPdf	PKPdf	12 54 54.2 -4.4
CABF	La Chapelle	143.02	338	*e*PKP1	PKPdf	12 54 58.4 -2.3
	comp=Z,27nm,0.7s					
FLN	La Foliniere	143.08	346	*e*PKP1	PKPdf	12 54 57.1 -3.6
	comp=Z,54nm,0.8s					
FLN				*e*MLR	MLR	
	comp=Z,134nm,20.0s					
FLN	La Foliniere	143.08	346	*e*PKP	PKPdf	12 54 57.1 -3.6
FLN				LR	LR	
	comp=Z,130nm,20.0s					
LDF	La Druitiere	143.15	346	*e*PKP1	PKPdf	12 54 58.0 -2.9
CUC	Castrocucco	143.16	322	*e*PKPdf	PKPdf	12 54 59.1 -2.1
LOR	Lormes	143.22	341	*e*PKP1	PKPdf	12 54 59.0 -2.0
	comp=Z,35nm,1.0s					
LOR				*e*MLR	MLR	
	comp=Z,122nm,22.2s					
LOR	Lormes	143.22	341	*e*PKP	PKPdf	12 54 59.0 -2.0
LOR				LR	LR	
	comp=Z,120nm,22.3s					
GRR	Gorron	143.52	346	*e*PKP1	PKPdf	12 54 58.7 -2.8
	comp=Z,41nm,0.7s					
SSF	Saint Saulge	143.52	341	*e*PKP1	PKPdf	12 54 59.5 -2.0
	comp=Z,39nm,0.9s					
HYF	Humbligny	143.60	342	*e*PKP1	PKPdf	12 54 58.8 -2.9
LPL	La Plagne	143.69	336	*e*PKP1	PKPdf	12 55 00.3 -1.6
	comp=Z,36nm,0.7s					
LPG	La Plagne	143.70	336	*e*PKP1	PKPdf	12 55 00.5 -1.4
	comp=Z,56nm,0.7s					
SMF	Signal de Mont	143.77	340	*e*PKP1	PKPdf	12 54 59.0 -3.0
AVF	Avril sur Loir	143.81	341	*e*PKP1	PKPdf	12 54 59.1 -3.0
SGMF	Saint Gilles	144.01	348	*e*PKP1	PKPdf	12 54 59.8 -2.6
	comp=Z,76nm,0.6s					
ROSF	Rostrenen	144.08	349	*e*PKP1	PKPdf	12 54 59.8 -2.7
	comp=Z,95nm,0.9s					
CEL	Celeste	144.15	319	*e*PKPdf	PKPdf	12 54 60.0 -3.0
BGF	Bois d'Agland	144.17	341	*e*PKP1	PKPdf	12 55 00.6 -2.1
	comp=Z,70nm,1.0s					
MBDF	Montbardon	144.32	335	*e*PKP1	PKPdf	12 55 01.0 -2.0
	comp=Z,31nm,0.6s					
QUIF	Quistinic	144.46	348	*e*PKP1	PKPdf	12 55 01.0 -2.2
	comp=Z,111nm,0.9s					
ORIF	Oris-en-Rattie	144.52	336	*e*PKP1	PKPdf	12 55 02.2 -1.2
	comp=Z,145nm,0.8s					
ORIF				*e*MLR	MLR	
	comp=Z,143nm,22.0s					
SAOF	Saorge	144.60	334	PKP	PKPdf	12 55 02.4 -1.1
TCF	Toulx Ste Croi	144.61	341	*e*PKP1	PKPdf	12 55 02.1 -1.4
	comp=Z,86nm,0.9s					
AUTN	L'Aution	144.65	334	PKP	PKPdf	12 55 02.6 -1.0
TOUF	Mont Tournerai	144.71	334	PKP	PKPdf	12 55 03.1 -0.6
SSB	Saint Sauveur	144.72	338	*e*PKIKP	PKPdf	12 55 02.7 -1.0
SBF	Sospel	144.75	334	*e*PKP1	PKPdf	12 55 02.3 -1.5
	comp=Z,229nm,0.8s					
LUCF	Luceram	144.76	334	PKP	PKPdf	12 55 03.2 -0.6
MVIF	Mont Vial	144.84	334	PKP	PKPdf	12 55 03.4 -0.6
REVF	Revere	144.88	334	PKP	PKPdf	12 55 03.4 -0.6
MFF	Saint Martin d	145.00	344	*e*PKP1	PKPbc	12 55 03.2 -0.6
	comp=Z,198nm,0.9s					
VIVF	Saint-Julien-l	145.03	338	*e*PKP1	PKPbc	12 55 03.9 0.0
	comp=Z,112nm,1.0s					
CALN	Calern	145.07	334	PKP	PKPdf	12 55 04.0 -0.4
PGF	Pioggiola	145.08	331	*e*PKP1	PKPbc	12 55 03.5 -0.7
	comp=Z,195nm,1.0s					
FRF	La Foret Royal	145.33	334	*e*PKP1	PKPbc	12 55 04.2 -0.7
	comp=Z,93nm,0.8s					
SMRF	Simiane la Rot	145.43	336	*e*PKP1	PKPbc	12 55 05.1 -0.1
	comp=Z,76nm,0.8s					
LMR	La Mourre	145.57	334	*e*PKP1	PKPbc	12 55 04.9 -0.8
	comp=Z,49nm,0.6s					
RJF	Les Rejaudoux	145.71	341	*e*PKP1	PKPbc	12 55 05.6 -0.4
RJF				*e*MLR	MLR	
	comp=Z,177nm,21.2s					
RJF	Les Rejaudoux	145.71	341	*e*PKP	PKPdf	12 55 05.6 +0.2
RJF				LR	LR	
	comp=Z,180nm,21.3s					
CAF	Calviac	145.88	341	*e*PKP1	PKPbc	12 55 06.6 +0.1
LASF	Ste Croix	146.00	338	*e*PKP1	PKPbc	12 55 05.3 -1.6
	comp=Z,94nm,1.0s					
LFF	La Freestale	146.28	342	*e*PKP1	PKPbc	12 55 07.3 -0.4
MTLF	Montolieu	147.22	339	*e*PKP1	PKPbc	12 55 08.7 -1.8
	comp=Z,126nm,1.3s					
MLS	Moulis	147.95	340	PKP	PKPbc	12 55 11.8 -0.6
EPF	Esparros	148.12	341	*e*PKP1	PKPbc	12 55 10.5 -2.4
	comp=Z,28nm,0.9s					
VIEF	Viey	148.36	341	PKP	PKPbc	12 55 14.2 +0.7
SJPF	Ste Jean	148.52	343	*e*PKP1	PKPbc	12 55 11.2 -2.7
	comp=Z,18nm,0.6s					
ETSF	Etsaut	148.52	342	*e*PKP1	PKPbc	12 55 11.3 -2.6
	comp=Z,38nm,0.7s					
KEST	Kesra	149.81	322	PKP	PKPdf	12 55 12.9 +0.4
	comp=Z,12nm,0.8s,baz=304,slow=3.4,SNR=4.4					
KEST				PKPbc	PKPbc	12 55 17.1 -0.3
	comp=Z,14nm,0.7s,baz=141,slow=0.6,SNR=34					
KEST	Kesra	149.81	322	*e*PKPdf	PKPdf	12 55 12.7 +0.2
KEST				*e*PKPbc	PKPbc	12 55 16.9 -0.5
SHEL	Horse Pasture	150.06	194	*e*PKIKP	PKPbc	12 55 18.4 -0.1
CMAH	Djebel Manchou	150.30	325	P	PKPbc	12 55 18.1 -0.4
CKFL	Kef-Lekhel	150.85	326	P	PKPbc	12 55 19.4 -0.4
PBRG	Braganca	151.02	350	*e*PKPbc	PKPbc	12 55 19.7 -0.3
CASM	Ain Smara	151.08	326	P	PKPbc	12 55 19.6 -0.8
DFRA	Djebel Bou Aff	151.20	327	P	PKPbc	12 55 20.7 +0.1
CTEI	Djebel Teioual	151.27	326	P	PKPbc	12 55 20.6 -0.2
PVRL	Vila Real	151.69	351	*e*PKPbc	PKPbc	12 55 21.0 -0.6
MVO	Moncorvo	151.69	350	*e*PKPbc	PKPbc	12 55 21.7 +0.1
SET	Setif	151.71	327	P	PKPbc	12 55 21.0 -0.8
CKHR	Kef el Ahmar	151.79	327	P	PKPbc	12 55 21.9 -0.1
PVIS	Viseu	152.26	351	*e*PKPbc	PKPbc	12 55 22.2 -0.7
ESDC	Sonseca Array	152.47	345	PKP	PKPdf	12 55 16.5 +0.1
	comp=Z,1.0nm,0.7s,baz=1.7,slow=2.6,SNR=5.4					
ESDC				PKPbc	PKPbc	12 55 23.1 -0.3
	comp=Z,12nm,0.6s,baz=15,slow=3.2,SNR=43					
ESDC				PKPab	PKPab	12 55 34.9 +0.9
	comp=Z,8.4nm,0.6s,baz=7.2,slow=4.8,SNR=10					
ESDC				PP	PP	12 59 04.7 -1.4
	comp=Z,0.4nm,0.3s,baz=357,slow=5.1,SNR=4.6					
ESDC	Sonseca Array	152.47	345	PKP	PKPdf	12 55 16.5 +0.1
ESDC				PKPbc	PKPbc	12 55 23.1 -0.3
ESDC				PKPab	PKPab	12 55 34.9 +0.8
ESDC				PP	PP	12 59 04.7 -1.4
MTE	Manteigas	152.52	351	*e*PKPbc	PKPbc	12 55 23.1 -0.4
MTE	Manteigas	152.52	351	*e*PKPdf	PKPdf	12 55 16.3 -0.2
MTE				*e*PKPbc	PKPbc	12 55 23.1 -0.4
PAB	San Pablo	152.69	345	*e*PKIKP	PKPbc	12 55 23.5 -0.4
PCBR	Castelo Branco	153.05	350	*e*PKPbc	PKPbc	12 55 24.1 -0.6
PMRV	Marv??o	153.44	350	*e*PKPbc	PKPbc	12 55 25.5 -0.1
TAM	Tamanrasset	159.88	301	*e*PKIKP	PKPdf	12 55 27.1 +0.5
TORD	Torodi Ar. Bea	165.53	271	PKP	PKPdf	12 55 31.2 -1.1
	comp=Z,1.6nm,0.3s,baz=40,slow=2.5,SNR=5.2					
TORD				PKPab	PKPab	12 56 31.6 0.0
	comp=Z,11nm,0.8s,baz=88,slow=4.7,SNR=11					
KIC	Kosan Boka	169.24	231	*e*PKIKP	PKPdf	12 55 33.7 -1.3
	comp=Z,112nm,1.6s					
LIC	Lamto	169.36	230	*e*PKIKP	PKPdf	12 55 33.9 -1.2
	comp=Z,98nm,1.9s					
DBIC	Dimbokro	169.52	232	PKP	PKPdf	12 55 33.1 -2.1
	comp=Z,8.0nm,0.8s,baz=177,slow=2.5,SNR=7.2					
DBIC				PKPab	PKPab	12 56 49.3 +0.2
	comp=Z,5.2nm,0.8s,baz=66,slow=6.4,SNR=3.6					
TIC	Toumodi	169.63	231	*e*PKIKP	PKPdf	12 55 33.9 -1.4
	comp=Z,7.6nm,0.2s					

IDC ***05*** *12:50:17.4±0.8, 30°.55N×83°.63E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.8/24, mbtmp3.8/11, ML3.3/1, Error ellipse: s-maj=26.2km s-min=18.5km az=41.0*
NEIC ***05*** *12:50:19.4±0.8, 30°.63N×83°.42E, h10km, Error ellipse: s-maj=22.6km s-min=13.2km az=43.0*
ISCJB ***05*** *12:50:24.2±3.1, 30°.7N±0°.1×83°.6E±0°.2, h62km±28km, mb3.6/10, Error ellipse: s-maj=28.9km s-min=14.8km az=141.9*

ISC 05 12:50:26.3±2.6, 30°.7N±0°.1×83°.6E±0°.2, h65km±24km, n16, σ0°.98/16, mb3.5/10, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	6.58	97	*e*Pn	Pn	12 52 01.4	+1.1
	11nm,0.8s						
MKAR	Makanchi Array	16.09	357	Pn	Pn	12 54 05.8	-2.4
	0.1nm,0.3s,baz=177,slow=12,SNR=5.5						
MKAR	Makanchi Array	16.09	357	Pn	Pn	12 54 05.8	-2.4
CMAR	Chiang Mai Arr	18.48	128	P	Pn	12 54 37.1	-0.7
	0.1nm,0.3s,baz=310,slow=10,SNR=7.8						
BVAR	Borovoye Array	24.31	340	P	P	12 55 36.5	-0.8
	0.4nm,0.4s,mb3.1,baz=142,slow=7.3,SNR=2.7						
BVAR	Borovoye Array	24.31	340	P	P	12 55 36.5	-0.9
SONM	Songino Array	24.41	39	P	P	12 55 39.5	+1.1
	0.5nm,0.6s,mb3.1,baz=224,slow=11,SNR=4.4						
KSRS	Korea Array	37.02	67	P	P	12 57 29.7	0.0
	0.3nm,0.5s,mb3.5,baz=263,slow=9.1,SNR=2.6						
FINES	FINESS Array B	48.12	327	P	P	12 58 59.8	+0.6
	1.3nm,0.6s,mb3.9,baz=114,slow=9.4,SNR=4.7						
NOA	NORSAR Array B	55.22	326	P	P	12 59 53.7	+1.6
	0.6nm,0.7s,mb3.8,baz=89,slow=7.0,SNR=3.0						
WRA	Warramunga Arr	70.07	129	P	P	13 01 31.0	-0.5
	1.8nm,0.7s,mb4.0,baz=324,slow=6.3,SNR=23						
WRA	Warramunga Arr	70.07	129	P	P	13 01 31.0	-0.5
ASAR	Alice Springs	72.42	132	P	P	13 01 44.9	-0.8
	0.7nm,0.8s,mb3.5,baz=317,slow=5.9,SNR=10						
TORD	Torodi Ar. Bea	76.56	277	P	P	13 02 10.7	+0.8
	0.3nm,0.5s,mb3.3,baz=55,slow=5.6,SNR=3.1						
ILAR	Eielson Array	77.03	20	P	P	13 02 11.4	-0.3
	0.2nm,0.8s,mb2.9,baz=297,slow=4.0,SNR=5.0						
DBIC	Dimbokro	85.35	275	P	P	13 02 56.6	-0.2
	0.8nm,0.4s,mb4.0,baz=100,slow=6.1,SNR=2.2						

KRSC 05 13:06:40.6±0.2, 55°.52N×161°.72E, h80km±79km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.72	314	*e*P	Pn	13 06 58.2	+1.8
ZLN				*e*S	Sn	13 07 10.7	+2.5
BZMR	Bezymyannaya	0.81	301	*e*P	Pn	13 06 59.0	+1.6
BZMR				*e*S	Sn	13 07 13.1	+3.2
CIRR	Tsirk	0.81	318	*e*P	Pn	13 06 58.6	+1.2
KBTR	Krutoberegovo	0.93	41	*e*P	Pn	13 07 01.0	+2.3
KBTR				*e*S	Sn	13 07 15.9	+3.6
KRSR	Krestovskiy	0.95	318	*e*P	Pn	13 07 00.3	+1.3
KRSR				*e*S	Sn	13 07 14.0	+1.2
KPT	Kopyto	0.96	298	*e*P	Pn	13 07 00.4	+1.3
KPT				*e*S	Sn	13 07 14.6	+1.7
MKZ	Mys Kozlova	0.97	180	*e*P	Pn	13 07 01.3	+2.1
MKZ				*e*S	Sn	13 07 17.2	+4.1
KLY	Klyuchi	1.00	323	*e*P	Pn	13 06 59.9	+0.4
KLY				*e*S	Sn	13 07 14.3	+0.6
SMKR	Semkarok	1.07	353	*e*P	Pn	13 07 02.4	+1.9
SMKR				*e*S	Sn	13 07 18.2	+2.8
BDR	Baidarnaya	1.09	345	*e*P	Pn	13 07 02.6	+1.9
BDR				*e*S	Sn	13 07 18.3	+2.6
KOZ	Kozyrevsk	1.17	298	*e*P	Pn	13 07 03.4	+1.7
KOZ				*e*S	Sn	13 07 19.7	+2.1
SRKR	Sorokina	1.18	345	*e*P	Pn	13 07 03.4	+1.6
SRKR				*e*S	Sn	13 07 19.7	+2.1
SRDR	Sredinnyy	1.38	306	*e*P	Pn	13 07 05.5	+1.2
SRDR				*e*S	Sn	13 07 23.3	+1.1
KII	Karymskiy	1.99	222	P	Pn	13 07 14.4	+2.2
BKI	Bering	2.45	96	*e*P	Pn	13 07 21.0	+2.6
BKI				*e*S	Sn	13 07 49.4	+2.0
SPN	Mys Shipunski	2.62	203	*e*P	Pn	13 07 22.3	+1.5
SPN				*e*S	Sn	13 07 53.5	+1.9
NLC	Nalytchevo	2.73	212	*e*P	Pn	13 07 23.9	+1.6
NLC				*e*S	Sn	13 07 56.7	+2.4
AVH	Avacha	2.85	219	*e*P	Pn	13 07 27.2	+3.3
GNL	Ganaly	2.86	232	*e*P	Pn	13 07 26.5	+2.6
PET	Petropavlovsk	3.08	217	S	Sn	13 08 06.5	+3.8

IDC ***05*** *13:09:56.6±1.3, 55°.45S×125°.11W, h0km, mb4.0/5, mb1 4.2/5, mb1mx4.1/13, mbtmp4.0/5, MS4.2/5, Ms1 4.1/5, ms1mx3.9/15, Error ellipse: s-maj=44.1km s-min=29.6km az=151.0*
NEIC ***05*** *13:09:57.7±0.8, 55°.42S×124°.95W, h10km, mb4.6/3, Error ellipse: s-maj=27.5km s-min=14.1km az=161.0*

ISC 05 13:09:58.7±0.8, 55°.7S±0°.2×124°.9W±0°.2, h10km, n20, σ1°.13/12, mb4.2/8, MS4.2/5, 1C, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	Rikitea	33.38	343	*e*LR	LR	13 25 17.7	
	674nm,28.8s,baz=157						
RKT				*e*T		13 51 27.1	
	4.9nm,0.2s						
QSPA	South Pole Qui	34.49	180	P	P	13 16 48.6	+2.5
	3.0nm,1.1s,mb4.2,baz=116,slow=5.3,SNR=5.1						
TBI	Tubuai	37.05	321	*e*T		13 56 17.3	
	82nm,0.4s						
PLCA	Paso Flores	38.13	90	P	P	13 17 17.2	-0.3
	22nm,1.8s,mb4.6						
PPT	Papeete	42.44	324	*e*S	S	13 24 20.6	+5.6
	126nm,27.5s						
PPT				*e*LQ		13 27 30.5	
	636nm,27.2s						
PPT				*e*LR	LR	13 29 24.6	
	590nm,26.0s,baz=168						
PPT	Papeete	42.44	324	LR	LR	13 31 10.7	
	comp=Z,232nm,21.9s,MS4.0,baz=264,slow=30						
PMOR	Pomariorio Ree	44.30	327	*e*T		14 05 14.1	
	6.1nm,0.3s						
TRQA	Tornquist	44.80	94	*e*P	P	13 18 10.9	-1.4
	15nm,1.4s,mb4.6						
TAOE	Nuku Hiva Isla	48.25	340	*e*LR	LR	13 32 11.3	
	419nm,27.9s						
SYO	Syowa Base	55.09	173	⇑*e*P	P	13 19 29.6	-0.5
MAW	Mawson	56.88	184	P	P	13 19 43.4	+0.5
	2.6nm,0.9s,mb4.2,baz=189,slow=9.3,SNR=4.0						
MAW				LR	LR	13 43 11.7	
	comp=Z,223nm,19.6s,MS4.3,baz=337,slow=35						
LPAZ	La Paz	58.14	71	P	P	13 19 53.0	+0.6
	2.9nm,1.0s,mb4.3,baz=234,slow=8.7,SNR=3.2						
LPAZ	La Paz	58.14	71	*e*P	P	13 19 52.5	+0.1
	7.3nm,1.4s,mb4.5						
STKA	Stephens Creek	66.20	248	LR	LR	13 42 57.0	
	comp=Z,160nm,19.5s,MS4.2,baz=206,slow=30						
BDFB	Brasilia	69.83	88	LR	LR	13 47 42.9	
	comp=Z,198nm,20.3s,MS4.3,slow=32						
ASAR	Alice Springs	76.82	247	P	P	13 21 50.0	-0.5
	0.8nm,0.8s,mb3.7,baz=147,slow=5.1,SNR=6.9						
WB2	Warramunga Arr	79.63	250	*e*P	P	13 22 05.2	-0.9
WRA	Warramunga Arr	79.64	250	P	P	13 22 05.8	-0.4
	1.3nm,0.9s,mb3.9,baz=141,slow=4.8,SNR=7.4						
TXAR	Lajitas Array	86.61	18	P	P	13 22 44.8	+3.1
	0.2nm,0.4s,mb3.7,baz=188,slow=4.6,SNR=3.8						
PDAR	Pinedale Array	98.94	11	LR	LR	13 58 37.8	
	comp=Z,80nm,20.4s,MS4.2,baz=356,slow=30						

ISCJB ***05*** *13:24:46.2±1.0, 42°.28N±0°.03×72°.54E±0°.05, h3km±6km, Error ellipse: s-maj=6.4km s-min=5.5km az=145.3*
NNC ***05*** *13:24:47.7±1.6, 42°.20N×72°.44E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=19.1km s-min=8.2km az=2.0*
NEIC ***05*** *13:24:49.6±0.9, 42°.18N×72°.69E, h10km, Error ellipse: s-maj=15.0km s-min=8.9km az=175.0*
KNET ***05*** *13:24:50.5±0.4, 42°.17N×72°.84E, h8km±2km, ml3.0, Error ellipse: s-maj=3.1km s-min=2.1km az=8.0*

ISC 05 13:24:49.3±1.0, 42°.24N±0°.04×72°.69E±0°.05, h4km±7km, n28, σ1°.38/46, 12C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	0.76	98	⇓P	Pg	13 25 02.8	-1.0
	85nm,0.1s,SNR=76						
AML				⇑S	Sg	13 25 12.8	-0.8
	280nm,0.2s						
AML	Almayashu	0.76	98	*e*Pg	Pg	13 25 02.8	-1.1
AML				*e*Sg	Sg	13 25 12.8	-0.8
EKS2	Erkin-Say	0.91	62	⇓P	Pg	13 25 07.1	+0.2
	44nm,0.1s,SNR=124						
EKS2	Erkin-Say	0.91	62	⇓*i* P	Pg	13 25 07.0	+0.2
EKS2				*e*S	Sg	13 25 20.2	+1.5
UCH	Uchtor	1.36	90	⇓P	Pn	13 25 14.2	-0.9
	26nm,0.1s,SNR=24						
UCH	Uchtor	1.36	90	*e*P	Pn	13 25 15.2	+0.1
UCH				*e*Sn	Sn	13 25 31.8	-1.7
AAK	Ala-Archa	1.40	73	⇓P	Pn	13 25 15.3	-0.3
	51nm,0.2s,SNR=63						
AAK	Ala-Archa	1.40	73	*e*Pn	Pn	13 25 15.2	-0.4
AAK				*i* Pg	Pg	13 25 17.3	+1.2
AAK				*e*Sn	Sg	13 25 36.9	+2.7
USP	Ospenovka	1.69	52	⇑P	Pg	13 25 20.9	-0.8
	60nm,0.1s,SNR=125						
USP				⇑S	Sg	13 25 44.8	+1.2
	136nm,0.2s						
CHMS	Chumysh	1.71	63	P	Pg	13 25 21.1	-0.9
	67nm,0.2s,SNR=65						
CHMS				⇑S	Sg	13 25 44.7	+0.6
	87nm,0.2s						
CHMS	Chumysh	1.71	63	*e*Pn	Pn	13 25 21.1	+1.3
CHMS				*e*Sn	Sg	13 25 44.2	+0.1
KBK	Karagaybulak	1.73	75	⇑P	Pn	13 25 21.8	+1.7
	46nm,0.1s,SNR=25						
KK31	Karatay Array	1.82	299	⇓Pn	Pn	13 25 22.8	+1.4
	11nm,0.2s,baz=120,slow=17,SNR=360						
KK31				⇑Sn	Sn	13 25 47.2	+2.3
	69nm,0.3s,baz=126,slow=29						
KKAR	Karatay Array	1.82	299	*e*Pn	Pn	13 25 22.0	+0.6
KKAR				*e*Sg	Sn	13 25 47.4	+2.4
TKM2	Tokmak 2	2.26	71	⇓Pn	Pg	13 25 30.1	-2.5
	16nm,0.4s						
TKM2				⇑Sn	Sg	13 26 01.0	-0.8
	100nm,0.4s						
TKM2	Tokmak 2	2.26	71	⇓P	Pn	13 25 30.1	+2.7
	28nm,0.2s,SNR=62						
TKM2	Tokmak 2	2.26	71	*e*Pn	Pn	13 25 30.1	+2.7
TKM2				*e*Sg	Sg	13 26 01.5	-0.3
KSH	Kashi	3.69	136	*e*Pn	Pn	13 25 45.9	-1.1
KSH				Sn	Sn	13 26 34.1	+3.2
KSH				smax			
	comp=N,37nm,0.4s						
KSH				smax			
	comp=E,30nm,0.4s						
KBL	Kabul	8.20	202	*e*Pn	Pn	13 26 48.4	-0.6
KBL				*e*Sg	Sn	13 28 22.2	+0.2
MK31	Makanchi Array	8.24	53	Pn	Pn	13 26 51.8	+2.3
	comp=E,0.5nm,0.3s,baz=229,slow=11,SNR=29						
MK31	Makanchi Array	8.24	53	*e*Pn	Pn	13 26 51.5	+2.0
KURBB	Kurchatov Arra	9.31	24	⇑Pn	Pn	13 27 01.5	-2.7
	comp=E,0.1nm,0.3s						
KURK	Kurchatov	9.42	24	⇑Pn	Pn	13 27 01.5	-4.2
	comp=E,2.7nm,1.6s						
VOSK	Vostochnaya	10.56	354	⇓Pn	Pn	13 27 20.5	-0.8
	comp=E,2.3nm,1.2s						
VOSK				⇓Sn	Sn	13 29 18.3	-1.5
	comp=E,2.1nm,1.0s						
ZRNK	Zerenda	11.00	348	⇑Pn	Pn

MK31 Makanchi Array 58.60 314 *eP* **P** **P** **14 21 32.9 0.0**
MKAR Makanchi Array 58.60 314 P **P** **14 21 33.4 +0.5**
1.2nm,0.6s,mb4.1,baz=91,slow=9.2,SNR=13
ILAR Eielson Array 62.99 26 P **P** **14 22 01.6 -0.8**
0.3nm,0.7s,mb3.4,baz=276,slow=5.7,SNR=4.3
ABKAR Akbulak array 73.44 317 *eP* **P** **14 23 07.4 -0.6**
1.1nm,0.5s,mb3.9
YKA Yellowknife Ar 77.32 28 P **P** **14 23 29.8 -0.1**
0.5nm,0.6s,mb3.4,baz=289,slow=5.7,SNR=3.3
ARCES ARCESS Array B 82.27 342 P **P** **14 23 58.0 +1.4**
1.6nm,0.8s,mb3.9,baz=94,slow=11,SNR=3.8
NVAR Mina Array Bea 82.39 52 P **P** **14 23 58.9 +1.0**
0.4nm,0.6s,mb3.5,baz=270,slow=5.7,SNR=4.1
NVAR Mina Array Bea 82.39 52 P **P** **14 23 58.9 +1.0**
FINES FINESS Array B 86.75 335 P **P** **14 24 18.2 -1.1**
1.2nm,0.6s,mb4.0,baz=70,slow=3.6,SNR=10

IDC ***05*** *14:16:16.0±0.9,2°.99N×127°.06E,h0km,mb3.8/9, mb1 3.9/9,mb1mx3.8/19,mbtmp3.8/9,Error ellipse: s-maj=55.4km s-min=14.9km az=71.0*
NEIC ***05*** *14:16:20.4±0.6,3°.01N×127°.07E,h35km,mb4.5/6,Error ellipse: s-maj=32.3km s-min=8.3km az=72.0*
ISCJB ***05*** *14:16:25.4±1.0,2°.94N±0°.07×126°.9E±0°.1,h100km±9km, mb4.0/14,Error ellipse: s-maj=21.2km s-min=7.3km az=152.1*
DJA ***05*** *14:16:25,3°.06N×127°.07E,h56km,MLv4.4/3*
ISC 05 14:16:26.1±1.2,**2°.96N**±0°.08×**127°.0E**±0°.1,**h88**km±11km, **n22**,σ0°.**86**/24,**mb4.0**/14,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.60**	**297**	P	**Pn**	**14 16 52.5**	**-0.5**
SGSI				S	**Sn**	**14 17 13.0**	**-0.4**
TNTI	**Ternate**	**2.21**	**169**	P	**Pn**	**14 17 01.0**	**0.0**
TNTI				S	**Sn**	**14 17 28.5**	**+0.8**
MNI	**Manado**	**2.59**	**235**	P	**Pn**	**14 17 09.4**	**+3.3**
LUWI	**Luwuk**	**5.77**	**227**	P	**Pn**	**14 17 48.6**	**-0.6**
	1μm41nm,0.9s						
TOLI	**Toli-Toli**	**6.42**	**254**	P	**Pn**	**14 17 58.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**20.96**	**184**	P	**P**	**14 21 02.2**	**0.0**
	0.4nm,0.3s,baz=349,slow=5.2,SNR=3.5						
FITZ	**Fitzroy Crossi**	**20.96**	**184**	P	**P**	**14 21 00.5**	**-1.7**
YULB	**Yu-li**	**21.04**	**345**	*eP*	**P**	**14 20 59.2**	**-3.8**
	3.7nm,0.5s,mb4.0						
TPUB	**Ta-pu**	**21.13**	**344**	*eP*	**P**	**14 21 00.7**	**-3.2**
	24nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**23.88**	**163**	P	**P**	**14 21 31.1**	**-0.6**
	0.9nm,0.4s,mb3.5,baz=339,slow=11,SNR=12						
WB2	**Warramunga Arr**	**23.89**	**163**	*eP*	**P**	**14 21 30.9**	**-0.8**
ASAR	**Alice Springs**	**27.31**	**166**	P	**P**	**14 22 02.3**	**-0.4**
	0.3nm,0.5s,mb3.1,baz=347,slow=7.4,SNR=7.2						
CMAR	**Chiang Mai Arr**	**31.46**	**301**	P	**P**	**14 22 40.4**	**+0.8**
	0.6nm,0.3s,mb3.8,baz=115,slow=7.0,SNR=4.5						
CHTO	**Chiang Mai**	**31.62**	**302**	*eP*	**P**	**14 22 40.7**	**-0.2**
	1.6nm,0.5s,mb4.0						
KSRS	**Korea Array**	**34.34**	**1**	P	**P**	**14 23 04.3**	**-0.1**
	0.4nm,0.5s,mb3.5,baz=175,slow=8.2,SNR=4.1						
STKA	**Stephens Creek**	**37.33**	**159**	P	**P**	**14 23 30.1**	**+0.1**
	1.3nm,0.5s,mb4.1,baz=341,slow=7.2,SNR=4.6						
BJT	**Baijiatuau**	**38.17**	**347**	*eP*	**P**	**14 23 37.6**	**+0.7**
	6.5nm,0.5s,mb4.7						
ULN	**Ulaanbaatar**	**47.92**	**342**	*eP*	**P**	**14 24 56.4**	**+0.9**
	3.4nm,0.9s,mb4.2						
SONM	**Songino Array**	**48.10**	**341**	P	**P**	**14 24 58.3**	**+1.4**
	1.5nm,0.6s,mb4.0,baz=158,slow=7.8,SNR=9.3						
MKAR	**Makanchi Array**	**58.32**	**325**	P	**P**	**14 26 12.1**	**+0.2**
	1.7nm,0.4s,mb4.4,baz=120,slow=8.0,SNR=36						
MKAR				PcP	PcP	14 27 05.7	+3.6
	0.3nm,0.4s,baz=140,slow=5.9,SNR=2.3						
ZALV	**Zalesovo Beam**	**61.38**	**333**	P	**P**	**14 26 32.8**	**+0.1**
	0.8nm,0.5s,mb4.0,baz=122,slow=5.4,SNR=4.9						
KURK	**Kurchatov**	**62.51**	**328**	*eP*	**P**	**14 26 39.9**	**-0.4**
	4.0nm,0.5s,mb4.6						

IDC 05 14:27:15.2±15.0,**8°.30S**×**119°.20E,h119**km±105km, **mb3.0**/2,**mb1 3.2**/4,**mb1mx3.0**/20,**mbtmp3.0**/4,**ML3.3**/2, **Error ellipse: s-maj=170.8km s-min=111.1km az=64.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.58**	**148**	P	Pn	14 29 57.9	+0.9
	0.0nm,0.3s,baz=330,slow=12,SNR=3.3						
FITZ				S	Sn	14 32 06.0	+1.5
	0.2nm,0.3s,baz=177,slow=17,SNR=8.7						
WRA	**Warramunga Arr**	**18.68**	**130**	P	P	14 31 24.5	+0.3
	0.3nm,0.3s,baz=302,slow=12,SNR=45						
ASAR	**Alice Springs**	**20.79**	**139**	P	P	14 31 45.1	-1.9
	0.2nm,0.4s,baz=311,slow=9.3,SNR=9.3						
STKA	**Stephens Creek**	**31.37**	**141**	P	P	14 33 25.9	+1.2
	1.4nm,0.7s,baz=322,slow=12,SNR=3.1						

CSEM ***05*** *14:39:12.3,40°.59N×43°.07E,h7km,MD2.5,After DDA*
DDA 05 14:39:12.3,40°.59N×43°.07E,h7km±3km,**Md2.5, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIGO	**Kars**	**0.30**	**127**	*i* P	Pg	14 39 18.6	+0.6
DIGO				*i* S	Sg	14 39 28.8	+6.8
DIGO	**Kars**	**0.30**	**127**	*i* P	Pg	14 39 18.6	+0.6
DIGO				*i* S	Sg	14 39 28.8	+6.8
DAGI	**Agillar**	**1.00**	**299**	*i* P	Pg	14 39 30.8	-0.6
DAGI				*i* S	Sg	14 39 48.7	+4.3
DDEM	**Demirkent**	**1.04**	**287**	*i* P	Pg	14 39 32.6	+0.3
DDEM				*i* S	Sg	14 39 51.0	+5.3
DDEM	**Demirkent**	**1.04**	**287**	*i* P	Pg	14 39 32.6	+0.3
DDEM				*i* S	Sg	14 39 51.0	+5.2
ARTV	**Artvin**	**1.04**	**305**	*i* P	Pg	14 39 29.5	-2.8
ARTV				*i* S	Sg	14 39 47.7	+1.9
ARTV	**Artvin**	**1.04**	**305**	*i* P	Pg	14 39 29.5	-2.8
ARTV				*i* S	Sg	14 39 47.7	+1.8
DBAD	**Bademkaya**	**1.12**	**293**	*i* P	Pg	14 39 33.2	-0.6
DBAD	**Bademkaya**	**1.12**	**293**	*i* P	Pg	14 39 33.2	-0.6

ISCJB ***05*** *14:39:40.4±0.5,30°.74N±0°.07×83°.21E±0°.06,h10km, mb3.8/17,Error ellipse: s-maj=9.7km s-min=7.3km az=13.0*
IDC ***05*** *14:39:40.9±0.8,30°.81N×83°.36E,h0km,mb3.8/13, mb1 4.0/15,mb1mx3.9/25,mbtmp3.8/15,ML3.7/1,MS3.2/1, Ms1 3.3/1,ms1mx2.6/30,Error ellipse: s-maj=28.6km s-min=15.6km az=52.0*
NEIC ***05*** *14:39:44.1±3.0,30°.80N×83°.26E,h21km±22km,mb3.9/4, Error ellipse: s-maj=13.2km s-min=7.7km az=220.0*
BJI ***05*** *14:39:52.1,31°.15N×84°.18E,h20km,mB4.0/1,mb3.8/4*
ISC 05 14:39:41.9±0.5,**30°.72N**±0°.07×**83°.16E**±0°.06,**h10**km,**n31**, σ0°.**95**/32,**mb3.8**/17,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.42**	**266**	*e*PN	**Pb**	**14 40 58.3**	**-1.3**
DDI				*e*SN	**Pg**	**14 41 16.5**	**+10**
NDI	**New Delhi**	**5.55**	**250**	*e*PKP	**Pb**	**14 41 18.0**	**-1.0**
LSA	**Lhasa**	**6.99**	**96**	Pn	**Pn**	**14 41 25.6**	**+1.2**
LSA	**Lhasa**	**6.99**	**96**	*e*Pn	**Pn**	**14 41 25.4**	**+1.0**
KBL	**Kabul**	**12.49**	**291**	*e*Pn	**Pn**	**14 42 40.2**	**+0.5**
	9.4nm,0.8s						
KKAR	**Karatay Array**	**15.94**	**324**	P	**Pn**	**14 43 22.4**	**-3.9**
	1.9nm,0.6s						
MK31	**Makanchi Array**	**16.06**	**358**	*eP*	**Pn**	**14 43 28.5**	**+0.7**
MKAR	**Makanchi Array**	**16.06**	**358**	Pn	**Pn**	**14 43 27.1**	**-0.7**
	0.3nm,0.3s,baz=186,slow=11,SNR=15						
CMAR	**Chiang Mai Arr**	**18.82**	**127**	P	**Pn**	**14 44 02.2**	**-0.1**
	0.1nm,0.3s,baz=310,slow=9.7,SNR=11						
CMAR	**Chiang Mai Arr**	**18.82**	**127**	P	**Pn**	**14 44 02.2**	**-0.1**
KURK	**Kurchatov**	**20.26**	**352**	*eP*	**P**	**14 44 16.2**	**-1.2**
	7.9nm,1.2s						
XAN	**Xi'an**	**21.99**	**75**	P	**P**	**14 44 34.8**	**-1.4**
XAN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.4						
ZALV	**Zalesovo Beam**	**23.24**	**2**	P	**P**	**14 44 48.9**	**-0.4**
	comp=Z,0.8nm,0.5s,mb3.4,baz=172,slow=12,SNR=2.9						
BVAR	**Borovoye Array**	**24.16**	**341**	P	**P**	**14 44 58.1**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.3,baz=147,slow=12,SNR=4.3						
SONM	**Songino Array**	**24.66**	**40**	P	**P**	**14 45 02.4**	**-0.3**
	comp=Z,1.4nm,0.6s,mb3.6,baz=225,slow=11,SNR=9.5						
ULN	**Ulaanbaatar**	**25.04**	**40**	*eP*	**P**	**14 45 05.6**	**-0.6**
	comp=Z,2.1nm,0.6s,mb3.8						
ABKAR	**Akbulak array**	**25.50**	**323**	*eP*	**P**	**14 45 12.0**	**+1.7**
	comp=Z,2.4nm,0.7s,mb3.8						
BRTR	**Keskin Array B**	**40.99**	**297**	P	**P**	**14 47 28.4**	**+3.3**
	comp=Z,0.5nm,0.7s,mb3.3,baz=79,slow=6.4,SNR=5.0						
JOF	**Joensuu**	**45.94**	**330**	*ep*	**P**	**14 48 04.8**	**+0.2**
	comp=Z,2.7nm,0.5s,mb4.4						
FINES	**FINESS Array B**	**47.88**	**327**	P	**P**	**14 48 20.9**	**+1.1**
	comp=Z,2.8nm,0.8s,mb4.4,baz=106,slow=6.9,SNR=8.1						
ARCES	**ARCESS Array B**	**50.36**	**337**	P	**P**	**14 48 40.2**	**+1.5**
	comp=Z,1.2nm,0.8s,mb4.0,baz=101,slow=8.3,SNR=4.1						
ARCES	**ARCESS Array B**	**50.36**	**337**	P	**P**	**14 48 40.2**	**+1.5**
NOA	**NORSAR Array B**	**54.97**	**326**	P	**P**	**14 49 12.2**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=78,slow=8.2,SNR=2.7						
NOA				LR	LR	15 13 47.6	
	comp=Z,20nm,19.4s,baz=155,slow=37						
WRA	**Warramunga Arr**	**70.40**	**129**	P	**P**	**14 50 56.9**	**+0.5**
	comp=Z,1.9nm,0.7s,mb4.1,baz=324,slow=6.3,SNR=28						
WRA	**Warramunga Arr**	**70.40**	**129**	P	**P**	**14 50 56.9**	**+0.5**
WB2	**Warramunga Arr**	**70.41**	**129**	*eP*	**P**	**14 50 56.8**	**+0.3**
ASAR	**Alice Springs**	**72.74**	**132**	P	**P**	**14 51 11.2**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=314,slow=6.1,SNR=9.3						
TORD	**Torodi Ar. Bea**	**76.15**	**277**	P	**P**	**14 51 31.4**	**+0.9**
	comp=Z,0.8nm,0.9s,mb3.6,baz=46,slow=4.1,SNR=4.2						
ILAR	**Eielson Array**	**77.16**	**20**	P	**P**	**14 51 34.6**	**-0.8**
	comp=Z,0.7nm,0.9s,mb3.6,baz=303,slow=4.7,SNR=5.7						
STKA	**Stephens Creek**	**83.32**	**133**	P	**P**	**14 52 08.2**	**-0.9**
	comp=Z,1.1nm,0.8s,mb3.9,baz=330,slow=8.1,SNR=3.4						
YKA	**Yellowknife Ar**	**86.02**	**8**	P	**P**	**14 52 21.5**	**-0.8**
	comp=Z,0.7nm,0.6s,mb4.1,baz=337,slow=5.2,SNR=5.9						

DJA 05 14:55:29,9°.53S×112°.89E,h18km,**MLv3.6**/13,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.36**	**24**	P	Pn	14 55 52.2	-0.9
GMJI				S	Sn	14 56 09.5	-1.3
KRKI	**Karangkates**	**1.43**	**342**	P	Pn	14 55 54.8	+0.7
KRKI				S	Sn	14 56 13.2	+0.8
JAGI	**Jajag, Banyuwa**	**1.63**	**50**	P	Pn	14 55 55.9	-0.9
JAGI				S	Sn	14 56 15.1	-2.3
PWJI	**Pagerwojo**	**1.84**	**324**	P	Pn	14 55 58.4	-1.4
BYJI	**Banyuwangi**	**1.95**	**48**	P	Pn	14 56 03.7	+2.5
BYJI				S	Sn	14 56 27.7	+2.4
NBBI	**Negara**	**2.06**	**56**	P	Pn	14 56 02.5	-0.3
NBBI				S	Sn	14 56 30.2	+2.2
SJI	**Sawahan**	**2.10**	**328**	P	Pn	14 56 03.3	0.0
PCJI	**Pacitan**	**2.15**	**308**	P	Pn	14 56 03.2	-0.8
PCJI				S	Sn	14 56 32.6	+2.4
IGBI	**Denpasar**	**2.34**	**73**	P	Pn	14 56 05.4	-1.1
IGBI				S	Sn	14 56 34.9	+0.1
NGJI	**Ngawi**	**2.57**	**327**	P	Pn	14 56 09.0	-0.8
GRJI	**Gresik**	**2.63**	**351**	P	Pn	14 56 08.6	-2.0
SRBI	**Singaraja**	**2.71**	**58**	P	Pn	14 56 13.4	+1.7
UGM	**Wanagama**	**2.84**	**304**	P	Pn	14 56 13.6	+0.1
KHKI	**Kahang-Kahang**	**2.92**	**67**	P	Pn	14 56 16.3	+1.7

ISCJB ***05*** *14:59:21.2±0.4,50°.00N±0°.03×18°.62E±0°.03,h0km,Error ellipse: s-maj=4.0km s-min=2.4km az=21.3*
CSEM ***05*** *14:59:22.4±0.2,50°.01N×18°.63E,h2km,ML2.8/6,Error ellipse: s-maj=5.8km s-min=3.1km az=7.0*
IPEC ***05*** *14:59:22.3±0.2,50°.00N×18°.69E,h3km±1km,ML2.0/3, Error ellipse: s-maj=1.4km s-min=1.0km az=6.0*
WAR ***05*** *14:59:22.6,49°.96N×18°.69E*
PRU ***05*** *14:59:23.8,49°.97N×18°.60E,h0km*
ISC 05 14:59:22.5±0.4,**49°.97N**±0°.03×**18°.64E**±0°.03,**h0**km,**n33**, σ1°.**02**/56,**Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.31**	**291**	*e*Pg	**Pg**	**14 59 30.0**	**+1.6**
RAC				*e*Sg	**Sg**	**14 59 34.6**	**+2.2**
OKC	**Ostrava-Krasne**	**0.35**	**247**	*e*PG	**Pg**	**14 59 29.9**	**+0.7**
OKC				*e*SG	**Sg**	**14 59 33.8**	**+0.2**
	comp=Z,52nm,0.3s						
OKC	**Ostrava-Krasne**	**0.35**	**247**	*e*Pg	**Pg**	**14 59 29.7**	**+0.5**
	baz=64						
OKC				Sg	**Sg**	**14 59 33.8**	**+0.2**
	comp=Z,52nm,0.3s						
MORC	**Moravsky Berou**	**0.74**	**255**	*e*Pg	**Pg**	**14 59 37.1**	**+0.5**
	baz=73						
MORC				*e*Sg	**Sg**	**14 59 46.9**	**+0.7**
	comp=Z,20nm,0.2s,baz=73						
OJC	**Ojcow**	**0.79**	**71**	*e*Pg	**Pg**	**14 59 36.7**	**-0.9**
OJC				*e*Sg	**Sg**	**14 59 47.2**	**-0.6**
OJC	**Ojcow**	**0.79**	**71**	*e*Pg	**Pg**	**14 59 36.4**	**-1.2**
	baz=254						
OJC				*e*Sg	**Sg**	**14 59 47.2**	**-0.6**
LIKS	**Likavka**	**0.97**	**162**	*e*SG	**Sg**	**14 59 55.3**	**+1.5**
LIKS	**Likavka**	**0.97**	**162**	*e*Sg	**Sg**	**14 59 55.3**	**+1.5**
NIE	**Niedzica**	**1.22**	**116**	*e*Pg	**Pg**	**14 59 46.0**	**+0.1**
NIE				*e*Sg	**Sg**	**15 00 02.6**	**+0.9**
NIE	**Niedzica**	**1.22**	**116**	*e*Pg	**Pg**	**14 59 46.0**	**+0.1**
NIE				*e*Sg	**Sg**	**15 00 02.6**	**+0.9**
KOLL	**Kolacno**	**1.41**	**186**	*e*PN	**Pn**	**14 59 48.9**	**-0.4**
KOLL				*e*SN	**Sn**	**15 00 07.3**	**-1.2**
KOLL	**Kolacno**	**1.41**	**186**	*e*Pn	**Pn**	**14 59 48.9**	**-0.4**
VYHS	**Vyhne**	**1.49**	**175**	*e*PN	**Pn**	**14 59 50.7**	**+0.2**
VYHS				*e*SN	**Sn**	**15 00 10.1**	**-0.5**
VYHS	**Vyhne**	**1.49**	**175**	*e*Pn	**Pn**	**14 59 50.5**	**0.0**
	baz=356						
VYHS				*e*Sg	**Sg**	**15 00 09.8**	**-0.4**
	baz=356						
VRAC	**Vranov**	**1.49**	**244**	*e*Pn	**Pn**	**14 59 50.2**	**-0.3**
VRAC				*e*Sg	**Sg**	**15 00 09.7**	**-0.6**
	comp=Z,20nm,0.3s,baz=62						
DPC	**Dobruska-Polom**	**1.54**	**285**	*e*PG	**Pn**	**14 59 50.6**	**-0.6**
DPC				*e*SG	**Sn**	**15 00 11.0**	**-0.8**
	comp=Z,14nm,0.3s						
DPC	**Dobruska-Polom**	**1.54**	**285**	Pg	**Pn**	**14 59 50.6**	**-0.6**
DPC	**Dobruska-Polom**	**1.54**	**285**	*e*Pn	**Pn**	**14 59 50.9**	**-0.3**
	baz=102						
DPC				*e*Sg	**Sg**	**15 00 11.4**	**-0.5**
	baz=102						
KRUC	**Moravsky**	**1.72**	**239**	*e*Pn	**Pn**	**14 59 53.7**	**0.0**
	baz=57						
KRUC				*e*Sg	**Sg**	**15 00 17.2**	**-0.7**
	comp=Z,10nm,0.2s,baz=57						
KSP	**Ksiaz**	**1.73**	**301**	*e*Pg	**Pg**	**14 59 56.8**	**+1.0**
KSP				*e*Sg	**Sg**	**15 00 16.9**	**-1.4**
UPC	**Upice**	**1.77**	**289**	*e*SG	**Sn**	**15 00 18.4**	**+0.8**
UPC	**Upice**	**1.77**	**289**	Sg	**Sn**	**15 00 18.4**	**+0.8**
KECS	**Kecovo**	**1.92**	**140**	*e*PN	**Pn**	**14 59 57.7**	**+1.3**
KECS				*e*SN	**Sn**	**15 00 23.7**	**+2.4**
ZST	**Bratislava**	**2.05**	**210**	*e*SG	**Sn**	**15 00 25.0**	**+0.6**
ZST	**Bratislava**	**2.05**	**210**	*e*Sg	**Sn**	**15 00 25.0**	**+0.6**
CRVS	**Cervenica-Dubn**	**2.13**	**119**	*e*PN	**Pg**	**15 00 01.9**	**-1.5**
CRVS				*e*SN	**Sg**	**15 00 30.1**	**-0.9**
CRVS	**Cervenica-Dubn**	**2.13**	**119**	*e*Pn	**Pg**	**15 00 01.9**	**-1.5**
CRVS				*e*Sn	**Sg**	**15 00 30.2**	**-0.8**
PRU	**Pruhonice**	**2.65**	**272**	*e*SG	**Sg**	**15 00 46.3**	**-1.2**
	comp=Z,7.6nm,0.4s						
PRU	**Pruhonice**	**2.65**	**272**	Sg	**Sg**	**15 00 46.3**	**-1.2**
	comp=Z,7.6nm,0.4s						
BRG	**Berggiesshubel**	**3.14**	**288**	PG	**Pg**	**15 00 21.4**	**-1.2**
BRG				SG	**Sg**	**15 01 03.1**	**-0.1**
	comp=Z,7.7nm,0.6s						
KHC	**Kasperske Hory**	**3.40**	**258**	*e*PN	**Pn**	**15 00 17.5**	**+0.7**
KHC				*e*PG	**Pg**	**15 00 26.0**	**-1.7**
KHC				*e*SG	**Sg**	**15 01 10.9**	**-0.9**
	comp=Z,6.7nm,0.5s						
KHC	**Kasperske Hory**	**3.40**	**258**	Pn	**Pn**	**15 00 17.5**	**+0.7**
CLL	**Collm**	**3.83**	**293**	*e*Pg	**Pg**	**15 00 36.0**	**+0.1**
CLL				*e*Sg	**Sg**	**15 01 28.0**	**+2.5**

SZGRF ***05*** *15:11:54.9,31°.92N×138°.93E,h400km,mb5.8,Southeast of Honshu, Japan*
NIED ***05*** *15:12:00,32°.70N×137°.30E,h420km,Mw5.3 Best double couple: M0 9.56000×10^16 NP1:φs327.00000°, δ66.00000°,λ-49.00000°. NP2:φs82.00000°,δ47.00000°, λ-146.00000°.*
BJI ***05*** *15:12:01.6,32°.65N×136°.98E,h398km,mB5.1/25, mb5.6/71*
ISCJB ***05*** *15:12:02.8±0.1,32°.63N±0°.02×137°.02E±0°.01, h413km±1km,mb5.2/367,Error ellipse: s-maj=2.6km s-min=1.7km az=150.7*
MOS ***05*** *15:12:02.1±0.9,32°.67N×137°.11E,h409km,mb5.3/111, MS4.3/6,Error ellipse: s-maj=6.6km s-min=3.7km az=108.1*
JMA ***05*** *15:12:02.6±0.3,32°.68N×137°.30E,h419km±3km,M5.6 Broadband fault plane solution: P waves. NP1: φs94.00000°,δ46.00000°,λ-150.00000°. NP2: φs342.00000°,δ69.00000°,λ-48.00000°. Principal axes: T Plg14.0000°, Azm43.0000°; N Plg39.0000°, Azm144.0000°; P Plg48.0000°, Azm297.0000°;*
JMA Felt II J1.
TEH ***05*** *15:12:02.0,32°.63N×137°.07E,h399km*
NEIC ***05*** *15:12:03.2±0.1,32°.63N×137°.05E,mb5.1/231,MW5.3, MW5.3(NIED),Error ellipse: s-maj=3.4km s-min=2.4km az=152.0,Moment Tensor Solution. s17 Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mφ0.00; Mθφ0.00; Best double couple: M0 1.10000×10^17 NP1:φs74.00000°,δ48.00000°,λ-152.00000°. NP2: φs324.00000°,δ70.00000°,λ-46.00000°. Principal axes: T 0.9700, Plg13.0000°, Azm23.0000°; N 0.1700, Plg40.0000°, Azm125.0000°; P -1.1300, Plg46.0000°, Azm279.0000°;*
NEIC Felt at Tokyo, Honshu. Recorded [2 JMA] in Fukushima, Gumma, Ibaraki, Miyagi, Saitama and Tochigi; [1 JMA] in Chiba, Iwate, Kanagawa, Nagano and Tokyo.
IDC ***05*** *15:12:03.0±0.4,32°.67N×137°.16E,h409km±3km,mb4.9/25, mb1 5.0/29,mb1mx5.0/31,mbtmp4.9/29 Error ellipse: s-maj=7.6km s-min=5.8km az=66.0*
GCMT ***05*** *15:12:05.3±0.3,32°.68N×137°.09E,h412km±1km,MW5.3, Moment Tensor Solution. s70,c112; Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mφ0.00; Mθφ0.00; Best double couple: M0 1.20000×10^17 NP1:φs78.00000°,δ48.00000°,λ-146.00000°. NP2: φs324.00000°,δ66.00000°,λ-48.00000°. Principal axes: T 1.1500, Plg11.0000°, Azm25.0000°; N 0.0700, Plg38.0000°, Azm124.0000°; P -1.2200, Plg50.0000°, Azm282.0000°; Data Used: II IU IC G CN.*
BGS ***05*** *15:12:08.4±1.7,33°.12N×134°.23E,h400km±999km,mb5.0*
DJA ***05*** *15:12:24,31°.95N×136°.75E,h650km,Mw5.4/38*
ISC 05 15:12:03.7±0.1,**32°.67N**±0°.02×**137°.05E**±0°.01,**h411**km±1km, **h413**km±1.9km:**pP-P,n1539,**σ0°.**88**/1598,**mb5.2**/364, **198C-233D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK01	**Tokai 1**	**1.18**	**22**	P	**P**	**15 12 56.6**	**+0.1**
TK02	**Tokai 2**	**1.40**	**25**	⇓P	**P**	**15 12 57.8**	**+0.4**
JWZ	**Kozaga**	**1.41**	**308**	⇓P	**P**	**15 12 58.0**	**+0.5**
JWZ				S	**S**	**15 13 40.9**	**-0.1**
TK03	**Tokai 3**	**1.67**	**27**	S	**S**	**15 13 44.2**	**+0.9**
JKN2	**Miekihoku**	**1.69**	**338**	⇓P	**P**	**15 12 59.4**	**+0.6**
JKN2				S	**S**	**15 13 43.5**	**0.0**
JIE	**Ise**	**1.74**	**351**	⇓P	**P**	**15 12 59.6**	**+0.5**
JIE				S	**S**	**15 13 44.1**	**+0.1**
TK04	**Tokai 4**	**1.84**	**22**	P	**P**	**15 13 00.2**	**+0.6**
JWM	**Minabe**	**1.84**	**310**	⇓P	**P**	**15 13 00.5**	**+0.8**
JWY	**Kouya**	**1.97**	**322**	⇓P	**P**	**15 13 01.4**	**+1.0**
JWY				S	**S**	**15 13 46.8**	**+0.5**
HMMJ	**Hamamatsu 2**	**2.25**	**14**	⇓P	**P**	**15 13 02.2**	**+0.1**
HMMJ				S	**S**	**15 13 49.3**	**-0.2**
JHE	**Heguri**	**2.28**	**330**	P	**P**	**15 13 03.3**	**+0.9**
JKO	**Kozu shima**	**2.31**	**49**	⇓P	**P**	**15 13 01.8**	**-0.7**
JHJ	**Hachijo jima 2**	**2.34**	**78**	P	**P**	**15 13 00.6**	**-2.2**
	1μm,0.3s,baz=4.6,slow=1.5,SNR=613						
JHJ				S	**S**	**15 13 48.8**	**-1.9**
	236nm,0.3s,baz=53,slow=20,SNR=2.6						
JHJ2	**Mitsune**	**2.37**	**79**	⇓P	**P**	**15 13 01.1**	**-1.9**
JYZW	**Yoshizawa**	**2.39**	**14**	P	**P**	**15 13 03.0**	**-0.1**
JAI	**Aioi**	**2.45**	**298**	⇓P	**P**	**15 13 04.9**	**+1.4**
JAI				S	**S**	**15 13 52.7**	**+0.7**
SHZ3	**Shizuoka 3**	**2.58**	**22**	⇓P	**P**	**15 13 04.5**	**+0.1**
JNY	**Yasuok**	**2.76**	**14**	⇓P	**P**	**15 13 06.1**	**+0.3**
JNY				S	**S**	**15 13 56.9**	**+0.7**
JIM2	**Oshima 3**	**2.85**	**44**	⇓P	**P**	**15 13 04.8**	**-1.6**
JMN	**Monobe**	**2.86**	**292**	⇑P	**P**	**15 13 08.4**	**+1.8**
JMN				S	**S**	**15 13 58.4**	**+0.8**
JWT	**Wachi**	**2.94**	**333**	⇑P	**P**	**15 13 08.1**	**+0.9**
JWT				S	**S**	**15 13 58.8**	**+0.1**
JKS	**Kasai**	**2.95**	**322**	P	**P**	**15 13 08.1**	**+0.9**
JFM	**Mihama**	**2.98**	**343**	⇑P	**P**	**15 13 08.3**	**+0.8**
JFM				S	**S**	**15 14 00.1**	**+0.8**
JGM	**Miyama**	**3.03**	**355**	⇓P	**P**	**15 13 08.6**	**+0.7**
JGM				S	**S**	**15 14 01.2**	**+1.2**
JYN	**Shimob**	**3.08**	**23**	⇓P	**P**	**15 13 07.9**	**-0.4**
JOD2	**Odawara 2**	**3.09**	**33**	⇓P

JOG2	Oga 2	7.56	16	P	P	15 13 51.8 -1.9
JOM	Ohasama	7.61	26	P	P	15 13 51.8 -2.4
MIYJ	Miyakonagasawa	7.89	28	P	P	15 13 54.8 -2.7
JAH	Hinai	8.04	20	P	P	15 13 57.2 -1.8
JKZ	Kuzumaki	8.07	24	P	P	15 13 57.4 -2.0
JTH	Tanohata	8.22	27	P	P	15 13 58.5 -2.6
JIW	Iwasaki	8.25	16	P	P	15 13 59.9 -1.5
JANG	Nango	8.48	24	P	P	15 14 01.8 -2.2
JTM	Tenmabayashi	8.72	21	P	P	15 14 04.8 -1.8
JSI2	Shiura 2	8.79	17	P	P	15 14 05.8 -1.6
KSRS	Korea Array	8.87	305	P	P	15 14 09.8 +1.5
	comp=N,28nm,0.3s,baz=120,slow=11,SNR=680					
KSRS				S	S	15 15 52.4 +1.6
	baz=111,slow=22,SNR=11					
KSRS				PcP	PcP	15 19 48.5 -0.3
	baz=173,slow=0.6,SNR=5.0					
KSRS				ScP	ScP	15 22 41.5 +0.4
	comp=N,0.4nm,0.3s,baz=185,slow=0.7,SNR=46					
KSRS	Korea Array	8.87	305	P	P	15 14 09.9 +1.5
KSRS				S	S	15 15 52.4 +1.6
KSRS				pmax	pmax	
	comp=Z,28nm,0.3s					
KSRS	Korea Array	8.87	305	PKiKP	x	15 27 47.5
	comp=Z,0.2nm,0.3s,baz=124,slow=0.1,SNR=6.0					
JOT	Ohata	9.26	19	P	P	15 14 11.1 -1.5
JOW	Kunigami	9.59	235⇑	eP	P	15 14 18.1 +1.5
JOW				eS	S	15 16 02.9 -2.9
JOW	Kunigami	9.59	235	P	P	15 14 18.2 +1.7
JIH	Iheya	9.68	237	P	P	15 14 18.9 +1.4
INCN	Inchon	9.79	302	⇓iP	P	15 14 19.9 +1.3
INCN				eS	S	15 16 12.0 +2.4
INCN	Inchon	9.79	302	P	P	15 14 20.2 +1.6
	SNR=142					
JAGN	Aguni-jima	10.46	237	P	P	15 14 27.3 +1.1
ERM	Erimo	10.51	26	diP	P	15 14 25.1 -1.4
ERM	Erimo	10.51	26	⇓iP	P	15 14 25.2 -1.3
ERM				eS	S	15 16 15.0 -9.2
JKE	Kume jima 2	10.95	237	P	P	15 14 32.3 +0.7
ASAJ	Asahikawa	12.22	19	P	P	15 14 45.1 -0.2
	comp=Z,64nm,0.3s,baz=214,slow=9.9,SNR=773					
ASAJ				S	S	15 16 56.1 -2.7
	comp=Z,12nm,0.3s,baz=18,slow=20,SNR=2.7					
ASAJ				ScP	ScP	15 22 45.4 0.0
	comp=Z,0.2nm,0.3s,baz=275,slow=4.6,SNR=6.5					
ASAJ	Asahikawa	12.22	19	P	P	15 14 45.1 -0.2
ASAJ				S	S	15 16 56.1 -2.7
ASAJ				pmax	pmax	
	comp=Z,64nm,0.3s					
ASAJ				smax		
	comp=N,12nm,0.3s					
ASAJ	Asahikawa	12.22	19	⇑iP	P	15 14 44.3 -1.0
ASAJ				eS	S	15 16 51.2 -7.5
JOGS	Gusukube	12.90	235	P	P	15 14 54.7 +1.7
MDJ	Mudanjiang	13.27	336	P	P	15 14 56.9 +0.2
MDJ				S	S	15 17 18.2 -1.6
MDJ				ScP	ScP	15 22 47.8 +0.7
MDJ				PcS	PcS	15 23 28.1 +0.2
MDJ				ScS	ScS	15 26 24.7 +0.9
MDJ				pmax	pmax	
	comp=Z,78nm,1.1s					
MDJ	Mudanjiang	13.27	336⇑	eP	P	15 14 56.5 -0.2
YUK	Yuzh-Kuril'sk	13.27	29⇑	iP	P	15 14 57.1 +0.3
YUK				i S	S	15 17 23.1 +3.1
YUK				pmax	pmax	
	comp=N,488nm,0.6s					
YUK				pmax	pmax	
	comp=Z,3μm,0.6s					
YUK				pmax	pmax	
	comp=E,265nm,0.3s					
YUK				pmax	pmax	
	comp=Z,2μm,0.5s					
YUK				smax		
	comp=N,5μm,0.6s					
YUK				smax		
	comp=E,2μm,0.6s					
JTJ	Tarama	13.47	237	P	P	15 14 59.6 +0.4
SSE	Sheshan	13.57	268	⇓P	P	15 14 59.8 -0.5
SSE				sP		15 16 29.9
SSE				S	S	15 17 23.5 -2.8
SSE				pmax	pmax	
	comp=Z,370nm,0.9s					
SSE				pmax	pmax	
	comp=Z,280nm,11.5s					
SSE				LR	LR	
	comp=N,270nm,24.1s					
SSE				LR	LR	
	comp=E,130nm,24.0s					
SSE				LR	LR	
	comp=Z,190nm,21.3s					
DL2	Dalian	13.97	301	⇓iP	P	15 15 05.8 +1.3
DL2				S	S	15 17 29.2 -4.9
DL2				PcP	PcP	15 19 52.5 -1.9
DL2				ScP	ScP	15 22 47.7 -0.7
DL2				ScS	ScS	15 26 24.6 -1.1
DL2				pmax	pmax	
	comp=Z,360nm,1.0s					
JIJ	Ishigaki jima	14.04	237	P	P	15 15 05.2 -0.2
SNY	Shenyang	14.08	314	⇓P	P	15 15 06.8 +1.1
SNY				sP		15 16 39.6
SNY				S	S	15 17 35.2 -0.9
SNY				pmax	pmax	
	comp=Z,190nm,1.5s					
SNY				LR	LR	
	comp=N,270nm,6.0s					
SNY				LR	LR	
	comp=E,300nm,6.9s					
SNY				LR	LR	
	comp=Z,260nm,10.8s					
JKRS	Kuro-shima	14.21	237	P	P	15 15 07.3 0.0
IRIF	Iriomote-Funau	14.35	238	P	P	15 15 08.1 -0.7
CN2	Changchun	14.36	324	eP	P	15 15 09.3 +0.7
CN2				esP		15 16 40.8
CN2				eS	S	15 17 41.3 -0.3
CN2				ScS	ScS	15 26 25.5 -1.0
CN2				pmax	pmax	
	comp=Z,30nm,0.9s					
CN2				pmax	pmax	
	comp=Z,200nm,3.0s					
YSS	Yuzh-Sakhalins	14.91	15	αiP	P	15 15 14.8 +0.2
YSS				i S	S	15 17 51.5 -1.1
YSS				pmax	pmax	
	comp=Z,2μm,0.6s					
YSS				pmax	pmax	
	comp=N,1μm,0.7s					
YSS				smax		
	comp=N,300nm,0.9s					
YSS				smax		
	comp=E,160nm,1.0s					
YSS				smax		
	comp=E,2μm,4.0s					
YSS	Yuzh-Sakhalins	14.91	15	eP	P	15 15 14.3 -0.3
	comp=E,2μm,0.6s					
KUR	Kuril'sk	15.08	31	⇑iP	P	15 15 13.8 -2.7
KUR				pmax	pmax	
	comp=N,160nm,0.9s					
KUR				pmax	pmax	
	comp=E,180nm,0.9s					
KUR				pmax	pmax	
	comp=Z,920nm,0.9s					
KUR				pmax	pmax	
	comp=Z,3μm,1.4s					
NJ2	Nanjing	15.39	273	eP	P	15 15 20.2 +0.2
NJ2				sP		15 16 52.2
NJ2				S	S	15 18 02.6 +0.2
NJ2				PcP	PcP	15 19 56.6 0.0
NJ2				pmax	pmax	
	comp=Z,740nm,0.8s					
NJ2				pmax	pmax	
	comp=Z,310nm,7.4s					
NJ2				LR	LR	
	comp=N,360nm,10.3s					
NJ2				LR	LR	
	comp=E,350nm,11.1s					
TATO	Taipei	15.64	245	⇓iP	P	15 15 21.8 -0.9
	comp=E,72nm,0.7s					
TATO				eS	S	15 18 05.2 -2.2
TATO	Taipei	15.64	245	P	P	15 15 22.6 -0.1
	SNR=6.1					
HABR	Khabarovsk	15.86	355	ciP	P	15 15 24.3 -0.4
HABR				eS	S	15 18 12.0 +1.0
HABR				pmax	pmax	
	comp=Z,591nm,0.9s					
HABR				pmax	pmax	
	comp=N,198nm,0.6s					
HABR				pmax	pmax	
	comp=E,205nm,0.7s					
YHNB	Yeheng	15.89	244	⇓eP	P	15 15 23.8 -1.6
	comp=E,110nm,0.4s					
YHNB				eS	S	15 18 07.6 -4.7
NACB	Ninganchiao	16.00	242	eP	P	15 15 23.8 -2.9
	comp=E,170nm,0.4s					
NACB				eS	S	15 18 11.0 -3.5
YULB	Yu-li	16.68	240	eP	P	15 15 31.4 -2.5
	comp=E,94nm,0.4s					
SSLB	Suanglung	16.70	242	⇓eP	P	15 15 32.3 -1.8
	comp=E,236nm,0.4s					
SSLB				eS	S	15 18 24.3 -3.9
SSLB				eScP	ScP	15 22 52.8 -1.0
TIA	Tai'an	16.81	288	⇓P	P	15 15 35.2 +0.1
TIA				S	S	15 18 29.0 -1.0
TIA				pmax	pmax	
	comp=Z,230nm,1.0s					
TIA				pmax	pmax	
	comp=Z,670nm,3.9s					
TIA				LR	LR	
	comp=N,800nm,12.5s					
TIA				LR	LR	
	comp=E,900nm,6.5s					
TIA				LR	LR	
	comp=Z,600nm,9.2s					
KLR	Kul'dur	17.01	348	⇓iP	P	15 15 32.3 -4.7
KLR				e		15 18 27.5
KLR				pmax	pmax	
	comp=N,64nm,1.0s					
KLR				pmax	pmax	
	comp=E,170nm,1.0s					
KLR				pmax	pmax	
	comp=Z,380nm,1.0s					
TWG	Pinlang	17.20	239	⇓eP	P	15 15 37.0 -2.3
	comp=Z,233nm,0.5s					
TWG				eS	S	15 18 32.4 -5.3
TPUB	Ta-pu	17.23	241	⇓eP	P	15 15 37.8 -1.9
	comp=Z,388nm,0.6s					
TPUB				eS	S	15 18 34.3 -4.1
QZH	Quanzhou	17.90	249	⇓iP	P	15 15 44.0 -2.8
QZH				pmax	pmax	
	comp=Z,210nm,0.7s					
QZH				LR	LR	
	comp=N,1μm,8.7s					
QZH				LR	LR	
	comp=E,730nm,8.9s					
QZH				LR	LR	
	comp=Z,1μm,14.5s					
BJT	Baijiatuau	18.33	299	eP	P	15 15 50.4 -0.7
BJT				pmax	pmax	
	comp=Z,599nm,0.4s					
BJT	Baijiatuau	18.33	299	eP	P	15 15 50.4 -0.7
	comp=Z,599nm,0.4s					
BJI	Beijing	18.33	300	P	P	15 15 50.2 -0.9
BJI				S	S	15 18 56.9 -2.0
BJI				ScS	ScS	15 26 36.9 -1.2
BJI				pmax	pmax	
	comp=Z,480nm,1.1s					
BJI				pmax	pmax	
	comp=Z,1μm,3.6s					
WHN	Wuhan	19.45	270	⇓P	P	15 16 02.4 0.0
WHN				sP	sP	15 17 48.1 -4.8
WHN				S	S	15 19 15.0 -2.5
WHN				LR	LR	
	comp=N,870nm,9.4s					
WHN				LR	LR	
	comp=E,790nm,9.2s					
WHN				LR	LR	
	comp=Z,1μm,9.6s					
GUMO	Guam	20.29	158	P	P	15 16 08.3 -2.0
	comp=Z,415nm,0.8s,baz=188,slow=3.1,SNR=27					
GUMO				S	S	15 19 30.6 -0.9
	comp=Z,120nm,1.1s,baz=270,slow=3.0,SNR=2.5					
GUMO	Guam	20.29	158	P	P	15 16 08.3 -2.0
GUMO				S	S	15 19 30.6 -0.8
GUMO				pmax	pmax	
	comp=Z,415nm,0.9s					
GUMO				smax		
	comp=N,121nm,1.1s					
GUMO	Guam	20.29	158	eP	P	15 16 08.5 -1.8
GUMO	Guam	20.29	158	eP	P	15 16 08.5 -1.8
	comp=N,1μm,1.2s					
TIY	Taiyuan	20.71	291	eP	P	15 16 13.6 -0.3
TIY				S	S	15 19 38.0 +0.2
TIY				LR	LR	
	comp=N,200nm,7.5s					
TIY				LR	LR	
	comp=E,250nm,10.5s					
TIY				LR	LR	
	comp=Z,240nm,11.4s					
HIA	Hailar	21.03	327	⇓iP	P	15 16 17.4 +0.9
HIA				pmax	pmax	
	comp=Z,80nm,0.8s					
HIA	Hailar	21.03	327	⇓iP	P	15 16 17.4 +0.8
	comp=Z,80nm,0.8s,mb5.2					
HHC	Hu-ho-hao-te	21.94	299	⇓P	P	15 16 25.6 +0.7
HHC				sP	sP	15 18 14.1 -6.1
HHC				S	S	15 19 58.4 +1.1
HHC				PcP	PcP	15 20 12.5 +4.6
HHC				pmax	pmax	
	comp=Z,330nm,1.4s,mb5.6					
HHC				pmax	pmax	
	comp=Z,470nm,5.5s					
HHC				LR	LR	
	comp=N,450nm,8.8s					
HHC				LR	LR	
	comp=E,550nm,7.6s					
HHC				LR	LR	
	comp=Z,340nm,12.0s					
GZH	Guangzhou	22.99	251	P	P	15 16 29.9 -4.8
GZH				S	S	15 20 05.4 -9.0
GZH				pmax	pmax	
	comp=Z,130nm,0.7s,mb5.5					
BTO	Baotou	23.03	298	eP	P	15 16 34.8 0.0
XAN	Xi'an	23.51	281	P	P	15 16 39.4 +0.1
XAN				sP	sP	15 18 30.0 -7.3
XAN				S	S	15 20 19.6 -2.8
XAN				pmax	pmax	
	comp=Z,340nm,0.7s,mb5.9					
XAN				LR	LR	
	comp=N,210nm,14.5s					
XAN				LR	LR	
	comp=E,90nm,10.6s					
XAN				LR	LR	
	comp=Z,110nm,11.4s					
ENH	Enshi	23.61	272	⇓iP	P	15 16 40.2 0.0
	comp=Z,340nm,0.6s,mb6.0					
BOAC	Boac	23.64	220	eP	P	15 16 39.7 -0.9
LUBP	Lubang	24.31	223	eP	P	15 16 44.3 -2.3
MSLP	Maasin	25.09	209	eP	P	15 16 52.7 -0.9
PETK	Petropavlovsk-	25.25	30	P	P	15 16 53.8 -0.8
	comp=Z,121nm,0.8s,mb5.4,baz=198,slow=5.3,SNR=120					
PETK	Petropavlovsk-	25.25	30	P	P	15 16 53.8 -0.7
PETK				pmax	pmax	
	comp=Z,121nm,0.8s,mb5.4					
CLNS	Chul'man	25.58	344	eP	P	15 16 58.5 +1.1
CLNS				e*PP		15 18 05.7
CLNS				e		15 20 15.3
CLNS				eS	S	15 20 54.7 +0.3
CLNS				pmax	pmax	
	comp=Z,43nm,0.8s,mb4.9					
CLNS				pmax	pmax	
	comp=N,41nm,0.9s					
CLNS				pmax	pmax	
	comp=E,11nm,0.8s					
CLNS				smax		
	comp=E,39nm,1.2s					
CLNS				smax		
	comp=N,42nm,1.5s					
PET	Petropavlovsk	25.60	31	αeP	P	15 16 57.1 -0.5
PET				e*PP		15 18 05.9
PET				e*SP	sP	15 18 56.3 -2.6
PET				eS	S	15 20 53.9 -0.9
PET				pmax	pmax	
	comp=Z,600nm,6.1s					
PET				pmax	pmax	
	comp=Z,317nm,0.8s,mb5.8					
PET				pmax	pmax	
	comp=Z,200nm,16.6s					
PET				MLR	MLR	
	comp=Z,200nm,18.0s					
PET				MLR	MLR	
	comp=Z,300nm,18.0s					
PET	Petropavlovsk	25.60	31	eP	P	15 16 57.1 -0.5
	comp=Z,169nm,0.7s,mb5.6					
GUIM	Jordan	25.67	215	eP	P	15 16 58.4 -0.3
BUSP	Coron	25.74	221	eP	P	15 16 58.1 -1.2
ENPP	El Nido	26.82	221	eP	P	15 17 07.9 -1.0
GYA	Guiyang	27.09	265	⇓iP	P	15 17 10.2 -1.0
GYA				sP	sP	15 19 08.9 -3.8
GYA				PcP	PcP	15 20 19.9 +0.2
GYA				ScP	ScP	15 23 22.0 +1.7
GYA				PcS	PcS	15 24 01.4 -0.4
GYA				ScS	ScS	15 27 11.8 -0.6
GYA				pmax	pmax	
	comp=Z,140nm,0.5s,mb5.7					
GYA				pmax	pmax	
	comp=Z,210nm,4.7s					
ULN	Ulaanbaatar	27.25	313	eP	P	15 17 13.3 +1.0
ULN				i		15 20 19.9
ULN				pmax	pmax	
	comp=Z,164nm,0.5s,mb5.7					
ULN	Ulaanbaatar	27.25	313	eP	P	15 17 13.2 +1.0
	comp=Z,164nm,0.5s,mb5.7					
ULN				i PcP	PcP	15 20 19.9 +0.3
ULN	Ulaanbaatar	27.25	313	P	P	15 17 14.0 +1.7
	SNR=97					
LZH	Lanzhou	27.54	286	⇓P	P	15 17 15.3 +0.2
LZH				PP	PP	15 18 31.8 +3.8
LZH				sP	sP	15 19 14.7 -2.1
LZH				S	S	15 21 25.6 -0.2
LZH				pmax	pmax	
	comp=Z,260nm,1.3s,mb5.4					
LZH				pmax	pmax	
	comp=Z,500nm,4.2s					
DAV	Davao City (W)	27.62	205	S	S	15 21 27.2 -0.2
	comp=Z,70nm,0.3s,baz=274,slow=17,SNR=6.3					
SONM	Songino Array	27.64	312	P	P	15 17 17.1 +1.3
	comp=Z,109nm,0.8s,mb5.2,baz=110,slow=8.1,SNR=540					
SONM				PcP	PcP	15 20 21.0 +0.4
	comp=Z,14nm,0.6s,baz=151,slow=2.5,SNR=7.2					
SONM				S	S	15 21 29.1 +2.1
	comp=Z,4.8nm,1.1s,baz=125,slow=12,SNR=2.1					
SONM				ScP	ScP	15 23 21.4 -0.2
	comp=Z,6.2nm,0.8s,baz=138,slow=2.4,SNR=6.8					
SONM				PKiKP	PKiKP	15 27 55.3 -1.0
	comp=Z,0.3nm,0.4s,baz=198,slow=2.1,SNR=4.2					
SONM	Songino Array	27.64	312	P	P	15 17 17.1 +1.3
SONM				PcP	PcP	15 20 21.0 +0.4
SONM				S	S	15 21 29.1 +2.1
SONM				ScP	ScP	15 23 21.4 -0.2
PAGZ	Pagadian	27.77	210	eP	P	15 17 15.9 -1.4
QIZ	Qiongzhong	27.90	248	P	P	15 17 18.0 -0.4
QIZ				pP		15 18 29.2
QIZ				PP	PP	15 18 31.6 -0.7
QIZ				sP	sP	15 19 15.0 -5.1
QIZ				S	S	15 21 32.4 +0.6
QIZ				pmax	pmax	
	comp=Z,36nm,0.9s,mb4.7					
QIZ				pmax	pmax	
	comp=Z,140nm,3.7s					
QIZ	Qiongzhong	27.90	248	eP	P	15 17 18.6 +0.1
	comp=Z,23nm,0.7s,mb4.6					
BATP	Batataza	29.70	221	eP	P	15 17 34.3 +0.1
YAK	Yakutsk	29.76	353	ciP	P	15 17 33.5 -0.6
YAK				e		15 18 47.6
YAK				e		15 20 24.8
YAK				eS	S	15 21 56.7 -2.9
YAK				e*SS	sS	15 24 12.9 -3.8
YAK				i		15 27 18.7
YAK				pmax	pmax	
	comp=Z,159nm,1.0s,mb5.3					
YAK				pmax	pmax	
	comp=E,10.0nm,0.9s					
YAK				pmax	pmax	
	comp=N,66nm,1.3s					
YAK				smax		
	comp=N,202nm,1.4s					
YAK				smax		
	comp=E,574nm,1.8s					
YAK	Yakutsk	29.76	353	⇑eP	P	15 17 33.5 -0.6
	comp=E,144nm,0.7s,mb5.4					
YAK				epP		15 18 47.8
YAK				ePcP	PcP	15 20 24.5 -1.2
YAK				eS	S	15 21 57.9 -1.7
GTA	Gaotai	30.69	293	⇓P	P	15 17 43.1 +0.5
GTA				pP	pP	15 18 59.7 +2.5
GTA				PcP	PcP	15 20 29.3 +0.6
GTA				S	S	15 22 14.5 -0.3
GTA				ScP	ScP	15 23 33.0 +1.4
GTA				SS	SS	15 24 42.4 -5.5
GTA				pmax	pmax	
	comp=Z,200nm,0.9s,mb5.5					
GTA				pmax	pmax	
	comp=Z,630nm,3.7s					
GTA				LR	LR	
	comp=N,220nm,10.9s					
GTA				LR	LR	
	comp=E,160nm,10.7s					
GTA				LR	LR	
	comp=Z,190nm,10.0s					
IRK	Irkutsk	30.72	319	eP	P	15 17 43.0 +0.4
IRK				pmax	pmax	
	comp=Z,148nm,1.6s,mb5.1					
TLY	Talaya	30.82	318	eP	P	15 17 43.1 -0.4
TLY				e		15 20 28.5
TLY				pmax	pmax	
	comp=Z,98nm,0.8s,mb5.2					
TLY	Talaya	30.82	318	⇓iP	P	15 17 45.0 +1.5
	comp=Z,96nm,0.8s,mb5.2					
TLY				i PcP	PcP	15 20 29.4 +0.6
TLY				eScP	ScP	15 23 31.9 +0.1
TLY	Talaya	30.82	318	P	P	15 17 45.4 +1.8
	SNR=30					
KMI	Kunming	30.87	265	P	P	15 17 44.0 -0.3
KMI				PP	PP	15 19 06.7 +1.8
KMI				sP	sP	15 19 43.8 -2.8
KMI				PcP	PcP	15 20 30.0 +0.6
KMI				S	S	15 22 16.1 -1.7
KMI				sS	sS	15 24 28.6 -6.7
KMI				SS	SS	15 24 42.5 -9.4
KMI				pmax	pmax	
	comp=Z,77nm,0.9s,mb5.0					
KMI				pmax	pmax	
	comp=Z,260nm,3.5s					
KMI				LR	LR	
	comp=N,300nm,10.2s					
KMI				LR	LR	
	comp=E,200nm,9.2s					
KMI				LR	LR	
	comp=Z,250nm,12.9s					
KDM	Kudat	31.78	221	P	P	15 17 51.8 -0.6
SEY	Seymchan	31.80	13	ceP	P	15 17 51.9 0.0
MOY	Mondy	32.33	317	eP	P	15 17 57.4 +0.8
MOY				pmax	pmax	
	comp=Z,84nm,3.0s					
MYLDM	Lahad Datu	32.38	216	P	P	15 17 57.1 -0.3
MYLDM	Lahad Datu	32.38	216	P	P	15 17 57.9 +0.5
	comp=Z,1μmcomp=Z,141nm,1.0s,mb5.3					
SDKM	Sandakan	32.65	219	P	P	15 17 59.2 -0.6
KKM	Kota Kinabalu	32.85	221	P	P	15 18 01.2 -0.3
KKM	Kota Kinabalu	32.85	221	eP	P	15 18 00.5 -0.9
	comp=Z,27nm,0.6s,mb4.8					
KKM	Kota Kinabalu	32.85	221	P	P	15 18 01.6 +0.1
	comp=Z,41nm,0.7s,mb4.9					
TNTI	Ternate	33.02	198	P	P	15 18 02.0 -0.9
	comp=Z,2μmcomp=Z,220nm,0.8s,mb5.5					
MNI	Manado	33.12	203	P	P	15 18 03.2 -0.6
	comp=Z,2μmcomp=Z,241nm,0.8s,mb5.6					
SMY	Shemya	33.29	42	eP	P	15 18 05.2 +0.4
SMY				pmax	pmax	
	comp=Z,412nm,1.4s,mb5.6					
SMY	Shemya	33.29	42	eP	P	15 18 05.2 +0.4
	comp=Z,412nm,1.4s,mb5.6					
TSM	Tawau	33.45	216	P	P	15 18 06.4 -0.2
UBT	Ubonrachathani	33.84	247	⇑P	P	15 18 11.0 +1.0
	comp=Z,382nm,0.5s,mb6.0					
KMSI	Cibinong	34.22	204	P	P	15 18 12.7 -0.4
TOLI	Toli-Toli	34.92	209	P	P	15 18 19.6 +0.6
	comp=Z,95nm,0.8s,mb5.2					
MRSI	Marisa	35.05	207	P	P	15 18 20.0 -0.1
CHRT	Chiangrai	35.59	258	⇓P	P	15 18 24.5 -0.1
	comp=Z,868nm,0.8s,mb6.1					
AMKA	Amchitka	35.91	46	eP	P	15 18 26.6 -0.3
	comp=Z,139nm,1.0s,mb5.2					
LUWI	Luwuk	36.15	205	P	P	15 18 26.8 -2.5
	comp=Z,2μmcomp=Z,218nm,0.9s,mb5.5					
CHG	Chiang Mai	36.79	257	⇓P	P	15 18 35.0 +0.3
	comp=Z,170nm,0.7s,mb5.5					
CHTO	Chiang Mai	36.79	257	⇓iP	P	15 18 34.9 +0.2
CHTO				e		15 20 46.6

CHTO *e*S **S** **15 23 47.0 -1.1**
CHTO pmax pmax
comp=Z,146nm,0.8s,mb5.4
CHTO Chiang Mai 36.79 257 ⇓*i*P **P** **15 18 34.9 +0.2**
comp=Z,146nm,0.8s,mb5.4
CHTO *e*PcP PcP 15 20 46.6 0.0
CHTO *e*S **S** **15 23 47.0 -1.1**
CHTO *e*ScP ScP 15 23 53.2 -0.4
CHTO Chiang Mai 36.79 257 P **P** **15 18 35.2 +0.5**
SNR=74
NLAI Namlea 36.94 197 P **P** **15 18 36.6 +0.7**
comp=Z,2μmcomp=Z,195nm,0.7s,mb5.5
CM31 Chiang Mai Arr 36.97 257 *e*P **P** **15 18 36.5 +0.4**
comp=Z,84nm,0.6s,mb5.2
CM31 *e*PcP PcP 15 20 46.8 -0.4
CM31 *e*ScP ScP 15 23 55.0 +0.8
CMAR Chiang Mai Arr 36.97 257 P **P** **15 18 36.5 +0.4**
comp=Z,70nm,0.7s,mb5.1,baz=50,slow=7.4,SNR=295
CMAR PcP PcP 15 20 47.5 +0.4
comp=Z,13nm,0.8s,baz=52,slow=1.2,SNR=10
CMAR ScP ScP 15 23 55.0 +0.8
comp=Z,6.3nm,1.0s,baz=42,slow=2.6,SNR=7.8
CMAR PKiKP PKiKP 15 28 02.8 -0.9
comp=Z,0.7nm,0.8s,baz=265,slow=1.1,SNR=4.5
CMAR Chiang Mai Arr 36.97 257 P **P** **15 18 36.6 +0.4**
CMAR 15 20 47.6
CMAR 15 23 55.1
CMAR *i* 15 28 02.8
CMAR pmax pmax
comp=Z,70nm,0.7s
CMAR Chiang Mai Arr 36.97 257 P **P** **15 18 36.5 +0.4**
CMAR PcP PcP 15 20 47.5 +0.4
CMAR ScP ScP 15 23 55.0 +0.8
PCI Palu 37.15 209 P PcS 15 24 30.1 -6.9
NST Nakhon Sawan 37.46 252 ⇑P **P** **15 18 41.0 +0.7**
comp=Z,175nm,0.8s,mb5.4
BNDI Bandanaira 37.61 192 P **P** **15 18 41.7 +0.2**
comp=Z,2μm,0.8s
SBUM Sibu 38.04 223 P **P** **15 18 45.0 -0.1**
comp=Z,516nmcomp=Z,68nm,1.1s,mb4.9
TLE Tual 38.32 187 P **P** **15 18 48.3 +1.0**
comp=Z,398nm,0.9s,mb5.8
KDI Kendari 38.92 203 P **P** **15 18 52.5 +0.3**
comp=Z,699nmcomp=Z,92nm,0.9s,mb5.1
TTSI Tana Toraja 39.10 208 P **P** **15 18 57.5 +3.8**
LSA Lhasa 39.15 278 P **P** **15 18 55.8 +1.8**
LSA pmax pmax
comp=Z,220nm,0.8s,mb5.5
LSA Lhasa 39.15 278 ⇓*e*P **P** **15 18 55.5 +1.5**
LSA pmax pmax
comp=Z,170nm,0.6s,mb5.5
LSA Lhasa 39.15 278 ⇓*e*P **P** **15 18 55.5 +1.5**
comp=Z,170nm,0.6s,mb5.5
BILL Bilibino 39.22 17 ⇑*e*P **P** **15 18 54.0 0.0**
BILL *e* 15 20 35.3
BILL *e*S **S** **15 24 21.1 -2.0**
BILL pmax pmax
comp=Z,488nm,0.9s,mb5.8
BILL Bilibino 39.22 17 ⇑*e*P **P** **15 18 53.9 -0.1**
comp=Z,304nm,0.8s,mb5.7
TIXI Tiksi 39.28 356*c i*P **P** **15 18 53.7 -0.8**
TIXI *e**PP pP 15 20 10.0 -2.2
TIXI *e* 15 20 34.9
TIXI *e*S **S** **15 24 22.1 -1.8**
TIXI *e* 15 28 09.9
TIXI pmax pmax
comp=Z,70nm,0.9s,mb5.0
TIXI Tiksi 39.28 356 ⇑*i*P **P** **15 18 53.4 -1.1**
comp=Z,65nm,0.8s,mb5.0
WMQ Urumqi 39.80 301 P **P** **15 19 00.0 +0.9**
WMQ pP pP 15 20 20.0 +3.0
WMQ PP PP 15 20 44.0 +2.9
WMQ S **S** **15 24 35.0 +2.8**
WMQ sS sS 15 26 55.0 +1.1
WMQ SS SS 15 27 42.0 -6.1
WMQ pmax pmax
comp=Z,350nm,1.0s,mb5.6
WMQ pmax pmax
comp=Z,2μm,4.0s
WMQ LR LR
comp=N,130nm,15.0s
WMQ LR LR
comp=E,100nm,15.0s
WMQ LR LR
comp=Z,110nm,15.0s
SHL Shillong 39.85 272 ⇓*i*P **P** **15 19 00.0 +0.2**
SHL *ex* x 15 24 39.0
KSM Kuching 39.94 224 ⇓*e*P **P** **15 19 01.0 +0.4**
comp=Z,96nm,0.6s,mb5.3
KSM *e*pP pP 15 20 18.1 -0.6
KSM *i* pP 15 20 24.7 +6.0
KSM *e*sP sP 15 21 02.8 -2.6
KSM Kuching 39.94 224 P **P** **15 19 01.0 +0.4**
comp=Z,1μmcomp=Z,176nm,0.7s,mb5.5
ATKA Atka Island 40.03 46 *e*P **P** **15 18 59.3 -1.5**
comp=Z,18nm,0.8s,mb4.5
BBSI Bau Bau 40.37 203 P **P** **15 19 04.4 +0.4**
comp=Z,818nmcomp=Z,68nm,1.0s,mb5.0
STKI Sintang 40.41 222 P **P** **15 19 04.9 +0.5**
comp=Z,92nm,1.1s,mb5.0
KBKI Kotabaru 40.89 213 P **P** **15 19 08.0 -0.2**
comp=Z,594nmcomp=Z,51nm,0.8s,mb4.9
KAPI Kappang 40.92 207 ⇓*e*P **P** **15 19 06.8 -1.7**
comp=Z,163nm,0.9s,mb5.4
KAPI *e*pP pP 15 20 25.0 -2.0
KAPI *i* PcP PcP 15 20 58.9 -0.9
KAPI Kappang 40.92 207 P **P** **15 19 07.6 -0.9**
SNR=8.2
BKSI Bulukumba 41.07 206 P **P** **15 19 08.7 -0.9**
comp=Z,861nmcomp=Z,113nm,0.8s,mb5.3
ZAA0 Zalesovo Array 42.38 316 ⇓*i*P **P** **15 19 19.2 -0.4**
ZAA0 *i* PcP PcP 15 21 03.3 -0.7
ZAA0 *e*ScP ScP 15 24 13.8 -0.9
ZALV Zalesovo Beam 42.38 316 P **P** **15 19 19.3 -0.3**
comp=Z,80nm,0.4s,mb5.4,baz=90,slow=7.9,SNR=291
ZALV PcP PcP 15 21 03.5 -0.5
comp=Z,66nm,0.6s,baz=103,slow=3.3,SNR=23
ZALV ScP ScP 15 24 13.8 -0.9
comp=Z,5.2nm,0.6s,baz=114,slow=3.8,SNR=3.9
ZALV S **S** **15 25 08.5 -1.0**
comp=Z,4.6nm,0.8s,baz=108,slow=12,SNR=3.2
ZALV Zalesovo Beam 42.38 316 P **P** **15 19 19.3 -0.3**
ZALV 15 21 03.5
ZALV S **S** **15 25 08.5 -1.0**
ZALV pmax pmax
comp=Z,80nm,0.4s,mb5.4
ZALV smax
comp=N,5.0nm,0.8s
ZALV Zalesovo Beam 42.38 316 P **P** **15 19 19.3 -0.3**
ZALV PcP PcP 15 21 03.5 -0.5
ZALV ScP ScP 15 24 13.8 -0.9
ZALV S **S** **15 25 08.5 -1.0**
TAPN Taplejung 42.75 276 *e*P **P** **15 19 23.8 +0.8**
comp=N,262nm,0.4s,mb5.9
PMG Port Moresby 42.94 165 *e*P **P** **15 19 23.5 -1.0**
PMG pmax pmax
comp=Z,46nm,0.7s
PMG Port Moresby 42.94 165 *e*P **P** **15 19 23.2 -1.4**
comp=Z,50nm,0.6s,mb5.0
PMG *e*PcP PcP 15 21 05.8 -0.7
PMG *e*ScP ScP 15 24 16.9 -0.7
PMG Port Moresby 42.94 165 P **P** **15 19 23.9 -0.6**
comp=Z,75nm,0.6s,mb5.2
PMG Port Moresby 42.94 165 P PcP 15 21 06.5 0.0
comp=Z,75nm,0.6s
ODAN Odare 43.19 276 *e*P **P** **15 19 27.0 +0.6**
comp=Z,744nm,0.6s,mb6.2
SPIA Saint Paul Isl 43.20 39 *e*P **P** **15 19 26.3 +0.2**
NIKO Nikolski 43.37 46 ⇑*i*P **P** **15 19 25.1 -2.3**
comp=Z,198nm,0.7s,mb5.5
NVS Novosibirsk 43.43 317 ⇓*i*P **P** **15 19 26.8 -1.1**
NVS *i* 15 21 05.7
NVS *i* S **S** **15 25 23.2 -1.4**
NVS *e* 15 28 36.7
NVS pmax pmax
comp=Z,121nm,1.3s,mb5.1
NVS pmax pmax
comp=E,77nm,1.0s
NVS smax
comp=E,25nm,1.4s
MMRI Maumere 43.44 202 P **P** **15 19 27.8 -0.7**
comp=E,1μmcomp=E,208nm,0.9s,mb5.4
KULM Kulim 43.51 239 ⇓*e*P **P** **15 19 29.0 -0.2**
comp=E,102nm,0.8s,mb5.2
KULM Kulim 43.51 239 P **P** **15 19 29.5 +0.3**
comp=E,1μmcomp=E,159nm,1.0s,mb5.3
MK31 Makanchi Array 43.55 305 ⇓*i*P **P** **15 19 29.5 +0.5**
MK31 *i* 15 21 08.1
MK31 *e*S **S** **15 25 26.1 -0.6**
MK31 Makanchi Array 43.55 305 ⇓*i*P **P** **15 19 29.5 +0.5**
MK31 *i* PcP PcP 15 21 08.1 0.0
MK31 *i* ScP ScP 15 24 19.4 -0.3
MK31 *e*S **S** **15 25 26.1 -0.5**
MKAR Makanchi Array 43.55 305 P **P** **15 19 29.5 +0.5**
comp=E,221nm,0.8s,mb5.6,baz=89,slow=9.7,SNR=1029
MKAR PcP PcP 15 21 07.9 -0.3
comp=E,30nm,0.8s,baz=79,slow=6.3,SNR=5.9
MKAR ScP ScP 15 24 19.5 -0.2
comp=E,16nm,0.7s,baz=84,slow=5.0,SNR=10
MKAR S **S** **15 25 27.3 +0.6**
comp=E,5.3nm,1.1s,baz=94,slow=16,SNR=3.8
MKAR Makanchi Array 43.55 305 P **P** **15 19 29.5 +0.5**
MKAR 15 21 07.9
MKAR S **S** **15 25 27.3 +0.6**
MKAR pmax pmax
comp=Z,221nm,0.8s
MKAR smax
comp=N,5.0nm,1.1s
MKAR Makanchi Array 43.55 305 P **P** **15 19 29.5 +0.5**
MKAR PcP PcP 15 21 07.9 -0.3
MKAR ScP ScP 15 24 19.5 -0.2
MKAR S **S** **15 25 27.3 +0.6**
MYKOM Kota Tinggi 43.77 232 P **P** **15 19 31.7 +0.5**
comp=N,883nmcomp=N,94nm,1.2s,mb5.0
IPM Ipoh 43.80 238 ⇓*e*P **P** **15 19 31.1 -0.3**
comp=N,227nm,0.7s,mb5.6
IPM *e*PcP PcP 15 21 09.1 -0.4
IPM Ipoh 43.80 238 P **P** **15 19 31.1 -0.3**
comp=N,3μmcomp=N,347nm,0.8s,mb5.7
RAMN Ramite 43.82 276 *e*P **P** **15 19 32.1 +0.7**
comp=N,1μm,0.7s
GUN Gumba 44.10 278 *e*P **P** **15 19 34.7 +1.1**
comp=N,1μm,0.7s
PKI Pulchoki 44.60 278 *e*P **P** **15 19 38.0 +0.5**
comp=N,598nm,0.7s,mb6.0
PKIN Phulchoki 44.61 278 *e*P **P** **15 19 38.0 +0.4**
comp=N,443nm,0.6s,mb5.9
KKN Kakani 44.64 278 *e*P **P** **15 19 38.4 +0.6**
comp=N,1μm,0.8s
DMN Daman 44.84 278 *e*P **P** **15 19 40.0 +0.6**
UNV Unalaska Valle 44.85 44 *e*Pn **P** **15 19 35.8 -3.2**
TPI Tanjungpandan 44.90 224 P **P** **15 19 39.9 -0.1**
comp=N,670nmcomp=N,85nm,0.8s,mb5.1
GKN Gorkha 45.10 278 *e*P **P** **15 19 41.9 +0.5**
comp=N,1μm,0.8s
KMMI Kalianget 45.20 213 P **P** **15 19 41.9 -0.4**
comp=N,124nm,0.9s,mb5.2
AKUT Akutan 45.30 44 *e*P **P** **15 19 40.7 -1.8**
comp=N,43nm,0.6s,mb5.0
KAKA Kakadu 45.34 186 *e*P **P** **15 19 41.8 -1.5**
comp=N,71nm,0.8s,mb5.0
KAKA *e* 15 25 50.5
KAKA Kakadu 45.34 186 *e*P **P** **15 19 41.7 -1.6**
comp=N,210nm,0.7s,mb5.6
KAKA *e*S **S** **15 25 50.2 -2.5**
KAKA Kakadu 45.34 186 P **P** **15 19 42.0 -1.3**
comp=N,1μmcomp=N,150nm,0.8s,mb5.4
SRBI Singaraja 45.56 211 P **P** **15 19 44.5 -0.5**
comp=N,110nm,0.8s,mb5.2
KHKI Kahang-Kahang 45.64 210 P **P** **15 19 44.7 -0.9**
comp=N,2μmcomp=N,240nm,1.1s,mb5.4
MTNI Mataram 45.65 210 P **P** **15 19 44.8 -0.9**
comp=N,107nm,1.1s,mb5.1
DANN Dangsing 45.72 279 *e*P **P** **15 19 47.4 +1.2**
KURK Kurchatov 45.94 311 ⇓*e*P **P** **15 19 47.4 -0.1**
KURK *e* 15 21 16.0
KURK *e*S **S** **15 25 57.7 -2.8**
KURK pmax pmax
comp=Z,328nm,0.8s,mb5.7
KURK Kurchatov 45.94 311 ⇓*e*P **P** **15 19 47.4 -0.1**
comp=Z,328nm,0.8s,mb5.7
KURK *e*PcP PcP 15 21 16.0 -0.4
KURK *e*ScP ScP 15 24 28.7 -0.8
KURK *e*S **S** **15 25 57.7 -2.8**
KURK Kurchatov 45.94 311 P **P** **15 19 47.6 +0.1**
SNR=131
KOLN Koldanda 46.05 279 *e*P **P** **15 19 49.5 +0.8**
IGBI Denpasar 46.24 211 P **P** **15 19 47.9 -2.4**
comp=Z,96nm,0.9s,mb5.1
TSI Tuntungan 46.25 239 P **P** **15 19 50.4 0.0**
JAGI Jajag, Banyuwa 46.37 212 P **P** **15 19 49.8 -1.5**
comp=Z,798nmcomp=Z,76nm,1.0s,mb5.0
TNA Tin City 46.40 28 ⇑*e*P **P** **15 19 51.1 +0.4**
comp=Z,104nm,0.8s,mb5.2
GMJI Gumukmas 46.52 213 P **P** **15 19 50.8 -1.6**
comp=Z,68nm,1.0s,mb5.0
NGJI Ngawi 46.68 216 P **P** **15 19 54.1 +0.5**
comp=Z,69nm,1.1s,mb4.9
COEN Coen 46.73 172 *e*P **P** **15 19 54.2 +0.2**
comp=Z,457nm,0.7s,mb5.9
COEN *e*PcP PcP 15 21 20.0 +0.4
COEN Coen 46.73 172 P **P** **15 19 54.4 +0.5**
comp=Z,333nm,0.8s,mb5.7
BKNI Bangkinang 46.74 234 P **P** **15 19 54.2 0.0**
comp=Z,4μmcomp=Z,452nm,0.9s,mb5.8
SJI Sawahan 46.85 215 P **P** **15 19 53.9 -1.0**
comp=Z,72nm,1.0s,mb5.0
KRKI Karangkates 46.88 214 P **P** **15 19 54.4 -0.8**
comp=Z,435nm,0.8s,mb5.8
SMRI Semarang 46.92 217 P **P** **15 19 55.8 +0.3**
comp=Z,147nm,0.9s,mb5.3
PWJI Pagerwojo 47.08 215 P **P** **15 19 54.9 -1.8**
comp=Z,2μmcomp=Z,273nm,0.9s,mb5.6
SDSI Sungai Dareh 47.41 232 P **P** **15 19 58.9 -0.3**
comp=Z,2μmcomp=Z,152nm,0.8s,mb5.4
MNSI Mandailing Nat 47.41 236 P **P** **15 19 59.0 -0.3**
comp=Z,2μmcomp=Z,111nm,0.7s,mb5.3
PCJI Pacitan 47.53 216 P **P** **15 19 58.7 -1.4**
comp=Z,64nm,0.8s,mb5.0
BJII Banjamegara 47.54 218 P **P** **15 19 59.9 -0.3**
comp=Z,42nm,0.7s,mb4.9
UGM Wanagama 47.62 217 *e*P **P** **15 19 59.6 -1.2**
comp=Z,78nm,1.0s,mb5.0
UGM Wanagama 47.62 217 P **P** **15 19 59.7 -1.1**
comp=Z,4μmcomp=Z,357nm,1.2s,mb5.6
YOGI Yogyakarta 47.65 217 P **P** **15 19 59.9 -1.1**
comp=Z,420nm,0.9s,mb5.8
PPI Padang Panjang 47.75 234 P **P** **15 20 02.0 +0.2**
comp=Z,4μmcomp=Z,65nm,1.1s,mb4.8
PDSI Padang 48.04 233 P **P** **15 20 02.6 -1.4**
comp=Z,50nm,0.8s,mb4.9
KLSI 48.18 226 P **P** **15 20 04.7 -0.4**
comp=Z,4μmcomp=Z,318nm,0.8s,mb5.7
LEM Lembang 48.24 221 P **P** **15 20 05.2 -0.3**
comp=Z,4μmcomp=Z,484nm,0.9s,mb5.8
KLI Kotabumi 48.24 225 P **P** **15 20 05.0 -0.5**
comp=Z,6μmcomp=Z,346nm,1.0s,mb5.7
ULHL Ulahol 48.30 300 P **P** **15 20 06.5 +0.9**
SNR=45
CBJI Citeko 48.34 222 P **P** **15 20 07.3 +1.1**
MDSI Maura Dua 48.36 226 P **P** **15 20 05.5 -0.9**
comp=Z,2μmcomp=Z,272nm,1.1s,mb5.5
BLSI Bandar Lampung 48.41 225 P **P** **15 20 06.1 -0.7**
comp=Z,3μmcomp=Z,375nm,0.7s,mb5.8
SDPT Sand Point 48.42 43 *e*P **P** **15 20 04.0 -2.3**
comp=Z,97nm,0.5s,mb5.4
SDPT *i* PcP PcP 15 21 24.8 -0.4
JOSI Joshimath 48.49 284 *e*PKP **P** **15 20 08.0 +0.8**
DBJI Dramaga 48.50 222 P **P** **15 20 07.2 -0.2**
comp=Z,131nm,0.9s,mb5.3
TKM2 Tokmak 2 48.66 301 P **P** **15 20 09.5 +1.2**
SNR=28
TKM2 Tokmak 2 48.66 301 ⇓*i*P **P** **15 20 09.5 +1.2**
TKM2 *e* 15 21 25.4
TKM2 pmax pmax
comp=Z,110nm,0.4s,mb5.5
TKM2 Tokmak 2 48.66 301 ⇓*i*P **P** **15 20 09.4 +1.2**
comp=Z,110nm,0.4s,mb5.5
TKM2 *e*PcP PcP 15 21 25.4 -1.0
TKM2 *e*ScP ScP 15 24 40.9 -0.2
KSI Kapahiang 48.70 229 P **P** **15 20 08.8 -0.1**
comp=Z,157nm,0.9s,mb5.3
KNA Kunundurra 48.79 191 P **P** **15 20 08.7 -0.8**
comp=Z,2μmcomp=Z,269nm,0.8s,mb5.6
LWLI Liwa 48.85 226 P **P** **15 20 09.3 -0.7**
comp=Z,3μmcomp=Z,350nm,0.7s,mb5.8
KASI Kota Agung 48.98 225 P **P** **15 20 08.9 -2.2**
comp=Z,162nm,1.0s,mb5.3
KSH Kashi 49.01 296 *e*P **P** **15 20 15.2 +4.3**
KSH *e*PcP PcP 15 21 30.6 +2.9
KSH *e*pP pP 15 21 38.1 +5.3
KSH *e*PP PP 15 22 15.7 +6.6
KSH *e*sP sP 15 22 23.0 +4.4
KSH *e*ScP ScP 15 24 45.0 +2.3
KSH *e*PcS PcS 15 25 26.5 +1.8
KSH *e*S **S** **15 26 49.4 +5.9**
KSH *e*sS sS 15 29 15.5 +4.8
KSH *e*ScS ScS 15 29 19.9 +1.6
KSH *e*SS SS 15 30 26.8 +6.5
KSH pmax pmax
comp=Z,1μm,2.4s,mb5.8
KSH LR LR
comp=N,240nm,8.1s
KSH LR LR
comp=E,250nm,7.1s
KSH LR LR
comp=Z,360nm,7.5s
KBK Karagaybulak 49.17 300 P **P** **15 20 13.2 +1.0**
SNR=20
KBK Karagaybulak 49.17 300 *e*P **P** **15 20 13.2 +1.1**
comp=Z,36nm,0.6s,mb4.9
CHMS Chumysh 49.25 301 P **P** **15 20 13.3 +0.5**
SNR=37
SISI Saibi 49.27 234 P **P** **15 20 12.3 -1.0**
comp=Z,79nm,1.1s,mb5.0
USP Ospenovka 49.39 301 P **P** **15 20 14.2 +0.5**
SNR=11
AAK Ala-Archa 49.50 301 P **P** **15 20 15.3 +0.7**
SNR=86
AAK Ala-Archa 49.50 301 P **P** **15 20 15.3 +0.7**
comp=Z,94nm,0.5s,mb5.4,baz=112,slow=5.5,SNR=208
AAK PcP PcP 15 21 29.8 +0.3
comp=Z,24nm,0.5s,baz=104,slow=6.2,SNR=4.8
AAK S **S** **15 26 50.5 +0.3**
comp=Z,0.9nm,0.3s,baz=240,slow=20,SNR=2.5
AAK Ala-Archa 49.50 301 *de*P **P** **15 20 15.0 +0.4**
AAK pmax pmax
comp=Z,73nm,0.8s,mb5.1
AAK Ala-Archa 49.50 301 ⇓*i*P **P** **15 20 15.2 +0.6**
comp=Z,114nm,0.5s,mb5.5
AAK *i* PcP PcP 15 21 29.9 +0.5
AAK Ala-Archa 49.50 301 P **P** **15 20 15.2 +0.6**
comp=Z,1μm,0.6s,mb6.5,SNR=60
AAK Ala-Archa 49.50 301 P **P** **15 20 15.3 +0.7**
SNR=36
UCH Uchtor 49.56 300 P **P** **15 20 16.8 +1.8**
SNR=19
UCH Uchtor 49.56 300 *e*P **P** **15 20 16.2 +1.1**
comp=Z,34nm,0.7s,mb4.8
UCH *e*PcP PcP 15 21 30.7 +1.0
CHGN Chignik 49.59 41 *e*P **P** **15 20 12.3 -2.7**
DDI Dehra Dun 49.80 284 *e*PKP **P** **15 20 16.0 -1.0**
DDI *ex* x 15 21 38.8
EKS2 Erkin-Say 50.02 301 P **P** **15 20 19.1 +0.7**
SNR=72
EKS2 Erkin-Say 50.02 301 ⇓*i*P **P** **15 20 18.9 +0.5**
comp=Z,57nm,0.6s,mb5.1
EKS2 *e*PcP PcP 15 21 31.1 -0.2
AML Almayashu 50.18 300 P **P** **15 20 21.4 +1.8**
SNR=234
AML Almayashu 50.18 300 *e*P **P** **15 20 21.0 +1.4**
comp=Z,265nm,0.4s,mb5.9
AML *i* PcP PcP 15 21 32.9 +1.0
SMLA Simla 50.26 285 *i* P **P** **15 20 19.5 -0.9**
SDNR Sundarnagar 50.31 286 *e*PKP **P** **15 20 20.9 +0.2**
VIS Vishakhapatnam 50.34 266 *e*PKP **P** **15 20 21.9 +0.7**
BHK Bhakra 50.78 286 *ex* x 15 20 22.0
AGRA Agra 50.94 280 *e*PKP **P** **15 20 24.9 -0.6**
BVAR Borovoye Array 50.95 314 P **P** **15 20 25.1 -0.1**
comp=Z,99nm,0.6s,mb5.2,baz=94,slow=8.0,SNR=464
BVAR PcP PcP 15 21 34.5 -0.2
comp=Z,74nm,0.7s,baz=102,slow=3.9,SNR=16
BVAR ScP ScP 15 24 50.5 -0.3
comp=Z,16nm,0.7s,baz=97,slow=4.6,SNR=8.6
BVAR S **S** **15 27 08.3 -1.4**
comp=Z,5.0nm,0.7s,baz=84,slow=16,SNR=5.9
BVAR Borovoye Array 50.95 314 P **P** **15 20 25.1 0.0**
BVAR 15 21 34.5
BVAR S **S** **15 27 08.3 -1.4**
BVAR pmax pmax
comp=Z,99nm,0.6s
BVAR smax
comp=N,5.0nm,0.7s
BRVK Borovoye 51.01 314*ce*P **P** **15 20 25.4 -0.2**
BRVK pmax pmax
comp=Z,134nm,0.9s,mb5.2
BRVK Borovoye 51.01 314 ⇓*e*P **P** **15 20 25.5 -0.1**
comp=Z,95nm,0.7s,mb5.1
BRVK *e*PcP PcP 15 21 34.4 -0.5
BRVK *e*ScP ScP 15 24 50.6 -0.4
BRVK Borovoye 51.01 314 P **P** **15 20 25.9 +0.3**
SNR=57
NDI New Delhi 51.03 282 *e*PKP **P** **15 20 24.0 -2.1**
TTA Tatalina 51.03 33 *e*P **P** **15 20 25.3 -0.2**
SVW2 Sparrevohn 51.15 35 *e*P **P** **15 20 26.6 +0.2**
comp=Z,108nm,1.7s,mb4.8
AYAN Aya Nagar 51.17 282 *e*PKP **P** **15 20 27.2 +0.1**
SONA Sohna 51.29 282 *e*PKP **P** **15 20 28.1 +0.1**
FITZ Fitzroy Crossi 51.65 194 ⇓*i*P **P** **15 20 30.1 -0.5**
comp=Z,57nm,0.6s,mb5.0
FITZ *e*S **S** **15 27 17.3 -2.6**
FITZ Fitzroy Crossi 51.65 194 ⇓*e*P **P** **15 20 30.2 -0.4**
comp=Z,28nm,0.6s,mb4.7
FITZ *e*S **S** **15 27 17.0 -2.9**
FITZ Fitzroy Crossi 51.65 194 P **P** **15 20 30.0 -0.6**
comp=Z,124nm,1.1s,mb5.1
KUDL Kundal 51.82 282 *ex* x 15 20 26.4
KUDL AMb AMB 15 20 27.1
comp=Z,235nm,1.1s,mb5.3
KK31 Karatay Array 52.29 302 *i* P **P** **15 20 35.4 +0.4**
KK31 pmax pmax
comp=Z,215nm,0.5s,mb5.6
KKAR Karatay Array 52.29 302 ⇓*e*P **P** **15 20 35.2 +0.2**
KKAR pmax pmax
comp=Z,224nm,0.5s,mb5.7
KKAR Karatay Array 52.29 302 ⇓*e*P **P** **15 20 35.2 +0.1**
comp=Z,224nm,0.5s,mb5.7
XMIS Christmas Isla 52.34 220 P **P** **15 20 33.4 -2.3**
comp=Z,647nm,1.5s,mb5.6
WB2 Warramunga Arr 52.38 183 ⇓*e*P **P** **15 20 34.6 -1.2**
WB2 *e*PcP PcP 15 21 40.5 +0.2
WRA Warramunga Arr 52.38 183 P **P** **15 20 34.6 -1.2**
comp=Z,53nm,0.7s,mb4.9,baz=0.4,slow=7.8,SNR=155
WRA PcP PcP 15 21 40.4 0.0
comp=Z,28nm,0.8s,baz=357,slow=4.2,SNR=11
WRA pP pP 15 22 01.3 +2.1
comp=Z,10nm,0.8s,baz=4.5,slow=7.8,SNR=2.2
WRA S **S** **15 27 25.7 -3.9**
comp=Z,8.3nm,1.1s,baz=2.9,slow=14,SNR=8.7
WRA Warramunga Arr 52.38 183 P **P** **15 20 34.7 -1.2**
WRA 15 21 40.4
WRA *PP pP 15 22 01.3 +2.1
WRA S **S** **15 27 25.7 -3.9**
WRA pmax pmax
comp=Z,53nm,0.7s
WRA smax
comp=N,8.0nm,1.1s
WRA Warramunga Arr 52.38 183 P **P** **15 20 34.6 -1.2**
WRA PcP PcP 15 21 40.4 0.0
WRA pP pP 15 22 01.3 +2.1
WRA S **S** **15 27 25.7 -3.9**
OHAK Old Harbor 52.39 40 *e*P **P** **15 20 34.2 -1.3**
comp=N,107nm,1.0s,mb5.0
KHET Khetri 52.41 282 *e*PKP **P** **15 20 36.6 +0.4**
RSO Redoubt South 52.54 36 ⇑*e*P **P** **15 20 36.1 -0.4**
KDAK Kodiak Island 52.74 39 P **P** **15 20 37.2 -0.8**
comp=N,151nm,0.5s,mb5.5,baz=276,slow=4.1,SNR=233
KDAK pP pP 15 22 00.6 -0.8
comp=N,18nm,0.7s,baz=9.4,slow=7.4,SNR=2.9
KDAK S **S** **15 27 32.6 -1.0**
comp=N,11nm,1.1s,baz=121,slow=22,SNR=6.2
KDAK Kodiak Island 52.74 39 *i* P **P** **15 20 36.8 -1.2**
KDAK Kodiak Island 52.74 39 ⇑*e*P **P** **15 20 37.0 -1.0**
comp=N,126nm,0.5s,mb5.4
PPLA Purkeypile 52.78 33 ⇑*i*P **P** **15 20 39.0 +0.7**
comp=N,118nm,0.6s,mb5.3
BHPL Bhopal 52.91 276 *e*PKP **P** **15 20 39.3 -0.6**
CTA Charters Tower 53.19 169 *e*P **P** **15 20 41.0 -0.8**
comp=N,19nm,0.8s,mb4.4
CTAO Charters Tower 53.19 169 *e*P **P** **15 20 40.6 -1.2**
CTAO pmax pmax
comp=Z,21nm,0.7s,mb4.5
CTAO Charters Tower 53.19 169 *e*P **P** **15 20 40.6 -1.1**
comp=Z,21nm,0.7s,mb4.5
BPAW Bear Paw Mtn. 53.32 31 ⇑*e*P **P** **15 20 42.3 +0.2**
comp=Z,42nm,0.6s,mb4.8

TRF Thorofare Moun 53.64 32 *eP* **P 15 20 44.1 -0.3**
comp=Z,25nm,0.5s,mb4.7
SLKM Skilak Lake 53.79 36 *eP* **P 15 20 44.2 -1.3**
AJM Ajmer 53.96 281 *ePKP* **P 15 20 46.9 -0.4**
RC01 Rabbit Creek A 53.99 35⇑ *eP* **P 15 20 45.9 -1.1**
comp=Z,60nm,0.9s,mb4.8
SEW Seward 54.20 36⇑ *eP* **P 15 20 47.5 -1.0**
comp=Z,75nm,0.5s,mb5.2
MCK McKinley 54.23 32⇑ *iP* **P 15 20 48.3 -0.3**
MCK pmax pmax
comp=Z,76nm,0.7s,mb5.0
MCK McKinley 54.23 32⇑ *iP* **P 15 20 48.3 -0.4**
comp=Z,76nm,0.7s,mb5.0
PMR Palmer 54.25 34 *eP* **P 15 20 47.6 -1.2**
PMR pmax pmax
comp=Z,163nm,1.0s,mb5.2
PMR Palmer 54.25 34 *eP* **P 15 20 47.6 -1.2**
comp=Z,163nm,1.0s,mb5.2
HYB Hyderabad 54.51 269 *iP* **P 15 20 52.0 +0.7**
SML Sawmill 54.62 34⇑ *iP* **P 15 20 50.9 -0.5**
SML *e*PP* pP 15 22 16.7 +1.3
SML *e* 15 22 56.7
SML pmax pmax
comp=Z,32nm,0.9s,mb4.5
SML Sawmill 54.62 34⇑ *iP* **P 15 20 50.9 -0.5**
comp=Z,32nm,0.9s,mb4.5
SML *e*pP pP 15 22 16.7 +1.3
SML *e*PP PP 15 22 56.7 -2.1
SML *e*ScP ScP 15 25 02.6 -4.0
COLA College 54.66 30⇑ *eP* **P 15 20 51.2 -0.4**
COLA *e* 15 22 59.5
COLA pmax pmax
comp=Z,49nm,0.6s,mb4.9
COLA College 54.66 30⇑ *eP* **P 15 20 51.2 -0.4**
comp=Z,49nm,0.6s,mb4.9
COLA *e*PP PP 15 22 59.5 +0.4
ILAR Eielson Array 55.08 30 P **P 15 20 53.5 -1.1**
comp=Z,24nm,0.6s,mb4.6,baz=257,slow=5.5,SNR=354
ILAR PcP PcP 15 21 48.9 -1.3
comp=Z,5.0nm,0.6s,baz=268,slow=4.1,SNR=4.2
ILAR pP pP 15 22 18.6 -0.2
comp=Z,4.6nm,0.7s,baz=275,slow=6.6,SNR=3.6
ILAR S **S 15 28 03.5 -0.8**
comp=Z,0.5nm,1.0s,baz=315,slow=8.9,SNR=3.7
ILAR Eielson Array 55.08 30 P **P 15 20 53.5 -1.1**
ILAR 15 21 48.9
ILAR **PP pP 15 22 18.7 -0.1
ILAR S **S 15 28 03.6 -0.8**
ILAR pmax pmax
comp=Z,24nm,0.6s
ILAR smax
comp=N,1.0nm,1.0s
KBL Kabul 55.67 292⇓ *iP* **P 15 20 59.5 +0.2**
KBL pmax pmax
comp=Z,161nm,0.8s,mb5.4
KBL Kabul 55.67 292⇓ *iP* **P 15 20 59.5 +0.2**
comp=Z,161nm,0.8s,mb5.4
LATR Latur 55.73 271 *ePKP* **P 15 21 00.0 +0.1**
PAX Paxson 55.84 33⇑ *eP* **P 15 20 59.5 -0.5**
PAX *e* 15 21 53.5
PAX pmax pmax
comp=Z,39nm,0.8s,mb4.8
PAX Paxson 55.84 33⇑ *eP* **P 15 20 59.5 -0.6**
comp=Z,39nm,0.8s,mb4.8
PAX *e*PcP PcP 15 21 53.5 +0.3
MBWA Marble Bar 56.03 200 *eP* **P 15 21 10.3 +8.5**
MBWA Marble Bar 56.03 200 *eP* **P 15 21 00.8 -1.0**
comp=Z,32nm,0.6s,mb4.8
ASAR Alice Springs 56.10 183 P **P 15 21 01.2 -1.0**
comp=Z,24nm,0.7s,mb4.6,baz=10,slow=12,SNR=204
ASAR PcP PcP 15 21 54.5 -0.2
comp=Z,14nm,0.8s,baz=9.6,slow=5.6,SNR=8.4
ASAR ScP ScP 15 25 13.2 -0.4
comp=Z,4.7nm,1.0s,baz=4.1,slow=5.0,SNR=3.3
ASAR S **S 15 28 18.9 +0.2**
comp=Z,2.1nm,0.9s,baz=11,slow=13,SNR=6.4
ASAR Alice Springs 56.10 183 P **P 15 21 01.3 -1.0**
ASAR 15 21 54.5
ASAR S **S 15 28 18.9 +0.2**
ASAR pmax pmax
comp=Z,25nm,0.7s
ASAR smax
comp=N,2.0nm,0.9s
SVE Sverdlovsk 56.10 320⇑ *eP* **P 15 21 02.3 +0.4**
SVE *e* 15 23 21.9
SVE *e*S **S 15 28 11.1 -6.9**
SVE pmax pmax
comp=Z,169nm,0.8s,mb5.4
DOT Dot Lake 56.40 32⇑ *iP* **P 15 21 03.4 -0.6**
comp=Z,246nm,0.5s,mb5.8
DOT *e*PcP PcP 15 21 55.3 0.0
DOT *e*PP PP 15 23 16.3 +1.7
RAGM Ragged Mountai 56.53 36 *eP* **P 15 21 05.6 +0.7**
MENT Mentasta 56.64 33 *eP* **P 15 21 05.7 +0.1**
ARU Arti 57.30 320*c iP* **P 15 21 09.8 -0.4**
ARU *e* 15 21 58.1
ARU *e*PP pP 15 22 37.1 +1.8
ARU **SP sP 15 23 15.4 -4.9
ARU *e* 15 23 22.6
ARU S **S 15 28 33.8 +0.2**
ARU pmax pmax
comp=Z,115nm,0.6s,mb5.4
ARU Arti 57.30 320⇓ *iP* **P 15 21 10.0 -0.3**
comp=Z,139nm,0.5s,mb5.5
ARU Arti 57.30 320 P **P 15 21 10.4 +0.2**
comp=Z,2μm,0.4s,SNR=57
EGAK Eagle 57.52 30⇑ *eP* **P 15 21 10.7 -0.9**
comp=Z,18nm,0.5s,mb4.7
PALK Pallekele 57.91 257 *iP* **P 15 21 15.9 +0.8**
PALK Pallekele 57.91 257⇓ *iP* **P 15 21 15.6 +0.5**
comp=Z,94nm,0.6s,mb5.3
PALK *e*PcP PcP 15 22 01.6 -0.6
PALK *i* ScP ScP 15 25 22.4 +0.4
PALK Pallekele 57.91 257 P **P 15 21 15.5 +0.4**
SNR=7.0
POO Poona 57.96 272 *ePKP* **P 15 21 15.3 0.0**
AB31 Akbulak array 58.05 311 *iP* **P 15 21 15.4 -0.1**
AB31 pmax pmax
comp=Z,149nm,0.6s,mb5.5
ABKAR Akbulak array 58.05 311⇓ *iP* **P 15 21 15.5 0.0**
comp=Z,141nm,0.5s,mb5.5
KAD Karad 58.24 271 *ePKP* **P 15 21 17.1 -0.3**
DAWY Dawson 58.39 31 *eP* **P 15 21 17.2 -0.3**
AKTO Aktyubinsk 58.96 313 S **S 15 28 54.6 -0.4**
comp=Z,2.0nm,0.8s,baz=203,slow=19,SNR=5.8
AKTO Aktyubinsk 58.96 313 P **P 15 21 20.8 -0.9**
AKTO pmax pmax
comp=Z,34nm,0.7s,mb4.8
EIDS Eidsvold 59.25 165 *eP* **P 15 21 23.6 -0.2**
comp=Z,36nm,0.7s,mb4.8
PNL Peninsula 59.27 36⇑ *eP* **P 15 21 23.8 +0.1**
comp=Z,140nm,0.9s,mb5.3
BHJ Bhuj 59.40 279 *ePKP* **P 15 21 24.8 -0.3**
INK Inuvik 59.88 25⇑ *iP* **P 15 21 27.4 -0.2**
INK pmax pmax
comp=Z,72nm,0.5s
INK Inuvik 59.88 25⇑ *iP* **P 15 21 27.4 -0.2**
comp=Z,72nm,0.5s,mb5.4
TRD Trivandrum 60.34 261 *ePKP* **P 15 21 31.6 +0.1**
POHA Pohakuloa 60.95 84⇑ *eP* **P 15 21 35.7 +0.2**
comp=Z,108nm,0.6s,mb5.5
SKAG Skagway 61.33 36 *eP* **P 15 21 37.7 +0.3**
comp=Z,94nm,1.0s,mb5.2
IMYA Miami 61.92 297 *eP* **P 15 21 42.3 +0.6**
SIT Sitka 62.03 38 *eP* **P 15 21 42.2 +0.2**
SIT pmax pmax
comp=Z,100nm,1.5s,mb5.1
SIT Sitka 62.03 38 *eP* **P 15 21 42.2 +0.2**
comp=Z,100nm,1.5s,mb5.1
PRGR Permogore 62.48 327⇓ *iP* **P 15 21 45.0 +0.1**
PRGR *e*S **S 15 29 39.0 +0.3**
PRGR pmax pmax
comp=Z,153nm,0.8s,mb5.6
IMOG Moghan 62.58 297 *eP* **P 15 21 46.7 +0.7**
IPAY Payeh 62.71 297 *eP* **P 15 21 46.8 0.0**
IAKL Akhelmad 62.83 298 *eP* **P 15 21 48.1 +0.5**
IKRD Kardeh 62.95 298 *eP* **P 15 21 44.5 -3.9**
ISFR Sfrayin 63.23 298 *eP* **P 15 21 51.2 +1.0**
ISHV Shirvan 63.27 299 *eP* **P 15 21 51.4 +0.9**
IMON Monand 63.44 294 *eP* **P 15 21 52.1 +0.5**
FORT Forrest 63.68 189⇓ *iP* **P 15 21 52.3 -0.7**
comp=Z,81nm,0.6s,mb5.4
FORT Forrest 63.68 189⇓ *eP* **P 15 21 52.2 -0.8**
comp=Z,87nm,0.6s,mb5.5
FORT *i* PcP PcP 15 22 24.9 -0.1

CRAG Craig 63.70 39 *eP* **P 15 21 53.1 +0.2**
comp=Z,49nm,0.7s,mb5.2
WRAK Wrangell Islan 63.79 38⇑ *eP* **P 15 21 53.5 +0.1**
comp=Z,26nm,0.8s,mb4.8
ARMA Armidale 64.25 166 *eP* **P 15 21 56.7 0.0**
ARMA Armidale 64.25 166 *eP* **P 15 21 56.2 -0.4**
comp=Z,29nm,0.7s,mb4.9
IKOO Kooshah 64.25 293 *eP* **P 15 21 57.6 +0.7**
DLBC Dease Lake 64.26 36⇑ *iP* **P 15 21 57.1 +0.7**
KBS Kingsbay 64.32 350 *epP* pP 15 23 25.8 +1.8
STKA Stephens Creek 64.34 176 P **P 15 21 56.8 -0.5**
comp=Z,22nm,0.8s,mb4.8,baz=340,slow=7.3,SNR=74
STKA Stephens Creek 64.34 176⇓ *iP* **P 15 21 56.6 -0.7**
comp=Z,15nm,0.7s,mb4.6
STKA Stephens Creek 64.34 176⇓ *eP* **P 15 21 56.5 -0.7**
comp=Z,3.5nm,0.6s
LVZ Lovozero 64.61 336 *eP* **P 15 21 58.3 -0.2**
LVZ pmax pmax
comp=Z,90nm,1.8s,mb5.1
ALE Alert 64.65 3 P **P 15 21 59.0 +0.3**
comp=Z,199nm,0.9s,mb5.7,SNR=14
BBOO Buckleboo 65.14 181⇓ *eP* **P 15 22 01.6 -0.6**
comp=Z,71nm,0.6s,mb5.5
APA Apatity 65.18 336⇓ *iP* **P 15 22 02.2 0.0**
APA *i* 15 22 29.4
APA MLR MLR
comp=Z,300nm,14.0s
KMBL Kambalda 65.29 194 *eP* **P 15 22 02.0 -1.3**
comp=Z,123nm,0.9s,mb5.5
KLMR Klimovskoe 65.52 328*d iP* **P 15 22 04.2 -0.2**
KLMR *e*S S 15 30 14.0 -1.7
KLMR pmax pmax
comp=Z,98nm,0.9s,mb5.4
KEV Kevo 66.23 339⇓ *eP* **P 15 22 08.8 0.0**
KEV pmax pmax
comp=Z,29nm,0.6s,mb5.1
KEV Kevo 66.23 339⇓ *eP* **P 15 22 08.8 0.0**
comp=Z,29nm,0.6s,mb5.1
KEV Kevo 66.23 339 *ep* **P 15 22 07.3 -1.5**
comp=Z,30nm,0.7s,mb5.0
KLBR Kellerberrin 66.47 198 *eP* **P 15 22 09.3 -1.4**
comp=Z,47nm,0.8s,mb5.2
IGLO Ghaloghah 66.52 299 *eP* **P 15 22 12.0 +0.8**
IKIA Kiasar 66.75 299 *eP* **P 15 22 14.0 +1.4**
ARCES ARCESS Array B 66.80 339 P **P 15 22 12.4 +0.2**
comp=Z,34nm,0.6s,mb5.1,baz=69,slow=9.0,SNR=162
ARCES ARCESS Array B 66.80 339 P **P 15 22 12.5 +0.2**
ARCES pmax pmax
comp=Z,34nm,0.6s
ARE0 ARCESS Array S 66.80 339⇓ *eP* **P 15 22 12.2 -0.1**
IANJ Anjilo 66.88 298 *eP* **P 15 22 14.4 +0.9**
ISHM Shahmirzad 67.20 299 *eP* **P 15 22 16.3 +0.9**
IBAF Bafgh 67.25 294 *eP* **P 15 22 15.9 +0.1**
IALA Alasht 67.44 299 *eP* **P 15 22 17.2 +0.3**
YNG Young 67.46 170 *eP* **P 15 22 16.7 -0.1**
comp=Z,26nm,0.6s,mb5.0
ILAS Lasjerd 67.63 298 *eP* **P 15 22 19.3 +1.2**
IFIR Firoozkooh 67.67 299 *eP* **P 15 22 19.6 +1.3**
RES Resolute Bay 67.68 13⇑ *iP* **P 15 22 17.5 -0.2**
RES pmax pmax
comp=Z,35nm,0.6s,mb5.2
RES Resolute Bay 67.68 13⇑ *iP* **P 15 22 17.5 -0.2**
comp=Z,36nm,0.6s,mb5.2
RES *e* 15 23 37.0
IPRN Peran 67.72 300 *eP* **P 15 22 19.2 +0.5**
KTK1 Kautokeino 67.76 339 *eP* **P 15 22 18.1 -0.1**
ICHK Chekchek 67.87 295 *eP* **P 15 22 19.7 +0.1**
IMEH Mehriz 68.08 294 *eP* **P 15 22 20.6 -0.3**
JOF Joensuu 68.10 332 *eP* **P 15 22 18.6 -1.9**
JOF pmax pmax
comp=Z,93nm,0.6s,mb5.6
JOF Joensuu 68.10 332 *ep* **P 15 22 18.6 -1.9**
comp=Z,93nm,0.6s,mb5.6
IDMV Damavand 68.23 299 *eP* **P 15 22 22.6 +0.8**
IBND Bandar-abas 68.29 289 *eP* **P 15 22 22.5 +0.2**
VRHR Novokhopersk 68.49 318 *eP* **P 15 22 21.6 -1.5**
VRHR pmax pmax
comp=E,50nm,0.6s
VRHR pmax pmax
comp=Z,220nm,0.6s,mb6.0
VRHR pmax pmax
comp=N,40nm,0.8s
WBK Wadi Bani Khal 68.51 284 P **P 15 22 24.6 +0.9**
SNR=36
MOS Moscow 68.60 323 *eP* **P 15 22 22.7 -0.9**
MOS *e* 15 24 58.9
MOS *e*S S 15 30 48.2 -4.0
MOS pmax pmax
comp=Z,300nm,1.2s,mb5.8
MOS pmax pmax
comp=Z,237nm,1.1s,mb5.7
MOS smax
comp=N,900nm,3.1s
TRO Tromso 68.65 341 *eP* **P 15 22 23.5 -0.2**
TRO AMB AMB 15 22 29.3
comp=Z,58nm,2.2s,mb4.8
IVRN Varamin 68.70 299 *eP* **P 15 22 24.9 +0.2**
IR3 Iran Long-Peri 69.02 299 *eP* **P 15 22 27.3 +0.7**
SMDO Samad 69.06 285 P **P 15 22 27.6 +0.6**
SNR=30
IZEF Zefreh 69.17 296 *eP* **P 15 22 28.1 +0.6**
BANOM Banah 69.17 288 P **P 15 22 28.4 +0.8**
SNR=14
IMHD Mahdasht 69.19 300 *eP* **P 15 22 28.3 +0.7**
ARPS Mount Arapiles 69.23 176 *eP* **P 15 22 27.1 -0.5**
comp=Z,78nm,0.7s,mb5.5
JMDO Jabal Madar 69.33 284 P **P 15 22 29.0 +0.3**
SNR=26
YKA Yellowknife Ar 69.36 28 P **P 15 22 27.5 -0.5**
comp=Z,26nm,0.7s,mb5.0,baz=303,slow=6.3,SNR=123
YKA pP pP 15 23 57.2 +0.1
comp=Z,3.2nm,0.7s,baz=296,slow=6.7,SNR=4.5
YKA Yellowknife Ar 69.36 28 P **P 15 22 27.6 -0.5**
YKA pP pP 15 23 57.2 +0.1
OBN Obninsk 69.42 323⇓ *eP* **P 15 22 28.3 -0.3**
OBN *e* 15 25 06.6
OBN *i* S S 15 31 00.8 -0.9
OBN pmax pmax
comp=Z,179nm,0.9s,mb5.7
OBN Obninsk 69.42 323 *eP* **P 15 22 27.8 -0.8**
comp=Z,110nm,0.7s,mb5.6
HOQ Hoqain 69.42 285 P **P 15 22 29.7 +0.5**
SNR=74
IKLH Kolahrood 69.55 297 *eP* **P 15 22 30.6 +0.8**
IGAR Gharneh 69.60 296 *eP* **P 15 22 30.7 +0.5**
HATD Hatta, Dubai 69.80 287 P **P 15 22 32.3 +0.8**
SNR=31
VSR Storozhevoye 69.82 318 *eP* **P 15 22 30.5 -0.6**
VSR *e*PP* PcP 15 22 49.5 -1.2
VSR *e*S S 15 31 04.6 -1.9
VSR pmax pmax
comp=N,110nm,0.8s
VSR pmax pmax
comp=Z,220nm,0.8s,mb5.7
VSR pmax pmax
comp=E,180nm,0.9s
VSR smax
comp=N,390nm,3.8s
VSR smax
comp=Z,60nm,2.9s
VSR smax
comp=E,210nm,2.6s
IRAZ Razeghan 69.85 300 *eP* **P 15 22 32.2 +0.6**
VORD Divnogorie 69.87 318 *eP* **P 15 22 30.8 -0.6**
VORD *e* 15 22 49.6
VORD pmax pmax
comp=Z,60nm,0.6s,mb5.3
VORD pmax pmax
comp=N,130nm,0.9s
VORD pmax pmax
comp=E,190nm,0.9s
BSY Bisya 69.90 285 P **P 15 22 32.7 +0.6**
SNR=67
ASHO Ashiyiah 69.93 287 P **P 15 22 32.9 +0.6**
SNR=32
IPAR Pars 69.97 293 *eP* **P 15 22 32.6 +0.2**
PUL Pulkovo 70.09 329*ceP* **P 15 22 31.2 -1.4**
PUL pmax pmax
comp=Z,65nm,0.8s,mb5.2
NAZ Nazwa, Dubai 70.11 287 P **P 15 22 33.7 +0.4**
SNR=15
ISRV Sarvestan 70.12 293 *eP* **P 15 22 33.9 +0.5**
ARQ Araqi 70.17 285 P **P 15 22 34.5 +0.8**
SNR=110
TOO Toolangi 70.32 173 *eP* **P 15 22 34.5 +0.4**

IPIR Pirpir 70.34 297 *eP* **P 15 22 36.1 +1.5**
DGRG David-gareji 70.38 307 P **P 15 22 34.0 -0.7**
ISRB Sarab 70.41 303 *eP* **P 15 22 35.3 +0.4**
KAF Kangasniemi 70.51 332 *eP* **P 15 22 32.8 -2.2**
KAF pmax pmax
comp=Z,64nm,0.6s,mb5.3
KAF Kangasniemi 70.51 332 *ep* **P 15 22 32.8 -2.2**
comp=Z,64nm,0.6s,mb5.3
ASUD Al Ashush, Dub 70.54 287 P **P 15 22 36.7 +0.8**
SNR=12
IHRS Heris 70.63 304 *eP* **P 15 22 36.1 -0.1**
MTA Mtatsminda 70.66 308 P **P 15 22 36.4 0.0**
TBLG Delisi 70.68 308 P **P 15 22 36.7 +0.2**
TBLG Delisi 70.68 308 P **P 15 22 36.7 +0.2**
ZEI Tsey 70.77 309 *eP* **P 15 22 34.6 -2.4**
ZEI pmax pmax
comp=Z,86nm,0.6s,mb5.5
FINES FINESS Array B 70.97 332 P **P 15 22 37.5 -0.3**
comp=Z,80nm,0.5s,mb5.5,baz=65,slow=5.5,SNR=655
FINES S S 15 31 16.7 -2.6
comp=Z,5.7nm,0.7s,baz=54,slow=13,SNR=9.4
FINES FINESS Array B 70.97 332 P **P 15 22 37.5 -0.3**
FINES S S 15 31 16.7 -2.6
FINES pmax pmax
comp=Z,80nm,0.5s
FINES smax
comp=N,6.0nm,0.7s
GOR Gori 70.99 308 P **P 15 22 39.5 +1.2**
KIV Kislovodsk 71.02 310⇓ *eP* **P 15 22 39.0 +0.6**
KIV *e*S S 15 31 27.7 +7.2
KIV pmax pmax
comp=Z,332nm,0.9s,mb5.9
KIV Kislovodsk 71.02 310⇓ *eP* **P 15 22 39.0 +0.5**
comp=Z,207nm,0.7s,mb5.8
KIV Kislovodsk 71.02 310 P **P 15 22 39.3 +0.8**
SNR=55
IMRD Marand 71.39 304 *eP* **P 15 22 41.4 +0.7**
GNI Garni 71.40 306 *eP* **P 15 22 41.7 +1.0**
GNI pmax pmax
comp=Z,81nm,0.9s
GNI Garni 71.40 306 *eP* **P 15 22 41.7 +0.9**
comp=Z,81nm,0.9s,mb5.3
GNI Garni 71.40 306 P **P 15 22 42.4 +1.7**
SNR=15
ISHB Shabestar 71.65 304 *eP* **P 15 22 42.7 +0.4**
IAZR Azarshahr 71.67 303 *eP* **P 15 22 42.5 +0.1**
PGC Sidney 71.95 43 *eP* **P 15 22 43.6 -0.2**
comp=Z,3.2nm,0.7s
MOR8 Moi Rana 72.17 339 *eP* **P 15 22 43.5 -1.3**
MOR8 AMb AMB 15 22 43.9
comp=Z,70nm,0.7s,mb5.3
MOR8 Moi Rana 72.17 339 *eP* **P 15 22 43.5 -1.3**
comp=Z,70nm,0.7s,mb5.3
IKOM Komasi 72.18 299 *eP* **P 15 22 44.8 -0.7**
ILIN Lien 72.24 300 *eP* **P 15 22 46.0 +0.2**
NLWA Neilton Lookou 72.32 45 *eP* **P 15 22 46.7 +0.7**
comp=Z,28nm,0.6s,mb5.0
VSU Vasula 72.36 329*d iP* **P 15 22 45.8 -0.2**
VSU pmax pmax
comp=Z,218nm,1.0s,mb5.6
IVIS Veis 72.50 300 *eP* **P 15 22 47.0 -0.3**
A05A Maple Falls 72.57 43 ⇓P **P 15 22 47.5 +0.1**
baz=72
IDHR Dehrash 72.76 300 *eP* **P 15 22 48.2 -0.6**
IGHG Ghaleghazi 72.80 300 *eP* **P 15 22 48.9 -0.2**
GNW Green Mountain 72.85 44 *eP* **P 15 22 48.9 -0.1**
comp=Z,15nm,1.0s,mb4.5
E03A Lebam 72.91 45 ⇓P **P 15 22 50.0 +0.5**
baz=73
JCW Jim Creek 73.06 43 P **P 15 22 50.6 +0.3**
SOC Sochi 73.09 311*d iP* **P 15 22 50.5 -0.1**
SOC *e*S S 15 31 42.2 -1.6
SOC pmax pmax
comp=Z,138nm,0.5s,mb5.7
B06A Marblemount 73.15 43 ⇑P **P 15 22 51.0 +0.2**
baz=73
RPW Rockport 73.17 43 *eP* **P 15 22 50.6 -0.3**
comp=Z,15nm,0.8s,mb4.6
F03A Seaside 73.22 46 ⇓P **P 15 22 52.0 +0.7**
baz=73
D05A Enumclaw 73.53 44 ⇑P **P 15 22 53.5 +0.5**
baz=73
LON Longmire 73.86 45 *eP* **P 15 22 54.5 -0.4**
comp=Z,11nm,0.8s,mb4.5
F04A Amboy 73.91 46 ⇓P **P 15 22 55.6 +0.4**
baz=74
ANN Anapa 73.92 313*d iP* **P 15 22 55.0 -0.3**
ANN *e*S S 15 31 51.6 -1.4
ANN pmax pmax
comp=Z,388nm,1.4s,mb5.8
WPW White Pass 74.04 45 P **P 15 22 56.1 +0.1**
COR Corvallis 74.05 47 *eP* **P 15 22 56.7 +0.7**
COR pmax pmax
comp=Z,65nm,0.8s,mb5.3
COR Corvallis 74.05 47 *eP* **P 15 22 56.7 +0.7**
comp=Z,65nm,0.8s,mb5.3
MICGM Minsk 74.05 325⇓ *iP* **P 15 22 55.0 -0.8**
NSS Namsos 74.05 338 *eP* **P 15 22 54.1 -1.5**
NSS AMb AMB 15 22 56.4
comp=Z,23nm,1.4s,mb4.6
NSS Namsos 74.05 338 *eP* **P 15 22 54.1 -1.5**
comp=Z,23nm,1.4s,mb4.6
MNK Minsk 74.07 325⇓ *iP* **P 15 22 55.0 -1.0**
MNK pmax pmax
comp=Z,390nm,1.0s,mb6.0
IDID Didziasalis 74.13 326 *eP* **P 15 22 56.8 +0.5**
IDID AMB AMB 15 22 57.7
comp=Z,75nm,0.9s,mb5.3
UMR Umm Al-Rimmam 74.21 295 *eP* **P 15 22 56.8 -0.4**
UMR AMb AMB 15 22 57.6
comp=Z,429nm,0.5s
G04A Mulino 74.24 46 ⇓P **P 15 22 57.6 +0.4**
baz=74
KEBM Edson Butte 74.26 49 *eP* **P 15 22 57.8 +0.5**
comp=Z,100nm,0.9s,mb5.4
ISAL Salakas 74.27 327 *eP* **P 15 22 57.7 +0.6**
ISAL AMB AMB 15 22 58.6
comp=Z,92nm,1.1s,mb5.3
ETW Entiat 74.28 43 *eP* **P 15 22 57.2 -0.1**
comp=Z,61nm,0.7s,mb5.3
IIGN Ignalina 74.35 326 *eP* **P 15 22 58.2 +0.6**
IIGN AMB AMB 15 22 59.0
comp=Z,59nm,1.0s,mb5.2
MIB Mutribah 74.38 296 *eP* **P 15 22 57.8 -0.4**
MIB AMb AMB 15 22 58.5
comp=Z,623nm,0.6s
KBD Kabd 74.41 295 *eP* **P 15 22 58.1 -0.3**
KBD AMb AMB 15 22 58.9
comp=Z,355nm,0.5s,mb6.2
QRN Al-Qurain 74.44 294 *eP* **P 15 22 58.1 -0.5**
QRN AMb AMB 15 22 58.9
comp=Z,422nm,0.6s,mb6.2
WTV Waterville 74.45 43 P **P 15 22 58.2 -0.1**
B08A Colville Reser 74.46 42 P **P 15 22 58.3 0.0**
baz=74,SNR=20
VLL Laurance Lake 74.59 46 P **P 15 22 59.7 +0.6**
RDF Al-Radifah 74.64 295 *eP* **P 15 22 59.8 +0.1**
RDF AMb AMB 15 23 00.6
comp=Z,680nm,0.6s
HOOD Mount Hood Mea 74.68 46⇑ *eP* **P 15 22 59.8 +0.2**
comp=Z,81nm,0.9s,mb5.4
H04A Detroit Lake 74.68 47 ⇓P **P 15 22 59.8 +0.1**
baz=74
RBK Rabkut 74.88 281 P **P 15 23 01.1 -0.1**
SNR=14
EDM Edmonton 74.98 36⇑ *eP* **P 15 23 00.9 -0.2**
EDM *e* 15 25 59.0
SUMG Summit 74.99 359 *eP* **P 15 23 02.1 +1.2**
comp=Z,30nm,0.8s,mb5.0
SUMG Summit 74.99 359 *i* P **P 15 23 02.1 +1.2**
comp=Z,20nm,0.8s,mb4.8
E07A Sunnyside 75.11 44 P **P 15 23 02.3 +0.3**
baz=75,SNR=12
HUMO Hull Mountain 75.27 49⇑ *eP* **P 15 23 03.3 +0.3**
comp=Z,10nm,0.6s,mb4.6
HUMO *e*PP PP 15 25 49.8 -8.0
OD2 Odessa Site #2 75.33 43 P **P 15 23 02.9 -0.4**
G06A Carlson Farm, 75.34 46 ⇑P **P 15 23 03.5 +0.1**
baz=75
RSW Rattlesnake Hi 75.35 44 *eP* **P 15 23 03.7 +0.4**
C09A Chrisman Ranch 75.36 42 P **P 15 23 03.5 +0.1**
baz=75,SNR=16
HAWA Hanford 75.39 44 *eP* **P 15 23 03.8 +0.2**
comp=Z,12nm,1.0s,mb4.5
D08A Wollman Farm, 75.39 43 P **P 15 23 03.6 +0.1**
baz=75,SNR=39

F07A **Phinny Hill Vi** 75.42 45 P P 15 23 04.3 +0.5
baz=75,SNR=9.6
KIEV **Kiev** 75.51 321⇓*i*P P 15 23 03.8 -0.4
KIEV pmax pmax
comp=Z,153nm,0.6s,mb5.8
KIEV **Kiev** 75.51 321⇓*i*P P 15 23 03.8 -0.4
comp=Z,153nm,0.6s,mb5.8
KHMM **Horse Mountain** 75.65 51 *e*P P 15 23 06.3 +1.2
comp=Z,12nm,0.9s,mb4.5
ABTO **Aybut** 75.71 282 P P 15 23 05.7 -0.2
SNR=18
VIPM **Ingram Point** 75.73 46 P P 15 23 05.9 +0.3
NEW **Newport** 75.76 42 P P 15 23 05.7 +0.1
baz=76,SNR=23
NEW **Newport** 75.76 42⇑*e*P P 15 23 05.6 0.0
NEW pmax pmax
comp=Z,31nm,0.8s
NEW **Newport** 75.76 42⇑*e*P P 15 23 05.6 0.0
comp=Z,31nm,0.8s,mb5.0
SIM **Simferopol'** 75.87 314*de*P P 15 23 06.4 +0.1
SIM S S 15 32 11.1 -3.1
YBH **Yreka Blue Hor** 75.87 49⇑*e*P P 15 23 06.8 +0.4
YBH pmax pmax
comp=Z,23nm,0.8s
YBH **Yreka Blue Hor** 75.87 49⇑*e*P P 15 23 06.8 +0.4
comp=Z,23nm,0.8s,mb4.9
SCO **Scoresbysund** 76.03 353 *i* P P 15 23 07.8 +1.0
SCO pmax pmax
comp=Z,22nm,0.8s,mb4.8
SCO **Scoresbysund** 76.03 353 *i* P P 15 23 07.8 +1.0
comp=Z,22nm,0.8s,mb4.8
E09A **Wood Farm, Sta** 76.13 43 P P 15 23 07.9 +0.1
baz=76,SNR=41
A12A **Yaak River Ran** 76.20 40 ⇓P P 15 23 08.8 +0.8
baz=76,SNR=10
G08A **Pilot Rock** 76.31 45 P P 15 23 09.1 +0.3
baz=76,SNR=21
KCPM **Cahto Peak** 76.36 52 *e*P P 15 23 09.9 +0.7
comp=Z,2.0nm,0.8s
LNOR **Lincton Mounta** 76.40 44 *e*P P 15 23 09.4 +0.2
C11A **Tepee Creek (N** 76.48 42 ⇑P P 15 23 10.1 +0.5
baz=76,SNR=68
K05A **Summer Lake** 76.50 48 ⇑P P 15 23 10.7 +0.8
baz=76
SUW **Suwalki** 76.57 326 *e*P P 15 23 09.7 -0.3
SUW **Suwalki** 76.57 326⇓*i*P P 15 23 09.5 -0.5
comp=Z,347nm,1.0s,mb5.9
MALT **Malatya** 76.57 307 P P 15 23 11.8 +1.4
MALT **Malatya** 76.57 307⇓*i*P P 15 23 11.4 +1.0
comp=Z,85nm,0.8s,mb5.4
MALT **Malatya** 76.57 307⇓*i*P P 15 23 11.5 +1.1
MALT **Malatya** 76.57 307 P P 15 23 11.1 +0.7
WDC **Whiskeytown Da** 76.58 50 *e*P P 15 23 10.3 -0.1
WDC pmax pmax
comp=Z,19nm,0.8s,mb4.8
WDC **Whiskeytown Da** 76.58 50 *e*P P 15 23 10.2 -0.1
comp=Z,19nm,0.8s,mb4.8
I07A **Izee** 76.64 46 P P 15 23 11.0 +0.4
baz=76,SNR=26
NB2 **NORSAR Subarra** 76.76 336 P P 15 23 10.3 -0.6
comp=Z,74nm,0.8s,mb5.4,baz=44,slow=5.6
NB2 **NORSAR Subarra** 76.76 336 P P 15 23 10.3 -0.6
comp=Z,67nm,0.7s,mb5.4,baz=43,slow=5.6
NB2 **NORSAR Subarra** 76.76 336 P P 15 23 10.3 -0.6
baz=43,slow=5.6
NB2 **NORSAR Subarra** 76.76 336 P P 15 23 10.3 -0.6
NB2 **NORSAR Subarra** 76.76 336 P P 15 23 10.3 -0.6
NOA **NORSAR Array B** 76.76 336 P P 15 23 10.5 -0.5
comp=Z,55nm,0.7s,mb5.3,baz=44,slow=5.5,SNR=245
NOA pP pP 15 24 45.0 +2.9
comp=Z,3.6nm,0.8s,baz=42,slow=5.9,SNR=2.6
NOA S S 15 32 17.6 -5.6
comp=Z,0.8nm,0.8s,baz=51,slow=11,SNR=3.2
NOA **NORSAR Array B** 76.76 336 P P 15 23 10.5 -0.4
NOA *PP pP 15 24 45.0 +2.9
NOA S S 15 32 17.6 -5.6
NOA pmax pmax
comp=Z,55nm,0.7s
NOA smax
comp=N,1.0nm,0.8s
A13A **Flathead Natio** 76.88 40 ⇓P P 15 23 12.2 +0.4
baz=77,SNR=27
F10A **Beach Ranch, E** 76.96 44 ⇑P P 15 23 12.3 -0.1
baz=77,SNR=26
NAO01 **NORSAR Array S** 77.02 336⇓*i*P P 15 23 11.6 -0.8
comp=N,33nm,0.8s,mb5.0
WALA **Waterton Lakes** 77.07 40⇑*e*P P 15 23 13.0 +0.1
comp=N,1.1nm,0.7s
WALA *e*pP pP 15 24 44.5 +0.4
WALA *e*PP PP 15 26 15.5 +2.9
B13A **Whitefish** 77.17 40 P P 15 23 14.1 +0.6
baz=77,SNR=31
BSMT **Bassoo Peak** 77.29 41 *e*P P 15 23 14.6 +0.5
MOD **Modoc** 77.31 48 *e*P P 15 23 14.5 +0.1
comp=N,8.3nm,0.8s,mb4.4
A14A **Double T Ranch** 77.39 40 ⇑P P 15 23 14.8 +0.2
baz=77
D12A **Red Ives Fores** 77.43 42 ⇑P P 15 23 14.8 -0.1
baz=77
BLMT **Blacktail Moun** 77.43 41 *e*P P 15 23 15.6 +0.7
C13A **Hot Springs** 77.50 41 P P 15 23 15.7 +0.4
baz=77,SNR=48
JTMT **Jette** 77.63 41 *e*P P 15 23 16.3 +0.3
J08A **Circle Bar Ran** 77.66 46 P P 15 23 16.8 +0.6
baz=78,SNR=33
E12A **Beaver Dam Sad** 77.67 43 P P 15 23 16.5 +0.3
baz=78,SNR=86
YBMT **Yellow Bay** 77.71 41 *e*P P 15 23 17.0 +0.6
OSL **Oslo** 77.72 335 *e*P P 15 23 15.6 -0.6
A15A **Johnson Ranch,** 77.75 39 P P 15 23 16.4 -0.2
baz=78,SNR=75
KIS **Kishinev** 77.82 318⇓*i*P P 15 23 16.0 -1.0
KIS *i* 15 23 28.0
B14A **Marquette Ranc** 77.82 40 ⇓P P 15 23 17.9 +0.8
baz=78
D13A **Huson** 77.91 42 ⇑P P 15 23 17.1 -0.4
baz=78,SNR=9.0
C14A **Swan Lake** 77.91 41 P P 15 23 17.8 +0.3
baz=78,SNR=18
SWMT **Swartz Lake** 77.92 41 *e*P P 15 23 17.6 +0.1
OHCM **Honcut** 77.93 51 *e*P P 15 23 17.3 -0.5
WVOR **Wild Horse Val** 78.06 47⇑*i*P P 15 23 18.6 +0.1
WVOR pmax pmax
comp=Z,33nm,0.8s,mb5.0
WVOR **Wild Horse Val** 78.06 47⇑*i*P P 15 23 18.6 +0.1
comp=Z,33nm,0.8s,mb5.0
F12A **Elk City** 78.22 43 P P 15 23 19.3 +0.1
baz=78,SNR=113
B15A **Bradely Ranch,** 78.24 40 P P 15 23 19.5 +0.2
baz=78,SNR=40
FOO **Floro** 78.35 339 *e*P P 15 23 18.8 -0.8
MSO **Missoula** 78.35 42 ⇑P P 15 23 19.7 -0.2
baz=78
MSO **Missoula** 78.35 42 *e*P P 15 23 19.8 -0.1
comp=Z,10nm,1.6s,mb4.2
SLMT **Seeley Lake** 78.36 41 *e*P P 15 23 19.8 -0.1
A16A **West Butte Ran** 78.37 39 P P 15 23 19.9 -0.1
baz=78,SNR=31
IAS **Iasi** 78.40 319 ⇑P P 15 23 20.3 +0.1
IAS **Iasi** 78.40 319⇑*i*P P 15 23 20.3 +0.1
E13A **Victor** 78.43 42 ⇓P P 15 23 19.9 -0.4
baz=78
D14A **Greenough** 78.44 41 P P 15 23 20.0 -0.4
baz=78,SNR=29
C15A **Salmond Ranch,** 78.53 40 ⇑P P 15 23 21.3 +0.5
baz=78,SNR=45
G12A **Big Creek, Yel** 78.54 44 ⇓P P 15 23 20.4 -0.6
baz=78
B16A **M & M Farms, S** 78.64 39 P P 15 23 21.4 0.0
baz=78,SNR=46
CHMT **Chamberlain Mo** 78.68 41 *e*P P 15 23 21.2 -0.5
LVV **L'vov** 78.72 323 *e*P P 15 23 21.3 -0.5
E14A **Clinton** 78.84 42 P P 15 23 22.4 -0.2
baz=79,SNR=9.7
A17A **Triple J Farms** 78.85 38 P P 15 23 22.4 -0.1
baz=79,SNR=70
TLCR 78.86 317 ⇑P P 15 23 22.8 +0.1
TLCR 78.86 317⇑*i*P P 15 23 22.8 +0.1
C16A **Fuhringer Ranc** 78.98 40 P P 15 23 23.4 +0.1
baz=79,SNR=8.5
BRTR **Keskin Array B** 78.98 310 P P 15 23 23.7 +0.2
comp=Z,88nm,0.8s,mb5.5,baz=102,slow=4.4,SNR=470
BRTR **Keskin Array B** 78.98 310 P P 15 23 23.7 +0.2
BRTR pmax pmax
comp=Z,88nm,0.8s
D15A **Lincoln** 79.01 41 P P 15 23 23.4 -0.1
baz=79,SNR=7.1
WCN **Washoe City** 79.07 50 ⇓P P 15 23 23.7 -0.2
baz=79,SNR=5.7
WCN **Washoe City** 79.07 50 *e*P P 15 23 24.6 +0.7
comp=Z,4.0nm,0.9s
PAHR **Pah Rah Range** 79.09 50 *e*P P 15 23 24.1 +0.1
comp=Z,15nm,0.9s,mb4.6
H12A **Diamond D Ranc** 79.15 44 P P 15 23 24.2 0.0
baz=79,SNR=33
G13A **Cobalt** 79.19 43 P P 15 23 23.8 -0.6
baz=79,SNR=18
B17A **L&G Farms, Che** 79.19 39 P P 15 23 24.6 +0.1
baz=79,SNR=85
MFID **Camas Ranch** 79.22 45 P P 15 23 25.0 +0.4
baz=79,SNR=25
CFR **Carcaliu** 79.26 317 P P 15 23 24.9 +0.1
CFR **Carcaliu** 79.26 317⇑*i*P P 15 23 24.7 -0.1
F14A **Wisdom** 79.26 42 P P 15 23 25.1 +0.3
baz=79,SNR=6.9
FFC **Flin Flon** 79.29 30 *i* P P 15 23 24.3 -0.5
FFC **Flin Flon** 79.29 30 *e*P P 15 23 23.6 -1.2
comp=Z,5.5nm,1.3s
A18A **Metzger Ranch,** 79.31 38 P P 15 23 24.9 -0.1
baz=79,SNR=18
E15A **Deer Lodge** 79.31 41 P P 15 23 25.1 +0.1
baz=79,SNR=22
TESR 79.31 319⇓*i*P P 15 23 25.2 +0.1
SAO **San Andreas Ge** 79.33 53 *e*P P 15 23 25.2 -0.1
comp=Z,3.7nm,1.0s
CMB **Columbia Colle** 79.35 52 *e*P P 15 23 24.9 -0.6
CMB pmax pmax
comp=Z,33nm,1.8s,mb4.7
CMB **Columbia Colle** 79.35 52 *e*P P 15 23 24.9 -0.5
comp=Z,33nm,1.8s,mb4.7
I12A **Atlanta** 79.42 45 P P 15 23 26.0 +0.3
baz=79,SNR=19
BUR08 **Bucovina Ar. S** 79.43 320⇓*i*P P 15 23 25.9 +0.2
BURAR **Bucovina Array** 79.43 320 ⇓P P 15 23 26.1 +0.4
BURAR **Bucovina Array** 79.43 320⇓*i*P P 15 23 26.1 +0.4
PETR 79.45 318⇓*i*P P 15 23 27.1 +1.3
H13A **Challis** 79.49 44 P P 15 23 26.1 +0.1
baz=79,SNR=56
KWP **Kalwaria Pacla** 79.51 323 *e*P P 15 23 26.7 +0.6
KWP **Kalwaria Pacla** 79.51 323 *e*P P 15 23 26.4 +0.3
comp=Z,229nm,0.8s,mb5.9
KWP **Kalwaria Pacla** 79.51 323⇓*i*P P 15 23 26.6 +0.5
BSD **Bornholm Skovb** 79.52 330⇓*i*P P 15 23 25.3 -0.7
BSD pmax pmax
comp=Z,84nm,0.7s,mb5.5
BSD **Bornholm Skovb** 79.52 330⇓*i*P P 15 23 25.3 -0.7
comp=Z,84nm,0.7s,mb5.5
TIRR **Tirgusor** 79.52 316 P P 15 23 26.5 +0.3
TIRR **Tirgusor** 79.52 316 *e*P P 15 23 26.1 -0.1
comp=Z,11nm,0.8s,mb4.5
TIRR **Tirgusor** 79.52 316⇓*i*P P 15 23 26.2 0.0
G14A **Jackson** 79.55 43 ⇓P P 15 23 26.4 0.0
baz=79
D16A **Dana Ranch, Ca** 79.55 40 P P 15 23 26.5 +0.1
baz=79,SNR=24
HRY **Holter Researc** 79.59 41 *e*P P 15 23 26.7 +0.2
C17A **Wharram Farm,** 79.61 40 ⇑P P 15 23 26.5 -0.2
baz=79,SNR=25
VRI **Vrincioaia** 79.65 318 P P 15 23 27.6 +0.7
VRI **Vrincioaia** 79.65 318⇓*i*P P 15 23 27.4 +0.5
B18A **Beardsley Farm** 79.67 39 P P 15 23 27.1 +0.2
baz=80,SNR=14
PLOR **Plostina** 79.70 318 ⇑P P 15 23 27.5 +0.3
PLOR **Plostina** 79.70 318 P P 15 23 27.9 +0.7
PLOR **Plostina** 79.70 318⇑*i*P P 15 23 27.5 +0.3
WAKR **Walker** 79.72 51 *e*P P 15 23 27.7 +0.3
F15A **Butte** 79.74 42 P P 15 23 27.8 +0.4
baz=80,SNR=60
GKP **Gorka Klasztor** 79.77 328 *e*P P 15 23 27.2 -0.1
GKP **Gorka Klasztor** 79.77 328⇓*e*P P 15 23 27.2 -0.1
LRM **Limekiln Ridge** 79.78 42 *e*P P 15 23 27.8 +0.3
LRM *e*pP pP 15 24 59.2 -0.2
E16A **East Helena** 79.78 41 P P 15 23 27.9 +0.3
baz=80,SNR=16
GRER 79.80 318⇓*i*P P 15 23 29.5 +1.8
A19A **Klindworth Far** 79.88 38 ⇑P P 15 23 28.2 +0.2
baz=80
EGMT **Eagleton** 79.91 39 P P 15 23 28.1 -0.1
baz=80,SNR=30
EGMT **Eagleton** 79.91 39 *e*P P 15 23 28.1 -0.2
comp=Z,16nm,0.9s,mb4.6
D17A **Six Diamond Ra** 79.94 40 P P 15 23 28.4 0.0
baz=80,SNR=45
I13A **Wildhorse Cree** 79.95 44 P P 15 23 29.3 +0.8
baz=80,SNR=36
DLMT **Dillon** 79.97 42 *e*P P 15 23 28.7 +0.1
comp=Z,4.5nm,0.8s,mb4.2
H14A **Leadore** 79.97 43 P P 15 23 28.6 -0.1
baz=80,SNR=10.0
HLID **Hailey** 79.98 44 P P 15 23 29.4 +0.7
baz=80,SNR=30
HLID **Hailey** 79.98 44 *e*P P 15 23 29.3 +0.6
comp=Z,5.0nm,0.9s
HLID *e*pP pP 15 25 02.4 +1.8
BMN **Battle Mountai** 80.06 48 *e*P P 15 23 29.7 +0.5
comp=Z,1.4nm,0.9s
B19A **Brinkman Farms** 80.07 38 ⇓P P 15 23 29.1 0.0
baz=80
PGOR **Pogoanele** 80.08 317⇑*i*P P 15 23 30.3 +1.1
PSN **Preselentsi** 80.10 316 *i* P P 15 23 30.0 +0.7
COP **Copenhagen** 80.13 332⇓*i*P P 15 23 29.0 -0.2
COP pmax pmax
comp=Z,73nm,0.8s,mb5.4
COP **Copenhagen** 80.13 332⇓*i*P P 15 23 29.0 -0.2
comp=Z,73nm,0.8s,mb5.4
MCMT **McKenzie Canyo** 80.14 43 *e*P P 15 23 29.0 -0.5
comp=Z,3.7nm,0.6s,mb4.2
G15A **Dillon** 80.15 42 P P 15 23 29.8 +0.2
baz=80,SNR=30
KOLS **Kolonicke sedl** 80.17 323 *e*P P 15 23 29.9 +0.3
KOLS pmax pmax
comp=Z,31nm,1.2s,mb4.8
KOLS **Kolonicke sedl** 80.17 323 *e*P P 15 23 29.9 +0.3
comp=Z,31nm,1.2s,mb4.8
KOLS **Kolonicke sedl** 80.17 323 *e*P P 15 23 29.9 +0.3
ISR **Istrita** 80.20 318 ⇑P P 15 23 29.9 +0.1
ISR **Istrita** 80.20 318⇑*i*P P 15 23 29.9 +0.1
J13A **Cove Ranch, Pi** 80.22 44 P P 15 23 30.7 +0.8
baz=80,SNR=27
F16A **Kennard Place,** 80.26 41 ⇓P P 15 23 30.5 +0.4
baz=80
E17A **Martinsdale** 80.27 41 P P 15 23 30.7 +0.6
baz=80,SNR=34
MLR **Muntele Rosu** 80.32 318 P P 15 23 31.0 +0.6
MLR **Muntele Rosu** 80.32 318⇓*i*P P 15 23 30.5 +0.1
BMR **Baia Mare** 80.32 321 ⇑P P 15 23 31.6 +1.2
BMR **Baia Mare** 80.32 321⇑*i*P P 15 23 31.6 +1.2
I14A **Mackay** 80.33 44 P P 15 23 31.4 +0.9
baz=80,SNR=90
BOZ **Bozeman (W)** 80.34 42 P P 15 23 30.9 +0.3
baz=80,SNR=36
BOZ **Bozeman (W)** 80.34 42 *e*P P 15 23 30.8 +0.3
BOZ *e*PP pP 15 25 04.2 +1.6
BOZ pmax pmax
comp=Z,3.0nm,0.7s
BOZ **Bozeman (W)** 80.34 42 *e*P P 15 23 30.8 +0.2
comp=Z,3.0nm,0.7s
BOZ *e*pP pP 15 25 04.2 +1.5
UZH **Uzhgorod** 80.35 322⇓*i*P P 15 23 30.0 -0.5
UZH *e*S S 15 32 59.8 -1.5
H15A **Lima** 80.39 43 P P 15 23 31.1 +0.4
baz=80,SNR=9.1
D18A **Linhart Farms,** 80.39 39 P P 15 23 31.1 +0.3
baz=80,SNR=16
HWQ **Hawqa** 80.41 305 *e*P P 15 23 30.9 -0.2
C19A **Slack Wire Ran** 80.46 39 P P 15 23 31.4 +0.3
baz=80,SNR=34
G16A **Moss Hill, Enn** 80.50 42 P P 15 23 31.6 +0.2
baz=80,SNR=20
NVAR **Mina Array Bea** 80.50 50 P P 15 23 31.8 +0.2
comp=Z,31nm,0.9s,mb4.9,baz=286,slow=5.3,SNR=102
NVAR pP pP 15 25 02.3 -1.3
comp=Z,5.5nm,1.0s,baz=295,slow=6.7,SNR=2.7
NVAR PKKPbc PKKPbc 15 42 09.7 +1.3
comp=Z,0.7nm,0.6s,baz=153,slow=2.1,SNR=5.0
TRPA **Tarpa** 80.54 322⇓*i*P P 15 23 32.1 +0.6
OJC **Ojcow** 80.58 325 *i* P P 15 23 32.0 +0.3
OJC **Ojcow** 80.58 325 *e*P P 15 23 32.0 +0.3
comp=Z,3.0nm,0.9s
CRVS **Cervenica-Dubn** 80.60 323 *e*P P 15 23 32.3 +0.5
CRVS pmax pmax
comp=Z,211nm,2.1s,mb5.5
CRVS **Cervenica-Dubn** 80.60 323 *e*P P 15 23 32.3 +0.5
comp=Z,211nm,2.1s,mb5.5
CRVS **Cervenica-Dubn** 80.60 323 *e*P P 15 23 32.3 +0.5
SULR 80.63 317⇓*i*P P 15 23 31.7 -0.4
J14A **Carey** 80.65 44 P P 15 23 33.4 +1.2
baz=80,SNR=32
MUKL **Al Mukalla** 80.69 281⇑*e*P P 15 23 33.1 +0.2
MUKL AMb AMB 15 23 33.4
comp=Z,17nm,0.5s,mb5.1
F17A **Fitzpatrick Pl** 80.72 41 P P 15 23 32.9 +0.4
baz=80,SNR=24
E18A **Harlowton** 80.72 40 P P 15 23 33.1 +0.6
baz=80,SNR=34
MDB **Medias** 80.79 319 ⇑P P 15 23 34.0 +1.1
MDB **Medias** 80.79 319⇑*i*P P 15 23 34.0 +1.1
BHL **Bhannes** 80.81 304 *e*P P 15 23 33.0 -0.2
MUD **Monsted U'grnd** 80.83 334⇓*i*P P 15 23 32.5 -0.4
MUD pmax pmax
comp=Z,40nm,0.8s,mb5.2
MUD **Monsted U'grnd** 80.83 334⇓*i*P P 15 23 32.5 -0.4
comp=Z,40nm,0.8s,mb5.2
I15A **Monteview** 80.85 43 ⇑P P 15 23 34.0 +0.8
baz=81
NIE **Niedzica** 80.85 324 *e*P P 15 23 33.9 +0.8
PRD **Provadia** 80.85 316 *i* P P 15 23 34.3 +1.0
VOIR 80.85 319 ⇑P P 15 23 33.4 +0.2
VOIR 80.85 319⇑*i*P P 15 23 33.4 +0.2
D19A **Cripps Ranch,** 80.91 39 P P 15 23 33.6 +0.1
baz=81,SNR=40
RCY **Rachaya** 80.91 304 *e*P P 15 23 34.1 +0.3
MTUM **Tungsten Hills** 80.93 51 *e*P P 15 23 34.1 +0.3
P10A **Eureka** 81.00 49 ⇑P P 15 23 34.9 +0.7
baz=81
C20A **Veseth Ranch,** 81.02 38 P P 15 23 34.2 +0.2
baz=81,SNR=25
G17A **Pierce Place,** 81.04 41 P P 15 23 35.0 +0.8
baz=81,SNR=18
SMMC **Simmler** 81.11 54 ⇓P P 15 23 35.3 +0.5
baz=81
H16A **Russell Place,** 81.13 42 P P 15 23 35.5 +0.8
baz=81,SNR=17
J15A **Blackfoot** 81.24 44 P P 15 23 36.3 +1.1
baz=81,SNR=20
F18A **Big Timber** 81.24 40 P P 15 23 35.5 +0.2
baz=81,SNR=38
DRGR 81.29 321 ⇑P P 15 23 35.8 +0.3
DRGR 81.29 321⇑*i*P P 15 23 35.8 +0.3
YMR **Madison River** 81.31 42 *e*P P 15 23 36.4 +0.8
comp=Z,36nm,0.8s,mb5.2
K14A **Jones Ranch, D** 81.31 45 P P 15 23 36.3 +0.7
baz=81,SNR=22
TIN **Tinemaha** 81.32 52 P P 15 23 36.6 +0.7
baz=81,SNR=6.0
GCMT **Greycliff** 81.34 41 *e*P P 15 23 35.9 +0.2
comp=Z,21nm,0.8s,mb4.9
D20A **Manuel Ranch,** 81.35 39 P P 15 23 36.0 +0.2
baz=81,SNR=29
KECS **Kecovo** 81.37 323 *e*P P 15 23 36.3 +0.5
KECS pmax pmax
comp=Z,20nm,0.9s,mb4.8
KECS **Kecovo** 81.37 323 *e*P P 15 23 36.3 +0.5
comp=Z,20nm,0.9s,mb4.8
KECS **Kecovo** 81.37 323 *e*P P 15 23 36.3 +0.5
WAL1 **Walls** 81.38 341 P P 15 23 35.4 -0.2
WAL1 **Walls** 81.38 341 *e*P P 15 23 35.4 -0.2
E19A **Rath Farm, Rou** 81.40 40 P P 15 23 36.4 +0.3
baz=81,SNR=48
C21A **Desert Coulee** 81.42 38 ⇓P P 15 23 36.1 0.0
baz=81
VES **Vestal, Richgr** 81.43 53 P P 15 23 35.9 -0.6
baz=81,SNR=6.1
YNR **Norris Junctio** 81.44 42 *e*P P 15 23 38.2 +1.9
comp=Z,11nm,1.1s,mb4.5
RAC **Raciborz** 81.45 325 *e*P P 15 23 36.9 +0.7
PKM **Peak Mountain** 81.46 54 ⇓P P 15 23 37.0 +0.4
baz=81,SNR=7.2
P11A **Circle Ranch,** 81.49 48 P P 15 23 37.3 +0.7
baz=81,SNR=14
I16A **Newdale** 81.50 43 P P 15 23 38.0 +1.4
baz=81,SNR=17
Q10A **Clear Creek Ra** 81.50 49 ⇑P P 15 23 37.4 +0.7
baz=81
YFT **Old Faithful** 81.52 42 *e*P P 15 23 38.7 +2.0
comp=Z,37nm,0.9s,mb5.1
L14A **Malta** 81.58 45 P P 15 23 38.0 +0.9
baz=81,SNR=27
K15A **Arbon** 81.61 44 ⇓P P 15 23 38.6 +1.4
baz=81
OKC **Ostrava-Krasne** 81.64 325 *i* P P 15 23 37.4 +0.2
OKC **Ostrava-Krasne** 81.64 325 *i* P P 15 23 37.4 +0.2
SZH **Strazhica** 81.67 316 *i* P P 15 23 37.9 +0.4
LIKS **Likavka** 81.69 324 *e*P P 15 23 38.2 +0.7
LIKS pmax pmax
comp=Z,46nm,0.5s,mb5.5
LIKS **Likavka** 81.69 324 *e*P P 15 23 38.2 +0.7
comp=Z,46nm,0.5s,mb5.5
LIKS **Likavka** 81.69 324 *e*P P 15 23 38.2 +0.7
LKWY **Lake** 81.69 42 *e*P P 15 23 38.7 +1.1
LKWY pmax pmax
comp=Z,51nm,0.8s,mb5.3
LKWY **Lake** 81.69 42 *e*P P 15 23 38.7 +1.1
comp=Z,51nm,0.8s,mb5.3
F19A **Roth Farm, Mol** 81.69 40 P P 15 23 37.5 0.0
baz=82,SNR=15
H17A **Grant Village** 81.70 42 P P 15 23 40.1 +2.5
baz=82,SNR=49
E20A **Meyer Farm, Mu** 81.72 39 P P 15 23 38.0 +0.2
baz=82,SNR=21
DEV **Deva** 81.75 320 ⇓P P 15 23 39.0 +1.1
DEV **Deva** 81.75 320⇓*i*P P 15 23 39.0 +1.1
CWC **Cottonwood Cre** 81.77 52 P P 15 23 37.9 -0.2
baz=82,SNR=6.1
JMB **Yambol** 81.77 316 P P 15 23 39.0 +1.0
J16A **Bone** 81.79 43 P P 15 23 39.1 +1.0
baz=82,SNR=16
IMW **Indian Meadow** 81.80 43⇑*e*P P 15 23 38.9 +0.7
comp=Z,21nm,0.6s,mb5.0
IMW *e*pP pP 15 25 13.6 +3.0
CSS **Prodhromos** 81.83 306 *e*P P 15 23 37.7 -0.8
comp=Z,22nm,0.8s,mb4.9
CSS **Prodhromos** 81.83 306 P P 15 23 38.2 -0.3
RUE **Ruedersdorf** 81.83 329 *e*P P 15 23 38.4 +0.2
comp=Z,136nm,0.9s,mb5.7
RUE **Ruedersdorf** 81.83 329 *e*P P 15 23 38.0 -0.2
comp=Z,90nm,0.7s,mb5.6
KSP **Ksiaz** 81.84 327 *e*P P 15 23 38.7 +0.4
R10A **Warm Springs** 81.87 50 P P 15 23 39.0 +0.4
baz=82,SNR=24
S10A **Tonopah Range,** 81.89 50 P P 15 23 39.0 +0.3
baz=82,SNR=58
RRI2 **Red Ridge** 81.91 43 *e*P P 15 23 39.1 +0.4
comp=Z,15nm,0.6s,mb4.9
GRAC **Grapevine Rang** 81.92 51 P P 15 23 39.2 +0.3
baz=82,SNR=8.3
ISA **Isabella** 81.94 53 P P 15 23 38.1 -1.0
baz=82,SNR=10
ISA **Isabella** 81.94 53 *e*P P 15 23 38.0 -1.1
ISA pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
ISA **Isabella** 81.94 53 *e*P P 15 23 38.0 -1.1
comp=Z,7.8nm,0.7s,mb4.5
Q11A **Duckwater** 81.96 49 ⇓P P 15 23 39.4 +0.2
baz=82,SNR=15
D21A **La Casta Ranch** 81.97 38 P P 15 23 38.9 -0.1
baz=82,SNR=12
MORC **Moravsky Berou** 81.97 325 P P 15 23 39.3 +0.4
MORC **Moravsky Berou** 81.97 325⇓*e*P P 15 23 38.8 -0.1
comp=Z,38nm,0.7s,mb5.2
MORC **Moravsky Berou** 81.97 325⇑*i*P P 15 23 39.0 +0.1
RLMT **Red Lodge** 81.98 41 P P 15 23 39.8 +0.7
baz=82,SNR=14
RLMT **Red Lodge** 81.98 41 *e*P P 15 23 39.5 +0.5
comp=Z,8.2nm,0.5s,mb4.7
I17A **Pilgrim Ck.** 81.99 42 P P 15 23 40.7 +1.6
baz=82,SNR=14
MOOW **Moose Ponds** 82.00 43 *e*P P 15 23 39.8 +0.6
comp=Z,11nm,0.7s,mb4.7
MOOW *e*PcP PcP 15 23 43.1 -0.5
MOOW *e*pP pP 15 25 13.7 +2.0
HVU **Hansel Valley** 82.01 45⇑*i*P P 15 23 39.8 +0.5
HVU *e*PP pP 15 25 13.3 +1.5
HVU pmax pmax
comp=Z,28nm,0.6s,mb5.2
HVU **Hansel Valley** 82.01 45⇑*i*P P 15 23 39.8 +0.5
comp=Z,28nm,0.6s,mb5.2
HVU *e*pP pP 15 25 13.3 +1.5

H18A **Shoshone NF, C** 82.03 41 P P 15 23 40.1 +0.8
baz=82,SNR=22
PSZ **Piszkesteto** 82.03 323 P P 15 23 40.0 +0.7
PSZ **Piszkesteto** 82.03 323⇓eP P 15 23 39.5 +0.2
comp=Z,58nm,0.8s,mb5.4
PSZ **Piszkesteto** 82.03 323⇓iP P 15 23 39.5 +0.2
PSZ **Piszkesteto** 82.03 323⇓eP P 15 23 39.7 +0.4
TPAW **Teton Pass** 82.04 43⇑eP P 15 23 40.2 +0.8
comp=Z,19nm,0.6s,mb5.0
TPAW epP pP 15 25 14.1 +2.2
K16A **Soda Springs** 82.07 44 P P 15 23 41.1 +1.5
baz=82,SNR=10
L15A **Malad City** 82.10 45 P P 15 23 40.2 +0.4
baz=82,SNR=14
GZR **Gura Zlata** 82.13 320 P P 15 23 40.1 +0.3
GZR **Gura Zlata** 82.13 320⇑iP P 15 23 40.0 +0.2
DPC **Dobruska-Polom** 82.16 326 iP P 15 23 40.4 +0.5
DPC **Dobruska-Polom** 82.16 326 eP P 15 23 40.3 +0.4
comp=Z,25nm,0.7s,mb5.0
DPC **Dobruska-Polom** 82.16 326 iP P 15 23 40.4 +0.5
F20A **Billings** 82.16 40 ⇑P P 15 23 39.7 -0.3
baz=82
LOHW **Long Hollow** 82.16 43⇑eP P 15 23 40.6 +0.6
comp=Z,10nm,0.8s,mb4.6
LOHW ePP PP 15 26 56.7 +2.2
SNOW **Snow King Moun** 82.17 43 eP P 15 23 41.0 +0.9
comp=Z,22nm,0.7s,mb5.0
REDW **Red Top Meadow** 82.17 43 eP P 15 23 40.5 +0.4
comp=Z,27nm,1.2s,mb4.8
REDW epP pP 15 25 14.4 +1.8
VYHS **Vyhne** 82.19 324 eP P 15 23 40.6 +0.5
VYHS pmax pmax
comp=Z,40nm,0.8s,mb5.2
VYHS **Vyhne** 82.19 324 eP P 15 23 40.6 +0.5
comp=Z,40nm,0.8s,mb5.2
VYHS **Vyhne** 82.19 324 eP P 15 23 40.5 +0.4
UPC **Upice** 82.20 326 iP P 15 23 40.3 +0.2
UPC **Upice** 82.20 326 iP P 15 23 40.3 +0.2
CRAR **CRAIOVA** 82.23 318 P P 15 23 40.9 +0.5
J17A **Brown Place, J** 82.25 43 ⇓P P 15 23 41.3 +0.8
baz=82
R11A **Troy Canyon, C** 82.30 49 P P 15 23 41.2 +0.3
baz=82,SNR=68
KOLL **Kolacno** 82.35 324 eP P 15 23 41.7 +0.8
KOLL **Kolacno** 82.35 324 eP P 15 23 41.7 +0.8
BGU **Big Grassy Mou** 82.37 46⇑eP P 15 23 41.4 +0.3
comp=Z,17nm,0.9s,mb4.8
OSI **Osito Adit** 82.37 54 ⇓P P 15 23 41.7 +0.4
baz=82
OSI **Osito Adit** 82.37 54 eP P 15 23 41.7 +0.4
comp=Z,3.2nm,0.8s
MPMC **Manual Prospec** 82.38 52 P P 15 23 41.2 0.0
baz=82,SNR=29
M15A **Larsen Ranch,** 82.39 45 ⇑P P 15 23 41.6 +0.4
baz=82
H19A **Powell** 82.42 41 P P 15 23 42.1 +0.8
baz=82,SNR=12
G20A **Bridger** 82.49 40 P P 15 23 41.5 -0.2
baz=82,SNR=11
K17A **Gardner Place,** 82.51 44 ⇓P P 15 23 42.7 +0.8
baz=82
I18A **Diamond G Ranc** 82.56 42 ⇓P P 15 23 42.7 +0.6
baz=82,SNR=6.5
FURC **Furnace Creek,** 82.56 51 ⇑P P 15 23 42.3 +0.1
baz=82,SNR=12
LRMC **Laurel Mountai** 82.58 53 P P 15 23 42.0 -0.3
baz=82,SNR=11
S11A **Rachel** 82.60 50 P P 15 23 42.8 +0.4
baz=82,SNR=19
LAO **LASA Array** 82.61 38 P P 15 23 42.5 +0.2
baz=82,SNR=16
LAO **LASA Array** 82.61 38 eP P 15 23 42.1 -0.2
comp=Z,38nm,0.9s,mb5.1
LAO epP pP 15 25 14.0 -1.0
BZS **Buzias** 82.62 320 P P 15 23 42.4 +0.1
BZS **Buzias** 82.62 320⇓iP P 15 23 42.0 -0.3
P13A **Bates Ranch, G** 82.64 48 ⇓P P 15 23 42.9 +0.4
baz=82
L16A **Fish Haven** 82.66 44 P P 15 23 43.4 +0.8
baz=82,SNR=6.3
N15A **Stansbury Isla** 82.69 46 ⇓P P 15 23 43.7 +0.8
baz=82
EDW2 **Edwards Air Fo** 82.71 53 P P 15 23 42.9 -0.1
baz=82,SNR=22
VRAC **Vranov** 82.74 325 P P 15 23 43.5 +0.6
VRAC **Vranov** 82.74 325⇓iP P 15 23 43.1 +0.2
J18A **Kendall Valley** 82.75 43 P P 15 23 43.9 +0.9
baz=82,SNR=7.9
BUD **Budapest** 82.76 323⇓eP P 15 23 43.3 +0.3
I19A **Meeteetse** 82.81 42 ⇑P P 15 23 43.9 +0.5
baz=83,SNR=9.0
HWUT **Hardware Ranch** 82.83 45⇑eP P 15 23 43.8 +0.3
comp=Z,26nm,0.8s,mb5.0
HWUT epP pP 15 25 18.6 +2.4
PVCC **Panska Ves** 82.85 327 iP P 15 23 43.6 +0.2
PVCC **Panska Ves** 82.85 327 iP P 15 23 43.6 +0.2
BRG **Berggiesshubel** 82.89 328 eP P 15 23 43.5 -0.1
comp=Z,78nm,0.8s,mb5.5
BRG **Berggiesshubel** 82.89 328⇓iP P 15 23 43.6 0.0
comp=Z,77nm,0.8s,mb5.5
BRG e 15 23 53.6
comp=Z,10nm,0.6s
BRG e 15 25 23.7
comp=Z,9.2nm,0.9s
BRG S S 15 33 27.0 +0.1
R12A **Pony Springs,** 82.93 49 P P 15 23 44.4 +0.3
baz=83,SNR=20
U10A **Ash Meadows, A** 82.94 51 P P 15 23 44.6 +0.5
baz=83,SNR=26
DUG **Dugway** 82.94 46 ⇓P P 15 23 44.7 +0.7
baz=83,SNR=27
DUG **Dugway** 82.94 46⇑iP P 15 23 44.6 +0.5
DUG e*PP pP 15 25 16.4 -0.4
DUG pmax pmax
comp=Z,34nm,0.8s,mb5.1
DUG **Dugway** 82.94 46⇑iP P 15 23 44.6 +0.5
comp=Z,34nm,0.8s,mb5.1
DUG epP pP 15 25 16.4 -0.4
L17A **Cokeville** 82.94 44 P P 15 23 44.4 +0.4
baz=83,SNR=11
M16A **Huntsville** 82.97 45 ⇑P P 15 23 44.7 +0.5
baz=83
CLL **Collm** 83.00 328 eP P 15 23 43.8 -0.4
comp=Z,140nm,1.0s,mb5.7
CLL **Collm** 83.00 328⇓iP P 15 23 43.8 -0.4
CLL eS S 15 33 28.0 0.0
CLL pmax pmax
comp=Z,140nm,1.0s,mb5.7
CLL **Collm** 83.00 328⇓iP P 15 23 43.8 -0.4
comp=Z,140nm,1.0s,mb5.7
CLL eS S 15 33 28.0 0.0
CLL eSS sS 15 36 10.0 -3.1
CLL **Collm** 83.00 328⇓iP P 15 23 43.8 -0.4
comp=Z,140nm,1.0s,mb5.7
CLL eS S 15 33 28.0 0.0
comp=N,200nm,16.7s
CLL eS S 15 33 28.0 0.0
comp=E,100nm,15.3s
CLL eSS sS 15 36 10.0 -3.1
CLL eSS SS 15 39 01.0 -0.2
CLL eSSS 15 42 48.0
CLL e 15 43 54.0
CLL eSSSS 15 45 24.0
CLL LV 16 09 00.0
comp=Z,100nm,19.3s
G21A **Lodge Grass** 83.04 40 ⇑P P 15 23 44.4 -0.1
baz=83,SNR=5.9
ALN **Alexandroupoli** 83.04 315 P P 15 23 44.1 -0.5
MWC **Mount Wilson** 83.04 54 eP P 15 23 44.4 -0.3
MWC pmax pmax
comp=Z,31nm,1.1s,mb5.0
MWC **Mount Wilson** 83.04 54 eP P 15 23 44.4 -0.3
comp=Z,31nm,1.1s,mb5.0
MODS **Modra-Piesok** 83.04 324 eP P 15 23 44.7 +0.3
MODS **Modra-Piesok** 83.04 324 eP P 15 23 44.7 +0.3
H20A **Greybull** 83.08 41 ⇑P P 15 23 45.6 +0.9
baz=83,SNR=6.3
NOQ **North Oquirrh** 83.08 46 eP P 15 23 44.8 0.0
comp=Z,64nm,0.8s,mb5.4
K18A **Toltan Ranch,** 83.09 43 P P 15 23 45.5 +0.7
baz=83,SNR=6.5
O15A **The Old Anders** 83.09 46 P P 15 23 46.0 +1.1
baz=83,SNR=5.8
FBE **Freiberg** 83.12 328 eP P 15 23 45.0 +0.2
comp=Z,136nm,0.8s,mb5.7
P14A **Drum Mountains** 83.14 47 ⇑P P 15 23 45.8 +0.6
baz=83
T11A **Corn Creek, Al** 83.18 50 P P 15 23 45.5 +0.1
baz=83,SNR=36
S12A **Delamar Landin** 83.20 49 P P 15 23 46.0 +0.6
baz=83,SNR=10
PRU **Pruhonice** 83.24 327 iP P 15 23 46.1 +0.7
PRU **Pruhonice** 83.24 327 iP P 15 23 46.1 +0.7
ZST **Bratislava** 83.25 324 eP P 15 23 46.2 +0.7
ZST pmax pmax
comp=Z,19nm,0.7s,mb4.9
ZST **Bratislava** 83.25 324 eP P 15 23 46.2 +0.7
comp=Z,19nm,0.7s,mb4.9
ZST **Bratislava** 83.25 324 eP P 15 23 46.2 +0.7
J19A **Crowheart** 83.26 42 P P 15 23 46.2 +0.5
baz=83,SNR=35
GSC **Goldstone** 83.27 52 P P 15 23 45.7 -0.1
baz=83,SNR=26
GSC **Goldstone** 83.27 52 eP P 15 23 45.6 -0.2
GSC e 15 27 01.9
GSC pmax pmax
comp=Z,30nm,0.8s,mb5.1
GSC **Goldstone** 83.27 52 eP P 15 23 45.5 -0.3
comp=Z,30nm,0.8s,mb5.1
GSC ePP PP 15 27 01.9 -1.9
CIS **Catalina Islan** 83.27 55 ⇓P P 15 23 44.8 -1.0
baz=83
SHOC **Shoshone** 83.27 52 P P 15 23 45.8 0.0
baz=83,SNR=7.7
TREC **Trest** 83.28 326 iP P 15 23 45.5 -0.1
TREC **Trest** 83.28 326 iP P 15 23 45.5 -0.1
CTU **Camp Tracy** 83.28 46 eP P 15 23 46.6 +0.9
comp=Z,6.0nm,0.8s,mb4.4
BW06 **Boulder Array** 83.29 43 P P 15 23 45.6 -0.1
baz=83,SNR=23
BW06 **Boulder Array** 83.29 43 eP P 15 23 45.5 -0.3
comp=Z,4.3nm,0.9s,mb4.2
PDAR **Pinedale Array** 83.29 43 P P 15 23 45.5 -0.2
comp=Z,17nm,0.9s,mb4.8,baz=296,slow=2.1,SNR=80
PDAR pP pP 15 25 17.5 -1.1
comp=Z,3.0nm,0.9s,baz=286,slow=4.4,SNR=3.5
BFSC **Mount Baldy Ra** 83.30 54 P P 15 23 46.4 +0.4
baz=83,SNR=8.8
RZN **Rozhen** 83.34 316 iP P 15 23 46.5 +0.4
I20A **Worland** 83.35 41 P P 15 23 46.5 +0.4
baz=83,SNR=11
Q14A **Sevier Lake (B** 83.38 48 P P 15 23 46.9 +0.6
baz=83,SNR=88
NRDL **Niedersach Rie** 83.39 331 eP P 15 23 45.7 -0.4
comp=Z,33nm,0.9s,mb5.1
R13A **O'Grain Ranch,** 83.42 49 P P 15 23 47.1 +0.5
baz=83,SNR=19
M17A **Scullys Gap (B** 83.45 44 ⇓P P 15 23 47.1 +0.5
baz=83,SNR=12
H21A **Big Horn, Sher** 83.51 40 P P 15 23 47.0 +0.2
baz=83,SNR=8.1
JLU **Jordanelle** 83.52 45 eP P 15 23 47.2 +0.3
comp=Z,13nm,0.7s,mb4.8
NLU **North Lily Min** 83.53 46⇑eP P 15 23 47.4 +0.3
comp=Z,30nm,0.8s,mb5.1
L18A **Fontenelle, Gr** 83.54 44 P P 15 23 47.6 +0.6
baz=83,SNR=5.3
U11A **Corn Creek** 83.55 51 ⇓P P 15 23 48.2 +1.0
baz=83
NEUB **Neuenburg** 83.61 329 eP P 15 23 47.0 -0.2
comp=Z,130nm,1.0s,mb5.6
P15A **Leamington** 83.64 47 P P 15 23 48.2 +0.6
baz=83,SNR=23
SHPR **Sheep Range** 83.65 51 eP P 15 23 47.9 +0.2
comp=Z,18nm,0.6s,mb5.0
K19A **Absolon Red Bu** 83.66 43 P P 15 23 47.2 -0.5
baz=83,SNR=9.0
VTS **Vitosha** 83.66 317 ⇓P P 15 23 48.0 +0.4
VTS **Vitosha** 83.66 317 P P 15 23 47.5 -0.1
VTS **Vitosha** 83.66 317 ⇓iP P 15 23 48.0 +0.4
VTS **Vitosha** 83.66 317 iP P 15 23 47.9 +0.3
N17A **Moffit Pass** 83.67 45 P P 15 23 48.1 +0.3
baz=84,SNR=12
DAU **Daniels Canyon** 83.75 46 eP P 15 23 48.9 +0.8
DAU pmax pmax
comp=Z,42nm,0.7s,mb5.3
DAU **Daniels Canyon** 83.75 46 eP P 15 23 48.9 +0.8
comp=Z,42nm,0.7s,mb5.3
J20A **Shoshoni** 83.75 42 P P 15 23 48.3 +0.2
baz=84,SNR=18
CLZ **Clausthal** 83.75 330 eP P 15 23 48.0 +0.1
comp=Z,87nm,1.0s,mb5.4
CLZ **Clausthal** 83.75 330 eP P 15 23 48.0 +0.1
CLZ pmax pmax
comp=Z,87nm,1.0s,mb5.4
MPU **Maple Canyon** 83.76 46 eP P 15 23 48.7 +0.4
comp=Z,33nm,0.6s,mb5.2
TUQ **Turquoise Moun** 83.77 52 P P 15 23 48.5 +0.1
baz=84,SNR=32
PKSM **Moragy** 83.80 322 P P 15 23 48.0 -0.3
PKSM **Moragy** 83.80 322⇑iP P 15 23 47.7 -0.6
L19A **Farson** 83.82 43 P P 15 23 48.8 +0.3
baz=84,SNR=24
M18A **Lyman** 83.83 44 P P 15 23 48.9 +0.4
baz=84,SNR=6.3
S13A **Holt Ranch, En** 83.85 49 P P 15 23 49.3 +0.6
baz=84,SNR=27
HEC **Hector,Ludlow** 83.86 52 P P 15 23 48.7 -0.1
baz=84,SNR=26
V11A **Goodsprings** 83.86 51 ⇑P P 15 23 49.1 +0.3
baz=84
SOP **Sopron** 83.87 324⇓eP P 15 23 48.6 0.0
TANN **Tannenbergstha** 83.88 328 eP P 15 23 48.4 -0.2
comp=Z,27nm,0.9s,mb5.0
KAVA **Kavala** 83.89 315 P P 15 23 48.5 -0.3
I21A **Big Trails, Te** 83.90 41 ⇓P P 15 23 48.8 0.0
baz=84,SNR=14
PRK **Paraskevi** 83.91 313 P P 15 23 48.4 -0.5
Q15A **Fillmore** 83.93 47 P P 15 23 49.6 +0.5
baz=84,SNR=18
WERD **Werda** 83.93 328 eP P 15 23 48.6 -0.2
PLN **Plauen** 83.97 328 eP P 15 23 48.8 -0.2
RSC **Scourie** 83.97 341 P P 15 23 48.5 -0.4
RSC **Scourie** 83.97 341 eP P 15 23 48.5 -0.4
GÜNZ **Gunzen** 83.98 328 eP P 15 23 49.0 -0.1
MURC **Murrieta** 83.98 54 P P 15 23 49.4 0.0
baz=84,SNR=5.2
ARUT **Antelope Range** 83.99 49 eP P 15 23 49.1 -0.3
ARUT pmax pmax
comp=Z,17nm,1.0s,mb4.7
ARUT **Antelope Range** 83.99 49 eP P 15 23 49.1 -0.3
comp=Z,17nm,1.0s,mb4.7
WERN **Wernitzgruen** 84.01 328 eP P 15 23 49.2 0.0
NKC **Novy Kostel** 84.02 328 iP P 15 23 49.0 -0.3
NKC **Novy Kostel** 84.02 328 iP P 15 23 49.0 -0.3
CONA **Conrad Observa** 84.04 325 iPcP PcP 15 23 49.7 -2.7
comp=Z,36nm,0.8s,SNR=27
K20A **Yellowstone Ra** 84.05 42 P P 15 23 49.1 -0.4
baz=84,SNR=6.6
MVH1 **Achvaich** 84.06 340 P P 15 23 48.6 -0.7
MVH1 **Achvaich** 84.06 340 eP P 15 23 48.6 -0.7
MCD **Coleburn Disti** 84.08 340 P P 15 23 48.9 -0.6
MCD **Coleburn Disti** 84.08 340 eP P 15 23 48.9 -0.6
MOX **Moxa** 84.09 329 eP P 15 23 47.3 -2.3
MOX **Moxa** 84.09 329 eP P 15 23 49.3 -0.3
comp=Z,32nm,0.9s,mb5.0
U12A **Valley of Fire** 84.10 50 P P 15 23 50.4 +0.4
baz=84,SNR=7.1
J21A **Lysite** 84.11 41 P P 15 23 50.1 +0.2
baz=84,SNR=26
LBOS 84.13 283⇓eP P 15 23 51.0 +0.6
LBOS AMb AMB 15 23 51.4
comp=Z,170nm,1.0s,mb5.7
T13A **Saint George** 84.16 50 P P 15 23 51.0 +0.8
baz=84,SNR=10
LIA **Limnos Island** 84.17 314 P P 15 23 50.1 -0.2
S14A **Cedar City** 84.18 49 ⇑P P 15 23 50.4 +0.1
baz=84
CCUT **Cedar City** 84.18 49 eP P 15 23 50.7 +0.3
comp=Z,7.9nm,0.7s,mb4.5
CCUT epP pP 15 25 25.0 +1.6
KKB **Krupnik** 84.19 317 iP P 15 23 50.8 +0.5
O17A **Robinson Place** 84.19 45 P P 15 23 51.2 +0.8
baz=84,SNR=27
MME1 **Meikle Cairn** 84.22 339 P P 15 23 49.0 -1.1
MME1 **Meikle Cairn** 84.22 339 eP P 15 23 49.0 -1.1
KHC **Kasperske Hory** 84.29 327 iP P 15 23 50.3 -0.3
KHC **Kasperske Hory** 84.29 327 eP P 15 23 50.1 -0.5
comp=Z,43nm,0.8s,mb5.2
KHC **Kasperske Hory** 84.29 327 iP P 15 23 50.3 -0.3
V12A **Nelson** 84.31 51 ⇓P P 15 23 51.3 +0.3
baz=84
GMRC **Granite Mounta** 84.33 52 P P 15 23 51.2 0.0
baz=84,SNR=26
N18A **Larsen Ranch,** 84.34 44 P P 15 23 51.1 0.0
baz=84,SNR=14
MSU **Marysvale** 84.35 47 eP P 15 23 52.0 +0.8
MSU e*PP pP 15 25 27.0 +2.7
MSU pmax pmax
comp=Z,21nm,0.8s,mb4.9
MSU **Marysvale** 84.35 47 eP P 15 23 52.0 +0.9
comp=Z,21nm,0.8s,mb4.9
MSU epP pP 15 25 27.0 +2.8
SRS **Serrai** 84.36 316 P P 15 23 50.1 -1.1
GEC2 **GERESS Array S** 84.43 326 eP P 15 23 50.9 -0.5
comp=Z,42nm,1.1s,mb5.1
GEC2 **GERESS Array S** 84.43 326 eP P 15 23 50.9 -0.5
GEC2 pmax pmax
comp=Z,42nm,1.1s,mb5.1
ROTZ **Rotzenmuhle** 84.46 328 eP P 15 23 51.8 +0.3
TMUT **Trail Mountain** 84.46 46 eP P 15 23 51.9 +0.2
comp=Z,10.0nm,0.7s,mb4.7
L20A **Wamsutter** 84.47 43 ⇑P P 15 23 51.9 +0.2
baz=84
R15A **Junction** 84.47 48 ⇓P P 15 23 52.9 +1.1
baz=84
U13A **Pakoon Wash** 84.48 50 P P 15 23 52.1 +0.3
baz=84,SNR=25
PFO **Pinyon Flat Ob** 84.48 54 P P 15 23 51.6 -0.3
baz=84,SNR=22
PFO **Pinyon Flat Ob** 84.48 54 eP P 15 23 50.9 -1.0
PFO e*PP pP 15 25 24.2 -0.9
PFO pmax pmax
comp=Z,41nm,0.9s,mb5.2
PFO **Pinyon Flat Ob** 84.48 54 eP P 15 23 50.9 -1.0
comp=Z,41nm,0.9s,mb5.2
PFO epP pP 15 25 24.2 -0.9
DIVS **Divibare** 84.48 320 P P 15 23 51.1 -0.6
LDFC **Landfair** 84.52 52 eP P 15 23 51.7 -0.4
comp=Z,29nm,0.8s,mb5.0
MDO **Dochfour** 84.53 340 P P 15 23 50.9 -0.7
MDO **Dochfour** 84.53 340 eP P 15 23 50.9 -0.7
BELC **Belle Mtn. Jos** 84.56 53 P P 15 23 51.9 -0.5
baz=84,SNR=27
O18A **Roosevelt** 84.59 45 P P 15 23 53.3 +1.0
baz=84,SNR=8.8
WET **Wettzell** 84.60 327 eP P 15 23 52.0 -0.2
comp=Z,20nm,0.9s,mb4.8
WET **Wettzell** 84.60 327 eP P 15 23 52.0 -0.2
WET pmax pmax
comp=Z,20nm,0.9s,mb4.8
J22A **Midwest** 84.61 41 P P 15 23 52.2 -0.1
baz=84,SNR=32
P17A **Butcher Ranch,** 84.64 46 P P 15 23 53.3 +0.7
baz=84,SNR=24
T14A **Hurricane** 84.66 49 ⇓P P 15 23 52.9 +0.2
baz=84,SNR=5.4
ARSA **Arzberg** 84.67 324⇓iPcP PcP 15 23 52.2 -3.0
comp=Z,29nm,1.4s
K21A **Alcova** 84.68 42 P P 15 23 53.0 +0.2
baz=84,SNR=45
Q16A **Castle Valley** 84.72 47 P P 15 23 53.7 +0.7
baz=84,SNR=14
KAC **Achnashellach** 84.74 341 P P 15 23 52.3 -0.4
KAC **Achnashellach** 84.74 341 eP P 15 23 52.3 -0.4
KNT **Kendrikon** 84.74 316 P P 15 23 52.2 -0.8
RRH **Rhenigidale** 84.76 342 P P 15 23 52.3 -0.4
RRH **Rhenigidale** 84.76 342 eP P 15 23 52.3 -0.4
P18A **Preston Nutter** 84.84 46 P P 15 23 54.3 +0.7
baz=85,SNR=38
MOA **Molln** 84.87 325⇑iP P 15 23 52.6 -0.9
comp=Z,26nm,1.6s,mb4.7
BAR **Barrett** 84.87 54 eP P 15 23 53.2 -0.7
comp=Z,20nm,0.8s,mb4.9
M20A **Sweetwater, Wa** 84.88 43 ⇓P P 15 23 54.4 +0.7
baz=85,SNR=9.3
PLG **Polygyros** 84.92 315 P P 15 23 52.9 -1.0
R16A **Teasdale** 84.92 47 P P 15 23 55.1 +1.1
baz=85,SNR=21
MONP **Monument Peak** 84.92 54 P P 15 23 54.0 -0.1
baz=85,SNR=14
GRA1 **Grafenberg Arr** 84.96 328 eP P 15 23 53.5 -0.4
comp=Z,91nm,1.1s,mb5.4
GRF **Grafenberg Arr** 84.96 328 eP P 15 23 53.5 -0.4
comp=Z,91nm,1.1s,mb5.4
GRF **Grafenberg Arr** 84.96 328 eP P 15 23 53.5 -0.4
GRF pmax pmax
comp=Z,91nm,1.1s,mb5.4
GRFO **Grafenberg** 84.96 328 eP P 15 23 53.7 -0.2
GRFO pmax pmax
comp=Z,54nm,1.0s,mb5.2
GRFO **Grafenberg** 84.96 328 eP P 15 23 53.7 -0.3
comp=Z,54nm,1.0s,mb5.2
KPL **Plockton** 84.98 341 P P 15 23 53.5 -0.4
KPL AMB AMB 15 23 54.4
comp=Z,81nm,0.8s,mb5.5
KPL **Plockton** 84.98 341 eP P 15 23 53.5 -0.4
KPL AMB AMB 15 23 54.4
comp=Z,81nm,0.8s,mb5.5
U14A **Mt Trumbull** 84.98 50 P P 15 23 54.7 +0.4
baz=85,SNR=13
SRU **San Rafael** 85.00 46 P P 15 23 54.6 +0.3
baz=85,SNR=38
SRU **San Rafael** 85.00 46⇑iP P 15 23 54.4 +0.1
SRU e*PP pP 15 25 28.7 +1.1
SRU pmax pmax
comp=Z,29nm,0.5s,mb5.3
SRU **San Rafael** 85.00 46⇑iP P 15 23 54.4 0.0
comp=Z,29nm,0.5s,mb5.3
SRU epP pP 15 25 28.7 +1.1
KSB **Sheil Bridge** 85.02 341 P P 15 23 53.3 -0.8
KSB **Sheil Bridge** 85.02 341 eP P 15 23 53.3 -0.8
NEE2 **Needles Airpor** 85.03 52 ⇓P P 15 23 54.4 -0.2
baz=85
IRM **Iron Mountain** 85.04 52 P P 15 23 54.6 0.0
baz=85,SNR=16
L21A **Rawlins** 85.05 42 P P 15 23 54.8 +0.2
baz=85,SNR=13
PAIG **Paliouri** 85.06 315 P P 15 23 53.6 -1.0
K22A **Casper** 85.08 42 ⇓P P 15 23 54.2 -0.5
baz=85,SNR=9.2
O19A **Miners Draw (B** 85.09 45 ⇑P P 15 23 54.8 0.0
baz=85
T15A **Red Dirt Ranch** 85.13 49 P P 15 23 55.8 +0.7
baz=85,SNR=7.4
BC3 **Big Chuckawall** 85.13 53 P P 15 23 55.1 0.0
baz=85,SNR=19
S16A **Weppner Ranch,** 85.19 48 P P 15 23 55.7 +0.4
baz=85,SNR=8.7
Q18A **Rafter H Ranch** 85.24 46 P P 15 23 55.8 +0.2
baz=85,SNR=11
N20A **Spence Gulch,** 85.26 44 P P 15 23 56.4 +0.8
baz=85,SNR=22
DVTC **Desert V Tower** 85.28 54 P P 15 23 56.1 +0.3
baz=85,SNR=7.4
M21A **Separation Pea** 85.28 43 P P 15 23 56.0 +0.3
baz=85,SNR=9.6
ESY **Stoneypath** 85.29 339 P P 15 23 54.5 -0.9
ESY **Stoneypath** 85.29 339 eP P 15 23 54.5 -0.9
PERS **Pernice** 85.30 324 iP P 15 23 55.0 -0.6
PERS **Pernice** 85.30 324 iP P 15 23 55.0 -0.6
R17A **Hanksville Air** 85.31 47 P P 15 23 56.2 +0.3
baz=85,SNR=10
SOKA **Soboth** 85.31 324⇓iP P 15 23 55.1 -0.6
comp=Z,37nm,0.6s,mb5.3
RWWY **Rawlins** 85.32 43 eP P 15 23 55.6 -0.2
comp=Z,31nm,0.9s,mb5.0
SWSC **Sam W. Stewart** 85.32 54 P P 15 23 56.0 0.0
baz=85,SNR=5.1
KAR1 **Arisaig** 85.39 341 P P 15 23 55.5 -0.4
KAR1 **Arisaig** 85.39 341 eP P 15 23 55.5 -0.4
TRBA **At Turbah** 85.41 283⇑eP P 15 23 57.2 +0.5
AOS **Alonnisos** 85.41 314 P P 15 23 55.0 -1.4
RSSD **Black Hills** 85.47 39 eP P 15 23 56.3 -0.2
RSSD pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
RSSD **Black Hills** 85.47 39 eP P 15 23 56.3 -0.2
comp=Z,7.7nm,0.6s,mb4.6
V14A **Boquillas Ranc** 85.50 50 P P 15 23 57.8 +0.8
baz=85,SNR=16
L22A **Ellis Ranch, M** 85.54 42 ⇓P P 15 23 57.5 +0.6
baz=85
EBL **Broad Law** 85.55 339 P P 15 23 55.9 -0.8
EBL **Broad Law** 85.55 339 eP P 15 23 55.9 -0.8
U15A **North Rim** 85.55 49 P P 15 23 57.6 +0.6
baz=85,SNR=24
EAB **Aberfoyle** 85.58 340 P P 15 23 56.2 -0.6
EAB **Aberfoyle** 85.58 340 eP P 15 23 56.2 -0.6

P19A Cripple Cowboy 85.60 45 P P 15 23 57.7 +0.4
baz=85,SNR=43
EAU Auchinoon 85.61 339 P P 15 23 56.3 -0.7
EAU Auchinoon 85.61 339 eP P 15 23 56.3 -0.7
PDMCI Parker Dam,Lak 85.63 52 ⇑P P 15 23 57.6 +0.1
baz=85
RJOB Jochberg 85.65 326 eP P 15 23 57.1 -0.2
comp=Z,36nm,1.0s,mb5.1
LIT Litokhoron 85.65 316 P P 15 23 56.0 -1.5
X13A Yucca 85.66 51 ⇑P P 15 23 58.0 +0.3
baz=86
Y12C Blythe 85.70 52 ⇑P P 15 23 58.0 +0.1
baz=86,SNR=5.2
APE Apeiranthos 85.70 312 ⇓P P 15 23 56.4 -1.4
APE Apeiranthos 85.70 312 ⇓iP P 15 23 56.4 -1.4
O20A White River Ci 85.72 44 P P 15 23 58.4 +0.5
baz=86,SNR=8.7
N21A Black Mountain 85.74 43 P P 15 23 58.4 +0.5
baz=86,SNR=16
S17A Black Ridge (B 85.74 48 P P 15 23 57.8 -0.3
baz=86,SNR=9.6
W14A Seligman 85.77 51 ⇑P P 15 23 58.6 +0.4
baz=86,SNR=16
R18A Canyonlands Na 85.83 46 P P 15 23 58.4 -0.1
baz=86,SNR=20
M22A Cedar Creek Ra 85.85 43 ⇓P P 15 23 58.8 +0.3
baz=86
KBA Koelnbreinsper 85.86 325 ⇓iP P 15 23 57.5 -0.9
comp=Z,13nm,0.8s,mb4.7
Q19A Hogan Spring (85.86 46 P P 15 23 58.6 0.0
baz=86,SNR=16
L23A Garrett 85.89 42 P P 15 23 58.4 -0.2
baz=86,SNR=28
GLA Glamis 85.91 53 P P 15 23 59.4 +0.5
baz=86,SNR=13
GLA Glamis 85.91 53 eP P 15 23 59.3 +0.4
GLA pmax pmax
comp=Z,19nm,0.6s,mb5.0
GLA Glamis 85.91 53 eP P 15 23 59.3 +0.4
comp=Z,19nm,0.6s,mb5.0
PGBU Glenifferbraes 85.95 339 P P 15 23 58.5 -0.1
PGBU AMB AMB 15 23 58.9
comp=Z,72nm,1.3s,mb5.2
PGBU Glenifferbraes 85.95 339 eP P 15 23 58.5 -0.1
PGBU AMB AMB 15 23 58.9
comp=Z,72nm,1.3s,mb5.2
ESK Eskdalemuir 85.98 339 iP P 15 23 59.5 +0.7
V15A Kaibab Nationa 85.99 50 P P 15 23 59.8 +0.5
baz=86,SNR=15
LJU Ljubljana 86.01 324 iP P 15 23 58.1 -1.0
LJU Ljubljana 86.01 324 iP P 15 23 58.1 -1.0
BOJS Bojanci 86.02 323 iP P 15 23 58.4 -0.8
BOJS Bojanci 86.02 323 iP P 15 23 58.4 -0.8
MYKA Terra Mystica 86.03 325 ⇓iP P 15 23 57.9 -1.3
comp=Z,18nm,0.9s,mb4.8
P20A De Beque 86.03 45 ⇑P P 15 23 59.7 +0.3
baz=86
FUR Furstenfeldbru 86.04 327 eP P 15 23 59.0 -0.2
comp=Z,72nm,0.9s,mb5.4
FUR Furstenfeldbru 86.04 327 eP P 15 23 59.0 -0.2
FUR pmax pmax
comp=Z,72nm,0.9s,mb5.4
ECK Cauldkaine Hil 86.07 338 P P 15 23 58.4 -0.8
ECK Cauldkaine Hil 86.07 338 eP P 15 23 58.4 -0.8
TOD Tromm 86.08 329 eP P 15 23 59.0 -0.4
O21A Pagoda 86.12 44 P P 15 24 00.1 +0.3
baz=86
Y13A Salome 86.12 52 P P 15 24 00.2 +0.3
baz=86,SNR=7.5
T17A Navajo Res., N 86.14 48 ⇑P P 15 23 59.9 -0.1
baz=86
S18A Hurst Farm, Bl 86.21 47 P P 15 24 00.1 -0.2
baz=86,SNR=13
ATAL Atalanti 86.23 314 P P 15 23 58.3 -2.1
LKR Lokris 86.27 314 P P 15 23 57.8 -2.8
R19A Curley Farm, L 86.28 46 ⇓P P 15 24 01.1 +0.6
baz=86,SNR=6.3
THL Klokotos Trika 86.28 315 P P 15 23 58.3 -2.3
NEST Nestorio 86.30 317 P P 15 23 58.6 -2.0
M23A Laramie 86.31 42 P P 15 24 01.0 +0.3
baz=86,SNR=14
W15A Williams 86.32 50 ⇑P P 15 24 01.2 +0.4
baz=86,SNR=8.1
N22A Wattenberg Ran 86.33 43 ⇑P P 15 24 01.4 +0.6
baz=86,SNR=11
JAVS Javornik 86.34 324 iP P 15 23 59.4 -1.4
JAVS Javornik 86.34 324 iP P 15 23 59.4 -1.4
X14A Yava 86.35 51 P P 15 24 01.9 +0.9
baz=86,SNR=8.6
TIR Tirane 86.36 318 eP P 15 23 59.9 -1.0
TIR pmax pmax
comp=Z,30nm,0.6s,mb5.2
TIR Tirane 86.36 318 eP P 15 23 59.9 -1.0
comp=Z,30nm,0.6s,mb5.2
PV04 Paradox Valley 86.43 46 eP P 15 24 01.7 +0.4
Q20A Ridgley Place, 86.44 45 P P 15 24 01.9 +0.5
baz=86,SNR=15
U16A Tuba City 86.46 49 P P 15 24 02.4 +0.9
baz=86,SNR=6.2
U17A Shonto 86.47 48 ⇑P P 15 24 02.4 +0.8
baz=86
BEBN Eben Emael 86.48 332 P P 15 24 00.5 -0.7
ABTA Abfaltersbach 86.49 325 ⇓iP P 15 23 59.7 -1.7
comp=Z,32nm,0.8s,mb5.1,SNR=11
MEM Membach 86.49 331 P P 15 24 00.3 -1.1
STU Stuttgart 86.53 328 eP P 15 24 01.0 -0.6
comp=Z,90nm,1.6s,mb5.2
AGMN Agassiz Nation 86.54 32 eP P 15 24 00.7 -1.0
comp=Z,2.8nm,0.8s
N23A Red Feather La 86.56 43 ⇓P P 15 24 02.4 +0.6
baz=86,SNR=17
Y14A Wickenburg 86.60 52 P P 15 24 02.3 +0.1
baz=86,SNR=7.9
Z13A Yuma Proving G 86.61 52 P P 15 24 02.3 +0.1
baz=86,SNR=15
HPK Haverah Park 86.61 337 P P 15 24 01.0 -0.8
HPK Haverah Park 86.61 337 eP P 15 24 01.0 -0.8
T18A Mexican Hat 86.63 47 P P 15 24 01.9 -0.4
baz=86,SNR=9.2
O22A Kremmling 86.69 43 P P 15 24 03.0 +0.4
baz=86,SNR=23
WUAZ Wupatki 86.69 49 ⇓P P 15 24 03.1 +0.5
baz=86,SNR=7.1
WUAZ Wupatki 86.69 49 eP P 15 24 02.8 +0.2
comp=Z,14nm,1.0s,mb4.6
WUAZ epP pP 15 25 36.4 +0.1
S19A Harvey Farm, M 86.70 47 ⇓P P 15 24 02.7 +0.1
baz=86
MOTA Moosalm 86.72 327 ⇓iP P 15 24 01.5 -1.0
comp=Z,17nm,0.7s,mb4.9
RUP Ruppelstein 86.75 330 eP P 15 24 02.2 -0.4
X15A Humboldt 86.77 51 ⇑P P 15 24 03.1 +0.1
baz=87,SNR=11
RETA Reutte 86.78 327 ⇓iPcP PcP 15 24 02.2 -2.3
comp=Z,28nm,0.7s,SNR=12
113A Mohawk Valley, 86.80 53 ⇑P P 15 24 03.3 +0.2
baz=87
PV01 Paradox Valley 86.80 46 eP P 15 24 03.0 0.0
comp=Z,1μm,0.9s
M24A Cheyenne 86.81 42 P P 15 24 03.9 +0.8
baz=87,SNR=10
GAL1 Galloway 86.82 339 P P 15 24 02.3 -0.5
GAL1 AMB AMB 15 24 03.8
comp=Z,81nm,2.3s,mb5.1
GAL1 Galloway 86.82 339 eP P 15 24 02.3 -0.5
GAL1 AMB AMB 15 24 03.8
comp=Z,81nm,2.3s,mb5.1
W16A Flagstaff 86.85 50 ⇓P P 15 24 04.4 +1.1
baz=87
R20A Redvale 86.88 46 P P 15 24 04.1 +0.7
baz=87,SNR=10
BCLA Clavier 86.92 331 P P 15 24 02.7 -0.7
P22A Eagle 86.94 44 P P 15 24 04.7 +1.0
baz=87,SNR=20
Q21A Lamborn Mesa, 86.95 45 ⇑P P 15 24 04.7 +1.0
baz=87
O23A Lake Granby, G 87.02 43 P P 15 24 04.8 +0.8
baz=87,SNR=22
Y15A Casa Rosa Ranc 87.03 51 P P 15 24 04.4 +0.2
baz=87,SNR=7.8
EFP Efpalio 87.08 315 P P 15 24 03.0 -1.4
SMCO Snowmass 87.08 44 eP P 15 24 05.2 +0.8
comp=Z,18nm,0.8s,mb4.8
SMCO epP pP 15 25 40.2 +2.0
U18A Rough Rock, Ch 87.08 48 P P 15 24 05.0 +0.6
baz=87,SNR=12

S20A Disappointment 87.12 46 P P 15 24 05.2 +0.6
baz=87,SNR=7.7
GUR Goura 87.13 314 P P 15 24 02.2 -2.4
FETA Feichten 87.13 326 i PcP PcP 15 24 03.8 -2.3
comp=Z,49nm,0.8s,SNR=38
LAKA Lakka 87.15 314 P P 15 24 02.9 -1.8
WLF Walferdange 87.16 331 P P 15 24 04.4 -0.1
comp=Z,27nm,2.3s,mb4.6
WLF Walferdange 87.16 331 eP P 15 24 04.5 0.0
WLF pmax pmax
comp=Z,285nm,3.0s
WLF Walferdange 87.16 331 eP P 15 24 04.5 -0.1
comp=Z,286nm,3.0s
N24A Carr 87.21 42 P P 15 24 06.0 +1.1
baz=87,SNR=5.1
SPAK Spaichingen-Ko 87.22 328 eP P 15 24 04.2 -0.6
BFO Black Forest 87.25 329 eP P 15 24 04.1 -0.9
BFO Black Forest 87.25 329 eP P 15 24 03.4 -1.5
comp=Z,24nm,0.7s,mb5.0
SNF Seneffe 87.26 332 P P 15 24 04.3 -0.7
comp=Z,24nm,2.6s,mb4.5
R21A Cimarron 87.26 45 ⇓P P 15 24 06.4 +1.1
baz=87,SNR=6.7
Q22A Crested Butte, 87.33 45 ⇓P P 15 24 06.9 +1.3
baz=87,SNR=20
X16A Lo Mia Camp, P 87.33 50 ⇑P P 15 24 06.8 +1.2
baz=87
DAVA Damuels 87.33 327 i PcP PcP 15 24 04.8 -2.1
comp=Z,60nm,0.7s,SNR=32
T19A Beclabito 87.35 47 P P 15 24 06.0 +0.4
baz=87,SNR=8.2
GIVF Givet 87.36 331 eP P 15 24 04.1 -1.4
comp=Z,13nm,0.6s,mb4.6
GIVF Givet 87.36 331 eP P 15 24 04.1 -1.4
GIVF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
GIVF Givet 87.36 331 eP P 15 24 04.1 -1.4
comp=Z,6.4nm,0.6s,mb4.5
114A Black Gap (USA 87.40 52 P P 15 24 06.3 +0.3
baz=87,SNR=8.1
MVCO Mesa Verde 87.43 47 eP P 15 24 06.0 -0.1
comp=Z,3.4nm,0.6s,mb4.2
DOU Dourbes 87.46 332 P P 15 24 04.9 -1.0
comp=Z,38nm,3.5s
ISCO Idaho Springs 87.47 43 P P 15 24 07.1 +0.9
baz=87,SNR=11
ISCO Idaho Springs 87.47 43 eP P 15 24 07.0 +0.8
ISCO e*PP pP 15 25 39.9 -0.2
ISCO pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
ISCO Idaho Springs 87.47 43 eP P 15 24 07.0 +0.8
comp=Z,10nm,0.7s,mb4.7
ISCO epP pP 15 25 39.9 -0.2
CWF Charnwood Fore 87.52 336 P P 15 24 04.5 -1.6
CWF AMB AMB 15 24 04.9
comp=Z,49nm,1.5s,mb5.0
CWF Charnwood Fore 87.52 336 eP P 15 24 04.5 -1.6
CWF AMB AMB 15 24 04.9
comp=Z,49nm,1.5s,mb5.0
O24A Longmont 87.57 43 ⇓P P 15 24 07.5 +0.8
baz=87
S21A Coal Bank Pass 87.57 46 ⇑P P 15 24 07.6 +0.9
baz=87,SNR=12
P23A Jefferson 87.62 44 ⇓P P 15 24 08.2 +1.3
baz=87
Y16A Circle Bar Ran 87.64 51 ⇓P P 15 24 07.7 +0.6
baz=87
CDF Champ du Feu 87.64 329 eP P 15 24 05.8 -1.0
comp=Z,39nm,0.7s,mb4.9
CDF Champ du Feu 87.64 329 eP P 15 24 05.8 -1.0
CDF pmax pmax
comp=Z,20nm,0.7s,mb5.0
CDF Champ du Feu 87.64 329 eP P 15 24 05.8 -1.0
comp=Z,20nm,0.7s,mb4.9
BAIF Baives 87.64 332 eP P 15 24 05.4 -1.4
comp=Z,32nm,1.0s,mb4.7
BAIF Baives 87.64 332 eP P 15 24 05.4 -1.4
BAIF pmax pmax
comp=Z,16nm,1.0s,mb4.7
BAIF Baives 87.64 332 eP P 15 24 05.4 -1.4
comp=Z,16nm,1.0s,mb4.7
FUORN Ofenpass-Fuorn 87.64 326 eP P 15 24 06.8 -0.1
comp=Z,24nm,0.8s,mb5.0
LIBD Limburg 87.70 329 eP P 15 24 06.8 -0.3
FELD Feldberg im Sc 87.73 328 eP P 15 24 06.8 -0.5
X17A Forest Lakes 87.79 50 ⇓P P 15 24 09.2 +1.4
baz=88
R22A Saguache, Gunn 87.83 45 ⇓P P 15 24 09.1 +1.2
baz=88,SNR=9.6
ECH Echery 87.84 329 eP P 15 24 07.2 -0.6
ECH Echery 87.84 329 eP P 15 24 07.2 -0.6
ECH Echery 87.84 329 eP P 15 24 07.2 -0.6
115A Sonoran Desert 87.86 52 ⇓P P 15 24 09.8 +1.6
baz=88
ITM Ithomi 87.86 314 P P 15 24 06.4 -1.7
214A Organ Pipe Nat 87.93 53 ⇓P P 15 24 08.9 +0.4
baz=88
Q23A Hartsel 87.93 44 P P 15 24 09.4 +1.0
baz=88,SNR=13
KFL Anninata 87.95 315 P P 15 24 07.1 -1.4
U20A Newcomb 87.95 47 ⇓P P 15 24 08.8 +0.3
baz=88
S22A 4UR Ranch, Cre 88.10 45 P P 15 24 10.2 +1.0
baz=88,SNR=17
O25A Wiggins 88.12 42 ⇓P P 15 24 09.7 +0.5
baz=88
MOF Molkenrain 88.13 329 eP P 15 24 08.3 -0.8
MOF Molkenrain 88.13 329 eP P 15 24 08.3 -0.8
MOF Molkenrain 88.13 329 eP P 15 24 08.3 -0.8
PYL PYLOS 88.16 314 P P 15 24 07.4 -2.1
Y17A Roosevelt 88.16 51 ⇑P P 15 24 10.1 +0.6
baz=88,SNR=6.3
TUE Stuetta 88.18 327 eP P 15 24 08.7 -0.7
comp=Z,42nm,0.7s,mb5.3
W19A Sanders 88.21 49 ⇓P P 15 24 10.2 +0.5
baz=88,SNR=8.3
BBS Basel-Blauen 88.26 328 eP P 15 24 08.9 -0.8
HINF Hinteralfeld 88.28 329 eP P 15 24 08.4 -1.4
comp=Z,43nm,1.1s,mb4.8
HINF Hinteralfeld 88.28 329 eP P 15 24 08.4 -1.4
HINF pmax pmax
comp=Z,21nm,1.1s,mb4.8
HINF Hinteralfeld 88.28 329 eP P 15 24 08.4 -1.4
comp=Z,21nm,1.1s,mb4.8
Q24A Divide 88.29 44 P P 15 24 10.7 +0.6
baz=88,SNR=6.1
116A Eloy 88.30 52 ⇓P P 15 24 10.9 +0.6
baz=88
THEF They Montfort 88.34 330 eP P 15 24 09.6 -0.5
THEF They Montfort 88.34 330 eP P 15 24 09.6 -0.5
THEF They Montfort 88.34 330 eP P 15 24 09.6 -0.5
V20A Brimhall 88.35 48 P P 15 24 10.9 +0.5
baz=88,SNR=7.3
HAU Haudompre 88.36 329 eP P 15 24 08.8 -1.4
HAU eMLR MLR
comp=Z,121nm,18.2s
HAU Haudompre 88.36 329 eP P 15 24 08.8 -1.4
HAU LR LR
comp=Z,120nm,18.3s
U21A Nageezi 88.45 47 ⇑P P 15 24 11.5 +0.6
baz=88
P25A Willow Gulch B 88.49 43 ⇑P P 15 24 11.7 +0.7
baz=88
MEZF Maizieres J'vi 88.52 330 eP P 15 24 09.2 -1.7
T22A Edith 88.53 46 P P 15 24 12.2 +1.0
baz=88,SNR=16
MCH1 Michaelchurch 88.71 337 P P 15 24 11.2 -0.6
MCH1 AMB AMB 15 24 11.8
comp=Z,128nm,2.1s,mb5.3
MCH1 Michaelchurch 88.71 337 eP P 15 24 11.2 -0.6
MCH1 AMB AMB 15 24 11.8
comp=Z,128nm,2.1s,mb5.3
EYMN Ely 88.72 30 eP P 15 24 12.0 +0.1
comp=Z,5.8nm,0.9s,mb4.3
HTR Trewern Hill 88.73 337 P P 15 24 11.2 -0.6
HTR Trewern Hill 88.73 337 eP P 15 24 11.2 -0.6
SFTF Sexfontaines 88.76 330 eP P 15 24 11.0 -1.0
comp=Z,125nm,1.1s,mb5.3
SFTF Sexfontaines 88.76 330 eP P 15 24 11.0 -1.0
comp=Z,125nm,1.1s,mb5.5
R24A Sanders Place, 88.80 44 P P 15 24 13.7 +1.2
baz=89,SNR=15
Q25A Bedland, Calha 88.85 43 P P 15 24 13.0 +0.3
baz=89,SNR=8.6
V21A Milan 88.86 47 P P 15 24 13.5 +0.7
baz=89,SNR=5.7

SDCO Great Sand Dun 88.89 45 P P 15 24 13.7 +0.8
baz=89,SNR=13
SDCO Great Sand Dun 88.89 45 eP P 15 24 13.4 +0.5
comp=Z,6.4nm,0.8s,mb4.4
117A Oracle 88.93 51 ⇓P P 15 24 13.9 +0.8
baz=89
HGH Gray Hill 88.95 336 P P 15 24 12.2 -0.6
HGH Gray Hill 88.95 336 eP P 15 24 12.2 -0.6
T23A Casias Ranch, 89.04 46 P P 15 24 14.8 +1.2
baz=89,SNR=7.5
TUC Tucson 89.06 52 eP P 15 24 13.2 -0.6
comp=Z,0.7nm,0.9s
S24A Houchin Ranch, 89.13 45 P P 15 24 15.0 +1.0
baz=89,SNR=10.0
X20A Quemado 89.14 49 P P 15 24 15.1 +1.0
baz=89,SNR=8.1
AQU L'Aquila 89.19 322 ⇑P P 15 24 14.4 +0.2
AQU L'Aquila 89.19 322 eP P 15 24 14.2 0.0
comp=Z,56nm,0.8s,mb5.3
AQU L'Aquila 89.19 322 ⇑iP P 15 24 14.4 +0.2
SENIN Lac Senin/Sane 89.19 328 eP P 15 24 13.6 -0.5
comp=Z,12nm,1.3s,mb4.5
V22A San Miguel Ran 89.25 47 ⇓P P 15 24 15.0 +0.4
baz=89
R25A Fountain Ranch 89.34 44 P P 15 24 15.3 +0.3
baz=89,SNR=5.2
217A Green Valley 89.38 52 ⇓P P 15 24 15.8 +0.5
baz=89,SNR=7.6
118A Homack Ranch, 89.39 51 ⇓P P 15 24 15.9 +0.6
baz=89
U23A El Rito 89.41 46 ⇑P P 15 24 16.2 +0.8
baz=89,SNR=21
CABF La Chapelle 89.54 329 eP P 15 24 14.7 -1.0
comp=Z,35nm,0.8s,mb4.9
CABF La Chapelle 89.54 329 eP P 15 24 14.7 -1.0
CABF pmax pmax
comp=Z,17nm,0.8s,mb4.9
CABF La Chapelle 89.54 329 eP P 15 24 14.7 -1.0
comp=Z,17nm,0.8s,mb4.9
CUC Castrocucco 89.55 319 eP P 15 24 14.2 -1.7
comp=Z,4.5nm,0.6s,mb4.5
CUC ePP PP 15 27 53.2 -0.4
ECSD EROS Data Cent 89.55 36 eP P 15 24 14.5 -1.3
comp=Z,13nm,1.0s,mb4.7
T24A Torres, Weston 89.61 45 P P 15 24 17.5 +1.2
baz=89,SNR=17
Y20A Horse Springs, 89.62 49 ⇓P P 15 24 17.0 +0.7
baz=89,SNR=9.1
X21A Alamocita Cree 89.65 48 P P 15 24 17.3 +0.8
baz=90,SNR=10.0
119A Ashpeak Ranch, 89.75 51 ⇓P P 15 24 17.3 +0.3
baz=90,SNR=5.8
218A Dragoon 89.76 52 ⇓P P 15 24 17.9 +0.8
baz=90,SNR=6.8
V23A Ortiz Mt. (NFS 89.80 47 ⇑P P 15 24 18.6 +1.4
baz=90
T25A Trinidad 89.94 45 P P 15 24 18.4 +0.6
baz=90,SNR=8.3
LOR Lormes 89.99 330 eP P 15 24 16.5 -1.3
comp=Z,48nm,1.0s,mb5.0
LOR eMLR MLR
comp=Z,113nm,20.5s
LOR Lormes 89.99 330 eP P 15 24 16.5 -1.3
LOR pmax pmax
comp=Z,24nm,1.0s,mb5.0
LOR MLR MLR
comp=Z,110nm,20.5s
LOR Lormes 89.99 330 eP P 15 24 16.5 -1.3
comp=Z,24nm,1.0s,mb5.0
LOR LR LR
comp=Z,110nm,20.5s
Z20A Nine Sixteen R 89.99 50 P P 15 24 18.9 +0.8
baz=90,SNR=24
Y21A Point of Rocks 90.00 49 P P 15 24 19.2 +1.1
baz=90,SNR=7.6
HTL Hartland 90.06 337 P P 15 24 17.2 -0.9
HTL AMB AMB 15 24 18.8
comp=Z,133nm,2.2s,mb5.4
HTL Hartland 90.06 337 eP P 15 24 17.2 -0.9
HTL AMB AMB 15 24 18.8
comp=Z,133nm,2.2s,mb5.4
LPL La Plagne 90.10 328 eP P 15 24 17.6 -0.7
comp=Z,71nm,0.9s,mb5.2
LPL La Plagne 90.10 328 eP P 15 24 17.6 -0.7
LPL pmax pmax
comp=Z,35nm,0.9s,mb5.2
LPL La Plagne 90.10 328 eP P 15 24 17.6 -0.7
comp=Z,35nm,0.9s,mb5.2
LPG La Plagne 90.10 328 eP P 15 24 17.7 -0.6
318A Bisbee 90.14 52 P P 15 24 19.6 +0.8
baz=90,SNR=13
ANMO Albuquerque 90.15 47 eP P 15 24 19.1 +0.3
ANMO pmax pmax
comp=Z,7.0nm,0.7s
ANMO Albuquerque 90.15 47 eP P 15 24 19.1 +0.3
comp=Z,7.2nm,0.7s,mb4.6
W23A Werner Place, 90.20 47 ⇑P P 15 24 20.0 +0.9
baz=90
219A White Tail Can 90.26 51 P P 15 24 19.8 +0.4
baz=90,SNR=15
SSF Saint Saulge 90.30 330 eP P 15 24 18.0 -1.2
comp=Z,38nm,0.9s,mb4.9
SSF Saint Saulge 90.30 330 eP P 15 24 18.0 -1.2
SSF pmax pmax
comp=Z,19nm,0.9s,mb4.9
SSF Saint Saulge 90.30 330 eP P 15 24 18.0 -1.2
comp=Z,19nm,0.9s,mb4.9
120A U Bar Ranch, L 90.33 50 P P 15 24 20.6 +1.0
baz=90,SNR=6.4
V24A Rampart Ranch, 90.37 46 ⇑P P 15 24 21.2 +1.4
baz=90,SNR=10
U25A Circle Dot Ran 90.44 45 P P 15 24 20.6 +0.5
baz=90,SNR=12
Z21A St. Cloud Mine 90.46 49 ⇑P P 15 24 21.1 +0.9
baz=90
LPM Los Pinos Moun 90.46 48 eP P 15 24 20.8 +0.6
SMF Signal de Mont 90.48 330 eP P 15 24 19.0 -1.1
comp=Z,71nm,0.8s,mb5.2
SMF Signal de Mont 90.48 330 eP P 15 24 19.0 -1.1
SMF pmax pmax
comp=Z,35nm,0.8s,mb5.2
SMF Signal de Mont 90.48 330 eP P 15 24 19.0 -1.1
comp=Z,35nm,0.8s,mb5.2
HYF Humbligny 90.49 331 eP P 15 24 19.6 -0.5
Y22A Socorro 90.50 48 ⇓P P 15 24 21.0 +0.6
baz=90
FLN La Foliniere 90.51 333 eP P 15 24 19.0 -1.2
comp=Z,26nm,0.7s,mb4.9
FLN eMLR MLR
comp=Z,124nm,18.2s
FLN La Foliniere 90.51 333 eP P 15 24 19.0 -1.2
FLN pmax pmax
comp=Z,13nm,0.6s,mb4.9
FLN MLR MLR
comp=Z,120nm,18.3s
FLN La Foliniere 90.51 333 eP P 15 24 19.0 -1.2
comp=Z,13nm,0.6s,mb4.9
FLN LR LR
comp=Z,120nm,18.3s
LDF La Druitiere 90.51 333 eP P 15 24 19.6 -0.6
comp=Z,22nm,0.5s,mb4.9
LDF La Druitiere 90.51 333 eP P 15 24 19.6 -0.6
LDF pmax pmax
comp=Z,11nm,0.5s,mb4.9
LDF La Druitiere 90.51 333 eP P 15 24 19.6 -0.6
comp=Z,11nm,0.5s,mb4.9
BNM Barren Site 90.57 48 eP P 15 24 21.0 +0.2
comp=Z,4.7nm,0.5s,mb4.6
AVF Avril sur Loir 90.58 330 eP P 15 24 19.4 -1.1
comp=Z,152nm,1.1s,mb5.4
AVF Avril sur Loir 90.58 330 eP P 15 24 19.4 -1.1
AVF pmax pmax
comp=Z,76nm,1.1s,mb5.4
AVF Avril sur Loir 90.58 330 eP P 15 24 19.4 -1.1
comp=Z,76nm,1.1s,mb5.4
W24A Lazy 6 Ranch, 90.63 47 P P 15 24 22.0 +1.0
baz=90,SNR=13
319A Douglas 90.64 52 P P 15 24 21.9 +0.8
baz=90,SNR=8.8
MBDF Montbardon 90.68 327 eP P 15 24 19.3 -1.8
comp=Z,33nm,0.8s,mb4.9
MBDF Montbardon 90.68 327 eP P 15 24 19.3 -1.8
MBDF pmax pmax
comp=Z,17nm,0.8s,mb4.9
MBDF Montbardon 90.68 327 eP P 15 24 19.3 -1.8
comp=Z,17nm,0.8s,mb4.9
V25A Rancho No Teng 90.69 46 P P 15 24 22.2 +1.0

baz=90,SNR=22
CEL Celeste 90.70 318 *e*P **P 15 24 19.9 -1.4**
CEL comp=Z,53nm,0.8s,mb5.4 *e*PP PP 15 28 00.1 -2.6
JSA Saint Aubin 90.78 335 P **P 15 24 19.3 -2.1**
JSA AMB AMB 15 24 22.0
comp=Z,122nm,3.0s,mb5.2
JSA Saint Aubin 90.78 335 *e*P **P 15 24 19.3 -2.1**
JSA AMB AMB 15 24 22.0
comp=Z,122nm,3.0s,mb5.2
220A Playas Peak, P 90.80 51 ⇓P **P 15 24 22.2 +0.3**
baz=91,SNR=14
121A Cookes Peak, D 90.88 50 P **P 15 24 23.0 +0.7**
baz=91,SNR=9.9
ORIF Oris-en-Rattie 90.94 328 *e*P **P 15 24 21.1 -1.1**
ORIF comp=Z,30nm,0.9s,mb4.8 *e*MLR MLR
comp=Z,103nm,18.2s
ORIF Oris-en-Rattie 90.94 328 *e*P **P 15 24 21.1 -1.1**
ORIF pmax pmax
comp=Z,15nm,0.9s,mb4.8
ORIF Oris-en-Rattie 90.94 328 *e*P **P 15 24 21.1 -1.1**
comp=Z,15nm,0.9s,mb4.8
Z22A Elephant Butte 90.94 49 ⇓P **P 15 24 22.8 +0.3**
baz=91,SNR=21
GRR Gorron 90.96 333 *e*P **P 15 24 21.3 -0.9**
comp=Z,122nm,0.7s,mb5.5
GRR Gorron 90.96 333 *e*P **P 15 24 21.3 -0.9**
GRR pmax pmax
comp=Z,61nm,0.7s,mb5.5
GRR Gorron 90.96 333 *e*P **P 15 24 21.3 -0.9**
comp=Z,61nm,0.7s,mb5.5
BGF Bois d'Agland 90.97 330 *e*P **P 15 24 21.3 -1.0**
comp=Z,35nm,0.9s,mb4.9
BGF Bois d'Agland 90.97 330 *e*P **P 15 24 21.3 -1.0**
BGF pmax pmax
comp=Z,18nm,0.9s,mb4.9
BGF Bois d'Agland 90.97 330 *e*P **P 15 24 21.3 -1.0**
comp=Z,18nm,0.9s,mb4.9
SBF Sospel 91.03 326 *e*P **P 15 24 20.8 -1.9**
comp=Z,47nm,0.8s,mb5.1
SBF Sospel 91.03 326 *e*P **P 15 24 20.8 -1.9**
SBF pmax pmax
comp=Z,24nm,0.8s,mb5.1
SBF Sospel 91.03 326 *e*P **P 15 24 20.8 -1.9**
comp=Z,24nm,0.8s,mb5.1
Y23A Lovelace Mesa, 91.07 48 P **P 15 24 23.5 +0.4**
baz=91,SNR=11
PLDF La Plantade 91.11 330 *e*P **P 15 24 23.1 +0.1**
PLDF La Plantade 91.11 330 *e*P **P 15 24 23.1 +0.1**
PLDF La Plantade 91.11 330 *e*P **P 15 24 23.1 +0.1**
320A Kipp Ranch, An 91.17 51 ⇓P **P 15 24 24.3 +0.7**
baz=91
W25A X Bar L Ranch, 91.20 46 P **P 15 24 24.2 +0.6**
baz=91,SNR=14
V26A Tequesquite Ra 91.22 45 ⇓P **P 15 24 24.2 +0.5**
baz=91,SNR=6.3
AGO Saint Agoulin 91.25 330 *e*P **P 15 24 23.6 -0.1**
AGO Saint Agoulin 91.25 330 *e*P **P 15 24 23.1 +0.1**
SSB Saint Sauveur 91.26 329 *e*P **P 15 24 23.0 -0.7**
SSB pmax pmax
comp=Z,29nm,0.8s,mb5.2
SSB Saint Sauveur 91.26 329 *e*P **P 15 24 22.9 -0.7**
comp=Z,29nm,0.8s,mb5.2
PGF Pioggiola 91.27 324 *e*P **P 15 24 22.2 -1.6**
122A Conniff Cattle 91.28 49 ⇑P **P 15 24 25.0 +0.9**
baz=91
Z23A Rita Site, Whi 91.40 48 P **P 15 24 25.1 +0.4**
baz=91,SNR=8.7
TCF Toulx Ste Croi 91.45 331 *e*P **P 15 24 23.7 -0.9**
comp=Z,59nm,0.7s,mb5.2
TCF Toulx Ste Croi 91.45 331 *e*P **P 15 24 23.7 -0.9**
TCF pmax pmax
comp=Z,30nm,0.7s,mb5.2
TCF Toulx Ste Croi 91.45 331 *e*P **P 15 24 23.7 -0.9**
comp=Z,30nm,0.7s,mb5.2
Y24A Capitan 91.46 48 P **P 15 24 25.0 +0.1**
baz=91,SNR=6.4
VIVF Saint-Julien-l 91.53 328 *e*P **P 15 24 23.8 -1.2**
comp=Z,61nm,0.9s,mb5.2
VIVF Saint-Julien-l 91.53 328 *e*P **P 15 24 23.8 -1.2**
VIVF pmax pmax
comp=Z,30nm,0.9s,mb5.2
VIVF Saint-Julien-l 91.53 328 *e*P **P 15 24 23.8 -1.2**
comp=Z,30nm,0.9s,mb5.2
X25A Clemmons Ranch 91.54 47 ⇓P **P 15 24 25.9 +0.7**
baz=91
PYM Petit Puy Mans 91.55 330 *e*P **P 15 24 24.8 -0.2**
PYM Petit Puy Mans 91.55 330 *e*P **P 15 24 24.8 -0.2**
PYM Petit Puy Mans 91.55 330 *e*P **P 15 24 24.8 -0.2**
FRF La Foret Royal 91.63 326 *e*P **P 15 24 23.5 -2.0**
comp=Z,47nm,1.0s,mb5.1
FRF La Foret Royal 91.63 326 *e*P **P 15 24 23.5 -2.0**
FRF pmax pmax
comp=Z,24nm,1.0s,mb5.1
FRF La Foret Royal 91.63 326 *e*P **P 15 24 23.5 -2.0**
comp=Z,24nm,1.0s,mb5.1
SGMF Saint Gilles 91.70 334 *e*P **P 15 24 24.9 -0.8**
comp=Z,123nm,0.8s,mb5.6
SGMF Saint Gilles 91.70 334 *e*P **P 15 24 24.9 -0.8**
SGMF pmax pmax
comp=Z,62nm,0.8s,mb5.6
SGMF Saint Gilles 91.70 334 *e*P **P 15 24 24.9 -0.8**
comp=Z,62nm,0.8s,mb5.6
SMRF Simiane la Rot 91.81 327 *e*P **P 15 24 24.5 -1.8**
LMR La Mourre 91.87 326 *e*P **P 15 24 24.8 -1.8**
ROSF Rostrenen 91.89 335 *e*P **P 15 24 25.9 -0.6**
comp=Z,132nm,0.9s,mb5.6
ROSF Rostrenen 91.89 335 *e*P **P 15 24 25.9 -0.6**
ROSF pmax pmax
comp=Z,66nm,0.9s,mb5.6
ROSF Rostrenen 91.89 335 *e*P **P 15 24 25.9 -0.6**
comp=Z,66nm,0.9s,mb5.6
Z24A Sheeppen Canyo 91.90 48 ⇓P **P 15 24 27.4 +0.4**
baz=92,SNR=7.1
Y25A Mesa, Roswell 91.92 47 ⇑P **P 15 24 26.8 -0.2**
baz=92,SNR=7.9
X26A CR and CF Fran 92.05 46 P **P 15 24 28.0 +0.4**
baz=92,SNR=14
MFF Saint Martin d 92.15 332 *e*P **P 15 24 27.2 -0.6**
comp=Z,109nm,0.8s,mb5.5
MFF Saint Martin d 92.15 332 *e*P **P 15 24 27.2 -0.6**
MFF pmax pmax
comp=Z,55nm,0.8s,mb5.5
MFF Saint Martin d 92.15 332 *e*P **P 15 24 27.2 -0.6**
comp=Z,54nm,0.8s,mb5.5
QUIF Quistinic 92.21 334 *e*P **P 15 24 27.0 -1.0**
comp=Z,42nm,0.8s,mb5.1
QUIF Quistinic 92.21 334 *e*P **P 15 24 27.0 -1.0**
QUIF pmax pmax
comp=Z,21nm,0.8s,mb5.1
QUIF Quistinic 92.21 334 *e*P **P 15 24 27.0 -1.0**
comp=Z,21nm,0.8s,mb5.1
124A Stringfield Ra 92.26 48 P **P 15 24 29.0 +0.4**
baz=92,SNR=16
Z25A Roswell 92.34 48 P **P 15 24 29.5 +0.6**
baz=92,SNR=15
X27A F and S Farms, 92.41 46 ⇓P **P 15 24 29.9 +0.7**
baz=92
Y26A Elida 92.46 47 ⇑P **P 15 24 30.2 +0.7**
baz=92
LASF Ste Croix 92.50 328 *e*P **P 15 24 28.5 -1.0**
comp=Z,45nm,0.8s,mb5.1
RJF Les Rejaudoux 92.53 330 *e*P **P 15 24 28.9 -0.7**
comp=Z,97nm,0.8s,mb5.5
RJF Les Rejaudoux 92.53 330 *e*P **P 15 24 28.9 -0.7**
RJF *e*MLR MLR
comp=Z,109nm,20.0s
RJF Les Rejaudoux 92.53 330 *e*P **P 15 24 28.9 -0.7**
RJF pmax pmax
comp=Z,49nm,0.8s,mb5.5
RJF MLR MLR
comp=Z,110nm,20.0s
RJF Les Rejaudoux 92.53 330 *e*P **P 15 24 28.9 -0.7**
comp=Z,49nm,0.8s,mb5.5
RJF LR LR
comp=Z,110nm,20.0s
CAF Calviac 92.61 330 *e*P **P 15 24 29.5 -0.4**
comp=Z,56nm,0.8s,mb5.3
CAF Calviac 92.61 330 *e*P **P 15 24 29.5 -0.4**
CAF pmax pmax
comp=Z,28nm,0.8s,mb5.2
CAF Calviac 92.61 330 *e*P **P 15 24 29.5 -0.4**
comp=Z,28nm,0.8s,mb5.2
224A Cornudas Mount 92.63 49 P **P 15 24 30.7 +0.4**
baz=92,SNR=18
125A Gardner Draw, 92.79 48 ⇑P **P 15 24 31.1 +0.1**
baz=93,SNR=12
Z26A Caprock 92.80 47 P **P 15 24 31.1 0.0**
baz=93,SNR=17
Y27A Causey 92.89 46 P **P 15 24 31.5 0.0**
baz=93,SNR=6.4
KSU1 Kansas State U 92.95 39 *e*P **P 15 24 30.7 -0.9**
comp=Z,15nm,0.6s,mb5.1
MNTX Cornudas Mount 92.97 49 P **P 15 24 31.8 0.0**
baz=93,SNR=14
MNTX Cornudas Mount 92.97 49 *e*P **P 15 24 31.4 -0.5**
comp=Z,5.9nm,0.8s,mb4.6
225A Deer Hill, Car 93.05 49 ⇓P **P 15 24 32.6 +0.4**
baz=93
MSTX Muleshoe 93.07 46 ⇓P **P 15 24 31.7 -0.6**
baz=93
324A Moseley Ranch, 93.07 49 P **P 15 24 32.4 0.0**
baz=93,SNR=6.7
AMTX Amarillo 93.10 45 ⇓P **P 15 24 32.6 +0.2**
baz=93
AMTX Amarillo 93.10 45 *e*P **P 15 24 32.3 -0.1**
comp=Z,35nm,0.7s,mb5.4
LFF La Frestale 93.15 331 *e*P **P 15 24 31.9 -0.5**
comp=Z,124nm,0.7s,mb5.6
LFF La Frestale 93.15 331 *e*P **P 15 24 31.9 -0.5**
LFF pmax pmax
comp=Z,62nm,0.7s,mb5.7
LFF La Frestale 93.15 331 *e*P **P 15 24 31.9 -0.5**
comp=Z,62nm,0.7s,mb5.7
126A Clayton Basin, 93.20 48 ⇓P **P 15 24 32.7 -0.2**
baz=93
Z27A Tatum 93.24 47 ⇑P **P 15 24 33.1 0.0**
baz=93
GDL2 Guadalupe Moun 93.28 48 *e*P **P 15 24 33.3 0.0**
325A Bean Ranch, Si 93.45 49 P **P 15 24 34.2 +0.1**
baz=93,SNR=10
226A Malaga, Loving 93.54 48 ⇑P **P 15 24 34.5 0.0**
baz=93
MTLF Montolieu 93.81 329 *e*P **P 15 24 34.5 -1.0**
comp=Z,13nm,0.9s,mb4.7
MTLF Montolieu 93.81 329 *e*P **P 15 24 34.5 -1.0**
MTLF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MTLF Montolieu 93.81 329 *e*P **P 15 24 34.5 -1.0**
comp=Z,6.3nm,0.9s,mb4.7
425A Indio Mountain 93.83 50 ⇓P **P 15 24 36.0 +0.2**
baz=94,SNR=12
227A Bennet, Jal 94.08 48 ⇑P **P 15 24 36.6 -0.3**
baz=94
326A Caldwell Ranch 94.11 49 ⇓P **P 15 24 37.0 -0.1**
baz=94
426A McDonald Obser 94.52 49 ⇓P **P 15 24 38.8 -0.1**
baz=94
427A Hayter Ranch, 94.79 49 ⇓P **P 15 24 40.1 -0.1**
baz=95
328A Wristen Ranch, 94.81 48 ⇓P **P 15 24 40.1 -0.2**
baz=95
EPF Esparros 94.87 330 *e*P **P 15 24 38.6 -1.7**
526A Mary Lane Ranc 94.89 50 P **P 15 24 41.1 +0.5**
baz=95,SNR=7.1
WMOK Wichita Mounta 94.90 43 *e*P **P 15 24 40.0 -0.6**
WMOK pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
WMOK Wichita Mounta 94.90 43 *e*P **P 15 24 40.0 -0.6**
comp=Z,4.7nm,0.7s,mb4.6
527A Woodward Ranch 95.14 49 ⇑P **P 15 24 41.6 -0.1**
baz=95
626A Big Bend Ranch 95.20 50 ⇑P **P 15 24 42.0 -0.1**
baz=95
428A Kincaid Ranch, 95.33 48 ⇓P **P 15 24 42.9 +0.3**
baz=95
ETSF Etsaut 95.36 330 *e*P **P 15 24 42.1 -0.4**
comp=Z,11nm,0.7s,mb4.7
ETSF Etsaut 95.36 330 *e*P **P 15 24 42.1 -0.4**
ETSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ETSF Etsaut 95.36 330 *e*P **P 15 24 42.1 -0.4**
comp=Z,5.6nm,0.7s,mb4.7
SJPF Ste Jean 95.46 331 *e*P **P 15 24 40.7 -2.3**
TXAR Lajitas Array 95.64 50 P **P 15 24 44.2 +0.2**
comp=Z,10nm,0.6s,mb5.1,baz=292,slow=2.8,SNR=100
TXAR pP pP 15 26 15.7 -3.1
comp=Z,3.9nm,1.0s,baz=270,slow=2.5,SNR=5.2
TXAR PP PP 15 28 37.2 -4.0
comp=Z,3.1nm,1.0s,baz=293,slow=4.6,SNR=3.0
TXAR Lajitas Array 95.64 50 P **P 15 24 44.3 +0.2**
TXAR *PP pP 15 26 15.7 -3.1
TXAR 15 28 37.2
TXAR pmax pmax
comp=Z,10.0nm,0.6s
TXAR Lajitas Array 95.64 50 P **P 15 24 44.2 +0.2**
TXAR pP pP 15 26 15.7 -3.1
TXAR PP PP 15 28 37.2 -4.0
528A Cox Ranch, San 95.65 49 ⇓P **P 15 24 44.4 +0.3**
baz=96
627A Terlingua Ranc 95.74 50 ⇓P **P 15 24 44.8 +0.2**
baz=96
628A Black Gap, Mar 96.04 49 ⇓P **P 15 24 45.5 -0.4**
baz=96
KEST Kesra 96.16 320 P **P 15 24 45.9 -0.4**
comp=Z,2.9nm,0.6s,mb4.6,baz=308,slow=3.1,SNR=7.6
KEST PP PP 15 28 45.7 +0.8
comp=Z,1.3nm,0.5s,baz=4.5,slow=4.3,SNR=5.1
JCT Junction City 97.30 47 ⇑P **P 15 24 51.5 0.0**
baz=97
KMBO Kilima Mbogo 98.86 274 P Pdif 15 24 58.1 -0.1
comp=Z,4.2nm,0.9s,baz=179,slow=24,SNR=9.6
KMBO PP PP 15 29 05.2 -1.4
comp=Z,3.1nm,0.9s,baz=1.0,slow=24,SNR=5.2
KMBO Kilima Mbogo 98.86 274 P Pdif 15 24 58.2 0.0
KMBO 15 29 05.2
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO pmax pmax
comp=Z,3.0nm,0.9s
KMBO Kilima Mbogo 98.86 274 *e*Pdif Pdif 15 24 58.2 0.0
comp=Z,3.5nm,0.7s
KMBO *e*PP PP 15 29 05.4 -1.2
ESDC Sonseca Array 99.46 331 P Pdif 15 25 00.2 -0.6
comp=Z,11nm,1.2s,baz=17,slow=4.7,SNR=5.6
OPO Ambohidratompo 99.68 254 P Pdif 15 25 01.8 -0.1
comp=Z,4.3nm,1.0s,baz=333,slow=5.5,SNR=4.0
MAW Mawson 114.09 204 PKP PKiKP 15 29 54.1 +0.1
comp=Z,5.1nm,0.8s,baz=54,slow=0.9,SNR=15
MAW PP PP 15 30 54.2 -2.3
comp=Z,3.5nm,1.1s,baz=42,slow=11,SNR=3.5
MAW Mawson 114.09 204 *e*P PKiKP 15 29 53.9 -0.1
comp=Z,4.3nm,0.8s
MAW Mawson 114.09 204 PKIKP PKiKP 15 29 54.1 +0.1
MAW 15 30 54.2
MAW pmax pmax
comp=Z,5.0nm,0.8s
MAW pmax pmax
comp=Z,4.0nm,1.1s
TORD Torodi Ar. Bea 117.59 309 PKP PKPdf 15 30 01.1 -1.3
comp=Z,8.3nm,0.6s,baz=28,slow=1.3,SNR=82
LBTB Lobatse 120.39 258 *e*PKIKP PKPdf 15 30 07.6 +0.2
BOSA Boshof 122.09 254 PKP PKPdf 15 30 10.4 -0.1
comp=Z,14nm,0.7s,baz=79,slow=2.9,SNR=25
BOSA PP PP 15 31 52.2 -0.1
comp=Z,5.9nm,0.8s,baz=88,slow=12,SNR=3.1
BOSA Boshof 122.09 254 PKIKP PKPdf 15 30 10.5 -0.1
BOSA 15 31 52.2
BOSA pmax pmax
comp=Z,14nm,0.7s
BOSA pmax pmax
comp=Z,6.0nm,0.8s
QSPA South Pole Qui 122.42 180 *e*PKPdf PKPdf 15 30 09.0 -0.7
SYO Syowa Base 122.72 205⇓ *e*P PKPdf 15 30 08.7 -1.8
SYO Syowa Base 122.72 205⇓ *e*P PKPdf 15 30 14.6 +4.1
TSUM Tsumeb 124.59 268 *e*PKPdf PKPdf 15 30 15.8 +0.2
SJG San Juan 124.84 27 PKP PKPdf 15 30 14.2 -2.0
comp=Z,7.3nm,0.3s,baz=338,slow=16,SNR=4.1
SJG San Juan 124.84 27 PKIKP PKPdf 15 30 14.2 -2.0
SJG pmax pmax
comp=Z,7.0nm,0.3s
DBIC Dimbokro 126.68 310 PKP PKPdf 15 30 18.9 -0.9
comp=Z,22nm,0.7s,baz=39,slow=2.1,SNR=25
DBIC PP PP 15 32 17.5 -4.4
comp=Z,7.3nm,0.8s,baz=0.2,slow=1.9,SNR=3.3
DBIC Dimbokro 126.68 310 *e*PKPdf PKPdf 15 30 19.0 -0.8
TIC Toumodi 126.81 310 *e*PKIKP PKPdf 15 30 19.5 -0.6
comp=Z,18nm,0.4s
KIC Kosan Boka 126.84 310 *e*PKIKP PKPdf 15 30 19.6 -0.6
comp=Z,88nm,1.0s
LIC Lamto 127.13 310 *e*PKIKP PKPdf 15 30 20.2 -0.5
comp=Z,100nm,1.0s
LIC Lamto 127.13 310 *e*PKIKP PKPdf 15 30 19.9 -0.8
comp=Z,68nm,0.9s
ROSC El Rosal 132.25 45 *e*PKPdf PKPdf 15 30 31.2 +0.8
PCRV Puerto La Cruz 132.63 30 PKP PKPdf 15 30 27.9 -3.2
comp=Z,4.8nm,0.5s,baz=266,slow=1.5,SNR=3.5
LPAZ La Paz 151.98 60 PKP PKPdf 15 31 05.9 +1.2
comp=Z,2.5nm,0.8s,baz=342,slow=4.0,SNR=5.5
LPAZ PKPbc PKPbc 15 31 12.4 +0.8
comp=Z,11nm,0.8s,baz=346,slow=5.1,SNR=30
LPAZ pPKPbc pPKPbc 15 32 51.3 +0.3
comp=Z,7.2nm,0.9s,baz=11,slow=3.2,SNR=3.8
LPAZ La Paz 151.98 60 *e*PKPdf PKPdf 15 31 05.5 +0.9
LPAZ *e*PKPbc PKPbc 15 31 12.2 +0.6
RCBR Riachuelo 152.50 345 *e*PKPdf PKPdf 15 31 05.1 -0.5
RCBR *i* PKPbc PKPbc 15 31 12.7 -0.1
RCBR *e*PKPab PKPab 15 31 24.0 -0.9
PLCA Paso Flores 156.52 118 PKP PKPdf 15 31 09.7 -0.6
comp=Z,1.0nm,0.7s,baz=287,slow=2.2,SNR=3.2
PLCA PKPab PKPab 15 31 41.1 -0.5
comp=Z,2.2nm,0.8s,baz=191,slow=5.2,SNR=4.2
SIV San Ignacio 156.64 49 PKP PKPdf 15 31 10.1 -1.0
comp=Z,2.9nm,0.8s,baz=87,slow=1.3,SNR=11
SIV PKPab PKPab 15 31 41.5 -1.2
comp=Z,3.8nm,0.6s,baz=296,slow=4.9,SNR=7.7
BDFB Brasilia 162.43 16 PKP PKPdf 15 31 17.2 -0.5
comp=Z,7.1nm,0.8s,baz=26,slow=1.9,SNR=5.9
BDFB Brasilia 162.43 16 PKIKP PKPdf 15 31 17.2 -0.5
BDFB pmax pmax
comp=Z,7.0nm,0.8s

KRSC 05 15:16:54.3±0.7, 54.75N×162.49E, h27km±17km, ML3.7,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.48**	**247**	*e*P	Pb	15 17 04.8	+0.5
MKZ				*e*S	Sb	15 17 11.9	+0.9
KBTR	**Krutoberegovo**	**1.47**	**7**	*e*P	Pn	15 17 19.6	+0.6
KBTR				*e*S	Sn	15 17 37.8	+0.4
KII	**Karymskiy**	**1.92**	**249**	*e*P	Pn	15 17 26.1	+1.0
KII				*e*S	Sn	15 17 49.8	+1.5
BKI	**Bering**	**2.06**	**76**	S	Sn	15 17 54.4	+2.6
SPN	**Mys Shipunski**	**2.21**	**222**	*e*P	Pn	15 17 29.5	+0.4
SPN				*e*S	Sn	15 17 54.9	-0.5
NLC	**Nalytchevo**	**2.44**	**231**	*e*P	Pn	15 17 33.6	+1.3
NLC				*e*S	Sn	15 18 02.8	+1.6
AVH	**Avacha**	**2.67**	**238**	*e*P	Pn	15 17 37.8	+2.4
PET	**Petropavlovsk**	**2.85**	**234**	*e*P	Pn	15 17 39.5	+1.5
PET				*e*S	Sn	15 18 13.3	+1.9
GNL	**Ganaly**	**2.87**	**250**	*e*P	Pn	15 17 40.3	+2.1

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*ISK **05** 15:26:12.0, 37.55N×35.02E, h4km, MD2.7*
*ISCJB **05** 15:26:13.9±0.8, 37.51N±0.05×35.06E±0.05, h3km±9km,*
Error ellipse: s-maj=8.1km s-min=6.1km az=150.9
*DDA **05** 15:26:13.6, 37.51N×35.08E, h7km±4km, Md2.8*
*CSEM **05** 15:26:13.6±0.2, 37.52N×35.05E, h8km, MD2.7, Error*
ellipse: s-maj=5.6km s-min=4.9km az=5.0
ISC 05 15:26:14.5±0.7, 37.48N±0.06×35.08E±0.05, h13km±10km,
n18, σ0.74/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.22**	**184**	*e*PG	**Pg**	**15 26 18.4**	**-0.8**
KARA				*e*SG	**Sg**	**15 26 22.9**	**+0.4**
KARA	**Karaisali**	**0.22**	**184**	*e*Pg	**Pg**	**15 26 18.4**	**-0.8**
KARA				*e*Sg	**Sg**	**15 26 22.9**	**+0.5**
GULE	**Gulek**	**0.31**	**231**	*i* P	**Pg**	**15 26 19.9**	**-0.9**
GULE				*i* S	**Sg**	**15 26 25.9**	**+0.9**
GULE	**Gulek**	**0.31**	**231**	*i* P	**Pg**	**15 26 19.9**	**-0.9**
GULE				*i* S	**Sg**	**15 26 25.9**	**+0.9**
KOZT	**Kozan**	**0.60**	**90**	*e*PG	**Pg**	**15 26 24.8**	**-1.3**
KOZT				*e*SG	**Sg**	**15 26 34.9**	**+0.8**
KOZT	**Kozan**	**0.60**	**90**	*e*Pg	**Pg**	**15 26 24.8**	**-1.3**
KOZT				*e*Sg	**Sg**	**15 26 34.9**	**+0.8**
CEYT	**Ceyhan**	**0.71**	**131**	*e*PG	**Pg**	**15 26 28.1**	**-0.2**
CEYT	**Ceyhan**	**0.71**	**131**	*e*Pg	**Pg**	**15 26 28.1**	**-0.2**
YURE	**YUREGIR**	**0.79**	**146**	*i* P	**Pg**	**15 26 30.2**	**+0.4**
YURE				*i* S	**Sg**	**15 26 44.5**	**+4.4**
YURE	**YUREGIR**	**0.79**	**146**	*i* P	**Pg**	**15 26 30.2**	**+0.4**
YURE				*i* S	**Sg**	**15 26 44.5**	**+4.4**
AVNT	**Avonos**	**1.31**	**352**	*i* P	**Pn**	**15 26 38.2**	**-0.2**
AVNT				*i* S	**Sb**	**15 26 56.4**	**+0.8**
AVNT	**Avonos**	**1.31**	**352**	*i* P	**Pn**	**15 26 38.2**	**-0.3**
AVNT				*i* S	**Sb**	**15 26 56.4**	**+0.8**
IKL	**Isikli**	**1.67**	**222**	*e*PN	**Pn**	**15 26 43.8**	**+0.4**
IKL	**Isikli**	**1.67**	**222**	*e*Pn	**Pn**	**15 26 43.8**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.75**	**46**	*e*PN	**Pn**	**15 26 38.5**	**-6.1**
SARI	**SarD1z-Kayseri**	**1.75**	**46**	*e*Pn	**Pn**	**15 26 38.5**	**-6.1**
HDMB	**Hadim**	**2.13**	**257**	*e*PN	**Pn**	**15 26 49.2**	**-0.6**
HDMB	**Hadim**	**2.13**	**257**	*e*Pn	**Pn**	**15 26 49.2**	**-0.6**

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*IDC **05** 15:30:30.8±0.6, 2.93N×75.93W, h0km, mb4.0/9,*
mb1 4.4/12, mb1mx4.2/21, mbtmp4.1/12, ML3.9/2, MS3.8/4,
Ms1 3.8/4, ms1mx3.2/29, Error ellipse: s-maj=26.9km
s-min=16.3km az=84.0
*NEIC **05** 15:30:34.3±2.2, 2.92N×75.90W, h26km±15km, mb4.4/23,*
Error ellipse: s-maj=8.9km s-min=7.7km az=85.0
ISC 05 15:30:34.7±2.5, 2.89N±0.06×75.86W±0.07, h30km±19km,
n57, σ0.92/46, mb4.3/31, MS3.7/4, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.48**	**38**	Pn	**Pn**	**15 31 13.4**	**+0.3**
ROSC				Sn	**Sn**	**15 31 50.5**	**+8.0**
ROSC	**El Rosal**	**2.48**	**38**	*e*Pn	**Pn**	**15 31 14.5**	**+1.3**
ROSC				Sn	**Sn**	**15 31 50.5**	**+8.1**
OTAV	**Otavalo**	**3.69**	**224**	*e*Pn	**Pn**	**15 31 30.9**	**+1.1**
BCIP	**Isla Barro Col**	**7.38**	**328**	*e*Pn	**Pn**	**15 32 20.1**	**-0.4**
	35nm,0.9s						
SDV	**Santo Domingo**	**7.91**	**41**	Pn	**Pn**	**15 32 27.4**	**-0.4**
SDV				*e*Sn	**Sn**	**15 34 02.1**	**+5.8**
ATAH	**Atahualpa**	**10.28**	**194**	Pn	**Pn**	**15 32 59.5**	**-0.8**
	1.2nm,0.3s,baz=15,slow=5.9,SNR=16						
PCRV	**Puerto La Cruz**	**13.29**	**56**	Pn	**Pn**	**15 33 40.2**	**-1.4**
	0.5nm,0.3s,baz=36,slow=14,SNR=2.5						
SDDR	**Presa de Saban**	**16.61**	**15**	P	**Pn**	**15 34 29.6**	**+4.1**
	21nm,0.8s						
SJG	**San Juan**	**17.87**	**32**	P	**Pn**	**15 34 44.1**	**+2.8**
	8.7nm,0.3s,baz=318,slow=18,SNR=5.9						
SJG	**San Juan**	**17.87**	**32**	Pn	**Pn**	**15 34 43.8**	**+2.5**
STVI	**Saint Thomas**	**18.72**	**34**	*e*P	**Pn**	**15 34 52.0**	**+0.4**
	23nm,1.0s						
LPAZ	**La Paz**	**20.53**	**158**	LR	LR	15 43 34.2	
	comp=Z,327nm,20.4s,MS3.7,baz=336,slow=38						
CMIG	**Matias Romero**	**23.41**	**308**	LR	LR	15 44 52.5	
	comp=Z,115nm,21.5s,MS3.3,baz=320,slow=37						
SIV	**San Ignacio**	**23.79**	**143**	P	**P**	**15 35 43.2**	**-1.9**
	5.6nm,1.0s,mb4.0,baz=332,slow=12,SNR=4.3						
BDFB	**Brasilia**	**33.14**	**125**	LR	LR	15 51 20.8	
	comp=Z,259nm,19.6s,MS4.0,baz=297,slow=38						
CFAA	**Coronel Fontan**	**35.06**	**169**	P	**P**	**15 37 26.1**	**+1.0**
	0.3nm,0.5s,mb3.5,baz=352,slow=6.9,SNR=4.7						
TXAR	**Lajitas Array**	**37.27**	**318**	P	**P**	**15 37 44.4**	**+0.3**
	2.3nm,0.9s,mb4.0,baz=141,slow=8.1,SNR=17						
TXAR				PcP	PcP	15 40 03.5	+0.1
	0.6nm,0.8s,baz=134,slow=5.4,SNR=4.5						
CCM	**Cathedral Cave**	**37.73**	**340**	*e*P	**P**	**15 37 46.1**	**-1.7**
	18nm,1.3s,mb4.6						
MNTX	**Cornudas Mount**	**39.91**	**319**	*e*P	**P**	**15 38 05.7**	**-0.6**
	16nm,1.2s,mb4.6						
LBNH	**Lisbon**	**41.32**	**4**	P	**P**	**15 38 17.1**	**-0.6**
	13nm,1.0s,mb4.5						
LONY	**Lake Ozonia**	**41.57**	**1**	*e*P	**P**	**15 38 20.4**	**+0.7**
	18nm,1.0s,mb4.7						
ANMO	**Albuquerque**	**42.71**	**322**	*e*P	**P**	**15 38 29.8**	**+0.6**
	6.8nm,1.0s,mb4.3						
PLCA	**Paso Flores**	**43.69**	**174**	P	**P**	**15 38 37.5**	**+0.6**
	2.2nm,0.9s,mb3.9,baz=359,slow=12,SNR=3.5						
PLCA				LR	LR	15 56 03.7	
	comp=Z,116nm,19.4s,MS3.8,baz=295,slow=35						
TUC	**Tucson**	**43.94**	**316**	*e*P	**P**	**15 38 39.5**	**+0.3**
	13nm,1.4s,mb4.5						
SDCO	**Great Sand Dun**	**44.05**	**326**	*e*P	**P**	**15 38 40.0**	**0.0**
	4.2nm,1.0s,mb4.1						
WUAZ	**Wupatki**	**46.19**	**319**	*e*P	**P**	**15 38 57.5**	**+0.4**
	6.1nm,0.8s,mb4.6						
EYMN	**Ely**	**46.86**	**346**	*e*P	**P**	**15 39 00.3**	**-1.8**
	3.5nm,0.6s,mb4.5						
RSSD	**Black Hills**	**48.02**	**333**	*e*P	**P**	**15 39 11.6**	**+0.4**
	4.9nm,0.8s,mb4.6						
MSU	**Marysvale**	**48.51**	**322**	*e*P	**P**	**15 39 15.5**	**+0.5**

3.1nm,1.0s,mb4.3
DAU Daniels Canyon 49.15 324 *e*P **P 15 39 20.3 +0.3**
3.5nm,0.8s,mb4.4
PDAR Pinedale Array 49.77 328 P **P 15 39 24.8 +0.2**
0.7nm,0.7s,mb3.8,baz=146,slow=9.0,SNR=6.8
HWUT Hardware Ranch 50.10 325 *e*P **P 15 39 25.3 -1.9**
2.6nm,0.9s,mb4.3
LOHW Long Hollow 50.91 328 *e*P **P 15 39 32.8 -0.4**
4.3nm,1.0s,mb4.3
MOOW Moose Ponds 51.08 328 *e*P **P 15 39 34.0 -0.4**
3.1nm,0.9s,mb4.2
IMW Indian Meadow 51.28 328 *e*P **P 15 39 35.8 -0.2**
3.3nm,0.8s,mb4.3
GCMT Greycliff 51.94 330 *e*P **P 15 39 41.4 +0.4**
2.5nm,0.7s,mb4.2
SCHQ Schefferville 52.30 7 P **P 15 39 44.5 +1.1**
11nm,0.8s,mb4.8,baz=206,slow=7.1,SNR=5.3
NVAR Mina Array Bea 52.42 318 P **P 15 39 45.1 +0.5**
2.6nm,0.8s,mb4.2,baz=129,slow=6.7,SNR=16
NVAR PcP PcP 15 40 57.5 +2.3
0.9nm,0.8s,baz=120,slow=5.3,SNR=2.9
MCMT McKenzie Canyo 52.92 328 *e*P **P 15 39 48.7 +0.5**
2.1nm,1.2s,mb3.9
HLID Hailey 52.97 325 *e*P **P 15 39 48.6 0.0**
3.2nm,1.0s,mb4.2
WVOR Wild Horse Val 54.80 322 *e*P **P 15 40 02.0 0.0**
11nm,1.2s,mb4.8
YKA Yellowknife Ar 66.04 341 P **P 15 41 16.9 -1.5**
1.1nm,0.7s,mb4.0,baz=133,slow=6.8,SNR=7.2
EGAK Eagle 77.05 336 *e*P **P 15 42 24.8 +0.1**
5.8nm,1.1s,mb4.4
ILAR Eielson Array 79.37 336 P **P 15 42 37.4 -0.2**
0.3nm,0.5s,mb3.4,baz=102,slow=4.4,SNR=6.1
NB2 NORSAR Subarra 86.07 29 P **P 15 43 13.8 +1.3**
comp=Z,1.6nm,0.8s,mb4.3,baz=267,slow=5.1
NOA NORSAR Array B 86.07 29 P **P 15 43 14.2 +1.7**
comp=Z,2.6nm,0.8s,mb4.5,baz=270,slow=4.9,SNR=6.5
ZALV Zalesovo Beam 121.11 13 PKP PKPdf 15 49 25.2 +0.6
comp=Z,0.4nm,0.4s,baz=242,slow=3.2,SNR=3.9
ZALV Zalesovo Beam 121.11 13 PKP PKPdf 15 49 25.2 +0.6
MKAR Makanchi Array 126.91 19 PKP PKPdf 15 49 35.8 -0.2
comp=Z,0.6nm,0.7s,baz=0.0,slow=1.3,SNR=6.7
SONM Songino Array 129.45 358 PKP PKPdf 15 49 42.2 +1.4
comp=Z,0.9nm,0.7s,baz=335,slow=2.0,SNR=6.7
KSRS Korea Array 134.18 333 PKP PKPdf 15 49 51.9 +1.8
comp=Z,0.6nm,0.5s,baz=24,slow=2.0,SNR=5.9
STKA Stephens Creek 134.49 226 PKP PKPdf 15 49 53.3 +2.6
comp=Z,1.2nm,0.7s,baz=110,slow=0.5,SNR=3.3
ASAR Alice Springs 144.58 232 PKP PKPdf 15 50 08.1 -1.2
comp=Z,9.7nm,0.8s,baz=121,slow=3.6,SNR=76
WB2 Warramunga Arr 145.99 238 *e*PKPdf PKPdf 15 50 12.4 +0.6
WRA Warramunga Arr 146.00 238 PKPbc PKPbc 15 50 12.7 +0.1
comp=Z,9.1nm,1.0s,baz=116,slow=3.4,SNR=43
ENH Enshi 146.63 352 *e*PKPdf PKPdf 15 50 13.8 +1.1
CMAR Chiang Mai Arr 158.18 13 PKP PKPdf 15 50 30.6 +0.6
comp=Z,0.4nm,0.6s,baz=320,slow=1.8,SNR=4.9

BJI ***05*** *15:32:06.2,34.°68N×81.°94E,h20km,ML3.7/5*
IDC 05 15:32:14.7±4.1,35.°50N×80.°99E,h0km,mb3.4/2,
mb1 3.6/4,mb1mx3.3/23,mbtmp3.5/4,ML3.5/2,Error
ellipse: s-maj=68.5km s-min=44.8km az=53.0,
Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.66**	**317**	Pn	Pn	15 33 47.5	+7.5
KSH				Sn	Sg	15 35 13.1	-3.3
KSH				smax			
	comp=N,38nm,0.6s						
KSH				smax			
	comp=E,130nm,1.4s						
AAK	**Ala-Archa**	**8.73**	**327**	Pg	Pg	15 34 51.8	-10
	comp=E,0.0nm,0.3s,baz=190,slow=8.0,SNR=2.1						
AAK				Lg		15 36 39.8	
	comp=E,0.0nm,0.3s,baz=247,slow=7.7,SNR=2.7						
MKAR	**Makanchi Array**	**11.33**	**5**	Pn	Pn	15 34 58.7	+1.0
	comp=E,0.2nm,0.3s,baz=181,slow=13,SNR=12						
MKAR				Sn	Sn	15 37 03.5	-1.5
	comp=E,0.2nm,0.3s,baz=188,slow=22,SNR=3.6						
ZALV	**Zalesovo Beam**	**18.64**	**7**	P	Pn	15 36 33.0	-1.1
	comp=E,0.2nm,0.3s,baz=194,slow=10,SNR=3.0						
SONM	**Songino Array**	**22.52**	**49**	P	P	15 37 16.0	+0.2
	comp=E,0.9nm,1.0s,baz=251,slow=9.0,SNR=5.5						
ILAR	**Eielson Array**	**73.28**	**19**	P	P	15 43 47.7	+0.2
	comp=E,0.1nm,0.4s,baz=316,slow=4.9,SNR=4.9						

IDC ***05*** *15:35:42.9±7.1,17.°10S×173.°77W,h162km±148km,*
mb3.8/5,mb1 3.9/6,mb1mx3.5/20,mbtmp3.8/6,ML2.1/1,
Error ellipse: s-maj=142.3km s-min=36.0km az=75.0
ISCJB ***05*** *15:35:43.5±1.6,17.°0S±0.°2×173.°8W±0.°2,h189km±21km,*
mb4.0/5,Error ellipse: s-maj=39.5km s-min=19.6km
az=144.4
NEIC ***05*** *15:35:44.1±1.3,17.°13S×173.°76W,h177km±16km,Error*
ellipse: s-maj=28.2km s-min=15.3km az=153.0
ISC 05 15:35:43.9±1.7,17.°1S±0.°2×173.°7W±0.°2,h178km±22km,n9,
σ0.58/11,mb4.0/5,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.66**	**31**	P	**Pn**	**15 36 41.8**	**+1.2**
	8.5nm,0.3s,baz=50,slow=23,SNR=11						
AFI				S	**Sn**	**15 37 23.6**	**-1.3**
	12nm,0.3s,baz=51,slow=8.5,SNR=3.8						
AFI	**Afiamalu**	**3.66**	**31**	*e*Pn	**Pn**	**15 36 41.9**	**+1.2**
AFI				*e*Sn	**Sn**	**15 37 24.5**	**-0.4**
MSVF	**Nonsavu**	**7.88**	**264**	*e*Pn	**Pn**	**15 37 35.5**	**-0.1**
URZ	**Urewera**	**22.60**	**199**	P	**P**	**15 40 28.9**	**-0.4**
	5.0nm,0.5s,mb4.2,baz=258,slow=5.8,SNR=4.8						
CTA	**Charters Tower**	**37.99**	**259**	P	**P**	**15 42 44.4**	**-0.5**
	3.1nm,1.0s,mb3.9,baz=76,slow=12,SNR=5.5						
STKA	**Stephens Creek**	**42.95**	**241**	P	**P**	**15 43 25.6**	**+0.2**
	1.9nm,0.9s,mb3.7,baz=102,slow=13,SNR=4.6						
WB2	**Warramunga Arr**	**49.16**	**258**	*e*P	**P**	**15 44 14.0**	**-0.1**
WRA	**Warramunga Arr**	**49.18**	**258**	P	**P**	**15 44 14.4**	**+0.2**
	1.6nm,0.5s,mb3.9,baz=96,slow=7.0,SNR=49						
ASAR	**Alice Springs**	**49.31**	**253**	P	**P**	**15 44 15.7**	**+0.4**
	8.7nm,0.6s,mb4.6,baz=88,slow=8.6,SNR=232						

ISCJB ***05*** *15:49:11.6±0.5,37.°44N±0.°02×38.°59E±0.°02,h2km±4km,*
Error ellipse: s-maj=3.6km s-min=2.4km az=151.6
DDA ***05*** *15:49:11.8,37.°47N×38.°57E,h7km±4km,Md3.2*
CSEM ***05*** *15:49:12.3±0.1,37.°47N×38.°58E,h2km,MD3.2,Error*
ellipse: s-maj=3.9km s-min=3.0km az=118.0
ISK ***05*** *15:49:12.8,37.°51N×38.°47E,h9km,MD3.3*
NSSC ***05*** *15:49:14,37.°40N×38.°69E,h9km±3km*
ISC 05 15:49:12.2±0.5,37.°44N±0.°02×38.°60E±0.°02,h4km±4km,
n70,σ0.86/113,6D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.24**	**276**	*i*P	**Pg**	**15 49 16.0**	**-0.8**
ATAB				*i*S	**Sg**	**15 49 19.4**	**-0.7**
ATAB	**Bozova**	**0.24**	**276**	*i*P	**Pg**	**15 49 16.0**	**-0.9**
ATAB				*i*S	**Sg**	**15 49 19.4**	**-0.6**
GZT	**Gaziantep**	**0.83**	**264**	*i*P	**Pg**	**15 49 27.0**	**-1.1**
GZT				*i*S	**Sg**	**15 49 40.5**	**+1.8**
MALT	**Malatya**	**0.88**	**351**	PG	**Pg**	**15 49 28.3**	**-0.8**
MALT				SG	**Sg**	**15 49 40.7**	**+0.2**
MALT	**Malatya**	**0.88**	**351**	*i*Pg	**Pg**	**15 49 28.3**	**-0.8**
MALT				*i*Sg	**Sg**	**15 49 40.7**	**+0.2**
MYA	**Malataya**	**0.89**	**351**	PG	**Pg**	**15 49 28.6**	**-0.7**
MYA	**Malataya**	**0.89**	**351**	*i*Pg	**Pg**	**15 49 28.6**	**-0.7**
AKCD	**Akcadag**	**1.00**	**328**	*i*P	**Pg**	**15 49 30.8**	**-0.7**
AKCD				*i*S	**Sg**	**15 49 44.2**	**-0.3**
AKCD	**Akcadag**	**1.00**	**328**	*i*P	**Pg**	**15 49 30.8**	**-0.7**
AKCD				*i*S	**Sg**	**15 49 44.2**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.09**	**31**	*e*PN	**Pg**	**15 49 33.8**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.09**	**31**	*e*Pn	**Pg**	**15 49 33.8**	**+0.7**
ELZG	**Elazig**	**1.10**	**16**	*i*P	**Pg**	**15 49 33.6**	**+0.4**
ELZG				*i*S	**Sg**	**15 49 48.2**	**+0.7**
ELZG	**Elazig**	**1.10**	**16**	*i*P	**Pg**	**15 49 33.7**	**+0.4**
ELZG				*i*S	**Sg**	**15 49 48.2**	**+0.7**
GAZ	**Gaziantep**	**1.14**	**257**	*e*PG	**Pg**	**15 49 33.6**	**-0.4**
GAZ				*e*SG	**Sg**	**15 49 48.8**	**+0.1**
GAZ	**Gaziantep**	**1.14**	**257**	*e*Pg	**Pg**	**15 49 33.6**	**-0.4**
GAZ				*e*Sg	**Sg**	**15 49 48.8**	**+0.1**
DRBT	**Darb Altahta**	**1.14**	**121**	⇓P	**Pn**	**15 49 30.0**	**-4.8**
DRBT	**Darb Altahta**	**1.14**	**121**	⇓*i*P	**Pn**	**15 49 31.0**	**-3.8**
DIYA	**Diyarbakir**	**1.30**	**68**	*i*P	**Pn**	**15 49 37.5**	**+0.4**
DIYA				*i*S	**Sg**	**15 49 54.9**	**+0.8**
DIYA	**Diyarbakir**	**1.30**	**68**	*i*P	**Pn**	**15 49 37.5**	**+0.4**
DIYA				*i*S	**Sg**	**15 49 54.9**	**+0.9**
SLMH	**Al Salmeh**	**1.34**	**204**	⇓P	**Pn**	**15 49 38.0**	**+0.4**
SLMH				⇓S	**Sg**	**15 49 55.0**	**-0.2**
SLMH	**Al Salmeh**	**1.34**	**204**	⇓*i*P	**Pn**	**15 49 38.1**	**+0.5**
SLMH				⇓*i*S	**Sg**	**15 49 55.3**	**+0.1**
KMRS	**Kahramanmaras**	**1.35**	**273**	*e*PN	**Pn**	**15 49 36.3**	**-1.5**
KMRS				*e*SN	**Sn**	**15 49 54.2**	**-2.0**
KMRS	**Kahramanmaras**	**1.35**	**273**	*e*Pn	**Pn**	**15 49 36.3**	**-1.5**
KMRS				*e*Sn	**Sn**	**15 49 54.2**	**-1.9**
KUZU	**Kuzuini**	**1.39**	**242**	*i*P	**Pn**	**15 49 38.7**	**+0.4**
KUZU				*i*S	**Sb**	**15 49 57.2**	**+0.5**
KUZU	**Kuzuini**	**1.39**	**242**	*i*P	**Pn**	**15 49 38.7**	**+0.4**
KUZU				*i*S	**Sb**	**15 49 57.2**	**+0.5**
PTK	**Pertek**	**1.58**	**23**	*e*PN	**Pn**	**15 49 41.1**	**+0.2**
PTK	**Pertek**	**1.58**	**23**	*e*Pn	**Pn**	**15 49 41.1**	**+0.2**
SFNV	**Sufian**	**1.59**	**130**	⇑P	**Pn**	**15 49 41.0**	**-0.1**
SFNV				⇑S	**Sn**	**15 50 01.0**	**-1.0**
SFNV	**Sufian**	**1.59**	**130**	⇑*i*P	**Pn**	**15 49 41.8**	**+0.7**
SFNV				⇑*i*S	**Sn**	**15 50 01.0**	**-1.0**
MNKR	**ALMNKUR**	**1.59**	**160**	⇑P	**Pn**	**15 49 41.0**	**-0.1**
MNKR				⇑S	**Sn**	**15 50 00.0**	**-2.1**
MNKR	**ALMNKUR**	**1.59**	**160**	⇑*i*P	**Pn**	**15 49 41.8**	**+0.7**
MNKR				⇑*i*S	**Sn**	**15 50 01.0**	**-1.1**
KBSD	**Kabsdagh**	**1.62**	**105**	⇑P	**Pn**	**15 49 41.0**	**-0.4**
KBSD				⇑S	**Sn**	**15 50 00.0**	**-2.7**
KBSD	**Kabsdagh**	**1.62**	**105**	⇑*i*P	**Pn**	**15 49 41.4**	**0.0**
KBSD				⇑*i*S	**Sn**	**15 50 00.7**	**-2.0**
MARD	**Mardin**	**1.74**	**94**	*i*P	**Pn**	**15 49 42.5**	**-0.7**
MARD				*i*S	**Sn**	**15 50 06.2**	**+0.4**
DRWC	**Darouich**	**1.75**	**243**	⇑P	**Pb**	**15 49 45.0**	**+0.2**
DRWC	**Darouich**	**1.75**	**243**	⇑*i*P	**Pb**	**15 49 45.2**	**+0.4**
JHLN	**Al Jahlan**	**1.77**	**184**	⇑P	**Pb**	**15 49 45.0**	**-0.2**
JHLN				⇑S	**Sn**	**15 50 07.0**	**+0.5**
JHLN	**Al Jahlan**	**1.77**	**184**	⇑*i*P	**Pb**	**15 49 45.2**	**0.0**
JHLN				⇑*i*S	**Sn**	**15 50 07.1**	**+0.6**
ANDN	**Andirin**	**1.79**	**275**	*i*P	**Pn**	**15 49 42.3**	**-1.6**
ANDN				*i*S	**Sn**	**15 50 07.2**	**+0.1**
ANDN	**Andirin**	**1.79**	**275**	*i*P	**Pn**	**15 49 42.3**	**-1.6**
ANDN				*i*S	**Sn**	**15 50 07.2**	**+0.1**
KEMA	**Kemaliye**	**1.82**	**358**	*i*P	**Pn**	**15 49 44.4**	**+0.1**
KEMA				*i*S	**Sb**	**15 50 09.2**	**-0.1**
KEMA	**Kemaliye**	**1.82**	**358**	*i*P	**Pn**	**15 49 44.4**	**+0.1**
KEMA				*i*S	**Sb**	**15 50 09.2**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.94**	**310**	*e*PN	**Pn**	**15 49 45.3**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.94**	**310**	*e*Pn	**Pn**	**15 49 45.3**	**-0.6**
BINT	**Bingol**	**2.07**	**46**	*e*PN	**Pn**	**15 49 49.6**	**+1.9**
COBT	**Iskenderun**	**2.09**	**245**	*i*P	**Pb**	**15 49 50.7**	**+0.1**
COBT				*i*S	**Sb**	**15 50 15.8**	**-1.0**
COBT	**Iskenderun**	**2.09**	**245**	*i*P	**Pb**	**15 49 50.7**	**+0.1**
COBT				*i*S	**Sb**	**15 50 15.8**	**-1.1**
PINB	**Pinarbasi**	**2.12**	**306**	*i*P	**Pn**	**15 49 48.9**	**+0.5**
PINB				*i*S	**Sb**	**15 50 17.8**	**-0.1**
PINB	**Pinarbasi**	**2.12**	**306**	*i*P	**Pn**	**15 49 48.9**	**+0.5**
BEST	**Besiri**	**2.17**	**77**	*i*P	**Pn**	**15 49 50.2**	**+1.1**
BEST				*i*S	**Sb**	**15 50 18.6**	**-0.6**
KOZT	**Kozan**	**2.20**	**272**	*e*PN	**Pn**	**15 49 49.1**	**-0.4**
BTCH	**Batrach**	**2.22**	**231**	⇑P	**Pb**	**15 49 52.0**	**-0.8**
BTCH				⇑S	**Sn**	**15 50 18.0**	**+0.5**
EZC	**Erzincan**	**2.38**	**14**	*e*PN	**Pn**	**15 49 53.0**	**+1.0**
EZC	**Erzincan**	**2.38**	**14**	*e*Pn	**Pn**	**15 49 53.0**	**+1.0**
YAYL	**Yayladag**	**2.44**	**236**	*i*P	**Pn**	**15 49 53.6**	**+0.8**
YAYL				*i*S	**Sb**	**15 50 28.3**	**+1.2**
YAYL	**Yayladag**	**2.44**	**236**	*i*P	**Pn**	**15 49 53.6**	**+0.8**
BNGL	**BINGOL**	**2.51**	**52**	*e*P	**Pb**	**15 49 56.4**	**-1.4**
BNGL				*i*S	**Sb**	**15 50 29.2**	**+0.1**
WRDH	**Warideh**	**2.61**	**223**	⇑P	**Pn**	**15 49 56.0**	**+0.9**
WRDH				⇑S	**Sn**	**15 50 28.0**	**+0.7**
SLNF	**Slenfeh**	**2.66**	**227**	⇑P	**Pn**	**15 49 57.0**	**+1.3**
SLNF				⇑S	**Sn**	**15 50 29.0**	**+0.7**
SLNF	**Slenfeh**	**2.66**	**227**	⇑*i*P	**Pn**	**15 49 58.0**	**+2.3**
SLNF				⇑*i*S	**Sn**	**15 50 29.6**	**+1.3**
KRTS	**Karatas**	**2.72**	**252**	*e*PN	**Pn**	**15 49 56.9**	**+0.3**
KRTS	**Karatas**	**2.72**	**252**	*e*Pn	**Pn**	**15 49 56.9**	**+0.3**
SVSK	**Karacayir**	**2.77**	**334**	*e*PN	**Pn**	**15 49 57.5**	**+0.2**
SVSK	**Karacayir**	**2.77**	**334**	*e*Pn	**Pn**	**15 49 57.5**	**+0.2**
KARA	**Karaisali**	**2.83**	**267**	*e*PN	**Pn**	**15 49 58.9**	**+0.8**
KARA	**Karaisali**	**2.83**	**267**	*e*Pn	**Pn**	**15 49 58.9**	**+0.8**
BIDA	**Albida**	**3.04**	**218**	⇑P	**Pn**	**15 50 01.0**	**-0.1**
BIDA				⇑S	**Sn**	**15 50 37.0**	**-0.9**
CUKT	**Cukurca**	**4.00**	**91**	*e*PN	**Pn**	**15 50 18.5**	**+4.3**
CORM	**Corum**	**4.13**	**313**	*e*PN	**Pn**	**15 50 16.5**	**+0.5**
CORM	**Corum**	**4.13**	**313**	*e*Pn	**Pn**	**15 50 16.5**	**+0.5**

IDC 05 15:50:19.2±50.0,15.°09S×172.°07W,h0km,mb4.0/3,
mb1 4.1/3,mb1mx3.7/18,mbtmp4.0/3,Error ellipse:
s-maj=970.3km s-min=179.3km az=78.0,Samoa Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.30**	**240**	P	P	15 58 39.0	-0.1
	0.7nm,0.5s,baz=98,slow=14,SNR=6.2						
WRA	**Warramunga Arr**	**51.17**	**256**	P	P	15 59 24.4	-0.1
	0.4nm,0.5s,baz=93,slow=6.9,SNR=15						
ASAR	**Alice Springs**	**51.43**	**252**	P	P	15 59 26.5	+0.1
	3.4nm,0.6s,baz=88,slow=7.9,SNR=105						

IDC 05 15:54:23.6±3.1,21.°08S×173.°37E,h0km,mb3.9/5,
mb1 4.2/5,mb1mx3.9/16,mbtmp3.9/5,MS3.8/11,
Ms1 3.8/11,ms1mx3.5/25,Error ellipse: s-maj=172.6km
s-min=30.0km az=159.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.52**	**260**	*e*P	Pn	15 56 02.7	+1.9
DZM				*e*LR	LR	15 57 24.3	
	2μm,25.2s						
AFI	**Afiamalu**	**15.85**	**66**	LR	LR	16 02 35.4	
	comp=Z,182nm,19.0s,baz=180,slow=31						
HNR	**Honiara**	**17.36**	**310**	LR	LR	16 04 00.6	
	comp=Z,309nm,18.2s,baz=279,slow=33						
URZ	**Urewera**	**17.42**	**170**	LR	LR	16 04 07.7	
	comp=Z,137nm,19.9s,baz=358,slow=34						
RPZ	**Rata Peaks**	**22.65**	**184**	LR	LR	16 07 08.0	
	comp=Z,424nm,18.6s,baz=353,slow=34						
RAR	**Rarotonga**	**25.04**	**95**	LR	LR	16 07 27.4	
	comp=Z,245nm,19.2s,baz=254,slow=31						
CTA	**Charters Tower**	**25.39**	**267**	LR	LR	16 08 53.6	
	comp=Z,366nm,19.2s,baz=62,slow=34						
STKA	**Stephens Creek**	**30.30**	**243**	LR	LR	16 11 20.4	
	comp=Z,180nm,20.0s,baz=218,slow=34						
PPT	**Papeete**	**35.09**	**91**	*e*LR	LR	16 11 02.1	
	387nm,26.2s						
ASAR	**Alice Springs**	**36.51**	**258**	P	P	16 01 30.9	0.0
	1.7nm,0.9s,baz=85,slow=9.0,SNR=11						
WRA	**Warramunga Arr**	**36.51**	**265**	P	P	16 01 29.7	-1.3
	1.5nm,1.1s,baz=97,slow=7.8,SNR=5.9						
FITZ	**Fitzroy Crossi**	**44.94**	**265**	P	P	16 02 41.1	+0.4
	6.5nm,1.0s,baz=124,slow=7.3,SNR=9.8						
TAOE	**Nuku Hiva Isla**	**46.36**	**82**	*e*LR	LR	16 16 16.1	
	215nm,24.8s						
KSRS	**Korea Array**	**72.25**	**323**	LR	LR	16 32 07.1	
	comp=Z,16nm,19.5s,baz=160,slow=31						
PETK	**Petropavlovsk-**	**75.12**	**350**	LR	LR	16 32 49.3	
	comp=Z,32nm,20.6s,baz=299,slow=31						
CMAR	**Chiang Mai Arr**	**82.79**	**293**	P	P	16 06 50.8	+0.7
	0.2nm,0.5s,baz=120,slow=3.6,SNR=3.9						
NVAR	**Mina Array Bea**	**87.16**	**47**	P	P	16 07 11.7	+0.1
	0.6nm,0.9s,baz=206,slow=6.0,SNR=3.4						
ILAR	**Eielson Array**	**90.88**	**16**	LR	LR	16 40 18.1	
	comp=Z,71nm,19.8s,baz=275,slow=30						
TXAR	**Lajitas Array**	**94.27**	**60**	LR	LR	16 43 03.6	
	comp=Z,60nm,19.3s,baz=125,slow=31						

MAN 05 15:59:55,11.°42N×125.°82E,h37km,mb4.3,ML3.1,MS2.9,
Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataman**	**1.57**	**314**	*e*P	Pn	16 00 22.1	+1.7
CNP				*e*S	Sn	16 00 41.1	+1.6
MSLP	**Maasin**	**1.59**	**217**	*e*P	Pn	16 00 22.8	+2.2
MSLP				*e*S	Sn	16 00 37.0	-2.9
SCPH	**Surigao**	**1.66**	**191**	*e*P	Pn	16 00 22.6	+1.0
SCPH				*e*S	Sn	16 00 44.2	+2.5

IDC ***05*** *16:14:45.7±1.7,18.°24S×178.°24W,h460km±23km,mb3.6/9,*
mb1 3.9/10,mb1mx3.6/19,mbtmp3.6/10,Error ellipse:
s-maj=27.6km s-min=11.6km az=153.0
ISCJB ***05*** *16:14:50.8±1.1,18.°5S±0.°2×178.°3W±0.°1,h539km±11km,*
mb4.2/11,Error ellipse: s-maj=24.8km s-min=16.1km
az=157.7
NEIC ***05*** *16:14:51.1±1.1,18.°37S×178.°38W,h527km±12km,mb4.7/2,*
Error ellipse: s-maj=23.0km s-min=13.9km az=159.0
ISC 05 16:14:51.3±1.0,18.°5S±0.°2×178.°3W±0.°1,h533km±10km,
n25,σ1.02/27,mb4.2/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.59**	**282**	*e*Pn	**P**	**16 16 07.6**	**-1.4**
MSVF				*e*S	**S**	**16 17 12.9**	**+0.7**
AFI	**Afiamalu**	**7.73**	**55**	P	**P**	**16 16 38.6**	**-7.3**
	8.4nm,0.3s,baz=56,slow=17,SNR=11						
AFI				S	**S**	**16 18 06.0**	**-14**
	2.7nm,0.3s,baz=74,slow=22,SNR=2.9						
URZ	**Urewera**	**20.09**	**191**	P	**P**	**16 18 48.8**	**-0.1**
	3.2nm,0.3s,baz=216,slow=5.5,SNR=6.2						
EIDS	**Eidsvold**	**29.20**	**251**	*e*P	**P**	**16 20 09.9**	**+0.1**
ARMA	**Armidale**	**29.77**	**241**	*e*P	**P**	**16 20 16.1**	**+1.4**
RMQ	**Roma**	**31.42**	**249**	*e*P	**P**	**16 20 29.7**	**+0.7**
	9.2nm,0.6s,mb4.5						
CTA	**Charters Tower**	**33.49**	**261**	P	**P**	**16 20 46.4**	**-0.3**
	12nm,0.7s,mb4.6,baz=91,slow=9.9,SNR=20						
CTA	**Charters Tower**	**33.49**	**261**	*e*P	**P**	**16 20 46.2**	**-0.4**
	11nm,0.8s,mb4.5						
CTAO	**Charters Tower**	**33.49**	**261**	*e*P	**P**	**16 20 46.0**	**-0.6**
	12nm,0.8s,mb4.5						
COEN	**Coen**	**37.25**	**271**	*e*P	**P**	**16 21 17.9**	**-0.1**
STKA	**Stephens Creek**	**38.47**	**242**	P	**P**	**16 21 29.0**	**+1.4**
	10nm,0.6s,mb4.5,baz=86,slow=9.1,SNR=50						
STKA	**Stephens Creek**	**38.47**	**242**	*e*P	**P**	**16 21 29.0**	**+1.3**
	8.8nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**38.47**	**242**	P	**P**	**16 21 29.0**	**+1.4**
BBOO	**Buckleboo**	**43.24**	**242**	*e*P	**P**	**16 22 06.4**	**+0.8**
	7.8nm,0.6s,mb4.4						
WB2	**Warramunga Arr**	**44.65**	**260**	*e*P	**P**	**16 22 15.6**	**-1.1**
WRA	**Warramunga Arr**	**44.66**	**260**	P	**P**	**16 22 16.1**	**-0.8**
	3.9nm,0.7s,mb4.0,baz=96,slow=7.0,SNR=102						
ASAR	**Alice Springs**	**44.77**	**255**	P	**P**	**16 22 17.6**	**+0.1**
	25nm,0.7s,mb4.9,baz=89,slow=8.4,SNR=490						
KAKA	**Kakadu**	**47.71**	**269**	*e*P	**P**	**16 22 39.5**	**-0.6**
	14nm,0.5s,mb4.7						
KAKA	**Kakadu**	**47.71**	**269**	*e*P	**P**	**16 22 39.2**	**-0.8**
	28nm,0.6s,mb5.0						
NVAR	**Mina Array Bea**	**79.76**	**44**	P	**P**	**16 26 04.2**	**+0.2**
	0.9nm,0.7s,mb3.2,baz=225,slow=9.8,SNR=7.4						
TXAR	**Lajitas Array**	**86.20**	**58**	P	**P**	**16 26 37.8**	**+1.3**
	1.0nm,0.7s,mb3.6,baz=220,slow=6.3,SNR=12						
PDAR	**Pinedale Array**	**87.69**	**43**	P	**P**	**16 26 42.9**	**-0.3**
	0.5nm,0.6s,mb3.4,baz=270,slow=2.7,SNR=4.2						
VNA3	**Neumayer Olymp**	**90.14**	**176**	*e*	**P**	**16 26 52.4**	**-1.7**
VNA2	**Neumayer--Watz**	**90.58**	**177**	*e*	**P**	**16 26 54.7**	**-1.4**
	baz=196,slow=5.1						
PLCA	**Paso Flores**	**90.82**	**134**	P	**P**	**16 27 00.4**	**+2.5**
	0.8nm,0.5s,mb3.9,baz=217,slow=18,SNR=3.4						

ATH ***05*** *16:43:31.6,38.°35N×21.°94E,h19km,MD2.7/6*
CSEM ***05*** *16:43:31.9±0.2,38.°34N×21.°91E,h11km±1km,ML2.0/5,*
Error ellipse: s-maj=5.4km s-min=4.0km az=178.0
ISCJB ***05*** *16:43:32.1±0.4,38.°29N±0.°03×21.°94E±0.°03,h13km±3km,*
Error ellipse: s-maj=5.6km s-min=4.0km az=7.7
THE ***05*** *16:43:32.6,38.°28N×21.°92E,h10km,ML2.0/5,Error*
ellipse: s-maj=0.9km s-min=0.4km az=266.0
ISC 05 16:43:32.5±0.5,38.°32N±0.°04×21.°92E±0.°04,h13km±4km,
n26,σ0.68/47,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.09**	**151**	P	**Pg**	**16 43 34.4**	**-0.8**
LAKA				S	**Sg**	**16 43 36.2**	**-1.0**
LAKA	**Lakka**	**0.09**	**151**	P	**Pg**	**16 43 34.4**	**-0.8**

QSPA ScP ScP 16 58 53.3 -2.9
2.8nm,0.8s,baz=192,slow=2.1,SNR=5.7
QSPA South Pole Qui 34.49 180 P **P 16 52 37.1 +0.4**
QSPA ScP ScP 16 58 53.3 -2.9
CFAA Coronel Fontan 37.66 292 P **P 16 53 03.5 -0.8**
2.0nm,0.6s,mb4.0,baz=146,slow=8.4,SNR=42
CFAA Coronel Fontan 37.66 292 P **P 16 53 03.5 -0.8**
MAW Mawson 40.25 144 P **P 16 53 26.4 +0.8**
9.5nm,0.6s,mb4.7,baz=237,slow=7.7,SNR=49
MAW LR LR 17 10 31.5
comp=Z,148nm,18.3s,MS3.9,baz=61,slow=37
MAW Mawson 40.25 144 *e*P **P 16 53 26.0 +0.4**
8.1nm,0.6s,mb4.6
MAW Mawson 40.25 144 *e*P **P 16 53 25.1 -0.5**
2.9nm,0.9s,mb4.0
SUR Sutherland 40.35 75 P **P 16 53 27.9 +1.2**
16nm,1.1s,mb4.7,baz=74,slow=8.0,SNR=3.8
SUR Sutherland 40.35 75 *e*P **P 16 53 28.0 +1.3**
23nm,1.2s,mb4.8
LCO Las Campanas 41.00 292 *e*P **P 16 53 31.9 -0.3**
19nm,0.9s,mb4.7
BDFB Brasilia 43.23 329 P **P 16 53 50.5 +0.1**
1.9nm,0.3s,mb4.3,baz=172,slow=19,SNR=3.5
BOSA Boshof 45.68 76 P **P 16 54 09.7 -0.3**
3.9nm,0.6s,mb4.5,baz=229,slow=9.4,SNR=13
BOSA LR LR 17 08 50.2
comp=Z,406nm,19.3s,MS4.4,baz=182,slow=30
BOSA Boshof 45.68 76 *e*P **P 16 54 09.7 -0.3**
20nm,1.2s,mb4.9
SBA Scott Base 46.38 184 *e*P **P 16 54 15.7 +0.8**
17nm,1.0s,mb4.9
SIV San Ignacio 47.54 313 P **P 16 54 24.1 -0.5**
6.6nm,0.7s,mb4.8,baz=159,slow=7.7,SNR=41
SIV ScP ScP 16 59 46.4 -2.0
2.4nm,1.0s,baz=138,slow=5.5,SNR=5.7
TSUM Tsumeb 49.34 61 *e*P **P 16 54 38.4 -0.1**
3.8nm,1.1s,mb4.3
LPAZ La Paz 50.40 305 P **P 16 54 48.1 +1.5**
12nm,0.5s,mb5.2,baz=148,slow=5.7,SNR=42
LPAZ ScP ScP 16 59 58.6 -2.0
1.0nm,0.7s,baz=152,slow=6.9,SNR=4.2
LPAZ LR LR 17 14 58.6
comp=Z,93nm,18.6s,MS3.8,baz=127,slow=35
LPAZ La Paz 50.40 305 *e*P **P 16 54 47.7 +1.1**
12nm,0.5s,mb5.2
CASY Casey 54.11 160 *e*P **P 16 55 13.8 +0.3**
DBIC Dimbokro 64.81 24 P **P 16 56 27.9 0.0**
3.1nm,0.7s,mb4.5,baz=189,slow=8.2,SNR=4.4
DBIC LR LR 17 17 35.7
comp=Z,219nm,18.4s,MS4.4,baz=121,slow=29
DBIC Dimbokro 64.81 24 *e*P **P 16 56 27.5 -0.5**
5.9nm,0.8s,mb4.7
OTAV Otavalo 69.68 303 *e*P **P 16 57 00.1 +1.1**
5.2nm,0.7s,mb4.6
ROSC El Rosal 71.89 309 LR LR 17 26 46.9
comp=Z,93nm,21.3s,MS4.0,baz=343,slow=34
TOA0 Torodi Ar. Sit 72.69 29 *e*P **P 16 57 16.4 -0.7**
TORD Torodi Ar. Bea 72.69 29 P **P 16 57 17.3 +0.2**
4.2nm,0.5s,mb4.6,baz=199,slow=6.4,SNR=9.0
TORD LR LR 17 23 58.4
comp=Z,87nm,18.6s,MS4.1,baz=120,slow=32
SDV Santo Domingo 73.97 315 *e*P **P 16 57 24.7 +0.1**
18nm,1.0s,mb5.0
STKA Stephens Creek 92.15 170 P **P 16 58 58.6 -0.1**
2.3nm,0.7s,mb4.6,baz=193,slow=3.2,SNR=9.5
STKA LR LR 17 36 56.7
comp=Z,148nm,20.9s,MS4.4,baz=24,slow=33
FINES FINESS Array B 124.02 28 PKP PKPdf 17 04 45.9 -0.3
3.1nm,0.5s,baz=176,slow=2.3,SNR=27
KAF Kangasniemi 124.64 27 *e*p PKPdf 17 04 45.4 -1.9
3.8nm,0.6s
CM31 Chiang Mai Arr 124.95 110 *e*PKPdf PKPdf 17 04 48.5 -0.8
CMAR Chiang Mai Arr 124.95 110 PKP PKPdf 17 04 49.0 -0.3
3.4nm,0.8s,baz=231,slow=3.7,SNR=22
JOF Joensuu 126.64 29 *e*p PKPdf 17 04 50.0 -1.1
3.1nm,0.6s
ABKAR Akbulak array 127.02 55 *e*PKPdf PKPdf 17 04 51.4 -0.9
KKAR Karatay Array 127.90 67 *e*PKPdf PKPdf 17 04 53.9 -0.3
KSH Kashi 128.27 74 PKP PKPdf 17 04 54.9 -0.1
EKS2 Erkin-Say 129.30 70 *e*PKPdf PKPdf 17 04 56.4 -0.5
LSA Lhasa 129.57 94 PKPdf PKPdf 17 04 58.1 +0.3
ARCES ARCESS Array B 130.59 21 PKP PKPdf 17 04 58.5 0.0
4.8nm,0.7s,baz=194,slow=1.8,SNR=21
ARU Arti 131.34 48 *e*PKPdf PKPdf 17 05 00.0 -0.3
YKA Yellowknife Ar 136.11 318 PKP PKPdf 17 05 08.3 -0.7
2.8nm,0.7s,baz=126,slow=2.4,SNR=14
YKA PP PP 17 07 50.7 +0.8
0.4nm,0.7s,baz=124,slow=6.7,SNR=4.4
YKA Yellowknife Ar 136.11 318 PKP PKPdf 17 05 08.3 -0.7
YKA PP PP 17 07 50.7 +0.8
MK31 Makanchi Array 136.58 71 *e*PKPpre PKPpre 17 05 05.2
MKAR Makanchi Array 136.58 71 PKP PKPdf 17 05 08.5 -1.9
0.7nm,0.6s,baz=238,slow=3.9,SNR=6.0
MKAR Makanchi Array 136.58 71 PKP PKPdf 17 05 08.5 -1.9
KURK Kurchatov 137.07 64 *e*PKPdf PKPdf 17 05 09.5 -1.7
GTA Gaotai 141.51 92 *e*PKP PKPdf 17 05 21.6 +1.9
ZALV Zalesovo Beam 142.04 63 PKhKP PKPpre 17 05 14.1
1.2nm,0.6s,baz=276,slow=1.3,SNR=5.3
ZALV PKP PKPdf 17 05 25.2 +5.0
1.2nm,0.4s,baz=227,slow=2.8,SNR=7.8
ZALV Zalesovo Beam 142.04 63 PKP PKPpre 17 05 14.1
ZALV PKP PKPdf 17 05 25.2 +5.0
INK Inuvik 145.72 321 *e*PKPdf PKPdf 17 05 26.1 -0.1
JOW Kunigami 145.93 138 *e*PKPdf PKPdf 17 05 26.2 -1.7
JOW *e*PKPbc PKPbc 17 05 28.8 +0.2
DAWY Dawson 146.76 312 *e*PKPbc PKPbc 17 05 29.4 -0.4
EGAK Eagle 147.70 313 *e*PKPdf PKPdf 17 05 28.9 -0.7
EGAK *e*PKPbc PKPbc 17 05 31.8 -0.6
MENT Mentasta 148.29 309 *e*PKPbc PKPbc 17 05 34.0 0.0
DOT Dot Lake 148.63 310 *e*PKPdf PKPdf 17 05 30.1 -1.0
DOT *e*PKPbc PKPbc 17 05 35.4 +0.5
PAX Paxson 149.06 309 PKPdf PKPdf 17 05 29.0 -2.9
PAX *e*PKPbc PKPbc 17 05 35.3 -0.7
HHC Hu-ho-hao-te 149.08 101 *e*PKPbc PKPdf 17 05 30.4 -2.2
HHC pPKP pPKPdf 17 05 41.1 +5.0
HHC PKS PKS 17 09 03.5 0.0
HHC SKS SKSdf 17 12 33.7 -6.7
HHC AMB AMB
comp=Z,64nm,7.4s
HHC LR LR
comp=Z,77nm,21.1s,MS4.5
SML Sawmill 150.04 306 *e*PKPbc PKPbc 17 05 38.2 -0.3
ILAR Eielson Array 150.09 312 PKP PKPdf 17 05 31.8 -1.6
comp=Z,0.5nm,0.8s,baz=7.8,slow=0.6,SNR=6.4
ILAR PKPbc PKPbc 17 05 37.8 -0.7
comp=Z,18nm,0.8s,baz=118,slow=1.2,SNR=124
SONM Songino Array 150.48 86 PKP PKPdf 17 05 34.2 -0.4
comp=Z,0.8nm,0.6s,baz=209,slow=2.7,SNR=6.3
SONM PKPbc PKPbc 17 05 40.0 +0.1
comp=Z,8.9nm,0.5s,baz=222,slow=3.3,SNR=51
SONM PKPab PKPab 17 05 46.2 -0.5
comp=Z,3.9nm,0.8s,baz=232,slow=2.9,SNR=5.6
COLA College 150.51 312 *e*PKPbc PKPbc 17 05 39.1 -0.4
COLA *e*PKPab PKPab 17 05 46.5 +0.2
SLKM Skilak Lake 150.57 303 *e*PKPbc PKPbc 17 05 39.1 -0.7
MCK McKinley 150.76 310 *e*PKPbc PKPbc 17 05 40.5 +0.3
ULN Ulaanbaatar 150.87 86 *e*PKPdf PKPdf 17 05 34.2 -1.0
ULN *e*PKPbc PKPbc 17 05 40.9 0.0
KDAK Kodiak Island 150.89 297 *e*PKPbc PKPbc 17 05 40.7 +0.1
TLY Talaya 150.90 77 *e*PKPdf PKPdf 17 05 33.9 -1.2
TLY *e*PKPbc PKPbc 17 05 40.8 -0.1
BJT Baijiatuan 151.03 107 *e*PKPbc PKPbc 17 05 41.3 -0.2
OHAK Old Harbor 151.06 295 *e*PKPbc PKPbc 17 05 40.9 -0.1
TRF Thorofare Moun 151.30 309 *e*PKPbc PKPbc 17 05 41.3 -0.1
BPAW Bear Paw Mtn. 151.72 310 *e*PKPbc PKPbc 17 05 42.1 -0.2
COLD Coldfoot 151.77 317 *e*PKPbc PKPbc 17 05 43.0 +0.6
RSO Redoubt South 151.77 302 *e*PKPbc PKPbc 17 05 41.4 -1.1
PPLA Purkeypile 152.04 307 *e*PKPbc PKPbc 17 05 43.1 0.0
TTA Tatalina 153.77 307 *e*PKPbc PKPbc 17 05 46.8 -0.1
KSRS Korea Array 154.99 126 PKPab PKPab 17 06 05.1 -0.8
comp=Z,2.1nm,0.9s,baz=211,slow=4.0,SNR=7.0

CSEM ***05*** *17:01:16.3±0.2, 38°.78N×19°.54E, h20km, ML2.7/2, Error ellipse: s-maj=5.2km s-min=3.6km az=32.0*
ISCJB ***05*** *17:01:17.9±0.6, 38°.84N±0°.03×19°.85E±0°.03, h13km±5km, Error ellipse: s-maj=5.5km s-min=3.9km az=36.5*
THE ***05*** *17:01:19.8, 38°.86N×19°.98E, h9km±1km, ML2.7/2, Error ellipse: s-maj=3.0km s-min=0.7km az=256.0*
ATH ***05*** *17:01:19.0, 38°.89N×20°.05E, h23km±1km, MD3.4/5, ML3.1*
NEIC ***05*** *17:01:20.0, 38°.87N×19°.86E, h17km, ML2.8(ATH), After ATH.*
ROM ***05*** *17:01:20.4±0.8, 38°.92N×19°.62E, h10km, Md3.0/7, Ml2.7/6, Error ellipse: s-maj=13.1km s-min=3.0km az=126.0*

ISC 05 17:01:18.8±0.7, 38°.85N±0°.03×19°.87E±0°.04, h14km±5km, n99, σ0.8 77/116, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.77**	**27**	P	**Pg**	**17 01 33.5**	**-0.3**
IGT	**Igoumenitsa**	**0.77**	**27**	P	**Pg**	**17 01 33.5**	**-0.3**
IGT				S	**Sg**	**17 01 44.4**	**+0.5**
IGT	**Igoumenitsa**	**0.77**	**27**	P	**Pg**	**17 01 33.5**	**-0.3**
IGT				S	**Sg**	**17 01 44.4**	**+0.5**
KEK	**Kerkira**	**0.87**	**356**	P	**Pg**	**17 01 36.0**	**+0.4**
KEK	**Kerkira**	**0.87**	**356**	*e*PN	**Pg**	**17 01 35.3**	**-0.3**
KEK				*e*SN	**Sg**	**17 01 47.3**	**+0.4**
KEK	**Kerkira**	**0.87**	**356**	P	**Pg**	**17 01 35.6**	**0.0**
KEK				S	**Sg**	**17 01 48.2**	**+1.3**
KEK	**Kerkira**	**0.87**	**356**	Pg	**Pg**	**17 01 35.5**	**-0.1**
KEK				Sg	**Sg**	**17 01 47.6**	**+0.7**
KEK	**Kerkira**	**0.87**	**356**	Pg	**Pg**	**17 01 35.5**	**-0.1**
KEK				Sg	**Sg**	**17 01 47.6**	**+0.7**
KEK				S	**Sg**	**17 01 48.2**	**+1.3**
VLS	**Valsamata**	**0.87**	**140**	P	**Pg**	**17 01 35.0**	**-0.7**
VLS	**Valsamata**	**0.87**	**140**	*e*PN	**Pg**	**17 01 35.3**	**-0.4**
VLS				*e*SN	**Sg**	**17 01 47.3**	**+0.2**
VLS	**Valsamata**	**0.87**	**140**	P	**Pg**	**17 01 35.3**	**-0.4**
VLS				S	**Sg**	**17 01 47.5**	**+0.4**
VLS	**Valsamata**	**0.87**	**140**	P	**Pg**	**17 01 35.0**	**-0.7**
VLS				S	**Sg**	**17 01 47.5**	**+0.4**
KFL	**Anninata**	**1.03**	**135**	P	**Pg**	**17 01 38.0**	**-0.6**
KFL	**Anninata**	**1.03**	**135**	P	**Pg**	**17 01 38.0**	**-0.6**
JAN	**Janina**	**1.11**	**43**	P	**Pb**	**17 01 39.4**	**-0.3**
JAN	**Janina**	**1.11**	**43**	*e*PN	**Pn**	**17 01 38.4**	**-1.4**
JAN				*e*SN	**Sg**	**17 01 51.1**	**-3.5**
JAN	**Janina**	**1.11**	**43**	*e*Pn	**Pn**	**17 01 38.4**	**-1.4**
JAN	**Janina**	**1.11**	**43**	P	**Pb**	**17 01 39.4**	**-0.3**
RLS	**Riolos of Patr**	**1.48**	**122**	P	**Pn**	**17 01 46.3**	**+1.4**
RLS	**Riolos of Patr**	**1.48**	**122**	*e*PN	**Pn**	**17 01 44.7**	**-0.2**
RLS	**Riolos of Patr**	**1.48**	**122**	*e*Pn	**Pn**	**17 01 44.7**	**-0.2**
RLS	**Riolos of Patr**	**1.48**	**122**	P	**Pn**	**17 01 46.3**	**+1.4**
EVR	**Evrytania**	**1.51**	**87**	P	**Pn**	**17 01 46.2**	**+0.8**
EVR	**Evrytania**	**1.51**	**87**	*e*PN	**Pn**	**17 01 45.0**	**-0.4**
EVR	**Evrytania**	**1.51**	**87**	*e*Pn	**Pn**	**17 01 45.0**	**-0.4**
EVR	**Evrytania**	**1.51**	**87**	P	**Pn**	**17 01 46.2**	**+0.8**
SCTE	**Santa Cesarea**	**1.64**	**319**	Pg	**Pn**	**17 01 46.3**	**-0.8**
SCTE	**Santa Cesarea**	**1.64**	**319**	Pg	**Pn**	**17 01 46.3**	**-0.8**
EFP	**Efpalio**	**1.65**	**104**	*e*PN	**Pn**	**17 01 47.3**	**+0.1**
EFP	**Efpalio**	**1.65**	**104**	P	**Pn**	**17 01 47.3**	**+0.1**
EFP				S	**Sn**	**17 02 07.1**	**-1.1**
EFP	**Efpalio**	**1.65**	**104**	P	**Pn**	**17 01 47.3**	**+0.1**
EFP				S	**Sn**	**17 02 07.1**	**-1.1**
LAKA	**Lakka**	**1.76**	**110**	P	**Pn**	**17 01 48.8**	**0.0**
LAKA	**Lakka**	**1.76**	**110**	P	**Pn**	**17 01 48.8**	**0.0**
TRIZ	**Trizonia**	**1.79**	**105**	P	**Pn**	**17 01 49.4**	**+0.2**
TRIZ	**Trizonia**	**1.79**	**105**	P	**Pn**	**17 01 49.4**	**+0.2**
NEST	**Nestorio**	**1.81**	**30**	P	**Pn**	**17 01 50.0**	**+0.5**
NEST	**Nestorio**	**1.81**	**30**	P	**Pn**	**17 01 50.0**	**+0.5**
THL	**Klokotos Trika**	**1.81**	**66**	*e*PN	**Pn**	**17 01 49.1**	**-0.4**
THL	**Klokotos Trika**	**1.81**	**66**	P	**Pn**	**17 01 49.2**	**-0.3**
THL	**Klokotos Trika**	**1.81**	**66**	P	**Pn**	**17 01 49.2**	**-0.3**
KALE	**Kalithea**	**1.83**	**104**	P	**Pn**	**17 01 50.2**	**+0.4**
KALE	**Kalithea**	**1.83**	**104**	P	**Pn**	**17 01 50.2**	**+0.4**
DSF	**Desfina**	**2.12**	**101**	P	**Pn**	**17 01 54.0**	**+0.2**
DSF				S	**Sn**	**17 02 20.4**	**+0.5**
DSF	**Desfina**	**2.12**	**101**	P	**Pn**	**17 01 54.0**	**+0.2**
DSF				S	**Sn**	**17 02 20.4**	**+0.5**
GUR	**Goura**	**2.14**	**114**	*e*PN	**Pn**	**17 01 54.5**	**+0.4**
GUR	**Goura**	**2.14**	**114**	P	**Pn**	**17 01 54.5**	**+0.4**
GUR	**Goura**	**2.14**	**114**	P	**Pn**	**17 01 54.5**	**+0.4**
FNA	**Florina**	**2.25**	**30**	P	**Pn**	**17 01 56.3**	**+0.7**
FNA	**Florina**	**2.25**	**30**	P	**Pn**	**17 01 55.5**	**-0.1**
FNA	**Florina**	**2.25**	**30**	P	**Pn**	**17 01 55.5**	**-0.1**
LADO	**San Nicola del** 34nm,0.4s	**2.29**	**282**	Pg	**Pn**	**17 01 56.8**	**+0.6**
LADO	**San Nicola del** 34nm,0.4s	**2.29**	**282**	Pg	**Pn**	**17 01 56.8**	**+0.6**
ITM	**Ithomi**	**2.32**	**135**	P	**Pn**	**17 01 58.7**	**+2.1**
ITM	**Ithomi**	**2.32**	**135**	*e*PN	**Pn**	**17 01 56.8**	**+0.2**
ITM	**Ithomi**	**2.32**	**135**	P	**Pn**	**17 01 56.1**	**-0.5**
ITM	**Ithomi**	**2.32**	**135**	P	**Pn**	**17 01 56.1**	**-0.5**
ITM	**Ithomi**	**2.32**	**135**	*e*Pn	**Pn**	**17 01 56.8**	**+0.2**
LIT	**Litokhoron**	**2.38**	**57**	P	**Pn**	**17 01 58.2**	**+0.9**
LIT	**Litokhoron**	**2.38**	**57**	P	**Pn**	**17 01 56.7**	**-0.6**
LIT	**Litokhoron**	**2.38**	**57**	P	**Pn**	**17 01 58.2**	**+0.9**
LKR	**Lokris**	**2.45**	**94**	P	**Pn**	**17 01 59.1**	**+0.8**
LKR	**Lokris**	**2.45**	**94**	P	**Pn**	**17 01 58.5**	**+0.2**
LKR	**Lokris**	**2.45**	**94**	P	**Pn**	**17 01 58.5**	**+0.2**
SERS	**Sersale** 21nm,0.3s	**2.49**	**275**	Pg	**Pn**	**17 01 58.6**	**-0.3**
SERS	**Sersale** 21nm,0.3s	**2.49**	**275**	Pg	**Pn**	**17 01 58.6**	**-0.3**
LTK	**Loutraki**	**2.56**	**108**	*e*PN	**Pn**	**17 01 59.3**	**-0.6**
LTK	**Loutraki**	**2.56**	**108**	*e*Pn	**Pn**	**17 01 59.3**	**-0.6**
NEO	**Neokhori**	**2.65**	**79**	P	**Pn**	**17 02 00.9**	**-0.1**
NEO	**Neokhori**	**2.65**	**79**	P	**Pn**	**17 02 00.9**	**-0.1**
PLAC	**Placanica** 26nm,0.3s	**2.72**	**263**	Pg	**Pn**	**17 02 02.0**	**0.0**
PLAC	**Placanica** 26nm,0.3s	**2.72**	**263**	Pg	**Pn**	**17 02 02.0**	**0.0**
NOCI	**Noci**	**2.91**	**313**	Pg	**Pn**	**17 02 03.9**	**-0.6**
DID	**Didima**	**2.97**	**116**	*e*PN	**Pn**	**17 02 05.2**	**-0.2**
DID	**Didima**	**2.97**	**116**	P	**Pn**	**17 02 05.0**	**-0.4**
DID	**Didima**	**2.97**	**116**	*e*Pn	**Pn**	**17 02 05.2**	**-0.2**
JOPP	**Joppolo** 39nm,0.4s	**3.13**	**267**	Pg	**Pn**	**17 02 07.7**	**+0.1**
JOPP	**Joppolo** 39nm,0.4s	**3.13**	**267**	Pg	**Pn**	**17 02 07.7**	**+0.1**
AOS	**Alonnisos**	**3.14**	**83**	P	**Pn**	**17 02 06.9**	**-0.8**
AOS	**Alonnisos**	**3.14**	**83**	P	**Pn**	**17 02 07.0**	**-0.7**
AOS	**Alonnisos**	**3.14**	**83**	P	**Pn**	**17 02 07.0**	**-0.7**
PAIG	**Paliouri**	**3.14**	**69**	P	**Pn**	**17 02 08.4**	**+0.6**
PAIG	**Paliouri**	**3.14**	**69**	P	**Pn**	**17 02 08.4**	**+0.6**
ATH	**Athens Observa**	**3.14**	**105**	*e*PN	**Pn**	**17 02 07.3**	**-0.5**
ATH	**Athens Observa**	**3.14**	**105**	*e*Pn	**Pn**	**17 02 07.3**	**-0.5**
PLG	**Polygyros**	**3.15**	**60**	P	**Pn**	**17 02 10.1**	**+2.2**
PLG	**Polygyros**	**3.15**	**60**	P	**Pn**	**17 02 10.1**	**+2.2**
CEL	**Celeste**	**3.17**	**261**	P	**Pn**	**17 02 08.1**	**-0.2**
CEL	**Celeste** 35nm,0.3s	**3.17**	**261**	Pg	**Pn**	**17 02 08.3**	**0.0**
CEL	**Celeste** 35nm,0.3s	**3.17**	**261**	Pg	**Pn**	**17 02 08.3**	**0.0**
VLI	**Veliai**	**3.23**	**130**	P	**Pn**	**17 02 12.5**	**+3.5**
VLI	**Veliai**	**3.23**	**130**	P	**Pn**	**17 02 12.5**	**+3.5**
VLY	**Voula,Athens**	**3.24**	**107**	P	**Pn**	**17 02 09.1**	**0.0**
VLY	**Voula,Athens**	**3.24**	**107**	P	**Pn**	**17 02 09.1**	**0.0**
CUC	**Castrocucco**	**3.34**	**291**	P	**Pn**	**17 02 12.4**	**+1.8**
CUC	**Castrocucco** 14nm,0.7s	**3.34**	**291**	Pg	**Pn**	**17 02 11.6**	**+1.0**
STON	**Ston**	**4.34**	**338**	*e*Pn	**Pn**	**17 02 21.1**	**-3.2**
STON				Sn	**Sn**	**17 03 04.3**	**-10**
STON	**Ston**	**4.34**	**338**	*e*Pn	**Pn**	**17 02 21.0**	**-3.3**
MELA	**Melanico ??? S**	**4.62**	**310**	Pg	**Pn**	**17 02 27.9**	**-0.2**
NVLJ	**Novalja**	**6.83**	**328**	*e*Pn	**Pn**	**17 02 57.6**	**-0.8**
NVLJ				Sn	**Sn**	**17 04 09.6**	**-6.3**

IDC 05 17:07:57.5±2.1, 3°.94N×127°.09E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/19, mbtmp3.2/3, Error ellipse: s-maj=164.0km s-min=25.6km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=344,slow=10,SNR=5.6	**24.78**	**164**	P	P	17 13 20.9	-0.3
ASAR	**Alice Springs** 0.2nm,0.8s,baz=341,slow=7.8,SNR=2.7	**28.23**	**167**	P	P	17 13 52.8	+0.5
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=112,slow=8.1,SNR=9.1	**57.59**	**325**	P	P	17 17 49.1	0.0

ISCJB ***05*** *17:15:01.6±0.2, 32°.69N±0°.02×105°.49E±0°.03, h10km, mb4.4/35, MS3.3/7, Error ellipse: s-maj=3.9km s-min=3.1km az=25.9*
IDC ***05*** *17:15:01.7±0.6, 32°.75N×105°.56E, h0km, mb4.2/12, mb1 4.3/15, mb1mx4.2/24, mbtmp4.1/15, ML3.5/3, MS3.1/6, Ms1 3.1/6, ms1mx2.9/24, Error ellipse: s-maj=23.3km s-min=14.2km az=62.0*
BJI ***05*** *17:15:02.6, 32°.69N×105°.53E, h13km, mB4.5/15, mb4.3/27, ML4.1/19, Ms3.9/22, Ms7 3.6/23*
NEIC ***05*** *17:15:02.6±2.6, 32°.75N×105°.54E, h5km±17km, mb4.3/19, Error ellipse: s-maj=6.6km s-min=4.8km az=68.0*

MOS ***05*** *17:15:04.6±1.0, 32°.74N×105°.60E, h33km, mb4.7/20, Error ellipse: s-maj=11.5km s-min=6.8km az=105.2*

ISC 05 17:15:03.6±0.2, 32°.72N±0°.02×105°.51E±0°.03, h10km, n97, σ1.9 14/117, mb4.4/35, MS3.3/7, 5C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.34**	**220**	Pn	**Pn**	**17 15 42.5**	**+0.5**
CD2				Pg	**Pg**	**17 15 46.0**	**-2.4**
CD2				Sn	**Sn**	**17 16 13.3**	**+2.5**
CD2				Sg	**Sg**	**17 16 17.3**	**-1.4**
CD2				smax			
	comp=N,8μm,0.8s						
CD2				smax			
	comp=E,4μm,0.7s						
XAN	**Xi'an**	**3.15**	**64**	Pn	**Pn**	**17 15 54.4**	**+1.2**
XAN				Pg	**Pg**	**17 16 01.2**	**-2.7**
XAN				Sn	**Sn**	**17 16 31.3**	**+0.5**
XAN				Sg	**Sg**	**17 16 39.7**	**-5.0**
XAN				smax			
	comp=N,620nm,0.7s						
XAN				smax			
	comp=E,370nm,0.8s						
XAN				LR	LR		
	comp=N,350nm,6.1s						
XAN				LR	LR		
	comp=E,330nm,7.6s						
XAN				LR	LR		
	comp=Z,310nm,7.3s						
LZH	**Lanzhou**	**3.63**	**338**	Pn	**Pn**	**17 16 01.8**	**+1.9**
LZH				Pg	**Pg**	**17 16 10.0**	**-3.2**
LZH				Sg	**Sg**	**17 16 56.3**	**-3.9**
LZH				smax			
	comp=N,1μm,1.0s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=N,1μm,8.1s						
LZH				LR	LR		
	comp=E,1μm,5.6s						
LZH				LR	LR		
	comp=Z,1μm,8.6s						
ENH	**Enshi**	**4.18**	**125**	*e*Pn	**Pn**	**17 16 08.5**	**+1.1**
ENH				*e*Pb	**Pb**	**17 16 18.0**	**+0.7**
GYA	**Guiyang**	**6.32**	**171**	Pn	**Pn**	**17 16 36.7**	**-0.1**
GYA				Pg	**Pg**	**17 16 56.6**	**-8.0**
GYA				Sn	**Sn**	**17 17 48.2**	**-0.8**
GYA				Sg	**Sg**	**17 18 16.6**	**-10**
GYA				smax			
	comp=N,140nm,1.0s						
GYA				smax			
	comp=E,180nm,1.0s						
WHN	**Wuhan**	**7.85**	**104**	P	**Pn**	**17 16 51.3**	**-6.5**
WHN				S	**Sn**	**17 18 22.9**	**-3.7**
WHN				LR	LR		
	comp=N,620nm,6.1s						
WHN				LR	LR		
	comp=E,910nm,7.4s						
WHN				LR	LR		
	comp=Z,460nm,17.0s						
KMI	**Kunming**	**7.94**	**198**	P	**Pn**	**17 16 59.5**	**+0.4**
KMI				S	**Sn**	**17 18 28.4**	**-0.7**
KMI				smax			
	comp=N,31nm,1.4s						
KMI				smax			
	comp=E,31nm,0.9s						
KMI				LR	LR		
	comp=N,130nm,6.2s						
KMI				LR	LR		
	comp=E,150nm,5.8s						
KMI				LR	LR		
	comp=Z,250nm,13.9s						
GTA	**Gaotai**	**8.11**	**327**	*e*P	**Pn**	**17 17 01.5**	**+0.1**
GTA				pP		17 17 04.5	
GTA				sP		17 17 07.4	
GTA				S	**Sn**	**17 18 32.7**	**-0.4**
GTA				pmax	pmax		
	comp=Z,16nm,0.9s						
GTA				LR	LR		
	comp=N,210nm,9.0s						
GTA				LR	LR		
	comp=E,170nm,7.1s						
GTA				LR	LR		
	comp=Z,220nm,8.5s						
BTO	**Baotou**	**8.67**	**23**	*e*P	Px	17 17 43.4	
HHC	**Hu-ho-hao-te**	**9.46**	**29**	*e*P	**Pn**	**17 17 22.1**	**+2.3**
HHC				pP		17 17 25.3	
HHC				sP		17 17 28.1	
HHC				S	**Sn**	**17 19 09.0**	**+2.9**
HHC				sS		17 19 13.5	
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,89nm,5.9s						
HHC				LR	LR		
	comp=N,390nm,5.0s						
HHC				LR	LR		
	comp=E,290nm,5.2s						
HHC				LR	LR		
	comp=Z,310nm,6.1s						
BJI	**Beijing**	**11.28**	**47**	P	**Pn**	**17 17 44.6**	**-0.2**
BJI				S	**Sn**	**17 19 51.3**	**+0.5**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,140nm,6.0s						
BJI				LR	LR		
	comp=N,200nm,18.7s						
BJI				LR	LR		
	comp=E,180nm,18.4s						
BJI				LR	LR		
	comp=Z,100nm,16.2s						
NJ2	**Nanjing**	**11.30**	**90**	*e*P	**Pn**	**17 17 48.2**	**+3.0**
NJ2				pP		17 17 51.0	
NJ2				sP		17 17 54.0	
NJ2				PP		17 17 56.6	
NJ2				S	**Sn**	**17 19 56.3**	**+4.7**
NJ2				sS		17 20 02.4	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,70nm,7.0s						
NJ2				LR	LR		
	comp=N,130nm,16.6s						
NJ2				LR	LR		
	comp=E,210nm,12.9s						
NJ2				LR	LR		
	comp=Z,2μm,16.8s						
QIZ	**Qiongzhong**	**14.18**	**163**	*e*P	**Pn**	**17 18 25.6**	**+1.2**
QIZ				*e*S	**Sn**	**17 21 07.4**	**+5.6**
QIZ				LR	LR		
	comp=Z,130nm,8.8s						
CHTO	**Chiang Mai**	**15.05**	**205**	*e*P	**Pn**	**17 18 37.5**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CHTO	**Chiang Mai**	**15.05**	**205**	*e*Pn	**Pn**	**17 18 37.5

WMQ SS 17 22 53.0
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ LR LR
comp=N,63nm,10.0s
WMQ LR LR
comp=E,55nm,10.0s
WMQ LR LR
comp=Z,47nm,10.0s
KSRS Korea Array 18.93 69 P **Pn 17 19 24.1 -1.1**
comp=Z,0.1nm,0.3s,baz=257,slow=10,SNR=20
KSRS LR LR 17 25 48.3
comp=Z,39nm,21.8s,baz=344,slow=34
CN2 Changchun 19.12 49 *e*P **Pn 17 19 29.3 +1.8**
CN2 *e*S **Sn 17 22 59.1 -2.6**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,200nm,15.0s
JOW Kunigami 20.60 101 *e*P **P 17 19 42.5 -0.4**
comp=Z,3.3nm,1.0s
MDJ Mudanjiang 22.16 51 P **P 17 19 59.3 -0.2**
MDJ pP 17 20 02.2
MDJ pmax pmax
comp=Z,8.0nm,1.3s,mb4.0
MDJ pmax pmax
comp=Z,74nm,5.8s
MDJ LR LR
comp=Z,27nm,18.5s,MS2.7
MK31 Makanchi Array 22.61 315 *e*P **P 17 20 04.8 +0.5**
MKAR Makanchi Array 22.61 315 P **P 17 20 03.5 -0.8**
comp=Z,6.8nm,0.9s,mb4.1,baz=119,slow=11,SNR=23
MKAR Makanchi Array 22.61 315 *i*P **P 17 20 04.5 +0.2**
MKAR pmax pmax
comp=Z,7.0nm,0.9s
KSH Kashi 24.73 294 *e*P **P 17 20 29.3 +4.2**
KSH *e*pP 17 20 33.5
KSH *e*sP sP 17 20 36.3 +6.9
KSH *e*PP 17 21 06.8
KSH *e*PcP PcP 17 24 05.2 +3.4
KSH S **S 17 24 50.2 +3.1**
KSH sS sS 17 24 57.0 +4.9
KSH SS 17 25 48.9
KSH pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
KSH pmax pmax
comp=Z,57nm,4.1s
KSH LR LR
comp=N,200nm,6.4s
KSH LR LR
comp=E,170nm,6.6s
KSH LR LR
comp=Z,270nm,6.2s
KLR Kul'dur 25.59 42 *e*P **P 17 20 31.0 -1.8**
KLR MLR MLR
comp=Z,700nm,12.0s,MS4.4
TKM2 Tokmak 2 25.61 302 *e*P **P 17 20 34.2 +1.2**
TKM2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
TKM2 Tokmak 2 25.61 302 *e*P **P 17 20 34.2 +1.2**
comp=Z,3.7nm,0.9s,mb3.9
ZAA0 Zalesovo Array 25.84 331 *e*P **P 17 20 34.4 -0.5**
ZALV Zalesovo Beam 25.84 331 P **P 17 20 35.2 +0.3**
comp=Z,2.6nm,0.7s,mb3.9,baz=136,slow=11,SNR=14
ZALV Zalesovo Beam 25.84 331 P **P 17 20 35.2 +0.3**
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
ZALV Zalesovo Beam 25.84 331 P **P 17 20 35.2 +0.3**
AAK Ala-Archa 26.34 301 LR LR 17 33 16.1
comp=Z,32nm,20.2s,MS2.9,baz=2.7,slow=42
AAK Ala-Archa 26.34 301 *ce*P **P 17 20 43.8 +4.2**
AAK pmax pmax
comp=Z,3.0nm,1.7s,mb3.5
AAK Ala-Archa 26.34 301 *e*P **P 17 20 39.9 +0.3**
comp=Z,6.2nm,1.5s,mb3.9
KURK Kurchatov 26.72 320 *ce*P **P 17 20 43.4 +0.4**
KURK pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
KURK Kurchatov 26.72 320 *e*P **P 17 20 42.8 -0.1**
comp=Z,5.9nm,0.8s,mb4.2
EKS2 Erkin-Say 26.86 301 P **P 17 20 44.9 +0.6**
MJAR Matsushiro Arr 27.11 73 LR LR 17 31 49.8
comp=Z,32nm,20.9s,MS2.9,baz=260,slow=37
KBL Kabul 30.32 284 P **P 17 21 15.8 +0.6**
KBL pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KBL Kabul 30.32 284 P **P 17 21 15.8 +0.6**
comp=Z,6.3nm,0.9s,mb4.3
KSM Kuching 31.40 171 P **P 17 21 25.3 +0.4**
YSS Yuzh-Sakhalins 31.62 52 *e*P **P 17 21 27.1 +0.6**
BRVK Borovoye 32.38 319 *e*P **P 17 21 33.7 +0.6**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
BRVK Borovoye 32.38 319 *e*P **P 17 21 33.7 +0.6**
comp=Z,2.7nm,0.6s,mb4.2
ABKAR Akbulak array 37.53 310 *e*P **P 17 22 17.6 +0.1**
comp=Z,2.5nm,0.8s,mb4.0
ABKAR *e* 17 22 31.1
ARU Arti 39.92 321 *c i*P **P 17 22 37.9 +0.4**
ARU *e* 17 24 10.6
ARU S **S 17 28 32.1 -10**
ARU SS SS 17 31 31.7 -6.9
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
ARU Arti 39.92 321 *e*P **P 17 22 37.4 -0.2**
comp=Z,7.7nm,1.0s,mb4.4
PETK Petropavlovsk- 42.21 45 LR LR 17 42 38.0
comp=Z,28nm,18.7s,MS3.2,baz=342,slow=39
PRGR Permogore 47.58 326 P **P 17 23 37.4 -1.7**
PRGR pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BILL Bilibino 49.21 26‖ *e*P **P 17 23 50.0 -1.6**
BILL *e* 17 25 40.7
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.9
VRHR Novokhopersk 49.35 312 *e*P **P 17 23 52.1 -0.8**
VRHR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.7s
KLMR Klimovskoe 50.43 325 *e*P **P 17 24 00.4 -0.6**
KLMR pmax pmax
comp=Z,34nm,1.6s,mb5.1
VORD Divnogorie 50.82 312 *e*P **P 17 24 04.2 +0.1**
VORD pmax pmax
comp=Z,10.0nm,1.8s,mb4.4
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 50.88 312 *e*P **P 17 24 04.3 -0.2**
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
VSR pmax pmax
comp=N,4.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.1s
OBN Obninsk 52.10 317‖ *e*P **P 17 24 14.9 +1.3**
OBN *e* 17 26 05.9
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
JOF Joensuu 54.31 327 *e*P **P 17 24 28.9 -0.8**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
MBWA Marble Bar 55.27 164 P **P 17 24 36.6 -0.5**
comp=Z,9.0nm,1.1s,mb4.7
ARCES ARCESS Array B 56.29 335 P **P 17 24 43.6 -0.3**
comp=Z,2.9nm,0.9s,mb4.3,baz=93,slow=8.5,SNR=4.4
ARCES ARCESS Array B 56.29 335 P **P 17 24 43.6 -0.3**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
KAF Kangasniemi 56.70 326 *e*P **P 17 24 45.9 -1.0**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
FINES FINESS Array B 56.90 326 P **P 17 24 48.4 0.0**
comp=Z,5.6nm,0.4s,mb4.9,baz=94,slow=7.6,SNR=70
FINES FINESS Array B 56.90 326 P **P 17 24 48.4 0.0**
FINES pmax pmax
comp=Z,6.0nm,0.4s
BRTR Keskin Array B 56.99 299 P **P 17 24 49.3 -0.1**
comp=Z,0.7nm,0.6s,mb3.9,baz=112,slow=8.4,SNR=6.1
BRTR Keskin Array B 56.99 299 *ce*P **P 17 24 50.0 +0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 59.18 148 P **P 17 25 04.4 -0.4**
comp=Z,4.5nm,0.9s,mb4.5,baz=340,slow=7.6,SNR=26
WRA Warramunga Arr 59.18 148 P **P 17 25 04.4 -0.4**
WRA pmax pmax
comp=Z,5.0nm,0.9s
KWP Kalwaria Pacla 61.49 313 *e*P **P 17 25 18.5 -1.8**
KWP pmax pmax
comp=Z,8.0nm,0.5s,mb5.1
KWP Kalwaria Pacla 61.49 313 *e*P **P 17 25 18.5 -1.8**
comp=Z,8.4nm,0.5s,mb5.1
KOLS Kolonicke sedl 61.97 312 *e*P **P 17 25 26.6 +3.0**
ASAR Alice Springs 62.27 150 P **P 17 25 25.7 -0.1**
comp=Z,2.3nm,0.8s,mb4.3,baz=335,slow=6.8,SNR=20
ASAR Alice Springs 62.27 150 P **P 17 25 25.7 -0.1**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
CRVS Cervenica-Dubn 62.49 312 *e*P **P 17 25 29.0 +1.9**
KECS Kecovo 63.24 312 *e*P **P 17 25 34.6 +2.5**
NB2 NORSAR Subarra 63.95 327 P **P 17 25 35.5 -1.0**
comp=Z,2.7nm,0.6s,mb4.5,baz=69,slow=6.9
NOA NORSAR Array B 63.95 327 P **P 17 25 35.8 -0.7**
comp=Z,4.2nm,0.8s,mb4.5,baz=70,slow=6.6,SNR=17
NOA LR LR 17 55 08.9
comp=Z,17nm,18.3s,MS3.3,baz=205,slow=38
NOA NORSAR Array B 63.95 327 P **P 17 25 35.8 -0.7**
NOA pmax pmax
comp=Z,4.0nm,0.8s
NOA MLR MLR
comp=Z,17nm,18.3s
VYHS Vyhne 64.27 313 *e*P **P 17 25 39.4 +0.6**
BPAW Bear Paw Mtn. 66.62 28 *e*P **P 17 25 53.4 -0.4**
comp=Z,4.4nm,1.1s,mb4.4
COLA College 67.46 26 *e*P **P 17 25 59.4 +0.3**
COLA pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
COLA College 67.46 26 *e*P **P 17 25 59.4 +0.2**
comp=Z,8.9nm,1.1s,mb4.7
ILAR Eielson Array 67.87 26 P **P 17 26 00.9 -0.8**
comp=Z,0.9nm,0.9s,mb3.8,baz=291,slow=5.9,SNR=8.3
ILAR Eielson Array 67.87 26 P **P 17 26 01.0 -0.7**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
PMR Palmer 68.56 30 P **P 17 26 05.3 -0.8**
PMR pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
PMR Palmer 68.56 30 P **P 17 26 05.3 -0.7**
comp=Z,7.7nm,0.7s,mb4.7
KMBO Kilima Mbogo 72.44 257 P **P 17 26 31.5 +0.9**
comp=Z,3.2nm,0.8s,mb4.3,baz=0.4,slow=23,SNR=7.4
KMBO Kilima Mbogo 72.44 257 *e*P **P 17 26 30.6 +0.1**
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 72.44 257 *e*P **P 17 26 30.6 0.0**
comp=Z,4.6nm,1.0s,mb4.4
STKA Stephens Creek 72.73 148 P **P 17 26 31.4 -0.4**
comp=Z,0.9nm,0.8s,mb3.8,baz=281,slow=5.2,SNR=3.3
YKA Yellowknife Ar 79.80 18 P **P 17 27 11.3 -0.3**
comp=Z,1.3nm,0.8s,mb3.9,baz=321,slow=4.3,SNR=6.2

CASC 05 17:26:13.8±2.4, 12°.83N×88°.02W, h71km±16km, MD3.9, ML2.6, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.48**	**22**	*e*P	Pn	17 26 26.5	-0.1
CNCH				*e*S	Sn	17 26 37.7	+1.8
VSM	**San Miguel**	**0.64**	**337**	*e*P	Pn	17 26 28.3	+0.1
BLLM	**Bellamira**	**0.64**	**341**	*e*P	Pn	17 26 28.1	0.0
BLLM				*e*S	Sn	17 26 39.9	+1.2
CAHU	**Cacacuatique**	**0.95**	**349**	*e*P	Pn	17 26 32.1	+0.4
SNVI	**San Vicente**	**1.11**	**314**	*e*P	Pn	17 26 33.5	-0.2
SNVI				*e*S	Sn	17 26 49.7	+1.0
LFRS	**El Faro**	**1.28**	**308**	*e*P	Pn	17 26 35.8	-0.2
LBRS	**Las Brisas**	**1.34**	**312**	*e*P	Pn	17 26 37.0	+0.3
TGUH	**Tegucigalpa,Un**	**1.42**	**31**	*e*P	Pn	17 26 38.7	+1.0
TGUH				*e*S	Sn	17 26 57.8	+2.0
MOMN	**Momotombo**	**1.50**	**106**	*e*P	Pn	17 26 38.3	-0.5
BOQS	**Boqueron**	**1.52**	**306**	*e*P	Pn	17 26 39.5	+0.4
BOQS				*e*S	Sn	17 27 00.8	+2.6
COPN	**Copaltepe**	**1.54**	**115**	*e*P	Pn	17 26 38.2	-1.1
CSAN		**1.69**	**112**	*e*P	Pn	17 26 40.8	-0.6
SBLS	**San Blas**	**1.85**	**303**	*e*P	Pn	17 26 44.0	+0.5
SNJE	**San Jose**	**1.85**	**304**	*e*P	Pn	17 26 43.7	+0.1
HUEN		**1.87**	**105**	*e*P	Pn	17 26 43.2	-0.5
RTR	**El Retiro**	**1.90**	**304**	*e*P	Pn	17 26 45.0	+0.8
TICN	**Ticuantepe**	**1.92**	**114**	*e*P	Pn	17 26 43.8	-0.6
RBDL	**Robledal**	**2.06**	**308**	*e*P	Pn	17 26 46.8	+0.5
BOAB	**BOACO BROADBAN**	**2.33**	**99**	*e*P	Pn	17 26 47.2	-2.7
BOAB				*e*S	Sn	17 27 17.7	+0.1
BOAB				AML	AML	17 27 19.8	
	comp=N,21nm,0.3s						
VCR	**Vista de Mar**	**3.57**	**139**	*e*P	Pn	17 27 06.9	+0.1
JCR	**Jicaral**	**4.11**	**136**	*e*P	Pn	17 27 15.5	+1.2
CGA2	**Cerro Gallo 2**	**4.47**	**128**	*e*P	Pn	17 27 22.3	+3.2
PRS1	**Puriscal**	**4.61**	**128**	*e*P	Pn	17 27 23.8	+2.8
LAJ	**Bijagual**	**4.83**	**127**	*e*P	Pn	17 27 24.6	+0.6
URSC	**Urasca**	**5.12**	**125**‖	*e*P	Pn	17 27 31.2	+3.3
BUS	**Buena Vista**	**5.30**	**127**‖	*e*P	Pn	17 27 32.4	+2.0

JMA 05 17:56:04.3±0.2, 29°.16N×127°.88E, h212km, M3.5, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.66**	**145**	P	Pn	17 56 40.6	+0.1
JTK				S	S	17 57 08.9	+0.2
JAM	**Amami Oshima**	**1.69**	**116**	P	Pn	17 56 40.7	0.0
JAM				S	S	17 57 08.1	-1.0
JZK	**Kikaishima**	**2.02**	**114**	P	Pn	17 56 45.0	+1.1
JZK				*e*S	S	17 57 15.8	+1.0
JIH	**Iheya**	**2.12**	**178**	P	Pn	17 56 45.1	+0.1
JIH				S	S	17 57 16.9	+0.2
JOW	**Kunigami**	**2.34**	**171**	P	Pn	17 56 47.2	-0.1
JOW				S	S	17 57 19.9	-1.0
JAGN	**Aguni-jima**	**2.62**	**193**	P	Pn	17 56 50.5	+0.2
JAGN				S	S	17 57 26.4	0.0
NAH1	**Naha**	**2.95**	**183**	S	S	17 57 31.9	-1.1
JKE	**Kume jima 2**	**2.98**	**199**	P	Pn	17 56 54.2	-0.2
JKE				*e*S	S	17 57 33.0	-0.7
JJT2	**Tamagusuku 2**	**3.01**	**182**	P	Pn	17 56 55.0	+0.2
JJT2				*e*S	S	17 57 34.2	-0.1
JTN	**Tanegashima 3**	**3.08**	**60**	P	Pn	17 56 54.8	-0.6
JTN				*e*S	S	17 57 32.5	-3.0
JTZ	**Takazaki**	**3.89**	**45**	P	Pn	17 57 04.9	-0.2
JTZ				*e*S	S	17 57 50.4	-2.6

MAN 05 18:18:34, 7°.20N×122°.06E, h15km, mb3.8, ML2.6, MS2.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZMPH	**Zamboanga City**	**0.24**	**179**‖	*i*P	Pg	18 18 41.1	+1.8
ZMPH				*i* S	Sg	18 18 44.7	+1.7
IPIL	**Ipil**	**0.77**	**41**	*e*P	Pg	18 18 49.0	-0.1
IPIL				*e*S	Sg	18 18 55.4	-3.9
PAGZ	**Pagadian**	**1.46**	**64**	*e*P	Pn	18 19 01.4	+1.6
PAGZ				*e*S	Sn	18 19 18.4	-0.3

MAN 05 18:20:27, 7°.40N×121°.96E, h33km, mb3.6, ML2.3, MS1.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZMPH	**Zamboanga City**	**0.45**	**167**‖	*i*P	Pb	18 20 38.6	+1.8
ZMPH				*i* S	Sb	18 20 44.3	+0.7
IPIL	**Ipil**	**0.72**	**57**	*e*P	Pn	18 20 42.3	+1.4
IPIL				*e*S	Sn	18 20 49.3	-1.5
PAGZ	**Pagadian**	**1.48**	**72**	*e*P	Pn	18 20 54.1	+2.7
PAGZ				*e*S	Sn	18 21 06.1	-3.5

IDC ***05*** *18:38:46.0±1.0, 0°.39S×98°.33E, h0km, mb4.3/12, mb1 4.4/13, mb1mx4.2/23, mbtmp4.3/13, ML4.6/1, MS3.8/3, Ms1 3.9/3, ms1mx3.4/29, Error ellipse: s-maj=39.8km s-min=14.0km az=54.0*

ISCJB ***05*** *18:38:50.0±1.0, 0°.46S±0°.05×98°.15E±0°.06, h50km±8km, mb4.5/37, MS4.0/10, Error ellipse: s-maj=10.5km s-min=6.9km az=151.3*

DJA ***05*** *18:38:52, 0°.45S×98°.32E, h22km, MLv4.5/5*

BJI ***05*** *18:38:52.7, 0°.66S×98°.17E, h92km, mB4.8/24, mb4.8/34*

NEIC ***05*** *18:38:54.6±2.1, 0°.31S×98°.37E, h66km±16km, mb4.6/16, Error ellipse: s-maj=17.8km s-min=9.9km az=224.0*

ISC 05 18:38:51.9±0.9, 0°.46S±0°.05×98°.17E±0°.06, h49km±8km, h97km±.6km: pP-P, n92, σ0°.94/96, mb4.5/37, MS4.0/10, 3C-3D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.26**	**133**	P	**Pn**	**18 39 12.1**	**-1.0**
MNSI	**Mandailing Nat**	**1.88**	**48**	P	**Pn**	**18 39 22.1**	**+0.5**
PPI	**Padang Panjang**	**2.22**	**90**	P	**Pn**	**18 39 25.9**	**-0.4**
PPI				S	**Sn**	**18 39 52.0**	**-0.6**
PDSI	**Padang**	**2.33**	**101**	P	**Pn**	**18 39 25.6**	**-2.2**
BKNI	**Bangkinang**	**2.97**	**75**	P	**Pn**	**18 39 44.4**	**+7.8**
SDSI	**Sungai Dareh**	**3.29**	**98**	P	**Pn**	**18 39 41.0**	**0.0**
KRJI	**Kerinci**	**3.67**	**116**	P	**Pn**	**18 39 47.5**	**+1.4**
KRJI				S	**Sn**	**18 40 29.5**	**+1.3**
FRIM	**Kepong**	**5.04**	**43**	P	**Pn**	**18 40 05.6**	**+0.6**
KSI	**Kapahiang**	**5.44**	**126**	P	**Pn**	**18 40 10.9**	**+0.4**
	5μm415nm,0.8s						
IPM	**Ipoh**	**5.67**	**30**	*e*Pn	**Pn**	**18 40 14.3**	**+0.6**
	30nm,0.5s						
KGM	**Kluang**	**5.70**	**64**	P	**Pn**	**18 40 14.4**	**+0.3**
MYKOM	**Kota Tinggi**	**6.10**	**69**	P	**Pn**	**18 40 20.0**	**+0.4**
MYKOM	**Kota Tinggi**	**6.10**	**69**	P	**Pn**	**18 40 19.8**	**+0.2**
	622nm50nm,0.6s						
KULM	**Kulim**	**6.22**	**23**	P	**Pn**	**18 40 21.0**	**-0.3**
KULM	**Kulim**	**6.22**	**23**	*e*Pn	**Pn**	**18 40 20.6**	**-0.7**
	54nm,1.0s						
KULM	**Kulim**	**6.22**	**23**	P	**Pn**	**18 40 21.4**	**+0.1**
	44nm,1.3s						
MDSI	**Maura Dua**	**7.21**	**124**	P	**Pn**	**18 40 34.0**	**-0.8**
	1μm69nm,0.7s						
KTGM	**Kuala Trenggan**	**7.59**	**41**	P	**Pn**	**18 40 40.4**	**+0.4**
KLSI		**7.78**	**123**	P	**Pn**	**18 40 42.5**	**-0.2**
SBUM	**Sibu**	**14.34**	**78**	P	**Pn**	**18 42 13.0**	**+0.8**
BTM	**Bintulu**	**15.34**	**76**	P	**Pn**	**18 42 25.8**	**+0.4**
CM31	**Chiang Mai Arr**	**18.81**	**2**	*e*P	**Pn**	**18 43 07.0**	**-1.5**
	2.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**18.81**	**2**	P	**Pn**	**18 43 06.8**	**-1.7**
	0.7nm,0.3s,baz=192,slow=11,SNR=41						
CMAR				LR	LR	18 51 04.3	
	comp=Z,219nm,18.1s,baz=185,slow=39						
PALK	**Pallekele**	**19.05**	**294**	*e*P	**Pn**	**18 43 15.5**	**+4.1**
KKM	**Kota Kinabalu**	**19.13**	**70**	P	**Pn**	**18 43 12.2**	**-0.3**
KKM	**Kota Kinabalu**	**19.13**	**70**	*e*P	**Pn**	**18 43 11.6**	**-0.9**
	29nm,0.9s						
CHTO	**Chiang Mai**	**19.17**	**2**	*e*P	**Pn**	**18 43 09.7**	**-3.1**
	2.8nm,0.6s						
SDKM	**Sandakan**	**19.94**	**72**	P	**Pn**	**18 43 20.3**	**-1.7**
TSM	**Tawau**	**20.24**	**76**	P	**P**	**18 43 23.6**	**+0.3**
MYLDM	**Lahad Datu**	**21.06**	**74**	P	**P**	**18 43 32.8**	**+0.6**
QIZ	**Qiongzhong**	**22.50**	**30**	P	**P**	**18 43 46.5**	**-1.0**
QIZ				S	**S**	**18 47 46.2**	**-5.4**
QIZ				LR	LR		
	comp=N,220nm,14.8s						
QIZ				LR	LR		
	comp=Z,250nm,13.8s,MS3.8						
KMI	**Kunming**	**25.81**	**10**	P	**P**	**18 44 21.8**	**+3.1**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
SHL	**Shillong**	**26.58**	**347**	*e*PKP	**P**	**18 44 26.5**	**+0.9**
GYA	**Guiyang**	**27.98**	**16**	P	**P**	**18 44 38.7**	**+0.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**30.73**	**348**	P	**P**	**18 44 59.1**	**-3.4**
LSA	**Lhasa**	**30.73**	**348**	*e*P	**P**	**18 45 03.4**	**+0.9**
	comp=Z,8.2nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**32.18**	**125**	P	**P**	**18 45 14.8**	**-0.7**
	comp=Z,2.6nm,0.8s,mb4.1,baz=299,slow=6.4,SNR=6.2						
ENH	**Enshi**	**32.40**	**18**	*e*P	**P**	**18 45 16.8**	**-0.5**
	comp=Z,19nm,0.6s,mb5.1						
SSLB	**Suanglung**	**32.71**	**41**	*e*P	**P**	**18 45 20.3**	**+0.2**
	comp=Z,11nm,0.9s,mb4.8						
XAN	**Xi'an**	**35.77**	**15**	P	**P**	**18 45 46.1**	**-0.3**
XAN				pP	pP	18 46 07.9	+8.7
XAN				S	**S**	**18 51 11.0**	**-9.2**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
XAN				pmax	pmax		
	comp=Z,13nm,5.7s						
XAN				LR	LR		
	comp=N,150nm,15.2s,MS3.9						
XAN				LR	LR		
	comp=E,47nm,15.9s,MS3.9						
XAN				LR	LR		
	comp=Z,94nm,15.5s,MS3.7						
LZH	**Lanzhou**	**36.74**	**8**	*e*P	**P**	**18 45 54.0**	**-0.6**
LZH				pP	pP	18 46 16.5	+9.0
LZH				sP	sP	18 46 28.3	+15
LZH				PP	PP	18 47 19.6	+0.5
LZH				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.8						
LZH				pmax	pmax		
	comp=Z,65nm,4.8s						
LZH				LR	LR		
	comp=E,310nm,13.2s						
LZH				LR	LR		
	comp=Z,430nm,17.6s,MS4.3						
NJ2	**Nanjing**	**37.79**	**29**	*e*P	**P**	**18 46 03.6**	**0.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
GTA	**Gaotai**	**39.70**	**2**	*e*P	**P**	**18 46 19.9**	**+0.4**
GTA				pP	pP	18 46 42.1	+10
GTA				sP	sP	18 46 53.4	+15
GTA				PP	PP	18 47 55.1	+3.6
GTA				S	**S**	**18 52 11.6**	**-8.1**
GTA				sS	sS	18 52 53.3	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
GTA				pmax	pmax		
	comp=Z,50nm,5.2s						
GTA				LR	LR		
	comp=N,180nm,14.0s,MS4.1						
GTA				LR	LR		
	comp=E,91nm,12.8s,MS4.1						
GTA				LR	LR		
	comp=Z,220nm,15.2s,MS4.1						
WRA	**Warramunga Arr**	**40.34**	**121**	P	**P**	**18 46 24.4**	**-0.7**
	comp=Z,4.0nm,0.7s,mb4.2,baz=302,slow=8.9,SNR=32						
ASAR	**Alice Springs**	**41.63**	**126**	P	**P**	**18 46 35.5**	**-0.1**
	comp=Z,3.2nm,0.4s,mb4.3,baz=296,slow=8.0,SNR=94						
HHC	**Hu-ho-hao-te**	**42.88**	**15**	*e*P	**P**	**18 46 46.6**	**+1.0**
HHC				pP	pP	18 47 09.4	+11
HHC				sP	sP	18 47 21.4	+17
HHC				PP	PP	18 48 30.2	+4.3
HHC				PcP	PcP	18 48 39.4	+3.6
HHC				ScP	ScP	18 52 19.2	-3.8
HHC				S	**S**	**18 53 00.1**	**-6.7**
HHC				sS	sS	18 53 39.9	+11
HHC				ScS	ScS	18 56 36.3	-5.9
HHC				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,98nm,7.5s						
HHC				LR	LR		
	comp=N,310nm,16.7s,MS4.4						
HHC				LR	LR		
	comp=E,220nm,16.8s,MS4.4						
HHC				LR	LR		
	comp=Z,230nm,15.8s,MS4.2						
BJT	**Baijiatuau**	**43.51**	**20**	*e*P	**P**	**18 46 52.0**	**+1.4**
	comp=Z,17nm,0.8s,mb4.8						
BJI	**Beijing**	**43.53**	**20**	P	**P**	**18 46 51.3**	**+0.5**
BJI				S	**S**	**18 53 09.4**	**-6.9**
BJI				SS	SS	18 56 26.1	-6.4
BJI				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
BJI				pmax	pmax		
	comp=Z,59nm,3.8s						
BJI				LR	LR		
	comp=N,160nm,16.5s,MS4.1						
BJI				LR	LR		
	comp=E,140nm,16.5s,MS4.1						
BJI				LR	LR		
	comp=Z,46nm,18.5s,MS3.4						

WMQ	**Urumqi**	**45.07**	**349**	*e*P	**P**	**18 47 04.0**	**+0.9**
WMQ				pP	pP	18 47 27.0	+11
WMQ				sP	sP	18 47 39.0	+17
WMQ				PP	PP	18 48 50.0	+0.8
WMQ				S	**S**	**18 53 31.0**	**-7.6**
WMQ				sS	sS	18 54 11.0	+10
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,97nm,4.0s						
WMQ				LR	LR		
	comp=N,47nm,16.0s,MS3.8						
WMQ				LR	LR		
	comp=E,65nm,16.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,49nm,16.0s,MS3.5						
KSRS	**Korea Array**	**46.68**	**33**	P	**P**	**18 47 15.7**	**-0.2**
	comp=Z,3.8nm,0.9s,mb4.3,baz=222,slow=9.3,SNR=14						
TKM2	**Tokmak 2**	**47.71**	**338**	*e*P	**P**	**18 47 23.8**	**0.0**
	comp=Z,3.8nm,1.0s,mb4.4						
TKM2				*e*		18 47 31.4	
AAK	**Ala-Archa**	**47.90**	**336**	P	**P**	**18 47 26.5**	**+1.2**
	comp=Z,1.0nm,0.3s,mb4.3,baz=292,slow=4.5,SNR=2.7						
AAK				LR	LR	19 08 46.3	
	comp=Z,70nm,19.0s,MS3.7,baz=205,slow=38						
AAK	**Ala-Archa**	**47.90**	**336**	P	**P**	**18 47 26.5**	**+1.2**
EKS2	**Erkin-Say**	**48.21**	**336**	*e*P	**P**	**18 47 28.2**	**+0.5**
EKS2				*e*	pP	18 47 36.4	-4.6
SONM	**Songino Array**	**48.63**	**7**	P	**P**	**18 47 31.7**	**+0.9**
	comp=Z,2.2nm,0.3s,mb4.6,baz=189,slow=9.7,SNR=28						
ULN	**Ulaanbaatar**	**48.75**	**8**	*e*P	**P**	**18 47 31.5**	**-0.2**
	comp=Z,5.6nm,0.9s,mb4.6						
MK31	**Makanchi Array**	**49.08**	**346**	*e*P	**P**	**18 47 34.4**	**+0.1**
MK31				*e*		18 47 41.2	
MKAR	**Makanchi Array**	**49.08**	**346**	P	**P**	**18 47 34.5**	**+0.2**
	comp=Z,8.4nm,0.7s,mb4.9,baz=158,slow=9.0,SNR=55						
CN2	**Changchun**	**50.35**	**26**	*e*P	**P**	**18 47 43.4**	**-0.6**
CN2				*e*pP	pP	18 48 06.6	+9.2
CN2				*e*S	**S**	**18 54 44.1**	**-9.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=E,200nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=Z,300nm,14.0s,MS4.5						
STKA	**Stephens Creek**	**51.53**	**132**	P	**P**	**18 47 54.0**	**+0.9**
	comp=Z,2.7nm,0.6s,mb4.4,baz=314,slow=6.2,SNR=13						
STKA				LR	LR	19 11 42.2	
	comp=Z,200nm,21.4s,MS4.1,baz=206,slow=38						
MDJ	**Mudanjiang**	**52.85**	**28**	P	**P**	**18 48 03.1**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,42nm,4.4s						
HIA	**Hailar**	**52.90**	**18**	*e*P	**P**	**18 48 03.9**	**+0.9**
HIA				*e*		18 48 11.4	
ZAA0	**Zalesovo Array**	**55.34**	**350**	*e*P	**P**	**18 48 20.0**	**-0.6**
ZAA0				*e*		18 48 27.6	
ZALV	**Zalesovo Beam**	**55.34**	**350**	P	**P**	**18 48 20.6**	**-0.1**
	comp=Z,6.1nm,0.4s,mb5.0,baz=183,slow=6.0,SNR=40						
BRVK	**Borovoye**	**58.19**	**341**	*e*P	**P**	**18 48 39.7**	**-1.1**
	comp=Z,6.2nm,1.0s,mb4.6						
ABKAR	**Akbulak array**	**59.42**	**332**	*e*P	**P**	**18 48 47.9**	**-1.6**
	comp=Z,4.4nm,0.8s,mb4.5						
ABKAR				*e*	pP	18 48 56.4	-6.8
YSS	**Yuzh-Sakhalins**	**61.18**	**33**	*e*P	**P**	**18 49 01.8**	**+0.2**
ARU	**Arti**	**65.08**	**337**	*e*P	**P**	**18 49 25.5**	**-1.8**
	comp=Z,1.1nm,0.5s,mb4.1						
ARU				*e*	pP	18 49 34.3	-6.7
KIV	**Kislovodsk**	**66.19**	**319**	*e*P	**P**	**18 49 34.6**	**-0.1**
	comp=Z,12nm,1.1s,mb4.8						
KIV				*e*		18 49 42.1	
CASY	**Casey**	**66.27**	**175**	*e*P	pP	18 49 45.2	-3.4
	comp=Z,3.6nm,1.0s						
YAK	**Yakutsk**	**66.74**	**16**	*e*P	**P**	**18 49 37.0**	**-0.8**
	comp=Z,33nm,0.9s,mb5.4						
YAK				*e*		18 49 44.8	
MALT	**Malatya**	**66.96**	**312**	*e*P	**P**	**18 49 45.5**	**+5.8**
	comp=Z,1.7nm,0.7s,mb4.2						
MALT	**Malatya**	**66.96**	**312**	⇑*i*P	**P**	**18 49 48.7**	**+9.0**
BRTR	**Keskin Array B**	**70.94**	**313**	P	**P**	**18 50 07.9**	**+3.5**
	comp=Z,1.7nm,0.8s,mb4.0,baz=135,slow=7.8,SNR=11						
VRI	**Vrincioaia**	**77.49**	**317**	⇓*i*P	**P**	**18 50 42.2**	**-0.2**
TESR		**77.69**	**318**	⇑*i*P	**P**	**18 50 43.5**	**-0.1**
MLR	**Muntele Rosu**	**77.93**	**317**	⇑*i*P	**P**	**18 50 45.3**	**+0.4**
BURAR	**Bucovina Array**	**78.90**	**319**	⇓*i*P	**P**	**18 50 51.0**	**+0.8**
BUR08	**Bucovina Ar. S**	**78.92**	**319**	*e*P	**P**	**18 50 50.4**	**+0.1**
BUR08				*e*	pP	18 50 59.1	-5.3
VTS	**Vitosha**	**79.27**	**313**	⇓*i*P	**P**	**18 50 51.0**	**-1.3**
JOF	**Joensuu**	**80.05**	**335**	*e*p	**P**	**18 50 52.9**	**-3.2**
	comp=Z,2.0nm,0.8s,mb4.1						
KOLS	**Kolonicke sedl**	**81.10**	**320**	*e*P	**P**	**18 51 03.1**	**+1.0**
KOLS				*e*PcP	PcP	18 51 11.1	+2.8
KOLS	**Kolonicke sedl**	**81.10**	**320**	*e*P	**P**	**18 51 03.1**	**+1.0**
KOLS				*e*PCP	PcP	18 51 11.1	+2.8
FINES	**FINESS Array B**	**81.91**	**332**	P	**P**	**18 51 05.6**	**-0.4**
	comp=Z,1.6nm,0.8s,mb4.0,baz=46,slow=5.5,SNR=6.6						
KAF	**Kangasniemi**	**81.99**	**333**	*e*p	**P**	**18 51 05.2**	**-1.3**
	comp=Z,2.6nm,0.7s,mb4.3						
KECS	**Kecovo**	**82.19**	**319**	*e*PCP	PcP	18 51 16.1	+3.0
VYHS	**Vyhne**	**83.27**	**319**	*e*P	**P**	**18 51 16.7**	**+3.3**
VYHS	**Vyhne**	**83.27**	**319**	*e*P	**P**	**18 51 16.7**	**+3.3**
ARCES	**ARCESS Array B**	**84.41**	**340**	P	**P**	**18 51 18.7**	**-0.1**
	comp=Z,2.7nm,0.9s,mb4.4,baz=101,slow=4.9,SNR=6.8						
KDAK	**Kodiak Island**	**100.56**	**31**	*e*Pdif	Pdif	18 52 35.8	+1.5
TXAR	**Lajitas Array**	**144.52**	**34**	PKP	PKPdf	18 58 23.4	-0.3
	comp=Z,1.1nm,0.5s,baz=170,slow=0.5,SNR=29						
TXAR	**Lajitas Array**	**144.52**	**34**	PKP	PKPdf	18 58 23.4	-0.3

KRSC ***05*** *18:48:39.4±2.6, 52.°07N×171.°82E, h14km±15km, ML4.2*
IDC ***05*** *18:48:41.1±0.7, 52.°73N×172.°19E, h0km, mb4.1/25, mb1 4.2/26, mb1mx4.2/31, mbtmp4.1/26, ML4.1/1, MS3.6/3, Ms1 3.6/3, ms1mx2.8/31, Error ellipse: s-maj=22.0km s-min=11.7km az=165.0*
MOS ***05*** *18:48:43.9±1.2, 52.°67N×172.°14E, h33km, mb4.5/31, Error ellipse: s-maj=9.8km s-min=7.3km az=111.0*
BJI ***05*** *18:48:43.7, 52.°27N×171.°76E, h24km, mB4.8/11, mb4.6/22, Ms4.3/8, Ms7 4.1/7*
ISCJB ***05*** *18:48:44.6±0.6, 52.°71N±0.°06×172.°09E±0.°04, h38km±5km, mb4.3/56, MS3.9/7, Error ellipse: s-maj=10.5km s-min=3.8km az=3.8*
NEIC ***05*** *18:48:46.1±0.8, 52.°70N×172.°15E, h35km±7km, mb4.4/24, Error ellipse: s-maj=10.7km s-min=4.6km az=174.0*
ISC 05 18:48:46.8±0.6**, 52.°68N**±0.°07×**172.°17E**±0.°04**, h41**km±4km**,**
h9km±5.0km**:pP-P, n133,** σ1§**15**/146**, mb4.3**/56**, MS3.9**/7**,**
Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.18**	**87**	P	**Pn**	**18 49 05.0**	**-1.7**
SMY				S	**Sn**	**18 49 20.4**	**-1.1**
BKI	**Bering**	**4.45**	**307**	*e*P	**Pn**	**18 49 53.0**	**+1.4**
BKI				*i* S	**Sn**	**18 50 47.1**	**+5.1**
AMKA	**Amchitka**	**4.60**	**104**	P	**Pn**	**18 49 54.7**	**+1.1**
AMKA				S	**Sn**	**18 50 49.6**	**+3.9**
MKZ	**Mys Kozlova**	**6.49**	**291**	*e*P	**Pn**	**18 50 17.5**	**-2.1**
MKZ				*i* S	**Sn**	**18 51 29.4**	**-2.8**
KBTR	**Krutoberegovo**	**6.50**	**307**	*e*P	**Pn**	**18 50 19.7**	**0.0**
KBTR				*i* S	**Sn**	**18 51 33.3**	**+0.9**
SPN	**Mys Shipunski**	**7.36**	**278**	*e*P	**Pn**	**18 50 28.6**	**-2.9**
SPN				*i* S	**Sn**	**18 51 47.1**	**-6.6**
KLY	**Klyuchi**	**7.63**	**303**	*e*P	**Pn**	**18 50 35.3**	**+0.1**
KRSR	**Krestovskiy**	**7.63**	**302**	*e*P	**Pn**	**18 50 36.4**	**+1.1**
KPT	**Kopyto**	**7.72**	**300**	*e*P	**Pn**	**18 50 38.0**	**+1.6**
KOZR	**Kozyr**	**7.92**	**300**	P	**Pn**	**18 50 40.6**	**+1.3**
KOZ	**Kozyrevsk**	**7.94**	**300**	*e*P	**Pn**	**18 50 40.6**	**+1.2**
SRDR	**Sredinnyy**	**8.11**	**302**	*e*P	**Pn**	**18 50 43.5**	**+1.7**
AVH	**Avacha**	**8.13**	**279**	*e*P	**Pn**	**18 50 40.7**	**-1.4**
PET	**Petropavlovsk**	**8.19**	**278**	*e*P	**Pn**	**18 50 41.1**	**-1.8**
PET				*i* S	**Sn**	**18 52 09.4**	**-4.6**
PET	**Petropavlovsk**	**8.19**	**278**	*e*P	**Pn**	**18 50 35.0**	**-7.9**
PET	**Petropavlovsk**	**8.19**	**278**	*e*Pn	**Pn**	**18 50 42.0**	**-1.0**
PET				*e*Sn	**Sn**	**18 52 05.9**	**-8.2**
GNL	**Ganaly**	**8.61**	**282**	*e*P	**Pn**	**18 50 48.3**	**-0.3**
PETK	**Petropavlovsk-**	**8.76**	**279**	Pn	**Pn**	**18 50 50.2**	**-0.5**
	2.1nm,0.3s,baz=99,slow=19,SNR=22						
PETK				Sn	**Sn**	**18 52 23.9**	**-4.1**
	0.6nm,0.3s,baz=14,slow=31,SNR=3.0						
PETK	**Petropavlovsk-**	**8.76**	**279**	P	**Pn**	**18 50 50.2**	**-0.5**
PETK						18 52 23.9	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax			
	comp=N,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**8.76**	**279**	Pn	**Pn**	**18 50 50.2**	**-0.6**
PETK				Sn	**Sn**	**18 52 23.9**	**-4.1**
SKR	**Severo-Kuril's**	**10.17**	**265**	*e*P	**Pn**	**18 51 18.5**	**+8.5**
SKR				*e*		18 52 55.0	
NIKO	**Nikolski**	**11.49**	**81**	Pn	**Pn**	**18 51 30.3**	**+2.3**
UNV	**Unalaska Valle**	**12.82**	**76**	*e*Pn	**Pn**	**18 51 48.4**	**+2.2**
	comp=N,10nm,0.9s						
GAMB	**Gambell**	**13.94**	**31**	Pn	**Pn**	**18 52 01.5**	**+0.1**
TTA	**Tatalina**	**19.60**	**46**	*e*P	**Pn**	**18 53 11.5**	**-1.2**
TTA				pmax	pmax		
	comp=Z,12nm,1.2s						
TTA	**Tatalina**	**19.60**	**46**	*e*P	**Pn**	**18 53 11.5**	**-1.2**
	comp=Z,12nm,1.2s						
OHAK	**Old Harbor**	**20.21**	**63**	*e*P	**P**	**18 53 16.4**	**-1.4**
	comp=Z,6.2nm,0.4s						
KDAK	**Kodiak Island**	**20.58**	**62**	P	**P**	**18 53 21.2**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=261,slow=3.3,SNR=12						
KDAK	**Kodiak Island**	**20.58**	**62**	P	**P**	**18 53 21.2**	**-0.6**
KDAK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KDAK	**Kodiak Island**	**20.58**	**62**	*e*P	**P**	**18 53 20.9**	**-0.9**
	comp=Z,20nm,1.1s						
RSO	**Redoubt South**	**20.62**	**54**	*e*P	**P**	**18 53 23.2**	**+1.0**
PPLA	**Purkeypile**	**21.28**	**47**	*e*P	**P**	**18 53 30.2**	**+0.9**
	comp=Z,22nm,1.3s,mb4.3						
ASAJ	**Asahikawa**	**21.30**	**258**	P	**P**	**18 53 30.8**	**+1.1**
	comp=Z,5.6nm,0.9s,mb3.9,baz=16,slow=10,SNR=7.0						
ASAJ	**Asahikawa**	**21.30**	**258**	P	**P**	**18 53 30.8**	**+1.2**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RC01	**Rabbit Creek A**	**22.16**	**53**	P	**P**	**18 53 34.0**	**-4.7**
TRF	**Thorofare Moun**	**22.24**	**46**	*e*P	**P**	**18 53 39.9**	**+0.4**
	comp=Z,8.2nm,0.9s,mb4.2						
MCK	**McKinley**	**22.89**	**46**	*e*P	**P**	**18 53 44.1**	**-2.3**
MCK				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb4.5						
MCK	**McKinley**	**22.89**	**46**	*e*P	**P**	**18 53 44.1**	**-2.3**
	comp=Z,5.6nm,0.3s,mb4.5						
SML	**Sawmill**	**22.89**	**51**	*e*P	**P**	**18 53 46.4**	**-0.1**
SML				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
SML	**Sawmill**	**22.89**	**51**	*e*P	**P**	**18 53 46.4**	**-0.1**
	comp=Z,2.6nm,0.7s,mb3.8						
COLA	**College**	**23.58**	**43**	*e*P	**P**	**18 53 53.0**	**-0.3**
COLA				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.6						
COLA	**College**	**23.58**	**43**	*e*P	**P**	**18 53 53.0**	**-0.3**
	comp=Z,24nm,1.0s,mb4.6						
ILAR	**Eielson Array**	**23.96**	**44**	P	**P**	**18 53 56.1**	**-0.7**
	comp=Z,11nm,0.9s,mb4.2,baz=251,slow=8.2,SNR=80						
ILAR				LR	LR	19 03 35.9	
	comp=Z,108nm,18.6s,MS3.4,baz=296,slow=37						
ILAR	**Eielson Array**	**23.96**	**44**	P	**P**	**18 53 56.1**	**-0.7**
ILAR				pmax	pmax		
	comp=Z,11nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,109nm,18.7s						
YAK	**Yakutsk**	**24.32**	**309**	*e*P	**P**	**18 53 58.6**	**-1.5**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
YAK	**Yakutsk**	**24.32**	**309**	*e*P	**P**	**18 53 58.6**	**-1.5**
	comp=Z,10nm,0.6s,mb4.4						
PAX	**Paxson**	**24.33**	**48**	*e*P	**P**	**18 53 59.8**	**-0.4**
PAX				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.3						
PAX	**Paxson**	**24.33**	**48**	*e*P	**P**	**18 53 59.8**	**-0.4**
	comp=Z,15nm,1.2s,mb4.3						
KLR	**Kul'dur**	**25.45**	**279**	*e*P	**P**	**18 54 07.2**	**-3.3**
EGAK	**Eagle**	**26.39**	**45**	*e*P	**P**	**18 54 17.9**	**-0.9**
	comp=Z,7.1nm,0.8s,mb4.2						
MDJ	**Mudanjiang**	**28.90**	**271**	P	**P**	**18 54 40.2**	**-1.3**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,34nm,7.9s						
INK	**Inuvik**	**29.72**	**38**	P	**P**	**18 54 48.2**	**-0.3**
	comp=Z,1.6nm,0.5s,mb4.0,baz=296,slow=8.0,SNR=6.4						
INK	**Inuvik**	**29.72**	**38**	*e*P	**P**	**18 54 47.4**	**-1.1**
INK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
INK	**Inuvik**	**29.72**	**38**	P	**P**	**18 54 48.2**	**-0.3**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**29.72**	**38**	*e*P	**P**	**18 54 47.4**	**-1.1**
	comp=Z,10nm,1.3s,mb4.4						
CN2	**Changchun**	**31.85**	**273**	*e*P	**P**	**18 55 05.4**	**-2.2**
CN2				*e*S	**S**	**19 00 14.1**	**-1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.1						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.1						
CN2				LR	LR		
	comp=Z,300nm,14.0s,MS4.1						
KSRS	**Korea Array**	**34.16**	**261**	P	**P**	**18 55 29.7**	**+1.9**
	comp=Z,0.4nm,0.4s,mb3.7,baz=61,slow=10,SNR=5.1						
YKA	**Yellowknife Ar**	**38.36**	**46**	P	**P**	**18 56 03.2**	**-0.1**
	comp=Z,1.7nm,0.3s,mb4.2,baz=290,slow=7.8,SNR=15						
YKA	**Yellowknife Ar**	**38.36**	**46**	P	**P**	**18 56 03.2**	**-0.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
YKA	**Yellowknife Ar**	**38.36**	**46**	P	**P**	**18 56 03.2**	**-0.1**
BJI	**Beijing**	**39.67**	**274**	P	**P**	**18 56 13.2**	**-1.3**
BJI				S	**S**	**19 02 16.6**	**+1.8**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.6						
BJI				pmax	pmax		
	comp=Z,57nm,4.3s						
BJI				LR	LR		
	comp=N,110nm,11.6s,MS4.1						
BJI				LR	LR		
	comp=E,130nm,13.0s,MS4.1						
BJI				LR	LR		
	comp=Z,80nm,17.7s,MS3.6						
ULN	**Ulaanbaatar**	**40.62**	**290**	*e*P	**P**	**18 56 20.6**	**-1.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.0						
ULN	**Ulaanbaatar**	**40.62**	**290**	*e*P	**P**	**18 56 20.6**	**-1.7**
	comp=Z,4.4nm,1.1s,mb4.0						
SONM	**Songino Array**	**41.01**	**291**	P	**P**	**18 56 26.2**	**+0.7**
	comp=Z,1.3nm,0.5s,mb3.8,baz=62,slow=7.6,SNR=16						
SONM				LR	LR	19 15 02.7	
	comp=Z,86nm,20.6s,MS3.6,baz=11,slow=39						
SONM	**Songino Array**	**41.01**	**291**	P	**P**	**18 56 26.2**	**+0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,86nm,20.6s						
EDM	**Edmonton**	**42.96**	**58**	*e*P	**P**	**18 56 39.3**	**-2.1**
WALA	**Waterton Lakes**	**44.90**	**64**	*e*P	**P**	**18 56 57.3**	**+0.4**
	comp=Z,0.3nm,1.0s,mb3.1						
BOZ	**Bozeman (W)**	**48.15**	**66**	*e*P	**P**	**18 57 22.4**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BOZ	**Bozeman (W)**	**48.15**	**66**	*e*P	**P**	**18 57 22.4**	**0.0**
	comp=Z,2.2nm,0.7s,mb4.3						
NVAR	**Mina Array Bea**	**48.83**	**78**	P	**P**	**18 57 29.0**	**+1.2**
	comp=Z,1.0nm,1.0s,mb3.8,baz=297,slow=6.7,SNR=2.8						
ZALV	**Zalesovo Beam**	**48.97**	**308**	P	**P**	**18 57 29.6**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.8,baz=27,slow=20,SNR=2.9						
ZALV				LR	LR	19 20 06.8	
	comp=Z,63nm,19.1s,MS3.6,baz=245,slow=38						
NVS	**Novosibirsk**	**49.18**	**310**	*e*P	**P**	**18 57 28.1**	**-2.1**
LZH	**Lanzhou**	**49.66**	**279**	*e*P	**P**	**18 57 36.1**	**+2.0**
LZH				pP	pP	18 57 40.6	-5.2
LZH				sP	sP	18 57 43.2	-7.3
LZH				PP	PP	18 59 31.5	+2.9
LZH				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
LZH				pmax	pmax		
	comp=Z,67nm,5.4s						
LZH				LR	LR		
	comp=E,340nm,13.5s						
LZH				LR	LR		
	comp=Z,450nm,17.8s,MS4.5						
GTA	**Gaotai**	**49.86**	**285**	P	**P**	**18 57 36.4**	**+0.7**
GTA				pP	pP	18 57 40.3	-7.0
GTA				PP	PP	18 59 33.8	+3.4
GTA				S	**S**	**19 04 46.4**	**+3.9**
GTA				sS	sS	19 04 56.8	-5.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
GTA				pmax	pmax		
	comp=Z,59nm,3.8s						
GTA				LR	LR		
	comp=N,120nm,14.9s,MS4.1						
GTA				LR	LR		
	comp=E,73nm,14.0s,MS4.1						
GTA				LR	LR		
	comp=Z,92nm,13.5s,MS4.0						
PDAR	**Pinedale Array**	**51.11**	**68**	P	**P**	**18 57 45.8**	**+0.7**
	comp=Z,2.0nm,0.8s,mb4.1,baz=316,slow=2.2,SNR=12						
ULM	**Lac du Bonnet**	**53.50**	**53**	P	**P**	**18 58 03.2**	**+0.6**
	comp=Z,1.3nm,0.3s,mb4.3,baz=316,slow=11,SNR=2.9						
ULM	**Lac du Bonnet**	**53.50**	**53**	P	**P**	**18 58 03.2**	**+0.6**
KURK	**Kurchatov**	**53.95**	**308**	*e*P	**P**	**18 58 05.2**	**-0.8**
KURK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
KURK	**Kurchatov**	**53.95**	**308**	*e*P	**P**	**18 58 05.2**	**-0.7**
	comp=Z,13nm,1.1s,mb4.8						
GYA	**Guiyang**	**54.70**	**268**	*e*P	**P**	**18 58 11.8**	**+0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
MKAR	**Makanchi Array**	**54.74**	**303**	P	**P**	**18 58 10.8**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.9,baz=56,slow=6.8,SNR=17						
MKAR	**Makanchi Array**	**54.74**	**303**	P	**P**	**18 58 10.9**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KEV	**Kevo**	**55.27**	**346**	*e*P	**P**	**18 58 16.0**	**+0.8**
ARCES	**ARCESS Array B**	**55.69**	**346**	P	**P**	**18 58 18.2**	**0.0**
	comp=Z,2.5nm,0.8s,mb4.3,baz=24,slow=9.0,SNR=5.8						
ARCES	**ARCESS Array B**	**55.69**	**346**	P	**P**	**18 58 18.2**	**0.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVAR	**Borovoye Array**	**56.14**	**315**	P	**P**	**18 58 21.3**	**-0.4**
	comp=Z,2.5nm,0.6s,mb4.4,baz=53,slow=7.6,SNR=23						
BVAR	**Borovoye Array**	**56.14**	**315**	P	**P**	**18 58 21.3**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**56.16**	**315**	*e*P	**P**	**18 58 21.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
BRVK	**Borovoye**	**56.16**	**315**	*e*P	**P**	**18 58 21.4**	**-0.5**
	comp=Z,3.3nm,0.5s,mb4.6						
KMI	**Kunming**	**58.07**	**270**	P	**P**	**18 58 37.9**	**+2.2**
KMI				pP	pP	18 58 42.3	-5.2
KMI				sP	sP	18 58 43.8	-8.5
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
JOF	**Joensuu**	**60.71**	**341**	*e*P	**P**	**18 58 52.3**	**-1.1**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.9						
MNTX	**Cornudas Mount**	**61.12**	**75**	*e*P	**P**	**18 58 56.5**	**-0.2**
	comp=Z,2.3nm,0.9s,mb4.3						
AAK	**Ala-Archa**	**61.62**	**304**	P	**P**	**18 59 00.4**	**+0.6**
	comp=Z,0.9nm,0.3s,mb4.4,baz=49,slow=2.9,SNR=4.6						
AAK	**Ala-Archa**	**61.62**	**304**	P	**P**	**18 59 00.4**	**+0.6**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
AAK	**Ala-Archa**	**61.62**	**304**	*e*P	**P**	**18 58 59.8**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.4						
SCHQ	**Schefferville**	**62.25**	**34**	P	**P**	**18 59 03.5**	**-0.3**
	comp=Z,7.7nm,1.1s,mb4.8,baz=297,slow=6.8,SNR=3.1						
KAF	**Kangasniemi**	**62.41**	**343**	*e*P	**P**	**18 59 03.8**	**-1.0**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6						
FINES	**FINESS Array B**	**63.07**	**343**	P	**P**	**18 59 09.3**	**+0.1**
	comp=Z,2.0nm,0.5s,mb4.5,baz=19,slow=8.1,SNR=13						
FINES	**FINESS Array B**	**63.07**	**343**	P	**P**	**18 59 09.4**	**+0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSH	**Kashi**	**63.13**	**300**	*e*P	**P**	**18 59 14.2**	**+4.2**
KSH				pmax	pmax		
	comp=Z,140nm,5.3s						
AKTK	**Aktyubinsk**	**63.22**	**319**	P	**P**	**18 59 10.6**	**+0.2**
AKTO	**Aktyubinsk**	**63.22**	**319**	P	**P**	**18 59 10.6**	**+0.2**
	comp=Z,2.8nm,0.5s,mb4.6,baz=51,slow=8.2,SNR=11						
AKTO	**Aktyubinsk**	**63.22**	**319**	P	**P**	**18 59 10.6**	**+0.2**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
KKAR	**Karatay Array**	**63.25**	**307**	P	**P**	**18 59 09.5**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1						
KKAR	**Karatay Array**	**63.25**	**307**	P	**P**	**18 59 09.5**	**-1.3**
	comp=Z,0.7nm,0.6s,mb4.0						
ABKAR	**Akbulak array**	**63.36**	**317**	*e*P	**P**	**18 59 11.1**	**-0.2**
	comp=Z,2.5nm,0.4s,mb4.7						
TXAR	**Lajitas Array**	**63.85**	**75**	P	**P**	**18 59 14.7**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.8,baz=307,slow=6.0,SNR=4.0						
CMAR	**Chiang Mai Arr**	**65.39**	**268**	P	**P**	**18 59 25.1**	**+0.1**
	comp=Z,1.1nm,0.9s,mb3.9,baz=26,slow=6.7,SNR=6.8						
CMAR	**Chiang Mai Arr**	**65.39**	**268**	P	**P**	**18 59 25.1**	**+0.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NB2	**NORSAR Subarra**	**65.61**	**350**	P	**P**	**18 59 25.9**	**0.0**
	comp=Z,1.8nm,0.6s,mb4.3,baz=12,slow=6.5						
NOA	**NORSAR Array B**	**65.61**	**350**	P	**P**	**18 59 26.1**	**+0.2**
	comp=Z,2.8nm,0.6s,mb4.5,baz=12,slow=6.5,SNR=18						
NOA	**NORSAR Array B**	**65.61**	**350**	P	**P**	**18 59 26.1**	**+0.2**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VRHR	**Novokhopersk**	**68.52**	**329**	*e*P	**P**	**18 59 44.4**	**-0.1**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.5s						
VSR	**Storozhevoye**	**69.17**	**331**	*e*P	**P**	**18 59 49.2**	**+0.7**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
VSR				pmax	pmax		
	comp=N,20nm,1.2s						
VSR				pmax	pmax		
	comp=E,9.0nm,0.6s						
VORD	**Divnogorie**	**69.35**	**330**	*e*P	**P**	**18 59 50.2**	**+0.5**
VORD				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
VORD				pmax	pmax		
	comp=N,10.0nm,0.8s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.9s						
AKASG	**Malin Array Be**	**72.35**	**336**	P	**P**	**19 00 07.7**	**-0.2**
	comp=E,1.9nm,0.5s,mb4.3,baz=25,slow=5.8,SNR=6.7						
AKASG	**Malin Array Be**	**72.35**	**336**	P	**P**	**19 00 07.7**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KOLS	**Kolonicke sedl**	**75.58**	**340**	*e*P	**P**	**19 00 28.1**	**+1.3**
KOLS				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
KOLS	**Kolonicke sedl**	**75.58**	**340**	*e*P	**P**	**19 00 28.1**	**+1.3**
	comp=Z,5.4nm,1.2s,mb4.3						
CRVS	**Cervenica-Dubn**	**75.78**	**341**	*e*P	**P**	**19 00 29.1**	**+1.2**
CRVS				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
CRVS	**Cervenica-Dubn**	**75.78**	**341**	*e*P	**P**	**19 00 29.1**	**+1.2**
	comp=Z,10.0nm,1.5s,mb4.5						
KECS	**Kecovo**	**76.37**	**341**	*e*P	**P**	**19 00 31.9**	**+0.6**
KECS				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
KECS	**Kecovo**	**76.37**	**341**	*e*P	**P**	**19 00 31.9**	**+0.6**
	comp=Z,2.0nm,1.0s,mb4.0						
VYHS	**Vyhne**	**76.68**	**342**	*e*P	**P**	**19 00 34.7**	**+1.7**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
VYHS	**Vyhne**	**76.68**	**342**	*e*P	**P**	**19 00 34.7**	**+1.7**
	comp=Z,4.8nm,1.4s,mb4.2						
KHC	**Kasperske Hory**	**76.95**	**346**	*e*P	**P**	**19 00 36.0**	**+1.5**
KHC	**Kasperske Hory**	**76.95**	**346**	*e*P	**P**	**19 00 36.0**	**+1.5**
WRA	**Warramunga Arr**	**79.43**	**216**	P	**P**	**19 00 48.4**	**-0.1**
	comp=Z,0.6nm,1.0s,mb3.5,baz=62,slow=9.2,SNR=4.3						
WRA	**Warramunga Arr**	**79.43**	**216**	P	**P**	**19 00 48.4**	**-0.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRTR	**Keskin Array B**	**81.19**	**329**	P	**P**	**19 00 58.1**	**+0.2**
	comp=Z,2.5nm,0.9s,mb4.2,baz=48,slow=3.7,SNR=14						
BRTR	**Keskin Array B**	**81.19**	**329**	P	**P**	**19 00 58.1**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAR	**Alice Springs**	**83.01**	**215**	P	**P**	**19 01 07.8**	**+0.4**
	comp=Z,0.6nm,1.0s,mb3.6,baz=26,slow=5.5,SNR=6.6						
ASAR	**Alice Springs**	**83.01**	**215**	P	**P**	**19 01 07.8**	**+0.4**

ASAR pmax pmax
comp=Z,1.0nm,1.0s

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*IDC **05** 18:54:16.2±0.9, 10°.23N×93°.64E, h0km, mb3.9/11, mb1 3.9/12, mb1mx3.8/25, mbtmp3.8/12, ML3.5/1, MS3.0/1, Ms1 3.2/1, ms1mx2.5/31, Error ellipse: s-maj=40.7km s-min=15.5km az=56.0*

*ISCJB **05** 18:54:19.5±0.6, 10°.33N±0°.08×93°.80E±0°.09, h33km, mb3.9/16, Error ellipse: s-maj=15.0km s-min=8.8km az=143.0*

*NEIC **05** 18:54:21.3±5.1, 10°.30N×93°.74E, h33km±36km, mb4.1/6, Error ellipse: s-maj=23.9km s-min=7.1km az=60.0*

ISC 05 18:54:21.7±0.6, 10°.31N±0°.08×93.75E±0°.09, h35km, n26, σ0s73/27, mb3.9/16, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**8.46**	**126**	*e*Pn	**Pn**	**18 56 21.4**	**-0.4**
KULM				*e*Sn	**Sn**	**18 57 51.0**	**-5.1**
CM31	**Chiang Mai Arr**	**9.53**	**31**	*e*Pn	**Pn**	**18 56 34.9**	**-1.6**
CMAR	**Chiang Mai Arr**	**9.53**	**31**	Pn	**Pn**	**18 56 37.5**	**+1.0**
	0.1nm,0.3s,baz=219,slow=14,SNR=12						
CMAR				LR	LR	19 00 08.9	
	comp=Z,82nm,20.6s,baz=205,slow=36						
CMAR	**Chiang Mai Arr**	**9.53**	**31**	Pn	**Pn**	**18 56 37.5**	**+1.0**
CMAR				LR	LR	19 00 08.9	
CHTO	**Chiang Mai**	**9.83**	**30**	Pn	**Pn**	**18 56 41.8**	**+1.2**
	3.3nm,1.1s						
LSA	**Lhasa**	**19.44**	**353**	P	**Pn**	**18 58 45.8**	**-0.8**
LSA	**Lhasa**	**19.44**	**353**	*e*P	**Pn**	**18 58 45.5**	**-1.1**
	7.8nm,0.7s						
LSA				*e*		18 58 52.5	
KKM	**Kota Kinabalu**	**22.63**	**99**	P	**P**	**18 59 19.8**	**0.0**
	14nm,1.0s,mb4.3						
EKS2	**Erkin-Say**	**36.65**	**335**	*e*P	**P**	**19 01 25.0**	**+0.1**
	4.4nm,0.9s,mb4.3						
MK31	**Makanchi Array**	**37.64**	**347**	P	**P**	**19 01 30.9**	**-2.3**
MKAR	**Makanchi Array**	**37.64**	**347**	P	**P**	**19 01 33.4**	**+0.2**
	0.8nm,0.6s,mb3.6,baz=172,slow=8.6,SNR=8.1						
KKAR	**Karatay Array**	**38.43**	**332**	*e*P	**P**	**19 01 40.9**	**+1.0**
	0.9nm,0.6s,mb3.7						
SONM	**Songino Array**	**38.89**	**14**	P	**P**	**19 01 44.1**	**+0.4**
	0.4nm,0.7s,mb3.2,baz=214,slow=7.2,SNR=3.8						
KURK	**Kurchatov**	**42.17**	**346**	*e*P	**P**	**19 02 10.5**	**-0.2**
	2.7nm,0.8s,mb3.9						
ZAA0	**Zalesovo Array**	**44.10**	**352**	*e*P	**P**	**19 02 26.3**	**-0.1**
ZALV	**Zalesovo Beam**	**44.10**	**352**	P	**P**	**19 02 26.6**	**+0.3**
	2.2nm,0.5s,mb4.1,baz=178,slow=8.4,SNR=15						
BVAR	**Borovoye Array**	**46.58**	**341**	P	**P**	**19 02 45.3**	**-0.6**
	0.4nm,0.4s,mb3.7,baz=135,slow=8.5,SNR=5.4						
ABKAR	**Akbulak array**	**47.93**	**331**	*e*P	**P**	**19 02 56.6**	**0.0**
	1.7nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**49.65**	**331**	P	**P**	**19 03 10.2**	**+0.5**
AKTO	**Aktyubinsk**	**49.65**	**331**	P	**P**	**19 03 10.2**	**+0.5**
	0.7nm,0.5s,mb3.9,baz=95,slow=5.3,SNR=2.8						
WRA	**Warramunga Arr**	**50.00**	**127**	P	**P**	**19 03 12.9**	**+0.1**
	2.1nm,0.6s,mb4.3,baz=305,slow=8.8,SNR=33						
ASAR	**Alice Springs**	**51.78**	**131**	P	**P**	**19 03 26.1**	**-0.1**
	1.0nm,0.6s,mb3.9,baz=305,slow=6.5,SNR=31						
BRTR	**Keskin Array B**	**60.57**	**310**	P	**P**	**19 04 29.0**	**+0.1**
	0.6nm,0.8s,mb3.8,baz=91,slow=11,SNR=3.6						
STKA	**Stephens Creek**	**62.06**	**134**	P	**P**	**19 04 39.3**	**+0.3**
	1.0nm,0.6s,mb4.1,baz=331,slow=10,SNR=5.1						
FINES	**FINESS Array B**	**70.39**	**332**	P	**P**	**19 05 31.5**	**-0.4**
	1.8nm,0.9s,mb4.0,baz=115,slow=12,SNR=3.7						
ARCES	**ARCESS Array B**	**72.86**	**340**	P	**P**	**19 05 46.9**	**+0.3**
	1.2nm,0.8s,mb3.9,baz=90,slow=7.3,SNR=3.7						

DJA 05 18:55:55, 0°.90S×121°.73E, h67km, MLv3.8/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**0.08**	**262**	P	Pn	18 56 06.1	+1.3
APSI				S	Sn	18 56 13.7	+1.7
LUWI	**Luwuk**	**1.05**	**98**	P	Pn	18 56 15.5	+1.5
LUWI				S	Sn	18 56 29.7	+1.6
MRSI	**Marisa**	**1.38**	**9**	P	Pn	18 56 13.6	-4.8
TOLI	**Toli-Toli**	**2.21**	**335**	P	Pn	18 56 30.2	+0.7
TOLI				S	Sn	18 56 55.9	0.0

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*ISCJB **05** 19:03:29.9±3.6, 49°.3N±0°.2×149°.6E±0°.6, h419km±34km, mb3.3/7, Error ellipse: s-maj=64.6km s-min=25.8km az=176.5*

*IDC **05** 19:03:30.7±3.7, 49°.33N×149°.66E, h413km±38km, mb3.0/6, mb1 3.1/7, mb1mx2.7/24, mbtmp3.0/7, Error ellipse: s-maj=43.7km s-min=16.9km az=88.0*

ISC 05 19:03:30.6±4.1, 49°.3N±0°.2×149°.7E±0°.6, h410km±41km, n8, σ0s83/8, mb3.3/7, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**7.13**	**226**	P	**P**	**19 05 15.8**	**-0.1**
	0.3nm,0.3s,baz=76,slow=9.5,SNR=6.2						
BVAR	**Borovoye Array**	**47.47**	**306**	P	**P**	**19 11 26.7**	**+0.9**
	0.2nm,0.3s,mb2.9,baz=80,slow=4.7,SNR=4.5						
JOF	**Joensuu**	**57.99**	**332**	*e*p	**P**	**19 12 37.2**	**-4.4**
	1.3nm,0.7s,mb3.4						
FINES	**FINESS Array B**	**60.72**	**333**	P	**P**	**19 12 59.2**	**-0.7**
	1.0nm,0.3s,mb3.7,baz=32,slow=6.8,SNR=13						
NOA	**NORSAR Array B**	**65.03**	**339**	P	**P**	**19 13 27.4**	**-0.6**
	0.3nm,0.5s,mb3.2,baz=48,slow=7.0,SNR=3.3						
WRA	**Warramunga Arr**	**70.29**	**195**	P	**P**	**19 14 00.7**	**-0.2**
	0.6nm,1.1s,mb3.0,baz=22,slow=8.0,SNR=2.9						
SCHQ	**Schefferville**	**71.79**	**21**	P	**P**	**19 14 10.0**	**+0.6**
	2.4nm,0.7s,mb3.8,baz=54,slow=17,SNR=2.5						
ASAR	**Alice Springs**	**74.00**	**195**	P	**P**	**19 14 22.6**	**+0.1**
	0.3nm,0.5s,mb3.2,baz=11,slow=5.9,SNR=12						

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*BGS **05** 19:07:31.2±1.9, 2°.11S×12°.70W, h10km, mb5.2, MS5.4*

*ISCJB **05** 19:07:36.4±0.2, 1°.17S±0°.02×13°.94W±0°.03, h10km, mb5.3/278, MS5.5/254, Error ellipse: s-maj=3.9km s-min=3.4km az=14.4*

*MOS **05** 19:07:36.7±0.9, 1°.13S×13°.88W, h10km, mb5.5/116, MS5.5/65, Error ellipse: s-maj=9.1km s-min=3.0km az=70.2*

*BJI **05** 19:07:36.7, 1°.70S×13°.49W, h10km, mB5.7/23, mb5.6/4, Ms5.7/26, Ms7 5.5/26*

*IDC **05** 19:07:37.2±0.4, 1°.15S×13°.97W, h0km, mb4.8/33, mb1 4.9/34, mb1mx4.9/34, mbtmp4.8/34, ML5.2/1, MS5.4/27, Ms1 5.4/27, ms1mx5.3/33, Error ellipse: s-maj=12.7km s-min=11.3km az=142.0*

*IGIL **05** 19:07:38.9, 1°.15S×13°.88W, h10km, MS5.4*

*NEIC **05** 19:07:38.3±0.2, 1°.17S×13°.96W, h10km, mb5.5/163, MS5.5/175, MW5.8, MW5.7, Error ellipse: s-maj=4.6km s-min=3.1km az=136.0, Moment Tensor Solution. s68 Moment tensor: Scale 10^{17}Nm; M_{rr}0.36; $M_{\theta\theta}$0.94; $M_{\phi\phi}$-1.30; $M_{r\theta}$0.80; $M_{\theta\phi}$-3.97; $M_{\phi r}$-0.81; Best double couple: M_0=4.30000×10^{17} NP1:ϕ_s173.00000°, δ80.00000°, λ13.00000°. NP2:ϕ_s81.00000°, δ77.00000°, λ170.00000°. Principal axes: T 4.2700, Plg16.0000°, Azm37.0000°; N 0.0400, Plg73.0000°, Azm209.0000°; P -4.3100, Plg2.0000°, Azm306.0000°;*

*DJA **05** 19:07:41, 1°.01S×13°.92W, h10km, mb5.6/7*

*GCMT **05** 19:07:42.4±0.1, 0°.88S×13°.79W, h12km, MW5.8, Moment Tensor Solution. s97,c187; s80,c99; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.32±.04; $M_{\theta\theta}$2.36±.05; $M_{\phi\phi}$-2.04±.05; $M_{r\theta}$-0.41±.12; $M_{\theta\phi}$-5.25±.04; $M_{\phi r}$0.72±.12; Best double couple: $M_0$5.80000×10^{17} NP1:ϕ_s258.00000°, δ82.00000°, λ178.00000°. NP2:ϕ_s349.00000°, δ88.00000°, λ8.00000°. Principal axes: T 5.9400, Plg7.0000°, Azm214.0000°; N -0.3800, Plg82.0000°, Azm3.0000°; P -5.5600, Plg4.0000°, Azm123.0000°; Data Used: II IU CN IC G. Surface waves: sta=112, comp=254, per= 50.*

*SZGRF **05** 19:07:43.7, 0.65S×13.45W, h33km, mb5.4, MS5.5, North of Ascension Island*

ISC 05 19:07:37.8±0.8, 1°.20S±0°.02×13°.96W±0°.03, h7km±5km, h25km±1.1km; pP-P, n1023, σ0s94/916, mb5.3/278, MS5.5/254, 70C-17D, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIC	**Lamto**	**11.57**	**50**	*e*P	**Pn**	**19 10 18.5**	**-5.0**
	396nm,0.8s						
LIC	**Lamto**	**11.57**	**50**	*e*Pn	**Pn**	**19 10 17.6**	**-5.9**
	baz=232						
LIC				*e*Sn	**Sn**	**19 12 18.1**	**-15**
	894nm,0.9s						
LIC				*e*MLR	MLR		
	comp=Z,35μm,17.2s						
TIC	**Toumodi**	**11.84**	**49**	*e*P	**Pn**	**19 10 21.1**	**-6.2**
	comp=Z,514nm,1.0s						
TIC	**Toumodi**	**11.84**	**49**	*e*P	**Pn**	**19 10 21.1**	**-6.2**
TIC				pmax	pmax		
	comp=Z,514nm,1.0s						
KIC	**Kosan Boka**	**11.88**	**51**	*e*P	**Pn**	**19 10 21.8**	**-5.9**
	comp=Z,367nm,0.8s						
DBIC	**Dimbokro**	**11.98**	**49**	Pn	**Pn**	**19 10 23.6**	**-5.6**
	comp=Z,6.3nm,0.3s,baz=210,slow=15,SNR=79						
DBIC				Sn	**Sn**	**19 12 29.2**	**-14**
	comp=Z,25nm,0.3s,baz=127,slow=22,SNR=6.3						
DBIC				LR	LR	19 14 12.5	
	comp=Z,36μm,18.6s,baz=206,slow=33						
DBIC	**Dimbokro**	**11.98**	**49**	*e*P	**Pn**	**19 10 22.8**	**-6.3**
	comp=Z,2.0nm,0.4s						
BBTS	**Babate**	**15.96**	**351**	Pn	**Pn**	**19 11 21.6**	**-1.4**
	comp=Z,9.4nm,0.3s,baz=188,slow=1.6,SNR=14						
BBTS				Sn	**Sn**	**19 14 06.5**	**-14**
	comp=Z,4.8nm,0.3s,baz=15,slow=21,SNR=14						
BBTS				LR	LR	19 15 43.0	
	comp=Z,8μm,21.5s,baz=270,slow=30						
BBTS	**Babate**	**15.96**	**351**	Pn	**Pn**	**19 11 21.6**	**-1.4**
BBTS				Sn	**Sn**	**19 14 06.5**	**-14**
BBTS				LR	LR	19 15 43.0	
SHEL	**Horse Pasture**	**16.76**	**152**	P	**Pn**	**19 11 32.4**	**-0.8**
SHEL				pmax	pmax		
	comp=Z,245nm,1.2s						
SHEL	**Horse Pasture**	**16.76**	**152**	P	**Pn**	**19 11 32.4**	**-0.8**
	comp=Z,245nm,1.2s						
TORD	**Torodi Ar. Bea**	**21.07**	**47**	P	**P**	**19 12 19.8**	**-3.1**
	comp=Z,176nm,0.9s,mb5.4,baz=229,slow=7.7,SNR=144						
TORD				S	**S**	**19 16 03.2**	**-15**
	comp=Z,70nm,0.8s,baz=225,slow=21,SNR=5.7						
TORD				LR	LR	19 19 39.6	
	comp=Z,29μm,18.6s,MS5.7,baz=230,slow=34						
RCBR	**Riachuelo**	**22.37**	**258**	P	**P**	**19 12 38.2**	**+1.4**
	comp=Z,12nm,0.8s,mb4.3,baz=70,slow=12,SNR=4.0						
RCBR				LR	LR	19 19 35.5	
	comp=Z,3μm,18.6s,MS4.8,baz=73,slow=32						
RCBR	**Riachuelo**	**22.37**	**258**	*e*P	**P**	**19 12 37.4**	**+0.6**
	comp=Z,90nm,1.3s,mb5.0						
RCBR				LR	LR		
	comp=Z,5μm,21.0s,MS4.9						
CHIE	**El Hierro**	**29.01**	**353**	P	**P**	**19 13 40.6**	**+2.1**
	comp=Z,44nm,1.2s,mb5.1						
EOSO	**Osorio**	**29.14**	**357**	P	**P**	**19 13 42.0**	**+2.4**
	comp=Z,191nm,2.3s,mb5.4						
CCAN	**Las Canadas**	**29.36**	**355**	P	**P**	**19 13 42.4**	**+0.8**
	comp=Z,24nm,1.0s,mb4.9						
CFTV	**Fuerteventura**	**29.44**	**360**	P	**P**	**19 13 41.1**	**-1.2**
	comp=Z,18nm,1.0s,mb4.8						
EBAJ	**Bajamar**	**29.65**	**356**	P	**P**	**19 13 43.9**	**-0.2**
	comp=Z,322nm,2.1s,mb5.7						
EHIG	**Higuera**	**29.81**	**353**	P	**P**	**19 13 45.3**	**-0.2**
	comp=Z,314nm,2.0s,mb5.7						
EFAM	**Famara**	**30.15**	**1**	P	**P**	**19 13 43.4**	**-5.1**
	comp=Z,306nm,2.6s,mb5.6						
TAM	**Tamanrasset**	**30.48**	**37**	*e*P	**P**	**19 13 51.6**	**+0.1**
TAM				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.1						
TAM				MLR	MLR		
	comp=Z,12μm,20.0s,MS5.5						
TAM	**Tamanrasset**	**30.48**	**37**	*e*P	**P**	**19 13 51.6**	**+0.1**
	comp=Z,48nm,1.1s,mb5.1						
TAM				LR	LR		
	comp=Z,12μm,20.0s,MS5.5						
PMAR	**Madeira**	**33.85**	**356**	*e*P	**P**	**19 14 20.9**	**-0.1**
MDT	**Midelt**	**34.96**	**14**	P	**P**	**19 14 31.4**	**+0.7**
	comp=Z,9.5nm,1.1s,mb4.6,baz=210,slow=6.9,SNR=18						
TSUM	**Tsumeb**	**35.71**	**122**	P	**P**	**19 14 38.2**	**+0.9**
	comp=Z,22nm,1.0s,mb5.0,baz=289,slow=8.7,SNR=20						
TSUM				LR	LR	19 26 33.2	
	comp=Z,8μm,19.3s,MS5.5,baz=288,slow=32						
TSUM	**Tsumeb**	**35.71**	**122**	*e*P	**P**	**19 14 37.8**	**+0.6**
	comp=Z,41nm,1.1s,mb5.3						
BDFB	**Brasilia**	**36.53**	**245**	P	**P**	**19 14 45.1**	**+0.8**
	comp=Z,17nm,0.9s,mb4.9,baz=70,slow=11,SNR=13						
BDFB				LR	LR	19 26 44.8	
	comp=Z,4μm,18.0s,MS5.2,baz=287,slow=31						
BDFB	**Brasilia**	**36.53**	**245**	P	**P**	**19 14 45.1**	**+0.8**
BDFB				pmax	pmax		
	comp=Z,17nm,1.0s						
BDFB				MLR	MLR		
	comp=Z,4μm,18.0s						
SFS	**San Fernando**	**38.16**	**10**	PFAKE		19 15 10.0	+12
SFS				LR	LR		
	comp=Z,20μm,19.0s,MS6.0						
EJIF	**Jimena Fronter**	**38.28**	**11**	P	**P**	**19 14 58.6**	**-0.3**
EJIF				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.2						
EJIF	**Jimena Fronter**	**38.28**	**11**	P	**P**	**19 14 58.6**	**-0.3**
	comp=Z,52nm,1.0s,mb5.2						
PFVI	**Vila Bisbo**	**38.43**	**7**	*e*PP	PP	19 16 31.7	+3.5
PFVI				*e*S	**S**	**19 20 55.0**	**-0.6**
PFVI				*i* P		19 23 15.4	
PFVI				*e*LR	LR	19 26 32.5	
	comp=Z,5μm,16.0s						
EMIJ	**Mijas**	**38.53**	**12**	P	**P**	**19 15 01.9**	**+0.9**
	comp=Z,183nm,2.3s,mb5.4						
ESPR	**Espera**	**38.61**	**10**	P	**P**	**19 15 02.6**	**+1.0**
	comp=Z,335nm,2.1s,mb5.7						
MORF	**Marmelete**	**38.62**	**7**	*e*P	**P**	**19 15 03.8**	**+2.0**
	comp=Z,76nm,1.8s,mb5.1						
MORF	**Marmelete**	**38.62**	**7**	*e*PP	PP	19 16 34.6	+4.3
MORF				*e*S	**S**	**19 20 57.5**	**-1.0**
MORF				*i* P		19 23 30.0	
MORF				*e*LQ		19 26 31.2	
MORF				*e*LR	LR	19 27 30.8	
	comp=Z,5μm,18.0s						
MORF	**Marmelete**	**38.62**	**7**	*e*P	**P**	**19 15 02.4**	**+0.6**
MORF				*e*S	**S**	**19 20 58.5**	**0.0**
PBDV	**Barranco-do-Ve**	**38.65**	**8**	*e*P	**P**	**19 15 03.1**	**+1.1**
	comp=Z,148nm,1.8s,mb5.4						
PBDV	**Barranco-do-Ve**	**38.65**	**8**	*e*PP	PP	19 16 34.7	+4.1
PBDV				*e*S	**S**	**19 21 07.9**	**+9.0**
PBDV				*i* P		19 23 38.7	
PBDV				*e*LQ		19 25 43.4	
PBDV				*e*LR	LR	19 27 34.0	
	comp=Z,4μm,20.0s						
PVAQ	**Vaqueiros**	**38.84**	**8**	*e*P	**P**	**19 15 03.0**	**-0.6**
	comp=Z,115nm,2.1s,mb5.2						
PVAQ	**Vaqueiros**	**38.84**	**8**	*e*PP	PP	19 16 35.6	+3.0
PVAQ				*e*S	**S**	**19 21 02.3**	**+0.6**
PVAQ				*i* P		19 23 52.5	
PVAQ				*e*LQ		19 25 37.7	
PVAQ				*e*LR	LR	19 27 41.6	
	comp=Z,6μm,18.0s						
PCVE	**Castro Verde**	**39.02**	**7**	*e*P	**P**	**19 15 06.5**	**+1.4**
	comp=Z,76nm,2.0s,mb5.1						
PCVE				*e*S	**S**	**19 21 11.9**	**+7.4**
PCVE				*i* P		19 23 34.7	
PCVE				*e*LQ		19 26 54.7	
PCVE				*e*LR	LR	19 27 52.5	
	comp=Z,4μm,20.0s						
ETRT	**Tiaret**	**39.09**	**20**	P	**P**	**19 15 06.7**	**+1.0**
ERON	**Agron**	**39.17**	**13**	P	**P**	**19 15 05.2**	**-1.2**
MESJ	**Messejana**	**39.20**	**7**	*e*P	**P**	**19 15 07.2**	**+0.6**
MESJ				*e*S	**S**	**19 21 07.3**	**+0.1**
MESJ	**Messejana**	**39.20**	**7**	*e*P	**P**	**19 15 07.2**	**+0.6**
MESJ				*e*S	**S**	**19 21 07.3**	**+0.1**
MESJ				*e*S	**S**	**19 21 07.5**	**+0.2**
MESJ				AMS	AMS	19 30 04.9	
	comp=N,7μm,21.9s						
ELOJ	**Sierra Loja**	**39.22**	**12**	P	**P**	**19 15 07.7**	**+0.9**
ELOJ				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
ELOJ	**Sierra Loja**	**39.22**	**12**	P	**P**	**19 15 07.7**	**+0.9**
	comp=Z,17nm,0.9s,mb4.8						
SPB	**Sao Paulo**	**39.35**	**233**	PFAKE		19 15 20.0	+12
SPB				LR	LR		
	comp=Z,6μm,20.0s,MS5.5						
EMIN	**Mina Concepcio**	**39.35**	**9**	P	**P**	**19 15 08.5**	**+0.7**
	comp=Z,246nm,2.4s,mb5.5						
PBEJ	**Beja**	**39.43**	**8**	*e*P	**P**	**19 15 10.0**	**+1.5**
	comp=Z,77nm,1.9s,mb5.1						
ECOG	**Cogollos-Vega**	**39.47**	**13**	P	**P**	**19 15 09.4**	**+0.5**
ECOG				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
ECOG	**Cogollos-Vega**	**39.47**	**13**	P	**P**	**19 15 09.4**	**+0.5**
	comp=Z,23nm,0.8s,mb5.0						
ENIJ	**Nijar**	**39.51**	**15**	P	**P**	**19 15 08.2**	**-1.0**
ENIJ				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.2						
ENIJ	**Nijar**	**39.51**	**15**	P	**P**	**19 15 08.2**	**-1.0**
	comp=Z,51nm,0.9s,mb5.3						
EANR	**'Ain N'Sour**	**39.53**	**19**	P	**P**	**19 15 10.6**	**+1.2**
ELUQ	**Luque**	**39.59**	**12**	P	**P**	**19 15 09.7**	**-0.2**
ELUQ				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.1						
ELUQ	**Luque**	**39.59**	**12**	P	**P**	**19 15 09.7**	**-0.2**
	comp=Z,35nm,0.8s,mb5.1						
PBAR	**Barrancos**	**39.69**	**9**	*e*P	**P**	**19 15 09.9**	**-0.8**
	comp=Z,43nm,1.8s,mb4.9						
PBAR	**Barrancos**	**39.69**	**9**	*e*PP	PP	19 16 47.6	+5.7
PBAR				*e*S	**S**	**19 21 19.9**	**+5.3**
PBAR				*i* P		19 24 03.6	
PBAR				*e*LQ		19 26 00.3	
PBAR				*e*LR	LR	19 29 06.6	
	comp=Z,6μm,20.0s						
ECHA	**Ech Chlef**	**39.80**	**20**	P	**P**	**19 15 12.0**	**+0.3**
EVOP	**Sao Brissos**	**39.89**	**7**	*e*P	**P**	**19 15 13.4**	**+1.1**
EVOP				*e*PP	PP	19 16 44.4	+0.2
EVOP				*e*S	**S**	**19 21 17.6**	**+0.1**
EVOP				*e*S	**S**	**19 21 17.6**	**+0.1**
EVOP				AMS	AMS	19 30 24.7	
	comp=N,4μm,19.6s						
EVOP	**Sao Brissos**	**39.89**	**7**	*e*P	**P**	**19 15 13.4**	**+1.0**
EVOP				*e*		19 16 44.4	
EVOP				*e*S	**S**	**19 21 17.6**	**+0.1**
EVO	**Evora**	**39.91**	**7**	↑*i*P	**P**	**19 15 12.4**	**-0.1**
	comp=N,282nm,1.6s,mb5.5						
EVO				*e*MLR	MLR		
	comp=Z,8μm,20.5s,MS5.2						
EVO	**Evora**	**39.91**	**7**	*e*P	**P**	**19 15 12.9**	**+0.4**
	comp=Z,101nm,1.9s,mb5.2						
LIS	**Lisbon**	**39.96**	**6**	*e*P	**P**	**19 15 13.5**	**+0.6**
LIS				*e*S	**S**	**19 21 19.2**	**+0.6**
LIS	**Lisbon**	**39.96**	**6**	*e*P	**P**	**19 15 13.5**	**+0.6**
LIS				*e*S	**S**	**19 21 19.2**	**+0.6**
LIS				*e*S	**S**	**19 21 19.3**	**+0.7**
LIS				AMS	AMS	19 31 19.1	
	comp=N,9μm,19.2s						
EBNR	**Beni Rached**	**39.99**	**20**	P	**P**	**19 15 13.6**	**+0.4**
EQES	**Quesada**	**40.09**	**13**	P	**P**	**19 15 13.3**	**-0.7**
	comp=N,341nm,2.4s,mb5.7						
EADA	**Adamuz**	**40.11**	**12**	P	**P**	**19 15 14.7**	**+0.5**
	comp=N,332nm,2.4s,mb5.6						
PMAFR	**Mafra**	**40.19**	**6**	*e*PP	PP	19 16 53.1	+5.8
PMAFR				*e*S	**S**	**19 21 23.5**	**+1.6**
PMAFR				*i* P		19 24 03.8	
PMAFR				*e*LR	LR	19 27 07.8	
	comp=N,6μm,18.0s						
EHUE	**Huescar**	**40.21**	**14**	P	**P**	**19 15 16.0**	**+1.0**
EHUE				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.0						
EHUE	**Huescar**	**40.21**	**14**	P	**P**	**19 15 16.0**	**+1.0**
	comp=Z,37nm,1.3s,mb5.0						
EBAD	**Badajoz**	**40.27**	**8**	P	**P**	**19 15 17.6**	**+2.2**
	comp=Z,197nm,2.2s,mb5.5						
EBAN	**Banos Encina**	**40.27**	**12**	P	**P**	**19 15 14.7**	**-0.9**
EBAN				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.2						
EBAN	**Banos Encina**	**40.27**	**12**	P	**P**	**19 15 14.7**	**-0.8**
	comp=Z,28nm,0.6s,mb5.2						
PESTR	**Estremoz**	**40.29**	**8**	*e*PP	PP	19 16 54.8	+6.3
PESTR				*e*S	**S**	**19 21 26.5**	**+2.9**
PESTR				*i* P		19 24 21.1	
PESTR				*e*LR	LR	19 28 26.6	
	comp=Z,7μm,20.0s						
EMHD	**Djebel Mahouad**	**40.40**	**21**	P	**P**	**19 15 19.0**	**+2.4**
PMRV	**Marv??o**	**40.87**	**8**	*e*P	**P**	**19 15 22.5**	**+2.0**
	comp=Z,98nm,1.7s,mb5.2						
PMRV	**Marv??o**	**40.87**	**8**	*e*PP	PP	19 17 00.8	+6.0
PMRV				*e*S	**S**	**19 21 36.0**	**+3.8**
PMRV				*i* P		19 24 28.9	
PMRV				*e*LQ		19 27 36.3	
PMRV				*e*LR	LR	19 29 40.2	
	comp=Z,6μm,20.0s						
EVIA	**Vianos**	**41.02**	**14**	P	**P**	**19 15 21.5**	**-0.2**
EVIA				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.8						
EVIA	**Vianos**	**41.02**	**14**	P	**P**	**19 15 21.5**	**-0.2**
	comp=Z,17nm,0.7s,mb4.8						
CKHR	**Kef el Ahmar**	**41.23**	**24**	P	**P**	**19 15 25.0**	**+1.5**
ETOB	**Tobarra**	**41.26**	**15**	P	**P**	**19 15 24.3**	**+0.6**
	comp=Z,372nm,2.4s,mb5.6						
KOMG	**Komaggas**	**41.26**	**137**	*e*P	**P**	**19 15 25.1**	**+1.2**
KOMG				AMS	AMS	19 31 15.8	
	comp=Z,4μm,13.5s,MS5.5						
PCBR	**Castelo Branco**	**41.27**	**8**	*e*P	**P**	**19 15 24.5**	**+0.8**
	comp=Z,7.1nm,1.9s,mb5.0						
SET	**Setif**	**41.34**	**24**	P	**P**	**19 15 27.0**	**+2.6**
PAB	**San Pablo**	**41.49**	**11**	*e*P	**P**	**19 15 25.1**	**-0.5**
PAB				pmax	pmax		
	comp=Z,115nm,1.6s,mb5.3						
PAB				MLR	MLR		
	comp=Z,6μm,19.0s,MS5.5						
PAB	**San Pablo**	**41.49**	**11**	*e*P	**P**	**19 15 25.1**	**-0.4**
	comp=Z,115nm,1.6s,mb5.3						
PAB				LR	LR		
	comp=Z,6μm,19.0s,MS5.5						
CTEI	**Djebel Teioual**	**41.64**	**25**	P	**P**	**19 15 27.5**	**+0.6**
EPLA	**Plasencia**	**41.69**	**9**	P	**P**	**

ETOR pmax pmax
comp=Z,23nm,1.2s,mb4.8
ETOR Torete 43.20 13 P **P 19 15 39.5 +0.1**
comp=Z,23nm,1.2s,mb4.8
CVNA Calvinia 43.84 137 *e*P **P 19 15 44.4 -0.4**
CVNA AMS AMS 19 28 37.4
comp=Z,4µm,20.4s,MS5.3
ERTA Horta de San J 43.92 16 P **P 19 15 46.2 +0.9**
comp=Z,181nm,2.2s,mb5.4
ESAC San Caprasio 44.43 14 P **P 19 15 50.1 +0.8**
comp=Z,348nm,1.8s,mb5.8
EPOB Poblet 44.50 16 P **P 19 15 50.9 +1.0**
comp=Z,197nm,2.3s,mb5.4
CER Ceres 44.68 139 *e*P **P 19 15 51.0 -0.5**
CER AMB AMB 19 30 19.5
comp=Z,2µm,19.1s
LBTB Lobatse 44.92 125 P **P 19 15 54.1 +0.5**
comp=Z,30nm,1.0s,mb5.1,baz=301,slow=9.2,SNR=15
LBTB Lobatse 44.92 125 P **P 19 15 54.1 +0.5**
LBTB LR LR
comp=Z,6µm,21.0s,MS5.5
PKA Prieska 44.95 133 *e*P **P 19 15 53.1 -0.6**
PKA AMS AMS 19 29 51.8
comp=Z,960nm,31.1s,MS4.5
EARI Arriondas 44.99 9 P **P 19 15 55.0 +1.2**
comp=Z,2µm,4.8s
SUR Sutherland 45.09 137 P **P 19 15 55.9 +1.0**
comp=Z,40nm,0.9s,mb5.2,baz=209,slow=1.3,SNR=11
SUR Sutherland 45.09 137 P **P 19 15 55.9 +1.0**
SUR LR LR
comp=Z,4µm,22.0s,MS5.3
ELAN Lanestosa 45.23 11 P **P 19 15 56.2 +0.6**
comp=Z,352nm,1.9s,mb5.9
CFON Fontmartina 45.27 17 P **P 19 15 56.8 +0.8**
comp=Z,158nm,1.5s,mb5.6
WDD Wield Dalam 45.44 33 *e*P **P 19 15 58.2 +0.8**
comp=Z,87nm,0.8s,mb5.6
WDD LR LR
comp=Z,4µm,20.0s,MS5.4
CSOR Sort 45.46 16 P **P 19 15 57.9 +0.3**
comp=Z,433nm,2.6s,mb5.8
EBIE Bielsa 45.49 15 P **P 19 15 58.9 +1.1**
comp=Z,164nm,2.2s,mb5.5
ETSF Etsaut 45.52 14 *e*P **P 19 15 58.1 +0.1**
comp=Z,67nm,0.9s,mb5.3
ETSF Etsaut 45.52 14 *e*P **P 19 15 58.1 +0.1**
ETSF pmax pmax
comp=Z,34nm,0.9s,mb5.3
ETSF Etsaut 45.52 14 *e*P **P 19 15 58.1 +0.1**
comp=Z,34nm,0.9s,mb5.3
ELIZ Elizondo 45.55 13 P **P 19 15 57.3 -1.0**
ELIZ pmax pmax
comp=Z,28nm,0.8s,mb5.2
ELIZ Elizondo 45.55 13 P **P 19 15 57.3 -1.0**
comp=Z,28nm,0.8s,mb5.2
SJPF Ste Jean 45.57 13 *e*P **P 19 15 57.6 -0.8**
comp=Z,78nm,0.8s,mb5.4
SJPF Ste Jean 45.57 13 *e*P **P 19 15 57.6 -0.8**
SJPF pmax pmax
comp=Z,39nm,0.8s,mb5.4
SJPF Ste Jean 45.57 13 *e*P **P 19 15 57.6 -0.8**
comp=Z,39nm,0.8s,mb5.4
VIEF Viey 45.65 14 *e*P **P 19 15 58.9 -0.1**
RESF Ens 45.66 15 *e*P **P 19 15 59.4 +0.3**
SWZ Schweizer 45.68 128⇑*i*P **P 19 15 60.0 +0.4**
SWZ AMS AMS 19 32 44.1
comp=Z,5µm,17.1s,MS5.5
VALF Valcebollere 45.73 17 *e*P **P 19 16 00.2 +0.5**
ELIM Elim 45.74 140 *e*P **P 19 15 58.1 -1.8**
CLLI Llivia 45.79 16 P **P 19 16 00.5 +0.3**
VSL Villasalto 45.80 25⇑*e*P **P 19 16 00.3 0.0**
comp=Z,129nm,1.1s,mb5.8
VSL *e*PP PP 19 17 41.6 -6.1
VSL LR LR
comp=Z,15µm,19.0s,MS6.0
LABF Labassere 45.82 14 *e*P **P 19 15 59.6 -0.8**
EPF Esparros 45.87 15 *e*P **P 19 16 00.8 0.0**
comp=Z,82nm,1.1s,mb5.3
EPF Esparros 45.87 15 *e*P **P 19 16 00.8 0.0**
EPF pmax pmax
comp=Z,41nm,1.1s,mb5.3
EPF Esparros 45.87 15 *e*P **P 19 16 00.8 0.0**
comp=Z,41nm,1.1s,mb5.3
MLS Moulis 45.99 15 *e*P **P 19 16 01.9 +0.1**
EJON La Jonquera 46.03 17 P **P 19 16 02.5 +0.5**
comp=Z,312nm,1.9s,mb5.9
BOSA Boshof 46.30 130 P **P 19 16 04.8 +0.3**
comp=Z,26nm,1.0s,mb5.1,baz=295,slow=6.7,SNR=12
BOSA LR LR 19 33 05.6
comp=Z,3µm,18.5s,MS5.3,baz=294,slow=33
BOSA Boshof 46.30 130 P **P 19 16 04.8 +0.4**
BOSA pmax pmax
comp=Z,26nm,1.0s,mb5.1
BOSA MLR MLR
comp=Z,3µm,18.5s,MS5.3
VAE Valguarnera 46.58 31 P **P 19 16 07.6 +1.1**
comp=Z,31nm,0.9s,mb5.2,baz=67,slow=3.7,SNR=12
MTLF Montolieu 46.66 16 *e*P **P 19 16 06.3 -0.7**
KLOF Kloof 47.13 126 *e*P **P 19 16 08.4 -2.6**
PRYS Parys 47.18 127 *e*P **P 19 16 11.6 +0.3**
PRYS AMS AMS 19 34 11.1
comp=Z,4µm,18.9s,MS5.4
BBGH Gun Hill 47.41 289 PFAKE 19 16 30.0 +17
BBGH LR LR
comp=Z,5µm,19.0s,MS5.5
SLR Silverton 47.43 125 *e*P **P 19 16 13.3 0.0**
SLR AMS AMS 19 32 46.8
comp=Z,6µm,20.7s,MS5.5
HVD Gariep Dam 47.46 132 *e*P **P 19 16 13.5 0.0**
HVD AMS AMS 19 31 48.2
comp=Z,3µm,41.8s,MS5.0
MSNA Messina 47.63 120 *e*P **P 19 16 14.9 -0.1**
MSNA AMS AMS 19 33 32.6
comp=Z,3µm,24.9s,MS5.1
ERPM east rand prop 47.64 125 *e*P **P 19 16 14.9 -0.1**
LFF La Frestale 47.76 14 *e*P **P 19 16 15.4 -0.1**
comp=Z,155nm,1.2s,mb5.6
LFF La Frestale 47.76 14 *e*P **P 19 16 15.4 -0.1**
LFF pmax pmax
comp=Z,78nm,1.2s,mb5.6
LFF La Frestale 47.76 14 *e*P **P 19 16 15.4 -0.1**
comp=Z,78nm,1.2s,mb5.6
LASF Ste Croix 47.80 17 *e*P **P 19 16 15.7 -0.2**
comp=Z,307nm,1.7s,mb5.8
CEL Celeste 47.94 32 *e*P **P 19 16 17.7 +0.6**
comp=Z,131nm,1.0s,mb5.9
CEL LR LR
comp=Z,5µm,20.0s,MS5.5
LMR La Mourre 47.99 20 *e*P **P 19 16 17.3 0.0**
comp=Z,170nm,1.2s,mb5.7
LMR La Mourre 47.99 20 *e*P **P 19 16 17.3 0.0**
LMR pmax pmax
comp=Z,85nm,1.2s,mb5.7
LMR La Mourre 47.99 20 *e*P **P 19 16 17.3 0.0**
comp=Z,85nm,1.2s,mb5.7
CAF Calviac 48.08 15 *e*P **P 19 16 17.6 -0.4**
comp=Z,152nm,1.3s,mb5.6
CAF Calviac 48.08 15 *e*P **P 19 16 17.6 -0.4**
CAF pmax pmax
comp=Z,76nm,1.3s,mb5.6
CAF Calviac 48.08 15 *e*P **P 19 16 17.6 -0.4**
comp=Z,76nm,1.3s,mb5.6
PGF Pioggiola 48.22 23 *e*P **P 19 16 19.0 -0.1**
comp=Z,100nm,0.9s,mb5.5
PGF Pioggiola 48.22 23 *e*P **P 19 16 19.0 -0.1**
PGF pmax pmax
comp=Z,50nm,0.9s,mb5.5
PGF Pioggiola 48.22 23 *e*P **P 19 16 19.0 -0.1**
comp=Z,50nm,0.9s,mb5.5
FRF La Foret Royal 48.23 20 *e*P **P 19 16 18.8 -0.5**
comp=Z,63nm,1.0s,mb5.3
FRF La Foret Royal 48.23 20 *e*P **P 19 16 18.8 -0.5**
FRF pmax pmax
comp=Z,31nm,1.0s,mb5.3
FRF La Foret Royal 48.23 20 *e*P **P 19 16 18.8 -0.5**
comp=Z,31nm,1.0s,mb5.3
SMRF Simiane la Rot 48.25 19 *e*P **P 19 16 19.8 +0.5**
comp=Z,214nm,1.9s,mb5.5
SMRF Simiane la Rot 48.25 19 *e*P **P 19 16 19.8 +0.5**
comp=Z,214nm,1.9s,mb5.8
RJF Les Rejaudoux 48.29 15 *e*P **P 19 16 19.2 -0.5**
comp=Z,145nm,1.4s,mb5.5
RJF *e*MLR MLR
comp=Z,10µm,19.8s,MS5.5
RJF Les Rejaudoux 48.29 15 *e*P **P 19 16 19.2 -0.5**
RJF pmax pmax
comp=Z,73nm,1.4s,mb5.5
RJF MLR MLR
comp=Z,10µm,19.8s,MS5.8
RJF Les Rejaudoux 48.29 15 *e*P **P 19 16 19.2 -0.5**
comp=Z,72nm,1.4s,mb5.5
RJF LR LR
comp=Z,10µm,19.8s,MS5.8
CALN Calern 48.49 20 *e*P **P 19 16 23.5 +2.3**
SOE Somerset East 48.60 134 *e*P **P 19 16 23.4 +1.1**
SOE AMS AMS 19 34 10.9
comp=Z,6µm,19.4s,MS5.6
SIV San Ignacio 48.69 250 P **P 19 16 24.1 +0.8**
comp=Z,7,7nm,0.9s,mb4.7,baz=93,slow=9.7,SNR=30
VIVF Saint-Julien-l 48.76 18 *e*P **P 19 16 23.2 0.0**
comp=Z,268nm,1.8s,mb5.7
VIVF Saint-Julien-l 48.76 18 *e*P **P 19 16 23.2 0.0**
VIVF pmax pmax
comp=Z,134nm,1.8s,mb5.7
VIVF Saint-Julien-l 48.76 18 *e*P **P 19 16 23.2 0.0**
comp=Z,134nm,1.8s,mb5.7
SBF Sospel 48.77 21 *e*P **P 19 16 23.1 -0.3**
comp=Z,136nm,0.9s,mb5.7
SBF Sospel 48.77 21 *e*P **P 19 16 23.1 -0.3**
SBF pmax pmax
comp=Z,68nm,0.9s,mb5.7
SBF Sospel 48.77 21 *e*P **P 19 16 23.1 -0.3**
comp=Z,68nm,0.9s,mb5.7
TOUF Mont Tournerai 48.84 20 *e*P **P 19 16 24.6 +0.7**
AUTN L'Aution 48.89 20 *e*P **P 19 16 24.8 +0.5**
SAOF Saorge 48.92 21 *e*P **P 19 16 25.0 +0.4**
PYM Petit Puy Mans 49.10 16 *e*P **P 19 16 26.3 +0.5**
SSB Saint Sauveur 49.10 17 *e*P **P 19 16 25.8 -0.1**
SSB *e* 19 18 16.4
SSB pmax pmax
comp=Z,170nm,1.8s,mb5.8
SSB MLR MLR
comp=Z,5µm,19.0s,MS5.5
SSB Saint Sauveur 49.10 17 *e*P **P 19 16 25.8 -0.1**
comp=Z,170nm,1.8s,mb5.8
SSB *e*PP PP 19 18 16.4 -3.2
SSB LR LR
comp=Z,5µm,19.0s,MS5.5
MFF Saint Martin d 49.12 13 *e*P **P 19 16 25.3 -0.7**
comp=Z,196nm,1.5s,mb5.6
MFF Saint Martin d 49.12 13 *e*P **P 19 16 25.3 -0.7**
MFF pmax pmax
comp=Z,98nm,1.5s,mb5.6
MFF Saint Martin d 49.12 13 *e*P **P 19 16 25.3 -0.7**
comp=Z,98nm,1.5s,mb5.6
GRGR Grenville 49.17 287 PFAKE 19 16 40.0 +13
GRGR LR LR
comp=Z,2µm,21.0s,MS5.0
ORIF Oris-en-Rattie 49.19 19 *e*P **P 19 16 27.0 +0.5**
ORIF *e*MLR MLR
comp=Z,14µm,19.0s,MS5.7
CUC Castrocucco 49.20 30 *e*P **P 19 16 26.3 -0.4**
comp=Z,28nm,0.9s,mb5.3
CUC LR LR
comp=Z,5µm,20.0s,MS5.5
FDF Fort de France 49.30 291 *e*P **P 19 16 29.7 +1.8**
FDF pmax pmax
comp=Z,138nm,1.2s,mb5.9
FDF MLR MLR
comp=Z,2µm,19.0s,MS5.2
FDF Fort de France 49.30 291 *e*P **P 19 16 29.7 +1.8**
comp=Z,138nm,1.2s,mb5.9
FDF LR LR
comp=Z,2µm,19.0s,MS5.2
MBDF Montbardon 49.31 19 *e*P **P 19 16 28.2 +0.7**
comp=Z,111nm,1.0s,mb5.5
MBDF Montbardon 49.31 19 *e*P **P 19 16 28.2 +0.7**
MBDF pmax pmax
comp=Z,56nm,1.0s,mb5.5
MBDF Montbardon 49.31 19 *e*P **P 19 16 28.2 +0.7**
comp=Z,56nm,1.0s,mb5.5
TCF Toulx Ste Croi 49.39 15 *e*P **P 19 16 28.1 +0.1**
comp=Z,357nm,1.7s,mb5.8
TCF Toulx Ste Croi 49.39 15 *e*P **P 19 16 28.1 +0.1**
TCF pmax pmax
comp=Z,179nm,1.7s,mb5.8
TCF Toulx Ste Croi 49.39 15 *e*P **P 19 16 28.1 +0.1**
comp=Z,179nm,1.7s,mb5.8
AGO Saint Agoulin 49.41 16 *e*P **P 19 16 28.8 +0.6**
PLDF La Plantade 49.47 16 *e*P **P 19 16 28.8 +0.1**
GRM Grahamstown 49.59 134 *e*P **P 19 16 31.1 +1.2**
GRM AMS AMS 19 33 43.4
comp=Z,5µm,17.2s,MS5.6
BGF Bois d'Agland 49.80 15 *e*P **P 19 16 31.3 +0.1**
AQU L'Aquila 49.89 26⇑P **P 19 16 32.7 +0.7**
AQU L'Aquila 49.89 26 *e*P **P 19 16 32.4 +0.5**
comp=Z,128nm,0.9s,mb6.0
AQU LR LR
comp=Z,16µm,19.0s,MS6.0
AQU L'Aquila 49.89 26⇑*i*P **P 19 16 32.7 +0.7**
LPG La Plagne 49.98 19 *e*P **P 19 16 33.4 +0.8**
comp=Z,192nm,1.1s,mb5.7
LPG La Plagne 49.98 19 *e*P **P 19 16 33.4 +0.8**
LPG pmax pmax
comp=Z,96nm,1.1s,mb5.7
LPG La Plagne 49.98 19 *e*P **P 19 16 33.4 +0.8**
comp=Z,96nm,1.1s,mb5.7
LPL La Plagne 49.99 19 *e*P **P 19 16 33.4 +0.7**
comp=Z,61nm,0.8s,mb5.4
LPL La Plagne 49.99 19 *e*P **P 19 16 33.4 +0.7**
LPL pmax pmax
comp=Z,31nm,0.8s,mb5.4
LPL La Plagne 49.99 19 *e*P **P 19 16 33.4 +0.7**
comp=Z,30nm,0.8s,mb5.4
SMF Signal de Mont 50.15 16 *e*P **P 19 16 34.1 +0.3**
AVF Avril sur Loir 50.15 15 *e*P **P 19 16 33.6 -0.3**
comp=Z,206nm,1.8s,mb5.6
AVF Avril sur Loir 50.15 15 *e*P **P 19 16 33.6 -0.3**
AVF pmax pmax
comp=Z,103nm,1.8s,mb5.6
AVF Avril sur Loir 50.15 15 *e*P **P 19 16 33.6 -0.3**
comp=Z,103nm,1.8s,mb5.6
ROSF Rostrenen 50.20 9 *e*P **P 19 16 33.8 -0.4**
comp=Z,411nm,1.7s,mb5.9
ROSF Rostrenen 50.20 9 *e*P **P 19 16 33.8 -0.4**
ROSF pmax pmax
comp=Z,205nm,1.7s,mb5.9
ROSF Rostrenen 50.20 9 *e*P **P 19 16 33.8 -0.4**
comp=Z,205nm,1.7s,mb5.9
SGMF Saint Gilles 50.24 10 *e*P **P 19 16 33.9 -0.6**
comp=Z,330nm,1.5s,mb5.8
SGMF Saint Gilles 50.24 10 *e*P **P 19 16 33.9 -0.6**
SGMF pmax pmax
comp=Z,165nm,1.5s,mb5.8
SGMF Saint Gilles 50.24 10 *e*P **P 19 16 33.9 -0.6**
comp=Z,165nm,1.5s,mb5.8
PYL PYLOS 50.32 37 *e*P **P 19 16 34.0 -1.4**
HYF Humbligny 50.41 15 *e*P **P 19 16 35.9 +0.1**
SSF Saint Saulge 50.44 15 *e*P **P 19 16 35.8 -0.2**
comp=Z,145nm,1.4s,mb5.5
SSF Saint Saulge 50.44 15 *e*P **P 19 16 35.8 -0.2**
SSF pmax pmax
comp=Z,72nm,1.4s,mb5.5
SSF Saint Saulge 50.44 15 *e*P **P 19 16 35.8 -0.2**
comp=Z,72nm,1.4s,mb5.5
VLS Valsamata 50.49 35 *e*P **P 19 16 36.0 -0.6**
VLS Valsamata 50.49 35 P **P 19 16 34.1 -2.5**
ITM Ithomi 50.62 37 *e*P **P 19 16 37.5 -0.1**
ITM Ithomi 50.62 37 P **P 19 16 37.0 -0.6**
ANWB Willy Bob 50.67 294 PFAKE 19 16 50.0 +12
ANWB LR LR
comp=Z,2µm,22.0s,MS5.0
GRR Gorron 50.68 11 *e*P **P 19 16 37.2 -0.6**
LOR Lormes 50.72 16 *e*P **P 19 16 37.8 -0.4**
comp=Z,65nm,0.9s,mb5.3
LOR *e*MLR MLR
comp=Z,5µm,22.8s,MS5.2
LOR Lormes 50.72 16 *e*P **P 19 16 37.8 -0.4**
LOR pmax pmax
comp=Z,33nm,0.9s,mb5.3
LOR MLR MLR
comp=Z,5µm,22.8s,MS5.5
LOR Lormes 50.72 16 *e*P **P 19 16 37.8 -0.4**
comp=Z,32nm,0.9s,mb5.3
LOR LR LR
comp=Z,5µm,22.8s,MS5.5
KARN Karanos 50.75 40 P **P 19 16 39.2 +0.6**
CABF La Chapelle 50.77 18 *e*P **P 19 16 38.1 -0.4**
comp=Z,338nm,1.6s,mb5.7
CABF La Chapelle 50.77 18 *e*P **P 19 16 38.1 -0.4**
CABF pmax pmax
comp=Z,169nm,1.6s,mb5.7
CABF La Chapelle 50.77 18 *e*P **P 19 16 38.1 -0.4**
comp=Z,169nm,1.6s,mb5.7
POGA Pongola 50.81 125 *e*P **P 19 16 38.9 -0.4**
POGA *e* pP 19 16 40.2 -1.2
RLS Riolos of Patr 50.92 36 *e*P **P 19 16 41.0 +1.1**
VAM Vamos 50.93 41 *e*P **P 19 16 40.0 0.0**
VLI Veliai 50.94 38 *e*P **P 19 16 41.5 +1.5**
VLX Vlachokerasia 51.02 37 *e*P **P 19 16 41.5 +0.9**
VLX Vlachokerasia 51.02 37 P **P 19 16 41.5 +0.9**
LDF La Druitiere 51.02 12 *e*P **P 19 16 40.0 -0.4**
comp=Z,76nm,1.4s,mb5.2
LDF La Druitiere 51.02 12 *e*P **P 19 16 40.0 -0.4**
LDF pmax pmax
comp=Z,38nm,1.4s,mb5.1
LDF La Druitiere 51.02 12 *e*P **P 19 16 40.0 -0.4**
comp=Z,38nm,1.4s,mb5.1
KEK Kerkira 51.10 33 *e*P **P 19 16 41.0 -0.2**
KEK Kerkira 51.10 33 P **P 19 16 41.3 +0.1**
FLN La Foliniere 51.11 11 *e*P **P 19 16 40.2 -0.9**
FLN *e*MLR MLR
comp=Z,9µm,22.5s,MS5.4
FLN La Foliniere 51.11 11 *e*P **P 19 16 40.2 -0.9**
FLN LR LR
comp=Z,9µm,22.5s,MS5.7
KMBO Kilima Mbogo 51.20 90 P **P 19 16 43.6 +1.2**
comp=Z,27nm,1.0s,mb5.1,baz=360,slow=24,SNR=32
KMBO LR LR 19 36 55.3
comp=Z,9µm,18.1s,MS5.8,baz=258,slow=34
KMBO Kilima Mbogo 51.20 90 P **P 19 16 43.7 +1.3**
KMBO pmax pmax
comp=Z,27nm,1.0s
KMBO MLR MLR
comp=Z,9µm,18.1s
KMBO Kilima Mbogo 51.20 90 *e*P **P 19 16 44.6 +2.2**
KMBO Kilima Mbogo 51.20 90 P **P 19 16 44.1 +1.7**
SNR=22
LAKA Lakka 51.34 36 P **P 19 16 44.2 +1.2**
GUR Goura 51.36 37 *e*P **P 19 16 44.0 +0.8**
GUR Goura 51.36 37 P **P 19 16 44.2 +1.0**
EFP Efpalio 51.42 36 *e*P **P 19 16 44.5 +0.9**
EFP Efpalio 51.42 36 P **P 19 16 44.8 +1.2**
TRIZ Trizonia 51.48 36 P **P 19 16 45.1 +1.0**
KALE Kalithea 51.54 36 P **P 19 16 45.7 +1.2**
DID Didima 51.63 38 *e*P **P 19 16 45.0 -0.2**
DID Didima 51.63 38 P **P 19 16 44.3 -0.9**
LAST Lasithi 51.63 42 *e*P **P 19 16 45.5 +0.3**
JAN Janina 51.64 34 *e*P **P 19 16 46.5 +1.2**
LOMF Lomont 51.66 18 *e*P **P 19 16 46.2 +1.0**
EVR Evrytania 51.69 36 *e*P **P 19 16 47.0 +1.4**
TUE Stuetta 51.71 20 *e*P **P 19 16 44.8 -0.8**
comp=Z,16nm,0.6s,mb5.1
TUE LR LR
comp=Z,7µm,19.0s,MS5.7
NPS Neapolis 51.77 42 *e*P **P 19 16 47.0 +0.7**
DSF Desfina 51.78 36 P **P 19 16 46.3 0.0**
LTK Loutraki 51.79 37 *e*P **P 19 16 46.0 -0.4**
LTK Loutraki 51.79 37 P **P 19 16 46.1 -0.3**
SFTF Sexfontaines 51.90 16 *e*P **P 19 16 46.6 -0.4**
comp=Z,309nm,1.7s,mb5.7
SFTF Sexfontaines 51.90 16 *e*P **P 19 16 46.6 -0.4**
comp=Z,309nm,1.7s,mb6.0
NAIG Nisos Aigina 51.94 38 *e*P **P 19 16 48.0 +0.5**
BBS Basel-Blauen 51.97 18 *e*P **P 19 16 47.3 -0.2**
HINF Hinteralfeld 52.08 18 *e*P **P 19 16 47.3 -1.0**
HAU Haudompre 52.10 17 *e*P **P 19 16 47.9 -0.6**
comp=Z,107nm,0.9s,mb5.5
HAU *e*MLR MLR
comp=Z,4µm,17.5s,MS5.2
HAU Haudompre 52.10 17 *e*P **P 19 16 47.9 -0.6**
HAU pmax pmax
comp=Z,53nm,0.9s,mb5.5
HAU MLR MLR
comp=Z,4µm,17.5s,MS5.5
HAU Haudompre 52.10 17 *e*P **P 19 16 47.9 -0.6**
comp=Z,53nm,0.9s,mb5.5
HAU LR LR
comp=Z,4µm,17.5s,MS5.5
DYA Yadsworthy 52.15 8 AMS AMS 19 40 03.7
comp=Z,3µm,13.4s,MS5.5
DAVOX Davos/Dischmat 52.16 21 P **P 19 16 48.8 -0.2**
comp=Z,66nm,0.8s,mb5.6,baz=217,slow=9.7,SNR=50
DAVOX LR LR 19 39 07.0
comp=Z,7µm,18.9s,MS5.7,baz=263,slow=36
MEZF Maizieres J'vi 52.18 16 *e*P **P 19 16 48.9 -0.2**
comp=Z,601nm,1.9s,mb5.9
MEZF Maizieres J'vi 52.18 16 *e*P **P 19 16 48.9 -0.2**
comp=Z,601nm,1.9s,mb6.2
VLY Voula,Athens 52.19 38 *e*P **P 19 16 49.5 +0.1**
THEF They Montfort 52.19 17 *e*P **P 19 16 49.3 +0.1**
MOF Molkenrain 52.20 18 *e*P **P 19 16 48.2 -1.0**
ATH Athens Observa 52.22 38 *e*P **P 19 16 50.0 +0.4**
LKR Lokris 52.22 37 *e*P **P 19 16 50.0 +0.4**
LKR Lokris 52.22 37 P **P 19 16 48.9 -0.7**
THL Klokotos Trika 52.24 35 *e*P **P 19 16 50.0 +0.3**
THL Klokotos Trika 52.24 35 P **P 19 16 49.9 +0.2**
ATHU Athens Univers 52.25 38 P **P 19 16 51.0 +1.2**
ATAL Atalanti 52.26 37 P **P 19 16 49.0 -0.9**
NEST Nestorio 52.27 34 P **P 19 16 51.5 +1.5**
TIR Tirane 52.29 32 *e*P **P 19 16 51.1 +1.1**
TIR pmax pmax
comp=Z,127nm,1.1s,mb5.8
TIR MLR MLR
comp=Z,8µm,20.0s,MS5.8
TIR Tirane 52.29 32 *e*P **P 19 16 51.1 +1.1**
comp=Z,127nm,1.1s,mb5.8
TIR LR LR
comp=Z,8µm,20.0s,MS5.8
PTL Penteli 52.35 38 *e*P **P 19 16 51.0 +0.4**
HCY Herceg Novi 52.38 30⇑*i*P **P 19 16 50.9 +0.2**
HCY Herceg Novi 52.38 30⇑*i*P **P 19 16 50.9 +0.2**
ULC Ulcinj 52.41 31⇑*i*P **P 19 16 51.8 +0.9**
ULC Ulcinj 52.41 31⇑*i*P **P 19 16 51.9 +1.0**
BUM Brajici-Budva 52.47 30⇑*i*P **P 19 16 52.2 +0.8**
FELD Feldberg im Sc 52.49 19 *e*P **P 19 16 50.3 -1.1**
ECH Echery 52.53 18 *e*P **P 19 16 51.0 -0.7**
ECH Echery 52.53 18 *e*P **P 19 16 50.7 -1.0**
ECH pmax pmax
comp=Z,97nm,1.6s,mb5.5
ECH MLR MLR
comp=Z,4µm,20.0s,MS5.5
ECH Echery 52.53 18 *e*P **P 19 16 50.7 -0.9**
comp=Z,97nm,1.6s,mb5.5
ECH LR LR
comp=Z,4µm,20.0s,MS5.5
DAVA Damuels 52.60 20⇑*i*P **P 19 16 51.3 -0.9**
comp=Z,159nm,1.5s,mb5.7,SNR=26
KZN Kozani 52.60 34 *e*P **P 19 16 52.5 +0.1**
KZN Kozani 52.60 34 P **P 19 16 53.0 +0.6**
LIBD Limburg 52.61 18 *e*P **P 19 16 52.1 -0.2**
FETA Feichten 52.67 21⇑*i*P **P 19 16 51.9 -0.9**
comp=Z,56nm,1.5s,mb5.3,SNR=13
FNA Florina 52.71 34 P **P 19 16 53.3 +0.1**
BRY Bratogost 52.73 30⇑*i*P **P 19 16 53.0 -0.3**
BRY Bratogost 52.73 30⇑*i*P **P 19 16 53.1 -0.2**
CDF Champ du Feu 52.74 18 *e*P **P 19 16 52.4 -0.8**
comp=Z,87nm,0.9s,mb5.4
CDF Champ du Feu 52.74 18 *e*P **P 19 16 52.4 -0.8**
CDF pmax pmax
comp=Z,43nm,0.9s,mb5.4
CDF Champ du Feu 52.74 18 *e*P **P 19 16 52.4 -0.8**
comp=Z,43nm,0.9s,mb5.4
TRI Trieste 52.74 24 *e*P **P 19 16 53.2 -0.1**
TRI pmax pmax
comp=Z,223nm,1.4s,mb5.9
TRI MLR MLR
comp=Z,5µm,20.0s,MS5.6
TRI Trieste 52.74 24 *e*P **P 19 16 53.2 -0.1**
comp=Z,223nm,1.4s,mb5.9
TRI LR LR
comp=Z,5µm,20.0s,MS5.6
TTG Podgorica 52.75 31⇑*i*P **P 19 16 54.0 +0.6**
TTG Podgorica 52.75 31⇑*i*P **P 19 16 54.1 +0.6**
NEO Neokhori 52.78 36 *e*P **P 19 16 53.5 -0.2**
BIA Bitola 52.84 33 *i*P **P 19 16 54.6 +0.4**
KNDS Knezji Dol 52.85 25 *e*P **P 19 16 54.4 +0.2**
KNDS Knezji Dol 52.85 25 *e*P **P 19 16 54.4 +0.2**
LIT Litokhoron 52.87 35 *e*P **P 19 16 54.5 +0.1**
LIT Litokhoron 52.87 35 P **P 19 16 54.3 -0.1**
NKY Niksic 52.90 30⇑*i*P **P 19 16 55.3 +0.8**
NKY Niksic 52.90 30⇑*i*P **P 19 16 55.3 +0.8**
SPAK Spaichingen-Ko 52.94 19 *e*P **P 19 16 54.0 -0.7**
KARP Karpathos 52.97 42 *e*P **P 19 16 57.5 +2.3**
BFO Black Forest 52.99 18 *e*P **P 19 16 54.4 -0.7**
comp=Z,53nm,1.2s,mb5.3
BFO LR LR

comp=Z,8µm,19.0s,MS5.8
JAVS Javornik 53.02 24 *i* P **P 19 16 55.4 +0.1**
JAVS *i* 19 17 03.5
JAVS Javornik 53.02 24 *i* P **P 19 16 55.4 +0.1**
JAVS *i* 19 17 03.5
KRUS Krusevo 53.04 33 *i* P **P 19 16 56.0 +0.3**
AOS Alonnisos 53.08 37 P **P 19 16 55.4 -0.5**
RETA Reutte 53.08 21⇑*i*P **P 19 16 54.6 -1.2**
comp=Z,76nm,1.7s,mb5.3,SNR=9.2
MOTA Moosalm 53.08 21⇑*i*P **P 19 16 54.5 -1.3**
comp=Z,39nm,1.1s,mb5.2,SNR=18
ABTA Abfaltersbach 53.10 23⇑*i*P **P 19 16 55.8 -0.2**
comp=Z,78nm,1.6s,mb5.4,SNR=16
UPM Unac-Piva 53.14 30⇑*i*P **P 19 16 56.6 +0.3**
UPM Unac-Piva 53.14 30⇑*i*P **P 19 16 56.6 +0.3**
CADS Cadrg 53.16 24 *e*P **P 19 16 56.2 -0.2**
CADS *e*S **S 19 24 27.7 +0.4**
CADS *e* 19 28 26.0
CADS Cadrg 53.16 24 *e*P **P 19 16 56.2 -0.2**
CADS *e*S **S 19 24 27.7 +0.4**
CADS *e* 19 28 26.0
BOJS Bojanci 53.20 25 *i* P **P 19 16 57.1 +0.4**
BOJS *i* 19 17 05.3
BOJS Bojanci 53.20 25 *i* P **P 19 16 57.1 +0.4**
BOJS *i* 19 17 05.3
WTTA Wattenberg 53.20 22⇑*i*P **P 19 16 56.3 -0.4**
comp=Z,69nm,0.9s,mb5.6,SNR=13
PVY Plav 53.23 31⇑*i*P **P 19 16 57.3 +0.3**
PVY Plav 53.23 31⇑*i*P **P 19 16 57.4 +0.4**
WATA Walderalm 53.24 21⇓*i*P **P 19 16 56.2 -0.8**
comp=Z,46nm,1.1s,mb5.3,SNR=7.9
LJU Ljubljana 53.33 24 *e*P **P 19 16 57.8 +0.2**
LJU *e*S **S 19 24 30.7 +1.0**
LJU Ljubljana 53.33 24 *e*P **P 19 16 57.8 +0.2**
LJU *e*S **S 19 24 30.7 +1.0**
BAIF Baives 53.38 14 *e*P **P 19 16 57.1 -0.9**
comp=Z,76nm,0.8s,mb5.4
BAIF Baives 53.38 14 *e*P **P 19 16 57.1 -0.9**
BAIF pmax pmax
comp=Z,38nm,0.8s,mb5.4
BAIF Baives 53.38 14 *e*P **P 19 16 57.1 -0.9**
comp=Z,38nm,0.8s,mb5.4
IVA Berane 53.39 31⇑*i*P **P 19 16 59.0 +0.8**
IVA Berane 53.39 31⇑*i*P **P 19 16 59.0 +0.9**
GRG Griva 53.40 34 P **P 19 16 58.1 -0.1**
LANF Langenberg 53.41 18 *e*P **P 19 16 57.7 -0.4**
MYKA Terra Mystica 53.45 23⇑*i*P **P 19 16 58.5 0.0**
comp=Z,65nm,1.0s,mb5.5
PAIG Pallouri 53.45 36 P **P 19 16 58.4 -0.2**
PLE Pljevlja 53.47 30⇑*i*P **P 19 16 59.9 +1.2**
PLE Pljevlja 53.47 30⇑*i*P **P 19 16 60.0 +1.3**
AAE Adis Abeba 53.50 78 *e*P **P 19 17 00.7 +1.3**
AAE *e*S **S 19 24 31.6 -1.4**
DOU Dourbes 53.52 15 P **P 19 16 58.9 0.0**
comp=Z,38nm,1.8s,mb5.0
WLF Walferdange 53.54 16 P **P 19 17 00.0 +0.9**
comp=Z,62nm,2.3s,mb5.1
WLF Walferdange 53.54 16 *e*P **P 19 16 59.7 +0.6**
WLF pmax pmax
comp=Z,87nm,1.5s,mb5.5
WLF MLR MLR
comp=Z,7µm,19.0s,MS5.8
WLF Walferdange 53.54 16 *e*P **P 19 16 59.7 +0.6**
comp=Z,88nm,1.5s,mb5.5
WLF LR LR
comp=Z,7µm,19.0s,MS5.8
SKO Skopje 53.56 32 *i* P **P 19 17 01.0 +1.5**
GIVF Givet 53.58 15 *e*P **P 19 16 58.5 -0.9**
comp=Z,153nm,1.1s,mb5.5
GIVF Givet 53.58 15 *e*P **P 19 16 58.5 -0.9**
GIVF pmax pmax
comp=Z,77nm,1.1s,mb5.5
GIVF Givet 53.58 15 *e*P **P 19 16 58.5 -0.9**
comp=Z,77nm,1.1s,mb5.5
PLG Polygyros 53.60 35 *e*P **P 19 16 59.5 -0.3**
STU Stuttgart 53.66 19 *e*P **P 19 16 59.0 -1.0**
comp=Z,26nm,1.0s,mb5.1
STU Stuttgart 53.66 19 *e*P **P 19 16 59.8 -0.2**
STU pmax pmax
comp=Z,23nm,0.8s,mb5.2
STU Stuttgart 53.66 19 *e*P **P 19 16 59.8 -0.2**
comp=Z,23nm,0.8s,mb5.2
KBA Koelnbreinsper 53.70 23⇑*i*P **P 19 17 00.1 -0.2**
comp=Z,45nm,1.2s,mb5.3,SNR=11
OBKA Obir 53.71 24⇑*i*P **P 19 17 00.1 -0.4**
comp=Z,102nm,1.5s,mb5.5,SNR=6.3
STVI Saint Thomas 53.76 294 *e*P **P 19 17 00.9 -0.4**
comp=Z,44nm,1.1s,mb5.3
MCH1 Michaelchurch 53.80 8 P **P 19 17 00.0 -1.0**
MCH1 AMB AMB 19 17 02.7
comp=Z,88nm,2.4s,mb5.3
MCH1 AMS AMS 19 40 40.1
comp=Z,3µm,15.8s
MCH1 Michaelchurch 53.80 8 *e*P **P 19 17 00.0 -1.0**
MCH1 AMB AMB 19 17 02.7
comp=Z,88nm,2.4s,mb5.3
MCH1 AMS AMS 19 40 40.1
comp=Z,3µm,15.8s,MS5.4
KNT Kendrikon 53.81 34 P **P 19 17 01.0 -0.3**
SNF Seneffe 53.82 14 P **P 19 17 01.4 +0.2**
comp=Z,36nm,2.1s,mb4.9
RUP Ruppelstein 53.83 17 *e*P **P 19 17 00.9 -0.3**
FUR Furstenfeldbru 53.84 21 *e*P **P 19 17 00.6 -0.7**
comp=Z,139nm,1.5s,mb5.7
FUR Furstenfeldbru 53.84 21 *e*P **P 19 17 00.6 -0.7**
FUR pmax pmax
comp=Z,139nm,1.5s,mb5.7
SOH Sokhos 53.84 35 *e*P **P 19 17 02.0 +0.5**
SOH Sokhos 53.84 35 P **P 19 17 01.8 +0.3**
OUR Ouranopolis 53.89 36 P **P 19 17 01.8 -0.1**
BCLA Clavier 54.00 15 P **P 19 17 02.5 +0.1**
comp=Z,58nm,2.0s,mb5.2
BDRM Kayabasi 54.03 41 *i* P **P 19 17 02.2 -0.7**
RJOB Jochberg 54.03 22 *e*P **P 19 17 01.7 -1.1**
comp=Z,45nm,0.8s,mb5.5
SOKA Soboth 54.05 24⇑*i*P **P 19 17 02.9 0.0**
comp=Z,70nm,1.3s,mb5.4
PERS Pernice 54.05 24 *i* P **P 19 17 02.9 0.0**
PERS *i* 19 17 11.2
PERS Pernice 54.05 24 *i* P **P 19 17 02.9 0.0**
PERS *i* 19 17 11.2
SRS Serrai 54.17 35 P **P 19 17 04.1 +0.2**
URLA Izmir 54.24 39 *i* P **P 19 17 03.2 -1.3**
TOD Tromm 54.27 18 *e*P **P 19 17 04.0 -0.4**
LIA Limnos Island 54.32 37 *e*P **P 19 17 04.5 -0.5**
LIA Limnos Island 54.32 37 P **P 19 17 05.9 +0.9**
DIVS Divibare 54.33 30 P **P 19 17 06.0 +1.0**
MEM Membach 54.35 16 P **P 19 17 05.6 +0.5**
KOGS Kog 54.38 25 *e*P **P 19 17 05.8 +0.5**
KOGS Kog 54.38 25 *e*P **P 19 17 05.8 +0.5**
KKB Krupnik 54.39 34 *i* P **P 19 17 06.0 +0.5**
BEBN Eben Emael 54.44 15 P **P 19 17 05.9 +0.3**
comp=Z,34nm,2.1s,mb4.9
NVR Nevrokopi 54.48 35 *e*P **P 19 17 06.5 +0.3**
MMB Musomiste 54.56 34 *i* P **P 19 17 07.3 +0.5**
PRK Paraskevi 54.57 38 *e*P **P 19 17 07.5 +0.6**
KAVA Kavala 54.62 35 P **P 19 17 06.7 -0.5**
AYDN Tasoluk 54.65 40 *i* P **P 19 17 07.5 +0.1**
DESE Dese 54.66 76 *e*P **P 19 17 11.6 +3.6**
DESE *e*S **S 19 24 46.6 -2.2**
MOA Molln 54.69 23⇑*i*P **P 19 17 06.4 -1.2**
comp=Z,47nm,1.1s,mb5.4,SNR=13
KDAG Bornova 54.69 39 *i* P **P 19 16 59.3 -8.5**
TNS Taunus Mts 54.70 17 *e*P **P 19 17 07.0 -0.6**
comp=Z,60nm,1.0s,mb5.6
TNS Taunus Mts 54.70 17 *e*P **P 19 17 07.0 -0.6**
TNS pmax pmax
comp=Z,60nm,1.0s,mb5.6
ARSA Arzberg 54.71 24⇓*i*P **P 19 17 06.9 -0.8**
comp=Z,53nm,1.4s,mb5.4,SNR=8.4
CWF Charnwood Fore 54.78 9 P **P 19 17 06.2 -1.9**
CWF AMB AMB 19 17 06.8
comp=Z,37nm,1.7s,mb5.1
CWF AMS AMS 19 42 35.3
comp=Z,4µm,15.2s
CWF Charnwood Fore 54.78 9 *e*P **P 19 17 06.2 -1.9**
CWF AMB AMB 19 17 06.8
comp=Z,37nm,1.7s,mb5.1
CWF AMS AMS 19 42 35.3
comp=Z,4µm,15.2s,MS5.5
SJG San Juan 54.80 293 LR LR 19 35 41.8
comp=Z,1µm,21.3s,MS4.9,baz=104,slow=31
SJG San Juan 54.80 293 *e*P **P 19 17 09.9 +1.0**
SJG pmax pmax
comp=Z,36nm,0.9s
SJG MLR MLR
comp=Z,2µm,21.0s
SJG San Juan 54.80 293 *e*P **P 19 17 09.9 +1.1**
comp=Z,36nm,0.9s,mb5.4
SJG LR LR
comp=Z,2µm,21.0s,MS5.2
BOZC Bozcaada 54.80 37 *i* P **P 19 17 10.0 +1.5**
AYVA Ayvalik 54.87 38 *i* P **P 19 17 09.8 +0.8**
VTS Vitosha 54.95 33 ⇓P **P 19 17 10.6 +1.1**
VTS Vitosha 54.95 33 P **P 19 17 10.0 +0.5**
VTS Vitosha 54.95 33⇓*i*P **P 19 17 10.6 +1.1**
VTS Vitosha 54.95 33 *i* P **P 19 17 10.3 +0.8**
AKAS Kas 55.00 43 *i* P **P 19 17 07.7 -2.4**
ICM Isla Caja Muer 55.08 293 *e*P **P 19 17 11.2 +0.3**
GRFO Grafenberg 55.12 20 *e*P **P 19 17 09.8 -0.8**
GRFO pmax pmax
comp=Z,48nm,1.2s,mb5.4
GRFO Grafenberg 55.12 20 *e*P **P 19 17 09.8 -0.8**
comp=Z,48nm,1.2s,mb5.4
GRA1 Grafenberg Arr 55.12 20 *e*P **P 19 17 10.1 -0.5**
comp=Z,48nm,1.1s,mb5.4
GRA1 *e*pP pP 19 17 17.6 +4.8
GRA1 *e*PP PP 19 19 09.2 -4.9
GRA1 *e*S **S 19 24 51.6 -2.2**
GRA1 LR LR
comp=Z,4µm,21.0s,MS5.5
GRF Grafenberg Arr 55.12 20 *e*P **P 19 17 10.1 -0.5**
comp=Z,48nm,1.1s,mb5.4
GRF *e*pP pP 19 17 17.6 +4.8
GRF *e*PP PP 19 19 09.2 -4.9
GRF *e*S **S 19 24 51.6 -2.2**
GRF *e*L 19 40 18.0
comp=Z,4µm,21.0s
GRF Grafenberg Arr 55.12 20 *e*P **P 19 17 10.1 -0.5**
GRF *e**PP pP 19 17 17.6 +4.8
GRF *e* 19 19 09.2
GRF *e*S **S 19 24 51.6 -2.2**
GRF pmax pmax
comp=Z,48nm,1.1s,mb5.4
GRF MLR MLR
comp=Z,4µm,21.0s,MS5.5
CELP Cerrillos 55.18 293 *e*P **P 19 17 12.1 +0.5**
OBIP Obispado Ponce 55.20 293 *e*P **P 19 17 12.3 +0.6**
comp=Z,32nm,0.9s,mb5.4
WET Wettzell 55.24 21 *e*P **P 19 17 10.8 -0.7**
comp=Z,50nm,1.1s,mb5.5
WET Wettzell 55.24 21 *e*P **P 19 17 10.8 -0.7**
WET pmax pmax
comp=Z,50nm,1.1s,mb5.5
PKSM Moragy 55.25 27 P **P 19 17 12.1 +0.5**
PKSM Moragy 55.25 27⇑*i*P **P 19 17 11.6 0.0**
GEC2 GERESS Array S 55.29 22 *e*P **P 19 17 11.3 -0.6**
comp=Z,76nm,1.2s,mb5.6
GEC2 *e*PP PP 19 19 12.3 -3.3
GEC2 GERESS Array S 55.29 22 *e*P **P 19 17 11.3 -0.6**
GEC2 *e* 19 19 12.3
GEC2 pmax pmax
comp=Z,76nm,1.2s,mb5.6
AKHS Akhisar 55.32 39 *i* P **P 19 17 13.1 +0.8**
CONA Conrad Observa 55.39 24⇑*i*P **P 19 17 12.5 -0.1**
comp=Z,74nm,1.8s,mb5.4,SNR=15
LPAZ La Paz 55.40 251 P **P 19 17 13.6 +0.3**
comp=Z,2.7nm,0.8s,mb4.3,baz=69,slow=6.8,SNR=9.3
LPAZ LR LR 19 39 44.8
comp=Z,4µm,18.7s,MS5.6,baz=268,slow=35
LPAZ La Paz 55.40 251 P **P 19 17 13.6 +0.3**
LPAZ LR LR 19 39 44.8
DNZL Cakiroluk 55.43 41 *i* P **P 19 17 12.4 -0.7**
PGB Panagyurishte 55.44 34 *i* P **P 19 17 13.1 0.0**
BUG Bochum--Univer 55.45 16 *e*P **P 19 17 11.8 -1.2**
comp=Z,63nm,1.5s,mb5.4
ALN Alexandroupoli 55.46 36 *e*P **P 19 17 13.0 -0.2**
ALN Alexandroupoli 55.46 36 P **P 19 17 12.4 -0.8**
LRS Lares 55.48 293 *e*P **P 19 17 14.8 +1.0**
LRS *e* 19 17 26.9
SOP Sopron 55.48 25⇑*e*P **P 19 17 13.6 +0.3**
KHC Kasperske Hory 55.48 22 *i* P **P 19 17 12.3 -0.9**
KHC *e* 19 17 21.3
KHC *e* 19 19 13.0
KHC *e*S **S 19 24 56.8 -1.8**
KHC MLR MLR
comp=Z,5µm,17.1s,MS5.7
KHC Kasperske Hory 55.48 22 *e*P **P 19 17 12.1 -1.1**
comp=Z,21nm,0.9s,mb5.2
KHC *e*PP PP 19 19 12.0 -5.3
KHC Kasperske Hory 55.48 22 *i* P **P 19 17 12.3 -0.9**
KHC *e*x x 19 17 21.3
KHC *e*PP PP 19 19 13.0 -4.3
KHC *e*S **S 19 24 56.8 -1.8**
KHC AMS AMS 19 41 50.0
comp=Z,5µm,17.1s
GOLH Golhisar 55.52 42 *i* P **P 19 17 12.3 -1.5**
ROTZ Rotzenmuhle 55.52 20 *e*P **P 19 17 12.9 -0.6**
ROTZ *e*pP pP 19 17 20.2 +4.5
KDZ Kurdzhali 55.56 35 *i* P **P 19 17 13.7 -0.3**
CRPR Cabo Rojo, PR 55.65 293 *e*P **P 19 17 14.2 -0.9**
comp=Z,17nm,0.7s,mb5.2
UBBA Unterbreizbach 55.70 18 *e*P **P 19 17 14.3 -0.5**
BALY Balya 55.70 38 *i* P **P 19 17 13.6 -1.4**
HPK Haverah Park 55.91 9 P **P 19 17 14.3 -1.9**
HPK AMB AMB 19 17 19.8
comp=Z,116nm,2.8s,mb5.4
HPK AMS AMS 19 42 20.2
comp=Z,3µm,16.3s
HPK Haverah Park 55.91 9 *e*P **P 19 17 14.3 -1.9**
HPK AMB AMB 19 17 19.8
comp=Z,116nm,2.8s,mb5.4
HPK AMS AMS 19 42 20.2
comp=Z,3µm,16.3s,MS5.5
KORT Korkueli 55.92 42 *i* P **P 19 17 17.8 +1.1**
DEMI Demirci 55.98 40 *i* P **P 19 17 16.8 -0.2**
NKC Novy Kostel 56.00 20 *i* P **P 19 17 16.6 -0.3**
NKC *e* 19 17 23.9
NKC *e*S **S 19 25 01.8 -3.7**
NKC MLR MLR
comp=Z,4µm,17.5s,MS5.6
NKC Novy Kostel 56.00 20 *i* P **P 19 17 16.6 -0.3**
NKC *e*pP pP 19 17 23.9 +4.7
NKC *e*S **S 19 25 01.8 -3.7**
NKC AMS AMS 19 40 40.0
comp=Z,4µm,17.5s
WERN Wernitzgruen 56.02 20 *e*P **P 19 17 16.2 -0.9**
MOX Moxa 56.07 19 *e*P **P 19 17 16.7 -0.7**
comp=Z,151nm,1.8s,mb5.7
MOX *e*S **S 19 25 05.0 -1.4**
MOX
comp=Z,4µm,20.0s
MOX Moxa 56.07 19 *e*P **P 19 17 16.7 -0.7**
MOX *e*S **S 19 25 05.0 -1.4**
MOX pmax pmax
comp=Z,151nm,1.8s,mb5.7
MOX MLR MLR
comp=Z,4µm,20.0s,MS5.5
GUNZ Gunzen 56.07 20 *e*P **P 19 17 16.7 -0.7**
KHAL Karahalli 56.10 41 *i* P **P 19 17 17.9 0.0**
ZST Bratislava 56.11 25 *e*P **P 19 17 18.8 +1.0**
ZST pmax pmax
comp=Z,28nm,0.9s,mb5.3
ZST Bratislava 56.11 25 *e*P **P 19 17 18.8 +1.0**
comp=Z,28nm,0.9s,mb5.3
ZST Bratislava 56.11 25 *e*P **P 19 17 18.8 +1.0**
PLN Plauen 56.12 20 *e*P **P 19 17 17.2 -0.6**
WERD Werda 56.13 20 *e*P **P 19 17 17.0 -0.9**
WERD *e*pP pP 19 17 25.1 +5.0
DURS Dursunbey 56.15 39 *i* P **P 19 17 17.8 -0.5**
TANN Tannenbergstha 56.16 20 *e*P **P 19 17 17.6 -0.5**
BZS Buzias 56.22 29 P **P 19 17 19.4 +0.8**
BZS Buzias 56.22 29⇑*i*P **P 19 17 19.1 +0.5**
KESW Keswick, Cumbr 56.31 8 P **P 19 17 18.1 -1.0**
KESW AMB AMB 19 17 28.0
comp=Z,116nm,1.8s,mb5.6
KESW Keswick, Cumbr 56.31 8 *e*P **P 19 17 18.1 -1.0**
KESW AMB AMB 19 17 28.0
comp=Z,116nm,1.8s,mb5.6
MODS Modra-Piesok 56.32 25 *e*P **P 19 17 20.0 +0.7**
MODS Modra-Piesok 56.32 25 *e*P **P 19 17 20.0 +0.7**
TREC Trest 56.34 23 *i* P **P 19 17 18.4 -1.0**
TREC *e* 19 17 26.2
TREC *e*S **S 19 25 08.9 -1.1**
TREC MLR MLR
comp=Z,6µm,15.8s,MS5.8
TREC Trest 56.34 23 *i* P **P 19 17 18.4 -1.0**
TREC *e*pP pP 19 17 26.2 +4.6
TREC *e*S **S 19 25 08.9 -1.1**
TREC AMS AMS 19 42 20.0
comp=Z,6µm,15.8s
BUD Budapest 56.38 26⇑*e*P **P 19 17 19.9 +0.1**
GAL1 Galloway 56.39 6 P **P 19 17 18.1 -1.5**
GAL1 AMB AMB 19 17 24.6
comp=Z,82nm,3.5s
GAL1 AMS AMS 19 42 57.0
comp=Z,2µm,15.6s
GAL1 Galloway 56.39 6 *e*P **P 19 17 18.1 -1.5**
GAL1 AMB AMB 19 17 24.6
comp=Z,82nm,3.5s
GAL1 AMS AMS 19 42 57.0
comp=Z,2µm,15.6s,MS5.3
GDZ Gediz 56.50 40 *i* P **P 19 17 19.9 -0.9**
PRU Pruhonice 56.54 22 *i* P **P 19 17 20.6 -0.2**
PRU *e* 19 17 28.6
PRU *e* 19 19 24.6
PRU *e*S **S 19 25 13.6 +0.9**
PRU MLR MLR
comp=Z,7µm,18.5s,MS5.8
PRU Pruhonice 56.54 22 *i* P **P 19 17 20.6 -0.2**
PRU *e*x x 19 17 28.6
PRU *e*PP PP 19 19 24.6 -2.2
PRU *e*x x 19 20 33.9
PRU *e*S **S 19 25 13.6 +0.9**
PRU AMS AMS 19 42 00.0
comp=Z,7µm,18.5s
PRA Prague 56.57 22 P **P 19 17 21.0 0.0**
PRA PP PP 19 19 26.0 -1.0
PRA S **S 19 25 14.0 +0.9**
PRA AMS AMS 19 42 30.0
NEUB Neuenburg 56.60 19 *e*P **P 19 17 20.4 -0.8**
GZR Gura Zlata 56.64 30 P **P 19 17 22.6 +1.0**
GZR Gura Zlata 56.64 30⇓*i*P **P 19 17 22.6 +1.0**
XAL Allendale 56.70 8 P **P 19 17 19.9 -1.9**
XAL Allendale 56.70 8 *e*P **P 19 17 19.9 -1.9**
CLZ Clausthal 56.71 18 *e*P **P 19 17 21.5 -0.5**
comp=Z,70nm,1.7s,mb5.4
CLZ Clausthal 56.71 18 *e*P **P 19 17 21.5 -0.5**
CLZ pmax pmax
comp=Z,70nm,1.7s,mb5.4
JMB Yambol 56.75 35 P **P 19 17 23.0 +0.5**
VRAC Vranov 56.78 23 P **P 19 17 22.6 +0.1**
VRAC Vranov 56.78 23⇓*i*P **P 19 17 22.4 -0.1**
GAZI Gazipasa 56.87 44 *i* P **P 19 17 21.9 -1.5**
ECK Cauldkaine Hil 56.89 7 P **P 19 17 22.6 -0.5**
ECK Cauldkaine Hil 56.89 7 *e*P **P 19 17 22.6 -0.5**
FBE Freiberg 56.89 20 *e*P **P 19 17 22.8 -0.5**
comp=Z,150nm,2.0s,mb5.7
KOLL Kolacno 56.95 25 *e*P **P 19 17 24.6 +0.8**
KOLL Kolacno 56.95 25 *e*P **P 19 17 24.6 +0.8**
CSS Prodhromos 56.96 46 *e*P **P 19 17 23.3 -0.8**
comp=Z,46nm,1.0s,mb5.5
CSS LR LR
comp=Z,3µm,20.0s,MS5.4
PVCC Panska Ves 57.00 21 *i* P **P 19 17 23.4 -0.6**
PVCC *e* 19 17 31.1
PVCC *e*S **S 19 25 20.6 +1.9**
PVCC MLR MLR
comp=Z,6µm,17.1s,MS5.7
PVCC Panska Ves 57.00 21 *i* P **P 19 17 23.4 -0.6**
PVCC *e*pP pP 19 17 31.1 +4.8
PVCC *e*S **S 19 25 20.6 +1.9**
PVCC AMS AMS 19 42 00.0
comp=Z,6µm,17.1s
ESK Eskdalemuir 57.01 7 P **P 19 17 22.4 -1.7**
ESK AMB AMB 19 17 22.7
comp=Z,87nm,2.6s,mb5.3
ESK AMS AMS 19 44 16.9
comp=Z,2µm,15.2s
ESK Eskdalemuir 57.01 7 *e*P **P 19 17 22.4 -1.7**
ESK AMB AMB 19 17 22.7
comp=Z,87nm,2.6s,mb5.3
ESK AMS AMS 19 44 16.9
comp=Z,2µm,15.2s,MS5.3
ESK Eskdalemuir 57.01 7 *i* P **P 19 17 26.5 +2.5**
ESK Eskdalemuir 57.01 7 *e*P **P 19 17 23.4 -0.7**
comp=Z,39nm,1.0s,mb5.4
ESK LR LR
comp=Z,2µm,22.0s,MS5.1
ELBA Catalca 57.04 37 *i* P **P 19 17 22.7 -1.8**
BRG Berggiesshubel 57.06 21 *e*P **P 19 17 23.7 -0.8**
comp=Z,94nm,1.8s,mb5.5
BRG *e*PP PP 19 19 27.0 -4.3
BRG Berggiesshubel 57.06 21 *i* P **P 19 17 23.8 -0.7**
comp=Z,23nm,1.1s,mb5.1
BRG *e* pP 19 17 26.9 +0.2
comp=Z,94nm,1.8s
BRG *e* 19 17 31.9
comp=Z,49nm,1.2s
BRG PP PP 19 19 26.7 -4.7
comp=Z,113nm,1.9s
BRG *e* 19 20 47.0
BRG S **S 19 25 24.0 +4.5**
BRG SS SS 19 29 09.0 +0.6
BRG
comp=Z,4µm,15.4s
BRG
comp=N,4µm,15.2s
BRG
comp=E,4µm,15.2s
VYHS Vyhne 57.07 25 *e*P **P 19 17 24.8 +0.2**
VYHS pmax pmax
comp=Z,162nm,2.4s,mb5.6
VYHS Vyhne 57.07 25 *e*P **P 19 17 24.8 +0.2**
comp=Z,162nm,2.4s,mb5.6
VYHS Vyhne 57.07 25 *e*P **P 19 17 24.8 +0.2**
CLL Collm 57.10 20 *e*P **P 19 17 24.0 -0.7**
comp=Z,29nm,1.4s,mb5.1
CLL *e*pP pP 19 17 31.8 +4.9
CLL Collm 57.10 20⇑*i*P **P 19 17 23.8 -0.9**
CLL *i* 19 17 31.5
CLL *e*S **S 19 25 14.0 -6.0**
CLL pmax pmax
comp=Z,69nm,1.7s,mb5.4
CLL MLR MLR
comp=Z,4µm,19.4s,MS5.5
CLL Collm 57.10 20⇑*i*P **P 19 17 23.8 -0.9**
comp=Z,69nm,1.7s,mb5.4
CLL *i* 19 17 31.5
CLL *e*S **S 19 25 14.0 -6.0**
CLL LR LR
comp=Z,4µm,19.4s,MS5.5
CLL Collm 57.10 20⇑*i*P **P 19 17 23.8 -0.9**
comp=Z,69nm,1.7s,mb5.4
CLL *i* (sP) sP 19 17 31.5 +3.7
comp=Z,125nm,1.9s
CLL *e*PPk 19 19 21.0
CLL *e*PP PP 19 19 34.0 +2.3
CLL *e*PPP 19 20 54.0
CLL *e*S **S 19 25 14.0 -6.0**
comp=N,2µm,25.3s
CLL *e*S **S 19 25 14.0 -6.0**
comp=E,900nm,21.5s
CLL *e* 19 30 54.0
CLL LmH 19 40 00.0
comp=N,5µm,20.1s
CLL LmH 19 40 00.0
comp=E,3µm,19.4s
CLL LmV 19 42 00.0
comp=Z,4µm,19.4s
PSZ Piszkesteto 57.10 27 P **P 19 17 25.1 +0.3**
PSZ Piszkesteto 57.10 27 *e*P **P 19 17 24.4 -0.4**
comp=Z,57nm,1.1s,mb5.5
PSZ LR LR
comp=Z,5µm,20.0s,MS5.6
PSZ Piszkesteto 57.10 27⇑*i*P **P 19 17 24.9 +0.1**
PSZ Piszkesteto 57.10 27⇑*e*P **P 19 17 24.9 +0.1**
TRQA Tornquist 57.27 224 *e*P **P 19 17 25.1 -1.2**
comp=Z,51nm,1.3s,mb5.4
BUY Buyukada 57.28 38 *i* P **P 19 17 27.3 +1.0**
PGBU Glenifferbraes 57.34 6 P **P 19 17 25.4 -1.0**
PGBU AMB AMB 19 17 26.7
comp=Z,71nm,1.5s,mb5.5
PGBU AMS AMS 19 43 54.3
comp=Z,2µm,14.6s
PGBU Glenifferbraes 57.34 6 *e*P **P 19 17 25.4 -1.0**
PGBU AMB AMB 19 17 26.7
comp=Z,71nm,1.5s,mb5.5
PGBU AMS AMS 19 43 54.3
comp=Z,2µm,14.6s,MS5.4
SDV Santo Domingo 57.34 281 *e*P **P 19 17 27.7 +0.5**
comp=Z,14nm,0.8s,mb5.0
SDV LR LR

comp=Z,689nm,20.0s,MS4.8
EBL Broad Law 57.48 7 P **P 19 17 26.0 -1.3**
EBL Broad Law 57.48 7 *e*P **P 19 17 26.0 -1.3**
ERMK Ermenek 57.49 44 *i* P **P 19 17 24.6 -3.2**
DPC Dobruska-Polom 57.51 23 *i* P **P 19 17 27.2 -0.5**
DPC *e* 19 17 33.9
DPC *e*S **S 19 25 26.8 +1.4**
DPC MLR MLR
comp=Z,3μm,20.3s,MS5.4
DPC Dobruska-Polom 57.51 23 *i* P **P 19 17 27.2 -0.5**
DPC *e*pP pP 19 17 33.9 +4.0
DPC *e*x x 19 27 49.0
DPC *e*S **S 19 25 26.8 +1.4**
DPC AMS AMS 19 39 30.0
comp=Z,3μm,20.3s
UPC Upice 57.52 22 *i* P **P 19 17 26.6 -1.1**
UPC *e* 19 17 34.8
UPC Upice 57.52 22 *i* P **P 19 17 26.6 -1.1**
UPC *e*pP pP 19 17 34.8 +4.9
MORC Moravsky Berou 57.53 24 P **P 19 17 27.8 0.0**
MORC Moravsky Berou 57.53 24 *e*P **P 19 17 25.3 -2.5**
comp=Z,150nm,1.8s,mb5.7
MORC Moravsky Berou 57.53 24⇑*i*P **P 19 17 27.5 -0.3**
BORA Eskisehir 57.57 40 *i* P **P 19 17 27.9 -0.4**
DRGR 57.59 29 P **P 19 17 28.8 +0.5**
MMAI Mount Meron Ar 57.60 49 P **P 19 17 28.7 0.0**
comp=Z,1,8nm,0.6s,mb4.3,baz=243,slow=5.5,SNR=4.5
EDI Edinburgh 57.61 7 AMS AMS 19 44 35.3
comp=Z,2μm,13.6s,MS5.5
ESKT Eskisehir 57.62 40 *i* P **P 19 17 27.8 -0.9**
EAB Aberfoyle 57.73 6 P **P 19 17 28.1 -1.0**
EAB Aberfoyle 57.73 6 *e*P **P 19 17 28.1 -1.0**
KECS Kecovo 57.78 26 *e*P **P 19 17 30.7 +1.0**
KECS pmax pmax
comp=Z,38nm,1.7s,mb5.2
KECS Kecovo 57.78 26 *e*P **P 19 17 30.7 +1.0**
comp=Z,38nm,1.7s,mb5.2
KECS Kecovo 57.78 26 *e*P **P 19 17 30.7 +1.0**
OKC Ostrava-Krasne 57.82 24 *i* P **P 19 17 29.3 -0.6**
OKC *e* 19 17 37.1
OKC *e*S **S 19 25 30.1 +0.5**
OKC MLR MLR
comp=Z,3μm,15.0s,MS5.5
OKC Ostrava-Krasne 57.82 24 *i* P **P 19 17 29.3 -0.6**
OKC *e*x x 19 17 37.1
OKC *e*S **S 19 25 30.1 +0.5**
OKC AMS AMS 19 42 10.0
comp=Z,3μm,15.0s
ATD Arta Tunnel 57.84 76 P **P 19 17 32.3 +1.7**
comp=Z,16nm,0.8s,mb5.1,baz=281,slow=8.6,SNR=6.0
VOIR 57.84 32⇓*i*P **P 19 17 31.0 +0.9**
VOIR 57.84 32⇓*i*P **P 19 17 31.0 +0.9**
KSP Ksiaz 57.89 22 *e*P **P 19 17 29.2 -1.2**
KSP *e*pP pP 19 17 37.5 +4.9
KSP *e*PcP PcP 19 18 21.8 -0.9
KSP *e*S **S 19 25 31.0 +0.5**
KSP LMZ 19 43 19.9
comp=Z,13μm,19.3s
KDHN Kadinhani 57.91 42 *i* P **P 19 17 30.4 -0.4**
SULR 57.98 33⇑*i*P **P 19 17 31.2 +0.1**
RAC Raciborz 58.03 24 *e*P **P 19 17 31.6 +0.2**
RAC MLR MLR
comp=Z,3μm,24.0s,MS5.3
BHL Bhannes 58.18 48 *e*P **P 19 17 33.0 +0.3**
MLR Muntele Rosu 58.35 32 P **P 19 17 33.5 -0.2**
MLR Muntele Rosu 58.35 32⇑*i*P **P 19 17 33.4 -0.3**
BBSR BB Station 58.37 310 PFAKE 19 17 50.0 +16
BBSR LR LR
comp=Z,2μm,20.0s,MS5.2
HENT Hendek 58.38 39 *i* P **P 19 17 32.9 -1.1**
ASF Jabal al Asfar 58.38 51 P **P 19 17 35.1 +0.9**
comp=Z,9.3nm,0.9s,mb4.8,baz=103,slow=3.2,SNR=16
ASF Jabal al Asfar 58.38 51 P **P 19 17 35.1 +0.9**
ASF pmax pmax
comp=Z,9.0nm,0.9s
NIE Niedzica 58.41 26 *e*P **P 19 17 34.2 +0.2**
NIE *e*PP PP 19 19 42.6 -0.8
PSN Preselentsi 58.43 35 *i* P **P 19 17 33.0 -1.3**
TRPA Tarpa 58.46 28⇑*i*P **P 19 17 34.5 +0.1**
CRVS Cervenica-Dubn 58.53 27 *e*P **P 19 17 35.8 +0.9**
CRVS pmax pmax
comp=Z,201nm,1.8s,mb5.8
CRVS Cervenica-Dubn 58.53 27 *e*P **P 19 17 35.8 +0.9**
comp=Z,201nm,1.8s,mb5.8
CRVS Cervenica-Dubn 58.53 27 *e*P **P 19 17 35.8 +0.9**
HWQ Hawqa 58.56 48 *e*P **P 19 17 36.0 +0.6**
BMR Baia Mare 58.59 29 P **P 19 17 36.1 +0.8**
UZH Uzhgorod 58.71 27 *e*P **P 19 17 36.0 -0.1**
UZH *e*S **S 19 25 36.0 -5.2**
UZH MLR MLR
comp=Z,300nm,18.0s,MS4.5
KPL Plockton 58.73 5 P **P 19 17 35.5 -0.6**
KPL AMB AMB 19 17 45.6
comp=Z,93nm,2.0s,mb5.5
KPL AMS AMS 19 39 14.0
comp=Z,3μm,20.9s
KPL Plockton 58.73 5 *e*P **P 19 17 35.5 -0.6**
KPL AMB AMB 19 17 45.6
comp=Z,93nm,2.0s,mb5.5
KPL AMS AMS 19 39 14.0
comp=Z,3μm,20.9s,MS5.4
KSK Scoval 58.77 5 P **P 19 17 34.7 -1.7**
KSK Scoval 58.77 5 *e*P **P 19 17 34.7 -1.7**
OJC Ojcow 58.80 25 *e*P **P 19 17 36.2 -0.5**
OJC *e*pP pP 19 17 40.2 +1.3
OJC *e*PPP 19 21 13.5
OJC *e*S **S 19 25 43.6 +1.3**
OJC L 19 44 19.1
comp=Z,3.7nm,16.8s
KOLS Kolonicke sedl 58.92 27 *e*P **P 19 17 38.0 +0.4**
KOLS pmax pmax
comp=Z,59nm,1.8s,mb5.3
KOLS Kolonicke sedl 58.92 27 *e*P **P 19 17 38.0 +0.4**
comp=Z,59nm,1.8s,mb5.3
KOLS Kolonicke sedl 58.92 27 *e*P **P 19 17 38.0 +0.4**
KAC Achnashellach 58.92 5 P **P 19 17 36.6 -0.8**
KAC Achnashellach 58.92 5 *e*P **P 19 17 36.6 -0.8**
PLOR Plostina 58.96 32 P **P 19 17 37.7 -0.2**
PLOR Plostina 58.96 32⇑*i*P **P 19 17 37.3 -0.6**
MDO Dochfour 58.96 6 P **P 19 17 37.0 -0.7**
MDO Dochfour 58.96 6 *e*P **P 19 17 37.0 -0.7**
SGKT Sivrigoynuk 58.97 40 *i* P **P 19 17 37.1 -1.0**
MME1 Meikle Cairn 58.99 7 P **P 19 17 35.8 -2.1**
MME1 Meikle Cairn 58.99 7 *e*P **P 19 17 35.8 -2.1**
VRI Vrincioaia 59.01 32⇓P **P 19 17 38.3 0.0**
VRI Vrincioaia 59.01 32⇓*i*P **P 19 17 38.3 0.0**
TIRR Tirgusor 59.04 34⇓P **P 19 17 38.2 -0.3**
TIRR Tirgusor 59.04 34 *e*P **P 19 17 36.2 -2.3**
comp=Z,80nm,1.5s,mb5.5
TIRR Tirgusor 59.04 34⇓*i*P **P 19 17 38.2 -0.3**
GULE Gulek 59.11 44 *i* P **P 19 17 40.0 +0.8**
BBAL Bala 59.12 41 *i* P **P 19 17 37.5 -1.7**
MCD Coleburn Disti 59.22 7 P **P 19 17 37.5 -2.0**
MCD Coleburn Disti 59.22 7 *e*P **P 19 17 37.5 -2.0**
RRR Rubha Reidh 59.23 5 P **P 19 17 38.0 -1.5**
RRR Rubha Reidh 59.23 5 *e*P **P 19 17 38.0 -1.5**
TESR 59.39 31⇑*i*P **P 19 17 41.0 +0.1**
BURAR Bucovina Array 59.39 30⇑P **P 19 17 41.1 +0.2**
BURAR Bucovina Array 59.39 30⇑*i*P **P 19 17 41.1 +0.2**
BUR08 Bucovina Ar. S 59.41 30 *e*P **P 19 17 40.6 -0.3**
YAYL Yayladag 59.47 46 *i* P **P 19 17 41.4 -0.3**
YURE YUREGIR 59.49 45 *i* P **P 19 17 41.9 +0.1**
BRTR Keskin Array B 59.55 41 P **P 19 17 42.6 +0.4**
comp=Z,27nm,0.9s,mb5.3,baz=227,slow=6.5,SNR=120
BRTR LR LR 19 47 30.3
comp=Z,2μm,18.3s,MS5.2,baz=74,slow=40
BRTR Keskin Array B 59.55 41*ce*P **P 19 17 42.5 +0.3**
BRTR pmax pmax
comp=Z,27nm,0.9s
KWP Kalwaria Pacla 59.62 27 *e*P **P 19 17 42.2 -0.2**
KWP *e*pP pP 19 17 50.5 +5.9
KWP LMZ 19 43 08.3
comp=Z,7μm,22.4s
KWP Kalwaria Pacla 59.62 27⇑P **P 19 17 42.3 -0.1**
KWP Kalwaria Pacla 59.62 27 *e*P **P 19 17 41.5 -0.9**
comp=Z,103nm,1.1s,mb5.8
KWP LR LR
comp=Z,6μm,22.0s,MS5.7
KWP Kalwaria Pacla 59.62 27⇑*i*P **P 19 17 42.3 -0.1**
SDDR Presa de Saban 59.73 293 *e*P **P 19 17 45.0 +1.2**
comp=Z,83nm,1.1s,mb5.7
SDDR LR LR
comp=Z,2μm,19.0s,MS5.2

AVNT Avonos 59.89 43 *i* P **P 19 17 44.6 +0.1**
GRTK Grand Turk 60.19 296 PFAKE 19 18 00.0 +13
GRTK LR LR
comp=Z,2μm,21.0s,MS5.3
GKP Gorka Klasztor 60.19 21 *e*P **P 19 17 46.2 0.0**
GKP *e*pP pP 19 17 54.2 +5.7
GKP *e*S **S 19 26 00.3 +0.1**
GKP LMZ 19 43 40.0
comp=Z,4μm,20.4s
ILGA Ilgaz 60.29 40 *i* P **P 19 17 47.2 0.0**
BALT Daday 60.34 39 *i* P **P 19 17 46.1 -1.4**
ANDN Andirin 60.35 45 *i* P **P 19 17 48.8 +1.1**
LVV L'vov 60.36 27 *e*P **P 19 17 46.4 -1.1**
LVV *i* S **S 19 26 02.7 +0.2**
LVV *e*PS 19 26 29.7
LVV MLR MLR
comp=N,3μm,18.0s,MS5.6
LVV MLR MLR
comp=Z,4μm,18.0s,MS5.6
LVV MLR MLR
comp=E,3μm,17.0s,MS5.6
MUD Monsted U'grnd 60.45 15 *i* P **P 19 17 48.2 +0.2**
MUD pmax pmax
comp=Z,31nm,0.9s,mb5.3
MUD Monsted U'grnd 60.45 15 *i* P **P 19 17 48.2 +0.2**
comp=Z,31nm,0.9s,mb5.3
KUZU Kuzuini 60.50 46 *i* P **P 19 17 49.5 +0.8**
ROSC El Rosal 60.61 276 P **P 19 17 51.4 +1.5**
comp=Z,13nm,0.6s,mb5.2,baz=99,slow=22,SNR=7.0
ROSC LR LR 19 41 00.1
comp=Z,3μm,21.1s,MS5.5,baz=280,slow=33
LCO Las Campanas 60.64 237 *e*P **P 19 17 49.9 0.0**
comp=Z,29nm,1.3s,mb5.2
LCO LR LR
comp=Z,2μm,20.0s,MS5.3
COP Copenhagen 60.65 17⇑*i*P **P 19 17 49.2 -0.2**
COP pmax pmax
comp=Z,22nm,0.9s,mb5.3
COP Copenhagen 60.65 17⇑*i*P **P 19 17 49.2 -0.2**
comp=Z,22nm,0.9s,mb5.3
CTKT Corum 60.77 41 *i* P **P 19 17 50.2 -0.3**
WAR Warsaw 60.83 24 *e*P **P 19 17 53.2 +2.6**
WAR LMZ 19 40 00.9
comp=Z,3μm,29.6s
KIS Kishinev 60.84 32 *e*P **P 19 17 49.0 -1.9**
comp=Z,200nm,2.4s,mb5.8
KIS Kishinev 60.84 32 *e*PP PP 19 20 06.0 +1.0
KIS Kishinev 60.84 32 *e*P **P 19 17 49.0 -1.9**
KIS *i* 19 17 56.5
KIS *e* 19 20 06.0
KIS *e*S **S 19 26 04.0 -4.8**
KIS *e*SS SS 19 30 08.0 0.0
KIS pmax pmax
comp=Z,220nm,2.4s,mb5.9
KIS smax
comp=N,1μm,11.0s
KIS smax
comp=E,1μm,11.0s
KIS MLR MLR
comp=Z,4μm,16.0s,MS5.6
KIS MLR MLR
comp=N,1μm,15.0s,MS5.3
KIS MLR MLR
comp=E,1μm,15.0s,MS5.3
KIS MLR MLR
comp=Z,4μm,16.0s
PINB Pinarbasi 60.90 44 *i* P **P 19 17 51.9 +0.5**
BSD Bornholm Skovb 60.92 19 *i* P **P 19 17 51.5 +0.3**
BSD pmax pmax
comp=Z,20nm,0.9s,mb5.2
BSD Bornholm Skovb 60.92 19 *i* P **P 19 17 51.5 +0.3**
comp=Z,20nm,0.9s,mb5.2
GZT Gaziantep 61.11 45 *i* P **P 19 17 53.0 +0.1**
TOKA Tokat 61.74 42 *i* P **P 19 17 56.8 -0.2**
SCER sogukcermik 61.96 43 *i* P **P 19 17 58.5 -0.1**
LRW Lerwick 61.96 7 P **P 19 17 56.4 -1.8**
LRW AMB AMB 19 18 12.0
comp=Z,109nm,2.7s,mb5.5
LRW AMS AMS 19 41 29.3
comp=Z,3μm,17.3s
LRW Lerwick 61.96 7 *e*P **P 19 17 56.4 -1.8**
LRW AMB AMB 19 18 12.0
comp=Z,109nm,2.7s,mb5.5
LRW AMS AMS 19 41 29.3
comp=Z,3μm,17.3s,MS5.5
WAL1 Walls 62.03 7 P **P 19 17 57.8 -0.7**
WAL1 Walls 62.03 7 *e*P **P 19 17 57.8 -0.7**
ERBA Erbaa 62.10 42 *i* P **P 19 17 58.2 -1.2**
MALT Malatya 62.15 45 P **P 19 18 01.2 +1.4**
MALT Malatya 62.15 45 *e*P **P 19 18 00.2 +0.4**
comp=Z,67nm,1.1s,mb5.7
MALT LR LR
comp=Z,1μm,19.0s,MS5.1
MALT Malatya 62.15 45⇑*i*P **P 19 18 00.7 +0.8**
MALT Malatya 62.15 45 P **P 19 18 01.0 +1.1**
comp=Z,881nmcomp=Z,59nm,1.2s,mb5.6
ABPO Ambohimpanom 62.45 111 PFAKE 19 18 10.0 +7.8
ABPO LR LR
comp=Z,2μm,20.0s,MS5.3
KEMA Kemaliye 62.62 44 *i* P **P 19 18 01.6 -1.3**
SIM Simferopol' 62.63 37*ce*P **P 19 18 02.4 -0.5**
SIM 19 20 18.9
SIM PPP 19 21 53.0
SIM S **S 19 26 29.8 -1.7**
SIM pmax pmax
comp=Z,19nm,0.9s,mb5.2
SIM pmax pmax
comp=Z,170nm,11.0s
SUW Suwalki 63.02 24 *e*P **P 19 18 04.6 -0.8**
SUW *e*pP pP 19 18 12.7 +5.1
SUW *e*PcP PcP 19 18 42.9 -0.3
SUW *e*S **S 19 26 35.4 -0.7**
SUW LMZ 19 42 08.3
comp=Z,3μm,28.5s
SUW Suwalki 63.02 24 *e*P **P 19 18 04.6 -0.8**
SUW *e**PP pP 19 18 12.6 +5.0
SUW *e* 19 18 42.9
SUW *e*S **S 19 26 35.3 -0.8**
SUW MLR MLR
comp=Z,3μm,28.5s,MS5.3
SUW Suwalki 63.02 24 *e*P **P 19 18 04.7 -0.7**
comp=Z,148nm,1.1s,mb6.0
DIYA Diyarbakir 63.18 46 *i* P **P 19 18 07.6 +0.9**
GRSN GIRESUNGRSN 63.22 42 *i* P **P 19 18 04.7 -2.3**
NNA Nana 63.24 257 PFAKE 19 18 20.0 +12
NNA LR LR
comp=Z,2μm,22.0s,MS5.3
KIEV Kiev 63.40 29 *e*P **P 19 18 06.2 -1.7**
KIEV pmax pmax
comp=Z,59nm,1.1s,mb5.6
KIEV MLR MLR
comp=Z,3μm,21.0s,MS5.4
KIEV Kiev 63.40 29 *e*P **P 19 18 06.2 -1.8**
comp=Z,59nm,1.1s,mb5.6
KIEV LR LR
comp=Z,3μm,21.0s,MS5.4
MARD Mardin 63.41 47 *i* P **P 19 18 09.6 +1.3**
KONO Kongsberg 63.41 13 *e*P **P 19 18 07.7 -0.1**
KONO pmax pmax
comp=Z,64nm,1.1s,mb5.7
KONO MLR MLR
comp=Z,3μm,19.0s,MS5.5
KONO Kongsberg 63.41 13 *e*P **P 19 18 07.7 -0.2**
comp=Z,64nm,1.1s,mb5.7
KONO LR LR
comp=Z,3μm,19.0s,MS5.5
GTBY Guantanamo Bay 63.46 293 PFAKE 19 18 20.0 +11
GTBY LR LR
comp=Z,3μm,22.0s,MS5.3
KELT Kelkit 63.54 43 *i* P **P 19 18 07.9 -1.2**
BNGL BINGOL 64.34 45 *i* P **P 19 18 14.5 +0.1**
PLCA Paso Flores 64.42 225 P **P 19 18 14.4 -0.5**
comp=Z,2.4nm,1.0s,mb4.2,baz=91,slow=7.8,SNR=3.4
PLCA LR LR 19 41 54.9
comp=Z,3μm,21.0s,MS5.5,baz=73,slow=32
OTAV Otavalo 64.50 271 *e*P **P 19 18 17.1 +1.2**
comp=Z,40nm,1.3s,mb5.3
OTAV LR LR
comp=Z,2μm,21.0s,MS5.3
ANN Anapa 64.56 38*c* *i*P **P 19 18 14.1 -1.6**
ANN *i* *PP pP 19 18 22.1 +4.2
ANN *e* 19 20 32.9
ANN *e*S **S 19 26 51.0 -4.6**
ANN pmax pmax
comp=Z,66nm,1.2s,mb5.5

BHD Baghdad 64.64 52 *ex* x 19 18 10.0
BHD *ex* x 19 26 58.0
NAO01 NORSAR Array S 64.77 13 PFAKE 19 18 30.0 +13
NAO01 LR LR
comp=Z,5μm,19.0s,MS5.7
ERZM Erzurum 64.89 44 *i* P **P 19 18 18.8 +0.8**
NB2 NORSAR Subarra 65.02 13 P **P 19 18 17.8 -0.6**
comp=Z,109nm,1.7s,mb5.6,baz=212,slow=6.5
NB2 NORSAR Subarra 65.02 13 P **P 19 18 17.8 -0.6**
NB2 NORSAR Subarra 65.02 13 P **P 19 18 17.8 -0.6**
NOA NORSAR Array B 65.02 13 P **P 19 18 18.2 -0.2**
comp=Z,9.1nm,0.9s,mb4.8,baz=208,slow=6.6,SNR=25
NOA LR LR 19 46 57.1
comp=Z,2μm,20.0s,MS5.3,baz=210,slow=36
NOA NORSAR Array B 65.02 13 P **P 19 18 18.2 -0.2**
NOA pmax pmax
comp=Z,9.0nm,0.9s
NOA MLR MLR
comp=Z,2μm,20.0s
IIGN Ignalina 65.21 24 *e*P **P 19 18 18.1 -1.6**
IIGN AMB AMB 19 18 28.0
comp=Z,26nm,1.5s,mb5.0
MNK Minsk 65.29 25⇓*e*P **P 19 18 17.0 -3.3**
MNK *e* 19 18 26.0
MNK *e*PPP 19 22 14.0
MNK *e*S S 19 26 58.0 -6.2
MNK *e*PS 19 27 20.0
MNK MLR MLR
comp=E,3μm,14.0s
MNK MLR MLR
comp=Z,15μm,14.0s,MS6.3
MICGM Minsk 65.31 25⇓*e*P **P 19 18 17.0 -3.4**
ISAL Salakas 65.33 24 *e*P **P 19 18 19.5 -1.0**
ISAL AMB AMB 19 18 29.6
comp=Z,15nm,1.4s,mb4.8
MTDJ Mount Denham 65.39 291 PFAKE 19 18 30.0 +8.4
MTDJ LR LR
comp=Z,817nm,20.0s,MS4.9
IDID Didziasalis 65.40 24 *e*P **P 19 18 20.0 -1.0**
IDID AMB AMB 19 18 30.0
comp=Z,21nm,1.3s,mb5.0
SOC Sochi 65.41 40*c* *i*P **P 19 18 19.7 -1.6**
SOC *e* 19 18 49.7
SOC *e*PPP 19 22 15.8
SOC pmax pmax
comp=Z,78nm,1.4s,mb5.5
SOC MLR MLR
comp=Z,2μm,19.0s,MS5.3
DDEM Demirkent 65.57 43 *i* P **P 19 18 22.5 +0.1**
DBAD Bademkaya 65.59 43 *i* P **P 19 18 22.9 +0.4**
HAKT HAKKARI 65.64 47 *i* P **P 19 18 22.4 -0.5**
DBOC Borcka 65.71 43 *i* P **P 19 18 26.6 +3.3**
DAGI Agillar 65.76 43 *i* P **P 19 18 22.6 -1.1**
ARTV Artvin 65.82 43 *i* P **P 19 18 23.4 -0.6**
RDF Al-Radifah 65.91 58 *e*P **P 19 18 26.0 +1.1**
RDF AMb AMB 19 18 38.6
comp=Z,172nm,1.4s,mb5.9
MIB Mutribah 65.98 57 *e*P **P 19 18 26.8 +1.5**
MIB AMb AMB 19 18 36.2
comp=Z,92nm,1.3s,mb5.7
BORG Borgarnes 66.01 357 P **P 19 18 25.6 +1.0**
comp=Z,34nm,0.8s,mb5.4,baz=156,slow=6.5,SNR=14
BORG Borgarnes 66.01 357 P **P 19 18 25.6 +1.0**
BORG LR LR
comp=Z,1μm,20.0s,MS5.1
KBD Kabd 66.10 57 *e*P **P 19 18 26.8 +0.8**
QRN Al-Qurain 66.18 58 *e*P **P 19 18 27.7 +1.2**
QRN AMb AMB 19 18 39.2
comp=Z,202nm,1.5s,mb5.9
UMR Umm Al-Rimmam 66.22 57 *e*P **P 19 18 28.0 +1.1**
UMR AMb AMB 19 18 38.0
comp=Z,218nm,1.2s,mb6.1
DYDN Diyadin 66.39 45 *i* P **P 19 18 31.5 +3.8**
BCIP Isla Barro Col 66.41 280 *e*P **P 19 18 29.0 +0.6**
BCIP LR LR
comp=Z,1μm,21.0s,MS5.0
PKME Peaks-Kenny Pk 67.23 321 *e*P **P 19 18 32.5 -0.5**
comp=Z,11nm,0.7s,mb5.0
PKME LR LR
comp=Z,2μm,20.0s,MS5.4
GNI Garni 67.37 45 P **P 19 18 35.3 +1.4**
comp=Z,6.1nm,0.7s,mb4.8,baz=194,slow=22,SNR=3.3
GNI Garni 67.37 45 *i* P **P 19 18 33.9 0.0**
GNI pmax pmax
comp=Z,11nm,0.8s
GNI Garni 67.37 45 *e*P **P 19 18 28.2 -5.7**
comp=Z,59nm,1.3s,mb5.5
GNI P 19 18 35.4
GNI LR LR
comp=Z,810nm,19.0s,MS5.0
KIV Kislovodsk 67.50 41⇑*e*P **P 19 18 33.9 -0.8**
KIV *e* 19 21 02.2
KIV *i* S S 19 27 32.2 +0.7
KIV pmax pmax
comp=Z,32nm,1.2s,mb5.2
KIV MLR MLR
comp=Z,1μm,20.0s,MS5.0
KIV Kislovodsk 67.50 41 *e*P **P 19 18 34.2 -0.5**
comp=Z,82nm,1.3s,mb5.6
KIV LR LR
comp=Z,1μm,20.0s,MS5.0
KIV Kislovodsk 67.50 41 P **P 19 18 35.6 +0.9**
comp=Z,286nm,1.0s,mb6.3,SNR=10
KIV Kislovodsk 67.50 41 P **P 19 18 35.0 +0.4**
SNR=20
ZEI Tsey 67.81 42 *e*P **P 19 18 34.5 -2.1**
ZEI *e*PPP 19 22 44.4
ZEI *e*S S 19 27 29.6 -5.6
ZEI *e*SS SS 19 31 53.6 -3.2
ZEI pmax pmax
comp=Z,52nm,1.8s,mb5.3
TBLG Delisi 67.97 44 P **P 19 18 38.5 +0.8**
TBLG Delisi 67.97 44 P **P 19 18 38.5 +0.8**
MTA Mtatsminda 67.99 44 P **P 19 18 38.1 +0.3**
MTA S S 19 27 37.0 -0.5
DGRG David-gareji 68.30 44 P **P 19 18 43.8 +4.0**
LBNH Lisbon 68.48 319 PFAKE 19 18 50.0 +9.2
LBNH LR LR
comp=Z,3μm,21.0s,MS5.5
VORD Divnogorie 68.77 33 *e*P **P 19 18 41.0 -1.4**
VORD *e**PP pP 19 18 49.2 +4.5
VORD *e*S S 19 27 41.3 -5.0
VORD *e*SS SS 19 32 07.9 -3.3
VORD pmax pmax
comp=Z,20nm,1.3s,mb4.9
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,9.0nm,0.8s
VORD smax
comp=N,180nm,3.5s
VORD smax
comp=Z,90nm,5.3s
VORD smax
comp=E,170nm,4.7s
VORD MLR MLR
comp=N,910nm,16.0s,MS5.5
VORD MLR MLR
comp=E,2μm,16.0s,MS5.5
VORD MLR MLR
comp=Z,2μm,16.0s,MS5.5
VSR Storozhevoye 68.83 33 *e*P **P 19 18 41.8 -1.0**
VSR *e**PP pP 19 18 49.3 +4.2
VSR *e*S S 19 27 42.6 -4.4
VSR *e*SS SS 19 32 07.9 -4.3
VSR pmax pmax
comp=N,20nm,1.1s
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=Z,30nm,1.1s,mb5.1
VSR smax
comp=N,140nm,3.4s
VSR smax
comp=Z,190nm,4.9s
VSR smax
comp=E,90nm,3.9s
VSR MLR MLR
comp=Z,3μm,16.0s,MS5.6
VSR MLR MLR
comp=N,710nm,14.0s,MS5.5
VSR MLR MLR
comp=E,2μm,15.0s,MS5.5
MDV Middlebury 69.22 318 P **P 19 18 42.4 -3.0**
VNA1 Neumayer--Stat 69.44 178 *e*P **P 19 18 44.8 -1.5**

FINES FINESS Array B 69.53 19 P **P** **19 18 46.3 -0.7**
comp=E,19nm,0.8s,mb5.0,baz=222,slow=2.6,SNR=25
FINES LR LR 19 51 18.1
comp=E,3µm,19.0s,MS5.6,baz=233,slow=38
FINES FINESS Array B 69.53 19 P **P** **19 18 46.3 -0.7**
FINES pmax pmax
comp=Z,19nm,0.9s
FINES MLR MLR
comp=Z,3µm,19.0s
OBN Obninsk 69.62 28⇑ *e*P **P** **19 18 46.8 -0.9**
OBN *e* 19 21 23.6
OBN *i* S S 19 27 58.9 +2.6
OBN pmax pmax
comp=Z,17nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,4µm,23.0s,MS5.6
OBN Obninsk 69.62 28 *e*P **P** **19 18 53.2 +5.6**
comp=Z,13nm,0.7s,mb5.0
OBN LR LR
comp=Z,4µm,20.0s,MS5.6
CNNC Cliffs of the 69.65 308 PFAKE 19 19 00.0 +12
CNNC LR LR
comp=Z,2µm,20.0s,MS5.4
VNA2 Neumayer--Watz 69.75 178 *e*P **P** **19 18 46.5 -1.7**
baz=346,slow=8.1
PUL Pulkovo 69.86 22 *e*P **P** **19 18 50.7 +1.7**
PUL pmax pmax
comp=Z,23nm,0.8s,mb5.2
NCB Newcomb 69.90 318 PFAKE 19 19 00.0 +10
NCB LR LR
comp=Z,3µm,20.0s,MS5.5
VNA3 Neumayer Olymp 69.99 179 *e*P **P** **19 18 47.4 -2.3**
KAF Kangasniemi 70.10 19 *e*P **P** **19 18 49.0 -1.5**
KAF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
KAF Kangasniemi 70.10 19 *e*p **P** **19 18 49.0 -1.5**
comp=Z,10nm,0.7s,mb4.9
VRHR Novokhopersk 70.11 34 *e*P **P** **19 18 51.0 +0.3**
VRHR *e**PP pP 19 18 57.8 +4.8
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VRHR pmax pmax
comp=E,20nm,0.8s
CBN Corbin 70.14 311 PFAKE 19 19 00.0 +8.8
CBN LR LR
comp=Z,2µm,22.0s,MS5.4
MAK Makhachkala 70.33 43 *e*P **P** **19 18 53.4 +1.1**
MAK *e* 19 19 16.3
MAK *e* 19 21 25.7
MAK *e*PPP 19 23 06.2
MAK *e*S S 19 28 03.9 -1.2
MAK *e* 19 28 53.0
MAK *e*SS SS 19 32 28.2 -7.6
MAK pmax pmax
comp=Z,324nm,1.4s,mb6.1
LONY Lake Ozonia 70.38 319 PFAKE 19 19 00.0 +7.4
LONY LR LR
comp=Z,2µm,20.0s,MS5.4
BINY Binghamton 70.45 316 PFAKE 19 19 00.0 +6.9
BINY LR LR
comp=Z,3µm,21.0s,MS5.5
MOS Moscow 70.47 28 *e*P **P** **19 18 59.6 +6.7**
MOS *e* 19 21 35.7
MOS pmax pmax
comp=Z,400nm,2.0s,mb6.0
MOS pmax pmax
comp=Z,166nm,1.3s,mb5.8
MOS MLR MLR
comp=Z,4µm,20.0s,MS5.7
SCHQ Schefferville 70.60 331 P **P** **19 18 55.1 +1.5**
comp=Z,6.1nm,0.9s,mb4.5,baz=113,slow=7.6,SNR=4.6
SCHQ LR LR 19 42 00.7
comp=Z,1µm,21.1s,MS5.2,baz=18,slow=29
RER Riviere de l'E 70.66 112 PFAKE 19 19 10.0 +15
RER LR LR
comp=Z,3µm,19.0s,MS5.6
DWPF Disney 70.81 300 PFAKE 19 19 10.0 +14
DWPF LR LR
comp=Z,4µm,22.0s,MS5.6
NHSC New Hope 70.91 306 PFAKE 19 19 10.0 +14
NHSC LR LR
comp=Z,3µm,19.0s,MS5.6
SSPA Standing Stone 71.28 314 *e*P **P** **19 18 56.9 -1.3**
comp=Z,52nm,1.4s,mb5.3
NVL N'lazarevskaya 71.47 171 *e*P **P** **19 19 03.1 +4.4**
NVL *e**PP pP 19 19 10.1 +9.2
NVL *e*PPP 19 21 46.5
NVL pmax pmax
comp=Z,16nm,1.0s,mb4.9
JTS JuntasAbangare 71.53 281 PFAKE 19 19 10.0 +10
JTS LR LR
comp=Z,821nm,22.0s,MS5.0
SCO Scoresbysund 71.75 357 *i* P **P** **19 19 01.4 +1.1**
SCO pmax pmax
comp=Z,19nm,1.0s,mb5.0
SCO Scoresbysund 71.75 357 *i* P **P** **19 19 01.4 +1.1**
comp=Z,19nm,1.0s,mb5.0
NAZ Nazwa, Dubai 72.11 63 P **P** **19 19 04.9 +1.4**
SNR=7.2
BLA Blacksburg 72.16 310 PFAKE 19 19 20.0 +16
BLA LR LR
comp=Z,2µm,19.0s,MS5.5
JOF Joensuu 72.33 20 *e*P **P** **19 19 02.2 -1.7**
JOF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
JOF Joensuu 72.33 20 *e*p **P** **19 19 02.2 -1.7**
comp=Z,8.0nm,0.8s,mb4.7
ASHO Ashiyiah 72.41 64 P **P** **19 19 06.2 +1.0**
SNR=11
MCWV Mont Chateau 72.41 312 PFAKE 19 19 20.0 +15
MCWV LR LR
comp=Z,2µm,22.0s,MS5.3
HATD Hatta, Dubai 72.50 64 P **P** **19 19 06.9 +1.1**
SNR=14
ARQ Araqi 72.61 65 P **P** **19 19 07.9 +1.4**
SNR=52
SFJD Kangerlussuaq 72.77 346 PFAKE 19 19 20.0 +13
SFJD LR LR
comp=Z,1.0nm,19.0s
BANOM Banah 72.84 63 P **P** **19 19 08.6 +0.8**
SNR=6.4
PMSA Palmer Station 72.93 200 *e*P **P** **19 19 06.0 -1.4**
comp=Z,32nm,1.0s,mb5.2
PMSA LR LR
comp=Z,5µm,22.0s,MS5.7
BSY Bisya 73.14 66 P **P** **19 19 10.4 +0.8**
SNR=16
ERPA Erie 73.24 315 PFAKE 19 19 20.0 +10
ERPA LR LR
comp=Z,3µm,21.0s,MS5.5
HOQ Hoqain 73.36 65 P **P** **19 19 11.1 +0.2**
SNR=20
GOGA Godfrey 73.66 305 PFAKE 19 19 20.0 +7.5
GOGA LR LR
comp=Z,3µm,19.0s,MS5.5
JMDO Jabal Madar 73.91 66 P **P** **19 19 14.5 +0.4**
SNR=7.3
SMDO Samad 73.96 66 P **P** **19 19 14.8 +0.3**
SNR=28
TGUH Tegucigalpa,Un 74.12 285 *e*P **P** **19 19 16.4 +0.8**
comp=Z,70nm,0.8s,mb5.6
KLMR Klimovskoe 74.14 24 *e*P **P** **19 19 11.8 -2.9**
KLMR *e* 19 21 59.0
KLMR S S 19 28 47.7 -0.4
KLMR pmax pmax
comp=Z,104nm,8.6s
KLMR pmax pmax
comp=Z,105nm,1.6s,mb5.5
KLMR MLR MLR
comp=Z,5µm,21.0s,MS5.8
WBK Wadi Bani Khal 74.73 66 P **P** **19 19 22.0 +3.0**
SNR=7.3
ACSO Alum Creek Sta 74.89 312 PFAKE 19 19 30.0 +10
ACSO LR LR
comp=Z,2µm,22.0s,MS5.4
SUMG Summit 75.27 353 *e*P **P** **19 19 22.2 +1.2**
comp=Z,57nm,1.0s,mb5.5
SUMG Summit 75.27 353 *i* P **P** **19 19 22.3 +1.3**
comp=Z,34nm,0.9s,mb5.3
ARCES ARCESS Array B 75.40 13 P **P** **19 19 21.6 -0.2**
comp=Z,8.8nm,0.7s,mb4.8,baz=253,slow=3.7,SNR=16
ARCES LR LR 19 55 28.4
comp=Z,3µm,18.3s,MS5.6,baz=47,slow=38
ARCES ARCESS Array B 75.40 13 P **P** **19 19 21.6 -0.2**
ARCES pmax pmax
comp=Z,9.0nm,0.7s
ARCES MLR MLR
comp=Z,3µm,18.3s
TEIG Tepich 75.72 291 *e*P **P** **19 19 24.3 -0.4**
comp=Z,36nm,1.3s,mb5.1
AAM Ann Arbor 75.91 314 PFAKE 19 19 40.0 +15
AAM LR LR
comp=Z,2µm,20.0s,MS5.5
KEV Kevo 75.92 14 *e*P **P** **19 19 23.5 -1.3**
KEV pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KEV Kevo 75.92 14 PFAKE 19 19 40.0 +15
KEV LR LR
comp=Z,3µm,20.0s,MS5.6
KEV Kevo 75.92 14 *e*p **P** **19 19 23.5 -1.3**
comp=Z,8.0nm,0.7s,mb4.8
APA Apatity 76.07 17⇑ *e*P **P** **19 19 27.6 +1.9**
APA *i* S S 19 29 10.0 +0.7
APA *i* PS 19 29 43.0
APA *e*SS SS 19 34 08.0 +5.7
APA pmax pmax
comp=Z,190nm,2.0s,mb5.7
APA MLR MLR
comp=Z,3µm,15.0s,MS5.7
BRAL Brewton 76.18 302 PFAKE 19 19 40.0 +13
BRAL LR LR
comp=Z,3µm,20.0s,MS5.6
PAYG Puerto Ayora 76.32 270 PFAKE 19 19 40.0 +12
PAYG LR LR
comp=Z,2µm,19.0s,MS5.4
LRAL Lakeview Retre 76.48 304 PFAKE 19 19 40.0 +11
LRAL LR LR
comp=Z,3µm,20.0s,MS5.6
SYO Syowa Base 76.50 163⇑ *e*P **P** **19 19 30.4 +2.2**
SYO Syowa Base 76.50 163⇓ *e*P **P** **19 19 32.0 +3.8**
LVZ Lovozero 76.64 17 PFAKE 19 19 40.0 +11
LVZ LR LR
comp=Z,3µm,19.0s,MS5.6
ABKT Ailbek 76.67 51 P **P** **19 19 30.0 +0.3**
comp=Z,107nm,1.1s,mb5.7,SNR=6.5
PRGR Permogore 77.08 25⇓ *i*P **P** **19 19 29.9 -1.7**
PRGR 19 19 37.4
PRGR *SP sP 19 19 44.3 +10
PRGR *e* 19 22 30.8
PRGR pmax pmax
comp=Z,24nm,1.2s,mb5.0
WVT Waverly 77.72 307 *e*P **P** **19 19 35.0 -0.7**
WVT pmax pmax
comp=Z,156nm,1.9s,mb5.6
WVT Waverly 77.72 307 *e*P **P** **19 19 35.0 -0.7**
comp=Z,156nm,1.9s,mb5.6
DAG Danmarks Havn 77.92 359⇑ *e*P **P** **19 19 37.2 +1.2**
DAG pmax pmax
comp=Z,13nm,0.9s,mb4.9
DAG Danmarks Havn 77.92 359⇑ *i*P **P** **19 19 37.2 +1.2**
comp=Z,13nm,0.9s,mb4.9
OLIL Olney 78.42 310 *e*P **P** **19 19 38.1 -1.4**
comp=Z,41nm,0.9s,mb5.4
OXF Oxford 78.71 305 PFAKE 19 19 50.0 +8.8
OXF LR LR
comp=Z,2µm,19.0s,MS5.4
VBMS Vicksburg 79.28 303 PFAKE 19 20 00.0 +16
VBMS LR LR
comp=Z,2µm,20.0s,MS5.5
AKTO Aktyubinsk 79.52 38 LR LR 19 58 51.8
comp=Z,975nm,20.2s,MS5.1,baz=105,slow=39
HDIL Hopedale 79.66 311 PFAKE 19 20 00.0 +14
HDIL LR LR
comp=Z,2µm,20.0s,MS5.5
HBAR Harrisburg 79.89 306 *e*P **P** **19 19 47.1 -0.6**
FVM French Village 80.09 309 *e*P **P** **19 19 48.3 -0.4**
FVM pmax pmax
comp=Z,26nm,0.9s,mb5.2
FVM French Village 80.09 309 *e*P **P** **19 19 48.3 -0.3**
comp=Z,26nm,0.9s,mb5.2
ABKAR Akbulak array 80.44 40 *e*P **P** **19 19 49.3 -1.1**
comp=Z,34nm,1.1s,mb5.2
COWI Conover 80.61 317 *e*P **P** **19 19 50.8 -0.6**
comp=Z,72nm,1.4s,mb5.4
COWI LR LR
comp=Z,3µm,21.0s,MS5.6
CCM Cathedral Cave 80.74 309 *e*P **P** **19 19 50.1 -2.1**
CCM pmax pmax
comp=Z,32nm,1.1s,mb5.2
CCM MLR MLR
comp=Z,3µm,19.0s,MS5.6
CCM Cathedral Cave 80.74 309 *e*P **P** **19 19 50.1 -2.0**
comp=Z,32nm,1.1s,mb5.2
CCM LR LR
comp=Z,3µm,19.0s,MS5.6
JFWS Jewell Farm 80.79 314 *e*P **P** **19 19 51.8 -0.5**
JFWS pmax pmax
comp=Z,14nm,0.7s,mb5.0
JFWS MLR MLR
comp=Z,2µm,22.0s,MS5.5
JFWS Jewell Farm 80.79 314 *e*P **P** **19 19 51.8 -0.6**
comp=Z,14nm,0.7s,mb5.0
JFWS LR LR
comp=Z,2µm,22.0s,MS5.5
UALR University of 81.14 305 *e*P **P** **19 19 53.3 -1.1**
comp=Z,20nm,1.0s,mb5.0
KBS Kingsbay 81.17 5 PFAKE 19 20 00.0 +6.3
KBS LR LR
comp=Z,2µm,21.0s,MS5.4
ARU Arti 81.40 32 *d i*P **P** **19 19 55.5 +0.3**
ARU 19 22 59.5
ARU PPP 19 24 54.5
ARU S S 19 30 05.2 -1.5
ARU SS SS 19 35 17.3 -5.5
ARU pmax pmax
comp=Z,31nm,1.2s,mb5.1
ARU MLR MLR
comp=Z,3µm,18.0s,MS5.7
ARU Arti 81.40 32 *e*P **P** **19 19 54.6 -0.6**
comp=Z,51nm,1.2s,mb5.3
ARU LR LR
comp=Z,3µm,19.0s,MS5.7
ARU Arti 81.40 32 P **P** **19 19 55.1 -0.1**
comp=Z,191nm,0.9s,mb6.0,SNR=12
MIAR Mount Ida 82.12 305 *e*P **P** **19 20 00.4 +0.8**
MIAR pmax pmax
comp=Z,27nm,1.3s,mb5.0
MIAR MLR MLR
comp=Z,2µm,22.0s,MS5.5
MIAR Mount Ida 82.12 305 *e*P **P** **19 20 00.4 +0.8**
comp=Z,27nm,1.3s,mb5.0
MIAR LR LR
comp=Z,2µm,22.0s,MS5.5
EYMN Ely 82.55 319 *e*P **P** **19 20 01.1 -0.3**
comp=Z,35nm,1.4s,mb5.2
EYMN LR LR
comp=Z,3µm,21.0s,MS5.7
SVE Sverdlovsk 82.61 32 *e*P **P** **19 20 02.0 +0.4**
SVE *e*S S 19 30 23.4 +4.3
SVE *e*SS SS 19 35 47.6 +6.8
SVE pmax pmax
comp=Z,60nm,2.1s,mb5.3
SVE MLR MLR
comp=Z,3µm,18.0s,MS5.7
NATX Nacogdoches 82.72 302 PFAKE 19 20 10.0 +7.2
NATX LR LR
comp=Z,1µm,19.0s,MS5.3
HKT Hockley 83.55 300 PFAKE 19 20 20.0 +13
HKT LR LR
comp=Z,1µm,20.0s,MS5.4
MAW Mawson 83.89 158 P **P** **19 20 09.3 +1.3**
comp=Z,7.0nm,0.7s,mb4.9,baz=293,slow=7.9,SNR=21
MAW LR LR 19 48 37.6
comp=Z,1µm,21.6s,MS5.2,baz=289,slow=29
MAW Mawson 83.89 158 *e*P **P** **19 20 10.2 +2.2**
comp=Z,13nm,1.0s,mb5.0
MAW Mawson 83.89 158 P **P** **19 20 09.3 +1.3**
MAW pmax pmax
comp=Z,7.0nm,0.7s
MAW MLR MLR
comp=Z,1µm,21.6s
KBL Kabul 84.90 55 *e*P **P** **19 20 13.0 -0.9**
KBL pmax pmax
comp=Z,15nm,1.1s,mb5.0
KBL Kabul 84.90 55 *e*P **P** **19 20 13.0 -0.9**
comp=Z,15nm,1.1s,mb5.0
KSU1 Kansas State U 85.04 309 PFAKE 19 20 30.0 +16
KSU1 LR LR
comp=Z,3µm,22.0s,MS5.7
KVTX Kingsville 85.17 298 PFAKE 19 20 30.0 +15
KVTX LR LR
comp=Z,1µm,19.0s,MS5.3
AGMN Agassiz Nation 85.49 318 *e*P **P** **19 20 15.3 -1.2**
comp=Z,235nm,1.8s,mb6.0
AGMN LR LR
comp=Z,3µm,20.0s,MS5.7
ECSD EROS Data Cent 85.50 314 *e*P **P** **19 20 16.9 +0.2**
comp=Z,98nm,1.6s,mb5.8
ECSD LR LR
comp=Z,2µm,19.0s,MS5.5
ULM Lac du Bonnet 85.73 320 P **P** **19 20 18.3 +0.6**
comp=Z,7.9nm,0.9s,mb4.9,baz=89,slow=5.8,SNR=6.9
ULM LR LR 19 56 54.6
comp=Z,2µm,18.1s,MS5.5,baz=104,slow=34
FCC Fort Churchill 85.89 329 *e*P **P** **19 20 17.4 -0.9**
DGAR Diego Garcia 86.29 97 PFAKE 19 20 30.0 +8.8
DGAR LR LR
comp=Z,2µm,21.0s,MS5.5
WMOK Wichita Mounta 86.41 305 *e*P **P** **19 20 20.6 -0.8**
WMOK pmax pmax
comp=Z,47nm,1.4s,mb5.5
WMOK Wichita Mounta 86.41 305 *e*P **P** **19 20 20.6 -0.8**
comp=Z,47nm,1.4s,mb5.5
KKAR Karatay Array 86.76 47 *e*P **P** **19 20 22.3 -0.6**
KKAR pmax pmax
comp=Z,18nm,1.0s,mb5.3
KKAR Karatay Array 86.76 47 *e*P **P** **19 20 22.3 -0.6**
comp=Z,18nm,1.0s,mb5.2
JCT Junction City 87.01 300 *e*P **P** **19 20 24.1 -0.3**
JCT pmax pmax
comp=Z,43nm,1.1s,mb5.6
JCT MLR MLR
comp=Z,1µm,22.0s,MS5.3
JCT Junction City 87.01 300 *e*P **P** **19 20 24.1 -0.4**
comp=Z,43nm,1.1s,mb5.6
JCT LR LR
comp=Z,1µm,22.0s,MS5.3
CBKS Cedar Bluff 87.45 309 *e*P **P** **19 20 26.1 -0.3**
CBKS pmax pmax
comp=Z,78nm,1.2s,mb5.8
CBKS MLR MLR
comp=Z,2µm,20.0s,MS5.5
CBKS Cedar Bluff 87.45 309 *e*P **P** **19 20 26.1 -0.2**
comp=Z,78nm,1.2s,mb5.8
CBKS LR LR
comp=Z,2µm,20.0s,MS5.5
BRVK Borovoye 87.48 37 *ce*P **P** **19 20 24.8 -1.4**
BRVK pmax pmax
comp=Z,15nm,1.2s,mb5.1
BRVK Borovoye 87.48 37 *e*P **P** **19 20 25.8 -0.4**
comp=Z,20nm,1.2s,mb5.2
BRVK LR LR
comp=Z,2µm,21.0s,MS5.6
BRVK Borovoye 87.48 37 P **P** **19 20 27.3 +1.1**
SNR=14
POO Poona 88.30 72 *e*PKP **P** **19 20 29.7 -1.1**
POO AMb AMB 19 20 42.2
comp=Z,68nm,0.8s,mb6.0
NIL Nilore 88.33 56 PFAKE 19 20 40.0 +9.3
NIL LR LR
comp=Z,82nm,21.0s,MS4.1
KAD Karad 88.58 73 *e*PKP **P** **19 20 30.8 -1.4**
KAD AMb AMB 19 20 38.4
comp=Z,41nm,1.4s,mb5.6
AMTX Amarillo 88.80 305 PFAKE 19 20 40.0 +7.1
AMTX LR LR
comp=Z,3µm,21.0s,MS5.7
QSPA South Pole Qui 88.88 180 *e*P **P** **19 20 33.7 +1.4**
comp=Z,62nm,1.2s,mb5.8
QSPA LR LR
comp=Z,1µm,21.0s,MS5.2
AML Almayashu 89.05 48 *e*P **P** **19 20 34.1 +0.3**
comp=Z,23nm,1.0s,mb5.5
AML LR LR
comp=Z,2µm,20.0s,MS5.5
EKS2 Erkin-Say 89.13 47 *e*P **P** **19 20 35.0 +0.8**
comp=Z,27nm,1.1s,mb5.5
EKS2 LR LR
comp=Z,2µm,20.0s,MS5.4
OGNE Ogallala 89.32 311 *e*P **P** **19 20 36.1 +1.0**
comp=Z,184nm,1.4s,mb6.2
OGNE LR LR
comp=Z,3µm,22.0s,MS5.7
AAK Ala-Archa 89.66 48 *ce*P **P** **19 20 37.8 +1.1**
AAK pmax pmax
comp=Z,14nm,1.2s,mb5.2
AAK Ala-Archa 89.66 48 *e*P **P** **19 20 37.1 +0.3**
comp=Z,49nm,1.2s,mb5.7
AAK LR LR
comp=Z,2µm,20.0s,MS5.4
AAK Ala-Archa 89.66 48 P **P** **19 20 38.2 +1.5**
comp=Z,176nm,1.1s,mb6.3,SNR=9.1
AAK Ala-Archa 89.66 48 P **P** **19 20 38.2 +1.4**
SNR=20
FFC Flin Flon 89.82 325 *i* P **P** **19 20 38.6 +1.4**
FFC Flin Flon 89.82 325 *e*P **P** **19 20 36.7 -0.5**
comp=Z,19nm,1.1s,mb5.3
FFC LR LR
comp=Z,2µm,20.0s,MS5.4
TXAR Lajitas Array 90.32 299 P **P** **19 20 41.0 +0.9**
comp=Z,1.3nm,0.8s,mb4.3,baz=120,slow=6.8,SNR=10
TXAR LR LR 19 57 49.3
comp=Z,1µm,20.1s,MS5.3,baz=345,slow=33
KHET Khetri 90.35 62 *e*PKP **P** **19 20 39.9 -0.4**
KHET AMb AMB 19 20 51.2
comp=Z,22nm,1.0s,mb5.4
TKM2 Tokmak 2 90.48 47 *e*P **P** **19 20 40.8 +0.2**
TKM2 *e* 19 24 15.8
TKM2 pmax pmax
comp=Z,19nm,1.3s,mb5.3
TKM2 MLR MLR
comp=Z,2µm,19.0s,MS5.6
TKM2 Tokmak 2 90.48 47 *e*P **P** **19 20 40.8 +0.3**
comp=Z,19nm,1.3s,mb5.3
TKM2 *e*PP PP 19 24 15.8 +0.7
TKM2 LR LR
comp=Z,2µm,19.0s,MS5.6
KSH Kashi 90.70 51 *e*P **P** **19 20 41.4 -0.3**
KSH *e*pP pP 19 20 46.2 +2.2
KSH *e*sP sP 19 20 48.4 +3.6
KSH *e*PP PP 19 24 17.5 +0.5
KSH SKS 19 31 10.0
KSH S S 19 31 32.8 -5.6
KSH SS SS 19 37 35.0 -5.2
KSH pmax pmax
comp=Z,45nm,1.0s,mb5.8
KSH LR LR
comp=N,1µm,14.9s,MS5.6
KSH LR LR
comp=E,1µm,14.6s,MS5.6
KSH LR LR
comp=Z,7µm,31.6s
RSSD Black Hills 90.88 314 PFAKE 19 20 50.0 +7.6
RSSD LR LR
comp=Z,2µm,19.0s,MS5.5
KUDL Kundal 90.95 62 *ex* x 19 20 37.7
KUDL AMb AMB 19 20 41.4
comp=Z,14nm,1.1s,mb5.2
GDL2 Guadalupe Moun 90.97 302 *e*P **P** **19 20 43.6 +0.5**
comp=Z,15nm,1.3s,mb5.2
DGMT Dagmar 91.04 318 PFAKE 19 20 50.0 +7.0
DGMT LR LR
comp=Z,4µm,22.0s,MS5.8
TRD Trivandrum 91.08 82 *e*PKP **P** **19 20 42.6 -1.4**
TRD AMb AMB 19 20 46.5
comp=Z,42nm,0.6s,mb5.9
AYAN Aya Nagar 91.52 62 *e*PKP **P** **19 20 44.9 -0.8**
AYAN AMb AMB 19 20 50.8
comp=Z,19nm,1.2s,mb5.3
BHPL Bhopal 91.74 67 *e*PKP **P** **19 20 46.9 +0.1**
BHPL AMb AMB 19 20 57.8
comp=Z,25nm,1.2s,mb5.4
MNTX Cornudas Mount 91.83 302 PFAKE 19 21 00.0 +13
MNTX LR LR
comp=Z,1µm,20.0s,MS5.4
SDCO Great Sand Dun 91.95 308 *e*P **P** **19 20 48.6 +1.1**
comp=Z,31nm,1.4s,mb5.5
SDCO LR LR
comp=Z,2µm,20.0s,MS5.4
ISCO Idaho Springs 92.03 310 *e*P **P** **19 20 49.7 +1.9**
ISCO pmax pmax
comp=Z,41nm,1.7s,mb5.5
ISCO MLR MLR
comp=Z,2µm,20.0s,MS5.6
ISCO Idaho Springs 92.03 310 *e*P **P** **19 20 49.7 +1.9**
comp=Z,41nm,1.7s,mb5.5
ISCO LR LR

comp=Z,2μm,20.0s,MS5.6
AGRA Agra 92.23 63 *e*PKP **P 19 20 47.5 -1.5**
AGRA AMb AMB 19 20 49.2
comp=Z,85nm,0.2s,mb6.7
DDI Dehra Dun 92.34 60 *e*PKP **P 19 20 49.0 -0.5**
LAO LASA Array 92.42 316 PFAKE 19 21 00.0 +11
LAO LR LR
comp=Z,2μm,20.0s,MS5.6
KURK Kurchatov 92.56 39 PFAKE 19 21 00.0 +10
KURK LR LR
comp=Z,2μm,19.0s,MS5.6
ANMO Albuquerque 92.73 305 *e*P **P 19 20 51.3 +0.1**
ANMO pmax pmax
comp=Z,1.0nm,0.7s
ANMO MLR MLR
comp=Z,2μm,20.0s
ANMO Albuquerque 92.73 305 *e*P **P 19 20 51.3 +0.1**
comp=Z,1.4nm,0.7s,mb4.5
ANMO LR LR
comp=Z,2μm,20.0s,MS5.6
HYB Hyderabad 92.75 73 *i* P **P 19 20 52.0 +0.4**
BNM Barren Site 92.88 304 *e*P **P 19 20 51.9 0.0**
comp=Z,6.2nm,1.3s,mb4.9
SMCO Snowmass 93.09 309 *e*P **P 19 21 01.6 +8.8**
comp=Z,9.1nm,1.1s,mb5.1
LENM Lemitar 93.16 304 *e*P **P 19 20 54.8 +1.6**
comp=Z,16nm,1.3s,mb5.3
LAZ Ladron 93.30 304 *e*P **P 19 20 53.4 -0.4**
comp=Z,2.1nm,1.1s,mb4.5
JOSI Joshimath 93.63 60 *e*PKP **P 19 20 55.0 -0.5**
JOSI AMb AMB 19 20 59.5
comp=Z,105nm,0.6s,mb6.4
MVCO Mesa Verde 94.34 307 PFAKE 19 21 10.0 +11
MVCO LR LR
comp=Z,1μm,20.0s,MS5.4
RLMT Red Lodge 94.59 315 *e*P **P 19 20 58.3 -1.2**
RLMT LR LR
comp=Z,2μm,20.0s,MS5.5
EGMT Eagleton 94.77 318 PFAKE 19 21 10.0 +10
EGMT LR LR
comp=Z,3μm,21.0s,MS5.8
BW06 Boulder Array 94.92 313 PFAKE 19 21 10.0 +8.9
BW06 LR LR
comp=Z,3μm,19.0s,MS5.7
PDAR Pinedale Array 94.92 313 P **P 19 21 02.3 +1.2**
comp=Z,0.8nm,0.7s,mb4.3,baz=74,slow=22,SNR=2.0
PDAR LR LR 20 01 00.3
comp=Z,2μm,18.6s,MS5.7,baz=101,slow=34
NVS Novosibirsk 95.12 35 *e*P **P 19 21 01.6 -0.1**
NVS *e* 19 24 47.2
NVS *e* 19 33 28.6
NVS pmax pmax
comp=Z,12nm,1.5s,mb5.1
MKAR Makanchi Array 95.15 43 P **P 19 21 02.0 0.0**
comp=Z,3.6nm,0.9s,mb4.8,baz=258,slow=4.7,SNR=12
MKAR PP PP 19 24 51.3 -0.4
comp=Z,2.9nm,0.9s,baz=258,slow=6.1,SNR=4.6
MKAR LR LR 20 10 07.7
comp=Z,1μm,19.1s,MS5.4,baz=276,slow=39
MKAR Makanchi Array 95.15 43 P **P 19 21 02.0 0.0**
MKAR 19 24 51.3
MKAR pmax pmax
comp=Z,4.0nm,0.9s
MKAR pmax pmax
comp=Z,3.0nm,0.9s
MKAR MLR MLR
comp=Z,1μm,19.1s
LKWY Lake 95.43 314 PFAKE 19 21 10.0 +6.6
LKWY LR LR
comp=Z,2μm,20.0s,MS5.7
YKA Yellowknife Ar 95.98 333 P **P 19 21 06.2 +0.8**
comp=Z,4.7nm,0.9s,mb4.9,baz=80,slow=5.3,SNR=21
YKA LR LR 20 01 24.0
comp=Z,108nm,18.9s,MS4.3,baz=40,slow=34
YKA Yellowknife Ar 95.98 333 P **P 19 21 06.2 +0.8**
YKA pmax pmax
comp=Z,5.0nm,0.9s
YKA MLR MLR
comp=Z,108nm,19.0s
AHID Auburn Hatcher 96.06 313 PFAKE 19 21 20.0 +14
AHID LR LR
comp=Z,2μm,20.0s,MS5.5
ZALV Zalesovo Beam 96.14 36 P **P 19 21 06.0 -0.4**
comp=Z,0.4nm,0.5s,mb4.1,baz=305,slow=5.2,SNR=4.0
ZALV PP PP 19 24 54.0 -5.0
comp=Z,5.6nm,1.1s,baz=282,slow=8.5,SNR=5.0
ZALV LR LR 20 08 12.1
comp=Z,1μm,21.4s,MS5.4,baz=286,slow=38
ZALV Zalesovo Beam 96.14 36 P **P 19 21 06.0 -0.3**
ZALV 19 24 54.1
ZALV pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
ZALV MLR MLR
comp=Z,1μm,21.5s,MS5.4
BOZ Bozeman (W) 96.22 316 PFAKE 19 21 20.0 +13
BOZ LR LR
comp=Z,2μm,20.0s,MS5.6
HWUT Hardware Ranch 96.49 312 PFAKE 19 21 20.0 +12
HWUT LR LR
comp=Z,3μm,22.0s,MS5.7
EDM Edmonton 96.58 323 P **P 19 21 09.1 +0.7**
MVU Marysvale 97.21 308 PFAKE 19 21 20.0 +8.4
MVU LR LR
comp=Z,2μm,20.0s,MS5.6
DUG Dugway 97.54 310 PFAKE 19 21 20.0 +7.0
DUG LR LR
comp=Z,3μm,20.0s,MS5.7
MSO Missoula 97.70 317 PFAKE 19 21 20.0 +6.4
MSO LR LR
comp=Z,2μm,19.0s,MS5.6
HLID Hailey 98.40 314 PFAKE 19 21 30.0 +13
HLID LR LR
comp=Z,3μm,21.0s,MS5.7
WMQ Urumqi 99.23 46 *e*P **P 19 21 21.0 +0.4**
WMQ sP sP 19 21 28.0 +4.3
WMQ PP PP 19 25 26.0 +2.8
WMQ SKS 19 31 58.0
WMQ S S 19 32 48.0 -4.8
WMQ SS SS 19 39 41.0 -0.3
WMQ pmax pmax
comp=Z,18nm,1.2s,mb5.5
WMQ pmax pmax
comp=Z,100nm,10.0s
WMQ LR LR
comp=N,2μm,22.0s,MS5.6
WMQ LR LR
comp=E,1μm,22.0s,MS5.6
WMQ LR LR
comp=Z,1μm,22.0s,MS5.4
NEW Newport 99.65 319 PFAKE 19 21 30.0 +7.9
NEW LR LR
comp=Z,4μm,22.0s,MS5.9
PFO Pinyon Flat Ob 101.07 304 PFAKE 19 21 40.0 +12
PFO LR LR
comp=Z,2μm,21.0s,MS5.5
TPH Tonopah 101.17 308 PFAKE 19 21 40.0 +11
TPH LR LR
comp=Z,2μm,19.0s,MS5.6
HAWA Hanford 101.58 317 PFAKE 19 21 40.0 +9.3
HAWA LR LR
comp=Z,3μm,20.0s,MS5.7
DAC Darwin (Calif) 101.69 307 PFAKE 19 21 40.0 +8.8
DAC LR LR
comp=Z,939nm,22.0s,MS5.3
CASY Casey 102.13 160 PFAKE 19 21 40.0 +6.9
CASY LR LR
comp=Z,2μm,19.0s,MS5.6
MOD Modoc 102.93 313 PFAKE 19 21 50.0 +13
MOD LR LR
comp=Z,2μm,21.0s,MS5.5
CMB Columbia Colle 103.65 309 PFAKE 19 21 50.0 +10
CMB LR LR
comp=Z,1μm,20.0s,MS5.4
LSA Lhasa 103.71 60 PFAKE 19 21 50.0 +10
LSA LR LR
comp=Z,1μm,22.0s,MS5.3
NLWA Neilton Lookou 104.27 319 PFAKE 19 21 50.0 +7.3
NLWA LR LR
comp=Z,4μm,21.0s,MS6.0
COR Corvallis 104.55 316 PFAKE 19 22 00.0 +16
COR LR LR
comp=Z,1μm,19.0s,MS5.5
SAO San Andreas Ge 104.69 308 PFAKE 19 22 00.0 +15
SAO LR LR
comp=Z,1μm,19.0s,MS5.5
HUMO Hull Mountain 104.73 314 PFAKE 19 22 00.0 +15
HUMO LR LR
comp=Z,2μm,19.0s,MS5.5
YBH Yreka Blue Hor 104.73 313 PFAKE 19 22 00.0 +15
YBH LR LR
comp=Z,1μm,22.0s,MS5.4
WDC Whiskeytown Da 104.84 312 PFAKE 19 22 00.0 +15
WDC LR LR
comp=Z,1μm,19.0s,MS5.5
HOPS Hopland 105.55 310 PFAKE 19 26 10.0 +7.8
HOPS LR LR
comp=Z,2μm,20.0s,MS5.7
MCCM Marconi Confer 105.57 309 PFAKE 19 26 10.0 +7.7
MCCM LR LR
comp=Z,2μm,21.0s,MS5.7
EGAK Eagle 106.12 339 PFAKE 19 26 10.0 +7.5
EGAK LR LR
comp=Z,1μm,20.0s,MS5.4
TLY Talaya 107.74 35 PFAKE 19 26 20.0 +14
TLY LR LR
comp=Z,2μm,21.0s,MS5.6
COLA College 108.34 341 PFAKE 19 26 20.0 +13
COLA LR LR
comp=Z,764nm,20.0s,MS5.3
COCO West Island 110.04 103 PFAKE 19 26 20.0 +8.7
COCO LR LR
comp=Z,2μm,19.0s,MS5.6
SONM Songino Array 110.84 38 PKiKP PKiKP 19 26 12.8 +0.9
comp=Z,0.9nm,0.8s,baz=294,slow=1.8,SNR=5.4
SONM Songino Array 110.84 38 *i* PKIKP PKiKP 19 26 12.8 +1.0
SONM pmax pmax
comp=Z,1.0nm,0.8s
CHTO Chiang Mai 112.04 70 PFAKE 19 26 30.0 +15
CHTO LR LR
comp=Z,424nm,19.0s,MS5.0
CM31 Chiang Mai Arr 112.08 71 PFAKE 19 26 30.0 +15
CM31 LR LR
comp=Z,363nm,19.0s,MS5.0
CMAR Chiang Mai Arr 112.08 71 PKiKP PKiKP 19 26 16.2 +1.2
comp=Z,0.6nm,0.8s,baz=277,slow=4.3,SNR=5.2
CMAR Chiang Mai Arr 112.08 71 *i* PKIKP PKiKP 19 26 16.3 +1.3
CMAR pmax pmax
comp=Z,1.0nm,0.8s
LZH Lanzhou 112.95 51 *e*PKP PKiKP 19 26 10.4 -5.8
LZH sPKP 19 26 15.0
LZH AMB AMB
comp=Z,200nm,6.1s
LZH LR LR
comp=N,1μm,19.2s,MS5.7
LZH LR LR
comp=E,1μm,18.3s,MS5.7
LZH LR LR
comp=Z,2μm,21.0s,MS5.7
BILL Bilibino 113.28 360 PFAKE 19 26 30.0 +14
BILL LR LR
comp=Z,1μm,21.0s,MS5.4
KMI Kunming 114.58 63 PKP PKiKP 19 26 19.3 -0.3
KMI sPKP 19 26 23.8
KMI PP PP 19 27 20.1 +3.6
KMI SKS SKSdf 19 33 29.4 -3.3
KMI SKKS SKKSac 19 34 11.4 -7.9
KMI S Sdif 19 34 56.5 -3.8
KMI SS SS 19 43 08.8 -2.1
KMI LR LR
comp=N,340nm,18.7s,MS5.2
KMI LR LR
comp=E,560nm,20.2s,MS5.2
KMI LR LR
comp=Z,870nm,21.8s,MS5.3
KULM Kulim 114.61 85 PFAKE 19 26 30.0 +10
KULM LR LR
comp=Z,500nm,19.0s,MS5.1
KDAK Kodiak Island 114.80 337 PFAKE 19 26 30.0 +11
KDAK LR LR
comp=Z,840nm,20.0s,MS5.3
HHC Hu-ho-hao-te 117.01 44 *e*PKP PKPdf 19 26 25.8 +1.9
HHC PP PP 19 27 39.1 +6.2
HHC PKS 19 30 01.4
HHC SKS SKSdf 19 33 36.8 +0.2
HHC SKKS SKKSac 19 34 32.1 -2.8
HHC SS SS 19 43 44.8 +3.3
HHC AMB AMB
comp=Z,260nm,8.4s
HHC LR LR
comp=N,1μm,19.0s,MS5.7
HHC LR LR
comp=E,1μm,20.4s,MS5.7
HHC LR LR
comp=Z,2μm,19.0s,MS5.8
GYA Guiyang 117.76 61 Pdif Pdif 19 22 43.0 +0.4
GYA PKP PKPdf 19 26 25.3 -0.4
GYA PP PP 19 27 41.8 +3.0
GYA PKS 19 30 01.4
GYA SKKS SKKSac 19 34 33.2 -7.3
GYA SS SS 19 43 50.6 -1.7
GYA AMB AMB
comp=Z,180nm,7.6s
GYA LR LR
comp=N,2μm,20.9s,MS5.8
GYA LR LR
comp=E,1μm,21.8s,MS5.8
GYA LR LR
comp=Z,4μm,20.2s,MS6.0
RKT Rikitea 117.79 243 *e*LR LR 20 02 15.8
comp=Z,1μm,32.8s
HIA Hailar 117.91 32 PFAKE 19 26 40.0 +15
HIA LR LR
comp=Z,3μm,19.0s,MS5.9
ENH Enshi 119.15 56 PFAKE 19 26 40.0 +12
ENH LR LR
comp=Z,1μm,22.0s,MS5.4
BJI Beijing 120.53 43 PKP PKPdf 19 26 31.0 +0.3
BJI PP PP 19 27 56.3 -0.9
BJI SKS SKSdf 19 33 42.4 -1.0
BJI SS SS 19 44 26.3 -0.6
BJI AMB AMB
comp=Z,200nm,8.6s
BJI LR LR
comp=N,1μm,18.9s,MS5.7
BJI LR LR
comp=E,1μm,19.9s,MS5.7
BJI LR LR
comp=Z,640nm,24.5s,MS5.2
BJT Baijiatuau 120.54 43 PFAKE 19 26 40.0 +9.3
BJT LR LR
comp=Z,2μm,19.0s,MS5.7
QIZ Qiongzhong 122.20 68 PKP PKPdf 19 26 33.5 -1.0
QIZ PP PP 19 28 08.3 -1.3
QIZ SS SS 19 44 48.4 -1.6
QIZ LR LR
comp=N,370nm,23.5s
QIZ LR LR
comp=Z,610nm,18.8s,MS5.3
QIZ Qiongzhong 122.20 68 PFAKE 19 26 50.0 +16
QIZ LR LR
comp=Z,626nm,20.0s,MS5.3
NWAO Narrogin (SRO) 122.86 131 PFAKE 19 26 50.0 +15
NWAO LR LR
comp=Z,1μm,21.0s,MS5.6
WHN Wuhan 123.04 54 P PKPdf 19 26 42.2 +6.4
WHN PP PP 19 28 13.6 -1.1
WHN SS SS 19 45 15.6 +16
WHN LR LR
comp=N,1μm,18.0s,MS5.8
WHN LR LR
comp=E,1μm,17.6s,MS5.8
WHN LR LR
comp=Z,2μm,20.3s,MS5.8
KLR Kul'dur 123.86 26 *e*PKIKP PKPdf 19 26 35.0 -1.8
KSM Kuching 124.28 89 PFAKE 19 26 50.0 +11
KSM LR LR
comp=Z,633nm,20.0s,MS5.3
CN2 Changchun 124.33 35 *e*PKP PKPdf 19 26 46.2 +8.3
CN2 *e*pPKP pPKPdf 19 27 00.7 +20
CN2 PP PP 19 28 35.2 +13
CN2 SS SS 19 45 20.9 +6.2
CN2 LR LR
comp=N,900nm,18.0s,MS5.7
CN2 LR LR
comp=E,1μm,18.0s,MS5.7
CN2 LR LR
comp=Z,2μm,21.0s,MS5.6
TAOE Nuku Hiva Isla 125.47 258 *e*LR LR 20 06 00.3
comp=Z,815nm,22.1s
NJ2 Nanjing 126.01 50 *e*PKP PKPdf 19 26 36.7 -4.7
NJ2 PKS 19 30 11.0
NJ2 AMB AMB
comp=Z,170nm,8.5s
MDJ Mudanjiang 126.08 32 PKP PKPdf 19 26 40.8 -0.4
MDJ AMB AMB
comp=Z,200nm,11.8s
MDJ LR LR
comp=N,930nm,32.6s,MS5.4
MDJ LR LR
comp=E,760nm,31.0s,MS5.4
MDJ LR LR
comp=Z,2μm,27.8s,MS5.6
MDJ Mudanjiang 126.08 32 PFAKE 19 26 50.0 +8.8
MDJ LR LR
comp=Z,2μm,21.0s,MS5.7
PET Petropavlovsk 127.98 6 PFAKE 19 27 00.0 +15
PET LR LR
comp=Z,806nm,21.0s,MS5.4
SSE Sheshan 128.22 50 *e*PKP PKPdf 19 26 46.0 +0.3
SSE LR LR
comp=N,380nm,23.0s,MS5.4
SSE LR LR
comp=E,890nm,23.0s,MS5.4
SSE LR LR
comp=Z,1μm,20.0s,MS5.5
QZH Quanzhou 128.50 59 *e*PKP PKPdf 19 26 46.0 -0.4
QZH PP PP 19 28 52.1 +0.8
QZH LR LR
comp=N,470nm,10.8s
QZH LR LR
comp=E,1μm,17.2s
QZH LR LR
comp=Z,1μm,21.5s
INCN Inchon 128.83 40 PFAKE 19 27 00.0 +13
INCN LR LR
comp=Z,1μm,20.0s,MS5.7
MBWA Marble Bar 129.58 119 *e*PKP PKPdf 19 26 59.6 +11
MBWA Marble Bar 129.58 119 PFAKE 19 27 00.0 +11
MBWA LR LR
comp=Z,2μm,19.0s,MS5.8
KSRS Korea Array 129.68 40 PKP PKPdf 19 26 48.8 +0.5
comp=Z,1.7nm,1.0s,baz=278,slow=1.8,SNR=6.8
KSRS Korea Array 129.68 40 PKIKP PKPdf 19 26 48.8 +0.5
KSRS pmax pmax
comp=Z,2.0nm,1.0s
KKM Kota Kinabalu 130.06 83 PFAKE 19 27 00.0 +10
KKM LR LR
comp=Z,882nm,21.0s,MS5.4
TATO Taipei 130.94 57 PFAKE 19 27 00.0 +9.0
TATO LR LR
comp=Z,752nm,19.0s,MS5.4
YHNB Yeheng 130.96 58 PFAKE 19 27 00.0 +8.9
YHNB LR LR
comp=Z,884nm,19.0s,MS5.5
MYLDM Lahad Datu 132.38 84 PKP PKPdf 19 27 07.4 +13
PPT Papeete 132.49 245 *e*SS SS 19 46 56.6 -1.3
comp=Z,1μm,28.2s
PPT *e*LR LR 20 09 03.7
comp=Z,2μm,23.2s
KAPI Kappang 133.35 98 PFAKE 19 27 10.0 +14
KAPI LR LR
comp=Z,699nm,20.0s,MS5.4
ERM Erimo 134.44 24 PFAKE 19 27 10.0 +13
ERM LR LR
comp=Z,1μm,20.0s,MS5.6
JOW Kunigami 135.69 52 *e*PKPdf PKPdf 19 27 00.4 +0.5
FITZ Fitzroy Crossi 135.87 118 *e*PKP PKPdf 19 26 50.8 -10
comp=Z,5.0nm,0.8s
MAJO Matsushiro 136.41 33 PFAKE 19 27 10.0 +9.0
MAJO LR LR
comp=Z,1μm,21.0s,MS5.6
MAT Matsushiro 136.41 33 PKP PKPdf 19 27 01.7 +0.7
SNZO South Karori 136.97 190 PFAKE 19 27 10.0 +8.1
SNZO LR LR
comp=Z,2μm,19.0s,MS5.8
DAV Davao City (W) 139.24 81 PFAKE 19 27 20.0 +13
DAV LR LR
comp=Z,678nm,22.0s,MS5.3
STKA Stephens Creek 139.77 147 PKP PKPdf 19 27 10.1 +2.7
comp=Z,2.5nm,0.7s,baz=274,slow=3.4,SNR=6.7
STKA Stephens Creek 139.77 147 *e*PKP PKPdf 19 27 03.2 -4.1
comp=Z,5.6nm,0.9s
ASAR Alice Springs 140.17 130 PKhKP PKPpre 19 26 59.7
comp=Z,4.0nm,0.8s,baz=219,slow=2.5,SNR=23
ASAR PP PP 19 30 01.9 -3.2
comp=Z,0.7nm,1.0s,baz=238,slow=3.3,SNR=4.3
ASAR Alice Springs 140.17 130 PKHKP PKPpre 19 26 59.7
ASAR 19 30 01.9
ASAR pmax pmax
comp=Z,4.0nm,0.8s
CAN Canberra 140.33 158 PFAKE 19 27 20.0 +12
CAN LR LR
comp=Z,2μm,21.0s,MS5.8
WRA Warramunga Arr 142.49 126 PKhKP PKPpre 19 27 07.6
comp=Z,3.5nm,0.8s,baz=246,slow=2.7,SNR=21
WRA Warramunga Arr 142.49 126 PKIKP PKPpre 19 27 07.6
WRA pmax pmax
comp=Z,4.0nm,0.8s
KAKA Kakadu 143.91 114 *e*PKP PKPdf 19 27 13.3 -1.8
comp=Z,54nm,1.1s
KAKA Kakadu 143.91 114 *e*PKPdf PKPdf 19 27 12.4 -2.7
QLP Quilpie 145.29 144 *e*PKP PKPdf 19 27 17.8 +0.6
CBIJ Chichi jima 145.54 40 PKPbc PKPbc 19 27 16.0 -1.7
comp=Z,79nm,0.9s,baz=47,slow=6.0,SNR=4.9
ARMA Armidale 145.69 158 *e*PKP PKPdf 19 27 19.1 +1.3
MIDW Midway 148.80 331 PFAKE 19 27 30.0 +6.9
MIDW LR LR
comp=Z,1μm,19.0s,MS5.7
CTA Charters Tower 151.30 139 *e*PKP PKPbc 19 27 34.6 +1.4
comp=Z,28nm,1.0s
CTAO Charters Tower 151.30 139 *e*PKIKP PKPbc 19 27 33.9 +0.7
CTAO MLR MLR
comp=Z,2μm,22.0s,MS5.8
COEN Coen 152.80 124 *e*PKPbc PKPbc 19 27 36.3 -0.4
AFI Afiamalu 153.39 235 PFAKE 19 27 40.0 +10
AFI LR LR
comp=Z,679nm,20.0s,MS5.5
GUMO Guam 155.69 59 PFAKE 19 27 40.0 +6.4
GUMO LR LR
comp=Z,654nm,20.0s,MS5.5
DZM Mont Dzumac 156.87 181 *e*SS SS 19 51 34.5 +0.9
comp=Z,612nm,28.1s
DZM *e*LR LR 20 20 24.0
comp=Z,2μm,27.6s
MSVF Nonsavu 157.78 212 PFAKE 19 27 50.0 +14
MSVF LR LR
comp=Z,1μm,21.0s,MS5.7
PMG Port Moresby 158.44 120 PFAKE 19 27 50.0 +13
PMG LR LR
comp=Z,1μm,20.0s,MS5.7
FUNA Funafuti 163.72 233 PFAKE 19 27 50.0 +7.2
FUNA LR LR
comp=Z,9μm,19.0s
HNR Honiara 167.82 150 PFAKE 19 28 00.0 +14
HNR LR LR
comp=Z,908nm,20.0s
TARA Tarawa 173.12 271 PFAKE 19 28 00.0 +11
TARA LR LR
comp=Z,52nm,21.0s

ISCJB ***05*** *19:13:59.7±1.0, 17°.71N±0°.10×145°.4E±0°.2, h10km, mb3.6/9, Error ellipse: s-maj=28.2km s-min=13.9km az=3.2*
IDC ***05*** *19:14:00.6±1.1, 17°.68N×145°.29E, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.6/7, MS2.9/1, Ms1 2.9/1, ms1mx2.6/26, Error ellipse: s-maj=33.7km s-min=22.9km az=98.0*
NEIC ***05*** *19:14:02.1±0.8, 17°.68N×145°.26E, h10km, mb3.9/2, Error ellipse: s-maj=24.0km s-min=15.5km az=98.0*
ISC 05 19:14:02.1±0.9, 17.73N±0°.09×145°.3E±0°.2, h10km, n14, σ1§15/13, mb3.6/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.13**	**185**	LR	LR	19 16 38.2	
	comp=Z,137nm,19.5s,baz=230,slow=38						
MAJO	**Matsushiro**	**19.75**	**343**	*e*P	**Pn**	**19 18 32.0**	**-1.6**
	5.5nm,0.8s						
MAT	**Matsushiro**	**19.75**	**343**	P	**Pn**	**19 18 33.3**	**-0.3**
KSRS	**Korea Array**	**24.86**	**326**	P	**P**	**19 19 33.5**	**+8.7**
	0.7nm,0.7s,mb3.3,baz=150,slow=9.9,SNR=4.5						
WRA	**Warramunga Arr**	**38.94**	**196**	P	**P**	**19 21 28.3**	**-0.1**
	1.3nm,0.9s,mb3.6,baz=19,slow=9.1,SNR=5.6						
WRA	**Warramunga Arr**	**38.94**	**196**	P	**P**	**19 21 28.3**	**-0.1**
ASAR	**Alice Springs**	**42.61**	**195**	P	**P**	**19 21 57.9**	**-0.7**

0.3nm,0.7s,mb3.1,baz=17,slow=12,SNR=4.4
SONM Songino Array 43.64 322 P **P 19 22 07.4 +0.6**
0.4nm,0.7s,mb3.3,baz=108,slow=9.3,SNR=3.5
CHTO Chiang Mai 43.90 279 *eP* **P 19 22 10.3 +1.1**
2.1nm,0.9s,mb3.9
CMAR Chiang Mai Arr 43.94 278 P **P 19 22 09.1 -0.4**
0.7nm,0.9s,mb3.4,baz=68,slow=6.2,SNR=5.2
COCO West Island 56.29 242 *eP* **P 19 23 42.7 -0.6**
114nm,0.9s
ZALV Zalesovo Beam 58.53 323 P **P 19 24 00.3 +1.8**
0.6nm,0.5s,mb3.9,baz=107,slow=7.9,SNR=3.9
ILAR Eielson Array 64.69 26 P **P 19 24 38.5 -1.5**
0.6nm,0.8s,mb3.7,baz=253,slow=5.7,SNR=5.3
NVAR Mina Array Bea 84.06 52 P **P 19 26 35.5 +2.3**
0.7nm,0.7s,mb3.9,baz=263,slow=7.2,SNR=4.4

IDC 05 19:39:08.8±2.2, 10°.17N×93°.62E, h0km, mb3.5/5, mb1 3.5/6, mb1mx3.4/23, mbtmp3.4/6, ML2.9/1, Error ellipse: s-maj=74.9km s-min=22.4km az=67.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.72**	**31**	Pn	Pn	19 41 30.0	0.0
	0.0nm,0.3s,baz=220,slow=14,SNR=3.6						
MKAR	**Makanchi Array**	**37.75**	**347**	P	P	19 46 26.4	0.0
	0.6nm,0.7s,baz=161,slow=7.8,SNR=2.7						
SONM	**Songino Array**	**39.06**	**14**	P	P	19 46 37.4	+0.1
	0.4nm,1.0s,baz=178,slow=9.7,SNR=3.4						
ZALV	**Zalesovo Beam**	**44.23**	**353**	P	P	19 47 19.6	-0.1
	1.0nm,0.5s,baz=168,slow=7.9,SNR=7.0						
WRA	**Warramunga Arr**	**50.02**	**127**	P	P	19 48 05.5	+0.1
	0.4nm,0.6s,baz=305,slow=8.5,SNR=6.5						
ASAR	**Alice Springs**	**51.78**	**131**	P	P	19 48 18.5	-0.1
	1.2nm,1.3s,baz=304,slow=6.6,SNR=4.9						

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*ISCJB **05** 19:55:29.6±0.7, 38°.69N±0°.03×39°.24E±0°.06, h10km, Error ellipse: s-maj=7.4km s-min=4.7km az=12.7*
*ISK **05** 19:55:29.0, 38°.69N×39°.22E, h6km, MD2.2*
*DDA **05** 19:55:29.6, 38°.71N×39°.22E, h6km, Md2.6*
*CSEM **05** 19:55:29.0±0.1, 38°.69N×39°.24E, h15km, MD2.2, Error ellipse: s-maj=3.4km s-min=2.4km az=95.0*
ISC 05 19:55:29.9±0.7, 38°.70N±0°.03×39°.24E±0°.06, h10km, n10, σ0°53/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.23**	**31**	*e*PG	**Pg**	**19 55 34.3**	**-0.2**
PTK				*e*SG	**Sg**	**19 55 38.3**	**+0.6**
PTK	**Pertek**	**0.23**	**31**	*e*Pg	**Pg**	**19 55 34.3**	**-0.3**
PTK				*e*Sg	**Sg**	**19 55 38.3**	**+0.5**
ELZG	**Elazig**	**0.28**	**225**	*i* P	**Pg**	**19 55 35.4**	**-0.1**
ELZG				*i* S	**Sg**	**19 55 40.2**	**+0.8**
ELZG	**Elazig**	**0.28**	**225**	*i* P	**Pg**	**19 55 35.4**	**-0.1**
ELZG				*i* S	**Sg**	**19 55 40.2**	**+0.9**
SVRC	**Sivrice-ELAZID**	**0.32**	**171**	*e*PG	**Pg**	**19 55 36.0**	**-0.3**
SVRC				*e*SG	**Sg**	**19 55 40.8**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.32**	**171**	*e*Pg	**Pg**	**19 55 36.0**	**-0.3**
SVRC				*e*Sg	**Sg**	**19 55 40.8**	**+0.2**
MALT	**Malatya**	**0.74**	**239**	*e*PG	**Pg**	**19 55 43.5**	**-0.8**
MALT	**Malatya**	**0.74**	**239**	*e*Pg	**Pg**	**19 55 43.5**	**-0.7**
KEMA	**Kemaliye**	**0.81**	**315**	*i* P	**Pg**	**19 55 44.9**	**-0.7**
KEMA				*i* S	**Sg**	**19 55 56.7**	**+0.5**
KEMA	**Kemaliye**	**0.81**	**315**	*i* P	**Pg**	**19 55 44.9**	**-0.7**
KEMA				*i* S	**Sg**	**19 55 56.7**	**+0.5**

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*IDC **05** 19:58:35.8±2.6, 35°.36N×21°.60E, h0km, mb3.9/8, mb1 3.9/13, mb1mx3.8/31, mbtmp3.9/13, ML3.6/4, Error ellipse: s-maj=54.5km s-min=20.6km az=24.0*
*ATH **05** 19:58:35.2, 35°.22N×21°.34E, h17km±2km, ML3.4*
*NEIC **05** 19:58:38.7, 35°.24N×21°.37E, h22km, mb4.0/7, ML3.9(ATH), After ATH.*
*CSEM **05** 19:58:39.3±0.2, 35°.20N×21°.33E, h40km, mb3.9/6, Error ellipse: s-maj=6.0km s-min=3.4km az=47.0*
*THE **05** 19:58:40.4, 35°.30N×21°.44E, h68km±18km, ML3.4/3, Error ellipse: s-maj=18.3km s-min=1.7km az=46.0*
*HLW **05** 19:58:41.1, 35°.41N×22°.44E, h13km±23km, Md3.8, Ml3.3*
ISC 05 19:58:37.9±1.0, 35°.18N±0°.03×21°.30E±0°.04, h26km±8km, n253, σ1°01/289, mb4.1/18, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.74**	**12**	*e*PN	**Pn**	**19 59 06.5**	**0.0**
PYL				*e*SN	**Sn**	**19 59 28.8**	**+0.9**
PYL	**PYLOS**	**1.74**	**12**	P	**Pn**	**19 59 06.4**	**-0.1**
PYL	**PYLOS**	**1.74**	**12**	*e*Pn	**Pn**	**19 59 06.5**	**0.0**
PYL				*e*Sn	**Sn**	**19 59 28.8**	**+0.9**
KYTH	**Kithira**	**1.78**	**52**	*e*PN	**Pn**	**19 59 07.1**	**0.0**
KYTH	**Kithira**	**1.78**	**52**	*e*Pn	**Pn**	**19 59 07.1**	**0.0**
VLI	**Veliai**	**2.02**	**40**	P	**Pn**	**19 59 10.9**	**+0.5**
VLI	**Veliai**	**2.02**	**40**	*e*PN	**Pn**	**19 59 10.5**	**+0.1**
VLI				*e*SN	**Sn**	**19 59 36.3**	**+1.5**
VLI	**Veliai**	**2.02**	**40**	*e*Pn	**Pn**	**19 59 10.5**	**+0.1**
VLI	**Veliai**	**2.02**	**40**	P	**Pn**	**19 59 10.9**	**+0.5**
VLI				*e*Sn	**Sn**	**19 59 36.3**	**+1.5**
ITM	**Ithomi**	**2.05**	**14**	P	**Pn**	**19 59 11.0**	**+0.2**
ITM	**Ithomi**	**2.05**	**14**	*e*PN	**Pn**	**19 59 10.8**	**0.0**
ITM				*e*SN	**Sn**	**19 59 36.6**	**+1.0**
ITM	**Ithomi**	**2.05**	**14**	P	**Pn**	**19 59 10.7**	**-0.1**
ITM				S	**Sn**	**19 59 33.5**	**-2.1**
ITM	**Ithomi**	**2.05**	**14**	P	**Pn**	**19 59 11.0**	**+0.2**
ITM				S	**Sn**	**19 59 33.5**	**-2.1**
ITM				*e*Sn	**Sn**	**19 59 36.6**	**+1.0**
KARN	**Karanos**	**2.15**	**83**	*e*PN	**Pn**	**19 59 12.3**	**+0.2**
KARN				*e*SN	**Sn**	**19 59 39.0**	**+1.1**
KARN	**Karanos**	**2.15**	**83**	P	**Pn**	**19 59 12.4**	**+0.3**
KARN				S	**Sn**	**19 59 37.4**	**-0.5**
KARN	**Karanos**	**2.15**	**83**	P	**Pn**	**19 59 12.4**	**+0.3**
KARN				S	**Sn**	**19 59 37.4**	**-0.5**
KARN				*e*Sn	**Sn**	**19 59 39.0**	**+1.1**
VLX	**Vlachokerasia**	**2.35**	**21**	*e*PB	**Pb**	**19 59 14.6**	**-4.9**
VLX	**Vlachokerasia**	**2.35**	**21**	P	**Pn**	**19 59 15.0**	**+0.2**
VLX				S	**Sn**	**19 59 42.4**	**-0.4**
VLX	**Vlachokerasia**	**2.35**	**21**	P	**Pn**	**19 59 15.0**	**+0.2**
VLX				S	**Sn**	**19 59 42.4**	**-0.4**
VAM	**Vamos**	**2.38**	**84**	P	**Pn**	**19 59 15.2**	**0.0**
VAM	**Vamos**	**2.38**	**84**	*e*PN	**Pn**	**19 59 15.4**	**+0.2**
VAM				*e*SN	**Sn**	**19 59 44.5**	**+0.9**
VAM	**Vamos**	**2.38**	**84**	*e*Pn	**Pn**	**19 59 15.4**	**+0.2**
VAM				*e*Sn	**Sn**	**19 59 44.5**	**+0.9**
DID	**Didima**	**2.79**	**33**	*e*PN	**Pn**	**19 59 20.6**	**-0.4**
DID	**Didima**	**2.79**	**33**	P	**Pn**	**19 59 20.6**	**-0.4**
DID				S	**Sn**	**19 59 51.7**	**-2.1**
DID	**Didima**	**2.79**	**33**	P	**Pn**	**19 59 20.6**	**-0.4**
DID				S	**Sn**	**19 59 51.7**	**-2.1**
GUR	**Goura**	**2.87**	**17**	*e*PN	**Pn**	**19 59 22.6**	**+0.6**
GUR	**Goura**	**2.87**	**17**	P	**Pn**	**19 59 22.7**	**+0.7**
GUR				S	**Sn**	**19 59 55.3**	**-0.4**
GUR	**Goura**	**2.87**	**17**	*e*Pn	**Pn**	**19 59 22.6**	**+0.6**
GUR				S	**Sn**	**19 59 55.3**	**-0.4**
RLS	**Riolos of Patr**	**2.87**	**3**	P	**Pn**	**19 59 23.1**	**+1.1**
RLS	**Riolos of Patr**	**2.87**	**3**	*e*PN	**Pn**	**19 59 22.5**	**+0.5**
RLS	**Riolos of Patr**	**2.87**	**3**	*e*Pn	**Pn**	**19 59 22.5**	**+0.5**
RLS	**Riolos of Patr**	**2.87**	**3**	P	**Pn**	**19 59 23.1**	**+1.1**
SIVA	**Sivas**	**2.88**	**92**	P	**Pn**	**19 59 23.1**	**+1.0**
SIVA	**Sivas**	**2.88**	**92**	*e*PN	**Pn**	**19 59 22.1**	**0.0**
SIVA				*e*SN	**Sn**	**19 59 57.2**	**+1.3**
SIVA	**Sivas**	**2.88**	**92**	P	**Pn**	**19 59 22.9**	**+0.8**
SIVA	**Sivas**	**2.88**	**92**	*e*Pn	**Pn**	**19 59 22.1**	**0.0**
SIVA	**Sivas**	**2.88**	**92**	P	**Pn**	**19 59 22.9**	**+0.8**
SIVA				*e*Sn	**Sn**	**19 59 57.2**	**+1.3**
KFL	**Anninata**	**2.95**	**352**	P	**Pn**	**19 59 23.7**	**+0.6**
KFL	**Anninata**	**2.95**	**352**	P	**Pn**	**19 59 23.7**	**+0.6**
VLS	**Valsamata**	**3.04**	**349**	P	**Pn**	**19 59 24.2**	**-0.2**
VLS	**Valsamata**	**3.04**	**349**	*e*PN	**Pn**	**19 59 24.4**	**0.0**
VLS				*e*SN	**Sn**	**20 00 00.8**	**+0.9**
VLS	**Valsamata**	**3.04**	**349**	P	**Pn**	**19 59 24.4**	**0.0**
VLS				S	**Sn**	**20 00 00.2**	**+0.3**
VLS	**Valsamata**	**3.04**	**349**	P	**Pn**	**19 59 24.4**	**0.0**
VLS				S	**Sn**	**20 00 00.2**	**+0.3**
LAKA	**Lakka**	**3.10**	**10**	P	**Pn**	**19 59 26.5**	**+1.4**
LAKA	**Lakka**	**3.10**	**10**	P	**Pn**	**19 59 26.5**	**+1.4**
NAIG	**Nisos Aigina**	**3.12**	**34**	*e*PN	**Pn**	**19 59 25.3**	**-0.1**
NAIG	**Nisos Aigina**	**3.12**	**34**	*e*Pn	**Pn**	**19 59 25.3**	**-0.1**
LTK	**Loutraki**	**3.13**	**25**	*e*PN	**Pn**	**19 59 26.1**	**+0.5**
LTK	**Loutraki**	**3.13**	**25**	P	**Pn**	**19 59 26.0**	**+0.4**
LTK	**Loutraki**	**3.13**	**25**	P	**Pn**	**19 59 26.0**	**+0.4**
TRIZ	**Trizonia**	**3.23**	**11**	P	**Pn**	**19 59 29.0**	**+2.0**
TRIZ	**Trizonia**	**3.23**	**11**	P	**Pn**	**19 59 29.0**	**+2.0**
KALE	**Kalithea**	**3.27**	**12**	P	**Pn**	**19 59 29.3**	**+1.8**
KALE	**Kalithea**	**3.27**	**12**	P	**Pn**	**19 59 29.3**	**+1.8**
EFP	**Efpalio**	**3.27**	**8**	*e*PN	**Pn**	**19 59 28.0**	**+0.5**
EFP	**Efpalio**	**3.27**	**8**	P	**Pn**	**19 59 29.7**	**+2.2**
EFP	**Efpalio**	**3.27**	**8**	*e*Pn	**Pn**	**19 59 28.0**	**+0.5**
EFP	**Efpalio**	**3.27**	**8**	P	**Pn**	**19 59 29.7**	**+2.2**
VLY	**Voula,Athens**	**3.33**	**36**	P	**Pn**	**19 59 28.4**	**0.0**
VLY	**Voula,Athens**	**3.33**	**36**	*e*PN	**Pn**	**19 59 28.5**	**+0.1**
VLY	**Voula,Athens**	**3.33**	**36**	P	**Pn**	**19 59 28.4**	**0.0**
DSF	**Desfina**	**3.37**	**17**	P	**Pn**	**19 59 28.7**	**-0.1**
DSF	**Desfina**	**3.37**	**17**	P	**Pn**	**19 59 28.7**	**-0.1**
ATH	**Athens Observa**	**3.39**	**34**	P	**Pn**	**19 59 31.0**	**+1.8**
ATH	**Athens Observa**	**3.39**	**34**	*e*PN	**Pn**	**19 59 29.6**	**+0.4**
ATH	**Athens Observa**	**3.39**	**34**	*e*Pn	**Pn**	**19 59 29.6**	**+0.4**
ATH	**Athens Observa**	**3.39**	**34**	P	**Pn**	**19 59 31.0**	**+1.8**
ATHU	**Athens Univers**	**3.42**	**35**	P	**Pn**	**19 59 29.9**	**+0.3**
ATHU	**Athens Univers**	**3.42**	**35**	P	**Pn**	**19 59 29.9**	**+0.3**
LAST	**Lasithi**	**3.42**	**89**	S	**Sn**	**20 00 09.6**	**+0.3**
LAST	**Lasithi**	**3.42**	**89**	S	**Sn**	**20 00 09.6**	**+0.3**
THR5	**Thira Island,**	**3.51**	**68**	P	**Pn**	**19 59 30.1**	**-0.7**
THR5				S	**Sn**	**20 00 10.8**	**-0.7**
THR5	**Thira Island,**	**3.51**	**68**	P	**Pn**	**19 59 30.1**	**-0.7**
THR5				S	**Sn**	**20 00 10.8**	**-0.7**
PTL	**Penteli**	**3.52**	**35**	P	**Pn**	**19 59 30.6**	**-0.4**
PTL	**Penteli**	**3.52**	**35**	*e*PN	**Pn**	**19 59 30.7**	**-0.3**
PTL	**Penteli**	**3.52**	**35**	*e*Pn	**Pn**	**19 59 30.7**	**-0.3**
NPS	**Neapolis**	**3.53**	**87**	P	**Pn**	**19 59 32.4**	**+1.4**
NPS	**Neapolis**	**3.53**	**87**	*e*PN	**Pn**	**19 59 31.1**	**+0.1**
NPS	**Neapolis**	**3.53**	**87**	*e*Pn	**Pn**	**19 59 31.1**	**+0.1**
NPS	**Neapolis**	**3.53**	**87**	P	**Pn**	**19 59 32.4**	**+1.4**
THR3	**Thira Island,**	**3.55**	**69**	P	**Pn**	**19 59 30.6**	**-0.7**
THR3	**Thira Island,**	**3.55**	**69**	P	**Pn**	**19 59 30.6**	**-0.7**
LKR	**Lokris**	**3.72**	**21**	P	**Pn**	**19 59 32.9**	**-0.7**
LKR	**Lokris**	**3.72**	**21**	*e*PN	**Pn**	**19 59 33.9**	**+0.3**
LKR	**Lokris**	**3.72**	**21**	P	**Pn**	**19 59 33.0**	**-0.6**
LKR	**Lokris**	**3.72**	**21**	P	**Pn**	**19 59 33.0**	**-0.6**
LKR	**Lokris**	**3.72**	**21**	*e*Pn	**Pn**	**19 59 33.9**	**+0.3**
EVR	**Evrytania**	**3.75**	**6**	P	**Pn**	**19 59 36.7**	**+2.6**
EVR	**Evrytania**	**3.75**	**6**	*e*PN	**Pn**	**19 59 34.3**	**+0.2**
EVR	**Evrytania**	**3.75**	**6**	*e*Pn	**Pn**	**19 59 34.3**	**+0.2**
EVR	**Evrytania**	**3.75**	**6**	P	**Pn**	**19 59 36.7**	**+2.6**
ATAL	**Atalanti**	**3.76**	**21**	P	**Pn**	**19 59 33.5**	**-0.8**
ATAL	**Atalanti**	**3.76**	**21**	P	**Pn**	**19 59 33.5**	**-0.8**
APE	**Apeiranthos**	**3.90**	**60**	P	**Pn**	**19 59 37.0**	**+0.8**
APE	**Apeiranthos**	**3.90**	**60**	*e*PN	**Pn**	**19 59 36.4**	**+0.2**
APE	**Apeiranthos**	**3.90**	**60**	*e*Pn	**Pn**	**19 59 36.4**	**+0.2**
APE	**Apeiranthos**	**3.90**	**60**	P	**Pn**	**19 59 37.0**	**+0.8**
NEO	**Neokhori**	**4.39**	**20**	P	**Pn**	**19 59 41.9**	**-1.0**
NEO	**Neokhori**	**4.39**	**20**	*e*PN	**Pn**	**19 59 43.9**	**+1.0**
NEO	**Neokhori**	**4.39**	**20**	P	**Pn**	**19 59 41.9**	**-1.0**
NEO	**Neokhori**	**4.39**	**20**	*e*Pn	**Pn**	**19 59 43.9**	**+1.0**
IGT	**Igoumenitsa**	**4.41**	**350**	P	**Pn**	**19 59 44.1**	**+0.9**
IGT	**Igoumenitsa**	**4.41**	**350**	P	**Pn**	**19 59 44.1**	**+0.9**
THL	**Klokotos Trika**	**4.41**	**7**	*e*PN	**Pn**	**19 59 43.7**	**+0.5**
THL	**Klokotos Trika**	**4.41**	**7**	P	**Pn**	**19 59 43.4**	**+0.2**
THL				S	**Sn**	**20 00 33.2**	**-0.4**
THL	**Klokotos Trika**	**4.41**	**7**	P	**Pn**	**19 59 43.4**	**+0.2**
THL	**Klokotos Trika**	**4.41**	**7**	*e*Pn	**Pn**	**19 59 43.7**	**+0.5**
THL				S	**Sn**	**20 00 33.2**	**-0.4**
AOS	**Alonnisos**	**4.48**	**27**	P	**Pn**	**19 59 42.7**	**-1.4**
AOS	**Alonnisos**	**4.48**	**27**	P	**Pn**	**19 59 42.8**	**-1.3**
AOS	**Alonnisos**	**4.48**	**27**	P	**Pn**	**19 59 42.8**	**-1.3**
JAN	**Janina**	**4.48**	**356**	*e*PN	**Pn**	**19 59 44.5**	**+0.4**
JAN	**Janina**	**4.48**	**356**	*e*Pn	**Pn**	**19 59 44.5**	**+0.4**
KEK	**Kerkira**	**4.68**	**346**	P	**Pn**	**19 59 48.4**	**+1.6**
KEK	**Kerkira**	**4.68**	**346**	*e*PN	**Pn**	**19 59 47.8**	**+1.0**
KEK	**Kerkira**	**4.68**	**346**	*e*Pn	**Pn**	**19 59 47.8**	**+1.0**
KEK	**Kerkira**	**4.68**	**346**	P	**Pn**	**19 59 48.4**	**+1.6**
KARP	**Karpathos**	**4.80**	**84**	*e*PN	**Pn**	**19 59 49.3**	**+0.8**
KARP	**Karpathos**	**4.80**	**84**	*e*Pn	**Pn**	**19 59 49.3**	**+0.8**
SLUM		**4.92**	**137**	P	**Pn**	**19 59 49.6**	**-0.7**
	baz=148						
SLUM				AMP		20 00 00.0	
	comp=E,40μm,0.2s,logA/T=5.2,baz=148						
SLUM				S	**Sn**	**20 00 37.4**	**-9.0**
	baz=148						
SLUM		**4.92**	**137**	P	**Pn**	**19 59 49.6**	**-0.7**
LIT	**Litokhoron**	**5.00**	**10**	P	**Pn**	**19 59 51.4**	**+0.2**
LIT	**Litokhoron**	**5.00**	**10**	*e*PN	**Pn**	**19 59 52.0**	**+0.8**
LIT	**Litokhoron**	**5.00**	**10**	P	**Pn**	**19 59 51.3**	**+0.1**
LIT	**Litokhoron**	**5.00**	**10**	P	**Pn**	**19 59 51.4**	**+0.2**
LIT	**Litokhoron**	**5.00**	**10**	*e*Pn	**Pn**	**19 59 52.0**	**+0.8**
PAIG	**Paliouri**	**5.10**	**21**	P	**Pn**	**19 59 51.7**	**-0.9**
PAIG	**Paliouri**	**5.10**	**21**	P	**Pn**	**19 59 51.6**	**-1.0**
PAIG	**Paliouri**	**5.10**	**21**	P	**Pn**	**19 59 51.7**	**-0.9**
SMG	**Samos**	**5.12**	**59**	*e*PN	**Pn**	**19 59 53.6**	**+0.6**
SMG	**Samos**	**5.12**	**59**	*e*Pn	**Pn**	**19 59 53.6**	**+0.6**
KZN	**Kozani**	**5.13**	**4**	P	**Pn**	**19 59 53.4**	**+0.4**
KZN	**Kozani**	**5.13**	**4**	*e*PN	**Pn**	**19 59 54.1**	**+1.1**
KZN	**Kozani**	**5.13**	**4**	P	**Pn**	**19 59 53.4**	**+0.4**
KZN	**Kozani**	**5.13**	**4**	*e*Pn	**Pn**	**19 59 54.1**	**+1.1**
NEST	**Nestorio**	**5.23**	**358**	P	**Pn**	**19 59 55.6**	**+1.2**
NEST	**Nestorio**	**5.23**	**358**	P	**Pn**	**19 59 55.6**	**+1.2**
CEL	**Celeste**	**5.32**	**307**	P	**Pn**	**19 59 56.8**	**+1.1**
CEL	**Celeste**	**5.32**	**307**	P	**Pn**	**19 59 56.8**	**+1.1**
PLG	**Polygyros**	**5.45**	**17**	P	**Pn**	**19 59 56.7**	**-0.8**
PLG	**Polygyros**	**5.45**	**17**	*e*PN	**Pn**	**19 59 58.3**	**+0.8**
PLG	**Polygyros**	**5.45**	**17**	P	**Pn**	**19 59 56.5**	**-1.0**
PLG	**Polygyros**	**5.45**	**17**	P	**Pn**	**19 59 56.7**	**-0.8**
PLG	**Polygyros**	**5.45**	**17**	*e*Pn	**Pn**	**19 59 58.3**	**+0.8**
OUR	**Ouranopolis**	**5.56**	**22**	P	**Pn**	**19 59 57.9**	**-1.1**
OUR	**Ouranopolis**	**5.56**	**22**	P	**Pn**	**19 59 58.0**	**-1.0**
OUR	**Ouranopolis**	**5.56**	**22**	P	**Pn**	**19 59 58.0**	**-1.0**
HORT	**Hortiatis**	**5.59**	**14**	P	**Pn**	**19 59 58.5**	**-0.8**
HORT	**Hortiatis**	**5.59**	**14**	P	**Pn**	**19 59 58.4**	**-0.9**
HORT	**Hortiatis**	**5.59**	**14**	P	**Pn**	**19 59 58.5**	**-0.8**
FNA	**Florina**	**5.59**	**1**	P	**Pn**	**19 59 59.4**	**0.0**
FNA	**Florina**	**5.59**	**1**	P	**Pn**	**19 59 59.4**	**0.0**
LIA	**Limnos Island**	**5.62**	**32**	P	**Pn**	**19 59 59.5**	**-0.3**
LIA	**Limnos Island**	**5.62**	**32**	*e*PN	**Pn**	**20 00 00.9**	**+1.1**
LIA	**Limnos Island**	**5.62**	**32**	P	**Pn**	**19 59 59.5**	**-0.3**
LIA	**Limnos Island**	**5.62**	**32**	*e*Pn	**Pn**	**20 00 00.9**	**+1.1**
ARG	**Arkhangelos**	**5.65**	**78**	P	**Pn**	**19 59 59.6**	**-0.6**
ARG	**Arkhangelos**	**5.65**	**78**	*e*PN	**Pn**	**20 00 01.2**	**+1.0**
ARG	**Arkhangelos**	**5.65**	**78**	P	**Pn**	**19 59 59.6**	**-0.6**
ARG	**Arkhangelos**	**5.65**	**78**	*e*Pn	**Pn**	**20 00 01.2**	**+1.0**
GRG	**Griva**	**5.83**	**8**	P	**Pn**	**20 00 01.9**	**-0.7**
GRG	**Griva**	**5.83**	**8**	P	**Pn**	**20 00 02.3**	**-0.3**
GRG	**Griva**	**5.83**	**8**	P	**Pn**	**20 00 02.3**	**-0.3**
SOH	**Sokhos**	**5.86**	**15**	P	**Pn**	**20 00 03.2**	**+0.2**
SOH	**Sokhos**	**5.86**	**15**	P	**Pn**	**20 00 02.5**	**-0.5**
SOH	**Sokhos**	**5.86**	**15**	P	**Pn**	**20 00 03.2**	**+0.2**
VAE	**Valguarnera**	**6.02**	**294**	Pn	**Pn**	**20 00 09.6**	**+4.4**
	comp=E,0.5nm,0.3s,baz=264,slow=19,SNR=3.3						
VAE				Sn	**Sn**	**20 01 10.6**	**-2.7**
	comp=E,1.1nm,0.3s,baz=283,slow=18,SNR=3.8						
KNT	**Kendrikon**	**6.10**	**11**	P	**Pn**	**20 00 05.8**	**-0.6**
KNT	**Kendrikon**	**6.10**	**11**	P	**Pn**	**20 00 05.8**	**-0.6**
SRS	**Serrai**	**6.19**	**16**	P	**Pn**	**20 00 06.5**	**-1.1**
SRS	**Serrai**	**6.19**	**16**	P	**Pn**	**20 00 06.4**	**-1.2**
SRS	**Serrai**	**6.19**	**16**	P	**Pn**	**20 00 06.5**	**-1.1**
PE1	**Pezze di Greco**	**6.39**	**333**	*e*Pn	**Pn**	**20 00 09.0**	**-1.4**
NVR	**Nevrokopi**	**6.48**	**17**	P	**Pn**	**20 00 11.7**	**+0.2**
NVR	**Nevrokopi**	**6.48**	**17**	P	**Pn**	**20 00 11.7**	**+0.2**
CUC	**Castrocucco**	**6.48**	**319**	P	**Pn**	**20 00 13.3**	**+1.7**
CUC	**Castrocucco**	**6.48**	**319**	P	**Pn**	**20 00 13.3**	**+1.7**
SG1	**Sgolgore (BA)**	**6.72**	**328**	*e*Pn	**Pn**	**20 00 14.1**	**-0.8**
ALN	**Alexandroupoli**	**6.82**	**32**	P	**Pn**	**20 00 18.2**	**+1.9**
ALN	**Alexandroupoli**	**6.82**	**32**	P	**Pn**	**20 00 18.2**	**+1.9**
SWA2		**6.89**	**148**	P	**Pn**	**20 00 18.2**	**+1.0**
	baz=156						
SWA2		**6.89**	**148**	P	**Pn**	**20 00 18.2**	**+1.0**
CDT	**Castel del Mon**	**7.10**	**328**	*e*Pn	**Pn**	**20 00 19.2**	**-0.9**
BARS	**Barje**	**7.63**	**3**	*e*Pn	**Pn**	**20 00 26.4**	**-1.0**
STON	**Ston**	**8.17**	**341**	*i* Pn	**Pn**	**20 00 31.5**	**-3.3**
STON				Sn	**Sn**	**20 01 55.9**	**-10**
BBLS	**Lazići**	**8.79**	**351**	*e*Pn	**Pn**	**20 00 42.1**	**-1.2**
AWBH		**9.41**	**135**	P	**Pn**	**20 00 51.3**	**-0.6**
	baz=140						
AWBH		**9.41**	**135**	P	**Pn**	**20 00 51.3**	**-0.6**
CSS	**Prodhromos**	**9.86**	**88**	*e*Pn	**Pn**	**20 00 51.7**	**-6.3**
CSS				P		20 00 57.1	
CSS				*e*Sn	Sn	20 02 25.2	-23
HFRF	**Wahat Farafira**	**10.01**	**141**	P	**Pn**	**20 01 00.6**	**+0.6**
	baz=147						
HFRF				S	**Sn**	**20 02 39.6**	**-12**
	baz=147						
HFRF	**Wahat Farafira**	**10.01**	**141**	P	**Pn**	**20 01 00.6**	**+0.6**
GLL	**Jalalah**	**10.42**	**120**	P	**Pn**	**20 01 02.3**	**-3.4**
	baz=124						
TIRR	**Tirgusor**	**10.75**	**28**	Pn	**Pn**	**20 01 09.4**	**-0.7**
	comp=E,2.2nm,0.8s						
TIRR	**Tirgusor**	**10.75**	**28**	Pn	**Pn**	**20 01 09.4**	**-0.7**
	comp=E,2.2nm,0.8s						
BRTR	**Keskin Array B**	**10.80**	**62**	Pn	**Pn**	**20 01 08.9**	**-1.9**
	comp=E,0.4nm,0.3s,baz=259,slow=14,SNR=12						
BRTR	**Keskin Array B**	**10.80**	**62**	Pn	**Pn**	**20 01 08.9**	**-1.9**
AMAG	**Maghara**	**10.98**	**111**	P	**Pn**	**20 01 08.4**	**-4.9**
	baz=114						
MMAI	**Mount Meron Ar**	**11.89**	**96**	Pn	**Pn**	**20 01 22.3**	**-3.4**
	comp=E,0.7nm,0.3s,baz=298,slow=11,SNR=9.6						
MMAI				Sn	**Sn**	**20 03 26.8**	**-11**
	comp=E,3.5nm,0.3s,baz=280,slow=19,SNR=8.0						
HNKL	**Nakhl**	**11.90**	**113**	P	**Pn**	**20 01 22.3**	**-3.7**
	baz=116						
EIL	**Elat**	**12.77**	**112**	Pn	**Pn**	**20 01 35.2**	**-2.6**
	comp=E,0.5nm,0.3s,baz=315,slow=11,SNR=8.3						
EIL				Sn	**Sn**	**20 03 47.0**	**-12**
	comp=E,1.1nm,0.3s,baz=342,slow=12,SNR=9.0						
EIL	**Elat**	**12.77**	**112**	Pn	**Pn**	**20 01 35.2**	**-2.6**
EIL				Sn	**Sn**	**20 03 47.0**	**-12**
AKASG	**Malin Array Be**	**16.54**	**18**	Pn	**Pn**	**20 02 28.4**	**+0.5**
	comp=E,2.5nm,0.3s,baz=55,slow=5.3,SNR=6.0						
AKASG	**Malin Array Be**	**16.54**	**18**	Pn	**Pn**	**20 02 28.5**	**+0.5**
KIV	**Kislovodsk**	**18.63**	**56**	P	**Pn**	**20 02 51.5**	**-2.3**
KIV	**Kislovodsk**	**18.63**	**56**	P	**Pn**	**20 02 51.5**	**-2.4**
SUW	**Suwalki**	**18.87**	**3**	*e*P	**Pn**	**20 02 55.0**	**-1.7**
	comp=E,15nm,0.5s						
SUW	**Suwalki**	**18.87**	**3**	*e*P	**Pn**	**20 02 55.0**	**-1.7**
	comp=E,15nm,0.5s						
GNI	**Garni**	**19.19**	**68**	P	**Pn**	**20 02 59.8**	**-0.8**

	baz=13							
427A	Hayter Ranch, baz=13	12.87	22	⇑P	Pn	20 28 12.2	-0.6	
220A	Playas Peak, P baz=13,SNR=15	12.89	2	P	Pn	20 28 13.5	+0.4	
219A	White Tail Can baz=13,SNR=22	12.98	359	P	Pn	20 28 14.8	+0.4	
218A	Dragoon baz=13,SNR=8.9	12.99	356	P	Pn	20 28 14.2	-0.3	
428A	Kincaid Ranch, baz=13	13.03	25	⇑P	Pn	20 28 15.5	+0.6	
221A	Mesquite Ranch baz=13,SNR=7.3	13.04	5	P	Pn	20 28 15.8	+0.7	
MNTX	Cornudas Mount 5.0nm,1.1s	13.09	14	ePn	Pn	20 28 16.0	+0.2	
MNTX				eSn	Sn	20 30 26.2	-15	
326A	Caldwell Ranch baz=13,SNR=10	13.10	19	P	Pn	20 28 15.8	-0.2	
216A	Three Points, baz=13,SNR=9.9	13.18	351	⇓P	Pn	20 28 17.2	+0.2	
TUC	Tucson 23nm,1.4s	13.39	353	⇓ePn	Pn	20 28 19.0	-0.9	
214A	Organ Pipe Nat baz=13,SNR=6.8	13.39	346	⇑P	Pn	20 28 19.3	-0.6	
224A	Cornudas Mount baz=13,SNR=7.4	13.42	13	⇑P	Pn	20 28 21.6	+1.2	
120A	U Bar Ranch, L baz=13,SNR=13	13.53	1	P	Pn	20 28 22.0	+0.2	
121A	Cookes Peak, D baz=13,SNR=6.0	13.56	4	⇑P	Pn	20 28 23.4	+1.2	
328A	Wristen Ranch, baz=13,SNR=5.3	13.56	23	⇑P	Pn	20 28 22.9	+0.7	
225A	Deer Hill, Car baz=13	13.62	15	⇓P	Pn	20 28 24.8	+1.8	
117A	Oracle baz=13,SNR=9.7	13.65	354	⇓P	Pn	20 28 23.5	+0.1	
118A	Homack Ranch, baz=13	13.65	356	⇓P	Pn	20 28 24.4	+0.9	
119A	Ashpeak Ranch, baz=14	13.75	359	⇑P	Pn	20 28 25.1	+0.3	
226A	Malaga, Loving baz=14	13.76	18	⇓P	Pn	20 28 26.0	+1.0	
116A	Eloy baz=14,SNR=6.4	13.77	350	⇓P	Pn	20 28 25.0	0.0	
GDL2	Guadalupe Moun 6.2nm,1.1s	13.82	17	ePn	Pn	20 28 25.7	-0.1	
115A	Sonoran Desert baz=14,SNR=6.0	13.99	349	⇑P	Pn	20 28 27.7	-0.4	
CLNB	Carlsbad	14.02	18	ePn	Pn	20 28 28.0	-0.4	
124A	Stringfield Ra baz=14	14.04	12	⇓P	Pn	20 28 30.0	+1.2	
Z20A	Nine Sixteen R baz=14,SNR=11	14.10	1	P	Pn	20 28 29.8	+0.2	
JCT	Junction City 8.9nm,0.7s	14.17	34	ePn	Pn	20 28 30.4	-0.2	
114A	Black Gap (USA baz=14,SNR=14	14.17	346	P	Pn	20 28 30.8	+0.1	
125A	Gardner Draw, baz=14,SNR=6.6	14.18	15	⇓P	Pn	20 28 32.2	+1.5	
Z21A	St. Cloud Mine baz=14	14.34	4	⇓P	Pn	20 28 33.6	+0.8	
Z17A	San Carlos Hig baz=14	14.34	355	⇑P	Pn	20 28 33.3	+0.4	
Z22A	Elephant Butte baz=14,SNR=9.0	14.35	7	⇑P	Pn	20 28 33.4	+0.4	
113A	Mohawk Valley, baz=14	14.41	344	⇓P	Pn	20 28 33.8	0.0	
CPRX	Cap Rock	14.74	17	ePn	Pn	20 28 38.7	+0.4	
Z25A	Roswell baz=14	14.76	14	⇑P	Pn	20 28 38.9	+0.3	
Y17A	Roosevelt baz=14,SNR=12	14.77	354	P	Pn	20 28 38.3	-0.4	
Z14A	Wintersburg baz=14	14.78	347	⇑P	Pn	20 28 38.5	-0.3	
Y18A	Canyon Day Jun baz=14	14.79	357	⇑P	Pn	20 28 40.1	+1.1	
Z13A	Yuma Proving G baz=14,SNR=9.4	14.79	344	P	Pn	20 28 39.0	0.0	
Y20A	Horse Springs, baz=15	14.90	2	⇓P	Pn	20 28 40.0	-0.5	
Z26A	Caprock baz=15	14.94	16	⇓P	Pn	20 28 40.8	-0.2	
Y19A	Nutrioso baz=15,SNR=14	14.94	359	P	Pn	20 28 40.6	-0.4	
GLA	Glamis baz=15,SNR=13	14.98	341	⇑P	Pn	20 28 41.2	-0.4	
GLA	Glamis 38nm,1.1s	14.98	341	ePn	Pn	20 28 40.4	-1.2	
Y22A	Socorro baz=15	15.02	6	⇓P	Pn	20 28 42.5	+0.4	
Y16A	Circle Bar Ran baz=15,SNR=12	15.03	352	⇑P	Pn	20 28 42.2	-0.1	
Y21A	Point of Rocks baz=15	15.03	4	⇓P	Pn	20 28 43.1	+0.8	
Y23A	Lovelace Mesa, baz=15	15.14	9	⇑P	Pn	20 28 44.5	+0.8	
Z27A	Tatum baz=15,SNR=7.3	15.20	19	⇑P	Pn	20 28 44.5	0.0	
SWSC	Sam W. Stewart baz=15,SNR=9.0	15.21	338	⇓P	Pn	20 28 43.7	-0.9	
Y15A	Casa Rosa Ranc baz=15,SNR=6.9	15.23	349	⇑P	Pn	20 28 44.0	-0.9	
LENM	Lemitar	15.25	6	ePn	Pn	20 28 44.5	-0.6	
BNM	Barren Site 9.5nm,1.1s	15.27	7	ePn	Pn	20 28 45.0	-0.5	
BAR	Barrett 12nm,1.0s	15.31	335	ePn	Pn	20 28 43.8	-2.2	
Y14A	Wickenburg baz=15,SNR=12	15.34	347	⇑P	Pn	20 28 45.7	-0.7	
MONP	Monument Peak baz=15,SNR=8.0	15.39	336	P	Pn	20 28 46.8	-0.3	
X17A	Forest Lakes baz=15,SNR=9.1	15.40	354	⇑P	Pn	20 28 47.2	+0.1	
X19A	St. Johns baz=15	15.41	359	⇓P	Pn	20 28 47.9	+0.7	
Y13A	Salome baz=15,SNR=11	15.41	345	⇓P	Pn	20 28 46.5	-0.8	
LPM	Los Pinos Moun	15.43	7	ePn	Pn	20 28 46.2	-1.4	
X21A	Alamocita Cree baz=15,SNR=15	15.46	4	P	Pn	20 28 48.0	+0.1	
LAZ	Ladron 5.1nm,1.2s	15.47	6	ePn	Pn	20 28 47.7	-0.3	
X20A	Quemado baz=15,SNR=16	15.53	1	P	Pn	20 28 49.1	+0.3	
X18A	Snowflake baz=15,SNR=11	15.53	357	⇓P	Pn	20 28 48.8	-0.1	
Y12C	Blythe baz=15	15.54	342	⇑P	Pn	20 28 48.4	-0.6	
X16A	Lo Mia Camp, P baz=15,SNR=6.7	15.55	352	⇑P	Pn	20 28 49.0	-0.1	
X15A	Humboldt baz=15	15.73	350	⇓P	Pn	20 28 51.5	0.0	
BC3	Big Chuckawall baz=15,SNR=42	15.74	340	⇑P	Pn	20 28 50.8	-0.7	
Y27A	Causey baz=16	15.74	18	⇑P	Pn	20 28 52.4	+0.8	
X14A	Yava baz=16	15.84	348	⇓P	Pn	20 28 52.6	-0.3	
MSTX	Muleshoe baz=16	15.94	19	⇑P	Pn	20 28 55.3	+1.1	
PDMCI	Parker Dam,Lak baz=16,SNR=5.3	15.96	344	⇓P	Pn	20 28 54.2	-0.2	
PFO	Pinyon Flat Ob baz=16	16.05	337	⇑P	Pn	20 28 55.1	-0.5	
PFO	Pinyon Flat Ob 7.5nm,1.3s	16.05	337	ePn	Pn	20 28 53.0	-2.5	
ANMO	Albuquerque 9.4nm,1.2s	16.08	7	ePn	Pn	20 28 55.1	-0.9	
W19A	Sanders baz=16,SNR=11	16.09	359	P	Pn	20 28 56.1	0.0	
W20A	Ramah baz=16,SNR=12	16.11	1	⇓P	Pn	20 28 56.4	0.0	
IRM	Iron Mountain baz=16,SNR=21	16.11	341	P	Pn	20 28 55.6	-0.8	
W18A	Petrified Fore baz=16,SNR=19	16.11	358	⇓P	Pn	20 28 55.9	-0.4	
W21A	San Fidel baz=16	16.14	4	⇓P	Pn	20 28 56.6	-0.1	
X13A	Yucca baz=16,SNR=13	16.16	345	P	Pn	20 28 56.7	-0.3	
HKT	Hockley 30nm,1.5s	16.19	45	ePn	Pn	20 28 58.8	+1.3	
BELC	Belle Mtn. Jos baz=16,SNR=45	16.24	339	P	Pn	20 28 58.2	+0.2	
MURC	Murrieta baz=16,SNR=8.1	16.33	335	⇓P	Pn	20 29 00.2	+1.0	
W23A	Werner Place, baz=16,SNR=5.6	16.33	8	⇑P	Pn	20 28 58.9	-0.2	
W15A	Williams baz=16,SNR=15	16.42	350	⇑P	Pn	20 29 00.8	+0.5	
W24A	Lazy 6 Ranch, baz=16,SNR=6.7	16.49	10	⇓P	Pn	20 29 02.5	+1.2	
W14A	Seligman baz=16,SNR=14	16.59	348	P	Pn	20 29 02.5	0.0	
WUAZ	Wupatki baz=16,SNR=5.4	16.63	353	⇑P	Pn	20 29 03.8	+0.9	
WUAZ	Wupatki 40nm,1.5s	16.63	353	ePn	Pn	20 29 02.3	-0.7	
W25A	X Bar L Ranch, baz=16	16.68	13	⇓P	Pn	20 29 05.4	+1.8	
V18A	Ganado baz=16	16.71	357	⇑P	Pn	20 29 03.6	-0.4	
V20A	Brimhall baz=16,SNR=11	16.78	1	P	Pn	20 29 05.1	+0.2	
V21A	Milan baz=16	16.82	4	⇑P	Pn	20 29 06.2	+0.8	
GMRC	Granite Mounta baz=16,SNR=23	16.84	341	P	Pn	20 29 05.5	-0.1	
W27A	Bowe Ranch, En baz=17	16.87	17	⇓P	Pn	20 29 07.0	+0.9	
LDFC	Landfair	16.95	342	ePn	Pn	20 29 07.6	+0.6	
V22A	San Miguel Ran baz=17	16.99	6	⇓P	Pn	20 29 09.0	+1.5	
V14A	Boquillas Ranc baz=17,SNR=5.5	17.01	348	⇓P	Pn	20 29 08.2	+0.5	
V15A	Kaibab Nationa baz=17,SNR=5.2	17.03	351	⇑P	Pn	20 29 08.7	+0.7	
BFSC	Mount Baldy Ra baz=17	17.07	335	⇓P	Pn	20 29 10.5	+1.9	
HEC	Hector,Ludlow baz=17,SNR=14	17.10	339	⇓P	Pn	20 29 08.7	-0.2	
V25A	Rancho No Teng baz=17	17.25	12	⇓P	Pn	20 29 10.7	-0.1	
U19A	Dine' College, baz=17,SNR=6.7	17.27	359	⇓P	Pn	20 29 13.3	+2.3	
V13A	Grand Canyon W baz=17,SNR=10	17.40	346	P	Pn	20 29 13.3	+0.6	
U18A	Rough Rock, Ch baz=17,SNR=5.4	17.41	358	⇓P	Pn	20 29 12.3	-0.5	
U21A	Nageezi baz=17,SNR=7.0	17.44	4	P	Pn	20 29 13.8	+0.6	
U22A	Llaves baz=17,SNR=5.1	17.45	6	⇓P	Pn	20 29 13.8	+0.5	
U23A	El Rito baz=17	17.48	7	⇓P	Pn	20 29 14.0	+0.4	
V12A	Nelson baz=17	17.49	344	⇓P	Pn	20 29 14.1	+0.3	
TUQ	Turquoise Moun baz=17,SNR=11	17.53	341	⇓P	Pn	20 29 14.8	+0.5	
U15A	North Rim baz=17	17.64	351	⇑P	Pn	20 29 16.3	+0.6	
GSC	Goldstone baz=17,SNR=11	17.69	338	⇑P	Pn	20 29 16.4	+0.1	
GSC	Goldstone 26nm,1.2s	17.69	338	ePn	Pn	20 29 16.5	+0.1	
V11A	Goodsprings baz=18,SNR=11	17.75	343	⇓P	Pn	20 29 17.7	+0.6	
EDW2	Edwards Air Fo baz=18	17.76	335	⇑P	Pn	20 29 16.9	-0.2	
U14A	Mt Trumbull baz=18,SNR=10	17.78	349	P	Pn	20 29 17.9	+0.4	
T19A	Beclabito baz=18,SNR=12	17.80	360	⇑P	Pn	20 29 17.1	-0.5	
U25A	Circle Dot Ran baz=18	17.83	12	⇑P	Pn	20 29 17.1	-0.9	
U13A	Pakoon Wash baz=18,SNR=20	17.93	347	P	Pn	20 29 20.4	+1.1	
T22A	Edith baz=18,SNR=5.6	18.08	5	⇑P	Pn	20 29 21.3	+0.3	
U12A	Valley of Fire baz=18,SNR=5.2	18.08	345	⇑P	Pn	20 29 21.3	+0.2	
NATX	Nacogdoches	18.13	43	ePn	Pn	20 29 21.7	-0.1	
WMOK	Wichita Mounta 24nm,1.5s	18.14	28	ePn	Pn	20 29 18.7	-3.0	
LRMC	Laurel Mountai baz=18,SNR=10	18.17	337	P	Pn	20 29 22.8	+0.6	
MVCO	Mesa Verde baz=18,SNR=9.9	18.19	1	⇓P	Pn	20 29 22.3	-0.1	
MVCO	Mesa Verde 32nm,1.3s	18.19	1	ePn	Pn	20 29 21.5	-0.9	
U11A	Corn Creek baz=18	18.29	343	⇓P	Pn	20 29 23.4	-0.2	
SHPR	Sheep Range 31nm,1.2s	18.31	344	ePn	Pn	20 29 23.6	-0.3	
T14A	Hurricane baz=18,SNR=6.9	18.39	350	P	Pn	20 29 25.9	+1.1	
T13A	Saint George baz=18	18.50	347	⇑P	Pn	20 29 26.9	+0.6	
T25A	Trinidad baz=18	18.55	12	⇓P	Pn	20 29 26.2	-0.6	
U10A	Ash Meadows, A baz=18,SNR=6.2	18.56	341	⇓P	Pn	20 29 27.1	+0.2	
PKM	Peak Mountain baz=18,SNR=9.9	18.56	331	⇑P	Pn	20 29 27.7	+0.6	
MPMC	Manual Prospec baz=18,SNR=19	18.62	338	P	Pn	20 29 28.3	+0.6	
ISA	Isabella baz=18,SNR=14	18.64	335	P	Pn	20 29 28.2	+0.3	
ISA	Isabella 16nm,1.0s	18.64	335	ePn	Pn	20 29 28.0	+0.1	
S21A	Coal Bank Pass baz=18,SNR=21	18.66	3	P	Pn	20 29 27.9	-0.3	
S17A	Black Ridge (B baz=18,SNR=6.7	18.68	355	P	Pn	20 29 28.2	-0.2	
S18A	Hurst Farm, Bl baz=18	18.68	357	⇓P	Pn	20 29 28.3	-0.1	
S19A	Harvey Farm, M baz=18,SNR=13	18.72	360	P	Pn	20 29 28.5	-0.3	
FURC	Furnace Creek, baz=18	18.77	340	⇓P	Pn	20 29 29.4	-0.1	
S20A	Disappointment baz=18	18.81	2	⇑P	Pn	20 29 29.5	-0.4	
S22A	4UR Ranch, Cre baz=18	18.81	5	⇓P	Pn	20 29 29.8	-0.2	
CCUT	Cedar City	18.91	349	eP	Pn	20 29 32.3	+1.0	
SDCO	Great Sand Dun baz=19,SNR=6.5	18.96	8	⇓P	Pn	20 29 31.2	-0.6	
SDCO	Great Sand Dun 20nm,1.6s	18.96	8	ePn	Pn	20 29 31.2	-0.6	
SMMC	Simmler baz=19,SNR=6.5	18.99	331	⇓P	Pn	20 29 32.5	+0.4	
T11A	Corn Creek, Al baz=19	19.02	345	⇑P	Pn	20 29 32.5	0.0	
S13A	Holt Ranch, En baz=19,SNR=9.3	19.04	348	⇑P	Pn	20 29 33.1	+0.4	
S25A	Robets Cordova baz=19	19.05	11	⇓P	Pn	20 29 32.2	-0.6	
PV01	Paradox Valley 1µm,1.3s	19.11	1	eP	Pn	20 29 34.5	+1.0	
ARUT	Antelope Range 7.7nm,0.8s	19.16	349	eP	Pn	20 29 32.5	-1.7	
S12A	Delamar Landin baz=19	19.28	346	⇑P	Pn	20 29 36.0	+0.4	
R22A	Saguache, Gunn baz=19	19.30	5	⇑P	Pn	20 29 35.2	-0.6	
PV04	Paradox Valley	19.36	0	eP	Pn	20 29 33.1	-3.5	
R18A	Canyonlands Na baz=19,SNR=14	19.37	358	⇓P	Pn	20 29 36.2	-0.5	
R16A	Teasdale baz=19	19.38	354	⇑P	Pn	20 29 36.2	-0.6	
R21A	Cimarron baz=19	19.38	3	⇑P	Pn	20 29 37.1	+0.3	
GRAC	Grapevine Rang baz=19,SNR=7.1	19.42	339	⇑P	Pn	20 29 37.4	0.0	
R17A	Hanksville Air baz=19	19.45	356	⇑P	Pn	20 29 36.2	-1.4	
R25A	Fountain Ranch baz=19	19.55	11	⇑P	Pn	20 29 37.9	-1.0	
R13A	O'Grain Ranch, baz=19,SNR=14	19.64	348	⇑P	Pn	20 29 41.0	+1.0	
MSU	Marysvale 6.2nm,1.3s	19.68	353	eP	Pn	20 29 40.9	+0.5	
Q21A	Lamborn Mesa, baz=20	19.84	3	⇓P	Pn	20 29 42.3	0.0	
R12A	Pony Springs, baz=20	19.91	347	⇓P	Pn	20 29 42.3	-0.9	
Q19A	Hogan Spring (baz=20,SNR=10	19.93	359	P	Pn	20 29 41.5	-1.9	
S10A	Tonopah Range, baz=20,SNR=17	20.03	342	P	P	20 29 43.9	+1.0	
SRU	San Rafael baz=20	20.12	356	⇓P	P	20 29 44.0	+0.1	
SRU	San Rafael 9.2nm,1.0s	20.12	356	eP	P	20 29 43.1	-0.8	
SMCO	Snowmass 16nm,1.2s	20.22	4	eP	P	20 29 45.8	+0.9	
R10A	Warm Springs baz=20,SNR=10.0	20.29	343	⇓P	P	20 29 46.3	+0.6	
Q14A	Sevier Lake (B baz=20,SNR=15	20.30	350	⇓P	P	20 29 46.7	+0.9	
P19A	Cripple Cowboy baz=20	20.60	360	⇓P	P	20 29 48.8	-0.3	
P18A	Preston Nutter baz=20,SNR=10	20.62	357	⇓P	P	20 29 49.5	+0.2	
Q11A	Duckwater baz=20	20.65	345	⇑P	P	20 29 50.0	+0.5	
MIAR	Mount Ida 8.5nm,1.0s	20.70	38	eP	P	20 29 48.0	-2.1	
Q10A	Clear Creek Ra baz=20	20.82	343	⇑P	P	20 29 52.2	+0.8	
SAO	San Andreas Ge 34nm,1.4s	20.85	331	eP	P	20 29 52.0	+0.2	
P14A	Drum Mountains baz=21,SNR=26	20.86	351	P	P	20 29 52.3	+0.5	
ISCO	Idaho Springs baz=21	20.97	7	⇑P	P	20 29 53.8	+0.8	
NVAR	Mina Array Bea 12nm,0.8s,mb4.3,baz=166,slow=11,SNR=13	21.03	339	P	P	20 29 54.0	+0.3	
MPU	Maple Canyon 21nm,1.3s,mb4.3	21.11	354	eP	P	20 29 53.5	-1.0	
O20A	White River Ci baz=21	21.11	2	⇓P	P	20 29 54.5	0.0	
O17A	Robinson Place baz=21,SNR=10	21.22	356	P	P	20 29 55.8	+0.1	
O22A	Kremmling baz=21,SNR=5.4	21.23	5	P	P	20 29 56.1	+0.2	
O18A	Roosevelt baz=21	21.25	358	⇓P	P	20 29 55.9	-0.2	
O19A	Miners Draw (B baz=21	21.27	360	⇓P	P	20 29 55.6	-0.6	
O23A	Lake Granby, G baz=21	21.34	6	⇓P	P	20 29 57.6	+0.5	
TGUH	Tegucigalpa,Un	21.36	100	eP	P	20 30 04.4	+6.9	
DUG	Dugway baz=21,SNR=13	21.42	352	⇑P	P	20 29 58.0	+0.2	
DUG	Dugway 16nm,1.0s,mb4.3	21.42	352	eP	P	20 29 57.8	-0.1	
CMB	Columbia Colle 16nm,1.2s,mb4.2	21.45	335	eP	P	20 29 57.2	-1.1	
O15A	The Old Anders baz=21	21.46	353	⇑P	P	20 29 58.3	0.0	
DAU	Daniels Canyon 17nm,1.0s,mb4.3	21.47	355	eP	P	20 29 58.4	0.0	
WAKR	Walker 34nm,1.2s,mb4.6	21.50	337	eP	P	20 29 59.6	+0.9	
P10A	Eureka baz=21	21.58	344	⇓P	P	20 30 00.1	+0.5	
N21A	Black Mountain baz=22,SNR=11	21.76	3	P	P	20 30 01.8	+0.3	
N20A	Spence Gulch, baz=22,SNR=12	21.81	1	P	P	20 30 02.0	0.0	
N18A	Larsen Ranch, baz=22,SNR=9.4	21.95	359	⇑P	P	20 30 03.2	-0.4	
N16A	Rees Ranch, Co baz=22	21.95	355	⇑P	P	20 30 03.8	+0.2	
N23A	Red Feather La baz=22	22.02	6	⇓P	P	20 30 04.1	-0.1	
WCN	Washoe City baz=22	22.32	338	⇑P	P	20 30 08.4	+0.9	
WCN	Washoe City 37nm,1.3s,mb4.7	22.32	338	eP	P	20 30 08.4	+0.9	
M16A	Huntsville baz=22,SNR=9.2	22.40	355	⇑P	P	20 30 07.9	-0.4	
M18A	Lyman baz=22	22.41	358	⇓P	P	20 30 08.9	+0.5	
SPUT	South Promonto 26nm,1.0s,mb4.6	22.47	353	eP	P	20 30 08.5	-0.6	
M17A	Scullys Gap (B baz=22	22.48	357	⇓P	P	20 30 08.7	-0.6	
BMN	Battle Mountai 20nm,1.3s,mb4.4	22.54	343	eP	P	20 30 09.5	-0.3	
PAHR	Pah Rah Range 49nm,1.5s,mb4.7	22.54	339	eP	P	20 30 10.3	+0.4	
M23A	Laramie baz=22	22.61	6	⇑P	P	20 30 10.4	-0.1	
M21A	Separation Pea baz=22	22.61	3	⇓P	P	20 30 09.6	-1.0	
M15A	Larsen Ranch, baz=22,SNR=22	22.62	353	P	P	20 30 10.6	-0.2	
MCCM	Marconi Confer	22.63	330	eP	P	20 30 11.5	+0.6	
HWUT	Hardware Ranch 20nm,1.1s,mb4.5	22.68	355	eP	P	20 30 10.6	-0.8	
L18A	Fontenelle, Gr baz=23,SNR=9.0	22.91	358	⇑P	P	20 30 12.9	-0.8	
L21A	Rawlins baz=23	22.97	3	⇑P	P	20 30 12.9	-1.5	
L19A	Farson baz=23	23.07	359	⇑P	P	20 30 14.2	-1.2	
L16A	Fish Haven baz=23,SNR=6.8	23.07	355	P	P	20 30 15.1	-0.4	
L22A	Ellis Ranch, M baz=23	23.10	5	⇑P	P	20 30 16.9	+1.2	
L15A	Malad City baz=23	23.15	354	⇓P	P	20 30 16.2	-0.1	
L14A	Malta baz=23,SNR=13	23.29	352	⇑P	P	20 30 17.8	+0.1	
K20A	Yellowstone Ra baz=23,SNR=9.8	23.63	1	⇑P	P	20 30 19.9	-1.3	
K21A	Alcova baz=23	23.64	3	⇓P	P	20 30 19.3	-2.0	
K22A	Casper baz=23	23.71	4	⇑P	P	20 30 21.5	-0.4	
BW06	Boulder Array baz=24,SNR=6.0	23.74	359	⇓P	P	20 30 21.0	-1.2	
PDAR	Pinedale Array 2.3nm,0.8s,mb3.7,baz=166,slow=8.7,SNR=14	23.74	359	P	P	20 30 20.9	-1.3	
K15A	Arbon baz=24,SNR=5.6	23.84	354	P	P	20 30 23.8	+0.6	
J18A	Kendall Valley baz=24,SNR=9.4	24.19	358	P	P	20 30 26.1	-0.2	
J19A	Crowheart baz=24,SNR=5.5	24.23	360	P	P	20 30 26.5	-0.2	
J20A	Shoshoni baz=24	24.33	2	⇓P	P	20 30 27.6	0.0	
J16A	Bone baz=24,SNR=9.9	24.34	355	⇑P	P	20 30 28.1	+0.4	
J21A	Lysite baz=24	24.34	3	⇓P	P	20 30 27.4	-0.4	
J17A	Brown Place, J baz=24	24.37	357	⇑P	P	20 30 28.2	+0.2	
REDW	Red Top Meadow 33nm,1.6s,mb4.5	24.38	357	eP	P	20 30 27.4	-0.6	
RRI2	Red Ridge 15nm,1.0s,mb4.4	24.39	356	eP	P	20 30 28.4	+0.2	
J22A	Midwest baz=24	24.47	4	⇓P	P	20 30 28.4	-0.4	
SNOW	Snow King Moun	24.47	357	eP	P	20 30 28.6	-0.3	
TPAW	Teton Pass 19nm,1.2s,mb4.5	24.51	357	eP	P	20 30 30.1	+0.8	
J15A	Blackfoot baz=24,SNR=6.2	24.54	354	P	P	20 30 29.7	+0.2	
J14A	Carey baz=24,SNR=5.1	24.59	352	⇑P	P	20 30 30.3	+0.3	
LOHW	Long Hollow 26nm,1.4s,mb4.6	24.61	357	eP	P	20 30 29.8	-0.4	
DCID1	Drake Creek	24.63	356	eP	P	20 30 30.0	-0.3	
MOOW	Moose Ponds 9.4nm,1.0s,mb4.3	24.76	357	eP	P	20 30 30.8	-0.7	
WVOR	Wild Horse Val 15nm,1.0s,mb4.5	24.79	343	eP	P	20 30 31.4	-0.4	
I21A	Big Trails, Te baz=24	24.82	3	⇓P	P	20 30 32.0	0.0	
MOD	Modoc 29nm,1.1s,mb4.7	24.82	340	eP	P	20 30 32.3	+0.2	
IMW	Indian Meadow 14nm,1.1s,mb4.4	24.92	357	eP	P	20 30 32.8	-0.2	
I17A	Pilgrim Ck. baz=25	24.92	357	⇓P	P	20 30 33.4	+0.4	
I20A	Worland baz=25,SNR=7.8	24.92	1	⇓P	P	20 30 33.3	+0.3	
I16A	Newdale baz=25,SNR=8.9	24.93	356	⇑P	P	20 30 33.3	+0.3	
HLID	Hailey baz=25,SNR=12	24.95	351	⇓P	P	20 30 34.0	+0.8	
HLID	Hailey 7.1nm,0.8s,mb4.2	24.95	351	eP	P	20 30 33.5	+0.2	
I19A	Meeteetse baz=25,SNR=7.3	25.00	360	P	P	20 30 34.0	+0.3	
MFID	Camas Ranch baz=25	25.05	348	⇓P	P	20 30 35.1	+0.9	
FLWY	Flagg Ranch 10nm,1.2s,mb4.2	25.09	357	eP	P	20 30 33.9	-0.6	
I14A	Mackay baz=25,SNR=9.3	25.18	352	P	P	20 30 36.1	+0.8	

I13A	Wildhorse Cree	25.25	351	P		P	20 30 36.9 +0.9
	baz=25,SNR=29						
I12A	Atlanta	25.30	350	P		P	20 30 37.1 +0.7
	baz=25,SNR=12						
H20A	Greybull	25.46	2	⇓P		P	20 30 38.9 +1.0
	baz=25						
YBH	Yreka Blue Hor	25.54	336	P		P	20 30 39.1 +0.5
	2.8nm,0.9s,mb3.8,baz=301,slow=2.5,SNR=3.8						
YBH	Yreka Blue Hor	25.54	336	eP		P	20 30 38.9 +0.2
J08A	Circle Bar Ran	25.61	344	⇓P		P	20 30 39.4 +0.1
	baz=25						
H19A	Powell	25.64	360	⇑P		P	20 30 39.5 +0.1
	baz=25						
H18A	Shoshone NF, C	25.65	359	⇑P		P	20 30 38.9 -0.7
	baz=25						
H16A	Russell Place,	25.74	356	⇓P		P	20 30 41.1 +0.7
	baz=26						
K05A	Summer Lake	25.75	339	⇑P		P	20 30 41.5 +0.9
	baz=26,SNR=5.9						
H15A	Lima	25.77	354	⇓P		P	20 30 41.5 +0.9
	baz=26						
H14A	Leadore	25.84	353	P		P	20 30 42.1 +0.8
	baz=26,SNR=6.4						
H13A	Challis	25.91	351	P		P	20 30 42.8 +0.9
	baz=26,SNR=6.9						
H12A	Diamond D Ranc	25.98	350	P		P	20 30 43.3 +0.7
	baz=26,SNR=9.3						
MCMT	McKenzie Canyo	25.99	354	eP		P	20 30 43.2 +0.5
	4.8nm,1.1s,mb3.9						
SWET	Sewanee	26.04	47	P		P	20 30 35.9 -7.4
RLMT	Red Lodge	26.09	360	⇓P		P	20 30 43.7 +0.1
	baz=26						
RLMT	Red Lodge	26.09	360	eP		P	20 30 43.5 -0.1
	14nm,1.3s,mb4.3						
G20A	Bridger	26.19	1	⇓P		P	20 30 43.8 -0.7
	baz=26,SNR=10						
G21A	Lodge Grass	26.23	3	⇓P		P	20 30 45.0 +0.2
	baz=26						
G18A	Lazy EL Ranch,	26.29	359	⇓P		P	20 30 45.4 0.0
	baz=26,SNR=8.1						
G16A	Moss Hill, Enn	26.30	355	⇑P		P	20 30 46.2 +0.8
	baz=26,SNR=15						
G13A	Cobalt	26.42	352	P		P	20 30 46.8 +0.2
	baz=26,SNR=8.8						
I07A	Izee	26.56	343	⇑P		P	20 30 47.3 -0.6
	baz=26						
G12A	Big Creek, Yel	26.62	350	⇑P		P	20 30 47.4 -1.0
	baz=26,SNR=6.6						
BOZ	Bozeman (W)	26.70	356	⇑P		P	20 30 48.0 -1.1
	baz=26,SNR=5.3						
F20A	Billings	26.77	1	P		P	20 30 51.9 +2.2
	baz=26,SNR=7.5						
F18A	Big Timber	26.88	359	⇓P		P	20 30 50.4 -0.3
	baz=27						
F17A	Fitzpatrick Pl	26.91	357	⇑P		P	20 30 51.5 +0.6
	baz=27						
LRM	Limekiln Ridge	26.94	355	eP		P	20 30 51.3 +0.1
	42nm,1.4s,mb4.8						
F15A	Butte	26.96	355	⇓P		P	20 30 51.5 +0.1
	baz=27						
F12A	Elk City	27.22	350	P		P	20 30 53.6 -0.2
	baz=27,SNR=19						
E19A	Rath Farm, Rou	27.43	0	⇑P		P	20 30 54.6 -1.0
	baz=27,SNR=5.7						
E17A	Martinsdale	27.47	357	⇓P		P	20 30 55.3 -0.7
	baz=27,SNR=9.9						
E18A	Harlowton	27.54	359	⇑P		P	20 30 56.5 -0.1
	baz=27						
E21A	Keefer Ranch,	27.55	3	⇑P		P	20 30 55.3 -1.4
	baz=27						
E16A	East Helena	27.59	356	P		P	20 30 57.3 +0.3
	baz=27,SNR=6.8						
E14A	Clinton	27.63	353	⇓P		P	20 30 57.5 +0.1
	baz=27						
E13A	Victor	27.74	352	⇓P		P	20 30 57.6 -0.9
	baz=28						
TKL	Tuckaleechee C	27.77	48	LR		LR	20 42 57.3
	comp=Z,260nm,19.1s,MS3.8,baz=275,slow=39						
HRY	Holter Researc	27.78	356	eP		P	20 30 58.8 +0.1
	25nm,1.3s,mb4.7						
F10A	Beach Ranch, E	27.79	348	⇑P		P	20 30 58.6 -0.3
	baz=28						
E12A	Beaver Dam Sad	27.91	350	⇓P		P	20 30 59.1 -0.9
	baz=28						
H04A	Detroit Lake	27.92	340	P		P	20 30 59.8 -0.2
	baz=28,SNR=5.4						
G06A	Carlson Farm,	27.94	342	⇑P		P	20 31 00.8 +0.6
	baz=28						
D20A	Manuel Ranch,	28.06	1	⇓P		P	20 31 00.4 -0.9
	baz=28						
MSO	Missoula	28.09	353	⇓P		P	20 31 01.7 +0.2
	baz=28						
CHMT	Chamberlain Mo	28.10	354	eP		P	20 31 01.6 0.0
	15nm,1.5s,mb4.4						
D19A	Cripps Ranch,	28.13	0	⇑P		P	20 31 01.4 -0.5
	baz=28						
D17A	Six Diamond Ra	28.15	358	P		P	20 31 01.9 -0.2
	baz=28,SNR=5.3						
D15A	Lincoln	28.16	355	⇓P		P	20 31 01.5 -0.6
	baz=28						
D14A	Greenough	28.29	353	⇑P		P	20 31 02.7 -0.6
	baz=28,SNR=10						
SLMT	Seeley Lake	28.45	354	eP		P	20 31 04.2 -0.5
	20nm,1.3s,mb4.6						
D12A	Red Ives Fores	28.50	351	⇑P		P	20 31 04.1 -1.1
	baz=28,SNR=6.6						
C17A	Wharram Farm,	28.64	357	⇓P		P	20 31 05.6 -0.8
	baz=28						
C21A	Desert Coulee	28.83	3	⇑P		P	20 31 07.9 -0.2
	baz=29						
C16A	Fuhringer Ranc	28.86	356	⇑P		P	20 31 07.9 -0.5
	baz=29						
C14A	Swan Lake	29.00	353	⇑P		P	20 31 09.5 -0.1
	baz=29						
F04A	Amboy	29.11	341	⇑P		P	20 31 10.7 +0.1
	baz=29						
B17A	L&G Farms, Che	29.30	358	⇓P		P	20 31 11.9 -0.4
	baz=29						
C11A	Tepee Creek (N	29.41	350	⇑P		P	20 31 12.8 -0.4
	baz=29						
B15A	Bradely Ranch,	29.42	355	⇓P		P	20 31 12.5 -0.9
	baz=29						
B14A	Marquette Ranc	29.53	354	⇑P		P	20 31 14.4 +0.1
	baz=29						
LON	Longmire	29.66	342	eP		P	20 31 15.7 +0.2
	4.4nm,1.0s,mb4.1						
B13A	Whitefish	29.68	353	⇓P		P	20 31 15.6 0.0
	baz=29						
A17A	Triple J Farms	29.94	358	⇓P		P	20 31 17.7 -0.3
	baz=30						
A15A	Johnson Ranch,	30.10	355	⇑P		P	20 31 19.0 -0.3
	baz=30						
A14A	Double T Ranch	30.15	354	⇑P		P	20 31 20.3 +0.5
	baz=30						
ULM	Lac du Bonnet	32.92	16	LR		LR	20 45 23.2
	comp=Z,185nm,19.1s,MS3.8,baz=325,slow=37						
OTAV	Otavalo	35.26	118	eP		P	20 32 14.6 +10
	12nm,1.3s,mb4.7						
SADO	Sadowa	35.76	37	LR		LR	20 47 06.5
	comp=Z,148nm,18.7s,MS3.8,baz=309,slow=37						
SDV	Santo Domingo	38.46	100	P		P	20 32 37.4 +5.2
	5.1nm,0.8s,mb4.3						
FCC	Fort Churchill	41.21	12	eP		P	20 32 51.5 -3.0
	0.8nm,1.2s,mb3.2						
YKA	Yellowknife Ar	43.67	356	P		P	20 33 13.2 -1.2
	2.5nm,0.8s,mb4.0,baz=172,slow=7.9,SNR=18						
YKA				PcP		PcP	20 35 03.9 +2.4
	0.4nm,0.6s,baz=163,slow=2.9,SNR=3.7						
YKA				LR		LR	20 50 34.2
	comp=Z,21nm,19.1s,MS3.1,baz=195,slow=35						
YKA	Yellowknife Ar	43.67	356	P		P	20 33 13.2 -1.2
YKA				PcP		PcP	20 35 03.9 +2.4
YKA				LR		LR	20 50 34.2
KDAK	Kodiak Island	50.22	331	P		P	20 34 07.8 +2.0
	7.2nm,0.8s,mb4.7,baz=68,slow=3.7,SNR=7.5						
EGAK	Eagle	50.58	343	eP		P	20 34 09.0 +0.7
	4.0nm,0.8s,mb4.4						
INK	Inuvik	51.69	349	eP		P	20 34 16.8 +0.1
	9.2nm,1.0s,mb4.7						
RSO	Redoubt South	51.75	334	eP		P	20 34 17.3 +0.1
ILAR	Eielson Array	52.28	341	P		P	20 34 21.6 +0.6
	2.8nm,0.8s,mb4.3,baz=145,slow=6.6,SNR=46						
BPAW	Bear Paw Mtn.	53.20	338	eP		P	20 34 27.5 -0.4
	2.1nm,0.8s,mb4.1						
SVW2	Sparrevohn	53.26	334	eP		P	20 34 27.3 -1.1
	23nm,2.4s,mb4.7						
LPAZ	La Paz	53.30	128	eP		P	20 34 36.5 +7.2
	10nm,1.4s,mb4.6						
TTA	Tatalina	54.39	336	eP		P	20 34 36.1 -0.5
SUMG	Summit	66.23	18	P		P	20 35 57.7 +0.2
	6.9nm,1.0s,mb4.6						
PLCA	Paso Flores	69.30	150	eP		P	20 36 25.6 +8.3
	18nm,1.4s,mb4.8						
TRQA	Tornquist	71.86	143	eP		P	20 36 37.7 +4.8
ARCES	ARCESS Array B	86.04	15	P		P	20 37 50.8 +0.6
	0.8nm,0.6s,mb4.1,baz=302,slow=5.2,SNR=4.3						
MDJ	Mudanjiang	97.27	322	P		P	20 38 43.6 +0.5
MDJ				pmax		pmax	
	comp=Z,220nm,13.0s						
CN2	Changchun	100.13	323	eP		Pdif	20 38 54.5 -1.2
CN2				eS		Sdif	20 50 23.8 -7.2
CN2				pmax		pmax	
	comp=Z,10.0nm,0.6s						
CN2				pmax		pmax	
	comp=Z,200nm,3.0s						
HHC	Hu-ho-hao-te	109.58	328	ePdif		Pdif	20 39 40.2 +2.4
HHC				PP		PP	20 44 16.2 +5.4
HHC				S		Sdif	20 51 47.7 -2.1
HHC				SS		SS	20 59 34.9 +1.9
HHC				AMB		AMB	
	comp=Z,91nm,9.0s						
HHC				LR		LR	
	comp=N,75nm,21.8s,MS4.5						
HHC				LR		LR	
	comp=E,140nm,21.6s,MS4.5						
HHC				LR		LR	
	comp=Z,120nm,21.0s,MS4.4						
GTA	Gaotai	116.00	335	PKP		PKPdf	20 43 55.4 +2.1
LZH	Lanzhou	117.06	330	ePKP		PKPdf	20 43 53.5 -1.9
LZH				sPKP			20 43 58.2
LZH				LR		LR	
	comp=E,110nm,18.0s						
LZH				LR		LR	
	comp=Z,180nm,20.1s,MS4.7						
WRA	Warramunga Arr	120.62	258	PKP		PKPdf	20 44 06.3 +3.7
	comp=Z,0.5nm,0.9s,baz=69,slow=2.2,SNR=5.4						
ASAR	Alice Springs	121.64	253	PKP		PKPdf	20 44 08.6 +4.1
	comp=Z,0.4nm,0.8s,baz=66,slow=2.3,SNR=3.6						
KSH	Kashi	121.65	356	PKP		PKPdf	20 44 09.6 +5.4
CMAR	Chiang Mai Arr	133.80	322	PKP		PKPdf	20 44 31.0 +3.1
	comp=Z,0.2nm,0.3s,baz=340,slow=4.0,SNR=4.1						

MAN 05 20:27:28.15̶45N×122̶52E,h1km,mb4.8,ML3.7,MS3.7, 2C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.91	218	eP	Pg	20 27 44.7	-0.8
BALP	Baler	0.96	288	eP	Pg	20 27 46.8	+0.4
PALP	Palanan	1.61	357	eP	Pn	20 27 58.6	+1.0
CAUP	Cauayan	1.63	336	eP	Pn	20 27 59.0	+1.2
LQP	Lukban	1.64	216	⇑eP	Pn	20 28 15.4	+17
BCPH	Baguio City Da	2.08	297	⇑iP	Pn	20 28 05.3	+1.2
BCPH				i S	Sn	20 28 36.0	+5.3
BOAC	Boac	2.08	198	eP	Pn	20 28 05.3	+1.2
AUQP	San Andres	2.12	176	eP	Pn	20 28 10.3	+5.7
SCZP	Santa Cruz	2.54	278	eP	Pn	20 28 12.8	+2.4
BOLP	Bolinao	2.67	291	eP	Pn	20 28 13.7	+1.5
APYP	Conner	2.69	333	eP	Pn	20 28 13.8	+1.3
LUBP	Lubang	2.79	233	eP	Pn	20 28 15.9	+2.1
ABRA	Dolores	2.79	322	eP	Pn	20 28 17.0	+3.2

IDC 05 20:32:31.6±2.1,6̶53S×129̶50E,h0km,mb3.4/1, mb1 3.6/4,mb1mx3.4/17,mbtmp3.4/4,ML3.0/2,Error ellipse: s-maj=80.6km s-min=28.4km az=76.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.10	198	Pn	Pn	20 35 25.4	0.0
	0.1nm,0.3s,baz=12,slow=19,SNR=3.1						
FITZ				Sn	Sn	20 37 31.5	-10
	0.2nm,0.3s,baz=338,slow=16,SNR=6.0						
WRA	Warramunga Arr	14.14	161	Pn	Pn	20 35 53.1	-0.1
	0.1nm,0.3s,baz=340,slow=12,SNR=3.3						
WRA				Sn	Sn	20 38 16.9	-14
	0.1nm,0.3s,baz=338,slow=22,SNR=5.8						
ASAR	Alice Springs	17.56	166	P	Pn	20 36 38.0	+0.1
	0.1nm,0.3s,baz=346,slow=11,SNR=13						
ASAR				S	Sn	20 39 44.5	-10
	0.1nm,0.3s,baz=2.6,slow=26,SNR=3.4						
MKAR	Makanchi Array	67.56	327	P	P	20 43 30.0	+0.1
	0.2nm,0.4s,baz=130,slow=7.9,SNR=5.2						

*ISCJB **05** 20:41:34.0±0.5,34̶25S±0̶08×14̶5W±0̶1,h10km, mb4.4/13,MS4.3/16,Error ellipse: s-maj=12.8km s-min=10.8km az=166.2*

*IDC **05** 20:41:35.1±0.8,34̶09S×14̶59W,h0km,mb4.2/8, mb1 4.2/8,mb1mx4.0/17,mbtmp4.2/8,MS4.3/16, Ms1 4.3/16,ms1mx4.1/26,Error ellipse: s-maj=27.3km s-min=20.0km az=161.0*

*NEIC **05** 20:41:35.6±0.5,34̶26S×14̶55W,h10km,mb4.5/9,Error ellipse: s-maj=15.1km s-min=13.9km az=221.0*

*GCMT **05** 20:41:40.8±0.3,34̶14S×14̶42W,h16km±1km,MW5.1, Moment Tensor Solution. s25,c26; s78,c119; Moment tensor: Scale 10^16^Nm; Mrr=0.80±.21; Mθθ=2.18±.19; Mφφ=2.99±.19; Mrθ=0.10±.54; Mrφ=4.14±.15; Mθφ=1.12±.50; Best double couple: M0=5.00000×10^16^ NP1:φs=74.00000°, δ78.00000°,λ2.00000°. NP2:φs=344.00000°,δ88.00000°, λ168.00000°. Principal axes: T 5.4600, Plg9.0000°, Azm299.0000°; N -0.9200, Plg78.0000°, Azm157.0000°; P -4.5300, Plg7.0000°, Azm30.0000°; Data Used: II IU G IC CN.*

ISC 05 20:41:35.7±0.5,34̶28S±0̶08×14̶5W±0̶1,h10km,n38, σ1s18/25,mb4.4/13,MS4.3/16,1C,Tristan da Cunha region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIS	Tristan da Cun	3.32	148	ePn	Pn	20 42 26.1	-1.6
TRIS				eSn	Sn	20 43 01.3	-5.9
SUR	Sutherland	29.50	96	LR	LR	20 56 34.5	
	comp=Z,681nm,21.8s,MS4.2,baz=261,slow=30						
TSUM	Tsumeb	32.21	70	eP	P	20 48 03.7	-0.4
	14nm,1.1s,mb4.7						
BOSA	Boshof	34.25	92	P	P	20 48 22.2	+0.3
	9.1nm,1.1s,mb4.6,baz=252,slow=13,SNR=2.8						
BOSA				LR	LR	20 59 28.7	
	comp=Z,836nm,19.4s,MS4.5,baz=250,slow=31						
RCBR	Riachuelo	34.54	320	LR	LR	20 58 53.7	
	comp=Z,543nm,19.5s,MS4.3,baz=137,slow=30						
BDFB	Brasilia	35.35	293	LR	LR	21 00 28.3	
	comp=Z,663nm,18.2s,MS4.4,baz=317,slow=32						
LBTB	Lobatse	35.88	86	P	P	20 48 39.0	+2.9
	2.0nm,0.8s,mb4.1,baz=252,slow=20,SNR=2.6						
LBTB				LR	LR	21 00 29.8	
	comp=Z,618nm,20.1s,MS4.4,baz=256,slow=32						
LBTB	Lobatse	35.88	86	eP	P	20 48 38.1	+2.1
	10nm,1.1s,mb4.7						
LBTB				LR	LR	21 00 29.8	
VNA2	Neumayer--Watz	36.91	176	e	P	20 48 43.3	-0.9
	baz=345,slow=9.2						
VNA3	Neumayer Olymp	37.12	177	e	P	20 48 46.6	+0.6
DBIC	Dimbokro	41.74	15	P	P	20 49 24.4	-0.7
	3.2nm,0.8s,mb4.0,baz=179,slow=13,SNR=3.7						
DBIC				LR	LR	21 02 46.9	
	comp=Z,148nm,21.5s,MS3.8,baz=181,slow=31						
DBIC	Dimbokro	41.74	15	eP	P	20 49 24.5	-0.6
	10nm,1.0s,mb4.4						
DBIC				LR	LR	21 02 46.9	
PMSA	Palmer Station	42.53	209	LR	LR	21 02 33.9	
	comp=Z,483nm,21.2s,MS4.4,baz=68,slow=30						
PLCA	Paso Flores	44.27	245	P	P	20 49 46.7	+1.3
	2.8nm,0.9s,mb4.0,baz=80,slow=6.1,SNR=4.2						
PLCA				LR	LR	21 06 23.7	
	comp=Z,262nm,20.6s,MS4.1,baz=276,slow=34						
PLCA	Paso Flores	44.27	245	eP	P	20 49 45.7	+0.3
	4.1nm,1.0s,mb4.1						
PLCA				LR	LR	21 06 23.7	
SIV	San Ignacio	45.47	282	P	P	20 49 55.5	+0.3
	4.3nm,0.8s,mb4.3,baz=122,slow=8.9,SNR=21						
SYO	Syowa Base	45.75	156	⇑eP	P	20 49 57.0	+0.2
BBTS	Babate	48.70	357	LR	LR	21 06 37.3	
	comp=Z,309nm,19.0s,MS4.3,baz=238,slow=31						
TORD	Torodi Ar. Bea	49.62	21	P	P	20 50 27.2	-0.2
	4.3nm,0.8s,mb4.5,baz=198,slow=6.4,SNR=5.0						
TORD				LR	LR	21 06 56.3	
	comp=Z,399nm,21.5s,MS4.4,baz=180,slow=31						
LPAZ	La Paz	51.09	277	LR	LR	21 11 33.2	
	comp=Z,289nm,19.3s,MS4.3,baz=119,slow=35						
LPAZ	La Paz	51.09	277	P	P	20 50 37.5	-1.2
	2.8nm,1.2s,mb4.1						
MAW	Mawson	54.05	152	eP	P	20 50 57.4	-2.5
QSPA	South Pole Qui	55.97	180	P	P	20 51 16.5	+2.8
	1.3nm,0.5s,mb4.2,baz=222,slow=2.9,SNR=5.1						
QSPA	South Pole Qui	55.97	180	eP	P	20 51 16.1	+2.5
	4.1nm,1.0s,mb4.4						
TAM	Tamanrasset	59.87	21	eP	P	20 51 41.7	0.0
	3.0nm,0.9s,mb4.3						
MDT	Midelt	67.39	9	LR	LR	21 16 11.2	
	comp=Z,43nm,21.4s,MS3.6,baz=352,slow=31						
SBA	Scott Base	68.13	180	eP	P	20 52 37.7	+2.4
	4.9nm,1.0s,mb4.5						
ROSC	El Rosal	68.41	292	LR	LR	21 20 23.4	
	comp=Z,432nm,19.1s,MS4.7,baz=285,slow=34						
BBSR	BB Station	81.36	319	eP	P	20 53 52.5	0.0
	115nm,0.6s						
BRTR	Keskin Array B	86.04	35	P	P	20 54 17.0	+0.7
	0.3nm,0.5s,mb3.8,baz=208,slow=4.9,SNR=2.7						
BRTR	Keskin Array B	86.04	35	P	P	20 54 17.0	+0.7
TEIG	Tepich	88.57	296	P	P	20 54 28.1	-0.9
	17nm,1.2s,mb5.2						
NOA	NORSAR Array B	97.28	12	LR	LR	21 35 03.7	
	comp=Z,79nm,20.4s,MS4.2,baz=170,slow=33						
NWAO	Narrogin (SRO)	99.24	141	LR	LR	21 32 24.3	
	comp=Z,210nm,20.4s,MS4.6,baz=128,slow=31						
SCHQ	Schefferville	99.46	332	LR	LR	21 33 57.3	
	comp=Z,149nm,18.2s,MS4.5,baz=4.8,slow=32						
YKA	Yellowknife Ar	124.32	326	PKP	PKPdf	21 00 34.9	+0.9
	0.2nm,0.7s,baz=116,slow=1.4,SNR=2.3						
ILAR	Eielson Array	138.21	332	PKP	PKPdf	21 00 59.0	-1.2
	0.3nm,0.9s,baz=75,slow=1.0,SNR=3.6						
KSRS	Korea Array	149.53	73	PKPbc	PKPbc	21 01 24.8	-0.5
	0.3nm,0.4s,baz=256,slow=3.6,SNR=3.0						

IDC 05 20:50:14.6±2.1,6̶74S×150̶54E,h0km,mb3.4/4, mb1 3.7/4,mb1mx3.4/16,mbtmp3.4/4,Error ellipse: s-maj=121.1km s-min=27.3km az=131.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.48	229	P	P	20 54 54.1	-0.1
	0.6nm,0.6s,baz=52,slow=11,SNR=9.0						
ASAR	Alice Springs	23.21	222	P	P	20 55 22.4	-0.9
	0.5nm,0.8s,baz=56,slow=9.6,SNR=6.8						
FITZ	Fitzroy Crossi	26.77	243	P	P	20 55 57.2	+0.8
	2.2nm,1.1s,baz=58,slow=9.5,SNR=3.7						
ILAR	Eielson Array	84.80	22	P	P	21 02 50.7	+0.1
	0.3nm,0.8s,baz=238,slow=5.2,SNR=2.6						

*NEIC **05** 20:51:13.9±1.1,24̶22S×67̶09W,h156km±10km,mb4.2/10, Error ellipse: s-maj=15.3km s-min=11.5km az=95.0*

*ISCJB **05** 20:51:14.0±0.8,24̶28S±0̶05×67̶05W±0̶08,h168km±8km, mb4.1/14,Error ellipse: s-maj=12.8km s-min=7.7km az=169.5*

*IDC **05** 20:51:16.9±1.9,24̶09S×66̶92W,h178km±17km,mb3.7/5, mb1 3.8/9,mb1mx3.6/18,mbtmp3.6/9,Error ellipse: s-maj=25.3km s-min=15.7km az=89.0*

*GUC **05** 20:51:18.4±0.5,23̶88S×67̶47W,h220km±29km,ML4.8*

ISC 05 20:51:14.9±0.7,24̶28S±0̶05×67̶02W±0̶08,h161km±7km, n36,σ1s25/40,mb4.1/14,2C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	Antofagasta	3.15	280	⇓iP	Pn	20 52 01.6	-3.0
ANCH				i S	Sn	20 52 38.5	-4.6
ANCH	Antofagasta	3.15	280	⇓iP	Pn	20 52 01.6	-3.0
ANCH				i S	Sn	20 52 38.5	-4.6
ANCH				AML	AML	20 52 40.7	
	comp=N,2μm,0.4s						
MACH	Maria Elena	3.26	309	⇓iP	Pn	20 52 08.0	+2.0
MACH				i S	Sn	20 52 45.6	+0.1
MECH	Mejillones	3.35	290	⇑iP	Pn	20 52 09.2	+2.1
MECH				i S	Sn	20 52 47.6	+0.1
MECH				AML	AML	20 52 52.1	
	comp=N,2μm,0.3s						
TOCH	Tocopilla	3.64	306	⇑iP	Pn	20 52 12.0	+1.2
TOCH				i S	Sn	20 52 52.7	-1.6
TOCH				AML	AML	20 52 54.3	
	comp=N,1μm,0.1s						
LCO	Las Campanas	5.75	214	ePn	Pn	20 52 38.5	+0.2
LCO				eSn	Sn	20 53 34.2	-9.5
CFAA	Coronel Fontan	7.38	188	P	Pn	20 53 04.0	+4.1
	comp=N,0.2nm,0.3s,baz=27,slow=13,SNR=4.9						
CFAA				S	Sn	20 54 20.0	-2.5
	comp=N,0.3nm,0.3s,baz=284,slow=18,SNR=8.3						
CFAA	Coronel Fontan	7.38	188	P	Pn	20 53 04.0	+4.1
CFAA				S	Sn	20 54 20.0	-2.5
LPAZ	La Paz	8.02	352	P	Pn	20 53 08.9	+0.4
	comp=N,2.2nm,0.3s,baz=149,slow=5.4,SNR=40						
LPAZ				S	Sn	20 54 37.4	-0.7
	comp=N,0.5nm,0.3s,baz=105,slow=20,SNR=6.3						
LPAZ	La Paz	8.02	352	ePn	Pn	20 53 09.9	+1.4
LPAZ				eS	Sn	20 54 32.7	-5.4
SIV	San Ignacio	9.96	35	P	Pn	20 53 34.0	-0.2
	comp=N,0.5nm,0.3s,baz=222,slow=12,SNR=7.1						
TRQA	Tornquist	14.39	164	ePn	Pn	20 54 31.7	+0.5
	comp=N,10nm,0.7s						
PLCA	Paso Flores	16.67	189	P	Pn	20 55 03.8	+4.7
	comp=N,0.1nm,0.3s,baz=13,slow=11,SNR=2.2						
BDFB	Brasilia	19.81	68	P	P	20 55 32.1	-1.0
	comp=N,1.0nm,0.3s,baz=223,slow=8.7,SNR=8.5						
AGPR	Aguadilla, PR	42.49	360	P	P	20 58 47.0	-7.2
	comp=N,36nm,0.8s,mb5.1						
MTDJ	Mount Denham	43.47	345	eP	P	20 58 56.5	-5.7
	comp=N,70nm,1.2s,mb5.2						
WVT	Waverly	63.22	341	P	P	21 01 23.2	-2.6
	comp=N,4.4nm,0.7s,mb4.4						
TXAR	Lajitas Array	63.89	325	P	P	21 01 30.7	+0.3
	comp=N,0.4nm,0.5s,mb3.5,baz=141,slow=6.5,SNR=6.2						
QSPA	South Pole Qui	65.93	180	eP	P	21 01 44.6	+1.7
	comp=N,1.5nm,0.7s,mb3.9						
ANMO	Albuquerque	69.77	326	eP	P	21 02 08.3	+0.8
	comp=N,4.6nm,1.0s,mb4.2						
SBA	Scott Base	73.42	190	eP	P	21 02 24.9	-3.9
HWUT	Hardware Ranch	77.45	327	P	P	21 02 51.8

DESE				*i* S	Sg	20 59 36.0	+0.2
UDYN	**Al 'Udayn**	**4.20**	**99**	*i* P	Pn	20 58 46.2	+0.5
UDYN				AML	AML	20 59 05.2	
	comp=Z,126nm,0.7s						
ATD	**Arta Tunnel**	**4.39**	**135**	Pn	Pn	20 58 46.9	-1.5
	comp=Z,1.8nm,0.3s,baz=283,slow=20,SNR=6.8						
ATD				Pg	Pg	20 58 57.5	-8.3
	comp=Z,7.5nm,0.3s,baz=258,slow=22,SNR=18						
ATD				Lg		20 59 57.1	
	comp=Z,7.5nm,0.3s,baz=261,slow=19,SNR=4.2						
TRBA	**At Turbah**	**4.53**	**108**	*e*	Pn	20 58 51.2	+0.9
	baz=240,slow=8.6						
TRBA				⇑*i* P		20 58 51.2	
TRBA				*i* S	Sn	20 59 43.0	0.0
AAE	**Adis Abeba**	**5.70**	**189**	*eP*	Pg	20 59 25.8	-5.0
AAE				*eS*	Sg	21 00 37.2	-7.5
BRTR	**Keskin Array B**	**25.50**	**349**	P	P	21 03 11.2	+1.2
	comp=Z,0.5nm,0.7s,mb3.2,baz=174,slow=14,SNR=4.7						
TORD	**Torodi Ar. Bea**	**36.89**	**272**	LR	LR	21 20 45.5	
	comp=Z,95nm,19.1s,baz=125,slow=38						
FINES	**FINESS Array B**	**47.70**	**351**	P	P	21 06 17.9	-0.2
	comp=Z,2.2nm,0.8s,mb4.2,baz=152,slow=12,SNR=5.4						
MKAR	**Makanchi Array**	**47.73**	**39**	P	P	21 06 18.4	-0.2
	comp=Z,1.2nm,0.9s,mb3.9,baz=224,slow=4.4,SNR=6.8						
NOA	**NORSAR Array B**	**50.64**	**343**	P	P	21 06 40.5	-0.1
	comp=Z,1.8nm,1.0s,mb4.0,baz=142,slow=7.5,SNR=3.3						
ZALV	**Zalesovo Beam**	**52.63**	**32**	P	P	21 06 54.5	-1.1
	comp=Z,0.5nm,0.5s,mb3.8,baz=232,slow=7.3,SNR=5.3						
SONM	**Songino Array**	**63.63**	**44**	P	P	21 08 13.3	+0.5
	comp=Z,1.0nm,0.8s,mb3.9,baz=255,slow=7.0,SNR=6.9						

WEL 05 21:01:07.2±0.4, 39°.26S×174°.85E, h215km±2km, ML3.6/7, Error ellipse: s-maj=5.1km s-min=2.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTVZ	**Mangateitei**	**0.50**	**105**	PN	Pn	21 01 35.8	-0.2
MTVZ				SN	S	21 01 56.9	-1.5
WAZ	**Wanganui**	**0.51**	**168**	PN	Pn	21 01 36.4	+0.4
WAZ				SN	S	21 01 58.8	+0.2
WNVZ	**Wahianoa**	**0.58**	**97**	PN	Pn	21 01 36.4	+0.1
WNVZ				SN	S	21 01 59.1	+0.1
NGZ	**Ngauruhoe**	**0.59**	**82**	PN	Pn	21 01 36.2	-0.2
NGZ				SN	S	21 01 57.8	-1.1
WTVZ	**West Tongariro**	**0.59**	**76**	PN	Pn	21 01 36.1	-0.3
WTVZ				SN	S	21 01 58.2	-0.8
KRVZ	**Karewarewa**	**0.64**	**75**	PN	Pn	21 01 36.3	-0.3
KRVZ				SN	S	21 01 58.4	-0.9
MOVZ	**Moawhango**	**0.71**	**102**	PN	Pn	21 01 36.5	-0.4
MOVZ				SN	S	21 01 58.1	-1.8
BHHZ	**Black Hill Sta**	**0.97**	**104**	PN	Pn	21 01 38.0	-0.3
TSZ	**Takapari Road**	**1.17**	**133**	PN	Pn	21 01 40.0	+0.4
TSZ				SN	S	21 02 04.3	-0.7
PNHZ	**Pukenui**	**1.23**	**123**	PN	Pn	21 01 40.4	+0.3
BKZ	**Black Stump Fm**	**1.28**	**86**	PN	Pn	21 01 40.0	-0.5
POWZ	**Post Office Ro**	**1.33**	**148**	PN	Pn	21 01 40.9	0.0
MCHZ	**McNeill Hill**	**1.44**	**98**	PN	Pn	21 01 42.0	+0.2
MRZ	**Mangatainoka R**	**1.51**	**158**	PN	Pn	21 01 42.1	-0.2
NMHZ	**Naumai**	**1.53**	**85**	PN	Pn	21 01 42.8	+0.4
OGWZ	**Otaki Gorge**	**1.58**	**171**	PN	Pn	21 01 42.9	+0.1
OGWZ				SN	S	21 02 08.5	-2.3
KIW	**Kapiti Island**	**1.60**	**178**	PN	Pn	21 01 42.9	-0.1
KAHZ	**Kahuranaki**	**1.66**	**110**	PN	Pn	21 01 44.2	+0.7
HOWZ	**Holdsworth Sta**	**1.71**	**163**	PN	Pn	21 01 43.8	-0.3
CAW	**Cannon Point**	**1.85**	**175**	PN	Pn	21 01 45.1	-0.2
TCW	**Tory Channel**	**2.00**	**193**	PN	Pn	21 01 46.5	-0.3
URZ	**Urewera**	**2.03**	**61**	PN	Pn	21 01 45.1	-2.0
NNZ	**Nelson**	**2.26**	**209**	PN	Pn	21 01 48.5	-0.9
TUWZ	**Tuamarina**	**2.28**	**197**	PN	Pn	21 01 49.2	-0.4
MWZ	**Matawai**	**2.29**	**67**	PN	Pn	21 01 48.1	-1.7
QRZ	**Quartz Range**	**2.37**	**228**	PN	Pn	21 01 48.9	-1.7
THZ	**Tophouse**	**2.91**	**210**	PN	Pn	21 01 55.5	-1.0
PUZ	**Puketiti**	**2.92**	**67**	PN	Pn	21 01 54.5	-2.2
KHZ	**Kahutara**	**3.31**	**197**	PN	Pn	21 02 00.4	-0.8
LTZ	**Lake Taylor**	**4.03**	**208**	PN	Pn	21 02 08.2	-1.6
WVZ	**Waitaha Valley**	**4.92**	**218**	PN	Pn	21 02 18.4	-2.5

DJA 05 21:26:36, 1°.70S×99°.65E, h24km, MLv3.5/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.67**	**304**	P	Pb	21 26 49.0	-0.1
SISI				S	Sb	21 27 01.1	+3.1
PDSI	**Padang**	**1.13**	**46**	P	Pn	21 26 55.4	-0.9
PDSI				S	Sn	21 27 10.4	-0.6
PPI	**Padang Panjang**	**1.44**	**31**	P	Pn	21 27 00.3	-0.3
PPI				S	Sn	21 27 20.5	+1.7
KRJI	**Kerinci**	**1.85**	**102**	P	Pn	21 27 07.1	+0.8
SDSI	**Sungai Dareh**	**1.93**	**67**	P	Pn	21 27 08.8	+1.4
SDSI				S	Sn	21 27 34.4	+3.4
BKNI	**Bangkinang**	**2.45**	**35**	P	Pn	21 27 20.4	+6.0

*IDC **05** 21:32:10.1±1.1, 40°.53N×22°.90E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.6/24, mbtmp3.9/6, ML2.7/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/42, Error ellipse: s-maj=29.9km s-min=22.1km az=163.0*
*SOF **05** 21:32:10.9, 40°.60N×23°.05E, h10km, MD3.5*
*NEIC **05** 21:32:11.9, 40°.63N×23°.03E, h19km, MD3.8(ATH), ML3.5(THE), After ATH.*
NEIC Felt at Thessaloniki.
*PDG **05** 21:32:11.9±0.5, 40°.63N×23°.06E, h11km, ML3.4/10, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*ISCJB **05** 21:32:11.4±0.2, 40°.64N±0°.01×23°.04E±0°.02, h6km±2km, mb3.8/6, Error ellipse: s-maj=2.2km s-min=2.0km az=156.4*
*CSEM **05** 21:32:11.8±0.1, 40°.63N×23°.06E, h2km, ML3.5/11, Error ellipse: s-maj=2.3km s-min=1.9km az=69.0*
*SKO **05** 21:32:11.6, 40°.59N×23°.06E, h3km, M3.0, ML3.5*
*BEO **05** 21:32:11.8±0.8, 40°.61N×23°.00E, h5km±3km, ML3.6/11*
*ATH **05** 21:32:11.9, 40°.63N×23°.03E, h19km, ML3.8*
*THE **05** 21:32:12.0, 40°.63N×23°.02E, h6km, ML3.5/11, Error ellipse: s-maj=0.6km s-min=0.4km az=29.0*

ISC 05 21:32:12.1±0.3, 40°.62N±0°.01×23°.03E±0°.02, h3km±2km, n288, σ1§07/385, mb3.8/6, 29C-33D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.05**	**285**	P	Pg	21 32 13.5	+0.2
THE				S	Sg	21 32 14.6	+0.6
THE	**Thessaloniki**	**0.05**	**285**	P	Pg	21 32 13.5	+0.2
THE				S	Sg	21 32 14.6	+0.6
HORT	**Hortiatis**	**0.06**	**112**	P	Pg	21 32 13.4	+0.1
HORT	**Hortiatis**	**0.06**	**112**	P	Pg	21 32 14.0	+0.7
HORT				S	Sg	21 32 15.5	+1.4
HORT	**Hortiatis**	**0.06**	**112**	P	Pg	21 32 13.4	+0.1
HORT				S	Sg	21 32 15.5	+1.4
SOH	**Sokhos**	**0.32**	**50**	P	Pg	21 32 18.0	-0.2
SOH	**Sokhos**	**0.32**	**50**	*e*PB	Pg	21 32 18.5	+0.3
SOH				*e*SB	Sg	21 32 23.1	+0.7
SOH	**Sokhos**	**0.32**	**50**	P	Pg	21 32 18.5	+0.3
SOH				S	Sg	21 32 23.4	+1.0
SOH	**Sokhos**	**0.32**	**50**	P	Pg	21 32 18.0	-0.2
SOH	**Sokhos**	**0.32**	**50**	*e*Pb	Pg	21 32 18.5	+0.3
SOH				*e*Sb	Sg	21 32 23.1	+0.7
SOH				S	Sg	21 32 23.4	+1.0
PLG	**Polygyros**	**0.40**	**128**	P	Pg	21 32 19.2	-0.6
PLG	**Polygyros**	**0.40**	**128**	*e*PB	Pg	21 32 19.8	0.0
PLG				*e*SB	Sg	21 32 25.9	+1.0
PLG	**Polygyros**	**0.40**	**128**	P	Pg	21 32 19.7	-0.1
PLG				S	Sg	21 32 25.8	+0.9
PLG	**Polygyros**	**0.40**	**128**	P	Pg	21 32 19.2	-0.6
PLG	**Polygyros**	**0.40**	**128**	*e*Pb	Pg	21 32 19.8	0.0
PLG				S	Sg	21 32 25.8	+0.9
KNT	**Kendrikon**	**0.55**	**349**	P	Pg	21 32 22.5	-0.2
KNT				S	Sg	21 32 30.0	+0.1
KNT	**Kendrikon**	**0.55**	**349**	P	Pg	21 32 22.5	-0.2
KNT				S	Sg	21 32 30.0	+0.1
GRG	**Griva**	**0.59**	**305**	P	Pg	21 32 22.3	-1.1
GRG				S	Sg	21 32 31.5	+0.5
GRG	**Griva**	**0.59**	**305**	P	Pg	21 32 22.3	-1.1
GRG				S	Sg	21 32 31.5	+0.5
SRS	**Serrai**	**0.66**	**40**	P	Pg	21 32 23.8	-0.9
SRS	**Serrai**	**0.66**	**40**	P	Pg	21 32 24.0	-0.7
SRS				S	Sg	21 32 33.7	+0.5
SRS	**Serrai**	**0.66**	**40**	P	Pg	21 32 24.0	-0.7
SRS				S	Sg	21 32 33.7	+0.5
LIT	**Litokhoron**	**0.66**	**219**	P	Pg	21 32 24.6	-0.2
LIT	**Litokhoron**	**0.66**	**219**	*e*PN	Pg	21 32 25.1	+0.3
LIT				*e*SN	Sg	21 32 34.4	+1.0
LIT	**Litokhoron**	**0.66**	**219**	P	Pg	21 32 25.1	+0.3
LIT				S	Sg	21 32 33.3	-0.1
LIT	**Litokhoron**	**0.66**	**219**	P	Pg	21 32 25.1	+0.3
LIT				S	Sg	21 32 33.3	-0.1
OUR	**Ouranopolis**	**0.78**	**111**	P	Pg	21 32 26.1	-0.9
OUR	**Ouranopolis**	**0.78**	**111**	P	Pg	21 32 26.7	-0.3
OUR				S	Sg	21 32 38.2	+1.1
OUR	**Ouranopolis**	**0.78**	**111**	P	Pg	21 32 26.1	-0.9
OUR				S	Sg	21 32 38.2	+1.1
VAY	**Valandovo**	**0.79**	**334**	⇑*i* Pg	Pg	21 32 25.5	-1.7
VAY				*e*Sg	Sg	21 32 36.6	-0.8
VAY	**Valandovo**	**0.79**	**334**	P	Pg	21 32 26.4	-0.8
VAY				S	Sg	21 32 36.9	-0.5
VAY	**Valandovo**	**0.79**	**334**	*e*Pg	Pg	21 32 26.7	-0.5
VAY				*e*Lg	Sg	21 32 38.5	+1.2
	comp=E,2μm,0.7s						
VAY				*e*Sg	Sg	21 32 38.7	+1.4
VAY				*e*Lg		21 32 38.9	
	comp=N,2μm,0.7s						
VAY	**Valandovo**	**0.79**	**334**	⇑*i* Pg	Pg	21 32 25.5	-1.7
VAY	**Valandovo**	**0.79**	**334**	P	Pg	21 32 26.4	-0.8
VAY				*e*Sg	Sg	21 32 36.6	-0.8
VAY				S	Sg	21 32 36.9	-0.5
PAIG	**Paliouri**	**0.85**	**144**	P	Pg	21 32 27.1	-1.3
PAIG	**Paliouri**	**0.85**	**144**	P	Pg	21 32 27.6	-0.8
PAIG				S	Sg	21 32 40.3	+0.9
PAIG	**Paliouri**	**0.85**	**144**	P	Pg	21 32 27.6	-0.8
PAIG				S	Sg	21 32 40.3	+0.9
NVR	**Nevrokopi**	**0.96**	**40**	P	Pg	21 32 29.6	-1.0
NVR	**Nevrokopi**	**0.96**	**40**	*e*PN	Pg	21 32 30.2	-0.4
NVR				*e*SN	Sg	21 32 43.5	+0.4
NVR	**Nevrokopi**	**0.96**	**40**	P	Pg	21 32 29.6	-1.0
NVR	**Nevrokopi**	**0.96**	**40**	*e*Pn	Pg	21 32 30.2	-0.4
NVR				*e*Sn	Sg	21 32 43.5	+0.4
KZN	**Kozani**	**1.01**	**253**	P	Pg	21 32 31.2	-0.3
KZN	**Kozani**	**1.01**	**253**	*e*PN	Pg	21 32 31.1	-0.4
KZN				*e*SN	Sg	21 32 46.0	+1.4
KZN	**Kozani**	**1.01**	**253**	P	Pg	21 32 30.7	-0.8
KZN				S	Sg	21 32 44.7	+0.1
KZN	**Kozani**	**1.01**	**253**	P	Pg	21 32 31.2	-0.3
KZN				S	Sg	21 32 44.7	+0.1
KZN				*e*Sn	Sg	21 32 46.0	+1.4
MMB	**Musomiste**	**1.10**	**28**	*i* P	Pg	21 32 32.4	-0.9
MMB	**Musomiste**	**1.10**	**28**	*i* P	Pg	21 32 32.4	-0.9
KAVA	**Kavala**	**1.19**	**71**	P	Pg	21 32 33.9	-1.0
KAVA				S	Sg	21 32 51.5	+1.3
KAVA	**Kavala**	**1.19**	**71**	P	Pg	21 32 33.9	-1.0
KAVA				S	Sg	21 32 51.5	+1.3
KKB	**Krupnik**	**1.25**	**2**	*i* P	Pg	21 32 34.7	-1.4
KKB	**Krupnik**	**1.25**	**2**	*i* P	Pg	21 32 34.7	-1.4
FNA	**Florina**	**1.27**	**278**	P	Pg	21 32 35.4	-1.1
FNA	**Florina**	**1.27**	**278**	P	Pg	21 32 34.8	-1.7
FNA				S	Sg	21 32 54.2	+1.3
FNA	**Florina**	**1.27**	**278**	P	Pg	21 32 35.4	-1.1
FNA				S	Sg	21 32 54.2	+1.3
THL	**Klokotos Trika**	**1.31**	**217**	*e*PN	Pn	21 32 36.6	-0.7
THL				*e*SN	Sn	21 32 54.8	-0.5
THL	**Klokotos Trika**	**1.31**	**217**	P	Pg	21 32 35.7	-1.5
THL	**Klokotos Trika**	**1.31**	**217**	P	Pg	21 32 35.7	-1.5
THL	**Klokotos Trika**	**1.31**	**217**	*e*Pn	Pn	21 32 36.6	-0.7
THL				*e*Sn	Sn	21 32 54.8	-0.5
NEO	**Neokhori**	**1.32**	**174**	P	Pn	21 32 35.8	-1.6
NEO	**Neokhori**	**1.32**	**174**	*e*PN	Pn	21 32 36.5	-0.9
NEO	**Neokhori**	**1.32**	**174**	P	Pn	21 32 35.8	-1.6
NEO	**Neokhori**	**1.32**	**174**	*e*Pn	Pn	21 32 36.5	-0.9
BIA	**Bitola**	**1.36**	**288**	P	Pn	21 32 36.6	-1.4
BIA	**Bitola**	**1.36**	**288**	*e*Pn	Pn	21 32 36.9	-1.1
BIA				*e*Sn	Sn	21 32 56.6	+0.1
BIA	**Bitola**	**1.36**	**288**	P	Pn	21 32 36.6	-1.4
NEST	**Nestorio**	**1.53**	**263**	P	Pn	21 32 38.8	-1.5
NEST	**Nestorio**	**1.53**	**263**	P	Pn	21 32 38.8	-1.5
KRUS	**Krusevo**	**1.54**	**300**	*e*Pn	Pn	21 32 39.5	-1.0
AOS	**Alonnisos**	**1.59**	**155**	P	Pn	21 32 39.5	-1.6
AOS	**Alonnisos**	**1.59**	**155**	P	Pn	21 32 39.9	-1.2
AOS	**Alonnisos**	**1.59**	**155**	P	Pn	21 32 39.9	-1.2
RZN	**Rozhen**	**1.66**	**49**	*i* P	Pn	21 32 41.6	-0.5
RZN	**Rozhen**	**1.66**	**49**	*i* P	Pn	21 32 41.6	-0.5
KBN	**Korca**	**1.71**	**271**	*e*PN	Pn	21 32 44.0	+1.2
KBN	**Korca**	**1.71**	**271**	*e*Pn	Pn	21 32 44.0	+1.2
LIA	**Limnos Island**	**1.80**	**113**	P	Pn	21 32 43.6	-0.4
LIA	**Limnos Island**	**1.80**	**113**	P	Pn	21 32 43.0	-1.0
LIA	**Limnos Island**	**1.80**	**113**	P	Pn	21 32 43.6	-0.4
SKO	**Skopje**	**1.81**	**319**	⇑*i* Pn	Pn	21 32 43.7	-0.5
SKO				*e*Sn	Sn	21 33 07.6	0.0
SKO	**Skopje**	**1.81**	**319**	*e*Pn	Pn	21 32 44.4	+0.2
SKO				*e*Sn	Sn	21 33 07.5	-0.1
SKO				*e*Lg		21 33 07.7	
	comp=E,482nm,1.3s						
SKO				*e*Lg		21 33 08.1	
	comp=N,213nm,0.6s						
SKO	**Skopje**	**1.81**	**319**	⇑*i* Pn	Pn	21 32 43.7	-0.5
SKO				*e*Sn	Sn	21 33 07.6	0.0
LSK	**Leskovik**	**1.92**	**257**	*e*PN	Pn	21 32 45.3	-0.3
LSK				*e*SN	Sn	21 33 08.1	-2.2
LSK	**Leskovik**	**1.92**	**257**	*e*Pn	Pn	21 32 45.3	-0.3
LSK				*e*Sn	Sn	21 33 08.1	-2.1
ATAL	**Atalanti**	**1.92**	**180**	P	Pn	21 32 44.3	-1.4
ATAL	**Atalanti**	**1.92**	**180**	P	Pn	21 32 44.3	-1.4
JAN	**Janina**	**1.93**	**241**	P	Pn	21 32 48.2	+2.4
JAN	**Janina**	**1.93**	**241**	*e*PN	Pn	21 32 45.6	-0.2
JAN	**Janina**	**1.93**	**241**	*e*Pn	Pn	21 32 45.6	-0.2
JAN	**Janina**	**1.93**	**241**	P	Pn	21 32 48.2	+2.4
EVR	**Evrytania**	**1.94**	**209**	P	Pn	21 32 47.2	+1.2
EVR	**Evrytania**	**1.94**	**209**	*e*PB	Pb	21 32 45.9	-2.3
EVR	**Evrytania**	**1.94**	**209**	*e*Pb	Pb	21 32 45.9	-2.3
EVR	**Evrytania**	**1.94**	**209**	P	Pn	21 32 47.2	+1.2
PLD	**Plovdiv**	**1.95**	**40**	⇓*i* Pn	Pn	21 32 46.2	+0.1
PLD				*e*Sn	Sn	21 33 10.7	-0.3
PLD	**Plovdiv**	**1.95**	**40**	P	Pn	21 32 45.8	-0.2
PLD	**Plovdiv**	**1.95**	**40**	P	Pn	21 32 45.8	-0.2
PLD	**Plovdiv**	**1.95**	**40**	⇓*i* Pn	Pn	21 32 46.2	+0.1
PLD				*e*Sn	Sn	21 33 10.7	-0.3
LKR	**Lokris**	**1.96**	**181**	P	Pn	21 32 45.3	-1.0
LKR	**Lokris**	**1.96**	**181**	*e*PN	Pn	21 32 46.3	0.0
LKR	**Lokris**	**1.96**	**181**	P	Pn	21 32 45.2	-1.1
LKR	**Lokris**	**1.96**	**181**	P	Pn	21 32 45.3	-1.0
LKR	**Lokris**	**1.96**	**181**	*e*Pn	Pn	21 32 46.3	0.0
VTS	**Vitosha**	**1.98**	**4**	P	Pn	21 32 46.3	-0.2
VTS	**Vitosha**	**1.98**	**4**	P	Pn	21 32 46.3	-0.2
VTS	**Vitosha**	**1.98**	**4**	⇓*i* P	Pn	21 32 46.7	+0.2
VTS				S	Sn	21 33 15.6	+3.9
VTS	**Vitosha**	**1.98**	**4**	*i* P	Pn	21 32 48.7	+2.2
VTS	**Vitosha**	**1.98**	**4**	P	Pn	21 32 46.3	-0.2
VTS				S	Sn	21 33 15.6	+3.9
KDZ	**Kurdzhali**	**2.08**	**59**	*i* P	Pn	21 32 46.7	-1.1
KDZ	**Kurdzhali**	**2.08**	**59**	*i* P	Pn	21 32 46.7	-1.1
PGB	**Panagyurishte**	**2.11**	**23**	*i* P	Pn	21 32 48.0	-0.3
PGB	**Panagyurishte**	**2.11**	**23**	*i* P	Pn	21 32 48.0	-0.3
DSF	**Desfina**	**2.24**	**190**	P	Pn	21 32 48.8	-1.3
DSF	**Desfina**	**2.24**	**190**	P	Pn	21 32 48.8	-1.3
ALN	**Alexandroupoli**	**2.31**	**82**	P	Pn	21 32 49.9	-1.1
ALN	**Alexandroupoli**	**2.31**	**82**	P	Pn	21 32 50.2	-0.8
ALN	**Alexandroupoli**	**2.31**	**82**	P	Pn	21 32 50.2	-0.8
EFP	**Efpalio**	**2.36**	**202**	P	Pn	21 32 50.7	-1.0
EFP	**Efpalio**	**2.36**	**202**	P	Pn	21 32 50.7	-1.0
DIM	**Dimitrovgrad**	**2.37**	**52**	*i* P	Pn	21 32 51.3	-0.5
DIM	**Dimitrovgrad**	**2.37**	**52**	*i* P	Pn	21 32 51.3	-0.5
TRIZ	**Trizonia**	**2.37**	**199**	P	Pn	21 32 50.7	-1.2
TRIZ	**Trizonia**	**2.37**	**199**	P	Pn	21 32 50.7	-1.2
BARS	**Barje**	**2.38**	**338**	⇑*i* Pn	Pn	21 32 51.1	-0.9
BARS	**Barje**	**2.38**	**338**	⇑*i* Pn	Pn	21 32 51.1	-0.9
SRN	**Sarande**	**2.44**	**253**	*e*PN	Pn	21 32 54.3	+1.5
SRN				*e*SN	Sn	21 33 24.8	+1.8
SRN	**Sarande**	**2.44**	**253**	*e*Pn	Pn	21 32 54.3	+1.5
SRN				*e*Sn	Sn	21 33 24.8	+1.8
TIR	**Tirane**	**2.51**	**288**	⇑*i* Pn	Pn	21 32 54.7	+0.9
TIR				*e*Sg	Sg	21 33 29.9	-2.7
TIR	**Tirane**	**2.51**	**288**	P	Pn	21 32 56.0	+2.2
TIR	**Tirane**	**2.51**	**288**	⇑*i* Pn	Pn	21 32 54.7	+0.9
TIR	**Tirane**	**2.51**	**288**	P	Pn	21 32 56.0	+2.2
TIR				*e*Sg	Sg	21 33 29.9	-2.7
LTK	**Loutraki**	**2.59**	**181**	*e*PN	Pn	21 32 55.3	+0.4
LTK	**Loutraki**	**2.59**	**181**	P	Pn	21 32 54.3	-0.6
LTK	**Loutraki**	**2.59**	**181**	P	Pn	21 32 54.3	-0.6
LTK	**Loutraki**	**2.59**	**181**	*e*Pn	Pn	21 32 55.3	+0.4
KEK	**Kerkira**	**2.64**	**251**	*e*PB	Pb	21 32 56.4	-3.6
KEK	**Kerkira**	**2.64**	**251**	*e*Pb	Pb	21 32 56.4	-3.6
PTL	**Penteli**	**2.65**	**166**	P	Pn	21 32 55.5	-0.2
PTL	**Penteli**	**2.65**	**166**	*e*PN	Pn	21 32 55.9	+0.2
PTL	**Penteli**	**2.65**	**166**	P	Pn	21 32 55.5	-0.2
PTL	**Penteli**	**2.65**	**166**	*e*Pn	Pn	21 32 55.9	+0.2
ZAPS	**Zavoj**	**2.67**	**354**	⇓*i* Pn	Pn	21 32 56.1	+0.1
ZAPS				*e*Sn	Sn	21 33 29.1	+0.2
ATH	**Athens Observa**	**2.69**	**168**	*e*PN	Pn	21 32 56.1	-0.2
ATH	**Athens Observa**	**2.69**	**168**	*e*Pn	Pn	21 32 56.1	-0.2
GUR	**Goura**	**2.73**	**192**	*e*PN	Pn	21 32 56.8	0.0
GUR	**Goura**	**2.73**	**192**	*e*Pn	Pn	21 32 56.8	0.0
PUK	**Puka**	**2.76**	**302**	*e*PN	Pn	21 32 57.8	+0.6
PUK	**Puka**	**2.76**	**302**	*e*Pn	Pn	21 32 57.8	+0.6
MPEP	**Malo Peshtene**	**2.79**	**11**	*i* P	Pn	21 32 58.2	+0.6
VLY	**Voula,Athens**	**2.82**	**168**	P	Pn	21 32 58.0	-0.1
VLY	**Voula,Athens**	**2.82**	**168**	*e*PN	Pn	21 32 58.9	+0.8
VLY	**Voula,Athens**	**2.82**	**168**	P	Pn	21 32 58.0	-0.1
VLY	**Voula,Athens**	**2.82**	**168**	*e*Pn	Pn	21 32 58.9	+0.8
BCI	**Bajram Curri**	**2.83**	**309**	*e*PN	Pn	21 32 58.0	-0.2
BCI	**Bajram Curri**	**2.83**	**309**	*e*Pn	Pn	21 32 58.0	-0.2
PRK	**Paraskevi**	**2.84**	**118**	*e*PN	Pn	21 32 59.1	+0.7
PRK	**Paraskevi**	**2.84**	**118**	*e*Pn	Pn	21 32 59.1	+0.7
NAIG	**Nisos Aigina**	**2.88**	**173**	*e*PN	Pn	21 32 59.3	+0.5
NAIG	**Nisos Aigina**	**2.88**	**173**	*e*Pn	Pn	21 32 59.3	+0.5
PVY	**Plav**	**3.03**	**312**	⇑*i* Pn	Pn	21 33 01.2	+0.3
PVY				*e*Sn	Sn	21 33 38.6	+0.9
PVY	**Plav**	**3.03**	**312**	⇑*i* Pn	Pn	21 33 01.2	+0.3
PVY				*e*Sn	Sn	21 33 38.6	+0.9
DID	**Didima**	**3.11**	**177**	*e*PN	Pn	21 33 02.3	+0.2
DID	**Didima**	**3.11**	**177**	P	Pn	21 33 01.4	-0.7
DID	**Didima**	**3.11**	**177**	P	Pn	21 33 01.4	-0.7
DID	**Didima**	**3.11**	**177**	*e*Pn	Pn	21 33 02.3	+0.2
ULC	**Ulcinj**	**3.15**	**296**	⇓*i* Pn	Pn	21 33 03.4	+0.8
ULC				*e*Sn	Sn	21 33 42.3	+1.6
ULC	**Ulcinj**	**3.15**	**296**	⇓*i* Pn	Pn	21 33 03.4	+0.8
ULC				*e*Sn	Sn	21 33 42.3	+1.6
CHOS	**Chios island**	**3.23**	**133**	*e*PN	Pn	21 33 04.5	+0.8
CHOS	**Chios island**	**3.23**	**133**	*e*Pn	Pn	21 33 04.5	+0.8
BEY	**Berane**	**3.25**	**315**	⇓*i* Pn	Pn	21 33 03.9	-0.1
BEY				*e*Sn	Sn	21 33 44.5	+1.3
IVA	**Berane**	**3.25**	**315**	⇓*i* Pn	Pn	21 33 03.9	-0.1
IVA				*e*Sn	Sn	21 33 44.5	+1.3
IVA	**Berane**	**3.25**	**315**	⇓*i* Pn	Pn	21 33 03.9	-0.1
IVA				*e*Sn	Sn	21 33 44.5	+1.3
BOLS	**Boljevac**	**3.31**	**346**	⇓*i* Pn	Pn	21 33 03.4	-1.4
BOLS	**Boljevac**	**3.31**	**346**	⇓*i* Pn	Pn	21 33 03.4	-1.4
PDG	**Podgorica**	**3.36**	**304**	⇓*i* Pn	Pn	21 33 05.9	+0.4
TTG	**Podgorica**	**3.36**	**304**

PERS	Pernice	8.31	319	*i* Pn	Pn	21 34 14.2 +0.7
KOLS	Kolonicke sedl	8.33	357	*e*Pn	Pn	21 34 13.9 +0.2
KOLS				*e*Sn	Sn	21 35 37.4 -11
KOLS				*e*Sg	Sg	21 36 45.3 +5.8
KOLS	Kolonicke sedl	8.33	357	*e*PN	Pn	21 34 13.9 +0.2
KOLS				*e*SN	Sn	21 35 37.4 -11
KOLS				*e*	Sg	21 36 45.3 +5.8
KOLS	Kolonicke sedl	8.33	357	*e*Pn	Pn	21 34 13.9 +0.2
CRVS	Cervenica-Dubn	8.36	353	*e*Pn	Pn	21 34 16.0 +1.9
CRVS				*e*Sg	Sg	21 36 45.9 +5.6
CRVS	Cervenica-Dubn	8.36	353	*e*PN	Pn	21 34 16.0 +1.9
CRVS				*e*	Sg	21 36 45.9 +5.6
CRVS	Cervenica-Dubn	8.36	353	*e*Pn	Pn	21 34 16.0 +1.9
JAVS	Javornik	8.40	312	*i* Pn	Pn	21 34 15.4 +0.7
JAVS				*i* Sn	Sn	21 35 45.5 -4.5
JAVS	Javornik	8.40	312	*i* Pn	Pn	21 34 15.4 +0.7
JAVS				*i* Sn	Sn	21 35 45.5 -4.5
JAVS	Javornik	8.40	312	*i* Pn	Pn	21 34 15.4 +0.7
VYHS	Vyhne	8.42	341	*e*Pn	Pn	21 34 15.7 +0.7
VYHS	Vyhne	8.42	341	*e*PN	Pn	21 34 15.7 +0.7
VYHS	Vyhne	8.42	341	*e*Pn	Pn	21 34 15.7 +0.7
VOY	Vojsko	8.58	312	*e*Pn	Pn	21 34 17.4 +0.3
VOY	Vojsko	8.58	312	*e*Pn	Pn	21 34 17.4 +0.3
VOY	Vojsko	8.58	312	*e*Pn	Pn	21 34 17.4 +0.3
ASF	Jabal al Asfar	13.98	123	LR	LR	21 41 08.1
	comp=N,56nm,21.6s,baz=161,slow=38					
NB2	NORSAR Subarra	21.70	344	P	P	21 37 02.6 -1.3
	comp=Z,2.4nm,0.9s,mb3.6,baz=159,slow=11					
NB2	NORSAR Subarra	21.70	344	P	P	21 37 02.6 -1.3
	comp=Z,2.4nm,0.9s,mb3.6,SNR=4.3					
NOA	NORSAR Array B	21.70	344	P	P	21 37 04.0 0.0
	comp=Z,0.5nm,0.8s,mb3.0,baz=159,slow=11,SNR=3.7					
NOA	NORSAR Array B	21.70	344	P	P	21 37 04.0 +0.1
TORD	Torodi Ar. Bea	33.15	220	P	P	21 38 47.4 -2.3
	comp=Z,0.6nm,0.5s,mb3.8,baz=31,slow=8.7,SNR=15					
MKAR	Makanchi Array	42.39	61	P	P	21 40 07.3 -0.3
	comp=Z,1.2nm,0.6s,mb3.7,baz=283,slow=6.8,SNR=11					
MKAR	Makanchi Array	42.39	61	P	P	21 40 07.3 -0.3
ZALV	Zalesovo Beam	42.63	50	P	P	21 40 08.9 -0.5
	comp=Z,0.9nm,0.6s,mb3.7,baz=259,slow=9.3,SNR=5.5					
ZALV	Zalesovo Beam	42.63	50	P	P	21 40 08.9 -0.5
SCHQ	Schefferville	58.00	317	P	P	21 42 03.8 -2.0
	comp=Z,1.7nm,0.4s,mb4.4,baz=136,slow=19,SNR=4.8					
SCHQ	Schefferville	58.00	317	P	P	21 42 03.8 -2.0
CMAR	Chiang Mai Arr	67.67	84	P	P	21 43 09.0 -1.8
	comp=Z,0.6nm,0.8s,mb3.7,baz=308,slow=6.6,SNR=5.1					
CMAR	Chiang Mai Arr	67.67	84	P	P	21 43 08.9 -1.8
CMAR	Chiang Mai Arr	67.67	84	P	P	21 43 08.9 -1.9

BJI ***05*** *21:54:31.4, 32°.40N×115°.30W, h6km, mB5.0/9, mb4.9/11, Ms4.8/8, Ms7 4.6/8*
ECX ***05*** *21:54:32.4±0.2, 32°.36N×115°.26W, h6km, MD4.8, ML4.9, MW4.7*
IDC ***05*** *21:54:35.0±1.0, 32°.38N×115°.09W, h0km, mb4.1/11, mb1 4.3/14, mb1mx4.1/26, mbtmp4.1/14, ML4.4/2, MS3.8/15, Ms1 3.8/15, ms1mx3.6/32, Error ellipse: s-maj=21.6km s-min=13.3km az=39.0*

NEIC 05 21:54:32.4, 32°.37N×115°.25W, h6km, mb4.4/31, ML4.8(ECX), ML4.6(PAS), 36C-40D, After ECX., California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.07	319	⇑*i*P	Pg	21 54 35.4	+1.3
CPBX				*e*S	Sg	21 54 37.6	+2.3
SGL	Mount Signal	0.49	305	*i* P	Pg	21 54 43.8	+1.9
SGL	Mount Signal	0.49	305	⇑*i*P	Pg	21 54 43.8	+1.9
COA	Coachella	0.51	12	*i* P	Pg	21 54 44.3	+2.1
COA	Coachella	0.51	12	⇓*i*P	Pg	21 54 44.3	+2.1
SNR	Schaffner Ranc	0.52	342	*i* P	Pg	21 54 44.8	+2.4
SNR	Schaffner Ranc	0.52	342	⇓*i*P	Pg	21 54 44.8	+2.4
112A	Yuma	0.59	73	⇑P	Pg	21 54 45.5	+1.7
	baz=0.6,SNR=188						
112A				⇑S	Sg	21 54 53.9	+2.4
	baz=0.6						
YMD	Yuma Desert	0.62	72	⇓*i*P	Pg	21 54 45.9	+1.4
COK	Cook Ranch	0.63	320	*i* P	Pg	21 54 46.2	+1.7
COK	Cook Ranch	0.63	320	⇑*i*P	Pg	21 54 46.2	+1.7
YUH	Yuha Desert	0.64	297	⇑*i*P	Pg	21 54 46.2	+1.6
RDX	Rancho Dawling	0.73	234	*e*P	Pg	21 54 48.8	+2.3
RDX				*e*S	Sg	21 54 59.8	+3.8
RDX	Rancho Dawling	0.73	234	⇓*e*P	Pg	21 54 48.8	+2.3
RDX				*e*S	Sg	21 54 59.8	+3.8
SWSC	Sam W. Stewart	0.74	321	P	Pg	21 54 47.4	+0.9
	baz=0.7,SNR=744						
SWSC				⇑S	Sg	21 54 58.4	+2.3
	baz=0.7						
RMX	La Rumorosa	0.74	289	⇑*e*P	Pg	21 54 48.2	+1.6
RMX				*e*S	Sg	21 54 60.0	+3.8
GLA	Glamis	0.77	27	P	Pg	21 54 48.0	+0.7
	baz=0.8,SNR=998						
GLA				⇑S	Sg	21 54 58.6	+1.3
	baz=0.8						
GLA	Glamis	0.77	27	*e*Pg	Pg	21 54 47.9	+0.7
GLA				*e*Sg	Sg	21 54 57.9	+0.6
GLA	Glamis	0.77	27	⇓*e*P	Pg	21 54 48.0	+0.7
DVTC	Desert V Tower	0.78	292	⇑P	Pg	21 54 49.0	+1.7
	baz=0.8,SNR=556						
DVTC				⇓S	Sg	21 55 00.1	+2.7
	baz=0.8						
CRR	Carrizo Plain	0.80	311	⇓*i*P	Pg	21 54 48.8	+1.0
MONP	Monument Peak	1.12	298	P	Pg	21 54 54.0	+0.1
	baz=1.1,SNR=635						
MONP				⇑S	Sg	21 55 08.4	0.0
	baz=1.1						
CBX	Cerro Bola	1.20	268	*e*PN	Pn	21 54 56.8	+1.1
CBX				*e*S	Sg	21 55 12.0	+1.1
BAR	Barrett	1.24	285	*e*Pn	Pn	21 54 56.1	-0.1
BAR				*e*Sn	Sn	21 55 12.5	-0.8
BC3	Big Chuckawall	1.30	352	P	Pn	21 54 55.9	-1.2
	baz=1.3,SNR=839						
BC3				⇑S	Sb	21 55 12.0	-2.1
	baz=1.3						
CCX	Cicese	1.30	248	*e*P	Pn	21 54 58.0	+1.0
CCX				*e*S	Sb	21 55 18.4	+4.3
113A	Mohawk Valley,	1.31	72	Pn	Pn	21 54 56.5	-0.7
	baz=1.3,SNR=183						
SPX	San Pedro Mart	1.33	188	*e*PN	Pn	21 54 58.5	+1.0
SPX				*e*S	Sb	21 55 16.5	+1.6
SPX				⇑*e*		21 55 20.2	
	comp=N,12μm,0.7s						
ECNX	Esteban Cantu	1.34	239	⇓*e*PN	Pn	21 54 59.0	+1.3
ECNX				*e*PN	Pn	21 54 58.0	+0.3
ECNX				⇓*e*		21 55 18.4	
	comp=E,20μm,0.8s						
PBX	Punta Banda	1.40	244	⇓*e*PN	Pn	21 54 59.7	+1.2
Y12C	Blythe	1.51	24	⇑Pn	Pn	21 54 58.9	-1.1
	baz=1.5,SNR=185						
Z13A	Yuma Proving G	1.58	58	⇑Pn	Pn	21 55 00.2	-0.7
	baz=1.6,SNR=464						
Z13A				⇑Sb	Sb	21 55 23.1	+0.9
	baz=1.6						
PFO	Pinyon Flat Ob	1.60	321	⇓Pn	Pn	21 55 00.0	-1.2
	baz=1.6,SNR=259						
PFO	Pinyon Flat Ob	1.60	321	*e*Pn	Pn	21 54 59.9	-1.4
109C	Camp Elliot, M	1.65	289	⇓Pn	Pn	21 55 01.9	0.0
	baz=1.6						
109C				⇑Sb	Sb	21 55 25.0	+0.7
	baz=1.6						
BELC	Belle Mtn. Jos	1.75	339	⇓Pn	Pn	21 55 02.2	-1.1
	baz=1.8						
IRM	Iron Mountain	1.79	3	⇓Pn	Pn	21 55 02.8	-1.1
	baz=1.8,SNR=186						
Y13A	Salome	1.87	39	⇓Pn	Pn	21 55 04.3	-0.7
	baz=1.9,SNR=12						
Y13A				⇓Sb	Sb	21 55 31.9	+1.2
	baz=1.9						
114A	Black Gap (USA	2.04	78	⇑Pn	Pn	21 55 06.7	-0.5
	baz=2.0,SNR=84						
114A				⇓Sb	Sb	21 55 36.4	+1.0
	baz=2.0						
214A	Organ Pipe Nat	2.11	101	⇓Pn	Pn	21 55 07.3	-0.9
	baz=2.1,SNR=89						
PDMCI	Parker Dam,Lak	2.14	25	⇓Pn	Pn	21 55 08.0	-0.7
	baz=2.1						
PDMCI				⇓Sb	Sb	21 55 39.3	+0.9
	baz=2.1						
Z14A	Wintersburg	2.18	62	⇓Pn	Pn	21 55 08.6	-0.5
	baz=2.2,SNR=33						
Z14A				⇑Sb	Sb	21 55 40.1	+0.6
	baz=2.2						
GMRC	Granite Mounta	2.43	352	⇑Pn	Pn	21 55 12.0	-0.7
	baz=2.4,SNR=12						
Y14A	Wickenburg	2.45	50	⇓Pn	Pn	21 55 12.8	-0.1
	baz=2.5						
NEE2	Needles Airpor	2.45	12	⇓Pn	Pn	21 55 12.6	-0.4
	baz=2.5,SNR=18						
X13A	Yucca	2.52	28	⇓Pn	Pn	21 55 13.4	-0.4
	baz=2.5,SNR=160						
115A	Sonoran Desert	2.58	82	⇓Pn	Pn	21 55 14.4	-0.2
	baz=2.6,SNR=44						
HEC	Hector,Ludlow	2.62	340	⇓Pn	Pn	21 55 14.6	-0.6
	baz=2.6						
LDFC	Landfair	2.71	2	*e*Pn	Pn	21 55 17.1	+0.7
Z15A	Gila River Ind	2.76	70	⇓Pn	Pn	21 55 17.1	-0.1
	baz=2.8						
X14A	Yava	2.88	43	⇓Pn	Pn	21 55 18.2	-0.6
	baz=2.9						
Y15A	Casa Rosa Ranc	2.92	56	⇓Pn	Pn	21 55 18.6	-0.7
	baz=2.9,SNR=48						
MWC	Mount Wilson	2.99	309	*e*Pn	Pn	21 55 20.6	+0.2
PASC	Pasadena Art C	3.05	307	*e*Pn	Pn	21 55 28.4	+7.3
TUQ	Turquoise Moun	3.11	350	⇓Pn	Pn	21 55 21.4	-0.6
	baz=3.1						
GSC	Goldstone	3.20	337	*e*Pn	Pn	21 55 23.5	+0.2
GSC				*e*Lg		21 55 42.2	
216A	Three Points,	3.24	95	⇑Pn	Pn	21 55 23.2	-0.5
	baz=3.2,SNR=8.0						
Z16A	Peralta Trail,	3.36	72	⇑Pn	Pn	21 55 25.1	-0.3
	baz=3.4						
V12A	Nelson	3.37	6	⇓Pn	Pn	21 55 25.2	-0.4
	baz=3.4						
V11A	Goodsprings	3.47	358	⇑Pn	Pn	21 55 27.3	+0.4
	baz=3.5						
Y16A	Circle Bar Ran	3.51	63	⇑Pn	Pn	21 55 27.4	0.0
	baz=3.5,SNR=27						
V13A	Grand Canyon W	3.63	16	⇓Pn	Pn	21 55 30.2	+1.0
	baz=3.6,SNR=80						
OSI	Osito Adit	3.67	309	*e*Pn	Pn	21 55 29.0	-0.7
OSI				*e*Pg	Pg	21 55 42.3	-0.4
V14A	Boquillas Ranc	3.71	28	⇑Pn	Pn	21 55 31.2	+0.9
	baz=3.7,SNR=27						
TUC	Tucson	3.78	90	*e*Pn	Pn	21 55 30.7	-0.5
TUC				*e*Sg	Sg	21 56 33.6	-0.3
X16A	Lo Mia Camp, P	3.79	56	⇑Pn	Pn	21 55 31.8	+0.5
	baz=3.8						
217A	Green Valley	3.81	98	⇓Pn	Pn	21 55 31.4	-0.2
	baz=3.8						
117A	Oracle	3.82	86	⇑Pn	Pn	21 55 31.9	+0.2
	baz=3.8,SNR=20						
Y17A	Roosevelt	3.93	69	⇑Pn	Pn	21 55 32.9	-0.3
	baz=3.9,SNR=65						
Z17A	San Carlos Hig	4.13	76	⇑Pn	Pn	21 55 36.7	+0.8
	baz=4.1						
SHPR	Sheep Range	4.13	1	*e*Pn	Pn	21 55 37.0	+1.0
SHPR				*e*Pg	Pg	21 55 53.2	+1.6
SHPR				*e*Sg	Sg	21 56 45.2	+0.1
U13A	Pakoon Wash	4.18	14	⇓Pn	Pn	21 55 37.6	+0.9
	baz=4.2,SNR=48						
X17A	Forest Lakes	4.21	61	⇓Pn	Pn	21 55 38.3	+1.2
	baz=4.2						
ISA	Isabella	4.24	322	*e*Pn	Pn	21 55 38.4	+0.9
ISA				*e*Pg	Pg	21 55 52.0	-1.7
V15A	Kaibab Nationa	4.29	36	⇑Pn	Pn	21 55 39.8	+1.7
	baz=4.3,SNR=43						
U14A	Mt Trumbull	4.39	22	⇓Pn	Pn	21 55 40.9	+1.3
	baz=4.4,SNR=21						
218A	Dragoon	4.43	94	⇑Pn	Pn	21 55 40.3	+0.1
	baz=4.4						
WUAZ	Wupatki	4.50	45	*e*Pn	Pn	21 55 42.6	+1.5
WUAZ				*e*Pg	Pg	21 55 57.3	-1.4
WUAZ				*e*Sg	Sg	21 56 54.2	-2.8
318A	Bisbee	4.57	100	⇓Pn	Pn	21 55 42.1	+0.1
	baz=4.6,SNR=46						
Y18A	Canyon Day Jun	4.60	71	⇑Pn	Pn	21 55 43.4	+0.9
	baz=4.6						
U15A	North Rim	4.73	30	⇑Pn	Pn	21 55 45.6	+1.3
	baz=4.7,SNR=66						
T11A	Corn Creek, Al	4.86	0	⇑Pn	Pn	21 55 47.3	+1.2
	baz=4.9						
219A	White Tail Can	5.09	93	⇓Pn	Pn	21 55 49.1	-0.2
	baz=5.1						
319A	Douglas	5.17	99	⇑Pn	Pn	21 55 50.7	+0.3
	baz=5.2,SNR=21						
T15A	Red Dirt Ranch	5.21	26	⇓Pn	Pn	21 55 52.4	+1.6
	baz=5.2						
Y19A	Nutrioso	5.27	71	⇑Pn	Pn	21 55 53.2	+1.5
	baz=5.3						
CCUT	Cedar City	5.40	16	*e*Pn	Pn	21 55 55.7	+2.2
CCUT				*e*Pg	Pg	21 56 10.5	-5.4
CCUT				*e*Sg	Sg	21 57 23.7	-2.1
120A	U Bar Ranch, L	5.60	86	⇓Pn	Pn	21 55 56.5	+0.3
	baz=5.6,SNR=12						
ARUT	Antelope Range	5.61	15	*e*Pn	Pn	21 55 57.8	+1.5
	comp=E,38nm,0.5s						
ARUT				*e*Pg	Pg	21 56 20.4	+0.5
ARUT				*e*Sg	Sb	21 57 20.6	+2.4
MTUM	Tungsten Hills	5.67	332	*e*Pb	Pb	21 56 09.6	-2.2
NVAR	Mina Array Bea	6.54	338	Pn	Pn	21 56 19.8	+11
	comp=E,2.6nm,0.3s,baz=145,slow=13,SNR=33						
NVAR				Lg		21 58 10.5	
	baz=181,slow=31,SNR=2.0						
NVAR	Mina Array Bea	6.54	338	Pn	Pn	21 56 19.8	+11
NVAR				Lg		21 58 10.5	
MSU	Marysvale	6.63	21	*e*Pn	Pn	21 56 08.5	-1.8
MSU				*e*Pg	Pg	21 56 37.9	-1.4
SAO	San Andreas Ge	6.74	312	*e*Pn	Pn	21 56 11.1	-0.7
SAO				*e*Pg	Pb	21 56 31.1	+1.2
WAKR	Walker	7.01	332	*e*Pn	Pn	21 56 16.4	+0.7
WAKR				*e*Pg	Pg	21 56 45.2	-1.5
CMB	Columbia Colle	7.05	325	*e*Pn	Pn	21 56 17.4	+1.3
CMB				*e*Pg	Pg	21 56 44.4	-2.9
CMB				*e*Sg	Sg	21 58 17.2	-1.4
LAZ	Ladron	7.08	71	*e*Pn	Pn	21 56 18.3	+1.7
	comp=E,57nm,1.4s						
LENM	Lemitar	7.16	73	*e*Pn	Pn	21 56 19.6	+1.9
MVCO	Mesa Verde	7.36	47	*e*Pn	Pn	21 56 24.1	+3.7
MVCO				*e*Pg	Pg	21 56 54.9	+1.6
MVCO				*e*Sg	Sg	21 58 27.9	-0.8
BNM	Barren Site	7.44	74	*e*Pn	Pn	21 56 23.0	+1.5
	comp=E,602nm,0.6s						
LPM	Los Pinos Moun	7.47	73	*e*Pn	Pn	21 56 23.7	+1.8
TMUT	Trail Mountain	7.66	24	*e*Pn	Pn	21 56 26.3	+1.9
TMUT				*e*Pg	Pg	21 56 58.9	0.0
TMUT				*e*Sg	Sg	21 58 38.3	+0.2
ANMO	Albuquerque	7.77	68	Pn	Pn	21 56 28.0	+2.0
	comp=E,0.3nm,0.3s,baz=249,slow=11,SNR=12						
ANMO				Lg		21 58 37.0	
	comp=E,0.4nm,0.3s,baz=306,slow=18,SNR=2.4						
ANMO				LR	LR	21 59 44.1	
	comp=E,366nm,21.1s,baz=149,slow=40						
ANMO	Albuquerque	7.77	68	*e*Pn	Pn	21 56 28.8	+2.8
WCN	Washoe City	7.83	333	*e*Pg	Pg	21 57 05.8	+3.6
PV01	Paradox Valley	7.93	42	*e*Pn	Pn	21 56 31.3	+3.0
	comp=E,8μm,0.7s						
PV01				*e*Pg	Pg	21 57 01.2	-3.1
PV01				*e*Sg	Sg	21 58 41.3	-5.8
PV04	Paradox Valley	7.94	39	*e*Pn	Pn	21 56 32.6	+4.4
PV04				*e*Pg	Pg	21 57 01.1	-3.3
PV04				*e*Sg	Sb	21 58 32.5	+7.4
NLU	North Lily Min	8.00	18	*e*Pn	Pn	21 56 29.2	+0.1
NLU				*e*Pg	Pg	21 57 05.7	+0.2
PAHR	Pah Rah Range	8.05	337	*e*Pg	Pg	21 57 14.4	+7.8
DUG	Dugway	8.06	13	*e*Pn	Pn	21 56 37.1	+7.1
DUG				*e*Pg	Pg	21 57 07.8	+1.2
MPU	Maple Canyon	8.17	20	*e*Pn	Pn	21 56 31.4	-0.1
BMN	Battle Mountai	8.21	349	*e*Pg	Pg	21 57 07.4	-2.1
MNTX	Cornudas Mount	8.40	92	*e*Pn	Pn	21 56 35.8	+1.1
MNTX				*e*Sn	Sn	21 58 10.4	+0.5
DAU	Daniels Canyon	8.65	21	*e*Pn	Pn	21 56 43.0	+5.0
BGU	Big Grassy Mou	8.73	11	*e*Pn	Pn	21 56 42.7	+3.6
	comp=E,5.1nm,0.7s						
BGU				*e*Lg		21 59 22.2	
JLU	Jordanelle	8.77	19	*e*Pn	Pn	21 56 44.7	+5.0
CTU	Camp Tracy	8.77	18	*e*Pn	Pn	21 56 38.6	-1.2
SPUT	South Promonto	9.20	13	*e*Pn	Pn	21 56 51.7	+6.1
SPUT				*e*		21 59 40.5	
GDL2	Guadalupe Moun	9.22	88	*e*Pn	Pn	21 56 49.0	+3.1
SMCO	Snowmass	9.56	42	*e*Pn	Pn	21 56 55.7	+5.2
SMCO				*e*		21 57 32.3	
HVU	Hansel Valley	9.60	11	*e*Pn	Pn	21 56 55.1	+4.0
HVU				*e*Lg		21 59 47.6	
CLNB	Carlsbad	9.62	88	*e*Pn	Pn	21 56 51.1	-0.3
	comp=E,74nm,0.3s						
SDCO	Great Sand Dun	9.62	53	*e*Pn	Pn	21 56 54.7	+3.2
HWUT	Hardware Ranch	9.68	17	*e*Pn	Pn	21 56 57.5	+5.3
MOD	Modoc	10.34	339	*e*Pn	Pn	21 56 59.8	-1.4
TXAR	Lajitas Array	10.40	104	Pn	Pn	21 57 05.0	+2.9
	comp=E,0.8nm,0.3s,baz=286,slow=13,SNR=26						
TXAR				Lg		22 00 06.5	
	comp=E,0.4nm,0.3s,baz=288,slow=30,SNR=7.6						
TXAR				LR	LR	22 01 27.4	
	comp=E,1μm,18.6s,baz=85,slow=40						
WVOR	Wild Horse Val	10.40	346	*e*Pn	Pn	21 57 01.7	-0.4
	comp=E,10nm,0.8s						
ISCO	Idaho Springs	10.76	44	*e*Pn	Pn	21 57 12.2	+5.3
ISCO				*e*		21 57 52.8	
YBH	Yreka Blue Hor	11.08	330	LR	LR	22 01 56.4	
	comp=E,360nm,21.6s,baz=154,slow=40						
HLID	Hailey	11.20	3	*e*Pn	Pn	21 57 20.6	+7.7
HLID				*e*		21 58 08.4	
HLID				*e*		22 00 31.9	
BW06	Boulder Array	11.32	22	*e*Pn	Pn	21 57 16.7	+2.1
	comp=E,39nm,1.5s						
PDAR	Pinedale Array	11.32	22	Pn	Pn	21 57 20.8	+6.1
	comp=E,0.3nm,0.3s,baz=231,slow=9.2,SNR=13						
PDAR				Lg		22 00 36.1	
	comp=E,0.2nm,0.3s,baz=202,slow=31,SNR=2.2						
RRI2	Red Ridge	11.39	15	*e*Pn	Pn	21 57 21.4	+5.7
RRI2				*e*		22 00 46.1	
REDW	Red Top Meadow	11.51	16	*e*Pn	Pn	21 57 23.1	+5.9
AMTX	Amarillo	11.59	74	*e*Pn	Pn	21 57 20.0	+1.7
TPAW	Teton Pass	11.61	16	*e*Pn	Pn	21 57 24.3	+5.7
TPAW				*e*		22 01 06.5	
SNOW	Snow King Moun	11.63	16	*e*Pn	Pn	21 57 24.0	+5.2
LOHW	Long Hollow	11.81	17	*e*Pn	Pn	21 57 26.6	+5.3
	comp=E,12nm,1.0s						
MOOW	Moose Ponds	11.90	16	*e*Pn	Pn	21 57 25.2	+2.6
MOOW				*e*		22 01 16.9	
IMW	Indian Meadow	12.00	15	*e*Pn	Pn	21 57 29.5	+5.6
FLWY	Flagg Ranch	12.23	16	*e*Pn	Pn	21 57 32.6	+5.5
YFT	Old Faithful	12.55	15	*e*Pn	Pn	21 57 40.8	+9.3
MCMT	McKenzie Canyo	12.58	8	P	Pn	21 57 39.8	+7.9
HBO	Huckleberry Mo	12.73	336	P	Pn	21 57 42.5	+8.5
VIPM	Ingram Point	12.83	342	P	Pn	21 57 42.9	+7.7
DLMT	Dillon	13.14	8	*e*Pn	Pn	21 57 47.1	+7.6
BROR	Big Rock Looko	13.15	337	P	Pn	21 57 47.1	+7.5
JCT	Junction City	13.33	94	*e*Pn	Pn	21 57 46.6	+4.5
BOZ	Bozeman (W)	13.56	11	*e*Pn	Pn	21 57 50.2	+5.0
	comp=E,8.5nm,1.3s						
RLMT	Red Lodge	13.56	18	*e*Pn	Pn	21 57 49.6	+4.3
	comp=E,22nm,1.3s						
LRM	Limekiln Ridge	13.61	8	*e*Pn	Pn	21 57 52.1	+6.1
LNOR	Lincoln Mounta	13.69	351	*e*Pn	Pn	21 57 45.9	-1.1
	comp=E,14nm,1.2s						
HOOD	Mount Hood Mea	13.86	341	*e*Pn	Pn	21 57 55.1	+5.8
WMOK	Wichita Mounta	13.94	76	*e*Pn	Pn	21 57 53.9	+3.5
HAWA	Hanford	14.39	348	*e*Pn	Pn	21 58 02.6	+6.0
RSW	Rattlesnake Hi	14.40	348	*e*Pn	Pn	21 58 03.7	+7.0
MSO	Missoula	14.48	4	*e*Pn	Pn	21 58 02.3	+4.5
	comp=E,15nm,1.4s						
CHMT	Chamberlain Mo	14.61	5	*e*Pn	Pn	21 58 10.5	+11
RSSD	Black Hills	14.66	34	*e*Pn	Pn	21 58 04.4	+4.2
	comp=E,20nm,1.2s						
SLMT	Seeley Lake	14.92	5	*e*Pn	Pn	21 58 12.9	+9.2
SWMT	Swartz Lake	15.16	3	*e*Pn	Pn	21 58 14.0	+7.1
	comp=E,6.9nm,1.0s						
LON	Longmire	15.22	343	*e*Pn	Pn	21 58 13.4	+5.6
	comp=E,20nm,1.2s						
OD2	Odessa Site #2	15.24	351	*e*Pn	Pn	21 58 12.7	+4.7
	comp=E,21nm,1.3s						
JTMT	Jette	15.38	2	*e*Pn	Pn	21 58 14.4	+4.6
	comp=E,6.7nm,0.9s						
BSMT	Bassoo Peak	15.47	1	*e*Pn	Pn	21 58 16.0	+4.9
	comp=E,22nm,1.4s						
ETW	Entiat	15.71	347	P	Pn	21 58 20.5	+6.4
LAO	LASA Array	15.89	23	*e*Pn	Pn	21 58 19.9	+3.3
	comp=E,64nm,1.3s						
NEW	Newport	15.95	355	*e*Pn	Pn	21 58 21.9	+4.7
	comp=E,24nm,1.1s						
EGMT	Eagleton	16.19	13	*e*Pn	Pn	21 58 23.8	+3.4
	comp=E,45nm,1.5s						
GNW	Green Mountain	16.24	341	*e*Pn	Pn	21 58 18.2	-2.8
	comp=E,18nm,1.4s						

MDJ	Mudanjiang	83.34	319	P	P	22 06 58.2	-2.0
MDJ				pmax	pmax		
comp=Z,3.0nm,0.6s							
MDJ				pmax	pmax		
comp=Z,48nm,8.7s							
MDJ				LR	LR		
comp=E,29nm,25.4s							
MDJ				LR	LR		
comp=Z,41nm,26.0s							
PLCA	Paso Flores	83.64	147	LR	LR	22 36 09.0	
comp=Z,144nm,19.1s,baz=46,slow=30							
CN2	Changchun	86.13	321	eP	P	22 07 13.4	-0.9
CN2				eS	S	22 17 44.1	-5.2
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
CN2				pmax	pmax		
comp=Z,200nm,3.0s							
CN2				LR	LR		
comp=N,100nm,17.0s							
CN2				LR	LR		
comp=E,200nm,17.0s							
CN2				LR	LR		
comp=Z,200nm,19.0s							
ISAL	Salakas	86.39	21	eP	P	22 07 16.3	+0.9
IIGN	Ignalina	86.61	21	eP	P	22 07 17.3	+0.9
IDID	Didziasalis	86.79	21	eP	P	22 07 18.1	+0.8
KSRS	Korea Array	88.93	315	P	P	22 07 31.7	+3.8
comp=Z,0.6nm,0.7s,baz=48,slow=3.6,SNR=4.2							
SONM	Songino Array	91.86	333	P	P	22 07 44.3	+2.9
comp=Z,0.2nm,0.5s,baz=15,slow=6.2,SNR=4.2							
SONM				LR	LR	22 48 09.5	
comp=Z,74nm,21.3s,baz=50,slow=35							
ZALV	Zalesovo Beam	92.30	348	P	P	22 07 46.2	+2.9
comp=Z,0.5nm,0.4s,baz=25,slow=5.2,SNR=6.4							
ZALV	Zalesovo Beam	92.30	348	P	P	22 07 46.2	+2.9
BJI	Beijing	93.66	323	P	P	22 07 47.6	-2.2
BJI				pmax	pmax		
comp=Z,4.0nm,0.7s							
HHC	Hu-ho-hao-te	95.29	326	eP	P	22 07 56.5	-0.8
HHC				PP	PP	22 11 47.8	+1.2
HHC				SKS		22 18 32.2	
HHC				S	S	22 19 09.0	-4.6
HHC				SS	SS	22 25 37.6	-1.2
HHC				pmax	pmax		
comp=Z,9.0nm,1.0s							
HHC				pmax	pmax		
comp=Z,100nm,6.9s							
HHC				LR	LR		
comp=N,87nm,15.1s							
HHC				LR	LR		
comp=E,150nm,18.0s							
HHC				LR	LR		
comp=Z,77nm,14.5s							
MKAR	Makanchi Array	99.63	348	LR	LR	22 54 21.0	
comp=Z,58nm,21.4s,baz=349,slow=36							
LZH	Lanzhou	102.69	328	eP	Pdif	22 08 29.0	-1.4
LZH				pP		22 08 39.2	
LZH				sP		22 08 43.1	
LZH				PP	PP	22 12 43.8	+0.8
LZH				pmax	pmax		
comp=Z,16nm,1.3s							
LZH				pmax	pmax		
comp=Z,52nm,8.2s							
LZH				LR	LR		
comp=E,120nm,17.5s							
LZH				LR	LR		
comp=Z,180nm,19.8s							
VNA3	Neumayer Olymp	125.28	158	ePKPdf	PKPdf	22 13 32.8	-0.2
VNA2	Neumayer--Watz	126.05	157	ePKPdf	PKPdf	22 13 34.6	+0.1
baz=313,slow=4.0							
MAW	Mawson	144.71	179	PKP	PKPdf	22 14 10.9	+1.8
comp=Z,7.7nm,1.1s,baz=185,slow=6.5,SNR=11							
LBTB	Lobatse	145.03	88	ePKPbc	PKPbc	22 14 13.2	+2.8
BOSA	Boshof	145.89	94	PKPbc	PKPbc	22 14 15.5	+2.5
comp=Z,6.8nm,1.0s,baz=220,slow=5.3,SNR=4.1							
BOSA	Boshof	145.89	94	ePKPbc	PKPbc	22 14 15.5	+2.5

*SZGRF **05** 22:13:54.6, 20.°93S×177.°85W, h33km, Fiji Islands region*
*ISCJB **05** 22:14:16.8±1.7, 20.°29S±0.°07×176.°46W±0.°09, h218km±16km, mb4.1/29, Error ellipse: s-maj=16.1km s-min=8.9km az=36.3*
*IDC **05** 22:14:18.5±2.6, 20.°22S×176.°44W, h219km±24km, mb3.8/11, mb1 4.0/13, mb1mx3.9/21, mbtmp3.8/13, Error ellipse: s-maj=26.3km s-min=12.3km az=143.0*
*NEIC **05** 22:14:26.2±1.1, 20.°37S×176.°50W, h297km±10km, mb4.2/20, Error ellipse: s-maj=11.4km s-min=7.3km az=137.0*

ISC 05 22:14:18.1±1.7, 20.°23S±0.°10×176.°46W±0.°10, h215km±15km, n103, σ0°66/39, mb4.1/29, 16C-11D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.76	295	ePn	Pn	Pn	22 15 53.3	+11
35nm,0.9s								
AFI	Afiamalu	7.71	36	P	Pn	Pn	22 16 07.5	-0.2
4.3nm,0.3s,baz=260,slow=18,SNR=2.3								
AFI				S	S	S	22 17 27.2	-8.0
14nm,0.3s,baz=218,slow=23,SNR=7.1								
URZ	Urewera	18.81	196	P	P	P	22 18 21.6	0.0
1.3nm,0.3s,baz=74,slow=17,SNR=7.2								
URZ				S	S	S	22 21 39.0	-5.0
0.5nm,0.3s,baz=53,slow=20,SNR=9.7								
CTA	Charters Tower	34.96	264	P	P	P	22 20 50.2	+0.3
2.9nm,0.4s,mb4.2,baz=96,slow=11,SNR=7.5								
CTAO	Charters Tower	34.96	264	eP	P	P	22 20 51.2	+1.3
4.2nm,0.6s,mb4.2								
COEN	Coen	39.02	273	eP	P	P	22 21 24.9	+0.7
32nm,0.7s,mb5.0								
STKA	Stephens Creek	39.21	244	P	P	P	22 21 26.0	+0.4
0.6nm,0.4s,mb3.5,baz=63,slow=11,SNR=5.1								
STKA				PcP	PcP	PcP	22 23 29.7	-0.6
1.2nm,0.6s,baz=100,slow=6.1,SNR=3.4								
ASAR	Alice Springs	45.99	256	P	P	P	22 22 20.2	+0.1
2.6nm,0.6s,mb3.7,baz=96,slow=8.4,SNR=29								
ASAR				PcP	PcP	PcP	22 23 52.2	-1.0
1.0nm,0.5s,baz=105,slow=4.3,SNR=6.9								
WB2	Warramunga Arr	46.06	261	eP	P	P	22 22 20.1	-0.7
WRA	Warramunga Arr	46.07	261	P	P	P	22 22 20.6	-0.2
1.7nm,0.2s,mb3.9,baz=95,slow=7.6,SNR=62								
FITZ	Fitzroy Crossi	54.50	262	P	P	P	22 23 24.4	+0.4
0.9nm,0.4s,mb3.7,baz=82,slow=8.7,SNR=8.8								
MBWA	Marble Bar	59.33	257	eP	P	P	22 23 57.1	-0.7
3.2nm,0.7s,mb4.1								
CASY	Casey	64.83	205	eP	P	P	22 24 33.0	-0.5
3.2nm,0.9s,mb4.0								
QSPA	South Pole Qui	69.84	180	eP	P	P	22 25 04.9	+0.1
4.7nm,0.8s,mb4.2								
MJAR	Matsushiro Arr	70.86	323	P	P	P	22 25 11.4	-0.2
2.1nm,0.6s,mb4.0,baz=166,slow=6.7,SNR=11								
MAJO	Matsushiro	70.86	323	eP	P	P	22 25 11.4	-0.2
3.6nm,0.5s,mb4.3								
PETK	Petropavlovsk-	76.39	344	P	P	P	22 25 43.5	+0.2
4.2nm,0.8s,mb4.1,baz=128,slow=9.6,SNR=6.4								
WAKR	Walker	79.17	42	eP	P	P	22 25 60.0	+1.0
3.1nm,1.0s,mb3.9								
NVAR	Mina Array Bea	79.84	43	P	P	P	22 26 03.5	+0.8
2.3nm,0.8s,mb3.9,baz=228,slow=8.0,SNR=12								
NVAR	Mina Array Bea	79.84	43	P	P	P	22 26 03.5	+0.8
TUC	Tucson	81.68	51	eP	P	P	22 26 13.7	+1.1
1.1nm,0.6s,mb3.7								
WVOR	Wild Horse Val	82.00	39	eP	P	P	22 26 14.5	+0.6
3.5nm,0.9s,mb4.0								
TTA	Tatalina	84.44	9	eP	P	P	22 26 26.0	+0.1
6.0nm,1.1s,mb4.2								
MNTX	Cornudas Mount	85.42	54	eP	P	P	22 26 32.0	+0.4
2.5nm,0.8s,mb4.0								
TXAR	Lajitas Array	85.69	57	P	P	P	22 26 33.8	+0.8
2.2nm,0.8s,mb3.9,baz=207,slow=8.0,SNR=26								
TRF	Thorofare Moun	85.89	11	eP	P	P	22 26 32.4	-0.7
8.0nm,0.7s,mb4.6								
MCK	McKinley	86.40	12	eP	P	P	22 26 34.8	-0.8
5.1nm,0.9s,mb4.2								
COLA	College	87.64	12	eP	P	P	22 26 40.4	-1.1
4.0nm,0.6s,mb4.4								
ILAR	Eielson Array	87.74	12	P	P	P	22 26 41.2	-0.7
1.0nm,0.7s,mb3.8,baz=216,slow=5.0,SNR=15								
BOZ	Bozeman (W)	87.98	39	eP	P	P	22 26 42.9	-0.7
5.4nm,1.5s,mb4.2								
VNA3	Neumayer Olymp	88.31	176	e	P	P	22 26 40.7	-4.1
VNA2	Neumayer--Watz	88.77	176	e	P	P	22 26 43.2	-3.8
baz=199,slow=3.8								
EGAK	Eagle	88.98	14	eP	P	P	22 26 47.7	-0.1
3.6nm,1.0s,mb4.2								
CMAR	Chiang Mai Arr	91.39	289	P	P	P	22 27 01.2	+1.1
0.6nm,0.3s,mb4.0,baz=119,slow=2.1,SNR=8.6								
CHTO	Chiang Mai	91.52	289	eP	P	P	22 27 00.8	+0.1
1.9nm,0.7s,mb4.1								
RSSD	Black Hills	91.96	43	eP	P	P	22 27 02.0	-0.2
4.5nm,1.0s,mb4.3								
INK	Inuvik	93.64	15	eP	P	P	22 27 08.7	-0.6
1.6nm,0.7s,mb4.2								
MK31	Makanchi Array	112.07	313	ePKP	PKiKP	PKiKP	22 32 25.6	-2.1
KURK	Kurchatov	114.78	317	ePKPdf	PKiKP	PKiKP	22 32 30.5	-2.2
TKM2	Tokmak 2	116.47	309	ePKPdf	PKPdf	PKPdf	22 32 34.5	-1.7
KBL	Kabul	121.03	299	ePKPdf	PKPdf	PKPdf	22 32 44.2	-1.1
ARU	Arti	125.80	326	ePKPdf	PKPdf	PKPdf	22 32 52.4	-1.3
ABKAR	Akbulak array	126.88	317	ePKPdf	PKPdf	PKPdf	22 32 55.0	-1.0
ARCES	ARCESS Array B	128.91	350	PKP	PKPdf	PKPdf	22 32 58.0	-1.3
1.6nm,0.6s,baz=71,slow=1.1,SNR=14								
FINES	FINESS Array B	135.91	345	PKhKP	PKPpre	PKPpre	22 33 07.2	
2.0nm,0.9s,baz=64,slow=3.2,SNR=5.0								
NOA	NORSAR Array B	138.87	354	PKP	PKPdf	PKPdf	22 33 17.6	-0.6
0.2nm,0.5s,baz=36,slow=2.1,SNR=2.8								
KIEV	Kiev	143.47	332	ePKPdf	PKPdf	PKPdf	22 33 23.2	-3.6
MALT	Malatya	144.91	309	ePKPbc	PKPdf	PKPdf	22 33 29.1	-0.6
MALT	Malatya	144.91	309	⇓iP	PKPdf	PKPdf	22 33 29.6	-0.1
KWP	Kalwaria Pacla	146.92	337	ePKPbc	PKPbc	PKPbc	22 33 34.4	-0.5
KWP	Kalwaria Pacla	146.92	337	⇓iP	PKPbc	PKPbc	22 33 35.2	+0.2
BUR08	Bucovina Ar. S	147.50	332	ePKPbc	PKPbc	PKPbc	22 33 36.7	0.0
BURAR	Bucovina Array	147.52	332	⇓iP	PKPbc	PKPbc	22 33 36.6	-0.1
KOLS	Kolonicke sedl	147.66	337	eP	PKPbc	PKPbc	22 33 37.1	+0.1
KOLS	Kolonicke sedl	147.66	337	ePKP	PKPbc	PKPbc	22 33 37.1	+0.1
BRTR	Keskin Array B	147.72	314	PKPbc	PKPbc	PKPbc	22 33 36.5	-0.9
3.0nm,0.8s,baz=64,slow=3.4,SNR=17								
NIE	Niedzica	147.94	339	eP	PKPbc	PKPbc	22 33 37.9	+0.2
CRVS	Cervenica-Dubn	147.98	337	eP	PKPbc	PKPbc	22 33 37.9	0.0
CRVS	Cervenica-Dubn	147.98	337	ePKP	PKPbc	PKPbc	22 33 37.9	0.0
CLL	Collm	148.11	349	ePKPbc	PKPbc	PKPbc	22 33 37.5	-0.6
CLL				ePKPab	PKPab	PKPab	22 33 41.0	-0.5
CLL	Collm	148.11	349	⇓iPKP	PKPbc	PKPbc	22 33 37.5	-0.6
CLL				⇑iPKP	PKPab	PKPab	22 33 41.1	-0.4
CLL	Collm	148.11	349	⇓iPKPbc	PKPbc	PKPbc	22 33 37.5	-0.6
comp=Z,11nm,1.0s								
CLL				⇑iPKPab	PKPab	PKPab	22 33 41.1	-0.4
comp=Z,8.0nm,0.8s								
VRI	Vrincioaia	148.11	329	⇓iP	PKPbc	PKPbc	22 33 37.7	-0.6
UPC	Upice	148.21	345	⇑ePKP	PKPbc	PKPbc	22 33 38.1	-0.3
UPC				ePKPAB	PKPab	PKPab	22 33 42.3	+0.3
TIRR	Tirgusor	148.22	325	⇑iP	PKPbc	PKPbc	22 33 37.5	-1.1
OKC	Ostrava-Krasne	148.25	342	⇑ePKP	PKPbc	PKPbc	22 33 37.8	-0.7
OKC				ePKPAB	PKPab	PKPab	22 33 42.4	+0.2
DPC	Dobruska-Polom	148.28	344	⇑ePKP	PKPbc	PKPbc	22 33 38.5	-0.1
DPC				ePKPAB	PKPab	PKPab	22 33 42.8	+0.5
BRG	Berggiesshubel	148.34	347	ePKPbc	PKPbc	PKPbc	22 33 38.2	-0.5
BRG				ePKPab	PKPab	PKPab	22 33 42.1	-0.4
BRG	Berggiesshubel	148.34	347	iP	PKPbc	PKPbc	22 33 38.4	-0.3
comp=Z,6.7nm,0.8s								
BRG				i			22 33 42.3	
comp=Z,4.0nm,0.7s								
FBE	Freiberg	148.41	348	ePKPbc	PKPbc	PKPbc	22 33 38.9	0.0
FBE				ePKPab	PKPab	PKPab	22 33 42.7	-0.1
NEUB	Neuenburg	148.41	350	ePKPab	PKPab	PKPab	22 33 42.5	-0.3
MORC	Moravsky Berou	148.48	343	ePKPbc	PKPbc	PKPbc	22 33 38.8	-0.3
MORC				ePKPab	PKPab	PKPab	22 33 43.1	0.0
MORC	Moravsky Berou	148.48	343	⇑iP	PKPbc	PKPbc	22 33 38.9	-0.2
PVCC	Panska Ves	148.53	346	⇑ePKP	PKPbc	PKPbc	22 33 39.2	0.0
PVCC				⇑ePKPAB	PKPab	PKPab	22 33 43.3	0.0
KECS	Kecovo	148.68	338	eP	PKPbc	PKPbc	22 33 39.6	-0.1
KECS	Kecovo	148.68	338	ePKP	PKPbc	PKPbc	22 33 39.6	-0.1
BUG	Bochum--Univer	148.72	356	ePKPbc	PKPbc	PKPbc	22 33 39.9	+0.3
BUG				ePKPab	PKPab	PKPab	22 33 44.5	+0.5
MLR	Muntele Rosu	148.76	329	⇓iP	PKPbc	PKPbc	22 33 39.2	-0.8
MOX	Moxa	148.99	350	ePKPbc	PKPbc	PKPbc	22 33 39.8	-0.6
PRU	Pruhonice	149.04	346	⇑ePKP	PKPbc	PKPbc	22 33 40.6	+0.1
PRU				ePKPAB	PKPab	PKPab	22 33 45.8	+0.4
PLN	Plauen	149.05	349	ePKPbc	PKPbc	PKPbc	22 33 40.1	-0.4
WERD	Werda	149.06	349	ePKPbc	PKPbc	PKPbc	22 33 40.1	-0.4
WERD				ePKPab	PKPab	PKPab	22 33 45.0	-0.4
TANN	Tannenbergstha	149.06	349	ePKPbc	PKPbc	PKPbc	22 33 40.2	-0.3
TANN				ePKPab	PKPab	PKPab	22 33 45.2	-0.2
GUNZ	Gunzen	149.13	349	ePKPbc	PKPbc	PKPbc	22 33 40.5	-0.2
GUNZ				ePKPab	PKPab	PKPab	22 33 45.7	0.0
VRAC	Vranov	149.16	343	⇑iP	PKPbc	PKPbc	22 33 39.8	-1.0
WERN	Wernitzgruen	149.20	349	ePKPab	PKPab	PKPab	22 33 46.0	0.0
VYHS	Vyhne	149.23	340	eP	PKPbc	PKPbc	22 33 41.0	0.0
VYHS	Vyhne	149.23	340	ePKP	PKPbc	PKPbc	22 33 41.0	0.0
DRGR		149.23	334	⇓iP	PKPbc	PKPbc	22 33 40.6	-0.5
VOIR		149.23	330	⇓iP	PKPbc	PKPbc	22 33 41.1	0.0
NKC	Novy Kostel	149.24	349	⇑ePKP	PKPbc	PKPbc	22 33 40.6	-0.4
NKC				ePKPAB	PKPab	PKPab	22 33 45.8	-0.3
PSZ	Piszkesteto	149.37	338	ePKPdf	PKPdf	PKPdf	22 33 35.7	-1.0
PSZ				ePKPbc	PKPbc	PKPbc	22 33 40.7	-0.7
PSZ				ePKPab	PKPab	PKPab	22 33 46.9	+0.1
PSZ	Piszkesteto	149.37	338	⇓iP	PKPdf	PKPdf	22 33 37.7	+0.9
TREC	Trest	149.47	345	⇑ePKP	PKPbc	PKPbc	22 33 40.9	-0.7
CSS	Prodhromos	149.94	305	ePKPbc	PKPbc	PKPbc	22 33 41.8	-1.4
CSS				ePKPab	PKPab	PKPab	22 33 49.0	-0.6
GRA1	Grafenberg Arr	149.97	350	ePKPbc	PKPbc	PKPbc	22 33 42.3	-0.5
GRA1				ePKPab	PKPab	PKPab	22 33 48.9	-0.3
GRF	Grafenberg Arr	149.97	350	ePKPbc	PKPbc	PKPbc	22 33 42.3	-0.5
GRF				ePKPab	PKPab	PKPab	22 33 48.9	-0.3
KHC	Kasperske Hory	150.06	347	ePKPbc	PKPbc	PKPbc	22 33 42.2	-0.8
KHC				ePKPab	PKPab	PKPab	22 33 49.5	-0.1
KHC	Kasperske Hory	150.06	347	⇑ePKP	PKPbc	PKPbc	22 33 42.7	-0.3
KHC				ePKPAB	PKPab	PKPab	22 33 49.1	-0.5
GZR	Gura Zlata	150.31	332	⇑iP	PKPbc	PKPbc	22 33 42.7	-1.0
BZS	Buzias	150.62	334	⇓iP	PKPbc	PKPbc	22 33 43.7	-0.8
PKSM	Moragy	151.28	338	⇑iP	PKPbc	PKPbc	22 33 45.1	-0.9
VTS	Vitosha	152.23	328	⇑iP	PKPbc	PKPbc	22 33 47.5	-0.8

IDC 05 22:19:38.3±2.3, 6.°69S×150.°34E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/16, mbtmp3.5/4, Error ellipse: s-maj=116.0km s-min=29.8km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.37	228	P	P	P	22 24 15.8	-0.9
1.1nm,0.8s,baz=52,slow=11,SNR=6.6								
ASAR	Alice Springs	23.11	221	P	P	P	22 24 45.5	-0.6
0.9nm,0.7s,baz=57,slow=9.0,SNR=5.1								
FITZ	Fitzroy Crossi	26.62	243	P	P	P	22 25 19.5	+0.8
0.8nm,0.5s,baz=65,slow=10,SNR=2.4								
ILAR	Eielson Array	84.83	22	P	P	P	22 32 14.6	+0.2
0.4nm,0.8s,baz=243,slow=4.0,SNR=4.1								

IDC 05 22:23:19.6±2.2, 6.°95S×150.°69E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, Error ellipse: s-maj=124.7km s-min=28.5km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.46	229	P	P	P	22 27 58.8	-0.1
0.9nm,0.8s,baz=54,slow=10,SNR=4.7								
ASAR	Alice Springs	23.16	222	P	P	P	22 28 27.7	-0.1
0.5nm,0.6s,baz=58,slow=9.1,SNR=5.0								
FITZ	Fitzroy Crossi	26.81	243	P	P	P	22 29 00.6	-1.1
1.0nm,0.7s,baz=58,slow=9.8,SNR=3.0								
ILAR	Eielson Array	84.93	22	P	P	P	22 35 55.6	-0.6
0.2nm,0.3s,baz=238,slow=5.2,SNR=5.4								
TORD	Torodi Ar. Bea	148.88	284	PKPbc	PKPbc	PKPbc	22 43 11.4	+1.0
0.4nm,0.6s,baz=44,slow=3.0,SNR=6.8								

GUC 05 22:27:39.1±0.8, 32.°66S×71.°09W, h9km±2km, MD3.5, ML2.3, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.32	169	⇑iP	Pg	Pg	22 27 46.4	+1.0
ROCH				⇓iP			22 27 46.6	
ROCH				i S	Sg	Sg	22 27 51.7	+1.9
ROCH				AML	AML	AML	22 27 56.3	
comp=E,599nm,0.5s								
JACH	Jahuel	0.42	94	⇑iP	Pg	Pg	22 27 48.1	+0.8
JACH				i S	Sg	Sg	22 27 54.7	+1.9
PEL	Peldehue	0.59	145	⇑iP	Pg	Pg	22 27 51.1	+0.6
PEL				i S	Sg	Sg	22 28 00.0	+1.7
PEL				AML	AML	AML	22 28 06.0	
comp=E,471nm,0.5s								
CHNG	Los Chungos	0.85	335	⇑iP	Pg	Pg	22 27 52.0	-3.4
CHNG				i S	Sg	Sg	22 28 03.6	-2.8
CHNG				AML	AML	AML	22 28 05.7	
comp=E,361nm,0.6s								
FCH	Farellones	0.95	135	eP	Pg	Pg	22 27 55.8	-1.5
FCH				i S	Sg	Sg	22 28 09.6	0.0
FCH				AML	AML	AML	22 28 25.3	
comp=N,76nm,0.5s								
TACH	Talagante	1.00	173	eP	Pg	Pg	22 27 58.2	-0.2
TACH				eS	Sg	Sg	22 28 12.3	+0.9
PCH	Pirque	1.08	154	eP	Pg	Pg	22 27 59.6	-0.1
PCH				i S	Sg	Sg	22 28 14.8	+1.1
LMEL	Las Melosas	1.40	148	eP	Pn	Pn	22 28 05.1	+0.3
LMEL				i S	Sb	Sb	22 28 24.1	+0.6
CACH	El Canelo	1.51	165	eP	Pn	Pn	22 28 08.0	+1.6
CACH				i S	Sn	Sn	22 28 29.2	+3.0

GUC 05 22:35:24.8±0.7, 21.°29S×69.°16W, h88km±10km, ML4.0, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MACH	Maria Elena	1.06	212	⇑iP		Pn	22 35 46.0	+1.0
MACH				i S		Sn	22 36 01.7	+1.5
TOCH	Tocopilla	1.25	230	eP		Pn	22 35 47.8	+0.4
TOCH				i S		Sn	22 36 05.1	+0.7
TOCH				AML		AML	22 36 08.0	
comp=N,6μm,0.2s								
MECH	Mejillones	2.16	213	eP		Pn	22 36 00.1	+1.1
MECH				eS		Sn	22 36 26.2	+0.9
MECH				AML		AML	22 36 42.6	
comp=N,1μm,0.6s								
ANCH	Antofagasta	2.64	206	eP		Pn	22 36 02.5	-3.0
ANCH				eS		Sn	22 36 34.4	-2.3
ANCH				AML		AML	22 36 43.8	
comp=E,663nm,0.2s								

*IDC **05** 22:46:09.7±1.9, 6.°97S×150.°51E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.8/16, mbtmp3.7/7, Error ellipse: s-maj=68.1km s-min=22.2km az=120.0*
*ISCJB **05** 22:46:17.2±3.7, 7.°1S±0.°2×150.°4E±0.°3, h68km±30km, mb3.7/9, Error ellipse: s-maj=50.8km s-min=24.1km az=37.1*
*NEIC **05** 22:46:17.4±2.7, 7.°17S×150.°59E, h62km±22km, mb4.3/3, Error ellipse: s-maj=37.2km s-min=17.3km az=119.0*

ISC 05 22:46:18.0±3.6, 7.°2S±0.°2×150.°5E±0.°3, h64km±30km, n15, σ0°67/14, mb3.9/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.99	236	ePn	Pn	Pn	22 47 17.4	+0.8
PMG				eSn	Sn	Sn	22 48 01.4	-0.8
WRA	Warramunga Arr	20.18	229	P	P	P	22 50 47.8	+0.4
1.9nm,0.8s,baz=52,slow=11,SNR=7.3								
ASAR	Alice Springs	22.87	222	P	P	P	22 51 16.1	-0.2
0.6nm,0.4s,mb3.4,baz=53,slow=9.3,SNR=12								
FITZ	Fitzroy Crossi	26.55	243	P	P	P	22 51 50.1	+0.1
1.0nm,0.5s,mb3.6,baz=60,slow=9.5,SNR=4.7								
SONM	Songino Array	67.13	329	P	P	P	22 57 04.0	-0.9
0.3nm,0.4s,mb3.7,baz=134,slow=6.2,SNR=3.2								
SONM	Songino Array	67.13	329	P	P	P	22 57 04.0	-0.9
MK31	Makanchi Array	80.61	320	eP	P	P	22 58 24.9	+1.1
MKAR	Makanchi Array	80.61	320	P	P	P	22 58 24.1	+0.3
0.2nm,0.5s,mb3.3,baz=103,slow=6.1,SNR=3.6								
ZALV	Zalesovo Beam	81.85	327	P	P	P	22 58 29.8	-0.4
0.4nm,0.4s,mb3.7,baz=107,slow=7.7,SNR=3.2								
MCK	McKinley	83.91	23	eP	P	P	22 58 40.2	-0.4
2.4nm,0.5s,mb4.6								
KURK	Kurchatov	84.22	323	eP	P	P	22 58 41.9	-0.6
2.5nm,1.1s,mb4.3								
EKS2	Erkin-Say	85.15	314	eP	P	P	22 58 48.5	+1.2
2.0nm,0.8s,mb4.3								
ILAR	Eielson Array	85.20	22	P	P	P	22 58 46.5	-0.6
1.4nm,0.8s,mb4.2,baz=253,slow=5.5,SNR=15								
TORD	Torodi Ar. Bea	148.74	283	PKPbc	PKPbc	PKPbc	23 06 00.2	+1.0
2.0nm,0.6s,baz=54,slow=2.9,SNR=33								
TORD	Torodi Ar. Bea	148.74	283	PKPbc	PKPbc	PKPbc	23 06 00.2	+1.0

CASC 05 22:50:15.3±3.0, 11.°02N×86.°28W, h0km±7km, MD3.5, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SSN	San Juan del S	0.50	56	eP

CTAO	**Charters Tower**	**20.36**	**242**	*eP*	**P**	**23 32 49.5 +1.5**
	10nm,1.1s					
COEN	**Coen**	**21.78**	**260**	*eP*	**P**	**23 33 03.2 -0.2**
	78nm,1.0s,mb5.1					
AFI	**Afiamalu**	**22.53**	**99**	LR	LR	23 39 31.7
	comp=Z,78nm,21.3s,MS3.1,baz=94,slow=30					
STKA	**Stephens Creek**	**30.05**	**223**	P	**P**	**23 34 20.4 +0.2**
	1.9nm,0.6s,mb4.0,baz=48,slow=10,SNR=9.0					
STKA				LR	LR	23 45 52.6
	comp=Z,127nm,21.8s,MS3.5,baz=25,slow=35					
WRA	**Warramunga Arr**	**31.04**	**250**	P	**P**	**23 34 28.9 -0.2**
	4.3nm,0.9s,mb4.3,baz=79,slow=9.0,SNR=15					
ASAR	**Alice Springs**	**32.35**	**243**	P	**P**	**23 34 40.2 -0.4**
	1.7nm,0.6s,mb4.1,baz=64,slow=10,SNR=33					
FITZ	**Fitzroy Crossi**	**38.93**	**255**	P	**P**	**23 35 36.6 -0.6**
	3.0nm,0.7s,mb4.2,baz=97,slow=6.5,SNR=12					
FITZ				LR	LR	23 50 34.9
	comp=Z,64nm,18.9s,MS3.5,baz=276,slow=35					
MBWA	**Marble Bar**	**44.75**	**251**	*eP*	**P**	**23 36 24.9 +0.2**
	6.1nm,0.9s,mb4.4					
VIB	**Van Inlet**	**83.02**	**32**	T		01 11 29.8
ILAR	**Eielson Array**	**83.77**	**19**	P	**P**	**23 40 39.4 -0.1**
	0.4nm,0.6s,mb3.8,baz=234,slow=5.4,SNR=8.2					
MKAR	**Makanchi Array**	**93.33**	**317**	P	**P**	**23 41 26.1 +0.4**
	0.2nm,0.7s,mb3.7,baz=87,slow=6.2,SNR=2.4					

GUC 05 23:31:39.0±0.9, 22°.68S×69°.24W, h90km±8km, ML3.5, 2C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.68**	**315**	⇑*iP*	Pn	23 31 56.2	+0.9
MACH				*i*S	Sn	23 32 08.9	+1.4
SPCH	**San Pedro de A**	**0.99**	**103**	*eP*	Pn	23 31 59.1	+0.6
SPCH				*i*S	Sn	23 32 15.2	+1.9
SPCH				AML	AML	23 32 23.1	
	comp=N,3μm,0.3s						
TOCH	**Tocopilla**	**1.06**	**303**	⇓*iP*	Pn	23 31 60.0	+0.6
TOCH				*e*S	Sn	23 32 15.4	+0.6
TOCH				AML	AML	23 32 22.7	
	comp=E,1μm,0.1s						
MECH	**Mejillones**	**1.19**	**249**	⇑*iP*	Pn	23 32 01.1	+0.2
MECH				*e*S	Sn	23 32 18.1	+0.7
MECH				AML	AML	23 32 22.2	
	comp=E,3μm,0.5s						
ANCH	**Antofagasta**	**1.46**	**227**	⇓*iP*	Pn	23 31 59.0	-5.3
ANCH				*e*S	Sn	23 32 17.8	-5.6

*IDC **05** 23:32:46.3±0.9, 0°.42S×122°.15E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/19, mbtmp3.9/7, ML3.4/1, Error ellipse: s-maj=46.9km s-min=16.8km az=66.0*
*ISCJB **05** 23:32:51.2±0.4, 0°.64S±0°.04×121°.81E±0°.04, h52km±5km, mb4.2/18, Error ellipse: s-maj=6.6km s-min=5.7km az=38.4*
*DJA **05** 23:32:51, 0°.61S×121°.86E, h14km, MLv4.6/13*
*NEIC **05** 23:32:51.2±2.5, 0°.56S×121°.95E, h36km±26km, mb4.5/10, Error ellipse: s-maj=22.0km s-min=11.2km az=54.0*
ISC 05 23:32:52.8±0.4, 0°.63S±0°.04×121°.83E±0°.04, h48km±5km, n37, σ1°.14/43, mb4.2/18, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.33**	**214**	P	**Pn**	**23 32 58.2**	**-3.9**
APSI				S	**Sn**	**23 33 06.8**	**-1.8**
LUWI	**Luwuk**	**1.02**	**113**	P	**Pn**	**23 33 08.3**	**-2.5**
LUWI				S	**Sn**	**23 33 22.4**	**-1.7**
MRSI	**Marisa**	**1.11**	**6**	P	**Pn**	**23 33 06.3**	**-5.7**
TOLI	**Toli-Toli**	**2.03**	**329**	P	**Pn**	**23 33 23.2**	**-1.4**
TOLI				S	**Sn**	**23 33 49.4**	**+0.7**
KMSI	**Cibinong**	**2.46**	**61**	P	**Pn**	**23 33 32.5**	**+2.0**
KMSI				S	**Sn**	**23 34 01.2**	**+1.9**
TTSI	**Tana Toraja**	**3.13**	**220**	P	**Pn**	**23 33 40.7**	**+1.0**
TTSI				S	**Sn**	**23 34 19.0**	**+3.2**
KDI	**Kendari**	**3.39**	**167**	P	**Pn**	**23 33 42.7**	**-0.6**
MNI	**Manado**	**3.65**	**56**	P	**Pn**	**23 33 46.1**	**-0.7**
BNSI	**Bone**	**4.12**	**205**	P	**Pn**	**23 33 54.2**	**+0.9**
KAPI	**Kappang**	**4.82**	**205**	*e*Pn	**Pn**	**23 34 01.9**	**-1.0**
BBSI	**Bau Bau**	**4.88**	**171**	P	**Pn**	**23 34 04.3**	**+0.6**
BKSI	**Bulukumba**	**4.96**	**200**	P	**Pn**	**23 34 05.1**	**+0.3**
LBMI	**Labuha**	**5.67**	**90**	P	**Pn**	**23 34 15.1**	**+0.6**
	0.7nm2μm137nm,0.9s						
NLAI	**Namlea**	**5.87**	**116**	P	**Pn**	**23 34 17.8**	**+0.6**
	0.5nm1μm50nm,0.7s						
NLAI				S	**Sn**	**23 35 25.8**	**+2.6**
	0.5nm1μm50nm,0.7s						
MYLDM	**Lahad Datu**	**6.67**	**330**	P	**Pn**	**23 34 29.5**	**+1.3**
FITZ	**Fitzroy Crossi**	**17.76**	**168**	P	**Pn**	**23 36 57.4**	**+0.8**
	0.1nm,0.3s,baz=348,slow=13,SNR=2.7						
WRA	**Warramunga Arr**	**22.76**	**148**	P	**P**	**23 37 51.1**	**-0.1**
	2.3nm,0.7s,mb3.7,baz=332,slow=9.9,SNR=10						
SSLB	**Suanglung**	**24.29**	**358**	*eP*	**P**	**23 38 06.0**	**+0.2**
	12nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**25.72**	**154**	P	**P**	**23 38 18.6**	**-0.2**
	0.8nm,0.8s,mb3.3,baz=336,slow=8.0,SNR=7.6						
CMAR	**Chiang Mai Arr**	**29.43**	**311**	P	**P**	**23 38 53.7**	**+1.6**
	1.0nm,0.7s,mb3.7,baz=136,slow=8.0,SNR=8.7						
CHTO	**Chiang Mai**	**29.65**	**312**	*eP*	**P**	**23 38 55.1**	**+1.0**
	2.2nm,0.8s,mb3.9						
MJAR	**Matsushiro Arr**	**39.99**	**21**	P	**P**	**23 40 20.6**	**-2.3**
	0.9nm,0.3s,mb4.0,baz=194,slow=8.9,SNR=7.4						
LSA	**Lhasa**	**42.03**	**318**	P	**P**	**23 40 39.2**	**-0.6**
GTA	**Gaotai**	**44.67**	**336**	*eP*	**P**	**23 41 01.6**	**+0.7**
GTA				pP	pP	23 41 05.4	-8.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
ULN	**Ulaanbaatar**	**49.99**	**347**	*eP*	**P**	**23 41 41.6**	**-0.6**
	comp=Z,5.2nm,1.0s,mb4.5						
SONM	**Songino Array**	**50.11**	**346**	P	**P**	**23 41 43.0**	**-0.1**
	comp=Z,2.4nm,0.8s,mb4.3,baz=162,slow=8.4,SNR=14						
MK31	**Makanchi Array**	**58.55**	**329**	*eP*	**P**	**23 42 44.1**	**-0.3**
MKAR	**Makanchi Array**	**58.55**	**329**	P	**P**	**23 42 44.4**	**0.0**
	comp=Z,2.1nm,0.6s,mb4.3,baz=125,slow=8.5,SNR=26						
MKAR	**Makanchi Array**	**58.55**	**329**	P	**P**	**23 42 44.4**	**0.0**
TKM2	**Tokmak 2**	**59.96**	**322**	*eP*	**P**	**23 42 54.6**	**+0.3**
	comp=Z,3.5nm,0.7s,mb4.5						
KBL	**Kabul**	**60.46**	**311**	*eP*	**P**	**23 42 57.7**	**-0.2**
	comp=Z,15nm,0.8s,mb5.1						
AAK	**Ala-Archa**	**60.48**	**321**	*eP*	**P**	**23 42 58.1**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.5						
EKS2	**Erkin-Say**	**60.95**	**321**	*eP*	**P**	**23 43 01.6**	**+0.6**
	comp=Z,3.5nm,0.8s,mb4.5						
ZALV	**Zalesovo Beam**	**62.41**	**336**	P	**P**	**23 43 08.9**	**-1.7**
	comp=Z,0.8nm,0.5s,mb4.1,baz=120,slow=6.0,SNR=5.4						
KURK	**Kurchatov**	**62.95**	**331**	*eP*	**P**	**23 43 12.9**	**-1.4**
	comp=Z,4.2nm,0.9s,mb4.6						
KKAR	**Karatay Array**	**63.24**	**320**	*eP*	**P**	**23 43 16.0**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.9						
ABKAR	**Akbulak array**	**72.52**	**323**	*eP*	**P**	**23 44 13.6**	**-1.0**
	comp=Z,0.6nm,0.8s,mb3.6						

IDC 05 23:37:27.2±2.0, 6°.93S×150°.38E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.7/16, mbtmp3.7/5, MS3.3/1, Ms1 3.3/1, ms1mx2.6/23, Error ellipse: s-maj=84.5km s-min=24.9km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.24**	**229**	P	P	23 42 04.7	+0.5
	0.7nm,0.5s,baz=52,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**22.96**	**222**	P	P	23 42 33.1	-0.4
	0.8nm,0.6s,baz=59,slow=10,SNR=9.6						
FITZ	**Fitzroy Crossi**	**26.54**	**243**	P	P	23 43 06.5	-0.4
	2.2nm,1.1s,baz=71,slow=8.7,SNR=3.0						
DAV	**Davao City (W)**	**28.38**	**299**	LR	LR	23 53 28.1	
	comp=Z,57nm,19.2s,baz=224,slow=34						
MKAR	**Makanchi Array**	**80.36**	**320**	P	P	23 49 41.4	+0.9
	0.2nm,0.5s,baz=103,slow=5.5,SNR=3.7						
ILAR	**Eielson Array**	**85.03**	**22**	P	P	23 50 04.2	-0.1
	1.0nm,0.8s,baz=250,slow=5.6,SNR=14						

*IDC **05** 23:42:53.4±2.0, 6°.99S×150°.53E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/16, mbtmp3.8/7, Error ellipse: s-maj=70.7km s-min=22.6km az=121.0*
*ISCJB **05** 23:42:59.0±4.3, 7°.1S±0°.2×150°.5E±0°.3, h54km±33km, mb3.8/7, Error ellipse: s-maj=58.5km s-min=25.5km az=34.8*
*NEIC **05** 23:43:00.7±3.2, 7°.12S×150°.53E, h56km±23km, mb4.1/1, Error ellipse: s-maj=47.2km s-min=18.4km az=114.0*
ISC 05 23:42:60.0±4.3, 7°.2S±0°.2×150°.6E±0°.3, h51km±34km, n10, σ0°.48/10, mb3.8/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.11**	**237**	*e*Pn	**Pn**	**23 43 60.0**	**-0.3**
PMG				*e*Sn	**Sn**	**23 44 47.5**	**+0.4**
WRA	**Warramunga Arr**	**20.29**	**230**	P	**P**	**23 47 31.4**	**-0.2**
	0.9nm,0.4s,baz=51,slow=10,SNR=4.8						
ASAR	**Alice Springs**	**22.98**	**223**	P	**P**	**23 48 00.1**	**-0.1**
	0.8nm,0.4s,mb3.5,baz=54,slow=9.2,SNR=12						
FITZ	**Fitzroy Crossi**	**26.67**	**244**	P	**P**	**23 48 34.2**	**-0.2**
	1.0nm,0.6s,mb3.6,baz=73,slow=9.3,SNR=5.6						
SONM	**Songino Array**	**67.19**	**329**	P	**P**	**23 53 48.0**	**-0.6**
	0.3nm,0.5s,mb3.6,baz=138,slow=4.7,SNR=3.7						
MKAR	**Makanchi Array**	**80.69**	**320**	P	**P**	**23 55 08.4**	**+0.9**
	0.3nm,0.5s,mb3.5,baz=109,slow=6.6,SNR=3.1						
ZALV	**Zalesovo Beam**	**81.92**	**327**	P	**P**	**23 55 13.3**	**-0.6**
	1.0nm,0.3s,mb4.2,baz=119,slow=5.1,SNR=3.0						
KURK	**Kurchatov**	**84.29**	**323**	*eP*	**P**	**23 55 26.2**	**0.0**
	1.2nm,0.6s,mb4.2						
ILAR	**Eielson Array**	**85.13**	**22**	P	**P**	**23 55 30.8**	**+0.7**
	1.6nm,0.8s,mb4.2,baz=254,slow=5.2,SNR=19						
TORD	**Torodi Ar. Bea**	**148.87**	**284**	PKPbc	PKPbc	00 02 42.9	-0.1
	2.4nm,0.6s,baz=81,slow=3.0,SNR=3.9						

*TEH **06** 00:00:14.1, 25°.97N×53°.59E, h12km*
*ISCJB **06** 00:00:19.0±0.6, 26°.55N±0°.05×53°.74E±0°.05, h10km, Error ellipse: s-maj=7.1km s-min=6.5km az=173.6*
*CSEM **06** 00:00:18.5±0.4, 26°.75N×53°.86E, h10km, ML3.7, Error ellipse: s-maj=17.7km s-min=6.3km az=10.0*
*SGS **06** 00:00:20.4, 26°.75N×53°.76E, h6km*
*OMAN **06** 00:00:37.2, 25°.80N×55°.14E, h0km*
ISC 06 00:00:20.2±0.6, 26°.53N±0°.05×53°.81E±0°.07, h10km, n20, σ0°.89/24, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	**Banah**	**2.32**	**104**	P	**Pn**	**00 00 57.2**	**-1.2**
	SNR=38						
BANOM	**Banah**	**2.32**	**104**	P	**Pn**	**00 00 57.2**	**-1.2**
	SNR=38						
ASUD	**Al Ashush, Dub**	**2.34**	**144**	P	**Pn**	**00 00 59.5**	**+0.8**
	SNR=46						
ASUD	**Al Ashush, Dub**	**2.34**	**144**	P	**Pn**	**00 00 59.5**	**+0.8**
	SNR=46						
IBND	**Bandar-abas**	**2.60**	**69**	*e*Pn	**Pn**	**00 01 01.5**	**-0.9**
IBND				*e*Pn	**Pn**	**00 01 01.6**	**-0.8**
IBND				*e*Sg	**Sg**	**00 01 48.2**	**+4.2**
IBND				*e*		00 02 25.7	
	comp=Z,2μm,0.3s						
ASHO	**Ashiyiah**	**2.74**	**132**	P	**Pn**	**00 01 04.1**	**-0.1**
	SNR=17						
ASHO	**Ashiyiah**	**2.74**	**132**	P	**Pn**	**00 01 04.1**	**0.0**
	SNR=17						
ISRV	**Sarvestan**	**2.91**	**348**	*e*Pn	**Pn**	**00 01 07.1**	**+0.5**
ISRV				*e*Sg	**Sg**	**00 02 00.9**	**+7.1**
ISRV				*e*		00 02 11.5	
	comp=Z,831nm,0.5s						
SLWS		**3.33**	**240**	P	**Pn**	**00 01 13.4**	**+1.0**
SLWS		**3.33**	**240**	P	**Pn**	**00 01 13.4**	**+1.0**
IPAR	**Pars**	**3.37**	**349**	*e*Pn	**Pn**	**00 01 13.4**	**+0.5**
IPAR				*e*		00 02 29.1	
	comp=Z,468nm,0.5s						
BTHS		**3.65**	**228**	P	**Pn**	**00 01 16.9**	**+0.3**
BTHS		**3.65**	**228**	P	**Pn**	**00 01 17.0**	**+0.3**
IMEH	**Mehriz**	**4.90**	**8**	*e*Pn	**Pn**	**00 01 34.9**	**+1.0**
IMEH				*e*		00 01 55.1	
	comp=Z,82nm,0.1s						
IBAF	**Bafgh**	**5.28**	**17**	*e*Pn	**Pn**	**00 01 39.7**	**+0.6**
IBAF				*e*		00 01 43.5	
	comp=Z,109nm,0.1s						
ISAD	**Sadrabad**	**5.37**	**359**	*e*Pn	**Pn**	**00 01 41.4**	**+1.0**
ISAD				*e*		00 02 49.3	
	comp=Z,129nm,0.1s						
IZEF	**Zefreh**	**6.48**	**349**	*e*Pn	**Pn**	**00 01 55.0**	**-0.6**
IZEF				*e*		00 03 08.2	
	comp=Z,71nm,0.2s						
IPIR	**Pirpir**	**6.64**	**338**	*e*Pn	**Pn**	**00 01 56.6**	**-1.3**
IPIR				*e*		00 03 13.8	
	comp=Z,61nm,0.1s						
IKLH	**Kolahrood**	**7.04**	**345**	*e*	**Pn**	**00 02 11.4**	**+8.0**
	comp=Z,59nm,0.1s						
IKLH				*e*Pn	**Pn**	**00 02 02.9**	**-0.5**
ASYS		**8.50**	**279**	P	**Pn**	**00 02 21.8**	**-1.6**

IDC 06 00:14:30.7±4.7, 6°.68S×128°.91E, h249km±48km, mb3.1/1, mb1 3.5/4, mb1mx3.1/17, mbtmp3.3/4, Error ellipse: s-maj=66.2km s-min=19.9km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.79**	**195**	P	Pn	00 17 10.6	-1.1
	0.4nm,0.3s,baz=23,slow=12,SNR=20						
FITZ				S	S	00 19 15.2	-8.2
	0.3nm,0.3s,baz=288,slow=20,SNR=6.7						
WRA	**Warramunga Arr**	**14.20**	**159**	P	Pn	00 17 40.7	-0.6
	0.8nm,0.3s,baz=338,slow=12,SNR=8.3						
WRA				S	S	00 20 16.1	-2.4
	0.4nm,0.3s,baz=337,slow=23,SNR=3.6						
ASAR	**Alice Springs**	**17.56**	**165**	P	P	00 18 20.6	+2.0
	1.9nm,0.3s,baz=346,slow=12,SNR=93						
ASAR				S	S	00 21 27.5	-0.4
	0.0nm,0.3s,baz=351,slow=22,SNR=3.6						
MKAR	**Makanchi Array**	**67.37**	**327**	P	P	00 24 58.8	-0.4
	0.3nm,0.4s,baz=118,slow=7.0,SNR=4.1						

IDC 06 00:26:28.0±5.5, 39°.04N×110°.67E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.3/24, mbtmp3.5/3, ML2.9/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/28, Error ellipse: s-maj=115.1km s-min=25.1km az=85.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.32**	**342**	Pn	Pn	00 28 44.3	+0.8
	0.1nm,0.3s,baz=156,slow=14,SNR=9.0						
SONM				Lg		00 31 23.0	
	0.3nm,0.3s,baz=158,slow=29,SNR=5.9						
KSRS	**Korea Array**	**13.65**	**91**	LR	LR	00 35 18.3	
	comp=Z,18nm,20.3s,baz=235,slow=39						
MKAR	**Makanchi Array**	**22.10**	**300**	P	P	00 31 24.8	+0.1
	0.5nm,0.7s,baz=91,slow=10,SNR=4.3						
CMAR	**Chiang Mai Arr**	**22.90**	**210**	P	P	00 31 33.3	-0.1
	2.2nm,0.7s,baz=12,slow=9.8,SNR=12						

*ATH **06** 00:47:57.9, 35°.24N×21°.42E, h17km±8km, MD3.7/8*
*NEIC **06** 00:47:57.9, 35°.24N×21°.42E, h17km, MD3.7(ATH), After ATH.*
*ISCJB **06** 00:48:02.0±0.7, 35°.41N±0°.04×21°.54E±0°.07, h115km±9km, Error ellipse: s-maj=10.3km s-min=5.2km az=145.9*
*CSEM **06** 00:48:01.3±0.2, 35°.25N×21°.38E, h80km, ML3.0/13, Error ellipse: s-maj=6.4km s-min=4.3km az=70.0*
*THE **06** 00:48:02.8, 35°.45N×21°.66E, h119km±8km, ML3.0/13, Error ellipse: s-maj=9.1km s-min=2.0km az=59.0*
ISC 06 00:48:02.6±0.7, 35°.35N±0°.04×21°.50E±0°.06, h98km±16km, n132, σ1°.00/170, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.55**	**7**	*e*Pn	**Pn**	**00 48 29.0**	**-0.4**
PYL				*e*Sn	**Sn**	**00 48 50.5**	**+0.8**
PYL	**PYLOS**	**1.55**	**7**	P	**Pn**	**00 48 28.9**	**-0.5**
PYL	**PYLOS**	**1.55**	**7**	P	**Pn**	**00 48 28.9**	**-0.5**
PYL				*e*Sn	**Sn**	**00 48 50.5**	**+0.8**
KYTH	**Kithira**	**1.56**	**53**	*e*Pn	**Pn**	**00 48 29.1**	**-0.3**
KYTH	**Kithira**	**1.56**	**53**	*e*Pn	**Pn**	**00 48 29.1**	**-0.3**
VLI	**Veliai**	**1.80**	**40**	P	**Pn**	**00 48 32.4**	**0.0**
VLI	**Veliai**	**1.80**	**40**	*e*Pn	**Pn**	**00 48 32.6**	**+0.2**
VLI				*e*Sn	**Sn**	**00 48 56.8**	**+1.7**
VLI	**Veliai**	**1.80**	**40**	P	**Pn**	**00 48 32.4**	**0.0**
VLI				*e*Sn	**Sn**	**00 48 56.8**	**+1.7**
ITM	**Ithomi**	**1.86**	**11**	P	**Pn**	**00 48 32.9**	**-0.3**
ITM	**Ithomi**	**1.86**	**11**	*e*Pn	**Pn**	**00 48 32.6**	**-0.6**
ITM	**Ithomi**	**1.86**	**11**	P	**Pn**	**00 48 32.9**	**-0.3**
ITM	**Ithomi**	**1.86**	**11**	*e*Pn	**Pn**	**00 48 32.6**	**-0.6**
ITM	**Ithomi**	**1.86**	**11**	P	**Pn**	**00 48 32.9**	**-0.3**
KARN	**Karanos**	**1.98**	**88**	*e*Pn	**Pn**	**00 48 33.8**	**-1.0**
KARN	**Karanos**	**1.98**	**88**	P	**Pn**	**00 48 33.7**	**-1.1**
KARN				S	**Sn**	**00 48 58.4**	**-0.9**
KARN	**Karanos**	**1.98**	**88**	*e*Pn	**Pn**	**00 48 33.8**	**-1.0**
KARN				S	**Sn**	**00 48 58.4**	**-0.9**
VLX	**Vlachokerasia**	**2.14**	**19**	*e*PN	**Pn**	**00 48 37.6**	**+0.8**
VLX	**Vlachokerasia**	**2.14**	**19**	P	**Pn**	**00 48 35.7**	**-1.1**
VLX				S	**Sn**	**00 49 02.4**	**-0.6**
VLX	**Vlachokerasia**	**2.14**	**19**	P	**Pn**	**00 48 35.7**	**-1.1**
VLX	**Vlachokerasia**	**2.14**	**19**	*e*PN	**Pn**	**00 48 37.6**	**+0.8**
VLX				S	**Sn**	**00 49 02.4**	**-0.6**
VAM	**Vamos**	**2.21**	**88**	*e*PB	**Pn**	**00 48 36.8**	**-1.0**
VAM				*e*SN	**Sn**	**00 49 06.5**	**+1.8**
DID	**Didima**	**2.57**	**33**	*e*PN	**Pn**	**00 48 42.3**	**-0.2**
DID	**Didima**	**2.57**	**33**	P	**Pn**	**00 48 42.1**	**-0.4**
DID				S	**Sn**	**00 49 12.4**	**-0.7**
DID	**Didima**	**2.57**	**33**	*e*Pn	**Pn**	**00 48 42.3**	**-0.2**
DID				S	**Sn**	**00 49 12.4**	**-0.7**
GUR	**Goura**	**2.67**	**15**	*e*PB	**Pn**	**00 48 45.0**	**+1.2**
GUR	**Goura**	**2.67**	**15**	P	**Pn**	**00 48 44.4**	**+0.6**
GUR				S	**Sn**	**00 49 15.6**	**+0.1**
GUR	**Goura**	**2.67**	**15**	P	**Pn**	**00 48 44.4**	**+0.6**
GUR				S	**Sn**	**00 49 15.6**	**+0.1**
RLS	**Riolos of Patr**	**2.70**	**360**	P	**Pn**	**00 48 45.4**	**+1.1**
RLS	**Riolos of Patr**	**2.70**	**360**	*e*PN	**Pn**	**00 48 44.6**	**+0.3**
RLS	**Riolos of Patr**	**2.70**	**360**	*e*Pn	**Pn**	**00 48 44.6**	**+0.3**
RLS	**Riolos of Patr**	**2.70**	**360**	P	**Pn**	**00 48 45.4**	**+1.1**
SIVA	**Sivas**	**2.73**	**96**	*e*PN	**Pn**	**00 48 44.2**	**-0.5**
SIVA	**Sivas**	**2.73**	**96**	P	**Pn**	**00 48 44.1**	**-0.6**
SIVA	**Sivas**	**2.73**	**96**	*e*Pn	**Pn**	**00 48 44.2**	**-0.5**
LAKA	**Lakka**	**2.91**	**8**	P	**Pn**	**00 48 48.3**	**+1.3**
LAKA				S	**Sn**	**00 49 22.0**	**+0.8**
LAKA	**Lakka**	**2.91**	**8**	P	**Pn**	**00 48 48.3**	**+1.3**
LAKA				S	**Sn**	**00 49 22.0**	**+0.8**
VLS	**Valsamata**	**2.91**	**346**	P	**Pn**	**00 48 45.5**	**-1.6**
VLS				S	**Sn**	**00 49 18.6**	**-2.7**
VLS	**Valsamata**	**2.91**	**346**	P	**Pn**	**00 48 45.6**	**-1.5**
VLS				S	**Sn**	**00 49 18.9**	**-2.4**
VLS	**Valsamata**	**2.91**	**346**	P	**Pn**	**00 48 45.6**	**-1.5**
VLS				S	**Sn**	**00 49 18.9**	**-2.4**
LTK	**Loutraki**	**2.92**	**23**	*e*PN	**Pn**	**00 48 47.5**	**+0.4**
LTK	**Loutraki**	**2.92**	**23**	P	**Pn**	**00 48 47.4**	**+0.3**
LTK				S	**Sn**	**00 49 19.2**	**-2.2**
LTK	**Loutraki**	**2.92**	**23**	P	**Pn**	**00 48 47.4**	**+0.3**
TRIZ	**Trizonia**	**3.04**	**9**	P	**Pn**	**00 48 49.9**	**+1.1**
TRIZ				S	**Sn**	**00 49 24.9**	**+0.4**
TRIZ	**Trizonia**	**3.04**	**9**	P	**Pn**	**00 48 49.9**	**+1.1**
TRIZ				S	**Sn**	**00 49 24.9**	**+0.4**
KALE	**Kalithea**	**3.08**	**9**	P	**Pn**	**00 48 50.6**	**+1.3**
KALE				S	**Sn**	**00 49 23.3**	**-2.0**
KALE	**Kalithea**	**3.08**	**9**	P	**Pn**	**00 48 50.6**	**+1.3**
KALE				S	**Sn**	**00 49 23.3**	**-2.0**
EFP	**Efpalio**	**3.09**	**6**	*e*PN	**Pn**	**00 48 51.0**	**+1.6**
EFP	**Efpalio**	**3.09**	**6**	P	**Pn**	**00 48 50.8**	**+1.4**
EFP				S	**Sn**	**00 49 26.4**	**+0.9**
EFP	**Efpalio**	**3.09**	**6**	P	**Pn**	**00 48 50.8**	**+1.4**
EFP				S	**Sn**	**00 49 26.4**	**+0.9**
VLY	**Voula,Athens**	**3.11**	**36**	P	**Pn**	**00 48 51.8**	**+2.1**
VLY	**Voula,Athens**	**3.11**	**36**	*e*PN	**Pn**	**00 48 50.6**	**+0.9**
VLY	**Voula,Athens**	**3.11**	**36**	*e*Pn	**Pn**	**00 48 50.6**	**+0.9**
VLY	**Voula,Athens**	**3.11**	**36**	P	**Pn**	**00 48 51.8**	**+2.1**
DSF	**Desfina**	**3.16**	**15**	P	**Pn**	**00 48 50.2**	**-0.2**
DSF				S	**Sn**	**00 49 26.0**	**-1.3**
DSF	**Desfina**	**3.16**	**15**	P	**Pn**	**00 48 50.2**	**-0.2**
DSF				S	**Sn**	**00 49 26.0**	**-1.3**
ATHU	**Athens Univers**	**3.19**	**35**	P	**Pn**	**00 48 51.8**	**+1.0**
ATHU				S	**Sn**	**00 49 27.6**	**-0.4**
ATHU	**Athens Univers**	**3.19**	**35**	P	**Pn**	**00 48 51.8**	**+1.0**
ATHU				S	**Sn**	**00 49 27.6**	**-0.4**
LAST	**Lasithi**	**3.27**	**92**	P	**Pn**	**00 48 51.9**	**+0.1**
LAST	**Lasithi**	**3.27**	**92**	*e*PN	**Pn**	**00 48 51.5**	**-0.3**
LAST	**Lasithi**	**3.27**	**92**	P	**Pn**	**00 48 51.9**	**+0.1**
LAST	**Lasithi**	**3.27**	**92**	*e*Pn	**Pn**	**00 48 51.5**	**-0.3**
LAST	**Lasithi**	**3.27**	**92**	P	**Pn**	**00 48 51.9**	**+0.1**
PTL	**Penteli**	**3.30**	**35**	P	**Pn**	**00 48 53.0**	**+0.8**
PTL	**Penteli**	**3.30**	**35**	*e*PN	**Pn**	**00 48 52.5**	**+0.3**
PTL	**Penteli**	**3.30**	**35**	*e*Pn	**Pn**	**00 48 52.5**	**+0.3**
PTL	**Penteli**	**3.30**	**35**	P	**Pn**	**00 48 53.0**	**+0.8**
THR5	**Thira Island,**	**3.30**	**70**	P	**Pn**	**00 48 51.8**	**-0.5**
**THR

Error ellipse: s-maj=0.8km s-min=1.0km az=0.0

ISC 06 00:51:43.4±0.8,**41°80N**±0°.04×**20°19E**±0°.05,**h10**km,**n28,**
σ0**98**/54,**10C-4D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.33**	**318**	*e*PG	**Pg**	**00 51 49.8**	**-0.1**
PUK				*i* SG	**Sg**	**00 51 54.2**	**-0.2**
PUK	**Puka**	**0.33**	**318**	*e*Pg	**Pg**	**00 51 49.8**	**-0.1**
	SNR=117						
PUK				*i* Sg	**Sg**	**00 51 54.2**	**-0.2**
	SNR=117						
BCI	**Bajram Curri**	**0.58**	**351**	*e*PG	**Pg**	**00 51 54.1**	**-0.5**
BCI				*i* SG	**Sg**	**00 52 02.5**	**+0.4**
BCI	**Bajram Curri**	**0.58**	**351**	*e*Pg	**Pg**	**00 51 54.1**	**-0.5**
	SNR=103						
BCI				*i* Sg	**Sg**	**00 52 02.5**	**+0.3**
	SNR=103						
ULC	**Ulcinj**	**0.72**	**284**	*e*Pg	**Pg**	**00 51 56.6**	**-0.7**
ULC				*e*Sg	**Sg**	**00 52 07.3**	**+0.6**
ULC	**Ulcinj**	**0.72**	**284**	*e*Pg	**Pg**	**00 51 56.6**	**-0.7**
ULC				*e*Sg	**Sg**	**00 52 07.3**	**+0.6**
PVY	**Plav**	**0.81**	**349**	⇑*i*Pg	**Pg**	**00 51 57.9**	**-1.2**
PVY				*e*Sg	**Sg**	**00 52 10.0**	**+0.3**
PVY	**Plav**	**0.81**	**349**	⇑*i*Pg	**Pg**	**00 51 57.9**	**-1.2**
PVY				*e*Sg	**Sg**	**00 52 10.0**	**+0.3**
KRUS	**Krusevo**	**0.90**	**118**	*e*Pn	**Pn**	**00 52 02.7**	**+0.6**
PDG	**Podgorica**	**0.94**	**313**	⇑*i*Pg	**Pg**	**00 52 00.1**	**-1.3**
PDG				*e*Sg	**Sg**	**00 52 13.6**	**0.0**
TTG	**Podgorica**	**0.94**	**313**	⇑*i*Pg	**Pg**	**00 52 00.1**	**-1.3**
TTG				*e*Sg	**Sg**	**00 52 13.6**	**0.0**
BUM	**Brajici-Budva**	**1.09**	**298**	⇑*i*Pg	**Pg**	**00 52 03.4**	**-0.8**
BUM				*e*Sg	**Sg**	**00 52 19.3**	**+0.9**
BUM	**Brajici-Budva**	**1.09**	**298**	⇑*i*Pg	**Pg**	**00 52 03.4**	**-0.8**
BUM				*e*Sg	**Sg**	**00 52 19.3**	**+0.9**
BEY	**Berane**	**1.10**	**349**	⇑*i*Pg	**Pg**	**00 52 03.4**	**-1.0**
BEY				*e*Sg	**Sg**	**00 52 19.6**	**+0.9**
IVA	**Berane**	**1.10**	**349**	⇑*i*Pg	**Pg**	**00 52 03.4**	**-1.0**
IVA				*e*Sg	**Sg**	**00 52 19.6**	**+0.9**
BIA	**Bitola**	**1.15**	**132**	*e*Pn	**Pn**	**00 52 07.4**	**+1.9**
BIA				*e*Sn	**Sn**	**00 52 26.0**	**+4.7**
NKY	**Niksic**	**1.35**	**319**	⇓*i*Pg	**Pg**	**00 52 08.2**	**-1.0**
NKY				*e*Sg	**Sg**	**00 52 27.6**	**+0.9**
NKY	**Niksic**	**1.35**	**319**	⇓*i*Pg	**Pg**	**00 52 08.2**	**-1.0**
NKY				*e*Sg	**Sg**	**00 52 27.6**	**+0.9**
HCY	**Herceg Novi**	**1.42**	**298**	⇓*i*Pg	**Pg**	**00 52 08.9**	**-1.6**
HCY				*e*Sg	**Sg**	**00 52 30.3**	**+1.4**
HCY	**Herceg Novi**	**1.42**	**298**	⇓*i*Pg	**Pg**	**00 52 08.9**	**-1.6**
HCY				*e*Sg	**Sg**	**00 52 30.3**	**+1.4**
BRY	**Bratogost**	**1.65**	**313**	*e*Pg	**Pg**	**00 52 13.7**	**-1.2**
BRY				*e*Sg	**Sg**	**00 52 37.8**	**+1.5**
BRY	**Bratogost**	**1.65**	**313**	*e*Pg	**Pg**	**00 52 13.7**	**-1.2**
BRY				*e*Sg	**Sg**	**00 52 37.8**	**+1.5**
UPM	**Unac-Piva**	**1.69**	**326**	⇑*i*Pn	**Pn**	**00 52 14.7**	**+1.7**
UPM				*e*Sn	**Sn**	**00 52 39.2**	**+4.5**
UPM	**Unac-Piva**	**1.69**	**326**	⇑*i*Pn	**Pn**	**00 52 14.7**	**+1.7**
STON	**Ston**	**2.14**	**301**	*e*Pn	**Pn**	**00 52 18.9**	**-0.2**
STON				Sn	**Sn**	**00 52 50.4**	**+4.8**
STON	**Ston**	**2.14**	**301**	*e*Pn	**Pn**	**00 52 18.8**	**-0.2**
STON				Sn	**Sn**	**00 52 50.4**	**+4.8**
NVLJ	**Novalja**	**4.77**	**307**	*e*Pn	**Pn**	**00 52 54.7**	**-0.6**
NVLJ				Sn	**Sn**	**00 53 50.3**	**-0.3**
NVLJ	**Novalja**	**4.77**	**307**	*e*Pn	**Pn**	**00 52 54.6**	**-0.7**
NVLJ				Sn	**Sn**	**00 53 50.3**	**-0.3**

*ISK **06** 01:08:53.7, 37°.32N×27°.00E, h4km, MD2.6*
*ISCJB **06** 01:08:54.8±0.6, 37°.34N±0°.03×27°.06E±0°.04, h9km±6km, Error ellipse: s-maj=5.4km s-min=4.5km az=172.8*
*DDA **06** 01:08:54.5, 37°.37N×27°.04E, h7km±5km, Md2.9*
*CSEM **06** 01:08:54.4±0.1, 37°.34N×27°.00E, h8km, MD2.6, Error ellipse: s-maj=3.7km s-min=2.5km az=62.0*
*THE **06** 01:08:55.0, 37°.33N×27°.17E, h10km±8km, ML2.1/1, Error ellipse: s-maj=9.5km s-min=1.0km az=110.0*

ISC 06 01:08:54.9±0.5,**37°35N**±0°.02×**27°02E**±0°.04,**h9**km±8km,
n34,σ0**82**/54,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.37**	**141**	*e*PG	**Pg**	**01 09 01.2**	**-1.0**
BODT				*e*SG	**Sg**	**01 09 07.3**	**+0.2**
BODT	**Bodrum**	**0.37**	**141**	*e*Pg	**Pg**	**01 09 01.2**	**-1.0**
BODT				*e*Sg	**Sg**	**01 09 07.3**	**+0.2**
BDRM	**Kayabasi**	**0.44**	**130**	*i* P	**Pg**	**01 09 03.4**	**-0.1**
BDRM				*i* S	**Sg**	**01 09 10.2**	**+0.8**
BDRM	**Kayabasi**	**0.44**	**130**	*i* P	**Pg**	**01 09 03.4**	**-0.2**
BDRM				*i* S	**Sg**	**01 09 10.2**	**+0.8**
MLSB	**Milas**	**0.61**	**95**	*e*PG	**Pg**	**01 09 06.5**	**-0.1**
MLSB				*e*SG	**Sg**	**01 09 15.6**	**+1.0**
MLSB	**Milas**	**0.61**	**95**	*e*Pg	**Pg**	**01 09 06.5**	**-0.2**
MLSB				*e*Sg	**Sg**	**01 09 15.6**	**+1.0**
AYDN	**Tasoluk**	**0.75**	**65**	*i* P	**Pg**	**01 09 08.6**	**-0.8**
AYDN				*i* S	**Sg**	**01 09 19.8**	**+0.6**
AYDN	**Tasoluk**	**0.75**	**65**	*i* P	**Pg**	**01 09 08.6**	**-0.8**
AYDN				*i* S	**Sg**	**01 09 19.8**	**+0.6**
NIS1	**Nisyros Isl.**	**0.76**	**170**	P	**Pg**	**01 09 08.1**	**-1.4**
NIS1				S	**Sg**	**01 09 20.2**	**+0.8**
NIS1	**Nisyros Isl.**	**0.76**	**170**	P	**Pg**	**01 09 08.1**	**-1.4**
NIS1				S	**Sg**	**01 09 20.2**	**+0.8**
DAT	**Datca**	**0.77**	**144**	*e*PG	**Pg**	**01 09 08.8**	**-0.8**
DAT	**Datca**	**0.77**	**144**	*e*Pg	**Pg**	**01 09 08.8**	**-0.9**
YER	**Yerkesik**	**1.03**	**102**	*e*PG	**Pg**	**01 09 14.8**	**+0.1**
YER	**Yerkesik**	**1.03**	**102**	*e*Pg	**Pg**	**01 09 14.8**	**+0.1**
BLCB	**Balcova**	**1.03**	**1**	*e*PG	**Pg**	**01 09 14.6**	**-0.2**
BLCB	**Balcova**	**1.03**	**1**	P	**Pg**	**01 09 14.4**	**-0.4**
BLCB				S	**Sg**	**01 09 29.0**	**+0.8**
BLCB	**Balcova**	**1.03**	**1**	P	**Pg**	**01 09 14.4**	**-0.4**
BLCB	**Balcova**	**1.03**	**1**	*e*Pg	**Pg**	**01 09 14.6**	**-0.2**
BLCB				S	**Sg**	**01 09 29.0**	**+0.8**
IZM	**Izmir**	**1.06**	**10**	*e*PN	**Pn**	**01 09 15.6**	**-0.4**
IZM	**Izmir**	**1.06**	**10**	*e*Pn	**Pn**	**01 09 15.6**	**-0.4**
URLA	**Izmir**	**1.06**	**342**	*i* P	**Pg**	**01 09 14.4**	**-0.9**
URLA				*i* S	**Sg**	**01 09 30.0**	**+0.8**
URLA	**Izmir**	**1.06**	**342**	*i* P	**Pg**	**01 09 14.4**	**-0.9**
URLA				*i* S	**Sg**	**01 09 30.0**	**+0.9**
KDAG	**Bornova**	**1.07**	**10**	*i* P	**Pg**	**01 09 14.3**	**-1.1**
KDAG				*i* S	**Sg**	**01 09 28.9**	**-0.4**
KDAG	**Bornova**	**1.07**	**10**	*i* P	**Pg**	**01 09 14.4**	**-1.1**
KDAG				*i* S	**Sg**	**01 09 28.9**	**-0.4**
APE	**Apeiranthos**	**1.22**	**257**	*e*PN	**Pn**	**01 09 17.6**	**-0.6**
APE	**Apeiranthos**	**1.22**	**257**	P	**Pg**	**01 09 18.1**	**-0.3**
APE				S	**Sg**	**01 09 36.2**	**+2.0**
APE	**Apeiranthos**	**1.22**	**257**	*e*Pn	**Pn**	**01 09 17.6**	**-0.6**
APE	**Apeiranthos**	**1.22**	**257**	P	**Pg**	**01 09 18.1**	**-0.3**
APE				S	**Sg**	**01 09 36.2**	**+2.0**
CHOS	**Chios island**	**1.28**	**324**	P	**Pn**	**01 09 19.4**	**+0.3**
CHOS	**Chios island**	**1.28**	**324**	P	**Pn**	**01 09 19.4**	**+0.3**
TURN	**Turunc**	**1.35**	**110**	*i* P	**Pn**	**01 09 14.8**	**-5.2**
TURN				*i* S	**Sb**	**01 09 33.6**	**-4.3**
TURN	**Turunc**	**1.35**	**110**	*i* P	**Pn**	**01 09 14.8**	**-5.2**
TURN				*i* S	**Sb**	**01 09 33.6**	**-4.2**
KULA	**Kula-Manisa**	**1.74**	**48**	*e*PN	**Pn**	**01 09 26.3**	**+1.0**
KULA	**Kula-Manisa**	**1.74**	**48**	*e*Pn	**Pn**	**01 09 26.3**	**+1.0**

*BJI **06** 01:10:15.6, 49°.80N×130°.10W, h5km, mB5.0/22, mb4.9/33, Ms5.0/23, Ms7 4.6/23*
*PGC **06** 01:10:17.0±0.9, 49°.59N×130°.37W, h10km, ML4.2/15, Mw5.4, 244km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **06** 01:10:17.6±0.6, 49°.62N×130°.33W, h0km, mb4.5/19, mb1 4.7/27, mb1mx4.6/33, mbtmp4.5/27, ML3.9/7, MS4.5/31, Ms1 4.5/31, ms1mx4.4/38, Error ellipse: s-maj=16.3km s-min=10.6km az=45.0*
*MOS **06** 01:10:18.6±1.1, 49°.77N×130°.12W, h10km, mb5.2/36, Error ellipse: s-maj=8.6km s-min=4.0km az=118.2*
*ISCJB **06** 01:10:19.1±0.2, 49°.81N±0°.02×130°.03W±0°.03, h10km, mb4.8/99, MS4.6/57, Error ellipse: s-maj=3.6km s-min=1.9km az=39.6*
*GCMT **06** 01:10:20.6±0.2, 49°.51N×130°.45W, h15km, MW5.2, Moment Tensor Solution. s59,c82; s98,c179; Moment tensor: Scale 10^{16}Nm; M_{rr}0.29±.16; $M_{\theta\theta}$-5.54±.14; $M_{\phi\phi}$5.26±.15; $M_{r\theta}$1.50±.42; $M_{\theta\phi}$4.85±.14; $M_{r\phi}$-1.24±.44; Best double couple: $M_0$7.50000×10^{16} NP1:ϕ_s245.00000°, δ77.00000°, λ-5.00000°. NP2:ϕ_s336.00000°, δ85.00000°, λ-167.00000°. Principal axes: T 7.1800, Plg5.0000°, Azm110.0000°; N 0.6500, Plg76.0000°, Azm358.0000°; P -7.8200, Plg13.0000°, Azm202.0000°; Data Used: II IU IC CN G.*
*NEIC **06** 01:10:20.7±0.2, 49°.79N×130°.11W, h10km, mb5.0/94, MW5.4(PGC) Error ellipse: s-maj=5.4km s-min=2.3km az=222.0*

ISC 06 01:10:20.9±0.2,**49°85N**±0°.02×**130°04W**±0°.03,**h10**km,
(h13km±2.6km:**pP-P),n392,**σ1**25**/386,**mb4.8**/99,**MS4.6**/57,
17C-14D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.46**	**56**	Pn	**Pn**	**01 10 45.7**	**-1.6**
HOLB				Sn	**Sn**	**01 11 05.5**	**-1.0**
HOLB	**Holberg**	**1.46**	**56**	⇓Pn	**Pn**	**01 10 45.7**	**-1.6**
HOLB				⇓Sn	**Sn**	**01 11 05.5**	**-1.0**
BPBC	**Brooks Peninsu**	**1.50**	**77**	Pn	**Pn**	**01 10 45.1**	**-2.7**
BPBC				Sn	**Sn**	**01 11 05.1**	**-2.3**
BPBC	**Brooks Peninsu**	**1.50**	**77**	⇑Pn	**Pn**	**01 10 45.1**	**-2.7**
BPBC				⇓Sn	**Sn**	**01 11 05.1**	**-2.3**
PHC	**Port Hardy**	**1.88**	**62**	Pn	**Pn**	**01 10 51.7**	**-1.5**
PHC				Sn	**Sn**	**01 11 15.5**	**-1.4**
PHC	**Port Hardy**	**1.88**	**62**	⇑Pn	**Pn**	**01 10 51.7**	**-1.5**
PHC				⇑Sn	**Sn**	**01 11 15.5**	**-1.4**
EDB	**Eliza Dome**	**1.89**	**88**	⇑Pn	**Pn**	**01 10 49.8**	**-3.4**
MAYB	**Maynard**	**1.93**	**72**	⇑Pn	**Pn**	**01 10 51.5**	**-2.3**
WOSB	**Woss**	**2.26**	**81**	⇑Pn	**Pn**	**01 10 56.5**	**-1.8**
ETB	**Estevan Point**	**2.33**	**100**	⇑Pn	**Pn**	**01 10 56.1**	**-3.1**
GDR	**Gold River**	**2.60**	**90**	⇓Pn	**Pn**	**01 11 00.1**	**-2.8**
NCRB	**Newcastle Ridg**	**2.63**	**76**	Pn	**Pn**	**01 11 02.3**	**-1.0**
BBB	**Bella Bella**	**2.64**	**27**	Pn	**Pn**	**01 11 03.1**	**-0.4**
	378nm,0.3s,baz=43,slow=13,SNR=2799						
BBB				Sn	**Sn**	**01 11 35.0**	**-0.5**
	140nm,0.3s,baz=134,slow=23,SNR=10						
BBB				LR	LR	01 12 11.5	
	comp=Z,8μm,21.4s,baz=29,slow=39						
BBB	**Bella Bella**	**2.64**	**27**	Pn	**Pn**	**01 11 03.1**	**-0.4**
BBB				Sn	**Sn**	**01 11 35.0**	**-0.5**
BBB				LR	LR	01 12 11.4	
BBB	**Bella Bella**	**2.64**	**27**	⇑Pn	**Pn**	**01 11 03.1**	**-0.4**
BBB				⇑Sn	**Sn**	**01 11 35.2**	**-0.3**
BNB	**Barry Inlet**	**2.94**	**339**	⇑Pn	**Pn**	**01 11 04.3**	**-3.3**
CBB	**Campbell River**	**3.03**	**85**	Pn	**Pn**	**01 11 07.2**	**-1.6**
CBB				Sn	**Sn**	**01 11 44.2**	**-0.9**
CBB	**Campbell River**	**3.03**	**85**	⇓Pn	**Pn**	**01 11 07.2**	**-1.6**
CBB				⇑Sn	**Sn**	**01 11 44.2**	**-0.9**
OZB	**Mount Ozzard**	**3.10**	**105**	⇑Pn	**Pn**	**01 11 07.5**	**-2.4**
BCBC	**Bella Coola**	**3.27**	**38**	⇑Pn	**Pn**	**01 11 13.5**	**+1.4**
ALB	**Alberni**	**3.44**	**98**	⇓Pn	**Pn**	**01 11 13.9**	**-0.7**
MOBC	**Moresby Island**	**3.52**	**341**	⇑Pn	**Pn**	**01 11 12.9**	**-2.6**
MGB	**Mount Grey**	**3.59**	**102**	Pn	**Pn**	**01 11 14.7**	**-1.9**
MGB	**Mount Grey**	**3.59**	**102**	⇓Pn	**Pn**	**01 11 14.7**	**-1.9**
DIB	**Dawson Inlet,**	**3.69**	**337**	Pn	**Pn**	**01 11 14.6**	**-3.3**
	SNR=1465						
DIB	**Dawson Inlet,**	**3.69**	**337**	⇑Pn	**Pn**	**01 11 15.0**	**-2.9**
VIB	**Van Inlet**	**3.75**	**336**	Pn	**Pn**	**01 11 15.6**	**-3.2**
PGC	**Sidney**	**4.48**	**103**	*e*Pn	**Pn**	**01 11 27.8**	**-1.0**
NLWA	**Neilton Lookou**	**4.78**	**119**	*e*Pn	**Pn**	**01 11 30.8**	**-2.0**
MCW	**Mount Constitu**	**4.86**	**101**	P	**Pn**	**01 11 33.4**	**-0.7**
HDW	**Hoodsport**	**5.12**	**113**	P	**Pn**	**01 11 35.5**	**-2.1**
VDB	**Vedder Mountai**	**5.25**	**96**	P	**Pn**	**01 11 39.0**	**-0.3**
GNW	**Green Mountain**	**5.30**	**113**	*e*Pn	**Pn**	**01 11 39.9**	**-0.1**
JCW	**Jim Creek**	**5.59**	**104**	P	**Pn**	**01 11 43.8**	**-0.2**
BLH	**Bald Hill**	**5.66**	**108**	P	**Pn**	**01 11 44.5**	**-0.5**
RPW	**Rockport**	**5.77**	**101**	*e*Pn	**Pn**	**01 11 46.1**	**-0.4**
CRAG	**Craig**	**5.94**	**343**	*e*P	**Pn**	**01 11 47.4**	**-1.3**
LON	**Longmire**	**6.31**	**116**	*e*P	**Pn**	**01 11 52.8**	**-1.1**
WRAK	**Wrangell Islan**	**6.73**	**349**	*e*Pn	**Pn**	**01 12 00.1**	**+0.5**
	29nm,0.7s						
ETW	**Entiat**	**6.81**	**106**	*e*Pn	**Pn**	**01 12 01.0**	**+0.2**
COR	**Corvallis**	**6.98**	**136**	*e*P	**Pn**	**01 12 02.2**	**-0.9**
COR				pmax	pmax		
	comp=Z,82nm,0.9s						
COR	**Corvallis**	**6.98**	**136**	*e*Pn	**Pn**	**01 12 02.1**	**-1.0**
	comp=Z,82nm,0.9s						
HOOD	**Mount Hood Mea**	**7.26**	**125**	*e*Pn	**Pn**	**01 12 07.1**	**+0.2**
RSW	**Rattlesnake Hi**	**7.80**	**112**	*e*Pn	**Pn**	**01 12 15.1**	**+0.7**
HAWA	**Hanford**	**7.84**	**112**	*e*Pn	**Pn**	**01 12 15.3**	**+0.4**
SIT	**Sitka**	**7.88**	**338**	*e*P	**Pn**	**01 12 15.0**	**-0.4**
SIT				pmax	pmax		
	comp=Z,30nm,1.0s						
SIT	**Sitka**	**7.88**	**338**	*e*Pn	**Pn**	**01 12 15.0**	**-0.4**
	comp=Z,30nm,1.0s						
OD2	**Odessa Site #2**	**7.90**	**104**	*e*Pn	**Pn**	**01 12 13.3**	**-2.4**
KEBM	**Edson Butte**	**8.01**	**148**	*e*Pb	**Pb**	**01 12 29.0**	**-1.1**
DLBC	**Dease Lake**	**8.61**	**0**	Pn	**Pn**	**01 12 28.2**	**+2.8**
	comp=Z,0.8nm,0.3s,baz=191,slow=12,SNR=20						
DLBC				Sn	**Sn**	**01 14 11.9**	**+10**
	comp=Z,0.2nm,0.3s,baz=342,slow=20,SNR=1.5						
DLBC				LR	LR	01 15 32.7	
	comp=Z,4μm,18.9s,baz=182,slow=36						
DLBC	**Dease Lake**	**8.61**	**0**	*e*Pn	**Pn**	**01 12 29.1**	**+3.7**
NEW	**Newport**	**8.63**	**96**	*e*P	**Pn**	**01 12 25.8**	**0.0**
HUMO	**Hull Mountain**	**8.75**	**143**	*e*Pn	**Pn**	**01 12 28.2**	**+0.9**
LNOR	**Lincton Mounta**	**8.85**	**112**	*e*P	**Pn**	**01 12 28.9**	**+0.2**
KRMB	**Red Mountain**	**9.36**	**150**	*e*Pn	**Pn**	**01 12 35.6**	**-0.2**
	comp=Z,224nm,1.6s						
YBH	**Yreka Blue Hor**	**9.59**	**145**	Pn	**Pn**	**01 12 40.3**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=341,slow=14,SNR=26						
YBH				Sn	**Sn**	**01 14 20.4**	**-6.3**
	comp=Z,0.2nm,0.3s,baz=31,slow=5.9,SNR=3.6						
YBH	**Yreka Blue Hor**	**9.59**	**145**	*e*Pn	**Pn**	**01 12 40.5**	**+1.6**
SKAG	**Skagway**	**10.11**	**344**	*e*Pn	**Pn**	**01 12 48.7**	**+2.9**
	comp=Z,25nm,1.2s						
BSMT	**Bassoo Peak**	**10.26**	**95**	*e*Pn	**Pn**	**01 12 47.9**	**-0.1**
MOD	**Modoc**	**10.44**	**136**	*e*Pn	**Pn**	**01 12 51.6**	**+1.0**
BLMT	**Blacktail Moun**	**10.48**	**94**	*e*Pn	**Pn**	**01 12 51.6**	**+0.5**
WALA	**Waterton Lakes**	**10.54**	**88**	*e*Pn	**Pn**	**01 12 53.5**	**+1.7**
JTMT	**Jette**	**10.61**	**95**	*e*Pn	**Pn**	**01 12 53.0**	**+0.1**
WDC	**Whiskeytown Da**	**10.66**	**147**	*e*P	**Pn**	**01 12 54.4**	**+0.8**
YBMT	**Yellow Bay**	**10.75**	**95**	*e*Pn	**Pn**	**01 12 55.0**	**+0.3**
WVOR	**Wild Horse Val**	**10.84**	**129**	*e*P	**Pn**	**01 12 56.5**	**+0.5**
WVOR				pmax	pmax		
	comp=Z,285nm,1.9s						
WVOR	**Wild Horse Val**	**10.84**	**129**	*e*Pn	**Pn**	**01 12 56.5**	**+0.5**
	comp=Z,285nm,1.9s						
SWMT	**Swartz Lake**	**10.87**	**96**	*e*Pn	**Pn**	**01 12 56.2**	**-0.2**
EDM	**Edmonton**	**10.93**	**66**	*e*P	**Pn**	**01 13 00.2**	**+3.0**
KIPM	**Iron Peak**	**11.06**	**153**	*e*Pn	**Pn**	**01 12 59.9**	**+0.9**
	comp=Z,119nm,1.5s						
MSO	**Missoula**	**11.14**	**100**	*e*Pn	**Pn**	**01 12 59.5**	**-0.6**
PNL	**Peninsula**	**11.21**	**335**	*e*Pn	**Pn**	**01 13 01.8**	**+0.7**
SLMT	**Seeley Lake**	**11.28**	**97**	*e*Pn	**Pn**	**01 13 01.3**	**-0.7**
CHMT	**Chamberlain Mo**	**11.55**	**98**	*e*Pn	**Pn**	**01 13 05.3**	**-0.3**
OHCM	**Honcut**	**12.14**	**147**	*e*Pn	**Pn**	**01 13 14.2**	**+0.3**
HLID	**Hailey**	**12.42**	**114**	*e*Pn	**Pn**	**01 13 18.0**	**+0.4**
	comp=Z,24nm,1.1s						
LRM	**Limekiln Ridge**	**12.48**	**102**	*e*Pn	**Pn**	**01 13 16.9**	**-1.6**
HRY	**Holter Researc**	**12.53**	**98**	*e*Pn	**Pn**	**01 13 19.2**	**+0.1**
DLMT	**Dillon**	**12.59**	**104**	*e*Pn	**Pn**	**01 13 19.5**	**-0.5**
PAHR	**Pah Rah Range**	**12.64**	**139**	*e*Pn	**Pn**	**01 13 22.0**	**+1.4**
MCMT	**McKenzie Canyo**	**12.69**	**107**	*e*Pn	**Pn**	**01 13 20.9**	**-0.4**
	comp=Z,13nm,1.0s						
WCN	**Washoe City**	**12.83**	**141**	*e*P	**Pn**	**01 13 24.0**	**+0.8**
BMN	**Battle Mountai**	**13.04**	**131**	*e*P	**Pn**	**01 13 27.4**	**+1.3**
BMN				pmax	pmax		
	comp=Z,55nm,1.1s						
BMN	**Battle Mountai**	**13.04**	**131**	*e*Pn	**Pn**	**01 13 27.4**	**+1.2**
	comp=Z,55nm,1.1s						
BOZ	**Bozeman (W)**	**13.08**	**102**	*e*P	**Pn**	**01 13 26.3**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,64nm,1.6s						
BOZ	**Bozeman (W)**	**13.08**	**102**	*e*Pn	**Pn**	**01 13 26.3**	**-0.3**
	comp=Z,64nm,1.6s						
EGMT	**Eagleton**	**13.46**	**90**	*e*Pn	**Pn**	**01 13 31.7**	**-0.1**
WAKR	**Walker**	**13.64**	**142**	*e*Pn	**Pn**	**01 13 34.6**	**+0.3**
CMB	**Columbia Colle**	**13.69**	**146**	*e*P	**Pn**	**01 13 33.7**	**-1.3**
CMB				pmax	pmax		
	comp=Z,23nm,1.1s						
CMB	**Columbia Colle**	**13.69**	**146**	*e*Pn	**Pn**	**01 13 33.7**	**-1.3**
	comp=Z,23nm,1.1s						
YMR	**Madison River**	**13.94**	**105**	*e*Pn	**Pn**	**01 13 39.0**	**+0.6**
	comp=Z,178nm,1.4s						
YNR	**Norris Junctio**	**14.10**	**104**	*e*Pn	**Pn**	**01 13 42.2**	**+1.7**
YFT	**Old Faithful**	**14.13**	**105**	*e*Pn	**Pn**	**01 13 43.1**	**+2.2**
NVAR	**Mina Array Bea**	**14.17**	**139**	Pn	**Pn**	**01 13 41.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=312,slow=10,SNR=18						
GCMT	**Greycliff**	**14.27**	**99**	*e*Pn	**Pn**	**01 13 42.9**	**+0.1**
	comp=Z,22nm,0.9s						
IMW	**Indian Meadow**	**14.34**	**107**	*e*Pn	**Pn**	**01 13 44.7**	**+0.9**
LKWY	**Lake**	**14.35**	**104**	*e*Pn	**Pn**	**01 13 46.4**	**+2.5**
LKWY				*e*P		01 13 54.3	
DCID1	**Drake Creek**	**14.35**	**109**	*e*Pn	**Pn**	**01 13 46.0**	**+2.0**
FLWY	**Flagg Ranch**	**14.40**	**106**	*e*Pn	**Pn**	**01 13 45.6**	**+1.1**
RRI2	**Red Ridge**	**14.40**	**110**	*e*Pn	**Pn**	**01 13 45.3**	**+0.6**
HVU	**Hansel Valley**	**14.47**	**117**	*e*P	**Pn**	**01 13 46.7**	**+1.1**
SAO	**San Andreas Ge**	**14.48**	**151**	*e*P	**Pn**	**01 13 45.6**	**-0.2**
MOOW	**Moose Ponds**	**14.54**	**107**	*e*Pn	**Pn**	**01 13 47.9**	**+1.4**
TPAW	**Teton Pass**	**14.55**	**109**	*e*Pn	**Pn**	**01 13 49.0**	**+2.3**
REDW	**Red Top Meadow**	**14.68**	**109**	*e*Pn	**Pn**	**01 13 51.6**	**+3.2**
SNOW	**Snow King Moun**	**14.69**	**108**	*e*Pn	**Pn**	**01 13 52.5**	**+4.0**
LOHW	**Long Hollow**	**14.70**	**108**	*e*Pn	**Pn**	**01 13 50.8**	**+2.1**
RLMT	**Red Lodge**	**14.81**	**101**	*e*Pn	**Pn**	**01 13 50.6**	**+0.4**
	comp=Z,196nm,1.5s						
AHID	**Auburn Hatcher**	**14.86**	**111**	*e*Pn	**Pn**	**01 13 54.0**	**+3.1**
	comp=Z,386nm,1.6s						
BGU	**Big Grassy Mou**	**14.89**	**120**	*e*Pn	**Pn**	**01 13 51.6**	**+0.3**
	comp=Z,144nm,1.4s						
SPUT	**South Promonto**	**14.96**	**118**	*e*Pn	**Pn**	**01 13 53.4**	**+1.1**
MTUM	**Tungsten Hills**	**14.98**	**142**	*e*Pn	**Pn**	**01 13 52.5**	**-0.1**
SEW	**Seward**	**15.09**	**320**	*e*Pn	**Pn**	**01 13 53.8**	**-0.1**
	comp=Z,42nm,1.0s						
DAWY	**Dawson**	**15.11**	**344**	*e*Pn	**Pn**	**01 13 57.1**	**+2.9**
YKA	**Yellowknife Ar**	**15.25**	**28**	Pn	**Pn**	**01 13 54.9**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=215,slow=12,SNR=45						
YKA				LR	LR	01 20 11.5	
	comp=Z,253nm,18.2s,baz=100,slow=38						
HWUT	**Hardware Ranch**	**15.28**	**116**	*e*Pn	**Pn**	**01 13 58.6**	**+2.1**
	comp=Z,70nm,1.3s						
KDAK	**Kodiak Island**	**15.44**	**310**	Pn	**Pn**	**01 13 55.6**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=136,slow=8.9,SNR=5.8						
KDAK				Sn	**Sn**	**01 16 59.7**	**+10**
	comp=Z,0.1nm,0.3s,baz=166,slow=19,SNR=1.9						
KDAK				LR	LR	01 18 23.8	
	comp=Z,4μm,21.4s,baz=136,slow=32						
KDAK	**Kodiak Island**	**15.44**	**310**	*e*P	**Pn**	**01 14 04.0**	**+5.4**
DUG	**Dugway**	**15.51**	**122**	*e*P	**Pn**	**01 13 58.7**	**-0.8**
NOQ	**North Oquirrh**	**15.58**	**119**	*e*P	**Pn**	**01 14 06.2**	**+5.7**
OHAK	**Old Harbor**	**15.61**	**307**	*e*P	**Pn**	**01 13 58.4**	**-2.3**
	comp=Z,92nm,1.0s						
SLKM	**Skilak Lake**	**15

TTA	**Tatalina**	19.27	323	*e*P	Pn	01 14 45.5	-0.7
PV01	**Paradox Valley**	19.31	119	*e*P	Pn	01 14 45.8	-1.2
	comp=Z,13μm,1.2s						
SMCO	**Snowmass**	19.53	114	*e*P	Pn	01 14 48.5	-1.0
	comp=Z,103nm,1.4s						
WUAZ	**Wupatki**	19.76	129	*e*P	Pn	01 14 50.9	-1.4
	comp=Z,167nm,1.6s						
BAR	**Barrett**	19.83	145	*e*P	Pn	01 14 51.7	-1.5
	comp=Z,93nm,1.6s						
ISCO	**Idaho Springs**	19.95	111	*e*P	Pn	01 14 53.8	-0.8
ISCO				pmax	pmax		
	comp=Z,62nm,1.3s						
ISCO	**Idaho Springs**	19.95	111	*e*P	Pn	01 14 53.8	-0.7
	comp=Z,62nm,1.3s						
MVCO	**Mesa Verde**	20.00	121	*e*P	P	01 14 53.3	-0.2
	comp=Z,480nm,1.6s						
COLD	**Coldfoot**	20.18	337	*e*P	P	01 14 58.3	+3.1
	comp=Z,197nm,1.7s						
GLA	**Glamis**	20.22	140	*e*P	P	01 14 55.8	-0.1
GLA				pmax	pmax		
	comp=Z,73nm,1.2s						
GLA	**Glamis**	20.22	140	*e*P	P	01 14 55.8	-0.1
	comp=Z,74nm,1.2s						
FALS	**False Pass**	20.86	297	*e*P	P	01 15 00.8	-1.9
	comp=Z,107nm,0.8s						
SDCO	**Great Sand Dun**	21.34	115	*e*P	P	01 15 08.4	+0.4
	comp=Z,130nm,1.6s,mb5.0						
OGNE	**Ogallala**	21.49	104	*e*P	P	01 15 10.1	+0.6
	comp=Z,286nm,1.3s,mb5.4						
ULM	**Lac du Bonnet**	21.84	76	P	P	01 15 15.4	+2.2
	comp=Z,49nm,0.8s,mb5.0,baz=285,slow=11,SNR=28						
AKUT	**Akutan**	22.26	295	*e*P	P	01 15 16.7	-1.0
	comp=Z,260nm,1.8s,mb5.4						
AGMN	**Agassiz Nation**	22.34	81	*e*P	P	01 15 18.9	+0.3
	comp=Z,106nm,1.3s,mb5.1						
FCC	**Fort Churchill**	22.54	53	*e*P	P	01 15 21.2	+0.6
	comp=Z,6.9nm,1.4s,mb3.9						
TUC	**Tucson**	22.64	133	*e*P	P	01 15 20.9	-1.0
TUC				pmax	pmax		
	comp=Z,55nm,1.3s,mb4.8						
TUC				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.4						
TUC	**Tucson**	22.64	133	*e*P	P	01 15 20.9	-1.1
	comp=Z,56nm,1.3s,mb4.8						
TUC				LR	LR		
	comp=Z,1μm,19.0s,MS4.4						
UNV	**Unalaska Valle**	22.71	294	*e*P	P	01 15 21.0	-1.5
	comp=Z,49nm,1.0s,mb4.9						
ANMO	**Albuquerque**	22.78	122	P	P	01 15 22.7	-0.6
	comp=Z,7.8nm,0.9s,mb4.1,baz=316,slow=11,SNR=21						
ANMO				LR	LR	01 24 38.3	
	comp=Z,1μm,18.5s,MS4.3,baz=127,slow=38						
ANMO	**Albuquerque**	22.78	122	*e*P	P	01 15 22.5	-0.8
ANMO				pmax	pmax		
	comp=Z,101nm,1.7s						
ANMO	**Albuquerque**	22.78	122	*e*P	P	01 15 22.5	-0.9
	comp=Z,101nm,1.7s,mb5.0						
LAZ	**Ladron**	22.82	124	*e*P	P	01 15 23.8	0.0
	comp=Z,22nm,1.4s,mb4.4						
LENM	**Lemitar**	23.09	124	*e*P	P	01 15 26.8	+0.1
	comp=Z,61nm,1.3s,mb4.9						
LPM	**Los Pinos Moun**	23.16	123	*e*P	P	01 15 27.7	+0.3
	comp=Z,64nm,1.7s,mb4.8						
BNM	**Barren Site**	23.29	124	*e*P	P	01 15 28.1	-0.6
	comp=Z,184nm,1.9s,mb5.2						
ECSD	**EROS Data Cent**	23.55	92	*e*P	P	01 15 31.0	-0.5
	comp=Z,57nm,0.9s,mb5.0						
CBKS	**Cedar Bluff**	24.16	106	*e*P	P	01 15 37.4	+0.4
CBKS				pmax	pmax		
	comp=Z,143nm,1.3s,mb5.2						
CBKS	**Cedar Bluff**	24.16	106	*e*P	P	01 15 37.4	+0.4
	comp=Z,143nm,1.3s,mb5.2						
EYMN	**Ely**	25.23	79	*e*P	P	01 15 47.0	+0.3
	comp=Z,84nm,0.9s,mb5.3						
EYMN				LR	LR		
	comp=Z,4μm,21.0s,MS4.9						
AMTX	**Amarillo**	25.55	115	*e*P	P	01 15 49.3	-0.3
	comp=Z,71nm,1.0s,mb5.2						
MNTX	**Cornudas Mount**	25.84	125	*e*P	P	01 15 51.8	-0.5
	comp=Z,36nm,1.4s,mb4.7						
KSU1	**Kansas State U**	25.96	102	*e*P	P	01 15 54.0	+0.6
	comp=Z,115nm,1.2s,mb5.3						
GAMB	**Gambell**	26.14	318	*e*P	P	01 15 57.5	+2.7
	comp=Z,142nm,1.7s,mb5.2						
WMOK	**Wichita Mounta**	27.37	112	*e*P	P	01 16 05.5	-0.6
WMOK				pmax	pmax		
	comp=Z,15nm,0.5s,mb4.8						
WMOK				MLR	MLR		
	comp=Z,3μm,20.0s,MS4.8						
WMOK	**Wichita Mounta**	27.37	112	*e*P	P	01 16 05.5	-0.7
	comp=Z,14nm,0.5s,mb4.8						
WMOK				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
COWI	**Conover**	27.40	82	*e*P	P	01 16 07.6	+1.3
	comp=Z,58nm,1.2s,mb5.0						
JFWS	**Jewell Farm**	28.05	89	*e*P	P	01 16 12.6	+0.4
JFWS				pmax	pmax		
	comp=Z,99nm,1.3s,mb5.3						
JFWS	**Jewell Farm**	28.05	89	*e*P	P	01 16 12.6	+0.4
	comp=Z,99nm,1.3s,mb5.3						
TXAR	**Lajitas Array**	28.61	126	P	P	01 16 16.6	-0.6
	comp=Z,3.0nm,0.9s,mb4.0,baz=309,slow=6.1,SNR=20						
TXAR				PcP	PcP	01 19 28.3	+0.2
	comp=Z,1.2nm,0.9s,baz=212,slow=1.2,SNR=4.6						
TXAR				LR	LR	01 28 18.7	
	comp=Z,2μm,19.5s,MS4.7,baz=355,slow=38						
TXAR	**Lajitas Array**	28.61	126	P	P	01 16 16.7	-0.5
TXAR						01 19 28.3	
RES	**Resolute Bay**	28.90	18	LR	LR	01 28 09.5	
	comp=Z,1μm,20.8s,MS4.5,baz=38,slow=37						
ADK	**Adak**	29.12	292	*e*P	P	01 16 18.7	-2.9
ADK				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.1						
ADK	**Adak**	29.12	292	*e*P	P	01 16 18.7	-2.8
	comp=Z,45nm,1.1s,mb5.1						
JCT	**Junction City**	29.83	119	*e*P	P	01 16 26.6	-1.5
JCT				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
JCT	**Junction City**	29.83	119	*e*P	P	01 16 26.6	-1.5
	comp=Z,14nm,0.8s,mb4.7						
HDIL	**Hopedale**	29.85	92	*e*P	P	01 16 29.4	+1.2
	comp=Z,71nm,1.4s,mb5.2						
CCM	**Cathedral Cave**	29.99	98	*e*P	P	01 16 29.0	-0.4
CCM				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
CCM	**Cathedral Cave**	29.99	98	*e*P	P	01 16 29.0	-0.4
	comp=Z,19nm,1.0s,mb4.8						
MIAR	**Mount Ida**	30.69	106	*e*P	P	01 16 35.9	+0.3
MIAR				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.1						
MIAR				MLR	MLR		
	comp=Z,750nm,19.0s,MS4.4						
MIAR	**Mount Ida**	30.69	106	*e*P	P	01 16 35.9	+0.3
	comp=Z,42nm,1.2s,mb5.1						
MIAR				LR	LR		
	comp=Z,750nm,19.0s,MS4.4						
SIUC	**Southern Illin**	31.49	97	*e*P	P	01 16 43.7	+1.0
	comp=Z,40nm,1.1s,mb5.2						
OLIL	**Olney**	31.62	94	*e*P	P	01 16 45.0	+1.2
	comp=Z,57nm,1.4s,mb5.2						
HKT	**Hockley**	32.52	115	*e*P	P	01 16 52.0	+0.3
HKT				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.1						
HKT	**Hockley**	32.52	115	*e*P	P	01 16 52.0	+0.3
	comp=Z,32nm,1.4s,mb5.1						
WVT	**Waverly**	33.32	98	*e*P	P	01 17 00.0	+1.2
WVT				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
WVT	**Waverly**	33.32	98	*e*P	P	01 16 60.0	+1.2
	comp=Z,18nm,1.3s,mb4.8						
OXF	**Oxford**	33.33	102	*e*P	P	01 16 58.5	-0.3
	comp=Z,166nm,1.1s,mb5.9						
SADO	**Sadowa**	34.34	79	P	P	01 17 07.0	-0.5
	comp=Z,14nm,1.0s,mb4.8,baz=138,slow=3.8,SNR=3.4						
BILL	**Bilibino**	35.50	325	*e*P	P	01 17 18.5	+1.3
BILL				*e*		01 18 39.6	
BILL				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
BILL				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.4						
SCHQ	**Schefferville**	37.77	57	P	P	01 17 42.2	+5.4
	comp=Z,7.2nm,1.0s,mb4.4,baz=323,slow=7.8,SNR=3.2						
SCHQ				LR	LR	01 33 05.2	
	comp=Z,2μm,18.1s,MS4.9,baz=110,slow=36						
SCHQ	**Schefferville**	37.77	57	P	P	01 17 42.2	+5.4
SCHQ				LR	LR	01 33 05.2	
FRNY	**Flat Rock**	37.81	75	*e*P	P	01 17 38.7	+1.6
	comp=Z,17nm,1.0s,mb4.7						
SEY	**Seymchan**	42.14	318	*e*P	P	01 18 14.3	+1.4
PET	**Petropavlovsk**	42.88	303⇑	*e*P	P	01 18 20.1	+1.0
PET				*e*		01 20 03.1	
PET				*e*S	S	01 24 46.0	+2.6
PET				pmax	pmax		
	comp=Z,100nm,8.4s						
PET				pmax	pmax		
	comp=Z,100nm,18.4s						
CMIG	**Matias Romero**	43.21	126	P	P	01 18 20.0	-2.1
	comp=Z,3.3nm,0.8s,mb4.1,baz=352,slow=10.0,SNR=4.0						
PETK	**Petropavlovsk-**	43.36	303	P	P	01 18 21.4	-1.5
	comp=Z,9.6nm,0.7s,mb4.6,baz=82,slow=11,SNR=13						
PETK				LR	LR	01 33 30.6	
	comp=Z,359nm,22.0s,MS4.2,baz=258,slow=32						
SUMG	**Summit**	43.83	26	*e*P	P	01 18 28.2	+1.6
	comp=Z,26nm,1.1s,mb4.9						
SUMG	**Summit**	43.83	26	*i* P	P	01 18 28.4	+1.9
	comp=Z,14nm,1.0s,mb4.7						
TIXI	**Tiksi**	46.88	335	*e*P	P	01 18 52.0	+1.3
TIXI				pmax	pmax		
	comp=Z,18nm,1.9s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,356nm,15.0s,MS4.5						
YAK	**Yakutsk**	51.85	324	*e*P	P	01 19 27.0	-1.7
YAK				*e**PP	pP	01 19 35.7	+3.8
YAK				*e*		01 20 37.8	
YAK				*e*		01 21 24.7	
YAK				*e*PPP		01 22 29.2	
YAK				*e*S	S	01 26 51.0	+0.3
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,11nm,0.9s						
YAK				pmax	pmax		
	comp=Z,82nm,3.2s						
YAK				pmax	pmax		
	comp=N,93nm,4.0s						
YAK				pmax	pmax		
	comp=E,50nm,3.0s						
YAK				smax			
	comp=N,77nm,12.6s						
YAK				smax			
	comp=E,221nm,16.9s						
YAK				MLR	MLR		
	comp=Z,672nm,16.0s,MS4.8						
YAK				MLR	MLR		
	comp=N,231nm,17.0s,MS4.6						
YAK				MLR	MLR		
	comp=E,365nm,16.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	54.77	303	*e*P	P	01 19 43.0	-7.4
YSS				*e*		01 19 50.0	
YSS				*e*		01 27 30.0	
YSS				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
YSS				MLR	MLR		
	comp=N,400nm,17.0s						
ASAJ	**Asahikawa**	56.62	300	P	P	01 20 02.4	-1.3
	comp=N,3.0nm,0.3s,mb4.9,baz=44,slow=7.3,SNR=7.2						
ASAJ	**Asahikawa**	56.62	300	*e*P	P	01 20 04.1	+0.3
	comp=N,8.8nm,1.2s,mb4.7						
ERM	**Erimo**	57.64	298	*e*P	P	01 20 10.7	-0.3
ERM				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
ERM	**Erimo**	57.64	298	*e*P	P	01 20 10.7	-0.3
	comp=Z,16nm,0.9s,mb5.1						
HABR	**Khabarovsk**	57.85	308	*e*P	P	01 20 10.7	-1.7
HABR				*e*		01 21 02.6	
HABR				*e*		01 22 19.1	
HABR				*e*PPP		01 23 37.7	
HABR				*e*S	S	01 28 09.5	-2.2
HABR				*e*		01 29 57.6	
HABR				SS	SS	01 32 01.8	+0.1
HABR				pmax	pmax		
	comp=E,69nm,3.2s						
HABR				pmax	pmax		
	comp=N,21nm,2.1s						
HABR				pmax	pmax		
	comp=Z,53nm,3.2s						
HABR				MLR	MLR		
	comp=E,221nm,16.0s,MS4.6						
HABR				MLR	MLR		
	comp=Z,377nm,17.0s,MS4.6						
HABR				MLR	MLR		
	comp=N,306nm,18.0s,MS4.6						
KLR	**Kul'dur**	59.00	311	*e*P	P	01 20 14.8	-5.6
KLR				*e*S	S	01 28 26.0	-0.6
TAOE	**Nuku Hiva Isla**	59.12	192	*e*LR	LR	01 37 35.4	
	comp=N,1μm,28.6s						
KEV	**Kevo**	59.54	9	*e*P	P	01 20 23.4	-0.4
KEV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
KEV	**Kevo**	59.54	9	*e*p	P	01 20 23.4	-0.4
	comp=Z,4.5nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	59.59	10	LR	LR	01 45 31.8	
	comp=Z,380nm,21.0s,MS4.5,baz=163,slow=35						
LVZ	**Lovozero**	62.02	6	*de*P	P	01 20 40.2	-0.5
LVZ				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.3						
APA	**Apatity**	62.25	7⇑	*e*P	P	01 20 47.0	+4.8
APA				*e*		01 29 00.0	
APA				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.3						
MAJO	**Matsushiro**	64.16	297	*e*P	P	01 20 53.6	-1.8
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
MAJO	**Matsushiro**	64.16	297	*e*P	P	01 20 53.6	-1.8
	comp=Z,15nm,0.9s,mb5.0						
MAT	**Matsushiro**	64.16	297	P	P	01 20 55.1	-0.3
MAT				S	S	01 29 33.0	+0.7
MJAR	**Matsushiro Arr**	64.16	297	P	P	01 20 52.1	-3.2
	comp=Z,0.7nm,0.3s,mb4.2,baz=30,slow=7.0,SNR=4.8						
MJAR				LR	LR	01 43 57.7	
	comp=Z,208nm,22.0s,MS4.3,baz=70,slow=32						
ROSC	**El Rosal**	64.69	114	P	P	01 21 00.6	+1.5
	comp=Z,4.9nm,0.4s,mb4.9,baz=257,slow=22,SNR=4.4						
ROSC				LR	LR	01 49 55.6	
	comp=Z,156nm,20.5s,MS4.2,baz=0.8,slow=37						
NB2	**NORSAR Subarra**	65.16	20	P	P	01 21 03.8	+2.3
	comp=Z,0.8nm,0.7s,mb3.9,baz=336,slow=6.9						
NOA	**NORSAR Array B**	65.16	20	P	P	01 21 01.8	+0.3
	comp=Z,1.7nm,0.9s,mb4.1,baz=337,slow=6.4,SNR=6.0						
NOA				LR	LR	01 50 54.8	
	comp=Z,334nm,18.0s,MS4.6,baz=340,slow=37						
CN2	**Changchun**	65.91	310	*e*P	P	01 21 03.4	-3.2
CN2				*es*P	sP	01 21 10.0	-1.1
CN2				*e*S	S	01 29 46.9	-6.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,1μm,22.0s,MS5.1						
CN2				LR	LR		
	comp=E,700nm,22.0s,MS5.1						
CN2				LR	LR		
	comp=Z,1μm,23.0s,MS5.0						
OTAV	**Otavalo**	66.09	121	*e*P	P	01 21 08.7	+0.5
	comp=Z,25nm,1.3s,mb5.1						
OTAV				LR	LR		
	comp=Z,291nm,21.0s,MS4.5						
JOF	**Joensuu**	66.62	9	*e*P	P	01 21 09.2	-1.7
JOF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
JOF	**Joensuu**	66.62	9	*e*p	P	01 21 09.2	-1.7
	comp=Z,3.7nm,0.9s,mb4.4						
FINES	**FINESS Array B**	67.42	12	P	P	01 21 15.4	-0.6
	comp=Z,5.5nm,0.9s,mb4.6,baz=15,slow=10,SNR=5.9						
FINES				LR	LR	01 51 48.7	
	comp=Z,340nm,18.5s,MS4.6,baz=344,slow=37						
PRGR	**Permogore**	68.82	2	*e*P	P	01 21 23.8	-1.0
PRGR				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
TLY	**Talaya**	69.04	328	*e*P	P	01 21 28.0	+1.7
TLY				*e*S	S	01 30 20.5	-10
TLY				*e*PPS		01 31 12.1	
TLY				*e*SS	SS	01 34 54.6	-1.0
TLY				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
TLY				MLR	MLR		
	comp=Z,223nm,18.0s,MS4.5						
KSRS	**Korea Array**	69.26	304	P	P	01 21 26.4	-1.6
	comp=Z,3.5nm,0.9s,mb4.3,baz=49,slow=5.4,SNR=7.9						
KSRS				LR	LR	01 51 34.7	
	comp=Z,146nm,20.7s,MS4.2,baz=31,slow=36						
PPT	**Papeete**	69.31	200	*e*S	S	01 30 37.0	+2.3
	comp=Z,656nm,27.0s						
PPT				*e*LR	LR	01 42 24.9	
	comp=Z,708nm,26.2s,baz=14						
PPT	**Papeete**	69.31	200	LR	LR	01 43 52.1	
	comp=Z,307nm,19.1s,MS4.6,baz=2.3,slow=29						
KLMR	**Klimovskoe**	69.33	5	*e*P	P	01 21 26.7	-1.3
KLMR				pmax	pmax		
	comp=Z,54nm,1.5s,mb5.3						
KLMR				MLR	MLR		
	comp=Z,329nm,18.0s,MS4.6						
ZAK	**Zakamensk**	70.25	327	*e*P	P	01 21 33.4	-0.4
SONM	**Songino Array**	71.21	324	P	P	01 21 38.6	-1.1
	comp=Z,3.2nm,1.0s,mb4.2,baz=44,slow=4.9,SNR=15						
SONM				LR	LR	01 54 10.3	
	comp=Z,566nm,18.0s,MS4.9,baz=26,slow=37						
NVS	**Novosibirsk**	72.02	341	*i* P	P	01 21 42.2	-2.3
NVS				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
NVS				pmax	pmax		
	comp=E,6.0nm,1.3s						
ZAA0	**Zalesovo Array**	72.50	339	*e*P	P	01 21 47.1	-0.2
ZALV	**Zalesovo Beam**	72.50	339	P	P	01 21 46.4	-1.0
	comp=E,5.8nm,0.8s,mb4.5,baz=25,slow=5.4,SNR=16						
ZALV				LR	LR	01 58 22.9	
	comp=E,208nm,18.1s,MS4.5,baz=242,slow=40						
RKT	**Rikitea**	72.77	185	*e*LR	LR	01 44 09.3	
	comp=E,858nm,26.5s						
ISAL	**Salakas**	73.08	14	*e*P	P	01 21 52.2	+1.4
ISAL				AMB	AMB	01 21 55.1	
	comp=Z,3.5nm,1.5s,mb4.1						
BJI	**Beijing**	73.26	313	P	P	01 21 50.9	-1.2
BJI				S	S	01 31 18.4	-1.9
BJI				SS	SS	01 35 58.0	-3.0
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
BJI				pmax	pmax		
	comp=Z,160nm,4.8s						
BJI				LR	LR		
	comp=N,170nm,24.3s,MS4.5						
BJI				LR	LR		
	comp=E,240nm,21.7s,MS4.5						
BJI				LR	LR		
	comp=Z,210nm,20.8s,MS4.4						
IIGN	**Ignalina**	73.31	14	*e*P	P	01 21 53.5	+1.4
IIGN				AMB	AMB	01 21 55.2	
	comp=Z,3.0nm,1.4s,mb4.0						
SVE	**Sverdlovsk**	73.33	354⇑	*e*P	P	01 21 52.0	-0.2
SVE				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
IDID	**Didziasalis**	73.43	14	*e*P	P	01 21 54.0	+1.2
IDID				AMB	AMB	01 21 56.9	
	comp=Z,3.3nm,1.2s,mb4.1						
ARU	**Arti**	73.85	355	*c* *i*P	P	01 21 54.7	-0.6
ARU						01 24 36.6	
ARU				S	S	01 31 26.7	+0.3
ARU				SS	SS	01 36 10.6	+1.7
ARU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
ARU	**Arti**	73.85	355	*e*P	P	01 21 54.2	-1.1
	comp=Z,15nm,1.0s,mb4.9						
ARU	**Arti**	73.85	355	P	P	01 21 55.7	+0.4
	comp=Z,74nm,1.2s,mb5.5,SNR=5.1						
CLL	**Collm**	74.42	23	*e*P	P	01 21 54.0	-4.7
CLL				*e*S	S	01 31 36.0	+3.0
HHC	**Hu-ho-hao-te**	74.75	316	*e*P	P	01 22 00.8	0.0
HHC				pP	pP	01 22 05.5	+1.4
HHC				sP	sP	01 22 07.8	+2.5
HHC				PcP	PcP	01 22 15.6	+0.7
HHC				PP	PP	01 24 50.8	+3.5
HHC				S	S	01 31 35.6	-1.4
HHC				sS	sS	01 31 42.4	0.0
HHC				SKS		01 32 03.5	
HHC				SS	SS	01 36 23.8	+0.3
HHC				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
HHC				pmax	pmax		
	comp=Z,77nm,5.2s						
HHC				LR	LR		
	comp=N,310nm,17.7s,MS4.8						
HHC				LR	LR		
	comp=E,350nm,17.4s,MS4.8						
HHC				LR	LR		
	comp=Z,360nm,18.6s,MS4.7						
OBN	**Obninsk**	74.81	8⇑	*i*P	P	01 22 00.5	-0.4
OBN				*i*	pP	01 22 03.0	-1.2
OBN				*i*		01 22 14.8	
OBN				*e*		01 24 50.6	
OBN				*e*S	S	01 31 41.8	+4.6
OBN				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.5						
OBN	**Obninsk**	74.81	8	*e*P	P	01 22 00.4	-0.5
	comp=Z,32nm,1.1s,mb5.2						
BRG	**Berggiesshubel**	75.06	23	*e*P	P	01 22 06.9	+4.5
	comp=Z,3.7nm,1.0s,mb4.3						
BRG							
	comp=Z,384nm,18.2s						
BRG							
	comp=N,357nm,15.9s						
BRG							
	comp=E,252nm,15.9s						
NKC	**Novy Kostel**	75.26	24	AMS	AMS	01 55 50.0	
	comp=E,300nm,16.2s						
LOR	**Lormes**	75.38	30	*e*P	P	01 22 00.5	-3.8
SSF	**Saint Saulge**	75.45	31	*e*P	P	01 22 01.1	-3.6
	comp=E,104nm,1.8s,mb5.2						
SSF	**Saint Saulge**	75.45	31	*e*P	P	01 22 01.1	-3.6
SSF				pmax	pmax		
	comp=Z,52nm,1.8s,mb5.2						
SSF	**Saint Saulge**	75.45	31	*e*P	P	01 22 01.1	-3.6
	comp=Z,52nm,1.8s,mb5.2						
PVCC	**Panska Ves**	75.53	22	*e*P	P	01 22 11.4	+6.3
PVCC				MLR	MLR		
	comp=Z,400nm,19.6s,MS4.7						
PVCC	**Panska Ves**	75.53	22	*e*pP	pP	01 22 11.4	+3.0
PVCC				AMS	AMS	01 57 30.0	
	comp=Z,400nm,19.6s						
PRA	**Prague**	75.92	23	P	P	01 22 12.0	+4.7
PRA				AMS	AMS	01 58 00.0	
PRU	**Pruhonice**	76.02	23	*e*P	P	01 22 11.0	+3.1
PRU				MLR	MLR		
	comp=Z,500nm,14.6s,MS5.0						
PRU	**Pruhonice**	76.02	23	*e*P	P	01 22 11.0	+3.1
PRU				AMS	AMS	01 59 20.0	
	comp=Z,500nm,14.6s						
BRVK	**Borovoye**	76.04	348	*e*P	P	01 22 06.7	-1.3
BRVK	**Borovoye**	76.04	348	*e*P	P	01 22 05.8	-2.2
	comp=Z,9.5nm,1.1s,mb4.6						
BVAR	**Borovoye Array**	76.06	347	P	P	01 22 07.2	-0.9
	comp=Z,5.5nm,1.0s,mb4.4,baz=46,slow=6.4,SNR=16						
DPC	**Dobruska-Polom**	76.12	21	*e*P	P	01 22 12.2	+3.7
DPC				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.9						
DPC	**Dobruska-Polom**	76.12	21	*e*P	P	01 22 12.2	+3.7

SSE LR LR
comp=N,130nm,35.8s,MS4.2
SSE LR LR
comp=E,170nm,35.8s,MS4.2
SSE LR LR
comp=Z,270nm,38.9s,MS4.3
NJ2 Nanjing 78.19 306 *e*P **P 01 22 22.1 +1.6**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.2
AKASG Malin Array Be 78.28 13 P **P 01 22 19.6 -1.0**
comp=Z,3.0nm,0.8s,mb4.3,baz=346,slow=5.2,SNR=7.9
KIEV Kiev 78.28 13 *e*P **P 01 22 21.0 +0.4**
KIEV MLR MLR
comp=Z,552nm,21.0s,MS4.9
ESDC Sonseca Array 79.02 39 P **P 01 22 24.8 -0.1**
comp=Z,2.9nm,0.9s,mb4.2,baz=317,slow=5.2,SNR=9.5
ESDC Sonseca Array 79.02 39 P **P 01 22 24.8 -0.1**
UZH Uzhgorod 79.05 18 *e*P **P 01 22 28.4 +3.5**
UZH *e* 01 22 35.7
UZH *e*S S 01 32 26.0 +2.3
UZH *e* 01 33 10.9
UZH *e* 01 37 30.7
UZH MLR MLR
comp=N,460nm,17.0s,MS4.9
UZH MLR MLR
comp=E,250nm,17.0s,MS4.9
UZH MLR MLR
comp=Z,390nm,17.0s,MS4.8
MK31 Makanchi Array 79.75 338 *e*P **P 01 22 27.5 -1.2**
MKAR Makanchi Array 79.75 338 P **P 01 22 27.4 -1.4**
comp=Z,3.3nm,0.8s,mb4.3,baz=39,slow=4.8,SNR=16
MKAR LR LR 02 04 04.2
comp=Z,226nm,18.1s,MS4.5,baz=13,slow=40
MKAR Makanchi Array 79.75 338 *i* P **P 01 22 28.7 0.0**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
PKSM Moragy 80.54 21 ⇑P **P 01 22 32.4 -0.6**
PKSM Moragy 80.54 21 ⇑*i*P **P 01 22 32.4 -0.6**
BURAR Bucovina Array 80.59 17 ⇓P pP 01 22 43.8 +7.2
BURAR Bucovina Array 80.59 17 ⇓*i*P **P 01 22 43.8 +11**
ABKAR Akbulak array 80.91 353 *e*P **P 01 22 33.7 -1.2**
comp=Z,11nm,1.0s,mb4.7
WMQ Urumqi 81.06 333 *e*P **P 01 22 36.0 +0.1**
WMQ sP sP 01 22 43.0 +2.6
WMQ PP PP 01 25 44.0 +4.1
WMQ S S 01 32 44.0 -1.0
WMQ SS SS 01 38 02.0 +3.9
WMQ pmax pmax
comp=Z,24nm,1.2s,mb5.0
WMQ pmax pmax
comp=Z,76nm,7.0s
WMQ LR LR
comp=N,160nm,20.0s,MS4.7
WMQ LR LR
comp=E,260nm,20.0s,MS4.7
WMQ LR LR
comp=Z,160nm,20.0s,MS4.4
BZS Buzias 81.78 20 ⇑P **P 01 22 40.4 +0.8**
BZS Buzias 81.78 20 ⇑*i*P **P 01 22 40.4 +0.8**
LZH Lanzhou 82.07 319 *e*P **P 01 22 41.6 +0.3**
LZH pP pP 01 22 44.8 +0.2
LZH sP sP 01 22 46.2 +0.4
LZH *e*PP PP 01 25 50.7 +2.2
LZH *e*S S 01 32 52.5 -3.2
LZH sS sS 01 33 01.1 -0.1
LZH *e*SS SS 01 38 15.0 +1.3
LZH pmax pmax
comp=Z,41nm,1.5s,mb5.1
LZH pmax pmax
comp=Z,150nm,6.4s
LZH LR LR
comp=N,300nm,13.0s,MS5.0
LZH LR LR
comp=E,410nm,17.0s,MS5.0
LZH LR LR
comp=Z,420nm,20.0s,MS4.8
VRI Vrincioaia 82.56 16 ⇑P **P 01 22 45.9 +2.2**
VRI Vrincioaia 82.56 16 ⇑*i*P **P 01 22 45.9 +2.2**
VOIR 82.66 17 ⇑P **P 01 22 45.9 +1.7**
VOIR 82.66 17 ⇑*i*P **P 01 22 45.9 +1.7**
AQU L'Aquila 82.75 26 ⇓P **P 01 22 46.7 +1.9**
AQU L'Aquila 82.75 26 ⇓*i*P **P 01 22 46.7 +1.9**
TIRR Tirgusor 84.22 15 ⇑P **P 01 22 53.6 +1.3**
TIRR Tirgusor 84.22 15 ⇑*i*P **P 01 22 53.6 +1.3**
MDT Midelt 84.54 44 LR LR 01 58 52.6
comp=Z,131nm,18.2s,MS4.4,baz=343,slow=34
TKM2 Tokmak 2 84.93 341 *e*P **P 01 22 54.9 -1.0**
TKM2 pmax pmax
comp=Z,15nm,1.0s,mb5.1
TKM2 Tokmak 2 84.93 341 *e*P **P 01 22 54.9 -1.0**
comp=Z,15nm,1.0s,mb5.1
VTS Vitosha 85.01 19 ⇓P **P 01 22 56.1 -0.2**
VTS Vitosha 85.01 19 ⇓*i*P **P 01 22 56.1 -0.2**
ANN Anapa 85.11 9 *e*P **P 01 22 59.5 +2.8**
ANN pmax pmax
comp=Z,24nm,1.0s,mb5.3
ANN MLR MLR
comp=Z,276nm,17.0s,MS4.7
LPAZ La Paz 85.39 122 P **P 01 22 56.2 -2.2**
comp=Z,11nm,1.2s,mb4.9,baz=350,slow=6.3,SNR=11
LPAZ LR LR 02 03 52.7
comp=Z,174nm,18.3s,MS4.5,baz=328,slow=38
LPAZ La Paz 85.39 122 *e*P **P 01 22 56.3 -2.1**
LPAZ pmax pmax
comp=Z,19nm,1.2s
LPAZ La Paz 85.39 122 *e*P **P 01 22 56.3 -2.1**
comp=Z,19nm,1.2s,mb5.1
AAK Ala-Archa 85.43 342 *e*P **P 01 22 58.2 -0.2**
AAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
AAK Ala-Archa 85.43 342 *e*P **P 01 22 58.6 +0.2**
comp=Z,4.4nm,0.9s,mb4.6
EKS2 Erkin-Say 85.54 343 *e*P **P 01 22 59.7 +0.8**
comp=Z,13nm,1.4s,mb5.0
KKAR Karatay Array 85.70 345 *e*P **P 01 22 59.3 -0.4**
KKAR pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
KKAR Karatay Array 85.70 345 *e*P **P 01 22 59.3 -0.4**
comp=Z,3.0nm,0.9s,mb4.5
AML Almayashu 86.07 343 *e*P **P 01 23 02.4 +0.8**
comp=Z,10nm,1.1s,mb5.0
KIV Kislovodsk 86.37 5 *e*P **P 01 23 02.6 -0.4**
KIV *i*S S 01 33 28.1 -10
KIV pmax pmax
comp=Z,16nm,1.2s,mb5.1
KIV MLR MLR
comp=Z,100nm,17.0s,MS4.3
KIV Kislovodsk 86.37 5 *e*P **P 01 23 04.0 +1.0**
comp=Z,15nm,1.0s,mb5.2
CD2 Chengdu 86.50 316 *e*P **P 01 23 04.1 +0.2**
CD2 pP pP 01 23 08.9 +1.6
CD2 sP sP 01 23 11.6 +3.2
CD2 PP PP 01 26 26.6 +1.8
CD2 SKS 01 33 26.4
CD2 S S 01 33 37.9 -2.3
CD2 sS sS 01 33 45.9 +0.2
CD2 SS SS 01 39 21.0 +1.8
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
CD2 pmax pmax
comp=Z,30nm,4.2s
CD2 LR LR
comp=N,130nm,16.2s
CD2 LR LR
comp=Z,100nm,14.2s,MS4.4
SOC Sochi 86.52 7 *e*P **P 01 23 03.2 -0.6**
SOC *e*S S 01 33 30.0 -10
SOC pmax pmax
comp=Z,24nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,196nm,17.0s,MS4.6
KEST Kesra 87.52 32 LR LR 02 01 21.6
comp=Z,108nm,20.8s,MS4.2,baz=311,slow=35
VAE Valguarnera 87.55 28 LR LR 02 03 35.5
comp=Z,434nm,18.2s,MS4.9,baz=108,slow=36
ZEI Tsey 87.61 4 *e*P **P 01 23 11.6 +2.5**
ZEI pmax pmax
comp=Z,8.0nm,0.5s,mb5.2
GYA Guiyang 88.90 311 P **P 01 23 14.8 -0.7**
GYA PP PP 01 26 46.2 +2.1
GYA SKS 01 33 42.7
GYA S S 01 34 00.8 -2.5
GYA SS SS 01 39 53.4 -1.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,12nm,5.2s
GYA LR LR
comp=N,430nm,19.8s,MS5.0
GYA LR LR
comp=E,410nm,20.4s,MS5.0
GYA LR LR
comp=Z,480nm,22.4s,MS4.9
BRTR Keskin Array B 89.66 13 P **P 01 23 17.4 -1.4**
comp=Z,1.5nm,0.9s,mb4.3,baz=336,slow=2.7,SNR=6.4
BRTR LR LR 02 06 18.2
comp=Z,105nm,20.2s,MS4.3,baz=329,slow=37
BRTR Keskin Array B 89.66 13 *ce*P **P 01 23 21.2 +2.4**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 89.66 13 P **P 01 23 17.4 -1.4**
BRTR LR LR 02 06 18.2
MALT Malatya 91.63 9 *e*P **P 01 23 28.3 +0.3**
MALT pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
MALT Malatya 91.63 9 *e*P **P 01 23 28.3 +0.3**
comp=Z,2.1nm,0.9s,mb4.5
KMI Kunming 91.90 314 P **P 01 23 30.3 +0.8**
KMI pP pP 01 23 33.0 +0.2
KMI sP sP 01 23 34.3 +0.3
KMI PP PP 01 27 10.2 +2.3
KMI S S 01 34 29.3 -1.6
KMI SS SS 01 40 35.5 -2.3
KMI pmax pmax
comp=Z,19nm,0.5s,mb5.7
KMI pmax pmax
comp=Z,43nm,3.3s
KMI LR LR
comp=N,210nm,20.3s,MS4.8
KMI LR LR
comp=E,200nm,16.7s,MS4.8
KMI LR LR
comp=Z,230nm,20.3s,MS4.6
BBTS Babate 93.34 63 LR LR 02 04 53.0
comp=Z,331nm,19.5s,MS4.8,baz=114,slow=35
QIZ Qiongzhong 93.45 305 P **P 01 23 33.3 -3.4**
QIZ S S 01 34 40.6 -4.3
QIZ LR LR
comp=N,130nm,19.4s
QIZ LR LR
comp=Z,170nm,18.0s,MS4.5
BDFB Brasilia 96.76 106 LR LR 02 07 00.0
comp=Z,252nm,21.2s,MS4.7,baz=202,slow=35
RCBR Riachuelo 97.09 91 LR LR 02 08 04.5
comp=Z,252nm,18.9s,MS4.7,baz=311,slow=36
CMAR Chiang Mai Arr 99.41 313 LR LR 02 12 08.9
comp=Z,145nm,18.8s,MS4.5,baz=29,slow=37
KMBO Kilima Mbogo 130.26 17 PKP PKPdf 01 29 30.7 -0.9
comp=Z,0.8nm,0.7s,baz=4.2,slow=19,SNR=2.0
QSPA South Pole Qui 139.65 180 PKhKP PKPpre 01 29 39.3
comp=Z,1.3nm,0.9s,baz=80,slow=6.1,SNR=2.9
QSPA South Pole Qui 139.65 180 PKP PKPpre 01 29 39.3
CASY Casey 145.66 219 *e*PKPbc PKPdf 01 29 55.3 -2.7
LBTB Lobatse 148.82 46 *e*PKP2 PKPbc 01 30 09.6 +1.1
BOSA Boshof 151.67 51 PKPbc PKPbc 01 30 14.7 -0.5
comp=Z,10nm,0.9s,baz=332,slow=4.0,SNR=8.7
BOSA Boshof 151.67 51 *e*PKPbc PKPbc 01 30 15.4 +0.2
SUR Sutherland 152.21 62 PKPbc PKPbc 01 30 16.6 +0.2
comp=Z,7.7nm,0.7s,baz=316,slow=1.2,SNR=5.1

*IDC **06** 01:23:16.3±0.8, 15°.72S×173°.30W, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.0/22, mbtmp4.0/9, ML2.7/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/27, Error ellipse: s-maj=36.2km s-min=17.8km az=129.0*
*ISCJB **06** 01:23:19.3±0.7, 15°.6S±0°.2×173°.3W±0°.2, h33km, mb3.9/8, Error ellipse: s-maj=32.5km s-min=8.8km az=42.4*
*NEIC **06** 01:23:21.2±0.6, 15°.68S×173°.28W, h35km, Error ellipse: s-maj=30.2km s-min=12.5km az=130.0*
ISC 06 01:23:21.0±0.7, 15°.6S±0°.2×173°.2W±0°.2, h35km, n11, σ1§26/11, mb3.9/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.19**	**40**	Pn	**Pn**	**01 23 55.1**	**+0.1**
	118nm,0.3s,baz=33,slow=2.7,SNR=43						
AFI				Sn	**Sn**	**01 24 19.3**	**-1.6**
	225nm,0.3s,baz=72,slow=20,SNR=9.3						
AFI				LR	LR	01 24 42.6	
	comp=Z,435nm,18.9s,baz=235,slow=37						
URZ	**Urewera**	**24.13**	**199**	P	**P**	**01 28 32.7**	**-0.9**
	5.9nm,0.6s,mb4.2,baz=4.4,slow=16,SNR=8.5						
STKA	**Stephens Creek**	**44.08**	**240**	P	**P**	**01 31 24.4**	**-1.5**
	2.0nm,0.7s,mb3.9,baz=81,slow=13,SNR=4.0						
WRA	**Warramunga Arr**	**49.95**	**257**	P	**P**	**01 32 12.1**	**+0.2**
	0.2nm,0.3s,mb3.6,baz=95,slow=6.8,SNR=3.0						
ASAR	**Alice Springs**	**50.20**	**252**	P	**P**	**01 32 13.5**	**-0.2**
	2.4nm,0.6s,mb4.4,baz=90,slow=8.0,SNR=27						
NVAR	**Mina Array Bea**	**74.37**	**42**	P	**P**	**01 34 56.9**	**+1.6**
	0.2nm,0.3s,mb3.5,baz=212,slow=8.4,SNR=2.5						
QSPA	**South Pole Qui**	**74.45**	**180**	P	**P**	**01 34 56.6**	**+1.5**
	1.7nm,0.9s,mb4.0,baz=65,slow=0.8,SNR=3.3						
QSPA	**South Pole Qui**	**74.45**	**180**	P	**P**	**01 34 56.6**	**+1.5**
ILAR	**Eielson Array**	**82.61**	**11**	P	**P**	**01 35 42.3**	**+2.3**
	0.4nm,0.6s,mb3.6,baz=231,slow=6.0,SNR=11						
MAW	**Mawson**	**87.66**	**199**	P	**P**	**01 36 04.4**	**-1.1**
	1.3nm,0.8s,mb4.2,baz=83,slow=8.1,SNR=3.0						
BRTR	**Keskin Array B**	**146.41**	**321**	PKPbc	PKPbc	01 42 59.4	+0.9
	0.6nm,0.7s,baz=64,slow=4.9,SNR=4.4						

WEL 06 01:46:12.5±0.2, 39°.70S×174°.46E, h121km±2km, ML3.5/13, 2D, Error ellipse: s-maj=1.2km s-min=0.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.41**	**98**	PN	Pn	01 46 30.1	+0.2
WAZ				SN	Sn	01 46 43.4	+0.3
RAEZ	**Rainy Point**	**0.42**	**353**	PN	Pn	01 46 29.9	-0.2
DFE	**Dawson Falls**	**0.46**	**323**	PN	Pn	01 46 30.1	-0.2
NEZ	**North Egmont**	**0.51**	**327**	PN	Pn	01 46 30.5	-0.1
NRZ	**Ngariki Road**	**0.55**	**312**	PN	Pn	01 46 30.5	-0.3
DREZ	**Durham Road**	**0.55**	**338**	PN	Pn	01 46 30.6	-0.2
VRZ	**Vera Road**	**0.62**	**22**	PN	Pn	01 46 31.0	-0.3
PKE	**Pukeiti**	**0.62**	**324**	PN	Pn	01 46 31.0	-0.3
PKE				SN	Sn	01 46 44.3	-1.2
NWEZ	**Newall Road**	**0.63**	**313**	PN	Pn	01 46 31.3	0.0
MHEZ	**Mangahewa**	**0.63**	**350**	PN	Pn	01 46 31.5	+0.1
MHEZ				SN	Sn	01 46 44.9	-0.7
PKVZ	**Pokaka**	**0.80**	**59**	PN	Pn	01 46 32.5	-0.2
MTVZ	**Mangateitei**	**0.84**	**68**	PN	Pn	01 46 32.9	-0.2
DRZ	**Dome Shelter**	**0.95**	**64**	PN	Pn	01 46 34.1	0.0
FWVZ	**Far West T-bar**	**0.95**	**63**	PN	Pn	01 46 34.1	0.0
WNVZ	**Wahianoa**	**0.95**	**67**	⇓PN	Pn	01 46 34.0	-0.1
WPVZ	**Whakapapa**	**0.97**	**60**	PN	Pn	01 46 34.1	-0.2
TWVZ	**Taurewa**	**0.98**	**51**	⇓PN	Pn	01 46 34.0	-0.4
TUVZ	**Tukino**	**1.02**	**65**	PN	Pn	01 46 34.8	+0.1
NGZ	**Ngauruhoe**	**1.03**	**60**	PN	Pn	01 46 34.6	-0.2
MOVZ	**Moawhango**	**1.04**	**74**	PN	Pn	01 46 34.5	-0.4
WTVZ	**West Tongariro**	**1.05**	**57**	PN	Pn	01 46 34.8	-0.2
OTVZ	**Oturere**	**1.08**	**61**	PN	Pn	01 46 35.4	+0.1
KRVZ	**Karewarewa**	**1.10**	**57**	PN	Pn	01 46 35.3	-0.2
KATZ	**Kakaramea**	**1.20**	**53**	PN	Pn	01 46 36.6	0.0
TSZ	**Takapari Road**	**1.21**	**108**	PN	Pn	01 46 37.0	+0.3
KIW	**Kapiti Island**	**1.21**	**164**	PN	Pn	01 46 36.6	-0.1
POWZ	**Post Office Ro**	**1.22**	**125**	PN	Pn	01 46 36.6	-0.1
HIZ	**Hauiti**	**1.22**	**15**	PN	Pn	01 46 36.5	-0.3
OGWZ	**Otaki Gorge**	**1.24**	**154**	PN	Pn	01 46 37.2	+0.1
BHHZ	**Black Hill Sta**	**1.26**	**81**	PN	Pn	01 46 36.4	-0.8
MRZ	**Mangatainoka R**	**1.29**	**139**	PN	Pn	01 46 37.3	-0.2
RATZ	**Rangitukua**	**1.31**	**51**	PN	Pn	01 46 38.4	+0.6
PNHZ	**Pukenui**	**1.36**	**100**	PN	Pn	01 46 40.0	+1.7
WATZ	**Wairara**	**1.40**	**45**	PN	Pn	01 46 39.0	+0.2
DVHZ	**Dannevirke**	**1.44**	**115**	PN	Pn	01 46 38.9	-0.3
HOWZ	**Holdsworth Sta**	**1.44**	**146**	PN	Pn	01 46 39.1	-0.1
CAW	**Cannon Point**	**1.48**	**162**	PN	Pn	01 46 39.7	0.0
TCW	**Tory Channel**	**1.52**	**185**	PN	Pn	01 46 40.2	+0.1
TIWZ	**Tintock**	**1.53**	**135**	PN	Pn	01 46 40.1	-0.2
WPHZ	**Waipukurau**	**1.57**	**104**	PN	Pn	01 46 42.7	+2.0
SNZO	**South Karori**	**1.62**	**173**	PN	Pn	01 46 41.1	-0.2
MTW	**Mount Morrison**	**1.66**	**152**	PN	Pn	01 46 41.5	-0.3
BKZ	**Black Stump Fm**	**1.66**	**72**	PN	Pn	01 46 41.2	-0.6
BFZ	**Birch Farm**	**1.68**	**126**	PN	Pn	01 46 41.6	-0.4
NNZ	**Nelson**	**1.73**	**208**	PN	Pn	01 46 42.7	+0.2
PRHZ	**Porangahau**	**1.76**	**109**	PN	Pn	01 46 43.0	-0.1
TUWZ	**Tuamarina**	**1.77**	**193**	PN	Pn	01 46 42.9	-0.3
TMWZ	**Te Maipa**	**1.78**	**143**	PN	Pn	01 46 43.0	-0.2
MSWZ	**Moikau Station**	**1.81**	**161**	PN	Pn	01 46 43.4	-0.3
PAWZ	**Paruwai Farm**	**1.83**	**157**	PN	Pn	01 46 43.6	-0.3
QRZ	**Quartz Range**	**1.86**	**232**	PN	Pn	01 46 43.7	-0.5
KAHZ	**Kahuranaki**	**1.86**	**94**	PN	Pn	01 46 44.1	-0.1
NMHZ	**Naumai**	**1.92**	**72**	PN	Pn	01 46 45.5	+0.7
PLWZ	**Palliser**	**1.96**	**162**	PN	Pn	01 46 44.9	-0.5
BSWZ	**Blackbirch Sta**	**2.06**	**192**	PN	Pn	01 46 46.9	+0.2
RAHZ	**Arahi**	**2.18**	**70**	PN	Pn	01 46 48.0	-0.2
THZ	**Tophouse**	**2.38**	**209**	PN	Pn	01 46 50.5	-0.1
URZ	**Urewera**	**2.52**	**56**	PN	Pn	01 46 51.3	-1.2
KNZ	**Kokohu**	**2.58**	**76**	PN	Pn	01 46 52.2	-1.1
KHZ	**Kahutara**	**2.80**	**194**	PN	Pn	01 46 55.7	-0.4
DSZ	**Denniston Nort**	**2.87**	**224**	PN	Pn	01 46 56.4	-0.7
PUZ	**Puketiti**	**3.38**	**62**	PN	Pn	01 47 02.0	-1.8
LTZ	**Lake Taylor**	**3.49**	**208**	PN	Pn	01 47 05.1	-0.1
MQZ	**McQueen's Vall**	**4.23**	**198**	PN	Pn	01 47 12.0	-2.9
ODZ	**Otahua Downs**	**6.04**	**207**	PN	Pn	01 47 37.5	-1.9

*IDC **06** 02:13:41.5±0.7, 6°.30N×126°.58E, h0km, mb4.2/13, mb1 4.4/13, mb1mx4.2/22, mbtmp4.2/13, Error ellipse: s-maj=39.5km s-min=13.3km az=75.0*
*ISCJB **06** 02:13:50.2±0.5, 6°.20N±0°.03×126°.28E±0°.06, h79km±4km, mb4.2/21, Error ellipse: s-maj=9.8km s-min=4.0km az=169.8*
*NEIC **06** 02:13:50.5±1.2, 6°.17N×126°.36E, h66km±11km, mb4.5/7, Error ellipse: s-maj=19.2km s-min=6.4km az=70.0*
*MAN **06** 02:13:59, 7°.27N×126°.17E, h1km, mb4.8, ML3.7, MS3.7*
*DJA **06** 02:14:00, 5°.59N×126°.26E, h103km, mb4.9/11*
ISC 06 02:13:51.4±0.5, 6°.20N±0°.03×126°.27E±0°.06, h73km±4km, n63, σ1§30/75, mb4.2/21, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.74**	**359**	*e*P	**Pn**	**02 14 05.8**	**-1.3**
MATI				*e*S	**Sn**	**02 14 18.3**	**-0.3**
DAV	**Davao City (W)**	**1.10**	**322**	Pn	**Pn**	**02 14 11.0**	**-0.4**
	266nm,0.3s,baz=166,slow=0.8,SNR=20						
DAV				Sn	**Sn**	**02 14 26.9**	**+0.7**
	713nm,0.3s,baz=74,slow=20,SNR=43						
DAV	**Davao City (W)**	**1.10**	**322**	Pn	**Pn**	**02 14 11.0**	**-0.4**
DAV				Sn	**Sn**	**02 14 26.9**	**+0.7**
DMPH	**Davao City--Mi**	**1.16**	**319**	⇑*e*P	**Pn**	**02 14 11.2**	**-0.8**
DMPH				*e*S	**Sn**	**02 14 26.0**	**-1.5**
GSPH	**General Santos**	**1.32**	**265**	⇓*i*P	**Sn**	**02 14 27.2**	**-3.9**
KCP	**Kidapawan**	**1.42**	**305**	⇓*i*P	**Pn**	**02 14 14.0**	**-1.5**
KCP				*i* S	**Sn**	**02 14 31.8**	**-1.7**
BUKP	**Musuan**	**2.05**	**324**	*e*P	**Pn**	**02 14 24.0**	**+0.2**
BUKP				*e*S	**Sn**	**02 14 46.8**	**-1.8**
CTBH	**Cotabato--PC H**	**2.25**	**297**	⇓*i*P	**Pn**	**02 14 26.7**	**+0.1**
CTBH				*i* S	**Sn**	**02 14 51.5**	**-1.9**
SGSI	**Sangihe**	**2.60**	**196**	P	**Pn**	**02 14 31.4**	**+0.1**
SGSI				S	**Sn**	**02 15 03.6**	**+1.7**
CGP	**Cagayan de Oro**	**2.73**	**325**	⇓*i*P	**Pn**	**02 14 33.5**	**+0.5**
CGP				*i* S	**Sn**	**02 15 09.8**	**+4.8**
BUTP	**Butuan**	**2.83**	**347**	*e*P	**Pn**	**02 14 37.2**	**+2.8**
PAGZ	**Pagadian**	**3.30**	**300**	*e*P	**Pn**	**02 14 40.3**	**-0.5**
SCPH	**Surigao**	**3.64**	**348**	*e*P	**Pn**	**02 14 47.6**	**+2.1**
SCPH				*e*S	**Sn**	**02 15 28.1**	**+0.8**
MSLP	**Maasin**	**4.15**	**340**	*e*P	**Pn**	**02 14 54.5**	**+2.1**
TBP	**Tagbilaran**	**4.21**	**326**	*e*P	**Pn**	**02 14 53.0**	**-0.2**
TBP				*e*S	**Sn**	**02 15 43.7**	**+2.5**
MNI	**Manado**	**4.93**	**197**	P	**Pn**	**02 15 03.5**	**+0.4**
TNTI	**Ternate**	**5.50**	**168**	P	**Pn**	**02 15 10.9**	**0.0**
KMSI	**Cibinong**	**6.04**	**202**	P	**Pn**	**02 15 19.1**	**+0.9**
	1.6nm336nm,0.8s						
LBMI	**Labuha**	**6.90**	**170**	P	**Pn**	**02 15 32.2**	**+2.2**
	0.3nm85nm,0.8s						
MRSI	**Marisa**	**7.14**	**217**	P	**Pn**	**02 15 33.3**	**+0.1**
	1.4nm3μm185nm,0.8s						
MRSI				S	**Sn**	**02 16 50.4**	**-2.5**
	1.4nm3μm185nm,0.8s						
MYLDM	**Lahad Datu**	**7.80**	**263**	P	**Pn**	**02 15 46.9**	**+4.7**
	0.1nm22nm,0.9s						
LUWI	**Luwuk**	**7.99**	**206**	P	**Pn**	**02 15 47.4**	**+2.5**
	0.8nm230nm,1.0s						
APSI	**Ampana**	**8.43**	**213**	P	**Pn**	**02 15 54.4**	**+3.4**
NLAI	**Namlea**	**9.41**	**175**	P	**Pn**	**02 16 02.4**	**-1.9**
	1μm57nm,0.6s						
NLAI				S	**Sn**	**02 17 44.0**	**-4.6**
	1μm57nm,0.6s						
KDI	**Kendari**	**10.73**	**200**	P	**Pn**	**02 16 23.8**	**+1.5**
	459nm37nm,0.8s						
TTSI	**Tana Toraja**	**11.21**	**215**	P	**Pn**	**02 16 31.2**	**+2.3**
	2μm42nm,0.8s						
KAPI	**Kappang**	**12.90**	**210**	*e*Pn	**Pn**	**02 16 50.5**	**-1.3**
	35nm,0.9s						
KBKI	**Kotabaru**	**13.81**	**227**	P	**Pn**	**02 17 12.1**	**+8.1**
SBUM	**Sibu**	**14.49**	**256**	P	**Pn**	**02 17 22.0**	**+9.1**
KAKA	**Kakadu**	**19.76**	**162**	*e*P	**Pn**	**02 18 15.8**	**-2.0**
	25nm,0.6s						
KAKA	**Kakadu**	**19.76**	**162**	*e*P	**Pn**	**02 18 15.8**	**-2.1**
	73nm,0.7s						
KNA	**Kununurra**	**21.95**	**174**	*e*P	**P**	**02 18 38.8**	**-0.4**
	23nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**24.15**	**181**	P	**P**	**02 19 00.2**	**-0.7**
	5.4nm,0.7s,mb4.0,baz=11,slow=7.6,SNR=28						
FITZ	**Fitzroy Crossi**	**24.15**	**181**	*e*P	**P**	**02 18 59.9**	**-1.0**
	12nm,0.9s,mb4.2						
COEN	**Coen**	**26.13**	**140**	*e*P	**P**	**02 19 19.0**	**+0.2**
	23nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**27.16**	**163**	P	**P**	**02 19 27.0**	**-1.1**
	3.3nm,0.5s,mb4.1,baz=348,slow=10,SNR=12						
WRA	**Warramunga Arr**	**27.16**	**163**	P	**P**	**02 19 27.0**	**-1.1**
WB2	**Warramunga Arr**	**27.17**	**163**	*e*P	**P**	**02 19 27.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**29.29**	**297**	P	**P**	**02 19 49.2**	**+2.0**
	0.9nm,0.3s,mb3.9,baz=112,slow=7.3,SNR=5.2						
ASAR	**Alice Springs**	**30.61**	**166**	P	**P**	**02 19 58.0**	**-0.6**
	5.5nm,0.6s,mb4.5,baz=345,slow=7.1,SNR=74						
KSRS	**Korea Array**	**31.15**	**3**	P	**P**	**02 20 01.1**	**-2.2**
	0.6nm,0.4s,mb3.7,baz=183,slow=11,SNR=2.9						
NWAO	**Narrogin (SRO)**	**39.84**	**192**	P	**P**	**02 21 17.2**	**-0.7**
	8.2nm,0.8s,mb4.6,baz=45,slow=4.3,SNR=3.4						
NWAO	**Narrogin (SRO)**	**39.84**	**192**	P	**P**	**02 21 17.2**	**-0.7**
BBOO	**Buckleboo**	**39.89**	**167**	*e*P	**P**	**02 21 18.0**	**-0.3**
	10nm,0.4s,mb5.0						
BBOO	**Buckleboo**	**39.89**	**167**	*e*P	**P**	**02 21 17.8**	**-0.5**
	48nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**40.59**	**160**	P	**P**	**02 21 24.0**	**0.0**
	17nm,0.8s,mb5.0,baz=338,slow=7.8,SNR=31						
STKA	**Stephens Creek**	**40.59**	**160**	*e*P	**P**	**02 21 23.9**	**-0.1**
	11nm,0.7s,mb4.8						
SONM	**Songino Array**	**44.83**	**341**	P	**P**	**02 21 58.9**	**+0.8**
	0.5nm,0.6s,mb3.4,baz=161,slow=6.5,SNR=4.3						
SONM				PcP	PcP	02 23 39.2	+0.3
	0.6nm,0.8s,baz=123,slow=5.3,SNR=2.6						
MK31	**Makanchi Array**	**55.28**	**325**	*e*P	**P**	**02 23 18.6**	**+1.3**
MKAR	**Makanchi Array**	**55.28**	**325**	P	**P**	**02 23 16.5**	**-0.8**
	1.5nm,0.5s,mb4.3,baz=114,slow=8.6,SNR=12						
MKAR				PcP	PcP	02 24 17.8	+0.5
	0.7nm,0.6s,baz=96,slow=5.8,SNR=2.7						
ZALV	**Zalesovo Beam**	**58.20**	**333**	P	**P**	**02 23 38.5**	**+0.7**
	0.9nm,0.5s,mb4.1,baz=120,slow=8.8,SNR=4.1						
KURK	**Kurchatov**	**59.43**	**327**	*e*P	**P**	**02 23 47.3**	**+0.8**
	3.9nm,0.8s,mb4.5						
BRVK	**Borovoye**	**65.09**	**327**	*e*P	**P**	**02 24 25.6**	**+1.4**
	2.9nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**69.96**	**320**	*e*P	**P**	**02 24 55.4**	**+0.4**
	0.5nm,0.6s,mb3.5						
CASY	**Casey**	**73.20**	**187**	*e*P	**P**	**02 25 13.4**	**-0.7**
	3.0nm,0.

ASAR Alice Springs 43.50 127 P P 02 23 59.9 +0.3
0.6nm,0.7s,baz=298,slow=6.2,SNR=3.9
KSRS Korea Array 45.91 35 P P 02 24 18.2 -0.5
0.9nm,0.5s,baz=226,slow=7.9,SNR=5.9
SONM Songino Array 47.14 9 P P 02 24 28.6 +0.4
1.1nm,0.7s,baz=192,slow=8.7,SNR=5.1
MKAR Makanchi Array 47.20 346 P P 02 24 28.4 -0.3
0.9nm,0.6s,baz=151,slow=7.5,SNR=3.0
ZALV Zalesovo Beam 53.53 351 P P 02 25 16.5 +0.1
1.4nm,0.4s,baz=184,slow=6.4,SNR=6.5

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*GRAL **06** 02:17:31.7±0.3,34°.36N×36°.42E,h0km±16km,MD2.8*
*NSSC **06** 02:17:32,34°.38N×36°.37E,h10km*
CSEM 06 02:17:32.2±0.2,34°.34N×36°.33E,h2km,ML2.8,12D,Error ellipse: s-maj=6.5km s-min=4.3km az=106.0,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FKH	**Fakeheh**	**0.12**	**149**	*e*P	Pg	02 17 33.7	-0.8
FKH				*e*S	Sg	02 17 35.2	-0.9
FKH	**Fakeheh**	**0.12**	**149**	*e*P	Pg	02 17 33.7	-0.8
FKH				*e*S	Sg	02 17 35.2	-0.9
HAWK	**Haweek**	**0.19**	**20**	⇑P	Pg	02 17 35.0	-0.9
HAWK				⇑S	Sg	02 17 39.0	+0.6
HAWK	**Haweek**	**0.19**	**20**	⇑*i*P	Pg	02 17 35.9	0.0
HAWK				⇑*i*S	Sg	02 17 39.1	+0.7
HWQ	**Hawqa**	**0.32**	**259**	*e*P	Pg	02 17 38.9	+0.5
HWQ				*e*S	Sg	02 17 44.3	+1.7
HWQ	**Hawqa**	**0.32**	**259**	*e*P	Pg	02 17 38.9	+0.5
HWQ				*e*S	Sg	02 17 44.3	+1.8
BIDA	**Albida**	**0.67**	**360**	⇓P	Pg	02 17 45.0	-0.1
BIDA				⇓S	Sg	02 17 54.0	+0.2
BIDA	**Albida**	**0.67**	**360**	⇓*i*P	Pg	02 17 45.7	+0.6
BIDA				⇓*i*S	Sg	02 17 54.9	+1.1
BHL	**Bhannes**	**0.71**	**232**	*e*P	Pg	02 17 45.8	0.0
BHL	**Bhannes**	**0.71**	**232**	*e*P	Pg	02 17 45.8	0.0
QASN	**Qassioun**	**0.81**	**183**	⇑P	Pg	02 17 49.0	+1.4
QASN				⇑S	Sg	02 17 59.0	+0.9
QASN	**Qassioun**	**0.81**	**183**	⇑*i*P	Pg	02 17 49.4	+1.8
QASN				⇑*i*S	Sg	02 17 59.8	+1.7
ROOS	**tl_alroos**	**0.81**	**102**	⇓P	Pg	02 17 48.0	+0.2
ROOS				⇓S	Sg	02 17 58.0	-0.4
ROOS	**tl_alroos**	**0.81**	**102**	⇓*i*P	Pg	02 17 48.5	+0.7
ROOS				⇓*i*S	Sg	02 17 58.1	-0.3
RCY	**Rachaya**	**0.95**	**207**	*e*P	Pg	02 17 49.5	-1.0
RCY				*e*S	Sg	02 18 02.5	-0.2
RCY	**Rachaya**	**0.95**	**207**	*e*P	Pg	02 17 49.5	-0.9
RCY				*e*S	Sg	02 18 02.5	-0.3
WRDH	**Warideh**	**1.17**	**3**	⇓P	Pg	02 17 54.0	-0.6
WRDH				⇓S	Sg	02 18 09.0	-0.7
WRDH	**Warideh**	**1.17**	**3**	⇓*i*P	Pg	02 17 54.6	0.0
WRDH				⇓*i*S	Sg	02 18 09.5	-0.2

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*ISCJB **06** 02:28:04.2±0.3,39°.09S±0°.03×71°.41W±0°.09,h150km±4km, mb4.3/10,Error ellipse: s-maj=12.0km s-min=4.3km az=4.2*
*IDC **06** 02:28:05.8±1.5,39°.02S×71°.05W,h140km±9km,mb4.4/8, mb1 4.2/11,mb1mx4.0/18,mbtmp4.2/11,Error ellipse: s-maj=37.3km s-min=9.9km az=98.0*
*NEIC **06** 02:28:05.5±0.4,39°.06S×71°.32W,h146km±5km,mb4.2/4, Error ellipse: s-maj=13.0km s-min=6.2km az=99.0*
*GUC **06** 02:28:06.2±1.1,39°.14S×71°.15W,h113km±38km,ML4.6*
ISC 06 02:28:05.2±0.3,39°.09S±0°.03×71°.41W±0°.09,h145km±4km, n49,σ1°.07/66,mb4.3/10,4C-1D,Southern Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**1.00**	**291**	*e*P	Pn	02 28 30.2	+0.7
TMU				*i* S	Sn	02 28 48.0	0.0
TMU	**Temuco**	**1.00**	**291**	*e*P	Pn	02 28 30.2	+0.7
TMU				*i* S	Sn	02 28 48.0	0.0
AGCH	**Angol**	**1.63**	**321**	*e*P	Pn	02 28 44.2	+8.4
AGCH				*i* S	Sn	02 29 06.8	+7.6
PLCA	**Paso Flores**	**1.77**	**158**	P	Pn	02 28 38.1	+0.8
PLCA	34nm,0.3s,baz=330,slow=12,SNR=1024			S	Sn	02 29 02.0	0.0
OSCH	**Osorno**	**1.99**	**221**	⇑*e*P	Pn	02 28 39.8	-0.1
OSCH	18nm,0.3s,baz=79,slow=22,SNR=4.9			*i* S	Sn	02 29 05.7	-0.9
OSCH	**Osorno**	**1.99**	**221**	⇑*e*P	Pn	02 28 39.8	-0.1
OSCH				*i* S	Sn	02 29 05.7	-0.9
CCHI	**Chillan**	**2.54**	**348**	⇑*i*P	Pn	02 28 48.0	+1.4
CCHI				*e*S	Sn	02 29 19.0	+0.5
CCHI	**Chillan**	**2.54**	**348**	⇑*i*P	Pn	02 28 48.0	+1.4
CCHI				*e*S	Sn	02 29 19.0	+0.5
CCHI				AML	AML	02 29 22.1	
PMCH	**Puerto Montt**	**2.65**	**205**	*e*P	Pn	02 28 48.5	+0.6
PMCH	comp=N,1μm,0.5s			*i* S	Sn	02 29 21.1	+0.1
PMCH	**Puerto Montt**	**2.65**	**205**	*e*P	Pn	02 28 48.5	+0.6
PMCH				*i* S	Sn	02 29 21.1	+0.1
PMCH				AML	AML	02 29 22.4	
PUEL	**Puelo Alto**	**2.66**	**194**	*e*P	Pn	02 28 48.7	+0.7
PUEL	comp=N,6μm,0.6s			*e*S	Sn	02 29 20.2	-0.9
PUEL	**Puelo Alto**	**2.66**	**194**	*e*P	Pn	02 28 48.7	+0.7
PUEL				*e*S	Sn	02 29 20.2	-0.9
PUEL				AML	AML	02 29 25.8	
HUNY	**Huinay**	**3.37**	**193**	*e*P	Pn	02 28 57.8	+0.7
HUNY	comp=N,898nm,0.8s			AML	AML	02 29 51.8	
CNCO	**Chanco**	**3.47**	**345**	P	Pn	02 28 58.9	+0.4
CNCO	comp=E,620nm,0.4s			S	Sn	02 29 38.1	-1.5
CNCO	**Chanco**	**3.47**	**345**	*e*P	Pn	02 28 58.9	+0.4
CNCO				*i* S	Sn	02 29 38.1	-1.5
TALC	**Talca**	**3.69**	**357**	P	Pn	02 29 01.4	+0.1
TALC				S	Sn	02 29 42.7	-2.1
TALC	**Talca**	**3.69**	**357**	*e*P	Pn	02 29 01.4	+0.1
TALC				*i* S	Sn	02 29 42.7	-2.1
QLLN	**Quelln**	**4.34**	**202**	*e*P	Pn	02 29 08.6	-1.2
QLLN				*i* S	Sn	02 29 54.8	-5.2
LMEL	**Las Melosas**	**5.32**	**11**	P	Pn	02 29 23.2	+0.4
LMEL				*i* S	Pn	02 29 24.2	+1.4
LMEL	**Las Melosas**	**5.32**	**11**	*e*P	Pn	02 29 23.2	+0.4
LMEL				*i* S	Sn	02 30 24.2	+0.8
TRQA	**Tornquist**	**7.46**	**85**	*e*Pn	Pn	02 29 51.5	+0.2
	comp=E,109nm,0.7s						
CFAA	**Coronel Fontan**	**7.91**	**20**	P	Pn	02 29 56.1	-1.3
	comp=E,1.1nm,0.3s,baz=191,slow=11,SNR=71						
CFAA				S	Sn	02 31 20.0	-5.4
CFAA	**Coronel Fontan**	**7.91**	**20**	P	Pn	02 29 56.1	-1.3
CFAA	comp=E,1.6nm,0.3s,baz=81,slow=23,SNR=16			S	Sn	02 31 20.0	-5.4
USHA	**Ushuaia**	**15.88**	**174**	P	Pn	02 31 41.1	+0.7
	comp=E,1.2nm,0.3s,baz=332,slow=12,SNR=11						
CPUP	**Villa Florida**	**17.36**	**47**	P	Pn	02 31 54.8	-3.8
	comp=E,1.4nm,0.3s,baz=208,slow=11,SNR=12						
LPAZ	**La Paz**	**22.90**	**8**	P	P	02 32 58.4	+1.9
	comp=E,3.2nm,0.7s,mb3.9,baz=169,slow=6.8,SNR=14						
LPAZ	**La Paz**	**22.90**	**8**	*e*P	P	02 32 57.8	+1.4
	comp=E,4.6nm,0.7s,mb4.0						
SIV	**San Ignacio**	**24.73**	**24**	P	P	02 33 13.1	-0.1
	comp=E,22nm,1.0s,mb4.6,baz=223,slow=9.1,SNR=39						
BDFB	**Brasilia**	**31.09**	**48**	P	P	02 34 08.3	-1.5
	comp=E,22nm,0.7s,mb5.0,baz=211,slow=7.9,SNR=40						
VNA3	**Neumayer Olymp**	**44.49**	**156**	*e*	P	02 35 59.3	-2.2
VNA1	**Neumayer--Stat**	**44.83**	**155**	*e*	P	02 36 02.5	-1.6
VNA2	**Neumayer--Watz**	**45.16**	**155**	*e*	P	02 36 04.8	-2.0
	baz=290,slow=10						
VNA2				*e*		02 36 07.2	
QSPA	**South Pole Qui**	**51.16**	**180**	P	P	02 36 54.7	+2.0
	comp=E,12nm,0.7s,mb4.6,baz=146,slow=2.6,SNR=33						
MAIT	**Maitri**	**51.44**	**155**	*e*P	P	02 36 55.7	+0.8
SYO	**Syowa Base**	**60.97**	**157**	⇓*e*P	P	02 38 01.0	-1.4
MAW	**Mawson**	**68.17**	**163**	P	P	02 38 50.1	+0.9
	comp=E,3.1nm,0.6s,mb4.2,baz=185,slow=6.1,SNR=25						
MAW	**Mawson**	**68.17**	**163**	*e*P	P	02 38 50.0	+0.8
	comp=E,4.4nm,1.0s,mb4.1						
TXAR	**Lajitas Array**	**74.42**	**331**	pP	pP	02 40 05.0	+2.2
	comp=E,0.7nm,1.0s,baz=131,slow=5.8,SNR=3.9						
CASY	**Casey**	**74.95**	**181**	*e*P	P	02 39 30.8	+1.0
CASY	**Casey**	**74.95**	**181**	*e*P	P	02 39 30.8	+1.1
	comp=E,3.5nm,0.6s,mb4.2						
DBIC	**Dimbokro**	**76.40**	**70**	P	P	02 39 39.1	+0.3
	comp=E,4.2nm,0.4s,mb4.4,baz=209,slow=7.2,SNR=19						
DBIC	**Dimbokro**	**76.40**	**70**	*e*P	P	02 39 41.0	+2.2
	comp=E,4.7nm,0.5s,mb4.4						
BOSA	**Boshof**	**77.30**	**116**	P	P	02 39 44.0	+0.2
	comp=E,2.8nm,0.5s,mb4.2,baz=218,slow=17,SNR=13						
BOSA	**Boshof**	**77.30**	**116**	P	P	02 39 44.0	+0.2
LBTB	**Lobatse**	**79.75**	**114**	*e*P	P	02 39 57.4	+0.2
	comp=E,3.8nm,0.7s,mb4.1						
TORD	**Torodi Ar. Bea**	**85.50**	**69**	P	P	02 40 26.9	-0.1
	comp=E,0.4nm,0.4s,mb3.5,baz=220,slow=4.9,SNR=9.0						
WRA	**Warramunga Arr**	**116.52**	**207**	PKP	PKPdf	02 46 32.0	-0.2
	comp=E,0.2nm,0.5s,baz=175,slow=1.5,SNR=5.3						
ABKAR	**Akbulak array**	**144.22**	**57**	*e*PKPdf	PKPdf	02 47 21.6	-1.6
MKAR	**Makanchi Array**	**159.33**	**60**	PKPab	PKPab	02 48 23.9	-0.1
	comp=E,0.7nm,0.6s,baz=323,slow=4.5,SNR=3.6						

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*ISCJB **06** 02:29:06.0±1.2,33°.83N±0°.04×48°.12E±0°.04,h0km±11km, Error ellipse: s-maj=7.1km s-min=5.4km az=145.3*
*CSEM **06** 02:29:07.0±0.3,33°.90N×48°.17E,h2km,ML3.3,Error ellipse: s-maj=12.3km s-min=7.0km az=92.0*
*TEH **06** 02:29:08.5,33°.87N×48°.12E,h8km*
*KISR **06** 02:29:08.1±0.7,33°.49N×48°.35E,h34km±999km,ML2.9*
ISC 06 02:29:07.4±1.3,33°.87N±0°.04×48°.12E±0°.05,h2km±11km, n27,σ0°.81/37,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**0.59**	**301**	*e*Pg	Pg	02 29 19.1	+0.3
IKOM				*e*Sg	Sg	02 29 27.2	+0.7
IKOM				*e*		02 29 31.9	
	comp=Z,14μm,0.1s						
IVIS	**Veis**	**1.24**	**302**	*e*Pg	Pg	02 29 30.0	-1.3
IVIS				*e*Sg	Sg	02 29 47.9	+0.5
IVIS				*e*		02 29 56.2	
	comp=Z,11μm,0.1s						
IGHG	**Ghaleghazi**	**1.37**	**290**	*e*Pn	Pn	02 29 33.9	+0.4
IGHG				*e*		02 30 05.0	
	comp=Z,13μm,0.3s						
SNGE	**Sanandaj**	**1.38**	**333**	*e*Pg	Pn	02 29 32.1	-1.5
SNGE				*e*Sg	Sg	02 29 52.5	+0.7
ILIN	**Lien**	**1.42**	**318**	*e*Pn	Pn	02 29 34.1	-0.1
ILIN				*e*		02 29 58.5	
	comp=N,18μm,0.2s						
IDHR	**Dehrash**	**1.66**	**301**	*e*Pn	Pg	02 29 38.4	-0.8
IDHR				*e*Sg	Sg	02 29 59.8	-1.0
IDHR				*e*		02 30 07.6	
	comp=Z,20μm,0.1s						
IRAZ	**Razeghan**	**2.14**	**44**	*e*Pn	Pn	02 29 44.2	+0.1
IRAZ				*e*		02 30 20.8	
	comp=Z,4μm,0.3s						
IPIR	**Pirpir**	**2.60**	**116**	*e*Pn	Pn	02 29 50.6	+0.2
IPIR				*e*		02 30 47.7	
	comp=Z,1μm,0.3s						
ZNJK	**Zanjan**	**2.83**	**9**	*e*Pn	Pn	02 29 53.6	0.0
IR3	**Iran Long-Peri**	**2.88**	**55**	*e*Pn	Pn	02 29 55.0	+0.7
IKLH	**Kolahrood**	**2.94**	**100**	*e*Pn	Pn	02 29 55.8	+0.8
IKLH				*e*		02 30 46.1	
	comp=Z,675nm,0.3s						
CHTH	**Charan**	**3.20**	**50**	*e*Pn	Pn	02 29 58.7	0.0
ISFB	**Sefidab**	**3.45**	**81**	*e*Pn	Pn	02 30 02.4	+0.3
DAMV	**Damavand**	**3.62**	**60**	*e*Pn	Pn	02 30 04.5	0.0
IZEF	**Zefreh**	**3.65**	**104**	*e*Pn	Pn	02 30 04.9	0.0
IZEF				*e*		02 31 12.3	
	comp=Z,268nm,0.4s						
NASN	**Na'in**	**4.06**	**104**	*e*Pn	Pn	02 30 08.6	-1.9
MIB	**Mutribah**	**4.11**	**190**	*e*P	Pn	02 30 11.8	+0.7
MIB				*e*S	Sn	02 30 59.9	+0.2
MIB				AML	AML	02 31 01.3	
	comp=Z,16nm,0.5s						
MIB	**Mutribah**	**4.11**	**190**	*e*P	Pn	02 30 11.8	+0.7
MIB				*e*S	Sn	02 30 59.9	+0.2
	comp=Z,16nm,0.5s						
IFIR	**Firoozkooh**	**4.20**	**64**	*e*Pn	Pn	02 30 11.9	-0.6
IFIR				*e*		02 30 21.3	
	comp=Z,276nm,0.1s						
IHRS	**Heris**	**4.53**	**349**	*e*Pn	Pn	02 30 16.3	-0.6
IHRS				*e*		02 30 41.8	
	comp=Z,150nm,0.1s						
NAY	**Al-Naaiem**	**4.66**	**190**	*e*P	Pn	02 30 19.5	+0.7
NAY				*e*S	Sn	02 31 13.2	-0.2
NAY				AML	AML	02 31 20.6	
	comp=Z,8.9nm,0.5s						
NAY	**Al-Naaiem**	**4.66**	**190**	*e*P	Pn	02 30 19.5	+0.7
NAY				*e*S	Sn	02 31 13.2	-0.3
ISHB	**Shabestar**	**4.85**	**336**	*e*Pn	Pb	02 30 34.4	+1.3
ISHB				*e*		02 30 47.4	
	comp=Z,205nm,0.4s						
RDF	**Al-Radifah**	**4.95**	**186**	*e*P	Pn	02 30 23.8	+1.1
RDF				*e*S	Sn	02 31 20.0	-0.5
RDF				AML	AML	02 31 22.5	
	comp=Z,24nm,0.5s						
RDF	**Al-Radifah**	**4.95**	**186**	*e*P	Pn	02 30 23.8	+1.1
RDF				*e*S	Sn	02 31 20.0	-0.5
IANJ	**Anjilo**	**5.03**	**70**	*e*Pn	Pn	02 30 24.4	+0.5
IANJ				*e*		02 30 51.7	
	comp=Z,106nm,0.2s						
IPAR	**Pars**	**5.80**	**132**	*e*Pn	Pn	02 30 31.3	-3.1
IPAR				*e*		02 32 32.1	
	comp=Z,98nm,0.4s						

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*TIR **06** 02:43:14.3±1.3,41°.65N×20°.46E,h0km±14km,ML3.5*
*SKO **06** 02:43:15.8,41°.67N×19°.35E,h0km*
*ISCJB **06** 02:43:18.6±1.0,41°.72N±0°.05×19°.42E±0°.06,h13km±7km, Error ellipse: s-maj=10.0km s-min=5.0km az=136.1*
*CSEM **06** 02:43:18.3±0.7,41°.74N×19°.45E,h2km,ML3.5,Error ellipse: s-maj=17.5km s-min=12.7km az=171.0*
ISC 06 02:43:18.9±1.3,41°.68N±0°.06×19°.46E±0°.07,h10km±9km, n13,σ1°.20/19,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.49**	**42**	*e*PG	Pg	02 43 27.5	-0.9
PUK				*i* SG	Sg	02 43 38.9	+4.1
PUK	**Puka**	**0.49**	**42**	*e*Pg	Pg	02 43 27.5	-0.9
	SNR=91						
BCI	**Bajram Curri**	**0.82**	**33**	*e*PG	Pg	02 43 32.8	-1.9
BCI				*i* SG	Sg	02 43 47.5	+2.0
BCI	**Bajram Curri**	**0.82**	**33**	*e*Pg	Pg	02 43 32.8	-2.0
	SNR=90						
KRUS	**Krusevo**	**1.38**	**102**	*e*Pn	Pn	02 43 42.9	-1.4
KBN	**Korca**	**1.46**	**136**	*i* SN	Sg	02 44 09.6	+3.8
BIA	**Bitola**	**1.55**	**115**	*e*Sn	Sn	02 44 07.1	+0.3
STON	**Ston**	**1.77**	**313**	*e*Pn	Pn	02 43 48.2	-1.3
STON				Sn	Sg	02 44 15.9	+0.3
STON	**Ston**	**1.77**	**313**	*e*Pn	Pn	02 43 48.2	-1.3
STON				Sn	Sg	02 44 15.9	+0.3
SRN	**Sarande**	**1.85**	**167**	*i* SN	Sb	02 44 16.4	+0.5
SRN	**Sarande**	**1.85**	**167**	*i* Sn	Sb	02 44 16.4	+0.5
	SNR=40						
NVLJ	**Novalja**	**4.42**	**312**	*e*Pn	Pn	02 44 26.7	+0.6
NVLJ				Sn	Sn	02 45 18.4	+0.9
NVLJ	**Novalja**	**4.42**	**312**	*e*Pn	Pn	02 44 26.6	+0.5
NVLJ				Sn	Sn	02 45 18.4	+0.8

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*ISCJB **06** 02:47:40.5±4.1,24°.4S±0°.1×179°.9W±0°.2,h456km±46km, mb4.0/17,Error ellipse: s-maj=23.4km s-min=15.0km az=150.7*
*NEIC **06** 02:47:42.1±2.6,24°.42S×179°.81W,h468km±29km,mb4.5/4, Error ellipse: s-maj=20.7km s-min=16.0km az=206.0*
*IDC **06** 02:47:43.5±2.2,24°.36S×179°.88W,h476km±20km, mb3.5/12,mb1 3.7/12,mb1mx3.7/17,mbtmp3.5/12,Error ellipse: s-maj=20.1km s-min=18.9km az=109.0*
ISC 06 02:47:41.1±3.3,24°.5S±0°.1×179°.8W±0°.1,h451km±39km, n30,σ0°.84/25,mb4.0/17,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.02**	**190**	P	P	02 50 41.3	-0.2
	2.4nm,0.3s,baz=347,slow=4.9,SNR=12						
URZ				S	S	02 53 09.3	-1.2
	0.8nm,0.3s,baz=253,slow=19,SNR=6.5						
RPZ	**Rata Peaks**	**20.63**	**199**	P	P	02 51 50.1	+2.2
	3.3nm,0.5s,baz=27,slow=4.5,SNR=4.2						
CMSA	**Cobar Meteorol**	**31.18**	**249**	*e*P	P	02 53 22.5	+0.9
CTA	**Charters Tower**	**31.66**	**271**	P	P	02 53 26.6	+0.7
	17nm,0.3s,mb4.9,baz=96,slow=12,SNR=14						
CTA	**Charters Tower**	**31.66**	**271**	*e*P	P	02 53 26.9	+1.0
	13nm,0.3s,mb4.8						
CTAO	**Charters Tower**	**31.66**	**271**	*e*P	P	02 53 26.5	+0.6
	7.3nm,0.3s,mb4.6						
MTSU	**Mount Surprise**	**33.94**	**274**	*e*P	P	02 53 46.3	+0.9
	21nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**34.68**	**249**	P	P	02 53 52.3	+0.8
	3.3nm,0.4s,mb4.1,baz=90,slow=9.6,SNR=18						
STKA	**Stephens Creek**	**34.68**	**249**	*e*P	P	02 53 52.3	+0.8
	2.2nm,0.3s,mb4.1						
PMG	**Port Moresby**	**34.84**	**290**	*e*P	P	02 53 52.7	-0.3
	10.0nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**42.12**	**261**	P	P	02 54 52.4	0.0
	1.7nm,0.5s,mb3.7,baz=95,slow=7.5,SNR=35						
WRA	**Warramunga Arr**	**42.55**	**267**	P	P	02 54 55.3	-0.6
	4.4nm,0.4s,mb4.3,baz=98,slow=8.3,SNR=74						
FORT	**Forrest**	**46.29**	**250**	*e*P	P	02 55 23.5	-1.3
	13nm,0.6s,mb4.5						
KAKA	**Kakadu**	**46.53**	**276**	*e*P	P	02 55 25.8	-1.1
	4.7nm,0.3s,mb4.4						
FITZ	**Fitzroy Crossi**	**50.96**	**266**	*e*P	P	02 55 59.8	-0.1
	7.4nm,0.6s,mb4.2						
MJAR	**Matsushiro Arr**	**72.44**	**326**	P	P	02 58 19.5	-1.0
	0.4nm,0.3s,mb3.4,baz=168,slow=6.8,SNR=4.6						
MJAR	**Matsushiro Arr**	**72.44**	**326**	P	P	02 58 19.5	-1.0
MAW	**Mawson**	**77.30**	**200**	P	P	02 58 47.6	+0.2
	1.2nm,0.5s,mb3.6,baz=129,slow=6.6,SNR=12						
KSRS	**Korea Array**	**78.78**	**320**	P	P	02 58 55.9	0.0
	1.0nm,0.7s,mb3.5,baz=131,slow=6.2,SNR=4.2						
PETK	**Petropavlovsk-**	**79.67**	**346**	P	P	02 58 59.7	-0.6
	1.9nm,0.7s,mb3.7,baz=157,slow=7.8,SNR=3.1						
NVAR	**Mina Array Bea**	**85.02**	**44**	P	P	02 59 27.9	0.0
	0.3nm,0.5s,mb3.1,baz=234,slow=7.7,SNR=3.9						
CMAR	**Chiang Mai Arr**	**89.88**	**290**	P	P	02 59 52.1	+0.8
	0.5nm,0.3s,mb3.8,baz=144,slow=2.1,SNR=5.9						
TXAR	**Lajitas Array**	**90.57**	**58**	P	P	02 59 55.1	+0.9
	0.6nm,0.8s,mb3.6,baz=201,slow=6.6,SNR=6.3						
COLA	**College**	**92.41**	**13**	*e*P	P	03 00 01.2	-0.6
	1.5nm,0.7s,mb4.0						
ARCES	**ARCESS Array B**	**132.46**	**348**	PKP	PKPdf	03 06 01.2	-1.2
	1.8nm,0.7s,baz=19,slow=1.5,SNR=6.0						
ARCES				SKPbc	SKPbc	03 08 43.5	-3.1
	4.2nm,1.0s,baz=17,slow=4.5,SNR=3.6						
ARCES	**ARCESS Array B**	**132.46**	**348**	PKP	PKPdf	03 06 01.2	-1.2
ARCES				SKPbc	SKPbc	03 08 43.5	-3.1
FINES	**FINESS Array B**	**139.02**	**341**	PKhKP	PKPpre	03 06 05.5	
	1.2nm,0.8s,baz=56,slow=1.4,SNR=6.6						
FINES				PKP	PKPdf	03 06 14.9	+0.1
	0.8nm,0.3s,baz=84,slow=1.6,SNR=10						
FINES				SKPbc	SKPbc	03 09 03.0	-3.7
	1.6nm,0.6s,baz=33,slow=3.5,SNR=9.2						
BRTR	**Keskin Array B**	**148.04**	**307**	PKPbc	PKPbc	03 06 33.9	-1.1
	1.7nm,0.7s,baz=144,slow=5.3,SNR=12						
CLL	**Collm**	**151.43**	**343**	*i* PKPbc	PKPbc	03 06 41.7	-1.0
	comp=Z,4.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**168.67**	**187**	PKP	PKPdf	03 06 54.1	-2.0
	comp=Z,0.7nm,1.2s,baz=208,slow=2.8,SNR=4.1						
TORD				PKPab	PKPab	03 08 08.5	-0.3
	comp=Z,0.5nm,0.8s,baz=163,slow=5.8,SNR=4.1						

IDC 06 02:51:17.3±1.5,22°.51S×176°.01W,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.8/17,mbtmp3.8/4,Error ellipse: s-maj=63.7km s-min=34.9km az=165.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.90**	**258**	P	P	02 59 42.4	+0.4
	0.9nm,0.8s,baz=97,slow=7.4,SNR=8.3						
WRA	**Warramunga Arr**	**46.19**	**263**	P	P	02 59 43.7	-0.6
	0.4nm,0.6s,baz=103,slow=8.8,SNR=3.9						
MAW	**Mawson**	**80.30**	**199**	P	P	03 03 29.9	+0.1
	1.1nm,0.6s,baz=143,slow=7.7,SNR=8.6						
TXAR	**Lajitas Array**	**86.59**	**56**	P	P	03 04 02.9	+0.1
	0.2nm,0.7s,baz=198,slow=5.7,SNR=4.0						

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*IDC **06** 02:58:44.2±1.2,41°.00S×175°.11E,h0km,mb3.7/2, mb1 3.7/4,mb1mx3.6/15,mbtmp3.5/4,ML3.0/2,Error ellipse: s-maj=37.2km s-min=17.9km az=130.0*
*ISCJB **06** 02:58:49.4±0.4,41°.09S±0°.04×175°.16E±0°.05,h43km±6km, mb4.1/3,Error ellipse: s-maj=7.4km s-min=4.1km az=137.5*
*WEL **06** 02:58:49.9±0.0,41°.03S×175°.11E,h31km,ML4.1/48,Error ellipse: s-maj=0.6km s-min=0.5km az=90.0*
WEL Felt from Wellington to Wairarapa, maximum reported intensity MM 5.
*NEIC **06** 02:58:49.9,41°.03S×175°.11E,h31km,ML4.1(WEL),After WEL.*
NEIC Felt [IV] in the Wellington area.
ISC 06 02:58:49.6±0.3,41°.09S±0°.03×175°.17E±0°.04,h33km±3km, n59,σ1°.01/62,mb4.1/3,8C-6D,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAW	**Cannon Point**	**0.08**	**253**	⇓P*	Pb	02 58 55.3	0.0
MTW	**Mount Morrison**	**0.26**	**107**	P*	Pb	02 58 57.8	+0.9
OGWZ	**Otaki Gorge**	**0.27**	**360**	⇓P*	Pb	02 58 56.2	-0.8
KIW	**Kapiti Island**	**0.30**	**318**	⇓P*	Pb	02 58 56.5	-0.8
HOWZ	**Holdsworth

HHC			PP	PP	03 16 39.4	+3.3
HHC			SKS		03 23 06.4	
HHC			S	S	03 24 00.6	-1.3
HHC			sS	sS	03 24 18.4	-1.3
HHC			SS	SS	03 30 58.9	+3.1
HHC			pmax	pmax		
	comp=Z,13nm,1.0s,mb5.3					
HHC			pmax	pmax		
	comp=Z,92nm,6.7s					
HHC			LR	LR		
	comp=N,42nm,18.0s					
HHC			LR	LR		
	comp=E,77nm,18.4s					
HHC			LR	LR		
	comp=Z,75nm,19.8s					
BRTR	**Keskin Array B**	**150.83 280**	PKPbc	PKPbc	03 18 36.6	-1.6
	comp=Z,0.2nm,0.5s,baz=108,slow=4.7,SNR=3.6					
BRTR			PKPab	PKPab	03 18 46.4	+0.8
	comp=Z,0.5nm,0.9s,baz=116,slow=6.6,SNR=3.2					
TORD	**Torodi Ar. Bea**	**151.59 193**	PKPbc	PKPbc	03 18 40.4	-0.3
	comp=Z,0.3nm,0.6s,baz=167,slow=2.6,SNR=4.3					
TORD			PKPab	PKPab	03 18 49.3	+0.1
	comp=Z,0.7nm,0.6s,baz=156,slow=2.9,SNR=5.4					

*IDC **06** 03:12:32.7±1.9, 51.°53N×173.°89W, h0km, mb3.5/6, mb1 3.8/8, mb1mx3.6/26, mbtmp3.5/8, ML4.0/2, MS2.8/3, Ms1 2.7/3, ms1mx2.5/25, Error ellipse: s-maj=51.0km s-min=26.1km az=6.0*
*NEIC **06** 03:12:37.3, 51.°45N×173.°76W, h29km, ML3.2(AEIC), After AEIC.*
*ISCJB **06** 03:12:38.2±1.3, 51.°7N±0.°2×173.°83W±0.°10, h48km±12km, mb3.4/6, MS2.7/3, Error ellipse: s-maj=36.0km s-min=8.6km az=171.9*

ISC 06 03:12:39.8±1.3, 51.°7N±0.°2×173.°86W±0.°10, h46km±11km, n17, σ1°18/16, mb3.4/6, MS2.7/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.76**	**276**	P	**Pn**	**03 13 05.6**	**-2.1**
ADK				S	**Sn**	**03 13 28.7**	**-0.2**
NIKO	**Nikolski**	**3.32**	**66**	P	**Pn**	**03 13 28.0**	**-1.1**
AMKA	**Amchitka**	**4.28**	**268**	*e*P	**Pn**	**03 13 44.3**	**+2.0**
UNV	**Unalaska Valle**	**4.95**	**62**	*e*Pn	**Pn**	**03 13 54.6**	**+3.2**
	13nm,0.5s						
AKUT	**Akutan**	**5.46**	**61**	*e*Pn	**Pn**	**03 13 58.7**	**+0.3**
KDAK	**Kodiak Island**	**13.67**	**55**	Pn	**Pn**	**03 15 53.1**	**+2.4**
	0.3nm,0.3s,baz=288,slow=6.1,SNR=2.6						
KDAK	**Kodiak Island**	**13.67**	**55**	*e*Pn	**Pn**	**03 15 50.4**	**-0.3**
	4.2nm,0.3s						
ILAR	**Eielson Array**	**19.09**	**36**	P	**Pn**	**03 16 58.5**	**-0.7**
	0.3nm,0.3s,baz=233,slow=8.5,SNR=32						
INK	**Inuvik**	**25.43**	**34**	P	**P**	**03 18 02.2**	**-0.4**
	1.5nm,0.8s,mb3.5,baz=280,slow=6.1,SNR=2.5						
INK				LR	LR	03 29 24.0	
	comp=Z,55nm,19.5s,MS3.1,baz=8.1,slow=40						
INK	**Inuvik**	**25.43**	**34**	P	**P**	**03 18 02.2**	**-0.4**
INK				LR	LR	03 29 24.0	
YKA	**Yellowknife Ar**	**32.74**	**48**	LR	LR	03 34 28.5	
	comp=Z,4.9nm,19.2s,MS2.2,baz=325,slow=40						
NVAR	**Mina Array Bea**	**40.45**	**87**	P	**P**	**03 20 13.6**	**+0.1**
	0.2nm,0.6s,mb3.0,baz=280,slow=11,SNR=2.8						
KSRS	**Korea Array**	**42.70**	**274**	LR	LR	03 40 02.1	
	comp=Z,11nm,18.0s,MS2.8,baz=220,slow=39						
PDAR	**Pinedale Array**	**43.25**	**76**	P	**P**	**03 20 36.4**	**0.0**
	0.4nm,0.8s,mb3.2,baz=300,slow=9.0,SNR=3.6						
TXAR	**Lajitas Array**	**55.55**	**85**	P	**P**	**03 22 09.2**	**-1.1**
	0.2nm,0.8s,mb3.2,baz=326,slow=4.5,SNR=2.9						
MKAR	**Makanchi Array**	**62.18**	**311**	P	**P**	**03 22 55.9**	**-0.1**
	0.5nm,0.8s,mb3.7,baz=63,slow=7.4,SNR=4.0						
BRTR	**Keskin Array B**	**85.82**	**339**	P	**P**	**03 25 15.5**	**+1.5**
	0.2nm,0.3s,mb3.8,baz=28,slow=3.4,SNR=3.2						

*NSSP **06** 03:58:36.6, 38.°47N×45.°03E, h13km, Ms3.0*
*ISCJB **06** 03:58:37.9±0.7, 38.°44N±0.°03×45.°10E±0.°03, h0km±8km, Error ellipse: s-maj=6.4km s-min=3.4km az=32.6*
*ISK **06** 03:58:37.2, 38.°49N×45.°07E, h5km, MD3.2*
*TEH **06** 03:58:38.0, 38.°38N×44.°97E, h2km*
*CSEM **06** 03:58:39.7±0.4, 38.°53N×45.°07E, h15km, ML2.6, Error ellipse: s-maj=11.4km s-min=7.9km az=18.0*

ISC 06 03:58:38.9±0.6, 38.°43N±0.°03×45.°09E±0.°04, h9km±7km, n22, σ0°98/36, 3C-1D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.44**	**109⇑**	*e*Pg	**Pg**	**03 58 47.3**	**-0.2**
ISHB				*e*Sg	**Sg**	**03 58 54.2**	**+0.8**
ISHB				*e*		03 58 56.6	
	comp=Z,31μm,0.1s						
IMRD	**Marand**	**0.56**	**60**	*e*Pg	**Pg**	**03 58 49.8**	**+0.1**
IMRD				*e*Sg	**Sg**	**03 58 59.2**	**+2.1**
IMRD				*e*		03 59 02.3	
	comp=Z,28μm,0.1s						
ITBZ	**Tabriz**	**0.85**	**103**	*e*Pg	**Pg**	**03 58 54.8**	**-0.6**
ITBZ				*e*Sg	**Sg**	**03 59 06.8**	**+0.3**
ITBZ				*e*		03 59 09.0	
	comp=Z,3μm,0.2s						
MAKU	**Maku**	**0.97**	**341**	*e*Pg	**Pg**	**03 58 56.5**	**-1.2**
MAKU				*e*Sg	**Sg**	**03 59 10.1**	**-0.3**
IAZR	**Azarshahr**	**1.03**	**137**	*e*Pg	**Pg**	**03 58 57.2**	**-1.5**
IAZR				*e*		03 59 21.3	
	comp=Z,13μm,0.2s						
CLDR	**Caldiran**	**1.16**	**308**	*e*PN	**Pb**	**03 58 59.0**	**-2.1**
CLDR				*e*SN	**Sb**	**03 59 16.2**	**-0.1**
CLDR	**Caldiran**	**1.16**	**308**	*e*Pn	**Pb**	**03 58 59.1**	**-2.0**
CLDR				*e*Sn	**Sb**	**03 59 16.2**	**0.0**
VANB	**Van**	**1.34**	**277**	*e*PN	**Pn**	**03 59 03.6**	**-0.2**
VANB				*e*SN	**Sg**	**03 59 23.1**	**+0.9**
VANB	**Van**	**1.34**	**277**	*e*Pn	**Pn**	**03 59 03.6**	**-0.2**
VANB				*e*Sn	**Sg**	**03 59 23.1**	**+0.9**
VANT	**Van**	**1.43**	**270**	*e*PN	**Pn**	**03 59 05.4**	**+0.4**
VANT	**Van**	**1.43**	**270**	*e*Pn	**Pn**	**03 59 05.4**	**+0.4**
IHRS	**Heris**	**1.54**	**94**	*e*Sg	**Sg**	**03 59 28.8**	**+0.4**
IHRS				*e*Pn	**Pb**	**03 59 07.4**	**-0.2**
CUKT	**Cukurca**	**1.67**	**225**	*e*PN	**Pn**	**03 59 09.0**	**+0.8**
CUKT	**Cukurca**	**1.67**	**225**	*e*Pn	**Pn**	**03 59 09.0**	**+0.8**
GNI	**Garni**	**1.74**	**351⇑**	*i*P	**Pg**	**03 59 12.4**	**+0.1**
GNI				↓*i*S	**Sg**	**03 59 36.5**	**+1.7**
GNI	**Garni**	**1.74**	**351⇑**	*i*P	**Pg**	**03 59 12.4**	**+0.2**
GNI				S	**Sg**	**03 59 36.5**	**+1.7**
VADZ	**Vardenis**	**1.81**	**16**	*e*P	**Pb**	**03 59 11.0**	**-1.2**
VADZ				*e*S	**Sg**	**03 59 37.0**	**-0.2**
AGRB	**Hanur-Agry**	**1.99**	**306**	*e*PN	**Pn**	**03 59 13.1**	**+0.3**
AGRB	**Hanur-Agry**	**1.99**	**306**	*e*Pn	**Pn**	**03 59 13.1**	**+0.3**
ISRB	**Sarab**	**2.12**	**106**	*e*Pn	**Pn**	**03 59 15.9**	**+1.4**
ISRB				*e*Sg	**Sg**	**03 59 46.7**	**-0.4**
GRMI	**Germi**	**2.23**	**79**	*e*Pn	**Pb**	**03 59 17.7**	**-1.7**
GRMI				*e*Sg	**Sg**	**03 59 49.7**	**-0.9**
ZNJK	**Zanjan**	**3.36**	**121**	*e*Pn	**Pn**	**03 59 32.8**	**+1.3**

*BJI **06** 04:00:12.2, 37.°90N×122.°00W, h15km, mB5.0/5, mb5.0/9, Ms4.6/5, Ms7 4.6/4*
*ISCJB **06** 04:00:14.1±0.6, 37.°77N±0.°03×122.°02W±0.°03, h8km±4km, MS3.3/3, Error ellipse: s-maj=5.7km s-min=3.6km az=36.1*
*NEIC **06** 04:00:15.3, 37.°87N×122.°00W, h16km, MW4.1(BRK), After NCEDC.*
NEIC Felt [V] at Alamo; [IV] at Berkeley, Castro Valley, Concord, Danville, Diablo, Dublin, Hayward, Lafayette, Moraga, Oakland, Orinda, Pleasant Hill, San Francisco, San Leandro, San Ramon and Walnut Creek; [III] at Alameda, Albany, Antioch, Aptos, Belmont, Belvedere Tiburon, Benicia, Bolinas, Brentwood, Brisbane, Burlingame, Bryon, Campbell, Clayton, Corte Madera, Crockett, Daly City, El Cerrito, El Sobrante, Emeryville, Fairfax, Fairfield, Felton, Fremont, Greenbrae, Half Moon Bay, Hercules, La Honda, Livermore, Lodi, Manteca, Martinez, Mill Valley, Millbrae, Moss Beach, Novato, Oakley, Pacifica, Palo Alto, Pinole, Pittsburg, Placerville, Pleasanton, Redwood City, Richmond, San Anselmo, San Bruno, San Carlos, San Jose, San Lorenzo, San Mateo, San Pablo, Santa Clara, Sausalito, Sonoma, Stockton, Sunol, Tracy and Union City. Felt as far north as Santa Rosa and Sacramento, as far east as Modesto and as far south as Watsonville.
*IDC **06** 04:00:16.1±2.5, 38.°02N×121.°88W, h0km, mb3.4/3, mb1 3.9/7, mb1mx3.7/27, mbtmp3.5/7, ML3.8/4, MS3.1/8,*

Ms1 3.1/8, ms1mx2.9/23, Error ellipse: s-maj=36.5km s-min=12.8km az=38.0

ISC 06 04:00:15.1±0.5, 37.°78N±0.°03×121.°98W±0.°03, h4km±4km, n75, σ1°44/90, MS3.3/3, 1C-1D, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAC	**San Andreas**	**0.40**	**241⇓**	*i*Pg	**Pg**	**04 00 24.6**	**+1.8**
SAC				*e*Sg	**Sg**	**04 00 30.7**	**+2.8**
MCCM	**Marconi Confer**	**0.80**	**298⇑**	*i*Pg	**Pg**	**04 00 29.8**	**-0.7**
MCCM				*e*Sg	**Sg**	**04 00 41.1**	**+0.2**
SAO	**San Andreas Ge**	**1.10**	**157**	*e*Pg	**Pg**	**04 00 36.1**	**0.0**
CMB	**Columbia Colle**	**1.29**	**78**	*e*Pn	**Pn**	**04 00 37.7**	**-2.1**
CMB				*e*Sg	**Sg**	**04 00 54.6**	**-1.9**
HOPS	**Hopland**	**1.49**	**325**	*e*Pn	**Pn**	**04 00 39.5**	**-3.2**
HOPS				*e*Pg	**Pg**	**04 00 43.8**	**+0.1**
OHCM	**Honcut**	**1.60**	**14**	*e*Pn	**Pn**	**04 00 40.1**	**-4.2**
WAKR	**Walker**	**2.13**	**69**	*e*Pn	**Pn**	**04 00 52.2**	**+0.7**
WAKR				*e*Sn	**Sn**	**04 01 19.9**	**+1.5**
KCPM	**Cahto Peak**	**2.28**	**327**	*e*Pn	**Pn**	**04 00 51.3**	**-2.3**
KCPM				*e*Pg	**Pg**	**04 00 59.7**	**+0.9**
WCN	**Washoe City**	**2.31**	**48**	*e*Pn	**Pn**	**04 00 53.9**	**-0.1**
WCN				*e*Pg	**Pg**	**04 01 00.6**	**+1.1**
WCN				*e*Sn	**Sn**	**04 01 23.9**	**+1.0**
KIPM	**Iron Peak**	**2.34**	**330**	*e*Pn	**Pn**	**04 00 53.9**	**-0.5**
KIPM				*e*Pg	**Pg**	**04 01 01.1**	**+1.1**
MTUM	**Tungsten Hills**	**2.75**	**98**	*e*Pn	**Pn**	**04 01 01.1**	**+1.1**
PAHR	**Pah Rah Range**	**2.80**	**46**	*e*Pn	**Pn**	**04 00 59.6**	**-1.0**
PAHR				*e*Pg	**Pg**	**04 01 06.5**	**-2.2**
WDC	**Whiskeytown Da**	**2.83**	**351**	*e*Pn	**Pn**	**04 00 57.1**	**-4.0**
WDC				*e*Sn	**Sn**	**04 01 29.0**	**-6.7**
NVAR	**Mina Array Bea**	**2.97**	**76**	Pn	**Pn**	**04 01 02.9**	**-0.2**
	14nm,0.3s,baz=258,slow=16,SNR=334						
NVAR				Sn	**Sn**	**04 01 45.9**	**+6.7**
	48nm,0.3s,baz=262,slow=20,SNR=5.3						
NVAR	**Mina Array Bea**	**2.97**	**76**	Pn	**Pn**	**04 01 02.9**	**-0.2**
NVAR				Sn	**Sn**	**04 01 45.9**	**+6.7**
KHMM	**Horse Mountain**	**3.38**	**337**	*e*Pn	**Pn**	**04 01 08.4**	**-0.2**
ISA	**Isabella**	**3.52**	**126**	*e*Pn	**Pn**	**04 01 10.5**	**0.0**
ISA				*e*Sg	**Sg**	**04 02 06.2**	**-2.0**
YBH	**Yreka Blue Hor**	**3.99**	**352**	Pn	**Pn**	**04 01 15.8**	**-1.2**
	1.7nm,0.3s,baz=174,slow=9.8,SNR=24						
YBH				Sn	**Sn**	**04 02 02.9**	**-1.4**
	2.6nm,0.3s,baz=58,slow=19,SNR=4.1						
YBH				LR	LR	04 03 04.0	
	comp=Z,240nm,19.5s,baz=169,slow=45						
YBH	**Yreka Blue Hor**	**3.99**	**352**	*e*Pn	**Pn**	**04 01 16.9**	**-0.1**
KRMB	**Red Mountain**	**4.03**	**339**	*e*Pn	**Pn**	**04 01 17.4**	**-0.1**
OSI	**Osito Adit**	**4.11**	**139**	*e*Pn	**Pn**	**04 01 19.4**	**+0.7**
OSI				*e*Pg	**Pg**	**04 01 31.6**	**-2.3**
MOD	**Modoc**	**4.32**	**17**	*e*Pn	**Pn**	**04 01 22.2**	**+0.7**
MOD				*e*Pg	**Pg**	**04 01 33.9**	**-3.9**
BMN	**Battle Mountai**	**4.55**	**53**	*e*Pn	**Pn**	**04 01 24.2**	**-0.6**
BMN				*e*Pg	**Pg**	**04 01 42.9**	**+0.5**
BMN				*e*Sg	**Sg**	**04 02 38.5**	**-2.8**
PASC	**Pasadena Art C**	**4.74**	**138**	*e*Pn	**Pn**	**04 01 26.8**	**-0.5**
MWC	**Mount Wilson**	**4.76**	**137**	*e*Pn	**Pn**	**04 01 27.5**	**-0.1**
GSC	**Goldstone**	**4.84**	**119**	*e*Pn	**Pn**	**04 01 28.8**	**0.0**
HUMO	**Hull Mountain**	**4.88**	**352**	*e*Pn	**Pn**	**04 01 30.4**	**+1.1**
WVOR	**Wild Horse Val**	**5.31**	**28**	*e*Pn	**Pn**	**04 01 35.3**	**+0.1**
	6.1nm,0.9s						
KEBM	**Edson Butte**	**5.40**	**341**	*e*Pn	**Pn**	**04 01 36.5**	**+0.1**
SHPR	**Sheep Range**	**5.59**	**101**	*e*Pn	**Pn**	**04 01 40.8**	**+1.7**
	15nm,0.6s						
SHPR				*e*Pg	**Pg**	**04 02 01.3**	**-1.0**
PFO	**Pinyon Flat Ob**	**6.12**	**131**	*e*Pn	**Pn**	**04 01 45.8**	**-0.6**
	16nm,0.4s						
LDFC	**Landfair**	**6.16**	**114**	*e*Pn	**Pn**	**04 01 46.5**	**-0.4**
	90nm,1.0s						
BAR	**Barrett**	**6.69**	**138**	*e*Pn	**Pn**	**04 01 53.7**	**-0.4**
	8.0nm,0.5s						
ARUT	**Antelope Range**	**6.76**	**87**	*e*Pn	**Pn**	**04 01 54.7**	**-0.4**
	24nm,0.7s						
CCUT	**Cedar City**	**6.84**	**89**	*e*Pn	**Pn**	**04 01 57.9**	**+1.7**
	20nm,1.0s						
GLA	**Glamis**	**7.50**	**127**	*e*Pn	**Pn**	**04 02 04.0**	**-1.4**
	21nm,0.5s						
DUG	**Dugway**	**7.54**	**68**	*e*Pn	**Pn**	**04 02 03.6**	**-2.1**
	7.7nm,0.6s						
BGU	**Big Grassy Mou**	**7.61**	**63**	*e*Pn	**Pn**	**04 02 07.6**	**+0.8**
	16nm,0.8s						
MSU	**Marysvale**	**7.76**	**82**	*e*Pn	**Pn**	**04 02 11.7**	**+2.8**
	13nm,0.9s						
HLID	**Hailey**	**8.15**	**42**	*e*Pn	**Pn**	**04 02 11.4**	**-2.8**
	6.1nm,0.9s						
SPUT	**South Promonto**	**8.16**	**61**	*e*Pn	**Pn**	**04 02 15.1**	**+0.8**
	3.3nm,0.6s						
TMUT	**Trail Mountain**	**8.58**	**77**	*e*Pn	**Pn**	**04 02 23.8**	**+3.7**
	8.2nm,0.9s						
HAWA	**Hanford**	**8.80**	**11**	*e*Pn	**Pn**	**04 02 25.8**	**+2.7**
	6μm,0.9s						
WUAZ	**Wupatki**	**8.82**	**102**	*e*Pn	**Pn**	**04 02 26.3**	**+3.0**
	9.0nm,0.7s						
HWUT	**Hardware Ranch**	**8.89**	**61**	*e*Pn	**Pn**	**04 02 26.6**	**+2.3**
	12nm,0.9s						
SRU	**San Rafael**	**9.09**	**78**	*e*Pn	**Pn**	**04 02 31.3**	**+4.3**
	11nm,0.7s						
REDW	**Red Top Meadow**	**10.13**	**53**	*e*Pn	**Pn**	**04 02 45.7**	**+4.3**
	5.8nm,1.2s						
DLMT	**Dillon**	**10.33**	**40**	*e*Pn	**Pn**	**04 02 49.9**	**+5.9**
	6.6nm,1.2s						
LOHW	**Long Hollow**	**10.42**	**52**	*e*Pn	**Pn**	**04 02 50.1**	**+4.9**
PV01	**Paradox Valley**	**10.60**	**84**	*e*Pn	**Pn**	**04 02 51.6**	**+3.9**
	485nm,1.0s						
TUC	**Tucson**	**10.67**	**117**	*e*Pn	**Pn**	**04 02 55.0**	**+6.2**
	2.7nm,1.1s						
BW06	**Boulder Array**	**10.72**	**58**	*e*Pn	**Pn**	**04 02 53.6**	**+4.3**
	4.5nm,1.1s						
PDAR	**Pinedale Array**	**10.72**	**58**	Pn	**Pn**	**04 02 53.0**	**+3.7**
	0.1nm,0.3s,baz=246,slow=13,SNR=9.7						
MVCO	**Mesa Verde**	**10.73**	**89**	*e*Pn	**Pn**	**04 02 50.2**	**+0.7**
	3.7nm,0.7s						
PGC	**Sidney**	**10.92**	**355**	*e*Pn	**Pn**	**04 02 54.7**	**+2.6**
NEW	**Newport**	**11.06**	**17**	*e*Pn	**Pn**	**04 02 58.1**	**+4.0**
BSMT	**Bassoo Peak**	**11.36**	**25**	*e*Pn	**Pn**	**04 03 03.7**	**+5.6**
	2.1nm,0.7s						
ANMO	**Albuquerque**	**12.82**	**98**	LR	LR	04 08 36.6	
	comp=Z,123nm,18.7s,baz=40,slow=39						
MNTX	**Cornudas Mount**	**14.93**	**109**	*e*Pn	**Pn**	**04 03 49.6**	**+2.7**
BBB	**Bella Bella**	**15.04**	**345**	LR	LR	04 09 19.1	
	comp=Z,109nm,19.8s,baz=79,slow=37						
EDM	**Edmonton**	**16.57**	**18**	*e*Pn	**Pn**	**04 04 06.4**	**-1.7**
TXAR	**Lajitas Array**	**17.41**	**114**	P	**Pn**	**04 04 21.3**	**+2.4**
	0.1nm,0.3s,baz=291,slow=10,SNR=21						
TXAR				LR	LR	04 11 10.3	
	comp=Z,23nm,19.9s,baz=150,slow=38						
DLBC	**Dease Lake**	**21.33**	**348**	P	**P**	**04 05 02.5**	**-0.4**
	1.1nm,0.8s,baz=208,slow=15,SNR=2.3						
DLBC	**Dease Lake**	**21.33**	**348**	P	**P**	**04 05 02.5**	**-0.4**
ULM	**Lac du Bonnet**	**22.41**	**48**	LR	LR	04 14 03.1	
	comp=Z,74nm,20.4s,MS3.1,baz=179,slow=37						
YKA	**Yellowknife Ar**	**25.16**	**8**	P	**P**	**04 05 41.7**	**+0.6**
	0.5nm,0.6s,baz=191,slow=9.7,SNR=2.7						
YKA				LR	LR	04 15 30.4	
	comp=Z,6.7nm,18.6s,baz=150,slow=37						
ILAR	**Eielson Array**	**30.78**	**339**	P	**P**	**04 06 32.5**	**+1.2**
	1.2nm,0.7s,baz=153,slow=8.0,SNR=10						
ILAR				LR	LR	04 16 28.5	
	comp=Z,56nm,21.5s,MS3.2,baz=257,slow=32						
ROSC	**El Rosal**	**54.32**	**115**	LR	LR	04 38 09.8	
	comp=Z,47nm,18.1s,MS3.6,baz=13,slow=42						
CN2	**Changchun**	**78.43**	**317**	*e*P	**P**	**04 12 15.2**	**-1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJI	**Beijing**	**85.99**	**319**	P	**P**	**04 12 53.7**	**-3.0**
BJI				S	S	04 23 25.9	-5.3
BJI				SS	SS	04 29 03.2	-4.5
BJI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,75nm,5.6s						
BJI				LR	LR		
	comp=N,110nm,26.7s						
BJI				LR	LR		
	comp=E,74nm,27.3s						
HHC	**Hu-ho-hao-te**	**87.69**	**322**	*e*P	**P**	**04 13 02.5**	**-2.5**
HHC				sP	sP	04 13 09.3	+2.6
HHC				PP	PP	04 16 30.2	+0.7
HHC				S	S	04 23 40.8	-6.9
HHC				SS	SS	04 29 27.3	-5.2
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,74nm,7.0s						
HHC				LR	LR		
	comp=N,81nm,17.4s						
HHC				LR	LR		
	comp=E,86nm,18.4s						
HHC				LR	LR		
	comp=Z,85nm,18.0s						
NJ2	**Nanjing**	**90.33**	**312**	*e*P	**P**	**04 13 16.6**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
LZH	**Lanzhou**	**95.14**	**324**	*e*P	**P**	**04 13 35.2**	**-4.5**
LZH				pP	pP	04 13 40.1	-0.9
LZH				sP	sP	04 13 42.3	+0.9
LZH				*e*PP	PP	04 17 26.5	-1.9
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,46nm,8.5s						
LZH				LR	LR		
	comp=E,100nm,18.2s						
LZH				LR	LR		
	comp=Z,150nm,19.9s						
CD2	**Chengdu**	**99.41**	**321**	*e*P	**P**	**04 13 56.1**	**-3.0**
GYA	**Guiyang**	**101.48**	**317**	*e*P	Pdif	04 14 05.2	-2.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						

IDC 06 04:07:03.5±3.5, 4.°30S×152.°89E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.3/3, Error ellipse: s-maj=155.8km s-min=46.0km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.84**	**228**	P	P	04 12 19.4	+0.7
	0.5nm,0.6s,baz=54,slow=10,SNR=6.9						
ASAR	**Alice Springs**	**26.57**	**222**	P	P	04 12 43.2	-0.3
	0.2nm,0.6s,baz=55,slow=9.3,SNR=3.8						
FITZ	**Fitzroy Crossi**	**29.97**	**241**	P	P	04 13 14.1	+0.1
	0.8nm,0.8s,baz=72,slow=9.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**150.23**	**289**	PKPbc	PKPbc	04 26 57.0	-0.7
	0.3nm,0.4s,baz=70,slow=1.8,SNR=8.9						

*ISCJB **06** 04:23:33.7±3.2, 41.°7S±0.°1×75.°48W±0.°08, h25km±25km, mb3.7/3, Error ellipse: s-maj=17.6km s-min=10.1km az=11.1*
*IDC **06** 04:23:33.1±2.7, 41.°41S×75.°51W, h0km, mb3.7/3, mb1 4.1/4, mb1mx3.8/16, mbtmp3.7/4, ML3.4/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/19, Error ellipse: s-maj=64.1km s-min=27.1km az=174.0*
*NEIC **06** 04:23:34.9, 41.°73S×75.°37W, h27km, ML3.4(GUC), After GUC.*
*GUC **06** 04:23:34.9±0.7, 41.°73S×75.°37W, h27km±6km, ML3.4*

ISC 06 04:23:34.0±2.9, 41.°66S±0.°08×75.°44W±0.°09, h14km±20km, n13, σ0°93/19, mb3.7/3, 1C, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMCH	**Puerto Montt**	**1.91**	**86**	*i* S	**Sn**	**04 24 30.1**	**0.0**
OSCH	**Osorno**	**2.05**	**59**	*e*P	**Pn**	**04 24 08.3**	**+0.1**
OSCH				*i* S	**Sn**	**04 24 34.6**	**+1.0**
OSCH	**Osorno**	**2.05**	**59**	*e*P	**Pn**	**04 24 08.3**	**+0.1**
OSCH				*i* S	**Sn**	**04 24 34.6**	**+1.0**
OSCH				AML	AML	04 24 40.4	
	comp=E,508nm,0.4s						
ILCA	**Isla Las Cabra**	**2.20**	**101⇑**	*i*P	**Pn**	**04 24 09.7**	**-0.5**
ILCA				*i* S	**Sn**	**04 24 36.3**	**-1.0**
ILCA				AML	AML	04 24 43.3	
	comp=E,138nm,0.3s						
HUNY	**Huinay**	**2.37**	**109**	*e*P	**Pn**	**04 24 12.3**	**-0.1**
HUNY				*e*S	**Sn**	**04 24 40.4**	**-0.8**
HUNY				AML	AML	04 24 45.4	
	comp=E,281nm,0.3s						
PLCA	**Paso Flores**	**3.80**	**78**	Pn	**Pn**	**04 24 33.4**	**+1.2**
	comp=E,1.8nm,0.3s,baz=257,slow=15,SNR=30						
PLCA				Sn	**Sn**	**04 25 18.2**	**+1.5**
	comp=E,0.8nm,0.3s,baz=180,slow=20,SNR=1.5						
PLCA				LR	LR	04 26 18.4	
	comp=E,220nm,19.6s,baz=284,slow=43						
CFAA	**Coronel Fontan**	**11.58**	**32**	Pn	**Pn**	**04 26 17.5**	**-1.3**
	comp=E,0.0nm,0.3s,baz=214,slow=11,SNR=9.2						
CFAA				Sn	**Sn**	**04 28 26.4**	**-1.5**
	comp=E,0.1nm,0.3s,baz=306,slow=19,SNR=3.8						
CFAA	**Coronel Fontan**	**11.58**	**32**	Pn	**Pn**	**04 26 17.5**	**-1.3**
CFAA				Sn	**Sn**	**04 28 26.4**	**-1.5**
CPUP	**Villa Florida**	**21.36**	**50**	P	**P**	**04 28 20.8**	**-0.2**
	comp=E,3.0nm,0.8s,mb3.7,baz=229,slow=11,SNR=6.1						
CPUP				LR	LR	04 35 57.9	
	comp=E,45nm,20.8s,baz=11,slow=35						
CPUP	**Villa Florida**	**21.36**	**50**	*e*P	**P**	**04 28 22.1**	**+1.1**
CPUP				LR	LR	04 35 57.9	
TXAR	**Lajitas Array**	**75.30**	**335**	P	**P**	**04 35 16.2**	**-0.3**
	comp=E,0.4nm,0.7s,mb3.5,baz=159,slow=7.7,SNR=6.2						
NVAR	**Mina Array Bea**	**88.77**	**328**	P	**P**	**04 36 28.0**	**+1.0**
	comp=E,0.2nm,0.3s,mb3.9,baz=169,slow=5.3,SNR=4.0						
ABKAR	**Akbulak array**	**148.18**	**61**	*e*PKPbc	PKPbc	04 43 18.8	0.0

*ATH **06** 04:24:26

LTK	**Loutraki**	**1.87**	**351**	*e*P	**Pn**	**04 24 58.5**	**+0.2**
LTK				*e*S	**Sn**	**04 25 21.1**	**+0.3**
LTK	**Loutraki**	**1.87**	**351**	P	**Pn**	**04 24 58.5**	**+0.2**
LTK				S	**Sn**	**04 25 21.3**	**+0.5**
LTK	**Loutraki**	**1.87**	**351**	*e*P	**Pn**	**04 24 58.5**	**+0.2**
LTK				*e*S	**Sn**	**04 25 21.1**	**+0.3**
PTL	**Penteli**	**1.92**	**12**	*e*P	**Pn**	**04 24 58.7**	**-0.3**
PTL	**Penteli**	**1.92**	**12**	*e*P	**Pn**	**04 24 58.7**	**-0.3**
GUR	**Goura**	**1.93**	**336**	*e*P	**Pn**	**04 24 58.6**	**-0.6**
GUR				*e*S	**Sn**	**04 25 22.7**	**+0.4**
GUR	**Goura**	**1.93**	**336**	P	**Pn**	**04 24 59.5**	**+0.3**
GUR				S	**Sn**	**04 25 22.8**	**+0.5**
GUR	**Goura**	**1.93**	**336**	P	**Pn**	**04 24 59.5**	**+0.3**
GUR				*e*S	**Sn**	**04 25 22.7**	**+0.4**
APE	**Apeiranthos**	**1.98**	**62**	*e*P	**Pn**	**04 25 00.8**	**+1.0**
APE				*e*S	**Sn**	**04 25 23.7**	**+0.3**
APE	**Apeiranthos**	**1.98**	**62**	P	**Pn**	**04 25 00.8**	**+1.0**
APE				S	**Sn**	**04 25 23.1**	**-0.3**
APE	**Apeiranthos**	**1.98**	**62**	*e*P	**Pn**	**04 25 00.8**	**+1.0**
APE				S	**Sn**	**04 25 23.1**	**-0.3**
LAST	**Lasithi**	**2.01**	**119**	P	**Pn**	**04 25 00.3**	**0.0**
LAST				S	**Sn**	**04 25 24.2**	**-0.1**
LAST	**Lasithi**	**2.01**	**119**	P	**Pn**	**04 25 00.3**	**0.0**
LAST				S	**Sn**	**04 25 24.2**	**-0.1**
DSF	**Desfina**	**2.33**	**344**	P	**Pn**	**04 25 04.6**	**0.0**
DSF				S	**Sn**	**04 25 32.8**	**+0.9**
DSF	**Desfina**	**2.33**	**344**	P	**Pn**	**04 25 04.6**	**0.0**
DSF				S	**Sn**	**04 25 32.8**	**+0.9**
LAKA	**Lakka**	**2.33**	**333**	P	**Pn**	**04 25 05.7**	**+1.1**
LAKA				S	**Sn**	**04 25 33.6**	**+1.5**
LAKA	**Lakka**	**2.33**	**333**	P	**Pn**	**04 25 05.7**	**+1.1**
LAKA				S	**Sn**	**04 25 33.6**	**+1.5**
RLS	**Riolos of Patr**	**2.40**	**322**	*e*P	**Pn**	**04 25 05.9**	**+0.3**
RLS				*e*S	**Sn**	**04 25 33.9**	**0.0**
RLS	**Riolos of Patr**	**2.40**	**322**	*e*P	**Pn**	**04 25 05.9**	**+0.3**
RLS				*e*S	**Sn**	**04 25 33.9**	**0.0**
LKR	**Lokris**	**2.49**	**354**	P	**Pn**	**04 25 06.5**	**-0.3**
LKR				S	**Sn**	**04 25 35.6**	**-0.3**
LKR	**Lokris**	**2.49**	**354**	P	**Pn**	**04 25 06.5**	**-0.3**
LKR				S	**Sn**	**04 25 35.6**	**-0.3**
EFP	**Efpalio**	**2.52**	**333**	*e*P	**Pn**	**04 25 07.5**	**+0.2**
EFP	**Efpalio**	**2.52**	**333**	*e*P	**Pn**	**04 25 07.5**	**+0.2**
ATAL	**Atalanti**	**2.53**	**354**	P	**Pn**	**04 25 07.3**	**0.0**
ATAL				S	**Sn**	**04 25 36.1**	**-0.8**
ATAL	**Atalanti**	**2.53**	**354**	P	**Pn**	**04 25 07.3**	**0.0**
ATAL				S	**Sn**	**04 25 36.1**	**-0.8**
VLS	**Valsamata**	**2.97**	**313**	*e*P	**Pn**	**04 25 12.7**	**-0.7**
VLS	**Valsamata**	**2.97**	**313**	*e*P	**Pn**	**04 25 12.7**	**-0.7**
AOS	**Alonnisos**	**3.02**	**8**	P	**Pn**	**04 25 13.7**	**-0.4**
AOS				S	**Sn**	**04 25 47.6**	**-1.4**
AOS	**Alonnisos**	**3.02**	**8**	P	**Pn**	**04 25 13.7**	**-0.4**
AOS				S	**Sn**	**04 25 47.6**	**-1.4**
CHOS	**Chios island**	**3.09**	**44**	P	**Pn**	**04 25 14.8**	**-0.3**
CHOS				S	**Sn**	**04 25 51.5**	**+0.7**
CHOS	**Chios island**	**3.09**	**44**	P	**Pn**	**04 25 14.8**	**-0.3**
CHOS				S	**Sn**	**04 25 51.5**	**+0.7**
STON	**Ston**	**7.98**	**329**	*i* Pn	**Pn**	**04 26 16.7**	**-5.3**
STON				Sn	**Sn**	**04 27 38.1**	**-13**
NVLJ	**Novalja**	**10.57**	**325**	*e*Pn	**Pn**	**04 26 52.1**	**-5.4**
NVLJ				Sn	**Sn**	**04 28 43.8**	**-11**

*IDC **06** 04:29:18.2±5.5, 36.′25N×71.′46E, h164km±45km, mb3.5/5, mb1 3.6/7, mb1mx3.2/24, mbtmp3.5/7, Error ellipse: s-maj=62.9km s-min=34.2km az=136.0*
*NEIC **06** 04:29:18.4±3.4, 36.′32N×71.′21E, h155km±21km, mb3.9/2, Error ellipse: s-maj=38.8km s-min=18.2km az=173.0*
*ISCJB **06** 04:29:22.4±1.2, 36.′80N±0.′07×71.′5E±0.′1, h186km±14km, mb3.6/5, Error ellipse: s-maj=18.7km s-min=5.7km az=149.2*

ISC 06 04:29:23.1±1.3, 36.′77N±0.′07×71.′5E±0.′1, h176km±15km, n29, σ1s15/37, mb3.6/5, 3C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.50**	**51**	Pn	**Pn**	**04 30 28.1**	**-2.2**
KSH				Sn	**Sn**	**04 31 14.6**	**-8.4**
KSH				smax			
	comp=N,44nm,1.0s						
KSH				smax			
	comp=E,60nm,0.5s						
AML	**Almayashu**	**5.63**	**17**	*e*Pn	**Pn**	**04 30 46.6**	**+1.6**
	comp=E,14nm,0.4s						
AML				*e*Sn	**Sn**	**04 31 48.0**	**-1.4**
EKS2	**Erkin-Say**	**6.15**	**16**	*e*Pn	**Pn**	**04 30 53.1**	**+1.3**
EKS2				*e*Sn	**Sn**	**04 32 00.6**	**-1.2**
AAK	**Ala-Archa**	**6.31**	**21**	P	**Pn**	**04 30 56.0**	**+2.1**
	comp=E,0.0nm,0.3s,baz=207,slow=4.5,SNR=5.6						
AAK				S	**Sn**	**04 32 06.7**	**+1.2**
	comp=E,0.0nm,0.3s,baz=127,slow=20,SNR=8.6						
AAK	**Ala-Archa**	**6.31**	**21**	P	**Pn**	**04 30 56.0**	**+2.1**
AAK				S	**Sn**	**04 32 06.7**	**+1.2**
KK31	**Karatay Array**	**6.37**	**354**	Pn	**Pn**	**04 30 54.8**	**+0.1**
	comp=E,2.9nm,0.4s,baz=177,slow=12,SNR=37						
KK31				⇑Sn	**Sn**	**04 32 03.9**	**-3.0**
	comp=E,2.8nm,0.3s,baz=178,slow=18,SNR=14						
KKAR	**Karatay Array**	**6.37**	**354**	*e*Pn	**Pn**	**04 30 55.0**	**+0.3**
	comp=E,5.8nm,0.4s						
KKAR				*e*Sn	**Sn**	**04 32 03.8**	**-3.2**
TKM2	**Tokmak 2**	**6.92**	**26**	*e*Pn	**Pn**	**04 31 03.9**	**+2.0**
MKAR	**Makanchi Array**	**12.86**	**35**	P	**Pn**	**04 32 23.5**	**+4.1**
	comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=2.5						
KOLN	**Koldanda**	**13.63**	**128**	*e*P	**Pn**	**04 32 29.1**	**-0.2**
GKN	**Gorkha**	**14.15**	**124**	*e*P	**Pn**	**04 32 35.6**	**-0.2**
	comp=E,11nm,0.4s						
KKN	**Kakani**	**14.72**	**124**	*e*P	**Pn**	**04 32 42.5**	**-0.3**
DMN	**Daman**	**14.72**	**124**	*e*P	**Pn**	**04 32 43.2**	**+0.3**
	comp=E,12nm,0.3s						
PKIN	**Phulchoki**	**14.93**	**124**	*e*P	**Pn**	**04 32 45.4**	**-0.1**
	comp=E,11nm,0.5s						
PKI	**Pulchoki**	**14.95**	**124**	*e*P	**Pn**	**04 32 45.9**	**+0.3**
	comp=E,14nm,0.5s						
AB31	**Akbulak array**	**15.03**	**330**	⇑Pn	**Pn**	**04 32 47.1**	**+0.7**
	comp=E,0.4nm,0.3s,baz=159,slow=12,SNR=25						
AB31				⇑Sn	**Sn**	**04 35 24.8**	**-9.1**
	comp=E,1.3nm,0.7s,baz=151,slow=22,SNR=5.7						
ABKAR	**Akbulak array**	**15.03**	**330**	*e*P	**Pn**	**04 32 47.0**	**+0.5**
	comp=E,0.9nm,0.3s						
GUN	**Gumba**	**15.04**	**122**	*e*P	**Pn**	**04 32 47.4**	**+0.6**
RAMN	**Ramite**	**16.15**	**123**	*e*P	**Pn**	**04 33 00.0**	**-0.4**
	comp=E,7.6nm,0.5s						
ODAN	**Odare**	**16.75**	**122**	*e*P	**Pn**	**04 33 06.1**	**-1.4**
	comp=E,4.2nm,0.3s						
ZALV	**Zalesovo Beam**	**19.52**	**24**	P	**P**	**04 33 37.5**	**+0.8**
	comp=E,0.6nm,0.3s,baz=221,slow=12,SNR=5.4						
FINES	**FINESS Array B**	**37.46**	**326**	P	**P**	**04 36 18.6**	**-0.5**
	comp=E,2.7nm,0.9s,mb3.9,baz=123,slow=8.8,SNR=5.0						
ARCES	**ARCESS Array B**	**41.03**	**337**	P	**P**	**04 36 49.2**	**+0.6**
	comp=E,2.4nm,0.9s,mb3.8,baz=111,slow=6.6,SNR=5.8						
ARCES	**ARCESS Array B**	**41.03**	**337**	P	**P**	**04 36 49.2**	**+0.6**
NB2	**NORSAR Subarra**	**44.38**	**323**	P	**P**	**04 37 15.0**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.5,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**04 37 15.2**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.5,baz=97,slow=7.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**66.09**	**269**	P	**P**	**04 39 47.9**	**-3.5**
	comp=Z,0.4nm,0.5s,mb3.5,baz=53,slow=5.8,SNR=8.7						
TORD	**Torodi Ar. Bea**	**66.09**	**269**	P	**P**	**04 39 47.9**	**-3.5**
YKA	**Yellowknife Ar**	**80.96**	**3**	P	**P**	**04 41 16.9**	**-0.5**
	comp=Z,0.2nm,0.4s,mb3.1,baz=347,slow=5.8,SNR=2.4						

IDC 06 04:51:26.0±2.3, 6.′96S×150.′56E, h0km, mb3.3/3, mb1 3.7/3, mb1mx3.5/15, mbtmp3.4/3, Error ellipse: s-maj=142.6km s-min=30.9km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.36**	**229**	P	P	04 56 04.3	+0.1
	1.1nm,0.8s,baz=54,slow=11,SNR=9.1						
ASAR	**Alice Springs**	**23.06**	**222**	P	P	04 56 33.1	-0.1
	0.6nm,0.8s,baz=56,slow=9.4,SNR=7.6						
ILAR	**Eielson Array**	**84.99**	**22**	P	P	05 04 03.1	+0.2
	0.3nm,0.8s,baz=245,slow=3.9,SNR=4.2						

IDC 06 05:18:45.0±8.6, 17.′99S×175.′86W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.4/3, Error ellipse: s-maj=378.2km s-min=39.8km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.00**	**259**	P	P	05 27 18.0	-0.3
	0.1nm,0.3s,baz=96,slow=8.4,SNR=6.1						
ASAR	**Alice Springs**	**47.10**	**254**	P	P	05 27 19.2	+0.2
	0.5nm,0.5s,baz=88,slow=8.1,SNR=9.4						
ILAR	**Eielson Array**	**85.44**	**12**	P	P	05 31 24.0	+0.1
	0.2nm,0.4s,baz=226,slow=6.2,SNR=4.1						

IDC 06 05:26:25.9±3.4, 16.′84S×174.′81W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/18, mbtmp4.1/4, ML2.9/1, Error ellipse: s-maj=192.9km s-min=30.7km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.13**	**46**	Pn	Pn	05 27 30.3	+0.1
	39nm,0.3s,baz=185,slow=1.9,SNR=18						
AFI				Sn	Sn	05 28 06.7	-13
	41nm,0.3s,baz=52,slow=18,SNR=7.9						
STKA	**Stephens Creek**	**42.15**	**241**	P	P	05 34 20.1	-0.1
	2.0nm,0.5s,baz=86,slow=11,SNR=7.2						
WRA	**Warramunga Arr**	**48.21**	**258**	P	P	05 35 08.0	-0.6
	0.3nm,0.4s,baz=95,slow=6.9,SNR=3.2						
ASAR	**Alice Springs**	**48.39**	**253**	P	P	05 35 10.4	+0.5
	1.7nm,0.5s,baz=88,slow=8.3,SNR=31						

*DJA **06** 05:47:21, 36.′66N×71.′44E, h10km, Mw6.7/53*
*NNC **06** 05:47:34.3±8.6, 36.′62N×69.′91E, h108km±111km, mb6.2, mpv6.9, Error ellipse: s-maj=59.5km s-min=46.3km az=19.0*
*TEH **06** 05:47:38.0, 36.′56N×71.′01E, h174km*
*ISCJB **06** 05:47:38.4±0.1, 36.′45N±0.′01×70.′89E±0.′01, h190km, mb5.7/509, Error ellipse: s-maj=1.7km s-min=1.2km az=21.5*
*BJI **06** 05:47:38.6, 36.′65N×70.′85E, h192km, mB5.6/37, mb5.8/59*
*IDC **06** 05:47:39.8±0.4, 36.′49N×71.′00E, h196km±3km, mb5.3/29, mb1 5.4/33, mb1mx5.4/33, mbtmp5.4/33, MS4.8/9, Ms1 4.8/9, ms1mx4.2/37, Error ellipse: s-maj=7.6km s-min=5.5km az=177.0*
*MOS **06** 05:47:39.0±1.0, 36.′57N×70.′96E, h196km, mb5.6/119, MS4.9/25, Error ellipse: s-maj=5.1km s-min=2.7km az=131.5*
*NEIC **06** 05:47:39.9±0.1, 36.′49N×70.′93E, mb5.5/285, ME6.3, MW5.8, MW5.8, Error ellipse: s-maj=3.2km s-min=1.9km az=182.0 Broadband fault plane solution: P waves. NP1:ϕ_s235.00000°, δ60.00000°, λ90.00000°. NP2: ϕ_s55.00000°, δ30.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm145.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm325.0000°; Moment Tensor Solution. s68 Moment tensor: Scale 10^{17} Nm; M_{rr}3.52; $M_{\theta\theta}$-2.76; $M_{\phi\phi}$-0.76; $M_{r\theta}$-4.10; $M_{\theta\phi}$-0.08; $M_{\phi r}$-1.76; Best double couple: $M_0$5.50000×10^{17} NP1:ϕ_s92.00000°, δ19.00000°, λ110.00000°. NP2:ϕ_s251.00000°, δ73.00000°, λ83.00000°. Principal axes: T 5.9000, Plg61.0000°, Azm151.0000°; N -0.9300, Plg6.0000°, Azm253.0000°; P -4.9700, Plg27.0000°, Azm346.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Jalalabad and [III] at Bagrami, Charikar and Kabul. Also felt at Baghran, Mahmud-e Raqi, Nuristan and Sarawbi. Felt [IV] at Islamabad, Pakistan. Also felt at Abbottabad, Chitral, Lahore, Peshawar, Rawalpindi, Sialkot and Topi. Felt [III] at Tashkent, Uzbekistan. Also felt at Chandigarh, India; Doda, Punch and Rajouri, Kashmir; Dushanbe, Tajikistan.
*SZGRF **06** 05:47:39.2, 36.′48N×71.′10E, h191km, mb5.9, Afghanistan-Tajikistan border region*
*BGS **06** 05:47:41.0±1.7, 36.′57N×70.′57E, h190km, mb5.5*
*GCMT **06** 05:47:41.1±0.1, 36.′49N×70.′78E, h183km, MW5.8, Moment Tensor Solution. s86,c174; s58,c66; Moment tensor: Scale 10^{17}Nm; M_{rr}4.25±.07; $M_{\theta\theta}$-3.84±.08; $M_{\phi\phi}$-0.41±.08; $M_{r\theta}$-5.30±.06; $M_{\theta\phi}$-0.76±.08; $M_{\phi r}$-2.14±.06; Best double couple: $M_0$7.10000×10^{17} NP1:ϕ_s85.00000°, δ18.00000°, λ104.00000°. NP2:ϕ_s250.00000°, δ72.00000°, λ85.00000°. Principal axes: T 7.2100, Plg63.0000°, Azm153.0000°; N -0.3300, Plg4.0000°, Azm251.0000°; P -6.8800, Plg27.0000°, Azm344.0000°; Data Used: II IU IC CN. Surface waves: sta=104, comp=245, per= 50.*

ISC 06 05:47:40.0±0.1, 36.′45N±0.′01×70.′92E±0.′01, h192km, h192km±.5km; pP-P, n1918, σ1s01/1852, mb5.5/507, 214C-176D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.44**	**219**	*e*Pn	**Pn**	**05 48 22.2**	**-0.5**
KBL				*e*Sn	**Sn**	**05 48 54.1**	**-1.8**
CEP	**Cherat**	**2.74**	**162**	⇑P	**Pn**	**05 48 26.8**	**+0.6**
CEP				S	**Sn**	**05 49 02.0**	**-0.2**
CHCP	**Chirah Chowk**	**3.38**	**145**	⇑P	**Pn**	**05 48 34.8**	**+0.9**
NIL	**Nilore**	**3.38**	**145**	*e*Pn	**Pn**	**05 48 34.6**	**+0.7**
NIL				*e*Sn	**Sn**	**05 49 16.4**	**+0.5**
THW	**Thamme Wali**	**3.71**	**169**	⇑P	**Pn**	**05 48 38.2**	**+0.3**
SRNI	**Srinagar**	**3.98**	**125**	*e*PKP	**Pn**	**05 48 33.5**	**-7.7**
SRNI				*e*S	**Sn**	**05 49 21.0**	**-8.2**
JMU	**Jammu**	**4.96**	**137**	*e*PKP	**Pn**	**05 48 50.5**	**-3.3**
JMU				*ex*	x	05 48 52.5	
KSH	**Kashi**	**5.03**	**51**	⇑*i*P	**Pn**	**05 48 49.4**	**-5.1**
KSH				S	**Sn**	**05 49 39.4**	**-14**
KSH				smax			
	comp=N,67μm,0.8s						
KSH				smax			
	comp=E,43μm,0.8s						
DLH	**Dalhousie**	**5.71**	**132**	*e*PKP	**Pn**	**05 49 03.0**	**-0.3**
DLH				*ex*	x	05 50 07.0	
AML	**Almayashu**	**6.07**	**20**	P	**Pn**	**05 49 06.4**	**-1.6**
	SNR=3638						
AML	**Almayashu**	**6.07**	**20**	*e*Pn	**Pn**	**05 49 06.3**	**-1.6**
UCH	**Uchtor**	**6.41**	**25**	P	**Sn**	**05 50 22.0**	**-3.4**
KZA	**Kyzart**	**6.55**	**30**	P	**Pn**	**05 49 12.4**	**-1.8**
	SNR=240						
KZA	**Kyzart**	**6.55**	**30**	*e*Pn	**Pn**	**05 49 12.3**	**-1.8**
KZA				*e*Sn	**Sn**	**05 50 17.4**	**-11**
EKS2	**Erkin-Say**	**6.59**	**19**	P	**Pn**	**05 49 13.0**	**-1.6**
	SNR=2366						
EKS2	**Erkin-Say**	**6.59**	**19**	*e*Pn	**Pn**	**05 49 13.2**	**-1.5**
EKS2				*e*Sn	**Sn**	**05 50 25.4**	**-4.2**
KK31	**Karatay Array**	**6.65**	**357**	⇓P	**Pn**	**05 49 08.3**	**-7.2**
	comp=E,1μm,0.4s,baz=181,slow=12						
KK31				⇑S	**Sn**	**05 50 20.7**	**-10**
	comp=E,18μm,0.7s,baz=185,slow=20,SNR=25						
KK31	**Karatay Array**	**6.65**	**357**	PN	**Pn**	**05 49 13.2**	**-2.3**
KK31				pmax	pmax		
	comp=Z,1μm,0.3s						
KKAR	**Karatay Array**	**6.65**	**357**	*e*Pn	**Pn**	**05 49 13.4**	**-2.1**
KKAR				*e*Sn	**Sn**	**05 50 21.2**	**-10**
AAK	**Ala-Archa**	**6.77**	**23**	P	**Pn**	**05 49 15.7**	**-1.3**
	SNR=635						
AAK	**Ala-Archa**	**6.77**	**23**	P	**Pn**	**05 49 16.0**	**-1.0**
	comp=Z,14nm,0.3s,baz=200,slow=7.2,SNR=1106						
AAK				S	**Sn**	**05 50 27.7**	**-6.1**
	comp=Z,6.2nm,0.3s,baz=356,slow=19,SNR=5.4						
AAK	**Ala-Archa**	**6.77**	**23**	*d*iPN	**Pn**	**05 49 15.4**	**-1.6**
AAK	**Ala-Archa**	**6.77**	**23**	*e*Pn	**Pn**	**05 49 15.7**	**-1.3**
AAK				*e*Sn	**Sn**	**05 50 31.3**	**-2.5**
AAK	**Ala-Archa**	**6.77**	**23**	Pn	**Pn**	**05 49 15.8**	**-1.2**
	comp=Z,38μm,0.6s						
AAK	**Ala-Archa**	**6.77**	**23**	P	**Pn**	**05 49 15.9**	**-1.1**
	SNR=826						
BHK	**Bhakra**	**6.79**	**136**	*ex*	**Pn**	**05 49 12.8**	**-4.6**
BHK				*ex*	x	05 50 06.2	
KBK	**Karagaybulak**	**6.94**	**25**	P	**Pn**	**05 49 18.1**	**-1.1**
	SNR=2706						
KBK	**Karagaybulak**	**6.94**	**25**	*e*Pn	**Pn**	**05 49 18.1**	**-1.1**
ULHL	**Ulahol**	**7.11**	**34**	P	**Pn**	**05 49 19.6**	**-1.9**
	SNR=141						
CHMS	**Chumysh**	**7.18**	**23**	P	**Pn**	**05 49 20.4**	**-1.9**
	SNR=530						
USP	**Ospenovka**	**7.34**	**21**	P	**Pn**	**05 49 22.1**	**-2.4**
	SNR=2188						
TKM2	**Tokmak 2**	**7.40**	**28**	⇓P	**Pn**	**05 49 23.9**	**-1.4**
	comp=Z,9μm,0.7s						
TKM2				⇑S	**Sn**	**05 50 48.3**	**-0.6**
	comp=Z,6μm,1.0s						
TKM2	**Tokmak 2**	**7.40**	**28**	P	**Pn**	**05 49 23.9**	**-1.4**
	SNR=4862						
TKM2	**Tokmak 2**	**7.40**	**28**	*e*Pn	**Pn**	**05 49 23.4**	**-1.9**

SMLA	**Simla**	**7.43**	**134**	*e*PKP	**Pn**	**05 49 23.8**	**-1.9**
SMLA				*i* S	**Sn**	**05 50 45.2**	**-4.5**
SMLA				⇓		05 50 49.0	
	comp=E,417μm,0.5s						
SMLA				⇓		05 50 50.2	
	comp=N,308μm,0.3s						
KKR	**Kurukshetra**	**8.14**	**141**	*e*PKP	**Pn**	**05 49 33.0**	**-2.1**
KKR				*e*S	**Sn**	**05 51 00.3**	**-6.3**
KNDC	**Almaty**	**8.20**	**33**	⇓P	**Pn**	**05 49 35.4**	**-0.4**
	comp=N,11μm,1.1s						
KNDC				⇓S	**Sn**	**05 51 09.1**	**+1.2**
	comp=N,5μm,0.8s						
AAA	**Alma-Ata**	**8.24**	**32**	*i* PN	**Pn**	**05 49 34.5**	**-1.7**
AAA				pmax	pmax		
	comp=Z,26μm,1.7s						
AAA				MLR	MLR		
	comp=Z,4μm,3.0s						
DDI	**Dehra Dun**	**8.54**	**134**	*ex*	**Pn**	**05 49 36.3**	**-4.0**
DDI				*e*S	**Sn**	**05 51 10.3**	**-5.8**
IMYA	**Miami**	**8.72**	**273**	*e*P	**Pn**	**05 49 40.0**	**-2.6**
ISRO	**Mashad**	**9.23**	**273**	*e*P	**Pn**	**05 49 46.3**	**-3.0**
MHI	**Mashad**	**9.23**	**273**	*e*P	**Pn**	**05 49 47.3**	**-2.0**
JOSI	**Joshimath**	**9.30**	**127**	*e*PKP	**Pn**	**05 49 49.4**	**-0.9**
JOSI				*e*S	**Sn**	**05 51 29.0**	**-5.3**
KHET	**Khetri**	**9.32**	**152**	*e*PKP	**Pn**	**05 49 48.5**	**-1.9**
KHET				*e*S	**Sn**	**05 51 26.3**	**-8.4**
IMOG	**Moghan**	**9.36**	**271**	*e*P	**Pn**	**05 49 48.7**	**-2.2**
NDI	**New Delhi**	**9.39**	**144**	*e*PKP	**Pn**	**05 49 47.0**	**-4.4**
NDI				*e*S	**Sn**	**05 51 25.0**	**-11**
AYAN	**Aya Nagar**	**9.52**	**145**	*e*PKP	**Pn**	**05 49 51.1**	**-2.0**
AYAN				*e*S	**Sn**	**05 51 31.8**	**-7.5**
KUDL	**Kundal**	**9.53**	**149**	*e*PKP	**Pn**	**05 49 46.0**	**-7.2**
KUDL				*e*S	**Sn**	**05 51 26.0**	**-14**
BISR	**Bishrakh**	**9.59**	**143**	*e*PKP	**Pn**	**05 49 51.9**	**-2.1**
BISR				*e*S	**Sn**	**05 51 33.3**	**-7.9**
IPAY	**Payeh**	**9.61**	**274**	*e*P	**Pn**	**05 49 51.6**	**-2.5**
SONA	**Sohna**	**9.69**	**146**	*e*PKP	**Pn**	**05 49 53.3**	**-2.1**
SONA				*e*S	**Sn**	**05 51 34.4**	**-9.2**
IAKL	**Akhelmad**	**9.79**	**275**	*e*P	**Pn**	**05 49 53.6**	**-2.9**
IDAH	**Dahanechah**	**9.83**	**251**	*e*P	**Pn**	**05 49 54.3**	**-2.8**
IEMG	**Emamgholi**	**9.87**	**279**	*e*P	**Pn**	**05 49 53.8**	**-3.7**
IKRD	**Kardeh**	**9.98**	**276**	*e*P	**Pn**	**05 49 45.5**	**-13**
ABKT	**Ailbek**	**10.32**	**282**	Pn	**Pn**	**05 49 59.9**	**-3.5**
	comp=Z,5μm,0.5s						
VAN	**Vannovskaya**	**10.33**	**282**	⇓*i*P	**Pn**	**05 49 59.4**	**-4.1**
VAN				*e*S	**Sn**	**05 51 49.3**	**-9.3**
ISFR	**Sfrayin**	**10.38**	**277**	*e*P	**Pn**	**05 50 00.9**	**-3.3**
AJM	**Ajmer**	**10.43**	**161**	*e*PKP	**Pn**	**05 50 03.6**	**-1.4**
AJM				*e*PKP		05 50 03.7	
AJM				*e*S	**Sn**	**05 51 52.2**	**-9.1**
IKOO	**Kooshah**	**10.62**	**251**	*e*P	**Pn**	**05 50 06.6**	**-0.8**
ISHV	**Shirvan**	**10.63**	**280**	*e*P	**Pn**	**05 50 04.2**	**-3.2**
ITEG	**Tejag**	**10.63**	**254**	*e*P	**Pn**	**05 50 06.6**	**-0.8**
AGRA	**Agra**	**10.96**	**145**	*ex*	**Pn**	**05 50 09.6**	**-2.2**
AGRA				*e*S	**Sn**	**05 52 03.8**	**-10**
PYUN	**Piuthan**	**13.17**	**126**	*e*P	**Pn**	**05 50 38.0**	**-1.8**
PYUN				*e*S	**Sn**	**05 52 56.0**	**-11**
BHJ	**Bhuj**	**13.20**	**185**	*e*PKP	**Pn**	**05 50 38.9**	**-1.4**
BHJ				*ex*	x	05 52 58.4	
MK31	**Makanchi Array**	**13.37**	**36**	P	**Pn**	**05 50 43.1**	**+0.9**
	comp=Z,458nm,0.7s,baz=203,slow=7.6,SNR=2137						
MK31	**Makanchi Array**	**13.37**	**36**	*e*Pn	**Pn**	**05 50 40.1**	**-2.1**
MKAR	**Makanchi Array**	**13.37**	**36**	P	**Pn**	**05 50 40.3**	**-1.9**
	comp=Z,34nm,0.3s,baz=218,slow=9.1,SNR=424						
MKAR				S	**Sn**	**05 53 05.5**	**-5.6**
	baz=210,slow=17,SNR=1.9						
MKAR				P3KPbc		06 26 34.7	
	comp=Z,0.0nm,0.3s,baz=180,slow=0.7,SNR=3.7						
MKAR	**Makanchi Array**	**13.37**	**36**	*ce*P	**Pn**	**05 50 39.7**	**-2.5**
MKAR				pmax	pmax		
	comp=Z,411nm,0.8s						
MKAR	**Makanchi Array**	**13.37**	**36**	P	**Pn**	**05 50 40.3**	**-1.9**
MKAR				S	**Sn**	**05 53 05.5**	**-5.6**
DANN	**Dangsing**	**13.52**	**123**	*e*P	**Pn**	**05 50 42.2**	**-2.0**
IBAF	**Bafgh**	**13.62**	**254**	P	**Pn**	**05 50 45.8**	**+0.3**
IBAF	**Bafgh**	**13.62**	**254**	*e*P	**Pn**	**05 50 45.9**	**+0.4**
IGLO	**Ghaloghah**	**13.76**	**275**	P	**Pn**	**05 50 46.7**	**-0.4**
IGLO	**Ghaloghah**	**13.76**	**275**	*e*P	**Pn**	**05 50 46.8**	**-0.3**
KOLN	**Koldanda**	**13.79**	**125**	*e*P	**Pn**	**05 50 45.7**	**-1.9**
	comp=Z,4μm,0.5s						
KOLN				*e*S	**Sn**	**05 53 12.2**	**-9.2**
IANJ	**Anjilo**	**13.81**

IDMV	**Damavand**	**15.31 272**	*e*P		**Pn**	**05 51 06.3 0.0**
ISFB	**Sefidab**	**15.38 268**	P		**Pn**	**05 51 06.2 -0.9**
ISFB	**Sefidab**	**15.38 268**	*e*P		**Pn**	**05 51 06.2 -0.9**
JBP	**Jabalpur**	**15.38 147**	*ex*		**Pn**	**05 51 09.9 +2.6**
JBP			*ex*		x	05 53 46.0
IAFJ	**Afjeh**	**15.53 274**	P		**Pn**	**05 51 10.5 +1.6**
IAFJ	**Afjeh**	**15.53 274**	*e*P		**Pn**	**05 51 10.6 +1.7**
IVRN	**Varamin**	**15.66 270**	P		**Pn**	**05 51 09.9 -0.6**
IVRN	**Varamin**	**15.66 270**	*e*P		**Pn**	**05 51 10.0 -0.5**
IVRN			*e*P			05 51 09.7
IZEF	**Zefreh**	**15.70 262**	P		**Pn**	**05 51 11.2 +0.2**
IZEF	**Zefreh**	**15.70 262**	*e*P		**Pn**	**05 51 11.3 +0.3**
IGAR	**Gharneh**	**16.09 261**	*e*P		**Pn**	**05 51 15.8 +0.1**
IR3	**Iran Long-Peri**	**16.14 272**	*e*P		**Pn**	**05 51 16.6 +0.3**
IKLH	**Kolahrood**	**16.17 265**	P		**Pn**	**05 51 16.7 0.0**
IKLH	**Kolahrood**	**16.17 265**	*e*P		**Pn**	**05 51 16.8 +0.1**
VOSK	**Vostochnaya**	**16.27 0**	⇑P		**Pn**	**05 51 15.0 -2.8**
	comp=Z,2μm,0.9s					
VOSK			⇑S		**S**	**05 54 11.9 -5.8**
	comp=Z,676nm,1.1s					
VOSK	**Vostochnaya**	**16.27 0**	P		**Pn**	**05 51 14.9 -2.8**
VOSK			S		**S**	**05 54 08.8 -8.8**
VOSK			pmax		pmax	
	comp=Z,3μm,1.0s					
VOSK			smax			
	comp=N,696nm,1.0s					
BANOM	**Banah**	**16.31 234**	P		**Pn**	**05 51 17.3 -1.0**
	SNR=70					
BANOM	**Banah**	**16.31 234**	P		**Pn**	**05 51 17.1 -1.3**
	SNR=276					
IPAR	**Pars**	**16.34 251**	P		**Pn**	**05 51 19.2 +0.4**
IPAR	**Pars**	**16.34 251**	*e*P		**Pn**	**05 51 19.3 +0.5**
RAMN	**Ramite**	**16.35 121**	*e*P		**Pn**	**05 51 16.7 -2.2**
	comp=N,7μm,0.6s					
RAMN			*e*S		**S**	**05 54 09.0 -11**
ISRV	**Sarvestan**	**16.52 250**	P		**Pn**	**05 51 20.9 0.0**
ISRV	**Sarvestan**	**16.52 250**	*e*P		**Pn**	**05 51 21.0 +0.1**
ZRNK	**Zerenda**	**16.56 356**	⇑P		**Pn**	**05 51 18.4 -2.7**
	comp=N,1μm,0.5s					
ZRNK			⇑S		**S**	**05 54 17.8 -5.6**
	comp=N,675nm,0.8s					
ZRNK	**Zerenda**	**16.56 356**	P		**Pn**	**05 51 18.3 -2.8**
ZRNK			S		**S**	**05 54 14.7 -8.6**
ZRNK			pmax		pmax	
	comp=Z,2μm,0.5s					
ZRNK			smax			
	comp=N,690nm,0.9s					
AKL	**Akola**	**16.57 160**	*e*PKP		**Pn**	**05 51 21.8 +0.2**
AKL			*ex*		x	05 51 24.8
	comp=Z,1μm,0.8s					
AKL			*i* x		x	05 54 18.3
BVA0	**Borovoye Array**	**16.58 359**	P		**Pn**	**05 51 19.0 -2.4**
	comp=Z,296nm,0.9s,baz=169,slow=12,SNR=7873					
BVA0			⇓S		**S**	**05 54 19.9 -3.9**
	comp=Z,89nm,0.7s,baz=172,slow=22,SNR=8.8					
BVA0	**Borovoye Array**	**16.58 359**	*i* P		**Pn**	**05 51 18.9 -2.5**
BVA0			*i* S		**S**	**05 54 17.6 -6.2**
BVA0			pmax		pmax	
	comp=Z,489nm,1.1s					
BVA0			smax			
	comp=N,113nm,0.9s					
BVAR	**Borovoye Array**	**16.58 359**	P		**Pn**	**05 51 19.4 -2.0**
	comp=N,94nm,0.3s,baz=172,slow=13,SNR=382					
BVAR			S		**S**	**05 54 17.9 -5.9**
	comp=N,49nm,0.3s,baz=170,slow=23,SNR=6.0					
BVAR	**Borovoye Array**	**16.58 359**	P		**Pn**	**05 51 19.4 -2.0**
BVAR			S		**S**	**05 54 17.9 -5.9**
BVAR			pmax		pmax	
	comp=Z,95nm,0.3s					
BVAR			smax			
	comp=N,49nm,0.3s					
BRVK	**Borovoye**	**16.61 359**	P		**Pn**	**05 51 19.0 -2.8**
	comp=N,18μm,0.9s					
BRVK	**Borovoye**	**16.61 359**	⇓P		**Pn**	**05 51 18.7 -3.0**
	comp=N,7μm,1.3s					
BRVK			⇑S		**S**	**05 54 20.2 -4.3**
	comp=N,1μm,0.9s					
BRVK	**Borovoye**	**16.61 359**	*de*P		**Pn**	**05 51 19.5 -2.3**
BRVK			pmax		pmax	
	comp=Z,3μm,1.0s					
BRVK	**Borovoye**	**16.61 359**	*e*P		**Pn**	**05 51 19.7 -2.1**
	comp=Z,3μm,0.8s					
BRVK	**Borovoye**	**16.61 359**	P		**Pn**	**05 51 20.0 -1.8**
	SNR=1533					
AKTK	**Aktyubinsk**	**16.79 330**	P		**Pn**	**05 51 22.3 -1.6**
AKTK			S		**S**	**05 54 21.1 -7.0**
AKTK			LR		LR	05 58 22.9
AKTO	**Aktyubinsk**	**16.79 330**	⇓P		**Pn**	**05 51 17.4 -6.6**
	comp=Z,947nm,0.8s					
AKTO			⇓S		**S**	**05 54 17.8 -10**
	comp=Z,300nm,1.1s					
AKTO	**Aktyubinsk**	**16.79 330**	P		**Pn**	**05 51 22.3 -1.6**
	comp=Z,350nm,0.3s,baz=144,slow=13,SNR=3003					
AKTO			S		**S**	**05 54 21.1 -7.0**
	comp=Z,10nm,0.3s,baz=348,slow=20,SNR=4.8					
AKTO			LR		LR	05 58 22.9
	comp=Z,2μm,20.6s,baz=136,slow=38					
AKTO	**Aktyubinsk**	**16.79 330**	P		**Pn**	**05 51 22.3 -1.6**
AKTO			S		**S**	**05 54 21.2 -6.9**
AKTO			pmax		pmax	
	comp=Z,350nm,0.3s					
AKTO			smax			
	comp=N,10.0nm,0.3s					
AKTO			MLR		MLR	
	comp=Z,2μm,20.6s					
NGP	**Nagpur**	**16.81 153**	*e*PKP		**Pn**	**05 51 24.1 -0.4**
TAPN	**Taplejung**	**16.88 118**	*e*P		**Pn**	**05 51 24.4 -0.8**
	comp=Z,4μm,0.6s					
TAPN			*e*S		**S**	**05 54 19.5 -11**
IPIR	**Pirpir**	**16.91 263**	P		**Pn**	**05 51 26.5 +0.9**
IPIR	**Pirpir**	**16.91 263**	*e*P		**Pn**	**05 51 26.6 +1.0**
ODAN	**Odare**	**16.95 120**	*e*P		**Pn**	**05 51 25.3 -0.8**
	comp=Z,4μm,0.6s					
ODAN			*e*S		**S**	**05 54 22.6 -9.2**
IRAZ	**Razeghan**	**17.03 273**	P		**Pn**	**05 51 27.6 +0.6**
IRAZ	**Razeghan**	**17.03 273**	*e*P		**Pn**	**05 51 27.6 +0.6**
HATD	**Hatta, Dubai**	**17.18 232**	P		**Pn**	**05 51 26.1 -2.7**
	SNR=63					
HATD	**Hatta, Dubai**	**17.18 232**	P		**Pn**	**05 51 26.2 -2.6**
	SNR=86					
WBK	**Wadi Bani Khal**	**17.25 220**	P		**Pn**	**05 51 30.1 +0.5**
	SNR=91					
ASHO	**Ashiyiah**	**17.33 232**	P		**Pn**	**05 51 29.9 -0.7**
	SNR=220					
NAZ	**Nazwa, Dubai**	**17.37 233**	P		**Pn**	**05 51 29.7 -1.3**
	SNR=116					
NAZ	**Nazwa, Dubai**	**17.37 233**	P		**Pn**	**05 51 29.5 -1.6**
	SNR=124					
SMDO	**Samad**	**17.38 223**	P		**Pn**	**05 51 30.9 -0.3**
	SNR=59					
SMDO	**Samad**	**17.38 223**	P		**Pn**	**05 51 30.6 -0.6**
	SNR=44					
HOQ	**Hoqain**	**17.39 226**	P		**Pn**	**05 51 29.8 -1.5**
	SNR=36					
SLGI	**Shiliguri**	**17.77 118**	*ex*		**Pn**	**05 51 36.5 +0.7**
ASUD	**Al Ashush, Dub**	**17.84 233**	P		**Pn**	**05 51 35.5 -1.1**
	SNR=69					
JMDO	**Jabal Madar**	**17.90 222**	P		**Pn**	**05 51 37.0 -0.4**
	SNR=56					
POO	**Poona**	**18.04 171**	*e*PKP		**P**	**05 51 36.4 -0.4**
POO			AMb		AMB	05 51 45.7
	comp=Z,920nm,0.4s					
POO			*i* S		**S**	**05 54 55.0 +1.4**
ARQ	**Araqi**	**18.04 228**	P		**P**	**05 51 37.9 +1.1**
	SNR=64					
BOK	**Bokaro**	**18.05 130**	*e*PKP		**P**	**05 51 37.4 +0.5**
BSY	**Bisya**	**18.10 225**	P		**P**	**05 51 38.6 +1.1**
	SNR=92					
LSA	**Lhasa**	**18.23 106**	P		**P**	**05 51 42.2 +3.4**
LSA			S		**S**	**05 54 55.9 -1.4**
LSA	**Lhasa**	**18.23 106**	*e*P		**P**	**05 51 41.9 +3.1**
LSA			pmax		pmax	
	comp=Z,2μm,0.8s					
LSA	**Lhasa**	**18.23 106**	*e*P		**P**	**05 51 41.9 +3.1**
	comp=Z,2μm,0.8s					
ISRB	**Sarab**	**18.58 281**	*e*P		**P**	**05 51 43.2 +0.6**
LATR	**Latur**	**18.64 163**	*e*PKP		**P**	**05 51 44.5 +1.2**
LATR			*e*PKP			05 51 44.9
LATR			*ex*		x	05 55 21.2
IHRS	**Heris**	**19.06 283**	*e*P		**P**	**05 51 48.9 +1.2**
MAK	**Makhachkala**	**19.12 297**	*e*P		**P**	**05 51 48.4 +0.1**
MAK			*e*S		**S**	**05 55 16.3 +1.6**
MAK			pmax		pmax	
	comp=Z,636nm,0.8s					
MAK			MLR		MLR	
	comp=Z,4μm,11.0s					
IKOM	**Komasi**	**19.23 270**	P		**P**	**05 51 50.4 +0.8**
IKOM	**Komasi**	**19.23 270**	*e*P		**P**	**05 51 50.5 +0.9**
KAD	**Karad**	**19.28 171**	*e*PKP		**P**	**05 51 51.0 +0.7**
KAD			*e*PKP			05 51 51.3
KAD			AMb		AMB	05 51 56.6
	comp=Z,707nm,1.5s					
KAD			*e*S		**S**	**05 55 22.1 +3.8**
IVIS	**Veis**	**19.68 272**	P		**P**	**05 51 55.2 +0.7**
IVIS	**Veis**	**19.68 272**	*e*P		**P**	**05 51 55.2 +0.7**
ITBZ	**Tabriz**	**19.76 283**	*e*P		**P**	**05 51 56.7 +1.4**
IAZR	**Azarshahr**	**19.93 281**	*e*P		**P**	**05 51 58.2 +1.2**
IGHG	**Ghaleghazi**	**19.95 271**	P		**P**	**05 51 58.3 +0.9**
IGHG	**Ghaleghazi**	**19.95 271**	*e*P		**P**	**05 51 58.3 +0.9**
ZALV	**Zalesovo Beam**	**19.99 25**	P		**P**	**05 51 56.7 -0.8**
	comp=Z,248nm,0.3s,baz=220,slow=12,SNR=1766					
ZALV			S		**S**	**05 55 28.3 -3.2**
	comp=Z,4.2nm,0.3s,baz=216,slow=20,SNR=4.2					
ZALV	**Zalesovo Beam**	**19.99 25**	P		**P**	**05 51 56.7 -0.8**
ZALV			S		**S**	**05 55 28.3 -3.2**
ZALV			pmax		pmax	
	comp=Z,248nm,0.3s					
ZALV			smax			
	comp=N,4.0nm,0.3s					
ZALV	**Zalesovo Beam**	**19.99 25**	P		**P**	**05 51 56.7 -0.8**
ZALV			S		**S**	**05 55 28.3 -3.2**
IDHR	**Dehrash**	**20.02 272**	Pn		**P**	**05 51 58.4 +0.3**
IDHR	**Dehrash**	**20.02 272**	*e*Pn		**P**	**05 51 58.4 +0.3**
IMRD	**Marand**	**20.10 284**	*e*P		**P**	**05 52 00.6 +1.8**
HYB	**Hyderabad**	**20.13 158**	*i* P		**P**	**05 52 00.5 +1.2**
	comp=N,900nm,0.8s					
HYB			*e*pP			05 52 32.0
HYB			*es*P		sP	05 52 54.0 -1.7
HYB			*e*S		**S**	**05 55 32.0 -2.7**
ISHB	**Shabestar**	**20.18 283**	*e*P		**P**	**05 52 01.4 +1.7**
NVS	**Novosibirsk**	**20.25 21**	*e*P		**P**	**05 51 59.0 -1.3**
NVS			*i* S		**S**	**05 55 35.5 -1.1**
NVS			pmax		pmax	
	comp=Z,483nm,0.5s					
NVS			pmax		pmax	
	comp=N,202nm,0.4s					
NVS			smax			
	comp=N,984nm,1.6s					
NVS			smax			
	comp=E,346nm,1.3s					
DGRG	**David-gareji**	**20.45 292**	P		**P**	**05 52 02.8 +0.2**
CAL	**Calcutta**	**20.49 128**	*e*PKP		**P**	**05 52 03.5 +0.3**
CAL			*ex*		x	05 55 38.5
BWNR	**Bhubaneshwar**	**20.71 137**	*ex*		**P**	**05 52 03.0 -2.5**
BWNR			*ex*		x	05 55 51.0
KBD	**Kabd**	**20.79 256**	*e*P		**P**	**05 52 05.5 -0.8**
KBD			AMb		AMB	05 52 11.3
	comp=Z,811nm,0.5s					
MIB	**Mutribah**	**20.80 258**	*e*P		**P**	**05 52 05.5 -0.9**
MIB			AMb		AMB	05 52 10.9
	comp=Z,1μm,1.0s					
QRN	**Al-Qurain**	**20.81 255**	*e*P		**P**	**05 52 05.8 -0.8**
QRN			AMb		AMB	05 52 08.8
	comp=Z,714nm,0.4s					
GNI	**Garni**	**20.85 288**	P		**P**	**05 52 08.4 +1.7**
	comp=Z,930nm,1.0s,baz=146,slow=6.8,SNR=199					
GNI			S		**S**	**05 55 51.1 +2.7**
	comp=Z,98nm,1.0s,baz=104,slow=17,SNR=1.5					
GNI	**Garni**	**20.85 288**	*ce*P		**P**	**05 52 08.8 +2.0**
GNI			pmax		pmax	
	comp=Z,2μm,1.2s					
GNI	**Garni**	**20.85 288**	*e*P		**P**	**05 52 08.9 +2.1**
	comp=Z,2μm,1.1s					
GNI	**Garni**	**20.85 288**	P		**P**	**05 52 09.2 +2.5**
	SNR=362					
MTA	**Mtatsminda**	**20.91 292**	P		**P**	**05 52 07.8 +0.3**
SHL	**Shillong**	**20.95 115**	⇑*i*P		**P**	**05 52 08.0 0.0**
	comp=Z,90nm,0.9s					
SHL			*i* S		**S**	**05 55 51.0 +0.5**
SHL	**Shillong**	**20.95 115**	*e*PKP		**P**	**05 52 08.5 +0.5**
TBLG	**Delisi**	**20.96 293**	P		**P**	**05 52 08.4 +0.5**
TBLG	**Delisi**	**20.96 293**	P		**P**	**05 52 08.4 +0.5**
GOA	**Goa**	**21.03 172**	⇑*i*P		**P**	**05 52 10.5 +1.5**
GOA			*i* S		**S**	**05 55 55.2 +3.2**
NAY	**Al-Naaiem**	**21.12 257**	*e*P		**P**	**05 52 09.1 -0.7**
NAY			AMb		AMB	05 52 13.7
	comp=Z,823nm,1.4s,mb6.1					
GOR	**Gori**	**21.45 293**	P		**P**	**05 52 14.0 +0.9**
SVE	**Sverdlovsk**	**21.53 344**	⇑*e*P		**P**	**05 52 13.3 -0.5**
SVE			*e*S		**S**	**05 56 01.1 +1.8**
SVE			pmax		pmax	
	comp=Z,1μm,9.9s					
SVE			MLR		MLR	
	comp=Z,11μm,14.0s					
AGT	**Agartala**	**21.53 120**	*ex*		**P**	**05 52 11.0 -3.2**
AGT			*ex*		x	05 52 51.0
VIS	**Vishakhapatnam**	**21.64 146**	*e*PKP		**P**	**05 52 15.5 +0.1**
VIS			*ex*		x	05 52 18.5
	comp=Z,477nm,1.3s					
VIS			*i* x		x	05 56 06.8
DYDN	**Diyadin**	**21.65 286**	*i* P		**P**	**05 52 16.6 +1.3**
VJD	**Vijayawada**	**21.65 154**	*ex*		**P**	**05 52 20.0 +4.5**
VJD			*ex*		x	05 53 46.0
ARU	**Arti**	**21.66 341**	*d* *i*P		**P**	**05 52 14.4 -0.8**
ARU			*e*			05 52 47.8
ARU			S		**S**	**05 56 03.6 +2.1**
ARU			SS			05 56 44.6
ARU			pmax		pmax	
	comp=Z,356nm,1.2s,mb5.8					
ARU	**Arti**	**21.66 341**	*e*P		**P**	**05 52 14.6 -0.6**
	comp=Z,3μm,1.1s					
ARU	**Arti**	**21.66 341**	P		**P**	**05 52 14.0 -1.2**
	comp=Z,13μm,1.1s					
ZEI	**Tsey**	**21.70 295**	*e*P		**P**	**05 52 14.2 -1.6**
ZEI			*e*S		**S**	**05 56 06.1 +3.6**
ZEI			pmax		pmax	
	comp=Z,284nm,0.8s,mb5.8					
HAKT	**HAKKARI**	**21.74 281**	*i* P		**P**	**05 52 15.9 -0.2**
DIGO	**Kars**	**21.90 289**	*i* P		**P**	**05 52 18.1 +0.3**
KIV	**Kislovodsk**	**22.75 298**	*de*P		**P**	**05 52 25.6 0.0**
KIV			*i* S		**S**	**05 56 22.0 +2.4**
KIV			pmax		pmax	
	comp=Z,702nm,1.9s,mb5.9					
KIV			MLR		MLR	
	comp=Z,3μm,19.0s					
KIV	**Kislovodsk**	**22.75 298**	*e*P		**P**	**05 52 25.0 -0.5**
	comp=Z,367nm,1.1s,mb5.8					
KIV	**Kislovodsk**	**22.75 298**	P		**P**	**05 52 25.6 0.0**
	comp=Z,1μm,1.1s,mb6.4,SNR=40					
KIV	**Kislovodsk**	**22.75 298**	P		**P**	**05 52 26.1 +0.5**
	SNR=95					
IMP	**Imphal**	**22.91 114**	*e*PKP		**P**	**05 52 29.0 +1.8**
IMP			*ex*		x	05 55 29.0
GTA	**Gaotai**	**22.94 74**	⇑*i*P		**P**	**05 52 29.3 +1.9**
GTA			pP			05 53 07.1
GTA			sP		sP	05 53 27.0 +0.8
GTA			S		**S**	**05 56 25.8 +3.1**
GTA			SS			05 57 29.2
GTA			ScS		ScS	06 03 15.2 -1.5
GTA			pmax		pmax	
	comp=Z,540nm,0.6s,mb6.2					
GTA			pmax		pmax	
	comp=Z,3μm,6.2s					
GTA			LR		LR	
	comp=N,1μm,13.3s					
GTA			LR		LR	
	comp=E,2μm,12.1s					
GTA			LR		LR	
	comp=Z,2μm,9.0s					
HOMI	**Horasan**	**23.02 288**	*i* P		**P**	**05 52 30.3 +2.2**
ARTV	**Artvin**	**23.02 291**	*i* P		**P**	**05 52 28.4 +0.4**
DAGI	**Agillar**	**23.03 290**	*i* P		**P**	**05 52 29.1 +0.9**
DDEM	**Demirkent**	**23.15 290**	*i* P		**P**	**05 52 30.1 +0.9**
DBOC	**Borcka**	**23.23 291**	*i* P		**P**	**05 52 31.1 +1.1**
BEST	**Besiri**	**23.63 282**	*i* P		**P**	**05 52 35.2 +1.6**
BNGL	**BINGOL**	**23.64 285**	*i* P		**P**	**05 52 35.2 +1.5**
MNGI	**Mangalore**	**23.67 170**	*i* x		x	05 53 14.0
MNGI			*ex*		x	05 53 18.7
	comp=Z,687nm,1.2s					
MNGI			*i* x		x	05 54 13.4
RBK	**Rabkut**	**23.97 222**	P		**P**	**05 52 37.1 +0.2**
	SNR=29					
MARD	**Mardin**	**24.08 281**	*i* P		**P**	**05 52 37.3 -0.5**
KOPT	**Kop Dagi**	**24.10 288**	*i* P		**P**	**05 52 40.1 +2.2**
DIYA	**Diyarbakir**	**24.53 283**	*i* P		**P**	**05 52 43.1 +1.3**
ABTO	**Aybut**	**24.59 224**	P		**P**	**05 52 42.6 +0.1**
	SNR=64					
MDRS	**Chennai**	**24.74 158**	⇓*i*P		x	05 53 00.2
MDRS			*e*S		x	05 57 10.2
SOC	**Sochi**	**24.83 296**	*d* *i*P		**P**	**05 52 44.9 +0.4**
SOC			*e*			05 53 23.8
SOC			*e*S		**S**	**05 56 53.9 +1.1**
SOC			pmax		pmax	
	comp=Z,388nm,0.9s,mb6.0					
SOC			pmax		pmax	
	comp=Z,290nm,0.7s,mb6.0					
KELT	**Kelkit**	**25.05 288**	*i* P		**P**	**05 52 47.3 +0.8**
ELZG	**Elazig**	**25.36 284**	*i* P		**P**	**05 52 51.7 +2.4**
VRHR	**Novokhopersk**	**25.51 314**	*e*P		**P**	**05 52 50.4 -0.1**
VRHR			pmax		pmax	
	comp=Z,460nm,1.0s,mb6.1					
VRHR			pmax		pmax	
	comp=N,290nm,1.3s					
VRHR			pmax		pmax	
	comp=E,500nm,0.9s					
KEMA	**Kemaliye**	**25.68 286**	*i* P		**P**	**05 52 54.1 +1.9**
GRSN	**GIRESUNGRSN**	**25.79 290**	*i* P		**P**	**05 52 53.3 +0.2**
MALT	**Malatya**	**25.82 284**	*e*P		**P**	**05 52 55.1 +1.7**
MALT			pmax		pmax	
	comp=Z,122nm,1.4s,mb5.3					
MALT	**Malatya**	**25.82 284**	*e*P		**P**	**05 52 55.1 +1.7**
	comp=Z,122nm,1.4s,mb5.3					
MALT	**Malatya**	**25.82 284**	P		**P**	**05 52 55.7 +2.3**
	comp=Z,3μmcomp=Z,66nm,1.3s,mb5.1					
MALT	**Malatya**	**25.82 284**	P		**P**	**05 52 55.8 +2.4**
	comp=Z,3μmcomp=Z,66nm,1.3s,mb5.1					
MALT	**Malatya**	**25.82 284**	P		**P**	**05 52 55.0 +1.6**
	comp=Z,3μmcomp=Z,66nm,1.3s,mb5.1					
MOY	**Mondy**	**26.19 45**	*e*P		**P**	**05 52 58.1 +1.5**
MOY			pmax		pmax	
	comp=Z,143nm,2.1s,mb5.2					
LZH	**Lanzhou**	**26.48 81**	⇑P		**P**	**05 53 01.3 +1.9**
LZH			pP		pP	05 53 37.0 -1.2
LZH			PP		PP	05 53 53.5 -10
LZH			sP		sP	05 53 58.1 -2.4
LZH			S		**S**	**05 57 20.0 +1.0**
LZH			sS		sS	05 58 23.0 -5.5
LZH			SS		sS	05 58 46.5 +18
LZH			pmax		pmax	
	comp=Z,170nm,1.0s,mb5.6					
LZH			pmax		pmax	
	comp=Z,1μm,4.1s					
LZH			LR		LR	
	comp=N,2μm,10.2s					
LZH			LR		LR	
	comp=E,2μm,6.8s					
LZH			LR		LR	
	comp=Z,4μm,12.0s					
ANN	**Anapa**	**26.60 299**	*c* *i*P		**P**	**05 53 00.0 -0.4**
ANN			*e**PP		pP	05 53 35.7 -3.5
ANN			*e*			05 53 50.8
ANN			*e*S		**S**	**05 57 21.5 +0.9**
ANN			pmax		pmax	
	comp=Z,265nm,0.7s,mb6.0					
ANN			pmax		pmax	
	comp=N,88nm,0.8s					
ANN			pmax		pmax	
	comp=E,58nm,0.8s					
ANN			smax			
	comp=N,985nm,6.1s					
ANN			smax			
	comp=E,752nm,6.1s					
ANN			MLR		MLR	
	comp=N,2μm,16.0s					
ANN			MLR		MLR	
	comp=E,3μm,16.0s					
ANN			MLR		MLR	
	comp=Z,3μm,16.0s					
GZT	**Gaziantep**	**26.61 282**	*i* P		**P**	**05 53 00.6 0.0**
VORD	**Divnogorie**	**26.83 313**	*e*P		**P**	**05 53 02.1 -0.2**
VORD			*e*S		**S**	**05 57 23.4 -0.6**
VORD			pmax		pmax	
	comp=E,470nm,1.2s					
VORD			pmax		pmax	
	comp=Z,250nm,1.2s,mb5.7					
VORD			pmax		pmax	
	comp=N,140nm,0.9s					
VORD			smax			
	comp=E,380nm,4.7s					
VORD			smax			
	comp=Z,270nm,4.9s					
VORD			smax			
	comp=N,170nm,4.4s					
VSR	**Storozhevoye**	**26.99 313**	*e*P		**P**	**05 53 03.2 -0.5**
VSR			*e*S		**S**	**05 57 25.7 -0.9**
VSR			pmax		pmax	
	comp=Z,480nm,1.2s,mb6.0					
VSR			pmax		pmax	
	comp=N,210nm,1.3s					
VSR			pmax		pmax	
	comp=E,650nm,1.1s					
VSR			smax			
	comp=E,580nm,5.6s					
VSR			smax			
	comp=Z,430nm,6.1s					
VSR			smax			
	comp=N,330nm,6.6s					
ZAK	**Zakamensk**	**27.07 49**	⇓*i*P		**P**	**05 53 05.0 +0.5**
ZAK			*e*			05 53 48.9
ZAK			pmax		pmax	
	comp=Z,43nm,1.0s,mb5.0					
KUZU	**Kuzuini**	**27.09 281**	*i* P		**P**	**05 53 05.3 +0.5**
VOR	**Voronezh**	**27.16 314**	⇑*i*P		**P**	**05 53 05.0 -0.2**
VOR			pmax		pmax	
	comp=Z,750nm,1.8s,mb6.0					
PINB	**Pinarbasi**	**27.36 285**	*i* P		**P**	**05 53 08.5 +1.3**
ANDN	**Andirin**	**27.54 283**	*i* P		**P**	**05 53 10.0 +1.2**
TLY	**Talaya**	**27.73 46**	*e*P		**P**	**05 53 11.5 +1.2**
TLY			*e*		pP	05 53 53.4 +4.1
TLY			*e*PPP			05 54 09.1
TLY			*e*S		**S**	**05 57 41.1 +3.0**
TLY			*e*SS		sS	05 58 53.9 +6.1
TLY			*e*SSS			05 59 07.1
TLY			pmax		pmax	
	comp=Z,48nm,1.0s,mb5.1					
TLY			MLR		MLR	
	comp=Z,577nm,16.0s					
TLY	**Talaya**	**27.73 46**	*e*P		**P**	**05 53 11.8 +1.5**
	comp=Z,28nm,0.6s,mb5.1					
TLY			*e*		pP	05 53 54.9 +5.6
TLY	**Talaya**	**27.73 46**	P		**P**	**05 53 11.2 +0.9**
	comp=Z,306nm,1.1s,mb5.8,SNR=10					
TLY	**Talaya**	**27.73 46**	P		**P**	**05 53 12.1 +1.9**
	SNR=12					
COBT	**Iskenderun**	**27.78 281**	*i* P		**P**	**05 53 12.0 +1.0**
CD2	**Chengdu**	**27.80 92**	P		**P**	**05 53 13.0 +1.8**
CD2			pP		pP	05 53 48.9 -1.3
CD2			PP		PP	05 54 12.4 -5.4
CD2			S		**S**	**05 57 41.4 +1.6**
CD2			sS		sS	05 58 44.9 -4.6
CD2			SS		SS	05 59 18.0 -27
CD2			PcS		PcS	06 00 05.7 +1.1
CD2			pmax		pmax	
	comp=Z,650nm,0.6s,mb6.4					
CD2			pmax		pmax	
	comp=Z,3μm,4.8s					
MNCY	**Minicoy**	**28.12 176**	*e*PKP		**P**	**05 53 12.9 -1.2**
IRK	**Irkutsk**	**28.29 46**	*e*P		**P**	**05 53 15.0 -0.2**
IRK			*e*		pP	05 53 54.9 +0.5
IRK			pmax		pmax	
	comp=Z,136nm,1.7s,mb5.3					
ASF	**Jabal al Asfar**	**28.33 271**	P		**P**	**05 53 17.1 +1.2**
	comp=Z,13nm,1.0s,mb4.5,baz=319,slow=5.6,SNR=14					
ASF			pP		pP	05 53 55.8 +0.8
	comp=Z,17nm,1.0s,baz=321,slow=12,SNR=3.2					
TRD	**Trivandrum**	**28.35 167**	*e*PKP		**P**

GULE	Gulek	28.82	283	*i* P	P	05 53 20.8 +0.6
ULN	Ulaanbaatar	28.86	55	*e*P	P	05 53 21.0 +0.6
ULN				*e*	pP	05 54 04.3 +4.7
ULN				pmax	pmax	
	comp=Z,89nm,0.8s,mb5.5					
ULN	Ulaanbaatar	28.86	55	*e*P	P	05 53 21.0 +0.6
	comp=Z,88nm,0.8s,mb5.4					
ULN				*e*	pP	05 54 04.3 +4.8
ULN	Ulaanbaatar	28.86	55	P	P	05 53 21.4 +1.1
	SNR=75					
SIM	Simferopol'	28.96	299	*e*P	P	05 53 24.1 +2.8
SIM				*e*	pP	05 54 01.0 +0.5
SIM				*e*S	S	05 57 58.0 +0.3
SIM				pmax	pmax	
	comp=Z,102nm,1.4s,mb5.3					
SIM				MLR	MLR	
	comp=Z,2μm,18.0s					
KSDI	Kefar Szold	29.03	274	P	P	05 53 24.6 +2.5
ILGA	Ilgaz	29.23	291	*i* P	P	05 53 24.6 +0.9
MMAI	Mount Meron Ar	29.29	274	P	P	05 53 25.5 +1.2
	comp=Z,26nm,0.9s,mb4.9,baz=69,slow=9.9,SNR=16					
MMAI				pP	pP	05 54 04.7 +1.1
	comp=Z,7.9nm,0.7s,baz=61,slow=6.8,SNR=3.1					
MMAI				PcP	PcP	05 56 25.5 -0.6
	comp=Z,86nm,0.9s,baz=51,slow=4.6,SNR=6.9					
MMAI				S	S	05 58 03.3 +0.2
	comp=Z,1.5nm,0.4s,baz=57,slow=16,SNR=3.9					
MMAI				ScP	ScP	05 59 48.4 -1.0
	comp=Z,28nm,0.8s,baz=90,slow=2.9,SNR=7.4					
MUKL	Al Mukalla	29.34	227⇑	*e*P	P	05 53 25.4 +0.5
BRTR	Keskin Array B	29.39	288	P	P	05 53 25.6 +0.4
	comp=Z,24nm,0.6s,mb5.0,baz=96,slow=6.9,SNR=82					
BRTR				pP	pP	05 54 05.7 +1.3
	comp=Z,50nm,0.8s,baz=104,slow=6.5,SNR=5.3					
BRTR				ScP	ScP	05 59 47.5 -2.1
	comp=Z,13nm,0.9s,baz=90,slow=2.6,SNR=3.9					
BRTR				P3KPbc		06 25 26.9
	comp=Z,4.1nm,1.0s,baz=298,slow=3.1,SNR=12					
BRTR	Keskin Array B	29.39	288	P	P	05 53 25.6 +0.4
BRTR				pP	pP	05 54 05.7 +1.3
BRTR				ScP	ScP	05 59 47.5 -2.1
BRTR				*e*		06 25 26.9
MMLI	Mount Malkishu	29.44	273	P	P	05 53 27.2 +1.5
KMI	Kunming	29.45	104	P	P	05 53 26.9 +1.1
KMI				pP	pP	05 54 04.1 -1.0
KMI				sP	sP	05 54 24.9 -2.3
KMI				PP	PP	05 54 31.3 -4.9
KMI				S	S	05 58 07.9 +2.1
KMI				sS	sS	05 59 14.2 -1.4
KMI				SS	SS	05 59 57.8 -22
KMI				pmax	pmax	
	comp=Z,140nm,0.6s,mb5.8					
KMI				pmax	pmax	
	comp=Z,1μm,4.4s					
KMI				LR	LR	
	comp=N,2μm,17.6s					
KMI				LR	LR	
	comp=E,1μm,13.7s					
KMI				LR	LR	
	comp=Z,1μm,16.9s					
BALT	Daday	29.45	292	*i* P	P	05 53 25.7 +0.1
ELDT	Eldivan	29.48	289	*i* P	P	05 53 27.0 +1.0
HMDM	Hanimaadhoo	29.61	175	P	P	05 53 29.7 +2.4
	comp=Z,2μm,1.1s,mb6.6					
HMDM	Hanimaadhoo	29.61	175	P	P	05 53 30.2 +2.9
	comp=Z,2μm,1.1s,mb6.6					
HMDM	Hanimaadhoo	29.61	175	P	P	05 53 29.8 +2.5
	comp=Z,2μm,1.1s,mb6.6					
MOS	Moscow	29.66	321	*e*P	P	05 53 26.8 -0.5
MOS				*e**PP	pP	05 54 02.5 -4.1
MOS				*e*		05 54 31.0
MOS				*e*		05 56 25.8
MOS				*e*S	S	05 58 07.3 -1.1
MOS				pmax	pmax	
	comp=Z,1μm,1.0s,mb6.4					
MOS				pmax	pmax	
	comp=Z,1μm,1.1s,mb6.4					
PRGR	Permogore	29.79	336⇓	*i*P	P	05 53 28.3 -0.1
PRGR				*e**PP	pP	05 54 04.4 -3.3
PRGR				pmax	pmax	
	comp=Z,965nm,1.3s,mb6.3					
OBN	Obninsk	29.93	319*d*	*i*P	P	05 53 29.8 +0.1
OBN				*i* *PP	pP	05 54 06.9 -2.2
OBN				*i*		05 54 31.7
OBN				*i* S	S	05 58 12.6 -0.1
OBN				pmax	pmax	
	comp=Z,1μm,1.5s,mb6.3					
OBN				MLR	MLR	
	comp=Z,2μm,16.0s					
OBN	Obninsk	29.93	319	*e*P	P	05 53 29.6 -0.2
	comp=Z,464nm,0.6s,mb6.3					
OBN	Obninsk	29.93	319	P	P	05 53 30.9 +1.2
	comp=Z,5μm,0.9s,SNR=26					
CHRT	Chiangrai	30.18	115	⇑P	P	05 53 32.0 -0.3
	comp=Z,2μm,0.8s					
CHTO	Chiang Mai	30.25	118	*e*P	P	05 53 33.4 +0.4
CHTO				pmax	pmax	
	comp=Z,210nm,0.7s,mb5.9					
CHTO	Chiang Mai	30.25	118	*e*P	P	05 53 33.4 +0.4
	comp=Z,210nm,0.7s,mb5.9					
CHTO	Chiang Mai	30.25	118	P	P	05 53 33.7 +0.7
	SNR=84					
PALK	Pallekele	30.39	161	P	P	05 53 35.4 +1.3
	comp=Z,5μm,0.8s,SNR=88					
PALK	Pallekele	30.39	161	*e*P	P	05 53 35.8 +1.7
PALK				*e**PP	pP	05 54 16.0 +2.5
PALK				pmax	pmax	
	comp=Z,684nm,0.8s,mb6.3					
PALK	Pallekele	30.39	161	*e*P	P	05 53 35.8 +1.7
	comp=Z,684nm,0.8s,mb6.3					
PALK				*e*pP	pP	05 54 16.0 +2.5
PALK	Pallekele	30.39	161	P	P	05 53 36.1 +2.0
	SNR=36					
ERMK	Ermenek	30.40	282	*i* P	P	05 53 30.4 -3.7
CSS	Prodhromos	30.43	279	*e*P	P	05 53 36.1 +1.7
	comp=Z,22nm,0.8s,mb4.8					
CM31	Chiang Mai Arr	30.49	118	*e*P	P	05 53 36.0 +1.0
	comp=Z,229nm,0.7s,mb5.9					
CMAR	Chiang Mai Arr	30.49	118	P	P	05 53 35.6 +0.6
	comp=Z,417nm,0.9s,mb6.1,baz=304,slow=11,SNR=493					
CMAR				pP	pP	05 54 14.3 -0.1
	comp=Z,132nm,1.1s,baz=315,slow=9.5,SNR=1.5					
CMAR				PcP	PcP	05 56 28.4 -0.9
	comp=Z,94nm,0.9s,baz=290,slow=4.8,SNR=6.6					
CMAR				ScP	ScP	05 59 52.9 -0.7
	comp=Z,22nm,1.0s,baz=303,slow=4.8,SNR=5.4					
CMAR				PKiKP	PKiKP	06 03 59.4 -1.0
	comp=Z,0.8nm,0.3s,baz=270,slow=2.0,SNR=4.2					
CMAR				P3KPbc		06 25 22.4
	comp=Z,0.8nm,0.4s,baz=147,slow=2.7,SNR=6.4					
CMAR				P3KP		06 26 11.8
	comp=Z,1.4nm,0.7s,baz=173,slow=3.4,SNR=4.3					
CMAR	Chiang Mai Arr	30.49	118	P	P	05 53 35.7 +0.7
CMAR				*PP	pP	05 54 14.3 -0.1
CMAR						05 56 28.5
CMAR				pmax	pmax	
	comp=Z,417nm,0.9s					
CMAR	Chiang Mai Arr	30.49	118	P	P	05 53 35.6 +0.6
CMAR				pP	pP	05 54 14.3 -0.1
CMAR				PcP	PcP	05 56 28.4 -0.9
CMAR				ScP	ScP	05 59 52.9 -0.7
SGKT	Sivrigoynuk	30.52	290	*i* P	P	05 53 35.1 0.0
HRFI	Mount Harif	30.56	268	P	P	05 53 36.8 +1.2
BTO	Baotou	30.70	70	*e*P	P	05 53 37.6 +0.9
KDHN	Kadinhani	30.71	286	*i* P	P	05 53 36.7 -0.1
EIL	Elat	30.77	268	P	P	05 53 37.6 +0.3
	comp=Z,51nm,1.1s,mb5.1,baz=67,slow=6.9,SNR=16					
EIL				pP	pP	05 54 18.2 +1.4
	comp=Z,38nm,1.0s,baz=99,slow=5.2,SNR=3.6					
EIL	Elat	30.77	268	P	P	05 53 37.6 +0.3
EIL				pP	pP	05 54 18.2 +1.4
KZIT	Kziot	30.77	270	P	P	05 53 38.6 +1.2
GAZI	Gazipasa	30.96	281	*i* P	P	05 53 38.2 -0.8
HENT	Hendek	31.37	290	*i* P	P	05 53 42.7 +0.2
KLMR	Klimovskoe	31.49	331*d*	*i*P	P	05 53 43.3 -0.1
KLMR				*i* S	S	05 58 36.9 0.0
KLMR				pmax	pmax	
	comp=Z,296nm,7.4s					
ESKT	Eskisehir	31.55	288	*i* P	P	05 53 43.5 -0.7
PBA	Port Blair	31.57	136	*ex*	P	05 53 42.2 -2.3
BOLV	Bolvadin	31.58	286	*i* P	P	05 53 44.2 -0.3
BORA	Eskisehir	31.81	289	*i* P	P	05 53 46.9 +0.5
HHC	Hu-ho-hao-te	31.84	69⇑	*i*P	P	05 53 48.3 +1.6
HHC				pP	pP	05 54 24.9 -1.3
HHC				sP	sP	05 54 45.4 -2.9
HHC				PP	PP	05 55 00.9 -1.7
HHC				PcP	PcP	05 56 34.4 +1.7
HHC				S	S	05 58 44.5 +1.7
HHC				sS	sS	05 59 48.7 -4.2
HHC				ScP	ScP	06 00 00.6 +2.8
HHC				PcS	PcS	06 00 19.2 +1.7
HHC				SS	SS	06 00 50.0 -18
HHC				ScS	ScS	06 03 57.5 +1.1
HHC				pmax	pmax	
	comp=Z,93nm,1.1s,mb5.2					
HHC				pmax	pmax	
	comp=Z,310nm,5.5s					
HHC				LR	LR	
	comp=N,1μm,12.9s					
HHC				LR	LR	
	comp=E,1μm,7.1s					
HHC				LR	LR	
	comp=Z,1μm,11.4s					
BDHA	Al Bayda'	31.86	232⇓	*e*P	P	05 53 47.8 +0.7
GYA	Guiyang	31.92	98⇑	*i*P	P	05 53 48.5 +0.9
GYA				pP	pP	05 54 25.1 -2.0
GYA				sP	sP	05 54 45.6 -3.5
GYA				PP	PP	05 55 01.2 -2.5
GYA				PcP	PcP	05 56 35.3 +2.1
GYA				S	S	05 58 45.6 +1.3
GYA				ScP	ScP	05 59 58.6 +0.3
GYA				PcS	PcS	06 00 18.4 +0.2
GYA				ScS	ScS	06 03 53.4 -3.9
GYA				pmax	pmax	
	comp=Z,100nm,1.0s,mb5.3					
GYA				pmax	pmax	
	comp=Z,570nm,5.3s					
GYA				LR	LR	
	comp=N,930nm,22.8s					
GYA				LR	LR	
	comp=E,810nm,23.4s					
GYA				LR	LR	
	comp=Z,880nm,24.4s					
LBOS		32.14	232⇑	*e*P	P	05 53 50.3 +0.8
LBOS				AMb	AMB	05 53 51.1
	comp=Z,342nm,1.2s,mb5.7					
DHBB	Dhamar BB	32.18	234⇑	*e*P	P	05 53 50.6 +0.8
DHBB				AMb	AMB	05 53 52.6
	comp=Z,298nm,1.5s,mb5.6					
KORT	Korkueli	32.35	283	*i* P	P	05 53 51.7 +0.5
ENH	Enshi	32.64	90	*e*P	P	05 53 55.0 +1.3
	comp=Z,869nm,0.9s,mb6.3					
GDZ	Gediz	32.66	287	*i* P	P	05 53 53.4 -0.5
BUY	Buyukada	32.71	291	*i* P	P	05 53 54.7 +0.4
TLCR		32.73	299	⇓P	P	05 53 54.3 0.0
TLCR		32.73	299	⇓*i*P	P	05 53 54.3 0.0
KHAL	Karahalli	32.77	286	*i* P	P	05 53 54.5 -0.3
KIS	Kishinev	32.78	302	⇓*i*P	P	05 53 54.0 -0.8
	comp=Z,1μm,1.0s,mb6.3					
KIS				*i* pP	pP	05 54 34.0 -0.4
KIS	Kishinev	32.78	302	k *i*P	P	05 53 54.0 -0.8
KIS				*i* *PP	pP	05 54 34.0 -0.4
KIS				*e*		05 54 56.0
KIS				*e*PPP		05 55 06.0
KIS				*e*S	S	05 58 57.0 -0.2
KIS				pmax	pmax	
	comp=E,500nm,2.0s					
KIS				pmax	pmax	
	comp=Z,900nm,2.0s,mb6.0					
KIS				MLR	MLR	
	comp=Z,1μm,14.0s					
KIS	Kishinev	32.78	302	P	P	05 53 55.5 +0.7
GOLH	Golhisar	32.92	284	*i* P	P	05 53 55.5 -0.6
KIEV	Kiev	32.94	309	*e*P	P	05 53 55.5 -0.6
KIEV				*e**PP	pP	05 54 34.4 -1.3
KIEV				*e*		05 55 11.6
KIEV				pmax	pmax	
	comp=Z,323nm,0.7s,mb6.0					
KIEV	Kiev	32.94	309	*e*P	P	05 53 55.5 -0.6
	comp=Z,323nm,0.7s,mb6.0					
KIEV				*e*pP	pP	05 54 34.4 -1.3
KIEV				*e*PP	PP	05 55 11.6 -2.8
TIY	Taiyuan	32.95	75	*e*P	P	05 53 57.5 +1.1
TIY				pP	pP	05 54 35.9 -0.1
TIY				sP	sP	05 55 01.8 +3.7
TIY				S	S	05 59 01.8 +1.7
TIY				sS	sS	06 00 13.0 +2.6
TIY				LR	LR	
	comp=N,960nm,6.6s					
TIY				LR	LR	
	comp=E,790nm,6.2s					
TIY				LR	LR	
	comp=Z,460nm,11.4s					
TIRR	Tirgusor	33.01	297	P	P	05 53 57.6 +0.8
TIRR	Tirgusor	33.01	297	*e*P	P	05 53 56.6 -0.2
	comp=Z,92nm,1.3s,mb5.2					
TIRR	Tirgusor	33.01	297⇑	*i*P	P	05 53 56.9 +0.1
AKAS	Kas	33.10	282	*i* P	P	05 53 55.5 -2.2
ELBA	Catalca	33.20	291	*i* P	P	05 53 57.8 -0.7
CFR	Carcaliu	33.20	299⇑	*i*P	P	05 53 58.7 +0.2
NST	Nakhon Sawan	33.21	121	⇓P	P	05 54 01.0 +2.2
	comp=Z,775nm,0.8s,mb6.3					
DNZL	Cakiroluk	33.23	285	*i* P	P	05 53 57.8 -1.1
TRBA	At Turbah	33.35	233⇑	*e*P	P	05 54 00.7 +0.7
DURS	Dursunbey	33.36	289	*i* P	P	05 53 59.3 -0.6
IAS	Iasi	33.65	302	P	P	05 54 02.5 +0.2
CIT	Chita	33.74	49	*e*P	P	05 54 03.5 +0.5
CIT				*e*	pP	05 54 45.8 +3.1
CIT				*e*		05 55 04.0
CIT				*e*S	S	05 59 14.7 +2.9
AMRR	Amara	33.78	298	P	P	05 54 05.1 +1.6
AMRR	Amara	33.78	298	⇓*i*P	P	05 54 04.6 +1.1
PRD	Provadia	33.80	295	*i* P	P	05 54 03.9 +0.3
PRD	Provadia	33.80	295	*i* P	P	05 54 03.9 +0.3
PETR		33.84	300⇑	*i*P	P	05 54 05.6 +1.6
AKHS	Akhisar	33.98	287	*i* P	P	05 54 04.7 -0.6
BALY	Balya	33.99	289	*i* P	P	05 54 05.5 +0.3
GRER		34.02	299	P	P	05 54 08.1 +2.6
GRER		34.02	299	⇓*i*P	P	05 54 06.2 +0.7
VRI	Vrincioaia	34.20	300⇑	*i*P	P	05 54 07.5 +0.5
PLOR	Plostina	34.25	300	⇑P	P	05 54 09.4 +1.9
PLOR	Plostina	34.25	300⇑	*i*P	P	05 54 09.4 +1.9
TESR		34.26	301	P	P	05 54 07.7 +0.2
TESR		34.26	301⇑	*i*P	P	05 54 07.8 +0.3
ISR	Istrita	34.33	299	⇑P	P	05 54 09.5 +1.3
ISR	Istrita	34.33	299⇑	*i*P	P	05 54 09.5 +1.3
JMB	Yambol	34.45	294	P	P	05 54 11.9 +2.7
JMB	Yambol	34.45	294	*i* P	P	05 54 09.8 +0.6
JMB	Yambol	34.45	294	*i* P	P	05 54 09.8 +0.6
KDAG	Bornova	34.48	287	*i* P	P	05 54 08.2 -1.4
MICGM	Minsk	34.49	315	⇓*i*P	P	05 54 09.0 -0.4
MNK	Minsk	34.52	315	⇓*i*P	P	05 54 09.0 -0.7
MNK				*e**PP	pP	05 54 46.0 -3.5
MNK				*e*S	S	05 59 21.0 -2.7
MNK				pmax	pmax	
	comp=Z,2μm,1.0s,mb6.5					
SULR		34.55	298	P	P	05 54 11.4 +1.3
BDRM	Kayabasi	34.61	284	*i* P	P	05 54 09.6 -1.1
MLR	Muntele Rosu	34.75	299⇑	*i*P	P	05 54 13.3 +1.5
SZH	Strazhica	34.86	295	*e*P	P	05 54 12.6 -0.1
SZH	Strazhica	34.86	295	*e*P	P	05 54 12.6 -0.1
PUL	Pulkovo	34.92	325*d*	*e*P	P	05 54 13.3 +0.3
SMG	Samos	34.95	286	*e*P	P	05 54 13.8 +0.2
ALN	Alexandroupoli	35.02	291	P	P	05 54 14.9 +0.7
PRK	Paraskevi	35.10	288	P	P	05 54 15.3 +0.5
BOZC	Bozcaada	35.17	289	*i* P	P	05 54 16.6 +1.2
KARP	Karpathos	35.19	282	*e*P	P	05 54 15.5 -0.1
BURAR	Bucovina Array	35.26	303	P	P	05 54 16.9 +0.8
BURAR	Bucovina Array	35.26	303⇑	*i*P	P	05 54 16.6 +0.5
BUR08	Bucovina Ar. S	35.27	303	*e*P	P	05 54 16.7 +0.5
BUR08				*e*pP	pP	05 55 00.5 +4.3
PVL	Pavlikeni	35.30	295	*i* P	P	05 54 17.9 +1.4
PVL	Pavlikeni	35.30	295	*i* P	P	05 54 17.9 +1.4
VOIR		35.38	299	⇓P	P	05 54 17.9 +0.8
VOIR		35.38	299	⇓*i*P	P	05 54 17.9 +0.8
KDZ	Kurdzhali	35.40	293	*e*P	P	05 54 18.1 +0.7
KDZ	Kurdzhali	35.40	293	*e*P	P	05 54 18.1 +0.7
CHOS	Chios island	35.42	287	P	P	05 54 17.6 0.0
BJT	Baijiatuau	35.43	70	*e*P	P	05 54 18.5 +0.8
BJT				pmax	pmax	
	comp=Z,122nm,0.7s					
BJT	Baijiatuau	35.43	70	*e*P	P	05 54 18.5 +0.8
	comp=Z,122nm,0.7s,mb5.5					
BJI	Beijing	35.44	70	P	P	05 54 17.6 -0.1
BJI				S	S	05 59 39.5 +1.4
BJI				pmax	pmax	
	comp=Z,160nm,0.7s,mb5.7					
BJI				pmax	pmax	
	comp=Z,770nm,3.5s					
BJI				LR	LR	
	comp=N,1μm,11.9s					
BJI				LR	LR	
	comp=E,1μm,12.8s					
BJI				LR	LR	
	comp=Z,740nm,22.8s					
ATD	Arta Tunnel	35.44	233	P	P	05 54 18.4 +0.4
	comp=Z,83nm,1.1s,mb5.2,baz=35,slow=6.0,SNR=40					
IIGN	Ignalina	35.62	316	*e*P	P	05 54 19.9 +0.9
IIGN				AMB	AMB	05 54 22.2
	comp=Z,234nm,0.9s,mb5.7					
IIGN				*e*pP	pP	05 54 58.0 -1.1
IIGN				*e*sP	sP	05 55 18.2 -2.9
IIGN				*e*PP	PP	05 55 39.4 -4.6
IIGN				*e*PP	PP	05 55 39.5 -4.5
IIGN				*e*PP	PP	05 55 39.5 -4.5
ISAL	Salakas	35.72	317	*e*P	P	05 54 20.8 +0.8
ISAL				AMB	AMB	05 54 23.1
	comp=Z,169nm,1.0s,mb5.5					
ISAL				*e*pP	pP	05 54 59.2 -0.8
ISAL				*e*sP	sP	05 55 19.2 -2.8
ISAL				*e*PP	PP	05 55 40.0 -5.1
PLD	Plovdiv	35.87	294	*e*P	P	05 54 21.8 +0.4
PLD	Plovdiv	35.87	294	*e*P	P	05 54 21.8 +0.4
JOF	Joensuu	35.88	330	*e*P	P	05 54 19.6 -1.6
JOF				pmax	pmax	
	comp=Z,377nm,0.5s,mb6.2					
RZN	Rozhen	35.91	293	*i* P	P	05 54 22.4 +0.7
RZN	Rozhen	35.91	293	*i* P	P	05 54 22.4 +0.7
APE	Apeiranthos	36.10	285	⇑P	P	05 54 23.3 -0.1
APE	Apeiranthos	36.10	285	P	P	05 54 24.6 +1.2
APE	Apeiranthos	36.10	285	*e*P	P	05 54 23.3 -0.1
APE	Apeiranthos	36.10	285⇑	*i*P	P	05 54 23.3 -0.1
LVV	L'vov	36.14	307*c*	*i*P	P	05 54 24.3 +0.8
LVV				*e**PP	pP	05 55 05.5 +1.8
LVV				*e*S	S	05 59 49.2 +0.6
LVV				*e*SS	SS	06 02 28.3 -6.3
LVV				MLR	MLR	
	comp=N,400nm,17.0s					
LVV				MLR	MLR	
	comp=E,1μm,17.0s					
LVV				MLR	MLR	
	comp=Z,1μm,17.0s					
LVV	L'vov	36.14	307	*e*P	P	05 54 24.0 +0.5
KAVA	Kavala	36.16	292	P	P	05 54 23.9 +0.1
VSU	Vasula	36.18	322*d*	*i*P	P	05 54 23.7 -0.1
VSU				pmax	pmax	
	comp=Z,886nm,1.0s,mb6.2					
VSU	Vasula	36.18	322	P	P	05 54 23.5 -0.3
PGB	Panagyurishte	36.22	294	*i* P	P	05 54 24.8 +0.5
PGB	Panagyurishte	36.22	294	*i* P	P	05 54 24.8 +0.5
CRAR	CRAIOVA	36.32	297	P	P	05 54 26.5 +1.3
BMR	Baia Mare	36.42	303	⇓P	P	05 54 27.8 +1.8
BMR	Baia Mare	36.42	303⇓	*i*P	P	05 54 27.8 +1.8
MPEP	Malo Peshtene	36.45	296	*i* P	P	05 54 26.8 +0.6
MPEP	Malo Peshtene	36.45	296	*i* P	P	05 54 26.8 +0.6
WHN	Wuhan	36.46	86	P	P	05 54 27.3 +0.8
WHN				pP	pP	05 55 04.8 -1.9
WHN				sP	sP	05 55 26.5 -2.2
WHN				PP	PP	05 55 59.4 +5.8
WHN				S	S	05 59 56.2 +2.2
WHN				pmax	pmax	
	comp=Z,3μm,2.6s,mb6.3					
WHN				pmax	pmax	
	comp=Z,2μm,13.6s					
WHN				LR	LR	
	comp=N,2μm,8.8s					
WHN				LR	LR	
	comp=E,1μm,6.5s					
WHN				LR	LR	
	comp=Z,2μm,17.1s					
NPS	Neapolis	36.48	282	*e*P	P	05 54 26.2 -0.5
XRY	Khrisi	36.52	281	*e*P	P	05 54 26.5 -0.5
LAST	Lasithi	36.62	282	P	P	05 54 28.0 +0.2
OUR	Ouranopolis	36.66	291	P	P	05 54 27.8 -0.3
MMB	Musomiste	36.66	293	*i* P	P	05 54 27.8 -0.3
MMB	Musomiste	36.66	293	*i* P	P	05 54 27.8 -0.3
SRS	Serrai	36.83	292	P	P	05 54 29.6 +0.1
DEV	Deva	36.87	300	⇓P	P	05 54 31.2 +1.4
DEV	Deva	36.87	300⇓	*i*P	P	05 54 31.2 +1.4
VTS	Vitosha	36.92	295⇑	*i*P	P	05 54 30.7 +0.5
VTS	Vitosha	36.92	295	*i* P	P	05 54 30.7 +0.5
VTS	Vitosha	36.92	295	*i* P	P	05 54 30.7 +0.5
AOS	Alonnisos	36.94	289	P	P	05 54 30.3 -0.2
TIA	Tai'an	36.95	76	⇑P	P	05 54 31.8 +1.2
TIA				S	S	06 00 02.6 +1.4
TIA				pmax	pmax	
	comp=Z,190nm,1.3s,mb5.5					
TIA				pmax	pmax	
	comp=Z,1μm,4.5s					
TIA				LR	LR	
	comp=N,1μm,14.3s					
TIA				LR	LR	
	comp=E,3μm,14.3s					
TIA				LR	LR	
	comp=Z,790nm,13.1s					
PAIG	Paliouri	36.95	290	P	P	05 54 30.7 +0.1
DRGR		36.97	302	⇓*i*P	P	05 54 31.5 +0.9
GZR	Gura Zlata	36.98	299	P	P	05 54 31.0 +0.3
GZR	Gura Zlata	36.98	299	⇓*i*P	P	05 54 31.2 +0.5
KWP	Kalwaria Pacla	36.99	306	*e*P	P	05 54 31.9 +1.2
KWP				*e*PP	PP	05 55 59.9 +0.9
KWP				*e*S	S	06 00 03.4 +1.9
KWP				LMZ		06 12 49.9
	comp=Z,2μm,19.8s					
KWP	Kalwaria Pacla	36.99	306	*e*P	P	05 54 32.0 +1.3
KWP				pmax	pmax	
	comp=Z,509nm,0.9s,mb6.0					
KWP	Kalwaria Pacla	36.99	306	*e*P	P	05 54 31.9 +1.2
	comp=Z,509nm,0.9s,mb6.0					
KWP	Kalwaria Pacla	36.99	306⇑	*i*P	P	05 54 31.8 +1.1
SOH	Sokhos	37.05	292	P	P	05 54 31.8 +0.4
PLG	Polygyros	37.06	291	*e*P	P	05 54 31.9 +0.5
PLG	Polygyros	37.06	291	P	P	05 54 31.8 +0.4
TRPA	Tarpa	37.07	304⇑	*i*P	P	05 54 32.1 +0.7
KKB	Krupnik	37.10	293	*i* P	P	05 54 31.6 -0.2
KKB	Krupnik	37.10	293	*i* P	P	05 54 31.6 -0.2
SUW	Suwalki	37.10	314	*e*P	P	05 54 31.7 +0.1
SUW				*e*pP	pP	05 55 13.1 +1.2
SUW				*e*PP	PP	05 55 58.9 -1.3
SUW				*e*S	S	06 00 03.3 +0.2
SUW				LMZ		06 12 59.3
	comp=Z,2μm,18.7s					
SUW	Suwalki	37.10	314	*e*P	P	05 54 31.4 -0.2
	comp=Z,376nm,0.8s,mb6.0					
SUW				*e*pP	pP	05 55 12.9 +0.9
UZH	Uzhgorod	37.23	305⇑	*e*P	P	05 54 33.5 +0.7
UZH				*e*	pP	05 55 13.4 +0.3
UZH				*e*		05 55 59.0
UZH				*i* S	S	06 00 06.2 +1.0
UZH				*e*		06 02 52.5
UZH				MLR	MLR	
	comp=N,1μm,13.5s					
UZH				MLR	MLR	
	comp=E,900nm,13.5s					
UZH				MLR	MLR	
	comp=Z,570nm,13.5s					
UZ

FINES FINESS Array B 37.49 326 P **P** **05 54 34.6 -0.2**
comp=Z,260nm,0.7s,mb5.8,baz=117,slow=8.1,SNR=620
FINES pP pP 05 55 15.2 +0.1
comp=Z,70nm,0.6s,baz=110,slow=10,SNR=3.3
FINES PP PP 05 55 59.0 -5.3
comp=Z,142nm,0.9s,baz=105,slow=11,SNR=3.4
FINES LR LR 06 11 14.8
comp=Z,2μm,18.1s,baz=76,slow=38
FINES P3KPbc 06 24 49.3
comp=Z,1.2nm,0.8s,baz=359,slow=5.6,SNR=3.4
FINES FINESS Array B 37.49 326 P **P** **05 54 34.6 -0.2**
FINES *PP pP 05 55 15.2 +0.1
FINES pmax pmax
comp=Z,260nm,0.7s
FINES MLR MLR
comp=Z,2μm,18.1s
FINES FINESS Array B 37.49 326 P **P** **05 54 34.6 -0.2**
FINES pP pP 05 55 15.2 +0.1
FINES PP PP 05 55 59.0 -5.4
FINES LR LR 06 11 14.8
FINES *e* 06 24 49.3
VAM Vamos 37.56 283 *e*P **P** **05 54 35.4 -0.3**
VAY Valandovo 37.56 293 ⇓*i*P **P** **05 54 35.5 -0.2**
KAF Kangasniemi 37.63 327 *e*P **P** **05 54 34.1 -1.9**
KAF pmax pmax
comp=Z,172nm,0.9s,mb5.6
APA Apatity 37.66 338 ⇑*i*P **P** **05 54 35.6 -0.5**
APA *i* *PP pP 05 55 16.0 -0.5
APA *i* 05 56 05.0
APA *i* S **S** **06 00 12.0 +0.8**
APA *e*SS sS 06 01 22.0 -0.4
APA *i* SS ScS 06 04 24.0 -2.9
APA pmax pmax
comp=Z,270nm,1.0s,mb5.7
APA pmax pmax
comp=Z,900nm,5.0s
APA MLR MLR
comp=Z,7μm,10.0s
ATAL Atalanti 37.69 288 P **P** **05 54 36.2 -0.6**
LKR Lokris 37.72 288 P **P** **05 54 36.1 -0.9**
GRG Griva 37.74 292 P **P** **05 54 37.3 +0.1**
KARN Karanos 37.78 283 P **P** **05 54 37.3 -0.3**
BZS Buzias 37.78 300 ⇑P **P** **05 54 37.9 +0.5**
BZS Buzias 37.78 300 ⇑*i*P **P** **05 54 37.9 +0.5**
DID Didima 37.78 286 P **P** **05 54 34.9 -2.7**
CRVS Cervenica-Dubn 37.79 305 *e*P **P** **05 54 37.9 +0.5**
CRVS *e* 05 56 07.4
CRVS *e*S **S** **06 00 15.9 +2.4**
CRVS *e*SS SS 06 03 03.8 -3.9
CRVS pmax pmax
comp=Z,51nm,1.5s,mb4.8
CRVS Cervenica-Dubn 37.79 305 *e*P **P** **05 54 37.9 +0.5**
comp=Z,50nm,1.5s,mb4.8
CRVS *e* 05 54 57.4
CRVS *e*PP PP 05 56 07.4 -0.4
CRVS *e*S **S** **06 00 15.9 +2.4**
CRVS *e*SS SS 06 03 03.8 -3.9
CRVS Cervenica-Dubn 37.79 305 *e*P **P** **05 54 37.9 +0.5**
CRVS *e* 05 54 57.4
CRVS *e*PP PP 05 56 07.4 -0.4
CRVS *e*S **S** **06 00 15.9 +2.4**
CRVS *e*SS SS 06 03 03.8 -3.9
LIT Litokhoron 37.82 291 P **P** **05 54 37.3 -0.6**
LTK Loutraki 37.88 287 P **P** **05 54 36.8 -1.5**
BARS Barje 37.91 295 P **P** **05 54 37.8 -0.7**
DSF Desfina 38.13 288 P **P** **05 54 40.2 -0.3**
WAR Warsaw 38.20 310 *e*P **P** **05 54 41.7 +0.9**
WAR *e*PP PP 05 56 12.6 +0.4
WAR *e*S **S** **06 00 21.5 +1.8**
WAR LMZ 06 12 28.1
comp=Z,1μm,20.7s
WAR Warsaw 38.20 310 P **P** **05 54 43.3 +2.5**
VLI Veliai 38.21 285 *e*P **P** **05 54 39.2 -1.9**
KYTH Kithira 38.24 284 *e*P **P** **05 54 41.3 -0.1**
QIZ Qiongzhong 38.27 106 P **P** **05 54 42.4 +0.6**
QIZ pP pP 05 55 21.7 -0.6
QIZ sP sP 05 55 43.8 -0.3
QIZ PP PP 05 56 14.7 +1.2
QIZ S **S** **06 00 21.4 0.0**
QIZ sS sS 06 01 32.4 -0.4
QIZ pmax pmax
comp=Z,97nm,1.2s,mb5.2
QIZ pmax pmax
comp=Z,1μm,6.3s
QIZ Qiongzhong 38.27 106 *e*P **P** **05 54 42.0 +0.2**
comp=Z,87nm,0.8s,mb5.3
THL Klokotos Trika 38.28 290 *e*P **P** **05 54 41.5 -0.2**
THL Klokotos Trika 38.28 290 P **P** **05 54 40.7 -1.0**
KZN Kozani 38.33 291 P **P** **05 54 42.3 +0.2**
GUR Goura 38.38 287 P **P** **05 54 41.2 -1.3**
KALE Kalithea 38.43 288 P **P** **05 54 42.1 -0.9**
KECS Kecovo 38.44 304 *e*P **P** **05 54 43.5 +0.6**
KECS pmax pmax
comp=Z,34nm,0.8s,mb4.9
KECS Kecovo 38.44 304 *e*P **P** **05 54 43.5 +0.6**
comp=Z,34nm,0.8s,mb4.9
KECS *e*PP PP 05 56 13.2 -1.6
KECS Kecovo 38.44 304 *e*P **P** **05 54 43.5 +0.6**
KECS *e*pP pP 05 55 22.8 -0.6
KECS *e*PP PP 05 56 13.2 -1.6
VLX Vlachokerasia 38.48 286 P **P** **05 54 41.5 -1.9**
TRIZ Trizonia 38.49 288 P **P** **05 54 42.4 -1.0**
KRUS Krusevo 38.54 293 ⇓*i*P **P** **05 54 43.3 -0.5**
FNA Florina 38.54 292 P **P** **05 54 43.5 -0.3**
NIE Niedzica 38.54 306 *e*P **P** **05 54 44.9 +1.2**
NIE *e*PP PP 05 56 20.0 +4.0
NIE Niedzica 38.54 306 P **P** **05 54 45.0 +1.3**
GRUS Gruza 38.58 297 P **P** **05 54 44.6 +0.5**
LAKA Lakka 38.59 288 P **P** **05 54 43.9 -0.4**
EFP Efpalio 38.60 288 P **P** **05 54 43.1 -1.3**
PSZ Piszkesteto 38.85 304 P **P** **05 54 47.5 +1.2**
PSZ Piszkesteto 38.85 304 *e*P **P** **05 54 47.0 +0.7**
comp=Z,92nm,1.0s,mb5.3
PSZ Piszkesteto 38.85 304 ⇓*i*P **P** **05 54 46.9 +0.6**
PSZ Piszkesteto 38.85 304 ⇑*e*P **P** **05 54 47.2 +0.9**
PSZ *e*pP pP 05 55 28.0 +1.1
PSZ *e*PP PP 05 56 24.1 +4.8
NEST Nestorio 38.85 291 P **P** **05 54 45.9 -0.5**
GZH Guangzhou 38.86 98 P **P** **05 54 47.4 +0.7**
GZH S **S** **06 00 31.8 +1.6**
GZH LR LR
comp=N,880nm,11.2s
GZH LR LR
comp=E,820nm,10.6s
ITM Ithomi 38.88 286 *e*P **P** **05 54 45.1 -1.6**
OJC Ojcow 38.88 307 *e*P **P** **05 54 46.5 0.0**
OJC *e*PP PP 05 56 21.7 +2.1
OJC *e*S **S** **06 00 32.0 +2.1**
OJC L 06 14 17.7
comp=E,1.0nm,18.4s
OJC Ojcow 38.88 307 *e*P **P** **05 54 46.7 +0.1**
comp=E,11nm,1.0s
KBN Korca 39.01 292 *e*P **P** **05 54 50.9 +3.2**
RLS Riolos of Patr 39.02 288 *e*P **P** **05 54 47.9 0.0**
DIVS Divibare 39.07 297 P **P** **05 54 48.5 +0.3**
FRGS Fruska Gora 39.09 299 P **P** **05 54 49.1 +0.8**
PYL PYLOS 39.09 286 P **P** **05 54 46.1 -2.4**
BCI Bajram Curri 39.25 295 *e*P **P** **05 54 49.6 -0.1**
PVY Plav 39.28 295 ⇓*i*P **P** **05 54 49.6 -0.4**
PVY Plav 39.28 295 ⇓*i*P **P** **05 54 49.7 -0.3**
IVA Berane 39.30 296 ⇓*i*P **P** **05 54 49.9 -0.2**
IVA Berane 39.30 296 P **P** **05 54 51.0 +0.9**
LIKS Likavka 39.34 305 *e*P **P** **05 54 50.8 +0.5**
LIKS pmax pmax
comp=Z,77nm,0.8s,mb5.3
LIKS Likavka 39.34 305 *e*P **P** **05 54 50.8 +0.5**
comp=Z,76nm,0.8s,mb5.3
LIKS Likavka 39.34 305 *e*P **P** **05 54 50.8 +0.5**
PUK Puka 39.43 294 *e*P **P** **05 54 47.8 -3.4**
BUD Budapest 39.45 303 ⇓*e*sP sP 05 55 52.6 -1.2
BBLS Lazići 39.52 297 P **P** **05 54 52.8 +0.9**
KFL Anninata 39.53 288 P **P** **05 54 50.8 -1.3**
VYHS Vyhne 39.53 304 *e*P **P** **05 54 52.8 +0.8**
VYHS *e* pP 05 55 32.7 0.0
VYHS *e* 05 56 25.9
VYHS *e*S **S** **06 00 39.4 -0.3**
VYHS *e*SS sS 06 01 51.1 -0.3
VYHS *e*SS SS 06 03 40.4 -2.0
VYHS Vyhne 39.53 304 *e*P **P** **05 54 52.8 +0.8**
comp=Z,88nm,1.3s,mb5.0
VYHS *e*PP pP 05 55 32.7 0.0
VYHS *e*PP PP 05 56 25.9 -0.8
VYHS *e* 06 00 24.8
VYHS *e*S **S** **06 00 39.4 -0.3**
VYHS *e*SS sS 06 01 51.1 -0.3
VYHS *e*SS SS 06 03 40.4 -2.0
VYHS Vyhne 39.53 304 *e*P **P** **05 54 52.8 +0.8**
VYHS *e* 05 55 10.1
VYHS *e*pP pP 05 55 32.7 0.0
VYHS *e*PP PP 05 56 25.9 -0.8
VYHS *e*SCP ScP 06 00 24.8 -0.9
VYHS *e*S **S** **06 00 39.4 -0.3**
VYHS *e*sS sS 06 01 51.1 -0.3
VYHS *e*SS SS 06 03 40.4 -2.0
NJ2 Nanjing 39.55 82 *e*P **P** **05 54 53.6 +1.3**
NJ2 pP pP 05 55 31.1 -1.9
NJ2 sP sP 05 55 51.1 -3.7
NJ2 PP PP 05 56 31.7 +4.5
NJ2 S **S** **06 00 42.0 +1.6**
NJ2 sS sS 06 01 49.0 -3.1
NJ2 pmax pmax
comp=Z,440nm,0.8s,mb5.9
NJ2 pmax pmax
comp=Z,170nm,6.0s
NJ2 LR LR
comp=N,990nm,16.4s
NJ2 LR LR
comp=E,1μm,17.1s
NJ2 LR LR
comp=Z,790nm,15.0s
PLE Pljevlja 39.60 296 ⇓*i*P **P** **05 54 53.1 +0.5**
PLE Pljevlja 39.60 296 P **P** **05 54 54.0 +1.4**
VLS Valsamata 39.67 288 *e*P **P** **05 54 52.0 -1.2**
VLS Valsamata 39.67 288 P **P** **05 54 51.4 -1.8**
SRN Sarande 39.74 291 *e*P **P** **05 54 52.8 -1.0**
SNG Songkhla 39.79 130 P **P** **05 54 55.0 +0.5**
comp=Z,2μm,1.1s,mb6.5
DL2 Dalian 39.79 71 P **P** **05 54 55.4 +1.1**
DL2 pP pP 05 55 37.5 +2.5
DL2 sP sP 05 55 54.8 -2.0
DL2 S **S** **06 00 47.0 +3.1**
DL2 sS sS 06 01 52.2 -3.4
DL2 pmax pmax
comp=Z,160nm,0.7s,mb5.6
DL2 pmax pmax
comp=Z,400nm,4.7s
PKSM Moragy 39.81 301 ⇑*i*P **P** **05 54 54.3 +0.1**
KOLL Kolacno 39.82 305 *e*P **P** **05 54 54.6 +0.3**
KOLL *e* pP 05 55 36.2 +1.1
KOLL Kolacno 39.82 305 *e*P **P** **05 54 54.6 +0.3**
KOLL *e* 06 00 26.6
KOLL Kolacno 39.82 305 *e*P **P** **05 54 54.6 +0.3**
KOLL *e*pP pP 05 55 36.2 +1.1
KOLL *e*SCP ScP 06 00 26.6 -0.2
TTG Podgorica 39.83 295 *e*P **P** **05 54 52.9 -1.6**
TTG Podgorica 39.83 295 P **P** **05 54 55.7 +1.2**
ULC Ulcinj 39.91 294 ⇓*i*P **P** **05 54 53.9 -1.3**
ULC Ulcinj 39.91 294 P **P** **05 54 54.0 -1.2**
KEK Kerkira 39.93 291 P **P** **05 54 52.4 -3.0**
OKC Ostrava-Krasne 39.95 307 *e*P **P** **05 54 56.1 +0.7**
OKC *e**PP pP 05 55 38.6 +2.5
OKC *e* 05 56 50.3
OKC *e*S **S** **06 00 49.7 +3.9**
OKC *e*SS SS 06 03 51.2 +0.7
OKC Ostrava-Krasne 39.95 307 *e*P **P** **05 54 56.1 +0.7**
OKC *e*pP pP 05 55 38.6 +2.5
OKC *e*x x 05 56 50.3
OKC *e*S **S** **06 00 49.7 +3.9**
OKC *e*SS SS 06 03 51.2 +0.7
NKY Niksic 39.96 296 ⇓*i*P **P** **05 54 53.9 -1.7**
NKY Niksic 39.96 296 ⇓*i*P **P** **05 54 53.9 -1.7**
UPM Unac-Piva 39.97 296 ⇓*i*P **P** **05 54 55.4 -0.2**
UPM Unac-Piva 39.97 296 P **P** **05 54 57.0 +1.4**
FURI Furi 40.11 235 *e*P **P** **05 55 00.8 +3.7**
comp=Z,11nm,0.8s
BUM Brajici-Budva 40.12 295 ⇓*i*P **P** **05 54 56.2 -0.6**
BUM Brajici-Budva 40.12 295 P **P** **05 54 56.0 -0.8**
BRY Bratogost 40.28 296 ⇓*i*P **P** **05 54 58.1 -0.1**
BRY Bratogost 40.28 296 P **P** **05 54 58.0 -0.2**
MORC Moravsky Berou 40.34 307 *e*P **P** **05 54 58.9 +0.3**
MORC pmax pmax
comp=Z,214nm,1.0s,mb5.5
MORC Moravsky Berou 40.34 307 *e*P **P** **05 54 58.9 +0.3**
comp=Z,214nm,1.0s,mb5.5
MORC Moravsky Berou 40.34 307 ⇑*i*P **P** **05 54 58.3 -0.3**
HCY Herceg Novi 40.38 295 ⇓*i*P **P** **05 54 58.5 -0.5**
HCY Herceg Novi 40.38 295 ⇓*i*P **P** **05 54 58.6 -0.5**
GKP Gorka Klasztor 40.56 312 *e*P **P** **05 55 00.8 +0.6**
GKP *e*pP pP 05 55 41.3 +0.1
GKP *e*S **S** **06 00 56.1 +1.3**
GKP LMZ 06 13 57.1
comp=Z,2μm,17.9s
GKP Gorka Klasztor 40.56 312 *e*P **P** **05 55 00.8 +0.5**
GKP *e**PP pP 05 55 41.3 +0.1
GKP *e*S **S** **06 00 56.1 +1.3**
GKP MLR MLR
comp=Z,2μm,17.9s
MODS Modra-Piesok 40.58 304 *e*P **P** **05 55 02.1 +1.6**
MODS *e* 05 56 38.6
MODS Modra-Piesok 40.58 304 *e*P **P** **05 55 02.1 +1.6**
MODS *e*PP PP 05 56 38.6 +0.6
SNY Shenyang 40.67 66 ⇑P **P** **05 55 01.5 +0.1**
SNY pP pP 05 55 43.7 +1.4
SNY PP PP 05 56 40.9 +1.8
SNY sS sS 06 02 09.8 +1.1
SNY pmax pmax
comp=Z,150nm,0.8s,mb5.5
SNY pmax pmax
comp=Z,330nm,5.1s
SNY LR LR
comp=N,1μm,12.5s
SNY LR LR
comp=E,1μm,12.4s
SNY LR LR
comp=Z,1μm,12.2s
ZST Bratislava 40.70 304 *e*P **P** **05 55 02.5 +0.9**
ZST pmax pmax
comp=Z,35nm,0.9s,mb4.8
ZST Bratislava 40.70 304 *e*P **P** **05 55 02.5 +0.9**
comp=Z,34nm,0.9s,mb4.8
ZST *e*PP PP 05 56 38.3 -1.0
ZST *e* 06 00 29.9
ZST *e*SS SS 06 04 10.4 +4.9
ZST Bratislava 40.70 304 *e*P **P** **05 55 02.5 +0.9**
ZST *e*pP pP 05 55 41.1 -1.4
ZST *e*PP PP 05 56 38.3 -1.0
ZST *e*SCP ScP 06 00 29.9 -0.4
ZST *e*SS SS 06 04 10.4 +4.9
KEV Kevo 40.83 338 *e*P **P** **05 55 02.1 -0.2**
KEV *e**PP pP 05 55 42.5 -0.7
KEV pmax pmax
comp=Z,434nm,1.0s,mb5.8
KEV Kevo 40.83 338 *e*P **P** **05 55 02.1 -0.2**
comp=Z,434nm,1.0s,mb5.8
KEV *e*pP pP 05 55 42.5 -0.7
STON Ston 40.90 296 P **P** **05 55 01.3 -2.0**
VRAC Vranov 40.98 306 ⇑P **P** **05 55 04.5 +0.7**
VRAC Vranov 40.98 306 ⇑*i*P **P** **05 55 04.5 +0.7**
BLY Banja Luka 40.99 299 P **P** **05 55 05.0 +1.1**
CLNS Chul'man 40.99 43 *e*P **P** **05 55 04.4 +0.6**
CLNS *e**PP pP 05 55 46.2 +1.4
CLNS *e* 05 56 36.5
CLNS *e* 05 56 59.8
CLNS *e*S **S** **06 01 02.7 +1.6**
CLNS *e* 06 04 46.2
CLNS pmax pmax
comp=Z,88nm,1.1s,mb5.1
CLNS pmax pmax
comp=E,72nm,1.3s
CLNS pmax pmax
comp=N,24nm,1.3s
CLNS pmax pmax
comp=E,62nm,1.2s
CLNS pmax pmax
comp=Z,67nm,1.4s,mb4.9
CLNS pmax pmax
comp=N,97nm,1.3s
CLNS smax
comp=N,744nm,12.4s
CLNS smax
comp=E,308nm,11.4s
SOP Sopron 41.10 303 ⇓*e*P **P** **05 55 05.6 +0.7**
SOP *e*pP pP 05 55 47.8 +2.0
SOP *e*PP PP 05 56 45.5 +1.8
DPC Dobruska-Polom 41.11 307 *e*P **P** **05 55 04.7 -0.2**
DPC pmax pmax
comp=Z,44nm,0.7s,mb5.0
DPC Dobruska-Polom 41.11 307 *e*P **P** **05 55 04.7 -0.1**
comp=Z,44nm,0.7s,mb5.0
DPC Dobruska-Polom 41.11 307 *e*P **P** **05 55 05.7 +0.8**
DPC *e*pP pP 05 55 47.0 +1.1
DPC *e*PP PP 05 56 50.1 +6.4
DPC *e*S **S** **06 01 06.6 +3.6**
DPC *e*SS SS 06 04 13.0 -0.4
KSP Ksiaz 41.12 308 *e*P **P** **05 55 05.7 +0.8**
KSP *e*S **S** **06 01 05.7 +2.6**
KSP LMZ 06 15 36.6
comp=Z,2μm,19.0s
ARCES ARCESS Array B 41.17 338 P **P** **05 55 05.3 +0.3**
comp=Z,584nm,0.8s,mb6.0,baz=115,slow=10.0,SNR=692
ARCES pP pP 05 55 46.0 -0.1
comp=Z,409nm,0.8s,baz=96,slow=8.3,SNR=8.6
ARCES LR LR 06 13 33.3
comp=Z,4μm,20.6s,baz=3.9,slow=38
ARCES ARCESS Array B 41.17 338 P **P** **05 55 05.3 +0.2**
ARCES *PP pP 05 55 46.0 -0.1
ARCES pmax pmax
comp=Z,584nm,0.8s
ARCES MLR MLR
comp=Z,4μm,20.6s
ARCES ARCESS Array B 41.17 338 P **P** **05 55 05.3 +0.3**
ARCES pP pP 05 55 46.0 -0.1
ARCES LR LR 06 13 33.3
ARE0 ARCESS Array S 41.17 338 *e*P **P** **05 55 05.6 +0.6**
ARE0 *e*pP pP 05 55 45.7 -0.3
KULM Kulim 41.29 132 P **P** **05 55 07.7 +1.0**
KULM Kulim 41.29 132 *e*P **P** **05 55 07.4 +0.6**
comp=Z,260nm,0.9s,mb5.7
KULM *e*pP pP 05 55 48.3 +0.5
KULM Kulim 41.29 132 P **P** **05 55 07.6 +0.9**
comp=Z,4μmcomp=Z,305nm,1.0s,mb5.7
KULM Kulim 41.29 132 P **P** **05 55 07.6 +0.9**
comp=Z,4μmcomp=Z,305nm,1.0s,mb5.7
UPC Upice 41.30 308 *e*P **P** **05 55 07.1 +0.7**
UPC *e**PP pP 05 55 47.1 -0.4
UPC Upice 41.30 308 *e*P **P** **05 55 07.1 +0.7**
UPC *e*pP pP 05 55 47.1 -0.4
KOGS Kog 41.43 302 P **P** **05 55 07.9 +0.4**
SISC Sisak 41.46 300 P **P** **05 55 07.3 -0.5**
TSI Tuntungan 41.51 136 P **P** **05 55 09.7 +1.1**
TSI Tuntungan 41.51 136 P **P** **05 55 09.7 +1.1**
CONA Conrad Observa 41.55 304 *i* P **P** **05 55 09.0 +0.5**
comp=Z,298nm,1.0s,mb5.7,SNR=117
KTK1 Kautokeino 41.64 336 *e*P **P** **05 55 08.9 0.0**
KTK1 *e*S **S** **06 01 09.4 -0.9**
KTK1 *e*SS SS 06 04 26.4 +3.3
CN2 Changchun 41.69 62 ⇑P **P** **05 55 09.7 0.0**
CN2 *e*sP sP 05 56 08.8 -3.7
CN2 *e*PP PP 05 56 49.9 -0.1
CN2 *e*S **S** **06 01 11.5 -0.3**
CN2 pmax pmax
comp=Z,50nm,1.1s,mb4.9
CN2 pmax pmax
comp=Z,500nm,7.0s
TREC Trest 41.70 306 *e*P **P** **05 55 10.5 +0.8**
TREC *e**PP pP 05 55 53.0 +2.2
TREC *e* 05 56 51.1
TREC *e*S **S** **06 01 16.2 +4.5**
TREC Trest 41.70 306 *e*P **P** **05 55 10.5 +0.8**
TREC *e*pP pP 05 55 53.0 +2.2
TREC *e*PP PP 05 56 51.1 +1.1
TREC *e*S **S** **06 01 16.2 +4.5**
TREC *e*SS SS 06 04 34.3 +9.4
SSE Sheshan 41.75 82 P **P** **05 55 11.0 +0.7**
SSE sP sP 05 56 12.5 -0.6
SSE PcP PcP 05 57 02.9 0.0
SSE S **S** **06 01 14.2 +1.3**
SSE sS sS 06 02 23.3 -1.8
SSE pmax pmax
comp=Z,310nm,0.9s,mb5.7
SSE pmax pmax
comp=Z,810nm,4.5s
SSE LR LR
comp=N,1μm,18.1s
SSE LR LR
comp=E,1μm,18.2s
SSE LR LR
comp=Z,680nm,15.5s
ARSA Arzberg 41.84 303 P **P** **05 55 11.0 +0.1**
ARSA Arzberg 41.84 303 ⇑*i*P **P** **05 55 11.0 +0.2**
comp=Z,80nm,1.1s,mb5.1,SNR=33
BSD Bornholm Skovb 42.00 315 ⇓*i*P **P** **05 55 11.2 -0.8**
BSD *i* *PP pP 05 55 51.0 -2.1
BSD *i* S **S** **06 01 15.4 -0.6**
BSD pmax pmax
comp=Z,280nm,0.9s,mb5.7
BSD MLR MLR
comp=Z,2μm,18.0s
BSD Bornholm Skovb 42.00 315 ⇓*i*P **P** **05 55 11.2 -0.8**
comp=Z,275nm,0.9s,mb5.7
BSD *i* S **S** **06 01 15.4 -0.6**
BSD
comp=Z,2μm,18.0s
DOBS Dobrina 42.00 301 *i* P **P** **05 55 12.4 +0.2**
DOBS *e* 06 00 34.0
DOBS Dobrina 42.00 301 *i* P **P** **05 55 12.4 +0.2**
DOBS *e* 06 00 34.0
IPM Ipoh 42.16 132 P **P** **05 55 14.8 +1.0**
IPM Ipoh 42.16 132 *e*P **P** **05 55 14.1 +0.4**
comp=Z,1μm,0.8s,mb6.3
IPM Ipoh 42.16 132 P **P** **05 55 14.5 +0.7**
comp=Z,10μmcomp=Z,1μm,0.8s,mb6.4
PERS Pernice 42.19 302 *i* P **P** **05 55 14.0 +0.4**
PERS *i* pP pP 05 55 55.6 +0.8
PERS *e*S **S** **06 01 19.5 +0.5**
PERS *e*SS SS 06 04 39.4 +4.8
PERS Pernice 42.19 302 *i* P **P** **05 55 14.0 +0.4**
PERS *i* pP pP 05 55 55.6 +0.8
PERS *e*S **S** **06 01 19.5 +0.5**
PERS *e*SS SS 06 04 39.4 +4.8
QZH Quanzhou 42.19 92 ⇑*i*P **P** **05 55 13.5 -0.5**
QZH pP pP 05 55 54.5 -0.6
QZH sP sP 05 56 16.1 -0.7
QZH S **S** **06 01 16.3 -3.2**
QZH pmax pmax
comp=Z,270nm,0.7s,mb5.8
QZH pmax pmax
comp=Z,2μm,3.4s
QZH LR LR
comp=N,2μm,8.0s
QZH LR LR
comp=E,3μm,10.7s
QZH LR LR
comp=Z,2μm,12.0s
PVCC Panska Ves 42.22 308 *e*P **P** **05 55 14.8 +0.9**
PVCC *e**PP pP 05 55 58.2 +3.1
PVCC *e* 05 56 55.5
PVCC *e*S **S** **06 01 23.0 +3.6**
PVCC Panska Ves 42.22 308 *e*P **P** **05 55 14.8 +0.9**
PVCC *e*pP pP 05 55 58.2 +3.1
PVCC *e*PP PP 05 56 55.5 -0.1
PVCC *e*S **S** **06 01 23.0 +3.6**
PVCC *e*SS SS 06 04 42.9 +7.8
BOJS Bojanci 42.24 300 *i* P **P** **05 55 14.3 +0.2**
BOJS *i* pP pP 05 55 55.7 +0.4
BOJS *e*PP PP 05 56 58.6 +2.7
BOJS *e*PcP PcP 05 57 01.8 -2.5
BOJS *i* 06 00 35.3
BOJS *e*S **S** **06 01 19.0 -0.7**
BOJS *e*SS SS 06 04 40.3 +4.7
BOJS Bojanci 42.24 300 *i* P **P** **05 55 14.3 +0.2**
BOJS *i* pP pP 05 55 55.7 +0.4
BOJS *e*PP PP 05 56 58.6 +2.7
BOJS *e*PcP PcP 05 57 01.8 -2.5
BOJS *i* ScP ScP 06 00 35.3 -1.2
BOJS *e*S **S** **06 01 19.0 -0.7**
BOJS *e*SS SS 06 04 40.3 +4.7
SOKA Soboth 42.24 302 ⇑*i*P **P** **05 55 14.5 +0.4**
comp=Z,233nm,1.1s,mb5.5
PRU Pruhonice 42.27 307 *e*P **P** **05 55 15.9 +1.6**
PRU *e**PP pP 05 55 56.8 +1.3
PRU *e* 05 56 57.2
PRU *e*S **S** **06 01 24.5 +4.4**
PRU Pruhonice 42.27 307 *e*P **P** **05 55 15.9 +1.6**
PRU *e*pP pP 05 55 56.8 +1.3

PRU *e*PP PP 05 56 57.2 +1.1
PRU *e*S **S** **06 01 24.5 +4.4**
PRU *e*SS SS 06 04 44.2 +8.2
PRA Prague 42.34 307 ⇑P **P** **05 55 16.0 +1.2**
PRA pP PP 05 56 40.0 -17
PRA PP PP 05 56 56.0 -0.8
PRA S **S** **06 01 25.0 +4.0**
MSAG Monte S. Angel 42.41 295 P **P** **05 55 15.3 -0.3**
SGRT San Giovanni R 42.53 295 P **P** **05 55 16.2 -0.3**
ACER Acerenza 42.58 293 P **P** **05 55 17.1 +0.2**
OBKA Obir 42.59 302 P **P** **05 55 17.6 +0.7**
OBKA Obir 42.59 302 ⇑*i*P **P** **05 55 17.5 +0.6**
comp=Z,110nm,1.1s,mb5.2,SNR=23
BRG Berggiesshubel 42.60 308 *e*P **P** **05 55 17.4 +0.5**
comp=Z,317nm,1.0s,mb5.7
BRG *e*pP pP 05 55 58.2 0.0
BRG Berggiesshubel 42.60 308 ⇑*i*P **P** **05 55 17.3 +0.4**
comp=Z,317nm,1.0s,mb5.7
BRG pP pP 05 55 54.3 -3.9
comp=Z,73nm,1.0s
BRG *e* pP 05 55 58.3 +0.1
comp=Z,143nm,1.0s
BRG *e* 05 56 22.4
comp=Z,119nm,1.1s
BRG PP PP 05 56 55.5 -4.1
comp=Z,145nm,1.1s
BRG pPP 05 57 34.3
comp=Z,187nm,1.4s
BRG SCP ScP 06 00 37.0 -0.9
comp=Z,89nm,1.2s
BRG S **S** **06 01 31.0 +6.1**
BRG sS sS 06 02 38.0 +0.6
BRG SS SS 06 04 38.0 -4.4
BRG
comp=Z,1µm,15.5s
BRG
comp=N,758nm,14.4s
BRG
comp=E,830nm,14.4s
MOA Molln 42.63 304 P **P** **05 55 17.2 0.0**
MOA Molln 42.63 304 *i* P **P** **05 55 17.2 0.0**
comp=E,185nm,1.2s,mb5.4,SNR=64
RUE Ruedersdorf 42.65 311 *e*P **P** **05 55 17.1 -0.1**
comp=Z,269nm,0.9s,mb5.7
RUE *e*pP pP 05 55 58.9 +0.4
RUE Ruedersdorf 42.65 311 *e*P **P** **05 55 17.4 +0.2**
comp=Z,460nm,1.1s,mb5.8
RUE *e*pP pP 05 55 59.1 +0.6
NVLJ Novalja 42.65 299 P **P** **05 55 16.4 -1.0**
RGNG Rignano Grg 42.66 295 P **P** **05 55 17.4 -0.1**
LJU Ljubljana 42.67 301 *i* P **P** **05 55 18.1 +0.6**
LJU *i* *PP pP 05 56 00.1 +1.3
LJU *e**SP sP 05 56 21.7 +1.2
LJU *e* 05 57 02.0
LJU *e*S **S** **06 01 27.7 +1.7**
LJU *e**SS sS 06 02 41.9 +3.4
LJU *e*SS SS 06 04 48.6 +4.7
LJU Ljubljana 42.67 301 *i* P **P** **05 55 18.1 +0.6**
LJU *i* 05 55 36.9
LJU *i* pP pP 05 56 00.1 +1.3
LJU *e*sP sP 05 56 21.7 +1.2
LJU *e*PcP PcP 05 57 02.0 -3.7
LJU *i* 06 00 37.0
LJU *e*S **S** **06 01 27.7 +1.7**
LJU *e*sS sS 06 02 41.9 +3.5
LJU *e*SS SS 06 04 48.6 +4.7
LJU Ljubljana 42.67 301 *i* P **P** **05 55 18.1 +0.6**
LJU *i* 05 55 36.9
LJU *i* pP pP 05 56 00.1 +1.3
LJU *e*sP sP 05 56 21.7 +1.2
LJU *e*PcP PcP 05 57 02.0 -3.7
LJU *i* ScP ScP 06 00 37.0 -1.2
LJU *e*S **S** **06 01 27.7 +1.7**
LJU *e*sS sS 06 02 41.9 +3.5
LJU *e*SS SS 06 04 48.6 +4.7
CEY Cerknica 42.78 301 P **P** **05 55 19.0 +0.6**
KTGM Kuala Trenggan 42.79 129 P **P** **05 55 20.4 +1.5**
CUC Castrocucco 42.86 292 *e*P **P** **05 55 19.3 +0.1**
comp=Z,113nm,0.9s,mb5.3
CUC *e*pP pP 05 56 01.6 +1.2
GEC2 GERESS Array S 42.91 305 *e*P **P** **05 55 19.7 +0.3**
comp=Z,77nm,1.1s,mb5.0
GEC2 *e*pP pP 05 56 02.6 +1.9
GEC2 *e*sP sP 05 56 21.9 -0.5
GEC2 GERESS Array S 42.91 305 *e*P **P** **05 55 19.7 +0.3**
GEC2 *e**PP pP 05 56 02.6 +1.9
GEC2 *e**SP sP 05 56 21.9 -0.5
GEC2 pmax pmax
comp=Z,77nm,1.1s,mb5.0
RGN Rugen 42.91 314 *e*P **P** **05 55 19.9 +0.6**
comp=Z,1µm,1.0s,mb6.2
RGN *e*pP pP 05 56 01.2 +0.6
RGN Rugen 42.91 314 *e*P **P** **05 55 20.0 +0.7**
comp=Z,2µm,1.1s,mb6.4
RGN *e*pP pP 05 56 01.0 +0.4
MRLC Muro Lucano 42.93 293 P **P** **05 55 19.9 +0.2**
KHC Kasperske Hory 42.96 306 *e*P **P** **05 55 20.3 +0.5**
KHC *e**PP pP 05 55 57.9 -3.2
KHC *e* 05 57 02.5
KHC *e*S **S** **06 01 33.5 +3.3**
KHC *e*SS SS 06 04 51.2 +1.8
KHC Kasperske Hory 42.96 306 *e*P **P** **05 55 20.2 +0.4**
comp=Z,126nm,1.3s,mb5.2
KHC Kasperske Hory 42.96 306 *e*P **P** **05 55 20.3 +0.5**
KHC *e*pP pP 05 55 57.9 -3.2
KHC *e*PP PP 05 57 02.5 -1.0
KHC *e*S **S** **06 01 33.5 +3.3**
KHC *e*SS SS 06 04 51.2 +1.8
FBE Freiberg 42.97 308 *e*P **P** **05 55 20.6 +0.7**
comp=Z,338nm,0.9s,mb5.8
FBE *e*pP pP 05 56 02.3 +1.1
FG5 Orsara di Pugl 42.97 294 P **P** **05 55 20.9 +0.8**
MGR Morigerati 43.02 292 P **P** **05 55 19.7 -0.7**
VOY Vojsko 43.11 301 *e*P **P** **05 55 20.8 -0.3**
VOY *e* 05 55 34.1
VOY *e* 05 55 39.3
VOY *e* pP 05 55 59.3 -3.1
VOY *e* 06 00 40.7
VOY Vojsko 43.11 301 *e*P **P** **05 55 20.8 -0.3**
VOY *e* 05 55 34.1
VOY *e* 05 55 39.3
VOY *e* pP 05 55 59.3 -3.1
VOY *e* 06 00 40.7
CLL Collm 43.17 309 *e*P **P** **05 55 21.4 -0.1**
comp=Z,140nm,0.9s,mb5.4
CLL *e*pP pP 05 56 03.0 +0.2
CLL Collm 43.17 309 ⇓*i*P **P** **05 55 21.7 +0.2**
CLL *e**PP pP 05 56 03.0 +0.2
CLL *e*S **S** **06 01 34.0 +0.8**
CLL pmax pmax
comp=Z,140nm,0.9s,mb5.4
CLL Collm 43.17 309 ⇓*i*P **P** **05 55 21.7 +0.2**
comp=Z,140nm,0.9s,mb5.4
CLL *e*pP pP 05 56 03.0 +0.2
CLL *e*ScP ScP 06 00 39.0 -1.2
CLL *e*S **S** **06 01 34.0 +0.8**
CLL Collm 43.17 309 ⇓*i*P **P** **05 55 21.7 +0.2**
comp=Z,140nm,0.9s,mb5.4
CLL *e* 05 55 30.0
CLL *e*pP pP 05 56 03.0 +0.2
CLL *e*sP sP 05 56 26.0 +1.5
CLL *e*PP PP 05 57 07.0 +1.3
CLL *i* 05 57 14.4
CLL *e* 05 57 30.0
CLL *e*PPP 05 57 42.0
CLL *e*ScP ScP 06 00 39.0 -1.2
comp=Z,52nm,1.1s
CLL *e*S **S** **06 01 34.0 +0.8**
comp=N,700nm,26.0s
CLL *e*S **S** **06 01 34.0 +0.8**
comp=E,1µm,24.0s
CLL *e*sS sS 06 02 43.0 -2.8
CLL *e*SS SS 06 04 48.0 -5.4
CLL *e*(ScS) 06 05 11.0
CLL *e*SS 06 05 55.0
CLL *e* 06 07 38.0
CLL LmH 06 14 00.0
comp=N,1µm,20.1s
CLL LmH 06 14 00.0
comp=E,400nm,22.0s
CLL LmV 06 16 00.0
comp=Z,1µm,18.1s
MYKA Terra Mystica 43.20 302 ⇑*i*P **P** **05 55 21.7 -0.1**
comp=Z,34nm,0.6s,mb4.9
MRB1 Monte Rocchett 43.23 294 P **P** **05 55 23.4 +1.3**
CEL Celeste 43.23 290 *e*P **P** **05 55 21.8 -0.4**
comp=Z,573nm,1.7s,mb5.7
CEL *e*pP pP 05 56 02.9 -0.6
TRI Trieste 43.24 301 *e*P **P** **05 55 22.2 0.0**
TRI *e**PP pP 05 56 04.8 +1.3
TRI pmax pmax
comp=Z,34nm,0.8s,mb4.8
TRI Trieste 43.24 301 *e*P **P** **05 55 22.2 0.0**
comp=Z,34nm,0.8s,mb4.8
TRI *e*pP pP 05 56 04.8 +1.3
CSSN Cassano Irpino 43.25 294 P **P** **05 55 24.2 +1.9**
TRO Tromso 43.29 336 *e*P **P** **05 55 22.2 0.0**
TRO *e*S **S** **06 01 33.1 -1.3**
TRO *e*SS SS 06 04 53.6 -1.5
PSB1 Pescosannita 43.32 294 P **P** **05 55 23.4 +0.5**
KBA Koelnbreinsper 43.34 303 ⇑*i*P **P** **05 55 23.1 +0.2**
comp=Z,104nm,1.2s,mb5.1,SNR=25
SCLL Scilla 43.37 290 P **P** **05 55 23.7 +0.4**
WET Wettzell 43.42 306 *e*P **P** **05 55 23.8 +0.3**
comp=Z,54nm,1.4s,mb4.8
WET *e*pP pP 05 56 04.7 -0.2
WET Wettzell 43.42 306 *e*P **P** **05 55 23.8 +0.3**
WET *e**PP pP 05 56 04.7 -0.2
WET pmax pmax
comp=Z,54nm,1.4s,mb4.8
PTCC Patocco-Chiusa 43.42 302 P **P** **05 55 23.5 -0.1**
COP Copenhagen 43.43 315 ⇓*i*P **P** **05 55 24.3 +0.8**
COP *i* *PP pP 05 56 05.0 +0.1
COP *i* S **S** **06 01 41.5 +4.7**
COP pmax pmax
comp=Z,250nm,0.9s,mb5.6
COP Copenhagen 43.43 315 ⇓*i*P **P** **05 55 24.3 +0.8**
comp=Z,246nm,0.9s,mb5.6
COP *i* pP pP 05 56 05.1 +0.2
COP *i* S **S** **06 01 41.5 +4.7**
MTTG Motta San Giov 43.45 289 P **P** **05 55 23.8 -0.1**
FRIM Kepong 43.50 132 P **P** **05 55 25.9 +1.3**
TANN Tannenbergstha 43.57 308 *e*P **P** **05 55 25.3 +0.6**
comp=Z,108nm,1.0s,mb5.1
TANN *e*pP pP 05 56 07.3 +1.2
NKC Novy Kostel 43.60 307 *e*P **P** **05 55 25.7 +0.8**
NKC *e**PP pP 05 56 07.5 +1.2
NKC *e* 05 57 12.1
NKC *e*S **S** **06 01 44.4 +5.0**
NKC Novy Kostel 43.60 307 *e*P **P** **05 55 25.7 +0.8**
NKC *e*pP pP 05 56 07.5 +1.2
NKC *e*PP PP 05 57 12.1 +1.9
NKC *e*S **S** **06 01 44.4 +5.0**
NKC *e*SS SS 06 05 10.3 +8.6
SGG Gregorio Mates 43.60 294 P **P** **05 55 25.0 -0.1**
RJOB Jochberg 43.63 304 *e*P **P** **05 55 25.1 -0.1**
comp=Z,50nm,1.0s,mb4.8
RJOB *e*pP pP 05 56 06.6 0.0
WERN Wernitzgruen 43.64 308 *e*P **P** **05 55 25.8 +0.6**
comp=Z,165nm,1.6s,mb5.1
WERN *e*pP pP 05 56 07.6 +0.9
MIDA Miranda 43.64 295 P **P** **05 55 26.1 +0.7**
DGAR Diego Garcia 43.65 178 *e*P **P** **05 55 25.5 -0.2**
DGAR pmax pmax
comp=Z,357nm,0.9s,mb5.7
DGAR Diego Garcia 43.65 178 *e*P **P** **05 55 25.5 -0.2**
comp=Z,357nm,0.9s,mb5.7
GUNZ Gunzen 43.66 308 *e*P **P** **05 55 26.0 +0.6**
comp=Z,140nm,1.0s,mb5.2
GUNZ *e*pP pP 05 56 07.9 +1.1
GUNZ *e*sP sP 05 56 30.7 +2.2
GUNZ *e*PcP PcP 05 57 07.5 -1.5
WERD Werda 43.67 308 *e*P **P** **05 55 25.9 +0.4**
comp=Z,130nm,1.0s,mb5.2
AOI Ancona 43.72 298 P **P** **05 55 26.5 +0.5**
PLN Plauen 43.76 308 *e*P **P** **05 55 26.7 +0.5**
comp=Z,130nm,1.0s,mb5.2
PLN *e*pP pP 05 56 07.2 -0.5
ROTZ Rotzenmuhle 43.79 307 *e*P **P** **05 55 27.3 +0.8**
comp=Z,175nm,1.2s,mb5.3
ROTZ *e*pP pP 05 56 08.3 +0.4
MOR8 Moi Rana 43.83 331 ⇓*i*P **P** **05 55 26.1 -0.4**
MOR8 AMb AMB 05 55 28.6
comp=Z,823nm,0.6s,mb6.2
MOR8 *e*pP pP 05 56 07.2 -0.8
MOR8 Moi Rana 43.83 331 ⇓*i*P **P** **05 55 26.1 -0.4**
comp=Z,823nm,0.6s,mb6.2
RFI Roccamonfina 43.91 294 P **P** **05 55 28.1 +0.5**
NEUB Neuenburg 43.95 309 *e*P **P** **05 55 27.9 +0.2**
comp=Z,375nm,0.9s,mb5.7
ABTA Abfaltersbach 43.95 302 ⇓*i*P **P** **05 55 27.0 -0.7**
comp=Z,61nm,1.2s,mb4.8,SNR=18
INCN Inchon 43.97 71 *e*P **P** **05 55 28.5 +0.4**
comp=Z,59nm,0.8s,mb5.0
INCN Inchon 43.97 71 P **P** **05 55 28.3 +0.2**
SNR=16
STEI Steigen 43.99 333 ⇓*i*P **P** **05 55 28.1 +0.3**
STEI AMb AMB 05 55 29.9
comp=Z,251nm,0.8s,mb5.6
STEI *e*pP pP 05 56 09.6 +0.4
YAK Yakutsk 44.05 35*c* *i*P **P** **05 55 27.9 -0.4**
YAK *e**PP pP 05 56 10.1 +0.3
YAK *e* 05 57 10.7
YAK *e* 05 57 14.5
YAK *e*PPP 05 57 58.3
YAK *e*S **S** **06 01 44.6 -1.0**
YAK *e**SS sS 06 02 57.4 -1.0
YAK *e* 06 04 55.4
YAK pmax pmax
comp=Z,305nm,0.9s,mb5.6
YAK pmax pmax
comp=N,26nm,0.9s
YAK pmax pmax
comp=E,32nm,1.0s
YAK pmax pmax
comp=Z,106nm,0.9s,mb5.2
YAK pmax pmax
comp=N,58nm,1.1s
YAK pmax pmax
comp=E,82nm,1.4s
YAK smax
comp=N,1µm,1.8s
YAK smax
comp=E,2µm,2.0s
YAK Yakutsk 44.05 35 *e*P **P** **05 55 28.0 -0.3**
comp=E,560nm,0.8s,mb6.0
YAK *e*pP pP 05 56 10.3 +0.5
CING Cingoli 44.05 298 P **P** **05 55 28.9 +0.3**
MOX Moxa 44.09 308 *e*P **P** **05 55 29.0 +0.1**
comp=E,224nm,1.1s,mb5.4
MOX *e* pP 05 56 10.5 +0.1
MOX *e*S **S** **06 01 51.0 +4.4**
MOX
comp=Z,800nm,17.0s
MOX Moxa 44.09 308 *e*P **P** **05 55 29.3 +0.4**
comp=Z,142nm,1.0s,mb5.2
MOX *e*pP pP 05 56 10.5 +0.1
MOX Moxa 44.09 308 *e*P **P** **05 55 29.0 +0.1**
MOX *e* pP 05 56 10.5 +0.1
MOX *e*S **S** **06 01 51.0 +4.4**
MOX pmax pmax
comp=Z,224nm,1.1s,mb5.4
MOX MLR MLR
comp=Z,800nm,17.0s
AQU L'Aquila 44.11 296 *e*P **P** **05 55 29.2 +0.1**
AQU pmax pmax
comp=Z,96nm,0.9s,mb5.1
AQU L'Aquila 44.11 296 *e*P **P** **05 55 29.1 +0.1**
comp=Z,96nm,0.9s,mb5.1
SSY Sortino 44.16 288 P **P** **05 55 29.1 -0.5**
HAVL Avola 44.18 288 P **P** **05 55 29.3 -0.4**
FDMO Fiordimonte 44.19 297 P **P** **05 55 30.1 +0.3**
NRCA Norcia 44.22 297 P **P** **05 55 30.4 +0.5**
SNTG Esanatoglia 44.25 297 P **P** **05 55 30.5 +0.3**
FSSB Fossombrone 44.28 298 P **P** **05 55 30.8 +0.3**
FLOS Flostrand 44.29 331 ⇓*i*P **P** **05 55 30.2 0.0**
GUAR Guarcino 44.30 295 P **P** **05 55 30.6 0.0**
MNSI Mandailing Nat 44.31 137 P **P** **05 55 31.9 +0.9**
comp=Z,3µm,0.9s,mb6.6
MNSI Mandailing Nat 44.31 137 P **P** **05 55 31.2 +0.2**
comp=Z,3µm,0.9s,mb6.6
CESI CESI - Serrava 44.33 297 P **P** **05 55 31.4 +0.5**
FIAM Fiamignano 44.33 296 P **P** **05 55 32.7 +1.8**
NB2 NORSAR Subarra 44.38 323 P **P** **05 55 30.4 -0.6**
comp=Z,430nm,0.7s,mb5.9,baz=97,slow=7.9
NB2 NORSAR Subarra 44.38 323 P **P** **05 55 30.0 -1.0**
NOA NORSAR Array B 44.38 323 P **P** **05 55 30.4 -0.6**
comp=Z,448nm,0.8s,mb5.8,baz=96,slow=7.8,SNR=733
NOA pP pP 05 56 11.9 -0.6
comp=Z,223nm,0.9s,baz=98,slow=7.9,SNR=5.3
NOA PP PP 05 57 15.6 -2.7
comp=Z,85nm,1.0s,baz=94,slow=9.6,SNR=3.5
NOA S **S** **06 01 50.5 +0.1**
comp=Z,25nm,1.1s,baz=99,slow=14,SNR=2.8
NOA NORSAR Array B 44.38 323 P **P** **05 55 30.4 -0.6**
NOA *PP pP 05 56 12.0 -0.5
NOA 05 57 15.6
NOA S **S** **06 01 50.5 0.0**
NOA pmax pmax
comp=Z,449nm,0.8s
NOA smax
comp=N,25nm,1.1s
KONS Konsvik 44.42 331 ⇓*i*P **P** **05 55 31.3 +0.1**
STOK Stokkvaagen 44.43 331 *e*P **P** **05 55 30.8 -0.5**
STOK *e*SS SS 06 05 25.8 +11
GRA1 Grafenberg Arr 44.44 307 *e*P **P** **05 55 32.9 +1.3**
comp=N,465nm,1.4s,mb5.6
GRA1 *e*pP pP 05 56 13.6 +0.4
GRA1 *e*sP sP 05 56 33.7 -1.1
GRA1 *e*PP PP 05 57 19.7 +0.6
GRF Grafenberg Arr 44.44 307 *e*P **P** **05 55 32.9 +1.3**
comp=Z,465nm,1.4s,mb5.6
GRF *e*pP pP 05 56 13.6 +0.4
GRF *e*sP sP 05 56 33.7 -1.1
GRF *e*PP PP 05 57 19.7 +0.6
GRF Grafenberg Arr 44.44 307 *e*P **P** **05 55 32.9 +1.3**
GRF *e**PP pP 05 56 13.6 +0.4
GRF *e**SP sP 05 56 33.7 -1.1
GRF *e* 05 57 19.7
GRF pmax pmax
comp=Z,465nm,1.4s,mb5.6
GRF Grafenberg Arr 44.44 307 *e*P **P** **05 55 32.9 +1.3**
GRF *e**PP pP 05 56 13.6 +0.4
GRF *e**SP sP 05 56 33.7 -1.1
GRF *e* 05 57 19.7
GRF pmax pmax
comp=Z,465nm,1.4s,mb5.6
GRFO Grafenberg 44.44 307 *e*P **P** **05 55 33.0 +1.4**
comp=Z,350nm,1.4s,mb5.5
GRFO *e*PP PP 05 57 19.7 +0.6
GRFO Grafenberg 44.44 307 *e*P **P** **05 55 32.6 +1.0**
GRFO pmax pmax
comp=Z,382nm,1.4s,mb5.5
GRFO Grafenberg 44.44 307 *e*P **P** **05 55 32.6 +1.0**
comp=Z,382nm,1.4s,mb5.5
WTTA Wattenberg 44.47 303 ⇓*i*P **P** **05 55 31.5 -0.4**
comp=Z,149nm,1.3s,mb5.2,SNR=22
MDJ Mudanjiang 44.49 61 P **P** **05 55 32.3 +0.2**
MDJ pP pP 05 56 15.3 +1.7
MDJ sP sP 05 56 34.7 -0.5
MDJ PcP PcP 05 57 10.9 -1.0
MDJ ScP ScP 06 00 44.3 -1.4
MDJ PcS PcS 06 01 05.7 +0.2
MDJ S **S** **06 01 53.8 +1.4**
MDJ sS sS 06 03 07.1 +1.8
MDJ ScS ScS 06 05 06.5 -2.6
MDJ pmax pmax
comp=Z,54nm,1.1s,mb4.8
MDJ pmax pmax
comp=Z,430nm,8.6s
MDJ LR LR
comp=N,930nm,11.5s
MDJ LR LR
comp=E,370nm,9.5s
MDJ LR LR
comp=Z,890nm,9.5s
MDJ Mudanjiang 44.49 61 *e*P **P** **05 55 32.1 0.0**
comp=Z,35nm,0.8s,mb4.7
PIEI Pieia 44.49 298 P **P** **05 55 32.7 +0.6**
WATA Walderalm 44.50 303 ⇑*i*P **P** **05 55 31.4 -0.8**
comp=Z,76nm,1.0s,mb5.0,SNR=16
CERT Cerreto 44.50 296 P **P** **05 55 31.8 -0.4**
NSS Namsos 44.51 328 *e*P **P** **05 55 30.5 -1.4**
NSS *e*S **S** **06 01 51.8 -0.3**
NSS *e*SS SS 06 05 19.1 +2.8
TATO Taipei 44.51 90 *e*P **P** **05 55 34.2 +1.7**
comp=Z,102nm,1.0s,mb5.1
TATO Taipei 44.51 90 P **P** **05 55 35.1 +2.6**
SNR=5.7
NAO01 NORSAR Array S 44.52 323 *e*P **P** **05 55 31.8 -0.3**
comp=Z,1.2nm,0.5s
NAO01 *e*pP pP 05 56 13.3 -0.4
NAO01 *e*PP PP 05 57 17.3 -2.5
OSL Oslo 44.53 321 *e*P **P** **05 55 32.4 +0.2**
OSL *e*pP pP 05 56 13.4 -0.4
MURB Monte Urbino 44.55 298 P **P** **05 55 34.2 +1.6**
YHNB Yeheng 44.56 91 *e*P **P** **05 55 34.5 +1.6**
comp=Z,224nm,0.8s,mb5.5
FUR Furstenfeldbru 44.59 305 *e*P **P** **05 55 33.4 +0.6**
comp=Z,211nm,1.1s,mb5.4
FUR *e*pP pP 05 56 14.3 -0.1
FUR Furstenfeldbru 44.59 305 *e*P **P** **05 55 33.4 +0.6**
FUR *e**PP pP 05 56 14.3 -0.1
FUR pmax pmax
comp=Z,211nm,1.1s,mb5.4
TPUB Ta-pu 44.60 93 *e*P **P** **05 55 34.6 +1.4**
comp=Z,129nm,0.7s,mb5.4
SSLB Suanglung 44.63 92 *e*P **P** **05 55 35.2 +1.7**
comp=Z,508nm,0.8s,mb5.9
SSLB *e*pP pP 05 56 24.4 +9.3
LOF Lofoten 44.66 333 ⇓*i*P **P** **05 55 32.5 -0.6**
LOF AMb AMB 05 55 34.3
comp=Z,179nm,1.3s,mb5.2
LOF Lofoten 44.66 333 ⇓*i*P **P** **05 55 32.5 -0.6**
comp=Z,179nm,1.3s,mb5.2
CSLB Castelbuono 44.71 290 P **P** **05 55 32.8 -1.1**
CLZ Clausthal 44.77 310 *e*P **P** **05 55 34.7 +0.5**
comp=Z,409nm,1.3s,mb5.6
CLZ Clausthal 44.77 310 *e*P **P** **05 55 34.7 +0.5**
CLZ pmax pmax
comp=Z,409nm,1.3s,mb5.6
MOTA Moosalm 44.82 303 ⇑*i*P **P** **05 55 33.7 -0.9**
comp=Z,75nm,0.9s,mb5.0,SNR=32
APPI Appiano 44.87 302 P **P** **05 55 33.1 -1.9**
NRDL Niedersach Rie 44.89 311 *e*P **P** **05 55 35.6 +0.5**
comp=Z,180nm,0.9s,mb5.4
MGAB Montegabbione 44.92 297 P **P** **05 55 35.7 +0.2**
KSRS Korea Array 44.96 71 P **P** **05 55 35.5 -0.4**
comp=Z,25nm,0.5s,mb4.8,baz=284,slow=6.5,SNR=101
KSRS pP pP 05 56 18.6 +1.1
comp=Z,41nm,1.1s,baz=273,slow=7.3,SNR=2.5
KSRS PcP PcP 05 57 12.2 -1.5
comp=Z,86nm,0.9s,baz=283,slow=2.9,SNR=14
KSRS ScP ScP 06 00 44.5 -3.3
comp=Z,17nm,0.9s,baz=291,slow=3.7,SNR=5.8
NACB Ninganchiao 44.97 91 *e*P **P** **05 55 37.5 +1.3**
comp=Z,138nm,0.8s,mb5.3
WDD Wield Dalam 44.97 287 *e*P **P** **05 55 35.3 -0.6**
comp=Z,138nm,0.8s,mb5.3
WDD *e*pP pP 05 56 17.2 -0.5
ALJA Alia 44.99 290 P **P** **05 55 36.4 +0.2**
RETA Reutte 45.02 304 ⇑*i*P **P** **05 55 35.5 -0.7**
comp=Z,63nm,1.4s,mb4.8,SNR=9.6
KONO Kongsberg 45.08 321 *e* **P** **05 55 33.6 -3.0**
KONO *e*P 05 55 36.6
KONO *e*S **S** **06 02 02.7 +2.1**
KONO *e*SS SS 06 05 37.9 +12
KONO Kongsberg 45.08 321 *e*P **P** **05 55 36.2 -0.3**
KONO *e**PP pP 05 56 17.5 -0.7
KONO *e* 05 57 24.4
KONO pmax pmax
comp=Z,241nm,0.8s,mb5.6
KONO Kongsberg 45.08 321 *e*P **P** **05 55 36.2 -0.3**
comp=Z,241nm,0.8s,mb5.6
KONO *e*pP pP 05 56 17.4 -0.8
KONO *e*PP PP 05 57 24.4 -1.3
YULB Yu-li 45.10 92 *e*P **P** **05 55 38.9 +1.7**
comp=Z,250nm,0.7s,mb5.7
UBBA Unterbreizbach 45.10 308 *e*P **P** **05 55 37.0 +0.2**
comp=Z,74nm,0.8s,mb5.1
VMG Vicchio 45.11 299 P **P** **05 55 38.2 +1.2**
FETA Feichten 45.12 303 ⇑*i*P **P** **05 55 36.3 -0.8**
comp=Z,44nm,0.6s,mb5.0,SNR=27
TWG Pinlang 45.19 93 *e*P **P** **05 55 40.6 +2.7**
comp=Z,732nm,0.7s,mb6.1
FAVR Favara 45.20 289 P **P** **05 55 39.2 +1.4**
LATE Laterza 45.21 297 P **P** **05 55 38.2 +0.4**
SEI Scarperia 45.22 299 P **P** **05 55 39.4 +1.6**
KLR Kul'dur 45.23 54 ⇓*i*P **P** **05 55 34.5 -3.3**
KLR *e* pP 05 56 19.0 -0.5
KLR *e* 05 57 22.0

KLR eS S 06 02 00.0 -3.0
KLR e 06 03 14.0
KLR pmax pmax
comp=E,76nm,1.0s
KLR pmax pmax
comp=Z,140nm,1.0s,mb5.2
KLR pmax pmax
comp=Z,800nm,7.0s
KLR smax
comp=N,2µm,7.5s
KLR smax
comp=E,1µm,7.5s
KLR MLR MLR
comp=E,1µm,13.0s
KLR MLR MLR
comp=Z,3µm,13.0s
HDH Heidenheim-Cha 45.23 305 P P 05 55 38.9 +1.0
BJO Bjornoya 45.25 343 eP P 05 55 37.6 0.0
BJO eS S 06 02 03.4 +0.7
BJO eSS SS 06 05 30.1 +2.0
MUD Monsted U'grnd 45.26 316 i P P 05 55 38.8 +0.8
MUD i *PP pP 05 56 19.8 +0.1
MUD i S S 06 02 08.1 +4.9
MUD pmax pmax
comp=Z,160nm,1.0s,mb5.3
MUD MLR MLR
comp=Z,2µm,21.0s
MUD Monsted U'grnd 45.26 316 i P P 05 55 38.8 +0.8
comp=Z,162nm,1.0s,mb5.3
MUD i S S 06 02 08.1 +4.9
MUD
comp=Z,2µm,21.0s
BJO1 Bjornoya 45.30 343 eP P 05 55 37.6 -0.4
FNVD Fontana Vidola 45.36 299 P P 05 55 40.0 +1.0
CSNT Castellina Chi 45.39 298 P P 05 55 38.7 -0.5
UBR Ueberruh 45.43 304 P P 05 55 39.5 0.0
BRMO Bormio 45.45 302 P P 05 55 39.4 -0.2
KGM Kluang 45.49 131 P P 05 55 41.9 +1.6
BKNI Bangkinang 45.51 135 P P 05 55 40.6 +0.1
comp=Z,5µm,0.9s
BKNI Bangkinang 45.51 135 P P 05 55 40.9 +0.4
comp=Z,5µm,0.9s
BKNI Bangkinang 45.51 135 P P 05 55 40.3 -0.2
comp=Z,5µm,0.9s
SIND Sindeldorf 45.52 306 P P 05 55 40.7 +0.5
DAVA Damuels 45.65 304 P P 05 55 40.5 -0.7
DAVA Damuels 45.65 304 i P P 05 55 40.6 -0.6
comp=Z,157nm,0.5s,mb5.6,SNR=108
PPI Padang Panjang 45.80 137 P P 05 55 43.4 +0.7
comp=Z,2µm,0.8s,mb6.5
PPI Padang Panjang 45.80 137 P P 05 55 42.7 0.0
PPI Padang Panjang 45.80 137 P P 05 55 42.7 0.0
comp=Z,2µm,0.8s,mb6.5
ERBM Eremo 45.81 300 P P 05 55 43.8 +1.3
SISI Saibi 45.81 139 P P 05 55 44.2 +1.4
comp=Z,2µm,0.9s,mb6.4
SISI Saibi 45.81 139 P P 05 55 44.0 +1.2
comp=Z,2µm,0.9s,mb6.4
BUCH Bad Urach 45.82 305 P P 05 55 43.1 +0.6
TIXI Tiksi 45.85 22 c iP P 05 55 42.2 -0.2
TIXI e*PP pP 05 56 24.0 -0.2
TIXI e*SP sP 05 56 46.4 +0.7
TIXI e 05 57 31.8
TIXI eS S 06 02 11.4 +0.2
TIXI eSS SS 06 05 38.2 +0.4
TIXI pmax pmax
comp=Z,306nm,0.9s,mb5.6
TIXI Tiksi 45.85 22 eP P 05 55 42.1 -0.3
comp=Z,195nm,0.6s,mb5.6
TIXI epP pP 05 56 24.6 +0.4
TIXI eScP ScP 06 00 49.9 -1.0
TIXI eS S 06 02 11.1 -0.2
STU Stuttgart 45.87 306 eP P 05 55 43.2 +0.3
comp=Z,105nm,0.9s,mb5.2
STU epP pP 05 56 25.0 +0.3
STU esP sP 05 56 45.4 -0.8
STU Stuttgart 45.87 306 eP P 05 55 43.3 +0.4
STU e*PP pP 05 56 26.3 +1.6
STU e*SP sP 05 56 46.1 -0.1
STU pmax pmax
comp=Z,98nm,0.9s,mb5.1
STU Stuttgart 45.87 306 eP P 05 55 43.3 +0.4
comp=Z,98nm,0.9s,mb5.1
STU epP pP 05 56 26.3 +1.6
STU esP sP 05 56 46.1 -0.1
STU eScP ScP 06 00 50.4 -0.9
MYKOM Kota Tinggi 45.99 131 P P 05 55 45.8 +1.5
MYKOM Kota Tinggi 45.99 131 P P 05 55 45.3 +1.1
comp=Z,7µmcomp=Z,1µm,0.8s,mb6.2
TOD Tromm 46.01 307 eP P 05 55 44.1 +0.2
GUT Gutenstein 46.03 305 P P 05 55 44.3 +0.2
HLG Helgoland 46.10 313 eP P 05 55 45.0 +0.5
comp=Z,540nm,1.2s,mb5.8
HLG epP pP 05 56 27.3 +0.9
HLG ePcP PcP 05 57 16.5 -0.8
HLG ePP PP 05 57 34.7 -0.8
TUE Stuetta 46.15 303 eP P 05 55 44.1 -0.9
comp=Z,55nm,0.8s,mb4.9
TUE epP pP 05 56 27.8 +0.9
LBG Lerchenberg 46.15 306 P P 05 55 45.6 +0.5
TNS Taunus Mts 46.15 308 eP P 05 55 45.5 +0.4
comp=Z,161nm,1.1s,mb5.3
TNS Taunus Mts 46.15 308 eP P 05 55 45.5 +0.4
TNS pmax pmax
comp=Z,161nm,1.1s,mb5.3
SISB Singen-Schiene 46.19 304 P P 05 55 45.2 -0.2
PDSI Padang 46.21 137 P P 05 55 46.4 +0.5
comp=Z,4µm,0.9s
PDSI Padang 46.21 137 P P 05 55 45.6 -0.3
comp=Z,4µm,0.9s
SPAK Spaichingen-Ko 46.24 305 eP P 05 55 45.6 -0.2
SNART Snartemo 46.30 319 ⇓ iP P 05 55 46.5 +0.4
SNART AMb AMB 05 55 48.4
comp=Z,137nm,0.9s,mb5.3
SNART epP pP 05 56 29.5 +1.5
IBBN Ibbenburen 46.34 311 eP P 05 55 46.8 +0.3
comp=Z,332nm,0.9s,mb5.7
IBBN epP pP 05 56 29.1 +0.7
IBBN ePP PP 05 57 38.6 +0.8
BFO Black Forest 46.51 305 eP P 05 55 47.6 -0.2
comp=Z,103nm,1.2s,mb5.0
BFO epP pP 05 56 30.0 +0.2
BFO Black Forest 46.51 305 eP P 05 55 47.6 -0.2
BFO e*PP pP 05 56 30.0 +0.2
BFO pmax pmax
comp=Z,103nm,1.2s,mb5.0
BFO Black Forest 46.51 305 P P 05 55 47.0 -0.8
comp=Z,400nm,1.2s,mb5.6,SNR=23
KTD Kalmit 46.51 307 eP P 05 55 48.0 +0.1
ODD1 Odda 46.59 321 ⇓ iP P 05 55 49.0 +0.7
ODD1 AMb AMB 05 55 50.9
comp=Z,193nm,1.1s,mb5.3
ODD1 epP pP 05 56 30.6 +0.3
ODD1 Odda 46.59 321 ⇓ iP P 05 55 49.0 +0.7
comp=Z,193nm,1.1s,mb5.3
BLS5 Blasjo 46.68 321 ⇓ iP P 05 55 49.9 +0.9
BLS5 AMb AMB 05 55 51.6
comp=Z,150nm,0.9s,mb5.3
BLS5 epP pP 05 56 31.5 +0.5
BLS5 Blasjo 46.68 321 ⇓ iP P 05 55 49.9 +0.9
comp=Z,150nm,0.9s,mb5.3
BUG Bochum--Univer 46.74 310 eP P 05 55 49.9 +0.3
comp=Z,235nm,1.0s,mb5.5
BUG epP pP 05 56 31.3 -0.2
LANF Langenberg 46.75 306 eP P 05 55 49.9 +0.2
SDSI Sungai Dareh 46.76 136 P P 05 55 37.9 -12
comp=Z,402nm,0.7s,mb5.9
SDSI Sungai Dareh 46.76 136 P P 05 55 36.7 -14
ABH Altenburg 46.77 307 eP P 05 55 49.9 0.0
FELD Feldberg im Sc 46.80 305 eP P 05 55 49.7 -0.4
RGRI Rengat 46.80 134 P P 05 55 51.4 +0.9
RGRI Rengat 46.80 134 P P 05 55 51.4 +0.9
comp=Z,703nm,0.5s,mb6.3
KIZ Kirchzarten 46.84 305 P P 05 55 50.3 -0.2
WTSB Winterswijk 46.96 310 eP P 05 55 51.7 +0.4
comp=Z,237nm,1.3s,mb5.3
WTSB Winterswijk 46.96 310 epP pP 05 56 34.1 +0.8
LIBD Limburg 47.02 305 eP P 05 55 52.7 +0.9
RUP Ruppelstein 47.12 307 eP P 05 55 52.5 0.0
CDF Champ du Feu 47.19 306 eP P 05 55 52.0 -1.1
comp=Z,57nm,0.9s,mb4.6
CDF epP pP 05 56 34.4 -0.7
CDF Champ du Feu 47.19 306 eP P 05 55 52.0 -1.1
CDF e*PP pP 05 56 34.4 -0.7
CDF pmax pmax
comp=Z,29nm,0.9s,mb4.6
CDF Champ du Feu 47.19 306 eP P 05 55 52.0 -1.1
comp=Z,29nm,0.9s,mb4.6
CDF epP pP 05 56 34.4 -0.7
BBS Basel-Blauen 47.20 304 eP P 05 55 51.9 -1.3
RUND Rundenannen 47.22 322 eP P 05 55 52.6 -0.6
PGF Pioggiola 47.23 297 eP P 05 55 52.4 -1.2
comp=Z,104nm,0.6s,mb5.0
PGF epP pP 05 56 34.6 -1.0
PGF Pioggiola 47.23 297 eP P 05 55 52.4 -1.2
PGF e*PP pP 05 56 34.6 -1.0
PGF pmax pmax
comp=Z,52nm,0.6s,mb5.0
PGF Pioggiola 47.23 297 eP P 05 55 52.4 -1.2
comp=Z,52nm,0.6s,mb5.0
PGF epP pP 05 56 34.6 -1.0
BER Bergen 47.24 322 eP P 05 55 53.6 +0.3
EGD Espegrend 47.30 322 eP P 05 55 53.1 -0.6
ECH Echery 47.30 305 eP P 05 55 55.1 +1.1
ASK Askoy 47.31 322 eP P 05 55 52.0 -1.9
ASK epP pP 05 56 34.6 -1.3
MOF Molkenrain 47.38 305 eP P 05 55 54.2 -0.4
FOO Floro 47.38 324 eP P 05 55 53.7 -0.7
FOO eS S 06 02 32.3 -1.0
FOO eSS SS 06 06 05.8 +2.8
HABR Khabarovsk 47.50 54 c iP P 05 55 55.3 -0.2
HABR *PP pP 05 56 35.5 -2.1
HABR e 05 57 21.7
HABR e 05 57 48.2
HABR ePPP 05 58 41.1
HABR eS S 06 02 36.7 +1.4
HABR e 06 05 29.0
HABR pmax pmax
comp=Z,138nm,0.9s,mb5.3
HABR pmax pmax
comp=E,81nm,0.9s
HABR pmax pmax
comp=N,17nm,0.9s
HABR MLR MLR
comp=Z,600nm,16.0s
SUE Sulen 47.52 323 eP P 05 55 55.6 +0.1
SUE AMb AMB 05 55 57.5
comp=Z,109nm,0.8s,mb5.2
SUE epP pP 05 56 37.4 -0.1
SUE Sulen 47.52 323 eP P 05 55 55.6 +0.1
comp=Z,109nm,0.8s,mb5.2
SPITS Spitsbergen Ar 47.53 347 P P 05 55 55.8 +0.5
comp=Z,244nm,0.8s,mb5.6,baz=133,slow=11,SNR=169
SPITS pP pP 05 56 37.5 +0.1
comp=Z,171nm,0.9s,baz=147,slow=11,SNR=4.0
SPITS Spitsbergen Ar 47.53 347 P P 05 55 55.8 +0.5
SPITS *PP pP 05 56 37.5 +0.1
SPITS pmax pmax
comp=Z,244nm,0.8s
SPITS Spitsbergen Ar 47.53 347 P P 05 55 55.9 +0.5
SPITS pP pP 05 56 37.5 +0.1
HINF Hinteralfeld 47.57 305 eP P 05 55 55.1 -1.0
comp=Z,123nm,0.9s,mb4.9
HINF Hinteralfeld 47.57 305 eP P 05 55 55.1 -1.0
HINF pmax pmax
comp=Z,61nm,0.9s,mb4.9
HINF Hinteralfeld 47.57 305 eP P 05 55 55.1 -1.0
comp=Z,61nm,0.9s,mb4.9
ABRA Dolores 47.58 99 eP P 05 55 58.6 +2.0
MEM Membach 47.64 309 P P 05 55 56.7 +0.1
comp=Z,78nm,1.1s,mb5.0
MEM AP pP 05 56 38.2 -0.5
MEM SCP ScP 06 00 57.3 -1.4
HGN Heimansgroeve 47.67 309 ⇓ eP P 05 55 57.0 +0.3
comp=Z,62nm,0.9s,mb5.0
HGN Heimansgroeve 47.67 309 epP pP 05 56 39.0 +0.1
LOMF Lomont 47.68 304 eP P 05 55 56.6 -0.3
IMI Imperia 47.69 299 P P 05 55 56.9 -0.2
WLF Walferdange 47.70 307 P P 05 55 58.0 +0.9
WLF AP pP 05 56 39.9 +0.7
comp=Z,190nm,1.5s
WLF SCP ScP 06 00 58.5 -0.5
WLF Walferdange 47.70 307 eP P 05 55 57.8 +0.7
comp=Z,246nm,1.0s,mb5.5
WLF epP pP 05 56 40.1 +0.9
WLF Walferdange 47.70 307 eP P 05 55 58.0 +0.9
WLF e*PP pP 05 56 39.9 +0.7
WLF pmax pmax
comp=Z,235nm,1.0s,mb5.5
WLF Walferdange 47.70 307 eP P 05 55 58.0 +0.9
comp=Z,235nm,1.0s,mb5.5
WLF epP pP 05 56 39.9 +0.7
KRJI Kerinci 47.74 137 P P 05 55 57.9 +0.2
comp=Z,3µm,1.0s,mb6.6
KRJI Kerinci 47.74 137 P P 05 55 58.2 +0.5
comp=Z,3µm,1.0s,mb6.6
VSL Villasalto 47.78 293 eP P 05 55 56.9 -0.9
comp=Z,89nm,1.1s,mb5.0
VSL epP pP 05 56 39.4 -0.5
BEBN Eben Emael 47.82 309 P P 05 55 58.1 +0.1
comp=Z,22nm,1.6s
BEBN AP pP 05 56 40.0 -0.1
HAU Haudompre 47.87 305 eP P 05 55 57.5 -0.9
comp=Z,70nm,0.5s,mb4.9
HAU epP pP 05 56 39.8 -0.7
HAU eMLR MLR
comp=Z,837nm,18.8s
HAU Haudompre 47.87 305 eP P 05 55 57.5 -0.9
HAU e*PP pP 05 56 39.8 -0.7
HAU pmax pmax
comp=Z,35nm,0.5s,mb5.0
HAU MLR MLR
comp=Z,840nm,18.8s
HAU Haudompre 47.87 305 eP P 05 55 57.5 -0.9
comp=Z,35nm,0.5s,mb4.9
HAU epP pP 05 56 39.8 -0.7
HAU LR LR
comp=Z,840nm,18.8s
APYP Conner 47.89 99 eP P 05 56 00.3 +1.4
SAOF Saorge 47.91 300 eP P 05 55 58.7 0.0
OG01 Vacheresse 47.98 303 eP P 05 55 59.1 -0.2
AUTN L'Aution 48.00 300 eP P 05 55 59.6 +0.2
SBF Sospel 48.02 299 eP P 05 55 58.9 -0.7
comp=Z,317nm,0.9s,mb5.4
SBF Sospel 48.02 299 eP P 05 55 58.9 -0.7
SBF pmax pmax
comp=Z,159nm,0.9s,mb5.3
SBF Sospel 48.02 299 eP P 05 55 58.9 -0.7
comp=Z,159nm,0.9s,mb5.3
THEF They Montfort 48.07 305 eP P 05 55 59.4 -0.5
LUCF Luceram 48.08 300 eP P 05 55 59.8 -0.2
REVF Revere 48.10 299 eP P 05 55 59.6 -0.6
BCLA Clavier 48.12 309 P P 05 56 00.3 0.0
comp=Z,38nm,1.2s,mb4.6
BCLA AP pP 05 56 42.7 +0.3
BCLA SCP ScP 06 00 59.5 -1.3
LPG La Plagne 48.12 302 eP P 05 56 00.1 -0.2
comp=Z,120nm,0.7s,mb5.0
LPG La Plagne 48.12 302 eP P 05 56 00.1 -0.2
LPG pmax pmax
comp=Z,60nm,0.7s,mb5.0
LPG La Plagne 48.12 302 eP P 05 56 00.1 -0.2
comp=Z,60nm,0.7s,mb5.0
TOUF Mont Tournerai 48.12 300 eP P 05 56 00.1 -0.2
LPL La Plagne 48.13 302 eP P 05 56 00.0 -0.4
comp=Z,120nm,0.7s,mb5.0
LPL La Plagne 48.13 302 eP P 05 56 00.0 -0.4
LPL pmax pmax
comp=Z,60nm,0.7s,mb5.0
LPL La Plagne 48.13 302 eP P 05 56 00.0 -0.4
comp=Z,60nm,0.7s,mb5.0
OG22 Abries 48.14 301 eP P 05 56 00.2 -0.3
RSL Roselend 48.16 302 eP P 05 56 00.4 -0.2
MVIF Mont Vial 48.21 300 eP P 05 56 00.8 -0.3
MBDF Montbardon 48.28 301 eP P 05 56 00.5 -1.1
comp=Z,109nm,0.6s,mb5.0
MBDF epP pP 05 56 43.9 +0.1
MBDF Montbardon 48.28 301 eP P 05 56 00.5 -1.1
MBDF e*PP pP 05 56 43.9 +0.1
MBDF pmax pmax
comp=Z,54nm,0.6s,mb5.0
MBDF Montbardon 48.28 301 eP P 05 56 00.5 -1.1
comp=Z,54nm,0.6s,mb5.1
MBDF epP pP 05 56 43.9 +0.1
CABF epP pP 05 56 43.6 -0.5
CABF La Chapelle 48.33 303 eP P 05 56 01.4 -0.5
comp=Z,97nm,0.6s,mb5.0
CABF epP pP 05 56 43.6 -0.5
CABF La Chapelle 48.33 303 eP P 05 56 01.4 -0.5
CABF e*PP pP 05 56 43.6 -0.5
CABF pmax pmax
comp=Z,49nm,0.6s,mb5.0
CABF La Chapelle 48.33 303 eP P 05 56 01.4 -0.5
comp=Z,49nm,0.6s,mb5.0
CABF epP pP 05 56 43.6 -0.5
CALN Calern 48.43 299 eP P 05 56 02.1 -0.6
GIVF Givet 48.48 308 eP P 05 56 02.8 -0.2
comp=Z,207nm,1.1s,mb5.1
GIVF epP pP 05 56 45.2 0.0
GIVF Givet 48.48 308 eP P 05 56 02.8 -0.2
GIVF e*PP pP 05 56 45.2 0.0
GIVF pmax pmax
comp=Z,103nm,1.0s,mb5.1
GIVF Givet 48.48 308 eP P 05 56 02.8 -0.2
comp=Z,103nm,1.0s,mb5.1
GIVF epP pP 05 56 45.2 0.0
DOU Dourbes 48.62 308 P P 05 56 04.1 +0.1
comp=Z,66nm,1.3s,mb4.8
DOU AP pP 05 56 46.8 +0.4
DOU XP sP 05 57 10.0 +2.2
DOU SCP ScP 06 01 00.7 -2.2
MEZF Maizieres J'vi 48.62 306 eP P 05 56 03.8 -0.3
comp=Z,180nm,0.7s,mb5.2
MEZF Maizieres J'vi 48.62 306 eP P 05 56 03.8 -0.3
comp=Z,180nm,0.7s,mb5.5
KBS Kingsbay 48.65 347 eP P 05 56 02.5 -1.4
KBS eS S 06 02 52.2 +1.5
KBS Kingsbay 48.65 347 deP P 05 56 04.9 +1.0
KBS pmax pmax
comp=Z,402nm,0.8s,mb5.8
KBS Kingsbay 48.65 347 eP P 05 56 04.7 +0.8
comp=Z,406nm,0.9s,mb5.8
KBS epP pP 05 56 46.5 +0.3
FRF La Foret Royal 48.65 299 eP P 05 56 03.2 -1.2
comp=Z,74nm,0.8s,mb4.8
FRF epP pP 05 56 45.7 -1.0
FRF La Foret Royal 48.65 299 eP P 05 56 03.2 -1.2
FRF e*PP pP 05 56 45.7 -1.0
FRF pmax pmax
comp=Z,37nm,0.8s,mb4.8
FRF La Foret Royal 48.65 299 eP P 05 56 03.2 -1.2
comp=Z,37nm,0.8s,mb4.8
FRF epP pP 05 56 45.7 -1.0
JNU Nakatsue 48.67 75 eP P 05 56 05.1 +0.4
comp=Z,84nm,0.9s,mb5.1
SFTF Sexfontaines 48.69 306 eP P 05 56 04.0 -0.7
comp=Z,372nm,1.2s,mb5.3
SFTF Sexfontaines 48.69 306 eP P 05 56 04.0 -0.7
comp=Z,372nm,1.3s,mb5.6
KMBO Kilima Mbogo 48.75 227 P P 05 56 06.2 +0.7
comp=Z,54nm,0.6s,mb5.1,baz=14,slow=18,SNR=195
KMBO Kilima Mbogo 48.75 227 eP P 05 56 06.7 +1.2
KMBO pmax pmax
comp=Z,67nm,0.6s
KMBO Kilima Mbogo 48.75 227 eP P 05 56 06.7 +1.2
comp=Z,67nm,0.6s,mb5.2
KMBO Kilima Mbogo 48.75 227 ⇑ iP P 05 56 06.5 +1.0
KMBO AMB AMB 05 56 07.6
comp=Z,1µm,1.9s,mb6.0
KMBO Kilima Mbogo 48.75 227 P P 05 56 07.1 +1.7
SNR=44
LMR La Mourre 48.81 299 eP P 05 56 05.4 -0.2
OG25 Le Caire 48.85 300 eP P 05 56 04.7 -1.2
ORIF Oris-en-Rattie 48.85 301 eP P 05 56 04.4 -1.5
comp=Z,34nm,0.7s,mb4.5
ORIF eMLR MLR
comp=Z,1µm,21.8s
ORIF Oris-en-Rattie 48.85 301 eP P 05 56 04.4 -1.5
comp=Z,17nm,0.7s,mb4.5
CAUP Cauayan 48.85 99 eP P 05 56 07.9 +1.6
BAIF Baives 48.87 308 eP P 05 56 05.9 -0.1
comp=Z,488nm,1.1s,mb5.5
BAIF Baives 48.87 308 eP P 05 56 05.9 -0.1
comp=Z,244nm,1.1s,mb5.5
KEST Kesra 48.99 289 P P 05 56 07.3 +0.3
comp=Z,17nm,0.7s,mb4.5,baz=46,slow=4.9,SNR=53
KEST pP pP 05 56 49.8 +0.4
comp=Z,61nm,1.1s,baz=60,slow=3.2,SNR=5.8
KEST Kesra 48.99 289 eP P 05 56 07.2 +0.1
KEST epP pP 05 56 50.1 +0.7
JOW Kunigami 49.14 84 eP P 05 56 07.9 -0.5
comp=Z,45nm,0.4s,mb5.2
JOW eScP ScP 06 01 02.3 -3.3
SMRF Simiane la Rot 49.30 300 eP P 05 56 08.7 -0.6
comp=Z,47nm,0.8s,mb4.6
SMRF epP pP 05 56 51.1 -0.6
SMRF Simiane la Rot 49.30 300 eP P 05 56 08.7 -0.6
comp=Z,47nm,0.8s,mb4.9
SMRF epP pP 05 56 51.1 -0.6
BALP Baler 49.33 101 eP P 05 56 11.7 +1.8
OCF Saint Nazaire 49.33 301 eP P 05 56 09.3 -0.3
OG26 St.-Nazaire-De 49.33 301 eP P 05 56 09.3 -0.3
LUBP Lubang 49.44 104 eP P 05 56 12.4 +1.7
KSI Kapahiang 49.65 137 P P 05 56 11.9 -0.4
comp=Z,6µm,0.8s
KSI Kapahiang 49.65 137 P P 05 56 11.4 -0.9
comp=Z,6µm,0.8s
LOR Lormes 49.67 305 eP P 05 56 10.9 -1.2
comp=Z,101nm,1.0s,mb4.8
LOR eMLR MLR
comp=Z,398nm,21.2s
LOR Lormes 49.67 305 eP P 05 56 10.9 -1.2
LOR pmax pmax
comp=Z,50nm,1.0s,mb4.8
LOR MLR MLR
comp=Z,400nm,21.3s
LOR Lormes 49.67 305 eP P 05 56 10.9 -1.2
comp=Z,50nm,1.0s,mb4.8
LOR LR LR
comp=Z,400nm,21.3s
SSB Saint Sauveur 49.68 302 eP P 05 56 12.0 -0.2
VIVF Saint-Julien-l 49.70 301 eP P 05 56 11.7 -0.6
comp=Z,111nm,0.6s,mb5.0
VIVF epP pP 05 56 54.3 -0.5
VIVF Saint-Julien-l 49.70 301 eP P 05 56 11.7 -0.6
VIVF e*PP pP 05 56 54.3 -0.5
VIVF pmax pmax
comp=Z,55nm,0.6s,mb5.1
VIVF Saint-Julien-l 49.70 301 eP P 05 56 11.7 -0.6
comp=Z,56nm,0.6s,mb5.1
VIVF epP pP 05 56 54.3 -0.5
SMF Signal de Mont 49.83 304 eP P 05 56 12.3 -1.0
comp=Z,271nm,1.0s,mb5.2
SMF Signal de Mont 49.83 304 eP P 05 56 12.3 -1.0
SMF pmax pmax
comp=Z,135nm,1.0s,mb5.2
SMF Signal de Mont 49.83 304 eP P 05 56 12.3 -1.0
comp=Z,135nm,1.0s,mb5.2
SSF Saint Saulge 49.95 304 eP P 05 56 13.2 -1.0
comp=Z,255nm,1.2s,mb5.1
SSF epP pP 05 56 55.6 -1.1
SSF Saint Saulge 49.95 304 eP P 05 56 13.2 -1.0
SSF e*PP pP 05 56 55.6 -1.1
SSF pmax pmax
comp=Z,128nm,1.2s,mb5.1
SSF Saint Saulge 49.95 304 eP P 05 56 13.2 -1.0
comp=Z,128nm,1.2s,mb5.1
SSF epP pP 05 56 55.6 -1.1
AVF Avril sur Loir 50.12 304 eP P 05 56 14.5 -1.0
comp=Z,215nm,0.8s,mb5.2
AVF Avril sur Loir 50.12 304 eP P 05 56 14.5 -1.0
AVF pmax pmax
comp=Z,108nm,0.8s,mb5.2
AVF Avril sur Loir 50.12 304 eP P 05 56 14.5 -1.0
comp=Z,108nm,0.8s,mb5.2
PLDF La Plantade 50.14 303 eP P 05 56 16.0 +0.4
CMAH Djebel Manchou 50.15 290 P P 05 56 15.4 -0.4
ABSA Djebel Ababsia 50.23 290 P P 05 56 18.5 +2.1
AEU East Anglia Un 50.24 312 P P 05 56 14.9 -1.3
AEU East Anglia Un 50.24 312 eP P 05 56 14.9 -1.3
ENPP El Nido 50.33 107 eP P 05 56 19.2 +1.7
KSM Kuching 50.35 125 P P 05 56 19.1 +1.5
KSM Kuching 50.35 125 eP P 05 56 18.5 +0.9
comp=Z,187nm,0.8s,mb5.5
KSM epP pP 05 57 00.4 +0.1
KSM Kuching 50.35 125 P P 05 56 18.8 +1.2
comp=Z,3µmcomp=Z,263nm,0.9s,mb5.5
MNAI Manna 50.44 137 P P 05 56 17.6 -0.6
comp=Z,10µmcomp=Z,1µm,0.8s,mb6.2
MNAI Manna 50.44 137 P P 05 56 18.2 0.0
comp=Z,1µm,0.8s,mb6.2
BUSP Coron 50.44 106 eP P 05 56 19.8 +1.5
AGO Saint Agoulin 50.45 303 eP P 05 56 18.8 +0.9
LASF Ste Croix 50.47 301 eP P 05 56 17.6 -0.5

comp=Z,144nm,0.8s,mb5.1
HYF Humbligny 50.48 305 *e*P P **05 56 17.7 -0.4**
LRW Lerwick 50.49 322 P P **05 56 17.2 -0.9**
LRW AMB AMB 05 56 19.8
comp=Z,232nm,0.9s,mb5.5
LRW Lerwick 50.49 322⇑ *e*P P **05 56 17.2 -0.9**
LRW AMB AMB 05 56 19.8
comp=Z,232nm,0.9s,mb5.5
PPBI Pangkal Pinang 50.50 132 P P **05 56 19.2 +0.5**
comp=Z,5µmcomp=Z,599nm,0.9s,mb5.9
PPBI Pangkal Pinang 50.50 132 P P **05 56 18.6 -0.1**
comp=Z,5µmcomp=Z,599nm,0.9s,mb5.9
BGF Bois d'Agland 50.51 304 *e*P P **05 56 17.3 -1.1**
comp=Z,106nm,0.8s,mb5.0
BGF *e*pP pP 05 57 00.1 -0.9
BGF Bois d'Agland 50.51 304 *e*P P **05 56 17.3 -1.1**
BGF *e**PP pP 05 57 00.1 -0.9
BGF pmax pmax
comp=Z,53nm,0.8s,mb5.0
BGF Bois d'Agland 50.51 304 *e*P P **05 56 17.3 -1.1**
comp=Z,53nm,0.8s,mb5.0
BGF *e*pP pP 05 57 00.1 -0.9
CAEH 'Ain El Ouahch 50.53 291 P P **05 56 21.7 +3.0**
ELSH Elham, Standar 50.59 310 P P **05 56 18.1 -0.7**
ELSH AMB AMB 05 56 21.1
comp=Z,554nm,1.0s,mb6.0
ELSH Elham, Standar 50.59 310 *e*P P **05 56 18.1 -0.7**
ELSH AMB AMB 05 56 21.1
comp=Z,554nm,1.0s,mb6.0
PYM Petit Puy Mans 50.61 303 *e*P P **05 56 19.7 +0.6**
BATP Bataraza 50.61 111 *e*P P **05 56 21.0 +1.4**
WAL1 Walls 50.70 322⇑ *e*P P **05 56 18.1 -1.5**
CKFL Kef-Lekhel 50.76 290 P P **05 56 19.0 -1.4**
SBUM Sibu 50.93 122 P P **05 56 23.7 +1.8**
SBUM Sibu 50.93 122 P P **05 56 23.1 +1.2**
comp=Z,3µmcomp=Z,244nm,0.9s,mb5.6
VERF Verneugheol 50.96 303 *e*P P **05 56 21.8 0.0**
CASM Ain Smara 50.98 290 P P **05 56 21.1 -1.0**
BTM Bintulu 50.99 120 P P **05 56 24.7 +2.4**
TCF Toulx Ste Croi 51.01 304 *e*P P **05 56 21.5 -0.6**
comp=Z,303nm,1.0s,mb5.4
TCF *e*pP pP 05 57 02.7 -2.1
TCF Toulx Ste Croi 51.01 304 *e*P P **05 56 21.5 -0.6**
TCF *e**PP pP 05 57 02.7 -2.1
TCF pmax pmax
comp=Z,151nm,1.0s,mb5.4
TCF Toulx Ste Croi 51.01 304 *e*P P **05 56 21.5 -0.6**
comp=Z,151nm,1.0s,mb5.4
TCF *e*pP pP 05 57 02.7 -2.1
CTEI Djebel Teioual 51.11 290 P P **05 56 23.1 +0.1**
MDSI Maura Dua 51.23 135 P P **05 56 21.1 -3.0**
comp=Z,3µmcomp=Z,336nm,0.9s,mb5.8
MDSI Maura Dua 51.23 135 P P **05 56 20.9 -3.2**
comp=Z,3µmcomp=Z,336nm,0.9s,mb5.8
KKM Kota Kinabalu 51.25 115 P P **05 56 26.4 +2.1**
KKM Kota Kinabalu 51.25 115 *e*P P **05 56 25.8 +1.5**
comp=Z,347nm,0.8s,mb5.8
KKM Kota Kinabalu 51.25 115 P P **05 56 25.5 +1.2**
comp=Z,6µmcomp=Z,446nm,0.8s,mb5.9
DFRA Djebel Bou Aff 51.34 291 P P **05 56 25.4 +0.7**
CAF Calviac 51.47 302 *e*P P **05 56 25.1 -0.5**
comp=Z,163nm,0.9s,mb5.2
CAF *e*pP pP 05 57 06.2 -2.1
CAF Calviac 51.47 302 *e*P P **05 56 25.1 -0.5**
CAF *e**PP pP 05 57 06.2 -2.1
CAF pmax pmax
comp=Z,81nm,0.9s,mb5.2
CAF Calviac 51.47 302 *e*P P **05 56 25.1 -0.5**
comp=Z,81nm,0.9s,mb5.2
CAF *e*pP pP 05 57 06.2 -2.1
LWLI Liwa 51.60 136 P P **05 56 24.7 -2.1**
comp=Z,2µm,0.9s,mb6.5
LWLI Liwa 51.60 136 P P **05 56 24.6 -2.2**
comp=Z,2µm,0.9s,mb6.5
SJAF Saint Jean de 51.60 299 *e*P P **05 56 25.4 -1.2**
EJON La Jonquera 51.61 299 P P **05 56 26.6 0.0**
comp=Z,40nm,0.8s,mb4.9
HPK Haverah Park 51.67 314 P P **05 56 26.4 -0.6**
HPK AMB AMB 05 56 28.8
comp=Z,319nm,0.9s,mb5.8
HPK Haverah Park 51.67 314⇑ *e*P P **05 56 26.4 -0.6**
HPK AMB AMB 05 56 28.8
comp=Z,319nm,0.9s,mb5.8
KLSI 51.71 135 P P **05 56 25.0 -2.7**
comp=Z,1µm,0.8s,mb6.4
CWF Charnwood Fore 51.74 312 P P **05 56 25.0 -2.4**
CWF AMB AMB 05 56 27.7
comp=Z,90nm,1.2s,mb5.1
CWF pP 05 57 07.9 -2.3
CWF Charnwood Fore 51.74 312 *e*P P **05 56 25.0 -2.4**
CWF AMB AMB 05 56 27.7
comp=Z,90nm,1.2s,mb5.1
CWF *e* pP 05 57 07.9 -2.3
RJF Les Rejaudoux 51.74 303 *e*P P **05 56 27.2 -0.3**
comp=Z,101nm,0.9s,mb4.9
RJF *e*pP pP 05 57 08.4 -1.9
RJF *e*MLR MLR
comp=Z,669nm,21.2s
RJF Les Rejaudoux 51.74 303 *e*P P **05 56 27.2 -0.3**
RJF *e**PP pP 05 57 08.4 -1.9
RJF pmax pmax
comp=Z,51nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,670nm,21.3s
RJF Les Rejaudoux 51.74 303 *e*P P **05 56 27.2 -0.3**
comp=Z,50nm,0.9s,mb5.0
RJF *e*pP pP 05 57 08.4 -1.9
RJF LR LR
comp=Z,670nm,21.3s
CUYO Cuyo Island 51.78 106 *e*P P **05 56 29.7 +1.5**
CKHR Kef el Ahmar 51.80 290 P P **05 56 28.6 +0.4**
MME1 Meikle Cairn 51.81 318 P P **05 56 27.2 -0.6**
MME1 Meikle Cairn 51.81 318 *e*P P **05 56 27.2 -0.6**
MTLF Montolieu 51.81 300 *e*P P **05 56 27.4 -0.7**
comp=Z,50nm,0.8s,mb4.7
MTLF *e*pP pP 05 57 10.3 -0.6
MTLF Montolieu 51.81 300 *e*P P **05 56 27.4 -0.7**
MTLF *e**PP pP 05 57 10.3 -0.6
MTLF pmax pmax
comp=Z,25nm,0.8s,mb4.7
MTLF Montolieu 51.81 300 *e*P P **05 56 27.4 -0.7**
comp=Z,25nm,0.8s,mb4.7
MTLF *e*pP pP 05 57 10.3 -0.6
XAL Allendale 51.84 315 P P **05 56 27.3 -0.8**
XAL pP 05 57 09.5 -1.4
XAL Allendale 51.84 315 *e*P P **05 56 27.3 -0.8**
XAL *e* pP 05 57 09.5 -1.4
ESY Stoneypath 51.86 317 P P **05 56 27.2 -1.1**
ESY pP 05 57 10.2 -0.9
ESY Stoneypath 51.86 317⇑ *e*P P **05 56 27.2 -1.1**
ESY *e* pP 05 57 10.2 -0.9
TPI Tanjungpandan 51.89 131 P P **05 56 29.2 +0.2**
comp=Z,2µmcomp=Z,173nm,1.1s,mb5.4
TPI Tanjungpandan 51.89 131 P P **05 56 29.2 +0.2**
comp=Z,2µmcomp=Z,173nm,1.1s,mb5.4
MCD Coleburn Disti 51.92 319 P P **05 56 27.9 -0.7**
MCD pP 05 57 09.8 -1.7
MCD Coleburn Disti 51.92 319⇑ *e*P P **05 56 27.9 -0.7**
MCD *e* pP 05 57 09.8 -1.7
KLI Kotabumi 51.92 135 P P **05 56 26.7 -2.5**
comp=Z,5µmcomp=Z,385nm,1.0s,mb5.8
KLI Kotabumi 51.92 135 P P **05 56 26.9 -2.3**
comp=Z,5µmcomp=Z,386nm,1.0s,mb5.8
LDF La Druitiere 51.96 307 *e*P P **05 56 27.9 -1.2**
comp=Z,94nm,0.6s,mb5.1
LDF La Druitiere 51.96 307 *e*P P **05 56 27.9 -1.2**
LDF pmax pmax
comp=Z,47nm,0.6s,mb5.1
LDF La Druitiere 51.96 307 *e*P P **05 56 27.9 -1.2**
comp=Z,47nm,0.6s,mb5.1
WOL Wolverton 52.00 311 P P **05 56 28.5 -0.9**
WOL AMB AMB 05 56 31.4
comp=Z,427nm,0.9s,mb5.9
WOL Wolverton 52.00 311 *e*P P **05 56 28.5 -0.9**
WOL AMB AMB 05 56 31.4
comp=Z,427nm,0.9s,mb5.9
EBL Broad Law 52.13 317 P P **05 56 29.1 -1.1**
EBL Broad Law 52.13 317⇑ *e*P P **05 56 29.1 -1.1**
CFON Fontmartina 52.14 298 P P **05 56 30.5 -0.1**
comp=Z,92nm,0.9s,mb5.2
FLN La Foliniere 52.14 307 *e*P P **05 56 29.3 -1.2**
comp=Z,171nm,0.7s,mb5.3
FLN *e*pP pP 05 57 12.0 -1.3
FLN *e*MLR MLR
comp=Z,1µm,20.0s
FLN La Foliniere 52.14 307 *e*P P **05 56 29.3 -1.2**
FLN *e**PP pP 05 57 12.0 -1.3
FLN pmax pmax
comp=Z,85nm,0.7s,mb5.3
FLN MLR MLR
comp=Z,1µm,20.0s
FLN La Foliniere 52.14 307 *e*P P **05 56 29.3 -1.2**
comp=Z,85nm,0.7s,mb5.3
FLN *e*pP pP 05 57 12.0 -1.3
FLN LR LR
comp=Z,1µm,20.0s
STKI Sintang 52.18 125 P P **05 56 32.3 +1.1**
comp=Z,337nm,0.9s,mb5.8
STKI Sintang 52.18 125 P P **05 56 32.4 +1.2**
comp=Z,337nm,0.9s,mb5.8
EDI Edinburgh 52.18 317 P P **05 56 28.5 -2.1**
EDI AMB AMB 05 56 31.2
comp=Z,219nm,1.0s,mb5.5
EDI Edinburgh 52.18 317 *e*P P **05 56 28.5 -2.1**
EDI AMB AMB 05 56 31.2
comp=Z,219nm,1.0s,mb5.5
STNC Stoke 52.19 313 P P **05 56 30.8 +0.1**
STNC AMB AMB 05 56 33.2
comp=Z,179nm,1.6s,mb5.2
STNC Stoke 52.19 313⇑ *e*P P **05 56 30.8 +0.1**
STNC AMB AMB 05 56 33.2
comp=Z,179nm,1.6s,mb5.2
VALF Valcebollere 52.24 299 *e*P P **05 56 31.4 +0.1**
SDKM Sandakan 52.24 115 P P **05 56 32.5 +0.9**
CLLI Llivia 52.24 299 P P **05 56 32.0 +0.7**
KASI Kota Agung 52.26 136 P P **05 56 29.1 -2.6**
comp=Z,7µmcomp=Z,990nm,0.8s,mb6.3
ECK Cauldkaine Hil 52.29 316 P P **05 56 30.6 -0.9**
ECK Cauldkaine Hil 52.29 316⇑ *e*P P **05 56 30.6 -0.9**
EBH Black Hill 52.29 317 P P **05 56 30.4 -1.0**
EBH pP 05 57 11.2 -3.1
EBH Black Hill 52.29 317⇑ *e*P P **05 56 30.4 -1.0**
EBH *e* pP 05 57 11.2 -3.1
SWN1 Swindon 52.30 311 P P **05 56 30.9 -0.7**
SWN1 AMB AMB 05 56 34.1
comp=Z,632nm,1.0s,mb6.0
SWN1 Swindon 52.30 311 *e*P P **05 56 30.9 -0.7**
SWN1 AMB AMB 05 56 34.1
comp=Z,632nm,1.0s,mb6.0
ESK Eskdalemuir 52.31 316 P P **05 56 31.9 +0.3**
comp=Z,1µm,1.1s,mb6.3,SNR=15
ESK Eskdalemuir 52.31 316 P P **05 56 29.4 -2.1**
ESK AMB AMB 05 56 32.2
comp=Z,230nm,1.1s,mb5.5
ESK Eskdalemuir 52.31 316 *e*P P **05 56 29.4 -2.1**
ESK AMB AMB 05 56 32.2
comp=Z,230nm,1.1s,mb5.5
ESK Eskdalemuir 52.31 316 *i* P P **05 56 31.7 +0.1**
ESK Eskdalemuir 52.31 316 *e*P P **05 56 30.6 -1.0**
comp=Z,252nm,1.0s,mb5.6
ESK *e*pP pP 05 57 14.1 -0.4
EAU Auchinoon 52.34 317 P P **05 56 31.8 0.0**
EAU Auchinoon 52.34 317 *e*P P **05 56 31.8 0.0**
MVH1 Achvaich 52.35 319 P P **05 56 31.1 -0.7**
MVH1 Achvaich 52.35 319 *e*P P **05 56 31.1 -0.7**
LFF La Frestale 52.37 302 *e*P P **05 56 31.7 -0.5**
comp=Z,116nm,0.6s,mb5.2
LFF La Frestale 52.37 302 *e*P P **05 56 31.7 -0.5**
LFF pmax pmax
comp=Z,58nm,0.6s,mb5.2
LFF La Frestale 52.37 302 *e*P P **05 56 31.7 -0.5**
comp=Z,58nm,0.6s,mb5.2
KESW Keswick, Cumbr 52.40 315 P P **05 56 31.8 -0.4**
KESW AMB AMB 05 56 33.6
comp=Z,215nm,1.3s,mb5.4
KESW Keswick, Cumbr 52.40 315 *e*P P **05 56 31.8 -0.4**
KESW AMB AMB 05 56 33.6
comp=Z,215nm,1.3s,mb5.4
MBAR Mbarara 52.42 234 P P **05 56 32.3 -0.7**
comp=Z,406nm,0.9s,mb5.8,SNR=26
MBAR Mbarara 52.42 234 *c i* P P **05 56 32.4 -0.6**
GRR Gorron 52.48 307 *e*P P **05 56 31.8 -1.2**
comp=Z,313nm,0.9s,mb5.4
GRR Gorron 52.48 307 *e*P P **05 56 31.8 -1.2**
GRR pmax pmax
comp=Z,157nm,0.9s,mb5.4
GRR Gorron 52.48 307 *e*P P **05 56 31.8 -1.2**
comp=Z,156nm,0.9s,mb5.4
MFF Saint Martin d 52.49 305 *e*P P **05 56 31.9 -1.2**
comp=Z,97nm,0.8s,mb5.0
MFF Saint Martin d 52.49 305 *e*P P **05 56 31.9 -1.2**
MFF pmax pmax
comp=Z,49nm,0.8s,mb5.0
MFF Saint Martin d 52.49 305 *e*P P **05 56 31.9 -1.2**
comp=Z,49nm,0.8s,mb5.0
ETOS Mallorca 52.51 296 P P **05 56 33.5 +0.2**
comp=Z,35nm,0.7s,mb4.9
MDO Dochfour 52.53 319 P P **05 56 32.2 -0.9**
MDO pP 05 57 14.3 -1.8
MDO Dochfour 52.53 319⇑ *e*P P **05 56 32.2 -0.9**
MDO *e* pP 05 57 14.3 -1.8
BLSI Bandar Lampung 52.55 135 P P **05 56 31.2 -2.7**
comp=Z,5µmcomp=Z,784nm,0.9s,mb6.2
JMIC Jan Mayen 52.61 336 *e*P P **05 56 35.1 +1.6**
JMIC *e*S S **06 03 47.2 +1.9**
JMIC *e*SS SS 06 07 28.5 +2.9
SALF Salau 52.71 300 *e*P P **05 56 32.7 -2.0**
MLS Moulis 52.71 300 *e*P P **05 56 33.4 -1.4**
EMIR Miracle 52.74 299 P P **05 56 34.6 -0.4**
comp=Z,169nm,1.1s,mb5.4
EAB Aberfoyle 52.76 317 P P **05 56 34.1 -0.8**
EAB pP 05 57 16.3 -1.6
EAB Aberfoyle 52.76 317⇑ *e*P P **05 56 34.1 -0.8**
EAB *e* pP 05 57 16.3 -1.6
RSC Scourie 52.78 320 P P **05 56 34.8 -0.2**
RSC Scourie 52.78 320⇑ *e*P P **05 56 34.8 -0.2**
GCD Castle Douglas 52.81 316 P P **05 56 34.6 -0.7**
GCD Castle Douglas 52.81 316⇑ *e*P P **05 56 34.6 -0.7**
CSOR Sort 52.87 299 P P **05 56 36.2 +0.3**
comp=Z,58nm,1.0s,mb5.0
HGH Gray Hill 52.88 311 P P **05 56 34.7 -1.2**
HGH pP 05 57 17.6 -1.2
HGH Gray Hill 52.88 311⇑ *e*P P **05 56 34.7 -1.2**
HGH *e* pP 05 57 17.6 -1.2
YSS Yuzh-Sakhalins 52.91 55 *α i* P P **05 56 35.8 -0.3**
YSS *e**PP pP 05 57 18.0 -1.1
YSS *i* S S **06 03 49.0 -1.0**
YSS *e**SS sS 06 05 05.0 -0.1
YSS *e*SS SS 06 07 32.0 +0.8
YSS *e*SSS 06 09 36.0
YSS pmax pmax
comp=Z,190nm,1.0s,mb5.5
YSS MLR MLR
comp=E,400nm,15.0s
YSS MLR MLR
comp=Z,400nm,15.0s
YSS MLR MLR
comp=N,400nm,14.0s
YSS Yuzh-Sakhalins 52.91 55 *e*P P **05 56 36.1 0.0**
comp=N,176nm,0.8s,mb5.5
YSS *e*pP pP 05 57 19.6 +0.5
MCH1 Michaelchurch 52.91 312 P P **05 56 35.4 -0.6**
MCH1 AMB AMB 05 56 38.3
comp=N,386nm,0.8s,mb5.9
MCH1 pP 05 57 16.4 -2.7
MCH1 Michaelchurch 52.91 312 *e*P P **05 56 35.4 -0.6**
MCH1 AMB AMB 05 56 38.3
comp=Z,386nm,0.8s,mb5.9
MCH1 *e* pP 05 57 16.4 -2.7
PGBU Glenifferbraes 52.92 317 P P **05 56 35.2 -0.8**
PGBU AMB AMB 05 56 37.9
comp=Z,240nm,1.0s,mb5.6
PGBU Glenifferbraes 52.92 317 *e*P P **05 56 35.2 -0.8**
PGBU AMB AMB 05 56 37.9
comp=Z,240nm,1.0s,mb5.6
KAC Achnashellach 53.01 319 P P **05 56 36.7 0.0**
KAC pP 05 57 18.4 -1.3
KAC Achnashellach 53.01 319⇑ *e*P P **05 56 36.7 0.0**
KAC *e* pP 05 57 18.4 -1.3
SOFL Sornfelli, Far 53.02 325 *e*P P **05 56 35.2 -1.5**
SOFL AMB AMB 05 56 37.4
comp=Z,138nm,3.0s,mb4.9
MAJO Matsushiro 53.03 68 *e*P P **05 56 36.6 -0.6**
MAJO *e**PP pP 05 57 21.0 +0.8
MAJO pmax pmax
comp=Z,74nm,0.8s,mb5.2
MAJO Matsushiro 53.03 68 *e*P P **05 56 36.6 -0.6**
comp=Z,74nm,0.8s,mb5.2
MAJO *e*pP pP 05 57 21.0 +0.8
MJAR Matsushiro Arr 53.03 68 P P **05 56 35.1 -2.1**
comp=Z,49nm,0.9s,mb5.0,baz=277,slow=9.7,SNR=97
MJAR Matsushiro Arr 53.03 68 P P **05 56 35.1 -2.1**
MJAR pmax pmax
comp=Z,49nm,0.9s
HTR Trewern Hill 53.06 312 P P **05 56 35.7 -1.4**
HTR pP 05 57 18.3 -1.8
HTR Trewern Hill 53.06 312⇑ *e*P P **05 56 35.7 -1.4**
HTR *e* pP 05 57 18.3 -1.8
JSA Saint Aubin 53.11 308 P P **05 56 36.3 -1.2**
JSA AMB AMB 05 56 38.7
comp=Z,103nm,1.5s,mb5.0
JSA Saint Aubin 53.11 308 *e*P P **05 56 36.3 -1.2**
JSA AMB AMB 05 56 38.7
comp=Z,103nm,1.5s,mb5.0
GUIM Jordan 53.13 105 *e*P P **05 56 38.8 +0.6**
KSB Sheil Bridge 53.14 319 P P **05 56 37.0 -0.6**
KSB pP 05 57 18.8 -1.9
KSB Sheil Bridge 53.14 319 *e*P P **05 56 37.0 -0.6**
KSB *e* pP 05 57 18.8 -1.9
RRR Rubha Reidh 53.21 319 P P **05 56 37.1 -1.0**
RRR pP 05 57 20.4 -0.8
RRR Rubha Reidh 53.21 319⇑ *e*P P **05 56 37.1 -1.0**
RRR *e* pP 05 57 20.4 -0.8
EPF Esparros 53.22 300 *e*P P **05 56 36.7 -1.7**
comp=Z,70nm,0.7s,mb4.9
EPF Esparros 53.22 300 *e*P P **05 56 36.7 -1.7**
EPF pmax pmax
comp=Z,35nm,0.7s,mb4.9
EPF Esparros 53.22 300 *e*P P **05 56 36.7 -1.7**
comp=Z,35nm,0.7s,mb4.9
RBSI Rajabasa 53.23 135 P P **05 56 35.5 -3.3**
comp=Z,156nm,1.0s,mb5.4
EPOB Poblet 53.23 298 P P **05 56 38.8 +0.2**
comp=Z,51nm,0.8s,mb5.0
KPL Plockton 53.23 319 P P **05 56 37.2 -1.1**
KPL AMB AMB 05 56 40.0
comp=Z,188nm,0.9s,mb5.5
KPL pP 05 57 20.2 -1.2
KPL Plockton 53.23 319 *e*P P **05 56 37.2 -1.1**
KPL AMB AMB 05 56 40.0
comp=Z,188nm,0.9s,mb5.5
KPL *e* pP 05 57 20.2 -1.2
GAL1 Galloway 53.25 316 P P **05 56 37.9 -0.6**
GAL1 AMB AMB 05 56 40.3
comp=Z,121nm,1.0s,mb5.3
GAL1 Galloway 53.25 316 *e*P P **05 56 37.9 -0.6**
GAL1 AMB AMB 05 56 40.3
comp=Z,121nm,1.0s,mb5.3
RESF Ens 53.29 300 *e*P P **05 56 38.8 -0.2**
LABF Labassere 53.40 300 *e*P P **05 56 39.8 +0.1**
KAR1 Arisaig 53.42 318 P P **05 56 39.0 -0.6**
KAR1 pP 05 57 21.6 -1.1
KAR1 Arisaig 53.42 318⇑ *e*P P **05 56 39.0 -0.6**
KAR1 *e* pP 05 57 21.6 -1.1
WLF1 Llynfaes 53.43 314 P P **05 56 39.7 -0.2**
WLF1 AMB AMB 05 56 39.9
comp=Z,447nm,3.5s
WLF1 Llynfaes 53.43 314 *e*P P **05 56 39.7 -0.2**
WLF1 AMB AMB 05 56 39.9
comp=Z,447nm,3.5s
EBIE Bielsa 53.46 300 P P **05 56 40.6 +0.4**
comp=Z,21nm,0.6s,mb4.7
VIEF Viey 53.48 300 *e*P P **05 56 39.9 -0.5**
MYLDM Lahad Datu 53.51 114 P P **05 56 43.6 +2.6**
MYLDM Lahad Datu 53.51 114 P P **05 56 42.8 +1.9**
comp=Z,5µmcomp=Z,351nm,1.1s,mb5.8
SGMF Saint Gilles 53.61 307 *e*P P **05 56 40.3 -0.9**
SGMF *e*pP pP 05 57 23.1 -1.2
CNP Catarman 53.63 102 *e*P P **05 56 42.7 +0.8**
ASAJ Asahikawa 53.64 58 P P **05 56 40.0 -1.5**
comp=Z,23nm,0.8s,mb4.8,baz=295,slow=7.8,SNR=18
ASAJ Asahikawa 53.64 58 P P **05 56 40.0 -1.5**
ASAJ pmax pmax
comp=Z,23nm,0.8s
ASAJ Asahikawa 53.64 58 *e*P P **05 56 40.8 -0.6**
comp=Z,18nm,0.9s,mb4.6
TSM Tawau 53.64 115 P P **05 56 42.8 +0.9**
RRH Rhenigidale 53.66 320 P P **05 56 40.7 -0.7**
RRH Rhenigidale 53.66 320⇑ *e*P P **05 56 40.7 -0.7**
EMHD Djebel Mahouad 53.66 291 P P **05 56 40.9 -0.9**
SBJI Serang 53.67 135 P P **05 56 39.4 -2.6**
comp=Z,9µmcomp=Z,228nm,0.9s,mb5.7
SBJI Serang 53.67 135 P P **05 56 47.9 +5.9**
comp=Z,9µmcomp=Z,255nm,0.9s,mb5.7
REYF Montagne du Re 53.71 301 *e*P P **05 56 41.1 -0.9**
CGJI Cibinong 53.82 135 P P **05 56 39.5 -3.6**
comp=Z,6µmcomp=Z,726nm,0.9s,mb6.2
CGJI Cibinong 53.82 135 P P **05 56 39.6 -3.5**
comp=Z,6µmcomp=Z,725nm,0.9s,mb6.2
EIBI Ibiza 53.83 295 P P **05 56 43.0 0.0**
comp=Z,84nm,0.9s,mb5.3
ETSF Etsaut 53.88 300 *e*P P **05 56 42.7 -0.6**
comp=Z,274nm,0.8s,mb5.6
ETSF Etsaut 53.88 300 *e*P P **05 56 42.7 -0.6**
ETSF pmax pmax
comp=Z,137nm,0.8s,mb5.5
ETSF Etsaut 53.88 300 *e*P P **05 56 42.7 -0.6**
comp=Z,137nm,0.8s,mb5.5
ERTA Horta de San J 53.90 298 P P **05 56 43.6 +0.2**
comp=Z,89nm,1.0s,mb5.2
ROSF Rostrenen 54.05 308 *e*P P **05 56 43.3 -1.1**
comp=Z,412nm,1.1s,mb5.6
ROSF Rostrenen 54.05 308 *e*P P **05 56 43.3 -1.1**
ROSF pmax pmax
comp=Z,206nm,1.1s,mb5.6
ROSF Rostrenen 54.05 308 *e*P P **05 56 43.3 -1.1**
comp=Z,206nm,1.1s,mb5.6
HTL Hartland 54.07 311 P P **05 56 44.1 -0.4**
HTL AMB AMB 05 56 46.0
comp=Z,124nm,0.9s,mb5.5
HTL pP 05 57 26.8 -0.8
HTL Hartland 54.07 311 *e*P P **05 56 44.1 -0.4**
HTL AMB AMB 05 56 46.0
comp=Z,124nm,0.9s,mb5.5
HTL *e* pP 05 57 26.8 -0.8
QUIF Quistinic 54.10 307 *e*P P **05 56 43.5 -1.2**
comp=Z,228nm,1.1s,mb5.3
QUIF Quistinic 54.10 307 *e*P P **05 56 43.5 -1.2**
QUIF pmax pmax
comp=Z,114nm,1.1s,mb5.3
QUIF Quistinic 54.10 307 *e*P P **05 56 43.5 -1.2**
comp=Z,114nm,1.1s,mb5.3
GMM Mts of Mourne 54.10 315 P P **05 56 43.7 -0.9**
GMM Mts of Mourne 54.10 315 *e*P P **05 56 43.7 -0.9**
LARF Larrau 54.14 301 *e*P P **05 56 43.9 -1.2**
COCO West Island 54.20 148 *i* P P **05 56 48.3 +2.5**
ESAC San Caprasio 54.21 299 P P **05 56 46.0 +0.4**
comp=Z,151nm,0.9s,mb5.5
SJPF Ste Jean 54.28 301 *e*P P **05 56 45.0 -1.1**
comp=Z,97nm,1.0s,mb5.0
SJPF Ste Jean 54.28 301 *e*P P **05 56 45.0 -1.1**
SJPF pmax pmax
comp=Z,49nm,1.0s,mb5.0
SJPF Ste Jean 54.28 301 *e*P P **05 56 45.0 -1.1**
comp=Z,48nm,1.0s,mb5.0
DBJI Dramaga 54.38 134 P P **05 56 43.8 -3.4**
comp=Z,459nm,0.8s,mb6.0
DBJI Dramaga 54.38 134 P P **05 56 43.8 -3.4**
comp=Z,459nm,0.8s,mb6.0
PBKI Pangkalan Bun 54.38 127 P P **05 56 48.1 +0.9**
EALK Alkurruntz 54.44 301 P P **05 56 48.5 +1.2**
comp=Z,78nm,1.0s,mb5.2
ELIZ Elizondo 54.47 301 P P **05 56 48.0 +0.5**
ELIZ pmax pmax
comp=Z,39nm,0.8s,mb5.0
ELIZ Elizondo 54.47 301 P P **05 56 48.0 +0.5**
comp=Z,39nm,0.8s,mb5.0
DSB Dublin 54.59 314 *e*P P **05 56 48.0 -0.2**
comp=Z,38nm,0.7s,mb5.0
DSB *e*pP pP 05 57 31.7 +0.2
DLF Lyons Farm 54.67 314 ⇓ *i* P P **05 56 48.6 -0.2**
EMOS Mosqueruela 54.68 297 P P **05 56 49.5 +0.5**
comp=Z,59nm,0.9s,mb5.1
TBP Tagbilaran 54.69 105 *e*P P **05 56 50.1 +0.6**
EBNR Beni Rached 54.70 292 P P **05 56 49.0 -0.3**
ERM Erimo 54.71 60 P P **05 56 50.4 +1.1**
comp=Z,260nm,0.5s,mb6.0,SNR=8.5
ERM Erimo 54.71 60 *d i* P P **05 56 48.7 -0.6**
ERM Erimo 54.71 60 *e*P P **05 56 46.5 -2.7**
comp=Z,22nm,0.6s,mb4.9
CCA1 Carnmenellis 54.74 310 P P **05 56 47.3 -2.1**
CCA1 AMB AMB 05 56 49.7
comp=Z,193nm,1.1s,mb5.5
CCA1 Carnmenellis 54.74 310 *e*P P **05 56 47.3 -2.1**

CCA1 AMB AMB 05 56 49.7
comp=Z,193nm,1.1s,mb5.5
ECHA Ech Chief 54.87 292 P **P** **05 56 51.0 +0.5**
EBEN Beniarda 55.09 295 P **P** **05 56 52.6 +0.6**
comp=Z,17nm,0.7s,mb4.7
LEM Lembang 55.10 134 P **P** **05 56 48.8 -3.6**
comp=Z,2µmcomp=Z,138nm,0.8s,mb5.5
LEM Lembang 55.10 134 P **P** **05 56 50.0 -2.4**
comp=Z,2µmcomp=Z,138nm,0.8s,mb5.5
EANR 'Ain N'Sour 55.15 292 P **P** **05 56 51.7 -0.8**
MSLP Maasin 55.20 104 *e*P **P** **05 56 54.1 +1.0**
ETRT Tiaret 55.22 291 P **P** **05 56 52.5 -0.5**
ECHE Chera 55.31 297 P **P** **05 56 54.5 +0.9**
ECHE pmax pmax
comp=Z,52nm,1.0s,mb5.0
ECHE Chera 55.31 297 P **P** **05 56 54.5 +0.9**
comp=Z,52nm,1.0s,mb5.0
ECRI Cripan 55.34 301 P **P** **05 56 54.0 +0.3**
ECRI pmax pmax
comp=Z,46nm,0.9s,mb5.0
ECRI Cripan 55.34 301 P **P** **05 56 54.0 +0.2**
comp=Z,46nm,0.9s,mb5.0
PAGZ Pagadian 55.46 107 *e*P **P** **05 56 56.4 +1.3**
ETOR Torete 55.64 298 P **P** **05 56 54.3 -1.7**
comp=Z,33nm,1.6s,mb4.6
ELAN Lanestosa 55.76 302 P **P** **05 56 56.9 +0.1**
comp=Z,482nm,1.3s,mb5.9
CISI Cisompet, Garu 55.80 134 P **P** **05 56 53.1 -4.3**
comp=Z,3µmcomp=Z,313nm,0.9s,mb5.8
CISI Cisompet, Garu 55.80 134 P **P** **05 56 56.0 -1.4**
comp=Z,3µmcomp=Z,313nm,0.9s,mb5.8
YUK Yuzh-Kuril'sk 55.89 57⇑ *i*P **P** **05 56 49.2 -8.4**
YUK *i* *PP pP 05 57 30.0 -11
YUK pmax pmax
comp=N,80nm,1.0s
YUK pmax pmax
comp=E,72nm,1.0s
YUK pmax pmax
comp=Z,282nm,1.0s,mb5.8
YUK MLR MLR
comp=N,1µm,15.0s
YUK MLR MLR
comp=E,600nm,15.0s
YUK MLR MLR
comp=Z,600nm,15.0s
ETOB Tobarra 56.08 296 P **P** **05 56 59.7 +0.7**
comp=Z,44nm,0.7s,mb5.1
CART Cartagena 56.08 294 *e*P **P** **05 56 58.7 -0.4**
comp=Z,166nm,0.9s,mb5.6
CART *ep*P pP 05 57 44.7 +2.1
EMUR La Murta 56.16 295 P **P** **05 56 59.6 -0.1**
comp=Z,44nm,0.9s,mb5.0
BUTP Butuan 56.50 105 *e*P **P** **05 57 03.4 +1.0**
BUKP Musuan 56.74 106 *e*P **P** **05 57 05.5 +1.4**
BJII Banjamegara 56.74 132 P **P** **05 57 01.5 -2.5**
comp=Z,1µmcomp=Z,118nm,1.0s,mb5.5
BJII Banjamegara 56.74 132 P **P** **05 57 02.8 -1.2**
comp=Z,1µmcomp=Z,118nm,1.0s,mb5.5
EVIA Vianos 56.77 296 P **P** **05 57 04.4 +0.5**
EVIA pmax pmax
comp=Z,51nm,0.7s,mb5.3
EVIA Vianos 56.77 296 P **P** **05 57 04.4 +0.4**
comp=Z,51nm,0.7s,mb5.3
EARI Arriondas 56.95 302 P **P** **05 57 04.9 -0.3**
comp=Z,54nm,0.9s,mb5.2
SMRI Semarang 56.96 131 P **P** **05 57 03.4 -2.1**
comp=Z,3µmcomp=Z,355nm,0.9s,mb6.0
SMRI Semarang 56.96 131 P **P** **05 57 04.6 -0.9**
comp=Z,3µmcomp=Z,355nm,0.9s,mb6.0
XMIS Christmas Isla 56.99 138 P **P** **05 57 04.6 -1.1**
comp=Z,2µm,1.0s
SCO Scoresbysund 57.08 336⇓ *i*P **P** **05 57 07.0 +1.4**
SCO pmax pmax
comp=Z,41nm,1.0s,mb5.0
SCO MLR MLR
comp=Z,1µm,18.0s
EHUE Huescar 57.15 295 P **P** **05 57 06.2 -0.5**
EHUE pmax pmax
comp=Z,141nm,0.9s,mb5.6
EHUE Huescar 57.15 295 P **P** **05 57 06.2 -0.5**
comp=Z,141nm,0.9s,mb5.6
GUD Guadarrama 57.19 299 P **P** **05 57 07.1 +0.2**
GUD pmax pmax
comp=Z,100nm,0.9s,mb5.5
GUD Guadarrama 57.19 299 P **P** **05 57 07.1 +0.2**
comp=Z,100nm,0.9s,mb5.4
ENIJ Nijar 57.20 294 P **P** **05 57 06.3 -0.7**
ENIJ pmax pmax
comp=Z,106nm,0.7s,mb5.6
ENIJ Nijar 57.20 294 P **P** **05 57 06.3 -0.7**
comp=Z,106nm,0.7s,mb5.6
VAL Valentia 57.23 313⇓ *i*P **P** **05 57 06.5 -0.5**
ESDC Sonseca Array 57.42 298 P **P** **05 57 07.7 -0.9**
comp=Z,65nm,1.0s,mb5.2,baz=57,slow=7.1,SNR=61
ESDC pP pP 05 57 51.2 -1.0
comp=Z,59nm,0.9s,baz=57,slow=7.3,SNR=5.0
ESDC PKPPKP 06 26 56.0
comp=Z,3.9nm,1.0s,baz=290,slow=1.6,SNR=7.9
ESDC Sonseca Array 57.42 298 P **P** **05 57 07.9 -0.6**
comp=Z,56nm,0.9s,mb5.2
EQES Quesada 57.51 295 P **P** **05 57 09.2 +0.1**
comp=Z,285nm,1.3s,mb5.7
DAV Davao City (W) 57.64 107 P **P** **05 57 10.6 +0.3**
comp=Z,175nm,0.4s,mb6.1,baz=79,slow=10.0,SNR=5.8
DAV Davao City (W) 57.64 107⇑ *e*P **P** **05 57 10.1 -0.3**
DAV Davao City (W) 57.64 107 P **P** **05 57 12.6 +2.2**
SNR=7.7
UGM Wanagama 57.69 132 P **P** **05 57 09.5 -1.1**
comp=Z,203nm,0.9s,mb5.7
EBER Berja 57.73 294 P **P** **05 57 10.5 -0.2**
comp=Z,75nm,0.7s,mb5.4
PAB San Pablo 57.75 298 *e*P **P** **05 57 10.6 -0.2**
PAB *e**PP pP 05 57 53.7 -0.8
PAB pmax pmax
comp=Z,383nm,1.8s,mb5.7
PAB San Pablo 57.75 298 *e*P **P** **05 57 10.6 -0.2**
comp=Z,383nm,1.8s,mb5.7
PAB *ep*P pP 05 57 53.7 -0.8
KBKI Kotabaru 57.80 123 P **P** **05 57 12.2 +0.8**
comp=Z,8µmcomp=Z,587nm,1.0s,mb6.2
KBKI Kotabaru 57.80 123 P **P** **05 57 12.3 +0.9**
comp=Z,8µmcomp=Z,587nm,1.0s,mb6.2
NGJI Ngawi 57.83 130 P **P** **05 57 11.6 0.0**
comp=Z,299nm,1.0s,mb5.9
NGJI Ngawi 57.83 130 P **P** **05 57 11.6 0.0**
comp=Z,299nm,1.0s,mb5.9
EBAN Banos Encina 57.88 296 P **P** **05 57 11.8 +0.1**
EBAN pmax pmax
comp=Z,64nm,0.6s,mb5.4
EBAN Banos Encina 57.88 296 P **P** **05 57 11.8 +0.1**
comp=Z,64nm,0.6s,mb5.4
ECOG Cogollos-Vega 58.08 295 P **P** **05 57 12.1 -1.0**
ECOG pmax pmax
comp=Z,51nm,0.7s,mb5.3
ECOG Cogollos-Vega 58.08 295 P **P** **05 57 12.1 -1.0**
comp=Z,51nm,0.7s,mb5.3
EALB Alboran 58.23 293 P **P** **05 57 14.2 0.0**
comp=Z,66nm,0.6s,mb5.4
EGUA Guajares 58.26 295 P **P** **05 57 13.4 -1.0**
comp=Z,11nm,1.9s
EPON Pontenova 58.26 303 P **P** **05 57 13.7 -0.6**
comp=Z,211nm,1.4s,mb5.6
PCJI Pacitan 58.31 131 P **P** **05 57 11.4 -3.5**
SJI Sawahan 58.31 130 P **P** **05 57 12.5 -2.4**
comp=Z,114nm,1.0s,mb5.5
SJI Sawahan 58.31 130 P **P** **05 57 12.7 -2.2**
comp=Z,114nm,1.0s,mb5.5
ERON Agron 58.36 295 P **P** **05 57 14.3 -0.7**
comp=Z,123nm,1.6s,mb5.3
EADA Adamuz 58.45 296 P **P** **05 57 15.6 -0.1**
comp=Z,44nm,0.8s,mb5.1
ELUQ Luque 58.47 296 P **P** **05 57 14.9 -0.9**
ELUQ pmax pmax
comp=Z,79nm,0.8s,mb5.4
ELUQ Luque 58.47 296 P **P** **05 57 14.9 -0.9**
comp=Z,79nm,0.8s,mb5.4
ECAL Calabor 58.50 301 P **P** **05 57 16.7 +0.8**
comp=Z,94nm,1.0s,mb5.4
PWJI Pagerwojo 58.55 131 P **P** **05 57 14.0 -2.6**
comp=Z,2µmcomp=Z,141nm,0.9s,mb5.6
PWJI Pagerwojo 58.55 131 P **P** **05 57 13.4 -3.2**
comp=Z,2µmcomp=Z,142nm,0.9s,mb5.6
PBRG Braganca 58.56 301 *e*P **P** **05 57 16.8 +0.5**
comp=Z,38nm,1.3s,mb4.9
PBRG *ep*P pP 05 57 59.8 -0.4
ELOJ Sierra Loja 58.56 295 P **P** **05 57 15.2 -1.2**
ELOJ pmax pmax
comp=Z,24nm,0.7s,mb4.9
ELOJ Sierra Loja 58.56 295 P **P** **05 57 15.2 -1.2**
comp=Z,24nm,0.7s,mb4.9
ERUA La Rua 58.61 302 P **P** **05 57 17.4 +0.7**
ERUA pmax pmax
comp=Z,53nm,1.3s,mb5.0
ERUA La Rua 58.61 302 P **P** **05 57 17.4 +0.7**
comp=Z,53nm,1.3s,mb5.0
BORG Borgarnes 58.62 330 LR LR 06 24 57.2
comp=Z,565nm,18.2s,baz=177,slow=38
BORG Borgarnes 58.62 330 *e*P **P** **05 57 18.7 +2.3**
BORG *e**PP pP 05 58 00.7 +0.5
BORG pmax pmax
comp=Z,73nm,0.8s
BORG Borgarnes 58.62 330 *e*P **P** **05 57 18.7 +2.4**
comp=Z,73nm,0.8s,mb5.4
BORG *ep*P pP 05 58 00.7 +0.5
BORG Borgarnes 58.62 330 P **P** **05 57 18.6 +2.2**
comp=Z,631nm,0.7s,mb6.3,SNR=14
PCI Palu 58.63 118 P **P** **05 57 11.8 -5.4**
comp=Z,442nmcomp=Z,30nm,1.0s,mb4.9
BILL Bilibino 58.68 26⇑ *i*P **P** **05 57 17.5 +0.7**
BILL *i* *PP pP 05 58 01.2 +0.6
BILL *i* S **S** **06 05 08.4 +2.7**
BILL *i* SS SS 06 09 08.6 +7.5
BILL pmax pmax
comp=Z,240nm,1.0s,mb5.8
BILL MLR MLR
comp=Z,2µm,19.0s
BILL Bilibino 58.68 26 *e*P **P** **05 57 17.6 +0.8**
comp=Z,178nm,0.8s,mb5.8
BILL *ep*P pP 05 58 01.1 +0.5
EPLA Plasencia 58.77 299 P **P** **05 57 16.7 -1.2**
EPLA pmax pmax
comp=Z,117nm,2.1s,mb5.2
EPLA Plasencia 58.77 299 P **P** **05 57 16.7 -1.2**
comp=Z,116nm,2.1s,mb5.1
MVO Moncorvo 59.00 301 *e*P **P** **05 57 19.3 -0.1**
comp=Z,113nm,1.2s,mb5.4
MVO *ep*P pP 05 58 03.0 -0.3
MVO Moncorvo 59.00 301 P **P** **05 57 19.7 +0.3**
KRKI Karangkates 59.06 130 P **P** **05 57 19.0 -1.1**
comp=Z,320nm,1.0s,mb5.9
KRKI Karangkates 59.06 130 P **P** **05 57 19.4 -0.7**
comp=Z,320nm,1.0s,mb5.9
ALE Alert 59.08 354 P **P** **05 57 19.3 -0.1**
comp=Z,261nm,0.9s,mb5.9,SNR=22
ECAB El Cabril 59.10 297 P **P** **05 57 19.3 -0.9**
comp=Z,66nm,1.4s,mb5.1
KMMI Kalianget 59.16 128 P **P** **05 57 19.8 -1.0**
KMMI Kalianget 59.16 128 P **P** **05 57 20.7 -0.1**
comp=Z,167nm,1.0s,mb5.6
MRSI Marisa 59.20 115 P **P** **05 57 21.6 +0.5**
comp=Z,1µm,0.9s,mb6.5
MRSI Marisa 59.20 115 P **P** **05 57 21.3 +0.2**
comp=Z,1µm,0.9s,mb6.5
EMIJ Mijas 59.25 295 P **P** **05 57 19.3 -1.9**
comp=Z,52nm,0.8s,mb5.2
STS Santiago 59.38 303 P **P** **05 57 22.4 +0.4**
STS pmax pmax
comp=Z,71nm,1.8s,mb5.0
STS Santiago 59.38 303 P **P** **05 57 22.4 +0.4**
comp=Z,71nm,1.8s,mb5.0
PVRL Vila Real 59.44 301 *e*P **P** **05 57 22.7 +0.3**
comp=Z,76nm,1.3s,mb5.2
PVRL *ep*P pP 05 58 06.4 0.0
ELOB Lobios 59.44 302 P **P** **05 57 23.0 +0.6**
comp=Z,65nm,0.8s,mb5.3
ABPO Ambohimpanom 59.54 206 P **P** **05 57 24.9 +1.7**
comp=Z,605nm,0.9s,mb6.2,SNR=18
ABPO Ambohimpanom 59.54 206 *e*P **P** **05 57 24.1 +0.9**
ABPO pmax pmax
comp=Z,276nm,1.1s,mb5.8
ABPO Ambohimpanom 59.54 206 *e*P **P** **05 57 24.1 +0.9**
comp=Z,276nm,1.1s,mb5.8
EMAZ Mazaricos 59.64 303 P **P** **05 57 23.2 -0.5**
comp=Z,80nm,1.1s,mb5.3
MTE Manteigas 59.67 300 *e*P **P** **05 57 24.7 +0.7**
comp=Z,193nm,1.2s,mb5.6
MTE *ep*P pP 05 58 07.5 -0.5
MTE Manteigas 59.67 300 *e*P **P** **05 57 24.1 +0.1**
comp=Z,163nm,1.1s,mb5.6
MTE *ep*P pP 05 58 07.9 -0.1
SGSI Sangihe 59.75 110 P **P** **05 57 26.9 +2.0**
comp=Z,222nm,1.0s,mb5.8
EZAM Zamans 59.76 302 P **P** **05 57 23.9 -0.7**
EZAM pmax pmax
comp=Z,12nm,0.5s,mb4.8
EZAM Zamans 59.76 302 P **P** **05 57 23.9 -0.7**
comp=Z,12nm,0.5s,mb4.8
GMJI Gumukmas 59.76 129 P **P** **05 57 22.2 -2.7**
comp=Z,1µmcomp=Z,134nm,0.9s,mb5.6
GMJI Gumukmas 59.76 129 P **P** **05 57 22.2 -2.7**
comp=Z,1µmcomp=Z,134nm,0.9s,mb5.6
PVIS Viseu 59.78 300 *e*P **P** **05 57 24.8 0.0**
comp=Z,161nm,1.3s,mb5.5
PVIS *ep*P pP 05 58 08.7 -0.1
EJIF Jimena Fronter 59.81 295 P **P** **05 57 23.4 -1.6**
EJIF pmax pmax
comp=Z,74nm,1.3s,mb5.2
EJIF Jimena Fronter 59.81 295 P **P** **05 57 23.4 -1.6**
comp=Z,74nm,1.3s,mb5.2
PCBR Castelo Branco 59.85 299 *e*P **P** **05 57 25.9 +0.7**
comp=Z,74nm,1.3s,mb5.2
ESPR Espera 59.91 296 P **P** **05 57 24.1 -1.7**
comp=Z,41nm,0.7s,mb5.2
PMRV Marv??o 59.95 299 *e*P **P** **05 57 26.1 +0.1**
comp=Z,108nm,1.3s,mb5.3
PMRV *ep*P pP 05 58 09.6 -0.4
EBAD Badajoz 59.96 298 P **P** **05 57 26.1 +0.1**
comp=Z,121nm,0.8s,mb5.6
SKR Severo-Kuril's 60.05 47 *e*P **P** **05 57 26.6 +0.2**
SKR *e* pP pP 05 58 10.0 -0.4
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.4
PETK Petropavlovsk- 60.05 44 P **P** **05 57 25.0 -1.4**
comp=Z,19nm,0.7s,mb4.8,baz=309,slow=3.7,SNR=34
PETK pP pP 05 58 10.0 -0.4
comp=Z,73nm,1.1s,baz=294,slow=1.4,SNR=5.3
PETK PKPPKP 06 26 41.8
comp=Z,2.5nm,0.4s,baz=128,slow=9.6,SNR=5.4
PETK Petropavlovsk- 60.05 44 P **P** **05 57 25.0 -1.4**
PETK pP pP 05 58 10.0 -0.4
PETK P'P' 06 26 41.8
CBIJ Chichi jima 60.08 77 P **P** **05 57 24.1 -2.9**
comp=Z,35nm,0.5s,mb5.3,baz=296,slow=12,SNR=11
TTSI Tana Toraja 60.13 120 P **P** **05 57 27.3 -0.1**
comp=Z,3µmcomp=Z,352nm,0.9s,mb6.0
TTSI Tana Toraja 60.13 120 P **P** **05 57 27.0 -0.4**
comp=Z,3µmcomp=Z,352nm,0.9s,mb6.0
EMIN Mina Concepcio 60.13 297 P **P** **05 57 26.9 -0.3**
comp=Z,52nm,0.8s,mb5.2
PBAR Barrancos 60.22 297 *e*P **P** **05 57 27.5 -0.3**
comp=Z,152nm,1.2s,mb5.5
PBAR *ep*P pP 05 58 11.2 -0.7
BYJI Banyuwangi 60.29 128 P **P** **05 57 28.3 -0.2**
comp=Z,584nm,0.9s,mb6.2
BYJI Banyuwangi 60.29 128 P **P** **05 57 28.6 +0.1**
comp=Z,584nm,0.9s,mb6.2
PESTR Estremoz 60.33 298 *e*P **P** **05 57 28.2 -0.3**
comp=Z,106nm,1.1s,mb5.4
PESTR *ep*P pP 05 58 12.0 -0.6
JAGI Jajag, Banyuwa 60.36 129 P **P** **05 57 26.2 -2.8**
comp=Z,2µmcomp=Z,180nm,0.8s,mb5.8
JAGI Jajag, Banyuwa 60.36 129 P **P** **05 57 26.3 -2.7**
comp=Z,2µmcomp=Z,180nm,0.8s,mb5.8
NBBI Negara 60.58 128 P **P** **05 57 28.2 -2.2**
comp=Z,782nm,0.8s,mb6.4
NBBI Negara 60.58 128 P **P** **05 57 28.7 -1.7**
comp=Z,783nm,0.8s,mb6.4
PTOM Tomar 60.59 299 *e*P **P** **05 57 30.9 +0.6**
comp=Z,199nm,1.1s,mb5.7
PTOM *ep*P pP 05 58 14.2 -0.2
PET Petropavlovsk 60.62 44 *e*P **P** **05 57 28.5 -1.7**
PET *e**PP pP 05 58 10.0 -4.3
PET *e*S **S** **06 05 22.9 -7.9**
PET pmax pmax
comp=Z,94nm,1.1s,mb5.3
PET pmax pmax
comp=Z,300nm,17.4s
PET MLR MLR
comp=Z,600nm,13.0s
PET MLR MLR
comp=Z,800nm,16.0s
KMSI Cibinong 60.63 113 P **P** **05 57 31.8 +0.9**
comp=Z,1µm,0.9s,mb6.6
KMSI Cibinong 60.63 113 P **P** **05 57 31.6 +0.7**
comp=Z,1µm,0.9s,mb6.6
MNI Manado 60.69 112 P **P** **05 57 31.9 +0.6**
comp=Z,6µmcomp=Z,581nm,0.8s,mb6.2
MNI Manado 60.69 112 P **P** **05 57 32.7 +1.4**
comp=Z,6µmcomp=Z,581nm,0.8s,mb6.2
SRBI Singaraja 60.74 128 P **P** **05 57 30.5 -1.0**
comp=Z,3µmcomp=Z,332nm,0.9s,mb6.0
SRBI Singaraja 60.74 128 P **P** **05 57 30.6 -0.9**
comp=Z,3µmcomp=Z,333nm,0.9s,mb6.0
EVO Evora 60.77 298 *e*P **P** **05 57 32.0 +0.5**
comp=Z,165nm,1.2s,mb5.2
EVO *ep*P pP 05 58 15.2 -0.4
EVO *e*MLR MLR
comp=Z,430nm,17.5s
EVO Evora 60.77 298 *e*P **P** **05 57 31.5 0.0**
comp=Z,122nm,1.3s,mb5.4
EVO *ep*P pP 05 58 15.2 -0.4
EGRO El Granado 60.81 297 P **P** **05 57 31.6 -0.2**
comp=Z,70nm,0.8s,mb5.3
LUWI Luwuk 60.84 116 P **P** **05 57 31.9 -0.4**
comp=Z,2µmcomp=Z,296nm,0.9s,mb5.9
LUWI Luwuk 60.84 116 P **P** **05 57 41.7 +9.4**
EVOP Sao Brissos 60.85 298 AMb AMB 05 58 19.4
comp=Z,200nm,1.8s,mb5.4
EVOP *e*S **S** **06 05 34.9 +0.7**
EVOP *e*S **S** **06 05 35.1 +0.9**
PBEJ Beja 60.88 298 *e*P **P** **05 57 32.4 +0.2**
comp=Z,99nm,1.1s,mb5.4
PBEJ *ep*P pP 05 58 16.6 +0.2
PVAQ Vaqueiros 61.03 297 *e*P **P** **05 57 32.9 -0.4**
comp=Z,142nm,1.1s,mb5.5
PVAQ *ep*P pP 05 58 16.8 -0.7
SUMG Summit 61.09 341 *e*P **P** **05 57 34.1 +1.0**
comp=Z,447nm,0.9s,mb6.1
SUMG *ep*P pP 05 58 17.7 +0.4
PCVE Castro Verde 61.17 297 *e*P **P** **05 57 34.3 +0.1**
comp=Z,90nm,1.5s,mb5.2
PCVE *ep*P pP 05 58 18.7 +0.3
KHKI Kahang-Kahang 61.20 127 P **P** **05 57 32.7 -2.0**
comp=Z,7µmcomp=Z,851nm,0.8s,mb6.5
MESJ Messejana 61.21 297 *e*P **P** **05 57 33.7 -0.8**
comp=Z,153nm,2.0s,mb5.3
MESJ *e*S **S** **06 05 39.5 +0.7**
MESJ Messejana 61.21 297 *e*P **P** **05 57 33.7 -0.8**
MESJ AMb AMB 05 58 20.4
comp=Z,153nm,2.0s,mb5.3
MESJ *e*S **S** **06 05 39.5 +0.7**
MESJ *e*S **S** **06 05 39.5 +0.7**
PBDV Barranco-do-Ve 61.26 297 *e*P **P** **05 57 34.8 0.0**
comp=Z,172nm,1.1s,mb5.6
PBDV *ep*P pP 05 58 18.7 -0.3
KAPI Kappang 61.49 121 *e*P **P** **05 57 34.5 -2.1**
comp=Z,152nm,0.9s,mb5.6
KAPI Kappang 61.49 121 P **P** **05 57 35.2 -1.4**
SNR=10
PMAFR Mafra 61.49 299 *e*P **P** **05 57 36.7 +0.4**
comp=Z,208nm,1.4s,mb5.6
PMAFR *ep*P pP 05 58 20.3 -0.3
LIS Lisbon 61.49 299 *e*P **P** **05 57 35.5 -0.9**
comp=Z,300nm,2.0s,mb5.6
LIS *e*S **S** **06 05 43.0 +0.6**
LIS Lisbon 61.49 299 *e*P **P** **05 57 35.5 -0.9**
LIS AMb AMB 05 58 24.4
comp=Z,300nm,2.0s,mb5.6
LIS *e*S **S** **06 05 43.0 +0.7**
LIS *e*S **S** **06 05 43.4 +1.1**
PTEO Sao Teotonio 61.70 297 *e*P **P** **05 57 37.8 +0.1**
comp=Z,139nm,1.1s,mb5.5
PTEO *ep*P pP 05 58 22.3 +0.3
MORF Marmelete 61.75 297 *e*P **P** **05 57 38.5 +0.4**
MORF *ep*P pP 05 58 18.8 -3.6
MORF Marmelete 61.75 297 *e*P **P** **05 57 36.9 -1.2**
MORF *e*S **S** **06 05 46.0 +0.4**
MTNI Mataram 61.77 127 P **P** **05 57 36.1 -2.3**
comp=Z,138nm,0.9s,mb5.6
MTNI Mataram 61.77 127 P **P** **05 57 36.4 -2.0**
comp=Z,138nm,0.9s,mb5.6
PFVI Vila Bisbo 61.95 297 *e*P **P** **05 57 39.6 +0.2**
comp=Z,151nm,1.4s,mb5.4
PFVI *ep*P pP 05 58 23.2 -0.5
PFVI Vila Bisbo 61.95 297 P **P** **05 57 39.7 +0.3**
BKSI Bulukumba 61.96 121 P **P** **05 57 39.7 -0.1**
comp=Z,4µmcomp=Z,160nm,1.9s,mb5.3
BKSI Bulukumba 61.96 121 P **P** **05 57 39.2 -0.6**
comp=Z,4µmcomp=Z,160nm,1.9s,mb5.3
KDI Kendari 62.74 118 P **P** **05 57 45.4 +0.4**
comp=Z,3µmcomp=Z,175nm,1.2s,mb5.6
KDI Kendari 62.74 118 P **P** **05 57 44.9 -0.1**
comp=Z,3µmcomp=Z,175nm,1.2s,mb5.6
TNTI Ternate 63.03 111 P **P** **05 57 46.9 0.0**
comp=Z,1µm,1.1s,mb6.5
TNTI Ternate 63.03 111 P **P** **05 57 46.8 -0.1**
comp=Z,1µm,1.1s,mb6.5
BBSI Bau Bau 63.78 120 P **P** **05 57 53.8 +2.0**
comp=Z,8µmcomp=Z,528nm,1.0s,mb6.1
BBSI Bau Bau 63.78 120 P **P** **05 57 53.5 +1.7**
comp=Z,8µmcomp=Z,528nm,1.0s,mb6.1
LBMI Labuha 64.06 112 P **P** **05 57 52.9 -0.7**
comp=Z,9µmcomp=Z,599nm,0.9s,mb6.2
LBMI Labuha 64.06 112 P **P** **05 57 53.2 -0.4**
comp=Z,9µmcomp=Z,599nm,0.9s,mb6.2
NLAI Namlea 65.49 114 P **P** **05 58 03.6 +0.7**
comp=Z,4µmcomp=Z,560nm,0.8s,mb6.3
NLAI Namlea 65.49 114 P **P** **05 58 03.3 +0.4**
comp=Z,4µmcomp=Z,560nm,0.8s,mb6.3
TORD Torodi Ar. Bea 65.65 269 P **P** **05 58 01.8 -2.1**
comp=Z,68nm,0.6s,mb5.5,baz=51,slow=5.3,SNR=77
TORD pP pP 05 58 46.5 -2.2
comp=Z,65nm,0.7s,baz=51,slow=5.7,SNR=4.7
TORD PKPPKP 06 26 29.4
comp=Z,3.1nm,0.9s,baz=198,slow=4.1,SNR=8.7
TORD Torodi Ar. Bea 65.65 269 P **P** **05 58 01.8 -2.1**
TORD pP pP 05 58 46.5 -2.2
TORD P'P' 06 26 29.4
MMRI Maumere 65.79 122 P **P** **05 58 02.8 -1.9**
comp=Z,4µmcomp=Z,268nm,0.9s,mb5.9
MMRI Maumere 65.79 122 P **P** **05 58 02.9 -1.8**
comp=Z,4µmcomp=Z,268nm,0.9s,mb5.9
BNDI Bandanaira 68.42 113 P **P** **05 58 19.3 -2.0**
comp=Z,1µm,0.8s
BNDI Bandanaira 68.42 113 P **P** **05 58 20.6 -0.7**
comp=Z,1µm,0.8s
GAMB Gambell 68.58 25 *e*P **P** **05 58 21.5 0.0**
comp=Z,93nm,1.0s,mb5.4
GAMB *ep*P pP 05 59 06.5 -0.2
TNA Tin City 68.64 22 *e*P **P** **05 58 22.0 +0.1**
comp=Z,101nm,0.8s,mb5.5
TNA *ep*P pP 05 59 07.6 +0.5
RES Resolute Bay 68.75 356 *e*P **P** **05 58 23.0 +0.6**
RES *e**PP pP 05 59 07.1 -0.5
RES pmax pmax
comp=Z,63nm,1.1s,mb5.2
RES Resolute Bay 68.75 356 *e*P **P** **05 58 23.0 +0.6**
comp=Z,63nm,1.1s,mb5.2
RES *ep*P pP 05 59 07.1 -0.5
EFAM Famara 69.22 291 P **P** **05 58 25.7 -0.5**
comp=Z,63nm,0.7s,mb5.3
CFTV Fuerteventura 70.01 291 P **P** **05 58 30.1 -0.8**
comp=Z,32nm,0.9s,mb5.0
MSNA Messina 70.08 220 *e*P **P** **05 58 32.2 +0.9**
MSNA AMB AMB 05 58 32.6
comp=Z,224nm,1.7s,mb5.5
MOPA Mopani 70.35 218⇑ *i*P **P** **05 58 33.6 +0.8**
MOPA AMB AMB 05 58 35.4
comp=Z,356nm,1.0s,mb6.0
BAKI Biak 70.97 106 P **P** **05 58 36.3 -0.6**
comp=Z,4µmcomp=Z,275nm,1.1s,mb5.8
BAKI Biak 70.97 106 P **P** **05 58 37.1 +0.2**
comp=Z,4µmcomp=Z,274nm,1.1s,mb5.8
TLE Tual 71.26 112 P **P** **05 58 39.5 +0.9**
comp=Z,9µmcomp=Z,907nm,0.9s,mb6.4
TLE Tual 71.26 112 P **P** **05 58 39.9 +1.3**
comp=Z,9µmcomp=Z,907nm,0.9s,mb6.4
EOSO Osorio 71.29 291 P **P** **05 58 38.6 -0.1**
comp=Z,54nm,0.8s,mb5.2
EBAJ Bajamar 71.64 292 P **P** **05 58 40.5 -0.3**
comp=Z,59nm,0.8s,mb5.3
CCAN Las Canadas 72.00 292 P **P** **05 58 43.2 +0.3**
comp=Z,32nm,0.8s,mb5.0
COLD Coldfoot 72.04 16 *e*P **P** **05 58 42.7 +0.2**
comp=Z,24nm,1.1s,mb4.8
COLD *ep*P pP 05 59 27.5 -0.6
AMKA Amchitka 72.45 39 *e*P **P** **05 58 44.7 -0.5**
comp=Z,71nm,0.7s,mb5.4
AMKA *ep*P pP 05 59 32.8 +2.0
EHIG Higuera 72.72 293 P **P** **05 58 46.8 -0.3**

comp=Z,129nm,0.8s,mb5.6
BART Pico Bartolome 72.96 305 *eP* **P 05 58 48.9 +0.5**
comp=Z,177nm,0.7s,mb5.8
BART *epP* pP 05 59 33.7 -0.4
CMLA Cha da Macela 73.20 305 *eP* **P 05 58 53.7 +3.9**
comp=Z,102nm,0.8s,mb5.5
CMLA *epP* pP 05 59 35.1 -0.5
GRON Grota Negra 73.20 305 *eP* pP 05 59 35.4 -0.2
CHIE El Hierro 73.28 292 P **P 05 58 49.4 -1.0**
comp=Z,38nm,0.8s,mb5.1
PSET Sete Cidades 73.30 305 *eP* **P 05 58 50.9 +0.5**
PSET *epP* pP 05 59 36.0 -0.2
PDA Ponta Delgada 73.30 305 *eP* **P 05 58 48.9 -1.5**
PDA *epP* pP 05 59 35.0 -1.2
PSMN Pico do Norte, 73.31 304 *epP* pP 05 59 35.5 -0.8
PSMA Santa Maria 73.36 304 *eP* **P 05 58 48.1 -2.7**
comp=Z,149nm,1.1s,mb5.5
PSMA *epP* pP 05 59 35.9 -0.6
POGA Pongola 73.48 216⇑*iP* **P 05 58 51.5 +0.1**
POGA AMB AMB 05 58 53.2
comp=Z,460nm,0.9s,mb6.1
MBWA Marble Bar 73.54 133 *eP* **P 05 58 51.7 -0.2**
comp=Z,169nm,0.9s,mb5.7
MBWA Marble Bar 73.54 133 P **P 05 58 52.1 +0.2**
SNR=19
SLR Silverton 73.77 220⇑*iP* **P 05 58 53.5 +0.4**
SLR AMB AMB 05 58 54.4
comp=Z,189nm,1.3s,mb5.6
ADH Angra Heroismo 73.83 306 *epP* pP 05 59 38.7 -0.6
INK Inuvik 73.97 9 *eP* **P 05 58 53.9 +0.2**
INK *e*PP pP 05 59 39.9 +0.3
INK *e*SP sP 06 00 02.9 +2.8
INK pmax pmax
comp=Z,192nm,0.7s
INK Inuvik 73.97 9 *eP* **P 05 58 53.9 +0.2**
comp=Z,192nm,0.7s,mb5.8
INK *epP* pP 05 59 39.9 +0.3
INK *es*P sP 06 00 02.9 +2.8
TTA Tatalina 74.09 20 *eP* **P 05 58 54.6 0.0**
ADK Adak 74.11 37 *eP* **P 05 58 53.0 -1.9**
ADK pmax pmax
comp=Z,33nm,1.0s,mb4.9
ADK Adak 74.11 37 *eP* **P 05 58 53.0 -1.9**
comp=Z,33nm,1.0s,mb4.9
ERPM east rand prop 74.28 219⇑*iP* **P 05 58 56.3 +0.2**
ERPM AMB AMB 05 58 57.4
comp=Z,289nm,1.2s,mb5.8
PMAN Manadas 74.40 307 *epP* pP 05 59 42.3 -0.4
ROSA Rosais 74.45 307 *epP* pP 05 59 43.8 +0.8
BPAW Bear Paw Mtn. 74.46 18 *eP* **P 05 58 56.5 -0.2**
comp=Z,223nm,0.7s,mb5.9
BPAW *epP* pP 05 59 42.0 -0.6
PID Ribeirinha 74.53 306 *epP* pP 05 59 43.8 +0.4
COLA College 74.55 16 *eP* **P 05 58 57.2 +0.1**
COLA *e*PP pP 05 59 42.9 -0.1
COLA pmax pmax
comp=Z,278nm,0.8s,mb5.9
COLA College 74.55 16 *eP* **P 05 58 57.2 +0.1**
comp=Z,278nm,0.8s,mb5.9
COLA *epP* pP 05 59 42.9 -0.1
KSR Koster 74.58 221 *eP* **P 05 58 58.6 +0.8**
KSR AMB AMB 05 59 00.2
comp=Z,120nm,1.1s,mb5.4
LBTB Lobatse 74.59 222 *eP* **P 05 58 58.6 +0.7**
comp=Z,638nm,1.1s,mb6.2
LBTB *epP* pP 05 59 44.6 +0.8
DBIC Dimbokro 74.63 267 P **P 05 58 56.8 -1.7**
comp=Z,20nm,0.5s,mb5.0,baz=32,slow=8.2,SNR=39
DBIC pP pP 05 59 41.9 -2.6
comp=Z,43nm,0.8s,baz=46,slow=5.1,SNR=5.4
DBIC LR LR 06 31 56.7
comp=Z,399nm,19.2s,baz=142,slow=36
DBIC Dimbokro 74.63 267 P **P 05 58 56.8 -1.7**
DBIC *PP pP 05 59 41.9 -2.5
DBIC pmax pmax
comp=Z,20nm,0.5s
DBIC MLR MLR
comp=Z,399nm,19.2s
DBIC Dimbokro 74.63 267 *eP* **P 05 58 56.5 -2.0**
comp=Z,61nm,0.9s,mb5.2
DBIC *epP* pP 05 59 42.2 -2.2
PICO Pico 74.69 307 *epP* pP 05 59 45.7 +1.3
KIC Kosan Boka 74.72 267 *eP* **P 05 58 56.5 -2.5**
comp=Z,170nm,0.9s,mb5.7
TIC Toumodi 74.78 267 *eP* **P 05 58 57.0 -2.3**
comp=Z,222nm,1.1s,mb5.7
TIC Toumodi 74.78 267 *eP* **P 05 58 57.0 -2.3**
TIC pmax pmax
comp=Z,222nm,1.1s,mb5.7
PCED Cedros 74.80 307 *epP* pP 05 59 43.1 -1.9
HOR Horta 74.81 307 *eP* pP 05 59 38.3 -6.8
CALA Caldeira 74.83 307 *epP* pP 05 59 42.8 -2.4
TSUM Tsumeb 74.83 232 *eP* **P 05 58 59.7 +0.3**
comp=Z,324nm,1.1s,mb5.9
ILAR Eielson Array 74.85 16 P **P 05 58 58.0 -0.8**
comp=Z,104nm,0.9s,mb5.5,baz=334,slow=4.2,SNR=429
ILAR pP pP 05 59 43.8 -1.0
comp=Z,38nm,0.8s,baz=316,slow=3.8,SNR=3.4
ILAR PKKPbc PKKPbc 06 18 19.3 -2.6
comp=Z,2.0nm,1.0s,baz=170,slow=2.8,SNR=4.8
ILAR LR LR 06 35 41.2
comp=Z,668nm,18.4s,baz=0.9,slow=38
FITZ Fitzroy Crossi 74.92 126 P **P 05 58 59.5 -0.4**
comp=Z,375nm,0.9s,mb6.0,baz=334,slow=5.5,SNR=286
FITZ Fitzroy Crossi 74.92 126⇑*iP* **P 05 58 59.8 -0.1**
comp=Z,757nm,0.9s,mb6.3
FITZ *eS* S 06 08 16.4 -5.0
FITZ Fitzroy Crossi 74.92 126 *eP* **P 05 58 59.9 0.0**
comp=Z,47nm,0.9s,mb5.1
FITZ Fitzroy Crossi 74.92 126 P **P 05 58 59.8 -0.1**
comp=Z,9µmcomp=Z,952nm,0.9s,mb6.4
LIC Lamto 75.03 267 *eP* **P 05 58 58.4 -2.4**
comp=Z,205nm,0.9s,mb5.8
LIC Lamto 75.03 267⇑*iP* **P 05 58 58.9 -1.9**
comp=Z,70nm,0.6s,mb5.2
LIC *epP* pP 05 59 43.9 -2.8
LIC *e*MLR MLR
comp=Z,731nm,20.2s
LIC Lamto 75.03 267⇑*iP* **P 05 58 58.9 -1.9**
comp=Z,35nm,0.6s,mb5.2
LIC *epP* pP 05 59 43.9 -2.8
LIC LR LR
comp=Z,370nm,20.3s
PPLA Purkeypile 75.16 19 *eP* **P 05 59 00.4 -0.3**
comp=Z,516nm,1.5s,mb5.9
PPLA *epP* pP 05 59 46.6 0.0
TRF Thorofare Moun 75.18 18 *eP* **P 05 58 59.9 -0.8**
comp=Z,62nm,0.9s,mb5.2
PRYS Parys 75.21 220⇑*iP* **P 05 59 01.0 -0.4**
PRYS AMB AMB 05 59 03.3
comp=Z,206nm,1.0s,mb5.7
MCK McKinley 75.27 17 *eP* **P 05 59 00.5 -0.8**
MCK pmax pmax
comp=Z,74nm,0.7s,mb5.4
MCK McKinley 75.27 17 *eP* **P 05 59 00.5 -0.8**
comp=Z,74nm,0.7s,mb5.4
KNA Kununurra 75.31 123 P **P 05 59 02.6 +0.4**
comp=Z,4µm,0.8s
SVW2 Sparrevohn 75.68 21 *eP* **P 05 59 03.8 +0.1**
comp=Z,110nm,1.0s,mb5.4
KAKA Kakadu 75.77 118⇑*iP* **P 05 59 04.2 -0.7**
comp=Z,411nm,0.6s,mb6.2
KAKA Kakadu 75.77 118 *eP* **P 05 59 04.3 -0.6**
comp=Z,1µm,0.7s
KAKA Kakadu 75.77 118 P **P 05 59 04.3 -0.6**
comp=Z,7µmcomp=Z,1µm,0.8s,mb6.5
EGAK Eagle 76.01 14 *eP* **P 05 59 04.9 -0.6**
comp=Z,89nm,0.9s,mb5.4
EGAK *epP* pP 05 59 51.8 +0.3
DOT Dot Lake 76.44 15 *eP* **P 05 59 07.6 -0.3**
comp=Z,190nm,0.7s,mb5.8
DOT *epP* pP 05 59 54.0 -0.1
SWZ Schweizer 76.47 221⇑*iP* **P 05 59 08.8 +0.2**
SWZ AMB AMB 05 59 10.7
comp=Z,405nm,1.0s,mb6.0
PAX Paxson 76.73 16 *eP* **P 05 59 09.3 -0.2**
PAX *e*PP pP 05 59 55.4 -0.3
PAX pmax pmax
comp=Z,174nm,0.9s,mb5.7
PAX Paxson 76.73 16 *eP* **P 05 59 09.3 -0.3**
comp=Z,174nm,0.9s,mb5.7
PAX *epP* pP 05 59 55.4 -0.3
DAWY Dawson 76.99 13 *eP* **P 05 59 11.0 0.0**
DAWY *epP* pP 05 59 56.3 -0.9
RSO Redoubt South 77.01 21 *eP* **P 05 59 11.1 -0.1**
RSO *epP* pP 05 59 58.3 +0.9
PMR Palmer 77.04 18 *eP* **P 05 59 10.8 -0.5**
PMR pmax pmax
comp=Z,143nm,0.9s,mb5.6
PMR Palmer 77.04 18 *eP* **P 05 59 10.8 -0.5**
comp=Z,143nm,0.9s,mb5.6
SML Sawmill 77.06 18 *eP* **P 05 59 10.9 -0.5**
comp=Z,15nm,0.7s,mb4.7
SML *epP* pP 05 59 57.6 +0.1
MENT Mentasta 77.14 15 *eP* **P 05 59 11.6 -0.2**
KSD Kokstad 77.18 216⇑*iP* **P 05 59 13.2 +0.8**
KSD AMB AMB 05 59 13.7
comp=Z,573nm,1.2s,mb6.1
RC01 Rabbit Creek A 77.31 19 *eP* **P 05 59 12.3 -0.5**
comp=Z,254nm,1.1s,mb5.8
RC01 *epP* pP 05 59 58.5 -0.5
UNV Unalaska Valle 77.34 31 *eP* **P 05 59 11.6 -1.5**
comp=Z,92nm,0.9s,mb5.4
UNV *epP* pP 05 59 59.5 +0.2
AKUT Akutan 77.43 30 *eP* **P 05 59 12.5 -1.1**
comp=Z,79nm,0.9s,mb5.3
BOSA Boshof 77.66 220 P **P 05 59 14.9 -0.2**
comp=Z,382nm,0.9s,mb6.0,baz=37,slow=5.4,SNR=203
BOSA Boshof 77.66 220 *eP* **P 05 59 15.2 +0.1**
BOSA pmax pmax
comp=Z,339nm,0.8s,mb6.0
BOSA Boshof 77.66 220 *eP* **P 05 59 15.2 0.0**
comp=Z,339nm,0.8s,mb6.0
SLKM Skilak Lake 77.67 19 *eP* **P 05 59 13.8 -1.0**
SLKM *e*PP pP 06 00 00.3 -0.8
FALS False Pass 77.83 29 *eP* **P 05 59 14.8 -1.0**
comp=Z,149nm,0.8s,mb5.7
SEW Seward 78.22 19 *eP* **P 05 59 17.1 -0.7**
comp=Z,190nm,1.4s,mb5.5
SEW *epP* pP 06 00 04.2 0.0
CHGN Chignik 78.57 26 *eP* **P 05 59 18.4 -1.5**
CHGN *epP* pP 06 00 07.9 +1.7
SDPT Sand Point 78.57 27 *eP* **P 05 59 19.7 -0.2**
comp=Z,112nm,1.0s,mb5.5
HVD Gariep Dam 79.15 219⇑*iP* **P 05 59 23.3 0.0**
HVD AMB AMB 05 59 24.7
comp=Z,235nm,1.2s,mb5.7
KDAK Kodiak Island 79.27 22 *eP* **P 05 59 23.5 -0.1**
KDAK *e*PP pP 06 00 10.5 +0.4
KDAK pmax pmax
comp=Z,308nm,0.9s,mb5.9
KDAK Kodiak Island 79.27 22 *eP* **P 05 59 23.5 -0.1**
comp=Z,308nm,0.9s,mb5.9
KDAK *epP* pP 06 00 10.4 +0.4
KDAK Kodiak Island 79.27 22 P **P 05 59 23.0 -0.6**
comp=Z,2µm,0.8s,SNR=72
OHAK Old Harbor 79.52 23 *eP* **P 05 59 24.8 -0.2**
comp=Z,298nm,1.0s,mb5.9
UPI Upington 79.61 223⇑*iP* **P 05 59 26.3 +0.5**
UPI AMB AMB 05 59 28.2
comp=Z,374nm,1.0s,mb6.0
MID Middleton Isla 79.61 18 *eP* **P 05 59 25.8 +0.4**
MID pmax pmax
comp=Z,88nm,0.8s,mb5.4
MID Middleton Isla 79.61 18 *eP* **P 05 59 25.8 +0.4**
comp=Z,88nm,0.8s,mb5.4
PKA Prieska 79.82 221⇑*iP* **P 05 59 26.8 0.0**
PKA AMB AMB 05 59 27.7
comp=Z,76nm,1.3s,mb5.2
KLBR Kellerberrin 80.66 141⇑*iP* **P 05 59 29.8 -1.5**
comp=Z,138nm,0.8s,mb5.6
GRM Grahamstown 80.85 216⇑*iP* **P 05 59 32.7 +0.4**
GRM AMB AMB 05 59 35.0
comp=Z,227nm,1.4s,mb5.6
PNL Peninsula 81.00 15 *eP* **P 05 59 33.3 +0.5**
comp=Z,179nm,0.9s,mb5.7
PNL *epP* pP 06 00 22.4 +3.0
YKA Yellowknife Ar 81.30 3 P **P 05 59 34.1 -0.3**
comp=Z,91nm,0.7s,mb5.5,baz=348,slow=5.3,SNR=288
YKA pP pP 06 00 20.3 -0.7
comp=Z,125nm,0.8s,baz=350,slow=5.5,SNR=9.1
YKA PKKPbc PKKPbc 06 18 04.7 -3.3
comp=Z,5.1nm,0.6s,baz=169,slow=2.3,SNR=21
YKA PKPPKP 06 26 08.3
comp=Z,1.2nm,0.8s,baz=153,slow=2.9,SNR=3.0
YKA LR LR 06 40 52.7
comp=Z,112nm,18.1s,baz=240,slow=39
YKA Yellowknife Ar 81.30 3 P **P 05 59 34.1 -0.3**
YKA *PP pP 06 00 20.3 -0.7
YKA pmax pmax
comp=Z,91nm,0.7s
YKA Yellowknife Ar 81.30 3 P **P 05 59 34.1 -0.3**
YKA pP pP 06 00 20.3 -0.7
YKA PKKPbc PKKPbc 06 18 04.7 -3.3
YKA P'P' 06 26 08.3
YKA LR LR 06 40 52.7
NWAO Narrogin (SRO) 81.47 142 *eP* **P 05 59 34.1 -1.5**
NWAO pmax pmax
comp=Z,72nm,0.6s
NWAO Narrogin (SRO) 81.47 142 *eP* **P 05 59 34.1 -1.5**
comp=Z,72nm,0.6s,mb5.5
SKAG Skagway 82.00 13 *eP* **P 05 59 38.4 +0.3**
comp=Z,197nm,1.2s,mb5.6
WRA Warramunga Arr 82.02 122 P **P 05 59 37.4 -1.3**
comp=Z,682nm,0.8s,mb6.3,baz=323,slow=4.9,SNR=733
WRA S S 06 09 32.8 -4.1
comp=Z,3.3nm,0.9s,baz=318,slow=11,SNR=5.9
WRA PKKPbc PKKPbc 06 18 05.9 -0.5
comp=Z,8.9nm,1.0s,baz=131,slow=1.9,SNR=14
WRA PKPPKP 06 26 02.2
comp=Z,2.0nm,1.1s,baz=155,slow=3.2,SNR=5.3
WRA Warramunga Arr 82.02 122 P **P 05 59 37.4 -1.3**
WRA S S 06 09 32.8 -4.1
WRA PKKPbc PKKPbc 06 18 05.9 -0.5
WRA P'P' 06 26 02.2
WB2 Warramunga Arr 82.03 122 *eP* **P 05 59 37.7 -1.1**
SCHQ Schefferville 82.12 337 P **P 05 59 38.1 -0.7**
comp=Z,73nm,0.9s,mb5.3,baz=27,slow=8.2,SNR=38
SCHQ pP pP 06 00 25.9 +0.4
comp=Z,65nm,1.0s,baz=39,slow=6.6,SNR=3.1
SCHQ PKKPbc PKKPbc 06 18 01.8 -4.1
comp=Z,4.8nm,0.7s,baz=326,slow=3.6,SNR=5.1
SCHQ LR LR 06 36 08.4
comp=Z,814nm,21.0s,baz=216,slow=35
KOMG Komaggas 82.81 225⇑*iP* **P 05 59 43.1 +0.5**
KOMG AMB AMB 05 59 45.0
comp=Z,147nm,1.0s,mb5.7
CVNA Calvinia 82.84 222⇑*iP* **P 05 59 42.9 +0.2**
CVNA AMB AMB 05 59 44.1
comp=Z,223nm,1.2s,mb5.8
SUR Sutherland 82.97 221 *eP* **P 05 59 44.2 +0.8**
comp=Z,204nm,1.0s,mb5.8
SUR Sutherland 82.97 221 P **P 05 59 44.8 +1.4**
comp=Z,1µm,1.2s,mb6.5,SNR=25
WAKE Wake Island 83.22 71 *eP* **P 05 59 44.4 -0.7**
comp=Z,160nm,1.0s,mb5.7
WAKE *epP* pP 06 00 38.1 +6.1
DLBC Dease Lake 83.86 11 *eP* **P 05 59 48.2 +0.6**
DLBC *epP* pP 06 00 35.1 +0.5
SIT Sitka 84.25 14 *eP* **P 05 59 50.1 +0.5**
SIT pmax pmax
comp=Z,91nm,1.0s,mb5.5
SIT Sitka 84.25 14 *eP* **P 05 59 50.1 +0.5**
comp=Z,91nm,1.0s,mb5.5
ASAR Alice Springs 84.28 125 P **P 05 59 49.3 -0.9**
comp=Z,534nm,0.7s,mb6.4,baz=312,slow=5.1,SNR=1186
ASAR pP pP 06 00 38.8 +1.6
comp=Z,34nm,0.9s,baz=318,slow=5.0,SNR=1.7
ASAR PKiKP PKiKP 06 05 01.4 -2.0
comp=Z,2.7nm,0.5s,baz=321,slow=1.3,SNR=5.1
ASAR S S 06 09 49.2 -10
comp=Z,3.0nm,0.9s,baz=317,slow=6.8,SNR=5.5
ASAR PKKPbc PKKPbc 06 18 00.5 -0.9
comp=Z,3.4nm,0.9s,baz=129,slow=1.3,SNR=7.6
ASAR PKPPKP 06 26 04.2
comp=Z,3.9nm,0.9s,baz=138,slow=2.9,SNR=13
ASAR Alice Springs 84.28 125 P **P 05 59 49.3 -0.9**
ASAR *PP pP 06 00 38.8 +1.6
ASAR 06 05 01.4
ASAR S S 06 09 49.3 -10
ASAR smax
comp=N,3.0nm,0.9s
FCC Fort Churchill 84.32 352 *eP* **P 05 59 50.2 +0.2**
comp=N,4.8nm,1.0s
FCC *epP* pP 06 00 37.9 +0.9
COEN Coen 84.45 112 *eP* **P 05 59 50.2 -1.0**
comp=N,2µm,0.8s
COEN Coen 84.45 112 P **P 05 59 50.1 -1.1**
comp=N,7µmcomp=N,945nm,0.9s,mb6.5
PMG Port Moresby 84.65 106 *eP* **P 05 59 51.5 -0.8**
PMG pmax pmax
comp=Z,155nm,0.9s
PMG Port Moresby 84.65 106 *eP* **P 05 59 51.5 -0.8**
comp=Z,155nm,0.9s,mb5.7
PMG Port Moresby 84.65 106 P **P 05 59 52.1 -0.2**
WRAK Wrangell Islan 85.40 13 *eP* **P 05 59 55.8 +0.4**
comp=Z,88nm,1.0s,mb5.4
WRAK *epP* pP 06 00 42.7 +0.2
FORT Forrest 85.68 134⇑*iP* **P 05 59 56.5 -0.5**
comp=Z,830nm,0.7s,mb6.6
CRAG Craig 86.16 13 *eP* **P 05 59 59.5 +0.3**
comp=Z,59nm,1.2s,mb5.2
FFC Flin Flon 88.99 356 P **P 06 00 13.2 +0.6**
comp=Z,949nm,0.9s,mb6.6,SNR=52
FFC Flin Flon 88.99 356 *eP* **P 06 00 12.9 +0.3**
FFC *e*PP pP 06 01 02.5 +2.4
FFC pmax pmax
comp=Z,160nm,0.9s,mb5.8
FFC Flin Flon 88.99 356 *eP* **P 06 00 12.9 +0.3**
comp=Z,160nm,0.9s,mb5.8
FFC *epP* pP 06 01 02.5 +2.4
PQI Presque Isle 89.41 333 *eP* **P 06 00 14.7 0.0**
comp=Z,34nm,0.9s,mb5.2
CTA Charters Tower 90.58 115⇑*iP* **P 06 00 19.7 -0.8**
comp=Z,246nm,0.7s,mb6.2
CTAO Charters Tower 90.58 115 *eP* **P 06 00 19.6 -1.0**
comp=Z,287nm,0.8s,mb6.3
PKME Peaks-Kenny Pk 91.08 333 *eP* **P 06 00 22.8 +0.3**
comp=Z,48nm,1.3s,mb5.3
BBOO Buckleboo 91.92 130 *eP* **P 06 00 24.6 -1.8**
comp=Z,219nm,0.8s,mb6.1
BBOO *epP* pP 06 01 16.3 +2.3
ULM Lac du Bonnet 92.89 352 P **P 06 00 29.8 -1.1**
comp=Z,76nm,0.9s,mb5.7,baz=17,slow=6.2,SNR=55
ULM PKKP PKKPbc 06 17 38.3 -1.9
comp=Z,6.7nm,0.8s,baz=183,slow=3.7,SNR=5.4
ULM LR LR 06 45 58.3
comp=Z,797nm,19.3s,baz=226,slow=38
LBNH Lisbon 92.90 334 *eP* **P 06 00 31.5 +0.5**
LBNH pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
LBNH Lisbon 92.90 334 *eP* **P 06 00 31.4 +0.5**
comp=Z,7.8nm,0.7s,mb4.8
LONY Lake Ozonia 93.47 336 *eP* **P 06 00 33.6 0.0**
comp=Z,36nm,1.0s,mb5.4
MDV Middlebury 93.55 335 *eP* **P 06 00 34.0 0.0**
comp=Z,18µm,0.6s
NCB Newcomb 93.93 336 *eP* **P 06 00 33.8 -1.9**
comp=Z,10nm,0.9s,mb4.9
A05A Maple Falls 94.15 9⇑P **P 06 00 36.3 -0.3**
baz=94,SNR=10
ACCN Adirondack Com 94.26 335 *eP* **P 06 00 36.1 -1.2**
comp=Z,16nm,1.0s,mb5.0
PGC Sidney 94.32 9 *eP* **P 06 00 38.0 +0.6**
comp=Z,1.6nm,0.9s
EYMN Ely 94.52 348 *eP* **P 06 00 38.0 -0.3**
comp=Z,103nm,1.0s,mb5.9
EYMN *epP* pP 06 01 25.8 -0.2
B06A Marblemount 94.69 8⇓P **P 06 00 38.7 -0.3**
baz=94,SNR=15
HNR Honiara 94.75 98 PKKPbc PKKPbc 06 17 33.7 -0.9
comp=Z,67nm,0.3s,baz=180,slow=2.0,SNR=9.0
RPW Rockport 94.76 8 *eP* **P 06 00 39.4 0.0**
comp=Z,35nm,0.9s,mb5.5
RPW *epP* pP 06 01 29.1 +2.1
WALA Waterton Lakes 94.76 3 *eP* **P 06 00 39.5 +0.1**
comp=Z,2.4nm,0.8s
WALA *epP* pP 06 01 27.9 +0.9
QUA2 Belchertown 94.77 334 *eP* **P 06 00 38.9 -0.7**
comp=Z,90nm,1.4s,mb5.7
A12A Yaak River Ran 94.79 4 P **P 06 00 40.3 +0.7**
baz=94,SNR=26
AGMN Agassiz Nation 94.81 351 *eP* **P 06 00 39.3 -0.4**
comp=Z,69nm,1.0s,mb5.7
AGMN *epP* pP 06 01 26.2 -1.0
STKA Stephens Creek 94.81 126 P **P 06 00 38.0 -1.7**
comp=Z,48nm,0.7s,mb5.8,baz=324,slow=6.7,SNR=59
STKA PP PP 06 04 26.9 -4.6
comp=Z,8.9nm,0.8s,baz=312,slow=14,SNR=2.1
STKA Stephens Creek 94.81 126⇑*iP* **P 06 00 37.9 -1.9**
comp=Z,37nm,0.6s,mb5.7
A13A Flathead Natio 94.86 4⇓P **P 06 00 40.3 +0.4**
baz=94
A14A Double T Ranch 94.87 3⇑P **P 06 00 40.1 +0.2**
baz=94,SNR=65
A15A Johnson Ranch, 94.89 2⇑P **P 06 00 40.4 +0.4**
baz=94,SNR=106
A16A West Butte Ran 94.95 2⇓P **P 06 00 40.2 -0.1**
baz=94
JCW Jim Creek 94.96 9 *eP* **P 06 00 40.6 +0.3**
comp=Z,216nm,0.9s,mb6.3
JCW *epP* pP 06 01 28.4 +0.5
A17A Triple J Farms 94.97 1⇓P **P 06 00 41.0 +0.6**
baz=94,SNR=89
A19A Klindworth Far 95.00 360⇑P **P 06 00 40.6 +0.1**
baz=95
A18A Metzger Ranch, 95.00 1⇓P **P 06 00 41.0 +0.5**
baz=95,SNR=113
B08A Colville Reser 95.08 7 P **P 06 00 41.0 +0.1**
baz=95,SNR=38
OSD Olympics--Snow 95.09 10 P **P 06 00 42.5 +1.5**
NLW Nelson Butte 95.25 8 P **P 06 00 42.1 +0.5**
B12A Libby 95.26 4 P **P 06 00 42.5 +0.8**
baz=95,SNR=13
DGMT Dagmar 95.35 357⇓P **P 06 00 42.8 +0.7**
baz=95,SNR=30
DGMT Dagmar 95.35 357 *eP* **P 06 00 42.9 +0.8**
comp=Z,98nm,1.0s,mb5.9
NEW Newport 95.36 5 P **P 06 00 42.5 +0.3**
baz=95,SNR=49
NEW Newport 95.36 5 *eP* **P 06 00 42.1 0.0**
NEW *e*PP pP 06 01 31.1 +1.3
NEW *e* 06 04 30.8
NEW pmax pmax
comp=Z,41nm,0.9s
NEW Newport 95.36 5 *eP* **P 06 00 42.1 0.0**
comp=Z,41nm,0.9s,mb5.6
NEW *epP* pP 06 01 31.1 +1.3
NEW *e*PP PP 06 04 30.8 -3.2
NEW *e*PKPdf PKiKP 06 05 16.2 -5.3
B13A Whitefish 95.42 4⇑P **P 06 00 42.9 +0.5**
baz=95,SNR=31
GNW Green Mountain 95.46 9 *eP* **P 06 00 43.3 +0.6**
comp=Z,27nm,1.0s,mb5.3
GNW *epP* pP 06 01 30.7 +0.4
B19A Brinkman Farms 95.47 360⇑P **P 06 00 43.0 +0.3**
baz=95
B21A Ellsworth Farm 95.48 359⇑P **P 06 00 43.5 +0.8**
baz=95
B16A M & M Farms, S 95.48 2⇑P **P 06 00 43.0 +0.3**
baz=95
B14A Marquette Ranc 95.48 3 P **P 06 00 43.1 +0.4**
baz=95,SNR=33
NLWA Neilton Lookou 95.49 10 *eP* **P 06 00 43.0 +0.2**
comp=Z,39nm,0.9s,mb5.5
B18A Beardsley Farm 95.53 0 P **P 06 00 43.5 +0.5**
baz=95,SNR=84
B15A Bradely Ranch, 95.56 2⇓P **P 06 00 42.9 -0.2**
baz=95,SNR=83
B17A L&G Farms, Che 95.62 1 P **P 06 00 43.9 +0.6**
baz=95,SNR=52
WTV Waterville 95.67 7 P **P 06 00 43.6 0.0**
ETW Entiat 95.72 8 *eP* **P 06 00 44.2 +0.4**
comp=Z,20nm,0.9s,mb5.3
C09A Chrisman Ranch 95.73 6 P **P 06 00 44.6 +0.8**
baz=95,SNR=17
BLMT Blacktail Moun 95.78 4 *eP* **P 06 00 45.0 +0.9**
comp=Z,28nm,1.0s,mb5.5
C11A Tepee Creek (N 95.84 5 P **P 06 00 44.8 +0.5**
baz=95,SNR=23
COWI Conover 95.89 346 *eP* **P 06 00 43.6 -1.0**
comp=Z,32nm,0.9s,mb5.5
EGMT Eagleton 95.90 0⇓P **P 06 00 45.2 +0.6**
baz=96,SNR=46
EGMT Eagleton 95.90 0 *eP* **P 06 00 44.8 +0.1**
comp=Z,74nm,0.9s,mb5.9
BSMT Bassoo Peak 95.92 4 *eP* **P 06 00 45.8 +1.1**
comp=Z,72nm,1.1s,mb5.8
BSMT *epP* pP 06 01 34.5 +2.1
D05A Enumclaw 95.94 9 P **P 06 00 45.9 +1.1**
baz=96,SNR=14
YBMT Yellow Bay 95.95 3 *eP* **P 06 00 44.9 +0.1**
comp=Z,13nm,0.9s,mb5.2
YBMT *epP* pP 06 01 34.0 +1.6
C12B Naegeli Ranch, 96.02 4 P **P 06 00 46.4 +1.2**
baz=96,SNR=37
JTMT Jette 96.05 4 *eP* **P 06 00 45.9 +0.6**
comp=Z,15nm,0.8s,mb5.3

JTMT				*e*pP	pP		06 01 33.6 +0.6
C14A	**Swan Lake**	**96.06**	**3**	⇊P	**P**		**06 00 45.5 +0.2**
	baz=96						
C21A	**Desert Coulee**	**96.08**	**359**	⇑P	**P**		**06 00 46.1 +0.6**
	baz=96						
BINY	**Binghamton**	**96.09**	**336**	*e*P	**P**		**06 00 44.4 -1.2**
	comp=Z,18nm,1.0s,mb5.3						
OD2	**Odessa Site #2**	**96.09**	**7**	P	**P**		**06 00 45.8 +0.3**
C15A	**Salmond Ranch,**	**96.09**	**2**	⇑P	**P**		**06 00 45.8 +0.3**
	baz=96,SNR=51						
C16A	**Fuhringer Ranc**	**96.09**	**2**	⇊P	**P**		**06 00 45.5 +0.1**
	baz=96,SNR=57						
C13A	**Hot Springs**	**96.11**	**4**	⇊P	**P**		**06 00 46.3 +0.8**
	baz=96,SNR=63						
GLMI	**Grayling**	**96.13**	**343**	*e*P	**P**		**06 00 45.9 +0.2**
	comp=Z,158nm,1.0s,mb6.2						
C19A	**Slack Wire Ran**	**96.19**	**360**	P	**P**		**06 00 46.6 +0.6**
	baz=96,SNR=40						
C20A	**Veseth Ranch,**	**96.21**	**359**	P	**P**		**06 00 46.2 +0.2**
	baz=96,SNR=48						
C17A	**Wharram Farm,**	**96.28**	**1**	⇊P	**P**		**06 00 46.6 +0.3**
	baz=96,SNR=76						
SWMT	**Swartz Lake**	**96.30**	**3**	*e*P	**P**		**06 00 46.9 +0.5**
	comp=Z,26nm,0.5s,mb5.7						
E03A	**Lebam**	**96.36**	**10**	⇑P	**P**		**06 00 48.0 +1.3**
	baz=96,SNR=6.3						
EBG	**Ellensburg**	**96.38**	**8**	P	**P**		**06 00 47.4 +0.5**
LON	**Longmire**	**96.39**	**9**	*e*P	**P**		**06 00 47.1 +0.2**
LON				*e**PP	pP		06 01 38.9 +4.4
LON				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.6						
LON	**Longmire**	**96.39**	**9**	*e*P	**P**		**06 00 47.1 +0.2**
	comp=Z,30nm,0.8s,mb5.6						
LON				*e*pP	pP		06 01 38.9 +4.4
D08A	**Wollman Farm,**	**96.40**	**7**	⇑P	**P**		**06 00 47.3 +0.4**
	baz=96,SNR=12						
WPW	**White Pass**	**96.48**	**9**	P	**P**		**06 00 47.9 +0.6**
SLMT	**Seeley Lake**	**96.59**	**3**	*e*P	**P**		**06 00 48.5 +0.7**
	comp=Z,25nm,0.9s,mb5.4						
SLMT				*e*pP	pP		06 01 36.5 +1.1
D12A	**Red Ives Fores**	**96.69**	**4**	⇑P	**P**		**06 00 48.1 -0.1**
	baz=96						
D13A	**Huson**	**96.69**	**4**	P	**P**		**06 00 48.5 +0.2**
	baz=96,SNR=7.7						
D18A	**Linhart Farms,**	**96.73**	**0**	⇊P	**P**		**06 00 48.9 +0.5**
	baz=96,SNR=18						
D14A	**Greenough**	**96.75**	**3**	P	**P**		**06 00 48.8 +0.3**
	baz=96,SNR=33						
D17A	**Six Diamond Ra**	**96.76**	**1**	⇑P	**P**		**06 00 49.2 +0.6**
	baz=96,SNR=78						
D19A	**Cripps Ranch,**	**96.76**	**360**	P	**P**		**06 00 49.1 +0.5**
	baz=96,SNR=51						
E07A	**Sunnyside**	**96.81**	**7**	⇊P	**P**		**06 00 49.1 +0.4**
	baz=96						
D15A	**Lincoln**	**96.83**	**2**	⇊P	**P**		**06 00 49.1 +0.3**
	baz=96,SNR=13						
D20A	**Manuel Ranch,**	**96.83**	**359**	⇑P	**P**		**06 00 49.4 +0.5**
	baz=96,SNR=23						
D21A	**La Casta Ranch**	**96.84**	**359**	P	**P**		**06 00 49.9 +1.0**
	baz=96,SNR=35						
D16A	**Dana Ranch, Ca**	**96.87**	**2**	⇑P	**P**		**06 00 49.5 +0.5**
	baz=96,SNR=29						
CHMT	**Chamberlain Mo**	**96.93**	**3**	*e*P	**P**		**06 00 49.8 +0.5**
	comp=Z,25nm,0.9s,mb5.4						
CHMT				*e*pP	pP		06 01 37.6 +0.6
F03A	**Seaside**	**96.97**	**10**	⇊P	**P**		**06 00 51.0 +1.6**
	baz=96						
MSO	**Missoula**	**96.98**	**3**	P	**P**		**06 00 49.8 +0.3**
	baz=97,SNR=11						
MSO	**Missoula**	**96.98**	**3**	*e*P	**P**		**06 00 49.4 -0.2**
	comp=Z,11nm,1.1s,mb5.0						
HAWA	**Hanford**	**97.00**	**7**	*e*P	**P**		**06 00 49.9 +0.2**
	comp=Z,4.3nm,0.8s,mb4.7						
E09A	**Wood Farm, Sta**	**97.01**	**6**	⇑P	**P**		**06 00 50.2 +0.5**
	baz=97,SNR=22						
F04A	**Amboy**	**97.12**	**9**	⇑P	**P**		**06 00 50.4 +0.2**
	baz=97,SNR=10						
HRY	**Holter Researc**	**97.18**	**2**	*e*P	**P**		**06 00 51.2 +0.8**
	comp=Z,41nm,0.9s,mb5.7						
HRY				*e*pP	pP		06 01 40.0 +1.9
LAO	**LASA Array**	**97.20**	**358**	⇑P	**P**		**06 00 51.9 +1.4**
	baz=97,SNR=34						
LAO	**LASA Array**	**97.20**	**358**	*e*P	**P**		**06 00 51.9 +1.4**
	comp=Z,58nm,0.8s,mb5.9						
LAO				*e*pP	pP		06 01 39.4 +1.2
E12A	**Beaver Dam Sad**	**97.31**	**5**	⇑P	**P**		**06 00 50.8 -0.2**
	baz=97						
EIDS	**Eidsvold**	**97.32**	**116**	*e*P	**P**		**06 00 50.2 -1.1**
	comp=Z,24nm,0.9s,mb5.4						
E13A	**Victor**	**97.36**	**4**	⇊P	**P**		**06 00 51.1 -0.2**
	baz=97,SNR=14						
E18A	**Harlowton**	**97.36**	**1**	⇑P	**P**		**06 00 52.2 +1.0**
	baz=97,SNR=20						
E16A	**East Helena**	**97.36**	**2**	⇑P	**P**		**06 00 51.8 +0.6**
	baz=97,SNR=28						
E21A	**Keefer Ranch,**	**97.37**	**359**	⇑P	**P**		**06 00 51.3 0.0**
	baz=97						
E14A	**Clinton**	**97.42**	**3**	P	**P**		**06 00 52.1 +0.7**
	baz=97,SNR=21						
E20A	**Meyer Farm, Mu**	**97.42**	**359**	P	**P**		**06 00 52.3 +0.8**
	baz=97,SNR=28						
E15A	**Deer Lodge**	**97.44**	**2**	⇊P	**P**		**06 00 52.1 +0.5**
	baz=97,SNR=22						
E17A	**Martinsdale**	**97.45**	**1**	⇊P	**P**		**06 00 52.6 +0.9**
	baz=97,SNR=33						
F07A	**Phinny Hill Vi**	**97.45**	**8**	P	**P**		**06 00 52.8 +1.1**
	baz=97,SNR=11						
E19A	**Rath Farm, Rou**	**97.47**	**360**	P	**P**		**06 00 52.1 +0.4**
	baz=97,SNR=35						
F10A	**Beach Ranch, E**	**97.63**	**6**	⇑P	**P**		**06 00 52.9 +0.4**
	baz=97,SNR=20						
LNOR	**Lincton Mounta**	**97.64**	**6**	*e*P	**P**		**06 00 53.1 +0.6**
LNOR				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
LNOR	**Lincton Mounta**	**97.64**	**6**	*e*P	**P**		**06 00 53.0 +0.5**
	comp=Z,4.4nm,0.9s,mb4.8						
HOOD	**Mount Hood Mea**	**97.82**	**9**	*e*P	**P**		**06 00 54.5 +1.1**
	comp=Z,34nm,1.0s,mb5.6						
G04A	**Mulino**	**97.83**	**10**	⇊P	**P**		**06 00 54.1 +0.8**
	baz=97,SNR=22						
F12A	**Elk City**	**97.98**	**4**	⇑P	**P**		**06 00 53.6 -0.5**
	baz=98						
F17A	**Fitzpatrick Pl**	**98.01**	**1**	⇑P	**P**		**06 00 55.2 +1.0**
	baz=98,SNR=39						
LRM	**Limekiln Ridge**	**98.05**	**2**	*e*P	**P**		**06 00 55.2 +0.8**
	comp=Z,116nm,1.1s,mb6.1						
LRM				*e*pP	pP		06 01 43.9 +1.9
F21A	**Absaloka Mine,**	**98.09**	**359**	⇑P	**P**		**06 00 55.4 +0.9**
	baz=98						
GCMT	**Greycliff**	**98.14**	**0**	*e*P	**P**		**06 00 56.2 +1.4**
	comp=Z,22nm,1.0s,mb5.4						
G08A	**Pilot Rock**	**98.15**	**7**	⇊P	**P**		**06 00 55.6 +0.8**
	baz=98						
BOZ	**Bozeman (W)**	**98.25**	**2**	P	**P**		**06 00 56.4 +1.2**
	baz=98,SNR=21						
BOZ	**Bozeman (W)**	**98.25**	**2**	*e*P	**P**		**06 00 56.2 +1.0**
BOZ				*e**PP	pP		06 01 44.5 +1.5
BOZ				*e*			06 04 55.9
BOZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2						
BOZ	**Bozeman (W)**	**98.25**	**2**	*e*P	**P**		**06 00 56.1 +0.9**
	comp=Z,12nm,0.9s,mb5.2						
BOZ				*e*pP	pP		06 01 44.5 +1.5
BOZ				*e*PP	PP		06 04 55.9 -0.3
H04A	**Detroit Lake**	**98.38**	**9**	⇑P	**P**		**06 00 55.3 -0.6**
	baz=98						
DLMT	**Dillon**	**98.50**	**3**	*e*P	**P**		**06 00 56.8 +0.4**
	comp=Z,15nm,0.9s,mb5.3						
G14A	**Jackson**	**98.59**	**3**	P	**P**		**06 00 57.8 +1.0**
	baz=98,SNR=6.4						
G17A	**Pierce Place,**	**98.59**	**1**	⇊P	**P**		**06 00 57.8 +1.1**
	baz=98						
G18A	**Lazy EL Ranch,**	**98.61**	**0**	⇊P	**P**		**06 00 57.0 +0.1**
	baz=98						
G16A	**Moss Hill, Enn**	**98.66**	**2**	P	**P**		**06 00 58.0 +0.9**
	baz=98,SNR=23						
G21A	**Lodge Grass**	**98.69**	**359**	P	**P**		**06 00 58.2 +1.1**
	baz=98,SNR=6.6						
G13A	**Cobalt**	**98.70**	**4**	⇊P	**P**		**06 00 57.3 0.0**
	baz=98						
G15A	**Dillon**	**98.70**	**2**	P	**P**		**06 00 58.2 +0.9**
	baz=98,SNR=28						
G20A	**Bridger**	**98.71**	**359**	P	**P**		**06 00 58.0 +0.7**
	baz=98,SNR=19						
VIPM	**Ingram Point**	**98.75**	**8**	P	**P**		**06 00 58.4 +0.9**
RLMT	**Red Lodge**	**98.81**	**0**	P	**P**		**06 00 58.5 +0.8**
	baz=98,SNR=18						
RLMT	**Red Lodge**	**98.81**	**0**	*e*P	**P**		**06 00 58.5 +0.7**
	comp=Z,22nm,1.0s,mb5.4						
MCMT	**McKenzie Canyo**	**99.03**	**3**	*e*P	**P**		**06 00 59.8 +1.1**
	comp=Z,5.7nm,0.9s,mb4.9						
JFWS	**Jewell Farm**	**99.17**	**346**	P	Pdif		06 00 58.8 -0.7
JFWS				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.5						
JFWS	**Jewell Farm**	**99.17**	**346**	Pdif	Pdif		06 00 58.8 -0.7
	comp=Z,21nm,0.8s						
H16A	**Russell Place,**	**99.20**	**2**	⇑P	Pdif		06 01 00.3 +0.7
	baz=99,SNR=7.9						
H12A	**Diamond D Ranc**	**99.21**	**4**	⇊P	Pdif		06 00 59.0 -0.6
	baz=99						
H14A	**Leadore**	**99.22**	**3**	P	Pdif		06 01 00.8 +1.1
	baz=99,SNR=28						
H13A	**Challis**	**99.23**	**4**	⇑P	Pdif		06 00 59.4 -0.3
	baz=99,SNR=14						
H15A	**Lima**	**99.25**	**3**	⇑P	Pdif		06 01 00.5 +0.7
	baz=99,SNR=12						
H18A	**Shoshone NF, C**	**99.25**	**0**	P	Pdif		06 01 00.7 +0.9
	baz=99,SNR=15						
H19A	**Powell**	**99.26**	**360**	P	Pdif		06 01 01.1 +1.2
	baz=99,SNR=7.6						
H21A	**Big Horn, Sher**	**99.28**	**359**	⇑P	Pdif		06 01 00.5 +0.6
	baz=99,SNR=14						
I07A	**Izee**	**99.29**	**8**	P	Pdif		06 01 01.3 +1.3
	baz=99,SNR=16						
ECSD	**EROS Data Cent**	**99.39**	**351**	*e*Pdif	Pdif		06 01 00.3 -0.2
	comp=Z,20nm,0.9s						
H20A	**Greybull**	**99.44**	**359**	P	Pdif		06 01 01.6 +1.0
	baz=99,SNR=15						
H17A	**Grant Village**	**99.52**	**1**	⇑P	Pdif		06 01 02.9 +1.9
	baz=99						
RSSD	**Black Hills**	**99.68**	**356**	*e*P	Pdif		06 01 02.4 +0.7
RSSD				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.5						
RSSD	**Black Hills**	**99.68**	**356**	*e*Pdif	Pdif		06 01 02.4 +0.6
	comp=Z,17nm,0.9s						
FLWY	**Flagg Ranch**	**99.83**	**1**	*e*Pdif	Pdif		06 01 04.0 +1.6
	comp=Z,25nm,1.4s						
I13A	**Wildhorse Cree**	**99.88**	**4**	⇊P	Pdif		06 01 03.2 +0.6
	baz=100						
I19A	**Meeteetse**	**99.89**	**360**	⇊P	Pdif		06 01 03.9 +1.3
	baz=100,SNR=7.5						
I14A	**Mackay**	**99.90**	**3**	P	Pdif		06 01 03.9 +1.2
	baz=100,SNR=49						
I12A	**Atlanta**	**99.95**	**4**	P	Pdif		06 01 03.6 +0.7
	baz=100,SNR=29						
I20A	**Worland**	**99.97**	**359**	P	Pdif		06 01 04.2 +1.2
	baz=100,SNR=12						
ACSO	**Alum Creek Sta**	**100.01**	**340**	*e*Pdif	Pdif		06 01 02.5 -0.7
IMW	**Indian Meadow**	**100.02**	**1**	*e*Pdif	Pdif		06 01 04.4 +1.2
	comp=Z,7.9nm,1.0s						
I16A	**Newdale**	**100.02**	**2**	P	Pdif		06 01 05.2 +2.0
	baz=100,SNR=8.4						
I21A	**Big Trails, Te**	**100.10**	**359**	P	Pdif		06 01 04.3 +0.7
	baz=100,SNR=31						
J08A	**Circle Bar Ran**	**100.11**	**7**	⇑P	Pdif		06 01 04.8 +1.1
	baz=100						
MOOW	**Moose Ponds**	**100.17**	**1**	*e*Pdif	Pdif		06 01 05.1 +1.2
	comp=Z,27nm,1.8s						
HLID	**Hailey**	**100.22**	**4**	⇑P	Pdif		06 01 04.8 +0.7
	baz=100,SNR=10						
HLID	**Hailey**	**100.22**	**4**	*e*Pdif	Pdif		06 01 04.6 +0.5
	comp=Z,5.5nm,0.9s						
I18A	**Diamond G Ranc**	**100.22**	**1**	⇊P	Pdif		06 01 06.1 +1.9
	baz=100,SNR=8.0						
MFID	**Camas Ranch**	**100.28**	**5**	P	Pdif		06 01 05.5 +1.2
	baz=100,SNR=5.3						
LOHW	**Long Hollow**	**100.31**	**1**	*e*Pdif	Pdif		06 01 05.1 +0.6
	comp=Z,5.3nm,1.0s						
HUMO	**Hull Mountain**	**100.31**	**10**	*e*Pdif	Pdif		06 01 05.2 +0.7
	comp=Z,6.5nm,0.9s						
J13A	**Cove Ranch, Pi**	**100.40**	**4**	P	Pdif		06 01 06.0 +1.1
	baz=100,SNR=6.4						
TPAW	**Teton Pass**	**100.42**	**1**	*e*Pdif	Pdif		06 01 06.1 +1.1
	comp=Z,5.3nm,1.1s						
SNOW	**Snow King Moun**	**100.45**	**1**	*e*Pdif	Pdif		06 01 06.2 +1.1
	comp=Z,8.3nm,1.1s						
K05A	**Summer Lake**	**100.47**	**9**	⇑P	Pdif		06 01 06.9 +1.6
	baz=100						
J15A	**Blackfoot**	**100.47**	**2**	⇊P	Pdif		06 01 06.5 +1.2
	baz=100,SNR=7.3						
J22A	**Midwest**	**100.48**	**358**	P	Pdif		06 01 05.5 +0.3
	baz=100,SNR=21						
J14A	**Carey**	**100.50**	**3**	⇑P	Pdif		06 01 06.3 +0.9
	baz=100						
REDW	**Red Top Meadow**	**100.55**	**1**	*e*Pdif	Pdif		06 01 06.1 +0.5
	comp=Z,11nm,1.3s						
J17A	**Brown Place, J**	**100.55**	**1**	⇑P	Pdif		06 01 07.4 +1.8
	baz=100						
RRI2	**Red Ridge**	**100.56**	**2**	*e*Pdif	Pdif		06 01 07.2 +1.6
	comp=Z,2.2nm,0.8s						
J21A	**Lysite**	**100.57**	**359**	⇑P	Pdif		06 01 06.0 +0.3
	baz=100,SNR=13						
J16A	**Bone**	**100.62**	**2**	⇊P	Pdif		06 01 07.3 +1.4
	baz=100						
J19A	**Crowheart**	**100.66**	**360**	P	Pdif		06 01 07.5 +1.4
	baz=100,SNR=39						
ARMA	**Armidale**	**100.69**	**120**	*e*P	Pdif		06 01 06.5 +0.3
J18A	**Kendall Valley**	**100.71**	**1**	⇑P	Pdif		06 01 07.4 +1.0
	baz=100,SNR=6.7						
TOO	**Toolangi**	**100.88**	**129**	*e*P	Pdif		06 01 05.3 -1.8
WVOR	**Wild Horse Val**	**101.01**	**7**	*e*P	Pdif		06 01 08.3 +0.7
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WVOR	**Wild Horse Val**	**101.01**	**7**	*e*Pdif	Pdif		06 01 08.3 +0.6
	comp=Z,9.6nm,1.1s						
K16A	**Soda Springs**	**101.06**	**2**	⇑P	Pdif		06 01 08.8 +0.9
	baz=101						
K19A	**Absolon Red Bu**	**101.10**	**360**	⇊P	Pdif		06 01 08.2 +0.1
	baz=101,SNR=7.5						
AHID	**Auburn Hatcher**	**101.14**	**2**	*e*Pdif	Pdif		06 01 09.0 +0.8
	comp=Z,8.1nm,0.9s						
K17A	**Gardner Place,**	**101.16**	**1**	⇑P	Pdif		06 01 08.9 +0.6
	baz=101						
BW06	**Boulder Array**	**101.16**	**0**	⇊P	Pdif		06 01 08.7 +0.4
	baz=101,SNR=8.4						
BW06	**Boulder Array**	**101.16**	**0**	*e*Pdif	Pdif		06 01 08.7 +0.4
	comp=Z,4.5nm,0.8s						
PDAR	**Pinedale Array**	**101.16**	**0**	P	Pdif		06 01 06.6 -1.7
	comp=Z,5.9nm,0.9s,baz=25,slow=3.0,SNR=34						
PDAR				PP	PP		06 05 14.8 -3.4
	comp=Z,2.7nm,0.9s,baz=316,slow=2.5,SNR=2.9						
PDAR				PKiKP	PKiKP		06 05 31.4 -0.6
	comp=Z,4.4nm,0.9s,baz=42,slow=1.5,SNR=4.7						
PDAR				PKKPbc	PKKPbc		06 17 14.6 -3.1
	comp=Z,4.7nm,0.9s,baz=159,slow=3.6,SNR=16						
PDAR				PKPPKP			06 25 29.4
	comp=Z,0.8nm,1.0s,baz=222,slow=1.2,SNR=4.5						
PDAR	**Pinedale Array**	**101.16**	**0**	P	Pdif		06 01 06.6 -1.7
PDAR				PP	PP		06 05 14.8 -3.4
K15A	**Arbon**	**101.18**	**3**	⇊P	Pdif		06 01 10.0 +1.6
	baz=101						
K22A	**Casper**	**101.24**	**358**	⇑P	Pdif		06 01 09.4 +0.7
	baz=101						
K20A	**Yellowstone Ra**	**101.27**	**359**	P	Pdif		06 01 09.5 +0.7
	baz=101,SNR=11						
K21A	**Alcova**	**101.28**	**359**	⇑P	Pdif		06 01 09.6 +0.8
	baz=101						
K18A	**Toltan Ranch,**	**101.29**	**1**	P	Pdif		06 01 10.3 +1.4
	baz=101,SNR=7.8						
K14A	**Jones Ranch, D**	**101.30**	**3**	⇑P	Pdif		06 01 10.3 +1.4
	baz=101,SNR=10.0						
MOD	**Modoc**	**101.35**	**9**	*e*Pdif	Pdif		06 01 10.0 +0.9
	comp=Z,9.4nm,0.9s						
L23A	**Garrett**	**101.75**	**357**	⇊P	Pdif		06 01 11.4 +0.5
	baz=101						
L14A	**Malta**	**101.80**	**3**	⇊P	Pdif		06 01 11.8 +0.7
	baz=101,SNR=9.6						
L19A	**Farson**	**101.83**	**0**	⇊P	Pdif		06 01 12.3 +1.0
	baz=101,SNR=11						
L22A	**Ellis Ranch, M**	**101.86**	**358**	⇊P	Pdif		06 01 12.6 +1.1
	baz=101						
L15A	**Malad City**	**101.87**	**3**	P	Pdif		06 01 12.8 +1.3
	baz=101,SNR=6.3						
L16A	**Fish Haven**	**101.88**	**2**	P	Pdif		06 01 12.5 +1.0
	baz=102,SNR=6.2						
L21A	**Rawlins**	**101.95**	**359**	⇑P	Pdif		06 01 12.1 +0.3
	baz=102						
L18A	**Fontenelle, Gr**	**102.00**	**1**	P	Pdif		06 01 13.4 +1.3
	baz=102,SNR=9.5						
HVU	**Hansel Valley**	**102.08**	**3**	*e*P	Pdif		06 01 13.4 +1.0
HVU				pmax	pmax		
	comp=Z,12nm,0.8s						
HVU	**Hansel Valley**	**102.08**	**3**	*e*Pdif	Pdif		06 01 13.3 +1.0
	comp=Z,12nm,0.8s						
RWWY	**Rawlins**	**102.22**	**359**	*e*Pdif	Pdif		06 01 13.5 +0.5
	comp=Z,13nm,1.1s						
HWUT	**Hardware Ranch**	**102.29**	**2**	*e*Pdif	Pdif		06 01 14.6 +1.2
	comp=Z,17nm,0.9s						
M21A	**Separation Pea**	**102.31**	**359**	⇑P	Pdif		06 01 14.0 +0.6
	baz=102						
M15A	**Larsen Ranch,**	**102.40**	**3**	⇑P	Pdif		06 01 14.6 +0.7
	baz=102,SNR=16						
M20A	**Sweetwater, Wa**	**102.43**	**359**	⇑P	Pdif		06 01 14.9 +1.0
	baz=102						
M17A	**Scullys Gap (B**	**102.44**	**1**	⇊P	Pdif		06 01 15.3 +1.3
	baz=102						
M18A	**Lyman**	**102.50**	**1**	P	Pdif		06 01 15.6 +1.4
	baz=102,SNR=11						
M16A	**Huntsville**	**102.58**	**2**	P	Pdif		06 01 16.0 +1.4
	baz=102,SNR=8.9						
OGNE	**Ogallala**	**102.71**	**355**	⇊P	Pdif		06 01 15.8 +0.6
	baz=102						
N18A	**Larsen Ranch,**	**102.95**	**0**	⇑P	Pdif		06 01 17.4 +1.2
	baz=102						
N17A	**Moffit Pass**	**102.97**	**1**	⇊P	Pdif		06 01 17.7 +1.4
	baz=102						
N15A	**Stansbury Isla**	**102.97**	**3**	⇊P	Pdif		06 01 17.8 +1.4
	baz=102						
N24A	**Carr**	**103.00**	**357**	⇑P	Pdif		06 01 18.1 +1.6
	baz=103						
N22A	**Wattenberg Ran**	**103.09**	**358**	⇑P	Pdif		06 01 18.4 +1.5
	baz=103						
N20A	**Spence Gulch,**	**103.09**	**359**	⇑P	Pdif		06 01 18.3 +1.4
	baz=103						
N21A	**Black Mountain**	**103.15**	**359**	⇊P	Pdif		06 01 18.3 +1.1
	baz=103						
DAU	**Daniels Canyon**	**103.49**	**2**	*e*P	Pdif		06 01 21.3 +2.6
DAU				pmax	pmax		
	comp=Z,14nm,0.9s						
DAU	**Daniels Canyon**	**103.49**	**2**	*e*Pdif	Pdif		06 01 21.3 +2.7
	comp=Z,14nm,0.9s						
O19A	**Miners Draw (B**	**103.63**	**0**	⇊P	Pdif		06 01 19.8 +0.6
	baz=103						
DUG	**Dugway**	**103.66**	**3**	⇑P	Pdif		06 01 20.3 +0.9
	baz=103						
DUG	**Dugway**	**103.66**	**3**	*e*P	Pdif		06 01 20.5 +1.1
DUG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DUG	**Dugway**	**103.66**	**3**	*e*Pdif	Pdif		06 01 20.5 +1.1
	comp=Z,7.1nm,0.8s						
O23A	**Lake Granby, G**	**103.66**	**358**	⇑P	Pdif		06 01 20.9 +1.4
	baz=103						
O17A	**Robinson Place**	**103.72**	**1**	⇊P	Pdif		06 01 21.2 +1.5
	baz=103						
O20A	**White River Ci**	**103.79**	**359**	⇑P	Pdif		06 01 21.3 +1.3
	baz=103						
MAW	**Mawson**	**103.91**	**183**	Pdiff	Pdif		06 01 19.6 -0.9
	comp=Z,3.9nm,1.0s,baz=358,slow=4.6,SNR=7.0						
MAW				PKiKP	PKiKP		06 05 36.5 +0.5
	comp=Z,24nm,1.1s,baz=4.7,slow=9.2,SNR=12						
MAW				PKKPbc	PKKPbc		06 17 09.3 -1.6
	comp=Z,4.8nm,0.9s,baz=220,slow=5.3,SNR=9.3						
MAW				PKKP	PKKPdf		06 17 29.5 +9.4
	comp=Z,3.6nm,1.0s,baz=215,slow=7.8,SNR=4.4						
MAW	**Mawson**	**103.91**	**183**	P	Pdif		06 01 19.6 -0.9
MAW				*i*			06 05 36.5
MAW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAW				pmax	pmax		
	comp=Z,24nm,1.1s						
WCN	**Washoe City**	**103.98**	**9**	*e*P	Pdif		06 01 21.1 +0.2
WCN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WCN	**Washoe City**	**103.98**	**9**	*e*Pdif	Pdif		06 01 21.1 +0.3
	comp=Z,5.0nm,1.2s						
ISCO	**Idaho Springs**	**104.06**	**357**	⇑P	Pdif		06 01 22.5 +1.3
	baz=104						
ISCO	**Idaho Springs**	**104.06**	**357**	*e*P	Pdif		06 01 22.5 +1.3
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ISCO	**Idaho Springs**	**104.06**	**357**	*e*Pdif	Pdif		06 01 22.5 +1.3
	comp=Z,4.9nm,1.0s						
P14A	**Drum Mountains**	**104.25**	**3**	⇊P	Pdif		06 01 23.6 +1.6
	baz=104						
P18A	**Preston Nutter**	**104.29**	**1**	⇊P	Pdif		06 01 24.1 +1.9
	baz=104						
P19A	**Cripple Cowboy**	**104.29**	**360**	⇊P	Pdif		06 01 23.9 +1.6
	baz=104						
P15A	**Leamington**	**104.30**	**3**	⇑P	Pdif		06 01 23.8 +1.5
	baz=104						
P22A	**Eagle**	**104.30**	**358**	⇊P	Pdif		06 01 23.8 +1.5
	baz=104						
P20A	**De Beque**	**104.42**	**359**	⇑P	Pdif		06 01 24.1 +1.3
	baz=104						
P17A	**Butcher Ranch,**	**104.44**	**1**	⇑P	Pdif		06 01 24.6 +1.8
	baz=104						
SRU	**San Rafael**	**104.80**	**1**	⇊P	Pdif		06 01 25.5 +1.0

S13A	Holt Ranch, En	106.21	4	⇓P	Pdif	06 01 32.9	+2.1
	baz=106						
S18A	Hurst Farm, Bl	106.23	1	⇑P	Pdif	06 01 32.1	+1.3
	baz=106						
S21A	Coal Bank Pass	106.25	359	⇑P	Pdif	06 01 33.1	+2.2
	baz=106						
T24A	Torres, Weston	106.75	357	⇑P	Pdif	06 01 35.4	+2.3
	baz=106						
T13A	Saint George	106.77	4	⇑P	Pdif	06 01 35.4	+2.2
	baz=106						
T14A	Hurricane	106.77	3	⇑P		06 02 20.9	
	baz=106,SNR=7.9						
T18A	Mexican Hat	106.78	1	⇓P	Pdif	06 01 34.7	+1.4
	baz=106						
T23A	Casias Ranch,	106.83	357	⇑P	Pdif	06 01 35.6	+2.1
	baz=106						
T15A	Red Dirt Ranch	106.84	3	⇑P	Pdif	06 01 34.9	+1.3
	baz=106						
T22A	Edith	106.88	358	⇓P	Pdif	06 01 35.7	+1.9
	baz=106						
T21A	Navajo Lake	106.92	359	⇑P	Pdif	06 01 36.0	+2.1
	baz=106						
FURC	Furnace Creek,	107.09	7	⇑P	Pdif	06 01 37.0	+2.4
	baz=107						
T19A	Beclabito	107.09	360	⇑P	Pdif	06 01 36.1	+1.4
	baz=107						
U10A	Ash Meadows, A	107.19	6	⇓P	Pdif	06 01 37.9	+2.8
	baz=107						
U14A	Mt Trumbull	107.40	3	⇓P	Pdif	06 01 38.5	+2.4
	baz=107						
U15A	North Rim	107.43	3	⇑P	Pdif	06 01 37.6	+1.4
	baz=107						
MPMC	Manual Prospec	107.44	7	⇓P	Pdif	06 01 37.3	+1.1
	baz=107						
U18A	Rough Rock, Ch	107.50	1	⇑P	Pdif	06 01 38.3	+1.8
	baz=107						
U23A	El Rito	107.54	358	⇓P	Pdif	06 01 38.2	+1.6
	baz=107						
U16A	Tuba City	107.75	2	⇓P	Pdif	06 01 39.8	+2.2
	baz=107						
V13A	Grand Canyon W	107.92	4	⇓P	Pdif	06 01 40.6	+2.3
	baz=108						
V25A	Rancho No Teng	107.96	356	⇑P	Pdif	06 01 39.8	+1.3
	baz=108						
V22A	San Miguel Ran	107.98	358	⇓P	Pdif	06 01 40.0	+1.4
	baz=108						
V12A	Nelson	107.99	5	⇑P	Pdif	06 01 40.5	+1.8
	baz=108						
LRMC	Laurel Mountai	107.99	7	⇓P	Pdif	06 01 40.4	+1.7
	baz=108						
V15A	Kaibab Nationa	108.04	3	⇑P	Pdif	06 01 40.9	+2.0
	baz=108						
V24A	Rampart Ranch,	108.11	357	⇑P	Pdif	06 01 42.5	+3.3
	baz=108						
V14A	Boquillas Ranc	108.19	3	⇓P	Pdif	06 01 42.3	+2.7
	baz=108						
WUAZ	Wupatki	108.37	2	⇓P	Pdif	06 01 42.8	+2.4
	baz=108						
WUAZ	Wupatki	108.37	2	*e*Pdif	Pdif	06 01 42.3	+1.9
	comp=Z,5.8nm,1.0s						
W14A	Seligman	108.61	3	⇓P	Pdif	06 01 43.1	+1.7
	baz=108						
W16A	Flagstaff	108.79	2	⇑P	Pdif	06 01 43.6	+1.4
	baz=108						
ANMO	Albuquerque	108.92	358	*e*P	Pdif	06 01 45.8	+3.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANMO	Albuquerque	108.92	358	*e*Pdif	Pdif	06 01 45.8	+3.0
	comp=Z,3.9nm,0.9s						
X15A	Humboldt	109.37	3	⇓P	Pdif	06 01 47.4	+2.6
	baz=109						
X20A	Quemado	109.37	359	⇓P	Pdif	06 01 47.4	+2.6
	baz=109						
X21A	Alamocita Cree	109.46	359	⇑P	Pdif	06 01 47.5	+2.3
	baz=109						
MSTX	Muleshoe	109.70	354	⇓P	Pdif	06 01 47.6	+1.3
	baz=109						
Y27A	Causey	109.81	355	⇑P	Pdif	06 01 48.6	+1.8
	baz=109						
Y21A	Point of Rocks	109.89	359	⇓P	Pdif	06 01 50.7	+3.5
	baz=110						
Y22A	Socorro	109.95	358	⇓P	Pdif	06 01 51.3	+3.9
	baz=110						
Y19A	Nutrioso	109.96	0	⇓P	Pdif	06 01 50.8	+3.4
	baz=110						
Z22A	Elephant Butte	110.63	358	⇓P	Pdif	06 01 52.4	+2.0
	baz=110						
GDL2	Guadalupe Moun	111.57	356	*e*PKPdf	PKiKP	06 05 50.1	-1.5
TUC	Tucson	111.58	2	*e*PKIKP	PKiKP	06 05 51.9	+0.2
MNTX	Cornudas Mount	112.12	357	⇑P	Pdif	06 01 59.6	+2.5
	baz=112						
SJG	San Juan	112.25	316	PKKPbc	PKKPbc	06 16 41.1	-2.0
	comp=Z,10.0nm,0.6s,baz=32,slow=1.4,SNR=7.7						
JCT	Junction City	112.86	351	*e*PKIKP	PKiKP	06 05 52.5	-1.6
TXAR	Lajitas Array	114.37	355	PKP	PKiKP	06 05 56.0	-1.0
	comp=Z,2.4nm,0.9s,baz=7.1,slow=2.2,SNR=11						
TXAR				PP	PP	06 06 54.2	-0.2
	comp=Z,5.8nm,0.9s,baz=0.0,slow=4.0,SNR=6.1						
TXAR				PKKPbc	PKKPbc	06 16 35.9	-0.5
	comp=Z,9.2nm,0.9s,baz=185,slow=4.9,SNR=30						
TXAR				PKPPKP		06 25 06.0	
	comp=Z,0.6nm,0.9s,baz=172,slow=3.8,SNR=4.2						
TXAR	Lajitas Array	114.37	355	PKIKP	PKiKP	06 05 56.0	-1.1
TXAR						06 06 54.3	
TXAR						06 16 35.9	
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TXAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NVL	N'lazarevskaya	114.88	198	⇓*i*PKIKP	PKiKP	06 05 55.7	-0.9
AFI	Afiamalu	120.03	85	*e*PKIKP	PKPdf	06 06 08.1	0.0
TEIG	Tepich	120.30	337	*e*PKPdf	PKPdf	06 06 08.1	-0.6
RPZ	Rata Peaks	120.68	124	SKP		06 09 24.6	
	comp=Z,8.9nm,0.8s,baz=27,slow=2.3,SNR=7.0						
RPZ	Rata Peaks	120.68	124	*e*PKPdf	PKPdf	06 06 07.3	-1.3
SDV	Santo Domingo	122.22	313	*e*PKPdf	PKPdf	06 06 11.2	-1.3
BDFB	Brasilia	122.30	274	PKP	PKPdf	06 06 11.7	-0.8
	comp=Z,11nm,0.8s,baz=75,slow=0.4,SNR=12						
BDFB				PKKPbc	PKKPbc	06 16 06.7	-0.7
	comp=Z,26nm,0.9s,baz=218,slow=3.5,SNR=22						
URZ	Urewera	122.80	116	*e*PKPdf	PKPdf	06 06 09.6	-3.2
CMIG	Matias Romero	125.09	343	PKP	PKPdf	06 06 16.3	-1.6
	comp=Z,12nm,0.9s,baz=46,slow=2.2,SNR=5.1						
QSPA	South Pole Qui	126.24	180	PKP	PKPdf	06 06 17.1	-1.1
	comp=Z,151nm,1.0s,baz=278,slow=1.8,SNR=88						
QSPA				SKKPbc		06 19 24.8	
	comp=Z,5.1nm,1.1s,baz=118,slow=4.0,SNR=3.5						
QSPA	South Pole Qui	126.24	180	PKP	PKPdf	06 06 17.1	-1.1
QSPA				SKKPbc		06 19 24.8	
SBA	Scott Base	126.55	165	*e*PKIKP	PKPdf	06 06 18.9	0.0
BCIP	Isla Barro Col	126.94	323	*e*PKPdf	PKPdf	06 06 20.3	-1.2
BCIP				*ep*PKPdf	pPKPdf	06 07 10.6	-0.8
ROSC	El Rosal	127.62	314	PKhKP	PKPpre	06 06 19.6	
	comp=Z,95nm,1.0s,baz=120,slow=2.2,SNR=6.0						
ROSC				PKP	PKPdf	06 06 23.2	+0.3
	comp=Z,104nm,1.0s,baz=116,slow=2.4,SNR=6.2						
ROSC				pPKP	pPKPdf	06 07 13.1	+0.4
	comp=Z,36nm,0.8s,baz=79,slow=9.4,SNR=4.0						
SIV	San Ignacio	132.90	283	PKhKP	PKPpre	06 06 27.5	
	comp=Z,14nm,1.0s,baz=74,slow=5.8,SNR=2.3						
SIV				PKP	PKPdf	06 06 32.4	-0.3
	comp=Z,43nm,1.1s,baz=64,slow=2.0,SNR=14						
SIV				pPKP	pPKPdf	06 07 21.9	-0.6
	comp=Z,11nm,1.0s,baz=60,slow=1.5,SNR=3.7						
SIV				SKPbc	SKPbc	06 09 41.1	-1.1
	comp=Z,23nm,1.0s,baz=86,slow=5.4,SNR=5.8						
SIV	San Ignacio	132.90	283	PKP	PKPdf	06 06 32.4	-0.3
SIV				pPKP	pPKPdf	06 07 21.9	-0.6
SIV				SKPbc	SKPbc	06 09 41.1	-1.1
OTAV	Otavalo	133.74	315	*e*PKPdf	PKPdf	06 06 33.9	-0.5
OTAV				*e*SKPbc	SKPbc	06 09 44.3	-0.9
CPUP	Villa Florida	135.14	268	PKP	PKPdf	06 06 34.1	-2.5
	comp=Z,42nm,0.8s,baz=44,slow=2.8,SNR=49						
CPUP				pPKP	pPKPdf	06 07 24.8	-1.8
	comp=Z,9.8nm,0.7s,baz=47,slow=3.0,SNR=3.3						
CPUP				SKPbc	SKPbc	06 09 46.9	-2.3
	comp=Z,11nm,0.9s,baz=41,slow=4.8,SNR=3.8						
CPUP	Villa Florida	135.14	268	PKP	PKPdf	06 06 34.1	-2.5
CPUP				pPKP	pPKPdf	06 07 24.8	-1.8
CPUP				SKPbc	SKPbc	06 09 46.9	-2.3
LPAZ	La Paz	138.56	288	PKhKP	PKPpre	06 06 34.1	
	comp=Z,1.7nm,0.8s,baz=57,slow=6.9,SNR=10						
LPAZ				PKP	PKPdf	06 06 42.2	-1.0
	comp=Z,37nm,1.1s,baz=49,slow=6.6,SNR=40						
LPAZ				SKKPbc		06 18 39.2	
	comp=Z,8.4nm,0.8s,baz=199,slow=3.8,SNR=11						
LPAZ	La Paz	138.56	288	PKHKP	PKPpre	06 06 34.1	
LPAZ						06 06 42.2	
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LPAZ				pmax	pmax		
	comp=Z,37nm,1.1s						
LPAZ	La Paz	138.56	288	*e*PKPdf	PKPdf	06 06 43.0	-0.2
ATAH	Atahualpa	139.56	309	PKP	PKPdf	06 06 43.3	-1.8
	comp=Z,20nm,1.1s,baz=335,slow=2.6,SNR=5.7						
ATAH				SKPbc	SKPbc	06 10 02.8	+0.2
	comp=Z,13nm,0.8s,baz=27,slow=9.0,SNR=5.4						
NNA	Nana	142.13	302	PKhKP	PKPpre	06 06 45.4	
	comp=Z,38nm,1.0s,baz=263,slow=9.9,SNR=5.2						
NNA				PKP	PKPdf	06 06 49.7	-0.1
	comp=Z,43nm,1.0s,baz=295,slow=2.3,SNR=7.2						
NNA	Nana	142.13	302	PKP	PKPpre	06 06 45.4	
NNA				*e*PKPdf	PKPdf	06 06 49.7	-0.1
LCO	Las Campanas	147.04	272	*e*PKPdf	PKPdf	06 06 58.5	+0.7
LMEL	Las Melosas	148.25	263	⇑*i*P	PKPdf	06 06 59.9	+0.3
PLCA	Paso Flores	149.75	250	PKP	PKPdf	06 07 01.7	-0.2
	comp=Z,45nm,1.1s,baz=95,slow=2.3,SNR=29						
PLCA				PKPbc	PKPbc	06 07 06.6	-0.2
	comp=Z,170nm,1.0s,baz=77,slow=2.0,SNR=45						
PLCA				pPKPbc	pPKPbc	06 07 55.9	-0.4
	comp=Z,36nm,0.8s,baz=141,slow=3.5,SNR=2.5						
PLCA	Paso Flores	149.75	250	*e*PKPdf	PKPdf	06 07 01.7	-0.2
PLCA				*e*PKPbc	PKPbc	06 07 07.1	+0.4
PLCA				*ep*PKPdf	pPKPbc	06 07 55.6	-0.8
CCHI	Chillan	150.38	258	*e*P	PKPdf	06 07 01.6	-1.4
COYC	Coyhaique	150.85	240	⇑*i*P	PKPbc	06 07 08.1	-1.1

*ISCJB **06** 05:48:09.4±0.5, 38°.93N±0°.03×26°.67E±0°.03, h2km±7km, Error ellipse: s-maj=5.2km s-min=3.9km az=31.4*
*DDA **06** 05:48:09.4, 38°.94N×26°.67E, h7km±6km, Md2.7*
*CSEM **06** 05:48:09.6±0.2, 38°.93N×26°.66E, h5km, MD2.7, Error ellipse: s-maj=3.6km s-min=3.4km az=43.0*
*THE **06** 05:48:09.6, 38°.95N×26°.66E, h2km±4km, ML2.2/3, Error ellipse: s-maj=4.3km s-min=1.2km az=196.0*

ISC 06 05:48:10.0±0.5, 38°.93N±0°.03×26°.66E±0°.03, h9km±5km, n21, σ0°81/40, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.38**	**3**	*i* P	**Pg**	**05 48 16.6**	**-0.8**
AYVA				*i* S	**Sg**	**05 48 22.4**	**0.0**
AYVA	**Ayvalik**	**0.38**	**3**	*i* P	**Pg**	**05 48 16.5**	**-0.9**
AYVA				*i* S	**Sg**	**05 48 22.4**	**0.0**
PRK	**Paraskevi**	**0.44**	**316**	P	**Pg**	**05 48 17.9**	**-0.6**
PRK				S	**Sg**	**05 48 24.3**	**0.0**
PRK	**Paraskevi**	**0.44**	**316**	P	**Pg**	**05 48 17.9**	**-0.6**
PRK				S	**Sg**	**05 48 24.3**	**0.0**
URLA	**Izmir**	**0.57**	**185**	*i* P	**Pg**	**05 48 19.5**	**-1.7**
URLA	**Izmir**	**0.57**	**185**	*i* P	**Pg**	**05 48 19.5**	**-1.6**
BLCB	**Balcova**	**0.62**	**151**	P	**Pg**	**05 48 21.8**	**-0.2**
BLCB				S	**Sg**	**05 48 30.6**	**+0.4**
BLCB	**Balcova**	**0.62**	**151**	P	**Pg**	**05 48 21.8**	**-0.2**
BLCB				S	**Sg**	**05 48 30.6**	**+0.4**
SIGR	**SIGRI**	**0.69**	**294**	P	**Pg**	**05 48 22.7**	**-0.6**
SIGR				S	**Sg**	**05 48 32.1**	**-0.1**
SIGR	**SIGRI**	**0.69**	**294**	P	**Pg**	**05 48 22.7**	**-0.6**
SIGR				S	**Sg**	**05 48 32.1**	**-0.1**
CHOS	**Chios island**	**0.72**	**221**	P	**Pg**	**05 48 23.3**	**-0.7**
CHOS				S	**Sg**	**05 48 35.1**	**+1.7**
CHOS	**Chios island**	**0.72**	**221**	P	**Pg**	**05 48 23.3**	**-0.7**
CHOS				S	**Sg**	**05 48 35.1**	**+1.7**
AKHS	**Akhisar**	**0.90**	**93**	*i* P	**Pg**	**05 48 27.5**	**+0.1**
AKHS				*i* S	**Sg**	**05 48 40.2**	**+1.2**
AKHS	**Akhisar**	**0.90**	**93**	*i* P	**Pg**	**05 48 27.5**	**+0.2**
AKHS				*i* S	**Sg**	**05 48 40.2**	**+1.1**
BOZC	**Bozcaada**	**1.02**	**333**	*i* P	**Pg**	**05 48 30.0**	**+0.3**
BOZC				*i* S	**Sg**	**05 48 44.7**	**+1.7**
BALY	**Balya**	**1.10**	**42**	*i* P	**Pg**	**05 48 29.9**	**-1.2**
BALY				*i* S	**Sg**	**05 48 45.6**	**+0.3**
BALY	**Balya**	**1.10**	**42**	*i* P	**Pg**	**05 48 29.9**	**-1.2**
BALY				*i* S	**Sg**	**05 48 45.6**	**+0.3**
LIA	**Limnos Island**	**1.50**	**311**	P	**Pn**	**05 48 37.9**	**+0.8**
LIA				S	**Sn**	**05 48 56.5**	**-0.3**
LIA	**Limnos Island**	**1.50**	**311**	P	**Pn**	**05 48 37.9**	**+0.8**
LIA				S	**Sn**	**05 48 56.5**	**-0.3**
DURS	**Dursunbey**	**1.56**	**64**	*i* P	**Pn**	**05 48 37.8**	**-0.1**
DURS				*i* S	**Sn**	**05 48 58.2**	**-0.1**
DURS	**Dursunbey**	**1.56**	**64**	*i* P	**Pn**	**05 48 37.8**	**-0.1**
DURS				*i* S	**Sn**	**05 48 58.2**	**-0.1**

*IDC **06** 06:11:42.9±0.8, 7°.70S×119°.04E, h0km, mb4.2/7, mb1 4.3/9, mb1mx4. 1/20, mbtmp4.2/9, ML3.9/2, MS4.0/2, Ms1 4.0/2, ms1mx3.2/28, Error ellipse: s-maj=49.4km s-min=16.6km az=63.0*
*ISCJB **06** 06:11:45.4±0.5, 7°.80S±0°.07×119°.0E±0°.1, h33km, mb4.4/12, MS4.3/2, Error ellipse: s-maj=16.6km s-min=8.0km az=153.5*
*NEIC **06** 06:11:47.9±0.5, 7°.77S×119°.09E, h35km, mb4.5/4, Error ellipse: s-maj=18.7km s-min=8.4km az=68.0*

ISC 06 06:11:47.8±0.5, 7°.80S±0°.07×119°.1E±0°.1, h35km, n26, σ1°04/32, mb4.4/12, MS4.3/2, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.85**	**14**	*e*Pn	**Pn**	**06 12 29.6**	**-1.2**
FITZ	**Fitzroy Crossi**	**12.09**	**149**	Pn	**Pn**	**06 14 37.1**	**-0.5**
	0.2nm,0.3s,baz=322,slow=13,SNR=11						
FITZ				Sn	**Sn**	**06 16 44.7**	**-6.5**
	1.1nm,0.3s,baz=174,slow=19,SNR=11						
FITZ	**Fitzroy Crossi**	**12.09**	**149**	*e*P	**Pn**	**06 14 37.3**	**-0.3**
	3.5nm,0.4s						
FITZ				*e*S	**Sn**	**06 16 44.2**	**-7.0**
FITZ	**Fitzroy Crossi**	**12.09**	**149**	*e*Pn	**Pn**	**06 14 34.9**	**-2.7**
FITZ				*e*Sn	**Sn**	**06 16 46.0**	**-5.1**
MBWA	**Marble Bar**	**13.30**	**177**	*e*P	**Pn**	**06 14 53.0**	**-1.2**
MBWA				*e*S	**Sn**	**06 17 06.0**	**-15**
MBWA	**Marble Bar**	**13.30**	**177**	*e*Pn	**Pn**	**06 14 53.3**	**-0.9**
MBWA				*e*Sn	**Sn**	**06 17 13.7**	**-7.2**
KAKA	**Kakadu**	**14.05**	**111**	*e*P	**Pn**	**06 15 06.6**	**+2.1**
	5.0nm,0.4s						
WRA	**Warramunga Arr**	**19.11**	**131**	P	**Pn**	**06 16 08.2**	**-0.7**
	0.8nm,0.3s,baz=304,slow=12,SNR=36						
WRA				S	**S**	**06 19 29.1**	**-14**
	0.1nm,0.3s,baz=307,slow=24,SNR=4.0						
WRA				LR	LR	06 24 56.1	
	comp=Z,331nm,21.0s,baz=315,slow=41						
WB2	**Warramunga Arr**	**19.12**	**131**	*e*P	**Pn**	**06 16 07.8**	**-1.1**
ASAR	**Alice Springs**	**21.26**	**140**	P	**P**	**06 16 32.2**	**+1.1**
	5.8nm,0.3s,mb4.4,baz=315,slow=8.8,SNR=63						
ASAR				S	**S**	**06 20 22.7**	**-2.8**
	1.2nm,0.8s,baz=320,slow=24,SNR=4.9						
COEN	**Coen**	**24.46**	**107**	*e*P	**P**	**06 17 04.5**	**+0.9**
COEN	**Coen**	**24.46**	**107**	*e*P	**P**	**06 17 04.2**	**+0.5**
	78nm,0.8s,mb5.2						
BBOO	**Buckleboo**	**29.47**	**150**	*e*P	**P**	**06 17 49.0**	**+0.5**
	5.7nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**31.85**	**142**	P	**P**	**06 18 10.4**	**+0.8**
	2.2nm,0.4s,mb4.3,baz=321,slow=9.8,SNR=11						
STKA				LR	LR	06 33 48.9	
	comp=Z,502nm,21.2s,MS4.2,baz=118,slow=42						
STKA	**Stephens Creek**	**31.85**	**142**	*e*P	**P**	**06 18 10.3**	**+0.7**
	3.4nm,0.8s,mb4.2						
HHC	**Hu-ho-hao-te**	**48.89**	**352**	*e*P	**P**	**06 20 33.9**	**+3.7**
HHC				pP	pP	06 20 43.9	+3.2
HHC				sP	sP	06 20 47.8	+3.0
HHC				PcP	PcP	06 21 57.8	+3.5
HHC				PP	PP	06 22 28.1	+4.2
HHC				ScP	ScP	06 25 48.2	+1.4
HHC				S	**S**	**06 27 35.9**	**+4.3**
HHC				sS	sS	06 27 52.8	+4.0
HHC				ScS	ScS	06 30 20.3	+0.4
HHC				SS	SS	06 31 03.1	+0.2
HHC				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
HHC				pmax	pmax		
	comp=Z,350nm,6.9s						
HHC				LR	LR		
	comp=N,140nm,14.1s,MS4.4						
HHC				LR	LR		
	comp=E,250nm,13.3s,MS4.4						
HHC				LR	LR		
	comp=Z,240nm,14.1s,MS4.3						
SONM	**Songino Array**	**56.51**	**350**	P	**P**	**06 21 26.2**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.9,baz=155,slow=7.9,SNR=5.1						
MKAR	**Makanchi Array**	**63.42**	**333**	P	**P**	**06 22 14.1**	**+0.3**
	comp=Z,3.0nm,0.7s,mb4.5,baz=136,slow=8.1,SNR=12						
ZALV	**Zalesovo Beam**	**67.94**	**339**	P	**P**	**06 22 42.2**	**-0.7**
	comp=Z,1.2nm,0.3s,mb4.4,baz=150,slow=6.1,SNR=4.0						
KURK	**Kurchatov**	**67.95**	**334**	*e*P	**P**	**06 22 42.7**	**-0.3**
	comp=Z,3.8nm,0.8s,mb4.5						
MAW	**Mawson**	**70.38**	**200**	P	**P**	**06 22 58.7**	**+0.9**
	comp=Z,3.2nm,1.0s,mb4.2,baz=77,slow=10,SNR=4.1						
ABKAR	**Akbulak array**	**76.61**	**325**	*e*P	**P**	**06 23 34.4**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.6						
QSPA	**South Pole Qui**	**82.19**	**180**	P	**P**	**06 24 05.6**	**+0.9**
	comp=Z,1.5nm,0.7s,mb4.0,baz=343,slow=1.2,SNR=5.1						
QSPA	**South Pole Qui**	**82.19**	**180**	*e*P	**P**	**06 24 06.0**	**+1.3**
	comp=Z,4.6nm,1.1s,mb4.3						
CPUP	**Villa Florida**	**145.90**	**186**	PKPbc	PKPbc	06 31 25.9	+1.6
	comp=Z,1.7nm,0.9s,baz=146,slow=3.6,SNR=3.5						
LPAZ	**La Paz**	**155.04**	**163**	PKPab	PKPab	06 32 04.3	+2.1
	comp=Z,1.1nm,0.8s,baz=194,slow=4.2,SNR=5.4						

*IDC **06** 06:20:40.7±2.9, 41°.70N×141°.66E, h64km±26km, mb3.6/13, mb1 3.8/15, mb1mx3.7/24, mbtmp3.7/15, ML4.0/2, MS3.7/1, Ms1 3.7/1, ms1mx2.9/26, Error ellipse: s-maj=20.0km s-min=15.4km az=115.0*
*ISCJB **06** 06:20:42.0±0.3, 41°.78N±0°.03×141°.73E±0°.04, h87km±2km, mb3.8/16, Error ellipse: s-maj=5.4km s-min=3.6km az=39.0*
*MOS **06** 06:20:42.2±1.0, 41°.81N×141°.69E, h96km, mb4.1/9, Error ellipse: s-maj=18.3km s-min=9.5km az=74.0*
*JMA **06** 06:20:43.1±0.1, 41°.77N×141°.70E, h77km±2km, M3.8 Broadband fault plane solution: P waves. NP1: φs=102.00000°, δ34.00000°, λ-72.00000°. NP2: φs=261.00000°, δ58.00000°, λ-102.00000°. Principal axes: T Plg12.0000°, Azm359.0000°; N Plg10.0000°, Azm267.0000°; P Plg74.0000°, Azm139.0000°;*
JMA Felt II J1.
*NEIC **06** 06:20:43.2, 41°.77N×141°.70E, h77km, mb4.2/1, After JMA.*
NEIC Recorded [2 JMA] in Aomori, Honshu. Also recorded [1 JMA] in southern Hokkaido.

ISC 06 06:20:42.9±0.3, 41°.79N±0°.03×141°.72E±0°.04, h82km±2km, n61, σ0°88/80, mb3.8/16, 8C-8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.53**	**281**	⇓P	**Pn**	**06 20 56.5**	**-0.6**
JKB				*e*S	**Sn**	**06 21 06.7**	**-0.9**
JOT	**Ohata**	**0.65**	**231**	⇓P	**Pn**	**06 20 58.1**	**-0.1**
JOT				*e*S	**Sn**	**06 21 09.3**	**-0.3**
JNB	**Noboribetsu**	**0.85**	**323**	⇓P	**Pn**	**06 21 00.0**	**-0.3**
JNB				*e*S	**Sn**	**06 21 12.9**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.91**	**57**	⇓P	**Pn**	**06 21 00.6**	**-0.4**
JSR	**Shiriuchi**	**1.01**	**256**	⇓P	**Pn**	**06 21 02.1**	**-0.1**
JSR				*e*S	**Sn**	**06 21 16.1**	**-0.6**
JYM2	**Yakumo 2**	**1.06**	**288**	⇓P	**Pn**	**06 21 03.1**	**+0.3**
JYM2				*e*S	**Sn**	**06 21 18.2**	**+0.5**
JEW	**Eniwo**	**1.07**	**349**	⇑P	**Pn**	**06 21 03.1**	**+0.2**
JEW				*e*S	**Sn**	**06 21 17.7**	**-0.2**
ERM	**Erimo**	**1.09**	**78**	*e*Pn	**Pn**	**06 21 03.4**	**+0.2**
ERM				*e*Sn	**Sn**	**06 21 17.9**	**-0.5**
JEM	**Erimo**	**1.09**	**78**	⇓P	**Pn**	**06 21 03.2**	**0.0**
JEM				*e*S	**Sn**	**06 21 18.2**	**-0.2**
JBT2	**Biratori 2**	**1.10**	**25**	⇑P	**Pn**	**06 21 03.5**	**+0.3**
JBT2				*e*S	**Sn**	**06 21 18.9**	**+0.5**
JTM	**Tenmabayashi**	**1.12**	**206**	⇑P	**Pn**	**06 21 03.4**	**-0.1**
JTM				*e*S	**Sn**	**06 21 18.8**	**-0.1**
JANG	**Nango**	**1.42**	**186**	⇑P	**Pn**	**06 21 06.7**	**-0.6**
JANG				*e*S	**Sn**	**06 21 24.4**	**-1.3**
JCH	**Churui**	**1.47**	**55**	⇑P	**Pn**	**06 21 08.4**	**+0.5**
JCH				*e*S	**Sn**	**06 21 27.2**	**+0.4**
JFR	**Furan**	**1.52**	**25**	P	**Pn**	**06 21 08.6**	**+0.1**
JFR				*e*S	**Sn**	**06 21 28.3**	**+0.5**
JOSM	**Okushiri--Mats**	**1.70**	**281**	⇓P	**Pn**	**06 21 11.0**	**+0.1**
JSK	**Shakotan**	**1.81**	**330**	⇑P	**Pn**	**06 21 12.9**	**+0.5**
JHR	**Hokuryu**	**1.95**	**0**	⇑P	**Pn**	**06 21 15.1**	**+0.9**
JHR				*e*S	**Sn**	**06 21 39.5**	**+1.5**
ASAJ	**Asahikawa**	**2.41**	**15**	P	**Pn**	**06 21 20.1**	**-0.3**
	30nm,0.3s,baz=208,slow=10,SNR=92						
ASAJ				S	**Sn**	**06 21 46.7**	**-2.3**
	22nm,0.3s,baz=311,slow=20,SNR=7.3						
ASAJ	**Asahikawa**	**2.41**	**15**	P	**Pn**	**06 21 20.1**	**-0.2**
ASAJ				S	**Sn**	**06 21 46.7**	**-2.3**
ASAJ				pmax	pmax		
	comp=Z,30nm,0.3s						
ASAJ				smax			

comp=Z,1.4nm,1.0s,mb3.6,baz=74,slow=11,SNR=3.6
MKAR PcP PcP 06 30 19.6 +0.3
comp=Z,0.5nm,0.3s,baz=75,slow=5.2,SNR=12
MKAR Makanchi Array 41.95 298 P P 06 28 25.4 -0.1
MKAR 06 30 19.7
MKAR pmax pmax
comp=Z,1.0nm,1.0s
CMAR Chiang Mai Arr 43.12 251 P P 06 28 33.8 -1.4
comp=Z,0.4nm,0.4s,mb3.5,baz=51,slow=8.6,SNR=4.5
KURK Kurchatov 43.32 304 *eP* **P 06 28 36.0 -0.4**
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KURK Kurchatov 43.32 304 *eP* **P 06 28 36.0 -0.4**
comp=Z,2.0nm,0.5s,mb4.1
KDAK Kodiak Island 43.49 45 P P 06 28 37.2 -0.5
comp=Z,1.0nm,0.3s,mb4.0,baz=300,slow=8.0,SNR=2.9
KDAK Kodiak Island 43.49 45 P P 06 28 37.2 -0.5
KDAK pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
ILAR Eielson Array 45.40 35 P P 06 28 53.3 +0.4
comp=Z,0.4nm,0.6s,mb3.4,baz=265,slow=6.5,SNR=7.7
ARCES ARCESS Array B 59.65 339 P P 06 30 37.8 -0.2
comp=Z,1.7nm,0.8s,mb4.1,baz=30,slow=7.5,SNR=3.4
ARCES ARCESS Array B 59.65 339 P P 06 30 37.8 -0.1
ARCES pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 61.80 188 P P 06 30 52.3 -0.7
comp=Z,1.7nm,0.5s,mb4.3,baz=6.2,slow=7.0,SNR=12
WRA Warramunga Arr 61.80 188 P P 06 30 52.3 -0.7
WRA pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 61.91 331 *eP* **P 06 30 51.9 -1.4**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
JOF Joensuu 61.91 331 *ep* **P 06 30 51.9 -1.4**
comp=Z,1.3nm,0.4s,mb4.3
KAF Kangasniemi 64.21 332 *eP* **P 06 31 07.6 -1.0**
KAF Kangasniemi 64.21 332 *ep* **P 06 31 07.6 -1.0**
FINES FINESS Array B 64.74 331 P P 06 31 11.8 -0.2
comp=Z,1.2nm,0.3s,mb4.1,baz=40,slow=7.9,SNR=22
FINES FINESS Array B 64.74 331 P P 06 31 11.8 -0.2
FINES pmax pmax
comp=Z,1.0nm,0.4s
ASAR Alice Springs 65.53 188 P P 06 31 16.9 -0.6
comp=Z,0.4nm,0.6s,mb3.5,baz=4.9,slow=7.5,SNR=5.5
NOA NORSAR Array B 69.91 337 P P 06 31 44.6 0.0
comp=Z,1.6nm,1.0s,mb3.8,baz=34,slow=6.4,SNR=3.5
NOA NORSAR Array B 69.91 337 P P 06 31 44.6 -0.1
NOA pmax pmax
comp=Z,2.0nm,1.0s
NVAR Mina Array Bea 71.99 54 P P 06 31 59.0 +1.3
comp=Z,0.5nm,0.5s,mb3.6,baz=304,slow=6.4,SNR=6.7
NVAR Mina Array Bea 71.99 54 P P 06 31 59.0 +1.3
PDAR Pinedale Array 74.19 46 P P 06 32 11.2 +0.6
comp=Z,0.5nm,0.6s,mb3.4,baz=306,slow=2.1,SNR=5.2
TXAR Lajitas Array 87.04 53 P P 06 33 20.5 +1.1
comp=Z,0.1nm,0.4s,mb3.1,baz=152,slow=4.1,SNR=4.5
DRV Dumont d'Urvil 108.13 181 R 06 40 00.0
VNA2 Neumayer--Watz 146.93 198 *e* PKPdf 06 40 11.1 -1.4
baz=91,slow=2.5
VNA3 Neumayer Olymp 147.20 197 *e* PKPdf 06 40 12.3 -0.7

ISCJB ***06*** *06:27:31.7±0.4,40°.61S±0°.03×173°.26E±0°.05,h184km±5km, mb3.6/4, Error ellipse: s-maj=8.1km s-min=3.6km az=37.5*
IDC ***06*** *06:27:32.2±1.5,40°.51S×173°.31E,h148km±19km,mb3.5/4, mb1 3.6/6,mb1mx3.5/15,mbtmp3.6/6, Error ellipse: s-maj=23.4km s-min=16.6km az=122.0*
WEL ***06*** *06:27:34.3±0.3,40°.59S×173°.28E,h165km±2km,ML4.5/23, Error ellipse: s-maj=1.4km s-min=0.6km az=90.0*
ISC 06 06:27:32.8±0.3,40°.61S±0°.03×173°.26E±0°.05,h174km±5km, n101,σ0s87/105,mb3.6/4,3C-2D,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.59**	**248**	⇓PN	**Pn**	**06 27 58.1**	**+0.8**
QRZ				SN	**Sn**	**06 28 14.9**	**-1.3**
NNZ	**Nelson**	**0.62**	**171**	⇑PN	**Pn**	**06 27 58.1**	**+0.7**
TUWZ	**Tuamarina**	**0.97**	**148**	PN	**Pn**	**06 28 00.6**	**+1.0**
TCW	**Tory Channel**	**0.98**	**128**	⇑PN	**Pn**	**06 28 00.8**	**+1.1**
THZ	**Tophouse**	**1.19**	**195**	⇑PN	**Pn**	**06 28 02.3**	**+0.9**
BSWZ	**Blackbirch Sta**	**1.20**	**157**	PN	**Pn**	**06 28 02.6**	**+1.1**
BSWZ				SN	**Sn**	**06 28 22.6**	**-1.1**
KIW	**Kapiti Island**	**1.28**	**102**	PN	**Pn**	**06 28 02.8**	**+0.6**
SNZO	**South Karori**	**1.30**	**123**	PN	**Pn**	**06 28 03.0**	**+0.6**
WEL	**Wellington**	**1.33**	**121**	PN	**Pn**	**06 28 03.3**	**+0.7**
CMWZ	**Cape Campbell**	**1.35**	**148**	PN	**Pn**	**06 28 04.1**	**+1.3**
NWEZ	**Newall Road**	**1.41**	**20**	PN	**Pn**	**06 28 04.1**	**+0.7**
DFE	**Dawson Falls**	**1.43**	**27**	PN	**Pn**	**06 28 04.0**	**+0.4**
BHW	**Baring Head**	**1.46**	**124**	PN	**Pn**	**06 28 04.3**	**+0.5**
CAW	**Cannon Point**	**1.46**	**111**	PN	**Pn**	**06 28 04.4**	**+0.5**
OGWZ	**Otaki Gorge**	**1.47**	**99**	PN	**Pn**	**06 28 04.7**	**+0.8**
NEZ	**North Egmont**	**1.48**	**26**	PN	**Pn**	**06 28 04.4**	**+0.3**
PKE	**Pukeiti**	**1.52**	**22**	PN	**Pn**	**06 28 05.0**	**+0.5**
WAZ	**Wanganui**	**1.57**	**58**	PN	**Pn**	**06 28 05.8**	**+0.8**
DSZ	**Denniston Nort**	**1.58**	**223**	PN	**Pn**	**06 28 05.9**	**+0.9**
RAEZ	**Rainy Point**	**1.58**	**34**	PN	**Pn**	**06 28 05.5**	**+0.5**
DREZ	**Durham Road**	**1.59**	**28**	PN	**Pn**	**06 28 05.6**	**+0.4**
MSWZ	**Moikau Station**	**1.71**	**119**	PN	**Pn**	**06 28 06.8**	**+0.5**
MHEZ	**Mangahewa**	**1.73**	**29**	PN	**Pn**	**06 28 07.2**	**+0.6**
HOWZ	**Holdsworth Sta**	**1.74**	**100**	PN	**Pn**	**06 28 07.1**	**+0.4**
MRZ	**Mangatainoka R**	**1.77**	**93**	PN	**Pn**	**06 28 07.3**	**+0.3**
MTW	**Mount Morrison**	**1.79**	**109**	PN	**Pn**	**06 28 07.6**	**+0.5**
PLWZ	**Palliser**	**1.79**	**123**	PN	**Pn**	**06 28 07.6**	**+0.4**
PAWZ	**Paruwai Farm**	**1.82**	**116**	PN	**Pn**	**06 28 07.8**	**+0.4**
KHZ	**Kahutara**	**1.82**	**173**	PN	**Pn**	**06 28 08.3**	**+0.8**
VRZ	**Vera Road**	**1.88**	**39**	PN	**Pn**	**06 28 07.9**	**-0.3**
POWZ	**Post Office Ro**	**1.93**	**84**	PN	**Pn**	**06 28 08.9**	**+0.3**
TRWZ	**Traveller**	**2.00**	**114**	PN	**Pn**	**06 28 10.0**	**+0.5**
TIWZ	**Tintock**	**2.01**	**96**	PN	**Pn**	**06 28 09.9**	**+0.5**
PKVZ	**Pokaka**	**2.08**	**51**	PN	**Pn**	**06 28 10.4**	**+0.1**
MTVZ	**Mangateitei**	**2.09**	**55**	PN	**Pn**	**06 28 10.6**	**+0.1**
TSZ	**Takapari Road**	**2.14**	**76**	⇓PN	**Pn**	**06 28 11.1**	**+0.1**
TRVZ	**Turoa**	**2.19**	**54**	PN	**Pn**	**06 28 11.6**	**0.0**
WNVZ	**Wahianoa**	**2.21**	**55**	PN	**Pn**	**06 28 11.7**	**0.0**
DRZ	**Dome Shelter**	**2.22**	**54**	PN	**Pn**	**06 28 14.5**	**+2.7**
FWVZ	**Far West T-bar**	**2.22**	**53**	PN	**Pn**	**06 28 11.7**	**-0.2**
DVHZ	**Dannevirke**	**2.24**	**83**	PN	**Pn**	**06 28 12.1**	**0.0**
WPVZ	**Whakapapa**	**2.25**	**52**	PN	**Pn**	**06 28 12.0**	**-0.2**
MOVZ	**Moawhango**	**2.26**	**59**	PN	**Pn**	**06 28 11.9**	**-0.5**
TWVZ	**Taurewa**	**2.27**	**48**	PN	**Pn**	**06 28 12.1**	**-0.4**
BFZ	**Birch Farm**	**2.28**	**93**	PN	**Pn**	**06 28 12.8**	**+0.3**
TUVZ	**Tukino**	**2.28**	**55**	PN	**Pn**	**06 28 12.5**	**-0.1**
LTZ	**Lake Taylor**	**2.30**	**198**	PN	**Pn**	**06 28 13.4**	**+0.7**
NGZ	**Ngauruhoe**	**2.30**	**52**	PN	**Pn**	**06 28 12.5**	**-0.3**
WTVZ	**West Tongariro**	**2.33**	**51**	PN	**Pn**	**06 28 12.8**	**-0.4**
OTVZ	**Oturere**	**2.35**	**53**	PN	**Pn**	**06 28 13.2**	**-0.1**
PNHZ	**Pukenui**	**2.36**	**74**	PN	**Pn**	**06 28 13.4**	**0.0**
KRVZ	**Karewarewa**	**2.38**	**51**	PN	**Pn**	**06 28 13.3**	**-0.4**
BHHZ	**Black Hill Sta**	**2.43**	**64**	PN	**Pn**	**06 28 13.8**	**-0.5**
HIZ	**Hauiti**	**2.43**	**31**	PN	**Pn**	**06 28 13.9**	**-0.4**
KATZ	**Kakaramea**	**2.49**	**50**	PN	**Pn**	**06 28 14.8**	**-0.2**
WPHZ	**Waipukurau**	**2.49**	**79**	PN	**Pn**	**06 28 15.2**	**+0.2**
RITZ	**Rihia Road**	**2.58**	**52**	PN	**Pn**	**06 28 15.9**	**-0.2**
PRHZ	**Porangahau**	**2.60**	**84**	PN	**Pn**	**06 28 16.6**	**+0.3**
RATZ	**Rangitukua**	**2.60**	**49**	PN	**Pn**	**06 28 16.4**	**0.0**
WATZ	**Wairara**	**2.69**	**46**	PN	**Pn**	**06 28 17.4**	**-0.1**
PXZ	**Pawanui**	**2.82**	**79**	PN	**Pn**	**06 28 18.8**	**-0.1**
BKZ	**Black Stump Fm**	**2.88**	**61**	PN	**Pn**	**06 28 18.5**	**-1.1**
MCHZ	**McNeill Hill**	**2.89**	**67**	PN	**Pn**	**06 28 19.7**	**-0.1**
KAHZ	**Kahuranaki**	**2.89**	**75**	PN	**Pn**	**06 28 20.1**	**+0.3**
CRLZ	**Canterbury Las**	**3.00**	**189**	PN	**Pn**	**06 28 20.9**	**-0.3**
CKHZ	**Cape Kidnapper**	**3.08**	**73**	PN	**Pn**	**06 28 22.8**	**+0.7**
WVZ	**Waitaha Valley**	**3.10**	**217**	PN	**Pn**	**06 28 22.3**	**-0.1**
NMHZ	**Naumai**	**3.12**	**62**	PN	**Pn**	**06 28 22.7**	**0.0**
MQZ	**McQueen's Vall**	**3.13**	**188**	PN	**Pn**	**06 28 22.0**	**-0.7**
ALRZ	**Allen Road**	**3.14**	**50**	PN	**Pn**	**06 28 21.8**	**-1.1**
RAHZ	**Arahi**	**3.40**	**61**	PN	**Pn**	**06 28 25.3**	**-0.8**
RPZ	**Rata Peaks**	**3.51**	**207**	PN	**Pn**	**06 28 27.1**	**-0.4**
RPZ	**Rata Peaks**	**3.51**	**207**	P	**Pn**	**06 28 27.5**	**+0.1**
	19nm,0.3s,baz=297,slow=2.4,SNR=65						
RPZ				S	**Sn**	**06 29 06.2**	**-3.9**
	40nm,0.3s,baz=113,slow=18,SNR=39						
KNZ	**Kokohu**	**3.75**	**66**	PN	**Pn**	**06 28 29.5**	**-1.0**
URZ	**Urewera**	**3.79**	**53**	PN	**Pn**	**06 28 29.0**	**-2.1**
URZ	**Urewera**	**3.79**	**53**	P	**Pn**	**06 28 28.9**	**-2.2**
	26nm,0.3s,baz=252,slow=8.2,SNR=134						
URZ				S	**Sn**	**06 29 12.3**	**-4.2**
	7.9nm,0.3s,baz=114,slow=8.5,SNR=3.8						
MKAZ	**Moumakai**	**3.80**	**24**	PN	**Pn**	**06 28 31.3**	**+0.2**
MHGZ	**Mahia Peninsul**	**3.86**	**69**	PN	**Pn**	**06 28 31.4**	**-0.5**
PRGZ	**Paritu Road**	**3.94**	**66**	PN	**Pn**	**06 28 31.9**	**-1.1**
RVAZ	**Riverhead Bore**	**3.97**	**16**	PN	**Pn**	**06 28 34.1**	**+0.8**
FOZ	**Fox Glacier**	**3.97**	**221**	PN	**Pn**	**06 28 31.6**	**-1.7**
MWZ	**Matawai**	**4.01**	**57**	PN	**Pn**	**06 28 31.9**	**-1.9**
KUZ	**Kuaotunu**	**4.31**	**27**	PN	**Pn**	**06 28 37.2**	**-0.5**
CNGZ	**Carnagh Statio**	**4.38**	**63**	PN	**Pn**	**06 28 37.0**	**-1.5**
LBZ	**Lake Benmore**	**4.41**	**210**	PN	**Pn**	**06 28 38.1**	**-0.7**
PUZ	**Puketiti**	**4.63**	**58**	PN	**Pn**	**06 28 39.7**	**-2.1**
WCZ	**Waipu Caves**	**4.74**	**11**	PN	**Pn**	**06 28 43.9**	**+0.7**
JCZ	**Jackson Bay**	**4.81**	**222**	PN	**Pn**	**06 28 43.2**	**-0.9**
ODZ	**Otahua Downs**	**4.83**	**203**	PN	**Pn**	**06 28 44.2**	**-0.1**
MXZ	**Matakaoa Point**	**4.97**	**54**	PN	**Pn**	**06 28 44.5**	**-1.7**
WKZ	**Wanaka**	**5.25**	**215**	PN	**Pn**	**06 28 48.3**	**-1.4**
EAZ	**Earnscleugh**	**5.46**	**211**	PN	**Pn**	**06 28 50.6**	**-1.9**
MSZ	**Milford Sound**	**5.65**	**222**	PN	**Pn**	**06 28 54.2**	**-0.9**
TUZ	**Tuapeka**	**5.96**	**205**	PN	**Pn**	**06 28 58.7**	**-0.4**
MLZ	**Mavora Lakes**	**6.03**	**217**	PN	**Pn**	**06 28 59.5**	**-0.4**
WHZ	**Wether Hill Ro**	**6.55**	**214**	PN	**Pn**	**06 29 05.5**	**-1.4**
SYZ	**Scrubby Hill**	**6.64**	**205**	PN	**Pn**	**06 29 07.2**	**-0.8**
ASAR	**Alice Springs**	**37.01**	**285**	P	**P**	**06 34 27.3**	**+1.7**
	0.3nm,0.4s,mb3.3,baz=125,slow=6.9,SNR=7.3						
WRA	**Warramunga Arr**	**39.00**	**290**	P	**P**	**06 34 44.2**	**+1.9**
	0.7nm,0.4s,mb3.6,baz=126,slow=8.4,SNR=9.7						
QSPA	**South Pole Qui**	**49.52**	**180**	P	**P**	**06 36 08.0**	**+3.0**
	2.4nm,0.6s,mb4.0,baz=46,slow=3.4,SNR=19						
KSRS	**Korea Array**	**88.09**	**326**	P	**P**	**06 40 06.0**	**+2.8**
	0.4nm,0.3s,mb3.7,baz=149,slow=5.3,SNR=4.0						

NIED ***06*** *07:05:00,42°.60N×141°.30E,h116km,Mw4.3 Best double couple: M0 3.07000×10^15 NP1:φ0=216.00000°, δ86.00000°,λ77.00000°. NP2:φ0=111.00000°,δ13.00000°, λ164.00000°.*
BJI ***06*** *07:05:02.6,42°.59N×141°.50E,h127km,mB4.5/14, mb4.7/27*
MOS ***06*** *07:05:03.3±1.1,42°.66N×141°.15E,h115km,mb4.5/21, Error ellipse: s-maj=9.4km s-min=6.5km az=98.6*
ISCJB ***06*** *07:05:04.3±0.2,42°.57N±0°.03×141°.31E±0°.03, h129km±1km,mb4.3/45, Error ellipse: s-maj=5.3km s-min=3.4km az=143.6*
IDC ***06*** *07:05:04.7±1.1,42°.61N×141°.24E,h120km±9km,mb3.9/13, mb1 4.0/15,mb1mx3.9/23,mbtmp3.8/15,MS2.7/1, Ms1 2.7/1,ms1mx2.3/31,Error ellipse: s-maj=14.6km s-min=10.8km az=127.0*
JMA ***06*** *07:05:05.5±0.1,42°.57N×141°.29E,h121km±1km,M3.9 Broadband fault plane solution: P waves. NP1: φ=127.00000°,δ23.00000°,λ173.00000°. NP2: φ=223.00000°,δ87.00000°,λ67.00000°. Principal axes: T Plg43.0000°, Azm111.0000°; N Plg23.0000°, Azm224.0000°; P Plg38.0000°, Azm334.0000°;*
NEIC ***06*** *07:05:05.5,42°.57N×141°.29E,h121km,mb4.3/14,After JMA.*
ISC 06 07:05:05.4±0.2,42°.58N±0°.03×141°.30E±0°.03,h124km±2km, h126km±5.7km:pP-P,n123,σ0s81/145,mb4.4/45,12C-11D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNB	**Noboribetsu**	**0.22**	**241**	⇑P	**Pn**	**07 05 22.1**	**-0.4**
JNB				*e*S	**Sn**	**07 05 34.8**	**-0.6**
JEW	**Eniwo**	**0.28**	**23**	⇑P	**Pn**	**07 05 22.8**	**+0.1**
JEW				*e*S	**Sn**	**07 05 35.6**	**-0.2**
JKB	**Kayabe**	**0.72**	**196**	⇓P	**Pn**	**07 05 25.0**	**-0.3**
JKB				*e*S	**Sn**	**07 05 39.6**	**-0.6**
JBT2	**Biratori 2**	**0.81**	**75**	⇓P	**Pn**	**07 05 25.8**	**-0.2**
JYM2	**Yakumo 2**	**0.83**	**237**	⇑P	**Pn**	**07 05 26.2**	**0.0**
JYM2				*e*S	**Sn**	**07 05 41.2**	**-0.7**
JSH	**Shimam**	**0.93**	**274**	⇑P	**Pn**	**07 05 27.1**	**0.0**
JSK	**Shakotan**	**0.98**	**322**	⇑P	**Pn**	**07 05 27.5**	**-0.1**
JSK				*e*S	**Sn**	**07 05 44.4**	**0.0**
JNBK	**Urakawa-nobuka**	**1.11**	**105**	⇓P	**Pn**	**07 05 28.7**	**-0.2**
JFR	**Furan**	**1.12**	**58**	P	**Pn**	**07 05 29.2**	**+0.3**
JFR				*e*S	**Sn**	**07 05 47.1**	**+0.4**
JAB	**Ashibetsu**	**1.15**	**36**	⇑P	**Pn**	**07 05 29.9**	**+0.7**
JAB				*e*S	**Sn**	**07 05 48.1**	**+0.8**
JHR	**Hokuryu**	**1.21**	**15**	⇑P	**Pn**	**07 05 30.6**	**+0.8**
JOT	**Ohata**	**1.21**	**189**	⇓P	**Pn**	**07 05 29.7**	**-0.2**
JOSM	**Okushiri--Mats**	**1.44**	**251**	⇑P	**Pn**	**07 05 32.2**	**-0.2**
JOSM				*e*S	**Sn**	**07 05 52.6**	**-0.3**
ERM	**Erimo**	**1.49**	**112**	*e*PN	**Pn**	**07 05 33.4**	**+0.5**
JCH	**Churui**	**1.52**	**88**	P	**Pn**	**07 05 33.2**	**-0.1**
JCH				*e*S	**Sn**	**07 05 54.2**	**-0.3**
JKK2	**Kamakawa 2**	**1.67**	**39**	⇑P	**Pn**	**07 05 35.4**	**+0.4**
JKK2				*e*S	**Sn**	**07 05 57.7**	**0.0**
ASAJ	**Asahikawa**	**1.81**	**31**	P	**Pn**	**07 05 37.1**	**+0.5**
	19nm,0.3s,baz=227,slow=10,SNR=134						
ASAJ				S	**Sn**	**07 05 59.4**	**-1.1**
	27nm,0.3s,baz=258,slow=20,SNR=13						
ASAJ	**Asahikawa**	**1.81**	**31**	PN	**Pn**	**07 05 37.2**	**+0.6**
ASAJ				S	**Sn**	**07 05 59.4**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,19nm,0.3s						
ASAJ				smax			
	comp=N,27nm,0.3s						
ASAJ	**Asahikawa**	**1.81**	**31**	*e*Pn	**Pn**	**07 05 36.8**	**+0.2**
JYG	**Yagishiri**	**1.85**	**3**	P	**Pn**	**07 05 37.5**	**+0.3**
JYG				*e*S	**Sn**	**07 06 02.0**	**+0.5**
JAR	**Ashorobuto**	**1.95**	**68**	⇓P	**Pn**	**07 05 37.9**	**-0.5**
JAR				*e*S	**Sn**	**07 06 02.4**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**3.63**	**65**	⇓*i*PN	**Pn**	**07 06 01.0**	**+0.9**
YUK				*i* S	**Sn**	**07 06 42.9**	**+0.5**
YUK				pmax	pmax		
	comp=N,35nm,0.3s						
YUK				pmax	pmax		
	comp=E,104nm,0.3s						
YUK				pmax	pmax		
	comp=Z,232nm,0.3s						
YUK				pmax	pmax		
	comp=Z,440nm,1.4s						
YUK				smax			
	comp=N,2μm,1.2s						
YUK				smax			
	comp=E,600nm,0.6s						
YUK				smax			
	comp=N,1μm,0.6s						
YUK				smax			
	comp=E,693nm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.50**	**13**	⇓*i*PN	**Pn**	**07 06 12.0**	**+0.4**
YSS				*e*S	**Sn**	**07 07 04.0**	**+1.0**
YSS				pmax	pmax		
	comp=Z,100nm,1.1s						
YSS				smax			
	comp=N,40nm,1.1s						
YSS	**Yuzh-Sakhalins**	**4.50**	**13**	*e*Pn	**Pn**	**07 06 12.8**	**+1.2**
KUR	**Kuril'sk**	**5.44**	**59**	*e*PN	**Pn**	**07 06 24.8**	**+0.6**
KUR				*e*S	**Sn**	**07 07 25.3**	**-0.3**
KUR				pmax	pmax		
	comp=Z,80nm,0.6s						
KUR				smax			
	comp=N,110nm,0.9s						
KUR				smax			
	comp=E,210nm,0.9s						
MAJO	**Matsushiro**	**6.48**	**203**	*e*PN	**Pn**	**07 06 38.8**	**+0.4**
MAT	**Matsushiro**	**6.48**	**203**	P	**Pn**	**07 06 38.5**	**+0.1**
MAT				S	**Sn**	**07 07 53.0**	**+2.0**
MJAR	**Matsushiro Arr**	**6.48**	**203**	P	**Pn**	**07 06 38.6**	**+0.2**
	comp=E,3.1nm,0.3s,baz=19,slow=12,SNR=18						
MJAR				LR	LR	07 09 19.8	
	comp=E,62nm,20.1s,baz=270,slow=39						
MJAR	**Matsushiro Arr**	**6.48**	**203**	P	**Pn**	**07 06 38.6**	**+0.2**
MJAR				LR	LR	07 09 19.8	
HABR	**Khabarovsk**	**7.35**	**325**	*e*PN	**Pn**	**07 06 50.6**	**+0.6**
HABR				pmax	pmax		
	comp=N,65nm,1.8s						
HABR				pmax	pmax		
	comp=Z,143nm,1.9s						
HABR				pmax	pmax		
	comp=E,58nm,1.5s						
MDJ	**Mudanjiang**	**8.74**	**287**	P	**Pn**	**07 07 10.0**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,63nm,7.6s						
MDJ	**Mudanjiang**	**8.74**	**287**	*e*Pn	**Pn**	**07 07 09.5**	**+0.7**
	comp=Z,7.3nm,0.7s						
KLR	**Kul'dur**	**9.41**	**318**	*e*PN	**Pn**	**07 07 14.6**	**-3.2**
KLR				pmax	pmax		
	comp=E,43nm,1.4s						
KLR				pmax	pmax		
	comp=Z,67nm,1.4s						
JHJ	**Hachijo jima 2**	**9.52**	**188**	P	**Pn**	**07 07 15.9**	**-3.5**
	comp=Z,14nm,0.3s,baz=238,slow=19,SNR=3.8						
JHJ				S	**Sn**	**07 08 53.0**	**-12**
	comp=Z,6.7nm,0.3s,baz=56,slow=18,SNR=7.6						
KSRS	**Korea Array**	**11.46**	**248**	P	**Pn**	**07 07 45.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=60,slow=14,SNR=3.5						
CN2	**Changchun**	**11.64**	**281**	*e*P	**Pn**	**07 07 47.7**	**+0.1**
CN2				*es*P		07 08 21.3	
CN2				*e*S	**Sn**	**07 09 55.2**	**-0.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,300nm,3.0s						
PETK	**Petropavlovsk-**	**15.20**	**40**	P	**Pn**	**07 08 33.2**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=234,slow=8.8,SNR=5.7						
CBIJ	**Chichi jima**	**15.46**	**177**	P	**Pn**	**07 08 33.5**	**-3.3**
	comp=Z,3.5nm,0.3s,baz=321,slow=6.5,SNR=5.1						
CBIJ				S	S	07 11 14.0	-21
	comp=Z,1.1nm,0.3s,baz=82,slow=15,SNR=2.6						
BJI	**Beijing**	**19.03**	**271**	P	**P**	**07 09 17.7**	**+0.1**
BJI				S	**S**	**07 12 47.0**	**0.0**
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
BJI				pmax	pmax		
	comp=Z,110nm,5.7s						
BJI				LR	LR		
	comp=N,100nm,16.8s						
BJI				LR	LR		
	comp=E,84nm,17.6s						
BJI				LR	LR		
	comp=Z,40nm,16.4s						
NJ2	**Nanjing**	**20.66**	**247**	*e*P	**P**	**07 09 36.6**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
SEY	**Seymchan**	**21.40**	**14**	⇑*e*P	**P**	**07 09 40.6**	**-2.3**
HHC	**Hu-ho-hao-te**	**22.22**	**276**	*e*P	**P**	**07 09 50.8**	**-1.0**
HHC				pP		07 10 16.0	
HHC				PP		07 10 23.9	
HHC				sP	sP	07 10 31.6	+1.4
HHC				S	**S**	**07 13 42.7**	**-4.8**
HHC				sS	sS	07 14 24.6	-3.4
HHC				SS		07 14 32.8	
HHC				ScP	ScP	07 17 09.0	-0.2
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.2						
HHC				pmax	pmax		
	comp=Z,97nm,5.1s						
HHC				LR	LR		
	comp=N,120nm,10.7s						
HHC				LR	LR		
	comp=E,96nm,6.8s						
HHC				LR	LR		
	comp=Z,110nm,11.2s						
ULN	**Ulaanbaatar**	**24.56**	**294**	*e*P	**P**	**07 10 13.0**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.2						
ULN	**Ulaanbaatar**	**24.56**	**294**	*e*P	**P**	**07 10 13.0**	**-0.6**
	comp=Z,3.6nm,0.4s,mb4.2						
SONM	**Songino Array**	**25.01**	**294**	P	**P**	**07 10 17.0**	**-0.5**
	comp=Z,9.0nm,0.8s,mb4.3,baz=86,slow=8.8,SNR=37						
SONM	**Songino Array**	**25.01**	**294**	P	**P**	**07 10 17.0**	**-0.6**
SONM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TLY	**Talaya**	**26.93**	**303**	*e*P	**P**	**07 10 34.4**	**-0.4**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
ZAK	**Zakamensk**	**27.08**	**300**	*e*P	**P**	**07 10 35.3**	**-0.9**
MOY	**Mondy**	**28.57**	**303**	*e*P	**P**	**07 10 49.6**	**+0.1**
CD2	**Chengdu**	**32.01**	**261**	*e*P	**P**	**07 11 21.1**	**+1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
GYA	**Guiyang**	**32.49**	**252**	*e*P	**P**	**07 11 25.4**	**+1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
KMI	**Kunming**	**36.08**	**254**	P	**P**	**07 11 53.6**	**-1.6**
KMI				pP	pP	07 12 24.7	+2.2
KMI				sP	sP	07 12 39.5	+2.9
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
ZALV	**Zalesovo Beam**	**38.30**	**307**	P	**P**	**07 12 13.2**	**-0.3**
	comp=Z,8.9nm,0.5s,mb4.9,baz=88,slow=8.2,SNR=23						
ZALV	**Zalesovo Beam**	**38.30**	**307**	P	**P**	**07 12 13.2**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.9						
WMQ	**Urumqi**	**38.52**	**291**	*e*P	**P**	**07 12 17.0**	**+1.4**
WMQ				pP	pP	07 12 45.0	+1.9
WMQ				sP	sP	07 13 00.0	+2.8
WMQ				PP	PP	07 13 52.0	+5.9
WMQ				S	**S**	**07 18 03.0**	**+1.0**
WMQ				SS	SS	07 20 49.0	-7.3
WMQ

ARU			*e*			07 16 02.8	
ARU			S	S		07 21 40.6	+22
ARU			pmax	pmax			
comp=Z,11nm,1.7s,mb4.6							
ABKAR	**Akbulak array**	**54.41 307**	*e*P	**P**		**07 14 19.1**	**-0.3**
comp=Z,3.0nm,0.5s,mb4.6							
KBS	**Kingsbay**	**55.19 350⇓**	*e*P	**P**		**07 14 25.1**	**+0.5**
KBS			pmax	pmax			
comp=Z,35nm,2.5s,mb5.0							
KEV	**Kevo**	**58.25 338**	*e*P	**P**		**07 14 45.4**	**-0.9**
KEV			pmax	pmax			
comp=Z,3.0nm,0.6s,mb4.5							
ARCES	**ARCESS Array B**	**58.80 338**	P	**P**		**07 14 49.2**	**-0.9**
comp=Z,1.8nm,0.6s,mb4.3,baz=56,slow=8.1,SNR=9.7							
ARCES	**ARCESS Array B**	**58.80 338**	P	**P**		**07 14 49.2**	**-0.9**
ARCES			pmax	pmax			
comp=Z,2.0nm,0.6s							
ARCES	**ARCESS Array B**	**58.80 338**	P	**P**		**07 14 49.3**	**-0.8**
YKA	**Yellowknife Ar**	**59.10 32**	P	**P**		**07 14 50.5**	**-1.7**
comp=Z,1.0nm,0.7s,mb4.0,baz=307,slow=7.1,SNR=3.9							
YKA	**Yellowknife Ar**	**59.10 32**	P	**P**		**07 14 50.5**	**-1.8**
YKA			pmax	pmax			
comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**59.10 32**	P	**P**		**07 14 50.5**	**-1.8**
JOF	**Joensuu**	**61.07 331**	*e*P	**P**		**07 15 03.8**	**-1.9**
JOF			pmax	pmax			
comp=Z,4.0nm,0.5s,mb4.7							
WRA	**Warramunga Arr**	**62.53 187**	P	**P**		**07 15 15.1**	**-0.9**
comp=Z,1.4nm,0.5s,mb4.1,baz=6.1,slow=7.0,SNR=30							
WRA			pP	pP		07 15 44.4	-1.5
comp=Z,1.9nm,0.9s,baz=3.7,slow=6.8,SNR=6.5							
WRA	**Warramunga Arr**	**62.53 187**	P	**P**		**07 15 15.1**	**-0.9**
WRA			*PP	pP		07 15 44.4	-1.4
WRA			pmax	pmax			
comp=Z,1.0nm,0.5s							
KAF	**Kangasniemi**	**63.37 332**	*e*P	**P**		**07 15 19.2**	**-1.9**
KAF			pmax	pmax			
comp=Z,3.0nm,0.6s,mb4.4							
OBN	**Obninsk**	**63.65 322⇑**	*e*P	**P**		**07 15 22.2**	**-0.8**
OBN			pmax	pmax			
comp=Z,8.0nm,0.5s,mb4.8							
OBN			MLR	MLR			
comp=Z,100nm,22.0s							
FINES	**FINESS Array B**	**63.90 331**	P	**P**		**07 15 23.4**	**-1.1**
comp=Z,8.3nm,0.6s,mb4.8,baz=50,slow=7.5,SNR=52							
FINES	**FINESS Array B**	**63.90 331**	P	**P**		**07 15 23.4**	**-1.1**
FINES			pmax	pmax			
comp=Z,8.0nm,0.6s							
SUMG	**Summit**	**65.15 360**	*e*P	**P**		**07 15 32.9**	**+0.4**
comp=Z,8.5nm,0.9s,mb4.6							
ASAR	**Alice Springs**	**66.26 187**	P	**P**		**07 15 39.8**	**-0.4**
comp=Z,1.4nm,0.8s,mb3.9,baz=3.7,slow=5.3,SNR=16							
ASAR			pP	pP		07 16 08.6	-1.8
comp=Z,1.0nm,0.9s,baz=10,slow=5.8,SNR=4.1							
ASAR	**Alice Springs**	**66.26 187**	P	**P**		**07 15 39.8**	**-0.4**
ASAR			*PP	pP		07 16 08.6	-1.8
ASAR			pmax	pmax			
comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**66.26 187**	P	**P**		**07 15 39.8**	**-0.4**
ASAR			pP	pP		07 16 08.6	-1.8
KIV	**Kislovodsk**	**67.27 309**	*e*P	**P**		**07 15 45.3**	**-1.2**
KIV			pmax	pmax			
comp=Z,12nm,1.2s,mb4.6							
NB2	**NORSAR Subarra**	**69.06 337**	P	**P**		**07 15 56.4**	**-0.9**
comp=Z,3.3nm,0.6s,mb4.3,baz=36,slow=6.5							
NOA	**NORSAR Array B**	**69.06 337**	P	**P**		**07 15 56.2**	**-1.1**
comp=Z,4.4nm,0.8s,mb4.4,baz=37,slow=6.3,SNR=16							
NOA	**NORSAR Array B**	**69.06 337**	P	**P**		**07 15 56.2**	**-1.1**
NOA			pmax	pmax			
comp=Z,4.0nm,0.8s							
NVAR	**Mina Array Bea**	**71.78 54**	P	**P**		**07 16 15.3**	**+1.0**
comp=Z,1.7nm,0.6s,mb4.0,baz=298,slow=6.0,SNR=19							
NVAR	**Mina Array Bea**	**71.78 54**	P	**P**		**07 16 15.3**	**+1.0**
KIS	**Kishinev**	**72.66 319**	*e*P	**P**		**07 16 23.0**	**+3.7**
DUG	**Dugway**	**73.83 50**	*e*P	**P**		**07 16 26.9**	**+0.5**
DUG			pmax	pmax			
comp=Z,1.0nm,0.6s,mb3.7							
DUG	**Dugway**	**73.83 50**	*e*P	**P**		**07 16 26.9**	**+0.5**
comp=Z,1.0nm,0.6s,mb3.7							
PDAR	**Pinedale Array**	**73.88 46**	P	**P**		**07 16 27.1**	**+0.5**
comp=Z,0.7nm,0.6s,mb3.6,baz=310,slow=4.2,SNR=6.7							
BUR08	**Bucovina Ar. S**	**73.93 321**	*e*P	**P**		**07 16 27.0**	**+0.3**
OJC	**Ojcow**	**74.41 325**	*e*P	**P**		**07 16 29.8**	**+0.2**
CLL	**Collm**	**76.27 330**	*e*P	**P**		**07 16 40.0**	**-0.1**
PV10	**Paradox Valley**	**77.21 49**	*e*P	**P**		**07 16 47.2**	**+1.5**
comp=Z,104nm,0.8s							
TXAR	**Lajitas Array**	**86.81 52**	P	**P**		**07 17 36.2**	**+0.2**
comp=Z,0.4nm,0.5s,mb3.6,baz=300,slow=1.8,SNR=12							
SIV	**San Ignacio**	**147.30 43**	PKPbc	PKPbc		07 24 34.6	-0.1
comp=Z,1.1nm,0.5s,baz=8.8,slow=3.5,SNR=6.4							

NEIC ***06*** *07:26:48.1, 18°.73N×67°.40W, h11km, MD3.2(RSPR), After RSPR.*

RSPR 06 07:26:48.1, 18°.73N×67°.40W, h11km±1km, MD3.2/15, 8C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.38**	**134⇑**	*e*P		Pg	07 26 55.5	-0.2
AGPR				*e*S		Sg	07 27 01.4	+0.7
MPR	**Mayaguez**	**0.57**	**155⇓**	*e*P		Pg	07 26 58.5	-0.8
LSP	**Las Mesas**	**0.63**	**152⇓**	*e*P		Pg	07 26 59.5	-0.8
LRS	**Lares**	**0.69**	**130⇑**	*e*P		Pg	07 27 00.1	-1.3
AOPR	**Arecibo Observ**	**0.72**	**122⇑**	*e*P		Pg	07 27 00.7	-1.4
AOPR				*e*S		Sg	07 27 10.5	-1.0
CRPR	**Cabo Rojo, PR**	**0.77**	**159⇓**	*e*P		Pg	07 27 02.3	-0.8
IMO	**Isla Mona**	**0.79**	**218⇓**	*e*P		Pg	07 27 01.6	-1.7
IMO				*e*S		Sg	07 27 12.2	-1.4
GBPR	**Guanica, Bosqu**	**0.90**	**147⇓**	*e*P		Pg	07 27 03.8	-1.7
CELP	**Cerrillos**	**1.02**	**130⇓**	*e*P		Pg	07 27 05.6	-2.1
OBIP	**Obispado Ponce**	**1.02**	**132⇓**	*e*P		Pg	07 27 05.4	-2.3
OBIP				*e*S		Sg	07 27 18.9	-2.2
ICM	**Isla Caja Muer**	**1.18**	**135**	*e*Pn		Pn	07 27 08.6	-2.0
ICM				*e*Sn		Sn	07 27 24.2	-2.4
SJG	**San Juan**	**1.34**	**117⇑**	*e*P		Pn	07 27 09.4	-3.3
SJG	**San Juan**	**1.34**	**117⇑**	*e*P		Pn	07 27 09.3	-3.4
SJG				*e*S		Sb	07 27 27.0	-3.4
HUMP	**Col San Antoni**	**1.58**	**112⇑**	*e*P		Pn	07 27 13.7	-2.4
SMN1	**Samana, DR**	**1.83**	**285⇑**	*e*P		Pn	07 27 16.9	-2.6
STVI	**Saint Thomas**	**2.35**	**99⇓**	*e*P		Pn	07 27 24.1	-2.6
SDDR	**Presa de Saban**	**3.69**	**274**	*e*Pn		Pn	07 27 45.8	+0.6
SDDR				*e*Sg		Sg	07 28 40.8	-5.9

NIED ***06*** *07:29:00, 35°.30N×141°.30E, h23km, Mw4.6 Best double couple: M0 9.28000×10^15 NP1:φ=216.00000°, δ85.00000°, λ-69.00000°. NP2:φ=319.00000°, δ22.00000°, λ-166.00000°.*

BJI ***06*** *07:29:09.9, 35°.45N×141°.38E, h10km, mB4.7/28, mb4.7/44, Ms4.3/35, Ms7 4.1/35*

IDC ***06*** *07:29:12.5±0.5, 35°.28N×140°.97E, h0km, mb4.3/21, mb1 4.5/24, mb1mx4.4/29, mbtmp4.4/24, ML4.3/3, MS4.0/12, Ms1 4.1/12, ms1mx3.7/35, Error ellipse: s-maj=15.2km s-min=12.0km az=100.0*

NEIC ***06*** *07:29:14.4±0.2, 35°.34N×140°.96E, h10km, mb4.8/37, MS4.2/2, MW4.6(NIED), Error ellipse: s-maj=6.5km s-min=5.7km az=123.0*

NEIC Recorded [2 JMA] in Chiba.

JMA ***06*** *07:29:14.8±0.1, 35°.36N×141°.25E, h40km±2km, M4.7*

JMA Felt II J1.

ISCJB ***06*** *07:29:16.4±0.5, 35°.30N±0°.03×141°.08E±0°.04, h36km±4km, mb4.7/91, MS4.1/25, Error ellipse: s-maj=5.1km s-min=4.5km az=17.2*

SZGRF ***06*** *07:29:17.6, 35°.39N×142°.05E, h33km, mb5.3, MS4.3, Off east coast of Honshu, Japan*

MOS ***06*** *07:29:18.6±1.0, 35°.80N×141°.00E, h33km, mb4.9/51, Error ellipse: s-maj=9.6km s-min=5.5km az=110.1*

ISC 06 07:29:17.0±0.5, 35°.30N±0°.02×141°.06E±0°.03, h28km±3km, h16km±3.9km: pP-P, n219, σ1°.03/238, mb4.7/91, MS4.1/25, 16C-9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CHOJ	**Chosi**	**0.44**	**338**	⇑P		**Pb**	**07 29 25.0**	**-1.3**
CHOJ				*e*S		**Sb**	**07 29 32.9**	**+0.2**
KTR	**Katsuura**	**0.62**	**257**	⇑P		**Pb**	**07 29 29.7**	**+0.3**
KTR				*e*S		**Sb**	**07 29 39.5**	**+1.7**
BSO1	**Boso 1**	**0.64**	**186**	P		**Pb**	**07 29 28.9**	**-0.8**
BSO1				*e*S		**Sb**	**07 29 38.0**	**-0.3**
BSO4	**Boso 4**	**0.66**	**243**	⇑P		**Pb**	**07 29 30.5**	**+0.5**
BSO4				*e*S		**Sb**	**07 29 41.5**	**+2.6**
BSO3	**Boso 3**	**0.67**	**222**	⇓P		**Pb**	**07 29 30.2**	**+0.1**
JCN	**Nagara**	**0.71**	**280**	⇑P		**Pb**	**07 29 31.5**	**+0.7**
JYT	**Yasato**	**1.17**	**323**	⇑P		**Pn**	**07 29 35.9**	**-1.6**
JIM2	**Oshima 3**	**1.45**	**247**	⇑P		**Pn**	**07 29 40.3**	**-1.1**
JIM2				S		**Sn**	**07 29 59.0**	**-0.5**
JOD2	**Odawara 2**	**1.61**	**269**	⇑P		**Pn**	**07 29 43.0**	**-0.6**
JOD2				S		**Sn**	**07 30 02.1**	**-1.3**
JHJ	**Hachijo jima 2**	**2.41**	**206**	Pn		**Pn**	**07 29 52.9**	**-1.8**
62nm,0.3s,baz=207,slow=9.0,SNR=24								
JHJ				Sn		**Sn**	**07 30 23.4**	**+0.1**
231nm,0.3s,baz=279,slow=19,SNR=8.6								
MJAR	**Matsushiro Arr**	**2.62**	**299**	Pn		**Pn**	**07 29 56.7**	**-0.9**
40nm,0.3s,baz=100,slow=14,SNR=191								
MJAR	**Matsushiro Arr**	**2.62**	**299**	P		**Pn**	**07 29 56.7**	**-0.8**
MJAR				pmax		pmax		
comp=Z,40nm,0.3s								
MJAR	**Matsushiro Arr**	**2.62**	**299**	Pn		**Pn**	**07 29 56.7**	**-0.8**
MJAR				LR		LR	07 42 48.9	
MAJO	**Matsushiro**	**2.63**	**299**	*e*P		**Pn**	**07 29 59.7**	**+2.1**
MAT	**Matsushiro**	**2.63**	**299**	P		**Pn**	**07 29 59.5**	**+1.9**
MAT				*e*S		**Sn**	**07 30 28.3**	**-0.2**
ERM	**Erimo**	**6.91**	**13**	*d i*P		**Pn**	**07 30 52.1**	**-4.3**
ERM	**Erimo**	**6.91**	**13**	*e*Pn		**Pn**	**07 30 52.7**	**-3.6**
ERM				*e*Sn		**Sn**	**07 32 10.4**	**-3.6**
CBIJ	**Chichi jima**	**8.23**	**173**	Pn		**Pn**	**07 31 11.8**	**-2.8**
comp=Z,30nm,0.3s,baz=321,slow=13,SNR=48								
CBIJ				Sn		**Sn**	**07 32 37.5**	**-9.1**
baz=246,slow=20,SNR=3.0								
JNU	**Nakatsue**	**8.71**	**258**	*e*Pn		**Pn**	**07 31 26.8**	**+5.7**
ASAJ	**Asahikawa**	**8.89**	**7**	Pn		**Pn**	**07 31 19.4**	**-4.1**
comp=Z,6.5nm,0.3s,baz=203,slow=10,SNR=31								
ASAJ				Sn		**Sn**	**07 32 56.7**	**-6.0**
comp=Z,0.9nm,0.3s,baz=252,slow=20,SNR=1.8								
ASAJ				LR		LR	07 35 25.8	
comp=Z,678nm,20.6s,baz=176,slow=42								
ASAJ	**Asahikawa**	**8.89**	**7**	P		**Pn**	**07 31 19.5**	**-4.0**
ASAJ							07 32 56.7	
ASAJ				pmax		pmax		
comp=Z,7.0nm,0.3s								
ASAJ				smax				
comp=N,1.0nm,0.3s								
ASAJ	**Asahikawa**	**8.89**	**7**	*e*Pn		**Pn**	**07 31 19.9**	**-3.6**
YUK	**Yuzh-Kuril'sk**	**9.48**	**22**	*i*P		**Pn**	**07 31 29.7**	**-1.9**
YUK				S		**Sn**	**07 33 08.7**	**-8.5**
YUK				pmax		pmax		
comp=N,69nm,0.7s								
YUK				pmax		pmax		
comp=E,27nm,0.7s								
YUK				pmax		pmax		
comp=Z,100nm,0.7s								
YUK				pmax		pmax		
comp=Z,330nm,1.9s								
YUK				smax				
comp=N,260nm,1.2s								
YUK				smax				
comp=E,410nm,1.4s								
YUK				MLR		MLR		
comp=E,500nm,19.0s								
YUK				MLR		MLR		
comp=Z,500nm,19.0s								
YUK				MLR		MLR		
comp=N,700nm,10.0s								
KSRS	**Korea Array**	**10.81**	**285**	Pn		**Pn**	**07 31 53.2**	**+3.4**
comp=N,0.4nm,0.3s,baz=97,slow=14,SNR=31								
KSRS				Lg			07 34 55.3	
comp=N,2.7nm,0.3s,baz=226,slow=31,SNR=11								
KSRS				LR		LR	07 36 14.1	
comp=N,1μm,18.3s,baz=99,slow=39								
KUR	**Kuril'sk**	**11.20**	**26**	P		**Pn**	**07 31 47.0**	**-8.2**
KUR				*e*S		**Sn**	**07 33 50.5**	**-8.9**
KUR				pmax		pmax		
comp=Z,110nm,0.9s								
KUR				smax				
comp=N,80nm,0.7s								
YSS	**Yuzh-Sakhalins**	**11.72**	**6**	*e*P		**Pn**	**07 31 58.4**	**-3.8**
YSS				*e*S		**Sn**	**07 34 04.0**	**-8.0**
YSS				MLR		MLR		
comp=N,500nm,14.0s								
YSS				MLR		MLR		
comp=Z,700nm,14.0s								
YSS				MLR		MLR		
comp=E,500nm,16.0s								
YSS	**Yuzh-Sakhalins**	**11.72**	**6**	*e*Pn		**Pn**	**07 31 59.1**	**-3.1**
MDJ	**Mudanjiang**	**12.79**	**320**	P		**Pn**	**07 32 24.9**	**+7.9**
MDJ				pmax		pmax		
comp=Z,11nm,0.8s								
MDJ				pmax		pmax		
comp=Z,120nm,7.7s								
MDJ				LR		LR		
comp=N,430nm,16.9s								
MDJ				LR		LR		
comp=E,410nm,15.2s								
MDJ				LR		LR		
comp=Z,770nm,15.2s								
MDJ	**Mudanjiang**	**12.79**	**320**	*e*Pn		**Pn**	**07 32 19.8**	**+2.8**
HABR	**Khabarovsk**	**13.90**	**343**	P		**Pn**	**07 32 29.3**	**-2.7**
HABR				*e*			07 34 55.5	
HABR				MLR		MLR		
comp=Z,645nm,16.0s								
CN2	**Changchun**	**14.72**	**310**	*e*P		**Pn**	**07 32 43.1**	**-0.1**
CN2				*es*P		sP	07 32 50.0	-10
CN2				*e*S		**Sn**	**07 35 25.8**	**+0.5**
CN2				pmax		pmax		
comp=Z,10.0nm,0.6s								
CN2				pmax		pmax		
comp=Z,80nm,4.0s								
CN2				LR		LR		
comp=N,600nm,14.0s								
CN2				LR		LR		
comp=E,400nm,14.0s								
CN2				LR		LR		
comp=Z,500nm,15.0s								
DL2	**Dalian**	**15.91**	**289**	P		**Pn**	**07 33 01.1**	**+2.2**
DL2				*e*S		**Sn**	**07 36 01.6**	**+7.2**
DL2				pmax		pmax		
comp=Z,20nm,0.6s								
DL2				LR		LR		
comp=E,420nm,18.0s								
DL2				LR		LR		
comp=Z,630nm,16.2s								
SSE	**Sheshan**	**17.15**	**261**	P		**Pn**	**07 33 15.6**	**+1.0**
SSE				S		**Sn**	**07 36 24.0**	**-0.5**
SSE				pmax		pmax		
comp=Z,15nm,0.6s								
SSE				pmax		pmax		
comp=Z,78nm,5.1s								
SSE				LR		LR		
comp=N,360nm,14.7s								
SSE				LR		LR		
comp=E,610nm,14.5s								
SSE				LR		LR		
comp=Z,1μm,13.2s								
NJ2	**Nanjing**	**18.75**	**266**	*e*P		**Pn**	**07 33 42.2**	**+7.8**
NJ2				pP		pP	07 33 45.8	+4.5
NJ2				sP		sP	07 33 49.2	+4.4
NJ2				PP			07 33 58.3	
NJ2				S		**Sn**	**07 37 14.0**	**+11**
NJ2				sS		sS	07 37 21.0	+3.3
NJ2				pmax		pmax		
comp=Z,20nm,0.5s								
NJ2				pmax		pmax		
comp=Z,90nm,8.5s								
NJ2				LR		LR		
comp=N,260nm,12.4s								
NJ2				LR		LR		
comp=E,640nm,16.3s								
NJ2				LR		LR		
comp=Z,440nm,12.2s								
BJI	**Beijing**	**20.23**	**291**	P		**P**	**07 33 47.3**	**-2.6**
BJI				S		**S**	**07 37 36.2**	**+0.8**
BJI				pmax		pmax		
comp=Z,27nm,0.9s								
BJI				pmax		pmax		
comp=Z,110nm,3.7s								
BJI				LR		LR		
comp=N,150nm,16.9s,MS3.8								
BJI				LR		LR		
comp=E,340nm,19.1s,MS3.8								
BJI				LR		LR		
comp=Z,330nm,24.2s								
BJT	**Baijiatuau**	**20.24**	**291**	*e*P		**P**	**07 33 47.2**	**-2.7**
BJT				pmax		pmax		
comp=Z,25nm,0.6s								
BJT	**Baijiatuau**	**20.24**	**291**	*e*P		**P**	**07 33 47.2**	**-2.8**
comp=Z,25nm,0.6s								
PETK	**Petropavlovsk-**	**21.34**	**28**	P		**P**	**07 34 02.4**	**+0.6**
comp=Z,3.0nm,0.7s,mb3.7,baz=213,slow=9.1,SNR=4.9								
PETK				LR		LR	07 42 48.9	
comp=Z,99nm,19.2s,MS3.2,baz=30,slow=38								
HHC	**Hu-ho-hao-te**	**23.81**	**292**	*e*P		**P**	**07 34 27.2**	**-0.3**
HHC				sP		sP	07 34 34.3	-4.7
HHC				PP			07 35 02.0	
HHC				PcP		PcP	07 38 08.7	-1.6
HHC				S		**S**	**07 38 40.2**	**-1.1**
HHC				SS			07 39 28.3	
HHC				ScP		ScP	07 41 45.8	-0.8
HHC				pmax		pmax		
comp=Z,21nm,1.2s,mb4.4								
HHC				pmax		pmax		
comp=Z,130nm,5.2s								
HHC				LR		LR		
comp=N,200nm,12.9s,MS4.0								
HHC				LR		LR		
comp=E,280nm,11.1s,MS4.0								
HHC				LR		LR		
comp=Z,250nm,13.2s,MS3.9								
CLNS	**Chul'man**	**24.17**	**338**	*e*P		**P**	**07 34 30.5**	**-0.1**
CLNS				pmax		pmax		
comp=N,22nm,1.1s								
CLNS				pmax		pmax		
comp=E,11nm,1.3s								
CLNS				pmax		pmax		
comp=Z,36nm,1.2s,mb4.7								
CLNS				MLR		MLR		
comp=E,330nm,16.0s,MS4.1								
CLNS				MLR		MLR		
comp=N,340nm,16.0s,MS4.1								
CLNS				MLR		MLR		
comp=Z,362nm,15.0s,MS4.0								
ENH	**Enshi**	**26.94**	**268**	*e*P		**P**	**07 34 54.3**	**-1.8**
comp=Z,23nm,0.8s,mb4.8								
YAK	**Yakutsk**	**27.71**	**348**	*e*P		**P**	**07 35 01.8**	**-0.7**
YAK				pmax		pmax		
comp=Z,29nm,0.8s,mb5.0								
YAK				pmax		pmax		
comp=N,39nm,1.2s								
YAK				pmax		pmax		
comp=E,8.0nm,0.9s								
YAK				MLR		MLR		
comp=Z,459nm,21.0s,MS4.0								
YAK				MLR		MLR		
comp=N,300nm,18.0s,MS4.0								
YAK				MLR		MLR		
comp=E,286nm,20.0s,MS4.0								
YAK	**Yakutsk**	**27.71**	**348**	*e*P		**P**	**07 35 03.4**	**+0.8**
comp=E,80nm,0.6s,mb5.5								
SEY	**Seymchan**	**28.55**	**11⇑**	*e*P		**P**	**07 35 10.5**	**+0.5**
SONM	**Songino Array**	**28.55**	**307**	P		**P**	**07 35 09.3**	**-1.0**
comp=E,2.8nm,0.6s,mb4.1,baz=104,slow=8.7,SNR=13								
SONM				LR		LR	07 47 02.1	
comp=E,331nm,18.3s,MS4.0,baz=306,slow=38								
SONM	**Songino Array**	**28.55**	**307**	P		**P**	**07 35 09.3**	**-1.0**
SONM				pmax		pmax		
comp=Z,3.0nm,0.6s								
SONM				MLR		MLR		
comp=Z,331nm,18.3s								
SONM	**Songino Array**	**28.55**	**307**	P		**P**	**07 35 09.3**	**-1.0**
SONM				LR		LR	07 47 02.1	
LZH	**Lanzhou**	**30.12**	**283**	*e*P		**P**	**07 35 22.5**	**-1.8**
LZH				pP		pP	07 35 31.1	-1.3
LZH				sP		sP	07 35 34.0	-1.8
LZH				*e*PP		PP	07 36 20.7	-12
LZH				pmax		pmax		
comp=Z,17nm,1.3s,mb4.6								
LZH				pmax		pmax		
comp=Z,48nm,4.5s								
LZH				LR		LR		
comp=E,230nm,12.8s								
LZH				LR		LR		
comp=Z,300nm,16.7s,MS4.0								
GYA	**Guiyang**	**30.68**	**263**	P		**P**	**07 35 30.0**	**+0.6**
GYA				PP		PP	07 36 30.7	-8.1
GYA				PcP		PcP	07 38 27.8	+0.8
GYA				S		**S**	**07 40 30.2**	**-0.1**
GYA				ScP		ScP	07 42 11.0	+3.4
GYA				pmax		pmax		
comp=Z,10.0nm,0.8s,mb4.7								
GYA				pmax		pmax		
comp=Z,110nm,4.8s								
GYA				LR		LR		
comp=N,490nm,16.8s,MS4.4								
GYA				LR		LR		
comp=E,510nm,17.4s,MS4.4								
GYA				LR		LR		
comp=Z,480nm,15.4s,MS4.3								
ZAK	**Zakamensk**	**31.15**	**311**	*e*P		**P**	**07 35 34.8**	**+1.6**
TLY	**Talaya**	**31.28**	**313**	*e*P		**P**	**07 35 35.7**	**+1.3**
TLY				pmax		pmax		
comp=Z,4.0nm,0.9s,mb4.2								
TLY				MLR		MLR		
comp=Z,259nm,17.0s,MS4.0								
CD2	**Chengdu**	**31.43**	**273**	*e*P		**P**	**07 35 36.7**	**+0.8**
CD2				pmax		pmax		
comp=Z,10.0nm,0.6s,mb4.8								
CD2				pmax		pmax		
comp=Z,30nm,4.2s								
QIZ	**Qiongzhong**	**31.98**	**248**	P		**P**	**07 35 39.9**	**-0.9**
QIZ				S		**S**	**07 40 50.0**	**-0.7**
QIZ				pmax		pmax		
comp=Z,74nm,6.0s								
QIZ				LR		LR		
comp=N,200nm,15.2s								
QIZ				LR		LR		
comp=Z,170nm,15.2s,MS3.9								
GTA	**Gaotai**	**32.84**	**290**	*e*P		**P**	**07 35 48.3**	**+0.1**
GTA				pP		pP	07 35 51.5	-4.8
GTA				sP		sP	07 35 54.9	-4.8
GTA				S		**S**	**07 41 02.7**	**-1.0**
GTA				pmax		pmax		
comp=Z,6.0nm,0.7s,mb4.6								
GTA				pmax		pmax		
comp=Z,76nm,4.0s								
GTA				LR		LR		
comp=N,190nm,16.8s,MS4.3								
GTA				LR		LR		
comp=E,450nm,18.5s,MS4.3								
GTA				LR		LR		
comp=Z,320nm,19.9s,MS4.0								
KMI	**Kunming**	**34.45**	**264**	P		**P**	**07 36 03.8**	**+1.5**
KMI				pP		pP	07 36 06.9	-3.6
KMI				sP		sP	07 36 08.3	-5.6
KMI				PP		PP	07 37 18.9	-1.7
KMI				S		**S**	**07 41 30.6**	**+1.7**
KMI				pmax		pmax		
comp=Z,11nm,0.8s,mb4.8								
KMI				pmax		pmax		
comp=Z,79nm,3.7s								
KMI				LR		LR		
comp=N,290nm,16.4s,MS4.4								
KMI				LR		LR		
comp=E,450nm,14.4s,MS4.4								
KMI				LR		LR		
comp=Z,530nm,14.0s,MS4.4								
BILL	**Bilibino**	**35.77**	**16⇓**	*e*P		**P**	**07 36 12.8**	**-0.4**
BILL				pmax		pmax		
comp=Z,10.0nm,1.0s,mb4.7								
BILL				M

WMQ LR LR
comp=E,270nm,15.0s,MS4.3
WMQ LR LR
comp=Z,190nm,15.0s,MS4.1
ZALV Zalesovo Beam 42.89 314 P **P** **07 37 12.3 -0.4**
comp=Z,5.1nm,0.5s,mb4.5,baz=92,slow=7.0,SNR=13
ZALV PcP PcP 07 39 03.3 +0.1
comp=Z,1.1nm,0.4s,baz=57,slow=5.3,SNR=2.7
ZALV LR LR 07 55 54.9
comp=Z,111nm,18.3s,MS3.8,baz=252,slow=37
ZALV Zalesovo Beam 42.89 314 P **P** **07 37 12.3 -0.5**
ZALV 07 39 03.3
ZALV pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
ZALV MLR MLR
comp=Z,111nm,18.3s,MS3.8
NVS Novosibirsk 43.85 315 *e*P **P** **07 37 19.1 -1.4**
NVS pmax pmax
comp=Z,11nm,1.2s,mb4.5
NVS pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
MK31 Makanchi Array 44.82 304 *i* P **P** **07 37 27.9 -0.5**
MK31 pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
MK31 Makanchi Array 44.82 304 *e*P **P** **07 37 28.0 -0.4**
MKAR Makanchi Array 44.82 304 P **P** **07 37 27.9 -0.5**
comp=Z,5.1nm,0.6s,mb4.6,baz=86,slow=8.8,SNR=31
MKAR LR LR 07 56 56.7
comp=Z,258nm,18.5s,MS4.2,baz=93,slow=37
MKAR Makanchi Array 44.82 304 *c e*P **P** **07 37 28.2 -0.2**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
TAPN Taplejung 45.80 275 *e*P **P** **07 37 35.8 -0.6**
ODAN Odare 46.26 275 *e*P **P** **07 37 39.6 -0.4**
comp=Z,16nm,0.4s,mb5.3
KURK Kurchatov 46.79 309 P **P** **07 37 43.5 -0.4**
comp=Z,8.8nm,0.5s,mb4.9,baz=85,slow=8.0,SNR=32
KURK Kurchatov 46.79 309 *c i* P **P** **07 37 43.1 -0.8**
KURK pmax pmax
comp=Z,44nm,1.7s,mb5.1
KURK Kurchatov 46.79 309 *e*P **P** **07 37 43.2 -0.7**
comp=Z,28nm,1.0s,mb5.1
RAMN Ramite 46.86 276 *e*P **P** **07 37 44.5 -0.3**
comp=Z,39nm,0.6s,mb5.5
GUN Gumba 47.06 277 *e*P **P** **07 37 46.7 +0.4**
comp=Z,23nm,0.5s,mb5.3
PKI Pulchoki 47.58 277 *e*P **P** **07 37 49.8 -0.6**
DMN Daman 47.81 277 *e*P **P** **07 37 52.2 +0.1**
comp=Z,11nm,0.4s,mb5.2
GKN Gorkha 48.03 278 *e*P **P** **07 37 53.6 -0.3**
comp=Z,37nm,0.8s,mb5.5
KAKA Kakadu 48.44 191 *e*P **P** **07 37 56.4 -0.5**
comp=Z,8.8nm,0.6s,mb5.0
KAKA Kakadu 48.44 191 *e*P **P** **07 37 56.1 -0.8**
comp=Z,20nm,0.5s,mb5.4
KDAK Kodiak Island 48.59 41 P **P** **07 37 57.8 0.0**
comp=Z,3.6nm,0.6s,mb4.6,baz=271,slow=3.0,SNR=6.8
KDAK Kodiak Island 48.59 41 *i P* **P** **07 37 58.2 +0.5**
KDAK Kodiak Island 48.59 41 *e*P **P** **07 37 57.9 +0.2**
comp=Z,7.8nm,0.9s,mb4.7
DANN Dangsing 48.60 279 *e*P **P** **07 37 58.5 +0.2**
comp=Z,50nm,0.6s,mb5.7
KOLN Koldanda 48.97 278 *e*P **P** **07 38 01.8 +0.7**
comp=Z,9.7nm,0.5s,mb5.1
COEN Coen 49.02 177 *e*P **P** **07 38 02.1 +0.7**
COEN Coen 49.02 177 *e*P **P** **07 38 02.3 +0.9**
comp=Z,58nm,0.7s,mb5.7
TKM2 Tokmak 2 50.22 300 *e*P **P** **07 38 10.0 -0.4**
TKM2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
TKM2 Tokmak 2 50.22 300 *e*P **P** **07 38 10.0 -0.4**
comp=Z,9.9nm,0.5s,mb5.1
COLA College 50.70 31 *e*P **P** **07 38 13.7 0.0**
COLA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
COLA College 50.70 31 *e*P **P** **07 38 13.7 0.0**
comp=Z,3.2nm,0.8s,mb4.3
KBK Karagaybulak 50.75 299 *e*P **P** **07 38 15.4 +1.0**
comp=Z,2.7nm,0.8s,mb4.2
KSH Kashi 50.87 295 *e*P **P** **07 38 18.4 +3.0**
KSH *e*pP pP 07 38 22.9 -0.9
KSH *e*sP sP 07 38 24.5 -2.6
KSH *e*PcP PcP 07 39 34.6 +2.9
KSH *e*PP PP 07 40 15.8 +4.2
KSH *e*ScP ScP 07 43 29.0 +3.0
KSH *e*PcS PcS 07 43 30.7 +1.5
KSH *e*S **S** **07 45 34.2 +4.3**
KSH *e*ScS ScS 07 48 05.5 +1.4
KSH *e*SS SS 07 49 06.4 +1.9
KSH pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
KSH LR LR
comp=N,150nm,7.1s
KSH LR LR
comp=E,140nm,7.2s
KSH LR LR
comp=Z,220nm,7.1s
AAK Ala-Archa 51.08 300 *d i* P **P** **07 38 17.3 +0.4**
AAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
AAK Ala-Archa 51.08 300 *e*P **P** **07 38 17.5 +0.6**
comp=Z,9.7nm,0.9s,mb4.7
ILAR Eielson Array 51.12 32 P **P** **07 38 16.7 -0.2**
comp=Z,1.3nm,0.5s,mb4.1,baz=264,slow=6.1,SNR=35
ILAR Eielson Array 51.12 32 P **P** **07 38 16.7 -0.1**
ILAR pmax pmax
comp=Z,1.0nm,0.5s
VOSK Vostochnaya 51.24 313 P **P** **07 38 16.9 -1.0**
VOSK pmax pmax
comp=Z,15nm,1.2s,mb4.8
BRVK Borovoye 51.60 313 *c i* P **P** **07 38 20.0 -0.6**
BRVK pmax pmax
comp=Z,26nm,2.5s,mb4.7
BRVK Borovoye 51.60 313 *e*P **P** **07 38 20.4 -0.2**
comp=Z,8.4nm,0.9s,mb4.7
ZRNK Zerenda 52.38 313 P **P** **07 38 25.3 -1.1**
ZRNK pmax pmax
comp=Z,34nm,1.3s,mb5.1
MENT Mentasta 52.63 34 *e*P **P** **07 38 29.5 +1.4**
EGAK Eagle 53.57 31 *e*P **P** **07 38 35.0 0.0**
comp=Z,1.5nm,0.6s,mb4.1
KK31 Karatay Array 53.76 301 P **P** **07 38 36.8 0.0**
KK31 pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KKAR Karatay Array 53.76 301 *e*P **P** **07 38 37.1 +0.3**
KKAR pmax pmax
comp=Z,28nm,1.1s,mb5.1
KKAR Karatay Array 53.76 301 *e*P **P** **07 38 37.1 +0.3**
comp=Z,28nm,1.1s,mb5.1
FITZ Fitzroy Crossi 55.08 198 *e*P **P** **07 38 46.5 0.0**
comp=Z,6.6nm,0.5s,mb4.9
FITZ Fitzroy Crossi 55.08 198 *e*P **P** **07 38 46.6 +0.1**
comp=Z,18nm,1.3s,mb4.9
WB2 Warramunga Arr 55.30 188 *e*P **P** **07 38 47.1 -0.9**
WRA Warramunga Arr 55.30 188 P **P** **07 38 47.0 -1.0**
comp=Z,16nm,0.8s,mb5.1,baz=4.4,slow=7.7,SNR=173
WRA LR LR 08 00 49.5
comp=Z,137nm,20.3s,MS4.0,baz=250,slow=34
INK Inuvik 56.07 27 P **P** **07 38 53.0 0.0**
comp=Z,2.5nm,1.0s,mb4.2,baz=288,slow=8.4,SNR=5.8
INK Inuvik 56.07 27 *e*P **P** **07 38 53.0 0.0**
INK pmax pmax
comp=Z,2.0nm,0.5s
INK Inuvik 56.07 27 *e*P **P** **07 38 53.0 0.0**
comp=Z,2.4nm,0.5s,mb4.5
SVE Sverdlovsk 56.27 319 *e*P **P** **07 38 55.1 +0.5**
SVE pmax pmax
comp=Z,17nm,1.1s,mb5.0
ARU Arti 57.48 319 *d i* P **P** **07 39 03.0 -0.2**
ARU 07 41 08.1
ARU S **S** **07 46 59.9 +1.4**
ARU SS SS 07 50 47.1 -0.8
ARU pmax pmax
comp=Z,33nm,1.2s,mb5.2
ARU Arti 57.48 319 *e*P **P** **07 39 03.2 0.0**
comp=Z,26nm,1.0s,mb5.2
KBL Kabul 57.78 292 *e*P **P** **07 39 05.4 -0.3**
KBL pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KBL Kabul 57.78 292 *e*P **P** **07 39 05.4 -0.3**
comp=Z,4.8nm,0.6s,mb4.7
AB31 Akbulak array 58.85 311 P **P** **07 39 12.3 -0.6**
AB31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
ABKAR Akbulak array 58.85 311 *e*P **P** **07 39 12.5 -0.4**
comp=Z,4.5nm,0.4s,mb4.8

ASAR Alice Springs 59.03 188 P **P** **07 39 13.7 -0.6**
comp=Z,1.9nm,0.5s,mb4.4,baz=9.0,slow=9.0,SNR=47
ASAR Alice Springs 59.03 188 P **P** **07 39 13.7 -0.7**
ASAR pmax pmax
comp=Z,2.0nm,0.5s
MBWA Marble Bar 59.68 203 *e*P **P** **07 39 19.6 +0.7**
comp=Z,14nm,0.9s,mb5.0
KBS Kingsbay 62.32 350 *e*P **P** **07 39 36.2 0.0**
KBS pmax pmax
comp=Z,11nm,1.0s,mb4.9
LVZ Lovozero 63.58 336 *e*P **P** **07 39 41.2 -3.5**
LVZ pmax pmax
comp=Z,91nm,2.5s,mb5.4
KLMR Klimovskoe 65.07 328 *e*P **P** **07 39 39.8 -15**
KLMR pmax pmax
comp=Z,19nm,1.7s,mb4.8
YKA Yellowknife Ar 65.46 30 P **P** **07 39 56.8 -0.2**
comp=Z,0.7nm,0.7s,mb3.8,baz=301,slow=6.4,SNR=3.2
ARCES ARCESS Array B 65.52 340 P **P** **07 39 57.5 +0.2**
comp=Z,5.5nm,0.8s,mb4.6,baz=59,slow=7.4,SNR=8.4
ARCES LR LR 08 14 16.3
comp=Z,162nm,19.0s,MS4.2,baz=278,slow=41
STKA Stephens Creek 66.82 180 P **P** **07 40 06.1 +0.1**
comp=Z,1.1nm,0.5s,mb4.2,baz=18,slow=9.6,SNR=7.3
JOF Joensuu 67.36 332 *e*P **P** **07 40 07.8 -1.4**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
JOF Joensuu 67.36 332 *e*p **P** **07 40 07.8 -1.4**
comp=Z,3.3nm,0.5s,mb4.6
OBN Obninsk 69.32 324 *e*P **P** **07 40 21.4 -0.2**
OBN pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
OBN MLR MLR
comp=Z,200nm,15.0s,MS4.5
KAF Kangasniemi 69.72 333 *e*P **P** **07 40 22.6 -1.3**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KAF Kangasniemi 69.72 333 *e*p **P** **07 40 22.6 -1.3**
comp=Z,3.5nm,0.6s,mb4.5
FINES FINESS Array B 70.22 332 P **P** **07 40 26.1 -0.9**
comp=Z,7.7nm,0.9s,mb4.7,baz=46,slow=8.0,SNR=13
FINES LR LR 08 15 39.4
comp=Z,156nm,19.2s,MS4.3,baz=166,slow=40
FINES FINESS Array B 70.22 332 P **P** **07 40 26.1 -0.9**
FINES pmax pmax
comp=Z,8.0nm,0.9s
FINES MLR MLR
comp=Z,156nm,19.2s
ZEI Tsey 71.69 310 *e*P **P** **07 40 34.6 -1.7**
ZEI pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
VSU Vasula 71.81 330 *e*P **P** **07 40 36.8 +0.1**
VSU pmax pmax
comp=Z,25nm,1.2s,mb5.0
KIV Kislovodsk 71.83 311 *c i* P **P** **07 40 37.5 +0.4**
KIV *i* 07 40 57.2
KIV pmax pmax
comp=Z,31nm,1.2s,mb5.1
KIV Kislovodsk 71.83 311 *e*P **P** **07 40 37.6 +0.5**
comp=Z,13nm,0.9s,mb4.9
SUMG Summit 72.42 360 *e*P **P** **07 40 41.6 +1.5**
comp=Z,19nm,1.0s,mb5.0
SUMG Summit 72.42 360 *i* P **P** **07 40 40.9 +0.7**
comp=Z,13nm,1.0s,mb4.8
GNI Garni 72.52 307 *e*P **P** **07 40 42.6 +1.3**
GNI pmax pmax
comp=Z,14nm,1.2s
SWMT Swartz Lake 73.75 43 *e*P **P** **07 40 49.2 +0.8**
comp=Z,2.2nm,1.0s,mb4.0
CMB Columbia Colle 75.12 54 *e*P **P** **07 40 57.8 +1.2**
CMB pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
CMB Columbia Colle 75.12 54 *e*P **P** **07 40 57.8 +1.2**
comp=Z,4.4nm,1.2s,mb4.3
AKASG Malin Array Be 75.50 322 P **P** **07 40 57.6 -0.9**
comp=Z,5.4nm,0.6s,mb4.7,baz=46,slow=5.8,SNR=18
AKASG Malin Array Be 75.50 322 P **P** **07 40 57.6 -0.9**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
KIEV Kiev 75.51 322 *e*P **P** **07 40 57.5 -1.1**
KIEV pmax pmax
comp=Z,12nm,1.0s,mb4.8
KIEV Kiev 75.51 322 *e*P **P** **07 40 57.5 -1.1**
comp=Z,12nm,1.0s,mb4.8
NB2 NORSAR Subarra 75.68 337 P **P** **07 40 58.9 -0.4**
comp=Z,12nm,0.8s,mb4.9,baz=40,slow=5.9
NOA NORSAR Array B 75.68 337 P **P** **07 40 58.7 -0.6**
comp=Z,9.2nm,0.9s,mb4.7,baz=39,slow=5.7,SNR=20
NOA LR LR 08 17 14.0
comp=Z,245nm,19.5s,MS4.5,baz=50,slow=38
NOA NORSAR Array B 75.68 337 P **P** **07 40 58.7 -0.6**
NOA pmax pmax
comp=Z,9.0nm,0.9s
NOA MLR MLR
comp=Z,245nm,19.5s
MIB Mutribah 76.21 297 *e*P **P** **07 41 02.5 -0.5**
MIB AMb AMB 07 41 03.3
comp=Z,20nm,1.0s,mb5.0
NVAR Mina Array Bea 76.27 53 P **P** **07 41 04.0 +0.9**
comp=Z,1.2nm,0.7s,mb4.0,baz=296,slow=4.9,SNR=12
RDF Al-Radifah 76.53 296 *e*P **P** **07 41 05.0 +0.1**
RDF AMb AMB 07 41 05.5
comp=Z,37nm,0.7s,mb5.4
NAY Al-Naaiem 76.58 296 *e*P **P** **07 41 04.5 -0.6**
NAY AMb AMB 07 41 05.4
comp=Z,19nm,1.3s,mb4.8
MALT Malatya 77.62 308 *e*P **P** **07 41 11.9 +1.1**
MALT pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MALT Malatya 77.62 308 *e*P **P** **07 41 11.9 +1.2**
comp=Z,5.0nm,1.0s,mb4.4
DUG Dugway 78.72 49 *e*P **P** **07 41 17.8 +1.0**
DUG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
DUG Dugway 78.72 49 *e*P **P** **07 41 17.8 +1.0**
comp=Z,3.1nm,0.9s,mb4.2
BW06 Boulder Array 79.09 45 *e*P **P** **07 41 19.5 +0.7**
comp=Z,0.6nm,0.6s,mb3.7
PDAR Pinedale Array 79.09 45 P **P** **07 41 18.9 +0.1**
comp=Z,0.7nm,0.7s,mb3.7,baz=298,slow=1.9,SNR=7.1
BUR08 Bucovina Ar. S 79.48 322 *e*P **P** **07 41 21.3 +0.4**
BRTR Keskin Array B 79.79 312 P **P** **07 41 22.4 -0.3**
comp=Z,4.3nm,1.0s,mb4.3,baz=101,slow=4.6,SNR=15
BRTR LR LR 08 22 09.4
comp=Z,48nm,20.1s,MS3.8,baz=182,slow=40
BRTR Keskin Array B 79.79 312 *c e*P **P** **07 41 23.2 +0.5**
BRTR pmax pmax
comp=Z,4.0nm,1.0s
KOLS Kolonicke sedl 80.06 324 *e*P **P** **07 41 24.9 +1.0**
KOLS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
KOLS Kolonicke sedl 80.06 324 *e*P **P** **07 41 24.9 +1.0**
comp=Z,3.6nm,1.1s,mb4.2
KOLS Kolonicke sedl 80.06 324 *e*P **P** **07 41 24.9 +1.0**
CRVS Cervenica-Dubn 80.47 324 *e*P **P** **07 41 26.6 +0.5**
CRVS pmax pmax
comp=Z,15nm,1.8s,mb4.6
CRVS Cervenica-Dubn 80.47 324 *e*P **P** **07 41 26.6 +0.5**
comp=Z,15nm,1.8s,mb4.6
CRVS Cervenica-Dubn 80.47 324 *e*P **P** **07 41 26.5 +0.4**
SRU San Rafael 80.78 48 *e*P **P** **07 41 29.1 +1.1**
SRU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SRU San Rafael 80.78 48 *e*P **P** **07 41 29.1 +1.1**
comp=Z,4.2nm,0.7s,mb4.5
OKC Ostrava-Krasne 81.34 327 *e*P **P** **07 41 32.1 +1.3**
OKC Ostrava-Krasne 81.34 327 *e*P **P** **07 41 32.1 +1.3**
DPC Dobruska-Polom 81.78 328 *e*P **P** **07 41 33.9 +0.8**
DPC Dobruska-Polom 81.78 328 *e*P **P** **07 41 33.9 +0.8**
UPC Upice 81.79 328 *e*P **P** **07 41 33.9 +0.7**
UPC Upice 81.79 328 *e*P **P** **07 41 33.9 +0.7**
VYHS Vyhne 81.99 325 *e*P **P** **07 41 34.4 +0.2**
VYHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
VYHS Vyhne 81.99 325 *e*P **P** **07 41 34.4 +0.2**
comp=Z,2.0nm,0.8s,mb4.1
VYHS Vyhne 81.99 325 *e*P **P** **07 41 34.4 +0.2**
PV10 Paradox Valley 82.14 48 *e*P **P** **07 41 37.0 +1.7**
comp=Z,153nm,0.8s
PVCC Panska Ves 82.40 329 *e*P **P** **07 41 37.0 +0.7**
PVCC Panska Ves 82.40 329 *e*P **P** **07 41 37.0 +0.7**
BRG Berggiesshubel 82.40 329 *i* P **P** **07 41 36.3 -0.1**
comp=Z,3.8nm,0.8s,mb4.4
CLL Collm 82.46 330 *e*P **P** **07 41 36.0 -0.6**
CLL pmax pmax
comp=Z,12nm,1.0s,mb4.8

CLL Collm 82.46 330 *e*P **P** **07 41 36.0 -0.6**
comp=Z,12nm,1.0s,mb4.8
CLL Collm 82.46 330 *e*P **P** **07 41 36.0 -0.6**
comp=Z,12nm,1.0s,mb4.8
CLL LmH 08 22 00.0
comp=N,200nm,20.9s
CLL LmH 08 22 00.0
comp=E,100nm,21.2s
PV01 Paradox Valley 82.58 48 *e*P **P** **07 41 39.0 +1.5**
comp=E,412nm,1.0s
PRU Pruhonice 82.81 328 *e*P **P** **07 41 40.2 +1.7**
PRU Pruhonice 82.81 328 *e*P **P** **07 41 40.2 +1.7**
PMOR Pomariorio Ree 83.76 113 *e*T 09 13 54.7
comp=E,20nm,0.2s
KHC Kasperske Hory 83.87 328 *e*P **P** **07 41 43.6 -0.4**
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KHC Kasperske Hory 83.87 328 *e*P **P** **07 41 43.6 -0.4**
comp=Z,3.0nm,0.8s,mb4.5
KHC Kasperske Hory 83.87 328 *e*P **P** **07 41 44.2 +0.2**
PPT Papeete 84.12 116 *e*LR LR 08 08 07.0
comp=Z,138nm,22.5s
PPT *e*T 09 14 22.3
comp=Z,5.0nm,0.3s
PPT Papeete 84.12 116 LR LR 08 18 15.7
comp=Z,147nm,18.7s,MS4.4,baz=325,slow=35
GRA1 Grafenberg Arr 84.43 330 *e*P **P** **07 41 47.3 +0.5**
comp=Z,23nm,1.3s,mb5.2
GRA1 LR LR
comp=Z,100nm,18.8s,MS4.2
GRF Grafenberg Arr 84.43 330 *e*P **P** **07 41 47.3 +0.5**
comp=Z,23nm,1.3s,mb5.2
GRF *e*L 08 22 55.6
comp=Z,129nm,18.8s
GRF Grafenberg Arr 84.43 330 *e*P **P** **07 41 47.3 +0.5**
GRF pmax pmax
comp=Z,23nm,1.3s,mb5.2
GRF MLR MLR
comp=Z,100nm,18.8s,MS4.2
GRF Grafenberg Arr 84.43 330 *e*P **P** **07 41 47.3 +0.5**
GRF pmax pmax
comp=Z,23nm,1.3s,mb5.2
GRF MLR MLR
comp=Z,100nm,18.8s,MS4.2
TUC Tucson 84.83 54 *e*P **P** **07 41 50.6 +1.4**
TUC pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
TUC Tucson 84.83 54 *e*P **P** **07 41 50.6 +1.4**
comp=Z,3.7nm,1.1s,mb4.4
PERS Pernice 85.07 326 *i* P **P** **07 41 50.0 -0.1**
PERS Pernice 85.07 326 *i* P **P** **07 41 50.0 -0.1**
VISS Visnje 85.82 326 *i* P **P** **07 41 53.5 -0.4**
VISS Visnje 85.82 326 *i* P **P** **07 41 53.5 -0.4**
BOJS Bojanci 85.85 325 *i* P **P** **07 41 54.0 0.0**
BOJS Bojanci 85.85 325 *i* P **P** **07 41 54.0 0.0**
JAVS Javornik 86.11 326 *i* P **P** **07 41 54.1 -1.2**
JAVS Javornik 86.11 326 *i* P **P** **07 41 54.1 -1.2**
TBI Tubuai 87.89 121 *e*T 09 19 04.3
comp=Z,6.1nm,0.2s
TXAR Lajitas Array 91.41 52 P **P** **07 42 22.1 +1.3**
comp=Z,0.5nm,0.7s,mb4.0,baz=316,slow=2.5,SNR=9.5
TXAR Lajitas Array 91.41 52 P **P** **07 42 22.1 +1.3**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 118.34 314 PKP PKPdf 07 48 00.5 -1.9
comp=Z,0.4nm,0.5s,baz=25,slow=1.3,SNR=7.5
TORD Torodi Ar. Bea 118.34 314 PKP PKPdf 07 48 00.5 -1.9
LPAZ La Paz 147.80 62 PKPbc PKPbc 07 49 01.7 +2.0
comp=Z,1.4nm,0.5s,baz=9.0,slow=4.2,SNR=13
LPAZ La Paz 147.80 62 *e*PKPbc PKPbc 07 49 01.4 +1.6

IDC 06 07:50:48.3±3.4, 31°.91S×177°.89W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/17, mbtmp3.6/3, ML2.8/1, Error ellipse: s-maj=76.3km s-min=38.2km az=112.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.54**	**212**	Pn	Pn	07 52 39.3	-0.1
	0.1nm,0.3s,baz=270,slow=7.1,SNR=1.9						
URZ				Sn	Sn	07 54 04.4	-1.2
	0.7nm,0.3s,baz=120,slow=20,SNR=7.4						
ASAR	**Alice Springs**	**43.14**	**268**	P	P	07 58 50.7	0.0
	0.2nm,0.4s,baz=108,slow=7.3,SNR=6.7						
WRA	**Warramunga Arr**	**44.27**	**274**	P	P	07 58 60.0	+0.2
	0.2nm,0.3s,baz=113,slow=7.9,SNR=17						
FINES	**FINESS Array B**	**146.59**	**339**	PKPbc	PKPbc	08 10 29.9	-1.0
	2.7nm,1.0s,baz=130,slow=2.2,SNR=1.8						

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*IPEC **06** 08:27:31.9±0.4, 51°.60N×16°.20E, h1km±2km, ML3.4/4, Error ellipse: s-maj=2.5km s-min=1.6km az=14.0*
*ISCJB **06** 08:27:31.3±0.3, 51°.48N±0°.02×16°.08E±0°.02, h0km, mb3.6/7, Error ellipse: s-maj=2.5km s-min=1.7km az=11.5*
*LDG **06** 08:27:31.9±0.2, 51°.57N×16°.11E, h1km, Ml4.1/20, Error ellipse: s-maj=5.4km s-min=2.2km az=10.0, Suspected Mining induced.*
*CSEM **06** 08:27:32.3±0.1, 51°.57N×16°.11E, h2km, ML4.1/15, Ms3.6, Error ellipse: s-maj=3.0km s-min=1.9km az=13.0*
*BGR **06** 08:27:33.6±0.4, 51°.53N×16°.12E, h1km, ML3.6/11, Error ellipse: s-maj=4.4km s-min=2.2km az=18.0*
*PRU **06** 08:27:33.4, 51°.53N×16°.13E, h0km, Felt In Harrachov*
*IDC **06** 08:27:33.0±0.6, 51°.52N×16°.16E, h0km, mb3.7/7, mb1 3.8/14, mb1mx3.7/29, mbtmp3.6/14, ML3.3/7, Error ellipse: s-maj=18.0km s-min=7.7km az=92.0*
*NEIC **06** 08:27:33.6, 51°.53N×16°.12E, h1km, ML3.6(SZGRF), ML3.5(STR), After SZGRF.*
*STR **06** 08:27:34.6±0.8, 51°.56N×15°.90E, h1km, Ml4.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*WAR **06** 08:27:34.0, 51°.55N×16°.10E, ML3.2, Mining Induced*
*VIE **06** 08:27:36.5±0.5, 51°.27N×15°.97E, h0km, mb3.4/12, ML3.4/13, Ms3.6/1, Error ellipse: s-maj=3.4km s-min=2.8km az=12.0 74 km WNW of Wroclaw Suspected Mining induced.*

ISC 06 08:27:31.9±0.2, 51°.57N±0°.01×16°.12E±0°.02, h0km, n220, σ1°.24/352, mb3.6/7, 23C-12D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**171**	*e*Pg	**Pg**	**08 27 47.1**	**+1.1**
KSP				*e*Sg	**Sg**	**08 27 56.3**	**+0.7**
KSP	**Ksiaz**	**0.74**	**171**	*i* Pg	**Pg**	**08 27 47.1**	**+1.1**
KSP				*i* Sg	**Sg**	**08 27 56.2**	**+0.7**
KSP	**Ksiaz**	**0.74**	**171**	*e*Pg	**Pg**	**08 27 47.1**	**+1.1**
	SNR=60						
KSP				*e*Sg	**Sg**	**08 27 56.3**	**+0.8**
	SNR=3.3						
KSP	**Ksiaz**	**0.74**	**171**	*e*Pg	**Pg**	**08 27 46.7**	**+0.7**
	baz=355						
KSP				Sg	**Sg**	**08 27 56.3**	**+0.8**
	SNR=3.3						
UPC	**Upice**	**1.07**	**184**	*e*PG	**Pg**	**08 27 53.2**	**+0.9**
UPC	**Upice**	**1.07**	**184**	Pg	**Pg**	**08 27 53.2**	**+0.9**
DPC	**Dobruska-Polom**	**1.23**	**174**	*e*Pg	**Pg**	**08 27 55.9**	**+0.4**
	SNR=94						
DPC				*e*Sg	**Sg**	**08 28 11.8**	**+0.4**
	SNR=3.5						
DPC	**Dobruska-Polom**	**1.23**	**174**	*e*PG	**Pg**	**08 27 55.9**	**+0.5**
DPC				*e*SG	**Sg**	**08 28 11.6**	**+0.3**
	comp=Z,449nm,0.8s						
DPC	**Dobruska-Polom**	**1.23**	**174**	Pg	**Pg**	**08 27 55.9**	**+0.5**
	SNR=94						
DPC				Sg	**Sg**	**08 28 11.6**	**+0.3**
	comp=Z,449nm,0.8s						
PVCC	**Panska Ves**	**1.43**	**224**	*e*PG	**Pg**	**08 27 59.4**	**+0.1**
PVCC	**Panska Ves**	**1.43**	**224**	Pg	**Pg**	**08 27 59.4**	**+0.1**
PVCC				*e*Sg	**Sg**	**08 28 18.3**	**+0.5**
	baz=43						
BRG	**Berggiesshubel**	**1.54**	**244**	*e*Pn	**Pn**	**08 28 00.2**	**-0.3**
	SNR=4.8						
BRG				*e*Pg	**Pg**	**08 28 01.7**	**+0.4**
	SNR=125						
BRG				*e*Sg	**Sg**	**08 28 22.4**	**+1.1**
	SNR=2.2						
BRG	**Berggiesshubel**	**1.54**	**244**	PN	**Pn**	**08 28 00.3**	**-0.2**
BRG				PG	**Pg**	**08 28 02.1**	**+0.7**
BRG				SG	**Sg**	**08 28 22.3**	**+1.0**
	comp=Z,488nm,0.4s						
BRG	**Berggiesshubel**	**1.54**	**244**	Pn	**Pn**	**08 28 00.2**	**-0.3**
	SNR=4.8						
BRG	**Berggiesshubel**	**1.54**	**244**	Pg	**Pg**	**08 28 01.7**	**+0.3**
	SNR=125						

BRG Sg **Sg** **08 28 22.4 +1.1**
SNR=2.2
RUE Ruedersdorf 1.71 303 *e*Pn **Pn** **08 28 02.7 -0.2**
RUE Ruedersdorf 1.71 303 *e*Pn **Pn** **08 28 02.7 -0.2**
GKP Gorka Klasztor 1.83 21 *e*Pn **Pn** **08 28 12.4 +7.8**
GKP *e*Pg **Pg** **08 28 15.5 +8.4**
GKP *e*Sn **Sn** **08 28 34.9 +6.3**
FBE Freiberg 1.86 251 *e*Pn **Pn** **08 28 04.8 -0.1**
SNR=2.4
FBE *e*Pg **Pg** **08 28 07.4 -0.1**
SNR=63
FBE *e*Sg **Sg** **08 28 32.0 +0.5**
SNR=3.6
FBE Freiberg 1.86 251 Pn **Pn** **08 28 04.8 -0.1**
SNR=2.4
PRU Pruhonice 1.87 213 *e*PN **Pn** **08 28 05.9 +0.7**
PRU *e*PG **Pg** **08 28 06.8 -1.0**
PRU *e*SG **Sg** **08 28 32.2 +0.1**
comp=Z,194nm,0.4s
PRU Pruhonice 1.87 213 Pn **Pn** **08 28 05.9 +0.7**
CLL Collm 1.97 264 *e*Pn **Pn** **08 28 06.0 -0.5**
SNR=38
CLL *i* Pg **Pg** **08 28 09.4 -0.2**
CLL *e*Sg **Sg** **08 28 35.4 +0.2**
SNR=2.6
CLL Collm 1.97 264 *i* Pn **Pn** **08 28 06.1 -0.4**
CLL *i* Pg **Pg** **08 28 09.4 -0.2**
CLL *e*Sg **Sg** **08 28 35.0 -0.1**
CLL Collm 1.97 264 *i* Pn **Pn** **08 28 06.1 -0.4**
comp=Z,77nm,0.5s
CLL *i* Pg **Pg** **08 28 09.4 -0.2**
CLL *i* 08 28 12.8
CLL *e*Sg **Sg** **08 28 35.0 -0.1**
comp=Z,216nm,0.4s
CLL Collm 1.97 264 *i* Pn **Pn** **08 28 06.1 -0.4**
RAC Raciborz 1.99 138 *e*Pg **Pg** **08 28 10.5 +0.5**
RAC *e*Sg **Sg** **08 28 36.0 +0.3**
MORC Moravsky Berou 2.01 153 *e*Pn **Pn** **08 28 07.2 +0.1**
SNR=80
MORC *e*Sg **Sg** **08 28 36.0 -0.5**
SNR=3.5
MORC Moravsky Berou 2.01 153 *e*Pn **Pn** **08 28 07.0 0.0**
MORC *e*Sn **Sn** **08 28 36.6 +3.7**
MORC Moravsky Berou 2.01 153⇑*i*P **Pn** **08 28 07.2 +0.1**
MORC Moravsky Berou 2.01 153⇑*i*P **Pn** **08 28 07.2 +0.1**
MORC Sg **Sg** **08 28 36.0 -0.5**
SNR=3.5
MORC *e*Sn **Sn** **08 28 36.6 +3.7**
OKC Ostrava-Krasne 2.16 143 *e*Pn **Pn** **08 28 08.7 -0.4**
SNR=4.1
OKC *e*Sg **Sg** **08 28 40.1 -1.2**
SNR=5.8
OKC Ostrava-Krasne 2.16 143 *e*PN **Pn** **08 28 09.4 +0.3**
OKC *e*PG **Pg** **08 28 13.4 +0.1**
OKC *e*SG **Sg** **08 28 41.3 0.0**
comp=Z,224nm,0.6s
OKC Ostrava-Krasne 2.16 143 Pn **Pn** **08 28 09.4 +0.3**
VRAC Vranov 2.29 172 Pn **Pn** **08 28 11.5 +0.7**
comp=Z,9.6nm,0.3s,baz=345,slow=13,SNR=28
VRAC Lg 08 28 45.1
comp=Z,31nm,0.3s,baz=95,slow=23,SNR=11
VRAC Vranov 2.29 172⇑*i*P **Pn** **08 28 12.0 +1.2**
VRAC Vranov 2.29 172 *e*Pn **Pn** **08 28 11.1 +0.3**
baz=354
VRAC Vranov 2.29 172⇑*i*P **Pn** **08 28 12.0 +1.2**
VRAC *e*Sg **Sg** **08 28 44.0 -1.3**
comp=Z,203nm,0.8s,baz=354
VRAC Lg 08 28 45.1
KRUC Moravsky 2.52 176 *e*Pn **Pn** **08 28 14.3 +0.3**
baz=357
KRUC *e*Sg **Sg** **08 28 51.2 -1.6**
comp=Z,84nm,0.5s,baz=357
TANN Tannenbergstha 2.58 245 *e*Pn **Pn** **08 28 15.4 +0.4**
SNR=14
TANN *e*Pg **Pg** **08 28 22.5 +1.1**
SNR=5.3
TANN *e*Sg **Sg** **08 28 55.2 +0.3**
SNR=4.8
TANN Tannenbergstha 2.58 245 Pn **Pn** **08 28 15.4 +0.4**
SNR=14
WERD Werda 2.66 246 *e*Pn **Pn** **08 28 16.2 +0.2**
SNR=12
WERD *e*Pg **Pg** **08 28 22.7 -0.1**
SNR=7.3
WERD *e*Sg **Sg** **08 28 58.8 +1.6**
SNR=3.8
WERD Werda 2.66 246 Pn **Pn** **08 28 16.2 +0.2**
SNR=12
NKC Novy Kostel 2.68 241 *e*PN **Pn** **08 28 16.8 +0.5**
NKC *e*PG **Pg** **08 28 23.4 +0.1**
NKC *e*SG **Sg** **08 28 59.8 +1.7**
comp=Z,415nm,0.7s
NKC Novy Kostel 2.68 241 Pn **Pn** **08 28 16.8 +0.5**
OJC Ojcow 2.69 119 *e*Pn **Pn** **08 28 15.0 -1.4**
OJC *e*Pg **Pg** **08 28 23.7 +0.2**
OJC *e*Sg **Sg** **08 28 58.4 0.0**
OJC Ojcow 2.69 119 *e*Pn **Pn** **08 28 16.8 +0.4**
SNR=4.9
OJC *e*Sg **Sg** **08 28 59.6 +1.2**
SNR=5.4
OJC Ojcow 2.69 119 Pn **Pn** **08 28 16.8 +0.4**
SNR=4.9
OJC Ojcow 2.69 119 *e*Pg **Pg** **08 28 23.7 +0.2**
OJC Sg **Sg** **08 28 59.6 +1.2**
SNR=5.4
JAVC Velka Javorina 2.89 159 *e*Pn **Pn** **08 28 20.4 +1.2**
JAVC *e*Sg **Sg** **08 29 06.3 +1.5**
comp=Z,185nm,0.9s
KHC Kasperske Hory 2.94 215 *e*Pn **Pn** **08 28 19.8 0.0**
KHC *e*Pg **Pg** **08 28 28.5 +0.3**
KHC *e*S **Sn** **08 28 59.9 +4.2**
KHC Kasperske Hory 2.94 215 *e*PN **Pn** **08 28 20.0 +0.2**
KHC *e*PG **Pg** **08 28 26.8 -1.3**
KHC *e*SN **Sn** **08 28 55.5 -0.2**
KHC *e*SG **Sg** **08 29 05.5 -0.7**
comp=Z,76nm,0.5s
KHC Kasperske Hory 2.94 215 Pn **Pn** **08 28 20.0 +0.2**
KHC Kasperske Hory 2.94 215 *e*Pg **Pg** **08 28 28.5 +0.4**
KHC Sn **Sn** **08 28 55.5 -0.2**
KHC Sg **Sg** **08 29 05.5 -0.7**
comp=Z,76nm,0.5s
MGBB Grossbuechelbe 2.95 239⇓*i*Pn **Pn** **08 28 20.6 +0.6**
MGBB Grossbuechelbe 2.95 239 Pn **Pn** **08 28 20.6 +0.6**
MOX Moxa 2.99 254 *e*PN **Pn** **08 28 20.6 +0.1**
MOX *e*PG **Pg** **08 28 29.6 +0.5**
MOX *e*SG **Sg** **08 29 09.3 +1.5**
MOX Moxa 2.99 254 *e*Pn **Pn** **08 28 20.6 +0.2**
SNR=5.5
MOX ⇑*e*Pg **Pg** **08 28 29.6 +0.5**
MOX *e*Sg **Sg** **08 29 09.4 +1.6**
SNR=9.6
MOX Moxa 2.99 254 Pn **Pn** **08 28 20.6 +0.1**
SNR=5.5
ROTZ Rotzenmuhle 3.08 236 *e*Pn **Pn** **08 28 21.8 +0.1**
SNR=17
ROTZ *e*Sg **Sg** **08 29 09.8 -0.8**
SNR=3.0
ROTZ Rotzenmuhle 3.08 236 Pn **Pn** **08 28 21.8 +0.1**
SNR=17
ROTZ Sg **Sg** **08 29 09.8 -0.9**
SNR=3.0
GEC2 GERESS Array S 3.14 211 *e*Pn **Pn** **08 28 23.0 +0.4**
SNR=30
GEC2 *e*Sg **Sg** **08 29 10.6 -2.1**
SNR=3.2
GEC2 GERESS Array S 3.14 211 *e*Pn **Pn** **08 28 23.0 +0.4**
GEC2 *e*Sg **Sg** **08 29 10.6 -2.1**
GEC2 GERESS Array S 3.14 211 Pn **Pn** **08 28 23.0 +0.4**
SNR=30
GEC2 Sg **Sg** **08 29 10.6 -2.1**
SNR=3.2
LIKS Likavka 3.17 142 *e* **Pg** **08 28 36.1 +3.5**
LIKS Likavka 3.17 142 *e*SG **Sg** **08 29 12.0 -1.6**
LIKS Likavka 3.17 142 *e*Sg **Sg** **08 29 12.0 -1.6**
WET Wettzell 3.19 222 *e*Pn **Pn** **08 28 23.8 +0.4**
SNR=12
WET Wettzell 3.19 222 *e*Pn **Pn** **08 28 23.8 +0.5**
WET Wettzell 3.19 222 Pn **Pn** **08 28 23.8 +0.5**
SNR=12
MODS Modra-Piesok 3.29 166 *e* **Pg** **08 28 35.4 +0.5**
MODS Modra-Piesok 3.29 166 *e*SG **Sg** **08 29 17.2 -0.2**
MODS Modra-Piesok 3.29 166 *e*Sg **Sg** **08 29 17.2 -0.2**
KOLL Kolacno 3.34 153 *e*Pn **Pn** **08 28 26.0 +0.7**
KOLL *e* 08 28 36.6
KOLL *e*Sg **Sg** **08 29 17.9 -1.1**

KOLL Kolacno 3.34 153 *e*PN **Pn** **08 28 26.0 +0.7**
KOLL *e* 08 28 36.6
KOLL Kolacno 3.34 153 *e*SG **Sg** **08 29 17.9 -1.1**
KOLL Kolacno 3.34 153 *e*Pn **Pn** **08 28 26.0 +0.7**
KOLL *e*Sg **Sg** **08 29 17.9 -1.1**
NIE Niedzica 3.44 127 *e*P **Pg** **08 28 37.3 -0.4**
NIE *e*S **Sg** **08 29 21.7 -0.5**
ZST Bratislava 3.44 169 *e*Pn **Pn** **08 28 28.4 +1.7**
ZST *e* 08 28 36.4
ZST *e*Sg **Sg** **08 29 20.1 -2.2**
ZST Bratislava 3.44 169 *e*PN **Pn** **08 28 28.4 +1.7**
ZST *e* 08 28 36.4
ZST Bratislava 3.44 169 *e*SG **Sg** **08 29 20.1 -2.2**
ZST Bratislava 3.44 169 *e*Pn **Pn** **08 28 28.4 +1.7**
ZST *e*Sg **Sg** **08 29 20.1 -2.2**
VYHS Vyhne 3.54 149 *e*PN **Pn** **08 28 28.4 +0.3**
VYHS *e* 08 28 41.7
VYHS Vyhne 3.54 149 *e*Pn **Pn** **08 28 28.4 +0.3**
VYHS *e*Sg **Sg** **08 29 23.8 -1.9**
CLZ Clausthal 3.59 277 *e*Pn **Pn** **08 28 29.9 +1.2**
SNR=5.3
CLZ *e*Sg **Sg** **08 29 26.7 -0.4**
SNR=2.4
CLZ Clausthal 3.59 277 *e*Pn **Pn** **08 28 29.9 +1.2**
CLZ *e*Sg **Sg** **08 29 26.7 -0.4**
CLZ Clausthal 3.59 277 Pn **Pn** **08 28 29.9 +1.2**
SNR=5.3
CLZ Sg **Sg** **08 29 26.7 -0.4**
SNR=2.4
BSD Bornholm Skovb 3.62 349 *i* P **Pn** **08 28 28.8 -0.4**
BSD *i* S **Sn** **08 29 07.4 -5.2**
BSD Bornholm Skovb 3.62 349 *i* P **Pn** **08 28 28.8 -0.4**
GRA1 Grafenberg Arr 3.64 241 *e*Pn **Pn** **08 28 30.3 +0.8**
GRA1 *e*Sg **Sg** **08 29 28.4 -0.4**
GRA1 Grafenberg Arr 3.64 241 Pn **Pn** **08 28 30.3 +0.8**
SNR=2.8
GRA1 Sg **Sg** **08 29 28.4 -0.4**
SNR=4.0
GRF Grafenberg Arr 3.64 241 *e*Pn **Pn** **08 28 30.3 +0.8**
SNR=2.8
GRF *e*Sg **Sg** **08 29 28.4 -0.4**
SNR=4.0
GRF Grafenberg Arr 3.64 241 *e*Pn **Pn** **08 28 30.3 +0.8**
GRF *e*Sg **Sg** **08 29 28.4 -0.4**
GRF Grafenberg Arr 3.64 241 *e*Pn **Pn** **08 28 30.3 +0.8**
GRF *e*Sg **Sg** **08 29 28.4 -0.4**
GRFO Grafenberg 3.64 241 *e*Pn **Pn** **08 28 30.3 +0.8**
GRFO *e*Pg **Pg** **08 28 43.5 +1.8**
GRFO *e*Sg **Sg** **08 29 31.0 +2.1**
GRFO Grafenberg 3.64 241 *e*Pn **Pn** **08 28 30.3 +0.8**
CONA Conrad Observa 3.65 183 *i* Pn **Pn** **08 28 30.6 +1.0**
SNR=23
CONA ⇑*i*Sg **Sg** **08 29 25.7 -3.5**
comp=Z,120nm,0.5s
CONA Conrad Observa 3.65 183 Pn **Pn** **08 28 30.6 +1.0**
SNR=23
CONA Sg **Sg** **08 29 25.7 -3.4**
comp=Z,120nm,0.5s
SOP Sopron 3.90 176⇑*e*Pn **Pn** **08 28 34.0 +1.0**
SOP *e*Sg **Sg** **08 29 37.1 -0.1**
SOP Sopron 3.90 176⇑*e*P **Pn** **08 28 34.0 +1.0**
MOA Molln 3.91 199 *i* Pn **Pn** **08 28 33.9 +0.7**
SNR=34
MOA ⇑*i*Sg **Sg** **08 29 36.2 -1.4**
comp=Z,163nm,0.8s
MOA Molln 3.91 199 Pn **Pn** **08 28 33.9 +0.7**
SNR=34
MOA Sg **Sg** **08 29 36.2 -1.4**
comp=Z,163nm,0.8s
KECS Kecovo 4.18 136 *e*Pn **Pn** **08 28 37.1 +0.2**
KECS *e* 08 28 53.4
KECS *e*Sg **Sg** **08 29 44.1 -2.0**
KECS Kecovo 4.18 136 *e*PN **Pn** **08 28 37.1 +0.2**
KECS *e* 08 28 53.4
KECS Kecovo 4.18 136 *e*SG **Sg** **08 29 44.1 -2.0**
ARSA Arzberg 4.34 185⇑*i*Pn **Pn** **08 28 39.8 +0.7**
ARSA ⇓*i*Sg **Sg** **08 29 49.1 -2.2**
comp=Z,87nm,0.8s
ARSA Arzberg 4.34 185 Pn **Pn** **08 28 39.8 +0.7**
ARSA Sg **Sg** **08 29 49.1 -2.2**
comp=Z,87nm,0.8s
CRVS Cervenica-Dubn 4.35 126 *e*Pn **Pn** **08 28 40.9 +1.8**
CRVS *e* 08 28 57.4
CRVS *e*Sg **Sg** **08 29 51.1 -0.3**
CRVS Cervenica-Dubn 4.35 126 *e*PN **Pn** **08 28 40.9 +1.8**
CRVS *e* 08 28 57.4
CRVS Cervenica-Dubn 4.35 126 *e*SG **Sg** **08 29 51.1 -0.3**
CRVS Cervenica-Dubn 4.35 126 *e*Pn **Pn** **08 28 40.9 +1.8**
CRVS *e*Sg **Sg** **08 29 51.1 -0.3**
PSZ Piszkesteto 4.40 145 *e*Pn **Pn** **08 28 41.1 +1.2**
PSZ Piszkesteto 4.40 145⇓*i*P **Pn** **08 28 41.2 +1.3**
PSZ Piszkesteto 4.40 145⇑*e*Pn **Pn** **08 28 40.8 +0.9**
PSZ Piszkesteto 4.40 145⇑*e*P **Pn** **08 28 40.8 +0.9**
PSZ Piszkesteto 4.40 145 *e*Pn **Pn** **08 28 41.1 +1.2**
BUD Budapest 4.51 154 *e*Sg **Sg** **08 29 59.6 +3.0**
KWP Kalwaria Pacla 4.62 112 *e*Pn **Pb** **08 28 53.5 -0.3**
KWP *e* 08 29 02.3
KWP Kalwaria Pacla 4.62 112 *e*Pn **Pn** **08 28 43.7 +0.8**
KWP *e*Pg **Pg** **08 28 59.4 -1.1**
KWP *e*Sg **Sg** **08 30 05.5 +5.1**
KWP Kalwaria Pacla 4.62 112⇓*i*P **Pg** **08 28 58.2 -2.3**
KWP Kalwaria Pacla 4.62 112 *e*Pn **Pn** **08 28 43.7 +0.7**
KOLS Kolonicke sedl 4.75 121 *e*PN **Pn** **08 28 45.0 +0.3**
KOLS *e* 08 29 06.3
KOLS Kolonicke sedl 4.75 121 *e*Pn **Pn** **08 28 45.0 +0.3**
KOLS *e*Sg **Sg** **08 30 03.2 -1.2**
KBA Koelnbreinsper 4.85 203⇓*i*Pn **Pn** **08 28 47.4 +1.3**
SNR=17
KBA ⇓*i*Sg **Sg** **08 30 06.7 -0.9**
comp=Z,32nm,0.5s
KBA Koelnbreinsper 4.85 203 Pn **Pn** **08 28 47.4 +1.3**
SNR=17
KBA Sg **Sg** **08 30 06.7 -0.9**
comp=Z,32nm,0.5s
TOD Tromm 5.06 250 P **Pn** **08 28 48.8 -0.1**
TOD S **Sn** **08 29 51.1 +3.1**
TOD Tromm 5.06 250 P **Pn** **08 28 48.8 -0.1**
TOD S **Sn** **08 29 51.1 +3.1**
WATA Walderalm 5.17 217⇓*i*Pn **Pn** **08 28 52.1 +1.6**
WATA ⇑*i*Sg **Sg** **08 30 17.1 -0.8**
comp=Z,33nm,0.6s
WATA Walderalm 5.17 217 Pn **Pn** **08 28 52.1 +1.6**
WATA Sg **Sg** **08 30 17.1 -0.8**
comp=Z,33nm,0.6s
MOTA Moosalm 5.35 220⇑*i*Pn **Pn** **08 28 53.2 +0.3**
SNR=6.8
MOTA ⇓*i*Sg **Sg** **08 30 23.6 +0.1**
comp=Z,69nm,0.8s
MOTA Moosalm 5.35 220 Pn **Pn** **08 28 53.2 +0.3**
SNR=6.8
MOTA Sg **Sg** **08 30 23.6 +0.1**
comp=Z,69nm,0.8s
ABTA Abfaltersbach 5.38 208⇓*i*Pn **Pn** **08 28 54.6 +1.3**
SNR=6.7
ABTA ⇑*i*Sg **Sg** **08 30 24.2 -0.3**
comp=Z,50nm,0.6s
ABTA Abfaltersbach 5.38 208 Pn **Pn** **08 28 54.6 +1.3**
SNR=6.7
ABTA Sg **Sg** **08 30 24.2 -0.3**
comp=Z,50nm,0.6s
DOBS Dobrina 5.44 185 *i* Pn **Pn** **08 28 55.7 +1.4**
DOBS Dobrina 5.44 185 *i* Pn **Pn** **08 28 55.7 +1.4**
DOBS Dobrina 5.44 185 *i* Pn **Pn** **08 28 55.7 +1.5**
PDKS Podkum 5.56 188 *i* Pn **Pn** **08 28 57.5 +1.6**
PDKS Podkum 5.56 188 *i* Pn **Pn** **08 28 57.5 +1.6**
PKSM Moragy 5.62 162⇓*i*P **Pn** **08 28 53.3 -3.3**
PKSM Moragy 5.62 162⇑*e*P **Pn** **08 28 58.2 +1.6**
VOY Vojsko 5.74 196 *e*Pn **Pn** **08 28 58.4 +0.2**
VOY *e*Sn **Sg** **08 30 39.0 +3.0**
VOY Vojsko 5.74 196 *e*Pn **Pn** **08 28 58.4 +0.2**
VOY *e*Sn **Sg** **08 30 39.0 +3.0**
VOY Vojsko 5.74 196 *e*Pn **Pn** **08 28 58.4 +0.2**
FETA Feichten 5.76 220⇓*i*Pn **Pn** **08 28 58.8 +0.2**
FETA Feichten 5.76 220 Pn **Pn** **08 28 58.8 +0.3**
VISS Visnje 5.83 189 *i* Pn **Pn** **08 29 00.8 +1.3**
VISS Visnje 5.83 189 *i* Pn **Pn** **08 29 00.7 +1.1**
VISS Visnje 5.83 189 *i* Pn **Pn** **08 29 00.9 +1.3**
SPAK Spaichingen-Ko 5.88 237 P **Pn** **08 29 00.7 +0.5**
SPAK Spaichingen-Ko 5.88 237 P **Pn** **08 29 00.7 +0.5**
DAVA Damuels 5.91 226⇓*i*Pn **Pn** **08 29 00.8 +0.1**
DAVA ⇑*i*Sg **Sg** **08 30 43.3 +1.6**
comp=Z,51nm,0.8s
DAVA Damuels 5.91 226 Pn **Pn** **08 29 00.8 +0.2**

DAVA Sg **Sg** **08 30 43.3 +1.6**
comp=Z,51nm,0.8s
BFO Black Forest 5.98 240 *e*Pn **Pn** **08 29 00.5 -1.2**
comp=Z,15nm,0.6s
BFO *e*Pg **Pg** **08 29 27.9 +1.4**
BFO *e*Sg **Sg** **08 30 42.8 -1.1**
BFO Black Forest 5.98 240 *e*Pn **Pn** **08 29 00.5 -1.1**
comp=Z,15nm,0.6s
RUP Ruppelstein 6.06 256 P **Pn** **08 29 03.3 +0.6**
RUP Ruppelstein 6.06 256 P **Pn** **08 29 03.3 +0.6**
BOJS Bojanci 6.10 186 *i* Pn **Pn** **08 29 04.5 +1.3**
BOJS Bojanci 6.10 186 *i* Pn **Pn** **08 29 04.5 +1.3**
BOJS Bojanci 6.10 186 *i* Pn **Pn** **08 29 04.5 +1.3**
DAVOX Davos/Dischmat 6.30 223 Pn **Pn** **08 29 06.7 +0.7**
comp=Z,1.4nm,0.3s,baz=21,slow=16,SNR=7.9
DAVOX Lg 08 30 52.2
comp=Z,1.7nm,0.3s,baz=170,slow=23,SNR=6.2
DAVOX Davos/Dischmat 6.30 223 Pn **Pn** **08 29 06.7 +0.7**
FELD Feldberg im Sc 6.43 238 P **Pn** **08 29 08.5 +0.7**
FELD Feldberg im Sc 6.43 238 P **Pn** **08 29 08.5 +0.7**
DRGR 6.44 135⇑*i*P **Pn** **08 29 08.5 +0.5**
DRGR 6.44 135⇑*i*P **Pn** **08 29 08.5 +0.5**
MEM Membach 6.45 265 P **Pn** **08 29 08.1 +0.2**
MEM Membach 6.45 265 P **Pn** **08 29 08.1 +0.1**
CDF Champ du Feu 6.52 244 *e*Pg **Pg** **08 29 32.6 -4.2**
CDF *e*Sg **Sg** **08 30 56.5 -4.7**
comp=Z,75nm,0.8s
CDF Champ du Feu 6.52 244 *e*Pn **Pn** **08 29 07.0 -2.0**
CDF *e*Pg **Pg** **08 29 32.6 -4.2**
CDF *e*Sg **Sg** **08 30 56.5 -4.7**
CDF Champ du Feu 6.52 244 *e*Pn **Pn** **08 29 07.0 -2.0**
BCLA Clavier 6.93 265 P **Pn** **08 29 15.9 +1.4**
BCLA Clavier 6.93 265 P **Pn** **08 29 15.9 +1.3**
BUR08 Bucovina Ar. S 7.09 120 *e*Pn **Pn** **08 29 17.7 +0.9**
BUR08 Bucovina Ar. S 7.09 120 *e*Pn **Pn** **08 29 17.7 +0.9**
HINF Hinteralfeld 7.09 242 *e*Pg **Pg** **08 29 45.1 -2.5**
HINF *e*Sg **Sg** **08 31 13.9 -5.5**
comp=Z,50nm,0.9s
HINF Hinteralfeld 7.09 242 *e*Pn **Pn** **08 29 14.7 -2.1**
HINF *e*Pg **Pg** **08 29 45.1 -2.5**
HINF *e*Sg **Sg** **08 31 13.9 -5.5**
HINF Hinteralfeld 7.09 242 *e*Pn **Pn** **08 29 14.7 -2.1**
BURAR Bucovina Array 7.11 120⇑*i*P **Pn** **08 29 17.6 +0.4**
BURAR Bucovina Array 7.11 120⇑*i*P **Pn** **08 29 17.6 +0.4**
HAU Haudompre 7.26 244 *e*Pg **Pg** **08 29 47.9 -3.1**
HAU *e*Sg **Sg** **08 31 19.5 -5.5**
comp=Z,58nm,1.0s
HAU Haudompre 7.26 244 *e*Pn **Pn** **08 29 16.3 -2.9**
HAU *e*Pg **Pg** **08 29 47.9 -3.1**
HAU *e*Sg **Sg** **08 31 19.5 -5.5**
GIVF Givet 7.30 263 *e*Pg **Pg** **08 29 49.2 -2.6**
GIVF *e*Sg **Sg** **08 31 21.6 -4.7**
comp=Z,50nm,1.0s
GIVF Givet 7.30 263 *e*Pn **Pn** **08 29 17.9 -1.9**
GIVF *e*Pg **Pg** **08 29 49.2 -2.6**
GIVF *e*Sg **Sg** **08 31 21.6 -4.7**
GIVF Givet 7.30 263 *e*Pn **Pn** **08 29 17.9 -1.9**
RFYF Reffroy 7.45 251 *e*Pn **Pn** **08 29 19.4 -2.4**
baz=73
RFYF *e*Sg **Sg** **08 31 25.7 -5.4**
comp=Z,5.3nm,0.2s
GZR Gura Zlata 7.60 142⇑*i*P **Pn** **08 29 23.0 -0.8**
GZR Gura Zlata 7.60 142⇑*i*P **Pn** **08 29 23.0 -0.8**
BAIF Baives 7.70 263 *e*Pn **Pn** **08 29 22.6 -2.6**
BAIF *e*Sg **Sg** **08 31 34.1 -4.8**
comp=Z,51nm,1.1s
MEZF Maizieres J'vi 7.76 251 *e*Pn **Pn** **08 29 23.1 -2.9**
MEZF *e*Sg **Sg** **08 31 35.6 -5.4**
comp=Z,120nm,1.4s
SFTF Sexfontaines 7.91 249 *e*Pn **Pn** **08 29 24.9 -3.2**
SFTF *e*Sg **Sg** **08 31 39.6 -6.1**
comp=Z,45nm,0.9s
CABF La Chapelle 8.24 237 *e*Pg **Pg** **08 30 05.9 -3.8**
CABF *e*Sg **Sg** **08 31 50.3 -6.1**
comp=Z,53nm,0.9s
CABF La Chapelle 8.24 237 *e*Pn **Pn** **08 29 29.6 -3.0**
CABF *e*Pg **Pg** **08 30 05.9 -3.8**
CABF *e*Sg **Sg** **08 31 50.3 -6.1**
KIEV Kiev 8.28 91 *e*Pn **Pn** **08 29 33.7 +0.6**
comp=Z,6.6nm,0.6s
KIEV Kiev 8.28 91 *e*Pn **Pn** **08 29 33.7 +0.5**
comp=Z,6.6nm,0.6s
LPL La Plagne 8.68 229 *e*Pn **Pn** **08 29 36.2 -2.5**
LPL *e*Sg **Sg** **08 32 03.5 -7.1**
comp=Z,29nm,1.2s
LPG La Plagne 8.69 229 *e*Pn **Pn** **08 29 35.6 -3.1**
LPG *e*Sg **Sg** **08 32 03.8 -6.9**
comp=Z,55nm,1.2s
HFS Hagfors 8.69 352 Pn **Pn** **08 29 38.0 -0.7**
comp=Z,0.3nm,0.3s,baz=139,slow=9.9,SNR=3.8
HFS Sn **Sn** **08 31 15.1 -2.2**
comp=Z,0.4nm,0.3s,baz=165,slow=24,SNR=2.2
HFS Lg 08 32 16.0
comp=Z,0.3nm,0.3s,baz=160,slow=26,SNR=3.2
HFS Hagfors 8.69 352 Pn **Pn** **08 29 38.0 -0.7**
HFS Sn **Sn** **08 31 15.1 -2.2**
HFS Lg 08 32 16.0
HFS Hagfors 8.69 352 Pn **Pn** **08 29 38.0 -0.7**
LOR Lormes 9.08 246 *e*Pn **Pn** **08 29 40.5 -3.5**
baz=67
LOR *e*Sg **Sg** **08 32 16.7 -6.4**
comp=Z,55nm,1.3s
MBDF Montbardon 9.26 226 *e*Pn **Pn** **08 29 44.0 -2.6**
MBDF *e*Sg Sn 08 32 21.9 +50
comp=Z,26nm,1.2s
SSF Saint Saulge 9.39 246 *e*Pn **Pn** **08 29 45.0 -3.4**
SSF *e*Sg Sn 08 32 25.3 +51
comp=Z,19nm,0.9s
SMF Signal de Mont 9.44 243 *e*Pn **Pn** **08 29 45.8 -3.2**
SMF *e*Sg Sn 08 32 27.1 +51
comp=Z,37nm,1.0s
ORIF Oris-en-Rattie 9.53 230 *e*Pn **Pn** **08 29 47.3 -3.0**
ORIF *e*Sg Sn 08 32 30.2 +52
comp=Z,27nm,1.2s
AVF Avril sur Loir 9.63 245 *e*Pn **Pn** **08 29 48.5 -3.1**
AVF *e*Sg Sn 08 32 33.3 +53
comp=Z,54nm,1.4s
NOA NORSAR Array B 9.87 346 Pn **Pn** **08 29 53.9 -1.0**
comp=Z,0.2nm,0.3s,baz=153,slow=12,SNR=3.2
NOA NORSAR Array B 9.87 346 Pn **Pn** **08 29 53.9 -1.0**
BGF Bois d'Agland 10.05 245 *e*Pn **Pn** **08 29 54.8 -2.6**
BGF *e*Sg Sn 08 32 46.3 +56
comp=Z,25nm,0.9s
FINES FINESS Array B 11.31 25 Pn **Pn** **08 30 12.8 -1.7**
comp=Z,0.4nm,0.3s,baz=202,slow=10,SNR=11
FINES Sn **Sn** **08 32 11.6 -10**
comp=Z,0.7nm,0.3s,baz=220,slow=22,SNR=6.8
FINES Lg 08 33 42.0
comp=Z,0.2nm,0.3s,baz=205,slow=22,SNR=4.7
EKA Eskdalemuir Ar 12.09 296 Pn **Pn** **08 30 20.5 -4.7**
comp=Z,0.6nm,0.3s,baz=105,slow=14,SNR=5.9
BRTR Keskin Array B 16.99 127 Pn **Pn** **08 31 32.0 +1.3**
comp=Z,0.1nm,0.3s,baz=254,slow=14,SNR=3.7
ARCES ARCESS Array B 18.56 10 Pn **Pn** **08 31 47.2 -2.8**
comp=Z,0.2nm,0.3s,baz=188,slow=12,SNR=5.7
AKTO Aktyubinsk 26.13 76 P **P** **08 33 08.0 +0.7**
comp=Z,1.4nm,0.6s,mb3.8,baz=301,slow=9.0,SNR=5.1
TORD Torodi Ar. Bea 40.06 202 P **P** **08 35 09.3 +0.5**
comp=Z,0.6nm,0.8s,mb3.2,baz=10,slow=9.2,SNR=3.7
SONM Songino Array 54.88 55 P **P** **08 37 04.2 +0.5**
comp=Z,0.6nm,0.7s,mb3.7,baz=297,slow=9.7,SNR=4.1
YKA Yellowknife Ar 59.81 336 P **P** **08 37 38.8 +0.5**
comp=Z,0.7nm,0.6s,mb3.9,baz=31,slow=6.5,SNR=3.5
ILAR Eielson Array 63.25 352 P **P** **08 38 02.5 +1.0**
comp=Z,0.1nm,0.6s,mb3.1,baz=346,slow=8.1,SNR=4.7
PDAR Pinedale Array 74.90 322 P **P** **08 39 15.8 +1.6**
comp=Z,0.4nm,0.6s,mb3.6,baz=60,slow=5.3,SNR=5.4
TXAR Lajitas Array 83.68 310 P **P** **08 40 04.9 +2.5**
comp=Z,0.3nm,0.8s,mb3.5,baz=98,slow=6.5,SNR=3.3
ASAR Alice Springs 125.35 84 PKP PKPdf 08 46 34.1 -0.4
comp=Z,0.3nm,0.7s,baz=351,slow=1.5,SNR=4.8

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*NEIC **06** 08:28:59.9, 18°.72N×67°.40W, h12km, MD3.1 (RSPR), After RSPR.*

RSPR 06 08:28:59.9, 18°.72N×67°.40W, h12km±1km, MD3.1/14, 10C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.37**	**133**	*e*S	Sg	08 29 13.1	+0.8
AGPR	**Aguadilla, PR**	**0.37**	**133**⇑*e*P		Pg	08 29 07.1	-0.2
AGPR	**Aguadilla, PR**	**0.37**	**133**⇑*e*P		Pg	08 29 07.1	-0.2
AGPR				*e*S	Sg	08 29 13.1	+0.8

MPR	Mayaguez	0.56 154	eP	Pg	08 29 10.2	-0.7
MPR			eS	Sg	08 29 18.7	+0.4
LSP	Las Mesas	0.62 151	eP	Pg	08 29 11.1	-0.9
LRS	Lares	0.68 129	eP	Pg	08 29 11.7	-1.4
AOPR	Arecibo Observ	0.72 121	eP	Pg	08 29 12.2	-1.6
AOPR			eS	Sg	08 29 22.4	-0.9
CRPR	Cabo Rojo, PR	0.76 159	eP	Pg	08 29 13.9	-0.8
IMO	Isla Mona	0.78 218	eP	Pg	08 29 13.2	-1.8
CELP	Cerrillos	1.01 130	eP	Pb	08 29 17.2	-2.1
CELP			eS	Sg	08 29 30.2	-2.3
OBIP	Obispado Ponce	1.01 132	ePn	Pb	08 29 17.0	-2.4
OBIP			eS	Sg	08 29 29.9	-2.7
ICM	Isla Caja Muer	1.17 135	ePn	Pn	08 29 20.4	-1.7
SJG	San Juan	1.33 117	eP	Pn	08 29 21.6	-2.8
SJG	San Juan	1.33 117	eP	Pn	08 29 21.4	-3.0
HUMP	Col San Antoni	1.58 111	eP	Pn	08 29 24.9	-2.9
SMN1	Samana, DR	1.83 285	eP	Pn	08 29 29.2	-2.0
STVI	Saint Thomas	2.35 99	eP	Pn	08 29 35.9	-2.5
SDDR	Presa de Saban	3.69 275	ePn	Pn	08 29 59.7	+2.8

IDC 06 08:51:26.3±8.0, 20°.37S×179°.18W, h603km±81km, mb2.9/5, mb1 3.2/5, mb1mx2.9/17, mbtmp2.9/5, Error ellipse: s-maj=123.3km s-min=32.9km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	32.40	264	P	P	08 57 09.3	+0.9
	2.9nm,0.5s,baz=98,slow=14,SNR=6.2						
ASAR	Alice Springs	43.47	257	P	P	08 58 37.5	-0.4
	1.1nm,0.5s,baz=96,slow=7.9,SNR=21						
ASAR				PcP	PcP	09 00 12.2	0.0
	0.5nm,0.7s,baz=110,slow=3.5,SNR=5.5						
WRA	Warramunga Arr	43.52	262	P	P	08 58 37.9	-0.5
	0.5nm,0.4s,baz=94,slow=6.7,SNR=16						
NVAR	Mina Array Bea	81.69	44	P	P	09 02 43.0	+0.1
	0.1nm,0.4s,baz=223,slow=8.7,SNR=3.6						
ILAR	Eielson Array	88.44	13	P	P	09 03 14.9	+0.2
	0.2nm,0.5s,baz=217,slow=4.8,SNR=6.5						
BRTR	Keskin Array B	145.93	312	PKPbc	PKPbc	09 09 59.4	-0.2
	0.6nm,0.5s,baz=134,slow=4.2,SNR=4.1						

IDC 06 09:11:45.5±0.5, 9°.72N×121°.98E, h0km, mb4.2/20, mb1 4.3/20, mb1mx4.2/26, mbtmp4.2/20, MS3.6/6, Ms1 3.6/6, ms1mx3.2/25, Error ellipse: s-maj=22.8km s-min=11.0km az=72.0
BJI 06 09:11:45.6, 9°.70N×122°.00E, h15km, mB4.8/6, mb4.6/8
MAN 06 09:11:45, 9°.74N×121°.80E, h1km, mb4.6, ML3.5, MS3.4
NEIC 06 09:11:50.7±0.2, 9°.69N×121°.96E, h35km, mb4.5/4, Error ellipse: s-maj=11.6km s-min=4.8km az=67.0
ISC 06 09:11:46.2±1.6, 9°.72N±0°.04×121°.82E±0°.04, h3km±10km, n67, σ0s90/64, mb4.3/31, MS3.5/5, 1D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	1.18	40	eP	Pg	09 12 07.8	-1.0
CUYO	Cuyo Island	1.37	325	eP	Pn	09 12 11.8	-0.5
SNPH	Sibulan	1.45	105	eP	Pn	09 12 12.3	-1.0
SNPH				i S	Sb	09 12 33.5	+0.9
TBP	Tagbilaran	2.02	91	eP	Pn	09 12 21.4	+0.3
IPIL	Ipil	2.06	159	eP	Pn	09 12 20.8	-0.8
LLP	Lapu-Lapu	2.20	74	eP	Pn	09 12 23.4	-0.2
LLP				eS	Sn	09 12 50.2	-1.1
PAGZ	Pagadian	2.42	140	eP	Pn	09 12 26.9	+0.3
OTRP	Odiongan	2.64	4	eP	Pn	09 12 28.7	-1.0
BUSP	Coron	2.77	325	eP	Pn	09 12 31.2	-0.3
ENPP	El Nido	2.78	302	eP	Pn	09 12 32.1	+0.5
MSLP	Maasin	3.03	82	eP	Pn	09 12 36.5	+1.5
OCLP	Ormoc	3.05	64	eP	Pn	09 12 35.4	0.0
CGP	Cagayan de Oro	3.11	114	eP	Pn	09 12 36.6	+0.6
CGP				eS	Sn	09 13 16.4	+2.7
SCPH	Surigao	3.62	89	eP	Pn	09 12 44.5	+1.3
SCPH				eS		09 12 51.9	
BUKP	Musuan	3.69	119	eP	Pn	09 12 46.9	+2.8
BOAC	Boac	3.72	0	eP	Pn	09 12 49.7	+5.2
LUBP	Lubang	4.28	339	eP	Pn	09 12 54.4	+2.1
DAV	Davao City (W)	4.56	125	LR	LR	09 14 55.5	
	comp=Z,755nm,18.5s,baz=285,slow=43						
GUMO	Guam	22.90	78	LR	LR	09 23 42.7	
	comp=Z,76nm,19.9s,MS3.1,baz=88,slow=32						
CMAR	Chiang Mai Arr	23.80	294	P	P	09 17 01.8	+1.3
	1.3nm,0.5s,mb3.6,baz=83,slow=8.1,SNR=7.3						
CMAR				LR	LR	09 26 22.2	
	comp=Z,87nm,19.1s,MS3.2,baz=155,slow=37						
KAKA	Kakadu	24.65	154	eP	P	09 17 07.6	-0.6
	21nm,0.6s,mb4.8						
KAKA	Kakadu	24.65	154	eP	P	09 17 07.5	-0.7
	67nm,0.7s,mb5.3						
FITZ	Fitzroy Crossi	27.90	172	P	P	09 17 37.0	-0.5
	5.9nm,0.8s,mb4.3,baz=358,slow=7.5,SNR=14						
FITZ	Fitzroy Crossi	27.90	172	eP	P	09 17 37.2	-0.3
	9.7nm,0.7s,mb4.5						
KSRS	Korea Array	28.16	10	P	P	09 17 39.9	+0.2
	1.1nm,0.8s,mb3.5,baz=191,slow=10,SNR=4.1						
JHJ	Hachijo jima 2	28.58	33	P	P	09 17 42.1	-1.4
	11nm,0.3s,mb5.0,baz=266,slow=19,SNR=4.6						
LZH	Lanzhou	30.92	331	eP	P	09 18 04.8	+0.6
LZH				pP	pP	09 18 17.5	+12
LZH				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
WRA	Warramunga Arr	31.95	157	P	P	09 18 12.0	-1.4
	comp=Z,6.7nm,0.7s,mb4.6,baz=336,slow=9.6,SNR=72						
WRA				PcP	PcP	09 21 02.8	-1.1
	comp=Z,1.2nm,0.8s,baz=344,slow=3.0,SNR=6.3						
WB2	Warramunga Arr	31.95	157	eP	P	09 18 11.9	-1.5
ASAR	Alice Springs	35.22	161	P	P	09 18 41.8	-0.1
	comp=Z,9.2nm,0.6s,mb4.9,baz=343,slow=7.4,SNR=184						
MDJ	Mudanjiang	35.42	10	P	P	09 18 43.1	-0.3
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,44nm,4.4s						
GTA	Gaotai	35.50	330	eP	P	09 18 45.3	+1.1
GTA				pP	pP	09 18 52.8	+7.6
GTA				sP	sP	09 18 56.3	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
MEEK	Meekatharra	36.27	185	eP	P	09 18 50.8	0.0
CTA	Charters Tower	38.15	141	P	P	09 19 06.3	-0.6
	comp=Z,3.5nm,0.9s,mb4.1,baz=333,slow=11,SNR=3.0						
CTA				LR	LR	09 33 22.2	
	comp=Z,114nm,20.6s,MS3.7,baz=139,slow=34						
ASAJ	Asahikawa	38.72	24	P	P	09 19 11.0	-0.5
	comp=Z,1.6nm,0.6s,mb3.9,baz=249,slow=11,SNR=4.4						
SONM	Songino Array	40.16	344	P	P	09 19 24.5	+1.1
	comp=Z,0.5nm,0.6s,mb3.4,baz=160,slow=9.5,SNR=4.2						
SONM				PcP	PcP	09 21 27.4	-0.4
	comp=Z,0.3nm,0.6s,baz=100,slow=1.7,SNR=3.7						
FORT	Forrest	40.70	172	eP	P	09 19 28.3	+0.2
	comp=Z,11nm,0.6s,mb4.7						
KMBL	Kambalda	40.85	180	eP	P	09 19 29.1	-0.2
	comp=Z,52nm,0.7s,mb5.3						
HNR	Honiara	42.45	116	LR	LR	09 36 57.4	
	comp=Z,59nm,19.7s,MS3.5,baz=265,slow=36						
NWAO	Narrogin (SRO)	42.63	186	P	P	09 19 44.5	+0.6
	comp=Z,10.0nm,0.7s,mb4.6,baz=3.7,slow=6.5,SNR=5.6						
NWAO	Narrogin (SRO)	42.63	186	P	P	09 19 44.5	+0.6
BBOO	Buckleboo	44.42	163	eP	P	09 19 58.3	0.0
	comp=Z,5.0nm,1.0s,mb4.2						
STKA	Stephens Creek	45.48	156	P	P	09 20 06.2	-0.7
	comp=Z,7.2nm,0.8s,mb4.5,baz=328,slow=5.9,SNR=16						
STKA	Stephens Creek	45.48	156	eP	P	09 20 06.3	-0.5
	comp=Z,5.6nm,0.8s,mb4.5						
MK31	Makanchi Array	49.89	325	eP	P	09 20 38.1	-2.8
MK31				ePcP	PcP	09 22 01.2	-0.1
MKAR	Makanchi Array	49.89	325	P	P	09 20 41.8	+0.9
	comp=Z,2.1nm,0.7s,mb4.3,baz=130,slow=8.6,SNR=18						
MKAR				PcP	PcP	09 22 01.0	-0.3
	comp=Z,2.1nm,0.7s,baz=108,slow=4.0,SNR=8.2						
MKAR	Makanchi Array	49.89	325	P	P	09 20 41.8	+0.9
MKAR				PcP	PcP	09 22 01.0	-0.3
PETK	Petropavlovsk-	52.02	27	P	P	09 20 56.2	-0.6
	comp=Z,2.2nm,0.6s,mb4.3,baz=212,slow=5.9,SNR=6.3						
PETK	Petropavlovsk-	52.02	27	P	P	09 20 56.2	-0.6
ZALV	Zalesovo Beam	53.08	334	P	P	09 21 04.9	+0.2
	comp=Z,2.4nm,0.4s,mb4.5,baz=109,slow=8.0,SNR=4.6						
KURK	Kurchatov	54.10	328	P	P	09 21 13.1	+0.9
	comp=Z,2.8nm,0.7s,mb4.3,baz=122,slow=6.0,SNR=13						
BVAR	Borovoye Array	59.67	327	P	P	09 21 51.9	+0.2
	comp=Z,0.6nm,0.6s,mb3.8,baz=114,slow=6.5,SNR=2.6						
ABKAR	Akbulak array	64.46	320	eP	P	09 22 24.3	+0.4
	comp=Z,2.0nm,0.7s,mb4.3						

AKTK	Aktyubinsk	65.97	321	P	P	09 22 34.0	+0.3
AKTO	Aktyubinsk	65.97	321	P	P	09 22 34.0	+0.3
	comp=Z,2.7nm,0.6s,mb4.5,baz=102,slow=9.2,SNR=9.5						
COLD	Coldfoot	80.33	23	eP	P	09 23 58.4	+0.1
	comp=Z,9.0nm,1.6s,mb4.5						
ILAR	Eielson Array	81.84	26	P	P	09 24 05.2	-1.2
	comp=Z,0.4nm,0.8s,mb3.4,baz=258,slow=4.5,SNR=2.7						
BRTR	Keskin Array B	82.48	309	P	P	09 24 10.4	+0.1
	comp=Z,0.4nm,0.6s,mb3.6,baz=132,slow=7.3,SNR=3.8						
ARCES	ARCESS Array B	83.17	339	P	P	09 24 13.0	-0.3
	comp=Z,2.0nm,0.8s,mb4.2,baz=74,slow=8.9,SNR=4.0						
ARCES	ARCESS Array B	83.17	339	P	P	09 24 13.0	-0.3
FINES	FINESS Array B	84.28	331	P	P	09 24 18.3	-0.8
	comp=Z,2.1nm,0.8s,mb4.3,baz=57,slow=7.0,SNR=6.2						
DAWY	Dawson	85.16	26	eP	P	09 24 23.2	-0.3
INK	Inuvik	86.40	21	eP	P	09 24 29.1	-0.5
	comp=Z,2.9nm,1.0s,mb4.5						
BUR08	Bucovina Ar. S	87.32	318	eP	P	09 24 34.9	+0.4
PPT	Papeete	91.57	107	LR	LR	10 04 57.4	
	comp=Z,56nm,18.2s,MS4.0,baz=69,slow=35						
TXAR	Lajitas Array	121.45	47	PKP	PKPdf	09 30 41.6	-0.1
	comp=Z,0.5nm,0.7s,baz=128,slow=0.9,SNR=9.1						
BCIP	Isla Barro Col	151.43	50	ePKPbc	PKPbc	09 31 41.5	-1.2

NEIC 06 09:18:47.8, 14°.93N×95°.01W, h16km, MD4.1(MEX), After MEX.
MEX 06 09:18:47.8±1.5, 14°.93N×95°.02W, h16km±35km, MD4.1, Off coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.34	308	eP	Pn	09 19 08.0	-3.9
HUIG				i S	Sn	09 19 23.4	-6.1
HUIG	Huatulco	1.34	308	eP	Pn	09 19 08.0	-3.9
HUIG				i S	Sn	09 19 23.4	-6.1
PCIG		1.90	66	i P	Pn	09 19 15.2	-4.3
PCIG				i S	Sn	09 19 37.2	-5.9
TGIG		2.59	45	eP	Pn	09 19 25.7	-3.3
TGIG				i S	Sn	09 19 56.1	-4.0
VHO	Vista Hermosa	2.69	322	i P	Pn	09 19 28.1	-2.5
VHO				i S	Sn	09 19 59.6	-3.2
VHO	Vista Hermosa	2.69	322	i P	Pn	09 19 28.1	-2.5
VHO				i S	Sn	09 19 59.6	-3.2
SCX	San Cristobal	2.91	52	i P	Pn	09 19 32.7	-0.8
SCX	San Cristobal	2.91	52	i P	Pn	09 19 32.7	-0.8
CCIG	Comitan	3.08	64	eP	Pn	09 19 34.4	-1.4
CCIG				i S	Sn	09 20 07.8	-4.5
CCIG	Comitan	3.08	64	eP	Pn	09 19 34.4	-1.4
CCIG				i S	Sn	09 20 07.8	-4.5
PNIG	Pinotepa	3.33	296	i P	Pn	09 19 37.4	-1.9
PNIG				i S	Sn	09 20 12.8	-5.7
PNIG	Pinotepa	3.33	296	i P	Pn	09 19 37.4	-1.9
PNIG				i S	Sn	09 20 12.8	-5.7

IDC 06 09:20:43.4±0.8, 31°.12N×103°.67E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.8/25, mbtmp3.9/10, ML4.1/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/27, Error ellipse: s-maj=29.1km s-min=16.7km az=58.0
BJI 06 09:20:44.1, 31°.21N×103°.68E, h14km, mb4.3/3, ML3.9/20, Ms3.9/5, Ms7 3.5/4
NEIC 06 09:20:45.5±0.6, 31°.15N×103°.68E, h10km, mb4.3/2, Error ellipse: s-maj=14.8km s-min=10.2km az=54.0
ISC 06 09:20:44.5±0.9, 31°.23N±0°.03×103°.56E±0°.05, h6km±6km, n26, σ1s14/34, mb3.9/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.36	152	Pg	Pg	09 20 51.8	+0.4
CD2				Sg	Sg	09 20 59.2	+3.1
CD2				smax			
	comp=N,7μm,0.7s						
CD2				smax			
	comp=E,14μm,0.7s						
LZH	Lanzhou	4.85	3	Pg	Pg	09 22 16.6	-0.8
LZH				Sg	Sg	09 23 19.0	-1.3
LZH				smax			
	comp=N,140nm,1.2s						
LZH				smax			
	comp=E,410nm,1.2s						
LZH				LR	LR		
	comp=N,720nm,7.6s						
LZH				LR	LR		
	comp=E,2μm,7.4s						
LZH				LR	LR		
	comp=Z,1μm,9.5s						
ENH	Enshi	5.19	99	ePn	Pn	09 22 03.1	+0.5
	comp=Z,59nm,0.6s						
ENH				eSn	Sn	09 23 02.6	-0.3
XAN	Xi'an	5.32	57	Pg	Pg	09 22 20.4	-6.0
XAN				Sg	Sg	09 23 29.0	-6.3
XAN				smax			
	comp=N,130nm,0.6s						
XAN				smax			
	comp=E,94nm,1.0s						
GYA	Guiyang	5.48	149	Pn	Pn	09 22 07.6	+1.0
GYA				Sn	Sn	09 23 09.5	-0.4
GYA				Sg	Sg	09 23 29.3	-11
GYA				smax			
	comp=N,170nm,0.8s						
GYA				smax			
	comp=E,160nm,0.8s						
KMI	Kunming	6.12	187	Pn	Pn	09 22 15.0	-0.5
KMI				Sn	Sn	09 23 25.4	-0.6
KMI				Sg	Sg	09 24 01.6	+0.4
KMI				smax			
	comp=N,29nm,1.4s						
KMI				smax			
	comp=E,35nm,1.3s						
KMI				LR	LR		
	comp=N,340nm,9.3s						
KMI				LR	LR		
	comp=E,1μm,11.0s						
KMI				LR	LR		
	comp=Z,350nm,8.6s						
GTA	Gaotai	8.72	340	eP	Pn	09 23 26.2	+35
GTA				pP		09 23 32.1	
GTA				sP		09 23 34.7	
GTA				S	Sn	09 24 48.2	+18
GTA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GTA				LR	LR		
	comp=N,170nm,13.0s						
GTA				LR	LR		
	comp=E,370nm,11.9s						
GTA				LR	LR		
	comp=Z,200nm,10.9s						
CMAR	Chiang Mai Arr	13.39	199	Pn	Pn	09 23 55.9	+0.8
	comp=Z,0.5nm,0.3s,baz=7.7,slow=13,SNR=5.0						
ODAN	Odare	14.80	257	eP	Pn	09 24 12.7	-1.6
PKI	Pulchoki	16.23	262	eP	Pn	09 24 31.4	-1.8
KKN	Kakani	16.28	262	eP	Pn	09 24 33.6	-0.2
	comp=Z,18nm,0.6s						
DMN	Daman	16.48	262	eP	Pn	09 24 35.8	-0.5
SONM	Songino Array	16.73	7	Pn	Pn	09 24 41.1	+1.7
	comp=Z,0.4nm,0.3s,baz=193,slow=6.8,SNR=8.0						
GKN	Gorkha	16.77	264	eP	Pn	09 24 40.5	+0.5
	comp=Z,33nm,0.8s						
KSRS	Korea Array	21.02	66	P	P	09 25 28.9	0.0
	comp=Z,3.7nm,0.7s,mb3.8,baz=258,slow=10,SNR=14						
MKAR	Makanchi Array	22.58	320	P	P	09 25 46.2	+0.7
	comp=Z,7.9nm,1.1s,mb4.0,baz=125,slow=10,SNR=14						
MKAR				LR	LR	09 35 17.9	
	comp=Z,65nm,19.9s,baz=264,slow=38						
MKAR	Makanchi Array	22.58	320	P	P	09 25 46.2	+0.7
MKAR				LR	LR	09 35 17.9	
KZA	Kyzart	25.05	304	eP	P	09 26 12.9	+3.4
	comp=Z,8.0nm,0.5s,mb4.5						
AAK	Ala-Archa	25.75	304	P	P	09 26 18.8	+3.0
	comp=Z,1.5nm,0.5s,mb3.8,baz=30,slow=8.6,SNR=4.7						
AML	Almayashu	26.18	303	eP	P	09 26 22.0	+2.2
	comp=Z,3.1nm,0.9s,mb3.8						
KURK	Kurchatov	26.87	324	P	P	09 26 25.8	-0.1
	comp=Z,3.0nm,0.9s,mb3.8,baz=131,slow=9.5,SNR=9.0						
WRA	Warramunga Arr	58.84	146	P	P	09 30 42.7	-1.3
	comp=Z,1.0nm,0.5s,mb4.1,baz=338,slow=7.8,SNR=15						
WRA	Warramunga Arr	58.84	146	P	P	09 30 42.7	-1.3
ASAR	Alice Springs	61.84	148	P	P	09 31 03.5	-0.9
	comp=Z,0.4nm,0.7s,mb3.7,baz=337,slow=6.9,SNR=7.6						
ILAR	Eielson Array	69.92	25	P	P	09 31 56.5	+0.4
	comp=Z,0.4nm,1.0s,mb3.3,baz=272,slow=6.8,SNR=5.9						
STKA	Stephens Creek	72.37	147	P	P	09 32 09.7	-1.6
	comp=Z,1.0nm,0.8s,mb3.8,baz=270,slow=2.0,SNR=3.3						

ISCJB 06 09:39:37.6±0.8, 31°.35N±0°.03×103°.78E±0°.08, h11km±6km, mb3.5/6, Error ellipse: s-maj=11.4km s-min=5.2km az=7.6
IDC 06 09:39:38.0±1.2, 31°.04N×103°.49E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.5/23, mbtmp3.5/7, ML3.9/1, Error ellipse: s-maj=38.3km s-min=21.6km az=60.0
BJI 06 09:39:39.8, 31°.27N×103°.65E, h14km, ML3.5/13, Ms7 2.9/1
NEIC 06 09:39:39.4±0.7, 31°.02N×103°.39E, h10km, mb3.6/1, Error ellipse: s-maj=19.5km s-min=10.6km az=223.0
ISC 06 09:39:40.0±0.8, 31°.29N±0°.03×103°.67E±0°.07, h8km±6km, n13, σ1s17/18, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.39	168	Pg	Pg	09 39 46.6	-1.0
CD2				Sg	Sg	09 39 53.5	+0.7
CD2				smax			
	comp=N,3μm,0.6s						
CD2				smax			
	comp=E,6μm,0.5s						
LZH	Lanzhou	4.78	2	ePg	Pg	09 41 11.9	+0.2
LZH				Sg	Sg	09 42 14.0	+0.4
LZH				smax			
	comp=N,58nm,1.2s						
LZH				smax			
	comp=E,81nm,1.2s						
LZH				LR	LR		
	comp=N,300nm,7.6s						
LZH				LR	LR		
	comp=E,810nm,8.0s						
LZH				LR	LR		
	comp=Z,380nm,8.5s						
ENH	Enshi	5.11	100	ePn	Pn	09 40 58.5	+1.6
	comp=Z,12nm,0.5s						
XAN	Xi'an	5.21	57	Pg	Pg	09 41 13.7	-6.1
XAN				Sg	Sg	09 42 26.2	-1.1
XAN				smax			
	comp=N,55nm,0.7s						
XAN				smax			
	comp=E,37nm,0.9s						
KMI	Kunming	6.20	188	Pn	Pn	09 41 11.7	-0.2
KMI				Sn	Sn	09 42 23.5	+0.5
KMI				Sg	Sg	09 42 59.5	+0.4
KMI				smax			
	comp=N,15nm,1.0s						
KMI				smax			
	comp=E,14nm,1.3s						
KMI				LR	LR		
	comp=Z,100nm,9.6s						
SONM	Songino Array	16.65	6	Pn	Pn	09 43 36.6	+2.9
	comp=Z,0.4nm,0.3s,baz=193,slow=16,SNR=3.8						
KSRS	Korea Array	20.92	66	P	P	09 44 23.3	+0.3
	comp=Z,0.9nm,0.3s,baz=262,slow=10,SNR=8.3						
MKAR	Makanchi Array	22.59	319	P	P	09 44 39.4	-1.4
	comp=Z,1.3nm,1.0s,mb3.3,baz=119,slow=12,SNR=3.2						
EKS2	Erkin-Say	26.30	304	eP	P	09 45 14.8	-1.2
	comp=Z,0.9nm,0.6s,mb3.5						
KURK	Kurchatov	26.87	323	P	P	09 45 22.0	+0.9
	comp=Z,0.8nm,0.3s,mb3.7,baz=132,slow=8.8,SNR=3.8						
WRA	Warramunga Arr	58.84	146	P	P	09 49 37.6	-1.6
	comp=Z,0.4nm,0.5s,mb3.7,baz=338,slow=7.8,SNR=8.9						
ASAR	Alice Springs	61.85	148	P	P	09 49 58.1	-1.6
	comp=Z,0.4nm,1.0s,mb3.5,baz=347,slow=7.6,SNR=2.7						
ILAR	Eielson Array	69.83	26	P	P	09 50 52.5	+1.8
	comp=Z,0.3nm,0.9s,mb3.2,baz=288,slow=7.5,SNR=2.9						

BUC 06 09:49:37.9±13.0, 44°.88N×25°.45E, h5km, MD2.1/1, 3C-9D, Error ellipse: s-maj=110.0km s-min=41.5km az=11.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOIR		0.63	333	↓iP	Pg	09 49 51.1	+1.1
VOIR				i S	Sg	09 49 55.2	-2.9
VOIR		0.63	333	↓iP	Pg	09 49 51.1	+1.1
VOIR		0.63	333	S	Sg	09 49 55.2	-2.9
VOIR		0.63	333	↓iP	Pg	09 49 51.1	+1.1
MLR	Muntele Rosu	0.70	29	↓iP	Pg	09 49 54.3	+2.9
MLR				i S	Sg	09 50 03.6	+3.1
MLR	Muntele Rosu	0.70	29	↓iP	Pg	09 49 54.3	+2.9
MLR	Muntele Rosu	0.70	29	S	Sg	09 50 03.6	+3.1
MLR	Muntele Rosu	0.70	29	↓iP	Pg	09 49 54.3	+2.9
PLOR	Plostina	1.29	41	↑iP	Pn	09 50 01.3	-1.2
PLOR	Plostina	1.29	41	S	Sg	09 50 25.9	+6.7
PLOR	Plostina	1.29	41	↑iP	Pn	09 50 01.3	-1.2
PLOR	Plostina	1.29	41	↑iP	Pn	09 50 01.3	-1.2
VRI	Vrincioaia	1.33	42	↓iP	Pn	09 50 02.1	-1.1
VRI	Vrincioaia	1.33	42	↓iP	Pn	09 50 02.1	-1.1
VRI				S	Sb	09 50 26.7	+5.9
VRI	Vrincioaia	1.33	42	↓iP	Pn	09 50 02.1	-1.1

MAN 06 10:35:35, 11°.03N×124°.67E, h2km, mb4.0, ML2.8, MS2.5, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.07	290	eP	Pg	10 35 37.3	+1.0
OCLP				eS	Sg	10 35 42.2	+5.0
MSLP	Maasin	0.91	168	eP	Pg	10 35 54.3	+1.9
MSLP				eS	Sg	10 36 09.9	+5.7
TBP	Tagbilaran	1.55	211	eP	Pn	10 36 04.0	+0.4

IDC 06 10:40:29.0±7.1, 15°.96S×173°.01W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/20, mbtmp3.7/3, ML2.4/1, Error ellipse: s-maj=294.1km s-min=27.8km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.36	31	Pn	Pn	10 41 07.9	-1.2
	58nm,0.3s,baz=143,slow=0.7,SNR=64						
AFI				Sn	Sn	10 41 27.9	-11
	106nm,0.3s,baz=56,slow=22,SNR=23						
WRA	Warramunga Arr	50.08	257	P	P	10 49 25.5	-0.7
	0.2nm,0.6s,baz=96,slow=7.9,SNR=8.2						
ASAR	Alice Springs	50.30	252	P	P	10 49 27.6	-0.1
	1.1nm,0.6s,baz=87,slow=7.9,SNR=22						

ETOS	Mallorca	2.83	355	P	Pn	10 47 56.0	0.0
ETOS				S	Sn	10 48 26.8	-3.0
ETOS	Mallorca	2.83	355	P	Pn	10 47 56.0	0.0
	2.0nm,0.1s,SNR=20						
ETOS				S	Sn	10 48 28.0	-1.9
	101nm,1.4s						
ETOS	Mallorca	2.83	355	P	Pn	10 47 56.0	0.0
	2.0nm,0.1s,SNR=20						
ETOS				S	Sn	10 48 28.0	-1.9
	101nm,1.4s						
ETOS	Mallorca	2.83	355	P	Pn	10 47 56.0	+0.1
	2.0nm,0.1s,SNR=20						
ETOS				S	Sn	10 48 26.8	-3.1
	101nm,1.4s						
EBEN	Beniarda	3.20	304	P	Pn	10 48 04.5	+3.4
EBEN				S	Sn	10 48 38.8	-0.3
EBEN	Beniarda	3.20	304	P	Pn	10 48 01.9	+0.9
	0.2nm,0.2s,SNR=7.9						
EBEN				S	Sn	10 48 38.8	-0.3
	0.3nm,0.2s,SNR=7.9						
EBEN	Beniarda	3.20	304	P	Pn	10 48 01.9	+0.9
	0.2nm,0.2s,SNR=7.9						
EBEN				S	Sn	10 48 38.8	-0.3
	0.3nm,0.2s,SNR=7.9						
EBEN	Beniarda	3.20	304	P	Pn	10 48 04.5	+3.4
	0.2nm,0.2s,SNR=7.9						
EBEN				S	Sn	10 48 38.8	-0.3
	0.3nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.10	296	P	Pn	10 48 16.3	+2.9
ETOB				S	Sn	10 49 01.8	+0.6
ETOB	Tobarra	4.10	296	P	Pn	10 48 14.4	+1.0
	0.4nm,0.1s,SNR=6.0						
ETOB				S	Sn	10 49 01.8	+0.6
	36nm,1.4s						
ETOB	Tobarra	4.10	296	P	Pn	10 48 14.4	+1.0
	0.4nm,0.1s,SNR=6.0						
ETOB				S	Sn	10 49 01.8	+0.6
	36nm,1.4s						
ETOB	Tobarra	4.10	296	P	Pn	10 48 16.3	+2.9
	0.4nm,0.1s,SNR=6.0						
ETOB				S	Sn	10 49 01.8	+0.7
	36nm,1.4s						
ECHE	Chera	4.19	310	P	Pn	10 48 16.4	+1.8
ECHE				S	Sn	10 49 01.2	-2.1
ECHE	Chera	4.19	310	P	Pn	10 48 16.4	+1.8
	2.0nm,0.2s,SNR=7.9						
ECHE	Chera	4.19	310	P	Pn	10 48 16.4	+1.8
	2.0nm,0.2s,SNR=7.9						
ECHE	Chera	4.19	310	P	Pn	10 48 16.4	+1.8
	2.0nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.44	321	P	Pn	10 48 19.2	+1.1
EMOS				S	Sn	10 49 08.7	-0.9
EMOS	Mosqueruela	4.44	321	P	Pn	10 48 19.2	+1.1
	0.5nm,0.3s,SNR=8.1						
EMOS				S	Sn	10 49 08.7	-0.9
	24nm,1.1s						
EMOS	Mosqueruela	4.44	321	P	Pn	10 48 19.2	+1.1
	0.5nm,0.3s,SNR=8.1						
EMOS				S	Sn	10 49 08.7	-0.9
	24nm,1.1s						
EMOS	Mosqueruela	4.44	321	P	Pn	10 48 19.2	+1.1
	0.5nm,0.3s,SNR=8.1						
EMOS				S	Sn	10 49 08.7	-0.9
	24nm,1.1s						
ERTA	Horta de San J	4.57	332	P	Pn	10 48 20.6	+0.7
ERTA				S	Sn	10 49 08.4	-4.3
ERTA	Horta de San J	4.57	332	P	Pn	10 48 20.6	+0.7
	0.1nm,0.1s,SNR=4.0						
ERTA				S	Sn	10 49 11.6	-1.1
	0.1nm,0.1s,SNR=7.9						
ERTA	Horta de San J	4.57	332	P	Pn	10 48 20.6	+0.7
	0.1nm,0.1s,SNR=4.0						
ERTA				S	Sn	10 49 11.6	-1.1
	0.1nm,0.1s,SNR=7.9						
ERTA	Horta de San J	4.57	332	P	Pn	10 48 20.6	+0.7
	0.1nm,0.1s,SNR=4.0						
ERTA				S	Sn	10 49 08.4	-4.4
	0.1nm,0.1s,SNR=7.9						
EPOB	Poblet	4.69	340	P	Pn	10 48 23.3	+1.8
EPOB	Poblet	4.69	340	P	Pn	10 48 22.6	+1.2
	0.4nm,0.1s,SNR=4.0						
EPOB	Poblet	4.69	340	P	Pn	10 48 22.6	+1.2
	0.4nm,0.1s,SNR=4.0						
EPOB	Poblet	4.69	340	P	Pn	10 48 22.6	+1.1
	0.4nm,0.1s,SNR=4.0						
CFON	Fontmartina	4.84	354	P	Pn	10 48 23.8	+0.2
CFON	Fontmartina	4.84	354	P	Pn	10 48 23.8	+0.2
	1.8nm,0.2s,SNR=11						
CFON	Fontmartina	4.84	354	P	Pn	10 48 23.8	+0.2
	1.8nm,0.2s,SNR=11						
CFON	Fontmartina	4.84	354	P	Pn	10 48 23.8	+0.2
	1.8nm,0.2s,SNR=11						
EMIR	Miracle	5.12	346	P	Pn	10 48 28.7	+1.3
EMIR				S	Sn	10 49 21.9	-4.4
EMIR	Miracle	5.12	346	P	Pn	10 48 28.7	+1.3
	3.7nm,0.2s,SNR=7.9						
EMIR				S	Sn	10 49 23.7	-2.6
	0.5nm,0.3s,SNR=7.9						
EMIR	Miracle	5.12	346	P	Pn	10 48 28.7	+1.3
	3.7nm,0.2s,SNR=7.9						
EMIR				S	Sn	10 49 23.7	-2.6
	0.5nm,0.3s,SNR=7.9						
EMIR	Miracle	5.12	346	P	Pn	10 48 28.7	+1.3
	3.7nm,0.2s,SNR=7.9						
EMIR				S	Sn	10 49 21.9	-4.4
	0.5nm,0.3s,SNR=7.9						

IDC 06 10:58:51.4±1.8, 15°06S×70°08W, h214km±19km, mb3.1/4, mb1 3.5/5, mb1mx3.3/19, mbtmp3.2/5, MS2.3/1, Ms1 2.3/1, ms1mx1.9/12, Error ellipse: s-maj=45.4km s-min=30.3km az=46.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.23	123	P	Pn	10 59 34.5	+1.2
	25nm,0.3s,baz=296,slow=8.2,SNR=492						
LPAZ				S	S	11 00 07.7	+1.5
	15nm,0.3s,baz=22,slow=21,SNR=12						
CFAA	Coronel Fontan	16.55	174	P	P	11 02 29.8	-0.6
	0.0nm,0.3s,baz=2.6,slow=13,SNR=4.4						
CFAA				LR	LR	11 08 55.1	
	comp=Z,12nm,20.6s,baz=57,slow=36						
TXAR	Lajitas Array	54.77	324	P	P	11 07 58.4	-0.7
	0.1nm,0.5s,baz=153,slow=10,SNR=3.6						
PDAR	Pinedale Array	68.01	330	P	P	11 09 27.5	+0.1
	0.2nm,0.4s,baz=128,slow=2.8,SNR=3.2						
TORD	Torodi Ar. Bea	76.35	72	P	P	11 10 16.7	-0.7
	0.6nm,0.4s,baz=262,slow=4.7,SNR=3.4						
YKA	Yellowknife Ar	84.77	341	P	P	11 11 01.4	+0.4
	0.6nm,0.8s,baz=137,slow=4.8,SNR=5.3						
WRA	Warramunga Arr	137.74	215	PKP	PKPdf	11 17 49.6	-1.2
	0.8nm,0.3s,baz=135,slow=1.8,SNR=40						
MJAR	Matsushiro Arr	146.95	316	PKPbc	PKPbc	11 18 08.8	-0.2
	1.5nm,0.9s,baz=142,slow=0.8,SNR=5.2						
SONM	Songino Array	147.19	4	PKPbc	PKPbc	11 18 09.8	+0.6
	0.4nm,0.4s,baz=328,slow=2.5,SNR=4.0						

MAN 06 11:06:54, 14°00N×120°31E, h67km, mb4.2, ML3.0, MS2.8, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.27	193	eP	Pn	11 07 07.3	+2.6
LUBP				eS	Sn	11 07 15.5	+3.1
TGY	Tagaytay City	0.62	81	⇓iP	Pn	11 07 09.8	+2.0
PGP	Puerto Galera	0.80	128	⇓iP	Pn	11 07 11.8	+1.9
BOAC	Boac	1.59	110	eP	Pn	11 07 21.3	+1.3
BOAC				eS	Sn	11 07 31.3	-8.4
BUSP	Coron	1.99	183	eP	Pn	11 07 26.7	+1.2
BALP	Baler	2.12	35	eP	Pn	11 07 28.4	+1.2
ENPP	El Nido	2.91	197	eP	Pn	11 07 39.3	+1.4

ISCJB 06 11:07:22.1±0.6, 35°3S±0°1×111°2W±0°2, h10km, mb4.1/14, MS3.1/3, Error ellipse: s-maj=29.6km s-min=13.1km az=166.2
IDC 06 11:07:22.4±0.7, 35°12S×111°22W, h0km, mb3.8/7, mb1 4.1/7, mb1mx4.0/18, mbtmp3.8/7, MS3.1/3, Ms1 3.2/3, ms1mx3.0/27, Error ellipse: s-maj=31.6km s-min=20.6km az=82.0
NEIC 06 11:07:24.0±0.5, 35°16S×111°25W, h10km, mb4.6/7, Error ellipse: s-maj=20.1km s-min=11.9km az=76.0
ISC 06 11:07:24.0±0.6, 35°3S±0°1×111°2W±0°2, h10km, n25, σ0§82/18, mb4.1/14, MS3.1/3, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	32.31	112	P	P	11 13 54.1	+1.0
	1.0nm,0.8s,mb3.7,baz=264,slow=10,SNR=2.6						
CFAA	Coronel Fontan	35.86	97	LR	LR	11 24 40.7	
	comp=Z,9.7nm,19.0s,MS2.6,baz=316,slow=29						
LPAZ	La Paz	42.77	75	LR	LR	11 30 08.3	
	comp=Z,19nm,18.6s,MS3.0,baz=243,slow=32						
CPUP	Villa Florida	46.67	95	LR	LR	11 33 24.9	
	comp=Z,76nm,20.9s,MS3.6,baz=293,slow=34						
SIV	San Ignacio	48.58	80	P	P	11 16 07.8	0.0
	0.8nm,0.8s,mb3.8,baz=231,slow=13,SNR=3.1						
QSPA	South Pole Qui	54.94	180	P	P	11 16 56.6	+2.1
	0.9nm,0.9s,mb3.8,baz=304,slow=4.3,SNR=4.2						
QSPA	South Pole Qui	54.94	180	P	P	11 16 56.6	+2.1
VNA3	Neumayer Olymp	60.62	159	e	P	11 17 32.8	-1.7
VNA2	Neumayer--Watz	61.42	159	e	P	11 17 38.6	-1.4
	baz=248,slow=6.3						
TXAR	Lajitas Array	64.64	7	P	P	11 18 01.4	-0.3
	0.3nm,0.9s,mb3.3,baz=193,slow=12,SNR=3.1						
SHPR	Sheep Range	71.49	357	eP	P	11 18 45.4	+0.8
	8.3nm,1.5s,mb4.4						
NVAR	Mina Array Bea	73.61	354	P	P	11 18 57.6	+0.4
	1.3nm,0.8s,mb3.9,baz=187,slow=7.2,SNR=12						
DAU	Daniels Canyon	75.30	360	eP	P	11 19 07.3	+0.4
	8.6nm,1.0s,mb4.6						
JLU	Jordanelle	75.48	360	eP	P	11 19 07.5	-0.5
	9.0nm,1.4s,mb4.5						
MAW	Mawson	77.36	178	P	P	11 19 18.7	+0.2
	1.3nm,0.9s,mb3.9,baz=186,slow=8.0,SNR=2.8						
PDAR	Pinedale Array	77.66	1	P	P	11 19 19.4	-0.9
	1.8nm,0.8s,mb4.1,baz=151,slow=5.2,SNR=17						
TPAW	Teton Pass	78.37	0	eP	P	11 19 24.0	-0.3
	3.2nm,1.2s,mb4.1						
HLID	Hailey	78.50	358	eP	P	11 19 25.0	+0.1
	7.3nm,1.1s,mb4.5						
FLWY	Flagg Ranch	78.96	0	eP	P	11 19 27.3	-0.2
	13nm,1.5s,mb4.6						
MCMT	McKenzie Canyo	79.72	359	eP	P	11 19 31.9	+0.4
	0.8nm,0.8s,mb3.7						
GLMI	Grayling	83.28	19	eP	P	11 19 50.4	0.0
	38nm,0.4s						
BUR08	Bucovina Ar. S	145.52	55	ePKPbc	PKPbc	11 27 02.5	+0.4
CMAR	Chiang Mai Arr	148.47	246	PKPbc	PKPbc	11 27 11.8	+0.5
	1.1nm,0.7s,baz=158,slow=1.3,SNR=9.3						
SONM	Songino Array	149.47	306	PKPbc	PKPbc	11 27 12.0	-1.0
	0.9nm,0.8s,baz=104,slow=4.7,SNR=3.7						
BRTR	Keskin Array B	151.88	70	PKPbc	PKPbc	11 27 17.0	-2.0
	0.8nm,0.7s,baz=190,slow=0.8,SNR=5.5						

ISCJB 06 11:10:35.9±0.7, 9°74N±0°07×121°85E±0°05, h43km±16km, mb4.0/3, Error ellipse: s-maj=11.2km s-min=8.8km az=18.8
MAN 06 11:10:35, 9°73N×121°83E, h28km, mb4.5, ML3.4, MS3.3
IDC 06 11:11:47.8±7.8, 1°56N×124°21E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/19, mbtmp3.9/3, Error ellipse: s-maj=166.8km s-min=120.9km az=63.0
ISC 06 11:10:36.1±2.2, 9°77N±0°07×121°86E±0°05, h27km±20km, n13, σ0§74/17, mb4.0/3, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	1.12	40	eP	Pn	11 10 55.2	-0.8
GUIM				eS	Sb	11 11 11.0	0.0
CUYO	Cuyo Island	1.36	323	eP	Pn	11 10 59.1	-0.2
CUYO				eS	Sn	11 11 06.8	-10
SNPH	Sibulan	1.42	107	⇑eP	Pn	11 10 59.7	-0.5
SNPH				iS	Sn	11 11 21.6	+3.6
TBP	Tagbilaran	1.98	92	eP	Pn	11 11 08.3	+0.5
IPIL	Ipil	2.09	160	eP	Pn	11 11 08.1	-1.2
LLP	Lapu-Lapu	2.15	75	eP	Pn	11 11 09.9	-0.2
LLP				eS	Sn	11 11 35.2	-0.7
PAGZ	Pagadian	2.43	142	eP	Pn	11 11 14.3	+0.2
BUSP	Coron	2.76	324	eP	Pn	11 11 18.6	0.0
ENPP	El Nido	2.79	301	eP	Pn	11 11 19.5	+0.5
MSLP	Maasin	2.98	83	eP	Pn	11 11 23.1	+1.5
WRA	Warramunga Arr	31.98	157	P	P	11 16 59.8	-0.3
	0.9nm,0.5s,mb3.8,baz=334,slow=10,SNR=16						
ASAR	Alice Springs	35.25	161	P	P	11 17 29.1	+0.5
	1.5nm,0.6s,mb4.1,baz=341,slow=7.2,SNR=40						
STKA	Stephens Creek	45.51	156	P	P	11 19 01.5	+8.1
	0.7nm,0.3s,mb4.0,baz=320,slow=7.9,SNR=2.8						

BJI 06 11:25:53.8, 49°90N×130°10W, h10km, mB5.1/21, mb4.8/32, Ms4.8/19, Ms7 4.5/19
IDC 06 11:25:54.8±0.6, 49°66N×130°40W, h0km, mb4.4/17, mb1 4.5/26, mb1mx4.5/33, mbtmp4.4/26, ML3.8/8, MS4.2/32, Ms1 4.2/32, ms1mx4.2/37, Error ellipse: s-maj=16.4km s-min=10.4km az=48.0
ISCJB 06 11:25:55.4±1.1, 49°87N±0°03×130°06W±0°04, h7km±7km, mb4.7/63, MS4.4/38, Error ellipse: s-maj=5.3km s-min=3.4km az=38.5
MOS 06 11:25:55.1±1.0, 49°78N×130°24W, h10km, mb5.0/22, Error ellipse: s-maj=11.9km s-min=6.0km az=118.0
PGC 06 11:25:57.1±4.1, 49°71N×130°08W, h10km, ML4.0/13, Mw4.9, 219km Wsw of Pt. Hardy, Bc Vancouver Island Region
NEIC 06 11:25:57.8±0.3, 49°87N×130°08W, h10km, mb4.9/26, MW4.9(PGC), Error ellipse: s-maj=7.6km s-min=3.2km az=44.0
GCMT 06 11:25:58.4±0.2, 49°58N×130°35W, h13km±1km, MW5.0, Moment Tensor Solution. s29,c38; s79,c131; Moment tensor: Scale 10^{16}Nm; M_{rr}0.54±.10; $M_{\theta\theta}$-3.00±.11; $M_{\phi\phi}$2.45±.10; $M_{r\theta}$-0.53±.25; $M_{r\phi}$2.57±.10; $M_{\theta\phi}$-0.49±.24; Best double couple: Mo3.80000×10^{16} NP1:φs156.00000°, δ79.00000°, λ174.00000°. NP2:φs247.00000°, δ84.00000°, λ11.00000°. Principal axes: T 3.6100, Plg12.0000°, Azm112.0000°; N 0.4300, Plg77.0000°, Azm274.0000°; P -4.0400, Plg4.0000°, Azm21.0000°; Data Used: IU II IC CN.
ISC 06 11:25:58.6±1.2, 49°92N±0°03×130°03W±0°04, h16km±8km, h13km±1.0km: pP-P, n187, σ1§20/179, mb4.7/63, MS4.4/38, 5C-11D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.41	59	Pn	Pn	11 26 22.9	-0.8
BPBC	Brooks Peninsu	1.47	80	⇑Pn	Pn	11 26 22.3	-2.1
BPBC				⇓Sn	Sn	11 26 42.1	-1.3
PHC	Port Hardy	1.84	64	⇓Pn	Pn	11 26 28.8	-0.8
PHC				⇓Sn	Sn	11 26 52.3	-0.2
EDB	Eliza Dome	1.88	90	⇑Pn	Pn	11 26 26.9	-3.2
MAYB	Maynard	1.90	74	⇑Pn	Pn	11 26 28.7	-1.6
MAYB				⇑Sn	Sn	11 26 53.3	-0.6
WOSB	Woss	2.24	82	Pn	Pn	11 26 33.5	-1.5
ETB	Estevan Point	2.33	102	⇓Pn	Pn	11 26 33.5	-2.8
BBB	Bella Bella	2.57	27	Pn	Pn	11 26 40.4	+0.8
	168nm,0.3s,baz=42,slow=10,SNR=5492						
BBB				Sn	Sn	11 27 12.5	+2.0
	36nm,0.3s,baz=137,slow=20,SNR=5.1						
BBB	Bella Bella	2.57	27	⇑Pn	Pn	11 26 40.4	+0.9
GDR	Gold River	2.59	92	⇑Pn	Pn	11 26 37.4	-2.4
NCRB	Newcastle Ridg	2.60	78	⇑Pn	Pn	11 26 39.4	-0.5
BNB	Barry Inlet	2.87	338	⇑Pn	Pn	11 26 41.5	-2.2
CBB	Campbell River	3.01	86	⇑Pn	Pn	11 26 44.2	-1.4
OZB	Mount Ozzard	3.11	106	⇑Pn	Pn	11 26 44.8	-2.2
BCBC	Bella Coola	3.21	39	⇓Pn	Pn	11 26 50.9	+2.6
ALB	Alberni	3.44	99	⇑Pn	Pn	11 26 51.0	-0.5
MGB	Mount Grey	3.60	103	⇑Pn	Pn	11 26 52.5	-1.1
DIB	Dawson Inlet,	3.63	336	Pn	Pn	11 26 53.0	-1.1
DIB				Sn	Sn	11 27 36.0	-0.5
VIB	Van Inlet	3.69	336	Pn	Pn	11 26 53.5	-1.4
VIB				Sn	Sn	11 27 37.7	-0.4
OBC	Olympics--Boni	4.35	113	P	Pn	11 27 04.3	+0.4
PGC	Sidney	4.49	104	ePn	Pn	11 27 04.8	-1.1
OSD	Olympics--Snow	4.67	114	P	Pn	11 27 07.7	-0.7
NLWA	Neilton Lookou	4.80	119	ePn	Pn	11 27 08.3	-1.8
MCW	Mount Constitu	4.87	102	P	Pn	11 27 10.6	-0.5
HDW	Hoodsport	5.14	114	P	Pn	11 27 13.7	-1.1
VDB	Vedder Mountai	5.24	97	P	Pn	11 27 15.8	-0.4
GNW	Green Mountain	5.31	114	ePn	Pn	11 27 16.5	-0.7
JCW	Jim Creek	5.59	105	P	Pn	11 27 20.6	-0.5
BMW	Boistfort Moun	5.70	125	eP	Pn	11 27 22.5	-0.1
RPW	Rockport	5.77	102	ePn	Pn	11 27 23.0	-0.5
CRAG	Craig	5.87	342	eP	Pn	11 27 26.0	+1.1
RMW	Rattlesnake Mo	5.97	111	P	Pn	11 27 26.9	+0.6
LON	Longmire	6.33	117	eP	Pn	11 27 30.3	-0.9
WRAK	Wrangell Islan	6.66	349	ePn	Pn	11 27 37.7	+2.0
ETW	Entiat	6.81	106	P	Pn	11 27 38.1	+0.3
TBM	Table Mountain	6.84	110	P	Pn	11 27 38.9	+0.7
COR	Corvallis	7.03	137	eP	Pn	11 27 41.2	+0.5
HOOD	Mount Hood Mea	7.29	126	ePn	Pn	11 27 44.6	+0.2
RSW	Rattlesnake Hi	7.82	113	ePn	Pn	11 27 52.3	+0.7
HAWA	Hanford	7.85	113	ePn	Pn	11 27 52.5	+0.4
OD2	Odessa Site #2	7.91	104	ePn	Pn	11 27 52.1	-0.7
DLBC	Dease Lake	8.54	360	Pn	Pn	11 28 05.2	+3.8
	0.5nm,0.3s,baz=180,slow=13,SNR=18						
DLBC				LR	LR	11 31 09.5	
	comp=Z,2µm,19.3s,baz=181,slow=36						
DLBC	Dease Lake	8.54	360	ePn	Pn	11 28 06.0	+4.6
NEW	Newport	8.63	96	eP	Pn	11 28 02.8	+0.1
HUMO	Hull Mountain	8.80	144	ePn	Pn	11 28 06.8	+1.7
LNOR	Lincton Mounta	8.87	113	eP	Pn	11 28 06.5	+0.5
YBH	Yreka Blue Hor	9.64	145	Pn	Pn	11 28 16.2	-0.4
	0.3nm,0.3s,baz=337,slow=15,SNR=14						
YBH				LR	LR	11 31 29.2	
	comp=Z,3µm,18.2s,baz=330,slow=35						
YBH	Yreka Blue Hor	9.64	145	ePn	Pn	11 28 18.2	+1.6
KHMM	Horse Mountain	10.06	152	ePn	Pn	11 28 22.6	+0.2
BSMT	Bassoo Peak	10.25	96	ePn	Pn	11 28 25.0	+0.1
BLMT	Blacktail Moun	10.48	95	ePn	Pn	11 28 28.7	+0.7
MOD	Modoc	10.49	136	ePn	Pn	11 28 29.6	+1.4
WALA	Waterton Lakes	10.52	89	ePn	Pn	11 28 30.1	+1.5
JTMT	Jette	10.61	96	ePn	Pn	11 28 29.8	0.0
WDC	Whiskeytown Da	10.72	148	eP	Pn	11 28 31.9	+0.5
WVOR	Wild Horse Val	10.87	129	eP	Pn	11 28 34.5	+1.1
WVOR				pmax	pmax		
	comp=Z,71nm,1.4s						
WVOR	Wild Horse Val	10.87	129	ePn	Pn	11 28 34.5	+1.1
	comp=Z,71nm,1.4s						
KIPM	Iron Peak	11.12	153	ePn	Pn	11 28 37.0	+0.1
	comp=Z,76nm,1.2s						
HLID	Hailey	12.44	115	ePn	Pn	11 28 54.3	-0.6
	comp=Z,14nm,1.0s						
PAHR	Pah Rah Range	12.69	140	ePn	Pn	11 28 59.2	+0.9
	comp=Z,73nm,1.4s						
MCMT	McKenzie Canyo	12.70	107	ePn	Pn	11 28 58.3	-0.1
	comp=Z,9.9nm,0.9s						
WAKR	Walker	13.69	142	ePn	Pn	11 29 12.6	+0.6
	comp=Z,40nm,1.3s						
YMR	Madison River	13.95	105	ePn	Pn	11 29 16.0	+0.6
	comp=Z,89nm,1.2s						
NVAR	Mina Array Bea	14.21	139	Pn	Pn	11 29 18.5	-0.6
	comp=Z,0.1nm,0.3s,baz=315,slow=12,SNR=38						
GCMT	Greycliff	14.27	99	ePn	Pn	11 29 20.4	+0.6
	comp=Z,18nm,1.0s						
BGU	Big Grassy Mou	14.91	121	ePn	Pn	11 29 29.4	+0.7
	comp=Z,110nm,1.6s						
SPUT	South Promonto	14.98	118	ePn	Pn	11 29 31.4	+1.8
	comp=Z,146nm,1.5s						
MENT	Mentasta	15.04	335	eP	Pn	11 29 33.2	+3.0
YKA	Yellowknife Ar	15.19	28	Pn	Pn	11 29 32.7	+0.6
	comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=15						
YKA				LR	LR	11 35 40.4	
	comp=Z,141nm,21.2s,baz=260,slow=38						
YKA	Yellowknife Ar	15.19	28	Pn	Pn	11 29 32.7	+0.6
YKA				LR	LR	11 35 40.4	
KDAK	Kodiak Island	15.41	309	Pn	Pn	11 29 33.5	-1.6
	comp=Z,0.2nm,0.3s,baz=124,slow=11,SNR=3.0						
KDAK				LR	LR	11 34 01.6	
	comp=Z,2µm,21.3s,baz=135,slow=32						
SLKM	Skilak Lake	15.59	321	eP	Pn	11 29 37.8	+0.4
PDAR	Pinedale Array	15.81	109	Pn	Pn	11 29 42.5	+2.1
	comp=Z,0.2nm,0.3s,baz=307,slow=9.2,SNR=72						
PDAR				LR	LR	11 35 53.2	
	comp=Z,1µm,21.4s,baz=326,slow=38						
LAO	LASA Array	16.14	92	ePn	Pn	11 29 45.1	+0.4
	comp=Z,44nm,0.9s						
ARUT	Antelope Range	16.99	129	eP	Pn	11 29 55.8	+0.4
ARUT				pmax	pmax		
	comp=Z,90nm,1.4s						
ARUT	Antelope Range	16.99	129	ePn	Pn	11 29 55.8	+0.4
	comp=Z,90nm,1.4s						
ILAR	Eielson Array	17.35	335	P	Pn	11 30 00.6	+0.8
	comp=Z,0.2nm,0.3s,baz=150,slow=9.9,SNR=57						
ILAR				PcP	PcP	11 34 40.6	-0.4
	comp=Z,0.0nm,0.3s,baz=213,slow=0.8,SNR=6.1						
ILAR				LR	LR	11 36 01.0	
	comp=Z,695nm,21.2s,baz=325,slow=35						
OSI	Osito Adit	17.40	147	ePn	Pn	11 30 01.3	+0.7
	comp=Z,23nm,0.4s						
COLA	College	17.70	335	eP	Pn	11 30 06.9	+2.9
COLA				pmax	pmax		
	comp=Z,59nm,1.3s						
COLA	College	17.70	335	ePn	Pn	11 30 06.9	+2.9
	comp=Z,59nm,1.3s						
FFC	Flin Flon	17.74	64	iP	Pn	11 30 06.7	+2.0
SVW2	Sparrevohn	18.16	318	eP	Pn	11 30 10.0	+0.3
	comp=Z,308nm,2.1s						
INK	Inuvik	18.53	356	P	Pn	11 30 16.6	+2.4
	comp=Z,0.1nm,0.3s,baz=174,slow=13,SNR=12						
INK				LR	LR	11 36 52.2	
	comp=Z,610nm,20.4s,baz=178,slow=35						
PV01	Paradox Valley	19.33	119	eP	Pn	11 30 23.7	-0.5
	comp=Z,11µm,1.3s						
ULM	Lac du Bonnet	21.81	76	P	P	11 30 52.2	+2.4
	comp=Z,66nm,0.8s,mb5.1,baz=284,slow=11,SNR=19						
ULM				LR	LR	11 39 22.1	
	comp=Z,1µm,21.4s,MS4.2,baz=303,slow=36						
ULM	Lac du Bonnet	21.81	76	P	P	11 30 52.2	+2.4
ULM				LR	LR	11 39 22.4	
ANMO	Albuquerque	22.80	122	P	P	11 31 00.2	-0.3
	comp=Z,11nm,0.9s,mb4.3,baz=320,slow=10,SNR=43						
ANMO				LR	LR	11 40 14.9	
	comp=Z,544nm,19.4s,MS4.0,baz=128,slow=38						
LAZ	Ladron	22.85	124	eP	P	11 31 00.7	-0.3
	comp=Z,42nm,1.8s,mb4.6						
BNM	Barren Site	23.32	124	eP	P	11 31 06.4	+0.5
	comp=Z,139nm,1.9s,mb5.1						
TNA	Tin City	25.04	323	eP	P	11 31 17.5	-4.1
	comp=Z,92nm,2.0s,mb5.0						
CPRX	Cap Rock	25.67	121	eP	P	11 31 26.5	-1.1
	comp=Z,53nm,1.2s,mb4.9						
MNTX	Cornudas Mount	25.87	125	eP	P	11 31 29.5	+0.1
	comp=Z,35nm,1.5s,mb4.7						
TXAR	Lajitas Array	28.64	126	P	P	11 31 54.4	+0.1
	comp=Z,3.8nm,1.1s,mb4.1,baz=325,slow=6.4,SNR=22						
TXAR				PcP	PcP	11 35 05.9	+1.0
	comp=Z,0.9nm,1.0s,baz=311,slow=4.5,SNR=4.0						
TXAR				LR	LR	11 43 55.2	
	comp=Z,1µm,19.5s,MS4.4,baz=5.0,slow=38						
TXAR	Lajitas Array	28.64	126	P	P	11 31 54.4	0.0
TXAR						11 35 05.9	
TXAR	Lajitas Array	28.64	126	P	P	11 31 54.4	+0.1
TXAR				PcP	PcP	11 35 05.9	+1.0
TXAR				LR	LR	11 43 55.2	
RES	Resolute Bay	28.83	18	LR	LR	11 43 45.8	
	comp=Z,1µm,18.3s,MS4.5,baz=336,slow=37						
CCM	Cathedral Cave	29.98	98	eP	P	11 32 07.0	+0.8
CCM				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.7						
CCM	Cathedral Cave	29.98	98	eP	P	11 32 07.0	+0.8
	comp=Z,22nm,1.6s,mb4.7						
OXF	Oxford	33.33	102	eP	P	11 32 35.5	-0.1
	comp=Z,117nm,1.1s,mb5.7						
BILL	Bilibino	35.45	324	⇓eP	P	11 32 54.0	+0.4
BILL				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
BILL				MLR	MLR		
	comp=Z,500nm,23.0s,MS4.2						
MSNY	Massena	36.90	76	eP	P	11 33 06.5	+0.2
	comp=Z,173nm,1.1s,mb5.8						
SCHQ	Schefferville	37.72	58	LR	LR	11 48 42.4	
	comp=Z,941nm,19.5s,MS4.6,baz=114,slow=36						
FRNY	Flat Rock	37.78	75	eP	P	11 33 15.2	+1.5
	comp=Z,15nm,1.0s,mb4.7						
SEY	Seymchan	42.10	318	⇓eP	P	11 33 49.8	+0.4
PET	Petropavlovsk	42.85	303	iP	P	11 33 55.1	-0.5
PET				iS	S	11 40 21.4	+2.2
PET				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
PET	Petropavlovsk	42.85	303	eP	P	11 33 55.2	-0.5
	comp=Z,23nm,0.9s,mb4.9						
PETK	Petropavlovsk-	43.33	303	P	P	11 33 58.6	-0.9
	comp=Z,8.8nm,0.9s,mb4.5,baz=75,slow=14,SNR=16						
PETK				LR	LR	11 49 08.2	
	comp=Z,179nm,21.0s,MS4.0,baz=258,slow=32						
SUMG	Summit	43.77	26	P	P	11 34 05.1	+2.3
SUMG				pmax	pmax		
	comp=Z,19nm,1.1s						
SUMG	Summit	43.77	26	P	P	11 34 05.1	+2.4
	comp=Z,19nm,1.1s,mb4.7						

SUMG Summit 43.77 26 *i* P **P 11 34 06.5 +3.7**
comp=Z,9.9nm,0.9s,mb4.5
TEIG Tepich 44.35 117 *eP* **P 11 34 08.2 +0.2**
comp=Z,24nm,1.0s,mb4.9
KBS Kingsbay 49.45 9‖ *eP* **P 11 34 48.4 +1.2**
YSS Yuzh-Sakhalins 54.74 303 *eP* **P 11 35 25.0 -2.0**
ASAJ Asahikawa 56.59 300 P **P 11 35 38.6 -1.7**
comp=Z,6.0nm,1.0s,mb4.6,baz=352,slow=4.3,SNR=8.1
ASAJ LR LR 11 55 59.7
comp=Z,192nm,21.2s,MS4.2,baz=332,slow=32
ASAJ Asahikawa 56.59 300 *eP* **P 11 35 38.5 -1.8**
comp=Z,5.7nm,1.1s,mb4.5
ERM Erimo 57.62 298⇑ *eP* **P 11 35 46.0 -1.6**
ERM pmax pmax
comp=Z,21nm,1.2s,mb5.0
HABR Khabarovsk 57.82 308 *eP* **P 11 35 46.4 -2.5**
HABR *e**SP sP 11 35 51.0 -4.8
HABR *e* 11 36 38.1
HABR *e* 11 37 54.3
HABR S **S 11 43 46.3 -1.1**
HABR *e**SS sS 11 43 51.9 -3.7
HABR *e* 11 45 35.3
HABR *e*SS SS 11 47 37.9 +0.5
HABR pmax pmax
comp=E,27nm,2.2s
HABR pmax pmax
comp=Z,31nm,2.2s,mb5.0
HABR pmax pmax
comp=N,23nm,2.2s
HABR MLR MLR
comp=Z,220nm,17.0s,MS4.3
BCIP Isla Barro Col 58.03 117 *eP* **P 11 35 51.3 +0.5**
comp=Z,21nm,1.0s,mb5.1
KLR Kul'dur 58.97 311 *eP* **P 11 35 51.0 -5.9**
TAOE Nuku Hiva Isla 59.19 192 *e*LR LR 11 53 15.1
comp=Z,640nm,25.9s
ARCES ARCESS Array B 59.52 10 LR LR 12 01 08.3
comp=Z,249nm,21.3s,MS4.3,baz=130,slow=35
LVZ Lovozero 61.95 7⇑ *iP* **P 11 36 18.4 +1.4**
LVZ pmax pmax
comp=Z,48nm,1.7s,mb5.3
MJAR Matsushiro Arr 64.13 297 P **P 11 36 29.6 -2.4**
comp=Z,2.2nm,0.9s,mb4.2,baz=25,slow=5.5,SNR=8.8
MJAR LR LR 11 59 12.4
comp=Z,118nm,21.9s,MS4.0,baz=215,slow=31
MAJO Matsushiro 64.14 297 *eP* **P 11 36 27.4 -4.6**
MAJO pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
MAJO Matsushiro 64.14 297 *eP* **P 11 36 27.4 -4.6**
comp=Z,9.5nm,1.0s,mb4.8
MAT Matsushiro 64.14 297 P **P 11 36 29.7 -2.3**
ROSC El Rosal 64.71 114 LR LR 12 07 38.4
comp=Z,147nm,20.3s,MS4.2,baz=7.6,slow=39
NOA NORSAR Array B 65.09 20 P **P 11 36 38.0 +0.2**
comp=Z,1.9nm,1.1s,mb4.1,baz=337,slow=6.4,SNR=2.9
NOA LR LR 12 06 22.4
comp=Z,214nm,18.2s,MS4.4,baz=340,slow=37
CN2 Changchun 65.87 310 *eP* **P 11 36 45.8 +2.6**
CN2 *es*P sP 11 36 52.0 +1.9
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,17.0s,MS4.7
CN2 LR LR
comp=E,300nm,17.0s,MS4.7
CN2 LR LR
comp=Z,300nm,19.0s,MS4.5
OTAV Otavalo 66.12 121 *eP* **P 11 36 47.4 +2.3**
comp=Z,18nm,1.3s,mb4.9
JOF Joensuu 66.54 9 *eP* **P 11 36 43.0 -4.2**
JOF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
JOF Joensuu 66.54 9 *ep* **P 11 36 43.0 -4.2**
comp=Z,3.5nm,0.8s,mb4.4
FINES FINESS Array B 67.35 12 P **P 11 36 54.1 +1.8**
comp=Z,2.5nm,0.9s,mb4.2,baz=4.6,slow=7.0,SNR=5.1
FINES LR LR 12 07 25.0
comp=Z,209nm,18.1s,MS4.4,baz=339,slow=37
CBIJ Chichi jima 68.42 287 LR LR 11 59 04.4
comp=Z,176nm,21.6s,MS4.3,baz=122,slow=29
PRGR Permogore 68.74 2 *eP* **P 11 36 59.9 -1.2**
PRGR pmax pmax
comp=Z,18nm,1.3s,mb4.8
TLY Talaya 68.98 327 *eP* **P 11 37 01.2 -1.5**
TLY *eS* S 11 46 04.5 -2.0
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TLY MLR MLR
comp=Z,140nm,18.0s,MS4.2
KSRS Korea Array 69.23 304 P **P 11 37 02.6 -1.9**
comp=Z,1.6nm,0.8s,mb4.0,baz=56,slow=6.1,SNR=8.6
KSRS LR LR 12 07 01.0
comp=Z,76nm,18.9s,MS4.0,baz=31,slow=36
KLMR Klimovskoe 69.26 5 *eP* **P 11 37 03.5 -0.8**
KLMR pmax pmax
comp=Z,25nm,1.4s,mb5.0
PPT Papeete 69.38 200 *eS* S 11 46 13.7 +2.0
comp=Z,336nm,26.5s
PPT *e*LR LR 11 57 48.2
comp=Z,548nm,29.5s,baz=19
PPT Papeete 69.38 200 LR LR 12 00 03.2
comp=Z,230nm,19.1s,MS4.4,baz=100,slow=30
ZAK Zakamensk 70.19 327 *eP* **P 11 37 03.0 -7.2**
SONM Songino Array 71.16 324 P **P 11 37 15.7 -0.5**
comp=Z,1.6nm,0.8s,mb4.0,baz=42,slow=4.9,SNR=8.6
SONM LR LR 12 08 50.4
comp=Z,394nm,21.4s,MS4.6,baz=29,slow=36
NVS Novosibirsk 71.96 341 *eP* **P 11 37 18.3 -2.5**
NVS pmax pmax
comp=N,7.0nm,1.7s
NVS pmax pmax
comp=Z,17nm,1.7s,mb4.7
NVS pmax pmax
comp=E,8.0nm,1.3s
ZALV Zalesovo Beam 72.43 339 P **P 11 37 23.2 -0.5**
comp=E,1.6nm,0.4s,mb4.3,baz=32,slow=7.0,SNR=6.3
ZALV LR LR 12 14 09.8
comp=E,108nm,18.6s,MS4.2,baz=35,slow=40
RKT Rikitea 72.84 185 *e*LR LR 11 59 44.6
comp=E,578nm,29.0s
BJI Beijing 73.22 313 P **P 11 37 29.0 +0.4**
BJI PP PP 11 40 10.6 -0.6
BJI SS SS 11 51 38.5 +1.9
BJI pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BJI pmax pmax
comp=Z,64nm,6.3s
BJI LR LR
comp=N,160nm,14.1s,MS4.6
BJI LR LR
comp=E,190nm,14.6s,MS4.6
BJI LR LR
comp=Z,120nm,20.8s
SVE Sverdlovsk 73.26 354⇑ *eP* **P 11 37 28.6 +0.1**
SVE pmax pmax
comp=Z,15nm,1.1s,mb4.8
ARU Arti 73.78 355 *d iP* **P 11 37 31.4 -0.2**
ARU 11 40 12.0
ARU S S 11 47 04.5 +2.7
ARU SS SS 11 51 43.1 -1.0
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ARU Arti 73.78 355 *eP* **P 11 37 31.5 -0.1**
comp=Z,6.8nm,0.9s,mb4.6
CLL Collm 74.35 23 *eP* **P 11 37 31.0 -4.0**
CLL *eS* S 11 47 14.0 +5.7
CLL pmax pmax
comp=Z,61nm,2.6s,mb5.1
CLL MLR MLR
comp=Z,200nm,19.5s,MS4.4
CLL Collm 74.35 23 *eP* **P 11 37 31.0 -4.0**
comp=Z,61nm,2.6s,mb5.1
CLL *eS* S 11 47 14.0 +5.7
CLL LR LR
comp=Z,200nm,19.5s,MS4.4
CLL Collm 74.35 23 *e*(P) **P 11 37 39.0 +4.0**
comp=Z,61nm,2.6s,mb5.1
CLL *e*PP PP 11 40 14.0 -6.4
CLL *eS* S 11 47 14.0 +5.7
CLL *e*SS SS 11 51 59.0 +6.0
CLL *e*SSS 11 55 18.0
CLL Lm 12 11 00.0
comp=N,100nm,19.4s
CLL Lm 12 11 00.0
comp=E,100nm,18.4s
CLL Lm 12 11 00.0
comp=Z,200nm,19.5s
HHC Hu-ho-hao-te 74.70 316 *e*P **P 11 37 38.9 +1.6**
HHC sP sP 11 37 46.0 +1.8
HHC PcP PcP 11 37 53.6 +2.1
HHC PP PP 11 40 27.1 +3.4
HHC S S 11 47 13.7 +1.0
HHC sS sS 11 47 20.1 -1.0
HHC ScS ScS 11 47 46.2 -1.9
HHC SS SS 11 52 02.1 +3.0
HHC pmax pmax
comp=Z,18nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,140nm,5.2s
HHC LR LR
comp=N,190nm,18.0s,MS4.7
HHC LR LR
comp=E,260nm,15.4s,MS4.7
HHC LR LR
comp=Z,200nm,16.1s,MS4.5
OBN Obninsk 74.74 8 *d iP* **P 11 37 37.7 +0.5**
OBN pmax pmax
comp=Z,31nm,1.6s,mb5.0
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.4
BRG Berggiesshubel 74.98 23 *e*(P) **P 11 37 42.3 +3.6**
comp=Z,7.0nm,1.3s,mb4.4
BRVK Borovoye 75.97 348 *d iP* **P 11 37 44.3 0.0**
BRVK pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BVAR Borovoye Array 75.99 347 P **P 11 37 44.4 0.0**
comp=Z,0.7nm,0.4s,mb4.0,baz=60,slow=3.6,SNR=8.7
KURK Kurchatov 76.80 342 *c iP* **P 11 37 48.2 -0.9**
KURK pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
NJ2 Nanjing 78.16 306 *eP* **P 11 38 00.1 +3.1**
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.3
ESDC Sonseca Array 78.96 39 P **P 11 38 01.3 0.0**
comp=Z,1.0nm,0.7s,mb3.9,baz=341,slow=6.8,SNR=4.5
ESDC LR LR 12 10 37.4
comp=Z,101nm,18.6s,MS4.2,baz=330,slow=34
ESDC Sonseca Array 78.96 39 P **P 11 38 01.3 0.0**
ESDC LR LR 12 10 37.4
MKAR Makanchi Array 79.69 338 P **P 11 38 04.2 -1.0**
comp=Z,2.1nm,0.8s,mb4.1,baz=49,slow=5.5,SNR=8.8
MKAR LR LR 12 18 06.5
comp=Z,125nm,18.4s,MS4.3,baz=12,slow=39
AKTK Aktyubinsk 79.79 355 P **P 11 38 05.2 -0.4**
AKTO Aktyubinsk 79.79 355 P **P 11 38 05.2 -0.4**
comp=Z,0.9nm,0.3s,mb4.1,baz=20,slow=7.0,SNR=5.0
GTA Gaotai 80.82 323 *eP* **P 11 38 13.1 +1.7**
GTA pP pP 11 38 16.9 +0.4
GTA sP sP 11 38 19.8 +1.4
GTA pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
ABKAR Akbulak array 80.84 353 *eP* **P 11 38 10.9 -0.4**
comp=Z,8.8nm,1.2s,mb4.6
WMQ Urumqi 81.01 333 *eP* **P 11 38 14.0 +1.7**
WMQ sP sP 11 38 21.0 +1.7
WMQ PP PP 11 41 22.0 +5.7
WMQ S S 11 48 17.0 -3.6
WMQ SS SS 11 53 30.0 -3.5
WMQ pmax pmax
comp=Z,14nm,1.2s,mb4.8
WMQ LR LR
comp=N,120nm,20.0s,MS4.7
WMQ LR LR
comp=E,300nm,20.0s,MS4.7
WMQ LR LR
comp=Z,100nm,20.0s,MS4.2
LZH Lanzhou 82.03 319 *e*P **P 11 38 16.1 -1.7**
LZH pP pP 11 38 19.3 -3.7
LZH sP sP 11 38 20.6 -4.2
LZH *e*PP PP 11 41 27.2 +2.2
LZH *e*S S 11 48 28.1 -3.3
LZH pmax pmax
comp=Z,25nm,1.2s,mb5.0
LZH pmax pmax
comp=Z,120nm,6.6s
LZH LR LR
comp=N,300nm,13.0s,MS5.0
LZH LR LR
comp=E,410nm,17.0s,MS5.0
LZH LR LR
comp=Z,420nm,20.0s,MS4.8
HNR Honiara 84.63 249 LR LR 12 10 26.4
comp=Z,92nm,19.1s,MS4.2,baz=79,slow=32
TKM2 Tokmak 2 84.86 341 *eP* **P 11 38 32.2 -0.1**
TKM2 pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
TKM2 Tokmak 2 84.86 341 *eP* **P 11 38 32.2 -0.1**
comp=Z,8.6nm,1.2s,mb4.8
AAK Ala-Archa 85.36 342⇑ *eP* **P 11 38 34.3 -0.5**
AAK pmax pmax
comp=Z,3.0nm,1.7s,mb4.2
LPAZ La Paz 85.42 122 P **P 11 38 34.0 -1.3**
comp=Z,3.5nm,0.8s,mb4.5,baz=348,slow=6.7,SNR=9.2
LPAZ LR LR 12 18 27.7
comp=Z,161nm,21.0s,MS4.4,baz=331,slow=37
LPAZ La Paz 85.42 122 *eP* **P 11 38 33.8 -1.5**
LPAZ pmax pmax
comp=Z,11nm,1.2s
LPAZ La Paz 85.42 122 *eP* **P 11 38 33.8 -1.5**
comp=Z,11nm,1.2s,mb4.9
KIV Kislovodsk 86.29 5 *eP* **P 11 38 39.6 +0.2**
KIV pmax pmax
comp=Z,12nm,1.6s,mb4.9
CD2 Chengdu 86.46 316 *eP* **P 11 38 41.1 +0.6**
CD2 pP pP 11 38 45.9 +0.3
CD2 sP sP 11 38 48.2 +0.7
CD2 PP PP 11 42 03.6 +2.4
CD2 SKS 11 49 03.7
CD2 S S 11 49 13.9 -2.1
CD2 sS sS 11 49 21.9 -2.6
CD2 SS SS 11 54 56.2 +1.4
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
CD2 pmax pmax
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,130nm,14.6s
CD2 LR LR
comp=Z,110nm,15.2s,MS4.4
KEST Kesra 87.45 32 LR LR 12 17 49.2
comp=Z,85nm,19.2s,MS4.2,baz=289,slow=36
GYA Guiyang 88.86 311 P **P 11 38 53.2 +1.2**
GYA PP PP 11 42 23.7 +3.1
GYA SKS 11 49 20.0
GYA S S 11 49 38.4 -0.7
GYA SS SS 11 55 32.8 +2.7
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,590nm,15.8s,MS5.2
GYA LR LR
comp=E,520nm,16.4s,MS5.2
GYA LR LR
comp=Z,480nm,15.4s,MS5.0
BRTR Keskin Array B 89.58 13 P **P 11 38 55.4 +0.2**
comp=Z,1.2nm,1.0s,mb4.2,baz=8.5,slow=2.5,SNR=4.1
BRTR LR LR 12 23 12.4
comp=Z,72nm,18.4s,MS4.1,baz=154,slow=38
KMI Kunming 91.86 314 P **P 11 39 07.0 +1.0**
KMI pP pP 11 39 11.0 -0.2
KMI sP sP 11 39 12.3 -0.8
KMI PP PP 11 42 46.2 +1.8
KMI S S 11 50 06.6 -0.1
KMI sS sS 11 50 12.7 -2.6
KMI SS SS 11 56 14.2 +0.8
KMI pmax pmax
comp=Z,9.0nm,0.5s,mb5.4
KMI pmax pmax
comp=Z,59nm,6.7s
KMI LR LR
comp=N,150nm,17.1s,MS4.6
KMI LR LR
comp=E,130nm,21.3s,MS4.6
KMI LR LR
comp=Z,170nm,21.3s,MS4.5
BDFB Brasilia 96.77 106 LR LR 12 27 30.2
comp=Z,158nm,21.0s,MS4.5,baz=304,slow=38
CMAR Chiang Mai Arr 99.36 313 P **P 11 39 42.5 +2.2**
comp=Z,0.4nm,0.4s,mb4.3,baz=354,slow=4.0,SNR=4.0
CPUP Villa Florida 99.44 120 LR LR 12 33 54.9
comp=Z,107nm,18.5s,MS4.4,baz=341,slow=41
VNA3 Neumayer Olymp 145.86 150 *e*PKPdf PKPdf 11 45 31.0 -3.9
VNA3 *e* 11 45 57.0
VNA3 *e* 11 59 48.4
VNA2 Neumayer--Watz 146.63 150 *e*PKPdf PKPdf 11 45 33.9 -2.4
VNA2 *e* 11 45 58.6
VNA2 *e* 11 59 47.6
BOSA Boshof 151.61 51 PKPbc PKPbc 11 45 50.8 -1.1
comp=Z,5.2nm,1.0s,baz=344,slow=7.4,SNR=3.5

IDC ***06*** *11:37:49.1±1.1,8.°50N×93.°34E,h0km,mb3.9/10, mb1 4.0/11,mb1mx3.8/26,mbtmp3.9/11,ML4.1/1,Error ellipse: s-maj=48.3km s-min=18.8km az=53.0*
ISCJB ***06*** *11:37:52.4±0.8,8.°6N±0.°1×93.°5E±0.°2,h33km,mb4.0/12, Error ellipse: s-maj=24.6km s-min=14.6km az=146.0*
NEIC ***06*** *11:37:54.7±0.6,8.°57N×93.°45E,h35km,mb4.3/2,Error ellipse: s-maj=19.1km s-min=11.2km az=55.0*
ISC 06 11:37:54.6±0.8,8.°6N±0.°1×93.°5E±0.°2,h35km,n16, σ0.°72/15,mb4.0/12,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.18**	**28**	Pn	**Pn**	**11 40 32.1**	**+0.1**
0.4nm,0.3s,baz=213,slow=14,SNR=8.5							
LSA	**Lhasa**	**21.13**	**354**	P	**P**	**11 42 35.8**	**-0.7**
AML	**Almayashu**	**37.69**	**336**	*eP*	**P**	**11 45 08.5**	**+1.8**
8.3nm,1.1s,mb4.4							
AAK	**Ala-Archa**	**37.80**	**337**	P	**P**	**11 45 07.1**	**-0.5**
1.1nm,0.3s,mb4.0,baz=274,slow=10,SNR=5.1							
MKAR	**Makanchi Array**	**39.26**	**348**	P	**P**	**11 45 19.8**	**0.0**
0.7nm,0.7s,mb3.5,baz=160,slow=7.4,SNR=4.3							
ZALV	**Zalesovo Beam**	**45.78**	**353**	P	**P**	**11 46 12.9**	**+0.3**
1.4nm,0.4s,mb4.3,baz=175,slow=7.4,SNR=5.1							
BVAR	**Borovoye Array**	**48.11**	**341**	P	**P**	**11 46 31.4**	**+0.5**
0.5nm,0.4s,mb3.9,baz=133,slow=6.3,SNR=5.1							
WRA	**Warramunga Arr**	**49.22**	**126**	P	**P**	**11 46 39.7**	**-0.1**
0.4nm,0.8s,mb3.5,baz=302,slow=9.5,SNR=7.8							
ABKAR	**Akbulak array**	**49.30**	**331**	*eP*	**P**	**11 46 41.1**	**+1.0**
1.0nm,0.5s,mb4.1							
ASAR	**Alice Springs**	**50.88**	**130**	P	**P**	**11 46 52.5**	**+0.1**
0.5nm,0.8s,mb3.5,baz=304,slow=7.5,SNR=5.9							
AKTK	**Aktyubinsk**	**51.02**	**332**	P	**P**	**11 46 51.9**	**-1.1**
AKTO	**Aktyubinsk**	**51.02**	**332**	P	**P**	**11 46 51.9**	**-1.1**
0.8nm,0.3s,mb4.1,baz=121,slow=5.9,SNR=3.0							
BRTR	**Keskin Array B**	**61.46**	**311**	P	**P**	**11 48 08.0**	**+0.2**
1.4nm,0.9s,mb4.1,baz=120,slow=7.3,SNR=7.8							
FINES	**FINESS Array B**	**71.78**	**332**	P	**P**	**11 49 13.0**	**-0.3**
1.9nm,0.9s,mb4.0,baz=83,slow=11,SNR=3.9							
NOA	**NORSAR Array B**	**78.79**	**331**	P	**P**	**11 49 53.6**	**0.0**
1.0nm,0.7s,mb3.8,baz=92,slow=5.8,SNR=3.5							
PDAR	**Pinedale Array**	**124.76**	**21**	PKP	PKPdf	11 56 52.2	+1.2
0.4nm,0.9s,baz=64,slow=3.4,SNR=4.0							

NIED ***06*** *11:38:00,28.°30N×139.°20E,h540km,Mw4.9 Best double couple: M0=2.34000×10^16 NP1:φ0=269.00000°, δ63.00000°,λ-87.00000°. NP2:φ0=83.00000°,δ27.00000°, λ-95.00000°.*
ISCJB ***06*** *11:38:55.6±0.1,28.°25N±0.°02×138.°95E±0.°02,h516km, mb4.7/162,Error ellipse: s-maj=2.5km s-min=2.1km az=135.5*
JMA ***06*** *11:38:55.4±0.2,28.°28N×139.°23E,h536km±4km,M5.0*
MOS ***06*** *11:38:56.7±1.0,28.°35N×138.°90E,h534km,mb4.9/50, Error ellipse: s-maj=9.0km s-min=5.1km az=102.8*
NEIC ***06*** *11:38:56.2±0.1,28.°28N×138.°91E,MW4.8(NIED),Error ellipse: s-maj=4.1km s-min=3.2km az=135.0*
BJI ***06*** *11:38:56.1,28.°25N×138.°99E,h539km,mB4.8/28, mb5.2/54*
IDC ***06*** *11:38:57.6±0.4,28.°30N×138.°94E,h533km±4km,mb4.0/26, mb1 4.2/31,mb1mx4.2/33,mbtmp4.1/31,Error ellipse: s-maj=8.9km s-min=6.2km az=94.0*
DJA ***06*** *11:39:06,27.°99N×138.°87E,h650km,mb5.1/28*
ISC 06 11:38:56.7±0.1,28.°26N±0.°02×138.°96E±0.°02,h518km, h518km±2.8km;pP-P,n628,σ0.°91/673,mb4.7/162,72C-78D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.09**	**111**	P	**P**	**11 40 08.8**	**-1.0**
185nm,0.3s,baz=96,slow=23,SNR=138							
CBIJ				S	**S**	**11 41 04.8**	**-4.4**
338nm,0.3s,baz=321,slow=21,SNR=22							
CBIJ	**Chichi jima**	**3.09**	**111**	P	**P**	**11 40 08.9**	**-0.9**
CBIJ				*e*S	**S**	**11 41 05.3**	**-3.9**
JHHJ	**Haha-jima-NKT**	**3.29**	**119**	P	**P**	**11 40 10.9**	**-0.3**
JHHJ				S	**S**	**11 41 09.6**	**-2.1**
JHJ2	**Mitsune**	**4.89**	**9**	P	**P**	**11 40 24.1**	**+0.5**
JHJ2				S	**S**	**11 41 33.3**	**-1.3**
JHJ	**Hachijo jima 2**	**4.89**	**8**	P	**P**	**11 40 24.2**	**+0.6**
139nm,0.3s,baz=189,slow=9.6,SNR=174							
JHJ				S	**S**	**11 41 31.8**	**-2.9**
140nm,0.3s,baz=224,slow=11,SNR=5.1							
TK01	**Tokai 1**	**5.61**	**348**	S	**S**	**11 41 49.5**	**+3.1**
JWZ	**Kozaga**	**5.94**	**333**	P	**P**	**11 40 35.2**	**+2.0**
JWZ				S	**S**	**11 41 54.6**	**+2.5**
JKN2	**Miekihoku**	**6.38**	**340**	P	**P**	**11 40 39.0**	**+1.7**
JIE	**Ise**	**6.40**	**343**	P	**P**	**11 40 39.5**	**+2.0**
JIE				S	**S**	**11 42 01.5**	**+1.3**
JIZS	**Izushimoda**	**6.43**	**359**	P	**P**	**11 40 37.7**	**-0.1**
JIM2	**Oshima 3**	**6.45**	**3**	P	**P**	**11 40 37.0**	**-0.9**
JAA	**Atsumi**	**6.53**	**347**	P	**P**	**11 40 40.4**	**+1.6**
JAA				S	**S**	**11 42 03.2**	**+0.7**
MRT2	**Murotomisaki 2**	**6.57**	**322**	P	**P**	**11 40 41.6**	**+2.4**
BSO1	**Boso 1**	**6.60**	**15**	P	**P**	**11 40 39.1**	**-0.3**
BSO1				S	**S**	**11 42 00.6**	**-3.0**
HMMJ	**Hamamatsu 2**	**6.66**	**351**	P	**P**	**11 40 40.8**	**+0.8**
TSUJ	**Tsu 2**	**6.78**	**342**	P	**P**	**11 40 43.2**	**+2.0**
JYZW	**Yoshizawa**	**6.79**	**351**	P	**P**	**11 40 41.8**	**+0.5**
JOD2	**Odawara 2**	**6.98**	**1**	P	**P**	**11 40 42.3**	**-0.9**
JOD2				S	**S**	**11 42 08.2**	**-2.2**
JTO	**Tosashimizu**	**7.01**	**312**	P	**P**	**11 40 45.8**	**+2.3**
JTO				S	**S**	**11 42 13.0**	**+2.0**
JAO	**Obara**	**7.13**	**349**	P	**P**	**11 40 45.6**	**+1.0**
JNY	**Yasuok**	**7.13**	**353**	P	**P**	**11 40 45.2**	**+0.5**
JYN	**Shimob**	**7.22**	**357**	P	**P**	**11 40 45.5**	**0.0**
JMZ	**Minamidaito 2**	**7.31**	**252**	P	**P**	**11 40 48.0**	**+1.3**
JMZ				S	**S**	**11 42 17.7**	**+1.0**
JTN	**Tanegashima 3**	**7.35**	**291**	P	**P**	**11 40 49.5**	**+2.6**
JTSR	**Tashiro 2**	**7.56**	**294**	P	**P**	**11 40 52.0**	**+3.0**
JWT	**Wachi**	**7.62**	**338**	P	**P**	**11 40 50.9**	**+1.3**
JGM	**Miyama**	**7.65**	**346**	P	**P**	**11 40 50.6**	**+0.7**
JGM				S	**S**	**11 42 23.4**	**+0.7**
JFM	**Mihama**	**7.67**	**342**	P	**P**	**11 40 51.4**	**+1.3**
JTZ	**Takazaki**	**7.72**	**300**	P	**P**	**11 40 53.5**	**+2.9**
JRY	**Ryogami san**	**7.73**	**360**	P	**P**	**11 40 50.1**	**-0.6**
JRY				S	**S**	**11 42 20.1**	**-4.1**
JSU	**Suzuyama**	**8.05**	**296**	P	**P**	**11 40 56.4**	**+2.4**
JNG	**Nsakai**	**8.15**	**355**	P	**P**	**11 40 54.3**	**-0.6**
JAM	**Amami Oshima**	**8.24**	**273**	P	**P**	**11 40 58.6**	**+2.6**
JAM				S	**S**	**11 42 37.5**	**+3.6**
MJAR	**Matsushiro Arr**	**8.28**	**356**	P	**P**	**11 40 55.1**	**-1.1**
69nm,0.3s,baz=172,slow=11,SNR=1584							
MJAR				S	**S**	**11 42 30.2**	**-4.2**
7.2nm,0.3s,baz=132,slow=5.7,SNR=4.1							
MJAR	**Matsushiro Arr**	**8.28**	**356**	P	**P**	**11 40 55.2**	**-1.0**
MJAR				S	**S**	**11 42 30.2**	**-4.2**
MJAR				pmax	pmax		
comp=Z,69nm,0.3s							
MJAR				smax			
comp=N,7.0nm,0.3s							
MAJO	**Matsushiro**	**8.28**	**356**	*eP*	**P**	**11 40 55.6**	**-0.6**
MAT	**Matsushiro**	**8.28**	**356**	P	**P**	**11 40 55.4**	**-0.8**
MAT				S	**S**	**11 42 30.1**	**-4.3**
MAT	**Matsushiro**	**8.28**	**356**	P	**P**	**11 40 55.2**	**-1.0**
MAT				S	**S**	**11 42 30.3**	**-4.1**
JHS	**Saijyo**	**8.36**	**325**	P	**P**	**11 40 58.7**	**+1.6**
JHS				S	**S**	**11 42 36.9**	**+1.0**
JKD	**Kudamatsu**	**8.37**	**315**	P	**P**	**11 40 59.5**	**+2.3**
JNU	**Nakatsue**	**8.47**	**307**	*eP*	**P**	**11 41 00.5**	**+2.2**
JSJ	**Shimokoshiki**	**8.71**	**295**	P	**P**	**11 41 02.8**	**+2.1**
JSJ				S	**S**	**11 42 43.9**	**+1.3**
ONAJ	**Iwakimizuishiy**	**8.95**	**10**	P	**P**	**11 41 02.6**	**-0.5**
JHK	**Hiroka**	**8.96**	**0**	P	**P**	**11 41 01.8**	**-1.4**
NGSJ	**Nagasakinomoza**	**9.02**	**301**	P	**P**	**11 41 05.6**	**+1.6**
SAI	**Saigo**	**9.23**	**330**	P	**P**	**11 41 07.2**	**+1.1**
SAI				*e*S	**S**	**11 42 52.0**	**-0.4**

JIZZ Izumozaki 9.24 359 P **P** **11 41 05.9 -0.3**
JSZ Suzu 9.26 352 P **P** **11 41 05.0 -1.3**
JOW Kunigami 9.59 264 *eP* **P** **11 41 11.6 +1.7**
JOW Kunigami 9.59 264 P **P** **11 41 11.7 +1.7**
JMM Marumori 9.70 9 P **P** **11 41 11.1 +0.2**
JHG Hegura jima 9.71 350 P **P** **11 41 10.0 -1.0**
JSD Sado 9.76 357 P **P** **11 41 10.2 -1.4**
JOU Okura 10.18 8 P **P** **11 41 16.5 +0.6**
JTU Tsushima 10.27 310 P **P** **11 41 18.1 +1.1**
JTU S **S** **11 43 11.4 -1.0**
JYA Atsumi 10.32 3 P **P** **11 41 18.3 +0.9**
JIO Ouri 10.36 11 P **P** **11 41 17.9 +0.1**
JYK Kaneyama 10.69 6 P **P** **11 41 21.5 +0.2**
JMK Ichinoseki 10.83 9 P **P** **11 41 22.9 +0.2**
JMK S **S** **11 43 20.9 -2.0**
JTB Tobi-shima 10.91 2 P **P** **11 41 24.1 +0.5**
JKE Kume jima 2 10.99 263 P **P** **11 41 25.6 +0.9**
OFUJ Ofunato 11.02 11 P **P** **11 41 25.2 +0.4**
JRG Rokugo 11.19 7 P **P** **11 41 27.4 +0.9**
JYW Yuwa 11.30 5 P **P** **11 41 28.8 +1.2**
JOM Ohasama 11.35 9 P **P** **11 41 28.6 +0.4**
MIYJ Miyakonagasawa 11.53 11 P **P** **11 41 30.4 +0.3**
JOG2 Oga 2 11.64 3 P **P** **11 41 32.0 +0.7**
JKZ Kuzumaki 11.86 9 P **P** **11 41 33.9 +0.4**
JTH Tanohata 11.89 11 P **P** **11 41 33.9 0.0**
JAH Hinai 11.98 6 P **P** **11 41 35.4 +0.6**
JANG Nango 12.26 9 P **P** **11 41 37.5 -0.3**
JIW Iwasaki 12.33 4 P **P** **11 41 39.0 +0.5**
JTM Tenmabayashi 12.61 7 P **P** **11 41 41.6 +0.1**
JOGS Gusukube 12.62 257 P **P** **11 41 43.5 +1.7**
JSI2 Shiura 2 12.82 5 P **P** **11 41 43.7 +0.1**
KSRS Korea Array 13.03 318 P **P** **11 41 45.1 -0.7**
comp=N,2.7nm,0.3s,baz=135,slow=10,SNR=86
KSRS S **S** **11 44 12.6 +7.3**
baz=150,slow=15,SNR=24
KSRS ScP ScP 11 49 17.4 -2.0
comp=N,0.2nm,0.3s,baz=188,slow=1.2,SNR=9.6
JOT Ohata 13.20 7 P **P** **11 41 47.5 -0.1**
JOT *e*S **S** **11 44 10.0 +1.6**
JKB Kayabe 13.70 7 P **P** **11 41 52.6 -0.2**
INCN Inchon 13.84 315 *eP* **P** **11 41 54.0 -0.4**
JIJ Ishigaki jima 13.84 257 P **P** **11 41 54.3 -0.3**
ERM Erimo 14.14 13 P **P** **11 41 57.8 +0.4**
comp=N,1μm,0.7s,SNR=94
ERM Erimo 14.14 13 *d iP* **P** **11 41 57.3 -0.1**
ERM Erimo 14.14 13 *eP* **P** **11 41 57.6 +0.1**
IRIF Iriomote-Funau 14.20 257 P **P** **11 41 57.8 -0.6**
GUMO Guam 15.61 158 P **P** **11 42 13.4 +0.4**
comp=N,24nm,0.3s,baz=214,slow=2.3,SNR=19
GUMO S **S** **11 44 57.9 +3.0**
comp=N,1.8nm,0.3s,baz=133,slow=19,SNR=2.4
GUMO Guam 15.61 158 *eP* **P** **11 42 13.5 +0.4**
GUMO pmax pmax
comp=Z,972nm,1.3s
GUMO Guam 15.61 158 *eP* **P** **11 42 13.5 +0.4**
comp=Z,972nm,1.3s
TATO Taipei 15.96 262 *eP* **P** **11 42 15.4 -1.3**
comp=Z,13nm,0.9s
ASAJ Asahikawa 16.09 10 P **P** **11 42 17.7 +0.1**
comp=Z,12nm,0.3s,baz=225,slow=12,SNR=240
ASAJ S **S** **11 45 02.6 -0.5**
comp=Z,0.5nm,0.3s,baz=350,slow=19,SNR=2.4
ASAJ ScP ScP 11 49 22.3 -2.4
comp=Z,0.4nm,0.3s,baz=222,slow=6.3,SNR=4.7
ASAJ Asahikawa 16.09 10 P **P** **11 42 17.7 +0.1**
ASAJ S **S** **11 45 02.7 -0.5**
ASAJ pmax pmax
comp=Z,12nm,0.3s
ASAJ smax
comp=N,1.0nm,0.3s
ASAJ Asahikawa 16.09 10 *eP* **P** **11 42 17.6 0.0**
comp=N,2.8nm,0.8s
NACB Ninganchiao 16.10 259 *eP* **P** **11 42 16.1 -1.9**
comp=N,2.6nm,0.7s
YHNB Yeheng 16.14 261 *eP* **P** **11 42 16.5 -2.0**
comp=N,4.0nm,0.8s
YULB Yu-li 16.62 257 *eP* **P** **11 42 22.1 -1.4**
comp=N,3.4nm,0.6s
YUK Yuzh-Kuril'sk 16.69 18⇓ *iP* **P** **11 42 22.8 -1.0**
YUK pmax pmax
comp=E,201nm,0.8s
YUK pmax pmax
comp=Z,754nm,0.8s
YUK pmax pmax
comp=N,84nm,0.4s
SSLB Suanglung 16.78 259 *eP* **P** **11 42 24.1 -1.0**
comp=N,19nm,0.9s
TWG Pinlang 17.02 255 *eP* **P** **11 42 25.4 -1.8**
comp=N,22nm,0.6s
TPUB Ta-pu 17.22 257 *eP* **P** **11 42 28.2 -0.9**
comp=N,5.3nm,0.8s
NJ2 Nanjing 17.79 287 *eP* **P** **11 42 33.2 -1.0**
DL2 Dalian 17.89 311 P **P** **11 42 34.1 -0.9**
DL2 sP sP **11 44 40.7 -5.1**
DL2 S **S** **11 45 32.1 -0.9**
MDJ Mudanjiang 17.95 338 P **P** **11 42 35.7 +0.2**
MDJ sP sP 11 44 47.7 +1.2
MDJ S **S** **11 45 31.1 -2.7**
MDJ ScS ScS 11 53 07.0 -2.3
MDJ pmax pmax
comp=Z,63nm,1.0s
MDJ pmax pmax
comp=Z,180nm,5.1s
MDJ Mudanjiang 17.95 338 *eP* **P** **11 42 35.6 +0.2**
comp=Z,59nm,0.8s
SNY Shenyang 18.44 321 ⇓P **P** **11 42 40.1 +0.1**
SNY sP sP 11 44 49.8 -2.2
SNY S **S** **11 45 45.5 +3.6**
SNY pmax pmax
comp=Z,110nm,1.1s
SNY pmax pmax
comp=Z,330nm,3.5s
QZH Quanzhou 18.50 264⇓ *iP* **P** **11 42 39.2 -1.6**
QZH S **S** **11 45 39.9 -3.5**
QZH pmax pmax
comp=Z,290nm,0.8s
YSS Yuzh-Sakhalins 18.89 8⇑ *iP* **P** **11 42 43.2 -0.9**
YSS *e* 11 45 48.4
YSS pmax pmax
comp=Z,140nm,0.7s
YSS Yuzh-Sakhalins 18.89 8 *eP* **P** **11 42 43.8 -0.2**
comp=Z,11nm,0.5s
CN2 Changchun 18.93 329 *eP* **P** **11 42 45.0 +0.6**
CN2 *es*P sP 11 44 58.2 +0.9
CN2 *e*S **S** **11 45 47.8 -1.9**
CN2 pmax pmax
comp=Z,50nm,0.7s
CN2 pmax pmax
comp=Z,800nm,4.0s
HABR Khabarovsk 20.40 353 *c iP* **P** **11 42 58.2 +0.4**
HABR *e*S **S** **11 46 13.9 +0.6**
HABR *e* 11 46 45.3
HABR *e* 11 53 15.0
HABR pmax pmax
comp=Z,134nm,1.4s
HABR pmax pmax
comp=N,49nm,1.4s
HABR pmax pmax
comp=E,36nm,1.1s
KLR Kul'dur 21.66 347⇓ *eP* **P** **11 43 05.5 -3.6**
KLR *e*S **S** **11 46 29.5 -3.6**
KLR pmax pmax
comp=E,67nm,1.4s
KLR pmax pmax
comp=Z,120nm,1.4s,mb5.3
TGY Tagaytay City 21.89 234 P **P** **11 43 12.6 +1.0**
comp=Z,183nm,0.4s
BJT Baijiatuau 22.14 308 *eP* **P** **11 43 12.6 -1.0**
BJT pmax pmax
comp=Z,15nm,0.6s
BJT Baijiatuau 22.14 308 *eP* **P** **11 43 12.6 -1.0**
comp=Z,16nm,0.6s,mb4.8
BJI Beijing 22.14 308 P **P** **11 43 12.7 -0.9**
BJI S **S** **11 46 34.9 -6.2**
BJI pmax pmax
comp=Z,13nm,0.6s,mb4.7
BJI pmax pmax
comp=Z,110nm,7.3s
HIA Hailar 25.64 330 *eP* **P** **11 43 44.4 -0.1**
HIA pmax pmax
comp=Z,32nm,0.8s
HIA Hailar 25.64 330 *eP* **P** **11 43 44.4 -0.1**
comp=Z,32nm,0.8s,mb5.0
HHC Hu-ho-hao-te 25.70 306 *eP* **P** **11 43 44.8 -0.4**

HHC PcP PcP 11 46 59.4 +1.2
HHC S **S** **11 47 37.7 +0.6**
HHC pmax pmax
comp=Z,16nm,1.0s,mb4.6
HHC pmax pmax
comp=Z,82nm,5.1s
ENH Enshi 25.75 282 *eP* **P** **11 43 45.7 -0.1**
comp=Z,238nm,0.7s
SKR Severo-Kuril's 25.89 25 *eP* **P** **11 43 46.5 -0.3**
SKR pmax pmax
comp=E,40nm,0.6s
SKR pmax pmax
comp=Z,60nm,0.6s,mb5.4
XAN Xi'an 26.28 290 P **P** **11 43 50.5 0.0**
XAN pmax pmax
comp=Z,22nm,0.6s,mb5.0
XAN pmax pmax
comp=Z,22nm,6.6s
QIZ Qiongzhong 28.15 257 P **P** **11 44 06.8 -0.2**
QIZ S **S** **11 48 12.1 -3.7**
QIZ pmax pmax
comp=Z,41nm,1.2s,mb4.9
QIZ pmax pmax
comp=Z,88nm,6.0s
PETK Petropavlovsk- 28.43 24 P **P** **11 44 09.8 +0.8**
comp=Z,5.6nm,0.5s,mb4.5,baz=198,slow=4.2,SNR=48
PETK Petropavlovsk- 28.43 24 P **P** **11 44 09.8 +0.8**
PETK pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
PETK Petropavlovsk- 28.43 24 P **P** **11 44 09.8 +0.8**
GYA Guiyang 28.69 274⇓ *iP* **P** **11 44 11.9 +0.2**
GYA sP sP 11 46 43.3 +4.6
GYA PcP PcP 11 47 07.1 +1.3
GYA S **S** **11 48 21.6 -2.6**
GYA ScP ScP 11 49 57.1 -0.9
GYA ScS ScS 11 53 50.0 -2.8
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.1
PET Petropavlovsk 28.71 25⇑ *iP* **P** **11 44 11.1 -0.3**
PET pmax pmax
comp=Z,79nm,0.7s,mb5.5
PET Petropavlovsk 28.71 25 *eP* **P** **11 44 11.2 -0.3**
comp=Z,163nm,2.2s,mb5.3
TNTI Ternate 29.50 204 P **P** **11 44 18.5 -0.4**
comp=Z,69nm,0.8s,mb5.2
KDM Kudat 29.81 229 P **P** **11 44 23.0 +1.4**
MYLDM Lahad Datu 30.07 224 P **P** **11 44 25.3 +1.4**
MYLDM Lahad Datu 30.07 224 P **P** **11 44 26.8 +3.0**
comp=Z,867nmcomp=Z,122nm,0.9s,mb5.4
CLNS Chul'man 30.25 345 *eP* **P** **11 44 25.0 +0.2**
CLNS *e**PP 11 45 49.7
CLNS *e* 11 47 16.2
CLNS *e*S **S** **11 48 42.4 -5.0**
CLNS *e**SS sS 11 51 20.4 -10
CLNS pmax pmax
comp=Z,42nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,24nm,0.8s
CLNS pmax pmax
comp=E,13nm,0.9s
CLNS smax
comp=E,37nm,1.6s
CLNS smax
comp=N,24nm,1.6s
SDKM Sandakan 30.53 227 P **P** **11 44 28.6 +0.8**
LZH Lanzhou 30.60 294 ⇓P **P** **11 44 28.3 +0.2**
LZH pP 11 45 56.9
LZH sP sP 11 46 57.8 +2.0
LZH PcP PcP 11 47 11.5 +0.9
LZH S **S** **11 48 51.0 -2.4**
LZH ScP ScP 11 50 04.0 0.0
LZH ScS ScS 11 54 00.1 -1.6
LZH pmax pmax
comp=Z,77nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,240nm,4.3s
CD2 Chengdu 30.65 284 *eP* **P** **11 44 28.0 -0.6**
CD2 S **S** **11 48 53.2 -1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
CD2 pmax pmax
comp=Z,30nm,4.2s
KKM Kota Kinabalu 30.87 229 P **P** **11 44 32.3 +1.6**
KKM Kota Kinabalu 30.87 229 P **P** **11 44 35.0 +4.3**
comp=Z,59nm,0.9s,mb5.1
TSM Tawau 31.15 224 P **P** **11 44 33.6 +0.5**
ULN Ulaanbaatar 31.51 317 *eP* **P** **11 44 36.2 +0.4**
comp=Z,1.3nm,1.0s
SONM Songino Array 31.90 317 P **P** **11 44 39.1 0.0**
comp=Z,2.6nm,0.5s,mb4.0,baz=127,slow=8.4,SNR=18
SONM PcP PcP 11 47 13.8 -0.1
comp=Z,1.4nm,0.4s,baz=143,slow=1.7,SNR=5.4
SONM ScP ScP 11 50 05.9 -2.2
comp=Z,9.4nm,0.7s,baz=144,slow=4.0,SNR=24
KMI Kunming 32.43 273 P **P** **11 44 44.3 +0.4**
KMI sP sP 11 47 13.9 +1.8
KMI S **S** **11 49 23.3 +1.5**
KMI sS sS 11 52 05.4 -0.2
KMI pmax pmax
comp=Z,88nm,0.9s,mb5.3
KMI pmax pmax
comp=Z,220nm,4.2s
GTA Gaotai 34.12 299⇓ *iP* **P** **11 44 58.2 +0.2**
GTA pP 11 46 29.0
GTA PcP PcP 11 47 20.1 -0.4
GTA S **S** **11 49 43.4 -3.6**
GTA ScP ScP 11 50 14.4 -1.8
GTA pmax pmax
comp=Z,47nm,0.9s,mb5.0
GTA pmax pmax
comp=Z,69nm,4.0s
TLE Tual 34.23 191 P **P** **11 45 00.1 +0.9**
comp=Z,58nm,1.1s,mb5.0
YAK Yakutsk 34.32 352⇑ *iP* **P** **11 44 58.2 -1.1**
YAK *e* 11 46 40.9
YAK *e* 11 47 25.7
YAK *e*S **S** **11 49 44.5 -4.9**
YAK *e**SS sS 11 52 29.7 -4.6
YAK *e* 11 54 13.7
YAK pmax pmax
comp=Z,136nm,0.9s,mb5.5
YAK pmax pmax
comp=E,13nm,0.9s
YAK pmax pmax
comp=N,45nm,1.0s
YAK pmax pmax
comp=Z,17nm,1.0s,mb4.5
YAK pmax pmax
comp=N,60nm,2.0s
YAK pmax pmax
comp=E,30nm,1.5s
YAK smax
comp=N,100nm,1.3s
YAK smax
comp=E,62nm,1.2s
YAK Yakutsk 34.32 352 *eP* **P** **11 44 58.3 -1.0**
comp=E,25nm,0.9s,mb4.8
ZAK Zakamensk 34.85 319 *eP* **P** **11 45 03.6 -0.4**
ZAK *e* 11 49 54.6
BTM Bintulu 35.06 229 P **P** **11 45 07.0 +0.9**
TLY Talaya 35.24 321 *eP* **P** **11 45 06.4 -0.7**
TLY pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
SEY Seymchan 35.77 10⇑ *iP* **P** **11 45 11.5 +0.1**
SBUM Sibu 36.19 230 P **P** **11 45 16.5 +0.9**
SBUM Sibu 36.19 230 P **P** **11 45 15.8 +0.2**
comp=Z,529nmcomp=Z,39nm,1.6s,mb4.7
CHRT Chiangrai 36.60 266 ⇓P **P** **11 45 18.0 -0.9**
comp=Z,263nm,1.0s,mb5.7
CHTO Chiang Mai 37.72 264 *eP* **P** **11 45 27.6 -0.6**
CHTO pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
CHTO Chiang Mai 37.72 264 *eP* **P** **11 45 27.6 -0.6**
comp=Z,7.6nm,0.9s,mb4.2
CHTO Chiang Mai 37.72 264 P **P** **11 45 28.5 +0.3**
SNR=20
CM31 Chiang Mai Arr 37.86 264 *eP* **P** **11 45 29.5 +0.3**
comp=Z,9.3nm,0.5s,mb4.6
CM31 *e*PcP PcP 11 47 32.5 +0.3
CMAR Chiang Mai Arr 37.86 264 P **P** **11 45 29.4 +0.1**
comp=Z,15nm,0.7s,mb4.6,baz=50,slow=9.4,SNR=120
CMAR PcP PcP 11 47 32.2 0.0
comp=Z,5.7nm,0.7s,baz=32,slow=0.6,SNR=14
CMAR ScP ScP 11 50 29.6 -0.8
comp=Z,2.6nm,0.9s,baz=52,slow=2.1,SNR=8.9

NST Nakhon Sawan 37.96 259 ⇑P **P** **11 45 30.8 +0.7**
comp=Z,108nm,0.7s,mb5.5
KSM Kuching 38.20 231 P **P** **11 45 33.0 +1.0**
KSM Kuching 38.20 231 *eP* **P** **11 45 32.9 +0.9**
comp=Z,13nm,1.0s,mb4.4
KSM Kuching 38.20 231 P **P** **11 45 32.7 +0.7**
comp=Z,562nmcomp=Z,65nm,0.8s,mb5.2
PMG Port Moresby 38.28 167 *d iP* **P** **11 45 32.2 -0.5**
PMG pmax pmax
comp=Z,19nm,1.2s
PMG Port Moresby 38.28 167 *eP* **P** **11 45 32.3 -0.4**
comp=Z,32nm,1.4s,mb4.7
PMG Port Moresby 38.28 167 P **P** **11 45 32.7 0.0**
comp=Z,22nm,0.7s,mb4.8
MMRI Maumere 40.08 206 P **P** **11 45 46.2 -1.0**
comp=Z,924nmcomp=Z,82nm,1.0s,mb5.2
PBKI Pangkalan Bun 40.45 225 P **P** **11 45 50.3 +0.1**
comp=Z,186nm,1.1s,mb5.5
KTGM Kuala Trenggan 40.92 243 P **P** **11 45 55.2 +1.2**
KAKA Kakadu 41.22 190 *eP* **P** **11 45 55.6 -0.7**
comp=Z,39nm,0.8s,mb5.0
KAKA Kakadu 41.22 190 *eP* **P** **11 45 55.7 -0.6**
comp=Z,149nm,0.8s,mb5.6
KAKA *e*PcP PcP 11 47 42.5 -0.5
LSA Lhasa 41.61 284 *eP* **P** **11 46 00.7 +1.4**
LSA pmax pmax
comp=Z,18nm,0.6s,mb4.8
LSA Lhasa 41.61 284 *eP* **P** **11 46 00.7 +1.4**
comp=Z,18nm,0.6s,mb4.8
SNG Songkhla 41.84 247 P **P** **11 46 02.0 +0.7**
comp=Z,280nm,1.0s
SHL Shillong 41.86 278⇓ *iP* **P** **11 46 01.5 +0.2**
COEN Coen 42.17 174 *eP* **P** **11 46 04.2 +0.4**
COEN Coen 42.17 174 *eP* **P** **11 46 04.3 +0.5**
comp=Z,51nm,0.8s,mb5.1
COEN Coen 42.17 174 P **P** **11 46 04.5 +0.7**
comp=Z,126nm,0.7s,mb5.6
MYKOM Kota Tinggi 42.62 238 P **P** **11 46 08.5 +1.1**
MYKOM Kota Tinggi 42.62 238 P **P** **11 46 07.3 -0.1**
comp=Z,649nmcomp=Z,60nm,1.2s,mb5.0
KHKI Kahang-Kahang 42.84 215 P **P** **11 46 09.0 -0.1**
comp=Z,2μmcomp=Z,158nm,1.1s,mb5.5
KGM Kluang 42.87 239 P **P** **11 46 10.4 +1.0**
KULM Kulim 42.91 245 P **P** **11 46 10.5 +0.8**
KULM Kulim 42.91 245 *eP* **P** **11 46 10.2 +0.5**
comp=Z,23nm,0.7s,mb4.8
KULM Kulim 42.91 245 P **P** **11 46 10.2 +0.5**
comp=Z,2μmcomp=Z,188nm,0.8s,mb5.7
BILL Bilibino 43.01 15 *c iP* **P** **11 46 09.2 -0.5**
BILL *e*S **S** **11 51 56.2 -0.7**
BILL pmax pmax
comp=Z,161nm,0.9s,mb5.5
BILL Bilibino 43.01 15 *eP* **P** **11 46 09.5 -0.1**
comp=Z,136nm,0.8s,mb5.5
TPI Tanjungpandan 43.08 229 P **P** **11 46 11.0 -0.1**
comp=Z,319nmcomp=Z,30nm,1.1s,mb4.7
IPM Ipoh 43.09 244 P **P** **11 46 11.3 +0.2**
IPM Ipoh 43.09 244 *eP* **P** **11 46 11.2 0.0**
comp=Z,14nm,0.7s,mb4.6
IPM Ipoh 43.09 244 P **P** **11 46 11.7 +0.5**
comp=Z,1μmcomp=Z,133nm,0.8s,mb5.5
FRIM Kepong 43.39 242 P **P** **11 46 14.0 +0.6**
WMQ Urumqi 43.57 305 P **P** **11 46 15.0 +0.6**
WMQ pP pP 11 47 49.0 0.0
WMQ S **S** **11 52 07.0 +1.4**
WMQ SS SS 11 55 30.0 -4.2
WMQ pmax pmax
comp=Z,45nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,150nm,4.0s
JAGI Jajag, Banyuwa 43.68 217 P **P** **11 46 14.3 -1.4**
comp=Z,717nmcomp=Z,72nm,1.0s,mb5.2
TIXI Tiksi 43.79 355 *eP* **P** **11 46 14.5 -1.2**
TIXI pmax pmax
comp=Z,35nm,0.9s,mb4.9
TIXI Tiksi 43.79 355 *eP* **P** **11 46 14.8 -0.9**
comp=Z,2.9nm,0.7s,mb3.9
KNA Kununurra 44.85 194 *eP* **P** **11 46 24.3 -0.3**
comp=Z,16nm,0.6s,mb4.7
KNA Kununurra 44.85 194 P **P** **11 46 24.5 -0.1**
comp=Z,881nmcomp=Z,104nm,1.0s,mb5.3
TAPN Taplejung 45.05 281 *eP* **P** **11 46 27.0 +0.8**
comp=Z,72nm,0.6s,mb5.4
BJII Banjamegara 45.27 223 P **P** **11 46 29.4 +1.4**
comp=Z,56nm,1.0s,mb5.1
YOGI Yogyakarta 45.31 222 P **P** **11 46 28.7 +0.5**
comp=Z,520nm,1.0s
ODAN Odare 45.45 281 *eP* **P** **11 46 29.7 +0.5**
comp=Z,89nm,0.3s,mb5.7
BKNI Bangkinang 45.69 239 P **P** **11 46 32.0 +0.8**
comp=Z,94nm,0.9s,mb5.3
LEM Lembang 46.17 226 P **P** **11 46 35.2 +0.4**
comp=Z,4μmcomp=Z,488nm,0.8s
KLSI 46.47 231 P **P** **11 46 37.4 +0.3**
comp=Z,5μmcomp=Z,410nm,0.8s
GUN Gumba 46.50 283 *eP* **P** **11 46 38.4 +1.2**
comp=Z,195nm,0.5s
CISI Cisompet, Garu 46.61 225 P **P** **11 46 36.7 -1.4**
comp=Z,124nm,0.8s,mb5.5
PPI Padang Panjang 46.68 239 P **P** **11 46 38.6 -0.2**
comp=Z,3μmcomp=Z,48nm,0.8s,mb5.1
ZALV Zalesovo Beam 46.73 319 P **P** **11 46 37.5 -1.1**
comp=Z,4.3nm,0.4s,mb4.3,baz=97,slow=7.0,SNR=5.5
ZALV PcP PcP 11 47 59.8 -1.8
comp=Z,6.5nm,0.5s,baz=128,slow=3.1,SNR=10
ZALV ScP ScP 11 51 02.0 -3.6
comp=Z,12nm,0.7s,baz=110,slow=4.4,SNR=20
TPTI 46.89 246 P **P** **11 46 38.7 -1.6**
comp=Z,30nm,1.3s,mb4.7
PKI Pulchoki 46.99 282 *eP* **P** **11 46 41.2 +0.3**
comp=Z,73nm,0.6s,mb5.4
PKIN Phulchoki 47.00 282 *eP* **P** **11 46 41.5 +0.5**
comp=Z,51nm,0.7s,mb5.2
KKN Kakani 47.05 283 *eP* **P** **11 46 41.9 +0.6**
comp=Z,91nm,0.6s,mb5.5
DMN Daman 47.24 283 *eP* **P** **11 46 43.4 +0.6**
comp=Z,75nm,0.4s,mb5.5
CGJI Cibinong 47.25 228 P **P** **11 46 40.9 -2.1**
comp=Z,77nm,0.5s,mb5.5
MK31 Makanchi Array 47.52 309 *eP* **P** **11 46 44.3 -0.3**
MK31 *e* 11 48 03.4
MK31 Makanchi Array 47.52 309 *eP* **P** **11 46 44.3 -0.3**
MK31 *e*PcP PcP 11 48 03.4 -1.1
MK31 *e*ScP ScP 11 51 06.3 -2.8
MKAR Makanchi Array 47.52 309 P **P** **11 46 44.5 -0.1**
comp=Z,5.3nm,0.5s,mb4.3,baz=91,slow=9.6,SNR=36
MKAR PcP PcP 11 48 03.5 -1.0
comp=Z,5.8nm,0.8s,baz=91,slow=4.9,SNR=7.6
MKAR ScP ScP 11 51 06.1 -3.0
comp=Z,6.1nm,0.7s,baz=91,slow=5.6,SNR=11
MKAR S **S** **11 52 60.0 -1.0**
comp=Z,1.7nm,0.8s,baz=86,slow=17,SNR=4.2
MKAR Makanchi Array 47.52 309 P **P** **11 46 44.5 -0.1**
MKAR 11 48 03.6
MKAR S **S** **11 53 00.0 -1.0**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MKAR smax
comp=N,2.0nm,0.8s
MKAR Makanchi Array 47.52 309 P **P** **11 46 44.5 -0.1**
MKAR PcP PcP 11 48 03.5 -1.0
MKAR ScP ScP 11 51 06.1 -3.0
MKAR S **S** **11 52 60.0 -1.0**
GKN Gorkha 47.55 283 *eP* **P** **11 46 45.5 +0.4**
comp=N,236nm,1.1s,mb5.7
FITZ Fitzroy Crossi 47.86 197 P **P** **11 46 47.5 0.0**
comp=N,36nm,0.6s,mb5.1,baz=18,slow=7.1,SNR=191
FITZ PcP PcP 11 48 06.5 +0.4
comp=N,4.1nm,0.9s,baz=57,slow=1.0,SNR=3.5
FITZ S **S** **11 53 03.9 -2.3**
comp=N,3.8nm,1.0s,baz=152,slow=18,SNR=3.9
FITZ Fitzroy Crossi 47.86 197 ⇓*iP* **P** **11 46 47.4 0.0**
comp=N,67nm,0.6s,mb5.3
FITZ Fitzroy Crossi 47.86 197 P **P** **11 46 47.3 -0.1**
WB2 Warramunga Arr 48.13 186 *eP* **P** **11 46 48.8 -0.7**
WB2 *e*PcP PcP 11 48 07.1 0.0
WRA Warramunga Arr 48.13 186 P **P** **11 46 48.8 -0.7**
comp=N,44nm,0.4s,mb5.3,baz=1.2,slow=7.7,SNR=598
WRA PcP PcP 11 48 06.8 -0.2
comp=N,10nm,0.7s,baz=358,slow=3.7,SNR=8.8
WRA pP pP 11 48 27.6 +0.8
comp=N,4.3nm,0.7s,baz=4.3,slow=8.5,SNR=3.1
WRA S **S** **11 53 05.3 -4.5**
comp=N,5.1nm,0.9s,baz=1.4,slow=14,SNR=6.4
WRA Warramunga Arr 48.13 186 P **P** **11 46 48.8 -0.6**
WRA 11 48 06.9

WRA *PP pP 11 48 27.6 +0.8
WRA S **S** **11 53 05.4 -4.5**
WRA pmax pmax
comp=Z,44nm,0.4s
WRA smax
comp=N,5.0nm,0.9s
WRA Warramunga Arr 48.13 186 P **P** **11 46 48.8 -0.7**
WRA PcP PcP 11 48 06.8 -0.2
WRA pP pP 11 48 27.6 +0.8
WRA S **S** **11 53 05.3 -4.5**
DANN Dangsing 48.22 284 *e*P **P** **11 46 50.9 +0.8**
comp=N,178nm,0.7s,mb5.7
KOLN Koldanda 48.49 283 *e*P **P** **11 46 52.8 +0.6**
comp=N,127nm,0.7s,mb5.6
CTA Charters Tower 48.58 171 P **P** **11 46 52.7 -0.1**
comp=N,15nm,0.8s,mb4.5,baz=356,slow=7.8,SNR=13
CTA Charters Tower 48.58 171 *e*P **P** **11 46 52.8 0.0**
comp=N,11nm,0.8s,mb4.5
CTA Charters Tower 48.58 171 P **P** **11 46 52.7 -0.1**
CTA pmax pmax
comp=Z,15nm,0.8s
CTA Charters Tower 48.58 171 P **P** **11 46 52.7 -0.1**
CTAO Charters Tower 48.58 171 *e*P **P** **11 46 52.7 -0.1**
CTAO pmax pmax
comp=Z,11nm,0.8s,mb4.4
CTAO Charters Tower 48.58 171 *e*P **P** **11 46 52.7 -0.1**
comp=Z,11nm,0.8s,mb4.5
TNA Tin City 49.56 26 *e*P **P** **11 46 59.6 +0.1**
comp=Z,34nm,1.2s,mb4.7
KURK Kurchatov 50.12 314 P **P** **11 47 03.4 -0.4**
comp=Z,213nm,0.7s,mb5.7,SNR=12
KURK Kurchatov 50.12 314*d i*P **P** **11 47 03.2 -0.6**
KURK pmax pmax
comp=Z,36nm,1.1s,mb4.7
KURK Kurchatov 50.12 314 *e*P **P** **11 47 02.6 -1.2**
comp=Z,1.5nm,0.7s
KURK Kurchatov 50.12 314 P **P** **11 47 03.3 -0.6**
SNR=9.8
ASAR Alice Springs 51.86 186 P **P** **11 47 16.1 -0.6**
comp=Z,12nm,0.5s,mb4.5,baz=16,slow=12,SNR=191
ASAR PcP PcP 11 48 21.1 +0.3
comp=Z,9.8nm,0.8s,baz=14,slow=3.9,SNR=18
ASAR S **S** **11 53 56.9 -3.5**
comp=Z,2.2nm,0.9s,baz=18,slow=18,SNR=9.5
ASAR Alice Springs 51.86 186 P **P** **11 47 16.1 -0.6**
ASAR 11 48 21.1
ASAR S **S** **11 53 56.9 -3.5**
ASAR pmax pmax
comp=Z,12nm,0.5s
ASAR smax
comp=N,2.0nm,0.9s
VIS Vishakhapatnam 51.89 271 *e*PKP **P** **11 47 17.2 0.0**
VIS AMb AMB 11 47 18.3
comp=Z,102nm,1.1s,mb5.1
ULHL Ulahol 51.99 303 P **P** **11 47 18.4 +0.8**
SNR=5.9
TKM2 Tokmak 2 52.40 304 P **P** **11 47 21.4 +0.9**
SNR=22
TKM2 Tokmak 2 52.40 304 *e*P **P** **11 47 21.3 +0.8**
TKM2 pmax pmax
comp=Z,7.0nm,1.0s,mb4.0
TKM2 Tokmak 2 52.40 304 *e*P **P** **11 47 21.3 +0.8**
comp=Z,6.8nm,1.0s,mb3.9
KSH Kashi 52.52 300 *e*P **P** **11 47 25.0 +3.6**
KSH *e*PcP PcP 11 48 26.0 +2.7
KSH *e*pP pP 11 49 08.6 +7.6
KSH *e*PP PP 11 49 33.9 +6.6
KSH *e*sP sP 11 50 06.2 +8.5
KSH *e*ScP ScP 11 51 31.4 +0.6
KSH PcS PcS 11 52 24.1 +1.4
KSH S **S** **11 54 11.4 +2.4**
KSH ScS ScS 11 56 15.4 -1.1
KSH sS sS 11 57 15.1 +6.8
KSH SS SS 11 58 01.5 +5.2
KSH pmax pmax
comp=Z,85nm,0.6s,mb5.2
MBWA Marble Bar 52.52 203 ||*i*P **P** **11 47 21.2 -0.4**
MBWA Marble Bar 52.52 203 *e*P **P** **11 47 21.2 -0.3**
comp=Z,85nm,0.6s,mb5.2
MBWA *e*PcP PcP 11 48 22.7 -0.7
DDI Dehra Dun 52.59 288 *ex* **P** **11 47 20.0 -2.0**
KZA Kyzart 52.74 303 P **P** **11 47 24.7 +1.8**
SNR=16
KBK Karagaybulak 52.90 304 P **P** **11 47 24.8 +0.8**
SNR=11
KBK Karagaybulak 52.90 304 *e*P **P** **11 47 24.8 +0.7**
comp=Z,6.5nm,0.7s,mb4.1
USP Ospenovka 53.16 305 P **P** **11 47 26.1 +0.1**
SNR=13
AAK Ala-Archa 53.23 304 P **P** **11 47 26.8 +0.4**
SNR=14
AAK Ala-Archa 53.23 304 P **P** **11 47 26.5 0.0**
comp=Z,15nm,0.5s,mb4.6,baz=115,slow=5.6,SNR=30
AAK PcP PcP 11 48 25.3 -0.7
comp=Z,4.8nm,0.4s,baz=118,slow=4.4,SNR=5.4
AAK ScP ScP 11 51 30.9 -3.0
comp=Z,0.9nm,0.3s,baz=155,slow=6.5,SNR=4.4
AAK Ala-Archa 53.23 304 *e*P **P** **11 47 26.0 -0.5**
AAK pmax pmax
comp=Z,4.0nm,0.5s,mb4.0
AAK Ala-Archa 53.23 304 *e*P **P** **11 47 26.0 -0.4**
comp=Z,3.7nm,0.5s,mb4.0
AAK Ala-Archa 53.23 304 P **P** **11 47 27.0 +0.6**
SNR=6.3
NDI New Delhi 53.71 286 *e*PKP **P** **11 47 30.0 -0.1**
EKS2 Erkin-Say 53.76 304 P **P** **11 47 30.6 +0.4**
SNR=13
EKS2 Erkin-Say 53.76 304 *e*P **P** **11 47 30.5 +0.3**
comp=Z,3.8nm,1.0s,mb3.7
SVW2 Sparrevohn 53.87 33 *e*P **P** **11 47 30.5 -0.1**
comp=Z,42nm,1.4s,mb4.6
AML Almayashu 53.88 303 P **P** **11 47 32.3 +1.2**
SNR=14
AML Almayashu 53.88 303 *e*P **P** **11 47 32.3 +1.2**
comp=Z,5.2nm,0.6s,mb4.0
TTA Tatalina 53.90 31 *e*P **P** **11 47 30.7 -0.1**
SONA Sohna 53.94 286 *ex* x 11 48 27.9
EIDS Eidsvold 54.59 167 *e*P **P** **11 47 35.6 -0.5**
VOSK Vostochnaya 54.89 316 P **P** **11 47 36.9 -1.1**
VOSK pmax pmax
comp=Z,20nm,0.6s,mb4.5
KHET Khetri 55.07 286 *ex* x 11 48 31.3
KHET *ex* x 11 54 36.6
BHPL Bhopal 55.14 280 *e*PKP **P** **11 47 39.5 -0.8**
BHPL AMb AMB 11 47 40.1
comp=Z,64nm,0.7s,mb5.0
KDAK Kodiak Island 55.16 37 P **P** **11 47 39.0 -0.7**
comp=Z,48nm,0.9s,mb4.7,baz=276,slow=3.5,SNR=20
KDAK Kodiak Island 55.16 37 P **P** **11 47 39.0 -0.8**
KDAK pmax pmax
comp=Z,49nm,0.9s,mb4.7
KDAK Kodiak Island 55.16 37 *e*P **P** **11 47 38.9 -0.9**
comp=Z,3.9nm,1.0s,mb3.6
RSO Redoubt South 55.19 34 *e*P **P** **11 47 39.5 -0.4**
BVA0 Borovoye Array 55.24 317 *i*P **P** **11 47 40.0 -0.4**
BVA0 pmax pmax
comp=Z,4.0nm,0.3s,mb4.1
BVAR Borovoye Array 55.24 317 ScP ScP 11 51 39.2 -3.3
comp=Z,5.2nm,0.8s,baz=100,slow=5.5,SNR=7.3
BVAR S **S** **11 54 40.9 -3.5**
comp=Z,8.3nm,0.7s,baz=91,slow=15,SNR=18
BRVK Borovoye 55.30 317 P **P** **11 47 40.6 -0.2**
comp=Z,232nm,0.5s,mb5.7,SNR=12
BRVK Borovoye 55.30 317*d i*P **P** **11 47 40.5 -0.3**
BRVK pmax pmax
comp=Z,26nm,0.7s,mb4.6
BRVK Borovoye 55.30 317 *e*P **P** **11 47 40.8 -0.1**
comp=Z,3.9nm,1.0s,mb3.6
BRVK Borovoye 55.30 317 P **P** **11 47 41.0 +0.2**
SNR=11
PPLA Purkeypile 55.63 31 *e*P **P** **11 47 43.4 +0.5**
comp=Z,4.5nm,0.8s,mb3.8
KK31 Karatay Array 56.08 305 P **P** **11 47 46.2 -0.2**
KK31 pmax pmax
comp=Z,24nm,0.4s,mb4.8
KKAR Karatay Array 56.08 305 *e*P **P** **11 47 46.5 +0.1**
ZRNK Zerenda 56.08 317 P **P** **11 47 45.7 -0.5**
ZRNK pmax pmax
comp=Z,13nm,0.5s,mb4.4
HYB Hyderabad 56.21 273 *i*P **P** **11 47 47.5 -0.2**
BPAW Bear Paw Mtn. 56.27 30 *e*P **P** **11 47 47.4 +0.1**
comp=Z,0.9nm,0.6s
AJM Ajmer 56.52 284 *e*PKP **P** **11 47 48.5 -1.3**
AJM AMb AMB 11 47 49.7
comp=Z,34nm,0.1s
TRF Thorofare Moun 56.53 31 *e*P **P** **11 47 49.3 +0.2**
comp=Z,1.0nm,0.8s
RC01 Rabbit Creek A 56.70 33 *e*P **P** **11 47 49.6 -0.7**
comp=Z,2.1nm,0.9s
SEW Seward 56.83 35 *e*P **P** **11 47 50.4 -0.9**
comp=Z,5.4nm,1.0s,mb3.7
COLD Coldfoot 56.87 26 *e*P **P** **11 47 51.9 +0.4**
comp=Z,4.7nm,0.9s,mb3.7
PMR Palmer 57.00 33 *e*P **P** **11 47 50.8 -1.6**
PMR pmax pmax
comp=Z,62nm,1.2s,mb4.7
PMR Palmer 57.00 33 *e*P **P** **11 47 50.8 -1.6**
comp=Z,62nm,1.2s,mb4.7
MCK McKinley 57.15 30 *e*P **P** **11 47 52.8 -0.6**
MCK pmax pmax
comp=Z,17nm,0.8s,mb4.3
MCK McKinley 57.15 30 *e*P **P** **11 47 52.8 -0.6**
comp=Z,17nm,0.8s,mb4.3
COCO West Island 57.25 231 *i*P **P** **11 47 56.7 +1.8**
SML Sawmill 57.38 33 *e*P **P** **11 47 54.2 -0.9**
comp=Z,0.8nm,0.8s
COLA College 57.67 29 *e*P **P** **11 47 56.8 -0.1**
COLA pmax pmax
comp=Z,12nm,0.6s,mb4.3
COLA College 57.67 29 *e*P **P** **11 47 56.8 -0.1**
comp=Z,12nm,0.6s,mb4.3
ILAR Eielson Array 58.08 29 P **P** **11 47 58.1 -1.5**
comp=Z,5.1nm,0.4s,mb4.1,baz=248,slow=6.0,SNR=215
ILAR pP pP 11 49 40.5 -1.6
comp=Z,1.0nm,0.8s,baz=248,slow=6.1,SNR=2.6
ILAR S **S** **11 55 19.1 -1.4**
comp=Z,0.7nm,0.9s,baz=267,slow=9.7,SNR=6.2
ILAR Eielson Array 58.08 29 P **P** **11 47 58.2 -1.5**
ILAR *PP pP 11 49 40.5 -1.6
ILAR S **S** **11 55 19.1 -1.4**
ILAR pmax pmax
comp=Z,5.0nm,0.4s
ILAR smax
comp=N,1.0nm,0.9s
PALK Pallekele 58.69 261 *i*P **P** **11 48 00.4 -4.3**
PAX Paxson 58.71 31 *e*P **P** **11 48 03.8 -0.2**
PAX pmax pmax
comp=Z,8.0nm,1.2s,mb3.8
PAX Paxson 58.71 31 *e*P **P** **11 48 03.8 -0.2**
comp=Z,8.2nm,1.2s,mb3.8
KBL Kabul 58.94 295 *e*P **P** **11 48 06.0 -0.1**
comp=Z,1.9nm,0.8s
RAGM Ragged Mountai 59.20 34 *e*P **P** **11 48 07.5 +0.1**
DOT Dot Lake 59.32 30 *e*P **P** **11 48 07.5 -0.6**
comp=Z,26nm,0.9s,mb4.5
MENT Mentasta 59.51 31 *e*P **P** **11 48 09.5 +0.1**
FORT Forrest 59.62 191 *e*P **P** **11 48 10.2 -0.3**
comp=Z,91nm,0.6s,mb5.3
FORT Forrest 59.62 191 *e*P **P** **11 48 10.3 -0.2**
comp=Z,74nm,0.7s,mb5.1
STKA Stephens Creek 59.86 177 P **P** **11 48 12.1 0.0**
comp=Z,18nm,0.7s,mb4.5,baz=344,slow=8.8,SNR=41
STKA Stephens Creek 59.86 177 *e*P **P** **11 48 11.6 -0.5**
comp=Z,12nm,0.7s,mb4.3
POO Poona 59.93 276 *e*PKP **P** **11 48 12.4 -0.5**
POO AMb AMB 11 48 13.0
comp=Z,67nm,1.1s,mb4.9
KAD Karad 60.10 275 *e*PKP **P** **11 48 13.2 -0.9**
KAD AMb AMB 11 48 15.0
comp=Z,63nm,0.9s,mb4.9
EGAK Eagle 60.53 29 *e*P **P** **11 48 15.1 -1.0**
comp=Z,1.1nm,0.6s
BBOO Buckleboo 60.80 183 *e*P **P** **11 48 17.5 -0.7**
comp=Z,28nm,0.8s,mb4.7
BBOO *e*PcP PcP 11 48 55.5 -0.4
BBOO *e*pP pP 11 50 02.8 +0.6
KMBL Kambalda 61.49 197 *e*P **P** **11 48 22.0 -0.8**
comp=Z,36nm,0.6s,mb4.9
ARU Arti 61.74 322*d i*P **P** **11 48 23.4 -0.8**
ARU *PP pP 11 50 07.9 -0.5
ARU *e* 11 50 44.2
ARU S **S** **11 56 03.5 -3.1**
ARU pmax pmax
comp=Z,18nm,1.0s,mb4.5
ARU Arti 61.74 322 *e*P **P** **11 48 23.0 -1.2**
comp=Z,0.7nm,0.5s
BHJ Bhuj 61.86 283 *e*PKP **P** **11 48 25.4 -0.1**
PNL Peninsula 61.91 35 *e*P **P** **11 48 25.3 +0.1**
comp=Z,0.8nm,0.6s
AB31 Abkulak array 62.22 313 *e*P **P** **11 48 26.5 -1.0**
AB31 pmax pmax
comp=Z,9.0nm,0.3s,mb4.7
ABKAR Abkulak array 62.22 313 *e*P **P** **11 48 26.8 -0.7**
KLBR Kellerberrin 62.85 200 *e*P **P** **11 48 30.9 -0.8**
comp=Z,26nm,1.0s,mb4.6
YNG Young 62.86 171 *e*P **P** **11 48 31.8 +0.1**
comp=Z,17nm,0.6s,mb4.7
INK Inuvik 63.16 25 P **P** **11 48 32.4 -0.8**
comp=Z,9.7nm,0.4s,mb4.6,baz=286,slow=5.8,SNR=95
INK Inuvik 63.16 25 *e*P **P** **11 48 32.5 -0.8**
comp=Z,0.2nm,0.4s
AKTO Aktyubinsk 63.19 315 S **S** **11 56 20.4 -4.2**
comp=Z,2.3nm,0.8s,baz=176,slow=22,SNR=9.1
AKTO Aktyubinsk 63.19 315 P **P** **11 48 32.0 -1.7**
NWAO Narrogin (SRO) 64.25 200 *e*P **P** **11 48 40.3 -0.4**
NWAO pmax pmax
comp=Z,4.0nm,0.7s
NWAO Narrogin (SRO) 64.25 200 *e*P **P** **11 48 40.3 -0.3**
comp=Z,4.2nm,0.7s,mb4.0
TOO Toolangi 65.77 174 *e*P **P** **11 48 50.4 +0.3**
CRAG Craig 66.08 39 *e*P **P** **11 48 52.2 +0.3**
comp=Z,73nm,2.2s,mb4.8
WRAK Wrangell Islan 66.25 37 *e*P **P** **11 48 53.2 +0.3**
comp=Z,34nm,1.5s,mb4.7
DLBC Dease Lake 66.90 35 *e*P **P** **11 48 57.3 +0.4**
PRGR Permogore 67.08 329 P **P** **11 48 58.1 +0.1**
PRGR pmax pmax
comp=Z,3.0nm,0.5s,mb4.1
KBS Kingsbay 68.93 350⇑*e*P **P** **11 49 07.7 -1.3**
KEV Kevo 70.92 340 *e*P **P** **11 49 19.3 -1.7**
KEV pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
KEV Kevo 70.92 340 *e*p **P** **11 49 19.3 -1.7**
comp=Z,5.0nm,0.5s,mb4.3
ARCES ARCESS Array B 71.49 340 P **P** **11 49 23.9 -0.4**
comp=Z,5.3nm,0.4s,mb4.4,baz=70,slow=8.5,SNR=54
ARCES ARCESS Array B 71.49 340 P **P** **11 49 23.9 -0.4**
ARCES pmax pmax
comp=Z,5.0nm,0.4s
ARCES ARCESS Array B 71.49 340 P **P** **11 49 23.9 -0.4**
ARE0 ARCESS Array S 71.49 340 *e*P **P** **11 49 24.1 -0.2**
HOQ Hoqain 72.24 288 P **P** **11 49 29.2 -0.3**
SNR=14
YKA Yellowknife Ar 72.47 28 P **P** **11 49 29.1 -1.0**
comp=Z,7.8nm,0.5s,mb4.4,baz=297,slow=6.1,SNR=33
YKA Yellowknife Ar 72.47 28 P **P** **11 49 29.1 -1.0**
YKA pmax pmax
comp=Z,8.0nm,0.5s
YKA Yellowknife Ar 72.47 28 P **P** **11 49 29.1 -1.0**
BSY Bisya 72.67 287 P **P** **11 49 32.2 +0.1**
SNR=9.3
HATD Hatta, Dubai 72.73 289 P **P** **11 49 32.6 +0.2**
SNR=6.8
JOF Joensuu 72.75 333 *e*P **P** **11 49 30.1 -1.7**
JOF pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
JOF Joensuu 72.75 333 *e*p **P** **11 49 30.1 -1.7**
comp=Z,5.3nm,0.5s,mb4.2
ASHO Ashiyiah 72.85 289 P **P** **11 49 33.1 +0.1**
SNR=6.0
VRHR Novokhopersk 72.86 319 *e*P **P** **11 49 30.5 -2.1**
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
ARQ Araqi 73.00 288 P **P** **11 49 34.1 +0.2**
SNR=14
OBN Obninsk 73.93 324*d i*P **P** **11 49 37.4 -1.2**
OBN *e*S S 11 58 25.0 -3.5
OBN pmax pmax
comp=Z,17nm,1.2s,mb4.3
VSR Storozhevoye 74.22 320 *e*P **P** **11 49 39.2 -1.2**
VSR *e*S S 11 58 26.9 -4.9
VSR pmax pmax
comp=Z,30nm,1.2s,mb4.6
VSR pmax pmax
comp=N,7.0nm,0.7s
VSR pmax pmax
comp=E,20nm,0.9s
VSR smax
comp=E,140nm,1.1s
VSR smax
comp=Z,20nm,1.4s
VSR smax
comp=N,110nm,1.0s
VORD Divnogorie 74.26 320 *e*P **P** **11 49 39.1 -1.5**
VORD *e*S S 11 58 26.8 -5.4
VORD pmax pmax
comp=Z,10.0nm,1.0s,mb4.2
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD smax
comp=N,160nm,3.1s
VORD smax
comp=Z,60nm,3.0s
VORD smax
comp=E,60nm,1.3s
NLWA Neilton Lookou 74.29 44 *e*P **P** **11 49 42.0 +1.1**
comp=E,7.0nm,0.7s,mb4.2
HDW Hoodsport 74.69 44 P **P** **11 49 43.9 +0.9**
A05A Maple Falls 74.69 42 ⇑P **P** **11 49 43.0 -0.1**
baz=74
E03A Lebam 74.84 45 ⇑P **P** **11 49 44.5 +0.6**
baz=75
ZEI Tsey 74.84 311 *e*P **P** **11 49 42.3 -1.7**
ZEI pmax pmax
comp=Z,14nm,0.5s,mb4.7
GNW Green Mountain 74.86 44 *e*P **P** **11 49 44.8 +0.8**
F03A Seaside 75.10 46 ||P **P** **11 49 46.4 +1.0**
baz=75
JCW Jim Creek 75.13 43 P **P** **11 49 45.9 +0.4**
KIV Kislovodsk 75.15 312*c i*P **P** **11 49 45.9 +0.2**
KIV *i* 11 49 54.6
KIV pmax pmax
comp=Z,39nm,1.1s,mb4.8
KIV Kislovodsk 75.15 312 *e*P **P** **11 49 47.1 +1.4**
KIV Kislovodsk 75.15 312 P **P** **11 49 46.4 +0.6**
SNR=5.3
KAF Kangasniemi 75.17 333 *e*P **P** **11 49 43.3 -2.1**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.2
KAF Kangasniemi 75.17 333 *e*p **P** **11 49 43.3 -2.1**
comp=Z,4.3nm,0.4s,mb4.2
URZ Urewera 75.19 150 P **P** **11 49 45.7 -0.2**
comp=Z,5.1nm,0.5s,mb4.2,baz=77,slow=4.0,SNR=5.6
B06A Marblemount 75.26 43 ||P **P** **11 49 46.9 +0.7**
baz=75
GNI Garni 75.35 308*d i*P **P** **11 49 47.1 +0.2**
GNI pmax pmax
comp=Z,45nm,1.5s
HTW Haystack Looko 75.40 43 P **P** **11 49 47.5 +0.5**
D05A Enumclaw 75.54 44 ||P **P** **11 49 48.5 +0.7**
baz=75
FINES FINESS Array B 75.62 333 P **P** **11 49 46.9 -1.1**
comp=Z,8.5nm,0.4s,mb4.5,baz=65,slow=5.0,SNR=82
FINES S S 11 58 41.8 -4.8
comp=Z,1.8nm,0.7s,baz=69,slow=17,SNR=4.6
FINES FINESS Array B 75.62 333 P **P** **11 49 46.9 -1.1**
FINES S S 11 58 41.8 -4.8
FINES pmax pmax
comp=Z,9.0nm,0.4s
FINES smax
comp=N,2.0nm,0.7s
FINES FINESS Array B 75.62 333 P **P** **11 49 46.9 -1.1**
FINES S S 11 58 41.8 -4.8
TDL Tradedollar La 75.76 45 P **P** **11 49 49.9 +0.8**
F04A Amboy 75.82 45 ||P **P** **11 49 50.0 +0.6**
baz=76
LON Longmire 75.84 44 *e*P **P** **11 49 49.5 0.0**
G04A Mulino 76.10 46 ||P **P** **11 49 51.5 +0.5**
baz=76
NLW Nelson Butte 76.14 43 P **P** **11 49 51.5 +0.3**
ETW Entiat 76.36 43 *e*P **P** **11 49 52.4 +0.1**
H04A Detroit Lake 76.52 46 ⇑P **P** **11 49 53.4 +0.1**
baz=76
WTV Waterville 76.54 43 P **P** **11 49 53.2 -0.1**
HOOD Mount Hood Mea 76.57 46 *e*P **P** **11 49 54.4 +0.8**
B08A Colville Reser 76.61 42 ⇑P **P** **11 49 53.5 -0.2**
baz=76
VSU Vasula 76.97 330*c i*P **P** **11 49 54.8 -0.7**
VSU pmax pmax
comp=Z,25nm,1.2s,mb4.5
G06A Carlson Farm, 77.25 45 ⇑P **P** **11 49 57.0 -0.3**
baz=77
F07A Phinny Hill Vi 77.39 45 ⇑P **P** **11 49 58.2 +0.2**
baz=77
HAWA Hanford 77.40 44 *e*P **P** **11 49 58.2 +0.1**
RPZ Rata Peaks 77.44 157 P **P** **11 49 57.1 -1.0**
comp=Z,28nm,0.6s,mb4.9,baz=114,slow=2.7,SNR=14
D08A Wollman Farm, 77.46 43 ||P **P** **11 49 58.6 +0.2**
baz=77
YBH Yreka Blue Hor 77.49 49 P **P** **11 49 59.1 +0.4**
comp=Z,4.5nm,0.8s,mb4.0,baz=280,slow=3.6,SNR=8.1
YBH Yreka Blue Hor 77.49 49 P **P** **11 49 59.1 +0.5**
YBH pmax pmax
comp=Z,5.0nm,0.8s
C09A Chrisman Ranch 77.50 42 ||P **P** **11 49 58.5 -0.1**
baz=77
VIPM Ingram Point 77.59 46 P **P** **11 49 59.6 +0.4**
KBD Kabd 77.79 297 *e*P **P** **11 49 59.4 -1.1**
QRN Al-Qurain 77.80 296 *e*P **P** **11 49 59.3 -1.3**
QRN AMb AMB 11 50 00.2
comp=Z,102nm,0.7s,mb5.3
MIB Mutribah 77.80 297 *e*P **P** **11 49 59.5 -1.1**
MIB AMb AMB 11 50 00.3
comp=Z,176nm,0.6s,mb5.5
NEW Newport 77.96 42 ⇑P **P** **11 50 01.1 0.0**
baz=78
NEW Newport 77.96 42 *e*P **P** **11 50 01.0 -0.1**
RDF Al-Radifah 78.01 296 *e*P **P** **11 50 01.0 -0.7**
RDF AMb AMB 11 50 01.9
comp=Z,136nm,0.7s,mb5.4
NAY Al-Naaiem 78.11 297 *e*P **P** **11 50 01.2 -1.1**
NAY AMb AMB 11 50 02.0
comp=Z,86nm,0.8s,mb5.1
ANN Anapa 78.15 315 *e*P **P** **11 50 00.4 -1.8**
ANN *e**PP pP 11 51 53.7 +0.7
ANN *e*S S 11 59 10.1 -4.0
ANN pmax pmax
comp=Z,64nm,1.3s,mb4.8
E09A Wood Farm, Sta 78.19 43 ||P **P** **11 50 02.5 +0.2**
baz=78
K05A Summer Lake 78.24 48 ||P **P** **11 50 03.3 +0.6**
baz=78,SNR=5.4
G08A Pilot Rock 78.27 45 ||P **P** **11 50 02.7 -0.1**
baz=78
LASM Arnica Sink 78.30 49 P **P** **11 50 03.7 +0.6**
I07A Izee 78.50 46 ⇑P **P** **11 50 04.0 -0.1**
baz=78
C11A Tepee Creek (N 78.67 42 ||P **P** **11 50 04.9 0.0**
baz=78
IDID Didziasalis 78.71 327 *e*P **P** **11 50 04.6 -0.3**
B12A Libby 78.75 41 ||P **P** **11 50 05.7 +0.5**
baz=78
ISAL Salakas 78.85 328 *e*P **P** **11 50 05.4 -0.3**
ISAL AMB AMB 11 50 06.0
comp=Z,7.2nm,0.7s,mb4.1
IIGN Ignalina 78.93 328 *e*P **P** **11 50 05.8 -0.3**
IIGN AMB AMB 11 50 06.3
comp=Z,5.5nm,0.6s,mb4.0
F10A Beach Ranch, E 79.01 44 ||P **P** **11 50 06.7 0.0**
baz=79
A13A Flathead Natio 79.19 40 ||P **P** **11 50 07.7 +0.1**
baz=79
WALA Waterton Lakes 79.41 40 *e*P **P** **11 50 09.1 +0.3**
comp=Z,0.3nm,1.2s
WALA *e*pP pP 11 52 00.5 +0.5
B13A Whitefish 79.44 41 ⇑P **P** **11 50 09.2 +0.3**
baz=79
J08A Circle Bar Ran 79.50 46 P **P** **11 50 09.9 +0.5**
baz=79,SNR=15
BSMT Bassoo Peak 79.52 41 *e*P **P** **11 50 10.1 +0.7**
D12A Red Ives Fores 79.60 42 ⇑P **P** **11 50 09.4 -0.4**
baz=79
A14A Double T Ranch 79.73 40 ⇑P **P** **11 50 10.8 +0.3**
baz=80
C13A Hot Springs 79.73 41 ⇑P **P** **11 50 10.4 -0.2**
baz=80,SNR=9.9
E12A Beaver Dam Sad 79.79 43 ⇑P **P** **11 50 10.9 +0.1**
baz=80
KIEV Kiev 79.98 323 *e*P **P** **11 50 10.4 -1.4**
KIEV pmax pmax
comp=Z,12nm,0.8s,mb4.3
KIEV Kiev 79.98 323 *e*P **P** **11 50 10.4 -1.4**

comp=Z,12nm,0.8s,mb4.3
D13A Huson 80.10 42 ⇑P P 11 50 11.9 -0.5
baz=80
A15A Johnson Ranch, 80.11 39 ⇑P P 11 50 12.1 -0.3
baz=80,SNR=12
B14A Marquette Ranc 80.13 40 P P 11 50 13.2 +0.6
baz=80,SNR=12
SIM Simferopol' 80.14 316 P P 11 50 11.9 -0.8
SIM pmax pmax
comp=Z,24nm,0.7s,mb4.6
SWMT Swartz Lake 80.16 41 *e*P **P 11 50 12.5 -0.2**
SWMT *e*pP pP 11 52 04.7 +0.4
C14A Swan Lake 80.17 41 ⇑P P 11 50 12.7 -0.1
baz=80
F12A Elk City 80.31 43 ⇑P P 11 50 13.5 -0.1
baz=80,SNR=16
MSO Missoula 80.54 42 ⇓P P 11 50 14.1 -0.7
baz=80
MALT Malatya 80.56 308 *e*P **P 11 50 15.2 +0.2**
MALT pmax pmax
comp=Z,29nm,1.4s,mb4.5
MALT Malatya 80.56 308 *e*P **P 11 50 15.2 +0.2**
comp=Z,29nm,1.4s,mb4.5
MALT Malatya 80.56 308 P P 11 50 15.3 +0.3
B15A Bradely Ranch, 80.56 40 P P 11 50 14.8 0.0
baz=80,SNR=9.0
G12A Big Creek, Yel 80.59 44 ⇑P P 11 50 14.1 -1.0
baz=80
SLMT Seeley Lake 80.59 41 *e*P **P 11 50 14.6 -0.4**
SLMT *e*pP pP 11 52 05.5 -1.2
E13A Victor 80.60 42 ⇓P P 11 50 14.0 -1.0
baz=80
WCN Washoe City 80.61 50 ⇑P P 11 50 15.2 -0.1
baz=80
D14A Greenough 80.67 41 P P 11 50 14.8 -0.6
baz=80,SNR=7.2
A16A West Butte Ran 80.76 39 P P 11 50 15.8 -0.1
baz=80,SNR=15
CMB Columbia Colle 80.78 52 *e*P **P 11 50 15.9 -0.3**
CMB pmax pmax
comp=Z,10.0nm,1.2s,mb4.1
CMB Columbia Colle 80.78 52 *e*P **P 11 50 15.9 -0.3**
comp=Z,10nm,1.2s,mb4.1
CMB *e*pP pP 11 52 06.0 -2.0
C15A Salmond Ranch, 80.82 40 ⇓P P 11 50 16.5 +0.3
baz=81,SNR=16
B16A M & M Farms, S 80.99 40 ⇑P P 11 50 16.9 -0.1
baz=81
E14A Clinton 81.02 42 ⇑P P 11 50 17.0 -0.2
baz=81
MFID Camas Ranch 81.15 45 P P 11 50 18.4 +0.4
baz=81,SNR=8.0
H12A Diamond D Ranc 81.17 44 P P 11 50 18.0 -0.1
baz=81,SNR=7.9
D15A Lincoln 81.26 41 ⇑P P 11 50 18.4 -0.1
baz=81
A17A Triple J Farms 81.26 39 ⇑P P 11 50 18.2 -0.2
baz=81,SNR=10
G13A Cobalt 81.27 43 ⇑P P 11 50 18.0 -0.6
baz=81,SNR=5.1
C16A Fuhringer Ranc 81.30 40 P P 11 50 18.5 -0.1
baz=81,SNR=16
I12A Atlanta 81.39 45 P P 11 50 19.4 +0.2
baz=81,SNR=5.6
F14A Wisdom 81.41 42 ⇓P P 11 50 19.6 +0.3
baz=81
NB2 NORSAR Subarra 81.45 337 P P 11 50 17.5 -1.6
comp=Z,6.0nm,0.6s,mb4.2,baz=46,slow=4.8
NOA NORSAR Array B 81.45 337 P P 11 50 17.7 -1.4
comp=Z,7.2nm,0.6s,mb4.3,baz=46,slow=4.9,SNR=27
NOA pP pP 11 52 14.1 +2.9
comp=Z,2.0nm,0.8s,baz=44,slow=5.4,SNR=4.7
NOA PP PP 11 53 33.2 -0.6
comp=Z,2.5nm,0.8s,baz=46,slow=8.4,SNR=7.4
NOA NORSAR Array B 81.45 337 P P 11 50 17.7 -1.4
NOA *PP pP 11 52 14.1 +3.0
NOA 11 53 33.2
NOA pmax pmax
comp=Z,7.0nm,0.6s
NOA NORSAR Array B 81.45 337 P P 11 50 17.7 -1.4
NOA pP pP 11 52 14.1 +2.9
NOA PP PP 11 53 33.2 -0.6
E15A Deer Lodge 81.52 42 P P 11 50 19.9 +0.1
baz=81,SNR=13
H13A Challis 81.53 44 P P 11 50 20.1 +0.2
baz=81,SNR=21
B17A L&G Farms, Che 81.56 39 ⇑P P 11 50 19.9 0.0
baz=81,SNR=19
A18A Metzger Ranch, 81.74 38 P P 11 50 20.8 -0.2
baz=82,SNR=13
D16A Dana Ranch, Ca 81.82 41 P P 11 50 21.5 +0.2
baz=82,SNR=13
HRY Holter Researc 81.83 41 *e*P **P 11 50 21.3 -0.1**
comp=Z,5.0nm,0.4s,mb4.3
HRY *e*PcP PcP 11 50 25.6 +0.1
F15A Butte 81.92 42 P P 11 50 21.9 0.0
baz=82,SNR=9.0
C17A Wharram Farm, 81.94 40 ⇓P P 11 50 21.1 -0.8
baz=82,SNR=6.3
LRM Limekiln Ridge 81.95 42 *e*P **P 11 50 22.3 +0.3**
comp=Z,106nm,1.2s,mb5.2
LRM *e*pP pP 11 52 14.4 +0.2
I13A Wildhorse Cree 81.95 44 P P 11 50 22.9 +0.7
baz=82,SNR=9.5
HLID Hailey 81.96 45 ⇓P P 11 50 22.7 +0.6
baz=82,SNR=6.5
E16A East Helena 82.02 41 P P 11 50 22.6 +0.2
baz=82,SNR=9.1
NVAR Mina Array Bea 82.02 51 P P 11 50 22.9 +0.3
comp=Z,3.3nm,0.9s,mb3.8,baz=278,slow=5.2,SNR=23
NVAR pP pP 11 52 16.7 +1.9
comp=Z,1.9nm,0.8s,baz=289,slow=5.2,SNR=5.9
H14A Leadore 82.04 43 ⇑P P 11 50 22.7 +0.2
baz=82
B18A Beardsley Farm 82.07 39 ⇑P P 11 50 22.6 0.0
baz=82,SNR=11
DLMT Dillon 82.11 42 *e*P **P 11 50 22.9 0.0**
comp=Z,7.5nm,1.0s,mb4.1
J13A Cove Ranch, Pi 82.19 45 P P 11 50 24.1 +0.7
baz=82,SNR=9.8
D17A Six Diamond Ra 82.25 40 P P 11 50 23.6 0.0
baz=82,SNR=12
G15A Dillon 82.28 43 ⇓P P 11 50 23.5 -0.2
baz=82,SNR=11
EGMT Eagleton 82.29 39 ⇓P P 11 50 23.6 -0.1
baz=82,SNR=5.9
EGMT Eagleton 82.29 39 *e*P **P 11 50 23.6 -0.1**
comp=Z,6.1nm,0.2s,mb4.7
I14A Mackay 82.36 44 ⇑P P 11 50 25.0 +0.9
baz=82,SNR=28
F16A Kennard Place, 82.46 42 P P 11 50 24.8 +0.2
baz=82,SNR=11
H15A Lima 82.48 43 ⇓P P 11 50 25.2 +0.5
baz=82
B19A Brinkman Farms 82.50 38 ⇓P P 11 50 24.8 0.0
baz=82
BOZ Bozeman (W) 82.53 42 P P 11 50 25.4 +0.4
baz=82,SNR=7.7
BOZ Bozeman (W) 82.53 42 *e*P **P 11 50 25.2 +0.2**
comp=Z,1.6nm,0.6s,mb3.7
E17A Martinsdale 82.53 41 P P 11 50 25.5 +0.5
baz=82,SNR=14
J14A Carey 82.64 45 P P 11 50 26.8 +1.2
baz=82,SNR=11
G16A Moss Hill, Enn 82.65 42 P P 11 50 25.7 +0.1
baz=82,SNR=5.9
P10A Eureka 82.67 49 ⇑P P 11 50 26.0 +0.2
baz=82
D18A Linhart Farms, 82.73 40 ⇓P P 11 50 26.0 +0.1
baz=82
VES Vestal, Richgr 82.76 53 ⇓P P 11 50 25.6 -0.8
baz=83
C19A Slack Wire Ran 82.85 39 P P 11 50 26.7 +0.2
baz=83,SNR=6.8
I15A Monteview 82.91 44 ⇑P P 11 50 27.5 +0.6
baz=83
F17A Fitzpatrick Pl 82.96 41 P P 11 50 27.4 +0.3
baz=83,SNR=7.3
E18A Harlowton 83.02 40 P P 11 50 28.0 +0.6
baz=83,SNR=11
BRTR Keskin Array B 83.10 311 P P 11 50 26.9 -1.1
comp=Z,8.0nm,0.6s,mb4.4,baz=98,slow=3.6,SNR=45
BRTR pP pP 11 52 21.0 +0.4
comp=Z,1.4nm,0.9s,baz=67,slow=3.7,SNR=3.2
BRTR Keskin Array B 83.10 311 *ce*P **P 11 50 26.8 -1.2**
BRTR pmax pmax
comp=Z,8.0nm,0.6s
Q10A Clear Creek Ra 83.11 50 ⇑P P 11 50 28.2 +0.1
baz=83
P11A Circle Ranch, 83.17 49 ⇓P P 11 50 28.8 +0.5
baz=83
G17A Pierce Place, 83.23 42 ⇑P P 11 50 29.3 +0.8
baz=83,SNR=5.1
K14A Jones Ranch, D 83.26 45 ⇓P P 11 50 29.5 +0.7
baz=83
D19A Cripps Ranch, 83.27 40 ⇑P P 11 50 28.5 -0.1
baz=83,SNR=7.6
H16A Russell Place, 83.27 43 ⇓P P 11 50 29.5 +0.8
baz=83,SNR=7.4
C20A Veseth Ranch, 83.44 39 ⇑P P 11 50 29.6 +0.1
baz=83,SNR=6.5
S10A Tonopah Range, 83.44 50 ⇑P P 11 50 29.9 +0.2
baz=83
R10A Warm Springs 83.45 50 ⇑P P 11 50 29.8 0.0
baz=83
L14A Malta 83.50 46 ⇓P P 11 50 30.9 +1.0
baz=83,SNR=5.8
F18A Big Timber 83.50 41 P P 11 50 30.0 +0.1
baz=83,SNR=9.1
B21A Ellsworth Farm 83.56 38 ⇑P P 11 50 29.7 -0.4
baz=83
I16A Newdale 83.58 43 ⇓P P 11 50 31.5 +1.2
baz=83,SNR=5.5
E19A Rath Farm, Rou 83.72 40 P P 11 50 30.8 -0.1
baz=84,SNR=9.5
D20A Manuel Ranch, 83.72 39 P P 11 50 31.1 +0.2
baz=84,SNR=10.0
MPMC Manual Prospec 83.77 52 ⇓P P 11 50 31.2 -0.2
baz=84
J16A Bone 83.83 44 P P 11 50 32.5 +1.0
baz=84,SNR=8.0
H17A Grant Village 83.84 42 ⇑P P 11 50 33.9 +2.4
baz=84
TIRR Tirgusor 83.85 318 *e*P **P 11 50 30.1 -1.5**
TIRR pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
TIRR Tirgusor 83.85 318 *e*P **P 11 50 30.1 -1.6**
comp=Z,5.3nm,0.9s,mb4.1
BUR08 Bucovina Ar. S 83.87 322 *e*P **P 11 50 30.7 -1.0**
C21A Desert Coulee 83.87 38 ⇑P P 11 50 31.3 -0.3
baz=84
IMW Indian Meadow 83.90 43 *e*P **P 11 50 32.7 +0.9**
comp=Z,5.7nm,1.0s,mb4.1
R11A Troy Canyon, C 83.91 50 ⇓P P 11 50 32.0 0.0
baz=84
LRMC Laurel Mountai 83.92 53 ⇑P P 11 50 32.3 +0.2
baz=84
F19A Roth Farm, Mol 83.98 41 ⇑P P 11 50 31.9 -0.3
baz=84
EDW2 Edwards Air Fo 84.01 54 ⇓P P 11 50 32.9 +0.3
baz=84
L15A Malad City 84.05 45 ⇑P P 11 50 33.4 +0.7
baz=84
E20A Meyer Farm, Mu 84.07 40 ⇓P P 11 50 32.7 0.0
baz=84
K16A Soda Springs 84.09 44 ⇓P P 11 50 34.0 +1.1
baz=84,SNR=6.9
I17A Pilgrim Ck. 84.11 43 ⇓P P 11 50 34.7 +1.8
baz=84
S11A Rachel 84.16 50 ⇓P P 11 50 33.5 +0.2
baz=84
RLMT Red Lodge 84.20 41 P P 11 50 34.1 +0.8
baz=84,SNR=8.3
RLMT Red Lodge 84.20 41 *e*P **P 11 50 33.9 +0.5**
comp=Z,2.5nm,0.4s,mb4.1
H18A Shoshone NF, C 84.22 42 ⇓P P 11 50 34.2 +0.8
baz=84
M15A Larsen Ranch, 84.30 46 ⇓P P 11 50 34.3 +0.4
baz=84
U10A Ash Meadows, A 84.39 52 ⇑P P 11 50 34.6 +0.2
baz=84
R12A Pony Springs, 84.57 49 ⇓P P 11 50 35.4 +0.1
baz=84
H19A Powell 84.63 42 ⇓P P 11 50 35.5 +0.1
baz=84
GSC Goldstone 84.63 53 ⇑P P 11 50 35.4 -0.2
baz=84
L16A Fish Haven 84.64 45 ⇓P P 11 50 36.1 +0.6
baz=84
SHOC Shoshone 84.69 52 ⇑P P 11 50 36.0 +0.1
baz=84
DUG Dugway 84.75 47 ⇑P P 11 50 36.0 -0.1
baz=85
G20A Bridger 84.76 41 ⇑P P 11 50 35.7 -0.4
baz=84
HWUT Hardware Ranch 84.78 45 *e*P **P 11 50 37.0 +0.7**
comp=Z,2.7nm,0.8s,mb3.8
J18A Kendall Valley 84.84 43 ⇑P P 11 50 36.8 +0.3
baz=85
I19A Meeteetse 84.98 42 ⇓P P 11 50 37.3 +0.1
baz=85
Q14A Sevier Lake (B 85.10 48 ⇑P P 11 50 38.1 +0.3
baz=85
CRVS Cervenica-Dubn 85.11 324 *e*P **P 11 50 36.9 -0.8**
CRVS pmax pmax
comp=Z,8.0nm,1.4s,mb4.1
CRVS Cervenica-Dubn 85.11 324 *e*P **P 11 50 36.9 -0.8**
comp=Z,8.3nm,1.4s,mb4.1
CRVS Cervenica-Dubn 85.11 324 *e*P **P 11 50 36.9 -0.8**
TUQ Turquoise Moun 85.18 52 ⇑P P 11 50 38.8 +0.4
baz=85
H20A Greybull 85.31 41 ⇓P P 11 50 39.1 +0.4
baz=85
BW06 Boulder Array 85.37 43 ⇓P P 11 50 38.9 -0.2
baz=85
PDAR Pinedale Array 85.37 43 P P 11 50 39.1 +0.1
comp=Z,1.3nm,0.9s,baz=299,slow=2.6,SNR=12
PDAR pP pP 11 52 32.6 +0.2
comp=Z,0.5nm,0.8s,baz=294,slow=1.5,SNR=3.3
J19A Crowheart 85.39 43 ⇓P P 11 50 39.5 +0.3
baz=85
M17A Scullys Gap (B 85.42 45 ⇓P P 11 50 39.4 +0.1
baz=85
S13A Holt Ranch, En 85.47 50 ⇓P P 11 50 40.2 +0.5
baz=85
I20A Worland 85.55 42 ⇑P P 11 50 39.7 -0.2
baz=85
GMRC Granite Mounta 85.71 53 ⇑P P 11 50 41.1 +0.3
baz=86
PFO Pinyon Flat Ob 85.75 54 ⇑P P 11 50 41.4 +0.3
baz=86
H21A Big Horn, Sher 85.78 41 ⇓P P 11 50 41.1 0.0
baz=86
L19A Farson 85.87 44 ⇓P P 11 50 41.7 +0.2
baz=86
BELC Belle Mtn. Jos 85.88 54 ⇑P P 11 50 41.7 +0.1
baz=86
KECS Kecovo 85.88 324 *e*P **P 11 50 41.5 +0.1**
comp=Z,1.7nm,0.7s,mb3.8
KECS Kecovo 85.88 324 *e*P **P 11 50 41.5 +0.1**
J20A Shoshoni 85.92 42 ⇓P P 11 50 41.6 -0.1
baz=86
VYHS Vyhne 86.72 325 *e*P **P 11 50 44.7 -0.7**
VYHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
VYHS Vyhne 86.72 325 *e*P **P 11 50 44.7 -0.7**
comp=Z,3.2nm,0.8s,mb4.0
VYHS Vyhne 86.72 325 *e*P **P 11 50 44.6 -0.8**
J22A Midwest 86.83 42 ⇑P P 11 50 45.6 -0.4
baz=87
K21A Alcova 86.83 43 ⇓P P 11 50 45.6 -0.4
baz=87
CLL Collm 87.61 329 *i* P **P 11 50 47.7 -1.8**
CLL *i* *PP pP 11 52 49.7 +6.1
CLL pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
CLL Collm 87.61 329 *i* P **P 11 50 47.7 -1.8**
comp=Z,4.0nm,0.6s,mb4.3
CLL *i* pP pP 11 52 49.7 +6.1
CLL Collm 87.61 329 *i* P **P 11 50 47.7 -1.8**
comp=Z,4.0nm,0.6s,mb4.3
CLL *i* pP pP 11 52 49.7 +6.1
L23A Garrett 88.06 42 ⇓P P 11 50 51.2 -0.6
baz=88
N23A Red Feather La 88.65 43 ⇓P P 11 50 55.2 +0.6
baz=88
X19A St. Johns 90.30 50 ⇑P P 11 51 03.1 +0.8
baz=90
Q24A Divide 90.31 45 ⇑P P 11 51 03.0 +0.6
baz=90
BOJS Bojanci 90.53 324 *e*P **P 11 51 01.9 -1.3**
BOJS Bojanci 90.53 324 *e*P **P 11 51 01.9 -1.3**
VISS Visnje 90.54 325 *i* P **P 11 51 01.2 -2.0**
VISS Visnje 90.54 325 *i* P **P 11 51 01.2 -2.0**
X20A Quemado 90.77 50 ⇓P P 11 51 05.4 +0.9
baz=91
R24A Sanders Place, 90.78 45 ⇓P P 11 51 04.7 +0.2
baz=91
SDCO Great Sand Dun 90.82 46 ⇓P P 11 51 04.9 +0.1
baz=91
118A Homack Ranch, 90.85 52 ⇑P P 11 51 05.2 +0.3
baz=91
JAVS Javornik 90.88 325 *i* P **P 11 51 02.7 -2.1**
JAVS *i* pP pP 11 53 16.1 +17
JAVS *i* 11 53 22.9
JAVS Javornik 90.88 325 *i* P **P 11 51 02.7 -2.1**
JAVS *i* pP pP 11 53 16.1 +17
JAVS *i* 11 53 22.9
V22A San Miguel Ran 91.02 48 ⇑P P 11 51 05.5 -0.2
baz=91
218A Dragoon 91.17 53 ⇓P P 11 51 07.2 +0.8
baz=91
Y20A Horse Springs, 91.21 50 ⇓P P 11 51 07.2 +0.6
baz=91
U23A El Rito 91.23 47 ⇑P P 11 51 07.6 +1.0
baz=91
Z20A Nine Sixteen R 91.53 51 ⇑P P 11 51 08.9 +0.9
baz=91
ANMO Albuquerque 91.88 48 P P 11 51 09.8 +0.2
comp=Z,0.2nm,0.3s,mb3.6,baz=269,slow=6.1,SNR=7.0
ANMO pP pP 11 53 06.5 +2.0
comp=Z,0.4nm,0.7s,baz=10,slow=11,SNR=1.9
ANMO Albuquerque 91.88 48 *e*P **P 11 51 10.0 +0.3**
ANMO pmax pmax
comp=Z,1.0nm,0.8s
ANMO Albuquerque 91.88 48 *e*P **P 11 51 10.0 +0.4**
comp=Z,1.4nm,0.8s,mb4.0
CDF Champ du Feu 92.27 330 *e*P **P 11 51 08.3 -2.8**
comp=Z,11nm,0.9s,mb4.6
CDF Champ du Feu 92.27 330 *e*P **P 11 51 08.3 -2.8**
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
CDF Champ du Feu 92.27 330 *e*P **P 11 51 08.3 -2.8**
comp=Z,5.4nm,0.9s,mb4.6
SFTF Sexfontaines 93.39 331 *e*P **P 11 51 14.2 -2.1**
comp=Z,40nm,1.1s,mb5.0
SFTF Sexfontaines 93.39 331 *e*P **P 11 51 14.2 -2.1**
comp=Z,40nm,1.1s,mb5.4
SCHQ Schefferville 94.32 15 PKKP PKKPbc 12 08 14.9 -4.1
comp=Z,2.3nm,0.6s,baz=352,slow=15,SNR=4.2
LPL La Plagne 94.69 329 *e*P **P 11 51 20.3 -2.0**
comp=Z,8.2nm,0.8s,mb4.6
LPL La Plagne 94.69 329 *e*P **P 11 51 20.3 -2.0**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
LPL La Plagne 94.69 329 *e*P **P 11 51 20.3 -2.0**
comp=Z,4.1nm,0.8s,mb4.6
LPG La Plagne 94.70 328 *e*P **P 11 51 20.5 -1.8**
CEL Celeste 95.07 319 *e*P **P 11 51 22.4 -1.8**
comp=Z,21nm,0.8s,mb5.3
SBF Sospel 95.61 327 *e*P **P 11 51 22.8 -3.6**
comp=Z,30nm,0.9s,mb5.2
SBF Sospel 95.61 327 *e*P **P 11 51 22.8 -3.6**
SBF pmax pmax
comp=Z,15nm,0.9s,mb5.2
SBF Sospel 95.61 327 *e*P **P 11 51 22.8 -3.6**
comp=Z,15nm,0.9s,mb5.2
TXAR Lajitas Array 97.16 51 P P 11 51 34.1 +0.3
comp=Z,0.6nm,0.8s,mb3.9,baz=174,slow=1.3,SNR=5.8
TXAR pP pP 11 53 30.1 +1.0
comp=Z,1.3nm,0.9s,baz=28,slow=3.2,SNR=8.5
TXAR Lajitas Array 97.16 51 P P 11 51 34.1 +0.4
TXAR *PP pP 11 53 30.1 +1.1
TXAR pmax pmax
comp=Z,1.0nm,0.8s
SADO Sadowa 99.43 26 PKKPbc PKKPbc 12 07 58.8 -6.2
comp=Z,1.3nm,0.5s,baz=135,slow=2.9,SNR=3.2
TORD Torodi Ar. Bea 121.64 309 PKP PKPdf 11 56 50.6 -1.6
comp=Z,3.3nm,0.5s,baz=53,slow=1.2,SNR=45
TORD PP PP 11 58 29.6 -3.0
comp=Z,1.7nm,1.1s,baz=46,slow=5.3,SNR=3.5
TORD PKKPbc PKKPbc 12 06 53.3 +0.2
comp=Z,1.5nm,0.7s,baz=218,slow=3.5,SNR=6.3
BOSA Boshof 122.42 253 PKP PKPdf 11 56 52.8 -0.4
comp=Z,4.4nm,0.7s,baz=110,slow=2.2,SNR=13
BOSA Boshof 122.42 253 PKIKP PKPdf 11 56 52.8 -0.4
BOSA pmax pmax
comp=Z,4.0nm,0.7s
DBIC Dimbokro 130.75 309 PKP PKPdf 11 57 08.4 -1.2
comp=Z,2.7nm,0.6s,baz=47,slow=2.7,SNR=3.5
DBIC SKPbc SKPbc 11 59 42.5 -2.9
comp=Z,29nm,0.9s,baz=28,slow=3.2,SNR=16
DBIC Dimbokro 130.75 309 PKP PKPdf 11 57 08.4 -1.2
DBIC SKPbc SKPbc 11 59 42.5 -2.9
SDV Santo Domingo 133.29 42 *e*PKPdf **PKPdf 11 57 13.8 -0.6**
LPAZ La Paz 152.32 70 PKP PKPdf 11 57 47.9 +0.7
comp=Z,1.1nm,0.7s,baz=340,slow=2.1,SNR=5.2
LPAZ PKPbc PKPbc 11 57 55.2 +0.8
comp=Z,3.3nm,0.6s,baz=295,slow=0.8,SNR=14
LPAZ pPKPbc pPKPbc 12 00 00.5 +4.5
comp=Z,3.9nm,0.8s,baz=270,slow=2.0,SNR=6.2
LPAZ La Paz 152.32 70 *e*PKPdf **PKPdf 11 57 47.5 +0.4**
LPAZ *e*PKPbc PKPbc 11 57 55.0 +0.6
LPAZ *e*PKPab PKPab 11 58 07.2 +0.3
PLCA Paso Flores 152.82 125 PKPbc PKPbc 11 57 54.9 0.0
comp=Z,9.5nm,0.7s,baz=244,slow=3.4,SNR=40
PLCA PKPab PKPab 11 58 08.2 -0.3
comp=Z,4.0nm,0.7s,baz=196,slow=2.5,SNR=5.1
PLCA pPKPbc pPKPbc 12 00 00.5 +3.9
comp=Z,2.9nm,0.9s,baz=236,slow=3.2,SNR=3.6
PLCA Paso Flores 152.82 125 PKIKP PKPbc 11 57 54.9 0.0
PLCA 11 58 08.2
PLCA 12 00 00.5
PLCA pmax pmax
comp=Z,10.0nm,0.7s
PLCA pmax pmax
comp=Z,4.0nm,0.7s
PLCA Paso Flores 152.82 125 *e*PKPbc **PKPbc 11 57 54.8 0.0**
PLCA *e*PKPab **PKPab 11 58 08.8 +0.3**
CPUP Villa Florida 165.39 86 PKP PKPdf 11 58 01.6 -0.3
comp=Z,0.3nm,0.3s,baz=138,slow=6.4,SNR=2.9

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*ISCJB **06** 11:56:38.3±0.6, 39°.83N±0°.03×23°.83E±0°.05, h8km±5km,*
Error ellipse: s-maj=7.1km s-min=4.3km az=174.2
*THE **06** 11:56:38.5, 39°.84N×23°.87E, h6km±1km, ML2.5/4, Error*
ellipse: s-maj=2.0km s-min=1.1km az=223.0
*ATH **06** 11:56:38.5, 39°.85N×23°.86E, h6km±3km, MD2.7/4*
*CSEM **06** 11:56:38.5±0.2, 39°.84N×23°.80E, h10km, ML2.5/4, Error*
ellipse: s-maj=5.8km s-min=4.4km az=91.0

ISC 06 11:56:38.7±0.6, 39°.84N±0°.03×23°.81E±0°.06, h14km±5km,
n22, σ0.9 75/35, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.13**	**310**	P	**Pg**	**11 56 42.1**	**-0.1**
PAIG				S	**Sg**	**11 56 45.2**	**+0.5**
PAIG	**Paliouri**	**0.13**	**310**	P	**Pg**	**11 56 42.1**	**-0.1**
PAIG				S	**Sg**	**11 56 45.2**	**+0.5**
OUR	**Ouranopolis**	**0.51**	**15**	P	**Pg**	**11 56 48.6**	**-0.1**
OUR				S	**Sg**	**11 56 56.0**	**+0.5**
OUR	**Ouranopolis**	**0.51**	**15**	P	**Pg**	**11 56 48.6**	**-0.1**
OUR				S	**Sg**	**11 56 56.0**	**+0.5**
PLG	**Polygyros**	**0.60**	**332**	*e*PB	**Pg**	**11 56 49.8**	**-0.7**
PLG				*e*SB	**Sb**	**11 56 58.2**	**-1.1**
PLG	**Polygyros**	**0.60**	**332**	P	**Pg**	**11 56 49.8**	**-0.7**
PLG				S	**Sg**	**11 56 58.4**	**-0.1**
PLG	**Polygyros**	**0.60**	**332**	P	**Pg**	**11 56 49.8**	**-0.7**
PLG				*e*Sb	**Sb**	**11 56 58.2**	**-1.1**
AOS	**Alonnisos**	**0.67**	**176**	P	**Pg**	**11 56 50.9**	**-0.8**
AOS				S	**Sg**	**11 57 00.7**	**+0.1**
AOS	**Alonnisos**	**0.67**	**176**	P	**Pg**	**11 56 50.9**	**-0.8**
AOS				S	**Sg**	**11 57 00.7**	**+0.1**
NEO	**Neokhori**	**0.70**	**221**	*e*PG	**Pg**	**11 56 52.1**	**-0.2**
NEO				*e*SB	**Sb**	**11 57 02.9**	**+0.8**
NEO	**Neokhori**	**0.70**	**221**	*e*Pg	**Pg**	**11 56 52.1**	**-0.2**
NEO				*e*Sb	**Sb**	**11 57 02.9**	**+0.8**
HORT	**Hortiatis**	**0.93**	**324**	P	**Pb**	**11 56 55.9**	**-0.7**
HORT				S	**Sg**	**11 57 09.8**	**+0.9**
HORT	**Hortiatis**	**0.93**	**324**	P	**Pb**	**11 56 55.9**	**-0.7**
HORT				S	**Sg**	**11 57 09.8**	**+0.9**
SOH	**Sokhos**	**1.04**	**340**	*e*PB	**Pb**	**11 56 58.4**	**0.0**
SOH	**Sokhos**	**1.04**	**340**	*e*Pb	**Pb**	**11 56 58.4**	**0.0**
LIT	**Litokhoron**	**1.05**	**285**	*e*PG	**Pg**	**11 56 58.7**	**-0.2**
LIT	**Litokhoron**	**1.05**	**285**	*e*Pg	**Pg**	**11 56 58.7**	**-0.2**
LIA	**Limnos Island**	**1.06**	**86**	*e*PB	**Pb**	**11 56 57.8**	**-0.9**
LIA	**Limnos Island**	**1.06**	**86**	*e*Pb	**Pb**	**11 56 57.8**	**-0.9**
THL	**Klokotos Trika**	**1.42**	**259**	*e*Pn	**Pn**	**11 57 04.3**	**+0.4**

ALN	**Alexandroupoli**	**2.00**	**58**	*e*PN	**Pn**	**11 57 14.5**	**+2.4**
ALN	**Alexandroupoli**	**2.00**	**58**	*e*Pn	**Pn**	**11 57 14.5**	**+2.4**

DJA 06 11:56:48,7°.81S×118°.69E, h9km, MLv3.8/6, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKSI	**Bulukumba**	**2.85**	**30**	P	Pn	11 57 34.0	+0.3
BKSI				S	Sn	11 58 09.9	+1.7
KHKI	**Kahang-Kahang**	**3.10**	**260**	P	Pn	11 57 37.3	+0.2
KHKI				S	Sn	11 58 16.6	+2.2
SRBI	**Singaraja**	**3.46**	**265**	P	Pn	11 57 41.2	-0.8
IGBI	**Denpasar**	**3.65**	**254**	P	Pn	11 57 45.9	+1.2
JAGI	**Jajag, Banyuwa**	**4.54**	**261**	P	Pn	11 57 57.6	+0.6
TTSI	**Tana Toraja**	**4.87**	**13**	P	Pn	11 58 02.6	+1.2

*ISCJB **06** 12:03:16.6±0.5, 42°.88N±0°.04×84°.06E±0°.06, h10km, mb3.6/9, Error ellipse: s-maj=6.3km s-min=5.3km az=148.6*
*IDC **06** 12:03:16.2±0.8, 42°.67N×83°.85E, h0km, mb3.8/9, mb1 3.8/14, mb1mx3.7/29, mbtmp3.7/14, ML3.2/5, Error ellipse: s-maj=23.2km s-min=12.8km az=51.0*
*BJI **06** 12:03:17.4, 42°.59N×83°.98E, h7km, ML3.7/11*
*NNC **06** 12:03:17.1±0.8, 42°.83N×83°.96E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=6.6km s-min=2.6km az=133.0*
*NEIC **06** 12:03:18.3±0.7, 42°.72N×83°.96E, h10km, mb3.3/1, Error ellipse: s-maj=13.4km s-min=10.5km az=216.0*

ISC 06 12:03:18.7±0.5, 42°.82N±0°.04×84°.09E±0°.06, h10km, n33, σ1°.24/48, mb3.6/9, 10C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.82**	**68**	Pn	**Pn**	**12 04 09.5**	**+5.8**
WMQ				Sn	**Sn**	**12 04 46.5**	**+8.8**
WMQ	comp=N,310nm,0.8s			smax			
WMQ	comp=E,380nm,0.8s			smax			
MK31	**Makanchi Array**	**4.18**	**343**	Pn	**Pn**	**12 04 24.4**	**+2.0**
MK31	baz=159,slow=14,SNR=130			⇑Pg	**Pg**	**12 04 33.4**	**-5.3**
MK31	comp=E,15nm,0.5s,baz=166,slow=15,SNR=43			⇑Sn	**Sn**	**12 05 17.1**	**+5.9**
MK31	comp=E,26nm,0.6s,baz=165,slow=16,SNR=2.7			⇑Lg		12 05 27.9	
MK31	comp=E,127nm,0.6s,baz=161,slow=29,SNR=14 **Makanchi Array**	**4.18**	**343**	*e*Pn	**Pn**	**12 04 24.6**	**+2.1**
MK31				*e*Sg	**Sg**	**12 05 27.8**	**-5.0**
MKAR	**Makanchi Array**	**4.18**	**343**	Pn	**Pn**	**12 04 24.6**	**+2.2**
MKAR	comp=E,1.0nm,0.3s,baz=167,slow=14,SNR=23			Pg	**Pg**	**12 04 34.9**	**-3.8**
MKAR	comp=E,7.4nm,0.3s,baz=155,slow=16,SNR=44			Sn	**Sn**	**12 05 06.0**	**-5.2**
MKAR	comp=E,10nm,0.3s,baz=162,slow=18,SNR=6.3			Lg		12 05 27.9	
MKAR	comp=E,40nm,0.3s,baz=256,slow=17,SNR=14 **Makanchi Array**	**4.18**	**343**	Pn	**Pn**	**12 04 24.6**	**+2.2**
MKAR				Pg	**Pg**	**12 04 34.9**	**-3.8**
MKAR				Sn	**Sn**	**12 05 06.0**	**-5.2**
MKAR				Lg		12 05 27.9	
TKM2	**Tokmak 2**	**6.24**	**274**	⇑Pn	**Pn**	**12 04 49.5**	**-1.3**
TKM2	comp=E,1.4nm,0.6s			⇑Pg	**Pg**	**12 05 08.5**	**-10**
TKM2	comp=E,5.0nm,0.6s			⇑Sn	**Sn**	**12 06 02.4**	**+0.3**
TKM2	comp=E,21nm,0.8s			⇓Lg		12 06 32.2	
TKM2	comp=E,35nm,0.6s **Tokmak 2**	**6.24**	**274**	*e*Pn	**Pn**	**12 04 50.7**	**-0.1**
TKM2	comp=E,11nm,0.6s			*e*Sg	**Sg**	**12 06 26.2**	**-13**
KSH	**Kashi**	**6.95**	**244**	Pn	**Pn**	**12 05 03.3**	**+2.8**
KSH				Sn	**Sn**	**12 06 20.3**	**+0.7**
KSH	comp=N,26nm,0.7s			smax			
KSH	comp=E,23nm,0.8s			smax			
AAK	**Ala-Archa**	**7.07**	**272**	Pn	**Pn**	**12 05 02.1**	**0.0**
AAK	comp=E,0.0nm,0.3s,baz=0.0,slow=10,SNR=2.5			Lg		12 06 50.2	
AAK	comp=E,0.0nm,0.3s,baz=251,slow=19,SNR=5.5 **Ala-Archa**	**7.07**	**272**	Pn	**Pn**	**12 05 02.1**	**0.0**
AAK				Lg		12 06 50.2	
KURBB	**Kurchatov Arra**	**8.69**	**336**	⇓Sn	**Sn**	**12 07 03.1**	**+0.9**
KURK	comp=E,14nm,0.8s **Kurchatov**	**8.75**	**337**	⇑Sn	**Sn**	**12 07 03.9**	**+0.3**
KK31	comp=E,68nm,1.0s **Karatay Array**	**9.96**	**276**	⇑Sn	**Sn**	**12 07 37.7**	**+4.2**
ZALV	comp=E,6.0nm,0.7s,baz=84,slow=28,SNR=4.1 **Zalesovo Beam**	**11.15**	**2**	Pn	**Pn**	**12 05 58.0**	**+0.1**
ZALV	comp=E,0.5nm,0.3s,baz=190,slow=14,SNR=6.8			Sn	**Sn**	**12 08 00.5**	**-2.2**
VOSK	comp=E,1.3nm,0.3s,baz=183,slow=22,SNR=10 **Vostochnaya**	**13.24**	**323**	⇓Pn	**Pn**	**12 06 24.8**	**-1.8**
VOSK	comp=E,3.7nm,1.0s			⇓Sn	**Sn**	**12 08 53.5**	**-0.2**
BVA0	comp=E,4.1nm,0.8s **Borovoye Array**	**13.71**	**323**	⇓Sn	**Sn**	**12 09 05.9**	**+0.7**
BVAR	comp=E,0.3nm,0.6s **Borovoye Array**	**13.71**	**323**	Pn	**Pn**	**12 06 31.4**	**-1.5**
BVAR	comp=E,0.2nm,0.3s,baz=141,slow=13,SNR=2.3			Sn	**Sn**	**12 08 58.6**	**-6.6**
BVAR	comp=E,0.2nm,0.3s,baz=127,slow=18,SNR=2.4			Lg		12 10 35.2	
BRVK	comp=E,0.3nm,0.3s,baz=124,slow=29,SNR=5.3 **Borovoye**	**13.78**	**323**	⇑Sn	**Sn**	**12 09 07.0**	**+0.1**
BRVK	**Borovoye**	**13.78**	**323**	*e*Pn	**Pn**	**12 06 35.1**	**+1.2**
ZRNK	**Zerenda**	**14.30**	**320**	⇑Sn	**Sn**	**12 09 19.7**	**+0.3**
SONM	comp=E,3.6nm,0.8s **Songino Array**	**16.45**	**65**	Pn	**Pn**	**12 07 12.0**	**+2.6**
SONM	comp=E,0.2nm,0.3s,baz=259,slow=12,SNR=12			Lg		12 12 11.2	
ABKAR	baz=254,slow=28,SNR=3.5 **Akbulak array**	**17.92**	**299**	*e*P	**Pn**	**12 07 25.9**	**-1.8**
AKTK	comp=E,1.8nm,0.8s **Aktyubinsk**	**19.39**	**302**	P	**Pn**	**12 07 46.5**	**+0.8**
AKTO	**Aktyubinsk**	**19.39**	**302**	P	**Pn**	**12 07 46.5**	**+0.8**
CMAR	comp=E,0.1nm,0.3s,baz=102,slow=9.4,SNR=4.6 **Chiang Mai Arr**	**27.35**	**148**	P	**P**	**12 09 04.5**	**+0.6**
KSRS	comp=E,0.4nm,0.3s,mb3.4,baz=325,slow=7.7,SNR=2.7 **Korea Array**	**33.65**	**84**	P	**P**	**12 09 60.0**	**+0.6**
FINES	comp=E,0.5nm,0.5s,mb3.8,baz=292,slow=9.2,SNR=4.0 **FINESS Array B**	**38.63**	**319**	P	**P**	**12 10 40.1**	**-1.7**
ARCES	comp=E,1.5nm,0.8s,mb3.8,baz=101,slow=9.9,SNR=4.1 **ARCESS Array B**	**39.75**	**332**	P	**P**	**12 10 50.3**	**-0.7**
NOA	comp=E,6.0nm,1.1s,mb4.3,baz=93,slow=8.9,SNR=4.7 **NORSAR Array B**	**45.81**	**320**	P	**P**	**12 11 39.2**	**-1.1**
ILAR	comp=E,0.4nm,0.6s,mb3.5,baz=80,slow=8.0,SNR=2.7 **Eielson Array**	**65.59**	**21**	P	**P**	**12 14 01.4**	**-0.7**
TORD	comp=E,0.4nm,0.8s,mb3.5,baz=296,slow=4.1,SNR=6.7 **Torodi Ar. Bea**	**75.64**	**275**	P	**P**	**12 15 01.6**	**-2.6**
WRA	comp=E,0.8nm,0.7s,mb3.8,baz=33,slow=5.8,SNR=4.2 **Warramunga Arr**	**77.70**	**132**	P	**P**	**12 15 15.2**	**-0.4**
ASAR	comp=E,0.2nm,0.6s,mb3.2,baz=334,slow=5.2,SNR=4.9 **Alice Springs**	**80.50**	**135**	P	**P**	**12 15 30.4**	**-0.5**
	comp=E,0.2nm,0.4s,mb3.4,baz=326,slow=4.6,SNR=4.3						

*ISCJB **06** 12:08:11.5±0.6, 37°.02N±0°.03×29°.20E±0°.03, h6km±7km, Error ellipse: s-maj=5.5km s-min=4.5km az=10.6*
*CSEM **06** 12:08:11.4±0.2, 37°.02N×29°.21E, h10km, MD2.7, Error ellipse: s-maj=6.4km s-min=4.7km az=5.0*
*DDA **06** 12:08:11.2, 37°.01N×29°.20E, h7km±4km, Md2.9*
*ISK **06** 12:08:11.1, 37°.07N×29°.19E, h14km, MD2.7*

ISC 06 12:08:12.0±0.5, 37°.03N±0°.03×29°.20E±0°.04, h10km±5km, n32, σ1°.13/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**61**	*e*PG	**Pg**	**12 08 16.8**	**-0.8**
GLHS	**Glhisar (BURDU**	**0.27**	**61**	*e*Pg	**Pg**	**12 08 16.8**	**-0.7**
GOLH	**Golhisar**	**0.36**	**54**	*i* P	**Pg**	**12 08 17.7**	**-1.4**
GOLH				*i* S	**Sg**	**12 08 24.5**	**+0.6**
GOLH	**Golhisar**	**0.36**	**54**	*i* P	**Pg**	**12 08 17.7**	**-1.4**
GOLH				*i* S	**Sg**	**12 08 24.5**	**+0.6**
TURN	**Turunc**	**0.50**	**252**	*i* P	**Pg**	**12 08 25.9**	**+4.1**
TURN				*i* S	**Sg**	**12 08 38.4**	**+10**
TURN	**Turunc**	**0.50**	**252**	*i* P	**Pg**	**12 08 25.9**	**+4.1**
ELL	**Elmali**	**0.63**	**116**	*e*PG	**Pg**	**12 08 24.4**	**+0.2**
ELL				*e*SG	**Sg**	**12 08 34.1**	**+1.5**
ELL	**Elmali**	**0.63**	**116**	*e*Pg	**Pg**	**12 08 24.4**	**+0.1**
ELL				*e*Sg	**Sg**	**12 08 34.1**	**+1.5**
DNZL	**Cakiroluk**	**0.67**	**350**	*i* P	**Pg**	**12 08 23.9**	**-1.2**
DNZL				*i* S	**Sg**	**12 08 34.9**	**+1.0**
DNZL	**Cakiroluk**	**0.67**	**350**	*i* P	**Pg**	**12 08 23.9**	**-1.2**
DNZL				*i* S	**Sg**	**12 08 34.9**	**+1.0**
YER	**Yerkesik**	**0.74**	**279**	*e*PG	**Pg**	**12 08 25.6**	**-0.8**
YER				*e*SG	**Sg**	**12 08 36.5**	**+0.4**
YER	**Yerkesik**	**0.74**	**279**	*e*Pg	**Pg**	**12 08 25.6**	**-0.8**
YER				*e*Sg	**Sg**	**12 08 36.5**	**+0.4**
AKAS	**Kas**	**0.85**	**158**	*i* P	**Pg**	**12 08 27.8**	**-0.8**
AKAS				*i* S	**Sg**	**12 08 42.8**	**+3.2**
AKAS	**Kas**	**0.85**	**158**	*i* P	**Pg**	**12 08 27.8**	**-0.7**
AKAS				*i* S	**Sg**	**12 08 42.8**	**+3.1**
MLSB	**Milas**	**1.17**	**284**	*e*PN	**Pn**	**12 08 33.4**	**-1.0**
MLSB	**Milas**	**1.17**	**284**	*e*Pn	**Pn**	**12 08 33.4**	**-1.0**
AYDN	**Tasoluk**	**1.23**	**301**	*i* P	**Pn**	**12 08 35.8**	**+0.6**
AYDN				*i* S	**Sb**	**12 08 52.9**	**+1.7**
AYDN	**Tasoluk**	**1.23**	**301**	*i* P	**Pn**	**12 08 35.8**	**+0.6**
AYDN				*i* S	**Sb**	**12 08 52.9**	**+1.7**
KHL	**Karahalli**	**1.32**	**11**	*e*PN	**Pn**	**12 08 35.5**	**-1.0**
KHL	**Karahalli**	**1.32**	**11**	*e*Pn	**Pn**	**12 08 35.5**	**-1.0**
DAT	**Datca**	**1.33**	**258**	*e*PN	**Pn**	**12 08 35.2**	**-1.5**
DAT	**Datca**	**1.33**	**258**	*e*Pn	**Pn**	**12 08 35.2**	**-1.5**
KHAL	**Karahalli**	**1.36**	**10**	*i* P	**Pn**	**12 08 38.2**	**+1.1**
KHAL				*i* S	**Sb**	**12 08 56.6**	**+1.5**
KHAL	**Karahalli**	**1.36**	**10**	*i* P	**Pn**	**12 08 38.2**	**+1.1**
KHAL				*i* S	**Sb**	**12 08 56.6**	**+1.6**
BDRM	**Kayabasi**	**1.41**	**272**	*i* P	**Pn**	**12 08 38.2**	**+0.5**
BDRM				*i* S	**Sn**	**12 08 57.3**	**+1.1**
BDRM	**Kayabasi**	**1.41**	**272**	*i* P	**Pn**	**12 08 38.2**	**+0.5**
BDRM				*i* S	**Sn**	**12 08 57.3**	**+1.1**
SUTC	**Sutluce-Ispart**	**1.50**	**72**	*e*PN	**Pn**	**12 08 38.0**	**-1.0**
SUTC	**Sutluce-Ispart**	**1.50**	**72**	*e*Pn	**Pn**	**12 08 38.0**	**-1.0**
BODT	**Bodrum**	**1.51**	**272**	*e*PN	**Pn**	**12 08 38.0**	**-1.1**
BODT	**Bodrum**	**1.51**	**272**	*e*Pn	**Pn**	**12 08 38.0**	**-1.1**
KULA	**Kula-Manisa**	**1.55**	**344**	*e*PN	**Pn**	**12 08 38.4**	**-1.2**
KULA	**Kula-Manisa**	**1.55**	**344**	*e*Pn	**Pn**	**12 08 38.4**	**-1.2**

*BJI **06** 12:26:01.8, 13°.03N×92°.77E, h30km, mB4.8/27, mb4.6/31, Ms4.2/26, Ms7 4.0/26*
*ISCJB **06** 12:26:06.1±0.3, 13°.51N±0°.04×92°.81E±0°.03, h31km, mb4.4/52, MS3.9/20, Error ellipse: s-maj=5.5km s-min=3.9km az=1.6*
*IDC **06** 12:26:08.0±0.6, 13°.60N×92°.99E, h31km±3km, mb4.3/21, mb1 4.4/22, mb1mx4.4/24, mbtmp4.3/22, ML3.8/1, MS3.9/13, Ms1 3.9/13, ms1mx3.7/31, Error ellipse: s-maj=14.3km s-min=9.0km az=52.0*
*NEIC **06** 12:26:08.1±0.2, 13°.57N×92°.87E, Error ellipse: s-maj=5.7km s-min=4.7km az=211.0*

ISC 06 12:26:08.6±0.3, 13°.58N±0°.04×92°.84E±0°.03, h33km, h33km±.9km: pP-P, n143, σ0°.97/144, mb4.4/52, MS3.9/19, 5C-4D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NST	**Nakhon Sawan**	**7.36**	**73**	P	**Pn**	**12 27 55.0**	**+1.1**
CM31	**Chiang Mai Arr**	**7.61**	**50**	*e*Pn	**Pn**	**12 27 57.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**7.61**	**50**	Pn	**Pn**	**12 27 56.0**	**-1.4**
CMAR	0.4nm,0.3s,baz=241,slow=15,SNR=24			Sn	**Sn**	**12 29 17.4**	**-5.1**
CHTO	1.9nm,0.3s,baz=239,slow=29,SNR=6.8 **Chiang Mai**	**7.84**	**48**	*e*Pn	**Pn**	**12 28 00.0**	**-0.4**
CHRT	**Chiangrai**	**9.13**	**46**	P	**Pn**	**12 28 19.0**	**+0.9**
BWNR	**Bhubaneshwar**	**9.47**	**316**	*e*PKP	**Pn**	**12 28 17.0**	**-5.8**
BWNR				*e*S	**Sn**	**12 29 54.0**	**-14**
VIS	**Vishakhapatnam**	**10.04**	**295**	*e*PKP	**Pn**	**12 28 29.2**	**-1.4**
VIS				*i* S	**Sn**	**12 30 10.1**	**-12**
VIS				AML	AML	12 30 16.1	
VIS	comp=N,271nm,0.4s			AML	AML	12 30 16.6	
AGT	comp=E,174nm,0.6s **Agartala**	**10.35**	**352**	*ex*	x	12 28 42.0	
KULM	**Kulim**	**11.28**	**136**	*e*Pn	**Pn**	**12 28 46.9**	**-0.8**
SHL	**Shillong**	**11.95**	**356**	*e*PKP	**Pn**	**12 29 00.0**	**+3.2**
SHL				*e*S	**Sn**	**12 31 02.0**	**-7.0**
MDRS	**Chennai**	**12.26**	**269**	*ex*	x	12 29 28.2	
MDRS				*ex*	x	12 32 12.2	
ODAN	**Odare**	**14.16**	**340**	*e*P	**Pn**	**12 29 24.8**	**-2.1**
HYB	**Hyderabad**	**14.28**	**287**	*i* P	**Pn**	**12 29 29.0**	**+0.4**
HYB				*e*		12 31 56.0	
HYB				*e*S	**Sn**	**12 32 07.0**	**+1.0**
TAPN	**Taplejung**	**14.51**	**342**	*e*P	**Pn**	**12 29 28.8**	**-2.9**
	comp=E,33nm,0.6s						
KMI	**Kunming**	**14.79**	**38**	P	**Pn**	**12 29 37.5**	**+1.9**
KMI				pP	pP	12 29 43.4	-6.2
KMI				sP	sP	12 29 48.1	-5.7
KMI				PP		12 29 51.1	
KMI				S	**Sn**	**12 32 23.3**	**+4.9**
KMI				sS	sS	12 32 35.8	-14
KMI				SS		12 32 40.5	
KMI	comp=Z,3.0nm,0.7s			pmax	pmax		
KMI	comp=Z,65nm,4.3s			pmax	pmax		
KMI	comp=N,310nm,17.5s			LR	LR		
KMI	comp=E,230nm,15.1s			LR	LR		
KMI	comp=Z,380nm,16.3s			LR	LR		
PKI	**Pulchoki**	**15.55**	**335**	*e*P	**Pn**	**12 29 43.3**	**-2.2**
PKIN	comp=Z,45nm,0.6s **Phulchoki**	**15.56**	**335**	*e*P	**Pn**	**12 29 44.1**	**-1.5**
GUN	comp=Z,66nm,0.6s **Gumba**	**15.66**	**337**	*e*P	**Pn**	**12 29 45.2**	**-1.7**
DMN	comp=Z,62nm,0.8s **Daman**	**15.71**	**334**	*e*P	**Pn**	**12 29 46.7**	**-0.8**
KKN	**Kakani**	**15.79**	**335**	*e*P	**Pn**	**12 29 47.0**	**-1.6**
LSA	**Lhasa**	**16.11**	**355**	P	**Pn**	**12 29 57.7**	**+5.0**
LSA				sP	sP	12 30 12.7	+4.2
LSA	comp=Z,410nm,15.6s			LR	LR		
LSA	**Lhasa**	**16.11**	**355**	Pn	**Pn**	**12 29 54.8**	**+2.1**
GKN	comp=Z,22nm,0.8s **Gorkha**	**16.25**	**333**	*e*P	**Pn**	**12 29 53.0**	**-1.6**
LATR	**Latur**	**16.36**	**289**	*ex*	x	12 32 42.2	
KOLN	**Koldanda**	**16.54**	**330**	*e*P	**Pn**	**12 29 57.5**	**-0.6**
DANN	comp=Z,113nm,0.6s **Dangsing**	**16.95**	**332**	*e*P	**Pn**	**12 30 02.2**	**-1.1**
QIZ	comp=Z,40nm,0.7s **Qiongzhong**	**17.19**	**69**	P	**Pn**	**12 30 05.5**	**-1.0**
QIZ				S	**Sn**	**12 33 17.3**	**+0.5**
QIZ	comp=N,180nm,16.5s			LR	LR		
QIZ	comp=E,230nm,16.8s			LR	LR		
QIZ	comp=Z,630nm,16.3s			LR	LR		
BHPL	**Bhopal**	**17.48**	**306**	*e*PKP	**Pn**	**12 30 10.4**	**+0.4**
BHPL				*ex*	x	12 33 09.6	
GYA	**Guiyang**	**18.22**	**43**	*e*P	**Pn**	**12 30 20.5**	**+1.4**
GYA				pP	pP	12 30 27.6	-0.1
GYA				PP		12 30 36.7	
GYA				S	**Sn**	**12 33 40.8**	**-0.8**
GYA				SS		12 34 04.5	
GYA	comp=Z,20nm,0.8s			pmax	pmax		
GYA	comp=Z,110nm,4.3s			pmax	pmax		
GYA	comp=N,690nm,14.8s			LR	LR		
GYA	comp=E,580nm,15.4s			LR	LR		
GYA	comp=Z,560nm,14.0s			LR	LR		
KAD	**Karad**	**18.36**	**284**	*ex*	x	12 33 29.1	
POO	**Poona**	**18.89**	**288**	*e*PKP	**Pn**	**12 30 28.0**	**+0.7**
POO				*i* x	x	12 33 42.0	
CD2	**Chengdu**	**19.96**	**28**	*e*P	**Pn**	**12 30 40.2**	**+0.2**
CD2				pP	pP	12 30 49.0	+2.2
CD2				sP	sP	12 30 53.2	+2.3
CD2				PP		12 31 00.4	
CD2				S	**Sn**	**12 34 19.4**	**-4.2**
CD2				sS	sS	12 34 32.2	-2.6
CD2				SS		12 34 49.0	
CD2	comp=Z,40nm,0.7s			pmax	pmax		
CD2	comp=Z,120nm,4.2s			pmax	pmax		
CD2	comp=N,310nm,15.6s			LR	LR		
CD2	comp=E,280nm,19.2s			LR	LR		
CD2	comp=Z,200nm,14.4s			LR	LR		
AJM	**Ajmer**	**21.33**	**310**	*e*PKP	**P**	**12 30 54.0**	**+0.9**
DDI	**Dehra Dun**	**21.53**	**323**	*ex*	**P**	**12 30 56.0**	**+0.9**
ENH	**Enshi**	**22.63**	**40**	*e*P	**P**	**12 31 05.8**	**-1.0**
LZH	comp=Z,35nm,0.8s,mb4.8 **Lanzhou**	**24.49**	**22**	*e*P	**P**	**12 31 25.1**	**+0.2**
LZH				pP		12 31 34.0	
LZH				sP	sP	12 31 37.8	-0.4
LZH				*e*S	**S**	**12 35 42.0**	**-1.2**
LZH				sS	sS	12 35 56.5	-2.1
LZH				*e*SS		12 36 40.2	
LZH	comp=Z,23nm,1.0s,mb4.6			pmax	pmax		
LZH	comp=Z,130nm,4.5s			pmax	pmax		
LZH	comp=N,280nm,13.0s,MS4.2			LR	LR		
LZH	comp=E,440nm,12.0s,MS4.2			LR	LR		
LZH	comp=Z,470nm,15.0s,MS4.1			LR	LR		
XAN	**Xi'an**	**25.06**	**33**	P	**P**	**12 31 28.9**	**-1.1**
XAN				pP	pP	12 31 37.3	-2.1
XAN	comp=Z,3.0nm,0.8s,mb3.9			pmax	pmax		
XAN	comp=Z,18nm,7.2s			pmax	pmax		
GTA	**Gaotai**	**26.45**	**12**	*e*P	**P**	**12 31 44.1**	**+1.5**
GTA				pP	pP	12 31 57.5	+5.5
GTA	comp=Z,7.0nm,1.1s,mb4.1			pmax	pmax		
GTA	comp=Z,89nm,5.5s			pmax	pmax		
GTA	comp=N,140nm,16.4s,MS4.0			LR	LR		
GTA	comp=E,310nm,17.5s,MS4.0			LR	LR		
NJ2	**Nanjing**	**30.08**	**48**	*e*P	**P**	**12 32 16.5**	**+1.4**
NJ2	comp=Z,10.0nm,0.9s,mb4.5			pmax	pmax		
WMQ	**Urumqi**	**30.45**	**353**	*e*P	**P**	**12 32 20.0**	**+1.8**
WMQ				pP	pP	12 32 30.0	+2.4
WMQ				sP	sP	12 32 34.0	+2.4
WMQ				PP	PP	12 33 20.0	-7.3
WMQ				S	**S**	**12 37 19.0**	**+1.9**
WMQ				SS	PcS	12 39 01.0	+0.3
WMQ	comp=Z,16nm,0.8s,mb4.8			pmax	pmax		
WMQ	comp=N,120nm,12.0s,MS4.0			LR	LR		
WMQ	comp=E,180nm,12.0s,MS4.0			LR	LR		
WMQ	comp=Z,130nm,12.0s,MS3.8			LR	LR		
HHC	**Hu-ho-hao-te**	**31.72**	**28**	*e*P	**P**	**12 32 31.6**	**+2.2**
HHC				pP	pP	12 32 41.1	+2.3
HHC				sP	sP	12 32 45.2	+2.4
HHC				PP	PP	12 33 37.8	-3.6
HHC				PcP	PcP	12 35 21.4	+0.8
HHC				S	**S**	**12 37 39.4**	**+2.4**
HHC				sS	sS	12 37 55.6	+3.0
HHC				ScP	ScP	12 39 01.2	-0.4
HHC				SS	SS	12 39 33.2	-20
HHC				ScS	ScS	12 42 58.1	-1.6
HHC	comp=Z,21nm,1.0s,mb4.9			pmax	pmax		
HHC	comp=Z,73nm,5.9s			pmax	pmax		
HHC	comp=N,120nm,13.7s,MS4.0			LR	LR		
HHC	comp=E,170nm,13.9s,MS4.0			LR	LR		
HHC	comp=Z,170nm,14.2s,MS3.9			LR	LR		
AML	**Almayashu**	**32.93**	**333**	P	**P**	**12 32 41.6**	**+1.6**
BJI	comp=Z,0.8nm,0.8s,mb3.7 **Beijing**	**33.39**	**34**	P	**P**	**12 32 44.7**	**+0.7**
BJI				S	**S**	**12 38 05.1**	**+2.1**
BJI	comp=Z,5.0nm,0.6s,mb4.6			pmax	pmax		
BJI	comp=Z,110nm,7.7s			pmax	pmax		
BJI	comp=N,170nm,19.6s			LR	LR		
BJI	comp=E,110nm,13.0s			LR	LR		
BJI	comp=Z,130nm,21.6s,MS3.6			LR	LR		
MK31	**Makanchi Array**	**34.27**	**347**	*e*P	**P**	**12 32 51.7**	**+0.1**
MKAR	**Makanchi Array**	**34.27**	**347**	P	**P**	**12 32 51.8**	**+0.2**
MKAR	comp=Z,4.4nm,0.8s,mb4.4,baz=163,slow=8.9,SNR=22			pP	pP	12 33 00.1	-1.0
MKAR	comp=Z,2.3nm,0.6s,baz=168,slow=7.1,SNR=8.5			LR	LR	12 50 24.6	
SONM	comp=Z,116nm,19.4s,MS3.6,baz=165,slow=42 **Songino Array**	**35.97**	**16**	P	**P**	**12 33 06.2**	**0.0**
SONM	comp=Z,2.5nm,0.8s,mb4.2,baz=199,slow=9.4,SNR=19			pP	pP	12 33 14.7	-1.0
SONM	comp=Z,2.5nm,0.8s,baz=200,slow=8.2,SNR=8.3			PcP	PcP	12 35 32.2	-0.3
ULN	comp=Z,1.5nm,0.7s,baz=208,slow=2.6,SNR=6.9 **Ulaanbaatar**	**36.17**	**16**	*e*P	**P**	**12 33 08.6**	**+0.6**
ULN	comp=Z,0.4nm,0.8s,mb3.4			*e*pP	pP	12 33 17.3	-0.2
KURK	**Kurchatov**	**38.80**	**346**	*e*P	**P**	**12 33 30.3**	**+0.2**
KURK	comp=Z,3.0nm,1.4s,mb3.8			*e*pP	pP	12 33 39.6	-0.1
KSRS	**Korea Array**	**39.24**	**46**	P	**P**	**12 33 33.0**	**-1.1**
KSRS	comp=Z,2.1nm,0.6s,mb4.0,baz=242,slow=8.5,SNR=14			pP	pP	12 33 41.9	-1.8
KSRS	comp=Z,2.9nm,0.7s,baz=242,slow=8.6,SNR=8.3			LR	LR	12 52 22.2	
ZALV	comp=Z,257nm,18.8s,MS4.1,baz=220,slow=40 **Zalesovo Beam**	**40.76**	**353**	P	**P**	**12 33 46.1**	**-0.3**
ZALV	comp=Z,5.2nm,0.6s,mb4.3,baz=177,slow=8.6,SNR=24			pP	pP	12 33 55.2	-0.8
ZALV	comp=Z,5.1nm,0.6s,baz=177,slow=8.2,SNR=9.6			LR	LR	12 54 29.4	
CN2	comp=Z,67nm,21.9s,MS3.5,baz=243,slow=42 **Changchun**	**41.06**	**36**	*e*P	**P**	**12 33 49.1**	**0.0**
CN2				*e*sP	sP	12 34 01.3	-1.3
CN2				*e*S	**S**	**12 40 00.2**	**+0.6**
CN2	comp=Z,10.0nm,0.7s,mb4.5			pmax	pmax		
CN2	comp=Z,200nm,4.0s			pmax	pmax		
CN2	comp=N,200nm,16.0s,MS4.3			LR	LR		
CN2	comp=E,300nm,16.0s,MS4.3			LR	LR		
CN2	comp=Z,500nm,18.0s,MS4.4			LR	LR		
BVAR	**Borovoye Array**	**43.21**	**340**	P	**P**	**12 34 05.6**	**-0.8**
BVAR	comp=Z,1.3nm,0.6s,mb3.9,baz=133,slow=8.5,SNR=8.6			pP	pP	12 34 15.5	-0.6
BVAR	comp=Z,0.5nm,0.4s,baz=165,slow=6.0,SNR=3.2			S	**S**	**12 40 21.4**	**-10**
ABKAR	comp=Z,1.7nm,0.8s,baz=144,slow=28,SNR=3.9 **Akbulak array**	**44.66**	**330**	*e*P	**P**	**12 34 18.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**45.15**	**133**	P	**P**	**12 34 21.1**	**-1.3**
	comp=Z,3.8nm,0.5s,mb4.5,baz=317,slow=6.1,SNR=24						
FITZ	**Fitzroy Cross

ASAJ	Asahikawa	52.10	44	eP	P	12 35 15.9	+0.3
	comp=Z,0.6nm,1.3s,mb3.4						
WRA	Warramunga Arr	52.70	128	P	P	12 35 20.0	-0.4
	comp=Z,9.4nm,0.6s,mb4.9,baz=308,slow=7.8,SNR=133						
WRA				PcP	PcP	12 36 29.2	-0.7
	comp=Z,3.6nm,0.6s,baz=316,slow=3.3,SNR=12						
WRA				S	S	12 42 43.2	-3.1
	comp=Z,1.4nm,1.0s,baz=305,slow=15,SNR=4.8						
WRA	Warramunga Arr	52.70	128	P	P	12 35 20.0	-0.4
WRA				PcP	PcP	12 36 29.2	-0.7
WRA				S	S	12 42 43.2	-3.1
WB2	Warramunga Arr	52.71	128	eP	P	12 35 19.7	-0.7
YSS	Yuzh-Sakhalins	53.21	41	eP	P	12 35 24.2	+0.5
	comp=Z,0.9nm,0.6s,mb3.9						
ASAR	Alice Springs	54.62	132	P	P	12 35 33.9	-0.5
	comp=Z,5.4nm,0.5s,mb4.8,baz=309,slow=6.7,SNR=126						
ASAR				PcP	PcP	12 36 37.4	+0.2
	comp=Z,1.8nm,0.6s,baz=316,slow=3.8,SNR=8.1						
ASAR				S	S	12 43 08.6	-3.6
	comp=Z,0.4nm,0.7s,baz=300,slow=13,SNR=6.8						
BRTR	Keskin Array B	57.82	308	P	P	12 35 57.4	+0.3
	comp=Z,5.3nm,0.8s,mb4.6,baz=120,slow=7.3,SNR=34						
BRTR				LR	LR	13 04 23.9	
	comp=Z,88nm,19.5s,MS3.9,baz=103,slow=40						
TLCR		62.21	314	⇓iP	P	12 36 33.2	+6.1
TIRR	Tirgusor	62.38	313	eP	P	12 36 28.6	+0.3
	comp=Z,1.4nm,0.9s,mb4.1						
TIRR	Tirgusor	62.38	313	⇓iP	P	12 36 27.8	-0.5
CVD	Cernavoda	62.63	313	⇑iP	sP	12 36 46.9	+3.1
VRI	Vrincioaia	63.76	315	⇓iP	P	12 36 38.5	+1.1
ISR	Istrita	63.79	314	⇑iP	sP	12 36 50.8	-0.7
PETK	Petropavlovsk-	64.20	37	pP	pP	12 36 51.0	+0.9
	comp=Z,0.6nm,0.5s,baz=250,slow=2.9,SNR=2.1						
PETK				LR	LR	13 05 45.7	
	comp=Z,48nm,19.7s,MS3.7,baz=46,slow=37						
MLR	Muntele Rosu	64.26	314	⇑iP	P	12 36 42.1	+1.5
VOIR		64.88	314	⇑iP	P	12 36 45.3	+0.6
STKA	Stephens Creek	64.99	135	P	P	12 36 44.8	-0.9
	comp=Z,3.8nm,0.7s,mb4.5,baz=315,slow=6.6,SNR=11						
STKA				pP	pP	12 36 54.0	-1.7
	comp=Z,3.1nm,0.6s,baz=326,slow=5.3,SNR=5.5						
STKA				LR	LR	13 07 30.7	
	comp=Z,150nm,21.9s,MS4.1,baz=211,slow=38						
STKA	Stephens Creek	64.99	135	eP	P	12 36 45.5	-0.1
	comp=Z,3.4nm,0.8s,mb4.4						
BURAR	Bucovina Array	65.02	316	⇓iP	P	12 36 46.3	+0.7
BUR08	Bucovina Ar. S	65.03	316	eP	P	12 36 46.2	+0.6
JOF	Joensuu	65.18	334	ep	P	12 36 44.9	-1.4
	comp=Z,5.8nm,0.7s,mb4.7						
FINES	FINESS Array B	67.10	331	P	P	12 36 58.1	-0.6
	comp=Z,4.9nm,0.7s,mb4.7,baz=90,slow=6.8,SNR=14						
FINES				pP	pP	12 37 07.2	-1.6
	comp=Z,1.6nm,0.5s,baz=100,slow=5.7,SNR=2.3						
KOLS	Kolonicke sedl	67.12	318	eP	P	12 36 58.4	-0.6
KOLS	Kolonicke sedl	67.12	318	eP	P	12 36 58.4	-0.6
CRVS	Cervenica-Dubn	67.65	317	eP	P	12 37 03.4	+1.0
	comp=Z,5.6nm,0.9s,mb4.6						
CRVS	Cervenica-Dubn	67.65	317	eP	P	12 37 03.4	+1.0
KECS	Kecovo	68.26	317	eP	P	12 37 06.6	+0.4
	comp=Z,2.7nm,0.9s,mb4.3						
KECS	Kecovo	68.26	317	eP	P	12 37 06.6	+0.4
VYHS	Vyhne	69.36	317	eP	P	12 37 13.3	+0.2
	comp=Z,3.2nm,1.4s,mb4.1						
VYHS	Vyhne	69.36	317	eP	P	12 37 13.3	+0.2
ARCES	ARCESS Array B	69.50	340	P	P	12 37 13.6	+0.1
	comp=Z,5.0nm,0.7s,mb4.6,baz=93,slow=7.3,SNR=18						
ARCES				LR	LR	13 10 55.7	
	comp=Z,134nm,18.2s,MS4.2,baz=125,slow=39						
MORC	Moravsky Berou	70.26	318	⇑iP	P	12 37 18.3	-0.3
DPC	Dobruska-Polom	71.07	319	eP	P	12 37 24.6	+1.1
CEL	Celeste	71.53	306	eP	P	12 37 27.6	+1.0
	comp=Z,3.5nm,1.0s,mb4.2						
BRG	Berggiesshubel	72.59	319	iP	P	12 37 32.0	-0.6
	comp=Z,12nm,1.1s,mb4.7						
KHC	Kasperske Hory	72.84	318	eP	P	12 37 34.3	+0.1
CLL	Collm	73.18	320	eP	P	12 37 36.0	-0.1
CLL	Collm	73.18	320	eP	P	12 37 36.0	-0.1
NKC	Novy Kostel	73.55	319	eP	P	12 37 39.6	+1.3
MOX	Moxa	74.07	319	eP	P	12 37 41.9	+0.5
NB2	NORSAR Subarra	74.17	330	P	P	12 37 40.5	-1.2
	comp=Z,3.9nm,0.7s,mb4.5,baz=88,slow=5.9						
NOA	NORSAR Array B	74.17	330	P	P	12 37 40.5	-1.2
	comp=Z,2.9nm,0.6s,mb4.4,baz=90,slow=5.8,SNR=14						
NOA				LR	LR	13 13 13.7	
	comp=Z,43nm,19.4s,MS3.8,baz=90,slow=38						
KEST	Kesra	76.97	304	P	P	12 37 58.6	+0.3
	comp=Z,1.9nm,0.8s,mb4.1,baz=0.2,slow=12,SNR=5.3						
HINF	Hinteralfeld	77.39	316	eP	P	12 38 00.5	+0.1
	comp=Z,7.3nm,0.6s,mb4.5						
HINF	Hinteralfeld	77.39	316	eP	P	12 38 00.5	+0.1
	comp=Z,3.7nm,0.6s,mb4.5						
BOSA	Boshof	77.59	236	P	P	12 38 03.5	+1.6
	comp=Z,10nm,0.6s,mb4.9,baz=90,slow=3.9,SNR=26						
BOSA				LR	LR	13 11 52.3	
	comp=Z,112nm,18.5s,MS4.2,baz=333,slow=35						
LPG	La Plagne	77.72	314	eP	P	12 38 02.6	+0.3
	comp=Z,18nm,0.7s,mb4.8						
LPG	La Plagne	77.72	314	eP	P	12 38 02.6	+0.3
	comp=Z,9.1nm,0.7s,mb4.8						
LPL	La Plagne	77.74	314	eP	P	12 38 02.7	+0.3
	comp=Z,26nm,0.7s,mb5.0						
LPL	La Plagne	77.74	314	eP	P	12 38 02.7	+0.3
	comp=Z,13nm,0.7s,mb4.7						
MBDF	Montbardon	77.80	313	eP	P	12 38 02.7	-0.1
FRF	La Foret Royal	78.04	312	eP	P	12 38 03.8	-0.3
ORIF	Oris-en-Rattie	78.41	314	eP	P	12 38 05.6	-0.6
SFTF	Sexfontaines	78.55	317	eP	P	12 38 06.5	-0.4
LOR	Lormes	79.47	316	eP	P	12 38 11.3	-0.6
SMF	Signal de Mont	79.58	316	eP	P	12 38 12.0	-0.5
SSF	Saint Saulge	79.74	316	eP	P	12 38 12.9	-0.5
AVF	Avril sur Loir	79.89	316	eP	P	12 38 13.6	-0.6
MTLF	Montolieu	81.26	312	eP	P	12 38 21.6	0.0
LDF	La Druitiere	81.88	318	eP	P	12 38 24.4	-0.4
	comp=Z,7.0nm,0.6s,mb4.5						
LDF	La Druitiere	81.88	318	eP	P	12 38 24.4	-0.4
	comp=Z,3.5nm,0.6s,mb4.5						
MAW	Mawson	83.84	191	P	P	12 38 35.2	+0.8
	comp=Z,2.2nm,0.7s,mb4.4,baz=7.8,slow=9.2,SNR=7.6						
ESDC	Sonseca Array	86.58	310	P	P	12 38 48.9	-0.1
	comp=Z,2.2nm,0.8s,mb4.5,baz=67,slow=4.2,SNR=7.4						
TORD	Torodi Ar. Bea	88.06	283	P	P	12 38 56.5	0.0
	comp=Z,1.4nm,0.4s,mb4.6,baz=72,slow=4.8,SNR=4.8						
TORD				LR	LR	13 21 23.3	
	comp=Z,87nm,18.1s,MS4.2,baz=150,slow=38						
TORD	Torodi Ar. Bea	88.06	283	P	P	12 38 56.5	+0.1
TORD				LR	LR	13 21 23.3	
BPAW	Bear Paw Mtn.	88.78	23	eP	P	12 38 59.7	+0.8
	comp=Z,26nm,1.6s,mb5.3						
BPAW				ep	pP	12 39 08.5	-0.8
TRF	Thorofare Moun	89.37	24	eP	P	12 39 02.2	+0.5
	comp=Z,4.5nm,0.9s,mb4.8						
ILAR	Eielson Array	89.96	22	P	P	12 39 03.5	-1.0
	comp=Z,1.1nm,0.7s,mb4.3,baz=300,slow=4.5,SNR=18						
ILAR				LR	LR	13 25 07.9	
	comp=Z,78nm,18.4s,MS4.2,baz=348,slow=39						
PMR	Palmer	90.78	25	eP	P	12 39 08.1	-0.2
	comp=Z,2.6nm,0.8s,mb4.6						
RC01	Rabbit Creek A	90.78	26	eP	P	12 39 08.6	+0.2
	comp=Z,17nm,1.0s,mb5.3						
MENT	Mentasta	92.15	22	eP	P	12 39 16.2	+1.5
KCPM	Cahto Peak	117.09	31	ePKPdf	PKPdf	12 44 51.1	+0.4
PDAR	Pinedale Array	120.28	19	PKP	PKPdf	12 44 56.4	-0.3
	comp=Z,0.6nm,0.6s,baz=5.1,slow=2.6,SNR=3.6						
NVAR	Mina Array Bea	120.61	28	PKP	PKPdf	12 44 58.8	+1.3
	comp=Z,1.2nm,0.7s,baz=304,slow=1.8,SNR=12						
TXAR	Lajitas Array	134.46	20	PKP	PKPdf	12 45 25.5	+1.3
	comp=Z,0.5nm,0.6s,baz=157,slow=0.9,SNR=10						
JCT	Junction City	134.53	15	ePKPdf	PKPdf	12 45 25.8	+1.6
PLCA	Paso Flores	149.29	205	PKPbc	PKPbc	12 45 54.0	-0.3
	comp=Z,1.2nm,0.8s,baz=211,slow=10,SNR=3.3						
CPUP	Villa Florida	149.31	241	PKPbc	PKPbc	12 45 53.5	-1.4
	comp=Z,1.1nm,0.4s,baz=37,slow=2.8,SNR=6.1						
SIV	San Ignacio	154.66	261	PKPbc	PKPbc	12 46 06.5	-0.8
	comp=Z,0.5nm,0.7s,baz=97,slow=14,SNR=3.7						
SIV				PKPab	PKPab	12 46 23.4	+1.3
	comp=Z,1.3nm,0.8s,baz=89,slow=3.8,SNR=5.9						
LPAZ	La Paz	161.41	259	PKPab	PKPab	12 46 51.8	+0.5
	comp=Z,1.1nm,0.5s,baz=124,slow=1.9,SNR=6.1						

IGQ 06 12:26:47.0, 2°.22S×79°.20W, h80km±5km, Mb4.2, Ms4.0, 7C-10D, Error ellipse: s-maj=4.0km s-min=2.3km az=88.0, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGUA	Igualata	0.92	38	⇓P	Pn	12 27 06.7	+1.5
IGUA	Igualata	0.92	38	⇓S	Sn	12 27 20.1	+1.4
BMAS	Trigal station	1.02	45	⇓P	Pn	12 27 07.5	+1.2
ARRY	Arrayan	1.03	46	⇓S	Sn	12 27 22.0	+1.0
ARRY	Arrayan	1.03	46	⇓P	Pn	12 27 07.0	+0.6
PAT1	Patacocha	1.04	47	⇑P	Pn	12 27 07.5	+0.9
BBIL	Ulba Tungurahu	1.05	43	⇑P	Pn	12 27 07.8	+1.1
RETU	Refugio	1.08	45	P	Pn	12 27 08.1	+1.0
JUI6	Juive	1.08	43	P	Pn	12 27 07.8	+0.7
ULBA	Ulba	1.10	46	⇑P	Pn	12 27 08.3	+0.9
BULB	Ulba Tungurahu	1.11	45	⇓P	Pn	12 27 08.5	+1.1
BRUN	Tungurahua Vol	1.12	45	⇓P	Pn	12 27 08.5	+0.9
PISA	Pisayambo	1.42	35	⇑S	Sn	12 27 31.6	+2.0
PISA	Pisayambo	1.42	35	⇑P	Pn	12 27 12.5	+1.2
BREF	Cotopaxi Volca	1.72	26	⇑P	Pn	12 27 17.7	+2.5
TAMB	Tambo	1.73	29	P	Pn	12 27 16.7	+1.3
BTAM	Cotopaxi Volca	1.74	28	⇓P	Pn	12 27 16.9	+1.5
BVC2	Cotopaxi Volca	1.74	27	P	Pn	12 27 16.2	+0.6
VC1	Cotopaxi 1	1.76	27	P	Pn	12 27 17.4	+1.6
COV1	Cotopaxi Volc	1.77	29	P	Pn	12 27 17.0	+1.0
PITA	Cotopaxi Volc	1.82	25	⇓P	Pn	12 27 18.3	+1.7
CHIS	Cerro-Chispas-	1.92	307	P	Pn	12 27 18.9	+1.0
ANTI	Antisana	2.05	31	P	Pn	12 27 20.9	+1.3
JUA2	San Juan 2	2.08	17	P	Pn	12 27 22.2	+2.1
TERV	Terraza Guagua	2.12	16	P	Pn	12 27 22.7	+2.1
GGP	Refugio Guagua	2.12	17	P	Pn	12 27 22.1	+1.5
PINO	Pino	2.13	16	⇑P	Pn	12 27 22.8	+2.0
YANA	Yana	2.18	17	P	Pn	12 27 22.6	+1.2
JAMA	Jama	2.19	333	⇓P	Pn	12 27 21.4	-0.2
CAYR	Refugio Cayamb	2.52	28	P	Pn	12 27 28.8	+2.8
CAYA	Cayambe	2.58	28	P	Pn	12 27 31.2	+4.4
CHAR	Charly	2.62	36	P	Pn	12 27 28.2	+1.0

*ISCJB **06** 12:33:41.7±0.5, 37°.88N±0°.03×21°.35E±0°.03, h24km±4km, Error ellipse: s-maj=4.8km s-min=4.3km az=20.5*
*THE **06** 12:33:41.6, 37°.87N×21°.37E, h0km±3km, ML2.7/7, Error ellipse: s-maj=3.7km s-min=1.1km az=236.0*
*ATH **06** 12:33:41.1, 37°.85N×21°.36E, h21km±1km, MD3.3/13*
*CSEM **06** 12:33:41.3±0.3, 37°.87N×21°.36E, h10km, MD3.3, Error ellipse: s-maj=6.6km s-min=5.6km az=74.0*

ISC 06 12:33:41.5±0.6, 37°.87N±0°.03×21°.35E±0°.04, h19km±4km, n52, σ1§28/76, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.21	26	ePB	Pg	12 33 46.5	-0.3
RLS				eSB	Sg	12 33 50.6	+0.2
RLS	Riolos of Patr	0.21	26	ePb	Pg	12 33 46.5	-0.3
RLS				eSb	Sg	12 33 50.6	+0.2
KFL	Anninata	0.50	299	P	Pg	12 33 51.9	+0.2
KFL	Anninata	0.50	299	P	Pg	12 33 51.9	+0.2
UPR	University Cam	0.54	40	ePN	Pg	12 33 52.2	-0.2
UPR				eSN	Sg	12 34 00.7	+0.9
UPR	University Cam	0.54	40	ePn	Pg	12 33 52.2	-0.2
LAKA	Lakka	0.62	53	P	Pb	12 33 52.7	-1.1
LAKA				S	Sb	12 34 01.9	-0.2
LAKA	Lakka	0.62	53	P	Pb	12 33 52.7	-1.1
LAKA				S	Sb	12 34 01.9	-0.2
VLS	Valsamata	0.67	298	ePN	Pn	12 33 54.5	-1.5
VLS				eSN	Sb	12 34 05.2	+1.6
VLS	Valsamata	0.67	298	P	Pb	12 33 54.4	-0.3
VLS				S	Sb	12 34 05.6	+2.0
VLS	Valsamata	0.67	298	P	Pb	12 33 54.4	-0.3
VLS				S	Sb	12 34 05.6	+2.0
EFP	Efpalio	0.71	38	ePB	Pb	12 33 54.3	-1.0
EFP				eSN	Sn	12 34 05.4	-1.6
EFP	Efpalio	0.71	38	P	Pb	12 33 54.2	-1.1
EFP				S	Sb	12 34 05.2	+0.5
EFP	Efpalio	0.71	38	ePb	Pb	12 33 54.3	-1.0
EFP				S	Sb	12 34 05.2	+0.5
TRIZ	Trizonia	0.76	49	P	Pb	12 33 54.8	-1.3
TRIZ				S	Sb	12 34 06.8	+0.7
TRIZ	Trizonia	0.76	49	P	Pb	12 33 54.8	-1.3
TRIZ				S	Sb	12 34 06.8	+0.7
GUR	Goura	0.79	85	ePN	Pn	12 33 55.3	-2.3
GUR				eSN	Sn	12 34 07.5	-1.4
GUR	Goura	0.79	85	P	Pb	12 33 55.1	-1.6
GUR				S	Sb	12 34 07.4	+0.4
GUR	Goura	0.79	85	P	Pb	12 33 55.1	-1.6
GUR				eSn	Sn	12 34 07.5	-1.4
KALE	Kalithea	0.82	50	P	Pb	12 33 55.8	-1.3
KALE				S	Sb	12 34 08.4	+0.7
KALE	Kalithea	0.82	50	P	Pb	12 33 55.8	-1.3
KALE				S	Sb	12 34 08.4	+0.7
ITM	Ithomi	0.83	146	ePN	Pb	12 33 56.8	-0.4
ITM				eSN	Sn	12 34 08.4	-1.4
ITM	Ithomi	0.83	146	P	Pb	12 33 56.8	-0.4
ITM	Ithomi	0.83	146	P	Pb	12 33 56.8	-0.4
ITM				eSn	Sn	12 34 08.4	-1.4
VLX	Vlachokerasia	0.96	121	ePN	Pn	12 33 59.9	0.0
VLX	Vlachokerasia	0.96	121	P	Pb	12 34 00.4	+0.9
VLX				S	Sb	12 34 14.1	+2.3
VLX	Vlachokerasia	0.96	121	ePn	Pn	12 33 59.9	0.0
VLX	Vlachokerasia	0.96	121	P	Pb	12 34 00.4	+0.9
VLX				S	Sb	12 34 14.1	+2.3
PYL	PYLOS	1.02	162	ePN	Pn	12 33 59.8	-1.0
PYL	PYLOS	1.02	162	P	Pb	12 33 59.1	-1.4
PYL	PYLOS	1.02	162	P	Pb	12 33 59.1	-1.4
PYL	PYLOS	1.02	162	ePn	Pn	12 33 59.8	-1.0
EVR	Evrytania	1.11	19	ePN	Pn	12 34 01.9	-0.1
EVR	Evrytania	1.11	19	ePn	Pn	12 34 01.9	-0.1
LTK	Loutraki	1.29	83	ePN	Pn	12 34 05.4	+0.9
LTK	Loutraki	1.29	83	P	Pn	12 34 05.6	+1.1
LTK	Loutraki	1.29	83	P	Pn	12 34 05.6	+1.1
LKR	Lokris	1.52	58	ePN	Pn	12 34 09.5	+1.9
LKR	Lokris	1.52	58	P	Pn	12 34 09.5	+2.0
LKR	Lokris	1.52	58	ePn	Pn	12 34 09.5	+1.9
DID	Didima	1.54	103	ePN	Pn	12 34 10.2	+2.2
DID	Didima	1.54	103	P	Pn	12 34 10.6	+2.6
DID				S	Sn	12 34 31.2	+3.8
DID	Didima	1.54	103	ePn	Pn	12 34 10.2	+2.2
DID	Didima	1.54	103	P	Pn	12 34 10.6	+2.6
DID				S	Sn	12 34 31.2	+3.8
NAIG	Nisos Aigina	1.70	93	ePB	Pb	12 34 10.9	-1.3
VLI	Veliai	1.71	132	ePN	Pn	12 34 12.4	+2.1
VLI	Veliai	1.71	132	ePn	Pn	12 34 12.4	+2.1
THL	Klokotos Trika	1.77	17	ePN	Pn	12 34 12.4	+1.2
THL	Klokotos Trika	1.77	17	ePn	Pn	12 34 12.4	+1.2
VLY	Voula,Athens	1.94	90	ePN	Pn	12 34 15.1	+1.7
VLY	Voula,Athens	1.94	90	ePn	Pn	12 34 15.1	+1.7
KYTH	Kithira	2.08	139	ePn	Pn	12 34 18.2	+2.8

*NNC **06** 12:33:53.2±1.6, 42°.00N×78°.28E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=13.7km s-min=7.7km az=164.0*

ISC 06 12:33:48.3±1.7, 41°.5N±0°.1×77°.92E±0°.08, h10km, n14, σ1§44/18, 11C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	1.47	302	P	Pn	12 34 12.3	-2.5
	SNR=92						
KNDC	Almaty	1.88	338	⇑Pn	Pn	12 34 22.0	+1.6
	36nm,0.5s						
KNDC				⇑Sn	Sn	12 34 44.8	+0.7
	199nm,0.6s						
KZA	Kyzart	2.09	288	P	Pn	12 34 25.5	+2.2
	SNR=7.4						
TKM2	Tokmak 2	2.25	311	⇑Pn	Pn	12 34 30.4	+4.9
	4.2nm,0.3s						
TKM2				⇓Pg	Pg	12 34 32.5	+1.1
	20nm,0.5s						
TKM2				⇓Lg		12 35 03.3	
	39nm,0.4s						
TKM2	Tokmak 2	2.25	311	P	Pn	12 34 18.0	-7.6
	SNR=10.0						
KBK	Karagaybulak	2.51	299	P	Pn	12 34 26.4	-2.7
	SNR=5.8						
AAK	Ala-Archa	2.80	296	P	Pn	12 34 32.2	-0.9
	SNR=14						
USP	Ospenovka	3.10	306	P	Pn	12 34 31.9	-5.3
	SNR=13						
AML	Almayashu	3.23	283	P	Pn	12 34 43.5	+4.6
	SNR=10						
EKS2	Erkin-Say	3.30	292	P	Pn	12 34 40.7	+0.7
	SNR=11						
KK31	Karatay Array	5.73	289	⇑Pn	Pb	12 35 23.6	-4.7
	0.5nm,0.3s,baz=90,slow=15,SNR=5.0						
KK31				⇓Pg	Pg	12 35 39.4	+1.4
	0.6nm,0.3s,baz=94,slow=15,SNR=4.1						
KK31				⇑Sn	Sb	12 36 35.0	-2.0
	1.4nm,0.4s,baz=96,slow=27,SNR=7.3						
KK31				⇑Lg		12 36 56.9	
	6.9nm,0.7s,baz=94,slow=29,SNR=5.8						
MK31	Makanchi Array	6.17	29	⇑Pn	Pn	12 35 19.8	+0.4
	0.5nm,0.3s,baz=216,slow=15,SNR=13						
MK31				⇑Pg	Pb	12 35 35.3	-0.6
	0.7nm,0.3s,baz=216,slow=15,SNR=4.3						
MK31				⇑Sn	Sn	12 36 29.2	-0.9
	2.7nm,0.6s,baz=217,slow=29,SNR=5.1						
MK31				⇑Lg		12 36 48.5	
	1.9nm,0.4s,baz=214,slow=30,SNR=3.6						
KURBB	Kurchatov Arra	9.16	2	⇓Lg		12 38 27.1	
	2.2nm,0.6s						
KURK	Kurchatov	9.25	3	⇑Lg		12 38 30.9	
	10nm,1.0s						

*ISCJB **06** 12:42:36.5±1.5, 25°.2S±0°.1×179°.6E±0°.2, h494km±20km, mb3.3/6, Error ellipse: s-maj=24.8km s-min=17.9km az=21.0*
*NEIC **06** 12:42:37.4±1.0, 25°.15S×179°.62E, h495km±14km, Error ellipse: s-maj=17.7km s-min=12.8km az=110.0*
*IDC **06** 12:42:38.1±7.3, 25°.18S×179°.61E, h505km±91km, mb2.8/6, mb1 3.2/8, mb1mx3.0/18, mbtmp3.0/8, Error ellipse: s-maj=49.0km s-min=23.0km az=17.0*

ISC 06 12:42:37.5±1.4, 25°.2S±0°.1×179°.6E±0°.2, h494km±19km, n12, σ0§50/12, mb3.3/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.53	349	eP	P	12 44 28.8	-0.1
	7.8nm,0.6s						
URZ	Urewera	13.24	189	P	P	12 45 29.4	+0.4
	4.6nm,0.3s,baz=359,slow=2.3,SNR=32						
RPZ	Rata Peaks	19.79	199	P	P	12 46 33.6	-0.7
	0.4nm,0.3s,baz=89,slow=4.1,SNR=3.3						
CTA	Charters Tower	31.15	272	P	P	12 48 15.6	+0.4
	1.2nm,0.4s,mb3.7,baz=103,slow=14,SNR=2.7						
CTA	Charters Tower	31.15	272	P	P	12 48 15.6	+0.4
STKA	Stephens Creek	33.94	250	P	P	12 48 39.2	+0.4
	1.0nm,0.7s,mb3.3,baz=100,slow=12,SNR=2.9						
STKA	Stephens Creek	33.94	250	P	P	12 48 39.2	+0.4
ASAR	Alice Springs	41.49	262	P	P	12 49 41.2	+0.4
	0.2nm,0.4s,mb2.9,baz=89,slow=7.3,SNR=5.3						
WRA	Warramunga Arr	41.98	268	P	P	12 49 43.8	-1.0
	0.4nm,0.3s,mb3.3,baz=100,slow=6.8,SNR=23						
NVAR	Mina Array Bea	85.90	44	P	P	12 54 24.9	+0.4
	0.3nm,0.6s,mb3.1,baz=209,slow=7.2,SNR=3.7						
TXAR	Lajitas Array	91.39	58	P	P	12 54 50.2	-0.2
	0.2nm,0.6s,mb3.2,baz=218,slow=4.2,SNR=4.4						
TXAR	Lajitas Array	91.39	58	P	P	12 54 50.2	-0.2

*IDC **06** 12:42:53.9±1.2, 34°.68N×137°.45E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/24, mbtmp3.5/4, Error ellipse: s-maj=29.1km s-min=18.7km az=54.0*
*JMA **06** 12:43:03.1±0.2, 35°.47N×139°.32E, h121km±2km, M2.9*

ISC 06 12:43:02.2±0.7, 35°.46N±0°.05×139°.4E±0°.1, h128km±5km, n14, σ0§74/23, mb3.4/3, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOD2	Odawara 2	0.30	230	P	Pn	12 43 20.2	+0.1
JOD2				eS	Sn	12 43 33.4	-0.2
JYN	Shimob	0.68	274	P	Pn	12 43 22.2	0.0
JRY	Ryogami san	0.68	326	P	Pn	12 43 22.7	+0.5
JRY				eS	Sn	12 43 38.0	+0.6
JIM2	Oshima 3	0.74	176	P	Pn	12 43 22.6	-0.1
JIZS	Izushimoda	0.84	209	P	Pn	12 43 23.8	+0.3
JAG	Ashikaga	0.97	4	P	Pn	12 43 25.1	+0.5
JAG				eS	Sn	12 43 42.1	+0.4
SHZ3	Shizuoka 3	1.03	248	P	Pn	12 43 25.8	+0.6
SHZ3				eS	Sn	12 43 43.5	+0.9
MJAR	Matsushiro Arr	1.44	319	Pn	Pn	12 43 27.7	-1.8
	8.7nm,0.3s,baz=199,slow=14,SNR=110						
MJAR				Sn	Sn	12

JNK	Nakash	6.91 239	P	Pn	13 08 11.7	+1.5
YSS	Yuzh-Sakhalins	6.93 270⇑	ePN	Pn	13 08 02.8	-7.5
JTKR	Abashiri--Toko	7.18 244	P	Pn	13 08 16.6	+2.8
JAK	Akkeshi	7.29 236	P	Pn	13 08 14.6	-0.7
JAK			eS	Sn	13 09 32.7	-3.8
JMP	Maruseppu	7.50 246	P	Pn	13 08 22.0	+3.9
JAR	Ashorobuto	7.64 241	P	Pn	13 08 22.0	+2.0
JAR			eS	Sn	13 09 46.4	+1.5
JOB	Onbets	7.84 238	P	Pn	13 08 23.3	+0.6
ASAJ	Asahikawa	7.93 249	Pn	Pn	13 08 26.9	+3.0
	comp=Z,0.6nm,0.3s,baz=97,slow=11,SNR=18					
ASAJ	Asahikawa	7.93 249	PN	Pn	13 08 26.9	+3.0
ASAJ			pmax	pmax		
	comp=Z,1.0nm,0.3s					
ASAJ	Asahikawa	7.93 249	P	Pn	13 08 28.7	+4.8
JKK2	Kamakawa 2	7.95 247	P	Pn	13 08 28.0	+3.8
JCH	Churui	8.29 238	P	Pn	13 08 28.9	0.0
JCH			eS	Sn	13 09 56.3	-4.4
JBT2	Biratori 2	8.78 242	P	Pn	13 08 36.4	+0.9
JEM	Erimo	8.79 236	P	Pn	13 08 35.6	-0.1
ERM	Erimo	8.79 236⇑	iPN	Pn	13 08 35.6	-0.1
JNBK	Urakawa-nobuka	8.85 238	P	Pn	13 08 35.6	-0.9
JNBK			eS	Sn	13 10 07.9	-6.4
JNB	Noboribetsu	9.76 244	P	Pn	13 08 49.8	+1.1
JKB	Kayabe	10.10 241	P	Pn	13 08 52.5	-0.8
JKB			eS	Sn	13 10 39.6	-5.0
JSH	Shimam	10.28 247	P	Pn	13 08 58.4	+2.8
JYM2	Yakumo 2	10.37 244	P	Pn	13 08 57.5	+0.7
JTM	Tenmabayashi	10.78 236	P	Pn	13 09 00.6	-1.8
JANG	Nango	10.82 233	P	Pn	13 08 59.8	-3.1
JANG			eS	Sn	13 10 51.5	-10
JTH	Tanohata	10.94 231	P	Pn	13 09 00.7	-3.9
JTH			eS	Sn	13 10 53.9	-11
JRG	Rokugo	11.99 232	P	Pn	13 09 16.3	-2.1
JIO	Ouri	12.32 227	P	Pn	13 09 19.6	-3.2
MJAR	Matsushiro Arr	15.39 230	Pn	Pn	13 10 02.1	0.0
	comp=Z,0.2nm,0.3s,baz=32,slow=12,SNR=8.8					
MAJO	Matsushiro	15.39 230⇑	eP	Pn	13 10 02.2	+0.1
JHJ	Hachijo jima 2	17.41 220	P	Pn	13 10 27.4	+0.4
	comp=Z,3.0nm,0.3s,baz=20,slow=17,SNR=3.0					
KSRS	Korea Array	20.87 251	P	P	13 11 10.3	+6.2
	comp=Z,1.1nm,0.7s,baz=62,slow=11,SNR=6.5					
KSRS	Korea Array	20.87 251	eP	P	13 11 10.5	+6.5
KURK	Kurchatov	46.87 303⇑	eP	P	13 14 46.1	-3.3
KURK			pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8					
YKA	Yellowknife Ar	50.47 37	iP	P	13 15 12.5	-4.2
ARU	Arti	54.41 317	diP	P	13 15 45.4	-0.5
ARU					13 17 45.4	
ARU			S	S	13 23 21.9	+7.0
ARU			pmax	pmax		
	comp=Z,9.0nm,2.5s,mb4.4					
TXAR	Lajitas Array	77.29 61	P	P	13 18 16.0	+3.1
	comp=Z,0.4nm,0.6s,mb3.3,baz=298,slow=4.0,SNR=7.6					

IDC 06 13:08:11.4±2.6, 5°.60S×130°.83E, h0km, mb3.9/1, mb1 4.0/4, mb1mx3.5/16, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=114.1km s-min=29.1km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.41	202	Pn	Pn	13 11 22.7	-0.5
	0.2nm,0.3s,baz=23,slow=8.2,SNR=12						
FITZ				Sn	Sn	13 13 38.4	-15
	0.6nm,0.3s,baz=288,slow=20,SNR=9.2						
WRA	Warramunga Arr	14.66	167	Pn	Pn	13 11 40.4	+0.2
	0.3nm,0.3s,baz=349,slow=11,SNR=20						
WRA				Sn	Sn	13 14 12.4	-11
	0.8nm,0.3s,baz=342,slow=21,SNR=8.5						
ASAR	Alice Springs	18.20	171	Pn	Pn	13 12 25.9	+0.3
	0.4nm,0.3s,baz=351,slow=11,SNR=64						
ASAR				Sn	Sn	13 15 37.8	-12
	0.2nm,0.3s,baz=350,slow=26,SNR=11						
MKAR	Makanchi Array	67.52	326	P	P	13 19 09.6	+0.1
	0.9nm,0.6s,baz=124,slow=7.4,SNR=8.7						

*NEIC **06** 14:00:26.1, 15°.49N×95°.46W, h24km, MD3.9(MEX), After MEX.*

MEX 06 14:00:26.1±0.5, 15°.49N×95°.46W, h24km±13km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.69	294	iP	Pb	14 00 37.3	-2.1
HUIG				iS	Sb	14 00 45.9	-2.6
HUIG	Huatulco	0.69	294	iP	Pb	14 00 37.3	-2.1
HUIG				iS	Sb	14 00 45.9	-2.6
VHO	Vista Hermosa	2.00	322	iP	Pn	14 00 56.9	-1.4
VHO				iS	Sn	14 01 19.2	-3.3
VHO	Vista Hermosa	2.00	322	iP	Pn	14 00 56.9	-1.4
VHO				iS	Sn	14 01 19.2	-3.3
PCIG		2.17	84	eP	Pn	14 00 58.5	-2.2
PCIG				iS	Sn	14 01 23.7	-3.2
TGIG		2.59	60	iP	Pn	14 01 04.9	-1.5
TGIG				iS	Sn	14 01 34.4	-2.7
PNIG	Pinotepa	2.72	290	iP	Pn	14 01 06.1	-2.2
PNIG				iS	Sn	14 01 35.5	-4.9
PNIG	Pinotepa	2.72	290	iP	Pn	14 01 06.1	-2.2
PNIG				iS	Sn	14 01 35.5	-4.9
UTMO	Huajuapan	3.24	316	iP	Pn	14 01 13.5	-1.9
UTMO				iS	Sn	14 01 51.0	-2.2
CCIG	Comitan	3.29	76	iP	Pn	14 01 14.5	-1.7
CCIG				iS	Sn	14 01 50.9	-3.7
CCIG	Comitan	3.29	76	iP	Pn	14 01 14.5	-1.7
CCIG				iS	Sn	14 01 50.9	-3.7
TPIG	Tehuac#an	3.44	328	iS	Sn	14 01 56.5	-1.7

*NEIC **06** 14:05:57.5, 16°.87N×100°.31W, h24km, MD3.6(MEX), After MEX.*

MEX 06 14:05:58.2±0.5, 16°.88N×100°.27W, h22km±6km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.16	1	iP	Pb	14 06 01.8	-1.3
CAIG				iS	Sb	14 06 05.2	-1.2
CAIG	El Cayaco	0.16	1	iP	Pb	14 06 01.8	-1.3
CAIG				iS	Sb	14 06 05.2	-1.2
ACX	Acapulco	0.40	92	iP	Pb	14 06 04.3	-2.3
ACX				iS	Sb	14 06 09.7	-2.6
ACX	Acapulco	0.40	92	iP	Pb	14 06 04.3	-2.3
ACX				iS	Sb	14 06 09.7	-2.6
MEIG	Mezcala	1.21	31	eP	Pn	14 06 16.6	-3.2
MEIG				iS	Sn	14 06 31.6	-3.9
ZIIG	Zihuatanejo	1.35	302	iP	Pn	14 06 17.1	-4.7
ZIIG				iS	Sn	14 06 35.2	-3.8
ZIIG	Zihuatanejo	1.35	302	iP	Pn	14 06 18.8	-3.0
ZIIG				iS	Sn	14 06 35.2	-3.8
PNIG	Pinotepa	2.11	103	iP	Pn	14 06 28.4	-3.8
PNIG				iS	Sn	14 06 56.3	-1.5
PNIG	Pinotepa	2.11	103	iP	Pn	14 06 29.0	-3.2
PNIG				iS	Sn	14 06 54.5	-3.4
UTMO	Huajuapan	2.54	68	iP	Pn	14 06 35.6	-2.5
UTMO				iS	Sn	14 07 05.7	-2.6

*NNC **06** 14:08:23.2±1.6, 45°.17N×73°.80E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=15.1km s-min=13.4km az=172.0*
*ISCJB **06** 14:08:27.6±1.3, 45°.32N±0°.09×73°.9E±0°.1, h33km, Error ellipse: s-maj=12.5km s-min=11.6km az=29.7*

ISC 06 14:08:29.0±1.5, 45°.29N±0°.09×73°.8E±0°.2, h35km, n11, σ1§07/11, 6C-2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USP	Ospenovka	2.09	165	P	Pn	14 09 00.7	-0.8
	SNR=50						
CHMS	Chumysh	2.40	163	P	Pn	14 09 05.6	-0.1
	SNR=8.8						
EKS2	Erkin-Say	2.63	180	P	Pn	14 09 08.3	-0.6
	SNR=6.9						
AAK	Ala-Archa	2.71	169	P	Pn	14 09 09.2	-0.8
	SNR=7.8						
TKM2	Tokmak 2	2.71	150	⇑Pn	Pn	14 09 06.5	-3.5
	4.2nm,0.4s						
TKM2				⇑Sn	Sn	14 09 40.9	-0.7
	12nm,0.5s						
TKM2	Tokmak 2	2.71	150	P	Pn	14 09 11.8	+1.8
	SNR=9.5						

KBK	Karagaybulak	2.77	162	P	Sn	14 09 44.7	+1.7
	SNR=13						
KK31	Karatay Array	3.21	228	⇑Pn	Pn	14 09 16.8	-0.2
	0.3nm,0.2s,baz=54,slow=13,SNR=5.3						
KK31				Pg	Pn	14 09 19.8	+2.8
	1.0nm,0.3s,baz=45,slow=16,SNR=16						
KK31				⇑Lg		14 10 01.1	
	2.4nm,0.4s,baz=50,slow=27,SNR=5.8						
MK31	Makanchi Array	6.11	73	⇑Pn	Pn	14 09 57.1	+0.4
	0.7nm,0.5s,baz=249,slow=15,SNR=18						
MK31				⇑Lg		14 11 36.0	
	2.8nm,0.7s,baz=252,slow=26						
KURBB	Kurchatov Arra	6.21	29	⇓Lg		14 11 43.7	
	0.7nm,0.7s						
KURK	Kurchatov	6.32	29	⇓Lg		14 11 47.2	
	3.0nm,0.7s						

*ISCJB **06** 14:15:58.2±1.0, 27°.77S±0°.06×66°.8W±0°.1, h153km±15km, mb3.6/3, Error ellipse: s-maj=19.0km s-min=9.5km az=2.8*
*IDC **06** 14:15:58.8±1.5, 27°.73S×67°.21W, h150km±15km, mb4.1/2, mb1 3.7/5, mb1mx3.5/18, mbtmp3.7/5, Error ellipse: s-maj=47.2km s-min=12.9km az=102.0*
*NEIC **06** 14:15:59.5±0.8, 27°.75S×66°.83W, h155km±9km, mb3.9/1, Error ellipse: s-maj=17.3km s-min=8.8km az=98.0*

ISC 06 14:15:59.3±1.0, 27°.79S±0°.07×66°.8W±0°.1, h144km±15km, n10, σ0§64/12, mb3.6/3, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	3.66	250	ePn	Pn	14 16 55.7	+0.8
LCO				eSn	Sn	14 17 37.8	-0.2
CFAA	Coronel Fontan	4.00	198	P	Pn	14 17 00.1	+0.7
	3.4nm,0.3s,baz=15,slow=12,SNR=219						
CFAA				S	Sn	14 17 45.1	-1.0
	3.5nm,0.3s,baz=202,slow=16,SNR=16						
TRQA	Tornquist	11.00	160	Pn	Pn	14 18 33.0	+0.5
LPAZ	La Paz	11.52	353	P	Pn	14 18 39.4	-0.1
	0.5nm,0.3s,baz=137,slow=7.9,SNR=11						
LPAZ				S	Sn	14 20 41.9	-4.8
	0.1nm,0.3s,baz=346,slow=4.2,SNR=2.2						
SIV	San Ignacio	12.88	25	P	Pn	14 18 56.5	-0.7
	0.2nm,0.3s,baz=217,slow=15,SNR=11						
SIV				S	Sn	14 21 24.5	+4.9
	0.1nm,0.3s,baz=324,slow=17,SNR=3.6						
QSPA	South Pole Qui	62.43	180	eP	P	14 26 06.2	-0.1
	1.2nm,0.7s,mb3.8						
TORD	Torodi Ar. Bea	77.77	68	P	P	14 27 41.6	+0.8
	0.3nm,0.4s,mb3.3,baz=245,slow=9.4,SNR=5.2						
MAW	Mawson	77.77	162	P	P	14 27 39.3	-0.7
	1.8nm,0.8s,mb3.8,baz=225,slow=7.1,SNR=3.6						
ASAR	Alice Springs	125.09	203	PKP	PKPdf	14 34 41.3	-1.8
	0.2nm,0.4s,baz=129,slow=1.7,SNR=10						
WRA	Warramunga Arr	128.33	206	PKP	PKPdf	14 34 48.0	-1.4
	0.2nm,0.3s,baz=154,slow=2.0,SNR=10						

*IDC **06** 14:17:21.9±1.1, 1°.88S×99°.66E, h34km±5km, mb3.6/11, mb1 3.7/11, mb1mx3.6/20, mbtmp3.6/11, Error ellipse: s-maj=44.7km s-min=12.3km az=55.0*
*NEIC **06** 14:17:21.4±0.6, 1°.91S×99°.59E, h35km, mb4.1/1, Error ellipse: s-maj=24.0km s-min=9.2km az=62.0*
*DJA **06** 14:17:22, 1°.71S×99°.70E, h5km, MLv4.3/7*

ISC 06 14:17:19.5±2.9, 1°.90S±0°.06×99°.68E±0°.07, h17km±18km, h35km±2.4km; pP-P, n28, σ1§05/28, mb3.9/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	0.82	314	P	Pb	14 17 35.3	+0.1
PDSI	Padang	1.26	39	P	Pn	14 17 40.8	-1.4
PDSI				S	Sb	14 17 58.0	-0.6
PPI	Padang Panjang	1.60	27	P	Pn	14 17 45.9	-1.1
PPI				S	Sn	14 18 08.0	+0.7
KRJI	Kerinci	1.79	96	P	Pn	14 17 54.9	+5.3
SDSI	Sungai Dareh	2.00	61	P	Pn	14 17 52.8	+0.4
BKNI	Bangkinang	2.60	32	P	Pn	14 18 03.8	+3.1
MNSI	Mandailing Nat	2.68	358	P	Pn	14 18 04.1	+2.3
RGRI	Rengat	3.07	60	P	Px	14 18 19.3	
KULM	Kulim	7.21	8	ePn	Pn	14 19 03.7	-0.4
CMAR	Chiang Mai Arr	20.24	358	P	P	14 21 54.6	+0.7
	0.5nm,0.5s,baz=179,slow=8.1,SNR=3.2						
FITZ	Fitzroy Crossi	30.13	124	P	P	14 23 28.5	-0.2
	2.1nm,1.0s,mb3.8,baz=327,slow=8.3,SNR=4.1						
FITZ				pP	pP	14 23 38.7	+4.8
	2.7nm,0.8s,baz=239,slow=8.4,SNR=4.9						
WRA	Warramunga Arr	38.32	120	P	P	14 24 39.2	-0.4
	0.9nm,0.4s,mb3.9,baz=303,slow=9.1,SNR=18						
WRA				pP	pP	14 24 49.6	+4.7
	1.4nm,0.6s,baz=304,slow=8.9,SNR=8.4						
WRA	Warramunga Arr	38.32	120	P	P	14 24 39.2	-0.4
WRA				pP	pP	14 24 49.6	+4.7
ASAR	Alice Springs	39.57	126	P	P	14 24 50.4	+0.4
	0.3nm,0.4s,mb3.4,baz=295,slow=7.7,SNR=21						
ASAR				pP	pP	14 25 00.9	+5.6
	2.4nm,0.6s,baz=301,slow=8.0,SNR=17						
ASAR				PcP	PcP	14 26 58.3	+1.0
	0.4nm,0.7s,baz=336,slow=2.0,SNR=4.2						
HHC	Hu-ho-hao-te	43.91	13	eP	P	14 25 27.7	+2.5
HHC				pP	pP	14 25 32.2	+1.6
HHC				sP	sP	14 25 34.8	+2.1
HHC				PP	PP	14 27 12.7	+5.0
HHC				ScP	ScP	14 31 03.6	+1.2
HHC				S	S	14 32 00.4	+4.5
HHC				sS	sS	14 32 07.6	+2.8
HHC				SS	SS	14 35 10.3	-2.5
HHC				ScS	ScS	14 35 37.2	+13
HHC				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.7						
HHC				pmax	pmax		
	comp=Z,77nm,5.6s						
HHC				LR	LR		
	comp=N,110nm,15.4s						
HHC				LR	LR		
	comp=E,80nm,15.6s						
HHC				LR	LR		
	comp=Z,78nm,15.0s						
KSRS	Korea Array	47.10	31	P	P	14 25 49.7	-0.9
	comp=Z,0.5nm,0.5s,mb3.7,baz=225,slow=8.0,SNR=4.8						
STKA	Stephens Creek	49.45	132	P	P	14 26 09.9	+1.0
	comp=Z,1.0nm,0.8s,mb3.9,baz=326,slow=11,SNR=3.0						
SONM	Songino Array	49.88	6	P	P	14 26 12.1	+0.3
	comp=Z,0.4nm,0.8s,mb3.5,baz=153,slow=1.0,SNR=3.2						
MK31	Makanchi Array	50.85	345	eP	P	14 26 18.8	-0.4
MKAR	Makanchi Array	50.85	345	P	P	14 26 19.4	+0.2
	comp=Z,0.8nm,0.3s,mb4.1,baz=160,slow=8.7,SNR=20						
MKAR				pP	pP	14 26 29.2	+4.5
	comp=Z,1.8nm,0.4s,baz=158,slow=8.6,SNR=8.6						
MKAR	Makanchi Array	50.85	345	P	P	14 26 19.4	+0.2
MKAR				pP	pP	14 26 29.2	+4.5
KURK	Kurchatov	55.42	344	eP	P	14 26 50.7	-2.1
	comp=Z,1.7nm,0.8s,mb4.1						
ZALV	Zalesovo Beam	57.01	350	P	P	14 27 03.6	-0.5
	comp=Z,1.5nm,0.5s,mb4.3,baz=167,slow=7.0,SNR=5.7						
ZALV				pP	pP	14 27 14.1	+4.5
	comp=Z,2.9nm,0.8s,baz=176,slow=4.5,SNR=3.9						
BRTR	Keskin Array B	73.02	313	P	P	14 28 47.6	-1.0
	comp=Z,0.4nm,0.6s,mb3.5,baz=134,slow=8.3,SNR=3.1						
FINES	FINESS Array B	83.88	332	P	P	14 29 48.2	+0.2
	comp=Z,1.1nm,0.7s,mb4.1,baz=113,slow=5.0,SNR=6.0						
FINES	FINESS Array B	83.88	332	P	P	14 29 48.2	+0.2
CPUP	Villa Florida	144.21	217	PKP	PKPdf	14 36 53.3	-1.9
	comp=Z,1.5nm,0.8s,baz=121,slow=5.9,SNR=4.1						
TXAR	Lajitas Array	144.82	37	PKP	PKPdf	14 36 55.0	-1.3
	comp=Z,0.8nm,0.6s,baz=249,slow=1.1,SNR=7.4						

IDC 06 14:21:37.3±29.0, 23°.02S×176°.54W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/19, Error ellipse: s-maj=553.5km s-min=156.2km az=92.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	10.12	27	LR	LR	14 27 08.4	
	comp=Z,84nm,18.3s,baz=121,slow=33						
STKA	Stephens Creek	37.99	247	P	P	14 28 55.3	-1.9
	1.4nm,1.0s,baz=90,slow=13,SNR=3.9						
ASAR	Alice Springs	45.31	259	P	P	14 29 57.1	-0.1
	0.3nm,0.3s,baz=90,slow=7.3,SNR=23						
WRA	Warramunga Arr	45.65	264	P	P	14 30 00.4	+0.5
	0.5nm,0.3s,baz=99,slow=6.9,SNR=21						
FITZ	Fitzroy Crossi	54.07	264	P	P	14 31 04.8	+0.7
	0.6nm,0.7s,baz=85,slow=9.7,SNR=2.7						

*ISCJB **06** 14:34:02.2±0.2, 36°.89N±0°.01×104°.85W±0°.02, h10km, Error ellipse: s-maj=2.5km s-min=1.8km az=171.0*
*NEIC **06** 14:34:04.6±0.6, 37°.01N×104°.89W, h5km, MN2.5, Error ellipse: s-maj=8.7km s-min=6.5km az=79.0*

ISC 06 14:34:02.2±0.2, 36°.90N±0°.01×104°.87W±0°.02, h10km, n60, σ1§36/97, 21C-22D, New Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T24A	Torres, Weston	0.23	321	⇓P	Pg	14 34 07.1	+0.2
	baz=0.1,SNR=709						
T24A				⇓S	Sg	14 34 10.4	+0.3
	baz=0.1						
T25A	Trinidad	0.44	56	⇑P	Pg	14 34 10.7	-0.1
	baz=0.4						
T25A				⇓S	Sg	14 34 16.5	-0.2
	baz=0.4						
U24A	Moreno Valley	0.58	214	⇓P	Pg	14 34 13.0	-0.5
	baz=0.7						
U24A				⇑S	Sg	14 34 20.5	-0.7
	baz=0.7						
U25A	Circle Dot Ran	0.62	143	⇓P	Pg	14 34 13.4	-0.8
	baz=0.7,SNR=325						
U25A				⇑S	Sg	14 34 21.0	-1.3
	baz=0.7						
S24A	Houchin Ranch,	0.79	340	⇑P	Pg	14 34 17.5	0.0
	baz=0.7,SNR=38						
S25A	Robets Cordova	0.84	24	⇑P	Pg	14 34 18.1	-0.3
	baz=0.7,SNR=456						
T23A	Casias Ranch,	0.95	279	⇑P	Pg	14 34 20.2	-0.2
	baz=0.9,SNR=29						
SDCO	Great Sand Dun	0.99	330	P	Pg	14 34 20.6	-0.6
	baz=0.9,SNR=193						
SDCO	Great Sand Dun	0.99	330	ePg	Pg	14 34 20.4	-0.8
SDCO				eSg	Sg	14 34 32.5	-1.6
V25A	Rancho No Teng	1.07	169	⇑P	Pg	14 34 21.7	-1.2
	baz=1.2						
V25A				⇑S	Sg	14 34 34.7	-2.1
	baz=1.2						
U23A	El Rito	1.20	242	⇑P	Pb	14 34 24.7	-0.4
	baz=1.3						
U23A				⇓S	Sb	14 34 40.2	-0.5
	baz=1.3						
V24A	Rampart Ranch,	1.21	196	⇓P	Pn	14 34 24.0	-1.1
	baz=1.4						
V24A				⇓S	Sb	14 34 39.1	-1.7
	baz=1.4						
S23A	Nye Farm, Mont	1.21	312	⇑P	Pn	14 34 25.5	+0.4
	baz=1.1						
R25A	Fountain Ranch	1.33	20	⇑Pb	Pb	14 34 27.1	-0.2
	baz=1.2,SNR=46						
R25A				⇓S	Sb	14 34 44.3	-0.2
	baz=1.2						
R24A	Sanders Place,	1.35	352	⇑Pg	Pn	14 34 27.6	+0.6
	baz=1.2,SNR=25						
R24A				⇓S	Sb	14 34 45.1	+0.3
	baz=1.2						
V26A	Tequesquite Ra	1.40	141	⇓Pb	Pn	14 34 27.4	-0.4
	baz=1.5,SNR=14						
V23A	Ortiz Mt. (NFS	1.56	223	⇓Pg	Pg	14 34 31.2	-0.9
	baz=1.7,SNR=29						
T22A	Edith	1.63	275	Pg	Pg	14 34 32.6	-0.9
	baz=1.6,SNR=75						
U22A	Llaves	1.68	253	⇑Pg	Pg	14 34 33.6	-0.8
	baz=1.7,SNR=59						
W25A	X Bar L Ranch,	1.71	169	⇑Pg	Pg	14 34 33.3	-1.6
	baz=1.9,SNR=66						
W25A				⇓Sb	Sb	14 34 55.0	-0.1
	baz=1.9						
W24A	Lazy 6 Ranch,	1.74	195	⇑Pg	Pn	14 34 33.6	+1.3
	baz=1.9,SNR=39						
S22A	4UR Ranch, Cre	1.78	299	⇓Pg	Pg	14 34 35.6	-0.7
	baz=1.7,SNR=36						
S22A				⇓Sb	Sb	14 34 58.5	+1.3
	baz=1.7						
V22A	San Miguel Ran	1.91	240	⇑Pg	Pn	14 34 37.4	+2.5
	baz=2.0						
R22A	Saguache, Gunn	2.00	312	⇓Sb	Sb	14 35 05.7	+1.9
	baz=1.9						
W26A	Owens Ranch, T	2.01	153	⇓Sb	Sb	14 35 04.3	+0.3
	baz=2.1						
W23A	Werner Place,	2.02	211	⇓Sb	Sb	14 35 04.5	+0.4
	baz=2.1						
Q25A	Bedland, Calha	2.08	14	⇑Pg	Pn	14 34 41.0	+3.9
	baz=1.9						
Q24A	Divide	2.08	354	⇓Sb	Sb	14 35 07.2	+1.4
	baz=1.9						
Q23A	Hartsel	2.15	339	⇓Pb	Pb	14 34 41.2	+0.1
	baz=2.0						
U21A	Nageezi	2.29	259	⇑Pb	Pb	14 34 42.9	-0.6
	baz=2.3,SNR=29						
U21A				⇑Sb	Sb	14 35 13.2	+1.2
	baz=2.3						
ANMO	Albuquerque	2.33	214	ePn	Pn	14 34 41.9	+1.3
ANMO				eSn	Sn	14 35 11.8	+2.6
W27A	Bowe Ranch, En	2.34	141	⇑Pb	Pn	14 34 42.6	+1.9
	baz=2.5						
S21A	Coal Bank Pass	2.45	289	⇓Pb	Pn	14 34 44.9	+2.7
	baz=2.4,SNR=18						
V21A	Milan	2.48	245	Pb	Pn	14 34 45.5	+2.8
	baz=2.5,SNR=8.8						
P23A	Jefferson	2.59	343	⇑Pg	Pg	14 34 51.2	-0.6
	baz=2.5						
X27A	F and S Farms,	2.67	147	⇓Sb	Sb	14 35 24.0	+1.3
	baz=2.8						
SMCO	Snowmass	2.82	325	ePn	Pb	14 34 50.4	-2.2
SMCO				eSn	Sb	14 35 27.5	+0.3
MVCO	Mesa Verde	2.92	277	ePn	Pb	14 34 51.7	-2.7
MVCO				eSn	Sb	14 35 31.0	+0.9
LPM	Los Pinos Moun	2.95	210	ePn	Pb	14 34 55.4	+0.5
LPM				eSn	Sb	14 35 31.8	+0.9
ISCO	Idaho Springs	2.96	349	ePn	Pb	14 34 51.8	-3.2
ISCO				eSn	Sb	14 35 31.8	+0.7
BNM	Barren Site	3.09	208	ePn	Pb	14 34 57.2	0.0
BNM				eSn	Sb	14 35 35.4	+0.4
LAZ	Ladron	3.10	217	ePn	Pb	14 34 55.4	-2.0
LAZ				eSn	Sb	14 35 38.3	+3.1
PV01	Paradox Valley	3.19	294	ePn	Pn	14 34 54.1	+1.8
PV01				ePg	Pg	14 35 00.9	-2.5
PV01				eSn	Sg	14 35 43.8	-0.9
LENM	Lemitar	3.22	213	ePn	Pn	14 34 56.5	+

CKHR	**Kef el Ahmar**	**0.77**	**153**	P	Pg	14 38 50.0	+2.6
CASM	**Ain Smara**	**1.22**	**111**	P	Pg	14 38 57.1	+1.1
CASM	**Ain Smara**	**1.22**	**111**	P	Pg	14 38 57.1	+1.1
CTEI	**Djebel Teioual**	**1.25**	**120**	P	Pg	14 38 59.1	+2.5
CTEI	**Djebel Teioual**	**1.25**	**120**	P	Pg	14 38 59.1	+2.5
CKFL	**Kef-Lekhel**	**1.35**	**102**	P	Pg	14 39 01.2	+2.5
CKFL	**Kef-Lekhel**	**1.35**	**102**	P	Pg	14 39 01.2	+2.5
CMAH	**Djebel Manchou**	**1.88**	**92**	P	Pn	14 39 08.9	+2.8
CMAH	**Djebel Manchou**	**1.88**	**92**	P	Pn	14 39 08.9	+2.8

*ISCJB **06** 14:39:28.2±0.8, 38°.63N±0°.03×21°.51E±0°.04, h9km±5km, Error ellipse: s-maj=5.2km s-min=4.4km az=137.6*
*CSEM **06** 14:39:28.3±0.2, 38°.64N×21°.52E, h9km, MD3.0, Error ellipse: s-maj=4.8km s-min=4.3km az=91.0*
*ATH **06** 14:39:28.2, 38°.63N×21°.54E, h17km±2km, MD3.0/10*
*THE **06** 14:39:28.5, 38°.63N×21°.54E, h0km±3km, ML2.1/8, Error ellipse: s-maj=3.1km s-min=0.9km az=302.0*

ISC 06 14:39:28.6±0.5, 38°.64N±0°.02×21°.52E±0°.03, h11km±5km, n40, σ0s93/65, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.36**	**39**	*e*PB	**Pg**	**14 39 35.5**	**-0.3**
EVR				*e*SB	**Sg**	**14 39 41.6**	**+0.9**
EVR	**Evrytania**	**0.36**	**39**	*e*Pb	**Pg**	**14 39 35.5**	**-0.3**
EVR				*e*Sb	**Sg**	**14 39 41.6**	**+0.9**
EFP	**Efpalio**	**0.37**	**124**	*e*PB	**Pg**	**14 39 35.2**	**-0.7**
EFP				*e*SB	**Sg**	**14 39 40.8**	**0.0**
EFP	**Efpalio**	**0.37**	**124**	P	**Pg**	**14 39 35.2**	**-0.7**
EFP				S	**Sg**	**14 39 40.9**	**+0.1**
EFP	**Efpalio**	**0.37**	**124**	P	**Pg**	**14 39 35.2**	**-0.7**
EFP				S	**Sg**	**14 39 40.9**	**+0.1**
UPR	**University Cam**	**0.41**	**149**	P	**Pg**	**14 39 36.4**	**-0.2**
UPR				S	**Sg**	**14 39 43.4**	**+1.3**
UPR	**University Cam**	**0.41**	**149**	P	**Pg**	**14 39 36.4**	**-0.2**
UPR				S	**Sg**	**14 39 43.4**	**+1.3**
TRIZ	**Trizonia**	**0.51**	**121**	P	**Pg**	**14 39 37.4**	**-1.2**
TRIZ				S	**Sg**	**14 39 45.3**	**0.0**
TRIZ	**Trizonia**	**0.51**	**121**	P	**Pg**	**14 39 37.4**	**-1.2**
TRIZ				S	**Sg**	**14 39 45.3**	**0.0**
LAKA	**Lakka**	**0.54**	**137**	P	**Pg**	**14 39 38.7**	**-0.3**
LAKA				S	**Sg**	**14 39 46.2**	**+0.1**
LAKA	**Lakka**	**0.54**	**137**	P	**Pg**	**14 39 38.7**	**-0.3**
LAKA				S	**Sg**	**14 39 46.2**	**+0.1**
KALE	**Kalithea**	**0.55**	**116**	P	**Pg**	**14 39 38.5**	**-0.7**
KALE				S	**Sg**	**14 39 46.3**	**-0.1**
KALE	**Kalithea**	**0.55**	**116**	P	**Pg**	**14 39 38.5**	**-0.7**
KALE				S	**Sg**	**14 39 46.3**	**-0.1**
RLS	**Riolos of Patr**	**0.58**	**184**	*e*PN	**Pg**	**14 39 39.7**	**-0.1**
RLS				*e*SN	**Sg**	**14 39 48.6**	**+1.2**
RLS	**Riolos of Patr**	**0.58**	**184**	*e*Pn	**Pg**	**14 39 39.7**	**-0.1**
KFL	**Anninata**	**0.78**	**228**	P	**Pg**	**14 39 43.5**	**-0.1**
KFL	**Anninata**	**0.78**	**228**	P	**Pg**	**14 39 43.5**	**-0.1**
DSF	**Desfina**	**0.82**	**105**	P	**Pg**	**14 39 42.8**	**-1.7**
DSF				S	**Sg**	**14 39 55.5**	**+0.3**
DSF	**Desfina**	**0.82**	**105**	P	**Pg**	**14 39 42.8**	**-1.7**
DSF				S	**Sg**	**14 39 55.5**	**+0.3**
VLS	**Valsamata**	**0.86**	**238**	*e*PB	**Pb**	**14 39 44.3**	**-1.2**
VLS				*e*SN	**Sn**	**14 39 58.3**	**-0.9**
VLS	**Valsamata**	**0.86**	**238**	P	**Pg**	**14 39 44.2**	**-1.0**
VLS				S	**Sg**	**14 39 58.4**	**+2.0**
VLS	**Valsamata**	**0.86**	**238**	*e*Pb	**Pb**	**14 39 44.3**	**-1.2**
VLS				*e*Sn	**Sn**	**14 39 58.3**	**-0.9**
GUR	**Goura**	**0.95**	**137**	*e*PB	**Pg**	**14 39 45.7**	**-1.2**
GUR	**Goura**	**0.95**	**137**	P	**Pg**	**14 39 45.7**	**-1.2**
GUR				S	**Sg**	**14 39 59.1**	**-0.2**
GUR	**Goura**	**0.95**	**137**	P	**Pg**	**14 39 45.7**	**-1.2**
GUR				S	**Sg**	**14 39 59.1**	**-0.2**
THL	**Klokotos Trika**	**1.01**	**22**	*e*PN	**Pn**	**14 39 47.0**	**-1.7**
THL	**Klokotos Trika**	**1.01**	**22**	P	**Pg**	**14 39 47.5**	**-0.5**
THL				S	**Sg**	**14 40 02.6**	**+1.5**
THL	**Klokotos Trika**	**1.01**	**22**	*e*Pn	**Pn**	**14 39 47.0**	**-1.7**
THL	**Klokotos Trika**	**1.01**	**22**	P	**Pg**	**14 39 47.5**	**-0.5**
THL				S	**Sg**	**14 40 02.6**	**+1.5**
LKR	**Lokris**	**1.16**	**89**	P	**Pb**	**14 39 51.2**	**+0.5**
LKR				S	**Sb**	**14 40 06.4**	**+0.6**
LKR	**Lokris**	**1.16**	**89**	P	**Pb**	**14 39 51.2**	**+0.5**
LKR				S	**Sb**	**14 40 06.4**	**+0.6**
LTK	**Loutraki**	**1.29**	**118**	*e*PN	**Pn**	**14 39 52.8**	**+0.2**
LTK	**Loutraki**	**1.29**	**118**	P	**Pn**	**14 39 52.8**	**+0.2**
LTK	**Loutraki**	**1.29**	**118**	P	**Pn**	**14 39 52.8**	**+0.2**
ITM	**Ithomi**	**1.49**	**167**	*e*PN	**Pn**	**14 39 56.5**	**+1.2**
ITM	**Ithomi**	**1.49**	**167**	*e*Pn	**Pn**	**14 39 56.5**	**+1.2**
LIT	**Litokhoron**	**1.65**	**27**	*e*PN	**Pn**	**14 39 58.3**	**+0.8**
LIT	**Litokhoron**	**1.65**	**27**	*e*Pn	**Pn**	**14 39 58.3**	**+0.8**
PYL	**PYLOS**	**1.75**	**174**	*e*PN	**Pn**	**14 40 00.3**	**+1.5**
PYL	**PYLOS**	**1.75**	**174**	*e*Pn	**Pn**	**14 40 00.3**	**+1.5**

IDC 06 14:40:29.1±4.6, 21°.72N×143°.41E, h293km±30km, mb2.9/3, mb1 3.1/4, mb1mx2.7/24, mbtmp3.0/4, Error ellipse: s-maj=240.3km s-min=23.5km az=87.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.47**	**349**	P	Pn	14 41 53.8	+2.0
	5.1nm,0.3s,baz=159,slow=23,SNR=18						
CBIJ				S	S	14 42 57.2	-1.1
	6.2nm,0.3s,baz=307,slow=22,SNR=9.3						
WRA	**Warramunga Arr**	**42.34**	**193**	P	P	14 47 55.4	+0.3
	0.5nm,0.3s,baz=16,slow=9.2,SNR=26						
ASAR	**Alice Springs**	**46.05**	**192**	P	P	14 48 23.2	-1.0
	0.1nm,0.6s,baz=13,slow=8.1,SNR=5.1						
FINES	**FINESS Array B**	**83.25**	**335**	P	P	14 52 23.0	+0.2
	0.6nm,0.6s,baz=76,slow=5.9,SNR=4.7						

*ISK **06** 14:43:01.4, 35°.45N×27°.03E, h10km, MD3.4*
*ISCJB **06** 14:43:03.0±1.4, 35°.43N±0°.04×27°.50E±0°.04, h9km±10km, Error ellipse: s-maj=7.8km s-min=4.2km az=158.4*
*THE **06** 14:43:02.8, 35°.43N×27°.51E, h0km±2km, Error ellipse: s-maj=4.7km s-min=1.5km az=151.0*
*CSEM **06** 14:43:03.1±0.3, 35°.42N×27°.46E, h8km, MD3.4, Error ellipse: s-maj=8.6km s-min=4.4km az=158.0*

ISC 06 14:43:04.0±1.1, 35°.47N±0°.04×27°.46E±0°.04, h9km±7km, n46, σ1s13/60, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.92**	**36**	P	**Pg**	**14 43 21.1**	**-0.6**
ARG				S	**Sg**	**14 43 34.9**	**+1.1**
ARG	**Arkhangelos**	**0.92**	**36**	P	**Pg**	**14 43 21.1**	**-0.6**
ARG				S	**Sg**	**14 43 34.9**	**+1.1**
ZKR	**Zakros**	**1.08**	**251**	P	**Pb**	**14 43 22.0**	**-2.7**
ZKR				S	**Sb**	**14 43 39.6**	**+0.7**
ZKR	**Zakros**	**1.08**	**251**	P	**Pb**	**14 43 22.0**	**-2.7**
ZKR				S	**Sb**	**14 43 39.6**	**+0.7**
DAT	**Datca**	**1.27**	**4**	*e*PN	**Pn**	**14 43 26.9**	**-0.8**
DAT				*e*SN	**Sn**	**14 43 44.9**	**+0.1**
DAT	**Datca**	**1.27**	**4**	*e*Pn	**Pn**	**14 43 26.9**	**-0.9**
DAT				*e*Sn	**Sn**	**14 43 44.9**	**+0.1**
BDRM	**Kayabasi**	**1.60**	**359**	*e*P	**Pn**	**14 43 31.3**	**-1.0**
BDRM	**Kayabasi**	**1.60**	**359**	*e*S	**Sn**	**14 43 51.7**	**-1.3**
BODT	**Bodrum**	**1.60**	**356**	*e*PN	**Pn**	**14 43 30.6**	**-1.7**
BODT				*e*SN	**Sn**	**14 43 52.8**	**-0.3**
LAST	**Lasithi**	**1.65**	**260**	P	**Pn**	**14 43 32.4**	**-0.7**
LAST				S	**Sn**	**14 43 55.6**	**+1.3**
LAST	**Lasithi**	**1.65**	**260**	P	**Pn**	**14 43 32.4**	**-0.7**
LAST				S	**Sn**	**14 43 55.6**	**+1.3**
TURN	**Turunc**	**1.68**	**33**	*e*P	**Pn**	**14 43 29.3**	**-4.2**
TURN	**Turunc**	**1.68**	**33**	*e*P	**Pn**	**14 43 29.3**	**-4.2**
YER	**Yerkesik**	**1.79**	**21**	*e*PN	**Pn**	**14 43 35.8**	**+0.8**
MLSB	**Milas**	**1.84**	**8**	*e*PN	**Pn**	**14 43 35.7**	**0.0**
MLSB	**Milas**	**1.84**	**8**	*e*Pn	**Pn**	**14 43 35.7**	**0.0**
AKAS	**Kas**	**1.90**	**66**	*e*P	**Pn**	**14 43 35.8**	**-0.7**
AKAS	**Kas**	**1.90**	**66**	*e*P	**Pn**	**14 43 35.8**	**-0.7**
AKAS				*e*S	**Sn**	**14 44 00.0**	**-0.6**
THR3	**Thira Island,**	**1.92**	**300**	P	**Pn**	**14 43 36.5**	**-0.3**
THR3	**Thira Island,**	**1.92**	**300**	P	**Pn**	**14 43 36.5**	**-0.3**
THR5	**Thira Island,**	**1.96**	**300**	P	**Pn**	**14 43 36.5**	**-0.8**
THR5	**Thira Island,**	**1.96**	**300**	P	**Pn**	**14 43 36.5**	**-0.8**
AYDN	**Tasoluk**	**2.22**	**9**	*e*P	**Pn**	**14 43 41.1**	**+0.2**
AYDN	**Tasoluk**	**2.22**	**9**	*e*P	**Pn**	**14 43 41.1**	**+0.3**
APE	**Apeiranthos**	**2.24**	**316**	*e*PN	**Pn**	**14 43 36.2**	**-4.9**
APE	**Apeiranthos**	**2.24**	**316**	*e*Pn	**Pn**	**14 43 36.2**	**-4.9**
GLHS	**Glhisar (BURDU**	**2.36**	**44**	*e*PN	**Pn**	**14 43 45.0**	**+2.2**
ELL	**Elmali**	**2.36**	**56**	*e*PN	**Pn**	**14 43 45.6**	**+2.8**
ELL	**Elmali**	**2.36**	**56**	*e*Pn	**Pn**	**14 43 45.6**	**+2.8**
GOLH	**Golhisar**	**2.45**	**43**	*e*P	**Pn**	**14 43 43.9**	**-0.2**
DNZL	**Cakiroluk**	**2.56**	**29**	*e*P	**Pn**	**14 43 47.2**	**+1.6**
DNZL	**Cakiroluk**	**2.56**	**29**	*e*P	**Pn**	**14 43 47.2**	**+1.6**
KORT	**Korkueli**	**2.79**	**56**	*e*P	**Pn**	**14 43 49.8**	**+1.0**
KORT	**Korkueli**	**2.79**	**56**	*e*P	**Pn**	**14 43 49.8**	**+1.0**
KARN	**Karanos**	**2.90**	**270**	P	**Pn**	**14 43 49.4**	**-0.8**
KARN				S	**Sn**	**14 44 26.8**	**+1.7**
KARN	**Karanos**	**2.90**	**270**	P	**Pn**	**14 43 49.4**	**-0.8**
KARN				S	**Sn**	**14 44 26.8**	**+1.7**
KULA	**Kula-Manisa**	**3.19**	**17**	*e*PN	**Pn**	**14 43 54.1**	**-0.1**
KULA	**Kula-Manisa**	**3.19**	**17**	*e*Pn	**Pn**	**14 43 54.1**	**-0.1**
KHL	**Karahalli**	**3.30**	**29**	*e*PN	**Pn**	**14 43 57.4**	**+1.7**
KHL	**Karahalli**	**3.30**	**29**	*e*Pn	**Pn**	**14 43 57.4**	**+1.7**
SUTC	**Sutluce-Ispart**	**3.49**	**54**	*e*PN	**Pn**	**14 44 02.0**	**+3.7**
SUTC	**Sutluce-Ispart**	**3.49**	**54**	*e*Pn	**Pn**	**14 44 02.0**	**+3.7**
GAZI	**Gazipasa**	**4.02**	**78**	*e*P	**Pn**	**14 44 04.5**	**-1.0**
GAZI	**Gazipasa**	**4.02**	**78**	*e*P	**Pn**	**14 44 04.6**	**-1.0**
CSS	**Prodhromos**	**4.83**	**94**	P	**Pn**	**14 44 16.0**	**-0.8**
CSS				S	**Sn**	**14 45 12.4**	**-0.4**
CSS	**Prodhromos**	**4.83**	**94**	P	**Pn**	**14 44 16.0**	**-0.8**
CSS				S	**Sn**	**14 45 12.4**	**-0.4**

JMA 06 14:53:13.6±0.1, 30°.07N×141°.78E, h72km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.98**	**173**	P	Pn	14 53 59.7	+1.1
CBIJ				*e*S	Sn	14 54 35.4	+2.1
JHJ2	**Mitsune**	**3.46**	**332**	P	Pn	14 54 06.0	+0.9
BSO1	**Boso 1**	**4.62**	**352**	P	Pn	14 54 25.1	+4.2
BSO2	**Boso 2**	**4.75**	**350**	*e*S	Sn	14 55 18.7	+2.4
BSO3	**Boso 3**	**4.84**	**348**	P	Pn	14 54 25.8	+1.9
BSO3				*e*S	Sn	14 55 23.1	+4.5
BSO4	**Boso 4**	**5.05**	**346**	*e*S	Sn	14 55 25.2	+1.3
JOD2	**Odawara 2**	**5.65**	**337**	P	Pn	14 54 37.7	+2.7
JHU	**Hanno**	**6.14**	**341**	P	Pn	14 54 42.9	+1.3
JHU				*e*S	Sn	14 55 51.0	+0.7
JHO	**Hitachi**	**6.60**	**351**	P	Pn	14 54 49.8	+1.9
JHO				S	Sn	14 56 00.0	-1.7

*ISCJB **06** 15:10:49.1±0.7, 4°.08N±0°.08×127°.7E±0°.1, h100km, mb4.0/10, Error ellipse: s-maj=21.6km s-min=10.8km az=163.6*
*NEIC **06** 15:10:50.6±0.8, 4°.08N×127°.77E, h100km, mb4.2/2, Error ellipse: s-maj=23.0km s-min=10.3km az=64.0*
*IDC **06** 15:10:51.2±3.3, 4°.12N×127°.88E, h106km±31km, mb3.6/8, mb1 3.7/8, mb1mx3.5/21, mbtmp3.6/8, Error ellipse: s-maj=43.9km s-min=12.9km az=71.0*

ISC 06 15:10:51.1±0.7, 4°.03N±0°.08×127°.7E±0°.1, h100km, n11, σ0s88/12, mb4.0/10, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**17.58**	**262**	P	**Pn**	**15 14 49.2**	**-0.6**
	9.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**22.08**	**185**	P	**P**	**15 15 38.3**	**+0.2**
	1.5nm,0.4s,mb3.7,baz=28,slow=10.0,SNR=19						
WRA	**Warramunga Arr**	**24.69**	**165**	P	**P**	**15 16 02.9**	**0.0**
	3.9nm,0.5s,mb4.1,baz=342,slow=10,SNR=24						
MBWA	**Marble Bar**	**26.23**	**197**	P	**P**	**15 16 16.4**	**-0.4**
	15nm,1.3s,mb4.3						
ASAR	**Alice Springs**	**28.18**	**168**	P	**P**	**15 16 34.6**	**+0.4**
	1.7nm,0.3s,mb4.0,baz=351,slow=7.3,SNR=148						
ASAR				ScP	ScP	15 23 16.5	-1.5
	0.2nm,0.7s,baz=358,slow=4.1,SNR=4.1						
CMAR	**Chiang Mai Arr**	**31.59**	**299**	P	**P**	**15 17 05.5**	**+1.0**
	0.3nm,0.7s,mb3.1,baz=122,slow=7.6,SNR=3.8						
KSRS	**Korea Array**	**33.27**	**0**	P	**P**	**15 17 17.8**	**-1.1**
	1.0nm,0.6s,mb3.8,baz=179,slow=9.7,SNR=7.2						
STKA	**Stephens Creek**	**38.07**	**161**	P	**P**	**15 18 00.1**	**+0.2**
	2.0nm,0.3s,mb4.4,baz=349,slow=7.9,SNR=36						
HHC	**Hu-ho-hao-te**	**39.44**	**341**	*e*P	**P**	**15 18 12.8**	**+1.4**
HHC				pP	pP	15 18 35.5	+1.1
HHC				sP	sP	15 18 47.1	+1.2
HHC				PP	PP	15 19 49.2	+5.3
HHC				PcP	PcP	15 20 19.3	+1.8
HHC				ScP	ScP	15 23 57.3	0.0
HHC				S	**S**	**15 24 08.7**	**+2.9**
HHC				sS	sS	15 24 47.6	+1.9
HHC				SS	SS	15 27 01.6	-2.5
HHC				ScS	ScS	15 28 08.6	-0.9
HHC				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,82nm,5.5s						
HHC				LR	LR		
	comp=N,160nm,14.3s						
HHC				LR	LR		
	comp=E,220nm,13.9s						
HHC				LR	LR		
	comp=Z,220nm,13.1s						
SONM	**Songino Array**	**47.34**	**341**	P	**P**	**15 19 13.6**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.3,baz=150,slow=6.0,SNR=3.3						
MKAR	**Makanchi Array**	**57.88**	**325**	P	**P**	**15 20 31.9**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.9,baz=119,slow=7.5,SNR=11						
MKAR				pP	pP	15 20 54.5	-2.5
	comp=Z,1.0nm,0.7s,baz=118,slow=7.6,SNR=4.8						

*IDC **06** 15:30:11.0±0.9, 31°.35N×99°.74E, h0km, mb3.8/11, mb1 3.8/13, mb1mx3.7/27, mbtmp3.7/13, ML3.5/2, MS3.2/6, Ms1 3.2/6, ms1mx3.0/32, Error ellipse: s-maj=27.0km s-min=16.3km az=54.0*
*ISCJB **06** 15:30:12.4±0.3, 31°.47N±0°.04×99°.77E±0°.04, h10km, mb3.9/16, MS3.1/5, Error ellipse: s-maj=5.4km s-min=4.6km az=163.6*
*NEIC **06** 15:30:12.7±0.5, 31°.38N×99°.95E, h10km, mb3.8/6, Error ellipse: s-maj=11.5km s-min=9.9km az=218.0*
*BJI **06** 15:30:15.2, 31°.49N×99°.82E, h13km, mB4.4/1, mb4.0/3, ML3.9/10, Ms3.9/7, Ms7 3.7/7*

ISC 06 15:30:14.0±0.3, 31°.55N±0°.03×99°.84E±0°.03, h10km, n43, σ1s32/50, mb3.9/16, MS3.1/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**3.41**	**100**	Pg	**Pb**	**15 31 15.6**	**+1.0**
CD2				Sg	**Sb**	**15 31 56.1**	**0.0**
CD2				smax			
	comp=N,850nm,0.9s						
CD2				smax			
	comp=E,750nm,0.6s						
LZH	**Lanzhou**	**5.62**	**35**	Pg	**Pg**	**15 31 58.4**	**-3.2**
LZH				Sg	**Sg**	**15 33 10.8**	**-3.5**
LZH				smax			
	comp=N,100nm,1.1s						
LZH				smax			
	comp=E,190nm,1.0s						
LZH				LR	LR		
	comp=N,1μm,10.7s						
LZH				LR	LR		
	comp=E,1μm,8.2s						
LZH				LR	LR		
	comp=Z,1μm,9.6s						
KMI	**Kunming**	**6.89**	**158**	Pn	**Pn**	**15 31 56.4**	**+1.2**
KMI				Sn	**Sn**	**15 33 14.6**	**+0.9**
KMI				Sg	**Sg**	**15 33 55.1**	**-0.3**
KMI				smax			
	comp=N,14nm,1.5s						
KMI				smax			
	comp=E,13nm,1.9s						
KMI				LR	LR		
	comp=N,590nm,6.8s						
KMI				LR	LR		
	comp=E,320nm,8.0s						
KMI				LR	LR		
	comp=Z,440nm,8.7s						
LSA	**Lhasa**	**7.71**	**258**	Pn	**Pn**	**15 32 10.3**	**+3.9**
LSA				Sg	**Sg**	**15 34 19.2**	**-2.5**
LSA				LR	LR		
	comp=E,370nm,9.5s						
LSA				LR	LR		
	comp=Z,440nm,9.3s						
LSA	**Lhasa**	**7.71**	**258**	Pn	**Pn**	**15 32 05.2**	**-1.2**
GTA	**Gaotai**	**7.84**	**360**	*e*P	**Pn**	**15 32 10.5**	**+2.4**
GTA				pP		15 32 15.0	
GTA				S	**Sn**	**15 33 43.4**	**+6.5**
GTA				sS		15 33 48.4	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GTA				LR	LR		
	comp=N,280nm,8.1s						
GTA				LR	LR		
	comp=E,570nm,11.1s						
GTA				LR	LR		
	comp=Z,160nm,13.5s						
XAN	**Xi'an**	**8.04**	**70**	P	**Pb**	**15 32 39.8**	**+6.5**
XAN				S	**Sn**	**15 33 40.6**	**-1.1**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
XAN				LR	LR		
	comp=N,190nm,9.2s						
XAN				LR	LR		
	comp=E,130nm,7.6s						
XAN				LR	LR		
	comp=Z,110nm,9.2s						
ENH	**Enshi**	**8.38**	**96**	Pn	**Pn**	**15 32 11.6**	**-3.9**
	comp=Z,19nm,0.7s						
SHL	**Shillong**	**9.19**	**232**	*e*PKP	**Pn**	**15 32 28.0**	**+1.3**
SHL				*e*S	**Sn**	**15 34 10.0**	**-0.2**
TAPN	**Taplejung**	**11.37**	**251**	*e*P	**Pn**	**15 32 58.5**	**+1.9**
	comp=Z,19nm,0.7s						
ODAN	**Odare**	**11.84**	**250**	*e*P	**Pn**	**15 33 03.8**	**+0.9**
	comp=Z,21nm,0.5s						
GUN	**Gumba**	**12.67**	**257**	*e*P	**Pn**	**15 33 14.2**	**0.0**
	comp=Z,20nm,0.5s						
CMAR	**Chiang Mai Arr**	**13.06**	**184**	Pn	**Pn**	**15 33 15.5**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=358,slow=11,SNR=2.5						
PKI	**Pulchoki**	**13.18**	**256**	*e*P	**Pn**	**15 33 21.3**	**+0.1**
	comp=Z,27nm,0.7s						
PKIN	**Phulchoki**	**13.18**	**256**	*e*P	**Pn**	**15 33 21.8**	**+0.5**
	comp=Z,20nm,0.5s						
KKN	**Kakani**	**13.21**	**257**	*e*P	**Pn**	**15 33 21.3**	**-0.3**
	comp=Z,14nm,0.5s						
DMN	**Daman**	**13.41**	**257**	*e*P	**Pn**	**15 33 24.0**	**-0.4**
	comp=Z,18nm,0.7s						
GKN	**Gorkha**	**13.67**	**259**	*e*P	**Pn**	**15 33 26.1**	**-1.9**
	comp=Z,43nm,0.8s						
DANN	**Dangsing**	**14.30**	**261**	*e*P	**Pn**	**15 33 35.4**	**-1.2**
	comp=Z,34nm,0.6s						
KOLN	**Koldanda**	**14.62**	**259**	*e*P	**Pn**	**15 33 38.7**	**-2.2**
	comp=Z,25nm,0.7s						
SONM	**Songino Array**	**17.01**	**15**	P	**Pn**	**15 34 11.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=10.0						
SONM				LR	LR	15 41 11.2	
	comp=Z,72nm,18.1s,baz=199,slow=38						
ULN	**Ulaanbaatar**	**17.20**	**17**	*e*Pn	**Pn**	**15 34 15.4**	**+1.2**
	comp=Z,4.1nm,1.0s						
MKAR	**Makanchi Array**	**20.34**	**323**	P	**P**	**15 34 49.0**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=119,slow=15,SNR=4.0						
MKAR				LR	LR	15 44 02.1	
	comp=Z,56nm,20.2s,MS2.9,baz=328,slow=41						
MK31	**Makanchi Array**	**20.35**	**323**	P	**P**	**15 34 54.2**	**+3.8**
TKM2	**Tokmak 2**	**22.31**	**307**	*e*P	**P**	**15 35 13.1**	**+1.5**
	comp=Z,1.1nm,0.7s,mb3.4						
AAK	**Ala-Archa**	**22.96**	**306**	P	**P**	**15 35 19.3**	**+0.8**
	comp=Z,1.1nm,0.4s,mb3.7,baz=214,slow=5.6,SNR=3.8						
EKS2	**Erkin-Say**	**23.47**	**306**	*e*P	**P**	**15 35 24.8**	**+1.0**
	comp=Z,7.0nm,1.1s,mb4.0						
KSRS	**Korea Array**	**23.83**	**68**	P	**P**	**15 35 26.5**	**-0.8**
	comp=Z,2.2nm,0.8s,mb3.6,baz=257,slow=9.4,SNR=7.9						
KSRS				LR	LR	15 45 15.4	
	comp=Z,24nm,21.9s,MS2.6,baz=250,slow=38						
KURK	**Kurchatov**	**24.79**	**327**	*e*P	**P**	**15 35 35.5**	**-0.3**
	comp=Z,1.7nm,0.7s,mb3.7						
ZALV	**Zalesovo Beam**	**24.85**	**339**	P	**P**	**15 35 36.3**	**-0.1**
	comp=Z,3.3nm,0.6s,mb4.1,baz=147,slow=9.1,SNR=16						
ZALV				LR	LR	15 45 58.6	
	comp=Z,61nm,21.6s,MS3.1,baz=144,slow=38						
KBL	**Kabul**	**25.94**	**285**	*e*P	**P**	**15 35 48.4**	**+1.8**
	comp=Z,11nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**30.23**	**324**	P	**P**	**15 36 27.2**	**+2.5**
	comp=Z,0.4nm,0.5s,mb3.4,baz=140,slow=9.2,SNR=2.7						
ASAJ	**Asahikawa**	**35.63**	**57**	P	**P**	**15 37 12.7**	**+0.7**
	comp=Z,2.2nm,0.8s,mb4.1,baz=272,slow=15,SNR=4.7						
ASAJ	**Asahikawa**	**35.63**	**57**	*e*P	**P**	**15 37 12.4**	**+0.4**
	comp=Z,1.5nm,0.9s,mb3.9						
AKTO	**Aktyubinsk**	**36.18**	**314**	LR	LR	15 53 25.8	
	comp=Z,76nm,18.9s,MS3.5,baz=85,slow=38						
ASF	**Jabal al Asfar**	**52.76**	**288**	P	**P**	**15 39 30.6**	**+1.4**
	comp=Z,2.5nm,0.8s,mb4.2,baz=197,slow=2.9,SNR=4.4						
FINES	**FINESS Array B**	**55.16**	**326**	P	**P**	**15 39 45.5**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.0,baz=93,slow=10,SNR=5.8						
ARCES	**ARCESS Array B**	**55.35**	**336**	P	**P**	**15 39 46.2**	**-1.5**
	comp=Z,1.0nm,1.1s,mb4.8,baz=48,slow=9.9,SNR=3.7						
ARCES	**ARCESS Array B**	**55.35**	**336**	P	**P**	**15 39 46.2**	**-1.5**
WRA	**Warramunga Arr**	**60.96**	**142**	P	**P**	**15 40 24.9**	**-2.6**
	comp=Z,0.9nm,0.7s,mb4.0,baz=335,slow=7.1,SNR=8.3						
NOA	**NORSAR Array B**	**62.30**	**327**	P	**P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.47**	**358**	PG	**Pg**	**15 36 47.2**	**+0.1**
BLCB				SG	**Sg**	**15 36 53.5**	**+0.2**
BLCB	**Balcova**	**0.47**	**358**	*i* Pg	**Pg**	**15 36 47.2**	**+0.1**
BLCB				*i* Sg	**Sg**	**15 36 53.5**	**+0.2**
IZM	**Izmir**	**0.51**	**18**	PG	**Pg**	**15 36 47.6**	**-0.2**
IZM	**Izmir**	**0.51**	**18**	*i* Pg	**Pg**	**15 36 47.6**	**-0.2**
URLA	**Izmir**	**0.58**	**321**	*e*P	**Pg**	**15 36 48.7**	**-0.5**
URLA				*e*S	**Sg**	**15 36 57.2**	**+0.5**
URLA	**Izmir**	**0.58**	**321**	*e*P	**Pg**	**15 36 48.7**	**-0.4**
URLA				*e*S	**Sg**	**15 36 57.2**	**+0.5**
AYDN	**Tasoluk**	**0.69**	**111**	*e*P	**Pg**	**15 36 51.2**	**-0.1**
AYDN				*e*S	**Sg**	**15 36 59.9**	**-0.4**
AYDN	**Tasoluk**	**0.69**	**111**	*e*P	**Pg**	**15 36 51.2**	**-0.1**
AYDN				*e*S	**Sg**	**15 36 59.9**	**-0.4**
MLSB	**Milas**	**0.84**	**137**	*e*PG	**Pg**	**15 36 54.7**	**+0.6**
MLSB	**Milas**	**0.84**	**137**	*e*Pg	**Pg**	**15 36 54.7**	**+0.7**
BODT	**Bodrum**	**0.87**	**167**	*e*PG	**Pg**	**15 36 54.4**	**-0.3**
BODT				*e*SG	**Sg**	**15 37 06.9**	**+0.9**
BODT	**Bodrum**	**0.87**	**167**	*e*Pg	**Pg**	**15 36 54.4**	**-0.3**
BODT				*e*Sg	**Sg**	**15 37 06.9**	**+0.9**
BDRM	**Kayabasi**	**0.90**	**160**	*e*P	**Pg**	**15 36 55.4**	**+0.2**
BDRM				*e*S	**Sg**	**15 37 06.4**	**-0.4**
BDRM	**Kayabasi**	**0.90**	**160**	*e*P	**Pg**	**15 36 55.4**	**+0.2**
BDRM				*e*S	**Sg**	**15 37 06.4**	**-0.5**
AKHS	**Akhisar**	**1.13**	**31**	*e*P	**Pg**	**15 36 59.3**	**-0.4**
AKHS				*e*S	**Sg**	**15 37 14.1**	**-0.3**
AKHS	**Akhisar**	**1.13**	**31**	*e*P	**Pg**	**15 36 59.3**	**-0.4**
AKHS				*e*S	**Sg**	**15 37 14.1**	**-0.3**
YER	**Yerkesik**	**1.24**	**128**	*e*PN	**Pn**	**15 37 01.5**	**-0.3**
YER	**Yerkesik**	**1.24**	**128**	*e*Pn	**Pn**	**15 37 01.5**	**-0.3**
DAT	**Datca**	**1.25**	**161**	*e*PN	**Pn**	**15 37 00.7**	**-1.2**
DAT	**Datca**	**1.25**	**161**	*e*Pn	**Pn**	**15 37 00.7**	**-1.2**
KULA	**Kula-Manisa**	**1.40**	**64**	*e*PN	**Pn**	**15 37 04.0**	**+0.1**
KULA	**Kula-Manisa**	**1.40**	**64**	*e*Pn	**Pn**	**15 37 04.0**	**+0.1**
APE	**Apeiranthos**	**1.48**	**236**	*e*PN	**Pn**	**15 37 04.8**	**-0.3**
APE	**Apeiranthos**	**1.48**	**236**	*e*Pn	**Pn**	**15 37 04.8**	**-0.3**
KHL	**Karahalli**	**1.98**	**77**	*e*PN	**Pn**	**15 37 12.6**	**+0.6**
KHL	**Karahalli**	**1.98**	**77**	*e*Pn	**Pn**	**15 37 12.6**	**+0.6**
SUTC	**Sutluce-Ispart**	**3.15**	**97**	*e*PN	**Pn**	**15 37 29.2**	**+1.1**
SUTC	**Sutluce-Ispart**	**3.15**	**97**	*e*Pn	**Pn**	**15 37 29.2**	**+1.1**

IDC ***06*** *15:37:27.9±26.0,* **22°.14S×173°.09W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/19, mbtmp4.1/4, Error ellipse: s-maj=487.8km s-min=152.4km az=76.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.91**	**265**	P	P	15 44 47.8	+0.7
	4.4nm,0.4s,baz=99,slow=11,SNR=14						
STKA	**Stephens Creek**	**41.27**	**246**	P	P	15 45 14.2	-0.9
	0.9nm,0.7s,baz=90,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**48.62**	**257**	P	P	15 46 13.6	-0.2
	0.6nm,0.3s,baz=98,slow=7.3,SNR=44						
WRA	**Warramunga Arr**	**48.92**	**262**	P	P	15 46 16.1	+0.1
	1.5nm,0.3s,baz=97,slow=8.4,SNR=45						

IDC ***06*** *15:43:36.8±23.0, 37°.91N×20°.24E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.3/27, mbtmp3.7/4, Error ellipse: s-maj=448.4km s-min=44.6km az=39.0*
ISCJB ***06*** *15:43:38.7±0.7, 38°.04N±0°.03×20°.27E±0°.03, h2km±4km, mb3.6/4, Error ellipse: s-maj=5.0km s-min=3.0km az=28.9*
ATH ***06*** *15:43:40.0, 38°.07N×20°.36E, h12km±1km, ML3.3*
CSEM ***06*** *15:43:40.2±0.2, 38°.06N×20°.35E, h2km, ML3.2/15, Error ellipse: s-maj=5.4km s-min=2.9km az=30.0*
THE ***06*** *15:43:41.5, 38°.11N×20°.41E, h0km±2km, ML3.2/15, Error ellipse: s-maj=2.9km s-min=1.3km az=221.0*
NEIC ***06*** *15:43:41.0±2.0, 38°.14N×20°.49E, h10km, Error ellipse: s-maj=37.7km s-min=14.1km az=198.0*
ISC 06 15:43:39.8±0.7, 38°.05N±0°.03×20°.33E±0°.03, h1km±4km, n117, σ0°98/171, mb3.7/4, 1C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.24**	**57**	*e*PG	**Pg**	**15 43 45.3**	**+0.8**
VLS				*e*SG	**Sg**	**15 43 47.9**	**+0.2**
VLS	**Valsamata**	**0.24**	**57**	P	**Pg**	**15 43 45.2**	**+0.7**
VLS				S	**Sg**	**15 43 47.8**	**+0.1**
VLS	**Valsamata**	**0.24**	**57**	P	**Pg**	**15 43 45.2**	**+0.7**
VLS				*e*Sg	**Sg**	**15 43 47.9**	**+0.2**
KFL	**Anninata**	**0.37**	**80**	P	**Pg**	**15 43 47.4**	**+0.5**
KFL				S	**Sg**	**15 43 51.3**	**-0.4**
KFL	**Anninata**	**0.37**	**80**	P	**Pg**	**15 43 47.4**	**+0.5**
KFL				S	**Sg**	**15 43 51.3**	**-0.4**
RLS	**Riolos of Patr**	**0.90**	**89**	*e*PB	**Pb**	**15 43 56.7**	**-1.5**
RLS				*e*SB	**Sb**	**15 44 08.6**	**-2.0**
RLS	**Riolos of Patr**	**0.90**	**89**	*e*Pb	**Pb**	**15 43 56.7**	**-1.5**
RLS				*e*Sb	**Sb**	**15 44 08.6**	**-2.0**
UPR	**University Cam**	**1.17**	**78**	*e*PB	**Pb**	**15 44 02.0**	**-0.9**
UPR				*e*SB	**Sb**	**15 44 17.7**	**-0.8**
UPR	**University Cam**	**1.17**	**78**	P	**Pg**	**15 44 02.8**	**+0.5**
UPR	**University Cam**	**1.17**	**78**	*e*Pb	**Pb**	**15 44 02.0**	**-0.9**
UPR	**University Cam**	**1.17**	**78**	P	**Pg**	**15 44 02.8**	**+0.5**
UPR				*e*Sb	**Sb**	**15 44 17.7**	**-0.8**
EFP	**Efpalio**	**1.30**	**72**	P	**Pg**	**15 44 03.1**	**-1.6**
EFP				S	**Sg**	**15 44 22.7**	**+1.1**
EFP	**Efpalio**	**1.30**	**72**	P	**Pg**	**15 44 03.1**	**-1.6**
EFP				S	**Sg**	**15 44 22.7**	**+1.1**
LAKA	**Lakka**	**1.31**	**81**	P	**Pg**	**15 44 03.7**	**-1.3**
LAKA				S	**Sg**	**15 44 22.4**	**+0.3**
LAKA	**Lakka**	**1.31**	**81**	P	**Pg**	**15 44 03.7**	**-1.3**
LAKA				S	**Sg**	**15 44 22.4**	**+0.3**
TRIZ	**Trizonia**	**1.41**	**76**	P	**Pn**	**15 44 05.0**	**-1.6**
TRIZ				S	**Sg**	**15 44 24.9**	**-0.2**
TRIZ	**Trizonia**	**1.41**	**76**	P	**Pn**	**15 44 05.0**	**-1.6**
TRIZ				S	**Sg**	**15 44 24.9**	**-0.2**
EVR	**Evrytania**	**1.45**	**53**	*e*PB	**Pb**	**15 44 06.9**	**-0.7**
EVR				*e*SB	**Sb**	**15 44 26.7**	**+0.1**
EVR	**Evrytania**	**1.45**	**53**	*e*Pb	**Pb**	**15 44 06.9**	**-0.7**
EVR				*e*Sb	**Sb**	**15 44 26.7**	**+0.1**
KALE	**Kalithea**	**1.47**	**76**	P	**Pn**	**15 44 06.0**	**-1.4**
KALE				S	**Sg**	**15 44 28.4**	**+1.4**
KALE	**Kalithea**	**1.47**	**76**	P	**Pn**	**15 44 06.0**	**-1.4**
KALE				S	**Sg**	**15 44 28.4**	**+1.4**
IGT	**Igoumenitsa**	**1.49**	**0**	P	**Pn**	**15 44 07.3**	**-0.3**
IGT				S	**Sg**	**15 44 27.9**	**+0.3**
IGT	**Igoumenitsa**	**1.49**	**0**	P	**Pn**	**15 44 07.3**	**-0.3**
IGT				S	**Sg**	**15 44 27.9**	**+0.3**
ITM	**Ithomi**	**1.54**	**124**	*e*PB	**Pb**	**15 44 09.2**	**+0.2**
ITM				*e*SB	**Sb**	**15 44 29.2**	**+0.3**
ITM	**Ithomi**	**1.54**	**124**	P	**Pn**	**15 44 09.0**	**+0.7**
ITM	**Ithomi**	**1.54**	**124**	P	**Pn**	**15 44 09.0**	**+0.7**
ITM				*e*Sb	**Sb**	**15 44 29.2**	**+0.3**
GUR	**Goura**	**1.59**	**93**	*e*PN	**Pn**	**15 44 08.2**	**-0.9**
GUR				*e*SB	**Sb**	**15 44 31.1**	**+0.4**
GUR	**Goura**	**1.59**	**93**	P	**Pn**	**15 44 08.4**	**-0.7**
GUR				S	**Sn**	**15 44 31.9**	**+1.6**
GUR	**Goura**	**1.59**	**93**	P	**Pn**	**15 44 08.4**	**-0.7**
GUR				*e*Sb	**Sb**	**15 44 31.1**	**+0.4**
GUR				S	**Sn**	**15 44 31.9**	**+1.6**
PYL	**PYLOS**	**1.61**	**135**	*e*PB	**Pb**	**15 44 10.0**	**-0.2**
PYL	**PYLOS**	**1.61**	**135**	P	**Pn**	**15 44 09.7**	**+0.4**
PYL	**PYLOS**	**1.61**	**135**	P	**Pn**	**15 44 09.7**	**+0.4**
PYL	**PYLOS**	**1.61**	**135**	*e*Pb	**Pb**	**15 44 10.0**	**-0.2**
JAN	**Janina**	**1.66**	**14**	*e*PB	**Pb**	**15 44 11.4**	**+0.2**
JAN				*e*SB	**Sb**	**15 44 32.7**	**+0.1**
JAN	**Janina**	**1.66**	**14**	*e*Pb	**Pb**	**15 44 11.4**	**+0.2**
JAN				*e*Sb	**Sb**	**15 44 32.7**	**+0.1**
KEK	**Kerkira**	**1.72**	**346**	*e*PN	**Pn**	**15 44 10.8**	**0.0**
KEK	**Kerkira**	**1.72**	**346**	P	**Pn**	**15 44 10.9**	**+0.1**
KEK				S	**Sn**	**15 44 34.2**	**+0.9**
KEK	**Kerkira**	**1.72**	**346**	P	**Pn**	**15 44 10.9**	**+0.1**
KEK				S	**Sn**	**15 44 34.2**	**+0.9**
VLX	**Vlachokerasia**	**1.76**	**112**	*e*PG	**Pg**	**15 44 12.9**	**-0.7**
VLX	**Vlachokerasia**	**1.76**	**112**	P	**Pn**	**15 44 13.8**	**+2.4**
VLX				S	**Sn**	**15 44 34.7**	**+0.3**
VLX	**Vlachokerasia**	**1.76**	**112**	P	**Pn**	**15 44 13.8**	**+2.4**
VLX				S	**Sn**	**15 44 34.7**	**+0.3**
DSF	**Desfina**	**1.77**	**77**	P	**Pn**	**15 44 10.7**	**-0.8**
DSF				S	**Sn**	**15 44 35.6**	**+1.0**
DSF	**Desfina**	**1.77**	**77**	P	**Pn**	**15 44 10.7**	**-0.8**
DSF				S	**Sn**	**15 44 35.6**	**+1.0**
THL	**Klokotos Trika**	**2.01**	**40**	*e*PN	**Pn**	**15 44 15.8**	**+1.0**
THL	**Klokotos Trika**	**2.01**	**40**	P	**Pn**	**15 44 15.5**	**+0.7**
THL				S	**Sn**	**15 44 40.6**	**0.0**
THL	**Klokotos Trika**	**2.01**	**40**	P	**Pn**	**15 44 15.5**	**+0.7**
THL	**Klokotos Trika**	**2.01**	**40**	*e*Pn	**Pn**	**15 44 15.8**	**+1.0**
THL				S	**Sn**	**15 44 40.6**	**0.0**
LTK	**Loutraki**	**2.08**	**90**	P	**Pn**	**15 44 16.2**	**+0.4**
LTK	**Loutraki**	**2.08**	**90**	P	**Pn**	**15 44 16.2**	**+0.4**
LKR	**Lokris**	**2.19**	**73**	*e*PN	**Pn**	**15 44 17.8**	**+0.6**
LKR	**Lokris**	**2.19**	**73**	P	**Pn**	**15 44 17.5**	**+0.3**
LKR				S	**Sn**	**15 44 44.5**	**-0.4**
LKR	**Lokris**	**2.19**	**73**	P	**Pn**	**15 44 17.5**	**+0.3**
LKR	**Lokris**	**2.19**	**73**	*e*Pn	**Pn**	**15 44 17.8**	**+0.6**
LKR				S	**Sn**	**15 44 44.5**	**-0.4**
ATAL	**Atalanti**	**2.21**	**72**	P	**Pn**	**15 44 18.1**	**+0.5**
ATAL				S	**Sn**	**15 44 45.3**	**-0.3**
ATAL	**Atalanti**	**2.21**	**72**	P	**Pn**	**15 44 18.1**	**+0.5**
ATAL				S	**Sn**	**15 44 45.3**	**-0.3**
DID	**Didima**	**2.37**	**102**	*e*PN	**Pn**	**15 44 20.9**	**+1.2**
DID	**Didima**	**2.37**	**102**	P	**Pn**	**15 44 20.7**	**+1.0**
DID				S	**Sn**	**15 44 51.8**	**+2.4**
DID	**Didima**	**2.37**	**102**	P	**Pn**	**15 44 20.7**	**+1.0**
DID				S	**Sn**	**15 44 51.8**	**+2.4**
NEST	**Nestorio**	**2.43**	**13**	P	**Pn**	**15 44 22.1**	**+1.5**
NEST	**Nestorio**	**2.43**	**13**	P	**Pn**	**15 44 22.1**	**+1.5**
KZN	**Kozani**	**2.52**	**26**	*e*PN	**Pn**	**15 44 22.5**	**+0.6**
KZN	**Kozani**	**2.52**	**26**	*e*Pn	**Pn**	**15 44 22.5**	**+0.6**
NEO	**Neokhori**	**2.59**	**60**	*e*PB	**Pn**	**15 44 23.4**	**+0.6**
NEO	**Neokhori**	**2.59**	**60**	*e*Pn	**Pn**	**15 44 23.4**	**+0.6**
LIT	**Litokhoron**	**2.65**	**39**	*e*PN	**Pn**	**15 44 24.8**	**+1.1**
LIT	**Litokhoron**	**2.65**	**39**	P	**Pn**	**15 44 24.7**	**+1.0**
LIT				S	**Sn**	**15 44 55.6**	**-0.9**
LIT	**Litokhoron**	**2.65**	**39**	P	**Pn**	**15 44 24.7**	**+1.0**
LIT				S	**Sn**	**15 44 55.6**	**-0.9**
ATH	**Athens Observa**	**2.68**	**91**	*e*PN	**Pn**	**15 44 24.9**	**+0.9**
ATH	**Athens Observa**	**2.68**	**91**	*e*Pn	**Pn**	**15 44 24.9**	**+0.9**
VLY	**Voula,Athens**	**2.75**	**93**	*e*PN	**Pn**	**15 44 26.0**	**+1.1**
VLY	**Voula,Athens**	**2.75**	**93**	*e*Pn	**Pn**	**15 44 26.0**	**+1.1**
KYTH	**Kithira**	**2.79**	**128**	*e*PB	**Pb**	**15 44 27.7**	**-2.7**
KYTH	**Kithira**	**2.79**	**128**	*e*Pb	**Pb**	**15 44 27.7**	**-2.7**
PTL	**Penteli**	**2.79**	**89**	*e*PN	**Pn**	**15 44 25.2**	**-0.4**
PTL	**Penteli**	**2.79**	**89**	*e*Pn	**Pn**	**15 44 25.2**	**-0.4**
FNA	**Florina**	**2.85**	**16**	P	**Pn**	**15 44 27.1**	**+0.7**
FNA				S	**Sn**	**15 45 01.8**	**+0.4**
FNA	**Florina**	**2.85**	**16**	P	**Pn**	**15 44 27.1**	**+0.7**
FNA				S	**Sn**	**15 45 01.8**	**+0.4**
AOS	**Alonnisos**	**3.00**	**67**	P	**Pn**	**15 44 28.7**	**+0.3**
AOS				S	**Sn**	**15 45 02.8**	**-2.2**
AOS	**Alonnisos**	**3.00**	**67**	P	**Pn**	**15 44 28.7**	**+0.3**
AOS				S	**Sn**	**15 45 02.8**	**-2.2**
BIA	**Bitola**	**3.07**	**14**	*e*Pn	**Pn**	**15 44 31.2**	**+1.9**
PAIG	**Paliouri**	**3.22**	**53**	P	**Pn**	**15 44 30.9**	**-0.5**
PAIG	**Paliouri**	**3.22**	**53**	P	**Pn**	**15 44 30.9**	**-0.5**
PLG	**Polygyros**	**3.36**	**45**	*e*PN	**Pn**	**15 44 32.7**	**-0.7**
PLG	**Polygyros**	**3.36**	**45**	*e*Pn	**Pn**	**15 44 32.7**	**-0.7**
KRUS	**Krusevo**	**3.40**	**12**	*e*Pn	**Pn**	**15 44 33.8**	**-0.1**
PE1	**Pezze di Greco**	**3.56**	**322**	*e*Pn	**Pn**	**15 44 36.6**	**+0.5**
SOH	**Sokhos**	**3.63**	**39**	*e*PN	**Pn**	**15 44 37.8**	**+0.7**
SOH	**Sokhos**	**3.63**	**39**	*e*Pn	**Pn**	**15 44 37.8**	**+0.7**
SG1	**Sgolgore (BA)**	**3.97**	**316**	*e*Pn	**Pn**	**15 44 43.1**	**+1.3**
SG1				*e*Sn	**Sn**	**15 45 28.2**	**-0.8**
CUC	**Castrocucco**	**4.02**	**300**	*e*Pn	**Pn**	**15 44 43.2**	**+0.8**
CUC	**Castrocucco**	**4.02**	**300**	*e*Pn	**Pn**	**15 44 43.2**	**+0.8**
CDT	**Castel del Mon**	**4.36**	**315**	*e*Pn	**Pn**	**15 44 47.9**	**+0.8**
CHOS	**Chios island**	**4.52**	**84**	*e*PN	**Pn**	**15 44 49.7**	**+0.3**
CHOS	**Chios island**	**4.52**	**84**	*e*Pn	**Pn**	**15 44 49.7**	**+0.3**
BARS	**Barje**	**4.90**	**13**	⇓*i*Pn	**Pn**	**15 44 53.9**	**-0.6**
STON	**Ston**	**5.22**	**338**	*e*Pn	**Pn**	**15 44 56.6**	**-2.3**
STON				S	**Sn**	**15 45 53.6**	**-6.1**
STON	**Ston**	**5.22**	**338**	*e*Pn	**Pn**	**15 44 56.6**	**-2.4**
ALN	**Alexandroupoli**	**5.26**	**55**	*e*Pn	**Pn**	**15 44 59.3**	**-0.2**
BBLS	**Lazići**	**5.86**	**353**	*e*Pn	**Pn**	**15 45 08.2**	**+0.5**
DIVS	**Divibare**	**6.05**	**358**	*e*Pn	**Pn**	**15 45 09.3**	**-1.1**
NVLJ	**Novalja**	**7.70**	**329**	⇑*i*Pn	**Pn**	**15 45 33.1**	**+0.2**
NVLJ				S	**Sn**	**15 46 54.8**	**-5.9**
BOJS	**Bojanci**	**8.36**	**335**	*i* Pn	**Pn**	**15 45 42.2**	**+0.2**
BOJS				*i* Sn	**Sn**	**15 47 12.7**	**-4.3**
BOJS	**Bojanci**	**8.36**	**335**	*i* Pn	**Pn**	**15 45 42.2**	**+0.2**
BOJS				*i* Sn	**Sn**	**15 47 12.7**	**-4.3**
BOJS	**Bojanci**	**8.36**	**335**	*i* Pn	**Pn**	**15 45 42.2**	**+0.2**
SKDS	**Skadanscina**	**8.85**	**330**	*i* Pn	**Pn**	**15 45 48.1**	**-0.7**
PDKS	**Podkum**	**8.94**	**335**	*i* Pn	**Pn**	**15 45 49.9**	**0.0**
PDKS	**Podkum**	**8.94**	**335**	*i* Pn	**Pn**	**15 45 49.9**	**0.0**
HFS	**Hagfors**	**22.51**	**351**	P	**P**	**15 48 39.2**	**-1.3**
	5.2nm,1.2s,mb4.0,baz=177,slow=12,SNR=5.2						
HFS	**Hagfors**	**22.51**	**351**	P	**P**	**15 48 39.2**	**-1.3**
FINES	**FINESS Array B**	**23.70**	**7**	P	**P**	**15 48 51.1**	**-1.8**
	1.1nm,0.8s,mb3.4,baz=171,slow=9.6,SNR=5.0						
FINES	**FINESS Array B**	**23.70**	**7**	P	**P**	**15 48 51.1**	**-1.8**
MKAR	**Makanchi Array**	**45.50**	**58**	P	**P**	**15 51 58.7**	**-1.8**
	0.3nm,0.4s,mb3.7,baz=274,slow=7.6,SNR=9.1						
MKAR	**Makanchi Array**	**45.50**	**58**	P	**P**	**15 51 58.7**	**-1.8**
ZALV	**Zalesovo Beam**	**45.89**	**48**	P	**P**	**15 52 01.9**	**-1.7**
	0.5nm,0.4s,mb3.9,baz=288,slow=8.2,SNR=2.7						
ZALV	**Zalesovo Beam**	**45.89**	**48**	P	**P**	**15 52 01.9**	**-1.7**
YAK	**Yakutsk**	**65.30**	**29**	*e*P	**P**	**15 54 23.5**	**+0.6**
YAK	**Yakutsk**	**65.30**	**29**	*e*P	**P**	**15 54 23.5**	**+0.6**

ISCJB ***06*** *16:00:54.6±0.6, 38°.61N±0°.04×55°.14E±0°.05, h10km, Error ellipse: s-maj=6.2km s-min=5.8km az=161.4*
CSEM ***06*** *16:00:55.4±0.7, 38°.48N×55°.05E, h2km, ML3.1, Error ellipse: s-maj=20.3km s-min=14.2km az=47.0*
TEH ***06*** *16:01:02.5, 38°.09N×55°.12E, h10km*
ISC 06 16:00:57.2±0.5, 38°.54N±0°.04×55°.07E±0°.05, h10km, n19, σ1°30/25, 1C-1D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**1.19**	**137**	*e*Pg	**Pg**	**16 01 17.4**	**-2.6**
BJRD	**Bojnurd**	**2.02**	**114**	*e*Pg	**Pg**	**16 01 34.1**	**-1.8**
BJRD				*e*Sg	**Sg**	**16 02 01.4**	**-0.8**
IGLO	**Ghaloghah**	**2.26**	**206**	*e*Pn	**Pn**	**16 01 34.7**	**+0.1**
IGLO				*e*		16 02 26.5	
	comp=Z,2μm,0.2s						
ISFR	**Sfrayin**	**2.75**	**122**	*e*Pn	**Pn**	**16 01 43.4**	**+2.1**
ISFR				*e*Sg	**Sg**	**16 02 20.9**	**-4.6**
ISFR				*e*		16 02 25.4	
	comp=Z,2μm,0.2s						
IEMG	**Emamgholi**	**3.04**	**111**	*e*Pn	**Pn**	**16 01 48.5**	**+3.2**
IEMG				*e*		16 01 54.6	
	comp=Z,1μm,0.2s						
IALA	**Alasht**	**3.04**	**217**	*e*Pn	**Pn**	**16 01 43.8**	**-1.5**
IALA				*e*		16 02 21.3	
	comp=Z,1μm,0.1s						
ISHM	**Shahmirzad**	**3.08**	**208**	*e*Pn	**Pn**	**16 01 45.9**	**+0.1**
ISHM				*e*		16 02 24.4	
	comp=Z,1μm,0.2s						
IANJ	**Anjilo**	**3.20**	**197**	*e*Pn	**Pn**	**16 01 47.5**	**0.0**
IANJ				*e*		16 02 51.2	
	comp=Z,322nm,0.3s						
IKRD	**Kardeh**	**3.25**	**122**	*e*Pn	**Pg**	**16 01 59.8**	**+0.4**
IKRD				*e*		16 02 14.7	
	comp=Z,356nm,0.2s						
IFIR	**Firoozkooh**	**3.44**	**213**	*e*Pn	**Pn**	**16 01 51.2**	**+0.5**
IFIR				*e*		16 01 54.9	
	comp=Z,1μm,0.2s						
IAKL	**Akhelmad**	**3.51**	**122**	*e*	**Pg**	**16 02 04.9**	**+0.5**
	comp=Z,385nm,0.2s						
ILAS	**Lasjerd**	**3.58**	**209**	*e*Pn	**Pn**	**16 01 53.1**	**+0.4**
ILAS				*e*		16 02 12.8	
	comp=Z,367nm,0.2s						
IPAY	**Payeh**	**3.75**	**123**	*e*Pn	**Pn**	**16 01 57.4**	**+2.3**
IPAY				*e*		16 03 09.5	
	comp=Z,378nm,0.3s						
IVRN	**Varamin**	**4.44**	**218**	*e*	**Sn**	**16 02 43.0**	**-13**
	comp=Z,100nm,0.2s						
IVRN				*e*Pn	**Pn**	**16 02 05.0**	**+0.5**
ZNJK	**Zanjan**	**5.41**	**252**	*e*Pn	**Pn**	**16 02 17.0**	**-0.8**
AB31	**Akbulak array**	**11.27**	**17**	Pn	**Pn**	**16 03 40.4**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=204,slow=14,SNR=15						
AB31				⇑Sn	**Sn**	**16 05 43.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=205,slow=26						
AB31	**Akbulak array**	**11.27**	**17**	Pn	**Pn**	**16 03 40.4**	**+2.3**
	comp=Z,0.3nm,0.3s,SNR=15						
AB31				Sn	**Sn**	**16 05 43.9**	**-0.2**
	comp=Z,0.3nm,0.3s						
AKTO	**Aktyubinsk**	**12.08**	**9**	Pn	**Pn**	**16 03 48.1**	**-1.1**
	comp=Z,0.4nm,0.7s						
AKTO				⇓Sn	**Sn**	**16 05 59.9**	**-3.8**
	comp=Z,0.5nm,1.2s						
AKTO	**Aktyubinsk**	**12.08**	**9**	Pn	**Pn**	**16 03 48.1**	**-1.1**
	comp=Z,0.4nm,0.7s						

IDC ***06*** *16:13:59.0±2.5, 11°.27N×124°.76E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/20, mbtmp3.3/4, Error ellipse: s-maj=147.7km s-min=27.8km az=67.0*
ISCJB ***06*** *16:14:49.6±1.5, 6°.4N±0°.3×126°.5E±0°.1, h63km±34km, mb3.0/3, Error ellipse: s-maj=46.0km s-min=20.0km az=14.3*
MAN ***06*** *16:14:51, 6°.41N×126°.34E, h64km, mb4.4, ML3.3, MS3.2*
ISC 06 16:14:51.0±1.6, 6°.4N±0°.3×126°.4E±0°.1, h58km±40km, n7, σ1°29/11, mb3.0/3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.57**	**344**	*e*P	**Pn**	**16 15 05.6**	**+1.9**
MATI				*e*S	**Sn**	**16 15 11.2**	**-1.6**
KCP	**Kidapawan**	**1.45**	**295**	⇑*e*P	**Pn**	**16 15 15.2**	**+0.2**
KCP				*i* S	**Sn**	**16 15 33.1**	**+0.1**
BUKP	**Musuan**	**2.00**	**318**	*e*P	**Pn**	**16 15 23.0**	**+0.6**
BUKP				*e*S	**Sn**	**16 15 38.2**	**-8.1**
CGP	**Cagayan de Oro**	**2.67**	**320**	⇓*e*P	**Pn**	**16 15 31.1**	**-0.5**
CGP				*e*S	**Sn**	**16 16 07.6**	**+4.9**
FITZ	**Fitzroy Crossi**	**24.35**	**182**	P	**P**	**16 20 01.3**	**-2.3**
	1.2nm,1.1s,mb3.2,baz=18,slow=13,SNR=1.7						
WRA	**Warramunga Arr**	**27.30**	**164**	P	**P**	**16 20 32.4**	**+2.0**
	0.4nm,1.0s,mb2.9,baz=345,slow=10,SNR=5.4						
ASAR	**Alice Springs**	**30.75**	**166**	P	**P**	**16 21 00.5**	**-0.5**
	0.1nm,0.5s,mb2.9,baz=345,slow=6.7,SNR=5.7						

GII ***06*** *16:16:42.5±0.7, 33°.27N×35°.45E, h0km±2km*
ISCJB ***06*** *16:16:43.3±0.5, 33°.33N±0°.02×35°.41E±0°.04, h2km±6km, Error ellipse: s-maj=5.7km s-min=3.3km az=19.2*
GRAL ***06*** *16:16:44.6±0.3, 33°.31N×35°.46E, h0km±19km, MD3.2*
CSEM ***06*** *16:16:44.6, 33°.31N×35°.46E, h0km, ML3.2, After GRAL*
ISC 06 16:16:43.8±0.5, 33°.33N±0°.02×35°.41E±0°.04, h3km±6km, n34, σ0°71/38, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.17**	**337**	*e*P	**Pg**	**16 16 48.3**	**+1.1**
MATL	**Matarih**	**0.17**	**337**	*e*P	**Pg**	**16 16 48.3**	**+1.2**
KSDI	**Kefar Szold**	**0.25**	**124**	Pg	**Pg**	**16 16 47.8**	**-0.8**
KSDI	**Kefar Szold**	**0.25**	**124**	Sg	**Sg**	**16 16 52.2**	**+0.4**
HRI	**Mount Hermon**	**0.28**	**103**	Pg	**Pg**	**16 16 48.8**	**-0.4**
HRI	**Mount Hermon**	**0.28**	**103**	Sg	**Sg**	**16 16 53.0**	**+0.2**
MMC7	**Mount Meron ar**	**0.31**	**183**	Pg	**Pg**	**16 16 49.1**	**-0.6**
MMA0	**Mount Meron ar**	**0.32**	**181**	Pg	**Pg**	**16 16 49.2**	**-0.7**
MMA0	**Mount Meron ar**	**0.32**	**181**

BSD				i S		Sn	16 46 47.6	-1.6
HFS	**Hagfors**	**4.92**	**303**	Pn		**Pn**	**16 45 57.9**	**+0.9**
	baz=102,slow=12							
HFS				Sn		**Sn**	**16 46 53.5**	**-1.0**
	baz=112,slow=28							
HFS				Lg			16 47 16.6	
	baz=104,slow=28							
HFS	**Hagfors**	**4.92**	**303**	Pn		**Pn**	**16 45 57.9**	**+0.9**
	baz=102,slow=12,SNR=5.6							
HFS				Sn		**Sn**	**16 46 53.5**	**-1.0**
	baz=112,slow=26,SNR=3.8							
HFS				Lg			16 47 16.5	
	baz=104,slow=25,SNR=5.4							
NB2	**NORSAR Subarra**	**6.42**	**306**	Pn		**Pn**	**16 46 17.4**	**-0.1**
	baz=122,slow=14							
NB2				Sn		**Sn**	**16 47 31.4**	**0.0**
NB2				Lg			16 48 04.1	
	baz=123,slow=37							
NB2	**NORSAR Subarra**	**6.42**	**306**	Pn		**Pn**	**16 46 17.4**	**-0.2**
	baz=122,slow=13,SNR=0.6							
NB2				Sn		**Sn**	**16 47 31.4**	**0.0**
NOA	**NORSAR Array B**	**6.42**	**306**	Pn		**Pn**	**16 46 16.5**	**-1.1**
	0.1nm,0.3s,baz=57,slow=15,SNR=5.0							
NOA				Sn		**Sn**	**16 47 30.0**	**-1.5**
	0.1nm,0.3s,baz=272,slow=18,SNR=1.1							
NOA				Lg			16 48 04.5	
	0.5nm,0.3s,baz=93,slow=19,SNR=4.9							
ARA0	**ARCESS Array S**	**11.97**	**6**	Pn		**Pn**	**16 47 29.2**	**-4.2**
	baz=186,slow=14							
ARCES	**ARCESS Array B**	**11.97**	**6**	Pn		**Pn**	**16 47 29.0**	**-4.4**
	0.0nm,0.3s,baz=176,slow=14,SNR=3.3							

*IDC **06** 16:48:54.0±3.1, 21°.36S×68°.99W, h48km±34km, mb3.8/4, mb1 4.0/5, mb1mx3.7/17, mbtmp4.0/5, Error ellipse: s-maj=30.0km s-min=26.4km az=112.0*
*ISCJB **06** 16:48:55.4±1.7, 21°.48S±0°.07×69°.0W±0°.2, h87km±20km, mb3.9/3, Error ellipse: s-maj=24.2km s-min=11.0km az=4.9*
*NEIC **06** 16:48:56.1±1.5, 21°.54S×68°.99W, h76km±15km, mb3.9/1, Error ellipse: s-maj=21.4km s-min=14.9km az=95.0*

ISC 06 16:48:56.7±1.4, 21°.53S±0°.09×69°.0W±0°.2, h83km±16km, n11, σ1§22/11, mb3.9/3, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.28**	**9**	P	**Pn**	**16 50 15.1**	**+2.0**
	6.4nm,0.3s,baz=191,slow=6.1,SNR=89						
LPAZ				S	Sx	16 51 03.4	
	0.8nm,0.3s,baz=191,slow=14,SNR=3.9						
LPAZ	**La Paz**	**5.28**	**9**	*e*Pn	**Pn**	**16 50 14.6**	**+1.5**
LPAZ				P		16 50 15.1	
LPAZ				S	Sx	16 51 03.4	
SIV	**San Ignacio**	**9.30**	**55**	P	**Pn**	**16 51 06.4**	**-1.6**
	3.8nm,0.3s,baz=248,slow=12,SNR=64						
CFAA	**Coronel Fontan**	**10.05**	**176**	P	**Pn**	**16 51 17.7**	**-0.5**
	0.0nm,0.3s,baz=350,slow=6.1,SNR=3.0						
CFAA				S	**Sn**	**16 53 13.1**	**+4.0**
	0.1nm,0.3s,baz=120,slow=20,SNR=4.6						
TRQA	**Tornquist**	**17.54**	**161**	P	**Pn**	**16 52 49.3**	**-6.5**
	9.0nm,1.2s						
BDFB	**Brasilia**	**20.71**	**77**	P	**P**	**16 53 30.4**	**0.0**
	3.6nm,0.5s,baz=222,slow=13,SNR=6.5						
CMIG	**Matias Romero**	**46.02**	**325**	P	**P**	**16 57 12.1**	**-0.1**
	1.8nm,0.3s,mb4.2,baz=210,slow=8.1,SNR=3.7						
TXAR	**Lajitas Array**	**60.62**	**325**	P	**P**	**16 58 57.6**	**-1.4**
	0.2nm,0.7s,mb3.3,baz=155,slow=10,SNR=4.1						
TORD	**Torodi Ar. Bea**	**77.43**	**70**	P	**P**	**17 00 45.0**	**+1.6**
	1.8nm,0.5s,mb4.1,baz=248,slow=3.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**77.43**	**70**	P	**P**	**17 00 45.0**	**+1.6**
MKAR	**Makanchi Array**	**145.70**	**36**	PKPbc	PKPbc	17 08 27.4	+1.4
	0.2nm,0.6s,baz=279,slow=6.7,SNR=2.6						

IDC 06 16:53:37.4±2.2, 15°.36S×178°.38E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.8/17, mbtmp3.7/6, MS3.6/6, Ms1 3.6/6, ms1mx3.4/21, Error ellipse: s-maj=111.1km s-min=25.9km az=144.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.64**	**83**	LR	LR	16 58 42.7	
	comp=Z,419nm,21.6s,baz=189,slow=32						
HNR	**Honiara**	**18.93**	**286**	LR	LR	17 03 10.7	
	comp=Z,84nm,20.2s,baz=114,slow=30						
URZ	**Urewera**	**22.84**	**183**	LR	LR	17 05 14.5	
	comp=Z,202nm,19.0s,baz=18,slow=30						
CTA	**Charters Tower**	**30.93**	**257**	LR	LR	17 09 40.9	
	comp=Z,134nm,21.6s,baz=96,slow=31						
STKA	**Stephens Creek**	**37.27**	**237**	P	P	17 00 51.2	0.0
	2.1nm,0.8s,baz=86,slow=9.8,SNR=5.2						
STKA				LR	LR	17 13 40.6	
	comp=Z,123nm,18.0s,baz=26,slow=32						
WRA	**Warramunga Arr**	**42.12**	**257**	P	P	17 01 30.7	-1.0
	1.7nm,1.2s,baz=90,slow=7.8,SNR=3.4						
ASAR	**Alice Springs**	**42.58**	**252**	P	P	17 01 35.4	0.0
	1.6nm,0.8s,baz=82,slow=8.8,SNR=7.6						
MMRI	**Maumere**	**55.19**	**270**	P	P	17 03 13.5	+1.0
	0.1nm26nm,1.3s						
TOLI	**Toli-Toli**	**59.20**	**281**	P	P	17 03 32.7	-8.2
KSRS	**Korea Array**	**70.77**	**319**	LR	LR	17 31 35.9	
	comp=Z,53nm,18.3s,baz=63,slow=32						
NVAR	**Mina Array Bea**	**79.79**	**45**	P	P	17 05 48.5	+0.9
	0.4nm,0.9s,baz=234,slow=7.3,SNR=2.5						
ILAR	**Eielson Array**	**84.15**	**14**	P	P	17 06 09.2	-0.8
	0.4nm,0.7s,baz=233,slow=6.4,SNR=5.9						
CMAR	**Chiang Mai Arr**	**85.12**	**291**	P	P	17 06 17.4	+1.5
	0.4nm,0.8s,baz=134,slow=3.9,SNR=3.9						

IDC 06 17:00:29.2±1.5, 4°.45S×152°.05E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/18, mbtmp3.8/5, ML4.6/1, Error ellipse: s-maj=38.5km s-min=29.1km az=101.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.27**	**123**	Pn	Pn	17 02 45.5	+1.3
	5.7nm,0.3s,baz=297,slow=4.5,SNR=3.3						
WRA	**Warramunga Arr**	**23.12**	**227**	P	P	17 05 37.4	+0.3
	0.4nm,0.4s,baz=53,slow=9.7,SNR=13						
ASAR	**Alice Springs**	**25.91**	**221**	P	P	17 06 02.8	-0.3
	0.3nm,0.5s,baz=58,slow=9.5,SNR=15						
MKAR	**Makanchi Array**	**79.58**	**319**	P	P	17 12 39.2	+1.0
	0.2nm,0.6s,baz=79,slow=7.5,SNR=2.9						
BVAR	**Borovoye Array**	**88.52**	**323**	P	P	17 13 22.4	-1.2
	1.2nm,0.7s,baz=113,slow=7.0,SNR=6.8						

JMA 06 17:27:47.3, 34°.85N×135°.46E, h7km±1km, M3.2, 5C-5D Broadband fault plane solution: P waves. NP1: φs326.00000°, δ38.00000°, λ0.00000°. **NP2:** φs236.00000°, δ90.00000°, λ128.00000°. **Principal axes:** T Plg34.0000°, Azm177.0000°; N Plg38.0000°, Azm56.0000°; P Plg34.0000°, Azm294.0000°; **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHE	**Heguri**	**0.27**	**137**	⇓P	Pg	17 27 52.7	+0.1
JHE				S	Sg	17 27 56.6	+0.4
JWT	**Wachi**	**0.43**	**354**	⇑P	Pg	17 27 55.9	+0.2
JWT				S	Sg	17 28 01.5	+0.1
JKS	**Kasai**	**0.52**	**285**	⇓P	Pg	17 27 57.4	0.0
JKS				S	Sg	17 28 04.3	+0.1
JAJ2	**Tsuna**	**0.64**	**228**	⇑P	Pg	17 27 59.5	-0.1
JAJ2				S	Sg	17 28 08.2	+0.3
JWY	**Kouya**	**0.64**	**170**	⇑P	Pg	17 27 59.4	-0.2
JWY				S	Sg	17 28 08.1	+0.2
TSUJ	**Tsu 2**	**0.80**	**100**	⇓P	Pg	17 28 02.3	-0.4
TSUJ				S	Sg	17 28 13.0	-0.1
JKY	**Yasaka**	**0.83**	**340**	⇑P	Pg	17 28 03.0	-0.3
JKY				S	Sg	17 28 14.0	0.0
JKN2	**Miekihoku**	**0.91**	**132**	⇓P	Pg	17 28 04.3	-0.4
JKN2				S	Sg	17 28 15.8	-0.7
JKSM	**Kasumi**	**0.98**	**319**	⇓P	Pg	17 28 05.6	-0.6
JKSM				S	Sg	17 28 18.7	-0.3
JWM	**Minabe**	**1.00**	**185**	⇑P	Pg	17 28 06.3	-0.2
JWM				S	Sg	17 28 19.7	+0.2
MAT	**Matsushiro**	**2.80**	**52**	P	Pn	17 28 33.7	+1.2
MAT				S	Sn	17 29 08.0	+1.4
MAT	**Matsushiro**	**2.80**	**52**	P	Sg	17 29 14.6	-2.7

*ISCJB **06** 17:37:39.4±0.4, 35°.68S±0°.06×104°.0W±0°.1, h10km, mb4.5/46, MS4.2/19 Error ellipse: s-maj=13.0km s-min=8.1km az=152.5*
*IDC **06** 17:37:40.6±0.7, 35°.57S×103°.93W, h0km, mb4.3/15, mb1 4.4/16, mb1mx4.4/22, mbtmp4.3/16, ML4.6/1, MS4.3/19, Ms1 4.3/19, ms1mx4.2/28, Error ellipse: s-maj=21.0km s-min=16.7km az=57.0*
*NEIC **06** 17:37:41.5±0.3, 35°.60S×103°.96W, h10km, mb4.7/32, Error ellipse: s-maj=10.5km s-min=7.4km az=58.0*
*GCMT **06** 17:37:45.0±0.2, 35°.69S×103°.97W, h19km±1km, MW5.1, Moment Tensor Solution. s52,c73; s81,c135; Moment tensor: Scale 10^16Nm; Mrr=1.02±.15; Mθθ=1.41±.13; Mφφ=2.44±.13; Mrθ=0.07±.26; Mrφ=-5.67±.13; Mθφ=0.92±.26; Best double couple: M0=6.10000×10^16 NP1:φs=99.00000°, δ=81.00000°, λ=-180.00000°. NP2:φs=9.00000°, δ=90.00000°, λ=-9.00000°. Principal axes: T 6.5900, Plg6.0000°, Azm55.0000°; N -1.0500, Plg81.0000°, Azm188.0000°; P -5.5200, Plg6.0000°, Azm324.0000°; Data Used: II IU IC CN.*

ISC 06 17:37:41.5±0.4, 35°.66S±0°.06×104°.0W±0°.1, h10km, n90, σ1§02/60, mb4.5/46, MS4.2/19, 1C, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**9.66**	**330**	Pn	**Pn**	**17 40 00.9**	**+0.4**
	5.6nm,0.3s,baz=151,slow=3.8,SNR=7.0						
RPN				LR	LR	17 42 33.3	
	comp=Z,2μm,20.6s,baz=133,slow=30						
RPN				T		17 49 36.2	
	58nm,0.3s,baz=213,slow=4.6,SNR=5.2						
RPN	**Rapa Nui**	**9.66**	**330**	*e*Pn	**Pn**	**17 40 00.5**	**0.0**
RPN				LR	LR	17 42 33.3	
PLCA	**Paso Flores**	**26.66**	**111**	P	**P**	**17 43 21.9**	**+1.5**
	3.1nm,1.0s,mb3.8,baz=270,slow=5.1,SNR=2.6						
PLCA				LR	LR	17 51 17.0	
	comp=Z,406nm,18.0s,MS4.0,baz=276,slow=31						
RKT	**Rikitea**	**29.63**	**286**	*e*LR	LR	17 51 13.6	
	330nm,29.5s						
CFAA	**Coronel Fontan**	**29.93**	**93**	P	**P**	**17 43 49.7**	**0.0**
	0.4nm,0.6s,mb3.4,baz=273,slow=9.4,SNR=5.9						
CFAA				LR	LR	17 52 59.0	
	comp=Z,89nm,19.3s,MS3.4,baz=254,slow=31						
CFAA	**Coronel Fontan**	**29.93**	**93**	P	**P**	**17 43 49.7**	**0.0**
CFAA				LR	LR	17 52 59.0	
USHA	**Ushuaia**	**31.05**	**139**	LR	LR	17 53 30.1	
	comp=Z,967nm,20.4s,MS4.5,baz=18,slow=30						
TRQA	**Tornquist**	**33.49**	**107**	*e*P	**P**	**17 44 22.1**	**+1.2**
	10nm,1.2s,mb4.6						
NNA	**Nana**	**34.02**	**53**	LR	LR	17 54 54.7	
	comp=Z,1μm,19.5s,MS4.7,baz=160,slow=30						
LPAZ	**La Paz**	**37.28**	**68**	P	**P**	**17 44 55.2**	**+1.5**
	2.7nm,0.7s,mb4.2,baz=241,slow=5.1,SNR=9.9						
LPAZ				LR	LR	17 57 28.2	
	comp=Z,273nm,20.4s,MS4.0,baz=5.5,slow=32						
LPAZ	**La Paz**	**37.28**	**68**	*e*P	**P**	**17 44 54.7**	**+1.0**
	8.1nm,1.1s,mb4.5						
LPAZ				LR	LR	17 57 28.2	
PMSA	**Palmer Station**	**37.63**	**153**	LR	LR	17 56 03.7	
	comp=Z,561nm,19.9s,MS4.4,baz=28,slow=29						
CPUP	**Villa Florida**	**40.74**	**90**	P	**P**	**17 45 22.1**	**-0.5**
	1.1nm,0.5s,mb3.7,baz=242,slow=3.9,SNR=4.1						
CPUP				LR	LR	18 00 05.3	
	comp=Z,318nm,18.3s,MS4.2,baz=232,slow=33						
TAOE	**Nuku Hiva Isla**	**42.40**	**300**	*e*S	**S**	**17 51 52.5**	**-5.5**
	196nm,23.0s						
TAOE				*e*LR	LR	17 57 20.6	
	650nm,24.3s						
SIV	**San Ignacio**	**42.90**	**74**	P	**P**	**17 45 39.9**	**-0.5**
	3.6nm,0.9s,mb4.1,baz=246,slow=10,SNR=16						
OTAV	**Otavalo**	**42.91**	**39**	*e*P	**P**	**17 45 40.4**	**0.0**
	6.6nm,1.1s,mb4.3						
PPT	**Papeete**	**44.14**	**282**	*e*LQ		17 56 13.7	
	755nm,29.5s						
PPT				*e*LR	LR	17 57 59.5	
	337nm,24.5s,baz=105						
PPT	**Papeete**	**44.14**	**282**	LR	LR	17 59 26.0	
	comp=Z,436nm,18.2s,MS4.4,baz=117,slow=30						
ROSC	**El Rosal**	**48.98**	**41**	P	**P**	**17 46 29.5**	**+1.2**
	5.4nm,0.3s,mb5.0,baz=100,slow=19,SNR=4.0						
ROSC				LR	LR	18 03 28.4	
	comp=Z,384nm,20.8s,MS4.4,baz=25,slow=32						
JTS	**JuntasAbangare**	**49.11**	**25**	*e*P	**P**	**17 46 28.2**	**-1.1**
	19nm,1.3s,mb5.0						
RAR	**Rarotonga**	**50.51**	**271**	LR	LR	18 02 16.3	
	comp=Z,16nm,18.2s,MS3.1,baz=84,slow=29						
BDFB	**Brasilia**	**53.52**	**83**	P	**P**	**17 47 02.4**	**-0.1**
	2.7nm,0.5s,mb4.5,baz=256,slow=26,SNR=3.4						
BDFB				LR	LR	18 08 24.3	
	comp=Z,388nm,18.9s,MS4.5,baz=146,slow=34						
QSPA	**South Pole Qui**	**54.55**	**180**	P	**P**	**17 47 10.2**	**+1.1**
	7.2nm,0.8s,mb4.8,baz=121,slow=2.0,SNR=27						
SBA	**Scott Base**	**55.29**	**195**	*e*P	**P**	**17 47 15.1**	**+0.5**
	18nm,1.6s,mb4.8						
TEIG	**Tepich**	**57.54**	**18**	*e*P	**P**	**17 47 28.1**	**-3.0**
	21nm,1.1s,mb5.1						
VNA3	**Neumayer Olymp**	**58.04**	**158**	*e*	**P**	**17 47 31.6**	**-2.5**
VNA1	**Neumayer–Stat**	**58.66**	**157**	*e*	**P**	**17 47 36.8**	**-1.6**
PCRV	**Puerto La Cruz**	**58.80**	**47**	LR	LR	18 10 43.1	
	comp=Z,717nm,19.0s,MS4.8,baz=242,slow=34						
VNA2	**Neumayer–Watz**	**58.84**	**158**	*e*	**P**	**17 47 37.3**	**-2.4**
	baz=261,slow=1.0						
SJG	**San Juan**	**64.38**	**40**	P	**P**	**17 48 16.1**	**-1.6**
	7.2nm,0.5s,mb5.0,baz=340,slow=22,SNR=1.7						
SJG	**San Juan**	**64.38**	**40**	P	**P**	**17 48 12.6**	**-5.2**
	34nm,1.1s,mb5.3						
TXAR	**Lajitas Array**	**64.65**	**0**	P	**P**	**17 48 19.9**	**+0.7**
	1.6nm,0.7s,mb4.1,baz=183,slow=9.0,SNR=12						
TXAR				LR	LR	18 11 01.5	
	comp=Z,132nm,20.1s,MS4.1,baz=75,slow=31						
JCT	**Junction City**	**65.91**	**4**	*e*P	**P**	**17 48 27.1**	**-0.2**
	18nm,1.1s,mb5.0						
WMOK	**Wichita Mounta**	**70.20**	**5**	*e*P	**P**	**17 48 54.4**	**+0.1**
	3.1nm,0.9s,mb4.2						
ANMO	**Albuquerque**	**70.29**	**358**	P	**P**	**17 48 54.0**	**-0.8**
	0.6nm,0.5s,mb3.8,baz=0.0,slow=1.0,SNR=2.5						
ANMO				LR	LR	18 14 43.5	
	comp=Z,122nm,20.8s,MS4.1,baz=8.7,slow=32						
MIAR	**Mount Ida**	**70.52**	**9**	*e*P	**P**	**17 48 56.5**	**+0.3**
	14nm,1.3s,mb4.7						
LDFC	**Landfair**	**71.14**	**350**	*e*P	**P**	**17 49 00.3**	**+0.3**
	27nm,1.2s,mb5.1						
SYO	**Syowa Base**	**72.22**	**167**	⇑*e*P	**P**	**17 49 06.6**	**+0.4**
ISA	**Isabella**	**72.23**	**348**	*e*P	**P**	**17 49 07.3**	**+0.7**
	4.1nm,1.0s,mb4.3						
SWET	**Sewanee**	**72.50**	**15**	*e*P	**P**	**17 49 07.4**	**-0.8**
SHPR	**Sheep Range**	**72.55**	**351**	*e*P	**P**	**17 49 08.3**	**-0.1**
	4.8nm,1.1s,mb4.3						
MVCO	**Mesa Verde**	**72.62**	**356**	*e*P	**P**	**17 49 09.6**	**+0.7**
	15nm,1.1s,mb4.8						
WVT	**Waverly**	**72.99**	**14**	*e*P	**P**	**17 49 10.4**	**-0.7**
	20nm,1.6s,mb4.8						
SDCO	**Great Sand Dun**	**73.05**	**359**	*e*P	**P**	**17 49 10.6**	**-0.8**
	2.4nm,1.0s,mb4.1						
PV01	**Paradox Valley**	**73.55**	**356**	*e*P	**P**	**17 49 14.7**	**+0.3**
	607nm,1.2s						
PV10	**Paradox Valley**	**73.82**	**356**	*e*P	**P**	**17 49 14.4**	**-1.5**
	67nm,0.9s,mb5.6						
CMB	**Columbia Colle**	**74.89**	**347**	*e*P	**P**	**17 49 22.5**	**+0.4**
	12nm,1.2s,mb4.7						
NVAR	**Mina Array Bea**	**74.90**	**348**	P	**P**	**17 49 23.4**	**+1.1**
	2.0nm,0.8s,mb4.1,baz=177,slow=7.6,SNR=18						
WAKR	**Walker**	**75.17**	**348**	*e*P	**P**	**17 49 25.3**	**+1.5**
	10nm,1.6s,mb4.5						
DUG	**Dugway**	**75.92**	**353**	*e*P	**P**	**17 49 28.6**	**+0.6**
	7.3nm,1.2s,mb4.5						
DAU	**Daniels Canyon**	**76.00**	**354**	*e*P	**P**	**17 49 28.8**	**+0.4**
	16nm,0.9s,mb4.9						
MAW	**Mawson**	**76.57**	**175**	P	**P**	**17 49 33.3**	**+1.7**
	2.5nm,0.9s,mb4.2,baz=223,slow=4.0,SNR=4.9						
MAW				LR	LR	18 21 01.5	
	comp=Z,128nm,21.5s,MS4.2,baz=25,slow=34						
BMN	**Battle Mountai**	**76.69**	**350**	*e*P	**P**	**17 49 33.0**	**+0.5**
	6.0nm,0.9s,mb4.5						
DZM	**Mont Dzumac**	**77.15**	**252**	*e*S	S	17 59 18.9	-6.2
	131nm,25.1s						
DZM				*e*LR	LR	18 13 30.0	
	599nm,28.1s						
PDAR	**Pinedale Array**	**78.22**	**356**	P	**P**	**17 49 41.1**	**+0.3**
	3.6nm,0.9s,mb4.3,baz=154,slow=5.4,SNR=15						
PDAR				LR	LR	18 19 14.9	
	comp=Z,81nm,20.1s,MS4.0,baz=285,slow=32						
WVOR	**Wild Horse Val**	**78.87**	**349**	*e*P	**P**	**17 49 45.5**	**+1.1**
	12nm,1.5s,mb4.6						
WVOR				*e*		17 49 54.0	
YBH	**Yreka Blue Hor**	**78.91**	**346**	P	**P**	**17 49 44.8**	**+0.1**
	1.0nm,0.5s,mb4.0,baz=117,slow=4.5,SNR=5.0						
TPAW	**Teton Pass**	**79.03**	**355**	*e*P	**P**	**17 49 45.3**	**0.0**
	17nm,1.2s,mb4.9						
RSSD	**Black Hills**	**79.41**	**360**	*e*P	**P**	**17 49 45.9**	**-1.4**
HLID	**Hailey**	**79.42**	**352**	*e*P	**P**	**17 49 47.4**	**0.0**
	12nm,1.1s,mb4.7						
IMW	**Indian Meadow**	**79.44**	**355**	*e*P	**P**	**17 49 46.6**	**-1.0**
	9.1nm,1.3s,mb4.5						
FLWY	**Flagg Ranch**	**79.60**	**355**	*e*P	**P**	**17 49 49.7**	**+1.3**
	4.8nm,0.9s,mb4.4						
MCMT	**McKenzie Canyo**	**80.52**	**354**	*e*P	**P**	**17 49 52.6**	**-0.8**
	3.3nm,1.2s,mb4.1						
RLMT	**Red Lodge**	**80.55**	**356**	*e*P	**P**	**17 49 52.9**	**-0.7**
	9.0nm,1.3s,mb4.5						
CHMT	**Chamberlain Mo**	**82.62**	**354**	*e*P	**P**	**17 50 05.7**	**+1.3**
	6.5nm,1.5s,mb4.4						
SLMT	**Seeley Lake**	**82.97**	**353**	*e*P	**P**	**17 50 04.5**	**-1.7**
	8.4nm,1.1s,mb4.7						
NEW	**Newport**	**84.37**	**351**	*e*P	**P**	**17 50 13.0**	**-0.5**
	6.8nm,1.1s,mb4.7						
WALA	**Waterton Lakes**	**84.81**	**353**	*e*P	**P**	**17 50 11.7**	**-3.9**
	0.3nm,1.3s						
STKA	**Stephens Creek**	**88.94**	**231**	LR	LR	18 21 54.0	
	comp=Z,347nm,20.6s,MS4.8,baz=298,slow=30						
STKA	**Stephens Creek**	**88.94**	**231**	P	**P**	**17 50 32.9**	**-3.6**
	0.4nm,0.9s,mb3.8						
HNR	**Honiara**	**89.46**	**259**	LR	LR	18 24 06.7	
	comp=Z,112nm,18.8s,MS4.3,baz=145,slow=31						
CTA	**Charters Tower**	**93.48**	**242**	LR	LR	18 27 51.9	
	comp=Z,252nm,19.0s,MS4.7,baz=77,slow=32						
CLL	**Collm**	**133.14**	**50**	*e*PKPdf	PKPdf	17 56 58.1	+1.3
KSRS	**Korea Array**	**138.70**	**288**	PKP	PKPdf	17 57 06.8	-0.8
	0.2nm,0.3s,baz=170,slow=2.5,SNR=3.1						
EIL	**Elat**	**145.10**	**88**	PKPbc	PKPbc	17 57 18.4	-0.4
	7.4nm,0.9s,baz=235,slow=5.4,SNR=6.6						
EIL	**Elat**	**145.10**	**88**	PKPbc	PKPbc	17 57 18.4	-0.4
CSS	**Prodhromos**	**145.36**	**78**	*e*PKPbc	PKPbc	17 57 17.7	-1.7
HIA	**Hailar**	**145.49**	**307**	*e*PKPdf	PKPdf	17 57 18.3	-1.0
HIA				*e*PP	PP	18 00 35.9	-4.2
HIA	**Hailar**	**145.49**	**307**	*e*	PP	18 00 36.2	-3.9
BRTR	**Keskin Array B**	**146.45**	**70**	PKPbc	PKPbc	17 57 21.8	-0.9
	3.1nm,1.0s,baz=222,slow=3.3,SNR=12						
MMAI	**Mount Meron Ar**	**146.52**	**83**	PKPbc	PKPbc	17 57 24.7	+1.6
	2.8nm,0.8s,baz=250,slow=8.6,SNR=3.1						
OBN	**Obninsk**	**146.75**	**42**	*e*PKPdf	PKPdf	17 57 21.6	+0.4
ASF	**Jabal al Asfar**	**147.49**	**85**	PKPbc	PKPbc	17 57 28.3	+2.5
	3.1nm,0.9s,baz=155,slow=3.2,SNR=4.1						
BJT	**Baijiatuau**	**148.19**	**290**	*e*PKPdf	PKPdf	17 57 25.0	+0.9
MALT	**Malatya**	**149.99**	**74**	*e*PKPbc	PKPbc	17 57 31.5	-0.5
ENH	**Enshi**	**151.50**	**269**	*e*PKPbc	PKPbc	17 57 34.8	-1.1
CMAR	**Chiang Mai Arr**	**153.45**	**236**	PKPbc	PKPbc	17 57 39.8	-0.8
	0.2nm,0.5s,baz=298,slow=1.9,SNR=3.5						
ULN	**Ulaanbaatar**	**154.02**	**308**	*e*PKPdf	PKPdf	17 57 33.6	+0.8
ULN				*e*PKPbc	PKPbc	17 57 42.4	+1.5
SONM	**Songino Array**	**154.45**	**308**	PKP	PKPdf	17 57 36.1	+2.7
	1.2nm,0.8s,baz=86,slow=1.0,SNR=6.4						
ZALV	**Zalesovo Beam**	**160.71**	**344**	PKP	PKPdf	17 57 42.7	+1.8
	1.0nm,0.7s,baz=135,slow=0.4,SNR=2.2						

*IDC **06** 17:39:57.8±1.1, 36°.86N×23°.02E, h0km, mb3.8/8, mb1 3.8/11, mb1mx3.7/30, mbtmp3.7/11, ML3.2/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/36, Error ellipse: s-maj=24.6km s-min=17.6km az=175.0*
*HLW **06** 17:39:57.6, 37°.03N×22°.73E, h24km±13km, Md3.9, Ml3.7*
*ISCJB **06** 17:39:58.8±0.5, 36°.75N±0°.02×22°.74E±0°.03, h16km±4km, mb3.6/8, Error ellipse: s-maj=4.6km s-min=3.0km az=146.3*
*ATH **06** 17:39:58.5, 36°.81N×22°.73E, h25km±1km, ML3.5*
*NEIC **06** 17:39:59.5, 36°.75N×22°.78E, h5km, ML3.2(ATH), After ATH.*
*THE **06** 17:39:59.6, 36°.81N×22°.78E, h6km±1km, ML3.3/9, Error ellipse: s-maj=2.2km s-min=1.1km az=238.0*
*CSEM **06** 17:39:59.6±0.1, 36°.81N×22°.80E, h10km, ML3.2, Error ellipse: s-maj=4.2km s-min=2.8km az=59.0*

ISC 06 17:39:59.3±0.5, 36°.80N±0°.02×22°.77E±0°.03, h9km±3km, n151, σ1§04/182, mb3.6/8, 2C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.16**	**123**	P	**Pg**	**17 40 02.7**	**+0.1**
VLI	**Veliai**	**0.16**	**123**	*e*PB	**Pg**	**17 40 03.3**	**+0.7**
VLI	**Veliai**	**0.16**	**123**	P	**Pg**	**17 40 02.7**	**+0.1**
VLI	**Veliai**	**0.16**	**123**	*e*Pb	**Pg**	**17 40 03.3**	**+0.7**
VLI

EFP	Efpalio	1.76	337	*e*Pn	Pn	17 40 31.3	+1.3
VAM	Vamos	1.81	140	P	Pn	17 40 30.6	0.0
VAM	Vamos	1.81	140	*e*PB	Pb	17 40 30.2	-2.4
VAM	Vamos	1.81	140	*e*Pb	Pb	17 40 30.2	-2.4
VAM	Vamos	1.81	140	P	Pn	17 40 30.6	0.0
LKR	Lokris	1.85	5	P	Pn	17 40 31.9	+0.7
LKR	Lokris	1.85	5	*e*PN	Pn	17 40 31.3	+0.1
LKR	Lokris	1.85	5	P	Pn	17 40 31.2	0.0
LKR				S	Sn	17 40 54.2	-0.6
LKR	Lokris	1.85	5	*e*Pn	Pn	17 40 31.3	+0.1
LKR				S	Sn	17 40 54.2	-0.6
ATAL	Atalanti	1.90	6	P	Pn	17 40 31.8	0.0
ATAL	Atalanti	1.90	6	P	Pn	17 40 31.8	0.0
THR5	Thira Island,	2.11	100	P	Pn	17 40 34.5	-0.2
THR5	Thira Island,	2.11	100	P	Pn	17 40 34.5	-0.2
THR3	Thira Island,	2.15	100	P	Pn	17 40 35.8	+0.5
THR3	Thira Island,	2.15	100	P	Pn	17 40 35.8	+0.5
THR1	Thera Island	2.20	100	P	Pn	17 40 36.5	+0.4
THR1	Thera Island	2.20	100	P	Pn	17 40 36.5	+0.4
VLS	Valsamata	2.21	309	*e*PB	Pb	17 40 35.9	-3.6
VLS	Valsamata	2.21	309	P	Pn	17 40 35.4	-0.8
VLS	Valsamata	2.21	309	P	Pn	17 40 35.4	-0.8
VLS	Valsamata	2.21	309	*e*Pb	Pb	17 40 35.9	-3.6
APE	Apeiranthos	2.23	82	P	Pn	17 40 36.7	+0.4
APE	Apeiranthos	2.23	82	*e*PN	Pn	17 40 35.9	-0.4
APE	Apeiranthos	2.23	82	P	Pn	17 40 35.8	-0.5
APE	Apeiranthos	2.23	82	*e*Pb	Pn	17 40 35.9	-0.4
APE	Apeiranthos	2.23	82	P	Pn	17 40 36.7	+0.4
EVR	Evrytania	2.25	340	*e*Pb	Pb	17 40 38.1	-1.9
AOS	Alonnisos	2.52	20	P	Pn	17 40 39.8	-0.6
AOS	Alonnisos	2.52	20	P	Pn	17 40 39.7	-0.7
AOS				S	Sn	17 41 10.3	-1.0
AOS	Alonnisos	2.52	20	P	Pn	17 40 39.8	-0.6
AOS				S	Sn	17 41 10.3	-1.0
NEO	Neokhori	2.52	8	P	Pn	17 40 41.5	+1.0
NEO	Neokhori	2.52	8	*e*PN	Pn	17 40 40.5	0.0
NEO	Neokhori	2.52	8	*e*Pn	Pn	17 40 40.5	0.0
NEO	Neokhori	2.52	8	P	Pn	17 40 41.5	+1.0
LAST	Lasithi	2.74	126	P	Pn	17 40 43.8	+0.4
LAST				S	Sn	17 41 15.9	-0.7
LAST	Lasithi	2.74	126	P	Pn	17 40 43.8	+0.4
LAST				S	Sn	17 41 15.9	-0.7
NPS	Neapolis	2.77	123	*e*PN	Pn	17 40 43.7	-0.1
NPS	Neapolis	2.77	123	*e*Pn	Pn	17 40 43.7	-0.1
THL	Klokotos Trika	2.82	348	*e*PN	Pn	17 40 44.7	+0.1
THL	Klokotos Trika	2.82	348	P	Pn	17 40 45.2	+0.6
THL	Klokotos Trika	2.82	348	*e*Pn	Pn	17 40 44.7	+0.1
THL	Klokotos Trika	2.82	348	P	Pn	17 40 45.2	+0.6
PAIG	Paliouri	3.20	13	P	Pn	17 40 49.5	-0.3
PAIG	Paliouri	3.20	13	P	Pn	17 40 49.4	-0.4
PAIG	Paliouri	3.20	13	P	Pn	17 40 49.5	-0.3
LIT	Litokhoron	3.30	356	P	Pn	17 40 52.1	+1.0
LIT	Litokhoron	3.30	356	P	Pn	17 40 52.1	+1.0
SMG	Samos	3.37	73	*e*PN	Pn	17 40 51.8	-0.2
SMG	Samos	3.37	73	*e*Pn	Pn	17 40 51.8	-0.2
PLG	Polygyros	3.60	8	P	Pn	17 40 56.9	+1.6
PLG	Polygyros	3.60	8	*e*PN	Pn	17 40 55.6	+0.3
PLG	Polygyros	3.60	8	*e*Pn	Pn	17 40 55.6	+0.3
PLG	Polygyros	3.60	8	P	Pn	17 40 56.9	+1.6
OUR	Ouranopolis	3.65	15	P	Pn	17 40 56.3	+0.3
OUR	Ouranopolis	3.65	15	P	Pn	17 40 56.3	+0.3
HORT	Hortiatis	3.80	4	P	Pn	17 40 59.3	+1.3
HORT	Hortiatis	3.80	4	P	Pn	17 40 58.3	+0.3
HORT	Hortiatis	3.80	4	P	Pn	17 40 58.3	+0.3
KNT	Kendrikon	4.35	1	P	Pn	17 41 06.9	+1.3
KNT	Kendrikon	4.35	1	P	Pn	17 41 06.9	+1.3
SRS	Serrai	4.36	6	P	Pn	17 41 08.8	+3.2
CEL	Celeste	5.66	287	P	Pn	17 41 25.6	+2.1
CEL	Celeste	5.66	287	P	Pn	17 41 25.6	+2.1
BARS	Barje	6.05	353⇑	*e*Pn	Pn	17 41 28.8	-0.1
CUC	Castrocucco	6.33	302	P	Pn	17 41 35.6	+2.9
CUC	Castrocucco	6.33	302	P	Pn	17 41 35.6	+2.9
VAE	Valguarnera	6.71	278	Pn	Pn	17 41 40.0	+2.0
	2.1nm,0.3s,baz=67,slow=7.7,SNR=2.4						
VAE				Sn	Sn	17 43 02.8	+8.1
	1.7nm,0.3s,baz=218,slow=17,SNR=1.9						
VAE	Valguarnera	6.71	278	Pn	Pn	17 41 40.0	+2.0
VAE				Sn	Sn	17 43 02.8	+8.1
VAE	Valguarnera	6.71	278	Pn	Pn	17 41 40.0	+2.0
BBLS	Lazići	7.51	341⇑	*e*Pn	Pn	17 41 47.8	-1.1
SWA2		7.87	163	P	Pn	17 41 54.3	+0.4
	baz=162						
SWA2				AMP		17 43 00.0	
	comp=E,30µm,0.7s,logA/T=4.6,baz=162						
SWA2				S	Sn	17 43 17.0	-6.1
	baz=162						
SWA2		7.87	163	P	Pn	17 41 54.3	+0.4
BRTR	Keskin Array B	9.03	68	Pn	Pn	17 42 09.0	-0.8
	comp=E,0.1nm,0.3s,baz=257,slow=13,SNR=3.0						
BRTR	Keskin Array B	9.03	68	Pn	Pn	17 42 09.0	-0.8
AWBH		9.91	147	P	Pn	17 42 22.5	+0.6
	baz=147						
AWBH		9.91	147	P	Pn	17 42 22.5	+0.6
HFRF	Wahat Farafira	10.71	152	P	Pn	17 42 33.5	+0.6
	baz=152						
HFRF				S	Sn	17 44 24.5	-8.4
	baz=152						
HFRF	Wahat Farafira	10.71	152	P	Pn	17 42 33.4	+0.5
MMAI	Mount Meron Ar	11.04	106	Pn	Pn	17 42 34.1	-3.2
	comp=E,0.1nm,0.3s,baz=315,slow=12,SNR=2.4						
DAVOX	Davos/Dischmat	13.84	320	LR	LR	17 48 59.9	
	comp=E,49nm,20.7s,baz=268,slow=39						
CLL	Collm	16.09	337	*es*P	sP	17 43 50.0	-2.5
ESDC	Sonseca Array	21.17	286	P	P	17 44 47.9	+3.1
	comp=E,0.9nm,0.8s,mb3.1,baz=80,slow=9.8,SNR=3.4						
HFS	Hagfors	24.07	349	P	P	17 45 13.5	-1.1
	comp=E,2.3nm,0.8s,mb3.6,baz=185,slow=16,SNR=6.2						
HFS	Hagfors	24.07	349	P	P	17 45 13.5	-1.1
FINES	FINESS Array B	24.75	4	P	P	17 45 19.1	-1.7
	comp=E,3.1nm,1.1s,mb3.8,baz=185,slow=15,SNR=3.0						
FINES	FINESS Array B	24.75	4	P	P	17 45 19.1	-1.7
NOA	NORSAR Array B	25.34	347	P	P	17 45 25.5	-0.7
	comp=E,0.3nm,0.6s,mb3.0,baz=151,slow=10.0,SNR=2.9						
NOA	NORSAR Array B	25.34	347	P	P	17 45 25.5	-0.7
EKA	Eskdalemuir Ar	25.59	325	P	P	17 45 30.2	+1.7
	comp=E,5.4nm,0.8s,mb4.1,baz=123,slow=9.4,SNR=8.2						
EKA	Eskdalemuir Ar	25.59	325	P	P	17 45 30.2	+1.7
TORD	Torodi Ar. Bea	30.19	224	P	P	17 46 10.7	+0.7
	comp=E,0.8nm,0.8s,mb3.5,baz=31,slow=9.3,SNR=4.7						
MKAR	Makanchi Array	44.51	58	P	P	17 48 08.9	-2.1
	comp=E,0.3nm,0.4s,mb3.5,baz=271,slow=8.2,SNR=5.1						
ZALV	Zalesovo Beam	45.29	47	P	P	17 48 16.1	-1.0
	comp=E,0.5nm,0.3s,mb3.8,baz=264,slow=4.2,SNR=3.1						
ZALV	Zalesovo Beam	45.29	47	P	P	17 48 16.1	-1.0
ASAR	Alice Springs	120.22	98	PKP	PKPdf	17 58 50.7	-0.3
	comp=E,0.1nm,0.4s,baz=318,slow=1.2,SNR=3.1						
ASAR	Alice Springs	120.22	98	PKIKP	PKPdf	17 58 50.7	-0.3

*ISCJB **06** 17:41:03.0±0.4, 32°.83N±0°.03×106°.92E±0°.04, h10km, mb3.5/4, Error ellipse: s-maj=5.0km s-min=4.6km az=149.1*
*IDC **06** 17:41:03.7±1.1, 32°.82N×106°.96E, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.5/25, mbtmp3.5/7, ML3.4/3, Error ellipse: s-maj=39.4km s-min=20.0km az=61.0*
*BJI **06** 17:41:04.8, 32°.90N×106°.63E, h14km, mb3.9/2, ML3.9/19, Ms3.6/4, Ms7 3.3/4*
*NEIC **06** 17:41:10.0±1.8, 32°.98N×107°.13E, h64km±27km, mb4.2/3, Error ellipse: s-maj=19.7km s-min=12.8km az=87.0*
ISC 06 17:41:05.1±0.4, 32°.87N±0°.04×106°.77E±0°.04, h10km, n22, σ1§42/34, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	2.15	57	Pn	Pn	17 41 41.4	+0.5
XAN				Pg	Pg	17 41 43.4	-2.8
XAN				Sn	Sn	17 42 08.2	+0.6
XAN				Sg	Sg	17 42 11.1	-2.9
XAN				smax			
	comp=N,2µm,0.3s						
XAN				smax			
	comp=E,600nm,0.5s						
CD2	Chengdu	3.22	233	Pn	Pn	17 41 55.7	0.0
CD2				Pg	Pg	17 42 03.7	-3.1
CD2				Sn	Sn	17 42 34.6	+0.5
CD2				Sg	Sg	17 42 45.7	-2.9
CD2				smax			
	comp=N,3µm,0.8s						
CD2				smax			
	comp=E,3µm,0.5s						
ENH	Enshi	3.48	137	*e*Pn	Pn	17 42 00.9	+1.7
LZH	Lanzhou	4.01	324	Pn	Pn	17 42 08.6	+2.0
LZH				Pg	Pg	17 42 16.5	-5.5
LZH				Sn	Sn	17 42 56.3	+2.7
LZH				Sg	Sg	17 43 08.4	-5.5
LZH				smax			
	comp=N,680nm,0.9s						
LZH				smax			
	comp=E,480nm,0.8s						
LZH				LR	LR		
	comp=N,930nm,4.5s						
LZH				LR	LR		
	comp=E,800nm,4.5s						
LZH				LR	LR		
	comp=Z,800nm,8.8s						
GYA	Guiyang	6.39	181	Pn	Pn	17 42 39.9	+0.6
GYA				Sn	Sn	17 43 52.2	-0.2
GYA				smax			
	comp=N,70nm,0.9s						
GYA				smax			
	comp=E,60nm,1.0s						
WHN	Wuhan	6.87	108	Pg	Pb	17 43 10.3	+5.8
WHN				Sg	Sg	17 44 46.8	+1.3
WHN				smax			
	comp=N,210nm,1.0s						
WHN				smax			
	comp=E,180nm,0.9s						
GTA	Gaotai	8.61	321	*e*P	Pn	17 43 09.9	+0.2
GTA				pP		17 43 16.1	
GTA				sP		17 43 19.3	
GTA				S	Sn	17 44 41.3	-5.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				LR	LR		
	comp=N,180nm,7.8s						
GTA				LR	LR		
	comp=E,250nm,11.6s						
GTA				LR	LR		
	comp=Z,130nm,10.7s						
SONM	Songino Array	14.95	359	Pn	Pn	17 44 36.5	+0.2
	comp=Z,0.0nm,0.3s,baz=178,slow=12,SNR=4.2						
CHTO	Chiang Mai	15.66	209	*e*Pn	Pn	17 44 50.7	+4.9
	comp=Z,2.7nm,0.7s						
CM31	Chiang Mai Arr	15.98	208	*e*Pn	Pn	17 44 55.1	+5.0
CMAR	Chiang Mai Arr	15.98	208	Pn	Pn	17 44 51.6	+1.6
	comp=Z,0.2nm,0.3s,baz=18,slow=10,SNR=17						
TWG	Pinlang	16.12	125	Pn	Pn	17 44 48.2	-3.6
	comp=Z,11nm,0.3s						
KSRS	Korea Array	17.88	69	P	Pn	17 45 12.5	-1.4
	comp=Z,0.0nm,0.3s,baz=260,slow=9.8,SNR=2.5						
TLY	Talaya	18.93	354	*e*P	Pn	17 45 25.6	-1.0
	comp=Z,7.8nm,0.4s						
MK31	Makanchi Array	23.26	314	*e*P	P	17 46 11.5	-1.1
MKAR	Makanchi Array	23.26	314	P	P	17 46 13.7	+1.1
	comp=Z,0.3nm,0.5s,mb3.0,baz=115,slow=8.7,SNR=5.0						
ZALV	Zalesovo Beam	26.22	330	P	P	17 46 41.8	+1.9
	comp=Z,0.5nm,0.4s,mb3.4,baz=152,slow=9.6,SNR=2.4						
ZALV	Zalesovo Beam	26.22	330	P	P	17 46 41.8	+1.9
KURK	Kurchatov	27.29	319	P	P	17 46 44.3	-5.2
WRA	Warramunga Arr	58.76	149	P	P	17 51 02.4	-0.9
	comp=Z,0.7nm,0.6s,mb3.9,baz=343,slow=7.5,SNR=7.8						
ASAR	Alice Springs	61.90	152	P	P	17 51 24.2	-0.6
	comp=Z,0.4nm,0.6s,mb3.8,baz=335,slow=6.5,SNR=16						
ASAR	Alice Springs	61.90	152	P	P	17 51 24.2	-0.6

*IDC **06** 17:48:12.7±1.5, 14°.16N×91°.73W, h0km, mb4.1/9, mb1 4.4/11, mb1mx4.1/25, mbtmp4.1/11, ML3.8/2, MS3.9/5, Ms1 3.8/5, ms1mx3.3/31, Error ellipse: s-maj=62.3km s-min=19.2km az=45.0*
*ISCJB **06** 17:48:13.3±1.2, 13°.72N±0°.05×92°.40W±0°.04, h15km±8km, mb4.4/42, MS4.2/7, Error ellipse: s-maj=8.9km s-min=4.0km az=33.0*
*MEX **06** 17:48:15.2±1.0, 13°.69N×92°.50W, h4km±74km, MD4.5*
*NEIC **06** 17:48:15.2±3.0, 13°.76N×92°.28W, h28km±21km, mb4.5/36, MD4.5(MEX), Error ellipse: s-maj=20.0km s-min=10.1km az=209.0*
*CASC **06** 17:48:17.2±0.8, 14°.03N×92°.30W, h35km±999km, MD4.1, mb4.5(NEIC)*
ISC 06 17:48:14.0±1.3, 13°.78N±0°.04×92°.35W±0°.03, h7km±7km, n181, σ1§09/178, mb4.4/42, MS4.2/7, 43C-29D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.12	4	*e*P	Pg	17 48 34.4	-1.2
THIG				*e*S	Sg	17 48 50.9	+0.6
PCIG		2.09	336	*e*P	Pn	17 48 47.5	-2.0
PCIG				*e*S	Sn	17 49 13.7	-2.2
CCIG	Comitan	2.50	5	*e*P	Pn	17 48 56.8	+1.7
CCIG				*e*S	Sn	17 49 27.0	+1.1
CCIG	Comitan	2.50	5	*e*P	Pn	17 48 56.8	+1.7
CCIG				*e*S	Sn	17 49 27.0	+1.1
RBDL	Robledal	2.61	82	*e*P	Pn	17 48 56.3	-0.4
RTR	El Retiro	2.63	87	*e*P	Pn	17 48 56.9	-0.1
SBLS	San Blas	2.65	88	*e*P	Pn	17 48 57.6	+0.3
SBLS				*e*S	Sn	17 49 28.9	-0.8
SNJE	San Jose	2.67	88	*e*P	Pn	17 48 56.9	-0.6
MTO2	Montecristo 2	2.96	78	*e*P	Pn	17 49 01.1	-0.5
BOQS	Boqueron	2.98	91	*e*P	Pn	17 49 01.4	-0.4
TGIG		3.07	346	*i*P	Pn	17 49 02.2	-0.9
TGIG				*i*S	Sn	17 49 40.1	0.0
LFRS	El Faro	3.20	92	*e*P	Pn	17 49 05.0	+0.1
SNVI	San Vicente	3.42	92	*e*P	Pn	17 49 08.1	+0.3
CAHU	Cacacuatique	4.02	90	*e*P	Pn	17 49 17.1	+0.9
CMIG	Matias Romero	4.10	324	Pn	Pn	17 49 16.2	-1.0
	4.6nm,0.3s,baz=156,slow=12,SNR=35						
CMIG				Sn	Sn	17 50 09.8	+4.3
	19nm,0.3s,baz=105,slow=16,SNR=2.5						
CMIG	Matias Romero	4.10	324	Pn	Pn	17 49 16.2	-1.0
CMIG				Sn	Sn	17 50 09.8	+4.3
HUIG	Huatulco	4.14	299	*i*P	Pn	17 49 14.9	-2.8
HUIG	Huatulco	4.14	299	*i*P	Pn	17 49 14.9	-2.8
TGUH	Tegucigalpa,Un	4.94	86	*e*Pn	Pn	17 49 17.9	-11
VHO	Vista Hermosa	5.34	308	*i*P	Pn	17 49 33.1	-1.2
VHO				*i*S	Sn	17 50 33.8	-2.5
VHO	Vista Hermosa	5.34	308	*i*P	Pn	17 49 33.1	-1.2
VHO				*i*S	Sn	17 50 33.8	-2.5
PNIG	Pinotepa	6.15	296	*i*P	Pn	17 49 44.3	-1.2
PNIG				*i*S	Sn	17 50 53.1	-3.1
PNIG	Pinotepa	6.15	296	*i*P	Pn	17 49 44.3	-1.2
PNIG				*i*S	Sn	17 50 53.1	-3.1
UTMO	Huajuapan	6.61	308	*i*P	Pn	17 49 50.0	-1.8
UTMO				*i*S	Sn	17 51 07.0	-0.5
TEIG	Tepich	7.50	31	*e*Pn	Pn	17 50 03.1	-0.8
	7nm,0.5s						
JTS	JuntasAbangare	8.03	115	*e*Pn	Pn	17 50 09.3	-1.9
	65nm,1.4s						
MTDJ	Mount Denham	14.91	71	Pn	Pn	17 51 45.6	+0.1
	67nm,1.4s						
628A	Black Gap, Mar	18.43	330	⇑P	Pn	17 52 32.0	+1.9
	baz=18						
627A	Terlingua Ranc	18.65	329	⇓P	Pn	17 52 34.0	+1.2
	baz=19,SNR=12						
TXAR	Lajitas Array	18.69	328	P	Pn	17 52 34.1	+0.7
	0.1nm,0.3s,baz=154,slow=9.2,SNR=22						
TXAR				LR	LR	17 59 40.6	
	comp=Z,82nm,18.9s,baz=5.0,slow=37						
528A	Cox Ranch, San	18.94	331	⇓P	Pn	17 52 36.7	+0.4
	baz=19,SNR=7.3						
626A	Big Bend Ranch	19.11	327	P	Pn	17 52 39.4	+0.9
	baz=19,SNR=11						
OTAV	Otavalo	19.25	133	P	Pn	17 52 41.5	+1.2
	5.3nm,1.2s						
527A	Woodward Ranch	19.32	329	⇑P	Pn	17 52 41.5	+0.6
	baz=19						
428A	Kincaid Ranch,	19.37	332	⇓P	Pn	17 52 41.6	+0.1
	baz=19						
526A	Mary Lane Ranc	19.50	328	⇓P	Pn	17 52 43.3	+0.3
	baz=20,SNR=9.3						
427A	Hayter Ranch,	19.80	331	⇓P	Pn	17 52 46.4	-0.3
	baz=20						
ROSC	El Rosal	19.86	115	P	Pn	17 52 48.8	+1.3
	1.4nm,0.3s,baz=260,slow=12,SNR=4.1						
426A	McDonald Obser	19.96	329	⇑P	Pn	17 52 48.4	-0.1
	baz=20,SNR=11						
328A	Wristen Ranch,	19.98	333	⇑P	Pn	17 52 48.2	-0.6
	baz=20,SNR=18						
425A	Indio Mountain	20.54	328	⇑P	P	17 52 54.2	+0.9
	baz=21						
MIAR	Mount Ida	20.70	357	*e*P	P	17 52 52.0	-2.9
	18nm,1.1s						
227A	Bennet, Jal	20.73	333	⇑P	P	17 52 56.2	+0.9
	baz=21,SNR=5.5						
OXF	Oxford	20.81	7	*e*P	P	17 52 50.5	-5.7
325A	Bean Ranch, Si	21.00	329	P	P	17 52 58.6	+0.4
	baz=21,SNR=11						
226A	Malaga, Loving	21.14	331	⇑P	P	17 53 00.2	+0.5
	baz=21,SNR=14						
CLNB	Carlsbad	21.21	332	*e*P	P	17 53 00.3	-0.1
	3.6nm,0.7s,mb3.8						
324A	Moseley Ranch,	21.32	328	⇓P	P	17 53 01.9	+0.3
	baz=21,SNR=9.3						
127A	Arkansas Junct	21.33	334	⇑P	P	17 53 01.7	-0.1
	baz=21						
GDL2	Guadalupe Moun	21.38	331	*e*P	P	17 53 02.4	+0.1
	14nm,1.0s,mb4.2						
MNTX	Cornudas Mount	21.47	328	⇑P	P	17 53 03.0	-0.2
	baz=22,SNR=12						
MNTX	Cornudas Mount	21.47	328	*e*P	P	17 53 02.2	-1.1
	11nm,1.2s,mb4.0						
225A	Deer Hill, Car	21.52	330	⇑P	P	17 53 04.1	+0.3
	baz=22,SNR=16						
126A	Clayton Basin,	21.59	332	⇑P	P	17 53 04.3	-0.3
	baz=22,SNR=7.4						
WMOK	Wichita Mounta	21.66	346	*e*P	P	17 53 03.0	-2.3
	6.9nm,1.0s,mb4.0						
Z27A	Tatum	21.82	335	⇑P	P	17 53 06.2	-0.8
	baz=22						
224A	Cornudas Mount	21.84	329	⇑P	P	17 53 07.4	+0.1
	baz=22,SNR=9.8						
CPRX	Cap Rock	21.85	333	*e*P	P	17 53 06.7	-0.7
	20nm,0.9s,mb4.5						
125A	Gardner Draw,	21.90	331	⇓P	P	17 53 07.8	0.0
	baz=22,SNR=21						
Z26A	Caprock	22.10	333	⇑P	P	17 53 09.7	-0.4
	baz=22,SNR=12						
MSTX	Muleshoe	22.21	337	⇑P	P	17 53 10.6	-0.6
	baz=22,SNR=5.4						
124A	Stringfield Ra	22.31	330	⇑P	P	17 53 13.0	+0.7
	baz=22,SNR=24						
Z25A	Roswell	22.44	332	⇑P	P	17 53 13.2	-0.5
	baz=22,SNR=5.2						
Y26A	Elida	22.60	335	⇓P	P	17 53 15.1	-0.2
	baz=23						
AMTX	Amarillo	22.64	340	⇑P	P	17 53 14.9	-0.8
	baz=23,SNR=10.0						
AMTX	Amarillo	22.64	340	*e*P	P	17 53 13.8	-2.0
	17nm,0.6s,mb4.7						
Z24A	Sheeppen Canyo	22.78	331	⇑P	P	17 53 17.4	+0.2
	baz=23						
X27A	F and S Farms,	22.94	337	⇓P	P	17 53 18.2	-0.7
	baz=23						
Y25A	Mesa, Roswell	22.97	333	⇓P	P	17 53 19.0	-0.3
	baz=23,SNR=29						
TKL	Tuckaleechee C	23.11	18	LR	LR	18 03 47.5	
	comp=Z,368nm,19.3s,MS3.8,baz=4.5,slow=41						
Z23A	Rita Site, Whi	23.15	329	⇓P	P	17 53 21.6	+0.4
	baz=23,SNR=7.9						
W27A	Bowe Ranch, En	23.29	337	⇓P	P	17 53 21.7	-0.9
	baz=23						
Y24A	Capitan	23.31	332	⇑P	P	17 53 21.8	-1.0
	baz=23,SNR=12						
220A	Playas Peak, P	23.34	323	⇑P	P	17 53 24.5	+1.3
	baz=24,SNR=6.3						
121A	Cookes Peak, D	23.39	326	⇓P	P	17 53 24.6	+0.9
	baz=24						
319A	Douglas	23.42	321	⇑P	P	17 53 25.0	+1.0
	baz=24						
Z22A	Elephant Butte	23.51	328	⇓P	P	17 53 25.4	+0.4
	baz=24						
Y23A	Lovelace Mesa,	23.60	331	P	P	17 53 27.6	+1.7
	baz=24,SNR=17						
219A	White Tail Can	23.84	322	⇑P	P	17 53 29.2	+1.1
	baz=24,SNR=7.6						
120A	U Bar Ranch, L	23.88	324	P	P	17 53 29.9	+1.5
	baz=24,SNR=6.4						
318A	Bisbee	23.90	320	⇑P	P	17 53 29.5	+0.9
	baz=24,SNR=5.2						
W25A	X Bar L Ranch,	23.98	335	⇑P	P	17 53 28.9	-0.3
	baz=24,SNR=7.3						
BNM	Barren Site	24.06	330	*e*P	P	17 53 30.0	0.0
	20nm,1.3s,mb4.4						
FVM	French Village	24.16	4	*e*P	P	17 53 32.8	+1.9
	16nm,0.8s,mb4.5						
LPM	Los Pinos Moun	24.19	330	*e*P	P	17 53 31.7	+0.5
	8.1nm,1.0s,mb4.1						
LENM	Lemitar	24.24	329	*e*P	P	17 53 29.5	-2.2
Z20A	Nine Sixteen R	24.28	325	⇑P	P	17 53 32.8	+0.7
	baz=24						
218A	Dragoon	24.30	321	⇓P	P	17 53 33.3	+1.1
	baz=24						
W24A	Lazy 6 Ranch,	24.37	333	⇓P	P	17 53 33.4	+0.5
	baz=24,SNR=11						
119A	Ashpeak Ranch,	24.42	324	⇓P	P	17 53 35.9	+2.5
	baz=24						
LAZ	Ladron	24.51	329	*e*P	P	17 53 34.3	+0.2
	4.5nm,1.2s,mb3.9						
V25A	Rancho No Teng	24.58	335	⇑P	P	17 53 35.5	+0.8
	baz=25,SNR=8.8						
ANMO	Albuquerque	24.63	331	P	P	17 53 34.5	-0.7
	1.1nm,0.4s,mb3.7,baz=155,slow=9.4,SNR=5.6						
ANMO	Albuquerque	24.63	331	*e*P	P	17 53 31.8	-3.4
	3.6nm,1.0s,mb3.9						
217A	Green Valley	24.64	320	⇑P	P	17 53 37.6	+2.2
	baz=25						
118A	Homack Ranch,	24.72	322	⇓P	P	17 53 37.2

20nm,1.2s,mb4.9
SNOW Snow King Moun 33.54 335 *e*P P 17 54 54.4 -0.1
21nm,1.1s,mb5.0
NVAR Mina Array Bea 33.63 322 P **P 17 54 56.5 +1.2**
2.3nm,0.8s,mb4.2,baz=136,slow=8.9,SNR=16
TPAW Teton Pass 33.64 335 *e*P **P 17 54 54.9 -0.5**
11nm,1.1s,mb4.7
HLID Hailey 35.20 332 ⇓P **P 17 55 09.5 +0.6**
baz=35,SNR=6.4
HLID Hailey 35.20 332 *e*P **P 17 55 09.0 +0.1**
12nm,1.4s,mb4.6
I13A Wildhorse Cree 35.34 332 P **P 17 55 11.1 +1.0**
baz=35,SNR=6.8
MCMT McKenzie Canyo 35.52 335 *e*P **P 17 55 12.2 +0.6**
10nm,1.2s,mb4.6
H14A Leadore 35.57 334 P **P 17 55 12.8 +0.7**
baz=36,SNR=7.7
G15A Dillon 35.65 335 ⇑P **P 17 55 12.8 +0.1**
baz=36,SNR=6.0
I12A Atlanta 35.72 331 ⇓P **P 17 55 13.5 +0.2**
baz=36,SNR=6.5
H13A Challis 35.91 333 ⇑P **P 17 55 15.4 +0.4**
baz=36,SNR=14
H12A Diamond D Ranc 36.17 332 ⇑P **P 17 55 17.8 +0.6**
baz=36,SNR=11
WVOR Wild Horse Val 36.48 327 *e*P **P 17 55 19.3 -0.6**
MOD Modoc 37.04 324 P **P 17 55 27.3 +2.6**
8.3nm,1.3s,mb4.4
F12A Elk City 37.29 333 P **P 17 55 26.6 -0.1**
baz=37,SNR=12
E13A Victor 37.38 335 P **P 17 55 27.4 -0.1**
baz=37,SNR=5.3
E12A Beaver Dam Sad 37.94 334 ⇓P **P 17 55 31.4 -0.8**
baz=38,SNR=6.4
D13A Huson 38.01 335 ⇓P **P 17 55 32.3 -0.5**
baz=38,SNR=5.8
LPAZ La Paz 38.28 141 LR LR 18 10 31.8
comp=Z,90nm,20.6s,MS3.6,baz=175,slow=35
C11A Tepee Creek (N 39.35 334 ⇓P **P 17 55 43.6 -0.5**
baz=39,SNR=5.7
HOOD Mount Hood Mea 40.05 328 *e*P **P 17 55 48.6 -1.3**
16nm,1.1s,mb4.7
OD2 Odessa Site #2 40.08 332 *e*P **P 17 55 50.0 -0.1**
15nm,1.2s,mb4.6
SIV San Ignacio 42.79 133 P **P 17 56 11.1 -1.7**
1.3nm,0.6s,mb3.8,baz=319,slow=11,SNR=7.9
YKA Yellowknife Ar 51.16 347 P **P 17 57 15.7 -1.9**
4.4nm,0.7s,mb4.5,baz=152,slow=7.4,SNR=18
YKA Yellowknife Ar 51.16 347 P **P 17 57 15.7 -1.9**
DLBC Dease Lake 52.71 336 *e*P **P 17 57 29.1 -0.1**
RKT Rikitea 55.54 229 *e*T 18 57 41.3
1.9nm,0.3s
PNL Peninsula 57.32 334 *e*P **P 17 57 57.6 -4.9**
6.4nm,0.9s,mb4.7
INK Inuvik 60.55 344 P **P 17 58 23.4 -1.4**
4.8nm,0.9s,mb4.6,baz=128,slow=8.6,SNR=6.3
INK Inuvik 60.55 344 *e*P **P 17 58 23.1 -1.7**
7.4nm,1.2s,mb4.7
PAX Paxson 61.51 335 *e*P **P 17 58 29.7 -1.7**
6.4nm,1.2s,mb4.6
ILAR Eielson Array 62.91 337 P **P 17 58 39.0 -1.7**
1.3nm,0.7s,mb4.1,baz=125,slow=4.6,SNR=15
MCK McKinley 63.25 335 P **P 17 58 41.7 -1.4**
TRF Thorofare Moun 63.69 335 *e*P **P 17 58 44.5 -1.4**
40nm,1.7s,mb5.2
BPAW Bear Paw Mtn. 64.23 335 *e*P **P 17 58 47.5 -2.0**
2.2nm,0.7s,mb4.3
PPT Papeete 64.49 243 *e*LR LR 18 17 54.0
106nm,24.0s
COLD Coldfoot 65.21 339 *e*P **P 17 58 54.5 -1.3**
6.8nm,1.3s,mb4.5
EKA Eskdalemuir Ar 78.34 36 P **P 18 00 10.9 -4.2**
3.2nm,0.8s,mb4.3,baz=285,slow=6.6,SNR=6.0
ARCES ARCESS Array B 86.45 18 P **P 18 00 54.5 -2.7**
2.1nm,0.8s,mb4.4,baz=258,slow=4.8,SNR=5.1
ARCES ARCESS Array B 86.45 18 P **P 18 00 54.5 -2.7**
CLL Collm 88.69 37 *e*PP PP 18 04 32.0 -4.6
CLL *ep*PP 18 04 40.0
CLL *e* 18 04 50.0
PETK Petropavlovsk- 90.63 325 LR LR 18 37 49.5
comp=Z,113nm,21.7s,MS4.3,baz=292,slow=33
TORD Torodi Ar. Bea 90.76 76 LR LR 18 35 16.9
comp=Z,119nm,18.9s,MS4.3,baz=105,slow=31
BJI Beijing 120.24 335 PKP PKPdf 18 07 03.4 -3.0
BJI LR LR
comp=N,86nm,26.5s,MS4.3
BJI LR LR
comp=E,53nm,26.8s,MS4.3
HHC Hu-ho-hao-te 121.30 339 *e*PKP PKPdf 18 07 04.2 -4.2
HHC PKS 18 10 40.2
HHC SKKS SKKSac 18 15 30.8 -8.5
HHC AMB AMB
comp=Z,150nm,7.2s
HHC LR LR
comp=N,63nm,21.7s,MS4.4
HHC LR LR
comp=E,74nm,21.4s,MS4.4
HHC LR LR
comp=Z,95nm,20.7s,MS4.4
WMQ Urumqi 122.68 360 *e*PKP PKPdf 18 07 11.0 0.0
NJ2 Nanjing 125.50 327 *e*PKP PKPdf 18 07 10.1 -6.6
LZH Lanzhou 128.09 343 *e*PKP PKPdf 18 07 17.5 -4.1
LZH LR LR
comp=E,110nm,18.2s
LZH LR LR
comp=Z,150nm,20.3s,MS4.7
CD2 Chengdu 132.94 341 *e*PKP PKPdf 18 07 25.9 -5.0
CHTO Chiang Mai 145.75 341 *e*PKPdf PKPdf 18 07 50.6 -3.8
CM31 Chiang Mai Arr 146.09 341 *e*PKPdf PKPdf 18 07 51.8 -3.2
CMAR Chiang Mai Arr 146.09 341 PKPbc PKPbc 18 07 54.3 -1.5
comp=Z,6.0nm,0.8s,baz=338,slow=3.4,SNR=28

IDC 06 17:51:06.1±2.9, 31°.82S×177°.93W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.6/17, mbtmp3.7/3, ML2.8/1, Error ellipse: s-maj=68.3km s-min=35.6km az=117.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.60**	**211**	Pn	Pn	17 52 58.6	+0.5
	0.1nm,0.3s,baz=317,slow=19,SNR=2.4						
URZ				Sn	Sn	17 54 23.7	-1.3
	baz=100,slow=18,SNR=1.8						
ASAR	**Alice Springs**	**43.11**	**268**	P	P	17 59 08.2	-0.1
	0.3nm,0.4s,baz=105,slow=7.2,SNR=8.2						
WRA	**Warramunga Arr**	**44.22**	**274**	P	P	17 59 17.3	0.0
	0.6nm,0.3s,baz=111,slow=8.0,SNR=17						
FINES	**FINESS Array B**	**146.49**	**339**	PKPbc	PKPbc	18 10 47.6	-0.9
	0.8nm,0.4s,baz=54,slow=3.7,SNR=12						

MAN 06 17:51:49, 9°.13N×126°.14E, h19km, mb3.9, ML2.6, MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.54**	**253**	*e*P	Pg	17 52 01.0	+1.2
BUTP				*e*S	Sg	17 52 08.1	+1.1
SCPH	**Surigao**	**0.91**	**315**	*e*P	Pb	17 52 05.8	-0.5
SCPH				*e*S	Sb	17 52 20.3	+2.3
MSLP	**Maasin**	**1.61**	**308**	*e*P	Pn	17 52 18.0	+1.6
MSLP				*e*S	Sn	17 52 37.2	+0.5
BUKP	**Musuan**	**1.64**	**221**	*e*P	Pn	17 52 16.8	0.0

NIED ***06*** *17:55:00, 46°.70N×152°.80E, h38km, Mw4.6 Best double couple: M₀7.95000×10¹⁵ NP1:ϕs344.00000°, δ64.00000°, λ44.00000°. NP2:ϕs231.00000°, δ51.00000°, λ146.00000°.*
SKHL ***06*** *17:55:26.6±0.4, 46°.40N×152°.90E, h63km±23km, mb5.1/7, mbh5.2/2, mbv5.4/2, ms4.0/5, msh5.0/3*
JMA ***06*** *17:55:26.3±0.9, 46°.73N×152°.77E, h30km, M5.0*
ISCJB ***06*** *17:55:26.1±0.1, 46°.64N±0°.03×152°.42E±0°.03, h39km, mb4.4/76, MS4.0/19, Error ellipse: s-maj=5.2km s-min=1.9km az=155.8*
BJI ***06*** *17:55:26.2, 46°.65N×152°.82E, h63km, mB4.7/23, mb4.5/31, Ms4.2/20, Ms7 3.9/20*
NEIC ***06*** *17:55:27.5±0.3, 46°.64N×152°.48E, mb4.6/31, Error ellipse: s-maj=10.2km s-min=5.1km az=153.0*
IDC ***06*** *17:55:27.7±0.3, 46°.73N×152°.43E, h38km±2km, mb3.9/25, mb1 4.1/26, mb1mx4.1/30, mbtmp3.9/26, ML3.8/1, MS3.9/14, Ms1 3.9/14, ms1mx3.7/33, Error ellipse: s-maj=12.4km s-min=7.7km az=142.0*
MOS ***06*** *17:55:30.7±1.0, 46°.76N×152°.32E, h83km, mb4.2/32, Error ellipse: s-maj=8.9km s-min=7.0km az=67.2*

ISC 06 17:55:28.6±0.1, 46°.70N±0°.03×152°.40E±0°.03, h41km, h41km±1.5km: pP-P, n351, σ0.94/365, mb4.4/76, MS4.0/19, 69C-72D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.49**	**247**	⇓*i*PN	**Pn**	**17 56 23.0**	**+2.7**
KUR				*e*S	**Sn**	**17 57 05.0**	**+4.7**
KUR				pmax	pmax		
	comp=Z,2μm,1.2s						
KUR				pmax	pmax		
	comp=N,370nm,0.6s						
KUR				pmax	pmax		
	comp=E,150nm,0.6s						
KUR				pmax	pmax		
	comp=Z,380nm,0.6s						
KUR				smax			
	comp=N,6μm,2.0s						
KUR				smax			
	comp=E,6μm,2.0s						
KUR				smax			
	comp=N,600nm,0.8s						
KUR				smax			
	comp=E,1μm,0.8s						
KUR	**Kuril'sk**	**3.49**	**247**	⇓*i*P	**Pn**	**17 56 23.0**	**+2.7**
KUR				AMB	AMB	17 56 29.0	
	comp=E,2μm,1.2s						
KUR				AMB	AMB	17 56 49.0	
	comp=E,340nm,0.6s						
KUR				AMB	AMB	17 56 49.0	
	comp=E,150nm,0.6s						
KUR				AMB	AMB	17 56 49.0	
	comp=E,380nm,0.6s						
KUR				*e*S	**Sn**	**17 57 05.0**	**+4.7**
KUR				A		17 57 07.2	
	comp=E,6μm,2.0s						
KUR				A		17 57 07.2	
	comp=E,6μm,2.0s						
KUR				A		17 57 20.2	
	comp=E,600nm,0.8s						
KUR				A		17 57 20.2	
	comp=E,1μm,0.8s						
SKR	**Severo-Kuril's**	**4.68**	**30**	*e*PN	**Pn**	**17 56 39.5**	**+2.9**
SKR				*i* S	**Sn**	**17 57 31.5**	**+1.9**
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR				smax			
	comp=N,350nm,0.5s						
SKR				smax			
	comp=Z,190nm,0.5s						
SKR				smax			
	comp=E,320nm,0.3s						
SKR				MLR	MLR		
	comp=Z,1μm,12.0s						
SKR	**Severo-Kuril's**	**4.68**	**30**	*e*P	**Pn**	**17 56 39.5**	**+2.9**
SKR				AMB	AMB	17 56 44.8	
	comp=Z,80nm,0.4s						
SKR				AMB	AMB	17 56 44.8	
	comp=Z,90nm,0.5s						
SKR				*i* S	**Sn**	**17 57 31.5**	**+1.9**
SKR				A		17 57 38.0	
	comp=Z,1μm,6.0s						
SKR				A		17 57 38.0	
	comp=Z,1μm,6.0s						
SKR				A		17 57 40.0	
	comp=Z,320nm,0.2s						
SKR				A		17 57 40.0	
	comp=Z,350nm,0.5s						
SKR				A		17 57 40.0	
	comp=Z,190nm,0.5s						
SKR				AMS	AMS	17 58 52.0	
	comp=Z,1μm,12.0s						
SKR				AMS	AMS	17 58 52.0	
	comp=Z,1μm,12.0s						
YUK	**Yuzh-Kuril'sk**	**5.33**	**242**	⇓*i*PN	**Pn**	**17 56 48.4**	**+2.9**
YUK				*i* S	**Sn**	**17 57 50.1**	**+4.6**
YUK				pmax	pmax		
	comp=Z,357nm,0.3s						
YUK				pmax	pmax		
	comp=N,229nm,0.2s						
YUK				pmax	pmax		
	comp=E,163nm,0.3s						
YUK				pmax	pmax		
	comp=Z,200nm,0.5s						
YUK				smax			
	comp=N,408nm,0.6s						
YUK				smax			
	comp=E,781nm,0.6s						
YUK				smax			
	comp=N,1μm,1.4s						
YUK				smax			
	comp=E,2μm,1.4s						
YUK				MLR	MLR		
	comp=E,600nm,21.0s						
YUK				MLR	MLR		
	comp=Z,1μm,21.0s						
YUK				MLR	MLR		
	comp=N,400nm,10.0s						
YUK	**Yuzh-Kuril'sk**	**5.33**	**242**	⇓*i*P	**Pn**	**17 56 48.4**	**+2.9**
YUK				AMB	AMB	17 56 51.0	
	comp=N,490nm,0.3s						
YUK				*i* S	**Sn**	**17 57 50.1**	**+4.6**
YUK				A		17 58 12.3	
	comp=N,730nm,0.5s						
YUK				A		17 58 12.3	
	comp=N,640nm,0.5s						
YUK				A		17 58 17.0	
	comp=N,2μm,1.5s						
YUK				A		17 58 17.0	
	comp=N,2μm,1.1s						
YUK				AMS	AMS	17 58 45.4	
	comp=N,400nm,10.0s						
YUK				AMS	AMS	17 58 45.4	
	comp=N,630nm,20.0s						
YUK				AMS	AMS	17 58 45.4	
	comp=N,1μm,20.0s						
NEM2	**Nemuro 2**	**5.78**	**237**	P	**Pn**	**17 56 52.3**	**+0.6**
NEM2				*e*S	**Sn**	**17 57 55.6**	**-1.1**
JRA	**Rausu**	**5.83**	**244**	P	**Pn**	**17 56 56.2**	**+3.8**
JNK	**Nakash**	**6.26**	**243**	P	**Pn**	**17 57 01.1**	**+2.7**
JTKR	**Abashiri--Toko**	**6.58**	**249**	P	**Pn**	**17 57 06.5**	**+3.8**
JAK	**Akkeshi**	**6.61**	**239**	P	**Pn**	**17 57 03.6**	**+0.4**
JAK				*e*S	**Sn**	**17 58 16.0**	**-1.2**
YSS	**Yuzh-Sakhalins**	**6.62**	**276**	*e*PN	**Pn**	**17 57 06.6**	**+3.3**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,800nm,16.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.62**	**276**	*e*Pn	**Pn**	**17 57 08.0**	**+4.7**
	comp=Z,54nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.62**	**276**	*e*P	**Pn**	**17 57 06.6**	**+3.3**
YSS				AMB	AMB	17 57 10.2	
	comp=Z,60nm,1.0s						
YSS				*e*S	**Sn**	**17 58 17.0**	**-0.5**
YSS				*e*LQ		17 58 50.0	
YSS				*e*LR	LR	17 59 11.0	
YSS				AMS	AMS	17 59 36.0	
	comp=Z,1μm,16.0s						
YSS				AMS	AMS	17 59 36.0	
	comp=Z,400nm,16.0s						
YSS				AMS	AMS	17 59 36.0	
	comp=Z,800nm,16.0s						
YSS				*e*rx	rx	18 03 29.0	
JMP	**Maruseppu**	**6.92**	**250**	P	**Pn**	**17 57 11.4**	**+4.1**
JAR	**Ashorobuto**	**7.00**	**244**	P	**Pn**	**17 57 11.5**	**+3.0**
JSE	**Soyaes**	**7.08**	**259**	P	**Pn**	**17 57 14.2**	**+4.7**
JOB	**Onbets**	**7.18**	**241**	P	**Pn**	**17 57 12.6**	**+1.7**
JOB				*e*S	**Sn**	**17 58 31.9**	**+0.7**
PETK	**Petropavlovsk-**	**7.26**	**26**	Pn	**Pn**	**17 57 14.2**	**+2.1**
	comp=Z,1.6nm,0.3s,baz=179,slow=12,SNR=41						
PETK				LR	LR	18 00 05.8	
	comp=Z,300nm,19.5s,baz=210,slow=38						
UGL	**Uglegorsk**	**7.34**	**293**	*e*P	**Pn**	**17 57 19.5**	**+6.3**
UGL				AMB	AMB	17 57 20.5	
	comp=Z,160nm,1.0s						
UGL				AMB	AMB	17 57 20.5	
	comp=Z,400nm,1.6s						
UGL				*e*L		17 59 14.0	
UGL				AMS	AMS	18 00 15.0	
	comp=Z,500nm,16.0s						
UGL				AMS	AMS	18 00 15.0	
	comp=Z,1μm,16.0s						
ASAJ	**Asahikawa**	**7.37**	**253**	Pn	**Pn**	**17 57 18.6**	**+5.1**
	comp=Z,2.1nm,0.3s,baz=81,slow=11,SNR=46						
ASAJ				LR	LR	18 00 00.4	
	comp=Z,738nm,20.6s,baz=350,slow=37						
ASAJ	**Asahikawa**	**7.37**	**253**	PN	**Pn**	**17 57 18.7**	**+5.2**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,738nm,20.6s						
ASAJ	**Asahikawa**	**7.37**	**253**	*e*Pn	**Pn**	**17 57 18.4**	**+4.9**
	comp=Z,52nm,0.9s						
ASAJ	**Asahikawa**	**7.37**	**253**	P	**Pn**	**17 57 18.5**	**+5.0**
JKK2	**Kamakawa 2**	**7.37**	**251**	P	**Pn**	**17 57 17.9**	**+4.3**
JWK2	**Keihoku**	**7.45**	**263**	P	**Pn**	**17 57 21.8**	**+7.2**
PET	**Petropavlovsk**	**7.50**	**30**	*e*PN	**Pn**	**17 57 21.2**	**+5.9**
PET				pmax	pmax		
	comp=Z,33nm,0.6s						
PET				MLR	MLR		
	comp=Z,300nm,14.0s						
PET	**Petropavlovsk**	**7.50**	**30**	*e*Pn	**Pn**	**17 57 15.8**	**+0.5**
	comp=Z,26nm,0.5s						
PET				*e*Sn	**Sn**	**17 58 37.0**	**-2.0**
JCH	**Churui**	**7.63**	**241**	P	**Pn**	**17 57 18.0**	**+0.9**
JCH				*e*S	**Sn**	**17 58 40.3**	**-1.9**
TYV	**Tymovskoe**	**7.67**	**306**	*e*P	**Pn**	**17 57 21.0**	**+3.5**
TYV				AMB	AMB	17 57 28.0	
	comp=Z,26nm,1.0s						
TYV				AMB	AMB	17 57 28.0	
	comp=Z,40nm,1.0s						
TYV				AMB	AMB	17 57 28.0	
	comp=Z,44nm,1.0s						
TYV				AMS	AMS	18 00 20.0	
	comp=Z,2μm,16.0s						
TYV				AMS	AMS	18 00 20.0	
	comp=Z,16μm,18.0s						
JSS	**Shosan**	**7.76**	**257**	P	**Pn**	**17 57 25.6**	**+6.8**
JFR	**Furan**	**7.81**	**247**	P	**Pn**	**17 57 23.3**	**+3.8**
JAB	**Ashibetsu**	**7.88**	**250**	P	**Pn**	**17 57 25.0**	**+4.5**
JEM	**Erimo**	**8.11**	**238**	P	**Pn**	**17 57 25.5**	**+1.8**
JEM				*e*S	**Sn**	**17 58 55.3**	**+1.2**
ERM	**Erimo**	**8.11**	**238**	*e*PN	**Pn**	**17 57 26.2**	**+2.5**
ERM	**Erimo**	**8.11**	**238**	*e*Pn	**Pn**	**17 57 25.7**	**+2.0**
	comp=Z,82nm,0.7s						
ERM				*e*Sn	**Sn**	**17 58 55.0**	**+0.9**
JBT2	**Biratori 2**	**8.15**	**245**	P	**Pn**	**17 57 26.2**	**+1.9**
JNBK	**Urakawa-nobuka**	**8.19**	**241**	P	**Pn**	**17 57 25.2**	**+0.4**
JNB	**Noboribetsu**	**9.15**	**247**	P	**Pn**	**17 57 39.2**	**+1.3**
JNB				*e*S	**Sn**	**17 59 19.6**	**+0.2**
OKH	**Okha**	**9.16**	**322**	*e*L		17 57 46.0	
OKH				AMS	AMS	18 02 13.6	
	comp=Z,1μm,10.0s						
OKH				AMS	AMS	18 02 13.6	
	comp=Z,1μm,14.0s						
JKB	**Kayabe**	**9.46**	**244**	P	**Pn**	**17 57 42.4**	**+0.2**
JKB				*e*S	**Sn**	**17 59 23.3**	**-4.0**
JSH	**Shimam**	**9.69**	**250**	P	**Pn**	**17 57 47.8**	**+2.4**
JYM2	**Yakumo 2**	**9.75**	**246**	P	**Pn**	**17 57 47.1**	**+0.9**
NKL	**Nikolayevsk**	**9.93**	**315**	*e*P	**Pn**	**17 57 50.0**	**+1.4**
NKL				AMB	AMB	17 57 53.0	
	comp=Z,300nm,2.0s						
NKL				AMB	AMB	17 57 53.0	
	comp=Z,300nm,2.0s						
NKL				AMB	AMB	17 57 53.2	
	comp=Z,20nm,1.2s						
NKL				AMB	AMB	17 57 53.2	
	comp=Z,70nm,1.2s						
NKL				AMB	AMB	17 57 53.2	
	comp=Z,130nm,1.5s						
NKL				*e*L		18 01 37.0	
NKL				AMS	AMS	18 01 56.0	
	comp=Z,500nm,19.0s						
NKL				AMS	AMS	18 01 56.0	
	comp=Z,1μm,19.0s						
JSR	**Shiriuchi**	**10.05**	**243**	P	**Pn**	**17 57 50.4**	**+0.2**
JTM	**Tenmabayashi**	**10.11**	**238**	P	**Pn**	**17 57 50.1**	**-0.9**
JTM				*e*S	**Sn**	**17 59 37.1**	**-5.9**
JANG	**Nango**	**10.12**	**235**	P	**Pn**	**17 57 48.9**	**-2.3**
JANG				*e*S	**Sn**	**17 59 36.2**	**-7.1**
JTH	**Tanohata**	**10.22**	**232**	P	**Pn**	**17 57 50.2**	**-2.5**
JTH				*e*S	**Sn**	**17 59 37.0**	**-8.9**
JOSM	**Okushiri--Mats**	**10.34**	**248**	P	**Pn**	**17 57 55.2**	**+1.0**
OFUJ	**Ofunato**	**10.95**	**230**	P	**Pn**	**17 58 00.1**	**-2.5**
TEY	**Ternei**	**11.14**	**267**	*e*P	**Pn**	**17 58 11.0**	**+5.8**
JRG	**Rokugo**	**11.28**	**234**	P	**Pn**	**17 58 06.1**	**-1.0**
JRG				*e*S	**Sn**	**18 00 05.4**	**-6.4**
JOG2	**Oga 2**	**11.41**	**238**	P	**Pn**	**17 58 08.2**	**-0.7**
JIO	**Ouri**	**11.58**	**229**	P	**Pn**	**17 58 08.5**	**-2.7**
JIO				*e*S	**Sn**	**18 00 09.9**	**-9.2**
HABR	**Khabarovsk**	**11.85**	**285**	PN	**Pn**	**17 58 17.8**	**+3.0**
HABR				*e*S	**Sn**	**18 00 30.7**	**+5.1**
HABR				MLR	MLR		
	comp=Z,428nm,15.0s						
KLR	**Kul'dur**	**14.06**	**288**	*e*P	**Pn**	**17 58 46.8**	**+1.8**
KLR				MLR	MLR		
	comp=E,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,1μm,14.0s						
MAJO	**Matsushiro**	**14.67**	**231**	*e*P	**Pn**	**17 58 51.2**	**-2.0**
MAJO				pmax	pmax		
	comp=Z,15nm,0.5s						
MAJO	**Matsushiro**	**14.67**	**231**	*e*Pn	**Pn**	**17 58 51.2**	**-2.0**
	comp=Z,14nm,0.5s						
MJAR	**Matsushiro Arr**	**14.67**	**231**	Pn	**Pn**	**17 58 50.9**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=26,slow=13,SNR=23						
MJAR				LR	LR	18 04 47.4	
	comp=Z,162nm,20.7s,baz=50,slow=38						
MDJ	**Mudanjiang**	**16.08**	**271**	P	**Pn**	**17 59 11.7**	**+0.2**
MDJ				pP	pP	17 59 26.8	+2.5
MDJ				sP	sP	17 59 34.6	+5.1
MDJ				S	**S**	**18 02 09.3**	**-11**
MDJ				PcP	PcP	18 04 05.6	0.0
MDJ				ScP	ScP	18 07 33.4	-3.1
MDJ				PcS	PcS	18 07 39.6	-1.5
MDJ				ScS	ScS	18 11 12.4	-2.8
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,62nm,6.0s						
MDJ				LR	LR		
	comp=N,180nm,19.0s						
MDJ				LR	LR		
	comp=E,190nm,22.8s						
MDJ				LR	LR		
	comp=Z,310nm,17.1s						
MDJ	**Mudanjiang**	**16.08**	**271**	*e*Pn	**Pn**	**17 59 13.2**	**+1.7**
	comp=Z,15nm,1.1s						
SEY	**Seymchan**	**16.27**	**360**	⇑*e*P	**Pn**	**17 59 17.6**	**+3.9**
JHJ	**Hachijo jima 2**	**16.64**	**220**	Sn	**Sn**	**18 02 13.1**	**-9.1**
	comp=Z,2.5nm,0.3s,baz=254,slow=24,SNR=1.4						
ZEA	**Zeya**	**17.51**	**303**	*e*P	**Pn**	**17 59 28.0**	**-1.3**
ZEA				AMB	AMB	17 59 31.5	
	comp=Z,36nm,1.6s						
ZEA				AMB	AMB	17 59 32.0	
	comp=Z,200nm,5.0s						
ZEA				AMB	AMB	17 59 32.0	
	comp=Z,300nm,5.0s						
ZEA				*e*S	**S**	**18 02 48.0**	**-1.6**
ZEA				A		18 02 51.0	
	comp=Z,200nm,8.0s						
CN2	**Changchun**	**19.16**	**271**	*e*P	**Pn**	**17 59 50.1**	**+0.6**
CN2				*es*P	sP	18 00 12.5	+8.9
CN2				*e*S	**S**	**18 03 17.2**	**-6.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s						
CN2				LR	LR		
	comp=E,300nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
YAK	**Yakutsk**	**20.10**	**328**	*e*P	**P**	**17 59 59.7**	**+1.3**
YAK				*e*		18 00 17.3	
YAK				*e*		18 04 12.8	
YAK				*e*SS		18 04 25.7	
YAK				pmax	pmax		
	comp=Z,190nm,1.9s						
YAK				pmax	pmax		
	comp=N,221nm,2.0s						
YAK				pmax	pmax		
	comp=E,224nm,2.0s						
YAK				MLR	MLR		

comp=Z,240nm,20.0s,MS3.5
YAK MLR MLR
comp=N,194nm,16.0s,MS3.5
YAK MLR MLR
comp=E,96nm,21.0s,MS3.5
YAK Yakutsk 20.10 328 *e*P **P 18 00 04.0 +5.6**
comp=E,19nm,0.6s
KSRS Korea Array 20.32 252 P **P 18 00 02.5 +1.5**
comp=E,5.5nm,0.9s,baz=58,slow=10.0,SNR=12
KSRS S **S 18 03 46.8 +0.4**
comp=E,0.3nm,0.3s,baz=30,slow=22,SNR=2.7
KSRS LR LR 18 06 50.2
comp=E,174nm,19.9s,MS3.4,baz=56,slow=34
INCN Inchon 21.15 253 P **P 18 00 09.3 -0.7**
CBIJ Chichi jima 21.17 206 S **S 18 03 56.7 -6.6**
comp=E,16nm,0.8s,baz=282,slow=15,SNR=1.7
HIA Hailar 21.92 289 *e*P **P 18 00 17.8 -0.3**
BILL Bilibino 22.55 14⇑*i*P **P 18 00 28.0 +3.4**
BILL pmax pmax
comp=Z,8.0nm,1.0s,mb4.1
BJI Beijing 26.99 269 P **P 18 01 05.4 -0.9**
BJI S **S 18 05 38.5 -2.3**
BJI pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
BJI pmax pmax
comp=Z,100nm,4.7s
BJI LR LR
comp=N,130nm,18.3s,MS3.9
BJI LR LR
comp=E,290nm,22.6s,MS3.9
BJI LR LR
comp=Z,220nm,21.5s,MS3.7
BJT Baijiatuau 27.00 269 *e*P **P 18 01 09.8 +3.4**
BJT pmax pmax
comp=Z,8.0nm,0.8s
BJT Baijiatuau 27.00 269 *e*P **P 18 01 09.8 +3.3**
comp=Z,8.0nm,0.8s,mb4.3
NJ2 Nanjing 29.52 252 *e*P **P 18 01 30.2 +1.3**
NJ2 pP pP 18 01 45.0 +4.9
NJ2 sP sP 18 01 52.3 +7.3
NJ2 PP PP 18 02 28.0 -7.9
NJ2 S **S 18 06 15.0 -5.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
NJ2 pmax pmax
comp=Z,130nm,6.4s
NJ2 LR LR
comp=N,140nm,20.8s
NJ2 LR LR
comp=E,170nm,13.2s
NJ2 LR LR
comp=Z,720nm,16.8s,MS4.4
HHC Hu-ho-hao-te 29.81 274 *e*P **P 18 01 31.8 +0.4**
HHC pP pP 18 01 46.6 +4.0
HHC sP sP 18 01 53.9 +6.4
HHC PP PP 18 02 30.5 -8.5
HHC PcP PcP 18 04 34.6 +0.6
HHC S **S 18 06 22.6 -2.5**
HHC sS sS 18 06 48.4 +4.6
HHC SS SS 18 08 01.3 -31
HHC ScP ScP 18 08 09.2 -3.3
HHC ScS ScS 18 12 03.4 -4.2
HHC pmax pmax
comp=Z,12nm,1.1s,mb4.5
HHC pmax pmax
comp=Z,63nm,5.7s
HHC LR LR
comp=N,180nm,14.9s,MS4.0
HHC LR LR
comp=E,190nm,15.1s,MS4.0
HHC LR LR
comp=Z,200nm,17.3s,MS3.8
ULN Ulaanbaatar 30.45 289 *e*P **P 18 01 36.0 -1.0**
ULN pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
ULN Ulaanbaatar 30.45 289 *e*P **P 18 01 36.0 -1.1**
comp=Z,3.6nm,0.8s,mb4.2
SONM Songino Array 30.89 289 P **P 18 01 42.3 +1.4**
comp=Z,1.8nm,0.8s,mb4.0,baz=78,slow=8.3,SNR=9.3
SONM LR LR 18 15 11.8
comp=Z,323nm,19.3s,MS4.0,baz=72,slow=38
SONM Songino Array 30.89 289 P **P 18 01 42.3 +1.4**
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM MLR MLR
comp=Z,323nm,19.3s
ZAK Zakamensk 32.26 295 *e*P **P 18 01 51.6 -1.3**
ZAK *e* 18 03 08.8
XAN Xi'an 35.02 265 P **P 18 02 16.8 -0.3**
XAN pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
XAN pmax pmax
comp=Z,10.0nm,6.0s
COLD Coldfoot 35.65 34 *e*P **P 18 02 22.5 +0.4**
comp=Z,9.4nm,0.8s,mb4.8
MCK McKinley 36.00 40 *e*P **P 18 02 25.2 0.0**
MCK pmax pmax
comp=Z,30nm,1.6s,mb5.0
MCK McKinley 36.00 40 *e*Pn **P 18 02 25.2 +0.1**
comp=Z,30nm,1.6s,mb5.0
SML Sawmill 36.34 44 *e*P **P 18 02 25.7 -2.4**
SML pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SML Sawmill 36.34 44 *e*P **P 18 02 25.7 -2.3**
comp=Z,2.5nm,0.6s,mb4.3
COLA College 36.48 38 *e*P **P 18 02 29.1 -0.1**
COLA pmax pmax
comp=Z,17nm,0.9s,mb5.0
COLA College 36.48 38 *e*P **P 18 02 29.1 -0.1**
comp=Z,17nm,0.9s,mb5.0
ENH Enshi 36.88 259 P **P 18 02 32.5 -0.5**
comp=Z,5.6nm,0.8s,mb4.5
ILAR Eielson Array 36.89 39 P **P 18 02 32.0 -0.7**
comp=Z,1.8nm,0.9s,mb3.9,baz=266,slow=7.5,SNR=16
ILAR pP pP 18 02 41.1 -3.0
comp=Z,1.2nm,0.8s,baz=269,slow=7.9,SNR=5.0
ILAR sP sP 18 02 46.5 -2.4
comp=Z,5.2nm,0.9s,baz=267,slow=7.4,SNR=13
LZH Lanzhou 37.40 271 *e*P **P 18 02 37.5 +0.1**
LZH pP pP 18 02 53.0 +4.3
LZH sP sP 18 03 00.1 +6.5
LZH *e*PP PP 18 04 08.3 +5.2
LZH pmax pmax
comp=Z,19nm,1.2s,mb4.8
LZH pmax pmax
comp=Z,47nm,5.1s
LZH LR LR
comp=N,410nm,13.2s
LZH LR LR
comp=Z,510nm,17.5s,MS4.4
GTA Gaotai 38.49 279 *e*P **P 18 02 47.1 +0.5**
GTA pP pP 18 03 01.4 +3.4
GTA sP sP 18 03 09.3 +6.5
GTA S **S 18 08 38.6 -0.5**
GTA sS sS 18 09 03.5 +5.4
GTA SS SS 18 11 21.2 -8.2
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
GTA pmax pmax
comp=Z,100nm,5.2s
GTA LR LR
comp=N,130nm,14.7s,MS4.1
GTA LR LR
comp=E,150nm,13.5s,MS4.1
GTA LR LR
comp=Z,140nm,14.7s,MS3.9
EGAK Eagle 39.34 38 *e*P **P 18 02 51.5 -1.9**
comp=Z,19nm,1.2s,mb4.7
DAWY Dawson 40.19 39 P **P 18 03 01.5 +1.2**
CD2 Chengdu 40.39 265 *e*P **P 18 03 02.5 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CD2 pmax pmax
comp=Z,30nm,5.2s
GYA Guiyang 41.23 257 P **P 18 03 08.7 -0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
INK Inuvik 41.95 32 P **P 18 03 14.7 -0.1**
comp=Z,2.9nm,0.6s,mb4.1,baz=270,slow=6.7,SNR=9.1
INK pP pP 18 03 24.7 -1.6
comp=Z,6.0nm,0.7s,baz=283,slow=8.2,SNR=7.5
INK Inuvik 41.95 32 *e*P **P 18 03 14.3 -0.5**
INK pmax pmax
comp=Z,8.0nm,0.8s
INK Inuvik 41.95 32 *e*P **P 18 03 14.3 -0.5**
comp=Z,7.6nm,0.8s,mb4.4

ZALV Zalesovo Beam 42.24 306 P **P 18 03 16.3 -1.1**
comp=Z,1.1nm,0.5s,mb3.7,baz=66,slow=6.2,SNR=4.2
ZALV PcP PcP 18 05 10.8 +0.2
comp=Z,0.5nm,0.3s,baz=130,slow=2.3,SNR=4.8
ZALV LR LR 18 22 13.1
comp=Z,392nm,18.1s,MS4.3,baz=70,slow=38
ZALV Zalesovo Beam 42.24 306 P **P 18 03 16.3 -1.1**
ZALV 18 05 10.9
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
ZALV MLR MLR
comp=Z,392nm,18.1s,MS4.3
ZALV Zalesovo Beam 42.24 306 P **P 18 03 16.3 -1.1**
ZALV PcP PcP 18 05 10.8 +0.2
ZALV LR LR 18 22 13.1
SIT Sitka 43.77 49 *e*P **P 18 03 31.3 +1.6**
WMQ Urumqi 44.49 291 *e*P **P 18 03 38.0 +2.4**
WMQ pP pP 18 03 54.0 +6.9
WMQ sP sP 18 04 01.0 +9.0
WMQ PP PP 18 05 24.0 +4.3
WMQ S **S 18 10 08.0 +0.2**
WMQ SS SS 18 13 20.0 -7.6
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.7
WMQ pmax pmax
comp=Z,84nm,4.0s
WMQ LR LR
comp=N,140nm,16.0s,MS4.2
WMQ LR LR
comp=E,220nm,16.0s,MS4.2
WMQ LR LR
comp=Z,140nm,16.0s,MS4.0
KMI Kunming 44.75 259 P **P 18 03 38.2 +0.3**
KMI pP pP 18 03 55.3 +5.8
KMI sP sP 18 04 03.2 +8.9
KMI PP PP 18 05 22.3 -0.5
KMI S **S 18 10 08.7 -3.3**
KMI sS sS 18 10 38.5 +7.3
KMI SS SS 18 13 21.9 -12
KMI pmax pmax
comp=Z,6.0nm,1.4s,mb4.2
KMI pmax pmax
comp=Z,69nm,8.2s
KMI LR LR
comp=N,83nm,20.7s,MS3.8
KMI LR LR
comp=E,80nm,19.9s,MS3.8
KMI LR LR
comp=Z,98nm,19.2s,MS3.8
DLBC Dease Lake 45.98 46 *e*P **P 18 03 48.8 +1.6**
DLBC *e* pP 18 03 59.1 +0.3
MK31 Makanchi Array 46.53 297 *e*P **P 18 03 50.0 -1.7**
MKAR Makanchi Array 46.53 297 P **P 18 03 50.3 -1.4**
comp=Z,1.2nm,0.6s,mb4.0,baz=72,slow=6.1,SNR=16
MKAR LR LR 18 24 36.8
comp=Z,432nm,18.9s,MS4.4,baz=91,slow=38
MKAR Makanchi Array 46.53 297 P **P 18 03 50.3 -1.4**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR MLR MLR
comp=Z,432nm,18.9s
KURK Kurchatov 46.98 303 *de*P **P 18 03 55.6 +0.4**
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KURK Kurchatov 46.98 303 *e*P **P 18 03 54.8 -0.4**
LSA Lhasa 49.79 273 P **P 18 04 17.9 +0.8**
BVAR Borovoye Array 50.51 309 P **P 18 04 22.0 -0.2**
comp=Z,0.8nm,0.4s,mb4.0,baz=50,slow=7.5,SNR=6.0
BVAR sP sP 18 04 36.9 -1.8
comp=Z,0.7nm,0.4s,baz=64,slow=6.9,SNR=3.2
BVAR PcP PcP 18 05 38.7 -0.9
comp=Z,0.8nm,0.3s,baz=98,slow=5.2,SNR=4.2
BVAR Borovoye Array 50.51 309 P **P 18 04 22.0 -0.2**
BVAR 18 05 38.7
BVAR pmax pmax
comp=Z,1.0nm,0.4s
YKA Yellowknife Ar 51.25 36 P **P 18 04 27.9 +0.2**
comp=Z,0.6nm,0.6s,mb3.7,baz=312,slow=7.4,SNR=3.5
YKA pP pP 18 04 38.2 -1.2
comp=Z,3.2nm,0.8s,baz=294,slow=7.0,SNR=7.1
YKA sP sP 18 04 42.8 -1.4
comp=Z,2.8nm,0.9s,baz=297,slow=7.4,SNR=7.2
YKA Yellowknife Ar 51.25 36 P **P 18 04 27.9 +0.2**
YKA pP pP 18 04 38.2 -1.2
YKA sP sP 18 04 42.8 -1.4
CHTO Chiang Mai 51.63 256 *e*P **P 18 04 31.0 -0.1**
CHTO *e* 18 04 48.3
CHTO pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CHTO Chiang Mai 51.63 256 *e*P **P 18 04 31.0 -0.1**
comp=Z,6.6nm,1.0s,mb4.5
CHTO *e* 18 04 48.3
SHL Shillong 51.88 268 *e*PKP **P 18 04 32.0 -0.9**
CMAR Chiang Mai Arr 51.88 256 P **P 18 04 34.0 +1.0**
comp=Z,2.0nm,0.9s,mb4.0,baz=32,slow=7.5,SNR=14
CMAR pP pP 18 04 43.1 -1.6
comp=Z,1.0nm,0.7s,baz=31,slow=7.8,SNR=5.3
CMAR sP sP 18 04 50.2 +0.8
comp=Z,2.1nm,0.6s,baz=38,slow=7.2,SNR=11
CMAR LR LR 18 29 27.1
comp=Z,61nm,19.8s,MS3.6,baz=230,slow=39
CMAR Chiang Mai Arr 51.88 256 P **P 18 04 34.0 +1.0**
CMAR *SP sP 18 04 50.2 +0.7
CMAR pmax pmax
comp=Z,2.0nm,0.9s
CMAR MLR MLR
comp=Z,61nm,19.8s
TKM2 Tokmak 2 52.58 296 P **P 18 04 36.8 -1.0**
TKM2 pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
TKM2 Tokmak 2 52.58 296 P **P 18 04 36.8 -1.1**
comp=Z,6.1nm,1.2s,mb4.4
AAK Ala-Archa 53.42 296⇑*e*P **P 18 04 42.8 -1.2**
AAK pmax pmax
comp=Z,4.0nm,1.8s,mb4.0
TAPN Taplejung 53.61 273 *e*P **P 18 04 46.4 +0.7**
comp=Z,15nm,0.7s,mb5.0
ODAN Odare 54.15 273 *e*P **P 18 04 50.1 +0.6**
ARU Arti 54.72 317 *c i*P **P 18 04 53.5 +0.2**
ARU *e* 18 06 52.6
ARU S **S 18 12 29.8 -0.5**
ARU SS SS 18 16 06.6 -6.4
ARU pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
ARU Arti 54.72 317 P **P 18 04 53.6 +0.3**
KKN Kakani 55.01 275 *e*P **P 18 04 57.0 +1.2**
PKI Pulchoki 55.05 275 *e*P **P 18 04 56.8 +0.7**
PKIN Phulchoki 55.06 275 *e*P **P 18 04 56.8 +0.6**
comp=Z,20nm,0.7s,mb5.3
DMN Daman 55.24 275 *e*P **P 18 04 58.3 +0.8**
comp=Z,56nm,1.1s,mb5.5
GKN Gorkha 55.31 275 *e*P **P 18 04 58.5 +0.5**
comp=Z,43nm,1.0s,mb5.4
DANN Dangsing 55.69 276 *e*P **P 18 05 01.7 +1.0**
comp=Z,18nm,0.7s,mb5.2
KOLN Koldanda 56.17 276 *e*P **P 18 05 04.3 +0.2**
ETW Entiat 56.20 54 *e*P **P 18 05 04.0 0.0**
comp=Z,6.4nm,0.7s,mb4.8
ETW *e* pP 18 05 14.1 -1.8
B08A Colville Reser 56.33 53 ⇓P **P 18 05 04.5 -0.5**
baz=56
HOOD Mount Hood Mea 56.74 57 P **P 18 05 07.2 -0.7**
KEV Kevo 57.22 340 *e*P **P 18 05 09.4 -1.6**
KLP Kalpa 57.45 283 *e*PKP **P 18 05 12.8 -0.3**
ARCES ARCESS Array B 57.74 341 P **P 18 05 14.0 -0.6**
comp=Z,0.9nm,0.6s,mb4.0,baz=39,slow=8.4,SNR=6.7
ARCES ARCESS Array B 57.74 341 P **P 18 05 14.0 -0.6**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
E09A Wood Farm, Sta 58.05 54 ⇓P **P 18 05 16.8 -0.3**
baz=58
YBH Yreka Blue Hor 58.20 61 P **P 18 05 18.9 +0.6**
comp=Z,1.7nm,0.9s,mb4.1,baz=262,slow=17,SNR=1.9
YBH pP pP 18 05 30.1 0.0
comp=Z,2.6nm,0.8s,baz=277,slow=1.3,SNR=3.4
G08A Pilot Rock 58.30 56 ⇑P **P 18 05 18.7 -0.3**
baz=58
C11A Tepee Creek (N 58.31 52 ⇓P **P 18 05 18.9 0.0**
baz=58
AKTK Aktyubinsk 58.39 312 P **P 18 05 18.5 -1.0**
AKTO Aktyubinsk 58.39 312 P **P 18 05 18.5 -1.0**
comp=Z,0.5nm,0.5s,mb3.9,baz=8.1,slow=7.1,SNR=2.7
A13A Flathead Natio 58.66 50 ⇑P **P 18 05 21.2 -0.1**
baz=58
B13A Whitefish 58.96 51 P **P 18 05 24.1 +0.6**

baz=59,SNR=5.3
A14A Double T Ranch 59.16 50 ⇓P **P 18 05 24.4 -0.4**
baz=59
A15A Johnson Ranch, 59.52 50 ⇓P **P 18 05 26.4 -0.8**
baz=59
E12A Beaver Dam Sad 59.54 53 ⇓P **P 18 05 27.6 +0.1**
baz=59,SNR=5.7
MOD Modoc 59.54 60 *e*P **P 18 05 27.6 +0.1**
comp=Z,3.3nm,0.8s,mb4.4
C14A Swan Lake 59.71 51 ⇑P **P 18 05 29.5 +0.8**
baz=60
D13A Huson 59.73 52 ⇑P **P 18 05 27.7 -1.2**
baz=60
B15A Bradely Ranch, 60.01 50 ⇓P **P 18 05 30.2 -0.5**
baz=60
F12A Elk City 60.11 54 ⇓P **P 18 05 31.4 0.0**
baz=60
A16A West Butte Ran 60.13 49 ⇓P **P 18 05 30.9 -0.6**
baz=60
MSO Missoula 60.18 52 ⇑P **P 18 05 31.6 -0.3**
baz=60
MSO Missoula 60.18 52 *e*P **P 18 05 31.1 -0.8**
comp=Z,8.8nm,1.3s,mb4.6
MSO *e* pP 18 05 42.7 -1.1
WVOR Wild Horse Val 60.20 59 *e*P **P 18 05 31.7 -0.4**
WVOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
WVOR Wild Horse Val 60.20 59 *e*P **P 18 05 31.7 -0.4**
comp=Z,4.9nm,0.9s,mb4.5
WVOR *e* pP 18 05 43.3 -0.7
D14A Greenough 60.26 52 P **P 18 05 32.1 -0.3**
baz=60,SNR=10.0
C15A Salmond Ranch, 60.32 51 ⇑P **P 18 05 33.1 +0.3**
baz=60,SNR=13
B16A M & M Farms, S 60.40 50 ⇓P **P 18 05 33.6 +0.3**
baz=60
G12A Big Creek, Yel 60.45 54 ⇑P **P 18 05 32.9 -0.9**
baz=60
A17A Triple J Farms 60.59 49 ⇓P **P 18 05 33.9 -0.8**
baz=60
C16A Fuhringer Ranc 60.76 50 ⇑P **P 18 05 36.4 +0.6**
baz=60
KUDL Kundal 60.77 281 AMb AMB 18 05 32.3
comp=Z,6.5nm,0.7s,mb4.9
KUDL *e*PKP 18 05 36.2
SUMG Summit 60.78 4 *e*P **P 18 05 34.3 -1.3**
comp=Z,15nm,1.0s,mb5.1
SUMG *e* pP 18 05 46.7 -0.8
B17A L&G Farms, Che 60.95 49 ⇑P **P 18 05 37.0 -0.1**
baz=61
G13A Cobalt 61.09 54 P **P 18 05 37.8 -0.3**
baz=61,SNR=8.2
FFC Flin Flon 61.09 40 *i* P **P 18 05 38.5 +0.6**
FFC Flin Flon 61.09 40 *e*P **P 18 05 37.0 -0.9**
comp=Z,7.8nm,1.1s,mb4.8
E15A Deer Lodge 61.13 52 ⇓P **P 18 05 38.5 +0.1**
baz=61
JOF Joensuu 61.16 333 *e*P **P 18 05 37.0 -1.3**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.4
KHET Khetri 61.27 281 *e*PKP **P 18 05 38.3 -1.3**
KHET AMb AMB 18 05 40.9
comp=Z,6.3nm,0.8s,mb4.8
D16A Dana Ranch, Ca 61.34 51 ⇓P **P 18 05 40.0 +0.2**
baz=61,SNR=8.2
C17A Wharram Farm, 61.38 50 ⇓P **P 18 05 39.6 -0.4**
baz=61,SNR=8.1
I12A Atlanta 61.39 56 ⇓P **P 18 05 40.3 +0.2**
baz=61,SNR=5.1
H13A Challis 61.40 54 ⇓P **P 18 05 40.3 +0.1**
baz=61
B18A Beardsley Farm 61.42 49 ⇑P **P 18 05 40.2 -0.1**
baz=61,SNR=5.1
FCC Fort Churchill 61.57 33 *e*P **P 18 05 39.6 -1.6**
comp=Z,0.7nm,1.3s,mb3.6
F15A Butte 61.58 52 ⇑P **P 18 05 41.3 -0.1**
baz=61
A19A Klindworth Far 61.61 48 ⇑P **P 18 05 40.9 -0.6**
baz=61
LRM Limekiln Ridge 61.61 52 *e*P **P 18 05 41.7 0.0**
LRM *e* pP 18 05 52.8 -0.8
EGMT Eagleton 61.66 49 ⇓P **P 18 05 41.5 -0.4**
baz=61,SNR=6.3
D17A Six Diamond Ra 61.72 50 ⇓P **P 18 05 42.1 -0.2**
baz=62,SNR=5.3
HLID Hailey 61.94 55 ⇑P **P 18 05 44.2 +0.3**
baz=62
G15A Dillon 62.00 53 ⇓P **P 18 05 44.7 +0.4**
baz=62
E17A Martinsdale 62.07 51 ⇓P **P 18 05 44.9 +0.2**
baz=62,SNR=6.8
BOZ Bozeman (W) 62.17 52 P **P 18 05 45.9 +0.5**
baz=62,SNR=5.5
C19A Slack Wire Ran 62.21 49 P **P 18 05 46.0 +0.3**
baz=62,SNR=6.6
G16A Moss Hill, Enn 62.34 53 ⇑P **P 18 05 46.5 0.0**
baz=62,SNR=7.8
C20A Veseth Ranch, 62.77 48 P **P 18 05 49.6 +0.2**
baz=62,SNR=10
NVAR Mina Array Bea 62.89 62 P **P 18 05 50.5 +0.2**
comp=Z,0.9nm,0.9s,mb3.9,baz=283,slow=7.3,SNR=7.5
NVAR pP pP 18 06 01.1 -1.2
comp=Z,3.0nm,0.9s,baz=292,slow=7.4,SNR=13
NVAR sP sP 18 06 06.4 -0.6
comp=Z,1.1nm,0.6s,baz=302,slow=7.7,SNR=6.1
H16A Russell Place, 62.98 53 ⇑P **P 18 05 51.3 +0.5**
baz=63
F18A Big Timber 63.04 51 ⇑P **P 18 05 51.5 +0.4**
baz=63
D20A Manuel Ranch, 63.10 49 ⇓P **P 18 05 52.0 +0.4**
baz=63,SNR=7.9
J15A Blackfoot 63.16 54 ⇓P **P 18 05 52.6 +0.6**
baz=63
C21A Desert Coulee 63.16 48 ⇑P **P 18 05 52.2 +0.3**
baz=63
E19A Rath Farm, Rou 63.17 50 ⇑P **P 18 05 51.9 -0.1**
baz=63
KAF Kangasniemi 63.28 335 *e*P **P 18 05 50.6 -1.9**
KAF pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
BHPL Bhopal 63.34 276 *e*PKP **P 18 05 52.7 -0.8**
BHPL AMb AMB 18 05 55.9
comp=Z,28nm,1.0s,mb5.4
F19A Roth Farm, Mol 63.48 51 ⇓P **P 18 05 54.6 +0.5**
baz=63
J16A Bone 63.70 54 ⇑P **P 18 05 55.8 +0.2**
baz=64
H18A Shoshone NF, C 63.86 52 ⇓P **P 18 05 57.8 +1.2**
baz=64
FINES FINESS Array B 63.87 334 P **P 18 05 55.0 -1.4**
comp=Z,2.8nm,0.4s,mb4.7,baz=37,slow=6.5,SNR=78
FINES pP pP 18 06 07.4 -1.0
comp=Z,2.0nm,0.4s,baz=25,slow=7.4,SNR=3.9
K16A Soda Springs 64.00 54 ⇓P **P 18 05 58.6 +1.0**
baz=64
J17A Brown Place, J 64.14 54 ⇑P **P 18 05 59.6 +1.1**
baz=64
DGMT Dagmar 64.19 46 *e*P **P 18 05 57.2 -1.5**
comp=Z,14nm,0.9s,mb5.0
G20A Bridger 64.28 51 ⇓P **P 18 05 59.0 -0.3**
baz=64
M15A Larsen Ranch, 64.40 56 ⇓P **P 18 05 59.7 -0.5**
baz=64
R11A Troy Canyon, C 64.58 60 ⇓P **P 18 06 01.0 -0.4**
baz=64
HWUT Hardware Ranch 64.81 56 *e*P **P 18 06 03.2 +0.3**
comp=Z,2.4nm,0.9s,mb4.2
HWUT *e* pP 18 06 13.4 -1.5
DUG Dugway 65.01 57 ⇑P **P 18 06 04.2 0.0**
baz=65
DUG Dugway 65.01 57 *e*P **P 18 06 04.1 -0.1**
DUG pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
DUG Dugway 65.01 57 *e*P **P 18 06 04.1 -0.1**
comp=Z,4.9nm,1.3s,mb4.4
DUG *e* pP 18 06 15.0 -1.3
FURC Furnace Creek, 65.03 63 ⇓P **P 18 06 04.4 0.0**
baz=65
BW06 Boulder Array 65.17 53 ⇓P **P 18 06 05.2 0.0**
baz=65,SNR=5.1
PDAR Pinedale Array 65.17 53 P **P 18 06 04.8 -0.3**
comp=Z,2.7nm,0.9s,mb4.3,baz=304,slow=3.2,SNR=18
PDAR pP pP 18 06 15.8 -1.5
comp=Z,3.1nm,0.8s,baz=297,slow=2.8,SNR=12
PDAR LR LR 18 32 23.6
comp=Z,44nm,18.2s,MS3.7,baz=156,slow=34
P14A Drum Mountains 65.26 58 ⇑P **P 18 06 05.3 -0.5**
baz=65

S12A	Delamar Landin	65.50	61	⇑P	P	18 06 07.3	-0.2
	baz=65						
T11A	Corn Creek, Al	65.52	61	⇓P	P	18 06 07.9	+0.3
	baz=65						
Q14A	Sevier Lake (B	65.53	59	⇓P	P	18 06 08.0	+0.4
	baz=65						
J20A	Shoshoni	65.59	52	⇓P	P	18 06 08.1	+0.2
	baz=65						
NLU	North Lily Min	65.60	57	eP	P	18 06 07.0	-1.0
	comp=Z,3.2nm,0.8s,mb4.4						
N17A	Moffit Pass	65.66	56	⇓P	P	18 06 08.8	+0.4
	baz=65						
I21A	Big Trails, Te	65.71	51	⇑P	P	18 06 08.5	-0.2
	baz=66,SNR=6.6						
P15A	Leamington	65.73	58	⇑P	P	18 06 08.4	-0.5
	baz=66						
J21A	Lysite	65.94	52	⇓P	P	18 06 10.4	+0.3
	baz=66						
SHPR	Sheep Range	66.04	62	eP	P	18 06 10.6	-0.3
	comp=Z,4.8nm,1.1s,mb4.4						
SHPR				e	pP	18 06 21.8	-1.2
S13A	Holt Ranch, En	66.11	60	⇑P	P	18 06 11.2	-0.2
	baz=66						
J22A	Midwest	66.42	51	⇓P	P	18 06 13.7	+0.5
	baz=66						
K21A	Alcova	66.52	52	⇑P	P	18 06 14.2	+0.3
	baz=66						
P17A	Butcher Ranch,	66.69	57	⇓P	P	18 06 15.5	+0.5
	baz=66						
Q16A	Castle Valley	66.81	57	⇑P	P	18 06 16.1	+0.3
	baz=67						
P18A	Preston Nutter	66.87	56	⇑P	P	18 06 16.9	+0.8
	baz=67						
K22A	Casper	66.91	52	⇑P	P	18 06 16.4	0.0
	baz=67						
L21A	Rawlins	66.91	53	⇓P	P	18 06 16.8	+0.4
	baz=67						
R16A	Teasdale	67.05	58	⇓P	P	18 06 18.3	+0.9
	baz=67						
SRU	San Rafael	67.05	57	⇑P	P	18 06 17.0	-0.3
	baz=67						
SRU	San Rafael	67.05	57	eP	P	18 06 17.0	-0.4
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
SRU	San Rafael	67.05	57	eP	P	18 06 17.0	-0.4
	comp=Z,5.7nm,1.1s,mb4.5						
SRU				e	pP	18 06 27.3	-2.2
M21A	Separation Pea	67.16	53	⇑P	P	18 06 18.1	+0.1
	baz=67						
N20A	Spence Gulch,	67.18	54	⇑P	P	18 06 19.0	+0.8
	baz=67						
U14A	Mt Trumbull	67.29	61	⇑P	P	18 06 19.0	+0.1
	baz=67						
S16A	Weppner Ranch,	67.36	59	⇑P	P	18 06 19.3	0.0
	baz=67						
T15A	Red Dirt Ranch	67.36	60	⇓P	P	18 06 19.2	-0.2
	baz=67						
L22A	Ellis Ranch, M	67.38	52	⇓P	P	18 06 19.6	+0.3
	baz=67						
P19A	Cripple Cowboy	67.59	56	⇓P	P	18 06 21.0	+0.3
	baz=67						
Q19A	Hogan Spring (	67.88	56	⇓P	P	18 06 22.3	-0.3
	baz=68						
S17A	Black Ridge (B	67.88	58	⇑P	P	18 06 22.1	-0.5
	baz=68						
R18A	Canyonlands Na	67.91	57	⇑P	P	18 06 22.2	-0.5
	baz=68						
NB2	NORSAR Subarra	68.11	341	P	P	18 06 22.6	-1.1
	comp=Z,9.0nm,1.0s,mb4.8,baz=28,slow=6.5						
NOA	NORSAR Array B	68.11	341	P	P	18 06 22.6	-1.1
	comp=Z,3.7nm,0.8s,mb4.5,baz=26,slow=6.3,SNR=48						
NOA				pP	pP	18 06 34.7	-1.1
	comp=Z,1.6nm,0.5s,baz=27,slow=6.4,SNR=4.6						
NOA				LR	LR	18 40 31.5	
	comp=Z,103nm,18.1s,MS4.1,baz=0.0,slow=40						
W14A	Seligman	68.16	62	⇑P	P	18 06 24.9	+0.6
	baz=68						
WRA	Warramunga Arr	68.31	198	P	P	18 06 23.8	-1.4
	comp=Z,1.6nm,0.9s,mb4.0,baz=10,slow=6.6,SNR=9.5						
WRA				pP	pP	18 06 35.3	-2.1
	comp=Z,2.3nm,0.7s,baz=17,slow=6.7,SNR=4.8						
WRA				sP	sP	18 06 40.4	-1.7
	comp=Z,3.6nm,0.7s,baz=18,slow=6.7,SNR=13						
WRA	Warramunga Arr	68.31	198	P	P	18 06 23.9	-1.4
WRA				pP	pP	18 06 35.3	-2.1
WRA				sP	sP	18 06 40.4	-1.7
HFS	Hagfors	68.33	339	P	P	18 06 24.0	-1.0
	comp=Z,4.2nm,0.3s,mb4.9,baz=52,slow=5.8,SNR=11						
HFS	Hagfors	68.33	339	P	P	18 06 24.0	-1.0
HFS				pmax	pmax		
	comp=Z,4.0nm,0.3s						
U16A	Tuba City	68.70	60	⇑P	P	18 06 27.5	-0.3
	baz=68						
T18A	Mexican Hat	68.77	58	⇓P	P	18 06 28.1	0.0
	baz=69						
S19A	Harvey Farm, M	68.78	57	⇓P	P	18 06 28.4	+0.2
	baz=69						
FITZ	Fitzroy Crossi	68.87	207	P	P	18 06 27.4	-1.4
	comp=Z,3.3nm,1.0s,mb4.2,baz=110,slow=2.0,SNR=4.4						
FITZ				pP	pP	18 06 40.9	-0.1
	comp=Z,4.5nm,0.9s,baz=33,slow=6.9,SNR=4.4						
FITZ				sP	sP	18 06 44.9	-0.8
	comp=Z,3.6nm,0.8s,baz=58,slow=9.2,SNR=5.2						
Q21A	Lamborn Mesa,	68.93	56	⇓P	P	18 06 29.3	+0.1
	baz=69						
POO	Poona	68.98	275	ex	x	18 05 41.0	
SMCO	Snowmass	69.03	55	eP	P	18 06 29.3	-0.5
	comp=Z,8.5nm,1.4s,mb4.5						
X15A	Humboldt	69.16	62	⇑P	P	18 06 30.9	+0.3
	baz=69						
S20A	Disappointment	69.17	57	⇑P	P	18 06 30.8	+0.2
	baz=69						
R21A	Cimarron	69.26	56	⇓P	P	18 06 31.3	0.0
	baz=69						
Q22A	Crested Butte,	69.29	55	⇑P	P	18 06 32.1	+0.8
	baz=69						
ISCO	Idaho Springs	69.36	54	⇑P	P	18 06 32.2	+0.3
	baz=69						
ISCO	Idaho Springs	69.36	54	eP	P	18 06 31.3	-0.5
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ISCO	Idaho Springs	69.36	54	eP	P	18 06 31.3	-0.5
	comp=Z,3.7nm,1.0s,mb4.3						
KAD	Karad	69.59	274	ePKP	P	18 06 32.1	-1.4
KAD				AMb	AMB	18 06 36.2	
	comp=Z,6.4nm,0.8s,mb4.6						
S21A	Coal Bank Pass	69.61	57	⇑P	P	18 06 34.1	+0.7
	baz=69						
X16A	Lo Mia Camp, P	69.69	61	⇑P	P	18 06 34.2	+0.3
	baz=70						
V18A	Ganado	69.70	59	⇓P	P	18 06 34.8	+0.9
	baz=70						
U19A	Dine' College,	69.73	58	⇓P	P	18 06 34.1	0.0
	baz=70						
R22A	Saguache, Gunn	69.81	56	⇑P	P	18 06 35.3	+0.7
	baz=70						
S22A	4UR Ranch, Cre	70.10	56	⇑P	P	18 06 37.5	+1.1
	baz=70						
X17A	Forest Lakes	70.12	61	⇑P	P	18 06 37.5	+0.9
	baz=70						
T22A	Edith	70.57	57	⇓P	P	18 06 39.7	+0.4
	baz=70						
Q25A	Bedland, Calha	70.74	54	⇑P	P	18 06 40.2	-0.1
	baz=70						
SDCO	Great Sand Dun	70.86	55	⇓P	P	18 06 41.2	+0.2
	baz=71						
X19A	St. Johns	70.97	60	⇓P	P	18 06 42.3	+0.6
	baz=71						
X20A	Quemado	71.36	59	⇑P	P	18 06 44.4	+0.3
	baz=71						
U23A	El Rito	71.46	57	⇑P	P	18 06 45.1	+0.4
	baz=71						
S25A	Robets Cordova	71.52	55	⇓P	P	18 06 45.7	+0.7
	baz=71						
118A	Homack Ranch,	71.80	62	⇑P	P	18 06 47.0	+0.2
	baz=72						
X21A	Alamocita Cree	71.85	59	⇑P	P	18 06 48.2	+1.2
	baz=72						
ASAR	Alice Springs	72.01	198	P	P	18 06 47.9	0.0
	comp=Z,0.8nm,0.5s,mb3.9,baz=14,slow=6.8,SNR=14						
ASAR				pP	pP	18 06 60.0	-0.1
	comp=Z,1.3nm,0.9s,baz=15,slow=5.3,SNR=6.3						
ASAR				sP	sP	18 07 04.1	-0.7
	comp=Z,2.7nm,0.6s,baz=14,slow=5.4,SNR=12						
ANMO	Albuquerque	72.27	58	P	P	18 06 49.5	0.0
	comp=Z,0.4nm,0.4s,mb3.7,baz=289,slow=8.7,SNR=3.1						
ANMO				pP	pP	18 07 00.4	-1.4
	comp=Z,0.8nm,0.6s,baz=304,slow=11,SNR=2.1						
ANMO	Albuquerque	72.27	58	eP	P	18 06 48.6	-0.9
	comp=Z,3.7nm,1.2s,mb4.2						
U25A	Circle Dot Ran	72.42	55	⇓P	P	18 06 50.6	+0.1
	baz=72						
120A	U Bar Ranch, L	72.67	61	⇑P	P	18 06 53.1	+1.1
	baz=72						
219A	White Tail Can	72.68	62	⇑P	P	18 06 51.5	-0.6
	baz=72						
319A	Douglas	73.10	62	⇓P	P	18 06 54.4	-0.2
	baz=73						
220A	Playas Peak, P	73.19	61	⇑P	P	18 06 54.6	-0.4
	baz=73						
Y23A	Lovelace Mesa,	73.23	58	⇑P	P	18 06 55.5	+0.2
	baz=73						
W25A	X Bar L Ranch,	73.24	56	⇓P	P	18 06 55.7	+0.4
	baz=73						
SCHQ	Schefferville	73.54	22	P	P	18 06 55.6	-1.1
	comp=Z,1.9nm,0.6s,mb4.2,baz=342,slow=3.2,SNR=3.8						
Y24A	Capitan	73.59	58	⇓P	P	18 06 57.3	-0.1
	baz=73						
MBWA	Marble Bar	73.72	212	P	P	18 06 56.3	-1.7
Y25A	Mesa, Roswell	74.03	57	⇑P	P	18 07 00.2	+0.3
	baz=74						
Z26A	Caprock	74.91	57	⇑P	P	18 07 04.5	-0.5
	baz=75						
Y27A	Causey	74.94	57	⇑P	P	18 07 04.8	-0.4
	baz=75						
125A	Gardner Draw,	74.95	58	⇓P	P	18 07 05.5	+0.2
	baz=75						
AMTX	Amarillo	75.06	55	⇓P	P	18 07 05.2	-0.7
	baz=75						
MNTX	Cornudas Mount	75.21	60	⇓P	P	18 07 06.5	-0.3
	baz=75						
Z27A	Tatum	75.32	57	⇓P	P	18 07 06.8	-0.6
	baz=75						
BUR08	Bucovina Ar. S	75.34	326	eP	P	18 07 06.9	-0.4
226A	Malaga, Loving	75.71	58	⇓P	P	18 07 09.3	-0.3
	baz=76						
OKC	Ostrava-Krasne	76.00	331	AMS	AMS	18 44 50.0	
425A	Indio Mountain	76.10	60	⇑P	P	18 07 12.1	+0.1
	baz=76						
DPC	Dobruska-Polom	76.14	333	AMS	AMS	18 45 30.0	
	comp=Z,200nm,18.7s						
CLL	Collm	76.31	335	iP	P	18 07 11.4	-1.3
CLL				i	pP	18 07 23.1	-1.9
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
CLL	Collm	76.31	335	iP	P	18 07 11.4	-1.3
	comp=Z,9.0nm,1.1s,mb4.6						
CLL				i	pP	18 07 23.1	-1.9
PVCC	Panska Ves	76.53	334	AMS	AMS	18 44 30.0	
	comp=Z,300nm,26.8s						
328A	Wristen Ranch,	76.96	58	⇓P	P	18 07 16.4	-0.3
	baz=77						
PRU	Pruhonice	77.02	334	AMS	AMS	18 44 30.0	
	comp=Z,200nm,18.6s						
526A	Mary Lane Ranc	77.16	60	⇑P	P	18 07 17.9	-0.1
	baz=77						
TREC	Trest	77.33	333	AMS	AMS	18 45 50.0	
	comp=Z,200nm,23.7s						
527A	Woodward Ranch	77.38	59	⇓P	P	18 07 18.6	-0.6
	baz=77						
NKC	Novy Kostel	77.42	335	AMS	AMS	18 46 40.0	
626A	Big Bend Ranch	77.50	60	⇑P	P	18 07 19.9	0.0
	baz=77						
528A	Cox Ranch, San	77.86	59	⇓P	P	18 07 21.7	-0.1
	baz=78						
TXAR	Lajitas Array	77.94	60	P	P	18 07 21.9	-0.5
	comp=Z,1.7nm,0.8s,mb4.0,baz=286,slow=4.0,SNR=18						
TXAR				pP	pP	18 07 32.6	-2.0
	comp=Z,1.2nm,0.6s,baz=295,slow=4.1,SNR=6.8						
TXAR				sP	sP	18 07 37.5	-1.8
	comp=Z,4.6nm,0.6s,baz=301,slow=4.1,SNR=16						
627A	Terlingua Ranc	78.02	60	⇓P	P	18 07 22.8	+0.1
	baz=78						
KHC	Kasperske Hory	78.07	334	eP	P	18 07 22.1	-0.6
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
KHC	Kasperske Hory	78.07	334	eP	P	18 07 22.1	-0.6
	comp=Z,2.1nm,0.9s,mb4.1						
KHC	Kasperske Hory	78.07	334	eP	P	18 07 21.7	-1.0
KHC				AMS	AMS	18 44 50.0	
	comp=Z,200nm,5.9s						
BRTR	Keskin Array B	78.09	316	P	P	18 07 22.9	-0.1
	comp=Z,1.5nm,0.8s,mb4.0,baz=68,slow=4.7,SNR=10						
BRTR	Keskin Array B	78.09	316	iP	P	18 07 23.2	+0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
628A	Black Gap, Mar	78.29	59	⇓P	P	18 07 23.9	-0.3
	baz=78						
STKA	Stephens Creek	78.82	189	P	P	18 07 27.2	+0.4
	comp=Z,1.2nm,0.9s,mb3.8,baz=294,slow=1.2,SNR=2.8						
STKA	Stephens Creek	78.82	189	P	P	18 07 27.2	+0.4
PMOR	Pomariorio Ree	81.44	122	eT		19 37 16.5	
	comp=Z,14nm,0.2s						
ASF	Jabal al Asfar	82.35	309	LR	LR	18 48 50.2	
	comp=Z,80nm,18.6s,MS4.1,baz=76,slow=39						
MMAI	Mount Meron Ar	82.48	311	LR	LR	18 48 10.1	
	comp=Z,77nm,21.6s,MS4.0,baz=145,slow=38						
PPT	Papeete	82.53	125	eLR	LR	18 33 58.5	
	comp=Z,191nm,24.5s						
PPT	Papeete	82.53	125	LR	LR	18 34 42.1	
	comp=Z,145nm,21.5s,MS4.3,baz=344,slow=28						
TBI	Tubuai	87.25	129	eT		19 44 35.8	
	comp=Z,15nm,0.2s						
VAE	Valguarnera	88.12	328	LR	LR	18 49 38.0	
	comp=Z,179nm,19.5s,MS4.5,baz=248,slow=37						
BDFB	Brasilia	144.67	36	PKP	PKPdf	18 14 59.2	-1.7
	comp=Z,2.2nm,0.5s,baz=114,slow=25,SNR=3.1						
BDFB				pPKP	pPKPdf	18 15 10.3	-3.4
	comp=Z,1.4nm,0.3s,baz=136,slow=26,SNR=2.1						
PLCA	Paso Flores	148.69	95	PKPbc	PKPbc	18 15 09.2	-1.6
	comp=Z,4.0nm,1.0s,baz=306,slow=5.2,SNR=4.4						
PLCA				pPKPbc	pPKPdf	18 15 22.4	+2.5
	comp=Z,5.5nm,0.9s,baz=276,slow=5.1,SNR=6.7						
PLCA				sPKPbc	pPKPbc	18 15 26.6	+3.0
	comp=Z,5.3nm,0.9s,baz=238,slow=4.0,SNR=9.9						
CPUP	Villa Florida	148.91	60	PKPbc	PKPbc	18 15 10.7	-1.1
	comp=Z,0.4nm,0.3s,baz=297,slow=3.5,SNR=2.7						
CPUP				pPKPbc	pPKPdf	18 15 23.2	+2.6
	comp=Z,1.3nm,0.5s,baz=285,slow=8.1,SNR=2.4						
CPUP				sPKPbc	pPKPbc	18 15 28.2	+3.6
	comp=Z,1.6nm,0.6s,baz=217,slow=5.1,SNR=4.9						

*ISCJB **06** 17:57:25.1±0.8, 24°.21S±0°.05×67°.1W±0°.1, h170km±9km, mb3.9/10, Error ellipse: s-maj=15.3km s-min=7.7km az=179.4*

*NEIC **06** 17:57:25.6±0.7, 24°.18S×67°.08W, h161km±7km, mb4.1/8, Error ellipse: s-maj=10.8km s-min=6.8km az=97.0*

*IDC **06** 17:57:25.6±1.6, 24°.23S×67°.06W, h157km±14km, mb3.6/4, mb1 3.7/9, mb1mx3.5/19, mbtmp3.5/9, Error ellipse: s-maj=21.4km s-min=12.8km az=90.0*

ISC 06 17:57:25.8±0.8, 24°.21S±0°.05×67°.1W±0°.1, h161km±9km, n27, σ0°88/26, mb3.9/10, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	5.78	213	ePn	Pn	17 58 49.1	-0.6
LCO				eSn	Sn	17 59 45.3	-10
CFAA	Coronel Fontan	7.44	188	P	Pn	17 59 13.2	+1.5
	0.0nm,0.3s,baz=13,slow=18,SNR=8.0						
CFAA				S	Sn	18 00 31.2	-3.8
	0.1nm,0.3s,baz=132,slow=23,SNR=4.6						
LPAZ	La Paz	7.95	353	P	Pn	17 59 19.8	+1.3
	0.9nm,0.3s,baz=159,slow=8.0,SNR=18						
LPAZ				S	Sn	18 00 47.9	+0.6
	0.2nm,0.3s,baz=355,slow=19,SNR=4.1						
LPAZ	La Paz	7.95	353	ePn	Pn	17 59 18.7	+0.2
LPAZ				eSn	Sn	18 00 46.7	-0.6
LPAZ				S	Sn	18 00 47.9	+0.6
CPUP	Villa Florida	9.07	105	P	Pn	17 59 34.1	+0.8
	0.3nm,0.3s,baz=265,slow=14,SNR=3.3						
SIV	San Ignacio	9.93	36	P	Pn	17 59 44.1	-0.7
	0.9nm,0.3s,baz=219,slow=13,SNR=18						
SIV				S	Sn	18 01 25.8	-9.2
	0.1nm,0.3s,baz=232,slow=17,SNR=3.6						
TRQA	Tornquist	14.47	164	ePn	Pn	18 00 42.5	-0.6
	5.3nm,0.9s						
PLCA	Paso Flores	16.73	189	P	Pn	18 01 11.7	+0.9
	0.1nm,0.3s,baz=353,slow=11,SNR=2.7						
PLCA	Paso Flores	16.73	189	ePn	Pn	18 01 10.9	+0.2
	4.0nm,0.8s						
BDFB	Brasilia	19.82	68	P	P	18 01 43.9	-0.3
	1.3nm,0.3s,baz=253,slow=10,SNR=9.9						
AGPR	Aguadilla, PR	42.42	360	P	P	18 05 02.9	-1.8
	41nm,0.8s,mb5.1						
WVT	Waverly	63.14	341	P	P	18 07 35.1	-1.2
	5.1nm,0.9s,mb4.3						
MIAR	Mount Ida	63.62	336	eP	P	18 07 35.6	-4.0
	9.0nm,1.2s,mb4.5						
QSPA	South Pole Qui	66.00	180	eP	P	18 07 54.6	+0.2
	2.1nm,0.6s,mb4.1						
ANMO	Albuquerque	69.69	326	P	P	18 08 18.4	+0.3
	1.2nm,0.7s,mb3.7						
SDCO	Great Sand Dun	71.43	329	eP	P	18 08 29.4	+0.9
	0.7nm,0.7s,mb3.5						
NVAR	Mina Array Bea	78.66	321	P	P	18 09 10.7	+0.7
	0.2nm,0.4s,mb3.1,baz=146,slow=8.2,SNR=3.7						
BOSA	Boshof	80.69	117	P	P	18 09 21.4	+0.1
	1.7nm,0.8s,mb3.8,baz=270,slow=3.0,SNR=5.5						
MAW	Mawson	81.25	163	P	P	18 09 24.2	+0.6
	1.6nm,0.7s,mb3.8,baz=163,slow=3.8,SNR=3.7						
YKA	Yellowknife Ar	94.30	340	P	P	18 10 26.2	-0.2
	0.1nm,0.3s,mb3.5,baz=130,slow=5.1,SNR=4.1						
ASAR	Alice Springs	128.24	205	PKP	PKPdf	18 16 13.1	-0.7
	0.6nm,0.5s,baz=131,slow=1.7,SNR=18						
WRA	Warramunga Arr	131.41	207	PKP	PKPdf	18 16 19.5	-0.3
	0.5nm,0.5s,baz=159,slow=1.7,SNR=25						
PETK	Petropavlovsk-	135.74	323	PKP	PKPdf	18 16 28.5	+1.7
	1.0nm,0.9s,baz=90,slow=4.5,SNR=2.9						
ZALV	Zalesovo Beam	143.61	28	PKP	PKPdf	18 16 39.2	-1.9
	0.8nm,0.6s,baz=282,slow=2.6,SNR=4.7						
MK31	Makanchi Array	146.73	40	ePKPdf	PKPdf	18 16 46.6	-0.1
MKAR	Makanchi Array	146.73	40	PKP	PKPdf	18 16 46.0	-0.7
	1.2nm,0.5s,baz=36,slow=2.0,SNR=19						
MKAR				PKPbc	PKPbc	18 16 48.6	-0.1
	1.2nm,0.5s,baz=304,slow=3.2,SNR=18						
MJAR	Matsushiro Arr	155.05	305	PKPab	PKPab	18 17 25.1	+0.1
	0.2nm,0.3s,baz=84,slow=2.9,SNR=4.2						

*ISCJB **06** 18:49:24.8±0.6, 6°.92S±0°.09×154°.96E±0°.07, h10km, mb4.0/14, Error ellipse: s-maj=14.2km s-min=9.2km az=151.5*

*IDC **06** 18:49:24.6±0.8, 6°.89S×154°.96E, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.0/17, mbtmp4.0/10, ML4.4/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/21, Error ellipse: s-maj=27.1km s-min=20.7km az=116.0*

*NEIC **06** 18:49:24.5±0.6, 7°.07S×155°.27E, h10km, mb4.2/6, Error ellipse: s-maj=14.8km s-min=13.8km az=132.0*

ISC 06 18:49:26.5±0.5, 6°.92S±0°.08×155°.01E±0°.05, h10km, n23, σ1°30/26, mb4.0/14, 1D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.49	117	Pn	Pn	18 50 49.4	+1.0
	13nm,0.3s,baz=313,slow=20,SNR=14						
HNR				Sn	Sn	18 52 08.0	+16
	8.0nm,0.3s,baz=274,slow=13,SNR=1.8						
HNR				LR	LR	18 52 49.7	
	comp=Z,110nm,19.3s,baz=237,slow=37						
HNR	Honiara	5.49	117	ePn	Pn	18 50 40.9	-7.5
HNR				Sn	Sn	18 52 08.0	+16
HNR				eSg	Sg	18 52 23.1	+0.3
HNR				LR	LR	18 52 49.6	
PMG	Port Moresby	8.16	252	ePn	Pn	18 51 24.8	-0.3
PMG				eSn	Sn	18 52 59.4	+2.0
CTA	Charters Tower	15.61	212	Pn	Pn	18 53 11.5	+4.8
	0.1nm,0.3s,baz=41,slow=13,SNR=4.6						
CTA				LR	LR	18 58 00.4	
	comp=Z,122nm,18.3s,baz=336,slow=33						
CTAO	Charters Tower	15.61	212	ePn	Pn	18 53 06.8	+0.1
	6.3nm,0.9s						
WRA	Warramunga Arr	23.87	235	P	P	18 54 39.0	-1.4
	3.9nm,0.9s,mb3.9,baz=58,slow=9.2,SNR=25						
WRA				PcP	PcP	18 58 23.2	-0.2
	0.2nm,0.5s,baz=59,slow=2.6,SNR=8.3						
ASAR	Alice Springs	26.24	228	P	P	18 55 00.7	-1.2
	1.5nm,0.8s,mb3.6,baz=60,slow=8.5,SNR=25						
ASAR				ScP	ScP	19 02 08.5	-0.3
	0.4nm,1.0s,baz=138,slow=4.3,SNR=4.1						
STKA	Stephens Creek	27.81	205	P	P	18 55 17.3	+1.3
	3.4nm,0.8s,mb4.0,baz=26,slow=11,SNR=8.6						
STKA				LR	LR	19 06 58.7	
	comp=Z,126nm,19.6s,baz=24,slow=38						
STKA	Stephens Creek	27.81	205	eP	P	18 55 13.4	-2.6
	1.0nm,0.9s,mb3.5						
STKA				LR	LR	19 06 58.7	
IPIL	Ipil	35.49	294	‖iP	P	18 56 22.0	-1.7
ENH	Enshi	57.20	313	eP	P	18 59 14.1	+0.1
	10.0nm,0.9s,mb4.8						
CMAR	Chiang Mai Arr	60.76	296	P	P	18 59 40.2	+1.2
	1.8nm,0.7s,mb4.3,baz=113,slow=5.4,SNR=14						
CHTO	Chiang Mai	60.88	296	eP	P	18 59 38.1	-1.8
	1.6nm,0.7s,mb4.3						
GTA	Gaotai	68.69	317	eP	P	19 00 32.4	+2.0
GTA				pP	pP	19 00 36.0	+2.3
GTA				sP	sP	19 00 39.0	+4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SONM	Songino Array	69.28	327	P	P	19 00 34.5	+0.6
	comp=Z,1.4nm,1.0s,mb3.9,baz=116,slow=3.4,SNR=7.2						
LSA	Lhasa	71.24	304	eP	P	19 00 47.8	+1.5
	comp=Z,2.3nm,0.7s,mb4.2						
QSPA	South Pole Qui	83.06	180	eP	P	19 01 51.3	-0.5
	comp=Z,1.8nm,0.8s,mb4.2						
ILAR	Eielson Array	83.30	21	P	P	19 01 51.8	-1.4
	comp=Z,0.6nm,0.7s,mb3.8,baz=247,slow=5.5,SNR=5.7						
MKAR	Makanchi Array	83.36	319	P	P	19 01 54.1	+0.3
	comp=Z,0.8nm,0.9s,mb3.7,baz=133,slow=1.2,SNR=4.7						
ZALV	Zalesovo Beam	84.12	326	P	P	19 01 55.5	-2.1
	comp=Z,0.4nm,0.4s,mb3.9,baz=108,slow=4.7,SNR=3.7						
EGAK	Eagle	85.44	23	P	P	19 02 04.1	+0.1
NVAR

EKMR		A		19 03 33.1
	8.0nm,0.5s			
EKMR		A		19 03 33.1
	5.0nm,0.5s			

*IDC **06** 19:14:23.8±1.9, 0°.55N×125°.43E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/19, mbtmp3.6/4, Error ellipse: s-maj=174.1km s-min=26.6km az=64.0*
*ISCJB **06** 19:14:28.9±1.0, 1°.0N±0°.1×126°.18E±0°.06, h64km±12km, mb3.7/4, Error ellipse: s-maj=21.1km s-min=10.2km az=9.9*
*DJA **06** 19:14:29, 0°.98N×126°.13E, h22km, MLv3.7/4*
ISC 06 19:14:29.7±1.0, 0°.9N±0°.1×126°.19E±0°.07, h52km±14km, n9, σ0$59/11, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**98**	P	**Pn**	**19 14 50.3**	**+0.3**
MNI	**Manado**	**1.44**	**290**	P	**Pn**	**19 14 52.7**	**-0.7**
MNI				S	**Sn**	**19 15 10.9**	**-0.3**
KMSI	**Cibinong**	**2.24**	**261**	P	**Pn**	**19 15 04.1**	**-0.3**
KMSI				S	**Sn**	**19 15 30.8**	**0.0**
LUWI	**Luwuk**	**3.95**	**240**	P	**Pn**	**19 15 28.9**	**+1.1**
MRSI	**Marisa**	**4.28**	**264**	P	**Pn**	**19 15 32.7**	**+0.4**
WRA	**Warramunga Arr**	**22.24**	**159**	P	**P**	**19 19 21.0**	**-1.2**
	0.9nm,0.5s,mb3.4,baz=335,slow=11,SNR=17						
ASAR	**Alice Springs**	**25.59**	**163**	P	**P**	**19 19 54.1**	**0.0**
	0.8nm,0.3s,mb3.7,baz=346,slow=12,SNR=42						
STKA	**Stephens Creek**	**35.76**	**157**	P	**P**	**19 21 23.9**	**+0.2**
	0.7nm,0.6s,mb3.7,baz=332,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**59.54**	**326**	P	**P**	**19 24 28.4**	**+0.6**
	0.3nm,0.3s,mb3.9,baz=125,slow=7.2,SNR=2.9						

*ISCJB **06** 19:31:52.3±0.3, 24°.85N±0°.04×97°.66E±0°.03, h10km, mb4.0/25, MS3.4/3, Error ellipse: s-maj=5.3km s-min=3.8km az=15.5*
*IDC **06** 19:31:52.8±0.7, 24°.94N×97°.69E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.8/27, mbtmp3.9/13, ML4.3/1, MS3.3/4, Ms1 3.4/4, ms1mx3.0/39, Error ellipse: s-maj=38.6km s-min=12.0km az=63.0*
*BJI **06** 19:31:54.2, 24°.87N×97°.79E, h25km, mB4.3/2, mb4.2/10, ML4.3/9, Ms4.4/4, Ms7 4.0/1*
*NEIC **06** 19:31:55.3±3.5, 24°.92N×97°.76E, h17km±23km, mb4.2/13, Error ellipse: s-maj=10.4km s-min=5.9km az=58.0*
ISC 06 19:31:53.8±0.2, 24°.73N±0°.02×97°.70E±0°.03, h10km, n66, σ1$41/75, mb4.0/25, MS3.4/3, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**3.42**	**272**	*ex*	**Pg**	**19 32 56.0**	**-3.4**
IMP				*ex*	**Sg**	**19 33 46.0**	**+2.2**
KMI	**Kunming**	**4.59**	**84**	Pn	**Pn**	**19 33 05.3**	**+1.9**
KMI				Pg	**Pg**	**19 33 17.7**	**-4.2**
KMI				Sg	**Sb**	**19 34 10.8**	**+0.8**
KMI				smax			
	comp=N,530nm,1.0s						
KMI				smax			
	comp=E,390nm,0.9s						
KMI				LR	LR		
	comp=N,2μm,7.2s						
KMI				LR	LR		
	comp=E,1μm,8.3s						
CHRT	**Chiangrai**	**5.21**	**158**	PN	**Pn**	**19 33 11.0**	**-0.8**
CHRT	**Chiangrai**	**5.21**	**158**	PG	**Pg**	**19 33 32.0**	**-1.7**
CHRT				SG	**Sg**	**19 34 39.0**	**-2.2**
SHL	**Shillong**	**5.33**	**280**	*e*PKP	**Pn**	**19 33 15.7**	**+2.2**
SHL				*ex*	x	19 34 32.0	
CHTO	**Chiang Mai**	**6.00**	**169**	*e*Pn	**Pn**	**19 33 24.9**	**+2.2**
	comp=E,39nm,0.6s						
CHTO				*e*Pg	**Pg**	**19 33 47.0**	**-1.8**
CHTO				*e*Sg	**Sg**	**19 35 06.0**	**-0.7**
CM31	**Chiang Mai Arr**	**6.35**	**169**	*e*Pn	**Pn**	**19 33 29.8**	**+2.3**
	comp=E,50nm,0.6s						
CM31				*e*Pg	**Pg**	**19 33 53.8**	**-1.7**
CM31				*e*Sg	**Sg**	**19 35 16.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**6.35**	**169**	Pn	**Pn**	**19 33 29.8**	**+2.2**
	comp=E,1.6nm,0.3s,baz=344,slow=13,SNR=31						
CMAR				Pg	**Pg**	**19 33 53.5**	**-2.0**
	comp=E,3.7nm,0.3s,baz=348,slow=16,SNR=43						
CMAR				Lg		19 35 18.7	
	comp=E,6.7nm,0.3s,baz=354,slow=32,SNR=6.4						
CMAR				LR	LR	19 36 20.7	
	comp=E,141nm,18.0s,baz=158,slow=41						
LSA	**Lhasa**	**7.64**	**312**	Pn	**Pn**	**19 33 47.0**	**+1.8**
LSA				Sg	**Sg**	**19 35 51.8**	**-7.4**
LSA	**Lhasa**	**7.64**	**312**	*e*Pn	**Pn**	**19 33 46.7**	**+1.5**
	comp=E,14nm,0.5s						
NST	**Nakhon Sawan**	**9.30**	**165**	P	**Pn**	**19 34 11.0**	**+3.0**
TAPN	**Taplejung**	**9.35**	**288**	*e*P	**Pn**	**19 34 10.1**	**+1.4**
	comp=E,23nm,0.4s						
ODAN	**Odare**	**9.53**	**285**	*e*P	**Pn**	**19 34 12.2**	**+1.1**
	comp=E,24nm,0.5s						
GUN	**Gumba**	**11.06**	**289**	*e*P	**Pn**	**19 34 32.8**	**+0.7**
PKI	**Pulchoki**	**11.39**	**287**	*e*P	**Pn**	**19 34 36.7**	**0.0**
	comp=E,14nm,0.6s						
PKIN	**Phulchoki**	**11.41**	**287**	*e*P	**Pn**	**19 34 37.2**	**+0.4**
	comp=E,19nm,0.6s						
KKN	**Kakani**	**11.55**	**288**	*e*P	**Pn**	**19 34 38.4**	**-0.4**
	comp=E,14nm,0.4s						
DMN	**Daman**	**11.66**	**287**	*e*P	**Pn**	**19 34 40.1**	**-0.3**
	comp=E,14nm,0.7s						
ENH	**Enshi**	**11.83**	**60**	*e*Pn	**Pn**	**19 34 43.1**	**+0.6**
	comp=E,14nm,1.0s						
GKN	**Gorkha**	**12.15**	**288**	*e*P	**Pn**	**19 34 46.7**	**-0.4**
	comp=E,17nm,0.6s						
LZH	**Lanzhou**	**12.49**	**24**	*e*P	**Pn**	**19 34 53.5**	**+1.9**
LZH				pP		19 34 55.7	
LZH				sP		19 34 58.0	
LZH				*e*PP		19 35 03.6	
LZH				*e*S	**Sn**	**19 37 10.5**	**-0.4**
LZH				sS		19 37 16.6	
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				LR	LR		
	comp=N,500nm,11.2s						
LZH				LR	LR		
	comp=E,1μm,10.8s						
LZH				LR	LR		
	comp=Z,680nm,13.0s						
DANN	**Dangsing**	**12.98**	**289**	*e*P	**Pn**	**19 34 57.1**	**-1.3**
	comp=Z,9.7nm,0.5s						
KOLN	**Koldanda**	**13.01**	**286**	*e*P	**Pn**	**19 34 57.3**	**-1.4**
	comp=Z,10.0nm,0.7s						
GTA	**Gaotai**	**14.74**	**6**	*e*P	**Pn**	**19 35 31.4**	**+9.1**
GTA				pP	pP	19 35 35.7	+4.4
GTA				sP	sP	19 35 38.7	+6.1
GTA				S	**Sn**	**19 38 21.0**	**+15**
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GTA				LR	LR		
	comp=N,150nm,9.7s						
GTA				LR	LR		
	comp=E,870nm,12.1s						
GTA				LR	LR		
	comp=Z,190nm,7.8s						
KLP	**Kalpa**	**18.43**	**296**	*e*PKP	**Pn**	**19 36 08.2**	**-1.3**
KLP				AMb	AMB	19 36 12.5	
	comp=Z,4.2nm,0.6s						
BHPL	**Bhopal**	**18.59**	**270**	*e*PKP	**Pn**	**19 36 12.8**	**+1.4**
BHPL				AMb	AMB	19 36 15.3	
	comp=Z,2.9nm,0.2s						
SMLA	**Simla**	**19.21**	**294**	*e*PKP	**Pn**	**19 36 16.7**	**-2.2**
KKR	**Kurukshetra**	**19.25**	**290**	*ex*	**Pn**	**19 36 14.8**	**-4.7**
KUDL	**Kundal**	**19.29**	**285**	*ex*	**Pn**	**19 36 13.0**	**-6.9**
KUDL				*ex*	x	19 36 15.4	
KUDL				AMb	AMB	19 36 16.8	
	comp=Z,12nm,0.8s						
RTK	**Rohtak**	**19.46**	**287**	*ex*	x	19 36 03.9	
KHET	**Khetri**	**19.89**	**284**	*e*PKP	**Pn**	**19 36 26.6**	**-0.4**
KHET				AMb	AMB	19 36 27.6	
	comp=Z,12nm,0.4s						
MDRS	**Chennai**	**20.15**	**238**	*ex*	x	19 37 31.3	
WMQ	**Urumqi**	**20.73**	**339**	P	**P**	**19 36 33.6**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,11nm,1.0s						
YHNB	**Yeheng**	**21.51**	**85**	*e*P	**P**	**19 36 42.1**	**-0.9**
	comp=Z,21nm,1.3s,mb4.4						
POO	**Poona**	**23.00**	**259**	*e*PKP	**P**	**19 36 59.7**	**+0.8**
KAD	**Karad**	**23.14**	**256**	*e*PKP	**P**	**19 37 01.1**	**+0.7**
KAD				AMb	AMB	19 37 09.1	
	comp=Z,12nm,1.4s,mb4.2						
SONM	**Songino Array**	**24.07**	**14**	P	**P**	**19 37 07.0**	**-2.1**
	comp=Z,1.1nm,0.8s,mb3.4,baz=195,slow=8.7,SNR=4.1						
SONM	**Songino Array**	**24.07**	**14**	P	**P**	**19 37 07.0**	**-2.1**
ULN	**Ulaanbaatar**	**24.25**	**15**	*e*P	**P**	**19 37 08.5**	**-2.3**
	comp=Z,5.0nm,1.5s,mb3.7						
MK31	**Makanchi Array**	**25.23**	**335**	*e*P	**P**	**19 37 18.5**	**-1.2**
MKAR	**Makanchi Array**	**25.23**	**335**	P	**P**	**19 37 19.1**	**-0.6**
	comp=Z,3.0nm,0.6s,mb4.0,baz=146,slow=9.0,SNR=21						
MKAR				LR	LR	19 48 48.2	
	comp=Z,57nm,18.2s,MS3.1,baz=53,slow=41						
TKM2	**Tokmak 2**	**25.68**	**320**	*e*P	**P**	**19 37 24.0**	**+0.1**
	comp=Z,13nm,1.4s,mb4.3						
UCH	**Uchtor**	**25.91**	**318**	P	**P**	**19 37 27.0**	**+0.9**
	comp=Z,2.1nm,0.6s,mb3.8						
KSM	**Kuching**	**26.14**	**150**	*e*P	**P**	**19 37 30.3**	**+2.0**
	comp=Z,8.5nm,1.0s,mb4.2						
AAK	**Ala-Archa**	**26.16**	**319**	P	**P**	**19 37 29.1**	**+0.8**
	comp=Z,2.9nm,0.6s,mb4.0,baz=147,slow=6.1,SNR=8.7						
AAK				LR	LR	19 49 04.0	
	comp=Z,87nm,19.8s,MS3.3,baz=297,slow=40						
AAK	**Ala-Archa**	**26.16**	**319**	*e*P	**P**	**19 37 28.6**	**+0.3**
	comp=Z,5.9nm,0.7s,mb4.2						
AAK				LR	LR	19 49 04.0	
AML	**Almayashu**	**26.36**	**317**	*e*P	**P**	**19 37 30.5**	**+0.4**
	comp=Z,8.3nm,0.8s,mb4.3						
KBL	**Kabul**	**26.68**	**298**	*e*P	**P**	**19 37 33.4**	**+0.4**
	comp=Z,6.6nm,0.8s,mb4.2						
KURK	**Kurchatov**	**29.83**	**335**	*e*P	**P**	**19 38 00.1**	**-0.8**
ZALV	**Zalesovo Beam**	**30.73**	**345**	P	**P**	**19 38 07.5**	**-1.3**
	comp=Z,2.0nm,0.5s,mb4.2,baz=168,slow=8.7,SNR=10						
BRVK	**Borovoye**	**35.02**	**331**	P	**P**	**19 38 45.5**	**-0.9**
ABKAR	**Akbulak array**	**38.24**	**320**	*e*P	**P**	**19 39 13.3**	**-0.6**
	comp=Z,2.1nm,0.7s,mb4.0						
AKTK	**Aktyubinsk**	**39.88**	**320**	P	**P**	**19 39 26.9**	**-0.7**
AKTO	**Aktyubinsk**	**39.88**	**320**	P	**P**	**19 39 26.9**	**-0.7**
	comp=Z,1.0nm,0.6s,mb3.7,baz=128,slow=17,SNR=3.8						
ASAJ	**Asahikawa**	**41.19**	**51**	*e*P	**P**	**19 39 35.2**	**-3.4**
	comp=Z,1.2nm,0.8s,mb3.6						
ARU	**Arti**	**42.45**	**329**	P	**P**	**19 39 46.6**	**-2.1**
	comp=Z,2.9nm,0.9s,mb3.9						
MBWA	**Marble Bar**	**50.40**	**153**	*e*P	**P**	**19 40 53.6**	**+2.2**
	comp=Z,1.3nm,0.5s,mb4.2						
FITZ	**Fitzroy Crossi**	**50.54**	**145**	P	**P**	**19 40 54.7**	**+2.1**
	comp=Z,2.0nm,0.9s,mb4.0,baz=348,slow=8.4,SNR=4.3						
BRTR	**Keskin Array B**	**55.13**	**302**	P	**P**	**19 41 25.6**	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.8,baz=120,slow=8.9,SNR=5.9						
WRA	**Warramunga Arr**	**56.95**	**138**	P	**P**	**19 41 41.5**	**+1.9**
	comp=Z,1.6nm,0.6s,mb4.2,baz=327,slow=7.5,SNR=23						
ASAR	**Alice Springs**	**59.56**	**141**	P	**P**	**19 42 00.0**	**+2.3**
	comp=Z,1.3nm,1.0s,mb3.9,baz=325,slow=6.6,SNR=8.3						
FINES	**FINESS Array B**	**59.82**	**328**	P	**P**	**19 41 58.3**	**-0.8**
	comp=Z,1.0nm,0.7s,mb4.0,baz=100,slow=11,SNR=4.0						
VRAC	**Vranov**	**66.01**	**315**	LR	LR	20 15 25.3	
	comp=Z,38nm,18.8s,MS3.6,baz=352,slow=40						
NOA	**NORSAR Array B**	**67.01**	**328**	P	**P**	**19 42 45.2**	**-1.5**
	comp=Z,0.3nm,0.7s,mb3.5,baz=81,slow=6.4,SNR=2.8						
STKA	**Stephens Creek**	**70.20**	**141**	P	**P**	**19 43 08.7**	**+1.8**
	comp=Z,2.4nm,1.0s,mb4.1,baz=2.1,slow=16,SNR=4.3						
BPAW	**Bear Paw Mtn.**	**76.78**	**25**	*e*P	**P**	**19 43 46.3**	**+1.1**
	comp=Z,3.8nm,1.1s,mb4.2						

*ISCJB **06** 19:41:14.8±0.7, 8°.30S±0°.07×122°.42E±0°.10, h196km±9km, mb3.4/3, Error ellipse: s-maj=17.0km s-min=10.0km az=154.3*
*IDC **06** 19:41:16.1±3.5, 8°.44S×122°.09E, h191km±39km, mb3.2/3, mb1 3.3/6, mb1mx3.1/18, mbtmp3.2/6, Error ellipse: s-maj=103.0km s-min=11.9km az=59.0*
*DJA **06** 19:41:18, 8°.14S×122°.24E, h164km, MLv3.3/4*
ISC 06 19:41:16.2±0.7, 8°.26S±0°.07×122°.4E±0°.1, h188km±9km, n10, σ0$95/14, mb3.6/3, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.41**	**202**	P	**Pn**	**19 41 41.9**	**+0.4**
WSI	**Waingapu**	**2.50**	**236**	P	**Pn**	**19 41 59.7**	**+0.4**
WSI				S	**Sn**	**19 42 33.1**	**+0.3**
BBSI	**Bau Bau**	**2.76**	**4**	P	**Pn**	**19 42 03.0**	**+0.7**
BKSI	**Bulukumba**	**3.68**	**322**	P	**Pn**	**19 42 12.2**	**-1.4**
FITZ	**Fitzroy Crossi**	**10.28**	**162**	P	**Pn**	**19 43 36.6**	**-2.7**
	0.2nm,0.3s,baz=0.0,slow=16,SNR=8.4						
FITZ				S	**Sn**	**19 45 26.6**	**-7.3**
	0.4nm,0.3s,baz=352,slow=15,SNR=3.5						
WRA	**Warramunga Arr**	**16.39**	**136**	P	**Pn**	**19 44 55.1**	**-0.8**
	0.4nm,0.3s,baz=318,slow=12,SNR=25						
WRA				S	**S**	**19 47 48.5**	**-8.9**
	0.3nm,0.3s,baz=313,slow=21,SNR=5.5						
ASAR	**Alice Springs**	**18.88**	**146**	P	**P**	**19 45 23.6**	**+1.1**
	0.7nm,0.3s,baz=333,slow=12,SNR=43						
ASAR				S	**S**	**19 48 47.1**	**0.0**
	0.0nm,0.3s,baz=318,slow=22,SNR=2.6						
STKA	**Stephens Creek**	**29.52**	**145**	P	**P**	**19 47 04.0**	**+1.0**
	0.7nm,0.3s,mb3.9,baz=304,slow=14,SNR=13						
SONM	**Songino Array**	**57.61**	**347**	P	**P**	**19 50 46.9**	**+0.5**
	0.3nm,0.6s,mb3.3,baz=169,slow=8.7,SNR=2.8						
MKAR	**Makanchi Array**	**65.39**	**331**	P	**P**	**19 51 38.0**	**-0.5**
	0.7nm,0.6s,mb3.7,baz=133,slow=7.5,SNR=5.9						

*IDC **06** 19:47:59.5±0.5, 45°.71N×26°.49E, h0km, mb4.2/19, mb1 4.3/25, mb1mx4.2/33, mbtmp4.2/25, ML4.0/7, MS3.3/9, Ms1 3.3/9, ms1mx3.0/41, Error ellipse: s-maj=10.5km s-min=10.3km az=112.0*
*BJI **06** 19:48:01.1, 45°.80N×26°.50E, h24km, mB4.8/17, mb4.8/30, Ms4.5/15, Ms7 4.2/13*
*CSEM **06** 19:48:01.9±0.1, 45°.81N×26°.58E, h15km, mb4.4/17, Error ellipse: s-maj=2.0km s-min=1.6km az=60.0*
*PRU **06** 19:48:01.4, 45°.64N×26°.72E, h9km, M4.5*
*ISCJB **06** 19:48:01.2±0.3, 45°.78N±0°.01×26°.54E±0°.02, h25km±2km, mb4.6/64, MS4.0/11, Error ellipse: s-maj=1.9km s-min=1.7km az=140.3*
*BUC **06** 19:48:01.6±0.5, 45°.78N×26°.51E, h13km±4km, MD4.4/2, Error ellipse: s-maj=5.5km s-min=4.5km az=319.0*
*MOS **06** 19:48:02.4±1.1, 45°.83N×26°.58E, h33km, mb4.6/24, Error ellipse: s-maj=4.8km s-min=3.7km az=118.8*
*THE **06** 19:48:03.3, 45°.77N×26°.55E, h31km±62km, ML4.4/7, Error ellipse: s-maj=62.9km s-min=3.0km az=31.0*
*NEIC **06** 19:48:03.1±1.7, 45°.85N×26°.55E, h25km±13km, mb4.5/28, MD4.7(BUC), Error ellipse: s-maj=6.0km s-min=5.5km az=185.0*
ISC 06 19:48:02.4±0.3, 45°.80N±0°.01×26°.56E±0°.01, h17km±1km, h31km±1.8km:pP-P, n642, σ1$06/755, mb4.6/65, MS4.0/11, 78C-53D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.08**	**50**	⇑*iP*	**Pg**	**19 48 04.6**	**-1.1**
PLOR				*i* S	**Sg**	**19 48 07.6**	**-0.3**
PLOR	**Plostina**	**0.08**	**50**	⇑*iP*	**Pg**	**19 48 04.6**	**-1.1**
PLOR	**Plostina**	**0.08**	**50**	S	**Sg**	**19 48 07.6**	**-0.3**
PLOR	**Plostina**	**0.08**	**50**	⇑*iP*	**Pg**	**19 48 04.6**	**-1.1**
PLOR				*i* S	**Sg**	**19 48 07.6**	**-0.3**
VRI	**Vrincioaia**	**0.13**	**60**	⇑P	**Pg**	**19 48 05.5**	**-0.8**
VRI				S	**Sg**	**19 48 08.9**	**0.0**
VRI	**Vrincioaia**	**0.13**	**60**	⇑*iP*	**Pg**	**19 48 05.5**	**-0.8**
VRI				*i* S	**Sg**	**19 48 08.9**	**0.0**
VRI	**Vrincioaia**	**0.13**	**60**	⇑*iP*	**Pg**	**19 48 05.5**	**-0.8**
VRI	**Vrincioaia**	**0.13**	**60**	S	**Sg**	**19 48 08.9**	**0.0**
VRI	**Vrincioaia**	**0.13**	**60**	⇑*iP*	**Pg**	**19 48 05.5**	**-0.8**
VRI				*i* S	**Sg**	**19 48 08.9**	**0.0**
PETR		**0.47**	**99**	⇑*iP*	**Pg**	**19 48 13.4**	**+1.5**
PETR		**0.47**	**99**	⇑*iP*	**Pg**	**19 48 13.4**	**+1.5**
PETR		**0.47**	**99**	⇑*iP*	**Pg**	**19 48 13.4**	**+1.5**
GRER		**0.51**	**145**	⇑*iP*	**Pg**	**19 48 13.0**	**+0.4**
GRER				*i* S	**Sg**	**19 48 21.4**	**+2.0**
GRER		**0.51**	**145**	⇑*iP*	**Pg**	**19 48 13.0**	**+0.4**
GRER		**0.51**	**145**	S	**Sg**	**19 48 21.4**	**+2.0**
GRER		**0.51**	**145**	⇑*iP*	**Pg**	**19 48 13.0**	**+0.4**
GRER				*i* S	**Sg**	**19 48 21.4**	**+2.0**
MLR	**Muntele Rosu**	**0.53**	**235**	⇓P	**Pg**	**19 48 12.1**	**-0.9**
MLR				S	**Sg**	**19 48 20.0**	**-0.1**
MLR	**Muntele Rosu**	**0.53**	**235**	⇓*iP*	**Pg**	**19 48 12.1**	**-0.9**
MLR				*i* S	**Sg**	**19 48 20.0**	**-0.1**
MLR	**Muntele Rosu**	**0.53**	**235**	⇓*iP*	**Pg**	**19 48 12.1**	**-0.9**
MLR	**Muntele Rosu**	**0.53**	**235**	S	**Sg**	**19 48 20.0**	**-0.1**
MLR	**Muntele Rosu**	**0.53**	**235**	⇓*iP*	**Pg**	**19 48 12.1**	**-0.9**
MLR				*i* S	**Sg**	**19 48 20.0**	**-0.1**
GHRR		**0.65**	**66**	⇓*iP*	**Pg**	**19 48 15.9**	**+0.8**
GHRR				*i* S	**Sg**	**19 48 26.7**	**+3.0**
GHRR		**0.65**	**66**	⇓*iP*	**Pg**	**19 48 15.9**	**+0.8**
GHRR				S	**Sg**	**19 48 26.7**	**+3.0**
GHRR		**0.65**	**66**	⇓*iP*	**Pg**	**19 48 15.9**	**+0.8**
ISR	**Istrita**	**0.68**	**181**	⇓P	**Pg**	**19 48 14.9**	**-0.9**
ISR	**Istrita**	**0.68**	**181**	P	**Pg**	**19 48 14.9**	**-0.9**
TESR		**0.71**	**5**	⇑*iP*	**Pg**	**19 48 17.1**	**+0.7**
TESR				*i* S	**Sg**	**19 48 28.5**	**+2.6**
TESR		**0.71**	**5**	⇑*iP*	**Pg**	**19 48 17.1**	**+0.7**
TESR		**0.71**	**5**	S	**Sg**	**19 48 28.5**	**+2.6**
TESR		**0.71**	**5**	⇑*iP*	**Pg**	**19 48 17.1**	**+0.7**
PGOR	**Pogoanele**	**0.94**	**161**	⇑*iP*	**Pb**	**19 48 20.3**	**0.0**
PGOR	**Pogoanele**	**0.94**	**161**	⇑*iP*	**Pb**	**19 48 20.3**	**0.0**
PGOR	**Pogoanele**	**0.94**	**161**	⇑*iP*	**Pb**	**19 48 20.3**	**0.0**
VOIR		**1.12**	**252**	⇓P	**Pn**	**19 48 21.8**	**-1.5**
VOIR				S	**Sb**	**19 48 40.1**	**+2.5**
VOIR		**1.12**	**252**	⇑*iP*	**Pn**	**19 48 21.8**	**-1.5**
VOIR				*i* S	**Sb**	**19 48 37.1**	**-0.5**
VOIR		**1.12**	**252**	⇑*iP*	**Pn**	**19 48 21.8**	**-1.5**
VOIR		**1.12**	**252**	S	**Sb**	**19 48 37.1**	**-0.5**
VOIR		**1.12**	**252**	⇑*iP*	**Pn**	**19 48 21.8**	**-1.5**
VOIR				*i* S	**Sb**	**19 48 37.1**	**-0.5**
SULR		**1.14**	**191**	⇑*iP*	**Pn**	**19 48 22.8**	**-0.8**
SULR		**1.14**	**191**	⇑*iP*	**Pn**	**19 48 22.8**	**-0.8**
SULR		**1.14**	**191**	⇑*iP*	**Pn**	**19 48 22.8**	**-0.8**
CFR	**Carcaliu**	**1.27**	**119**	⇓*iP*	**Pn**	**19 48 24.2**	**-1.2**
CFR				*i* S	**Sb**	**19 48 42.5**	**+0.6**
CFR	**Carcaliu**	**1.27**	**119**	⇓*iP*	**Pn**	**19 48 24.2**	**-1.2**
CFR	**Carcaliu**	**1.27**	**119**	S	**Sb**	**19 48 42.5**	**+0.6**
CFR	**Carcaliu**	**1.27**	**119**	⇓*iP*	**Pn**	**19 48 24.2**	**-1.2**
CFR				*i* S	**Sb**	**19 48 42.5**	**+0.6**
AMRR	**Amara**	**1.31**	**155**	⇑*iP*	**Pn**	**19 48 26.5**	**+0.6**
AMRR				*i* S	**Sn**	**19 48 45.0**	**+2.0**
AMRR	**Amara**	**1.31**	**155**	⇑*iP*	**Pn**	**19 48 26.5**	**+0.6**
AMRR	**Amara**	**1.31**	**155**	S	**Sn**	**19 48 45.0**	**+2.0**
AMRR	**Amara**	**1.31**	**155**	⇑*iP*	**Pn**	**19 48 26.5**	**+0.6**
AMRR				*i* S	**Sn**	**19 48 45.0**	**+2.0**
INCR	**INCERC-Sediu C**	**1.39**	**192**	⇓*iP*	**Pn**	**19 48 28.0**	**+1.0**
INCR	**INCERC-Sediu C**	**1.39**	**192**	S	**Sn**	**19 48 49.0**	**+4.1**
BUC	**Bucharest**	**1.43**	**194**	⇑P	**Pn**	**19 48 28.1**	**+0.6**
BUC				S	**Sn**	**19 48 48.3**	**+2.5**
BUC1	**Bucharest**	**1.50**	**195**	P	**Pn**	**19 48 29.3**	**+0.8**
BUC1	**Bucharest**	**1.50**	**195**	⇓*iP*	**Pn**	**19 48 28.1**	**-0.4**
BUC1				*i* S	**Sn**	**19 48 46.5**	**-1.2**
BUC1	**Bucharest**	**1.50**	**195**	⇓*iP*	**Pn**	**19 48 28.1**	**-0.4**
BUC1	**Bucharest**	**1.50**	**195**	S	**Sn**	**19 48 46.5**	**-1.2**
BUC1	**Bucharest**	**1.50**	**195**	⇓*iP*	**Pn**	**19 48 28.1**	**-0.4**
BUC1				*i* S	**Sn**	**19 48 46.5**	**-1.2**
IAS	**Iasi**	**1.56**	**26**	⇑P	**Pn**	**19 48 29.9**	**+0.6**
IAS				S	**Sn**	**19 48 52.3**	**+3.2**
IAS	**Iasi**	**1.56**	**26**	⇓*iP*	**Pn**	**19 48 29.9**	**+0.6**
IAS				*i* S	**Sn**	**19 48 52.3**	**+3.2**
IAS	**Iasi**	**1.56**	**26**	⇓*iP*	**Pn**	**19 48 29.9**	**+0.6**
IAS	**Iasi**	**1.56**	**26**	S	**Sn**	**19 48 52.3**	**+3.2**
IAS	**Iasi**	**1.56**	**26**	⇓*iP*	**Pn**	**19 48 29.9**	**+0.6**
TLCR		**1.70**	**110**	⇑P	**Pn**	**19 48 32.1**	**+0.8**
TLCR				S	**Sn**	**19 48 55.7**	**+3.1**
TLCR		**1.70**	**110**	⇑*iP*	**Pn**	**19 48 32.1**	**+0.8**
TLCR				*i* S	**Sn**	**19 48 55.7**	**+3.1**
TLCR		**1.70**	**110**	⇑*iP*	**Pn**	**19 48 32.1**	**+0.8**
TLCR		**1.70**	**110**	S	**Sn**	**19 48 55.7**	**+3.1**
TLCR		**1.70**	**110**	⇑*iP*	**Pn**	**19 48 32.1**	**+0.8**
CVD	**Cernavoda**	**1.81**	**144**	⇓P	**Pn**	**19 48 32.9**	**0.0**
CVD				S	**Sn**	**19 48 57.6**	**+2.1**
CVD	**Cernavoda**	**1.81**	**144**	⇓*iP*	**Pn**	**19 48 32.9**	**0.0**
CVD				*i* S	**Sn**	**19 48 57.6**	**+2.1**
CVD	**Cernavoda**	**1.81**	**144**	⇓*iP*	**Pn**	**19 48 32.9**	**0.0**
CVD	**Cernavoda**	**1.81**	**144**	S	**Sn**	**19 48 57.6**	**+2.1**
CVD	**Cernavoda**	**1.81**	**144**	⇓*iP*	**Pn**	**19 48 32.9**	**0.0**
CVD				*i* S	**Sn**	**19 48 57.6**	**+2.1**
TIRR	**Tirgusor**	**1.88**	**135**	P	**Pn**	**19 48 33.7**	**0.0**
TIRR	**Tirgusor**	**1.88**	**135**	*e*Pn	**Pn**	**19 48 33.3**	**-0.4**
TIRR				*e*Sn	**Sn**	**19 48 56.4**	**

VTS			*i* S	Sn	19 49 49.8	+0.1
VTS	**Vitosha**	**4.01 218**	⇑*i*P	Pn	19 49 03.9	+0.8
VTS	**Vitosha**	**4.01 218**	S	Sn	19 49 49.8	+0.1
VTS	**Vitosha**	**4.01 218**	P	Pn	19 49 03.8	+0.7
VTS			*i* S	Sn	19 49 49.8	+0.1
UZH	**Uzhgorod**	**4.06 316**	*e*P	Pn	19 49 03.7	0.0
UZH			*e*S	Sn	19 49 51.7	+0.9
UZH			pmax	pmax		
	comp=N,160nm,1.0s					
UZH			pmax	pmax		
	comp=E,460nm,1.0s					
UZH	**Uzhgorod**	**4.06 316**	*e*P	Pn	19 49 03.7	0.0
UZH			*e*S	Sn	19 49 51.7	+0.9
KOLS	**Kolonicke sedl**	**4.28 319**	*e*Pn	Pn	19 49 07.3	+0.6
KOLS			*e*		19 49 16.3	
KOLS			*e*Pg	Pg	19 49 28.3	+4.0
KOLS	**Kolonicke sedl**	**4.28 319**	*e*PN	Pn	19 49 07.3	+0.6
KOLS			*e*		19 49 16.3	
KOLS			*e*		19 49 28.3	
KOLS	**Kolonicke sedl**	**4.28 319**	*e*P	Pn	19 49 07.3	+0.6
LVV	**L'vov**	**4.37 338**	*e*P	Pn	19 49 13.0	+5.1
LVV			*e*S	Sn	19 50 00.8	+2.4
LVV			MLR	MLR		
	comp=Z,600nm,2.5s					
LVV			MLR	MLR		
	comp=N,1µm,2.3s					
LVV			MLR	MLR		
	comp=E,1µm,2.3s					
GRUS	**Gruza**	**4.58 247**	*e*Pn	Pn	19 49 11.9	+1.1
KWP	**Kalwaria Pacla**	**4.63 327**	*e*Pn	Pn	19 49 12.2	+0.6
KWP			*e*Pg	Pg	19 49 35.0	+3.9
KWP			*e*Sn	Sg	19 50 40.4	+9.4
KWP	**Kalwaria Pacla**	**4.63 327**	*e*Pn	Pn	19 49 12.5	+0.9
KWP	**Kalwaria Pacla**	**4.63 327**	⇑*i*P	Pn	19 49 13.4	+1.8
KWP	**Kalwaria Pacla**	**4.63 327**	*e*P	Pn	19 49 12.2	+0.6
TRUS	**Trudelj**	**4.64 252**	⇑*i*Pn	Pn	19 49 10.8	-0.9
CRVS	**Cervenica-Dubn**	**4.65 314**	*e*Pn	Pn	19 49 11.7	-0.1
CRVS			*e*Pg	Pg	19 49 30.6	-0.9
CRVS	**Cervenica-Dubn**	**4.65 314**	*e*PN	Pn	19 49 11.7	-0.1
CRVS			*e*		19 49 30.6	
CRVS	**Cervenica-Dubn**	**4.65 314**	*e*P	Pn	19 49 11.7	-0.1
SLVT	**Silivri**	**4.72 165**	*e*P	Pn	19 49 13.1	+0.2
SLVT	**Silivri**	**4.72 165**	*e*P	Pn	19 49 13.1	+0.3
CRLT	**Corlu**	**4.75 169**	*e*P	Pn	19 49 12.9	-0.3
CRLT	**Corlu**	**4.75 169**	*e*P	Pn	19 49 12.9	-0.3
PKSN	**Nyarlorinc**	**4.76 286**	‖*e*Pn	Pn	19 49 13.4	0.0
CTKS	**Kestanelik-??a**	**4.78 162**	*e*P	Pn	19 49 12.4	-1.2
CTKS	**Kestanelik-??a**	**4.78 162**	*e*P	Pn	19 49 12.4	-1.2
FRGS	**Fruska Gora**	**4.79 265**	*e*Pn	Pn	19 49 08.9	-4.9
ELBA	**Catalca**	**4.85 163**	*e*P	Pn	19 49 13.6	-0.9
ELBA	**Catalca**	**4.85 163**	*e*P	Pn	19 49 13.6	-0.9
TKR	**Tekirdag**	**4.86 171**	*e*P	Pn	19 49 13.8	-0.9
TKR	**Tekirdag**	**4.86 171**	*e*P	Pn	19 49 13.8	-0.9
BGKT	**Bogazkoy**	**4.89 160**	*e*P	Pn	19 49 15.2	0.0
BGKT	**Bogazkoy**	**4.89 160**	*e*P	Pn	19 49 15.2	+0.1
KLYT	**Kilyos**	**4.89 157**	*e*P	Pn	19 49 15.2	0.0
KLYT	**Kilyos**	**4.89 157**	*e*P	Pn	19 49 15.2	+0.1
ALN	**Alexandroupoli**	**4.92 185**	P	Pn	19 49 15.6	+0.1
ALN			S	Sn	19 50 12.3	+0.4
ALN	**Alexandroupoli**	**4.92 185**	P	Pn	19 49 15.6	+0.1
ALN			S	Sn	19 50 12.3	+0.4
PKS6	**Bocsa**	**4.92 282**	*e*Pn	Pn	19 49 15.9	+0.3
KECS	**Kecovo**	**4.94 305**	*e*Pn	Pn	19 49 15.9	+0.1
KECS			*e*Sn	Sn	19 50 11.6	-0.9
KECS	**Kecovo**	**4.94 305**	*e*PN	Pn	19 49 15.9	+0.1
KECS			*e*SN	Sn	19 50 11.6	-0.9
DIVS	**Divibare**	**4.96 252**	P	Pn	19 49 15.5	-0.6
DIVS	**Divibare**	**4.96 252**	P	Pn	19 49 15.5	-0.6
KAVA	**Kavala**	**5.03 198**	P	Pn	19 49 16.9	-0.1
KAVA			S	Sn	19 50 14.2	-0.5
KAVA	**Kavala**	**5.03 198**	P	Pn	19 49 16.9	-0.1
KAVA			S	Sn	19 50 14.2	-0.5
MFT	**Murefte**	**5.04 174**	*e*P	Pn	19 49 17.1	0.0
MFT	**Murefte**	**5.04 174**	*e*P	Pn	19 49 17.1	-0.1
PSZ	**Piszkesteto**	**5.04 297**	P	Pn	19 49 17.1	-0.1
PSZ	**Piszkesteto**	**5.04 297**	*e*Pn	Pn	19 49 16.2	-1.0
	comp=E,61nm,0.6s					
PSZ	**Piszkesteto**	**5.04 297**	‖*i*P	Pn	19 49 16.8	-0.4
PSZ	**Piszkesteto**	**5.04 297**	‖*i*P	Pn	19 49 16.8	-0.4
PSZ	**Piszkesteto**	**5.04 297**	⇑*e*Pn	Pn	19 49 16.6	-0.6
PSZ	**Piszkesteto**	**5.04 297**	*e*Pn	Pn	19 49 16.2	-1.0
	comp=E,61nm,0.6s					
PSZ	**Piszkesteto**	**5.04 297**	P	Pn	19 49 17.1	-0.1
ISK	**Istanbul-Kandi**	**5.07 158**	*e*P	Pn	19 49 16.5	-1.1
ISK	**Istanbul-Kandi**	**5.07 158**	*e*P	Pn	19 49 16.5	-1.1
ENEZ	**Enez**	**5.07 184**	*e*P	Pn	19 49 17.0	-0.6
ENEZ	**Enez**	**5.07 184**	*e*P	Pn	19 49 17.0	-0.6
ERIK	**Erikli-Kesan**	**5.13 180**	*e*P	Pn	19 49 18.6	+0.2
ERIK	**Erikli-Kesan**	**5.13 180**	*e*P	Pn	19 49 18.6	+0.2
RKY	**Sarkoy-Tekirda**	**5.13 175**	*e*P	Pn	19 49 18.3	-0.2
RKY	**Sarkoy-Tekirda**	**5.13 175**	*e*P	Pn	19 49 18.3	-0.1
SRS	**Serrai**	**5.16 206**	P	Pn	19 49 19.2	+0.4
SRS			S	Sn	19 50 18.0	+0.1
SRS	**Serrai**	**5.16 206**	P	Pn	19 49 19.2	+0.4
SRS			S	Sn	19 50 18.0	+0.1
SILT	**Sile**	**5.16 153**	*e*P	Pn	19 49 17.9	-0.9
SILT	**Sile**	**5.16 153**	*e*P	Pn	19 49 17.9	-0.9
SEV	**Sevastopol'**	**5.18 101**	⇑*e*P	Pn	19 49 19.0	-0.1
SEV			*e*S	Sn	19 50 20.0	+1.6
SEV	**Sevastopol'**	**5.18 101**	*e*P	Pn	19 49 19.0	-0.1
SEV			*e*S	Sn	19 50 20.0	+1.6
KIEV	**Kiev**	**5.21 19**	*e*P	Pn	19 49 18.7	-0.8
KIEV			pmax	pmax		
	comp=Z,53nm,0.5s					
KIEV	**Kiev**	**5.21 19**	*e*Pn	Pn	19 49 18.7	-0.7
	comp=Z,53nm,0.5s					
KIEV			*e*Pg	Pg	19 49 37.2	-4.9
KIEV			*e*Sg	Sg	19 50 42.3	-7.1
KIEV	**Kiev**	**5.21 19**	*e*P	Pn	19 49 18.7	-0.8
	comp=Z,53nm,0.5s					
AKASG	**Malin Array Be**	**5.22 19**	Pn	Pn	19 49 19.4	-0.2
	comp=Z,14nm,0.3s,baz=207,slow=12,SNR=24					
AKASG			Sn	Sn	19 50 17.2	-2.1
	comp=Z,29nm,0.3s,baz=215,slow=24,SNR=4.4					
AKASG			Lg		19 50 42.2	
	comp=Z,87nm,0.3s,baz=198,slow=29,SNR=14					
AKASG	**Malin Array Be**	**5.22 19**	P	Pn	19 49 19.4	-0.2
AKASG					19 50 17.2	
AKASG			pmax	pmax		
	comp=Z,15nm,0.3s					
AKASG			smax			
	comp=N,29nm,0.3s					
AKASG	**Malin Array Be**	**5.22 19**	Pn	Pn	19 49 19.4	-0.2
AKASG			Sn	Sn	19 50 17.2	-2.1
AKASG			Lg		19 50 42.2	
AKASG	**Malin Array Be**	**5.22 19**	P	Pn	19 49 19.4	-0.2
	comp=N,15nm,0.3s					
AKASG			S	Sn	19 50 17.2	-2.1
	comp=N,29nm,0.3s					
VAY	**Valandovo**	**5.33 214**	P	Pn	19 49 21.3	+0.1
VAY	**Valandovo**	**5.33 214**	‖*i*P	Pn	19 49 21.3	+0.1
VAY	**Valandovo**	**5.33 214**	P	Pn	19 49 21.3	+0.1
KNT	**Kendrikon**	**5.35 211**	P	Pn	19 49 21.8	+0.4
KNT	**Kendrikon**	**5.35 211**	P	Pn	19 49 21.8	+0.4
SIM	**Simferopol'**	**5.39 96**	*ce*P	Pn	19 49 22.6	+0.6
SIM			S	Sn	19 50 23.0	-0.6
SIM			pmax	pmax		
	comp=Z,159nm,0.3s					
SIM			MLR	MLR		
	comp=Z,500nm,18.0s					
SIM	**Simferopol'**	**5.39 96**	*e*P	Pn	19 49 22.6	+0.6
	comp=Z,159nm,0.3s					
SIM			S	Sn	19 50 23.0	-0.6
	comp=Z,500nm,18.0s					
GELI	**Tayfur-Gelibol**	**5.40 181**	*e*P	Pn	19 49 21.8	-0.4
GELI	**Tayfur-Gelibol**	**5.40 181**	*e*P	Pn	19 49 21.8	-0.3
LPK	**Lapseki**	**5.43 178**	*e*P	Pn	19 49 21.5	-1.0
LPK	**Lapseki**	**5.43 178**	*e*P	Pn	19 49 21.5	-1.0
BBLS	**Lazići**	**5.45 252**	*e*Pn	Pn	19 49 22.1	-0.6
BUD	**Budapest**	**5.46 291**	‖*e*Pn	Pn	19 49 22.4	-0.5
BUD	**Budapest**	**5.46 291**	‖*e*P	Pn	19 49 22.4	-0.5
HRT	**Hereke**	**5.47 154**	*e*P	Pn	19 49 23.1	+0.1
HRT	**Hereke**	**5.47 154**	*e*P	Pn	19 49 23.1	0.0
ARMT	**Armutlu**	**5.50 161**	*e*P	Pn	19 49 23.4	0.0
ARMT	**Armutlu**	**5.50 161**	*e*P	Pn	19 49 23.4	-0.1
SOH	**Sokhos**	**5.50 206**	P	Pn	19 49 24.0	+0.5
SOH	**Sokhos**	**5.50 206**	P	Pn	19 49 24.0	+0.5
YAL	**Yalta**	**5.53 101**	⇑*e*P	Pn	19 49 23.9	0.0
YAL			*e*S	Sn	19 50 29.6	+2.6
YAL	**Yalta**	**5.53 101**	*e*P	Pn	19 49 23.9	0.0
BNT	**Bandirma**	**5.53 169**	*e*P	Pn	19 49 23.9	0.0
BNT	**Bandirma**	**5.53 169**	*e*P	Pn	19 49 23.9	0.0
EDC	**Edincik**	**5.53 170**	*e*P	Pn	19 49 23.4	-0.5
EDC	**Edincik**	**5.53 170**	*e*P	Pn	19 49 23.4	-0.6
PKSM	**Moragy**	**5.53 277**	⇑P	Pn	19 49 23.3	-0.7
PKSM	**Moragy**	**5.53 277**	⇑*i*P	Pn	19 49 23.3	-0.7
PKSM	**Moragy**	**5.53 277**	⇑*i*P	Pn	19 49 23.3	-0.7
PKSM	**Moragy**	**5.53 277**	⇑*i*P	Pn	19 49 23.3	-0.7
NIE	**Niedzica**	**5.56 313**	*e*Pn	Pn	19 49 25.5	+1.1
NIE			*e*		19 49 28.7	
NIE			*e*PP		19 49 31.9	
NIE			*e*Sn	Sn	19 50 29.2	+1.3
NIE	**Niedzica**	**5.56 313**	*e*P	Pn	19 49 25.5	+1.1
NIE			*e*S	Sn	19 50 29.2	+1.3
YLV	**Yalova**	**5.62 158**	*e*P	Pn	19 49 24.4	-0.8
YLV	**Yalova**	**5.62 158**	*e*P	Pn	19 49 24.4	-0.8
GADA	**Gvkgeada**	**5.63 185**	*e*P	Pn	19 49 25.3	0.0
GADA	**Gvkgeada**	**5.63 185**	*e*P	Pn	19 49 25.3	0.0
ALU	**Alushta**	**5.65 99**	*e*P	Pn	19 49 26.0	+0.5
ALU			*e*S	Sn	19 50 32.7	+2.7
ALU	**Alushta**	**5.65 99**	*e*P	Pn	19 49 26.0	+0.5
KCTX	**Karacabey (Bur**	**5.69 166**	*e*P	Pn	19 49 25.6	-0.5
KCTX	**Karacabey (Bur**	**5.69 166**	*e*P	Pn	19 49 25.6	-0.5
GEMT	**Gemlik**	**5.70 159**	*e*P	Pn	19 49 25.7	-0.5
GEMT	**Gemlik**	**5.70 159**	*e*P	Pn	19 49 25.7	-0.5
GRG	**Griva**	**5.71 214**	P	Pn	19 49 26.5	+0.1
GRG	**Griva**	**5.71 214**	P	Pn	19 49 26.5	+0.1
KDZE	**Karadeniz Ereo**	**5.72 140**	*e*P	Pn	19 49 26.2	-0.3
KDZE	**Karadeniz Ereo**	**5.72 140**	*e*P	Pn	19 49 26.2	-0.3
OUR	**Ouranopolis**	**5.78 200**	P	Pn	19 49 26.5	-0.9
OUR			S	Sn	19 50 31.9	-1.4
OUR	**Ouranopolis**	**5.78 200**	P	Pn	19 49 26.5	-0.9
OUR			S	Sn	19 50 31.9	-1.4
HORT	**Hortiatis**	**5.78 207**	P	Pn	19 49 27.8	+0.4
HORT			S	Sn	19 50 34.0	+0.7
HORT	**Hortiatis**	**5.78 207**	P	Pn	19 49 27.8	+0.4
HORT			S	Sn	19 50 34.0	+0.7
THE	**Thessaloniki**	**5.79 208**	P	Pn	19 49 27.9	+0.3
THE	**Thessaloniki**	**5.79 208**	P	Pn	19 49 27.9	+0.3
SPNC	**Sapanca-Adapaz**	**5.80 151**	*e*Pn	Pn	19 49 28.0	+0.4
SPNC	**Sapanca-Adapaz**	**5.80 151**	*e*P	Pn	19 49 28.0	+0.4
PKS9	**Tamasi**	**5.80 281**	*e*Pn	Pn	19 49 27.7	0.0
RHK3	**Tenkes**	**5.81 274**	‖*e*Pn	Pn	19 49 27.4	-0.3
GONE	**Gonen-Balikesi**	**5.81 171**	*e*P	Pn	19 49 28.0	+0.2
GONE	**Gonen-Balikesi**	**5.81 171**	*e*P	Pn	19 49 28.0	+0.2
ADVT	**Abdulvahap**	**5.85 155**	*e*P	Pn	19 49 28.5	+0.2
ADVT	**Abdulvahap**	**5.85 155**	*e*P	Pn	19 49 28.5	+0.2
PKSG		**5.85 289**	*e*Pn	Pn	19 49 28.4	+0.1
KRUS	**Krusevo**	**5.87 223**	‖*i*P	Pn	19 49 29.3	+0.7
PLG	**Polygyros**	**5.88 204**	P	Pn	19 49 29.2	+0.4
PLG	**Polygyros**	**5.88 204**	P	Pn	19 49 29.2	+0.4
VYHS	**Vyhne**	**5.92 300**	*e*P	Pn	19 49 28.8	-0.4
VYHS			*e*		19 50 36.9	
VYHS	**Vyhne**	**5.92 300**	*e*Pn	Pn	19 49 28.8	-0.4
VYHS			*e*		19 49 42.6	
VYHS			*e*Sn	Sn	19 50 36.9	+0.3
VYHS			*e*Sg	Sg	19 51 23.3	+11
VYHS	**Vyhne**	**5.92 300**	*e*PN	Pn	19 49 28.8	-0.4
VYHS			*e*		19 49 42.6	
VYHS	**Vyhne**	**5.92 300**	*e*SN	Sn	19 50 36.9	+0.3
VYHS			*e*		19 51 23.3	
VYHS	**Vyhne**	**5.92 300**	*e*P	Pn	19 49 28.8	-0.4
VYHS			*e*S	Sn	19 50 36.9	+0.3
BOZC	**Bozcaada**	**5.97 184**	‖*i*P	Pn	19 49 31.0	+1.1
EZN	**Ezine**	**5.97 182**	*e*P	Pn	19 49 29.4	-0.6
EZN	**Ezine**	**5.97 182**	*e*P	Pn	19 49 29.4	-0.6
LIA	**Limnos Island**	**5.99 190**	P	Pn	19 49 30.4	+0.2
LIA			S	Sn	19 50 37.1	-1.2
LIA	**Limnos Island**	**5.99 190**	P	Pn	19 49 30.4	+0.2
LIA			S	Sn	19 50 37.1	-1.2
LIKS	**Likavka**	**6.01 305**	*e*P	Pn	19 49 32.0	+1.5
LIKS	**Likavka**	**6.01 305**	*e*PN	Pn	19 49 32.0	+1.5
LIKS	**Likavka**	**6.01 305**	*e*P	Pn	19 49 32.0	+1.5
SUDU	**Sudak**	**6.02 96**	*e*P	Pn	19 49 29.5	-1.1
SUDU			*e*S	Sn	19 50 38.6	-0.5
SUDU	**Sudak**	**6.02 96**	*e*P	Pn	19 49 29.5	-1.1
SUDU			*e*S	Sn	19 50 38.6	-0.5
CAVI	**Cavuskoy**	**6.09 156**	*e*P	Pn	19 49 31.7	+0.1
CAVI	**Cavuskoy**	**6.09 156**	*e*P	Pn	19 49 31.7	+0.1
GULT	**Gulveren**	**6.09 150**	*e*P	Pn	19 49 32.2	+0.5
GULT	**Gulveren**	**6.09 150**	*e*P	Pn	19 49 32.2	+0.5
BALY	**Balya**	**6.11 172**	⇑*i*P	Pn	19 49 31.8	-0.1
BALY	**Balya**	**6.11 172**	*i* P	Pn	19 49 31.8	0.0
BIA	**Bitola**	**6.11 220**	‖*i*P	Pn	19 49 33.1	+1.2
GPA	**Golpazari**	**6.15 152**	*e*P	Pn	19 49 32.6	+0.1
GPA	**Golpazari**	**6.15 152**	*e*P	Pn	19 49 32.6	+0.1
KOLL	**Kolacno**	**6.22 299**	*e*Pn	Pn	19 49 33.0	-0.3
KOLL			*e*		19 49 44.2	
KOLL			*e*Sn	Sn	19 50 42.5	-1.4
KOLL	**Kolacno**	**6.22 299**	*e*PN	Pn	19 49 33.0	-0.3
KOLL			*e*		19 49 44.2	
KOLL	**Kolacno**	**6.22 299**	*e*SN	Sn	19 50 42.5	-1.4
KOLL	**Kolacno**	**6.22 299**	*e*P	Pn	19 49 33.0	-0.3
KOLL			*e*S	Sn	19 50 42.5	-1.4
BALB	**Balikesir**	**6.23 171**	*e*P	Pn	19 49 33.1	-0.5
BALB	**Balikesir**	**6.23 171**	*e*P	Pn	19 49 33.1	-0.5
PAIG	**Paliouri**	**6.24 201**	P	Pn	19 49 33.0	-0.7
PAIG	**Paliouri**	**6.24 201**	P	Pn	19 49 33.0	-0.7
FNA	**Florina**	**6.28 219**	P	Pn	19 49 35.3	+1.1
FNA			S	Sn	19 50 44.2	-1.4
FNA	**Florina**	**6.28 219**	P	Pn	19 49 35.3	+1.1
FNA			S	Sn	19 50 44.2	-1.4
MDU	**Mudurnu**	**6.33 146**	*e*P	Pn	19 49 34.9	+0.1
MDU	**Mudurnu**	**6.33 146**	*e*P	Pn	19 49 34.9	+0.1
OJC	**Ojcow**	**6.33 317**	*e*Pn	Pn	19 49 36.9	+2.0
OJC			*e*PP		19 49 44.6	
OJC			*e*Sn	Sn	19 50 49.8	+3.0
OJC	**Ojcow**	**6.33 317**	*e*P	Pn	19 49 36.9	+2.0
DURS	**Dursunbey**	**6.35 167**	*e*P	Pn	19 49 35.0	-0.2
DURS	**Dursunbey**	**6.35 167**	*e*P	Pn	19 49 35.0	-0.2
SAFT	**Safranbolu**	**6.37 134**	*e*P	Pn	19 49 34.9	-0.5
SAFT	**Safranbolu**	**6.37 134**	*e*P	Pn	19 49 34.9	-0.6
LIT	**Litokhoron**	**6.43 209**	P	Pn	19 49 36.0	-0.3
LIT	**Litokhoron**	**6.43 209**	P	Pn	19 49 36.0	-0.3
AYVA	**Ayvalik**	**6.49 179**	*e*P	Pn	19 49 36.6	-0.5
KZN	**Kozani**	**6.51 214**	P	Pn	19 49 37.6	+0.1
KZN	**Kozani**	**6.51 214**	P	Pn	19 49 37.6	+0.1
PRK	**Paraskevi**	**6.55 182**	P	Pn	19 49 37.9	-0.1
PRK	**Paraskevi**	**6.55 182**	P	Pn	19 49 37.9	-0.1
SGKT	**Sivrigoynuk**	**6.59 141**	*e*P	Pn	19 49 36.5	-1.9
SGKT	**Sivrigoynuk**	**6.59 141**	*e*P	Pn	19 49 36.5	-1.9
SIGR	**SIGRI**	**6.61 185**	P	Pn	19 49 38.3	-0.4
SIGR	**SIGRI**	**6.61 185**	P	Pn	19 49 38.3	-0.4
NEST	**Nestorio**	**6.72 219**	P	Pn	19 49 41.7	+1.4
NEST	**Nestorio**	**6.72 219**	P	Pn	19 49 41.7	+1.4
MODS	**Modra-Piesok**	**6.84 295**	*e*P	Pn	19 49 42.7	+0.8
MODS	**Modra-Piesok**	**6.84 295**	*e*PN	Pn	19 49 42.7	+0.8
MODS	**Modra-Piesok**	**6.84 295**	*e*P	Pn	19 49 42.7	+0.8
ZST	**Bratislava**	**6.90 294**	*e*Pn	Pn	19 49 42.0	-0.7
ZST			*e*		19 49 51.8	
ZST	**Bratislava**	**6.90 294**	*e*PN	Pn	19 49 42.0	-0.7
ZST			*e*		19 49 51.8	
ZST	**Bratislava**	**6.90 294**	*e*P	Pn	19 49 42.0	-0.7
AOS	**Alonnisos**	**6.92 198**	P	Pn	19 49 42.4	-0.6
AOS	**Alonnisos**	**6.92 198**	P	Pn	19 49 42.4	-0.6
OKC	**Ostrava-Krasne**	**6.96 309**	*e*P	Pn	19 49 46.0	+2.5
OKC			*e*		19 51 02.5	
OKC			MLR	MLR		
	comp=Z,700nm,12.1s					
OKC	**Ostrava-Krasne**	**6.96 309**	*e*PN	Pn	19 49 46.0	+2.5
OKC			*e*SN	Sn	19 51 02.5	+0.4
OKC			AMS	AMS	19 53 40.0	
	comp=Z,700nm,12.1s					
KERU	**Kerch**	**6.97 90**	*e*P	Pn	19 49 46.8	+3.2
AKS	**Akhisar**	**6.98 172**	*e*P	Pn	19 49 43.7	-0.1
AKHS	**Akhisar**	**6.98 172**	*e*P	Pn	19 49 44.4	+0.6
ESKT	**Eskisehir**	**7.03 152**	*e*P	Pn	19 49 43.4	-1.1
GDZ	**Gediz**	**7.04 161**	*e*P	Pn	19 49 43.8	-0.9
THL	**Klokotos Trika**	**7.07 210**	P	Pn	19 49 45.3	+0.2
THL	**Klokotos Trika**	**7.07 210**	P	Pn	19 49 45.3	+0.2
SOP	**Sopron**	**7.13 289**	*e*Pn	Pn	19 49 47.5	+1.7
SOP			*e*Sn	Sn	19 51 04.9	-1.5
SOP	**Sopron**	**7.13 289**	*e*P	Pn	19 49 47.5	+1.7
SOP			*e*S	Sn	19 51 04.9	-1.5
MORC	**Moravsky Berou**	**7.26 306**	*e*P	Pn	19 49 46.8	-0.8
MORC			pmax	pmax		
	comp=Z,15nm,0.8s					
MORC	**Moravsky Berou**	**7.26 306**	*e*Pn	Pn	19 49 46.8	-0.8
	comp=Z,15nm,0.8s					
MORC	**Moravsky Berou**	**7.26 306**	*e*P	Pn	19 49 46.8	-0.8
	comp=Z,15nm,0.8s					
SVRH	**Sivrihisar-ESK**	**7.33 148**	*e*P	Pn	19 49 48.3	-0.3
IZM	**Izmir**	**7.42 176**	*e*P	Pn	19 49 49.6	-0.2
BLCB	**Balcova**	**7.42 177**	*e*P	Pn	19 49 50.1	+0.3
CHOS	**Chios island**	**7.42 183**	P	Pn	19 49 50.1	+0.3
CHOS	**Chios island**	**7.42 183**	P	Pn	19 49 50.1	+0.3
KULA	**Kula-Manisa**	**7.45 167**	*e*P	Pn	19 49 49.6	-0.6
ATAL	**Atalanti**	**7.57 202**	P	Pn	19 49 51.6	-0.4
ATAL	**Atalanti**	**7.57 202**	P	Pn	19 49 51.6	-0.4
VRAC	**Vranov**	**7.60 301**	Pn	Pn	19 49 52.7	+0.4
	comp=Z,0.8nm,0.3s,baz=104,slow=12,SNR=7.0					
VRAC			Sn	Sn	19 51 16.7	-1.3
	comp=Z,1.0nm,0.3s,baz=191,slow=18,SNR=5.3					
VRAC	**Vranov**	**7.60 301**	P	Pn	19 49 52.7	+0.4
VRAC					19 51 16.7	
VRAC			pmax	pmax		
	comp=Z,1.0nm,0.3s					
VRAC			smax			
	comp=N,1.0nm,0.3s					
VRAC	**Vranov**	**7.60 301**	P	Pn	19 49 52.7	+0.4
	comp=N,1.0nm,0.3s					
VRAC			S	Sn	19 51 16.7	-1.3
	comp=N,1.0nm,0.3s					
CONA	**Conrad Observa**	**7.64 290**	⇑*i*Pn	Pn	19 49 52.7	-0.1
	comp=N,6.9nm,0.6s					
CONA	**Conrad Observa**	**7.64 290**	Pn	Pn	19 49 52.7	-0.1
	comp=N,6.9nm,0.6s					
ANN	**Anapa**	**7.73 94**	*e*P	Pn	19 49 50.8	-3.3
ANN			*e*S	Sn	19 51 17.8	-3.4
ANN			pmax	pmax		
	comp=Z,19nm,1.0s					
ANN			MLR	MLR		
	comp=N,215nm,10.0s					
ANN			MLR	MLR		
	comp=E,266nm,10.0s					
ANN			MLR	MLR		
	comp=Z,437nm,10.0s					
ARSA	**Arzberg**	**7.75 285**	⇑*i*Pn	Pn	19 49 54.5	+0.1
	comp=Z,3.2nm,0.4s					
ARSA	**Arzberg**	**7.75 285**	Pn	Pn	19 49 54.5	+0.1
	comp=Z,3.2nm,0.4s					
CRES	**Cresnjev**	**7.76 274**	*i* Pn	Pn	19 49 54.9	+0.3
CRES	**Cresnjev**	**7.76 274**	*i* Pn	Pn	19 49 54.9	+0.3
CRES	**Cresnjev**	**7.76 274**	*i* Pn	Pn	19 49 54.9	+0.4
KHL	**Karahalli**	**7.79 163**	*e*P	Pn	19 49 54.7	-0.2
SHUT	**Suhut-Afyon**	**7.82 156**	*e*P	Pn	19 49 55.2	-0.2
BOJS	**Bojanci**	**7.93 272**	*i* Pn	Pn	19 49 59.3	+2.4
BOJS	**Bojanci**	**7.93 272**	*i* Pn	Pn	19 49 59.3	+2.4
BOJS	**Bojanci**	**7.93 272**	*i* Pn	Pn	19 49 59.3	+2.4
AFSR	**Af´ar-Bala (A**	**7.96 141**	*e*P	Pn	19 49 57.0	-0.2
KIZT	**Kizilcal**	**7.96 148**	*e*P	Pn	19 49 56.5	-0.7
DSF	**Desfina**	**7.97 204**	P	Pn	19 49 56.1	-1.3
DSF	**Desfina**	**7.97 204**	P	Pn	19 49 56.1	-1.3
PERS	**Pernice**	**7.98 280**	*i* Pn	Pn	19 49 56.9	-0.7
PERS	**Pernice**	**7.98 280**	*i* Pn	Pn	19 49 56.9	-0.7
PERS	**Pernice**	**7.98 280**	*i* Pn	Pn	19 49 56.9	-0.7
BRTR	**Keskin Array B**	**8.00 137**	Pn	Pn	19 49 56.9	-0.9

BRG
comp=E,401nm,16.2s
HDMB Hadim 9.88 151 *e*P **Pn 19 50 22.3 -1.4**
HDMB Hadim 9.88 151 *e*P **Pn 19 50 22.3 -1.3**
VORD Divnogorie 9.92 54 *e*P **Pn 19 50 23.3 -0.8**
VORD *e*S **Sn 19 52 13.8 -1.1**
VORD pmax pmax
comp=N,50nm,0.9s
VORD pmax pmax
comp=E,80nm,0.9s
VORD pmax pmax
comp=Z,40nm,0.9s
VORD smax
comp=E,250nm,0.9s
VORD smax
comp=Z,70nm,1.0s
VORD smax
comp=N,150nm,0.8s
VORD MLR MLR
comp=N,490nm,12.0s
VORD MLR MLR
comp=Z,330nm,12.0s
VORD MLR MLR
comp=E,230nm,8.0s
VORD Divnogorie 9.92 54 *e*P **Pn 19 50 23.3 -0.8**
VORD *e*S **Sn 19 52 13.8 -1.1**
comp=E,150nm,0.8s
VSR Storozhevoye 9.96 53 *e*P **Pn 19 50 24.4 -0.3**
VSR *e*S **Sn 19 52 10.4 -5.5**
VSR pmax pmax
comp=Z,100nm,0.5s
VSR pmax pmax
comp=N,110nm,0.9s
VSR pmax pmax
comp=E,140nm,0.9s
VSR smax
comp=E,580nm,2.7s
VSR smax
comp=Z,190nm,1.5s
VSR smax
comp=N,350nm,1.0s
VSR MLR MLR
comp=Z,190nm,8.0s
VSR MLR MLR
comp=N,260nm,11.0s
VSR MLR MLR
comp=E,120nm,7.0s
VSR Storozhevoye 9.96 53 *e*P **Pn 19 50 24.4 -0.3**
comp=E,100nm,0.5s
AQU L'Aquila 10.08 255 *e*P **Pn 19 50 24.9 -1.4**
AQU L'Aquila 10.08 255 *e*P **Pn 19 50 24.9 -1.4**
VOR Voronezh 10.23 50 P Px 19 50 42.0
VOR pmax pmax
comp=Z,200nm,1.2s
NKC Novy Kostel 10.44 300 AMS AMS 19 55 20.0
comp=Z,700nm,14.3s
CLL Collm 10.54 306 *e*Pn **Pn 19 50 34.0 +1.5**
CLL *e* 19 50 47.0
CLL *e*Sg 19 53 47.0
CLL Collm 10.54 306 *e*Pn **Pn 19 50 34.0 +1.5**
CLL *e* 19 50 47.0
CLL *e*Pg Pn 19 51 29.0 +56
CLL *e* 19 52 30.0
CLL *e* 19 53 07.0
CLL *e*Sg 19 53 47.0
CLL Lmax 19 55 18.0
CLL Collm 10.54 306 *e*P **Pn 19 50 34.0 +1.5**
CEL Celeste 10.93 230 *e*Pn **Pn 19 50 35.8 -2.3**
comp=Z,14nm,1.0s
CEL Celeste 10.93 230 *e*Pn **Pn 19 50 35.8 -2.2**
comp=Z,14nm,1.0s
OBN Obninsk 11.28 31 *d i*P **Pn 19 50 39.4 -3.3**
OBN *i* S **Sn 19 52 39.7 -8.6**
OBN pmax pmax
comp=Z,34nm,1.0s
OBN Obninsk 11.28 31 *e*Pn **Pn 19 50 39.6 -3.1**
comp=Z,33nm,0.4s
VRHR Novokhopersk 11.31 57 *e*P **Pn 19 50 42.7 -0.4**
VRHR pmax pmax
comp=Z,50nm,0.8s
VRHR pmax pmax
comp=N,30nm,1.2s
VRHR pmax pmax
comp=E,50nm,0.8s
VRHR Novokhopersk 11.31 57 *e*P **Pn 19 50 42.7 -0.4**
comp=E,30nm,1.2s
DAVOX Davos/Dischmat 11.59 281 LR LR 19 55 20.9
comp=E,50nm,21.1s,baz=89,slow=38
KIV Kislovodsk 11.59 93 *e*P **Pn 19 50 46.0 -1.0**
KIV *e*S **Sn 19 53 00.5 +4.6**
KIV pmax pmax
comp=Z,6.0nm,0.9s
KIV MLR MLR
comp=Z,200nm,17.0s
KIV Kislovodsk 11.59 93 *e*Pn **Pn 19 50 42.5 -4.5**
comp=Z,14nm,0.6s
KIV Kislovodsk 11.59 93 *e*P **Pn 19 50 46.0 -1.0**
comp=Z,200nm,17.0s
BSD Bornholm Skovb 11.90 326 *i* P **Pn 19 50 49.8 -1.3**
BSD *i* S **Sn 19 52 59.8 -3.6**
CSS Prodhromos 11.99 152 *e*Pn **Pn 19 50 54.3 +1.9**
comp=Z,37nm,1.3s
CSS Prodhromos 11.99 152 *e*Pn **Pn 19 50 54.3 +1.9**
comp=Z,37nm,1.3s
ARTV Artvin 12.07 107 *e*P **Pn 19 50 49.6 -4.0**
DAGI Agillar 12.11 107 *e*P **Pn 19 50 51.1 -3.0**
MOS Moscow 12.15 31 *e*P **Pn 19 50 50.5 -4.0**
MOS *e*S **Sn 19 53 03.0 -6.5**
MOS pmax pmax
comp=Z,31nm,1.2s
VSU Vasula 12.68 0 *de*P **Pn 19 50 59.1 -2.7**
VSU Vasula 12.68 0 *e*P **Pn 19 50 59.1 -2.7**
ZEI Tsey 12.79 98 *e*P **Pn 19 51 03.2 -0.1**
ZEI pmax pmax
comp=Z,5.0nm,0.4s
ZEI Tsey 12.79 98 *e*P **Pn 19 51 03.2 -0.1**
comp=Z,5.0nm,0.4s
LPG La Plagne 13.86 276 *e*P **Pn 19 51 27.9 +10**
comp=Z,20nm,0.8s
LPG La Plagne 13.86 276 *e*P **Pn 19 51 27.9 +10**
LPG pmax pmax
comp=Z,10.0nm,0.8s
LPG La Plagne 13.86 276 *e*P **Pn 19 51 27.9 +10**
comp=Z,9.8nm,0.8s
LPL La Plagne 13.88 276 *e*P **Pn 19 51 28.0 +10**
comp=Z,24nm,0.9s
LPL La Plagne 13.88 276 *e*P **Pn 19 51 28.0 +10**
LPL pmax pmax
comp=Z,12nm,0.9s
LPL La Plagne 13.88 276 *e*P **Pn 19 51 28.0 +10**
comp=Z,12nm,0.9s
MBDF Montbardon 13.98 273 *e*P **Pn 19 51 28.7 +9.1**
comp=Z,27nm,1.0s
MBDF Montbardon 13.98 273 *e*P **Pn 19 51 28.7 +9.1**
MBDF pmax pmax
comp=Z,14nm,1.0s
MBDF Montbardon 13.98 273 *e*P **Pn 19 51 28.7 +9.1**
comp=Z,14nm,1.0s
MBDF Montbardon 13.98 273 *e*P **Pn 19 51 28.7 +9.1**
comp=Z,14nm,1.0s
GNI Garni 14.45 107 LR LR 19 58 06.8
comp=Z,34nm,20.2s,baz=311,slow=42
GNI Garni 14.45 107 *de*P **Pn 19 51 24.9 -1.1**
GNI pmax pmax
comp=Z,14nm,1.3s
GNI Garni 14.45 107 *e*Pn **Pn 19 51 30.7 +4.7**
comp=Z,13nm,1.0s
MMAI Mount Meron Ar 14.47 149 Pn **Pn 19 51 25.0 -1.3**
comp=Z,0.3nm,0.3s,baz=322,slow=12,SNR=2.5
MMAI LR LR 19 58 30.9
comp=Z,119nm,19.5s,baz=320,slow=44
MAK Makhachkala 15.24 93 *e*P **Pn 19 51 35.0 -1.6**
MAK S **Sn 19 54 22.7 -2.2**
MAK pmax pmax
comp=Z,357nm,1.6s
MAK MLR MLR
comp=Z,408nm,15.0s
FINES FINESS Array B 15.68 359 Pn **Pn 19 51 36.1 -6.1**
comp=Z,0.6nm,0.3s,baz=168,slow=12,SNR=27
FINES Sn **Sn 19 54 21.1 -14**
comp=Z,0.6nm,0.3s,baz=180,slow=24,SNR=5.7
SMF Signal de Mont 15.74 281 *e*P **Pn 19 51 49.5 +6.3**
comp=Z,14nm,0.8s
SMF Signal de Mont 15.74 281 *e*P **Pn 19 51 49.5 +6.3**
SMF pmax pmax
comp=Z,7.0nm,0.8s
SMF Signal de Mont 15.74 281 *e*P **Pn 19 51 49.5 +6.3**
comp=Z,7.2nm,0.8s
HFS Hagfors 16.27 337 Pn **Pn 19 51 46.3 -3.5**
comp=Z,1.5nm,0.3s,baz=138,slow=16,SNR=8.3
HFS LR LR 19 57 52.5
comp=Z,72nm,19.8s,baz=141,slow=36
KAF Kangasniemi 16.35 360 *e*P **Pn 19 51 43.1 -7.7**
KAF pmax pmax
comp=Z,5.0nm,0.5s
KAF Kangasniemi 16.35 360 *e*p **Pn 19 51 43.1 -7.7**
comp=Z,4.5nm,0.5s
KLMR Klimovskoe 16.90 22 *e*P **Pn 19 51 51.3 -6.5**
KLMR pmax pmax
comp=Z,64nm,1.0s
KLMR MLR MLR
comp=Z,252nm,9.0s
OSL Oslo 17.01 332 *e*P **Pn 19 51 58.3 -1.0**
KONO Kongsberg 17.18 330 *e*P **Pn 19 52 00.1 -1.3**
KONO pmax pmax
comp=Z,20nm,1.0s
KONO Kongsberg 17.18 330 *e*Pn **Pn 19 52 00.1 -1.4**
comp=Z,20nm,1.0s
KONO Kongsberg 17.18 330 *e*Pn **Pn 19 52 00.1 -1.3**
comp=Z,20nm,1.0s
JOF Joensuu 17.37 7 *e*P **Pn 19 51 58.8 -4.9**
JOF pmax pmax
comp=Z,10.0nm,0.5s
JOF Joensuu 17.37 7 *e*p **Pn 19 51 58.8 -4.9**
comp=Z,9.6nm,0.5s
EIL Elat 17.40 155 LR LR 20 00 20.7
comp=Z,62nm,18.1s,baz=293,slow=43
RJF Les Rejaudoux 17.53 277 *e*P **Pn 19 52 11.4 +5.5**
NAO01 NORSAR Array S 17.66 334 *e*Pn **Pn 19 52 04.6 -2.7**
comp=Z,14nm,0.7s
NB2 NORSAR Subarra 17.72 335 P **Pn 19 52 05.2 -2.9**
comp=Z,15nm,1.0s,baz=143,slow=11
NOA NORSAR Array B 17.72 335 Pn **Pn 19 52 03.6 -4.5**
comp=Z,0.9nm,0.3s,baz=56,slow=18,SNR=16
NOA Sn **Sn 19 55 14.8 -10**
comp=Z,0.3nm,0.3s,baz=143,slow=23,SNR=3.6
NOA LR LR 20 00 12.4
comp=Z,97nm,19.0s,baz=135,slow=41
NOA NORSAR Array B 17.72 335 P **Pn 19 52 03.6 -4.5**
NOA 19 55 14.8
NOA pmax pmax
comp=Z,1.0nm,0.3s
NOA MLR MLR
comp=Z,97nm,19.0s
LFF La Frestale 18.14 277 *e*P **Pn 19 52 15.5 +2.1**
LFF La Frestale 18.14 277 *e*P **Pn 19 52 15.5 +2.1**
LDF La Druitiere 18.32 288 *e*P **Pn 19 52 16.1 +0.6**
comp=Z,8.1nm,0.6s
LDF La Druitiere 18.32 288 *e*P **Pn 19 52 16.1 +0.6**
LDF pmax pmax
comp=Z,4.0nm,0.6s
LDF La Druitiere 18.32 288 *e*P **Pn 19 52 16.1 +0.6**
comp=Z,4.1nm,0.6s
LDF La Druitiere 18.32 288 *e*P **Pn 19 52 16.1 +0.6**
comp=Z,4.1nm,0.6s
EPF Esparros 18.91 271 *e*P **Pn 19 52 28.5 +5.8**
comp=Z,36nm,1.2s
EPF Esparros 18.91 271 *e*P **Pn 19 52 28.5 +5.8**
EPF pmax pmax
comp=Z,18nm,1.2s
EPF Esparros 18.91 271 *e*P **Pn 19 52 28.5 +5.8**
comp=Z,18nm,1.2s
PRGR Permogore 19.34 28 *e*P **Pn 19 52 24.0 -3.8**
PRGR *e*S **Sn 19 56 01.2 -2.8**
PRGR pmax pmax
comp=Z,23nm,0.8s
PRGR Permogore 19.34 28 *e*P **Pn 19 52 24.0 -3.8**
comp=Z,23nm,0.8s
NSS Namsos 20.44 342 *e*P **P 19 52 37.0 -1.6**
NSS Namsos 20.44 342 *e*P **P 19 52 37.0 -1.6**
SNR=34
EKA Eskdalemuir Ar 21.00 308 P **P 19 52 44.1 -0.6**
comp=Z,1.8nm,0.7s,mb3.5,baz=107,slow=9.7,SNR=2.7
EKA Eskdalemuir Ar 21.00 308 P **P 19 52 44.2 -0.6**
AKTK Aktyubinsk 21.41 66 P **P 19 52 48.8 -0.4**
AKTK Aktyubinsk 21.41 66 P **P 19 52 48.8 -0.4**
comp=Z,14nm,0.7s,mb4.4
AKTO Aktyubinsk 21.41 66 P **P 19 52 48.8 -0.4**
comp=Z,14nm,0.7s,mb4.4,baz=267,slow=11,SNR=63
AKTO Aktyubinsk 21.41 66 P **P 19 52 48.8 -0.4**
AKTO pmax pmax
comp=Z,14nm,0.7s,mb4.4
MOR8 Moi Rana 21.44 347 *e*P **P 19 52 50.6 +1.2**
MOR8 Moi Rana 21.44 347 *e*P **P 19 52 50.6 +1.2**
SNR=33
APA Apatity 22.12 7⇑ *i*P **P 19 52 55.3 -1.3**
APA *i* 19 53 06.0
APA *i* S **S 19 56 53.0 -6.5**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.3
APA MLR MLR
comp=Z,500nm,15.0s,MS4.1
APA Apatity 22.12 7 *i* P **P 19 52 55.3 -1.3**
comp=Z,13nm,1.0s,mb4.3
ARU Arti 22.52 50 *c i*P **P 19 52 59.5 -1.5**
ARU *e*PPP 19 53 29.6
ARU S **S 19 57 05.3 -2.2**
ARU SSS 19 57 47.5
ARU pmax pmax
comp=Z,123nm,1.7s,mb5.1
ARU Arti 22.52 50 *e*P **P 19 52 59.6 -1.4**
comp=Z,31nm,0.5s,mb5.0
ARU Arti 22.52 50 *e*P **P 19 52 59.6 -1.4**
comp=Z,31nm,0.5s,mb5.0
ARU S **S 19 57 05.3 -2.2**
LVZ Lovozero 22.55 8 *d i*P **P 19 53 00.4 -0.8**
LVZ pmax pmax
comp=Z,29nm,1.2s,mb4.6
LVZ Lovozero 22.55 8 *i* P **P 19 53 00.4 -0.8**
comp=Z,29nm,1.2s,mb4.6
ABKAR Akbulak array 22.70 69 *e*P **P 19 53 02.4 -0.5**
comp=Z,10nm,0.5s,mb4.5
ABKAR Akbulak array 22.70 69 *e*P **P 19 53 02.4 -0.5**
comp=Z,10nm,0.5s,mb4.5
ESDC Sonseca Array 23.15 266 P **P 19 53 07.0 -0.9**
comp=Z,3.0nm,0.7s,mb3.9,baz=62,slow=10,SNR=12
ESDC Sonseca Array 23.15 266 P **P 19 53 07.0 -0.9**
KTK1 Kautokeino 23.34 357 *e*P **P 19 53 09.0 -0.5**
KTK1 *e*pP 19 53 14.6
KTK1 Kautokeino 23.34 357 *e*P **P 19 53 09.0 -0.5**
SNR=28
SVE Sverdlovsk 23.73 50⇓ *e*P **P 19 53 15.4 +2.0**
SVE pmax pmax
comp=Z,24nm,1.0s,mb4.6
SVE MLR MLR
comp=Z,176nm,14.0s,MS3.7
ARCES ARCESS Array B 23.81 359 P **P 19 53 12.6 -1.4**
comp=Z,1.4nm,0.4s,mb3.7,baz=181,slow=12,SNR=30
ARCES ARCESS Array B 23.81 359 P **P 19 53 12.6 -1.4**
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ARE0 ARCESS Array S 23.81 359 *e*P **P 19 53 11.5 -2.5**
KEV Kevo 24.02 0 *e*P **P 19 53 15.1 -0.9**
KEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
KEV Kevo 24.02 0 *e*p **P 19 53 15.1 -0.9**
comp=Z,6.7nm,0.6s,mb4.2
KEV Kevo 24.02 0 *e*P **P 19 53 15.1 -0.9**
comp=Z,6.7nm,0.6s,mb4.2
TRO Tromso 24.20 353 *e*P **P 19 53 17.6 -0.1**
TRO Tromso 24.20 353 *e*P **P 19 53 17.6 -0.1**
SNR=28
MDT Midelt 27.20 252 P **P 19 53 45.1 -0.1**
comp=Z,1.6nm,0.8s,mb3.6,baz=98,slow=15,SNR=3.4
MDT LR LR 20 03 23.7
comp=Z,69nm,18.8s,MS3.2,baz=0.7,slow=34
BRVK Borovoye 28.97 59 *c i*P **P 19 54 01.3 +0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
BRVK Borovoye 28.97 59 *e*P **P 19 54 01.8 +1.1**
comp=Z,6.1nm,0.7s,mb4.4
BVAR Borovoye Array 29.03 60 P **P 19 54 02.4 +1.1**
comp=Z,3.2nm,0.8s,mb4.1,baz=271,slow=7.1,SNR=15
BVAR Borovoye Array 29.03 60 P **P 19 54 02.4 +1.1**
BVAR pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 31.20 79 *e*P **P 19 54 20.7 +0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
KKAR Karatay Array 31.20 79 *e*P **P 19 54 20.6 +0.1**
comp=Z,1.9nm,0.6s,mb4.1
EKS2 Erkin-Say 33.59 78 *e*P **P 19 54 42.3 +0.8**
comp=Z,4.9nm,0.7s,mb4.5
EKS2 Erkin-Say 33.59 78 *e*P **P 19 54 42.3 +0.8**
comp=Z,4.9nm,0.7s,mb4.5
KBS Kingsbay 33.70 355 *de*P **P 19 54 42.6 +0.5**
KBS Kingsbay 33.70 355 *e*P **P 19 54 42.6 +0.5**
KBL Kabul 33.98 94 P **P 19 54 45.0 0.0**
KBL pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KBL Kabul 33.98 94 P **P 19 54 45.0 0.0**
comp=Z,1.5nm,0.7s,mb4.0
KBL Kabul 33.98 94 P **P 19 54 45.0 0.0**
comp=Z,1.5nm,0.7s,mb4.0
AAK Ala-Archa 34.09 78 P **P 19 54 47.7 +1.8**
comp=Z,4.0nm,0.5s,mb4.6,baz=228,slow=4.5,SNR=12
AAK Ala-Archa 34.09 78 *d i*P **P 19 54 47.0 +1.1**
AAK pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
AAK Ala-Archa 34.09 78 *e*P **P 19 54 47.5 +1.6**
comp=Z,8.6nm,0.8s,mb4.7
AAK Ala-Archa 34.09 78 *i* P **P 19 54 47.0 +1.1**
comp=Z,10.0nm,1.7s,mb4.5
KURK Kurchatov 34.41 63 *d i*P **P 19 54 48.4 -0.1**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KURK Kurchatov 34.41 63 *e*P **P 19 54 47.3 -1.3**
comp=Z,3.1nm,0.9s,mb4.2
KURK *e*PP PP 19 55 59.6 -6.8
KURK Kurchatov 34.41 63 *i* P **P 19 54 48.4 -0.1**
comp=Z,3.0nm,0.8s,mb4.3
TKM2 Tokmak 2 34.74 77 *e*P **P 19 54 52.0 +0.5**
TKM2 pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
TKM2 Tokmak 2 34.74 77 *e*P **P 19 54 52.0 +0.5**
comp=Z,3.4nm,0.9s,mb4.3
TKM2 Tokmak 2 34.74 77 *e*P **P 19 54 52.0 +0.5**
comp=Z,3.4nm,0.9s,mb4.3
NVS Novosibirsk 36.37 55 *e*P **P 19 55 05.3 0.0**
NVS pmax pmax
comp=E,4.0nm,0.8s
NVS pmax pmax
comp=Z,11nm,0.8s,mb4.8
NVS pmax pmax
comp=N,1.0nm,0.6s
NVS Novosibirsk 36.37 55 *e*P **P 19 55 05.3 0.0**
comp=N,1.0nm,0.6s,mb3.9
KSH Kashi 36.40 82 *e*P **P 19 55 07.0 +1.3**
KSH *e*pP pP 19 55 14.3 +3.4
KSH *e*sP sP 19 55 17.7 +4.7
KSH *e*PP PP 19 56 30.8 +2.3
KSH *e*PcP PcP 19 57 31.4 +1.6
KSH *e*S **S 20 00 46.1 -0.2**
KSH *e*sS sS 20 00 58.5 +3.7
KSH *e*ScP ScP 20 01 15.0 -0.4
KSH *e*PcS PcS 20 01 17.9 +0.4
KSH *e*SS SS 20 03 11.9 -13
KSH pmax pmax
comp=Z,3.0nm,0.2s,mb4.9
KSH LR LR
comp=N,210nm,6.2s
KSH LR LR
comp=E,170nm,4.5s
KSH LR LR
comp=Z,190nm,8.6s
ZALV Zalesovo Beam 37.45 56 P **P 19 55 14.9 +0.4**
comp=Z,5.9nm,0.5s,mb4.7,baz=280,slow=9.1,SNR=23
ZALV Zalesovo Beam 37.45 56 P **P 19 55 14.9 +0.4**
ZALV pmax pmax
comp=Z,6.0nm,0.5s,mb4.7
ZALV Zalesovo Beam 37.45 56 P **P 19 55 14.9 +0.4**
comp=Z,6.0nm,0.5s,mb4.7
MK31 Makanchi Array 37.83 68 *e*P **P 19 55 18.3 +0.5**
MK31 Makanchi Array 37.83 68 *e*P **P 19 55 18.3 +0.5**
MKAR Makanchi Array 37.83 68 P **P 19 55 18.6 +0.8**
comp=Z,2.7nm,0.5s,mb4.3,baz=274,slow=8.1,SNR=23
MKAR Makanchi Array 37.83 68 *i* P **P 19 55 18.7 +0.9**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
TORD Torodi Ar. Bea 38.76 221 P **P 19 55 25.1 -0.9**
comp=Z,6.5nm,0.6s,mb4.6,baz=31,slow=8.9,SNR=57
WMQ Urumqi 42.48 70 P **P 19 55 58.0 +1.6**
WMQ pP pP 19 56 08.0 +6.3
WMQ sP sP 19 56 12.0 +8.3
WMQ PP PP 19 57 39.0 +4.2
WMQ S **S 20 02 18.0 +0.4**
WMQ SS SS 20 05 21.0 -5.8
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.6
WMQ pmax pmax
comp=Z,76nm,4.0s
WMQ LR LR
comp=N,82nm,15.0s,MS3.8
WMQ LR LR
comp=E,64nm,15.0s,MS3.8
WMQ LR LR
comp=Z,44nm,15.0s,MS3.5
MOY Mondy 47.47 55 *e*P **P 19 56 37.7 +1.7**
MOY Mondy 47.47 55 *e*P **P 19 56 37.7 +1.7**
DBIC Dimbokro 47.51 225 P **P 19 56 35.0 -1.7**
comp=Z,3.6nm,0.5s,mb4.7,baz=13,slow=7.6,SNR=11
DBIC Dimbokro 47.51 225 P **P 19 56 35.0 -1.7**
DBIC pmax pmax
comp=Z,4.0nm,0.5s
DBIC Dimbokro 47.51 225 *e*P **P 19 56 34.3 -2.4**
comp=Z,30nm,1.3s,mb5.2
DBIC Dimbokro 47.51 225 P **P 19 56 35.0 -1.7**
comp=Z,4.0nm,0.5s,mb4.7
DANN Dangsing 47.81 91 *e*P **P 19 56 40.4 +1.4**
comp=Z,41nm,0.8s,mb5.5
LIC Lamto 47.98 225 *e*P **P 19 56 42.0 +1.7**
LIC Lamto 47.98 225 *e*P **P 19 56 42.0 +1.7**
KOLN Koldanda 48.05 92 *e*P **P 19 56 41.9 +1.1**
comp=Z,30nm,0.8s,mb5.4
GKN Gorkha 48.63 91 *e*P **P 19 56 46.2 +0.9**
comp=Z,76nm,0.8s
TLY Talaya 48.96 54 *e*P **P 19 56 48.2 +0.7**
TLY pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TLY MLR MLR
comp=Z,93nm,16.0s,MS3.9
TLY Talaya 48.96 54 *e*P **P 19 56 48.8 +1.3**
comp=Z,9.0nm,0.9s,mb4.8
TLY Talaya 48.96 54 *e*P **P 19 56 48.2 +0.7**
comp=Z,93nm,16.0s
DMN Daman 49.20 91 *e*P **P 19 56 50.9 +1.2**
KKN Kakani 49.22 90 *e*P **P 19 56 50.5 +0.7**
comp=Z,53nm,0.6s
PKIN Phulchoki 49.43 90 *e*P **P 19 56 52.5 +1.1**
comp=Z,10nm,0.5s,mb5.1
PKI Pulchoki 49.44 90 *e*P **P 19 56 52.3 +0.8**
comp=Z,33nm,0.8s,mb5.4
GUN Gumba 49.56 90 *e*P **P 19 56 53.3 +0.9**
comp=Z,65nm,0.8s
TAPN Taplejung 51.19 89 *e*P **P 19 57 05.8 +1.1**
comp=Z,63nm,1.0s,mb5.5
ODAN Odare 51.26 90 *e*P **P 19 57 06.2 +0.9**
comp=Z,32nm,0.6s,mb5.4
LSA Lhasa 52.16 84 P **P 19 57 13.6 +1.6**
LSA pmax pmax
comp=Z,40nm,0.8s,mb5.4
SONM Songino Array 52.32 57 P **P 19 57 14.0 +1.1**
comp=Z,4.8nm,0.5s,mb4.7,baz=297,slow=8.6,SNR=55
SONM Songino Array 52.32 57 P **P 19 57 14.0 +1.1**
SONM pmax pmax
comp=Z,5.0nm,0.5s
SONM Songino Array 52.32 57 P **P 19 57 14.0 +1.1**
comp=Z,5.0nm,0.5s,mb4.7
GTA Gaotai 52.55 69 *e*P **P 19 57 15.9 +1.1**
GTA pP pP 19 57 24.2 +4.1
GTA sP sP 19 57 28.5 +6.4
GTA pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
ULN Ulaanbaatar 52.69 57 *e*P **P 19 57 15.6 -0.1**
ULN pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
ULN Ulaanbaatar 52.69 57 *e*P **P 19 57 15.6 -0.1**
comp=Z,1.2nm,0.6s,mb4.0
ULN Ulaanbaatar 52.69 57 *e*P **P 19 57 15.6 -0.1**
comp=Z,1.2nm,0.6s,mb4.0
LZH Lanzhou 57.06 70 *e*P **P 19 57 48.6 +1.1**
LZH pP pP 19 57 56.3 +3.5
LZH *e*PP PP 19 59 56.5 +2.5
LZH pmax pmax
comp=Z,18nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,53nm,6.5s
LZH LR LR

comp=N,370nm,15.3s,MS4.8
LZH LR LR
comp=E,350nm,14.7s,MS4.8
LZH LR LR
comp=Z,510nm,19.5s,MS4.6
HHC Hu-ho-hao-te 59.22 62 *eP* **P 19 58 01.8 -0.7**
HHC pP pP 19 58 12.0 +4.1
HHC sP sP 19 58 15.9 +6.0
HHC PcP PcP 19 58 50.5 -0.2
HHC PP PP 20 00 14.8 +1.8
HHC ScP ScP 20 02 47.3 -3.2
HHC S **S 20 06 03.9 -5.5**
HHC sS sS 20 06 21.4 +3.1
HHC ScS ScS 20 07 44.9 -6.8
HHC SS SS 20 10 00.3 -3.0
HHC pmax pmax
comp=Z,19nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,71nm,5.8s
HHC LR LR
comp=N,130nm,15.5s,MS4.3
HHC LR LR
comp=E,170nm,18.4s,MS4.3
HHC LR LR
comp=Z,110nm,12.7s
CD2 Chengdu 60.10 75 *eP* **P 19 58 08.4 -0.3**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,30nm,5.2s
PALK Pallekele 60.24 112 *eP* **P 19 58 09.6 -0.2**
PALK pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
PALK Pallekele 60.24 112 *eP* **P 19 58 09.6 -0.2**
comp=Z,9.6nm,0.5s,mb5.1
XAN Xi'an 61.62 69 P **P 19 58 19.5 +0.5**
XAN pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
XAN pmax pmax
comp=Z,13nm,5.5s
BJI Beijing 62.52 60 P **P 19 58 23.4 -1.5**
BJI S **S 20 06 48.4 -3.2**
BJI SS SS 20 10 54.3 -0.7
BJI pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
BJI pmax pmax
comp=Z,89nm,5.6s
BJI LR LR
comp=N,110nm,18.6s,MS4.2
BJI LR LR
comp=E,99nm,18.6s,MS4.2
BJI LR LR
comp=Z,33nm,23.8s
BILL Bilibino 62.52 16 *eP* **P 19 58 24.2 -0.3**
BILL pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KMI Kunming 63.05 81 P **P 19 58 29.7 +1.0**
KMI pP pP 19 58 40.3 +6.2
KMI sP sP 19 58 44.3 +8.2
KMI S **S 20 06 53.4 -5.2**
KMI sS sS 20 07 13.6 +6.1
KMI pmax pmax
comp=Z,13nm,0.9s,mb5.1
KMI pmax pmax
comp=Z,38nm,7.1s
KMI LR LR
comp=N,74nm,20.7s,MS3.9
KMI LR LR
comp=E,64nm,23.7s,MS3.9
KMI LR LR
comp=Z,85nm,21.7s,MS3.9
CHTO Chiang Mai 64.56 89 *eP* **P 19 58 38.1 -0.6**
CHTO pmax pmax
comp=Z,13nm,0.8s,mb5.0
CHTO Chiang Mai 64.56 89 *eP* **P 19 58 38.1 -0.6**
comp=Z,13nm,0.8s,mb5.0
CM31 Chiang Mai Arr 64.80 89 *eP* **P 19 58 39.8 -0.4**
comp=Z,13nm,0.9s,mb5.0
CMAR Chiang Mai Arr 64.80 89 P **P 19 58 40.4 +0.1**
comp=Z,9.4nm,0.8s,mb4.9,baz=305,slow=7.5,SNR=91
CMAR Chiang Mai Arr 64.80 89 P **P 19 58 40.4 +0.1**
CMAR pmax pmax
comp=Z,9.0nm,0.8s
GYA Guiyang 64.88 77 P **P 19 58 41.2 +0.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KLR Kul'dur 65.20 44 *eP* **P 19 58 38.8 -3.6**
TSUM Tsumeb 65.20 189 *eP* **P 19 58 41.6 -1.1**
comp=Z,2.7nm,1.0s,mb4.2
CN2 Changchun 65.51 52 *eP* **P 19 58 44.0 -0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
COLD Coldfoot 67.28 359 *eP* **P 19 58 55.8 +0.3**
comp=Z,1.9nm,0.8s,mb4.2
YKA Yellowknife Ar 67.68 342 P **P 19 58 58.1 0.0**
comp=Z,1.4nm,0.6s,mb4.2,baz=28,slow=6.0,SNR=8.8
YKA Yellowknife Ar 67.68 342 P **P 19 58 58.1 0.0**
YKA pmax pmax
comp=Z,1.0nm,0.6s
NJ2 Nanjing 69.29 65 *eP* PcP 19 59 26.5 -5.8
NJ2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
ILAR Eielson Array 69.65 357 P **P 19 59 10.9 +0.6**
comp=Z,0.6nm,0.7s,mb3.7,baz=356,slow=6.3,SNR=8.7
ILAR Eielson Array 69.65 357 P **P 19 59 10.9 +0.6**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
LBTB Lobatse 70.48 181 *eP* **P 19 59 15.4 -0.4**
LBTB pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LBTB Lobatse 70.48 181 *eP* **P 19 59 15.4 -0.4**
comp=Z,10nm,0.9s,mb4.8
TRF Thorofare Moun 71.07 359 *eP* **P 19 59 16.6 -2.4**
comp=Z,17nm,1.6s,mb4.7
KSRS Korea Array 71.15 56 P **P 19 59 20.0 0.0**
comp=Z,1.1nm,0.8s,mb3.8,baz=321,slow=5.8,SNR=4.4
KSRS Korea Array 71.15 56 P **P 19 59 20.0 0.0**
KSRS pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
PPLA Purkeypile 71.65 359 *eP* **P 19 59 19.3 -3.2**
comp=Z,11nm,1.2s,mb4.7
YSS Yuzh-Sakhalins 72.00 40 *eP* **P 19 59 25.0 +0.1**
YSS Yuzh-Sakhalins 72.00 40 *eP* **P 19 59 23.9 -1.0**
comp=Z,13nm,1.0s,mb4.8
PETK Petropavlovsk- 72.98 28 LR LR 20 31 24.1
comp=Z,125nm,20.8s,MS4.2,baz=96,slow=36
BOSA Boshof 74.07 181 P **P 19 59 36.6 -0.6**
comp=Z,5.1nm,0.9s,mb4.5,baz=54,slow=9.3,SNR=4.9
BOSA Boshof 74.07 181 P **P 19 59 36.6 -0.6**
BOSA pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BOSA Boshof 74.07 181 *eP* **P 19 59 36.4 -0.8**
comp=Z,7.5nm,0.9s,mb4.6
YHNB Yeheng 75.93 69 P **P 19 59 48.1 -0.1**
SUR Sutherland 77.99 185 P **P 20 00 02.4 +3.0**
comp=Z,8.2nm,0.8s,mb4.7
PDAR Pinedale Array 83.56 329 P **P 20 00 29.5 +0.1**
comp=Z,0.3nm,0.7s,mb3.5,baz=57,slow=5.5,SNR=3.0
ANMO Albuquerque 89.12 323 LR LR 20 42 39.1
comp=Z,53nm,18.6s,MS4.0,baz=65,slow=37
BDFB Brasilia 90.70 248 P **P 20 01 04.8 +0.5**
comp=Z,1.4nm,0.4s,mb4.6,baz=131,slow=11,SNR=2.4
BDFB Brasilia 90.70 248 P **P 20 01 04.8 +0.5**
BDFB pmax pmax
comp=Z,1.0nm,0.4s
WRA Warramunga Arr 116.31 92 PKP PKPdf 20 06 43.3 -1.7
comp=Z,0.4nm,1.0s,baz=322,slow=1.8,SNR=3.3
ASAR Alice Springs 118.45 95 PKP PKPdf 20 06 47.4 -1.7
comp=Z,0.1nm,0.3s,baz=318,slow=1.4,SNR=8.5
STKA Stephens Creek 128.86 98 PKP PKPdf 20 07 07.8 -1.0
comp=Z,0.9nm,1.1s,baz=260,slow=20,SNR=3.7

BJI ***06*** *20:22:26.4, 51.°10N×178.°90W, h55km, mB4.7/21, mb4.8/35, Ms4.6/13, Ms7 4.1/12*
IDC ***06*** *20:22:27.4±2.5, 51.°40N×179.°01W, h20km±15km, mb4.2/24, mb1 4.4/25, mb1mx4.4/30, mbtmp4.2/25, ML4.6/1, MS3.6/13, Ms1 3.6/13, ms1mx3.4/41, Error ellipse: s-maj=17.5km s-min=10.4km az=160.0*
MOS ***06*** *20:22:27.7±1.0, 51.°34N×178.°90W, h33km, mb4.7/54, Error ellipse: s-maj=9.7km s-min=6.4km az=80.2*
NEIC ***06*** *20:22:28.4, 51.°10N×178.°94W, h26km, mb4.6/67, ML4.6(AEIC), ML4.3(PMR), After AEIC.*
ISCJB ***06*** *20:22:29.9±0.7, 51.°39N±0.°05×179.°00W±0.°03, h50km±6km, mb4.6/121, MS3.7/19, Error ellipse: s-maj=8.9km s-min=3.0km az=179.8*
ISC 06 20:22:32.7±0.7, 51.°43N±0.°05×179.°00W±0.°03, h59km±5km, h53km±2.5km: pP-P, n409, c0.981/401, mb4.6/121, MS3.7/19, 65C-80D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.06**	**268**	*eP*	**Pn**	**20 22 47.6**	**-3.9**
GSTR	**Great Sitkin T**	**1.94**	**69**	*ePn*	**Pn**	**20 23 02.5**	**-0.8**
GSTR				*eSn*	**Sn**	**20 23 28.7**	**+2.1**
SMY	**Shemya**	**4.45**	**290**	P	**Pn**	**20 23 39.2**	**+1.6**
SMY				S	**Sn**	**20 24 28.1**	**+0.1**
NIKO	**Nikolski**	**6.43**	**72**	P	**Pn**	**20 24 04.3**	**-0.3**
UNV	**Unalaska Valle**	**7.98**	**67**	*ePn*	**Pn**	**20 24 26.0**	**+0.1**
UNV	25nm,0.5s			*eSn*	**Sn**	**20 25 53.8**	**-0.8**
CHGN	**Chignik**	**13.07**	**60**	*ePn*	**Pn**	**20 25 40.2**	**+4.9**
PETK	**Petropavlovsk-**	**14.35**	**286**	Pn	**Pn**	**20 25 52.8**	**+0.3**
	0.3nm,0.3s,baz=97,slow=15,SNR=6.7						
KDAK	**Kodiak Island**	**16.50**	**57**	Pn	**Pn**	**20 26 16.8**	**-3.2**
	2.1nm,0.3s,baz=126,slow=2.4,SNR=9.2						
KDAK	**Kodiak Island**	**16.50**	**57**	*i P*	**Pn**	**20 26 17.6**	**-2.4**
RSO	**Redoubt South**	**17.14**	**48**	*ePn*	**Pn**	**20 26 29.4**	**+1.5**
BILL	**Bilibino**	**18.14**	**342**	*d iP*	**Pn**	**20 26 45.7**	**+5.6**
BILL				pmax	pmax		
	comp=Z,15nm,1.2s						
BILL				MLR	MLR		
	comp=Z,300nm,18.0s						
SLKM	**Skilak Lake**	**18.35**	**49**	*eP*	**Pn**	**20 26 42.7**	**+0.1**
PPLA	**Purkeypile**	**18.36**	**41**	*ePn*	**Pn**	**20 26 44.3**	**+1.6**
	comp=Z,17nm,0.7s						
RC01	**Rabbit Creek A**	**18.75**	**48**	*ePn*	**Pn**	**20 26 47.9**	**+0.4**
SEY	**Seymchan**	**19.12**	**318**	⇑*eP*	**Pn**	**20 26 56.2**	**+4.3**
TRF	**Thorofare Moun**	**19.38**	**41**	*eP*	**Pn**	**20 26 53.2**	**-1.7**
	comp=Z,23nm,1.0s						
BPAW	**Bear Paw Mtn.**	**19.39**	**38**	*eP*	**Pn**	**20 26 54.1**	**-0.9**
	comp=Z,16nm,0.7s						
SML	**Sawmill**	**19.61**	**46**	*eP*	**Pn**	**20 26 55.4**	**-2.3**
SML				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SML	**Sawmill**	**19.61**	**46**	*eP*	**Pn**	**20 26 55.4**	**-2.4**
	comp=Z,1.9nm,0.5s						
MCK	**McKinley**	**20.04**	**41**	*eP*	**P**	**20 27 00.0**	**-0.5**
MCK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MCK	**McKinley**	**20.04**	**41**	*eP*	**P**	**20 26 60.0**	**-0.6**
	comp=Z,8.8nm,0.7s						
COLA	**College**	**20.95**	**38**	*eP*	**P**	**20 27 10.5**	**+0.2**
COLA				*e*		20 27 23.7	
COLA				pmax	pmax		
	comp=Z,12nm,0.8s						
COLA	**College**	**20.95**	**38**	*eP*	**P**	**20 27 10.5**	**+0.2**
	comp=Z,12nm,0.8s						
COLA				*e*		20 27 23.7	
PAX	**Paxson**	**21.24**	**44**	*eP*	**P**	**20 27 13.0**	**-0.4**
PAX				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.4						
PAX	**Paxson**	**21.24**	**44**	*eP*	**P**	**20 27 13.0**	**-0.4**
	comp=Z,11nm,0.6s,mb4.3						
COLD	**Coldfoot**	**21.27**	**31**	*eP*	**P**	**20 27 13.9**	**+0.2**
	comp=Z,4.3nm,0.5s,mb4.0						
ILAR	**Eielson Array**	**21.28**	**39**	P	**P**	**20 27 11.8**	**-2.1**
	comp=Z,2.3nm,0.5s,mb3.7,baz=243,slow=8.9,SNR=43						
ILAR				PcP	PcP	20 31 15.4	-0.7
	comp=Z,1.1nm,0.6s,baz=280,slow=3.3,SNR=12						
ILAR				ScP	ScP	20 34 50.0	+2.4
	comp=Z,0.3nm,0.7s,baz=250,slow=2.9,SNR=4.1						
DOT	**Dot Lake**	**22.05**	**43**	*eP*	**P**	**20 27 21.1**	**-0.9**
	comp=Z,42nm,0.7s,mb5.0						
PNL	**Peninsula**	**23.55**	**54**	*eP*	**P**	**20 27 36.8**	**-0.6**
PNL				*e*		20 27 50.9	
EGAK	**Eagle**	**23.59**	**41**	*eP*	**P**	**20 27 36.9**	**-0.8**
	comp=Z,14nm,0.6s,mb4.6						
DAWY	**Dawson**	**24.15**	**43**	*eP*	**P**	**20 27 41.3**	**-1.6**
YSS	**Yuzh-Sakhalins**	**25.19**	**275**	⇑*iP*	**P**	**20 27 52.3**	**-0.2**
YSS				*e*		20 27 57.6	
YSS	**Yuzh-Sakhalins**	**25.19**	**275**	*eP*	**P**	**20 27 52.4**	**0.0**
	comp=Z,19nm,0.8s,mb4.7						
ASAJ	**Asahikawa**	**26.58**	**269**	P	**P**	**20 28 04.8**	**-0.3**
	comp=Z,14nm,1.0s,mb4.4,baz=48,slow=6.8,SNR=17						
ASAJ	**Asahikawa**	**26.58**	**269**	P	**P**	**20 28 04.8**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,14nm,1.0s						
ASAJ	**Asahikawa**	**26.58**	**269**	*eP*	**P**	**20 28 04.9**	**-0.1**
	comp=Z,7.1nm,1.0s,mb4.2						
ASAJ				*e*	pP	20 28 17.1	-2.3
ERM	**Erimo**	**27.33**	**265**	⇓*eP*	**P**	**20 28 09.5**	**-2.3**
ERM				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
INK	**Inuvik**	**27.49**	**35**	P	**P**	**20 28 12.0**	**-0.9**
	comp=Z,1.6nm,0.4s,mb3.9,baz=294,slow=8.7,SNR=8.4						
INK				PcP	PcP	20 31 29.4	-0.1
	comp=Z,2.0nm,0.7s,baz=69,slow=2.7,SNR=4.1						
INK				LR	LR	20 39 51.3	
	comp=Z,82nm,18.2s,MS3.3,baz=288,slow=38						
INK	**Inuvik**	**27.49**	**35**	P	**P**	**20 28 12.0**	**-0.9**
INK						20 31 29.5	
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK				MLR	MLR		
	comp=Z,82nm,18.2s						
INK	**Inuvik**	**27.49**	**35**	P	**P**	**20 28 12.0**	**-0.9**
INK				PcP	PcP	20 31 29.4	-0.1
INK				LR	LR	20 39 51.3	
YAK	**Yakutsk**	**29.29**	**311**	⇑*eP*	**P**	**20 28 31.3**	**+2.3**
KLR	**Kul'dur**	**31.05**	**286**	*eP*	**P**	**20 28 39.8**	**-4.9**
MJAR	**Matsushiro Arr**	**33.67**	**261**	P	**P**	**20 29 07.5**	**-0.3**
	comp=Z,1.9nm,0.8s,mb4.0,baz=55,slow=7.5,SNR=10						
MJAR				PcP	PcP	20 31 46.1	-0.2
	comp=Z,1.7nm,0.8s,baz=77,slow=2.4,SNR=7.5						
MJAR				ScP	ScP	20 35 28.3	+2.6
	comp=Z,0.2nm,0.4s,baz=3.1,slow=1.1,SNR=4.4						
MAJO	**Matsushiro**	**33.67**	**261**	*eP*	**P**	**20 29 07.1**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
MAJO	**Matsushiro**	**33.67**	**261**	*eP*	**P**	**20 29 07.1**	**-0.6**
	comp=Z,5.8nm,1.0s,mb4.5						
MAT	**Matsushiro**	**33.67**	**261**	P	**P**	**20 29 06.8**	**-1.0**
MDJ	**Mudanjiang**	**34.44**	**279**	P	**P**	**20 29 13.2**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,60nm,5.7s						
YKA	**Yellowknife Ar**	**35.29**	**46**	P	**P**	**20 29 20.7**	**-0.7**
	comp=Z,1.9nm,0.6s,mb4.2,baz=283,slow=8.3,SNR=10						
YKA				PcP	PcP	20 31 50.6	+0.1
	comp=Z,2.8nm,1.1s,baz=284,slow=3.5,SNR=4.1						
YKA				LR	LR	20 43 34.9	
	comp=Z,11nm,19.9s,MS2.6,baz=185,slow=36						
YKA	**Yellowknife Ar**	**35.29**	**46**	P	**P**	**20 29 20.7**	**-0.7**
YKA						20 31 50.6	
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA				MLR	MLR		
	comp=Z,11nm,19.9s						
YKA	**Yellowknife Ar**	**35.29**	**46**	P	**P**	**20 29 20.7**	**-0.7**
YKA				PcP	PcP	20 31 50.6	+0.1
YKA				LR	LR	20 43 34.9	
JCW	**Jim Creek**	**36.17**	**72**	*eP*	**P**	**20 29 29.6**	**+0.4**
	comp=Z,10nm,0.8s,mb4.8						
LON	**Longmire**	**36.92**	**74**	*eP*	**P**	**20 29 35.4**	**-0.2**
LON				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
LON	**Longmire**	**36.92**	**74**	*eP*	**P**	**20 29 35.4**	**-0.2**
	comp=Z,4.6nm,0.6s,mb4.5						
F04A	**Amboy**	**36.95**	**76**	⇑P	**P**	**20 29 36.6**	**+0.8**
	baz=37						
G04A	**Mulino**	**37.28**	**77**	⇓P	**P**	**20 29 39.8**	**+1.2**
	baz=37						
ETW	**Entiat**	**37.40**	**72**	*eP*	**P**	**20 29 39.9**	**+0.3**
	comp=Z,17nm,0.8s,mb4.9						
CN2	**Changchun**	**37.41**	**281**	*eP*	**P**	**20 29 38.8**	**-1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
B08A	**Colville Reser**	**37.64**	**71**	P	**P**	**20 29 41.9**	**+0.3**
	baz=38,SNR=11						
H04A	**Detroit Lake**	**37.73**	**77**	⇓P	**P**	**20 29 42.7**	**+0.3**
	baz=38						
RSW	**Rattlesnake Hi**	**38.43**	**73**	*eP*	**P**	**20 29 48.6**	**+0.3**
	comp=Z,18nm,0.5s,mb5.1						
OD2	**Odessa Site #2**	**38.47**	**72**	*eP*	**P**	**20 29 47.8**	**-0.8**
	comp=Z,8.9nm,0.8s,mb4.5						
HAWA	**Hanford**	**38.47**	**73**	*eP*	**P**	**20 29 48.8**	**+0.1**
	comp=Z,8.7nm,0.5s,mb4.7						
D08A	**Wollman Farm,**	**38.51**	**72**	⇓P	**P**	**20 29 48.9**	**-0.1**
	baz=38						
C09A	**Chrisman Ranch**	**38.53**	**71**	⇑P	**P**	**20 29 48.9**	**-0.2**
	baz=38						
NEW	**Newport**	**38.98**	**70**	P	**P**	**20 29 53.0**	**+0.1**
	baz=39,SNR=9.5						
NEW	**Newport**	**38.98**	**70**	*eP*	**P**	**20 29 52.8**	**-0.1**
NEW				pmax	pmax		
	comp=Z,13nm,0.9s						
NEW	**Newport**	**38.98**	**70**	*eP*	**P**	**20 29 52.8**	**-0.1**
	comp=Z,14nm,0.9s,mb4.7						
YBH	**Yreka Blue Hor**	**39.00**	**82**	P	**P**	**20 29 54.2**	**+1.1**
	comp=Z,2.4nm,0.8s,mb4.0,baz=11,slow=5.2,SNR=2.6						
YBH	**Yreka Blue Hor**	**39.00**	**82**	P	**P**	**20 29 54.2**	**+1.1**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
E09A	**Wood Farm, Sta**	**39.24**	**72**	⇑P	**P**	**20 29 55.4**	**+0.3**
	baz=39,SNR=5.6						
G08A	**Pilot Rock**	**39.37**	**75**	⇓P	**P**	**20 29 56.0**	**-0.2**
	baz=39						
KSRS	**Korea Array**	**39.51**	**271**	P	**P**	**20 29 57.9**	**+0.4**
	comp=Z,3.5nm,0.8s,mb4.1,baz=57,slow=8.4,SNR=16						
KSRS				LR	LR	20 43 43.0	
	comp=Z,34nm,20.9s,MS3.2,baz=50,slow=32						
I07A	**Izee**	**39.68**	**77**	⇓P	**P**	**20 29 59.4**	**+0.6**
	baz=40,SNR=5.6						
F10A	**Beach Ranch, E**	**40.06**	**73**	⇓P	**P**	**20 30 01.7**	**-0.2**
	baz=40						
A13A	**Flathead Natio**	**40.24**	**67**	⇓P	**P**	**20 30 03.1**	**-0.2**
	baz=40						
JNU	**Nakatsue**	**40.45**	**263**	*eP*	**P**	**20 30 04.9**	**-0.4**
	comp=Z,8.3nm,1.3s,mb4.3						
WALA	**Waterton Lakes**	**40.47**	**67**	*eP*	**P**	**20 30 05.1**	**-0.1**
	comp=Z,0.1nm,0.8s						
B13A	**Whitefish**	**40.48**	**68**	⇓P	**P**	**20 30 05.3**	**-0.1**
	baz=40						
BSMT	**Bassoo Peak**	**40.55**	**69**	*eP*	**P**	**20 30 05.8**	**-0.1**
	comp=Z,9.5nm,0.8s,mb4.5						
D12A	**Red Ives Fores**	**40.62**	**70**	⇑P	**P**	**20 30 06.1**	**-0.4**
	baz=40						
C13A	**Hot Springs**	**40.76**	**69**	⇓P	**P**	**20 30 07.7**	**0.0**
	baz=41						
A14A	**Double T Ranch**	**40.79**	**67**	P	**P**	**20 30 08.1**	**+0.2**
	baz=41,SNR=11						
E12A	**Beaver Dam Sad**	**40.82**	**71**	⇑P	**P**	**20 30 07.7**	**-0.5**
	baz=41						
D13A	**Huson**	**41.13**	**70**	⇑P	**P**	**20 30 09.7**	**-0.9**
	baz=41						
B14A	**Marquette Ranc**	**41.18**	**67**	⇓P	**P**	**20 30 11.2**	**+0.2**
	baz=41,SNR=6.3						
A15A	**Johnson Ranch,**	**41.18**	**66**	⇑P	**P**	**20 30 10.4**	**-0.7**
	baz=41						
C14A	**Swan Lake**	**41.20**	**68**	⇓P	**P**	**20 30 11.2**	**-0.1**
	baz=41						
F12A	**Elk City**	**41.35**	**72**	P	**P**	**20 30 12.6**	**+0.1**
	baz=41,SNR=9.4						
MSO	**Missoula**	**41.57**	**70**	⇓P	**P**	**20 30 13.8**	**-0.4**
	baz=41						
MSO	**Missoula**	**41.57**	**70**	*eP*	**P**	**20 30 13.6**	**-0.6**
	comp=Z,4.6nm,1.0s,mb4.1						
B15A	**Bradely Ranch,**	**41.61**	**67**	⇓P	**P**	**20 30 14.3**	**-0.3**
	baz=42,SNR=6.4						
SLMT	**Seeley Lake**	**41.62**	**69**	*eP*	**P**	**20 30 13.9**	**-0.8**
	comp=Z,6.2nm,0.9s,mb4.2						
E13A	**Victor**	**41.62**	**70**	⇓P	**P**	**20 30 14.6**	**-0.1**
	baz=42,SNR=5.0						
G12A	**Big Creek, Yel**	**41.64**	**73**	P	**P**	**20 30 15.2**	**+0.3**
	baz=42,SNR=6.3						
D14A	**Greenough**	**41.69**	**69**	⇑P	**P**	**20 30 15.0**	**-0.3**
	baz=42,SNR=11						
A16A	**West Butte Ran**	**41.85**	**66**	⇓P	**P**	**20 30 15.9**	**-0.6**
	baz=42						
C15A	**Salmond Ranch,**	**41.86**	**68**	P	**P**	**20 30 17.0**	**+0.4**
	baz=42,SNR=12						
CHMT	**Chamberlain Mo**	**41.93**	**69**	*eP*	**P**	**20 30 14.9**	**-2.3**
	comp=Z,1.6nm,0.4s,mb4.0						
E14A	**Clinton**	**42.05**	**70**	⇑P	**P**	**20 30 18.3**	**+0.1**
	baz=42						
B16A	**M & M Farms, S**	**42.05**	**67**	⇓P	**P**	**20 30 17.6**	**-0.6**
	baz=42						
H12A	**Diamond D Ranc**	**42.24**	**73**	P	**P**	**20 30 19.5**	**-0.2**
	baz=42,SNR=5.9						
MFID	**Camas Ranch**	**42.28**	**75**	⇑P	**P**	**20 30 20.2**	**+0.1**
	baz=42						
D15A	**Lincoln**	**42.29**	**69**	⇓P	**P**	**20 30 20.1**	**-0.1**
	baz=42						
G13A	**Cobalt**	**42.31**	**72**	P	**P**	**20 30 20.6**	**+0.3**
	baz=42,SNR=9.7						
C16A	**Fuhringer Ranc**	**42.34**	**67**	⇑P	**P**	**20 30 20.0**	**-0.6**
	baz=42						
A17A	**Triple J Farms**	**42.36**	**65**	⇓P	**P**	**20 30 20.2**	**-0.5**
	baz=42						
I12A	**Atlanta**	**42.48**	**74**	P	**P**	**20 30 22.1**	**+0.3**
	baz=42,SNR=12						
E15A	**Deer Lodge**	**42.54**	**70**	⇓P	**P**	**20 30 22.0**	**-0.2**
	baz=42						
HRY	**Holter Researc**	**42.86**	**69**	*eP*	**P**	**20 30 24.6**	**-0.3**
C17A	**Wharram Farm,**	**43.00**	**67**	⇓P	**P**	**20 30 24.8**	**-1.1**
	baz=43						
I13A	**Wildhorse Cree**	**43.03**	**74**	P	**P**	**20 30 26.5**	**+0.3**
	baz=43,SNR=12						
HLID	**Hailey**	**43.05**	**74**	⇑P	**P**	**20 30 26.7**	**+0.3**
	baz=43						
HLID	**Hailey**	**43.05**	**74**	*eP*	**P**	**20 30 26.2**	**-0.1**
	comp=Z,4.1nm,0.7s,mb4.3						
H14A	**Leadore**	**43.09**	**72**	⇓P	**P**	**20 30 26.8**	**+0.1**
	baz=43,SNR=7.2						
MCMT	**McKenzie Canyo**	**43.28**	**72**	*eP*	**P**	**20 30 27.6**	**-0.6**
	comp=Z,2.9nm,0.6s,mb4.2						
J13A	**Cove Ranch, Pi**	**43.28**	**74**	P	**P**	**20 30 28.7**	**+0.5**
	baz=43,SNR=12						
G15A	**Dillon**	**43.31**	**71**	⇓P	**P**	**20 30 27.9**	**-0.6**
	baz=43						
I14A	**Mackay**	**43.42**	**73**	P	**P**	**20 30 29.9**	**+0.5**
	baz=43,SNR=8.2						
H15A	**Lima**	**43.52**	**72**	⇓P	**P**	**20 30 30.6**	**+0.4**
	baz=43						
BOZ	**Bozeman (W)**	**43.55**	**70**	⇑P	**P**	**20 30 30.5**	**+0.1**
	baz=43						
BOZ	**Bozeman (W)**	**43.55**	**70**	*eP*	**P**	**20 30 30.2**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
BOZ	**Bozeman (W)**	**43.55**	**70**	*eP*	**P**	**20 30 30.2**	**-0.2**
	comp=Z,7.4nm,1.0s,mb4.4						
E17A	**Martinsdale**	**43.56**	**69**	⇑P	**P**	**20 30 30.8**	**+0.3**
	baz=43						
B19A	**Brinkman Farms**	**43.61**	**65**	⇓P	**P**	**20 30 30.5**	**-0.3**
	baz=44						
NVAR	**Mina Array Bea**	**43.67**	**83**	P	**P**	**20 30 32.3**	**+0.9**
	comp=Z,1.3nm,0.6s,mb3.8,baz=299,slow=7.2,SNR=11						
NVAR				ScP	ScP	20 36 08.8	+5.0
	comp=Z,0.2nm,0.6s,baz=290,slow=5.4,SNR=2.7						
G16A	**Moss Hill, Enn**	**43.68**	**71**	⇓P	**P**	**20 30 31.3**	**-0.1**
	baz=44						
J14A	**Carey**	**43.72**	**74**	P	**P**	**20 30 32.5**	**+0.8**
	baz=44,SNR=8.2						
D18A	**Linhart Farms,**	**43.78**	**67**	⇓P	**P**	**20 30 32.8**	**+0.6**
	baz=44						
C19A	**Slack Wire Ran**	**43.93**	**66**	⇓P	**P**	**20 30 33.4**	**0.0**
	baz=44						
F17A	**Fitzpatrick Pl**	**43.98**	**69**	⇓P	**P**	**20 30 34.4**	**+0.6**
	baz=44						
E18A	**Harlowton**	**44.06**	**68**	⇓P	**P**	**20 30 34.9**	**+0.5**
	baz=44						
G17A	**Pierce Place,**	**44.26**	**70**	⇓P	**P**	**20 30 36.9**	**+0.9**
	baz=44						
H16A	**Russell Place,**	**44.30**	**71**	⇓P	**P**	**20

comp=Z,5.5nm,0.6s,mb4.6
FLWY Flagg Ranch 44.97 71 *e*P **P 20 30 40.5 -1.2**
comp=Z,8.7nm,0.7s,mb4.7
C21A Desert Coulee 44.99 65 ⇑P **P 20 30 41.6 -0.3**
baz=45
F19A Roth Farm, Mol 45.01 68 ⇓P **P 20 30 41.9 -0.1**
baz=45
RRI2 Red Ridge 45.02 73 *e*P **P 20 30 43.2 +1.0**
comp=Z,6.3nm,0.8s,mb4.5
RRI2 *e* pP 20 30 56.2 -1.1
HVU Hansel Valley 45.06 75 *e*P **P 20 30 42.3 -0.2**
HVU pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
HVU Hansel Valley 45.06 75 *e*P **P 20 30 42.3 -0.1**
comp=Z,8.3nm,0.6s,mb4.7
E20A Meyer Farm, Mu 45.12 67 ⇓P **P 20 30 42.4 -0.5**
baz=45
MOOW Moose Ponds 45.14 72 *e*P **P 20 30 42.9 -0.2**
K16A Soda Springs 45.16 73 ⇑P **P 20 30 45.0 +1.7**
baz=45
RLMT Red Lodge 45.23 69 ⇑P **P 20 30 44.3 +0.5**
baz=45,SNR=8.7
RLMT Red Lodge 45.23 69 *e*P **P 20 30 43.7 -0.1**
comp=Z,17nm,0.7s,mb5.0
BJI Beijing 45.24 282 P **P 20 30 42.2 -1.7**
BJI S **S 20 37 18.4 -1.2**
BJI pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
BJI pmax pmax
comp=Z,110nm,5.6s
BJI LR LR
comp=N,64nm,25.8s,MS3.6
BJI LR LR
comp=E,60nm,25.9s,MS3.6
BJI LR LR
comp=Z,54nm,25.6s,MS3.4
REDW Red Top Meadow 45.30 72 *e*P **P 20 30 44.7 +0.4**
SNOW Snow King Moun 45.30 72 *e*P **P 20 30 45.1 +0.8**
LOHW Long Hollow 45.30 72 *e*P **P 20 30 43.5 -0.8**
LOHW *e* pP 20 30 57.8 -1.7
R11A Troy Canyon, C 45.40 81 ⇑P **P 20 30 45.5 +0.2**
baz=45
M15A Larsen Ranch, 45.44 75 ⇑P **P 20 30 45.7 +0.2**
baz=45
F20A Billings 45.50 68 ⇑P **P 20 30 45.7 -0.2**
baz=45
H19A Powell 45.65 70 ⇓P **P 20 30 47.6 +0.5**
baz=46,SNR=5.5
L16A Fish Haven 45.73 74 ⇑P **P 20 30 48.0 +0.2**
baz=46
N15A Stansbury Isla 45.74 76 ⇑P **P 20 30 48.0 +0.1**
baz=46
G20A Bridger 45.79 69 P **P 20 30 47.9 -0.3**
baz=46,SNR=11
DUG Dugway 45.98 77 P **P 20 30 50.5 +0.7**
baz=46,SNR=7.5
DUG Dugway 45.98 77 *e*P **P 20 30 49.6 -0.2**
DUG pmax pmax
comp=Z,14nm,1.1s,mb4.8
DUG Dugway 45.98 77 *e*P **P 20 30 49.6 -0.1**
comp=Z,14nm,1.1s,mb4.8
I19A Meeteetse 46.01 70 ⇑P **P 20 30 50.2 +0.3**
baz=46
M16A Huntsville 46.03 75 ⇓P **P 20 30 50.5 +0.4**
baz=46
F21A Absaloka Mine, 46.08 67 ⇓P **P 20 30 50.4 -0.1**
baz=46
LAO LASA Array 46.12 66 ⇑P **P 20 30 51.0 +0.3**
baz=46
ULN Ulaanbaatar 46.12 296 *e*P **P 20 30 50.7 -0.1**
ULN pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
ULN Ulaanbaatar 46.12 296 *e*P **P 20 30 50.7 -0.1**
comp=Z,7.4nm,1.1s,mb4.5
P14A Drum Mountains 46.19 78 ⇓P **P 20 30 51.6 +0.2**
baz=46
S12A Delamar Landin 46.32 81 ⇑P **P 20 30 53.1 +0.7**
baz=46
T11A Corn Creek, Al 46.32 82 ⇓P **P 20 30 53.0 +0.6**
baz=46
G21A Lodge Grass 46.37 68 ⇑P **P 20 30 52.4 -0.4**
baz=46
BW06 Boulder Array 46.41 72 P **P 20 30 53.3 +0.2**
baz=46,SNR=9.4
PDAR Pinedale Array 46.41 72 P **P 20 30 53.1 0.0**
comp=Z,8.8nm,0.5s,mb4.9,baz=308,slow=3.6,SNR=24
PDAR LR LR 20 47 00.8
comp=Z,48nm,19.4s,MS3.5,baz=68,slow=32
J19A Crowheart 46.42 71 ⇓P **P 20 30 54.0 +0.8**
baz=46
Q14A Sevier Lake (B 46.43 79 ⇑P **P 20 30 53.8 +0.5**
baz=46,SNR=8.6
SONM Songino Array 46.51 296 P **P 20 30 54.5 +0.7**
comp=Z,2.0nm,0.6s,mb4.2,baz=67,slow=7.3,SNR=18
SONM PcP PcP 20 32 26.3 -1.0
comp=Z,0.7nm,0.5s,baz=74,slow=3.7,SNR=3.1
SONM ScP ScP 20 36 22.0 +6.6
comp=Z,0.2nm,0.4s,baz=78,slow=3.9,SNR=3.5
SONM LR LR 20 51 24.8
comp=Z,95nm,20.0s,MS3.8,baz=261,slow=37
I20A Worland 46.57 70 ⇓P **P 20 30 54.4 0.0**
baz=46
K19A Absolon Red Bu 46.80 72 ⇑P **P 20 30 55.7 -0.4**
baz=47
H21A Big Horn, Sher 46.81 69 ⇑P **P 20 30 56.5 +0.2**
baz=47
ZAK Zakamensk 46.82 301 *e*P **P 20 30 56.4 +0.2**
ZAK *e* 20 32 28.6
M18A Lyman 46.90 74 ⇑P **P 20 30 56.7 -0.3**
baz=47
L19A Farson 46.93 73 ⇑P **P 20 30 56.8 -0.3**
baz=47
J20A Shoshoni 46.94 71 ⇑P **P 20 30 58.2 +0.9**
baz=47
I21A Big Trails, Te 47.14 70 ⇓P **P 20 30 58.3 -0.5**
baz=47,SNR=7.0
K20A Yellowstone Ra 47.20 72 ⇓P **P 20 30 58.5 -0.8**
baz=47
J21A Lysite 47.32 70 ⇓P **P 20 31 00.4 +0.1**
baz=47
HHC Hu-ho-hao-te 47.55 286 *e*P **P 20 31 01.9 -0.1**
HHC pP pP 20 31 17.6 +0.3
HHC sP sP 20 31 24.4 +0.4
HHC PcP PcP 20 32 31.5 +0.4
HHC PP PP 20 32 53.2 -0.4
HHC ScP ScP 20 36 18.1 -1.8
HHC S **S 20 37 50.1 -2.6**
HHC ScS ScS 20 40 46.6 -3.4
HHC pmax pmax
comp=Z,16nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,91nm,6.5s
HHC LR LR
comp=N,93nm,17.8s,MS4.0
HHC LR LR
comp=E,110nm,18.4s,MS4.0
HHC LR LR
comp=Z,110nm,16.5s,MS3.9
J22A Midwest 47.85 70 P **P 20 31 04.3 0.0**
baz=48,SNR=8.8
M20A Sweetwater, Wa 47.99 73 ⇓P **P 20 31 05.5 +0.1**
baz=48,SNR=6.0
O19A Miners Draw (B 48.16 75 ⇓P **P 20 31 06.9 +0.2**
baz=48,SNR=12
L21A Rawlins 48.19 72 P **P 20 31 06.8 -0.2**
baz=48,SNR=12
K22A Casper 48.28 70 ⇓P **P 20 31 07.7 +0.1**
baz=48
P19A Cripple Cowboy 48.65 75 ⇑P **P 20 31 11.9 +1.3**
baz=48,SNR=7.5
NJ2 Nanjing 48.69 272 *e*P **P 20 31 11.2 +0.3**
NJ2 pmax pmax
comp=Z,40nm,0.5s,mb5.7
O20A White River Ci 48.79 74 ⇑P **P 20 31 11.5 0.0**
baz=49,SNR=8.2
S17A Black Ridge (B 48.80 78 ⇑P **P 20 31 11.9 +0.3**
baz=49
N21A Black Mountain 48.84 73 ⇓P **P 20 31 12.1 +0.2**
baz=49
L23A Garrett 49.09 71 P **P 20 31 13.5 -0.3**
baz=49,SNR=12
P20A De Beque 49.09 75 ⇑P **P 20 31 14.4 +0.5**
baz=49
O21A Pagoda 49.20 74 ⇓P **P 20 31 14.7 0.0**
baz=49
N22A Wattenberg Ran 49.45 72 ⇓P **P 20 31 16.5 -0.1**
baz=49
PV04 Paradox Valley 49.48 76 *e*P **P 20 31 16.4 -0.5**
Q20A Ridgley Place, 49.49 75 ⇑P **P 20 31 17.2 +0.2**
baz=49
PHWY Pilot Hill 49.73 71 *e*PcP PcP 20 32 39.1 +0.1
PV01 Paradox Valley 49.84 76 *e*P **P 20 31 18.9 -0.7**
Q21A Lamborn Mesa, 50.00 75 ⇓P **P 20 31 22.3 +1.4**
baz=50
O23A Lake Granby, G 50.13 73 ⇓P **P 20 31 22.9 +1.1**
baz=50
S20A Disappointment 50.16 77 ⇓P **P 20 31 21.9 -0.2**
baz=50
N24A Carr 50.37 71 ⇑P **P 20 31 24.8 +1.2**
baz=50
ISCO Idaho Springs 50.58 73 ⇓P **P 20 31 27.0 +1.9**
baz=50
ISCO Idaho Springs 50.58 73 *e*P **P 20 31 25.5 +0.3**
Q23A Hartsel 51.01 74 ⇓P **P 20 31 29.3 +0.9**
baz=51,SNR=5.3
P25A Willow Gulch B 51.62 72 ⇓P **P 20 31 33.8 +0.9**
baz=52,SNR=7.1
R24A Sanders Place, 51.88 74 ⇑P **P 20 31 36.1 +1.2**
baz=52
SDCO Great Sand Dun 51.95 75 ⇑P **P 20 31 36.6 +1.1**
baz=52,SNR=5.3
SDCO Great Sand Dun 51.95 75 *e*P **P 20 31 36.0 +0.5**
comp=Z,2.6nm,0.9s,mb4.2
S24A Houchin Ranch, 52.20 75 ⇑P **P 20 31 39.2 +1.9**
baz=52
X20A Quemado 52.22 80 ⇓P **P 20 31 38.0 +0.5**
baz=52
R25A Fountain Ranch 52.43 74 ⇑P **P 20 31 39.9 +0.9**
baz=52,SNR=7.4
ANMO Albuquerque 53.20 78 P **P 20 31 44.2 -0.6**
comp=Z,0.4nm,0.4s,mb3.7,baz=324,slow=8.7,SNR=2.5
ANMO Albuquerque 53.20 78 *e*P **P 20 31 43.8 -0.9**
comp=Z,2.1nm,0.7s,mb4.2
SUMG Summit 53.28 14 *e*Pn **P 20 31 43.1 -1.7**
comp=Z,6.0nm,0.7s,mb4.6
SUMG Summit 53.28 14 *i* P **P 20 31 46.2 +1.4**
comp=Z,6.9nm,0.9s,mb4.6
XAN Xi'an 53.53 281 P **P 20 31 46.3 -0.8**
XAN pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
XAN pmax pmax
comp=Z,12nm,7.6s
ZALV Zalesovo Beam 53.90 313 PcP PcP 20 32 54.7 +0.4
comp=Z,3.6nm,0.7s,baz=38,slow=3.8,SNR=14
ZALV LR LR 20 55 18.5
comp=Z,38nm,19.9s,MS3.5,baz=68,slow=37
Y23A Lovelace Mesa, 54.13 79 ⇓P **P 20 31 52.0 +0.5**
baz=54,SNR=5.7
W25A X Bar L Ranch, 54.24 77 ⇓P **P 20 31 52.4 0.0**
baz=54,SNR=5.5
Y24A Capitan 54.52 78 ⇓P **P 20 31 54.6 +0.3**
baz=54,SNR=9.5
CBKS Cedar Bluff 54.70 70 *e*P **P 20 31 54.8 -0.9**
comp=Z,15nm,0.6s,mb5.2
Y25A Mesa, Roswell 54.97 78 ⇓P **P 20 31 59.2 +1.6**
baz=55,SNR=5.3
LZH Lanzhou 55.25 286 *e*P **P 20 31 59.5 -0.1**
LZH pP pP 20 32 15.0 -0.2
LZH sP sP 20 32 21.7 -0.2
LZH *e*PP PP 20 34 01.8 -1.5
LZH pmax pmax
comp=Z,16nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,50nm,6.7s
LZH LR LR
comp=N,340nm,15.0s,MS4.7
LZH LR LR
comp=E,320nm,16.3s,MS4.7
LZH LR LR
comp=Z,460nm,18.7s,MS4.6
GTA Gaotai 55.43 292 ⇑P **P 20 32 01.4 +0.5**
GTA pP pP 20 32 15.0 -1.5
GTA sP sP 20 32 22.5 -0.6
GTA S **S 20 39 41.8 +0.7**
GTA sS sS 20 40 06.5 -0.8
GTA pmax pmax
comp=Z,13nm,0.6s,mb5.1
GTA pmax pmax
comp=Z,51nm,4.0s
GTA LR LR
comp=N,89nm,13.8s,MS4.2
GTA LR LR
comp=E,130nm,16.1s,MS4.2
GTA LR LR
comp=Z,83nm,14.2s,MS4.0
Y27A Causey 55.93 77 P **P 20 32 06.3 +1.7**
baz=56,SNR=6.3
MNTX Cornudas Mount 56.06 80 *e*P **P 20 32 02.1 -3.4**
comp=Z,2.2nm,0.9s,mb4.2
CPRX Cap Rock 56.08 78 *e*P **P 20 32 04.6 -1.0**
comp=Z,6.3nm,1.0s,mb4.6
KSU1 Kansas State U 56.34 68 *e*P **P 20 32 05.9 -1.5**
comp=Z,8.8nm,0.5s,mb5.0
CLNB Carlsbad 56.60 79 *e*P **P 20 32 10.4 +1.1**
KEV Kevo 57.64 350 *e*P **P 20 32 16.0 -0.1**
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KEV Kevo 57.64 350 *e*p **P 20 32 16.0 -0.1**
comp=Z,4.8nm,0.8s,mb4.6
WMOK Wichita Mounta 58.00 73 *e*P **P 20 32 18.5 -0.7**
WMOK *e* pP 20 32 32.5 -2.3
WMOK pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
WMOK Wichita Mounta 58.00 73 *e*P **P 20 32 18.5 -0.7**
comp=Z,4.8nm,0.7s,mb4.6
WMOK *e* pP 20 32 32.5 -2.3
ARCES ARCESS Array B 58.02 350 P **P 20 32 18.8 0.0**
comp=Z,2.8nm,0.7s,mb4.4,baz=19,slow=7.6,SNR=15
ARCES PcP PcP 20 33 07.8 -2.2
comp=Z,4.2nm,0.8s,baz=39,slow=7.8,SNR=4.4
ARCES ARCESS Array B 58.02 350 P **P 20 32 18.8 0.0**
ARCES 20 33 07.8
ARCES pmax pmax
comp=Z,3.0nm,0.7s
TXAR Lajitas Array 58.77 81 P **P 20 32 24.1 -0.5**
comp=Z,0.9nm,0.5s,mb4.1,baz=316,slow=5.1,SNR=12
TXAR Lajitas Array 58.77 81 P **P 20 32 24.1 -0.5**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
CD2 Chengdu 58.84 282 *e*P **P 20 32 24.2 -0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,30nm,4.2s
KURK Kurchatov 58.89 314 ⇓*e*P **P 20 32 25.0 -0.1**
KURK pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
WMQ Urumqi 59.21 303 *e*P **P 20 32 29.0 +1.6**
WMQ pP pP 20 32 45.0 +1.9
WMQ sP sP 20 32 52.0 +2.2
WMQ PP PP 20 34 42.0 +3.7
WMQ S **S 20 40 31.0 +0.5**
WMQ SS SS 20 44 27.0 +2.0
WMQ pmax pmax
comp=Z,15nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,64nm,6.0s
WMQ LR LR
comp=N,48nm,18.0s,MS4.0
WMQ LR LR
comp=E,79nm,18.0s,MS4.0
WMQ LR LR
comp=Z,72nm,18.0s,MS3.8
HDIL Hopedale 59.50 62 *e*P **P 20 32 28.2 -1.3**
comp=Z,15nm,0.5s,mb5.3
MKAR Makanchi Array 59.90 308 P **P 20 32 30.9 -1.3**
comp=Z,0.7nm,0.4s,mb4.1,baz=49,slow=6.7,SNR=21
MKAR PcP PcP 20 33 17.7 -0.3
comp=Z,0.7nm,0.5s,baz=49,slow=3.0,SNR=4.0
MKAR LR LR 20 58 42.4
comp=Z,47nm,21.2s,MS3.6,baz=77,slow=36
MKAR Makanchi Array 59.90 308 P **P 20 32 30.9 -1.3**
MKAR 20 33 17.7
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR MLR MLR
comp=Z,47nm,21.2s
CCM Cathedral Cave 60.13 65 *e*P **P 20 32 31.5 -2.3**
CCM pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
CCM Cathedral Cave 60.13 65 *e*P **P 20 32 31.5 -2.3**
comp=Z,5.0nm,0.7s,mb4.7
GYA Guiyang 60.19 276 P **P 20 32 33.7 -0.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
JCT Junction City 60.34 77 *e*P **P 20 32 35.5 +0.1**
JCT pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
JCT Junction City 60.34 77 *e*P **P 20 32 35.5 +0.1**
comp=Z,5.2nm,0.6s,mb4.7
FVM French Village 60.65 65 *e*P **P 20 32 35.8 -1.6**
FVM pmax pmax
comp=Z,6.0nm,0.4s,mb5.1
FVM French Village 60.65 65 *e*P **P 20 32 35.8 -1.6**
comp=Z,5.8nm,0.4s,mb5.1
BRVK Borovoye 60.79 320 ⇑*e*P **P 20 32 39.7 +1.6**
BRVK pmax pmax
comp=Z,7.0nm,2.5s,mb4.3
MIAR Mount Ida 61.23 70 *e*P **P 20 32 39.9 -1.4**
MIAR pmax pmax
comp=Z,14nm,1.1s,mb5.0
MIAR Mount Ida 61.23 70 *e*P **P 20 32 39.9 -1.5**
comp=Z,14nm,1.1s,mb5.0
OLIL Olney 61.43 63 *e*P **P 20 32 41.4 -1.3**
comp=Z,16nm,0.4s,mb5.5
PRGR Permogore 61.81 338 *e*P **P 20 32 45.2 +0.3**
PRGR pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
WCI Wyandotte Cave 62.79 62 *e*P **P 20 32 50.8 -1.0**
WCI pmax pmax
comp=Z,17nm,0.9s,mb5.2
WCI Wyandotte Cave 62.79 62 *e*P **P 20 32 50.8 -1.0**
comp=Z,17nm,0.9s,mb5.2
WVT Waverly 63.42 65 *e*P **P 20 32 55.3 -0.7**
WVT pmax pmax
comp=Z,12nm,0.9s,mb5.0
WVT Waverly 63.42 65 *e*P **P 20 32 55.3 -0.7**
comp=Z,12nm,0.9s,mb5.0
JOF Joensuu 63.51 345 *e*P **P 20 32 55.3 -0.9**
JOF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
JOF Joensuu 63.51 345 *e*p **P 20 32 55.3 -0.9**
comp=Z,5.3nm,0.5s,mb4.8
KMI Kunming 63.59 278 P **P 20 32 57.1 -0.2**
KMI pP pP 20 33 09.8 -3.4
KMI sP sP 20 33 16.6 -3.2
KMI pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KAF Kangasniemi 65.03 347 *e*P **P 20 33 04.9 -1.2**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KAF Kangasniemi 65.03 347 *e*p **P 20 33 04.9 -1.2**
comp=Z,6.2nm,0.6s,mb4.8
FINES FINESS Array B 65.70 347 P **P 20 33 10.2 -0.3**
comp=Z,4.4nm,0.5s,mb4.7,baz=11,slow=7.2,SNR=38
FINES LR LR 21 02 02.7
comp=Z,42nm,20.6s,MS3.6,baz=129,slow=36
FINES FINESS Array B 65.70 347 P **P 20 33 10.2 -0.3**
FINES pmax pmax
comp=Z,4.0nm,0.5s
FINES MLR MLR
comp=Z,42nm,20.6s
TKL Tuckaleechee C 66.04 63 *e*P **P 20 33 11.8 -1.2**
AAK Ala-Archa 66.73 310 ⇑*e*P **P 20 33 18.7 +1.3**
AAK pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
LSA Lhasa 67.31 289 P **P 20 33 22.4 +1.2**
LSA pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
AML Almayashu 67.50 310 *e*P **P 20 33 24.2 +2.0**
comp=Z,3.8nm,0.9s,mb4.4
AKTO Aktyubinsk 67.57 325 LR LR 21 05 50.2
comp=Z,72nm,18.3s,MS3.9,baz=212,slow=38
NB2 NORSAR Subarra 67.58 355 P **P 20 33 22.5 +0.1**
comp=Z,1.6nm,0.7s,mb4.2,baz=6.9,slow=6.5
NOA NORSAR Array B 67.58 355 P **P 20 33 22.3 -0.1**
comp=Z,1.8nm,0.7s,mb4.2,baz=7.6,slow=6.4,SNR=8.7
NOA LR LR 21 04 27.5
comp=Z,21nm,19.1s,MS3.4,baz=275,slow=37
NOA NORSAR Array B 67.58 355 P **P 20 33 22.3 -0.1**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,21nm,19.1s
NOA NORSAR Array B 67.58 355 P **P 20 33 22.3 -0.1**
NOA LR LR 21 04 27.5
KKAR Karatay Array 68.26 312 *e*P **P 20 33 27.5 +0.5**
KKAR pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KKAR Karatay Array 68.26 312 *e*P **P 20 33 27.5 +0.6**
comp=Z,2.7nm,0.7s,mb4.4
OBN Obninsk 69.78 339 ⇑*e*P **P 20 33 36.2 0.0**
OBN pmax pmax
comp=Z,14nm,1.6s,mb4.6
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
CMAR Chiang Mai Arr 70.88 276 P **P 20 33 43.0 -0.4**
comp=Z,2.3nm,0.8s,mb4.2,baz=26,slow=6.8,SNR=21
CMAR Chiang Mai Arr 70.88 276 P **P 20 33 43.1 -0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
TAPN Taplejung 71.07 290 *e*P **P 20 33 45.6 +1.1**
comp=Z,30nm,0.7s,mb5.3
ODAN Odare 71.63 290 *e*P **P 20 33 48.4 +0.5**
comp=Z,6.6nm,0.5s,mb4.9
GUN Gumba 71.72 292 *e*P **P 20 33 49.3 +0.9**
comp=Z,50nm,0.6s,mb5.6
KKN Kakani 72.16 292 *e*P **P 20 33 52.0 +0.9**
comp=Z,19nm,0.5s,mb5.3
PKI Pulchoki 72.25 292 *e*P **P 20 33 52.3 +0.7**
comp=Z,22nm,0.6s,mb5.3
PKIN Phulchoki 72.25 292 *e*P **P 20 33 52.8 +1.2**
comp=Z,13nm,0.6s,mb5.0
GKN Gorkha 72.37 293 *e*P **P 20 33 53.0 +0.7**
comp=Z,18nm,0.5s,mb5.2
DMN Daman 72.40 292 *e*P **P 20 33 53.5 +1.0**
DANN Dangsing 72.61 294 *e*P **P 20 33 54.8 +1.0**
comp=Z,46nm,0.9s,mb5.4
KOLN Koldanda 73.14 293 *e*P **P 20 33 57.6 +0.7**
comp=Z,14nm,0.9s,mb4.9
KIEV Kiev 75.47 342 *e*P **P 20 34 07.8 -2.2**
KIEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KIEV Kiev 75.47 342 *e*P **P 20 34 07.8 -2.2**
comp=Z,6.4nm,0.9s,mb4.5
KBL Kabul 75.71 308 *e*P **P 20 34 11.1 -0.6**
KBL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
KBL Kabul 75.71 308 *e*P **P 20 34 11.1 -0.6**
comp=Z,5.6nm,0.8s,mb4.5
CLL Collm 77.13 352 *e*P **P 20 34 21.0 +1.6**
CLL *e* pP 20 34 33.0 -2.8
CLL pmax pmax
comp=Z,9.0nm,1.6s,mb4.5
CLL Collm 77.13 352 *e*P **P 20 34 21.0 +1.6**
comp=Z,9.0nm,1.6s,mb4.5
CLL *e* pP 20 34 33.0 -2.8
CLL Collm 77.13 352 *e*P **P 20 34 21.0 +1.6**
comp=Z,9.0nm,1.6s,mb4.5
CLL *e*PcP PcP 20 34 33.0 +2.9
CTA Charters Tower 77.45 213 P **P 20 34 20.6 -0.9**
comp=Z,4.2nm,1.0s,mb4.3,baz=14,slow=4.2,SNR=3.1
CTA Charters Tower 77.45 213 P **P 20 34 20.6 -0.9**
CTA pmax pmax
comp=Z,4.0nm,1.0s
KWP Kalwaria Pacla 77.63 346 ⇑P **P 20 34 23.0 +0.8**
KWP Kalwaria Pacla 77.63 346 *e*P **P 20 34 22.0 -0.3**
comp=Z,11nm,0.8s,mb4.8
KWP Kalwaria Pacla 77.63 346 ⇑*i*P **P 20 34 23.0 +0.8**
KIV Kislovodsk 78.36 331 *e*P **P 20 34 27.2 +0.8**
KIV *e* 20 34 34.6
KIV pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
KOLS Kolonicke sedl 78.37 346 *e*P **P 20 34 26.5 +0.1**
KOLS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
KOLS Kolonicke sedl 78.37 346 *e*P **P 20 34 26.5 +0.1**
comp=Z,3.9nm,1.1s,mb4.2
KOLS Kolonicke sedl 78.37 346 *e*P **P 20 34 26.5 +0.1**
CRVS Cervenica-Dubn 78.53 346 *e*P **P 20 34 27.7 +0.5**
CRVS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
CRVS Cervenica-Dubn 78.53 346 *e*P **P 20 34 27.7 +0.5**
comp=Z,2.5nm,1.0s,mb4.1
CRVS Cervenica-Dubn 78.53 346 *e*P **P 20 34 27.7 +0.5**
BAIF Baives 78.85 358 *e*P **P 20 34 29.3 +0.3**
ZEI Tsey 79.05 329 *e*P **P 20 34 28.5 -1.7**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9

KECS	**Kecovo**	**79.08 347**	*eP*	**P**		**20 34 30.9**	**+0.6**
KECS			pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.2						
KECS	**Kecovo**	**79.08 347**	*eP*	**P**		**20 34 30.9**	**+0.6**
	comp=Z,2.5nm,1.0s,mb4.1						
KECS	**Kecovo**	**79.08 347**	*eP*	**P**		**20 34 30.9**	**+0.6**
TRPA	**Tarpa**	**79.11 345** ⇓*iP*		**P**		**20 34 31.3**	**+0.8**
BUR08	**Bucovina Ar. S**	**79.14 344**	*eP*	**P**		**20 34 30.5**	**-0.1**
BURAR	**Bucovina Array**	**79.17 344** ⇑*iP*		**P**		**20 34 31.6**	**+0.8**
BURAR	**Bucovina Array**	**79.17 344** ⇑*iP*		**P**		**20 34 31.6**	**+0.8**
VYHS	**Vyhne**	**79.29 348**	*eP*	**P**		**20 34 29.0**	**-2.4**
VYHS			pmax	pmax			
	comp=Z,64nm,4.0s						
VYHS	**Vyhne**	**79.29 348**	*eP*	**P**		**20 34 29.0**	**-2.4**
	comp=Z,64nm,4.0s						
VYHS	**Vyhne**	**79.29 348**	*eP*	**P**		**20 34 29.0**	**-2.4**
LDF	**La Druitiere**	**80.35 1**	*eP*	**P**		**20 34 36.3**	**-0.9**
	comp=Z,5.3nm,0.4s,mb4.5						
MEZF	**Maizieres J'vi**	**80.39 357**	*eP*	**P**		**20 34 37.4**	**+0.1**
DRGR		**80.39 345** ⇑*iP*		**P**		**20 34 35.7**	**-1.7**
DRGR		**80.39 345** ⇑*iP*		**P**		**20 34 35.7**	**-1.7**
CDF	**Champ du Feu**	**80.39 356**	*eP*	**P**		**20 34 37.0**	**-0.4**
VRI	**Vrincioaia**	**80.57 342** ⇓*iP*		**P**		**20 34 39.0**	**+0.6**
VRI	**Vrincioaia**	**80.57 342** ⇓*iP*		**P**		**20 34 39.0**	**+0.6**
PLOR	**Plostina**	**80.60 342** ⇓*iP*		**P**		**20 34 38.9**	**+0.3**
PLOR	**Plostina**	**80.60 342** ⇓*iP*		**P**		**20 34 38.9**	**+0.3**
SGMF	**Saint Gilles**	**80.65 2**	*eP*	**P**		**20 34 38.7**	**-0.1**
SFTF	**Sexfontaines**	**80.68 357**	*eP*	**P**		**20 34 38.9**	**0.0**
	comp=Z,15nm,0.8s,mb4.7						
SFTF	**Sexfontaines**	**80.68 357**	*eP*	**P**		**20 34 38.9**	**0.0**
	comp=Z,15nm,0.8s,mb5.0						
CFR	**Carcaliu**	**80.95 341** ⇑*iP*		**P**		**20 34 42.0**	**+1.6**
CFR	**Carcaliu**	**80.95 341** ⇑*iP*		**P**		**20 34 42.0**	**+1.6**
MLR	**Muntele Rosu**	**81.08 343** ⇓*iP*		**P**		**20 34 42.7**	**+1.6**
MLR	**Muntele Rosu**	**81.08 343** ⇓*iP*		**P**		**20 34 42.7**	**+1.6**
GNI	**Garni**	**81.13 328** LR		LR		21 15 37.1	
	comp=Z,42nm,18.6s,MS3.8,baz=322,slow=39						
KBA	**Koelnbreinsper**	**81.30 351** ⇓*iP*		**P**		**20 34 43.1**	**+0.9**
	comp=Z,14nm,0.9s,mb4.9						
VOIR		**81.30 343** ⇓*iP*		**P**		**20 34 42.8**	**+0.5**
VOIR		**81.30 343** ⇓*iP*		**P**		**20 34 42.8**	**+0.5**
SOKA	**Soboth**	**81.53 350** ⇓*iP*		**P**		**20 34 44.1**	**+0.6**
	comp=Z,8.4nm,1.0s,mb4.6						
TIRR	**Tirgusor**	**81.59 341** ⇑*iP*		**P**		**20 34 43.8**	**0.0**
TIRR	**Tirgusor**	**81.59 341** ⇑*iP*		**P**		**20 34 43.8**	**0.0**
GZR	**Gura Zlata**	**81.74 345** ⇑*iP*		**P**		**20 34 44.2**	**-0.4**
GZR	**Gura Zlata**	**81.74 345** ⇑*iP*		**P**		**20 34 44.2**	**-0.4**
CVD	**Cernavoda**	**81.80 341** ⇑*iP*		**P**		**20 34 25.4**	**-20**
SSF	**Saint Saulge**	**81.86 358**	*eP*	**P**		**20 34 45.1**	**-0.1**
	comp=Z,3.8nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**81.86 358**	*eP*	**P**		**20 34 45.1**	**-0.1**
SSF			pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**81.86 358**	*eP*	**P**		**20 34 45.1**	**-0.1**
	comp=Z,1.9nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**81.96 224** P		**P**		**20 34 44.4**	**-1.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=36,slow=6.6,SNR=11						
WRA	**Warramunga Arr**	**81.96 224** P		**P**		**20 34 44.4**	**-1.5**
WRA			pmax	pmax			
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**81.96 224** P		**P**		**20 34 44.4**	**-1.5**
AVF	**Avril sur Loir**	**82.14 358**	*eP*	**P**		**20 34 47.3**	**+0.6**
SMF	**Signal de Mont**	**82.27 358**	*eP*	**P**		**20 34 47.1**	**-0.3**
	comp=Z,7.2nm,0.8s,mb4.4						
SMF	**Signal de Mont**	**82.27 358**	*eP*	**P**		**20 34 47.1**	**-0.3**
SMF			pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4						
SMF	**Signal de Mont**	**82.27 358**	*eP*	**P**		**20 34 47.1**	**-0.3**
	comp=Z,3.6nm,0.8s,mb4.3						
RJF	**Les Rejaudoux**	**83.64 360**	*eP*	**P**		**20 34 54.4**	**-0.1**
LFF	**La Frestale**	**84.01 0**	*eP*	**P**		**20 34 56.4**	**0.0**
	comp=Z,11nm,0.6s,mb4.8						
LFF	**La Frestale**	**84.01 0**	*eP*	**P**		**20 34 56.4**	**0.0**
LFF			pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.9						
LFF	**La Frestale**	**84.01 0**	*eP*	**P**		**20 34 56.4**	**0.0**
	comp=Z,5.7nm,0.6s,mb4.9						
CAF	**Calviac**	**84.02 359**	*eP*	**P**		**20 34 56.5**	**+0.1**
MBDF	**Montbardon**	**84.09 356**	*eP*	**P**		**20 34 57.7**	**+0.9**
FITZ	**Fitzroy Crossi**	**84.40 232** P		**P**		**20 34 57.9**	**-0.7**
	comp=Z,5.2nm,0.8s,mb4.7,baz=9.9,slow=3.0,SNR=14						
BRTR	**Keskin Array B**	**84.85 335** P		**P**		**20 35 00.8**	**+0.1**
	comp=Z,4.2nm,0.7s,mb4.7,baz=51,slow=2.8,SNR=27						
BRTR	**Keskin Array B**	**84.85 335** P		**P**		**20 35 00.8**	**+0.1**
BRTR			pmax	pmax			
	comp=Z,4.0nm,0.7s						
SBF	**Sospel**	**84.92 355**	*eP*	**P**		**20 35 00.6**	**-0.4**
FRF	**La Foret Royal**	**85.26 356**	*eP*	**P**		**20 35 02.5**	**-0.2**
	comp=Z,7.6nm,0.7s,mb4.6						
FRF	**La Foret Royal**	**85.26 356**	*eP*	**P**		**20 35 02.5**	**-0.2**
FRF			pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.7						
FRF	**La Foret Royal**	**85.26 356**	*eP*	**P**		**20 35 02.5**	**-0.2**
	comp=Z,3.8nm,0.7s,mb4.6						
ASAR	**Alice Springs**	**85.44 222** P		**P**		**20 35 02.7**	**-0.9**
	comp=Z,1.8nm,0.8s,mb4.3,baz=27,slow=5.7,SNR=24						
ASAR	**Alice Springs**	**85.44 222** P		**P**		**20 35 02.7**	**-0.9**
ASAR			pmax	pmax			
	comp=Z,2.0nm,0.8s						
LMR	**La Mourre**	**85.49 356**	*eP*	**P**		**20 35 03.7**	**-0.2**
MTLF	**Montolieu**	**85.60 359**	*eP*	**P**		**20 35 04.4**	**0.0**
SJPF	**Ste Jean**	**85.82 2**	*eP*	**P**		**20 35 06.0**	**+0.5**
POO	**Poona**	**85.92 295** ⇓*iP*		**P**		**20 35 05.0**	**-1.3**
	comp=Z,50nm,1.0s,mb5.7						
ETSF	**Etsaut**	**86.04 1**	*eP*	**P**		**20 35 07.0**	**+0.4**
PGF	**Pioggiola**	**86.14 354**	*eP*	**P**		**20 35 06.9**	**-0.2**
	comp=Z,26nm,0.8s,mb5.2						
PGF	**Pioggiola**	**86.14 354**	*eP*	**P**		**20 35 06.9**	**-0.2**
PGF			pmax	pmax			
	comp=Z,13nm,0.8s,mb5.2						
PGF	**Pioggiola**	**86.14 354**	*eP*	**P**		**20 35 06.9**	**-0.2**
	comp=Z,13nm,0.8s,mb5.2						
ESDC	**Sonseca Array**	**89.17 4** P		**P**		**20 35 20.6**	**-1.0**
	comp=Z,1.4nm,0.7s,mb4.4,baz=344,slow=4.3,SNR=7.4						
STKA	**Stephens Creek**	**89.90 213** P		**P**		**20 35 24.6**	**-0.3**
	comp=Z,4.3nm,0.7s,mb4.9,baz=343,slow=4.8,SNR=11						
RPZ	**Rata Peaks**	**95.16 187** LR		LR		21 13 26.9	
	comp=Z,208nm,20.4s,MS4.6,baz=279,slow=32						
MDT	**Midelt**	**95.97 5** LR		LR		21 19 08.9	
	comp=Z,84nm,19.4s,MS4.2,baz=280,slow=35						
TORD	**Torodi Ar. Bea**	**115.69 359** PKP		PKPdf		20 41 07.3	-1.1
	comp=Z,0.4nm,0.5s,baz=355,slow=1.9,SNR=12						
TORD	**Torodi Ar. Bea**	**115.69 359** PKP		PKPdf		20 41 07.3	-1.1
DBIC	**Dimbokro**	**121.91 7** PKP		PKPdf		20 41 19.4	-1.0
	comp=Z,1.1nm,0.4s,baz=331,slow=2.5,SNR=6.9						
DBIC	**Dimbokro**	**121.91 7** PKIKP		PKPdf		20 41 19.5	-1.0
DBIC			pmax	pmax			
	comp=Z,1.0nm,0.4s						
MAW	**Mawson**	**146.45 218** PKPbc		PKPbc		20 42 04.9	-0.7
	comp=Z,2.9nm,0.8s,baz=52,slow=3.0,SNR=8.4						
MAW	**Mawson**	**146.45 218** PKP2		PKPbc		20 42 04.9	-0.7
MAW			pmax	pmax			
	comp=Z,3.0nm,0.8s						
LBTB	**Lobatse**	**147.60 315** *e*PKP2		PKPbc		20 42 10.1	-0.1
BOSA	**Boshof**	**150.85 312** PKPbc		PKPbc		20 42 18.3	+0.1
	comp=Z,4.6nm,0.6s,baz=73,slow=2.0,SNR=15						
BOSA	**Boshof**	**150.85 312** PKIKP		PKPbc		20 42 18.3	+0.1
BOSA			pmax	pmax			
	comp=Z,5.0nm,0.6s						

*NEIC **06** 20:28:19.6, 59°.18N×54°.99W, h18km, mb4.0/1, ML4.2(OTT), After OTT.*

OTT 06 20:28:20.0±1.4, 59°.17N×55°.13W, h18km, mb5.7/2, ML4.3/9, LAlbertaRADOR Sea Seismic Zone. 446km northeast from Nutak, NI, Labrador Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**7.72**	**241**	Pn	Pn	20 30 12.1	+0.7
SCHQ				Sn	Sn	20 31 34.0	-4.2
SCHQ	**Schefferville**	**7.72**	**241**	PN	Pn	20 30 12.2	+0.8
SCHQ				mb		20 30 13.6	
	comp=Z,10nm,0.1s						
SCHQ				SN	Sn	20 31 34.4	-3.9
SCHQ				Trac		20 31 38.0	
	comp=Z,16nm,0.2s						
FRB	**Frobisher Bay**	**7.89**	**311**	Pn	Pn	20 30 13.2	-0.4
FRB				Sn	Sn	20 31 36.0	-6.4
FRB	**Frobisher Bay**	**7.89**	**311**	PN	Pn	20 30 13.7	0.0
FRB				mb		20 30 15.7	
	comp=Z,2.4nm,0.1s						
FRB				SN	Sn	20 31 36.0	-6.4
FRB				Trac		20 31 44.1	
	comp=Z,26nm,0.5s						
NATG	**Natashquan Que**	**9.94**	**210**	Pn	Pn	20 30 43.3	+1.7
NATG				Sn	Sn	20 32 25.2	-7.4
NATG	**Natashquan Que**	**9.94**	**210**	PN	Pn	20 30 41.3	-0.3
NATG				mb		20 30 43.3	
	comp=Z,9.2nm,0.3s						
NATG				SN	Sn	20 32 24.2	-8.3
NATG				Trac		20 32 34.0	
	comp=Z,9.0nm,0.2s						
DRLN	**Deer Lake**	**10.03**	**189**	Pn	Pn	20 30 42.1	-0.8
DRLN				Sn	Sn	20 32 26.9	-7.9
DRLN	**Deer Lake**	**10.03**	**189**	PN	Pn	20 30 41.7	-1.2
DRLN				SN	Sn	20 32 26.9	-7.9
DRLN				Trac		20 32 30.5	
	comp=Z,125nm,0.7s						
SMQ	**Clarke City**	**11.17**	**222**	Pn	Pn	20 30 56.5	-2.0
SMQ				Sn	Sn	20 32 55.1	-7.6
SMQ	**Clarke City**	**11.17**	**222**	PN	Pn	20 30 56.2	-2.3
SMQ				mb		20 30 58.7	
	comp=Z,4.7nm,0.2s						
SMQ				SN	Sn	20 32 55.1	-7.6
SMQ				Trac		20 32 58.8	
	comp=Z,2.3nm,0.2s						
CODG	**Codroy Newfoun**	**11.61**	**194**	Pn	Pn	20 31 04.0	-0.5
CODG	**Codroy Newfoun**	**11.61**	**194**	PN	Pn	20 31 03.8	-0.7
MNQ	**Manicouagan**	**11.67**	**228**	Pn	Pn	20 31 03.3	-2.0
MNQ				Sn	Sn	20 33 06.4	-8.5
MNQ	**Manicouagan**	**11.67**	**228**	PN	Pn	20 31 02.8	-2.6
MNQ				mb		20 31 07.5	
	comp=Z,1.4nm,0.1s						
MNQ				SN	Sn	20 33 06.0	-9.0
MNQ				Trac		20 33 11.8	
	comp=Z,2.6nm,0.3s						
SJNN	**Saint John's**	**11.68**	**172**	Pn	Pn	20 31 04.3	-1.2
SJNN				Sn	Sn	20 33 06.6	-8.8
SJNN	**Saint John's**	**11.68**	**172**	PN	Pn	20 31 04.3	-1.2
SJNN				SN	Sn	20 33 06.6	-8.8
LG4Q	**La Grande 4**	**11.86**	**250**	Pn	Pn	20 31 06.5	-1.5
LG4Q				Sn	Sn	20 33 10.7	-9.1
LG4Q	**La Grande 4**	**11.86**	**250**	PN	Pn	20 31 06.2	-1.7
LG4Q				mb		20 31 08.1	
	comp=Z,6.9nm,0.3s						
LG4Q				SN	Sn	20 33 08.7	-11
LG4Q				Trac		20 33 13.0	
	comp=Z,11nm,0.4s						
ICQ	**Pointe Anglais**	**11.96**	**221**	Pn	Pn	20 31 07.2	-2.2
ICQ				Sn	Sn	20 33 13.2	-8.9
ICQ	**Pointe Anglais**	**11.96**	**221**	PN	Pn	20 31 06.8	-2.5
ICQ				mb		20 31 07.7	
	comp=Z,30nm,0.9s						
ICQ				SN	Sn	20 33 13.2	-8.9
ICQ				Trac		20 33 16.1	
	comp=Z,18nm,0.6s						
CNQ	**Baie Comeau**	**12.42**	**223**	Pn	Pn	20 31 14.7	-1.0
CNQ				Sn	Sn	20 33 25.0	-8.4
CNQ	**Baie Comeau**	**12.42**	**223**	PN	Pn	20 31 14.2	-1.4
CNQ				SN	Sn	20 33 25.0	-8.4
CNQ				Trac		20 33 28.8	
	comp=Z,2.2nm,0.3s						
GSQ	**Grosses Roches**	**12.43**	**220**	PN	Pn	20 31 13.8	-2.0
GSQ				SN	Sn	20 33 25.3	-8.4
MADG	**Magdalen Islan**	**12.53**	**201**	PN	Pn	20 31 16.6	-0.6
CHEG	**Cheticamp, Nov**	**12.81**	**197**	Pn	Pn	20 31 19.9	-1.1
CHEG				Sn	Sn	20 33 33.1	-10
CHEG	**Cheticamp, Nov**	**12.81**	**197**	PN	Pn	20 31 19.6	-1.5
CHEG				SN	Sn	20 33 32.6	-10
BATG	**Bathurst New B**	**13.56**	**213**	PN	Pn	20 31 29.6	-1.7
WEMQ	**Wemindji, Queb**	**14.09**	**254**	Pn	Pn	20 31 36.0	-2.4
WEMQ				Sn	Sn	20 34 02.1	-12
WEMQ	**Wemindji, Queb**	**14.09**	**254**	PN	Pn	20 31 35.2	-3.2
WEMQ				SN	Sn	20 34 02.1	-12
MALG	**Malagash, Nova**	**14.28**	**204**	PN	Pn	20 31 40.4	-0.6
GBN	**Guysborough**	**14.31**	**198**	Pn	Pn	20 31 40.1	-1.3
GBN				Sn	Sn	20 34 09.2	-10
GBN	**Guysborough**	**14.31**	**198**	PN	Pn	20 31 39.8	-1.6
GBN				SN	Sn	20 34 08.3	-11
LMN	**Caledonia Moun**	**14.55**	**208**	PN	Pn	20 31 42.3	-2.4
LMN				SN	Sn	20 34 13.2	-12
LMQ	**La Malbaie**	**14.71**	**224**	PN	Pn	20 31 43.7	-3.1
A54	**Misere**	**14.82**	**224**	PN	Pn	20 31 46.2	-2.1
GGN	**Saint George**	**15.76**	**212**	Pn	Pn	20 32 00.2	-0.5
GGN				Sn	Sn	20 34 41.9	-13
PKME	**Peaks-Kenny Pk**	**16.35**	**218**	Pn	Pn	20 32 06.8	-1.6
PKME	**Peaks-Kenny Pk**	**16.35**	**218**	PN	Pn	20 32 06.1	-2.2
MALO	**McAlpine Lake**	**16.86**	**248**	PN	Pn	20 32 11.4	-3.4
SILO	**Sutton Inlier**	**16.88**	**267**	Pn	Pn	20 32 13.8	-1.2
SILO	**Sutton Inlier**	**16.88**	**267**	PN	Pn	20 32 13.8	-1.2
FCC	**Fort Churchill**	**19.90**	**286**	P	Pn	20 32 46.8	-5.0
BINY	**Binghamton**	**21.36**	**227**	*e*P	P	20 33 06.2	+0.1
	4.5nm,0.7s						

IDC 06 20:29:39.4±1.9, 16°.41S×178°.81W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/18, mbtmp3.8/5, Error ellipse: s-maj=147.3km s-min=32.2km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.03**	**239**	P	P	20 37 08.4	+0.5
	0.9nm,0.4s,baz=114,slow=12,SNR=4.2						
WRA	**Warramunga Arr**	**44.55**	**258**	P	P	20 37 53.6	+0.3
	0.2nm,0.3s,baz=94,slow=7.5,SNR=7.1						
ASAR	**Alice Springs**	**44.84**	**253**	P	P	20 37 55.9	+0.3
	3.1nm,0.5s,baz=88,slow=8.2,SNR=72						
FITZ	**Fitzroy Crossi**	**52.91**	**260**	P	P	20 38 56.4	-1.3
	1.0nm,0.8s,baz=98,slow=7.1,SNR=4.1						
TXAR	**Lajitas Array**	**85.53**	**58**	P	P	20 42 19.9	+0.3
	0.3nm,0.7s,baz=206,slow=6.0,SNR=3.6						

*ATH **06** 20:30:07.3, 39°.53N×20°.62E, h5km±4km, MD3.0/7*
*CSEM **06** 20:30:07.6±0.2, 39°.52N×20°.63E, h2km, MD3.0, Error ellipse: s-maj=4.8km s-min=4.3km az=166.0*
*ISCJB **06** 20:30:08.1±0.5, 39°.53N±0°.04×20°.60E±0°.04, h10km, Error ellipse: s-maj=5.8km s-min=4.0km az=178.9*
*THE **06** 20:30:08.1, 39°.50N×20°.63E, h0km±3km, ML2.1/5, Error ellipse: s-maj=3.5km s-min=1.1km az=217.0*

ISC 06 20:30:08.1±0.4, 39°.53N±0°.04×20°.61E±0°.03, h10km, n33, σ1§17/49, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.21**	**271**	P	**Pg**	**20 30 11.7**	**-0.8**
IGT				S	**Sg**	**20 30 16.1**	**+0.6**
IGT	**Igoumenitsa**	**0.21**	**271**	P	**Pg**	**20 30 11.7**	**-0.8**
IGT				S	**Sg**	**20 30 16.1**	**+0.6**
JAN	**Janina**	**0.23**	**56**	*e*PG	**Pg**	**20 30 11.2**	**-1.5**
JAN	**Janina**	**0.23**	**56**	*e*Pg	**Pg**	**20 30 11.2**	**-1.5**
KEK	**Kerkira**	**0.65**	**287**	*e*PB	**Pb**	**20 30 20.3**	**-1.2**
KEK	**Kerkira**	**0.65**	**287**	P	**Pg**	**20 30 20.2**	**-0.5**
KEK				S	**Sg**	**20 30 31.8**	**+2.6**
KEK	**Kerkira**	**0.65**	**287**	P	**Pg**	**20 30 20.2**	**-0.5**
KEK				*e*Sb	**Sb**	**20 30 30.2**	**-0.5**
KEK				S	**Sg**	**20 30 31.8**	**+2.6**
NEST	**Nestorio**	**0.95**	**21**	P	**Pg**	**20 30 25.9**	**-0.4**
NEST	**Nestorio**	**0.95**	**21**	P	**Pg**	**20 30 25.9**	**-0.4**
THL	**Klokotos Trika**	**1.09**	**88**	*e*PB	**Pb**	**20 30 28.0**	**-1.0**
THL				*e*SB	**Sb**	**20 30 43.0**	**-0.2**
THL	**Klokotos Trika**	**1.09**	**88**	P	**Pb**	**20 30 27.8**	**-1.2**
THL				S	**Sg**	**20 30 43.5**	**+0.4**
THL	**Klokotos Trika**	**1.09**	**88**	*e*Pb	**Pb**	**20 30 28.0**	**-1.0**
THL				*e*Sb	**Sb**	**20 30 43.0**	**-0.2**
THL				S	**Sg**	**20 30 43.5**	**+0.4**
EVR	**Evrytania**	**1.11**	**123**	*e*PB	**Pb**	**20 30 28.8**	**-0.6**
EVR	**Evrytania**	**1.11**	**123**	*e*Pb	**Pb**	**20 30 28.8**	**-0.6**
KZN	**Kozani**	**1.18**	**49**	*e*PB	**Pb**	**20 30 30.3**	**-0.3**
KZN	**Kozani**	**1.18**	**49**	*e*Pb	**Pb**	**20 30 30.3**	**-0.3**
VLS	**Valsamata**	**1.35**	**181**	*e*PG	**Pg**	**20 30 32.3**	**-1.7**
VLS				*e*SB	**Sb**	**20 30 52.8**	**+2.1**
VLS	**Valsamata**	**1.35**	**181**	P	**Pn**	**20 30 32.4**	**-0.6**
VLS				S	**Sb**	**20 30 53.0**	**+2.3**
VLS	**Valsamata**	**1.35**	**181**	P	**Pn**	**20 30 32.4**	**-0.6**
VLS				*e*Sb	**Sb**	**20 30 52.8**	**+2.1**
FNA	**Florina**	**1.38**	**25**	P	**Pn**	**20 30 33.6**	**+0.2**
FNA				S	**Sb**	**20 30 55.7**	**+3.9**
FNA	**Florina**	**1.38**	**25**	P	**Pn**	**20 30 33.6**	**+0.2**
FNA				S	**Sb**	**20 30 55.7**	**+3.9**
LIT	**Litokhoron**	**1.56**	**68**	P	**Pn**	**20 30 36.3**	**+0.5**
LIT	**Litokhoron**	**1.56**	**68**	P	**Pn**	**20 30 36.3**	**+0.5**
RLS	**Riolos of Patr**	**1.61**	**155**	*e*PB	**Pb**	**20 30 38.2**	**+0.3**
RLS	**Riolos of Patr**	**1.61**	**155**	*e*Pb	**Pb**	**20 30 38.2**	**+0.3**
KALE	**Kalithea**	**1.65**	**133**	P	**Pn**	**20 30 37.9**	**+0.9**
KALE	**Kalithea**	**1.65**	**133**	P	**Pn**	**20 30 37.9**	**+0.9**
GRG	**Griva**	**1.98**	**43**	P	**Pn**	**20 30 43.3**	**+1.7**
GRG	**Griva**	**1.98**	**43**	P	**Pn**	**20 30 43.3**	**+1.7**
NEO	**Neokhori**	**2.04**	**95**	*e*PG	**Pg**	**20 30 45.0**	**-2.1**
NEO	**Neokhori**	**2.04**	**95**	*e*Pg	**Pg**	**20 30 45.0**	**-2.1**
PAIG	**Paliouri**	**2.40**	**79**	P	**Pn**	**20 30 48.5**	**+1.1**
PAIG				S	**Sn**	**20 31 19.0**	**+2.1**
PAIG	**Paliouri**	**2.40**	**79**	P	**Pn**	**20 30 48.5**	**+1.1**
PAIG				S	**Sn**	**20 31 19.0**	**+2.1**

*ISCJB **06** 20:31:57.6±0.7, 10°.71N±0°.06×62°.48W±0°.03, h78km±7km, Error ellipse: s-maj=9.4km s-min=4.2km az=169.8*
*FUNV **06** 20:31:59.8, 10°.71N×62°.46W, h65km, MW2.8*
*TRN **06** 20:32:01.6, 10°.81N×62°.29W, h72km, MD3.1*

ISC 06 20:31:58.5±0.7, 10°.72N±0°.06×62°.48W±0°.03, h73km±8km, n14, σ1§04/26, 2C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.26**	**107**	⇑*iP*	**Pn**	**20 32 10.1**	**+0.3**
GUIV				*e*S	**Sn**	**20 32 17.2**	**-0.7**
TCE	**Chacachacare**	**0.71**	**92**	⇑*iP*	**Pn**	**20 32 14.9**	**+1.1**
TCE				*e*S	**Sn**	**20 32 25.2**	**+0.1**
GUNV	**Guanoco**	**0.72**	**219**	⇓*eP*	**Pn**	**20 32 15.1**	**+1.3**
GUNV				*e*S	**Sn**	**20 32 25.4**	**+0.2**
CRUV	**Carupano**	**0.74**	**266**	*eP*	**Pn**	**20 32 14.0**	**-0.1**
CRUV				*e*S	**Sn**	**20 32 25.4**	**-0.2**
ITEV	**Isla Los Testi**	**0.90**	**315**	⇓*iP*	**Pn**	**20 32 16.8**	**+0.9**
ITEV				*e*S	**Sn**	**20 32 29.5**	**+0.7**
TRN	**Trinidad (W)**	**1.06**	**94**	⇓*iP*	**Pn**	**20 32 18.9**	**+1.0**
TRN				*e*S	**Sn**	**20 32 31.5**	**-0.9**
TBH	**Brigand Hill**	**1.41**	**100**	*eP*	**Pn**	**20 32 23.3**	**+1.0**
TBH				*e*S	**Sn**	**20 32 39.5**	**-0.8**
GRW	**Mount Saint Ca**	**1.64**	**29**	*eP*	**Pn**	**20 32 27.1**	**+1.7**
GRW				*e*S	**Sn**	**20 32 44.3**	**-1.4**
TPR	**Prospect**	**1.73**	**74**	*e*S	**Sn**	**20 32 47.6**	**-0.4**
TOSP	**Speyside**	**1.99**	**73**	*eP*	**Pn**	**20 32 30.5**	**+0.4**
TOSP				*e*S	**Sn**	**20 32 52.2**	**-2.0**
PCRV	**Puerto La Cruz**	**2.19**	**256**	*eP*	**Pn**	**20 32 33.5**	**+0.8**
PCRV				*e*S	**Sn**	**20 32 58.1**	**-0.9**
CUPV	**Cœpira**	**3.32**	**259**	*eP*	**Pn**	**20 32 49.3**	**+1.2**
CUPV				*e*S	**Sn**	**20 33 24.6**	**-1.8**
BIRV	**Birongo**	**3.73**	**267**	*eP*	**Pn**	**20 32 54.0**	**+0.3**
BIRV				*e*S	**Sn**	**20 33 33.8**	**-2.7**
CAOV	**Caicara del Or**	**5.08**	**229**	*eP*	**Pn**	**20 33 11.3**	**-0.8**

*ISCJB **06** 20:43:22.7±0.8, 4°.47S±0°.08×100°.73E±0°.06, h26km, mb3.8/12, Error ellipse: s-maj=12.8km s-min=6.7km az=24.9*
*DJA **06** 20:43:23, 4°.43S×100°.82E, h11km, MLv4.1/8*
*NEIC **06** 20:43:26.7±1.4, 4°.18S×101°.02E, mb3.8/5, Error ellipse: s-maj=55.4km s-min=10.9km az=59.0*
*IDC **06** 20:43:27.1±1.9, 4°.18S×101°.07E, h26km±4km, mb3.6/7, mb1 3.7/7, mb1mx3.5/18, mbtmp3.6/7, Error ellipse: s-maj=76.0km s-min=14.9km az=55.0*

ISC 06 20:43:25.3±0.8, 4°.40S±0°.08×100°.80E±0°.06, h28km, h28km±.4km: pP-P, n25, σ0§86/25, mb3.8/12, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.94**	**67**	P	**Pn**	**20 43 55.5**	**-0.9**
KSI				S	**Sn**	**20 44 21.1**	**+1.3**
MNAI	**Manna**	**2.15**	**89**	P	**Pn**	**20 43 58.4**	**-0.9**
MNAI				S	**Sn**	**20 44 25.2**	**+

AYVA				*e*S	Sg	20 50 14.9	-0.3
APE	Apeiranthos	1.34	212	*e*PN	Pb	20 50 06.0	+1.4
APE	Apeiranthos	1.34	212	*e*Pn	Pb	20 50 06.0	+1.4
BODT	Bodrum	1.34	148	*e*PN	Pg	20 50 03.4	-1.3
BODT				*e*SN	Sg	20 50 21.0	-1.1
BODT	Bodrum	1.34	148	*e*Pn	Pg	20 50 03.4	-1.3
BODT				*e*Sn	Sg	20 50 21.0	-1.1
MLSB	Milas	1.40	130	*e*PN	Pn	20 50 05.4	0.0
MLSB	Milas	1.40	130	*e*Pn	Pn	20 50 05.4	+0.1
KULA	Kula-Manisa	1.78	79	*e*PN	Pn	20 50 11.1	+0.6
KULA	Kula-Manisa	1.78	79	*e*Pn	Pn	20 50 11.1	+0.5
BALY	Balya	1.79	31	*e*P	Pb	20 50 12.5	0.0
BALY				*e*S	Sg	20 50 37.3	+0.5
BALY	Balya	1.79	31	*e*P	Pb	20 50 12.5	0.0
BALY				*e*S	Sg	20 50 37.3	+0.5
BALB	Balikesir	1.83	38	*e*PN	Pb	20 50 12.9	-0.2
BALB	Balikesir	1.83	38	*e*Pn	Pb	20 50 12.9	-0.1
LIA	Limnos Island	1.95	331	P	Pn	20 50 12.4	-0.5
LIA	Limnos Island	1.95	331	P	Pn	20 50 12.4	-0.5
GONE	Gonen-Balikesi	2.08	28	*e*PN	Pb	20 50 17.2	-0.3
GONE	Gonen-Balikesi	2.08	28	*e*Pn	Pb	20 50 17.2	-0.2

IDC 06 20:54:23.4±30.0**, 16°74S**×**179°86E, h0**km**, mb4.1/4, mb1 4.2/4, mb1mx3.8/18, mbtmp4.1/4, Error ellipse: s-maj=555.6km s-min=140.4km az=82.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.77	239	P	P	21 01 41.4	0.0
	0.7nm,0.5s,baz=112,slow=11,SNR=3.4						
WRA	Warramunga Arr	43.23	259	P	P	21 02 25.9	-0.8
	1.1nm,0.6s,baz=90,slow=7.2,SNR=20						
ASAR	Alice Springs	43.53	253	P	P	21 02 28.1	-1.0
	7.4nm,0.5s,baz=88,slow=8.0,SNR=198						
FITZ	Fitzroy Crossi	51.59	260	P	P	21 03 33.5	+1.6
	1.0nm,0.8s,baz=173,slow=8.1,SNR=4.0						

*IDC **06** 21:03:11.9±0.9, 42°60N×83°64E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.6/26, mbtmp3.6/11, ML3.3/3, Error ellipse: s-maj=29.1km s-min=15.1km az=62.0*
*ISCJB **06** 21:03:13.3±0.7, 42°80N±0°06×83°58E±0°06, h10km, mb3.7/8, Error ellipse: s-maj=9.2km s-min=6.0km az=1.3*
*BJI **06** 21:03:15.0, 42°64N×83°77E, h16km, mb4.0/1, ML3.6/10*
*NNC **06** 21:03:17.8±0.8, 43°13N×83°86E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=7.3km s-min=2.7km az=142.0*
*NEIC **06** 21:03:18.7±1.2, 42°77N×83°79E, h50km±13km, mb4.2/1, Error ellipse: s-maj=12.7km s-min=10.9km az=164.0*

ISC 06 21:03:14.6±0.6**, 42°69N**±0°06×**83°67E**±0°05**, h10**km**, n33, σ1°24/43, mb3.7/8, 13C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	3.15	68	Pn	Pn	21 04 06.0	+1.7
WMQ				Sn	Sn	21 04 43.0	+1.1
WMQ				smax			
	comp=N,200nm,0.6s						
WMQ				smax			
	comp=E,200nm,0.6s						
MK31	Makanchi Array	4.22	347	⇑Pn	Pn	21 04 20.7	+1.7
	comp=E,1.0nm,0.4s,baz=160,slow=13,SNR=339						
MK31				⇑Pg	Pg	21 04 28.2	-7.2
	comp=E,11nm,0.5s,baz=163,slow=15,SNR=50						
MK31				⇑Lg		21 05 18.0	
	comp=E,57nm,0.6s,baz=162,slow=28,SNR=12						
MK31	Makanchi Array	4.22	347	*e*Pn	Pn	21 04 20.6	+1.7
MKAR	Makanchi Array	4.22	347	Pn	Pn	21 04 20.3	+1.3
	comp=E,0.7nm,0.3s,baz=240,slow=6.8,SNR=26						
MKAR				Pg	Pg	21 04 29.8	-5.6
	comp=E,6.4nm,0.3s,baz=154,slow=17,SNR=78						
MKAR				Sn	Sn	21 05 03.1	-5.1
	comp=E,7.9nm,0.3s,baz=163,slow=14,SNR=6.7						
MKAR				Lg		21 05 23.1	
	comp=E,26nm,0.3s,baz=164,slow=28,SNR=13						
MKAR	Makanchi Array	4.22	347	Pn	Pn	21 04 20.3	+1.3
MKAR				Pg	Pg	21 04 29.8	-5.6
MKAR				Sn	Sn	21 05 03.1	-5.1
MKAR				Lg		21 05 23.1	
KNDC	Almaty	4.95	278	⇓Sn	Sn	21 05 34.4	+8.1
	comp=E,50nm,0.6s						
KNDC				⇑Lg		21 05 57.6	
	comp=E,86nm,0.7s						
TKM2	Tokmak 2	5.94	275	⇑Pn	Pn	21 04 49.0	+6.4
	comp=E,3.0nm,0.6s						
TKM2				⇑Pg	Pg	21 05 08.2	-0.2
	comp=E,5.3nm,0.6s						
TKM2				⇓Sn	Sn	21 06 00.9	+10
	comp=E,18nm,0.8s						
TKM2				⇓Lg		21 06 29.8	
	comp=E,32nm,0.7s						
TKM2	Tokmak 2	5.94	275	*e*Pn	Pn	21 04 45.5	+2.8
	comp=E,6.8nm,0.6s						
TKM2				*e*Sg	Sg	21 06 20.2	-5.1
KSH	Kashi	6.62	244	*e*Pn	Pn	21 05 01.3	+9.4
KSH				*e*Sn	Sn	21 06 20.1	+13
KSH				smax			
	comp=N,21nm,1.0s						
KSH				smax			
	comp=E,27nm,1.2s						
AAK	Ala-Archa	6.76	273	Lg		21 06 45.2	
	baz=18,slow=20,SNR=2.6						
AAK	Ala-Archa	6.76	273	*e*Pn	Pn	21 04 55.9	+1.9
	comp=E,4.0nm,0.6s						
AAK				*e*Pg	Pg	21 05 25.6	+1.5
AAK				*e*S	Sg	21 06 50.5	-1.2
AML	Almayashu	7.41	269	*e*Pn	Pn	21 05 07.6	+4.9
KURBB	Kurchatov Arra	8.68	338	⇑Pn	Pn	21 05 19.6	-0.6
	comp=E,0.7nm,1.2s						
KURBB				⇓Lg		21 07 42.6	
	comp=E,6.8nm,1.1s						
KURK	Kurchatov	8.74	338	⇓Pn	Pn	21 05 21.2	+0.2
	comp=E,2.5nm,0.6s						
KURK				⇑Lg		21 07 44.9	
	comp=E,25nm,0.7s						
KK31	Karatay Array	9.67	277	⇑Lg		21 08 24.1	
	comp=E,3.8nm,0.6s						
ZALV	Zalesovo Beam	11.29	3	Pn	Pn	21 05 54.2	-1.6
	comp=E,0.4nm,0.3s,baz=185,slow=12,SNR=4.5						
ZALV				Sn	Sn	21 07 58.0	-4.1
	comp=E,1.1nm,0.3s,baz=169,slow=27,SNR=11						
VOSK	Vostochnaya	13.16	324	⇑Pn	Pn	21 06 22.2	+0.8
	comp=E,3.1nm,1.2s						
VOSK				⇑Lg		21 10 06.5	
	comp=E,6.4nm,1.1s						
BVA0	Borovoye Array	13.63	324	⇑Lg		21 10 22.6	
	comp=E,0.8nm,1.0s						
BVAR	Borovoye Array	13.63	324	Pn	Pn	21 06 28.7	+0.9
	comp=E,0.1nm,0.3s,baz=132,slow=12,SNR=4.9						
BVAR				Sn	Sn	21 08 58.6	-0.5
	comp=E,0.2nm,0.3s,baz=119,slow=20,SNR=3.3						
BVAR				Lg		21 10 25.8	
	comp=E,0.1nm,0.3s,baz=134,slow=21,SNR=4.0						
BRVK	Borovoye	13.70	324	*e*Pn	Pn	21 06 29.6	+0.9
ZRNK	Zerenda	14.20	321	⇑Lg		21 10 40.9	
	comp=E,10nm,1.2s						
SONM	Songino Array	16.78	64	Pn	Pn	21 07 10.1	+0.5
	comp=E,0.1nm,0.3s,baz=251,slow=12,SNR=6.3						
ABKAR	Akbulak array	17.71	300	*e*Pn	Pn	21 07 21.4	+0.2
	comp=E,4.0nm,1.6s						
ARU	Arti	21.15	319	P	P	21 07 57.5	-2.1
	comp=E,38nm,2.8s,mb4.2						
CMAR	Chiang Mai Arr	27.41	147	P	P	21 08 58.5	-1.9
	comp=E,0.2nm,0.7s,baz=356,slow=10,SNR=2.8						
BRTR	Keskin Array B	37.32	283	P	P	21 10 24.6	-2.2
	comp=E,0.5nm,0.7s,mb3.5,baz=112,slow=13,SNR=4.3						
FINES	FINESS Array B	38.53	319	P	P	21 10 37.5	+0.6
	comp=E,2.4nm,1.0s,mb3.9,baz=101,slow=10,SNR=4.6						
ARCES	ARCESS Array B	39.72	332	P	P	21 10 46.6	-0.1
	comp=E,2.0nm,0.9s,mb3.8,baz=87,slow=7.0,SNR=5.1						
NOA	NORSAR Array B	45.71	320	P	P	21 11 34.7	-0.6
	comp=E,2.2nm,1.1s,mb4.0,baz=80,slow=7.7,SNR=2.6						
TORD	Torodi Ar. Bea	75.35	274	P	P	21 14 57.7	-0.8
	comp=E,0.2nm,0.5s,mb3.3,baz=27,slow=4.9,SNR=5.3						
TORD	Torodi Ar. Bea	75.35	274	P	P	21 14 57.7	-0.8
WRA	Warramunga Arr	77.84	132	P	P	21 15 10.5	-1.8
	comp=E,0.4nm,0.7s,mb3.4,baz=334,slow=5.5,SNR=4.0						
ASAR	Alice Springs	80.63	134	P	P	21 15 26.8	-0.7
	comp=E,0.2nm,0.6s,mb3.2,baz=317,slow=4.9,SNR=3.1						

*BJI **06** 21:05:18.9, 36°42N×34°39W, h5km, mB5.6/8, mb5.1/9, Ms4.8/7, Ms7 4.6/7*
*ISCJB **06** 21:05:22.0±0.5, 36°3N±0°1×33°87W±0°06, h10km, mb4.3/34, MS3.8/21, Error ellipse: s-maj=16.4km s-min=7.5km az=2.6*
*IDC **06** 21:05:22.0±0.7, 36°27N×33°85W, h0km, mb4.0/18, mb1 4.2/18, mb1mx4.0/29, mbtmp4.0/18, MS3.7/18, Ms1 3.7/18, ms1mx3.6/30, Error ellipse: s-maj=20.8km s-min=14.6km az=5.0*
*NEIC **06** 21:05:23.7±0.3, 36°25N×33°81W, h10km, mb4.7/14, Error ellipse: s-maj=11.8km s-min=5.5km az=184.0*

ISC 06 21:05:23.8±0.5**, 36°3N**±0°1×**33°79W**±0°06**, h10**km**, n59, σ0°78/47, mb4.3/34, MS3.8/21, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAB	San Pablo	23.40	73	*e*P	P	21 10 31.7	-1.2
ESDC	Sonseca Array	23.70	73	P	P	21 10 35.6	-0.2
	2.6nm,0.8s,mb3.7,baz=276,slow=8.7,SNR=13						
MDT	Midelt	24.23	90	P	P	21 10 42.1	+1.3
	2.3nm,0.9s,mb3.6,baz=304,slow=11,SNR=5.7						
BBTS	Babate	26.49	140	LR	LR	21 18 52.9	
	comp=Z,165nm,19.5s,MS3.6,baz=111,slow=31						
SCHQ	Schefferville	29.26	320	LR	LR	21 22 11.6	
	comp=Z,461nm,18.8s,MS4.1,baz=110,slow=34						
KEST	Kesra	34.68	78	LR	LR	21 23 36.2	
	comp=Z,29nm,20.2s,MS3.0,baz=1.6,slow=32						
CLL	Collm	36.30	51	*e*P	P	21 12 29.0	+1.7
	11nm,1.6s,mb4.5						
JMIC	Jan Mayen	37.24	13	LR	LR	21 23 08.2	
	comp=Z,55nm,21.8s,MS3.3,baz=35,slow=29						
NB2	NORSAR Subarra	37.55	34	P	P	21 12 37.4	-0.5
	comp=Z,3.5nm,0.9s,mb4.1,baz=250,slow=9.3						
NOA	NORSAR Array B	37.55	34	P	P	21 12 37.4	-0.5
	comp=Z,0.8nm,0.8s,mb3.5,baz=251,slow=8.6,SNR=3.1						
NOA				LR	LR	21 25 01.1	
	comp=Z,27nm,20.7s,MS3.0,baz=270,slow=31						
CUC	Castrocucco	38.79	69	*e*P	P	21 12 48.5	-0.1
	comp=Z,15nm,1.1s,mb4.7						
TORD	Torodi Ar. Bea	39.28	117	P	P	21 12 52.4	-0.5
	comp=Z,0.9nm,0.6s,mb3.7,baz=312,slow=6.0,SNR=11						
TORD				LR	LR	21 26 58.5	
	comp=Z,133nm,20.4s,MS3.8,baz=295,slow=33						
TORD	Torodi Ar. Bea	39.28	117	P	P	21 12 52.4	-0.5
TORD				LR	LR	21 26 58.5	
DBIC	Dimbokro	39.61	131	P	P	21 12 55.4	-0.3
	comp=Z,4.1nm,0.8s,mb4.2,baz=301,slow=8.0,SNR=5.7						
DBIC				LR	LR	21 26 54.3	
	comp=Z,214nm,21.1s,MS4.0,baz=308,slow=33						
DBIC	Dimbokro	39.61	131	*e*P	P	21 12 55.6	0.0
	comp=Z,17nm,1.3s,mb4.6						
FINES	FINESS Array B	44.63	36	P	P	21 13 37.5	+1.4
	comp=Z,3.0nm,0.9s,mb4.1,baz=224,slow=3.8,SNR=4.7						
FINES	FINESS Array B	44.63	36	P	P	21 13 37.5	+1.4
ARCES	ARCESS Array B	45.84	25	LR	LR	21 28 44.9	
	comp=Z,52nm,19.3s,MS3.5,baz=90,slow=31						
ULM	Lac du Bonnet	46.01	308	LR	LR	21 32 41.0	
	comp=Z,227nm,19.0s,MS4.1,baz=29,slow=36						
ECSD	EROS Data Cent	47.67	299	*e*P	P	21 13 59.7	-0.6
	comp=Z,9.4nm,1.0s,mb4.8						
MIAR	Mount Ida	48.07	287	*e*P	P	21 14 03.0	-0.5
	comp=Z,19nm,1.1s,mb5.0						
ROSC	El Rosal	48.60	240	LR	LR	21 31 26.6	
	comp=Z,68nm,20.8s,MS3.6,baz=50,slow=32						
BRTR	Keskin Array B	52.10	64	P	P	21 14 34.7	+0.7
	comp=Z,2.0nm,1.1s,mb4.0,baz=308,slow=6.2,SNR=7.4						
BRTR				PcP	PcP	21 15 46.8	+0.8
	comp=Z,0.9nm,0.9s,baz=251,slow=3.4,SNR=3.8						
BDFB	Brasilia	53.37	197	LR	LR	21 34 11.9	
	comp=Z,137nm,21.5s,MS4.0,baz=50,slow=32						
YKA	Yellowknife Ar	54.43	326	P	P	21 14 50.7	-0.1
	comp=Z,2.0nm,0.8s,mb4.1,baz=79,slow=7.1,SNR=7.2						
YKA				LR	LR	21 36 59.0	
	comp=Z,10nm,18.4s,MS2.9,baz=180,slow=35						
YKA	Yellowknife Ar	54.43	326	P	P	21 14 50.7	-0.1
YKA				LR	LR	21 36 59.0	
JCT	Junction City	54.49	284	*e*P	P	21 14 51.2	-0.5
	comp=Z,8.4nm,1.0s,mb4.6						
GCMT	Greycliff	56.02	305	*e*P	P	21 15 03.3	+0.7
	comp=Z,2.9nm,1.0s,mb4.3						
PDAR	Pinedale Array	56.98	302	P	P	21 15 09.2	-0.3
	comp=Z,1.9nm,1.0s,mb4.1,baz=69,slow=8.1,SNR=7.3						
PDAR				LR	LR	21 39 13.8	
	comp=Z,147nm,18.5s,MS4.1,baz=70,slow=36						
YMR	Madison River	57.27	304	*e*P	P	21 15 12.2	+0.8
	comp=Z,24nm,1.0s,mb5.2						
TPAW	Teton Pass	57.68	303	*e*P	P	21 15 15.6	+1.3
	comp=Z,4.1nm,1.0s,mb4.4						
RRI2	Red Ridge	57.98	303	*e*P	P	21 15 16.5	0.0
	comp=Z,6.3nm,0.9s,mb4.7						
TXAR	Lajitas Array	58.00	285	P	P	21 15 16.6	-0.2
	comp=Z,0.8nm,0.6s,mb3.9,baz=84,slow=7.0,SNR=10						
TXAR				LR	LR	21 36 30.9	
	comp=Z,60nm,21.4s,MS3.7,baz=0.0,slow=32						
DLMT	Dillon	58.10	305	*e*P	P	21 15 17.5	+0.2
	comp=Z,9.2nm,1.1s,mb4.7						
HWUT	Hardware Ranch	58.80	301	*e*P	P	21 15 22.4	+0.2
BGU	Big Grassy Mou	60.08	301	*e*P	P	21 15 31.0	-0.1
DUG	Dugway	60.23	300	*e*P	P	21 15 32.7	+0.6
MSU	Marysvale	60.47	298	*e*P	P	21 15 33.9	+0.2
	comp=Z,6.2nm,1.1s,mb4.5						
LPAZ	La Paz	61.55	218	P	P	21 15 41.7	+0.5
	comp=Z,3.7nm,1.0s,mb4.5,baz=25,slow=6.4,SNR=10						
LPAZ				LR	LR	21 37 33.4	
	comp=Z,32nm,20.0s,MS3.5,baz=75,slow=31						
LPAZ	La Paz	61.55	218	*e*P	P	21 15 42.2	+1.0
	comp=Z,14nm,1.5s,mb4.9						
AKTK	Aktyubinsk	64.11	45	P	P	21 15 57.8	-0.1
AKTO	Aktyubinsk	64.11	45	P	P	21 15 57.8	-0.1
	comp=Z,4.6nm,0.9s,mb4.5,baz=313,slow=4.5,SNR=9.1						
NVAR	Mina Array Bea	64.83	300	P	P	21 16 02.1	-0.8
	comp=Z,1.3nm,0.8s,mb4.0,baz=70,slow=6.0,SNR=5.6						
ILAR	Eielson Array	66.64	335	P	P	21 16 14.0	-0.1
	comp=Z,0.7nm,0.8s,mb3.7,baz=52,slow=5.8,SNR=4.3						
ILAR				LR	LR	21 41 53.2	
	comp=Z,66nm,18.4s,MS3.9,baz=11,slow=33						
ILAR	Eielson Array	66.64	335	P	P	21 16 14.0	-0.1
ILAR				LR	LR	21 41 53.2	
BVAR	Borovoye Array	69.51	39	P	P	21 16 32.4	0.0
	comp=Z,0.5nm,0.7s,mb3.5,baz=282,slow=2.9,SNR=3.6						
ZALV	Zalesovo Beam	75.72	32	P	P	21 17 09.8	+0.5
	comp=Z,0.3nm,0.3s,mb3.6,baz=304,slow=10,SNR=3.3						
AML	Almayashu	77.69	47	*e*P	P	21 17 22.6	+2.0
	comp=Z,9.0nm,1.3s,mb4.5						
MKAR	Makanchi Array	79.39	39	P	P	21 17 29.2	-0.7
	comp=Z,1.2nm,0.8s,mb3.9,baz=316,slow=3.3,SNR=6.7						
WMQ	Urumqi	84.20	38	*e*P	P	21 17 55.0	-0.3
BOSA	Boshof	85.14	131	LR	LR	21 56 23.3	
	comp=Z,90nm,18.5s,MS4.2,baz=170,slow=36						
SONM	Songino Array	89.01	26	P	P	21 18 18.6	-0.2
	comp=Z,0.3nm,0.7s,mb3.8,baz=346,slow=5.2,SNR=3.5						
PETK	Petropavlovsk-	90.42	353	LR	LR	21 58 44.1	
	comp=Z,34nm,19.2s,MS3.8,baz=239,slow=35						
HHC	Hu-ho-hao-te	96.91	26	*e*P	P	21 18 54.8	-0.6
HHC				sP	sP	21 19 01.9	+2.0
HHC				PP	PP	21 22 52.1	+2.4
HHC				SKS		21 29 29.9	
HHC				S	S	21 30 13.8	-3.9
HHC				sS	sS	21 30 20.2	-3.1
HHC				SS	SS	21 36 50.1	-1.5
HHC				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.3						
HHC				pmax	pmax		
	comp=Z,63nm,5.4s						
HHC				LR	LR		
	comp=N,77nm,18.8s,MS4.4						
HHC				LR	LR		
	comp=E,85nm,15.9s,MS4.4						
HHC				LR	LR		
	comp=Z,95nm,17.6s,MS4.3						
LZH	Lanzhou	97.93	33	*e*P	P	21 18 58.7	-1.4
LZH				pP	pP	21 19 02.0	-1.4
LZH				sP	sP	21 19 03.4	-1.2
LZH				*e*PP	PP	21 22 58.5	+0.8
LZH				pmax	pmax		
	comp=Z,16nm,1.5s,mb5.3						
LZH				pmax	pmax		
	comp=Z,45nm,8.6s						
LZH				LR	LR		
	comp=N,190nm,16.5s,MS4.8						
LZH				LR	LR		
	comp=E,160nm,17.8s,MS4.8						
LZH				LR	LR		
	comp=Z,200nm,19.7s,MS4.6						
CN2	Changchun	98.08	15	*e*P	P	21 18 59.5	-1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.4						
BJI	Beijing	99.17	23	P	P	21 19 03.9	-1.6
BJI				S	S	21 30 33.1	-3.9
BJI				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.7						
BJI				pmax	pmax		
	comp=Z,36nm,3.6s						
BJI				LR	LR		
	comp=N,75nm,28.3s,MS4.2						
BJI				LR	LR		
	comp=E,87nm,26.6s,MS4.2						
BJI				LR	LR		
	comp=Z,28nm,21.4s						
CD2	Chengdu	102.19	36	*e*P	Pdif	21 19 18.6	-0.3
WRA	Warramunga Arr	160.67	36	PKPab	PKPab	21 26 06.2	+0.2
	comp=Z,0.7nm,1.0s,baz=332,slow=4.8,SNR=6.0						

*IDC **06** 21:05:29.5±3.2, 29°50N×131°02E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/23, mbtmp3.5/5, Error ellipse: s-maj=194.9km s-min=22.6km az=69.0*
*ISCJB **06** 21:05:36.9±0.6, 29°17N±0°05×130°1E±0°1, h58km±7km, mb3.5/5, Error ellipse: s-maj=17.9km s-min=5.1km az=18.9*
*JMA **06** 21:05:36.5±0.1, 29°19N×130°07E, h63km±3km, M2.9*

ISC 06 21:05:37.7±0.6**, 29°17N**±0°04×**130°1E**±0°1**, h47**km±8**km, n12, σ0°61/18, mb3.5/5, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.70	343	P	Pn	21 05 50.5	-0.9
JNN				*e*S	Sn	21 06 01.8	+0.5
JZK	Kikaishima	0.86	188	P	Pn	21 05 53.4	-0.1
JAM	Amami Oshima	0.88	211	P	Pn	21 05 53.1	-0.6
JAM				S	Sn	21 06 05.5	+0.2
JKC	Kuchinoerabu	1.29	3	P	Pn	21 05 58.7	-0.6
JKC				*e*S	Sn	21 06 15.5	0.0
JTN	Tanegashima 3	1.66	27	P	Pn	21 06 03.8	-0.6
JTN				*e*S	Sn	21 06 25.1	+0.6
JTK	Tokunoshima	1.72	217	P	Pn	21 06 05.6	+0.5
JTK				*e*S	Sn	21 06 26.2	+0.3
JTSR	Tashiro 2	2.11	19	P	Pn	21 06 10.1	-0.5
JTSR				*e*S	Sn	21 06 36.5	+0.9
SONM	Songino Array	26.13	322	P	P	21 11 07.8	+0.6
	0.3nm,0.5s,mb3.0,baz=138,slow=10,SNR=3.4						
WRA	Warramunga Arr	48.99	175	P	P	21 14 19.2	-0.5
	0.3nm,1.0s,mb3.3,baz=355,slow=8.5,SNR=4.8						
BVAR	Borovoye Array	49.25	316	P	P	21 14 21.5	+0.1
	1.1nm,0.6s,mb4.0,baz=91,slow=8.0,SNR=5.9						
ASAR	Alice Springs	52.65	176	P	P	21 14 48.4	+1.1
	0.1nm,0.5s,mb3.0,baz=6.6,slow=12,SNR=4.7						
FINES	FINESS Array B	71.14	330	P	P	21 16 50.0	-1.0
	1.6nm,1.0s,mb3.9,baz=60,slow=8.2,SNR=3.7						

IDC 06 21:11:14.1±708.0**, 32°75N**×**148°13E, h0**km**, Error ellipse: s-maj=1392.0km s-min=79.0km az=116.0, North Pacific Ocean**

*ISCJB **06** 21:11:26.9±0.6, 45°79N±0°05×26°49E±0°05, h5km±6km, Error ellipse: s-maj=8.4km s-min=4.8km az=157.3*
*BUC **06** 21:11:26.5±0.7, 45°78N×26°49E, h4km±13km, MD3.1/2, Error ellipse: s-maj=8.7km s-min=6.1km az=128.0*
*CSEM **06** 21:11:27.2±0.3, 45°77N×26°49E, h2km, MD3.1/2, Error ellipse: s-maj=6.6km s-min=4.9km az=145.0*

ISC 06 21:11:27.5±0.6**, 45°78N**±0°04×**26°50E**±0°05**, h3**km±6**km, n48, σ0°92/56, 12C-21D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRI	Vrincioaia	0.18	62	⇓*i*P	Pg	21 11 29.9	-1.1
VRI				*i* S	Sg	21 11 33.1	-0.4
VRI	Vrincioaia	0.18	62	⇓*i*P	Pg	21 11 29.9	-1.1
VRI				S	Sg	21 11 33.1	-0.4
VRI	Vrincioaia	0.18	62	⇓*i*P	Pg	21 11 29.9	-1.1
VRI				*i* S	Sg	21 11 33.1	-0.4
ODB	Odobesti	0.39	91	⇓*i*P	Pg	21 11 35.1	+0.1
ODB	Odobesti	0.39	91	⇓*i*P	Pg	21 11 35.1	+0.1
ODB	Odobesti	0.39	91	⇓*i*P	Pg	21 11 35.1	+0.1
MLR	Muntele Rosu	0.48	233	⇑*i*P	Pg	21 11 36.3	-0.4
MLR				*i* S	Sg	21 11 44.5	+1.6
MLR	Muntele Rosu	0.48	233	⇑*i*P	Pg	21 11 36.3	-0.4
MLR	Muntele Rosu	0.48	233	S	Sg	21 11 44.5	+1.6
MLR	Muntele Rosu	0.48	233	⇑*i*P	Pg	21 11 36.3	-0.4
MLR				*i* S	Sg	21 11 44.5	+1.6
PETR		0.52	96	⇑*i*P	Pg	21 11 37.6	+0.2
PETR		0.52	96	⇑*i*P	Pg	21 11 37.6	+0.2
PETR		0.52	96	⇑*i*P	Pg	21 11 37.6	+0.2
GRER		0.52	140	⇑*i*P	Pg	21 11 37.3	-0.2
GRER		0.52	140	⇑*i*P	Pg	21 11 37.3	-0.2
GRER		0.52	140	⇑*i*P	Pg	21 11 37.3	-0.2
GHRR		0.70	66	⇓*i*P	Pg	21 11 40.3	-0.5
GHRR				*i* S	Sg	21 11 51.6	+1.8
GHRR		0.70	66	⇓*i*P	Pg	21 11 40.3	-0.5
GHRR				S	Sg	21 11 51.6	+1.8
GHRR		0.70	66	⇓*i*P	Pg	21 11 40.3	-0.5
GHRR				*i* S	Sg	21 11 51.6	+1.8
TESR		0.74	8	⇓*i*P	Pg	21 11 41.5	-0.1
TESR		0.74	8	⇓*i*P	Pg	21 11 41.5	-0.1
TESR		0.74	8	⇓

THL	Klokotos Trika	1.11	80	*e*Pg		Pg	21 18 43.0 -0.9
THL				S		Sg	21 18 58.0 -0.3
THL				*e*Sb		Sb	21 18 58.7 +0.4
VLS	Valsamata	1.21	181	P		Pg	21 18 44.1 -1.7
VLS				S		Sb	21 19 02.6 +1.4
VLS	Valsamata	1.21	181	P		Pg	21 18 44.1 -1.7
VLS				S		Sb	21 19 02.6 +1.4
KZN	Kozani	1.28	44	*e*PB		Pn	21 18 46.5 -0.1
KZN	Kozani	1.28	44	P		Pn	21 18 46.5 -0.1
KZN				S		Sn	21 19 06.1 +2.2
KZN	Kozani	1.28	44	P		Pn	21 18 46.5 -0.1
EFP	Efpalio	1.40	133	*e*PB		Pb	21 18 49.0 +0.2
EFP	Efpalio	1.40	133	*e*Pb		Pb	21 18 49.0 +0.2
RLS	Riolos of Patr	1.49	153	*e*PB		Pb	21 18 50.4 0.0
RLS	Riolos of Patr	1.49	153	*e*Pb		Pb	21 18 50.4 0.0
LIT	Litokhoron	1.62	63	P		Pn	21 18 51.4 +0.2
LIT				S		Sg	21 19 14.8 +0.1
LIT	Litokhoron	1.62	63	P		Pn	21 18 51.4 +0.2
LIT				S		Sg	21 19 14.8 +0.1
LKR	Lokris	2.01	111	*e*PN		Pb	21 18 59.1 -0.1
LKR	Lokris	2.01	111	*e*Pn		Pb	21 18 59.1 -0.1
PLG	Polygyros	2.40	65	*e*PN		Pn	21 19 03.7 +1.8
PLG	Polygyros	2.40	65	*e*Pn		Pn	21 19 03.7 +1.8

KRSC 06 21:32:04.7±0.6, 52°.57N×159°.87E, h23km±22km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.54	10	*e*P	Pb	21 32 17.0	+1.5
SPN				*i* S	Sb	21 32 25.2	+2.4
NLC	Nalytchevo	0.68	332	*e*P	Pb	21 32 18.4	+0.5
NLC				*i* S	Sb	21 32 27.8	+0.9
PET	Petropavlovsk	0.87	302	*e*P	Pb	21 32 21.0	0.0
PET				*i* S	Sb	21 32 32.4	+0.2
GRL	Gorelyy	1.10	270	*e*P	Pn	21 32 25.3	+0.7
GRL				*i* S	Sb	21 32 39.6	+0.8
KII	Karymskiy	1.49	350	*e*P	Pn	21 32 31.7	+1.7
KII				*i* S	Sn	21 32 51.3	+2.6
MIPR	Malaya Ipel'ka	1.93	262	*e*P	Pn	21 32 38.5	+2.5
MIPR				*i* S	Sn	21 33 03.8	+4.3
MKZ	Mys Kozlova	2.28	28	*e*P	Pn	21 32 41.1	+0.3
MKZ				*i* S	Sn	21 33 08.0	-0.1
ALID	Alaid	3.18	239	P	Pn	21 32 56.5	+3.3
KBTR	Krutoberegovo	4.03	24	*e*P	Pn	21 33 08.8	+3.9

IDC 06 21:32:09.2±630.0, 32°.26N×149°.74E, h0km, Error ellipse: s-maj=1241.0km s-min=73.5km az=117.0, North Pacific Ocean

ISCJB ***06*** *21:52:21.9±1.0, 38°.29N±0°.07×38°.81E±0°.05, h11km±7km, Error ellipse: s-maj=11.9km s-min=4.9km az=158.2*
CSEM ***06*** *21:52:21.6±0.2, 38°.30N×38°.81E, h15km, MD2.7, Error ellipse: s-maj=6.2km s-min=2.4km az=164.0*
ISK ***06*** *21:52:21.2, 38°.31N×38°.79E, h18km, MD2.6*
DDA ***06*** *21:52:22.2, 38°.32N×38°.78E, h7km±2km, Md2.7*
ISC 06 21:52:21.9±1.3, 38°.29N±0°.08×38°.80E±0°.05, h16km±9km, n14, σ0s44/26, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.26	34	⇓*i*P	Pg	21 52 27.4	-0.1
ELZG				*i* S	Sg	21 52 31.1	-0.4
ELZG	Elazig	0.26	34	*i* P	Pg	21 52 27.5	-0.1
ELZG				*i* S	Sg	21 52 31.1	-0.3
MALT	Malatya	0.30	276	PG	Pg	21 52 27.9	-0.3
MALT				SG	Sg	21 52 32.6	+0.1
MALT	Malatya	0.30	276	*i* Pg	Pg	21 52 27.9	-0.3
MALT				*i* Sg	Sg	21 52 32.6	+0.1
MYA	Malataya	0.30	278	PG	Pg	21 52 28.3	0.0
MYA	Malataya	0.30	278	*i* Pg	Pg	21 52 28.3	0.0
SVRC	Sivrice-ELAZID	0.41	77	*e*PG	Pg	21 52 30.1	-0.1
SVRC				*e*SG	Sg	21 52 36.5	+0.7
SVRC	Sivrice-ELAZID	0.41	77	*e*Pg	Pg	21 52 30.1	-0.1
SVRC				*e*Sg	Sg	21 52 36.5	+0.7
AKCD	Akcadag	0.69	271	⇑*i*P	Pg	21 52 35.4	-0.1
AKCD				*i* S	Sg	21 52 45.2	+0.5
AKCD	Akcadag	0.69	271	*i* P	Pg	21 52 35.3	-0.2
AKCD				*i* S	Sg	21 52 45.2	+0.6
PTK	Pertek	0.76	37	*e*PG	Pg	21 52 35.9	-0.9
PTK				*e*SG	Sg	21 52 47.4	+0.5
PTK	Pertek	0.76	37	*e*Pg	Pg	21 52 35.9	-0.9
PTK				*e*Sg	Sg	21 52 47.4	+0.5
KEMA	Kemaliye	1.01	346	*e*P	Pb	21 52 40.6	-0.5
KEMA				*e*S	Sb	21 52 54.5	+0.5
KEMA	Kemaliye	1.01	346	*e*P	Pb	21 52 40.6	-0.4
KEMA				*e*S	Sb	21 52 54.5	+0.4

IDC 06 22:05:06.7±622.0, 32°.47N×149°.08E, h0km, Error ellipse: s-maj=1224.0km s-min=74.0km az=117.0, North Pacific Ocean

IDC 06 22:15:09.7±11.0, 17°.55S×179°.74W, h617km±141km, mb3.3/5, mb1 3.6/5, mb1mx3.1/18, mbtmp3.3/5, Error ellipse: s-maj=107.4km s-min=46.3km az=173.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.70	240	P	P	22 21 34.6	0.0
	2.5nm,0.4s,baz=94,slow=10,SNR=30						
WRA	Warramunga Arr	43.45	259	P	P	22 22 19.8	-0.5
	2.3nm,0.5s,baz=93,slow=7.0,SNR=98						
ASAR	Alice Springs	43.67	254	P	P	22 22 21.9	0.0
	21nm,0.5s,baz=89,slow=8.2,SNR=485						
FITZ	Fitzroy Crossi	51.84	261	P	P	22 23 23.1	+0.4
	0.6nm,0.3s,baz=123,slow=9.5,SNR=10						
TXAR	Lajitas Array	86.88	58	P	P	22 26 50.8	+0.2
	0.5nm,0.8s,baz=224,slow=3.5,SNR=4.8						
BRTR	Keskin Array B	143.63	314	PKP	PKPdf	22 33 35.1	-0.6
	0.6nm,0.9s,baz=87,slow=3.8,SNR=3.1						

IDC 06 22:22:42.1±635.0, 32°.88N×148°.17E, h0km, Error ellipse: s-maj=1250.0km s-min=77.9km az=116.0, North Pacific Ocean

IDC ***06*** *22:23:14.8±0.8, 1°.08N×126°.53E, h58km±7km, mb3.6/11, mb1 3.7/12, mb1mx3.6/17, mbtmp3.6/12, MS3.3/1, Ms1 3.3/1, ms1mx2.4/20, Error ellipse: s-maj=29.4km s-min=12.5km az=75.0*
NEIC ***06*** *22:23:14.2±4.1, 1°.07N×126°.54E, h52km±40km, mb4.4/4, Error ellipse: s-maj=23.8km s-min=11.5km az=69.0*
ISC 06 22:23:12.5±5.0, 1°.1N±0°.1×126°.5E±0°.2, h36km±50km, h57km±.5km: pP-P, n22, σ0s97/20, mb4.0/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.07	183	P	Pn	22 27 32.0	-1.1
	0.1nm,0.3s,baz=86,slow=14,SNR=3.0						
FITZ	Fitzroy Crossi	19.07	183	*e*P	Pn	22 27 32.5	-0.6
WRA	Warramunga Arr	22.25	160	P	P	22 28 06.5	+0.1
	3.5nm,0.5s,mb4.1,baz=339,slow=11,SNR=25						
WB2	Warramunga Arr	22.25	160	*e*P	P	22 28 06.7	+0.3
ASAR	Alice Springs	25.62	164	P	P	22 28 39.0	+0.3
	1.3nm,0.4s,mb3.8,baz=349,slow=14,SNR=33						
CMAR	Chiang Mai Arr	32.11	304	P	P	22 29 35.8	-0.8
	0.3nm,0.6s,mb3.3,baz=133,slow=5.3,SNR=3.8						
STKA	Stephens Creek	35.75	158	P	P	22 30 08.9	+0.9
	1.9nm,0.8s,mb4.1,baz=355,slow=19,SNR=5.3						
KSRS	Korea Array	36.22	2	P	P	22 30 11.7	-0.4
	1.2nm,0.6s,mb4.0,baz=181,slow=10,SNR=7.4						
KSRS				LR	LR	22 46 17.8	
	comp=Z,40nm,18.5s,baz=232,slow=38						
MJAR	Matsushiro Arr	36.91	16	P	P	22 30 16.3	-1.7
	0.6nm,0.6s,mb3.6,baz=183,slow=9.6,SNR=4.9						
ULN	Ulaanbaatar	49.57	343	*e*P	P	22 32 01.8	+1.9
	4.4nm,1.1s,mb4.4						
SONM	Songino Array	49.74	342	P	P	22 32 02.7	+1.5
	1.3nm,0.9s,mb4.0,baz=164,slow=7.4,SNR=6.7						
SONM				pP	pP	22 32 17.2	+5.3
	1.8nm,0.8s,baz=162,slow=8.7,SNR=6.7						
SONM				PcP	PcP	22 33 21.7	-0.2
	0.5nm,0.6s,baz=157,slow=4.7,SNR=2.8						
PETK	Petropavlovsk-	57.95	22	P	P	22 33 02.1	+0.9
	0.6nm,0.5s,mb3.9,baz=231,slow=6.9,SNR=3.9						
MK31	Makanchi Array	59.62	326	*e*P	P	22 33 13.2	+0.3
MKAR	Makanchi Array	59.62	326	P	P	22 33 13.1	+0.2
	1.2nm,0.6s,mb4.1,baz=121,slow=8.5,SNR=20						
MKAR				pP	pP	22 33 28.1	+4.4
	2.5nm,0.9s,baz=129,slow=7.7,SNR=6.8						
ZALV	Zalesovo Beam	62.85	334	P	P	22 33 35.2	+0.5
	0.7nm,0.3s,mb4.2,baz=146,slow=2.8,SNR=3.7						
ZALV				pP	pP	22 33 50.5	+5.0
	1.6nm,0.7s,baz=104,slow=6.3,SNR=2.8						
KURK	Kurchatov	63.87	328	*e*P	P	22 33 41.6	+0.2
	8.9nm,0.8s,mb4.8						
KURK				*e*		22 33 57.7	
ABKAR	Akbulak array	74.07	321	*e*P	P	22 34 45.1	+0.3
	3.5nm,1.0s,mb4.2						
ARU	Arti	77.06	328	*e*P	P	22 35 01.5	-0.3
	4.6nm,1.0s,mb4.4						
ILAR	Eielson Array	87.58	25	P	P	22 35 54.4	-2.2
	0.2nm,0.5s,mb3.6,baz=253,slow=5.3,SNR=3.0						
BRTR	Keskin Array B	91.54	310	P	P	22 36 14.3	-1.5
	0.6nm,0.8s,mb4.0,baz=143,slow=8.9,SNR=4.7						
TXAR	Lajitas Array	123.36	53	PKP	PKPdf	22 42 07.3	+0.8
	0.2nm,0.7s,baz=333,slow=1.4,SNR=3.3						
TORD	Torodi Ar. Bea	123.51	286	PKP	PKPdf	22 42 06.9	-0.3
	0.2nm,0.7s,baz=22,slow=1.1,SNR=2.2						

IDC 06 22:41:00.4±644.0, 32°.92N×148°.16E, h0km, Error ellipse: s-maj=1267.0km s-min=76.8km az=116.0, North Pacific Ocean

IDC 06 22:59:51.8±3.0, 6°.23S×148°.20E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, MS3.9/1, Ms1 3.9/1, ms1mx2.7/27, Error ellipse: s-maj=88.2km s-min=45.4km az=103.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.16	223	P	Pn	23 04 16.9	-1.0
	0.1nm,0.3s,baz=44,slow=11,SNR=8.1						
WRA				LR	LR	23 11 12.4	
	comp=Z,320nm,18.2s,baz=330,slow=36						
ASAR	Alice Springs	22.13	217	P	P	23 04 50.0	+0.9
	1.2nm,0.6s,baz=52,slow=8.6,SNR=25						
STKA	Stephens Creek	26.25	193	P	P	23 05 27.8	-1.0
	1.8nm,0.8s,baz=1.4,slow=9.5,SNR=4.0						
TORD	Torodi Ar. Bea	146.30	284	PKPbc	PKPbc	23 19 35.2	-0.4
	0.9nm,0.8s,baz=83,slow=3.3,SNR=6.0						

IDC 06 23:00:17.8±599.0, 32°.55N×149°.16E, h0km, Error ellipse: s-maj=1181.0km s-min=73.9km az=117.0, North Pacific Ocean

NIED ***06*** *23:00:00.24°.10N×121°.90E, h47km, Mw4.1 Best double couple: M0:1.85000×10^15 NP1:φs34.00000°, δ65.00000°, λ94.00000°. NP2:φs204.00000°, δ25.00000°, λ81.00000°.*
BJI ***06*** *23:00:30.0, 23°.96N×121°.91E, h14km, mB4.4/2, mb4.1/8, ML3.9/6, Ms3.4/1*
NEIC ***06*** *23:00:34.8±0.7, 23°.95N×121°.96E, h50km±5km, mb4.1/4, Error ellipse: s-maj=11.3km s-min=6.8km az=124.0*
NEIC Recorded [3 TAP] in Hua-lien and I-lan; [2 TAP] in Nan-t'ou; [1 TAP] in Chang-hua, T'ai-chung and Yun-lin.
ISCJB ***06*** *23:00:35.1±0.2, 23°.98N±0°.02×121°.89E±0°.02, h58km±2km, mb3.9/14, Error ellipse: s-maj=3.0km s-min=2.1km az=138.2*
JMA ***06*** *23:00:35.9±0.2, 24°.14N×121°.89E, h83km±4km, M4.1*
TAP ***06*** *23:00:36.0, 23°.99N×121°.81E, h51km, ML4.6, B*
IDC ***06*** *23:00:40.8±6.8, 24°.05N×121°.76E, h100km±56km, mb3.5/9, mb1 3.7/10, mb1mx3.6/23, mbtmp3.5/10, MS2.8/2, Ms1 2.8/2, ms1mx2.3/32, Error ellipse: s-maj=48.4km s-min=25.8km az=151.0*
ISC 06 23:00:36.0±0.2, 23°.98N±0°.02×121°.88E±0°.02, h52km±2km, n100, σ0s99/164, mb3.9/14, 23C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.25	270	⇓*i*P	Pn	23 00 44.6	-0.2
	baz=259						
HWA				*e*S	Sn	23 00 51.0	-0.3
	baz=259						
TWD	Chiawan	0.28	292	⇓*i*P	Pn	23 00 44.6	-0.5
	baz=296						
TWD				*i* S	Sn	23 00 50.7	-0.9
	baz=296						
NACB	Ninganchiao	0.33	307	*e*Pg	Pn	23 00 44.8	-0.7
NACB				*e*S	Sn	23 00 51.4	-0.9
EHP	Heping Village	0.36	339	*e*P	Pn	23 00 45.2	-0.6
	baz=343						
EHP				*e*S	Sn	23 00 52.4	-0.4
	baz=343						
ESF	Shoufeng Towns	0.36	253	P	Pn	23 00 45.3	-0.5
	baz=246						
ESF				*e*S	Sn	23 00 52.2	-0.7
	baz=246						
TEGC	Jichi Village	0.41	230	P	Pn	23 00 46.2	-0.1
	baz=213						
TEGC				*e*S	Sn	23 00 53.8	0.0
	baz=213						
ESL	Shilin	0.44	249	⇑*i*P	Pn	23 00 46.0	-0.7
	baz=251						
ESL				*e*S	Sn	23 00 53.5	-0.8
	baz=251						
ENA	Nanau	0.47	344	⇓*i*P	Pn	23 00 46.7	-0.3
	baz=350						
ENA				*e*S	Sn	23 00 54.8	-0.1
	baz=350						
WHF	Hehuan Shan	0.59	287	⇑*i*P	Pn	23 00 48.1	-0.3
	baz=282						
WHF				S	Sn	23 00 56.6	-0.8
	baz=282						
TWC	Suao	0.63	357	⇓*i*P	Pn	23 00 49.2	+0.3
	baz=4.0						
TWC				*e*S	Sn	23 00 58.3	0.0
	baz=4.0						
NNS	Nan Shan	0.66	315	⇑*i*P	Pn	23 00 49.0	-0.2
	baz=319						
NNS				*e*S	Sn	23 00 57.7	-1.1
	baz=319						
EHY	Hungye	0.69	228	⇑*i*P	Pn	23 00 48.8	-0.9
	baz=222						
EHY				S	Sn	23 00 57.9	-1.8
	baz=222						
TWT	Tachien	0.70	293	⇑*i*P	Pn	23 00 50.0	+0.2
	baz=291						
TWT				S	Sn	23 00 59.5	-0.3
	baz=291						
ENTT	Nioudou	0.72	336	⇑*i*P	Pn	23 00 50.0	-0.1
	baz=342						
TWE	Neicheng	0.77	345	⇑*i*P	Pn	23 00 50.9	+0.3
	baz=343						
TWE				S	Sn	23 01 01.4	+0.1
	baz=343						
YULB	Yu-li	0.79	223	*e*Pg	Pn	23 00 49.7	-1.3
YULB				*e*S	Sn	23 00 59.7	-2.2
ILA	Ilan	0.80	351	P	Pn	23 00 51.6	+0.6
	baz=357						
ILA				*e*S	Sn	23 01 03.0	+1.0
	baz=357						
TWF1	Yuli	0.82	221	⇑*i*P	Pn	23 00 50.5	-0.8
	baz=224						
TWF1				*e*S	Sn	23 01 00.9	-1.6
	baz=224						
YHNB	Yeheng	0.83	326	*e*Pg	Pn	23 00 51.4	-0.1
YHNB				*e*S	Sn	23 01 02.1	-0.7
NSK	Sanguang	0.84	326	⇑*i*P	Pn	23 00 51.7	0.0
	baz=330						
NSK				S	Sn	23 01 02.1	-1.1
	baz=330						
SSLB	Suanglung	0.87	258	*e*Pn	Pn	23 00 51.3	-0.7
SSLB				*e*S	Sn	23 01 04.8	+1.1
TYC	Yuchr	0.94	266	⇑*i*P	Pn	23 00 52.7	-0.2
	baz=259						
YUS	Yu-Shan	0.98	241	⇑*i*P	Pn	23 00 54.0	+0.5
	baz=231						
YUS				S	Sn	23 01 06.2	-0.1
	baz=231						
TWB1	Santiao Chiao	1.03	5	⇓*i*P	Pn	23 00 54.7	+0.6
	baz=24						
TWB1				*e*S	Sn	23 01 07.1	-0.5
	baz=24						
NSTT	Nanjuang	1.03	309	⇑*i*P	Pn	23 00 55.0	+0.8
	baz=311						
NSTT				*i* S	Sn	23 01 08.3	+0.6
	baz=311						
TWA	Mucha	1.04	345	P	Pn	23 00 54.6	+0.4
	baz=339						
TWA				*e*S	Sn	23 01 08.2	+0.5
	baz=339						
TATO	Taipei	1.06	340	*e*Pn	Pn	23 00 54.3	-0.2
TWQ1	Liyutan	1.08	290	⇑*i*P	Pn	23 00 55.3	+0.5
	baz=291						
TWQ1				*e*S	Sn	23 01 09.0	+0.3
	baz=291						
ALS	Alishan	1.09	245	⇑*i*P	Pn	23 00 55.5	+0.6
	baz=235						
ALS				*e*S	Sn	23 01 09.4	+0.4
	baz=235						
NWF	Wu-fen Shan	1.09	355	*i* P	Pn	23 00 56.0	+1.0
	baz=359						
NWF				S	Sn	23 01 10.0	+0.9
	baz=359						
TAP1	Taipei	1.11	343	*e*P	Pn	23 00 55.1	0.0
	baz=346						
TAP1				S	Sn	23 01 09.8	+0.4
	baz=346						
ELDTW	Lidau	1.11	226	⇑*i*P	Pn	23 00 54.5	-0.7
	baz=218						
ELDTW				*e*S	Sn	23 01 08.1	-1.5
	baz=218						
TCU	Taichung	1.12	279	⇑*i*P	Pn	23 00 56.0	+0.7
	baz=278						
TCU				S	Sn	23 01 10.7	+1.1
	baz=278						
YOJ	Yonaguni jima	1.14	65	*e*P	Pn	23 00 56.5	+1.0
	baz=66						
YOJ				*e*S	Sn	23 01 11.6	+1.4
	baz=66						
YOJ	Yonaguni jima	1.14	65	P	Pn	23 00 56.2	+0.6
YOJ				S	Sn	23 01 11.7	+1.6
CHN5	Tsauling	1.17	251	⇑*i*P	Pn	23 00 56.4	+0.5
	baz=248						
CHN5				S	Sn	23 01 12.0	+1.2
	baz=248						
HSN	Hsinchu	1.17	315	*e*P	Pn	23 00 56.2	+0.2
	baz=320						
HSN				*e*S	Sn	23 01 11.9	+1.0
	baz=320						
TWS1	Kuangyinshan	1.20	339	*e*P	Pn	23 00 56.0	-0.4
	baz=343						
TWS1				*e*S	Sn	23 01 12.2	+0.6
	baz=343						
WGK	Gukeng	1.24	257	P	Pn	23 00 57.7	+0.7
	baz=243						
WGK				*e*S	Sn	23 01 14.1	+1.5
	baz=243						
STYT	Tauyuan	1.31	232	⇑*i*P	Pn	23 00 57.5	-0.4
	baz=222						
STYT				*e*S	Sn	23 01 14.5	+0.2
	baz=222						
TWY	Chenhua	1.32	349	*e*P	Pn	23 00 58.0	-0.1
	baz=340						
TPUB	Ta-pu	1.33	240	*e*Pn	Pn	23 00 58.6	+0.5
TPUB				*e*S	Sn	23 01 16.5	+1.7
TWG	Pinlang	1.37	213	*e*Pn	Pn	23 00 57.3	-1.4
TWG				*e*S	Sn	23 01 14.0	-1.8
TWG	Pinlang	1.37	213	⇓*i*P	Pn	23 00 57.5	-1.3
	baz=210						
TWG				*e*S	Sn	23 01 13.5	-2.3
	baz=210						
WTP	Ta-pu	1.37	238	⇑*i*P	Pn	23 00 59.4	+0.6
	baz=235						
WTP				S	Sn	23 01 17.9	+2.1
	baz=235						
TTN	Taitung	1.39	209	*e*P	Pn	23 00 58.4	-0.6
	baz=207						
CHY	Chiayi	1.42	251	P	Pn	23 01 00.3	+1.0
	baz=247						
CHY				*e*S	Sn	23 01 18.0	+1.1
	baz=247						
WTCT	Ta-ch'eng	1.47	266	⇑*i*P	Pn	23 01 00.5	+0.4
	baz=278						
WTCT				*e*S	Sn	23 01 18.9	+0.8
	baz=278						
CHN1	Nanshi	1.47	238	⇑*i*P	Pn	23 01 00.6	+0.5
	baz=234						
CHN1				S	Sn	23 01 19.4	+1.2
	baz=234						
SGST	Jiashian	1.49	234	⇑*i*P	Pn	23 01 01.5	+1.2
	baz=230						
SGST				*e*S	Sn	23 01 20.4	+1.7
	baz=230						
WSF	Szhu	1.56	258	P	Pn	23 01 01.8	+0.5
	baz=244						
WSF				*e*S	Sn	23 01 22.0	+1.7
	baz=244						
ECL	Taimali	1.62	212	*e*P	Pn	23 01 00.6	-1.5
	baz=204						
IRIF	Iriomote-Funau	1.73	78	P	Pn	23 01 04.3	+0.7
IRIF				S	Sn	23 01 25.4	+1.0
SCLT	Jiali	1.74	243	*e*P	Pn	23 01 02.8	-1.0
	baz=239						
SCLT				*e*S	Sn	23 01 26.6	+1.7
	baz=239						
HATJ	Hateruma jima	1.76	87	P	Pn	23 01 05.0	+1.0
HATJ				S	Sn	23 01 26.8	+1.5
TWM1	Shoushan	1.77	230	*e*P	Pn	23 01 06.3	+2.2
	baz=227						
EAST	Anshuo	1.85	211	*e*P	Pn	23 01 04.5	-0.8
	baz=205						
TAW	Tawu	1.85	210	*e*P	Pn	23 01 04.7	-0.6
	baz=208						
LAY	Lan-yu	1.95	189	*e*P	Pn	23 01 05.7	-1.0
	baz=180						
JKRS	Kuro-shima	1.96	82	P	Pn	23 01 07.9	+1.1
JKRS				S	Sn	23 01 32.5	+2.3
SCZT	Fangliau	1.97	216	*e*P	Pn	23 01 08.3	+1.4
	baz=215						
JIJ	Ishigaki jima	2.10	79	P	Pn	23 01 09.2	+0.5
JIJ				S	Sn	23 01 33.5	-0.1
TWP	Hsiaoliuchiu	2.14	221	*e*P	Pn	23 01 12.2	+2.9
	baz=219						
PNG	Penghu	2.17	260	⇑*i*P	Pn	23 01 09.0	-0.7
	baz=256						
PNG				*e*S	Sn	23 01 33.2	-2.2
	baz=256						
HEN	Hengchun	2.23	208	*e*P	Pn	23 01 11.4	+0.9
	baz=197						
HEN				*e*S	Sn	23 01 39.8	+3.0
	baz=197						
TWK1	Hengchun	2.25	206	*e*P	Pn	23 01 10.9	+0.1
	baz=196						
TWK1				*e*S	Sn	23 01 36.1	-1.3
	baz=196						
TSEB	Hengchuen, Pin	2.26	204	*e*P	Pn	23 01 10.9	+0.1
	baz=195						
TSEB				*e*S	Sn	23 01 37.8	+0.3
	baz=195						
JTJ	Tarama	2.66	75	P	Pn	23 01 17.0	+0.7
JTJ				S	Sn	23 01 47.5	+0.2
QZH	Quanzhou	3.15	288	⇓*i*Pn	Pn	23 01 20.6	-2.4
QZH				Sn	Sn	23 01 53.8	-5.6
QZH				smax			
	comp=N,1μm,0.4s						
QZH				smax			
	comp=E,1μm,0.4s						
KNM	Kinmen	3.18	279	*e*P	Pn	23 01 23.9	+0.5
	baz=278						
JMJ	Miyako jima 2	3.22	74	P	Pn	23 01 23.9	-0.1
JMJ				S	Sn	23 02 01.7	+0.5
JOGS	Gusukube	3.31	76	P	Pn	23 01 26.2	+1.0
JOGS				S	Sn	23 02 04.3	+1.0
JKE	Kume jima 2	5.02	61	P	Pn	23 01 49.0	+0.3
JKE				S	Sn	23 02 43.8	-1.7
JAGN	Aguni-jima	5.50	61	P	Pn	23 01 56.0	+0.6
JAGN				S	Sn	23 02 56.7	-0.7
JIH	Iheya	6.29	60	P	Pn	23 02 05.5	-0.6
JIH				S	Sn	23 03 15.0	-1.5
JOW	Kunigami	6.44	62	*e*Pn	Pn	23 02 06.8	-1.4
	comp=E,11nm,0.6s						
JOW				*e*S	Sn	23 03 16.9	-3.5
JOW	Kunigami	6.44	62	*e*P	Pn	23 02 07.0	-1.2
	baz=72						

JTK *e*S **Sn** **23 03 40.1 -4.1**
GZH Guangzhou 7.88 265 P **Pn** **23 02 22.8 -5.2**
GZH smax
comp=N,85nm,0.7s
GZH smax
comp=E,84nm,0.8s
JAM Amami Oshima 8.22 56 P **Pn** **23 02 31.0 -1.6**
KSRS Korea Array 14.40 20 P **Pn** **23 03 59.4 +2.6**
comp=E,0.2nm,0.3s,baz=197,slow=13,SNR=4.9
KSRS LR LR 23 10 05.7
comp=E,35nm,18.5s,baz=355,slow=39
MJAR Matsushiro Arr 18.83 45 LR LR 23 12 40.3
comp=E,35nm,21.2s,baz=240,slow=38
LZH Lanzhou 19.70 312 *e*P **Pn** **23 05 01.0 -1.8**
LZH pP pP 23 05 06.3 -6.4
LZH sP sP 23 05 08.1 -11
LZH pmax pmax
comp=Z,16nm,1.4s
CHTO Chiang Mai 21.96 261 *e*P **P** **23 05 26.0 +0.6**
comp=Z,6.3nm,1.3s,mb3.9
CMAR Chiang Mai Arr 22.07 260 P **P** **23 05 26.5 -0.1**
comp=Z,1.2nm,0.6s,mb3.5,baz=56,slow=8.5,SNR=10
GTA Gaotai 24.18 315 *e*P **P** **23 05 47.1 -0.3**
GTA pP 23 05 52.2
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb3.6
SONM Songino Array 26.81 336 P **P** **23 06 10.6 -0.5**
comp=Z,1.2nm,0.7s,mb3.5,baz=156,slow=11,SNR=8.2
LSA Lhasa 27.96 288 P **P** **23 06 23.0 +1.3**
LSA Lhasa 27.96 288 *e*P **P** **23 06 22.9 +1.3**
comp=Z,2.9nm,0.5s,mb4.2
MK31 Makanchi Array 38.93 316 *e*P **P** **23 07 56.3 -0.4**
MKAR Makanchi Array 38.93 316 P **P** **23 07 56.0 -0.6**
comp=Z,1.4nm,0.6s,mb3.9,baz=100,slow=10,SNR=18
ZALV Zalesovo Beam 40.77 327 P **P** **23 08 10.2 -1.6**
comp=Z,1.4nm,0.4s,mb3.9,baz=112,slow=7.5,SNR=10
KBL Kabul 46.83 296 *e*P **P** **23 09 01.2 +0.4**
comp=Z,4.4nm,1.0s,mb4.3
BVAR Borovoye Array 48.24 321 P **P** **23 09 10.4 -1.0**
comp=Z,0.7nm,0.5s,mb3.9,baz=85,slow=9.1,SNR=6.3
ABKAR Akbulak array 54.04 314 *e*P **P** **23 09 54.3 -0.7**
comp=Z,1.0nm,0.5s,mb4.0
ILAR Eielson Array 69.11 27 P **P** **23 11 35.5 -0.7**
comp=Z,0.2nm,0.5s,mb3.3,baz=288,slow=8.6,SNR=4.9
FINES FINESS Array B 71.95 330 P **P** **23 11 52.0 -1.7**
comp=Z,1.3nm,0.7s,mb4.0,baz=47,slow=7.7,SNR=7.9
BRTR Keskin Array B 73.81 307 P **P** **23 12 04.2 -0.9**
comp=Z,0.9nm,0.9s,mb3.7,baz=118,slow=5.3,SNR=5.9
YKA Yellowknife Ar 82.91 23 P **P** **23 12 54.3 -0.5**
comp=Z,1.1nm,0.5s,mb4.1,baz=311,slow=5.1,SNR=6.9

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*BJI **06** 23:01:55.4,8.00S×131.21E,h35km,mB4.9/23,mb5.0/40, Ms4.6/22,Ms7 4.2/20*
*IDC **06** 23:01:57.8±0.5,7.21S×130.85E,h0km,mb4.6/16, mb1 4.6/18,mb1mx4.6/19,mbtmp4.6/18,ML4.9/3,MS3.8/4, Ms1 3.7/4,ms1mx3.3/24,Error ellipse: s-maj=22.8km s-min=11.8km az=80.0*
*MOS **06** 23:02:01.3±1.2,7.23S×130.76E,h33km,mb5.1/17,Error ellipse: s-maj=15.3km s-min=6.9km az=118.7*
*NEIC **06** 23:02:02.7±0.2,7.31S×130.87E,h35km,mb4.8/24,Error ellipse: s-maj=8.8km s-min=4.7km az=68.0*
*TEH **06** 23:02:03.0,7.35S×130.84E,h35km*
*ISCJB **06** 23:02:04.1±0.6,7.42S±0.03×131.09E±0.04,h73km±5km, mb4.8/71,Error ellipse: s-maj=7.6km s-min=5.0km az=155.7*
*DJA **06** 23:02:07,7.47S×131.10E,h55km,mb5.2/19*
ISC 06 23:02:05.5±0.5,7.41S±0.03×131.03E±0.05,h67km±5km, h36km±1.9km;pP-P,n190,σ1§18/187,mb4.8/71,7C-3D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.44**	**44**	P			**Pn**	**23 02 45.2**	**+2.0**
BNDI	**Bandanaira**	**3.08**	**339**	P			**Pn**	**23 02 54.0**	**+2.1**
KAKA	**Kakadu**	**5.44**	**165**	⇑*i*P			**Pn**	**23 03 25.4**	**+1.3**
	148nm,0.2s								
KAKA				*e*S			**Sn**	**23 04 23.9**	**-1.6**
KAKA	**Kakadu**	**5.44**	**165**	*e*Pn			**Pn**	**23 03 25.3**	**+1.2**
	196nm,0.9s								
KAKA				*e*Sn			**Sn**	**23 04 24.1**	**-1.4**
KAKA	**Kakadu**	**5.44**	**165**	P			**Pn**	**23 03 25.6**	**+1.5**
	13nm302nm,0.6s								
NLAI	**Namlea**	**5.70**	**316**	P			**Pn**	**23 03 29.5**	**+1.8**
	2.6nm8μm809nm,1.1s								
LBMI	**Labuha**	**7.60**	**332**	P			**Pn**	**23 03 53.5**	**-0.1**
	2.6nm6μm173nm,0.9s								
BAKI	**Biak**	**7.99**	**40**	P			**Pn**	**23 03 59.5**	**+0.6**
	3.1nm10μm909nm,1.0s								
WAMI	**Wamena**	**8.41**	**66**	P			**Pn**	**23 04 08.5**	**+3.8**
	4μm409nm,0.7s								
KNA	**Kununurra**	**8.58**	**195**	*e*P			**Pn**	**23 04 06.8**	**-0.2**
	181nm,0.2s								
KNA				*e*S			**Sn**	**23 05 37.1**	**-5.2**
KNA	**Kununurra**	**8.58**	**195**	P			**Pn**	**23 04 08.1**	**+1.1**
	2μm,0.9s								
BBSI	**Bau Bau**	**8.62**	**282**	P			**Pn**	**23 04 11.1**	**+3.4**
	1μm140nm,1.1s								
MMRI	**Maumere**	**8.79**	**261**	P			**Pn**	**23 04 11.1**	**+1.1**
	2μm124nm,0.8s								
TNTI	**Ternate**	**8.91**	**336**	P			**Pn**	**23 04 10.5**	**-1.2**
	64nm,0.9s								
KDI	**Kendari**	**9.05**	**292**	P			**Pn**	**23 04 16.8**	**+3.3**
	780nm48nm,1.4s								
LUWI	**Luwuk**	**10.39**	**307**	P			**Pn**	**23 04 34.1**	**+2.3**
	1μm115nm,1.1s								
BKSI	**Bulukumba**	**11.04**	**280**	P			**Pn**	**23 04 43.6**	**+2.9**
	31nm,0.8s								
FITZ	**Fitzroy Crossi**	**11.85**	**206**	Pn			**Pn**	**23 04 48.8**	**-3.0**
	40nm,0.3s,baz=37,slow=10.0,SNR=244								
FITZ				Sn			**Sn**	**23 06 50.0**	**-12**
	8.9nm,0.3s,baz=59,slow=17,SNR=4.1								
FITZ	**Fitzroy Crossi**	**11.85**	**206**	*e*P			**Pn**	**23 04 48.5**	**-3.3**
	647nm,0.8s								
FITZ				*e*S			**Sn**	**23 06 52.6**	**-10**
FITZ	**Fitzroy Crossi**	**11.85**	**206**	*e*Pn			**Pn**	**23 04 48.6**	**-3.2**
	2.3nm,0.7s								
FITZ				*e*S			**Sn**	**23 06 50.7**	**-12**
FITZ	**Fitzroy Crossi**	**11.85**	**206**	P			**Pn**	**23 04 48.8**	**-3.0**
	7μm472nm,1.1s								
TTSI	**Tana Toraja**	**11.98**	**291**	P			**Pn**	**23 04 56.1**	**+2.6**
	616nm40nm,1.3s								
WRA	**Warramunga Arr**	**12.86**	**166**	Pn			**Pn**	**23 05 02.2**	**-3.3**
	3.8nm,0.3s,baz=344,slow=13,SNR=66								
WRA				Sn			**Sn**	**23 07 15.7**	**-11**
	4.0nm,0.3s,baz=337,slow=22,SNR=8.7								
WRA	**Warramunga Arr**	**12.86**	**166**	Pn			**Pn**	**23 05 02.2**	**-3.3**
WRA				Sn			**Sn**	**23 07 15.7**	**-11**
WB2	**Warramunga Arr**	**12.87**	**166**	*e*Pn			**Pn**	**23 05 02.8**	**-2.8**
WB2				*e*S			**Sn**	**23 07 16.7**	**-10**
COEN	**Coen**	**13.58**	**120**	*e*Pn			**Pn**	**23 05 13.5**	**-1.8**
	298nm,0.8s								
COEN				*e*S			**Sn**	**23 07 35.9**	**-8.7**
COEN	**Coen**	**13.58**	**120**	P			**Pn**	**23 05 13.5**	**-1.8**
	208nm,0.8s								
PMG	**Port Moresby**	**16.07**	**98**	‖*e*P			**Pn**	**23 05 52.7**	**+5.2**
PMG				pmax			pmax		
	comp=Z,20nm,1.0s								
PMG	**Port Moresby**	**16.07**	**98**	*e*Pn			**Pn**	**23 05 47.8**	**+0.3**
PMG				*e*S			S	23 08 28.1	-27
ASAR	**Alice Springs**	**16.39**	**171**	Pn			**Pn**	**23 05 51.1**	**-0.3**
	comp=Z,3.6nm,0.3s,baz=19,slow=13,SNR=114								
ASAR				Sn			**Sn**	**23 08 38.7**	**-14**
	comp=Z,0.6nm,0.3s,baz=341,slow=12,SNR=5.5								
MTSU	**Mount Surprise**	**16.76**	**131**	*e*P			**Pn**	**23 05 56.0**	**0.0**
	comp=Z,48nm,0.7s								
MBWA	**Marble Bar**	**17.50**	**217**	*e*P			**Pn**	**23 06 02.6**	**-2.5**
MBWA	**Marble Bar**	**17.50**	**217**	*e*Pn			**Pn**	**23 06 02.7**	**-2.4**
	comp=Z,36nm,0.8s								
MBWA				*e*S			**S**	**23 09 08.2**	**-16**
MYLDM	**Lahad Datu**	**17.69**	**315**	P			**Pn**	**23 06 12.1**	**+4.6**
	comp=Z,633nmcomp=Z,39nm,1.6s								
PLKI	**Palangkaraya**	**17.78**	**286**	P			**Pn**	**23 06 10.0**	**+1.3**
	comp=Z,4μmcomp=Z,194nm,0.9s								
CTA	**Charters Tower**	**19.40**	**132**	P			**Pn**	**23 06 29.6**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=304,slow=14,SNR=14								
CTA	**Charters Tower**	**19.40**	**132**	*e*P			**Pn**	**23 06 30.7**	**+2.6**
	comp=Z,16nm,0.9s								
CTAO	**Charters Tower**	**19.40**	**132**	*e*P			**Pn**	**23 06 29.8**	**+1.7**
CTAO				*e*S			**S**	**23 10 09.0**	**+6.7**
CTAO				pmax			pmax		
	comp=Z,27nm,1.0s								
CTAO	**Charters Tower**	**19.40**	**132**	*e*P			**Pn**	**23 06 29.8**	**+1.7**
	comp=Z,27nm,1.0s								
CTAO				*e*S			**S**	**23 10 09.0**	**+6.7**
KKM	**Kota Kinabalu**	**19.93**	**312**	*e*P			**Pn**	**23 06 29.5**	**-4.8**
	comp=Z,14nm,0.5s								
STKI	**Sintang**	**20.87**	**290**	P			**P**	**23 06 46.5**	**+4.2**
	comp=Z,64nm,1.0s								
SBUM	**Sibu**	**21.18**	**297**	P			**P**	**23 06 45.9**	**+0.3**
FORT	**Forrest**	**23.41**	**186**	*e*P			**P**	**23 07 10.4**	**+1.7**
	comp=Z,97nm,0.7s,mb5.2								
FORT				*e*S			**S**	**23 11 21.4**	**+4.5**
FORT	**Forrest**	**23.41**	**186**	*e*P			**P**	**23 07 10.1**	**+1.4**
	comp=Z,102nm,0.7s,mb5.3								
TGY	**Tagaytay City**	**23.61**	**335**	P			**P**	**23 07 07.2**	**-3.4**
	comp=Z,114nm,0.3s,mb5.6								
BBOO	**Buckleboo**	**25.70**	**170**	*e*P			**P**	**23 07 31.0**	**+1.5**
	comp=Z,17nm,0.6s,mb4.7								
BBOO				*e*S			**S**	**23 12 14.7**	**+21**
BBOO	**Buckleboo**	**25.70**	**170**	*e*P			**P**	**23 07 30.9**	**+1.4**
	comp=Z,77nm,1.0s,mb5.1								
BBOO				*e*S			**S**	**23 12 14.6**	**+21**
MORW	**Morawa**	**25.76**	**211**	*e*P			**P**	**23 07 31.8**	**+1.7**
STKA	**Stephens Creek**	**26.26**	**159**	P			**P**	**23 07 36.0**	**+1.5**
	comp=Z,7.2nm,1.0s,mb4.0,baz=332,slow=11,SNR=8.0								
STKA				LR			LR	23 19 44.0	
	comp=Z,194nm,18.1s,baz=187,slow=40								
STKA	**Stephens Creek**	**26.26**	**159**	*e*P			**P**	**23 07 36.6**	**+2.1**
	comp=Z,7.4nm,0.9s,mb4.1								
STKA				*e*S			**S**	**23 12 17.3**	**+15**
CMSA	**Cobar Meteorol**	**27.63**	**152**	*e*P			**P**	**23 07 49.6**	**+2.7**
NWAO	**Narrogin (SRO)**	**28.43**	**205**	P			**P**	**23 07 54.3**	**+0.2**
	comp=Z,2.6nm,0.3s,mb4.2,baz=0.0,slow=9.1,SNR=5.3								
NWAO				LR			LR	23 20 57.6	
	comp=Z,143nm,19.2s,baz=230,slow=40								
KULM	**Kulim**	**32.84**	**292**	*e*P			**P**	**23 08 32.5**	**-0.6**
YHNB	**Yeheng**	**33.25**	**344**	*e*P			**P**	**23 08 35.1**	**-1.4**
	comp=Z,4.6nm,0.6s,mb4.5								
JOW	**Kunigami**	**34.15**	**356**	*e*P			**P**	**23 08 44.3**	**+0.1**
	comp=Z,8.7nm,0.8s,mb4.6								
CBIJ	**Chichi jima**	**35.97**	**17**	P			**P**	**23 08 58.6**	**-1.3**
	comp=Z,12nm,0.6s,mb5.0,baz=295,slow=18,SNR=5.9								
CM31	**Chiang Mai Arr**	**40.78**	**309**	*e*P			**P**	**23 09 39.5**	**-1.0**
	comp=Z,3.4nm,0.6s,mb4.3								
CMAR	**Chiang Mai Arr**	**40.78**	**309**	P			**P**	**23 09 39.2**	**-1.3**
	comp=Z,4.6nm,0.7s,mb4.4,baz=140,slow=7.3,SNR=36								
CMAR				PcP			PcP	23 11 42.5	+1.8
	comp=Z,2.3nm,0.8s,baz=161,slow=2.4,SNR=9.0								
NJ2	**Nanjing**	**40.93**	**344**	*e*P			**P**	**23 09 42.8**	**+1.3**
NJ2				pmax			pmax		
	comp=Z,40nm,1.0s,mb5.2								
WHN	**Wuhan**	**40.99**	**338**	P			**P**	**23 09 42.0**	**-0.1**
GYA	**Guiyang**	**41.14**	**326**	*e*P			**P**	**23 09 45.0**	**+1.6**
GYA				pP			pP	23 09 55.4	-4.6
GYA				sP			sP	23 09 59.8	-7.9
GYA				PP			PP	23 11 23.7	+4.1
GYA				PcP			PcP	23 11 44.3	+2.6
GYA				ScP			ScP	23 15 30.0	+4.1
GYA				S			**S**	**23 15 56.0**	**+4.1**
GYA				sS			sS	23 16 12.8	-7.4
GYA				SS			SS	23 18 53.2	-4.0
GYA				pmax			pmax		
	comp=Z,20nm,0.8s,mb5.0								
GYA				pmax			pmax		
	comp=Z,120nm,5.3s								
GYA				LR			LR		
	comp=N,640nm,17.8s								
GYA				LR			LR		
	comp=E,560nm,18.4s								
GYA				LR			LR		
	comp=Z,570nm,17.0s								
JHJ	**Hachijo jima 2**	**41.16**	**11**	LR			LR	23 23 34.1	
	comp=Z,459nm,21.2s,baz=344,slow=32								
KMI	**Kunming**	**42.48**	**320**	P			**P**	**23 09 54.2**	**-0.1**
KMI				pP			pP	23 10 05.3	-5.7
KMI				sP			sP	23 10 09.6	-9.1
KMI				S			**S**	**23 16 15.5**	**+3.8**
KMI				sS			sS	23 16 34.1	-6.0
KMI				SS			SS	23 19 19.5	-4.1
KMI				pmax			pmax		
	comp=Z,12nm,1.2s,mb4.5								
KMI				pmax			pmax		
	comp=Z,59nm,5.0s								
KMI				LR			LR		
	comp=N,91nm,21.0s								
KMI				LR			LR		
	comp=E,67nm,22.2s								
KMI				LR			LR		
	comp=Z,100nm,21.0s								
MAJO	**Matsushiro**	**44.24**	**8**	*e*P			**P**	**23 10 07.1**	**-1.2**
MAJO				pmax			pmax		
	comp=Z,5.0nm,0.8s,mb4.3								
MAJO	**Matsushiro**	**44.24**	**8**	*e*P			**P**	**23 10 07.0**	**-1.2**
	comp=Z,5.2nm,0.8s,mb4.3								
MAT	**Matsushiro**	**44.24**	**8**	P			**P**	**23 10 06.7**	**-1.6**
MJAR	**Matsushiro Arr**	**44.24**	**8**	P			**P**	**23 10 06.6**	**-1.7**
	comp=Z,3.0nm,0.7s,mb4.1,baz=190,slow=10.0,SNR=16								
KSRS	**Korea Array**	**44.73**	**356**	P			**P**	**23 10 11.7**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.0,baz=178,slow=9.6,SNR=13								
KSRS				LR			LR	23 29 17.2	
	comp=Z,27nm,19.6s,baz=155,slow=37								
CD2	**Chengdu**	**46.20**	**327**	*e*P			**P**	**23 10 25.3**	**+1.4**
CD2				pP			pP	23 10 35.2	-5.6
CD2				sP			sP	23 10 39.1	-9.4
CD2				PP			PP	23 12 13.7	+0.1
CD2				S			**S**	**23 17 08.6**	**+3.0**
CD2				sS			sS	23 17 25.0	-9.3
CD2				SS			SS	23 20 26.1	-5.8
CD2				pmax			pmax		
	comp=Z,10.0nm,0.6s,mb4.7								
CD2				pmax			pmax		
	comp=Z,30nm,4.2s								
CD2				LR			LR		
	comp=N,160nm,13.2s								
CD2				LR			LR		
	comp=Z,130nm,12.4s								
XAN	**Xi'an**	**46.24**	**334**	P			**P**	**23 10 22.4**	**-1.8**
XAN				pmax			pmax		
	comp=Z,6.0nm,0.8s,mb4.4								
XAN				pmax			pmax		
	comp=Z,9.0nm,5.2s								
BJI	**Beijing**	**49.17**	**345**	P			**P**	**23 10 48.9**	**+2.1**
BJI				PP			PP	23 12 43.0	+1.8
BJI				S			**S**	**23 17 52.7**	**+5.3**
BJI				pmax			pmax		
	comp=Z,18nm,0.7s,mb5.1								
BJI				pmax			pmax		
	comp=Z,48nm,3.6s								
BJI				LR			LR		
	comp=N,47nm,27.5s								
BJI				LR			LR		
	comp=E,75nm,26.4s								
BJI				LR			LR		
	comp=Z,35nm,25.9s								
SHL	**Shillong**	**50.23**	**312**	*e*PKP			**P**	**23 10 54.0**	**-1.1**
LZH	**Lanzhou**	**50.25**	**331**	*e*P			**P**	**23 10 54.1**	**-1.0**
LZH				pP			pP	23 11 04.0	-8.2
LZH				sP			sP	23 11 07.9	-12
LZH				*e*PP			PP	23 12 50.3	-0.8
LZH				*e*S			**S**	**23 18 03.0**	**+0.4**
LZH				sS			sS	23 18 20.2	-11
LZH				pmax			pmax		
	comp=Z,25nm,1.5s,mb4.9								
LZH				pmax			pmax		
	comp=Z,97nm,5.6s								
LZH				LR			LR		
	comp=N,240nm,16.8s								
LZH				LR			LR		
	comp=E,350nm,18.0s								
LZH				LR			LR		
	comp=Z,410nm,18.2s								
RPZ	**Rata Peaks**	**50.28**	**143**	P			**P**	**23 10 59.0**	**+3.7**
	comp=Z,8.2nm,0.7s,mb4.8,baz=200,slow=10,SNR=3.8								
CN2	**Changchun**	**51.22**	**355**	*e*P			**P**	**23 11 06.4**	**+4.2**
CN2				*e*sP			sP	23 11 21.3	-5.7
CN2				*e*S			**S**	**23 18 22.3**	**+6.5**
CN2				pmax			pmax		
	comp=Z,10.0nm,0.6s,mb5.0								
CN2				pmax			pmax		
	comp=Z,200nm,3.0s								
CN2				LR			LR		
	comp=N,300nm,12.0s								
CN2				LR			LR		
	comp=E,500nm,12.0s								
CN2				LR			LR		
	comp=Z,700nm,14.0s								
HHC	**Hu-ho-hao-te**	**51.26**	**341**	*e*P			**P**	**23 11 02.5**	**0.0**
HHC				pP			pP	23 11 12.9	-6.8
HHC				sP			sP	23 11 16.5	-11
HHC				PcP			PcP	23 12 16.2	-0.7
HHC				PP			PP	23 13 01.0	+0.8
HHC				ScP			ScP	23 16 08.6	+0.9
HHC				S			**S**	**23 18 17.8**	**+1.4**
HHC				sS			sS	23 18 34.7	-11
HHC				ScS			ScS	23 20 46.6	-0.3
HHC				SS			SS	23 21 52.0	-0.9
HHC				pmax			pmax		
	comp=Z,24nm,1.2s,mb5.1								
HHC				pmax			pmax		
	comp=Z,97nm,5.1s								
HHC				LR			LR		
	comp=N,180nm,17.3s								
HHC				LR			LR		
	comp=E,550nm,16.1s								
HHC				LR			LR		
	comp=Z,170nm,17.4s								
ASAJ	**Asahikawa**	**52.34**	**11**	P			**P**	**23 11 10.8**	**+0.2**
	comp=Z,1.4nm,0.4s,mb4.3,baz=202,slow=3.9,SNR=3.8								
LSA	**Lhasa**	**53.20**	**316**	P			**P**	**23 11 17.2**	**0.0**
LSA	**Lhasa**	**53.20**	**316**	*e*P			**P**	**23 11 17.5**	**+0.3**
LSA				pmax			pmax		
	comp=Z,13nm,0.6s,mb5.1								
LSA	**Lhasa**	**53.20**	**316**	*e*P			**P**	**23 11 17.5**	**+0.3**
	comp=Z,12nm,0.6s,mb5.1								
ODAN	**Odare**	**54.30**	**311**	*e*P			**P**	**23 11 24.6**	**-0.7**
	comp=Z,45nm,0.9s,mb5.5								
TAPN	**Taplejung**	**54.33**	**311**	*e*P			**P**	**23 11 24.7**	**-0.7**
	comp=Z,43nm,0.9s,mb5.5								
GTA	**Gaotai**	**54.83**	**331**	⇑P			**P**	**23 11 28.9**	**0.0**
GTA				pP			pP	23 11 38.9	-7.3
GTA				sP			sP	23 11 42.9	-11
GTA				S			**S**	**23 19 05.5**	**+0.5**
GTA				pmax			pmax		
	comp=Z,14nm,0.9s,mb5.0								
GTA				pmax			pmax		
	comp=Z,90nm,3.7s								
GTA				LR			LR		
	comp=N,100nm,16.4s								
GTA				LR			LR		
	comp=E,63nm,15.4s								
GTA				LR			LR		
	comp=Z,94nm,12.8s								
GUN	**Gumba**	**55.99**	**311**	*e*P			**P**	**23 11 37.2**	**-0.3**
	comp=Z,67nm,0.8s,mb5.7								
PKI	**Pulchoki**	**56.17**	**310**	*e*P			**P**	**23 11 38.0**	**-0.7**
	comp=Z,23nm,0.8s,mb5.2								
PKIN	**Phulchoki**	**56.18**	**310**	*e*P			**P**	**23 11 38.5**	**-0.3**
	comp=Z,15nm,0.7s,mb5.2								
KKN	**Kakani**	**56.38**	**310**	*e*P			**P**	**23 11 39.7**	**-0.5**
	comp=Z,31nm,0.8s,mb5.4								
DMN	**Daman**	**56.42**	**310**	*e*P			**P**	**23 11 40.0**	**-0.5**
	comp=Z,44nm,0.9s,mb5.5								
GKN	**Gorkha**	**56.98**	**310**	*e*P			**P**	**23 11 43.6**	**-0.9**
	comp=Z,53nm,0.8s,mb5.6								
KOLN	**Koldanda**	**57.65**	**309**	*e*P			**P**	**23 11 48.7**	**-0.5**
	comp=Z,41nm,0.8s,mb5.5								
DANN	**Dangsing**	**57.82**	**310**	*e*P			**P**	**23 11 49.8**	**-0.6**
	comp=Z,44nm,0.9s,mb5.5								
ULN	**Ulaanbaatar**	**58.98**	**341**	*e*P			**P**	**23 11 58.3**	**+0.3**
ULN				pmax			pmax		
	comp=Z,17nm,0.9s,mb5.1								
ULN	**Ulaanbaatar**	**58.98**	**341**	*e*P			**P**	**23 11 58.3**	**+0.3**
	comp=Z,16nm,0.9s,mb5.1								
SONM	**Songino Array**	**59.16**	**341**	P			**P**	**23 11 59.3**	**0.0**
	comp=Z,5.2nm,0.8s,mb4.6,baz=160,slow=6.8,SNR=30								
ZAK	**Zakamensk**	**62.39**	**340**	*e*P			**P**	**23 12 21.0**	**-0.2**
ZAK				*e*				23 12 59.0	
ZAK				pmax			pmax		
	comp=Z,3.0nm,1.1s,mb4.2								
TLY	**Talaya**	**63.39**	**341**	*e*P			**P**	**23 12 27.4**	**-0.4**
TLY				pmax			pmax		
	comp=Z,8.0nm,1.4s,mb4.5								
TLY	**Talaya**	**63.39**	**341**	*e*P			**P**	**23 12 27.4**	**-0.4**
	comp=Z,7.7nm,1.4s,mb4.4								
WMQ	**Urumqi**	**64.30**	**327**	P			**P**	**23 12 34.0**	**+0.1**
WMQ				pP			pP	23 12 44.0	-7.7
WMQ				sP			sP	23 12 48.0	-11
WMQ				PP			PP	23 14 57.0	+0.8
WMQ				S			**S**	**23 21 07.0**	**+0.2**
WMQ				ScS			ScS	23 22 22.0	-0.2
WMQ				SS			SS	23 25 19.0	+1.1
WMQ				pmax			pmax		
	comp=Z,25nm,1.0s,mb5.0								
WMQ				pmax			pmax		
	comp=Z,120nm,6.0s								
WMQ				LR			LR		
	comp=N,36nm,18.0s								
WMQ				LR			LR		
	comp=E,40nm,18.0s								
WMQ				LR			LR		
	comp=Z,39nm,18.0s								
PETK	**Petropavlovsk-**	**64.40**	**17**	P			**P**	**23 12 35.3**	**+0.9**
	comp=Z,2.6nm,0.6s,mb4.2,baz=186,slow=4.7,SNR=6.1								
KSH	**Kashi**	**69.01**	**317**	P			**P**	**23 13 05.0**	**+0.9**
KSH				*e*pP			pP	23 13 15.2	-6.8
KSH				*e*sP			sP	23 13 19.2	-10
KSH				*e*PcP			PcP	23 13 30.3	+2.4
KSH				*e*PP			PP	23 15 38.1	+0.7
KSH				*e*S			S	23 22 02.8	-1.2
KSH				*e*ScS			ScS	23 22 58.2	-0.8
KSH				pmax			pmax		
	comp=Z,19nm,0.6s,mb5.1								
KSH				LR			LR		
	comp=N,130nm,4.3s								
KSH				LR			LR		
	comp=E,160nm,5.1s								
KSH				LR			LR		
	comp=Z,170nm,7.6s								
MK31	**Makanchi Array**	**69.13**	**326**	*e*P			**P**	**23 13 04.8**	**+0.2**
MKAR	**Makanchi Array**	**69.13**	**326**	P			**P**	**23 13 04.8**	**+0.1**
	comp=Z,17nm,0.5s,mb5.2,baz=113,slow=8.8,SNR=198								
YAK	**Yakutsk**	**69.24**	**359**	*e*P			**P**	**23 13 04.0**	**-1.0**
YAK				*e*			pP	23 13 20.8	-2.1
YAK				*e**PP			pP	23 13

SNR=11
EKS2 Erkin-Say 71.99 319 eP P 23 13 22.5 +0.3
EKS2 pmax pmax
comp=Z,12nm,0.7s,mb4.8
EKS2 Erkin-Say 71.99 319 eP P 23 13 22.5 +0.3
comp=Z,12nm,0.7s,mb4.8
SEY Seymchan 72.03 10⇓eP P 23 13 23.0 +1.1
ZALV Zalesovo Beam 72.41 333 P P 23 13 23.3 -1.1
comp=Z,12nm,0.8s,mb4.8,baz=116,slow=4.3,SNR=44
KURK Kurchatov 73.40 328c iP P 23 13 29.8 -0.6
KURK pmax pmax
comp=Z,17nm,0.8s,mb4.9
KURK Kurchatov 73.40 328 eP P 23 13 29.9 -0.5
comp=Z,17nm,0.9s,mb4.9
NVS Novosibirsk 73.69 333 eP P 23 13 29.4 -2.6
NVS pmax pmax
comp=N,5.0nm,1.0s
NVS pmax pmax
comp=E,6.0nm,1.0s
NVS pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
KK31 Karatay Array 74.33 319 iP P 23 13 35.7 -0.2
KK31 pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
KKAR Karatay Array 74.33 319 eP P 23 13 35.9 0.0
KKAR pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
KKAR Karatay Array 74.33 319 eP P 23 13 35.9 0.0
comp=Z,7.6nm,0.9s,mb4.4
MAW Mawson 74.94 202 P P 23 13 41.1 +2.0
comp=Z,4.3nm,0.9s,mb4.2,baz=65,slow=8.0,SNR=8.3
MAW Mawson 74.94 202 eP P 23 13 40.8 +1.7
comp=Z,3.4nm,0.9s,mb4.1
VOSK Vostochnaya 78.50 327 P P 23 13 58.1 -1.2
VOSK pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
BVA0 Borovoye Array 78.96 328 iP P 23 14 01.5 -0.3
BVA0 pmax pmax
comp=Z,3.0nm,1.1s,mb4.0
BVAR Borovoye Array 78.96 328 P P 23 14 01.9 +0.1
comp=Z,8.0nm,0.8s,mb4.6,baz=123,slow=5.5,SNR=45
IKOO Kooshah 79.02 305 eP P 23 14 03.6 +0.9
BRVK Borovoye 79.03 328c iP P 23 14 01.6 -0.6
BRVK pmax pmax
comp=Z,15nm,1.0s,mb4.8
BRVK Borovoye 79.03 328 eP P 23 14 01.9 -0.3
comp=Z,10nm,0.8s,mb4.7
IMYA Miami 79.28 309 eP P 23 14 04.7 +0.7
ITEG Tejag 79.36 305 eP P 23 14 05.5 +1.0
ZRNK Zerenda 79.66 327 P P 23 14 04.3 -1.4
ZRNK pmax pmax
comp=Z,20nm,1.7s,mb4.7
IMOG Moghan 79.80 309 eP P 23 14 07.8 +1.0
IPAY Payeh 80.17 309 eP P 23 14 09.7 +0.9
IAKL Akhelmad 80.39 309 eP P 23 14 10.5 +0.5
IKRD Kardeh 80.63 309 eP P 23 14 08.5 -2.8
ISFR Sfrayin 81.10 309 eP P 23 14 14.0 +0.2
QSPA South Pole Qui 82.57 180 eP P 23 14 22.5 +1.8
comp=Z,6.2nm,1.0s,mb4.4
ISRV Sarvestan 83.19 301 eP P 23 14 24.9 0.0
AB31 Abkulak array 83.47 321 iP P 23 14 24.9 -0.9
AB31 pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
ABKAR Abkulak array 83.47 321 eP P 23 14 25.4 -0.5
comp=Z,2.8nm,0.8s,mb4.1
SYO Syowa Base 83.65 201⇓esP sP 23 14 44.0 -8.2
AKTO Aktyubinsk 85.03 322 P P 23 14 33.0 -0.7
SVE Sverdlovsk 85.65 329⇑eP P 23 14 36.1 -0.6
SVE pmax pmax
comp=Z,12nm,0.7s,mb4.9
ARU Arti 86.60 328c iP P 23 14 39.3 -2.1
ARU 23 17 56.6
ARU S S 23 25 01.2 -12
ARU pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
ARU Arti 86.60 328 eP P 23 14 40.2 -1.1
comp=Z,3.4nm,0.6s,mb4.5
UMR Umm Al-Rimmam 87.84 300 eP P 23 14 47.5 -0.5
UMR AMb AMB 23 14 51.3
comp=Z,26nm,0.8s,mb5.3
NAY Al-Naaiem 88.20 300 eP P 23 14 49.1 -0.6
NAY AMb AMB 23 14 49.9
comp=Z,15nm,0.6s,mb5.2
MIB Mutribah 88.21 300 eP P 23 14 49.3 -0.5
MIB AMb AMB 23 14 51.9
comp=Z,24nm,1.2s,mb5.1
ISRB Sarab 89.29 308 eP P 23 14 54.8 +0.2
PPLA Purkeypile 90.58 26 P P 23 15 00.8 +0.7
ILAR Eielson Array 93.28 25 P P 23 15 11.8 -0.7
comp=Z,1.0nm,0.7s,mb4.3,baz=255,slow=4.7,SNR=11
KMBO Kilima Mbogo 93.61 268 P P 23 15 16.8 +1.6
comp=Z,3.3nm,0.9s,mb4.7,baz=181,slow=24,SNR=7.6
KMBO Kilima Mbogo 93.61 268 eP P 23 15 16.5 +1.3
ARCES ARCESS Array B 102.32 340 P Pdif 23 15 53.6 +0.1
comp=Z,2.2nm,0.8s,baz=70,slow=7.0,SNR=7.6
FINES FINESS Array B 103.61 331 Pdiff Pdif 23 15 57.4 -1.9
comp=Z,3.0nm,0.9s,baz=99,slow=7.2,SNR=5.0
FINES PKiKP PKiKP 23 20 17.4 +0.3
comp=Z,1.4nm,0.8s,baz=106,slow=4.2,SNR=8.8
CLL Collm 113.10 323 ePKPdf PKiKP 23 20 36.0 +0.8
HINF Hinteralfeld 118.05 321 ePKIKP PKPdf 23 20 45.0 +0.1
comp=Z,3.6nm,0.6s
LPG La Plagne 118.95 318 ePKIKP PKPdf 23 20 47.6 +0.9
comp=Z,4.1nm,0.6s
LPL La Plagne 118.95 318 ePKIKP PKPdf 23 20 47.6 +0.9
comp=Z,8.4nm,0.6s
CABF La Chapelle 118.98 320 ePKIKP PKPdf 23 20 47.5 +0.8
comp=Z,17nm,0.8s
ORIF Oris-en-Rattie 119.73 318 ePKIKP PKPdf 23 20 48.8 +0.6
comp=Z,9.9nm,0.7s
SSF Saint Saulge 120.43 321 ePKIKP PKPdf 23 20 50.1 +0.6
comp=Z,17nm,0.9s
BGF Bois d'Agland 121.06 321 ePKIKP PKPdf 23 20 51.6 +0.9
comp=Z,15nm,0.7s
TCF Toulx Ste Croi 121.57 321 ePKIKP PKPdf 23 20 52.5 +0.8
ULM Lac du Bonnet 122.22 34 PKP PKPdf 23 20 52.4 -0.5
comp=Z,2.0nm,0.4s,baz=325,slow=2.8,SNR=3.7
MTLF Montolieu 122.77 317 ePKIKP PKPdf 23 20 54.8 +0.7
MFF Saint Martin d 122.89 322 ePKIKP PKPdf 23 20 54.9 +0.7
comp=Z,5.3nm,0.5s
EPF Esparros 124.15 318 ePKIKP PKPdf 23 20 57.7 +1.0
comp=Z,2.8nm,0.5s
TXAR Lajitas Array 124.25 60 PKP PKPdf 23 20 59.2 +1.9
comp=Z,1.1nm,0.7s,baz=205,slow=1.3,SNR=12
JCT Junction City 127.26 57 ePKIKP PKPdf 23 21 05.7 +2.6
PLCA Paso Flores 128.13 159 PKP PKPdf 23 21 07.5 +3.0
comp=Z,0.4nm,0.7s,baz=207,slow=4.5,SNR=3.1
PLCA Paso Flores 128.13 159 PKP PKPdf 23 21 07.5 +3.0
ESDC Sonseca Array 128.51 316 PKP PKPdf 23 21 06.9 +1.7
comp=Z,0.2nm,0.5s,baz=85,slow=3.1,SNR=4.0
TORD Torodi Ar. Bea 129.89 281 PKP PKPdf 23 21 09.1 +0.6
comp=Z,4.3nm,0.7s,baz=104,slow=2.2,SNR=27
TORD Torodi Ar. Bea 129.89 281 PKP PKPdf 23 21 09.1 +0.6
MDT Midelt 131.78 308 PKP PKPdf 23 21 12.9 +1.3
comp=Z,1.7nm,0.7s,baz=60,slow=6.4,SNR=6.5
DBIC Dimbokro 136.23 272 PKhKP PKPpre 23 21 12.7
comp=Z,4.3nm,1.1s,baz=106,slow=4.3,SNR=4.5
DBIC PKP PKPdf 23 21 22.9 +2.5
comp=Z,3.0nm,0.7s,baz=104,slow=2.1,SNR=4.7
CPUP Villa Florida 145.49 167 PKPbc PKPbc 23 21 39.7 +2.8
comp=Z,3.7nm,0.6s,baz=192,slow=2.1,SNR=12
CPUP Villa Florida 145.49 167 PKPbc PKPbc 23 21 39.7 +2.8
LPAZ La Paz 149.76 141 PKP PKPbc 23 21 47.9 -0.9
comp=Z,7.5nm,1.1s,baz=309,slow=1.0,SNR=6.8
LPAZ PKPbc PKPab 23 21 52.5 -1.7
comp=Z,18nm,0.9s,baz=139,slow=0.6,SNR=47
LPAZ La Paz 149.76 141 PKP PKPbc 23 21 47.9 -0.9
LPAZ PKPbc PKPab 23 21 52.5 -1.7

IDC 06 23:17:49.3±600.0, 32°.66N×148°.89E, h0km, Error ellipse: s-maj=1182.0km s-min=74.1km az=116.0, North Pacific Ocean

MEX 06 23:19:45.7±1.0, 14°.93N×93°.94W, h7km±27km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.04	42	iP	Pg	23 20 02.3	-3.4
PCIG				iS	Sg	23 20 15.5	-3.7
THIG		1.62	91	iP	Pn	23 20 10.6	-4.1
THIG				iS	Sn	23 20 30.9	-5.0
TGIG		2.00	23	eP	Pn	23 20 17.9	-2.0
TGIG				iS	Sn	23 20 42.2	-2.9
SCX	San Cristobal	2.19	35	iP	Pn	23 20 24.0	+1.4
CCIG	Comitan	2.20	52	eP	Pn	23 20 20.1	-2.5
CCIG				iS	Sn	23 20 46.8	-3.2
HUIG	Huatulco	2.25	292	iP	Pn	23 20 19.6	-3.7
VHO	Vista Hermosa	3.43	309	iP	Pn	23 20 37.5	-2.0
VHO				iS	Sn	23 21 17.5	-3.0
UTMO	Huajuapan	4.70	308	iP	Pn	23 20 56.0	-1.0

BUC 06 23:21:48.1±0.8, 45°.36N×27°.01E, h25km, MD2.4/5, 12C-6D, Error ellipse: s-maj=13.3km s-min=7.8km az=38.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRER		0.03	312	⇓iP	Pb	23 21 52.2	-0.2
GRER				iS	Sb	23 21 56.8	+1.5
GRER		0.03	312	⇓iP	Pb	23 21 52.2	-0.2
GRER				S	Sb	23 21 56.8	+1.5
PETR		0.40	23	⇑iP	Pb	23 21 57.5	+0.9
PETR				iS	Sb	23 22 00.7	-1.7
PETR		0.40	23	⇑iP	Pb	23 21 57.5	+0.9
PETR		0.40	23	S	Sb	23 22 00.7	-1.7
VRI	Vrincioaia	0.55	339	⇑iP	Pb	23 21 59.0	-0.1
VRI				iS	Sb	23 22 07.6	+1.1
VRI	Vrincioaia	0.55	339	⇑iP	Pb	23 21 59.0	-0.1
VRI	Vrincioaia	0.55	339	S	Sb	23 22 07.6	+1.1
PLOR	Plostina	0.55	333	⇑iP	Pb	23 21 58.5	-0.7
PLOR				iS	Sb	23 22 06.8	0.0
PLOR	Plostina	0.55	333	⇑iP	Pb	23 21 58.5	-0.7
PLOR	Plostina	0.55	333	S	Sb	23 22 06.8	0.0
MLR	Muntele Rosu	0.76	280	⇑iP	Pb	23 22 02.3	-0.4
MLR				iS	Sb	23 22 14.2	+1.6
MLR	Muntele Rosu	0.76	280	⇑iP	Pb	23 22 02.3	-0.4
MLR	Muntele Rosu	0.76	280	S	Sb	23 22 14.2	+1.6
CFR	Carcaliu	0.82	102	⇓iP	Pb	23 22 03.2	-0.4
CFR				iS	Sb	23 22 15.1	+0.9
CFR	Carcaliu	0.82	102	⇓iP	Pb	23 22 03.2	-0.4
CFR	Carcaliu	0.82	102	S	Sb	23 22 15.1	+0.9
TESR		1.18	348	⇓iP	Pn	23 22 08.8	-0.2
TESR				iS	Sn	23 22 25.6	+1.3
TESR		1.18	348	⇓iP	Pn	23 22 08.8	-0.2
TESR		1.18	348	S	Sn	23 22 25.6	+1.3
TIRR	Tirgusor	1.34	132	⇑iP	Pn	23 22 12.0	+0.8
TIRR				iS	Sn	23 22 30.6	+2.4
TIRR	Tirgusor	1.34	132	⇑iP	Pn	23 22 12.0	+0.8
TIRR	Tirgusor	1.34	132	S	Sn	23 22 30.6	+2.4
VOIR		1.38	274	⇑iP	Pn	23 22 13.3	+1.5
VOIR				iS	Sn	23 22 32.3	+3.1
VOIR		1.38	274	⇑iP	Pn	23 22 13.3	+1.5
VOIR		1.38	274	S	Sn	23 22 32.3	+3.1

ISCJB 06 23:28:31.9±1.0, 5°.5S±0°.5×105°.0E±0°.2, h129km±30km, mb3.5/4, Error ellipse: s-maj=87.5km s-min=33.0km az=9.5
IDC 06 23:28:32.0±4.5, 6°.95S×105°.73E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.5/20, mbtmp3.7/5, Error ellipse: s-maj=195.8km s-min=26.1km az=54.0
DJA 06 23:28:33, 5°.48S×105°.04E, h104km, MLv3.5/4

ISC 06 23:28:32.9±1.0, 5°.5S±0°.6×105°.0E±0°.2, h124km±36km, n9, σ0°.33/9, mb3.5/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLI	Kotabumi	0.63	349	P	Pn	23 28 52.1	0.0
KLI				S	Sn	23 29 06.8	+0.1
KLSI		0.83	343	P	Pn	23 28 53.7	0.0
LWLI	Liwa	1.03	297	P	Pn	23 28 55.4	-0.1
MDSI	Maura Dua	1.27	321	P	Pn	23 28 58.0	-0.1
FITZ	Fitzroy Crossi	23.76	124	P	P	23 33 33.5	-0.6
	1.7nm,1.0s,mb3.3,baz=301,slow=5.9,SNR=3.5						
CMAR	Chiang Mai Arr	24.52	346	P	pP	23 34 08.1	+0.8
	0.2nm,0.3s,baz=177,slow=8.6,SNR=4.0						
WRA	Warramunga Arr	31.96	119	P	P	23 34 47.1	-0.1
	0.4nm,0.4s,mb3.5,baz=298,slow=9.4,SNR=9.9						
ASAR	Alice Springs	33.20	126	P	P	23 34 58.0	0.0
	0.3nm,0.3s,mb3.6,baz=296,slow=7.6,SNR=9.4						
STKA	Stephens Creek	43.14	132	P	P	23 36 22.0	+0.8
	1.0nm,0.6s,mb3.7,baz=326,slow=7.3,SNR=4.4						

ISCJB 06 23:31:25.3±0.6, 38°.08N±0°.04×27°.24E±0°.06, h3km±10km, Error ellipse: s-maj=9.4km s-min=4.4km az=146.0
DDA 06 23:31:25.4, 38°.06N×27°.21E, h7km±2km, Md2.8
ISK 06 23:31:25.2, 38°.08N×27°.25E, h11km, MD2.6
CSEM 06 23:31:25.7±0.1, 38°.08N×27°.25E, h10km, MD2.6, Error ellipse: s-maj=4.7km s-min=2.2km az=68.0

ISC 06 23:31:25.8±0.6, 38°.08N±0°.04×27°.24E±0°.06, h12km±9km, n16, σ0°.51/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	Izmir	0.32	4	PG	Pg	23 31 32.1	-0.1
IZM	Izmir	0.32	4	iPg	Pg	23 31 32.1	0.0
BLCB	Balcova	0.34	333	PG	Pg	23 31 32.9	+0.3
BLCB				SG	Sg	23 31 37.8	+0.6
BLCB	Balcova	0.34	333	iPg	Pg	23 31 32.9	+0.3
BLCB				iSg	Sg	23 31 37.8	+0.7
URLA	Izmir	0.57	299	eP	Pg	23 31 36.4	-0.5
URLA				iS	Sg	23 31 44.7	+0.1
AYDN	Tasoluk	0.66	129	iP	Pg	23 31 38.3	-0.3
AYDN				eS	Sg	23 31 47.3	0.0
AYDN	Tasoluk	0.66	129	iP	Pg	23 31 38.3	-0.3
AYDN				eS	Sg	23 31 47.3	0.0
MLSB	Milas	0.90	151	ePG	Pg	23 31 42.7	-0.3
MLSB				eSG	Sg	23 31 55.6	+0.9
MLSB	Milas	0.90	151	ePg	Pg	23 31 42.7	-0.3
MLSB				eSg	Sg	23 31 55.6	+0.9
AKS	Akhisar	0.92	30	ePG	Pg	23 31 43.1	-0.3
AKS	Akhisar	0.92	30	ePg	Pg	23 31 43.1	-0.3
BODT	Bodrum	1.02	177	ePG	Pg	23 31 44.8	-0.6
BODT	Bodrum	1.02	177	ePg	Pg	23 31 44.8	-0.6
BDRM	Kayabasi	1.03	171	eP	Pb	23 31 44.7	-0.8
BDRM				eS	Sb	23 31 59.8	+0.8
KULA	Kula-Manisa	1.20	69	ePN	Pn	23 31 48.5	+0.1
KULA	Kula-Manisa	1.20	69	ePn	Pn	23 31 48.5	+0.1

ISCJB 06 23:31:51.8±4.5, 21°.7N±0°.1×145°.2E±0°.5, h58km±32km, mb3.7/7, Error ellipse: s-maj=83.4km s-min=16.8km az=171.8
IDC 06 23:31:56.5±5.1, 21°.64N×144°.85E, h77km±35km, mb3.4/6, mb1 3.5/7, mb1mx3.3/23, mbtmp3.4/7, Error ellipse: s-maj=94.8km s-min=16.9km az=82.0

ISC 06 23:31:53.1±4.1, 21°.7N±0°.1×145°.4E±0°.5, h61km±28km, n9, σ0°.59/10, mb3.7/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	6.13	332	P	Pn	23 33 20.8	-0.3
	1.0nm,0.3s,baz=287,slow=1.9,SNR=3.1						
CBIJ				S	Sn	23 34 29.9	+0.1
	3.6nm,0.3s,baz=246,slow=20,SNR=5.4						
KSRS	Korea Array	21.80	320	P	P	23 36 40.5	+0.5
	1.6nm,0.7s,mb3.6,baz=144,slow=8.7,SNR=10						
WRA	Warramunga Arr	42.76	195	P	P	23 39 45.3	+0.7
	0.4nm,0.3s,mb3.6,baz=12,slow=9.0,SNR=18						
FITZ	Fitzroy Crossi	44.02	208	P	P	23 39 53.5	-1.3
	0.8nm,0.7s,mb3.6,baz=18,slow=13,SNR=4.0						
ASAR	Alice Springs	46.45	195	P	P	23 40 14.7	+0.7
	0.1nm,0.5s,mb3.0,baz=12,slow=13,SNR=4.9						
MKAR	Makanchi Array	56.22	313	P	P	23 41 26.9	-0.1
	0.4nm,0.6s,mb3.6,baz=96,slow=11,SNR=5.1						
MKAR				PcP	PcP	23 42 23.7	-0.2
	0.3nm,0.4s,baz=87,slow=3.9,SNR=6.8						
JOF	Joensuu	81.20	335	ep	P	23 44 02.2	+0.2
	1.3nm,0.6s,mb4.0						
KAF	Kangasniemi	83.59	336	ep	P	23 44 13.8	-0.7
FINES	FINESS Array B	84.07	335	P	P	23 44 17.0	+0.1
	1.5nm,0.4s,mb4.5,baz=65,slow=4.9,SNR=29						

BUC 06 23:32:25.5±1.6, 45°.71N×26°.60E, h10km, MD2.1/3, 6C-2D, Error ellipse: s-maj=25.3km s-min=3.5km az=133.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.14	14	⇑iP	Pg	23 32 28.7	0.0
PLOR				iS	Sg	23 32 31.5	+0.5
PLOR	Plostina	0.14	14	⇑iP	Pg	23 32 28.7	0.0
PLOR	Plostina	0.14	14	S	Sg	23 32 31.5	+0.5
VRI	Vrincioaia	0.18	30	⇑iP	Pg	23 32 29.6	+0.3
VRI				iS	Sg	23 32 32.8	+0.9
VRI	Vrincioaia	0.18	30	⇑iP	Pg	23 32 29.6	+0.3
VRI	Vrincioaia	0.18	30	S	Sg	23 32 32.8	+0.9
MLR	Muntele Rosu	0.51	245	⇑iP	Pg	23 32 36.3	+0.9
MLR				iS	Sg	23 32 43.7	+1.5
MLR	Muntele Rosu	0.51	245	⇑iP	Pg	23 32 36.3	+0.9
MLR	Muntele Rosu	0.51	245	S	Sg	23 32 43.7	+1.5
TESR		0.80	2	⇓iP	Pg	23 32 42.2	+1.3
TESR		0.80	2	⇓iP	Pg	23 32 42.2	+1.3

IDC 06 23:35:49.3±673.0, 32°.80N×148°.63E, h0km, Error ellipse: s-maj=1324.0km s-min=77.3km az=116.0, North Pacific Ocean

IDC 06 23:38:08.9±1.5, 32°.67N×131°.76E, h0km, mb3.3/2, mb1 3.8/5, mb1mx3.4/26, mbtmp3.7/5, ML3.6/3, MS3.3/2, Ms1 3.3/2, ms1mx2.6/25, Error ellipse: s-maj=32.5km s-min=23.8km az=55.0
ISCJB 06 23:38:14.2±0.6, 32°.96N±0°.05×131°.95E±0°.04, h58km±5km, mb3.1/2, Error ellipse: s-maj=9.0km s-min=5.4km az=169.8
JMA 06 23:38:15.4, 32°.96N×131°.95E, h46km±1km, M3.3

ISC 06 23:38:15.3±0.6, 32°.93N±0°.05×131°.95E±0°.04, h48km±6km, n15, σ0°.64/24, mb3.1/2, 6C-2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUS	Usuki	0.22	310	⇑P	Pn	23 38 23.2	-0.4
JUS				eS	Sn	23 38 29.3	-0.1
JKIT	Kitakata	0.52	235	⇑P	Pn	23 38 26.8	+0.2
JKIT				eS	Sn	23 38 35.5	+0.8
OIT2	Oita 2	0.55	310	⇓P	Pn	23 38 27.0	0.0
OIT2				eS	Sn	23 38 35.1	-0.3
UWA2	Uwa jima 2	0.64	63	⇑P	Pn	23 38 27.9	-0.2
UWA2				eS	Sn	23 38 37.2	-0.2
JTO	Tosashimizu	0.72	95	⇑P	Pn	23 38 28.9	-0.3
JTO				eS	Sn	23 38 39.0	-0.3
JNA	Nagahama	0.77	35	⇓P	Pn	23 38 29.6	-0.3
JNA				eS	Sn	23 38 39.8	-0.7
JKU	Kubokawa	1.01	67	⇑P	Pn	23 38 32.8	-0.3
JKU				eS	Sn	23 38 46.3	+0.1
JIU2	Izumi 2	1.03	249	⇑P	Pn	23 38 33.7	+0.3
KSRS	Korea Array	5.59	325	Pn	Pn	23 39 36.8	+0.9
	0.5nm,0.3s,baz=144,slow=14,SNR=6.0						
KSRS				Pg	Pn	23 39 51.7	+16
	0.4nm,0.3s,baz=143,slow=16,SNR=5.1						
KSRS				Sn	Sn	23 40 38.5	-0.4
	1.5nm,0.3s,baz=149,slow=25,SNR=9.4						
MAT	Matsushiro	6.29	53	P	Pn	23 39 46.5	+1.0
MAT				eS	Sn	23 40 56.7	+0.7
MJAR	Matsushiro Arr	6.29	53	Pn	Pn	23 39 47.1	+1.6
	1.0nm,0.3s,baz=249,slow=14,SNR=7.5						
MJAR				LR	LR	23 42 27.1	
	comp=Z,65nm,19.2s,baz=180,slow=39						
JHJ	Hachijo jima 2	6.58	86	Pn	Pn	23 39 49.5	0.0
	15nm,0.3s,baz=45,slow=20,SNR=5.2						
SONM	Songino Array	24.36	315	P	P	23 43 28.9	+0.2
	0.5nm,0.6s,mb3.2,baz=99,slow=9.2,SNR=3.6						
FITZ	Fitzroy Crossi	51.09	188	LR	LR	00 07 09.1	
	comp=Z,108nm,18.8s,baz=262,slow=34						
WRA	Warramunga Arr	52.62	177	P	P	23 47 22.8	-1.6
	0.2nm,0.8s,mb3.1,baz=346,slow=7.8,SNR=2.5						

IDC 06 23:46:03.5±1.8, 1°.27N×125°.62E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=119.9km s-min=23.2km az=67.0
ISCJB 06 23:46:10.3±1.0, 1°.3N±0°.1×125°.85E±0°.08, h75km±10km, mb3.3/3, Error ellipse: s-maj=25.4km s-min=11.2km az=21.4
DJA 06 23:46:11, 1°.11N×125°.83E, h23km, MLv4.0/5

ISC 06 23:46:11.5±1.0, 1°.2N±0°.1×125°.83E±0°.08, h66km±12km, n10, σ1°.05/11, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	1.02	284	P	Pn	23 46 29.9	-0.1
MNI				S	Sn	23 46 43.5	-0.3
TNTI	Ternate	1.59	105	P	Pn	23 46 37.1	-0.5
KMSI	Cibinong	1.95	251	P	Pn	23 46 43.9	+1.5
LBMI	Labuha	2.48	138	P	Pn	23 46 50.1	+0.6
LUWI	Luwuk	3.78	234	P	Pn	23 47 05.1	-2.3
MRSI	Marisa	3.96	260	P	Pn	23 47 10.7	+1.0
FITZ	Fitzroy Crossi	19.18	181	P	Pn	23 50 30.1	-1.4
	0.0nm,0.3s,baz=333,slow=9.0,SNR=2.4						
WRA	Warramunga Arr	22.61	159	P	P	23 51 06.8	0.0
	0.6nm,0.4s,mb3.3,baz=336,slow=11,SNR=16						
ASAR	Alice Springs	25.93	163	P	P	23 51 39.1	+1.4
	0.5nm,0.4s,mb3.3,baz=351,slow=15,SNR=13						
MKAR	Makanchi Array	59.13	327	P	P	23 56 04.8	-0.5
	0.1nm,0.3s,mb3.3,baz=118,slow=9.1,SNR=3.4						

MEX 06 23:51:50.4±1.0, 17°.27N×95°.01W, h133km±19km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXX	Oaxaca	1.65	264	iP	Pn	23 52 20.0	-0.4
VHO	Vista Hermosa	1.66	264	eP	Pn	23 52 19.7	-0.8
VHO				iS	Sn	23 52 42.5	-1.0
HUIG	Huatulco	1.82	216	eP	Pn	23 52 20.1	-2.4
HUIG				iS	Sn	23 52 45.7	-1.3
TGIG		1.87	105	iP	Pn	23 52 22.1	-0.8
TGIG				iS	Sn	23 52 45.6	-2.2
PCIG		2.31	132	eP	Pn	23 52 27.8	-0.6
PCIG				iS	Sn	23 52 55.6	-2.0
SCX	San Cristobal	2.33	103	iP	Pn	23 52 26.6	-2.0
SCX				iS	Sn	23 52 55.9	-2.1
TPIG	Tehuac#an	2.52	297	eP	Pn	23 52 29.6	-1.4
TPIG				iS	Sn	23 52 59.0	-3.2
UTMO	Huajuapan	2.73	282	iP	Pn	23 52 32.4	-1.2
UTMO				iS	Sn	23 53 04.3	-2.6
CCIG	Comitan	2.92	109	eP	Pn	23 52 35.4	-0.7
CCIG				iS	Sn	23 53 10.5	-0.8

IDC 06 23:53:28.2±0.8, 32°.40N×47°.37E, h0km, mb4.2/22, mb1 4.3/26, mb1mx4.2/33, mbtmp4.2/26, ML3.5/4, MS3.0/12, Ms1 3.1/12, ms1mx2.9/30, Error ellipse: s-maj=20.0km s-min=11.7km az=179.0
ISCJB 06 23:53:28.9±0.2, 32°.36N±0°.02×47°.24E±0°.02, h15km, mb4.5/87, MS3.3/10, Error ellipse: s-maj=3.3km s-min=2.4km az=15.9
MOS 06 23:53:30.8±0.9, 32°.27N×47°.26E, h33km, mb4.6/40, Error ellipse: s-maj=7.0km s-min=4.2km az=121.0
THR 06 23:53:30.2±0.5, 32°.35N×47°.35E, h15km, ML3.9
BJI 06 23:53:31.4, 32°.40N×47°.30E, h39km, mB4.6/6, mb4.8/13, Ms4.5/3, Ms7 4.2/3
SGS 06 23:53:32.0, 32°.31N×47°.34E, h5km
TEH 06 23:53:33.4, 32°.41N×47°.35E, h19km
CSEM 06 23:53:33.2±0.1, 32°.42N×47°.28E, h33km, mb4.4/53, Error ellipse: s-maj=3.5km s-min=2.6km az=14.0
NEIC 06 23:53:33.4, 32°.41N×47°.35E, h19km, mb4.5/32, ML4.0(THR), MN4.1(TEH), After TEH.
BGS 06 23:53:47.9±2.0, 33°.66N×45°.72E, h33km, mb5.1

ISC 06 23:53:31.1±0.2, 32°.40N±0°.02×47°.25E±0°.02, h15km, (h42km±2.4km: pP-P), n470, σ1°.09/470, mb4.5/86, MS3.3/10, 49C-9D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.35	102	ePg	Pg	23 53 49.6	-7.6
IKOM	Komasi	1.78	7	Pn	Pn	23 54 03.1	+1.7
IKOM				Sg	Sg	23 54 29.6	+1.0
IKOM	Komasi	1.78	7	Pn	Pn	23 54 03.1	+1.7

IVIS Sg **Sg** **23 54 40.0 -0.2**
IDHR Dehrash 2.40 343 Pn **Pn** **23 54 11.8 +1.9**
IDHR Dehrash 2.40 343 Pn **Pn** **23 54 11.8 +1.9**
BHD Baghdad 2.56 291 *ex* **Pn** **23 54 08.0 -4.1**
BHD *i* x **Sn** **23 54 45.5 +2.5**
MIB Mutribah 2.59 178 *eP* **Pn** **23 54 14.6 +2.2**
MIB AML AML 23 54 47.3
comp=Z,181nm,0.5s
MIB Mutribah 2.59 178 *eP* **Pn** **23 54 14.6 +2.1**
SNGE Sanandaj 2.69 2 *e*Pn **Pn** **23 54 15.7 +1.9**
SNGE Sanandaj 2.69 2 *e*Pn **Pn** **23 54 15.7 +1.9**
UMR Umm Al-Rimmam 2.87 172 *eP* **Pn** **23 54 17.9 +1.6**
UMR Umm Al-Rimmam 2.87 172 *eP* **Pn** **23 54 18.0 +1.7**
IPIR Pirpir 3.09 84 Pn **Pn** **23 54 20.4 +1.0**
IPIR Pirpir 3.09 84 Pn **Pn** **23 54 20.4 +1.0**
ASAO Ashtian 3.16 47 *e*Pn **Pn** **23 54 20.2 -0.2**
ASAO Ashtian 3.16 47 *e*Pn **Pn** **23 54 21.3 +0.9**
ASAO AML AML 23 55 11.5
comp=N,482nm,0.6s
ASAO AML AML 23 55 14.3
comp=E,412nm,0.5s
ASAO Ashtian 3.16 47 *e*Pn **Pn** **23 54 20.2 -0.1**
KBD Kabd 3.24 173 *eP* **Pn** **23 54 23.9 +2.5**
KBD AML AML 23 55 19.0
comp=Z,72nm,0.7s
KBD Kabd 3.24 173 *eP* **Pn** **23 54 23.9 +2.5**
RDF Al-Radifah 3.47 176 *eP* **Pn** **23 54 26.8 +2.2**
RDF AML AML 23 55 11.6
comp=Z,101nm,0.7s
RDF Al-Radifah 3.47 176 *eP* **Pn** **23 54 26.8 +2.2**
QRN Al-Qurain 3.69 171 *eP* **Pn** **23 54 29.9 +2.3**
QRN AML AML 23 55 16.1
comp=Z,92nm,0.4s
IRAZ Razeghan 3.74 36 Pn **Pn** **23 54 30.1 +1.8**
IRAZ Razeghan 3.74 36 Pn **Pn** **23 54 30.1 +1.8**
IKLH Kolahrood 3.76 75 Pn **Pn** **23 54 29.6 +1.0**
IKLH Kolahrood 3.76 75 Pn **Pn** **23 54 29.6 +1.0**
GHVR GHOM 3.97 57 *e*Pn **Pn** **23 54 29.5 -2.0**
GHVR *e*Sg **Sn** **23 55 19.8 +2.1**
GHVR GHOM 3.97 57 *e*Pn **Pn** **23 54 29.5 -2.0**
KFJS 4.24 172 S **Sn** **23 55 25.9 +1.4**
IZEF Zefreh 4.32 82 Pn **Pn** **23 54 36.7 +0.5**
IZEF Zefreh 4.32 82 Pn **Pn** **23 54 36.7 +0.5**
IMHD Mahdasht 4.34 40 Pn **Pn** **23 54 37.4 +0.9**
IMHD Mahdasht 4.34 40 Pn **Pn** **23 54 37.4 +0.9**
ZNJK Zanjan 4.42 15 *e*Pn **Pn** **23 54 39.7 +2.0**
ZNJK Zanjan 4.42 15 *e*Pn **Pn** **23 54 39.7 +2.0**
ISFB Sefidab 4.61 64 Pn **Pn** **23 54 40.3 0.0**
ISFB Sefidab 4.61 64 Pn **Pn** **23 54 40.3 0.0**
THKV Tehran--Karaj 4.62 40 *e*Pn **Pn** **23 54 40.5 +0.1**
THKV Tehran--Karaj 4.62 40 *e*Pn **Pn** **23 54 41.9 +1.5**
THKV AML AML 23 56 05.2
comp=E,136nm,0.8s
THKV AML AML 23 56 11.2
comp=N,108nm,0.6s
THKV Tehran--Karaj 4.62 40 *e*Pn **Pn** **23 54 40.5 +0.1**
NASN Na'in 4.71 84 *e*Pn **Pn** **23 54 41.9 +0.2**
NASN AML AML 23 56 03.4
comp=E,61nm,0.6s
NASN Na'in 4.71 84 *e*Pn **Pn** **23 54 41.9 +0.2**
CHTH Charan 4.75 42 *e*Pn **Pn** **23 54 42.3 +0.1**
CHTH Charan 4.75 42 *e*Pn **Pn** **23 54 43.2 +1.0**
CHTH Charan 4.75 42 *e*Pn **Pn** **23 54 42.3 +0.1**
DAMV Damavand 5.08 49 *e*Pn **Pn** **23 54 46.0 -0.7**
DAMV Damavand 5.08 49 *e*Pn **Pn** **23 54 47.2 +0.6**
DAMV AML AML 23 55 49.9
comp=N,61nm,0.8s
DAMV Damavand 5.08 49 *e*Pn **Pn** **23 54 47.2 +0.5**
IDMV Damavand 5.08 50 Pn **Pn** **23 54 47.2 +0.4**
IDMV Damavand 5.08 50 Pn **Pn** **23 54 47.2 +0.4**
IAZR Azarshahr 5.37 349 Pn **Pn** **23 54 52.1 +1.4**
IAZR Azarshahr 5.37 349 Pn **Pn** **23 54 52.1 +1.4**
ISRB Sarab 5.42 4 Pn **Pn** **23 54 53.1 +1.7**
ISRB Sarab 5.42 4 Pn **Pn** **23 54 53.1 +1.7**
ISAD Sadrabad 5.48 93 Pn **Pn** **23 54 52.1 -0.2**
ISAD Sadrabad 5.48 93 Pn **Pn** **23 54 52.1 -0.2**
ASYS 5.49 208 P **Pn** **23 54 52.4 0.0**
ASYS 5.49 208 P **Pn** **23 54 52.4 0.0**
IFIR Firoozkooh 5.60 53 Pn **Pn** **23 54 54.1 +0.2**
IFIR Firoozkooh 5.60 53 Pn **Pn** **23 54 54.1 +0.2**
ILAS Lasjerd 5.61 56 Pn **Pn** **23 54 53.9 0.0**
ILAS Lasjerd 5.61 56 Pn **Pn** **23 54 53.9 0.0**
IPRN Peran 5.70 46 Pn **Pn** **23 54 55.7 +0.5**
IPRN Peran 5.70 46 Pn **Pn** **23 54 55.7 +0.5**
ISRV Sarvestan 5.87 119 Pn **Pn** **23 54 58.1 +0.5**
ISRV Sarvestan 5.87 119 Pn **Pn** **23 54 58.1 +0.5**
IHRS Heris 5.91 358 Pn **Pn** **23 54 59.6 +1.5**
ISHB Shabestar 6.02 348 Pn **Pn** **23 55 00.8 +1.2**
ISHM Shahmirzad 6.06 54 Pn **Pn** **23 54 59.9 -0.3**
ISHM Shahmirzad 6.06 54 Pn **Pn** **23 54 59.9 -0.3**
ICHK Chekchek 6.07 90 Pn **Pn** **23 55 00.6 +0.3**
ICHK Chekchek 6.07 90 Pn **Pn** **23 55 00.6 +0.3**
IANJ Anjilo 6.33 59 Pn **Pn** **23 55 03.3 -0.6**
IANJ Anjilo 6.33 59 Pn **Pn** **23 55 03.3 -0.6**
IMEH Mehriz 6.35 97 Pn **Pn** **23 55 04.4 +0.3**
IMEH Mehriz 6.35 97 Pn **Pn** **23 55 04.4 +0.3**
GRMI Germi 6.42 5 *e*Pn **Pn** **23 55 07.2 +2.1**
GRMI Germi 6.42 5 *e*Pn **Pn** **23 55 07.2 +2.1**
IMRD Marand 6.42 349 Pn **Pn** **23 55 07.1 +1.9**
IMRD Marand 6.42 349 Pn **Pn** **23 55 07.1 +1.9**
IKIA Kiasar 6.54 53 Pn **Pn** **23 55 06.4 -0.4**
IKIA Kiasar 6.54 53 Pn **Pn** **23 55 06.4 -0.4**
IGLO Ghaloghah 6.81 51 Pn **Pn** **23 55 11.1 +0.7**
IGLO Ghaloghah 6.81 51 Pn **Pn** **23 55 11.1 +0.7**
IBAF Bafgh 7.12 94 Pn **Pn** **23 55 13.9 -0.8**
IBAF Bafgh 7.12 94 Pn **Pn** **23 55 13.9 -0.8**
MAKU Maku 7.25 344 *e*Pn **Pn** **23 55 18.8 +2.3**
GNI Garni 7.99 346 Pn **Pn** **23 55 29.5 +2.8**
comp=N,0.4nm,0.3s,baz=143,slow=20,SNR=3.8
GNI LR LR 23 58 25.2
comp=N,47nm,19.6s,baz=146,slow=37
GNI Garni 7.99 346 P **Pn** **23 55 29.5 +2.8**
GNI Garni 7.99 346 *e*Pn **Pn** **23 55 31.4 +4.6**
comp=N,20nm,0.9s
SLWS 8.14 158 P **Pn** **23 55 29.6 +0.8**
SLWS 8.14 158 P **Pn** **23 55 29.5 +0.7**
KRBR Kerman 8.50 104 *e*Pn **Pn** **23 55 34.4 +0.7**
KRBR Kerman 8.50 104 *e*Pn **Pn** **23 55 34.4 +0.7**
ASF Jabal al Asfar 8.76 271 Pn **Pn** **23 55 38.0 +0.7**
comp=N,0.8nm,0.3s,baz=320,slow=19,SNR=9.5
ASF Lg 23 58 14.5
comp=N,2.3nm,0.3s,baz=323,slow=20,SNR=5.1
ASF LR LR 23 58 59.0
comp=N,30nm,21.8s,baz=213,slow=37
ASF Jabal al Asfar 8.76 271 Pn **Pn** **23 55 38.0 +0.7**
ASF Lg 23 58 14.5
ASF LR LR 23 58 59.0
BTHS 8.91 158 S **Sn** **23 57 13.3 -6.0**
BTHS 8.91 158 P **Pn** **23 55 38.3 -1.0**
BTHS 8.91 158 P **Pn** **23 55 38.3 -1.0**
BNDS Bandar-Abbas 9.21 120 *e*Pn **Pn** **23 55 43.7 +0.3**
BNDS Bandar-Abbas 9.21 120 *e*Pn **Pn** **23 55 43.7 +0.3**
MALT Malatya 9.31 312 *eP* **Pn** **23 55 46.6 +1.9**
MALT Malatya 9.31 312 *e*Pn **Pn** **23 55 46.5 +1.8**
HRDDS 9.64 168 P **Pn** **23 55 49.0 -0.4**
BJRD Bojnurd 9.87 55 *e*Pn **Pn** **23 55 53.8 +1.4**
BJRD Bojnurd 9.87 55 *e*Pn **Pn** **23 55 53.8 +1.4**
MMAI Mount Meron Ar 10.00 277 Pn **Pn** **23 55 53.9 -0.3**
comp=N,0.2nm,0.3s,baz=85,slow=18,SNR=3.1
MMAI Lg 23 58 56.0
comp=N,3.5nm,0.3s,baz=89,slow=20,SNR=4.6
MAK Makhachkala 10.55 1 *eP* **Pn** **23 55 58.8 -2.9**
MAK *e*S **Sn** **23 57 59.2 -0.3**
MAK pmax pmax
comp=Z,122nm,1.0s
MAK MLR MLR
comp=Z,161nm,9.0s
ZEI Tsey 10.69 347 *eP* Px 23 56 19.1
ZEI pmax pmax
comp=Z,4.0nm,0.4s
EIL Elat 10.89 259 Pn **Pn** **23 56 08.7 +2.3**
comp=Z,0.1nm,0.3s,baz=103,slow=13,SNR=2.3
EIL Lg 23 59 19.1
comp=Z,0.7nm,0.3s,baz=90,slow=13,SNR=2.3
EIL LR LR 00 00 10.1
comp=Z,57nm,21.4s,baz=70,slow=37
EIL Elat 10.89 259 Pn **Pn** **23 56 08.7 +2.2**
CSS Prodhromos 11.87 286 *e*Pn **Pn** **23 56 17.2 -2.6**
KIV Kislovodsk 12.08 344 *d iP* **Pn** **23 56 26.3 +3.7**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV Kislovodsk 12.08 344 *e*Pn **Pn** **23 56 26.6 +4.0**
comp=Z,6.0nm,1.0s
SOC Sochi 12.64 334 *eP* **Pn** **23 56 28.5 -1.8**
SOC *e* 23 58 56.9
SOC MLR MLR
comp=Z,190nm,15.0s
SOC Sochi 12.64 334 *eP* **Pn** **23 56 28.5 -1.8**
comp=Z,190nm,15.0s
BRTR Keskin Array B 13.20 307 Pn **Pn** **23 56 41.0 +2.9**
comp=Z,0.1nm,0.3s,baz=130,slow=12,SNR=9.1
BRTR Keskin Array B 13.20 307 *ceP* **Pn** **23 56 40.4 +2.4**
BRTR pmax pmax
comp=Z,1.0nm,1.0s
BRTR Keskin Array B 13.20 307 *eP* **Pn** **23 56 40.4 +2.4**
comp=Z,1.0nm,1.0s
KBL Kabul 18.31 77 *eP* **Pn** **23 57 44.9 +0.3**
KBL pmax pmax
comp=Z,7.0nm,1.1s
KBL Kabul 18.31 77 *eP* **Pn** **23 57 44.9 +0.4**
comp=Z,6.9nm,1.1s
KBL Kabul 18.31 77 *eP* **Pn** **23 57 44.9 +0.3**
comp=Z,7.0nm,1.1s
TIRR Tirgusor 18.99 315 ⇑P **Pn** **23 57 51.5 -1.3**
TIRR Tirgusor 18.99 315 ⇑*iP* **Pn** **23 57 51.5 -1.3**
TIRR Tirgusor 18.99 315 P **Pn** **23 57 51.5 -1.3**
VRHR Novokhopersk 19.14 349 *eP* **Pn** **23 57 55.9 +1.5**
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s
AB31 Akbulak array 19.34 26 P **Pn** **23 57 55.7 -1.2**
AB31 pmax pmax
comp=Z,3.0nm,0.5s
AB31 Akbulak array 19.34 26 P **Pn** **23 57 55.7 -1.2**
comp=Z,3.0nm,0.5s
ABKAR Akbulak array 19.34 26 *eP* **Pn** **23 57 55.4 -1.5**
comp=Z,0.1nm,0.6s
ABKAR Akbulak array 19.34 26 *eP* **Pn** **23 57 55.4 -1.5**
comp=Z,0.1nm,0.6s
VORD Divnogorie 19.46 345 *eP* **Pn** **23 57 55.6 -2.7**
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,40nm,0.9s
VORD Divnogorie 19.46 345 *eP* **Pn** **23 57 55.6 -2.7**
comp=N,40nm,0.9s
CFR Carcaliu 19.55 316 ⇑P **Pn** **23 58 00.7 +1.2**
CFR Carcaliu 19.55 316 ⇑*iP* **Pn** **23 58 00.7 +1.2**
AKTK Aktyubinsk 19.71 21 P **Pn** **23 57 58.9 -2.4**
AKTK LR LR 00 08 14.9
AKTK Aktyubinsk 19.71 21 P **Pn** **23 57 58.9 -2.4**
comp=N,1.0nm,0.3s
AKTO Aktyubinsk 19.71 21 P **Pn** **23 57 58.9 -2.4**
comp=N,0.8nm,0.3s,baz=201,slow=12,SNR=15
AKTO LR LR 00 08 14.9
comp=N,29nm,20.2s,baz=26,slow=45
VSR Storozhevoye 19.72 345 *eP* **Pn** **23 57 58.6 -2.8**
VSR *e*S **Sn** **00 01 37.7 -4.8**
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=N,20nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR smax
comp=N,10.0nm,0.9s
VSR smax
comp=Z,3.0nm,0.9s
VSR smax
comp=E,10.0nm,0.8s
VSR Storozhevoye 19.72 345 *eP* **Pn** **23 57 58.6 -2.8**
comp=E,10.0nm,0.5s
VRI Vrincioaia 20.76 316 ⇑P **P** **23 58 12.1 +0.8**
VRI Vrincioaia 20.76 316 ⇑*iP* **P** **23 58 12.1 +0.8**
VRI Vrincioaia 20.76 316 P **P** **23 58 12.1 +0.8**
PLOR Plostina 20.80 316 ⇑P **P** **23 58 12.1 +0.4**
PLOR Plostina 20.80 316 ⇑*iP* **P** **23 58 12.1 +0.4**
PLOR Plostina 20.80 316 P **P** **23 58 12.1 +0.4**
MLR Muntele Rosu 21.02 315 ⇑P **P** **23 58 16.1 +2.0**
MLR Muntele Rosu 21.02 315 ⇑*iP* **P** **23 58 16.1 +2.0**
MLR Muntele Rosu 21.02 315 P **P** **23 58 16.1 +2.0**
ATD Arta Tunnel 21.16 192 LR LR 00 05 20.3
comp=E,35nm,20.6s,MS2.7,baz=168,slow=34
TESR 21.16 318 ⇓*iP* **P** **23 58 16.1 +0.5**
TESR 21.16 318 ⇓*iP* **P** **23 58 16.1 +0.5**
KK31 Karatay Array 21.21 53 P **P** **23 58 16.8 +0.6**
KK31 pmax pmax
comp=Z,8.0nm,0.8s,mb4.1
KK31 Karatay Array 21.21 53 P **P** **23 58 16.8 +0.6**
comp=Z,8.0nm,0.8s,mb4.1
KKAR Karatay Array 21.21 53 *eP* **P** **23 58 17.4 +1.2**
KKAR pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
KKAR Karatay Array 21.21 53 *eP* **P** **23 58 17.4 +1.3**
comp=Z,4.0nm,0.6s,mb3.9
KKAR Karatay Array 21.21 53 *eP* **P** **23 58 17.4 +1.2**
comp=Z,4.0nm,0.6s,mb3.9
VOIR 21.54 314 ⇑P **P** **23 58 21.2 +1.5**
VOIR 21.54 314 ⇑*iP* **P** **23 58 21.2 +1.5**
VOIR 21.54 314 P **P** **23 58 21.2 +1.5**
VTS Vitosha 21.55 305 ⇓P **P** **23 58 19.6 -0.2**
VTS Vitosha 21.55 305 ⇓*iP* **P** **23 58 19.5 -0.3**
VTS Vitosha 21.55 305 P **P** **23 58 19.6 -0.2**
BARS Barje 22.59 305 *eP* **P** **23 58 29.9 -1.1**
BURAR Bucovina Array 22.59 319 ⇑P **P** **23 58 31.8 +0.9**
BURAR Bucovina Array 22.59 319 ⇑*iP* **P** **23 58 31.8 +0.9**
BURAR Bucovina Array 22.59 319 ⇑*iP* **P** **23 58 31.8 +0.9**
KIEV Kiev 22.62 329 *eP* **P** **23 58 29.9 -1.2**
KIEV pmax pmax
comp=Z,12nm,0.7s,mb4.4
KIEV Kiev 22.62 329 *eP* **P** **23 58 29.9 -1.2**
comp=Z,12nm,0.7s,mb4.5
KIEV Kiev 22.62 329 *eP* **P** **23 58 29.9 -1.2**
comp=Z,12nm,0.7s,mb4.4
BUR08 Bucovina Ar. S 22.62 319 *eP* **P** **23 58 31.9 +0.7**
BUR08 Bucovina Ar. S 22.62 319 *eP* **P** **23 58 31.9 +0.7**
GZR Gura Zlata 22.94 312 ⇓*iP* **P** **23 58 34.3 -0.3**
AML Almayashu 23.10 58 *eP* **P** **23 58 36.3 -0.1**
comp=Z,4.0nm,0.6s,mb4.0
AML Almayashu 23.10 58 *eP* **P** **23 58 36.3 -0.1**
comp=Z,4.0nm,0.6s,mb4.0
EKS2 Erkin-Say 23.32 56 *eP* **P** **23 58 38.7 +0.1**
comp=Z,2.7nm,0.7s,mb3.8
EKS2 Erkin-Say 23.32 56 *eP* **P** **23 58 38.7 +0.1**
comp=Z,2.7nm,0.7s,mb3.8
DRGR 23.62 315 ⇑P **P** **23 58 41.9 +0.3**
DRGR 23.62 315 P **P** **23 58 41.9 +0.3**
AAK Ala-Archa 23.81 57 *ceP* **P** **23 58 44.6 +1.2**
comp=Z,0.7nm,0.3s,mb3.6,baz=225,slow=10.0,SNR=2.9
AAK LR LR 00 08 03.7
comp=Z,61nm,20.3s,MS3.1,baz=317,slow=37
AAK Ala-Archa 23.81 57 *ceP* **P** **23 58 43.7 +0.3**
AAK Ala-Archa 23.81 57 *eP* **P** **23 58 45.2 +1.8**
comp=Z,2.0nm,0.7s,mb3.7
AAK Ala-Archa 23.81 57 *eP* **P** **23 58 43.7 +0.3**
OBN Obninsk 23.93 345 *d iP* **P** **23 58 43.7 -0.6**
OBN pmax pmax
comp=Z,32nm,1.4s,mb4.6
OBN Obninsk 23.93 345 *i P* **P** **23 58 43.7 -0.6**
TKM2 Tokmak 2 24.67 57 *eP* **P** **23 58 51.9 +0.6**
TKM2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
TKM2 Tokmak 2 24.67 57 *eP* **P** **23 58 51.9 +0.6**
comp=Z,5.5nm,0.7s,mb4.2
TKM2 Tokmak 2 24.67 57 *eP* **P** **23 58 51.9 +0.6**
comp=Z,6.0nm,0.7s,mb4.2
KOLS Kolonicke sedl 24.96 319 *eP* **P** **23 58 55.5 +1.7**
KOLS pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
KOLS Kolonicke sedl 24.96 319 *eP* **P** **23 58 55.5 +1.7**
comp=Z,8.7nm,0.7s,mb4.4
KOLS Kolonicke sedl 24.96 319 *eP* **P** **23 58 55.5 +1.7**
comp=Z,9.0nm,0.7s,mb4.4
KWP Kalwaria Pacla 25.11 320 *eP* **P** **23 58 56.3 +1.2**
KWP Kalwaria Pacla 25.11 320 *eP* **P** **23 58 55.8 +0.7**
comp=Z,19nm,0.6s,mb4.8
KWP Kalwaria Pacla 25.11 320 *eP* **P** **23 58 55.8 +0.7**
comp=Z,19nm,0.6s,mb4.8
CRVS Cervenica-Dubn 25.40 318 *eP* **P** **23 58 58.9 +1.1**
CRVS pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
CRVS Cervenica-Dubn 25.40 318 *eP* **P** **23 58 58.9 +1.1**
comp=Z,7.8nm,0.8s,mb4.3
CRVS Cervenica-Dubn 25.40 318 *eP* **P** **23 58 58.9 +1.1**
comp=Z,8.0nm,0.8s,mb4.3
KECS Kecovo 25.75 316 *eP* **P** **23 59 02.0 +1.0**
KECS pmax pmax
comp=Z,12nm,0.8s,mb4.5
KECS Kecovo 25.75 316 *eP* **P** **23 59 02.0 +1.0**
comp=Z,12nm,0.8s,mb4.5
PSZ Piszkesteto 25.84 315 *eP* **P** **23 59 02.1 +0.3**
PSZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
PSZ Piszkesteto 25.84 315 *eP* **P** **23 59 02.0 +0.2**
comp=Z,6.5nm,0.9s,mb4.2
PSZ Piszkesteto 25.84 315 *eP* **P** **23 59 02.0 +0.2**
comp=Z,6.5nm,0.9s,mb4.2
ZRNK Zerenda 25.85 31 P **P** **23 59 01.2 -0.6**
ZRNK pmax pmax
comp=Z,5.0nm,1.2s,mb3.9
ZRNK Zerenda 25.85 31 P **P** **23 59 01.2 -0.6**
comp=Z,5.0nm,1.2s,mb3.9
PKSM Moragy 25.91 310 ⇑P **P** **23 59 03.0 +0.5**
PKSM Moragy 25.91 310 P **P** **23 59 03.0 +0.5**
MNK Minsk 26.04 334 *eP* **P** **23 59 00.0 -3.5**
SVE Sverdlovsk 26.12 17 *eP* **P** **23 59 04.4 +0.1**
SVE Sverdlovsk 26.12 17 *eP* **P** **23 59 04.4 +0.1**
NIE Niedzica 26.32 318 *eP* **P** **23 59 07.5 +1.4**
NIE Niedzica 26.32 318 *eP* **P** **23 59 07.5 +1.4**
BRVK Borovoye 26.49 32 *c iP* **P** **23 59 06.6 -1.0**
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.1
BRVK Borovoye 26.49 32 *eP* **P** **23 59 07.1 -0.5**
comp=Z,4.5nm,0.8s,mb4.0
BRVK Borovoye 26.49 32 *eP* **P** **23 59 07.1 -0.5**
comp=Z,4.5nm,0.8s,mb4.0
BVAR Borovoye Array 26.51 32 P **P** **23 59 07.5 -0.4**
comp=Z,6.3nm,0.7s,mb4.2,baz=221,slow=8.8,SNR=37
BVAR PcP PcP 00 02 32.5 +0.2
comp=Z,1.1nm,0.5s,baz=204,slow=3.3,SNR=5.2
BVAR Borovoye Array 26.51 32 P **P** **23 59 07.5 -0.3**
BVAR 00 02 32.5
BVAR pmax pmax
comp=Z,6.0nm,0.7s
BVAR Borovoye Array 26.51 32 P **P** **23 59 07.5 -0.3**
comp=Z,6.0nm,0.7s,mb4.2
BVAR Borovoye Array 26.51 32 PcP PcP 00 02 32.5 +0.2
VOSK Vostochnaya 26.58 33 P **P** **23 59 07.1 -1.4**
VOSK pmax pmax
comp=Z,5.0nm,1.5s,mb3.8
VOSK Vostochnaya 26.58 33 P **P** **23 59 07.1 -1.4**
comp=Z,5.0nm,1.5s,mb3.8
VYHS Vyhne 26.73 315 *eP* **P** **23 59 10.8 +0.9**
VYHS pmax pmax
comp=Z,6.0nm,1.8s,mb3.8
VYHS Vyhne 26.73 315 *eP* **P** **23 59 10.8 +0.9**
comp=Z,6.0nm,1.8s,mb3.8
VYHS Vyhne 26.73 315 *eP* **P** **23 59 10.8 +0.9**
comp=Z,6.0nm,1.8s,mb3.8
OJC Ojcow 27.01 319 *eP* **P** **23 59 13.2 +0.8**
OJC Ojcow 27.01 319 *eP* **P** **23 59 13.2 +0.8**
OKC Ostrava-Krasne 27.75 317 *eP* **P** **23 59 19.3 +0.3**
OKC Ostrava-Krasne 27.75 317 *eP* **P** **23 59 19.3 +0.3**
OKC Ostrava-Krasne 27.75 317 *eP* **P** **23 59 19.3 +0.3**
MORC Moravsky Berou 28.07 317 *eP* **P** **23 59 22.3 +0.4**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
MORC Moravsky Berou 28.07 317 *eP* **P** **23 59 22.3 +0.5**
comp=Z,2.3nm,0.7s,mb3.9
MORC Moravsky Berou 28.07 317 *eP* **P** **23 59 22.3 +0.4**
comp=Z,2.0nm,0.7s,mb3.9
VRAC Vranov 28.42 315 P **P** **23 59 24.4 -0.6**
comp=Z,1.5nm,0.5s,mb3.9,baz=93,slow=4.2,SNR=3.5
VRAC LR LR 00 13 39.7
comp=Z,32nm,18.7s,MS3.0,baz=103,slow=42
VRAC Vranov 28.42 315 P **P** **23 59 24.4 -0.6**
VRAC pmax pmax
comp=Z,2.0nm,0.5s
VRAC MLR MLR
comp=Z,32nm,18.7s
VRAC Vranov 28.42 315 P **P** **23 59 24.4 -0.6**
comp=Z,32nm,18.7s
KLMR Klimovskoe 28.91 352 *eP* **P** **23 59 27.2 -2.0**
KLMR pmax pmax
comp=Z,25nm,1.8s,mb4.6
KLMR Klimovskoe 28.91 352 *eP* **P** **23 59 27.2 -2.0**
comp=Z,25nm,1.8s,mb4.6
DPC Dobruska-Polom 29.03 317 *eP* **P** **23 59 30.8 +0.4**
DPC Dobruska-Polom 29.03 317 *eP* **P** **23 59 30.8 +0.4**
DPC Dobruska-Polom 29.03 317 *eP* **P** **23 59 30.8 +0.4**
KSP Ksiaz 29.27 318 *eP* **P** **23 59 32.8 +0.3**
UPC Upice 29.28 317 *eP* **P** **23 59 33.0 +0.4**
UPC Upice 29.28 317 *eP* **P** **23 59 33.0 +0.4**
UPC Upice 29.28 317 *eP* **P** **23 59 33.0 +0.4**
KURK Kurchatov 29.45 42 *c iP* **P** **23 59 33.8 -0.3**
KURK pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
KURK Kurchatov 29.45 42 *eP* **P** **23 59 33.7 -0.4**
comp=Z,11nm,1.0s,mb4.5
KURK Kurchatov 29.45 42 *eP* **P** **23 59 33.7 -0.4**
comp=Z,11nm,1.0s,mb4.5
VSU Vasula 29.53 338 ⇓*eP* **P** **23 59 34.3 -0.4**
VSU pmax pmax
comp=Z,26nm,1.2s,mb4.8
VSU Vasula 29.53 338 *eP* **P** **23 59 34.3 -0.4**
comp=Z,26nm,1.2s,mb4.8
KHC Kasperske Hory 30.17 314 *eP* **P** **23 59 41.8 +1.3**
KHC Kasperske Hory 30.17 314 *eP* **P** **23 59 41.8 +1.3**
KHC Kasperske Hory 30.17 314 *eP* **P** **23 59 41.8 +1.3**
MK31 Makanchi Array 30.31 51 *eP* **P** **23 59 41.9 +0.1**
MK31 Makanchi Array 30.31 51 *eP* **P** **23 59 41.9 +0.1**
MKAR Makanchi Array 30.31 51 P **P** **23 59 41.8 0.0**
comp=Z,2.9nm,0.7s,mb4.1,baz=248,slow=8.3,SNR=25
MKAR PcP PcP 00 02 40.3 -1.5
comp=Z,0.4nm,0.6s,baz=237,slow=2.9,SNR=3.7
MKAR Makanchi Array 30.31 51 P **P** **23 59 41.8 0.0**
MKAR 00 02 40.3
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 30.31 51 P **P** **23 59 41.8 0.0**
comp=Z,3.0nm,0.7s,mb4.1
MKAR Makanchi Array 30.31 51 PcP PcP 00 02 40.3 -1.5
CLL Collm 31.34 317 *eP* **P** **23 59 51.0 +0.2**
CLL Collm 31.34 317 *eP* **P** **23 59 51.0 +0.2**
DANN Dangsing 31.66 88 *eP* **P** **23 59 54.1 +0.2**
comp=Z,36nm,1.0s,mb5.2
DAVOX Davos/Dischmat 31.85 308 P **P** **23 59 55.7 +0.4**
comp=Z,1.5nm,0.6s,mb4.0,baz=90,slow=5.1,SNR=3.9
DAVOX Davos/Dischmat 31.85 308 P **P** **23 59 55.7 +0.3**
BSD Bornholm Skovb 32.10 325 *i P* **P** **23 59 56.9 -0.5**
BSD pmax pmax
comp=Z,11nm,0.9s,mb4.7
BSD Bornholm Skovb 32.10 325 *i P* **P** **23 59 56.9 -0.5**
comp=Z,11nm,0.9s,mb4.7
FINES FINESS Array B 32.14 341 P **P** **23 59 57.2 -0.5**
comp=Z,2.8nm,0.6s,mb4.3,baz=147,slow=8.6,SNR=22
FINES FINESS Array B 32.14 341 P **P** **23 59 57.3 -0.5**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 32.14 341 P **P** **23 59 57.3 -0.5**
comp=Z,3.0nm,0.6s,mb4.3
JOF Joensuu 32.17 346 *eP* **P** **23 59 57.2 -0.8**
JOF pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
JOF Joensuu 32.17 346 *ep* **P** **23 59 57.2 -0.8**
comp=Z,4.4nm,0.6s,mb4.5
JOF Joensuu 32.17 346 *eP* **P** **23 59 57.2 -0.8**
comp=Z,4.0nm,0.6s,mb4.4
GKN Gorkha 32.50 88 *eP* **P** **00 00 00.9 -0.4**
comp=Z,23nm,0.5s,mb5.3
DMN Daman 33.02 88 *eP* **P** **00 00 05.6 -0.2**
comp=Z,10nm,0.5s,mb5.0
KKN Kakani 33.11 88 *eP* **P** **00 00 06.4 -0.2**
comp=Z,25nm,0.6s,mb5.3
PKIN Phulchoki 33.27 88 *eP* **P** **00 00 08.5 +0.4**
comp=Z,13nm,0.6s,mb5.0
PKI Pulchoki 33.28 88 *eP* **P** **00 00 08.1 -0.1**
comp=Z,17nm,0.6s,mb5.2
WMQ Urumqi 33.50 58 *eP* **P** **00 00 11.0 +1.2**
WMQ PP PP 00 01 25.0 -0.6
WMQ S **S** **00 05 31.0 -0.1**
WMQ pmax pmax
comp=Z,15nm,1.0s,mb4.9
WMQ LR LR
comp=N,59nm,15.0s,MS3.6
WMQ LR LR
comp=E,77nm,15.0s,MS3.6
WMQ LR LR

comp=Z,44nm,15.0s,MS3.3
GUN Gumba 33.58 87 *e*P **P 00 00 10.8 +0.1**
comp=Z,45nm,0.9s,mb5.4
MBDF Montbardon 33.62 303⇑*i*P **P 00 00 10.8 -0.1**
comp=Z,7.3nm,0.6s,mb4.5
MBDF Montbardon 33.62 303⇑*i*P **P 00 00 10.8 -0.1**
MBDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
MBDF Montbardon 33.62 303⇑*i*P **P 00 00 10.8 -0.1**
comp=Z,3.7nm,0.6s,mb4.5
MBDF Montbardon 33.62 303⇑*i*P **P 00 00 10.8 -0.1**
comp=Z,3.7nm,0.6s,mb4.5
LPG La Plagne 33.74 305 *e*P **P 00 00 11.9 0.0**
comp=Z,14nm,0.6s,mb4.7
LPG La Plagne 33.74 305 *e*P **P 00 00 11.9 0.0**
LPG pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
LPG La Plagne 33.74 305 *e*P **P 00 00 11.9 0.0**
comp=Z,6.8nm,0.6s,mb4.8
LPG La Plagne 33.74 305 *e*P **P 00 00 11.9 0.0**
comp=Z,6.8nm,0.6s,mb4.7
LPL La Plagne 33.76 305 *e*P **P 00 00 12.0 -0.1**
comp=Z,7.7nm,0.6s,mb4.5
LPL La Plagne 33.76 305 *e*P **P 00 00 12.0 -0.1**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 33.76 305 *e*P **P 00 00 12.0 -0.1**
comp=Z,3.8nm,0.6s,mb4.5
LPL La Plagne 33.76 305 *e*P **P 00 00 12.0 -0.1**
comp=Z,3.8nm,0.6s,mb4.5
NVS Novosibirsk 33.81 38 *e*P **P 00 00 09.7 -2.7**
NVS pmax pmax
comp=N,3.0nm,1.1s
NVS pmax pmax
comp=E,4.0nm,1.1s
NVS pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
NVS Novosibirsk 33.81 38 *e*P **P 00 00 09.7 -2.7**
JIRN Jiri 33.92 88 *e*P **P 00 00 13.1 -0.6**
CDF Champ du Feu 33.94 310 *e*P **P 00 00 13.1 -0.5**
CDF Champ du Feu 33.94 310 *e*P **P 00 00 13.1 -0.5**
HINF Hinteralfeld 34.09 309⇑*i*P **P 00 00 14.1 -0.8**
comp=Z,7.4nm,0.7s,mb4.4
HINF Hinteralfeld 34.09 309⇑*i*P **P 00 00 14.1 -0.8**
HINF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
HINF Hinteralfeld 34.09 309⇑*i*P **P 00 00 14.1 -0.8**
comp=Z,3.7nm,0.7s,mb4.4
HINF Hinteralfeld 34.09 309⇑*i*P **P 00 00 14.1 -0.8**
comp=Z,3.7nm,0.7s,mb4.4
ZALV Zalesovo Beam 34.27 40 P **P 00 00 15.4 -0.9**
comp=Z,5.5nm,0.7s,mb4.6,baz=253,slow=9.0,SNR=25
ZALV LR LR 00 16 50.6
comp=Z,25nm,18.5s,MS3.0,baz=240,slow=41
ZALV Zalesovo Beam 34.27 40 P **P 00 00 15.4 -1.0**
ZALV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ZALV MLR MLR
comp=Z,25nm,18.5s,MS3.0
CABF La Chapelle 34.37 307⇑*i*P **P 00 00 17.5 +0.1**
comp=Z,24nm,0.6s,mb5.0
CABF La Chapelle 34.37 307⇑*i*P **P 00 00 17.5 +0.1**
CABF pmax pmax
comp=Z,12nm,0.6s,mb5.0
CABF La Chapelle 34.37 307⇑*i*P **P 00 00 17.5 +0.1**
comp=Z,12nm,0.6s,mb5.0
CABF La Chapelle 34.37 307⇑*i*P **P 00 00 17.5 +0.1**
comp=Z,12nm,0.6s,mb5.0
HAU Haudompre 34.46 309 *e*P **P 00 00 17.3 -0.8**
comp=Z,10nm,0.8s,mb4.5
HAU Haudompre 34.46 309 *e*P **P 00 00 17.3 -0.8**
HAU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
HAU Haudompre 34.46 309 *e*P **P 00 00 17.3 -0.8**
comp=Z,5.2nm,0.8s,mb4.5
HAU Haudompre 34.46 309 *e*P **P 00 00 17.3 -0.8**
comp=Z,5.2nm,0.8s,mb4.5
KMBO Kilima Mbogo 34.66 198 LR LR 00 14 26.3
comp=Z,58nm,18.1s,MS3.4,baz=360,slow=36
WLF Walferdange 34.95 312 *e*P **P 00 00 21.5 -0.9**
WLF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
WLF Walferdange 34.95 312 *e*P **P 00 00 21.5 -0.8**
comp=Z,6.4nm,0.7s,mb4.7
WLF Walferdange 34.95 312 *e*P **P 00 00 21.5 -0.9**
comp=Z,6.0nm,0.7s,mb4.6
ODAN Odare 35.18 88 *e*P **P 00 00 24.0 -0.6**
comp=Z,7.0nm,0.6s,mb4.7
TAPN Taplejung 35.30 87 *e*P **P 00 00 25.6 0.0**
comp=Z,5.5nm,0.5s,mb4.8
SFTF Sexfontaines 35.36 309 *e*P **P 00 00 25.4 -0.5**
comp=Z,27nm,1.1s,mb4.8
SFTF Sexfontaines 35.36 309 *e*P **P 00 00 25.4 -0.5**
comp=Z,27nm,1.1s,mb5.1
SFTF Sexfontaines 35.36 309 *e*P **P 00 00 25.4 -0.5**
comp=Z,14nm,1.1s,mb4.8
MEZF Maizieres J'vi 35.41 310⇑*i*P **P 00 00 25.9 -0.4**
comp=Z,29nm,0.9s,mb4.9
MEZF Maizieres J'vi 35.41 310⇑*i*P **P 00 00 25.9 -0.4**
comp=Z,29nm,0.9s,mb5.2
MEZF Maizieres J'vi 35.41 310⇑*i*P **P 00 00 25.9 -0.4**
comp=Z,14nm,0.9s,mb4.9
HFS Hagfors 35.46 332 P **P 00 00 26.7 +0.1**
comp=Z,16nm,0.5s,mb5.2,baz=128,slow=9.7,SNR=90
HFS Hagfors 35.46 332 P **P 00 00 26.7 +0.1**
HFS pmax pmax
comp=Z,16nm,0.5s
HFS Hagfors 35.46 332 P **P 00 00 26.7 +0.1**
comp=Z,16nm,0.5s,mb5.2
MUD Monsted U'grnd 35.59 324 *i* P **P 00 00 27.9 +0.2**
MUD pmax pmax
comp=Z,16nm,0.7s,mb5.1
MUD Monsted U'grnd 35.59 324 *i* P **P 00 00 27.9 +0.2**
comp=Z,16nm,0.7s,mb5.1
MUD Monsted U'grnd 35.59 324 *i* P **P 00 00 27.9 +0.2**
comp=Z,16nm,0.7s,mb5.1
SMF Signal de Mont 35.91 306⇑*i*P **P 00 00 30.0 -0.6**
comp=Z,39nm,0.9s,mb5.0
SMF Signal de Mont 35.91 306⇑*i*P **P 00 00 30.0 -0.6**
SMF pmax pmax
comp=Z,20nm,0.9s,mb5.0
SMF Signal de Mont 35.91 306⇑*i*P **P 00 00 30.0 -0.6**
comp=Z,20nm,0.9s,mb5.0
SMF Signal de Mont 35.91 306⇑*i*P **P 00 00 30.0 -0.6**
comp=Z,20nm,0.9s,mb5.0
LOR Lormes 35.99 307⇑*i*P **P 00 00 30.4 -0.9**
comp=Z,8.6nm,0.7s,mb4.5
LOR Lormes 35.99 307⇑*i*P **P 00 00 30.4 -0.9**
LOR pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LOR Lormes 35.99 307⇑*i*P **P 00 00 30.4 -0.9**
comp=Z,4.3nm,0.7s,mb4.5
LOR Lormes 35.99 307⇑*i*P **P 00 00 30.4 -0.9**
comp=Z,4.3nm,0.7s,mb4.5
SSF Saint Saulge 36.19 307⇑*i*P **P 00 00 32.5 -0.6**
comp=Z,15nm,0.8s,mb4.7
SSF Saint Saulge 36.19 307⇑*i*P **P 00 00 32.5 -0.6**
SSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SSF Saint Saulge 36.19 307⇑*i*P **P 00 00 32.5 -0.6**
comp=Z,7.6nm,0.8s,mb4.7
SSF Saint Saulge 36.19 307⇑*i*P **P 00 00 32.5 -0.6**
comp=Z,7.6nm,0.8s,mb4.7
AVF Avril sur Loir 36.26 306 *e*P **P 00 00 32.8 -0.8**
comp=Z,9.4nm,0.8s,mb4.5
AVF Avril sur Loir 36.26 306 *e*P **P 00 00 32.8 -0.8**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
AVF Avril sur Loir 36.26 306 *e*P **P 00 00 32.8 -0.8**
comp=Z,4.7nm,0.8s,mb4.5
AVF Avril sur Loir 36.26 306 *e*P **P 00 00 32.8 -0.8**
comp=Z,4.7nm,0.8s,mb4.5
BAIF Baives 36.27 312 *e*P **P 00 00 33.0 -0.7**
BAIF Baives 36.27 312 *e*P **P 00 00 33.0 -0.7**
BGF Bois d'Agland 36.58 306 *e*P **P 00 00 35.6 -0.8**
comp=Z,13nm,0.8s,mb4.5
BGF Bois d'Agland 36.58 306 *e*P **P 00 00 35.6 -0.8**
BGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
BGF Bois d'Agland 36.58 306 *e*P **P 00 00 35.6 -0.8**
comp=Z,6.4nm,0.8s,mb4.5
BGF Bois d'Agland 36.58 306 *e*P **P 00 00 35.6 -0.8**
comp=Z,6.4nm,0.8s,mb4.5
NB2 NORSAR Subarra 36.98 332 P **P 00 00 38.7 -0.9**
comp=Z,2.8nm,0.6s,mb4.3,baz=124,slow=8.6
NOA NORSAR Array B 36.98 332 P **P 00 00 38.8 -0.9**
comp=Z,2.7nm,0.6s,mb4.3,baz=124,slow=8.6,SNR=23
NOA NORSAR Array B 36.98 332 P **P 00 00 38.8 -0.8**
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA NORSAR Array B 36.98 332 P **P 00 00 38.8 -0.8**
comp=Z,3.0nm,0.6s,mb4.3
NAO01 NORSAR Array S 37.01 331 *e*P **P 00 00 39.3 -0.5**
comp=Z,3.0nm,0.6s,mb4.3
NAO01 NORSAR Array S 37.01 331 *e*P **P 00 00 39.3 -0.5**
comp=Z,3.0nm,0.6s,mb4.3
MFF Saint Martin d 38.64 306 *e*P **P 00 00 52.7 -1.1**
MFF Saint Martin d 38.64 306 *e*P **P 00 00 52.7 -1.1**
LDF La Druitiere 38.82 309 *e*P **P 00 00 53.9 -1.3**
LDF La Druitiere 38.82 309 *e*P **P 00 00 53.9 -1.3**
FLN La Foliniere 39.07 309 *e*P **P 00 00 56.3 -1.1**
FLN La Foliniere 39.07 309 *e*P **P 00 00 56.3 -1.1**
KEV Kevo 39.09 349 *e*p **P 00 00 56.2 -1.0**
comp=Z,1.0nm,0.4s,mb3.9
ARCES ARCESS Array B 39.15 348 P **P 00 00 57.2 -0.6**
comp=Z,1.7nm,0.4s,mb4.1,baz=155,slow=9.9,SNR=37
ARCES ARCESS Array B 39.15 348 P **P 00 00 57.2 -0.5**
ARCES pmax pmax
comp=Z,2.0nm,0.4s
ARCES ARCESS Array B 39.15 348 P **P 00 00 57.2 -0.6**
ARCES ARCESS Array B 39.15 348 P **P 00 00 57.2 -0.5**
comp=Z,2.0nm,0.4s,mb4.2
GRR Gorron 39.28 308 *e*P **P 00 00 58.2 -0.9**
GRR Gorron 39.28 308 *e*P **P 00 00 58.2 -0.9**
WOL Wolverton 39.90 313 P **P 00 01 03.9 -0.3**
WOL AMB AMB 00 01 05.9
comp=Z,123nm,1.8s,mb5.3
WOL Wolverton 39.90 313 *e*P **P 00 01 03.9 -0.3**
WOL AMB AMB 00 01 05.9
comp=Z,123nm,1.8s,mb5.3
WOL Wolverton 39.90 313 *e*P **P 00 01 03.9 -0.3**
CWF Charnwood Fore 40.20 315 P **P 00 01 05.0 -1.7**
CWF AMB AMB 00 01 10.7
comp=Z,95nm,2.6s,mb5.1
CWF Charnwood Fore 40.20 315 *e*P **P 00 01 05.0 -1.7**
CWF AMB AMB 00 01 10.7
comp=Z,95nm,2.6s,mb5.1
CWF Charnwood Fore 40.20 315 *e*P **P 00 01 05.0 -1.7**
SWN1 Swindon 40.29 313 P **P 00 01 06.0 -1.4**
SWN1 AMB AMB 00 01 11.6
comp=Z,88nm,1.9s,mb5.2
SWN1 Swindon 40.29 313 *e*P **P 00 01 06.0 -1.4**
SWN1 AMB AMB 00 01 11.6
comp=Z,88nm,1.9s,mb5.2
SWN1 Swindon 40.29 313 *e*P **P 00 01 06.0 -1.5**
SGMF Saint Gilles 40.40 308 *e*P **P 00 01 07.4 -1.0**
SGMF Saint Gilles 40.40 308 *e*P **P 00 01 07.4 -1.0**
QUIF Quistinic 40.78 307 *e*P **P 00 01 10.3 -1.3**
QUIF Quistinic 40.78 307 *e*P **P 00 01 10.3 -1.3**
MCH1 Michaelchurch 41.10 314 P **P 00 01 13.3 -0.9**
MCH1 AMB AMB 00 01 18.5
comp=Z,94nm,2.7s,mb5.0
MCH1 Michaelchurch 41.10 314 *e*P **P 00 01 13.3 -0.9**
MCH1 AMB AMB 00 01 18.5
comp=Z,94nm,2.7s,mb5.0
MCH1 Michaelchurch 41.10 314 *e*P **P 00 01 13.3 -0.8**
XAL Allendale 41.15 318 P **P 00 01 14.5 0.0**
XAL Allendale 41.15 318 *e*P **P 00 01 14.5 0.0**
XAL Allendale 41.15 318 *e*P **P 00 01 14.5 0.0**
HTR Trewern Hill 41.27 314 P **P 00 01 15.2 -0.4**
HTR Trewern Hill 41.27 314 *e*P **P 00 01 15.2 -0.4**
HTR Trewern Hill 41.27 314 *e*P **P 00 01 15.2 -0.4**
ESDC Sonseca Array 41.57 295 P **P 00 01 18.6 +0.3**
comp=Z,0.4nm,0.5s,mb3.3,baz=75,slow=8.2,SNR=6.2
ESDC Sonseca Array 41.57 295 P **P 00 01 18.6 +0.4**
ESY Stoneypath 41.60 320 P **P 00 01 18.1 -0.2**
ESY Stoneypath 41.60 320 *e*P **P 00 01 18.1 -0.2**
ESY Stoneypath 41.60 320 *e*P **P 00 01 18.1 -0.2**
ECK Cauldkaine Hil 41.73 318 P **P 00 01 18.7 -0.6**
ECK Cauldkaine Hil 41.73 318 *e*P **P 00 01 18.7 -0.6**
ECK Cauldkaine Hil 41.73 318 *e*P **P 00 01 18.7 -0.6**
EKA Eskdalemuir Ar 41.78 319 P **P 00 01 19.8 +0.1**
comp=Z,5.7nm,0.7s,mb4.3,baz=104,slow=8.4,SNR=17
EKA Eskdalemuir Ar 41.78 319 P **P 00 01 19.8 +0.1**
EKA pmax pmax
comp=Z,6.0nm,0.7s
EKA Eskdalemuir Ar 41.78 319 P **P 00 01 19.8 +0.1**
comp=Z,6.0nm,0.7s,mb4.3
EBL Broad Law 41.81 319 P **P 00 01 19.8 -0.2**
EBL Broad Law 41.81 319 *e*P **P 00 01 19.8 -0.2**
EBL Broad Law 41.81 319 *e*P **P 00 01 19.8 -0.1**
LRW Lerwick 42.05 326 P **P 00 01 21.1 -0.7**
LRW AMB AMB 00 01 26.2
comp=Z,110nm,2.4s,mb5.1
LRW Lerwick 42.05 326 *e*P **P 00 01 21.1 -0.7**
LRW AMB AMB 00 01 26.2
comp=Z,110nm,2.4s,mb5.1
LRW Lerwick 42.05 326 *e*P **P 00 01 21.1 -0.7**
MME1 Meikle Cairn 42.12 322 P **P 00 01 22.3 -0.2**
MME1 Meikle Cairn 42.12 322 *e*P **P 00 01 22.3 -0.2**
MME1 Meikle Cairn 42.12 322 *e*P **P 00 01 22.3 -0.2**
GCD Castle Douglas 42.13 318 P **P 00 01 21.6 -1.0**
GCD Castle Douglas 42.13 318 *e*P **P 00 01 21.6 -1.0**
GCD Castle Douglas 42.13 318 *e*P **P 00 01 21.6 -1.0**
MCD Coleburn Disti 42.34 322 P **P 00 01 23.7 -0.5**
MCD Coleburn Disti 42.34 322 *e*P **P 00 01 23.7 -0.5**
MCD Coleburn Disti 42.34 322 *e*P **P 00 01 23.7 -0.6**
GTA Gaotai 42.65 65 *e*P **P 00 01 27.2 +0.2**
GTA pP pP 00 01 37.2 +5.5
GTA sP sP 00 01 41.0 +7.4
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
GMM Mts of Mourne 43.18 317 P **P 00 01 30.8 -0.3**
GMM Mts of Mourne 43.18 317 *e*P **P 00 01 30.8 -0.3**
GMM Mts of Mourne 43.18 317 *e*P **P 00 01 30.8 -0.3**
TORD Torodi Ar. Bea 45.77 256 P **P 00 01 52.1 -0.1**
comp=Z,1.8nm,0.8s,mb4.0,baz=76,slow=6.2,SNR=29
TORD LR LR 00 23 14.4
comp=Z,64nm,19.5s,MS3.6,baz=95,slow=39
TORD Torodi Ar. Bea 45.77 256 P **P 00 01 52.1 -0.1**
TORD LR LR 00 23 14.3
LZH Lanzhou 46.38 69 *e*P **P 00 01 56.0 -0.9**
LZH pP pP 00 02 08.1 +6.5
LZH sP sP 00 02 13.2 +10
LZH *e*PP PP 00 03 45.8 +0.1
LZH pmax pmax
comp=Z,17nm,1.3s,mb4.8
LZH pmax pmax
comp=Z,46nm,6.4s
SONM Songino Array 46.66 53 P **P 00 01 58.6 -0.3**
comp=Z,0.6nm,0.5s,mb3.8,baz=275,slow=7.3,SNR=5.3
SONM PcP PcP 00 03 32.4 -0.1
comp=Z,0.2nm,0.3s,baz=284,slow=5.8,SNR=3.4
SONM LR LR 00 23 24.1
comp=Z,57nm,18.9s,MS3.5,baz=244,slow=39
SONM Songino Array 46.66 53 P **P 00 01 58.6 -0.3**
SONM 00 03 32.4
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM MLR MLR
comp=Z,57nm,18.9s
SONM Songino Array 46.66 53 P **P 00 01 58.6 -0.3**
comp=Z,1.0nm,0.5s,mb4.0
SONM Songino Array 46.66 53 PcP PcP 00 03 32.4 -0.1
comp=Z,57nm,18.9s
ULN Ulaanbaatar 47.10 53 *e*P **P 00 02 02.0 -0.4**
ULN pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ULN Ulaanbaatar 47.10 53 *e*P **P 00 02 02.0 -0.4**
comp=Z,3.8nm,0.7s,mb4.4
ULN Ulaanbaatar 47.10 53 *e*P **P 00 02 02.0 -0.4**
comp=Z,4.0nm,0.7s,mb4.5
CD2 Chengdu 47.64 76 *e*P **P 00 02 05.2 -1.6**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,20nm,4.2s
CMAR Chiang Mai Arr 48.28 94 P **P 00 02 10.8 -1.0**
comp=Z,0.9nm,0.7s,mb3.9,baz=291,slow=8.3,SNR=5.5
CMAR PcP PcP 00 03 38.3 -0.4
comp=Z,0.7nm,0.7s,baz=287,slow=4.7,SNR=3.8
CMAR LR LR 00 23 12.7
comp=Z,15nm,18.4s,MS3.0,baz=235,slow=37
CMAR Chiang Mai Arr 48.28 94 P **P 00 02 10.9 -1.0**
CMAR 00 03 38.3
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR MLR MLR
comp=Z,15nm,18.4s
CMAR Chiang Mai Arr 48.28 94 P **P 00 02 10.9 -1.0**
comp=Z,1.0nm,0.7s,mb4.0
CMAR Chiang Mai Arr 48.28 94 PcP PcP 00 03 38.3 -0.5
comp=Z,15nm,18.4s
KMI Kunming 48.73 84 P **P 00 02 13.8 -1.5**
KMI pP pP 00 02 26.6 +6.5
KMI sP sP 00 02 31.8 +10
KMI pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
HHC Hu-ho-hao-te 51.28 61 *e*P **P 00 02 34.1 -0.3**
HHC pP pP 00 02 47.2 +8.0
HHC sP sP 00 02 52.1 +11
HHC PcP PcP 00 03 47.2 -2.2
HHC PP PP 00 04 32.3 +1.1
HHC ScP ScP 00 07 39.3 -6.1
HHC S **S 00 09 50.1 -2.7**
HHC sS sS 00 10 11.8 +11
HHC ScS ScS 00 12 17.6 -6.9
HHC SS SS 00 13 25.0 -3.1
HHC pmax pmax
comp=Z,13nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,65nm,5.7s
HHC LR LR
comp=N,210nm,14.1s
HHC LR LR
comp=Z,210nm,16.1s,MS4.2
GYA Guiyang 51.53 80 *e*P **P 00 02 35.8 -0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
LIC Lamto 55.10 253 *e*P **P 00 03 02.4 -0.6**
LIC Lamto 55.10 253 *e*P **P 00 03 02.4 -0.6**
SUMG Summit 58.16 339 *i* P **P 00 03 24.1 +0.3**
comp=Z,5.8nm,0.7s,mb4.7
YAK Yakutsk 58.48 33⇑*i*P **P 00 03 24.7 -1.5**
YAK Yakutsk 58.48 33 *i* P **P 00 03 24.7 -1.5**
NJ2 Nanjing 59.45 69 *e*P **P 00 03 34.3 +0.8**
NJ2 pmax pmax
comp=Z,40nm,1.0s,mb5.4
KSRS Korea Array 64.41 61 P **P 00 04 04.5 -2.3**
comp=Z,1.5nm,0.7s,mb4.2,baz=283,slow=7.3,SNR=8.5
KSRS Korea Array 64.41 61 P **P 00 04 04.5 -2.2**
KSRS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KSRS Korea Array 64.41 61 P **P 00 04 04.5 -2.2**
comp=Z,2.0nm,0.7s,mb4.3
SEY Seymchan 68.09 28⇓*e*P **P 00 04 29.7 -0.2**
SEY Seymchan 68.09 28 *e*P **P 00 04 29.7 -0.2**
BILL Bilibino 70.14 20 P pP 00 04 55.0 +7.6
YSS Yuzh-Sakhalins 70.56 46 *e*P **P 00 04 44.2 -1.3**
YSS Yuzh-Sakhalins 70.56 46 *e*P **P 00 04 44.2 -1.3**
ASAJ Asahikawa 71.75 49 P **P 00 04 51.0 -1.7**
comp=Z,0.9nm,0.4s,mb4.1,baz=302,slow=13,SNR=3.5
ASAJ Asahikawa 71.75 49 P **P 00 04 51.1 -1.7**
ASAJ pmax pmax
comp=Z,1.0nm,0.4s
SCHQ Schefferville 76.39 327 P **P 00 05 19.3 -0.4**
comp=Z,2.8nm,0.7s,mb4.3,baz=57,slow=13,SNR=5.2
INK Inuvik 79.60 0 P **P 00 05 35.8 -1.5**
comp=Z,2.5nm,1.0s,mb4.1,baz=322,slow=6.5,SNR=3.3
INK Inuvik 79.60 0 P **P 00 05 35.8 -1.4**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 79.60 0 P **P 00 05 35.8 -1.4**
comp=Z,3.0nm,1.0s,mb4.2
ILAR Eielson Array 82.52 6 P **P 00 05 51.5 -1.3**
comp=Z,0.5nm,0.7s,mb3.7,baz=324,slow=3.7,SNR=6.9
ILAR Eielson Array 82.52 6 P **P 00 05 51.6 -1.2**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR Eielson Array 82.52 6 P **P 00 05 51.6 -1.2**
comp=Z,1.0nm,0.7s,mb4.0
YKA Yellowknife Ar 84.32 352 P **P 00 06 01.3 -0.8**
comp=Z,0.7nm,0.6s,mb4.0,baz=16,slow=5.2,SNR=4.4
YKA Yellowknife Ar 84.32 352 P **P 00 06 01.4 -0.7**
WRA Warramunga Arr 98.07 108 P **P 00 07 06.1 -1.3**
comp=Z,0.2nm,0.7s,mb3.7,baz=324,slow=3.0,SNR=3.1
WRA Warramunga Arr 98.07 108 P **P 00 07 06.1 -1.3**
WRA Warramunga Arr 98.07 108 P **P 00 07 06.1 -1.3**
ASAR Alice Springs 99.65 112 P Pdif 00 07 12.2 -1.9
comp=Z,0.1nm,0.4s,baz=321,slow=5.1,SNR=3.1
ASAR Alice Springs 99.65 112 P Pdif 00 07 12.2 -1.9

IDC 06 23:55:23.6±598.0**, 32°.54N×149°.29E, h0km, Error ellipse: s-maj=1179.0km s-min=73.8km az=117.0, North Pacific Ocean**

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*DDA **06** 23:58:45.5, 40°.70N×32°.79E, h7km±3km, Ml3.9*
*ISK **06** 23:58:45.2, 40°.64N×32°.82E, h5km, ML3.8*
*ISCJB **06** 23:58:46.6±0.2, 40°.68N±0°.02×32°.83E±0°.02, h10km, Error ellipse: s-maj=3.2km s-min=2.3km az=179.2*
*CSEM **06** 23:58:46.5±0.1, 40°.67N×32°.83E, h2km, ML3.8, Error ellipse: s-maj=3.1km s-min=2.2km az=179.0*
ISC 06 23:58:47.3±0.2**, 40°.68N**±0°.02×**32°.83E**±0°.02**, h10km, n95, σ0s.91**/116**, 2C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.49**	**113**	⇓*i*P	**Pg**	**23 58 56.3**	**-0.6**
ELDT				*i* S	**Sg**	**23 59 03.2**	**-0.1**
ELDT	**Eldivan**	**0.49**	**113**	*i* P	**Pg**	**23 58 56.3**	**-0.6**
ELDT				*i* S	**Sg**	**23 59 03.2**	**-0.2**
SAFT	**Safranbolu**	**0.57**	**349**	PG	**Pg**	**23 58 57.7**	**-0.6**
SAFT	**Safranbolu**	**0.57**	**349**	*i* Pg	**Pg**	**23 58 57.7**	**-0.7**
SGKT	**Sivrigoynuk**	**0.60**	**260**	⇓*i*P	**Pg**	**23 58 57.3**	**-1.6**
SGKT				*i* S	**Sg**	**23 59 05.2**	**-1.6**
SGKT	**Sivrigoynuk**	**0.60**	**260**	*i* P	**Pg**	**23 58 57.3**	**-1.6**
SGKT				*i* S	**Sg**	**23 59 05.2**	**-1.6**
CANT	**Cankiri**	**0.60**	**97**	PG	**Pg**	**23 58 58.7**	**-0.3**
CANT				SG	**Sg**	**23 59 07.7**	**+0.8**
ILGA	**Ilgaz**	**0.77**	**61**	⇑*i*P	**Pg**	**23 59 00.7**	**-1.4**
ILGA				*i* S	**Sg**	**23 59 12.8**	**+0.7**
ILGA	**Ilgaz**	**0.77**	**61**	*i* P	**Pg**	**23 59 00.7**	**-1.4**
ILGA				*i* S	**Sg**	**23 59 12.8**	**+0.7**
LOD	**Lodumlu**	**0.79**	**184**	PG	**Pg**	**23 59 00.3**	**-2.2**
LOD				SG	**Sg**	**23 59 12.0**	**-0.8**
LOD	**Lodumlu**	**0.79**	**184**	*i* Pg	**Pg**	**23 59 00.3**	**-2.3**
LOD				*i* Sg	**Sg**	**23 59 12.0**	**-0.9**
BALT	**Daday**	**0.95**	**26**	⇑*i*P	**Pg**	**23 59 03.9**	**-1.7**
BALT				*i* S	**Sg**	**23 59 16.9**	**-1.1**
BALT	**Daday**	**0.95**	**26**	*i* P	**Pg**	**23 59 03.9**	**-1.7**
BALT				*i* S	**Sg**	**23 59 16.9**	**-1.1**
TOS	**Tosya**	**0.97**	**68**	PG	**Pg**	**23 59 04.7**	**-1.2**
TOS	**Tosya**	**0.97**	**68**	*i* Pg	**Pg**	**23 59 04.7**	**-1.3**
BBAL	**Bala**	**1.16**	**169**	*e*P	**Pb**	**23 59 08.4**	**-1.0**
BBAL				*e*S	**Sb**	**23 59 24.4**	**-0.1**
BBAL	**Bala**	**1.16**	**169**	*e*P	**Pb**	**23 59 08.4**	**-1.0**
BBAL				*e*S	**Sb**	**23 59 24.4**	**0.0**
KDZE	**Karadeniz Ereo**	**1.23**	**301**	*e*PN	**Pn**	**23 59 10.3**	**-0.2**
KDZE				*e*SN	**Sn**	**23 59 27.4**	**+0.3**
KDZE	**Karadeniz Ereo**	**1.23**	**301**	*e*Pn	**Pn**	**23 59 10.3**	**-0.2**
KDZE				*e*Sn	**Sn**	**23 59 27.4**	**+0.3**
AFSR	**Af¯ar-Bala (A**	**1.25**	**171**	*e*PN	**Pn**	**23 59 09.5**	**-1.2**
AFSR				*e*SN	**Sn**	**23 59 27.2**	**-0.4**
AFSR	**Af¯ar-Bala (A**	**1.25**	**171**	*e*Pn	**Pn**	**23 59 09.5**	**-1.2**
AFSR				*e*Sn	**Sn**	**23 59 27.2**	**-0.4**
MDU	**Mudurnu**	**1.25**	**261**	*e*PN	**Pg**	**23 59 09.6**	**-1.7**
MDU	**Mudurnu**	**1.25**	**261**	*e*Pn	**Pg**	**23 59 09.6**	**-1.7**
CORM	**Corum**	**1.46**	**109**	*e*PN	**Pn**	**23 59 13.7**	**-0.1**
CORM	**Corum**	**1.46**	**109**	*e*Pn	**Pn**	**23 59 13.7**	**0.0**
HENT	**Hendek**	**1.47**	**276**	*e*P	**Pn**	**23 59 12.7**	**-1.1**
HENT				*e*S	**Sn**	**23 59 32.8**	**-0.4**
HENT	**Hendek**	**1.47**	**276**	*e*P	**Pn**	**23 59 12.7**	**-1.2**
HENT				*e*S	**Sn**	**23 59 32.8**	**-0.4**
KAMT	**Kaman**	**1.48**	**152**	*e*PN	**Pn**	**23 59 13.8**	**-0.1**
KAMT	**Kaman**	**1.48**	**152**	*e*Pn	**Pn**	**23 59 13.8**	**-0.1**
CTKT	**Corum**	**1.49**	**92**	*e*P	**Pn**	**23 59 13.3**	**-0.8**
CTKT				*e*S	**Sn**	**23 59 31.5**	**-2.1**
CTKT	**Corum**	**1.49**	**92**	*e*P	**Pn**	**23 59 13.3**	**-0.8**
CTKT				*e*S	**Sn**	**23 59 31.5**	**-2.1**
BZK	**Bozkurt**	**1.55**	**34**	*e*PN	**Pn**	**23 59 15.5**	**+0.5**
BZK	**Bozkurt**	**1.55**	**34**	*e*Pn	**Pn**	**23 59 15.5**	**+0.5**
SVRH	**Sivrihisar-ESK**	**1.59**	**220**	*e*PN	**Pn**	**23 59 15.1**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.59**	**220**	*e*Pn	**Pn**	**23 59 15.1**	**-0.4**
BYBT	**Boyabat**	**1.66**	**61**	*e*PN	**Pn**	**23 59 17.3**	**+0.8**
BYBT	**Boyabat**	**1.66**	**61**	*e*Pn	**Pn**	**23 59 17.3**	**+0.8**
GULT	**Gulveren**	**1.78**	**263**	*e*PN	**Pn**	**23 59 19.1**	**+1.0**
GULT	**Gulveren**	**1.78**	**263**	*e*Pn	**Pn**	**23 59 19.1**	**+1.0**
SPNC	**Sapanca-Adapaz**	**1.92**	**271**	*e*PN	**Pn**	**23 59 20.6**	**+0.7**
SPNC	**Sapanca-Adapaz**	**1.92**	**271**	*e*Pn	**Pn**	**23 59 20.7**	**+0.7**
KIZT	**Kizilcal**	**1.94**	**202**	*e*PN	**Pn**	**23 59 20.2**	**-0.1**

KIZT	Kizilcal	1.94 202	*e*Pn	Pn	23 59 20.2	-0.1
GPA	Golpazari	1.96 259	*e*PN	Pn	23 59 21.1	+0.5
GPA	Golpazari	1.96 259	*e*Pn	Pn	23 59 21.1	+0.5
YOZ	Yozgat	2.17 118	*e*PN	Pn	23 59 24.2	+0.8
YOZ	Yozgat	2.17 118	*e*Pn	Pn	23 59 24.3	+0.8
CAVI	Cavuskoy	2.33 259	*e*PN	Pn	23 59 26.4	+0.7
CAVI	Cavuskoy	2.33 259	*e*Pn	Pn	23 59 26.4	+0.8
ADVT	Abdulvahap	2.37 265	*e*PN	Pn	23 59 26.9	+0.7
ADVT	Abdulvahap	2.37 265	*e*Pn	Pn	23 59 26.9	+0.7
HRT	Hereke	2.41 274	*e*PN	Pn	23 59 27.4	+0.7
HRT	Hereke	2.41 274	*e*Pn	Pn	23 59 27.4	+0.7
AVNT	Avonos	2.46 140	⇓*i*P	Pn	23 59 28.2	+0.8
AVNT	Avonos	2.46 140	*i* P	Pn	23 59 28.2	+0.8
SILT	Sile	2.46 282	*e*PN	Pn	23 59 28.3	+0.9
SILT	Sile	2.46 282	*e*Pn	Pn	23 59 28.3	+0.8
KVT	Kavak	2.47 80	*e*PN	Pn	23 59 27.8	+0.2
KVT	Kavak	2.47 80	*e*Pn	Pn	23 59 27.8	+0.2
SULT	Sultanhani-AKS	2.54 168	*e*PN	Pn	23 59 28.3	-0.2
SULT	Sultanhani-AKS	2.54 168	*e*Pn	Pn	23 59 28.3	-0.2
YLV	Yalova	2.63 269	*e*PN	Pn	23 59 30.6	+0.8
YLV	Yalova	2.63 269	*e*Pn	Pn	23 59 30.6	+0.8
KONT	Konya--Tatoy	2.76 188	*e*PN	Pn	23 59 31.7	+0.2
KONT	Konya--Tatoy	2.76 188	*e*Pn	Pn	23 59 31.7	+0.2
SHUT	Suhut-Afyon	2.76 220	*e*PN	Pn	23 59 31.2	-0.4
SHUT	Suhut-Afyon	2.76 220	*e*Pn	Pn	23 59 31.2	-0.4
BADT	Buyukada	2.83 275	*e*PN	Pn	23 59 32.6	+0.2
BADT	Buyukada	2.83 275	*e*Pn	Pn	23 59 32.6	+0.1
TOKT	Tokat	2.85 96	*e*PN	Pn	23 59 33.6	+0.7
TOKT	Tokat	2.85 96	*e*Pn	Pn	23 59 33.6	+0.7
ISK	Istanbul-Kandi	2.89 279	*e*PN	Pn	23 59 34.5	+1.2
ISK	Istanbul-Kandi	2.89 279	*e*Pn	Pn	23 59 34.5	+1.2
KLYT	Kilyos	2.92 283	*e*PN	Pn	23 59 34.0	+0.2
KLYT	Kilyos	2.92 283	*e*Pn	Pn	23 59 34.1	+0.3
ARMT	Armutlu	3.02 269	*e*PN	Pn	23 59 36.0	+0.8
ARMT	Armutlu	3.02 269	*e*Pn	Pn	23 59 36.0	+0.8
MDNY	Mudanya-Bursa	3.02 265	*e*PN	Pn	23 59 35.5	+0.3
MDNY	Mudanya-Bursa	3.02 265	*e*Pn	Pn	23 59 35.5	+0.3
SVSK	Karacayir	3.28 102	*e*PN	Pn	23 59 39.8	+1.1
SVSK	Karacayir	3.28 102	*e*Pn	Pn	23 59 39.8	+1.1
RSDY	Resadiye-TOKAT	3.44 93	*e*PN	Pn	23 59 41.2	+0.3
RSDY	Resadiye-TOKAT	3.44 93	*e*Pn	Pn	23 59 41.2	+0.3
SARI	SarD1z-Kayseri	3.59 123	*e*PN	Pn	23 59 43.1	+0.2
SARI	SarD1z-Kayseri	3.59 123	*e*Pn	Pn	23 59 43.1	+0.1
BCK	Bucak	3.66 209	*e*PN	Pn	23 59 44.6	+0.7
BCK	Bucak	3.66 209	*e*Pn	Pn	23 59 44.6	+0.7
HDMB	Hadim	3.72 184	*e*PN	Pn	23 59 45.5	+0.8
HDMB	Hadim	3.72 184	*e*Pn	Pn	23 59 45.5	+0.7
KARA	Karaisali	3.83 152	*e*PN	Pn	23 59 47.4	+1.2
KARA	Karaisali	3.83 152	*e*Pn	Pn	23 59 47.4	+1.1
KOZT	Kozan	3.96 143	*e*PN	Pn	23 59 48.9	+0.9
ELL	Elmali	4.54 211	*e*PN	Pn	23 59 57.0	+0.9
ELL	Elmali	4.54 211	*e*Pn	Pn	23 59 57.0	+0.9
GUMT	Gumushane	5.07 90	*e*PN	Pn	00 00 05.6	+2.3

*IDC **06** 23:58:53.2±1.3, 39°.00N×141°.11E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, ML3.2/3, Error ellipse: s-maj=35.7km s-min=16.7km az=116.0*
*ISCJB **06** 23:58:54.4±0.6, 39°.06N±0°.03×140°.88E±0°.04, h12km±5km, mb3.7/3, Error ellipse: s-maj=6.0km s-min=5.1km az=31.9*
*JMA **06** 23:58:54.9, 39°.06N×140°.86E, h7km±1km, M3.4*
Broadband fault plane solution: P waves. NP1: ϕ_s=268.00000°, δ43.00000°, λ123.00000°. NP2: ϕ_s=46.00000°, δ56.00000°, λ63.00000°. Principal axes: T Plg67.0000°, Azm261.0000°; N Plg22.0000°, Azm62.0000°; P Plg7.0000°, Azm155.0000°;
JMA Felt I J1.

ISC 06 23:58:55.1±0.6, 39°.05N±0°.03×140°.87E±0°.04, h5km±5km, n13, σ0°.89/20, mb3.7/3, 1C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.29**	**110**	⇓P	**Pg**	**23 59 00.6**	**0.0**
JMK				S	**Sg**	**23 59 04.7**	**+0.3**
JRG	**Rokugo**	**0.39**	**332**	⇓P	**Pg**	**23 59 02.3**	**-0.3**
JYK	**Kaneyama**	**0.42**	**252**	⇑P	**Pg**	**23 59 03.1**	**-0.1**
JYK				S	**Sg**	**23 59 08.7**	**0.0**
JOM	**Ohasama**	**0.53**	**37**	⇓P	**Pg**	**23 59 05.0**	**-0.3**
JOM				S	**Sg**	**23 59 12.1**	**-0.1**
JIO	**Ouri**	**0.70**	**148**	⇓P	**Pg**	**23 59 08.2**	**-0.3**
JIO				S	**Sg**	**23 59 18.0**	**+0.4**
JOU	**Okura**	**0.70**	**194**	⇓P	**Pg**	**23 59 08.6**	**0.0**
JOU				S	**Sg**	**23 59 18.0**	**+0.3**
MAT	**Matsushiro**	**3.28**	**221**	P	**Pn**	**23 59 48.0**	**+0.9**
MJAR	**Matsushiro Arr**	**3.28**	**221**	Pn	**Pn**	**23 59 47.9**	**+0.8**
	0.9nm,0.3s,baz=28,slow=12,SNR=17						
MJAR				Pg	**Pg**	**23 59 54.3**	**-3.6**
	2.1nm,0.3s,baz=26,slow=13,SNR=22						
MJAR				Lg		00 00 39.1	
	0.6nm,0.3s,baz=177,slow=18,SNR=4.9						
ASAJ	**Asahikawa**	**5.22**	**14**	Pn	**Pn**	**00 00 14.6**	**+0.8**
	0.8nm,0.3s,baz=265,slow=20,SNR=5.1						
ASAJ				Sn	**Sn**	**00 01 15.4**	**+1.0**
	1.6nm,0.3s,baz=284,slow=8.1,SNR=6.3						
KSRS	**Korea Array**	**10.31**	**265**	Pn	**Pn**	**00 01 26.7**	**+3.1**
	0.5nm,0.3s,baz=80,slow=15,SNR=3.9						
WRA	**Warramunga Arr**	**59.00**	**187**	P	**P**	**00 08 54.3**	**-1.4**
	0.5nm,0.5s,mb3.9,baz=5.0,slow=7.1,SNR=17						
ASAR	**Alice Springs**	**62.73**	**187**	P	**P**	**00 09 20.0**	**-1.0**
	0.1nm,0.5s,mb3.2,baz=10,slow=5.7,SNR=3.8						
FINES	**FINESS Array B**	**66.84**	**332**	P	**P**	**00 09 45.9**	**-1.6**
	2.1nm,0.9s,mb4.2,baz=49,slow=11,SNR=3.5						

*NIED **07** 00:08:00, 24°.20N×125°.20E, h35km, Mw3.8 Best double couple: $M_0$6.61000×10^{14} NP1:ϕ_s=272.00000°, δ86.00000°, λ-63.00000°. NP2:ϕ_s10.00000°, δ27.00000°, λ-171.00000°.*
*NEIC **07** 00:08:19.6±2.4, 23°.80N×125°.51E, h35km, MG3.5(JMA), Error ellipse: s-maj=55.8km s-min=10.9km az=153.0*
*JMA **07** 00:08:21.9±0.2, 24°.20N×125°.23E, h30km, M3.5*

ISC 07 00:08:19.8±1.6, 24°.10N±0°.09×125°.34E±0°.04, h22km±12km, n19, σ1°.10/29, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.66**	**6**	P	**Pb**	**00 08 33.4**	**+0.8**
JOGS				*e*S	**Sb**	**00 08 42.2**	**+0.8**
JMJ	**Miyako jima 2**	**0.71**	**357**	P	**Pb**	**00 08 33.8**	**+0.3**
JMJ				*e*S	**Sb**	**00 08 42.3**	**-0.6**
JTJ	**Tarama**	**0.79**	**313**	P	**Pb**	**00 08 34.3**	**-0.5**
JTJ				*e*S	**Sb**	**00 08 43.3**	**-1.8**
JIJ	**Ishigaki jima**	**1.12**	**284**	P	**Pn**	**00 08 40.2**	**0.0**
JIJ				*e*S	**Sb**	**00 08 54.3**	**-0.3**
JKRS	**Kuro-shima**	**1.22**	**277**	P	**Pn**	**00 08 42.3**	**+0.8**
JKRS				*e*S	**Sn**	**00 08 58.3**	**+0.9**
HATJ	**Hateruma jima**	**1.40**	**268**	P	**Pn**	**00 08 44.1**	**+0.1**
IRIF	**Iriomote-Funau**	**1.48**	**279**	P	**Pn**	**00 08 45.6**	**+0.4**
IRIF				*e*S	**Sn**	**00 09 05.4**	**+1.5**
YOJ	**Yonaguni jima**	**2.15**	**280**	P	**Pn**	**00 08 56.2**	**+1.8**
JKE	**Kume jima 2**	**2.58**	**30**	P	**Pn**	**00 08 59.2**	**-1.0**
NACB	**Ninganchiao**	**3.42**	**272**	*e*Pn	**Pn**	**00 09 12.5**	**+0.7**
YHNB	**Yeheng**	**3.66**	**280**	*e*Pn	**Pn**	**00 09 16.6**	**+1.5**
YULB	**Yu-li**	**3.77**	**260**	*e*Pn	**Pn**	**00 09 16.0**	**-0.6**
YULB				*e*S	**Sn**	**00 09 55.3**	**-5.0**
JOW	**Kunigami**	**3.80**	**44**	*e*Pn	**Pn**	**00 09 17.3**	**+0.2**
JOW	**Kunigami**	**3.80**	**44**	P	**Pn**	**00 09 17.1**	**0.0**
SSLB	**Suanglung**	**4.02**	**266**	*e*Pn	**Pn**	**00 09 21.0**	**+0.9**
SSLB				*e*S	**Sn**	**00 10 05.0**	**-1.6**
TWG	**Pinlang**	**4.12**	**253**	*e*Pn	**Pn**	**00 09 20.5**	**-0.9**
TWG				*e*S	**Sn**	**00 10 05.8**	**-3.1**
TPUB	**Ta-pu**	**4.39**	**260**	*e*Pn	**Pn**	**00 09 26.7**	**+1.6**
TPUB				*e*S	**Sn**	**00 10 13.4**	**-2.2**
JTK	**Tokunoshima**	**4.90**	**41**	P	**Pn**	**00 09 31.0**	**-1.2**
JMZ	**Minamidaito 2**	**5.61**	**71**	P	**Pn**	**00 09 41.2**	**-0.7**

IDC 07 00:09:55.9±9.8, 7°.39S×122°.03E, h85km±106km, mb3.2/1, mb1 3.1/4, mb1mx3.0/19, mbtmp3.0/4, ML3.4/2, Error ellipse: s-maj=216.8km s-min=37.6km az=49.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.21**	**162**	P	Pn	00 12 33.7	+0.5
	0.2nm,0.3s,baz=342,slow=10.0,SNR=9.1						
FITZ				S	Sn	00 14 26.2	-11
	0.5nm,0.3s,baz=260,slow=17,SNR=5.8						
WRA	**Warramunga Arr**	**17.27**	**137**	P	Pn	00 13 52.0	+0.3
	0.1nm,0.3s,baz=309,slow=12,SNR=8.0						
WRA				S	S	00 16 52.7	-15
	0.1nm,0.3s,baz=311,slow=27,SNR=4.8						
ASAR	**Alice Springs**	**19.80**	**146**	P	Pn	00 14 19.3	-2.6
	0.1nm,0.3s,baz=325,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**64.46**	**331**	P	P	00 20 23.5	+0.2
	0.5nm,0.8s,baz=144,slow=7.6,SNR=6.1						
PDAR	**Pinedale Array**	**122.70**	**43**	PKP	PKPdf	00 28 42.1	0.0
	0.3nm,0.6s,baz=343,slow=0.9,SNR=3.7						

IDC 07 00:13:43.6±629.0, 32°.70N×149°.03E, h0km, Error ellipse: s-maj=1238.0km s-min=75.4km az=116.0, North Pacific Ocean

IDC 07 00:23:25.1±6.2, 16°.09S×14°.54W, h0km, mb4.2/3, mb1 4.2/3, mb1mx3.7/19, mbtmp4.2/3, MS3.5/3, Ms1 3.5/3, ms1mx3.1/20, Error ellipse: s-maj=280.7km s-min=127.2km az=128.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**32.18**	**266**	LR	LR	00 40 59.3	
	comp=Z,70nm,21.6s,baz=113,slow=33						
TORD	**Torodi Ar. Bea**	**33.19**	**30**	P	P	00 30 03.8	0.0
	1.8nm,0.9s,baz=213,slow=8.8,SNR=13						
TORD				LR	LR	00 40 58.4	
	comp=Z,56nm,19.6s,baz=185,slow=32						
PLCA	**Paso Flores**	**54.02**	**231**	LR	LR	00 53 51.4	
	comp=Z,74nm,18.3s,baz=119,slow=34						
BRTR	**Keskin Array B**	**71.40**	**37**	P	P	00 34 47.5	+0.3
	0.8nm,0.9s,baz=213,slow=8.7,SNR=5.1						
FINES	**FINESS Array B**	**83.74**	**18**	P	P	00 35 55.7	+0.1
	1.0nm,0.8s,baz=226,slow=7.6,SNR=3.6						

IDC 07 00:31:39.4±598.0, 32°.96N×148°.39E, h0km, Error ellipse: s-maj=1178.0km s-min=69.5km az=116.0, North Pacific Ocean

*NEIC **07** 00:36:51.9, 19°.55N×70°.42W, h110km, MD4.2(RSPR), After RSPR.*

RSPR 07 00:36:51.9, 19°.55N×70°.42W, h110km±4km, MD4.1/7, 6C-5D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**0.99**	**236**	*e*Pn	Pn	00 37 13.1	+0.1
SDDR				*e*S	Sn	00 37 27.9	-1.0
SDDR				*e*S	Sn	00 37 28.8	-0.2
SMN1	**Samana, DR**	**1.14**	**108**	⇑*e*P	Pn	00 37 14.4	-0.1
SMN1				*e*S	Sn	00 37 31.1	-0.6
IMO	**Isla Mona**	**2.78**	**121**	⇑*e*P	Pn	00 37 33.9	-1.0
AGPR	**Aguadilla, PR**	**3.31**	**108**	⇑*e*P	Pn	00 37 41.4	-0.6
AGPR	**Aguadilla, PR**	**3.31**	**108**	*e*S	Sn	00 38 21.1	+0.4
AGPR	**Aguadilla, PR**	**3.31**	**108**	*e*Pn	Pn	00 37 41.5	-0.5
AGPR				*e*S	Sn	00 38 21.1	+0.4
LSP	**Las Mesas**	**3.44**	**113**	⇓*e*P	Pn	00 37 44.0	+0.3
LSP	**Las Mesas**	**3.44**	**113**	*e*Pn	Pn	00 37 45.0	+1.2
CRPR	**Cabo Rojo, PR**	**3.49**	**115**	⇓*e*P	Pn	00 37 43.4	-1.0
AOPR	**Arecibo Observ**	**3.67**	**108**	⇓*e*P	Pn	00 37 48.4	+1.6
AOPR				*e*S	Sn	00 38 31.3	+2.0
OBIP	**Obispado Ponce**	**3.91**	**112**	⇓*e*P	Pn	00 37 50.6	+0.5
CELP	**Cerrillos**	**3.92**	**111**	⇓*e*P	Pn	00 37 50.6	+0.4
CELP	**Cerrillos**	**3.92**	**111**	*e*Pn	Pn	00 37 50.1	-0.1
SJG	**San Juan**	**4.29**	**109**	⇑*e*P	Pn	00 37 55.7	+0.6
SJG	**San Juan**	**4.29**	**109**	⇓*e*P	Pn	00 37 55.9	+0.8
SJG	**San Juan**	**4.29**	**109**	*e*Pn	Pn	00 37 54.9	-0.2
GTBY	**Guantanamo Bay**	**4.43**	**276**	*e*Pn	Pn	00 37 59.4	+2.3
HUMP	**Col San Antoni**	**4.55**	**107**	⇑*e*P	Pn	00 37 57.8	-0.8

*ISCJB **07** 00:42:43.8±0.6, 40°.71N±0°.03×32°.83E±0°.03, h4km±6km, Error ellipse: s-maj=4.9km s-min=4.3km az=175.4*
*DDA **07** 00:42:43.4, 40°.71N×32°.86E, h7km±7km, Md2.9*
*ISK **07** 00:42:44.4, 40°.75N×32°.92E, h13km, MD2.7*
*CSEM **07** 00:42:44.1±0.1, 40°.69N×32°.85E, h8km, MD2.9, Error ellipse: s-maj=2.5km s-min=1.8km az=76.0*

ISC 07 00:42:44.3±0.5, 40°.70N±0°.03×32°.83E±0°.03, h8km±5km, n29, σ0°.91/44, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.50**	**115**	*e*P	**Pg**	**00 42 53.4**	**-0.6**
ELDT				*e*S	**Sg**	**00 43 00.3**	**-0.2**
ELDT	**Eldivan**	**0.50**	**115**	*e*P	**Pg**	**00 42 53.4**	**-0.6**
ELDT				*e*S	**Sg**	**00 43 00.3**	**-0.2**
SAFT	**Safranbolu**	**0.55**	**349**	*e*PG	**Pg**	**00 42 54.9**	**+0.1**
SAFT				*e*SG	**Sg**	**00 43 03.0**	**+1.0**
SAFT	**Safranbolu**	**0.55**	**349**	*e*Pg	**Pg**	**00 42 54.9**	**0.0**
SAFT				*e*Sg	**Sg**	**00 43 03.0**	**+1.0**
SGKT	**Sivrigoynuk**	**0.60**	**258**	⇑*i*P	**Pg**	**00 42 54.5**	**-1.4**
SGKT				*i* S	**Sg**	**00 43 02.3**	**-1.4**
SGKT	**Sivrigoynuk**	**0.60**	**258**	*i* P	**Pg**	**00 42 54.5**	**-1.4**
SGKT				*i* S	**Sg**	**00 43 02.3**	**-1.4**
CANT	**Cankiri**	**0.61**	**99**	*e*PG	**Pg**	**00 42 55.6**	**-0.4**
CANT				*e*SG	**Sg**	**00 43 04.3**	**+0.3**
ILGA	**Ilgaz**	**0.76**	**62**	*e*P	**Pg**	**00 42 59.1**	**+0.3**
ILGA				*e*S	**Sg**	**00 43 10.4**	**+1.7**
ILGA	**Ilgaz**	**0.76**	**62**	*e*P	**Pg**	**00 42 59.2**	**+0.3**
ILGA				*e*S	**Sg**	**00 43 10.4**	**+1.7**
LOD	**Lodumlu**	**0.81**	**184**	*e*PG	**Pg**	**00 43 01.5**	**+1.6**
LOD	**Lodumlu**	**0.81**	**184**	*e*Pg	**Pg**	**00 43 01.5**	**+1.6**
BALT	**Daday**	**0.93**	**27**	*e*P	**Pg**	**00 43 01.1**	**-1.1**
BALT				*e*S	**Sg**	**00 43 14.1**	**-0.2**
BALT	**Daday**	**0.93**	**27**	*e*P	**Pg**	**00 43 01.1**	**-1.1**
BALT				*e*S	**Sg**	**00 43 14.1**	**-0.2**
TOS	**Tosya**	**0.96**	**69**	*e*PG	**Pg**	**00 43 02.0**	**-0.8**
TOS	**Tosya**	**0.96**	**69**	*e*Pg	**Pg**	**00 43 02.0**	**-0.8**
BBAL	**Bala**	**1.18**	**169**	*e*P	**Pg**	**00 43 06.7**	**-0.2**
BBAL				*e*S	**Sg**	**00 43 23.1**	**+1.0**
BBAL	**Bala**	**1.18**	**169**	*e*P	**Pg**	**00 43 06.7**	**-0.2**
BBAL				*e*S	**Sg**	**00 43 23.1**	**+0.9**
MDU	**Mudurnu**	**1.25**	**260**	*e*PN	**Pn**	**00 43 09.3**	**+1.2**
MDU	**Mudurnu**	**1.25**	**260**	*e*Pn	**Pn**	**00 43 09.3**	**+1.2**
AFSR	**Af´ar-Bala (A**	**1.27**	**172**	*e*PN	**Pn**	**00 43 08.0**	**-0.3**
AFSR	**Af´ar-Bala (A**	**1.27**	**172**	*e*Pn	**Pn**	**00 43 08.0**	**-0.3**
CORM	**Corum**	**1.47**	**110**	*e*PN	**Pn**	**00 43 10.2**	**-0.8**
CORM	**Corum**	**1.47**	**110**	*e*Pn	**Pn**	**00 43 10.2**	**-0.9**
CTKT	**Corum**	**1.49**	**92**	*e*P	**Pn**	**00 43 11.1**	**-0.3**
CTKT				*e*S	**Sn**	**00 43 30.3**	**-0.8**
CTKT	**Corum**	**1.49**	**92**	*e*P	**Pn**	**00 43 11.1**	**-0.3**
CTKT				*e*S	**Sn**	**00 43 30.3**	**-0.8**
KAMT	**Kaman**	**1.49**	**153**	*e*PN	**Pn**	**00 43 11.3**	**-0.1**
KAMT	**Kaman**	**1.49**	**153**	*e*Pn	**Pn**	**00 43 11.3**	**-0.1**
GULT	**Gulveren**	**1.78**	**262**	*e*PN	**Pn**	**00 43 17.1**	**+1.7**
GULT	**Gulveren**	**1.78**	**262**	*e*Pn	**Pn**	**00 43 17.1**	**+1.7**

IDC 07 00:51:05.6±593.0, 32°.89N×148°.64E, h0km, Error ellipse: s-maj=1169.0km s-min=69.9km az=116.0, North Pacific Ocean

IDC 07 01:00:04.8±4.1, 30°.37S×177°.65W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/17, mbtmp3.9/4, MS3.7/2, Ms1 3.7/2, ms1mx3.1/26, Error ellipse: s-maj=144.6km s-min=47.5km az=153.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.99**	**207**	Sn	Sn	01 03 41.6	-16
	0.8nm,0.3s,baz=240,slow=22,SNR=10						
CTA	**Charters Tower**	**34.09**	**279**	P	P	01 06 52.2	+0.9
	3.0nm,1.0s,baz=91,slow=6.1,SNR=3.6						
STKA	**Stephens Creek**	**34.78**	**257**	P	P	01 06 57.8	+0.6
	1.1nm,0.6s,baz=90,slow=7.1,SNR=4.2						
ASAR	**Alice Springs**	**43.41**	**267**	P	P	01 08 09.1	-0.4
	0.4nm,0.5s,baz=107,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**44.40**	**272**	P	P	01 08 16.7	-0.7
	0.9nm,0.6s,baz=113,slow=7.8,SNR=13						
WRA				LR	LR	01 26 41.1	
	comp=Z,105nm,20.5s,baz=290,slow=36						
CBIJ	**Chichi jima**	**68.84**	**322**	LR	LR	01 37 03.7	
	comp=Z,46nm,20.0s,baz=302,slow=32						
KEV	**Kevo**	**138.16**	**347**	*ep*	PKPdf	01 19 22.2	-8.6
	4.1nm,0.7s						
JOF	**Joensuu**	**142.50**	**339**	*ep*	PKPdf	01 19 38.5	-0.4
	1.1nm,0.8s						
KAF	**Kangasniemi**	**144.62**	**341**	*ep*	PKPdf	01 19 38.2	-4.4
	0.6nm,0.7s						
FINES	**FINESS Array B**	**145.22**	**340**	PKPbc	PKPbc	01 19 42.5	-0.8
	1.6nm,0.6s,baz=46,slow=4.2,SNR=24						

*ISCJB **07** 01:01:08.4±0.5, 40°.68N±0°.03×32°.81E±0°.03, h7km±5km, Error ellipse: s-maj=4.6km s-min=4.0km az=173.6*
*CSEM **07** 01:01:08.3±0.1, 40°.70N×32°.79E, h10km, MD3.0, Error ellipse: s-maj=1.9km s-min=1.2km az=153.0*
*DDA **07** 01:01:08.2, 40°.70N×32°.80E, h5km±3km, Md3.0*
*ISK **07** 01:01:08.4, 40°.68N×32°.84E, h16km, MD2.8*

ISC 07 01:01:08.9±0.5, 40°.68N±0°.03×32°.80E±0°.03, h11km±5km, n36, σ0°.70/52, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.51**	**112**	⇓*i*P	**Pg**	**01 01 18.7**	**-0.2**
ELDT				*i* S	**Sg**	**01 01 25.9**	**+0.2**
ELDT	**Eldivan**	**0.51**	**112**	*i* P	**Pg**	**01 01 18.7**	**-0.2**
ELDT				*i* S	**Sg**	**01 01 25.9**	**+0.2**
SAFT	**Safranbolu**	**0.56**	**351**	*e*PG	**Pg**	**01 01 20.6**	**+0.7**
SAFT				*e*SG	**Sg**	**01 01 28.4**	**+1.1**
SAFT	**Safranbolu**	**0.56**	**351**	*e*Pg	**Pg**	**01 01 20.6**	**+0.7**
SAFT				*e*Sg	**Sg**	**01 01 28.5**	**+1.1**
SGKT	**Sivrigoynuk**	**0.58**	**259**	⇓*i*P	**Pg**	**01 01 19.7**	**-0.5**
SGKT				*i* S	**Sg**	**01 01 27.9**	**+0.1**
SGKT	**Sivrigoynuk**	**0.58**	**259**	*i* P	**Pg**	**01 01 19.7**	**-0.5**
SGKT				*i* S	**Sg**	**01 01 27.9**	**+0.1**
CANT	**Cankiri**	**0.62**	**97**	*e*PG	**Pg**	**01 01 20.0**	**-1.1**
CANT				*e*SG	**Sg**	**01 01 29.9**	**+0.6**
ILGA	**Ilgaz**	**0.79**	**62**	*e*P	**Pg**	**01 01 23.9**	**-0.2**
ILGA				*e*S	**Sg**	**01 01 35.3**	**+1.0**
ILGA	**Ilgaz**	**0.79**	**62**	*e*P	**Pg**	**01 01 23.9**	**-0.2**
ILGA				*e*S	**Sg**	**01 01 35.3**	**+1.0**
LOD	**Lodumlu**	**0.79**	**182**	*e*PG	**Pg**	**01 01 24.1**	**-0.1**
LOD	**Lodumlu**	**0.79**	**182**	*e*Pg	**Pg**	**01 01 24.1**	**-0.1**
BALT	**Daday**	**0.96**	**27**	*e*P	**Pg**	**01 01 26.6**	**-0.8**
BALT				*e*S	**Sg**	**01 01 39.5**	**-0.4**
BALT	**Daday**	**0.96**	**27**	*e*P	**Pg**	**01 01 26.6**	**-0.8**
BALT				*e*S	**Sg**	**01 01 39.5**	**-0.4**
TOS	**Tosya**	**0.99**	**69**	*e*PG	**Pg**	**01 01 27.5**	**-0.5**
TOS	**Tosya**	**0.99**	**69**	*e*Pg	**Pg**	**01 01 27.5**	**-0.5**
BBAL	**Bala**	**1.16**	**168**	*e*P	**Pb**	**01 01 31.9**	**+0.8**
BBAL				*e*S	**Sb**	**01 01 47.6**	**+1.5**
BBAL	**Bala**	**1.16**	**168**	*e*P	**Pb**	**01 01 31.9**	**+0.9**
BBAL				*e*S	**Sb**	**01 01 47.6**	**+1.5**
MDU	**Mudurnu**	**1.23**	**260**	*e*PN	**Pn**	**01 01 31.5**	**-0.6**
MDU	**Mudurnu**	**1.23**	**260**	*e*Pn	**Pn**	**01 01 31.5**	**-0.5**
AFSR	**Af´ar-Bala (A**	**1.25**	**170**	*e*PN	**Pn**	**01 01 31.8**	**-0.5**
AFSR	**Af´ar-Bala (A**	**1.25**	**170**	*e*Pn	**Pn**	**01 01 31.8**	**-0.5**
CORM	**Corum**	**1.48**	**109**	*e*PN	**Pn**	**01 01 34.4**	**-1.1**
CORM	**Corum**	**1.48**	**109**	*e*Pn	**Pn**	**01 01 34.4**	**-1.1**
KAMT	**Kaman**	**1.49**	**152**	*e*PN	**Pn**	**01 01 35.4**	**-0.2**
KAMT	**Kaman**	**1.49**	**152**	*e*Pn	**Pn**	**01 01 35.4**	**-0.2**
CTKT	**Corum**	**1.51**	**92**	*e*P	**Pn**	**01 01 36.8**	**+0.9**
CTKT				*e*S	**Sn**	**01 01 56.0**	**+0.4**
CTKT	**Corum**	**1.51**	**92**	*e*P	**Pn**	**01 01 36.8**	**+0.9**
CTKT				*e*S	**Sn**	**01 01 56.0**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.58**	**219**	*e*PN	**Pn**	**01 01 36.5**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.58**	**219**	*e*Pn	**Pn**	**01 01 36.5**	**-0.3**
BYBT	**Boyabat**	**1.68**	**61**	*e*PN	**Pn**	**01 01 37.5**	**-0.7**
BYBT	**Boyabat**	**1.68**	**61**	*e*Pn	**Pn**	**01 01 37.5**	**-0.7**
GULT	**Gulveren**	**1.76**	**263**	*e*PN	**Pn**	**01 01 39.9**	**+0.6**
GULT	**Gulveren**	**1.76**	**263**	*e*Pn	**Pn**	**01 01 39.9**	**+0.5**
YOZ	**Yozgat**	**2.19**	**118**	*e*PN	**Pn**	**01 01

KURK pmax pmax
comp=Z,6.0nm,2.5s,mb3.9
MKAR Makanchi Array 47.17 296 P P 01 22 26.1 -1.2
comp=Z,0.3nm,0.4s,mb3.4,baz=60,slow=6.6,SNR=10
MKAR Makanchi Array 47.17 296 *eP* **P 01 22 26.4 -0.9**
BRVK Borovoye 50.15 308⇓*eP* **P 01 22 48.0 -2.1**
BRVK pmax pmax
comp=Z,4.0nm,2.1s,mb4.0
CHTO Chiang Mai 55.18 257 *eP* **P 01 23 28.7 +1.2**
CHTO pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
CHTO Chiang Mai 55.18 257 *eP* **P 01 23 28.7 +1.1**
comp=Z,2.5nm,0.7s,mb4.3
CMAR Chiang Mai Arr 55.45 256 P **P 01 23 30.9 +1.4**
comp=Z,1.3nm,0.7s,mb4.1,baz=31,slow=7.3,SNR=8.5
CMAR Chiang Mai Arr 55.45 256 P **P 01 23 30.9 +1.4**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
WVOR Wild Horse Val 55.91 63 *eP* **P 01 23 33.0 +0.6**
WVOR pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
WVOR Wild Horse Val 55.91 63 *eP* **P 01 23 33.0 +0.5**
comp=Z,2.1nm,0.8s,mb4.2
BOZ Bozeman (W) 57.66 56 *eP* **P 01 23 45.2 +0.5**
BOZ pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
BOZ Bozeman (W) 57.66 56 *eP* **P 01 23 45.2 +0.4**
comp=Z,1.1nm,0.6s,mb4.1
NVAR Mina Array Bea 58.73 66 P **P 01 23 53.3 +0.9**
comp=Z,0.7nm,0.4s,mb4.0,baz=299,slow=7.3,SNR=8.5
TPAW Teton Pass 59.46 58 *eP* **P 01 23 58.8 +1.5**
comp=Z,1.3nm,0.6s,mb4.1
BW06 Boulder Array 60.70 57 *eP* **P 01 24 06.4 +0.7**
comp=Z,1.9nm,0.8s,mb4.2
PDAR Pinedale Array 60.70 57 P **P 01 24 06.2 +0.5**
comp=Z,1.5nm,0.7s,mb4.1,baz=322,slow=2.4,SNR=16
RSSD Black Hills 62.64 53 *eP* **P 01 24 18.9 +0.2**
RSSD pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
RSSD Black Hills 62.64 53 *eP* **P 01 24 18.9 +0.2**
comp=Z,1.5nm,0.6s,mb4.1
WRA Warramunga Arr 72.97 202 P **P 01 25 23.2 -0.5**
comp=Z,0.2nm,0.6s,mb3.1,baz=16,slow=6.0,SNR=2.8
WRA pP pP 01 25 48.9 -1.9
comp=Z,0.5nm,0.9s,baz=16,slow=6.7,SNR=3.5
WRA Warramunga Arr 72.97 202 P **P 01 25 23.2 -0.4**
WRA *PP pP 01 25 48.9 -1.8
WRA pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 73.69 64 P **P 01 25 28.3 +0.3**
comp=Z,0.9nm,0.5s,mb3.8,baz=299,slow=5.2,SNR=22
TXAR Lajitas Array 73.69 64 P **P 01 25 28.3 +0.3**
TXAR pmax pmax
comp=Z,1.0nm,0.5s

IDC 07 01:23:19.4±7.0, 30.°50S×177.°74W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/16, mbtmp3.5/2, Error ellipse: s-maj=294.1km s-min=53.6km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.83**	**207**		Sn	Sn	01 26 55.7	-13
	1.2nm,0.3s,baz=237,slow=21,SNR=5.6							
ASAR	**Alice Springs**	**43.33**	**267**	P		P	01 31 23.4	0.0
	0.2nm,0.4s,baz=107,slow=7.6,SNR=5.9							
WRA	**Warramunga Arr**	**44.33**	**272**	P		P	01 31 31.3	-0.1
	0.4nm,0.4s,baz=111,slow=8.1,SNR=12							
KEV	**Kevo**	**138.27**	**347**	*ep*		PKPdf	01 42 54.1	+8.5
	3.6nm,0.8s							
JOF	**Joensuu**	**142.59**	**339**	*ep*		PKPdf	01 42 46.5	-7.1
	1.2nm,0.8s							
KAF	**Kangasniemi**	**144.72**	**341**	*ep*		PKPdf	01 42 51.5	-5.9
	1.0nm,0.9s							
FINES	**FINESS Array B**	**145.31**	**340**	PKPbc		PKPbc	01 42 57.4	-0.8
	0.6nm,0.3s,baz=46,slow=4.3,SNR=23							

IDC 07 01:35:44.0±1.6, 2.°45S×142.°12E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/16, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=62.6km s-min=23.9km az=107.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.97**	**203**	P		Pn	01 40 07.2	-0.5
	0.3nm,0.3s,baz=23,slow=12,SNR=14							
FITZ	**Fitzroy Crossi**	**22.43**	**225**	P		P	01 40 44.1	-0.5
	1.1nm,0.7s,baz=48,slow=15,SNR=4.8							
ASAR	**Alice Springs**	**22.54**	**200**	P		P	01 40 45.6	-0.1
	0.6nm,0.6s,baz=26,slow=11,SNR=9.8							
MKAR	**Makanchi Array**	**71.69**	**321**	P		P	01 47 09.2	+1.4
	0.7nm,0.7s,baz=108,slow=7.4,SNR=5.7							
ILAR	**Eielson Array**	**84.20**	**24**	P		P	01 48 15.9	-1.1
	0.5nm,1.1s,baz=269,slow=4.5,SNR=4.3							

*ISCJB **07** 01:38:33.2±1.0, 24.°47N±0.°08×122.°87E±0.°03, h91km±9km, Error ellipse: s-maj=13.0km s-min=4.0km az=177.6*
*TAP **07** 01:38:33.0, 24.°48N×122.°84E, h102km±1km, ML3.1, C*
*JMA **07** 01:38:33.3±0.1, 24.°62N×122.°92E, h93km±1km, M2.4*
ISC 07 01:38:33.7±1.0, 24.°46N±0.°08×122.°87E±0.°03, h90km±9km, n17, σ0°72/30, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.13**	**89**	P		**Pn**	**01 38 46.6**	**+0.2**
YOJ				*eS*		**Sn**	**01 38 56.7**	**+0.8**
IRIF	**Iriomote-Funau**	**0.79**	**99**	P		**Pn**	**01 38 51.0**	**-0.1**
IRIF				*eS*		**Sn**	**01 39 04.4**	**+0.3**
TWC	**Suao**	**0.94**	**279**	P		**Pn**	**01 38 52.4**	**-0.4**
	baz=277							
TWC				S		**Sn**	**01 39 06.2**	**-0.8**
	baz=277							
HATJ	**Hateruma jima**	**0.94**	**115**	P		**Pn**	**01 38 53.3**	**+0.6**
HATJ				*eS*		**Sn**	**01 39 07.7**	**+0.7**
JKRS	**Kuro-shima**	**1.06**	**102**	P		**Pn**	**01 38 54.3**	**+0.2**
JKRS				*eS*		**Sn**	**01 39 09.8**	**+0.4**
TWE	**Neicheng**	**1.13**	**284**	*eP*		**Pn**	**01 38 54.9**	**+0.1**
	baz=282							
JIJ	**Ishigaki jima**	**1.16**	**94**	P		**Pn**	**01 38 54.9**	**-0.4**
JIJ				*eS*		**Sn**	**01 39 10.5**	**-1.0**
ENTT	**Nioudou**	**1.20**	**279**	P		**Pn**	**01 38 56.2**	**+0.4**
	baz=277							
ENTT				*eS*		**Sn**	**01 39 12.0**	**-0.3**
	baz=277							
TWD	**Chiawan**	**1.22**	**252**	*eP*		**Pn**	**01 38 56.9**	**+0.9**
	baz=251							
TWD				S		**Sn**	**01 39 12.0**	**-0.8**
	baz=251							
NSK	**Sanguang**	**1.39**	**279**	*eS*		**Sn**	**01 39 16.6**	**+0.1**
	baz=277							
WHF	**Hehuan Shan**	**1.50**	**258**	*eP*		**Pn**	**01 38 58.9**	**-0.5**
	baz=263							
WHF				S		**Sn**	**01 39 19.1**	**+0.2**
	baz=263							
JTJ	**Tarama**	**1.68**	**83**	P		**Pn**	**01 39 01.3**	**-0.4**
JTJ				*eS*		**Sn**	**01 39 21.9**	**-1.0**
EHY	**Hungye**	**1.71**	**236**	*eP*		**Pn**	**01 39 02.1**	**+0.1**
	baz=245							
EHY				*eS*		**Sn**	**01 39 22.4**	**-1.2**
	baz=245							
TWF1	**Yuli**	**1.81**	**233**	P		**Pn**	**01 39 03.1**	**-0.4**
	baz=229							
TWF1				*eS*		**Sn**	**01 39 24.6**	**-1.5**
	baz=229							
TYC	**Yuchr**	**1.92**	**254**	*eP*		**Pn**	**01 39 06.3**	**+1.5**
	baz=248							
YUS	**Yu-Shan**	**2.00**	**242**	*eP*		**Pn**	**01 39 06.7**	**+0.8**
	baz=236							
YUS				*eS*		**Sn**	**01 39 30.6**	**+0.1**
	baz=236							
CHN5	**Tsauling**	**2.18**	**247**	*eS*		**Sn**	**01 39 36.2**	**+1.4**
	baz=241							

IDC 07 01:48:21.6±594.0, 33.°03N×148.°49E, h0km, Error ellipse: s-maj=1172.0km s-min=64.1km az=116.0, North Pacific Ocean

BUC 07 01:50:01.2±0.2, 45.°32N×27.°05E, h8km±4km, MD2.1/2, 4C-6D, Error ellipse: s-maj=3.2km s-min=1.2km az=20.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VRI	**Vrincioaia**	**0.59**	**338**	⇓*iP*		Pg	01 50 13.3	+0.7
VRI				*i* S		Sg	01 50 21.9	+1.6
VRI	**Vrincioaia**	**0.59**	**338**	⇓*iP*		Pg	01 50 13.3	+0.7
VRI	**Vrincioaia**	**0.59**	**338**	S		Sg	01 50 21.9	+1.6
PLOR	**Plostina**	**0.60**	**332**	⇓*iP*		Pg	01 50 13.4	+0.6
PLOR				*i* S		Sg	01 50 20.5	-0.1
PLOR	**Plostina**	**0.60**	**332**	⇓*iP*		Pg	01 50 13.4	+0.6
PLOR	**Plostina**	**0.60**	**332**	S		Sg	01 50 20.5	-0.1
CFR	**Carcaliu**	**0.78**	**100**	⇓*iP*		Pg	01 50 16.9	+0.7
CFR				*i* S		Sg	01 50 28.9	+2.5
CFR	**Carcaliu**	**0.78**	**100**	⇓*iP*		Pg	01 50 16.9	+0.7
CFR	**Carcaliu**	**0.78**	**100**	S		Sg	01 50 28.9	+2.5
MLR	**Muntele Rosu**	**0.80**	**283**	⇑*iP*		Pg	01 50 17.4	+0.9
MLR				*i* S		Sg	01 50 29.6	+2.8
MLR	**Muntele Rosu**	**0.80**	**283**	⇑*iP*		Pg	01 50 17.4	+0.9
MLR	**Muntele Rosu**	**0.80**	**283**	S		Sg	01 50 29.6	+2.8
TIRR	**Tirgusor**	**1.30**	**131**	⇑*iP*		Pn	01 50 26.0	+0.4
TIRR				*i* S		Sb	01 50 43.6	+0.9
TIRR	**Tirgusor**	**1.30**	**131**	⇑*iP*		Pn	01 50 26.0	+0.4
TIRR	**Tirgusor**	**1.30**	**131**	S		Sb	01 50 43.6	+0.9

*NIED **07** 02:00:00, 40.°30N×143.°00E, h23km, Mw3.5 Best double couple: $M_0$1.69000×10^{14} NP1:ϕ_s2.00000°, δ69.00000°, λ77.00000°. NP2:ϕ_s215.00000°, δ24.00000°, λ121.00000°.*
JMA 07 02:00:07.6±0.1, 40.°25N×143.°01E, h13km±2km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.93**	**251**	P		Pg	02 00 25.4	-0.2
JTH				*eS*		Sg	02 00 37.6	-0.2
MIYJ	**Miyakonagasawa**	**1.14**	**234**	P		Pb	02 00 28.4	-0.7
MIYJ				*eS*		Sb	02 00 43.0	-0.7
JANG	**Nango**	**1.15**	**277**	P		Pb	02 00 28.7	-0.6
JANG				*eS*		Sb	02 00 44.2	+0.1
JKZ	**Kuzumaki**	**1.31**	**259**	P		Pn	02 00 31.5	-0.1
JKZ				*eS*		Sb	02 00 48.6	-0.3
JOM	**Ohasama**	**1.53**	**240**	P		Pn	02 00 34.9	+0.3
JTM	**Tenmabayashi**	**1.57**	**291**	P		Pn	02 00 35.6	+0.4
JTM				*eS*		Sn	02 00 56.8	+1.4
JAH	**Hinai**	**1.82**	**269**	P		Pn	02 00 39.6	+1.0
JAH				*eS*		Sn	02 01 02.7	+1.2
JOT	**Ohata**	**1.87**	**308**	P		Pn	02 00 39.8	+0.5
JOT				*eS*		Sn	02 01 03.7	+1.0
JMK	**Ichinoseki**	**1.90**	**227**	P		Pn	02 00 41.2	+1.6

IDC 07 02:05:28.4±589.0, 33.°08N×148.°45E, h0km, Error ellipse: s-maj=1162.0km s-min=62.6km az=116.0, North Pacific Ocean

*BJI **07** 02:05:29.2, 23.°78S×68.°97E, h5km, mB5.3/30, mb5.1/46, Ms5.1/49, Ms7 4.9/48*
*IDC **07** 02:05:32.0±0.4, 23.°70S×69.°51E, h0km, mb4.5/29, mb1 4.6/29, mb1mx4.6/30, mbtmp4.5/29, MS4.6/22, Ms1 4.6/22, ms1mx4.5/31, Error ellipse: s-maj=14.4km s-min=11.5km az=17.0*
*MOS **07** 02:05:32.5±0.8, 23.°58S×69.°56E, h10km, mb5.6/67, MS4.7/32, Error ellipse: s-maj=10.6km s-min=5.3km az=110.0*
*ISCJB **07** 02:05:32.1±0.2, 23.°69S±0.°04×69.°46E±0.°04, h10km, mb5.3/175, MS4.9/158, Error ellipse: s-maj=5.7km s-min=4.7km az=0.6*
*NEIC **07** 02:05:33.7±0.1, 23.°71S×69.°49E, h10km, mb5.4/77, MS5.0/118, Error ellipse: s-maj=5.3km s-min=4.2km az=198.0*
*TEH **07** 02:05:34.0, 23.°77S×69.°48E, h10km*
*GCMT **07** 02:05:35.6±0.2, 23.°47S×69.°41E, h12km, MW5.4, Moment Tensor Solution. s47,c70; s15,c15; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.02±.02; $M_{\theta\theta}$0.28±.01; $M_{\phi\phi}$0.75±.02; $M_{r\theta}$-0.02±.05; $M_{r\phi}$-0.39±.01; $M_{\theta\phi}$0.94±.05; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s317.00000°, δ26.00000°, λ-119.00000°. NP2:ϕ_s169.00000°, δ67.00000°, λ-77.00000°. Principal axes: T 1.2900, Plg21.0000°, Azm248.0000°; N 0.1500, Plg12.0000°, Azm343.0000°; P -1.4400, Plg65.0000°, Azm102.0000°; Data Used: II IU CN IC. Surface waves: sta= 88, comp=181, per= 50.*
*SZGRF **07** 02:05:54.7, 20.°95S×65.°98E, h22km, mb5.6, Mauritius - Reunion region*
ISC 07 02:05:33.8±0.2, 23.°72S±0.°04×69.°41E±0.°03, h10km, (h20km±1.0km:pP-P), n611, σ0°88/458, mb5.3/175, MS4.9/158, 11C-37D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**21.17**	**279**	*eP*		**P**	**02 10 21.2**	**+1.8**
ABPO				pmax		pmax		
	comp=Z,244nm,2.1s,mb5.2							
ABPO				MLR		MLR		
	comp=Z,3μm,19.0s,MS4.7							
ABPO	**Ambohimpanom**	**21.17**	**279**	*eP*		**P**	**02 10 21.2**	**+1.7**
	comp=Z,244nm,2.1s,mb5.2							
ABPO				LR		LR		
	comp=Z,3μm,19.0s,MS4.7							
OPO	**Ambohidratompo**	**21.34**	**280**	P		**P**	**02 10 23.0**	**+1.7**
	comp=Z,4.7nm,0.9s,baz=92,slow=13,SNR=7.4							
COCO	**West Island**	**28.44**	**71**	PFAKE			02 11 40.0	+11
COCO				LR		LR		
	comp=Z,2μm,21.0s,MS4.8							
PALK	**Pallekele**	**32.71**	**21**	*eP*		**P**	**02 12 06.7**	**0.0**
PALK				pmax		pmax		
	comp=Z,152nm,1.7s,mb5.7							
PALK	**Pallekele**	**32.71**	**21**	*eP*		**P**	**02 12 06.7**	**0.0**
	comp=Z,152nm,1.7s,mb5.7							
XMIS	**Christmas Isla**	**36.93**	**75**	P		**P**	**02 12 37.7**	**-5.6**
	comp=Z,584nm,1.5s,mb6.2							
PDSI	**Padang**	**37.68**	**58**	P		**P**	**02 12 50.9**	**+1.3**
	comp=Z,2μmcomp=Z,110nm,1.6s,mb5.3							
PPI	**Padang Panjang**	**37.92**	**57**	P		**P**	**02 12 53.6**	**+2.0**
	comp=Z,1μmcomp=Z,50nm,1.6s,mb5.0							
KMBO	**Kilima Mbogo**	**38.41**	**301**	P		**P**	**02 12 56.8**	**+1.1**
	comp=Z,9.4nm,1.1s,mb4.5,baz=180,slow=24,SNR=13							
KMBO				LR		LR	02 25 23.3	
	comp=Z,710nm,21.2s,MS4.5,baz=90,slow=31							
KMBO	**Kilima Mbogo**	**38.41**	**301**	*eP*		**P**	**02 12 57.0**	**+1.2**
KMBO				pmax		pmax		
	comp=Z,63nm,1.5s							
KMBO				MLR		MLR		
	comp=Z,811nm,21.0s							
KMBO	**Kilima Mbogo**	**38.41**	**301**	*eP*		**P**	**02 12 57.0**	**+1.3**
	comp=Z,63nm,1.5s,mb5.1							
KMBO				LR		LR		
	comp=Z,811nm,21.0s,MS4.5							
KMBO	**Kilima Mbogo**	**38.41**	**301**	P		**P**	**02 12 57.8**	**+2.1**
	SNR=14							
SDSI	**Sungai Dareh**	**38.42**	**59**	P		**P**	**02 12 57.7**	**+1.9**
	comp=Z,32nm,1.8s,mb4.8							
MDSI	**Maura Dua**	**38.58**	**66**	P		**P**	**02 12 56.8**	**-0.4**
	comp=Z,12nm,1.6s,mb4.4							
BKNI	**Bangkinang**	**38.91**	**57**	P		**P**	**02 13 02.4**	**+2.4**
	comp=Z,1μmcomp=Z,87nm,1.2s,mb5.3							
BOSA	**Boshof**	**39.76**	**253**	P		**P**	**02 13 07.2**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.2,baz=97,slow=9.7,SNR=8.5							
BOSA				LR		LR	02 27 24.6	
	comp=Z,2μm,18.4s,MS5.1,baz=98,slow=33							
BOSA	**Boshof**	**39.76**	**253**	*eP*		**P**	**02 13 07.0**	**0.0**
BOSA				pmax		pmax		
	comp=Z,58nm,1.5s,mb5.1							
BOSA				MLR		MLR		
	comp=Z,3μm,20.0s,MS5.1							
BOSA	**Boshof**	**39.76**	**253**	*eP*		**P**	**02 13 07.0**	**0.0**
	comp=Z,58nm,1.5s,mb5.1							
BOSA				LR		LR		
	comp=Z,3μm,20.0s,MS5.1							
LBTB	**Lobatse**	**39.80**	**259**	P		**P**	**02 13 07.5**	**+0.1**
	comp=Z,5.2nm,1.0s,mb4.2,baz=110,slow=6.6,SNR=4.8							
LBTB	**Lobatse**	**39.80**	**259**	*eP*		**P**	**02 13 08.7**	**+1.3**
LBTB				pmax		pmax		
	comp=Z,66nm,1.6s,mb5.1							
LBTB				MLR		MLR		
	comp=Z,2μm,21.0s,MS5.0							
LBTB	**Lobatse**	**39.80**	**259**	*eP*		**P**	**02 13 08.7**	**+1.3**
	comp=Z,66nm,1.6s,mb5.1							
LBTB				LR		LR		
	comp=Z,2μm,21.0s,MS5.0							
CBJI	**Citeko**	**39.86**	**71**	P		**P**	**02 13 10.1**	**+2.2**
	comp=Z,174nm,1.3s,mb5.6							
LEM	**Lembang**	**40.33**	**72**	P		**P**	**02 13 14.5**	**+2.7**
	comp=Z,2μmcomp=Z,108nm,1.8s,mb5.3							
KAD	**Karad**	**41.04**	**7**	*e*PKP		**P**	**02 13 15.7**	**-1.8**
KAD				AMb		AMB	02 13 26.5	
	comp=Z,65nm,1.7s,mb5.0							
IPM	**Ipoh**	**41.66**	**52**	*eP*		**P**	**02 13 23.7**	**+1.0**
	comp=Z,102nm,1.4s,mb5.3							
HYB	**Hyderabad**	**41.84**	**13**	*i* P		**P**	**02 13 25.0**	**+0.9**
KULM	**Kulim**	**41.95**	**51**	*eP*		**P**	**02 13 25.7**	**+0.6**
	comp=Z,75nm,1.4s,mb5.1							
KULM				LR		LR		
	comp=Z,901nm,20.0s,MS4.7							
POO	**Poona**	**42.21**	**6**	*e*PKP		**P**	**02 13 27.2**	**+0.1**
POO				AMb		AMB	02 13 34.7	
	comp=Z,58nm,1.1s,mb5.1							
NWAO	**Narrogin (SRO)**	**42.78**	**113**	P		**P**	**02 13 32.0**	**+0.3**
	comp=Z,3.8nm,0.8s,mb4.2,baz=259,slow=5.2,SNR=2.2							
NWAO				LR		LR	02 27 59.8	
	comp=Z,1μm,18.5s,MS4.8,baz=278,slow=32							
PCJI	**Pacitan**	**42.83**	**76**	P		**P**	**02 13 33.0**	**+0.6**
	comp=Z,2μmcomp=Z,59nm,1.9s,mb5.0							
VIS	**Vishakhapatnam**	**43.37**	**20**	*e*PKP		**P**	**02 13 34.4**	**-2.1**
VIS				AMb		AMB	02 13 44.5	
	comp=Z,43nm,0.8s,mb5.2							
SUR	**Sutherland**	**43.45**	**247**	PFAKE			02 13 50.0	+13
SUR				LR		LR		
	comp=Z,2μm,21.0s,MS4.9							
PWJI	**Pagerwojo**	**43.46**	**76**	P		**P**	**02 13 35.4**	**-2.1**
	comp=Z,49nm,1.5s,mb5.0							
ATD	**Arta Tunnel**	**43.61**	**321**	P		**P**	**02 13 39.6**	**+1.1**
	comp=Z,11nm,0.9s,mb4.6,baz=143,slow=20,SNR=8.4							
MBAR	**Mbarara**	**43.97**	**296**	PFAKE			02 13 50.0	+8.5
MBAR				LR		LR		
	comp=Z,255nm,19.0s,MS4.2							
KRKI	**Karangkates**	**43.98**	**77**	P		**P**	**02 13 44.1**	**+2.4**
	comp=Z,241nm,1.3s,mb5.8							
MAW	**Mawson**	**44.08**	**184**	P		**P**	**02 13 42.2**	**+0.5**
	comp=Z,3.9nm,0.7s,mb4.3,baz=14,slow=9.9,SNR=6.4							
MAW				LR		LR	02 27 54.4	
	comp=Z,604nm,19.2s,MS4.5,baz=357,slow=30							
GMJI	**Gumukmas**	**44.82**	**77**	P		**P**	**02 13 48.4**	**0.0**
	comp=Z,1μmcomp=Z,53nm,1.7s,mb5.1							
MIR	**Mirnyy**	**45.36**	**167**	*eP*		**P**	**02 13 53.0**	**+1.0**
MIR				pmax		pmax		
	comp=Z,117nm,2.0s,mb5.4							
JAGI	**Jajag, Banyuwa**	**45.37**	**78**	P		**P**	**02 13 53.8**	**+1.1**
	comp=Z,1μmcomp=Z,67nm,1.3s,mb5.3							
BYJI	**Banyuwangi**	**45.66**	**78**	P		**P**	**02 13 56.6**	**+1.6**
MBWA	**Marble Bar**	**46.39**	**97**	PFAKE			02 14 10.0	+9.3
MBWA				LR		LR		
	comp=Z,1μm,21.0s,MS4.8							
KSM	**Kuching**	**46.97**	**64**	PFAKE			02 14 20.0	+15
KSM				LR		LR		
	comp=Z,840nm,20.0s,MS4.7							
BHPL	**Bhopal**	**47.32**	**10**	*e*PKP		**P**	**02 14 06.8**	**-1.0**
BHPL				AMb		AMB	02 14 15.8	
	comp=Z,81nm,1.0s,mb5.6							
BSY	**Bisya**	**47.68**	**345**	P		**P**	**02 14 11.6**	**+1.0**
	SNR=25							
SMDO	**Samad**	**47.79**	**346**	P		**P**	**02 14 11.9**	**+0.4**
	SNR=13							
TSUM	**Tsumeb**	**48.23**	**265**	P		**P**	**02 14 15.9**	**+0.8**
	comp=Z,5.1nm,0.9s,mb4.5,baz=89,slow=7.0,SNR=9.3							
TSUM	**Tsumeb**	**48.23**	**265**	*eP*		**P**	**02 14 15.7**	**+0.6**
	comp=Z,34nm,1.5s,mb5.2							
TSUM				LR		LR		
	comp=Z,2μm,20.0s,MS5.0							
ARQ	**Araqi**	**48.42**	**344**	P		**P**	**02 14 17.1**	**+0.8**
	SNR=11							
HOQ	**Hoqain**	**48.46**	**345**	P		**P**	**02 14 17.2**	**+0.6**
	SNR=16							
SYO	**Syowa Base**	**48.73**	**194**⇑*e*P			PP	02 16 06.0	-5.2
SYO	**Syowa Base**	**48.73**	**194**⇑*e*P			**P**	**02 14 17.2**	**-1.0**
SYO	**Syowa Base**	**48.73**	**194**⇓*ep*P			**P**	**02 14 20.6**	**+2.4**
NST	**Nakhon Sawan**	**49.34**	**40**	P		**P**	**02 14 20.2**	**-3.3**
CASY	**Casey**	**49.83**	**160**	*eP*		**P**	**02 14 26.3**	**-0.4**
	comp=Z,6.7nm,0.8s,mb4.7							
CASY				LR		LR		
	comp=Z,698nm,20.0s,MS4.7							
CM31	**Chiang Mai Arr**	**50.87**	**37**	*eP*		**P**	**02 14 36.1**	**+1.0**
	comp=Z,38nm,1.1s,mb5.2							
CM31				LR		LR		
	comp=Z,779nm,20.0s,MS4.7							
CMAR	**Chiang Mai Arr**	**50.87**	**37**	P		**P**	**02 14 34.9**	**-0.2**
	comp=Z,10.0nm,1.1s,mb4.7,baz=227,slow=6.5,SNR=36							
CMAR				LR		LR	02 33 33.9	
	comp=Z,820nm,18.7s,MS4.8,baz=203,slow=33							
CHG	**Chiang Mai**	**51.16**	**37**	⇓P		**P**	**02 14 36.9**	**-0.4**
	comp=Z,28nm,1.6s,mb4.9							
CHTO	**Chiang Mai**	**51.16**	**37**	*eP*		**P**	**02 14 36.8**	**-0.5**
CHTO				pmax		pmax		
	comp=Z,55nm,1.4s,mb5.3							
CHTO	**Chiang Mai**	**51.16**	**37**	*eP*		**P**	**02 14 36.8**	**-0.4**
	comp=Z,55nm,1.4s,mb5.3							
KHET	**Khetri**	**51.85**	**7**	*e*PKP		**P**	**02 14 41.9**	**-0.5**
KHET				AMb		AMB	02 14 50.4	
	comp=Z,72nm,1.0s,mb5.5							
KAPI	**Kappang**	**51.87**	**77**	*eP*		**P**	**02 14 42.0**	**-0.8**
	comp=Z,47nm,1.4s,mb5.2							
KAPI				LR		LR		
	comp=Z,392nm,20.0s,MS4.4							
KUDL	**Kundal**	**52.01**	**8**	*ex*		x	02 14 37.9	
SONA	**Sohna**	**52.19**	**9**	*e*PKP		**P**	**02 14 43.9**	**-0.9**
SONA				AMb		AMB	02 14 52.7	
	comp=Z,113nm,0.9s,mb5.8							
CHRT	**Chiangrai**	**52.47**	**37**	P		**P**	**02 14 47.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**52.55**	**95**	P		**P**	**02 14 47.3**	**-0.5**
	comp=Z,5.2nm,0.7s,mb4.5,baz=249,slow=5.9,SNR=16							
FITZ				LR		LR	02 33 08.5	
	comp=Z,293nm,20.6s,MS4.3,baz=271,slow=32							
FITZ	**Fitzroy Crossi**	**52.55**	**95**	*eP*		**P**	**02 14 46.9**	**-0.9**
	comp=Z,16nm,0.9s,mb4.9							
BISR	**Bishrakh**	**52.55**	**9**	*e*PKP		**P**	**02 14 48.2**	**+0.7**
RTK	**Rohtak**	**52.88**	**8**	*e*PKP		**P**	**02 14 48.8**	**-1.0**
KOLN	**Koldanda**	**52.98**	**16**	*eP*		**P**	**02 14 50.7**	**0.0**
	comp=Z,87nm,0.9s,mb5.7							
ODAN	**Odare**	**53.20**	**20**	*eP*		**P**	**02 14 52.0**	**-0.3**
	comp=Z,128nm,1.2s,mb5.7							
DMN	**Daman**	**53.23**	**17**	*eP*

NVL	**N'lazarevskaya**	**57.30**	**199**	*e*P	**P**	**02 15 22.3**	**+0.9**
NVL				pmax	pmax		
comp=Z,46nm,2.0s,mb5.2							
MAIT	**Maitri**	**57.34**	**199**	*e*P	**P**	**02 15 22.3**	**+0.6**
KBL	**Kabul**	**57.94**	**360**	*e*P	**P**	**02 15 26.9**	**+0.7**
KBL				pmax	pmax		
comp=Z,30nm,1.0s,mb5.3							
KBL	**Kabul**	**57.94**	**360**	*e*P	**P**	**02 15 26.9**	**+0.7**
comp=Z,30nm,1.0s,mb5.3							
QIZ	**Qiongzhong**	**57.97**	**46**	P	**P**	**02 15 27.0**	**+0.2**
QIZ				PP	PP	02 17 34.9	-0.6
QIZ				S	**S**	**02 23 29.3**	**+2.0**
QIZ				sS	sS	02 23 35.2	+2.6
QIZ				SS	SS	02 27 19.1	+0.3
QIZ				LR	LR		
comp=N,820nm,19.7s							
QIZ				LR	LR		
comp=Z,1μm,18.7s,MS5.0							
KMI	**Kunming**	**58.31**	**36**	P	**P**	**02 15 30.1**	**+1.0**
KMI				pP	pP	02 15 35.6	+3.3
KMI				sP	sP	02 15 38.0	+4.5
KMI				PP	PP	02 17 44.7	+6.3
KMI				S	**S**	**02 23 30.5**	**-1.1**
KMI				sS	sS	02 23 39.3	+2.4
KMI				SS	SS	02 27 25.7	+1.7
KMI				pmax	pmax		
comp=Z,22nm,1.5s,mb5.0							
KMI				pmax	pmax		
comp=Z,190nm,3.6s							
KMI				LR	LR		
comp=N,370nm,20.5s,MS4.9							
KMI				LR	LR		
comp=E,760nm,19.2s,MS4.9							
KMI				LR	LR		
comp=Z,850nm,19.1s,MS4.9							
ASAR	**Alice Springs**	**58.57**	**104**	P	**P**	**02 15 29.9**	**-1.2**
comp=Z,8.9nm,0.6s,mb5.0,baz=253,slow=6.1,SNR=166							
IZEF	**Zefreh**	**58.60**	**343**	*e*P	**P**	**02 15 30.3**	**-0.7**
IKLH	**Kolahrood**	**59.21**	**343**	*e*P	**P**	**02 15 35.0**	**-0.1**
WRA	**Warramunga Arr**	**59.94**	**100**	P	**P**	**02 15 39.4**	**-1.2**
comp=Z,9.2nm,0.7s,mb4.9,baz=254,slow=6.9,SNR=90							
WRA				LR	LR	02 39 48.9	
comp=Z,768nm,18.5s,MS4.9,baz=270,slow=34							
WRA	**Warramunga Arr**	**59.94**	**100**	P	**P**	**02 15 39.4**	**-1.2**
WRA				LR	LR	02 39 49.0	
WB2	**Warramunga Arr**	**59.95**	**100**	*e*P	**P**	**02 15 39.3**	**-1.3**
KAKA	**Kakadu**	**60.46**	**92**	*e*P	**P**	**02 15 41.9**	**-2.3**
comp=Z,27nm,1.1s,mb5.2							
KAKA	**Kakadu**	**60.46**	**92**	*e*P	**P**	**02 15 43.4**	**-0.8**
comp=Z,158nm,1.4s,mb5.8							
ILAS	**Lasjerd**	**60.81**	**345**	*e*P	**P**	**02 15 46.8**	**+0.7**
IFIR	**Firoozkooh**	**61.10**	**345**	*e*P	**P**	**02 15 48.9**	**+0.8**
ISHM	**Shahmirzad**	**61.13**	**345**	*e*P	**P**	**02 15 49.2**	**+0.9**
BHD	**Baghdad**	**61.48**	**336**	*i* x	x	02 15 49.0	
BHD				*e*x	x	02 17 05.0	
BHD				*e*x	x	02 24 09.0	
BHD				*e*x	x	02 28 11.0	
GYA	**Guiyang**	**61.52**	**38**	P	**P**	**02 15 51.6**	**+0.4**
GYA				PP	PP	02 18 10.3	+3.4
GYA				S	**S**	**02 24 16.0**	**+3.1**
GYA				SKS		02 25 41.0	
GYA				pmax	pmax		
comp=Z,30nm,1.0s,mb5.4							
GYA				pmax	pmax		
comp=Z,150nm,5.2s							
GYA				LR	LR		
comp=N,510nm,22.1s,MS4.8							
GYA				LR	LR		
comp=E,440nm,20.5s,MS4.8							
GYA				LR	LR		
comp=Z,830nm,21.5s,MS4.9							
ABKT	**Ailbek**	**62.23**	**350**	P	**P**	**02 15 55.7**	**+0.1**
comp=Z,46nm,1.2s,mb5.5,SNR=5.2							
DAV	**Davao City (W)**	**62.77**	**68**	PFAKE		02 16 10.0	+10
DAV				LR	LR		
comp=Z,483nm,21.0s,MS4.7							
DAV	**Davao City (W)**	**62.77**	**68**⇓	*e*P	**P**	**02 16 05.0**	**+5.2**
KSH	**Kashi**	**63.20**	**6**	P	**P**	**02 15 58.6**	**-3.5**
KSH				*e*pP	pP	02 16 03.2	-2.1
KSH				*e*sP	sP	02 16 05.6	-0.9
KSH				*e*PcP	PcP	02 16 37.8	-1.6
KSH				*e*PP	PP	02 18 17.9	-3.5
KSH				*e*ScP	ScP	02 20 37.9	-4.0
KSH				*e*PcS	PcS	02 20 39.6	-3.3
KSH				*e*S	**S**	**02 24 23.2**	**-10**
KSH				*e*ScS	ScS	02 25 46.6	-8.5
KSH				pmax	pmax		
comp=Z,14nm,1.0s,mb5.0							
KSH				LR	LR		
comp=N,1μm,14.4s,MS5.3							
KSH				LR	LR		
comp=E,2μm,18.8s,MS5.3							
KSH				LR	LR		
comp=Z,2μm,20.3s,MS5.4							
STKA	**Stephens Creek**	**63.34**	**115**	P	**P**	**02 16 02.5**	**-0.9**
comp=Z,4.1nm,1.1s,mb4.5,baz=267,slow=4.4,SNR=3.8							
STKA				LR	LR	02 39 59.8	
comp=Z,1μm,19.5s,MS5.0,baz=230,slow=33							
STKA	**Stephens Creek**	**63.34**	**115**	*e*P	**P**	**02 16 02.2**	**-1.2**
comp=Z,5.6nm,1.0s,mb4.7							
VNA2	**Neumayer--Watz**	**63.48**	**201**	*e*P	**P**	**02 16 01.6**	**-2.0**
CD2	**Chengdu**	**63.51**	**33**	*e*P	**P**	**02 16 04.4**	**0.0**
CD2				pP	pP	02 16 09.9	+2.3
CD2				sP	sP	02 16 11.4	+2.6
CD2				PP	PP	02 18 26.5	+2.2
CD2				S	**S**	**02 24 37.4**	**-0.4**
CD2				sS	sS	02 24 45.2	+2.1
CD2				SS	SS	02 28 46.9	+1.4
CD2				pmax	pmax		
comp=Z,60nm,0.8s,mb5.7							
CD2				LR	LR		
comp=N,590nm,22.6s							
CD2				LR	LR		
comp=E,650nm,16.8s							
CD2				LR	LR		
comp=Z,610nm,21.0s,MS4.8							
VNA1	**Neumayer--Stat**	**63.75**	**201**	*e*P	**P**	**02 16 03.9**	**-1.5**
VNA3	**Neumayer Olymp**	**64.24**	**201**	*e*P	**P**	**02 16 06.3**	**-2.3**
ISRB	**Sarab**	**64.54**	**341**	*e*P	**P**	**02 16 10.2**	**-0.7**
ISHB	**Shabestar**	**65.59**	**340**	*e*P	**P**	**02 16 17.8**	**0.0**
AML	**Almayashu**	**65.63**	**3**	P	**P**	**02 16 24.6**	**+6.7**
SNR=5.8							
AML	**Almayashu**	**65.63**	**3**	*e*P	**P**	**02 16 19.0**	**+1.1**
comp=Z,60nm,1.4s,mb5.4							
ENH	**Enshi**	**66.04**	**38**	*e*P	**P**	**02 16 21.4**	**+0.5**
comp=Z,74nm,1.4s,mb5.5							
ENH				LR	LR		
comp=Z,622nm,19.0s,MS4.8							
EKS2	**Erkin-Say**	**66.17**	**4**	P	**P**	**02 16 27.6**	**+6.2**
SNR=7.3							
EKS2	**Erkin-Say**	**66.17**	**4**	*e*P	**P**	**02 16 22.3**	**+0.9**
comp=Z,61nm,1.4s,mb5.4							
AAK	**Ala-Archa**	**66.18**	**4**	P	**P**	**02 16 21.8**	**+0.3**
comp=Z,0.8nm,0.5s,mb4.0,baz=178,slow=12,SNR=6.7							
AAK	**Ala-Archa**	**66.18**	**4**	*d i*P	**P**	**02 16 21.3**	**-0.2**
AAK				pmax	pmax		
comp=Z,13nm,1.7s,mb4.7							
AAK	**Ala-Archa**	**66.18**	**4**	*e*P	**P**	**02 16 21.6**	**+0.2**
comp=Z,68nm,1.4s,mb5.5							
AAK				LR	LR		
comp=Z,725nm,20.0s,MS4.9							
AAK	**Ala-Archa**	**66.18**	**4**	P	**P**	**02 16 22.7**	**+1.2**
comp=Z,159nm,1.5s,mb5.8,SNR=6.1							
AAK	**Ala-Archa**	**66.18**	**4**	P	**P**	**02 16 27.9**	**+6.4**
SNR=9.5							
KBK	**Karagaybulak**	**66.23**	**4**	P	**P**	**02 16 27.8**	**+6.0**
SNR=5.4							
FRU	**Bishkek**	**66.39**	**4**	*e*P	**P**	**02 16 21.0**	**-1.8**
FRU				*i*		02 16 28.0	
FRU				pmax	pmax		
comp=Z,140nm,2.1s,mb5.6							
QSPA	**South Pole Qui**	**66.41**	**180**	P	**P**	**02 16 22.5**	**-0.1**
comp=Z,7.1nm,0.7s,mb4.8,baz=282,slow=1.9,SNR=45							
QSPA	**South Pole Qui**	**66.41**	**180**	*e*P	**P**	**02 16 22.0**	**-0.6**
comp=Z,82nm,1.6s,mb5.5							
QSPA				LR	LR		
comp=Z,571nm,22.0s,MS4.7							
KKAR	**Karatay Array**	**66.49**	**1**	*e*P	**P**	**02 16 23.8**	**+0.3**
KKAR				pmax	pmax		
comp=Z,63nm,1.3s,mb5.5							
KKAR	**Karatay Array**	**66.49**	**1**	*e*P	**P**	**02 16 23.8**	**+0.4**
comp=Z,63nm,1.3s,mb5.5							
TKM2	**Tokmak 2**	**66.55**	**5**	P	**P**	**02 16 30.9**	**+7.1**
SNR=9.5							
TKM2	**Tokmak 2**	**66.55**	**5**	*e*P	**P**	**02 16 23.5**	**-0.3**
TKM2				pmax	pmax		
comp=Z,41nm,1.0s,mb5.4							
TKM2	**Tokmak 2**	**66.55**	**5**	*e*P	**P**	**02 16 23.5**	**-0.3**
comp=Z,41nm,1.0s,mb5.4							
USP	**Ospenovka**	**66.81**	**4**	P	**P**	**02 16 30.9**	**+5.4**
SNR=8.3							
GNI	**Garni**	**67.57**	**340**	*d i*P	**P**	**02 16 31.1**	**+0.7**
GNI				pmax	pmax		
comp=Z,67nm,1.7s							
GNI	**Garni**	**67.57**	**340**	*e*P	**P**	**02 16 31.5**	**+1.1**
comp=Z,230nm,1.8s,mb5.9							
GNI				LR	LR		
comp=Z,365nm,22.0s,MS4.6							
GNI	**Garni**	**67.57**	**340**	P	**P**	**02 16 32.2**	**+1.9**
SNR=14							
CSS	**Prodhromos**	**67.65**	**328**	*e*P	**P**	**02 16 31.1**	**0.0**
comp=Z,40nm,1.0s,mb5.4							
CSS				LR	LR		
comp=Z,280nm,22.0s,MS4.4							
LZH	**Lanzhou**	**67.80**	**30**	*e*P	**P**	**02 16 32.5**	**+0.6**
LZH				pP	pP	02 16 37.7	+2.5
LZH				sP	sP	02 16 40.6	+4.2
LZH				PcP	PcP	02 16 58.0	-0.6
LZH				PP	PP	02 19 01.1	-0.7
LZH				*e*S	S	02 25 29.5	-0.5
LZH				sS	sS	02 25 38.1	+2.7
LZH				SS	SS	02 29 51.1	-1.0
LZH				pmax	pmax		
comp=Z,15nm,1.0s,mb5.0							
LZH				pmax	pmax		
comp=Z,76nm,4.0s							
LZH				LR	LR		
comp=N,130nm,15.8s,MS4.7							
LZH				LR	LR		
comp=E,360nm,14.4s,MS4.7							
LZH				LR	LR		
comp=Z,600nm,18.9s,MS4.8							
MALT	**Malatya**	**68.21**	**334**	*e*P	**P**	**02 16 35.5**	**+1.0**
MALT				pmax	pmax		
comp=Z,24nm,1.1s,mb5.1							
MALT				MLR	MLR		
comp=Z,316nm,20.0s,MS4.5							
MALT	**Malatya**	**68.21**	**334**	*e*P	**P**	**02 16 35.5**	**+1.0**
comp=Z,24nm,1.1s,mb5.1							
MALT				LR	LR		
comp=Z,316nm,20.0s,MS4.5							
MALT	**Malatya**	**68.21**	**334**⇑	*i*P	**P**	**02 16 36.2**	**+1.7**
SBA	**Scott Base**	**68.53**	**167**	*e*P	**P**	**02 16 36.7**	**+0.7**
SBA				pmax	pmax		
comp=Z,47nm,1.8s,mb5.1							
SBA	**Scott Base**	**68.53**	**167**	*e*P	**P**	**02 16 36.6**	**+0.6**
comp=Z,47nm,1.8s,mb5.1							
DGRG	**David-gareji**	**68.56**	**341**	P	**P**	**02 16 36.7**	**+0.1**
SSLB	**Suanglung**	**68.79**	**50**	*e*P	**P**	**02 16 36.9**	**-1.6**
comp=Z,39nm,1.1s,mb5.2							
GTA	**Gaotai**	**68.93**	**25**	⇑P	**P**	**02 16 39.4**	**+0.5**
GTA				pP	pP	02 16 43.1	+0.9
GTA				sP	sP	02 16 46.1	+2.7
GTA				S	S	02 25 41.7	-1.6
GTA				SS	SS	02 30 09.2	-0.2
GTA				pmax	pmax		
comp=Z,14nm,1.6s,mb4.6							
GTA				pmax	pmax		
comp=Z,180nm,4.7s							
GTA				LR	LR		
comp=N,410nm,22.3s,MS4.8							
GTA				LR	LR		
comp=E,520nm,21.3s,MS4.8							
GTA				LR	LR		
comp=Z,600nm,20.9s,MS4.8							
MTA	**Mtatsminda**	**68.96**	**340**	P	**P**	**02 16 39.2**	**+0.1**
TBLG	**Delisi**	**69.01**	**340**	P	**P**	**02 16 39.6**	**+0.2**
TBLG	**Delisi**	**69.01**	**340**	P	**P**	**02 16 39.6**	**+0.2**
WHN	**Wuhan**	**69.05**	**41**	⇓P	**P**	**02 16 41.0**	**+1.1**
WHN				S	S	02 25 47.1	+1.9
WHN				LR	LR		
comp=N,890nm,16.4s,MS5.2							
WHN				LR	LR		
comp=E,840nm,17.6s,MS5.2							
WHN				LR	LR		
comp=Z,2μm,23.0s							
WMQ	**Urumqi**	**69.27**	**14**	P	**P**	**02 16 42.0**	**+1.1**
WMQ				sP	sP	02 16 49.0	+3.6
WMQ				PP	PP	02 19 18.0	+3.6
WMQ				ScP		02 21 08.0	
WMQ				S	S	02 25 47.0	-0.1
WMQ				ScS	ScS	02 26 40.0	-1.8
WMQ				SS	SS	02 30 17.0	+2.5
WMQ				pmax	pmax		
comp=Z,61nm,1.0s,mb5.5							
WMQ				pmax	pmax		
comp=Z,360nm,7.0s							
WMQ				LR	LR		
comp=N,570nm,20.0s,MS4.9							
WMQ				LR	LR		
comp=E,500nm,20.0s,MS4.9							
WMQ				LR	LR		
comp=Z,530nm,20.0s,MS4.8							
MAK	**Makhachkala**	**69.35**	**343**	*e*P	**P**	**02 16 41.7**	**+0.3**
MAK				*e*		02 17 04.6	
MAK				*i* S	S	02 25 47.2	-0.9
MAK				*i*		02 26 37.9	
MAK				pmax	pmax		
comp=Z,181nm,1.5s,mb5.8							
TATO	**Taipei**	**69.92**	**50**	PFAKE		02 17 00.0	+15
TATO				LR	LR		
comp=Z,499nm,19.0s,MS4.8							
ZEI	**Tsey**	**70.21**	**340**	*e*P	**P**	**02 16 47.2**	**+0.4**
ZEI				pmax	pmax		
comp=Z,24nm,1.2s,mb5.0							
CTA	**Charters Tower**	**70.57**	**104**	P	**P**	**02 16 49.0**	**-0.6**
comp=Z,3.2nm,0.9s,mb4.2,baz=247,slow=6.5,SNR=2.6							
CTA				LR	LR	02 45 38.4	
comp=Z,2μm,19.4s,MS5.3,baz=242,slow=34							
CTA	**Charters Tower**	**70.57**	**104**	*e*P	**P**	**02 16 50.7**	**+1.1**
comp=Z,8.8nm,1.3s,mb4.5							
CTAO	**Charters Tower**	**70.57**	**104**	*e*P	**P**	**02 16 48.7**	**-0.9**
CTAO				pmax	pmax		
comp=Z,51nm,1.8s,mb5.2							
CTAO				MLR	MLR		
comp=Z,2μm,21.0s,MS5.3							
CTAO	**Charters Tower**	**70.57**	**104**	*e*P	**P**	**02 16 48.7**	**-0.9**
comp=Z,51nm,1.8s,mb5.2							
CTAO				LR	LR		
comp=Z,2μm,21.0s,MS5.3							
MK31	**Makanchi Array**	**71.14**	**9**	*e*P	**P**	**02 16 51.3**	**-1.0**
MKAR	**Makanchi Array**	**71.14**	**9**	P	**P**	**02 16 51.4**	**-1.0**
comp=Z,5.0nm,0.8s,mb4.5,baz=194,slow=5.3,SNR=29							
MKAR				LR	LR	02 46 46.0	
comp=Z,449nm,20.0s,MS4.7,baz=185,slow=35							
BRTR	**Keskin Array B**	**71.40**	**332**	P	**P**	**02 16 53.9**	**-0.2**
comp=Z,8.7nm,1.1s,mb4.6,baz=155,slow=6.5,SNR=28							
BRTR				LR	LR	02 47 37.7	
comp=Z,211nm,19.8s,MS4.4,baz=127,slow=35							
KIV	**Kislovodsk**	**71.66**	**340**κ	*i*P	**P**	**02 16 55.3**	**-0.3**
KIV				*e**PP	pP	02 16 58.1	-0.7
KIV				*SP	sP	02 17 00.0	0.0
KIV				*e*		02 17 09.4	
KIV						02 19 39.0	
KIV				S	S	02 26 22.0	+6.9
KIV				pmax	pmax		
comp=Z,19nm,1.0s,mb5.0							
KIV				MLR	MLR		
comp=Z,100nm,18.0s,MS4.1							
KIV	**Kislovodsk**	**71.66**	**340**	*e*P	**P**	**02 16 56.2**	**+0.7**
comp=Z,56nm,1.2s,mb5.4							
KIV				LR	LR		
comp=Z,188nm,20.0s,MS4.3							
KIV	**Kislovodsk**	**71.66**	**340**	P	**P**	**02 16 56.7**	**+1.1**
comp=Z,222nm,1.3s,mb5.9,SNR=8.1							
KIV	**Kislovodsk**	**71.66**	**340**	P	**P**	**02 16 56.3**	**+0.8**
SNR=13							
SOC	**Sochi**	**72.31**	**338**	*e*P	**P**	**02 16 58.9**	**-0.6**
SOC				*e*	pP	02 17 02.5	-0.2
SOC				*e*		02 17 14.0	
SOC				*e*S	S	02 26 17.4	-5.2
SOC				pmax	pmax		
comp=Z,32nm,1.1s,mb5.2							
SOC				MLR	MLR		
comp=Z,174nm,16.0s,MS4.4							
NJ2	**Nanjing**	**72.85**	**42**	*e*P	**P**	**02 17 04.0**	**+1.0**
NJ2				pP	pP	02 17 08.8	+2.5
NJ2				sP	sP	02 17 11.0	+3.5
NJ2				S	S	02 26 30.0	+0.7
NJ2				sS	sS	02 26 38.5	+3.8
NJ2				SKS		02 27 04.5	
NJ2				SS	SS	02 31 10.5	+0.5
NJ2				pmax	pmax		
comp=Z,20nm,0.5s,mb5.3							
NJ2				pmax	pmax		
comp=Z,110nm,8.2s							
NJ2				LR	LR		
comp=N,760nm,22.3s,MS5.1							
NJ2				LR	LR		
comp=E,910nm,24.0s,MS5.1							
NJ2				LR	LR		
comp=Z,660nm,19.9s,MS4.9							
ABKAR	**Akbulak array**	**73.13**	**354**	*e*P	**P**	**02 17 03.0**	**-1.1**
comp=Z,43nm,1.0s,mb5.3							
SSE	**Sheshan**	**73.68**	**45**	P	**P**	**02 17 08.6**	**+0.7**
SSE				sP	sP	02 17 13.1	+0.7
SSE				S	S	02 26 39.1	+0.3
SSE				pmax	pmax		
comp=Z,19nm,0.7s,mb5.1							
SSE				pmax	pmax		
comp=Z,90nm,6.7s							
SSE				LR	LR		
comp=N,330nm,18.5s,MS4.8							
SSE				LR	LR		
comp=E,380nm,18.5s,MS4.8							
SSE				LR	LR		
comp=Z,490nm,17.3s,MS4.8							
ANN	**Anapa**	**74.18**	**337**	*d i*P	**P**	**02 17 09.9**	**-0.6**
ANN				*e*S	S	02 26 41.9	-1.8
ANN				pmax	pmax		
comp=Z,77nm,1.7s,mb5.4							
BTO	**Baotou**	**74.31**	**31**	*e*P	**P**	**02 17 11.2**	**-0.1**
AKTK	**Aktyubinsk**	**74.51**	**352**	P	**P**	**02 17 11.7**	**-0.5**
AKTO	**Aktyubinsk**	**74.51**	**352**	P	**P**	**02 17 11.7**	**-0.5**
comp=Z,7.1nm,1.1s,mb4.5,baz=161,slow=4.6,SNR=19							
KURK	**Kurchatov**	**74.55**	**6**	P	**P**	**02 17 11.7**	**-0.8**
comp=Z,247nm,1.2s,mb6.0,SNR=10							
KURK	**Kurchatov**	**74.55**	**6**	*d i*P	**P**	**02 17 11.6**	**-0.9**
KURK				pmax	pmax		
comp=Z,35nm,1.7s,mb5.0							
KURK	**Kurchatov**	**74.55**	**6**	*e*P	**P**	**02 17 11.5**	**-1.0**
comp=Z,61nm,1.1s,mb5.4							
KURK				LR	LR		
comp=Z,549nm,19.0s,MS4.9							
KURK	**Kurchatov**	**74.55**	**6**	P	**P**	**02 17 11.9**	**-0.6**
SNR=28							
PMG	**Port Moresby**	**75.12**	**94**	PFAKE		02 17 30.0	+13
PMG				LR	LR		
comp=Z,636nm,19.0s,MS4.9							
HHC	**Hu-ho-hao-te**	**75.23**	**32**	*e*P	**P**	**02 17 19.8**	**+3.1**
HHC				pP	pP	02 17 24.5	+4.5
HHC				sP	sP	02 17 27.0	+5.8
HHC				PcP	PcP	02 17 33.0	+2.9
HHC				PP	PP	02 20 11.3	+5.8
HHC				S	S	02 27 00.7	+5.0
HHC				sS	sS	02 27 07.6	+6.5
HHC				ScS	ScS	02 27 29.4	-0.1
HHC				SS	SS	02 31 52.7	+6.7
HHC				pmax	pmax		
comp=Z,23nm,1.0s,mb5.1							
HHC				pmax	pmax		
comp=Z,1μm,5.3s							
HHC				LR	LR		
comp=N,1μm,16.5s,MS5.6							
HHC				LR	LR		
comp=E,2μm,18.4s,MS5.6							
HHC				LR	LR		
comp=Z,2μm,17.9s,MS5.4							
LTK	**Loutraki**	**75.32**	**324**	P	**P**	**02 17 15.4**	**-1.8**
SIM	**Simferopol'**	**75.54**	**335**	*de*P	**P**	**02 17 17.9**	**-0.5**
SIM				S	S	02 27 01.5	+2.5
SIM				pmax	pmax		
comp=Z,45nm,1.1s,mb5.3							
SIM				MLR	MLR		
comp=Z,85nm,17.0s,MS4.1							
GUR	**Goura**	**75.59**	**323**	P	**P**	**02 17 18.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**75.63**	**291**	P	**P**	**02 17 19.4**	**-0.2**
comp=Z,7.6nm,1.0s,mb4.6,baz=142,slow=4.1,SNR=11							
TORD				LR	LR	02 50 13.6	
comp=Z,884nm,18.2s,MS5.1,baz=130,slow=35							
BVAR	**Borovoye Array**	**76.42**	**1**	P	**P**	**02 17 21.9**	**-1.2**
comp=Z,2.5nm,0.7s,mb4.2,baz=156,slow=7.6,SNR=16							
BRVK	**Borovoye**	**76.45**	**1**	P	**P**	**02 17 23.7**	**+0.4**
comp=Z,100nm,1.0s,mb5.7,SNR=5.7							
BRVK	**Borovoye**	**76.45**	**1**	*e*P	**P**	**02 17 21.9**	**-1.4**
BRVK				pmax	pmax		
comp=Z,18nm,0.9s,mb5.0							
BRVK				MLR	MLR		
comp=Z,478nm,22.0s,MS4.8							
BRVK	**Borovoye**	**76.45**	**1**	*e*P	**P**	**02 17 21.9**	**-1.4**
comp=Z,18nm,0.9s,mb5.0							
BRVK				LR	LR		
comp=Z,478nm,22.0s,MS4.8							
BRVK	**Borovoye**	**76.45**	**1**	P	**P**	**02 17 23.2**	**-0.2**
SNR=12							
KAVA	**Kavala**	**76.70**	**327**	P	**P**	**02 17 24.2**	**-0.8**
KDZ	**Kurdzhali**	**76.74**	**328**	*e*P	**P**	**02 17 25.0**	**-0.3**
THL	**Klokotos Trika**	**76.94**	**324**	P	**P**	**02 17 25.9**	**-0.6**
BJI	**Beijing**	**76.95**	**35**	P	**P**	**02 17 26.5**	**0.0**
BJI				pP	pP	02 17 31.8	+2.0
BJI				sP	sP	02 17 32.8	+1.8
BJI				PP	PP	02 20 22.0	+1.9
BJI				S	S	02 27 05.0	-10
BJI				sS	sS	02 27 24.2	+4.1
BJI				SS	SS	02 32 17.1	+5.0
BJI				pmax	pmax		
comp=Z,9.0nm,1.8s,mb4.4							
BJI				pmax	pmax		
comp=Z,160nm,5.2s							
BJI				LR	LR		
comp=N,280nm,21.9s,MS4.9							
BJI				LR	LR		
comp=E,600nm,21.1s,MS4.9							
BJI				LR	LR		
comp=Z,760nm,24.2s,MS4.9							
PRD	**Provadia**	**76.98**	**330**	*e*P	**P**	**02 17 27.0**	**+0.4**
PSN	**Preselentsi**	**77.00**	**331**	*e*P	**P**	**02 17 23.0**	**-3.7**
LIT	**Litokhoron**	**77.08**	**325**	P	**P**	**02 17 27.0**	**-0.2**
RZN	**Rozhen**	**77.11**	**327**	*e*P	**P**	**02 17 26.0**	**-1.4**
PLD	**Plovdiv**	**77.43**	**328**	P	**P**	**02 17 30.1**	**+1.0**
TIRR	**Tirgusor**	**77.51**	**331**	P	**P**	**02 17 29.3**	**-0.2**
TIRR	**Tirgusor**	**77.51**	**331**	*e*P	**P**	**02 17 28.7**	**-0.8**
comp=Z,47nm,1.1s,mb5.3							
TIRR	**Tirgusor**	**77.51**	**331**⇓	*i*P	**P**	**02 17 29.1**	**-0.4**
MMB	**Musomiste**	**77.53**	**327**	*e*P	**P**	**02 17 28.0**	**-1.7**
KNT	**Kendrikon**	**77.64**	**326**	P	**P**	**02 17 29.5**	**-0.8**
GRG	**Griva**	**77.75**	**325**	P	**P**	**02 17 30.7**	**-0.2**
VAY	**Valandovo**	**77.92**	**326**	*e*P	**P**	**02 17 31.7**	**-0.2**
KKB	**Krupnik**	**78.06**	**326**	*e*P	**P**	**02 17 31.0**	**-1.7**
NEST	**Nestorio**	**78.07**	**324**	P	**P**	**02 17 32.4**	**-0.3**
FNA	**Florina**	**78.16**	**325**	P	**P**	**02 17 33.1**	**-0.1**
KIC	**Kosan Boka**	**78.18**	**282**	*e*PKIKP	**P**	**02 17 35.1**	**+1.1**
comp=Z,210nm,1.6s,mb5.8							
SRN	**Sarande**	**78.26**	**323**	*e*P	**P**	**02 17 30.0**	**-3.8**
BIA	**Bitola**	**78.36**	**325**	*e*P	**P**	**02 17 34.2**	**-0.1**
**KB

SONM LR LR 02 52 38.9
KRUS Krusevo 78.65 325 *e*P **P** **02 17 35.7 -0.2**
SULR 78.65 330⇑*i*P **P** **02 17 36.3 +0.4**
WDD Wield Dalam 78.76 317 PFAKE 02 17 50.0 +13
WDD LR LR
comp=Z,319nm,22.0s,MS4.6
MPEP Malo Peshtene 78.84 328 *e*P **P** **02 17 36.0 -0.9**
ULN Ulaanbaatar 78.87 25 *e*P **P** **02 17 37.6 +0.6**
ULN pmax pmax
comp=Z,44nm,1.1s,mb5.3
ULN MLR MLR
comp=Z,610nm,22.0s,MS4.9
ULN Ulaanbaatar 78.87 25 *e*P **P** **02 17 37.6 +0.6**
comp=Z,44nm,1.1s,mb5.3
ULN LR LR
comp=Z,610nm,22.0s,MS4.9
ULN Ulaanbaatar 78.87 25 P **P** **02 17 37.0 +0.1**
SNR=26
VORD Divnogorie 78.96 341 *e*P **P** **02 17 37.1 -0.3**
VORD pmax pmax
comp=N,20nm,1.1s
VORD pmax pmax
comp=Z,30nm,1.1s,mb5.1
VORD pmax pmax
comp=E,10.0nm,0.6s
SKO Skopje 78.98 326 *e*P **P** **02 17 38.4 +0.7**
NVS Novosibirsk 79.13 8⇓*i*P **P** **02 17 36.3 -1.9**
NVS pmax pmax
comp=N,41nm,1.5s
NVS pmax pmax
comp=E,25nm,1.5s
NVS pmax pmax
comp=Z,90nm,1.5s,mb5.5
VSR Storozhevoye 79.22 341 *e*P **P** **02 17 37.9 -0.9**
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.2
VSR pmax pmax
comp=N,5.0nm,0.5s
KIS Kishinev 79.35 333 *e*P **P** **02 17 39.0 -0.6**
KIS *e*S S 02 27 38.0 -2.2
KIS LRM 02 50 40.0
comp=N,300nm,17.0s
KIS Kishinev 79.35 333 *e*P **P** **02 17 39.0 -0.6**
KIS *e* 02 17 45.0
KIS *e*S S 02 27 38.0 -2.2
KIS smax
comp=Z,300nm,17.0s
VRI Vrincioaia 79.36 331 P **P** **02 17 40.0 +0.3**
VRI Vrincioaia 79.36 331⇓*i*P **P** **02 17 39.8 +0.1**
TIR Tirane 79.36 324 *e*P **P** **02 17 40.1 +0.2**
TIR pmax pmax
comp=Z,45nm,1.0s,mb5.3
TIR MLR MLR
comp=Z,212nm,19.0s,MS4.5
TIR Tirane 79.36 324 *e*P **P** **02 17 40.1 +0.3**
comp=Z,45nm,1.0s,mb5.3
TIR LR LR
comp=Z,212nm,19.0s,MS4.5
TIR Tirane 79.36 324 P **P** **02 17 37.0 -2.9**
PLOR Plostina 79.38 331 P **P** **02 17 40.3 +0.5**
PLOR Plostina 79.38 331⇓*i*P **P** **02 17 40.3 +0.5**
MLR Muntele Rosu 79.42 331 P **P** **02 17 41.0 +1.0**
MLR Muntele Rosu 79.42 331⇓*i*P **P** **02 17 40.1 +0.1**
CEL Celeste 79.49 320 *e*P **P** **02 17 41.1 +0.4**
comp=Z,7.6nm,0.8s,mb4.7
CEL LR LR
comp=Z,154nm,20.0s,MS4.3
ZAK Zakamensk 79.63 21 *e*P **P** **02 17 39.9 -1.2**
VOIR 79.78 330⇓P **P** **02 17 42.9 +0.9**
VOIR 79.78 330⇓*i*P **P** **02 17 42.9 +0.9**
PUK Puka 79.84 325 *e*P **P** **02 17 42.9 +0.5**
TESR 79.89 332⇓*i*P **P** **02 17 42.8 +0.2**
BCI Bajram Curri 79.98 325 *e*P **P** **02 17 42.9 -0.3**
ARU Arti 80.35 354*d i*P **P** **02 17 43.3 -1.5**
ARU 02 20 44.0
ARU S S 02 27 50.3 -0.1
ARU SS SS 02 32 57.8 -4.8
ARU pmax pmax
comp=Z,55nm,2.5s,mb5.0
ARU MLR MLR
comp=Z,366nm,18.0s,MS4.8
ARU Arti 80.35 354 *e*P **P** **02 17 44.4 -0.4**
comp=Z,44nm,1.1s,mb5.3
ARU LR LR
comp=Z,360nm,20.0s,MS4.7
ARU Arti 80.35 354 P **P** **02 17 45.7 +0.9**
comp=Z,169nm,1.0s,mb5.9,SNR=6.2
SVE Sverdlovsk 80.57 355⇓*e*P **P** **02 17 46.3 +0.3**
SVE pmax pmax
comp=Z,59nm,1.5s,mb5.3
CUC Castrocucco 80.68 321 PFAKE 02 18 00.0 +13
CUC LR LR
comp=Z,97nm,20.0s,MS4.2
GZR Gura Zlata 80.81 329 P **P** **02 17 48.7 +1.1**
GZR Gura Zlata 80.81 329⇓*i*P **P** **02 17 48.0 +0.4**
TLY Talaya 80.86 21 *e*P **P** **02 17 52.3 +4.6**
TLY pmax pmax
comp=Z,17nm,1.1s,mb4.9
TLY MLR MLR
comp=Z,332nm,19.0s,MS4.7
TLY Talaya 80.86 21 *e*P **P** **02 17 47.7 +0.1**
comp=Z,17nm,1.1s,mb4.9
TLY LR LR
comp=Z,418nm,20.0s,MS4.8
TLY Talaya 80.86 21 P **P** **02 17 54.0 +6.3**
SNR=7.9
INCN Inchon 81.23 43 PFAKE 02 18 00.0 +10
INCN LR LR
comp=Z,731nm,19.0s,MS5.1
BURAR Bucovina Array 81.36 332⇓*i*P **P** **02 17 50.8 +0.3**
BUR08 Bucovina Ar. S 81.39 332 *e*P **P** **02 17 50.8 +0.2**
BZS Buzias 81.53 328 P **P** **02 17 51.8 +0.4**
BZS Buzias 81.53 328⇓*i*P **P** **02 17 51.1 -0.3**
IRK Irkutsk 81.54 21 *e*P **P** **02 17 56.2 +4.9**
IRK *e*S S 02 28 08.9 +6.0
IRK pmax pmax
comp=Z,64nm,2.0s,mb5.2
DRGR 81.87 330 P **P** **02 17 53.3 +0.1**
DRGR 81.87 330⇑*i*P **P** **02 17 53.1 -0.1**
KEST Kesra 81.97 315 P **P** **02 17 55.1 +1.2**
comp=Z,1.6nm,0.8s,baz=209,slow=6.5,SNR=5.0
KEST LR LR 02 53 38.3
comp=Z,169nm,19.8s,MS4.4,baz=269,slow=35
KEST Kesra 81.97 315 *e*P **P** **02 17 56.1 +2.1**
KSRS Korea Array 82.02 43 P **P** **02 17 53.5 -0.6**
comp=Z,3.9nm,1.0s,mb4.3,baz=237,slow=6.1,SNR=11
KSRS LR LR 02 57 15.5
comp=Z,221nm,18.1s,MS4.6,baz=226,slow=38
KIEV Kiev 82.15 336 *e*P **P** **02 17 53.6 -0.9**
KIEV pmax pmax
comp=Z,45nm,1.2s,mb5.3
KIEV MLR MLR
comp=Z,187nm,20.0s,MS4.5
KIEV Kiev 82.15 336 *e*P **P** **02 17 53.6 -0.9**
comp=Z,44nm,1.2s,mb5.3
KIEV LR LR
comp=Z,187nm,20.0s,MS4.5
BMR Baia Mare 82.17 331 P **P** **02 17 56.1 +1.4**
SNY Shenyang 82.22 38⇓P **P** **02 17 53.6 -1.5**
SNY S S 02 28 10.2 -0.2
SNY pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
SNY pmax pmax
comp=Z,120nm,3.5s
SNY LR LR
comp=N,420nm,17.3s,MS5.0
SNY LR LR
comp=E,240nm,15.7s,MS5.0
SNY LR LR
comp=Z,370nm,18.0s,MS4.8
OBN Obninsk 83.39 342*de*P **P** **02 18 00.6 -0.3**
OBN *i* 02 18 07.3
OBN 02 21 11.0
OBN PS 02 29 08.0
OBN pmax pmax
comp=Z,52nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.5
OBN Obninsk 83.39 342 *e*P **P** **02 18 00.5 -0.4**
comp=Z,109nm,1.6s,mb5.6
OBN LR LR
comp=Z,201nm,20.0s,MS4.5
PKSM Moragy 83.41 327 P **P** **02 18 01.0 -0.2**
PKSM Moragy 83.41 327⇑*i*P **P** **02 17 59.6 -1.6**
UZH Uzhgorod 83.42 331⇑*i*P **P** **02 18 00.5 -0.7**
UZH *e* 02 18 07.7
LVV L'vov 83.55 332 *i* P **P** **02 18 01.4 -0.4**
AQU L'Aquila 83.60 322 PFAKE 02 18 10.0 +7.7
AQU LR LR
comp=Z,182nm,20.0s,MS4.5
MOS Moscow 83.64 343 *e*P **P** **02 18 00.6 -1.5**
MOS *e* 02 21 12.3
MOS pmax pmax
comp=Z,50nm,1.4s,mb5.5
MOS pmax pmax
comp=Z,200nm,2.1s,mb5.9
KOLS Kolonicke sedl 83.66 331 *e*P **P** **02 18 02.6 +0.2**
KOLS pmax pmax
comp=Z,55nm,2.2s,mb5.3
KOLS Kolonicke sedl 83.66 331 *e*P **P** **02 18 02.6 +0.2**
comp=Z,55nm,2.2s,mb5.3
KOLS *e*PcP PcP 02 18 09.1 +2.6
KOLS Kolonicke sedl 83.66 331 *e*P **P** **02 18 02.6 +0.2**
KOLS *e*pP pP 02 18 09.1 +3.4
KWP Kalwaria Pacla 83.98 332 *e*P **P** **02 18 03.5 -0.5**
KWP Kalwaria Pacla 83.98 332 *e*P **P** **02 18 03.6 -0.4**
KWP pmax pmax
comp=Z,34nm,1.0s,mb5.4
KWP MLR MLR
comp=Z,164nm,19.0s,MS4.4
KWP Kalwaria Pacla 83.98 332 *e*P **P** **02 18 03.6 -0.4**
comp=Z,34nm,1.0s,mb5.4
KWP LR LR
comp=Z,164nm,19.0s,MS4.4
KWP Kalwaria Pacla 83.98 332⇓*i*P **P** **02 18 03.9 -0.1**
CRVS Cervenica-Dubn 84.00 330 *e*P **P** **02 18 04.5 +0.4**
CRVS pmax pmax
comp=Z,37nm,1.8s,mb5.2
CRVS Cervenica-Dubn 84.00 330 *e*P **P** **02 18 04.5 +0.4**
comp=Z,37nm,1.8s,mb5.2
CRVS *e*PcP PcP 02 18 11.2 +3.2
CRVS Cervenica-Dubn 84.00 330 *e*P **P** **02 18 04.5 +0.4**
CRVS *e*pP pP 02 18 11.2 +3.7
PSZ Piszkesteto 84.01 329 *e*P **P** **02 18 04.5 +0.3**
PSZ pmax pmax
comp=Z,34nm,1.6s,mb5.2
PSZ MLR MLR
comp=Z,132nm,19.0s,MS4.3
PSZ Piszkesteto 84.01 329 *e*P **P** **02 18 04.5 +0.2**
comp=Z,34nm,1.6s,mb5.2
PSZ LR LR
comp=Z,132nm,19.0s,MS4.3
PSZ Piszkesteto 84.01 329⇓*e*PcP PcP 02 18 09.3 +1.2
BUD Budapest 84.12 328⇓*e*P **P** **02 18 03.9 -0.9**
KECS Kecovo 84.14 330 *e*P **P** **02 18 04.7 -0.2**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
KECS Kecovo 84.14 330 *e*P **P** **02 18 04.7 -0.2**
comp=Z,2.8nm,1.0s,mb4.3
KECS *e*PcP PcP 02 18 12.1 +3.4
KECS Kecovo 84.14 330 *e*P **P** **02 18 04.7 -0.2**
KECS *e*pP pP 02 18 12.1 +3.9
CN2 Changchun 84.55 37 *e*P **P** **02 18 10.5 +3.4**
CN2 *e*S S 02 28 36.7 +2.8
CN2 pmax pmax
comp=Z,20nm,1.2s,mb5.1
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,20.0s,MS4.9
CN2 LR LR
comp=E,400nm,20.0s,MS4.9
CN2 LR LR
comp=Z,300nm,20.0s,MS4.7
CIT Chita 84.72 26 *e*P **P** **02 18 14.1 +6.4**
KOGS Kog 84.78 326 *e*P **P** **02 18 08.3 +0.2**
KOGS Kog 84.78 326 *e*P **P** **02 18 08.3 +0.2**
NIE Niedzica 84.89 330 *e*P **P** **02 18 09.3 +0.7**
VYHS Vyhne 84.92 329 *e*P **P** **02 18 08.7 -0.1**
VYHS pmax pmax
comp=Z,12nm,1.5s,mb4.8
VYHS Vyhne 84.92 329 *e*P **P** **02 18 08.7 -0.1**
comp=Z,12nm,1.5s,mb4.8
VYHS *e*PcP PcP 02 18 15.8 +3.7
VYHS Vyhne 84.92 329 *e*P **P** **02 18 08.7 -0.1**
VYHS *e*pP pP 02 18 15.8 +3.7
DOBS Dobrina 84.97 326 *e*P **P** **02 18 09.3 +0.1**
DOBS Dobrina 84.97 326 *e*P **P** **02 18 09.3 +0.1**
KOLL Kolacno 85.18 329 *e*P **P** **02 18 10.9 +0.8**
KOLL Kolacno 85.18 329 *e*P **P** **02 18 10.9 +0.8**
HIA Hailar 85.35 30 PFAKE 02 18 20.0 +9.1
HIA LR LR
comp=Z,489nm,22.0s,MS4.8
LJU Ljubljana 85.39 325 *e*P **P** **02 18 12.0 +0.7**
LJU Ljubljana 85.39 325 *e*P **P** **02 18 12.0 +0.7**
SOP Sopron 85.46 327*e*PcP PcP 02 18 11.7 -2.8
PERS Pernice 85.48 326 *e*P **P** **02 18 12.3 +0.7**
PERS Pernice 85.48 326 *e*P **P** **02 18 12.3 +0.7**
ZST Bratislava 85.54 328 *e*P **P** **02 18 12.4 +0.5**
ZST pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
ZST Bratislava 85.54 328 *e*P **P** **02 18 12.4 +0.5**
comp=Z,6.5nm,0.7s,mb5.0
ZST *e*PcP PcP 02 18 19.4 +4.5
ZST Bratislava 85.54 328 *e*P **P** **02 18 12.4 +0.5**
ZST *e*pP pP 02 18 19.4 +4.1
TRI Trieste 85.58 325 PFAKE 02 18 20.0 +7.8
TRI LR LR
comp=Z,132nm,22.0s,MS4.3
MODS Modra-Piesok 85.58 328 *e*P **P** **02 18 12.5 +0.4**
MODS *e* 02 18 19.6
MODS Modra-Piesok 85.58 328 *e*P **P** **02 18 12.5 +0.4**
MODS *e*pP pP 02 18 19.6 +4.1
MICGM Minsk 85.68 337 *e* **P** **02 18 12.0 -0.4**
ARSA Arzberg 85.68 327⇓*i*P **P** **02 18 12.5 -0.2**
comp=Z,25nm,1.1s,mb5.3
MNK Minsk 85.69 337 *e*P **P** **02 18 12.0 -0.5**
OJC Ojcow 85.70 331 *e*P **P** **02 18 12.0 -0.7**
CONA Conrad Observa 85.97 327 *i* P **P** **02 18 14.1 0.0**
comp=Z,40nm,1.2s,mb5.5,SNR=13
OKC Ostrava-Krasne 86.18 330 *e*P **P** **02 18 15.5 +0.4**
OKC *e* 02 18 21.9
OKC MLR MLR
comp=Z,200nm,23.2s,MS4.5
OKC Ostrava-Krasne 86.18 330 *e*P **P** **02 18 15.5 +0.4**
OKC *e*pP pP 02 18 21.9 +3.5
OKC AMS AMS 02 55 00.0
comp=Z,200nm,23.2s
MORC Moravsky Berou 86.42 329 *e*P **P** **02 18 15.6 -0.7**
MORC pmax pmax
comp=Z,28nm,1.3s,mb5.3
MORC Moravsky Berou 86.42 329 *e*P **P** **02 18 15.6 -0.6**
comp=Z,28nm,1.3s,mb5.3
MORC Moravsky Berou 86.42 329⇓*i*P **P** **02 18 15.9 -0.4**
CBIJ Chichi jima 86.52 59 LR LR 02 54 14.5
comp=Z,144nm,19.4s,MS4.4,baz=244,slow=34
VRAC Vranov 86.55 329 LR LR 02 58 26.0
comp=Z,73nm,18.7s,MS4.1,baz=172,slow=37
VRAC Vranov 86.55 329 P **P** **02 18 17.6 +0.7**
VRAC Vranov 86.55 329⇓*i*P **P** **02 18 15.8 -1.1**
MOA Molln 86.72 326 *i* P **P** **02 18 17.7 -0.1**
comp=Z,42nm,1.3s,mb5.5,SNR=7.9
HNR Honiara 86.75 99 PFAKE 02 18 30.0 +11
HNR LR LR
comp=Z,384nm,19.0s,MS4.8
ABTA Abfaltersbach 86.91 325⇑*i*P **P** **02 18 18.9 +0.2**
comp=Z,35nm,1.3s,mb5.4
SUW Suwalki 87.06 335 *e*P **P** **02 18 18.7 -0.6**
SUW Suwalki 87.06 335 *e*P **P** **02 18 18.9 -0.3**
SUW pmax pmax
comp=Z,70nm,1.0s,mb5.8
SUW Suwalki 87.06 335 *e*P **P** **02 18 18.9 -0.4**
comp=Z,70nm,1.0s,mb5.8
TREC Trest 87.07 328 AMS AMS 02 59 40.0
PRGR Permogore 87.18 349 *e*P **P** **02 18 19.2 -0.5**
PRGR *e* pP 02 18 21.5 -1.5
PRGR pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
DPC Dobruska-Polom 87.39 329 *e*P **P** **02 18 21.1 +0.1**
DPC *e* 02 18 28.3
DPC MLR MLR
comp=Z,100nm,21.5s,MS4.2
DPC Dobruska-Polom 87.39 329 *e*P **P** **02 18 21.1 +0.1**
DPC *e*pP pP 02 18 28.3 +4.0
DPC AMS AMS 02 58 00.0
comp=Z,100nm,21.5s
MDJ Mudanjiang 87.39 38 P **P** **02 18 21.8 +0.7**
MDJ pP pP 02 18 25.1 +0.7
MDJ sP sP 02 18 26.5 +0.9
MDJ PP PP 02 21 46.0 0.0
MDJ S S 02 28 57.3 -4.4
MDJ SS SS 02 34 45.3 -1.9
MDJ pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
MDJ pmax pmax
comp=Z,52nm,4.3s
MDJ LR LR
comp=N,290nm,19.8s,MS4.8
MDJ LR LR
comp=E,260nm,18.4s,MS4.8
MDJ LR LR
comp=Z,450nm,19.8s,MS4.9
MDJ Mudanjiang 87.39 38 *e*P **P** **02 18 20.6 -0.5**
comp=Z,18nm,1.1s,mb5.2
MDJ LR LR
comp=Z,477nm,19.0s,MS4.9
RJOB Jochberg 87.40 326 *e*P **P** **02 18 20.1 -1.0**
comp=Z,73nm,2.4s,mb5.5
DZM Mont Dzumac 87.40 113 *e*SS SS 02 34 45.9 -1.6
comp=Z,158nm,27.0s
DZM *e*LR LR 02 46 03.6
comp=Z,1μm,23.6s
UPC Upice 87.64 329 *e*P **P** **02 18 22.6 +0.4**
UPC *e* 02 18 29.6
UPC Upice 87.64 329 *e*P **P** **02 18 22.6 +0.4**
UPC *e*pP pP 02 18 29.6 +4.1
GEC2 GERESS Array S 87.66 327 *e*P **P** **02 18 21.2 -1.1**
comp=Z,72nm,2.6s,mb5.4
GEC2 GERESS Array S 87.66 327 *e*P **P** **02 18 21.2 -1.1**
GEC2 pmax pmax
comp=Z,72nm,2.6s,mb5.4
GEC2 GERESS Array S 87.66 327 *e*P **P** **02 18 21.2 -1.1**
comp=Z,72nm,2.6s,mb5.4
KLMR Klimovskoe 87.69 346⇓*i*P **P** **02 18 21.8 -0.4**
KLMR pmax pmax
comp=Z,126nm,1.5s,mb5.9
KLMR pmax pmax
comp=Z,114nm,9.0s
KLMR MLR MLR
comp=Z,247nm,17.0s,MS4.7
KSP Ksiaz 87.74 330 *e*P **P** **02 18 22.8 +0.2**
KHC Kasperske Hory 87.90 327 *e*P **P** **02 18 22.6 -0.9**
KHC *e* 02 18 30.1
KHC MLR MLR
comp=Z,200nm,4.8s
KHC Kasperske Hory 87.90 327 *e*P **P** **02 18 22.1 -1.3**
comp=Z,45nm,1.5s,mb5.5
KHC Kasperske Hory 87.90 327 *e*P **P** **02 18 22.6 -0.9**
KHC *e*pP pP 02 18 30.1 +3.3
KHC AMS AMS 02 57 30.0
comp=Z,200nm,4.8s
PRU Pruhonice 87.99 328 *e*P **P** **02 18 24.5 +0.6**
PRU *e* 02 18 32.0
PRU MLR MLR
comp=Z,100nm,18.0s,MS4.3
PRU Pruhonice 87.99 328 *e*P **P** **02 18 24.5 +0.6**
PRU *e*pP pP 02 18 32.0 +4.8
PRU AMS AMS 02 58 50.0
comp=Z,100nm,18.0s
FETA Feichten 88.03 324⇑*i*P **P** **02 18 24.3 +0.1**
comp=Z,41nm,1.2s,mb5.5
PRA Prague 88.10 328 P **P** **02 18 25.0 +0.6**
PRA AMS AMS 02 59 00.0
WET Wettzell 88.26 327 *e*P **P** **02 18 24.2 -1.0**
comp=Z,67nm,2.3s,mb5.5
WET Wettzell 88.26 327 *e*P **P** **02 18 24.2 -1.0**
WET pmax pmax
comp=Z,67nm,2.3s,mb5.5
WET Wettzell 88.26 327 *e*P **P** **02 18 24.2 -1.0**
comp=Z,67nm,2.3s,mb5.5
MAJO Matsushiro 88.29 49 *e*P **P** **02 18 24.5 -1.1**
MAJO pmax pmax
comp=Z,15nm,1.3s,mb5.1
MAJO MLR MLR
comp=Z,532nm,20.0s,MS5.0
MAJO Matsushiro 88.29 49 *e*P **P** **02 18 24.5 -1.1**
comp=Z,14nm,1.3s,mb5.0
MAJO LR LR
comp=Z,532nm,20.0s,MS5.0
MAT Matsushiro 88.29 49 P **P** **02 18 23.3 -2.3**
MAT S S 02 29 13.0 +2.3
MJAR Matsushiro Arr 88.29 49 P **P** **02 18 25.4 -0.2**
comp=Z,1.5nm,0.9s,mb4.2,baz=236,slow=5.5,SNR=5.0
MJAR LR LR 02 58 17.2
comp=Z,397nm,19.7s,MS4.8,baz=240,slow=36
PVCC Panska Ves 88.34 329 *e*P **P** **02 18 26.6 +1.1**
PVCC *e* 02 18 33.5
PVCC Panska Ves 88.34 329 *e*P **P** **02 18 26.6 +1.1**
PVCC *e*pP pP 02 18 33.5 +4.7
PVCC AMS AMS 03 00 20.0
TUE Stuetta 88.45 323 *e*P **P** **02 18 25.7 -0.4**
comp=Z,73nm,1.5s,mb5.7
TUE LR LR
comp=Z,85nm,19.0s,MS4.2
FUR Furstenfeldbru 88.46 325 *e*P **P** **02 18 26.0 -0.1**
comp=Z,87nm,1.3s,mb5.8
FUR Furstenfeldbru 88.46 325 *e*P **P** **02 18 26.0 -0.1**
FUR pmax pmax
comp=Z,87nm,1.3s,mb5.8
FUR Furstenfeldbru 88.46 325 *e*P **P** **02 18 26.0 -0.1**
comp=Z,87nm,1.3s,mb5.8
DAVA Damuels 88.65 324⇓*i*P **P** **02 18 27.1 0.0**
comp=Z,50nm,1.1s,mb5.8
MBDF Montbardon 88.86 321 *e*P **P** **02 18 28.6 +0.5**
comp=Z,60nm,1.2s,mb5.5
MBDF Montbardon 88.86 321 *e*P **P** **02 18 28.6 +0.5**
MBDF pmax pmax
comp=Z,30nm,1.2s,mb5.5
MBDF Montbardon 88.86 321 *e*P **P** **02 18 28.6 +0.5**
comp=Z,30nm,1.2s,mb5.5
BRG Berggiesshubel 88.87 329 *e*P **P** **02 18 28.1 +0.1**
comp=Z,87nm,2.2s,mb5.7
BRG Berggiesshubel 88.87 329 *i* P **P** **02 18 28.9 +1.0**
comp=Z,90nm,2.3s,mb5.7
BRG *i* 02 18 34.6
comp=Z,40nm,1.3s
GKP Gorka Klasztor 88.98 332 *e*P **P** **02 18 28.4 0.0**
ROTZ Rotzenmuhle 89.00 327 *e*P **P** **02 18 28.3 -0.3**
comp=Z,47nm,2.0s,mb5.5
NKC Novy Kostel 89.18 327 *e*P **P** **02 18 30.7 +1.3**
NKC *e* 02 18 37.6
NKC Novy Kostel 89.18 327 *e*P **P** **02 18 30.7 +1.3**
NKC *e*pP pP 02 18 37.6 +4.8
NKC AMS AMS 02 58 30.0
FBE Freiberg 89.18 328 *e*P **P** **02 18 29.8 +0.4**
comp=Z,74nm,1.9s,mb5.7
WERN Wernitzgruen 89.25 327 *e*P **P** **02 18 30.1 +0.3**
comp=Z,141nm,2.3s,mb5.9
TANN Tannenbergstha 89.29 328 *e*P **P** **02 18 30.2 +0.2**
comp=Z,80nm,2.1s,mb5.7
GUNZ Gunzen 89.32 327 *e*P **P** **02 18 30.4 +0.3**
comp=Z,208nm,2.5s,mb6.0
LPG La Plagne 89.32 321 *e*P **P** **02 18 31.0 +0.7**
comp=Z,39nm,1.3s,mb5.3
LPG La Plagne 89.32 321 *e*P **P** **02 18 31.0 +0.7**
LPG pmax pmax
comp=Z,19nm,1.3s,mb5.3
LPG La Plagne 89.32 321 *e*P **P** **02 18 31.0 +0.7**
comp=Z,19nm,1.3s,mb5.3
LPL La Plagne 89.35 321 *e*P **P** **02 18 31.1 +0.7**
comp=Z,79nm,1.6s,mb5.5
LPL La Plagne 89.35 321 *e*P **P** **02 18 31.1 +0.7**
LPL pmax pmax
comp=Z,39nm,1.6s,mb5.5
LPL La Plagne 89.35 321 *e*P **P** **02 18 31.1 +0.7**
comp=Z,39nm,1.6s,mb5.5
WERD Werda 89.38 328 *e*P **P** **02 18 30.6 +0.2**
comp=Z,95nm,2.3s,mb5.7
GRA1 Grafenberg Arr 89.45 327 *e*P **P** **02 18 30.4 -0.3**
comp=Z,34nm,1.0s,mb5.6
GRA1 *e*pP pP 02 18 36.9 +2.8
GRF Grafenberg Arr 89.45 327 *e*P **P** **02 18 30.4 -0.3**
comp=Z,34nm,1.0s,mb5.6
GRF *e*pP pP 02 18 36.9 +2.8
GRF Grafenberg Arr 89.45 327 *e*P **P** **02 18 30.4 -0.3**
GRF *e*PP pP 02 18 36.9 +2.8
GRF pmax pmax
comp=Z,34nm,1.0s,mb5.6
GRF Grafenberg Arr 89.45 327 *e*P **P** **02 18 30.4 -0.3**
GRF *e*PP pP 02 18 36.9 +2.8
GRF pmax pmax
comp=Z,34nm,1.0s,mb5.6
GRF Grafenberg Arr 89.45 327 *e*P **P** **02 18 30.4 -0.3**

comp=Z,34nm,1.0s,mb5.6
GRF *e*pP pP 02 18 36.9 +2.8
GRFO Grafenberg 89.45 327 *e*P **P** **02 18 30.4 -0.3**
GRFO Grafenberg 89.45 327 *e*P **P** **02 18 30.8 +0.1**
GRFO pmax pmax
comp=Z,51nm,1.1s,mb5.8
GRFO Grafenberg 89.45 327 *e*P **P** **02 18 30.8 0.0**
comp=Z,51nm,1.1s,mb5.8
PLN Plauen 89.48 327 *e*P **P** **02 18 31.2 +0.3**
ORIF Oris-en-Rattie 89.49 321 *e*P **P** **02 18 31.5 +0.4**
comp=Z,73nm,1.5s,mb5.5
ORIF Oris-en-Rattie 89.49 321 *e*P **P** **02 18 31.5 +0.4**
ORIF pmax pmax
comp=Z,37nm,1.5s,mb5.5
ORIF Oris-en-Rattie 89.49 321 *e*P **P** **02 18 31.5 +0.4**
comp=Z,37nm,1.5s,mb5.5
CLL Collm 89.60 328 *e*P **P** **02 18 31.5 +0.1**
CLL Collm 89.60 328⇓*i*P **P** **02 18 30.9 -0.5**
CLL *i* 02 18 37.4
CLL pmax pmax
comp=Z,41nm,1.8s,mb5.5
CLL Collm 89.60 328⇓*i*P **P** **02 18 30.9 -0.5**
comp=Z,41nm,1.8s,mb5.5
CLL *i* 02 18 37.4
CLL Collm 89.60 328⇓*i*P **P** **02 18 30.9 -0.5**
comp=Z,41nm,1.8s,mb5.5
CLL *i* (sP) sP 02 18 37.4 +1.5
comp=Z,28nm,1.2s
CLL LmV 03 11 00.0
comp=Z,100nm,20.2s
MOX Moxa 89.85 327 *e*P **P** **02 18 33.5 +0.9**
comp=Z,78nm,1.8s,mb5.7
MOX Moxa 89.85 327 *e*P **P** **02 18 32.6 0.0**
comp=Z,108nm,2.4s,mb5.8
MOX Moxa 89.85 327 *e*P **P** **02 18 33.5 +0.9**
MOX pmax pmax
comp=Z,78nm,1.8s,mb5.7
MOX Moxa 89.85 327 *e*P **P** **02 18 33.5 +0.9**
comp=Z,78nm,1.8s,mb5.7
STU Stuttgart 89.92 325 *e*P **P** **02 18 32.7 -0.3**
STU Stuttgart 89.92 325 *e*P **P** **02 18 32.7 -0.3**
STU pmax pmax
comp=Z,37nm,1.3s,mb5.5
STU Stuttgart 89.92 325 *e*P **P** **02 18 32.7 -0.3**
comp=Z,38nm,1.3s,mb5.6
RUE Ruedersdorf 90.00 330 *e*P **P** **02 18 33.2 0.0**
BFO Black Forest 90.12 324 *e*P **P** **02 18 33.7 -0.2**
comp=Z,56nm,2.0s,mb5.5
BFO Black Forest 90.12 324 *e*P **P** **02 18 33.7 -0.2**
BFO pmax pmax
comp=Z,56nm,2.0s,mb5.5
BFO Black Forest 90.12 324 *e*P **P** **02 18 33.7 -0.2**
comp=Z,56nm,2.0s,mb5.5
NEUB Neuenburg 90.13 328 *e*P **P** **02 18 34.0 +0.1**
CABF La Chapelle 90.34 322 *e*P **P** **02 18 35.4 +0.4**
comp=Z,27nm,1.0s,mb5.2
CABF La Chapelle 90.34 322 *e*P **P** **02 18 35.4 +0.4**
CABF pmax pmax
comp=Z,14nm,1.0s,mb5.2
CABF La Chapelle 90.34 322 *e*P **P** **02 18 35.4 +0.4**
comp=Z,14nm,1.0s,mb5.2
HINF Hinteralfeld 90.61 323 *e*P **P** **02 18 36.2 0.0**
comp=Z,60nm,1.7s,mb5.4
HINF Hinteralfeld 90.61 323 *e*P **P** **02 18 36.2 0.0**
HINF pmax pmax
comp=Z,30nm,1.7s,mb5.3
HINF Hinteralfeld 90.61 323 *e*P **P** **02 18 36.2 0.0**
comp=Z,30nm,1.7s,mb5.3
CDF Champ du Feu 90.73 324 *e*P **P** **02 18 36.9 +0.1**
comp=Z,79nm,1.8s,mb5.4
CDF Champ du Feu 90.73 324 *e*P **P** **02 18 36.9 +0.1**
CDF pmax pmax
comp=Z,39nm,1.8s,mb5.4
CDF Champ du Feu 90.73 324 *e*P **P** **02 18 36.9 +0.1**
comp=Z,39nm,1.8s,mb5.4
UBBA Unterbreizbach 90.76 327 *e*P **P** **02 18 36.8 0.0**
MTLF Montolieu 90.82 318 *e*P **P** **02 18 36.7 -0.6**
comp=Z,80nm,1.6s,mb5.5
MTLF Montolieu 90.82 318 *e*P **P** **02 18 36.7 -0.6**
MTLF pmax pmax
comp=Z,40nm,1.6s,mb5.5
MTLF Montolieu 90.82 318 *e*P **P** **02 18 36.7 -0.6**
comp=Z,40nm,1.6s,mb5.5
HAU Haudompre 91.00 323 *e*P **P** **02 18 38.2 +0.2**
comp=Z,93nm,1.8s,mb5.5
HAU Haudompre 91.00 323 *e*P **P** **02 18 38.2 +0.2**
HAU pmax pmax
comp=Z,46nm,1.8s,mb5.5
HAU Haudompre 91.00 323 *e*P **P** **02 18 38.2 +0.2**
comp=Z,46nm,1.8s,mb5.5
CLZ Clausthal 91.21 328 *e*P **P** **02 18 39.1 +0.2**
CLZ Clausthal 91.21 328 *e*P **P** **02 18 39.1 +0.2**
CLZ Clausthal 91.21 328 *e*P **P** **02 18 39.1 +0.2**
KLR Kul'dur 91.32 36 *e*P **P** **02 18 34.3 -5.2**
SMF Signal de Mont 91.64 321 *e*P **P** **02 18 41.8 +0.8**
comp=Z,21nm,1.1s,mb5.1
SMF Signal de Mont 91.64 321 *e*P **P** **02 18 41.8 +0.8**
SMF pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
SMF Signal de Mont 91.64 321 *e*P **P** **02 18 41.8 +0.8**
comp=Z,10nm,1.1s,mb5.1
FINES FINESS Array B 91.74 341 P **P** **02 18 40.1 -1.0**
comp=Z,3.9nm,1.0s,mb4.7,baz=138,slow=9.0,SNR=8.7
FINES PP PP 02 22 20.8 +0.6
comp=Z,3.4nm,0.9s,baz=142,slow=9.5,SNR=4.6
EPF Esparros 91.82 317 *e*P **P** **02 18 42.7 +0.7**
comp=Z,49nm,1.6s,mb5.3
EPF Esparros 91.82 317 *e*P **P** **02 18 42.7 +0.7**
EPF pmax pmax
comp=Z,25nm,1.6s,mb5.3
EPF Esparros 91.82 317 *e*P **P** **02 18 42.7 +0.7**
comp=Z,25nm,1.6s,mb5.3
RJF Les Rejaudoux 92.29 319 *e*P **P** **02 18 44.0 -0.1**
comp=Z,49nm,1.3s,mb5.4
RJF Les Rejaudoux 92.29 319 *e*P **P** **02 18 44.0 -0.1**
RJF pmax pmax
comp=Z,24nm,1.3s,mb5.4
RJF Les Rejaudoux 92.29 319 *e*P **P** **02 18 44.0 -0.1**
comp=Z,24nm,1.3s,mb5.4
ETSF Etsaut 92.32 316 *e*P **P** **02 18 44.4 +0.1**
comp=Z,80nm,1.7s,mb5.5
ETSF Etsaut 92.32 316 *e*P **P** **02 18 44.4 +0.1**
ETSF pmax pmax
comp=Z,40nm,1.7s,mb5.5
ETSF Etsaut 92.32 316 *e*P **P** **02 18 44.4 +0.1**
comp=Z,40nm,1.7s,mb5.5
HABR Khabarovsk 92.69 37 *e*P **P** **02 18 49.0 +3.2**
HABR PPP 02 24 24.2
HABR 02 29 49.9
HABR *e*PS PS 02 31 00.5 -3.0
HABR *e*SS SS 02 36 01.1 -2.7
HABR pmax pmax
comp=Z,70nm,1.8s,mb5.8
HABR pmax pmax
comp=N,19nm,1.0s
HABR pmax pmax
comp=E,25nm,0.8s
HABR MLR MLR
comp=Z,383nm,21.0s,MS4.8
ESDC Sonseca Array 92.97 312 P **P** **02 18 47.3 -0.1**
comp=Z,0.9nm,0.7s,mb4.3,baz=108,slow=3.1,SNR=6.5
ESDC LR LR 03 01 42.4
comp=Z,172nm,18.7s,MS4.5,baz=115,slow=36
SFS San Fernando 93.04 309 PFAKE 02 19 00.0 +12
SFS LR LR
comp=Z,884nm,21.0s,MS5.2
PAB San Pablo 93.17 312 PFAKE 02 19 00.0 +12
PAB LR LR
comp=Z,303nm,20.0s,MS4.8
ERM Erimo 94.33 46 PFAKE 02 19 00.0 +6.4
ERM LR LR
comp=Z,321nm,20.0s,MS4.8
LVZ Lovozero 94.89 347 PFAKE 02 19 10.0 +15
LVZ LR LR
comp=Z,837nm,20.0s,MS5.2
MTE Manteigas 95.75 312 PFAKE 02 19 10.0 +10
MTE LR LR
comp=Z,364nm,19.0s,MS4.9
YSS Yuzh-Sakhalins 96.40 41 PFAKE 02 19 10.0 +7.1
YSS LR LR
comp=Z,85nm,20.0s,MS4.2
NB2 NORSAR Subarra 96.56 335 P **P** **02 18 56.9 -6.4**
baz=120,slow=4.3
NB2 NORSAR Subarra 96.56 335 P **P** **02 18 56.9 -6.4**
NB2 NORSAR Subarra 96.56 335 P **P** **02 18 56.9 -6.4**
NOA NORSAR Array B 96.56 335 P **P** **02 19 02.8 -0.4**
comp=Z,1.3nm,0.8s,mb4.4,baz=118,slow=4.3,SNR=3.5
YAK Yakutsk 97.95 24 PFAKE 02 19 20.0 +10
YAK LR LR
comp=Z,475nm,20.0s,MS5.0
KEV Kevo 98.01 346 PFAKE 02 19 20.0 +10
KEV LR LR
comp=Z,218nm,19.0s,MS4.7
ARCES ARCESS Array B 98.17 346 LR LR 03 03 13.2
comp=Z,144nm,20.9s,MS4.4,baz=306,slow=35
MSVF Nonsavu 99.10 114 PFAKE 02 19 30.0 +14
MSVF LR LR
comp=Z,626nm,20.0s,MS5.1
RCBR Riachuelo 101.56 258 PFAKE 02 19 40.0 +14
RCBR LR LR
comp=Z,1μm,20.0s,MS5.4
TARA Tarawa 102.92 94 PFAKE 02 19 40.0 +7.9
TARA LR LR
comp=Z,237nm,21.0s,MS4.7
TIXI Tiksi 103.40 16 PFAKE 02 19 40.0 +5.7
TIXI LR LR
comp=Z,576nm,22.0s,MS5.1
TRQA Tornquist 103.47 218 PFAKE 02 19 50.0 +15
TRQA LR LR
comp=Z,935nm,21.0s,MS5.3
PLCA Paso Flores 105.86 211 PFAKE 02 24 10.0 +12
PLCA LR LR
comp=Z,664nm,22.0s,MS5.1
KBS Kingsbay 107.28 350 PFAKE 02 24 10.0 +11
KBS LR LR
comp=Z,260nm,20.0s,MS4.8
PET Petropavlovsk 108.14 39 PFAKE 02 24 10.0 +8.3
PET LR LR
comp=Z,352nm,20.0s,MS4.9
BILL Bilibino 114.31 24 PFAKE 02 24 20.0 +7.0
BILL LR LR
comp=Z,583nm,22.0s,MS5.1
LCO Las Campanas 115.03 218 PFAKE 02 24 30.0 +14
LCO LR LR
comp=Z,753nm,22.0s,MS5.3
LPAZ La Paz 122.54 230 PKP PKPdf 02 24 31.1 +0.7
comp=Z,0.5nm,0.5s,baz=130,slow=5.1,SNR=4.1
LPAZ La Paz 122.54 230 *e*PKPdf PKPdf 02 24 32.3 +1.9
LPAZ LR LR
comp=Z,390nm,20.0s,MS5.1
PPT Papeete 124.03 134 *e*LR LR 03 03 03.9
comp=Z,302nm,29.8s
NNA Nana 131.54 227 PFAKE 02 25 00.0 +12
NNA LR LR
comp=Z,562nm,20.0s,MS5.3
GRGR Grenville 132.25 265 PFAKE 02 25 00.0 +11
GRGR LR LR
comp=Z,375nm,19.0s,MS5.1
COLA College 132.31 20 PFAKE 02 25 00.0 +12
COLA LR LR
comp=Z,241nm,21.0s,MS4.9
ILAR Eielson Array 132.68 20 PKP PKPdf 02 24 47.2 -1.0
comp=Z,0.3nm,0.7s,baz=303,slow=4.2,SNR=1.9
ILAR PP PP 02 27 13.6 +1.0
comp=Z,0.7nm,0.9s,baz=324,slow=4.5,SNR=4.3
INK Inuvik 133.24 11 *e*PKIKP PKPdf 02 24 49.0 -0.2
ANWB Willy Bob 134.12 272 PFAKE 02 25 00.0 +7.7
ANWB LR LR
comp=Z,404nm,19.0s,MS5.2
EGAK Eagle 134.39 18 PFAKE 02 25 00.0 +8.6
EGAK LR LR
comp=Z,238nm,20.0s,MS4.9
KDAK Kodiak Island 134.64 30 PFAKE 02 25 00.0 +7.9
KDAK LR LR
comp=Z,535nm,21.0s,MS5.2
SJG San Juan 138.24 271 PFAKE 02 25 10.0 +10
SJG LR LR
comp=Z,349nm,19.0s,MS5.1
SDV Santo Domingo 139.08 256 PFAKE 02 25 10.0 +8.3
SDV LR LR
comp=Z,264nm,20.0s,MS5.0
PKME Peaks-Kenny Pk 140.30 313 PFAKE 02 25 10.0 +7.0
PKME LR LR
comp=Z,501nm,20.0s,MS5.3
OTAV Otavalo 141.05 238 *e*PKPdf PKPdf 02 25 06.8 +1.4
OTAV LR LR
comp=Z,361nm,21.0s,MS5.1
YKA Yellowknife Ar 141.14 3 PP PP 02 28 05.0 -0.1
comp=Z,1.2nm,0.9s,baz=0.0,slow=6.7,SNR=5.3
LBNH Lisbon 142.41 313 PFAKE 02 25 20.0 +13
LBNH LR LR
comp=Z,514nm,20.0s,MS5.3
WRAK Wrangell Islan 143.66 20 PFAKE 02 25 20.0 +11
WRAK LR LR
comp=Z,239nm,21.0s,MS4.9
LONY Lake Ozonia 144.04 314 PFAKE 02 25 20.0 +10
LONY LR LR
comp=Z,430nm,20.0s,MS5.2
NCB Newcomb 144.06 313 PFAKE 02 25 20.0 +10
NCB LR LR
comp=Z,388nm,19.0s,MS5.2
BINY Binghamton 145.91 311 PFAKE 02 25 20.0 +7.0
BINY LR LR
comp=Z,451nm,19.0s,MS5.3
BCIP Isla Barro Col 147.25 249 PFAKE 02 25 30.0 +14
BCIP LR LR
comp=Z,530nm,20.0s,MS5.3
SSPA Standing Stone 147.82 309 *e*PKPdf PKPdf 02 25 18.4 +2.1
FFC Flin Flon 148.37 350 *e*PKP2 PKPab 02 25 18.4 -4.9
FFC MLR MLR
comp=Z,297nm,19.0s,MS5.1
ERPA Erie 148.67 313 PFAKE 02 25 30.0 +12
ERPA LR LR
comp=Z,493nm,19.0s,MS5.3
MTDJ Mount Denham 148.70 266 PFAKE 02 25 30.0 +12
MTDJ LR LR
comp=Z,414nm,20.0s,MS5.2
ALLY Alegheny Colle 148.98 313 *e*PKPdf PKPdf 02 25 18.7 +0.6
ALLY *e*PKPbc PKPbc 02 25 22.4 +0.3
CNNC Cliffs of the 149.44 300 PFAKE 02 25 30.0 +11
CNNC LR LR
comp=Z,1μm,20.0s,MS5.7
MCWV Mont Chateau 149.58 309 PFAKE 02 25 30.0 +11
MCWV LR LR
comp=Z,470nm,22.0s,MS5.2
VWCC Virginia Weste 150.52 304 *e*PKPbc PKPbc 02 25 26.4 +0.4
BLA Blacksburg 150.86 305 *e*PKIKP PKPdf 02 25 26.6 +5.4
BLA *e* 02 25 34.5
AAM Ann Arbor 150.97 316 PFAKE 02 25 30.0 +8.8
AAM LR LR
comp=Z,500nm,19.0s,MS5.3
ULM Lac du Bonnet 151.13 340 PKPbc PKPbc 02 25 25.8 -1.2
comp=Z,6.7nm,0.6s,baz=24,slow=1.8,SNR=9.1
EYMN Ely 151.44 333 *e*PKPbc PKPbc 02 25 26.8 -1.0
EYMN LR LR
comp=Z,365nm,19.0s,MS5.2
ACSO Alum Creek Sta 151.53 312 *e*PKPbc PKPbc 02 25 28.5 +0.2
ACSO LR LR
comp=Z,341nm,19.0s,MS5.2
COWI Conover 151.74 327 *e*PKPbc PKPbc 02 25 28.0 -0.6
JTS JuntasAbangare 152.15 246 PFAKE 02 25 40.0 +16
JTS LR LR
comp=Z,366nm,20.0s,MS5.2
AGMN Agassiz Nation 152.82 338 *e*PKPbc PKPbc 02 25 29.7 -1.2
AGMN LR LR
comp=Z,399nm,19.0s,MS5.2
JCW Jim Creek 153.96 17 *e*PKPbc PKPbc 02 25 33.3 -0.1
NLWA Neilton Lookou 154.10 21 PFAKE 02 25 40.0 +14
NLWA LR LR
comp=Z,393nm,21.0s,MS5.2
GOGA Godfrey 154.36 298 PFAKE 02 25 40.0 +14
GOGA LR LR
comp=Z,229nm,20.0s,MS5.0
JFWS Jewell Farm 154.51 324 PFAKE 02 25 40.0 +14
JFWS LR LR
comp=Z,526nm,20.0s,MS5.3
WCI Wyandotte Cave 154.74 311 *e*PKPdf PKPdf 02 25 25.5 -1.4
WCI *e*PKPab PKPab 02 25 50.8 +0.5
WCI LR LR
comp=Z,108nm,19.0s,MS4.7
DGMT Dagmar 154.78 350 PFAKE 02 25 40.0 +13
DGMT LR LR
comp=Z,521nm,20.0s,MS5.3
ETW Entiat 154.92 16 *e*PKPdf PKPdf 02 25 26.7 -0.1
ETW *e*PKPbc PKPbc 02 25 36.4 +0.9
ETW *e*PKPab PKPab 02 25 49.4 -1.4
NEW Newport 154.96 10 *e*PKIKP PKPdf 02 25 26.5 -0.3
NEW MLR MLR
comp=Z,393nm,21.0s
HDIL Hopedale 155.46 318 PFAKE 02 25 40.0 +12
HDIL LR LR
comp=Z,413nm,20.0s,MS5.2
BSMT Bassoo Peak 155.68 7 *e*PKPdf PKPdf 02 25 26.7 -1.1
BSMT *e*PKPab PKPab 02 25 53.4 -0.5
BSMT *e*PP PP 02 29 28.5 -1.5
EGMT Eagleton 155.73 359 PFAKE 02 25 40.0 +12
EGMT LR LR
comp=Z,329nm,20.0s,MS5.2
TGUH Tegucigalpa,Un 155.97 251 PFAKE 02 25 40.0 +11
TGUH LR LR
comp=Z,376nm,21.0s,MS5.2
HAWA Hanford 156.25 15 PFAKE 02 25 40.0 +11
HAWA LR LR
comp=Z,390nm,20.0s,MS5.2
CHMT Chamberlain Mo 156.75 5 *e*PKPdf PKPdf 02 25 29.7 +0.5
CHMT *e*PP PP 02 29 33.8 -2.2
MSO Missoula 156.78 6 PFAKE 02 25 40.0 +11
MSO LR LR
comp=Z,240nm,21.0s,MS5.0
WVT Waverly 156.78 307 PFAKE 02 25 40.0 +10
WVT LR LR
comp=Z,392nm,20.0s,MS5.2
LAO LASA Array 156.81 352 PFAKE 02 25 40.0 +11
LAO LR LR
comp=Z,438nm,22.0s,MS5.2
ECSD EROS Data Cent 156.96 333 *e*PKPab PKPab 02 25 59.4 -0.2
ECSD LR LR
comp=Z,526nm,20.0s,MS5.4
LRAL Lakeview Retre 157.30 299 PFAKE 02 25 40.0 +10
LRAL LR LR
comp=Z,390nm,20.0s,MS5.2
BOZ Bozeman (W) 158.10 2 *e*PKIKP PKPdf 02 25 32.0 +1.0
BOZ *e* 02 26 03.9
BOZ MLR MLR
comp=Z,258nm,19.0s,MS5.1
CCM Cathedral Cave 158.15 315 PFAKE 02 25 40.0 +8.7
CCM LR LR
comp=Z,112nm,20.0s,MS4.7
DLMT Dillon 158.34 4 *e*PKPdf PKPdf 02 25 31.6 +0.3
DLMT *e*PKPab PKPab 02 26 05.5 0.0
HUMO Hull Mountain 158.55 26 PFAKE 02 25 40.0 +8.4
HUMO LR LR
comp=Z,362nm,22.0s,MS5.2
RLMT Red Lodge 158.62 357 PFAKE 02 25 40.0 +8.4
RLMT LR LR
comp=Z,385nm,21.0s,MS5.2
OXF Oxford 158.64 305 PFAKE 02 25 40.0 +8.0
OXF LR LR
comp=Z,273nm,19.0s,MS5.1
RSSD Black Hills 158.95 347 PFAKE 02 25 40.0 +8.0
RSSD LR LR
comp=Z,138nm,20.0s,MS4.8
TEIG Tepich 159.02 265 PFAKE 02 25 40.0 +7.1
TEIG LR LR
comp=Z,466nm,22.0s,MS5.3
LKWY Lake 159.20 360 PFAKE 02 25 40.0 +7.7
LKWY LR LR
comp=Z,468nm,20.0s,MS5.3
YBH Yreka Blue Hor 159.38 27 PFAKE 02 25 40.0 +7.4
YBH LR LR
comp=Z,330nm,20.0s,MS5.2
IMW Indian Meadow 159.87 1 *e*PKPdf PKPdf 02 25 34.3 +1.2
IMW *e*PKPab PKPab 02 26 13.3 +1.2
HLID Hailey 159.95 8 *e*PKPdf PKPdf 02 25 33.9 +0.7
HLID LR LR
comp=Z,401nm,22.0s,MS5.2
MOOW Moose Ponds 160.02 0 *e*PKPdf PKPdf 02 25 33.4 +0.1
MOOW *e*PKPab PKPab 02 26 13.6 +0.8
MOOW *e*PP PP 02 29 56.5 +2.7
MOD Modoc 160.14 22 PFAKE 02 25 40.0 +6.5
MOD LR LR
comp=Z,254nm,20.0s
LOHW Long Hollow 160.15 0 *e*PKPdf PKPdf 02 25 33.4 0.0
LOHW *e*PP PP 02 29 56.7 +2.2
WVOR Wild Horse Val 160.17 18 PFAKE 02 25 40.0 +6.5
WVOR LR LR
comp=Z,415nm,20.0s
TPAW Teton Pass 160.27 1 *e*PKPdf PKPdf 02 25 32.9 -0.7
VBMS Vicksburg 160.37 300 PFAKE 02 25 40.0 +5.9
VBMS LR LR
comp=Z,240nm,22.0s
WDC Whiskeytown Da 160.41 28 PFAKE 02 25 40.0 +6.2
WDC LR LR
comp=Z,369nm,21.0s
RRI2 Red Ridge 160.41 2 *e*PKPdf PKPdf 02 25 34.1 +0.4
KSU1 Kansas State U 160.60 326 PFAKE 02 25 40.0 +5.9
KSU1 LR LR
comp=Z,393nm,20.0s
BW06 Boulder Array 160.98 358 *e*PKPdf PKPdf 02 25 34.7 +0.3
BW06 LR LR
comp=Z,675nm,22.0s
PDAR Pinedale Array 160.98 358 PKP PKPdf 02 25 33.6 -0.7
comp=Z,1.2nm,1.1s,baz=116,slow=3.4,SNR=6.3
PDAR PKPab PKPab 02 26 21.6 +4.6
comp=Z,2.2nm,1.0s,baz=25,slow=2.7,SNR=5.7
PDAR PP PP 02 30 01.2 +2.3
comp=Z,1.2nm,1.0s,baz=73,slow=6.5,SNR=3.9
AHID Auburn Hatcher 161.00 1 PFAKE 02 25 50.0 +16
AHID LR LR
comp=Z,567nm,20.0s
OGNE Ogallala 161.38 339 PFAKE 02 25 50.0 +15
OGNE LR LR
comp=Z,546nm,20.0s
MIAR Mount Ida 161.66 310 *e*PKPdf PKPdf 02 25 35.5 +0.1
MIAR *e*PKPab PKPab 02 26 21.3 +0.9
MIAR LR LR
comp=Z,359nm,20.0s
HWUT Hardware Ranch 162.14 2 *e*PKPdf PKPdf 02 25 36.0 +0.3
HWUT *e*PKPab PKPab 02 26 23.3 +1.2
HWUT *e*PP PP 02 30 02.7 -2.5
HWUT LR LR
comp=Z,470nm,21.0s
CBKS Cedar Bluff 162.34 331 PFAKE 02 25 50.0 +14
CBKS LR LR
comp=Z,393nm,20.0s
BMN Battle Mountai 162.42 17 PFAKE 02 25 50.0 +14
BMN LR LR
comp=Z,368nm,21.0s
TCUT Toone Canyon 162.63 2 *e*PKPdf PKPdf 02 25 36.3 +0.2
ISCO Idaho Springs 163.42 346 PFAKE 02 25 50.0 +13
ISCO LR LR
comp=Z,521nm,21.0s
CMB Columbia Colle 163.45 28 PFAKE 02 25 50.0 +13
CMB LR LR
comp=Z,427nm,19.0s
DUG Dugway 163.46 6 *e*PKPdf PKPdf 02 25 37.0 0.0
DUG *e*PKPab PKPab 02 26 28.4 +0.5
DUG *e*PP PP 02 30 11.2 -0.9
DUG LR LR
comp=Z,462nm,21.0s
NATX Nacogdoches 163.79 303 PFAKE 02 25 50.0 +12
NATX LR LR
comp=Z,362nm,19.0s
NVAR Mina Array Bea 163.92 22 PKP PKPdf 02 25 38.5 +1.0
comp=Z,0.4nm,0.8s,baz=270,slow=0.7,SNR=5.7
NVAR PKPab PKPab 02 26 30.3 +0.3
comp=Z,1.0nm,0.7s,baz=307,slow=4.9,SNR=4.9
NVAR PP PP 02 30 15.2 +0.3
comp=Z,0.2nm,0.7s,baz=337,slow=4.1,SNR=3.6
NVAR Mina Array Bea 163.92 22 PKP PKPdf 02 25 38.5 +1.0
NVAR PKPab PKPab 02 26 30.3 +0.3
NVAR PP PP 02 30 15.2 +0.3
SAO San Andreas Ge 163.98 33 PFAKE 02 25 50.0 +12
SAO LR LR
comp=Z,329nm,20.0s
TPH Tonopah 164.60 20 PFAKE 02 25 50.0 +12
TPH LR LR
comp=Z,363nm,20.0s
WMOK Wichita Mounta 164.95 320 *e*PKIKP PKPdf 02 25 38.3 -0.2
WMOK *e* 02 26 35.1
WMOK MLR MLR
comp=Z,425nm,21.0s
MSU Marysvale 165.19 5 *e*PKPdf PKPdf 02 25 38.8 +0.3
MSU *e*PKPab PKPab 02 26 36.3 +0.7
MVU Marysvale 165.19 5 PFAKE 02 25 50.0 +11
MVU LR LR
comp=Z,296nm,19.0s
SDCO Great Sand Dun 165.35 344 PFAKE 02 25 50.0 +11
SDCO LR LR
comp=Z,362nm,20.0s
HKT Hockley 165.44 298 *e*PKIKP PKPdf 02 25 40.1 +1.0
HKT *e* 02 26 35.5
HKT MLR MLR
comp=Z,75nm,19.0s
DAC Darwin (Calif) 166.09 24 PFAKE 02 25 50.0 +11

DAC					LR	LR			
	comp=Z,432nm,22.0s								
MVCO	**Mesa Verde**	**166.43**	**353**		PFAKE			02 25 50.0	+10
MVCO					LR	LR			
	comp=Z,404nm,19.0s								
AMTX	**Amarillo**	**166.44**	**327**		PFAKE			02 25 50.0	+10
AMTX					LR	LR			
	comp=Z,437nm,20.0s								
GSC	**Goldstone**	**167.25**	**24**		*e*PKP2	PKPab		02 26 45.4	+0.6
KVTX	**Kingsville**	**167.93**	**291**		PFAKE			02 25 50.0	+9.0
KVTX					LR	LR			
	comp=Z,481nm,20.0s								
WUAZ	**Wupatki**	**168.22**	**3**		*e*PKPab	PKPab		02 26 49.3	+0.3
WUAZ					LR	LR			
	comp=Z,445nm,22.0s								
ANMO	**Albuquerque**	**168.24**	**343**		PKP	PKPdf		02 25 41.0	-0.1
	comp=Z,0.8nm,0.6s,baz=0.0,slow=3.0,SNR=8.1								
ANMO					PKPab	PKPab		02 26 49.9	+0.8
	comp=Z,0.4nm,0.3s,baz=41,slow=5.1,SNR=4.9								
ANMO					PP	PP		02 30 38.0	+0.9
	comp=Z,0.4nm,0.3s,baz=25,slow=5.9,SNR=5.9								
ANMO	**Albuquerque**	**168.24**	**343**		*e*PKPdf	PKPdf		02 25 41.3	+0.3
ANMO					LR	LR			
	comp=Z,508nm,19.0s								
JCT	**Junction City**	**168.27**	**307**		*e*PKPdf	PKPdf		02 25 41.1	0.0
JCT					*e*PKPab	PKPab		02 26 50.3	+0.7
JCT					LR	LR			
	comp=Z,354nm,20.0s								
PFO	**Pinyon Flat Ob**	**168.88**	**26**		PFAKE			02 25 50.0	+8.5
PFO					LR	LR			
	comp=Z,457nm,20.0s								
LAZ	**Ladron**	**168.93**	**345**		*e*PKPdf	PKPdf		02 25 42.2	+0.7
LAZ					*e*PKPab	PKPab		02 26 53.8	+1.6
LAZ					*e*PP	PP		02 30 40.9	+0.3
MNTX	**Cornudas Mount**	**170.81**	**331**		*e*PKPdf	PKPdf		02 25 43.1	+0.5
MNTX					*e*PKPab	PKPab		02 27 00.4	-0.3
MNTX					LR	LR			
	comp=Z,277nm,21.0s								
TUC	**Tucson**	**171.44**	**1**		*e*PKPdf	PKPdf		02 25 44.0	+1.0
TUC					*e*PKPab	PKPab		02 27 04.1	+0.8
TXAR	**Lajitas Array**	**171.65**	**314**		PKP	PKPdf		02 25 41.8	-1.4
	comp=Z,0.2nm,0.8s,baz=94,slow=2.7,SNR=3.5								
TXAR					PKPab	PKPab		02 27 04.8	+0.3
	comp=Z,3.3nm,0.9s,baz=90,slow=3.8,SNR=9.7								
TXAR					PP	PP		02 30 57.3	+2.1
	comp=Z,0.4nm,0.9s,baz=60,slow=5.9,SNR=4.4								
TXAR	**Lajitas Array**	**171.65**	**314**		PKP	PKPdf		02 25 41.8	-1.4
TXAR					PKPab	PKPab		02 27 04.8	+0.3
TXAR					PP	PP		02 30 57.3	+2.1

*ISCJB **07** 02:12:11.7±0.2,41°.72N±0°.01×112°.35W±0°.02,h10km, Error ellipse: s-maj=2.5km s-min=1.7km az=5.4*

*NEIC **07** 02:12:12.0,41°.71N×112°.38W,h11km,ML3.1(SLC),After SLC.*

NEIC Felt [III] at Garland and [II] at Tremonton. Also felt at Fielding, Magna and Snowville.

ISC 07 02:12:12.1±0.2,41°.72N±0°.01×112°.36W±0°.02,h10km,n67, σ1ϑ14/119,12C-14D,Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M15A	**Larsen Ranch,**	**0.27**	**194**	⇑P	**Pg**	**02 12 17.2**	**-0.3**
	baz=0.3,SNR=1000						
M15A				⇓S	**Sg**	**02 12 21.1**	**0.0**
	baz=0.3						
L15A	**Malad City**	**0.28**	**356**	P	**Pg**	**02 12 17.9**	**+0.2**
	baz=0.3,SNR=1000						
L15A				⇓S	**Sg**	**02 12 22.0**	**+0.4**
	baz=0.3						
HVU	**Hansel Valley**	**0.32**	**280**	*e*Pg	**Pg**	**02 12 18.2**	**-0.1**
SPUT	**South Promonto**	**0.42**	**189**	*e*Pg	**Pg**	**02 12 20.0**	**-0.3**
SPUT				*e*Sg	**Sg**	**02 12 25.3**	**-0.6**
HWUT	**Hardware Ranch**	**0.61**	**101**	*e*Pg	**Pg**	**02 12 23.6**	**-0.2**
HWUT				*e*Sg	**Sg**	**02 12 31.5**	**-0.3**
M16A	**Huntsville**	**0.69**	**126**	⇓P	**Pg**	**02 12 25.3**	**0.0**
	baz=0.7,SNR=198						
L14A	**Malta**	**0.73**	**296**	⇑P	**Pg**	**02 12 25.7**	**-0.4**
	baz=0.7,SNR=311						
L14A				⇓S	**Sg**	**02 12 35.8**	**+0.2**
	baz=0.7						
L16A	**Fish Haven**	**0.75**	**67**	P	**Pg**	**02 12 26.8**	**+0.2**
	baz=0.8,SNR=924						
L16A				⇓S	**Sg**	**02 12 37.2**	**+0.8**
	baz=0.8						
N15A	**Stansbury Isla**	**0.84**	**188**	⇓P	**Pg**	**02 12 28.3**	**0.0**
	baz=0.8						
N15A				⇓S	**Sg**	**02 12 39.6**	**+0.3**
	baz=0.8						
BGU	**Big Grassy Mou**	**0.94**	**212**	*e*Pg	**Pg**	**02 12 29.6**	**-0.7**
BGU				*e*Sg	**Sg**	**02 12 42.1**	**-0.4**
K15A	**Arbon**	**0.97**	**353**	⇓P	**Pg**	**02 12 30.9**	**+0.1**
	baz=1.0,SNR=38						
K15A				⇑S	**Sg**	**02 12 43.8**	**+0.5**
	baz=1.0						
K14A	**Jones Ranch, D**	**1.02**	**324**	P	**Pg**	**02 12 31.2**	**-0.5**
	baz=1.0,SNR=395						
K14A				⇑S	**Sg**	**02 12 44.8**	**-0.2**
	baz=1.0						
NOQ	**North Oquirrh**	**1.09**	**170**	*e*Pg	**Pg**	**02 12 32.4**	**-0.6**
NOQ				*e*Sg	**Sg**	**02 12 46.3**	**-0.7**
N16A	**Rees Ranch, Co**	**1.09**	**140**	⇓S	**Sg**	**02 12 47.5**	**+0.3**
	baz=1.1						
CTU	**Camp Tracy**	**1.13**	**156**	*e*Pg	**Pg**	**02 12 33.2**	**-0.6**
CTU				*e*Sg	**Sg**	**02 12 47.2**	**-1.3**
K16A	**Soda Springs**	**1.25**	**27**	Pg	**Pg**	**02 12 35.7**	**-0.3**
	baz=1.3,SNR=72						
K16A				⇑Sg	**Sg**	**02 12 53.6**	**+1.4**
	baz=1.3						
M17A	**Scullys Gap (B**	**1.29**	**101**	Pg	**Pg**	**02 12 37.0**	**0.0**
	baz=1.3,SNR=364						
M17A				⇑Sg	**Sg**	**02 12 55.2**	**+1.4**
	baz=1.3						
JLU	**Jordanelle**	**1.31**	**148**	*e*Pn	**Pn**	**02 12 36.4**	**-0.1**
JLU				*e*Sg	**Sg**	**02 12 53.0**	**-1.4**
N17A	**Moffit Pass**	**1.39**	**124**	⇑Pg	**Pg**	**02 12 38.6**	**-0.2**
	baz=1.4,SNR=104						
AHID	**Auburn Hatcher**	**1.40**	**42**	*e*Pn	**Pn**	**02 12 38.0**	**+0.3**
AHID				*e*Sg	**Sg**	**02 12 57.8**	**+0.7**
O15A	**The Old Anders**	**1.45**	**183**	Pb	**Pb**	**02 12 38.0**	**-1.0**
	baz=1.4,SNR=90						
K17A	**Gardner Place,**	**1.48**	**46**	⇑Pb	**Pb**	**02 12 39.5**	**-0.3**
	baz=1.5,SNR=13						
K17A				⇓Sg	**Sg**	**02 13 01.3**	**+1.5**
	baz=1.5						
DAU	**Daniels Canyon**	**1.55**	**147**	*e*Pn	**Pn**	**02 12 40.5**	**+0.7**
DAU				*e*Sg	**Sg**	**02 13 00.6**	**-1.4**
DUG	**Dugway**	**1.57**	**193**	*e*Pn	**Pn**	**02 12 39.2**	**-0.7**
DUG				*e*Sg	**Sg**	**02 13 00.7**	**-1.8**
J15A	**Blackfoot**	**1.68**	**358**	⇓Pb	**Pb**	**02 12 42.4**	**-0.6**
	baz=1.7,SNR=23						
M18A	**Lyman**	**1.75**	**99**	⇓Pb	**Pb**	**02 12 43.7**	**-0.5**
	baz=1.7,SNR=90						
L18A	**Fontenelle, Gr**	**1.75**	**83**	⇑Pb	**Pb**	**02 12 43.8**	**-0.4**
	baz=1.8,SNR=188						
NLU	**North Lily Min**	**1.78**	**173**	*e*Pn	**Pn**	**02 12 42.5**	**-0.4**
MPU	**Maple Canyon**	**1.79**	**162**	*e*Pn	**Pn**	**02 12 42.9**	**-0.2**
RRI2	**Red Ridge**	**1.79**	**25**	*e*Pn	**Pn**	**02 12 44.3**	**+1.2**
RRI2				*e*Sg	**Sg**	**02 13 09.9**	**+0.1**
J14A	**Carey**	**1.81**	**332**	⇓Pb	**Pb**	**02 12 44.2**	**-1.2**
	baz=1.8,SNR=38						
K18A	**Toltan Ranch,**	**1.95**	**61**	⇑Pb	**Pb**	**02 12 47.5**	**-0.2**
	baz=2.0,SNR=168						
O17A	**Robinson Place**	**1.96**	**141**	⇓Pb	**Pb**	**02 12 46.7**	**-1.2**
	baz=2.0,SNR=26						
REDW	**Red Top Meadow**	**1.98**	**34**	*e*Pn	**Pn**	**02 12 46.3**	**+0.7**
REDW				*e*Sg	**Sg**	**02 13 14.8**	**-1.0**
J17A	**Brown Place, J**	**2.04**	**36**	⇑Pb	**Pb**	**02 12 48.3**	**-1.0**
	baz=2.1,SNR=13						
TPAW	**Teton Pass**	**2.05**	**30**	*e*Pn	**Pn**	**02 12 47.7**	**+1.1**
TPAW				*e*Sg	**Sg**	**02 13 16.5**	**-1.4**
DCID1	**Drake Creek**	**2.06**	**25**	*e*Pn	**Pn**	**02 12 46.0**	**-0.8**
DCID1				*e*Sg	**Sg**	**02 13 17.3**	**-1.0**
SNOW	**Snow King Moun**	**2.10**	**34**	*e*Pn	**Pn**	**02 12 48.1**	**+0.8**
SNOW				*e*Sg	**Sg**	**02 13 19.4**	**-0.3**
N18A	**Larsen Ranch,**	**2.16**	**109**	⇑Sb	**Sb**	**02 13 19.6**	**+1.6**
	baz=2.2						
LOHW	**Long Hollow**	**2.29**	**34**	*e*Pn	**Pn**	**02 12 50.9**	**+1.0**
BW06	**Boulder Array**	**2.33**	**62**	*e*Pn	**Pn**	**02 12 51.9**	**+1.5**
BW06				*e*Sg	**Sg**	**02 13 25.3**	**-1.5**
MOOW	**Moose Ponds**	**2.35**	**30**	*e*Pn	**Pn**	**02 12 51.8**	**+1.1**
MOOW				*e*Sg	**Sg**	**02 13 24.6**	**-3.0**
HLID	**Hailey**	**2.38**	**321**	*e*Pn	**Pn**	**02 12 52.6**	**+1.5**
HLID				*e*Sg	**Sg**	**02 13 25.8**	**-2.8**
IMW	**Indian Meadow**	**2.41**	**25**	*e*Pn	**Pn**	**02 12 52.5**	**+1.0**
IMW				*e*Sg	**Sg**	**02 13 28.0**	**-1.5**
TMUT	**Trail Mountain**	**2.58**	**160**	*e*Pn	**Pn**	**02 12 55.1**	**+1.2**
FLWY	**Flagg Ranch**	**2.65**	**27**	*e*Pn	**Pn**	**02 12 55.3**	**+0.4**
FLWY				*e*Pg	**Pg**	**02 13 00.8**	**-2.2**
FLWY				*e*Sg	**Sg**	**02 13 36.2**	**-1.1**
SRU	**San Rafael**	**2.96**	**151**	*e*Pn	**Pn**	**02 13 00.7**	**+1.5**
MCMT	**McKenzie Canyo**	**3.12**	**354**	*e*Pg	**Pg**	**02 13 07.3**	**-4.6**
MCMT				*e*Sg	**Sg**	**02 13 50.3**	**-2.1**
MSU	**Marysvale**	**3.21**	**177**	*e*Pn	**Pn**	**02 13 03.8**	**+1.2**
DLMT	**Dillon**	**3.64**	**357**	*e*Pn	**Pn**	**02 13 09.0**	**+0.5**
DLMT				*e*Sg	**Sg**	**02 14 08.1**	**-0.9**
RWWY	**Rawlins**	**3.86**	**89**	*e*Pn	**Pn**	**02 13 12.6**	**+1.2**
RWWY				*e*Pg	**Pg**	**02 13 22.4**	**-3.5**
RWWY				*e*Sg	**Sg**	**02 14 13.5**	**-2.4**
BMN	**Battle Mountai**	**3.90**	**252**	*e*Pg	**Pg**	**02 13 23.0**	**-3.7**
BMN				*e*Sg	**Sg**	**02 14 12.1**	**-5.1**
BOZ	**Bozeman (W)**	**3.96**	**7**	*e*Pn	**Pn**	**02 13 16.0**	**+3.2**
ARUT	**Antelope Range**	**4.02**	**192**	*e*Pn	**Pn**	**02 13 14.6**	**+0.9**
LRM	**Limekiln Ridge**	**4.10**	**359**	*e*Pn	**Pn**	**02 13 15.3**	**+0.5**
LRM				*e*Pg	**Pg**	**02 13 24.8**	**-5.7**
LRM				*e*Sg	**Sg**	**02 14 18.6**	**-5.0**
CCUT	**Cedar City**	**4.24**	**191**	*e*Pn	**Pn**	**02 13 17.9**	**+1.2**
PV04	**Paradox Valley**	**4.25**	**140**	*e*Pn	**Pn**	**02 13 18.6**	**+1.7**
PV04				*e*Pg	**Pg**	**02 13 30.0**	**-3.6**
PV04				*e*Sg	**Sg**	**02 14 23.7**	**-5.0**
PV01	**Paradox Valley**	**4.62**	**140**	*e*Pn	**Pn**	**02 13 24.0**	**+2.0**
PV01				*e*Pg	**Pg**	**02 13 37.3**	**-3.3**
PV01				*e*Sg	**Sg**	**02 14 35.0**	**-5.5**
WVOR	**Wild Horse Val**	**4.72**	**281**	*e*Pg	**Pb**	**02 13 31.2**	**-3.8**
WVOR				*e*Sg	**Sb**	**02 14 35.5**	**+3.6**
SMCO	**Snowmass**	**4.83**	**120**	*e*Pn	**Pn**	**02 13 26.4**	**+1.6**
SMCO				*e*Pg	**Pg**	**02 13 40.7**	**-4.0**
SMCO				*e*Sg	**Sg**	**02 14 41.5**	**-5.8**
PHWY	**Pilot Hill**	**5.20**	**92**	*e*Pn	**Pn**	**02 13 31.3**	**+1.4**
	6.2nm,0.4s						
PHWY				*e*Sg	**Sg**	**02 14 53.9**	**-5.1**
MVCO	**Mesa Verde**	**5.41**	**145**	*e*Pn	**Pn**	**02 13 35.7**	**+2.9**
	9.1nm,0.4s						
MVCO				*e*Pg	**Pg**	**02 13 49.3**	**-6.4**
MVCO				*e*Sg	**Sg**	**02 15 01.2**	**-4.5**
ISCO	**Idaho Springs**	**5.47**	**108**	*e*Pn	**Pn**	**02 13 35.9**	**+2.3**
	11nm,0.9s						
ISCO				*e*Pg	**Pg**	**02 13 49.7**	**-7.2**
ISCO				*e*Sg	**Sg**	**02 14 59.6**	**-8.1**
SLMT	**Seeley Lake**	**5.58**	**352**	*e*Pn	**Pn**	**02 13 36.9**	**+1.8**
	3.3nm,0.6s						
SLMT				*e*Pg	**Pg**	**02 13 52.7**	**-6.1**
SLMT				*e*Sg	**Sg**	**02 15 04.2**	**-6.8**
MOD	**Modoc**	**5.94**	**274**	*e*Pn	**Pn**	**02 13 41.3**	**+1.2**
	6.5nm,0.6s						
MOD				*e*Sg	**Sb**	**02 15 12.2**	**+5.4**
SDCO	**Great Sand Dun**	**6.61**	**125**	*e*Pg	**Pg**	**02 14 15.0**	**-3.7**
	1.9nm,0.8s						
CMB	**Columbia Colle**	**7.19**	**242**	*e*Pg	**Pg**	**02 14 25.0**	**-4.7**
	3.0nm,0.8s						

*ISCJB **07** 02:18:12.5±0.5,52°.01N±0°.07×178°.03E±0°.06, h131km±6km,mb4.0/36,Error ellipse: s-maj=12.4km s-min=5.8km az=163.4*

*NEIC **07** 02:18:14.2,51°.91N×177°.94E,h133km,mb4.4/15,After AEIC.*

*IDC **07** 02:18:15.5±0.7,52°.08N×178°.00E,h144km±5km,mb3.8/25, mb1 4.0/27,mb1mx3.9/31,mbtmp3.8/27,MS3.5/2, Ms1 3.5/2,ms1mx2.7/38,Error ellipse: s-maj=15.0km s-min=8.5km az=161.0*

ISC 07 02:18:13.6±0.5,52°.00N±0°.07×178°.04E±0°.07,h127km±5km, h143km±1.1km:pP-P,n71,σ0ϑ81/69,mb4.1/36,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.00**	**128**	P	**Pn**	**02 18 36.5**	**+0.3**
AMKA				S	**Sn**	**02 18 53.3**	**0.0**
SMY	**Shemya**	**2.53**	**288**	*e*P	**Pn**	**02 18 53.5**	**-0.4**
ADK	**Adak**	**3.27**	**90**	P	**Pn**	**02 19 03.7**	**+0.2**
ADK				S	**Sn**	**02 19 40.4**	**-1.6**
NIKO	**Nikolski**	**8.06**	**78**	P	**Pn**	**02 20 07.3**	**-0.4**
SPIA	**Saint Paul Isl**	**8.55**	**48**	P	**Pn**	**02 20 15.3**	**+1.0**
UNV	**Unalaska Valle**	**9.52**	**73**	P	**Pn**	**02 20 28.0**	**+0.6**
PETK	**Petropavlovsk-**	**12.43**	**283**	P	**Pn**	**02 21 06.4**	**+0.4**
	1.0nm,0.3s,baz=88,slow=17,SNR=6.2						
PETK				S	**Sn**	**02 23 17.2**	**-5.6**
	0.8nm,0.3s,baz=120,slow=35,SNR=4.2						
KDAK	**Kodiak Island**	**17.77**	**59**	P	**Pn**	**02 22 10.6**	**-2.0**
	3.1nm,0.3s,baz=304,slow=6.6,SNR=10						
PPLA	**Purkeypile**	**19.18**	**44**	*e*P	**P**	**02 22 29.4**	**+2.4**
	27nm,0.9s						
SLKM	**Skilak Lake**	**19.41**	**52**	*e*P	**P**	**02 22 29.6**	**+0.2**
SEW	**Seward**	**19.71**	**53**	*e*P	**P**	**02 22 33.7**	**+1.0**
	19nm,0.7s						
BPAW	**Bear Paw Mtn.**	**20.13**	**41**	*e*P	**P**	**02 22 38.3**	**+1.1**
	12nm,0.6s						
TRF	**Thorofare Moun**	**20.18**	**43**	*e*P	**P**	**02 22 39.8**	**+2.0**
	26nm,0.8s						
SML	**Sawmill**	**20.58**	**48**	*e*P	**P**	**02 22 43.2**	**+1.1**
	3.0nm,0.5s						
MCK	**McKinley**	**20.85**	**43**	*e*P	**P**	**02 22 46.0**	**+1.1**
	8.8nm,0.7s						
COLA	**College**	**21.67**	**40**	*e*P	**P**	**02 22 53.2**	**-0.5**
	15nm,0.8s,mb4.4						
COLD	**Coldfoot**	**21.78**	**34**	*e*P	**P**	**02 22 54.2**	**-0.6**
	2.7nm,0.8s,mb3.6						
ILAR	**Eielson Array**	**22.03**	**41**	P	**P**	**02 22 55.6**	**-1.8**
	3.2nm,0.5s,mb3.9,baz=247,slow=8.1,SNR=54						
ILAR				ScP	ScP	02 30 11.8	-3.6
	0.9nm,0.8s,baz=287,slow=2.8,SNR=8.5						
ILAR				LR	LR	02 32 13.3	
	comp=Z,30nm,18.5s,baz=197,slow=38						
PAX	**Paxson**	**22.14**	**46**	*e*P	**P**	**02 22 58.0**	**-0.6**
	11nm,0.7s,mb4.3						
DOT	**Dot Lake**	**22.91**	**45**	*e*P	**P**	**02 23 05.1**	**-1.1**
	41nm,1.2s,mb4.6						
MENT	**Mentasta**	**22.92**	**47**	*e*P	**P**	**02 23 06.9**	**+0.6**
EGAK	**Eagle**	**24.40**	**43**	*e*P	**P**	**02 23 19.1**	**-0.6**
	38nm,0.9s,mb4.7						
ASAJ	**Asahikawa**	**24.77**	**266**	P	**P**	**02 23 23.9**	**+0.7**
	9.1nm,0.8s,mb4.2,baz=77,slow=3.5,SNR=14						
ASAJ	**Asahikawa**	**24.77**	**266**	*e*P	**P**	**02 23 23.4**	**+0.1**
	4.4nm,0.9s,mb3.9						
DAWY	**Dawson**	**25.02**	**45**	*e*P	**P**	**02 23 25.4**	**0.0**
INK	**Inuvik**	**28.10**	**36**	P	**P**	**02 23 53.0**	**+0.1**
	4.2nm,0.7s,mb4.1,baz=200,slow=3.1,SNR=13						
INK	**Inuvik**	**28.10**	**36**	*e*P	**P**	**02 23 52.9**	**0.0**
	3.2nm,0.6s,mb4.0						
MAJO	**Matsushiro**	**31.98**	**257**	*e*P	**P**	**02 24 27.5**	**+0.1**
	3.9nm,0.8s,mb4.2						
MJAR	**Matsushiro Arr**	**31.98**	**257**	P	**P**	**02 24 27.3**	**-0.1**
	1.3nm,0.6s,mb3.8,baz=48,slow=6.5,SNR=7.7						
YKA	**Yellowknife Ar**	**36.23**	**46**	P	**P**	**02 25 04.1**	**+0.3**
	2.1nm,0.6s,mb4.2,baz=282,slow=8.3,SNR=17						
YKA				ScP	ScP	02 30 57.6	-2.8
	0.4nm,0.6s,baz=291,slow=3.8,SNR=4.7						
YKA	**Yellowknife Ar**	**36.23**	**46**	P	**P**	**02 25 04.1**	**+0.3**
YKA				ScP	ScP	02 30 57.6	-2.8
KSRS	**Korea Array**	**37.68**	**268**	P	**P**	**02 25 16.9**	**+0.4**
	2.2nm,0.9s,mb4.0,baz=62,slow=8.4,SNR=7.2						
YBH	**Yreka Blue Hor**	**40.73**	**80**	P	**P**	**02 25 42.1**	**+0.5**
	1.4nm,0.6s,mb4.0,baz=297,slow=9.0,SNR=4.6						
YBH	**Yreka Blue Hor**	**40.73**	**80**	P	**P**	**02 25 42.1**	**+0.5**
LRM	**Limekiln Ridge**	**44.50**	**69**	*e*P	**P**	**02 26 09.6**	**-2.5**
	22nm,0.9s,mb4.9						
SONM	**Songino Array**	**44.61**	**294**	P	**P**	**02 26 13.0**	**+0.1**
	0.9nm,0.6s,mb3.7,baz=56,slow=8.9,SNR=5.4						
SONM				pP	pP	02 26 45.0	+3.4
	0.7nm,0.5s,baz=71,slow=8.4,SNR=3.3						
SONM				PcP	PcP	02 27 52.8	-0.6
	0.8nm,0.5s,baz=62,slow=4.9,SNR=4.5						
NVAR	**Mina Array Bea**	**45.41**	**81**	P	**P**	**02 26 20.2**	**+0.9**
	0.7nm,0.5s,mb3.6,baz=295,slow=7.3,SNR=8.1						
NVAR				ScP	ScP	02 31 36.5	-0.6
	0.3nm,0.6s,baz=308,slow=4.4,SNR=3.2						
PDAR	**Pinedale Array**	**47.98**	**71**	P	**P**	**02 26 39.6**	**+0.3**
	1.0nm,0.8s,mb3.7,baz=329,slow=3.8,SNR=7.5						
ULM	**Lac du Bonnet**	**50.97**	**56**	P	**P**	**02 27 01.6**	**-0.2**
	1.3nm,0.4s,mb4.3,baz=346,slow=8.3,SNR=3.1						
GTA	**Gaotai**	**53.51**	**289**	*e*P	**P**	**02 27 21.0**	**+0.3**
GTA				pP	pP	02 27 29.2	-21
GTA				sP	sP	02 27 34.1	-30
GTA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
KEV	**Kevo**	**56.73**	**348**	*e*p	pP	02 28 17.0	+3.6
	comp=Z,0.2nm,0.3s						
ARCES	**ARCESS Array B**	**57.12**	**349**	P	**P**	**02 27 45.2**	**-1.0**
	comp=Z,2.1nm,0.8s,mb4.2,baz=30,slow=10,SNR=4.1						
ARCES	**ARCESS Array B**	**57.12**	**349**	P	**P**	**02 27 45.2**	**-1.0**
MKAR	**Makanchi Array**	**58.10**	**306**	P	**P**	**02 27 52.1**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.9,baz=51,slow=7.9,SNR=4.3						
BVAR	**Borovoye Array**	**59.13**	**318**	P	**P**	**02 28 00.1**	**-0.2**
	comp=Z,1.2nm,0.3s,mb4.4,baz=50,slow=7.7,SNR=6.8						
BVAR				pP	pP	02 28 33.5	+2.9
	comp=Z,0.9nm,0.6s,baz=68,slow=5.1,SNR=2.7						
TXAR	**Lajitas Array**	**60.48**	**79**	P	**P**	**02 28 10.4**	**+0.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=308,slow=5.2,SNR=25						
SCHQ	**Schefferville**	**60.71**	**37**	P	**P**	**02 28 11.3**	**+0.2**
	comp=Z,2.5nm,0.7s,mb4.3,baz=311,slow=8.7,SNR=5.5						
JOF	**Joensuu**	**62.47**	**344**	*e*p	**P**	**02 28 22.9**	**+0.1**
	comp=Z,0.7nm,0.3s,mb4.2						
KAF	**Kangasniemi**	**64.05**	**346**	*e*p	**P**	**02 28 31.5**	**-1.7**
	comp=Z,0.4nm,0.3s,mb3.7						
FINES	**FINESS Array B**	**64.72**	**346**	P	**P**	**02 28 36.6**	**-0.9**
	comp=Z,1.5nm,0.8s,mb3.9,baz=19,slow=7.9,SNR=9.0						
FINES				pP	pP	02 29 11.8	+3.6
	comp=Z,1.6nm,0.8s,baz=44,slow=11,SNR=2.7						
FINES				LR	LR	03 03 14.0	
	comp=Z,167nm,19.7s,baz=328,slow=42						
AKTK	**Aktyubinsk**	**66.02**	**323**	P	**P**	**02 28 45.9**	**-0.2**
AKTK				pP	pP	02 29 19.6	+2.7
AKTO	**Aktyubinsk**	**66.02**	**323**	P	**P**	**02 28 45.9**	**-0.2**
	comp=Z,1.2nm,0.6s,mb3.9,baz=51,slow=6.9,SNR=6.7						
AKTO				pP	pP	02 29 19.6	+2.7
	comp=Z,1.5nm,0.7s,baz=31,slow=5.2,SNR=3.0						
NOA	**NORSAR Array B**	**66.82**	**353**	P	**P**	**02 28 51.0**	**0.0**
	comp=Z,0.4nm,0.7s,mb3.4,baz=11,slow=6.7,SNR=4.1						
NOA				pP	pP	02 29 25.7	+3.8
	comp=Z,1.7nm,0.7s,baz=9.4,slow=6.3,SNR=5.5						
CMAR	**Chiang Mai Arr**	**69.00**	**273**	P	**P**	**02 29 05.2**	**-0.2**
	comp=Z,1.7nm,0.5s,mb4.1,baz=28,slow=6.8,SNR=7.0						
TAPN	**Taplejung**	**69.15**	**288**	*e*P	**P**	**02 29 06.8**	**+0.7**
GUN	**Gumba**	**69.80**	**290**	*e*P	**P**	**02 29 10.5**	**+0.4**
KKN	**Kakani**	**70.24**	**290**	*e*P	**P**	**02 29 12.8**	**0.0**
PKI	**Pulchoki**	**70.33**	**290**	*e*P	**P**	**02 29 13.8**	**+0.4**
PKIN	**Phulchoki**	**70.33**	**290**	*e*P	**P**	**02 29 13.3**	**-0.1**
	comp=Z,9.8nm,0.6s,mb4.8						
GKN	**Gorkha**	**70.45**	**291**	*e*P	**P**	**02 29 14.2**	**+0.1**
DMN	**Daman**	**70.48**	**290**	*e*P	**P**	**02 29 14.5**	**+0.2**
KOLN	**Koldanda**	**71.23**	**291**	*e*P	**P**	**02 29 18.4**	**-0.4**
WRA	**Warramunga Arr**	**81.14**	**221**	P	**P**	**02 30 14.0**	**-0.7**
	comp=Z,4.1nm,0.6s,mb4.5,baz=34,slow=6.2,SNR=15						
FITZ	**Fitzroy Crossi**	**83.34**	**229**	P	**P**	**02 30 26.1**	**-0.1**
	comp=Z,4.3nm,0.7s,mb4.4,baz=84,slow=3.5,SNR=6.6						
BRTR	**Keskin Array B**	**83.54**	**333**	P	**P**	**02 30 27.6**	**+0.5**
	comp=Z,0.4nm,0.7s,mb3.4,baz=92,slow=2.3,SNR=3.6						
BRTR				pP	pP	02 31 02.6	+3.4
	comp=Z,0.4nm,0.7s,baz=76,slow=1.5,SNR=2.3						
ASAR	**Alice Springs**	**84.66**	**220**	P	**P**	**02 30 32.8**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.2,baz=22,slow=5.6,SNR=9.4						
STKA	**Stephens Creek**	**89.42**	**210**	P	**P**	**02 30 56.2**	**+0.6**
	comp=Z,5.0nm,0.7s,mb4.7,baz=1.7,slow=7.2,SNR=14

BOSA Boshof 39.85 253 *e*P **P** **02 46 44.4 -0.4**
BOSA pmax pmax
comp=Z,22nm,1.3s,mb4.6
BOSA Boshof 39.85 253 *e*P **P** **02 46 44.4 -0.4**
comp=Z,22nm,1.3s,mb4.6
LBTB Lobatse 39.90 259 P **P** **02 46 43.9 -1.3**
comp=Z,2.4nm,0.7s,mb4.0,baz=97,slow=8.1,SNR=3.2
IPM Ipoh 41.60 52 *e*P **P** **02 46 58.0 -1.3**
comp=Z,21nm,1.1s,mb4.8
MAW Mawson 44.06 184 P **P** **02 47 19.7 +1.1**
comp=Z,4.6nm,1.0s,mb4.2,baz=331,slow=13,SNR=7.7
MAW LR LR 03 01 00.8
comp=Z,274nm,21.3s,MS4.1,baz=3.1,slow=30
TSUM Tsumeb 48.33 265 P **P** **02 47 53.1 +0.2**
comp=Z,4.8nm,1.1s,mb4.5,baz=131,slow=8.7,SNR=6.3
TSUM Tsumeb 48.33 265 *e*P **P** **02 47 53.1 +0.2**
comp=Z,6.9nm,1.2s,mb4.7
CASY Casey 49.77 160 *e*P **P** **02 48 03.9 +0.6**
comp=Z,6.6nm,0.7s,mb4.7
CMAR Chiang Mai Arr 50.83 37 P **P** **02 48 12.4 +0.5**
comp=Z,1.9nm,0.3s,mb4.5,baz=229,slow=6.9,SNR=24
CMAR LR LR 03 07 30.4
comp=Z,291nm,18.3s,MS4.3,baz=208,slow=34
CHG Chiang Mai 51.12 37 P **P** **02 48 14.4 +0.3**
FITZ Fitzroy Crossi 52.45 95 P **P** **02 48 25.0 +0.9**
comp=Z,11nm,1.0s,mb4.7,baz=242,slow=6.3,SNR=14
FITZ Fitzroy Crossi 52.45 95 ⇓*i*P **P** **02 48 24.9 +0.8**
comp=Z,15nm,0.9s,mb4.9
FITZ Fitzroy Crossi 52.45 95 *e*P **P** **02 48 24.3 +0.2**
comp=Z,15nm,1.2s,mb4.8
KOLN Koldanda 52.98 16 *e*P **P** **02 48 28.0 +0.2**
comp=Z,36nm,1.1s,mb5.2
ODAN Odare 53.19 20 *e*P **P** **02 48 29.5 +0.2**
DMN Daman 53.22 17 *e*P **P** **02 48 30.2 +0.6**
PKI Pulchoki 53.27 18 *e*P **P** **02 48 29.7 -0.2**
PKIN Phulchoki 53.27 18 *e*P **P** **02 48 29.5 -0.4**
KKN Kakani 53.44 17 *e*P **P** **02 48 31.5 +0.3**
comp=Z,18nm,0.7s,mb5.1
GKN Gorkha 53.47 17 *e*P **P** **02 48 31.2 -0.2**
DANN Dangsing 53.58 16 *e*P **P** **02 48 32.7 +0.5**
comp=Z,43nm,0.9s,mb5.5
SHL Shillong 53.59 25 *e*PKP **P** **02 48 32.5 +0.2**
GUN Gumba 53.72 18 *e*P **P** **02 48 33.5 +0.3**
comp=Z,52nm,0.9s,mb5.6
TAPN Taplejung 53.75 20 *e*P **P** **02 48 34.0 +0.6**
comp=Z,45nm,1.0s,mb5.4
ISRV Sarvestan 55.13 343 *e*P **P** **02 48 44.2 +0.8**
IBAF Bafgh 56.62 346 *e*P **P** **02 48 53.9 -0.2**
IMEH Mehriz 56.65 345 *e*P **P** **02 48 53.3 -1.0**
IDAH Dahanechah 56.92 350 *e*P **P** **02 48 56.8 +0.6**
LSA Lhasa 57.06 22 P **P** **02 48 58.6 +1.3**
ITEG Tejag 57.25 349 *e*P **P** **02 48 58.9 +0.3**
ICHK Chekchek 57.52 345 *e*P **P** **02 49 00.2 -0.2**
QIZ Qiongzhong 57.92 46 P **P** **02 49 04.1 +0.6**
QIZ S **S** **02 57 05.3 +0.5**
QIZ pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
QIZ LR LR
comp=N,340nm,18.5s
QIZ LR LR
comp=Z,410nm,16.3s,MS4.6
KBL Kabul 57.97 360 *e*P **P** **02 49 03.8 +0.2**
KBL pmax pmax
comp=Z,11nm,1.1s,mb4.8
KBL Kabul 57.97 360 *e*P **P** **02 49 03.8 +0.2**
comp=Z,11nm,1.1s,mb4.8
KMI Kunming 58.27 36 P **P** **02 49 07.1 +1.2**
KMI pP 02 49 12.6
KMI sP sP 02 49 15.1 +9.1
KMI PP PP 02 51 20.9 +5.8
KMI S **S** **02 57 11.2 +2.0**
KMI SS SS 03 01 04.8 +3.3
KMI pmax pmax
comp=Z,15nm,1.1s,mb4.9
KMI pmax pmax
comp=Z,140nm,5.2s
KMI LR LR
comp=N,190nm,26.9s
KMI LR LR
comp=E,240nm,17.7s
KMI LR LR
comp=Z,290nm,17.7s
ASAR Alice Springs 58.46 104 P **P** **02 49 07.3 -0.1**
comp=Z,11nm,0.6s,mb5.0,baz=254,slow=6.1,SNR=167
ASAR PcP PcP 02 49 57.7 -0.5
comp=Z,2.1nm,0.9s,baz=263,slow=3.8,SNR=2.9
WRA Warramunga Arr 59.83 100 P **P** **02 49 16.6 -0.4**
comp=Z,16nm,0.8s,mb5.1,baz=255,slow=6.7,SNR=116
WRA LR LR 03 12 49.5
comp=Z,278nm,20.5s,MS4.4,baz=250,slow=34
WB2 Warramunga Arr 59.84 100 *e*P **P** **02 49 15.7 -1.3**
KAKA Kakadu 60.36 91 *e*P **P** **02 49 20.5 -0.2**
comp=Z,13nm,0.9s,mb5.0
KAKA Kakadu 60.36 91 *e*P **P** **02 49 20.2 -0.4**
comp=Z,45nm,0.9s,mb5.5
IANJ Anjilo 60.72 345 *e*P **P** **02 49 23.0 +0.4**
GYA Guiyang 61.49 38 P **P** **02 49 31.0 +3.0**
GYA PP PP 02 51 48.7 +5.1
GYA ScP ScP 02 54 12.6 -0.4
GYA S **S** **02 57 52.0 +1.4**
GYA SS SS 03 01 54.3 +2.4
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.3
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,480nm,19.1s,MS4.8
GYA LR LR
comp=E,490nm,21.5s,MS4.8
GYA LR LR
comp=Z,450nm,20.7s,MS4.6
IRAZ Razeghan 61.68 342 *e*P **P** **02 49 29.5 +0.3**
EIL Elat 62.64 326 LR LR 03 12 08.8
comp=Z,138nm,20.9s,MS4.1,baz=272,slow=32
KSH Kashi 63.22 6 P **P** **02 49 36.4 -2.9**
KSH *e*pP 02 49 41.0
KSH *e*sP sP 02 49 43.4 +4.0
KSH *e*PcP PcP 02 50 15.6 -1.1
KSH *e*PP PP 02 51 55.7 -2.9
KSH *e*ScP ScP 02 54 15.7 -4.7
KSH *e*PcS PcS 02 54 17.4 -2.8
KSH *e*S **S** **02 58 01.1 -11**
KSH *e*ScS ScS 02 59 24.4 -9.1
KSH *e*SS SS 03 02 06.5 -12
KSH pmax pmax
comp=Z,20nm,1.0s,mb5.2
KSH pmax pmax
comp=Z,300nm,3.1s
KSH LR LR
comp=N,260nm,12.0s
KSH LR LR
comp=E,170nm,7.0s
KSH LR LR
comp=Z,700nm,19.4s
STKA Stephens Creek 63.23 115 P **P** **02 49 40.1 +0.3**
comp=Z,4.4nm,1.0s,mb4.6,baz=35,slow=1.3,SNR=6.7
STKA LR LR 03 13 46.1
comp=Z,430nm,20.3s,MS4.6,baz=107,slow=33
STKA Stephens Creek 63.23 115 *e*P **P** **02 49 39.2 -0.6**
comp=Z,3.6nm,0.9s,mb4.5
CD2 Chengdu 63.48 33 *e*P **P** **02 49 40.6 -0.7**
CD2 pP 02 49 45.3
CD2 sP sP 02 49 48.4 +7.1
CD2 S **S** **02 58 13.6 -2.0**
CD2 sS sS 02 58 21.3 +5.7
CD2 SS SS 03 02 23.1 0.0
CD2 pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
CD2 pmax pmax
comp=Z,40nm,5.2s
CD2 LR LR
comp=N,130nm,13.6s
CD2 LR LR
comp=Z,120nm,14.2s,MS4.2
VNA2 Neumayer--Watz 63.49 201 *e*P **P** **02 49 41.7 +0.9**
VNA2 *e* 02 49 46.3
VNA1 Neumayer--Stat 63.76 201 *e*P **P** **02 49 43.0 +0.4**
VNA1 *e* 02 49 48.4
VNA3 Neumayer Olymp 64.25 201 *e*P **P** **02 49 43.8 -2.0**
AAK Ala-Archa 66.20 4 *c i*P **P** **02 49 59.1 +0.4**
AAK pmax pmax
comp=Z,8.0nm,1.7s,mb4.7
AAK Ala-Archa 66.20 4 *e*P **P** **02 49 59.2 +0.4**
comp=Z,5.6nm,1.0s,mb4.8
QSPA South Pole Qui 66.38 180 P **P** **02 49 59.8 +0.2**
comp=Z,2.9nm,0.7s,mb4.6,baz=271,slow=2.4,SNR=19
QSPA South Pole Qui 66.38 180 *e*P **P** **02 49 59.8 +0.2**
comp=Z,28nm,1.5s,mb5.3
KK31 Karatay Array 66.52 1 *i*P **P** **02 50 01.2 +0.4**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.5
KKAR Karatay Array 66.52 1 *e*P **P** **02 50 00.8 0.0**
KKAR pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
KKAR Karatay Array 66.52 1 *e*P **P** **02 50 00.8 +0.1**
comp=Z,8.3nm,1.1s,mb4.9
GNI Garni 67.63 340 *e*P **P** **02 50 08.2 +0.3**
GNI pmax pmax
comp=Z,4.0nm,0.6s
GNI Garni 67.63 340 *e*P **P** **02 50 08.2 +0.3**
comp=Z,3.9nm,0.6s,mb4.8
CSS Prodhromos 67.73 328 *e*P **P** **02 50 08.2 -0.4**
comp=Z,16nm,1.3s,mb5.1
LZH Lanzhou 67.78 30 *e*P **P** **02 50 09.3 +0.4**
LZH pP 02 50 14.4
LZH sP sP 02 50 18.0 +9.0
LZH PP PP 02 52 45.3 +6.7
LZH *e*S S 02 59 06.3 -1.6
LZH sS sS 02 59 13.2 +5.2
LZH SS SS 03 03 24.0 -5.8
LZH pmax pmax
comp=Z,24nm,1.1s,mb5.3
LZH pmax pmax
comp=Z,78nm,4.8s
LZH LR LR
comp=N,170nm,14.4s,MS4.5
LZH LR LR
comp=E,130nm,12.7s,MS4.5
LZH LR LR
comp=Z,190nm,17.7s,MS4.4
MALT Malatya 68.28 334 *e*P **P** **02 50 12.8 +0.8**
MALT pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
MALT Malatya 68.28 334 *e*P **P** **02 50 12.8 +0.8**
comp=Z,2.9nm,0.8s,mb4.6
GTA Gaotai 68.91 25 ⇑P **P** **02 50 16.6 +0.6**
GTA pP 02 50 20.4
GTA sP sP 02 50 23.4 +7.4
GTA S S 02 59 20.6 -0.7
GTA SS SS 03 03 46.2 -1.0
GTA pmax pmax
comp=Z,10.0nm,1.2s,mb4.9
GTA pmax pmax
comp=Z,260nm,5.0s
GTA LR LR
comp=N,200nm,18.5s,MS4.5
GTA LR LR
comp=E,210nm,21.1s,MS4.5
GTA LR LR
comp=Z,230nm,18.7s,MS4.4
WMQ Urumqi 69.27 14 *e*P **P** **02 50 18.0 -0.1**
WMQ sP sP 02 50 25.0 +6.9
WMQ PP PP 02 52 53.0 +1.5
WMQ ScP 02 54 43.0
WMQ S S 02 59 22.0 -3.4
WMQ ScS ScS 03 00 16.0 -4.2
WMQ SS SS 03 03 53.0 +0.4
WMQ pmax pmax
comp=Z,15nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,97nm,6.0s
WMQ LR LR
comp=N,210nm,20.0s,MS4.5
WMQ LR LR
comp=E,230nm,20.0s,MS4.5
WMQ LR LR
comp=Z,180nm,20.0s,MS4.3
ZEI Tsey 70.27 340 *e*P **P** **02 50 23.3 -1.0**
ZEI pmax pmax
comp=Z,17nm,1.3s,mb5.0
CTAO Charters Tower 70.47 104 *e*P **P** **02 50 26.1 0.0**
CTAO pmax pmax
comp=Z,20nm,1.5s,mb5.0
CTAO Charters Tower 70.47 104 *e*P **P** **02 50 26.1 0.0**
comp=Z,20nm,1.5s,mb5.0
MK31 Makanchi Array 71.15 9 *e*P **P** **02 50 28.4 -1.2**
MKAR Makanchi Array 71.15 9 P **P** **02 50 28.5 -1.1**
comp=Z,5.5nm,0.8s,mb4.7,baz=190,slow=6.0,SNR=30
MKAR LR LR 03 20 13.5
comp=Z,127nm,20.8s,MS4.2,baz=176,slow=35
BRTR Keskin Array B 71.47 332 P **P** **02 50 31.4 -0.3**
comp=Z,3.5nm,1.0s,mb4.4,baz=162,slow=6.3,SNR=15
BRTR LR LR 03 20 06.6
comp=Z,84nm,18.2s,MS4.0,baz=308,slow=34
BRTR Keskin Array B 71.47 332 *c e*P **P** **02 50 31.3 -0.4**
BRTR pmax pmax
comp=Z,4.0nm,1.0s
KIV Kislovodsk 71.72 340 *e*P **P** **02 50 35.0 +1.9**
KIV pmax pmax
comp=Z,13nm,1.0s,mb5.0
KIV Kislovodsk 71.72 340 *e*P **P** **02 50 35.0 +1.9**
comp=Z,13nm,1.0s,mb5.0
NJ2 Nanjing 72.81 42 *e*P **P** **02 50 40.6 +0.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
AB31 Akbulak array 73.17 353 *i*P **P** **02 50 40.2 -1.4**
AB31 pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ABKAR Akbulak array 73.17 353 *e*P **P** **02 50 40.3 -1.3**
comp=Z,4.1nm,0.7s,mb4.7
ANN Anapa 74.24 337 *e*P **P** **02 50 47.3 -0.7**
ANN pmax pmax
comp=Z,26nm,1.1s,mb5.2
AKTO Aktyubinsk 74.55 352 P **P** **02 50 48.5 -1.1**
AKTO pmax pmax
comp=Z,2.0nm,1.4s,mb4.0
KURK Kurchatov 74.56 6 *d i*P **P** **02 50 48.3 -1.4**
KURK pmax pmax
comp=Z,30nm,2.5s,mb4.9
KURK Kurchatov 74.56 6 *e*P **P** **02 50 49.4 -0.3**
comp=Z,13nm,1.2s,mb4.8
HHC Hu-ho-hao-te 75.20 32 *e*P **P** **02 50 56.2 +2.5**
HHC pP 02 51 01.0
HHC sP sP 02 51 03.2 +9.5
HHC PcP PcP 02 51 09.8 +2.7
HHC PP PP 02 53 47.9 +5.5
HHC S S 03 00 35.8 +2.2
HHC sS sS 03 00 43.6 +10
HHC SKS 03 01 00.8
HHC ScS ScS 03 01 05.5 -2.1
HHC SS SS 03 05 28.9 +5.3
HHC pmax pmax
comp=Z,19nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,86nm,7.1s
HHC LR LR
comp=N,590nm,17.6s,MS5.3
HHC LR LR
comp=E,1μm,17.5s,MS5.3
HHC LR LR
comp=Z,890nm,18.6s,MS5.1
TORD Torodi Ar. Bea 75.73 291 P **P** **02 50 56.3 -1.0**
comp=Z,2.9nm,1.0s,mb4.4,baz=114,slow=4.6,SNR=13
TORD LR LR 03 23 42.5
comp=Z,315nm,18.5s,MS4.7,baz=125,slow=35
BRVK Borovoye 76.48 0 *e*P **P** **02 51 00.6 0.0**
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
BRVK Borovoye 76.48 0 *e*P **P** **02 51 00.6 -0.1**
comp=Z,3.7nm,0.7s,mb4.6
BJI Beijing 76.92 35 P **P** **02 51 03.8 +0.3**
BJI pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BJI LR LR
comp=N,74nm,22.9s,MS4.3
BJI LR LR
comp=E,160nm,22.9s,MS4.3
BJI LR LR
comp=Z,240nm,22.9s,MS4.5
TIRR Tirgusor 77.58 331 *e*P **P** **02 51 06.4 -0.7**
TIRR pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
TIRR Tirgusor 77.58 331 *e*P **P** **02 51 06.4 -0.7**
comp=Z,5.2nm,0.8s,mb4.7
TIRR Tirgusor 77.58 331 ⇓*i*P **P** **02 51 06.3 -0.8**
VRHR Novokhopersk 78.47 342 *e*P **P** **02 51 12.2 +0.4**
VRHR pmax pmax
comp=N,7.0nm,0.8s
VRHR pmax pmax
comp=E,9.0nm,0.8s
VRHR pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
ZALV Zalesovo Beam 78.49 9 P **P** **02 51 10.8 -1.1**
comp=Z,4.2nm,0.8s,mb4.6,baz=186,slow=5.2,SNR=12
ZALV LR LR 03 22 22.6
comp=Z,83nm,21.4s,MS4.0,baz=229,slow=33
ZALV Zalesovo Beam 78.49 9 P **P** **02 51 10.8 -1.1**
ZALV LR LR 03 22 22.6
DBIC Dimbokro 78.52 283 LR LR 03 23 49.7
comp=Z,379nm,18.1s,MS4.8,baz=106,slow=34
SONM Songino Array 78.58 24 P **P** **02 51 12.9 +0.3**
comp=Z,5.7nm,1.1s,mb4.5,baz=211,slow=5.3,SNR=19
SONM LR LR 03 23 57.3
comp=Z,229nm,21.6s,MS4.5,baz=339,slow=34
ULN Ulaanbaatar 78.86 25 *e*P **P** **02 51 13.6 -0.5**
ULN pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ULN Ulaanbaatar 78.86 25 *e*P **P** **02 51 13.6 -0.5**
comp=Z,3.9nm,0.8s,mb4.5
VORD Divnogorie 79.02 341 *e*P **P** **02 51 13.6 -1.3**
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,20nm,0.7s
VORD pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
NVS Novosibirsk 79.14 8 ⇓*i*P **P** **02 51 13.3 -2.2**
NVS pmax pmax
comp=N,8.0nm,1.7s
NVS pmax pmax
comp=Z,22nm,1.7s,mb4.9
NVS pmax pmax
comp=E,6.0nm,1.1s
VSR Storozhevoye 79.28 341 *e*P **P** **02 51 15.3 -1.0**
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
VSR pmax pmax
comp=E,2.0nm,0.3s
VRI Vrincioaia 79.43 331 ⇓P **P** **02 51 17.0 -0.3**
VRI Vrincioaia 79.43 331 ⇓*i*P **P** **02 51 17.0 -0.3**
MLR Muntele Rosu 79.49 330 ⇑P **P** **02 51 17.8 +0.2**
MLR Muntele Rosu 79.49 330 ⇑*i*P **P** **02 51 17.8 +0.2**
ZAK Zakamensk 79.62 21 *e*P **P** **02 51 13.0 -5.2**
ZAK pmax pmax
comp=Z,2.0nm,2.0s,mb3.7
VOIR 79.86 330 ⇑P **P** **02 51 18.9 -0.7**
VOIR 79.86 330 ⇑*i*P **P** **02 51 18.9 -0.7**
ARU Arti 80.39 354 *c i*P **P** **02 51 22.4 +0.2**
ARU 02 54 23.3
ARU S S 03 01 29.3 +0.3
ARU SS SS 03 06 39.4 -1.8
ARU pmax pmax
comp=Z,25nm,2.5s,mb4.7
ARU Arti 80.39 354 *e*P **P** **02 51 21.6 -0.6**
comp=Z,12nm,1.4s,mb4.6
SVE Sverdlovsk 80.60 355 *e*P **P** **02 51 24.1 +0.8**
BURAR Bucovina Array 81.44 331 ⇓P **P** **02 51 27.7 -0.3**
BURAR Bucovina Array 81.44 331 ⇓*i*P **P** **02 51 27.7 -0.3**
BUR08 Bucovina Ar. S 81.47 331 *e*P **P** **02 51 27.8 -0.3**
BZS Buzias 81.61 328 ⇓P **P** **02 51 28.1 -0.9**
BZS Buzias 81.61 328 ⇓*i*P **P** **02 51 28.1 -0.9**
RPZ Rata Peaks 81.79 134 LR LR 03 19 17.9
comp=Z,20nm,18.3s,MS3.5,baz=152,slow=29
DRGR 81.95 330 ⇓P **P** **02 51 30.5 -0.2**
DRGR 81.95 330 ⇓*i*P **P** **02 51 30.5 -0.2**
KSRS Korea Array 81.97 43 P **P** **02 51 30.1 -1.0**
comp=Z,2.7nm,0.7s,mb4.5,baz=237,slow=5.4,SNR=13
KSRS LR LR 03 24 15.1
comp=Z,142nm,19.0s,MS4.3,baz=229,slow=33
KEST Kesra 82.06 315 LR LR 03 27 16.2
comp=Z,69nm,18.7s,MS4.0,baz=335,slow=35
KIEV Kiev 82.22 335 *e*P **P** **02 51 30.7 -1.3**
KIEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
KIEV Kiev 82.22 335 *e*P **P** **02 51 30.7 -1.3**
comp=Z,6.9nm,0.7s,mb4.9
OBN Obninsk 83.45 342 P **P** **02 51 39.0 +0.7**
OBN *e* 02 51 45.3
OBN pmax pmax
comp=Z,13nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.2
PKSM Moragy 83.49 327 ⇑P **P** **02 51 38.2 -0.6**
PKSM Moragy 83.49 327 ⇑*i*P **P** **02 51 38.2 -0.6**
UZH Uzhgorod 83.50 331 *e*P **P** **02 51 38.3 -0.4**
UZH *e* 02 51 45.9
KOLS Kolonicke sedl 83.73 331 *e*P **P** **02 51 40.4 +0.5**
KOLS *e* 02 51 47.5
KOLS pmax pmax
comp=Z,8.0nm,1.7s,mb4.7
KOLS Kolonicke sedl 83.73 331 *e*P **P** **02 51 40.4 +0.5**
comp=Z,8.4nm,1.7s,mb4.7
KOLS *e*PcP PcP 02 51 47.5 +3.4
KOLS Kolonicke sedl 83.73 331 *e*P **P** **02 51 40.4 +0.5**
KOLS *e*pP 02 51 47.5
KWP Kalwaria Pacla 84.05 332 *e*P **P** **02 51 40.8 -0.8**
KWP pmax pmax
comp=Z,19nm,1.3s,mb5.2
KWP Kalwaria Pacla 84.05 332 *e*P **P** **02 51 40.8 -0.8**
comp=Z,19nm,1.3s,mb5.2
CRVS Cervenica-Dubn 84.07 330 *e*P **P** **02 51 42.1 +0.4**
CRVS *e* 02 51 50.6
CRVS Cervenica-Dubn 84.07 330 *e*P **P** **02 51 42.1 +0.4**
CRVS *e*pP 02 51 50.6
KECS Kecovo 84.21 330 *e*P **P** **02 51 44.2 +1.8**
KECS Kecovo 84.21 330 *e*pP **P** **02 51 44.2 +1.8**
VYHS Vyhne 84.99 329 *e*P **P** **02 51 46.7 +0.3**
VYHS pmax pmax
comp=Z,6.0nm,1.4s,mb4.6
VYHS Vyhne 84.99 329 *e*P **P** **02 51 46.7 +0.3**
comp=Z,6.4nm,1.4s,mb4.7
VYHS Vyhne 84.99 329 *e*P **P** **02 51 46.7 +0.3**
KOLL Kolacno 85.26 329 *e*P **P** **02 51 49.3 +1.6**
KOLL Kolacno 85.26 329 *e*P **P** **02 51 49.3 +1.6**
ZST Bratislava 85.62 328 *e*P **P** **02 51 50.9 +1.4**
ZST pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
ZST Bratislava 85.62 328 *e*P **P** **02 51 50.9 +1.4**
comp=Z,5.5nm,0.8s,mb4.7
ZST Bratislava 85.62 328 *e*P **P** **02 51 50.9 +1.4**
OKC Ostrava-Krasne 86.26 330 *e*P **P** **02 51 55.2 +2.6**
OKC Ostrava-Krasne 86.26 330 *e*P **P** **02 51 55.2 +2.6**
MORC Moravsky Berou 86.50 329 *e*P **P** **02 51 54.1 +0.3**
MORC pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
MORC Moravsky Berou 86.50 329 *e*P **P** **02 51 54.1 +0.3**
comp=Z,3.2nm,0.9s,mb4.5
HNR Honiara 86.65 99 LR LR 03 27 37.2
comp=Z,146nm,19.0s,MS4.4,baz=134,slow=34
PRGR Permogore 87.23 349 *e*P **P** **02 51 54.6 -2.5**
PRGR pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
MDJ Mudanjiang 87.35 38 P **P** **02 51 58.9 +0.8**
MDJ pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
DPC Dobruska-Polom 87.46 329 *e*P **P** **02 51 59.3 +0.8**
DPC Dobruska-Polom 87.46 329 *e*P **P** **02 51 59.3 +0.8**
UPC Upice 87.72 329 *e*P **P** **02 52 07.3 +7.6**
KLMR Klimovskoe 87.74 346 *e*P **P** **02 51 58.0 -1.6**
KLMR pmax pmax
comp=Z,39nm,1.8s,mb5.4
KHC Kasperske Hory 87.98 327 *e*P **P** **02 52 00.7 -0.3**
KHC Kasperske Hory 87.98 327 *e*P **P** **02 51 59.9 -1.2**
comp=Z,6.7nm,1.3s,mb4.8
KHC Kasperske Hory 87.98 327 *e*P **P** **02 52 00.7 -0.3**
PRU Pruhonice 88.07 328 *e*P **P** **02 52 02.6 +1.2**
PRU Pruhonice 88.07 328 *e*P **P** **02 52 02.6 +1.2**
FETA Feichten 88.12 324 ⇓*i*P **P** **02 52 02.7 +0.9**
comp=Z,5.3nm,0.9s,mb4.8
MJAR Matsushiro Arr 88.23 49 P **P** **02 52 02.1 -0.4**
comp=Z,0.6nm,0.7s,mb4.0,baz=215,slow=7.2,SNR=5.0
MJAR LR LR 03 31 34.7
comp=Z,113nm,18.8s,MS4.3,baz=210,slow=36
MJAR Matsushiro Arr 88.23 49 P **P** **02 52 02.1 -0.4**
MJAR LR LR 03 31 34.7
PVCC Panska Ves 88.42 328 *e*P **P** **02 52 04.7 +1.7**
PVCC Panska Ves 88.42 328 *e*P **P** **02 52 04.7 +1.7**
DAVOX Davos/Dischmat 88.43 324 P **P** **02 52 02.8 -0.4**
comp=Z,5.9nm,0.7s,mb5.0,baz=152,slow=12,SNR=8.7
DAVA Damuels 88.74 324 ⇓*i*P **P** **02 52 04.2 -0.5**
comp=Z,7.2nm,0.6s,mb5.1
BRG Berggiesshubel 88.94 328 *e*P **P** **02 52 06.9 +1.4**
comp=Z,14nm,1.6s,mb4.9
NKC Novy Kostel 89.25 327 *e*P **P** **02 52 08.1 +1.1**

NKC	**Novy Kostel**	**89.25**	**327**	*eP*	**P**	**02 52 08.1**	**+1.1**
GRFO	**Grafenberg**	**89.53**	**326**	*eP*	**P**	**02 52 07.6**	**-0.7**
GRFO				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.9						
GRFO	**Grafenberg**	**89.53**	**326**	*eP*	**P**	**02 52 07.6**	**-0.7**
	comp=Z,6.2nm,0.7s,mb5.0						
CLL	**Collm**	**89.68**	**328**	*eP*	**P**	**02 52 11.0**	**+2.1**
CLL	**Collm**	**89.68**	**328**	*eP*	**P**	**02 52 10.0**	**+1.1**
KLR	**Kul'dur**	**91.29**	**35**	*eP*	**P**	**02 52 12.3**	**-4.2**
JOF	**Joensuu**	**91.51**	**344**	*eP*	**P**	**02 52 13.7**	**-3.5**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
JOF	**Joensuu**	**91.51**	**344**	*ep*	**P**	**02 52 13.7**	**-3.5**
	comp=Z,1.5nm,0.6s,mb4.5						
FINES	**FINES Array B**	**91.80**	**341**	P	**P**	**02 52 16.6**	**-2.0**
	comp=Z,2.2nm,0.8s,mb4.5,baz=108,slow=6.2,SNR=5.0						
KAF	**Kangasniemi**	**92.25**	**341**	*eP*	**P**	**02 52 11.1**	**-10**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
KAF	**Kangasniemi**	**92.25**	**341**	*ep*	**P**	**02 52 11.1**	**-10**
	comp=Z,2.2nm,0.8s,mb4.5						
ESDC	**Sonseca Array**	**93.07**	**312**	P	**P**	**02 52 24.4**	**-0.6**
	comp=Z,0.3nm,0.6s,mb3.9,baz=113,slow=4.2,SNR=4.7						
NOA	**NORSAR Array B**	**96.63**	**335**	P	**P**	**02 52 40.0**	**-0.7**
	comp=Z,0.5nm,0.8s,mb4.2,baz=128,slow=8.1,SNR=3.4						
ARCES	**ARCESS Array B**	**98.22**	**346**	LR	LR	03 37 38.7	
	comp=Z,103nm,18.3s,MS4.4,baz=106,slow=36						
LPAZ	**La Paz**	**122.60**	**230**	PKP	PKPdf	02 58 08.4	+0.7
	comp=Z,0.7nm,0.9s,baz=34,slow=3.6,SNR=3.0						
LPAZ	**La Paz**	**122.60**	**230**	*e*PKPdf	PKPdf	02 58 08.2	+0.5
ILAR	**Eielson Array**	**132.68**	**20**	PKP	PKPdf	02 58 26.0	+0.6
	comp=Z,0.5nm,1.1s,baz=308,slow=4.4,SNR=3.2						
OTAV	**Otavalo**	**141.12**	**238**	*e*PKPdf	PKPdf	02 58 44.2	+1.5
YKA	**Yellowknife Ar**	**141.17**	**3**	PKhKP	PKPpre	02 58 35.2	
	comp=Z,0.3nm,0.7s,baz=334,slow=4.1,SNR=3.3						
YKA				PKP	PKPdf	02 58 41.3	+0.1
	comp=Z,0.6nm,0.8s,baz=340,slow=2.4,SNR=4.7						
YKA				PP	PP	03 01 41.1	-1.3
	comp=Z,1.6nm,1.1s,baz=355,slow=6.1,SNR=4.3						
YKA	**Yellowknife Ar**	**141.17**	**3**	PKP	PKPpre	02 58 35.2	
YKA				PKP	PKPdf	02 58 41.3	+0.1
YKA				PP	PP	03 01 41.1	-1.3
SSPA	**Standing Stone**	**147.92**	**309**	*e*PKPbc	PKPbc	02 58 55.5	-1.1
FFC	**Flin Flon**	**148.41**	**351**	*e*PKP2	PKPab	02 58 56.1	-4.5
ULM	**Lac du Bonnet**	**151.19**	**340**	PKPbc	PKPbc	02 59 02.7	-1.7
ULM	**Lac du Bonnet**	**151.19**	**340**	PKPbc	PKPbc	02 59 02.7	-1.7
EYMN	**Ely**	**151.52**	**333**	*e*PKPbc	PKPbc	02 59 04.3	-0.9
ACSO	**Alum Creek Sta**	**151.62**	**312**	*e*PKPdf	PKPdf	02 58 59.6	+0.1
BSMT	**Bassoo Peak**	**155.70**	**7**	*e*PKPab	PKPab	02 59 29.7	-1.5
ECSD	**EROS Data Cent**	**157.03**	**334**	*e*PKPab	PKPab	02 59 36.5	-0.6
BOZ	**Bozeman (W)**	**158.13**	**2**	*e*PKIKP	PKPdf	02 59 08.8	+0.6
BOZ				*e*		02 59 41.0	
MOOW	**Moose Ponds**	**160.05**	**1**	*e*PKPdf	PKPdf	02 59 09.6	-0.9
MOOW				*e*PKPab	PKPab	02 59 49.9	-0.2
TPAW	**Teton Pass**	**160.30**	**1**	*e*PKPdf	PKPdf	02 59 10.8	0.0
BW06	**Boulder Array**	**161.01**	**358**	*e*PKPdf	PKPdf	02 59 11.3	-0.4
PDAR	**Pinedale Array**	**161.01**	**358**	PKP	PKPdf	02 59 10.9	-0.7
	comp=Z,0.4nm,0.6s,baz=66,slow=1.8,SNR=4.8						
PDAR				PKPab	PKPab	02 59 54.1	-0.2
	comp=Z,0.3nm,0.5s,baz=327,slow=6.5,SNR=2.0						
HWUT	**Hardware Ranch**	**162.16**	**3**	*e*PKPdf	PKPdf	02 59 11.9	-1.0
HWUT				*e*PKPab	PKPab	02 59 58.4	-1.0
DUG	**Dugway**	**163.48**	**6**	*e*PKIKP	PKPdf	02 59 13.0	-1.2
NVAR	**Mina Array Bea**	**163.91**	**23**	PKP	PKPdf	02 59 15.8	+1.1
	comp=Z,0.2nm,0.7s,baz=318,slow=1.2,SNR=2.8						
NVAR				PKPab	PKPab	03 00 07.5	+0.3
	comp=Z,1.4nm,0.9s,baz=306,slow=3.0,SNR=7.0						
NVAR	**Mina Array Bea**	**163.91**	**23**	PKP	PKPdf	02 59 15.8	+1.1
NVAR				PKPab	PKPab	03 00 07.5	+0.3
ANMO	**Albuquerque**	**168.30**	**344**	*e*PKIKP	PKPdf	02 59 17.7	-0.6
JCT	**Junction City**	**168.37**	**308**	*e*PKIKP	PKPdf	02 59 18.6	+0.1
LAZ	**Ladron**	**168.99**	**345**	*e*PKPdf	PKPdf	02 59 17.6	-1.1
MNTX	**Cornudas Mount**	**170.88**	**331**	*e*PKPdf	PKPdf	02 59 20.4	+0.5
MNTX				*e*PKPab	PKPab	03 00 37.4	-0.8
TUC	**Tucson**	**171.46**	**2**	*e*PKIKP	PKPdf	02 59 19.7	-0.5
TXAR	**Lajitas Array**	**171.74**	**314**	PKP	PKPdf	02 59 20.1	-0.4
	comp=Z,1.1nm,1.2s,baz=211,slow=1.5,SNR=4.1						
TXAR				PKPab	PKPab	03 00 41.6	-0.5
	comp=Z,0.8nm,0.7s,baz=58,slow=4.0,SNR=9.2						

IDC 07 02:44:48.8±586.0, 33°.18N×148°.34E, h0km, Error ellipse: s-maj=1157.0km s-min=60.1km az=116.0, North Pacific Ocean

IDC 07 03:05:58.3±598.0, 33°.11N×148°.49E, h0km, Error ellipse: s-maj=1180.0km s-min=60.8km az=116.0, North Pacific Ocean

*IDC **07** 03:13:35.4±6.5, 17°.87S×178°.64W, h600km±78km, mb3.2/9, mb1 3.5/9, mb1mx3.3/17, mbtmp3.2/9, Error ellipse: s-maj=44.3km s-min=22.7km az=134.0*
*ISCJB **07** 03:13:38.0±0.8, 17°.9S±0°.2×178°.8W±0°.2, h650km, mb3.7/11, Error ellipse: s-maj=31.9km s-min=13.3km az=152.7*
*NEIC **07** 03:13:41.1±5.4, 17°.94S×178°.83W, h675km±73km, mb4.1/2, Error ellipse: s-maj=42.0km s-min=20.5km az=112.0*
ISC 07 03:13:39.4±0.8, 18°.0S±0°.2×178°.8W±0°.2, h650km, n14, σ0°.51/13, mb3.7/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**33.11**	**261**	*eP*	**P**	**03 19 24.5**	**-0.5**
	1.6nm,0.3s,mb4.0						
PMG	**Port Moresby**	**34.13**	**280**	*eP*	**P**	**03 19 34.3**	**+0.7**
	2.0nm,0.3s,mb4.1						
COEN	**Coen**	**36.77**	**271**	*eP*	**P**	**03 19 55.4**	**+0.3**
STKA	**Stephens Creek**	**38.31**	**241**	P	**P**	**03 20 07.8**	**+0.5**
	2.5nm,0.4s,mb4.0,baz=92,slow=9.4,SNR=7.1						
WB2	**Warramunga Arr**	**44.28**	**260**	*eP*	**P**	**03 20 53.5**	**-0.8**
WRA	**Warramunga Arr**	**44.29**	**260**	P	**P**	**03 20 54.0**	**-0.4**
	2.9nm,0.5s,mb3.9,baz=94,slow=7.0,SNR=121						
WRA				PcP	PcP	03 22 25.4	+1.6
	0.2nm,0.4s,baz=90,slow=3.2,SNR=2.6						
ASAR	**Alice Springs**	**44.45**	**254**	P	**P**	**03 20 56.0**	**+0.4**
	24nm,0.6s,mb4.7,baz=88,slow=8.4,SNR=417						
ASAR				PcP	PcP	03 22 25.7	+1.4
	0.3nm,0.4s,baz=103,slow=3.9,SNR=3.5						
PETK	**Petropavlovsk-**	**73.64**	**345**	P	**P**	**03 24 08.8**	**+0.3**
	0.9nm,0.6s,mb3.5,baz=141,slow=10,SNR=3.9						
NVAR	**Mina Array Bea**	**79.69**	**44**	P	**P**	**03 24 41.4**	**-0.2**
	0.7nm,0.7s,mb3.2,baz=224,slow=8.8,SNR=6.7						
MAW	**Mawson**	**83.70**	**200**	P	**P**	**03 25 01.4**	**-0.1**
	0.6nm,0.4s,mb3.5,baz=120,slow=8.1,SNR=4.5						
ILAR	**Eielson Array**	**86.01**	**13**	P	**P**	**03 25 11.6**	**-0.9**
	0.4nm,0.4s,mb3.4,baz=223,slow=5.0,SNR=16						
TXAR	**Lajitas Array**	**86.30**	**58**	P	**P**	**03 25 15.5**	**+0.8**
	0.4nm,0.7s,mb3.2,baz=221,slow=6.3,SNR=6.8						
PDAR	**Pinedale Array**	**87.62**	**44**	P	**P**	**03 25 20.4**	**0.0**
	0.2nm,0.4s,mb3.1,baz=216,slow=2.9,SNR=4.8						
CLL	**Collm**	**145.43**	**347**	*e*PKPbc	PKPbc	03 32 08.0	+1.6

IDC 07 03:49:15.7±11.0, 7°.10S×129°.56E, h382km±155km, mb2.7/1, mb1 2.6/4, mb1mx2.5/17, mbtmp2.5/4, Error ellipse: s-maj=77.3km s-min=60.7km az=11.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.59**	**199**	P	Pn	03 51 49.3	-3.0
	0.0nm,0.3s,baz=25,slow=12,SNR=6.2						
FITZ				S	S	03 54 02.0	+1.7
	0.2nm,0.3s,baz=172,slow=18,SNR=4.4						
WRA	**Warramunga Arr**	**13.58**	**161**	P	P	03 52 12.2	-1.3
	0.2nm,0.3s,baz=341,slow=11,SNR=16						
WRA				S	S	03 54 34.1	-6.6
	0.2nm,0.3s,baz=337,slow=23,SNR=7.2						
ASAR	**Alice Springs**	**17.00**	**166**	P	P	03 52 51.8	+1.4
	0.1nm,0.3s,baz=348,slow=9.7,SNR=9.3						
MKAR	**Makanchi Array**	**68.07**	**327**	P	P	03 59 35.8	+0.5
	0.2nm,0.4s,baz=109,slow=11,SNR=3.3						

*ISCJB **07** 04:17:58.9±0.4, 23°.76S±0°.07×69°.53E±0°.09, h10km, mb4.4/35, MS3.8/7, Error ellipse: s-maj=12.1km s-min=10.4km az=159.8*
*IDC **07** 04:17:59.6±0.6, 23°.66S×69°.51E, h0km, mb4.3/14, mb1 4.4/14, mb1mx4.2/22, mbtmp4.3/14, MS3.8/7, Ms1 3.8/7, ms1mx3.4/30, Error ellipse: s-maj=20.0km s-min=16.8km az=43.0*
*NEIC **07** 04:18:00.9±0.3, 23°.67S×69°.51E, h10km, mb4.5/17, Error ellipse: s-maj=9.6km s-min=7.0km az=224.0*
ISC 07 04:18:00.8±0.4, 23°.77S±0°.07×69°.48E±0°.09, h10km, n58, σ0°.68/49, mb4.4/35, MS3.8/7, 2C-3D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**38.49**	**301**	P	**P**	**04 25 24.0**	**+0.6**
	1.7nm,0.8s,mb3.8,baz=180,slow=24,SNR=3.9						
KMBO	**Kilima Mbogo**	**38.49**	**301**	P	**P**	**04 25 24.0**	**+0.6**
BOSA	**Boshof**	**39.81**	**253**	LR	LR	04 39 02.6	
	comp=Z,172nm,18.5s,MS3.9,baz=166,slow=32						
MAW	**Mawson**	**44.04**	**184**	P	**P**	**04 26 10.3**	**+1.9**
	2.2nm,1.0s,mb3.8,baz=0.4,slow=10,SNR=5.0						
CMAR	**Chiang Mai Arr**	**50.87**	**37**	P	**P**	**04 27 03.0**	**+0.9**
	1.0nm,0.4s,mb4.1,baz=229,slow=7.5,SNR=9.6						
CMAR				LR	LR	04 45 42.8	
	comp=Z,86nm,18.0s,MS3.8,baz=198,slow=33						
FITZ	**Fitzroy Crossi**	**52.48**	**95**	P	**P**	**04 27 15.0**	**+0.6**
	2.2nm,0.8s,mb4.2,baz=249,slow=7.7,SNR=6.6						
FITZ	**Fitzroy Crossi**	**52.48**	**95**	*eP*	**P**	**04 27 14.8**	**+0.5**
	2.6nm,0.8s,mb4.2						
KOLN	**Koldanda**	**53.02**	**16**	*eP*	**P**	**04 27 18.3**	**+0.4**
	13nm,0.9s,mb4.9						
DMN	**Daman**	**53.25**	**17**	*eP*	**P**	**04 27 20.4**	**+0.7**
	14nm,0.8s,mb5.0						
KKN	**Kakani**	**53.47**	**17**	*eP*	**P**	**04 27 21.5**	**+0.2**
GKN	**Gorkha**	**53.50**	**17**	*eP*	**P**	**04 27 21.6**	**+0.1**
	13nm,0.9s,mb4.8						
DANN	**Dangsing**	**53.61**	**16**	*eP*	**P**	**04 27 22.6**	**+0.3**
	21nm,0.8s,mb5.1						
GUN	**Gumba**	**53.76**	**18**	*eP*	**P**	**04 27 24.1**	**+0.7**
	24nm,0.8s,mb5.2						
TAPN	**Taplejung**	**53.78**	**20**	*eP*	**P**	**04 27 24.1**	**+0.5**
	23nm,0.9s,mb5.1						
ASAR	**Alice Springs**	**58.49**	**104**	P	**P**	**04 27 57.8**	**+0.2**
	4.4nm,0.7s,mb4.6,baz=253,slow=6.0,SNR=68						
WRA	**Warramunga Arr**	**59.87**	**100**	P	**P**	**04 28 07.3**	**+0.2**
	5.7nm,0.8s,mb4.7,baz=255,slow=7.0,SNR=39						
WRA				LR	LR	04 50 53.3	
	comp=Z,100nm,18.2s,MS4.0,baz=340,slow=33						
WB2	**Warramunga Arr**	**59.88**	**100**	*eP*	**P**	**04 28 07.1**	**-0.1**
KAKA	**Kakadu**	**60.40**	**91**	*eP*	**P**	**04 28 09.9**	**-0.9**
	15nm,0.9s,mb5.0						
EIL	**Elat**	**62.64**	**326**	LR	LR	04 52 39.3	
	comp=Z,50nm,21.6s,MS3.6,baz=98,slow=33						
VNA2	**Neumayer--Watz**	**63.46**	**201**	*e*	**P**	**04 28 29.0**	**-1.5**
	baz=67,slow=7.5						
VNA3	**Neumayer Olymp**	**64.22**	**201**	*e*	**P**	**04 28 34.3**	**-1.2**
VNA3				*e*		04 28 40.8	
MMAI	**Mount Meron Ar**	**65.14**	**329**	LR	LR	04 53 05.0	
	comp=Z,51nm,18.1s,MS3.8,baz=195,slow=32						
AAK	**Ala-Archa**	**66.23**	**4**	*eP*	**P**	**04 28 48.9**	**+0.2**
	2.3nm,0.5s,mb4.5						
QSPA	**South Pole Qui**	**66.36**	**180**	P	**P**	**04 28 50.3**	**+1.1**
	3.0nm,0.7s,mb4.4,baz=263,slow=2.9,SNR=12						
QSPA	**South Pole Qui**	**66.36**	**180**	*eP*	**P**	**04 28 50.0**	**+0.7**
	4.1nm,0.8s,mb4.5						
KKAR	**Karatay Array**	**66.54**	**1**	*eP*	**P**	**04 28 50.6**	**-0.2**
	0.7nm,0.4s,mb4.0						
MALT	**Malatya**	**68.28**	**334**	*eP*	**P**	**04 29 02.9**	**+1.0**
	1.8nm,0.7s,mb4.2						
MK31	**Makanchi Array**	**71.17**	**9**	*eP*	**P**	**04 29 18.8**	**-0.8**
MKAR	**Makanchi Array**	**71.17**	**9**	P	**P**	**04 29 18.9**	**-0.7**
	2.1nm,0.7s,mb4.2,baz=189,slow=6.0,SNR=16						
BRTR	**Keskin Array B**	**71.47**	**332**	P	**P**	**04 29 21.9**	**+0.4**
	2.1nm,0.9s,mb4.0,baz=154,slow=7.5,SNR=11						
KIV	**Kislovodsk**	**71.73**	**340**	*eP*	**P**	**04 29 22.8**	**-0.1**
	5.1nm,0.7s,mb4.6						
ABKAR	**Akbulak array**	**73.18**	**353**	*eP*	**P**	**04 29 30.9**	**-0.7**
	5.1nm,0.8s,mb4.5						
KURK	**Kurchatov**	**74.59**	**6**	*eP*	**P**	**04 29 39.3**	**-0.4**
	2.1nm,0.8s,mb4.1						
TORD	**Torodi Ar. Bea**	**75.71**	**291**	P	**P**	**04 29 47.3**	**+0.3**
	1.4nm,0.9s,mb3.9,baz=102,slow=6.6,SNR=7.8						
TORD				LR	LR	04 59 47.8	
	comp=Z,62nm,18.9s,MS3.9,baz=70,slow=33						
BRVK	**Borovoye**	**76.50**	**0**	*eP*	**P**	**04 29 49.9**	**-0.7**
	3.0nm,0.8s,mb4.3						
TIRR	**Tirgusor**	**77.58**	**331**	*eP*	**P**	**04 29 56.8**	**-0.1**
	5.9nm,0.8s,mb4.6						
TIRR	**Tirgusor**	**77.58**	**331**	↓*iP*	**P**	**04 29 57.5**	**+0.5**
DBIC	**Dimbokro**	**78.49**	**283**	P	**P**	**04 30 03.2**	**+0.5**
	4.5nm,1.0s,mb4.3,baz=88,slow=8.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**78.52**	**9**	P	**P**	**04 30 01.6**	**-0.3**
	1.7nm,0.6s,mb4.2,baz=191,slow=4.7,SNR=6.7						
SONM	**Songino Array**	**78.61**	**24**	P	**P**	**04 30 02.1**	**-0.5**
	2.4nm,1.0s,mb4.1,baz=224,slow=5.8,SNR=7.9						
ULN	**Ulaanbaatar**	**78.89**	**25**	*eP*	**P**	**04 30 03.5**	**-0.6**
	1.9nm,0.6s,mb4.2						
VRI	**Vrincioaia**	**79.43**	**331**	↓*iP*	**P**	**04 30 07.9**	**+0.8**
MLR	**Muntele Rosu**	**79.49**	**330**	↑*iP*	**P**	**04 30 08.6**	**+1.2**
VOIR		**79.86**	**330**	↓*iP*	**P**	**04 30 09.7**	**+0.3**
ARU	**Arti**	**80.41**	**354**	*eP*	**P**	**04 30 12.0**	**-0.1**
	2.3nm,0.6s,mb4.3						
KSRS	**Korea Array**	**82.02**	**43**	P	**P**	**04 30 20.7**	**-0.5**
	1.5nm,0.8s,mb4.0,baz=243,slow=3.6,SNR=5.8						
KEST	**Kesra**	**82.05**	**315**	LR	LR	05 05 34.4	
	comp=Z,29nm,20.3s,MS3.6,baz=188,slow=35						
KIEV	**Kiev**	**82.22**	**335**	*eP*	**P**	**04 30 21.2**	**-0.7**
	5.3nm,0.8s,mb4.5						
PKSM	**Moragy**	**83.48**	**327**	↑*iP*	**P**	**04 30 27.7**	**-0.9**
MORC	**Moravsky Berou**	**86.50**	**329**	*eP*	**P**	**04 30 43.5**	**-0.1**
	2.5nm,0.8s,mb4.5						
KHC	**Kasperske Hory**	**87.98**	**327**	*eP*	**P**	**04 30 50.1**	**-0.8**
	2.7nm,0.8s,mb4.5						
GRFO	**Grafenberg**	**89.52**	**326**	*eP*	**P**	**04 30 57.9**	**-0.2**
	6.0nm,0.8s,mb5.0						
CLL	**Collm**	**89.67**	**328**	*eP*	**P**	**04 30 58.0**	**-0.8**
ULM	**Lac du Bonnet**	**151.20**	**340**	PKPbc	PKPbc	04 37 53.1	-1.1
	1.1nm,0.5s,baz=18,slow=3.2,SNR=4.0						
EYMN	**Ely**	**151.52**	**333**	*e*PKPbc	PKPbc	04 37 54.4	-0.6
PDAR	**Pinedale Array**	**161.03**	**358**	PKP	PKPdf	04 38 01.3	-0.2
	0.5nm,0.9s,baz=54,slow=4.7,SNR=4.5						
PDAR				PKPab	PKPab	04 38 44.9	+0.6
	0.2nm,0.4s,baz=343,slow=5.8,SNR=2.0						
NVAR	**Mina Array Bea**	**163.95**	**23**	PKPab	PKPab	04 38 57.6	+0.4
	0.7nm,0.8s,baz=280,slow=4.1,SNR=5.5						
TXAR	**Lajitas Array**	**171.73**	**314**	PKPab	PKPab	04 39 32.5	+0.6
	0.6nm,0.8s,baz=75,slow=3.8,SNR=7.3						

IDC 07 04:23:01.2±584.0, 33°.09N×148°.72E, h0km, Error ellipse: s-maj=1153.0km s-min=59.4km az=116.0, North Pacific Ocean

IDC 07 04:33:54.6±2.7, 16°.30S×175°.72W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.4/3, Error ellipse: s-maj=333.5km s-min=30.5km az=158.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.47**	**258**	P	P	04 42 31.5	-0.1
	0.1nm,0.5s,baz=93,slow=7.0,SNR=7.0						
ASAR	**Alice Springs**	**47.72**	**253**	P	P	04 42 33.4	0.0
	0.9nm,0.5s,baz=88,slow=8.7,SNR=21						
TXAR	**Lajitas Array**	**82.96**	**57**	P	P	04 46 22.0	+0.2
	0.2nm,0.8s,baz=238,slow=5.2,SNR=2.6						

*IDC **07** 04:43:08.7±1.9, 32°.56N×47°.21E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/32, Error ellipse: s-maj=44.8km s-min=23.2km az=152.0*
*THR **07** 04:43:09.3±0.7, 32°.31N×47°.31E, h15km, ML3.6*
*CSEM **07** 04:43:10.6±0.2, 32°.42N×47°.25E, h10km, ML3.7, Error ellipse: s-maj=7.6km s-min=5.6km az=95.0*
*NEIC **07** 04:43:10.7, 32°.40N×47°.42E, h15km, mb3.8/3, ML3.6(THR), MN3.7(TEH), After THR.*
*TEH **07** 04:43:11.7, 32°.38N×47°.27E, h11km*
*SGS **07** 04:43:11.2, 32°.32N×47°.34E, h1km*
ISC 07 04:43:12.1±1.3, 32°.41N±0°.03×47°.24E±0°.04, h20km±9km, n93, σ1°.09/97, mb3.7/10, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.78**	**7**	*e*Pn	**Pn**	**04 43 42.5**	**+0.8**
IKOM				*e*Sg	**Sg**	**04 44 08.3**	**-1.1**
IKOM	**Komasi**	**1.78**	**7**	*e*Pn	**Pn**	**04 43 42.5**	**+0.8**
IGHG	**Ghaleghazi**	**2.00**	**344**	*e*Pn	**Pn**	**04 43 46.0**	**+1.3**
IGHG				*e*		04 44 24.8	
	comp=Z,9μm,0.3s						
IGHG	**Ghaleghazi**	**2.00**	**344**	*e*Pn	**Pn**	**04 43 46.0**	**+1.3**
IVIS	**Veis**	**2.14**	**351**	*e*Pn	**Pn**	**04 43 47.7**	**+1.0**
IVIS				*e*Sg	**Sg**	**04 44 19.2**	**-1.8**
IVIS				*e*		04 44 26.8	
	comp=Z,4μm,0.2s						
IVIS	**Veis**	**2.14**	**351**	*e*Pn	**Pn**	**04 43 47.7**	**+1.0**
IDHR	**Dehrash**	**2.40**	**343**	*e*Pn	**Pn**	**04 43 51.2**	**+1.0**
IDHR	**Dehrash**	**2.40**	**343**	*e*Pn	**Pn**	**04 43 51.2**	**+1.0**
ILIN	**Lien**	**2.52**	**355**	*e*Pn	**Pn**	**04 43 53.1**	**+1.3**
ILIN				*e*		04 44 07.6	
	comp=N,3μm,0.2s						
ILIN	**Lien**	**2.52**	**355**	*e*Pn	**Pn**	**04 43 53.1**	**+1.3**
BHD	**Baghdad**	**2.56**	**290**	*ex*	**Pn**	**04 43 52.0**	**-0.4**
BHD				*ex*	**Sn**	**04 44 26.0**	**+3.0**
MIB	**Mutribah**	**2.60**	**178**	*eP*	**Pn**	**04 43 54.4**	**+1.4**
MIB				AML	AML	04 44 30.4	
	comp=Z,141nm,0.5s						
MIB	**Mutribah**	**2.60**	**178**	*eP*	**Pn**	**04 43 54.4**	**+1.4**
SNGE	**Sanandaj**	**2.68**	**2**	Pn	**Pn**	**04 43 55.0**	**+0.9**
SNGE	**Sanandaj**	**2.68**	**2**	*e*Pn	**Pn**	**04 43 55.5**	**+1.4**
SNGE	**Sanandaj**	**2.68**	**2**	Pn	**Pn**	**04 43 55.0**	**+0.9**
IPIR	**Pirpir**	**3.09**	**84**	*e*Pn	**Pn**	**04 44 00.5**	**+0.7**
IPIR				*e*		04 44 57.5	
	comp=Z,2μm,0.3s						
IPIR	**Pirpir**	**3.09**	**84**	*e*Pn	**Pn**	**04 44 00.5**	**+0.7**
NAY	**Al-Naaiem**	**3.15**	**180**	*eP*	**Pn**	**04 44 01.5**	**+1.0**
NAY				AML	AML	04 44 47.0	
	comp=Z,33nm,0.5s						
NAY	**Al-Naaiem**	**3.15**	**180**	*eP*	**Pn**	**04 44 01.5**	**+1.0**
ASAO	**Ashtian**	**3.16**	**47**	*eP*	**Pn**	**04 44 01.7**	**+1.1**
ASAO				AML	AML	04 44 50.8	
	comp=N,141nm,0.6s						
KBD	**Kabd**	**3.25**	**173**	*eP*	**Pn**	**04 44 02.6**	**+0.8**
KBD				AML	AML	04 44 45.9	
	comp=Z,33nm,0.5s						
KBD	**Kabd**	**3.25**	**173**	*eP*	**Pn**	**04 44 02.7**	**+0.8**
QRN	**Al-Qurain**	**3.70**	**171**	*eP*	**Pn**	**04 44 09.4**	**+1.3**
IRAZ	**Razeghan**	**3.73**	**36**	*e*	Px	04 44 20.8	
	comp=Z,2μm,0.2s						
IRAZ				*e*Pn	**Pn**	**04 44 09.6**	**+1.1**
IKLH	**Kolahrood**	**3.76**	**75**	*e*	Px	04 44 21.6	
	comp=Z,1μm,0.3s						
IKLH				*e*Pn	**Pn**	**04 44 09.1**	**+0.2**
GHVR	**GHOM**	**3.97**	**58**	*e*Pn	**Pn**	**04 44 11.5**	**-0.3**
GHVR				AML	AML	04 45 01.5	
	comp=E,91nm,0.6s						
IGAR	**Gharneh**	**4.06**	**89**	*e*Pn	**Pn**	**04 44 13.3**	**+0.2**
IGAR				*e*		04 45 01.4	
	comp=Z,727nm,0.1s						
KFJS		**4.25**	**172**	P	**Pn**	**04 44 15.9**	**+0.2**
KFJS		**4.25**	**172**	P	**Pn**	**04 44 15.9**	**+0.2**
IZEF	**Zefreh**	**4.32**	**82**	*e*Pn	**Pn**	**04 44 16.7**	**+0.1**
IZEF				*e*		04 44 29.8	
	comp=Z,597nm,0.3s						
IZEF	**Zefreh**	**4.32**	**82**	*e*Pn	**Pn**	**04 44 16.7**	**+0.1**
IR3	**Iran Long-Peri**	**4.39**	**45**	*e*Pn	**Pn**	**04 44 18.9**	**+1.3**
IR3	**Iran Long-Peri**	**4.39**	**45**	*e*Pn	**Pn**	**04 44 18.9**	**+1.3**
ZNJK	**Zanjan**	**4.42**	**15**	Pn	**Pn**	**04 44 19.0**	**+1.0**
ZNJK	**Zanjan**	**4.42**	**15**	*e*Pn	**Pn**	**04 44 19.1**	**+1.2**
ZNJK	**Zanjan**	**4.42**	**15**	*e*Pn	**Pn**	**04 44 19.1**	**+1.1**
ISFB	**Sefidab**	**4.61**	**64**	*e*Pn	**Pn**	**04 44 19.8**	**-0.8**
ISFB				*e*		04 44 39.5	
	comp=Z,340nm,0.1s						
ISFB	**Sefidab**	**4.61**	**64**	*e*Pn	**Pn**	**04 44 19

s-min=12.3km az=77.0
*ISCJB **07** 04:58:51.9±0.5, 4°.70N±0°.03×126°.58E±0°.06, h102km±4km, mb4.4/43, Error ellipse: s-maj=10.2km s-min=4.2km az=171.7*
*NEIC **07** 04:58:52.7±0.9, 4°.69N×126°.51E, h97km±8km, mb4.6/18, Error ellipse: s-maj=11.7km s-min=4.6km az=75.0*
*DJA **07** 04:58:55, 4°.51N×126°.50E, h100km, mb4.9/8*
ISC 07 04:58:53.1±0.4, 4°.71N±0°.03×126°.57E±0°.06, h96km±4km, h99km±1.5km:pP-P, n89, σ1§20/93, mb4.4/43, 3C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.45**	**226**	P	**Pn**	**04 59 16.6**	**-2.0**
SGSI				S	**Sn**	**04 59 37.5**	**-0.4**
GSPH	**General Santos**	**2.12**	**310⇑**	*e*P	**Pn**	**04 59 22.5**	**-4.6**
GSPH				*i* S	**Sn**	**04 59 48.2**	**-4.8**
MATI	**Mati**	**2.25**	**352**	*e*P	**Pn**	**04 59 27.5**	**-1.3**
MATI				*e*S	**Sn**	**04 59 54.0**	**-2.1**
DAV	**Davao City (W)**	**2.55**	**337**	P	**Pn**	**04 59 33.1**	**+0.4**
	79nm,0.3s,baz=107,slow=3.9,SNR=8.8						
DAV				S	**Sn**	**05 00 06.8**	**+3.6**
	150nm,0.3s,baz=126,slow=20,SNR=7.3						
DAV	**Davao City (W)**	**2.55**	**337**	*e*Pn	**Pn**	**04 59 32.6**	**-0.2**
DAV				*e*Sn	**Sn**	**05 00 06.1**	**+2.9**
DMPH	**Davao City--Mi**	**2.59**	**336⇑**	*e*P	**Pn**	**04 59 32.9**	**-0.4**
DMPH				*e*S	**Sn**	**05 00 08.8**	**+4.6**
KCP	**Kidapawan**	**2.72**	**327⇓**	*e*P	**Pn**	**04 59 34.6**	**-0.5**
KCP				*i* S	Px	04 59 48.2	
BUKP	**Musuan**	**3.49**	**335**	*e*P	**Pn**	**04 59 47.4**	**+2.1**
MNI	**Manado**	**3.67**	**208**	P	**Pn**	**04 59 47.4**	**-0.4**
TNTI	**Ternate**	**3.99**	**169**	P	**Pn**	**04 59 50.5**	**-1.6**
TNTI				S	**Sn**	**05 00 39.1**	**+1.3**
PAGZ	**Pagadian**	**4.45**	**315**	*e*P	**Pn**	**04 59 50.0**	**-8.3**
KMSI	**Cibinong**	**4.85**	**212**	P	**Pn**	**05 00 04.1**	**+0.3**
SCPH	**Surigao**	**5.16**	**348⇑**	*e*P	**Pn**	**05 00 09.3**	**+1.4**
LBMI	**Labuha**	**5.39**	**170**	P	**Pn**	**05 00 10.5**	**-0.6**
	0.6nm2μm130nm,0.8s						
TBP	**Tagbilaran**	**5.64**	**332**	*e*P	**Pn**	**05 00 15.4**	**+1.0**
MRSI	**Marisa**	**6.25**	**228**	P	**Pn**	**05 00 23.2**	**+0.4**
	0.7nm2μm154nm,0.6s						
LUWI	**Luwuk**	**6.86**	**214**	P	**Pn**	**05 00 33.4**	**+2.3**
MYLDM	**Lahad Datu**	**8.06**	**274**	P	**Pn**	**05 00 50.2**	**+2.8**
	57nm,1.1s						
KDI	**Kendari**	**9.47**	**205**	P	**Pn**	**05 01 04.7**	**-1.9**
	454nm26nm,1.1s						
TTSI	**Tana Toraja**	**10.24**	**221**	P	**Pn**	**05 01 20.5**	**+3.4**
TLE	**Tual**	**11.98**	**149**	P	**Pn**	**05 01 42.7**	**+2.1**
	6μm411nm,1.0s						
SBUM	**Sibu**	**14.50**	**262**	P	**Pn**	**05 02 22.6**	**+8.9**
KAKA	**Kakadu**	**18.26**	**161**	*e*P	**Pn**	**05 02 56.9**	**-3.3**
	36nm,0.7s						
KAKA	**Kakadu**	**18.26**	**161**	P	**Pn**	**05 02 57.0**	**-3.2**
	231nm31nm,0.7s						
TPUB	**Ta-pu**	**19.36**	**343**	*e*P	**Pn**	**05 03 10.1**	**-3.1**
	28nm,0.6s						
GUMO	**Guam**	**20.09**	**63**	LR	LR	05 09 57.8	
	comp=Z,60nm,19.4s,baz=220,slow=33						
KNA	**Kununurra**	**20.44**	**174**	*e*P	**P**	**05 03 23.2**	**+0.3**
	19nm,0.7s						
KNA	**Kununurra**	**20.44**	**174**	P	**P**	**05 03 22.6**	**-0.3**
	753nm91nm,0.8s						
FITZ	**Fitzroy Crossi**	**22.68**	**182**	P	**P**	**05 03 46.4**	**-0.3**
	17nm,0.9s,mb4.4,baz=15,slow=11,SNR=36						
FITZ	**Fitzroy Crossi**	**22.68**	**182**	*e*P	**P**	**05 03 44.8**	**-1.9**
	30nm,1.0s,mb4.6						
FITZ	**Fitzroy Crossi**	**22.68**	**182**	*e*P	**P**	**05 03 45.4**	**-1.3**
	72nm,1.5s,mb4.8						
FITZ	**Fitzroy Crossi**	**22.68**	**182**	P	**P**	**05 03 44.3**	**-2.4**
COEN	**Coen**	**24.80**	**139**	*e*P	**P**	**05 04 06.3**	**0.0**
	22nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**25.66**	**163**	P	**P**	**05 04 13.4**	**-0.6**
	6.6nm,0.7s,mb4.2,baz=344,slow=10.0,SNR=47						
WRA				ScP	ScP	05 11 17.3	+4.0
	1.5nm,0.9s,baz=332,slow=3.6,SNR=8.1						
WRA	**Warramunga Arr**	**25.66**	**163**	P	**P**	**05 04 13.4**	**-0.6**
WRA				ScP	ScP	05 11 17.3	+4.0
WB2	**Warramunga Arr**	**25.66**	**163**	*e*P	**P**	**05 04 13.2**	**-0.8**
MBWA	**Marble Bar**	**26.57**	**194**	*e*P	**P**	**05 04 22.4**	**+0.2**
	18nm,0.9s,mb4.6						
CBIJ	**Chichi jima**	**26.79**	**32**	LR	LR	05 14 26.1	
	comp=Z,45nm,18.1s,baz=314,slow=35						
NJ2	**Nanjing**	**28.15**	**346**	*e*P	**P**	**05 04 45.7**	**+9.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
GYA	**Guiyang**	**28.82**	**321**	P	**P**	**05 04 44.0**	**+1.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
ASAR	**Alice Springs**	**29.09**	**166**	P	**P**	**05 04 45.0**	**+0.3**
	comp=Z,1.7nm,0.6s,mb3.8,baz=356,slow=8.1,SNR=7.5						
ASAR				ScP	ScP	05 11 27.9	+4.3
	comp=Z,1.1nm,0.7s,baz=350,slow=2.6,SNR=11						
CMAR	**Chiang Mai Arr**	**30.25**	**299**	ScP	ScP	05 11 31.7	+4.2
	comp=Z,0.6nm,0.6s,baz=129,slow=2.1,SNR=5.4						
KMI	**Kunming**	**30.59**	**314**	P	**P**	**05 05 00.5**	**+2.6**
KMI				pP	pP	05 05 23.5	+3.8
KMI				sP	sP	05 05 35.5	+4.6
KMI				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.0						
KSRS	**Korea Array**	**32.62**	**2**	P	**P**	**05 05 15.2**	**-0.4**
	comp=Z,0.9nm,0.5s,mb3.9,baz=172,slow=9.7,SNR=4.5						
MJAR	**Matsushiro Arr**	**33.44**	**17**	LR	LR	05 17 09.3	
	comp=Z,40nm,18.4s,baz=200,slow=33						
CD2	**Chengdu**	**33.77**	**323**	*e*P	**P**	**05 05 28.1**	**+2.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
FORT	**Forrest**	**35.31**	**178**	*e*P	**P**	**05 05 39.3**	**+0.3**
	comp=Z,16nm,0.6s,mb5.0						
FORT	**Forrest**	**35.31**	**178**	*e*P	**P**	**05 05 39.1**	**+0.2**
	comp=Z,19nm,0.6s,mb5.1						
HNR	**Honiara**	**36.10**	**113**	LR	LR	05 18 06.4	
	comp=Z,63nm,19.9s,baz=107,slow=32						
BJI	**Beijing**	**36.41**	**346**	P	**P**	**05 05 48.5**	**+0.3**
BJI				pP	pP	05 06 10.6	+0.2
BJI				PP	PP	05 07 14.9	+1.9
BJI				PcP	PcP	05 08 11.1	+0.5
BJI				S	**S**	**05 11 27.2**	**+4.5**
BJI				ScP	ScP	05 11 49.6	+1.0
BJI				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
BJI				pmax	pmax		
	comp=Z,91nm,4.7s						
KLBR	**Kellerberrin**	**37.06**	**193**	*e*P	**P**	**05 05 54.3**	**+0.4**
	comp=Z,12nm,0.9s,mb4.8						
LZH	**Lanzhou**	**37.59**	**329**	*e*P	**P**	**05 05 57.5**	**-0.8**
LZH				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.7						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
EIDS	**Eidsvold**	**38.21**	**143**	*e*P	**P**	**05 06 04.6**	**+0.9**
HHC	**Hu-ho-hao-te**	**38.43**	**342**	*e*P	**P**	**05 06 07.1**	**+1.8**
HHC				pP	pP	05 06 29.8	+2.2
HHC				sP	sP	05 06 41.4	+2.7
HHC				PP	PP	05 07 41.8	+6.7
HHC				PcP	PcP	05 08 19.0	+2.2
HHC				S	**S**	**05 11 56.0**	**+2.7**
HHC				PcS	PcS	05 12 06.2	+0.2
HHC				sS	sS	05 12 34.9	+3.1
HHC				SS	SS	05 14 41.5	-4.8
HHC				ScS	ScS	05 16 05.4	-1.0
HHC				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
HHC				pmax	pmax		
	comp=Z,56nm,5.1s						
HHC				LR	LR		
	comp=N,39nm,18.2s						
HHC				LR	LR		
	comp=E,39nm,18.0s						
HHC				LR	LR		
	comp=Z,37nm,18.4s						
CN2	**Changchun**	**38.95**	**359**	*e*P	**P**	**05 06 12.3**	**+2.7**
STKA	**Stephens Creek**	**39.09**	**160**	P	**P**	**05 06 11.6**	**+0.6**
	comp=Z,5.1nm,0.5s,mb4.6,baz=342,slow=7.7,SNR=14						
STKA	**Stephens Creek**	**39.09**	**160**	*e*P	**P**	**05 06 11.2**	**+0.3**
	comp=Z,4.4nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**39.09**	**160**	*e*P	**P**	**05 06 11.1**	**+0.2**
	comp=Z,1.1nm,0.6s,mb3.9						
SHL	**Shillong**	**39.18**	**306**	*e*PKP	**P**	**05 06 11.3**	**-0.5**
MDJ	**Mudanjiang**	**39.84**	**3**	P	**P**	**05 06 17.3**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,25nm,4.3s						
ASAJ	**Asahikawa**	**41.71**	**17**	*e*P	**P**	**05 06 32.1**	**-0.3**
	comp=Z,2.4nm,0.8s,mb4.0						
GTA	**Gaotai**	**42.19**	**329**	*e*P	**P**	**05 06 41.7**	**+5.4**
GTA				pP	pP	05 07 04.5	+5.6
GTA				sP	sP	05 07 16.2	+6.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.8						
ARMA	**Armidale**	**42.36**	**147**	*e*P	**P**	**05 06 40.5**	**+2.6**
PALK	**Pallekele**	**45.68**	**276**	*e*P	**P**	**05 07 03.4**	**-1.2**
	comp=Z,47nm,1.5s,mb5.0						
ULN	**Ulaanbaatar**	**46.15**	**342**	*e*P	**P**	**05 07 09.0**	**+1.2**
	comp=Z,3.9nm,0.8s,mb4.2						
SONM	**Songino Array**	**46.33**	**341**	P	**P**	**05 07 09.0**	**-0.2**
	comp=Z,1.3nm,0.6s,mb3.9,baz=148,slow=7.0,SNR=3.8						
WMQ	**Urumqi**	**51.84**	**325**	*e*P	**P**	**05 07 52.0**	**+0.6**
WMQ				sP	sP	05 08 27.0	+1.5
WMQ				PP	PP	05 09 52.0	+1.9
WMQ				S	**S**	**05 15 05.0**	**-1.5**
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,75nm,5.0s						
WMQ				LR	LR		
	comp=N,83nm,16.0s						
WMQ				LR	LR		
	comp=E,140nm,16.0s						
WMQ				LR	LR		
	comp=Z,49nm,16.0s						
PETK	**Petropavlovsk-**	**54.59**	**22**	P	**P**	**05 08 11.1**	**-0.2**
	comp=Z,7.0nm,0.7s,mb4.8,baz=190,slow=6.4,SNR=20						
MK31	**Makanchi Array**	**56.67**	**325**	*e*P	**P**	**05 08 25.7**	**-0.6**
MKAR	**Makanchi Array**	**56.67**	**325**	P	**P**	**05 08 26.0**	**-0.4**
	comp=Z,1.1nm,0.5s,mb4.1,baz=121,slow=8.1,SNR=16						
MKAR				LR	LR	05 35 44.6	
	comp=Z,47nm,20.1s,baz=171,slow=39						
YAK	**Yakutsk**	**57.24**	**2**	*e*P	**P**	**05 08 29.8**	**-0.3**
	comp=Z,22nm,0.7s,mb5.3						
ZALV	**Zalesovo Beam**	**59.65**	**333**	P	**P**	**05 08 47.3**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.5,baz=125,slow=7.6,SNR=3.2						
KURK	**Kurchatov**	**60.84**	**327**	*e*P	**P**	**05 08 54.4**	**-0.8**
	comp=Z,5.5nm,0.6s,mb4.8						
BVAR	**Borovoye Array**	**66.42**	**327**	P	**P**	**05 09 31.1**	**-0.8**
	comp=Z,1.3nm,0.6s,mb3.9,baz=124,slow=7.3,SNR=7.3						
BRVK	**Borovoye**	**66.49**	**327**	*e*P	**P**	**05 09 31.6**	**-0.7**
	comp=Z,6.1nm,0.7s,mb4.5						
BRVK				*e*		05 09 47.3	
ABKAR	**Akbulak array**	**71.30**	**321**	*e*P	**P**	**05 10 01.3**	**-0.9**
	comp=Z,1.4nm,0.5s,mb4.0						
ARU	**Arti**	**74.03**	**328**	*e*P	**P**	**05 10 17.2**	**-1.0**
	comp=Z,3.3nm,0.7s,mb4.2						
COLD	**Coldfoot**	**83.06**	**23**	*e*P	**P**	**05 11 08.6**	**+1.0**
	comp=Z,3.6nm,0.9s,mb4.2						
MCK	**McKinley**	**83.36**	**26**	*e*P	**P**	**05 11 08.6**	**-0.6**
	comp=Z,3.3nm,0.7s,mb4.3						
COLA	**College**	**83.89**	**25**	*e*P	**P**	**05 11 11.4**	**-0.4**
	comp=Z,3.0nm,0.8s,mb4.2						
ILAR	**Eielson Array**	**84.30**	**25**	P	**P**	**05 11 12.8**	**-1.1**
	comp=Z,1.5nm,0.6s,mb4.0,baz=248,slow=5.1,SNR=30						
JOF	**Joensuu**	**88.25**	**333**	*e*p	**P**	**05 11 32.9**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.9						
KEV	**Kevo**	**88.93**	**340**	*e*p	**P**	**05 11 41.1**	**+4.7**
	comp=Z,0.2nm,0.3s,mb3.6						
BRTR	**Keskin Array B**	**89.28**	**310**	P	**P**	**05 11 37.2**	**-1.6**
	comp=Z,0.7nm,1.0s,mb3.7,baz=103,slow=6.5,SNR=2.8						
ARCES	**ARCESS Array B**	**89.48**	**340**	P	**P**	**05 11 38.8**	**-0.2**
	comp=Z,1.5nm,0.7s,mb4.1,baz=91,slow=6.5,SNR=7.9						
KAF	**Kangasniemi**	**90.67**	**332**	*e*p	**P**	**05 11 40.7**	**-4.0**
	comp=Z,0.8nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**90.90**	**332**	P	**P**	**05 11 45.3**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.1,baz=50,slow=5.2,SNR=14						
YKA	**Yellowknife Ar**	**98.68**	**24**	P	**P**	**05 12 21.2**	**0.0**
	comp=Z,0.5nm,0.6s,mb4.2,baz=299,slow=4.4,SNR=7.3						
TORD	**Torodi Ar. Bea**	**122.46**	**289**	PKP	PKPdf	05 17 38.0	-0.2
	comp=Z,0.3nm,0.6s,baz=57,slow=2.5,SNR=4.7						

IDC 07 05:01:21.9±588.0, 33°.24N×148°.47E, h0km, Error ellipse: s-maj=1161.0km s-min=61.4km az=116.0, North Pacific Ocean

IDC 07 05:08:31.4±1.6, 2°.35N×128°.42E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/18, mbtmp3.8/5, Error ellipse: s-maj=88.3km s-min=21.9km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.51**	**188**	P	P	05 13 11.5	+0.3
	2.0nm,1.0s,baz=13,slow=15,SNR=3.5						
WRA	**Warramunga Arr**	**22.91**	**166**	P	P	05 13 37.6	+0.6
	2.5nm,0.3s,baz=345,slow=11,SNR=58						
ASAR	**Alice Springs**	**26.41**	**169**	P	P	05 14 09.3	-0.5
	0.3nm,0.4s,baz=354,slow=8.1,SNR=6.1						
STKA	**Stephens Creek**	**36.27**	**161**	P	P	05 15 36.0	-0.5
	0.9nm,0.3s,baz=323,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**59.64**	**325**	P	P	05 18 37.7	+0.3
	0.5nm,0.4s,baz=121,slow=6.9,SNR=10						

IDC 07 05:21:05.3±587.0, 33°.14N×149°.06E, h0km, Error ellipse: s-maj=1160.0km s-min=60.4km az=117.0, North Pacific Ocean

IDC 07 05:39:31.4±596.0, 33°.40N×148°.21E, h0km, Error ellipse: s-maj=1177.0km s-min=65.7km az=116.0, North Pacific Ocean

JMA 07 05:56:35.7±0.4, 43°.68N×147°.60E, h9km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.39**	**258**	P	Pn	05 57 01.0	-0.2
NEM2				*e*S	Sb	05 57 19.7	+0.1
JRA	**Rausu**	**1.81**	**279**	P	Pn	05 57 07.5	+0.5
JAK	**Akkeshi**	**2.23**	**253**	P	Pn	05 57 13.1	+0.4
JAK				*e*S	Sn	05 57 40.6	+0.3
JAR	**Ashorobuto**	**2.81**	**263**	P	Pn	05 57 22.4	+1.6
JAR				*e*S	Sn	05 57 57.3	+2.5
JOB	**Onbets**	**2.86**	**256**	P	Pn	05 57 23.3	+1.9
JCH	**Churui**	**3.28**	**252**	P	Pn	05 57 28.6	+1.4
JCH				*e*S	Sn	05 58 07.5	+1.2
JNBK	**Urakawa-nobuka**	**3.82**	**250**	P	Pn	05 57 36.0	+1.3

IDC 07 05:58:52.5±623.0, 33°.45N×148°.09E, h0km, Error ellipse: s-maj=1230.0km s-min=67.6km az=115.0, North Pacific Ocean

WEL 07 06:18:54.6±0.2, 37°.07S×176°.58E, h233km±2km, ML3.8/13, 2C, Error ellipse: s-maj=3.6km s-min=3.5km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.26**	**161**	⇑PN	Pn	06 19 29.7	+0.3
URZ				SN	S	06 19 56.8	0.0
MXZ	**Matakaoa Point**	**1.46**	**110**	PN	Pn	06 19 31.1	+0.1
MXZ				SN	S	06 19 59.7	+0.3
MWZ	**Matawai**	**1.47**	**150**	PN	Pn	06 19 31.1	+0.2
MWZ				SN	S	06 19 59.4	-0.2
PUZ	**Puketiti**	**1.67**	**127**	⇑PN	Pn	06 19 32.6	0.0
PUZ				SN	S	06 20 01.4	-1.1
RAHZ	**Arahi**	**1.89**	**168**	PN	Pn	06 19 35.2	+0.7
CNGZ	**Carnagh Statio**	**1.92**	**138**	PN	Pn	06 19 35.3	+0.6
NMHZ	**Naumai**	**2.04**	**175**	PN	Pn	06 19 36.9	+1.0
BKZ	**Black Stump Fm**	**2.10**	**182**	PN	Pn	06 19 36.8	+0.3
BKZ				SN	S	06 20 09.3	-0.2
PRGZ	**Paritu Road**	**2.12**	**151**	PN	Pn	06 19 36.8	+0.1
KNZ	**Kokohu**	**2.13**	**156**	PN	Pn	06 19 36.7	-0.1
OTVZ	**Oturere**	**2.21**	**199**	PN	Pn	06 19 38.9	+1.3
MHGZ	**Mahia Peninsul**	**2.33**	**154**	PN	Pn	06 19 38.7	-0.1
MCHZ	**McNeill Hill**	**2.38**	**178**	PN	Pn	06 19 39.7	+0.5
WNVZ	**Wahianoa**	**2.39**	**199**	PN	Pn	06 19 40.0	+0.6
MOVZ	**Moawhango**	**2.43**	**195**	PN	Pn	06 19 40.0	+0.2
BHHZ	**Black Hill Sta**	**2.45**	**189**	PN	Pn	06 19 40.1	+0.1
CKHZ	**Cape Kidnapper**	**2.62**	**172**	PN	Pn	06 19 41.7	0.0
KAHZ	**Kahuranaki**	**2.73**	**175**	PN	Pn	06 19 42.8	-0.2
PNHZ	**Pukenui**	**2.86**	**186**	PN	Pn	06 19 43.8	-0.5
WAZ	**Wanganui**	**2.96**	**205**	PN	Pn	06 19 45.8	+0.3
PXZ	**Pawanui**	**2.97**	**176**	PN	Pn	06 19 44.7	-0.9
TSZ	**Takapari Road**	**3.03**	**189**	PN	Pn	06 19 45.5	-0.7
DVHZ	**Dannevirke**	**3.24**	**186**	PN	Pn	06 19 47.6	-1.0
BFZ	**Birch Farm**	**3.62**	**184**	PN	Pn	06 19 51.6	-1.4
MRZ	**Mangatainoka R**	**3.67**	**192**	PN	Pn	06 19 52.1	-1.5
OGWZ	**Otaki Gorge**	**3.90**	**196**	PN	Pn	06 19 54.6	-1.7
HOWZ	**Holdsworth Sta**	**3.92**	**192**	PN	Pn	06 19 54.7	-1.8
KIW	**Kapiti Island**	**4.01**	**198**	PN	Pn	06 19 55.7	-1.9
CAW	**Cannon Point**	**4.20**	**196**	PN	Pn	06 19 57.9	-2.1
SNZO	**South Karori**	**4.48**	**198**	PN	Pn	06 20 00.8	-2.5
TCW	**Tory Channel**	**4.51**	**203**	PN	Pn	06 20 01.9	-1.7
TUWZ	**Tuamarina**	**4.81**	**204**	PN	Pn	06 20 05.4	-2.0
THZ	**Tophouse**	**5.49**	**210**	PN	Pn	06 20 13.4	-2.4
KHZ	**Kahutara**	**5.83**	**203**	PN	Pn	06 20 17.7	-2.4

IDC 07 06:35:54.6±584.0, 33°.24N×148°.74E, h0km, Error ellipse: s-maj=1155.0km s-min=62.1km az=116.0, North Pacific Ocean

*ISCJB **07** 06:39:29.3±0.5, 45°.73N±0°.07×142°.6E±0°.1, h349km±4km, mb3.1/8, Error ellipse: s-maj=12.6km s-min=10.5km az=7.5*
*NEIC **07** 06:39:29.4, 45°.81N×142°.72E, h346km, MG3.3(JMA), After JMA.*
*IDC **07** 06:39:29.5±0.8, 46°.05N×142°.49E, h330km±10km, mb2.9/8, mb1 3.1/9, mb1mx3.0/22, mbtmp2.9/9, Error ellipse: s-maj=22.6km s-min=17.9km az=162.0*
*JMA **07** 06:39:29.4±0.2, 45°.81N×142°.72E, h346km±2km, M3.3*
ISC 07 06:39:30.1±0.5, 45°.73N±0°.07×142°.6E±0°.1, h343km±4km, n31, σ1§05/42, mb3.1/8, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.66**	**231**	P	**Pn**	**06 40 14.1**	**+0.2**
JWK2				*e*S	**S**	**06 40 48.6**	**-0.4**
JSE	**Soyaes**	**0.77**	**182**	P	**Pn**	**06 40 14.0**	**-0.3**
JSE				*e*S	**S**	**06 40 49.1**	**-0.5**
JRR	**Rishiri**	**1.10**	**238**	P	**Pn**	**06 40 15.7**	**+0.3**
JRR				*e*S	**S**	**06 40 52.1**	**+0.3**
JSS	**Shosan**	**1.44**	**203**	P	**Pn**	**06 40 17.8**	**+0.6**
JYG	**Yagishiri**	**1.56**	**213**	P	**Pn**	**06 40 18.3**	**+0.5**
ASAJ	**Asahikawa**	**1.61**	**181**	P	**Pn**	**06 40 18.9**	**+0.6**
	3.1nm,0.3s,baz=344,slow=6.4,SNR=75						
ASAJ				S	**S**	**06 40 58.1**	**+1.3**
	0.6nm,0.3s,baz=61,slow=32,SNR=14						
ASAJ	**Asahikawa**	**1.61**	**181**	*e*Pn	**Pn**	**06 40 18.6**	**+0.4**
ASAJ	**Asahikawa**	**1.61**	**181**	P	**Pn**	**06 40 18.8**	**+0.6**
JKK2	**Kamakawa 2**	**1.86**	**177**	P	**Pn**	**06 40 20.5**	**+0.7**
JTKR	**Abashiri--Toko**	**1.98**	**152**	P	**Pn**	**06 40 21.1**	**+0.5**
JTKR				*e*S	**S**	**06 41 01.5**	**+0.4**
JFR	**Furan**	**2.57**	**180**	P	**Pn**	**06 40 25.9**	**+0.8**
JAR	**Ashorobuto**	**2.57**	**161**	P	**Pn**	**06 40 25.9**	**+0.8**
JAK	**Akkeshi**	**3.11**	**151**	P	**Pn**	**06 40 30.1**	**+0.2**
JCH	**Churui**	**3.16**	**170**	P	**Pn**	**06 40 29.6**	**-0.8**
JCH				*e*S	**S**	**06 41 15.2**	**-3.7**
NEM2	**Nemuro 2**	**3.25**	**136**	P	**Pn**	**06 40 29.1**	**-2.1**
NEM2				*e*S	**S**	**06 41 15.6**	**-4.8**
JNBK	**Urakawa-nobuka**	**3.45**	**178**	P	**Pn**	**06 40 33.0**	**-0.2**
JNBK				*e*S	**S**	**06 41 22.5**	**-1.4**
ERM	**Erimo**	**3.73**	**174**	*e*Pn	**Pn**	**06 40 36.1**	**+0.1**
ERM				*e*S	**S**	**06 41 21.9**	**-7.2**
JKB	**Kayabe**	**4.01**	**197**	P	**Pn**	**06 40 38.7**	**-0.1**
JKB				*e*S	**S**	**06 41 32.3**	**-1.8**
JOSM	**Okushiri--Mats**	**4.30**	**213**	P	**Pn**	**06 40 42.2**	**+0.4**
JOT	**Ohata**	**4.50**	**195**	P	**Pn**	**06 40 43.8**	**-0.1**
JOT				*e*S	**S**	**06 41 40.2**	**-3.2**
MAJO	**Matsushiro**	**9.76**	**201**	*e*P	**Pn**	**06 41 47.3**	**+2.1**
KSRS	**Korea Array**	**13.75**	**238**	P	**Pn**	**06 42 34.3**	**+1.8**
	0.2nm,0.3s,baz=46,slow=10,SNR=5.7						
SONM	**Songino Array**	**24.76**	**288**	P	**P**	**06 44 20.0**	**-1.5**
	0.8nm,0.4s,mb3.3,baz=68,slow=9.5,SNR=2.4						
MKAR	**Makanchi Array**	**40.82**	**294**	P	**P**	**06 46 37.8**	**-1.2**
	0.5nm,0.6s,mb2.9,baz=72,slow=8.7,SNR=5.6						
YKA	**Yellowknife Ar**	**55.93**	**33**	P	**P**	**06 48 31.7**	**-1.2**
	0.4nm,0.6s,mb3.0,baz=309,slow=7.2,SNR=6.2						
YKA	**Yellowknife Ar**	**55.93**	**33**	P	**P**	**06 48 31.7**	**-1.2**
FINES	**FINESS Array B**	**61.61**	**331**	P	**P**	**06 49 10.3**	**-1.3**
	0.4nm,0.6s,mb3.1,baz=76,slow=7.3,SNR=2.8						
NVAR	**Mina Array Bea**	**69.21**	**56**	P	**P**	**06 50 01.2**	**+0.9**
	0.6nm,0.7s,mb3.4,baz=301,slow=6.3,SNR=6.8						
ASAR	**Alice Springs**	**69.52**	**189**	P	**P**	**06 50 04.6**	**+2.4**
	0.3nm,0.8s,mb3.0,baz=354,slow=4.8,SNR=3.9						
PDAR	**Pinedale Array**	**71.03**	**48**	P	**P**	**06 50 11.1**	**-0.1**
	0.3nm,0.6s,mb3.2,baz=318,slow=2.0,SNR=4.2						
TXAR	**Lajitas Array**	**84.15**	**53**	P	**P**	**06 51 23.9**	**+0.6**
	0.2nm,0.5s,mb3.2,baz=300,slow=3.4,SNR=3.4

8.6nm,0.3s,baz=160,slow=2.9,SNR=11
AFI Sn **Sn** **06 44 39.8 -12**
34nm,0.3s,baz=210,slow=21,SNR=8.8
AFI T 06 47 40.1
17nm,0.3s,baz=142,slow=16,SNR=8.4
AFI Afiamalu 3.47 19 Pn **Pn** **06 44 01.5 -10**
AFI Sn **Sn** **06 44 39.8 -12**
MSVF Nonsavu 8.61 265 *e*Pn **Pn** **06 45 31.1 +8.6**
71nm,1.2s
RAR Rarotonga 13.06 110 LR LR 06 50 33.3
comp=Z,483nm,18.4s,baz=258,slow=34
DZM Mont Dzumac 20.00 253 *e*LR LR 06 52 42.9
418nm,25.2s
PPT Papeete 22.30 94 *e*LR LR 06 53 01.2
481nm,28.5s
PPT Papeete 22.30 94 LR LR 06 55 32.1
comp=Z,344nm,18.7s,MS3.8,baz=269,slow=33
URZ Urewera 22.71 201 P **P** **06 48 18.0 -1.0**
8.2nm,0.6s,mb4.4,baz=315,slow=7.1,SNR=4.9
HNR Honiara 27.46 283 LR LR 06 58 19.7
comp=Z,380nm,20.5s,MS4.0,baz=293,slow=33
RKT Rikitea 36.05 106 *e*LR LR 06 59 25.1
307nm,30.5s
CTA Charters Tower 38.70 259 P **P** **06 50 41.8 +0.6**
2.5nm,0.8s,mb4.0,baz=103,slow=9.7,SNR=2.2
STKA Stephens Creek 43.54 242 P **P** **06 51 20.7 -0.1**
1.5nm,0.7s,mb3.8,baz=95,slow=10,SNR=5.6
WB2 Warramunga Arr 49.87 258 *e*P **P** **06 52 09.5 -1.1**
WRA Warramunga Arr 49.88 258 P **P** **06 52 09.7 -1.0**
2.3nm,0.6s,mb4.4,baz=94,slow=8.1,SNR=18
WRA LR LR 07 13 13.1
comp=Z,171nm,18.6s,MS4.1,baz=105,slow=36
ASAR Alice Springs 49.99 253 P **P** **06 52 11.1 -0.3**
8.1nm,0.6s,mb4.9,baz=89,slow=8.4,SNR=84
ASAR PcP PcP 06 53 32.5 +1.3
1.2nm,0.7s,baz=105,slow=3.6,SNR=4.4
GUMO Guam 51.69 304 LR LR 07 10 45.4
comp=Z,39nm,20.3s,MS3.4,baz=147,slow=32
FITZ Fitzroy Crossi 58.28 259 LR LR 07 15 53.6
comp=Z,102nm,18.1s,MS4.0,baz=176,slow=34
MJAR Matsushiro Arr 70.60 320 P **P** **06 54 33.2 +1.1**
1.3nm,0.9s,mb3.9,baz=176,slow=4.9,SNR=4.4
MJAR LR LR 07 20 34.6
comp=Z,36nm,19.0s,MS3.6,baz=180,slow=32
QSPA South Pole Qui 72.84 180 *e*P **P** **06 54 46.1 +1.0**
4.6nm,1.0s,mb4.4
ASAJ Asahikawa 73.30 328 *e*P **P** **06 54 50.0 +1.9**
2.2nm,0.9s,mb4.1
PETK Petropavlovsk- 74.48 342 P **P** **06 54 53.5 -1.3**
3.6nm,0.9s,mb4.3,baz=145,slow=8.5,SNR=5.9
NVAR Mina Array Bea 75.38 41 P **P** **06 54 59.8 -0.6**
2.0nm,0.9s,mb4.0,baz=227,slow=9.5,SNR=10
KSRS Korea Array 77.75 316 P **P** **06 55 14.7 +0.8**
1.9nm,0.9s,mb4.0,baz=142,slow=6.7,SNR=9.5
KSRS LR LR 07 24 59.4
comp=Z,31nm,21.5s,MS3.6,baz=235,slow=32
TXAR Lajitas Array 81.26 56 P **P** **06 55 32.7 -0.5**
1.1nm,1.0s,mb3.7,baz=221,slow=9.3,SNR=7.8
GDL2 Guadalupe Moun 81.96 53 *e*P **P** **06 55 32.2 -4.6**
1.2nm,0.7s,mb3.9
MCMT McKenzie Canyo 82.39 38 *e*P **P** **06 55 39.8 +1.0**
0.6nm,0.8s,mb3.6
CHMT Chamberlain Mo 83.31 37 *e*P **P** **06 55 44.6 +1.2**
2.9nm,1.3s,mb4.2
PDAR Pinedale Array 83.32 42 P **P** **06 55 42.8 -0.8**
1.4nm,0.9s,mb4.0,baz=225,slow=3.7,SNR=8.6
HRY Holter Researc 84.01 37 *e*P **P** **06 55 46.2 -0.9**
5.3nm,0.8s,mb4.7
ILAR Eielson Array 84.13 11 P **P** **06 55 46.0 -1.2**
0.9nm,0.9s,mb3.9,baz=230,slow=6.0,SNR=10
MAW Mawson 86.22 199 P **P** **06 55 59.7 +1.8**
1.2nm,0.8s,mb4.2,baz=138,slow=8.4,SNR=5.1
YKA Yellowknife Ar 91.58 23 P **P** **06 56 23.1 0.0**
0.3nm,0.7s,mb3.8,baz=238,slow=4.7,SNR=3.1
ATAH Atahualpa 92.23 98 LR LR 07 29 16.7
comp=Z,73nm,18.8s,MS4.2,baz=68,slow=30
SONM Songino Array 96.48 318 LR LR 07 33 08.9
comp=Z,57nm,20.2s,MS4.0,baz=236,slow=31
MKAR Makanchi Array 112.40 314 PKiKP PKiKP 07 01 52.4 -0.3
0.3nm,0.6s,baz=75,slow=1.6,SNR=3.7
KMBO Kilima Mbogo 145.10 242 PKPbc PKPbc 07 02 55.3 +0.7
2.7nm,0.9s,baz=180,slow=20,SNR=5.4
MALT Malatya 145.44 314 *e*PKPbc PKiKP 07 02 57.6 -1.3
CLL Collm 145.66 353 P PKiKP 07 02 59.0 +0.1
CLL Collm 145.66 353 *e*PKiKP PKiKP 07 02 59.0 +0.1
BRG Berggiesshubel 145.97 352 *e*(P) PKiKP 07 02 59.0 -0.6
7.7nm,1.4s
UPC Upice 146.01 350 *e*PKP PKiKP 07 02 59.1 -0.6
KOLS Kolonicke sedl 146.02 342 *e*P PKiKP 07 02 58.5 -1.3
KOLS Kolonicke sedl 146.02 342 *e*PKP PKiKP 07 02 58.5 -1.3
DPC Dobruska-Polom 146.11 349 *e*PKP PKiKP 07 02 58.7 -1.2
PVCC Panska Ves 146.22 351 *e*PKP PKiKP 07 03 00.0 -0.1
CRVS Cervenica-Dubn 146.29 343 *e*P PKiKP 07 03 01.7 +1.4
CRVS Cervenica-Dubn 146.29 343 *e*PKP PKiKP 07 03 01.7 +1.4
PRU Pruhonice 146.75 351 *e*PKP PKiKP 07 03 02.1 +0.9
KECS Kecovo 146.94 344 *e*P PKiKP 07 03 02.0 +0.3
KECS Kecovo 146.94 344 *e*PKP PKiKP 07 03 02.0 +0.3
VYHS Vyhne 147.35 345 *e*P PKiKP 07 03 03.5 +1.0
VYHS Vyhne 147.35 345 *e*PKP PKiKP 07 03 03.5 +1.0
KHC Kasperske Hory 147.72 352 *e*PKP PKPbc 07 03 02.5 +1.2
BRTR Keskin Array B 147.82 320 PKPbc PKPbc 07 03 02.5 +0.6
2.0nm,0.7s,baz=157,slow=3.0,SNR=12
MMAI Mount Meron Ar 150.02 307 PKPbc PKPbc 07 03 08.7 +1.1
0.3nm,0.3s,baz=98,slow=4.4,SNR=2.2
TORD Torodi Ar. Bea 173.44 127 PKP PKPdf 07 03 25.5 -1.5
0.7nm,1.0s,baz=220,slow=1.0,SNR=2.3
TORD PKPab PKPab 07 04 54.3 -1.3
0.6nm,0.6s,baz=257,slow=3.9,SNR=3.0

*IDC **07** 06:44:49.6±3.4, 8°.10N×127°.63E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.6/21, mbtmp3.8/5, Error ellipse: s-maj=305.5km s-min=26.4km az=69.0*
*ISCJB **07** 06:45:08.5±1.5, 7°.5N±0°.2×126°.6E±0°.2, h171km±12km, mb3.6/5, Error ellipse: s-maj=44.4km s-min=21.6km az=144.0*
*MAN **07** 06:45:11, 8°.05N×126°.58E, h95km, mb4.1, ML2.9, MS2.7*
ISC 07 06:45:09.6±1.7, 7°.6N±0°.2×126°.6E±0°.3, h161km±14km, n9, σ0°49/12, mb3.6/5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.69**	**207**	*e*P	**Pn**	**06 45 33.2**	**-0.1**
MATI				*e*S	**Sn**	**06 45 39.6**	**-12**
DMPH	**Davao City--Mi**	**1.16**	**246**	⇑*i*P	**Pn**	**06 45 37.4**	**+0.6**
DMPH				*e*S	**Sn**	**06 45 57.1**	**-0.5**
BUKP	**Musuan**	**1.53**	**282**	*e*P	**Pn**	**06 45 40.4**	**+0.1**
BUKP				*e*S	**Sn**	**06 45 56.8**	**-7.1**
PAGZ	**Pagadian**	**3.18**	**275**	*e*P	**Pn**	**06 45 59.8**	**+0.1**
ASAR	**Alice Springs**	**31.85**	**167**	P	**P**	**06 51 19.5**	**0.0**
0.1nm,0.4s,mb2.9,baz=348,slow=7.0,SNR=6.6
MKAR Makanchi Array 54.37 324 P **P** **06 54 20.3 +0.6**
1.7nm,0.8s,mb3.9,baz=124,slow=7.8,SNR=19
MKAR PcP PcP 06 55 22.0 +0.5
0.7nm,0.7s,baz=120,slow=4.3,SNR=6.8
ZALV Zalesovo Beam 57.14 332 P **P** **06 54 38.2 -1.1**
0.7nm,0.4s,mb3.8,baz=142,slow=7.2,SNR=3.2
BVAR Borovoye Array 64.06 326 P **P** **06 55 26.5 +0.3**
0.4nm,0.4s,mb3.6,baz=120,slow=8.5,SNR=3.4
AKTO Aktyubinsk 70.59 321 P **P** **06 56 07.2 -0.1**
0.5nm,0.3s,mb3.8,baz=97,slow=8.1,SNR=4.0

*DMN **07** 06:51:36.6±0.4, 31°.44N×82°.86E, h60km, Ml4.6/3, Error ellipse: s-maj=10.7km s-min=6.8km az=106.0*
*BJI **07** 06:51:40.9, 30°.37N×82°.94E, h30km, mb4.0/4, Ms4.0/2, Ms7 4.0/1*
*IDC **07** 06:51:40.5±0.9, 30°.41N×83°.19E, h0km, mb3.9/14, mb1 4.1/16, mb1mx3.9/27, mbtmp3.9/16, ML3.2/1, MS3.4/8, Ms1 3.4/8, ms1mx3.1/34, Error ellipse: s-maj=26.0km s-min=15.7km az=43.0*
*ISCJB **07** 06:51:40.4±1.0, 30°.51N±0°.03×83°.21E±0°.04, h10km±7km, mb3.9/15, MS3.3/6, Error ellipse: s-maj=6.7km s-min=4.5km az=137.3*
*NEIC **07** 06:51:42.3±0.6, 30°.51N×83°.13E, h10km, mb4.0/4, Error ellipse: s-maj=14.5km s-min=7.2km az=222.0*
*NDI **07** 06:51:45.2±2.9, 30°.31N×83°.24E, h10km, mb4.2, mb4.0(NEIC)*
ISC 07 06:51:42.9±1.1, 30°.55N±0°.03×83°.26E±0°.04, h12km±7km, n56, σ1°40/63, mb3.9/15, MS3.3/6, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.24**	**169**	*e*Pn	**Pn**	**06 52 24.3**	**+4.5**
DANN				*e*Sn	**Sg**	**06 52 59.7**	**+4.8**
1μm,0.7s
KOLN Koldanda 2.79 174 *e*Pn **Pn** **06 52 31.7 +4.3**
KOLN *e*Sn **Sg** **06 53 12.0 -0.6**
669nm,0.7s
GKN Gorkha 2.81 154 *e*Pn **Pn** **06 52 31.9 +4.2**
GKN *e*Sn **Sg** **06 53 13.2 -0.1**
731nm,0.8s
PTH Pithoragarh 2.82 250 *e*x **Pg** **06 52 35.1 -1.9**
PTH *e*x **Sg** **06 53 15.4 +1.8**
KKN Kakani 3.27 147 *e*Pn **Pn** **06 52 37.8 +3.8**
DMN Daman 3.35 151 *e*Pn **Pn** **06 52 39.1 +4.0**
GUN Gumba 3.49 138 *e*Pn **Pn** **06 52 40.8 +3.8**
PKIN Phulchoki 3.51 147 *e*Pn **Pn** **06 52 40.9 +3.6**
PKI Pulchoki 3.52 147 *e*Pn **Pn** **06 52 41.2 +3.8**
KLP Kalpa 4.41 284 *e*PKP **Pn** **06 52 53.5 +3.9**
KLP AMb AMB 06 53 09.2
comp=Z,22nm,1.2s
KLP *e*x **Sg** **06 54 03.5 -0.9**
DDI Dehra Dun 4.50 268 ⇑*i*P **Pn** **06 52 53.5 +2.6**
DDI *e*x **Sg** **06 54 10.0 +2.6**
ODAN Odare 5.17 134 *e*Pn **Pn** **06 53 03.1 +3.0**
SMLA Simla 5.27 278 *e*x **Pg** **06 53 16.8 -7.0**
SDNR Sundarnagar 5.48 282 *e*PKP **Pn** **06 53 07.5 +3.1**
SONA Sohna 5.86 248 *e*PKP **Pn** **06 53 10.8 +1.2**
KUDL Kundal 6.38 250 *e*x **Pn** **06 53 12.9 -3.8**
LSA Lhasa 6.89 95 Pn **Pn** **06 53 26.7 +3.0**
LSA Sg **Sg** **06 55 18.8 -5.2**
LSA LR LR
comp=E,700nm,10.4s
LSA LR LR
comp=Z,1μm,9.8s
LSA Lhasa 6.89 95 *e*Pn **Pn** **06 53 26.8 +3.0**
comp=Z,31nm,0.9s
KHET Khetri 6.96 251 *e*PKP **Pn** **06 53 25.3 +0.6**
BOK Bokaro 7.13 160 *e*PKP **Pn** **06 53 27.9 +0.9**
AJM Ajmer 8.60 244 *e*x **Pn** **06 53 42.8 -4.4**
BHPL Bhopal 8.95 217 *e*PKP **Pn** **06 53 49.6 -2.4**
BHPL *e*S **Sn** **06 55 23.5 -9.3**
SHL Shillong 9.09 121 *e*PKP **Pn** **06 53 53.2 -0.8**
NGP Nagpur 10.10 203 *e*PKP **Pn** **06 54 07.0 -0.8**
KSH Kashi 10.75 328 *e*P **Pn** **06 54 13.2 -3.4**
AKL Akola 11.31 211 *e*PKP **Pn** **06 54 21.8 -2.6**
KBL Kabul 12.63 292 *e*Pn **Pn** **06 54 42.3 -0.2**
comp=Z,10nm,0.6s
HYB Hyderabad 13.76 199 *i*P **Pn** **06 54 56.0 -1.9**
HYB *e*S **Sn** **06 57 30.0 -0.8**
AML Almayashu 13.88 329 *e*Pn **Pn** **06 54 58.3 -1.0**
comp=Z,6.6nm,0.9s
AAK Ala-Archa 13.95 332 LR LR 07 00 56.5
comp=Z,178nm,20.1s,baz=296,slow=40
EKS2 Erkin-Say 14.27 330 *e*Pn **Pn** **06 55 04.5 -0.2**
comp=Z,3.7nm,0.8s
POO Poona 14.71 218 *e*x **Pn** **06 55 12.5 +1.7**
POO *i*x x 06 57 42.0
KKAR Karatay Array 16.13 324 *e*P **Pn** **06 55 26.4 -3.1**
comp=Z,1.8nm,0.6s
MK31 Makanchi Array 16.23 358 *e*Pn **Pn** **06 55 30.6 -0.1**
MKAR Makanchi Array 16.23 358 Pn **Pn** **06 55 29.1 -1.6**
comp=Z,0.1nm,0.3s,baz=186,slow=11,SNR=5.2
MKAR LR LR 07 02 50.2
comp=Z,90nm,18.2s,baz=277,slow=41
CHTO Chiang Mai 18.41 126 *e*P **Pn** **06 55 57.1 -1.0**
comp=Z,9.0nm,1.3s
CMAR Chiang Mai Arr 18.65 127 P **Pn** **06 56 00.3 -0.6**
baz=314,slow=11,SNR=12
KURK Kurchatov 20.44 352 *e*P **P** **06 56 19.6 -0.4**
comp=Z,13nm,1.0s
ZALV Zalesovo Beam 23.41 2 P **P** **06 56 52.2 +0.6**
comp=Z,1.6nm,0.6s,mb3.6,baz=143,slow=5.2,SNR=4.9
ZALV LR LR 07 07 43.1
comp=Z,34nm,21.5s,MS2.8,baz=283,slow=41
BVAR Borovoye Array 24.34 341 P **P** **06 57 01.9 +1.5**
comp=Z,0.8nm,0.4s,mb3.5,baz=163,slow=11,SNR=6.3
SONM Songino Array 24.74 39 P **P** **06 57 05.3 +1.2**
comp=Z,4.2nm,0.8s,mb4.0,baz=228,slow=9.7,SNR=8.6
ABKAR Abkulak array 25.69 323 *e*P **P** **06 57 12.8 +0.2**
comp=Z,3.2nm,0.6s,mb4.0
AKTO Aktyubinsk 27.39 324 LR LR 07 08 33.3
comp=Z,62nm,19.4s,MS3.2,baz=297,slow=37
KSRS Korea Array 37.39 67 P **P** **06 58 54.4 -1.2**
comp=Z,1.8nm,0.6s,mb4.1,baz=274,slow=8.9,SNR=7.8
KSRS LR LR 07 15 27.8
comp=Z,83nm,21.5s,MS3.5,baz=54,slow=38
BRTR Keskin Array B 41.15 297 P **P** **06 59 26.8 -0.2**
comp=Z,0.7nm,0.7s,mb3.4,baz=111,slow=7.9,SNR=5.3
FINES FINESS Array B 48.07 327 P **P** **07 00 21.1 -0.9**
comp=Z,1.2nm,0.7s,mb4.0,baz=108,slow=10,SNR=6.9
FINES LR LR 07 22 41.5
comp=Z,36nm,18.5s,MS3.4,baz=129,slow=39
ARCES ARCESS Array B 50.55 337 P **P** **07 00 41.7 +0.9**
comp=Z,2.0nm,0.7s,mb4.1,baz=94,slow=6.2,SNR=8.1
ARCES LR LR 07 22 35.1
comp=Z,56nm,19.4s,MS3.6,baz=268,slow=37
NB2 NORSAR Subarra 55.16 326 P **P** **07 01 13.3 -1.7**
comp=Z,3.6nm,1.2s,mb4.3,baz=88,slow=7.9
NOA NORSAR Array B 55.16 326 P **P** **07 01 13.8 -1.1**
comp=Z,1.4nm,0.8s,mb4.0,baz=89,slow=7.2,SNR=4.4
NOA LR LR 07 27 23.5
comp=Z,35nm,19.4s,MS3.5,baz=90,slow=39
PETK Petropavlovsk- 57.11 44 P **P** **07 01 30.1 +1.1**
comp=Z,1.0nm,0.7s,mb4.0,baz=256,slow=3.8,SNR=4.0
KEST Kesra 60.75 296 P **P** **07 01 54.5 -0.1**
comp=Z,2.0nm,1.0s,mb4.2,baz=354,slow=12,SNR=3.8
WRA Warramunga Arr 70.22 129 P **P** **07 02 55.2 -0.7**
comp=Z,1.9nm,0.6s,mb4.2,baz=325,slow=6.3,SNR=23
ASAR Alice Springs 72.56 132 P **P** **07 03 09.4 -0.7**
comp=Z,0.6nm,0.8s,mb3.6,baz=316,slow=6.5,SNR=6.1
ILAR Eielson Array 77.29 20 P **P** **07 03 37.7 +0.9**
comp=Z,1.3nm,0.9s,mb3.9,baz=298,slow=4.6,SNR=12
YKA Yellowknife Ar 86.17 8 P **P** **07 04 24.7 +1.0**
comp=Z,0.3nm,0.5s,mb3.8,baz=335,slow=5.4,SNR=7.6
YKA Yellowknife Ar 86.17 8 P **P** **07 04 24.7 +1.0**

*ISCJB **07** 06:52:33.9±0.6, 31°.42N±0°.04×104°.09E±0°.07, h10km, mb3.7/6, Error ellipse: s-maj=9.4km s-min=5.6km az=16.8*
*IDC **07** 06:52:34.4±1.0, 31°.32N×103°.75E, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.6/22, mbtmp3.7/7, Error ellipse: s-maj=42.0km s-min=20.0km az=56.0*
*BJI **07** 06:52:38.0, 31°.30N×104°.08E, h12km, ML3.5/14, Ms7 2.8/1*
ISC 07 06:52:36.1±0.6, 31°.39N±0°.04×103°.99E±0°.07, h10km, n14, σ1°12/20, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.51**	**202**	Pg	**Pg**	**06 52 45.7**	**-0.4**
CD2				Sg	**Sg**	**06 52 52.7**	**-0.2**
CD2				smax			
comp=N,710nm,0.8s
LZH Lanzhou 4.69 359 *e*Pg **Pg** **06 54 05.4 -0.6**
LZH Sg **Sg** **06 55 02.4 -4.3**
LZH smax
comp=N,35nm,0.6s
LZH smax
comp=E,100nm,0.7s
XAN Xi'an 4.93 56 Pn **Pn** **06 53 51.5 +1.3**
XAN Sn **Sn** **06 54 50.2 +2.9**
XAN Sg **Sg** **06 55 11.9 -2.5**
XAN smax
comp=N,75nm,0.8s
XAN smax
comp=E,54nm,0.8s
GYA Guiyang 5.44 154 Pn **Pn** **06 53 57.6 +0.3**
GYA Pg **Pg** **06 54 16.2 -4.2**
GYA Sn **Sn** **06 54 59.3 -0.7**
GYA Sg **Sg** **06 55 20.1 -11**
GYA smax
comp=N,90nm,0.6s
GYA smax
comp=E,70nm,0.7s
GTA Gaotai 8.70 338 *e*P Px 06 55 20.9
GTA pP 06 55 34.7
GTA sP 06 55 40.8
GTA pmax pmax
comp=Z,3.0nm,1.3s
KSRS Korea Array 20.63 66 P **P** **06 57 17.9 +2.3**
comp=Z,1.5nm,0.6s,baz=264,slow=9.9,SNR=9.8
MKAR Makanchi Array 22.70 319 P **P** **06 57 38.2 +0.4**
comp=Z,0.6nm,0.8s,mb3.1,baz=128,slow=9.3,SNR=3.2
ARCES ARCESS Array B 56.96 336 P **P** **07 02 20.2 -1.1**
comp=Z,1.7nm,0.8s,mb4.1,baz=80,slow=7.5,SNR=4.1
ARCES PcP PcP 07 03 15.8 -0.5
comp=Z,2.7nm,1.0s,baz=90,slow=3.6,SNR=4.2
ARCES ARCESS Array B 56.96 336 P **P** **07 02 20.2 -1.1**
ARCES PcP PcP 07 03 15.8 -0.5
FINES FINESS Array B 57.28 326 P **P** **07 02 23.2 -0.4**
comp=Z,1.0nm,0.7s,mb4.0,baz=109,slow=7.6,SNR=3.6
FINES FINESS Array B 57.28 326 P **P** **07 02 23.2 -0.4**
WRA Warramunga Arr 58.76 146 P **P** **07 02 34.7 +0.2**
comp=Z,0.7nm,0.4s,mb4.0,baz=338,slow=7.9,SNR=31
ASAR Alice Springs 61.78 149 P **P** **07 02 55.6 +0.5**
comp=Z,0.2nm,0.5s,mb3.5,baz=344,slow=6.4,SNR=6.3
YKA Yellowknife Ar 81.45 17 P **P** **07 04 53.4 +0.3**
comp=Z,0.4nm,0.6s,mb3.5,baz=328,slow=5.1,SNR=4.6

IDC 07 06:57:25.9±691.0, 32°.90N×149°.69E, h0km, Error ellipse: s-maj=1367.0km s-min=56.9km az=117.0, North Pacific Ocean

*IDC **07** 07:08:10.8±1.2, 1°.64S×137°.80E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, ML4.0/1, Error ellipse: s-maj=46.5km s-min=22.8km az=93.0*
*NEIC **07** 07:08:17.6±0.8, 1°.75S×137°.80E, h50km, mb3.6/1, Error ellipse: s-maj=21.1km s-min=12.3km az=82.0*
ISC 07 07:08:16.3±2.7, 1°.7S±0°.1×137°.9E±0°.2, h42km±27km, n12, σ0°36/15, mb3.8/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**11.94**	**130**	*e*Pn	**Pn**	**07 10 57.7**	**-6.4**
COEN	**Coen**	**13.21**	**157**	*e*Pn	**Pn**	**07 11 21.6**	**+0.2**
WB2	**Warramunga Arr**	**18.42**	**191**	*e*P	**Pn**	**07 12 28.5**	**-0.2**
WB2				*e*Sn	**Sn**	**07 15 41.7**	**-12**
WRA	**Warramunga Arr**	**18.42**	**191**	P	**Pn**	**07 12 28.5**	**-0.2**
0.5nm,0.3s,baz=12,slow=11,SNR=32
WRA S **S** **07 15 43.2** **-13**
0.1nm,0.3s,baz=0.9,slow=23,SNR=6.1
CTA Charters Tower 19.98 156 P **Pn** **07 12 46.5 -0.8**
2.8nm,0.7s,baz=337,slow=14,SNR=3.4
CTA Charters Tower 19.98 156 P **Pn** **07 12 46.5 -0.8**
CTAO Charters Tower 19.98 156 *e*P **Pn** **07 12 47.8 +0.5**
2.5nm,0.8s
FITZ Fitzroy Crossi 20.23 216 P **P** **07 12 47.9 -0.2**
1.3nm,0.6s,baz=42,slow=9.1,SNR=3.8
FITZ S **S** **07 16 24.5** **-8.4**
1.0nm,0.7s,baz=84,slow=10,SNR=3.0
ASAR Alice Springs 22.14 190 P **P** **07 13 09.2 +0.7**
5.0nm,0.7s,mb4.0,baz=18,slow=11,SNR=53
ASAR S **S** **07 17 10.2** **0.0**
1.2nm,0.7s,baz=10,slow=24,SNR=6.8
MKAR Makanchi Array 68.54 322 P **P** **07 19 14.7** **0.0**
0.5nm,0.7s,mb3.6,baz=117,slow=7.3,SNR=3.2
ILAR Eielson Array 85.29 25 P **P** **07 20 48.5** **0.0**
0.4nm,0.8s,mb3.6,baz=267,slow=4.8,SNR=4.6
LPAZ La Paz 148.66 126 PKPbc PKPbc 07 28 02.3 +2.3
0.7nm,0.8s,baz=225,slow=2.9,SNR=3.7

*ISCJB **07** 07:10:11.2±0.7, 7°.03N±0°.07×73°.10W±0°.09, h153km±8km, mb3.7/2, Error ellipse: s-maj=17.5km s-min=7.4km az=34.7*
*IDC **07** 07:10:12.9±3.2, 6°.76N×73°.12W, h171km±22km, mb3.4/2, mb1 3.5/3, mb1mx3.0/21, mbtmp3.5/3, Error ellipse: s-maj=86.2km s-min=25.1km az=101.0*
*FUNV **07** 07:10:15.5, 7°.07N×72°.94W, h158km, MW3.7*
ISC 07 07:10:12.3±0.7, 7°.04N±0°.07×73°.09W±0°.09, h144km±9km, n16, σ1°35/21, mb3.7/2, 5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.12**	**43**	⇓*i*P	**Pn**	**07 10 40.2**	**+2.6**
CAPV				*e*S	**Sn**	**07 10 59.4**	**+2.5**
VIGV	**El Vigia**	**2.47**	**44**	⇓*i*P	**Pn**	**07 10 54.8**	**+2.0**
VIGV				*e*S	**Sn**	**07 11 22.6**	**-1.4**
ROSC	**El Rosal**	**2.50**	**210**	P	**Pn**	**07 10 52.1**	**-1.0**
18nm,0.3s,baz=3.3,slow=2.2,SNR=165
ROSC S **Sn** **07 11 23.9** **-0.7**
42nm,0.3s,baz=41,slow=19,SNR=21
SOCV Socops 2.53 61 ⇓*i*P **Pn** **07 10 55.1** **+1.5**
SOCV *e*S **Sn** **07 11 23.9** **-1.3**
VIRV Villa del Rosa 3.50 11 ⇓*i*P **Pn** **07 11 07.2** **+1.2**
VIRV *e*S **Sn** **07 11 45.9** **-1.6**
ELOV Elorza 3.58 90 *e*P **Pn** **07 11 06.4** **-0.5**
QARV Quebrada Arrib 4.04 39 ⇓*i*P **Pn** **07 11 14.5** **+1.5**
QARV *e*S **Sn** **07 11 56.9** **-3.1**
CURV Curarigua 4.27 46 *e*P **Pn** **07 11 17.0** **+0.9**
SANV Sanarito 4.28 55 *e*P **Pn** **07 11 16.4** **+0.3**
SANV *e*S **Sn** **07 12 01.5** **-4.2**
SIQV Siquisique 4.83 42 *e*P **Pn** **07 11 23.6** **+0.2**
SIQV *e*S **Sn** **07 12 13.6** **-5.2**
MAPV Macapo 5.35 59 *e*P **Pn** **07 11 30.1** **-0.2**
SCHQ Schefferville 47.92 5 P **P** **07 18 36.2** **+0.3**
2.4nm,0.8s,mb3.9,baz=191,slow=10,SNR=3.6
YKA Yellowknife Ar 63.07 340 P **P** **07 20 23.2** **-0.8**
0.4nm,0.5s,mb3.5,baz=133,slow=6.5,SNR=17
MKAR Makanchi Array 122.10 20 PKP PKPdf 07 28 47.7 -2.4
0.2nm,0.5s,baz=341,slow=3.1,SNR=2.9
ASAR Alice Springs 149.27 235 PKPbc PKPbc 07 29 41.2 -3.7
0.3nm,0.5s,baz=114,slow=3.6,SNR=7.1
WRA Warramunga Arr 150.47 242 PKPbc PKPbc 07 29 44.6 -3.3
0.4nm,0.6s,baz=111,slow=2.4,SNR=20

IDC 07 07:10:56.4±2.8, 19°.67S×68°.84W, h125km±25km, mb3.5/3, mb1 3.5/6, mb1mx3.2/19, mbtmp3.3/6, Error ellipse: s-maj=38.2km s-min=24.7km az=84.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.43**	**11**	P	Pn	07 11 49.5	+1.0
0.7nm,0.3s,baz=186,slow=7.3,SNR=36
SIV San Ignacio 8.25 65 P Pn 07 12 52.8 -0.6
0.8nm,0.3s,baz=262,slow=12,SNR=20
CPUP Villa Florida 12.50 124 P Pn 07 13 49.9 -0.1
0.3nm,0.3s,baz=275,slow=14,SNR=3.9
PLCA Paso Flores 21.05 184 P P 07 15 30.4 +0.1
3.0nm,1.0s,baz=21,slow=14,SNR=2.9
TORD Torodi Ar. Bea 76.69 71 P P 07 22 34.5 +0.4
0.2nm,0.3s,baz=251,slow=5.8,SNR=4.6
YKA Yellowknife Ar 89.49 341 P P 07 23 38.4 -0.5
0.4nm,0.7s,baz=123,slow=5.0,SNR=6.7
WRA Warramunga Arr 134.55 211 PKP PKPdf 07 30 01.1 +0.3
0.2nm,0.4s,baz=141,slow=1.7,SNR=5.2

IDC 07 07:16:09.2±580.0, 33°.08N×149°.13E, h0km, Error ellipse: s-maj=1147.0km s-min=59.0km az=116.0, North Pacific Ocean

*DDA **07** 07:33:00.1, 36°.38N×40°.89E, h8km±1km, Md3.4*
*CSEM **07** 07:33:04.8±0.5, 36°.73N×41°.07E, h2km, MD3.4, Error ellipse: s-maj=14.6km s-min=6.4km az=176.0*
ISC 07 07:33:04.0±1.4, 36°.60N±0°.06×41°.08E±0°.05, h2km±8km, n46, σ1°06/56, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARD	**Mardin**	**0.76**	**341**	*i*P	**Pg**	**07 33 17.8**	**-0.7**
MARD				*i*S	**Sg**	**07 33 31.6**	**+3.3**
BEST	**Besiri**	**1.30**	**6**	*i*P	**Pg**	**07 33 29.2**	**+0.2**
BEST				*i*S	**Sg**	**07 33 51.0**	**+5.1**
DIY	**Diyarbakir**	**1.47**	**332**	*e*PN	**Pn**	**07 33 30.2**	**-1.3**
DIY	**Diyarbakir**	**1.47**	**332**	*e*P	**Pn**	**07 33 30.2**	**-1.3**
DIY	**Diyarbakir**	**1.47**	**332**	*e*Pn	**Pn**	**07 33 30.2**	**-1.3**
DIYA	**Diyarbakir**	**1.53**	**330**	*i*P	**Pn**	**07 33 31.6**	**-0.8**
DIYA				*i*S	**Sn**	**07 33 54.7**	**+1.9**
DIYA	**Diyarbakir**	**1.53**	**330**	*i*P	**Pn**	**07 33 31.6**	**-0.8**
CUKT	**Cukurca**	**2.12**	**71**	*e*PN	**Pn**	**07 33 41.8**	**+1.3**
CUKT				*e*SN	**Sn**	**07 34 10.1**	**+2.7**
CUKT	**Cukurca**	**2.12**	**71**	*e*P	**Pn**	**07 33 39.8**	**-0.7**
CUKT				*e*S	**Sn**	**07 34 07.2**	**-0.2**
CUKT	**Cukurca**	**2.12**	**71**	*e*Pn	**Pn**	**07 33 41.8**	**+1.3**
CUKT				*e*Sn	**Sn**	**07 34 10.1**	**+2.7**
SVRC	**Sivrice-ELAZID**	**2.27**	**322**	*e*PN	**Pn**	**07 33 41.9**	**-0.6**
SVRC	**Sivrice-ELAZID**	**2.27**	**322**	*e*P	**Pn**	**07 33 41.9**	**-0.6**
SVRC				*e*S	**Sn**	**07 34 10.4**	**-0.7**
SVRC	**Sivrice-ELAZID**	**2.27**	**322**	*e*Pn	**Pn**	**07 33 41.9**	**-0.6**
HAKT	**HAKKARI**	**2.31**	**65**	*i*P	**Pn**	**07 33 41.8**	**-1.2**
HAKT				*i*S	**Sn**	**07 34 17.4**	**+5.4**

HAKT	HAKKARI	2.31	65	*i* P	Pn	07 33 41.8	-1.2
BINT	Bingol	2.32	348	*e*PN	Pn	07 33 42.4	-0.9
BINT	Bingol	2.32	348	*e*P	Pn	07 33 42.4	-0.9
BINT	Bingol	2.32	348	*e*Pn	Pn	07 33 42.4	-0.9
PTK	Pertek	2.66	330	*e*PN	Pn	07 33 46.9	-0.9
PTK	Pertek	2.66	330	*e*P	Pn	07 33 46.9	-0.9
PTK				*e*S	Sn	07 34 19.6	-0.9
PTK	Pertek	2.66	330	*e*Pn	Pn	07 33 46.9	-0.9
MALT	Malatya	2.72	310	*e*PN	Pn	07 33 48.3	-0.4
MALT	Malatya	2.72	310	*e*P	Pn	07 33 49.0	+0.3
MALT	Malatya	2.72	310	*e*Pn	Pn	07 33 48.3	-0.4
MYA	Malataya	2.73	310	*e*PN	Pn	07 33 48.4	-0.4
MYA	Malataya	2.73	310	*e*P	Pn	07 33 48.4	-0.4
MYA	Malataya	2.73	310	*e*Pn	Pn	07 33 48.4	-0.4
GZT	Gaziantep	2.92	286	*i* P	Pn	07 33 45.9	-5.5
GZT				*i* S	Sn	07 34 30.4	+3.4
GAZ	Gaziantep	3.16	282	*e*PN	Pn	07 33 54.7	0.0
GAZ	Gaziantep	3.16	282	*e*P	Pn	07 33 54.7	0.0
GAZ	Gaziantep	3.16	282	*e*Pn	Pn	07 33 54.7	0.0
AGRB	Hanur-Agry	3.33	26	*e*PN	Pn	07 33 57.7	+0.6
AGRB	Hanur-Agry	3.33	26	*e*P	Pn	07 33 56.5	-0.7
AGRB	Hanur-Agry	3.33	26	*e*Pn	Pn	07 33 57.7	+0.6
KMRS	Kahramanmaras	3.47	286	*e*PN	Pn	07 33 58.9	-0.1
KMRS	Kahramanmaras	3.47	286	*e*P	Pn	07 33 58.9	-0.1
KMRS	Kahramanmaras	3.47	286	*e*Pn	Pn	07 33 58.9	-0.1
SARI	SarD1z-Kayseri	4.05	302	*e*PN	Pn	07 34 08.2	+1.2
SARI	SarD1z-Kayseri	4.05	302	*e*P	Pn	07 34 08.2	+1.2
SARI	SarD1z-Kayseri	4.05	302	*e*Pn	Pn	07 34 08.2	+1.2
KOZT	Kozan	4.30	283	*e*PN	Pn	07 34 11.0	+0.6
KOZT	Kozan	4.30	283	*e*P	Pn	07 34 11.0	+0.6
KOZT	Kozan	4.30	283	*e*Pn	Pn	07 34 11.0	+0.6
MERS	Mersin	5.28	275	*e*PN	Pn	07 34 25.0	+1.2
MERS	Mersin	5.28	275	*e*P	Pn	07 34 25.0	+1.2
MERS	Mersin	5.28	275	*e*Pn	Pn	07 34 25.0	+1.2

IDC 07 07:33:24.3±587.0, 33°.99N×147°.59E, h0km, Error ellipse: s-maj=1162.0km s-min=57.1km az=115.0, Off east coast of Honshu

*ISCJB **07** 07:45:00.7±1.5, 10°.83N±0°.06×86°.79W±0°.06, h15km±11km, mb3.2/3, Error ellipse: s-maj=13.1km s-min=6.0km az=139.5*
*CASC **07** 07:45:02.9±3.4, 10°.90N×86°.67W, h14km±12km, MD3.7, ML3.2*
*IDC **07** 07:45:02.1±2.6, 11°.61N×86°.28W, h0km, mb3.3/3, mb1 3.8/3, mb1mx3.5/21, mbtmp3.3/3, Error ellipse: s-maj=239.3km s-min=53.6km az=54.0*
ISC 07 07:45:01.7±1.8, 10°.90N±0°.06×86°.70W±0°.07, h12km±11km, n26, σ0°81/31, mb3.2/3, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	San Juan del S	0.93	64	*e*P	Pg	07 45 19.8	+0.2
CRUN	El Crucero	1.15	20	*e*P	Pb	07 45 24.4	+0.8
NY14	Universidad de	1.18	102	*i* P	Pb	07 45 23.4	-0.6
TICN	Ticuantepe	1.22	22	*e*P	Pn	07 45 24.9	+0.3
CONN	Concepcion	1.25	58	*e*P	Pn	07 45 24.9	-0.1
COPN	Copaltepe	1.28	5	*e*P	Pn	07 45 24.9	-0.5
BUEV	Buena Vista	1.28	94	*i* P	Pn	07 45 24.9	-0.5
BUEV				*i* S	Sb	07 45 41.3	-0.9
GB1A	Borinquen Arri	1.28	93	*i* P	Pn	07 45 25.1	-0.4
XAVN	Gruta Xavier	1.29	17	*e*P	Pn	07 45 25.4	-0.2
CSAN		1.30	12	*e*P	Pn	07 45 25.3	-0.5
TISN	Laguna Tiscapa	1.31	19	*e*P	Pn	07 45 25.6	-0.2
LIM1	Limonal	1.44	98	*i* P	Pn	07 45 27.2	-0.5
LEON	Leon	1.52	353	*e*P	Pn	07 45 28.4	-0.3
CNGN	Cerro Negro	1.59	0	*e*P	Pn	07 45 29.4	-0.4
CNGN				*e*S	Sn	07 45 50.9	+0.7
CNGN				AML	AML	07 45 59.6	
	comp=N,344nm,0.4s						
TEL3	Telica 3	1.67	355	*e*P	Pn	07 45 30.5	-0.2
TELN	Telica	1.70	356	*e*P	Pn	07 45 31.6	+0.4
CRIN	San Cristobal	1.82	349	*e*P	Pn	07 45 32.7	-0.2
CHPA	Chiripa	1.82	104	*i* P	Pn	07 45 32.9	0.0
BOAB	BOACO BROADBAN	.84	33	*e*P	Pn	07 45 32.6	-0.6
BOAB				*e*S	Sn	07 45 60.0	+3.5
JCR	Jicaral	1.88	124	*e*P	Pn	07 45 40.8	+7.1
JCR				*e*S	Sn	07 46 06.6	+9.2
CGA2	Cerro Gallo 2	2.37	112	*e*P	Pn	07 45 41.3	+0.9
CGA2				*e*S	Sn	07 46 08.9	-0.5
PRS1	Puriscal	2.52	111	*e*P	Pn	07 45 45.5	+2.9
BUS	Buena Vista	3.19	114	*e*P	Pn	07 45 54.1	+2.4
TXAR	Lajitas Array	24.23	322	P	P	07 50 17.9	-0.7
	comp=N,0.7nm,0.7s,mb3.2,baz=135,slow=10,SNR=12						
TXAR				PcP	PcP	07 54 01.3	+2.3
	comp=N,0.2nm,0.7s,baz=146,slow=6.6,SNR=2.8						
PDAR	Pinedale Array	37.48	332	P	P	07 52 14.2	-1.0
	comp=N,0.3nm,0.6s,mb3.3,baz=125,slow=9.8,SNR=3.9						
NVAR	Mina Array Bea	39.35	320	P	P	07 52 32.0	+1.0
	comp=N,0.3nm,0.7s,mb3.2,baz=133,slow=6.6,SNR=3.7						
NVAR				PcP	PcP	07 54 40.0	+0.6
	comp=N,0.3nm,0.6s,baz=135,slow=6.0,SNR=4.3						

*ISCJB **07** 07:45:42.6±2.1, 48°.6N±0°.2×154°.8E±0°.2, h73km±19km, mb3.3/7, Error ellipse: s-maj=36.3km s-min=13.1km az=140.2*
*NEIC **07** 07:45:44.6±1.6, 48°.62N×154°.79E, h75km±15km, Error ellipse: s-maj=30.3km s-min=11.4km az=137.0*
*IDC **07** 07:45:45.4±3.2, 48°.67N×154°.69E, h82km±30km, mb3.3/7, mb1 3.6/9, mb1mx3.4/24, mbtmp3.4/9, Error ellipse: s-maj=37.5km s-min=17.3km az=145.0*
ISC 07 07:45:44.8±1.7, 48°.6N±0°.2×154°.8E±0°.2, h76km±16km, n13, σ0°91/13, mb3.3/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	4.86	21	P	Pn	07 46 54.6	-0.6
	2.3nm,0.3s,baz=182,slow=15,SNR=11						
YSS	Yuzh-Sakhalins	8.26	263	*e*Pn	Pn	07 47 42.7	+1.0
ASAJ	Asahikawa	9.54	246	P	Pn	07 48 00.7	+1.5
	1.4nm,0.3s,baz=79,slow=16,SNR=24						
ASAJ	Asahikawa	9.54	246	*e*Pn	Pn	07 48 00.9	+1.7
	4.0nm,0.7s						
ERM	Erimo	10.51	235	*e*Pn	Pn	07 48 10.3	-2.1
KSRS	Korea Array	22.46	250	P	P	07 50 37.2	-0.2
	0.3nm,0.6s,mb2.8,baz=46,slow=10,SNR=4.1						
MKAR	Makanchi Array	47.09	297	P	P	07 54 08.1	-0.6
	0.4nm,0.7s,mb3.2,baz=51,slow=6.4,SNR=4.5						
MKAR	Makanchi Array	47.09	297	P	P	07 54 08.1	-0.6
CMAR	Chiang Mai Arr	53.90	256	P	P	07 54 59.9	-0.4
	1.0nm,0.3s,mb4.3,baz=28,slow=7.1,SNR=6.3						
PDAR	Pinedale Array	62.75	56	P	P	07 56 02.6	+0.9
	0.5nm,1.1s,mb3.4,baz=336,slow=2.0,SNR=4.5						
WRA	Warramunga Arr	70.66	200	P	P	07 56 51.6	-0.5
	0.4nm,0.7s,mb3.3,baz=18,slow=6.5,SNR=4.8						
ASAR	Alice Springs	74.35	200	P	P	07 57 14.2	+0.3
	0.2nm,0.5s,mb3.1,baz=12,slow=5.2,SNR=4.2						
TXAR	Lajitas Array	75.61	62	P	P	07 57 21.8	+0.4
	0.3nm,0.6s,mb3.2,baz=297,slow=4.4,SNR=5.7						

IDC 07 07:54:06.5±569.0, 33°.61N×148°.31E, h0km, Error ellipse: s-maj=1125.0km s-min=63.8km az=116.0, North Pacific Ocean

IDC 07 07:55:08.7±1.9, 0°.43N×126°.52E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=163.6km s-min=25.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.65	160	P	P	08 00 00.4	-0.5
	0.6nm,0.5s,baz=338,slow=10,SNR=12						
ASAR	Alice Springs	25.00	164	P	P	08 00 34.9	+0.5
	0.3nm,0.5s,baz=347,slow=7.6,SNR=7.9						
MKAR	Makanchi Array	60.15	326	P	P	08 05 18.2	0.0
	0.3nm,0.4s,baz=135,slow=7.3,SNR=8.0						

IDC 07 08:13:51.2±591.0, 33°.88N×148°.04E, h0km, Error ellipse: s-maj=1170.0km s-min=56.1km az=115.0, North Pacific Ocean

IDC 07 08:17:37.4±2.2, 56°.63S×140°.63W, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.7/13, mbtmp3.7/2, MS3.7/6, Ms1 3.7/6, ms1mx3.5/23, Error ellipse: s-maj=461.4km s-min=47.4km az=177.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	Rata Peaks	32.82	272	LR	LR	08 35 39.0	
	comp=Z,100nm,18.5s,baz=0.7,slow=33						
URZ	Urewera	33.29	285	LR	LR	08 34 47.3	
	comp=Z,139nm,18.3s,baz=207,slow=31						
RAR	Rarotonga	38.10	330	LR	LR	08 36 53.2	
	comp=Z,192nm,19.9s,baz=63,slow=30						
PLCA	Paso Flores	46.78	101	LR	LR	08 40 45.6	
	comp=Z,89nm,20.2s,baz=248,slow=30						
VNA3	Neumayer Olymp	47.82	161	*e*	P	08 26 09.5	-6.5
VNA2	Neumayer--Watz	48.50	161	*e*	P	08 26 14.5	-6.7
	baz=219,slow=7.3						
VNA1	Neumayer--Stat	48.58	161	*e*	P	08 26 16.3	-5.5
CPUP	Villa Florida	64.82	100	LR	LR	08 54 04.5	
	comp=Z,44nm,20.7s,baz=85,slow=34						
LPAZ	La Paz	66.93	85	LR	LR	08 49 45.1	
	comp=Z,39nm,19.3s,baz=100,slow=29						
ASAR	Alice Springs	68.12	260	P	P	08 28 38.9	-0.1
	0.9nm,1.0s,baz=140,slow=6.2,SNR=5.7						
WRA	Warramunga Arr	70.88	263	P	P	08 28 56.4	+0.4
	0.6nm,0.9s,baz=149,slow=5.7,SNR=6.3						
ESDC	Sonseca Array	147.16	102	PKPbc	PKPbc	08 37 21.0	-0.6
	0.7nm,0.8s,baz=235,slow=4.0,SNR=5.0						
MKAR	Makanchi Array	152.08	268	PKPbc	PKPbc	08 37 33.4	-0.1
	0.8nm,0.8s,baz=116,slow=5.5,SNR=6.5						

IDC 07 08:23:27.4±1.5, 16°.58S×173°.23W, h0km, mb3.7/7, mb1 4.1/8, mb1mx3.9/20, mbtmp3.7/8, ML1.6/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/28, Error ellipse: s-maj=64.2km s-min=19.7km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.01	28	Pn	Pn	08 24 14.4	-1.9
	5.1nm,0.3s,baz=136,slow=13,SNR=7.1						
AFI				Sn	Sn	08 24 53.9	+0.8
	22nm,0.3s,baz=46,slow=21,SNR=7.3						
AFI				T		08 27 47.0	
	15nm,0.3s,baz=169,slow=19,SNR=4.4						
PPT	Papeete	22.63	96	LR	LR	08 35 29.5	
	comp=Z,154nm,19.6s,baz=276,slow=32						
URZ	Urewera	23.20	200	P	P	08 28 31.2	-4.8
	8.7nm,0.7s,baz=32,slow=5.3,SNR=9.5						
WRA	Warramunga Arr	49.74	258	P	P	08 32 21.3	-0.7
	0.8nm,0.4s,baz=96,slow=7.3,SNR=20						
ASAR	Alice Springs	49.91	253	P	P	08 32 22.9	-0.3
	2.9nm,0.5s,baz=89,slow=8.6,SNR=62						
PETK	Petropavlovsk-	73.80	342	P	P	08 35 04.5	+1.1
	1.0nm,0.7s,baz=148,slow=8.5,SNR=2.6						
NVAR	Mina Array Bea	75.10	42	P	P	08 35 11.3	-0.1
	0.8nm,1.1s,baz=230,slow=8.7,SNR=3.6						
TXAR	Lajitas Array	81.14	56	P	P	08 35 45.9	+0.8
	0.1nm,0.5s,baz=220,slow=9.2,SNR=2.8						
PDAR	Pinedale Array	83.03	42	P	P	08 35 54.7	-0.1
	0.2nm,0.5s,baz=226,slow=3.4,SNR=3.3						
ILAR	Eielson Array	83.57	11	P	P	08 35 57.5	+0.5
	0.3nm,0.7s,baz=212,slow=5.4,SNR=5.4						
VNA3	Neumayer Olymp	91.67	175	*e*	P	08 36 30.8	-5.5
VNA2	Neumayer--Watz	92.17	175	*e*	P	08 36 33.1	-5.5
	baz=202,slow=3.5						
BRTR	Keskin Array B	147.17	320	PKPbc	PKPbc	08 43 13.4	+0.6
	0.7nm,0.7s,baz=48,slow=1.8,SNR=4.3						

IDC 07 08:23:48.9±1.7, 5°.18N×126°.98E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/21, mbtmp3.8/5, Error ellipse: s-maj=101.1km s-min=23.3km az=67.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.17	183	P	P	08 28 58.0	+0.7
	0.4nm,0.3s,baz=18,slow=11,SNR=4.5						
WRA	Warramunga Arr	25.99	164	P	P	08 29 23.7	+0.1
	1.7nm,0.5s,baz=342,slow=10,SNR=16						
ASAR	Alice Springs	29.45	167	P	P	08 29 54.7	+0.1
	0.4nm,0.4s,baz=350,slow=7.2,SNR=13						
STKA	Stephens Creek	39.39	160	P	P	08 31 20.0	-0.5
	1.4nm,0.4s,baz=342,slow=8.6,SNR=9.3						
MKAR	Makanchi Array	56.52	325	P	P	08 33 33.1	+0.1
	0.4nm,0.5s,baz=122,slow=7.4,SNR=7.1						

IDC 07 08:31:54.7±612.0, 34°.17N×147°.15E, h0km, Error ellipse: s-maj=1211.0km s-min=58.2km az=115.0, Off east coast of Honshu

*JMA **07** 08:38:19.9±0.1, 28°.95N×139°.50E, h510km, M3.8*
*ISCJB **07** 08:38:20.8±0.5, 28°.98N±0°.05×139°.3E±0°.1, h485km±6km, mb3.2/9, Error ellipse: s-maj=17.9km s-min=6.3km az=168.0*
*IDC **07** 08:38:21.4±0.7, 28°.93N×139°.17E, h470km±9km, mb2.9/9, mb1 3.1/13, mb1mx2.9/26, mbtmp2.9/13, Error ellipse: s-maj=24.2km s-min=9.2km az=83.0*
*NEIC **07** 08:38:21.6±0.9, 28°.94N×139°.09E, h473km±11km, mb4.1/1, Error ellipse: s-maj=24.5km s-min=10.0km az=92.0*
ISC 07 08:38:21.9±0.5, 29°.01N±0°.05×139°.4E±0°.1, h479km±6km, n29, σ0°96/39, mb3.2/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.15	127	P	P	08 39 32.6	+0.3
	6.1nm,0.3s,baz=262,slow=22,SNR=8.4						
CBIJ				S	S	08 40 28.4	-1.0
	43nm,0.3s,baz=296,slow=22,SNR=25						
CBIJ	Chichi jima	3.15	127	P	P	08 39 32.1	-0.2
CBIJ				*e*S	S	08 40 27.9	-1.6
JHHJ	Haha-jima-NKT	3.45	133	*e*S	S	08 40 33.3	-0.3
JHJ2	Mitsune	4.11	6	P	P	08 39 41.4	+1.7
JHJ	Hachijo jima 2	4.12	5	P	P	08 39 41.2	+1.4
	9.2nm,0.3s,baz=63,slow=22,SNR=10.0						
JHJ				S	S	08 40 44.1	+0.9
	14nm,0.3s,baz=66,slow=22,SNR=6.2						
BSO1	Boso 1	5.80	13	P	P	08 39 56.4	+1.2
BSO1				S	S	08 41 11.6	+0.1
JIE	Ise	5.82	338	P	P	08 39 57.1	+1.7
BSO3	Boso 3	5.86	9	P	P	08 39 56.6	+0.8
BSO3				*e*S	S	08 41 12.5	-0.2
BSO4	Boso 4	6.02	8	*e*S	S	08 41 15.1	-0.5
JTO	Tosashimizu	6.81	306	P	P	08 40 06.1	+0.7
JHU	Hanno	6.82	360	P	P	08 40 05.5	0.0
JHU				*e*S	S	08 41 26.8	-3.6
JRY	Ryogami san	7.00	357	P	P	08 40 08.0	+0.7
JYT	Yasato	7.24	5	S	S	08 41 35.7	-2.4
JAG	Ashikaga	7.40	1	P	P	08 40 11.0	-0.4
JAG				*e*S	S	08 41 36.5	-4.7
MJAR	Matsushiro Arr	7.57	353	P	P	08 40 13.3	+0.1
	1.2nm,0.3s,baz=187,slow=13,SNR=13						
MJAR				S	S	08 41 43.6	-1.0
	0.3nm,0.3s,baz=288,slow=33,SNR=3.4						
MAJO	Matsushiro	7.58	353	*e*P	P	08 40 13.2	0.0
	8.1nm,0.6s						
MAT	Matsushiro	7.58	353	P	P	08 40 13.3	+0.1
MAT				S	S	08 41 44.1	-0.5
JHO	Hitachi	7.65	7	P	P	08 40 14.6	+0.6
JHO				*e*S	S	08 41 44.3	-1.7
KSRS	Korea Array	12.73	314	P	P	08 41 07.0	-1.3
	0.1nm,0.3s,baz=124,slow=10,SNR=6.3						
MKAR	Makanchi Array	47.33	308	P	P	08 46 10.3	-0.9
	0.2nm,0.6s,mb2.7,baz=100,slow=8.6,SNR=2.9						
FITZ	Fitzroy Crossi	48.67	197	P	P	08 46 21.0	-0.5
	2.0nm,0.6s,mb3.6,baz=11,slow=6.3,SNR=10.0						
WRA	Warramunga Arr	48.90	186	P	P	08 46 22.4	-0.8
	1.3nm,0.4s,mb3.7,baz=1.1,slow=7.7,SNR=61						
ASAR	Alice Springs	52.63	186	P	P	08 46 50.0	-0.4
	0.3nm,0.4s,mb3.0,baz=1.5,slow=6.4,SNR=17						
ILAR	Eielson Array	57.26	29	P	P	08 47 23.5	+1.1
	0.3nm,0.7s,mb2.7,baz=249,slow=6.0,SNR=6.0						
STKA	Stephens Creek	60.59	178	P	P	08 47 45.1	-0.1
	0.5nm,0.5s,mb3.2,baz=0.0,slow=10,SNR=3.8						
ARCES	ARCESS Array B	70.91	340	P	P	08 48 49.8	+0.3
	0.8nm,0.8s,mb3.3,baz=72,slow=8.0,SNR=3.7						
YKA	Yellowknife Ar	71.65	28	P	P	08 48 55.4	+1.5
	0.2nm,0.4s,mb3.0,baz=300,slow=6.0,SNR=6.4						
YKA	Yellowknife Ar	71.65	28	P	P	08 48 55.4	+1.5
FINES	FINESS Array B	75.12	333	P	P	08 49 13.6	-0.3
	3.8nm,1.2s,mb3.8,baz=76,slow=3.8,SNR=5.8						

IDC 07 08:49:48.0±1.3, 17°.06S×173°.15W, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.8/20, mbtmp3.9/5, MS3.5/1, Ms1 3.5/1, ms1mx2.7/24, Error ellipse: s-maj=53.6km s-min=25.6km az=132.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.40	23	Pn	Pn	08 50 35.3	-7.1
	2.6nm,0.3s,baz=260,slow=22,SNR=6.6						
AFI				Sn	Sn	08 51 13.4	-10
	26nm,0.3s,baz=79,slow=16,SNR=7.1						
AFI				T		08 54 06.4	
	8.1nm,0.3s,baz=134,slow=16,SNR=6.8						
URZ	Urewera	22.78	200	P	P	08 54 52.1	0.0
	8.0nm,0.6s,baz=56,slow=11,SNR=7.4						
HNR	Honiara	27.23	283	LR	LR	09 04 39.9	
	comp=Z,106nm,20.9s,baz=238,slow=33						
WRA	Warramunga Arr	49.72	258	P	P	08 58 41.8	-0.5
	0.4nm,0.4s,baz=96,slow=7.6,SNR=28						
ASAR	Alice Springs	49.84	253	P	P	08 58 43.4	+0.1
	2.9nm,0.6s,baz=89,slow=8.5,SNR=54						
NVAR	Mina Array Bea	75.40	42	P	P	09 01 33.8	+0.1
	0.3nm,0.7s,baz=224,slow=7.2,SNR=3.1						
ILAR	Eielson Array	84.02	11	P	P	09 02 19.2	-0.6
	0.3nm,0.8s,baz=213,slow=6.5,SNR=3.4						
VNA3	Neumayer Olymp	91.19	175	*e*	P	09 02 50.6	-4.0
VNA2	Neumayer--Watz	91.69	175	*e*	P	09 02 53.1	-3.8
	baz=203,slow=3.6						
BRTR	Keskin Array B	147.58	320	PKPbc	PKPbc	09 09 35.2	+0.7
	0.5nm,0.7s,baz=85,slow=3.5,SNR=3.4						

IDC 07 08:51:28.2±645.0, 34°.43N×146°.25E, h0km, Error ellipse: s-maj=1275.0km s-min=61.0km az=114.0, Off east coast of Honshu

*IDC **07** 09:00:22.4±0.4, 12°.95N×92°.46E, h0km, mb5.1/24, mb1 5.1/25, mb1mx5.1/26, mbtmp5.1/25, ML5.0/1, MS4.1/17, Ms1 4.2/17, ms1mx3.9/29, Error ellipse: s-maj=14.3km s-min=11.0km az=47.0*
*BJI **07** 09:00:25.9, 12°.90N×92°.39E, h40km, mB5.0/33, mb5.3/63, Ms4.4/60, Ms7 4.1/54*
*MOS **07** 09:00:26.0±0.8, 13°.00N×92°.44E, h33km, mb5.3/81, Error ellipse: s-maj=6.5km s-min=4.0km az=117.9*
*ISCJB **07** 09:00:26.9±0.1, 12°.93N±0°.03×92°.39E±0°.02, h42km, mb5.1/219, MS4.2/51, Error ellipse: s-maj=3.8km s-min=2.5km az=26.9*
*NEIC **07** 09:00:28.5±0.6, 12°.94N×92°.39E, h40km±5km, mb5.1/108, Error ellipse: s-maj=4.3km s-min=3.0km az=216.0*
*GCMT **07** 09:00:30.7±0.4, 13°.09N×92°.49E, h34km±1km, MW5.0, Moment Tensor Solution. s22,c26; s61,c84; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.82±.25; $M_{\theta\theta}$-0.67±.18; $M_{\phi\phi}$2.49±.18; $M_{r\theta}$-1.16±.18; $M_{\theta\phi}$2.17±.12; $M_{\phi r}$0.78±.18; Best double couple: $M_0$3.40000×10^{16} NP1:ϕ_s62.00000°, δ58.00000°, λ-35.00000°. NP2:ϕ_s172.00000°, δ61.00000°, λ-143.00000°. Principal axes: T 3.6000, Plg2.0000°, Azm296.0000°; N -0.4100, Plg44.0000°, Azm205.0000°; P -3.1800, Plg46.0000°, Azm28.0000°; Data Used: II IU CN IC.*
*DJA **07** 09:00:33, 13°.09N×92°.61E, h75km, mb5.0/23*
*SZGRF **07** 09:00:36.1, 14°.12N×92°.07E, h44km, mb5.1, Andaman Islands, India, region*
ISC 07 09:00:29.1±0.1, 12°.97N±0°.02×92°.40E±0°.02, h44km, h44km±.5km: pP-P, n841, σ0°90/572, mb5.1/219, MS4.2/51, 134C-185D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDT	Bhumibol Dam	7.66	55	⇑P	Pn	09 02 18.0	-0.1
	118nm,1.0s						
NST	Nakhon Sawan	7.96	69	P	Pn	09 02 17.0	-5.3
	92nm,0.4s						
CM31	Chiang Mai Arr	8.33	48	*e*Pn	Pn	09 02 25.7	-1.7
	32nm,0.5s						
CMAR	Chiang Mai Arr	8.33	48	Pn	Pn	09 02 25.3	-2.1
	5.0nm,0.3s,baz=239,slow=15,SNR=124						
CMAR				Sn	Sn	09 03 55.0	-5.1
	1.9nm,0.3s,baz=238,slow=27,SNR=7.2						
CMAR				LR	LR	09 06 26.4	
	comp=Z,2μm,19.6s,baz=226,slow=44						
CMAR	Chiang Mai Arr	8.33	48	P	Pn	09 02 25.3	-2.1
CMAR						09 03 55.1	
CHG	Chiang Mai	8.56	46	PG	Pn	09 02 32.4	+1.9
CHG				SG	Sn	09 04 00.5	-5.4
CHTO	Chiang Mai	8.56	46	*e*P	Pn	09 02 28.8	-1.7
CHTO				*e*		09 04 02.8	
CHTO				pmax	pmax		
	comp=Z,48nm,0.6s						
CHTO	Chiang Mai	8.56	46	*e*Pn	Pn	09 02 28.8	-1.7
	comp=Z,48nm,0.6s						
CHTO				*e*Sn	Sn	09 04 02.8	-3.1
CHTO	Chiang Mai	8.56	46	P	Pn	09 02 29.3	-1.2
	SNR=22						
BWNR	Bhubaneshwar	9.64	320	*e*PKP	Pn	09 02 39.0	-6.4
BWNR				*e*S	Sn	09 04 14.0	-18
CHRT	Chiangrai	9.86	45	⇓P	Pn	09 02 48.0	-0.3
	comp=Z,1μm,1.0s						
VIS	Vishakhapatnam	9.95	299	*e*PKP	Pn	09 02 47.5	-2.0
VIS				*i* x	x	09 04 29.6	
TPTI		10.74	154	P	Pn	09 03 06.6	+6.2
	comp=Z,31nm,1.5s						
KULM	Kulim	11.15	132	P	Pn	09 03 07.8	+1.8
KULM	Kulim	11.15	132	*e*Pn	Pn	09 03 06.8	+0.8
	comp=Z,98nm,1.2s						
KULM	Kulim	11.15	132	P	Pn	09 03 07.6	+1.6
	comp=Z,888nmcomp=Z,84nm,1.2s						
TSI	Tuntungan	11.21	147	P	Pn	09 03 07.0	+0.2
	comp=Z,176nm,1.2s						
IPM	Ipoh	11.98	134	*e*Pn	Pn	09 03 16.8	-0.6
	comp=Z,108nm,1.3s						
IPM	Ipoh

AKL *i* x x 09 07 07.8
GKN Gorkha 16.62 335 *e*P **Pn 09 04 17.9 -1.1**
LSA Lhasa 16.69 356 P **Pn 09 04 16.8 -3.0**
LSA S **S 09 07 31.9 -1.9**
LSA LR LR
comp=N,400nm,23.6s
LSA LR LR
comp=E,740nm,23.4s
LSA LR LR
comp=Z,990nm,22.5s
LSA Lhasa 16.69 356 *e*P **Pn 09 04 21.9 +2.1**
LSA pmax pmax
comp=Z,111nm,0.8s
LSA Lhasa 16.69 356 *e*P **Pn 09 04 21.9 +2.0**
comp=Z,111nm,0.8s
KOLN Koldanda 16.87 332 *e*P **Pn 09 04 21.5 -0.6**
comp=Z,195nm,0.6s
DANN Dangsing 17.30 334 *e*P **Pn 09 04 26.8 -0.6**
BHPL Bhopal 17.51 308 *e*PKP **Pn 09 04 29.5 -0.6**
BHPL AMb AMB 09 04 34.9
comp=Z,189nm,1.3s
QIZ Qiongzhong 17.81 68 P **Pn 09 04 33.9 +0.1**
QIZ pP pP 09 04 44.2 -0.4
QIZ sP sP 09 04 49.0 -1.1
QIZ S **S 09 07 50.9 -5.8**
QIZ pmax pmax
comp=Z,28nm,0.8s
QIZ LR LR
comp=N,430nm,18.3s
QIZ LR LR
comp=Z,550nm,19.8s
QIZ Qiongzhong 17.81 68 *e*P **Pn 09 04 35.7 +1.9**
comp=Z,15nm,0.6s
KAD Karad 18.11 286 *e*PKP **Pn 09 04 36.3 -1.2**
KAD AMb AMB 09 04 49.1
comp=Z,92nm,1.6s
POO Poona 18.69 290 *e*PKP **Pn 09 04 43.3 -1.2**
GYA Guiyang 18.96 43 ⇓*i*P **Pn 09 04 47.2 -0.5**
GYA pP pP 09 04 57.2 0.0
GYA sP sP 09 05 03.4 +0.6
GYA PP 09 05 05.8
GYA S **S 09 08 19.1 -0.7**
GYA sS sS 09 08 33.4 -3.2
GYA PcP PcP 09 09 07.3 -4.0
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,180nm,3.3s
GYA LR LR
comp=N,2μm,19.6s
GYA LR LR
comp=E,2μm,19.9s
GYA LR LR
comp=Z,3μm,21.5s
PTH Pithoragarh 20.00 327 *ex* **P 09 05 02.0 +3.9**
PTH *ex* x 09 08 26.8
PPBI Pangkal Pinang 20.29 137 P **P 09 05 00.5 -0.8**
comp=Z,67nm,1.0s
CD2 Chengdu 20.70 29 ⇓*i*P **P 09 05 05.4 -0.2**
CD2 pP 09 05 14.3
CD2 sP sP 09 05 18.6 -3.2
CD2 PP 09 05 27.8
CD2 S **S 09 08 50.7 -3.9**
CD2 sS sS 09 09 04.8 -6.8
CD2 SS 09 09 22.8
CD2 pmax pmax
comp=Z,320nm,0.6s
CD2 pmax pmax
comp=Z,400nm,4.6s
CD2 LR LR
comp=N,950nm,17.8s,MS4.3
CD2 LR LR
comp=E,920nm,22.6s,MS4.3
CD2 LR LR
comp=Z,490nm,20.2s,MS3.9
KSM Kuching 21.09 121 *e*P **P 09 05 11.8 +1.8**
comp=Z,40nm,1.0s,mb4.7
KSM Kuching 21.09 121 P **P 09 05 09.1 -0.9**
comp=Z,41nm,1.3s,mb4.6
AJM Ajmer 21.41 312 *e*PKP **P 09 05 13.9 +0.5**
AJM AMb AMB 09 05 20.1
comp=Z,107nm,1.6s,mb4.9
DDI Dehra Dun 21.78 325 *e*PKP **P 09 05 19.0 +1.8**
DDI *ex* x 09 09 14.0
SBUM Sibu 22.22 116 P **P 09 05 23.8 +1.8**
SBUM Sibu 22.22 116 P **P 09 05 21.6 -0.5**
comp=Z,25nm,1.2s,mb4.5
BTM Bintulu 22.64 114 P **P 09 05 27.7 +1.2**
STKI Sintang 22.84 123 P **P 09 05 28.4 -0.3**
comp=Z,50nm,1.2s,mb4.8
SDNR Sundarnagar 23.28 325 *e*PKP **P 09 05 34.3 +1.2**
SDNR *ex* x 09 09 44.5
ENH Enshi 23.37 40 *e*P **P 09 05 32.4 -1.6**
comp=Z,180nm,0.8s,mb5.5
KKM Kota Kinabalu 24.46 104 P **P 09 05 45.8 +1.6**
KKM Kota Kinabalu 24.46 104 *e*P **P 09 05 45.3 +1.2**
comp=Z,5.5nm,0.6s,mb4.2
LZH Lanzhou 25.22 22 *e*P **P 09 05 51.8 +1.0**
LZH pP pP 09 06 02.2 -0.2
LZH sP sP 09 06 08.4 +0.7
LZH PP 09 06 28.7
LZH PcP PcP 09 09 25.1 +1.5
LZH *e*S **S 09 10 11.4 -1.9**
LZH sS sS 09 10 32.5 -0.3
LZH SS 09 11 15.1
LZH pmax pmax
comp=Z,45nm,1.1s,mb4.9
LZH pmax pmax
comp=Z,240nm,5.7s
LZH LR LR
comp=N,140nm,6.2s
LZH LR LR
comp=E,390nm,13.6s
LZH LR LR
comp=Z,640nm,14.6s,MS4.3
SDKM Sandakan 25.51 104 P **P 09 05 54.3 +0.6**
XAN Xi'an 25.80 33 P **P 09 05 53.9 -2.2**
XAN pP pP 09 06 04.2 -3.6
XAN sP sP 09 06 09.2 -3.8
XAN S **S 09 10 29.7 +7.2**
XAN sS sS 09 10 44.3 +2.2
XAN pmax pmax
comp=Z,81nm,0.8s,mb5.3
XAN pmax pmax
comp=Z,31nm,8.9s
XAN LR LR
comp=N,350nm,20.3s,MS3.9
XAN LR LR
comp=E,92nm,21.5s,MS3.9
XAN LR LR
comp=Z,130nm,23.9s,MS3.4
TSM Tawau 26.59 107 P **P 09 06 04.9 +1.5**
WHN Wuhan 26.77 46 P **P 09 06 03.5 -1.4**
WHN pP pP 09 06 12.3 -4.3
WHN LR LR
comp=N,1μm,14.8s,MS4.6
WHN LR LR
comp=E,360nm,11.5s,MS4.6
WHN LR LR
comp=Z,1μm,17.6s
MYLDM Lahad Datu 26.89 104 P **P 09 06 07.0 +0.9**
MYLDM Lahad Datu 26.89 104 P **P 09 06 06.6 +0.5**
comp=Z,61nm,1.0s,mb5.1
GTA Gaotai 27.14 13 ⇓P **P 09 06 08.8 +0.7**
GTA pP pP 09 06 20.5 +0.7
GTA sP sP 09 06 26.0 +0.9
GTA PcP PcP 09 09 29.3 +1.3
GTA S **S 09 10 46.6 +3.0**
GTA sS sS 09 11 05.1 +1.9
GTA pmax pmax
comp=Z,98nm,1.1s,mb5.2
GTA pmax pmax
comp=Z,290nm,6.4s
GTA LR LR
comp=N,360nm,18.0s,MS4.2
GTA LR LR
comp=E,470nm,18.3s,MS4.2
GTA LR LR
comp=Z,190nm,17.8s,MS3.7
TGY Tagaytay City 27.76 84 P **P 09 06 15.4 +1.4**
comp=Z,72nm,0.3s,mb5.8,baz=224,slow=12,SNR=3.8
TWG Pinlang 28.94 66 *e*P **P 09 06 25.9 +1.6**
comp=Z,62nm,0.9s,mb5.3
SSLB Suanglung 29.09 64 *e*P **P 09 06 26.2 +0.4**
comp=Z,41nm,0.8s,mb5.2

YULB Yu-li 29.29 65 *e*P **P 09 06 28.5 +1.0**
comp=Z,36nm,0.8s,mb5.2
YHNB Yeheng 29.72 63 *e*P **P 09 06 32.2 +0.8**
comp=Z,34nm,0.8s,mb5.1
NACB Ninganchiao 29.77 64 *e*P **P 09 06 34.4 +2.7**
comp=Z,18nm,1.0s,mb4.8
KBL Kabul 30.16 319 *e*P **P 09 06 35.8 +0.7**
KBL pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
KBL Kabul 30.16 319 *e*P **P 09 06 35.8 +0.7**
comp=Z,5.0nm,0.6s,mb4.4
KSH Kashi 30.16 334 *e*P **P 09 06 34.3 -0.7**
KSH *e*pP pP 09 06 46.2 -0.6
KSH *e*sP sP 09 06 51.6 -0.4
KSH *e*PP PP 09 07 31.6 -12
KSH *e*PcP PcP 09 09 38.4 +2.9
KSH *e*S **S 09 11 25.5 -5.6**
KSH *e*sS sS 09 11 45.2 -5.6
KSH *e*ScP ScP 09 13 15.2 +0.8
KSH pmax pmax
comp=Z,61nm,0.7s,mb5.4
KSH LR LR
comp=N,1μm,15.4s
KSH LR LR
comp=E,510nm,8.4s
KSH LR LR
comp=Z,980nm,22.3s
NJ2 Nanjing 30.81 48 *e*P **P 09 06 41.1 +0.3**
NJ2 pP pP 09 06 53.0 +0.4
NJ2 sP sP 09 06 58.6 +0.8
NJ2 S **S 09 11 41.5 +0.1**
NJ2 sS sS 09 12 02.0 +0.9
NJ2 SS SS 09 13 29.0 -25
NJ2 pmax pmax
comp=Z,90nm,1.0s,mb5.5
NJ2 pmax pmax
comp=Z,70nm,9.9s
NJ2 LR LR
comp=N,410nm,23.7s,MS4.3
NJ2 LR LR
comp=E,620nm,21.4s,MS4.3
NJ2 LR LR
comp=Z,610nm,25.3s,MS4.2
SRBI Singaraja 30.84 132 P **P 09 06 41.3 +0.1**
comp=Z,117nm,1.0s,mb5.7
WMQ Urumqi 31.01 353 P **P 09 06 44.0 +1.6**
WMQ pP pP 09 06 54.0 -0.2
WMQ sP sP 09 06 58.0 -1.4
WMQ PP PP 09 07 47.0 -6.0
WMQ PcP PcP 09 09 40.0 +2.4
WMQ S **S 09 11 46.0 +1.7**
WMQ SS SS 09 13 31.0 -27
WMQ pmax pmax
comp=Z,48nm,0.8s,mb5.4
WMQ pmax pmax
comp=Z,180nm,3.0s
WMQ LR LR
comp=N,310nm,12.0s,MS4.7
WMQ LR LR
comp=E,890nm,12.0s,MS4.7
WMQ LR LR
comp=Z,360nm,12.0s,MS4.2
TTSI Tana Toraja 31.53 118 P **P 09 06 46.6 -0.8**
comp=Z,2μmcomp=Z,36nm,1.2s,mb5.1
SSE Sheshan 32.06 51 P **P 09 06 51.8 0.0**
SSE S **S 09 12 02.4 +1.4**
SSE pmax pmax
comp=Z,30nm,0.6s,mb5.3
SSE pmax pmax
comp=Z,81nm,4.0s
SSE LR LR
comp=N,380nm,17.4s,MS4.2
SSE LR LR
comp=E,250nm,17.5s,MS4.2
SSE LR LR
comp=Z,440nm,14.3s,MS4.3
ULHL Ulahol 32.37 337 P **P 09 06 55.5 +1.1**
SNR=12
HHC Hu-ho-hao-te 32.45 28 ⇓P **P 09 06 55.6 +0.4**
HHC pP pP 09 07 08.1 +1.1
HHC sP sP 09 07 12.9 +0.7
HHC PP PP 09 08 05.2 -3.9
HHC PcP PcP 09 09 40.7 -0.9
HHC S **S 09 12 07.5 +0.6**
HHC sS sS 09 12 27.3 +0.7
HHC ScP ScP 09 13 20.4 -1.7
HHC SS SS 09 14 05.6 -22
HHC pmax pmax
comp=Z,31nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,980nm,5.3s
HHC LR LR
comp=N,1μm,15.1s,MS5.0
HHC LR LR
comp=E,2μm,15.6s,MS5.0
KAPI Kappang 32.52 122 *e*P **P 09 06 54.5 -1.6**
comp=E,28nm,1.0s,mb5.1
KZA Kyzart 32.62 336 P **P 09 06 57.8 +1.3**
SNR=18
BKSI Bulukumba 32.99 122 P **P 09 06 59.1 -1.1**
comp=E,29nm,0.7s,mb5.3
LUWI Luwuk 33.19 113 P **P 09 07 02.0 +0.1**
comp=E,1μmcomp=E,116nm,1.1s,mb5.7
TKM2 Tokmak 2 33.20 337 P **P 09 07 02.6 +1.0**
SNR=24
KBK Karagaybulak 33.22 336 P **P 09 07 03.7 +1.9**
SNR=9.3
AML Almayashu 33.30 334 P **P 09 07 04.4 +1.8**
SNR=9.8
AAK Ala-Archa 33.38 336 P **P 09 07 05.0 +1.7**
SNR=19
AAK Ala-Archa 33.38 336 *e*P **P 09 07 04.8 +1.5**
AAK pmax pmax
comp=Z,35nm,1.0s,mb5.2
AAK Ala-Archa 33.38 336 *e*P **P 09 07 04.8 +1.5**
comp=Z,35nm,1.0s,mb5.2
AAK Ala-Archa 33.38 336 P **P 09 07 05.4 +2.1**
comp=Z,220nm,0.7s,mb6.2,SNR=14
AAK Ala-Archa 33.38 336 P **P 09 07 05.2 +1.9**
SNR=21
FRU Bishkek 33.50 336 ⇓*i*P **P 09 07 06.0 +1.7**
FRU pmax pmax
comp=Z,40nm,2.0s,mb5.0
CHMS Chumysh 33.59 336 P **P 09 07 06.3 +1.2**
SNR=8.4
KMSI Cibinong 33.63 109 P **P 09 07 07.2 +1.4**
comp=Z,169nm,1.0s,mb5.9
EKS2 Erkin-Say 33.70 335 P **P 09 07 07.5 +1.4**
SNR=48
USP Ospenovka 33.91 336 P **P 09 07 08.9 +1.1**
SNR=43
BJT Baijiatuau 34.11 33 *e*P **P 09 07 10.0 +0.4**
BJT pmax pmax
comp=Z,77nm,0.6s
BJT Baijiatuau 34.11 33 *e*P **P 09 07 10.0 +0.3**
comp=Z,77nm,0.6s,mb5.8
BJI Beijing 34.13 33 P **P 09 07 10.1 +0.3**
BJI pmax pmax
comp=Z,120nm,0.7s,mb5.9
BJI pmax pmax
comp=Z,270nm,4.6s
BJI LR LR
comp=N,370nm,20.1s,MS4.3
BJI LR LR
comp=E,440nm,21.3s,MS4.3
BJI LR LR
comp=Z,430nm,27.6s
MK31 Makanchi Array 34.78 348 *i* P **P 09 07 15.7 +0.4**
MK31 pmax pmax
comp=Z,56nm,0.8s,mb5.5
MK31 Makanchi Array 34.78 348 *e*P **P 09 07 15.6 +0.3**
MK31 *e* pP 09 07 27.8 +0.7
MKAR Makanchi Array 34.78 348 P **P 09 07 15.8 +0.5**
comp=Z,56nm,0.8s,mb5.5,baz=164,slow=8.6,SNR=355
MKAR PcP PcP 09 09 47.8 -0.2
comp=Z,3.0nm,0.6s,baz=197,slow=2.5,SNR=4.4
KK31 Karatay Array 35.48 332 *i* P **P 09 07 22.0 +0.6**
KK31 pmax pmax
comp=Z,25nm,0.9s,mb5.1
KKAR Karatay Array 35.48 332 *e*P **P 09 07 22.1 +0.7**
KKAR pmax pmax
comp=Z,20nm,0.8s,mb5.1
KKAR Karatay Array 35.48 332 *e*P **P 09 07 22.1 +0.6**
comp=Z,20nm,0.8s,mb5.1
JOW Kunigami 36.30 62 *e*P **P 09 07 28.6 -0.1**
comp=Z,6.9nm,0.6s,mb4.8

DL2 Dalian 36.56 40 P **P 09 07 31.0 +0.3**
DL2 sP sP 09 07 47.4 -0.4
DL2 *e*S **S 09 13 10.4 +0.1**
DL2 pmax pmax
comp=Z,30nm,1.0s,mb5.1
DL2 pmax pmax
comp=Z,120nm,4.8s
DL2 LR LR
comp=N,170nm,17.5s,MS4.0
DL2 LR LR
comp=E,140nm,17.4s,MS4.0
DL2 LR LR
comp=Z,240nm,18.7s,MS4.0
SONM Songino Array 36.67 16 P **P 09 07 32.3 +0.8**
comp=Z,52nm,0.7s,mb5.5,baz=201,slow=8.2,SNR=114
SONM PcP PcP 09 09 54.3 +0.7
comp=Z,6.6nm,0.7s,baz=196,slow=3.8,SNR=5.8
SONM LR LR 09 25 44.7
comp=Z,303nm,18.2s,MS4.1,baz=91,slow=42
SONM Songino Array 36.67 16 P **P 09 07 32.3 +0.8**
SONM 09 09 54.3
ULN Ulaanbaatar 36.88 16 *e*P **P 09 07 33.4 +0.1**
ULN pmax pmax
comp=Z,41nm,0.8s,mb5.3
ULN Ulaanbaatar 36.88 16 *e*P **P 09 07 33.4 +0.1**
comp=Z,41nm,0.8s,mb5.3
ULN Ulaanbaatar 36.88 16 P **P 09 07 34.0 +0.8**
SNR=28
ZAK Zakamensk 38.36 11 *e*P **P 09 07 46.3 +0.6**
ZAK pmax pmax
comp=Z,16nm,1.0s,mb4.7
MOY Mondy 39.22 8 *e*P **P 09 07 53.9 +1.0**
MOY pmax pmax
comp=Z,33nm,1.9s,mb4.7
KURK Kurchatov 39.29 346 P **P 09 07 53.3 -0.2**
comp=Z,372nm,0.9s,mb6.1,SNR=44
KURK Kurchatov 39.29 346 LR LR 09 26 37.5
comp=Z,272nm,21.0s,MS4.1,baz=135,slow=40
KURK Kurchatov 39.29 346 *d*/P **P 09 07 53.7 +0.2**
KURK pmax pmax
comp=Z,92nm,1.2s,mb5.4
KURK Kurchatov 39.29 346 *e*P **P 09 07 53.6 +0.1**
comp=Z,59nm,0.9s,mb5.3
KURK Kurchatov 39.29 346 P **P 09 07 54.1 +0.6**
SNR=32
ABKT Ailbek 39.34 315 P **P 09 07 55.0 +0.8**
comp=Z,186nm,0.5s,mb6.1,SNR=9.3
SNY Shenyang 39.51 37 ⇓P **P 09 07 55.2 -0.3**
SNY pmax pmax
comp=Z,60nm,0.8s,mb5.4
SNY pmax pmax
comp=Z,260nm,3.5s
SNY LR LR
comp=N,340nm,17.8s,MS4.3
SNY LR LR
comp=E,130nm,13.6s,MS4.3
SNY LR LR
comp=Z,260nm,17.3s,MS4.1
TLY Talaya 39.67 11 *e*P **P 09 07 57.7 +1.0**
TLY pmax pmax
comp=Z,46nm,1.0s,mb5.2
TLY MLR MLR
comp=Z,121nm,18.0s,MS3.8
TLY Talaya 39.67 11 *e*P **P 09 07 57.9 +1.2**
comp=Z,52nm,1.1s,mb5.2
TLY Talaya 39.67 11 P **P 09 07 58.2 +1.5**
comp=Z,271nm,1.0s,mb5.9,SNR=6.6
KSRS Korea Array 39.97 46 P **P 09 07 58.7 -0.7**
comp=Z,48nm,0.7s,mb5.4,baz=241,slow=8.8,SNR=277
KSRS PcP PcP 09 10 03.9 -0.3
comp=Z,1.6nm,0.7s,baz=253,slow=3.5,SNR=4.6
KSRS LR LR 09 27 30.6
comp=Z,414nm,18.4s,MS4.3,baz=238,slow=41
KSRS Korea Array 39.97 46 P **P 09 07 58.7 -0.7**
KSRS 09 10 03.9
KSRS pmax pmax
comp=Z,48nm,0.7s,mb5.3
KSRS MLR MLR
comp=Z,414nm,18.4s,MS4.3
IRK Irkutsk 40.32 11 *e*P **P 09 08 03.4 +1.3**
IRK pmax pmax
comp=Z,56nm,2.4s,mb4.9
JNU Nakatsue 40.38 54 *e*P **P 09 08 03.2 +0.3**
comp=Z,6.9nm,0.7s,mb4.5
ZALV Zalesovo Beam 41.32 353 P **P 09 08 10.3 0.0**
comp=Z,61nm,0.7s,mb5.3,baz=176,slow=8.6,SNR=117
ZALV LR LR 09 28 45.5
comp=Z,184nm,20.2s,MS3.9,baz=304,slow=41
ZALV Zalesovo Beam 41.32 353 P **P 09 08 10.3 0.0**
ZALV LR LR 09 28 45.5
CN2 Changchun 41.80 36 ⇓P **P 09 08 14.3 -0.1**
CN2 *e*pP pP 09 08 26.6 +0.1
CN2 *e*PP PP 09 09 51.5 -0.2
CN2 PcP PcP 09 10 09.6 -0.3
CN2 *e*S **S 09 14 28.9 0.0**
CN2 *e*SS SS 09 17 31.5 -4.7
CN2 pmax pmax
comp=Z,80nm,1.0s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,20.0s,MS4.2
CN2 LR LR
comp=E,200nm,20.0s,MS4.2
CN2 LR LR
comp=Z,300nm,20.0s,MS4.2
NVS Novosibirsk 42.39 352 ⇓*i*P **P 09 08 17.2 -1.8**
NVS *e*S **S 09 14 32.3 -5.0**
NVS pmax pmax
comp=N,19nm,1.0s
NVS pmax pmax
comp=E,13nm,1.0s
NVS pmax pmax
comp=Z,33nm,1.0s,mb4.9
NVS smax
comp=N,3.0nm,1.2s
NVS smax
comp=E,6.0nm,1.2s
CIT Chita 42.51 19 *e*P **P 09 08 19.2 -0.9**
HIA Hailar 42.63 26 *e*P **P 09 08 21.1 0.0**
HIA pmax pmax
comp=Z,13nm,0.6s
HIA Hailar 42.63 26 *e*P **P 09 08 21.1 0.0**
comp=Z,13nm,0.6s,mb4.8
VOSK Vostochnaya 43.20 341 P **P 09 08 25.4 -0.2**
VOSK pmax pmax
comp=Z,30nm,0.7s,mb5.1
MBWA Marble Bar 43.25 141 *e*P **P 09 08 24.8 -1.6**
MBWA Marble Bar 43.25 141 *e*P **P 09 08 25.1 -1.4**
comp=Z,6.4nm,0.5s,mb4.6
BRVK Borovoye 43.71 341 P **P 09 08 29.4 -0.3**
comp=Z,151nm,0.7s,mb5.8,SNR=8.9
BRVK Borovoye 43.71 341 *d*/P **P 09 08 29.6 -0.1**
BRVK pmax pmax
comp=Z,34nm,1.2s,mb5.0
BRVK Borovoye 43.71 341 *e*P **P 09 08 29.7 0.0**
comp=Z,29nm,1.0s,mb5.0
BRVK Borovoye 43.71 341 P **P 09 08 30.0 +0.3**
SNR=12
RDF Al-Radifah 44.51 298 *e*P **P 09 08 37.0 +0.5**
RDF AMb AMB 09 08 48.9
comp=Z,75nm,0.6s,mb5.7
MDJ Mudanjiang 44.71 38 P **P 09 08 37.6 -0.3**
MDJ pP pP 09 08 49.9 -0.1
MDJ sP sP 09 08 54.9 -0.3
MDJ PP PP 09 10 23.7 +0.9
MDJ S **S 09 15 13.5 +2.0**
MDJ sS sS 09 15 33.0 +1.3
MDJ pmax pmax
comp=Z,12nm,0.9s,mb4.7
MDJ pmax pmax
comp=Z,71nm,5.5s
MDJ LR LR
comp=N,200nm,20.4s,MS4.2
MDJ LR LR
comp=E,250nm,22.7s,MS4.2
MDJ LR LR
comp=Z,180nm,16.3s
NAY Al-Naaiem 44.84 299 *e*P **P 09 08 39.2 +0.1**
NAY AMb AMB 09 08 51.0
comp=Z,35nm,0.7s,mb5.3
MIB Mutribah 44.87 299 *e*P **P 09 08 39.6 +0.2**
MIB AMb AMB 09 08 51.4
comp=Z,39nm,0.8s,mb5.3
AB31 Akbulak array 44.98 330 *e*P **P 09 08 40.2 +0.3**
AB31 pmax pmax

comp=Z,8.0nm,0.4s,mb4.9
ABKAR **Akbulak array 44.98 330** *e*P **P 09 08 40.5 +0.6**
comp=Z,30nm,0.8s,mb5.2
FITZ **Fitzroy Crossi 45.04 133** P **P 09 08 39.2 -1.6**
comp=Z,34nm,1.0s,mb5.1,baz=328,slow=5.7,SNR=76
FITZ PcP PcP 09 10 21.1 -0.1
comp=Z,7.9nm,0.8s,baz=336,slow=3.5,SNR=3.1
FITZ **Fitzroy Crossi 45.04 133** *e*P **P 09 08 39.1 -1.7**
comp=Z,46nm,1.0s,mb5.3
FITZ **Fitzroy Crossi 45.04 133** *e*P **P 09 08 38.8 -2.0**
comp=Z,2.0nm,0.3s,mb4.4
FITZ **Fitzroy Crossi 45.04 133** P **P 09 08 39.4 -1.4**
comp=Z,74nm,1.1s,mb5.4
KNA **Kununurra 45.91 127** P **P 09 08 46.0 -1.8**
comp=Z,348nmcomp=Z,36nm,1.0s,mb5.3
AKTO **Aktyubinsk 46.70 330** LR LR 09 31 19.6
comp=Z,171nm,18.0s,MS4.0,baz=138,slow=40
KAKA **Kakadu 47.19 121** *e*P **P 09 08 55.6 -2.2**
comp=Z,23nm,1.4s,mb4.9
KAKA **Kakadu 47.19 121** *e*P **P 09 08 56.8 -1.0**
comp=Z,44nm,1.1s,mb5.3
MAJO **Matsushiro 47.20 52** *e*P **P 09 08 57.5 -0.1**
MAJO pmax pmax
comp=Z,43nm,0.9s,mb5.4
MAJO **Matsushiro 47.20 52** *e*P **P 09 08 57.5 -0.1**
comp=Z,43nm,0.9s,mb5.4
MAT **Matsushiro 47.20 52** P **P 09 08 57.1 -0.5**
MJAR **Matsushiro Arr 47.20 52** P **P 09 08 57.4 -0.3**
comp=Z,11nm,0.7s,mb4.9,baz=265,slow=12,SNR=58
MJAR PcP PcP 09 10 28.9 +0.3
comp=Z,6.9nm,0.9s,baz=245,slow=5.8,SNR=9.0
MJAR LR LR 09 32 10.0
comp=Z,182nm,18.2s,MS4.1,baz=245,slow=40
MJAR **Matsushiro Arr 47.20 52** P **P 09 08 57.4 -0.2**
MJAR 09 10 28.9
CBIJ **Chichi jima 48.53 65** P **P 09 09 05.5 -2.6**
comp=Z,49nm,0.6s,mb5.7,baz=169,slow=20,SNR=6.7
MAK **Makhachkala 48.83 316** *e*P **P 09 09 09.5 -0.6**
MAK *e* 09 11 02.3
MAK *e*S **S 09 16 12.3 +1.9**
MAK pmax pmax
comp=Z,284nm,1.8s,mb6.0
MAK MLR MLR
comp=Z,235nm,15.0s,MS4.3
DGRG **David-gareji 49.72 314** P **P 09 09 17.7 +0.8**
GNI **Garni 49.73 312** ⇑*i*P **P 09 09 17.1 +0.1**
GNI pmax pmax
comp=Z,32nm,1.0s
GNI **Garni 49.73 312** *e*P **P 09 09 19.0 +2.0**
comp=Z,54nm,1.3s,mb5.4
GNI **Garni 49.73 312** P **P 09 09 19.8 +2.8**
SNR=6.9
HABR **Khabarovsk 49.94 36** *e*P **P 09 09 16.5 -2.0**
HABR *e**PP pP 09 09 26.0 -4.8
HABR *e**SP sP 09 09 30.4 -5.5
HABR 09 11 12.4
HABR S **S 09 16 25.8 0.0**
HABR *e**SS sS 09 16 41.8 -4.5
HABR *e* 09 19 04.6
HABR *e*SS SS 09 19 59.5 +0.5
HABR *e*SSS 09 21 24.7
HABR pmax pmax
comp=N,5.0nm,0.7s
HABR pmax pmax
comp=Z,20nm,1.1s,mb5.1
HABR pmax pmax
comp=E,13nm,0.7s
HABR MLR MLR
comp=Z,264nm,22.0s,MS4.2
SVE **Sverdlovsk 50.07 338**⇑*e*P **P 09 09 19.7 +0.4**
SVE pmax pmax
comp=Z,90nm,1.0s,mb5.8
MTA **Mtatsminda 50.21 314** P **P 09 09 22.2 +1.5**
TBLG **Delisi 50.26 314** P **P 09 09 22.4 +1.3**
TBLG **Delisi 50.26 314** P **P 09 09 22.4 +1.3**
CLNS **Chul'man 50.34 23***d i*P **P 09 09 21.7 +0.3**
CLNS *e**PP pP 09 09 35.9 +2.2
CLNS *e* 09 10 38.9
CLNS *e* 09 11 18.5
CLNS pmax pmax
comp=Z,106nm,0.8s,mb5.9
CLNS pmax pmax
comp=E,56nm,0.8s
CLNS pmax pmax
comp=N,50nm,0.8s
CLNS pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
CLNS pmax pmax
comp=E,5.0nm,1.1s
CLNS pmax pmax
comp=N,7.0nm,0.9s
KLBR **Kellerberrin 50.54 152** *e*P **P 09 09 22.3 -0.9**
comp=N,22nm,0.9s,mb5.1
ARU **Arti 50.56 336***d i*P **P 09 09 23.0 -0.1**
ARU *e* 09 11 16.9
ARU PPP 09 12 15.5
ARU S **S 09 16 36.1 +1.9**
ARU SS SS 09 20 04.2 -4.5
ARU pmax pmax
comp=Z,62nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,345nm,21.0s,MS4.3
ARU **Arti 50.56 336** *e*P **P 09 09 23.0 -0.1**
comp=Z,40nm,1.1s,mb5.3
ARU **Arti 50.56 336** P **P 09 09 23.7 +0.6**
comp=Z,196nm,0.8s,mb6.1,SNR=5.5
GUMO **Guam 50.98 83** P **P 09 09 25.9 -1.0**
comp=Z,12nm,0.3s,mb5.2,baz=198,slow=5.1,SNR=4.4
ZEI **Tsey 51.21 315** *e*P **P 09 09 29.2 +1.0**
ZEI pmax pmax
comp=Z,20nm,1.0s,mb5.0
NWAO **Narrogin (SRO) 51.43 153** *e*P **P 09 09 29.0 -0.9**
NWAO *e* pP 09 09 41.7 -0.6
NWAO pmax pmax
comp=Z,34nm,1.0s
NWAO **Narrogin (SRO) 51.43 153** *e*P **P 09 09 29.0 -0.9**
comp=Z,34nm,1.0s,mb5.2
NWAO *e* pP 09 09 41.7 -0.5
KIV **Kislovodsk 52.45 316***d i*P **P 09 09 38.6 +1.2**
KIV *i* 09 09 45.9
KIV *e* pP 09 09 51.8 +2.0
KIV *e* 09 10 52.5
KIV *e* 09 17 15.2
KIV pmax pmax
comp=Z,36nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,100nm,17.0s,MS3.9
KIV **Kislovodsk 52.45 316** *e*P **P 09 09 38.7 +1.3**
comp=Z,35nm,0.8s,mb5.3
KIV **Kislovodsk 52.45 316** P **P 09 09 39.2 +1.8**
SNR=7.6
ERM **Erimo 52.53 47** P **P 09 09 39.7 +1.6**
comp=Z,123nm,0.8s,mb5.9,SNR=6.0
ERM **Erimo 52.53 47***c i*P **P 09 09 38.2 +0.1**
ERM pmax pmax
comp=Z,19nm,1.1s,mb4.9
ERM **Erimo 52.53 47** *e*P **P 09 09 39.2 +1.1**
comp=Z,14nm,0.8s,mb5.0
WRA **Warramunga Arr 52.65 128** P **P 09 09 37.8 -1.5**
comp=Z,22nm,0.8s,mb5.1,baz=306,slow=8.3,SNR=143
WRA PcP PcP 09 10 48.5 -0.3
comp=Z,16nm,0.6s,baz=320,slow=3.0,SNR=38
WRA S **S 09 16 59.5 -4.5**
comp=Z,6.6nm,0.9s,baz=295,slow=16,SNR=31
WRA **Warramunga Arr 52.65 128** P **P 09 09 37.8 -1.5**
WRA PcP PcP 09 10 48.5 -0.3
WRA S **S 09 16 59.5 -4.5**
WB2 **Warramunga Arr 52.66 128** *e*P **P 09 09 37.6 -1.7**
ASAJ **Asahikawa 52.83 44** *e*P **P 09 09 40.3 +0.1**
comp=Z,12nm,1.0s,mb4.8
MALT **Malatya 53.94 308** *e*P **P 09 09 49.1 +0.6**
MALT pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MALT **Malatya 53.94 308** *e*P **P 09 09 49.1 +0.6**
comp=Z,7.9nm,1.0s,mb4.6
MALT **Malatya 53.94 308** P **P 09 09 48.8 +0.3**
comp=Z,327nmcomp=Z,8.3nm,1.2s,mb4.5
YSS **Yuzh-Sakhalins 53.95 41**⇓*e*P **P 09 09 48.2 -0.2**
YSS pmax pmax
comp=E,30nm,1.0s
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.5
YSS MLR MLR
comp=N,300nm,18.0s,MS4.5
YSS MLR MLR
comp=E,300nm,18.0s,MS4.5
YSS MLR MLR
comp=Z,200nm,18.0s,MS4.2
YSS **Yuzh-Sakhalins 53.95 41** *e*P **P 09 09 48.4 +0.1**
comp=Z,75nm,0.9s,mb5.6
SOC **Sochi 54.37 315** *e*P **P 09 09 51.2 -0.3**
SOC *e**PP pP 09 09 59.5 -4.4
SOC *e*S **S 09 17 23.5 -3.2**
SOC pmax pmax
comp=Z,23nm,0.7s,mb5.2
SOC MLR MLR
comp=Z,276nm,22.0s,MS4.3
ASAR **Alice Springs 54.52 132** P **P 09 09 51.6 -1.2**
comp=Z,13nm,0.8s,mb5.0,baz=310,slow=7.2,SNR=132
ASAR PcP PcP 09 10 55.8 -0.1
comp=Z,10nm,0.6s,baz=316,slow=3.6,SNR=18
ASAR S **S 09 17 25.6 -3.5**
comp=Z,3.8nm,0.8s,baz=333,slow=21,SNR=19
FORT **Forrest 55.38 142** *e*P **P 09 09 58.2 -0.7**
comp=Z,30nm,0.7s,mb5.4
FORT **Forrest 55.38 142** *e*P **P 09 09 58.2 -0.7**
comp=Z,55nm,0.9s,mb5.6
YAK **Yakutsk 55.78 20***d i*P **P 09 10 00.6 -0.8**
YAK pmax pmax
comp=Z,105nm,0.8s,mb5.9
YAK pmax pmax
comp=E,24nm,1.1s
YAK pmax pmax
comp=N,22nm,1.0s
YAK MLR MLR
comp=Z,206nm,22.0s,MS4.2
YAK MLR MLR
comp=E,134nm,24.0s,MS4.1
YAK MLR MLR
comp=N,118nm,22.0s,MS4.1
YAK **Yakutsk 55.78 20** *e*P **P 09 10 00.6 -0.8**
comp=N,156nm,0.8s,mb6.1
VRHR **Novokhopersk 55.82 324** *e*P **P 09 10 01.5 -0.4**
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,9.0nm,0.7s
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.7
ANN **Anapa 56.29 316** *e*P **P 09 10 10.8 +5.5**
ANN *e*S **S 09 18 07.8 +15**
ANN pmax pmax
comp=Z,26nm,1.0s,mb5.2
COEN **Coen 56.97 116** *e*P **P 09 10 09.3 -1.3**
comp=Z,59nm,0.9s,mb5.6
COEN *e* pP 09 10 22.7 -0.3
VORD **Divnogorie 57.13 323** *e*P **P 09 10 10.7 -0.5**
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.3
VSR **Storozhevoye 57.30 323** *e*P **P 09 10 11.8 -0.5**
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.3
VSR pmax pmax
comp=N,2.0nm,0.3s
BRTR **Keskin Array B 57.87 309** P **P 09 10 16.1 -0.6**
comp=N,9.5nm,0.8s,mb4.9,baz=121,slow=7.3,SNR=47
BRTR LR LR 09 38 50.9
comp=N,84nm,19.1s,MS3.9,baz=272,slow=40
SIM **Simferopol' 58.61 315** P **P 09 10 20.3 -1.4**
SIM S **S 09 18 23.8 +1.0**
SIM pmax pmax
comp=Z,31nm,0.7s,mb5.5
SIM MLR MLR
comp=Z,160nm,20.0s,MS4.1
PMG **Port Moresby 58.74 109** *i* P **P 09 10 23.6 +0.5**
PMG pmax pmax
comp=Z,55nm,1.7s
PMG **Port Moresby 58.74 109** P **P 09 10 23.6 +0.5**
PRGR **Permogore 59.02 336**⇑*i*P **P 09 10 23.4 -0.8**
PRGR *e*S **S 09 18 18.8 -8.7**
PRGR pmax pmax
comp=Z,59nm,0.8s,mb5.7
MOS **Moscow 59.88 328** *e*P **P 09 10 29.4 -0.8**
MOS pmax pmax
comp=Z,44nm,0.6s,mb5.7
OBN **Obninsk 60.20 327**k *i*P **P 09 10 32.0 -0.4**
OBN *e* pP 09 10 42.1 -2.9
OBN *e* pP 09 10 44.8 -0.2
OBN *i* 09 11 17.8
OBN *e* 09 18 50.2
OBN pmax pmax
comp=Z,63nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.3
OBN **Obninsk 60.20 327** *e*P **P 09 10 32.2 -0.2**
comp=Z,18nm,0.5s,mb5.4
KLMR **Klimovskoe 61.16 334***d i*P **P 09 10 38.6 -0.3**
KLMR pmax pmax
comp=Z,47nm,1.1s,mb5.5
BBOO **Buckleboo 61.73 139** *e*P **P 09 10 42.1 -1.0**
comp=Z,12nm,0.7s,mb5.1
BBOO **Buckleboo 61.73 139** *e*P **P 09 10 42.0 -1.1**
comp=Z,41nm,0.8s,mb5.6
CTA **Charters Tower 62.33 121** P **P 09 10 47.4 -0.1**
comp=Z,16nm,0.8s,mb5.2,baz=301,slow=6.7,SNR=15
CTA **Charters Tower 62.33 121** *e*P **P 09 10 47.3 -0.1**
comp=Z,12nm,0.8s,mb5.1
CTAO **Charters Tower 62.33 121** *e*P **P 09 10 47.4 0.0**
CTAO pmax pmax
comp=Z,16nm,0.8s,mb5.2
CTAO **Charters Tower 62.33 121** *e*P **P 09 10 47.4 -0.1**
comp=Z,16nm,0.8s,mb5.2
TLCR **62.34 314**⇓*i*P **P 09 10 47.6 +0.5**
TIRR **Tirgusor 62.50 313** *e*P **P 09 10 47.8 -0.4**
TIRR *e* pP 09 10 59.9 -0.9
TIRR pmax pmax
comp=Z,24nm,0.9s,mb5.3
TIRR **Tirgusor 62.50 313** *e*P **P 09 10 47.8 -0.4**
comp=Z,24nm,0.9s,mb5.3
TIRR *e* pP 09 10 59.9 -0.9
TIRR **Tirgusor 62.50 313**⇓*i*P **P 09 10 48.4 +0.2**
TIXI **Tiksi 62.62 12***d i*P **P 09 10 47.8 -0.7**
TIXI pmax pmax
comp=Z,106nm,1.1s,mb5.9
TIXI MLR MLR
comp=Z,148nm,16.0s,MS4.2
TIXI **Tiksi 62.62 12** *e*P **P 09 10 47.7 -0.9**
comp=Z,37nm,0.7s,mb5.6
KIS **Kishinev 62.65 316** *e*P **P 09 10 48.0 -1.2**
CFR **Carcaliu 62.81 314**⇑*i*P **P 09 10 50.5 +0.3**
CFR **Carcaliu 62.81 314**⇑*i*P **P 09 10 50.5 +0.3**
KIEV **Kiev 63.15 320** *e*P **P 09 10 51.4 -1.0**
KIEV pmax pmax
comp=Z,19nm,1.0s,mb5.2
KIEV **Kiev 63.15 320** *e*P **P 09 10 51.4 -1.0**
comp=Z,19nm,1.0s,mb5.2
VRI **Vrincioaia 63.89 315** P **P 09 10 58.2 +0.8**
VRI **Vrincioaia 63.89 315**⇓*i*P **P 09 10 58.5 +1.1**
PLOR **Plostina 63.94 315** P **P 09 10 59.0 +1.3**
PLOR **Plostina 63.94 315**⇑*i*P **P 09 10 58.8 +1.1**
TESR **64.04 316**⇓*i*P **P 09 10 58.7 +0.3**
MLR **Muntele Rosu 64.38 314**⇑P **P 09 11 02.0 +1.4**
MLR **Muntele Rosu 64.38 314**⇑*i*P **P 09 11 02.0 +1.4**
MICGM **Minsk 64.81 324** *e* **P 09 11 02.0 -1.2**
MNK **Minsk 64.83 324** *e*P **P 09 11 02.0 -1.4**
STKA **Stephens Creek 64.86 135** P **P 09 11 03.4 -0.5**
comp=Z,14nm,0.8s,mb5.1,baz=311,slow=5.1,SNR=33
STKA LR LR 09 41 05.5
comp=Z,222nm,19.1s,MS4.4,baz=228,slow=38
STKA **Stephens Creek 64.86 135** *e*P **P 09 11 03.3 -0.6**
comp=Z,9.6nm,0.8s,mb4.9
STKA **Stephens Creek 64.86 135** *e*P **P 09 11 02.9 -1.0**
comp=Z,3.5nm,1.0s,mb4.3
PETK **Petropavlovsk- 64.94 37** P **P 09 11 03.0 -1.1**
comp=Z,8.0nm,0.8s,mb4.8,baz=238,slow=4.2,SNR=17
PETK LR LR 09 43 30.5
comp=Z,98nm,18.2s,MS4.0,baz=247,slow=40
VOIR **65.00 314**⇑P **P 09 11 04.6 -0.1**
VOIR **65.00 314**⇑*i*P **P 09 11 04.6 -0.1**
SEY **Seymchan 65.08 26***d i*P **P 09 11 04.0 -0.8**
BURAR **Bucovina Array 65.17 317** P **P 09 11 06.7 +1.0**
BURAR **Bucovina Array 65.17 317**⇓*i*P **P 09 11 06.4 +0.7**
BUR08 **Bucovina Ar. S 65.19 317** *e*P **P 09 11 06.1 +0.3**
JOF **Joensuu 65.55 334** *e*P **P 09 11 07.1 -0.8**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
JOF **Joensuu 65.55 334** *ep* **P 09 11 07.1 -0.8**
comp=Z,6.4nm,0.4s,mb5.0
IDID **Didziasalis 65.63 325** *e*P **P 09 11 08.9 +0.4**
IDID AMB AMB 09 11 09.8
comp=Z,16nm,1.0s,mb5.0
IIGN **Ignalina 65.93 325** *e*P **P 09 11 10.9 +0.4**
IIGN AMB AMB 09 11 11.7
comp=Z,18nm,0.6s,mb5.2
ISAL **Salakas 66.03 325** *e*P **P 09 11 11.5 +0.4**
ISAL AMB AMB 09 11 12.4
comp=Z,11nm,1.1s,mb4.8
VTS **Vitosha 66.04 311**⇓*i*P **P 09 11 11.5 0.0**
LVZ **Lovozero 66.22 340***d i*P **P 09 11 11.7 -0.4**
LVZ pmax pmax
comp=Z,16nm,0.8s,mb5.1
LVZ **Lovozero 66.22 340** P **P 09 11 11.1 -1.0**
comp=Z,200nm,0.8s,mb6.2,SNR=8.2
LVV **L'vov 66.26 319** *e*P **P 09 11 12.4 -0.3**
LVV *e* pP 09 11 23.8 -1.6
LVV *e*S S 09 20 17.0 +18
LVV MLR MLR
comp=Z,100nm,18.0s,MS4.1
LVV MLR MLR
comp=N,400nm,19.0s,MS4.9
LVV MLR MLR
comp=E,600nm,19.0s,MS4.9
VSU **Vasula 66.37 328***d i*P **P 09 11 12.9 -0.3**
VSU pmax pmax
comp=Z,25nm,0.9s,mb5.2
VAY **Valandovo 66.44 310** *e*P **P 09 11 13.2 -0.7**
APA **Apatity 66.51 339**⇑*i*P **P 09 11 14.0 0.0**
APA *i* 09 11 30.0
APA pmax pmax
comp=Z,28nm,0.8s,mb5.3
APA MLR MLR
comp=Z,400nm,21.0s,MS4.6
DRGR **66.77 315** P **P 09 11 16.9 +0.9**
DRGR **66.77 315**⇑*i*P **P 09 11 16.6 +0.6**
TRPA **Tarpa 67.02 317**⇓*i*P **P 09 11 17.9 +0.3**
KWP **Kalwaria Pacla 67.09 319** *e*P **P 09 11 18.2 +0.3**
KWP **Kalwaria Pacla 67.09 319** *e*P **P 09 11 18.3 +0.3**
KWP *e* pP 09 11 30.2 -0.5
KWP pmax pmax
comp=Z,35nm,0.9s,mb5.4
KWP **Kalwaria Pacla 67.09 319** *e*P **P 09 11 18.3 +0.3**
comp=Z,35nm,0.9s,mb5.4
KWP *e* pP 09 11 30.2 -0.5
UZH **Uzhgorod 67.24 317** *e*P **P 09 11 19.0 0.0**
UZH *e* 09 11 27.3
KOLS **Kolonicke sedl 67.29 318** *e*P **P 09 11 19.6 +0.3**
KOLS pmax pmax
comp=Z,12nm,1.6s,mb4.7
KOLS **Kolonicke sedl 67.29 318** *e*P **P 09 11 19.6 +0.3**
comp=Z,12nm,1.6s,mb4.7
KOLS **Kolonicke sedl 67.29 318** *e*P **P 09 11 19.6 +0.3**
RMQ **Roma 67.35 126** *e*P **P 09 11 20.8 +0.8**
comp=Z,19nm,0.5s,mb5.4
SUW **Suwalki 67.41 323** *e*P **P 09 11 19.5 -0.4**
SUW **Suwalki 67.41 323** *e*P **P 09 11 19.3 -0.6**
comp=Z,87nm,0.9s,mb5.8
SUW *e* pP 09 11 31.9 -0.8
KRUS **Krusevo 67.43 310** *e*P **P 09 11 18.7 -1.6**
FINES **FINESS Array B 67.44 332** P **P 09 11 19.7 -0.3**
comp=Z,25nm,0.7s,mb5.3,baz=102,slow=6.0,SNR=139
FINES LR LR 09 46 33.3
comp=Z,146nm,19.1s,MS4.2,baz=278,slow=41
KAF **Kangasniemi 67.51 332** *e*P **P 09 11 19.5 -0.9**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
KAF **Kangasniemi 67.51 332** *ep* **P 09 11 19.5 -0.9**
comp=Z,1.5nm,0.3s,mb4.5
CMSA **Cobar Meteorol 67.57 132**⇓*i*P **P 09 11 21.1 -0.2**
CRVS **Cervenica-Dubn 67.82 318** *e*P **P 09 11 23.2 +0.6**
CRVS *e* pP 09 11 35.4 0.0
CRVS pmax pmax
comp=Z,21nm,1.0s,mb5.1
CRVS **Cervenica-Dubn 67.82 318** *e*P **P 09 11 23.2 +0.6**
comp=Z,21nm,1.0s,mb5.1
CRVS *e* pP 09 11 35.4 0.0
CRVS **Cervenica-Dubn 67.82 318** *e*P **P 09 11 23.2 +0.6**
CRVS *ep*P pP 09 11 35.4 0.0
KECS **Kecovo 68.42 317** *e*P **P 09 11 26.7 +0.3**
KECS *e* pP 09 11 38.8 -0.4
KECS pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KECS **Kecovo 68.42 317** *e*P **P 09 11 26.7 +0.3**
comp=Z,6.3nm,0.9s,mb4.7
KECS *e* pP 09 11 38.8 -0.4
KECS **Kecovo 68.42 317** *e*P **P 09 11 26.7 +0.3**
KECS *ep*P pP 09 11 38.8 -0.4
NIE **Niedzica 68.62 318** *e*P **P 09 11 28.4 +0.8**
EIDS **Eidsvold 68.69 124** *e*P **P 09 11 28.6 +0.2**
comp=Z,12nm,1.1s,mb4.7
PSZ **Piszkesteto 68.77 317** ⇓P **P 09 11 28.6 0.0**
PSZ **Piszkesteto 68.77 317** *e*P **P 09 11 28.4 -0.2**
comp=Z,13nm,1.1s,mb4.8
PSZ *e* pP 09 11 41.0 -0.4
PSZ **Piszkesteto 68.77 317**⇓*i*P **P 09 11 28.6 0.0**
PSZ **Piszkesteto 68.77 317**⇓*e*P **P 09 11 28.7 +0.1**
OJC **Ojcow 69.02 319** *e*P **P 09 11 30.0 -0.1**
OJC *e*sP sP 09 11 42.1 -5.8
KEV **Kevo 69.50 340** *e*P **P 09 11 32.7 0.0**
KEV pmax pmax
comp=Z,31nm,1.0s,mb5.2
KEV **Kevo 69.50 340** *e*P **P 09 11 32.7 0.0**
comp=Z,31nm,1.0s,mb5.2
KEV **Kevo 69.50 340** *ep* **P 09 11 30.9 -1.8**
comp=Z,2.1nm,0.4s,mb4.4
VYHS **Vyhne 69.52 317** *e*P **P 09 11 33.0 -0.2**
VYHS *e* pP 09 11 45.2 -0.8
VYHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VYHS **Vyhne 69.52 317** *e*P **P 09 11 33.0 -0.2**
comp=Z,4.6nm,0.8s,mb4.5
VYHS *e* pP 09 11 45.2 -0.8
VYHS **Vyhne 69.52 317** *e*P **P 09 11 33.0 -0.2**
VYHS *ep*P pP 09 11 45.2 -0.8
KOLL **Kolacno 69.81 317** *e*P **P 09 11 35.2 +0.2**
KOLL **Kolacno 69.81 317** *e*P **P 09 11 35.2 +0.2**
ARCES **ARCESS Array B 69.92 340** P **P 09 11 35.6 +0.3**
comp=Z,24nm,0.8s,mb5.2,baz=89,slow=7.6,SNR=127
ARCES LR LR 09 45 10.8
comp=Z,231nm,18.7s,MS4.5,baz=295,slow=38
ARE0 **ARCESS Array S 69.92 340** *e*P **P 09 11 35.5 +0.1**
OKC **Ostrava-Krasne 70.05 318** *e*P **P 09 11 36.6 +0.1**
OKC *e**PP pP 09 11 49.0 -0.3
OKC **Ostrava-Krasne 70.05 318** *e*P **P 09 11 36.6 +0.1**
OKC *ep*P pP 09 11 49.0 -0.3
MORC **Moravsky Berou 70.44 318** P **P 09 11 39.6 +0.8**
MORC **Moravsky Berou 70.44 318** *e*P **P 09 11 39.2 +0.3**
comp=Z,19nm,0.8s,mb5.1
MORC *e* pP 09 11 51.4 -0.3
MORC **Moravsky Berou 70.44 318**⇓*i*P **P 09 11 39.5 +0.7**
KTK1 **Kautokeino 70.56 339** *e*P **P 09 11 39.1 -0.1**
ZST **Bratislava 70.66 317** *e*P **P 09 11 40.3 +0.1**
ZST *e* pP 09 11 53.1 +0.1
ZST pmax pmax
comp=Z,12nm,0.8s,mb4.9
ZST **Bratislava 70.66 317** *e*P **P 09 11 40.3 +0.1**
comp=Z,12nm,0.8s,mb4.9
ZST *e* pP 09 11 53.1 +0.1
ZST **Bratislava 70.66 317** *e*P **P 09 11 40.3 +0.1**
ZST *ep*P pP 09 11 53.1 +0.1
HNR **Honiara 70.66 105** P **P 09 11 40.2 -0.6**
comp=Z,234nm,1.0s,mb6.1,baz=115,slow=1.1,SNR=3.5
TOO **Toolangi 70.74 138** *e*P **P 09 11 41.4 +0.6**
SOP **Sopron 71.01 316**⇓*e*P **P 09 11 42.4 +0.1**
KOGS **Kog 71.19 315** *i* P **P 09 11 43.5 0.0**
KOGS *i* pP pP 09 11 55.9 -0.5
KOGS **Kog 71.19 315** *i* P **P 09 11 43.5 0.0**
KOGS *i* pP pP 09 11 55.9 -0.5
DPC **Dobruska-Polom 71.25 319** *e*P **P 09 11 44.4 +0.6**
DPC *e**PP pP 09 11 57.0 +0.4
DPC **Dobruska-Polom 71.25 319** *e*P **P 09 11 44.4 +0.6**
DPC *ep*P pP 09 11 57.0 +0.4
KSP **Ksiaz 71.29 319** *e*P **P 09 11 44.4 +0.4**
ARMA **Armidale 71.42 128** *e*P **P 09 11 46.3 +1.2**
ARMA **Armidale 71.42 128** *e*P **P 09 11 46.3 +1.2**
comp=Z,39nm,0.8s,mb5.4
UPC **Upice 71.45 319** *e*P **P 09 11 45.8 +0.8**
UPC *e**PP pP 09 11 58.1 +0.3
UPC **Upice 71.45 319** *e*P **P 09 11 45.8 +0.8**
UPC *ep*P pP 09 11 58.1 +0.3
CONA **Conrad Observa 71.48 316**⇓*i*P **P 09 11 45.2 0.0**

comp=Z,5.6nm,0.8s,mb4.5
CEL Celeste 71.55 306 *e*P **P 09 11 45.7 -0.1**
comp=Z,51nm,1.0s,mb5.4
CEL *e* pP 09 11 57.7 -0.9
CUC Castrocucco 71.55 308 *e*P **P 09 11 44.9 -0.9**
comp=Z,9.8nm,0.9s,mb4.7
ARSA Arzberg 71.70 316⇑ *i*P **P 09 11 46.5 -0.1**
comp=Z,6.7nm,0.8s,mb4.6
BOJS Bojanci 71.88 314 *i* P **P 09 11 47.4 -0.3**
BOJS Bojanci 71.88 314 *i* P **P 09 11 47.4 -0.3**
PERS Pernice 71.98 315 *i* P **P 09 11 48.2 0.0**
PERS *i* pP pP 09 12 00.6 -0.5
PERS Pernice 71.98 315 *i* P **P 09 11 48.2 0.0**
PERS *i* pP pP 09 12 00.6 -0.5
BILL Bilibino 72.03 22 *b*e**P 09 11 47.9 -0.2**
BILL *e* pP 09 11 59.8 -1.2
BILL pmax pmax
comp=Z,38nm,1.7s,mb5.0
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.2
BILL Bilibino 72.03 22 *e*P **P 09 11 48.0 -0.2**
comp=Z,9.8nm,0.5s,mb5.0
SOKA Soboth 72.03 315⇑ *i*P **P 09 11 48.4 -0.1**
comp=Z,14nm,1.1s,mb4.8
CNB Canberra Magne 72.16 134 *e*P **P 09 11 49.3 -0.1**
TRO Tromso 72.19 339 *e*P **P 09 11 48.7 -0.3**
TRO AMS AMS 09 45 42.7
comp=Z,293nm,20.3s,MS4.5
BSD Bornholm Skovb 72.31 324 *e*P **P 09 11 48.3 -1.7**
BSD pmax pmax
comp=Z,11nm,0.9s,mb4.8
BSD Bornholm Skovb 72.31 324 *i* P **P 09 11 48.3 -1.7**
comp=Z,11nm,0.9s,mb4.8
PRU Pruhonice 72.39 319 *e*P **P 09 11 51.6 +1.0**
PRU *e**PP pP 09 12 04.0 +0.6
PRU Pruhonice 72.39 319 *e*P **P 09 11 51.6 +1.0**
PRU *e*pP pP 09 12 04.0 +0.6
LJU Ljubljana 72.39 314 *i* P **P 09 11 50.8 +0.1**
LJU Ljubljana 72.39 314 *i* P **P 09 11 50.8 +0.1**
MOA Molln 72.56 316⇓ *i*P **P 09 11 51.4 -0.3**
comp=Z,7.0nm,0.9s,mb4.6
CRNS Crni Vrh 72.57 314 *i* P **P 09 11 51.7 -0.1**
BRG Berggiesshubel 72.78 319 *e*P **P 09 11 53.1 +0.2**
comp=Z,13nm,0.8s,mb4.9
BRG Berggiesshubel 72.78 319⇓ *i*P **P 09 11 53.3 +0.4**
comp=Z,13nm,0.8s,mb4.9
BRG *i* pP 09 12 05.7 -0.1
comp=Z,16nm,1.0s
VOY Vojsko 72.83 314 *e*P **P 09 11 52.9 -0.4**
VOY *e* pP 09 12 05.2 -1.0
VOY Vojsko 72.83 314 *e*P **P 09 11 52.9 -0.4**
VOY *e* pP 09 12 05.2 -1.0
RUE Ruedersdorf 72.90 321 *e*P **P 09 11 53.7 +0.1**
comp=Z,46nm,0.7s,mb5.5
GEC2 GERESS Array S 72.93 317 *e*P **P 09 11 54.0 +0.2**
comp=Z,16nm,0.8s,mb5.0
GEC2 *e*pP pP 09 12 06.4 -0.3
GEC2 GERESS Array S 72.93 317 *e*P **P 09 11 54.0 +0.2**
GEC2 *e**PP pP 09 12 06.4 -0.3
GEC2 pmax pmax
comp=Z,16nm,0.8s,mb5.0
KHC Kasperske Hory 73.01 318 *e*P **P 09 11 54.3 0.0**
KHC *e**PP pP 09 12 06.8 -0.4
KHC Kasperske Hory 73.01 318 *e*P **P 09 11 54.2 -0.1**
comp=Z,9.1nm,0.9s,mb4.7
KHC *e* pP 09 12 06.6 -0.6
KHC Kasperske Hory 73.01 318 *e*P **P 09 11 54.3 0.0**
KHC *e*pP pP 09 12 06.8 -0.4
KHC *ex* x 09 12 21.0
FBE Freiberg 73.15 320 *e*P **P 09 11 55.6 +0.5**
comp=Z,56nm,1.5s,mb5.3
CLL Collm 73.37 320 *e*P **P 09 11 56.2 -0.2**
comp=Z,12nm,1.0s,mb4.8
CLL Collm 73.37 320⇓ *i*P **P 09 11 55.9 -0.5**
CLL *i* pP 09 12 07.8 -1.5
CLL pmax pmax
comp=Z,12nm,1.0s,mb4.8
CLL Collm 73.37 320⇓ *i*P **P 09 11 55.9 -0.5**
comp=Z,12nm,1.0s,mb4.8
CLL *i* pP 09 12 07.8 -1.5
WET Wettzell 73.47 318 *e*P **P 09 11 57.1 +0.1**
comp=Z,13nm,0.9s,mb4.9
WET *e*pP pP 09 12 09.6 -0.3
WET Wettzell 73.47 318 *e*P **P 09 11 57.1 +0.1**
WET *e**PP pP 09 12 09.6 -0.3
WET pmax pmax
comp=Z,13nm,0.9s,mb4.9
TANN Tannenbergstha 73.72 319 *e*P **P 09 11 58.1 -0.4**
comp=Z,6.0nm,1.0s,mb4.5
NKC Novy Kostel 73.73 319 *e*P **P 09 11 58.8 +0.3**
NKC *e**PP pP 09 12 11.5 +0.1
NKC Novy Kostel 73.73 319 *e*P **P 09 11 58.8 +0.3**
NKC *e*pP pP 09 12 11.5 +0.1
WERN Wernitzgruen 73.78 319 *e*P **P 09 11 59.0 +0.2**
comp=Z,8.0nm,0.9s,mb4.7
WERN *e*pP pP 09 12 11.6 -0.1
GUNZ Gunzen 73.81 319 *e*P **P 09 11 58.9 -0.1**
comp=Z,23nm,1.3s,mb5.0
GUNZ *e*pP pP 09 12 11.4 -0.5
FLOS Flostrand 73.81 336 *e*P **P 09 11 58.4 -0.3**
WERD Werda 73.82 319 *e*P **P 09 11 59.0 -0.1**
comp=Z,11nm,0.8s,mb4.8
ROTZ Rotzenmuhle 73.90 318 *e*P **P 09 12 00.0 +0.5**
comp=Z,12nm,1.0s,mb4.8
ROTZ *e*pP pP 09 12 12.8 +0.4
LOF Lofoten 73.90 338⇓ *i*P **P 09 11 58.4 -0.8**
PLN Plauen 73.92 319 *e*P **P 09 11 59.6 0.0**
comp=Z,10.0nm,0.8s,mb4.8
KONS Konsvik 73.92 336 *e*P **P 09 11 58.0 -1.4**
MOX Moxa 74.26 319 *e*P **P 09 12 01.7 +0.1**
comp=Z,14nm,1.2s,mb4.8
MOX *e* pP 09 12 14.1 -0.4
MOX Moxa 74.26 319 *e*P **P 09 12 01.5 -0.1**
comp=Z,10.0nm,0.8s,mb4.8
MOX *e*pP pP 09 12 14.1 -0.4
MOX Moxa 74.26 319 *e*P **P 09 12 01.7 +0.1**
MOX *e* pP 09 12 14.1 -0.4
MOX pmax pmax
comp=Z,14nm,1.2s,mb4.8
NSS Namsos 74.27 334 *e*P **P 09 11 59.7 -1.7**
WTTA Wattenberg 74.35 316⇑ *i*P **P 09 12 01.2 -1.0**
comp=Z,14nm,0.9s,mb4.9
NB2 NORSAR Subarra 74.49 330 P **P 09 12 01.8 -0.9**
baz=89,slow=5.9
NB2 NORSAR Subarra 74.49 330 P **P 09 12 01.8 -0.9**
NB2 NORSAR Subarra 74.49 330 P **P 09 12 01.8 -0.9**
NOA NORSAR Array B 74.49 330 P **P 09 12 01.9 -0.8**
comp=Z,14nm,0.8s,mb5.0,baz=90,slow=5.8,SNR=65
NOA LR LR 09 47 53.1
comp=Z,128nm,21.0s,MS4.2,baz=90,slow=38
GRA1 Grafenberg Arr 74.54 318 *e*P **P 09 12 03.6 +0.4**
comp=Z,25nm,1.3s,mb5.0
GRA1 *e*pP pP 09 12 16.2 0.0
GRF Grafenberg Arr 74.54 318 *e*P **P 09 12 03.6 +0.4**
comp=Z,25nm,1.3s,mb5.0
GRF *e*pP pP 09 12 16.2 0.0
GRF Grafenberg Arr 74.54 318 *e*P **P 09 12 03.6 +0.4**
GRF *e**PP pP 09 12 16.2 0.0
GRF pmax pmax
comp=Z,25nm,1.3s,mb5.0
GRF Grafenberg Arr 74.54 318 *e*P **P 09 12 03.6 +0.4**
GRF *e**PP pP 09 12 16.2 0.0
GRF pmax pmax
comp=Z,25nm,1.3s,mb5.0
GRFO Grafenberg 74.54 318 *e*P **P 09 12 03.6 +0.3**
GRFO *e* pP 09 12 15.8 -0.4
GRFO pmax pmax
comp=Z,28nm,1.4s,mb5.0
GRFO Grafenberg 74.54 318 *e*P **P 09 12 03.5 +0.3**
comp=Z,28nm,1.4s,mb5.0
GRFO *e* pP 09 12 15.8 -0.3
MOTA Moosalm 74.71 316⇓ *i*P **P 09 12 03.3 -1.0**
comp=Z,8.0nm,0.8s,mb4.7
OSL Oslo 74.71 329 *e*P **P 09 12 04.0 0.0**
RETA Reutte 74.93 316⇓ *i*P **P 09 12 05.0 -0.6**
comp=Z,14nm,1.0s,mb4.9
CLZ Clausthal 75.01 320 *e*P **P 09 12 06.1 +0.2**
CLZ *e*pP pP 09 12 18.6 -0.2
LBTB Lobatse 75.25 240 *e*P **P 09 12 08.7 +0.9**
LBTB pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LBTB Lobatse 75.25 240 *e*P **P 09 12 08.7 +1.0**
comp=Z,5.0nm,0.6s,mb4.6
KBS Kingsbay 75.52 349 *d i*P **P 09 12 07.8 -0.6**
KBS Kingsbay 75.52 349 *e*P **P 09 12 07.5 -0.9**
comp=Z,24nm,1.3s,mb5.0
DAVA Damuels 75.54 316⇑ *i*P **P 09 12 08.9 -0.2**
comp=Z,16nm,0.8s,mb5.0
MUD Monsted U'grnd 75.57 325 *i* P **P 09 12 09.3 +0.3**
MUD pmax pmax
comp=Z,19nm,1.0s,mb5.0
MUD Monsted U'grnd 75.57 325 *i* P **P 09 12 09.3 +0.3**
comp=Z,19nm,1.0s,mb5.0
BFO Black Forest 76.51 317 *e*pP pP 09 12 26.8 -0.8
PGF Pioggiola 76.53 311 *e*P **P 09 12 14.3 -0.5**
comp=Z,26nm,0.9s,mb4.9
PGF Pioggiola 76.53 311 *e*P **P 09 12 14.3 -0.5**
PGF pmax pmax
comp=Z,13nm,0.9s,mb4.9
PGF Pioggiola 76.53 311 *e*P **P 09 12 14.3 -0.5**
comp=Z,13nm,0.9s,mb4.8
ODD1 Odda 76.78 329 *e*P **P 09 12 16.1 +0.3**
BLS5 Blasjo 76.89 328 *e*P **P 09 12 17.0 +0.5**
BLS5 AMb AMB 09 12 27.4
comp=Z,50nm,3.5s
BLS5 Blasjo 76.89 328 *e*P **P 09 12 17.0 +0.5**
comp=Z,50nm,3.5s
BOSA Boshof 76.90 236 P **P 09 12 18.1 +0.9**
comp=Z,8.3nm,0.6s,mb4.8,baz=84,slow=5.4,SNR=23
BOSA LR LR 09 43 16.0
comp=Z,141nm,18.2s,MS4.3,baz=248,slow=33
BOSA Boshof 76.90 236 *e*P **P 09 12 17.9 +0.8**
comp=Z,7.3nm,0.5s,mb4.9
KEST Kesra 76.97 304 P **P 09 12 17.3 -0.1**
comp=Z,4.9nm,0.8s,mb4.5,baz=337,slow=8.9,SNR=14
KEST Kesra 76.97 304 *e*P **P 09 12 17.0 -0.5**
KEST *e* pP 09 12 29.1 -1.3
CDF Champ du Feu 77.21 317 *e*P **P 09 12 18.0 -0.5**
comp=Z,7.8nm,0.7s,mb4.4
CDF *e*pP pP 09 12 30.5 -1.0
CDF Champ du Feu 77.21 317 *e*P **P 09 12 18.0 -0.5**
CDF *e**PP pP 09 12 30.5 -1.0
CDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CDF Champ du Feu 77.21 317 *e*P **P 09 12 18.0 -0.5**
comp=Z,3.9nm,0.7s,mb4.5
CDF *e*pP pP 09 12 30.5 -1.0
RUND Rundenannen 77.37 329 *e*P **P 09 12 18.6 -0.6**
HINF Hinteralfeld 77.54 317 *e*P **P 09 12 20.0 -0.4**
comp=Z,6.8nm,0.7s,mb4.4
HINF *e*pP pP 09 12 32.3 -1.1
HINF Hinteralfeld 77.54 317 *e*P **P 09 12 20.0 -0.4**
HINF *e**PP pP 09 12 32.3 -1.1
HINF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
HINF Hinteralfeld 77.54 317 *e*P **P 09 12 20.0 -0.4**
comp=Z,3.4nm,0.7s,mb4.4
HINF *e*pP pP 09 12 32.3 -1.1
LPG La Plagne 77.85 314 *e*P **P 09 12 22.4 +0.2**
comp=Z,50nm,0.8s,mb5.2
LPG La Plagne 77.85 314 *e*P **P 09 12 22.4 +0.2**
LPG pmax pmax
comp=Z,25nm,0.8s,mb5.2
LPG La Plagne 77.85 314 *e*P **P 09 12 22.4 +0.2**
comp=Z,25nm,0.8s,mb5.2
LPL La Plagne 77.86 314 *e*P **P 09 12 22.4 +0.2**
comp=Z,62nm,0.7s,mb5.3
LPL *e*pP pP 09 12 34.8 -0.4
LPL La Plagne 77.86 314 *e*P **P 09 12 22.4 +0.2**
LPL *e**PP pP 09 12 34.8 -0.4
LPL pmax pmax
comp=Z,31nm,0.7s,mb5.3
LPL La Plagne 77.86 314 *e*P **P 09 12 22.4 +0.2**
comp=Z,31nm,0.7s,mb5.3
LPL *e*pP pP 09 12 34.8 -0.4
HAU Haudompre 77.86 317 *e*P **P 09 12 21.6 -0.6**
comp=Z,17nm,0.8s,mb4.8
HAU *e*MLR MLR
comp=Z,102nm,22.4s,MS3.8
HAU Haudompre 77.86 317 *e*P **P 09 12 21.6 -0.6**
HAU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
HAU MLR MLR
comp=Z,100nm,22.4s,MS4.1
HAU Haudompre 77.86 317 *e*P **P 09 12 21.6 -0.6**
comp=Z,8.6nm,0.8s,mb4.7
HAU LR LR
comp=Z,100nm,22.4s,MS4.1
MBDF Montbardon 77.92 313 *e*P **P 09 12 23.5 +0.9**
comp=Z,23nm,0.8s,mb4.9
MBDF Montbardon 77.92 313 *e*P **P 09 12 23.5 +0.9**
MBDF pmax pmax
comp=Z,12nm,0.8s,mb4.9
MBDF Montbardon 77.92 313 *e*P **P 09 12 23.5 +0.9**
comp=Z,12nm,0.8s,mb4.9
FRF La Foret Royal 78.14 312 *e*P **P 09 12 23.4 -0.4**
comp=Z,47nm,1.0s,mb5.1
FRF La Foret Royal 78.14 312 *e*P **P 09 12 23.4 -0.4**
FRF pmax pmax
comp=Z,24nm,1.0s,mb5.1
FRF La Foret Royal 78.14 312 *e*P **P 09 12 23.4 -0.4**
comp=Z,24nm,1.0s,mb5.1
CABF La Chapelle 78.19 315 *e*P **P 09 12 24.1 +0.1**
comp=Z,15nm,0.7s,mb4.7
CABF La Chapelle 78.19 315 *e*P **P 09 12 24.1 +0.1**
CABF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
CABF La Chapelle 78.19 315 *e*P **P 09 12 24.1 +0.1**
comp=Z,7.7nm,0.7s,mb4.7
LMR La Mourre 78.27 312 *e*P **P 09 12 24.1 -0.4**
ORIF Oris-en-Rattie 78.53 314 *e*P **P 09 12 25.8 -0.1**
comp=Z,9.6nm,0.7s,mb4.6
ORIF *e*MLR MLR
comp=Z,80nm,21.5s,MS3.7
ORIF Oris-en-Rattie 78.53 314 *e*P **P 09 12 25.8 -0.1**
ORIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ORIF Oris-en-Rattie 78.53 314 *e*P **P 09 12 25.8 -0.1**
comp=Z,4.8nm,0.6s,mb4.6
MEZF Maizieres J'vi 78.67 317 *e*P **P 09 12 26.2 -0.4**
SFTF Sexfontaines 78.71 317 *e*P **P 09 12 26.5 -0.4**
comp=Z,18nm,0.8s,mb4.8
SFTF *e*pP pP 09 12 39.1 -0.8
SFTF Sexfontaines 78.71 317 *e*P **P 09 12 26.5 -0.4**
comp=Z,18nm,0.8s,mb5.1
SFTF *e*pP pP 09 12 39.1 -0.8
SMRF Simiane la Rot 78.86 313 *e*P **P 09 12 28.0 +0.2**
comp=Z,11nm,0.7s,mb4.6
SMRF Simiane la Rot 78.86 313 *e*P **P 09 12 28.0 +0.2**
comp=Z,11nm,0.7s,mb4.9
BAIF Baives 79.03 319 *e*P **P 09 12 28.5 -0.1**
comp=Z,15nm,0.9s,mb4.6
BAIF *e*pP pP 09 12 41.1 -0.5
BAIF Baives 79.03 319 *e*P **P 09 12 28.5 -0.1**
BAIF *e**PP pP 09 12 41.1 -0.5
BAIF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BAIF Baives 79.03 319 *e*P **P 09 12 28.5 -0.1**
comp=Z,7.7nm,0.9s,mb4.6
BAIF *e*pP pP 09 12 41.1 -0.5
VIVF Saint-Julien-l 79.39 314 *e*P **P 09 12 30.5 -0.1**
comp=Z,26nm,0.8s,mb4.9
VIVF *e*pP pP 09 12 42.9 -0.7
VIVF Saint-Julien-l 79.39 314 *e*P **P 09 12 30.5 -0.1**
VIVF *e**PP pP 09 12 42.9 -0.7
VIVF pmax pmax
comp=Z,13nm,0.8s,mb4.9
VIVF Saint-Julien-l 79.39 314 *e*P **P 09 12 30.5 -0.1**
comp=Z,13nm,0.8s,mb4.9
VIVF *e*pP pP 09 12 42.9 -0.7
LOR Lormes 79.62 316 *e*P **P 09 12 31.3 -0.6**
comp=Z,14nm,0.7s,mb4.7
LOR *e*pP pP 09 12 44.0 -0.9
LOR *e*MLR MLR
comp=Z,100nm,19.5s,MS3.9
LOR Lormes 79.62 316 *e*P **P 09 12 31.3 -0.6**
LOR *e**PP pP 09 12 44.0 -0.9
LOR pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LOR MLR MLR
comp=Z,100nm,19.5s,MS4.2
LOR Lormes 79.62 316 *e*P **P 09 12 31.3 -0.6**
comp=Z,7.0nm,0.7s,mb4.7
LOR *e*pP pP 09 12 44.0 -0.9
LOR LR LR
comp=Z,100nm,19.5s,MS4.2
SMF Signal de Mont 79.72 316 *e*P **P 09 12 31.8 -0.6**
comp=Z,20nm,0.7s,mb4.9
SMF *e*pP pP 09 12 44.5 -0.9
SMF Signal de Mont 79.72 316 *e*P **P 09 12 31.8 -0.6**
SMF *e**PP pP 09 12 44.5 -0.9
SMF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
SMF Signal de Mont 79.72 316 *e*P **P 09 12 31.8 -0.6**
comp=Z,10nm,0.7s,mb4.9
SMF *e*pP pP 09 12 44.5 -0.9
SSF Saint Saulge 79.89 316 *e*P **P 09 12 32.9 -0.4**
comp=Z,27nm,1.1s,mb4.8
SSF Saint Saulge 79.89 316 *e*P **P 09 12 32.9 -0.4**
SSF pmax pmax
comp=Z,13nm,1.1s,mb4.8
SSF Saint Saulge 79.89 316 *e*P **P 09 12 32.9 -0.4**
comp=Z,13nm,1.1s,mb4.8
AVF Avril sur Loir 80.03 316 *e*P **P 09 12 33.5 -0.6**
comp=Z,17nm,0.7s,mb4.8
AVF *e*pP pP 09 12 46.1 -1.0
AVF Avril sur Loir 80.03 316 *e*P **P 09 12 33.5 -0.6**
AVF *e**PP pP 09 12 46.1 -1.0
AVF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
AVF Avril sur Loir 80.03 316 *e*P **P 09 12 33.5 -0.6**
comp=Z,8.6nm,0.7s,mb4.8
AVF *e*pP pP 09 12 46.1 -1.0
LASF Ste Croix 80.07 313 *e*P **P 09 12 34.6 +0.2**
comp=Z,62nm,1.2s,mb5.1
LASF *e*pP pP 09 12 47.1 -0.3
BGF Bois d'Agland 80.41 316 *e*P **P 09 12 36.1 0.0**
TCF Toulx Ste Croi 80.89 315 *e*P **P 09 12 38.6 -0.1**
comp=Z,57nm,1.4s,mb5.0
TCF *e*pP pP 09 12 51.4 -0.3
TCF Toulx Ste Croi 80.89 315 *e*P **P 09 12 38.6 -0.1**
TCF *e**PP pP 09 12 51.4 -0.3
TCF pmax pmax
comp=Z,28nm,1.4s,mb5.0
TCF Toulx Ste Croi 80.89 315 *e*P **P 09 12 38.6 -0.1**
comp=Z,28nm,1.4s,mb5.0
TCF *e*pP pP 09 12 51.4 -0.3
CAF Calviac 81.21 314 *e*P **P 09 12 40.5 +0.1**
comp=Z,20nm,0.9s,mb4.7
CAF *e*pP pP 09 12 53.2 -0.3
CAF Calviac 81.21 314 *e*P **P 09 12 40.5 +0.1**
CAF *e**PP pP 09 12 53.2 -0.3
CAF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CAF Calviac 81.21 314 *e*P **P 09 12 40.5 +0.1**
comp=Z,9.8nm,0.9s,mb4.7
CAF *e*pP pP 09 12 53.2 -0.3
MTLF Montolieu 81.36 312 *e*P **P 09 12 41.2 -0.1**
comp=Z,22nm,0.8s,mb4.8
MTLF *e*pP pP 09 12 53.0 -1.3
MTLF Montolieu 81.36 312 *e*P **P 09 12 41.2 -0.1**
MTLF *e**PP pP 09 12 53.0 -1.3
MTLF pmax pmax
comp=Z,11nm,0.8s,mb4.8
MTLF Montolieu 81.36 312 *e*P **P 09 12 41.2 -0.1**
comp=Z,11nm,0.8s,mb4.8
MTLF *e*pP pP 09 12 53.0 -1.3
RJF Les Rejaudoux 81.53 314 *e*P **P 09 12 42.2 +0.1**
comp=Z,16nm,0.8s,mb4.7
RJF *e*MLR MLR
comp=Z,67nm,18.4s,MS3.7
RJF Les Rejaudoux 81.53 314 *e*P **P 09 12 42.2 +0.1**
RJF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
RJF MLR MLR
comp=Z,70nm,18.4s,MS4.0
RJF Les Rejaudoux 81.53 314 *e*P **P 09 12 42.2 +0.1**
comp=Z,7.8nm,0.8s,mb4.7
RJF LR LR
comp=Z,70nm,18.4s,MS4.0
LDF La Druitiere 82.06 318 *e*P **P 09 12 44.3 -0.5**
comp=Z,8.2nm,0.6s,mb4.5
LDF La Druitiere 82.06 318 *e*P **P 09 12 44.3 -0.5**
LDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LDF La Druitiere 82.06 318 *e*P **P 09 12 44.3 -0.5**
comp=Z,4.1nm,0.6s,mb4.5
FLN La Foliniere 82.26 318 *e*P **P 09 12 45.4 -0.5**
FLN *e*MLR MLR
comp=Z,128nm,22.2s,MS3.9
FLN La Foliniere 82.26 318 *e*P **P 09 12 45.4 -0.5**
FLN LR LR
comp=Z,130nm,22.3s,MS4.2
MFF Saint Martin d 82.44 316 *e*P **P 09 12 46.4 -0.5**
comp=Z,23nm,0.7s,mb4.9
MFF *e*pP pP 09 12 59.0 -0.9
MFF Saint Martin d 82.44 316 *e*P **P 09 12 46.4 -0.5**
MFF *e**PP pP 09 12 59.0 -0.9
MFF pmax pmax
comp=Z,12nm,0.7s,mb4.9
MFF Saint Martin d 82.44 316 *e*P **P 09 12 46.4 -0.5**
comp=Z,12nm,0.7s,mb4.9
MFF *e*pP pP 09 12 59.0 -0.9
MAW Mawson 83.16 191 P **P 09 12 50.7 +0.7**
comp=Z,4.0nm,0.9s,mb4.4,baz=14,slow=6.4,SNR=8.4
MAW LR LR 09 41 46.7
comp=Z,123nm,18.8s,MS4.3,baz=190,slow=30
MAW Mawson 83.16 191 *e*P **P 09 12 50.5 +0.5**
comp=Z,8.0nm,1.0s,mb4.7
ETSF Etsaut 83.44 312 *e*P **P 09 12 52.2 0.0**
SJPF Ste Jean 83.88 313 *e*P **P 09 12 54.4 0.0**
ESDC Sonseca Array 86.66 310 P **P 09 13 08.4 0.0**
comp=Z,4.9nm,0.6s,mb4.9,baz=61,slow=4.4,SNR=35
TORD Torodi Ar. Bea 87.78 283 P **P 09 13 14.7 +0.4**
comp=Z,7.7nm,0.7s,mb5.0,baz=80,slow=4.8,SNR=12
COLD Coldfoot 88.24 20 *e*P **P 09 13 15.3 0.0**
comp=Z,6.1nm,0.9s,mb4.8
MVO Moncorvo 88.53 312 *e*P **P 09 13 17.9 +0.6**
comp=Z,26nm,1.3s,mb5.4
SUMG Summit 88.83 347 *e*P **P 09 13 18.2 +0.1**
comp=Z,12nm,0.8s,mb5.3
SUMG Summit 88.83 347 *i* P **P 09 13 18.4 +0.3**
comp=Z,14nm,1.0s,mb5.2
SVW2 Sparrevohn 89.01 27 *e*P **P 09 13 19.9 +0.8**
comp=Z,112nm,2.2s,mb5.8
MTE Manteigas 89.12 311 *e*P **P 09 13 21.1 +1.0**
comp=Z,32nm,1.5s,mb5.4
PCBR Castelo Branco 89.23 311 *e*P **P 09 13 21.1 +0.5**
comp=Z,20nm,2.0s,mb5.1
PBAR Barrancos 89.36 309 *e*P **P 09 13 22.0 +0.7**
comp=Z,22nm,1.7s,mb5.2
PBAR *i* P pP 09 13 35.1 +0.6
BPAW Bear Paw Mtn. 89.51 23 *e*P **P 09 13 21.6 +0.2**
comp=Z,40nm,0.9s,mb5.8
PPLA Purkeypile 89.62 24 *e*P **P 09 13 22.6 +0.6**
comp=Z,26nm,1.2s,mb5.4
SYO Syowa Base 89.75 197⇓ *e*P **P 09 13 21.8 -0.5**
PTOM Tomar 89.98 311 *e*P **P 09 13 25.5 +1.4**
comp=Z,37nm,1.6s,mb5.5
EVO Evora 90.00 310 *e*P **P 09 13 24.9 +0.7**
comp=Z,24nm,1.2s,mb5.1
EVO *e*MLR MLR
comp=Z,108nm,20.5s,MS4.0
EVO Evora 90.00 310 *e*P **P 09 13 24.9 +0.7**
comp=Z,14nm,1.9s,mb5.0
PBEJ Beja 90.03 309 *e*P **P 09 13 25.2 +0.8**
comp=Z,12nm,1.4s,mb5.0
PVAQ Vaqueiros 90.09 308 *e*P **P 09 13 25.8 +1.1**
comp=Z,43nm,1.5s,mb5.6
COLA College 90.28 22 *e*P **P 09 13 24.7 -0.3**
COLA pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
COLA College 90.28 22 *e*P **P 09 13 24.7 -0.3**
comp=Z,6.9nm,0.9s,mb5.0
PBDV Barranco-do-Ve 90.30 308 *e*P **P 09 13 27.0 +1.3**
comp=Z,32nm,1.1s,mb5.6
MCK McKinley 90.48 23 *e*P **P 09 13 25.9 0.0**
MCK pmax pmax
comp=Z,46nm,1.1s,mb5.7
MCK McKinley 90.48 23 *e*P **P 09 13 25.9 -0.1**
comp=Z,46nm,1.1s,mb5.7
ILAR Eielson Array 90.68 22 P **P 09 13 25.6 -1.2**
comp=Z,7.9nm,0.7s,mb5.2,baz=299,slow=4.4,SNR=118
ILAR PP PP 09 17 00.6 -1.4
comp=Z,4.5nm,1.1s,baz=300,slow=6.5,SNR=6.9
ILAR LR LR 09 56 17.0
comp=Z,114nm,18.2s,MS4.3,baz=287,slow=37
ILAR Eielson Array 90.68 22 P **P 09 13 25.7 -1.2**
ILAR 09 17 00.6
PTEO Sao Teotonio 90.82 309 *e*P **P 09 13 29.0 +0.9**
comp=Z,39nm,1.4s,mb5.5
MORF Marmelete 90.83 308 *e*P **P 09 13 29.6 +1.4**
comp=Z,43nm,1.6s,mb5.5
PFVI Vila Bisbo 91.02 308 *e*P **P 09 13 30.1 +1.1**
PMR Palmer 91.51 25 *e*P **P 09 13 30.7 -0.1**
PMR pmax pmax

comp=Z,27nm,0.9s,mb5.6
PMR Palmer 91.51 25 eP P 09 13 30.7 -0.1
comp=Z,27nm,0.9s,mb5.6
SML Sawmill 91.72 24 eP P 09 13 32.1 +0.4
SML pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
SML Sawmill 91.72 24 eP P 09 13 32.1 +0.4
comp=Z,8.1nm,0.8s,mb5.1
KDAK Kodiak Island 91.86 29 i P P 09 13 33.2 +0.7
PAX Paxson 92.21 23 eP P 09 13 34.0 0.0
PAX pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
PAX Paxson 92.21 23 eP P 09 13 34.0 +0.1
comp=Z,10nm,0.8s,mb5.2
DOT Dot Lake 92.34 22 eP P 09 13 34.5 -0.1
comp=Z,29nm,0.8s,mb5.7
INK Inuvik 92.59 16 eP P 09 13 35.1 -0.5
INK pmax pmax
comp=Z,37nm,1.4s
INK Inuvik 92.59 16 eP P 09 13 35.1 -0.5
comp=Z,37nm,1.4s,mb5.6
EGAK Eagle 92.67 20 eP P 09 13 35.7 -0.4
comp=Z,8.2nm,1.3s,mb5.0
MENT Mentasta 92.88 22 eP P 09 13 38.0 +0.9
DAWY Dawson 93.72 20 eP P 09 13 40.9 0.0
DBIC Dimbokro 95.55 278 P P 09 13 50.9 +0.5
comp=Z,4.0nm,1.1s,mb4.7,baz=57,slow=2.1,SNR=3.9
DBIC LR LR 09 56 34.3
comp=Z,86nm,21.5s,MS4.2,baz=69,slow=35
SKAG Skagway 98.23 22 eP P 09 14 01.6 +0.1
comp=Z,12nm,1.0s,mb5.4
YKA Yellowknife Ar 101.88 12 P Pdif 09 14 16.8 -1.0
comp=Z,0.3nm,0.7s,baz=331,slow=4.1,SNR=5.3
YKA PP PP 09 18 24.4 -3.7
comp=Z,2.8nm,0.8s,baz=334,slow=8.2,SNR=10
YKA Yellowknife Ar 101.88 12 P Pdif 09 14 16.8 -1.0
YKA PP PP 09 18 24.4 -3.7
A13A Flathead Natio 113.96 19 ⇑P PKiKP 09 19 03.7 +0.3
baz=114
A17A Triple J Farms 115.06 17 ⇑P PKiKP 09 19 05.4 -0.1
baz=115
B15A Bradely Ranch, 115.08 18 ⇓P PKiKP 09 19 05.0 -0.5
baz=115
A18A Metzger Ranch, 115.31 16 ⇑P PKiKP 09 19 05.6 -0.4
baz=115
G08A Pilot Rock 115.45 24 ⇓P PKiKP 09 19 06.1 -0.3
baz=115
F10A Beach Ranch, E 115.54 22 ⇑P PKiKP 09 19 06.4 -0.1
baz=115
C15A Salmond Ranch, 115.55 18 ⇓P PKiKP 09 19 06.2 -0.3
baz=115
D13A Huson 115.56 20 ⇑P PKiKP 09 19 05.8 -0.7
baz=115
A19A Klindworth Far 115.60 15 ⇓P PKiKP 09 19 05.9 -0.6
baz=115
D14A Greenough 115.88 19 ⇓P PKiKP 09 19 06.7 -0.4
baz=116
MSO Missoula 115.96 20 ⇓P PKiKP 09 19 06.5 -0.8
baz=116
EGMT Eagleton 116.16 16 ⇑P PKiKP 09 19 07.5 -0.2
baz=116
C17A Wharram Farm, 116.23 17 ⇓P PKiKP 09 19 07.4 -0.4
baz=116
D16A Dana Ranch, Ca 116.54 18 ⇓P PKPdf 09 19 08.2 -0.2
baz=116
C19A Slack Wire Ran 116.61 16 ⇓P PKPdf 09 19 08.9 +0.4
baz=116
ULM Lac du Bonnet 116.64 6 PKP PKPdf 09 19 07.5 -1.0
comp=Z,2.0nm,0.8s,baz=104,slow=4.8,SNR=3.2
ULM Lac du Bonnet 116.64 6 PKP PKPdf 09 19 07.5 -1.0
K05A Summer Lake 116.72 27 ⇑P PKPdf 09 19 09.7 +0.8
baz=116
C20A Veseth Ranch, 116.91 15 ⇑P PKPdf 09 19 09.3 +0.2
baz=117
E16A East Helena 116.94 18 ⇓P PKPdf 09 19 09.0 -0.2
baz=117
D19A Cripps Ranch, 117.18 16 ⇑P PKPdf 09 19 09.4 -0.2
baz=117
J08A Circle Bar Ran 117.24 25 ⇓P PKPdf 09 19 10.3 +0.5
baz=117
G14A Jackson 117.51 20 ⇑P PKPdf 09 19 10.4 +0.1
baz=117
H12A Diamond D Ranc 117.63 22 ⇓P PKPdf 09 19 10.2 -0.3
baz=117
BOZ Bozeman (W) 117.75 19 ⇑P PKPdf 09 19 10.7 -0.1
baz=118
F17A Fitzpatrick Pl 117.82 18 ⇑P PKPdf 09 19 11.0 +0.1
baz=118
H13A Challis 117.83 21 ⇓P PKPdf 09 19 10.8 -0.2
baz=118
E19A Rath Farm, Rou 117.85 16 ⇑P PKPdf 09 19 10.4 -0.5
baz=118
E20A Meyer Farm, Mu 117.99 16 ⇓P PKPdf 09 19 11.3 +0.1
baz=118
G16A Moss Hill, Enn 118.07 19 ⇓P PKPdf 09 19 11.4 -0.1
baz=118
H14A Leadore 118.09 21 ⇑P PKPdf 09 19 11.5 0.0
baz=118
F18A Big Timber 118.10 17 ⇓P PKPdf 09 19 11.3 -0.1
baz=118
I12A Atlanta 118.18 22 ⇑P PKPdf 09 19 12.0 +0.4
baz=118
GCMT Greycliff 118.22 17 ePKPdf PKPdf 09 19 11.6 0.0
E21A Keefer Ranch, 118.23 15 ⇓P PKPdf 09 19 12.2 +0.5
baz=118
MFID Camas Ranch 118.24 23 ⇓P PKPdf 09 19 12.2 +0.4
baz=118
LAO LASA Array 118.31 14 ⇓P PKPdf 09 19 11.8 0.0
baz=118
LAO LASA Array 118.31 14 ePKPdf PKPdf 09 19 12.2 +0.4
F19A Roth Farm, Mol 118.37 17 ⇑P PKPdf 09 19 12.3 +0.4
baz=118
I13A Wildhorse Cree 118.44 22 ⇑P PKPdf 09 19 12.1 0.0
baz=118
F20A Billings 118.64 16 ⇓P PKPdf 09 19 12.2 -0.3
baz=118
HLID Hailey 118.64 22 ⇓P PKPdf 09 19 13.0 +0.4
baz=118,SNR=7.1
I14A Mackay 118.67 21 ⇓P PKPdf 09 19 12.9 +0.3
baz=118
J13A Cove Ranch, Pi 118.87 22 P PKPdf 09 19 13.8 +0.8
baz=119,SNR=8.1
RLMT Red Lodge 118.94 17 ⇓P PKPdf 09 19 13.7 +0.6
baz=119
RLMT Red Lodge 118.94 17 ePKPdf PKPdf 09 19 13.0 -0.1
G20A Bridger 119.15 17 ⇑P PKPdf 09 19 13.5 0.0
baz=119
J14A Carey 119.17 21 ⇓P PKPdf 09 19 14.1 +0.5
baz=119
I16A Newdale 119.38 20 ⇓P PKPdf 09 19 14.3 +0.4
baz=119
H19A Powell 119.44 17 ⇑P PKPdf 09 19 14.7 +0.6
baz=119
J15A Blackfoot 119.48 21 ⇓P PKPdf 09 19 14.8 +0.6
baz=119
K14A Jones Ranch, D 119.97 22 ⇓P PKPdf 09 19 15.7 +0.6
baz=120,SNR=5.1
WCN Washoe City 119.98 28 ⇑P PKPdf 09 19 15.5 +0.3
baz=120
SNOW Snow King Moun 119.99 19 ePKPdf PKPdf 09 19 15.6 +0.4
REDW Red Top Meadow 120.04 19 ePKPdf PKPdf 09 19 15.7 +0.4
K15A Arbon 120.08 21 ⇑P PKPdf 09 19 15.7 +0.3
baz=120
J17A Brown Place, J 120.09 19 ⇓P PKPdf 09 19 15.4 0.0
baz=120
K16A Soda Springs 120.27 20 ⇓P PKPdf 09 19 16.4 +0.7
baz=120
I20A Worland 120.34 17 ⇑P PKPdf 09 19 15.8 0.0
baz=120
L14A Malta 120.40 22 ⇓P PKPdf 09 19 16.0 0.0
baz=120
J18A Kendall Valley 120.45 19 ⇓P PKPdf 09 19 16.2 +0.1
baz=120
J19A Crowheart 120.70 18 ⇑P PKPdf 09 19 16.7 +0.2
baz=120
I21A Big Trails, Te 120.70 16 ⇓P PKPdf 09 19 16.1 -0.4
baz=120
L15A Malad City 120.73 21 ⇓P PKPdf 09 19 16.1 -0.5
baz=120
WAKR Walker 120.77 29 ePKPdf PKPdf 09 19 17.6 +0.8
J20A Shoshoni 120.90 17 ⇓P PKPdf 09 19 16.7 -0.2
baz=121
K18A Toltan Ranch, 120.96 19 ⇑P PKPdf 09 19 16.9 -0.1
baz=121
BW06 Boulder Array 120.99 19 ⇑P PKPdf 09 19 16.6 -0.5
baz=121
PDAR Pinedale Array 120.99 19 PKP PKPdf 09 19 16.0 -1.1
comp=Z,2.3nm,0.8s,baz=76,slow=0.8,SNR=21
PDAR PP PP 09 20 43.6 -1.8
comp=Z,1.8nm,1.0s,baz=8.1,slow=2.1,SNR=6.6
PDAR PKKPbc PKKPbc 09 29 17.5 -4.0
comp=Z,0.3nm,0.5s,baz=148,slow=4.4,SNR=5.3
J21A Lysite 121.09 17 ⇓P PKPdf 09 19 16.4 -0.9
baz=121
K19A Absolon Red Bu 121.16 18 ⇑P PKPdf 09 19 16.8 -0.6
baz=121
M15A Larsen Ranch, 121.18 22 ⇓P PKPdf 09 19 16.9 -0.6
baz=121
RSSD Black Hills 121.25 14 ePKIKP PKPdf 09 19 17.2 -0.3
J22A Midwest 121.30 16 ⇓P PKPdf 09 19 16.9 -0.8
baz=121
NVAR Mina Array Bea 121.35 28 PKP PKPdf 09 19 18.8 +0.9
comp=Z,6.2nm,0.7s,baz=301,slow=2.0,SNR=60
NVAR PKKPbc PKKPbc 09 29 18.9 -1.0
comp=Z,0.2nm,0.4s,baz=128,slow=6.5,SNR=3.5
HWUT Hardware Ranch 121.37 21 ePKPdf PKPdf 09 19 17.9 +0.1
K20A Yellowstone Ra 121.46 18 ⇓P PKPdf 09 19 17.4 -0.6
baz=121
L18A Fontenelle, Gr 121.60 20 ⇑P PKPdf 09 19 18.5 +0.2
baz=121
M16A Huntsville 121.60 21 ⇓P PKPdf 09 19 18.0 -0.3
baz=121
M17A Scullys Gap (B 121.80 20 ⇓P PKPdf 09 19 17.9 -0.7
baz=122
K21A Alcova 121.81 17 ⇑P PKPdf 09 19 18.2 -0.5
baz=122
Q10A Clear Creek Ra 121.87 26 ⇓P PKPdf 09 19 18.6 -0.3
baz=122
K22A Casper 121.99 16 ⇓P PKPdf 09 19 18.5 -0.5
baz=122
L20A Wamsutter 122.06 18 ⇑P PKPdf 09 19 19.2 0.0
baz=122
DUG Dugway 122.16 23 ⇓P PKPdf 09 19 19.9 +0.4
baz=122,SNR=6.7
DUG Dugway 122.16 23 ePKPdf PKPdf 09 19 19.7 +0.3
Q11A Duckwater 122.17 26 ⇑P PKPdf 09 19 19.2 -0.3
baz=122
O15A The Old Anders 122.21 22 ⇑P PKPdf 09 19 20.5 +0.9
baz=122
N17A Moffit Pass 122.21 21 ⇓P PKPdf 09 19 19.9 +0.4
baz=122
R10A Warm Springs 122.36 27 ⇓P PKPdf 09 19 20.6 +0.8
baz=122
L21A Rawlins 122.39 17 ⇓P PKPdf 09 19 19.6 -0.2
baz=122
DAU Daniels Canyon 122.53 21 ePKIKP PKPdf 09 19 20.7 +0.6
S10A Tonopah Range, 122.54 27 ⇑P PKPdf 09 19 20.6 +0.4
baz=122
M20A Sweetwater, Wa 122.58 18 ⇓P PKPdf 09 19 20.2 0.0
baz=122
P14A Drum Mountains 122.58 23 P PKPdf 09 19 21.4 +1.1
baz=122,SNR=10
R11A Troy Canyon, C 122.62 26 ⇓P PKPdf 09 19 21.3 +0.9
baz=122
L23A Garrett 122.71 16 ⇑P PKPdf 09 19 19.6 -0.9
baz=122
M21A Separation Pea 122.72 18 ⇓P PKPdf 09 19 20.1 -0.4
baz=122
N19A John Jarvie Ra 122.81 19 ⇓P PKPdf 09 19 20.4 -0.3
baz=123
O17A Robinson Place 122.91 21 ⇓P PKPdf 09 19 21.0 +0.1
baz=123
ECSD EROS Data Cent 122.98 8 ePKPdf PKPdf 09 19 20.2 -0.7
Q14A Sevier Lake (B 123.02 24 ⇑P PKPdf 09 19 22.1 +1.0
baz=123,SNR=7.7
VES Vestal, Richgr 123.06 30 ⇓P PKPdf 09 19 20.8 -0.5
baz=123
O18A Roosevelt 123.10 20 ⇓P PKPdf 09 19 21.7 +0.5
baz=123
S11A Rachel 123.14 27 ⇓P PKPdf 09 19 22.5 +1.1
baz=123
N20A Spence Gulch, 123.15 19 ⇓P PKPdf 09 19 20.5 -0.8
baz=123
Q15A Fillmore 123.36 23 P PKPdf 09 19 22.7 +1.0
baz=123,SNR=9.4
O19A Miners Draw (B 123.36 20 ⇑P PKPdf 09 19 21.1 -0.6
baz=123
PKM Peak Mountain 123.43 32 ⇑P PKPdf 09 19 23.1 +1.1
baz=123
R13A O'Grain Ranch, 123.44 25 ⇑P PKPdf 09 19 23.0 +1.1
baz=123
N21A Black Mountain 123.45 18 ⇑P PKPdf 09 19 21.9 +0.1
baz=123
ISA Isabella 123.50 30 ⇓P PKPdf 09 19 22.5 +0.4
baz=123
M24A Cheyenne 123.55 15 ⇑P PKPdf 09 19 22.2 +0.1
baz=123
S12A Delamar Landin 123.56 26 ⇑P PKPdf 09 19 23.6 +1.4
baz=123
P18A Preston Nutter 123.58 21 ⇓P PKPdf 09 19 22.9 +0.7
baz=123
FURC Furnace Creek, 123.61 28 ⇑P PKPdf 09 19 23.3 +1.0
baz=123
MPMC Manual Prospec 123.65 29 ⇑P PKPdf 09 19 23.5 +1.1
baz=124
T11A Corn Creek, Al 123.71 26 ⇑P PKPdf 09 19 23.8 +1.3
baz=124
O20A White River Ci 123.80 19 ⇑P PKPdf 09 19 22.8 +0.3
baz=124
MSU Marysvale 123.86 23 ePKIKP PKPdf 09 19 24.2 +1.5
Q16A Castle Valley 123.88 22 ⇑P PKPdf 09 19 23.6 +0.9
baz=124,SNR=6.9
U10A Ash Meadows, A 123.90 28 ⇑P PKPdf 09 19 24.1 +1.3
baz=124
S13A Holt Ranch, En 124.00 25 ⇓P PKPdf 09 19 23.9 +0.9
baz=124
P19A Cripple Cowboy 124.01 20 ⇓P PKPdf 09 19 23.3 +0.4
baz=124
LRMC Laurel Mountai 124.03 30 ⇑P PKPdf 09 19 24.0 +0.8
baz=124
R15A Junction 124.09 23 ⇓P PKPdf 09 19 24.4 +1.2
baz=124
Q18A Rafter H Ranch 124.09 21 P PKPdf 09 19 23.6 +0.4
baz=124,SNR=6.6
S14A Cedar City 124.12 24 ⇑P PKPdf 09 19 24.5 +1.2
baz=124
P20A De Beque 124.32 19 ⇑P PKPdf 09 19 23.1 -0.5
baz=124
R16A Teasdale 124.33 23 P PKPdf 09 19 24.9 +1.3
baz=124,SNR=15
SHOC Shoshone 124.35 28 ⇑P PKPdf 09 19 24.8 +1.0
baz=124
T12A Moapa 124.36 26 ⇓P PKPdf 09 19 24.8 +1.1
baz=124
EDW2 Edwards Air Fo 124.36 30 ⇑P PKPdf 09 19 24.7 +0.9
baz=124
O23A Lake Granby, G 124.42 17 ⇑P PKPdf 09 19 24.1 +0.4
baz=124
T13A Saint George 124.45 25 ⇑P PKPdf 09 19 25.4 +1.5
baz=124
R17A Hanksville Air 124.49 22 ⇓P PKPdf 09 19 24.3 +0.3
baz=124,SNR=10
S15A Panguitch 124.52 24 ⇑P PKPdf 09 19 25.7 +1.7
baz=124
GSC Goldstone 124.59 29 ⇓P PKPdf 09 19 25.4 +1.2
baz=124
P21A Newcastle 124.60 19 ⇑P PKPdf 09 19 24.6 +0.4
baz=124
U12A Valley of Fire 124.68 26 ⇓P PKPdf 09 19 25.5 +1.1
baz=124
P22A Eagle 124.75 18 ⇑P PKPdf 09 19 24.6 +0.2
baz=124
T14A Hurricane 124.76 25 ⇑P PKPdf 09 19 26.0 +1.5
baz=125
S16A Weppner Ranch, 124.77 23 P PKPdf 09 19 25.4 +0.8
baz=125,SNR=11
R18A Canyonlands Na 124.81 21 ⇓P PKPdf 09 19 24.9 +0.4
baz=125
Q20A Ridgley Place, 124.85 20 ⇓P PKPdf 09 19 24.8 +0.2
baz=125
ISCO Idaho Springs 124.89 17 ⇑P PKPdf 09 19 24.5 -0.2
baz=125
U13A Pakoon Wash 124.94 26 ⇓P PKPdf 09 19 25.9 +1.0
baz=125
T15A Red Dirt Ranch 125.08 24 ⇑P PKPdf 09 19 25.7 +0.6
baz=125
R19A Curley Farm, L 125.12 21 ⇑P PKPdf 09 19 25.9 +0.7
baz=125
V12A Nelson 125.14 27 ⇓P PKPdf 09 19 26.5 +1.2
baz=125
S17A Black Ridge (B 125.15 22 ⇓P PKPdf 09 19 25.2 -0.1
baz=125
P23A Jefferson 125.22 17 ⇓P PKPdf 09 19 25.8 +0.4
baz=125
U14A Mt Trumbull 125.27 25 ⇑P PKPdf 09 19 26.5 +1.0
baz=125
Q22A Crested Butte, 125.37 18 ⇓P PKPdf 09 19 26.2 +0.6
baz=125
BBRC Big Bear Solar 125.38 30 ⇑P PKPdf 09 19 26.7 +0.9
baz=125
V13A Grand Canyon W 125.41 26 ⇓P PKPdf 09 19 27.0 +1.2
baz=125
T16A Glen Canyon Da 125.45 23 ⇑P PKPdf 09 19 26.2 +0.4
baz=125,SNR=5.4
R20A Redvale 125.51 20 ⇑P PKPdf 09 19 26.4 +0.5
baz=125
GMRC Granite Mounta 125.55 28 ⇓P PKPdf 09 19 27.5 +1.4
baz=125
P25A Willow Gulch B 125.56 16 ⇓P PKPdf 09 19 26.1 +0.1
baz=125
R21A Cimarron 125.62 19 ⇓P PKPdf 09 19 26.3 +0.2
baz=125
U15A North Rim 125.62 24 ⇑P PKPdf 09 19 27.8 +1.6
baz=125
S19A Harvey Farm, M 125.65 21 ⇑P PKPdf 09 19 26.6 +0.4
baz=125
T17A Navajo Res., N 125.71 23 P PKPdf 09 19 27.4 +1.0
baz=126,SNR=8.5
MURC Murrieta 125.78 31 ⇓P PKPdf 09 19 27.2 +0.6
baz=126
S20A Disappointment 125.84 20 ⇑P PKPdf 09 19 27.3 +0.8
baz=126
T18A Mexican Hat 125.93 22 ⇑P PKPdf 09 19 27.3 +0.6
baz=126,SNR=8.9
V14A Boquillas Ranc 125.97 26 ⇑P PKPdf 09 19 28.2 +1.4
baz=126
R22A Saguache, Gunn 126.00 19 ⇑P PKPdf 09 19 28.0 +1.1
baz=126
BELC Belle Mtn. Jos 126.03 29 ⇓P PKPdf 09 19 28.2 +1.2
baz=126
Q25A Bedland, Calha 126.10 16 ⇓P PKPdf 09 19 26.8 -0.2
baz=126
PFO Pinyon Flat Ob 126.13 30 ⇑P PKPdf 09 19 28.5 +1.2
baz=126
S21A Coal Bank Pass 126.19 20 ⇑P PKPdf 09 19 28.5 +1.3
baz=126
V15A Kaibab Nationa 126.20 25 ⇓P PKPdf 09 19 29.0 +1.7
baz=126
IRM Iron Mountain 126.30 28 ⇑P PKPdf 09 19 29.0 +1.4
baz=126
U16A Tuba City 126.33 24 ⇑P PKPdf 09 19 29.0 +1.4
baz=126
W14A Seligman 126.34 26 ⇓P PKPdf 09 19 29.1 +1.5
baz=126
MVCO Mesa Verde 126.36 21 ⇓P PKPdf 09 19 28.2 +0.6
baz=126
S22A 4UR Ranch, Cre 126.42 19 ⇓P PKPdf 09 19 28.3 +0.6
baz=126
T19A Beclabito 126.51 21 ⇓P PKPdf 09 19 28.2 +0.3
baz=126,SNR=5.5
X13A Yucca 126.54 27 ⇓P PKPdf 09 19 29.3 +1.3
baz=126
U18A Rough Rock, Ch 126.57 22 ⇑P PKPdf 09 19 29.3 +1.3
baz=126,SNR=13
BC3 Big Chuckawall 126.58 29 ⇓P PKPdf 09 19 29.5 +1.4
baz=126
PDMCI Parker Dam,Lak 126.65 27 ⇓P PKPdf 09 19 29.4 +1.2
baz=126
W15A Williams 126.71 25 ⇑P PKPdf 09 19 30.1 +1.8
baz=126
MONP Monument Peak 126.73 30 ⇓P PKPdf 09 19 29.6 +1.2
baz=127
R25A Fountain Ranch 126.80 16 ⇓P PKPdf 09 19 28.3 -0.1
baz=127
SDCO Great Sand Dun 126.83 18 ⇑P PKPdf 09 19 28.6 +0.1
baz=127
U19A Dine' College, 126.93 22 ⇑P PKPdf 09 19 29.3 +0.6
baz=127,SNR=7.0
Y12C Blythe 126.93 28 ⇓P PKPdf 09 19 29.8 +1.1
baz=127
SWSC Sam W. Stewart 127.00 30 ⇑P PKPdf 09 19 29.8 +0.9
baz=127
S24A Houchin Ranch, 127.01 18 ⇓P PKPdf 09 19 29.6 +0.8
baz=127
X14A Yava 127.06 26 ⇓P PKPdf 09 19 30.2 +1.2
baz=127
T22A Edith 127.07 19 ⇓P PKPdf 09 19 30.0 +1.1
baz=127
DVTC Desert V Tower 127.08 30 ⇑P PKPdf 09 19 30.6 +1.6
baz=127
W16A Flagstaff 127.09 25 ⇓P PKPdf 09 19 30.6 +1.6
baz=127
U20A Newcomb 127.10 21 ⇓P PKPdf 09 19 30.3 +1.3
baz=127
V18A Ganado 127.17 23 P PKPdf 09 19 30.8 +1.6
baz=127,SNR=5.0
Y13A Salome 127.19 28 ⇑P PKPdf 09 19 30.4 +1.2
baz=127
S25A Robets Cordova 127.22 17 ⇑P PKPdf 09 19 29.2 0.0
baz=127
CBKS Cedar Bluff 127.25 12 ⇓P PKPdf 09 19 30.9 +1.7
baz=127
X15A Humboldt 127.32 26 ⇑P PKPdf 09 19 30.8 +1.3
baz=127
T23A Casias Ranch, 127.32 19 ⇓P PKPdf 09 19 30.3 +0.9
baz=127
U21A Nageezi 127.35 20 ⇑P PKPdf 09 19 30.4 +0.9
baz=127
GLA Glamis 127.37 29 ⇓P PKPdf 09 19 31.3 +1.6
baz=127
Y14A Wickenburg 127.46 27 ⇓P PKPdf 09 19 30.6 +0.9
baz=127
V19A Window Rock 127.50 22 ⇑P PKPdf 09 19 31.0 +1.2
baz=127
T24A Torres, Weston 127.58 18 ⇑P PKPdf 09 19 30.7 +0.8
baz=127
V20A Brimhall 127.64 21 ⇓P PKPdf 09 19 31.1 +1.1
baz=127
U22A Llaves 127.66 20 ⇑P PKPdf 09 19 31.2 +1.1
baz=128
T25A Trinidad 127.71 17 ⇑P PKPdf 09 19 30.6 +0.5
baz=128
X16A Lo Mia Camp, P 127.71 25 ⇑P PKPdf 09 19 31.5 +1.3
baz=128
Y15A Casa Rosa Ranc 127.73 26 ⇓P PKPdf 09 19 31.5 +1.3
baz=128
W18A Petrified Fore 127.77 23 ⇓P PKPdf 09 19 31.8 +1.4
baz=128
Z13A Yuma Proving G 127.79 28 ⇑P PKPdf 09 19 31.9 +1.5
baz=128
U23A El Rito 127.92 19 ⇓P PKPdf 09 19 31.9 +1.3
baz=128
Z14A Wintersburg 127.97 27 ⇓P PKPdf 09 19 32.4 +1.6
baz=128
X17A Forest Lakes 128.04 24 ⇓P PKPdf 09 19 32.5 +1.6
baz=128
V22A San Miguel Ran 128.07 20 ⇑P PKPdf 09 19 32.3 +1.4
baz=128
113A Mohawk Valley, 128.10 28 ⇓P PKPdf 09 19 32.1 +1.1
baz=128
W20A Ramah 128.23 22 P PKPdf 09 19 32.0 +0.9
baz=128,SNR=6.5
U25A Circle Dot Ran 128.40 17 ⇑P PKPdf 09 19 32.3 +0.8
baz=128
V23A Ortiz Mt. (NFS 128.46 19 ⇓P PKPdf 09 19 33.4 +1.8
baz=128
114A Black Gap (USA 128.51 27 ⇑P PKPdf 09 19 33.1 +1.3
baz=128
Y17A Roosevelt 128.58 25 ⇓P PKPdf 09 19 33.5 +1.6
baz=128
Z16A Peralta Trail, 128.65 26 ⇓P PKPdf 09 19 33.4 +1.3
baz=128
X20A Quemado 128.75 22 ⇑P PKPdf 09 19 33.6 +1.3
baz=128
V24A Rampart Ranch, 128.77 18 ⇑P PKPdf 09 19 33.2 +1.0
baz=129
Y18A Canyon Day Jun 128.84 24 ⇑P PKPdf 09 19 33.6 +1.2
baz=129
V25A Rancho No Teng 128.86 18 ⇓P PKPdf 09 19 32.7 +0.3
baz=129
Y19A Nutrioso 128.98 23 ⇓P PKPdf 09 19 34.0 +1.3
baz=129
W23A Werner Place, 129.01 20 ⇓P PKPdf 09 19 34.0 +1.3
baz=129
X21A Alamocita Cree 129.09 22 ⇑P PKPdf 09 19 34.9 +2.0
baz=129,SNR=8.5
ANMO Albuquerque 129.10 20 ePKIKP PKPdf 09 19 33.8 +0.9
116A Eloy 129.19 26 ⇓P PKPdf 09 19 34.7 +1.6
baz=129
W24A Lazy 6 Ranch, 129.20 19 ⇑P PKPdf 09 19 34.3 +1.3
baz=129
214A Organ Pipe Nat 129.22 28 ⇓P PKPdf 09 19 34.8 +1.6
baz=129
X22A Bernardo 129.31 21 ⇑P PKPdf 09 19 35.1 +1.8

	baz=129						
Y20A	Horse Springs,	129.36	22	⇓P	PKPdf	09 19 35.1	+1.7
	baz=129						
LAZ	Ladron	129.36	21	*e*PKPdf	PKPdf	09 19 34.9	+1.5
W25A	X Bar L Ranch,	129.48	18	⇓P	PKPdf	09 19 33.7	+0.1
	baz=129						
Y21A	Point of Rocks	129.53	22	⇓P	PKPdf	09 19 35.0	+1.3
	baz=129						
117A	Oracle	129.60	26	⇓P	PKPdf	09 19 35.8	+1.9
	baz=129						
BNM	Barren Site	129.77	21	*e*PKPdf	PKPdf	09 19 35.5	+1.4
216A	Three Points,	129.78	27	⇑P	PKPdf	09 19 35.7	+1.4
	baz=130						
Y22A	Socorro	129.84	21	P	PKPdf	09 19 35.5	+1.2
	baz=130,SNR=11						
118A	Homack Ranch,	129.86	25	⇑P	PKPdf	09 19 35.9	+1.5
	baz=130						
Z20A	Nine Sixteen R	129.99	23	⇓P	PKPdf	09 19 35.6	+1.0
	baz=130						
W27A	Bowe Ranch, En	130.03	17	⇓P	PKPdf	09 19 35.5	+0.9
	baz=130						
Z21A	St. Cloud Mine	130.16	22	⇑P	PKPdf	09 19 36.1	+1.1
	baz=130						
Y23A	Lovelace Mesa,	130.16	20	⇓P	PKPdf	09 19 35.7	+0.8
	baz=130,SNR=8.1						
217A	Green Valley	130.25	26	⇑P	PKPdf	09 19 36.5	+1.3
	baz=130						
X26A	CR and CF Fran	130.30	18	⇓P	PKPdf	09 19 35.8	+0.7
	baz=130						
Y24A	Capitan	130.37	20	⇑P	PKPdf	09 19 36.1	+0.8
	baz=130,SNR=5.4						
Z22A	Elephant Butte	130.46	21	⇓P	PKPdf	09 19 36.2	+0.7
	baz=130,SNR=7.8						
Y25A	Mesa, Roswell	130.61	19	⇓P	PKPdf	09 19 36.5	+0.7
	baz=130						
121A	Cookes Peak, D	130.81	23	⇑P	PKPdf	09 19 37.2	+1.0
	baz=131						
318A	Bisbee	130.90	26	⇑P	PKPdf	09 19 37.2	+0.8
	baz=131						
Z24A	Sheeppen Canyo	130.94	20	P	PKPdf	09 19 37.6	+1.2
	baz=131,SNR=12						
122A	Conniff Cattle	130.95	22	⇑P	PKPdf	09 19 37.9	+1.5
	baz=131						
220A	Playas Peak, P	131.08	24	⇑P	PKPdf	09 19 37.8	+1.0
	baz=131						
Y27A	Causey	131.11	17	⇑P	PKPdf	09 19 37.5	+0.8
	baz=131						
MSTX	Muleshoe	131.14	17	⇓P	PKPdf	09 19 37.9	+1.2
	baz=131						
Z25A	Roswell	131.20	19	⇑P	PKPdf	09 19 37.7	+0.8
	baz=131						
Z26A	Caprock	131.44	18	⇓P	PKPdf	09 19 37.3	0.0
	baz=131						
124A	Stringfield Ra	131.49	20	⇓P	PKPdf	09 19 39.0	+1.5
	baz=131						
320A	Kipp Ranch, An	131.58	24	⇓P	PKPdf	09 19 38.7	+1.0
	baz=131						
Z27A	Tatum	131.62	18	⇓P	PKPdf	09 19 38.3	+0.6
	baz=131						
125A	Gardner Draw,	131.79	19	⇓P	PKPdf	09 19 38.4	+0.3
	baz=132,SNR=5.3						
GDL2	Guadalupe Moun	132.31	19	*e*PKPdf	PKPdf	09 19 39.8	+0.7
MNTX	Cornudas Mount	132.43	21	⇑P	PKPdf	09 19 39.6	+0.3
	baz=132						
MNTX	Cornudas Mount	132.43	21	*e*PKPdf	PKPdf	09 19 39.5	+0.2
226A	Malaga, Loving	132.52	19	⇑P	PKPdf	09 19 39.8	+0.4
	baz=132						
425A	Indio Mountain	133.40	21	⇓P	PKPdf	09 19 41.1	-0.1
	baz=133						
328A	Wristen Ranch,	133.55	18	⇓P	PKPdf	09 19 41.9	+0.5
	baz=133						
426A	McDonald Obser	133.83	20	⇓P	PKPdf	09 19 42.5	+0.6
	baz=134						
427A	Hayter Ranch,	133.86	19	⇓P	PKPdf	09 19 42.9	+0.9
	baz=134,SNR=6.2						
428A	Kincaid Ranch,	134.20	18	⇑P	PKPdf	09 19 43.3	+0.7
	baz=134,SNR=7.2						
527A	Woodward Ranch	134.44	20	⇓P	PKPdf	09 19 43.6	+0.5
	baz=134						
528A	Cox Ranch, San	134.69	19	⇑P	PKPdf	09 19 43.9	+0.3
	baz=134						
626A	Big Bend Ranch	134.82	20	⇓P	PKPdf	09 19 44.1	+0.3
	baz=135						
627A	Terlingua Ranc	135.16	20	⇓P	PKPdf	09 19 44.9	+0.5
	baz=135						
TXAR	Lajitas Array	135.18	20	PKhKP	PKPpre	09 19 32.6	
	comp=Z,0.3nm,0.4s,baz=229,slow=0.6,SNR=13						
TXAR				PKP	PKPdf	09 19 45.7	+1.2
	comp=Z,2.2nm,0.6s,baz=144,slow=0.8,SNR=26						
TXAR				PP	PP	09 22 16.2	-2.5
	comp=Z,1.0nm,0.9s,baz=354,slow=3.8,SNR=6.0						
TXAR	Lajitas Array	135.18	20	PKIKP	PKPdf	09 19 45.7	+1.2
TXAR						09 22 16.3	
JCT	Junction City	135.24	15	⇓P	PKPdf	09 19 44.7	+0.1
	baz=135						
JCT	Junction City	135.24	15	*e*PKPdf	PKPdf	09 19 44.4	-0.1
628A	Black Gap, Mar	135.29	19	P	PKPdf	09 19 45.4	+0.6
	baz=135,SNR=8.2						
BDFB	Brasilia	141.59	261	PKP	PKPdf	09 19 56.6	+0.1
	comp=Z,3.5nm,0.7s,baz=184,slow=8.7,SNR=4.1						
TRQA	Tornquist	146.18	218	*e*PKPdf	PKPdf	09 20 04.1	+0.2
TEIG	Tepich	147.01	1	*e*PKPdf	PKPdf	09 20 07.7	+1.8
CPUP	Villa Florida	148.64	240	PKP	PKPdf	09 20 08.5	+0.1
	comp=Z,5.9nm,0.9s,baz=41,slow=3.3,SNR=5.8						
CPUP				PKPbc	PKPbc	09 20 11.3	-0.8
	comp=Z,5.8nm,0.7s,baz=49,slow=4.7,SNR=9.8						
SDV	Santo Domingo	152.52	321	*e*PKPbc	PKPbc	09 20 20.8	-0.9
TGUH	Tegucigalpa,Ún	153.15	359	*e*PKPbc	PKPbc	09 20 23.7	+0.6
ROSC	El Rosal	157.93	323	PKP	PKPdf	09 20 23.1	+1.0
	comp=Z,2.1nm,0.4s,baz=254,slow=23,SNR=4.0						
ROSC				PKPab	PKPab	09 20 56.0	+0.9
	comp=Z,11nm,0.6s,baz=96,slow=18,SNR=7.8						
LPAZ	La Paz	160.88	258	PKP	PKPdf	09 20 25.8	+0.4
	comp=Z,1.8nm,0.8s,baz=53,slow=4.2,SNR=7.6						
LPAZ				PKPab	PKPab	09 21 08.3	+0.3
	comp=Z,3.0nm,0.8s,baz=106,slow=1.8,SNR=6.9						
LPAZ	La Paz	160.88	258	*e*PKPdf	PKPdf	09 20 25.8	+0.4

*NEIC **07** 09:06:40.4, 32°.67S×71°.48W, h15km, ML2.9(GUC), After GUC.*

GUC 07 09:06:40.4±0.7, 32°.67S×71°.48W, h15km±4km, MD3.7, ML2.9, 12C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.49	127	⇑*i*P	Pg	09 06 50.6	+0.4
ROCH				*e*S	Sg	09 06 57.9	+1.1
ROCH	El Roble	0.49	127	⇓*i*P	Pg	09 06 50.5	+0.3
ROCH				⇑*i*P		09 06 50.6	
ROCH				*e*S	Sg	09 06 57.9	+1.1
ROCH				*i* S	Sg	09 06 58.2	+1.3
ROCH				AML	AML	09 06 58.8	
	comp=E,2μm,0.6s						
JACH	Jahuel	0.75	91	⇑*i*P	Pg	09 06 54.3	-0.6
JACH				*i* S	Sg	09 07 04.5	-0.3
JACH	Jahuel	0.75	91	⇓*i*P	Pg	09 06 54.3	-0.6
JACH				*i* S	Sg	09 07 04.5	-0.3
CHNG	Los Chungos	0.79	359	⇑*i*P	Pg	09 06 51.1	-4.6
CHNG				*i* S	Sg	09 07 01.6	-4.5
CHNG				AML	AML	09 07 02.4	
	comp=N,442nm,0.3s						
LCCH	Las Cruces	0.80	185	*e*P	Pb	09 06 54.8	-1.2
LCCH				*i* S	Sg	09 07 05.6	-1.1
LCCH	Las Cruces	0.80	185	*e*P	Pb	09 06 54.8	-1.2
LCCH				*i* S	Sg	09 07 05.6	-1.1
PEL	Peldehue	0.82	125	⇑*i*P	Pb	09 06 55.7	-0.5
PEL				*i* S	Sg	09 07 06.7	-0.3
PEL				AML	AML	09 07 08.9	
	comp=E,2μm,0.4s						
SAN	Santiago	1.04	139	*e*P	Pb	09 06 58.7	-1.3
SAN				*i* S	Sb	09 07 12.9	-0.6
SAN	Santiago	1.04	139	*e*P	Pb	09 06 58.7	-1.3
SAN				*i* S	Sb	09 07 12.9	-0.6
SAN				AML	AML	09 07 13.8	
	comp=N,820nm,0.8s						
TACH	Talagante	1.08	155	⇑*i*P	Pb	09 06 59.3	-1.4
TACH				*i* S	Sb	09 07 13.7	-0.9
TACH	Talagante	1.08	155	⇓*i*P	Pb	09 06 59.3	-1.4
TACH				*i* S	Sb	09 07 13.7	-0.9
FSR	Penalolen	1.13	135	*e*P	Pb	09 07 00.4	-1.3
FSR				*i* S	Sb	09 07 15.5	-0.7
FSR	Penalolen	1.13	135	*e*P	Pb	09 07 00.4	-1.3
FSR				*i* S	Sb	09 07 15.5	-0.7
FSR				AML	AML	09 07 19.9	
	comp=E,151nm,0.6s						
ANTU	Antumapu	1.14	142	⇓*i*P	Pn	09 07 00.4	-1.4
ANTU				*i* S	Sb	09 07 15.7	-0.7
ANTU	Antumapu	1.14	142	⇓*i*P	Pn	09 07 00.4	-1.4
ANTU				*i* S	Sb	09 07 15.7	-0.7
ANTU				AML	AML	09 07 16.2	
	comp=N,835nm,0.5s						
FCH	Farellones	1.19	123	*i* P	Pn	09 07 03.2	+0.7
FCH				*i* S	Sb	09 07 19.0	+1.1
FCH				AML	AML	09 07 19.7	
	comp=N,382nm,0.3s						
PCH	Pirque	1.25	140	⇓*i*P	Pn	09 07 02.2	-1.0
PCH				*i* S	Sb	09 07 18.7	-0.7
PCH	Pirque	1.25	140	⇓*i*P	Pn	09 07 02.2	-1.0
PCH				*i* S	Sb	09 07 18.7	-0.7
LNV	Longovilo	1.28	177	*e*P	Pn	09 07 02.3	-1.4
LNV	Longovilo	1.28	177	*e*P	Pn	09 07 02.3	-1.4
SJCH	San Jose de Ma	1.35	136	*e*P	Pn	09 07 03.8	-0.9
SJCH				*i* S	Sn	09 07 21.7	-0.6
SJCH	San Jose de Ma	1.35	136	*e*P	Pn	09 07 03.8	-0.9
SJCH				*i* S	Sn	09 07 21.7	-0.6
SJCH				AML	AML	09 07 30.3	
	comp=N,256nm,0.3s						
CHCH	Chadas Angostu	1.44	151	⇓*i*P	Pn	09 07 05.3	-0.5
CHCH				*i* S	Sn	09 07 24.3	-0.1
CHCH	Chadas Angostu	1.44	151	⇓*i*P	Pn	09 07 05.3	-0.5
CHCH				*i* S	Sn	09 07 24.3	-0.1
LMEL	Las Melosas	1.59	138	⇑*i*P	Pn	09 07 07.5	-0.4
LMEL				*e*S	Sn	09 07 28.0	-0.1
LMEL	Las Melosas	1.59	138	⇑*i*P	Pn	09 07 07.5	-0.4
LMEL				*e*S	Sn	09 07 28.0	-0.1
LMEL				AML	AML	09 07 31.1	
	comp=N,636nm,0.3s						
CACH	El Canelo	1.62	153	⇑*i*P	Pn	09 07 08.9	+0.6
CACH				*i* S	Sn	09 07 31.0	+2.1
CACH	El Canelo	1.62	153	⇑*i*P	Pn	09 07 08.9	+0.6
CACH				*i* S	Sn	09 07 31.0	+2.1

IDC 07 09:10:20.8±754.0, 34°.11N×147°.27E, h0km, Error ellipse: s-maj=1490.0km s-min=58.4km az=114.0, Off east coast of Honshu

DJA 07 09:22:44, 8°.44S×118°.74E, h200km, MLv3.7/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	Bima	0.11	205	P	Pn	09 23 10.3	+0.1
BMNI				S	Sn	09 23 32.1	+1.5
BKSI	Bulukumba	3.39	24	P	Pn	09 23 38.5	+0.2
SRBI	Singaraja	3.51	276	P	Pn	09 23 38.8	-1.0
IGBI	Denpasar	3.57	264	P	Pn	09 23 41.5	+1.0

KRSC 07 09:23:41.1±0.9, 53°.97N×161°.46E, h25km±24km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.61	15	*e*P	Pb	09 23 53.0	-0.1
MKZ				*e*S	Sb	09 24 01.2	-0.1
KII	Karymskiy	1.19	274	*e*P	Pn	09 24 02.1	0.0
KII				*e*S	Sn	09 24 16.9	-0.5
SPN	Mys Shipunski	1.22	225	*e*P	Pn	09 24 01.8	-0.8
SPN				*e*S	Sn	09 24 16.4	-1.9
NLC	Nalytchevo	1.49	238	*e*S	Sn	09 24 28.0	+3.1
AVH	Avacha	1.77	248	*e*P	Pn	09 24 11.0	+1.0
AVH				*e*S	Sn	09 24 32.9	+1.2
PET	Petropavlovsk	1.93	242	S	Sn	09 24 36.8	+1.2
GNL	Ganaly	2.10	264	*e*P	Pn	09 24 16.1	+1.5
GNL				*e*S	Sn	09 24 41.3	+1.3
KBTR	Krutoberegovo	2.38	19	*e*P	Pn	09 24 19.3	+0.9
KBTR				*e*S	Sn	09 24 47.4	+0.7

*IDC **07** 09:27:22.4±4.5, 30°.44N×82°.68E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.4/26, mbtmp3.6/4, ML4.3/1, Error ellipse: s-maj=173.4km s-min=27.5km az=65.0*
*ISCJB **07** 09:27:31.6±3.1, 30°.9N±0°.1×83°.5E±0°.2, h77km±44km, Error ellipse: s-maj=31.4km s-min=19.6km az=175.8*

ISC 07 09:27:32.4±2.6, 30°.9N±0°.1×83°.6E±0°.2, h64km±40km, n5, σ1§10/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	Pithoragarh	3.19	246	*e*PN	Pn	09 28 19.1	-1.0
PTH				*e*SN	Sn	09 28 57.5	+0.6
MKAR	Makanchi Array	15.89	357	Pn	Pn	09 31 12.7	+0.8
	baz=167,slow=13,SNR=2.3						
CMAR	Chiang Mai Arr	18.66	128	P	Pn	09 31 46.5	+0.2
	0.3nm,0.3s,baz=309,slow=12,SNR=6.9						
KURK	Kurchatov	20.13	351	P	P	09 32 00.3	-0.7
	1.2nm,0.6s,baz=174,slow=9.7,SNR=15						
WRA	Warramunga Arr	70.25	129	P	P	09 38 39.0	0.0
	0.9nm,1.1s,baz=324,slow=6.3,SNR=5.7						

IDC 07 09:36:31.4±5.7, 10°.75S×160°.98E, h47km±49km, mb3.4/4, mb1 3.7/4, mb1mx3.4/17, mbtmp3.4/4, Error ellipse: s-maj=44.4km s-min=26.0km az=119.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.66	322	P	Pn	09 36 57.7	-0.4
	18nm,0.3s,baz=210,slow=9.6,SNR=5.4						
HNR				S	Sn	09 37 18.4	+0.2
	82nm,0.3s,baz=169,slow=21,SNR=9.0						
WRA	Warramunga Arr	27.23	247	P	P	09 42 11.8	+0.6
	1.0nm,0.6s,baz=75,slow=10,SNR=11						
ASAR	Alice Springs	28.81	240	P	P	09 42 24.9	-0.4
	0.7nm,0.9s,baz=63,slow=10.0,SNR=6.2						
NVAR	Mina Array Bea	89.44	51	P	P	09 49 24.0	+0.4
	0.3nm,0.8s,baz=243,slow=8.0,SNR=2.7						
MKAR	Makanchi Array	90.13	318	P	P	09 49 26.4	-0.2
	0.1nm,0.4s,baz=93,slow=7.8,SNR=3.5						

*NIED **07** 10:03:00, 42°.30N×143°.00E, h53km, Mw3.7 Best double couple: M0=4.46000×10^14 NP1:φs=33.00000°, δ67.00000°, λ93.00000°. NP2:φs=206.00000°, δ23.00000°, λ83.00000°.*
*MOS **07** 10:03:37.6±1.3, 42°.20N×142°.97E, h65km, mb4.0/1, Error ellipse: s-maj=23.7km s-min=11.8km az=98.2*
*ISCJB **07** 10:03:37.6±0.5, 42°.25N±0°.05×143°.03E±0°.08, h64km±3km, mb3.8/12, Error ellipse: s-maj=10.7km s-min=7.1km az=19.8*
*JMA **07** 10:03:39.3±0.1, 42°.30N×143°.02E, h49km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs=233.00000°, δ30.00000°, λ112.00000°. NP2: φs=28.00000°, δ63.00000°, λ78.00000°. Principal axes: T Plg70.0000°, Azm273.0000°; N Plg11.0000°, Azm34.0000°; P Plg17.0000°, Azm127.0000°;*
JMA Felt I J1.
*IDC **07** 10:03:39.0±1.9, 42°.30N×143°.01E, h61km±15km, mb3.5/11, mb1 3.7/13, mb1mx3.5/25, mbtmp3.6/13 Error ellipse: s-maj=24.0km s-min=12.8km az=94.0*
*NEIC **07** 10:03:39.4, 42°.31N×143°.02E, h49km, mb4.0/1, After JMA.*

ISC 07 10:03:38.7±0.5, 42°.28N±0°.04×143°.03E±0°.08, h57km±3km, n30, σ0§64/37, mb3.8/12, 5C-2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.20	270	⇑P	Pn	10 03 47.4	-0.4
JNBK				*e*S	Sn	10 03 53.8	-0.5
JEM	Erimo	0.28	160	⇑P	Pn	10 03 48.5	+0.2
ERM	Erimo	0.28	160	*e*PN	Pn	10 03 48.5	+0.2
JCH	Churui	0.41	37	⇑P	Pn	10 03 49.4	-0.1
JCH				*e*S	Sn	10 03 56.9	-0.4
JBT2	Biratori 2	0.70	316	⇓P	Pn	10 03 52.8	+0.1
JOB	Onbets	0.86	44	⇑P	Pn	10 03 55.6	+0.8
JFR	Furan	0.94	340	P	Pn	10 03 55.3	-0.5
JAR	Ashorobuto	1.15	28	⇑P	Pn	10 03 58.6	0.0
JAR				*e*S	Sn	10 04 13.2	-0.3
JEW	Eniwo	1.29	296	⇓P	Pn	10 04 01.0	+0.5
ASAJ	Asahikawa	1.86	350	P	Pn	10 04 09.1	+0.9
	38nm,0.3s,baz=202,slow=12,SNR=124						
ASAJ				S	Sn	10 04 30.6	0.0
	16nm,0.3s,baz=184,slow=16,SNR=7.5						
ASAJ	Asahikawa	1.86	350	PN	Pn	10 04 09.1	+0.9
ASAJ				S	Sn	10 04 30.6	0.0
ASAJ				pmax	pmax		
	comp=Z,38nm,0.3s						
ASAJ				smax			
	comp=N,16nm,0.3s						
ASAJ	Asahikawa	1.86	350	*e*Pn	Pn	10 04 08.9	+0.7
YSS	Yuzh-Sakhalins	4.68	358	*e*PN	Pn	10 04 51.0	+4.3
YSS	Yuzh-Sakhalins	4.68	358	*e*Pn	Pn	10 04 48.0	+1.4
MJAR	Matsushiro Arr	6.84	215	P	Pn	10 05 17.6	+1.3
	comp=N,0.3nm,0.3s,baz=167,slow=26,SNR=6.7						
JHJ	Hachijo jima 2	9.50	197	P	Pn	10 05 51.7	-1.1
	comp=N,6.4nm,0.3s,baz=48,slow=23,SNR=4.8						
JHJ				S	Sn	10 07 31.2	-6.8
	comp=N,4.2nm,0.3s,baz=194,slow=13,SNR=3.2						
HHC	Hu-ho-hao-te	23.52	277	*e*P	P	10 08 45.0	+1.4
HHC				pP		10 08 56.6	
HHC				sP	sP	10 09 02.2	-1.7
HHC				PP		10 09 17.8	
HHC				PcP	PcP	10 12 32.9	+5.4
HHC				S	S	10 12 52.1	-1.0
HHC				sS	sS	10 13 10.7	-6.0
HHC				SS		10 13 40.7	
HHC				ScP	ScP	10 16 26.0	+25
HHC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
HHC				pmax	pmax		
	comp=Z,89nm,7.6s						
HHC				LR	LR		
	comp=N,150nm,12.1s						
HHC				LR	LR		
	comp=E,120nm,14.7s						
HHC				LR	LR		
	comp=Z,8μm,14.2s						
SONM	Songino Array	26.29	295	P	P	10 09 09.2	+0.6
	comp=Z,0.8nm,0.5s,mb3.5,baz=78,slow=9.3,SNR=3.4						
ZALV	Zalesovo Beam	39.49	308	P	P	10 11 03.0	-0.3
	comp=Z,1.6nm,0.5s,mb4.0,baz=87,slow=7.8,SNR=2.2						
MKAR	Makanchi Array	42.59	298	P	P	10 11 28.6	-0.3
	comp=Z,0.8nm,0.6s,mb3.6,baz=85,slow=9.9,SNR=11						
KURK	Kurchatov	43.85	304	P	P	10 11 39.3	+0.3
	comp=Z,1.2nm,0.3s,mb4.0,baz=77,slow=9.0,SNR=10						
KURK	Kurchatov	43.85	304	P	P	10 11 39.3	+0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
KURK	Kurchatov	43.85	304	*e*P	P	10 11 38.2	-0.8
	comp=Z,2.1nm,0.7s,mb4.0						
ILAR	Eielson Array	44.44	35	P	P	10 11 43.3	-0.3
	comp=Z,0.2nm,0.6s,mb3.1,baz=259,slow=5.2,SNR=4.8						
BVAR	Borovoye Array	48.09	309	P	P	10 12 12.2	-0.2
	comp=Z,0.5nm,0.3s,mb4.0,baz=64,slow=7.7,SNR=4.3						
ARCES	ARCESS Array B	59.55	339	P	P	10 13 35.4	-0.3
	comp=Z,1.1nm,0.7s,mb4.0,baz=48,slow=7.2,SNR=6.9						
WRA	Warramunga Arr	62.43	189	P	P	10 13 55.5	-0.3
	comp=Z,0.3nm,0.9s,mb3.4,baz=346,slow=7.9,SNR=3.5						
FINES	FINESS Array B	64.77	332	P	P	10 14 10.0	-0.8
	comp=Z,0.8nm,0.4s,mb4.1,baz=52,slow=7.1,SNR=22						
NOA	NORSAR Array B	69.83	337	P	P	10 14 42.1	-0.7
	comp=Z,0.9nm,0.9s,mb3.7,baz=40,slow=6.0,SNR=3.2						
TXAR	Lajitas Array	85.97	54	P	P	10 16 13.8	+0.9
	comp=Z,0.2nm,0.6s,mb3.5,baz=310,slow=5.8,SNR=3.8						

IDC 07 10:04:32.7±12.0, 6°.75S×129°.55E, h153km±121km, mb3.4/2, mb1 3.4/4, mb1mx3.1/16, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=257.3km s-min=38.1km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.90	198	S	Sn	10 09 26.4	-3.1
	0.3nm,0.3s,baz=219,slow=13,SNR=5.2						
WRA	Warramunga Arr	13.91	161	P	Pn	10 07 42.4	-1.0
	0.1nm,0.3s,baz=334,slow=13,SNR=5.1						
WRA				S	Sn	10 10 09.7	-8.0
	0.4nm,0.3s,baz=337,slow=22,SNR=9.6						
ASAR	Alice Springs	17.33	166	P	Pn	10 08 26.4	+1.0
	0.3nm,0.3s,baz=345,slow=9.9,SNR=34						
ASAR				S	S	10 11 33.9	-3.0
	0.1nm,0.3s,baz=0.2,slow=28,SNR=4.0						
STKA	Stephens Creek	27.41	157	P	P	10 10 03.5	-0.5
	0.9nm,0.8s,baz=322,slow=12,SNR=4.2						
MKAR	Makanchi Array	67.78	327	P	P	10 15 14.1	+0.1
	0.6nm,0.5s,baz=113,slow=7.9,SNR=9.5						

IDC 07 10:17:17.0±1.0, 8°.97S×157°.83E, h0km, mb3.8/6, mb1 4.1/7, mb1mx3.9/17, mbtmp3.8/7, ML3.3/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/22, Error ellipse: s-maj=36.5km s-min=21.1km az=149.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.14	103	Pn	Pn	10 17 52.9	-1.0
	9.1nm,0.3s,baz=270,slow=7.1,SNR=8.1						
HNR				Sn	Sn	10 18 29.3	+8.1
	36nm,0.3s,baz=226,slow=21,SNR=6.8						
CTA	Charters Tower	15.73	224	LR	LR	10 26 29.3	
	comp=Z,90nm,18.5s,baz=233,slow=35						
WRA	Warramunga Arr	25.19	242	P	P	10 22 43.6	-0.9
	2.7nm,0.7s,baz=67,slow=9.6,SNR=31						
ASAR	Alice Springs	27.15	235	P	P	10 23 01.1	-1.1
	0.7nm,0.8s,baz=69,slow=9.2,SNR=9.5						
STKA	Stephens Creek	27.33	211	P	P	10 23 05.6	+1.9
	2.5nm,0.7s,baz=31,slow=11,SNR=6.4						
STKA				LR	LR	10 33 05.4	
	comp=Z,161nm,19.9s,baz=24,slow=35						
PETK	Petropavlovsk-	61.83	360	LR	LR	10 53 02.7	
	comp=Z,22nm,18.3s,baz=91,slow=35						
ILAR	Eielson Array	84.19	21	P	P	10 29 48.5	-1.3
	0.4nm,0.9s,baz=263,slow=3.5,SNR=3.7						
MKAR	Makanchi Array	86.74	318	P	P	10 30 04.1	+1.1
	0.4nm,0.9s,baz=123,slow=5.3,SNR=2.8						
NVAR	Mina Array Bea	90.74	51	P	P	10 30 23.4	+1.3
	0.8nm,0.8s,baz=242,slow=5.6,SNR=6.4						

IDC 07 10:30:34.5±8.7, 24°.42S×179°.55E, h535km±80km, mb3.4/4, mb1 3.6/5, mb1mx3.1/18, mbtmp3.4/5, Error ellipse: s-maj=86.5km s-min=24.3km az=42.0, South of Fiji Islands

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

LPAZ La Paz 11.00 119 P Pn 10 52 33.8 +1.7
0.5nm,0.3s,baz=299,slow=12,SNR=18
LPAZ La Paz 11.00 119 *e*Pn **Pn 10 52 34.5 +2.5**
4.0nm,0.6s
OTAV Otavalo 11.29 358 *e*Pn **Pn 10 52 36.2 +0.3**
24nm,0.9s
ROSC El Rosal 16.32 14 P **Pn 10 53 43.6 +0.4**
0.7nm,0.3s,baz=96,slow=23,SNR=4.0
ROSC S **S 10 56 54.3 +0.4**
1.6nm,0.3s,baz=278,slow=23,SNR=2.1
ROSC LR LR 11 00 55.4
comp=Z,490nm,20.6s,baz=201,slow=40
SIV San Ignacio 17.29 108 P **Pn 10 53 54.1 -1.1**
0.3nm,0.3s,baz=300,slow=11,SNR=11
SIV S **S 10 57 18.0 +4.5**
0.3nm,0.3s,baz=255,slow=22,SNR=3.2
SDV Santo Domingo 21.24 21 *e*P **P 10 54 37.0 -2.2**
14nm,0.8s,mb4.3
CFAA Coronel Fontan 22.35 157 P **P 10 54 53.4 +2.5**
0.6nm,0.6s,mb3.2,baz=349,slow=6.3,SNR=14
CFAA LR LR 11 01 49.1
comp=Z,23nm,20.7s,baz=325,slow=32
CFAA Coronel Fontan 22.35 157 P **P 10 54 53.4 +2.5**
CFAA LR LR 11 01 49.1
CPUP Villa Florida 24.79 130 P **P 10 55 15.2 +0.6**
0.7nm,0.6s,mb3.4,baz=247,slow=14,SNR=3.2
PCRV Puerto La Cruz 25.07 33 P **P 10 55 16.4 -0.8**
3.2nm,0.4s,mb4.2,baz=299,slow=2.8,SNR=4.8
PCRV LR LR 11 06 26.4
comp=Z,416nm,19.3s,MS4.0,baz=154,slow=40
BDFB Brasilia 29.64 102 LR LR 11 08 27.0
comp=Z,177nm,19.7s,MS3.7,baz=228,slow=37
PLCA Paso Flores 30.24 168 P **P 10 56 03.8 +0.5**
3.7nm,0.7s,mb4.2,baz=342,slow=9.8,SNR=9.4
PLCA LR LR 11 06 09.9
comp=Z,103nm,20.3s,MS3.5,baz=113,slow=32
SJG San Juan 31.37 22 P **P 10 56 11.9 -1.6**
5.5nm,0.5s,mb4.7,baz=220,slow=7.9,SNR=3.9
TXAR Lajitas Array 47.16 329 P **P 10 58 24.6 -0.3**
0.4nm,0.7s,mb3.5,baz=155,slow=9.8,SNR=5.9
TXAR pP pP 10 58 38.6 +0.4
4.4nm,0.9s,baz=148,slow=9.5,SNR=27
UALR University of 47.59 344 *e*P **P 10 58 29.1 +0.9**
8.2nm,0.6s,mb4.9
UALR *e*pP pP 10 58 40.8 -0.6
MIAR Mount Ida 47.72 343 *e*P **P 10 58 30.7 +1.5**
6.3nm,0.8s,mb4.7
MIAR *e*pP pP 10 58 41.8 -0.7
MNTX Cornudas Mount 49.94 329 *e*P **P 10 58 46.8 +0.5**
7.4nm,1.2s,mb4.6
MNTX *e*pP pP 10 58 59.1 -0.5
HDIL Hopedale 52.44 349 *e*P **P 10 59 04.8 0.0**
7.6nm,0.5s,mb4.9
HDIL *e*pP pP 10 59 16.2 -2.1
ANMO Albuquerque 53.10 331 *e*P **P 10 59 10.3 +0.5**
9.8nm,1.3s,mb4.6
ANMO *e*pP pP 10 59 23.5 +0.2
SDCO Great Sand Dun 54.96 334 *e*P **P 10 59 25.3 +2.0**
15nm,1.9s,mb4.7
SDCO *e*pP pP 10 59 37.0 +0.1
SHPR Sheep Range 58.81 325 *e*P **P 10 59 50.7 +0.1**
4.5nm,1.2s,mb4.4
SHPR *e*pP pP 11 00 05.0 +0.7
PDAR Pinedale Array 60.85 334 P **P 11 00 03.3 -1.2**
0.3nm,0.7s,mb3.5,baz=122,slow=12,SNR=3.9
PDAR pP pP 11 00 17.9 -0.4
1.0nm,0.6s,baz=120,slow=7.4,SNR=9.6
AGMN Agassiz Nation 61.21 347 *e*P **P 11 00 04.9 -1.9**
7.4nm,0.7s,mb4.9
AGMN *e*pP pP 11 00 18.2 -2.4
NVAR Mina Array Bea 61.93 325 P **P 11 00 12.5 +0.6**
1.0nm,0.7s,mb4.1,baz=138,slow=6.5,SNR=13
NVAR pP pP 11 00 26.4 +0.7
1.8nm,0.9s,baz=144,slow=6.5,SNR=9.1
RRI2 Red Ridge 62.08 333 *e*P **P 11 00 12.1 -0.7**
2.5nm,0.7s,mb4.5
RRI2 *e*pP pP 11 00 27.3 +0.7
ULM Lac du Bonnet 63.05 347 pP pP 11 00 31.3 -1.7
3.3nm,0.4s,baz=166,slow=4.7,SNR=4.0
PPT Papeete 69.16 255 LR LR 11 26 16.4
comp=Z,87nm,18.1s,MS4.0,baz=138,slow=32
VNA3 Neumayer Olymp 72.67 162 *e* **P 11 01 17.8 -1.6**
VNA1 Neumayer--Stat 72.95 161 *e* **P 11 01 20.2 -0.8**
VNA2 Neumayer--Watz 73.30 161 *e* **P 11 01 21.6 -1.5**
DBIC Dimbokro 75.04 80 P **P 11 01 34.0 -0.4**
3.6nm,1.0s,mb4.3,baz=165,slow=22,SNR=4.2
DBIC LR LR 11 32 18.6
comp=Z,67nm,21.2s,MS3.9,baz=156,slow=34
YKA Yellowknife Ar 78.65 344 P **P 11 01 53.2 -0.4**
0.5nm,0.6s,mb3.6,baz=140,slow=5.3,SNR=4.0
YKA pP pP 11 02 07.1 -0.7
1.9nm,0.6s,baz=141,slow=6.1,SNR=11
YKA Yellowknife Ar 78.65 344 P **P 11 01 53.2 -0.4**
YKA pP pP 11 02 07.1 -0.7
DLBC Dease Lake 81.05 335 pP pP 11 02 20.4 -0.5
1.4nm,0.6s,baz=140,slow=5.5,SNR=4.5
INK Inuvik 88.31 342 pP pP 11 02 57.2 -0.3
4.8nm,1.2s,baz=120,slow=14,SNR=2.3
NOA NORSAR Array B 99.33 30 LR LR 11 47 25.0
comp=Z,24nm,19.6s,MS3.7,baz=270,slow=35
ASAR Alice Springs 133.33 222 PKP PKPdf 11 09 08.4 -0.2
0.5nm,0.6s,baz=114,slow=2.2,SNR=10
ASAR pPKP pPKPdf 11 09 22.4 -1.2
0.4nm,0.7s,baz=136,slow=2.3,SNR=3.0
ZALV Zalesovo Beam 135.18 14 pPKP pPKPdf 11 09 26.7 +0.6
0.6nm,0.3s,baz=318,slow=5.8,SNR=1.2
WRA Warramunga Arr 135.55 226 PKP PKPdf 11 09 12.5 -0.4
1.1nm,0.5s,baz=124,slow=2.1,SNR=21
WRA pPKP pPKPdf 11 09 28.2 +0.4
0.6nm,0.6s,baz=122,slow=2.0,SNR=3.0
MKAR Makanchi Array 140.78 21 pPKP pPKPdf 11 09 36.6 0.0
0.4nm,0.6s,baz=8.1,slow=1.7,SNR=4.7
KSRS Korea Array 144.85 323 PKP PKPdf 11 09 27.9 -1.2
3.4nm,1.0s,baz=47,slow=4.5,SNR=9.3
KSRS pPKP pPKPdf 11 09 42.7 -1.4
2.0nm,0.8s,baz=50,slow=3.2,SNR=5.0
HHC Hu-ho-hao-te 149.18 346 *e*PKPbc PKPbc 11 09 36.5 -4.0
HHC pPKP PKPab 11 09 47.5 +2.6
HHC sPKP 11 09 51.0
HHC PKS 11 13 10.1
HHC PP PP 11 13 15.8 +4.7
HHC SKS SKSdf 11 16 39.2 -1.3
HHC SKKS SKKSac 11 19 59.8 +0.5
HHC SS SS 11 32 23.4 +4.4
HHC AMB AMB
comp=Z,130nm,8.8s
HHC LR LR
comp=N,170nm,19.4s,MS5.0
HHC LR LR
comp=E,160nm,21.6s,MS5.0
HHC LR LR
comp=Z,170nm,20.8s,MS4.8

*IDC **07** 10:57:53.6±11.0, 0.°10N×123.°26E, h89km±105km, mb2.9/3, mb1 3.1/4, mb1mx3.0/20, mbtmp2.9/4, ML3.4/1, Error ellipse: s-maj=132.5km s-min=29.7km az=61.0*
*ISCJB **07** 10:57:55.3±0.6, 0.°20S±0.°06×122.°92E±0.°06, h113km±7km, mb3.0/3, Error ellipse: s-maj=13.0km s-min=6.2km az=139.3*
*DJA **07** 10:57:56, 0.°23S×122.°96E, h97km, MLv3.9/7*
ISC 07 10:57:56.4±0.6, 0.°21S±0.°06×122.°93E±0.°06, h107km±7km, n14, σ0.°72/19, mb3.0/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.84**	**191**	P	**Pn**	**10 58 15.7**	**-0.1**
LUWI				S	**Sn**	**10 58 29.2**	**-1.2**
MRSI	**Marisa**	**1.20**	**305**	P	**Pn**	**10 58 19.6**	**+0.1**
KMSI	**Cibinong**	**1.31**	**54**	P	**Pn**	**10 58 20.9**	**+0.1**
MNI	**Manado**	**2.52**	**49**	P	**Pn**	**10 58 36.6**	**+0.6**
MNI				S	**Sn**	**10 59 06.0**	**-0.5**
KDI	**Kendari**	**3.74**	**185**	P	**Pn**	**10 58 52.7**	**+0.5**
TTSI	**Tana Toraja**	**4.19**	**228**	P	**Pn**	**10 58 59.6**	**+1.2**
TTSI				S	**Sn**	**10 59 46.9**	**+0.5**
TNTI	**Ternate**	**4.55**	**78**	P	**Pn**	**10 59 03.4**	**+0.3**
TNTI				S	**Sn**	**10 59 55.1**	**+0.2**
LBMI	**Labuha**	**4.59**	**95**	P	**Pn**	**10 59 04.8**	**+1.0**
LBMI				S	**Sn**	**10 59 52.4**	**-3.7**
SGSI	**Sangihe**	**4.66**	**34**	S	**Sn**	**10 59 51.6**	**-6.1**
BKSI	**Bulukumba**	**5.80**	**209**	P	**Pn**	**10 59 19.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**17.98**	**172**	P	**Pn**	**11 01 59.8**	**+0.2**
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=3.4						
WRA	**Warramunga Arr**	**22.57**	**151**	P	**P**	**11 02 47.6**	**-0.6**
	0.3nm,0.3s,mb3.0,baz=331,slow=10,SNR=18						
ASAR	**Alice Springs**	**25.64**	**156**	P	**P**	**11 03 16.3**	**+0.1**
	0.2nm,0.4s,mb2.9,baz=344,slow=14,SNR=7.9						
ASAR				PcP	PcP	11 06 44.3	-0.1
	0.2nm,0.5s,baz=353,slow=2.2,SNR=5.9						
MKAR	**Makanchi Array**	**58.75**	**328**	P	**P**	**11 07 41.9**	**-1.2**
	0.1nm,0.5s,mb3.1,baz=117,slow=8.0,SNR=2.6						

*NEIC **07** 11:15:37.8, 18.°38N×102.°02W, h16km, MD3.6(MEX), After MEX.*
MEX 07 11:15:37.2±0.6, 18.°33N×102.°07W, h10km±7km, MD3.6, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.93**	**141**	*e*P	Pg	11 15 52.2	-2.8
ZIIG				*i* S	Sg	11 16 04.2	-2.9
ZIIG	**Zihuatanejo**	**0.93**	**141**	*e*P	Pg	11 15 52.2	-2.8
ZIIG				*i* S	Sg	11 16 04.2	-2.9
MMIG	**Aquila**	**1.21**	**268**	*e*P	Pn	11 15 56.5	-3.7
MMIG				*i* S	Sb	11 16 11.6	-4.3
MOIG	**Morelia**	**1.57**	**32**	*i* P	Pn	11 16 01.9	-3.3
MOIG				*i* S	Sn	11 16 17.4	-8.2
MOIG	**Morelia**	**1.57**	**32**	*i* P	Pn	11 16 01.9	-3.3
MOIG				*i* S	Sn	11 16 20.3	-5.4
EZ5V		**1.84**	**308**	*i* P	Pn	11 16 05.7	-3.2
EZ5V				*i* S	Sn	11 16 28.5	-3.8
R15V		**1.99**	**295**	*e*P	Pn	11 16 07.8	-3.1
R15V				*i* S	Sn	11 16 30.9	-5.0
CAIG	**El Cayaco**	**2.14**	**126**	*i* P	Pn	11 16 10.8	-2.2
CAIG				*i* S	Sn	11 16 32.3	-7.3
CAIG	**El Cayaco**	**2.14**	**126**	*i* P	Pn	11 16 10.8	-2.2
CAIG				*i* S	Sn	11 16 35.4	-4.2
SFJM	**Santa Fe**	**2.33**	**337**	*i* P	Pn	11 16 25.9	+10
ACX	**Acapulco**	**2.56**	**124**	*i* P	Pn	11 16 20.4	+1.6
ACX	**Acapulco**	**2.56**	**124**	*i* P	Pn	11 16 20.4	+1.6
PPM	**Popocatepetl**	**3.34**	**77**	*e*P	Pn	11 16 31.6	+2.0
PPM	**Popocatepetl**	**3.34**	**77**	*e*P	Pn	11 16 31.6	+2.0
UTMO	**Huajuapan**	**4.09**	**96**	*i* P	Pn	11 16 42.1	+2.3
PNIG	**Pinotepa**	**4.23**	**117**	*i* S	Sn	11 17 37.4	+6.1

IDC 07 11:24:01.7±2.9, 31.°00S×177.°44W, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.8/17, mbtmp3.9/4, ML3.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/23, Error ellipse: s-maj=70.8km s-min=41.3km az=129.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.52**	**210**	Pn	Pn	11 26 05.1	-1.2
	0.3nm,0.3s,baz=306,slow=19,SNR=2.9						
URZ				Sn	Sn	11 27 39.2	-3.9
	1.0nm,0.3s,baz=137,slow=18,SNR=9.4						
AFI	**Afiamalu**	**17.79**	**18**	LR	LR	11 34 00.9	
	comp=Z,67nm,21.2s,baz=109,slow=34						
STKA	**Stephens Creek**	**34.82**	**258**	P	P	11 30 56.0	+1.6
	0.9nm,0.4s,baz=95,slow=14,SNR=8.2						
ASAR	**Alice Springs**	**43.56**	**267**	P	P	11 32 07.3	-0.2
	0.3nm,0.4s,baz=106,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**44.60**	**272**	P	P	11 32 14.8	-1.2
	0.9nm,0.5s,baz=111,slow=8.0,SNR=21						
FINES	**FINESS Array B**	**145.87**	**340**	PKPbc	PKPbc	11 43 41.6	-0.7
	0.9nm,0.4s,baz=51,slow=4.3,SNR=24						

IDC 07 11:30:48.4±2.5, 51.°56S×133.°60W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/14, mbtmp3.6/3, Error ellipse: s-maj=848.1km s-min=32.9km az=168.0, South Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**62.18**	**81**	P	P	11 41 12.3	+0.7
	1.2nm,1.1s,baz=202,slow=5.4,SNR=3.8						
ASAR	**Alice Springs**	**73.33**	**253**	P	P	11 42 21.7	-0.2
	0.5nm,0.7s,baz=133,slow=6.4,SNR=7.4						
WRA	**Warramunga Arr**	**75.89**	**256**	P	P	11 42 37.2	+0.4
	0.3nm,0.7s,baz=145,slow=5.1,SNR=6.3						

MAN 07 11:53:34, 11.°72N×124.°36E, h26km, mb4.5, ML3.4, MS3.3, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.71**	**159**	*e*P	Pb	11 53 47.6	-0.2
OCLP				*e*S	Sb	11 53 58.3	+1.2
PLP	**Palo**	**0.82**	**132↓**	*e*P	Pb	11 53 50.3	+0.7
PLP				*e*S	Sb	11 54 04.1	+3.7
CNP	**Catarman**	**0.84**	**21**	*e*P	Pb	11 53 50.3	+0.2
CNP				*e*S	Sb	11 53 59.0	-2.0
LLP	**Lapu-Lapu**	**1.44**	**195**	*e*P	Pn	11 53 57.3	-1.1
LLP				*e*S	Sn	11 54 17.1	+0.5
MSLP	**Maasin**	**1.65**	**163**	*e*P	Pn	11 54 02.9	+1.6
MSLP				*e*S	Sn	11 54 22.2	+0.6
GUIM	**Jordan**	**2.04**	**238**	*e*P	Pn	11 54 06.8	0.0
TBP	**Tagbilaran**	**2.07**	**194**	*e*P	Pn	11 54 06.8	-0.4
TBP				*e*S	Sn	11 54 36.0	+3.9
OTRP	**Odiongan**	**2.37**	**286**	*e*P	Pn	11 54 12.2	+1.0
SNPH	**Sibulan**	**2.60**	**205**	*e*P	Pn	11 54 15.1	+0.7
SNPH				*i* S	Sn	11 54 59.4	+14
CUYO	**Cuyo Island**	**3.39**	**256**	*e*P	Pn	11 54 25.5	+0.3
PAGZ	**Pagadian**	**3.96**	**194**	*e*P	Pn	11 54 34.4	+1.3

*ISCJB **07** 12:02:39.3±0.5, 33.°22N±0.°04×141.°52E±0.°06, h33km, mb3.7/11, Error ellipse: s-maj=7.6km s-min=5.1km az=152.0*
*JMA **07** 12:02:39.5±0.3, 33.°26N×141.°55E, h69km, M3.1*
*IDC **07** 12:02:40.3±6.4, 33.°23N×141.°47E, h26km±44km, mb3.6/10, mb1 3.9/13, mb1mx3.8/24, mbtmp3.7/13, ML3.5/3, Error ellipse: s-maj=18.5km s-min=15.8km az=99.0*
ISC 07 12:02:40.0±2.0, 33.°23N±0.°04×141.°48E±0.°06, h25km±15km, n26, σ0.°58/33, mb3.7/11, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.40**	**266**	P	**Pn**	**12 03 04.3**	**+0.4**
JHJ	**Hachijo jima 2**	**1.43**	**266**	Pn	**Pn**	**12 03 04.4**	**+0.1**
	61nm,0.3s,baz=225,slow=16,SNR=50						
JHJ				Sn	**Sn**	**12 03 21.9**	**-0.4**
	106nm,0.3s,baz=82,slow=20,SNR=9.8						
BSO1	**Boso 1**	**1.48**	**344**	P	**Pn**	**12 03 04.1**	**-0.9**
BSO1				S	**Sn**	**12 03 23.3**	**-0.3**
BSO2	**Boso 2**	**1.63**	**338**	S	**Sn**	**12 03 27.7**	**+0.4**
BSO3	**Boso 3**	**1.76**	**333**	P	**Pn**	**12 03 08.9**	**0.0**
BSO3				S	**Sn**	**12 03 31.1**	**+0.5**
JIM2	**Oshima 3**	**2.26**	**312**	P	**Pn**	**12 03 15.8**	**+0.1**
JIZS	**Izushimoda**	**2.62**	**305**	P	**Pn**	**12 03 21.2**	**+0.5**
JIZS				*e*S	**Sn**	**12 03 51.8**	**0.0**
JOD2	**Odawara 2**	**2.84**	**316**	P	**Pn**	**12 03 24.0**	**+0.3**
JAG	**Ashikaga**	**3.60**	**333**	S	**Sn**	**12 04 15.8**	**0.0**
MJAR	**Matsushiro Arr**	**4.26**	**322**	Pn	**Pn**	**12 03 44.2**	**+1.0**
	0.7nm,0.3s,baz=151,slow=11,SNR=18						
MJAR				Sn	**Sn**	**12 04 30.9**	**-1.3**
	0.5nm,0.3s,baz=304,slow=18,SNR=4.8						
MAT	**Matsushiro**	**4.26**	**322**	P	**Pn**	**12 03 44.3**	**+1.0**
MAT				S	**Sn**	**12 04 32.1**	**-0.1**
JMM	**Marumori**	**4.66**	**353**	P	**Pn**	**12 03 48.2**	**-0.5**
JMM				S	**Sn**	**12 04 37.2**	**-4.8**
CBIJ	**Chichi jima**	**6.14**	**174**	Pn	**Pn**	**12 04 08.7**	**-0.4**
	9.2nm,0.3s,baz=282,slow=17,SNR=14						
CBIJ				Sn	**Sn**	**12 05 14.6**	**-4.0**
	5.0nm,0.3s,baz=262,slow=21,SNR=4.6						
ASAJ	**Asahikawa**	**10.91**	**4**	Pn	**Pn**	**12 05 13.3**	**-1.1**
	0.3nm,0.3s,baz=216,slow=14,SNR=3.7						
MKAR	**Makanchi Array**	**46.27**	**305**	P	**P**	**12 11 03.1**	**-0.1**
	0.3nm,0.6s,mb3.4,baz=93,slow=11,SNR=4.4						
ILAR	**Eielson Array**	**52.70**	**31**	P	**P**	**12 11 51.5**	**-0.4**
	0.8nm,0.8s,mb3.7,baz=264,slow=5.8,SNR=11						
WRA	**Warramunga Arr**	**53.31**	**188**	P	**P**	**12 11 56.6**	**-0.3**
	2.1nm,0.6s,mb4.2,baz=5.5,slow=7.6,SNR=53						
ASAR	**Alice Springs**	**57.04**	**188**	P	**P**	**12 12 23.8**	**0.0**
	0.4nm,0.5s,mb3.7,baz=358,slow=5.9,SNR=21						
YKA	**Yellowknife Ar**	**67.08**	**29**	P	**P**	**12 13 31.3**	**+0.5**
	0.7nm,0.8s,mb3.7,baz=304,slow=5.6,SNR=3.1						
FINES	**FINESS Array B**	**72.21**	**333**	P	**P**	**12 14 01.8**	**-0.6**
	1.3nm,0.8s,mb3.9,baz=20,slow=6.1,SNR=4.7						
NVAR	**Mina Array Bea**	**77.24**	**52**	P	**P**	**12 14 32.7**	**+0.7**
	0.7nm,0.7s,mb3.7,baz=289,slow=6.4,SNR=6.8						
NB2	**NORSAR Subarra**	**77.72**	**338**	P	**P**	**12 14 34.1**	**-0.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=39,slow=5.6						
PDAR	**Pinedale Array**	**80.30**	**45**	P	**P**	**12 14 49.6**	**+0.8**
	comp=Z,0.3nm,0.6s,mb3.4,baz=316,slow=2.5,SNR=3.0						
BRTR	**Keskin Array B**	**81.42**	**312**	P	**P**	**12 14 55.4**	**+0.5**
	comp=Z,0.6nm,0.5s,mb3.8,baz=119,slow=4.4,SNR=5.2						
TXAR	**Lajitas Array**	**92.39**	**52**	P	**P**	**12 15 48.8**	**+0.1**
	comp=Z,0.7nm,1.0s,mb3.9,baz=288,slow=4.0,SNR=5.2						
LPAZ	**La Paz**	**148.41**	**65**	PKPbc	PKPbc	12 22 26.3	+1.5
	comp=Z,0.8nm,0.5s,baz=342,slow=4.9,SNR=5.2						

IDC 07 12:30:51.9±3.2, 31.°15S×177.°58W, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.5/17, mbtmp3.5/3, ML2.8/1, Error ellipse: s-maj=76.9km s-min=37.4km az=114.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.33**	**210**	Pn	Pn	12 32 53.0	-0.9
	0.1nm,0.3s,baz=19,slow=12,SNR=3.2						
URZ				Sn	Sn	12 34 28.8	+0.1
	0.2nm,0.3s,baz=0.0,slow=20,SNR=3.1						
ASAR	**Alice Springs**	**43.43**	**268**	P	P	12 38 57.2	+0.6
	0.8nm,1.1s,baz=105,slow=7.8,SNR=4.7						
WRA	**Warramunga Arr**	**44.49**	**273**	P	P	12 39 05.0	-0.2
	0.3nm,0.8s,baz=110,slow=8.0,SNR=4.6						
FINES	**FINESS Array B**	**145.97**	**340**	PKPbc	PKPbc	12 50 31.8	-0.9
	0.2nm,0.3s,baz=29,slow=3.2,SNR=5.3						

*NIED **07** 12:44:00, 31.°20N×138.°20E, h500km, Mw4.2 Best double couple: M0 2.27000×10^15 NP1:φ0=338.00000°, δ86.00000°, λ-106.00000°. NP2:φ0=234.00000°, δ17.00000°, λ-14.00000°.*
*BJI **07** 12:44:11.5, 30.°93N×137.°80E, h444km, mB4.2/11, mb4.4/31*
*ISCJB **07** 12:44:11.4±0.3, 30.°95N±0.°04×137.°88E±0.°04, h441km±2km, mb4.0/75, Error ellipse: s-maj=5.8km s-min=5.0km az=147.2*
*MOS **07** 12:44:11.1±0.9, 31.°01N×137.°75E, h437km, mb4.0/35, Error ellipse: s-maj=12.9km s-min=7.5km az=104.9*
*NEIC **07** 12:44:12.5±0.5, 30.°98N×137.°81E, h434km±5km, mb4.1/36, Error ellipse: s-maj=7.2km s-min=4.6km az=137.0*
*IDC **07** 12:44:12.0±0.7, 31.°02N×137.°87E, h432km±7km, mb3.4/22, mb1 3.5/27, mb1mx3.5/32, mbtmp3.4/27, Error ellipse: s-maj=11.3km s-min=8.9km az=84.0*
*JMA **07** 12:44:13.0±0.4, 31.°23N×138.°23E, h461km±4km, M4.1*
ISC 07 12:44:12.5±0.3, 30.°98N±0.°04×137.°88E±0.°04, h437km±3km, h440km±1.9km; pP-P, n153, σ1.°04/172, mb4.0/75, 2C-5D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.67**	**37**	P	**P**	**12 45 16.9**	**+0.9**
	baz=342,slow=20						
JHJ				S	**S**	**12 46 06.0**	**-1.7**
	77nm,0.3s,baz=258,slow=24,SNR=4.5						
JHJ2	**Mitsune**	**2.68**	**37**	P	**P**	**12 45 17.1**	**+1.0**
TK02	**Tokai 2**	**2.96**	**358**	P	**P**	**12 45 19.9**	**+1.8**
JWZ	**Kozaga**	**3.14**	**325**	P	**P**	**12 45 21.8**	**+2.4**
JWZ				S	**S**	**12 46 15.5**	**+1.6**
JKN2	**Miekihoku**	**3.52**	**338**	P	**P**	**12 45 24.7**	**+2.2**
JKN2				S	**S**	**12 46 20.4**	**+0.8**
JIE	**Ise**	**3.54**	**344**	P	**P**	**12 45 25.0**	**+2.3**
JIE				S	**S**	**12 46 19.7**	**-0.2**
JWY	**Kouya**	**3.76**	**330**	P	**P**	**12 45 26.7**	**+2.1**
JWY				S	**S**	**12 46 24.6**	**+1.3**
HMMJ	**Hamamatsu 2**	**3.87**	**358**	P	**P**	**12 45 27.3**	**+1.8**
HMMJ				S	**S**	**12 46 23.7**	**-1.3**
JAO	**Obara**	**4.30**	**353**	P	**P**	**12 45 31.3**	**+1.8**
JNY	**Yasuok**	**4.37**	**360**	P	**P**	**12 45 31.6**	**+1.6**
JOD2	**Odawara 2**	**4.39**	**13**	P	**P**	**12 45 30.1**	**-0.1**
BSO3	**Boso 3**	**4.40**	**29**	P	**P**	**12 45 29.1**	**-1.3**
BSO1	**Boso 1**	**4.49**	**35**	P	**P**	**12 45 29.8**	**-1.4**
BSO4	**Boso 4**	**4.50**	**27**	P	**P**	**12 45 30.3**	**-1.0**
BSO4				S	**S**	**12 46 33.9**	**-1.6**
JHU	**Hanno**	**5.00**	**13**	P	**P**	**12 45 35.3**	**-0.7**
JRY	**Ryogami san**	**5.09**	**9**	P	**P**	**12 45 37.1**	**+0.1**
CBIJ	**Chichi jima**	**5.40**	**135**	P	**P**	**12 45 38.6**	**-1.6**
	10.0nm,0.3s,baz=318,slow=6.5,SNR=21						
CBIJ				S	**S**	**12 46 47.8**	**-4.0**
	96nm,0.3s,baz=295,slow=22,SNR=33						
CBIJ	**Chichi jima**	**5.40**	**135**	P	**P**	**12 45 38.7**	**-1.6**
CBIJ				*e*S	**S**	**12 46 47.2**	**-4.6**
MJAR	**Matsushiro Arr**	**5.55**	**3**	P	**P**	**12 45 40.5**	**-1.1**
	3.9nm,0.3s,baz=180,slow=10,SNR=89						
MJAR				S	**S**	**12 46 52.1**	**-2.3**
	1.3nm,0.3s,baz=270,slow=23,SNR=6.1						
MJAR	**Matsushiro Arr**	**5.55**	**3**	P	**P**	**12 45 40.5**	**-1.1**
MJAR				S	**S**	**12 46 52.1**	**-2.3**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MAJO	**Matsushiro**	**5.55**	**3**	*e*P	**P**	**12 45 41.3**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,41nm,0.7s						
MAJO	**Matsushiro**	**5.55**	**3**	*e*Pn	**P**	**12 45 41.2**	**-0.3**
	comp=Z,41nm,0.7s						
MAT	**Matsushiro**	**5.55**	**3**	P	**P**	**12 45 41.3**	**-0.3**
MAT				S	**S**	**12 46 51.4**	**-3.0**
JYT	**Yasato**	**5.58**	**20**	P	**P**	**12 45 39.9**	**-1.9**
JAG	**Ashikaga**	**5.58**	**13**	P	**P**	**12 45 40.3**	**-1.6**
JHO	**Hitachi**	**6.04**	**21**	P	**P**	**12 45 44.9**	**-1.7**
JNU	**Nakatsue**	**6.32**	**292**	*e*Pn	**P**	**12 45 51.7**	**+2.1**
	comp=Z,20nm,0.6s						
KSRS	**Korea Array**	**10.47**	**311**	P	**P**	**12 46 35.5**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=127,slow=10,SNR=23						
KSRS				S	**S**	**12 48 28.1**	**-3.6**
	baz=118,slow=39,SNR=2.6						
KSRS	**Korea Array**	**10.47**	**311**	P	**P**	**12 46 35.6**	**+1.0**
KSRS				S	**S**	**12 48 28.1**	**-3.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**11.80**	**20↓**	*e*P	**P**	**12 46 49.9**	**+0.8**
ERM	**Erimo**	**11.80**	**20**	*e*Pn	**P**	**12 46 49.2**	**+0.1**
ERM				*e*Sn	**S**	**12 48 58.7**	**+0.4**
ASAJ	**Asahikawa**	**13.63**	**15**	P	**P**	**12 47 09.4**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=222,slow=17,SNR=5.3						
ASAJ				S	**S**	**12 49 34.8**	**0.0

GYA ScP ScP 12 55 27.0 +1.2
GYA PcS PcS 12 56 10.6 +0.8
GYA ScS ScS 12 59 17.4 -1.5
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
LZH Lanzhou 28.73 289 *e*P **P 12 49 33.0 +0.4**
LZH pP 12 50 51.0
LZH sP sP 12 51 43.0 +2.1
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.3
ULN Ulaanbaatar 28.92 314 *e*P **P 12 49 34.2 +0.1**
ULN pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
ULN Ulaanbaatar 28.92 314 *e*P **P 12 49 34.2 +0.1**
comp=Z,3.7nm,0.6s,mb3.9
CD2 Chengdu 29.20 279 *e*P **P 12 49 36.9 +0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
CD2 pmax pmax
comp=Z,20nm,5.2s
SONM Songino Array 29.31 314 P **P 12 49 38.0 +0.5**
comp=Z,1.9nm,0.5s,mb3.7,baz=128,slow=9.6,SNR=4.9
SONM Songino Array 29.31 314 P **P 12 49 38.0 +0.5**
SONM pmax pmax
comp=Z,2.0nm,0.5s
KMI Kunming 31.47 268 P **P 12 49 56.5 -0.1**
KMI pP pP 12 51 15.5 +0.7
KMI sP sP 12 52 07.7 +2.3
KMI pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
GTA Gaotai 32.04 296 ⇓P **P 12 50 01.1 -0.1**
GTA pP pP 12 51 20.9 +1.3
GTA sP sP 12 52 11.6 +1.3
GTA pmax pmax
comp=Z,8.0nm,0.7s,mb4.2
CHTO Chiang Mai 37.16 260 *e*P **P 12 50 44.5 -0.2**
CHTO pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
CHTO Chiang Mai 37.16 260 *e*P **P 12 50 44.5 -0.2**
comp=Z,9.5nm,0.8s,mb4.2
CM31 Chiang Mai Arr 37.32 260 *e*P **P 12 50 46.4 +0.4**
comp=Z,3.0nm,0.4s,mb4.0
CMAR Chiang Mai Arr 37.32 260 P **P 12 50 46.5 +0.5**
comp=Z,4.3nm,0.7s,mb3.9,baz=54,slow=6.9,SNR=29
CMAR Chiang Mai Arr 37.32 260 P **P 12 50 46.6 +0.6**
CMAR pmax pmax
comp=Z,4.0nm,0.7s
BILL Bilibino 40.64 16 ⇓*i*P **P 12 51 13.2 +0.8**
BILL pmax pmax
comp=Z,12nm,1.7s,mb4.0
BILL Bilibino 40.64 16 *e*P **P 12 51 12.7 +0.4**
comp=Z,6.7nm,0.8s,mb4.0
WMQ Urumqi 41.28 303 *e*P **P 12 51 18.0 +0.1**
TAPN Taplejung 43.67 278 *e*P **P 12 51 37.1 +0.1**
comp=Z,6.6nm,0.4s,mb4.3
ODAN Odare 44.09 278 *e*P **P 12 51 40.4 +0.1**
comp=Z,13nm,0.4s,mb4.6
ZALV Zalesovo Beam 44.09 317 P **P 12 51 39.1 -0.8**
comp=Z,1.7nm,0.5s,mb3.7,baz=98,slow=9.1,SNR=5.8
ZALV PcP PcP 12 53 15.2 -0.8
comp=Z,1.4nm,0.6s,baz=114,slow=3.9,SNR=4.7
ZALV Zalesovo Beam 44.09 317 P **P 12 51 39.1 -0.8**
ZALV 12 53 15.2
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb3.7
GUN Gumba 45.06 280 *e*P **P 12 51 48.4 +0.6**
comp=Z,30nm,0.5s,mb4.9
MK31 Makanchi Array 45.12 307 *i*P **P 12 51 47.6 -0.4**
MK31 pmax pmax
comp=Z,2.0nm,0.4s,mb3.8
MK31 Makanchi Array 45.12 307 *e*P **P 12 51 47.5 -0.5**
MK31 *e*PcP PcP 12 53 18.9 -0.8
MKAR Makanchi Array 45.12 307 P **P 12 51 47.8 -0.2**
comp=Z,1.8nm,0.4s,mb3.8,baz=91,slow=9.7,SNR=40
MKAR PcP PcP 12 53 19.3 -0.4
comp=Z,0.5nm,0.4s,baz=72,slow=1.6,SNR=7.7
MKAR Makanchi Array 45.12 307 P **P 12 51 47.8 -0.2**
MKAR 12 53 19.3
MKAR pmax pmax
comp=Z,2.0nm,0.4s
KKN Kakani 45.60 280 *e*P **P 12 51 52.2 +0.2**
GKN Gorkha 46.08 280 *e*P **P 12 51 55.6 -0.1**
comp=Z,13nm,0.4s,mb4.6
DANN Dangsing 46.72 281 *e*P **P 12 52 01.1 +0.5**
KOLN Koldanda 47.02 280 *e*P **P 12 52 03.1 +0.2**
comp=Z,24nm,0.5s,mb4.8
KURK Kurchatov 47.59 312 ⇓*e*P **P 12 52 06.0 -0.8**
KURK pmax pmax
comp=Z,7.0nm,1.1s,mb3.9
KURK Kurchatov 47.59 312 *e*P **P 12 52 05.8 -1.0**
comp=Z,7.8nm,0.9s,mb4.0
TKM2 Tokmak 2 50.14 302 *e*P **P 12 52 26.2 +0.2**
comp=Z,1.6nm,0.7s,mb3.5
FITZ Fitzroy Crossi 50.20 195 *e*P **P 12 52 26.9 +0.2**
comp=Z,6.4nm,1.0s,mb3.9
KSH Kashi 50.40 298 P **P 12 52 31.4 +3.4**
KSH *e*PcP PcP 12 53 42.3 +3.3
KSH *e*pP pP 12 53 59.6 +5.1
KSH *e*PP PP 12 54 34.3 +5.5
KSH *e*sP sP 12 54 47.9 +5.0
KSH *e*ScP ScP 12 56 54.6 +2.2
KSH *e*PcS PcS 12 57 38.8 +1.9
KSH *e*S **S 12 59 09.7 +2.1**
KSH *e*ScS ScS 13 01 32.2 +0.4
KSH *e*sS sS 13 01 46.8 +3.7
KSH *e*SS SS 13 02 50.9 +3.0
KSH pmax pmax
comp=Z,11nm,0.5s,mb4.4
KZA Kyzart 50.51 301 *e*P **P 12 52 29.9 +1.2**
comp=Z,3.6nm,0.4s,mb4.0
WB2 Warramunga Arr 50.74 184 *e*P **P 12 52 30.3 -0.3**
WRA Warramunga Arr 50.74 184 P **P 12 52 30.6 0.0**
comp=Z,1.3nm,0.3s,mb3.7,baz=0.4,slow=7.9,SNR=46
WRA PcP PcP 12 53 39.3 -1.1
comp=Z,0.5nm,0.5s,baz=356,slow=4.3,SNR=3.5
WRA Warramunga Arr 50.74 184 P **P 12 52 30.6 0.0**
WRA 12 53 39.3
WRA pmax pmax
comp=Z,1.0nm,0.3s
AAK Ala-Archa 50.98 302 P **P 12 52 32.3 +0.1**
comp=Z,3.6nm,0.5s,mb3.8,baz=142,slow=5.4,SNR=9.3
AAK Ala-Archa 50.98 302 *d i*P **P 12 52 32.2 0.0**
AAK pmax pmax
comp=Z,2.0nm,0.7s,mb3.5
AAK Ala-Archa 50.98 302 *e*P **P 12 52 32.3 +0.1**
comp=Z,3.5nm,0.7s,mb3.7
EKS2 Erkin-Say 51.50 302 *e*P **P 12 52 35.9 -0.1**
comp=Z,1.7nm,0.7s,mb3.4
AML Almayashu 51.65 301 *e*P **P 12 52 37.9 +0.8**
comp=Z,7.7nm,0.6s,mb4.1
VOSK Vostochnaya 52.30 315 P **P 12 52 39.5 -2.1**
VOSK pmax pmax
comp=Z,2.0nm,0.7s,mb3.5
BVAR Borovoye Array 52.64 315 P **P 12 52 43.3 -0.7**
comp=Z,3.1nm,0.5s,mb3.8,baz=96,slow=8.8,SNR=23
BVAR PcP PcP 12 53 46.9 -0.3
comp=Z,1.4nm,0.6s,baz=84,slow=5.0,SNR=7.5
BVAR Borovoye Array 52.64 315 P **P 12 52 43.3 -0.8**
BVAR 12 53 46.9
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BRVK Borovoye 52.70 315 *e*P **P 12 52 44.1 -0.4**
BRVK pmax pmax
comp=Z,5.0nm,1.1s,mb3.7
BRVK Borovoye 52.70 315 *e*P **P 12 52 44.1 -0.5**
comp=Z,5.4nm,1.1s,mb3.7
KDAK Kodiak Island 53.60 39 P **P 12 52 51.1 +0.2**
comp=Z,6.1nm,0.4s,mb4.2,baz=343,slow=3.8,SNR=5.2
KDAK Kodiak Island 53.60 39 *i*P **P 12 52 51.0 +0.1**
KK31 Karatay Array 53.79 303 *i*P **P 12 52 52.1 -0.4**
KK31 pmax pmax
comp=Z,3.0nm,0.4s,mb3.9
KKAR Karatay Array 53.79 303 *e*P **P 12 52 52.2 -0.3**
KKAR pmax pmax
comp=Z,6.0nm,0.6s,mb4.0
KKAR Karatay Array 53.79 303 *e*P **P 12 52 52.2 -0.2**
comp=Z,5.6nm,0.6s,mb4.0
ASAR Alice Springs 54.47 184 P **P 12 52 57.7 +0.3**
comp=Z,0.5nm,0.4s,mb3.1,baz=23,slow=11,SNR=51
ASAR ScP ScP 12 57 10.1 -0.1
comp=Z,0.2nm,0.6s,baz=355,slow=4.7,SNR=4.5
MBWA Marble Bar 54.69 201 *e*P **P 12 52 58.9 -0.1**
comp=Z,3.2nm,0.4s,mb3.9
ILAR Eielson Array 56.18 30 P **P 12 53 08.2 -0.7**
comp=Z,0.9nm,0.6s,mb3.3,baz=253,slow=5.6,SNR=27

ARU Arti 59.05 320 *e*P **P 12 53 27.9 -0.8**
ARU pmax pmax
comp=Z,5.0nm,0.4s,mb4.2
ARU Arti 59.05 320 *e*P **P 12 53 27.9 -0.8**
comp=Z,5.3nm,0.4s,mb4.2
AB31 Akbulak array 59.70 312 P **P 12 53 32.5 -0.7**
AB31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.0
ABKAR Akbulak array 59.70 312 *e*P **P 12 53 32.6 -0.7**
comp=Z,3.6nm,0.4s,mb4.2
AKTO Aktyubinsk 60.63 314 P **P 12 53 38.2 -1.2**
comp=Z,1.1nm,0.3s,mb3.8,baz=90,slow=12,SNR=4.1
AKTO Aktyubinsk 60.63 314 P **P 12 53 38.3 -1.1**
AKTO pmax pmax
comp=Z,1.0nm,0.3s,mb3.7
INK Inuvik 61.10 25 *e*P **P 12 53 41.9 -0.3**
INK pmax pmax
comp=Z,2.0nm,0.3s
INK Inuvik 61.10 25 *e*P **P 12 53 41.9 -0.3**
comp=Z,2.3nm,0.3s,mb4.1
STKA Stephens Creek 62.61 176 P **P 12 53 52.6 0.0**
comp=Z,3.6nm,1.1s,mb3.8,baz=345,slow=7.5,SNR=4.9
ARCES ARCESS Array B 68.62 340 P **P 12 54 30.0 0.0**
comp=Z,1.3nm,0.7s,mb3.7,baz=67,slow=8.2,SNR=15
ARCES ARCESS Array B 68.62 340 P **P 12 54 30.0 0.0**
ARCES pmax pmax
comp=Z,1.0nm,0.7s
JOF Joensuu 69.92 332 *e*P **P 12 54 36.8 -1.1**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb3.8
JOF Joensuu 69.92 332 *ep* **P 12 54 36.8 -1.1**
comp=Z,1.0nm,0.3s,mb3.8
YKA Yellowknife Ar 70.51 28 P **P 12 54 41.2 -0.2**
comp=Z,1.6nm,0.7s,mb3.7,baz=300,slow=5.9,SNR=5.0
YKA Yellowknife Ar 70.51 28 P **P 12 54 41.2 -0.2**
YKA pmax pmax
comp=Z,2.0nm,0.7s
VSR Storozhevoye 71.56 319 *e*P **P 12 54 46.4 -1.5**
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.6s
VSR pmax pmax
comp=Z,6.0nm,0.6s,mb4.3
KAF Kangasniemi 72.33 333 *e*P **P 12 54 47.4 -4.8**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.1
KAF Kangasniemi 72.33 333 *ep* **P 12 54 47.4 -4.8**
comp=Z,1.5nm,0.3s,mb4.0
KIV Kislovodsk 72.66 311 ⇑*e*P **P 12 54 55.8 +1.4**
KIV *e* 12 55 11.8
KIV pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
FINES FINESS Array B 72.79 332 P **P 12 54 54.2 -0.6**
comp=Z,2.7nm,0.4s,mb4.1,baz=64,slow=5.5,SNR=48
FINES FINESS Array B 72.79 332 P **P 12 54 54.2 -0.6**
FINES pmax pmax
comp=Z,3.0nm,0.4s
UMR Umm Al-Rimmam 75.57 296 *e*P **P 12 55 10.2 -1.1**
UMR AMb AMB 12 55 11.1
comp=Z,21nm,0.4s,mb5.1
MIB Mutribah 75.75 296 *e*P **P 12 55 10.9 -1.4**
MIB AMb AMB 12 55 12.2
comp=Z,20nm,0.8s,mb4.8
RDF Al-Radifah 75.99 295 *e*P **P 12 55 12.7 -0.9**
RDF AMb AMB 12 55 13.6
comp=Z,22nm,0.7s,mb4.9
NAY Al-Naaiem 76.08 296 *e*P **P 12 55 12.8 -1.3**
NAY AMb AMB 12 55 13.7
comp=Z,11nm,0.5s,mb4.7
NEW Newport 76.55 42 *e*P **P 12 55 17.1 +0.7**
NEW pmax pmax
comp=Z,5.0nm,1.1s
NEW Newport 76.55 42 *e*P **P 12 55 17.1 +0.8**
comp=Z,4.9nm,1.1s,mb4.0
AKASG Malin Array Be 77.26 322 P **P 12 55 19.1 -1.1**
comp=Z,1.6nm,0.3s,mb4.1,baz=51,slow=5.3,SNR=6.4
AKASG Malin Array Be 77.26 322 P **P 12 55 19.1 -1.1**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
WALA Waterton Lakes 77.92 40 *e*P **P 12 55 24.5 +0.6**
comp=Z,0.1nm,0.6s
NOA NORSAR Array B 78.59 337 P **P 12 55 25.4 -1.8**
comp=Z,0.5nm,0.7s,mb3.3,baz=45,slow=5.5,SNR=4.4
NOA NORSAR Array B 78.59 337 P **P 12 55 25.5 -1.7**
NOA pmax pmax
comp=Z,1.0nm,0.7s
SLMT Seeley Lake 79.16 41 *e*P **P 12 55 30.9 +0.3**
comp=Z,3.3nm,0.8s,mb4.0
CMB Columbia Colle 79.84 52 *e*P **P 12 55 34.5 +0.1**
CMB pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
CMB Columbia Colle 79.84 52 *e*P **P 12 55 34.5 +0.1**
comp=Z,1.1nm,0.5s,mb3.7
LRM Limekiln Ridge 80.56 42 *e*P **P 12 55 39.4 +1.4**
comp=Z,8.5nm,0.7s,mb4.6
BRTR Keskin Array B 80.61 311 P **P 12 55 38.5 0.0**
comp=Z,1.6nm,0.7s,mb3.9,baz=85,slow=3.1,SNR=6.5
BRTR Keskin Array B 80.61 311 P **P 12 55 38.5 +0.1**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
HLID Hailey 80.68 45 *e*P **P 12 55 40.0 +1.3**
comp=Z,1.3nm,0.8s,mb3.7
DLMT Dillon 80.74 42 *e*P **P 12 55 39.9 +1.0**
comp=Z,5.1nm,1.3s,mb4.1
EGMT Eagleton 80.78 39 *e*P **P 12 55 39.7 +0.6**
comp=Z,10nm,1.4s,mb4.4
NVAR Mina Array Bea 81.03 51 P **P 12 55 41.6 +1.0**
comp=Z,1.3nm,0.7s,mb3.7,baz=288,slow=4.9,SNR=12
IMW Indian Meadow 82.55 43 *e*P **P 12 55 50.3 +2.0**
comp=Z,2.0nm,0.9s,mb3.9
HWUT Hardware Ranch 83.53 45 *e*P **P 12 55 54.9 +1.6**
comp=Z,3.5nm,0.7s,mb4.2
DUG Dugway 83.58 47 *e*P **P 12 55 54.3 +0.7**
DUG pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
DUG Dugway 83.58 47 *e*P **P 12 55 54.3 +0.7**
comp=Z,1.4nm,0.5s,mb4.0
PDAR Pinedale Array 84.04 43 P **P 12 55 56.8 +1.0**
comp=Z,0.6nm,0.7s,mb3.6,baz=253,slow=1.5,SNR=6.5
ANMO Albuquerque 90.77 48 *e*P **P 12 56 29.5 +1.6**
ANMO pmax pmax
comp=Z,1.0nm,0.8s
ANMO Albuquerque 90.77 48 *e*P **P 12 56 29.5 +1.6**
comp=Z,1.1nm,0.8s,mb3.7
TXAR Lajitas Array 96.18 51 P **P 12 56 53.2 +0.5**
comp=Z,0.1nm,0.4s,mb3.3,baz=354,slow=1.8,SNR=3.8
TXAR pP pP 12 58 33.8 +1.2
comp=Z,0.2nm,0.6s,baz=283,slow=3.0,SNR=3.7
TXAR Lajitas Array 96.18 51 P **P 12 56 53.2 +0.5**
TXAR *PP pP 12 58 33.8 +1.2

DDA ***07*** *12:47:37.7,39°.48N×32°.65E,h18km±1km,Md3.8,Ml4.0*
ISK ***07*** *12:47:37.2,39°.51N×32°.65E,h5km,ML3.9*
ISCJB ***07*** *12:47:38.9±0.2,39°.51N±0°.02×32°.65E±0°.01,h10km, Error ellipse: s-maj=2.2km s-min=1.6km az=5.4*
CSEM ***07*** *12:47:38.9±0.1,39°.52N×32°.64E,h2km,ML3.9, Error ellipse: s-maj=2.8km s-min=2.1km az=3.0*
ISC 07 12:47:39.0±0.4,39°.52N±0°.02×32°.65E±0°.02,h0km±3km, n206,σ0=96/244,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Af¯ar-Bala (A**	**0.34**	**102**	PG	**Pg**	**12 47 44.3**	**-1.1**
AFSR	**Af¯ar-Bala (A**	**0.34**	**102**	*i* Pg	**Pg**	**12 47 44.3**	**-1.2**
BBAL	**Bala**	**0.37**	**86**	*i* P	**Pg**	**12 47 45.4**	**-0.7**
BBAL				*i* S	**Sg**	**12 47 51.3**	**+0.4**
BBAL	**Bala**	**0.37**	**86**	*i* P	**Pg**	**12 47 45.4**	**-0.7**
BBAL				*i* S	**Sg**	**12 47 51.3**	**+0.4**
LOD	**Lodumlu**	**0.38**	**14**	PG	**Pg**	**12 47 45.4**	**-0.9**
LOD	**Lodumlu**	**0.38**	**14**	*i* Pg	**Pg**	**12 47 45.4**	**-1.0**
DAD	**Ankara**	**0.40**	**12**	*i* P	**Pg**	**12 47 46.5**	**-0.1**
DAD				*i* S	**Sg**	**12 47 52.6**	**+0.7**
DAD	**Ankara**	**0.40**	**12**	*i* P	**Pg**	**12 47 46.5**	**-0.2**
DAD				*i* S	**Sg**	**12 47 52.6**	**+0.8**
KAMT	**Kaman**	**0.84**	**100**	PG	**Pg**	**12 47 53.7**	**-1.4**
KAMT	**Kaman**	**0.84**	**100**	*i* Pg	**Pg**	**12 47 53.7**	**-1.4**
KIZT	**Kizilcal**	**0.87**	**223**	PG	**Pg**	**12 47 55.0**	**-0.8**
KIZT	**Kizilcal**	**0.87**	**223**	*i* Pg	**Pg**	**12 47 55.0**	**-0.8**
SVRH	**Sivrihisar-ESK**	**0.87**	**266**	PG	**Pg**	**12 47 55.2**	**-0.6**
SVRH				SG	**Sg**	**12 48 08.0**	**+1.0**
SVRH	**Sivrihisar-ESK**	**0.87**	**266**	*i* Pg	**Pg**	**12 47 55.2**	**-0.6**
SVRH				*i* Sg	**Sg**	**12 48 08.0**	**+0.9**
KDHN	**Kadinhani**	**1.08**	**203**	*i* P	**Pg**	**12 47 58.3**	**-1.4**
KDHN				*i* S	**Sg**	**12 48 14.5**	**+0.8**
KDHN	**Kadinhani**	**1.08**	**203**	*i* P	**Pg**	**12 47 58.3**	**-1.4**
KDHN				*i* S	**Sg**	**12 48 14.5**	**+0.8**
ELDT	**Eldivan**	**1.14**	**31**	*i* P	**Pg**	**12 47 59.6**	**-1.3**
ELDT				*i* S	**Sg**	**12 48 16.6**	**+0.9**
ELDT	**Eldivan**	**1.14**	**31**	*i* P	**Pg**	**12 47 59.7**	**-1.2**
ELDT				*i* S	**Sg**	**12 48 16.6**	**+0.9**
SGKT	**Sivrigoynuk**	**1.15**	**337**	*i* P	**Pg**	**12 47 59.6**	**-1.4**
SGKT				*i* S	**Sg**	**12 48 16.9**	**+1.0**
SGKT	**Sivrigoynuk**	**1.15**	**337**	*i* P	**Pg**	**12 47 59.6**	**-1.4**
SGKT				*i* S	**Sg**	**12 48 16.9**	**+1.0**
CANT	**Cankiri**	**1.32**	**34**	*e*PN	**Pg**	**12 48 03.2**	**-1.1**
CANT				*e*SN	**Sn**	**12 48 23.2**	**+0.3**
ESKT	**Eskisehir**	**1.39**	**271**	*i* P	**Pn**	**12 48 03.7**	**-1.9**
SEYT	**Eskypehyr**	**1.39**	**271**	*i* P	**Pn**	**12 48 03.7**	**-1.9**
MDU	**Mudurnu**	**1.45**	**311**	*e*PN	**Pn**	**12 48 05.7**	**-0.8**
MDU				*e*SN	**Sn**	**12 48 26.5**	**+0.3**
MDU	**Mudurnu**	**1.45**	**311**	*e*Pn	**Pn**	**12 48 05.7**	**-0.8**
MDU				*e*Sn	**Sn**	**12 48 26.5**	**+0.3**
SULT	**Sultanhani-AKS**	**1.48**	**153**	*e*PN	**Pn**	**12 48 05.8**	**-1.1**
SULT	**Sultanhani-AKS**	**1.48**	**153**	*e*Pn	**Pn**	**12 48 05.8**	**-1.1**
BOLV	**Bolvadin**	**1.54**	**239**	*i* P	**Pn**	**12 48 07.0**	**-0.7**
BOLV				*i* S	**Sg**	**12 48 30.2**	**+1.6**
BOLV	**Bolvadin**	**1.54**	**239**	*i* P	**Pn**	**12 48 07.0**	**-0.7**
BOLV				*i* S	**Sg**	**12 48 30.2**	**+1.6**
KONT	**Konya--Tatoy**	**1.59**	**188**	*e*PN	**Pn**	**12 48 07.3**	**-1.0**
KONT	**Konya--Tatoy**	**1.59**	**188**	*e*Pn	**Pn**	**12 48 07.3**	**-1.0**
CORM	**Corum**	**1.66**	**66**	*e*PN	**Pn**	**12 48 08.6**	**-0.8**
CORM	**Corum**	**1.66**	**66**	*e*Pn	**Pn**	**12 48 08.6**	**-0.8**
SAFT	**Safranbolu**	**1.72**	**1**	*e*PN	**Pn**	**12 48 10.1**	**-0.1**
SAFT	**Safranbolu**	**1.72**	**1**	*e*Pn	**Pn**	**12 48 10.1**	**-0.1**
BORA	**Eskisehir**	**1.73**	**283**	*i* P	**Pn**	**12 48 09.3**	**-1.0**
BORA				*i* S	**Sg**	**12 48 37.9**	**+3.3**
BORA	**Eskisehir**	**1.73**	**283**	*i* P	**Pn**	**12 48 09.3**	**-1.0**
ILGA	**Ilgaz**	**1.74**	**28**	*i* P	**Pn**	**12 48 11.0**	**+0.6**
ILGA				*i* S	**Sn**	**12 48 35.8**	**+2.6**
ILGA	**Ilgaz**	**1.74**	**28**	*i* P	**Pn**	**12 48 11.0**	**+0.6**
ILGA				*i* S	**Sn**	**12 48 35.8**	**+2.6**
TOS	**Tosya**	**1.84**	**34**	*e*PN	**Pn**	**12 48 10.4**	**-1.5**
TOS	**Tosya**	**1.84**	**34**	*e*Pn	**Pn**	**12 48 10.4**	**-1.5**
HENT	**Hendek**	**1.87**	**315**	*i* P	**Pn**	**12 48 09.9**	**-2.4**
HENT	**Hendek**	**1.87**	**315**	*i* P	**Pn**	**12 48 09.9**	**-2.3**
AVNT	**Avonos**	**1.87**	**113**	*i* P	**Pn**	**12 48 11.2**	**-1.0**
AVNT				*i* S	**Sn**	**12 48 36.7**	**+0.2**
AVNT	**Avonos**	**1.87**	**113**	*i* P	**Pn**	**12 48 11.2**	**-1.0**
AVNT				*i* S	**Sn**	**12 48 36.7**	**+0.2**
GULT	**Gulveren**	**1.88**	**300**	*e*PN	**Pn**	**12 48 11.5**	**-0.8**
GULT	**Gulveren**	**1.88**	**300**	*e*Pn	**Pn**	**12 48 11.5**	**-0.8**
SHUT	**Suhut-Afyon**	**1.90**	**240**	*e*PN	**Pn**	**12 48 11.7**	**-0.9**
SHUT	**Suhut-Afyon**	**1.90**	**240**	*e*Pn	**Pn**	**12 48 11.7**	**-0.9**
GPA	**Golpazari**	**1.96**	**294**	*e*PN	**Pn**	**12 48 12.7**	**-0.7**
GPA	**Golpazari**	**1.96**	**294**	*e*Pn	**Pn**	**12 48 12.7**	**-0.7**
CTKT	**Corum**	**1.98**	**55**	*i* P	**Pn**	**12 48 12.1**	**-1.7**
CTKT				*i* S	**Sn**	**12 48 40.5**	**+1.3**
CTKT	**Corum**	**1.98**	**55**	*i* P	**Pn**	**12 48 12.1**	**-1.6**
CTKT				*i* S	**Sn**	**12 48 40.5**	**+1.3**
KDZE	**Karadeniz Ereo**	**2.02**	**333**	*e*PN	**Pn**	**12 48 14.2**	**-0.1**
KDZE	**Karadeniz Ereo**	**2.02**	**333**	*e*Pn	**Pn**	**12 48 14.2**	**0.0**
YOZ	**Yozgat**	**2.07**	**86**	*e*PN	**Pn**	**12 48 14.7**	**-0.3**
YOZ	**Yozgat**	**2.07**	**86**	*e*Pn	**Pn**	**12 48 14.7**	**-0.3**
BALT	**Daday**	**2.09**	**15**	*i* P	**Pn**	**12 48 13.3**	**-2.0**
BALT				*i* S	**Sn**	**12 48 46.5**	**+4.6**
BALT	**Daday**	**2.09**	**15**	*i* P	**Pn**	**12 48 13.3**	**-2.0**
BALT				*i* S	**Sn**	**12 48 46.5**	**+4.5**
SPNC	**Sapanca-Adapaz**	**2.14**	**304**	*e*PN	**Pn**	**12 48 15.5**	**-0.5**
SPNC	**Sapanca-Adapaz**	**2.14**	**304**	*e*Pn	**Pn**	**12 48 15.5**	**-0.4**
CAVI	**Cavuskoy**	**2.26**	**288**	*e*PN	**Pn**	**12 48 17.5**	**-0.2**
CAVI	**Cavuskoy**	**2.26**	**288**	*e*Pn	**Pn**	**12 48 17.5**	**-0.2**
ADVT	**Abdulvahap**	**2.41**	**293**	*e*PN	**Pn**	**12 48 19.5**	**-0.2**
ADVT	**Abdulvahap**	**2.41**	**293**	*e*Pn	**Pn**	**12 48 19.5**	**-0.2**
SUTC	**Sutluce-Ispart**	**2.41**	**213**	*e*PN	**Pn**	**12 48 19.0**	**-0.7**
SUTC	**Sutluce-Ispart**	**2.41**	**213**	*e*Pn	**Pn**	**12 48 19.0**	**-0.7**
GDZ	**Gediz**	**2.49**	**261**	*i* P	**Pn**	**12 48 19.4**	**-1.4**
GDZ				*i* S	**Sg**	**12 49 01.6**	**+2.4**
GDZ	**Gediz**	**2.49**	**261**	*i* P	**Pn**	**12 48 19.5**	**-1.3**
BYBT	**Boyabat**	**2.53**	**39**	*e*PN	**Pn**	**12 48 21.5**	**+0.2**
BYBT	**Boyabat**	**2.53**	**39**	*e*Pn	**Pn**	**12 48 21.5**	**+0.2**
HDMB	**Hadim**	**2.55**	**183**	*e*PN	**Pn**	**12 48 20.8**	**-0.8**
HDMB	**Hadim**	**2.55**	**183**	*e*Pn	**Pn**	**12 48 20.8**	**-0.8**
BCK	**Bucak**	**2.61**	**219**	*e*PN	**Pn**	**12 48 21.8**	**-0.6**
BCK	**Bucak**	**2.61**	**219**	*e*Pn	**Pn**	**12 48 21.8**	**-0.7**
HRT	**Hereke**	**2.63**	**301**	*e*PN	**Pn**	**12 48 22.2**	**-0.5**
HRT	**Hereke**	**2.63**	**301**	*e*Pn	**Pn**	**12 48 22.2**	**-0.5**
BZK	**Bozkurt**	**2.65**	**22**	*e*PN	**Pn**	**12 48 22.8**	**-0.1**
BZK	**Bozkurt**	**2.65**	**22**	*e*Pn	**Pn**	**12 48 22.8**	**-0.1**
KHL	**Karahalli**	**2.71**	**245**	*e*PN	**Pn**	**12 48 23.5**	**-0.3**
KHL	**Karahalli**	**2.71**	**245**	*e*Pn	**Pn**	**12 48 23.5**	**-0.3**
KHAL	**Karahalli**	**2.71**	**246**	*i* P	**Pn**	**12 48 22.9**	**-1.0**
KHAL	**Karahalli**	**2.71**	**246**	*i* P	**Pn**	**12 48 22.9**	**-0.9**
YLV	**Yalova**	**2.72**	**294**	*e*PN	**Pn**	**12 48 23.9**	**0.0**
YLV	**Yalova**	**2.72**	**294**	*e*Pn	**Pn**	**12 48 23.9**	**-0.1**
ULDT	**Uludag**	**2.77**	**284**	*i* P	**Pn**	**12 48 22.5**	**-2.1**
ULDT				*i* S	**Sg**	**12 49 10.4**	**+2.2**
ULDT	**Uludag**	**2.77**	**284**	*i* P	**Pn**	**12 48 22.5**	**-2.2**
GULE	**Gulek**	**2.79**	**142**	*i* P	**Pn**	**12 48 25.3**	**+0.4**
GULE				*i* S	**Sg**	**12 49 11.7**	**+3.1**
GULE	**Gulek**	**2.79**	**142**	*i* P	**Pn**	**12 48 25.3**	**+0.4**
GEMT	**Gemlik**	**2.81**	**290**	*e*PN	**Pn**	**12 48 24.8**	**-0.3**
GEMT	**Gemlik**	**2.81**	**290**	*e*Pn	**Pn**	**12 48 24.8**	**-0.4**
SILT	**Sile**	**2.82**	**306**	*e*PN	**Pn**	**12 48 25.5**	**+0.2**
SILT	**Sile**	**2.82**	**306**	*e*Pn	**Pn**	**12 48 25.5**	**+0.2**
KARA	**Karaisali**	**2.94**	**139**	*e*PN	**Pn**	**12 48 26.8**	**-0.1**
KARA	**Karaisali**	**2.94**	**139**	*e*Pn	**Pn**	**12 48 26.8**	**-0.2**
MDNY	**Mudanya-Bursa**	**3.02**	**288**	*e*PN	**Pn**	**12 48 28.2**	**+0.2**
MDNY	**Mudanya-Bursa**	**3.02**	**288**	*e*Pn	**Pn**	**12 48 28.2**	**+0.2**
MERS	**Mersin**	**3.03**	**150**	*e*PN	**Pn**	**12 48 27.9**	**-0.3**
MERS	**Mersin**	**3.03**	**150**	*e*Pn	**Pn**	**12 48 27.9**	**-0.3**
KVT	**Kavak**	**3.03**	**58**	*e*PN	**Pn**	**12 48 28.2**	**0.0**
KVT	**Kavak**	**3.03**	**58**	*e*Pn	**Pn**	**12 48 28.2**	**0.0**
PINB	**Pinarbasi**	**3.04**	**105**	*i* P	**Pn**	**12 48 30.2**	**+1.9**
PINB				*i* S	**Sg**	**12 49 17.7**	**+1.0**
PINB	**Pinarbasi**	**3.04**	**105**	*i* P	**Pn**	**12 48 30.2**	**+1.9**
ANTB	**Antalya**	**3.05**	**212**	*e*PN	**Pn**	**12 48 28.2**	**-0.3**
ANTB	**Antalya**	**3.05**	**212**	*e*Pn	**Pn**	**12 48 28.2**	**-0.3**
TOKA	**Tokat**	**3.05**	**74**	*i* P	**Pn**	**12 48 27.8**	**-0.7**
TOKA	**Tokat**	**3.05**	**74**	*i* P	**Pn**	**12 48 27.8**	**-0.7**
DEMI	**Demirci**	**3.09**	**262**	*i* P	**Pn**	**12 48 28.2**	**-0.8**
DEMI				*i* S	**Sg**	**12 49 23.4**	**+5.2**
DEMI	**Demirci**	**3.09**	**262**	*i* P	**Pn**	**12 48 28.2**	**-0.8**
ARMT	**Armutlu**	**3.09**	**291**	*e*PN	**Pn**	**12 48 28.2**	**-0.8**
ARMT	**Armutlu**	**3.09**	**291**	*e*Pn	**Pn**	**12 48 28.2**	**-0.8**
TOKT	**Tokat**	**3.10**	**

CTKS	Kestanelik-??a	3.60	300	*e*Pn	Pn	12 48 36.2	+0.2
KRTS	Karatas	3.65	143	*e*PN	Pn	12 48 36.9	+0.2
KRTS	Karatas	3.65	143	*e*Pn	Pn	12 48 36.9	+0.3
BALB	Balikesir	3.69	273	*e*Pn	Pn	12 48 37.5	+0.3
BALB	Balikesir	3.69	273	*e*Pn	Pn	12 48 37.5	+0.3
RSDY	Resadiye-TOKAT	3.70	75	*e*PN	Pn	12 48 38.2	+0.8
RSDY	Resadiye-TOKAT	3.70	75	*e*Pn	Pn	12 48 38.2	+0.8
SLVT	Silivri	3.80	298	*e*PN	Pn	12 48 38.9	+0.1
SLVT	Silivri	3.80	298	*e*Pn	Pn	12 48 38.9	+0.2
AKHS	Akhisar	3.81	262	*i* P	Pg	12 48 51.1	-0.9
AKHS				*i* S	Sg	12 49 40.9	-0.5
GONE	Gonen-Balikesi	3.86	279	*e*PN	Pn	12 48 39.5	-0.1
GONE	Gonen-Balikesi	3.86	279	*e*Pn	Pn	12 48 39.5	-0.1
BALY	Balya	3.89	275	*i* P	Pn	12 48 39.5	-0.5
BALY				*i* S	Sg	12 49 46.0	+2.1
BALY	Balya	3.89	275	*i* P	Pn	12 48 39.5	-0.5
KMRS	Kahramanmaras	3.90	120	*e*PN	Pn	12 48 40.2	+0.1
KMRS	Kahramanmaras	3.90	120	*e*Pn	Pn	12 48 40.2	+0.1
AKAS	Kas	4.07	217	*i* P	Pn	12 48 43.6	+1.2
AKAS				*i* S	Sn	12 49 35.8	+5.1
AKAS	Kas	4.07	217	*i* P	Pn	12 48 43.7	+1.3
EREN	Erenkoy	4.16	163	*e*PN	Pn	12 48 44.2	+0.4
EREN	Erenkoy	4.16	163	*e*Pn	Pn	12 48 44.2	+0.5
YER	Yerkesik	4.18	237	*e*PN	Pn	12 48 44.2	+0.2
YER	Yerkesik	4.18	237	*e*Pn	Pn	12 48 44.2	+0.3
GAZ	Gaziantep	4.29	122	*e*PN	Pn	12 48 46.2	+0.8
GAZ	Gaziantep	4.29	122	*e*Pn	Pn	12 48 46.2	+0.8
LFK	Lefkose	4.29	170	*e*PN	Pn	12 48 45.5	0.0
LFK	Lefkose	4.29	170	*e*Pn	Pn	12 48 45.5	0.0
IZM	Izmir	4.34	257	*e*PN	Pn	12 48 46.9	+0.6
IZM	Izmir	4.34	257	*e*Pn	Pn	12 48 46.9	+0.7
RKY	Sarkoy-Tekirda	4.35	287	*e*PN	Pn	12 48 46.9	+0.5
RKY	Sarkoy-Tekirda	4.35	287	*e*Pn	Pn	12 48 46.9	+0.5
KEMA	Kemaliye	4.54	91	*i* P	Pn	12 48 48.8	-0.1
KEMA				*i* S	Sg	12 50 01.3	-3.5
KEMA	Kemaliye	4.54	91	*i* P	Pn	12 48 48.8	-0.1
CSS	Prodhromos	4.58	173	*e*PN	Pn	12 48 50.3	+0.8
CSS	Prodhromos	4.58	173	*e*Pn	Pn	12 48 50.3	+0.8
LPK	Lapseki	4.60	283	*e*PN	Pn	12 48 50.9	+1.0
LPK	Lapseki	4.60	283	*e*Pn	Pn	12 48 50.9	+1.1
MYA	Malataya	4.66	103	*e*PN	Pn	12 48 51.5	+0.9
MYA	Malataya	4.66	103	*e*Pn	Pn	12 48 51.5	+0.9
MALT	Malatya	4.67	103	*e*PN	Pn	12 48 51.6	+1.0
MALT	Malatya	4.67	103	*e*Pn	Pn	12 48 51.6	+0.9
GELI	Tayfur-Gelibol	4.82	282	*e*PN	Pn	12 48 53.5	+0.7
GELI	Tayfur-Gelibol	4.82	282	*e*Pn	Pn	12 48 53.5	+0.7
ERIK	Erikli-Kesan	4.84	286	*e*PN	Pn	12 48 54.2	+1.1
ERIK	Erikli-Kesan	4.84	286	*e*Pn	Pn	12 48 54.2	+1.1
ESPY	Espiye-Giresun	4.86	71	*e*PN	Pn	12 48 54.5	+1.2
ESPY	Espiye-Giresun	4.86	71	*e*Pn	Pn	12 48 54.5	+1.2
EDRB	Edirne	5.05	299	*e*PN	Pn	12 48 56.9	+0.9
EDRB	Edirne	5.05	299	*e*Pn	Pn	12 48 56.9	+0.9
ENEZ	Enez	5.12	286	*e*PN	Pn	12 48 58.2	+1.2
ENEZ	Enez	5.12	286	*e*Pn	Pn	12 48 58.2	+1.2
EZC	Erzincan	5.18	85	*e*PN	Pn	12 48 58.9	+1.1
EZC	Erzincan	5.18	85	*e*Pn	Pn	12 48 58.9	+1.1
GADA	Gvkgeada	5.24	280	*e*PN	Pn	12 48 59.5	+1.0
GADA	Gvkgeada	5.24	280	*e*Pn	Pn	12 48 59.5	+1.0
PTK	Pertek	5.28	95	*e*PN	Pn	12 49 00.3	+1.3
PTK	Pertek	5.28	95	*e*Pn	Pn	12 49 00.3	+1.2
SVRC	Sivrice-ELAZID	5.32	100	*e*PN	Pn	12 49 00.9	+1.3
SVRC	Sivrice-ELAZID	5.32	100	*e*Pn	Pn	12 49 00.9	+1.3
GUMT	Gumushane	5.33	78	*e*PN	Pn	12 49 00.9	+1.1
GUMT	Gumushane	5.33	78	*e*Pn	Pn	12 49 00.9	+1.1

*ISCJB **07** 12:52:07.3±0.7, 38°.48N±0°.03×23°.56E±0°.04, h10km±5km, Error ellipse: s-maj=5.3km s-min=3.9km az=143.2*
*ATH **07** 12:52:08.6, 38°.42N×23°.39E, h22km, MD2.7/6, ML2.3*
*CSEM **07** 12:52:08.2±0.2, 38°.48N×23°.47E, h15km, MD2.7, Error ellipse: s-maj=4.9km s-min=3.5km az=59.0*
*THE **07** 12:52:08.9, 38°.49N×23°.46E, h9km±3km, ML2.1/8, Error ellipse: s-maj=3.5km s-min=0.9km az=65.0*
ISC 07 12:52:08.5±0.5, 38°.49N±0°.02×23°.49E±0°.03, h14km±4km, n34, σ1º02/62, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	Lokris	0.42	293	*e*PB	Pg	12 52 16.5	-0.4
LKR				*e*SB	Sg	12 52 22.8	+0.2
LKR	Lokris	0.42	293	P	Pg	12 52 15.8	-1.1
LKR				S	Sg	12 52 22.7	+0.1
LKR	Lokris	0.42	293	P	Pg	12 52 15.8	-1.1
LKR	Lokris	0.42	293	*e*Pb	Pg	12 52 16.5	-0.4
LKR				S	Sg	12 52 22.7	+0.1
ATAL	Atalanti	0.42	299	P	Pg	12 52 16.0	-0.9
ATAL				S	Sg	12 52 22.3	-0.3
ATAL	Atalanti	0.42	299	P	Pg	12 52 16.0	-0.9
ATAL				S	Sg	12 52 22.3	-0.3
PTL	Penteli	0.53	146	*e*PN	Pg	12 52 18.8	-0.1
PTL				*e*SN	Sg	12 52 26.6	+0.6
PTL	Penteli	0.53	146	*e*Pn	Pg	12 52 18.8	-0.1
ATH	Athens Observa	0.55	161	*e*PN	Pg	12 52 18.6	-0.6
ATH	Athens Observa	0.55	161	*e*Pn	Pg	12 52 18.6	-0.6
ATHU	Athens Univers	0.57	156	P	Pg	12 52 20.8	+1.1
ATHU				S	Sg	12 52 28.7	+1.4
ATHU	Athens Univers	0.57	156	P	Pg	12 52 20.8	+1.1
ATHU				S	Sg	12 52 28.7	+1.4
LTK	Loutraki	0.62	222	P	Pg	12 52 19.7	-1.0
LTK				S	Sg	12 52 29.2	+0.2
LTK	Loutraki	0.62	222	P	Pg	12 52 19.7	-1.0
LTK				S	Sg	12 52 29.2	+0.2
VLY	Voula,Athens	0.68	160	*e*PN	Pn	12 52 21.6	-2.1
VLY				*e*SN	Sg	12 52 30.7	0.0
VLY	Voula,Athens	0.68	160	*e*Pn	Pn	12 52 21.6	-2.1
VLY				*e*Sn	Sg	12 52 30.7	0.0
NAIG	Nisos Aigina	0.73	180	*e*PN	Pn	12 52 22.1	-2.3
NAIG	Nisos Aigina	0.73	180	*e*Pn	Pn	12 52 22.1	-2.3
AOS	Alonnisos	0.74	24	P	Pg	12 52 23.3	+0.3
AOS				S	Sg	12 52 34.4	+1.7
AOS	Alonnisos	0.74	24	P	Pg	12 52 23.3	+0.3
AOS				S	Sg	12 52 34.4	+1.7
DSF	Desfina	0.76	264	P	Pg	12 52 21.9	-1.4
DSF				S	Sg	12 52 33.9	+0.5
DSF	Desfina	0.76	264	P	Pg	12 52 21.9	-1.4
DSF				S	Sg	12 52 33.9	+0.5
NEO	Neokhori	0.84	346	*e*PN	Pn	12 52 25.6	-0.3
NEO				*e*SN	Sn	12 52 38.4	+0.3
NEO	Neokhori	0.84	346	*e*Pn	Pn	12 52 25.6	-0.3
NEO				*e*Sn	Sn	12 52 38.4	+0.3
DID	Didima	1.00	192	P	Pb	12 52 26.6	-1.1
DID				S	Sb	12 52 41.9	+1.2
DID	Didima	1.00	192	P	Pb	12 52 26.6	-1.1
DID				S	Sb	12 52 41.9	+1.2
GUR	Goura	1.06	239	P	Pb	12 52 28.7	0.0
GUR				S	Sb	12 52 43.2	+0.8
GUR	Goura	1.06	239	P	Pb	12 52 28.7	0.0
GUR				S	Sb	12 52 43.2	+0.8
KALE	Kalithea	1.07	265	P	Pb	12 52 27.5	-1.3
KALE				S	Sb	12 52 44.5	+1.9
KALE	Kalithea	1.07	265	P	Pb	12 52 27.5	-1.3
KALE				S	Sb	12 52 44.5	+1.9
TRIZ	Trizonia	1.12	264	P	Pb	12 52 29.4	-0.3
TRIZ				S	Sb	12 52 46.0	+1.8
TRIZ	Trizonia	1.12	264	P	Pb	12 52 29.4	-0.3
TRIZ				S	Sb	12 52 46.0	+1.8
VLI	Veliai	1.82	194	*e*PN	Pn	12 52 39.6	+0.2
VLI				*e*SN	Sn	12 53 02.2	-0.1
VLI	Veliai	1.82	194	*e*Pn	Pn	12 52 39.6	+0.2
VLI				*e*Sn	Sn	12 53 02.2	-0.1

*ISCJB **07** 12:54:29.9±1.6, 15°.9N±0°.1×94°.79E±0°.06, h44km±13km, mb3.9/17, MS3.8/1, Error ellipse: s-maj=18.8km s-min=7.7km az=20.7*
*NEIC **07** 12:54:30.7±0.5, 15°.76N×94°.68E, h35km, mb4.5/1, Error ellipse: s-maj=11.1km s-min=8.2km az=188.0*
*IDC **07** 12:54:32.1±5.7, 15°.86N×94°.80E, h45km±51km, mb3.6/10, mb1 3.8/11, mb1mx3.6/24, mbtmp3.6/11, ML4.2/1, Error ellipse: s-maj=42.0km s-min=15.5km az=52.0*
ISC 07 12:54:31.7±1.4, 15°.8N±0°.1×94°.78E±0°.06, h43km±11km, n38, σ0º86/42, mb3.9/17, MS3.8/1, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	4.76	56	*e*Pn	Pn	12 55 41.8	+0.8
CMAR	Chiang Mai Arr	4.76	56	P	Pn	12 55 41.8	+0.8
	2.4nm,0.3s,baz=240,slow=15,SNR=83						
CMAR				S	Sn	12 56 34.5	-0.5
	2.6nm,0.3s,baz=242,slow=18,SNR=5.0						
CHG	Chiang Mai	4.97	53	PG	Pn	12 55 45.1	+1.4
CHG				SG	Sn	12 56 44.9	+5.0
CHTO	Chiang Mai	4.97	53	*e*Pn	Pn	12 55 44.2	+0.5
	19nm,0.4s						
NST	Nakhon Sawan	5.16	91	P	Pn	12 55 45.7	-0.7
	63nm,1.0s						
CHRT	Chiangrai	6.24	49	P	Pn	12 56 00.0	-1.2
	210nm,1.0s						
SHL	Shillong	10.06	345	*e*PKP	Pn	12 56 53.0	-0.6
ODAN	Odare	12.95	329	*e*Pn	Pn	12 57 33.2	+0.1
ODAN				*e*Sn	Sn	12 59 35.9	-20
	43nm,0.4s						
TAPN	Taplejung	13.21	331	*e*Pn	Pn	12 57 37.0	+0.4
TAPN				*e*Sn	Sn	12 59 44.2	-18
	37nm,0.7s						
LSA	Lhasa	14.20	347	P	Pn	12 57 47.2	-3.0
PKI	Pulchoki	14.56	325	*e*Pn	Pn	12 57 54.4	-0.6
PKIN	Phulchoki	14.57	325	*e*Pn	Pn	12 57 55.3	+0.1
GUN	Gumba	14.57	327	*e*Pn	Pn	12 57 55.6	+0.4
DMN	Daman	14.76	324	*e*Pn	Pn	12 57 57.5	-0.1
KKN	Kakani	14.80	325	*e*Pn	Pn	12 57 58.9	+0.7
GKN	Gorkha	15.33	324	*e*Pn	Pn	12 58 05.0	0.0
KOLN	Koldanda	15.76	321	*e*Pn	Pn	12 58 10.6	-0.1
DANN	Dangsing	16.09	323	*e*Pn	Pn	12 58 15.7	+0.8
GTA	Gaotai	23.90	10	*e*P	P	12 59 48.6	+7.2
GTA				pP		12 59 52.6	
GTA				sP	sP	12 59 54.6	-3.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
HHC	Hu-ho-hao-te	28.87	27	*e*P	P	13 00 29.5	+3.3
HHC				pP	pP	13 00 39.1	+1.3
HHC				sP	sP	13 00 43.3	+0.3
HHC				PP	PP	13 01 23.8	-8.1
HHC				PcP	PcP	13 03 38.3	+3.5
HHC				S	S	13 05 17.9	+4.4
HHC				sS	sS	13 05 32.6	-0.3
HHC				SS	SS	13 06 46.9	-30
HHC				ScP	ScP	13 07 15.4	+2.5
HHC				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,240nm,5.8s						
HHC				LR	LR		
	comp=N,140nm,14.6s,MS3.9						
HHC				LR	LR		
	comp=E,150nm,14.8s,MS3.9						
HHC				LR	LR		
	comp=Z,150nm,13.7s,MS3.8						
MK31	Makanchi Array	32.58	344	*e*P	P	13 00 59.6	+0.9
MKAR	Makanchi Array	32.58	344	P	P	13 00 59.7	+0.9
	comp=Z,1.7nm,0.6s,mb4.2,baz=155,slow=10.0,SNR=24						
KURK	Kurchatov	37.16	343	*e*P	P	13 01 38.5	+0.3
	comp=Z,7.0nm,1.0s,mb4.5						
ZALV	Zalesovo Beam	38.83	351	P	P	13 01 52.0	-0.2
	comp=Z,1.8nm,0.5s,mb4.1,baz=170,slow=9.9,SNR=11						
WRA	Warramunga Arr	52.69	131	P	P	13 03 42.2	+0.1
	comp=Z,0.4nm,0.5s,mb3.6,baz=312,slow=7.6,SNR=17						
WRA				PcP	PcP	13 04 51.3	-0.3
	comp=Z,0.4nm,0.8s,baz=325,slow=3.3,SNR=6.3						
ASAR	Alice Springs	54.80	135	P	P	13 03 57.8	+0.3
	comp=Z,0.3nm,0.5s,mb3.6,baz=315,slow=6.9,SNR=17						
BRTR	Keskin Array B	57.93	307	P	P	13 04 19.1	-0.5
	comp=Z,0.5nm,0.6s,mb3.7,baz=134,slow=7.1,SNR=4.7						
JOF	Joensuu	64.03	333	*e*p	P	13 04 56.9	-3.7
	comp=Z,0.5nm,0.3s,mb4.0						
FINES	FINESS Array B	66.06	331	P	P	13 05 13.7	-0.2
	comp=Z,1.4nm,0.6s,mb4.2,baz=94,slow=7.6,SNR=11						
KAF	Kangasniemi	66.09	331	*e*p	P	13 05 11.3	-2.7
	comp=Z,1.0nm,0.7s,mb4.0						
KEV	Kevo	67.61	340	*e*p	P	13 05 22.3	-1.3
	comp=Z,0.2nm,0.3s,mb3.6						
ARCES	ARCESS Array B	68.06	339	P	P	13 05 27.2	+0.8
	comp=Z,1.0nm,0.6s,mb4.0,baz=100,slow=7.0,SNR=9.9						
BRG	Berggiesshubel	72.13	319	*e*P	P	13 05 52.1	+0.4
	comp=Z,2.3nm,0.7s,mb4.2						
NB2	NORSAR Subarra	73.18	330	P	P	13 05 57.4	-0.3
	comp=Z,0.8nm,0.8s,mb3.7,baz=90,slow=6.2						
NOA	NORSAR Array B	73.18	330	P	P	13 05 57.8	0.0
	comp=Z,0.8nm,0.7s,mb3.8,baz=89,slow=5.9,SNR=3.8						
ESDC	Sonseca Array	86.59	310	P	P	13 07 10.8	+0.1
	comp=Z,0.1nm,0.3s,mb3.5,baz=54,slow=4.5,SNR=4.8						
ILAR	Eielson Array	87.19	22	P	P	13 07 12.4	-0.6
	comp=Z,0.3nm,0.8s,mb3.6,baz=279,slow=5.6,SNR=5.0						
TXAR	Lajitas Array	131.70	22	PKP	PKPdf	13 13 41.5	+0.9
	comp=Z,0.1nm,0.5s,baz=29,slow=6.2,SNR=3.1						

*NEIC **07** 12:59:46.6±1.7, 16°.48S×173°.78W, h51km±16km, mb4.0/2, Error ellipse: s-maj=31.5km s-min=11.4km az=134.0*
*IDC **07** 12:59:51.6±0.9, 16°.53S×173°.82W, h95km±7km, mb3.6/8, mb1 3.9/8, mb1mx3.7/19, mbtmp3.6/8, Error ellipse: s-maj=41.2km s-min=15.5km az=141.0*
ISC 07 12:59:51.8±0.7, 16°.6S±0°.2×173°.8W±0°.2, h98km, h98km±2.4km: pP-P, n14, σ0º71/17, mb3.8/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.32	36	P	Pn	13 00 34.7	-7.1
	56nm,0.3s,baz=194,slow=2.7,SNR=194						
AFI				S	Sn	13 01 08.0	-12
	111nm,0.3s,baz=216,slow=22,SNR=11						
AFI	Afiamalu	3.32	36	*e*Pn	Pn	13 00 34.6	-7.1
AFI				*e*Sn	Sn	13 01 11.1	-9.2
URZ	Urewera	22.99	199	P	P	13 04 48.9	+0.8
	10nm,0.4s,mb4.5,baz=358,slow=2.8,SNR=24						
URZ				S	S	13 08 49.5	-1.4
	14nm,1.0s,baz=180,slow=20,SNR=2.0						
URZ	Urewera	22.99	199	*e*P	P	13 04 48.3	+0.2
	13nm,0.5s,mb4.5						
STKA	Stephens Creek	43.13	241	P	P	13 07 42.9	+0.3
	2.9nm,0.9s,mb4.0,baz=79,slow=9.5,SNR=4.1						
STKA	Stephens Creek	43.13	241	*e*P	P	13 07 42.8	+0.2
	0.7nm,0.9s,mb3.4						
WRA	Warramunga Arr	49.23	258	P	P	13 08 30.9	+0.3
	0.4nm,0.4s,mb3.7,baz=94,slow=7.0,SNR=13						
WRA	Warramunga Arr	49.23	258	P	P	13 08 30.9	+0.2
ASAR	Alice Springs	49.41	253	P	P	13 08 31.8	-0.2
	8.7nm,0.6s,mb4.9,baz=88,slow=8.4,SNR=261						
ASAR				pP	pP	13 08 53.5	-1.9
	1.5nm,0.6s,baz=83,slow=8.8,SNR=3.5						
NVAR	Mina Array Bea	75.47	42	P	P	13 11 25.5	+0.2
	1.2nm,1.0s,mb3.6,baz=225,slow=7.8,SNR=6.7						
NVAR				pP	pP	13 11 50.4	-0.1
	0.4nm,0.8s,baz=226,slow=9.8,SNR=3.2						
NVAR	Mina Array Bea	75.47	42	P	P	13 11 25.5	+0.2
NVAR				pP	pP	13 11 50.4	-0.1
TXAR	Lajitas Array	81.58	56	P	P	13 12 00.2	+1.1
	0.1nm,0.4s,mb3.0,baz=251,slow=2.8,SNR=2.9						
PDAR	Pinedale Array	83.41	42	P	P	13 12 07.1	-1.2
	0.5nm,0.6s,mb3.5,baz=167,slow=2.6,SNR=3.8						
PDAR				pP	pP	13 12 34.0	+0.1
	0.4nm,0.7s,baz=228,slow=3.8,SNR=3.2						
ILAR	Eielson Array	83.72	11	P	P	13 12 08.8	-0.4
	0.3nm,0.9s,mb3.1,baz=224,slow=6.5,SNR=5.2						
ILAR				pP	pP	13 12 34.2	-0.6
	0.2nm,0.6s,baz=239,slow=5.5,SNR=1.8						

*IDC **07** 13:28:46.2±0.8, 0°.84N×126°.07E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.9/19, mbtmp4.0/9, ML3.5/1, Error ellipse: s-maj=45.1km s-min=14.3km az=79.0*
*NEIC **07** 13:28:47.2±0.5, 0°.76N×125°.78E, h10km, mb4.6/1, Error ellipse: s-maj=18.5km s-min=9.2km az=86.0*
*ISCJB **07** 13:28:52.2±0.5, 0°.78N±0°.05×126°.12E±0°.04, h65km±6km, mb4.0/10, Error ellipse: s-maj=8.1km s-min=5.6km az=24.6*
*DJA **07** 13:28:52, 0°.77N×126°.12E, h17km, MLv4.1/8*
ISC 07 13:28:53.3±0.5, 0°.79N±0°.05×126°.14E±0°.04, h57km±6km, n30, σ0º95/35, mb4.1/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.23	91	P	Pn	13 29 12.9	-1.3
TNTI				S	Sn	13 29 29.9	+0.3
MNI	Manado	1.45	297	P	Pn	13 29 15.7	-1.5
MNI				S	Sn	13 29 34.6	-0.4
LBMI	Labuha	1.96	136	P	Pn	13 29 23.8	-0.4
LBMI				S	Sn	13 29 48.9	+1.2
KMSI	Cibinong	2.17	264	P	Pn	13 29 26.5	-0.5
KMSI				S	Sn	13 29 54.1	+1.5
SGSI	Sangihe	2.94	348	P	Pn	13 29 38.8	+1.2
LUWI	Luwuk	3.82	242	P	Pn	13 29 48.8	-0.9
NLAI	Namlea	4.11	166	P	Pn	13 29 54.5	+0.9
MRSI	Marisa	4.21	266	P	Pn	13 29 56.4	+1.5
TTSI	Tana Toraja	7.37	239	P	Pn	13 30 38.6	+0.3
BKSI	Bulukumba	8.54	225	P	Pn	13 30 54.3	0.0
KAPI	Kappang	8.60	228	*e*P	Pn	13 30 46.4	-8.7
	28nm,1.2s						
FITZ	Fitzroy Crossi	18.77	181	P	Pn	13 33 07.7	-1.3
	0.1nm,0.3s,baz=6.8,slow=11,SNR=4.2						
FITZ	Fitzroy Crossi	18.77	181	*e*P	Pn	13 33 07.8	-1.2
WRA	Warramunga Arr	22.11	159	P	P	13 33 44.0	-0.1
	2.3nm,0.4s,mb3.9,baz=336,slow=11,SNR=55						
WRA	Warramunga Arr	22.11	159	P	P	13 33 44.0	-0.1
WB2	Warramunga Arr	22.12	159	*e*P	P	13 33 43.6	-0.6
MBWA	Marble Bar	22.69	196	*e*P	P	13 33 47.3	-2.8
ASAR	Alice Springs	25.45	163	P	P	13 34 17.4	+1.3
	3.4nm,0.3s,mb4.3,baz=347,slow=12,SNR=109						
ASAR				PcP	PcP	13 37 48.2	+1.2
	0.4nm,0.6s,baz=355,slow=2.2,SNR=6.7						
STKA	Stephens Creek	35.63	157	P	P	13 35 46.2	+0.4
	1.1nm,0.3s,mb4.3,baz=338,slow=7.4,SNR=16						
STKA	Stephens Creek	35.63	157	*e*P	P	13 35 46.4	+0.6
KSRS	Korea Array	36.52	2	P	P	13 35 53.7	+0.4
	1.0nm,0.7s,mb3.8,baz=177,slow=9.0,SNR=6.0						
MJAR	Matsushiro Arr	37.29	16	P	P	13 35 59.6	-0.2
	1.8nm,0.8s,mb4.0,baz=189,slow=10,SNR=9.4						
HHC	Hu-ho-hao-te	42.01	343	*e*P	P	13 36 40.2	+1.1
HHC				pP	pP	13 36 44.7	-9.0
HHC				sP	sP	13 36 47.3	-13
HHC				PP	PP	13 38 22.2	+4.9
HHC				PcP	PcP	13 38 34.8	+1.5
HHC				ScP	ScP	13 42 23.8	+4.6
HHC				S	S	13 43 00.0	+6.0
HHC				sS	sS	13 43 06.8	-12
HHC				SS	SS	13 46 01.6	-1.4
HHC				ScS	ScS	13 46 39.7	+3.2
HHC				pmax	pmax		
	comp=Z,110nm,1.1s						
HHC				pmax	pmax		
	comp=Z,320nm,5.2s						
HHC				LR	LR		
	comp=N,320nm,14.9s						
HHC				LR	LR		
	comp=E,420nm,15.2s						
HHC				LR	LR		
	comp=Z,320nm,16.1s						
PETK	Petropavlovsk-	58.36	22	P	P	13 38 43.6	+1.1
	comp=Z,1.5nm,0.7s,mb4.1,baz=203,slow=5.6,SNR=5.6						
MK31	Makanchi Array	59.64	327	*e*P	P	13 38 50.8	-0.8
MKAR	Makanchi Array	59.64	327	P	P	13 38 51.2	-0.4
	comp=Z,0.9nm,0.4s,mb4.1,baz=121,slow=8.3,SNR=16						
MKAR	Makanchi Array	59.64	327	P	P	13 38 51.2	-0.4
ZALV	Zalesovo Beam	62.94	334	P	P	13 39 14.3	+0.6
	comp=Z,0.4nm,0.3s,mb4.0,baz=120,slow=8.5,SNR=2.7						
KURK	Kurchatov	63.91	329	*e*P	P	13 39 19.6	-0.5
	comp=Z,4.2nm,1.0s,mb4.4						
ILAR	Eielson Array	88.00	25	P	P	13 41 36.2	-0.7
	comp=Z,0.3nm,0.8s,mb3.6,baz=224,slow=5.7,SNR=5.0						

*IDC **07** 13:40:12.2±1.6, 3°.14S×130°.74E, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/17, mbtmp4.1/6, MS3.4/3, Ms1 3.4/3, ms1mx2.9/24, Error ellipse: s-maj=102.4km s-min=21.1km az=66.0*
*ISCJB **07** 13:40:16.3±1.2, 3°.35S±0°.07×130°.78E±0°.08, h51km±13km, mb4.0/7, MS3.6/4, Error ellipse: s-maj=14.3km s-min=10.6km az=158.7*
*NEIC **07** 13:40:18.0±0.8, 3°.32S×130°.36E, h35km, mb4.1/1, Error ellipse: s-maj=31.4km s-min=9.8km az=77.0*
*DJA **07** 13:40:19, 3°.24S×130°.76E, h90km, MLv3.9/5*
ISC 07 13:40:18.5±1.0, 3°.39S±0°.07×130°.78E±0°.08, h54km±12km, n28, σ1º39/29, mb4.0/7, MS3.6/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.42	218	P	Pn	13 40 46.9	+4.9
TLE	Tual	2.97	139	P	Pn	13 41 06.4	+3.2
NLAI	Namlea	3.67	272	P	Pn	13 41 13.8	+1.0
BAKI	Biak	5.75	68	P	Pn	13 41 40.6	-0.8
	0.6nm195nm,0.9s						
KAKA	Kakadu	9.41	170	*e*P	Pn	13 42 30.3	-1.2
KAKA	Kakadu	9.41	170	P	Pn	13 42 32.6	+1.1
	154nm15nm,0.9s						
KNA	Kununurra	12.44	189	P	Pn	13 43 11.4	-1.5
	322nm32nm,0.9s						
FITZ	Fitzroy Crossi

*TRN **07** 13:51:26.7, 11.27N×61.72W, h17km, MD2.8*
*FUNV **07** 13:51:27.3, 11.16N×61.82W, h32km, MW2.9*
ISC 07 13:51:26.7±0.6, 11.18N±0.03×61.85W±0.04, h55km±12km, n18, σ0.69/30, 1C-1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.48**	**169**	⇓*e*P	**Pn**	**13 51 37.8**	**-0.3**
TCE				*e*S	**Sn**	**13 51 46.5**	**+0.3**
GUIV	**Guiria**	**0.64**	**215**	*e*P	**Pn**	**13 51 39.5**	**-0.5**
GUIV				*e*S	**Sn**	**13 51 49.6**	**+0.1**
TRN	**Trinidad (W)**	**0.68**	**140**	*e*P	**Pn**	**13 51 40.0**	**-0.4**
TRN				*e*S	**Sn**	**13 51 49.7**	**-0.7**
GRW	**Mount Saint Ca**	**1.00**	**11**	⇑*e*P	**Pn**	**13 51 44.0**	**-0.5**
GRW				*e*S	**Sn**	**13 51 56.2**	**-1.4**
TBH	**Brigand Hill**	**1.03**	**132**	*e*P	**Pn**	**13 51 46.6**	**+1.7**
TBH				*e*S	**Sn**	**13 52 01.4**	**+3.0**
GRIC	**Isle de Caille**	**1.13**	**13**	*e*P	**Pn**	**13 51 46.5**	**+0.2**
GRIC				*e*S	**Sn**	**13 52 01.0**	**+0.1**
GRSS	**Sisters**	**1.14**	**12**	*e*P	**Pn**	**13 51 46.8**	**+0.3**
GRSS				*e*S	**Sn**	**13 52 02.0**	**+0.9**
ITEV	**Isla Los Testi**	**1.27**	**278**	*e*P	**Pn**	**13 51 48.6**	**+0.4**
ITEV				*e*S	**Sn**	**13 52 05.0**	**+0.8**
TOSP	**Speyside**	**1.29**	**84**	*e*P	**Pn**	**13 51 47.9**	**-0.6**
TOSP				*e*S	**Sn**	**13 52 04.2**	**-0.5**
GRCU	**Cariacou**	**1.34**	**17**	*e*P	**Pn**	**13 51 49.1**	**-0.1**
GRCU				*e*S	**Sn**	**13 52 06.4**	**+0.4**
CRUV	**Carupano**	**1.45**	**250**	*e*P	**Pn**	**13 51 51.0**	**+0.4**
CRUV				*e*S	**Sn**	**13 52 08.2**	**-0.4**
GUNV	**Guanoco**	**1.47**	**227**	*e*P	**Pn**	**13 51 50.8**	**-0.1**
GUNV				*e*S	**Sn**	**13 52 09.0**	**-0.2**
IBAV	**Isla La Blanqu**	**2.75**	**284**	*e*P	**Pn**	**13 52 08.4**	**+0.1**
PCRV	**Puerto La Cruz**	**2.92**	**250**	*e*P	**Pn**	**13 52 10.2**	**-0.5**
RIOV	**Rio Grande**	**3.09**	**179**	*e*P	**Pn**	**13 52 12.9**	**-0.1**
CUPV	**Cœpira**	**4.03**	**254**	*e*P	**Pn**	**13 52 26.6**	**+0.7**
CAOV	**Caicara del Or**	**5.84**	**229**	*e*P	**Pn**	**13 52 50.5**	**-0.3**
BAUV	**El Baul**	**6.49**	**251**	*e*P	**Pn**	**13 52 58.8**	**-0.9**

*IDC **07** 14:06:59.5±0.6, 54.23S×56.24W, h0km, mb4.4/12, mb1 4.5/12, mb1mx4.4/16, mbtmp4.4/12, MS3.7/6, Ms1 3.8/6, ms1mx3.6/21, Error ellipse: s-maj=25.5km s-min=16.8km az=83.0*
*ISCJB **07** 14:07:00.1±0.4, 54.22S±0.06×55.9W±0.2, h10km, mb4.5/15, MS3.6/4, Error ellipse: s-maj=15.1km s-min=7.7km az=161.9*
*NEIC **07** 14:07:05.7±1.4, 54.19S×56.01W, h38km±13km, mb4.9/6, Error ellipse: s-maj=14.7km s-min=6.9km az=77.0*
ISC 07 14:07:02.1±0.4, 54.21S±0.06×55.9W±0.2, h10km, n62, σ1.08/31, mb4.5/15, MS3.6/4, Falkland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**7.34**	**260**	Pn	**Pn**	**14 08 40.5**	**-8.7**
	16nm,0.3s,baz=68,slow=13,SNR=126						
USHA				Sn	**Sn**	**14 10 00.3**	**-12**
	17nm,0.3s,baz=340,slow=12,SNR=7.8						
PMSA	**Palmer Station**	**11.37**	**198**	Pn	**Pn**	**14 09 45.8**	**+1.5**
	7.9nm,0.3s,baz=21,slow=12,SNR=100						
PMSA				LR	LR	14 13 16.0	
	comp=Z,351nm,21.5s,baz=338,slow=33						
PMSA	**Palmer Station**	**11.37**	**198**	*e*Pn	**Pn**	**14 09 45.4**	**+1.1**
PMSA				LR	LR	14 13 16.0	
TRQA	**Tornquist**	**16.69**	**343**	*e*P	**Pn**	**14 10 55.6**	**-0.2**
	31nm,0.8s						
PLCA	**Paso Flores**	**16.69**	**318**	Pn	**Pn**	**14 10 56.4**	**+0.5**
	0.4nm,0.3s,baz=154,slow=9.2,SNR=20						
PLCA				LR	LR	14 18 27.3	
	comp=Z,901nm,18.0s,baz=310,slow=42						
PLCA	**Paso Flores**	**16.69**	**318**	*e*P	**Pn**	**14 10 55.4**	**-0.4**
	11nm,0.8s						
PLCA				LR	LR	14 18 27.3	
CFAA	**Coronel Fontan**	**24.27**	**334**	P	**P**	**14 12 21.1**	**+2.0**
	0.4nm,0.6s,baz=191,slow=6.7,SNR=7.4						
CFAA				LR	LR	14 22 44.4	
	comp=Z,24nm,19.4s,MS2.7,baz=329,slow=39						
VNA3	**Neumayer Olymp**	**26.20**	**148**	*e*	**P**	**14 12 34.7**	**-1.7**
VNA3				*e*		14 16 00.0	
VNA1	**Neumayer--Stat**	**26.49**	**147**	*e*	**P**	**14 12 38.4**	**-0.6**
VNA2	**Neumayer--Watz**	**26.84**	**147**	*e*	**P**	**14 12 38.5**	**-3.6**
	baz=291,slow=9.9						
VNA2				*e*		14 16 00.5	
CPUP	**Villa Florida**	**27.87**	**357**	P	**P**	**14 12 51.5**	**-0.2**
	1.4nm,0.6s,mb3.8,baz=183,slow=12,SNR=4.8						
CPUP				LR	LR	14 25 46.6	
	comp=Z,199nm,18.6s,MS3.7,baz=159,slow=40						
MAIT	**Maitri**	**33.10**	**146**	*e*P	**P**	**14 13 38.9**	**+1.3**
QSPA	**South Pole Qui**	**36.05**	**180**	P	**P**	**14 14 02.4**	**-0.6**
	24nm,0.6s,mb5.3,baz=164,slow=3.2,SNR=275						
QSPA				PcP	PcP	14 16 27.9	-0.9
	4.8nm,0.9s,baz=275,slow=0.8,SNR=7.7						
QSPA				ScP	ScP	14 20 13.6	-1.1
	0.7nm,0.7s,baz=243,slow=4.5,SNR=5.6						
QSPA	**South Pole Qui**	**36.05**	**180**	*e*P	**P**	**14 14 02.2**	**-0.7**
	23nm,0.6s,mb5.3						
QSPA				PcP	PcP	14 16 27.9	-0.9
QSPA				ScP	ScP	14 20 13.6	-1.1
SIV	**San Ignacio**	**38.35**	**352**	P	**P**	**14 14 21.6**	**-1.4**
	2.7nm,0.5s,mb4.2,baz=172,slow=10,SNR=14						
BDFB	**Brasilia**	**38.97**	**12**	P	**P**	**14 14 27.9**	**-0.3**
	4.0nm,0.9s,mb4.2,baz=166,slow=7.5,SNR=4.7						
LPAZ	**La Paz**	**39.02**	**341**	P	**P**	**14 14 31.8**	**+3.1**
	1.4nm,0.6s,mb3.9,baz=151,slow=6.7,SNR=7.6						
LPAZ				LR	LR	14 30 59.3	
	comp=Z,167nm,19.1s,MS3.9,baz=185,slow=37						
LPAZ	**La Paz**	**39.02**	**341**	*e*P	**P**	**14 14 28.8**	**+0.1**
LPAZ				LR	LR	14 30 59.3	
SBA	**Scott Base**	**45.63**	**192**	*e*P	**P**	**14 15 22.3**	**+0.4**
	19nm,0.9s,mb5.0						
MAW	**Mawson**	**50.27**	**154**	P	**P**	**14 15 58.8**	**+1.0**
	0.7nm,0.5s,mb4.0,baz=246,slow=12,SNR=3.0						
MAW				PcP	PcP	14 17 16.1	-0.4
	4.0nm,0.9s,baz=176,slow=4.7,SNR=5.9						
SUR	**Sutherland**	**56.92**	**101**	P	**P**	**14 16 48.1**	**+1.0**
	14nm,1.1s,mb4.9,baz=180,slow=13,SNR=6.6						
SUR	**Sutherland**	**56.92**	**101**	*e*P	**P**	**14 16 48.5**	**+1.3**
OTAV	**Otavalo**	**57.38**	**333**	*e*P	**P**	**14 16 51.1**	**+0.7**
	20nm,0.8s,mb5.2						
BOSA	**Boshof**	**62.28**	**101**	P	**P**	**14 17 24.0**	**-0.1**
	2.8nm,0.6s,mb4.6,baz=21,slow=4.5,SNR=5.7						
BOSA	**Boshof**	**62.28**	**101**	*e*P	**P**	**14 17 24.0**	**-0.1**
	12nm,1.3s,mb4.9						
TSUM	**Tsumeb**	**65.00**	**88**	P	**P**	**14 17 42.5**	**+0.4**
	3.0nm,0.9s,mb4.3,baz=218,slow=9.6,SNR=6.5						
LBTB	**Lobatse**	**65.20**	**99**	P	**P**	**14 17 43.9**	**+0.4**
	16nm,0.7s,mb5.2,baz=230,slow=7.7,SNR=28						
DBIC	**Dimbokro**	**74.11**	**53**	LR	LR	14 47 18.9	
	comp=Z,66nm,18.0s,MS4.0,baz=136,slow=33						
TORD	**Torodi Ar. Bea**	**82.88**	**56**	P	**P**	**14 19 26.7**	**0.0**
	3.0nm,0.8s,mb4.4,baz=200,slow=6.0,SNR=13						
TORD				PP	PP	14 22 35.8	-1.5
	1.9nm,1.1s,baz=209,slow=8.1,SNR=5.4						
TXAR	**Lajitas Array**	**92.86**	**320**	P	**P**	**14 20 13.4**	**-1.2**
	0.4nm,0.9s,mb3.9,baz=107,slow=8.0,SNR=3.5						
STKA	**Stephens Creek**	**92.95**	**195**	P	**P**	**14 20 13.0**	**-2.3**
	1.0nm,0.7s,mb4.3,baz=176,slow=7.7,SNR=3.9						
ASAR	**Alice Springs**	**101.99**	**189**	P	Pdif	14 20 53.4	-3.0
	0.7nm,0.5s,baz=167,slow=4.3,SNR=25						
ASAR				PP	PP	14 25 05.8	-0.7
	0.7nm,0.9s,baz=181,slow=6.1,SNR=5.1						
ASAR				PKKPbc	PKKPbc	14 36 58.2	+0.1
	0.5nm,1.1s,baz=242,slow=3.9,SNR=3.8						
ESDC	**Sonseca Array**	**103.58**	**39**	PP	PP	14 25 17.6	-2.0
	0.6nm,0.8s,baz=227,slow=5.9,SNR=4.3						
WRA	**Warramunga Arr**	**105.64**	**190**	Pdiff	Pdif	14 21 09.8	-2.7
	0.6nm,0.6s,baz=177,slow=4.1,SNR=20						
WRA	**Warramunga Arr**	**105.64**	**190**	Pdif	Pdif	14 21 09.8	-2.7
NVAR	**Mina Array Bea**	**106.70**	**313**	PP	PP	14 25 41.4	-1.3
	0.1nm,0.3s,baz=299,slow=10,SNR=3.6						
BRTR	**Keskin Array B**	**120.75**	**64**	PKP	PKPdf	14 25 53.2	-0.3
	0.5nm,0.6s,baz=196,slow=5.6,SNR=3.5						
NOA	**NORSAR Array B**	**126.56**	**34**	PKP	PKPdf	14 26 02.9	-1.0
	0.5nm,0.7s,baz=171,slow=1.3,SNR=2.6						
FINES	**FINESS Array B**	**132.08**	**40**	PKP	PKPdf	14 26 12.9	-1.5
	1.5nm,0.8s,baz=185,slow=11,SNR=5.4						
ARCES	**ARCESS Array B**	**136.60**	**30**	PKP	PKPdf	14 26 22.8	+0.1
	2.1nm,1.0s,baz=209,slow=1.2,SNR=4.2						
ARCES	**ARCESS Array B**	**136.60**	**30**	PKP	PKPdf	14 26 22.8	+0.1
ILAR	**Eielson Array**	**137.36**	**321**	PKP	PKPdf	14 26 23.4	-0.8
	1.0nm,0.8s,baz=186,slow=3.3,SNR=8.8						
CMAR	**Chiang Mai Arr**	**139.40**	**142**	PKP	PKPdf	14 26 28.9	-0.5
	1.2nm,0.8s,baz=219,slow=3.5,SNR=7.7						
ABKAR	**Akbulak array**	**141.16**	**70**	*e*PKPpre	PKPpre	14 26 23.7	
ARU	**Arti**	**143.89**	**59**	*e*PKP	PKPdf	14 26 32.1	-4.1
AML	**Almayashu**	**145.00**	**89**	P	PKPbc	14 26 38.6	+0.5
	SNR=8.0						
AML	**Almayashu**	**145.00**	**89**	*e*P	PKPbc	14 26 37.0	-1.1
EKS2	**Erkin-Say**	**145.38**	**88**	P	PKPdf	14 26 39.4	+0.1
	SNR=11						
EKS2	**Erkin-Say**	**145.38**	**88**	*e*P	PKPdf	14 26 38.9	-0.3
AAK	**Ala-Archa**	**145.78**	**89**	P	PKPdf	14 26 40.6	+0.6
	SNR=6.7						
AAK	**Ala-Archa**	**145.78**	**89**	PKPbc	PKPbc	14 26 40.4	-0.2
	5.8nm,0.8s,baz=208,slow=4.2,SNR=20						
LSA	**Lhasa**	**145.86**	**122**	P	PKPdf	14 26 41.7	+1.2
LSA	**Lhasa**	**145.86**	**122**	*e*P	PKPdf	14 26 41.5	+1.0
KZA	**Kyzart**	**145.88**	**90**	P	PKPdf	14 26 41.5	+1.4
	SNR=11						
KZA	**Kyzart**	**145.88**	**90**	*e*P	PKPdf	14 26 41.2	+1.1
TKM2	**Tokmak 2**	**146.60**	**89**	P	PKPbc	14 26 43.4	+0.4
	SNR=6.6						
TKM2	**Tokmak 2**	**146.60**	**89**	*e*P	PKPdf	14 26 42.3	+0.9
KURK	**Kurchatov**	**152.42**	**78**	*e*PKPbc	PKPbc	14 26 57.3	+0.1
MK31	**Makanchi Array**	**152.71**	**88**	*e*PKPbc	PKPbc	14 26 56.8	-1.2
MKAR	**Makanchi Array**	**152.71**	**88**	PKP	PKPdf	14 26 50.4	-0.5
	0.4nm,0.8s,baz=251,slow=3.7,SNR=3.7						
MKAR				PKPbc	PKPbc	14 26 57.0	-1.0
	2.3nm,0.7s,baz=249,slow=2.1,SNR=27						
KSRS	**Korea Array**	**163.04**	**190**	PKPab	PKPab	14 27 52.3	-1.4
	1.0nm,0.7s,baz=179,slow=5.9,SNR=4.7						
HHC	**Hu-ho-hao-te**	**164.21**	**143**	*e*PKP	PKPdf	14 27 05.5	+0.6
HHC				pPKP	pPKPdf	14 27 16.3	+8.0
HHC				sPKP		14 27 20.0	
HHC				PKS		14 30 36.9	
HHC				PP	PP	14 31 49.5	+4.8
HHC				SKS	SKSdf	14 34 05.1	-3.8
HHC				SKKS	SKKSac	14 38 31.8	-0.4
HHC				SS	SS	14 52 17.2	+2.5
HHC				AMB	AMB		
	comp=Z,140nm,8.1s						
HHC				LR	LR		
	comp=N,190nm,19.8s						
HHC				LR	LR		
	comp=E,160nm,20.2s						
HHC				LR	LR		
	comp=Z,180nm,19.5s						

*ISCJB **07** 14:46:25.9±1.5, 17.2S±0.2×175.4W±0.2, h238km±24km, mb3.9/7, Error ellipse: s-maj=44.0km s-min=19.6km az=34.0*
*IDC **07** 14:46:26.6±1.9, 17.29S×175.19W, h241km±31km, mb3.5/5, mb1 3.7/6, mb1mx3.3/19, mbtmp3.5/6, Error ellipse: s-maj=38.0km s-min=22.2km az=116.0*
*NEIC **07** 14:46:27.9±1.3, 17.29S×175.25W, h252km±20km, mb4.3/1, Error ellipse: s-maj=30.6km s-min=17.4km az=126.0*
ISC 07 14:46:26.6±1.5, 17.3S±0.2×175.2W±0.2, h237km±24km, n11, σ0.79/13, mb3.9/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.74**	**45**	P	**Pn**	**14 47 40.5**	**+1.7**
	13nm,0.3s,baz=35,slow=4.4,SNR=36						
AFI				S	**S**	**14 48 35.0**	**-1.2**
	27nm,0.3s,baz=338,slow=21,SNR=12						
AFI	**Afiamalu**	**4.74**	**45**	*e*P	**Pn**	**14 47 40.9**	**+2.0**
AFI				S	**S**	**14 48 35.0**	**-1.2**
URZ	**Urewera**	**21.94**	**196**	P	**P**	**14 51 00.9**	**-0.2**
	4.2nm,0.5s,mb4.2,baz=301,slow=16,SNR=10						
CTAO	**Charters Tower**	**36.53**	**259**	*e*P	**P**	**14 53 09.4**	**-0.5**
	13nm,1.2s,mb4.3						
STKA	**Stephens Creek**	**41.57**	**241**	P	**P**	**14 53 51.3**	**-0.2**
	0.5nm,0.3s,mb3.5,baz=97,slow=8.1,SNR=6.7						
STKA	**Stephens Creek**	**41.57**	**241**	P	**P**	**14 53 52.0**	**+0.5**
WB2	**Warramunga Arr**	**47.70**	**259**	*e*P	**P**	**14 54 39.5**	**-0.4**
WRA	**Warramunga Arr**	**47.72**	**259**	P	**P**	**14 54 39.8**	**-0.2**
	1.4nm,0.5s,mb3.5,baz=96,slow=7.1,SNR=76						
ASAR	**Alice Springs**	**47.86**	**254**	P	**P**	**14 54 41.2**	**0.0**
	5.3nm,0.5s,mb4.1,baz=89,slow=9.7,SNR=177						
ILAR	**Eielson Array**	**84.64**	**12**	P	**P**	**14 58 32.8**	**-0.3**
	0.2nm,0.6s,mb3.0,baz=210,slow=4.9,SNR=4.6						
HHC	**Hu-ho-hao-te**	**89.03**	**313**	*e*P	**P**	**14 58 55.8**	**+1.0**
HHC				pP	pP	14 59 57.2	+4.8
HHC				sP	sP	15 00 24.1	+7.0
HHC				PP	PP	15 02 31.8	+3.3
HHC				SKS		15 08 59.8	
HHC				S	S	15 09 20.7	-2.0
HHC				sS	sS	15 11 08.6	+4.9
HHC				SS	SS	15 15 22.0	-0.3
HHC				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,140nm,7.0s						
HHC				LR	LR		
	comp=N,130nm,17.5s						
HHC				LR	LR		
	comp=E,130nm,16.3s						
HHC				LR	LR		
	comp=Z,130nm,16.9s						

*JMA **07** 14:47:41.4±0.6, 46.70N×152.53E, h30km, M4.2*
*ISCJB **07** 14:47:41.6±0.8, 46.55N±0.07×152.56E±0.09, h65km±7km, mb3.7/13, Error ellipse: s-maj=14.0km s-min=5.2km az=140.7*
*MOS **07** 14:47:42.4±1.2, 46.67N×152.49E, h71km, mb4.0/7, Error ellipse: s-maj=15.7km s-min=10.1km az=55.7*
*NEIC **07** 14:47:45.4±1.1, 46.75N×152.48E, h79km±9km, mb4.2/1, Error ellipse: s-maj=16.4km s-min=8.3km az=136.0*
*IDC **07** 14:47:46.3±2.6, 46.77N×152.48E, h88km±24km, mb3.4/12, mb1 3.6/14, mb1mx3.5/25, mbtmp3.4/14, Error ellipse: s-maj=22.7km s-min=13.9km az=135.0*
*BJI **07** 14:47:47.1, 46.89N×152.05E, h68km, mB4.3/4, mb4.3/6, Ms3.7/3, Ms7 3.6/4*
ISC 07 14:47:43.8±0.7, 46.54N±0.07×152.58E±0.09, h69km±6km, n59, σ1.20/69, mb3.7/13, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.54**	**250**	*e*PN	**Pn**	**14 48 33.3**	**-3.0**
KUR				*e*S	**Sn**	**14 49 18.0**	**+1.1**
KUR				pmax	pmax		
	comp=N,40nm,0.6s						
KUR				pmax	pmax		
	comp=Z,90nm,0.6s						
KUR				smax			
	comp=N,290nm,0.7s						
KUR				smax			
	comp=E,300nm,0.7s						
SKR	**Severo-Kuril's**	**4.76**	**28**	*e*PN	**Pn**	**14 48 53.0**	**0.0**
SKR				*e*S	**Sn**	**14 49 48.0**	**+1.2**
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
SKR				smax			
	comp=E,80nm,0.5s						
SKR				smax			
	comp=Z,60nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.36**	**245**	⇑*e*PN	**Pn**	**14 49 01.5**	**+0.4**
YUK				*i* S	**Sn**	**14 50 01.7**	**+0.2**
YUK				pmax	pmax		
	comp=N,23nm,0.2s						
YUK				pmax	pmax		
	comp=Z,122nm,0.2s						
YUK				pmax	pmax		
	comp=Z,250nm,1.5s						
YUK				smax			
	comp=E,430nm,1.1s						
YUK				smax			
	comp=N,106nm,0.7s						
YUK				smax			
	comp=E,235nm,0.7s						
NEM2	**Nemuro 2**	**5.80**	**239**	P	**Pn**	**14 49 05.3**	**-1.8**
NEM2				*e*S	**Sn**	**14 50 07.6**	**-4.6**
JRA	**Rausu**	**5.87**	**246**	P	**Pn**	**14 49 09.2**	**+1.1**
JNK	**Nakash**	**6.30**	**245**	P	**Pn**	**14 49 14.2**	**+0.2**
JNK				*e*S	**Sn**	**14 50 22.8**	**-1.7**
JAK	**Akkeshi**	**6.63**	**241**	P	**Pn**	**14 49 16.8**	**-1.8**
JAK				*e*S	**Sn**	**14 50 28.3**	**-4.4**
JTKR	**Abashiri--Toko**	**6.64**	**250**	P	**Pn**	**14 49 19.6**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.76**	**277**	*e*PN	**Pn**	**14 49 21.7**	**+1.4**
YSS				*e*S	**Sn**	**14 50 37.0**	**+1.2**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.76**	**277**	*e*P	**Pn**	**14 49 21.3**	**+1.0**
	comp=Z,19nm,0.8s						
JMP	**Maruseppu**	**6.98**	**252**	P	**Pn**	**14 49 24.6**	**+1.3**
JAR	**Ashorobuto**	**7.04**	**246**	P	**Pn**	**14 49 24.5**	**+0.3**
JAR				*e*S	**Sn**	**14 50 42.7**	**0.0**
PETK	**Petropavlovsk-**	**7.36**	**25**	P	**Pn**	**14 49 27.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=180,slow=11,SNR=6.7						
JKK2	**Kamakawa 2**	**7.44**	**253**	P	**Pn**	**14 49 31.0**	**+1.5**
ASAJ	**Asahikawa**	**7.44**	**255**	P	**Pn**	**14 49 32.2**	**+2.6**
	comp=Z,0.9nm,0.3s,baz=78,slow=18,SNR=18						
ASAJ	**Asahikawa**	**7.44**	**255**	PN	**Pn**	**14 49 32.2**	**+2.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.44**	**255**	*e*P	**Pn**	**14 49 31.2**	**+1.6**
	comp=Z,13nm,1.0s						
ASAJ	**Asahikawa**	**7.44**	**255**	P	**Pn**	**14 49 31.5**	**+1.9**
JCH	**Churui**	**7.66**	**242**	*e*S	**Sn**	**14 50 52.8**	**-5.0**
ERM	**Erimo**	**8.13**	**240**	*e*PN	**Pn**	**14 49 39.5**	**+0.5**
ERM				pmax	pmax		
	comp=Z,17nm,0.6s						
ERM	**Erimo**	**8.13**	**240**	*e*P	**Pn**	**14 49 39.5**	**+0.4**
	comp=Z,17nm,0.6s						
JBT2	**Biratori 2**	**8.19**	**246**	P	**Pn**	**14 49 39.1**	**-0.8**
JNBK	**Urakawa-nobuka**	**8.22**	**242**	*e*S	**Sn**	**14 51 03.6**	**-7.9**
JKB	**Kayabe**	**9.50**	**245**	P	**Pn**	**14 49 55.8**	**-2.0**
JKB				*e*S	**Sn**	**14 51 36.5**	**-6.4**
JYM2	**Yakumo 2**	**9.80**	**248**	P	**Pn**	**14 50 00.0**	**-1.8**
JANG	**Nango**	**10.13**	**236**	*e*S	**Sn**	**14 51 48.1**	**-10**
JTH	**Tanohata**	**10.22**	**234**	*e*S	**Sn**	**14 51 48.7**	**-12**
JOSM	**Okushiri--Mats**	**10.39**	**249**	P	**Pn**	**14 50 08.3**	**-1.6**
MJAR	**Matsushiro Arr**	**14.66**	**232**	P	**Pn**	**14 51 12.0**	**+4.7**
	comp=Z,0.2nm,0.3s,baz=36,slow=7.8,SNR=6.1						
YAK	**Yakutsk**	**20.30**	**328**	⇑*e*P	**P**	**14 52 12.4**	**-1.3**
KSRS	**Korea Array**	**20.38**	**252**	P	**P**	**14 52 17.2**	**+2.4**
	comp=Z,1.8nm,0.6s,baz=54,slow=11,SNR=7.2						
KSRS	**Korea Array**	**20.38**	**252**	*e*P	**P**	**14 52 18.0**	**+3.2**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SNY	**Shenyang**	**21.26**	**268**	⇓P	**P**	**14 52 29.3**	**+5.1**
SNY				pmax	pmax		
	comp=Z,13nm,0.3s,mb4.7						
SNY				pmax	pmax		
	comp=Z,50nm,4.3s						
SNY				LR	LR		
	comp=N,110nm,13.2s						
SNY				LR	LR		
	comp=E,140nm,13.9s						
SNY				LR	LR		
	comp=Z,72nm,5.9s						
HHC	**Hu-ho-hao-te**	**29.94**	**274**	*e*P	**P**	**14 53 47.3**	**+2.1**
HHC				pP	pP	14 54 05.1	+3.5
HHC				sP	sP	14 54 14.1	+4.4
HHC				PP	PP	14 54 47.0	-6.7
HHC				PcP	PcP	14 56 48.9	+2.8
HHC				S	**S**	**14 58 37.2**	**-0.4**
HHC				sS	sS	14 59 07.5	+1.6
HHC				SS	SS	15 00 17.9	-29
HHC				ScP	ScP	15 00 23.5	+1.5
HHC				ScS	ScS	15 04 16.3	-1.0
HHC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,75nm,5.8s						
HHC				LR	LR		
	comp=N,170nm,14.9s						
HHC				LR	LR		
	comp=E,98nm,16.7s						
HHC				LR	LR		
	comp=Z,96nm,14.3s						
ILAR	**Eielson Array**	**36.94**	**38**	P	**P**	**14 54 45.0**	**-0.6**
	comp=Z,0.2nm,0.7s,mb3.2,baz=256,slow=6.4,SNR=3.8						
INK	**Inuvik**	**42.03**	**32**	P	**P**	**14 55 27.3**	**-0.5**
	comp=Z,3.3nm,1.0s,mb4.0,baz=248,slow=3.7,SNR=3.1						
INK	**Inuvik**	**42.03**	**32**	*e*P	**P**	**14 55 28.1**	**+0.2**
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
INK	**Inuvik**	**42.03**	**32**	*e*P	**P**	**14 55 28.1**	**+0.2**
	comp=Z,3.8nm,1.0s,mb4.1						
MK31	**Makanchi Array**	**46.71**	**297**	*e*P	**P**	**14 56 05.1**	**-0.4**
MKAR	**Makanchi Array**	**46.71**	**297**	P	**P**	**14 56 04.4**	**-1.1**
	comp=Z,0.6nm,0.6s,mb3.5,baz=67,slow=7.9,SNR=9.0						
MKAR				PcP	PcP	14 57 37.6	-0.3
	comp=Z,0.3nm,0.6s,baz=49,slow=3.1,SNR=3.7						
MKAR	**Makanchi Array**	**46.71**	**297**	*i* P	**P**	**14 56 05.3**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**46.71**	**297**	P	**P**	**14 56 04.4**	**-1.1**
MKAR				PcP	PcP	14 57 37.6	-0.3
CMAR	**Chiang Mai Arr**	**51.96**	**256**	P	**P**	**14 56 46.8**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.7,baz=42,slow=7.2,SNR=3.7						
CMAR	**Chiang Mai Arr**	**51.96**	**256**	P	**P**	**14 56 46.8**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**64.07**	**335**	P	**P**	**14 58 08.5**	**-1.4**
	comp=Z,1.6nm,0.4s,mb4.2,baz=38,slow=6.6,SNR=20						
FINES	**FINESS Array B**	**64.07**

*ISCJB **07** 15:26:31.6±0.5, 50°.29N±0°.06×155°.20E±0°.10, h138km±4km, mb3.6/13, Error ellipse: s-maj=13.8km s-min=5.3km az=136.6*
*NEIC **07** 15:26:33.9±0.7, 50°.43N×155°.14E, h143km±7km, mb4.2/2, Error ellipse: s-maj=13.3km s-min=6.3km az=143.0*
*BJI **07** 15:26:33.3, 50°.41N×155°.40E, h167km, mB4.4/5, mb4.4/6*
*IDC **07** 15:26:34.7±2.0, 50°.50N×155°.02E, h150km±19km, mb3.3/12, mb1 3.6/15, mb1mx3.5/26, mbtmp3.4/15, Error ellipse: s-maj=21.7km s-min=11.3km az=148.0*

ISC 07 15:26:32.8±0.5, 50°.30N±0°.06×155°.17E±0°.10, h133km±4km, n52, σ1§17/59, mb3.6/13, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**0.62**	**23**	*e*P	**Pn**	**15 26 52.3**	**-0.6**
ALID				*i* S	**Sn**	**15 27 08.0**	**-0.2**
SKR	**Severo-Kuril's**	**0.72**	**57**	*i* PN	**Pn**	**15 26 52.9**	**-0.7**
SKR				*e*S	**Sn**	**15 27 07.8**	**-1.6**
SKR				pmax	pmax		
	comp=E,230nm,0.5s						
SKR				pmax	pmax		
	comp=Z,1μm,0.5s						
SKR				pmax	pmax		
	comp=N,350nm,0.3s						
SKR				pmax	pmax		
	comp=Z,1μm,1.0s						
SKR				smax			
	comp=N,310μm,0.5s						
SKR				smax			
	comp=E,840nm,0.6s						
SKR				smax			
	comp=N,2μm,4.0s						
SKR				smax			
	comp=E,3μm,2.0s						
MIPR	**Malaya Ipel'ka**	**2.22**	**26**	*e*P	**Pn**	**15 27 09.3**	**-0.2**
MIPR				*i* S	**Sn**	**15 27 37.5**	**-0.3**
GRL	**Gorelyy**	**2.90**	**38**	*e*P	**Pn**	**15 27 18.6**	**+0.5**
GRL				*i* S	**Sn**	**15 27 55.0**	**+1.9**
PETK	**Petropavlovsk-**	**3.23**	**28**	P	**Pn**	**15 27 23.0**	**+0.7**
	comp=E,1.3nm,0.3s,baz=201,slow=13,SNR=24						
PETK	**Petropavlovsk-**	**3.23**	**28**	PN	**Pn**	**15 27 23.0**	**+0.7**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PET	**Petropavlovsk**	**3.49**	**37**	*e*P	**Pn**	**15 27 25.3**	**-0.5**
PET				*i* S	**Sn**	**15 28 05.5**	**-1.3**
PET	**Petropavlovsk**	**3.49**	**37**	*e*P	**Pn**	**15 27 25.2**	**-0.6**
AVH	**Avacha**	**3.71**	**35**	*e*P	**Pn**	**15 27 29.7**	**+1.0**
AVH				*i* S	**Sn**	**15 28 13.1**	**+1.1**
GNL	**Ganaly**	**3.81**	**26**	*e*P	**Pn**	**15 27 30.8**	**+0.8**
GNL				*i* S	**Sn**	**15 28 15.1**	**+0.7**
KII	**Karymskiy**	**4.58**	**33**	*e*P	**Pn**	**15 27 42.6**	**+2.4**
KII				*i* S	**Sn**	**15 28 34.6**	**+2.0**
MKZ	**Mys Kozlova**	**5.86**	**41**	*e*P	**Pn**	**15 27 55.3**	**-2.0**
MKZ				*i* S	**Sn**	**15 28 55.9**	**-7.3**
KBTR	**Krutoberegovo**	**7.49**	**35**	*e*P	**Pn**	**15 28 17.0**	**-2.2**
BKI	**Bering**	**8.19**	**49**	*e*P	**Pn**	**15 28 25.6**	**-3.0**
YSS	**Yuzh-Sakhalins**	**8.88**	**253**	*e*PN	**Pn**	**15 28 40.1**	**+2.2**
YUK	**Yuzh-Kuril'sk**	**8.91**	**229**	*e*PN	**Pn**	**15 28 37.7**	**-0.6**
ASAJ	**Asahikawa**	**10.54**	**239**	P	**Pn**	**15 29 02.0**	**+1.8**
	comp=Z,1.4nm,0.3s,baz=56,slow=11,SNR=20						
ASAJ	**Asahikawa**	**10.54**	**239**	PN	**Pn**	**15 29 02.1**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**10.54**	**239**	*e*P	**Pn**	**15 29 01.8**	**+1.6**
	comp=Z,5.4nm,0.8s						
ERM	**Erimo**	**11.73**	**230**	*e*PN	**Pn**	**15 29 15.7**	**-0.2**
HABR	**Khabarovsk**	**13.23**	**270**	*e*PN	**Pn**	**15 29 34.2**	**-1.1**
YAK	**Yakutsk**	**18.27**	**320**	*e*P	**P**	**15 30 36.0**	**+0.2**
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK	**Yakutsk**	**18.27**	**320**	*e*P	**P**	**15 30 36.0**	**+0.2**
	comp=Z,10nm,0.8s						
MAT	**Matsushiro**	**18.40**	**228**	P	**P**	**15 30 37.2**	**-0.2**
MJAR	**Matsushiro Arr**	**18.40**	**228**	P	**P**	**15 30 40.4**	**+2.9**
	comp=Z,0.8nm,0.3s,baz=32,slow=6.9,SNR=13						
MJAR	**Matsushiro Arr**	**18.40**	**228**	P	**P**	**15 30 40.4**	**+3.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**23.31**	**247**	P	**P**	**15 31 28.2**	**-0.5**
	comp=Z,1.6nm,0.7s,mb3.5,baz=48,slow=9.6,SNR=7.9						
KSRS	**Korea Array**	**23.31**	**247**	P	**P**	**15 31 28.2**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
HHC	**Hu-ho-hao-te**	**31.55**	**270**	*e*P	**P**	**15 32 43.8**	**+1.6**
HHC				pP	pP	15 33 14.0	+3.2
HHC				PP	PP	15 33 53.4	-2.5
HHC				PcP	PcP	15 35 33.8	+2.3
HHC				S	**S**	**15 37 39.8**	**-0.9**
HHC				SS	SS	15 39 38.2	-23
HHC				ScS	ScS	15 42 59.1	-1.0
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,430nm,6.9s						
HHC				LR	LR		
	comp=N,430nm,15.3s						
HHC				LR	LR		
	comp=E,230nm,14.1s						
HHC				LR	LR		
	comp=Z,410nm,13.7s						
ILAR	**Eielson Array**	**32.96**	**42**	P	**P**	**15 32 53.5**	**-0.8**
	comp=Z,0.8nm,0.7s,mb3.6,baz=266,slow=9.0,SNR=11						
ILAR	**Eielson Array**	**32.96**	**42**	P	**P**	**15 32 53.5**	**-0.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**41.73**	**303**	P	**P**	**15 34 07.9**	**-0.3**
	comp=Z,0.6nm,0.3s,mb3.6,baz=41,slow=6.1,SNR=3.0						
ZALV	**Zalesovo Beam**	**41.73**	**303**	P	**P**	**15 34 07.9**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
MK31	**Makanchi Array**	**46.59**	**295**	*e*P	**P**	**15 34 45.8**	**-1.2**
MKAR	**Makanchi Array**	**46.59**	**295**	P	**P**	**15 34 46.0**	**-1.0**
	comp=Z,0.4nm,0.4s,mb3.4,baz=47,slow=5.6,SNR=9.5						
MKAR				pP	pP	15 35 18.1	+0.8
	comp=Z,0.7nm,0.7s,baz=60,slow=7.4,SNR=6.3						
MKAR	**Makanchi Array**	**46.59**	**295**	P	**P**	**15 34 46.0**	**-1.0**
MKAR				*PP	pP	15 35 18.1	+0.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**47.29**	**39**	P	**P**	**15 34 51.1**	**-1.0**
	comp=Z,0.6nm,0.6s,mb3.4,baz=296,slow=7.5,SNR=2.8						
YKA	**Yellowknife Ar**	**47.29**	**39**	P	**P**	**15 34 51.1**	**-1.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YBH	**Yreka Blue Hor**	**54.93**	**65**	P	**P**	**15 35 50.3**	**+0.8**
	comp=Z,1.4nm,0.5s,mb3.9,baz=307,slow=8.8,SNR=5.3						
YBH	**Yreka Blue Hor**	**54.93**	**65**	P	**P**	**15 35 50.3**	**+0.8**
YBH				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NVAR	**Mina Array Bea**	**59.64**	**65**	P	**P**	**15 36 23.4**	**+0.7**
	comp=Z,1.3nm,0.6s,mb3.9,baz=296,slow=7.8,SNR=12						
FINES	**FINESS Array B**	**61.41**	**335**	P	**P**	**15 36 32.3**	**-2.0**
	comp=Z,0.3nm,0.3s,mb3.6,baz=26,slow=5.5,SNR=6.8						
BW06	**Boulder Array**	**61.60**	**56**	*e*P	**P**	**15 36 35.7**	**-0.1**
PDAR	**Pinedale Array**	**61.60**	**56**	P	**P**	**15 36 35.6**	**-0.2**
	comp=Z,1.4nm,0.8s,mb3.9,baz=313,slow=1.8,SNR=12						
WRA	**Warramunga Arr**	**72.31**	**201**	P	**P**	**15 37 44.4**	**+0.8**
	comp=Z,0.1nm,0.5s,mb2.8,baz=14,slow=6.1,SNR=3.4						
TXAR	**Lajitas Array**	**74.60**	**63**	P	**P**	**15 37 57.2**	**0.0**
	comp=Z,1.1nm,0.6s,mb3.7,baz=295,slow=4.0,SNR=18						
TXAR	**Lajitas Array**	**74.60**	**63**	P	**P**	**15 37 57.2**	**0.0**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**74.60**	**63**	P	**P**	**15 37 57.2**	**0.0**
ASAR	**Alice Springs**	**76.01**	**200**	P	**P**	**15 38 05.7**	**+0.7**
	comp=Z,0.2nm,0.7s,mb2.9,baz=15,slow=5.1,SNR=5.6						
PPT	**Papeete**	**83.19**	**128**	*e*LR	LR	15 38 26.2	
	comp=Z,165nm,25.2s						
PLCA	**Paso Flores**	**147.03**	**91**	PKPbc	PKPbc	15 45 59.0	-0.2
	comp=Z,1.1nm,0.7s,baz=278,slow=7.2,SNR=2.8						
PLCA	**Paso Flores**	**147.03**	**91**	PKP2	PKPbc	15 45 59.0	-0.2
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

NEIC 07 15:34:48.0, 19°.21N×155°.53W, h35km, MD3.6(HVO), After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.10**	**294**	*e*Pg	Pn	15 34 53.8	-0.3
KHU				*e*Sg	Sn	15 34 55.5	-2.7
PUH	**Pauahi**	**0.34**	**60**	*e*Pg	Pn	15 34 55.4	-1.0
STCH	**Steam Cracks**	**0.42**	**65**	*e*Pg	Pn	15 34 56.3	-1.2
STCH				*e*Sg	Sn	15 35 02.3	-1.7
POHA	**Pohakuloa**	**0.55**	**359**	*e*Pg	Pn	15 34 58.0	-1.3
HON	**Honolulu**	**3.13**	**313**	*e*Pn	Pn	15 35 32.5	-2.4
HON				*e*Sn	Sn	15 36 02.4	-8.8
KIP	**Kipapa**	**3.21**	**314**	*e*Pn	Pn	15 35 33.4	-2.6
KIP				*e*Sn	Sn	15 36 03.9	-9.0

IDC 07 15:36:38.7±3.4, 6°.74S×150°.23E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/16, mbtmp3.4/3, Error ellipse: s-maj=110.8km s-min=45.5km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.25**	**228**	P	P	15 41 15.5	-0.2
	0.8nm,0.8s,baz=53,slow=11,SNR=12						
ASAR	**Alice Springs**	**23.00**	**221**	P	P	15 41 44.6	-0.8
	0.2nm,0.3s,baz=53,slow=9.8,SNR=16						
FITZ	**Fitzroy Crossi**	**26.49**	**243**	P	P	15 42 18.9	+0.9
	0.5nm,0.4s,baz=51,slow=10,SNR=5.8						
TORD	**Torodi Ar. Bea**	**148.38**	**284**	PKPbc	PKPbc	15 56 27.6	-0.6
	0.5nm,0.8s,baz=44,slow=3.2,SNR=2.7						

IDC 07 15:44:18.0±2.3, 6°.43S×130°.36E, h0km, mb3.5/1, mb1 3.4/4, mb1mx3.2/16, mbtmp3.2/4, ML3.2/3, Error ellipse: s-maj=88.9km s-min=29.4km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.48**	**201**	Pn	Pn	15 47 15.2	-1.8
	0.1nm,0.3s,baz=28,slow=11,SNR=8.6						
FITZ				Sn	Sn	15 49 20.5	-16
	0.2nm,0.3s,baz=160,slow=21,SNR=7.5						
WRA	**Warramunga Arr**	**13.97**	**164**	Pn	Pn	15 47 37.8	+0.4
	0.1nm,0.3s,baz=350,slow=13,SNR=15						
WRA				Sn	Sn	15 50 03.1	-10
	0.2nm,0.3s,baz=343,slow=21,SNR=7.0						
ASAR	**Alice Springs**	**17.47**	**169**	Pn	Pn	15 48 24.5	+1.3
	0.1nm,0.3s,baz=344,slow=8.7,SNR=10						
ASAR				Sn	Sn	15 51 26.6	-12
	0.0nm,0.3s,baz=343,slow=24,SNR=4.2						
MKAR	**Makanchi Array**	**67.95**	**327**	P	P	15 55 18.9	+0.2
	0.2nm,0.3s,baz=140,slow=6.6,SNR=5.0						

*NDI **07** 15:48:24.6±3.1, 33°.97N×70°.49E, h10km, ML3.1*
*ISCJB **07** 15:48:32.4±0.7, 34°.38N±0°.05×72°.64E±0°.06, h10km, Error ellipse: s-maj=8.6km s-min=5.8km az=137.9*
*NNC **07** 15:48:41.7±2.1, 34°.93N×72°.01E, h0km, mb3.4, mpv3.6, Error ellipse: s-maj=25.7km s-min=16.6km az=108.0*

ISC 07 15:48:34.7±0.9, 34°.49N±0°.08×72°.7E±0°.2, h10km, n12, σ1§39/18, 1C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**0.93**	**224**	P	**Sg**	**15 48 59.4**	**-5.1**
CHCP	**Chirah Chowk**	**0.96**	**150**	P	**Pg**	**15 48 56.5**	**+3.4**
THW	**Thamme Wali**	**1.86**	**205**	P	**Pg**	**15 49 15.6**	**+5.2**
SDNR	**Sundarnagar**	**4.67**	**128**	*e*PKP	**Pn**	**15 49 53.5**	**+8.3**
SDNR				*ex*	**Sn**	**15 50 39.5**	**0.0**
KLP	**Kalpa**	**5.52**	**121**	*ex*	**Pn**	**15 49 59.2**	**+2.2**
KLP				*e*S	**Sg**	**15 51 21.2**	**-11**
KLP				AML	AML	15 51 29.0	
	comp=N,41nm,0.6s						
KLP				AML	AML	15 51 30.0	
	comp=E,27nm,0.3s						
KHET	**Khetri**	**6.93**	**157**	*e*S	**Sn**	**15 51 32.2**	**-3.0**
KHET				AML	AML	15 51 37.9	
	comp=N,7.4nm,0.4s						
KHET				AML	AML	15 51 38.3	
	comp=E,8.3nm,0.6s						
JOSI	**Joshimath**	**7.00**	**122**	*e*PKP	**Pn**	**15 50 07.5**	**-10**
JOSI				*e*S	**Sn**	**15 51 36.3**	**-0.6**
JOSI				AML	AML	15 51 45.0	
	comp=E,18nm,0.4s						
JOSI				AML	AML	15 51 45.5	
	comp=N,17nm,0.4s						
KUDL	**Kundal**	**7.11**	**152**	*e*PKP	**Pn**	**15 50 09.1**	**-10**
KUDL				*e*S	**Sn**	**15 51 32.1**	**-7.5**
KUDL				AML	AML	15 51 35.5	
	comp=E,7.5nm,0.5s						
KUDL				AML	AML	15 51 37.2	
	comp=N,4.9nm,0.3s						
SONA	**Sohna**	**7.26**	**148**	*e*PKP	**Pn**	**15 50 21.2**	**+0.3**
SONA				*e*S	**Sn**	**15 51 43.5**	**+0.1**
SONA				AML	AML	15 51 49.1	
	comp=E,17nm,0.4s						
SONA				AML	AML	15 51 51.1	
	comp=N,12nm,0.2s						
KK31	**Karatay Array**	**8.77**	**349**	P	**Pn**	**15 50 42.9**	**+1.4**
	comp=N,1.2nm,0.3s,baz=171,slow=13,SNR=38						
KK31				⇑S	**Sn**	**15 52 17.5**	**-2.7**
	comp=N,0.9nm,0.4s,baz=171,slow=24,SNR=6.4						
AB31	**Akbulak array**	**17.51**	**331**	P	**Pn**	**15 52 39.4**	**+0.7**
	comp=N,0.8nm,0.6s,baz=149,slow=12,SNR=7.9						
AKTO	**Aktyubinsk**	**19.21**	**331**	⇓P	**Pn**	**15 52 59.1**	**-0.4**
	comp=N,0.2nm,0.5s						

*IDC **07** 16:46:50.7±15.0, 7°.34S×128°.59E, h104km±171km, mb3.1/3, mb1 3.4/6, mb1mx3.2/17, mbtmp3.3/6, ML3.7/3, Error ellipse: s-maj=150.6km s-min=43.5km az=37.0*
*NEIC **07** 16:46:55.6±2.8, 7°.55S×128°.25E, h149km±34km, mb4.3/2, Error ellipse: s-maj=31.1km s-min=24.9km az=64.0*
*ISCJB **07** 16:46:58.0±1.3, 7°.87S±0°.06×128°.5E±0°.1, h208km±17km, mb3.4/5, Error ellipse: s-maj=18.1km s-min=10.0km az=6.8*
*DJA **07** 16:46:57, 7°.57S×128°.40E, h110km, mb4.3/4*

ISC 07 16:46:57.8±1.1, 7°.81S±0°.06×128°.5E±0°.1, h180km±12km, n17, σ1§36/27, mb3.5/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**4.76**	**63**	P	**Pn**	**16 48 08.4**	**-0.3**
TLE				S	**Sn**	**16 48 59.5**	**-4.7**
KAKA	**Kakadu**	**6.25**	**142**	*e*P	**Pn**	**16 48 29.7**	**+1.7**
	25nm,0.5s						
KAKA				*e*S	**Sn**	**16 49 37.6**	**-1.6**
KAKA	**Kakadu**	**6.25**	**142**	P	**Pn**	**16 48 30.2**	**+2.1**
	0.9nm3μm19nm,0.6s						
KAKA				S	**Sn**	**16 49 38.6**	**-0.6**
	0.9nm3μm19nm,0.6s						
KNA	**Kununurra**	**7.90**	**178**	P	**Pn**	**16 48 51.7**	**+1.9**
	1μm54nm,0.7s						
KNA				S	**Sn**	**16 50 16.6**	**-1.9**
	1μm54nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.60**	**195**	P	**Pn**	**16 49 25.5**	**+0.4**
	0.6nm,0.3s,baz=41,slow=12,SNR=37						
FITZ				S	**Sn**	**16 51 18.1**	**-4.9**
	1.2nm,0.3s,baz=265,slow=23,SNR=8.0						
FITZ	**Fitzroy Crossi**	**10.60**	**195**	*e*P	**Pn**	**16 49 25.6**	**+0.5**
FITZ				S	**Sn**	**16 51 18.1**	**-4.9**
FITZ	**Fitzroy Crossi**	**10.60**	**195**	P	**Pn**	**16 49 25.8**	**+0.7**
	15nm,1.9s						
WRA	**Warramunga Arr**	**13.34**	**155**	P	**Pn**	**16 50 00.6**	**+0.3**
	0.3nm,0.3s,baz=322,slow=14,SNR=20						
WRA				S	**Sn**	**16 52 22.4**	**-6.3**
	1.3nm,0.3s,baz=334,slow=22,SNR=13						
WRA	**Warramunga Arr**	**13.34**	**155**	P	**Pn**	**16 50 00.6**	**+0.3**
WRA				S	**Sn**	**16 52 22.4**	**-6.3**
WB2	**Warramunga Arr**	**13.34**	**155**	*e*P	**Pn**	**16 50 00.4**	**+0.1**
COEN	**Coen**	**15.68**	**114**	P	**Pn**	**16 50 33.8**	**+4.5**
ASAR	**Alice Springs**	**16.61**	**162**	P	**Pn**	**16 50 43.7**	**+3.2**
	0.4nm,0.3s,baz=341,slow=11,SNR=98						
ASAR				S	**S**	**16 53 44.1**	**-0.1**
	0.4nm,0.3s,baz=318,slow=16,SNR=7.3						
CMAR	**Chiang Mai Arr**	**39.11**	**312**	P	**P**	**16 54 07.1**	**-0.9**
	0.2nm,0.6s,mb2.9,baz=123,slow=6.6,SNR=3.5						
HHC	**Hu-ho-hao-te**	**50.86**	**343**	*e*P	**P**	**16 55 42.7**	**+2.5**
HHC				pP	pP	16 56 15.0	-5.5
HHC				sP	sP	16 56 31.0	-9.4
HHC				PcP	PcP	16 56 58.1	+3.9
HHC				PP	PP	16 57 42.3	+3.8
HHC				ScP	ScP	17 00 39.0	+5.5
HHC				S	**S**	**17 02 45.7**	**+3.3**
HHC				sS	sS	17 03 43.3	-9.4
HHC				ScS	ScS	17 05 16.2	+3.9
HHC				SS	SS	17 06 20.4	+0.6
HHC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,320nm,6.3s						
HHC				LR	LR		
	comp=N,330nm,18.3s						
HHC				LR	LR		
	comp=E,470nm,18.5s						
HHC				LR	LR		
	comp=Z,320nm,15.7s						
MKAR	**Makanchi Array**	**68.08**	**328**	P	**P**	**16 57 37.2**	**-0.8**
	comp=Z,0.2nm,0.5s,mb3.1,baz=113,slow=8.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**71.64**	**335**	P	**P**	**16 57 57.8**	**-1.7**
	comp=Z,0.4nm,0.6s,mb3.4,baz=147,slow=2.9,SNR=2.8						
KURK	**Kurchatov**	**72.42**	**329**	*e*P	**P**	**16 58 03.4**	**-0.8**
	comp=Z,2.5nm,1.2s,mb3.8						

*ISCJB **07** 16:49:04.4±1.1, 38°.21N±0°.08×20°.16E±0°.07, h26km±6km, Error ellipse: s-maj=14.4km s-min=6.1km az=31.0*
*CSEM **07** 16:49:05.5±0.7, 38°.17N×20°.22E, h24km±4km, MD3.1, Error ellipse: s-maj=16.4km s-min=6.2km az=29.0*
*ATH **07** 16:49:07.0, 38°.36N×20°.39E, h19km±1km, MD3.1/7*
*THE **07** 16:49:07.3, 38°.43N×20°.49E, h0km±2km, ML2.3/7, Error ellipse: s-maj=3.0km s-min=1.0km az=225.0*

ISC 07 16:49:06.7±0.8, 38°.29N±0°.06×20°.30E±0°.07, h18km±6km, n36, σ1§10/67, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.26**	**117**	*e*PB	**Pg**	**16 49 12.5**	**0.0**
VLS				*e*SB	**Sg**	**16 49 17.3**	**+0.9**
VLS	**Valsamata**	**0.26**	**117**	P	**Pg**	**16 49 12.4**	**-0.1**
VLS				S	**Sg**	**16 49 17.1**	**+0.7**
VLS	**Valsamata**	**0.26**	**117**	*e*Pb	**Pg**	**16 49 12.5**	**0.0**
VLS				*e*Sb	**Sg**	**16 49 17.3**	**+0.9**
KFL	**Anninata**	**0.42**	**115**	P	**Pg**	**16 49 14.6**	**-0.8**
KFL				S	**Sg**	**16 49 21.3**	**0.0**
KFL	**Anninata**	**0.42**	**115**	P	**Pg**	**16 49 14.6**	**-0.8**
KFL				S	**Sg**	**16 49 21.3**	**0.0**
RLS	**Riolos of Patr**	**0.95**	**104**	*e*PN	**Pn**	**16 49 24.4**	**-0.6**
RLS				*e*SN	**Sn**	**16 49 37.4**	**-0.7**
RLS	**Riolos of Patr**	**0.95**	**104**	*e*Pn	**Pn**	**16 49 24.4**	**-0.6**
RLS				*e*Sn	**Sn**	**16 49 37.4**	**-0.7**
IGT	**Igoumenitsa**	**1.24**	**1**	P	**Pn**	**16 49 28.2**	**-0.8**
IGT				S	**Sb**	**16 49 45.0**	**-0.1**
IGT	**Igoumenitsa**	**1.24**	**1**	P	**Pn**	**16 49 28.2**	**-0.8**
IGT				S	**Sb**	**16 49 45.0**	**-0.1**
EFP	**Efpalio**	**1.27**	**83**	*e*PN	**Pn**	**16 49 29.6**	**+0.2**
EFP	**Efpalio**	**1.27**	**83**	P	**Pn**	**16 49 27.0**	**-2.4**
EFP				S	**Sb**	**16 49 45.4**	**-0.5**
EFP	**Efpalio**	**1.27**	**83**	P	**Pn**	**16 49 27.0**	**-2.4**
EFP	**Efpalio**	**1.27**	**83**	*e*Pn	**Pn**	**16 49 29.6**	**+0.2**
EFP				S	**Sb**	**16 49 45.4**	**-0.5**
LAKA	**Lakka**	**1.32**	**92**	P	**Pn**	**16 49 28.6**	**-1.6**
LAKA				S	**Sb**	**16 49 47.0**	**-0.5**
LAKA	**Lakka**	**1.32**	**92**	P	**Pn**	**16 49 28.6**	**-1.6**
LAKA				S	**Sb**	**16 49 47.0**	**-0.5**
EVR	**Evrytania**	**1.33**	**62**	*e*PN	**Pn**	**16 49 30.0**	**-0.3**
EVR				*e*SN	**Sn**	**16 49 48.0**	**+0.4**
EVR	**Evrytania**	**1.33**	**62**	*e*Pn	**Pn**	**16 49 30.0**	**-0.3**
EVR				*e*Sn	**Sn**	**16 49 48.0**	**+0.4**
TRIZ	**Trizonia**	**1.39**	**87**	P	**Pn**	**16 49 29.2**	**-2.0**
TRIZ				S	**Sn**	**16 49 49.1**	**0.0**
TRIZ	**Trizonia**	**1.39**	**87**	P	**Pn**	**16 49 29.2**	**-2.0**
TRIZ				S	**Sn**	**16 49 49.1**	**0.0**
KALE	**Kalithea**	**1.45**	**86**	P	**Pn**	**16 49 32.1**	**+0.2**
KALE				S	**Sn**	**16 49 50.4**	**0.0**
KALE	**Kalithea**	**1.45**	**86**	P	**Pn**	**16 49 32.1**	**+0.2**
KALE				S	**Sn**	**16 49 50.4**	**0.0**
KEK	**Kerkira**	**1.47**	**345**	*e*PN	**Pn**	**16 49 34.1**	**+1.9**
KEK				*e*SN	**Sn**	**16 49 53.7**	**+2.7**
KEK	**Kerkira**	**1.47**	**345**	P	**Pn**	**16 49 33.5**	**+1.3**
KEK				S	**Sn**	**16 49 52.5**	**+1.5**
KEK	**Kerkira**	**1.47**	**345**	P	**Pn**	**16 49 33.5**	**+1.3**
KEK	**Kerkira**	**1.47**	**345**	*e*Pn	**Pn**	**16 49 34.1**	**+1.9**
KEK				S	**Sn**	**16 49 52.5**	**+1.5**
KEK				*e*Sn	**Sn**	**16 49 53.7**	**+2.7**
DSF	**Desfina**	**1.75**	**85**	P	**Pn**	**16 49 36.9**	**+0.8**
DSF				S	**Sn**	**16 49 59.4**	**+1.5**
DSF	**Desfina**	**1.75**	**85**	P	**Pn**	**16 49 36.9**	**+0.8**
DSF				S	**Sn**	**16 49 59.4**	**+1.5**
THL	**Klokotos Trika**	**1.84**	**46**	*e*PN	**Pn**	**16 49 38.3**	**+1.0**
THL				*e*SN	**Sn**	**16 50 01.4**	**+1.3**
THL	**Klokotos Trika**	**1.84**	**46**	P	**Pn**	**16 49 37.2**	**-0.1**
THL				S	**Sn**	**16 49 59.6**	**-0.5**
THL	**Klokotos Trika**	**1.84**	**46**	P	**Pn**	**16 49 37.2**	**-0.1**
THL	**Klokotos Trika**	**1.84**	**46**	*e*Pn	**Pn**	**16 49 38.3**	**+1.0**
THL				S	**Sn**	**16 49 59.6**	**-0.5**
THL				*e*Sn	**Sn**	**16 50 01.4**	**+1.3**
KYTH	**Kithira**	**2.96**	**132**	*e*PN	**Pn**	**16 49 55.9**	**+3.1**
STON	**Ston**	**4.98**	**337**	*e*Pn	**Pn**	**16 50 17.9**	**-2.5**
STON				Sn	**Sn**	**16 51 11.6**	**-6.0**
STON	**Ston**	**4.98**	**337**	*e*Pn	**Pn**	**16 50 17.9**	**-2.6**
NVLJ	**Novalja**	**7.47**	**329**	*e*Pn	**Pn**	**16 50 53.3**	**-1.4**
NVLJ				Sn	**Sn**	**16 52 13.8**	**-5.1**
NVLJ	**Novalja**	**7.47**	**329**	*e*Pn	**Pn**	**16 50 53.2**	**-1.5**

**IDC 07 17:04:47.6±37.0, 6°.77N×126°.80E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/21, mbtmp3.4/4, Error ellipse: s-maj=626.9km s-min=118.5km az=165.

KSH				smax			
	comp=N,180nm,0.4s						
KSH				smax			
	comp=E,100nm,0.3s						
AML	**Almayashu**	**5.99**	**18**	P	**Pn**	**17 21 08.5**	**+0.6**
	SNR=109						
AML	**Almayashu**	**5.99**	**18**	*e*P	**Pn**	**17 21 08.3**	**+0.4**
	comp=E,52nm,0.4s						
KZA	**Kyzart**	**6.42**	**27**	P	**Pn**	**17 21 14.5**	**+0.7**
	SNR=12						
KZA	**Kyzart**	**6.42**	**27**	*e*P	**Pn**	**17 21 13.8**	**0.0**
	comp=E,18nm,0.7s						
EKS2	**Erkin-Say**	**6.51**	**16**	P	**Pn**	**17 21 15.3**	**+0.3**
	SNR=34						
EKS2	**Erkin-Say**	**6.51**	**16**	*e*P	**Pn**	**17 21 15.2**	**+0.2**
	comp=E,20nm,0.7s						
AAK	**Ala-Archa**	**6.67**	**21**	P	**Pn**	**17 21 18.0**	**+0.9**
	SNR=24						
AAK	**Ala-Archa**	**6.67**	**21**	Pn	**Pn**	**17 21 18.2**	**+1.1**
AAK				Sn	**Sn**	**17 22 30.9**	**-0.7**
KK31	**Karatay Array**	**6.68**	**355**	⇓P	**Pn**	**17 21 17.0**	**-0.4**
	comp=E,20nm,0.4s,baz=178,slow=13,SNR=355						
KK31				⇑S	**Sn**	**17 22 28.2**	**-3.7**
	comp=E,5.8nm,0.4s,baz=181,slow=22,SNR=7.1						
KKAR	**Karatay Array**	**6.68**	**355**	*e*PN	**Pn**	**17 21 16.9**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,41nm,0.3s						
KKAR	**Karatay Array**	**6.68**	**355**	*e*P	**Pn**	**17 21 16.9**	**-0.4**
	comp=Z,41nm,0.3s						
SDNR	**Sundarnagar**	**6.83**	**135**	*e*x	x	17 21 40.5	
SDNR				*e*S	**Sn**	**17 22 28.5**	**-7.1**
KBK	**Karagaybulak**	**6.83**	**23**	P	**Pn**	**17 21 20.2**	**+1.0**
	SNR=7.6						
FRU	**Bishkek**	**6.89**	**21**	*i* PN	**Pn**	**17 21 21.0**	**+0.9**
CHMS	**Chumysh**	**7.08**	**21**	P	**Pn**	**17 21 23.0**	**+0.4**
	SNR=5.1						
SMLA	**Simla**	**7.21**	**136**	*i* P	**Pn**	**17 21 22.2**	**-2.4**
SMLA				*i* S	**Sn**	**17 22 36.3**	**-8.7**
SMLA				*i* S	**Sn**	**17 22 36.9**	**-8.1**
USP	**Ospenovka**	**7.26**	**19**	P	**Pn**	**17 21 25.6**	**+0.5**
	SNR=8.6						
TKM2	**Tokmak 2**	**7.28**	**26**	P	**Pn**	**17 21 26.1**	**+0.7**
	SNR=29						
TKM2	**Tokmak 2**	**7.28**	**26**	*e*PN	**Pn**	**17 21 26.0**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,25nm,0.7s						
TKM2	**Tokmak 2**	**7.28**	**26**	*e*P	**Pn**	**17 21 25.9**	**+0.5**
	comp=Z,25nm,0.7s						
KLP	**Kalpa**	**7.58**	**128**	*e*PKP	**Pn**	**17 21 28.2**	**-1.4**
KLP				*e*S	**Sn**	**17 22 45.3**	**-8.5**
JOSI	**Joshimath**	**9.06**	**128**	*e*PKP	**Pn**	**17 21 48.3**	**-1.4**
JOSI				AMb	AMB	17 21 52.8	
	comp=Z,12nm,0.5s						
JOSI				*e*S	**Sn**	**17 23 22.6**	**-7.4**
KHET	**Khetri**	**9.18**	**154**	*e*S	**Sn**	**17 23 23.2**	**-10**
KUDL	**Kundal**	**9.37**	**150**	*e*x	x	17 23 21.3	
SONA	**Sohna**	**9.52**	**147**	*e*x	x	17 22 22.8	
SONA				AMb	AMB	17 22 25.7	
	comp=Z,5.5nm,0.5s						
SONA				*e*S	**Sn**	**17 23 31.0**	**-10**
AGRA	**Agra**	**10.78**	**146**	*e*S	**Sn**	**17 23 59.9**	**-12**
MK31	**Makanchi Array**	**13.21**	**35**	*e*P	**Pn**	**17 22 44.0**	**-1.0**
MKAR	**Makanchi Array**	**13.21**	**35**	Pn	**Pn**	**17 22 44.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=221,slow=16,SNR=7.0						
KURK	**Kurchatov**	**15.22**	**18**	*e*P	**Pn**	**17 23 13.0**	**+2.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**15.22**	**18**	*e*P	**Pn**	**17 23 13.0**	**+2.4**
	comp=Z,4.2nm,0.8s						
AB31	**Akbulak array**	**15.25**	**331**	⇑P	**Pn**	**17 23 08.9**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=114,slow=14,SNR=47						
AB31				⇓S	S	17 25 48.2	-20
	comp=Z,0.9nm,0.4s,baz=150,slow=23,SNR=8.0						
ABKAR	**Akbulak array**	**15.25**	**331**	*e*P	**Pn**	**17 23 09.0**	**-2.1**
	comp=Z,1.9nm,0.3s						
BVA0	**Borovoye Array**	**16.60**	**358**	P	**Pn**	**17 23 27.0**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=147,slow=13,SNR=11						
BVAR	**Borovoye Array**	**16.60**	**358**	P	**Pn**	**17 23 26.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=167,slow=14,SNR=11						
BRVK	**Borovoye**	**16.63**	**358**	*e*P	**Pn**	**17 23 30.0**	**+1.8**
AKTK	**Aktyubinsk**	**16.95**	**330**	P	**Pn**	**17 23 30.2**	**-1.8**
AKTK				S	**S**	**17 26 31.1**	**-10**
AKTO	**Aktyubinsk**	**16.95**	**330**	P	**Pn**	**17 23 30.2**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=134,slow=13,SNR=5.5						
AKTO				S	**S**	**17 26 31.1**	**-10**
	comp=Z,0.2nm,0.3s,baz=343,slow=21,SNR=3.6						
ZALV	**Zalesovo Beam**	**19.88**	**24**	P	**P**	**17 24 04.3**	**+0.1**
	comp=Z,7.5nm,0.4s,baz=207,slow=10,SNR=59						
ZALV	**Zalesovo Beam**	**19.88**	**24**	P	**P**	**17 24 04.3**	**0.0**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ZALV	**Zalesovo Beam**	**19.88**	**24**	P	**P**	**17 24 04.3**	**+0.1**
NVS	**Novosibirsk**	**20.16**	**20**	*e*P	**P**	**17 24 05.8**	**-1.5**
ARU	**Arti**	**21.77**	**341**	*e*P	**P**	**17 24 27.4**	**+3.0**
ARU	**Arti**	**21.77**	**341**	*e*P	**P**	**17 24 27.4**	**+3.0**
HHC	**Hu-ho-hao-te**	**31.58**	**70**	*e*P	**P**	**17 25 55.1**	**+1.2**
HHC				pP	pP	17 26 19.6	+1.6
HHC				sP	sP	17 26 32.9	+2.3
HHC				PP	PP	17 27 04.0	-3.1
HHC				PcP	PcP	17 28 44.7	+0.9
HHC				S	**S**	**17 30 55.1**	**+0.5**
HHC				sS	sS	17 31 37.6	+1.1
HHC				ScP	ScP	17 32 16.6	-0.4
HHC				SS	SS	17 32 51.9	-22
HHC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
HHC				LR	LR		
	comp=N,410nm,17.9s						
HHC				LR	LR		
	comp=E,400nm,15.5s						
HHC				LR	LR		
	comp=Z,360nm,14.5s						
FINES	**FINESS Array B**	**37.66**	**326**	P	**P**	**17 26 48.3**	**+2.3**
	comp=Z,0.7nm,0.4s,mb3.9,baz=122,slow=8.9,SNR=12						
FINES	**FINESS Array B**	**37.66**	**326**	P	**P**	**17 26 48.3**	**+2.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**41.29**	**338**	P	**P**	**17 27 18.3**	**+2.3**
	comp=Z,1.3nm,0.8s,mb3.8,baz=111,slow=6.6,SNR=6.8						
ARCES	**ARCESS Array B**	**41.29**	**338**	P	**P**	**17 27 18.3**	**+2.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**44.56**	**323**	P	**P**	**17 27 44.1**	**+1.6**
	comp=Z,0.5nm,0.5s,mb3.5,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.56**	**323**	P	**P**	**17 27 44.3**	**+1.8**
	comp=Z,0.5nm,0.6s,mb3.5,baz=96,slow=7.6,SNR=3.7						
NOA	**NORSAR Array B**	**44.56**	**323**	P	**P**	**17 27 44.3**	**+1.8**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.94**	**269**	P	**P**	**17 30 15.6**	**-1.0**
	comp=Z,0.2nm,0.4s,mb3.3,baz=52,slow=5.5,SNR=4.5						
TORD	**Torodi Ar. Bea**	**65.94**	**269**	P	**P**	**17 30 15.6**	**-1.0**
WRA	**Warramunga Arr**	**81.77**	**122**	P	**P**	**17 31 48.2**	**-0.4**
	comp=Z,0.3nm,0.8s,mb3.2,baz=324,slow=4.5,SNR=4.6						
ASAR	**Alice Springs**	**84.03**	**125**	P	**P**	**17 31 59.9**	**-0.4**
	comp=Z,0.2nm,0.6s,mb3.1,baz=308,slow=4.8,SNR=4.8						
PLCA	**Paso Flores**	**150.01**	**250**	PKPbc	PKPbc	17 39 17.9	-1.4
	comp=Z,1.4nm,0.7s,baz=90,slow=4.0,SNR=4.3						
PLCA	**Paso Flores**	**150.01**	**250**	PKIKP	PKPbc	17 39 18.0	-1.3
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

IDC 07 17:47:18.9±28.0, 59°.11S×162°.14E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.9/11, mbtmp3.9/3, MS3.5/1, Ms1 3.5/1, ms1mx2.9/16, Error ellipse: s-maj=512.2km s-min=258.8km az=128.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ	**The Paps**	**12.79**	**18**	P*	Pn	17 50 31.4	+10
SYZ	**Scrubby Hill**	**13.28**	**21**	PN	Pn	17 50 40.5	+12
WHZ	**Wether Hill Ro**	**13.70**	**17**	*e*PN	Pn	17 50 42.5	+8.4
URZ	**Urewera**	**22.98**	**31**	LR	LR	18 00 40.4	
	comp=Z,117nm,19.3s,baz=334,slow=35						
STKA	**Stephens Creek**	**30.55**	**324**	P	P	17 53 32.8	-0.9
	3.4nm,1.2s,baz=145,slow=12,SNR=2.1						
ASAR	**Alice Springs**	**40.65**	**318**	P	P	17 55 01.0	+0.5
	1.2nm,0.8s,baz=158,slow=7.8,SNR=22						
WRA	**Warramunga Arr**	**43.96**	**321**	P	P	17 55 27.7	+0.2
	1.1nm,0.8s,baz=161,slow=7.1,SNR=8.3						

*ISCJB **07** 17:48:20.4±1.5, 38°.26N±0°.09×20°.2E±0°.1, h11km±7km, Error ellipse: s-maj=20.5km s-min=6.9km az=41.8*

*ATH **07** 17:48:21.7, 38°.16N×20°.29E, h14km±1km, MD3.1/7*
*CSEM **07** 17:48:21.7, 38°.16N×20°.29E, h14km, MD3.1, After ATH*
ISC 07 17:48:21.8±1.5, 38°.25N±0°.09×20°.3E±0°.1, h13km±7km, n17, σ0°73/22, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.26**	**107**	*e*PG	**Pg**	**17 48 27.0**	**-0.3**
VLS				*e*SG	**Sg**	**17 48 31.0**	**0.0**
VLS	**Valsamata**	**0.26**	**107**	*e*Pg	**Pg**	**17 48 27.0**	**-0.3**
VLS				*e*Sg	**Sg**	**17 48 31.0**	**0.0**
RLS	**Riolos of Patr**	**0.96**	**101**	*e*PG	**Pg**	**17 48 39.4**	**-1.0**
RLS				*e*SB	**Sb**	**17 48 52.5**	**-0.4**
RLS	**Riolos of Patr**	**0.96**	**101**	*e*Pg	**Pg**	**17 48 39.4**	**-1.0**
RLS				*e*Sb	**Sb**	**17 48 52.5**	**-0.4**
EFP	**Efpalio**	**1.29**	**82**	*e*PB	**Pb**	**17 48 46.3**	**+0.3**
EFP	**Efpalio**	**1.29**	**82**	*e*Pb	**Pb**	**17 48 46.3**	**+0.3**
EVR	**Evrytania**	**1.37**	**61**	*e*PB	**Pb**	**17 48 48.4**	**+1.0**
EVR	**Evrytania**	**1.37**	**61**	*e*Pb	**Pb**	**17 48 48.4**	**+1.0**
KEK	**Kerkira**	**1.50**	**346**	*e*PG	**Pg**	**17 48 51.5**	**+0.8**
KEK	**Kerkira**	**1.50**	**346**	*e*Pg	**Pg**	**17 48 51.5**	**+0.8**
GUR	**Goura**	**1.66**	**100**	*e*PB	**Pb**	**17 48 52.4**	**+0.1**
GUR	**Goura**	**1.66**	**100**	*e*Pb	**Pb**	**17 48 52.4**	**+0.1**
ITM	**Ithomi**	**1.69**	**129**	*e*PB	**Pb**	**17 48 52.2**	**-0.6**
ITM	**Ithomi**	**1.69**	**129**	*e*Pb	**Pb**	**17 48 52.2**	**-0.6**
KYTH	**Kithira**	**2.96**	**131**	*e*PN	**Pn**	**17 49 09.9**	**+1.5**
KYTH	**Kithira**	**2.96**	**131**	*e*Pn	**Pn**	**17 49 09.9**	**+1.5**
STON	**Ston**	**5.01**	**338**	*e*Pn	**Pn**	**17 49 36.3**	**-0.4**
STON				Sn	**Sn**	**17 50 33.6**	**-0.9**

*ISCJB **07** 17:50:20.3±1.2, 26°.3N±0°.2×102°.2E±0°.5, h10km, mb3.4/4, Error ellipse: s-maj=63.1km s-min=8.3km az=158.3*
*BJI **07** 17:50:20.8, 26°.23N×101°.86E, h11km, ML3.2/6*
*IDC **07** 17:50:21.4±1.6, 26°.48N×102°.13E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/23, mbtmp3.4/4, Error ellipse: s-maj=87.5km s-min=23.7km az=67.0*
ISC 07 17:50:22.1±1.2, 26°.3N±0°.2×102°.2E±0°.4, h10km, n5, σ1°99/6, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.25**	**155**	Pg	**Pg**	**17 56 45.5**	**-0.6**
KMI				Sg	**Sg**	**17 51 01.5**	**-0.9**
KMI				smax			
	comp=N,150nm,0.8s						
KMI				smax			
	comp=E,140nm,0.9s						
SONM	**Songino Array**	**21.79**	**8**	P	**P**	**17 55 13.1**	**-0.9**
	comp=E,0.8nm,0.6s,mb3.3,baz=195,slow=11,SNR=5.0						
MKAR	**Makanchi Array**	**25.84**	**328**	P	**P**	**17 55 52.5**	**-1.0**
	comp=E,0.5nm,0.8s,mb3.1,baz=137,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**55.55**	**143**	P	**P**	**17 59 59.8**	**+2.0**
	comp=E,0.4nm,0.5s,mb3.7,baz=331,slow=8.2,SNR=8.3						
ASAR	**Alice Springs**	**58.37**	**145**	P	**P**	**18 00 20.3**	**+2.6**
	comp=E,0.3nm,0.8s,mb3.4,baz=335,slow=8.2,SNR=3.4						

*ISCJB **07** 17:55:29.6±1.1, 24°.55N±0°.06×99°.86E±0°.08, h10km, mb3.4/2, Error ellipse: s-maj=11.7km s-min=5.5km az=33.8*
*IDC **07** 17:55:30.9±1.6, 24°.75N×99°.71E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.2/24, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=41.4km s-min=21.0km az=80.0*
*BJI **07** 17:55:32.1, 24°.79N×99°.77E, h13km, ML3.0/6*
ISC 07 17:55:32.3±1.1, 24°.65N±0°.06×99°.83E±0°.08, h10km, n6, σ1°17/11, mb3.4/2, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.69**	**79**	Pn	**Pn**	**17 56 17.2**	**+1.6**
KMI				Pg	**Pg**	**17 56 22.5**	**-1.3**
KMI				Sg	**Sg**	**17 56 58.8**	**+0.1**
KMI				smax			
	comp=N,100nm,0.8s						
KMI				smax			
	comp=E,41nm,0.7s						
CHRT	**Chiangrai**	**4.76**	**180**	PG	**Pg**	**17 57 00.0**	**-3.4**
CHRT				SG	**Sg**	**17 58 04.0**	**-1.1**
CHG	**Chiang Mai**	**5.87**	**188**	PG	**Pg**	**17 57 24.1**	**-0.6**
CHG				SG	**Sg**	**17 58 42.4**	**+1.7**
CMAR	**Chiang Mai Arr**	**6.22**	**188**	Pn	**Pn**	**17 57 05.0**	**+0.9**
	comp=E,0.4nm,0.3s,baz=1.9,slow=13,SNR=4.7						
CMAR				Pg	**Pg**	**17 57 27.2**	**-4.1**
	comp=E,0.9nm,0.3s,baz=0.8,slow=17,SNR=30						
CMAR				Lg		17 58 51.8	
	comp=E,0.9nm,0.3s,baz=359,slow=28,SNR=6.8						
MKAR	**Makanchi Array**	**26.17**	**332**	P	**P**	**18 01 06.2**	**-0.6**
	comp=E,1.2nm,0.8s,mb3.5,baz=140,slow=11,SNR=5.9						
WRA	**Warramunga Arr**	**55.62**	**140**	P	**P**	**18 05 09.1**	**+0.6**
	comp=E,0.3nm,1.0s,mb3.3,baz=328,slow=7.7,SNR=4.6						

*IDC **07** 17:58:25.9±0.8, 15°.15S×173°.54W, h0km, mb3.8/9, mb1 4.1/9, mb1mx3.9/19, mbtmp3.8/9, MS2.9/1, Ms1 2.9/1, ms1mx2.6/17, Error ellipse: s-maj=46.1km s-min=18.7km az=145.0*
*ISCJB **07** 17:58:26.2±0.6, 15°.1S±0°.2×173°.6W±0°.1, h10km, mb4.0/12, Error ellipse: s-maj=27.8km s-min=14.0km az=146.1*
*NEIC **07** 17:58:27.6±0.4, 15°.13S×173°.57W, h10km, mb4.2/2, Error ellipse: s-maj=22.2km s-min=10.6km az=145.0*
ISC 07 17:58:27.8±0.6, 15°.2S±0°.2×173°.6W±0°.1, h10km, n22, σ0°57/19, mb4.0/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.14**	**55**	Pn	**Pn**	**17 58 56.9**	**-6.7**
	138nm,0.3s,baz=40,slow=2.9,SNR=103						
AFI				Sn	**Sn**	**17 59 15.3**	**-15**
	693nm,0.3s,baz=102,slow=20,SNR=17						
AFI				LR	LR	17 59 30.5	
	comp=Z,269nm,18.3s,baz=140,slow=31						
AFI	**Afiamalu**	**2.14**	**55**	*e*Pn	**Pn**	**17 58 56.7**	**-6.9**
AFI				Sn	**Sn**	**17 59 15.3**	**-15**
AFI				LR	LR	17 59 30.5	
PPT	**Papeete**	**23.16**	**99**	*e*LR	LR	18 08 35.6	
	109nm,24.5s						
PPT				*e*T		18 26 40.0	
	3.5nm,0.3s						
PAE	**Paea**	**23.16**	**100**	*e*T		18 26 40.0	
	2.2nm,0.3s						
TBI	**Tubuai**	**24.16**	**113**	*e*T		18 27 49.8	
	7.6nm,0.3s						
RKT	**Rikitea**	**37.24**	**108**	*e*T		18 44 11.6	
	3.4nm,0.3s						
STKA	**Stephens Creek**	**44.01**	**240**	P	**P**	**18 06 35.1**	**-0.6**
	1.4nm,1.0s,mb3.6,baz=76,slow=12,SNR=8.2						
STKA	**Stephens Creek**	**44.01**	**240**	*e*P	**P**	**18 06 35.7**	**0.0**
WB2	**Warramunga Arr**	**49.72**	**257**	*e*P	**P**	**18 07 20.3**	**-0.2**
WRA	**Warramunga Arr**	**49.73**	**257**	P	**P**	**18 07 20.6**	**-0.1**
	0.4nm,0.7s,mb3.6,baz=94,slow=6.3,SNR=15						
ASAR	**Alice Springs**	**50.02**	**252**	P	**P**	**18 07 22.7**	**-0.1**
	1.7nm,0.4s,mb4.5,baz=90,slow=7.6,SNR=59						
NVAR	**Mina Array Bea**	**74.26**	**42**	P	**P**	**18 10 05.8**	**+0.5**
	0.3nm,0.5s,mb3.4,baz=236,slow=10,SNR=3.5						
QSPA	**South Pole Qui**	**74.89**	**180**	P	**P**	**18 10 08.9**	**+0.6**
	1.1nm,0.8s,mb3.8,baz=360,slow=2.4,SNR=5.1						
QSPA	**South Pole Qui**	**74.89**	**180**	*e*P	**P**	**18 10 08.9**	**+0.6**
	2.5nm,1.1s,mb4.1						
HLID	**Hailey**	**79.55**	**39**	*e*P	**P**	**18 10 35.2**	**+0.3**
	2.9nm,1.0s,mb4.2						
TXAR	**Lajitas Array**	**80.62**	**56**	P	**P**	**18 10 41.0**	**-0.1**
	0.8nm,0.9s,mb3.6,baz=209,slow=10.0,SNR=6.7						
ANMO	**Albuquerque**	**80.78**	**50**	P	**P**	**18 10 41.9**	**+0.1**
	0.9nm,0.8s,mb3.8,baz=280,slow=12,SNR=2.8						
PDAR	**Pinedale Array**	**82.20**	**42**	P	**P**	**18 10 47.6**	**-1.5**
	0.7nm,0.8s,mb3.6,baz=242,slow=3.2,SNR=6.0						
ILAR	**Eielson Array**	**82.23**	**11**	P	**P**	**18 10 48.7**	**-0.1**
	0.3nm,0.6s,mb3.4,baz=228,slow=6.2,SNR=5.7						
PMSA	**Palmer Station**	**84.48**	**156**	*e*P	**P**	**18 11 00.4**	**-0.1**
	17nm,0.6s,mb5.4						
HHC	**Hu-ho-hao-te**	**88.72**	**313**	*e*P	**P**	**18 11 22.7**	**+1.0**
HHC				pP	pP	18 11 27.0	+1.9
HHC				sP	sP	18 11 29.7	+3.5
HHC				PP	PP	18 14 55.5	+4.7
HHC				SKS		18 21 49.8	
HHC				S	S	18 22 08.7	-0.2
HHC				sS	sS	18 22 16.5	+2.1
HHC				SS	SS	18 28 03.8	+2.9
HHC				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.2						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
HHC				LR	LR		
	comp=N,190nm,18.0s						
HHC				LR	LR		
	comp=E,460nm,18.0s						
HHC				LR	LR		
	comp=Z,160nm,16.7s						
BRTR	**Keskin Array B**	**145.85**	**321**	PKPbc	PKPbc	18 18 08.8	+1.1
	comp=Z,0.4nm,0.6s,baz=32,slow=1.0,SNR=3.6						

*ISCJB **07** 18:06:04.5±0.9, 38°.09N±0°.04×20°.18E±0°.06, h10km, Error ellipse: s-maj=7.9km s-min=3.9km az=136.4*
*ATH **07** 18:06:05.1, 38°.14N×20°.20E, h5km±3km, MD3.0/8*
*THE **07** 18:06:05.4, 38°.05N×20°.25E, h0km±2km, ML2.2/2, Error ellipse: s-maj=4.1km s-min=1.1km az=202.0*
*CSEM **07** 18:06:06.6±0.7, 38°.23N×20°.26E, h2km, ML2.2/2, Error ellipse: s-maj=18.8km s-min=7.4km az=42.0*
ISC 07 18:06:05.1±1.3, 38°.09N±0°.05×20°.17E±0°.07, h12km±7km, n27, σ1°08/43, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.34**	**76**	*e*PB	**Pg**	**18 06 11.6**	**-0.4**
VLS	**Valsamata**	**0.34**	**76**	P	**Pg**	**18 06 11.1**	**-0.9**
VLS				S	**Sg**	**18 06 15.2**	**-1.4**
VLS	**Valsamata**	**0.34**	**76**	P	**Pg**	**18 06 11.1**	**-0.9**
VLS	**Valsamata**	**0.34**	**76**	*e*Pb	**Pg**	**18 06 11.6**	**-0.4**
VLS				S	**Sg**	**18 06 15.2**	**-1.4**
KFL	**Anninata**	**0.49**	**88**	P	**Pg**	**18 06 13.7**	**-1.0**
KFL				S	**Sg**	**18 06 19.8**	**-1.3**
KFL	**Anninata**	**0.49**	**88**	P	**Pg**	**18 06 13.7**	**-1.0**
KFL				S	**Sg**	**18 06 19.8**	**-1.3**
RLS	**Riolos of Patr**	**1.02**	**92**	*e*PG	**Pg**	**18 06 23.9**	**-0.9**
RLS				*e*SB	**Sg**	**18 06 38.8**	**+0.7**
RLS	**Riolos of Patr**	**1.02**	**92**	*e*Pg	**Pg**	**18 06 23.9**	**-0.9**
RLS				*e*Sb	**Sg**	**18 06 38.8**	**+0.7**
EFP	**Efpalio**	**1.41**	**76**	*e*PG	**Pn**	**18 06 30.9**	**+0.4**
EFP	**Efpalio**	**1.41**	**76**	*e*Pg	**Pn**	**18 06 30.9**	**+0.4**
LAKA	**Lakka**	**1.43**	**84**	P	**Pn**	**18 06 30.8**	**0.0**
LAKA				S	**Sg**	**18 06 51.8**	**+0.6**
LAKA	**Lakka**	**1.43**	**84**	P	**Pn**	**18 06 30.8**	**0.0**
LAKA				S	**Sg**	**18 06 51.8**	**+0.6**
IGT	**Igoumenitsa**	**1.44**	**5**	P	**Pn**	**18 06 32.2**	**+1.2**
IGT				S	**Sg**	**18 06 53.6**	**+2.0**
IGT	**Igoumenitsa**	**1.44**	**5**	P	**Pn**	**18 06 32.2**	**+1.2**
KEK	**Kerkira**	**1.64**	**350**	*e*PB	**Pg**	**18 06 35.5**	**-1.1**
KEK	**Kerkira**	**1.64**	**350**	P	**Pg**	**18 06 35.4**	**-1.2**
KEK				S	**Sg**	**18 06 59.8**	**+1.8**
KEK	**Kerkira**	**1.64**	**350**	P	**Pg**	**18 06 35.4**	**-1.2**
GUR	**Goura**	**1.72**	**95**	*e*PN	**Pb**	**18 06 37.8**	**+1.2**
GUR				*e*SN	**Sg**	**18 07 00.9**	**+0.4**
GUR	**Goura**	**1.72**	**95**	*e*Pn	**Pb**	**18 06 37.8**	**+1.2**
GUR				*e*Sn	**Sg**	**18 07 00.9**	**+0.4**
PYL	**PYLOS**	**1.73**	**133**	*e*PN	**Pg**	**18 06 38.3**	**0.0**
PYL				*e*SN	**Sg**	**18 07 02.3**	**+1.6**
PYL	**PYLOS**	**1.73**	**133**	*e*Pn	**Pg**	**18 06 38.3**	**0.0**
PYL				*e*Sn	**Sg**	**18 07 02.3**	**+1.6**
LTK	**Loutraki**	**2.21**	**91**	*e*PN	**Pb**	**18 06 45.1**	**+0.2**
LTK	**Loutraki**	**2.21**	**91**	*e*Pn	**Pb**	**18 06 45.1**	**+0.2**
DID	**Didima**	**2.50**	**103**	*e*PN	**Pb**	**18 06 49.3**	**-0.6**
DID	**Didima**	**2.50**	**103**	*e*Pn	**Pb**	**18 06 49.3**	**-0.6**
STON	**Ston**	**5.13**	**339**	*e*Pn	**Pn**	**18 07 21.2**	**-0.5**
STON				Sn	**Sn**	**18 08 18.9**	**-1.9**
STON	**Ston**	**5.13**	**339**	*e*Pn	**Pn**	**18 07 21.1**	**-0.6**
STON				Sn	**Sn**	**18 08 18.8**	**-2.0**

IDC 07 18:22:44.4±6.0, 20°.51S×68°.19W, h139km±30km, mb3.9/1, mb1 3.7/3, mb1mx3.2/17, mbtmp3.6/3, Error ellipse: s-maj=101.8km s-min=26.0km az=66.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.20**	**1**	P	Pn	18 23 47.9	+0.7
	2.2nm,0.3s,baz=186,slow=5.9,SNR=55						
LPAZ				S	Sn	18 24 37.2	+1.4
	0.4nm,0.3s,baz=16,slow=18,SNR=2.6						
CPUP	**Villa Florida**	**11.53**	**122**	P	Pn	18 25 24.9	+0.1
	0.9nm,0.3s,baz=280,slow=14,SNR=14						
TORD	**Torodi Ar. Bea**	**76.39**	**70**	P	P	18 34 19.0	0.0
	1.6nm,0.5s,baz=254,slow=5.5,SNR=39						
MKAR	**Makanchi Array**	**144.44**	**36**	PKP	PKPdf	18 42 03.9	-0.2
	0.2nm,0.5s,baz=357,slow=2.8,SNR=3.3						

**IDC 07 19:12:00.6±10.0, 5°.49N×95°.04E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.4/23, mbtmp3.6/4, ML4.0/1, Error ellipse: s-maj=275.7km s-min=43.5km az=82.0, Northern

YOZ	Yozgat	2.35 319	*e*Pn	Pn	19 19 51.2	+0.2
EZC	Erzincan	2.44 40	*e*PN	Pn	19 19 53.2	+0.9
EZC	Erzincan	2.44 40	*e*Pn	Pn	19 19 53.2	+0.9
MERS	Mersin	2.45 246	*e*PN	Pn	19 19 52.8	+0.4
MERS	Mersin	2.45 246	*e*Pn	Pn	19 19 52.8	+0.4
TOKT	Tokat	2.50 346	*e*PN	Pn	19 19 53.5	+0.4
TOKT	Tokat	2.50 346	*e*Pn	Pn	19 19 53.5	+0.4
RSDY	Resadiye-TOKAT	2.50 0	*e*PN	Pn	19 19 52.8	-0.4
RSDY	Resadiye-TOKAT	2.50 0	*e*Pn	Pn	19 19 52.8	-0.3
GUMT	Gumushane	3.07 32	*e*PN	Pn	19 20 01.8	+1.0
GUMT	Gumushane	3.07 32	*e*Pn	Pn	19 20 01.8	+0.9
CORM	Corum	3.10 318	*e*PN	Pn	19 20 02.3	+1.0
CORM	Corum	3.10 318	*e*Pn	Pn	19 20 02.3	+1.0
KVT	Kavak	3.34 343	*e*PN	Pn	19 20 04.7	+0.1
KVT	Kavak	3.34 343	*e*Pn	Pn	19 20 04.7	+0.1

IDC ***07*** *19:41:35.6±0.8, 18°.78S×173°.55W, h0km, mb4.4/15, mb1 4.6/15, mb1mx4.5/21, mbtmp4.4/15, MS3.9/12, Ms1 3.9/12, ms1mx3.7/31, Error ellipse: s-maj=29.3km s-min=16.8km az=134.0*
BJI ***07*** *19:41:43.4, 18°.80S×173°.60W, h66km, mB5.4/1, mb5.2/5, Ms4.9/2, Ms7 4.7/1*
NEIC ***07*** *19:41:44.5±2.6, 18°.77S×173°.64W, h66km±22km, mb4.8/4, Error ellipse: s-maj=18.7km s-min=13.1km az=118.0*
ISC 07 19:41:45.2±2.5, 18°.80S±0°.10×173°.6W±0°.1, h74km±21km, n93, σ1§07/39, mb4.3/21, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.18**	**20**	Pn	**Pn**	**19 42 47.3**	**-13**
	4.3nm,0.3s,baz=179,slow=17,SNR=6.9						
AFI				Sn	**Sn**	**19 43 36.5**	**-22**
	14nm,0.3s,baz=24,slow=20,SNR=4.3						
AFI				LR	LR	19 44 37.5	
	comp=Z,361nm,21.8s,baz=177,slow=35						
AFI				T		19 47 51.5	
	28nm,0.3s,baz=323,slow=19,SNR=7.6						
AFI	**Afiamalu**	**5.18**	**20**	*e*Pn	**Pn**	**19 42 48.1**	**-12**
AFI				Sn	**Sn**	**19 43 36.5**	**-22**
AFI				LR	LR	19 44 37.5	
MSVF	**Nonsavu**	**7.98**	**276**	*e*P	**Pn**	**19 43 38.9**	**+0.5**
	93nm,1.3s						
RAR	**Rarotonga**	**13.24**	**103**	Pn	Px	19 44 33.6	
	9.8nm,0.3s,baz=280,slow=8.1,SNR=8.0						
RAR				LR	LR	19 48 24.6	
	comp=Z,311nm,20.4s,baz=265,slow=31						
RAR	**Rarotonga**	**13.24**	**103**	*e*P	Px	19 44 33.9	
RAR				LR	LR	19 48 24.6	
DZM	**Mont Dzumac**	**18.95**	**257**	*e*P	**Pn**	**19 46 02.5**	**+0.5**
	52nm,1.0s						
DZM				*e*LR	LR	19 50 35.0	
	560nm,22.7s						
URZ	**Urewera**	**21.00**	**201**	P	**P**	**19 46 22.1**	**-0.5**
	15nm,0.7s,mb4.4,baz=260,slow=4.2,SNR=5.2						
URZ	**Urewera**	**21.00**	**201**	*e*P	**P**	**19 46 22.2**	**-0.4**
PPT	**Papeete**	**22.88**	**91**	*e*LQ		19 51 01.9	
	404nm,25.5s						
PPT				*e*LR	LR	19 51 56.9	
	452nm,25.8s,baz=258						
PPT	**Papeete**	**22.88**	**91**	LR	LR	19 53 09.6	
	comp=Z,261nm,20.1s,baz=8.3,slow=30						
HNR	**Honiara**	**27.23**	**286**	LR	LR	19 56 45.9	
	comp=Z,433nm,19.6s,baz=108,slow=33						
RPZ	**Rata Peaks**	**27.98**	**204**	P	**P**	**19 47 29.9**	**+1.1**
	9.6nm,0.7s,mb4.5,baz=207,slow=9.0,SNR=2.0						
EIDS	**Eidsvold**	**33.28**	**252**	*e*P	**P**	**19 48 15.6**	**-0.2**
CTA	**Charters Tower**	**37.79**	**261**	P	**P**	**19 48 54.0**	**-0.6**
	12nm,0.7s,mb4.8,baz=89,slow=12,SNR=9.8						
CTA	**Charters Tower**	**37.79**	**261**	*e*P	**P**	**19 48 53.7**	**-0.8**
	9.4nm,0.8s,mb4.7						
CTA	**Charters Tower**	**37.79**	**261**	P	**P**	**19 48 54.0**	**-0.6**
CTAO	**Charters Tower**	**37.79**	**261**	*e*P	**P**	**19 48 53.5**	**-1.1**
	10nm,0.8s,mb4.7						
CMSA	**Cobar Meteorol**	**38.73**	**243**	*e*P	**P**	**19 49 01.2**	**-1.1**
COEN	**Coen**	**41.65**	**270**	*e*P	**P**	**19 49 26.3**	**-0.3**
STKA	**Stephens Creek**	**42.23**	**243**	P	**P**	**19 49 30.1**	**-1.1**
	1.6nm,0.6s,mb4.0,baz=104,slow=8.6,SNR=7.4						
STKA				LR	LR	20 06 12.8	
	comp=Z,280nm,19.7s,baz=206,slow=35						
STKA	**Stephens Creek**	**42.23**	**243**	*e*P	**P**	**19 49 30.3**	**-0.9**
	4.0nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**42.23**	**243**	*e*P	**P**	**19 49 30.9**	**-0.2**
STKA				LR	LR	20 06 12.8	
WB2	**Warramunga Arr**	**48.92**	**260**	*e*P	**P**	**19 50 22.1**	**-2.0**
ASAR	**Alice Springs**	**48.93**	**255**	P	**P**	**19 50 23.4**	**-0.7**
	14nm,0.7s,mb5.0,baz=94,slow=8.0,SNR=170						
WRA	**Warramunga Arr**	**48.94**	**260**	P	**P**	**19 50 22.8**	**-1.5**
	4.1nm,0.7s,mb4.4,baz=96,slow=7.5,SNR=53						
KNA	**Kununurra**	**54.89**	**264**	*e*P	**P**	**19 51 08.1**	**-0.5**
	37nm,2.0s,mb5.1						
FITZ	**Fitzroy Crossi**	**57.35**	**260**	*e*P	**P**	**19 51 26.3**	**+0.1**
	2.8nm,0.6s,mb4.5						
SBA	**Scott Base**	**59.86**	**185**	*e*P	**P**	**19 51 44.1**	**+1.5**
	2.9nm,0.8s,mb4.4						
MJAR	**Matsushiro Arr**	**71.40**	**321**	P	**P**	**19 52 58.2**	**+0.7**
	1.3nm,0.7s,mb3.9,baz=167,slow=6.4,SNR=5.3						
MJAR				LR	LR	20 18 19.5	
	comp=Z,84nm,21.7s,baz=165,slow=31						
MJAR	**Matsushiro Arr**	**71.40**	**321**	P	**P**	**19 52 58.2**	**+0.7**
MJAR				LR	LR	20 18 19.5	
PETK	**Petropavlovsk-**	**75.79**	**343**	P	**P**	**19 53 23.4**	**+0.6**
	1.1nm,0.5s,mb3.9,baz=130,slow=16,SNR=3.2						
PETK				LR	LR	20 25 38.4	
	comp=Z,44nm,19.2s,baz=65,slow=35						
NVAR	**Mina Array Bea**	**77.00**	**42**	P	**P**	**19 53 29.8**	**-0.2**
	0.6nm,0.8s,mb3.4,baz=224,slow=8.6,SNR=4.3						
KSM	**Kuching**	**77.30**	**276**	*e*P	**P**	**19 53 34.0**	**+1.7**
	73nm,1.8s,mb5.1						
KSRS	**Korea Array**	**78.43**	**316**	P	**P**	**19 53 40.4**	**+2.3**
	2.3nm,0.9s,mb3.9,baz=127,slow=5.5,SNR=9.8						
KSRS				LR	LR	20 25 22.7	
	comp=Z,68nm,18.2s,baz=309,slow=34						
TXAR	**Lajitas Array**	**82.69**	**56**	P	**P**	**19 54 00.9**	**0.0**
	1.1nm,1.1s,mb3.6,baz=197,slow=3.9,SNR=6.2						
MAW	**Mawson**	**84.52**	**199**	P	**P**	**19 54 10.5**	**+0.7**
	1.6nm,0.9s,mb4.0,baz=114,slow=10.0,SNR=2.9						
PDAR	**Pinedale Array**	**84.93**	**42**	P	**P**	**19 54 11.0**	**-1.1**
	0.3nm,0.4s,mb3.6,baz=202,slow=2.7,SNR=4.5						
COLA	**College**	**85.72**	**11**	*e*P	**P**	**19 54 14.9**	**-0.7**
	7.2nm,0.8s,mb4.7						
ILAR	**Eielson Array**	**85.80**	**11**	P	**P**	**19 54 15.1**	**-0.8**
	1.6nm,0.9s,mb3.9,baz=201,slow=5.2,SNR=9.7						
DAWY	**Dawson**	**86.75**	**14**	*e*P	**P**	**19 54 19.3**	**-1.3**
PLCA	**Paso Flores**	**87.40**	**132**	LR	LR	20 26 08.9	
	comp=Z,76nm,18.1s,baz=243,slow=31						
HHC	**Hu-ho-hao-te**	**91.17**	**313**	*e*P	**P**	**19 54 43.5**	**+1.5**
HHC				pP	pP	19 55 00.6	-1.7
HHC				sP	sP	19 55 07.4	-2.8
HHC				PP	PP	19 58 24.1	+4.0
HHC				SKS		20 05 09.1	
HHC				S	S	20 05 34.8	+0.6
HHC				sS	sS	20 06 05.2	-3.7
HHC				SS	SS	20 11 44.8	+4.1
HHC				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
HHC				LR	LR		
	comp=N,170nm,18.6s						
HHC				LR	LR		
	comp=E,190nm,17.6s						
HHC				LR	LR		
	comp=Z,250nm,17.9s						
ATAH	**Atahualpa**	**92.65**	**98**	LR	LR	20 28 13.7	
	comp=Z,64nm,18.6s,baz=348,slow=30						
CMAR	**Chiang Mai Arr**	**93.47**	**288**	P	**P**	**19 54 55.1**	**+2.0**
	comp=Z,12nm,0.8s,mb4.3,baz=96,slow=3.0,SNR=7.6						
ULM	**Lac du Bonnet**	**96.70**	**39**	LR	LR	20 34 30.5	
	comp=Z,108nm,18.5s,baz=322,slow=33						
LPAZ	**La Paz**	**98.85**	**111**	LR	LR	20 32 33.8	
	comp=Z,46nm,21.3s,baz=134,slow=31						
MALT	**Malatya**	**146.03**	**312**	PKPdf	PKPdf	20 01 16.9	+0.9
KWP	**Kalwaria Pacla**	**146.56**	**341**	*e*PKPbc	PKPbc	20 01 19.1	+1.0
CLL	**Collm**	**147.14**	**352**	*i* P	PKPbc	20 01 20.3	+0.6
CLL				*e*		20 01 24.0	
CLL				*i*		20 01 35.3	
CLL	**Collm**	**147.14**	**352**	*i* PKPbc	PKPbc	20 01 20.3	+0.6
	comp=Z,10.0nm,1.0s						
CLL				*e*(PKiKP)		20 01 24.0	
CLL				*e*		20 01 30.0	
CLL				*i* pPKPbc	pPKPbc	20 01 35.3	-5.2
	comp=Z,26nm,1.2s						
KOLS	**Kolonicke sedl**	**147.31**	**340**	*e*	PKPab	20 01 28.9	+6.8
KOLS	**Kolonicke sedl**	**147.31**	**340**	*e*P	pPKPdf	20 01 36.4	-2.5
BUR08	**Bucovina Ar. S**	**147.38**	**336**	*e*PKPbc	PKPbc	20 01 22.9	+2.4
BRG	**Berggiesshubel**	**147.44**	**351**	*e*P	PKPbc	20 01 21.5	+1.0
	comp=Z,7.0nm,1.1s						
BRG	**Berggiesshubel**	**147.44**	**351**	*e*(P)	pPKPdf	20 01 36.9	-2.1
	comp=Z,12nm,1.1s						
UPC	**Upice**	**147.44**	**349**	*e*PKP	PKPab	20 01 22.1	-0.5
UPC				*ep*PKP	pPKPdf	20 01 36.8	-2.2
DPC	**Dobruska-Polom**	**147.53**	**348**	*e*PKP	PKPab	20 01 22.1	-0.9
DPC				*ep*PKP	pPKPdf	20 01 37.5	-1.7
CRVS	**Cervenica-Dubn**	**147.59**	**341**	*e*PKP	PKPab	20 01 23.1	-0.1
CRVS				*e*		20 01 37.1	
OKC	**Ostrava-Krasne**	**147.63**	**346**	*e*PKP	PKPab	20 01 25.7	+2.3
OKC				*ep*PKP	pPKPdf	20 01 38.5	-0.9
PVCC	**Panska Ves**	**147.68**	**350**	*e*PKP	PKPab	20 01 22.7	-0.8
PVCC				*ep*PKP	pPKPdf	20 01 37.7	-1.7
MORC	**Moravsky Berou**	**147.82**	**346**	*e*PKPbc	PKPbc	20 01 21.8	+0.2
MOX	**Moxa**	**147.95**	**354**	*e*P	pPKPdf	20 01 38.1	-1.8
	comp=Z,20nm,1.6s						
PRU	**Pruhonice**	**148.20**	**350**	*e*PKP	PKPab	20 01 24.5	-1.1
PRU				*ep*PKP	pPKPdf	20 01 39.5	-0.8
KECS	**Kecovo**	**148.25**	**342**	*e*PKP	PKPdf	20 01 21.9	+2.6
KECS				*e*		20 01 35.2	
NKC	**Novy Kostel**	**148.26**	**353**	*e*PKP	PKPab	20 01 24.1	-1.8
NKC				*ep*PKP	pPKPdf	20 01 39.9	-0.5
BRTR	**Keskin Array B**	**148.57**	**317**	PKPbc	PKPbc	20 01 25.4	+1.5
	comp=Z,3.0nm,0.9s,baz=144,slow=2.7,SNR=17						
VYHS	**Vyhne**	**148.70**	**344**	*e*PKP	PKPbc	20 01 25.1	+1.2
VYHS				*e*		20 01 40.3	
TREC	**Trest**	**148.70**	**348**	*e*PKP	PKPbc	20 01 25.2	+1.3
TREC				*ep*PKP	pPKPdf	20 01 40.3	-0.9
GIVF	**Givet**	**148.75**	**2**	*e*PKP1	pPKPdf	20 01 40.0	-1.2
BAIF	**Baives**	**148.76**	**3**	*e*PKP1	pPKPdf	20 01 40.2	-1.0
	comp=Z,42nm,1.2s						
KHC	**Kasperske Hory**	**149.19**	**351**	*e*PKPbc	PKPbc	20 01 25.9	+0.8
KHC	**Kasperske Hory**	**149.19**	**351**	*e*PKP	PKPbc	20 01 27.3	+2.2
KHC				*ep*PKP	pPKPdf	20 01 41.0	-0.9
FLN	**La Foliniere**	**149.60**	**9**	*e*PKP1	pPKPdf	20 01 41.8	-0.8
	comp=Z,69nm,1.4s						
FLN				*e*MLR	MLR		
	comp=Z,53nm,19.0s						
LDF	**La Druitiere**	**149.82**	**9**	*e*PKP1	pPKPdf	20 01 42.2	-0.8
	comp=Z,23nm,1.2s						
GRR	**Gorron**	**149.91**	**10**	*e*PKP1	pPKPdf	20 01 42.6	-0.5
	comp=Z,24nm,0.9s						
MEZF	**Maizieres J'vi**	**150.35**	**2**	*e*PKP1	pPKPdf	20 01 44.2	+0.4
	comp=Z,74nm,1.3s						
MMAI	**Mount Meron Ar**	**150.41**	**304**	PKPbc	PKPbc	20 01 30.7	+2.1
	comp=Z,4.2nm,0.8s,baz=1.7,slow=2.8,SNR=8.9						
CDF	**Champ du Feu**	**150.45**	**359**	*e*PKP1	pPKPdf	20 01 44.2	+0.2
	comp=Z,31nm,1.2s						
SFTF	**Sexfontaines**	**150.65**	**2**	*e*PKP1	pPKPdf	20 01 44.8	+0.5
	comp=Z,22nm,0.8s						
HAU	**Haudompre**	**150.87**	**0**	*e*PKP1	pPKPdf	20 01 45.1	+0.5
	comp=Z,34nm,1.3s						
HAU				*e*MLR	MLR		
	comp=Z,42nm,21.5s						
HINF	**Hinteralfeld**	**151.06**	**359**	*e*PKP1	pPKPdf	20 01 45.2	+0.3
	comp=Z,12nm,1.1s						
LOR	**Lormes**	**151.53**	**4⇑**	*i*PKP1	pPKPdf	20 01 46.8	+1.1
	comp=Z,34nm,1.3s						
LOR				*e*MLR	MLR		
	comp=Z,86nm,19.5s						
SSF	**Saint Saulge**	**151.72**	**4**	*e*PKP1	pPKPdf	20 01 47.3	+1.3
	comp=Z,25nm,1.0s						
MFF	**Saint Martin d**	**151.76**	**10**	*e*PKP1	pPKPdf	20 01 48.1	+2.1
	comp=Z,24nm,1.2s						
SMF	**Signal de Mont**	**152.15**	**4**	*e*PKP1	pPKPdf	20 01 48.0	+1.4
	comp=Z,11nm,1.0s						
CABF	**La Chapelle**	**152.26**	**0**	*e*PKP1	pPKPdf	20 01 48.9	+2.1
	comp=Z,41nm,1.2s						
TCF	**Toulx Ste Croi**	**152.37**	**6**	*e*PKP1	pPKPdf	20 01 48.4	+1.4
	comp=Z,28nm,1.3s						
LPL	**La Plagne**	**153.36**	**359**	*e*PKP1	pPKPdf	20 01 51.5	+3.1
LPG	**La Plagne**	**153.38**	**359**	*e*PKP1	pPKPdf	20 01 51.8	+3.3
LFF	**La Frestale**	**153.52**	**9**	*e*PKP1	PKPab	20 01 50.0	+2.2
ORIF	**Oris-en-Rattie**	**153.95**	**1**	*e*PKP1	PKPab	20 01 52.4	+2.8
	comp=Z,9.7nm,0.9s						
ORIF				*e*MLR	MLR		
	comp=Z,65nm,21.5s						
LASF	**Ste Croix**	**154.71**	**4**	*e*PKP1	PKPab	20 01 53.1	+0.2
	comp=Z,18nm,1.2s						
ESDC	**Sonseca Array**	**157.36**	**21**	PKP	PKPdf	20 01 34.1	+1.2
	comp=Z,0.0nm,0.2s,baz=325,slow=2.0,SNR=2.8						

DDA ***07*** *19:46:51.8, 38°.85N×26°.04E, h7km±5km, Md3.0*
ISK ***07*** *19:46:51.8, 39°.01N×26°.32E, h5km, MD2.8*
ISCJB ***07*** *19:46:52.8±0.5, 38°.89N±0°.03×26°.19E±0°.05, h13km±5km, Error ellipse: s-maj=7.7km s-min=3.8km az=155.5*
CSEM ***07*** *19:46:52.7±0.2, 38°.92N×26°.22E, h10km, ML2.1/4, Error ellipse: s-maj=6.8km s-min=3.7km az=65.0*
THE ***07*** *19:46:53.9, 38°.89N×26°.03E, h6km±2km, ML2.1/4, Error ellipse: s-maj=3.0km s-min=0.9km az=90.0*
ISC 07 19:46:53.2±0.5, 38°.88N±0°.03×26°.17E±0°.06, h17km±4km, n31, σ0§97/46, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.37**	**13**	P	**Pg**	**19 47 01.2**	**+0.3**
PRK				S	**Sg**	**19 47 08.0**	**+1.9**
PRK	**Paraskevi**	**0.37**	**13**	P	**Pg**	**19 47 01.2**	**+0.3**
SIGR	**SIGRI**	**0.41**	**324**	P	**Pg**	**19 47 00.9**	**-0.6**
SIGR				S	**Sg**	**19 47 06.1**	**-1.0**
SIGR	**SIGRI**	**0.41**	**324**	P	**Pg**	**19 47 00.9**	**-0.6**
SIGR				S	**Sg**	**19 47 06.1**	**-1.0**
CHOS	**Chios island**	**0.50**	**190**	P	**Pg**	**19 47 02.9**	**-0.3**
CHOS				S	**Sg**	**19 47 11.4**	**+1.4**
CHOS	**Chios island**	**0.50**	**190**	P	**Pg**	**19 47 02.9**	**-0.3**
CHOS				S	**Sg**	**19 47 11.4**	**+1.4**
URLA	**Izmir**	**0.62**	**147**	*i* P	**Pg**	**19 47 04.0**	**-1.4**
URLA				*i* S	**Sg**	**19 47 14.4**	**+0.7**
URLA	**Izmir**	**0.62**	**147**	*i* P	**Pg**	**19 47 04.0**	**-1.4**
URLA				*i* S	**Sg**	**19 47 14.4**	**+0.7**
BLCB	**Balcova**	**0.85**	**126**	*e*PG	**Pg**	**19 47 08.9**	**-0.7**
BLCB				*e*SG	**Sg**	**19 47 22.1**	**+1.2**
BLCB	**Balcova**	**0.85**	**126**	*e*Pg	**Pg**	**19 47 09.0**	**-0.7**
BLCB				*e*Sg	**Sg**	**19 47 22.1**	**+1.3**
EZN	**Ezine**	**0.95**	**7**	*e*PG	**Pg**	**19 47 08.6**	**-3.0**
EZN	**Ezine**	**0.95**	**7**	*e*Pg	**Pg**	**19 47 08.6**	**-3.0**
BOZC	**Bozcaada**	**0.96**	**355**	*i* P	**Pb**	**19 47 11.6**	**+0.2**
BOZC				*i* S	**Sb**	**19 47 25.6**	**+1.8**
IZM	**Izmir**	**0.99**	**119**	*e*PG	**Pg**	**19 47 11.6**	**-0.7**
IZM	**Izmir**	**0.99**	**119**	*e*Pg	**Pg**	**19 47 11.6**	**-0.7**
LIA	**Limnos Island**	**1.27**	**323**	P	**Pn**	**19 47 16.8**	**+0.7**
LIA				S	**Sb**	**19 47 32.9**	**+0.3**
LIA	**Limnos Island**	**1.27**	**323**	P	**Pn**	**19 47 16.8**	**+0.7**
LIA				S	**Sb**	**19 47 32.9**	**+0.3**
GADA	**Gvkgeada**	**1.32**	**351**	*e*PN	**Pn**	**19 47 15.9**	**-1.0**
GADA				*e*SN	**Sn**	**19 47 34.5**	**+0.5**
GADA	**Gvkgeada**	**1.32**	**351**	*e*Pn	**Pn**	**19 47 15.9**	**-1.0**
GADA				*e*Sn	**Sn**	**19 47 34.6**	**+0.5**
BALY	**Balya**	**1.42**	**52**	*i* P	**Pn**	**19 47 18.0**	**-0.1**
BALY				*i* S	**Sn**	**19 47 41.8**	**+5.4**
BALY	**Balya**	**1.42**	**52**	*i* P	**Pn**	**19 47 18.0**	**-0.1**
BALB	**Balikesir**	**1.53**	**60**	*e*PN	**Pn**	**19 47 18.8**	**-0.9**
BALB	**Balikesir**	**1.53**	**60**	*e*Pn	**Pn**	**19 47 18.8**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.53**	**9**	*e*PN	**Pn**	**19 47 19.4**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.53**	**9**	*e*Pn	**Pn**	**19 47 19.4**	**-0.3**
GONE	**Gonen-Balikesi**	**1.66**	**45**	*e*PN	**Pn**	**19 47 20.8**	**-0.6**
GONE	**Gonen-Balikesi**	**1.66**	**45**	*e*Pn	**Pn**	**19 47 20.8**	**-0.6**
ERIK	**Erikli-Kesan**	**1.81**	**8**	*e*PN	**Pn**	**19 47 23.4**	**-0.1**
ERIK	**Erikli-Kesan**	**1.81**	**8**	*e*Pn	**Pn**	**19 47 23.4**	**-0.1**
ENEZ	**Enez**	**1.85**	**360**	*e*PN	**Pn**	**19 47 24.6**	**+0.5**
ENEZ	**Enez**	**1.85**	**360**	*e*Pn	**Pn**	**19 47 24.6**	**+0.5**

NDI ***07*** *19:46:55.5±4.0, 31°.06N×83°.54E, h10km, ML3.8, mb3.7(NEIC)*
BJI ***07*** *19:46:55.9, 30°.47N×83°.07E, h23km, mB4.6/3, mb4.0/8, Ms3.6/4, Ms7 3.4/4*
IDC ***07*** *19:46:55.1±0.7, 30°.61N×83°.36E, h0km, mb3.8/15, mb1 4.0/17, mb1mx3.9/27, mbtmp3.8/17, ML3.7/2, Error ellipse: s-maj=20.5km s-min=15.2km az=42.0*
ISCJB ***07*** *19:46:56.4±0.3, 30°.75N±0°.03×83°.24E±0°.04, h10km, mb3.7/18, Error ellipse: s-maj=4.9km s-min=3.5km az=140.1*
NEIC ***07*** *19:46:57.0±0.4, 30°.60N×83°.29E, h10km, mb3.7/5, Error ellipse: s-maj=12.2km s-min=7.2km az=223.0*
DMN ***07*** *19:46:57.1±0.5, 30°.93N×83°.16E, h10km, Ml4.5/3, Error ellipse: s-maj=11.8km s-min=6.8km az=123.0*
ISC 07 19:46:57.9±0.3, 30°.75N±0°.03×83°.33E±0°.04, h10km, n60, σ1§22/67, mb3.7/18, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.42**	**171**	*e*Pn	**Pn**	**19 47 38.1**	**+0.6**
DANN				*e*Sn	**Sn**	**19 48 07.2**	**0.0**
	1μm,0.6s						
PTH	**Pithoragarh**	**2.95**	**247**	*e*PKP	Pn	**19 47 49.8**	**+5.0**
PTH				*e*S	**Sn**	**19 48 28.7**	**+8.4**
GKN	**Gorkha**	**2.96**	**157**	*e*Pn	**Pn**	**19 47 45.6**	**+0.6**
GKN				*e*Sn	**Sn**	**19 48 21.8**	**+1.2**
	401nm,0.5s						
KOLN	**Koldanda**	**2.98**	**175**	*e*Pn	**Pn**	**19 47 45.6**	**+0.4**
KOLN				*e*Sn	**Sn**	**19 48 21.2**	**+0.2**
	928nm,0.7s						
JOSI	**Joshimath**	**3.26**	**268**	*e*PKP	**Pn**	**19 47 51.0**	**+1.9**
JOSI				*ex*	**Sn**	**19 48 19.7**	**-8.2**
JOSI				AML	AML	19 48 22.2	
	comp=E,416nm,0.7s						
JOSI				AML	AML	19 48 25.7	
	comp=N,418nm,0.8s						
KKN	**Kakani**	**3.40**	**149**	*e*Pn	**Pn**	**19 47 51.5**	**+0.4**
DMN	**Daman**	**3.49**	**153**	*e*Pn	**Pn**	**19 47 52.9**	**+0.6**
GUN	**Gumba**	**3.60**	**141**	*e*Pn	**Pn**	**19 47 54.4**	**+0.6**
PKIN	**Phulchoki**	**3.64**	**150**	*e*Pn	**Pn**	**19 47 54.6**	**+0.3**
PKI	**Pulchoki**	**3.65**	**150**	*e*Pn	**Pn**	**19 47 54.7**	**+0.2**
KLP	**Kalpa**	**4.42**	**281**	*e*PKP	**Pn**	**19 48 05.2**	**+0.1**
KLP				*e*S	**Sn**	**19 48 55.0**	**-1.7**
DDI	**Dehra Dun**	**4.57**	**266**	*ex*	**Pn**	**19 48 09.5**	**+2.4**
DDI				*ex*	**Sg**	**19 49 19.0**	**-5.7**
TAPN	**Taplejung**	**5.12**	**130**	*e*Pn	**Pn**	**19 48 15.3**	**+0.7**
ODAN	**Odare**	**5.26**	**136**	*e*Pn	**Pn**	**19 48 17.0**	**+0.4**
NDI	**New Delhi**	**5.70**	**250**	*e*S	**Pg**	**19 48 43.5**	**-3.7**
SONA	**Sohna**	**5.99**	**247**	*e*PKP	**Pn**	**19 48 26.8**	**+0.2**
SONA				*ex*	x	19 49 33.5	
LSA	**Lhasa**	**6.85**	**97**	Pn	**Pn**	**19 48 41.3**	**+2.9**
LSA				Sg	**Sg**	**19 50 30.0**	**-7.8**
LSA				LR	LR		
	comp=E,340nm,6.2s						
LSA				LR	LR		
	comp=Z,350nm,10.0s						
LSA	**Lhasa**	**6.85**	**97**	*e*P	**Pn**	**19 48 40.9**	**+2.5**
	comp=Z,20nm,0.9s						
KHET	**Khetri**	**7.08**	**250**	*e*PKP	**Pn**	**19 48 41.5**	**-0.1**
KHET				*ex*	**Sn**	**19 50 01.8**	**-0.4**
SHL	**Shillong**	**9.14**	**122**	*e*PKP	**Pn**	**19 49 07.5**	**-2.4**
KBL	**Kabul**	**12.62**	**291**	*e*P	**Pn**	**19 49 57.5**	**+0.1**
	comp=Z,9.6nm,0.4s						
KZA	**Kyzart**	**13.04**	**332**	Pn	**Pn**	**19 50 04.7**	**+1.5**
AML	**Almayashu**	**13.74**	**328**	*e*P	**Pn**	**19 50 15.5**	**+2.7**
	comp=Z,5.1nm,1.2s						
GTA	**Gaotai**	**16.01**	**53⇑**	*e*P	**Pn**	**19 50 46.9**	**+3.8**
GTA				pP	pP	19 50 51.8	+2.4
GTA				sP	sP	19 50 53.9	+3.2
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KKAR	**Karatay Array**	**16.01**	**324**	*e*P	**Pn**	**19 50 39.8**	**-3.3**
	comp=Z,0.6nm,0.3s						
MKAR	**Makanchi Array**	**16.04**	**357**	Pn	**Pn**	**19 50 44.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=179,slow=11,SNR=6.9						
MKAR	**Makanchi Array**	**16.04**	**357**	Pn	**Pn**	**19 50 44.0**	**+0.4**
CD2	**Chengdu**	**17.55**	**84**	*e*P	**Pn**	**19 51 06.9**	**+4.2**
CD2				pP	pP	19 51 12.8	+6.2
CD2				sP	sP	19 51 16.9	+9.0
CD2				PP		19 51 22.0	
CD2				S	**Sn**	**19 54 18.1**	**-0.1**
CD2				sS

URZ	Urewera	21.93	198	eP	P	20 12 38.0	-0.2
RPZ	Rata Peaks	28.83	202	P	P	20 13 43.5	+3.3
	12nm,0.7s,mb4.7,baz=320,slow=7.6,SNR=7.4						
ARMA	Armidale	33.40	241	eP	P	20 14 21.2	+0.9
CTA	Charters Tower	37.21	260	eP	P	20 14 52.5	-0.5
	5.8nm,0.7s,mb4.2						
CTAO	Charters Tower	37.21	260	eP	P	20 14 52.3	-0.7
	8.7nm,0.8s,mb4.3						
CMSA	Cobar Meteorol	38.62	241	eP	P	20 15 04.6	+0.1
QLP	Quilpie	39.18	249	eP	P	20 15 09.0	-0.3
STKA	Stephens Creek	42.11	242	P	P	20 15 33.6	+0.4
	7.7nm,0.8s,mb4.2,baz=100,slow=8.1,SNR=25						
STKA	Stephens Creek	42.11	242	eP	P	20 15 33.2	0.0
	8.0nm,1.1s,mb4.1						
STKA	Stephens Creek	42.11	242	eP	P	20 15 33.2	0.0
	2.7nm,1.0s,mb3.6						
BBOO	Buckleboo	46.88	241	eP	P	20 16 10.9	+0.1
	8.5nm,0.9s,mb4.1						
WB2	Warramunga Arr	48.38	259	eP	P	20 16 21.6	-1.0
WRA	Warramunga Arr	48.39	259	P	P	20 16 22.0	-0.6
	6.4nm,0.6s,mb4.1,baz=97,slow=7.0,SNR=213						
ASAR	Alice Springs	48.51	254	P	P	20 16 23.4	0.0
	29nm,0.6s,baz=89,slow=8.5,SNR=207						
FITZ	Fitzroy Crossi	56.80	260	P	P	20 17 24.4	+0.2
	1.9nm,0.9s,mb3.7,baz=196,slow=18,SNR=6.9						
NVAR	Mina Array Bea	76.59	42	P	P	20 19 29.0	+0.4
	0.9nm,0.8s,mb3.5,baz=228,slow=11,SNR=4.3						
NVAR	Mina Array Bea	76.59	42	P	P	20 19 29.0	+0.4
HLID	Hailey	81.91	40	eP	P	20 19 57.9	+0.6
	2.3nm,1.2s,mb3.7						
TXAR	Lajitas Array	82.64	56	P	P	20 20 00.9	-0.5
	0.4nm,0.6s,mb3.4,baz=229,slow=6.2,SNR=4.8						
BW06	Boulder Array	84.52	42	eP	P	20 20 10.7	0.0
	2.6nm,0.9s,mb4.0						
PDAR	Pinedale Array	84.52	42	P	P	20 20 10.7	0.0
	2.2nm,0.7s,mb4.0,baz=222,slow=2.3,SNR=17						
ILAR	Eielson Array	84.72	11	P	P	20 20 10.4	-0.7
	0.2nm,0.5s,mb3.1,baz=232,slow=6.4,SNR=3.3						
MAW	Mawson	85.46	199	P	P	20 20 16.8	+1.9
	0.9nm,0.6s,mb3.7,baz=136,slow=11,SNR=5.7						
HHC	Hu-ho-hao-te	89.72	313	eP	P	20 20 37.0	+1.3
HHC				pP	pP	20 21 31.7	+1.7
HHC				sP	sP	20 21 55.2	+2.0
HHC				PP	PP	20 24 15.1	+3.7
HHC				SKS		20 30 44.5	
HHC				S	S	20 31 07.3	-0.8
HHC				sS	sS	20 32 43.6	+0.2
HHC				SS	SS	20 37 13.4	+2.5
HHC				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.8						
HHC				pmax	pmax		
	comp=Z,95nm,6.1s						
HHC				LR	LR		
	comp=N,100nm,18.3s						
HHC				LR	LR		
	comp=E,130nm,18.2s						
HHC				LR	LR		
	comp=Z,120nm,17.3s						
VNA3	Neumayer Olymp	90.84	175	e	P	20 20 39.2	-1.2
VNA3				e		20 20 43.9	
VNA2	Neumayer--Watz	91.32	176	e	P	20 20 41.3	-1.3
	baz=185,slow=3.8						
VNA2				e		20 20 47.2	
CLL	Collm	145.78	352	i PKPbc	PKPbc	20 27 16.7	+1.3
BRTR	Keskin Array B	147.10	318	PKPbc	PKPbc	20 27 20.9	+1.3
	comp=Z,0.9nm,0.7s,baz=131,slow=3.4,SNR=6.1						

IDC 07 20:15:42.4±9.5, 2°.79N×123°.40E, h586km±151km, mb3.0/6, mb1 3.0/6, mb1mx2.7/20, mbtmp3.0/6, Error ellipse: s-maj=80.8km s-min=31.0km az=67.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.88	174	P	P	20 19 44.4	-0.3
	0.4nm,0.4s,baz=15,slow=9.6,SNR=2.9						
WRA	Warramunga Arr	25.01	155	P	P	20 20 21.4	-0.1
	0.2nm,0.4s,baz=338,slow=9.1,SNR=2.8						
ASAR	Alice Springs	28.22	159	ScP	ScP	20 26 41.8	+12
	0.1nm,0.4s,baz=340,slow=3.0,SNR=4.3						
STKA	Stephens Creek	38.57	155	P	P	20 22 16.8	+0.6
	2.6nm,1.0s,baz=297,slow=6.8,SNR=3.2						
SONM	Songino Array	47.21	344	P	P	20 23 23.6	+0.4
	1.3nm,0.5s,baz=158,slow=8.0,SNR=9.1						
MKAR	Makanchi Array	56.48	327	P	P	20 24 29.9	+0.2
	3.9nm,0.4s,baz=125,slow=8.0,SNR=59						
ZALV	Zalesovo Beam	59.96	335	P	P	20 24 52.4	-0.5
	1.1nm,0.3s,baz=136,slow=7.0,SNR=7.7						

IDC 07 20:22:08.3±645.0, 33°.78N×148°.70E, h0km, Error ellipse: s-maj=1279.0km s-min=54.5km az=116.0, North Pacific Ocean

MEX 07 20:28:55.7±0.5, 16°.37N×97°.46W, h15km±6km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.64	272	eP	Pg	20 29 06.1	-2.2
PNIG				i S	Sg	20 29 14.7	-2.1
VHO	Vista Hermosa	0.99	45	i P	Pb	20 29 11.5	-3.0
VHO				i S	Sb	20 29 23.5	-3.8
HUIG	Huatulco	1.43	115	i P	Pn	20 29 17.3	-3.8
HUIG				i S	Sn	20 29 35.1	-4.5
UTMO	Huajuapan	1.49	347	eP	Pn	20 29 18.8	-3.1
UTMO				i S	Sn	20 29 36.3	-4.8
TPIG	Tehuac#an	2.04	3	i P	Pn	20 29 27.6	-1.9
TPIG				i S	Sn	20 29 50.8	-3.9

IDC 07 20:30:13.8±22.0, 1°.31S×14°.98W, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.4/23, mbtmp3.8/3, ML3.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/36, Error ellipse: s-maj=634.2km s-min=71.6km az=166.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	Dimbokro	12.84	52	Pn	Pn	20 33 16.9	-0.8
	0.3nm,0.3s,baz=209,slow=13,SNR=5.0						
DBIC				Sn	Sn	20 35 33.6	-8.0
	0.3nm,0.3s,baz=189,slow=13,SNR=3.1						
TORD	Torodi Ar. Bea	21.91	49	P	P	20 35 09.2	+0.4
	2.1nm,0.9s,baz=236,slow=11,SNR=11						
TORD				LR	LR	20 42 55.8	
	comp=Z,62nm,18.4s,baz=160,slow=35						
FINES	FINESS Array B	69.98	20	P	P	20 41 26.9	0.0
	1.3nm,0.9s,baz=212,slow=4.9,SNR=4.2						

*NNC **07** 20:41:14.1±0.2, 43°.05N×77°.10E, h22km±6km, mb3.0, mpv2.8, Error ellipse: s-maj=8.2km s-min=4.8km az=169.0*
*KNET **07** 20:41:15.8±0.9, 42°.92N×77°.12E, h23km±5km, ml2.5, Error ellipse: s-maj=5.3km s-min=3.8km az=72.0*

ISC 07 20:41:15.0±1.8, 42°.96N±0°.05×77°.3E±0°.1, h10km, n11, σ1§26/16, 15C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	0.35	319	⇓P	Pg	20 41 20.9	-1.0
KNDC				⇑S	Sg	20 41 25.8	-0.8
	47nm,0.1s						
ULHL	Ulahol	1.04	228	P	Pg	20 41 33.4	-1.7
	24nm,0.1s,SNR=173						
ULHL				⇑S	Sg	20 41 46.9	-1.7
	52nm,0.1s						
TKM2	Tokmak 2	1.24	269	⇑P	Pn	20 41 36.4	-2.0
	12nm,0.2s,SNR=20						
TKM2				⇑S	Sb	20 41 52.6	-1.8
	51nm,0.1s						
KZA	Kyzart	1.74	240	⇑P	Pn	20 41 45.9	+0.7
	19nm,0.2s,SNR=19						
KZA				⇑S	Sn	20 42 09.1	+1.7
	20nm,0.2s						
KBK	Karagaybulak	1.74	261	⇑P	Pn	20 41 45.6	+0.4
	18nm,0.1s,SNR=44						
KBK				⇑S	Sn	20 42 08.6	+1.1
	67nm,0.2s						
CHMS	Chumysh	1.86	272	⇑P	Pn	20 41 47.1	+0.3
	7.6nm,0.2s,SNR=8.6						
CHMS				⇑S	Sn	20 42 11.0	+0.6
	45nm,0.2s						
USP	Ospenovka	2.06	280	⇑P	Pn	20 41 50.4	+0.8
	12nm,0.2s,SNR=43						
USP				⇓S	Sn	20 42 17.0	+1.6
	47nm,0.2s						
AAK	Ala-Archa	2.08	262	⇑P	Pn	20 41 51.2	+1.3
	18nm,0.2s,SNR=25						
KK31	Karatay Array	4.97	274	Pg	Pg	20 42 42.0	-8.1
	0.4nm,0.4s,baz=90,slow=16,SNR=18						
KK31				⇑Lg		20 43 47.8	
	1.7nm,0.4s,baz=94,slow=30,SNR=18						
KURBB	Kurchatov Arra	7.72	6	⇑Lg		20 45 17.4	
	0.6nm,0.8s						
KURK	Kurchatov	7.82	6	⇑Lg		20 45 19.4	
	4.4nm,0.9s						

IDC 07 20:41:36.2±635.0, 33°.73N×148°.82E, h0km, Error ellipse: s-maj=1260.0km s-min=54.3km az=116.0, North Pacific Ocean

MAN 07 20:44:51, 16°.72N×122°.34E, h32km, mb4.0, ML2.8, MS2.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.35	13	eP	Pb	20 45 01.4	+2.1
PALP				eS	Sb	20 45 06.6	+1.7
CAUP	Cauayan	0.55	294	eP	Pb	20 45 03.3	+1.1
BALP	Baler	1.23	217	eP	Pn	20 45 12.4	+0.5
APYP	Conner	1.54	317	eP	Pn	20 45 19.1	+2.8

*ISK **07** 20:47:51.6, 39°.92N×43°.35E, h3km, MD3.0*
*DDA **07** 20:47:52.1, 39°.91N×43°.26E, h8km±3km, Md3.1*
*CSEM **07** 20:47:52.0±0.3, 39°.94N×43°.36E, h2km, MD3.0, Error ellipse: s-maj=8.1km s-min=4.6km az=66.0*
*ISCJB **07** 20:47:53.6±0.4, 39°.87N±0°.02×43°.26E±0°.04, h10km, Error ellipse: s-maj=4.2km s-min=3.2km az=12.1*

ISC 07 20:47:54.0±0.4, 39°.88N±0°.02×43°.29E±0°.04, h10km, n27, σ1§18/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGRB	Hanur-Agry	0.38	216	PG	Pg	20 48 00.9	-0.6
AGRB				SG	Sg	20 48 08.1	+1.5
AGRB	Hanur-Agry	0.38	216	i Pg	Pg	20 48 01.0	-0.5
AGRB				i Sg	Sg	20 48 08.1	+1.5
DYDN	Diyadin	0.46	137	i P	Pg	20 48 01.7	-1.3
DYDN				i S	Sg	20 48 09.8	+0.7
DYDN	Diyadin	0.46	137	i P	Pg	20 48 01.7	-1.3
DYDN				i S	Sg	20 48 09.8	+0.7
KARS	Kars	0.76	348	ePG	Pg	20 48 05.9	-2.8
KARS				eSG	Sg	20 48 17.1	-1.6
KARS	Kars	0.76	348	ePg	Pg	20 48 05.9	-2.8
KARS				eSg	Sg	20 48 17.1	-1.5
CLDR	Caldiran	0.89	146	ePG	Pg	20 48 08.6	-2.5
CLDR				eSG	Sg	20 48 22.4	-0.2
CLDR	Caldiran	0.89	146	ePg	Pg	20 48 08.6	-2.5
CLDR				eSg	Sg	20 48 22.4	-0.2
GNI	Garni	1.15	76	ePN	Pg	20 48 14.0	-2.1
GNI	Garni	1.15	76	ePn	Pg	20 48 14.0	-2.1
VANB	Van	1.29	176	ePN	Pn	20 48 18.1	0.0
VANB	Van	1.29	176	ePn	Pn	20 48 18.1	0.0
TVAN	Van	1.36	176	i P	Pn	20 48 18.2	-0.8
TVAN				i S	Sn	20 48 40.0	+3.0
TVAN	Van	1.36	176	i P	Pn	20 48 18.2	-0.8
TVAN				i S	Sn	20 48 40.0	+3.0
VANT	Van	1.46	181	ePN	Pn	20 48 20.5	+0.1
VANT	Van	1.46	181	ePn	Pn	20 48 20.5	+0.1
EZM	Erzurum	1.48	271	ePN	Pn	20 48 20.4	-0.3
ARTV	Artvin	1.66	322	i P	Pn	20 48 22.3	-0.9
ARTV				i S	Sn	20 48 46.1	+1.5
ARTV	Artvin	1.66	322	i P	Pn	20 48 22.3	-0.9
ARTV				i S	Sn	20 48 46.1	+1.5
BNGL	BINGOL	1.90	241	i P	Pn	20 48 26.7	+0.3
BNGL				i S	Sg	20 48 54.5	-0.5
BCA	Borcka	2.01	321	ePN	Pn	20 48 27.3	-0.7
BCA	Borcka	2.01	321	ePn	Pn	20 48 27.3	-0.7
MTA	Mtatsminda	2.14	32	P	Pn	20 48 31.0	+1.2
MTA				S	Sb	20 48 59.6	+0.2
TBLG	Delisi	2.15	30	P	Pn	20 48 31.2	+1.3
TBLG				S	Sb	20 49 00.4	+0.7
DGRG	David-gareji	2.23	45	P	Pn	20 48 32.1	+1.1
DGRG				S	Sb	20 49 03.1	+1.1
PTK	Pertek	3.18	253	ePN	Pn	20 48 44.9	+0.9
PTK	Pertek	3.18	253	ePn	Pn	20 48 44.9	+0.9

*IDC **07** 20:49:32.0±2.9, 2°.14N×96°.08E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/22, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=113.3km s-min=21.4km az=61.0*

NEIC 07 20:49:37.9±0.9, 2°.24N×96°.26E, h35km, mb3.7/1, Error ellipse: s-maj=22.0km s-min=11.0km az=63.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPM	Ipoh	5.25	65	ePn	Pn	20 50 54.1	+0.2
CMAR	Chiang Mai Arr	16.33	9	Pn	Pn	20 53 25.8	+1.1
	0.1nm,0.3s,baz=195,slow=11,SNR=7.6						
WRA	Warramunga Arr	43.38	122	P	P	20 57 37.6	+0.3
	0.2nm,0.5s,baz=301,slow=9.2,SNR=5.8						
WB2	Warramunga Arr	43.39	122	eP	P	20 57 38.0	+0.6
ASAR	Alice Springs	44.76	127	P	P	20 57 48.1	-0.2
	0.2nm,0.5s,baz=307,slow=8.0,SNR=3.7						
MKAR	Makanchi Array	46.02	347	P	P	20 57 58.0	0.0
	1.0nm,0.6s,baz=159,slow=8.5,SNR=15						
MKAR	Makanchi Array	46.02	347	P	P	20 57 58.0	0.0
SONM	Songino Array	46.26	9	P	P	20 57 59.6	-0.2
	0.7nm,0.4s,baz=194,slow=8.5,SNR=3.2						
ULN	Ulaanbaatar	46.40	10	eP	P	20 58 01.0	+0.1
	0.5nm,0.5s						
ZALV	Zalesovo Beam	52.40	351	P	P	20 58 46.2	-0.4
	0.9nm,0.4s,baz=168,slow=7.6,SNR=4.9						

CASC 07 20:52:34.7±1.6, 8°.32N×82°.89W, h3km, MD3.5, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.43	320	eP	Pg	20 52 43.3	+0.4
ACR				eS	Sg	20 52 51.1	+2.6
BRU2	Volcan	0.51	23	i P	Pg	20 52 46.0	+1.5
BRU2				eS	Sg	20 52 55.1	+4.0
TBS2		0.52	26	eP	Pg	20 52 54.2	+10
TBS2				eS	Sg	20 53 03.7	+12
BUS	Buena Vista	1.49	325	eP	Pn	20 53 01.7	-0.7
BUS				eS	Sn	20 53 24.1	+1.7
URSC	Urasca	1.74	330	eP	Pn	20 53 05.2	-0.6
URSC				eS	Sn	20 53 29.6	+1.1

*IDC **07** 21:07:43.8±1.3, 54°.19S×56°.21W, h0km, mb4.2/4, mb1 4.2/4, mb1mx3.9/13, mbtmp4.2/4, MS3.7/4, Ms1 3.7/4, ms1mx3.3/19, Error ellipse: s-maj=52.3km s-min=26.6km az=92.0*
*NEIC **07** 21:07:45.9±0.5, 54°.10S×55°.83W, h10km, mb4.4/8, Error ellipse: s-maj=15.3km s-min=9.6km az=67.0*

ISC 07 21:07:44.4±0.5, 54°.42S±0°.06×56°.47W±0°.10, h10km, n29, σ1§11/22, mb4.3/8, MS3.7/3, Falkland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	Ushuaia	6.96	262	Pn	Pn	21 09 24.9	-1.4
	10nm,0.3s,baz=70,slow=14,SNR=42						
USHA				Sn	Sn	21 10 45.5	+0.2
	12nm,0.3s,baz=21,slow=6.6,SNR=12						
PMSA	Palmer Station	11.06	197	Pn	Pn	21 10 31.2	+8.8
	3.4nm,0.3s,baz=17,slow=12,SNR=22						
PMSA				Sn	Sn	21 12 25.4	-0.6
	4.8nm,0.3s,baz=322,slow=22,SNR=14						
PMSA	Palmer Station	11.06	197	ePn	Pn	21 10 30.7	+8.3
	14nm,0.5s						
PLCA	Paso Flores	16.62	320	Pn	Pn	21 11 41.0	+3.8
	0.4nm,0.3s,baz=154,slow=11,SNR=8.1						
PLCA				LR	LR	21 19 21.2	
	comp=Z,288nm,18.7s,baz=138,slow=42						
PLCA	Paso Flores	16.62	320	ePn	Pn	21 11 38.1	+0.9
	3.6nm,0.6s						
PLCA				LR	LR	21 19 21.2	
TRQA	Tornquist	16.79	345	ePn	Pn	21 11 39.9	+0.5
	6.1nm,0.6s						
TRQA				eSn	Sx	21 14 29.8	
VNA3	Neumayer Olymp	26.21	148	e	P	21 13 20.1	+1.4
VNA3				e		21 13 32.7	
QSPA	South Pole Qui	35.83	180	P	P	21 14 46.8	+3.4
	7.3nm,0.5s,mb4.8,baz=169,slow=2.6,SNR=82						
QSPA	South Pole Qui	35.83	180	eP	P	21 14 46.5	+3.2
	6.9nm,0.5s,mb4.8						
SIV	San Ignacio	38.51	353	P	P	21 15 05.8	-0.9
	0.8nm,0.5s,mb3.8,baz=190,slow=9.7,SNR=5.1						
LPAZ	La Paz	39.12	342	P	P	21 15 18.6	+6.8
	1.1nm,0.8s,mb3.6,baz=160,slow=4.4,SNR=4.0						
LPAZ	La Paz	39.12	342	eP	P	21 15 11.9	+0.1
	1.6nm,0.9s,mb3.8						
BDFB	Brasilia	39.25	13	LR	LR	21 31 37.4	
	comp=Z,132nm,19.6s,MS3.8,baz=142,slow=37						
MAW	Mawson	50.23	154	LR	LR	21 37 28.6	
	comp=Z,54nm,18.5s,MS3.6,baz=58,slow=35						
SUR	Sutherland	57.23	101	P	P	21 17 31.9	+0.3
OTAV	Otavalo	57.41	334	eP	P	21 17 34.6	+1.6
	6.8nm,0.9s,mb4.7						
ROSC	El Rosal	60.92	340	LR	LR	21 46 46.1	
	comp=Z,70nm,21.3s,MS3.8,baz=234,slow=39						
BOSA	Boshof	62.58	101	P	P	21 18 08.7	+0.2
	1.3nm,0.6s,mb4.3,baz=207,slow=9.0,SNR=4.2						
BOSA	Boshof	62.58	101	eP	P	21 18 07.0	-1.4
	2.8nm,0.8s,mb4.4						
TSUM	Tsumeb	65.36	89	eP	P	21 18 25.4	-1.4
	6.4nm,1.4s,mb4.5						
LBTB	Lobatse	65.52	99	eP	P	21 18 28.6	+0.8
	4.5nm,0.5s,mb4.8						
LBTB				ePcP	PcP	21 18 58.6	-0.9
DBIC	Dimbokro	74.52	54	P	P	21 19 21.6	-1.5
TORD	Torodi Ar. Bea	83.29	56	P	P	21 20 10.5	-0.6
	0.9nm,0.8s,mb3.9,baz=216,slow=3.7,SNR=5.9						
ASAR	Alice Springs	101.73	190	P	Pdif	21 21 37.8	+0.4
	0.3nm,0.8s,baz=167,slow=4.5,SNR=4.1						
WRA	Warramunga Arr	105.36	191	Pdiff	Pdif	21 21 54.1	+0.5
	0.2nm,0.7s,baz=176,slow=4.0,SNR=5.4						
AML	Almayashu	145.36	90	ePKP	PKPdf	21 27 21.6	+0.1
EKS2	Erkin-Say	145.73	89	ePKP	PKPdf	21 27 22.6	+0.5
MKAR	Makanchi Array	153.07	89	PKPbc	PKPbc	21 27 43.3	+2.2
	0.2nm,0.5s,baz=225,slow=4.0,SNR=2.6						
HHC	Hu-ho-hao-te	164.24	145	ePKP	PKPdf	21 27 49.0	+1.8
HHC				PKS		21 31 21.5	
HHC				PP	PP	21 32 23.2	-3.9
HHC				SKS	SKSdf	21 34 52.8	+1.5
HHC				SKKS	SKKSac	21 39 10.1	-4.5
HHC				SS	SS	21 52 45.7	-12
HHC				AMB	AMB		
	comp=Z,130nm,8.2s						
HHC				LR	LR		
	comp=N,130nm,19.8s						
HHC				LR	LR		
	comp=E,150nm,19.7s						
HHC				LR	LR		
	comp=Z,130nm,20.2s						

*IDC **07** 21:20:58.0±1.1, 5°.08N×94°.44E, h0km, mb4.1/9, mb1 4.2/9, mb1mx3.9/21, mbtmp4.1/9, MS4.0/1, Ms1 4.0/1, ms1mx3.0/29, Error ellipse: s-maj=41.5km s-min=18.7km az=52.0*
*ISCJB **07** 21:20:59.7±2.3, 5°.00N±0°.05×94°.38E±0°.06, h20km±17km, mb4.2/32, MS4.0/2, Error ellipse: s-maj=12.0km s-min=5.9km az=137.5*
*NEIC **07** 21:21:02.7±0.4, 4°.93N×94°.29E, h35km, mb4.3/11, Error ellipse: s-maj=9.6km s-min=6.4km az=60.0*
*BJI **07** 21:21:03.8, 5°.43N×94°.40E, h22km, mb4.4/5, Ms4.1/1, Ms7 3.8/1*
*DJA **07** 21:21:11, 4°.63N×94°.78E, h115km, MLv4.3/4*

ISC 07 21:21:02.5±2.1, 4°.99N±0°.05×94°.35E±0°.05, h27km±15km, n61, σ1§02/64, mb4.2/32, MS4.0/2, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		3.31	121	P	Pn	21 21 53.1	+0.6
TPTI				S	Sn	21 22 30.4	-0.5
TSI	Tuntungan	4.46	109	P	Pn	21 22 10.5	+2.2
TSI				S	Sn	21 22 58.2	-1.1
IPM	Ipoh	6.67	94	P	Pn	21 22 40.8	+2.0
	0.1nm20nm,1.1s						
MNSI	Mandailing Nat	6.68	128	P	Pn	21 22 39.6	+0.7
	0.3nm2μm48nm,0.4s						
MNSI				S	Sn	21 23 49.4	-4.8
	0.3nm2μm48nm,0.4s						
SISI	Saibi	7.86	143	P	Pn	21 22 56.4	+1.3
	38nm,1.9s						
MNAI	Manna	12.66	137	P	Pn	21 24 00.4	-0.5
PALK	Pallekele	13.76	280	ePn	Pn	21 24 14.1	-1.8
CM31	Chiang Mai Arr	14.12	18	ePn	Pn	21 24 19.8	-1.0
CMAR	Chiang Mai Arr	14.12	18	Pn	Pn	21 24 20.9	+0.2
	0.6nm,0.3s,baz=206,slow=14,SNR=6.1						
CMAR	Chiang Mai Arr	14.12	18	Pn	Pn	21 24 20.9	+0.2
CHTO	Chiang Mai	14.45	18	eP	Pn	21 24 30.0	+4.7
	7.0nm,0.9s						
COCO	West Island	17.25	172	ePn	Pn	21 24 59.2	-2.4
	116nm,0.6s						
QIZ	Qiongzhong	20.57	46	eP	P	21 25 41.1	+1.7
	2.4nm,0.5s						
PKIN	Phulchoki	24.02	340	eP	P	21 26 14.6	-0.7
DMN	Daman	24.15	340	eP	P	21 26 15.8	-0.7
KKN	Kakani	24.26	340	eP	P	21 26 17.4	0.0
GKN	Gorkha	24.68	339	eP	P	21 26 21.5	+0.3
LSA	Lhasa	24.76	353	P	P	21 26 22.0	0.0
LSA	Lhasa	24.76	353	eP	P	21 26 22.1	+0.2
	8.0nm,0.4s,mb4.6						
KOLN	Koldanda	24.86	337	eP	P	21 26 24.0	+1.1
DANN	Dangsing	25.32	338	eP	P	21 26 27.7	+0.7
KAPI	Kappang	27.25	111	P	P	21 26 44.5	-0.1
GTA	Gaotai	34.62	7	eP	P	21 27 48.3	-1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	38.46	127	P	P	21 28 21.3	-1.1
HHC	Hu-ho-hao-te	38.90	21	eP	P	21 28 28.2	+2.4
HHC				pP	pP	21 28 38.0	+4.1
HHC				sP	sP	21 28 42.1	+4.8
HHC				PP	PP	21 30 02.9	+7.6
HHC				ScP	ScP	21 34 22.7	-0.3
HHC				S	S	21 34 26.2	+3.8
HHC				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
HHC				LR	LR		
	comp=N,110nm,16.7s,MS4.0						
HHC				LR	LR		
	comp=E,130nm,15.9s,MS4.0						
HHC				LR	LR		
	comp=Z,120nm,15.7s,MS3.8						
BJT	Baijiatuau	40.04	26	P	P	21 28 35.2	-0.1
BJI	Beijing	40.06	26	P	P	21 28 34.6	-0.9
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
TKM2	Tokmak 2	41.27	339	eP	P	21 28 44.8	-0.6
	comp=Z,2.1nm,0.5s,mb4.0						
AML	Almayashu	41.31	337	eP	P	21 28 45.6	-0.1
	comp=Z,6.6nm,0.5s,mb4.5						
EKS2	Erkin-Say	41.72	337	eP	P	21 28

comp=Z,1.5nm,0.4s,mb4.3
CTA Charters Tower 56.75 118 LR LR 21 55 03.8
comp=Z,143nm,19.6s,MS4.1,baz=121,slow=36
BRTR Keskin Array B 64.47 312 P **P** **21 31 35.7 -1.2**
comp=Z,1.3nm,0.9s,mb4.0,baz=104,slow=5.2,SNR=7.1
JOF Joensuu 73.53 335 *ep* **P** **21 32 32.6 0.0**
comp=Z,0.2nm,0.3s,mb3.5
FINES FINESS Array B 75.34 333 P **P** **21 32 43.0 -0.2**
comp=Z,0.6nm,0.4s,mb3.9,baz=111,slow=5.5,SNR=10.0
KAF Kangasniemi 75.44 333 *ep* **P** **21 32 52.8 +9.1**
comp=Z,0.3nm,0.4s,mb3.6
KEV Kevo 77.61 341 *ep* **P** **21 32 56.1 +0.2**
comp=Z,0.2nm,0.3s,mb3.5
ARCES ARCESS Array B 78.03 340 P **P** **21 32 58.6 +0.3**
comp=Z,0.8nm,0.4s,mb4.0,baz=103,slow=6.3,SNR=17
CLL Collm 80.71 321 *eP* **P** **21 33 14.0 +0.8**
CLL Collm 80.71 321 *eP* **P** **21 33 14.0 +0.8**
LPG La Plagne 84.79 315 *eP* **P** **21 33 35.9 +1.3**
comp=Z,6.2nm,0.8s,mb4.5
LPL La Plagne 84.80 315 *eP* **P** **21 33 35.9 +1.3**
comp=Z,2.6nm,0.5s,mb4.4
FRF La Foret Royal 84.93 313 *eP* **P** **21 33 36.0 +0.7**
comp=Z,4.1nm,0.6s,mb4.5
ORIF Oris-en-Rattie 85.43 315 *eP* **P** **21 33 38.8 +1.0**
comp=Z,4.4nm,0.7s,mb4.4
SFTF Sexfontaines 85.86 318 *eP* **P** **21 33 40.7 +0.9**
comp=Z,4.6nm,0.4s,mb4.8
LOR Lormes 86.71 317 *eP* **P** **21 33 44.8 +0.8**
comp=Z,4.8nm,0.7s,mb4.5
SMF Signal de Mont 86.76 316 *eP* **P** **21 33 45.1 +0.8**
comp=Z,2.2nm,0.5s,mb4.4
LDF La Druitiere 89.25 319 *eP* **P** **21 33 57.1 +0.9**
comp=Z,3.1nm,0.7s,mb4.5
FLN La Foliniere 89.47 319 *eP* **P** **21 33 58.1 +0.9**

NEIC ***07*** *21:38:38.7±0.7, 2°.43S×133°.39E, h35km, mb3.5/2, Error ellipse: s-maj=20.4km s-min=9.4km az=72.0*
IDC ***07*** *21:38:40.1±1.7, 3°.27S×130°.52E, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.7/18, mbtmp3.9/5, ML3.6/2, Error ellipse: s-maj=106.6km s-min=23.2km az=71.0*
ISCJB ***07*** *21:38:44.5±0.8, 3°.22S±0°.05×130°.74E±0°.04, h61km±10km, mb3.7/3, Error ellipse: s-maj=8.7km s-min=7.1km az=27.3*
DJA ***07*** *21:38:46, 3°.03S×130°.71E, h52km, MLv4.0/4*
ISC 07 21:38:46.2±0.7, 3°.22S±0°.05×130°.72E±0°.05, h57km±9km, n26, σ1°.36/30, mb3.7/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.53**	**212**	P	**Pn**	**21 39 12.6**	**+1.4**
BNDI				S	**Sn**	**21 39 34.8**	**+4.7**
NLAI	**Namlea**	**3.62**	**270**	P	**Pn**	**21 39 40.6**	**+0.8**
NLAI				S	**Sn**	**21 40 22.3**	**+1.0**
LBMI	**Labuha**	**4.12**	**309**	P	**Pn**	**21 39 44.8**	**-1.9**
LBMI				S	**Sn**	**21 40 32.4**	**-1.2**
BAKI	**Biak**	**5.75**	**70**	P	**Pn**	**21 40 08.7**	**-0.3**
BAKI				S	**Sn**	**21 41 14.9**	**+1.3**
FITZ	**Fitzroy Crossi**	**15.60**	**198**	Pn	**Pn**	**21 42 19.3**	**-3.3**
	0.1nm,0.3s,baz=49,slow=14,SNR=4.9						
FITZ	**Fitzroy Crossi**	**15.60**	**198**	Pn	**Pn**	**21 42 19.3**	**-3.3**
WRA	**Warramunga Arr**	**16.99**	**168**	Pn	**Pn**	**21 42 37.7**	**-2.3**
	0.3nm,0.3s,baz=350,slow=11,SNR=16						
WRA				Sn	**Sn**	**21 45 44.3**	**-3.9**
	0.2nm,0.3s,baz=0.0,slow=23,SNR=4.3						
WRA	**Warramunga Arr**	**16.99**	**168**	Pn	**Pn**	**21 42 37.7**	**-2.3**
WRA				Sn	**Sn**	**21 45 44.3**	**-3.9**
WB2	**Warramunga Arr**	**16.99**	**168**	*e*Pn	**Pn**	**21 42 39.0**	**-1.1**
ASAR	**Alice Springs**	**20.55**	**172**	P	**P**	**21 43 21.1**	**+0.9**
	6.5nm,0.5s,baz=352,slow=11,SNR=114						
ASAR				S	**S**	**21 47 07.0**	**-0.1**
	2.3nm,1.1s,baz=349,slow=17,SNR=6.5						
ASAR	**Alice Springs**	**20.55**	**172**	P	**P**	**21 43 21.1**	**+0.9**
ASAR				S	**S**	**21 47 07.0**	**-0.1**
KSM	**Kuching**	**20.93**	**283**	*e*P	**P**	**21 43 26.1**	**+1.7**
QIZ	**Qiongzhong**	**30.18**	**318**	P	**P**	**21 44 57.6**	**+6.3**
STKA	**Stephens Creek**	**30.28**	**161**	P	**P**	**21 44 53.4**	**+1.4**
	0.8nm,0.6s,mb3.6,baz=325,slow=12,SNR=2.4						
STKA	**Stephens Creek**	**30.28**	**161**	*e*P	**P**	**21 44 47.5**	**-4.5**
	0.3nm,0.9s,mb3.0						
COCO	**West Island**	**34.70**	**253**	P	pP	21 45 49.8	+4.3
ENH	**Enshi**	**39.01**	**330**	P	**P**	**21 46 06.7**	**-0.5**
DGAR	**Diego Garcia**	**58.14**	**263**	*e*P	pP	21 48 48.3	-1.8
	60nm,0.5s						
TLY	**Talaya**	**59.35**	**341**	*e*P	**P**	**21 48 39.3**	**-3.0**
MKAR	**Makanchi Array**	**65.51**	**326**	P	**P**	**21 49 24.5**	**+1.0**
	0.7nm,0.6s,mb3.9,baz=120,slow=7.9,SNR=7.3						
MKAR	**Makanchi Array**	**65.51**	**326**	P	**P**	**21 49 24.5**	**+1.0**
EKS2	**Erkin-Say**	**68.66**	**318**	*e*P	**P**	**21 49 44.6**	**+1.1**
	0.7nm,0.6s,mb3.8						
KBL	**Kabul**	**68.93**	**309**	P	**P**	**21 49 50.0**	**+4.5**
KURK	**Kurchatov**	**69.71**	**328**	P	**P**	**21 49 49.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**128.69**	**284**	PKP	PKPdf	21 57 50.3	+2.2
	0.4nm,0.9s,baz=97,slow=2.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**128.69**	**284**	PKP	PKPdf	21 57 50.3	+2.2

ISCJB ***07*** *22:11:13.1±1.3, 21°.01S±0°.06×68°.8W±0°.1, h94km±16km, mb4.2/3, Error ellipse: s-maj=18.4km s-min=8.4km az=16.3*
NEIC ***07*** *22:11:14.0±1.1, 20°.92S×68°.87W, h83km±14km, mb3.9/3, Error ellipse: s-maj=16.9km s-min=9.7km az=109.0*
IDC ***07*** *22:11:14.5±2.4, 20°.94S×68°.84W, h100km±20km, mb4.1/4, mb1 3.8/8, mb1mx3.6/20, mbtmp3.8/8, MS3.4/1, Ms1 3.4/1, ms1mx2.5/28, Error ellipse: s-maj=40.9km s-min=17.4km az=107.0*
ISC 07 22:11:14.5±1.1, 20°.98S±0°.06×68°.8W±0°.1, h93km±13km, n18, σ1°.11/22, mb4.2/3, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.71**	**8**	P	**Pn**	**22 12 23.6**	**+0.3**
	5.1nm,0.3s,baz=208,slow=5.9,SNR=155						
LPAZ				S	**Sn**	**22 13 09.8**	**-7.0**
	1.6nm,0.3s,baz=158,slow=7.1,SNR=9.3						
LPAZ	**La Paz**	**4.71**	**8**	*e*Pn	**Pn**	**22 12 23.5**	**+0.2**
LPAZ				*e*Pg	**Pn**	**22 12 41.0**	**+18**
LPAZ				*e*Sn	**Sn**	**22 13 09.9**	**-6.8**
LCO	**Las Campanas**	**8.18**	**192**	*e*Pn	**Pn**	**22 13 09.6**	**-0.7**
LCO				*e*Sn	**Sn**	**22 14 42.3**	**+1.2**
SIV	**San Ignacio**	**8.86**	**57**	P	**Pn**	**22 13 18.7**	**-1.0**
	2.5nm,0.3s,baz=255,slow=11,SNR=56						
CFAA	**Coronel Fontan**	**10.59**	**177**	P	**Pn**	**22 13 43.7**	**+0.5**
	0.1nm,0.3s,baz=357,slow=14,SNR=26						
CFAA				S	**Sn**	**22 15 38.0**	**-1.9**
	0.1nm,0.3s,baz=148,slow=17,SNR=7.1						
CFAA	**Coronel Fontan**	**10.59**	**177**	P	**Pn**	**22 13 43.7**	**+0.5**
CFAA				S	**Sn**	**22 15 38.0**	**-1.9**
TRQA	**Tornquist**	**18.01**	**162**	*e*P	**Pn**	**22 15 20.3**	**+1.7**
	4.9nm,1.0s						
PLCA	**Paso Flores**	**19.74**	**184**	P	**Pn**	**22 15 38.8**	**-0.4**
	0.2nm,0.3s,baz=0.9,slow=13,SNR=7.4						
PLCA	**Paso Flores**	**19.74**	**184**	*e*P	**Pn**	**22 15 39.4**	**+0.3**
	3.4nm,0.7s						
BDFB	**Brasilia**	**20.43**	**78**	P	**P**	**22 15 45.7**	**+1.3**
	3.9nm,0.3s,baz=246,slow=11,SNR=9.8						
OTAV	**Otavalo**	**23.10**	**335**	P	**P**	**22 16 13.1**	**+0.7**
ROSC	**El Rosal**	**25.24**	**347**	LR	LR	22 28 18.8	
	comp=Z,81nm,19.9s,baz=29,slow=39						
RCBR	**Riachuelo**	**35.27**	**69**	P	**P**	**22 18 01.5**	**+1.0**
	9.3nm,0.9s,mb4.6,baz=246,slow=12,SNR=5.4						
RCBR	**Riachuelo**	**35.27**	**69**	*e*P	**P**	**22 18 01.9**	**+1.5**
	3.8nm,0.6s,mb4.4						
RPN	**Rapa Nui**	**37.39**	**252**	*e*P	**P**	**22 18 17.9**	**-0.6**
DBIC	**Dimbokro**	**68.50**	**74**	P	**P**	**22 22 06.2**	**-1.0**
	3.9nm,0.7s,mb4.4,baz=185,slow=6.6,SNR=7.5						
TORD	**Torodi Ar. Bea**	**77.09**	**70**	P	**P**	**22 22 56.5**	**-1.6**
	0.9nm,0.5s,mb3.8,baz=250,slow=3.8,SNR=54						
MKAR	**Makanchi Array**	**145.16**	**36**	PKPbc	PKPbc	22 30 39.5	-1.2
	0.4nm,0.5s,baz=352,slow=2.9,SNR=8.4						

ISCJB ***07*** *22:39:27.6±0.9, 54°.1N±0°.1×35°.2W±0°.2, h10km, mb3.6/7, MS3.0/6, Error ellipse: s-maj=20.4km s-min=13.0km az=20.7*
IDC ***07*** *22:39:27.9±1.2, 54°.16N×35°.14W, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/30, mbtmp3.8/8, ML2.7/1, MS3.1/7, Ms1 3.1/7, ms1mx2.9/35, Error ellipse: s-maj=33.4km s-min=21.1km az=27.0*
NEIC ***07*** *22:39:29.2±0.7, 54°.09N×35°.19W, h10km, mb3.5/1, Error ellipse: s-maj=18.7km s-min=11.6km az=199.0*
ISC 07 22:39:29.4±0.9, 54°.1N±0°.1×35°.2W±0°.2, h10km, n17, σ0°.81/13, mb3.6/7, MS3.0/6, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.33**	**285**	P	**Pn**	**22 43 43.2**	**-0.2**
	0.3nm,0.3s,baz=76,slow=9.1,SNR=5.7						
SCHQ				LR	LR	22 48 43.0	
	comp=Z,83nm,18.4s,baz=89,slow=30						
SCHQ	**Schefferville**	**18.33**	**285**	P	**Pn**	**22 43 43.2**	**-0.2**
SCHQ				LR	LR	22 48 43.0	
SUMG	**Summit**	**18.60**	**357**	*e*P	**Pn**	**22 43 47.4**	**+0.9**
	2.3nm,0.7s						
NAO01	**NORSAR Array S**	**25.22**	**56**	P	**P**	**22 44 54.7**	**-0.1**
NOA	**NORSAR Array B**	**25.36**	**55**	P	**P**	**22 44 55.7**	**-0.5**
	0.5nm,0.8s,mb3.1,baz=29,slow=14,SNR=2.8						
NOA				LR	LR	22 54 12.8	
	comp=Z,24nm,19.9s,MS2.7,baz=295,slow=35						
ESDC	**Sonseca Array**	**25.50**	**112**	P	**P**	**22 44 58.2**	**+0.7**
	0.5nm,0.6s,mb3.2,baz=312,slow=9.5,SNR=6.2						
ESDC				LR	LR	22 53 15.6	
	comp=Z,35nm,18.5s,MS2.9,baz=5.0,slow=32						
HFS	**Hagfors**	**26.68**	**57**	LR	LR	22 54 37.2	
	comp=Z,41nm,19.6s,MS3.0,baz=324,slow=34						
DAVOX	**Davos/Dischmat**	**29.20**	**86**	LR	LR	22 56 10.9	
	comp=Z,72nm,18.1s,MS3.3,baz=271,slow=34						
SADO	**Sadowa**	**29.63**	**270**	LR	LR	22 56 13.9	
	comp=Z,86nm,19.2s,MS3.4,baz=24,slow=34						
ARCES	**ARCESS Array B**	**30.92**	**37**	P	**P**	**22 45 44.9**	**-0.8**
	3.3nm,1.0s,mb4.1,baz=262,slow=7.0,SNR=7.1						
ARCES	**ARCESS Array B**	**30.92**	**37**	P	**P**	**22 45 44.9**	**-0.8**
YKA	**Yellowknife Ar**	**40.00**	**315**	P	**P**	**22 47 04.0**	**+0.3**
	0.4nm,0.7s,mb3.2,baz=22,slow=8.0,SNR=2.7						
YKA				LR	LR	23 03 02.6	
	comp=Z,5.0nm,18.3s,MS2.4,baz=340,slow=35						
YKA	**Yellowknife Ar**	**40.00**	**315**	P	**P**	**22 47 04.0**	**+0.3**
YKA				LR	LR	23 03 02.6	
BRTR	**Keskin Array B**	**47.27**	**78**	P	**P**	**22 48 04.2**	**+1.7**
	0.8nm,0.7s,mb3.7,baz=308,slow=6.0,SNR=4.4						
TORD	**Torodi Ar. Bea**	**50.09**	**130**	P	**P**	**22 48 23.9**	**-0.5**
	1.7nm,0.8s,mb4.1,baz=307,slow=4.0,SNR=14						
MKAR	**Makanchi Array**	**66.39**	**42**	P	**P**	**22 50 16.8**	**-1.3**
	0.6nm,0.7s,mb3.7,baz=332,slow=5.7,SNR=6.2						
ASAR	**Alice Springs**	**148.52**	**19**	PKPbc	PKPbc	22 59 15.6	-0.4
	1.5nm,0.6s,baz=354,slow=2.4,SNR=19						

ATH ***07*** *22:46:58.9, 38°.00N×19°.76E, h5km±1km, MD3.2/9*
CSEM ***07*** *22:47:01.9±0.5, 38°.11N×19°.86E, h2km, ML2.4/3, Error ellipse: s-maj=9.9km s-min=5.4km az=50.0*
ISCJB ***07*** *22:47:02.7±1.0, 38°.13N±0°.04×19°.89E±0°.06, h10km, Error ellipse: s-maj=8.4km s-min=4.2km az=137.8*
THE ***07*** *22:47:03.5, 38°.17N×19°.97E, h1km±4km, ML2.4/3, Error ellipse: s-maj=9.9km s-min=1.4km az=214.0*
ISC 07 22:47:02.0±1.5, 38°.09N±0°.05×19°.84E±0°.07, h5km±6km, n31, σ0°.72/54, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.60**	**81**	*e*PB	**Pg**	**22 47 12.3**	**-1.1**
VLS				*e*SG	**Sg**	**22 47 22.0**	**+0.8**
VLS	**Valsamata**	**0.60**	**81**	P	**Pg**	**22 47 11.9**	**-1.5**
VLS				S	**Sg**	**22 47 20.1**	**-1.1**
VLS	**Valsamata**	**0.60**	**81**	P	**Pg**	**22 47 11.9**	**-1.5**
VLS	**Valsamata**	**0.60**	**81**	*e*Pb	**Pg**	**22 47 12.3**	**-1.1**
VLS				S	**Sg**	**22 47 20.1**	**-1.1**
VLS				*e*Sg	**Sg**	**22 47 22.0**	**+0.8**
KFL	**Anninata**	**0.75**	**88**	P	**Pg**	**22 47 15.7**	**-0.6**
KFL	**Anninata**	**0.75**	**88**	P	**Pg**	**22 47 15.7**	**-0.6**
RLS	**Riolos of Patr**	**1.28**	**91**	*e*PB	**Pn**	**22 47 25.0**	**-1.6**
RLS				*e*SB	**Sg**	**22 47 43.4**	**+0.2**
RLS	**Riolos of Patr**	**1.28**	**91**	*e*Pb	**Pn**	**22 47 25.0**	**-1.6**
RLS				*e*Sb	**Sg**	**22 47 43.4**	**+0.2**
IGT	**Igoumenitsa**	**1.50**	**15**	P	**Pn**	**22 47 28.9**	**-0.6**
IGT	**Igoumenitsa**	**1.50**	**15**	P	**Pn**	**22 47 28.9**	**-0.6**
KEK	**Kerkira**	**1.62**	**359**	*e*PN	**Pn**	**22 47 31.0**	**-0.3**
KEK				*e*SG	**Sg**	**22 47 55.0**	**+0.8**
KEK	**Kerkira**	**1.62**	**359**	P	**Pn**	**22 47 31.0**	**-0.3**
KEK				S	**Sn**	**22 47 52.8**	**+0.2**
KEK	**Kerkira**	**1.62**	**359**	P	**Pn**	**22 47 31.0**	**-0.3**
KEK				S	**Sn**	**22 47 52.8**	**+0.2**
KEK				*e*Sg	**Sg**	**22 47 55.0**	**+0.8**
EFP	**Efpalio**	**1.66**	**78**	*e*PN	**Pn**	**22 47 31.8**	**0.0**
EFP				*e*SN	**Sg**	**22 47 55.9**	**+0.6**
EFP	**Efpalio**	**1.66**	**78**	P	**Pn**	**22 47 31.6**	**-0.2**
EFP				S	**Sn**	**22 47 52.2**	**-1.3**
EFP	**Efpalio**	**1.66**	**78**	*e*Pn	**Pn**	**22 47 31.8**	**0.0**
EFP				S	**Sn**	**22 47 52.2**	**-1.3**
EFP				*e*Sn	**Sg**	**22 47 55.9**	**+0.6**
TRIZ	**Trizonia**	**1.78**	**80**	P	**Pn**	**22 47 33.1**	**-0.3**
TRIZ				S	**Sn**	**22 47 56.2**	**-0.2**
TRIZ	**Trizonia**	**1.78**	**80**	P	**Pn**	**22 47 33.1**	**-0.3**
TRIZ				S	**Sn**	**22 47 56.2**	**-0.2**
ITM	**Ithomi**	**1.89**	**118**	*e*PN	**Pn**	**22 47 35.1**	**+0.2**
ITM				*e*SN	**Sb**	**22 48 01.2**	**+0.4**
ITM	**Ithomi**	**1.89**	**118**	*e*Pn	**Pn**	**22 47 35.1**	**+0.2**
ITM				*e*Sn	**Sb**	**22 48 01.2**	**+0.4**
GUR	**Goura**	**1.98**	**94**	*e*PN	**Pn**	**22 47 36.7**	**+0.5**
GUR				*e*SN	**Sb**	**22 48 04.5**	**+1.0**
GUR	**Goura**	**1.98**	**94**	*e*Pn	**Pn**	**22 47 36.7**	**+0.5**
GUR				*e*Sn	**Sb**	**22 48 04.5**	**+1.0**
VLX	**Vlachokerasia**	**2.14**	**109**	*e*PN	**Pn**	**22 47 38.8**	**+0.5**
VLX				*e*SN	**Sb**	**22 48 07.9**	**0.0**
VLX	**Vlachokerasia**	**2.14**	**109**	*e*Pn	**Pn**	**22 47 38.8**	**+0.5**
VLX				*e*Sn	**Sb**	**22 48 07.9**	**0.0**
THL	**Klokotos Trika**	**2.25**	**48**	P	**Pn**	**22 47 40.5**	**+0.6**
THL	**Klokotos Trika**	**2.25**	**48**	P	**Pn**	**22 47 40.5**	**+0.6**
DID	**Didima**	**2.75**	**101**	*e*PN	**Pn**	**22 47 47.7**	**+1.0**
DID	**Didima**	**2.75**	**101**	*e*Pn	**Pn**	**22 47 47.7**	**+1.0**
KYTH	**Kithira**	**3.12**	**124**	*e*PN	**Pn**	**22 47 52.0**	**+0.1**
KYTH	**Kithira**	**3.12**	**124**	*e*Pn	**Pn**	**22 47 52.0**	**+0.1**
STON	**Ston**	**5.05**	**342**	*e*Pn	**Pn**	**22 48 14.1**	**-4.3**
STON				Sn	**Sn**	**22 49 12.3**	**-4.8**

MEX 07 22:52:55.1±1.1, 15°.69N×96°.03W, h5km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.12**	**316**	*e*P	Pg	22 52 55.9	-1.6
HUIG				*i* S	Sg	22 52 59.2	+0.1
VHO	**Vista Hermosa**	**1.54**	**334**	*i* P	Pn	22 53 20.1	-3.1
VHO				*i* S	Sn	22 53 39.7	-3.9
PNIG	**Pinotepa**	**2.14**	**289**	*i* P	Pn	22 53 28.9	-2.5
PNIG				*i* S	Sn	22 53 53.6	-4.8
PCIG		**2.70**	**89**	*i* P	Pn	22 53 35.7	-3.5
PCIG				*i* S	Sn	22 54 09.3	-3.1
UTMO	**Huajuapan**	**2.73**	**322**	*i* P	Pn	22 53 36.1	-3.5
UTMO				*i* S	Sn	22 54 08.4	-4.7
TGIG		**2.99**	**68**	*i* P	Pn	22 53 40.0	-3.2
TGIG				*i* S	Sn	22 54 15.0	-4.5

ISCJB ***07*** *22:57:30.4±2.0, 17°.7S±0°.1×174°.5W±0°.1, h90km±19km, mb4.2/16, Error ellipse: s-maj=23.1km s-min=13.2km az=35.9*
IDC ***07*** *22:57:31.5±3.1, 17°.69S×174°.47W, h86km±29km, mb3.8/10, mb1 4.0/11, mb1mx3.9/22, mbtmp3.8/11, Error ellipse: s-maj=30.4km s-min=15.4km az=128.0*
NEIC ***07*** *22:57:35.4±1.3, 17°.75S×174°.29W, h128km±12km, mb4.5/9, Error ellipse: s-maj=17.6km s-min=10.9km az=132.0*
ISC 07 22:57:32.1±1.8, 17°.7S±0°.1×174°.5W±0°.1, h89km±17km, n30, σ0°.72/27, mb4.2/16, 2C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.62**	**35**	P	**Pn**	**22 58 38.5**	**-1.0**
	9.4nm,0.3s,baz=205,slow=22,SNR=9.9						
AFI				S	**Sn**	**22 59 25.8**	**-6.1**
	75nm,0.3s,baz=24,slow=23,SNR=20						
AFI	**Afiamalu**	**4.62**	**35**	*e*Pn	**Pn**	**22 58 40.6**	**+1.1**
AFI				*e*Sn	**Sn**	**22 59 26.3**	**-5.6**
MSVF	**Nonsavu**	**7.11**	**269**	*e*Pn	**Pn**	**22 59 21.8**	**+8.3**
	53nm,1.0s						
URZ	**Urewera**	**21.73**	**198**	P	**P**	**23 02 15.3**	**-0.7**
	7.3nm,0.5s,mb4.3,baz=115,slow=9.4,SNR=7.1						
URZ	**Urewera**	**21.73**	**198**	*e*P	**P**	**23 02 15.9**	**-0.2**
	7.6nm,0.4s,mb4.4						
RPZ	**Rata Peaks**	**28.63**	**202**	P	**P**	**23 03 22.2**	**+2.1**
	7.9nm,0.7s,mb4.5,baz=11,slow=5.2,SNR=4.3						
RPZ	**Rata Peaks**	**28.63**	**202**	*e*P	**P**	**23 03 21.4**	**+1.3**
	44nm,1.2s,mb5.0						
WB2	**Warramunga Arr**	**48.32**	**259**	*e*P	**P**	**23 06 04.3**	**-0.6**
WB2				PcP	PcP	23 07 31.2	+0.8
WRA	**Warramunga Arr**	**48.33**	**259**	P	**P**	**23 06 04.3**	**-0.6**
	0.8nm,0.3s,mb4.0,baz=98,slow=6.7,SNR=19						
ASAR	**Alice Springs**	**48.43**	**254**	P	**P**	**23 06 05.7**	**+0.1**
	9.8nm,0.7s,mb4.8,baz=89,slow=8.5,SNR=116						
KAKA	**Kakadu**	**51.32**	**268**	*e*P	**P**	**23 06 27.5**	**-0.2**
	11nm,0.5s,mb5.1						
FITZ	**Fitzroy Crossi**	**56.74**	**260**	*e*P	**P**	**23 07 07.4**	**+0.3**
	1.3nm,0.6s,mb4.1						
MBWA	**Marble Bar**	**61.73**	**255**	*e*P	**P**	**23 07 40.9**	**-0.6**
	1.4nm,0.6s,mb4.2						
CASY	**Casey**	**67.86**	**205**	*e*P	**P**	**23 08 19.6**	**-0.9**
	1.9nm,0.8s,mb4.0						
QSPA	**South Pole Qui**	**72.32**	**180**	P	**P**	**23 08 48.0**	**+0.5**
	0.6nm,0.3s,mb3.9,baz=75,slow=1.3,SNR=3.3						
QSPA	**South Pole Qui**	**72.32**	**180**	*e*P	**P**	**23 08 48.0**	**+0.5**
	9.0nm,1.8s,mb4.3						
PET	**Petropavlovsk**	**74.20**	**344**	*e*P	**P**	**23 08 58.7**	**-0.1**
	8.5nm,0.7s,mb4.6						
PETK	**Petropavlovsk-**	**74.54**	**343**	P	**P**	**23 09 00.9**	**+0.1**
	1.6nm,0.6s,mb3.9,baz=142,slow=7.3,SNR=3.0						
YULB	**Yu-li**	**74.85**	**301**	*e*P	**P**	**23 09 03.6**	**+0.3**
NVAR	**Mina Array Bea**	**76.75**	**42**	P	**P**	**23 09 13.5**	**-0.3**
	1.4nm,0.9s,mb3.7,baz=224,slow=9.3,SNR=7.2						
NVAR	**Mina Array Bea**	**76.75**	**42**	P	**P**	**23 09 13.5**	**-0.3**
TXAR	**Lajitas Array**	**82.77**	**56**	P	**P**	**23 09 46.5**	**-0.1**
	0.2nm,0.7s,mb3.1,baz=255,slow=2.7,SNR=2.8						
PDAR	**Pinedale Array**	**84.69**	**42**	P	**P**	**23 09 55.0**	**-1.0**
	0.5nm,0.8s,mb3.5,baz=270,slow=3.0,SNR=4.2						
ILAR	**Eielson Array**	**84.93**	**11**	P	**P**	**23 09 57.3**	**+0.6**
	0.9nm,1.0s,mb3.6,baz=239,slow=6.1,SNR=5.1						
HHC	**Hu-ho-hao-te**	**89.85**	**313**	*e*P	**P**	**23 10 22.4**	**+1.4**
HHC				pP	pP	23 10 55.1	+10
HHC				sP	sP	23 11 07.4	+13
HHC				PP	PP	23 13 59.8	+4.9
HHC				SKS		23 20 40.1	
HHC				S	S	23 21 03.1	-2.8
HHC				sS	sS	23 22 00.0	+13
HHC				SS	SS	23 27 09.1	+3.3
HHC				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
HHC				pmax	pmax		
	comp=Z,98nm,6.4s						
HHC				LR	LR		
	comp=N,140nm,18.4s						
HHC				LR	LR		
	comp=E,110nm,18.2s						
HHC				LR	LR		
	comp=Z,140nm,18.1s						
CLL	**Collm**	**145.98**	**352**	↑ *i* P	PKPdf	23 17 01.5	+1.1
CLL				*i*		23 17 04.6	
CLL				*i*		23 17 35.6	
CLL	**Collm**	**145.98**	**352**	↑ *i* PKPbc	PKPbc	23 17 01.5	+0.2
	comp=Z,9.0nm,1.1s						
CLL				*i* PKiKP	PKiKP	23 17 04.6	0.0
	comp=Z,8.0nm,1.2s						
CLL				*i* pPKPbc		23 17 35.6	
BRG	**Berggiesshubel**	**146.26**	**350**	*e*P	PKPdf	23 17 02.4	+1.5
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**147.24**	**318**	PKPbc	PKPbc	23 17 04.9	-0.5
	comp=Z,1.0nm,0.8s,baz=118,slow=4.9,SNR=4.8						
BRTR	**Keskin Array B**	**147.24**	**318**	PKPbc	PKPbc	23 17 04.9	-0.5

ISCJB ***07*** *23:03:44.8±3.7, 8°.9S±0°.2×159°.7E±0°.1, h10km±27km, mb4.1/9, Error ellipse: s-maj=29.5km s-min=18.0km az=143.7*
IDC ***07*** *23:03:44.8±1.0, 8°.91S×159°.70E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.9/16, mbtmp3.8/5, Error ellipse: s-maj=26.7km s-min=9.4km az=63.0*
NEIC ***07*** *23:03:48.8±0.7, 9°.09S×159°.88E, h35km, mb4.2/2, Error ellipse: s-maj=19.2km s-min=13.3km az=106.0*
ISC 07 23:03:45.3±4.4, 8°.9S±0°.2×159°.7E±0°.1, h4km±30km, n16, σ0°.92/17, mb4.1/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.58**	**158**	Pg	**Pg**	**23 03 56.1**	**-0.4**
	165nm,0.3s,baz=177,slow=12,SNR=20						
HNR				Lg		23 04 03.8	
	510nm,0.3s,baz=0.0,slow=20,SNR=48						
HNR	**Honiara**	**0.58**	**158**	*e*P	**Pg**	**23 03 56.4**	**-0.1**
HNR				Lg		23 04

ISC 07 23:05:41.6±0.6, 39°.38N±0°.03×33°.14E±0°.04, h2km±6km, n37, σ0°69/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Af`ar-Bala (A**	**0.09**	**324**	PG	**Pg**	**23 05 42.5**	**-0.8**
AFSR				SG	**Sg**	**23 05 45.0**	**+0.5**
AFSR	**Af`ar-Bala (A**	**0.09**	**324**	*i* Pg	**Pg**	**23 05 42.6**	**-0.7**
AFSR				*i* Sg	**Sg**	**23 05 45.0**	**+0.5**
BBAL	**Bala**	**0.17**	**357**	*i* P	**Pg**	**23 05 44.8**	**0.0**
BBAL				*i* S	**Sg**	**23 05 47.9**	**+0.9**
KAMT	**Kaman**	**0.45**	**91**	PG	**Pg**	**23 05 49.7**	**-0.5**
KAMT				SG	**Sg**	**23 05 56.1**	**+0.1**
KAMT	**Kaman**	**0.45**	**91**	*i* Pg	**Pg**	**23 05 49.7**	**-0.5**
KAMT				*i* Sg	**Sg**	**23 05 56.1**	**+0.1**
LOD	**Lodumlu**	**0.59**	**331**	*e*PG	**Pg**	**23 05 52.0**	**-0.9**
LOD				*e*SG	**Sg**	**23 06 00.7**	**+0.2**
LOD	**Lodumlu**	**0.59**	**331**	*e*Pg	**Pg**	**23 05 52.0**	**-0.9**
LOD				*e*Sg	**Sg**	**23 06 00.7**	**+0.2**
KIZT	**Kizilcal**	**1.10**	**243**	*e*PN	**Pn**	**23 06 02.9**	**-1.0**
KIZT	**Kizilcal**	**1.10**	**243**	*e*Pn	**Pn**	**23 06 02.9**	**-1.0**
KDHN	**Kadinhani**	**1.17**	**223**	*i* P	**Pg**	**23 06 03.2**	**-0.8**
KDHN				*i* S	**Sg**	**23 06 20.1**	**+1.0**
KDHN	**Kadinhani**	**1.17**	**223**	*i* P	**Pg**	**23 06 03.2**	**-0.8**
KDHN				*i* S	**Sg**	**23 06 20.1**	**+1.0**
SULT	**Sultanhani-AKS**	**1.21**	**166**	*e*PN	**Pn**	**23 06 05.5**	**-0.1**
SULT	**Sultanhani-AKS**	**1.21**	**166**	*e*Pn	**Pn**	**23 06 05.5**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.25**	**274**	*e*PN	**Pn**	**23 06 05.7**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.25**	**274**	*e*Pn	**Pn**	**23 06 05.7**	**-0.4**
CANT	**Cankiri**	**1.28**	**17**	*e*PN	**Pn**	**23 06 06.0**	**-0.4**
CORM	**Corum**	**1.40**	**55**	*e*PN	**Pn**	**23 06 08.1**	**0.0**
CORM	**Corum**	**1.40**	**55**	*e*Pn	**Pn**	**23 06 08.1**	**0.0**
SGKT	**Sivrigoynuk**	**1.45**	**326**	*i* P	**Pn**	**23 06 07.0**	**-1.8**
SGKT	**Sivrigoynuk**	**1.45**	**326**	*i* P	**Pn**	**23 06 07.1**	**-1.8**
AVNT	**Avonos**	**1.47**	**114**	*i* P	**Pn**	**23 06 08.6**	**-0.4**
AVNT				*i* S	**Sb**	**23 06 28.5**	**-0.1**
AVNT	**Avonos**	**1.47**	**114**	*i* P	**Pn**	**23 06 08.6**	**-0.4**
AVNT				*i* S	**Sb**	**23 06 28.5**	**-0.1**
KONT	**Konya--Tatoy**	**1.55**	**203**	*e*PN	**Pn**	**23 06 10.6**	**+0.4**
KONT	**Konya--Tatoy**	**1.55**	**203**	*e*Pn	**Pn**	**23 06 10.6**	**+0.4**
YOZ	**Yozgat**	**1.71**	**81**	*e*PN	**Pn**	**23 06 12.7**	**+0.3**
YOZ	**Yozgat**	**1.71**	**81**	*e*Pn	**Pn**	**23 06 12.7**	**+0.3**
ESKT	**Eskisehir**	**1.77**	**275**	*i* S	**Sn**	**23 06 40.8**	**+4.4**
MDU	**Mudurnu**	**1.83**	**307**	*e*PN	**Pn**	**23 06 14.8**	**+0.7**
MDU	**Mudurnu**	**1.83**	**307**	*e*Pn	**Pn**	**23 06 14.8**	**+0.7**
SAFT	**Safranbolu**	**1.89**	**350**	*e*PN	**Pn**	**23 06 15.1**	**+0.3**
SAFT	**Safranbolu**	**1.89**	**350**	*e*Pn	**Pn**	**23 06 15.1**	**+0.2**
GULT	**Gulveren**	**2.27**	**298**	*e*PN	**Pn**	**23 06 20.7**	**+0.6**
GULT	**Gulveren**	**2.27**	**298**	*e*Pn	**Pn**	**23 06 20.7**	**+0.6**
HDMB	**Hadim**	**2.46**	**192**	*e*PN	**Pn**	**23 06 23.5**	**+0.8**
HDMB	**Hadim**	**2.46**	**192**	*e*Pn	**Pn**	**23 06 23.5**	**+0.8**
SVSK	**Karacayir**	**3.03**	**79**	*e*PN	**Pn**	**23 06 31.6**	**+1.1**
SVSK	**Karacayir**	**3.03**	**79**	*e*Pn	**Pn**	**23 06 31.6**	**+1.1**

TAP 07 23:08:54.6, 22°.87N×121°.42E, h33km±1km, ML1.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.28**	**247**	*e*P	Pb	23 09 02.1	-0.1
	baz=245						
TTN				*e*S	Sb	23 09 06.9	-0.3
	baz=245						
TWG	**Pinlang**	**0.33**	**262**	*e*P	Pb	23 09 02.5	-0.3
TWG	**Pinlang**	**0.33**	**262**	P	Pb	23 09 02.9	+0.1
	baz=261						
TWG				S	Sb	23 09 09.1	+0.8
	baz=261						
ELDTW	**Lidau**	**0.49**	**311**	*e*P	Pb	23 09 05.4	+0.3
	baz=311						
ELDTW				*e*S	Sb	23 09 12.8	+0.4
	baz=311						
TWF1	**Yuli**	**0.50**	**346**	P	Pb	23 09 05.5	+0.3
	baz=347						
TWF1				*e*S	Sb	23 09 13.5	+1.0
	baz=347						
EHY	**Hungye**	**0.65**	**352**	*e*P	Pn	23 09 08.2	+0.8
	baz=352						
EHY				*e*S	Sb	23 09 17.1	+0.7
	baz=352						

IDC 07 23:17:32.5±7.9, 10°.34S×163°.51E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.9/3, Error ellipse: s-maj=237.8km s-min=51.4km az=122.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**29.69**	**248**	P	P	23 23 41.1	+0.8
	1.1nm,0.8s,baz=79,slow=9.5,SNR=6.6						
ASAR	**Alice Springs**	**31.18**	**241**	P	P	23 23 53.0	-0.5
	0.9nm,0.5s,baz=61,slow=10,SNR=11						
MKAR	**Makanchi Array**	**91.51**	**317**	P	P	23 30 41.0	0.0
	0.5nm,0.8s,baz=102,slow=5.1,SNR=4.7						

*ISCJB **07** 23:27:26.0±0.6, 32°.30N±0°.06×105°.00E±0°.07, h10km, mb3.6/5, Error ellipse: s-maj=11.2km s-min=5.3km az=135.5*
*IDC **07** 23:27:27.1±1.1, 32°.58N×105°.47E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, Error ellipse: s-maj=168.8km s-min=20.5km az=56.0*
*BJI **07** 23:27:32.5, 32°.37N×104°.81E, h14km, ML3.1/9*
ISC 07 23:27:28.6±0.6, 32°.29N±0°.06×104°.94E±0°.07, h10km, n8, σ0°83/14, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.71**	**217**	Pn	**Pn**	**23 28 00.0**	**+1.6**
CD2				Pg	**Pg**	**23 28 00.8**	**-0.6**
CD2				Sg	**Sg**	**23 28 22.6**	**-0.9**
CD2				smax			
	comp=N,850nm,0.8s						
CD2				smax			
	comp=E,740nm,0.6s						
XAN	**Xi'an**	**3.77**	**61**	Pn	**Pn**	**23 28 30.5**	**+3.8**
XAN				Pg	**Pg**	**23 28 39.5**	**-1.2**
XAN				Sn	**Sn**	**23 29 17.8**	**+6.7**
XAN				Sg	**Sg**	**23 29 29.7**	**+0.2**
XAN				smax			
	comp=N,66nm,0.6s						
XAN				smax			
	comp=E,27nm,0.5s						
LZH	**Lanzhou**	**3.89**	**347**	*e*Pg	**Pg**	**23 28 42.5**	**-0.7**
LZH				Sg	**Sg**	**23 29 28.1**	**-5.5**
LZH				smax			
	comp=N,72nm,0.5s						
LZH				smax			
	comp=E,120nm,0.6s						
MKAR	**Makanchi Array**	**22.58**	**316**	P	**P**	**23 32 29.6**	**+0.6**
	comp=E,0.2nm,0.4s,mb2.9,baz=110,slow=12,SNR=3.9						
ARCES	**ARCESS Array B**	**56.48**	**335**	P	**P**	**23 37 10.2**	**-0.1**
	comp=E,1.6nm,0.9s,mb4.0,baz=70,slow=7.1,SNR=4.5						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**23 37 14.2**	**+0.3**
	comp=E,0.4nm,0.6s,mb3.7,baz=101,slow=5.8,SNR=5.5						
WRA	**Warramunga Arr**	**59.07**	**147**	P	**P**	**23 37 29.0**	**-0.1**
	comp=E,0.4nm,0.3s,mb3.9,baz=341,slow=7.4,SNR=6.3						
ASAR	**Alice Springs**	**62.14**	**150**	P	**P**	**23 37 50.5**	**+0.6**
	comp=E,0.2nm,0.6s,mb3.5,baz=338,slow=7.0,SNR=3.7						

IDC 07 23:58:35.2±2.7, 7°.93S×119°.21E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.5/19, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=240.4km s-min=23.7km az=53.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.91**	**131**	P	Pn	00 02 57.5	-0.6
	0.2nm,0.3s,baz=303,slow=13,SNR=4.1						
ASAR	**Alice Springs**	**21.06**	**140**	P	P	00 03 21.4	+0.3
	0.6nm,0.3s,baz=312,slow=9.0,SNR=11						
MKAR	**Makanchi Array**	**63.60**	**333**	P	P	00 09 09.1	+1.2
	0.6nm,0.6s,baz=150,slow=7.9,SNR=5.4						
ZALV	**Zalesovo Beam**	**68.12**	**339**	P	P	00 09 35.9	-0.9
	0.9nm,0.5s,baz=126,slow=5.5,SNR=3.3						

*NEIC **08** 00:01:13.9, 14°.65N×94°.45W, h16km, MD4.0(MEX), After MEX.*
MEX 08 00:01:13.9±1.6, 14°.65N×94°.45W, h16km±35km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.58**	**48**	*i* P	Pn	00 01 36.9	-4.5
PCIG				*i* S	Sn	00 01 56.0	-5.5
HUIG	**Huatulco**	**1.95**	**305**	*e*P	Pn	00 01 44.0	-2.5
HUIG				*i* S	Sn	00 02 05.4	-5.3
HUIG	**Huatulco**	**1.95**	**305**	*e*P	Pn	00 01 44.0	-2.5
HUIG				*i* S	Sn	00 02 05.4	-5.3
THIG		**2.12**	**83**	*i* P	Pn	00 01 45.4	-3.3
THIG				*i* S	Sn	00 02 10.4	-4.4
TGIG		**2.47**	**31**	*e*P	Pn	00 01 50.5	-3.1
TGIG				*i* S	Sn	00 02 20.1	-3.3
SCX	**San Cristobal**	**2.71**	**40**	*i* P	Pn	00 01 54.3	-2.6
SCX	**San Cristobal**	**2.71**	**40**	*i* P	Pn	00 01 54.3	-2.6
CCIG	**Comitan**	**2.75**	**54**	*e*P	Pn	00 01 56.0	-1.4
CCIG				*i* S	Sn	00 02 26.8	-3.6
CCIG	**Comitan**	**2.75**	**54**	*e*P	Pn	00 01 56.0	-1.4
CCIG				*i* S	Sn	00 02 26.8	-3.6
VHO	**Vista Hermosa**	**3.26**	**318**	*i* P	Pn	00 02 01.5	-2.9
VHO				*i* S	Sn	00 02 40.7	-2.3
VHO	**Vista Hermosa**	**3.26**	**318**	*i* P	Pn	00 02 01.5	-2.9
VHO				*i* S	Sn	00 02 40.7	-2.3
PNIG	**Pinotepa**	**3.95**	**296**	*e*P	Pn	00 02 14.0	+0.1
PNIG				*i* S	Sn	00 02 53.0	-6.9
PNIG	**Pinotepa**	**3.95**	**296**	*e*P	Pn	00 02 14.0	+0.1
PNIG				*i* S	Sn	00 02 53.0	-6.9
UTMO	**Huajuapan**	**4.52**	**315**	*i* P	Pn	00 02 22.8	+1.1

IDC 08 00:17:01.2±1.6, 25°.40N×97°.20E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/24, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=132.5km s-min=24.7km az=63.0, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.09**	**166**	Pn	Pn	00 18 46.8	+0.5
	0.2nm,0.3s,baz=319,slow=14,SNR=5.2						
CMAR				Lg		00 20 37.0	
	0.5nm,0.3s,baz=304,slow=36,SNR=2.9						
MKAR	**Makanchi Array**	**24.43**	**335**	P	P	00 22 21.6	+0.2
	0.7nm,0.5s,baz=146,slow=9.2,SNR=12						
WRA	**Warramunga Arr**	**57.74**	**138**	P	P	00 26 54.4	+0.3
	0.7nm,0.7s,baz=324,slow=7.4,SNR=5.5						
ASAR	**Alice Springs**	**60.35**	**141**	P	P	00 27 11.8	-0.3
	0.4nm,0.5s,baz=324,slow=6.8,SNR=6.7						

*NIED **08** 00:25:00, 36°.30N×141°.10E, h41km, Mw3.5 Best double couple: M0=2.34000×10^14 NP1:φ=74.00000°, δ=77.00000°, λ=108.00000°. NP2:φ=199.00000°, δ=22.00000°, λ=37.00000°.*
*ISCJB **08** 00:25:46.7±0.6, 36°.38N±0°.03×141°.11E±0°.05, h53km±4km, mb3.9/6, Error ellipse: s-maj=7.4km s-min=5.1km az=179.8*
*IDC **08** 00:25:47.6±5.1, 36°.37N×141°.17E, h33km±44km, mb3.4/3, mb1 3.8/7, mb1mx3.4/27, mbtmp3.8/7, ML3.7/3, Error ellipse: s-maj=28.4km s-min=20.2km az=93.0*
*JMA **08** 00:25:48.1±0.1, 36°.37N×141°.02E, h47km±1km, M3.6*
JMA Felt I J1.
*NEIC **08** 00:25:49.4±1.3, 36°.41N×140°.96E, h58km±11km, mb4.1/3, Error ellipse: s-maj=13.6km s-min=10.9km az=103.0*
ISC 08 00:25:47.8±0.6, 36°.39N±0°.03×141°.10E±0°.06, h43km±6km, n27, σ0°96/40, mb3.9/6, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.48**	**298**	⇓P	**Pn**	**00 25 58.1**	**-0.3**
JHO				*e*S	**Sn**	**00 26 05.0**	**-0.9**
CHOJ	**Chosi**	**0.71**	**196**	⇑P	**Pn**	**00 26 01.4**	**0.0**
CHOJ				*e*S	**Sn**	**00 26 10.7**	**-0.5**
JYT	**Yasato**	**0.75**	**258**	P	**Pn**	**00 26 01.6**	**-0.3**
JYT				S	**Sn**	**00 26 10.6**	**-1.5**
ONAJ	**Iwakimizuishiy**	**0.75**	**341**	⇓P	**Pn**	**00 26 01.9**	**-0.1**
ONAJ				S	**Sn**	**00 26 11.7**	**-0.6**
JFK	**Kawauchi**	**0.99**	**350**	⇓P	**Pn**	**00 26 05.2**	**-0.1**
JFK				S	**Sn**	**00 26 17.3**	**-0.8**
JFT	**Otama**	**1.28**	**332**	⇓P	**Pn**	**00 26 10.5**	**+1.3**
JFT				*e*S	**Sn**	**00 26 26.5**	**+1.3**
JAG	**Ashikaga**	**1.33**	**272**	⇓P	**Pn**	**00 26 09.8**	**0.0**
JAG				S	**Sn**	**00 26 25.3**	**-1.0**
JKT	**Katashina**	**1.54**	**285**	P	**Pn**	**00 26 13.7**	**+1.0**
JKT				S	**Sn**	**00 26 32.3**	**+0.9**
MJAR	**Matsushiro Arr**	**2.33**	**275**	Pn	**Pn**	**00 26 24.2**	**+0.6**
	8.0nm,0.3s,baz=54,slow=32,SNR=34						
MJAR				Sn	**Sn**	**00 26 52.9**	**+1.8**
	9.5nm,0.3s,baz=86,slow=27,SNR=6.4						
MAJO	**Matsushiro**	**2.34**	**275**	*e*Pn	**Pn**	**00 26 24.4**	**+0.8**
MAJO				*e*Sn	**Sn**	**00 26 49.3**	**-1.8**
MAT	**Matsushiro**	**2.34**	**275**	P	**Pn**	**00 26 24.8**	**+1.1**
MAT				*e*S	**Sn**	**00 26 52.4**	**+1.3**
JHJ	**Hachijo jima 2**	**3.44**	**199**	Pn	**Pn**	**00 26 40.2**	**+1.4**
	13nm,0.3s,baz=60,slow=8.8,SNR=6.1						
JHJ				Sn	**Sn**	**00 27 19.1**	**+0.9**
	10nm,0.3s,baz=90,slow=20,SNR=3.4						
ASAJ	**Asahikawa**	**7.80**	**8**	Pn	**Pn**	**00 27 37.8**	**-0.9**
	1.4nm,0.3s,baz=184,slow=14,SNR=3.0						
ASAJ	**Asahikawa**	**7.80**	**8**	Pn	**Pn**	**00 27 39.7**	**+1.1**
CBIJ	**Chichi jima**	**9.31**	**174**	Pn	**Pn**	**00 27 57.9**	**-1.5**
	3.5nm,0.3s,baz=270,slow=19,SNR=3.0						
INCN	**Inchon**	**11.63**	**280**	*e*Pn	**Pn**	**00 28 30.7**	**-0.4**
HIA	**Hailar**	**20.19**	**316**	*e*P	**P**	**00 30 17.1**	**-1.5**
	16nm,2.0s						
HHC	**Hu-ho-hao-te**	**23.45**	**290**	*e*P	**P**	**00 30 52.4**	**-0.8**
HHC				pP		00 31 06.7	
HHC				sP	sP	00 31 14.1	+4.5
HHC				PP		00 31 26.1	
HHC				PcP	PcP	00 34 38.4	+0.3
HHC				S	**S**	**00 34 58.4**	**-4.8**
HHC				sS	sS	00 35 21.5	-1.0
HHC				SS		00 35 48.0	
HHC				ScS	ScS	00 41 56.0	-3.0
HHC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.3						
HHC				pmax	pmax		
	comp=Z,78nm,5.3s						
HHC				LR	LR		
	comp=N,150nm,15.6s						
HHC				LR	LR		
	comp=E,140nm,13.5s						
HHC				LR	LR		
	comp=Z,120nm,13.4s						
TLY	**Talaya**	**30.57**	**312**	*e*P	**P**	**00 31 55.6**	**-1.4**
	comp=Z,4.6nm,0.7s,mb4.4						
ZALV	**Zalesovo Beam**	**42.16**	**313**	P	**P**	**00 33 36.7**	**+0.9**
	comp=Z,0.5nm,0.3s,mb3.6,baz=92,slow=7.2,SNR=3.6						
PMG	**Port Moresby**	**45.90**	**172**	P	**P**	**00 34 05.8**	**-0.4**
KURK	**Kurchatov**	**46.13**	**309**	*e*P	**P**	**00 34 07.5**	**-0.1**
	comp=Z,1.4nm,0.6s,mb4.1						
TKM2	**Tokmak 2**	**49.72**	**299**	P	**P**	**00 34 35.0**	**-0.5**
ILAR	**Eielson Array**	**50.17**	**32**	P	**P**	**00 34 40.1**	**+1.5**
	comp=Z,0.5nm,0.9s,mb3.5,baz=262,slow=6.3,SNR=5.0						
UCH	**Uchtor**	**50.68**	**298**	*e*P	**P**	**00 34 42.1**	**-0.7**
WB2	**Warramunga Arr**	**56.38**	**188**	*e*P	**P**	**00 35 24.5**	**-0.1**
WRA	**Warramunga Arr**	**56.39**	**188**	P	**P**	**00 35 25.2**	**+0.6**
	comp=Z,0.3nm,0.4s,mb3.6,baz=4.7,slow=7.5,SNR=3.8						

*NOU **08** 00:26:32.0±1.0, 20°.55S×168°.41E, h10km, MD2.6, ML4.0*
*IDC **08** 00:26:33.9±10.0, 20°.18S×167°.90E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, Error ellipse: s-maj=287.6km s-min=50.0km az=137.0*
ISC 08 00:26:32.3±3.9, 20°.9S±0°.4×168°.4E±0°.5, h13km±33km, n8, σ0°37/11, mb3.9/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**1.90**	**229**	*e*S	**Sn**	**00 27 28.2**	**+0.1**
DZM	**Mont Dzumac**	**2.18**	**238**	*e*P	**Pn**	**00 27 07.7**	**-0.6**
DZM				*e*S	**Sn**	**00 27 35.4**	**+0.2**
DZM				AMP		00 27 37.3	
	comp=Z,2μm,1.1s						
NORM	**Noumea**	**2.24**	**234**	*e*P	**Pn**	**00 27 09.2**	**+0.2**
NORM				*e*S	**Sn**	**00 27 36.3**	**-0.2**
NOUC	**Port Laguerre**	**2.31**	**239**	*e*P	**Pn**	**00 27 10.4**	**+0.3**
NOUC				*e*S	**Sn**	**00 27 38.2**	**-0.1**
NOUC				AMP		00 27 45.4	
	comp=Z,80nm,6.8s						
WRA	**Warramunga Arr**	**31.93**	**266**	P	**P**	**00 32 57.3**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.6,baz=94,slow=8.7,SNR=4.8						
ASAR	**Alice Springs**	**32.02**	**259**	P	**P**	**00 32 59.1**	**+0.5**
	comp=Z,2.3nm,0.6s,mb4.2,baz=85,slow=9.2,SNR=34						
FITZ	**Fitzroy Crossi**	**40.35**	**266**	P	**P**	**00 34 10.4**	**+0.4**
	comp=Z,2.1nm,0.8s,mb3.9,baz=101,slow=9.5,SNR=5.8						
SONM	**Songino Array**	**88.10**	**323**	P	**P**	**00 39 22.2**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.9,baz=106,slow=4.7,SNR=2.8						

IDC 08 00:48:59.4±523.0, 33°.51N×149°.98E, h0km, Error ellipse: s-maj=1040.0km s-min=50.7km az=118.0, North Pacific Ocean

*ISCJB **08** 00:51:53.2±1.6, 23°.92S±0°.09×179°.99E±0°.09, h507km±22km, mb4.0/15, Error ellipse: s-maj=15.1km s-min=10.7km az=139.6*
*IDC **08** 00:51:53.4±2.8, 23°.83S×179°.97W, h496km±32km, mb3.3/8, mb1 3.6/9, mb1mx3.4/17, mbtmp3.4/9, Error ellipse: s-maj=45.8km s-min=18.8km az=161.0*
*NEIC **08** 00:51:54.0±1.1, 23°.97S×179°.94W, h511km±15km, mb4.4/6, Error ellipse: s-maj=14.9km s-min=8.1km az=155.0*
ISC 08 00:51:53.9±1.4, 24°.05S±0°.09×179°.92W±0°.09, h508km±20km, n30, σ0°.85/31, mb3.9/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.68**	**39**	P	**P**	**00 54 39.4**	**-0.4**
URZ	**Urewera**	**14.39**	**189**	P	**P**	**00 54 58.6**	**+1.3**
	1.1nm,0.3s,baz=5.2,slow=11,SNR=6.0						
URZ				S	**S**	**00 57 27.6**	**-1.0**
	0.6nm,0.3s,baz=41,slow=16,SNR=3.3						
URZ	**Urewera**	**14.39**	**189**	*e*P	**P**	**00 54 58.5**	**+1.2**
	16nm,0.8s						
SNZO	**South Karori**	**17.79**	**193**	*e*P	**P**	**00 55 31.8**	**+0.2**
	51nm,1.2s						
RAR	**Rarotonga**	**18.81**	**85**	P	**P**	**00 55 40.7**	**-0.6**
RPZ	**Rata Peaks**	**20.97**	**199**	P	**P**	**00 56 05.6**	**+4.9**
	8.2nm,0.7s,baz=17,slow=17,SNR=3.8						
EIDS	**Eidsvold**	**26.36**	**261**	*e*P	**P**	**00 56 49.5**	**+0.5**
EIDS	**Eidsvold**	**26.36**	**261**	*e*P	**P**	**00 56 49.4**	**+0.4**
	2.8nm,0.4s,mb4.0						
CTA	**Charters Tower**	**31.55**	**270**	P	**P**	**00 57 35.0**	**+0.7**
	12nm,0.4s,mb4.7,baz=92,slow=11,SNR=21						
CTA	**Charters Tower**	**31.55**	**270**	*e*P	**P**	**00 57 35.0**	**+0.7**
	9.9nm,0.4s,mb4.6						
CTAO	**Charters Tower**	**31.55**	**270**	*e*P	**P**	**00 57 34.9**	**+0.7**
	12nm,0.3s,mb4.8						
MTSU	**Mount Surprise**	**33.82**	**273**	*e*P	**P**	**00 57 54.4**	**+0.8**
	22nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**34.74**	**248**	P	**P**	**00 58 01.6**	**+0.5**
	1.5nm,0.5s,mb3.6,baz=79,slow=10,SNR=5.1						
STKA	**Stephens Creek**	**34.74**	**248**	*e*P	**P**	**00 58 01.2**	**+0.1**
	0.3nm,0.6s,mb2.9						
ASAR	**Alice Springs**	**42.09**	**261**	P	**P**	**00 59 01.1**	**+0.1**
	2.4nm,0.5s,mb3.9,baz=96,slow=7.1,SNR=29						
ASAR				ScP	ScP	01 03 47.6	+1.6
	0.6nm,0.7s,baz=98,slow=4.3,SNR=5.2						
WB2	**Warramunga Arr**	**42.46**	**266**	*e*P	**P**	**00 59 03.1**	**-0.8**
WRA	**Warramunga Arr**	**42.47**	**266**	P	**P**	**00 59 03.7**	**-0.4**
	7.9nm,0.6s,mb4.3,baz=103,slow=8.2,SNR=40						
WRA	**Warramunga Arr**	**42.47**	**266**	P	**P**	**00 59 03.7**	**-0.4**
KAKA	**Kakadu**	**46.40**	**275**	*e*P	**P**	**00 59 33.6**	**-0.9**
	4.7nm,0.3s,mb4.4						
KAKA	**Kakadu**	**46.40**	**275**	*e*P	**P**	**00 59 33.4**	**-1.1**
FITZ	**Fitzroy Crossi**	**50.90**	**266**	*e*P	**P**	**01 00 08.0**	**+0.1**
	4.9nm,0.8s,mb3.9						
FITZ	**Fitzroy Crossi**	**50.90**	**266**	*e*P	**P**	**01 00 08.0**	**+0.1**
	2.5nm,0.6s,mb3.7						
MBWA	**Marble Bar**	**55.42**	**260**	*e*P	**P**	**01 00 39.6**	**-0.6**
	2.0nm,0.7s,mb3.6						
KKM	**Kota Kinabalu**	**69.02**	**287**	P	**P**	**01 02 08.8**	**+0.1**
MDJ	**Mudanjiang**	**82.43**	**326**	P	**P**	**01 03 20.7**	**-1.6**
NVAR	**Mina Array Bea**	**84.81**	**44**	P	**P**	**01 03 35.2**	**+0.9**
	0.4nm,0.7s,mb3.2,baz=229,slow=5.5,SNR=2.9						
TXAR	**Lajitas Array**	**90.44**	**58**	P	**P**	**01 04 02.2**	**+1.1**
	0.5nm,0.7s,mb3.5,baz=236,slow=6.4,SNR=7.2						
HHC	**Hu-ho-hao-te**	**90.58**	**315**	*e*P	**P**	**01 04 02.9**	**+1.4**
HHC				pP	pP	01 05 56.0	+1.5
HHC				sP	sP	01 06 47.0	+1.1
HHC				PP	PP	01 07 49.3	+3.5
HHC				SKS		01 13 45.3	
HHC				S	S	01 14 13.0	-0.4
HHC				sS		01 16 34.5	
HHC				SS	SS	01 20 33.5	+2.9
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,78nm,5.3s						
HHC				LR	LR		
	comp=N,140nm,19.7s						
HHC				LR	LR		
	comp=E,130nm,20.8s						
HHC				LR	LR		
	comp=Z,190nm,19.6s						
ILAR	**Eielson Array**	**92.16**	**14**	P	**P**	**01 04 06.6**	**-1.6**
	comp=Z,0.2nm,0.6s,mb3.2,baz=190,slow=3.7,SNR=3.4						
PDAR	**Pinedale Array**	**92.74**	**44**	P	**P**	**01 04 11.9**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.6,baz=224,slow=8.3,SNR=2.8						

*NEIC **08** 00:54:23.2, 18°.22N×69°.00W, h117km, MD3.5(RSPR), After RSPR.*
RSPR 08 00:54:23.2, 18°.22N×69°.00W, h117km±5km, MD3.5/11, 12C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMN1	**Samana, DR

CTA	**Charters Tower**	**16.02 210**	P	**Pn**	**01 02 17.1**	**+4.7**
CTA			LR	LR	01 07 05.0	
EIDS	**Eidsvold**	**19.28 190**	*e*P	**Pn**	**01 02 52.8**	**+0.4**
RMQ	**Roma**	**20.88 195**	*e*P	**P**	**01 03 09.8**	**+1.6**
16nm,0.9s						
QLP	**Quilpie**	**22.54 205**	*e*P	**P**	**01 03 26.6**	**+0.6**
KAKA	**Kakadu**	**22.96 252**	*e*P	**P**	**01 03 30.0**	**-0.5**
WB2	**Warramunga Arr**	**24.06 234**	*e*P	**P**	**01 03 40.8**	**-0.1**
WRA	**Warramunga Arr**	**24.07 234**	P	**P**	**01 03 41.5**	**+0.5**
21nm,0.9s,mb4.6,baz=57,slow=9.5,SNR=65						
WRA			sP	sP	01 04 08.5	+7.6
1.5nm,0.6s,baz=57,slow=9.3,SNR=3.5						
WRA			PcP	PcP	01 07 22.0	+0.4
1.5nm,0.7s,baz=60,slow=2.3,SNR=7.3						
WRA			pPcP		01 07 36.4	
1.4nm,0.7s,baz=60,slow=2.6,SNR=5.6						
ASAR	**Alice Springs**	**26.50 227**	P	**P**	**01 04 03.0**	**0.0**
4.8nm,0.8s,mb4.1,baz=60,slow=8.5,SNR=42						
ASAR			PcP	PcP	01 07 27.4	+0.5
1.5nm,0.7s,baz=56,slow=3.0,SNR=9.0						
ASAR			pPcP		01 07 41.8	
1.7nm,0.6s,baz=56,slow=2.6,SNR=9.6						
CMSA	**Cobar Meteorol**	**26.51 198**	*e*P	**P**	**01 04 03.5**	**+0.5**
STKA	**Stephens Creek**	**28.28 204**	P	**P**	**01 04 18.5**	**-0.3**
3.8nm,0.7s,mb4.1,baz=356,slow=12,SNR=9.1						
STKA			PcP	PcP	01 07 31.6	+0.4
1.6nm,0.7s,baz=6.3,slow=9.2,SNR=3.3						
STKA			pPcP		01 07 45.1	
2.7nm,0.7s,baz=5.2,slow=11,SNR=4.6						
STKA			LR	LR	01 15 12.7	
comp=Z,205nm,19.8s,MS3.7,baz=24,slow=36						
STKA	**Stephens Creek**	**28.28 204**	*e*P	**P**	**01 04 18.8**	**-0.1**
2.7nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**28.28 204**	*e*P	**P**	**01 04 18.5**	**-0.4**
0.7nm,0.7s,mb3.4						
STKA			PcP	PcP	01 07 31.6	+0.4
STKA			pPcP		01 07 45.1	
STKA			LR	LR	01 15 12.7	
FITZ	**Fitzroy Crossi**	**30.77 245**	*e*P	**P**	**01 04 40.3**	**-0.9**
14nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**30.77 245**	*e*P	**P**	**01 04 40.5**	**-0.7**
8.6nm,0.8s,mb4.6						
FITZ			*e*	pP	01 04 53.9	-1.0
FORT	**Forrest**	**34.96 223**	*e*P	**P**	**01 05 17.3**	**-0.3**
9.4nm,0.7s,mb4.8						
MBWA	**Marble Bar**	**37.02 243**	*e*P	**P**	**01 05 34.6**	**-0.7**
4.3nm,0.6s,mb4.5						
MEEK	**Meekatharra**	**39.95 235**	*e*P	**P**	**01 05 59.7**	**-0.2**
KLBR	**Kellerberrin**	**42.79 229**	*e*P	**P**	**01 06 22.5**	**-0.6**
4.7nm,0.7s,mb4.3						
MORW	**Morawa**	**43.01 233**	*e*P	**P**	**01 06 24.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**43.81 228**	*e*P	**P**	**01 06 31.1**	**-0.2**
6.9nm,0.9s,mb4.4						
NACB	**Ninganchiao**	**44.36 314**	*e*P	**P**	**01 06 35.5**	**-0.3**
KSRS	**Korea Array**	**50.26 332**	P	**P**	**01 07 21.0**	**-0.4**
1.2nm,0.7s,mb4.0,baz=144,slow=7.4,SNR=5.9						
KSRS			LR	LR	01 28 12.3	
comp=Z,42nm,18.2s,MS3.5,baz=133,slow=36						
PETK	**Petropavlovsk-**	**59.24 2**	P	**P**	**01 08 27.4**	**+1.2**
3.4nm,0.7s,mb4.5,baz=142,slow=7.5,SNR=5.1						
PETK			LR	LR	01 32 28.9	
comp=Z,34nm,18.4s,MS3.5,baz=70,slow=34						
PETK	**Petropavlovsk-**	**59.24 2**	P	**P**	**01 08 27.4**	**+1.2**
PETK			LR	LR	01 32 28.9	
CM31	**Chiang Mai Arr**	**60.33 295**	P	**P**	**01 08 34.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**60.33 295**	P	**P**	**01 08 35.5**	**+1.1**
6.1nm,0.8s,mb4.7,baz=113,slow=5.1,SNR=27						
HHC	**Hu-ho-hao-te**	**61.44 324**	*e*P	**P**	**01 08 44.2**	**+2.7**
HHC			pP	pP	01 09 00.4	+4.1
HHC			sP	sP	01 09 07.3	+4.9
HHC			PcP	PcP	01 09 25.1	+2.0
HHC			PP	PP	01 11 02.2	+4.8
HHC			ScP	ScP	01 13 19.3	-1.1
HHC			S	**S**	**01 17 00.2**	**+1.5**
HHC			sS	sS	01 17 27.4	+3.8
HHC			ScS	ScS	01 18 26.9	-1.5
HHC			SS	SS	01 21 03.7	+3.1
HHC			pmax	pmax		
comp=Z,20nm,1.0s,mb5.2						
HHC			pmax	pmax		
comp=Z,79nm,5.7s						
HHC			LR	LR		
comp=N,100nm,15.5s,MS4.2						
HHC			LR	LR		
comp=E,110nm,15.8s,MS4.2						
HHC			LR	LR		
comp=Z,150nm,16.5s,MS4.2						
HIA	**Hailar**	**63.23 335**	P	**P**	**01 08 53.5**	**+0.3**
CASY	**Casey**	**67.18 198**	*e*P	**P**	**01 09 17.9**	**-0.7**
comp=Z,5.4nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**68.34 328**	*e*P	**P**	**01 09 25.4**	**-0.7**
comp=Z,2.0nm,0.8s,mb4.2						
SONM	**Songino Array**	**68.67 327**	P	**P**	**01 09 28.1**	**-0.1**
comp=Z,0.8nm,0.6s,mb3.9,baz=168,slow=7.4,SNR=3.1						
LSA	**Lhasa**	**70.74 304**	*e*P	**P**	**01 09 41.4**	**0.0**
comp=Z,4.2nm,0.7s,mb4.5						
MCK	**McKinley**	**81.49 22**	*e*P	**P**	**01 10 41.9**	**+0.1**
DGAR	**Diego Garcia**	**81.66 263**	P	**P**	**01 10 43.7**	**-0.1**
MKAR	**Makanchi Array**	**82.78 319**	P	**P**	**01 10 48.2**	**-0.6**
comp=Z,1.1nm,0.7s,mb4.0,baz=108,slow=6.5,SNR=7.8						
ILAR	**Eielson Array**	**82.81 22**	P	**P**	**01 10 47.6**	**-1.0**
comp=Z,1.0nm,0.8s,mb3.9,baz=255,slow=5.1,SNR=8.7						
ZALV	**Zalesovo Beam**	**83.52 326**	P	**P**	**01 10 50.8**	**-1.7**
comp=Z,1.2nm,0.7s,mb4.1,baz=90,slow=5.9,SNR=6.2						
QSPA	**South Pole Qui**	**83.66 180**	P	**P**	**01 10 52.8**	**-0.1**
comp=Z,6.8nm,0.9s,mb4.8,baz=320,slow=1.1,SNR=14						
QSPA			pP	pP	01 11 05.9	-2.3
comp=Z,2.5nm,0.7s,baz=15,slow=2.5,SNR=4.1						
QSPA	**South Pole Qui**	**83.66 180**	*e*P	**P**	**01 10 53.4**	**+0.5**
comp=Z,6.6nm,0.9s,mb4.8						
MAW	**Mawson**	**84.95 203**	P	**P**	**01 11 00.1**	**+0.5**
comp=Z,5.8nm,0.7s,mb4.8,baz=96,slow=6.2,SNR=16						
TKM2	**Tokmak 2**	**86.42 314**	*e*P	**P**	**01 11 07.2**	**-0.2**
comp=Z,1.2nm,0.7s,mb4.2						
AAK	**Ala-Archa**	**87.16 313**	*e*P	**P**	**01 11 10.3**	**-0.7**
NVAR	**Mina Array Bea**	**91.44 52**	P	**P**	**01 11 33.1**	**+2.0**
comp=Z,1.3nm,0.8s,mb4.3,baz=250,slow=8.2,SNR=7.2						
NVAR			pP	pP	01 11 46.2	-0.5
comp=Z,1.1nm,0.8s,baz=255,slow=7.7,SNR=3.3						
ROSC	**El Rosal**	**131.08 89**	PKP	PKPdf	01 17 38.3	+0.9
comp=Z,4.9nm,0.6s,baz=225,slow=20,SNR=4.6						
TORD	**Torodi Ar. Bea**	**152.67 286**	PKPbc	PKPbc	01 18 21.1	-1.2
comp=Z,1.7nm,0.8s,baz=42,slow=1.6,SNR=14						
TORD			PKPab	PKPab	01 18 31.6	-1.5
comp=Z,1.7nm,1.1s,baz=68,slow=2.0,SNR=5.2						
TORD			pPKPbc	pPKPbc	01 18 37.3	-1.1
comp=Z,1.8nm,0.7s,baz=42,slow=1.0,SNR=7.5						

NEIC ***08*** *01:00:58.9, 17.°00N×94.°64W, h136km, MD3.7(MEX), After MEX.*

MEX 08 01:00:58.8±1.4, 17.°00N×94.°65W, h137km±21km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.47**	**98**	*i* P	Pn	01 01 25.8	-1.3
TGIG				*i* S	Sn	01 01 45.9	-2.8
HUIG	**Huatulco**	**1.86**	**229**	*i* P	Pn	01 01 29.1	-2.4
HUIG				*i* S	Sn	01 01 54.6	-1.9
HUIG	**Huatulco**	**1.86**	**229**	*i* P	Pn	01 01 29.1	-2.4
HUIG				*i* S	Sn	01 01 54.6	-1.9
PCIG		**1.88**	**133**	*i* P	Pn	01 01 30.9	-0.8
PCIG				*i* S	Sn	01 01 56.1	-0.7
VHO	**Vista Hermosa**	**2.00**	**273**	*e*P	Pn	01 01 32.6	-0.5
VHO				*i* S	Sn	01 01 58.9	-0.5
VHO	**Vista Hermosa**	**2.00**	**273**	*e*P	Pn	01 01 32.6	-0.5
VHO				*i* S	Sn	01 01 58.9	-0.5
CCIG	**Comitan**	**2.51**	**106**	*e*P	Pn	01 01 38.4	-1.0
CCIG				*i* S	Sn	01 02 09.3	-1.3
CCIG	**Comitan**	**2.51**	**106**	*e*P	Pn	01 01 38.4	-1.0
CCIG				*i* S	Sn	01 02 09.3	-1.3
UTMO	**Huajuapan**	**3.13**	**286**	*i* P	Pn	01 01 47.0	-0.3
UTMO				*i* S	Sn	01 02 23.0	-1.8
PNIG	**Pinotepa**	**3.39**	**260**	*i* P	Pn	01 01 48.5	-2.3
PNIG				*i* S	Sn	01 02 27.6	-3.3
PNIG	**Pinotepa**	**3.39**	**260**	*i* P	Pn	01 01 48.6	-2.1
PNIG				*i* S	Sn	01 02 28.1	-2.8

IDC 08 01:02:34.4±1.4, 27.°33S×74.°19E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/19, mbtmp3.9/5, Error ellipse: s-maj=44.3km s-min=30.9km az=82.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**53.58**	**100**	P	P	01 11 57.5	0.0
0.7nm,0.5s,baz=251,slow=6.6,SNR=6.1							
WRA	**Warramunga Arr**	**55.15**	**96**	P	P	01 12 08.9	0.0
1.1nm,0.9s,baz=251,slow=7.2,SNR=7.8							
QSPA	**South Pole Qui**	**62.80**	**180**	P	P	01 13 01.7	+0.5
1.4nm,0.6s,baz=281,slow=2.5,SNR=4.1							
MKAR	**Makanchi Array**	**74.14**	**6**	P	P	01 14 12.8	+0.4
1.1nm,0.9s,baz=191,slow=4.1,SNR=4.3							
ZALV	**Zalesovo Beam**	**81.46**	**6**	P	P	01 14 52.7	-0.3
0.3nm,0.5s,baz=188,slow=4.1,SNR=3.6							

IDC 08 01:12:53.9±1.9, 1.°84N×126.°81E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/18, mbtmp4.0/4, Error ellipse: s-maj=165.1km s-min=24.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.88**	**162**	P	P	01 17 58.6	-0.5
1.2nm,0.4s,baz=340,slow=11,SNR=11							
ASAR	**Alice Springs**	**26.28**	**165**	P	P	01 18 31.8	+0.6
0.6nm,0.3s,baz=347,slow=11,SNR=11							
STKA	**Stephens Creek**	**36.35**	**159**	P	P	01 19 59.6	-0.1
0.7nm,0.3s,baz=315,slow=4.3,SNR=2.8							
MKAR	**Makanchi Array**	**59.15**	**326**	P	P	01 22 56.5	+0.1
0.3nm,0.4s,baz=124,slow=7.4,SNR=5.1							

ISK ***08*** *01:55:23.4, 40.°90N×41.°87E, h2km, MD2.8*
ISCJB ***08*** *01:55:24.2±0.7, 40.°86N±0.°04×41.°87E±0.°05, h3km±9km, Error ellipse: s-maj=6.4km s-min=6.1km az=33.8*
DDA ***08*** *01:55:24.1, 40.°88N×41.°86E, h7km±2km, Md2.8*
CSEM ***08*** *01:55:24.1±0.1, 40.°86N×41.°88E, h0km±1km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.9km az=62.0*

ISC 08 01:55:24.6±0.8, 40.°86N±0.°04×41.°87E±0.°05, h1km±11km, n22, σ0°54/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDEM	**Demirkent**	**0.10**	**291**	*i* P	**Pg**	**01 55 26.3**	**-0.2**
DDEM				*i* S	**Sg**	**01 55 28.1**	**+0.4**
DDEM	**Demirkent**	**0.10**	**291**	*i* P	**Pg**	**01 55 26.3**	**-0.2**
DDEM				*i* S	**Sg**	**01 55 28.1**	**+0.4**
DBAD	**Bademkaya**	**0.21**	**320**	*i* P	**Pg**	**01 55 28.4**	**-0.1**
DBAD				*i* S	**Sg**	**01 55 31.6**	**+0.3**
DBAD	**Bademkaya**	**0.21**	**320**	*i* P	**Pg**	**01 55 28.5**	**-0.1**
DBAD				*i* S	**Sg**	**01 55 31.6**	**+0.3**
DAGI	**Agillar**	**0.22**	**8**	*i* P	**Pg**	**01 55 29.1**	**+0.3**
DAGI				*i* S	**Sg**	**01 55 33.2**	**+1.4**
ARTV	**Artvin**	**0.33**	**7**	*i* P	**Pg**	**01 55 29.8**	**-1.1**
ARTV				*i* S	**Sg**	**01 55 35.2**	**0.0**
ARTV	**Artvin**	**0.33**	**7**	*i* P	**Pg**	**01 55 29.8**	**-1.1**
ARTV				*i* S	**Sg**	**01 55 35.2**	**0.0**
DBOC	**Borcka**	**0.51**	**342**	*i* P	**Pg**	**01 55 34.0**	**-0.4**
DBOC				*i* S	**Sg**	**01 55 40.9**	**-0.1**
DBOC	**Borcka**	**0.51**	**342**	*i* P	**Pg**	**01 55 34.0**	**-0.4**
DBOC				*i* S	**Sg**	**01 55 40.9**	**-0.1**
BCA	**Borcka**	**0.62**	**342**	PG	**Pg**	**01 55 35.5**	**-0.9**
BCA				SG	**Sg**	**01 55 44.2**	**-0.2**
BCA	**Borcka**	**0.62**	**342**	*i* Pg	**Pg**	**01 55 35.5**	**-0.9**
BCA				*i* Sg	**Sg**	**01 55 44.2**	**-0.2**
PZAR	**Pazar-Rize**	**0.80**	**294**	*e*PG	**Pg**	**01 55 39.2**	**-0.7**
PZAR				*e*SG	**Sg**	**01 55 51.0**	**+0.6**
PZAR	**Pazar-Rize**	**0.80**	**294**	*e*Pg	**Pg**	**01 55 39.2**	**-0.8**
PZAR				*e*Sg	**Sg**	**01 55 51.0**	**+0.6**
KARS	**Kars**	**0.94**	**104**	*e*PG	**Pg**	**01 55 42.9**	**+0.2**
KARS	**Kars**	**0.94**	**104**	*e*Pg	**Pg**	**01 55 42.9**	**+0.2**
EZM	**Erzurum**	**1.03**	**202**	*e*PG	**Pg**	**01 55 44.5**	**+0.3**
AGRB	**Hanur-Agry**	**1.54**	**146**	*e*PN	**Pn**	**01 55 53.3**	**+0.2**
AGRB	**Hanur-Agry**	**1.54**	**146**	*e*Pn	**Pn**	**01 55 53.3**	**+0.2**
GUMT	**Gumushane**	**1.86**	**258**	*e*PN	**Pn**	**01 55 57.4**	**-0.2**
GUMT	**Gumushane**	**1.86**	**258**	*e*Pn	**Pn**	**01 55 57.4**	**-0.1**
ESPY	**Espiye-Giresun**	**2.38**	**272**	*e*PN	**Pn**	**01 56 04.8**	**+0.1**
ESPY	**Espiye-Giresun**	**2.38**	**272**	*e*Pn	**Pn**	**01 56 04.8**	**+0.1**

ISK ***08*** *02:06:55.9, 39.°46N×33.°17E, h14km, MD2.7*
ISCJB ***08*** *02:06:56.8±0.5, 39.°38N±0.°04×33.°19E±0.°05, h10km, Error ellipse: s-maj=5.5km s-min=4.8km az=140.6*
DDA ***08*** *02:06:56.3, 39.°33N×33.°23E, h7km±2km, Md2.8*
CSEM ***08*** *02:06:56.6±0.1, 39.°37N×33.°14E, h10km, MD2.7, Error ellipse: s-maj=2.8km s-min=2.7km az=30.0*

ISC 08 02:06:57.0±0.7, 39.°38N±0.°05×33.°15E±0.°07, h15km±9km, n21, σ1°02/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Af¯ar-Bala (A**	**0.09**	**317**	PG	**Pg**	**02 06 58.8**	**-1.4**
AFSR				SG	**Sg**	**02 07 01.3**	**-1.1**
AFSR	**Af¯ar-Bala (A**	**0.09**	**317**	*i* Pg	**Pg**	**02 06 58.8**	**-1.3**
AFSR				*i* Sg	**Sg**	**02 07 01.3**	**-1.1**
BBAL	**Bala**	**0.17**	**352**	*i* P	**Pg**	**02 07 01.2**	**+0.1**
BBAL				*i* S	**Sg**	**02 07 04.3**	**+0.4**
BBAL	**Bala**	**0.17**	**352**	*i* P	**Pg**	**02 07 01.2**	**+0.1**
BBAL				*i* S	**Sg**	**02 07 04.3**	**+0.4**
KAMT	**Kaman**	**0.43**	**91**	*e*PG	**Pg**	**02 07 05.3**	**-0.4**
KAMT	**Kaman**	**0.43**	**91**	*e*Pg	**Pg**	**02 07 05.3**	**-0.4**
LOD	**Lodumlu**	**0.59**	**330**	*e*PG	**Pg**	**02 07 06.9**	**-1.7**
LOD	**Lodumlu**	**0.59**	**330**	*e*Pg	**Pg**	**02 07 06.9**	**-1.7**
KIZT	**Kizilcal**	**1.11**	**244**	*e*PN	**Pn**	**02 07 18.4**	**+0.4**
KIZT	**Kizilcal**	**1.11**	**244**	*e*Pn	**Pn**	**02 07 18.4**	**+0.5**
ELDT	**Eldivan**	**1.13**	**11**	*i* P	**Pg**	**02 07 18.7**	**0.0**
ELDT				*i* S	**Sg**	**02 07 35.7**	**+2.2**
ELDT	**Eldivan**	**1.13**	**11**	*i* P	**Pg**	**02 07 18.7**	**-0.1**
ELDT				*i* S	**Sg**	**02 07 35.7**	**+2.2**
KDHN	**Kadinhani**	**1.18**	**224**	*i* P	**Pb**	**02 07 18.7**	**-0.3**
KDHN				*i* S	**Sg**	**02 07 35.9**	**+0.9**
KDHN	**Kadinhani**	**1.18**	**224**	*i* P	**Pb**	**02 07 18.7**	**-0.3**
KDHN				*i* S	**Sg**	**02 07 35.9**	**+0.9**
SULT	**Sultanhani-AKS**	**1.21**	**166**	*e*PN	**Pn**	**02 07 19.5**	**+0.1**
SULT	**Sultanhani-AKS**	**1.21**	**166**	*e*Pn	**Pn**	**02 07 19.5**	**+0.1**
CORM	**Corum**	**1.39**	**54**	*e*PN	**Pn**	**02 07 19.8**	**-2.1**
AVNT	**Avonos**	**1.46**	**114**	*i* P	**Pn**	**02 07 23.7**	**+0.9**
AVNT				*i* S	**Sn**	**02 07 41.8**	**+0.2**
AVNT	**Avonos**	**1.46**	**114**	*i* P	**Pn**	**02 07 23.7**	**+1.0**
AVNT				*i* S	**Sn**	**02 07 41.8**	**+0.3**
YOZ	**Yozgat**	**1.70**	**80**	*e*PN	**Pn**	**02 07 25.3**	**-0.8**
YOZ	**Yozgat**	**1.70**	**80**	*e*Pn	**Pn**	**02 07 25.3**	**-0.8**

ISCJB ***08*** *02:20:51.9±0.6, 24.°77N±0.°04×122.°11E±0.°02, h77km±5km, Error ellipse: s-maj=6.1km s-min=3.3km az=162.5*
TAP ***08*** *02:20:51.9, 24.°77N×122.°10E, h77km, ML3.4, D*
JMA ***08*** *02:20:51.8±0.3, 24.°77N×122.°13E, h80km, M2.5*

ISC 08 02:20:52.4±0.6, 24.°77N±0.°04×122.°12E±0.°02, h75km±5km, n37, σ0°42/71, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.27**	**334**	↓*i* P	**Pn**	**02 21 03.9**	**0.0**
baz=337							
TWB1				*i* S	**Sn**	**02 21 12.5**	**+0.1**
baz=337							
TWC	**Suao**	**0.29**	**237**	*i* P	**Pn**	**02 21 03.7**	**-0.3**
baz=234							
TWC				*i* S	**Sn**	**02 21 12.1**	**-0.5**
baz=234							
ILA	**Ilan**	**0.33**	**270**	*i* P	**Pn**	**02 21 04.3**	**-0.1**
baz=269							
ILA				*i* S	**Sn**	**02 21 13.9**	**+0.7**
baz=269							
TWE	**Neicheng**	**0.41**	**263**	P	**Pn**	**02 21 04.8**	**-0.1**
baz=262							
TWE				S	**Sn**	**02 21 14.1**	**0.0**
baz=262							
NWF	**Wu-fen Shan**	**0.43**	**315**	P	**Pn**	**02 21 05.0**	**-0.1**
baz=315							
NWF				S	**Sn**	**02 21 14.8**	**+0.4**
baz=315							
ENA	**Nanau**	**0.48**	**225**	P	**Pn**	**02 21 05.5**	**+0.1**
baz=223							
ENA				S	**Sn**	**02 21 15.7**	**+0.5**
baz=223							
ENTT	**Nioudou**	**0.52**	**256**	↓*i* P	**Pn**	**02 21 05.9**	**+0.1**
baz=254							
ENTT				S	**Sn**	**02 21 15.7**	**0.0**
baz=254							
TWA	**Mucha**	**0.53**	**294**	*i* P	**Pn**	**02 21 05.4**	**-0.5**
baz=294							
TWA				S	**Sn**	**02 21 15.6**	**-0.3**
baz=294							
TWY	**Chenhua**	**0.69**	**317**	P	**Pn**	**02 21 07.5**	**-0.1**
baz=318							
TWY				S	**Sn**	**02 21 19.1**	**+0.3**
baz=318							
NSK	**Sanguang**	**0.69**	**263**	P	**Pn**	**02 21 07.6**	**0.0**
baz=262							
NSK				S	**Sn**	**02 21 19.0**	**+0.1**
baz=262							
TWS1	**Kuangyinshan**	**0.71**	**298**	*e*P	**Pn**	**02 21 07.6**	**-0.2**
baz=298							
TWS1				*e*S	**Sn**	**02 21 19.2**	**-0.1**
baz=298							
NNS	**Nan Shan**	**0.75**	**244**	*e*P	**Pn**	**02 21 08.3**	**+0.1**
baz=243							
NNS				*e*S	**Sn**	**02 21 20.3**	**+0.3**
baz=243							
TWD	**Chiawan**	**0.83**	**215**	*e*P	**Pn**	**02 21 08.4**	**-0.7**
baz=213							
TWD				*e*S	**Sn**	**02 21 20.9**	**-0.7**
baz=213							
YOJ	**Yonaguni jima**	**0.87**	**110**	P	**Pn**	**02 21 09.3**	**-0.3**
YOJ				*e*S	**Sn**	**02 21 22.3**	**-0.1**
WHF	**Hehuan Shan**	**0.99**	**231**	*e*P	**Pn**	**02 21 11.2**	**+0.1**
baz=230							
WHF				*e*S	**Sn**	**02 21 25.1**	**+0.1**
baz=230							
TWT	**Tachien**	**1.00**	**239**	*e*P	**Pn**	**02 21 11.6**	**+0.5**
baz=238							
TWT				*e*S	**Sn**	**02 21 25.3**	**+0.2**
baz=238							
NSTT	**Nanjuang**	**1.02**	**263**	*e*P	**Pn**	**02 21 11.1**	**-0.3**
baz=262							
NSTT				*e*S	**Sn**	**02 21 25.6**	**0.0**
baz=262							
ESL	**Shilin**	**1.14**	**213**	*e*P	**Pn**	**02 21 12.9**	**+0.1**
baz=212							
ESL				*e*S	**Sn**	**02 21 28.3**	**+0.2**
baz=212							
TWQ1	**Liyutan**	**1.29**	**251**	*e*P	**Pn**	**02 21 14.8**	**0.0**
baz=250							
TWQ1				*e*S	**Sn**	**02 21 30.8**	**-0.9**
baz=250							
SMLT	**Sun Moon Lake**	**1.42**	**232**	*e*P	**Pn**	**02 21 17.0**	**+0.6**
baz=231							
SMLT				*e*S	**Sn**	**02 21 34.9**	**+0.4**
baz=231							
TYC	**Yuchr**	**1.44**	**233**	*e*P	**Pn**	**02 21 16.9**	**+0.2**
baz=232							
TYC				*e*S	**Sn**	**02 21 34.7**	**-0.3**
baz=232							
TCU	**Taichung**	**1.45**	**245**	*e*P	**Pn**	**02 21 16.8**	**0.0**
baz=244							
TCU				*e*S	**Sn**	**02 21 34.6**	**-0.7**
baz=244							
EHY	**Hungye**	**1.45**	**210**	*e*P	**Pn**	**02 21 15.6**	**-1.3**
baz=209							
IRIF	**Iriomote-Funau**	**1.53**	**106**	P	**Pn**	**02 21 17.4**	**-0.5**
IRIF				*e*S	**Sn**	**02 21 37.2**	**0.0**
TWF1	**Yuli**	**1.60**	**208**	*e*P	**Pn**	**02 21 18.9**	**+0.2**
baz=207							
TWF1				*e*S	**Sn**	**02 21 38.8**	**+0.1**
baz=207							
YUS	**Yu-Shan**	**1.66**	**220**	*e*P	**Pn**	**02 21 20.1**	**+0.5**
baz=219							
YUS				*e*S	**Sn**	**02 21 40.8**	**+0.6**
baz=219							
HATJ	**Hateruma jima**	**1.69**	**114**	P	**Pn**	**02 21 20.1**	**0.0**
ALS	**Alishan**	**1.73**	**224**	*e*P	**Pn**	**02 21 21.5**	**+0.9**
baz=223							
ALS				*e*S	**Sn**	**02 21 42.0**	**+0.1**
baz=223							
CHN5	**Tsauling**	**1.76**	**229**	*e*P	**Pn**	**02 21 20.8**	**-0.1**
baz=228							
CHN5				*e*S	**Sn**	**02 21 43.0**	**+0.5**
baz=228							
JKRS	**Kuro-shima**	**1.80**	**107**	P	**Pn**	**02 21 21.5**	**0.0**
JKRS				*e*S	**Sn**	**02 21 43.5**	**-0.1**
ELDTW	**Lidau**	**1.87**	**213**	*e*P	**Pn**	**02 21 22.3**	**-0.1**
baz=212							
ELDTW				*e*S	**Sn**	**02 21 44.9**	**-0.2**
baz=212							
JIJ	**Ishigaki jima**	**1.89**	**102**	P	**Pn**	**02 21 22.1**	**-0.5**
JIJ				*e*S	**Sn**	**02 21 44.9**	**-0.8**
STYT	**Tauyuan**	**2.02**	**218**	*e*P	**Pn**	**02 21 24.8**	**+0.3**
baz=217							
STYT				*e*S	**Sn**	**02 21 49.1**	**+0.2**
baz=217							
WTP	**Ta-pu**	**2.04**	**222**	*e*P	**Pn**	**02 21 24.7**	**-0.1**
baz=221							
TTN	**Taitung**	**2.19**	**204**	*e*P	**Pn**	**02 21 26.8**	**+0.1**
baz=203							
TTN				*e*S	**Sn**	**02 21 52.8**	**-0.1**
baz=203							
JTJ	**Tarama**	**2.36**	**93**	P	**Pn**	**02 21 29.6**	**+0.7**
JTJ				*e*S	**Sn**	**02 21 58.1**	**+1.2**
PNG	**Penghu**	**2.63**	**243**	*e*P	**Pn**	**02 21 32.8**	**+0.3**
baz=242							
PNG				*e*S	**Sn**	**02 22 02.7**	**-0.7**
baz=242							

NEIC ***08*** *02:37:16.3, 54.°66N×

Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.81**	**44**	*e*P	Pg	02 47 12.1	-1.0
MATL	**Matarih**	**0.81**	**44**	*e*P	Pg	02 47 12.1	-1.0
RCY	**Rachaya**	**1.13**	**59**	*e*P	Pg	02 47 17.9	-1.4
RCY				*e*S	Sg	02 47 32.7	-1.3
RCY	**Rachaya**	**1.13**	**59**	*e*P	Pg	02 47 17.9	-1.4
RCY				*e*S	Sg	02 47 32.7	-1.3
BHL	**Bhannes**	**1.30**	**40**	*e*P	Pn	02 47 20.1	-1.8
BHL				*e*S	Sb	02 47 36.9	-2.0
BHL	**Bhannes**	**1.30**	**40**	*e*P	Pn	02 47 20.0	-1.9
BHL				*e*S	Sb	02 47 36.9	-2.0
HWQ	**Hawqa**	**1.74**	**38**	*e*P	Pn	02 47 26.9	-1.1
HWQ	**Hawqa**	**1.74**	**38**	*e*P	Pn	02 47 26.9	-1.1

LDG ***08*** *03:03:12.4±0.1, 19°.59S×169°.01E, h10km, Mb6.3/4, Ms5.7/10, Error ellipse: s-maj=9.4km s-min=3.1km az=126.0*

NOU ***08*** *03:03:13.7±1.1, 19°.55S×169°.01E, h10km, MD3.5, ML4.3*

BJI ***08*** *03:03:14.2, 19°.55S×169°.30E, h25km, mB6.2/54, mb5.9/68, Ms5.9/70, Ms7 5.7/65*

MOS ***08*** *03:03:14.9±0.9, 19°.87S×169°.10E, h33km, mb6.1/91, MS5.8/73, Error ellipse: s-maj=7.7km s-min=7.7km az=60.9*

NEIC ***08*** *03:03:15.9±0.1, 19°.96S×169°.11E, h36km, mb6.0/170, ME5.8, MS5.8/181, MW6.2, MW6.1, Error ellipse: s-maj=5.1km s-min=3.8km az=167.0 Broadband fault plane solution: P waves. NP1:φs340.00000°, δ45.00000°, λ90.00000°. NP2:φs160.00000°, δ45.00000°, λ90.00000°. Principal axes: T Plg90.0000°, Azm0.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm70.0000°; Moment Tensor Solution. s63 Moment tensor: Scale 10^18 Nm; Mrr1.52; Mθθ0.33; Mφφ-1.84; Mrθ-0.09; Mφθ0.74; Mφr-0.19; Best double couple: M0 1.90000×10^18 NP1:φs335.00000°, δ43.00000°, λ78.00000°. NP2:φs171.00000°, δ48.00000°, λ101.00000°. Principal axes: T 1.5500, Plg81.0000°, Azm145.0000°; N 0.5300, Plg7.0000°, Azm343.0000°; P -2.0700, Plg2.0000°, Azm253.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Port-Vila. Also felt at Noumea, New Caledonia.

ISCJB ***08*** *03:03:15.9±0.1, 19°.89S±0°.02×169°.04E±0°.02, h41km, mb6.0/288, MS5.8/268 Error ellipse: s-maj=2.8km s-min=2.3km az=44.9*

IGIL ***08*** *03:03:16.3, 20°.03S×169°.12E, h35km, MS6.1*

SZGRF ***08*** *03:03:17.2, 19°.87S×170°.71E, h43km, mb6.0, Vanuatu Islands*

IDC ***08*** *03:03:17.4±0.3, 19°.94S×169°.05E, h44km±2km, mb5.6/27, mb1 5.6/30, mb1mx5.6/30, mbtmp5.6/30, MS5.7/23, Ms1 5.7/23, ms1mx5.7/26, Error ellipse: s-maj=9.8km s-min=7.5km az=160.0*

GCMT ***08*** *03:03:20.9±0.1, 19°.97S×168°.81E, h48km, MW6.2, Moment Tensor Solution. s96,c236; s80,c136; Moment tensor: Scale 10^18 Nm; Mrr2.07±.01; Mθθ0.37±.01; Mφφ-2.44±.01; Mrθ-0.54±.01; Mθφ0.25±.01; Mφr-0.21±.01; Best double couple: M0 2.40000×10^18 NP1:φs339.00000°, δ45.00000°, λ66.00000°. NP2:φs191.00000°, δ49.00000°, λ112.00000°. Principal axes: T 2.2400, Plg73.0000°, Azm168.0000°; N 0.2200, Plg17.0000°, Azm356.0000°; P -2.4700, Plg2.0000°, Azm265.0000°; Data Used: II IU IC. Surface waves: sta=100, comp=239, per= 50.*

DJA ***08*** *03:03:30, 19°.65S×168°.65E, h127km, Mw6.4/47*

ISC 08 03:03:17.7±0.1, 19°.89S±0°.02×169°.09E±0°.02, h43km, h43km±1.0km: pP-P, n1460, σ0s91/538, mb6.0/288, MS5.8/268, 116C-59D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.05**	**222**	*e*P	**Pn**	**03 04 01.0**	**-2.4**
BAYA				*e*S	**Sn**	**03 04 37.8**	**-0.9**
BAYA				AMP		03 04 40.3	
	comp=Z,682nm,3.6s						
DZM	**Mont Dzumac**	**3.29**	**228**	*e*Pn	**Pn**	**03 04 04.3**	**-2.4**
	comp=Z,3μm,0.3s						
DZM				*e*Sn	**Sn**	**03 04 41.1**	**-3.4**
	comp=Z,7μm,0.2s						
DZM				*e*LR	LR	03 04 45.9	
	comp=Z,302μm,23.7s						
PLUM	**Mont Dore**	**3.29**	**224**	*e*P	**Pn**	**03 04 05.6**	**-1.1**
PLUM				*e*S	**Sn**	**03 04 43.0**	**-1.6**
PLUM				AMP		03 04 48.9	
	comp=Z,8μm,8.0s						
NORM	**Noumea**	**3.36**	**226**	*e*P	**Pn**	**03 04 05.5**	**-2.2**
NORM				*e*S	**Sn**	**03 04 43.9**	**-2.5**
NORM				AMP		03 04 45.8	
	comp=Z,9μm,2.3s						
NOUC	**Port Laguerre**	**3.41**	**229**	*e*P	**Pn**	**03 04 06.8**	**-1.5**
NOUC				*e*S	**Sn**	**03 04 46.5**	**-0.9**
NOUC				AMP		03 05 05.4	
	comp=Z,3μm,2.5s						
MVNO	**Noumea**	**3.42**	**226**	*e*P	**Pn**	**03 04 06.9**	**-1.6**
MVNO				*e*S	**Sn**	**03 04 45.0**	**-2.8**
MVNO				AMP		03 04 52.6	
	comp=Z,769nm,3.3s						
MSVF	**Nonsavu**	**8.76**	**77**	*e*Pn	**Pn**	**03 05 28.0**	**+6.2**
	comp=Z,11μm,1.6s						
MSVF				S	**Sn**	**03 07 09.3**	**+10**
HNR	**Honiara**	**13.64**	**318**	P	**Pn**	**03 06 30.2**	**+1.5**
	comp=Z,13nm,0.3s,baz=194,slow=17,SNR=5.3						
HNR				S	**Sn**	**03 09 07.3**	**+8.4**
	comp=Z,8.0nm,0.3s,baz=41,slow=20,SNR=2.2						
HNR				LR	LR	03 10 48.2	
	comp=Z,46μm,21.2s,baz=137,slow=33						
HNR	**Honiara**	**13.64**	**318**	P	**Pn**	**03 06 30.2**	**+1.5**
HNR				S	**Sn**	**03 09 07.4**	**+8.4**
HNR				pmax	pmax		
	comp=Z,13nm,0.3s						
HNR				smax			
	comp=N,8.0nm,0.3s						
HNR				MLR	MLR		
	comp=Z,46μm,21.2s						
HNR	**Honiara**	**13.64**	**318**	*e*Pn	**Pn**	**03 06 30.2**	**+1.5**
	comp=Z,2μm,1.3s						
HNR				*e*S	**Sn**	**03 09 14.8**	**+16**
FUNA	**Funafuti**	**14.95**	**42**	*e*Pn	**Pn**	**03 06 48.0**	**+1.7**
	comp=Z,2μm,1.3s						
OUZ	**Omahuta**	**15.78**	**166**	*e*Pn	**Pn**	**03 06 58.3**	**+1.4**
	comp=Z,622nm,0.9s						
WCZ	**Waipu Caves**	**16.64**	**165**	*e*PN	**Pn**	**03 07 10.0**	**+2.2**
EIDS	**Eidsvold**	**17.49**	**249**	*e*Pn	**Pn**	**03 07 19.9**	**+1.5**
	comp=Z,1μm,1.8s						
MKAZ	**Moumakai**	**17.96**	**164**	PN	**Pn**	**03 07 25.3**	**+1.1**
ARMA	**Armidale**	**18.94**	**233**	*e*P	**Pn**	**03 07 37.8**	**+1.7**
ARMA				*e*S	**S**	**03 11 08.8**	**+0.8**
ARMA	**Armidale**	**18.94**	**233**	*e*P	**Pn**	**03 07 37.5**	**+1.4**
	comp=Z,650nm,1.3s						
HIZ	**Hauiti**	**19.22**	**166**	P	**Pn**	**03 07 40.2**	**+0.8**
HIZ	**Hauiti**	**19.22**	**166**	PN	**Pn**	**03 07 40.0**	**+0.6**
AFI	**Afiamalu**	**19.25**	**75**	P	**Pn**	**03 07 39.3**	**-0.5**
	comp=Z,7.0nm,0.3s,baz=150,slow=3.0,SNR=21						
AFI				LR	LR	03 13 43.1	
	comp=Z,54μm,20.4s,baz=254,slow=32						
AFI	**Afiamalu**	**19.25**	**75**	*e*P	**Pn**	**03 07 39.4**	**-0.5**
AFI				pmax	pmax		
	comp=Z,588nm,0.9s						
AFI	**Afiamalu**	**19.25**	**75**	*e*P	**Pn**	**03 07 39.4**	**-0.5**
	comp=Z,588nm,0.9s						
HRRZ	**Handcock Road**	**19.46**	**163**	*e*PN	**Pn**	**03 07 43.6**	**+1.3**
URZ	**Urewera**	**19.58**	**161**	P	**Pn**	**03 07 43.3**	**-0.4**
	comp=Z,23nm,0.3s,baz=341,slow=5.5,SNR=96						
URZ				S	**S**	**03 11 33.5**	**+13**
	comp=Z,0.5nm,0.3s,baz=12,slow=20,SNR=4.8						
URZ				LR	LR	03 13 58.1	
	comp=Z,26μm,20.7s,baz=158,slow=33						
URZ	**Urewera**	**19.58**	**161**	*e*P	**Pn**	**03 07 43.3**	**-0.4**
	comp=Z,886nm,0.8s						
PRRZ	**Plateau Road**	**19.59**	**163**	PN	**Pn**	**03 07 44.7**	**+0.8**
MWZ	**Matawai**	**19.78**	**160**	PN	**Pn**	**03 07 45.5**	**-0.6**
PUZ	**Puketiti**	**19.79**	**158**	PN	**Pn**	**03 07 45.7**	**-0.5**
WPVZ	**Whakapapa**	**20.04**	**165**	P	**P**	**03 07 50.7**	**+3.7**
BKZ	**Black Stump Fm**	**20.24**	**163**	P	**P**	**03 07 50.2**	**+0.9**
BKZ	**Black Stump Fm**	**20.24**	**163**	PN	**P**	**03 07 50.3**	**+1.0**
MOVZ	**Moawhango**	**20.28**	**165**	*e*PN	**P**	**03 07 51.3**	**+1.7**
BHHZ	**Black Hill Sta**	**20.43**	**164**	*e*PN	**P**	**03 07 52.6**	**+1.3**
KNZ	**Kokohu**	**20.45**	**161**	PN	**P**	**03 07 52.4**	**+0.8**
MCHZ	**McNeill Hill**	**20.56**	**163**	*e*PN	**P**	**03 07 54.0**	**+1.3**
PNHZ	**Pukenui**	**20.87**	**164**	*e*PN	**P**	**03 07 56.5**	**+0.4**
KAHZ	**Kahuranaki**	**20.94**	**163**	*e*PN	**P**	**03 07 57.7**	**+0.9**
TSZ	**Takapari Road**	**20.95**	**165**	PN	**P**	**03 07 57.8**	**+1.0**
QRZ	**Quartz Range**	**21.07**	**173**	P	**P**	**03 08 01.0**	**+2.8**
QRZ	**Quartz Range**	**21.07**	**173**	PN	**P**	**03 08 00.8**	**+2.6**
DVHZ	**Dannevirke**	**21.23**	**165**	*e*PN	**P**	**03 07 60.0**	**+0.1**
DUWZ	**D'Urville Isla**	**21.25**	**170**	*e*PN	**P**	**03 08 02.8**	**+2.7**
MRZ	**Mangatainoka R**	**21.43**	**166**	PN	**P**	**03 08 01.8**	**-0.3**
TARA	**Tarawa**	**21.45**	**11**	PFAKE		03 08 10.0	+7.5
TARA				LR	LR		
	comp=Z,121nm,22.0s						
ANWZ	**Angora Road**	**21.45**	**164**	PN	**P**	**03 08 02.1**	**-0.2**
CTA	**Charters Tower**	**21.46**	**266**	P	**P**	**03 08 03.6**	**+1.0**
	comp=Z,124nm,0.6s,mb5.4,baz=90,slow=11,SNR=83						
CTA				S	**S**	**03 12 02.9**	**+4.5**
	comp=Z,20nm,1.1s,baz=255,slow=20,SNR=6.1						
CTA	**Charters Tower**	**21.46**	**266**	P	**P**	**03 08 03.6**	**+1.0**
CTA				S	**S**	**03 12 02.9**	**+4.6**
CTA				pmax	pmax		
	comp=Z,124nm,0.6s						
CTA				smax			
	comp=N,20nm,1.1s						
CTAO	**Charters Tower**	**21.46**	**266**	*e*P	**P**	**03 08 03.4**	**+0.8**
CTAO				*e*		03 12 03.5	
CTAO				pmax	pmax		
	comp=Z,363nm,1.2s,mb5.6						
CTAO				MLR	MLR		
	comp=Z,33μm,22.0s,MS5.7						
CTAO	**Charters Tower**	**21.46**	**266**	*e*P	**P**	**03 08 03.4**	**+0.8**
	comp=Z,363nm,1.2s,mb5.6						
CTAO				*e*		03 12 03.5	
	comp=Z,33μm,22.0s,MS5.7						
CTAO				LR	LR		
OGWZ	**Otaki Gorge**	**21.50**	**167**	*e*PN	**P**	**03 08 02.9**	**+0.1**
BFZ	**Birch Farm**	**21.61**	**165**	P	**P**	**03 08 03.9**	**-0.1**
HOWZ	**Holdsworth Sta**	**21.64**	**167**	PN	**P**	**03 08 03.9**	**-0.5**
TCW	**Tory Channel**	**21.71**	**169**	PN	**P**	**03 08 05.8**	**+0.7**
CAW	**Cannon Point**	**21.75**	**168**	*e*PN	**P**	**03 08 07.3**	**+1.8**
TUWZ	**Tuamarina**	**21.86**	**170**	*e*PN	**P**	**03 08 07.5**	**+0.9**
SNZO	**South Karori**	**21.88**	**169**	*e*P	**P**	**03 08 07.2**	**+0.3**
	comp=Z,231nm,0.7s,mb5.7						
SNZO				LR	LR		
	comp=Z,37μm,20.0s,MS5.8						
THZ	**Tophouse**	**22.04**	**172**	PN	**P**	**03 08 09.1**	**+0.5**
PAWZ	**Paruwai Farm**	**22.09**	**167**	*e*PN	**P**	**03 08 08.2**	**-0.9**
KHZ	**Kahutara**	**22.77**	**171**	*e*P	**P**	**03 08 15.5**	**-0.8**
	comp=Z,583nm,1.1s,mb5.9						
KHZ	**Kahutara**	**22.77**	**171**	PN	**P**	**03 08 16.0**	**-0.3**
LTZ	**Lake Taylor**	**22.98**	**174**	*e*PN	**P**	**03 08 19.0**	**+0.5**
FOZ	**Fox Glacier**	**23.61**	**179**	PN	**P**	**03 08 24.6**	**-0.1**
PMG	**Port Moresby**	**23.61**	**293**	*d*iP	**P**	**03 08 25.2**	**+0.2**
PMG				pmax	pmax		
	comp=Z,398nm,1.2s						
PMG	**Port Moresby**	**23.61**	**293**	*e*P	**P**	**03 08 25.4**	**+0.4**
	comp=Z,990nm,1.4s,mb6.0						
PMG				LR	LR		
	comp=Z,39μm,19.0s,MS5.9						
PMG	**Port Moresby**	**23.61**	**293**	P	**P**	**03 08 25.4**	**+0.4**
	comp=Z,566nm,1.6s,mb5.7						
RPZ	**Rata Peaks**	**23.81**	**176**	P	**P**	**03 08 27.4**	**+0.8**
	comp=Z,155nm,0.6s,mb5.6,baz=342,slow=4.3,SNR=49						
RPZ				PcP	PcP	03 12 07.9	-1.2
	comp=Z,14nm,0.6s,baz=2.5,slow=3.8,SNR=3.3						
RPZ	**Rata Peaks**	**23.81**	**176**	*e*P	**P**	**03 08 26.8**	**+0.2**
	comp=Z,359nm,1.0s,mb5.8						
MQZ	**McQueen's Vall**	**23.93**	**174**	PN	**P**	**03 08 27.0**	**-0.7**
JCZ	**Jackson Bay**	**24.11**	**181**	PN	**P**	**03 08 29.9**	**+0.6**
LBZ	**Lake Benmore**	**24.44**	**178**	PN	**P**	**03 08 31.4**	**-0.9**
WKZ	**Wanaka**	**24.86**	**180**	PN	**P**	**03 08 36.1**	**0.0**
ODZ	**Otahua Downs**	**25.11**	**177**	*e*P	**P**	**03 08 37.8**	**-0.7**
	comp=Z,817nm,1.0s,mb6.2						
ODZ	**Otahua Downs**	**25.11**	**177**	PN	**P**	**03 08 37.3**	**-1.1**
COEN	**Coen**	**25.47**	**279**	*e*P	**P**	**03 08 42.8**	**+0.9**
	comp=Z,5μm,1.4s,mb6.8						
COEN	**Coen**	**25.47**	**279**	P	**P**	**03 08 43.1**	**+1.2**
	comp=Z,1μm,1.4s,mb6.3						
DCZ	**Deep Cove**	**25.57**	**183**	PN	**P**	**03 08 42.6**	**+0.1**
TUZ	**Tuapeka**	**26.00**	**179**	PN	**P**	**03 08 45.3**	**-1.1**
STKA	**Stephens Creek**	**27.38**	**239**	P	**P**	**03 08 59.3**	**+0.2**
	comp=Z,106nm,0.7s,mb5.5,baz=64,slow=7.5,SNR=93						
STKA				pP	pP	03 09 10.7	+0.1
	comp=Z,90nm,0.9s,baz=62,slow=9.5,SNR=9.4						
STKA				PcP	PcP	03 12 16.8	-0.6
	comp=Z,24nm,0.7s,baz=323,slow=1.4,SNR=3.0						
STKA				ScP	ScP	03 15 55.9	+1.3
	comp=Z,8.7nm,1.1s,baz=90,slow=3.0,SNR=3.6						
STKA				LR	LR	03 19 28.7	
	comp=Z,29μm,20.0s,MS5.8,baz=63,slow=36						
STKA				P3KPbc		03 41 30.7	
	comp=Z,4.3nm,0.9s,baz=285,slow=4.8,SNR=5.7						
STKA	**Stephens Creek**	**27.38**	**239**	*e*P	**P**	**03 08 59.2**	**+0.2**
	comp=Z,27nm,0.8s,mb4.8						
RAR	**Rarotonga**	**29.16**	**98**	LR	LR	03 18 41.0	
	comp=Z,9μm,21.9s,MS5.3,baz=260,slow=32						
RAR	**Rarotonga**	**29.16**	**98**	PFAKE		03 09 30.0	+15
RAR				LR	LR		
	comp=Z,18μm,22.0s,MS5.6						
BBOO	**Buckleboo**	**32.13**	**240**	*e*P	**P**	**03 09 40.3**	**-0.8**
	comp=Z,238nm,0.8s,mb6.1						
WB2	**Warramunga Arr**	**32.62**	**264**	P	**P**	**03 09 48.0**	**+2.3**
WRA	**Warramunga Arr**	**32.64**	**264**	P	**P**	**03 09 44.2**	**-1.5**
	comp=Z,74nm,0.9s,mb5.6,baz=93,slow=9.0,SNR=152						
WRA				pP	pP	03 09 55.9	-1.5
	comp=Z,92nm,1.0s,baz=92,slow=8.4,SNR=16						
WRA				PcP	PcP	03 12 30.4	-0.8
	comp=Z,23nm,0.9s,baz=92,slow=3.1,SNR=6.3						
WRA				pPcP		03 12 44.1	
	comp=Z,29nm,1.1s,baz=86,slow=2.7,SNR=5.2						
WRA				S	**S**	**03 14 55.9**	**-3.1**
	baz=104,slow=16						
WRA				ScP	ScP	03 16 12.2	+0.4
	comp=Z,17nm,1.1s,baz=99,slow=3.7,SNR=6.2						
WRA				PKiKP	PKiKP	03 19 55.9	-2.4
	comp=Z,0.8nm,0.6s,baz=17,slow=0.4,SNR=5.6						
WRA				LR	LR	03 22 43.5	
	comp=Z,25μm,20.4s,MS5.9,baz=90,slow=36						
WRA				P3KPbc		03 41 07.7	
	comp=Z,1.4nm,0.8s,baz=300,slow=3.0,SNR=7.5						
WRA	**Warramunga Arr**	**32.64**	**264**	P	**P**	**03 09 44.2**	**-1.5**
WRA				*PP	pP	03 09 55.9	-1.5
WRA						03 12 30.4	
WRA				S	**S**	**03 14 55.9**	**-3.0**
WRA				pmax	pmax		
	comp=Z,74nm,0.9s						
WRA				MLR	MLR		
	comp=Z,25μm,20.4s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**32.64**	**264**	P	**P**	**03 09 44.2**	**-1.5**
WRA				pP	pP	03 09 55.9	-1.5
WRA				PcP	PcP	03 12 30.4	-0.8
WRA				pPcP		03 12 44.1	
WRA				S	**S**	**03 14 55.9**	**-3.1**
WRA				ScP	ScP	03 16 12.2	+0.4
ASAR	**Alice Springs**	**32.84**	**257**	P	**P**	**03 09 46.5**	**-0.9**
	comp=Z,273nm,0.8s,mb6.2,baz=82,slow=9.1,SNR=939						
ASAR				pP	pP	03 09 57.9	-1.3
	comp=Z,235nm,0.9s,baz=83,slow=8.2,SNR=12						
ASAR				PcP	PcP	03 12 30.8	-0.9
	comp=Z,22nm,0.8s,baz=100,slow=2.5,SNR=4.8						
ASAR				pPcP		03 12 44.3	
	comp=Z,29nm,1.0s,baz=101,slow=3.3,SNR=5.1						
ASAR				S	**S**	**03 15 00.6**	**-1.4**
	comp=Z,19nm,1.1s,baz=91,slow=17,SNR=6.4						
ASAR				ScP	ScP	03 16 13.3	+0.9
	comp=Z,9.3nm,1.0s,baz=97,slow=3.9,SNR=6.0						
ASAR				P3KPbc		03 41 06.4	
	comp=Z,2.0nm,0.8s,baz=270,slow=3.9,SNR=15						
ASAR	**Alice Springs**	**32.84**	**257**	P	**P**	**03 09 46.5**	**-0.9**
ASAR				*PP	pP	03 09 57.9	-1.2
ASAR						03 12 30.8	
ASAR				S	**S**	**03 15 00.6**	**-1.4**
ASAR				pmax	pmax		
	comp=Z,273nm,0.8s						
ASAR				smax			
	comp=N,19nm,1.1s						
ASAR	**Alice Springs**	**32.84**	**257**	P	**P**	**03 09 46.5**	**-0.9**
ASAR				pP	pP	03 09 57.9	-1.3
ASAR				PcP	PcP	03 12 30.8	-0.9
ASAR				pPcP		03 12 44.3	
ASAR				S	**S**	**03 15 00.6**	**-1.4**
ASAR				ScP	ScP	03 16 13.3	+0.9
ASAR				*e*		03 41 06.4	
KAKA	**Kakadu**	**35.83**	**276**	*e*P	**P**	**03 10 12.7**	**-0.8**
	comp=N,51nm,0.8s,mb5.5						
KAKA				*e*S	**S**	**03 15 47.8**	**-0.6**
KAKA	**Kakadu**	**35.83**	**276**	*e*P	**P**	**03 10 12.8**	**-0.7**
	comp=N,176nm,0.8s,mb6.0						
KAKA				*e*ScP	ScP	03 16 23.7	+0.5
BAKI	**Biak**	**37.23**	**296**	P	**P**	**03 10 25.9**	**+0.5**
	comp=N,5μmcomp=N,366nm,1.2s,mb6.1						
TLE	**Tual**	**38.06**	**287**	P	**P**	**03 10 33.3**	**+0.8**
TLE	**Tual**	**38.06**	**287**	P	**P**	**03 10 32.8**	**+0.3**
	comp=N,7μmcomp=N,277nm,1.1s,mb5.9						
FORT	**Forrest**	**38.44**	**245**	⇑*i*P	**P**	**03 10 34.5**	**-1.0**
	comp=N,172nm,1.0s,mb5.7						
KNA	**Kununurra**	**38.54**	**269**	P	**P**	**03 10 35.9**	**-0.6**
	comp=N,4μmcomp=N,588nm,0.9s,mb6.3						
TBI	**Tubuai**	**38.60**	**103**	*e*P	**P**	**03 10 36.3**	**-0.6**
	comp=N,582nm,1.3s,mb6.1						
WAKE	**Wake Island**	**39.01**	**356**	PFAKE		03 10 50.0	+10
WAKE				LR	LR		
	comp=Z,9μm,20.0s,MS5.6						
PAE	**Paea**	**39.13**	**94**	*e*P	**P**	**03 10 41.2**	**-0.2**
	comp=Z,18nm,0.8s,mb4.8						
PAE	**Paea**	**39.13**	**94**	*e*P	**P**	**03 10 41.2**	**-0.2**
PAE				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
PPT	**Papeete**	**39.15**	**94**	*e*P	**P**	**03 10 41.5**	**0.0**
	comp=Z,200nm,1.4s,mb5.7						
PPT				*e*S	**S**	**03 16 38.0**	**-0.7**
	comp=Z,9μm,28.8s						
PPT				*e*LQ		03 19 35.7	
	comp=Z,30μm,33.5s						
PPT				*e*LR	LR	03 21 15.3	
	comp=Z,42μm,27.2s,baz=258						
PPT	**Papeete**	**39.15**	**94**	P	**P**	**03 10 41.6**	**0.0**
	comp=Z,120nm,0.8s,mb5.7,baz=204,slow=4.1,SNR=8.5						
PPT				LR	LR	03 23 06.8	
	comp=Z,8μm,20.9s,MS5.5,baz=264,slow=30						
TIAR	**Tiarei**	**39.37**	**94**	*e*P	**P**	**03 10 43.0**	**-0.3**
	comp=Z,389nm,0.9s,mb6.1						
XMAS	**Kiritimati**	**39.42**	**60**	*e*P	**P**	**03 10 44.4**	**+0.6**
	comp=Z,186nm,0.9s,mb5.8						
XMAS				LR	LR		
	comp=Z,13μm,21.0s,MS5.7						
MEH	**Mehetia**	**40.51**	**94**	*e*P	**P**	**03 10 52.4**	**-0.5**
	comp=Z,319nm,1.0s,mb5.9						
GUMO	**Guam**	**40.93**	**322**	P	**P**	**03 10 56.0**	**-0.2**
	comp=Z,52nm,0.6s,mb5.4,baz=178,slow=14,SNR=8.8						
GUMO				LR	LR	03 26 08.3	
	comp=Z,8μm,20.9s,MS5.6,baz=323,slow=34						
GUMO	**Guam**	**40.93**	**322**	*e*P	**P**	**03 10 56.3**	**+0.1**
GUMO				pmax	pmax		
	comp=Z,477nm,1.6s,mb5.9						
GUMO				MLR	MLR		
	comp=Z,11μm,22.0s,MS5.7						
GUMO	**Guam**	**40.93**	**322**	*e*P	**P**	**03 10 56.3**	**+0.1**
	comp=Z,477nm,1.6s,mb5.9						
GUMO				LR	LR		
	comp=Z,11μm,22.0s,MS5.7						
FITZ	**Fitzroy Crossi**	**41.04**	**265**	P	**P**	**03 10 56.9**	**-0.3**
	comp=Z,175nm,1.0s,mb5.7,baz=112,slow=8.1,SNR=199						
FITZ				S	**S**	**03 17 06.2**	**-0.7**
	comp=Z,8.6nm,1.1s,baz=308,slow=19,SNR=3.2						
FITZ				LR	LR	03 28 10.6	
	comp=Z,20μm,19.3s,MS6.0,baz=91,slow=36						
FITZ	**Fitzroy Crossi**	**41.04**	**265**	*e*P	**P**	**03 10 56.1**	**-1.1**
	comp=Z,435nm,1.1s,mb6.0						
FITZ				*e*S	**S**	**03 17 05.9**	**-1.1**
FITZ	**Fitzroy Crossi**	**41.04**	**265**	*e*P	**P**	**03 10 57.4**	**+0.2**
	comp=Z,14nm,1.2s,mb4.5						
FITZ				*e*	pP	03 11 10.2	+1.1
BNDI	**Bandanaira**	**41.09**	**287**	P	**P**	**03 10 56.9**	**-0.8**
	comp=Z,8μmcomp=Z,508nm,1.8s,mb5.9						
PMOR	**Pomariorio Ree**	**41.24**	**90**	*e*P	**P**	**03 10 59.1**	**+0.2**
	comp=Z,365nm,1.1s,mb5.9						
JOHN	**Johnston Islan**	**42.02**	**31**	PFAKE		03 11 20.0	+15
JOHN				LR	LR		
	comp=Z,8μm,21.0s,MS5.6						
NLAI	**Namlea**	**44.16**	**287**	P	**P**	**03 11 23.5**	**+0.9**
	comp=Z,5μmcomp=Z,318nm,1.7s,mb5.8						
LBMI	**Labuha**	**44.96**	**290**	P	**P**	**03 11 30.9**	**+1.9**
	comp=Z,6μmcomp=Z,312nm,1.4s,mb6.0						
TNTI	**Ternate**	**45.75**	**292**	P	**P**	**03 11 33.9**	**-1.3**
	comp=Z,6μmcomp=Z,243nm,1.4s,mb6.0						
MBWA	**Marble Bar**	**46.09**	**259**	*e*P	**P**	**03 11 36.1**	**-1.7**
	comp=Z,234nm,1.0s,mb6.1						
MBWA				LR	LR		
	comp=Z,34μm,20.0s,MS6.3						
MBWA	**Marble Bar**	**46.09**	**259**	P	**P**	**03 11 39.0**	**+1.2**
	SNR=24						
MMRI	**Maumere**	**46.62**	**277**	P	**P**	**03 11 42.5**	**+0.4**
MMRI	**Maumere**	**46.62**	**277**	P	**P**	**03 11 41.9**	**-0.2**
	comp=Z,5μmcomp=Z,300nm,1.1s,mb6.1						
KLBR	**Kellerberrin**	**47.31**	**245**	*e*P	**P**	**03 11 45.6**	**-1.6**
	comp=Z,764nm,1.4s,mb6.4						
KLBR				*e*S	**S**	**03 18 35.4**	**-2.5**
BBSI	**Bau Bau**	**47.41**	**281**	P	**P**	**03 11 48.3**	**+0.1**
	comp=Z,6μmcomp=Z,253nm,1.4s,mb6.0						
NWAO	**Narrogin (SRO)**	**47.79**	**243**	P	**P**	**03 11 49.8**	**-1.2**
	comp=

KIP **Kipapa** 52.17 40 *e*P P 03 12 22.9 -1.3
KIP **Kipapa** 52.17 40 PFAKE 03 12 40.0 +16
KIP LR LR
comp=Z,8μm,20.0s,MS5.8
MTNI **Mataram** 52.30 274 P P 03 12 26.1 +0.7
comp=Z,244nm,1.2s,mb6.0
POHA **Pohakuloa** 52.48 43 PFAKE 03 12 40.0 +13
POHA LR LR
comp=Z,7μm,19.0s,MS5.7
KHKI **Kahang-Kahang** 52.91 275 P P 03 12 30.1 +0.1
comp=Z,4μmcomp=Z,266nm,1.6s,mb5.9
TBP **Tagbilaran** 53.35 299 *e*P P 03 12 34.1 +1.0
SRBI **Singaraja** 53.37 275 P P 03 12 34.3 +0.9
comp=Z,4μmcomp=Z,309nm,1.2s,mb6.1
CBIJ **Chichi jima** 53.49 330 S S 03 20 00.2 -3.6
baz=270,slow=19
CBIJ LR LR 03 33 48.9
comp=Z,7μm,20.7s,MS5.7,baz=347,slow=34
JAGI **Jajag, Banyuwa** 54.25 274 P P 03 12 39.3 -0.4
comp=Z,4μmcomp=Z,340nm,1.2s,mb6.2
KMMI **Kalianget** 54.88 275 P P 03 12 45.7 +1.4
comp=Z,4μmcomp=Z,253nm,1.2s,mb6.1
GMJI **Gumukmas** 54.97 274 P P 03 12 45.3 +0.3
comp=Z,3μmcomp=Z,195nm,1.4s,mb6.0
MYLDM **Lahad Datu** 55.62 291 P P 03 12 50.2 +0.6
TSM **Tawau** 55.76 290 P P 03 12 51.8 +1.2
PTCN **Pitcairn Islan** 56.04 107 PFAKE 03 13 00.0 +7.5
PTCN LR LR
comp=Z,9μm,20.0s,MS5.8
PWJI **Pagerwojo** 56.59 273 P P 03 12 57.0 +0.4
comp=Z,3μmcomp=Z,183nm,1.3s,mb5.9
PLKI **Palangkaraya** 56.60 281 P P 03 12 57.8 +1.1
comp=Z,503nm,1.2s,mb6.4
SJI **Sawahan** 56.72 274 P P 03 12 58.6 +1.1
comp=Z,254nm,1.4s,mb6.1
SDKM **Sandakan** 56.98 291 P P 03 12 59.9 +0.6
NGJI **Ngawi** 57.12 274 P P 03 13 02.6 +2.2
comp=Z,8μmcomp=Z,197nm,1.6s,mb5.9
PCJI **Pacitan** 57.13 273 P P 03 13 01.4 +1.0
comp=Z,481nm,1.2s,mb6.4
UGM **Wanagama** 57.83 273 P P 03 13 06.6 +1.2
comp=Z,481nm,1.2s,mb6.4
SBA **Scott Base** 58.01 181 *e*P P 03 13 05.8 +0.1
SBA pmax pmax
comp=Z,580nm,1.1s,mb6.5
SBA MLR MLR
comp=Z,6μm,19.0s,MS5.8
SBA **Scott Base** 58.01 181 *e*P P 03 13 05.8 +0.2
comp=Z,580nm,1.1s,mb6.5
SBA LR LR
comp=Z,6μm,19.0s,MS5.8
KKM **Kota Kinabalu** 58.03 291 P P 03 13 07.9 +1.2
KKM **Kota Kinabalu** 58.03 291 *e*P P 03 13 07.1 +0.4
comp=Z,492nm,1.4s,mb6.3
KKM LR LR
comp=Z,3μm,20.0s,MS5.4
YOGI **Yogyakarta** 58.07 273 P P 03 13 08.1 +1.0
comp=Z,1μm,1.1s,mb6.8
TGY **Tagaytay City** 58.18 302 LR LR 03 34 03.2
comp=Z,16nm,21.0s,baz=121,slow=32
SMRI **Semarang** 58.18 274 P P 03 13 09.5 +1.6
comp=Z,6μmcomp=Z,302nm,2.0s,mb6.0
BJII **Banjamegara** 58.78 273 P P 03 13 13.4 +1.4
comp=Z,4μmcomp=Z,204nm,1.6s,mb5.9
CASY **Casey** 59.47 204⇑ *i*P P 03 13 14.3 -1.6
CASY **Casey** 59.47 204 *e*P P 03 13 14.7 -1.3
comp=Z,266nm,1.2s,mb6.2
CASY LR LR
comp=Z,4μm,19.0s,MS5.6
STKI **Sintang** 59.75 282 P P 03 13 20.4 +1.6
comp=Z,258nm,1.2s,mb6.1
BCPH **Baguio City Da** 59.76 304⇓ *i*P P 03 13 17.3 -1.3
SBUM **Sibu** 60.03 285 P P 03 13 21.9 +1.3
JCJI **Jatiwangi** 60.40 274 P P 03 13 24.2 +1.0
comp=Z,8μmcomp=Z,660nm,1.0s,mb6.6
CISI **Cisompet, Garu** 60.49 273 P P 03 13 24.2 +0.4
comp=Z,427nm,1.1s,mb6.4
LEM **Lembang** 60.91 273 P P 03 13 27.3 +0.7
comp=Z,8μmcomp=Z,796nm,1.0s,mb6.8
JOW **Kunigami** 61.02 318 *e*P P 03 13 27.6 +0.5
comp=Z,183nm,1.8s,mb5.9
KSM **Kuching** 61.38 283 P P 03 13 31.2 +1.3
KSM **Kuching** 61.38 283 *e*P P 03 13 29.8 -0.1
comp=Z,300nm,1.3s,mb6.3
CBJI **Citeko** 61.76 273 P P 03 13 32.4 0.0
comp=Z,1μm,1.0s,mb7.0
DBJI **Dramaga** 61.81 273 P P 03 13 33.5 +0.8
comp=Z,962nm,1.1s,mb6.8
SKJI **Sukabumi** 61.84 273 P P 03 13 32.7 -0.3
comp=Z,7μmcomp=Z,533nm,0.9s,mb6.7
TNG **Tangerang** 62.03 274 P P 03 13 35.0 +0.8
comp=Z,2μm,1.5s,mb7.0
TPI **Tanjungpandan** 62.25 278 P P 03 13 37.0 +1.3
comp=Z,2μmcomp=Z,66nm,1.6s,mb5.5
SBJI **Serang** 62.53 273 P P 03 13 38.3 +0.7
comp=Z,951nm,1.3s,mb6.8
RBSI **Rajabasa** 62.98 274 P P 03 13 40.4 -0.2
comp=Z,7μmcomp=Z,648nm,1.2s,mb6.6
TWG **Pinlang** 63.23 310 *e*P P 03 13 41.5 -0.5
comp=Z,23nm,0.7s,mb5.4
MJAR **Matsushiro Arr** 63.26 332 P P 03 13 41.1 -0.8
comp=Z,34nm,0.6s,mb5.7,baz=174,slow=7.8,SNR=93
MJAR LR LR 03 37 18.6
comp=Z,2μm,21.2s,MS5.3,baz=150,slow=32
MJAR PKP2ab 03 42 53.4
comp=Z,5.0nm,0.3s,baz=289,slow=3.4,SNR=8.3
MAJO **Matsushiro** 63.26 332 *e*P P 03 13 41.6 -0.3
MAJO pmax pmax
comp=Z,176nm,1.3s,mb6.0
MAJO MLR MLR
comp=Z,4μm,21.0s,MS5.5
MAJO **Matsushiro** 63.26 332 *e*P P 03 13 41.6 -0.3
comp=Z,176nm,1.3s,mb6.0
MAJO LR LR
comp=Z,4μm,21.0s,MS5.5
MAT **Matsushiro** 63.26 332 P P 03 13 40.8 -1.1
MAT S S 03 22 06.0 -4.7
YULB **Yu-li** 63.42 310 *e*P P 03 13 42.8 -0.5
comp=Z,152nm,1.2s,mb6.0
BLSI **Bandar Lampung** 63.61 274 P P 03 13 44.9 +0.2
comp=Z,364nm,1.0s,mb6.4
NACB **Ninganchiao** 63.70 311 *e*P P 03 13 44.5 -0.6
comp=Z,445nm,1.1s,mb6.4
TPUB **Ta-pu** 63.85 310 *e*P P 03 13 44.8 -1.2
comp=Z,533nm,1.1s,mb6.5
PPBI **Pangkal Pinang** 63.88 278 P P 03 13 47.4 +0.9
comp=Z,112nm,1.6s,mb5.6
SSLB **Suanglung** 63.92 311 *e*P P 03 13 46.1 -0.4
comp=Z,291nm,1.2s,mb6.2
JNU **Nakatsue** 64.11 325 *e*P P 03 13 48.3 +0.7
comp=Z,36nm,0.9s,mb5.4
KLI **Kotabumi** 64.14 274 P P 03 13 47.4 -0.9
comp=Z,207nm,1.4s,mb6.0
YHNB **Yeheng** 64.17 312 *e*P P 03 13 48.3 +0.2
comp=Z,512nm,1.1s,mb6.5
KASI **Kota Agung** 64.26 273 P P 03 13 48.1 -0.9
comp=Z,5μmcomp=Z,557nm,1.0s,mb6.5
TATO **Taipei** 64.29 312 *e*P P 03 13 48.5 -0.4
comp=Z,625nm,1.1s,mb6.5
TATO LR LR
comp=Z,6μm,20.0s,MS5.8
TATO **Taipei** 64.29 312 P P 03 13 50.0 +1.1
SNR=9.5
KLSI **64.32 274** P P 03 13 48.1 -1.3
comp=Z,4μmcomp=Z,221nm,1.3s,mb6.0
LWLI **Liwa** 64.84 274 P P 03 13 52.5 -0.3
comp=Z,529nm,1.2s,mb6.4
MDSI **Maura Dua** 64.90 274 P P 03 13 52.7 -0.5
comp=Z,4μmcomp=Z,276nm,1.6s,mb6.0
MNAI **Manna** 66.09 274 P P 03 14 01.6 +0.7
comp=Z,775nm,1.1s,mb6.7
ERM **Erimo** 66.10 339*d* *i*P P 03 14 00.3 0.0
ERM pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
ERM **Erimo** 66.10 339 *e*P P 03 13 56.4 -3.9
comp=Z,71nm,1.3s,mb5.5
ERM LR LR
comp=Z,11μm,22.0s,MS6.0
QZH **Quanzhou** 66.32 310⇑ *i*P P 03 14 01.1 -1.0
QZH pP pP 03 14 14.0 -0.7
QZH S S 03 22 49.1 +0.2
QZH ScS ScS 03 23 55.7 +0.2
QZH pmax pmax
comp=Z,480nm,1.6s,mb6.3
QZH pmax pmax
comp=Z,4μm,4.4s
QZH LR LR
comp=N,5μm,20.3s,MS5.9
QZH LR LR
comp=E,6μm,22.2s,MS5.9
QZH LR LR
comp=Z,9μm,19.7s,MS6.0
MIR **Mirnyy** 66.38 205⇑ *i*P P 03 14 01.0 -0.9
MIR *e*S S 03 22 41.0 -7.4
MIR *e*PS 03 23 06.0
MIR *e*SS SS 03 27 05.0 0.0
MIR pmax pmax
comp=Z,735nm,1.8s,mb6.4
MIR pmax pmax
comp=N,500nm,5.0s
MIR pmax pmax
comp=Z,3μm,5.0s
MIR pmax pmax
comp=E,1μm,4.0s
MIR smax
comp=E,1μm,7.0s
MIR smax
comp=N,2μm,7.0s
KSI **Kapahiang** 66.67 275 P P 03 14 04.5 -0.1
comp=N,352nm,1.2s,mb6.3
YUK **Yuzh-Kuril'sk** 67.08 342⇑ *i*P P 03 13 58.1 -8.4
YUK *i* 03 16 39.2
YUK *i* PPP 03 18 17.6
YUK *i* S S 03 23 04.6 +7.3
YUK *i* SS SS 03 27 13.0 -4.4
YUK pmax pmax
comp=N,279nm,1.4s
YUK pmax pmax
comp=Z,366nm,1.4s,mb6.2
YUK pmax pmax
comp=E,230nm,1.4s
YUK smax
comp=N,1μm,6.8s
YUK smax
comp=E,1μm,6.8s
YUK MLR MLR
comp=E,1μm,21.1s
YUK MLR MLR
comp=Z,4μm,21.1s,MS5.5
MYKOM **Kota Tinggi** 67.45 281 P P 03 14 11.1 +1.6
KGM **Kluang** 68.03 281 P P 03 14 14.4 +1.2
HKC **Hong Kong Obse** 68.08 305⇑ *e*P P 03 14 12.0 -1.3
ASAJ **Asahikawa** 68.16 340 S S 03 23 09.7 -0.6
baz=60,slow=20
ASAJ **Asahikawa** 68.16 340 *e*P P 03 14 14.1 +0.8
comp=Z,115nm,1.1s,mb5.8
KRJI **Kerinci** 68.27 276 P P 03 14 15.3 +0.6
comp=Z,465nm,1.1s,mb6.4
SSE **Sheshan** 68.45 317 P P 03 14 15.8 +0.4
SSE S S 03 23 14.1 -0.1
SSE ScS ScS 03 24 08.6 -3.2
SSE SS SS 03 27 36.7 -2.3
SSE pmax pmax
comp=Z,74nm,1.7s,mb5.4
SSE pmax pmax
comp=Z,1μm,7.1s
SSE LR LR
comp=N,3μm,36.2s,MS5.4
SSE LR LR
comp=E,3μm,36.2s,MS5.4
SSE LR LR
comp=Z,4μm,24.1s
KSRS **Korea Array** 68.96 326 P P 03 14 18.5 0.0
comp=Z,10nm,1.0s,baz=146,slow=6.5,SNR=32
KSRS LR LR 03 41 18.6
comp=Z,2μm,21.6s,baz=242,slow=33
KSRS PKP2bc 03 42 27.2
comp=Z,6.6nm,1.0s,baz=325,slow=3.3,SNR=12
GZH **Guangzhou** 69.15 305 P P 03 14 20.2 +0.2
GZH S S 03 23 20.4 -2.4
GZH LR LR
comp=N,2μm,14.3s
GZH LR LR
comp=E,4μm,23.1s
COCO **West Island** 69.42 264 PFAKE 03 14 30.0 +8.1
COCO LR LR
comp=Z,8μm,20.0s,MS6.0
KTGM **Kuala Trenggan** 69.47 284 P P 03 14 24.1 +1.8
BKNI **Bangkinang** 69.52 278 P P 03 14 23.2 +0.7
comp=Z,544nm,1.4s,mb6.3
PDSI **Padang** 69.62 277 P P 03 14 22.1 -1.0
comp=Z,176nm,1.2s,mb5.9
INCN **Inchon** 69.67 325 *e*P P 03 14 23.5 +0.7
comp=Z,129nm,1.0s,mb5.8
INCN LR LR
comp=Z,3μm,20.0s,MS5.5
INCN **Inchon** 69.67 325 P P 03 14 24.3 +1.4
SNR=16
QIZ **Qiongzhong** 69.78 300 P P 03 14 24.2 +0.3
QIZ pP pP 03 14 33.7 -2.9
QIZ sP sP 03 14 38.3 -3.2
QIZ S S 03 23 33.8 +3.5
QIZ sS sS 03 23 49.8 -1.6
QIZ pmax pmax
comp=Z,48nm,1.4s,mb5.2
QIZ LR LR
comp=E,2μm,33.8s
QIZ LR LR
comp=Z,4μm,29.2s,MS5.5
QIZ **Qiongzhong** 69.78 300 *e*P P 03 14 24.9 +1.0
comp=Z,94nm,1.4s,mb5.5
QIZ LR LR
comp=Z,3μm,20.0s,MS5.5
PPI **Padang Panjang** 69.84 277 P P 03 14 23.9 -0.6
comp=Z,78nm,1.4s,mb5.4
FRIM **Kepong** 70.05 281 P P 03 14 26.4 +0.6
QSPA **South Pole Qui** 70.16 180 P P 03 14 24.9 -0.4
comp=Z,405nm,1.0s,mb6.3,baz=15,slow=2.3,SNR=293
QSPA pP pP 03 14 38.2 +0.2
comp=Z,162nm,1.0s,baz=355,slow=8.3,SNR=4.2
QSPA S S 03 23 33.7 +0.6
baz=102,slow=19
QSPA PKP2bc 03 42 23.1
comp=Z,12nm,1.1s,baz=199,slow=1.8,SNR=8.9
QSPA LR LR 03 43 48.1
comp=Z,6μm,18.0s,MS5.9,baz=32,slow=35
QSPA **South Pole Qui** 70.16 180 *e*P P 03 14 24.6 -0.7
comp=Z,386nm,0.9s,mb6.3
QSPA LR LR
comp=Z,5μm,20.0s,MS5.8
NJ2 **Nanjing** 70.58 316 *e*P P 03 14 28.9 +0.3
NJ2 PP PP 03 17 06.2 +0.7
NJ2 S S 03 23 33.0 -6.2
NJ2 pmax pmax
comp=Z,150nm,1.1s,mb5.8
NJ2 pmax pmax
comp=Z,2μm,5.8s
NJ2 LR LR
comp=N,3μm,16.0s,MS5.7
NJ2 LR LR
comp=E,2μm,17.1s,MS5.7
NJ2 LR LR
comp=Z,4μm,17.6s,MS5.7
YSS **Yuzh-Sakhalins** 70.65 341*j* *i*P P 03 14 29.5 +0.9
YSS *e* pP 03 14 42.0 +0.7
YSS *e*S S 03 23 38.0 -1.4
YSS *e*PPS 03 24 18.0
YSS pmax pmax
comp=Z,230nm,1.0s,mb6.1
YSS pmax pmax
comp=Z,2μm,6.0s
YSS **Yuzh-Sakhalins** 70.65 341 *e*P P 03 14 30.5 +1.9
comp=Z,302nm,1.1s,mb6.1
YSS LR LR
comp=Z,2μm,20.0s,MS5.3
SISI **Saibi** 70.76 276 P P 03 14 31.2 +1.1
comp=Z,222nm,1.4s,mb5.9
MNSI **Mandailing Nat** 71.05 278 P P 03 14 32.0 +0.1
comp=Z,171nm,2.1s,mb5.6
IPM **Ipoh** 71.08 282 P P 03 14 33.2 +1.2
IPM **Ipoh** 71.08 282 *e*P P 03 14 31.9 -0.1
comp=Z,222nm,1.3s,mb5.9
IPM **Ipoh** 71.08 282 P P 03 14 32.6 +0.6
comp=Z,164nm,1.4s,mb5.8
SKR **Severo-Kuril's** 71.19 351⇓ *i*P P 03 14 32.0 +0.2
SKR *e* pP 03 14 46.0 +1.5
SKR *e* 03 14 50.4
SKR *e*PPP 03 18 54.0
SKR *e*S S 03 23 46.0 +0.5
SKR *e*PS 03 24 24.0
SKR *e*SS SS 03 28 24.0 +3.5
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
SKR pmax pmax
comp=N,1μm,4.0s
SKR pmax pmax
comp=E,2μm,4.0s
SKR smax
comp=N,2μm,10.0s
SKR smax
comp=E,1μm,10.0s
SKR MLR MLR
comp=N,2μm,18.0s
SKR MLR MLR
comp=Z,2μm,18.0s,MS5.5
AMKA **Amchitka** 71.53 7 *e*P P 03 14 34.3 +0.5
comp=Z,60nm,1.0s,mb5.5
KULM **Kulim** 71.73 283 P P 03 14 37.3 +1.4
KULM **Kulim** 71.73 283 *e*P P 03 14 36.0 0.0
comp=Z,224nm,1.4s,mb5.9
KULM LR LR
comp=Z,6μm,22.0s,MS5.8
UBT **Ubonrachathani** 72.01 294 P P 03 14 36.3 -1.2
SMY **Shemya** 72.44 3 *e*P P 03 14 39.9 +0.6
SMY pmax pmax
comp=Z,722nm,1.4s,mb6.4
SMY MLR MLR
comp=Z,9μm,20.0s,MS6.0
SMY **Shemya** 72.44 3 *e*P P 03 14 39.9 +0.6
comp=Z,722nm,1.4s,mb6.4
SMY LR LR
comp=Z,9μm,20.0s,MS6.0
ADK **Adak** 72.54 9 PFAKE 03 14 50.0 +10
ADK LR LR
comp=Z,8μm,22.0s,MS6.0
WHN **Wuhan** 72.68 312 P P 03 14 40.7 -0.6
WHN S S 03 24 03.0 -0.5
WHN pmax pmax
comp=Z,780nm,1.4s,mb6.5
WHN pmax pmax
comp=Z,4μm,3.9s
WHN LR LR
comp=N,4μm,16.2s,MS5.9
WHN LR LR
comp=E,3μm,13.4s,MS5.9
WHN LR LR
comp=Z,14μm,22.2s
PET **Petropavlovsk** 73.17 353α *i*P P 03 14 43.5 -0.1
PET *e* 03 14 59.0
PET *e* 03 17 33.4
PET *e*PPP 03 19 18.2
PET *i*S S 03 24 07.3 -0.8
PET *e*SS sS 03 24 44.8 +15
PET *e*SPP 03 24 48.4
PET *e*SS SS 03 28 49.9 -0.9
PET *e*SSS 03 32 06.2
PET pmax pmax
comp=Z,2μm,6.4s
PET pmax pmax
comp=Z,215nm,0.6s,mb6.2
PET pmax pmax
comp=Z,1μm,13.1s
PET pmax pmax
comp=Z,400nm,17.8s
PET **Petropavlovsk** 73.17 353 *e*P P 03 14 44.2 +0.6
comp=Z,138nm,0.6s,mb6.1
PET LR LR
comp=Z,7μm,21.0s,MS5.9
PETK **Petropavlovsk-** 73.36 353 P P 03 14 44.8 +0.1
comp=Z,88nm,0.6s,mb5.8,baz=131,slow=6.1,SNR=81
PETK LR LR 03 41 49.3
comp=Z,6μm,20.8s,MS5.9,baz=158,slow=32
DL2 **Dalian** 73.45 323⇑ *i*P P 03 14 45.7 +0.1
DL2 S S 03 24 13.2 +1.3
DL2 SS SS 03 28 56.9 +1.3
DL2 pmax pmax
comp=Z,100nm,1.7s,mb5.5
DL2 pmax pmax
comp=Z,1μm,5.7s
DL2 LR LR
comp=E,2μm,23.1s
DL2 LR LR
comp=Z,4μm,25.7s,MS5.5
MDJ **Mudanjiang** 73.63 332 P P 03 14 47.4 +0.9
MDJ pP pP 03 14 56.9 -2.3
MDJ sP sP 03 15 00.1 -4.0
MDJ PcP PcP 03 15 03.5 +1.3
MDJ PP PP 03 17 34.9 +3.5
MDJ S S 03 24 10.4 -3.3
MDJ ScS ScS 03 24 53.0 +0.8
MDJ SS SS 03 28 57.2 -0.9
MDJ pmax pmax
comp=Z,120nm,1.4s,mb5.6
MDJ pmax pmax
comp=Z,1μm,6.1s
MDJ LR LR
comp=N,2μm,27.4s,MS5.5
MDJ LR LR
comp=E,2μm,24.3s,MS5.5
MDJ LR LR
comp=Z,4μm,28.4s,MS5.5
MDJ **Mudanjiang** 73.63 332 *e*P P 03 14 46.6 +0.1
comp=Z,202nm,1.3s,mb5.9
MDJ LR LR
comp=Z,4μm,22.0s,MS5.7
RPN **Rapa Nui** 73.96 113 P P 03 14 50.4 +1.4
comp=Z,82nm,0.8s,mb5.7,baz=186,slow=6.1,SNR=3.6
RPN **Rapa Nui** 73.96 113 P P 03 14 50.4 +1.4
RPN LR LR
comp=Z,6μm,21.0s,MS5.9
TIA **Tai'an** 74.34 319 ⇑P P 03 14 41.1 -10
TIA S S 03 24 19.8 -2.2
TIA SS SS 03 28 57.1 -12
TIA pmax pmax
comp=Z,150nm,1.5s,mb5.7
TIA pmax pmax
comp=Z,2μm,7.8s
TIA LR LR
comp=N,3μm,20.1s,MS5.7
TIA LR LR
comp=E,3μm,21.1s,MS5.7
TIA LR LR
comp=Z,5μm,19.6s,MS5.8
SNY **Shenyang** 74.45 326 ⇑P P 03 14 50.9 -0.5
SNY S S 03 24 19.5 -3.5
SNY SS SS 03 29 08.5 -2.1
SNY LR LR
comp=N,1μm,21.0s,MS5.5
SNY LR LR
comp=E,2μm,22.8s,MS5.5
SNY LR LR
comp=Z,2μm,21.9s,MS5.4
HABR **Khabarovsk** 74.55 337*c* *e*P P 03 14 51.8 0.0
HABR *e* pP 03 15 03.9 -0.6
HABR *e*PP pP 03 15 09.8 +5.3
HABR *e* 03 17 34.0
HABR PPP 03 19 19.4
HABR S S 03 24 19.8 -4.0
HABR *e* 03 24 50.7
HABR *e*SSS 03 32 23.9
HABR pmax pmax
comp=Z,2μm,2.9s,mb6.4
HABR pmax pmax
comp=Z,320nm,1.7s,mb6.0
HABR pmax pmax
comp=N,45nm,0.9s
HABR pmax pmax
comp=E,66nm,1.0s
HABR MLR MLR
comp=Z,2μm,19.0s,MS5.4
CN2 **Changchun** 74.94 329 *e*P P 03 14 52.8 -1.4
CN2 *e*sP sP 03 15 07.2 -4.6
CN2 *e*PP PP 03 17 43.7 +1.1
CN2 *e*S S 03 24 28.7 +0.3
CN2 *e*SS SS 03 29 21.1 +3.0
CN2 pmax pmax
comp=Z,200nm,1.2s,mb5.9
CN2 pmax pmax
comp=Z,2μm,8.0s
CN2 LR LR
comp=N,2μm,24.0s,MS5.5
CN2 LR LR
comp=E,2μm,24.0s,MS5.5
CN2 LR LR
comp=Z,3μm,25.0s,MS5.5
NIKO **Nikolski** 75.04 14 *e*P P 03 14 53.1 -1.4
comp=Z,670nm,1.1s,mb6.5
ENH **Enshi** 75.98 310 *e*P P 03 15 00.1 -0.3
comp=Z,418nm,1.3s,mb6.2

ENH LR LR
comp=Z,5µm,21.0s,MS5.8
GYA Guiyang 76.08 305⇓*i*P P 03 15 02.5 +1.4
GYA pP pP 03 15 14.0 +0.1
GYA PP PP 03 17 55.0 +2.5
GYA S S 03 24 40.8 -0.9
GYA SKS 03 25 06.2
GYA ScS ScS 03 25 11.1 -1.6
GYA pmax pmax
comp=Z,200nm,1.0s,mb6.0
GYA pmax pmax
comp=Z,1µm,7.5s
GYA LR LR
comp=N,1µm,21.3s,MS5.5
GYA LR LR
comp=E,3µm,23.2s,MS5.5
GYA LR LR
comp=Z,4µm,24.8s,MS5.7
UNV Unalaska Valle 76.39 15 *e*P P 03 15 01.1 -1.1
comp=Z,294nm,1.2s,mb6.1
KLR Kul'dur 76.41 336⇓*i*P P 03 14 58.2 -4.2
KLR *e* pP 03 15 11.2 -4.0
KLR *e*S S 03 24 41.5 -2.9
KLR *e* 03 25 09.5
KLR pmax pmax
comp=Z,2µm,8.5s
KLR smax
comp=N,1µm,9.5s
KLR smax
comp=E,1µm,9.5s
NST Nakhon Sawan 76.42 292 P P 03 15 05.0 +1.7
AKUT Akutan 76.83 15 *e*P P 03 15 02.7 -2.0
comp=E,399nm,1.6s,mb6.1
AKUT LR LR
comp=Z,6µm,23.0s,MS5.9
BJT Baijiatuau 77.34 321 *e*P P 03 15 08.3 +0.4
BJT pmax pmax
comp=Z,66nm,0.8s
BJT MLR MLR
comp=Z,3µm,19.0s
BJT Baijiatuau 77.34 321 *e*P P 03 15 08.3 +0.3
comp=Z,66nm,0.8s,mb5.6
BJT LR LR
comp=Z,3µm,19.0s,MS5.6
BJI Beijing 77.35 321 P P 03 15 08.0 0.0
BJI pP pP 03 15 19.3 -1.5
BJI sP sP 03 15 23.6 -2.1
BJI PP PP 03 18 04.4 +1.4
BJI S S 03 24 53.7 -1.4
BJI pmax pmax
comp=Z,120nm,1.2s,mb5.7
BJI pmax pmax
comp=Z,3µm,8.6s
BJI LR LR
comp=N,3µm,19.4s,MS5.6
BJI LR LR
comp=E,2µm,21.0s,MS5.6
BJI LR LR
comp=Z,5µm,37.0s
MAW Mawson 77.78 202 P P 03 15 10.0 0.0
comp=Z,104nm,0.9s,mb5.7,baz=113,slow=6.5,SNR=126
MAW pP pP 03 15 23.3 +0.5
comp=Z,88nm,1.0s,baz=102,slow=8.7,SNR=8.1
MAW LR LR 03 46 25.5
comp=Z,6µm,19.5s,MS6.0,baz=100,slow=33
MAW Mawson 77.78 202⇑*i*P P 03 15 09.9 -0.1
comp=Z,84nm,0.9s,mb5.7
MAW *e*S S 03 24 02.1 -57
BDT Bhumibol Dam 78.07 293 P P 03 15 13.0 +0.5
comp=Z,22nm,1.0s,mb5.0
TIY Taiyuan 78.22 317 *e*P P 03 15 13.3 +0.5
TIY pP pP 03 15 23.8 -1.9
TIY S S 03 25 06.3 +1.8
TIY pmax pmax
comp=Z,270nm,1.4s,mb6.0
TIY pmax pmax
comp=Z,2µm,4.2s
TIY LR LR
comp=N,3µm,17.8s,MS5.7
TIY LR LR
comp=E,3µm,20.4s,MS5.7
TIY LR LR
comp=Z,4µm,20.5s,MS5.7
XAN Xi'an 78.45 313 P P 03 15 14.6 +0.4
XAN pP pP 03 15 27.1 +0.1
XAN SS SS 03 30 08.3 -3.2
XAN pmax pmax
comp=Z,57nm,1.5s,mb5.3
XAN pmax pmax
comp=Z,540nm,9.5s
XAN LR LR
comp=N,4µm,22.6s,MS5.6
XAN LR LR
comp=E,1µm,25.3s,MS5.6
XAN LR LR
comp=Z,1µm,21.5s,MS5.3
KMI Kunming 78.50 302 ⇑P P 03 15 16.1 +1.4
KMI pP pP 03 15 27.7 +0.2
KMI sP sP 03 15 31.6 -0.8
KMI PP PP 03 18 15.0 +2.1
KMI S S 03 25 09.4 +1.3
KMI sS sS 03 25 28.0 -1.5
KMI SS SS 03 30 16.5 +3.9
KMI pmax pmax
comp=Z,190nm,1.5s,mb5.8
KMI pmax pmax
comp=Z,2µm,7.6s
KMI LR LR
comp=N,2µm,22.3s,MS5.6
KMI LR LR
comp=E,3µm,24.6s,MS5.6
KMI LR LR
comp=Z,4µm,28.5s,MS5.6
CHRT Chiangrai 78.54 296 ⇓P P 03 15 16.0 +1.0
comp=Z,368nm,1.0s,mb6.3
CM31 Chiang Mai Arr 78.64 294 *e*P P 03 15 16.6 +1.0
comp=Z,106nm,1.2s,mb5.6
CM31 LR LR
comp=Z,2µm,20.0s,MS5.5
CMAR Chiang Mai Arr 78.64 294 P P 03 15 16.6 +0.9
comp=Z,20nm,0.8s,mb5.1,baz=128,slow=3.9,SNR=96
CMAR PKKPbc PKKPbc 03 34 09.9 -1.0
comp=Z,7.4nm,0.7s,baz=287,slow=3.9,SNR=21
CMAR PKPPKP 03 42 13.4
comp=Z,4.9nm,0.9s,baz=291,slow=3.5,SNR=9.6
CHG Chiang Mai 78.79 295 ⇑P P 03 15 17.1 +0.7
comp=Z,101nm,0.9s,mb5.8
CHTO Chiang Mai 78.79 295 *e*P P 03 15 17.2 +0.8
CHTO pmax pmax
comp=Z,205nm,1.5s,mb5.8
CHTO MLR MLR
comp=Z,2µm,20.0s,MS5.5
CHTO Chiang Mai 78.79 295 *e*P P 03 15 17.2 +0.8
comp=Z,205nm,1.5s,mb5.8
CHTO LR LR
comp=Z,2µm,20.0s,MS5.5
CHTO Chiang Mai 78.79 295 P P 03 15 17.4 +1.0
SNR=46
SDPT Sand Point 79.29 17 *e*P P 03 15 17.1 -1.2
comp=Z,335nm,1.3s,mb6.1
SDPT LR LR
comp=Z,4µm,21.0s,MS5.8
CD2 Chengdu 80.52 308⇑*i*P P 03 15 26.2 +0.6
CD2 pP pP 03 15 39.0 +0.6
CD2 PP PP 03 18 29.0 -0.6
CD2 S S 03 25 27.2 -2.1
CD2 SS SS 03 30 47.3 +4.6
CD2 pmax pmax
comp=Z,180nm,1.2s,mb5.9
CD2 pmax pmax
comp=Z,3µm,7.1s
CD2 LR LR
comp=N,4µm,20.2s,MS5.9
CD2 LR LR
comp=E,4µm,24.0s,MS5.9
CD2 LR LR
comp=Z,4µm,23.2s,MS5.7
HHC Hu-ho-hao-te 80.62 320⇑*i*P P 03 15 26.8 +0.9
HHC pP pP 03 15 37.2 -1.6
HHC sP sP 03 15 41.1 -2.5
HHC PP PP 03 18 34.3 +4.0
HHC S S 03 25 33.3 +3.4
HHC SKS 03 25 38.1
HHC sS sS 03 25 49.7 -1.7
HHC SS SS 03 30 49.5 +5.6
HHC pmax pmax
comp=Z,19nm,1.4s,mb4.8
HHC pmax pmax
comp=Z,980nm,5.5s
HHC LR LR
comp=N,6µm,18.6s,MS6.1
HHC LR LR
comp=E,6µm,19.6s,MS6.1
HHC LR LR
comp=Z,5µm,18.6s,MS5.9
CHGN Chignik 80.70 18 *e*P P 03 15 25.3 -0.6
BTO Baotou 81.43 319 *e*P P 03 15 29.9 -0.3
HIA Hailar 81.60 330 *e*P P 03 15 31.5 +0.6
HIA pmax pmax
comp=Z,141nm,1.4s
HIA MLR MLR
comp=Z,4µm,22.0s
HIA Hailar 81.60 330 *e*P P 03 15 31.5 +0.6
comp=Z,142nm,1.4s,mb5.7
HIA LR LR
comp=Z,4µm,22.0s,MS5.7
OHAK Old Harbor 83.02 20 *e*P P 03 15 37.2 -0.9
comp=Z,546nm,1.1s,mb6.5
OHAK LR LR
comp=Z,7µm,22.0s,MS6.0
LZH Lanzhou 83.06 312⇑*i*P P 03 15 40.3 +1.5
LZH pP pP 03 15 50.7 -1.0
LZH sP sP 03 15 55.5 -1.1
LZH PP PP 03 18 54.5 +4.0
LZH *e*S S 03 25 57.1 +1.9
LZH sS sS 03 26 14.7 -2.1
LZH pmax pmax
comp=Z,480nm,1.4s,mb6.3
LZH pmax pmax
comp=Z,1µm,5.6s
LZH LR LR
comp=N,470nm,12.1s
LZH LR LR
comp=E,2µm,18.6s
LZH LR LR
comp=Z,4µm,18.8s
SEY Seymchan 83.59 352*c* *i*P P 03 15 40.5 -0.4
KDAK Kodiak Island 83.69 20 P P 03 15 41.9 +0.3
comp=Z,177nm,1.0s,mb6.2,baz=198,slow=2.8,SNR=41
KDAK LR LR 03 45 45.9
comp=Z,6µm,21.6s,MS5.9,baz=222,slow=30
KDAK Kodiak Island 83.69 20 *i* P P 03 15 41.4 -0.1
KDAK Kodiak Island 83.69 20 *e*P P 03 15 41.6 +0.1
comp=Z,413nm,1.2s,mb6.4
KDAK LR LR
comp=Z,6µm,20.0s,MS6.0
SYO Syowa Base 84.27 196⇓*i*P P 03 15 41.6 -2.9
CLNS Chul'man 84.94 337 *e*P P 03 15 48.2 +0.3
CLNS *e* 03 15 53.3
CLNS *e**PP pP 03 16 00.7 -0.1
CLNS *e* 03 19 04.0
CLNS *e*PPP 03 20 56.8
CLNS *e*S S 03 26 07.3 -5.8
CLNS pmax pmax
comp=Z,179nm,1.1s,mb6.1
CLNS pmax pmax
comp=N,119nm,1.2s
CLNS pmax pmax
comp=E,35nm,1.2s
CLNS pmax pmax
comp=Z,12nm,1.1s,mb4.9
CLNS pmax pmax
comp=N,23nm,1.1s
CLNS pmax pmax
comp=E,14nm,1.1s
CLNS smax
comp=E,185nm,11.3s
CLNS smax
comp=N,638nm,15.5s
CLNS MLR MLR
comp=E,361nm,14.0s,MS5.2
CLNS MLR MLR
comp=Z,726nm,17.0s,MS5.1
CLNS MLR MLR
comp=N,737nm,18.0s,MS5.2
SVW2 Sparrevohn 85.56 16 *e*P P 03 15 50.8 -0.1
comp=N,304nm,1.4s,mb6.3
SVW2 LR LR
comp=Z,5µm,21.0s,MS5.9
RSO Redoubt South 85.82 18 *e*P P 03 15 51.9 -0.3
MCCM Marconi Confer 86.01 47 *e*P P 03 15 54.1 +0.4
comp=Z,234nm,1.3s,mb6.2
MCCM LR LR
comp=Z,4µm,21.0s,MS5.8
SAC San Andreas 86.06 48 *e*P P 03 15 54.4 +0.4
SAC pmax pmax
comp=Z,148nm,1.1s,mb6.1
SAC San Andreas 86.06 48 *e*P P 03 15 54.4 +0.4
comp=Z,148nm,1.1s,mb6.1
KCPM Cahto Peak 86.29 46 *e*P P 03 15 55.7 +0.7
comp=Z,320nm,1.2s,mb6.4
HOPS Hopland 86.29 46 *e*P P 03 15 55.2 +0.2
comp=Z,220nm,1.1s,mb6.3
HOPS LR LR
comp=Z,4µm,21.0s,MS5.8
PMSA Palmer Station 86.35 160 LR LR 03 47 52.2
comp=Z,5µm,21.5s,MS5.8,baz=236,slow=31
PMSA Palmer Station 86.35 160 *e*P P 03 15 54.2 -0.8
comp=Z,434nm,1.1s,mb6.6
PMSA LR LR
comp=Z,5µm,22.0s,MS5.9
SAO San Andreas Ge 86.36 49 *e*P P 03 15 56.3 +0.9
SAO pmax pmax
comp=Z,163nm,1.2s,mb6.1
SAO MLR MLR
comp=Z,6µm,21.0s,MS6.0
SAO San Andreas Ge 86.36 49 *e*P P 03 15 56.2 +0.8
comp=Z,163nm,1.2s,mb6.1
SAO LR LR
comp=Z,6µm,21.0s,MS6.0
CIT Chita 86.38 329 *e*P P 03 15 52.5 -2.7
CIT *e* pP 03 16 04.8 -3.3
CIT *e* 03 26 17.4
CIT pmax pmax
comp=Z,446nm,2.9s,mb6.2
KIPM Iron Peak 86.42 45 *e*P P 03 15 56.3 +0.7
comp=Z,475nm,1.3s,mb6.6
SEW Seward 86.53 19 *e*P P 03 15 55.8 +0.1
comp=Z,149nm,1.5s,mb6.0
SLKM Skilak Lake 86.61 19 *e*P P 03 15 54.8 -1.3
KHMM Horse Mountain 86.78 44 *e*P P 03 15 58.3 +0.9
comp=Z,250nm,1.0s,mb6.4
KRMB Red Mountain 86.98 44 *e*P P 03 15 59.1 +0.7
comp=Z,243nm,1.2s,mb6.3
TTA Tatalina 87.00 15 *e*P P 03 15 57.6 -0.3
RC01 Rabbit Creek A 87.22 19 *e*P P 03 15 58.1 -0.9
comp=Z,100nm,1.1s,mb6.0
ULN Ulaanbaatar 87.30 323 *e*P P 03 16 00.0 +0.2
ULN pmax pmax
comp=Z,388nm,1.4s,mb6.4
ULN MLR MLR
comp=Z,2µm,21.0s,MS5.6
ULN Ulaanbaatar 87.30 323 *e*P P 03 16 00.0 +0.3
comp=Z,388nm,1.4s,mb6.4
ULN LR LR
comp=Z,2µm,21.0s,MS5.6
ULN Ulaanbaatar 87.30 323 P P 03 16 00.4 +0.6
SNR=127
OSI Osito Adit 87.36 52 *e*P P 03 16 01.0 +0.6
comp=Z,86nm,1.1s,mb5.9
KEBM Edson Butte 87.38 42 *e*P P 03 16 00.0 -0.3
comp=Z,182nm,1.2s,mb6.2
WDC Whiskeytown Da 87.42 45 *e*P P 03 16 00.6 +0.1
WDC pmax pmax
comp=Z,236nm,1.2s,mb6.3
WDC MLR MLR
comp=Z,7µm,21.0s,MS6.0
WDC Whiskeytown Da 87.42 45 *e*P P 03 16 00.6 +0.1
comp=Z,236nm,1.2s,mb6.3
WDC LR LR
comp=Z,7µm,21.0s,MS6.0
YAK Yakutsk 87.45 343 *e*P P 03 15 59.1 -1.0
YAK *e**PP pP 03 16 12.7 -0.4
YAK *e* 03 19 32.2
YAK *e*S S 03 26 19.3 -18
YAK *e* 03 26 36.6
YAK *e*PS 03 27 51.0
YAK pmax pmax
comp=Z,154nm,1.3s,mb6.1
YAK pmax pmax
comp=N,40nm,1.3s
YAK pmax pmax
comp=E,36nm,1.6s
YAK pmax pmax
comp=N,82nm,1.6s
YAK pmax pmax
comp=Z,231nm,3.0s
YAK pmax pmax
comp=E,77nm,2.1s
YAK smax
comp=E,207nm,2.5s
YAK smax
comp=N,479nm,2.7s
YAK Yakutsk 87.45 343 *e*P P 03 15 59.9 -0.2
comp=N,143nm,1.0s,mb6.2
YAK LR LR
comp=Z,7µm,22.0s,MS6.0
GTA Gaotai 87.47 314 ⇑P P 03 16 01.3 +0.5
GTA SKS 03 26 18.9
GTA S S 03 26 31.6 -7.1
GTA SS SS 03 32 20.8 -4.4
GTA pmax pmax
comp=Z,120nm,2.0s,mb5.8
GTA pmax pmax
comp=Z,2µm,5.9s
GTA LR LR
comp=N,2µm,20.6s,MS5.7
GTA LR LR
comp=E,2µm,21.8s,MS5.7
GTA LR LR
comp=Z,2µm,22.8s,MS5.5
PASC Pasadena Art C 87.56 52 *e*P P 03 16 00.9 -0.5
comp=Z,372nm,1.0s,mb6.6
SONM Songino Array 87.66 323 P P 03 16 01.5 0.0
comp=Z,92nm,1.1s,mb5.9,baz=140,slow=4.0,SNR=252
SONM pP pP 03 16 14.9 +0.4
comp=Z,49nm,1.1s,baz=133,slow=4.9,SNR=7.0
SONM PKKPbc PKKPbc 03 33 49.6 -1.8
comp=Z,6.4nm,0.8s,baz=304,slow=2.5,SNR=12
SONM PKPPKP 03 41 55.1
comp=Z,2.8nm,0.8s,baz=245,slow=1.2,SNR=8.5
SONM LR LR 03 57 55.0
comp=Z,3µm,18.2s,MS5.7,baz=125,slow=37
SONM Songino Array 87.66 323 P P 03 16 01.5 0.0
SONM *PP pP 03 16 14.9 +0.4
SONM pmax pmax
comp=Z,92nm,1.1s
SONM MLR MLR
comp=Z,3µm,18.2s
MWC Mount Wilson 87.68 52 *e*P P 03 16 01.8 -0.1
MWC pmax pmax
comp=Z,249nm,1.4s,mb6.2
MWC Mount Wilson 87.68 52 *e*P P 03 16 01.8 -0.2
comp=Z,249nm,1.4s,mb6.2
CMB Columbia Colle 87.70 48 *e*P P 03 16 01.6 -0.3
CMB pmax pmax
comp=Z,157nm,1.2s,mb6.1
CMB MLR MLR
comp=Z,8µm,21.0s,MS6.1
CMB Columbia Colle 87.70 48 *e*P P 03 16 01.6 -0.4
comp=Z,157nm,1.2s,mb6.1
CMB LR LR
comp=Z,8µm,21.0s,MS6.1
BILL Bilibino 87.70 359*c* *i*P P 03 16 00.8 -0.4
BILL *e* 03 19 33.1
BILL pmax pmax
comp=Z,84nm,1.0s,mb5.9
BILL Bilibino 87.70 359 *e*P P 03 16 00.4 -0.8
comp=Z,114nm,1.1s,mb6.0
BILL LR LR
comp=Z,3µm,20.0s,MS5.7
PMR Palmer 87.79 19 *e*P P 03 16 01.2 -0.6
PMR pmax pmax
comp=Z,107nm,1.5s,mb5.8
PMR MLR MLR
comp=Z,6µm,19.0s,MS6.0
PMR Palmer 87.79 19 *e*P P 03 16 01.2 -0.6
comp=Z,106nm,1.5s,mb5.8
PMR LR LR
comp=Z,6µm,19.0s,MS6.0
YBH Yreka Blue Hor 87.87 44 P P 03 16 03.2 +0.6
comp=Z,156nm,1.1s,mb6.2,baz=184,slow=1.8,SNR=88
YBH pP pP 03 16 15.4 -0.3
comp=Z,88nm,1.2s,baz=197,slow=10,SNR=5.0
YBH Yreka Blue Hor 87.87 44 P P 03 16 03.2 +0.6
YBH *PP pP 03 16 15.4 -0.2
YBH pmax pmax
comp=Z,156nm,1.1s
YBH pmax pmax
comp=Z,88nm,1.2s
YBH Yreka Blue Hor 87.87 44 *e*P P 03 16 03.1 +0.5
comp=Z,278nm,1.3s,mb6.3
YBH LR LR
comp=Z,7µm,22.0s,MS6.0
PPLA Purkeypile 87.96 17 *e*P P 03 16 01.1 -1.4
comp=Z,47nm,1.3s,mb5.6
ISA Isabella 88.00 51 *e*P P 03 16 03.5 +0.1
ISA pmax pmax
comp=Z,189nm,1.2s,mb6.2
ISA Isabella 88.00 51 *e*P P 03 16 03.5 0.0
comp=Z,189nm,1.2s,mb6.2
BAR Barrett 88.06 54 *e*P P 03 16 03.8 0.0
comp=Z,90nm,1.5s,mb5.8
HUMO Hull Mountain 88.13 43 *e*P P 03 16 04.5 +0.7
comp=Z,187nm,1.1s,mb6.2
HUMO LR LR
comp=Z,9µm,22.0s,MS6.1
NVL N'lazarevskaya 88.19 187*c* *i*P P 03 16 02.8 -1.0
NVL *e**PP pP 03 16 15.3 -1.5
NVL *i* 03 21 26.1
NVL *i* S S 03 26 38.2 -6.5
NVL *e* 03 27 55.1
NVL pmax pmax
comp=Z,188nm,1.2s,mb6.2
MAIT Maitri 88.20 187 *e*P P 03 16 02.7 -1.1
SML Sawmill 88.20 19 *e*P P 03 16 02.5 -1.2
SML pmax pmax
comp=Z,27nm,1.3s,mb5.3
SML Sawmill 88.20 19 *e*P P 03 16 02.5 -1.3
comp=Z,27nm,1.3s,mb5.3
WAKR Walker 88.58 48 *e*P P 03 16 06.3 +0.3
comp=Z,306nm,1.4s,mb6.4
PFO Pinyon Flat Ob 88.62 54 *e*P P 03 16 06.3 -0.1
PFO *e* 03 19 35.9
PFO pmax pmax
comp=Z,148nm,1.4s,mb6.1
PFO MLR MLR
comp=Z,4µm,21.0s,MS5.9
PFO Pinyon Flat Ob 88.62 54 *e*P P 03 16 06.3 -0.1
comp=Z,148nm,1.4s,mb6.1
PFO *e*PP PP 03 19 35.9 +0.3
PFO LR LR
comp=Z,4µm,21.0s,MS5.9
WCN Washoe City 88.71 47 *e*P P 03 16 06.8 +0.1
WCN pmax pmax
comp=Z,91nm,1.3s,mb6.0
WCN Washoe City 88.71 47 *e*P P 03 16 06.8 +0.1
comp=Z,91nm,1.3s,mb6.0
COR Corvallis 88.88 41 *e*P P 03 16 07.8 +0.5
COR pmax pmax
comp=Z,223nm,1.3s,mb6.3
COR MLR MLR
comp=Z,5µm,22.0s,MS5.9
COR Corvallis 88.88 41 *e*P P 03 16 07.8 +0.4
comp=Z,223nm,1.3s,mb6.3
COR LR LR
comp=Z,5µm,22.0s,MS5.9
DAC Darwin (Calif) 88.91 51 PFAKE 03 16 20.0 +12
DAC LR LR
comp=Z,4µm,22.0s,MS5.8
HEBO Mount Hebo 88.91 41 *e*P P 03 16 08.4 +1.0
comp=Z,477nm,1.4s,mb6.6
TRF Thorofare Moun 88.92 17 *e*P P 03 16 05.7 -1.4
comp=Z,89nm,1.3s,mb5.9
GSC Goldstone 89.07 52 *e*P P 03 16 08.8 +0.3
GSC pmax pmax
comp=Z,178nm,1.5s,mb6.2
GSC Goldstone 89.07 52 *e*P P 03 16 08.8 +0.3
comp=Z,178nm,1.5s,mb6.2
VNA3 Neumayer Olymp 89.10 180 *e*P P 03 16 04.1 -4.0
VNA3 *e* pP 03 16 17.2 -3.9
PAHR Pah Rah Range 89.15 47 *e*P P 03 16 08.8 +0.1
comp=Z,304nm,1.3s,mb6.5
BPAW Bear Paw Mtn. 89.25 16 *e*P P 03 16 06.7 -1.9
comp=Z,18nm,1.1s,mb5.3
NVAR Mina Array Bea 89.34 49 P P 03 16 09.8 +0.1
comp=Z,54nm,0.8s,mb5.9,baz=227,slow=6.5,SNR=261
NVAR pP pP 03 16 22.7 0.0
comp=Z,30nm,1.0s,baz=217,slow=7.7,SNR=5.1
NVAR PKKPbc PKKPbc 03 33 46.9 +0.2

comp=Z,0.8nm,0.8s,baz=47,slow=2.6,SNR=5.0
NVAR PKPPKP 03 41 53.9
comp=Z,3.3nm,1.0s,baz=111,slow=2.7,SNR=12
NVAR Mina Array Bea 89.34 49 P **P 03 16 09.8 +0.1**
NVAR pP pP 03 16 22.7 0.0
NVAR PKKPbc PKKPbc 03 33 46.9 +0.2
NVAR P'P' 03 41 53.9
VNA2 Neumayer--Watz 89.39 181 *e*P **P 03 16 05.5 -3.9**
baz=174,slow=3.5
VNA2 *e* 03 16 06.9
VNA2 *e* pP 03 16 20.3 -2.1
MCK McKinley 89.52 17 *e*P **P 03 16 08.0 -1.9**
MCK pmax pmax
comp=Z,50nm,1.1s,mb5.8
MCK McKinley 89.52 17 *e*P **P 03 16 08.0 -1.9**
comp=Z,50nm,1.1s,mb5.8
MOD Modoc 89.53 45 *e*P **P 03 16 10.6 +0.2**
comp=Z,223nm,1.2s,mb6.4
MOD LR LR
comp=Z,4μm,20.0s,MS5.9
CRAG Craig 89.56 29 *e*P **P 03 16 10.7 +0.4**
comp=Z,189nm,1.8s,mb6.1
CRAG LR LR
comp=Z,4μm,20.0s,MS5.9
GLA Glamis 89.63 55 *e*P **P 03 16 11.7 +0.5**
GLA pmax pmax
comp=Z,244nm,1.4s,mb6.3
GLA Glamis 89.63 55 *e*P **P 03 16 11.7 +0.5**
comp=Z,244nm,1.4s,mb6.3
VNA1 Neumayer--Stat 89.68 181 *e*P **P 03 16 07.3 -3.5**
LSA Lhasa 89.75 302 P **P 03 16 12.0 +0.2**
LSA sP sP 03 16 23.9 -5.8
LSA LR LR
comp=N,1μm,33.2s,MS5.4
LSA LR LR
comp=E,2μm,32.0s,MS5.4
LSA LR LR
comp=Z,3μm,30.9s,MS5.6
LSA Lhasa 89.75 302 *e*P **P 03 16 12.4 +0.6**
LSA pmax pmax
comp=Z,107nm,1.3s,mb6.0
LSA MLR MLR
comp=Z,3μm,22.0s,MS5.6
LSA Lhasa 89.75 302 *e*P **P 03 16 12.4 +0.6**
comp=Z,107nm,1.3s,mb6.0
LSA LR LR
comp=Z,3μm,22.0s,MS5.6
BKCOR Black Crater 89.75 42 P **P 03 16 11.6 +0.2**
OOW Octopus West 89.92 38 P **P 03 16 13.0 +0.8**
NLWA Neilton Lookou 89.93 39 *e*P **P 03 16 12.6 +0.4**
comp=Z,223nm,1.2s,mb6.4
NLWA LR LR
comp=Z,4μm,20.0s,MS5.9
TPH Tonopah 89.95 49 PFAKE 03 16 20.0 +7.5
TPH LR LR
comp=Z,5μm,21.0s,MS5.9
BBB Bella Bella 90.10 33 P **P 03 16 12.8 0.0**
comp=Z,64nm,0.9s,mb5.9,baz=66,slow=4.9,SNR=18
LVP Lakeview Peak 90.16 40 P **P 03 16 13.4 +0.2**
LDFC Landfair 90.24 53 *e*P **P 03 16 14.3 +0.4**
comp=Z,406nm,1.4s,mb6.6
HOOD Mount Hood Mea 90.26 41 *e*P **P 03 16 14.2 +0.4**
comp=Z,314nm,1.4s,mb6.5
TDL Tradedollar La 90.41 40 P **P 03 16 14.9 +0.5**
MENT Mentasta 90.48 20 *e*P **P 03 16 13.6 -0.8**
WRAK Wrangell Islan 90.49 28 *e*P **P 03 16 14.0 -0.6**
comp=Z,165nm,1.1s,mb6.3
WRAK LR LR
comp=Z,5μm,21.0s,MS5.9
VIPM Ingram Point 90.53 42 P **P 03 16 15.1 0.0**
HDW Hoodsport 90.54 39 P **P 03 16 15.5 +0.5**
GNW Green Mountain 90.63 39 P **P 03 16 15.6 +0.1**
COLA College 90.70 17 *e*P **P 03 16 13.7 -1.7**
COLA pmax pmax
comp=Z,49nm,1.0s,mb5.8
COLA MLR MLR
comp=Z,4μm,20.0s,MS5.9
COLA College 90.70 17 *e*P **P 03 16 13.7 -1.7**
comp=Z,49nm,1.0s,mb5.8
COLA LR LR
comp=Z,4μm,20.0s,MS5.9
ZAK Zakamensk 90.74 324 *e*P **P 03 16 15.8 -0.1**
ZAK *e* 03 26 44.2
ZAK pmax pmax
comp=Z,68nm,1.4s,mb5.8
SHPR Sheep Range 90.79 51 *e*P **P 03 16 16.6 +0.1**
comp=Z,191nm,1.5s,mb6.2
PGC Sidney 90.80 38 *e*P **P 03 16 16.1 -0.1**
comp=Z,11nm,1.1s,mb5.1
LON Longmire 90.85 40 *e*P **P 03 16 16.0 -0.5**
LON pmax pmax
comp=Z,128nm,1.3s,mb6.1
LON Longmire 90.85 40 *e*P **P 03 16 16.0 -0.5**
comp=Z,128nm,1.3s,mb6.1
WVOR Wild Horse Val 90.88 45 *e*P **P 03 16 16.9 +0.2**
WVOR pmax pmax
comp=Z,197nm,1.3s,mb6.3
WVOR MLR MLR
comp=Z,4μm,20.0s,MS5.9
WVOR Wild Horse Val 90.88 45 *e*P **P 03 16 16.9 +0.1**
comp=Z,197nm,1.3s,mb6.3
WVOR LR LR
comp=Z,4μm,20.0s,MS5.9
DOT Dot Lake 90.89 19 *e*P **P 03 16 15.0 -1.3**
comp=Z,96nm,1.0s,mb6.1
ILAR Eielson Array 90.89 17 P **P 03 16 13.6 -2.7**
comp=Z,13nm,0.7s,mb5.4,baz=236,slow=5.2,SNR=132
ILAR PKiKP PKiKP 03 21 07.4 -2.2
comp=Z,0.9nm,0.7s,baz=280,slow=3.0,SNR=6.8
ILAR PKKPbc PKKPbc 03 33 42.0 -2.0
comp=Z,1.2nm,1.0s,baz=323,slow=1.2,SNR=4.3
ILAR LR LR 03 51 39.5
comp=Z,6μm,21.4s,MS6.0,baz=224,slow=32
PALK Pallekele 90.93 277 *i*P **P 03 16 19.9 +2.2**
PALK Pallekele 90.93 277 *e*P **P 03 16 18.7 +1.0**
comp=Z,75nm,1.2s,mb5.9
BMN Battle Mountai 90.96 47 *e*P **P 03 16 17.4 +0.2**
BMN pmax pmax
comp=Z,154nm,1.3s,mb6.2
BMN MLR MLR
comp=Z,3μm,22.0s,MS5.7
BMN Battle Mountai 90.96 47 *e*P **P 03 16 17.4 +0.2**
comp=Z,154nm,1.3s,mb6.2
BMN LR LR
comp=Z,3μm,22.0s,MS5.7
FMW Mount Fremont 91.02 40 P **P 03 16 17.4 +0.1**
SKAG Skagway 91.10 25 *e*P **P 03 16 17.6 +0.3**
comp=Z,251nm,1.4s,mb6.3
SKAG LR LR
comp=Z,4μm,19.0s,MS5.9
IRK Irkutsk 91.18 326 ↓↓*i*P **P 03 16 17.7 -0.2**
IRK *e* pP 03 16 29.7 -1.2
IRK pmax pmax
comp=Z,146nm,1.4s,mb6.1
RMW Rattlesnake Mo 91.19 39 P **P 03 16 18.2 +0.2**
TLY Talaya 91.21 325*c i*P **P 03 16 17.6 -0.5**
TLY *e* pP 03 16 30.9 -0.2
TLY *e* 03 26 46.3
TLY *e*S S 03 27 07.1 -5.9
TLY *e*PPS 03 28 25.4
TLY *e*SS SS 03 33 27.5 +8.6
TLY pmax pmax
comp=Z,141nm,1.5s,mb6.1
TLY MLR MLR
comp=Z,2μm,21.0s,MS5.5
TLY Talaya 91.21 325 *e*P **P 03 16 17.5 -0.5**
comp=Z,157nm,1.4s,mb6.2
TLY LR LR
comp=Z,2μm,19.0s,MS5.6
TLY Talaya 91.21 325 P **P 03 16 17.9 -0.2**
comp=Z,352nm,1.4s,mb6.5,SNR=20
TLY Talaya 91.21 325 P **P 03 16 18.1 +0.1**
SNR=36
JCW Jim Creek 91.46 39 *e*P **P 03 16 19.2 -0.1**
comp=Z,392nm,1.4s,mb6.5
TAPN Taplejung 91.67 298 *e*P **P 03 16 20.8 0.0**
comp=Z,240nm,1.3s,mb6.4
ODAN Odare 91.75 298 *e*P **P 03 16 21.2 0.0**
comp=Z,378nm,1.4s,mb6.5
COLD Coldfoot 91.94 15 *e*P **P 03 16 20.9 -0.1**
comp=Z,92nm,1.5s,mb5.9
COLD *e*PP PP 03 19 51.4 -10
RSW Rattlesnake Hi 92.04 41 *e*P **P 03 16 22.6 +0.6**
comp=Z,316nm,1.3s,mb6.5
VIS Vishakhapatnam 92.06 288 *i*P **P 03 16 21.1 -1.7**
VIS AMb AMB 03 16 25.4
comp=Z,109nm,1.5s,mb6.0
VIS *i*x x 03 19 24.2
HAWA Hanford 92.07 41 *e*P **P 03 16 22.1 -0.1**
comp=Z,265nm,1.3s,mb6.4
HAWA LR LR
comp=Z,4μm,19.0s,MS5.9
ETW Entiat 92.14 40 *e*P **P 03 16 22.6 +0.2**
comp=Z,370nm,1.6s,mb6.5
ETW *e*PP PP 03 20 01.7 -1.5
WTV Waterville 92.41 40 P **P 03 16 24.0 +0.3**
TUC Tucson 92.48 57 *e*P **P 03 16 24.8 +0.4**
TUC pmax pmax
comp=Z,69nm,1.1s,mb5.9
TUC Tucson 92.48 57 *e*P **P 03 16 24.8 +0.3**
comp=Z,69nm,1.1s,mb5.9
CCUT Cedar City 92.52 51 *e*P **P 03 16 24.9 +0.4**
comp=Z,91nm,1.4s,mb6.0
ARUT Antelope Range 92.56 51 *e*P **P 03 16 25.2 +0.5**
EGAK Eagle 92.59 19 *e*P **P 03 16 22.9 -1.2**
comp=Z,93nm,1.1s,mb6.1
EGAK LR LR
comp=Z,4μm,20.0s,MS5.9
LNOR Lincton Mounta 92.62 42 *e*P **P 03 16 24.5 -0.2**
LNOR pmax pmax
comp=Z,16nm,1.1s,mb5.4
LNOR Lincton Mounta 92.62 42 *e*P **P 03 16 24.5 -0.2**
comp=Z,16nm,1.1s,mb5.4
MOY Mondy 92.64 325 *e*P **P 03 16 24.7 +0.1**
MOY pmax pmax
comp=Z,294nm,2.8s,mb6.2
DAWY Dawson 92.65 20 *e*P **P 03 16 23.4 -1.0**
DLBC Dease Lake 92.69 27 P **P 03 16 24.6 -0.1**
comp=Z,109nm,1.2s,mb6.2,baz=228,slow=5.0,SNR=58
DLBC Dease Lake 92.69 27 *e*P **P 03 16 24.6 -0.1**
OD2 Odessa Site #2 93.02 40 *e*P **P 03 16 26.5 -0.1**
comp=Z,45nm,1.1s,mb5.8
WUAZ Wupatki 93.22 53 *e*P **P 03 16 28.1 +0.3**
comp=Z,110nm,1.4s,mb6.1
WUAZ LR LR
comp=Z,4μm,22.0s,MS5.8
GUN Gumba 93.38 298 *e*P **P 03 16 28.6 -0.1**
comp=Z,180nm,1.2s,mb6.4
PKI Pulchoki 93.66 298 *e*P **P 03 16 29.3 -0.7**
comp=Z,246nm,1.2s,mb6.5
PKIN Phulchoki 93.67 298 *e*P **P 03 16 29.4 -0.6**
comp=Z,58nm,0.8s,mb6.0
DGAR Diego Garcia 93.70 261 PFAKE 03 16 40.0 +9.5
DGAR LR LR
comp=Z,8μm,21.0s,MS6.1
MVU Marysvale 93.73 50 PFAKE 03 16 40.0 +10
MVU LR LR
comp=Z,4μm,20.0s,MS5.9
MSU Marysvale 93.76 50 *e*P **P 03 16 30.8 +0.6**
MSU pmax pmax
comp=Z,58nm,1.5s,mb5.8
MSU Marysvale 93.76 50 *e*P **P 03 16 30.8 +0.6**
comp=Z,58nm,1.5s,mb5.8
KKN Kakani 93.84 298 *e*P **P 03 16 30.5 -0.3**
comp=Z,266nm,1.4s,mb6.5
DMN Daman 93.92 298 *e*P **P 03 16 31.1 -0.1**
comp=Z,347nm,1.2s,mb6.7
DUG Dugway 93.94 49 *e*P **P 03 16 30.2 -0.8**
DUG pmax pmax
comp=Z,25nm,1.3s,mb5.5
DUG MLR MLR
comp=Z,6μm,20.0s,MS6.0
DUG Dugway 93.94 49 *e*P **P 03 16 30.2 -0.8**
comp=Z,25nm,1.3s,mb5.5
DUG LR LR
comp=Z,6μm,20.0s,MS6.0
BGU Big Grassy Mou 94.07 48 *e*P **P 03 16 31.1 -0.4**
comp=Z,19nm,1.2s,mb5.4
HLID Hailey 94.16 45 *e*P **P 03 16 31.6 -0.3**
comp=Z,35nm,1.3s,mb5.6
HLID LR LR
comp=Z,5μm,20.0s,MS6.0
NEW Newport 94.36 40 *e*P **P 03 16 32.0 -0.7**
NEW pmax pmax
comp=Z,19nm,1.0s
NEW MLR MLR
comp=Z,2μm,20.0s
NEW Newport 94.36 40 *e*P **P 03 16 32.0 -0.7**
comp=Z,19nm,1.0s,mb5.5
NEW LR LR
comp=Z,2μm,20.0s,MS5.6
NLU North Lily Min 94.38 49 *e*P **P 03 16 33.3 +0.3**
comp=Z,48nm,1.6s,mb5.7
GKN Gorkha 94.44 298 *e*P **P 03 16 32.7 -0.9**
comp=Z,247nm,1.4s,mb6.5
HVU Hansel Valley 94.58 47 *e*P **P 03 16 33.3 -0.5**
HVU *e* 03 20 19.8
HVU pmax pmax
comp=Z,27nm,0.9s,mb5.7
HVU Hansel Valley 94.58 47 *e*P **P 03 16 33.3 -0.5**
comp=Z,27nm,0.9s,mb5.7
HVU *e*PP PP 03 20 19.8 -2.7
NOQ North Oquirrh 94.61 48 *e*P **P 03 16 34.4 +0.4**
comp=Z,9.9nm,0.5s,mb5.5
SPUT South Promonto 94.63 48 *e*P **P 03 16 34.1 0.0**
comp=Z,7.3nm,0.6s,mb5.3
MPU Maple Canyon 94.71 49 *e*P **P 03 16 34.6 +0.1**
comp=Z,27nm,1.1s,mb5.6
TMUT Trail Mountain 94.75 50 *e*P **P 03 16 35.8 +1.1**
comp=Z,30nm,0.9s,mb5.7
TRD Trivandrum 94.83 277 *ex* P **03 16 31.2 -4.5**
DAU Daniels Canyon 95.13 49 *e*P **P 03 16 36.6 +0.2**
DAU *e* 03 20 21.7
DAU pmax pmax
comp=Z,40nm,1.4s,mb5.7
DAU Daniels Canyon 95.13 49 *e*P **P 03 16 36.5 +0.1**
comp=Z,40nm,1.4s,mb5.7
DAU *e*PP PP 03 20 21.7 -5.2
SRU San Rafael 95.18 50 *e*P **P 03 16 36.3 -0.4**
SRU pmax pmax
comp=Z,19nm,0.9s,mb5.5
SRU San Rafael 95.18 50 *e*P **P 03 16 36.2 -0.4**
comp=Z,19nm,0.9s,mb5.5
KOLN Koldanda 95.23 297 *e*P **P 03 16 36.1 -1.1**
comp=Z,58nm,0.9s,mb6.0
DANN Dangsing 95.29 298 *e*P **P 03 16 36.5 -0.9**
comp=Z,241nm,1.5s,mb6.4
TIXI Tiksi 95.35 348 *e*P **P 03 16 34.7 -2.0**
TIXI *e* 03 20 22.3
TIXI *e*S SKSac 03 27 03.0 -5.5
TIXI pmax pmax
comp=Z,17nm,1.2s,mb5.3
TIXI MLR MLR
comp=Z,2μm,18.0s,MS5.6
TIXI Tiksi 95.35 348 PFAKE 03 16 50.0 +13
TIXI LR LR
comp=Z,4μm,22.0s,MS5.8
HWUT Hardware Ranch 95.35 48 *e*P **P 03 16 36.3 -1.1**
comp=Z,11nm,0.8s,mb5.3
HWUT *e*PP PP 03 20 27.3 -1.2
HWUT LR LR
comp=Z,3μm,20.0s,MS5.8
BSMT Bassoo Peak 95.63 41 *e*P **P 03 16 37.8 -0.7**
comp=Z,9.2nm,0.8s,mb5.3
MCMT McKenzie Canyo 95.69 44 *e*P **P 03 16 38.7 -0.2**
comp=Z,16nm,1.4s,mb5.3
MSO Missoula 95.75 42 *e*P **P 03 16 38.2 -0.8**
comp=Z,4.5nm,0.9s,mb4.9
MSO LR LR
comp=Z,3μm,20.0s,MS5.7
JTMT Jette 95.90 41 *e*P **P 03 16 39.1 -0.6**
comp=Z,7.5nm,1.2s,mb5.0
SWMT Swartz Lake 95.98 42 *e*P **P 03 16 39.2 -0.9**
comp=Z,3.1nm,0.6s,mb4.9
MVCO Mesa Verde 96.00 53 PFAKE 03 16 50.0 +10
MVCO LR LR
comp=Z,4μm,22.0s,MS5.8
PV10 Paradox Valley 96.00 51 *e*P **P 03 16 40.4 0.0**
comp=Z,315nm,0.8s,mb6.8
DLMT Dillon 96.06 44 *e*P **P 03 16 40.1 -0.4**
comp=Z,45nm,1.2s,mb5.8
DLMT *e*PP PP 03 20 31.1 -2.8
LAZ Ladron 96.08 56 *e*P **P 03 16 41.1 +0.3**
comp=Z,8.8nm,1.4s,mb5.0
AHID Auburn Hatcher 96.10 47 PFAKE 03 16 50.0 +9.2
AHID LR LR
comp=Z,2μm,21.0s,MS5.5
PV04 Paradox Valley 96.11 52 *e*P **P 03 16 39.9 -1.0**
YBMT Yellow Bay 96.11 41 *e*P **P 03 16 40.3 -0.4**
comp=Z,7.7nm,1.1s,mb5.0
RRI2 Red Ridge 96.16 46 *e*P **P 03 16 40.8 -0.2**
comp=Z,32nm,1.1s,mb5.7
SLMT Seeley Lake 96.19 42 *e*P **P 03 16 40.2 -0.9**
comp=Z,6.0nm,1.0s,mb5.0
CHMT Chamberlain Mo 96.22 42 *e*P **P 03 16 39.9 -1.3**
comp=Z,5.9nm,1.0s,mb5.0
HYB Hyderabad 96.26 286 *i*P **P 03 16 42.0 -0.1**
PV01 Paradox Valley 96.26 52 *e*P **P 03 16 40.6 -1.0**
comp=Z,764nm,0.9s
LRM Limekiln Ridge 96.33 44 *e*P **P 03 16 41.6 -0.1**
comp=Z,90nm,1.2s,mb6.1
BNM Barren Site 96.39 56 *e*P **P 03 16 42.4 +0.1**
comp=Z,11nm,1.2s,mb5.2
TPAW Teton Pass 96.46 46 *e*P **P 03 16 42.2 -0.2**
comp=Z,32nm,1.4s,mb5.5
TPAW *e*PP PP 03 20 34.2 -2.8
REDW Red Top Meadow 96.49 46 *e*P **P 03 16 42.6 +0.1**
comp=Z,41nm,1.3s,mb5.7
REDW *e*PP PP 03 20 34.1 -3.2
MNTX Cornudas Mount 96.57 59 *e*P **P 03 16 42.4 -0.8**
comp=Z,13nm,1.1s,mb5.3
MNTX LR LR
comp=Z,2μm,20.0s,MS5.7
SNOW Snow King Moun 96.59 46 *e*P **P 03 16 43.2 +0.2**
comp=Z,46nm,1.4s,mb5.7
IMW Indian Meadow 96.62 46 *e*P **P 03 16 43.1 0.0**
comp=Z,45nm,1.4s,mb5.7
WALA Waterton Lakes 96.63 40 *e*P **P 03 16 42.5 -0.6**
comp=Z,0.9nm,1.4s
WALA *e*PP PP 03 20 36.4 -1.9
LOHW Long Hollow 96.74 46 *e*P **P 03 16 43.0 -0.6**
comp=Z,5.9nm,0.8s,mb5.1
LOHW *e*PP PP 03 20 36.8 -2.4
ANMO Albuquerque 96.79 55 P **P 03 16 43.7 -0.4**
comp=Z,12nm,1.1s,mb5.2,baz=221,slow=5.4,SNR=14
ANMO PP PP 03 20 43.9 +4.1
comp=Z,2.5nm,1.0s,baz=239,slow=7.6,SNR=3.7
ANMO Albuquerque 96.79 55 P **P 03 16 43.7 -0.4**
ANMO 03 20 43.9
ANMO pmax pmax
comp=Z,12nm,1.1s
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 96.79 55 *e*P **P 03 16 43.5 -0.6**
comp=Z,9.3nm,0.9s,mb5.2
ANMO LR LR
comp=Z,2μm,20.0s,MS5.6
BOZ Bozeman (W) 96.80 44 *e*P **P 03 16 43.0 -0.8**
BOZ pmax pmax
comp=Z,24nm,1.3s,mb5.5
BOZ MLR MLR
comp=Z,6μm,21.0s,MS6.0
BOZ Bozeman (W) 96.80 44 *e*P **P 03 16 43.0 -0.8**
comp=Z,24nm,1.3s,mb5.5
BOZ LR LR
comp=Z,6μm,21.0s,MS6.0
FLWY Flagg Ranch 96.85 46 *e*P **P 03 16 44.4 +0.2**
comp=Z,28nm,1.4s,mb5.5
YMR Madison River 96.88 45 *e*P **P 03 16 44.4 +0.1**
comp=Z,28nm,1.3s,mb5.5
YFT Old Faithful 96.89 45 *e*P **P 03 16 44.6 +0.3**
comp=Z,14nm,1.1s,mb5.3
HRY Holter Researc 97.05 43 *e*P **P 03 16 45.2 +0.2**
comp=Z,17nm,1.0s,mb5.4
BW06 Boulder Array 97.16 47 PFAKE 03 17 00.0 +14
BW06 LR LR
comp=Z,2μm,20.0s,MS5.6
PDAR Pinedale Array 97.16 47 P **P 03 16 44.8 -0.8**
comp=Z,3.3nm,0.6s,mb5.0,baz=204,slow=3.3,SNR=27
PDAR PP PP 03 20 41.6 -0.8
comp=Z,3.7nm,1.1s,baz=249,slow=6.2,SNR=4.7
PDAR PKiKP PKiKP 03 21 22.4 +1.3
comp=Z,1.0nm,0.6s,baz=208,slow=1.7,SNR=5.2
PDAR PKKPbc PKKPbc 03 33 25.1 -1.2
comp=Z,1.6nm,0.8s,baz=90,slow=4.4,SNR=9.0
PDAR PKPPKP 03 41 39.2
comp=Z,0.7nm,1.0s,baz=95,slow=6.3,SNR=5.9
PDAR LR LR 03 53 52.9
comp=Z,2μm,20.7s,MS5.5,baz=250,slow=31
PDAR Pinedale Array 97.16 47 P **P 03 16 44.8 -0.8**
PDAR PP PP 03 20 41.6 -0.8
TXAR Lajitas Array 97.20 62 P **P 03 16 46.4 +0.3**
comp=Z,6.4nm,0.8s,mb5.1,baz=224,slow=5.9,SNR=74
TXAR PKKP PKKPbc 03 33 24.9 -0.8
comp=Z,3.4nm,0.9s,baz=106,slow=2.7,SNR=5.0
TXAR LR LR 03 51 49.6
comp=Z,4μm,21.4s,MS5.9,baz=55,slow=30
INK Inuvik 97.21 18 P **P 03 16 44.0 -1.2**
comp=Z,38nm,1.1s,mb5.8,baz=226,slow=4.3,SNR=26
INK PKiKP PKiKP 03 21 18.5 -1.9
comp=Z,3.0nm,0.8s,baz=323,slow=4.3,SNR=5.7
INK Inuvik 97.21 18 *e*P **P 03 16 43.8 -1.3**
comp=Z,85nm,1.3s,mb6.0
LKWY Lake 97.22 45 PFAKE 03 17 00.0 +14
LKWY LR LR
comp=Z,5μm,21.0s,MS6.0
GCMT Greycliff 98.13 44 *e*P **P 03 16 50.1 +0.2**
comp=Z,11nm,1.2s,mb5.3
PLCA Paso Flores 98.14 139 P **P 03 16 49.3 -0.9**
comp=Z,8.9nm,0.8s,mb5.3,baz=229,slow=4.9,SNR=19
PLCA PKKPbc PKKPbc 03 33 22.2 -0.9
comp=Z,4.2nm,1.1s,baz=33,slow=5.1,SNR=3.4
PLCA PKPPKP 03 41 37.5
comp=Z,2.7nm,1.0s,baz=207,slow=3.3,SNR=3.8
PLCA LR LR 03 51 15.4
comp=Z,2μm,21.9s,MS5.6,baz=230,slow=29
PLCA Paso Flores 98.14 139 *e*P **P 03 16 49.0 -1.3**
comp=Z,44nm,1.5s,mb5.8
PLCA LR LR
comp=Z,3μm,22.0s,MS5.7
RLMT Red Lodge 98.17 45 *e*P **P 03 16 50.2 +0.1**
comp=Z,11nm,1.1s,mb5.3
RLMT LR LR
comp=Z,7μm,21.0s,MS6.2
SDCO Great Sand Dun 98.42 53 *e*P **P 03 16 49.7 -1.7**
comp=Z,2.8nm,0.9s,mb4.8
SDCO *e*PP PP 03 20 49.9 -2.4
SDCO LR LR
comp=Z,2μm,21.0s,MS5.7
EGMT Eagleton 98.84 42 PFAKE 03 17 00.0 +7.0
EGMT LR LR
comp=Z,3μm,20.0s,MS5.7
ISCO Idaho Springs 98.99 51 PFAKE 03 17 00.0 +6.1
ISCO LR LR
comp=Z,2μm,20.0s,MS5.6
BHPL Bhopal 99.08 291 *e*PKP **P 03 16 53.8 -0.9**
JOSI Joshimath 99.46 299 *e*PKP **P 03 16 55.7 -0.6**
JOSI AMb AMB 03 16 59.5
comp=Z,406nm,1.2s,mb6.8
PAYG Puerto Ayora 99.76 94 PFAKE 03 17 10.0 +13
PAYG LR LR
comp=Z,3μm,21.0s,MS5.8
AGRA Agra 99.83 295 *e*PKP Pdif 03 16 56.6 -0.9
AMTX Amarillo 100.50 57 PFAKE 03 17 10.0 +10
AMTX LR LR
comp=Z,2μm,20.0s,MS5.7
LAO LASA Array 100.68 44 PFAKE 03 17 10.0 +8.7
LAO LR LR
comp=Z,6μm,21.0s,MS6.0
JCT Junction City 100.75 61 PFAKE 03 17 10.0 +8.5
JCT LR LR
comp=Z,4μm,21.0s,MS5.9
KLP Kalpa 100.82 300 *e*PKP Pdif 03 17 01.1 -0.8
SONA Sohna 100.85 296 *e*PKP Pdif 03 17 02.0 0.0
SONA AMb AMB 03 17 03.8
comp=Z,38nm,0.9s
POO Poona 100.86 286 *e*PKP Pdif 03 17 00.8 -1.3
YKA Yellowknife Ar 101.31 27 P Pdif 03 17 03.3 -0.8
comp=Z,6.7nm,0.6s,baz=257,slow=4.6,SNR=26
YKA PP PP 03 21 11.9 -1.6
comp=Z,2.9nm,0.9s,baz=247,slow=7.4,SNR=4.1
YKA PKiKP PKiKP 03 21 26.7 -1.1
comp=Z,1.6nm,0.6s,baz=250,slow=1.6,SNR=7.3
YKA Yellowknife Ar 101.31 27 P Pdif 03 17 03.3 -0.8
YKA 03 21 11.9
YKA pmax pmax
comp=Z,7.0nm,0.6s
YKA pmax pmax
comp=Z,3.0nm,0.9s
YKA Yellowknife Ar 101.31 27 P Pdif 03 17 03.3 -0.8
YKA PP PP 03 21 11.9 -1.6
RSSD Black Hills 101.41 47 PFAKE 03 17 20.0 +16
RSSD LR LR
comp=Z,2μm,22.0s,MS5.7
KVTX Kingsville 101.52 65 PFAKE 03 17 20.0 +15
KVTX LR LR
comp=Z,3μm,20.0s,MS5.7
KKR Kurukshetra 101.56 298 *e*PKP Pdif 03 17 04.0 -1.1
KHET Khetri 101.89 296 *e*PKP Pdif 03 17 05.9 -0.8
KHET AML AML 03 17 09.3

comp=Z,30nm,1.1s
OGNE Ogallala 101.94 51 PFAKE 03 17 20.0 +13
OGNE LR LR
comp=Z,4μm,22.0s,MS5.9
MKAR Makanchi Array 102.10 315 P Pdif 03 17 07.3 -0.3
comp=Z,6.6nm,0.8s,baz=96,slow=6.2,SNR=21
MKAR PP PP 03 21 17.6 -2.3
comp=Z,9.1nm,1.1s,baz=107,slow=6.6,SNR=5.8
MKAR PKiKP PKiKP 03 21 29.7 0.0
comp=Z,5.6nm,0.8s,baz=108,slow=4.7,SNR=8.1
MKAR PKKPbc PKKPbc 03 33 09.6 -2.8
comp=Z,2.8nm,0.6s,baz=277,slow=4.0,SNR=12
MKAR PKPPKP 03 41 29.4
comp=Z,2.9nm,0.9s,baz=270,slow=2.4,SNR=11
MKAR Makanchi Array 102.10 315 P Pdif 03 17 07.3 -0.3
MKAR 03 21 17.6
MKAR pmax pmax
comp=Z,7.0nm,0.8s
MKAR pmax pmax
comp=Z,9.0nm,1.1s
MKAR Makanchi Array 102.10 315 P Pdif 03 17 07.3 -0.3
MKAR PP PP 03 21 17.6 -2.3
AJM Ajmer 102.44 294 *ex* x 03 17 05.1
DGMT Dagmar 102.51 43 PFAKE 03 17 20.0 +11
DGMT LR LR
comp=Z,3μm,20.0s,MS5.8
ZALV Zalesovo Beam 102.55 323 P Pdif 03 17 08.9 -0.6
comp=Z,5.0nm,0.8s,baz=112,slow=4.0,SNR=13
ZALV PKiKP PKiKP 03 21 30.6 +0.2
comp=Z,3.0nm,0.6s,baz=146,slow=3.0,SNR=4.9
ZALV PKKPbc PKKPbc 03 33 09.3 -2.1
comp=Z,1.6nm,0.7s,baz=315,slow=0.2,SNR=4.6
ZALV PKPPKP 03 41 21.2
comp=Z,1.3nm,0.4s,baz=308,slow=5.1,SNR=4.2
ZALV Zalesovo Beam 102.55 323 P Pdif 03 17 08.9 -0.7
ZALV *i* 03 21 30.6
ZALV pmax pmax
comp=Z,5.0nm,0.8s
ZALV pmax pmax
comp=Z,3.0nm,0.6s
WMOK Wichita Mounta 102.75 58 PFAKE 03 17 20.0 +10
WMOK LR LR
comp=Z,4μm,20.0s,MS5.9
CBKS Cedar Bluff 103.08 53 PFAKE 03 17 20.0 +8.1
CBKS LR LR
comp=Z,2μm,19.0s,MS5.7
NVS Novosibirsk 103.68 324 *e*P Pdif 03 17 11.9 -2.7
NVS *e* 03 27 45.0
NVS *e*S Sdif 03 28 57.8 -2.5
NVS pmax pmax
comp=Z,58nm,2.5s
NVS pmax pmax
comp=N,6.0nm,1.7s
NVS pmax pmax
comp=E,15nm,1.8s
HKT Hockley 103.91 63 PFAKE 03 17 30.0 +14
HKT LR LR
comp=Z,4μm,20.0s,MS6.0
LCO Las Campanas 104.57 129 PFAKE 03 17 30.0 +11
LCO LR LR
comp=Z,3μm,19.0s,MS5.8
CFAA Coronel Fontan 104.90 132 Pdiff Pdif 03 17 19.3 -0.7
comp=Z,1.0nm,0.8s,baz=259,slow=2.3,SNR=16
CFAA PKiKP PKiKP 03 21 34.4 -1.1
comp=Z,0.3nm,0.8s,baz=252,slow=4.3,SNR=4.6
CFAA PKKPbc PKKPbc 03 33 02.9 -0.5
comp=Z,0.1nm,0.8s,baz=24,slow=6.9,SNR=3.2
TRQA Tornquist 105.02 141 PFAKE 03 17 30.0 +9.4
TRQA LR LR
comp=Z,1μm,20.0s,MS5.4
NATX Nacogdoches 105.33 61 PFAKE 03 21 50.0 +14
NATX LR LR
comp=Z,4μm,21.0s,MS6.0
FFC Flin Flon 105.39 37 PFAKE 03 21 50.0 +14
FFC LR LR
comp=Z,5μm,21.0s,MS6.0
KURK Kurchatov 105.42 319 *e*PKPdf PKiKP 03 21 32.7 -3.0
KURK LR LR
comp=Z,3μm,22.0s,MS5.8
KURK Kurchatov 105.42 319 P Pdif 03 17 22.5 +0.1
SNR=7.4
NIL Nilore 105.45 301 PFAKE 03 21 50.0 +14
NIL LR LR
comp=Z,58nm,19.0s
KSU1 Kansas State U 105.51 54 PFAKE 03 21 50.0 +14
KSU1 LR LR
comp=Z,3μm,19.0s,MS5.9
TKM2 Tokmak 2 105.76 310 *e*PKPdf PKiKP 03 21 35.9 -0.7
TKM2 LR LR
comp=Z,2μm,22.0s,MS5.6
AAK Ala-Archa 106.49 310 PFAKE 03 21 50.0 +12
AAK LR LR
comp=Z,2μm,21.0s,MS5.6
ECSD EROS Data Cent 106.51 49 *e*PKPdf PKiKP 03 21 36.1 -1.9
ECSD LR LR
comp=Z,4μm,21.0s,MS5.9
MIAR Mount Ida 106.87 59 PFAKE 03 21 50.0 +11
MIAR LR LR
comp=Z,3μm,20.0s,MS5.8
AML Almayashu 106.97 309 *e*PKPdf PKiKP 03 21 39.3 +0.4
AML LR LR
comp=Z,3μm,22.0s,MS5.8
EKS2 Erkin-Say 107.02 310 PFAKE 03 21 50.0 +11
EKS2 LR LR
comp=Z,2μm,19.0s,MS5.7
TGUH Tegucigalpa,Un 107.28 81 PFAKE 03 21 50.0 +10
TGUH LR LR
comp=Z,4μm,21.0s,MS6.0
NNA Nana 107.80 110 PFAKE 03 21 50.0 +8.7
NNA LR LR
comp=Z,3μm,22.0s,MS5.8
AGMN Agassiz Nation 107.89 44 PFAKE 03 21 50.0 +10
AGMN LR LR
comp=Z,5μm,22.0s,MS6.0
TEIG Tepich 108.03 75 PFAKE 03 21 50.0 +8.5
TEIG LR LR
comp=Z,5μm,22.0s,MS6.0
ULM Lac du Bonnet 108.20 42 PKiKP PKiKP 03 21 38.7 -2.2
comp=Z,5.6nm,0.6s,baz=306,slow=2.3,SNR=6.7
ULM PKKPbc PKKPbc 03 32 52.3 -1.5
comp=Z,5.8nm,0.8s,baz=98,slow=2.9,SNR=5.5
ULM Lac du Bonnet 108.20 42 PKPdf PKiKP 03 21 38.7 -2.2
ULM PKKPbc PKKPbc 03 32 52.3 -1.5
JTS JuntasAbangare 108.34 85 PFAKE 03 21 50.0 +7.7
JTS LR LR
comp=Z,4μm,21.0s,MS6.0
VBMS Vicksburg 108.87 62 PFAKE 03 21 50.0 +7.3
VBMS LR LR
comp=Z,4μm,21.0s,MS6.0
CCM Cathedral Cave 109.41 56 PFAKE 03 21 50.0 +6.4
CCM LR LR
comp=Z,3μm,20.0s,MS5.8
KKAR Karatay Array 109.46 310 *e*PKPdf PKiKP 03 21 42.4 -1.1
CHM Chimkent 109.99 309 *e*PKPdf PKiKP 03 21 37.1 -7.5
OXF Oxford 110.23 60 PFAKE 03 22 00.0 +15
OXF LR LR
comp=Z,3μm,21.0s,MS5.8
VOSK Vostochnaya 110.44 320 PKIKP PKiKP 03 21 43.0 -2.0
VOSK pmax pmax
comp=Z,34nm,1.4s
RES Resolute Bay 110.63 16 PKiKP PKiKP 03 21 42.2 -2.6
comp=Z,8.9nm,0.8s,baz=206,slow=6.7,SNR=7.1
RES PKKPbc PKKPbc 03 32 44.9 -1.8
comp=Z,6.7nm,0.8s,baz=103,slow=2.8,SNR=4.4
RES Resolute Bay 110.63 16 *e*PKPdf PKiKP 03 21 42.7 -2.1
EYMN Ely 110.73 45 PFAKE 03 22 00.0 +14
EYMN LR LR
comp=Z,6μm,22.0s,MS6.1
BVAR Borovoye Array 110.83 320 PKiKP PKiKP 03 21 44.4 -1.4
comp=Z,5.3nm,0.4s,baz=160,slow=1.9,SNR=19
BVAR PKKPbc PKKPbc 03 32 42.3 -3.2
comp=Z,3.5nm,0.6s,baz=305,slow=5.2,SNR=15
BVAR Borovoye Array 110.83 320 *i* PKIKP PKiKP 03 21 44.4 -1.3
BVAR pmax pmax
comp=Z,5.0nm,0.4s
BRVK Borovoye 110.89 320 *c i* PKIKP PKiKP 03 21 44.6 -1.3
BRVK pmax pmax
comp=Z,29nm,1.2s
BRVK Borovoye 110.89 320 *e*PKPdf PKiKP 03 21 44.8 -1.0
BRVK LR LR
comp=Z,4μm,22.0s,MS5.9
BRVK Borovoye 110.89 320 PKiKP PKiKP 03 21 45.8 -0.1
SNR=8.8
SIUC Southern Illin 110.94 56 *e*PKPdf PKiKP 03 21 44.6 -1.8
JFWS Jewell Farm 110.94 51 PFAKE 03 22 00.0 +14
JFWS LR LR
comp=Z,5μm,21.0s,MS6.0
ABPO Ambohimpanom 111.12 239 PFAKE 03 22 00.0 +13
ABPO LR LR
comp=Z,8μm,22.0s,MS6.2
OTAV Otavalo 111.16 98 PFAKE 03 22 00.0 +12
OTAV LR LR
comp=Z,2μm,22.0s,MS5.7
HDIL Hopedale 111.31 53 PFAKE 03 22 00.0 +13
HDIL LR LR
comp=Z,3μm,19.0s,MS6.0
BRAL Brewton 111.53 64 PFAKE 03 22 00.0 +12
BRAL LR LR
comp=Z,3μm,20.0s,MS5.8
ZRNK Zerenda 111.65 320 PKIKP PKiKP 03 21 45.5 -1.8
ZRNK pmax pmax
comp=Z,41nm,1.3s
WVT Waverly 111.78 58 PFAKE 03 22 00.0 +12
WVT LR LR
comp=Z,2μm,21.0s,MS5.7
LRAL Lakeview Retre 111.94 62 PFAKE 03 22 00.0 +11
LRAL LR LR
comp=Z,3μm,20.0s,MS5.8
COWI Conover 112.12 47 *e*PKPdf PKiKP 03 21 46.3 -2.1
COWI LR LR
comp=Z,4μm,20.0s,MS6.0
BCIP Isla Barro Col 112.81 88 PFAKE 03 22 00.0 +9.3
BCIP LR LR
comp=Z,1μm,21.0s,MS5.5
LPAZ La Paz 113.27 118 Pdiff Pdif 03 18 00.8 +3.6
comp=Z,1.3nm,0.8s,baz=238,slow=4.6,SNR=5.3
LPAZ PKiKP PKiKP 03 21 50.9 -0.6
comp=Z,7.9nm,0.8s,baz=24,slow=2.0,SNR=18
LPAZ PKKPbc PKKPbc 03 32 37.4 +1.0
comp=Z,4.2nm,1.1s,baz=4.8,slow=1.4,SNR=4.3
LPAZ La Paz 113.27 118 P Pdif 03 18 00.8 +3.6
LPAZ *i* 03 21 50.9
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ La Paz 113.27 118 Pdif Pdif 03 18 00.8 +3.5
LPAZ *e*PKPdf PKiKP 03 21 50.9 -0.6
LPAZ LR LR
comp=Z,3μm,22.0s,MS5.8
WCI Wyandotte Cave 113.30 56 PFAKE 03 22 00.0 +9.1
WCI LR LR
comp=Z,2μm,21.0s,MS5.7
GOGA Godfrey 114.92 62 *e*PKIKP PKiKP 03 21 51.8 -2.4
GOGA MLR MLR
comp=Z,3μm,22.0s,MS5.9
TKL Tuckaleechee C 114.97 59 PKP PKiKP 03 21 52.1 -2.1
comp=Z,9.9nm,0.8s,baz=180,slow=3.9,SNR=19
TKL PKKPbc PKKPbc 03 32 31.5 +0.5
comp=Z,2.5nm,0.8s,baz=179,slow=4.8,SNR=4.2
TKL Tuckaleechee C 114.97 59 PKIKP PKiKP 03 21 52.1 -2.1
TKL 03 32 31.5
TKL pmax pmax
comp=Z,10.0nm,0.8s
TKL Tuckaleechee C 114.97 59 *e*PKPdf PKiKP 03 21 52.1 -2.1
GLMI Grayling 115.19 49 PFAKE 03 22 10.0 +16
GLMI LR LR
comp=Z,3μm,19.0s,MS6.0
CPUP Villa Florida 115.66 134 PKP PKPdf 03 21 54.1 -1.8
comp=Z,15nm,0.8s,baz=242,slow=1.6,SNR=32
CPUP PKKPbc PKKPbc 03 32 28.0 -0.5
comp=Z,1.2nm,0.7s,baz=18,slow=8.8,SNR=3.2
CPUP Villa Florida 115.66 134 PKP PKPdf 03 21 54.1 -1.8
CPUP PKKPbc PKKPbc 03 32 28.0 -0.5
CPUP LR LR
comp=Z,331nm,21.0s,MS4.9
AAM Ann Arbor 115.72 52 PFAKE 03 22 10.0 +15
AAM LR LR
comp=Z,3μm,20.0s,MS5.9
DWPF Disney 115.83 68 PFAKE 03 22 10.0 +14
DWPF LR LR
comp=Z,2μm,20.0s,MS5.8
ACSO Alum Creek Sta 116.07 54 *e*PKPdf PKPdf 03 21 54.2 -2.0
ACSO LR LR
comp=Z,3μm,20.0s,MS6.0
SMDO Samad 116.29 286 PKPdf PKPdf 03 21 57.2 0.0
SNR=9.5
SVE Sverdlovsk 116.51 324 ⇓ *i* PKIKP PKPdf 03 21 55.9 -0.6
SVE *e* 03 23 04.2
SVE *e*SS SS 03 39 13.0 +7.0
SVE pmax pmax
comp=Z,65nm,1.3s
ROSC El Rosal 116.62 95 PKP PKPdf 03 21 56.7 -1.3
comp=Z,6.9nm,0.6s,baz=80,slow=12,SNR=8.5
JSC Jenkinsville 116.85 61 *e*PKIKP PKPdf 03 21 55.8 -2.1
BSY Bisya 116.99 286 PKPdf PKPdf 03 21 57.5 -1.0
SNR=8.3
COW Cow Castle Cre 117.21 62 *e*PKPdf PKPdf 03 21 57.2 -1.4
AB31 Akbulak array 117.24 316 *i* PKIKP PKPdf 03 21 56.6 -1.6
AB31 pmax pmax
comp=Z,10.0nm,0.7s
ABKAR Akbulak array 117.24 316 *e*PKPdf PKPdf 03 21 56.8 -1.4
MTDJ Mount Denham 117.39 79 PFAKE 03 22 10.0 +11
MTDJ LR LR
comp=Z,2μm,21.0s,MS5.7
NHSC New Hope 117.61 62 PFAKE 03 22 10.0 +11
NHSC LR LR
comp=Z,4μm,22.0s,MS6.0
ARU Arti 117.68 324 *i* PKIKP PKPdf 03 21 57.7 -1.1
ARU 03 28 43.1
ARU PS PS 03 32 49.7 -7.9
ARU SS SS 03 39 18.6 -2.7
ARU Arti 117.68 324 *e*PKPdf PKPdf 03 21 57.3 -1.5
ARU LR LR
comp=Z,3μm,20.0s,MS5.9
BLA Blacksburg 117.82 58 *e*PKIKP PKPdf 03 21 57.9 -1.8
BLA MLR MLR
comp=Z,3μm,20.0s,MS6.0
VWCC Virginia Weste 118.18 58 *e*PKPdf PKPdf 03 21 58.7 -1.6
ERPA Erie 118.43 52 PFAKE 03 22 10.0 +9.3
ERPA LR LR
comp=Z,2μm,20.0s,MS5.8
MCWV Mont Chateau 118.43 55 PFAKE 03 22 10.0 +9.2
MCWV LR LR
comp=Z,4μm,22.0s,MS6.0
AKTK Aktyubinsk 118.45 317 PKP PKPdf 03 21 59.0 -1.5
AKTK pPKP pPKPdf 03 22 13.3 -0.6
AKTK PKKPbc PKKPbc 03 32 16.2 -3.0
AKTK PKKP PKKPdf 03 32 46.9 -2.0
AKTO Aktyubinsk 118.45 317 PKP PKPdf 03 21 59.0 -1.5
comp=Z,21nm,0.7s,baz=87,slow=2.5,SNR=53
AKTO pPKP pPKPdf 03 22 13.3 -0.6
comp=Z,20nm,0.9s,baz=156,slow=1.3,SNR=10
AKTO PKKPbc PKKPbc 03 32 16.2 -3.0
comp=Z,4.4nm,0.8s,baz=268,slow=3.9,SNR=11
AKTO PKKP PKKPdf 03 32 46.9 -2.0
comp=Z,4.1nm,0.9s,baz=132,slow=4.0,SNR=4.6
AKTO Aktyubinsk 118.45 317 PKIKP PKPdf 03 21 59.0 -1.4
AKTO 03 22 13.3
AKTO pmax pmax
comp=Z,21nm,0.7s
SIV San Ignacio 119.16 122 PKP PKPdf 03 22 00.8 -2.1
comp=Z,20nm,0.9s,baz=248,slow=1.9,SNR=66
SIV pPKP pPKPdf 03 22 15.1 -1.3
comp=Z,8.1nm,1.0s,baz=2.1,slow=5.8,SNR=4.5
SIV PKKPbc PKKPbc 03 32 16.2 +0.3
comp=Z,4.8nm,1.2s,baz=55,slow=5.1,SNR=4.0
CNNC Cliffs of the 119.71 60 PFAKE 03 22 10.0 +6.6
CNNC LR LR
comp=Z,2μm,22.0s,MS5.6
SUR Sutherland 119.80 211 PKKPab PKKPab 03 32 14.8 -2.5
comp=Z,10nm,0.9s,baz=339,slow=8.6,SNR=3.3
SUR Sutherland 119.80 211 PFAKE 03 22 10.0 +6.2
SUR LR LR
comp=Z,3μm,21.0s,MS5.9
KBS Kingsbay 119.97 355 *e* PKPdf 03 22 01.4 -1.2
KBS *e*PP PP 03 23 26.1 -1.3
KBS AMS AMS 04 08 59.3
comp=Z,2μm,22.0s,MS5.7
KBS Kingsbay 119.97 355 PKIKP PKPdf 03 22 01.7 -1.0
KBS MLR MLR
comp=Z,2μm,22.0s,MS5.8
KBS Kingsbay 119.97 355 PKPdf PKPdf 03 22 01.7 -1.0
KBS LR LR
comp=Z,2μm,22.0s,MS5.8
SSPA Standing Stone 119.97 54 PKPdf PKPdf 03 22 01.5 -2.2
GTBY Guantanamo Bay 120.00 78 PFAKE 03 22 20.0 +16
GTBY LR LR
comp=Z,3μm,20.0s,MS5.9
CBN Corbin 120.29 57 PKPdf PKPdf 03 22 02.8 -1.6
CBN LR LR
comp=Z,4μm,20.0s,MS6.0
BOSA Boshof 120.45 217 PKP PKPdf 03 22 04.0 -1.1
comp=Z,4.3nm,0.5s,baz=202,slow=1.0,SNR=14
BOSA PKKPbc PKKPbc 03 32 10.1 -1.4
comp=Z,4.0nm,0.7s,baz=298,slow=4.8,SNR=9.8
BOSA Boshof 120.45 217 PKP PKPdf 03 22 04.0 -1.1
BOSA PKKPbc PKKPbc 03 32 10.1 -1.4
BOSA LR LR
comp=Z,4μm,22.0s,MS6.0
SDMD Soldier's Deli 120.75 55 PKPdf PKPdf 03 22 02.7 -2.5
SDV Santo Domingo 121.39 92 PKPdf PKPdf 03 22 05.4 -1.8
SDV LR LR
comp=Z,748nm,22.0s,MS5.3
BINY Binghamton 121.40 52 PKPdf PKPdf 03 22 05.0 -1.4
BINY LR LR
comp=Z,3μm,20.0s,MS5.9
FRB Frobisher Bay 121.80 26 PKP PKPdf 03 22 04.0 -2.5
comp=Z,42nm,0.9s,baz=296,slow=3.3,SNR=17
FRB Frobisher Bay 121.80 26 PKIKP PKPdf 03 22 04.0 -2.5
FRB pmax pmax
comp=Z,42nm,0.9s
LONY Lake Ozonia 122.33 49 PKPdf PKPdf 03 22 06.0 -2.1
LONY LR LR
comp=Z,5μm,22.0s,MS6.1
NCB Newcomb 122.63 50 PKPdf PKPdf 03 22 06.4 -2.3
NCB LR LR
comp=Z,5μm,20.0s,MS6.2
DAG Danmarks Havn 122.95 2 ⇓ *e*PKIKP PKPdf 03 22 06.0 -2.4
DAG pmax pmax
comp=Z,24nm,0.5s
DAG Danmarks Havn 122.95 2 ⇓ *i*P PKPdf 03 22 06.0 -2.4
comp=Z,24nm,0.5s
LBTB Lobatse 122.96 220 PKP PKPdf 03 22 08.6 -1.4
comp=Z,5.9nm,0.7s,baz=136,slow=5.8,SNR=13
LBTB pPKP pPKPdf 03 22 22.1 -1.4
comp=Z,16nm,0.9s,baz=167,slow=4.7,SNR=8.6
LBTB PKKPbc PKKPbc 03 32 00.5 -1.4
comp=Z,6.2nm,0.9s,baz=196,slow=4.7,SNR=4.6
LBTB Lobatse 122.96 220 PKIKP PKPdf 03 22 09.8 -0.2
LBTB MLR MLR
comp=Z,3μm,21.0s,MS6.0
LBTB Lobatse 122.96 220 PKPdf PKPdf 03 22 09.8 -0.2
LBTB LR LR
comp=Z,3μm,21.0s,MS6.0
PAL Palisades 122.99 54 PKIKP PKPdf 03 22 07.6 -1.9
PRGR Permogore 123.02 332 ⇓ *i* PKIKP PKPdf 03 22 07.4 -1.5
PRGR *e* 03 22 19.6
PRGR pmax pmax
comp=Z,126nm,1.2s
FRNY Flat Rock 123.03 49 PKPdf PKPdf 03 22 07.8 -1.6
TRY Troy 123.10 51 PKPdf PKPdf 03 22 08.7 -0.9
SDDR Presa de Saban 123.34 80 PFAKE 03 22 20.0 +9.2
SDDR LR LR
comp=Z,4μm,20.0s,MS6.1
MDV Middlebury 123.38 50 PKPdf PKPdf 03 22 07.8 -2.3
YLE Yale 123.71 53 PKPdf PKPdf 03 22 09.0 -1.8
GRTK Grand Turk 123.95 77 PFAKE 03 22 20.0 +8.1
GRTK LR LR
comp=Z,4μm,20.0s,MS6.1
QUA2 Belchertown 124.10 52 PKPdf PKPdf 03 22 09.5 -2.1
LVZ Lovozero 124.22 341 *d i* PKIKP PKPdf 03 22 07.6 -3.4
LVZ pmax pmax
comp=Z,119nm,1.2s
LVZ Lovozero 124.22 341 PFAKE 03 22 20.0 +9.0
LVZ LR LR
comp=Z,5μm,21.0s,MS6.1
LBNH Lisbon 124.26 50 PKIKP PKPdf 03 22 10.6 -1.2
LBNH MLR MLR
comp=Z,5μm,21.0s,MS6.2
BRYW Bryant College 124.72 52 PKPdf PKPdf 03 22 11.2 -1.6
APA Apatity 124.80 341 ⇑ *i* PKIKP PKPdf 03 22 11.8 -0.3
APA *i* 03 22 25.0
APA *i* 03 23 57.0
APA *e* 03 29 10.0
APA *i* PS PS 03 33 52.0 -8.6
APA *i* PPS 03 35 26.0
APA *e*SS SS 03 40 50.0 -1.3
APA pmax pmax
comp=Z,400nm,3.4s
APA pmax pmax
comp=Z,130nm,1.2s
APA MLR MLR
comp=Z,4μm,21.0s,MS6.1
SUMG Summit 125.03 10 PKPdf PKPdf 03 22 12.0 -0.5
SUMG Summit 125.03 10 ⇑ *i*P PKPdf 03 22 12.0 -0.5
comp=Z,36nm,1.0s
KEV Kevo 125.14 345 PKIKP PKPdf 03 22 11.7 -1.0
KEV MLR MLR
comp=Z,4μm,21.0s,MS6.1
KEV Kevo 125.14 345 *e*pkp PKPdf 03 22 11.2 -1.5
KEV Kevo 125.14 345 *e*pkp PKPdf 03 22 24.8 +12
SCHQ Schefferville 125.52 36 PKP PKPdf 03 22 12.2 -1.7
comp=Z,48nm,1.1s,baz=0.5,slow=2.1,SNR=19
ARCES ARCESS Array B 125.66 345 PKP PKPdf 03 22 12.4 -1.3
comp=Z,46nm,0.6s,baz=85,slow=2.0,SNR=210
ARCES pPKP pPKPdf 03 22 26.2 -1.0
comp=Z,46nm,0.9s,baz=8.1,slow=1.7,SNR=7.5
ARCES SKKPbc 03 35 34.1
comp=Z,2.8nm,0.8s,baz=251,slow=3.7,SNR=4.0
ARCES ARCESS Array B 125.66 345 PKP PKPdf 03 22 12.4 -1.3
ARCES pPKP pPKPdf 03 22 26.2 -1.0
ARCES SKKPbc 03 35 34.1
ARE0 ARCESS Array S 125.66 345 PKPdf PKPdf 03 22 12.5 -1.3
PKME Peaks-Kenny Pk 126.01 48 PKPdf PKPdf 03 22 14.0 -1.2
PKME LR LR
comp=Z,4μm,20.0s,MS6.1
KLMR Klimovskoe 126.04 332 *c i* PKIKP PKPdf 03 22 13.6 -1.1
KLMR *i* 03 22 27.1
KLMR pmax pmax
comp=Z,341nm,1.4s
KLMR MLR MLR
comp=Z,5μm,24.0s,MS6.1
QRN Al-Qurain 126.12 292 *e*P PKPdf 03 22 15.4 -0.4
QRN AMb AMB 03 22 18.4
comp=Z,512nm,1.7s
MAK Makhachkala 126.26 309 *e*P Pdif 03 18 54.3 -0.7
MAK *i* 03 22 13.4
MAK *e* 03 24 09.2
MAK *e* 03 29 16.1
MAK *e*PS PS 03 34 18.7 +4.2
MAK *e*SS SS 03 41 18.5 +7.0
MAK pmax pmax
comp=Z,313nm,1.5s
RDF Al-Radifah 126.46 292 *e*P PKPdf 03 22 16.3 -0.3
RDF AMb AMB 03 22 19.5
comp=Z,302nm,1.6s
SFJD Kangerlussuaq 126.55 18 PFAKE 03 22 30.0 +14
SFJD LR LR
comp=Z,2.0nm,22.0s
MIB Mutribah 126.70 293 *e*P PKPdf 03 22 16.3 -0.6
MIB AMb AMB 03 22 19.4
comp=Z,133nm,1.3s
NAY Al-Naaiem 126.75 292 *e*P PKPdf 03 22 16.4 -0.7
NAY AMb AMB 03 22 19.4
comp=Z,94nm,1.5s
TRO Tromso 127.06 347 *e* PKPdf 03 22 15.1 -1.3
TRO AMB AMB 03 22 15.9
comp=Z,148nm,1.3s
TRO *e*PP PP 03 24 12.5 -2.6
TRO AMS AMS 04 10 43.5
comp=Z,3μm,27.4s,MS5.8
LRS Lares 127.33 82 *e*PKPdf PKPdf 03 22 17.2 -1.2
PCRV Puerto La Cruz 127.41 92 PKP PKPdf 03 22 15.7 -3.0
comp=Z,9.2nm,0.9s,baz=162,slow=2.5,SNR=5.2
CELP Cerrillos 127.53 82 *e*PKPdf PKPdf 03 22 17.4 -1.5
ATD Arta Tunnel 127.77 269 PKP PKPdf 03 22 19.4 0.0
comp=Z,4.3nm,0.3s,baz=156,slow=21,SNR=15
CAM4 Nova Friburgo 127.85 142 ⇑ *i*P PKPdf 03 22 18.9 -0.6
CAM4 *i* 03 22 21.4
CAM4 *i* 03 22 29.2
CAM4 *i* 03 22 32.2
CAM4 *i* 03 22 43.6
SJG San Juan 127.94 82 PKP PKPdf 03 22 17.7 -1.9
comp=Z,96nm,0.8s,baz=301,slow=1.0,SNR=24
SJG San Juan 127.94 82 *e*PKPdf PKPdf 03 22 17.7 -1.9
SJG LR LR
comp=Z,2μm,20.0s,MS5.7
DGRG David-gareji 128.00 307 P PKPdf 03 22 18.1 -1.0
JOF Joensuu 128.29 337 *e*pkp PKPdf 03 22 17.3 -1.6
JOF Joensuu 128.29 337 *e*pkp PKPdf 03 22 29.9 +11
KMBO Kilima Mbogo 128.38 252 PKP PKPdf 03 22 20.8 +0.1
comp=Z,16nm,1.0s,baz=180,slow=24,SNR=27
KMBO pPKP pPKPdf 03 22 34.6 +0.5
comp=Z,34nm,1.2s,baz=0.0,slow=24,SNR=14
KMBO Kilima Mbogo 128.38 252 PKPdf PKPdf 03 22 21.0 +0.3
KMBO LR LR
comp=Z,3μm,21.0s,MS6.0

KMBO	Kilima Mbogo	128.38	252	PKPdf	PKPdf	03 22 21.1	+0.5
	SNR=18						
MTA	Mtatsminda	128.41	308	P	PKPdf	03 22 19.0	-0.8
TBLG	Delisi	128.44	308	PKIKP	PKPdf	03 22 20.1	+0.2
TBLG	Delisi	128.44	308	P	PKPdf	03 22 20.1	+0.2
VRHR	Novokhopersk	128.57	320	*e*PKIKP	PKPdf	03 22 19.6	-0.2
VRHR				*i*		03 22 32.8	
VRHR				pmax	pmax		
	comp=Z,110nm,1.0s						
VRHR				pmax	pmax		
	comp=N,30nm,0.5s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.3s						
GNI	Garni	128.62	306	PKP	PKPdf	03 22 21.7	+1.4
	comp=E,7.8nm,0.4s,baz=345,slow=4.0,SNR=16						
GNI	Garni	128.62	306*c*	*i* PKIKP	PKPdf	03 22 19.9	-0.4
GNI				pmax	pmax		
	comp=Z,105nm,1.7s						
GNI	Garni	128.62	306	PKPdf	PKPdf	03 22 20.4	+0.1
GNI				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
GNI	Garni	128.62	306	PKPdf	PKPdf	03 22 21.5	+1.3
	SNR=15						
GOR	Gori	128.88	308	P	PKPdf	03 22 21.6	+0.8
JMIC	Jan Mayen	128.88	359	*e*	PKPdf	03 22 23.5	+3.6
JMIC				*e*PP	PP	03 24 25.1	-1.8
JMIC	Jan Mayen	128.88	359	PKP	PKPdf	03 22 20.3	+0.4
	comp=Z,29nm,0.9s,baz=58,slow=10,SNR=3.9						
JMIC				pPKP	pPKPdf	03 22 33.3	0.0
	comp=Z,69nm,1.1s,baz=134,slow=9.8,SNR=2.9						
ZEI	Tsey	128.92	309	*i* PKIKP	PKPdf	03 22 20.1	-0.7
ZEI				*e*		03 24 25.9	
ZEI				pmax	pmax		
	comp=Z,175nm,6.1s						
ZEI				pmax	pmax		
	comp=Z,44nm,1.3s						
ZEI				pmax	pmax		
	comp=N,51nm,1.4s						
ZEI				pmax	pmax		
	comp=E,36nm,0.7s						
ZEI				MLR	MLR		
	comp=Z,3μm,21.0s,MS6.0						
SCO	Scoresbysund	128.98	5	*i* PKIKP	PKPdf	03 22 19.1	-1.0
SCO				*i*		03 24 26.3	
SCO				pmax	pmax		
	comp=Z,25nm,1.1s						
SCO				MLR	MLR		
	comp=Z,2μm,24.0s,MS5.8						
SCO	Scoresbysund	128.98	5	*i* P	PKPdf	03 22 19.1	-1.0
	comp=Z,25nm,1.1s						
SCO				*i*		03 24 26.3	
SCO				*i*		03 25 41.2	
SCO							
	comp=Z,3μm,24.0s						
MOS	Moscow	129.15	327	*e*PKIKP	PKPdf	03 22 19.4	-1.4
MOS				*e*		03 22 32.6	
MOS				*e*		03 24 29.0	
MOS				*e*SS	SS	03 41 43.5	-2.7
MOS				pmax	pmax		
	comp=Z,500nm,1.7s						
MOS				pmax	pmax		
	comp=Z,281nm,1.5s						
MOS				MLR	MLR		
	comp=Z,3μm,22.0s,MS5.9						
BDFB	Brasilia	129.23	131	PKP	PKPdf	03 22 20.8	-1.4
	comp=Z,98nm,0.8s,baz=214,slow=2.4,SNR=105						
BDFB				pPKP	pPKPdf	03 22 34.3	-1.4
	comp=Z,32nm,0.9s,baz=169,slow=6.6,SNR=4.1						
BDFB	Brasilia	129.23	131	PKIKP	PKPdf	03 22 20.8	-1.4
BDFB						03 22 34.3	
BDFB				pmax	pmax		
	comp=Z,98nm,0.8s						
LOF	Lofoten	129.39	348	*e*	PKPdf	03 22 19.7	-1.2
LOF	Lofoten	129.39	348	*e*P	PKPdf	03 22 19.4	-1.5
DYDN	Diyadin	129.49	305	*i* P	PKPdf	03 22 17.7	-4.2
KIV	Kislovodsk	129.59	311*c*	*i*PKIKP	PKPdf	03 22 21.5	-0.5
KIV				*e*		03 22 35.6	
KIV				*e*PS	PS	03 34 45.5	+2.1
KIV				pmax	pmax		
	comp=Z,81nm,1.2s						
KIV	Kislovodsk	129.59	311	PKPdf	PKPdf	03 22 22.4	+0.4
KIV	Kislovodsk	129.59	311	PKPdf	PKPdf	03 22 22.5	+0.5
	SNR=18						
OBN	Obninsk	129.96	326*c*	*i*PKIKP	PKPdf	03 22 21.0	-1.3
OBN				*e*		03 22 34.2	
OBN				*e*		03 29 21.8	
OBN				*e*PS	PS	03 34 45.0	-1.1
OBN				*e*SS	SS	03 41 57.6	+1.4
OBN				pmax	pmax		
	comp=Z,316nm,1.7s						
OBN	Obninsk	129.96	326	PKPdf	PKPdf	03 22 22.1	-0.3
OBN				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
VSR	Storozhevoye	130.00	321	*e*PKIKP	PKPdf	03 22 21.4	-1.1
VSR				*i*		03 22 35.1	
VSR				*e*SP	SP	03 34 33.2	-7.2
VSR				pmax	pmax		
	comp=E,40nm,1.5s						
VSR				pmax	pmax		
	comp=Z,150nm,1.5s						
VSR				pmax	pmax		
	comp=N,6.0nm,0.8s						
VORD	Divnogorie	130.01	321	*e*PKIKP	PKPdf	03 22 21.7	-0.9
VORD				*i*		03 22 35.1	
VORD				*e*		03 24 32.4	
VORD				pmax	pmax		
	comp=Z,400nm,6.0s						
VORD				pmax	pmax		
	comp=N,20nm,0.8s						
VORD				pmax	pmax		
	comp=E,30nm,0.9s						
VORD				MLR	MLR		
	comp=N,870nm,22.0s,MS5.6						
VORD				MLR	MLR		
	comp=E,1μm,22.0s,MS5.6						
VORD				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.8						
PUL	Pulkovo	130.53	334	*i* PKIKP	PKPdf	03 22 23.3	0.0
PUL				pmax	pmax		
	comp=Z,96nm,0.4s						
BBSR	BB Station	130.60	64	PKPdf	PKPdf	03 22 22.7	-1.6
KAF	Kangasniemi	130.61	338	*e*pkp	PKPdf	03 22 21.6	-1.8
KAF	Kangasniemi	130.61	338	*e*pkp	PKPdf	03 22 34.6	+11
ARTV	Artvin	130.61	308	*i* P	PKPdf	03 22 16.6	-7.4
DAGI	Agillar	130.64	307	*i* P	PKPdf	03 22 18.8	-5.3
GRGR	Grenville	130.77	91	PFAKE		03 22 40.0	+15
GRGR				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
DDEM	Demirkent	130.79	307	*i* P	PKPdf	03 22 18.8	-5.6
HOMI	Horasan	130.79	306	*i* P	PKPdf	03 22 20.9	-3.5
AAE	Adis Abeba	130.86	265	*e*P	PKPdf	03 22 25.9	+0.6
AAE				*i* S		03 25 58.9	
MOR8	Moi Rana	130.89	347	*e*	PKPdf	03 22 22.0	-1.8
MOR8				AMb	AMB	03 22 23.5	
	comp=Z,48nm,2.0s						
MOR8	Moi Rana	130.89	347	*e*P	PKPdf	03 22 22.0	-1.8
FINES	FINESS Array B	131.13	337	PKhKP	PKPpre	03 22 09.4	
	comp=Z,2.6nm,0.6s,baz=56,slow=4.6,SNR=10						
FINES				PKP	PKPdf	03 22 23.7	-0.7
	comp=Z,65nm,1.0s,baz=105,slow=2.2,SNR=41						
FINES				pPKP	pPKPdf	03 22 36.6	-1.3
	comp=Z,39nm,1.0s,baz=108,slow=6.2,SNR=7.7						
FINES				SKPbc	SKPbc	03 25 44.6	-1.0
	comp=Z,61nm,1.0s,baz=70,slow=6.3,SNR=27						
FINES	FINESS Array B	131.13	337	PKHKP	PKPpre	03 22 09.4	
FINES						03 22 23.7	
FINES						03 22 36.6	
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,65nm,1.0s						
FINES	FINESS Array B	131.13	337	PKP	PKPpre	03 22 09.4	
FINES				PKP	PKPdf	03 22 23.7	-0.7
FINES				pPKP	pPKPdf	03 22 36.6	-1.3
FINES				SKPbc	SKPbc	03 25 44.6	-1.0
BNGL	BINGOL	131.52	305	*i* P	PKPdf	03 22 19.9	-6.0
SOC	Sochi	131.77	311*c*	*i*PKIKP	PKPdf	03 22 25.1	-1.1
SOC				*i*		03 22 38.9	
SOC				*e*		03 24 45.1	
SOC				*e*PPP		03 27 38.2	
SOC				pmax	pmax		
	comp=Z,24nm,0.9s						
SOC				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.9						
KOPT	Kop Dagi	131.87	306	*i* P	PKPdf	03 22 18.8	-7.7

ANWB	Willy Bob	131.93	84	PFAKE		03 22 40.0	+13
ANWB				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
TSUM	Tsumeb	132.15	217	PKhKP	PKPpre	03 22 15.2	
	comp=Z,1.8nm,0.7s,baz=132,slow=6.4,SNR=4.1						
TSUM				PKP	PKPdf	03 22 26.9	-0.8
	comp=Z,6.7nm,0.8s,baz=120,slow=2.6,SNR=11						
TSUM				pPKP	pPKPdf	03 22 40.1	-1.0
	comp=Z,10.0nm,0.9s,baz=219,slow=1.3,SNR=6.4						
TSUM				PP	PP	03 24 45.5	-3.2
	comp=Z,1.8nm,0.5s,baz=106,slow=6.0,SNR=5.1						
TSUM				PKKP		03 32 20.1	
	comp=Z,2.1nm,0.8s,baz=357,slow=6.9,SNR=3.6						
TSUM	Tsumeb	132.15	217	PKP	PKPpre	03 22 15.2	
TSUM				PKPdf	PKPdf	03 22 26.4	-1.2
TSUM				*e*PP	PP	03 24 46.4	-2.3
MACK	Trabzon	132.26	308	*i* P	PKPdf	03 22 16.6	-11
KELT	Kelkit	132.79	307	*i* P	PKPdf	03 22 16.6	-12
VSU	Vasula	132.80	334*c*	*i*PKIKP	PKPdf	03 22 26.5	-1.1
NSS	Namsos	132.84	347	*e*	PKPdf	03 22 14.6	-13
NSS				*e*PP	PP	03 24 50.3	-2.3
NSS				AMS	AMS	04 12 06.8	
	comp=Z,3μm,29.3s,MS5.9						
BBGH	Gun Hill	133.01	90	PFAKE		03 22 40.0	+11
BBGH				LR	LR		
	comp=Z,4μm,22.0s,MS6.1						
ANN	Anapa	133.06	313	*i* PKIKP	PKPdf	03 22 21.6	-7.0
ANN				pmax	pmax		
	comp=N,30nm,1.5s						
ANN				pmax	pmax		
	comp=Z,62nm,1.5s						
ANN				MLR	MLR		
	comp=N,351nm,23.0s,MS5.5						
ANN				MLR	MLR		
	comp=E,1μm,23.0s,MS5.5						
ANN				MLR	MLR		
	comp=Z,2μm,23.0s,MS5.7						
KEMA	Kemaliye	133.52	306	*i* P	PKPdf	03 22 23.1	-6.5
MALT	Malatya	133.72	304	PKIKP	PKPdf	03 22 30.2	+0.2
MALT	Malatya	133.72	304	PKPdf	PKPdf	03 22 29.6	-0.4
MALT				*e*		03 22 43.8	
MALT				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
MALT	Malatya	133.72	304	‖*i* P	PKPdf	03 22 30.8	+0.8
MBAR	Mbarara	134.40	248	*i* PKIKP	PKPdf	03 22 31.7	-0.3
MBAR	Mbarara	134.40	248	PFAKE		03 22 40.0	+8.0
MBAR				LR	LR		
	comp=Z,468nm,20.0s,MS5.2						
BORG	Borgarnes	134.63	6	SKPbc	SKPbc	03 25 56.2	-1.3
	comp=Z,33nm,1.1s,baz=338,slow=1.3,SNR=3.9						
BORG	Borgarnes	134.63	6	PFAKE		03 22 40.0	+9.1
BORG				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
MICGM	Minsk	134.63	329	*e*PKP	PKPdf	03 22 28.0	-3.2
MNK	Minsk	134.66	329	*e*PKIKP	PKPdf	03 22 28.0	-3.2
MNK				*e*		03 22 43.0	
MNK				*e*PPS		03 37 00.0	
MNK				*e*SS	SS	03 43 24.0	+31
MNK				MLR	MLR		
	comp=Z,10μm,22.0s,MS6.5						
IDID	Didziasalis	134.71	331	*e*P	PKPdf	03 22 30.8	-0.5
IDID				AMB	AMB	03 22 33.8	
	comp=Z,30nm,1.2s						
ISAL	Salakas	134.83	331	*e*P	PKPdf	03 22 31.1	-0.4
ISAL				AMB	AMB	03 22 34.2	
	comp=Z,28nm,1.4s						
IIGN	Ignalina	134.92	331	*e*P	PKPdf	03 22 31.3	-0.4
IIGN				AMB	AMB	03 22 34.5	
	comp=Z,41nm,1.3s						
PINB	Pinarbasi	135.23	305	*i* P	PKPdf	03 22 24.1	-8.7
SIM	Simferopol'	135.27	314*c*	*i*PKIKP	PKPdf	03 22 32.0	-0.7
SIM				*i*	pPKPdf	03 22 46.0	-0.2
SIM				*e*		03 25 09.0	
SIM				*e*SS	SS	03 43 28.0	+27
SIM				pmax	pmax		
	comp=Z,29nm,0.7s						
SIM				pmax	pmax		
	comp=Z,80nm,7.4s						
SIM				MLR	MLR		
	comp=Z,5μm,25.5s,MS6.1						
ANDN	Andirin	135.47	304	*i* P	PKPdf	03 22 22.0	-11
ASF	Jabal al Asfar	135.66	296	PKP	PKPdf	03 22 33.9	+0.1
	comp=Z,11nm,0.9s,baz=288,slow=1.5,SNR=15						
ASF				pPKP	pPKPdf	03 22 47.1	-0.2
	comp=Z,12nm,0.9s,baz=325,slow=1.0,SNR=7.9						
ASF				PP	PP	03 25 13.9	+1.7
	comp=Z,3.5nm,1.0s,baz=207,slow=2.5,SNR=3.3						
ASF	Jabal al Asfar	135.66	296	PKIKP	PKPdf	03 22 33.9	+0.1
ASF						03 22 47.1	
ASF						03 25 13.9	
ASF				pmax	pmax		
	comp=Z,11nm,0.9s						
ASF				pmax	pmax		
	comp=Z,4.0nm,1.0s						
YAYL	Yayladag	135.90	302	*i* P	PKPdf	03 22 30.5	-3.6
AKASG	Malin Array Be	135.94	324	PKhKP	PKPpre	03 22 20.1	
	comp=Z,0.6nm,0.3s,baz=57,slow=2.8,SNR=8.8						
AKASG				PKP	PKPdf	03 22 32.5	-1.2
	comp=Z,18nm,0.7s,baz=46,slow=2.9,SNR=43						
AKASG				pPKP	pPKPdf	03 22 46.8	-0.5
	comp=Z,19nm,0.8s,baz=58,slow=1.6,SNR=6.4						
AKASG				SKPbc	SKPbc	03 26 01.4	-0.7
	comp=Z,23nm,0.9s,baz=47,slow=3.7,SNR=11						
AKASG	Malin Array Be	135.94	324	PKHKP	PKPpre	03 22 20.1	
AKASG						03 22 32.5	
AKASG						03 22 46.8	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG				pmax	pmax		
	comp=Z,18nm,0.7s						
AKASG	Malin Array Be	135.94	324	PKP	PKPpre	03 22 20.1	
AKASG				PKP	PKPdf	03 22 32.5	-1.2
AKASG				pPKP	pPKPdf	03 22 46.8	-0.5
AKASG				SKPbc	SKPbc	03 26 01.4	-0.7
KIEV	Kiev	135.95	324	*e*PKIKP	PKPdf	03 22 32.9	-0.9
KIEV				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.9						
NB2	NORSAR Subarra	136.03	345	PKPdf	PKPdf	03 22 32.4	-1.2
	comp=Z,67nm,1.2s,baz=31,slow=1.9						
NB2	NORSAR Subarra	136.03	345	PKPdf	PKPdf	03 22 32.4	-1.2
	baz=31,slow=1.9						
NOA	NORSAR Array B	136.03	345	PKP	PKPdf	03 22 32.8	-0.9
	comp=Z,30nm,0.9s,baz=30,slow=2.0,SNR=12						
NOA				SKPbc	SKPbc	03 26 00.7	-1.4
	comp=Z,12nm,1.1s,baz=32,slow=2.7,SNR=5.8						
NAO01	NORSAR Array S	136.29	345	*e*PKPdf	PKPdf	03 22 34.1	+0.1
KSDI	Kefar Szold	136.62	298	Pn	PKPdf	03 22 35.7	+0.1
GULE	Gulek	136.75	304	*i* P	PKPdf	03 22 30.5	-5.2
HMDT	Nahal Hemdat	136.81	296	Pn	PKPdf	03 22 35.9	-0.1
MMAI	Mount Meron Ar	136.85	297	PKhKP	PKPpre	03 22 30.6	
	comp=Z,0.6nm,0.3s,baz=58,slow=3.6,SNR=4.2						
MMAI				PKP	PKPdf	03 22 36.6	+0.5
	comp=Z,28nm,0.9s,baz=74,slow=3.9,SNR=28						
MMAI				pPKP	pPKPdf	03 22 49.1	-0.4
	comp=Z,63nm,1.1s,baz=86,slow=5.1,SNR=7.5						
MMAI				SKP		03 26 06.2	
	comp=Z,7.7nm,0.8s,baz=56,slow=4.4,SNR=4.8						
FOO	Floro	136.86	349	*e*	PKPdf	03 22 20.4	-15
FOO				*e*PP	PP	03 25 17.3	-0.8
FOO				AMS	AMS	04 13 31.4	
	comp=Z,2μm,27.5s,MS5.7						
MMLI	Mount Malkishu	136.89	296	Pn	PKPdf	03 22 37.4	+1.3
BRTR	Keskin Array B	137.10	307	PKhKP	PKPpre	03 22 28.1	
	comp=Z,1.9nm,0.7s,baz=132,slow=3.3,SNR=9.0						
BRTR				PKP	PKPdf	03 22 36.5	+0.2
	comp=Z,17nm,1.0s,baz=142,slow=1.6,SNR=37						
BRTR				pPKP	pPKPdf	03 22 49.8	+0.1
	comp=Z,32nm,1.1s,baz=110,slow=1.9,SNR=12						
BRTR				PP	PP	03 25 19.9	-1.0
	comp=Z,13nm,1.2s,baz=106,slow=4.5,SNR=5.4						
BRTR				SKPab		03 26 10.3	
	comp=Z,7.7nm,1.0s,baz=143,slow=4.3,SNR=4.2						
BRTR				PKKP		03 32 10.8	
	comp=Z,1.3nm,0.8s,baz=193,slow=3.3,SNR=5.1						
BRTR				SKKPbc		03 34 47.7	
	comp=Z,1.6nm,0.8s,baz=234,slow=4.2,SNR=4.3						
OSL	Oslo	137.11	344	*e*	PKPdf	03 22 36.8	+1.2
OSL	Oslo	137.11	344	*e*P	PKPdf	03 22 36.8	+1.2
SUW	Suwalki	137.14	331	*e*PKP	PKPdf	03 22 34.9	-1.0
SUW				*e*PKiKP	PKiKP	03 22 36.6	-1.1
SUW				*e*pPKPdf	pPKPdf	03 22 48.6	-0.7
SUW				*e*PKS		03 26 10.4	
SUW				*e*SP	SP	03 35 32.0	-8.9
SUW				LMZ		04 20 47.4	
	comp=Z,2μm,25.1s						

SUW	Suwalki	137.14	331	*i* PKIKP	PKPdf	03 22 36.6	+0.7
SUW				*e*		03 22 48.6	
SUW				MLR	MLR		
	comp=Z,2μm,25.1s,MS5.8						
SUW	Suwalki	137.14	331	*e*PKPdf	PKPdf	03 22 34.9	-1.0
HRFI	Mount Harif	137.38	293	Pn	PKPdf	03 22 35.5	-1.6
PRNI	Paran	137.39	293	PKIKP	PKPdf	03 22 37.6	+0.5
EIL	Elat	137.47	292	PKP	PKPdf	03 22 36.9	-0.4
	comp=Z,26nm,0.9s,baz=272,slow=1.1,SNR=23						
EIL				pPKP	pPKPdf	03 22 50.4	-0.3
	comp=Z,44nm,1.1s,baz=314,slow=2.1,SNR=7.9						
EIL	Elat	137.47	292	Pn	PKPdf	03 22 36.1	-1.2
BBAL	Bala	137.53	307	*i* P	PKPdf	03 22 28.4	-8.7
KONO	Kongsberg	137.65	345	*e*	PKPdf	03 22 11.5	-25
KONO				*e*PP	PP	03 25 25.2	+2.2
KONO				AMS	AMS	04 18 39.3	
	comp=Z,4μm,27.0s,MS6.0						
KONO	Kongsberg	137.65	345	*e*PKIKP	PKPdf	03 22 36.3	-0.3
KIS	Kishinev	137.90	319	*e*PKP	PKPdf	03 22 35.0	-2.5
KIS				*e*pPKP	pPKPdf	03 23 08.0	+17
KIS	Kishinev	137.90	319	*e*PP	PP	03 25 22.0	-3.4
KIS	Kishinev	137.90	319	*e*PKIKP	PKPdf	03 22 35.0	-2.5
KIS				*e*		03 22 50.0	
KIS				*e*		03 25 22.0	
KIS				*e*SS	SS	03 43 30.0	-2.4
KIS				MLR	MLR		
	comp=Z,4μm,23.0s,MS6.0						
KIS				MLR	MLR		
	comp=N,3μm,22.0s,MS6.0						
KIS				MLR	MLR		
	comp=E,1μm,24.0s,MS6.0						
BER	Bergen	137.93	348	*e*	PKPdf	03 22 27.2	-10
BER				*e*PP	PP	03 25 24.6	-0.1
BER				AMS	AMS	04 21 55.7	
	comp=Z,3μm,21.4s,MS6.0						
CSS	Prodhromos	138.30	301	P	PKPdf	03 22 38.1	-0.5
	comp=Z,1.1nm,1.0s						
ERMK	Ermenek	138.34	303	*i* P	PKPdf	03 22 28.4	-10
MAMC	Mammari	138.36	301	P	PKPdf	03 22 39.0	+0.3
BLS5	Blasjo	138.58	347	*e*	PKPdf	03 22 38.9	+0.5
BLS5				AMb	AMB	03 22 48.5	
	comp=Z,98nm,2.7s						
BLS5	Blasjo	138.58	347	*e*P	PKPdf	03 22 38.9	+0.5
TLCR		138.68	317	‖*e*PKIKP	PKPdf	03 22 38.7	-0.3
TLCR		138.68	317	‖*i*P	PKPdf	03 22 38.7	-0.3
ALFC	Alevga	138.86	301	P	PKPdf	03 22 39.2	-0.5
	comp=Z,0.7nm,0.6s						
GAZI	Gazipasa	138.89	303	*i* P	PKPdf	03 22 26.3	-13
PPCY	Paphos	139.11	301	P	PKPdf	03 22 39.8	-0.3
CFR	Carcaliu	139.12	317⇑	*i*P	PKPdf	03 22 40.0	+0.2
WAL1	Walls	139.14	353	P	PKPdf	03 22 38.0	-1.3
WAL1	Walls	139.14	353⇑	*e*P	PKPdf	03 22 38.0	-1.3
LRW	Lerwick	139.20	353	P	PKPdf	03 22 36.2	-3.3
LRW				AMB	AMB	03 22 43.4	
	comp=Z,134nm,3.2s						
LRW				AMS	AMS	04 23 40.1	
	comp=Z,3μm,25.1s						
LRW	Lerwick	139.20	353	*e*P	PKPdf	03 22 36.2	-3.3
LRW				AMB	AMB	03 22 43.4	
	comp=Z,134nm,3.2s						
LRW				AMS	AMS	04 23 40.1	
	comp=Z,3μm,25.1s,MS5.9						
LVV	L'vov	139.23	325*d*	*i*PKIKP	PKPdf	03 22 39.1	-0.8
LVV				*e*		03 25 29.3	
LVV				*e*PS	PS	03 36 02.5	-2.7
TIRR	Tirgusor	139.24	316	PKIKP	PKPdf	03 22 40.4	+0.4
TIRR	Tirgusor	139.24	316	*e*PKPdf	PKPdf	03 22 37.2	-2.8
TIRR	Tirgusor	139.24	316	‖*i*P	PKPdf	03 22 40.4	+0.4
WAR	Warsaw	139.27	330	*e*PKP	PKPdf	03 22 36.3	-3.6
WAR				*e*PKiKP	PKiKP	03 22 40.6	-1.5
WAR				*e*pPKP	pPKPdf	03 22 54.0	+0.7
WAR				*e*PKS		03 26 17.0	
WAR				*e*SKS	SKSdf	03 29 31.7	-15
WAR				LMZ		04 20 51.7	
	comp=Z,3μm,26.3s						
WAR	Warsaw	139.27	330	*i* PKIKP	PKPdf	03 22 40.6	+0.8
WAR				*e*		03 22 54.0	
WAR				MLR	MLR		
	comp=Z,3μm,26.3s,MS6.0						
BOLV	Bolvadin	139.37	307	*i* P	PKPdf	03 22 33.7	-6.7
BOLV				*i* S	PP	03 25 31.0	-4.0
TESR		139.45	320⇑	*i*P	PKPdf	03 22 35.9	-4.5
PSN	Preselentsi	139.70	315	*e*P	PKPdf	03 22 32.2	-8.7
VRI	Vrincioaia	139.70	319⇑	*i*P	PKPdf	03 22 41.3	+0.5
VRI	Vrincioaia	139.70	319	‖*i*P	PP	03 25 35.2	-1.3
VRI	Vrincioaia	139.70	319	S	PP	03 25 38.7	+2.2
BUR08	Bucovina Ar. S	139.75	322	*e*PKPdf	PKPdf	03 22 37.8	-3.1
PLOR	Plostina	139.76	319	PKIKP	PKPdf	03 22 40.8	-0.1
PLOR	Plostina	139.76	319	‖*i*P	PKPdf	03 22 41.3	+0.4
PLOR	Plostina	139.76	319	‖*i*P	PP	03 25 34.1	-2.7
PLOR	Plostina	139.76	319	S	PP	03 25 37.2	+0.4
BURAR	Bucovina Array	139.76	322	‖*i*P	PKPdf	03 22 41.9	+1.0
BSD	Bornholm Skovb	139.78	337	*e*PKIKP	PKPdf	03 22 37.2	-3.5
BSD				pmax	pmax		
	comp=Z,36nm,0.9s						
BSD				MLR	MLR		
	comp=Z,4μm,24.0s,MS6.1						
BSD	Bornholm Skovb	139.78	337	*i* P	PKPdf	03 22 37.2	-3.5
	comp=Z,36nm,0.9s						
BSD				*i*		03 26 10.8	
BSD							
	comp=Z,4μm,24.0s						
AMRR	Amara	139.87	317	P	PKPdf	03 22 41.9	+0.7
KWP	Kalwaria Pacla	140.04	326	*e*PKP	PKPdf	03 22 40.6	-0.7
KWP				*e*PKiKP	PKiKP	03 22 43.1	-0.7
KWP				*e*pPKP	pPKPdf	03 22 53.4	-1.4
KWP				*e*PP	PP	03 25 36.5	-1.8
KWP				*e*PKS		03 26 18.3	
KWP				LMZ		04 20 07.3	
	comp=Z,3μm,27.2s						
KWP	Kalwaria Pacla	140.04	326	*i* PKIKP	PKPdf	03 22 43.1	+1.8
KWP				*e*		03 22 53.4	
KWP				*e*		03 25 36.5	
KWP	Kalwaria Pacla	140.04	326	*e*PKPdf	PKPdf	03 22 41.4

comp=Z,800nm,12.0s,MS5.7
VOIR 140.94 319 ⇑PKIKP PKPdf 03 22 39.3 -3.8
VOIR 140.94 319 ⇓iP PKPdf 03 22 39.3 -3.8
TRPA Tarpa 141.00 324 ⇓iP PKPdf 03 22 36.8 -6.3
AKAS Kas 141.03 303 i P PKPdf 03 22 31.6 -12
CRVS Cervenica-Dubn 141.13 326 ePKP PKPdf 03 22 38.1 -5.2
CRVS e 03 26 15.8
CRVS LR LR
comp=Z,1μm,26.1s,MS5.6
CRVS Cervenica-Dubn 141.13 326 ePKP PKPdf 03 22 38.1 -5.2
CRVS eSKP 03 26 15.8
OJC Ojcow 141.17 328 ePKPdf PKPdf 03 22 39.4 -3.9
OJC ePP PP 03 25 41.9 -3.2
OJC eSKKSac SKKSac 03 32 28.1 -7.1
OJC eSS SS 03 44 06.7 -3.5
OJC L 04 25 28.0
comp=Z,3.6nm,23.2s
OJC Ojcow 141.17 328 ePKIKP PKPdf 03 22 39.4 -3.9
OJC e 03 25 41.9
OJC eSS SS 03 44 06.7 -3.5
OJC MLR MLR
comp=Z,4μm,23.2s,MS6.1
JMB Yambol 141.26 314 i P PKPdf 03 22 37.8 -6.0
SZH Strazhica 141.36 315 i P PKPdf 03 22 36.6 -7.3
RSC Scourie 141.37 355 P PKPdf 03 22 39.0 -4.5
RSC Scourie 141.37 355 eP PKPdf 03 22 39.0 -4.5
NIE Niedzica 141.42 327 ePKPdf PKPdf 03 22 39.5 -4.3
BALY Balya 141.54 309 i P PKPdf 03 22 28.4 -16
DRGR 141.65 322 ⇓PKIKP PKPdf 03 22 39.5 -4.8
DRGR 141.65 322 ⇓iP PKPdf 03 22 39.5 -4.8
AKHS Akhisar 141.67 308 i P PKPdf 03 22 25.2 -19
MVH1 Achvaich 141.70 354 P PKPdf 03 22 38.4 -5.6
MVH1 Achvaich 141.70 354⇑eP PKPdf 03 22 38.4 -5.6
PVL Pavlikeni 141.78 316 i P PKPdf 03 22 38.3 -6.4
RRH Rhenigidale 141.90 356 P PKPdf 03 22 39.1 -5.3
RRH Rhenigidale 141.90 356 eP PKPdf 03 22 39.1 -5.3
KECS Kecovo 141.90 326 ePKIKP PKPdf 03 22 40.7 -4.0
KECS Kecovo 141.90 326 ePKP PKPdf 03 22 40.7 -4.0
AYDN Tasoluk 141.99 306 i P PKPdf 03 22 32.7 -13
MME1 Meikle Cairn 142.17 353 P PKPdf 03 22 39.7 -5.2
MME1 Meikle Cairn 142.17 353⇑eP PKPdf 03 22 39.7 -5.2
MDO Dochfour 142.19 354 P PKPdf 03 22 40.0 -5.0
MDO Dochfour 142.19 354⇑eP PKPdf 03 22 40.0 -5.0
KAC Achnashellach 142.22 355 P PKPdf 03 22 39.0 -6.0
KAC Achnashellach 142.22 355⇑eP PKPdf 03 22 39.0 -6.0
OKC Ostrava-Krasne 142.22 329 ePKIKP PKPdf 03 22 40.9 -4.3
OKC e 03 25 50.2
OKC MLR MLR
comp=Z,3μm,22.8s,MS6.0
OKC Ostrava-Krasne 142.22 329 ePKP PKPdf 03 22 40.9 -4.3
OKC epPKP pPKPdf 03 22 58.0 -0.7
OKC ePP PP 03 25 50.2 -1.3
OKC ex x 03 36 22.2
OKC ex x 03 44 45.1
OKC AMS AMS 04 23 20.0
comp=Z,3μm,22.8s
RUE Ruedersdorf 142.24 335 ePKPdf PKPdf 03 22 41.4 -3.8
ALN Alexandroupoli 142.25 312 P PKPdf 03 22 37.9 -7.7
CRAR CRAIOVA 142.25 318 PKIKP PKPdf 03 22 42.2 -3.3
CRAR CRAIOVA 142.25 318 ⇓iP PKPdf 03 22 42.2 -3.3
GZR Gura Zlata 142.35 320 ⇓iP PKPdf 03 22 42.2 -3.4
KDZ Kurdzhali 142.38 313 i P PKPdf 03 22 39.9 -5.9
KSP Ksiaz 142.39 332 ePKP PKPdf 03 22 39.9 -5.7
KSP ePKiKP PKiKP 03 22 45.1 -3.4
KSP epPKP pPKPdf 03 22 58.0 -1.0
KSP ePKS 03 26 20.8
KSP LMZ 04 21 39.9
comp=Z,10μm,25.9s
KPL Plockton 142.41 355 P PKPdf 03 22 40.5 -4.8
KPL AMB AMB 03 22 48.1
comp=Z,100nm,1.7s
KPL Plockton 142.41 355 eP PKPdf 03 22 40.5 -4.8
KPL AMB AMB 03 22 48.1
comp=Z,100nm,1.7s
KPL AMS AMS 04 28 47.5
comp=Z,2μm,22.3s,MS5.7
KPL Plockton 142.41 355 AMS AMS 04 28 47.5
comp=Z,2μm,22.3s
KSB Sheil Bridge 142.51 355 P PKPdf 03 22 40.2 -5.3
KSB Sheil Bridge 142.51 355⇑eP PKPdf 03 22 40.2 -5.3
MORC Moravsky Berou 142.55 329 ePKPdf PKPdf 03 22 41.7 -4.2
MORC e 03 26 19.6
PSZ Piszkesteto 142.56 325 ePKIKP PKPdf 03 22 42.7 -3.2
PSZ e 03 25 54.3
PSZ Piszkesteto 142.56 325⇑iP PKPdf 03 22 42.4 -3.5
PSZ Piszkesteto 142.56 325⇑ePKP PKPdf 03 22 40.7 -5.2
PLD Plovdiv 142.68 314 eP PKPdf 03 22 40.4 -5.9
PRK Paraskevi 142.69 309 P PKPdf 03 22 41.0 -5.4
DPC Dobruska-Polom 142.73 331 ePKIKP PKPdf 03 22 42.8 -3.3
DPC e 03 22 59.1
DPC e 03 25 54.2
DPC eSS SS 03 44 30.0 +1.9
DPC MLR MLR
comp=Z,5μm,29.1s,MS6.1
DPC Dobruska-Polom 142.73 331 ePKP PKPdf 03 22 42.8 -3.3
DPC epPKP pPKPdf 03 22 59.1 -0.5
DPC ePP PP 03 25 54.2 -0.3
DPC ex x 03 35 58.0
DPC eSS SS 03 44 30.0 +1.9
DPC AMS AMS 04 19 00.0
comp=Z,5μm,29.1s
VYHS Vyhne 142.75 327 ePKP PKPdf 03 22 40.7 -5.5
VYHS e 03 26 20.8
VYHS e 03 33 57.0
VYHS LR LR
comp=Z,3μm,24.2s,MS5.9
VYHS Vyhne 142.75 327 ePKP PKPdf 03 22 40.7 -5.5
VYHS eSKP 03 26 20.8
VYHS e 03 33 57.0
UPC Upice 142.76 331 ePKIKP PKPdf 03 22 42.8 -3.4
UPC e 03 22 59.5
UPC Upice 142.76 331 ePKP PKPdf 03 22 42.8 -3.4
UPC epPKP pPKPdf 03 22 59.5 -0.2
NIS1 Nisyros Isl. 142.83 305 P PKPdf 03 22 40.6 -6.2
KAR1 Arisaig 142.84 355 P PKPdf 03 22 40.8 -5.3
KAR1 Arisaig 142.84 355 eP PKPdf 03 22 40.8 -5.3
PGB Panagyurishte 142.84 315 eP PKPdf 03 22 41.2 -5.4
RZN Rozhen 142.85 314 eP PKPdf 03 22 40.2 -6.4
BZS Buzias 142.92 321 ⇓iP PKPdf 03 22 43.4 -3.2
KOLL Kolacno 142.92 327 ePKIKP PKPdf 03 22 44.2 -2.3
KOLL Kolacno 142.92 327 ePKP PKPdf 03 22 44.2 -2.3
SIGR SIGRI 143.00 309 P PKPdf 03 22 42.3 -4.7
CHOS Chios island 143.13 308 P PKPdf 03 22 41.9 -5.3
LIA Limnos Island 143.23 311 P PKPdf 03 22 42.8 -4.6
KAVA Kavala 143.27 313 P PKPdf 03 22 42.4 -5.0
EBH Black Hill 143.28 353 P PKPdf 03 22 43.6 -3.3
EBH Black Hill 143.28 353⇑eP PKPdf 03 22 43.6 -3.3
BUD Budapest 143.29 326⇑ePKP PKPdf 03 22 43.5 -3.7
VRAC Vranov 143.33 330 PKP PKPdf 03 22 44.8 -2.4
comp=Z,114nm,1.3s,baz=54,slow=2.9,SNR=52
VRAC Vranov 143.33 330 PKIKP PKPdf 03 22 44.8 -2.4
VRAC pmax pmax
comp=Z,114nm,1.3s
VRAC Vranov 143.33 330⇑iP PKPdf 03 22 43.2 -4.0
PVCC Panska Ves 143.38 333 ePKIKP PKPdf 03 22 44.5 -2.8
PVCC e 03 22 58.6
PVCC e 03 26 00.6
PVCC eSS SS 03 44 39.8 +4.2
PVCC MLR MLR
comp=Z,6μm,25.0s,MS6.2
PVCC Panska Ves 143.38 333 ePKP PKPdf 03 22 44.5 -2.8
PVCC epPKP pPKPdf 03 22 58.6 -2.2
PVCC ePP PP 03 26 00.6 +2.2
PVCC ex x 03 36 00.6
PVCC eSS SS 03 44 39.8 +4.2
PVCC AMS AMS 04 22 40.0
comp=Z,6μm,25.0s
BRG Berggiesshubel 143.39 333 ePKPbc PKPdf 03 22 43.5 -3.8
BRG Berggiesshubel 143.39 333 i PKP PKPdf 03 22 43.2 -4.1
comp=Z,219nm,1.4s
BRG e 03 22 58.0
comp=Z,251nm,1.6s
BRG PP PP 03 26 04.0 +5.6
BRG SKP 03 26 23.6
comp=Z,55nm,1.2s
BRG e 03 35 56.0
BRG SKKS 03 38 37.0
BRG SS SS 03 44 35.0 -0.6
comp=Z,3μm,22.4s
BRG
comp=N,2μm,22.9s
BRG
comp=E,2μm,22.9s
BRG Berggiesshubel 143.39 333 i PKIKP PKPdf 03 22 43.2 -4.1
BRG e 03 22 58.0
BRG 03 26 04.0
BRG SS SS 03 44 35.0 -0.6
BRG pmax pmax
comp=Z,200nm,1.4s
BRG pmax pmax
comp=N,150nm,1.2s
BRG MLR MLR
comp=Z,33μm,22.4s,MS7.0
BRG MLR MLR
comp=N,2μm,22.9s,MS5.9
BRG MLR MLR
comp=E,1μm,22.9s,MS5.9
EAB Aberfoyle 143.43 354 P PKPdf 03 22 44.1 -3.0
EAB Aberfoyle 143.43 354 eP PKPdf 03 22 44.1 -3.0
CLL Collm 143.45 335 ePKPbc PKPdf 03 22 43.7 -3.7
CLL Collm 143.45 335 ⇓iPKIKP PKPdf 03 22 43.9 -3.5
CLL i 03 22 57.8
CLL e 03 26 01.0
CLL pmax pmax
comp=Z,256nm,1.6s
CLL Collm 143.45 335 ⇓iPKP PKPdf 03 22 43.9 -3.5
CLL i PKP PKPdf 03 22 46.4 -1.0
CLL i 03 22 57.8
CLL ePP PP 03 26 01.0 +2.3
CLL Collm 143.45 335 ⇓iPKPdf PKPdf 03 22 43.9 -3.5
comp=Z,256nm,1.6s
CLL i PKiKP PKiKP 03 22 46.4 -4.3
comp=Z,211nm,1.5s
CLL i 03 22 50.5
CLL i 03 22 57.8
CLL ePP PP 03 26 01.0 +2.3
CLL e 03 26 27.0
comp=Z,59nm,1.2s
CLL ePSKS 03 36 12.0
CLL e 03 36 28.0
CLL e(PPPrev) 03 37 40.0
CLL ePPS 03 38 26.0
CLL e 03 40 06.0
CLL eSS SS 03 44 24.0 -12
CLL eSKSSKSac 03 46 18.0
CLL e(SSS) 03 49 42.0
VTS Vitosha 143.46 316 ⇓PKIKP PKPdf 03 22 44.9 -2.8
VTS Vitosha 143.46 316 P PKPdf 03 22 43.0 -4.7
VTS Vitosha 143.46 316 ⇓iP PKPdf 03 22 44.9 -2.8
VTS Vitosha 143.46 316 eP PKPdf 03 22 43.6 -4.1
ESY Stoneypath 143.50 352 P PKPdf 03 22 44.3 -3.0
ESY Stoneypath 143.50 352 eP PKPdf 03 22 44.3 -3.0
MMB Musomiste 143.56 314 eP PKPdf 03 22 44.2 -3.7
EDI Edinburgh 143.56 353 P PKPdf 03 22 43.3 -4.1
EDI AMB AMB 03 22 44.7
comp=Z,107nm,2.3s
EDI AMS AMS 04 23 41.2
comp=Z,2μm,24.5s
EDI Edinburgh 143.56 353 eP PKPdf 03 22 43.3 -4.1
EDI AMB AMB 03 22 44.7
comp=Z,107nm,2.3s
EDI AMS AMS 04 23 41.2
comp=Z,2μm,24.5s,MS5.7
NRDL Niedersach Rie 143.59 338 ePKPbc PKPdf 03 22 43.8 -3.8
FBE Freiberg 143.60 334 ePKPbc PKPdf 03 22 44.3 -3.3
MODS Modra-Piesok 143.62 328 ePKIKP PKPdf 03 22 45.2 -2.6
MODS Modra-Piesok 143.62 328 ePKP PKPdf 03 22 45.2 -2.6
EAU Auchinoon 143.67 353 P PKPdf 03 22 44.4 -3.2
EAU Auchinoon 143.67 353⇑eP PKPdf 03 22 44.4 -3.2
EBL Broad Law 143.69 352 P PKPdf 03 22 42.3 -5.3
EBL Broad Law 143.69 352⇑eP PKPdf 03 22 42.3 -5.3
PRA Prague 143.77 332 PKP PKPdf 03 22 47.0 -1.0
PRA PP PP 03 26 05.0 +4.2
PRA SS SS 03 44 52.0 +12
PRA AMS AMS 04 22 30.0
PRU Pruhonice 143.79 332 ePKIKP PKPdf 03 22 46.5 -1.5
PRU e 03 23 00.3
PRU e 03 26 04.3
PRU MLR MLR
comp=Z,7μm,24.4s,MS6.3
PRU Pruhonice 143.79 332 ePKP PKPdf 03 22 46.5 -1.5
PRU epPKP pPKPdf 03 23 00.3 -1.2
PRU ePP PP 03 26 04.3 +3.5
PRU ex x 03 35 56.3
PRU eSS SS 03 44 50.7 +10
PRU AMS AMS 04 22 40.0
comp=Z,7μm,24.4s
PGBU Glenifferbraes 143.81 354 P PKPdf 03 22 43.9 -4.0
PGBU AMB AMB 03 22 46.5
comp=Z,153nm,1.8s
PGBU Glenifferbraes 143.81 354 eP PKPdf 03 22 43.9 -4.0
PGBU AMB AMB 03 22 46.5
comp=Z,153nm,1.8s
PGBU AMS AMS 04 26 36.7
comp=Z,2μm,23.6s,MS5.7
PGBU Glenifferbraes 143.81 354 AMS AMS 04 26 36.7
comp=Z,2μm,23.6s
SRS Serrai 143.85 313 P PKPdf 03 22 44.7 -3.7
TREC Trest 143.86 330 ePKIKP PKPdf 03 22 45.6 -2.6
TREC e 03 23 00.1
TREC e 03 26 02.1
TREC eSS SS 03 44 40.6 -0.6
TREC MLR MLR
comp=Z,6μm,26.2s,MS6.2
TREC Trest 143.86 330 ePKP PKPdf 03 22 45.6 -2.6
TREC epPKP pPKPdf 03 23 00.1 -1.5
TREC ePP PP 03 26 02.1 +0.8
TREC ex x 03 35 54.4
TREC eSS SS 03 44 40.6 -0.6
TREC AMS AMS 04 21 20.0
comp=Z,6μm,26.2s
TREC Trest 143.86 330 AMS AMS 04 21 20.0
comp=Z,6μm,26.2s
KKB Krupnik 143.87 315 eP PKPdf 03 22 44.7 -3.7
OUR Ouranopolis 143.91 312 P PKPdf 03 22 43.9 -4.6
APE Apeiranthos 143.95 306 ⇓PKIKP PKPdf 03 22 44.7 -4.0
APE Apeiranthos 143.95 306 P PKPdf 03 22 44.0 -4.7
APE Apeiranthos 143.95 306 ⇓iP PKPdf 03 22 44.7 -4.0
ZKR Zakros 143.98 303 P PKPdf 03 22 44.8 -4.0
NEUB Neuenburg 144.01 336 ePKPbc PKPdf 03 22 45.6 -2.8
SHEL Horse Pasture 144.01 188 ePKIKP PKPdf 03 22 48.2 -1.3
CLZ Clausthal 144.03 337 ePKPbc PKPdf 03 22 45.7 -2.7
EKA Eskdalemuir Ar 144.13 352 PKP PKPdf 03 22 45.7 -2.8
comp=Z,19nm,0.5s,baz=359,slow=2.6,SNR=125
EKA Eskdalemuir Ar 144.13 352 PKIKP PKPdf 03 22 45.7 -2.7
EKA pmax pmax
comp=Z,19nm,0.5s
SOH Sokhos 144.14 313 P PKPdf 03 22 45.2 -3.7
ESK Eskdalemuir 144.16 352 P PKPdf 03 22 44.0 -4.5
ESK AMB AMB 03 22 46.6
comp=Z,117nm,1.7s
ESK AMS AMS 04 33 03.7
comp=Z,2μm,20.8s
ESK Eskdalemuir 144.16 352⇑eP PKPdf 03 22 44.0 -4.5
ESK AMB AMB 03 22 46.6
comp=Z,117nm,1.7s
ESK AMS AMS 04 33 03.7
comp=Z,2μm,20.8s,MS5.8
ESK Eskdalemuir 144.16 352 ePKPdf PKPdf 03 22 46.1 -2.4
THR2 Thira island, 144.22 305 P PKPdf 03 22 46.8 -2.4
THR1 Thera Island 144.22 305 P PKPdf 03 22 46.7 -2.5
THR3 Thira Island, 144.25 305 P PKPdf 03 22 49.5 +0.2
PLG Polygyros 144.27 312 P PKPdf 03 22 46.1 -3.1
PLG Polygyros 144.27 312 P PKPdf 03 22 45.9 -3.3
PKSM Moragy 144.28 324 ⇑PKIKP PKPdf 03 22 46.9 -2.1
PKSM Moragy 144.28 324⇑iP PKPdf 03 22 46.9 -2.1
ECK Cauldkaine Hil 144.28 352 P PKPdf 03 22 44.6 -4.1
ECK Cauldkaine Hil 144.28 352 eP PKPdf 03 22 44.6 -4.1
PAIG Paliouri 144.29 312 P PKPdf 03 22 46.2 -3.0
PAIG Paliouri 144.29 312 P PKPdf 03 22 45.5 -3.7
THR5 Thira Island, 144.29 305 P PKPdf 03 22 47.0 -2.3
KNT Kendrikon 144.31 314 P PKPdf 03 22 46.4 -2.8
TANN Tannenbergstha 144.35 334 ePKPbc PKPdf 03 22 46.8 -2.2
WERD Werda 144.39 334 ePKPbc PKPdf 03 22 46.9 -2.1
HORT Hortiatis 144.41 313 P PKPdf 03 22 46.5 -2.9
HORT Hortiatis 144.41 313 P PKPdf 03 22 46.5 -2.9
PLN Plauen 144.42 335 ePKPbc PKPdf 03 22 47.4 -1.7
SOP Sopron 144.44 328⇑ePKP PKPdf 03 22 47.9 -1.3
AOS Alonnisos 144.44 310 P PKPdf 03 22 47.3 -2.2
AOS Alonnisos 144.44 310 P PKPdf 03 22 46.5 -3.0
GUNZ Gunzen 144.45 334 ePKPbc PKPdf 03 22 47.6 -1.5
VAY Valandovo 144.46 314 P PKPdf 03 22 46.3 -3.2
VAY Valandovo 144.46 314 ePKP PKPdf 03 22 47.6 -1.8
XAL Allendale 144.47 351 P PKPdf 03 22 46.4 -2.6
XAL Allendale 144.47 351 eP PKPdf 03 22 46.4 -2.6
WERN Wernitzgruen 144.49 334 ePKPbc PKPdf 03 22 48.0 -1.2
THE Thessaloniki 144.49 313 P PKPdf 03 22 47.4 -2.1
THE Thessaloniki 144.49 313 P PKPdf 03 22 46.4 -3.1
NKC Novy Kostel 144.50 334 ePKIKP PKPdf 03 22 47.7 -1.5
NKC e 03 23 01.3
NKC e 03 26 05.2
NKC MLR MLR
comp=Z,3μm,22.9s,MS5.9
NKC Novy Kostel 144.50 334 ePKP PKPdf 03 22 47.7 -1.5
NKC epPKP pPKPdf 03 23 01.3 -1.4
NKC ePP PP 03 26 05.2 +0.2
NKC ex x 03 36 02.1
NKC eSS SS 03 44 59.1 +11
NKC AMS AMS 04 27 40.0
comp=Z,3μm,22.9s
NKC Novy Kostel 144.50 334 AMS AMS 04 27 40.0
comp=Z,3μm,22.9s
MOX Moxa 144.51 335 ePKP PKPdf 03 22 47.2 -2.1
comp=Z,624nm,1.4s
MOX e 03 23 00.1
MOX ePP PP 03 26 07.0 +1.9
MOX eS 03 36 04.0
MOX eSS SS 03 45 11.0 +23
MOX
comp=Z,2μm,23.0s
MOX Moxa 144.51 335 ePKPbc PKPdf 03 22 47.7 -1.6
MOX epPKPbc 03 23 00.9
MOX Moxa 144.51 335 ePKIKP PKPdf 03 22 47.2 -2.1
MOX e 03 23 00.1
MOX e 03 26 07.0
MOX pmax pmax
comp=Z,624nm,1.4s
MOX MLR MLR
comp=Z,2μm,23.0s,MS5.9
IBBN Ibbenburen 144.53 340 ePKPbc PKPdf 03 22 47.6 -1.6
RCBR Riachuelo 144.54 134 ePKPdf PKPdf 03 22 47.3 -3.2
RCBR LR LR
comp=Z,2μm,20.0s,MS5.8
LAST Lasithi 144.55 303 P PKPdf 03 22 48.4 -1.4
CONA Conrad Observa 144.62 328 i PKPdf PKPdf 03 22 48.3 -1.2
comp=Z,784nm,1.5s,SNR=313
GCD Castle Douglas 144.69 353 P PKPdf 03 22 46.1 -3.3
GCD Castle Douglas 144.69 353⇑eP PKPdf 03 22 46.1 -3.3
GRG Griva 144.74 314 P PKPdf 03 22 47.6 -2.4
GAL1 Galloway 144.77 354 P PKPdf 03 22 46.3 -3.3
GAL1 AMB AMB 03 22 49.7
comp=Z,180nm,1.3s
GAL1 AMS AMS 04 26 32.7
comp=Z,2μm,20.4s
GAL1 Galloway 144.77 354 eP PKPdf 03 22 46.3 -3.3
GAL1 AMB AMB 03 22 49.7
comp=Z,180nm,1.3s
GAL1 AMS AMS 04 26 32.7
comp=Z,2μm,20.4s,MS5.8
KHC Kasperske Hory 144.84 332 ePKIKP PKPdf 03 22 48.9 -1.0
KHC e 03 23 02.9
KHC e 03 26 09.8
KHC eSS SS 03 44 59.8 +7.4
KHC MLR MLR
comp=Z,5μm,26.2s,MS6.2
KHC Kasperske Hory 144.84 332 ePKPdf PKPdf 03 22 48.6 -1.2
KHC Kasperske Hory 144.84 332 ePKP PKPdf 03 22 48.9 -1.0
KHC epPKP pPKPdf 03 23 02.9 -0.5
KHC ePP PP 03 26 09.8 +2.6
KHC ex x 03 36 04.9
KHC eSS SS 03 44 59.8 +7.4
KHC AMS AMS 04 23 00.0
comp=Z,5μm,26.2s
KHC Kasperske Hory 144.84 332 AMS AMS 04 23 00.0
comp=Z,5μm,26.2s
KESW Keswick, Cumbr 144.86 352 P PKPdf 03 22 47.6 -2.1
KESW AMB AMB 03 22 48.9
comp=Z,263nm,2.6s
KESW Keswick, Cumbr 144.86 352 eP PKPdf 03 22 47.6 -2.1
KESW AMB AMB 03 22 48.9
comp=Z,263nm,2.6s
PTL Penteli 144.87 309 P PKPdf 03 22 48.8 -1.5
SKO Skopje 144.90 316 ePKP PKPdf 03 22 48.6 -1.6
ROTZ Rotzenmuhle 144.96 334 ePKPbc PKPdf 03 22 49.2 -0.8
ATHU Athens Univers 144.96 308 P PKPdf 03 22 49.3 -1.1
XDE Dent Fell 144.99 352 P PKPdf 03 22 47.2 -2.7
XDE Dent Fell 144.99 352⇑eP PKPdf 03 22 47.2 -2.7
VLY Voula,Athens 144.99 308 P PKPdf 03 22 48.4 -2.1
UBBA Unterbreizbach 145.00 337 ePKPbc PKPdf 03 22 49.0 -1.1
GEC2 GERESS Array S 145.00 331 ePKPbc PKPdf 03 22 49.5 -0.6
ATH Athens Observa 145.01 308 P PKPbc 03 22 49.5 -0.4
LIT Litokhoron 145.05 313 P PKPbc 03 22 47.9 -2.1
SIVA Sivas 145.12 303 P PKPbc 03 22 50.0 -0.4
WET Wettzell 145.14 332 ePKPbc PKPbc 03 22 49.8 -0.2
ATAL Atalanti 145.25 310 P PKPbc 03 22 49.0 -1.7
ARSA Arzberg 145.25 328 ⇓iPKPdf PKPdf 03 22 49.2 -1.4
comp=Z,592nm,1.3s,SNR=203
HPK Haverah Park 145.26 350 P PKPbc 03 22 48.6 -1.6
HPK AMB AMB 03 22 50.3
comp=Z,452nm,1.5s
HPK AMS AMS 04 28 09.1
comp=Z,3μm,22.8s
HPK Haverah Park 145.26 350 eP PKPbc 03 22 48.6 -1.6
HPK AMB AMB 03 22 50.3
comp=Z,452nm,1.5s
HPK AMS AMS 04 28 09.1
comp=Z,3μm,22.8s,MS6.0
LKR Lokris 145.28 310 P PKPbc 03 22 48.7 -2.1
GIM North Isle of 145.31 353 P PKPbc 03 22 48.8 -1.5
GIM North Isle of 145.31 353 eP PKPbc 03 22 48.8 -1.5
KRUS Krusevo 145.32 315 ePKP PKPdf 03 22 49.3 -1.7
KOGS Kog 145.42 326 ePKPdf PKPdf 03 22 50.0 -1.0
KOGS Kog 145.42 326 ePKPdf PKPdf 03 22 50.0 -1.0
GRA1 Grafenberg Arr 145.42 334 ePKPbc PKPbc 03 22 51.8 +0.9
GRA1 epPKPbc pPKPbc 03 23 04.1 -0.1
GRA1 ePP PP 03 26 09.0 -1.5
GRA1 LR LR
comp=Z,2μm,21.6s,MS6.0
GRF Grafenberg Arr 145.42 334 ePKPbc PKPbc 03 22 51.8 +0.9
GRF epPKPbc pPKPbc 03 23 04.1 -0.1
GRF ePP PP 03 26 09.0 -1.5
GRF eL 04 28 46.6
comp=Z,3μm,21.6s
GRF Grafenberg Arr 145.42 334 eL 04 28 46.6
comp=Z,3μm,21.6s
GRFO Grafenberg 145.42 334 ePKPbc PKPbc 03 22 51.9 +1.0
GRFO Grafenberg 145.42 334 ePKPdf PKPdf 03 22 51.2 +0.3
BUG Bochum--Univer 145.43 340 ePKPbc PKPbc 03 22 50.9 +0.1
BIA Bitola 145.43 315 ePKP PKPdf 03 22 49.5 -1.7
IVA Berane 145.44 318 ⇓iPKP PKPdf 03 22 50.0 -1.1
IVA Berane 145.44 318 ⇓iPKP PKPdf 03 22 50.1 -1.0
MOA Molln 145.45 330 ⇑iPKPdf PKPdf 03 22 49.5 -1.5
comp=Z,1μm,1.3s,SNR=330
KZN Kozani 145.45 313 P PKPdf 03 22 49.1 -2.1
PLE Pljevlja 145.50 319 ⇓iPKP PKPdf 03 22 50.4 -0.8
PLE Pljevlja 145.50 319 ⇓iPKP PKPdf 03 22 50.4 -0.8
GMM Mts of Mourne 145.50 355 P PKPdf 03 22 48.4 -2.5
GMM Mts of Mourne 145.50 355⇑eP PKPdf 03 22 48.4 -2.5
FNA Florina 145.51 314 P PKPdf 03 22 49.5 -1.8
DID Didima 145.53 308 P PKPdf 03 22 48.9 -2.5
PVY Plav 145.53 318 ⇓iPKP PKPdf 03 22 50.1 -1.2
PVY Plav 145.53 318 ⇓iPKP PKPdf 03 22 50.2 -1.1
LTK Loutraki 145.54 309 P PKPdf 03 22 49.0 -2.4
BCI Bajram Curri 145.59 318 ePN PKPdf 03 22 51.0 -0.4
THL Klokotos Trika 145.61 312 P PKPdf 03 22 48.8 -2.7
KARN Karanos 145.70 304 P PKPdf 03 22 50.4 -1.4
DSF Desfina 145.71 310 P PKPdf 03 22 48.9 -2.8
ABA1 Baconsthorpe 145.76 347 P PKPdf 03 22 51.2 -0.2
ABA1 Baconsthorpe 145.76 347⇑eP PKPdf 03 22 51.2 -0.2
UPM Unac-Piva 145.87 320 ⇓iPKP PKPdf 03 22 51.4 -0.4
UPM Unac-Piva 145.87 320 ⇓iPKP PKPdf 03 22 51.5 -0.4
PUK Puka 145.87 317 ePN PKPdf 03 22 50.0 -1.9
SOKA Soboth 145.89 328 ⇑iPKPdf PKPdf 03 22 50.4 -1.4
comp=Z,508nm,1.4s
NEST Nestorio 145.90 314 P PKPdf 03 22 50.5 -1.5
KBN Korca 145.98 314 ePN PKPdf 03 22 50.6 -1.5
SISC Sisak 145.98 325 P PKPdf 03 22 52.4 +0.5
AEU East Anglia Un 146.00 347 P PKPdf 03 22 50.5 -1.3
AEU East Anglia Un 146.00 347⇑eP PKPdf 03 22 50.5 -1.3
KALE Kalithea 146.00 310 P PKPdf 03 22 50.8 -1.4
NKY Niksic 146.03 319 ⇓iPKP PKPdf 03 22 50.7 -1.4
NKY Niksic 146.03 319 ⇓iPKP PKPdf 03 22 50.8 -1.4
GUR Goura 146.03 309 P PKPdf 03 22 50.7 -1.6
VLI Veliai 146.03 307 P PKPdf 03 22 51.7 -0.6
TNS Taunus Mts 146.05 338 ePKPdf PKPdf 03 22 51.0 -0.9

TNS ePKPbc PKPbc 03 22 53.6 +0.8
TNS Taunus Mts 146.05 338 ePKP2 PKPab 03 22 53.6 +0.2
TRIZ Trizonia 146.06 310 P PKPdf 03 22 50.9 -1.4
TTG Podgorica 146.07 318 ⇓i PKP PKPdf 03 22 51.1 -1.1
EFP Efpalio 146.15 310 P PKPdf 03 22 51.8 -0.7
LAKA Lakka 146.18 310 P PKPdf 03 22 51.5 -1.0
STNC Stoke 146.19 351 P PKPdf 03 22 51.0 -1.0
STNC AMB AMB 03 22 53.8
comp=Z,994nm,1.3s
STNC AMS AMS 04 28 01.3
comp=Z,2µm,20.6s
STNC Stoke 146.19 351 eP PKPdf 03 22 51.0 -1.0
STNC AMB AMB 03 22 53.8
comp=Z,994nm,1.3s
STNC AMS AMS 04 28 01.3
comp=Z,2µm,20.6s,MS5.9
VLX Vlachokerasia 146.22 308 P PKPdf 03 22 51.8 -0.8
RJOB Jochberg 146.22 331 ePKPdf PKPdf 03 22 50.7 -1.6
RJOB ePKPbc PKPbc 03 22 53.9 +0.5
TIR Tirane 146.24 316 ePKPdf PKPdf 03 22 52.2 -0.3
TIR ePKPbc PKPbc 03 22 53.7 +0.1
OBKA Obir 146.25 328⇑i PKPdf PKPdf 03 22 50.5 -1.9
comp=Z,219nm,1.7s,SNR=19
BRY Bratogost 146.26 319 ⇓i PKP PKPdf 03 22 51.7 -0.8
BRY Bratogost 146.26 319 ⇓i PKP PKPdf 03 22 51.8 -0.7
WLF1 Llynfaes 146.29 353 P PKPdf 03 22 50.5 -1.7
WLF1 AMB AMB 03 22 53.5
comp=Z,2µm,1.4s
WLF1 AMS AMS 04 28 53.7
comp=Z,5µm,23.5s
WLF1 Llynfaes 146.29 353 eP PKPdf 03 22 50.5 -1.7
WLF1 AMB AMB 03 22 53.5
comp=Z,2µm,1.4s
WLF1 AMS AMS 04 28 53.7
comp=Z,5µm,23.5s,MS6.2
UPR University Cam 146.30 310 P PKPdf 03 22 53.9 +1.2
ULC Ulcinj 146.32 317 ⇓i PKP PKPdf 03 22 51.5 -1.1
ULC Ulcinj 146.32 317 ⇓i PKP PKPdf 03 22 51.5 -1.1
BUM Brajici-Budva 146.36 318 ⇓i PKP PKPdf 03 22 51.9 -0.8
BUM Brajici-Budva 146.36 318 ⇓i PKP PKPdf 03 22 51.9 -0.8
CWF Charnwood Fore 146.38 349 P PKPdf 03 22 49.7 -2.6
CWF AMB AMB 03 22 52.8
comp=Z,586nm,1.5s
CWF Charnwood Fore 146.38 349⇑eP PKPdf 03 22 49.7 -2.6
CWF AMB AMB 03 22 52.8
comp=Z,586nm,1.5s
CWF AMS AMS 04 29 22.8
comp=Z,2µm,21.8s,MS6.0
CWF Charnwood Fore 146.38 349 AMS AMS 04 29 22.8
comp=Z,2µm,21.8s
TOD Tromm 146.43 337 PKP PKPdf 03 22 51.9 -0.7
KBA Koelnbreinsper 146.44 329⇑i PKPdf PKPdf 03 22 50.8 -1.8
comp=Z,351nm,1.2s,SNR=80
BEBN Eben Emael 146.49 341 PKP PKPdf 03 22 51.8 -0.8
BEBN PKPab PKPab 03 22 53.8 -1.3
BEBN APKPab 03 23 07.3
DLF Lyons Farm 146.49 355 eP PKPdf 03 22 50.5 -2.1
DSB Dublin 146.53 355 ePKPdf PKPdf 03 22 51.9 -0.7
DSB e 03 23 05.2
HCY Herceg Novi 146.53 319 ⇓i PKP PKPdf 03 22 52.0 -1.0
HCY Herceg Novi 146.53 319 ⇓i PKP PKPdf 03 22 52.1 -0.9
MEM Membach 146.55 340 PKP PKPdf 03 22 51.8 -0.9
MEM PKPab PKPab 03 22 54.3 -1.0
MEM APKPbc 03 23 04.5
BOJS Bojanci 146.56 326 ePKPdf PKPdf 03 22 52.3 -0.6
BOJS ePKPbc PKPbc 03 22 54.1 -0.3
BOJS ePKPab PKPab 03 22 57.0 +1.5
BOJS epPKPbc pPKPbc 03 23 08.0 +0.1
BOJS epPKPab pPKPab 03 23 19.8 +11
BOJS eSKKSac SKKSac 03 33 04.4 -1.9
BOJS Bojanci 146.56 326 ePKPdf PKPdf 03 22 52.3 -0.6
BOJS ePKPbc PKPbc 03 22 54.1 -0.3
BOJS ePKPab PKPab 03 22 57.0 +1.5
BOJS epPKPbc pPKPbc 03 23 08.0 +0.1
BOJS epPKPab pPKPab 03 23 19.8 +11
BOJS eSKKSac SKKSac 03 33 04.4 -1.9
FUR Furstenfeldbru 146.58 333 ePKPdf PKPdf 03 22 52.1 -0.8
FUR ePKPbc PKPbc 03 22 55.3 +0.9
FUR Furstenfeldbru 146.58 333 ePKP2 PKPab 03 22 55.3 -0.2
LJU Ljubljana 146.58 327 ePKIKP PKPdf 03 22 51.9 -1.0
LJU e 03 22 54.1
LJU e 03 22 56.7
LJU e 03 23 07.3
LJU Ljubljana 146.58 327 ePKPdf PKPdf 03 22 51.9 -1.0
LJU ePKPbc PKPbc 03 22 54.0 -0.4
LJU ePKPab PKPab 03 22 56.6 +1.1
LJU epPKPbc pPKPbc 03 23 07.3 -0.5
LJU epPKPab pPKPab 03 23 22.8 +14
LJU eSKKSac SKKSac 03 33 03.6 -2.8
LJU Ljubljana 146.58 327 ePKPdf PKPdf 03 22 51.9 -1.0
LJU ePKPbc PKPbc 03 22 54.0 -0.4
LJU ePKPab PKPab 03 22 56.6 +1.1
LJU epPKPbc pPKPbc 03 23 07.3 -0.5
LJU epPKPab pPKPab 03 23 22.8 +14
LJU eSKKSac SKKSac 03 33 03.6 -2.8
MYKA Terra Mystica 146.61 329⇑i PKPdf PKPdf 03 22 50.7 -2.3
comp=Z,258nm,1.4s
ITM Ithomi 146.62 308 P PKPdf 03 22 52.0 -1.3
ABH Alteburg 146.66 338 PKP PKPdf 03 22 52.3 -0.6
STON Ston 146.79 320 P PKPdf 03 22 50.7 -2.7
SRN Sarande 146.86 314 ePN PKPdf 03 22 53.0 -0.6
PYL PYLOS 146.86 308 P PKPdf 03 22 51.7 -2.0
UCC Uccle 146.88 342 PKPbc PKPbc 03 22 54.8 -0.4
UCC APKP 03 23 03.1
UCC APKPab 03 23 07.2
VOY Vojsko 146.91 328 ePKPdf PKPdf 03 22 52.3 -1.2
VOY e 03 23 08.2
VOY e 03 23 37.9
VOY Vojsko 146.91 328 ePKPdf PKPdf 03 22 52.3 -1.2
VOY e 03 23 08.2
VOY e 03 23 37.9
JAVS Javornik 146.91 327 ePKPdf PKPdf 03 22 52.0 -1.6
JAVS ePKPbc PKPbc 03 22 54.6 -0.9
JAVS ePKPab PKPab 03 22 57.0 +0.1
JAVS epPKPbc pPKPbc 03 23 07.8 -1.0
JAVS Javornik 146.91 327 ePKPdf PKPdf 03 22 52.0 -1.6
JAVS ePKPbc PKPbc 03 22 54.6 -0.9
JAVS ePKPab PKPab 03 22 57.0 +0.1
JAVS epPKPbc pPKPbc 03 23 07.8 -1.0
KTD Kalmit 146.93 337 PKP PKPdf 03 22 52.5 -0.9
BCLA Clavier 146.93 341 PKP PKPdf 03 22 51.6 -1.8
BCLA PKPab PKPab 03 22 54.9 -1.9
BCLA E 03 23 01.2
BCLA APKPab 03 23 07.6
STU Stuttgart 146.96 335 ePKPdf PKPdf 03 22 52.5 -1.0
STU ePKPbc PKPbc 03 22 56.1 +0.6
STU Stuttgart 146.96 335 ePKPdf PKPdf 03 22 53.1 -0.3
STU e 03 22 56.2
RUP Ruppelstein 146.98 338 PKP PKPdf 03 22 52.9 -0.6
KEK Kerkira 147.07 314 P PKPdf 03 22 52.5 -1.5
WATA Walderalm 147.07 331 i PKPbc PKPbc 03 22 53.3 -2.6
comp=Z,339nm,1.0s,SNR=72
ABTA Abfaltersbach 147.07 330 ⇓i PKPdf PKPdf 03 22 51.1 -2.6
comp=Z,567nm,1.7s,SNR=165
KFL Anninata 147.09 310 P PKPdf 03 22 55.3 +1.2
WTTA Wattenberg 147.10 331⇑i PKPdf PKPdf 03 22 52.6 -1.1
comp=Z,966nm,1.4s,SNR=137
SNF Seneffe 147.16 342 PKP PKPdf 03 22 53.7 -0.1
SNF PKPbc PKPbc 03 22 55.8 -0.2
SNF APKP 03 23 04.9
TRI Trieste 147.19 327 ePKIKP PKPdf 03 22 53.1 -0.9
TRI e 03 22 56.4
TRI e 03 23 09.5
VLS Valsamata 147.20 311 P PKPdf 03 22 52.8 -1.4
MOTA Moosalm 147.28 332⇑i PKPdf PKPdf 03 22 53.3 -0.8
comp=Z,442nm,1.0s,SNR=164
LANF Langenberg 147.32 337 PKP PKPdf 03 22 53.4 -0.7
WLF Walferdange 147.32 339 PKPbc PKPbc 03 22 54.4 -2.1
WLF PKPab PKPab 03 22 56.7 -1.6
WLF APKPab 03 23 10.4
WLF Walferdange 147.32 339 ePKPdf PKPdf 03 22 53.5 -0.6
WLF ePKPbc PKPbc 03 22 57.5 +1.0
WLF Walferdange 147.32 339 ePKPdf PKPdf 03 22 55.1 +1.0
WLF ePKPbc PKPbc 03 22 57.1 +0.6
RETA Reutte 147.32 332⇑i PKPdf PKPdf 03 22 52.5 -1.6
comp=Z,407nm,1.5s,SNR=102
HTR Trewern Hill 147.33 351 P PKPdf 03 22 51.6 -2.4
HTR Trewern Hill 147.33 351⇑eP PKPdf 03 22 51.6 -2.4
GIVF Givet 147.36 341 ePKIKP PKPdf 03 22 53.5 -0.6
comp=Z,258nm,1.6s
MCH1 Michaelchurch 147.37 351 P PKPdf 03 22 51.9 -2.2
MCH1 AMB AMB 03 22 56.8
comp=Z,438nm,1.3s
MCH1 Michaelchurch 147.37 351 eP PKPdf 03 22 51.9 -2.2
MCH1 AMB AMB 03 22 56.8
comp=Z,438nm,1.3s
MCH1 AMS AMS 04 23 58.8
comp=Z,3µm,24.7s,MS5.9
MCH1 Michaelchurch 147.37 351 AMS AMS 04 23 58.8
comp=Z,3µm,24.7s
NVLJ Novalja 147.38 325 P PKPdf 03 22 52.9 -1.5
DOU Dourbes 147.44 341 PKP PKPdf 03 22 53.3 -0.9
DOU PKPbc PKPbc 03 22 56.3 -0.5
DOU PKPab PKPab 03 22 59.8 +1.0
DOU APKPab 03 23 10.2
BAIF Baives 147.58 342 ePKIKP PKPdf 03 22 54.0 -0.5
comp=Z,160nm,1.6s
SWN1 Swindon 147.64 349 AMS AMS 04 27 10.9
comp=Z,3µm,25.0s,MS6.0
BFO Black Forest 147.65 336 ePKPdf PKPdf 03 22 53.6 -1.1
BFO ePKPbc PKPbc 03 22 57.7 +0.3
SPAK Spaichingen-Ko 147.66 335 PKP PKPdf 03 22 53.4 -1.3
HGH Gray Hill 147.69 351 P PKPdf 03 22 52.7 -1.9
HGH Gray Hill 147.69 351 eP PKPdf 03 22 52.7 -1.9
FETA Feichten 147.69 332⇑i PKPdf PKPdf 03 22 53.9 -0.9
comp=Z,542nm,1.1s,SNR=265
WOL Wolverton 147.73 349 P PKPdf 03 22 52.8 -1.9
WOL AMB AMB 03 22 57.8
comp=Z,696nm,1.1s
WOL AMS AMS 04 30 55.1
comp=Z,3µm,22.4s
WOL Wolverton 147.73 349 eP PKPdf 03 22 52.8 -1.9
WOL AMB AMB 03 22 57.8
comp=Z,696nm,1.1s
WOL AMS AMS 04 30 55.1
comp=Z,3µm,22.4s,MS6.0
DAVA Damuels 147.85 333⇑i PKPdf PKPdf 03 22 54.1 -1.0
comp=Z,504nm,1.1s,SNR=168
STEIN Stein am Rhein 147.97 334⇑i PKPdf PKPdf 03 22 53.7 -1.5
comp=Z,1µm,1.7s
CDF Champ du Feu 147.99 337 ePKIKP PKPdf 03 22 54.2 -1.0
comp=Z,126nm,1.5s
LIENZ Kamor/St.Gall 148.01 333⇑i PKPdf PKPdf 03 22 53.8 -1.5
comp=Z,1µm,1.4s
VAL Valentia 148.01 359 eP PKPdf 03 22 44.3 -11
WEIN Weingarten 148.04 334⇑i PKPdf PKPdf 03 22 53.8 -1.5
comp=Z,640nm,1.1s
SLE Schleitheim 148.05 335⇑i PKPdf PKPdf 03 22 54.2 -1.1
comp=Z,788nm,1.1s
LIBD Limburg 148.08 336 PKP PKPdf 03 22 54.2 -1.2
FELD Feldberg im Sc 148.15 336 PKP PKPdf 03 22 54.7 -0.8
WILA Wila 148.16 334⇑i PKPdf PKPdf 03 22 54.3 -1.2
comp=Z,1µm,1.1s
FLACH Flaach 148.17 335⇑i PKPdf PKPdf 03 22 54.4 -1.1
comp=Z,685nm,1.4s
ECH Echery 148.19 337 PKP PKPdf 03 22 54.2 -1.4
FUORN Ofenpass-Fuorn 148.20 332⇑i PKPdf PKPdf 03 22 54.3 -1.3
comp=Z,2µm,1.2s
DAVOX Davos/Dischmat 148.25 332 PKP PKPdf 03 22 54.6 -1.1
comp=Z,44nm,0.6s,baz=6.3,slow=3.3
DAVOX PKPbc PKPbc 03 22 58.6 -0.5
comp=Z,593nm,1.0s,baz=9.1,slow=1.2,SNR=136
DAVOX pPKPbc pPKPbc 03 23 13.0 +0.5
comp=Z,320nm,0.9s,baz=38,slow=3.6,SNR=11
DAVOX Davos/Dischmat 148.25 332⇑i PKPdf PKPdf 03 22 54.5 -1.2
comp=Z,1µm,1.1s
DAVOX Davos/Dischmat 148.25 332 PKIKP PKPdf 03 22 54.6 -1.1
DAVOX 03 22 58.6
PLONS Plons/SG 148.25 333⇑i PKPdf PKPdf 03 22 54.6 -1.1
comp=Z,911nm,1.6s
ZUR Degenried 148.33 334⇑i PKPdf PKPdf 03 22 55.0 -0.8
comp=Z,1µm,1.1s
HEX Exmoor 148.39 351 P PKPdf 03 22 54.1 -1.6
HEX Exmoor 148.39 351⇑eP PKPdf 03 22 54.1 -1.6
SULZ Cheisacher 148.39 335⇑i PKPdf PKPdf 03 22 55.2 -0.7
comp=Z,801nm,1.1s
BERNI Berninapass 148.47 332⇑i PKPdf PKPdf 03 22 55.0 -1.1
comp=Z,1µm,1.2s
MOF Molkenrain 148.50 336 PKP PKPdf 03 22 55.1 -1.0
HTL Hartland 148.55 352 P PKPdf 03 22 54.4 -1.7
HTL AMB AMB 03 23 00.0
comp=Z,383nm,1.4s
HTL AMS AMS 04 28 44.0
comp=Z,2µm,21.6s
HTL Hartland 148.55 352⇑eP PKPdf 03 22 54.4 -1.7
HTL AMB AMB 03 23 00.0
comp=Z,383nm,1.4s
HTL AMS AMS 04 28 44.0
comp=Z,2µm,21.6s,MS6.0
LLS Linth-Limmern 148.57 333⇑i PKPdf PKPdf 03 22 55.2 -1.0
comp=Z,605nm,1.1s
THEF They Montfort 148.60 338 PKP PKPdf 03 22 55.3 -0.9
MUO Muotathal 148.63 334⇑i PKPdf PKPdf 03 22 55.3 -1.0
comp=Z,1µm,1.4s
HINF Hinteralfeld 148.64 337 ePKIKP PKPdf 03 22 55.0 -1.3
HAU Haudompre 148.66 337 ePKIKP PKPdf 03 22 55.3 -1.0
comp=Z,163nm,1.5s
HAU eMLR MLR
comp=Z,3µm,22.5s,MS5.7
HAU Haudompre 148.66 337 ePKPdf PKPdf 03 22 55.3 -1.0
HAU LR LR
comp=Z,3µm,22.5s,MS6.0
VDL Val di Lei 148.67 332⇑i PKPdf PKPdf 03 22 55.3 -1.1
comp=Z,1µm,1.5s
BBS Basel-Blauen 148.68 336 PKP PKPdf 03 22 55.1 -1.3
MEZF Maizieres J'vi 148.69 339 ePKIKP PKPdf 03 22 55.9 -0.5
comp=Z,354nm,1.5s
BALST Balsthal 148.71 335⇑i PKPdf PKPdf 03 22 55.6 -0.8
comp=Z,1µm,1.5s
TUE Stuetta 148.72 333 ePKPdf PKPdf 03 22 56.3 -0.2
TUE ePKPbc PKPbc 03 23 00.5 +0.2
BNALP Bannalp 148.79 334⇑i PKPdf PKPdf 03 22 55.6 -1.0
comp=Z,934nm,1.2s
BOURR Bourrignon 148.85 336⇑i PKPdf PKPdf 03 22 55.6 -1.0
comp=Z,1µm,1.2s
SFTF Sexfontaines 148.95 339 ePKIKP PKPdf 03 22 56.1 -0.7
comp=Z,252nm,1.5s
HASLI Hasliberg/Brie 149.00 334⇑i PKPdf PKPdf 03 22 55.7 -1.2
comp=Z,1µm,1.3s
DYA Yadsworthy 149.03 351 P PKPdf 03 22 54.5 -2.3
DYA AMB AMB 03 22 59.9
comp=Z,433nm,1.4s
DYA AMS AMS 04 29 50.0
comp=Z,2µm,22.6s
DYA Yadsworthy 149.03 351 eP PKPdf 03 22 54.5 -2.3
DYA AMB AMB 03 22 59.9
comp=Z,433nm,1.4s
DYA AMS AMS 04 29 50.0
comp=Z,2µm,22.6s,MS5.8
FUSIO Fusio 149.03 333⇑i PKPdf PKPdf 03 22 55.8 -1.2
comp=Z,1µm,1.3s
LOMF Lomont 149.03 336 PKP PKPdf 03 22 56.0 -1.0
MUGIO Muggio 149.28 332⇑i PKPdf PKPdf 03 22 56.1 -1.3
comp=Z,1µm,1.4s
WIMIS Wimmis 149.29 335⇑i PKPdf PKPdf 03 22 56.3 -1.1
comp=Z,859nm,1.4s
CCA1 Carnmenellis 149.44 353 P PKPdf 03 22 54.7 -2.8
CCA1 AMB AMB 03 23 01.8
comp=Z,494nm,1.4s
CCA1 Carnmenellis 149.44 353⇑eP PKPdf 03 22 54.7 -2.8
CCA1 AMB AMB 03 23 01.8
comp=Z,494nm,1.4s
CCA1 AMS AMS 04 24 59.1
comp=Z,2µm,23.2s,MS5.8
CCA1 Carnmenellis 149.44 353 AMS AMS 04 24 59.1
comp=Z,2µm,23.2s
TORNY Torny/Romont 149.46 335⇑i PKPdf PKPdf 03 22 56.8 -0.9
comp=Z,1µm,1.2s
LKBD Leukerbad 149.51 334⇑i PKPdf PKPdf 03 22 56.9 -0.9
comp=Z,888nm,1.4s
BRANT Les Verrieres 149.51 336⇑i PKPdf PKPdf 03 22 57.0 -0.7
comp=Z,835nm,1.4s
CUC Castrocucco 149.57 317 ePKPdf PKPdf 03 22 56.1 -1.9
CUC ePKPbc PKPbc 03 23 01.2 -1.4
AQU L'Aquila 149.62 323 ePKHKP PKPdf 03 22 57.4 -0.7
AQU e 03 23 03.1
AQU L'Aquila 149.62 323 ⇓i P PKPbc 03 23 02.9 +0.2
MMK Mattmark 149.64 334⇑i PKPdf PKPdf 03 22 57.3 -0.7
comp=Z,1µm,1.6s
SENIN Lac Senin/Sane 149.66 335⇑i PKPdf PKPdf 03 22 57.4 -0.6
comp=Z,856nm,1.5s
AIGLE Aigle 149.82 335⇑i PKPdf PKPdf 03 22 57.4 -0.8
comp=Z,1µm,1.4s
GRYON Gryon 149.83 335⇑i PKPdf PKPdf 03 22 57.7 -0.6
comp=Z,977nm,1.4s
DIX Grande Dixence 149.85 334⇑i PKPdf PKPdf 03 22 57.8 -0.5
comp=Z,791nm,1.3s
GIMEL St. Georges / 149.93 336⇑i PKPdf PKPdf 03 22 58.0 -0.4
comp=Z,948nm,1.5s
CABF La Chapelle 149.93 336 ePKIKP PKPdf 03 22 57.6 -0.8
JSA Saint Aubin 149.94 349 P PKPdf 03 22 54.1 -4.3
JSA AMB AMB 03 23 02.5
comp=Z,492nm,1.2s
JSA AMS AMS 04 29 37.7
comp=Z,3µm,20.9s
JSA Saint Aubin 149.94 349 eP PKPdf 03 22 54.1 -4.3
JSA AMB AMB 03 23 02.5
comp=Z,492nm,1.2s
JSA AMS AMS 04 29 37.7
comp=Z,3µm,20.9s,MS6.1
SALAN Lac Salanfe 149.97 335⇑i PKPdf PKPdf 03 22 58.0 -0.5
comp=Z,874nm,1.3s
FLN La Foliniere 150.00 346 ePKIKP PKPdf 03 22 57.5 -0.9
comp=Z,303nm,1.4s
FLN eMLR MLR
comp=Z,3µm,22.0s,MS5.7
FLN La Foliniere 150.00 346 ePKPdf PKPdf 03 22 57.5 -0.9
FLN LR LR
comp=Z,3µm,22.0s,MS6.0
LDF La Druitiere 150.07 346 ePKIKP PKPdf 03 22 57.5 -1.1
comp=Z,31nm,1.0s
LOR Lormes 150.16 340 ePKIKP PKPdf 03 22 58.0 -0.7
comp=Z,128nm,1.5s
LOR eMLR MLR
comp=Z,5µm,22.8s,MS5.9
LOR Lormes 150.16 340 ePKPdf PKPdf 03 22 58.0 -0.7
LOR LR LR
comp=Z,5µm,22.8s,MS6.2
GRR Gorron 150.44 346 ePKIKP PKPdf 03 22 58.3 -0.8
comp=Z,125nm,1.3s
CEL Celeste 150.44 314 ePKPdf PKPdf 03 22 58.0 -1.4
CEL ePKPbc PKPbc 03 23 04.0 -0.8
CEL LR LR
comp=Z,3µm,22.0s,MS6.0
CEL Celeste 150.44 314 P PKPbc 03 23 03.2 -1.6
SSF Saint Saulge 150.45 340 ePKIKP PKPdf 03 22 58.5 -0.7
comp=Z,162nm,1.5s
HYF Humbligny 150.54 341 ePKIKP PKPdf 03 22 59.0 -0.3
LPL La Plagne 150.58 334 ePKIKP PKPdf 03 22 59.2 -0.3
comp=Z,109nm,1.6s
LPG La Plagne 150.59 334 ePKIKP PKPdf 03 22 59.2 -0.3
comp=Z,118nm,1.6s
SMF Signal de Mont 150.71 339 ePKIKP PKPdf 03 22 58.6 -1.0
comp=Z,126nm,1.5s
AVF Avril sur Loir 150.74 340 ePKIKP PKPdf 03 22 58.5 -1.2
comp=Z,85nm,1.6s
SGMF Saint Gilles 150.91 348 ePKIKP PKPdf 03 22 58.7 -1.2
comp=Z,346nm,1.6s
ROSF Rostrenen 150.96 349 ePKIKP PKPdf 03 22 58.9 -1.1
comp=Z,161nm,1.6s
GDM Grand'Maison 151.09 335 PKP PKPdf 03 22 59.7 -0.6
BGF Bois d'Agland 151.11 340 ePKIKP PKPdf 03 22 59.5 -0.8
comp=Z,169nm,1.4s
BST Brest 151.12 351 PKP PKPdf 03 22 51.4 -8.8
GRN Grenoble 151.20 335 PKP PKPdf 03 22 59.7 -0.7
MBDF Montbardon 151.21 333 ePKIKP PKPdf 03 22 59.7 -0.8
comp=Z,258nm,1.9s
QUIF Quistinic 151.35 349 ePKIKP PKPdf 03 22 59.6 -1.0
comp=Z,278nm,1.7s
PLDF La Plantade 151.37 339 PKP PKPdf 03 22 59.8 -0.9
SURF Saint Ours 151.38 333 PKP PKPdf 03 23 00.7 0.0
ORIF Oris-en-Rattie 151.42 335 ePKIKP PKPdf 03 23 00.0 -0.8
comp=Z,155nm,1.7s
ORIF eMLR MLR
comp=Z,2µm,21.5s,MS5.6
AGO Saint Agoulin 151.47 339 PKP PKPdf 03 22 59.8 -1.0
AUTN L'Aution 151.50 332 PKP PKPdf 03 23 00.1 -0.8
TCF Toulx Ste Croi 151.55 341 ePKIKP PKPdf 03 23 00.0 -0.9
comp=Z,254nm,1.6s
TOUF Mont Tournerai 151.57 332 PKP PKPdf 03 23 00.1 -0.9
SBF Sospel 151.60 331 ePKIKP PKPdf 03 22 59.8 -1.3
comp=Z,291nm,1.5s
LUCF Luceram 151.62 332 PKP PKPdf 03 23 01.3 +0.2
MVIF Mont Vial 151.70 332 PKP PKPdf 03 23 00.1 -1.1
REVF Revere 151.73 331 PKP PKPdf 03 23 00.1 -1.2
VAE Valguarnera 151.84 314 PKP PKPdf 03 23 01.4 -0.2
comp=Z,3.2nm,0.4s,baz=88,slow=6.4,SNR=5.4
VAE PKPbc PKPbc 03 23 08.7 +0.6
comp=Z,25nm,0.8s,baz=137,slow=0.9,SNR=15
VAE Valguarnera 151.84 314 PKP PKPdf 03 23 01.4 -0.2
VAE PKPbc PKPbc 03 23 08.7 +0.6
PGF Pioggiola 151.85 328 ePKIKP PKPdf 03 23 00.3 -1.2
comp=Z,436nm,1.6s
CALN Calern 151.93 332 PKP PKPdf 03 23 00.5 -1.1
MFF Saint Martin d 151.94 344 ePKIKP PKPdf 03 23 00.7 -0.8
comp=Z,388nm,1.7s
VIVF Saint-Julien-l 151.94 336 ePKIKP PKPdf 03 23 00.9 -0.7
comp=Z,224nm,1.6s
FRF La Foret Royal 152.19 332 ePKIKP PKPdf 03 23 00.9 -1.1
comp=Z,257nm,1.6s
SMRF Simiane la Rot 152.32 334 ePKIKP PKPdf 03 23 01.7 -0.5
comp=Z,190nm,1.7s
LMR La Mourre 152.43 332 ePKIKP PKPdf 03 23 01.2 -1.1
comp=Z,300nm,1.7s
WDD Wield Dalam 152.57 311 ePKPdf PKPdf 03 23 01.0 -1.8
WDD ePKPbc PKPbc 03 23 09.1 -0.7
RJF Les Rejaudoux 152.65 341 ePKIKP PKPdf 03 23 01.9 -0.7
comp=Z,296nm,1.6s
RJF eMLR MLR
comp=Z,3µm,23.0s,MS5.8
RJF Les Rejaudoux 152.65 341 ePKPdf PKPdf 03 23 01.9 -0.7
RJF LR LR
comp=Z,3µm,23.0s,MS6.1
CAF Calviac 152.81 340 ePKIKP PKPdf 03 23 02.5 -0.4
comp=Z,189nm,1.6s
LASF Ste Croix 152.91 336 ePKIKP PKPdf 03 23 02.5 -0.5
comp=Z,230nm,1.5s
LFF La Frestale 153.22 341 ePKIKP PKPdf 03 23 02.8 -0.6
comp=Z,234nm,1.6s
VSL Villasalto 153.80 323 ePKPdf PKPdf 03 23 03.1 -1.4
VSL ePKPbc PKPbc 03 23 11.8 -0.5
MTLF Montolieu 154.15 338 ePKIKP PKPdf 03 23 04.1 -0.7
comp=Z,192nm,1.6s
SJAF Saint Jean de 154.64 336 PKP PKPdf 03 23 04.0 -1.5
EJON La Jonquera 154.67 336 PKP PKPdf 03 23 02.1 -3.5
FILF Fillols 154.70 336 PKP PKPdf 03 23 04.6 -1.0
CARF Carcanieres 154.74 337 PKP PKPdf 03 23 04.0 -1.7
MLS Moulis 154.88 339 PKP PKPdf 03 23 04.4 -1.5
CLLI Llivia 154.99 337 PKP PKPdf 03 23 03.8 -2.2
VALF Valcebollere 155.04 337 PKP PKPdf 03 23 05.8 -0.3
EPF Esparros 155.06 340 ePKIKP PKPdf 03 23 05.6 -0.5
comp=Z,275nm,1.6s
LABF Labassere 155.13 341 PKP PKPdf 03 23 05.1 -1.1
REYF Montagne du Re 155.26 341 PKP PKPdf 03 23 05.6 -0.8
RESF Ens 155.26 340 PKP PKPdf 03 23 06.3 -0.1
VIEF Viey 155.30 341 PKP PKPdf 03 23 06.1 -0.3
CSOR Sort 155.38 338 PKP PKPdf 03 23 04.5 -2.1
CFON Fontmartina 155.43 335 PKP PKPdf 03 23 04.5 -2.2
EALK Alkurruntz 155.44 343 PKP PKPdf 03 23 05.4 -1.2
EBIE Bielsa 155.44 340 PKP PKPdf 03 23 04.1 -2.5
SJPF Ste Jean 155.46 343 ePKIKP PKPdf 03 23 06.3 -0.3
comp=Z,114nm,1.5s
LARF Larrau 155.46 342 PKP PKPdf 03 23 04.4 -2.2
ETSF Etsaut 155.46 341 ePKIKP PKPdf 03 23 06.5 -0.1
comp=Z,196nm,1.6s
ELIZ Elizondo 155.49 343 PKIKP PKPdf 03 23 07.1 +0.4
EMIR Miracle 155.65 337 PKP PKPdf 03 23 03.7 -3.2
ELAN Lanestosa 155.90 347 PKP PKPdf 03 23 07.7 +0.5
EARI Arriondas 156.18 350 PKP PKPdf 03 23 06.0 -1.6
KEST Kesra 156.20 316 PKP PKPdf 03 23 07.8 -0.1
comp=Z,4.9nm,1.2s,baz=150,slow=3.8,SNR=11
KEST PKPab PKPab 03 23 36.0 +0.2
comp=Z,31nm,1.2s,baz=101,slow=4.1,SNR=8.0
KEST Kesra 156.20 316 ePKPdf PKPdf 03 23 06.9 -1.0
ECRI Cripan 156.27 344 PKIKP PKPdf 03 23 06.1 -1.6
EPOB Poblet 156.30 337 PKP PKPdf 03 23 07.2 -0.6
EPON Pontenova 156.42 353 PKP PKPdf 03 23 05.5 -2.4
ESAC San Caprasio 156.50 340 PKP PKPdf 03 23 08.3 +0.3
CMAH Djebel Manchou 156.86 320 P PKPdf 03 23 07.0 -1.7
ERTA Horta de San J 156.91 338 PKP PKPdf 03 23 05.6 -3.1
ETOS Mallorca 156.94 332 PKP PKPdf 03 23 06.4 -2.3
EMAZ Mazaricos 156.96 356 PKP PKPdf 03 23 04.9 -3.7
STS Santiago 156.99 356 PKIKP PKPdf 03 23 08.7 0.0
ABSA Djebel Ababsia 157.05 319 P PKPdf 03 23 08.0 -1.0
ERUA La Rua 157.34 353 PKIKP PKPdf 03 23 07.3 -1.8
CKFL Kef-Lekhel 157.43 320 P PKPdf 03 23 09.0 -0.4
CASM Ain Smara 157.66 321 P PKPdf 03 23 09.0 -0.7
EMOS Mosqueruela 157.72 339 PKP PKPdf 03 23 10.2 +0.6
EZAM Zamans 157.73 356 PKIKP PKPdf 03 23 07.1 -2.5
ECAL Calabor 157.74 352 PKP PKPdf 03 23 07.1 -2.5
ETOR Torete 157.81 342 PKIKP PKPdf 03 23 06.8 -3.0
DFRA Djebel Bou Aff 157.83 322 P PKPdf 03 23 09.5 -0.4

PBRG Braganca 157.87 352 *i* PKPab PKPab 03 23 42.4 -0.2
ELOB Lobios 157.96 354 PKP PKPdf 03 23 09.6 -0.3
PCAB Cabril 158.11 354 *e*PKPdf PKPdf 03 23 08.1 -2.0
PCAB *i* P 03 23 38.7
SET Setif 158.35 322 P PKPdf 03 23 10.0 -0.6
PVRL Vila Real 158.51 353 *e*PKPdf PKPdf 03 23 09.4 -1.2
PVRL *i* P 03 23 23.0
PVRL Vila Real 158.51 353 *e*PKPab PKPab 03 23 44.9 -0.5
GUD Guadarrama 158.53 346 PKIKP PKPdf 03 23 08.8 -1.8
MVO Moncorvo 158.54 352 *e*PKPdf PKPdf 03 23 08.7 -1.9
MVO Moncorvo 158.54 352 *e*PKPab PKPab 03 23 45.1 -0.5
MVO Moncorvo 158.54 352 *e*PP PP 03 27 24.8 -0.1
MVO Moncorvo 158.54 352 PKP PKPdf 03 23 08.0 -2.6
ECHE Chera 158.58 339 PKIKP PKPdf 03 23 08.7 -2.0
PVIS Viseu 159.09 354 *e*PKPdf PKPdf 03 23 09.8 -1.5
PVIS *i* P 03 23 23.6
PVIS Viseu 159.09 354 *e*PP PP 03 27 28.6 +0.7
MTE Manteigas 159.36 353 *e*PKPdf PKPdf 03 23 10.0 -1.6
MTE *i* P 03 23 24.2
MTE Manteigas 159.36 353 *e*PP PP 03 27 29.8 +0.4
MTE Manteigas 159.36 353 *e*PKPdf PKPdf 03 23 10.7 -0.9
ESDC Sonseca Array 159.40 345 PKP PKPdf 03 23 11.2 -0.5
comp=Z,7.4nm,1.2s,baz=4.0,slow=2.6,SNR=14
ESDC pPKP pPKPdf 03 23 23.8 -1.5
comp=Z,2.6nm,0.7s,baz=5.5,slow=2.4,SNR=7.7
ESDC PKPab PKPab 03 23 49.4 +0.1
comp=Z,8.3nm,1.0s,baz=16,slow=3.6,SNR=10
ESDC pPKPab pPKPab 03 24 01.9 -0.6
comp=Z,6.0nm,1.0s,baz=15,slow=3.6,SNR=2.9
ESDC PP PP 03 27 31.0 +1.3
comp=Z,1.2nm,0.8s,baz=18,slow=4.5,SNR=4.4
ESDC Sonseca Array 159.40 345 PKP PKPdf 03 23 08.4 -3.2
EPLA Plasencia 159.47 349 PKIKP PKPdf 03 23 07.9 -3.9
PAB San Pablo 159.62 345 *e*PKIKP PKPdf 03 23 10.4 -1.5
ETOB Tobarra 159.63 339 PKP PKPdf 03 23 09.9 -2.1
EMHD Djebel Mahouad 159.70 326 P PKPdf 03 23 12.1 0.0
PCBR Castelo Branco 159.90 352 *e*PKPdf PKPdf 03 23 10.3 -2.0
PCBR *i* P 03 23 24.5
EVIA Vianos 159.95 340 PKIKP PKPdf 03 23 11.1 -1.3
PTOM Tomar 160.22 354 *e*PKPdf PKPdf 03 23 11.3 -1.3
PTOM *i* P 03 23 24.9
PTOM Tomar 160.22 354 *e*PKPab PKPab 03 23 52.5 -0.4
PTOM Tomar 160.22 354 *e*PP PP 03 27 34.1 +0.1
EMUR La Murta 160.24 337 PKP PKPdf 03 23 11.2 -1.5
PMRV Marv??o 160.30 352 *e*PKPdf PKPdf 03 23 10.6 -2.1
PMRV *i* P 03 23 25.0
PMRV Marv??o 160.30 352 *e*PKPab PKPab 03 23 52.6 -0.6
PMRV Marv??o 160.30 352 *e*PP PP 03 27 34.3 -0.1
EBNR Beni Rached 160.35 329 P PKPdf 03 23 12.6 -0.3
EHUE Huescar 160.73 340 PKIKP PKPdf 03 23 11.2 -2.0
EBAN Banos Encina 160.77 343 PKIKP PKPdf 03 23 12.7 -0.6
EANR 'Ain N'Sour 160.83 329 P PKPdf 03 23 12.7 -0.7
PESTR Estremoz 160.88 352 *e*PKPdf PKPdf 03 23 11.5 -1.9
PESTR *i* P 03 23 25.4
PESTR Estremoz 160.88 352 *e*PKPab PKPab 03 23 55.4 -0.4
PESTR Estremoz 160.88 352 *e*PP PP 03 27 37.9 +0.4
EQES Quesada 160.89 341 PKP PKPdf 03 23 12.8 -0.7
EBAD Badajoz 160.90 351 PKP PKPdf 03 23 11.1 -2.3
PMAFR Mafra 160.95 356 *e*PKPdf PKPdf 03 23 11.6 -1.8
PMAFR Mafra 160.95 356 *i* PKPab PKPab 03 23 52.1 -4.0
EADA Adamuz 160.98 345 PKP PKPdf 03 23 10.1 -3.4
ETRT Tiaret 161.18 328 P PKPdf 03 23 13.1 -0.7
LIS Lisbon 161.18 356 *e*P PKPdf 03 23 12.4 -1.3
LIS A 04 39 00.9
comp=Z,3μm,21.6s
EVO Evora 161.26 353 ⇑ *i* PKIKP PKPdf 03 23 12.8 -1.0
comp=Z,226nm,1.7s
EVO *e*MLR MLR 03 23 26.1
comp=Z,6μm,21.5s
EVO Evora 161.26 353 *e*PKPdf PKPdf 03 23 11.2 -2.6
EVO *i* P 03 23 26.1
EVO Evora 161.26 353 *e*PKPab PKPab 03 23 57.2 -0.2
EVO Evora 161.26 353 *e*PP PP 03 27 40.1 +0.5
EVOP Sao Brissos 161.27 353 *e*P PKPdf 03 23 12.6 -1.2
EVOP *e*PP PP 03 27 41.1 +1.4
EVOP AMS AMS 04 38 15.6
comp=Z,4μm,26.8s
EVOP Sao Brissos 161.27 353 *e*PKIKP PKPdf 03 23 12.6 -1.2
EVOP *e* 03 27 41.1
ENIJ Nijar 161.36 338 PKIKP PKPdf 03 23 10.3 -3.6
ELUQ Luque 161.47 343 PKIKP PKPdf 03 23 12.1 -1.9
PBAR Barrancos 161.47 350 *e*PKPdf PKPdf 03 23 12.1 -1.9
PBAR *i* P 03 23 26.7
PBAR Barrancos 161.47 350 *e*PKPab PKPab 03 23 58.1 -0.3
PBAR Barrancos 161.47 350 *e*PP PP 03 27 40.8 0.0
ECOG Cogollos-Vega 161.53 341 PKIKP PKPdf 03 23 12.8 -1.3
PBEJ Beja 161.74 352 *e*PKPdf PKPdf 03 23 13.2 -1.1
PBEJ *i* P 03 23 27.0
PBEJ Beja 161.74 352 *e*PKPab PKPab 03 23 59.0 -0.6
PBEJ Beja 161.74 352 *e*PP PP 03 27 41.2 -1.0
EMIN Mina Concepcio 161.81 349 PKP PKPdf 03 23 10.4 -4.0
ELOJ Sierra Loja 161.82 342 PKIKP PKPdf 03 23 13.2 -1.2
EGUA Guajares 161.94 341 PKIKP PKPdf 03 23 11.0 -3.5
MESJ Messejana 161.97 353 *e*PP PP 03 27 44.6 +1.2
MESJ A 04 34 37.6
comp=Z,2μm,22.0s
MESJ Messejana 161.97 353 *e*P PKPdf 03 23 13.4 -1.2
MESJ *e*PP PP 03 27 44.6 +1.3
MESJ AMS AMS 04 34 37.6
comp=Z,2μm,22.0s
MESJ Messejana 161.97 353 *e*PKIKP PKPdf 03 23 13.4 -1.1
MESJ *e* 03 27 44.6
PCVE Castro Verde 162.15 353 *e*PKPdf PKPdf 03 23 13.0 -1.7
PCVE *i* P 03 23 27.6
PCVE Castro Verde 162.15 353 *e*PKPab PKPab 03 24 01.5 +0.1
PCVE Castro Verde 162.15 353 *e*PP PP 03 27 45.0 +0.6
EGRO El Granado 162.17 351 PKP PKPdf 03 23 12.3 -2.4
PTEO Sao Teotonio 162.31 354 *i* PKPab PKPab 03 24 03.4 +1.3
PVAQ Vaqueiros 162.33 352 *e*PKPdf PKPdf 03 23 13.2 -1.7
PVAQ *i* P 03 23 27.6
PVAQ Vaqueiros 162.33 352 *e*PKPab PKPab 03 24 02.4 +0.2
PVAQ Vaqueiros 162.33 352 *e*PP PP 03 27 45.9 +0.6
ESPR Espera 162.52 346 PKP PKPdf 03 23 12.5 -2.6
PBDV Barranco-do-Ve 162.52 352 *e*PKPdf PKPdf 03 23 13.5 -1.6
PBDV *i* P 03 23 28.3
PBDV Barranco-do-Ve 162.52 352 *e*PKPab PKPab 03 24 03.5 +0.5
PBDV Barranco-do-Ve 162.52 352 *e*PP PP 03 27 47.4 +1.1
MORF Marmelete 162.54 354 *e*PKPdf PKPdf 03 23 13.7 -1.4
MORF *i* P 03 23 27.7
MORF Marmelete 162.54 354 *e*PKPab PKPab 03 24 03.4 +0.3
MORF Marmelete 162.54 354 *e*PP PP 03 27 46.6 +0.2
MORF Marmelete 162.54 354 *e*PKIKP PKPdf 03 23 14.2 -0.9
MORF *e* 03 27 47.4
EMIJ Mijas 162.54 343 PKP PKPdf 03 23 12.2 -2.9
EALB Alboran 162.58 338 PKP PKPdf 03 23 14.4 -0.8
PFVI Vila Bisbo 162.73 354 *e*PKPdf PKPdf 03 23 13.8 -1.5
PFVI *i* P 03 23 28.1
PFVI Vila Bisbo 162.73 354 *e*PKPab PKPab 03 24 04.3 +0.4
PFVI Vila Bisbo 162.73 354 *e*PP PP 03 27 48.5 +1.1
PFVI Vila Bisbo 162.73 354 PKP PKPdf 03 23 10.5 -4.9
EJIF Jimena Fronter 162.83 345 PKIKP PKPdf 03 23 13.6 -1.8
SFS San Fernando 162.98 347 PFAKE 03 23 30.0 +14
SFS LR LR
comp=Z,6μm,20.0s
LIC Lamto 165.26 204 *e*PKIKP PKPdf 03 23 16.7 -1.6
comp=Z,507nm,1.5s
LIC Lamto 165.26 204 *e*PKIKP PKPdf 03 23 16.5 -1.8
comp=Z,120nm,1.5s
LIC *e*MLR MLR
comp=Z,7μm,22.0s
LIC Lamto 165.26 204 *e*PKPdf PKPdf 03 23 16.5 -1.8
LIC LR LR
comp=Z,4μm,22.0s
KIC Kosan Boka 165.27 205 *e*PKIKP PKPdf 03 23 16.4 -2.0
comp=Z,153nm,1.1s
DBIC Dimbokro 165.60 205 PKP PKPdf 03 23 17.1 -1.5
comp=Z,9.1nm,0.9s,baz=134,slow=2.6,SNR=7.5
DBIC pPKP pPKPdf 03 23 30.5 -1.6
comp=Z,12nm,1.0s,baz=178,slow=3.4,SNR=5.2
DBIC PKPab PKPab 03 24 16.6 -0.5
comp=Z,33nm,0.9s,baz=128,slow=4.7,SNR=16
DBIC pPKPab pPKPab 03 24 29.6 -0.7
comp=Z,39nm,1.0s,baz=134,slow=4.2,SNR=5.6
DBIC PP PP 03 28 02.5 -0.4
comp=Z,17nm,1.1s,baz=137,slow=8.0,SNR=4.0
DBIC Dimbokro 165.60 205 PKIKP PKPdf 03 23 17.2 -1.4
DBIC 03 23 30.5
DBIC 03 24 16.6
DBIC 03 28 02.5
DBIC pmax pmax
comp=Z,9.0nm,0.9s
DBIC pmax pmax
comp=Z,33nm,0.9s
DBIC pmax pmax
comp=Z,17nm,1.1s
DBIC Dimbokro 165.60 205 *e*PKPdf PKPdf 03 23 16.4 -2.2
DBIC *e*PKPab PKPab 03 24 16.2 -0.9
TIC Toumodi 165.64 204 *e*PKIKP PKPdf 03 23 17.1 -1.6
comp=Z,229nm,1.1s
MDT Midelt 165.95 338 PKP PKPdf 03 23 17.1 -1.2
comp=Z,4.8nm,0.9s,baz=172,slow=0.4,SNR=18
MDT pPKP pPKPdf 03 23 31.1 -0.7
comp=Z,7.7nm,1.0s,baz=129,slow=1.9,SNR=8.8
MDT PKPab PKPab 03 24 18.3 0.0
comp=Z,12nm,1.1s,baz=24,slow=5.2,SNR=5.5
MDT pPKPab pPKPab 03 24 31.4 0.0
comp=Z,17nm,1.3s,baz=42,slow=4.5,SNR=2.2
PMPS Porto Santo 166.03 19 *e*PKPdf PKPdf 03 23 17.7 -0.7
PMPS *i* P 03 23 31.8
PMAR Madeira 166.14 22 *e*PKPdf PKPdf 03 23 18.3 -0.2
TORD Torodi Ar. Bea 166.18 243 PKP PKPdf 03 23 17.0 -2.0
comp=Z,22nm,1.2s,baz=23,slow=0.8,SNR=49
TORD pPKP pPKPdf 03 23 31.4 -1.2
comp=Z,38nm,1.3s,baz=49,slow=1.8,SNR=9.6
TORD PKPab PKPab 03 24 19.5 -0.4
comp=Z,30nm,1.2s,baz=97,slow=2.1,SNR=12
TORD pPKPab pPKPab 03 24 31.8 -1.3
comp=Z,11nm,1.0s,baz=109,slow=1.8,SNR=2.7
TORD PP PP 03 28 05.5 -1.8
comp=Z,4.9nm,1.1s,baz=125,slow=7.2,SNR=3.8
EHIG Higuera 169.33 35 PKP PKPdf 03 23 21.6 +0.7
CCAN Las Canadas 170.22 31 PKP PKPdf 03 23 21.9 +0.5
EFAM Famara 170.50 14 PKP PKPdf 03 23 16.7 -4.8
EOSO Osorio 170.82 27 PKP PKPdf 03 23 22.1 +0.4
CFTV Fuerteventura 171.04 18 PKP PKPdf 03 23 16.1 -5.7
BBTS Babate 172.52 133 PKP PKPdf 03 23 22.4 -0.5
comp=Z,82nm,1.1s,baz=294,slow=2.1,SNR=8.5
BBTS pPKP pPKPdf 03 23 35.5 -0.8
comp=Z,96nm,1.2s,baz=236,slow=1.2,SNR=6.0
BBTS PKPab PKPab 03 24 47.3 -0.6
comp=Z,60nm,0.8s,baz=235,slow=3.4,SNR=12

BJI ***08*** *03:15:58.0, 1°.82N×129°.02E, h200km, mB4.9/6, mb4.5/11*
ISCJB ***08*** *03:16:08. 1±0.6, 2°.70N±0°.03×128°.68E±0°.05, h230km±5km, mb4.6/57, Error ellipse: s-maj=7.4km s-min=5.0km az=170.7*
IDC ***08*** *03:16:09.0±1.3, 2°.67N×128°.60E, h223km±11km, mb4.1/28, mb1 4.2/30, mb1mx4.2/33, mbtmp4.2/30, Error ellipse: s-maj=14.1km s-min=7.0km az=79.0*
NEIC ***08*** *03:16:09.2±0.7, 2°.68N×128°.63E, h226km±7km, mb4.6/16, Error ellipse: s-maj=7.0km s-min=4.1km az=75.0*
DJA ***08*** *03:16:10, 2°.74N×128°.49E, h216km, mb4.9/31*
ISC 08 03:16:09.2±0.6, 2°.69N±0°.03×128°.68E±0°.05, h226km±5km, n130, σ0=92/119, mb4.6/56, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.31**	**215**	P	**Pn**	**03 16 52.5**	**-0.4**
SGSI	**Sangihe**	**3.30**	**288**	P	**Pn**	**03 17 02.2**	**-1.6**
SGSI				S	**S**	**03 17 42.1**	**-4.6**
LBMI	**Labuha**	**3.51**	**200**	P	**Pn**	**03 17 08.4**	**+2.2**
MNI	**Manado**	**4.04**	**252**	P	**Pn**	**03 17 10.6**	**-1.9**
KMSI	**Cibinong**	**5.15**	**246**	P	**Pn**	**03 17 25.0**	**-1.2**
KMSI				S	**S**	**03 18 23.3**	**-4.0**
DAV	**Davao City (W)**	**5.34**	**325**	P	**Pn**	**03 17 29.1**	**+0.5**
	36nm,0.3s,baz=143,slow=3.9,SNR=4.3						
DAV				S	**S**	**03 18 35.1**	**+3.3**
	98nm,0.3s,baz=285,slow=20,SNR=2.2						
NLAI	**Namlea**	**6.09**	**195**	P	**Pn**	**03 17 38.3**	**+0.1**
	0.6nm3μm53nm,2.1s						
LUWI	**Luwuk**	**6.97**	**238**	P	**Pn**	**03 17 48.0**	**-1.4**
	2.6nm6μm186nm,0.8s						
MRSI	**Marisa**	**7.09**	**252**	P	**Pn**	**03 17 49.9**	**-1.0**
	0.4nm117nm,0.7s						
BAKI	**Biak**	**8.36**	**117**	P	**Pn**	**03 18 11.6**	**+4.4**
KDI	**Kendari**	**8.96**	**223**	P	Px	03 18 27.1	
MYLDM	**Lahaet Datu**	**10.46**	**284**	P	**Pn**	**03 18 34.2**	**+0.2**
	66nm,1.2s						
TTSI	**Tana Toraja**	**10.53**	**237**	P	**Pn**	**03 18 35.4**	**+0.4**
	3μm35nm,1.0s						
SPSI	**Sidrap Palu**	**11.09**	**233**	P	**Pn**	**03 18 43.7**	**+1.6**
	37nm,0.8s						
BKSI	**Bulukumba**	**11.68**	**227**	P	**Pn**	**03 18 50.4**	**+0.9**
	2μm140nm,0.6s						
KKM	**Kota Kinabalu**	**12.87**	**285**	*e*Pn	**Pn**	**03 19 02.9**	**-1.5**
BMNI	**Bima**	**14.95**	**222**	P	**Pn**	**03 19 30.8**	**+0.9**
	116nm,0.6s						
KAKA	**Kakadu**	**15.74**	**166**	*e*P	**Pn**	**03 19 38.6**	**-0.8**
	7.7nm,0.3s						
KAKA	**Kakadu**	**15.74**	**166**	*e*Pn	**Pn**	**03 19 38.7**	**-0.8**
	42nm,0.6s						
KAKA				*e*S	**S**	**03 22 26.5**	**-6.5**
SBUM	**Sibu**	**16.45**	**270**	P	**P**	**03 19 48.1**	**+1.5**
	53nm,1.2s						
MTNI	**Mataram**	**16.80**	**228**	P	**P**	**03 19 52.0**	**+1.6**
	106nm,0.8s						
KHKI	**Kahang-Kahang**	**17.05**	**230**	P	**P**	**03 19 51.6**	**-1.5**
	4μm186nm,0.9s						
STKI	**Sintang**	**17.40**	**262**	P	**P**	**03 19 58.2**	**+1.2**
	63nm,0.7s						
JAGI	**Jajag, Banyuwa**	**18.24**	**232**	P	**P**	**03 20 06.4**	**+0.2**
	4μm89nm,0.7s						
KNA	**Kununurra**	**18.32**	**180**	P	**P**	**03 20 07.6**	**+0.7**
	2μm114nm,0.7s						
KSM	**Kuching**	**18.40**	**267**	*e*P	**P**	**03 20 08.5**	**+0.6**
	105nm,1.1s						
KSM	**Kuching**	**18.40**	**267**	P	**P**	**03 20 08.2**	**+0.3**
	84nm,1.1s						
GMJI	**Gumukmas**	**18.70**	**234**	P	**P**	**03 20 11.5**	**+0.5**
	4μm106nm,0.9s						
GUMO	**Guam**	**19.32**	**55**	P	**P**	**03 20 18.4**	**+0.6**
	6.8nm,0.3s,baz=177,slow=19,SNR=2.4						
SJI	**Sawahan**	**19.80**	**238**	P	**P**	**03 20 25.0**	**+2.1**
	4μm96nm,0.9s						
PWJI	**Pagerwojo**	**19.92**	**238**	P	**P**	**03 20 25.8**	**+1.7**
	2μm76nm,0.7s						
PCJI	**Pacitan**	**20.54**	**238**	P	**P**	**03 20 31.3**	**+0.6**
	121nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.87**	**188**	P	**P**	**03 20 32.8**	**-1.4**
	3.6nm,0.5s,baz=17,slow=7.5,SNR=28						
FITZ				PcP	PcP	03 24 32.9	0.0
	1.2nm,0.4s,baz=79,slow=5.2,SNR=3.7						
FITZ				ScP	ScP	03 27 47.8	-0.4
	1.9nm,0.9s,baz=360,slow=5.4,SNR=3.2						
FITZ	**Fitzroy Crossi**	**20.87**	**188**	*e*P	**P**	**03 20 33.0**	**-1.2**
	6.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.87**	**188**	*e*P	**P**	**03 20 32.8**	**-1.4**
FITZ				PcP	PcP	03 24 32.9	0.0
FITZ				ScP	ScP	03 27 47.8	-0.4
BJII	**Banjamegara**	**21.39**	**242**	P	**P**	**03 20 40.2**	**+0.5**
	4μm55nm,1.2s,mb4.9						
TPI	**Tanjungpandan**	**21.71**	**256**	P	**P**	**03 20 41.2**	**-1.6**
	24nm,1.1s,mb4.6						
YHNB	**Yeheng**	**22.96**	**343**	*e*P	**P**	**03 20 54.3**	**+0.2**
	13nm,0.7s,mb4.6						
PPBI	**Pangkal Pinang**	**23.05**	**258**	P	**P**	**03 20 54.8**	**-0.2**
	4μm33nm,0.8s,mb4.9						
LEM	**Lembang**	**23.05**	**246**	P	**P**	**03 20 56.0**	**+0.9**
	5μm183nm,0.8s,mb5.6						
WRA	**Warramunga Arr**	**23.16**	**166**	P	**P**	**03 20 55.4**	**-0.6**
	5.2nm,0.3s,mb4.6,baz=343,slow=11,SNR=108						
WRA				S	**S**	**03 24 47.6**	**-2.9**
	1.4nm,0.8s,baz=357,slow=16,SNR=5.6						
WRA				ScP	ScP	03 27 53.3	-0.7
	1.4nm,0.5s,baz=343,slow=2.9,SNR=8.3						
WB2	**Warramunga Arr**	**23.16**	**166**	*e*P	**P**	**03 20 56.5**	**+0.5**
CISI	**Cisompet, Garu**	**23.17**	**244**	P	**P**	**03 20 54.8**	**-1.4**
	3μm79nm,1.0s,mb5.2						
CBJI	**Citeko**	**23.60**	**247**	P	**P**	**03 21 00.3**	**+0.2**
	266nm,0.7s						
DBJI	**Dramaga**	**23.74**	**247**	P	**P**	**03 21 01.9**	**+0.5**
	4μm92nm,0.7s,mb5.5						
RBSI	**Rajabasa**	**24.43**	**250**	P	**P**	**03 21 08.1**	**+0.5**
	3μm252nm,0.6s						
KLSI	**Cipu**	**25.03**	**253**	P	**P**	**03 21 13.1**	**+0.1**
	2μm70nm,0.8s,mb5.3						
MBWA	**Marble Bar**	**25.27**	**200**	*e*P	**P**	**03 21 14.0**	**-1.0**
	9.2nm,0.8s,mb4.5						
KASI	**Kota Agung**	**25.50**	**251**	P	**P**	**03 21 17.1**	**-0.1**
	4μm55nm,1.0s,mb5.1						
MDSI	**Maura Dua**	**25.50**	**254**	P	**P**	**03 21 14.8**	**-2.5**
	2μm31nm,0.8s,mb5.0						
LWLI	**Liwa**	**25.76**	**253**	P	**P**	**03 21 20.2**	**+0.6**
ASAR	**Alice Springs**	**26.68**	**169**	P	**P**	**03 21 27.8**	**+0.1**
	5.9nm,0.5s,mb4.5,baz=355,slow=8.2,SNR=70						
ASAR				PcP	PcP	03 24 45.5	+0.3
	3.8nm,0.6s,baz=355,slow=2.4,SNR=15						
ASAR				S	**S**	**03 25 43.7**	**-2.3**
	1.5nm,0.6s,baz=354,slow=20,SNR=8.1						
ASAR				ScP	ScP	03 28 03.2	-0.7
	2.7nm,0.7s,baz=344,slow=2.4,SNR=11						
CTA	**Charters Tower**	**28.45**	**143**	P	**P**	**03 21 49.4**	**+5.9**
	3.0nm,0.7s,mb4.1,baz=328,slow=12,SNR=3.3						
CMAR	**Chiang Mai Arr**	**33.08**	**300**	P	**P**	**03 22 25.0**	**+1.0**
	8.1nm,0.7s,mb4.4,baz=120,slow=7.2,SNR=27						
CHTO	**Chiang Mai**	**33.23**	**301**	P	**P**	**03 22 25.0**	**-0.3**
KSRS	**Korea Array**	**34.61**	**359**	P	**P**	**03 22 37.4**	**+0.5**
	4.9nm,0.5s,mb4.3,baz=175,slow=9.7,SNR=18						
MJAR	**Matsushiro Arr**	**34.82**	**13**	P	**P**	**03 22 38.0**	**-0.7**
	4.9nm,0.3s,mb4.5,baz=189,slow=9.9,SNR=16						
MAJO	**Matsushiro**	**34.82**	**13**	*e*P	**P**	**03 22 38.4**	**-0.3**
	6.7nm,0.8s,mb4.2						
MAT	**Matsushiro**	**34.82**	**13**	P	**P**	**03 22 37.7**	**-1.0**
STKA	**Stephens Creek**	**36.49**	**161**	P	**P**	**03 22 52.8**	**-0.2**
	4.9nm,0.3s,mb4.5,baz=354,slow=6.7,SNR=15						
STKA				PcP	PcP	03 25 12.2	+0.4
	2.2nm,0.5s,baz=333,slow=5.5,SNR=3.6						
STKA				ScP	ScP	03 28 37.5	+0.6
	1.0nm,0.4s,baz=7.1,slow=8.1,SNR=3.3						
STKA	**Stephens Creek**	**36.49**	**161**	*e*P	**P**	**03 22 51.9**	**-1.1**
	4.4nm,0.3s,mb4.5						
NWAO	**Narrogin (SRO)**	**37.04**	**196**	P	**P**	**03 22 57.3**	**-0.3**
	5.5nm,0.6s,mb4.3,baz=47,slow=11,SNR=5.8						
BJT	**Baijiatuan**	**38.86**	**345**	*e*P	**P**	**03 23 12.7**	**0.0**
	24nm,0.7s,mb4.8						
BJI	**Beijing**	**38.88**	**345**	P	**P**	**03 23 12.4**	**-0.4**
BJI				pmax	pmax		
	comp=Z,35nm,0.6s,mb5.1						
LZH	**Lanzhou**	**40.40**	**328**	*e*P	**P**	**03 23 26.7**	**+1.3**
LZH				pmax	pmax		
	comp=Z,53nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,280nm,4.2s						
ASAJ	**Asahikawa**	**43.06**	**15**	P	**P**	**03 23 48.0**	**+1.2**
	comp=Z,2.9nm,0.4s,mb4.0,baz=228,slow=15,SNR=6.6						
LSA	**Lhasa**	**44.59**	**311**	P	**P**	**03 24 00.4**	**+1.1**
LSA	**Lhasa**	**44.59**	**311**	*e*P	**P**	**03 24 01.1**	**+1.8**
	comp=Z,9.3nm,0.6s,mb4.3						
GTA	**Gaotai**	**45.00**	**328** ⇓	*e*P	**P**	**03 24 02.9**	**+0.6**
GTA				PcP	PcP	03 25 40.4	+1.1
GTA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
TAPN	**Taplejung**	**46.20**	**306**	*e*P	**P**	**03 24 12.4**	**+0.4**
	comp=Z,41nm,0.7s,mb4.9						
ODAN	**Odare**	**46.26**	**305**	*e*P	**P**	**03 24 12.7**	**+0.3**
	comp=Z,73nm,0.6s,mb5.2						
GUN	**Gumba**	**47.91**	**306**	*e*P	**P**	**03 24 25.6**	**+0.5**
PKI	**Pulchoki**	**48.16**	**305**	*e*P	**P**	**03 24 26.9**	**-0.1**
	comp=Z,16nm,0.3s,mb4.8						
PKIN	**Phulchoki**	**48.17**	**305**	*e*P	**P**	**03 24 27.3**	**+0.2**
KKN	**Kakani**	**48.35**	**305**	*e*P	**P**	**03 24 28.5**	**0.0**
DMN	**Daman**	**48.42**	**305**	*e*P	**P**	**03 24 29.1**	**+0.1**
ULN	**Ulaanbaatar**	**48.73**	**341**	*e*P	**P**	**03 24 31.1**	**+0.1**
SONM	**Songino Array**	**48.92**	**340**	P	**P**	**03 24 32.7**	**+0.2**
	comp=Z,3.5nm,0.7s,mb3.8,baz=152,slow=7.9,SNR=5.5						
SONM				PcP	PcP	03 25 52.9	-0.2
	comp=Z,1.9nm,0.5s,baz=158,slow=4.7,SNR=3.3						
GKN	**Gorkha**	**48.96**	**305**	*e*P	**P**	**03 24 32.9**	**-0.2**
KOLN	**Koldanda**	**49.72**	**305**	*e*P	**P**	**03 24 39.2**	**+0.3**
	comp=Z,103nm,0.6s,mb5.4						
DANN	**Dangsing**	**49.81**	**305**	*e*P	**P**	**03 24 39.7**	**+0.2**
	comp=Z,124nm,0.6s,mb5.4						
HYB	**Hyderabad**	**51.30**	**290**	*i* P	**P**	**03 24 50.0**	**-0.8**
PETK	**Petropavlovsk-**	**55.68**	**21**	P	**P**	**03 25 22.5**	**+0.5**
	comp=Z,1.4nm,0.4s,mb3.8,baz=184,slow=5.9,SNR=3.7						
YAK	**Yakutsk**	**59.21**	**1**	*e*P	**P**	**03 25 46.3**	**-0.1**
	comp=Z,40nm,0.7s,mb5.2						
MKAR	**Makanchi Array**	**59.52**	**325**	P	**P**	**03 25 48.7**	**-0.1**
	comp=Z,11nm,0.5s,mb4.8,baz=117,slow=8.3,SNR=57						
MKAR				PcP	PcP	03 26 33.6	-0.2
	comp=Z,3.1nm,0.7s,baz=122,slow=3.9,SNR=5.8						
RPZ	**Rata Peaks**	**59.80**	**146**	P	**P**	**03 25 51.5**	**+0.7**
	comp=Z,9.5nm,0.8s,mb4.5,baz=315,slow=4.9,SNR=3.7						
URZ	**Urewera**	**60.45**	**137**	P	**P**	**03 25 55.5**	**+0.2**
	comp=Z,6.3nm,0.6s,mb4.4,baz=0.0,slow=20,SNR=3.4						
ZALV	**Zalesovo Beam**	**62.40**	**332**	P	**P**	**03 26 06.5**	**-1.6**
	comp=Z,4.3nm,0.4s,mb4.5,baz=123,slow=6.6,SNR=7.7						
ZALV	**Zalesovo Beam**	**62.40**	**332**	P	**P**	**03 26 06.5**	**-1.6**
AML	**Almayashu**	**62.78**	**317**	*e*P	**P**	**03 26 11.2**	**+0.4**
	comp=Z,287nm,1.2s						
AML				*e*PcP	PcP	03 26 47.8	+0.6
EKS2	**Erkin-Say**	**62.93**	**317**	*e*P	**P**	**03 26 11.8**	**0.0**
	comp=Z,6.2nm,0.6s,mb4.4						
KURK	**Kurchatov**	**63.67**	**327**	*e*P	**P**	**03 26 15.9**	**-0.5**
	comp=Z,29nm,0.6s,mb5.1						
KKAR	**Karatay Array**	**65.32**	**317**	*e*P	**P**	**03 26 26.6**	**-0.7**
	comp=Z,3.9nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	**69.25**	**327**	P	**P**	**03 26 51.1**	**-0.6**
	comp=Z,7.6nm,0.5s,mb4.6,baz=114,slow=7.2,SNR=19						
BRVK	**Borovoye**	**69.33**	**327**	*e*P	**P**	**03 26 51.6**	**-0.5**
	comp=Z,9.1nm,0.5s,mb4.7						
CASY	**Casey**	**70.03**	**188**	*e*P	**P**	**03 26 56.7**	**+0.5**
	comp=Z,6.3nm,0.6s,mb4.4						
ABKAR	**Akbulak array**	**74.19**	**321**	*e*P	**P**	**03 27 20.1**	**-1.1**
AKTK	**Aktyubinsk**	**75.68**	**321**	P	**P**	**03 27 28.9**	**-0.7**
AKTO	**Aktyubinsk**	**75.68**	**321**	P	**P**	**03 27 28.9**	**-0.7**
	comp=Z,2.5nm,0.4s,mb4.2,baz=89,slow=5.6,SNR=6.5						
KDAK	**Kodiak Island**	**81.73**	**32**	P	**P**	**03 28 03.5**	**+1.1**
	comp=Z,6.9nm,0.5s,mb4.6,baz=208,slow=7.7,SNR=8.9						
OPO	**Ambohid

*ATH **08** 03:30:52.3, 40°.60N×22°.90E, h24km±2km, MD2.9/7*
*CSEM **08** 03:30:52.5±0.2, 40°.60N×22°.90E, h15km, ML2.2/8, Error ellipse: s-maj=4.8km s-min=4.5km az=42.0*
*THE **08** 03:30:53.4, 40°.60N×22°.91E, h4km±2km, ML2.2/8, Error ellipse: s-maj=2.5km s-min=0.6km az=40.0*
*SKO **08** 03:30:53.5, 40°.60N×22°.89E, h1km, M1.5, ML1.8*
ISC 08 03:30:52.9±0.4, 40°.60N±0°.02×22°.90E±0°.04, h10km±4km, n38, σ0°86/60, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.06**	**59**	P	**Pg**	**03 30 54.6**	**-0.4**
THE				S	**Sg**	**03 30 55.8**	**-0.8**
THE	**Thessaloniki**	**0.06**	**59**	P	**Pg**	**03 30 54.6**	**-0.4**
THE				S	**Sg**	**03 30 55.8**	**-0.8**
HORT	**Hortiatis**	**0.15**	**91**	P	**Pg**	**03 30 56.1**	**-0.3**
HORT				S	**Sg**	**03 30 58.7**	**0.0**
HORT	**Hortiatis**	**0.15**	**91**	P	**Pg**	**03 30 56.1**	**-0.3**
HORT				S	**Sg**	**03 30 58.7**	**0.0**
SOH	**Sokhos**	**0.41**	**57**	*e*PB	**Pg**	**03 31 01.1**	**+0.1**
SOH				*e*SB	**Sg**	**03 31 07.3**	**+0.8**
SOH	**Sokhos**	**0.41**	**57**	P	**Pg**	**03 31 01.2**	**+0.2**
SOH				S	**Sg**	**03 31 07.2**	**+0.7**
SOH	**Sokhos**	**0.41**	**57**	P	**Pg**	**03 31 01.2**	**+0.2**
SOH				S	**Sg**	**03 31 07.2**	**+0.7**
PLG	**Polygyros**	**0.48**	**118**	*e*PB	**Pg**	**03 31 01.6**	**-0.6**
PLG				*e*SB	**Sg**	**03 31 08.5**	**0.0**
PLG	**Polygyros**	**0.48**	**118**	P	**Pg**	**03 31 01.6**	**-0.6**
PLG				S	**Sg**	**03 31 09.4**	**+0.9**
PLG	**Polygyros**	**0.48**	**118**	P	**Pg**	**03 31 01.6**	**-0.6**
PLG				*e*Sb	**Sg**	**03 31 08.5**	**0.0**
PLG				S	**Sg**	**03 31 09.4**	**+0.9**
GRG	**Griva**	**0.52**	**314**	P	**Pg**	**03 31 02.9**	**-0.1**
GRG	**Griva**	**0.52**	**314**	P	**Pg**	**03 31 02.9**	**-0.1**
KNT	**Kendrikon**	**0.56**	**0**	P	**Pg**	**03 31 03.8**	**0.0**
KNT				S	**Sg**	**03 31 11.9**	**+0.7**
KNT	**Kendrikon**	**0.56**	**0**	P	**Pg**	**03 31 03.8**	**0.0**
KNT				S	**Sg**	**03 31 11.9**	**+0.7**
LIT	**Litokhoron**	**0.59**	**212**	*e*PN	**Pg**	**03 31 04.4**	**+0.1**
LIT				*e*SN	**Sg**	**03 31 13.2**	**+1.2**
LIT	**Litokhoron**	**0.59**	**212**	P	**Pg**	**03 31 04.5**	**+0.2**
LIT	**Litokhoron**	**0.59**	**212**	*e*Pn	**Pg**	**03 31 04.4**	**+0.1**
SRS	**Serrai**	**0.74**	**45**	P	**Pg**	**03 31 06.8**	**-0.4**
SRS				S	**Sg**	**03 31 18.3**	**+1.5**
SRS	**Serrai**	**0.74**	**45**	P	**Pg**	**03 31 06.8**	**-0.4**
SRS				S	**Sg**	**03 31 18.3**	**+1.5**
VAY	**Valandovo**	**0.76**	**341**	P	**Pg**	**03 31 07.0**	**-0.6**
VAY	**Valandovo**	**0.76**	**341**	*e*Pg	**Pg**	**03 31 07.0**	**-0.6**
VAY				*e*Sg	**Sg**	**03 31 17.2**	**-0.4**
VAY				*e*Lg		03 31 17.8	
	comp=N,33nm,0.4s						
VAY				*e*Lg		03 31 18.0	
	comp=E,34nm,0.6s						
VAY	**Valandovo**	**0.76**	**341**	P	**Pg**	**03 31 07.0**	**-0.6**
OUR	**Ouranopolis**	**0.87**	**107**	P	**Pg**	**03 31 08.6**	**-1.1**
OUR				S	**Sg**	**03 31 21.9**	**+0.9**
OUR	**Ouranopolis**	**0.87**	**107**	P	**Pg**	**03 31 08.6**	**-1.1**
OUR				S	**Sg**	**03 31 21.9**	**+0.9**
PAIG	**Paliouri**	**0.90**	**138**	P	**Pg**	**03 31 09.4**	**-0.9**
PAIG				S	**Sg**	**03 31 22.8**	**+0.8**
PAIG	**Paliouri**	**0.90**	**138**	P	**Pg**	**03 31 09.4**	**-0.9**
PAIG				S	**Sg**	**03 31 22.8**	**+0.8**
KZN	**Kozani**	**0.91**	**251**	*e*PN	**Pn**	**03 31 09.8**	**-1.9**
KZN	**Kozani**	**0.91**	**251**	*e*Pn	**Pn**	**03 31 09.8**	**-1.9**
NVR	**Nevrokopi**	**1.05**	**44**	*e*PN	**Pn**	**03 31 12.4**	**-1.2**
NVR	**Nevrokopi**	**1.05**	**44**	*e*Pn	**Pn**	**03 31 12.4**	**-1.2**
FNA	**Florina**	**1.17**	**279**	P	**Pb**	**03 31 15.8**	**+0.6**
FNA				S	**Sb**	**03 31 33.3**	**+2.9**
FNA	**Florina**	**1.17**	**279**	P	**Pb**	**03 31 15.8**	**+0.6**
THL	**Klokotos Trika**	**1.24**	**213**	*e*PN	**Pn**	**03 31 16.2**	**0.0**
THL	**Klokotos Trika**	**1.24**	**213**	*e*Pn	**Pn**	**03 31 16.2**	**0.0**
KAVA	**Kavala**	**1.29**	**72**	P	**Pn**	**03 31 17.7**	**+0.7**
KAVA	**Kavala**	**1.29**	**72**	P	**Pn**	**03 31 17.7**	**+0.7**
NEO	**Neokhori**	**1.32**	**169**	*e*PN	**Pn**	**03 31 16.6**	**-0.7**
NEO	**Neokhori**	**1.32**	**169**	*e*Pn	**Pn**	**03 31 16.6**	**-0.7**

*IDC **08** 03:31:12.7±1.2, 5°.97S×150°.54E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/16, mbtmp3.9/6, Error ellipse: s-maj=49.8km s-min=23.7km az=121.0*
*ISCJB **08** 03:31:18.0±4.1, 6°.2S±0°.2×150°.5E±0°.3, h46km±33km, mb3.8/6, Error ellipse: s-maj=45.7km s-min=23.6km az=24.6*
*NEIC **08** 03:31:21.0±3.6, 5°.92S×150°.27E, h58km±29km, mb3.8/1, Error ellipse: s-maj=35.3km s-min=26.4km az=112.0*
ISC 08 03:31:19.0±4.0, 6°.2S±0°.2×150°.6E±0°.3, h41km±32km, n13, σ0°88/12, mb3.8/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.65**	**226**	*e*Pn	**Pn**	**03 32 27.4**	**+0.6**
PMG				*e*S	**Sn**	**03 33 18.5**	**-1.0**
CTA	**Charters Tower**	**14.45**	**196**	Pn	**Pn**	**03 34 47.0**	**+6.1**
	0.2nm,0.3s,baz=18,slow=11,SNR=6.0						
WB2	**Warramunga Arr**	**20.86**	**227**	*e*P	**P**	**03 35 57.8**	**+0.1**
WRA	**Warramunga Arr**	**20.86**	**228**	P	**P**	**03 35 58.0**	**+0.2**
	2.8nm,0.4s,baz=53,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**23.64**	**221**	P	**P**	**03 36 27.3**	**+0.5**
	0.8nm,0.3s,mb3.6,baz=56,slow=9.3,SNR=18						
STKA	**Stephens Creek**	**26.91**	**197**	P	**P**	**03 36 57.3**	**+0.9**
	2.9nm,0.8s,mb3.9,baz=352,slow=10.0,SNR=4.6						
STKA	**Stephens Creek**	**26.91**	**197**	*e*P	**P**	**03 36 56.5**	**+0.2**
	5.7nm,2.1s,mb3.7						
FITZ	**Fitzroy Crossi**	**27.04**	**242**	P	**P**	**03 36 57.1**	**-0.6**
	1.5nm,0.4s,mb3.9,baz=80,slow=7.7,SNR=15						
GTA	**Gaotai**	**65.17**	**319**	*e*P	**P**	**03 41 57.6**	**+1.5**
GTA				pP	pP	03 42 06.2	-1.9
GTA				sP	sP	03 42 10.3	-2.5
GTA				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.6						
MKAR	**Makanchi Array**	**79.90**	**320**	P	**P**	**03 43 23.3**	**-0.3**
	comp=Z,0.2nm,0.4s,mb3.4,baz=106,slow=9.1,SNR=2.4						
ILAR	**Eielson Array**	**84.27**	**22**	P	**P**	**03 43 44.4**	**-1.8**
	comp=Z,0.6nm,0.8s,mb3.8,baz=212,slow=3.2,SNR=5.5						
TORD	**Torodi Ar. Bea**	**148.55**	**285**	PKPbc	PKPbc	03 51 02.1	-0.5
	comp=Z,3.2nm,0.7s,baz=94,slow=2.8,SNR=55						
BDFB	**Brasilia**	**151.58**	**140**	PKPbc	PKPbc	03 51 10.7	+0.8
	comp=Z,0.7nm,0.3s,baz=180,slow=3.8,SNR=3.9						

*INMG **08** 03:52:51.5, 37°.38N×30°.94W, h0km, Mb4.6*
*ISCJB **08** 03:52:59.4±0.2, 38°.27N±0°.04×29°.75W±0°.02, h10km, mb4.5/89, Error ellipse: s-maj=5.1km s-min=1.7km az=177.9*
*IDC **08** 03:52:59.9±0.5, 38°.41N×29°.87W, h0km, mb4.1/23, mb1 4.3/23, mb1mx4.2/31, mbtmp4.2/23, Error ellipse: s-maj=15.3km s-min=12.5km az=164.0*
*CSEM **08** 03:53:00.0±0.1, 38°.32N×29°.75W, h2km, mb4.6/63, Error ellipse: s-maj=6.9km s-min=3.2km az=179.0*
*NEIC **08** 03:53:01.4±0.2, 38°.29N×29°.79W, h10km, mb4.6/65, Error ellipse: s-maj=6.0km s-min=3.3km az=2.0*
*PDA **08** 03:53:02.5±1.2, 38°.47N×29°.87W, h10km, MD4.1, ML4.5, Error ellipse: s-maj=9.5km s-min=6.2km az=175.0*
*BGS **08** 03:53:03.8±2.3, 38°.29N×29°.19W, h10km, mb4.6*
*SZGRF **08** 03:53:18.3, 39°.21N×28°.33W, h33km, mb5.0, MS4.8, Azores Islands, Portugal*
ISC 08 03:53:01.4±0.1, 38°.29N±0°.03×29°.70W±0°.02, h10km, n498, σ1°03/509, mb4.5/89, 62C-61D, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.84**	**69**	*e*P	**Pg**	**03 53 17.4**	**-0.1**
CALA				*e*S	**Sg**	**03 53 28.0**	**-0.4**
CALA				*e*T		03 54 40.3	
CALA	**Caldeira**	**0.84**	**69**	*e*P	**Pg**	**03 53 17.4**	**-0.1**
CALA				*e*S	**Sg**	**03 53 28.0**	**-0.4**
PCED	**Cedros**	**0.85**	**66**	*e*P	**Pg**	**03 53 16.7**	**-1.1**
PCED				*e*S	**Sg**	**03 53 27.4**	**-1.5**
PCED				A		03 53 29.4	
	17μm,0.5s						
PCED				*e*P		03 54 38.6	
PCED	**Cedros**	**0.85**	**66**	*e*P	**Pg**	**03 53 16.7**	**-1.1**
PCED				*e*S	**Sg**	**03 53 27.4**	**-1.5**
HOR	**Horta**	**0.87**	**74**	*e*P	**Pg**	**03 53 18.3**	**+0.1**
HOR				*e*S	**Sg**	**03 53 29.5**	**-0.1**
HOR				*e*T		03 54 40.3	
HOR	**Horta**	**0.87**	**74**	*e*P	**Pg**	**03 53 18.3**	**+0.1**
HOR				*e*S	**Sg**	**03 53 29.5**	**-0.1**
PCAN	**Candelaria**	**0.97**	**79**	*e*P	**Pg**	**03 53 18.9**	**-1.1**
PCAN				*e*S	**Sg**	**03 53 31.3**	**-1.4**
PCAN				*e*T		03 54 43.7	
PCAN	**Candelaria**	**0.97**	**79**	*e*P	**Pg**	**03 53 18.9**	**-1.1**
PCAN				*e*S	**Sg**	**03 53 31.3**	**-1.4**
PICO	**Pico**	**1.02**	**78**	*e*P	**Pg**	**03 53 20.8**	**-0.2**
PICO				*e*S	**Sg**	**03 53 33.5**	**-0.8**
PICO				*e*T		03 54 46.0	
PICO	**Pico**	**1.02**	**78**	*e*P	**Pg**	**03 53 20.8**	**-0.2**
PICO				*e*S	**Sg**	**03 53 33.5**	**-0.8**
ROSA	**Rosais**	**1.22**	**69**	*e*P	**Pn**	**03 53 23.1**	**-1.4**
ROSA				*e*S	**Sb**	**03 53 37.4**	**-3.0**
ROSA				*e*T		03 54 49.4	
ROSA	**Rosais**	**1.22**	**69**	*e*P	**Pn**	**03 53 23.1**	**-1.4**
PID	**Ribeirinha**	**1.25**	**82**	*e*P	**Pn**	**03 53 23.9**	**-1.0**
PID				*e*T		03 54 52.9	
PID	**Ribeirinha**	**1.25**	**82**	*e*P	**Pn**	**03 53 23.9**	**-1.0**
PMAN	**Manadas**	**1.31**	**74**	*e*P	**Pn**	**03 53 23.8**	**-1.9**
PMAN				*e*S	**Sb**	**03 53 39.2**	**-3.7**
PMAN				A		03 53 41.9	
	2μm,0.3s						
PMAN				*e*T		03 54 51.0	
PMAN	**Manadas**	**1.31**	**74**	*e*P	**Pn**	**03 53 23.8**	**-1.9**
ADH	**Angra Heroismo**	**1.97**	**79**	*e*P	**Pn**	**03 53 33.1**	**-1.7**
ADH				*e*S	**Sn**	**03 53 55.8**	**-3.7**
ADH				A		03 53 58.7	
	3μm,0.5s						
ADH	**Angra Heroismo**	**1.97**	**79**	*e*P	**Pn**	**03 53 33.1**	**-1.7**
PSET	**Sete Cidades**	**3.17**	**97**	*e*P	**Pn**	**03 53 50.1**	**-1.2**
PSET				*e*S	**Sn**	**03 54 26.2**	**-3.0**
PSET				A		03 54 28.6	
	89nm,0.4s						
PSET	**Sete Cidades**	**3.17**	**97**	*e*P	**Pn**	**03 53 50.1**	**-1.2**
PDA	**Ponta Delgada**	**3.23**	**98**	*e*P	**Pn**	**03 53 50.7**	**-1.4**
PDA				*e*S	**Sn**	**03 54 28.1**	**-2.6**
PDA	**Ponta Delgada**	**3.23**	**98**	*e*P	**Pn**	**03 53 50.7**	**-1.4**
GRON	**Grota Negra**	**3.33**	**98**	*e*P	**Pn**	**03 53 54.5**	**+1.0**
GRON				*e*S	**Sn**	**03 54 33.2**	**+0.1**
GRON				A		03 54 34.7	
	36nm,0.3s						
BART	**Pico Bartolome**	**3.61**	**97**	*e*P	**Pn**	**03 53 56.6**	**-0.8**
BART	**Pico Bartolome**	**3.61**	**97**	*e*P	**Pn**	**03 53 56.6**	**-0.8**
PSMA	**Santa Maria**	**3.85**	**108**	*e*P	**Pn**	**03 53 59.3**	**-1.3**
PSMA				*e*S	**Sn**	**03 54 43.0**	**-2.9**
PSMA				A		03 54 44.0	
	98nm,0.2s						
PSMN	**Pico do Norte,**	**3.90**	**108**	*e*P	**Pn**	**03 53 59.5**	**-1.8**
PSMN	**Pico do Norte,**	**3.90**	**108**	*e*P	**Pn**	**03 53 59.5**	**-1.8**
PMAR	**Madeira**	**11.80**	**114**	*e*Pn	**Pn**	**03 55 49.7**	**0.0**
PMAR				A		03 55 51.9	
	129nm,0.3s						
PMAR	**Madeira**	**11.80**	**114**	*e*Pn	**Pn**	**03 55 49.7**	**0.0**
	129nm,0.3s						
FUL	**Funchal**	**11.86**	**115**	*e*Pn	**Pn**	**03 55 50.0**	**-0.5**
FUL				A		03 55 51.8	
	135nm,0.6s						
FUL	**Funchal**	**11.86**	**115**	*e*Pn	**Pn**	**03 55 50.0**	**-0.5**
	135nm,0.6s						
PMPS	**Porto Santo**	**12.05**	**112**	*e*Pn	**Pn**	**03 55 51.6**	**-1.6**
PMPS				A		03 55 53.1	
	192nm,1.6s						
PMPS	**Porto Santo**	**12.05**	**112**	*e*Pn	**Pn**	**03 55 51.6**	**-1.6**
	192nm,1.6s						
EHIG	**Higuera**	**13.87**	**131**	P	**Pn**	**03 56 17.5**	**-0.5**
	58nm,0.5s						
EHIG	**Higuera**	**13.87**	**131**	P	**Pn**	**03 56 17.5**	**-0.6**
	58nm,0.5s						
CHIE	**El Hierro**	**14.40**	**134**	P	**Pn**	**03 56 24.0**	**-1.3**
	11nm,0.3s						
EBAJ	**Bajamar**	**14.78**	**127**	P	**Pn**	**03 56 30.2**	**-0.2**
	16nm,0.3s						
CCAN	**Las Canadas**	**14.84**	**129**	P	**Pn**	**03 56 30.8**	**-0.5**
	12nm,0.2s						
EOSO	**Osorio**	**15.61**	**127**	P	**Pn**	**03 56 41.3**	**-0.1**
	8.0nm,0.3s						
PMAFR	**Mafra**	**15.97**	**81**	*e*P	**Pn**	**03 56 53.8**	**+7.7**
	88nm,1.3s						
PMAFR				*e*LQ		04 18 43.0	
PMAFR				*e*LR	LR	04 19 04.3	
	3μm,20.0s						
CFTV	**Fuerteventura**	**16.33**	**122**	P	**Pn**	**03 56 50.5**	**-0.2**
	1.6nm,0.2s						
EMAZ	**Mazaricos**	**16.40**	**67**	P	**Pn**	**03 56 53.8**	**+2.2**
	0.6nm,0.2s						
EMAZ				S	**Sn**	**03 59 36.7**	**-17**
EMAZ	**Mazaricos**	**16.40**	**67**	P	**Pn**	**03 56 53.8**	**+2.3**
	0.6nm,0.2s						
PFVI	**Vila Bisbo**	**16.56**	**88**	*e*P	**Pn**	**03 57 00.3**	**+6.7**
	67nm,1.4s						
PFVI				*e*LR	LR	04 19 29.2	
	2μm,22.0s						
PTEO	**Sao Teotonio**	**16.57**	**86**	*e*P	**Pn**	**03 56 59.2**	**+5.5**
	40nm,1.7s						
PTOM	**Tomar**	**16.61**	**79**	*e*P	**Pn**	**03 56 54.4**	**+0.1**
MORF	**Marmelete**	**16.67**	**87**	*e*P	**Pn**	**03 56 58.0**	**+3.0**
	42nm,1.7s						
MORF				*e*LQ		04 20 54.5	
MORF				*e*LR	LR	04 21 19.8	
	3μm,22.0s						
MORF	**Marmelete**	**16.67**	**87**	*e*P	**Pn**	**03 56 58.0**	**+3.0**
	42nm,1.7s						
ELOB	**Lobios**	**16.93**	**71**	P	**Pn**	**03 56 58.4**	**+0.1**
	1.7nm,0.3s						
ELOB				S	**Sn**	**03 59 50.4**	**-16**
ELOB	**Lobios**	**16.93**	**71**	P	**Pn**	**03 56 58.4**	**+0.1**
	1.7nm,0.3s						
PCAB	**Cabril**	**16.95**	**72**	*e*P	**Pn**	**03 57 06.4**	**+7.9**
	34nm,1.6s						
PVIS	**Viseu**	**17.00**	**75**	*e*P	**Pn**	**03 57 04.3**	**+5.2**
EVO	**Evora**	**17.00**	**82**	*e*P	**Pn**	**03 56 57.3**	**-1.9**
	22nm,1.1s						
EVO	**Evora**	**17.00**	**82**	*e*P	**Pn**	**03 57 05.8**	**+6.6**
	18nm,1.6s						
PCVE	**Castro Verde**	**17.09**	**85**	*e*P	**Pn**	**03 57 04.2**	**+3.8**
	46nm,1.4s						
PCVE				*e*LR	LR	04 23 55.8	
	3μm,22.0s						
PCVE	**Castro Verde**	**17.09**	**85**	*e*P	**Pn**	**03 57 04.2**	**+3.8**
	46nm,1.4s						
PVRL	**Vila Real**	**17.15**	**73**	*e*P	**Pn**	**03 57 05.5**	**+4.4**
PVRL	**Vila Real**	**17.15**	**73**	*e*P	**Pn**	**03 57 05.5**	**+4.4**
PBDV	**Barranco-do-Ve**	**17.24**	**87**	*e*P	**Pn**	**03 57 08.7**	**+6.5**
	40nm,1.8s						
PBDV				*e*LQ		04 23 27.0	
PBDV				*e*LR	LR	04 24 35.4	
	4μm,22.0s						
MTE	**Manteigas**	**17.26**	**76**	*e*P	**Pn**	**03 57 10.9**	**+8.5**
	28nm,1.6s						
MTE				*e*LR	LR	04 18 41.0	
	3μm,22.0s						
MTE				*e*LQ		04 18 42.7	
MTE	**Manteigas**	**17.26**	**76**	P	**Pn**	**03 57 02.3**	**-0.1**
MTE	**Manteigas**	**17.26**	**76**	P	**Pn**	**03 57 02.3**	**-0.1**
PESTR	**Estremoz**	**17.30**	**81**	*e*P	**Pn**	**03 57 09.9**	**+7.0**
	36nm,1.5s						
PESTR				*e*LR	LR	04 19 16.3	
	4μm,20.0s						
PCBR	**Castelo Branco**	**17.32**	**78**	*e*P	**Pn**	**03 57 05.0**	**+1.8**
PCBR	**Castelo Branco**	**17.32**	**78**	*e*P	**Pn**	**03 57 05.0**	**+1.8**
PVAQ	**Vaqueiros**	**17.38**	**86**	*e*LR	LR	04 25 03.4	
	4μm,22.0s						
PMRV	**Marv??o**	**17.41**	**79**	*e*P	**Pn**	**03 57 08.2**	**+3.9**
	28nm,1.8s						
PMRV				*e*LR	LR	04 19 03.5	
	4μm,22.0s						
PMRV				*e*LQ		04 19 05.5	
PMRV	**Marv??o**	**17.41**	**79**	*e*P	**Pn**	**03 57 08.2**	**+3.9**
	28nm,1.8s						
EGRO	**El Granado**	**17.55**	**86**	P	**Pn**	**03 57 07.3**	**+1.3**
	0.8nm,0.3s						
EGRO	**El Granado**	**17.55**	**86**	P	**Pn**	**03 57 07.3**	**+1.3**
	0.8nm,0.3s						
MVO	**Moncorvo**	**17.67**	**74**	*e*P	**Pn**	**03 57 13.1**	**+5.6**
MVO				*e*LQ		04 18 27.6	
MVO				A		04 34 34.1	
	4μm,22.0s						
EBAD	**Badajoz**	**17.76**	**81**	P	**Pn**	**03 57 09.8**	**+1.2**
	0.2nm,0.1s						
EBAD	**Badajoz**	**17.76**	**81**	P	**Pn**	**03 57 09.8**	**+1.2**
	0.2nm,0.1s						
PBAR	**Barrancos**	**17.80**	**83**	*e*P	**Pn**	**03 57 10.3**	**+1.1**
	24nm,1.8s						
PBAR				*e*LR	LR	04 19 39.7	
	5μm,20.0s						
PBAR	**Barrancos**	**17.80**	**83**	*e*P	**Pn**	**03 57 10.3**	**+1.1**
	24nm,1.8s						
PBRG	**Braganca**	**17.91**	**71**	*e*P	**Pn**	**03 57 17.5**	**+7.0**
	28nm,1.4s						
ECAL	**Calabor**	**17.93**	**71**	P	**Pn**	**03 57 12.7**	**+2.0**
	0.3nm,0.2s						
ECAL	**Calabor**	**17.93**	**71**	P	**Pn**	**03 57 12.7**	**+2.0**
	0.3nm,0.2s						
EMIN	**Mina Concepcio**	**18.15**	**84**	P	**Pn**	**03 57 14.0**	**+0.6**
	0.1nm,0.2s						
EMIN	**Mina Concepcio**	**18.15**	**84**	P	**Pn**	**03 57 14.0**	**+0.6**
	0.1nm,0.2s						
PAB	**San Pablo**	**19.75**	**78**	*e*P	**Pn**	**03 57 33.8**	**+1.0**
	9.3nm,1.1s						
PAB	**San Pablo**	**19.75**	**78**	*e*P	**Pn**	**03 57 33.8**	**+1.0**
	9.3nm,1.1s						
EMIJ	**Mijas**	**19.86**	**87**	P	**Pn**	**03 57 35.9**	**+1.8**
	0.4nm,0.3s						
ESDC	**Sonseca Array**	**20.04**	**78**	P	**P**	**03 57 37.5**	**+3.1**
	5.9nm,0.9s,baz=273,slow=10,SNR=12						
ESDC	**Sonseca Array**	**20.04**	**78**	P	**P**	**03 57 37.5**	**+3.1**
ELAN	**Lanestosa**	**20.46**	**68**	P	**P**	**03 57 41.1**	**+2.1**
	0.7nm,0.5s						
ELAN	**Lanestosa**	**20.46**	**68**	P	**P**	**03 57 41.1**	**+2.1**
	0.7nm,0.5s						
EGUA	**Guajares**	**20.75**	**86**	P	**P**	**03 57 45.2**	**+3.1**
	1.3nm,0.2s						
CCA1	**Carnmenellis**	**21.08**	**48**	P	**P**	**03 57 43.5**	**-2.1**
CCA1				AMB	AMB	03 57 44.3	
	53nm,2.1s,mb4.5						
CCA1	**Carnmenellis**	**21.08**	**48**	*e*P	**P**	**03 57 43.5**	**-2.1**
CCA1	**Carnmenellis**	**21.08**	**48**	*e*P	**P**	**03 57 43.5**	**-2.1**
CCA1	**Carnmenellis**	**21.08**	**48**	AMB	AMB	03 57 44.3	
	comp=Z,53nm,2.1s,mb4.5						
MDT	**Midelt**	**21.10**	**97**	P	**P**	**03 57 48.8**	**+2.8**
	comp=Z,12nm,1.1s,mb4.1,baz=300,slow=11,SNR=14						
MDT	**Midelt**	**21.10**	**97**	P	**P**	**03 57 48.8**	**+2.8**
QUIF	**Quistinic**	**21.54**	**55**	*e*P	**P**	**03 57 51.1**	**+0.5**
	comp=Z,66nm,1.3s,mb4.6						
QUIF	**Quistinic**	**21.54**	**55**	*e*P	**P**	**03 57 51.1**	**+0.5**
	comp=Z,33nm,1.3s,mb4.6						
QUIF	**Quistinic**	**21.54**	**55**	*e*P	**P**	**03 57 51.1**	**+0.5**
	comp=Z,33nm,1.3s,mb4.6						
ROSF	**Rostrenen**	**21.59**	**54**	*e*P	**P**	**03 57 54.0**	**+2.8**
	comp=Z,43nm,1.1s,mb4.5						
ROSF	**Rostrenen**	**21.59**	**54**	*e*P	**P**	**03 57 54.0**	**+2.8**
	comp=Z,21nm,1.1s,mb4.5						
SGMF	**Saint Gilles**	**22.03**	**54**	*e*P	**P**	**03 57 56.2**	**+0.4**
	comp=Z,35nm,1.0s,mb4.4						
SGMF	**Saint Gilles**	**22.03**	**54**	*e*P	**P**	**03 57 56.2**	**+0.4**
	comp=Z,18nm,1.0s,mb4.4						
SGMF	**Saint Gilles**	**22.03**	**54**	*e*P	**P**	**03 57 56.2**	**+0.4**
	comp=Z,18nm,1.0s,mb4.4						
SJPF	**Ste Jean**	**22.07**	**68**	*e*P	**P**	**03 57 56.7**	**+0.4**
	comp=Z,60nm,1.4s,mb4.5						
SJPF	**Ste Jean**	**22.07**	**68**	*e*P	**P**	**03 57 56.7**	**+0.4**
	comp=Z,30nm,1.4s,mb4.5						
SJPF	**Ste Jean**	**22.07**	**68**	*e*P	**P**	**03 57 56.7**	**+0.4**
	comp=Z,30nm,1.4s,mb4.5						
HTR	**Trewern Hill**	**23.01**	**45**	P	**P**	**03 58 06.3**	**0.0**
HTR	**Trewern Hill**	**23.01**	**45**	*e*P	**P**	**03 58 06.3**	**0.0**
HTR	**Trewern Hill**	**23.01**	**45**	*e*P	**P**	**03 58 06.3**	**+0.1**
EBIE	**Bielsa**	**23.06**	**70**	P	**P**	**03 58 13.4**	**+6.7**
	comp=Z,9.3nm,1.0s,mb4.2						
HGH	**Gray Hill**	**23.08**	**46**	P	**P**	**03 58 07.2**	**+0.3**
HGH	**Gray Hill**	**23.08**	**46**	*e*P	**P**	**03 58 07.2**	**+0.3**
HGH	**Gray Hill**	**23.08**	**46**	*e*P	**P**	**03 58 07.2**	**+0.2**
MCH1	**Michaelchurch**	**23.13**	**45**	P	**P**	**03 58 07.0**	**-0.4**
MCH1				AMB	AMB	03 58 19.1	
	comp=Z,45nm,1.9s,mb4.6						
MCH1	**Michaelchurch**	**23.13**	**45**	*e*P	**P**	**03 58 07.0**	**-0.4**
MCH1				AMB	AMB	03 58 19.1	
	comp=Z,45nm,1.9s,mb4.6						
MCH1	**Michaelchurch**	**23.13**	**45**	*e*P	**P**	**03 58 07.0**	**-0.5**
GRR	**Gorron**	**23.15**	**55**	*e*P	**P**	**03 58 07.7**	**-0.1**
	comp=Z,48nm,1.3s,mb4.5						
GRR	**Gorron**	**23.15**	**55**	*e*P	**P**	**03 58 07.7**	**-0.1**
	comp=Z,24nm,1.3s,mb4.5						
GRR	**Gorron**	**23.15**	**55**	*e*P	**P**	**03 58 07.7**	**-0.1**
	comp=Z,24nm,1.3s,mb4.5						
EPF	**Esparros**	**23.21**	**69**	*e*P	**P**	**03 58 09.1**	**+0.7**
	comp=Z,43nm,1.2s,mb4.4						
EPF	**Esparros**	**23.21**	**69**	*e*P	**P**	**03 58 09.1**	**+0.7**
	comp=Z,22nm,1.2s,mb4.5						
EPF	**Esparros**	**23.21**	**69**	*e*P	**P**	**03 58 09.1**	**+0.7**
	comp=Z,22nm,1.2s,mb4.4						
**MFF

MDO Dochfour 25.36 33 eP P 03 58 29.3 +1.0
AVF Avril sur Loir 25.64 60 eP P 03 58 31.1 +0.1
AVF Avril sur Loir 25.64 60 eP P 03 58 31.1 +0.1
MVH1 Achvaich 25.74 32 P P 03 58 32.5 +0.8
MVH1 Achvaich 25.74 32 eP P 03 58 32.5 +0.8
MVH1 Achvaich 25.74 32 eP P 03 58 32.5 +0.8
SSF Saint Saulge 25.78 59 eP P 03 58 32.6 +0.4
comp=Z,39nm,1.2s,mb4.5
SSF Saint Saulge 25.78 59 eP P 03 58 32.6 +0.4
comp=Z,19nm,1.3s,mb4.5
SSF Saint Saulge 25.78 59 eP P 03 58 32.6 +0.4
comp=Z,19nm,1.2s,mb4.5
LASF Ste Croix 25.79 66 eP P 03 58 30.8 -1.6
comp=Z,64nm,1.5s,mb4.6
LASF Ste Croix 25.79 66 eP P 03 58 30.8 -1.6
comp=Z,32nm,1.5s,mb4.6
MCD Coleburn Disti 25.92 33 P P 03 58 35.0 +1.6
MCD Coleburn Disti 25.92 33 eP P 03 58 35.0 +1.6
MCD Coleburn Disti 25.92 33 eP P 03 58 35.0 +1.6
SMF Signal de Mont 25.96 60 eP P 03 58 34.5 +0.7
comp=Z,50nm,1.1s,mb4.7
SMF Signal de Mont 25.96 60 eP P 03 58 34.5 +0.7
comp=Z,25nm,1.1s,mb4.7
SMF Signal de Mont 25.96 60 eP P 03 58 34.5 +0.7
comp=Z,25nm,1.1s,mb4.7
LOR Lormes 26.05 59 eP P 03 58 35.0 +0.3
comp=Z,29nm,1.2s,mb4.4
LOR Lormes 26.05 59 eP P 03 58 35.0 +0.3
comp=Z,15nm,1.2s,mb4.4
LOR Lormes 26.05 59 eP P 03 58 35.0 +0.3
comp=Z,15nm,1.2s,mb4.4
VIVF Saint-Julien-I 26.40 65 eP P 03 58 38.0 +0.1
comp=Z,49nm,1.4s,mb4.5
VIVF Saint-Julien-I 26.40 65 eP P 03 58 38.0 +0.1
comp=Z,25nm,1.4s,mb4.5
VIVF Saint-Julien-I 26.40 65 eP P 03 58 38.0 +0.1
comp=Z,25nm,1.4s,mb4.5
BAIF Baives 26.78 53 eP P 03 58 41.5 +0.2
BAIF Baives 26.78 53 eP P 03 58 41.5 +0.2
SFTF Sexfontaines 26.97 57 eP P 03 58 43.3 +0.3
comp=Z,27nm,0.9s,mb4.5
SFTF Sexfontaines 26.97 57 eP P 03 58 43.3 +0.3
comp=Z,27nm,0.9s,mb4.8
SFTF Sexfontaines 26.97 57 eP P 03 58 43.3 +0.3
comp=Z,14nm,0.9s,mb4.5
MEZF Maizieres J'vi 27.02 57 eP P 03 58 43.3 -0.2
comp=Z,27nm,0.7s,mb4.6
MEZF Maizieres J'vi 27.02 57 eP P 03 58 43.3 -0.2
comp=Z,27nm,0.7s,mb4.9
MEZF Maizieres J'vi 27.02 57 eP P 03 58 43.3 -0.2
comp=Z,13nm,0.7s,mb4.6
ORIF Oris-en-Rattie 27.26 64 eP P 03 58 48.4 +2.8
comp=Z,36nm,1.2s,mb4.5
ORIF Oris-en-Rattie 27.26 64 eP P 03 58 48.4 +2.8
comp=Z,18nm,1.3s,mb4.5
ORIF Oris-en-Rattie 27.26 64 eP P 03 58 48.4 +2.8
comp=Z,18nm,1.2s,mb4.5
CABF La Chapelle 27.49 61 eP P 03 58 48.0 +0.3
CABF La Chapelle 27.49 61 eP P 03 58 48.0 +0.3
HAU Haudompre 27.81 58 eP P 03 58 50.6 +0.1
comp=Z,16nm,0.9s,mb4.4
HAU Haudompre 27.81 58 eP P 03 58 50.6 +0.1
comp=Z,8.1nm,0.9s,mb4.3
HAU Haudompre 27.81 58 eP P 03 58 50.6 +0.1
comp=Z,8.1nm,0.9s,mb4.3
HINF Hinteralfeld 28.13 58 eP P 03 58 52.5 -0.9
HINF Hinteralfeld 28.13 58 eP P 03 58 52.5 -0.9
CDF Champ du Feu 28.48 57 eP P 03 58 56.9 +0.4
comp=Z,24nm,1.1s,mb4.4
CDF Champ du Feu 28.48 57 eP P 03 58 56.9 +0.4
comp=Z,12nm,1.1s,mb4.4
CDF Champ du Feu 28.48 57 eP P 03 58 56.9 +0.4
comp=Z,12nm,1.1s,mb4.4
BFO Black Forest 29.17 58 eP P 03 59 02.9 +0.3
comp=Z,11nm,1.3s,mb4.4
BFO Black Forest 29.17 58 eP P 03 59 02.9 +0.3
comp=Z,11nm,1.3s,mb4.4
SCHQ Schefferville 29.97 316 P P 03 59 08.4 -1.3
comp=Z,3.4nm,0.9s,mb4.1,baz=203,slow=5.4,SNR=3.8
SCHQ Schefferville 29.97 316 P P 03 59 08.4 -1.3
KEST Kesra 31.13 82 P P 03 59 22.4 +2.3
comp=Z,0.5nm,0.9s,baz=258,slow=1.3,SNR=2.2
KEST Kesra 31.13 82 P P 03 59 22.4 +2.3
GRA1 Grafenberg Arr 31.20 55 eP P 03 59 21.7 +1.2
comp=Z,37nm,1.6s,mb5.0
GRA1 LR LR
comp=Z,2µm,21.6s
GRA1 Grafenberg Arr 31.20 55 eP P 03 59 21.7 +1.2
comp=Z,37nm,1.6s,mb5.0
GRF Grafenberg Arr 31.20 55 eP P 03 59 21.7 +1.2
comp=Z,37nm,1.6s,mb5.0
GRF Grafenberg Arr 31.20 55 eP P 03 59 21.7 +1.2
comp=Z,37nm,1.6s,mb5.0
WTTA Wattenberg 31.32 60⇑iP P 03 59 23.0 +1.3
comp=Z,11nm,1.2s,mb4.6
WTTA Wattenberg 31.32 60 P P 03 59 23.0 +1.3
comp=Z,11nm,1.2s,mb4.6
NKC Novy Kostel 32.04 54 eP P 03 59 29.2 +1.3
NKC Novy Kostel 32.04 54 P P 03 59 29.2 +1.3
CLL Collm 32.51 52 eP P 03 59 33.0 +1.0
CLL e 03 59 40.0
CLL Collm 32.51 52 eP P 03 59 33.0 +1.0
CLL e(sP) sP 03 59 40.0 +3.7
CLL Lmax 04 26 00.0
CLL Collm 32.51 52 eP P 03 59 33.0 +1.0
KHC Kasperske Hory 32.69 56 epP pP 03 59 41.0 +4.3
MOA Molln 33.11 59⇓iP P 03 59 38.3 +0.9
comp=Z,7.7nm,0.8s,mb4.7
MOA Molln 33.11 59 P P 03 59 38.3 +0.9
comp=Z,7.7nm,0.8s,mb4.7
PRU Pruhonice 33.37 55 AMS AMS 04 22 50.0
comp=Z,7µm,24.4s
PVCC Panska Ves 33.42 54 AMS AMS 04 22 50.0
comp=Z,6µm,25.0s
NB2 NORSAR Subarra 34.06 35 P P 03 59 46.0 +0.6
comp=Z,2.4nm,0.7s,mb4.2,baz=248,slow=9.3
NOA NORSAR Array B 34.06 35 P P 03 59 46.0 +0.5
comp=Z,5.9nm,0.9s,mb4.5,baz=248,slow=9.0,SNR=12
NOA NORSAR Array B 34.06 35 P P 03 59 46.0 +0.5
NOA NORSAR Array B 34.06 35 P P 03 59 46.0 +0.6
DPC Dobruska-Polom 34.53 54 eP P 03 59 51.0 +1.4
DPC AMS AMS 04 18 40.0
comp=Z,5µm,29.1s
DPC Dobruska-Polom 34.53 54 P P 03 59 51.0 +1.4
SUMG Summit 34.64 355 eP P 03 59 50.4 0.0
comp=Z,10nm,1.0s,mb4.7
SUMG Summit 34.64 355 iP P 03 59 49.3 -1.1
comp=Z,7.8nm,1.0s,mb4.6
SUMG
comp=Z,3µm,23.0s
SUMG Summit 34.64 355 eP P 03 59 50.4 0.0
comp=Z,10nm,1.0s,mb4.7
CUC Castrocucco 35.05 73 eP P 03 59 56.2 +1.9
comp=Z,12nm,1.1s,mb4.7
CUC Castrocucco 35.05 73 eP P 03 59 56.2 +1.9
comp=Z,12nm,1.1s,mb4.7
OKC Ostrava-Krasne 35.69 55 AMS AMS 04 23 10.0
comp=Z,3µm,22.8s
OJC Ojcow 36.75 55 eP P 04 00 09.9 +1.2
OJC Ojcow 36.75 55 eP P 04 00 09.9 +1.2
TORD Torodi Ar. Bea 37.46 123 P P 04 00 15.9 +0.8
comp=Z,1.3nm,0.5s,mb4.0,baz=316,slow=8.5,SNR=33
CRVS Cervenica-Dubn 37.88 57 eP P 04 00 20.8 +2.5
comp=Z,8.7nm,1.2s,mb4.4
CRVS Cervenica-Dubn 37.88 57 eP P 04 00 20.8 +2.5
CRVS Cervenica-Dubn 37.88 57 eP P 04 00 20.8 +2.5
comp=Z,8.7nm,1.2s,mb4.4
KOLS Kolonicke sedl 38.41 57 eP P 04 00 24.4 +1.6
comp=Z,3.0nm,0.9s,mb4.0
KOLS Kolonicke sedl 38.41 57 eP P 04 00 24.4 +1.6
KOLS Kolonicke sedl 38.41 57 eP P 04 00 24.4 +1.6
comp=Z,3.0nm,0.9s,mb4.0
DBIC Dimbokro 38.69 138 P P 04 00 27.4 +1.9
comp=Z,5.4nm,0.8s,mb4.3,baz=302,slow=6.7,SNR=5.5
DBIC Dimbokro 38.69 138 eP P 04 00 27.7 +2.3
comp=Z,12nm,1.0s,mb4.6
DBIC Dimbokro 38.69 138 eP P 04 00 27.7 +2.2
comp=Z,12nm,1.0s,mb4.6
BUR08 Bucovina Ar. S 40.49 58 eP P 04 00 41.3 +1.2
BUR08 Bucovina Ar. S 40.49 58 eP P 04 00 41.3 +1.2
ACSO Alum Creek Sta 40.78 290 eP P 04 00 42.1 -0.5
comp=Z,14nm,1.0s,mb4.5
ACSO Alum Creek Sta 40.78 290 eP P 04 00 42.2 -0.5
comp=Z,14nm,1.0s,mb4.5
FINES FINESS Array B 41.08 37 P P 04 00 44.8 0.0
comp=Z,5.2nm,0.7s,mb4.3,baz=257,slow=7.6,SNR=13
FINES FINESS Array B 41.08 37 P P 04 00 44.8 0.0
KAF Kangasniemi 41.28 36 ep P 04 00 45.3 -1.2
comp=Z,5.3nm,0.7s,mb4.3
KAF Kangasniemi 41.28 36 eP P 04 00 45.3 -1.2
comp=Z,5.3nm,0.7s,mb4.3
ARCES ARCESS Array B 42.65 25 P P 04 00 57.0 -0.6
comp=Z,4.6nm,0.7s,mb4.3,baz=241,slow=6.8,SNR=30
ARCES ARCESS Array B 42.65 25 P P 04 00 57.0 -0.6
ARCES ARCESS Array B 42.65 25 P P 04 00 57.0 -0.5
KIEV Kiev 42.72 53 eP P 04 00 58.3 -0.1
comp=Z,5.8nm,0.8s,mb4.4
KIEV Kiev 42.72 53 eP P 04 00 58.3 -0.1
comp=Z,5.8nm,0.8s,mb4.4
TKL Tuckaleechee C 42.77 284 P P 04 00 58.5 -0.4
comp=Z,3.4nm,0.9s,mb4.1,baz=60,slow=8.8,SNR=5.1
TKL Tuckaleechee C 42.77 284 P P 04 00 58.5 -0.5
KEV Kevo 43.21 25 ep P 04 01 00.6 -1.5
comp=Z,2.7nm,0.6s,mb4.2
KEV Kevo 43.21 25 eP P 04 01 00.6 -1.5
comp=Z,2.7nm,0.6s,mb4.2
GOGA Godfrey 43.34 281 eP P 04 01 03.6 -0.1
comp=Z,14nm,1.3s,mb4.5
GOGA Godfrey 43.34 281 eP P 04 01 03.6 -0.1
comp=Z,14nm,1.3s,mb4.5
JOF Joensuu 43.68 35 ep P 04 01 03.8 -2.2
comp=Z,4.7nm,0.6s,mb4.4
JOF Joensuu 43.68 35 eP P 04 01 03.8 -2.2
comp=Z,4.7nm,0.6s,mb4.4
WVT Waverly 45.69 286 eP P 04 01 20.9 -1.5
comp=Z,3.3nm,0.9s,mb4.3
WVT Waverly 45.69 286 eP P 04 01 20.9 -1.5
comp=Z,3.3nm,0.9s,mb4.3
SIUC Southern Illin 46.18 289 P P 04 01 26.6 +0.4
comp=Z,10nm,0.8s,mb4.8
SIUC Southern Illin 46.18 289 P P 04 01 26.6 +0.4
comp=Z,10nm,0.8s,mb4.8
OBN Obninsk 46.61 46 eP P 04 01 30.3 +1.0
OBN Obninsk 46.61 46 eP P 04 01 30.3 +1.0
FVM French Village 46.98 289 eP P 04 01 31.6 -1.0
comp=Z,12nm,0.9s,mb4.8
FVM French Village 46.98 289 eP P 04 01 31.6 -0.9
comp=Z,12nm,0.9s,mb4.8
SDV Santo Domingo 46.99 242 eP P 04 01 34.4 +1.6
comp=Z,6.6nm,0.9s,mb4.6
SDV Santo Domingo 46.99 242 eP P 04 01 34.4 +1.6
comp=Z,6.6nm,0.9s,mb4.6
OXF Oxford 47.49 285 eP P 04 01 35.3 -1.2
comp=Z,30nm,0.9s,mb5.2
OXF Oxford 47.49 285 eP P 04 01 35.3 -1.2
comp=Z,30nm,0.9s,mb5.2
CCM Cathedral Cave 47.56 290 eP P 04 01 35.8 -1.3
comp=Z,11nm,1.1s,mb4.8
CCM Cathedral Cave 47.56 290 eP P 04 01 35.8 -1.3
comp=Z,11nm,1.1s,mb4.8
BRTR Keskin Array B 48.31 67 P P 04 01 42.0 -0.9
comp=Z,1.0nm,0.9s,mb3.9,baz=292,slow=6.5,SNR=5.5
BRTR Keskin Array B 48.31 67 P P 04 01 42.0 -0.8
UALR University of 49.61 286 eP P 04 01 52.2 -0.7
comp=Z,9.6nm,1.0s,mb4.8
UALR University of 49.61 286 eP P 04 01 52.2 -0.6
comp=Z,9.6nm,1.0s,mb4.8
FFC Flin Flon 50.09 314 eP P 04 01 56.6 +0.4
comp=Z,9.5nm,0.8s,mb4.9
FFC Flin Flon 50.09 314 eP P 04 01 56.6 +0.4
comp=Z,9.5nm,0.8s,mb4.9
MIAR Mount Ida 50.63 287 eP P 04 01 59.5 -1.1
comp=Z,8.2nm,0.9s,mb4.7
MIAR Mount Ida 50.63 287 eP P 04 01 59.5 -1.1
comp=Z,8.2nm,0.9s,mb4.7
KSU1 Kansas State U 51.12 293 eP P 04 02 02.6 -1.6
comp=Z,14nm,1.1s,mb4.8
KSU1 Kansas State U 51.12 293 eP P 04 02 02.6 -1.6
comp=Z,14nm,1.1s,mb4.8
MALT Malatya 52.30 67 eP P 04 02 14.0 +1.0
comp=Z,6.1nm,1.1s,mb4.4
MALT Malatya 52.30 67 eP P 04 02 14.0 +1.0
comp=Z,6.1nm,1.1s,mb4.4
B21A Ellsworth Farm 54.88 307 ⇑P P 04 02 30.9 -0.9
baz=51
LAO LASA Array 54.98 305 ⇓P P 04 02 30.8 -1.8
baz=51
LAO LASA Array 54.98 305 eP P 04 02 32.1 -0.5
comp=Z,11nm,0.9s,mb4.9
LAO LASA Array 54.98 305 eP P 04 02 32.1 -0.5
comp=Z,11nm,0.9s,mb4.9
C21A Desert Coulee 55.14 307 ⇑P P 04 02 33.2 -0.5
baz=51
C20A Veseth Ranch, 55.75 307 ⇓P P 04 02 38.7 +0.6
baz=52
D20A Manuel Ranch, 56.06 306 ⇓P P 04 02 39.9 -0.4
baz=52
BDFB Brasilia 56.33 201 P P 04 02 42.9 +0.5
comp=Z,3.8nm,0.9s,mb4.4,baz=23,slow=7.7,SNR=3.1
BDFB Brasilia 56.33 201 P P 04 02 42.9 +0.4
C19A Slack Wire Ran 56.40 307 ⇓P P 04 02 42.2 -0.5
baz=52
A18A Metzger Ranch, 56.45 309 ⇑P P 04 02 41.7 -1.4
baz=52
AMTX Amarillo 56.54 290 eP P 04 02 43.4 -0.6
comp=Z,17nm,1.0s,mb5.0
AMTX Amarillo 56.54 290 eP P 04 02 43.3 -0.6
comp=Z,17nm,1.0s,mb5.0
B18A Beardsley Farm 56.61 308 ⇑P P 04 02 42.3 -1.9
baz=53
M23A Laramie 56.64 299 ⇓P P 04 02 42.3 -2.2
baz=53
EGMT Eagleton 56.73 308 ⇓P P 04 02 41.9 -3.2
baz=53
H20A Greybull 56.97 303 ⇓P P 04 02 44.4 -2.5
baz=53,SNR=5.6
A17A Triple J Farms 56.97 309 ⇓P P 04 02 47.6 +0.9
baz=53,SNR=6.6
N23A Red Feather La 57.03 299 ⇓P P 04 02 46.7 -0.6
baz=53,SNR=5.8
F19A Roth Farm, Mol 57.05 305 ⇑P P 04 02 46.3 -1.0
baz=53
J21A Lysite 57.05 302 ⇑P P 04 02 46.5 -0.9
baz=53
ISCO Idaho Springs 57.25 297 ⇑P P 04 02 48.3 -0.6
baz=53
W27A Bowe Ranch, En 57.47 291 ⇓P P 04 02 49.2 -1.4
baz=54
A16A West Butte Ran 57.51 309 ⇓P P 04 02 52.6 +2.0
baz=54
L21A Rawlins 57.56 300 ⇓P P 04 02 51.2 +0.1
baz=54
P23A Jefferson 57.59 297 ⇑P P 04 02 52.2 +0.9
baz=54
D17A Six Diamond Ra 57.65 307 ⇑P P 04 02 50.8 -0.7
baz=54
V26A Tequesquite Ra 57.67 292 ⇓P P 04 02 50.7 -1.3
baz=54
O22A Kremmling 57.75 298 ⇓P P 04 02 50.9 -1.5
baz=54,SNR=8.4
MSTX Muleshoe 57.75 290 ⇑P P 04 02 51.1 -1.5
baz=54
U25A Circle Dot Ran 57.86 293 P P 04 02 53.8 +0.5
baz=54,SNR=11
SDCO Great Sand Dun 58.05 295 ⇓P P 04 02 53.4 -1.1
baz=54
C16A Fuhringer Ranc 58.05 308 ⇓P P 04 02 53.8 -0.6
baz=54
J19A Crowheart 58.16 302 ⇑P P 04 02 53.2 -2.0
baz=54
N21A Black Mountain 58.17 299 ⇑P P 04 02 55.6 +0.3
baz=54
L20A Wamsutter 58.20 301 ⇑P P 04 02 55.2 -0.4
baz=54
ARU Arti 58.24 41 eP P 04 02 56.0 +0.4
comp=Z,6.6nm,0.6s,mb4.8
ARU Arti 58.24 41 eP P 04 02 56.0 +0.4
comp=Z,6.6nm,0.6s,mb4.8
B15A Bradely Ranch, 58.35 309 ⇑P P 04 02 55.1 -1.4
baz=54,SNR=7.2
W25A X Bar L Ranch, 58.43 292 ⇑P P 04 02 56.9 -0.3
baz=54
Q22A Crested Butte, 58.56 297 ⇓P P 04 02 57.1 -1.0
baz=55
C15A Salmond Ranch, 58.60 308 ⇑P P 04 02 57.7 -0.5
baz=55
A14A Double T Ranch 58.61 310 ⇑P P 04 02 58.9 +0.5
baz=55,SNR=6.4
P21A Newcastle 58.65 298 ⇑P P 04 02 57.9 -0.9
baz=55
PDAR Pinedale Array 58.70 302 P P 04 02 57.5 -1.5
comp=Z,3.2nm,1.1s,mb4.3,baz=64,slow=6.8,SNR=13
PDAR Pinedale Array 58.70 302 P P 04 02 57.5 -1.5
BW06 Boulder Array 58.70 302 ⇓P P 04 02 57.6 -1.5
baz=55
R22A Saguache, Gunn 58.73 296 ⇑P P 04 03 00.2 +0.9
baz=55,SNR=5.5
J18A Kendall Valley 58.82 303 ⇓P P 04 02 57.9 -2.0
baz=55
L19A Farson 58.85 301 ⇑P P 04 02 59.2 -0.9
baz=55
WALA Waterton Lakes 58.87 310 eP P 04 02 60.0 -0.2
comp=Z,0.5nm,0.8s,mb3.6
WALA Waterton Lakes 58.87 310 eP P 04 03 00.0 -0.1
comp=Z,0.5nm,0.8s,mb3.6
Z26A Caprock 58.97 290 ⇑P P 04 03 00.5 -0.5
baz=55
S22A 4UR Ranch, Cre 59.00 296 ⇑P P 04 03 00.8 -0.3
baz=55
W24A Lazy 6 Ranch, 59.12 292 ⇑P P 04 03 02.7 +0.7
baz=55
U23A El Rito 59.18 294 ⇓P P 04 03 03.0 +0.5
baz=55
Y25A Mesa, Roswell 59.19 291 ⇓P P 04 03 01.6 -1.0
baz=55
428A Kincaid Ranch, 59.20 287 ⇑P P 04 03 01.7 -1.1
baz=55,SNR=6.1
C14A Swan Lake 59.30 309 ⇓P P 04 03 02.1 -1.0
baz=55
P20A De Beque 59.32 298 ⇓P P 04 03 03.4 +0.1
baz=55,SNR=9.9
T22A Edith 59.38 295 ⇓P P 04 03 02.3 -1.6
baz=55
O19A Miners Draw (B 59.47 299 ⇑P P 04 03 03.8 -0.7
baz=56
Z25A Roswell 59.51 290 ⇑P P 04 03 04.9 +0.1
baz=56,SNR=10
528A Cox Ranch, San 59.55 286 ⇑P P 04 03 04.4 -0.8
baz=56,SNR=17
SWMT Swartz Lake 59.56 309 eP P 04 03 05.5 +0.5
comp=Z,2.8nm,0.7s,mb4.4
SWMT Swartz Lake 59.56 309 eP P 04 03 05.4 +0.5
comp=Z,2.8nm,0.7s,mb4.4
G15A Dillon 59.60 306 ⇑P P 04 03 03.6 -1.6
baz=56
226A Malaga, Loving 59.63 289 ⇓P P 04 03 06.3 +0.7
baz=56
P19A Cripple Cowboy 59.67 298 ⇑P P 04 03 05.1 -0.6
baz=56,SNR=6.4
427A Hayter Ranch, 59.68 287 ⇓P P 04 03 05.1 -1.0
baz=56
S21A Coal Bank Pass 59.72 296 ⇓P P 04 03 04.3 -1.9
baz=56
Y24A Capitan 59.73 291 ⇑P P 04 03 06.6 +0.3
baz=56
125A Gardner Draw, 59.76 289 ⇑P P 04 03 06.3 -0.2
baz=56
326A Caldwell Ranch 59.89 288 ⇓P P 04 03 07.5 0.0
baz=56
BSMT Bassoo Peak 59.90 309 eP P 04 03 08.1 +0.9
comp=Z,2.4nm,0.9s,mb4.2
BSMT Bassoo Peak 59.90 309 eP P 04 03 08.1 +0.8
comp=Z,2.4nm,0.9s,mb4.2
628A Black Gap, Mar 59.96 285 P P 04 03 07.2 -0.7
baz=56,SNR=7.3
Z24A Sheeppen Canyo 59.96 290 P P 04 03 08.4 +0.5
baz=56,SNR=9.1
ANMO Albuquerque 60.01 293 eP P 04 03 08.6 +0.4
comp=Z,10nm,1.7s,mb4.6
ANMO Albuquerque 60.01 293 eP P 04 03 08.6 +0.4
comp=Z,10nm,1.7s,mb4.6
D13A Huson 60.02 308 ⇓P P 04 03 07.3 -0.8
baz=56,SNR=6.3
225A Deer Hill, Car 60.14 289 ⇑P P 04 03 08.9 -0.2
baz=56
527A Woodward Ranch 60.19 286 P P 04 03 08.8 -0.6
baz=56,SNR=13
Y23A Lovelace Mesa, 60.19 291 P P 04 03 09.8 +0.3
baz=56,SNR=9.0
426A McDonald Obser 60.24 287 ⇓P P 04 03 09.5 -0.4
baz=56,SNR=18
124A Stringfield Ra 60.33 290 P P 04 03 10.7 +0.3
baz=56,SNR=22
BNM Barren Site 60.50 292 eP P 04 03 11.7 +0.1
comp=Z,5.6nm,1.2s,mb4.6
BNM Barren Site 60.50 292 eP P 04 03 11.7 +0.1
comp=Z,5.6nm,1.2s,mb4.6
HWUT Hardware Ranch 60.55 302 eP P 04 03 11.0 -0.8
comp=Z,6.4nm,0.9s,mb4.8
HWUT Hardware Ranch 60.55 302 eP P 04 03 11.0 -0.8
comp=Z,6.4nm,0.9s,mb4.8
526A Mary Lane Ranc 60.59 287 P P 04 03 12.3 +0.1
baz=57,SNR=16
TXAR Lajitas Array 60.63 286 P P 04 03 11.9 -0.6
comp=Z,4.7nm,0.8s,mb4.7,baz=78,slow=7.3,SNR=44
TXAR Lajitas Array 60.63 286 P P 04 03 11.9 -0.6
S19A Harvey Farm, M 60.63 297 ⇑P P 04 03 11.6 -0.8
baz=57,SNR=10
224A Cornudas Mount 60.68 289 ⇓P P 04 03 12.6 -0.3
baz=57
Q18A Rafter H Ranch 60.70 298 ⇑P P 04 03 11.9 -0.9
baz=57
C11A Tepee Creek (N 60.80 310 ⇑P P 04 03 13.7 +0.3
baz=57
Y22A Socorro 60.85 292 ⇓P P 04 03 14.3 +0.4
baz=57
R18A Canyonlands Na 60.86 298 P P 04 03 14.1 +0.1
baz=57,SNR=5.2
626A Big Bend Ranch 60.87 286 P P 04 03 14.1 -0.1
baz=57,SNR=8.8
DAU Daniels Canyon 60.88 300 eP P 04 03 14.1 +0.1
comp=Z,12nm,1.2s,mb4.9
DAU Daniels Canyon 60.88 300 eP P 04 03 14.1 0.0
comp=Z,12nm,1.2s,mb4.9
425A Indio Mountain 60.91 288 ⇑P P 04 03 13.9 -0.4
baz=57,SNR=14
324A Moseley Ranch, 60.96 289 ⇓P P 04 03 13.4 -1.3
baz=57
SRU San Rafael 60.97 299 ⇑P P 04 03 13.8 -0.9
baz=57
H13A Challis 60.99 306 ⇓P P 04 03 14.6 -0.2
baz=57
E12A Beaver Dam Sad 61.01 308 ⇑P P 04 03 14.2 -0.6
baz=57
F12A Elk City 61.10 307 ⇑P P 04 03 15.6 +0.1
baz=57
NEW Newport 61.14 310 P P 04 03 16.3 +0.6
baz=57,SNR=11
NEW Newport 61.14 310 eP P 04 03 16.2 +0.5
comp=Z,11nm,0.9s,mb5.0
NEW Newport 61.14 310 eP P 04 03 16.2 +0.5
comp=Z,11nm,0.9s,mb5.0
M15A Larsen Ranch, 61.20 302 ⇑P P 04 03 15.1 -1.1
baz=57,SNR=7.1
S18A Hurst Farm, Bl 61.26 297 P P 04 03 17.2 +0.6
baz=57,SNR=11
Y21A Point of Rocks 61.33 292 ⇓P P 04 03 18.3 +1.0
baz=57
U19A Dine' College, 61.35 295 ⇓P P 04 03 17.7 +0.3
baz=57
R17A Hanksville Air 61.42 298 ⇓P P 04 03 17.4 -0.4
baz=58
G12A Big Creek, Yel 61.42 307 ⇑P P 04 03 16.6 -1.1
baz=58
SIV San Ignacio 61.49 215 P P 04 03 18.6 +0.3
comp=Z,2.1nm,0.8s,mb4.3,baz=41,slow=7.3,SNR=12
SIV San Ignacio 61.49 215 P P 04 03 18.6 +0.2
HLID Hailey 61.55 305 ⇑P P 04 03 18.4 -0.2
baz=58
Z21A St. Cloud Mine 61.67 291 ⇑P P 04 03 20.4 +0.9
baz=58
X20A Quemado 61.68 293 ⇑P P 04 03 20.3 +0.8
baz=58
U18A Rough Rock, Ch 61.76 296 ⇓P P 04 03 20.5 +0.4
baz=58
S17A Black Ridge (B 61.85 297 ⇓P P 04 03 20.7 +0.1
baz=58
DUG Dugway 62.03 301 ⇓P P 04 03 21.8 0.0
baz=58
V18A Ganado 62.15 295 ⇓P P 04 03 23.4 +0.6
baz=58
T17A Navajo Res., N 62.15 297 ⇓P P 04 03 22.5 -0.2
baz=58,SNR=7.1
X19A St. Johns 62.30 293 ⇑P P 04 03 24.4 +0.6
baz=58
S16A Weppner Ranch, 62.36 298 P P 04 03 24.0 -0.1
baz=58,SNR=7.7
MSU Marysvale 62.39 299 eP P 04 03 24.7 +0.4
comp=Z,6.7nm,1.3s,mb4.6
MSU Marysvale 62.39 299 eP P 04 03 24.7 +0.4
comp=Z,6.7nm,1.3s,mb4.6
Y19A Nutrioso 62.51 293 P P 04 03 26.4 +1.3

baz=59,SNR=9.2
U16A **Tuba City** 62.79 296 ⇑P P 04 03 27.8 +0.8
baz=59
Q14A **Sevier Lake (B** 62.92 300 ⇓P P 04 03 27.9 +0.1
baz=59,SNR=5.1
LNOR **Lincton Mounta** 62.93 308 *eP* P 04 03 29.0 +1.2
comp=Z,4.5nm,1.0s,mb4.5
LNOR **Lincton Mounta** 62.93 308 *eP* P 04 03 29.0 +1.2
comp=Z,4.5nm,1.0s,mb4.5
Y18A **Canyon Day Jun** 63.16 293 ⇓P P 04 03 30.4 +0.9
baz=59
T15A **Red Dirt Ranch** 63.25 297 ⇑P P 04 03 29.7 -0.3
baz=59
WUAZ **Wupatki** 63.27 295 ⇑P P 04 03 30.9 +0.7
baz=59
320A **Kipp Ranch, An** 63.27 290 ⇓P P 04 03 32.4 +2.1
baz=59
ETW **Entiat** 63.36 311 *eP* P 04 03 30.7 +0.1
comp=Z,8.5nm,0.9s,mb4.9
ETW **Entiat** 63.36 311 *eP* P 04 03 30.7 +0.1
comp=Z,8.5nm,0.9s,mb4.9
S14A **Cedar City** 63.44 298 ⇓P P 04 03 31.6 +0.4
baz=60
X17A **Forest Lakes** 63.44 294 ⇑P P 04 03 32.7 +1.3
baz=60
U15A **North Rim** 63.47 297 ⇑P P 04 03 31.8 +0.2
baz=60
118A **Homack Ranch,** 63.68 292 ⇑P P 04 03 33.6 +0.6
baz=60
V15A **Kaibab Nationa** 63.69 296 ⇓P P 04 03 33.7 +0.8
baz=60
Y17A **Roosevelt** 63.79 293 ⇓P P 04 03 34.4 +0.8
baz=60
319A **Douglas** 63.81 290 ⇓P P 04 03 36.3 +2.5
baz=60
X16A **Lo Mia Camp, P** 63.86 294 ⇑P P 04 03 35.7 +1.6
baz=60
S13A **Holt Ranch, En** 64.00 298 ⇑P P 04 03 35.0 0.0
baz=60
218A **Dragoon** 64.07 291 ⇓P P 04 03 36.6 +1.1
baz=60
R12A **Pony Springs,** 64.15 299 ⇓P P 04 03 37.7 +1.7
baz=60
Y16A **Circle Bar Ran** 64.15 294 ⇑P P 04 03 37.5 +1.5
baz=60
J08A **Circle Bar Ran** 64.25 306 ⇓P P 04 03 38.2 +1.6
baz=60
X15A **Humboldt** 64.39 295 ⇓P P 04 03 38.9 +1.3
baz=60
V14A **Boquillas Ranc** 64.44 296 ⇑P P 04 03 39.2 +1.3
baz=60
W14A **Seligman** 64.63 296 ⇑P P 04 03 40.2 +1.0
baz=61
U13A **Pakoon Wash** 64.65 297 ⇑P P 04 03 39.8 +0.6
baz=61
217A **Green Valley** 64.73 291 ⇓P P 04 03 40.4 +0.5
baz=61
R11A **Troy Canyon, C** 64.81 300 ⇓P P 04 03 40.0 -0.3
baz=61
X14A **Yava** 64.87 295 ⇓P P 04 03 42.0 +1.3
baz=61
V13A **Grand Canyon W** 64.95 297 ⇑P P 04 03 41.7 +0.5
baz=61
U12A **Valley of Fire** 65.04 298 ⇓P P 04 03 42.9 +1.1
baz=61
216A **Three Points,** 65.08 292 ⇓P P 04 03 43.3 +1.1
baz=61
T11A **Corn Creek, Al** 65.11 299 ⇓P P 04 03 43.0 +0.7
baz=61
Y14A **Wickenburg** 65.22 295 ⇑P P 04 03 44.3 +1.3
baz=61
R10A **Warm Springs** 65.33 300 ⇑P P 04 03 44.2 +0.5
baz=61
SHPR **Sheep Range** 65.44 298 *eP* P 04 03 44.4 0.0
comp=Z,4.0nm,1.1s,mb4.4
SHPR **Sheep Range** 65.44 298 *eP* P 04 03 44.4 0.0
comp=Z,4.0nm,1.1s,mb4.4
X13A **Yucca** 65.47 296 ⇓P P 04 03 45.7 +1.0
baz=62
114A **Black Gap (USA** 65.74 293 ⇑P P 04 03 47.6 +1.3
baz=62,SNR=6.8
ILAR **Eielson Array** 66.21 335 P P 04 03 48.2 -0.6
comp=Z,1.0nm,0.9s,mb3.8,baz=30,slow=6.7,SNR=5.0
ILAR **Eielson Array** 66.21 335 P P 04 03 48.2 -0.7
NVAR **Mina Array Bea** 66.61 301 P P 04 03 51.9 0.0
comp=Z,1.4nm,1.0s,mb4.0,baz=56,slow=6.5,SNR=7.2
NVAR **Mina Array Bea** 66.61 301 P P 04 03 51.9 0.0
KURK **Kurchatov** 71.39 40 *eP* P 04 04 21.6 +0.2
comp=Z,8.5nm,0.9s,mb4.7
KURK **Kurchatov** 71.39 40 *eP* P 04 04 21.6 +0.2
comp=Z,8.5nm,0.9s,mb4.7
ZALV **Zalesovo Beam** 72.26 34 P P 04 04 26.1 -0.4
comp=Z,4.6nm,1.0s,mb4.4,baz=308,slow=7.3,SNR=10
MKAR **Makanchi Array** 75.77 41 P P 04 04 47.2 +0.1
comp=Z,3.8nm,0.8s,mb4.4,baz=320,slow=5.5,SNR=21
CFAA **Coronel Fontan** 78.26 213 P P 04 05 00.8 -0.4
comp=Z,0.2nm,0.9s,baz=27,slow=3.2,SNR=4.2
CFAA **Coronel Fontan** 78.26 213 P P 04 05 00.8 -0.4
SONM **Songino Array** 85.76 28 P P 04 05 40.8 +0.2
comp=Z,3.1nm,1.1s,mb4.5,baz=324,slow=5.8,SNR=8.9
SONM **Songino Array** 85.76 28 P P 04 05 40.8 +0.2
PLCA **Paso Flores** 87.06 210 P P 04 05 48.4 +1.6
comp=Z,2.0nm,1.0s,mb4.3,baz=54,slow=5.5,SNR=3.0
PLCA **Paso Flores** 87.06 210 P P 04 05 48.4 +1.6
KAKA **Kakadu** 149.97 37 PKPbc PKPbc 04 12 51.9 -0.6
ASAR **Alice Springs** 159.80 49 PKPab PKPab 04 13 39.2 -0.4
comp=Z,0.9nm,0.9s,baz=329,slow=4.5,SNR=6.6

IDC 08 03:54:14.7±569.0, 33°.97N×149°.20E, h0km, Error ellipse: s-maj=1132.0km s-min=52.9km az=117.0, North Pacific Ocean

KRSC 08 03:57:05.8±1.1, 55°.28N×160°.89E, h124km±33km, ML3.5, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BZGR	**Bezymyannyi-Gr**	**0.67**	**351**	*eP*	Pn	03 57 26.2	+0.9
BZGR				*eS*	Sn	03 57 41.4	+1.4
BZMR	**Bezymyannaya**	**0.69**	**341**	*eP*	Pn	03 57 26.7	+1.2
BZMR				*eS*	Sn	03 57 42.2	+1.8
ZLN	**Zelenaya**	**0.74**	**356**	*eP*	Pn	03 57 27.1	+1.3
ZLN				*eS*	Sn	03 57 43.2	+2.2
KIRR	**Kirishev**	**0.74**	**335**	*eS*	Sn	03 57 41.7	+0.7
KPT	**Kopyto**	**0.79**	**331**	*eP*	Pn	03 57 26.9	+0.7
KPT				*eS*	Sn	03 57 42.8	+1.2
MKZ	**Mys Kozlova**	**0.87**	**146**	*eP*	Pn	03 57 27.9	+1.0
MKZ				*eS*	Sn	03 57 44.2	+1.3
KRSR	**Krestovskiy**	**0.96**	**349**	*eP*	Pn	03 57 28.8	+1.1
KRSR				*eS*	Sn	03 57 45.6	+1.3
KOZ	**Kozyrevsk**	**0.97**	**324**	*eP*	Pn	03 57 28.7	+0.9
KOZ				*eS*	Sn	03 57 45.4	+0.9
KLY	**Klyuchi**	**1.04**	**353**	*eP*	Pn	03 57 29.1	+0.6
KLY				*eS*	Sn	03 57 46.3	+0.5
SRDR	**Sredinnyy**	**1.23**	**328**	*eP*	Pn	03 57 31.3	+0.8
SRDR				*eS*	Sn	03 57 49.9	+0.7
KBTR	**Krutoberegovo**	**1.43**	**49**	*eP*	Pn	03 57 33.6	+1.0
KBTR				*eS*	Sn	03 57 53.8	+0.7
SPN	**Mys Shipunski**	**2.25**	**193**	*eP*	Pn	03 57 42.7	+0.2
SPN				*eS*	Sn	03 58 10.0	-0.5
NLC	**Nalytchevo**	**2.30**	**204**	*eP*	Pn	03 57 44.6	+1.5
NLC				*eS*	Sn	03 58 13.2	+1.4
GNL	**Ganaly**	**2.34**	**228**	*eP*	Pn	03 57 45.6	+1.9
AVH	**Avacha**	**2.38**	**213**	*eP*	Pn	03 57 47.0	+2.8

*ISCJB **08** 04:01:57.1±3.2, 15°.6S±0°.3×75°.1W±0°.2, h67km±23km, mb3.8/2, Error ellipse: s-maj=57.0km s-min=11.1km az=43.4*
*IDC **08** 04:01:59.8±5.4, 15°.50S×74°.99W, h67km±33km, mb3.5/2, mb1 3.7/6, mb1mx3.4/21, mbtmp3.6/6, ML3.4/4, Error ellipse: s-maj=89.6km s-min=16.0km az=40.0*
*NEIC **08** 04:02:07.5±2.0, 13°.83S×74°.13W, h83km±17km, Error ellipse: s-maj=131.6km s-min=10.8km az=207.0*
ISC 08 04:01:57.9±3.3, 15°.7S±0°.3×75°.1W±0°.3, h61km±23km, n10, σ1§10/12, mb3.8/2, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.05**	**335**	P	**Pn**	**04 02 55.9**	**-1.5**
19nm,0.3s,baz=144,slow=15,SNR=28							
NNA				S	**Sn**	**04 03 43.6**	**+0.1**
55nm,0.3s,baz=243,slow=21,SNR=5.5							
NNA	**Nana**	**4.05**	**335**	*ePn*	**Pn**	**04 02 55.7**	**-1.7**
NNA				*eS*	**Sn**	**04 03 39.7**	**-3.9**
LPAZ	**La Paz**	**6.75**	**96**	P	**Pn**	**04 03 37.2**	**+2.8**
0.2nm,0.3s,baz=298,slow=9.7,SNR=8.6							
LPAZ	**La Paz**	**6.75**	**96**	*ePn*	**Pn**	**04 03 38.5**	**+4.2**
ATAH	**Atahualpa**	**9.09**	**339**	P	**Pn**	**04 04 07.8**	**+1.4**
0.4nm,0.3s,baz=113,slow=18,SNR=3.0							
ATAH				S	**Sn**	**04 05 47.5**	**+0.1**
1.0nm,0.3s,baz=93,slow=17,SNR=2.4							
SIV	**San Ignacio**	**13.52**	**93**	P	**Pn**	**04 05 06.0**	**-1.0**
0.1nm,0.3s,baz=277,slow=17,SNR=2.1							
TXAR	**Lajitas Array**	**52.57**	**328**	P	**P**	**04 11 05.8**	**+0.4**
0.9nm,0.5s,mb3.9,baz=150,slow=9.2,SNR=25							
TXAR	**Lajitas Array**	**52.57**	**328**	P	**P**	**04 11 05.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**81.18**	**74**	P	**P**	**04 14 07.4**	**-0.2**
0.7nm,0.8s,mb3.6,baz=260,slow=4.8,SNR=9.7							
SONM	**Songino Array**	**147.93**	**358**	PKPbc	PKPbc	04 21 37.6	+1.3
1.3nm,0.8s,baz=340,slow=2.8,SNR=7.8							

*IDC **08** 04:09:28.4±0.8, 39°.64N×67°.70E, h0km, mb3.8/12, mb1 4.0/17, mb1mx3.9/31, mbtmp3.9/17, ML3.9/5, MS3.9/1, Ms1 4.1/1, ms1mx3.0/38, Error ellipse: s-maj=14.8km s-min=11.8km az=169.0*
*ISCJB **08** 04:09:29.9±0.4, 40°.11N±0°.03×67°.61E±0°.05, h10km, mb3.7/12, Error ellipse: s-maj=5.6km s-min=4.4km az=0.8*
*NNC **08** 04:09:30.7±4.8, 40°.17N×67°.47E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=43.7km s-min=22.8km az=25.0*
*NEIC **08** 04:09:35.2±1.0, 40°.05N×67°.66E, h38km±10km, mb3.6/1, Error ellipse: s-maj=10.7km s-min=8.3km az=213.0*
ISC 08 04:09:32.3±0.4, 40°.10N±0°.03×67°.61E±0°.05, h10km, n52, σ1§21/65, mb3.7/12, 11C-6D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**3.71**	**35**	⇑Pn	**Pn**	**04 10 31.2**	**+1.6**
5.5nm,0.4s,baz=221,slow=14,SNR=271							
KK31				⇑Pg	**Pg**	**04 10 42.4**	**-1.0**
15nm,0.3s,baz=224,slow=17,SNR=29							
KK31				Lg		04 11 31.5	
325nm,0.7s,baz=213,slow=30,SNR=22							
KKAR	**Karatay Array**	**3.71**	**35**	*ePn*	**Pn**	**04 10 31.6**	**+2.0**
KKAR				*eS*	**Sg**	**04 11 30.9**	**-0.5**
AML	**Almayashu**	**5.03**	**64**	P	**Pn**	**04 10 48.3**	**+0.6**
SNR=43							
AML	**Almayashu**	**5.03**	**64**	*ePn*	**Pn**	**04 10 48.2**	**+0.5**
17nm,0.4s							
AML				*eS*	**Sn**	**04 11 47.3**	**+1.5**
EKS2	**Erkin-Say**	**5.30**	**59**	P	**Pn**	**04 10 53.0**	**+1.4**
SNR=30							
EKS2	**Erkin-Say**	**5.30**	**59**	*ePn*	**Pn**	**04 10 52.8**	**+1.2**
21nm,0.5s							
EKS2				*eS*	**Sg**	**04 12 20.1**	**-2.3**
KBL	**Kabul**	**5.66**	**168**	Pn	**Pn**	**04 10 56.7**	**+0.2**
14nm,0.6s							
KBL				*eS*	**Sn**	**04 12 00.8**	**-0.8**
AAK	**Ala-Archa**	**5.77**	**62**	P	**Pn**	**04 10 59.5**	**+1.6**
SNR=10							
AAK	**Ala-Archa**	**5.77**	**62**	Pn	**Pn**	**04 10 59.5**	**+1.6**
0.1nm,0.3s,baz=209,slow=4.9,SNR=18							
AAK				Lg		04 12 33.7	
0.1nm,0.3s,baz=350,slow=19,SNR=3.5							
AAK	**Ala-Archa**	**5.77**	**62**	*ePn*	**Pn**	**04 10 59.4**	**+1.5**
AAK				Lg		04 12 33.7	
USP	**Ospenovka**	**6.05**	**56**	P	**Pn**	**04 11 02.0**	**+0.2**
SNR=9.6							
KBK	**Karagaybulak**	**6.08**	**63**	P	**Pn**	**04 11 03.9**	**+1.6**
SNR=23							
KZA	**Kyzart**	**6.10**	**69**	P	**Pn**	**04 11 03.4**	**+0.8**
SNR=13							
KZA	**Kyzart**	**6.10**	**69**	*ePn*	**Pn**	**04 11 03.3**	**+0.8**
34nm,0.6s							
KSH	**Kashi**	**6.47**	**92**	Pn	**Pn**	**04 11 03.4**	**-4.1**
KSH				Sn	**Sn**	**04 12 02.2**	**-19**
KSH				smax			
comp=N,37nm,0.5s							
KSH				smax			
comp=E,42nm,0.8s							
TKM2	**Tokmak 2**	**6.63**	**62**	⇓Pn	**Pn**	**04 11 09.7**	**-0.1**
comp=E,3.7nm,0.3s							
TKM2				⇓Lg		04 13 01.3	
comp=E,97nm,1.1s							
TKM2	**Tokmak 2**	**6.63**	**62**	P	**Pn**	**04 11 10.7**	**+1.0**
SNR=11							
TKM2	**Tokmak 2**	**6.63**	**62**	*ePn*	**Pn**	**04 11 09.9**	**+0.2**
comp=E,17nm,0.4s							
ULHL	**Ulahol**	**6.86**	**69**	P	**Pn**	**04 11 15.6**	**+2.7**
SNR=7.6							
CEP	**Cherat**	**7.14**	**150**	P	**Pn**	**04 11 17.6**	**+0.7**
CHCP	**Chirah Chowk**	**7.86**	**143**	P	**Pn**	**04 11 25.6**	**-1.1**
THW	**Thamme Wali**	**8.01**	**154**	P	**Pn**	**04 11 27.4**	**-1.4**
AB31	**Akbulak array**	**10.65**	**332**	⇓Pn	**Pn**	**04 12 04.9**	**+0.1**
comp=E,1.8nm,0.3s,baz=173,slow=23,SNR=4.4							
AB31				⇑Sn	**Sn**	**04 13 57.4**	**-6.7**
comp=E,3.3nm,0.3s,baz=156,slow=22,SNR=5.8							
AB31				⇑Lg		04 15 07.2	
comp=E,17nm,0.8s,baz=159,slow=27,SNR=3.9							
ABKAR	**Akbulak array**	**10.65**	**332**	*ePn*	**Pn**	**04 12 04.6**	**-0.3**
comp=E,5.0nm,0.4s							
ABKAR				*eS*	**Sn**	**04 13 56.9**	**-7.2**
AKTK	**Aktyubinsk**	**12.34**	**330**	Pn	**Pn**	**04 12 29.0**	**+1.1**
AKTK				Sn	**Sn**	**04 14 37.2**	**-8.2**
AKTK				Lg		04 16 04.4	
AKTO	**Aktyubinsk**	**12.34**	**330**	⇑Pn	**Pn**	**04 12 30.2**	**+2.3**
comp=E,0.9nm,1.1s							
AKTO				⇓Sn	**Sn**	**04 14 40.5**	**-4.8**
comp=E,0.9nm,0.5s							
AKTO	**Aktyubinsk**	**12.34**	**330**	Pn	**Pn**	**04 12 29.0**	**+1.1**
comp=E,0.8nm,0.3s,baz=150,slow=7.1,SNR=11							
AKTO				Sn	**Sn**	**04 14 37.2**	**-8.2**
baz=162,slow=20,SNR=2.8							
AKTO				Lg		04 16 04.4	
comp=E,0.3nm,0.3s,baz=180,slow=20,SNR=2.4							
MKAR	**Makanchi Array**	**12.59**	**53**	Pn	**Pn**	**04 12 30.6**	**-0.7**
comp=E,0.5nm,0.3s,baz=243,slow=15,SNR=13							
MKAR				Lg		04 16 04.9	
comp=E,0.3nm,0.3s,baz=249,slow=20,SNR=3.6							
VOSK	**Vostochnaya**	**12.84**	**9**	⇑Pn	**Pn**	**04 12 35.0**	**+0.2**
comp=E,1.1nm,0.5s							
VOSK				⇑Sn	**Sn**	**04 14 52.7**	**-5.0**
comp=E,3.0nm,0.6s							
ZRNK	**Zerenda**	**12.89**	**4**	⇓Pn	**Pn**	**04 12 34.3**	**-1.2**
comp=E,3.1nm,0.5s							
ZRNK				⇑Sn	**Sn**	**04 14 54.0**	**-4.9**
comp=E,3.6nm,0.4s							
KURBB	**Kurchatov Arra**	**13.01**	**32**	⇑Lg		04 16 25.1	
comp=E,6.7nm,0.9s							
BVA0	**Borovoye Array**	**13.07**	**7**	⇑Pn	**Pn**	**04 12 39.0**	**+1.1**
comp=E,0.4nm,0.6s							
BVA0				⇑Sn	**Sn**	**04 15 00.7**	**-2.6**
comp=E,0.8nm,0.6s							
BVAR	**Borovoye Array**	**13.07**	**7**	Pn	**Pn**	**04 12 38.2**	**+0.3**
comp=E,0.8nm,0.3s,baz=172,slow=12,SNR=9.1							
BVAR				Sn	**Sn**	**04 15 02.5**	**-0.8**
comp=E,1.9nm,0.3s,baz=204,slow=21,SNR=6.2							
BRVK	**Borovoye**	**13.09**	**7**	*ePn*	**Pn**	**04 12 36.4**	**-1.8**
comp=E,5.5nm,0.8s							
BRVK				*eS*	**Sn**	**04 15 02.5**	**-1.3**
KURK	**Kurchatov**	**13.12**	**32**	⇓Lg		04 16 28.6	
comp=E,74nm,2.0s							
ARU	**Arti**	**17.39**	**343**	*ePn*	**Pn**	**04 13 35.4**	**+0.5**
comp=E,8.7nm,1.8s							
ZALV	**Zalesovo Beam**	**18.09**	**34**	P	**Pn**	**04 13 43.6**	**+0.1**
comp=E,0.9nm,0.3s,baz=222,slow=13,SNR=8.8							
BRTR	**Keskin Array B**	**25.97**	**280**	P	**P**	**04 15 06.0**	**+1.1**
comp=E,0.8nm,0.7s,mb3.4,baz=81,slow=8.1,SNR=6.1							
SONM	**Songino Array**	**28.73**	**61**	P	**P**	**04 15 28.4**	**-1.2**
comp=E,0.4nm,0.6s,mb3.4,baz=275,slow=8.5,SNR=3.1							
FINES	**FINESS Array B**	**33.01**	**324**	P	**P**	**04 16 08.1**	**+0.8**
comp=E,0.6nm,0.3s,mb4.0,baz=133,slow=12,SNR=2.7							
CMAR	**Chiang Mai Arr**	**34.53**	**119**	LR	LR	04 33 18.4	
comp=E,182nm,19.3s,baz=210,slow=42							
ARCES	**ARCESS Array B**	**36.80**	**337**	P	**P**	**04 16 40.1**	**+0.3**
comp=E,1.0nm,0.8s,mb3.7,baz=105,slow=10,SNR=3.3							
NB2	**NORSAR Subarra**	**39.91**	**321**	P	**P**	**04 17 06.4**	**+0.3**
comp=Z,0.1nm,0.5s,mb2.8,baz=96,slow=8.6							
NOA	**NORSAR Array B**	**39.91**	**321**	P	**P**	**04 17 06.5**	**+0.4**
comp=Z,0.9nm,0.7s,mb3.6,baz=96,slow=8.1,SNR=4.5							
EKA	**Eskdalemuir Ar**	**47.87**	**313**	P	**P**	**04 18 10.2**	**+0.1**
comp=Z,1.2nm,0.8s,mb4.0,baz=86,slow=8.7,SNR=5.5							
TORD	**Torodi Ar. Bea**	**63.26**	**265**	P	**P**	**04 19 59.4**	**-1.9**
comp=Z,0.5nm,0.7s,mb3.7,baz=59,slow=5.8,SNR=7.8							
ILAR	**Eielson Array**	**72.02**	**15**	P	**P**	**04 20 55.2**	**-0.6**
comp=Z,0.5nm,0.8s,mb3.5,baz=336,slow=4.7,SNR=4.5							
YKA	**Yellowknife Ar**	**77.74**	**1**	P	**P**	**04 21 28.9**	**-0.1**
comp=Z,1.4nm,0.8s,mb4.0,baz=346,slow=5.8,SNR=3.2							
FITZ	**Fitzroy Crossi**	**79.15**	**125**	P	**P**	**04 21 32.0**	**-5.4**
comp=Z,1.9nm,0.9s,mb4.0,baz=346,slow=4.2,SNR=3.8							
WRA	**Warramunga Arr**	**86.13**	**120**	P	**P**	**04 22 10.3**	**-3.3**
comp=Z,0.6nm,0.4s,mb4.2,baz=327,slow=4.4,SNR=11							
WRA	**Warramunga Arr**	**86.13**	**120**	P	**P**	**04 22 10.3**	**-3.3**
ASAR	**Alice Springs**	**88.47**	**123**	P	**P**	**04 22 22.2**	**-2.7**
comp=Z,0.6nm,0.6s,mb4.0,baz=324,slow=5.2,SNR=7.9							

IDC 08 04:13:04.8±589.0, 33°.94N×149°.19E, h0km, Error ellipse: s-maj=1171.0km s-min=52.9km az=117.0, North Pacific Ocean

*IDC **08** 04:20:13.7±1.3, 2°.46S×140°.23E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/15, mbtmp3.8/6, ML4.1/1, Error ellipse: s-maj=57.5km s-min=22.3km az=100.0*
*ISCJB **08** 04:20:19.4±3.4, 2°.6S±0°.1×139°.9E±0°.2, h49km±32km, mb3.7/4, Error ellipse: s-maj=31.9km s-min=16.3km az=10.8*
*NEIC **08** 04:20:19.1±0.8, 2°.52S×140°.03E, h35km, mb3.6/1, Error ellipse: s-maj=22.8km s-min=12.1km az=99.0*
ISC 08 04:20:21.4±4.4, 2°.7S±0°.2×139°.8E±0°.2, h37km±40km, n11, σ1§09/12, mb3.7/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**12.35**	**216**	*ePn*	**Pn**	**04 23 15.3**	**+0.5**
42nm,0.5s							
KAKA				*eS*	**Sn**	**04 25 28.5**	**-2.7**
WB2	**Warramunga Arr**	**17.96**	**197**	*ePn*	**Pn**	**04 24 28.8**	**+0.4**
WRA	**Warramunga Arr**	**17.96**	**197**	P	**Pn**	**04 24 28.9**	**+0.5**
0.6nm,0.3s,baz=23,slow=13,SNR=28							
WRA				S	**Sn**	**04 27 44.1**	**-3.7**
0.1nm,0.3s,baz=12,slow=22,SNR=4.9							
CTAO	**Charters Tower**	**18.39**	**161**	Pn	**Pn**	**04 24 32.6**	**-1.0**
4.5nm,1.0s							
FITZ	**Fitzroy Crossi**	**20.69**	**221**	P	**P**	**04 24 59.7**	**+1.2**
2.8nm,0.8s,baz=28,slow=7.7,SNR=5.2							
ASAR	**Alice Springs**	**21.62**	**195**	P	**P**	**04 25 09.1**	**+0.6**
2.6nm,0.6s,mb3.8,baz=29,slow=10.0,SNR=20							
STKA	**Stephens Creek**	**29.08**	**177**	P	**P**	**04 26 18.9**	**+0.4**
0.4nm,0.3s,mb3.6,baz=15,slow=15,SNR=2.8							
STKA	**Stephens Creek**	**29.08**	**177**	P	**P**	**04 26 18.9**	**+0.4**
MKAR	**Makanchi Array**	**70.46**	**322**	P	**P**	**04 31 31.3**	**-0.8**
0.6nm,0.7s,mb3.7,baz=110,slow=9.2,SNR=4.9							
ILAR	**Eielson Array**	**85.36**	**24**	P	**P**	**04 32 50.3**	**-4.2**
0.3nm,0.6s,mb3.6,baz=264,slow=6.0,SNR=3.6							
DBIC	**Dimbokro**	**144.59**	**278**	PKP	PKPdf	04 39 52.5	-2.7
3.6nm,0.8s,baz=82,slow=3.7,SNR=7.3							

IDC 08 04:29:33.2±617.0, 34°.87N×146°.98E, h0km, Error ellipse: s-maj=1224.0km s-min=58.0km az=114.0, Off east coast of Honshu

*IDC **08** 04:32:09.3±2.1, 51°.16N×178°.59W, h0km, mb3.4/4, mb1 3.9/5, mb1mx3.5/25, mbtmp3.6/5, ML4.2/1, Error ellipse: s-maj=55.8km s-min=34.2km az=2.0*
*ISCJB **08** 04:32:16.6±1.4, 51°.3N±0°.3×178°.3W±0°.1, h62km±9km, mb3.5/4, Error ellipse: s-maj=44.9km s-min=7.8km az=167.7*
*NEIC **08** 04:32:17.5, 51°.27N×178°.21W, h27km, ML3.5(AEIC), After AEIC.*
ISC 08 04:32:17.6±1.4, 51°.3N±0°.3×178°.3W±0°.1, h52km±11km, n12, σ1§09/13, mb3.5/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.15**	**60**	*ePn*	**Pn**	**04 32 36.0**	**-1.4**
ADK				*eS*	**Sn**	**04 32 50.7**	**-1.3**
AMKA	**Amchitka**	**1.51**	**273**	*ePn*	**Pn**	**04 32 41.6**	**-0.6**
AMKA				*eS*	**Sn**	**04 33 01.4**	**+0.8**
GSTR	**Great Sitkin T**	**1.59**	**60**	*ePn*	**Pn**	**04 32 43.2**	**-0.1**
GSTR				*eS*	**Sn**	**04 33 04.7**	**+1.9**
NIKO	**Nikolski**	**6.04**	**71**	*ePn*	**Pn**	**04 33 45.5**	**+1.3**
CHGN	**Chignik**	**12.74**	**59**	*eP*	**Pn**	**04 35 15.7**	**-0.1**
KDAK	**Kodiak Island**	**16.19**	**56**	Pn	**Pn**	**04 36 00.4**	**-0.9**
1.0nm,0.3s,baz=270,slow=12,SNR=6.4							
ILAR	**Eielson Array**	**21.09**	**38**	P	**P**	**04 36 59.0**	**+1.9**
0.2nm,0.4s,mb2.8,baz=236,slow=10,SNR=5.0							
PDAR	**Pinedale Array**	**46.02**	**72**	P	**P**	**04 40 35.8**	**+0.1**
0.6nm,0.5s,mb3.8,baz=332,slow=3.2,SNR=11							
ARCES	**ARCESS Array B**	**58.19**	**350**	P	**P**	**04 42 04.2**	**-1.4**
2.6nm,1.0s,mb4.2,baz=24,slow=9.3,SNR=5.2							
TXAR	**Lajitas Array**	**58.35**	**82**	P	**P**	**04 42 07.4**	**+0.1**
0.1nm,0.5s,mb3.1,baz=280,slow=2.7,SNR=2.9							
BOSA	**Boshof**	**151.24**	**313**	PKPbc	PKPbc	04 52 05.5	+0.7
1.8nm,0.6s,baz=19,slow=4.3,SNR=4.5							
BOSA	**Boshof**	**151.24**	**313**	PKPbc	PKPbc	04 52 05.5	+0.7

IDC 08 04:36:19.9±3.8, 21°.93S×148°.36E, h0km, mb3.7/1, mb1 3.8/5, mb1mx3.7/15, mbtmp3.7/5, ML3.3/4, MS3.3/1, Ms1 3.3/1, ms1mx3.1/18, Error ellipse: s-maj=38.7km s-min=18.6km az=78.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**2.69**	**313**	Pn	Pn	04 37 03.9	-0.5
5.1nm,0.3s,baz=127,slow=16,SNR=23							
CTA				Pg	Pg	04 37 08.6	-2.9
13nm,0.3s,baz=130,slow=18,SNR=39							
CTA				Sn	Sn	04 37 40.0	+2.2
8.9nm,0.3s,baz=73,slow=15,SNR=6.2							
CTA				Lg		04 37 45.9	
17nm,0.3s,baz=53,slow=23,SNR=17							
CTA				LR	LR	04 38 09.4	
comp=Z,517nm,19.3s,baz=142,slow=41							
STKA	**Stephens Creek**	**11.60**	**210**	Pn	Pn	04 39 07.1	+0.3
0.2nm,0.3s,baz=28,slow=17,SNR=5.1							
STKA				Sn	Sn	04 41 16.5	-0.5
0.1nm,0.3s,baz=278,slow=16,SNR=2.9							
STKA				Lg		04 42 27.2	
0.1nm,0.3s,baz=85,slow=15,SNR=3.0							
WRA	**Warramunga Arr**	**13.25**	**276**	Pn	Pn	04 39 30.2	+0.8
0.1nm,0.3s,baz=99,slow=13,SNR=12							
WRA				Sn

GYA smax
comp=N,510nm,0.5s
GYA smax
comp=E,470nm,0.5s
KMI Kunming 4.00 267 Pg Pg 04 57 14.3 -4.4
KMI Sg Sg 04 58 02.1 -8.5
KMI smax
comp=N,43nm,0.9s
KMI smax
comp=E,27nm,0.8s
DHV Doan Hung 4.18 206 *e*Pn Pn 04 57 38.0 +33
DHV *e*Pg Pg 04 57 47.6 +25
DHV *e*Sg Sg 04 58 28.7 +12
BGV Bac-Giang 4.19 192 *e*Pn Pn 04 57 35.2 +30
BGV *e*Pg Pg 04 57 45.1 +23
BGV *e*Sg Sg 04 58 24.5 +7.8
BVV Ba Vi 4.60 201 *e*Pn Pn 04 57 42.6 +32
BVV *e*Pg Pg 04 57 54.0 +24
BVV *e*Sg Sg 04 58 41.2 +12
PLV Phu-Lien 4.62 186 *e*Pn Pn 04 57 40.0 +29
PLV *e*Pg Pg 04 57 51.9 +21
PLV *e*Sg Sg 04 58 37.5 +7.2
DSV Doi Son 4.93 193 *e*Pn Pn 04 57 46.2 +31
DSV *e*Pg Pg 04 57 59.4 +23
DSV *e*Sg Sg 04 58 49.1 +8.7
CD2 Chengdu 6.24 332 *e*Pn Pn 04 57 30.7 -2.5
CD2 Pg Pg 04 57 56.7 -4.7
CD2 Sn Sn 04 58 38.4 -5.7
CD2 Sg Sg 04 59 12.0 -10
CD2 smax
comp=N,30nm,1.2s
CD2 smax
comp=E,20nm,1.4s

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*ISCJB **08** 05:00:42.8±0.9, 28°.83S±0°.07×71°.72W±0°.08, h10km, mb3.5/2, Error ellipse: s-maj=12.3km s-min=8.1km az=40.2*
*IDC **08** 05:00:46.9±0.9, 28°.88S×71°.48W, h26km±5km, mb3.4/2, mb1 3.7/6, mb1mx3.5/19, mbtmp3.5/6, ML3.7/4, Error ellipse: s-maj=29.7km s-min=19.2km az=56.0*
*NEIC **08** 05:00:47.9±0.5, 28°.90S×71°.47W, h35km, Error ellipse: s-maj=11.9km s-min=9.4km az=106.0*
ISC 08 05:00:44.4±0.9, 28°.88S±0°.08×71°.64W±0°.08, h10km, n16, σ1§04/16, mb3.5/2, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.83**	**99**	*e*Pn	**Pn**	**05 01 01.9**	**-0.3**
LCO				*e*Sg	**Sg**	**05 01 12.3**	**+0.9**
CFAA	**Coronel Fontan**	**4.00**	**133**	Pn	**Pn**	**05 01 49.8**	**+3.9**
0.6nm,0.3s,baz=317,slow=12,SNR=214							
CFAA				Pg	**Pg**	**05 01 59.9**	**-1.2**
1.9nm,0.3s,baz=339,slow=12,SNR=25							
CFAA				Sn	**Sn**	**05 02 36.9**	**+4.1**
1.2nm,0.3s,baz=68,slow=19,SNR=3.6							
CFAA				Lg		05 02 49.5	
2.0nm,0.3s,baz=62,slow=21,SNR=5.6							
CFAA	**Coronel Fontan**	**4.00**	**133**	Pn	**Pn**	**05 01 49.8**	**+3.9**
CFAA				Pg	**Pg**	**05 01 59.9**	**-1.2**
CFAA				Sn	**Sn**	**05 02 36.9**	**+4.1**
CFAA				Lg		05 02 49.5	
PLCA	**Paso Flores**	**11.86**	**176**	Pn	**Pn**	**05 03 34.2**	**+0.7**
0.1nm,0.3s,baz=26,slow=14,SNR=2.8							
PLCA	**Paso Flores**	**11.86**	**176**	Pn	**Pn**	**05 03 34.2**	**+0.7**
CPUP	**Villa Florida**	**12.94**	**82**	Pn	**Pn**	**05 03 46.5**	**-1.9**
0.1nm,0.3s,baz=230,slow=19,SNR=2.5							
CPUP				Lg		05 07 29.9	
0.2nm,0.3s,baz=201,slow=18,SNR=2.6							
LPAZ	**La Paz**	**12.95**	**15**	Pn	**Pn**	**05 03 49.5**	**+0.9**
0.3nm,0.3s,baz=213,slow=9.8,SNR=14							
LPAZ	**La Paz**	**12.95**	**15**	*e*Pn	**Pn**	**05 03 49.5**	**+1.0**
SIV	**San Ignacio**	**16.11**	**39**	Pn	**Pn**	**05 04 31.4**	**+0.3**
0.2nm,0.3s,baz=218,slow=16,SNR=6.1							
NVAR	**Mina Array Bea**	**79.91**	**325**	P	**P**	**05 12 53.6**	**+0.3**
0.3nm,0.5s,mb3.5,baz=110,slow=5.2,SNR=3.6							
TORD	**Torodi Ar. Bea**	**82.16**	**70**	P	**P**	**05 13 04.8**	**-1.1**
0.4nm,0.5s,mb3.6,baz=266,slow=5.6,SNR=7.4							
TORD				pP	pP	05 13 13.7	+4.5
0.3nm,0.5s,baz=268,slow=5.2,SNR=2.9							
ASAR	**Alice Springs**	**122.25**	**208**	PKP	PKPdf	05 19 39.6	-0.5
0.2nm,0.5s,baz=111,slow=2.1,SNR=4.6							
WRA	**Warramunga Arr**	**125.36**	**210**	PKP	PKPdf	05 19 46.1	-0.1
0.6nm,0.5s,baz=151,slow=1.7,SNR=13							
WRA				pPKP	pPKPdf	05 19 55.0	+5.3
0.2nm,0.5s,baz=137,slow=2.0,SNR=1.9							
ZALV	**Zalesovo Beam**	**149.64**	**28**	PKPbc	PKPbc	05 20 33.5	-0.3
1.1nm,0.4s,baz=280,slow=2.6,SNR=2.3							
ZALV				pPKPbc	pPKPbc	05 20 41.5	+4.3
3.4nm,0.7s,baz=257,slow=2.8,SNR=3.2							
MKAR	**Makanchi Array**	**152.92**	**42**	PKPbc	PKPbc	05 20 41.4	-0.3
0.4nm,0.6s,baz=298,slow=3.1,SNR=3.6							
MKAR				pPKPbc	pPKPbc	05 20 50.0	+4.9
0.9nm,0.8s,baz=342,slow=3.1,SNR=3.1							
MKAR	**Makanchi Array**	**152.92**	**42**	PKPbc	PKPbc	05 20 41.4	-0.3
MKAR				pPKPbc	pPKPbc	05 20 50.0	+4.9

IDC 08 05:10:46.2±562.0, 34°.29N×148°.52E, h0km, Error ellipse: s-maj=1116.0km s-min=53.0km az=116.0, North Pacific Ocean

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IDC 08 05:31:18.2±564.0, 33°.87N×149°.61E, h0km, Error ellipse: s-maj=1122.0km s-min=51.8km az=117.0, North Pacific Ocean

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*IDC **08** 05:50:54.4±1.1, 4°.07S×152°.63E, h0km, mb4.1/4, mb1 4.4/4, mb1mx3.9/17, mbtmp4.1/4, Error ellipse: s-maj=70.2km s-min=23.0km az=132.0*
*NEIC **08** 05:50:55.4±0.7, 4°.10S×152°.80E, h10km, Error ellipse: s-maj=40.6km s-min=13.7km az=137.0*
*ISCJB **08** 05:50:57.3±1.7, 4°.1S±0°.4×152°.8E±0°.5, h33km, mb3.9/4, Error ellipse: s-maj=86.9km s-min=22.3km az=41.0*
ISC 08 05:50:59.0±1.6, 4°.1S±0°.4×152°.8E±0°.4, h35km, n9, σ0§04/7, mb3.9/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**21.87**	**246**	*e*P	**P**	**05 55 48.9**	**0.0**
WB2	**Warramunga Arr**	**23.89**	**227**	*e*P	**P**	**05 56 09.6**	**0.0**
WRA	**Warramunga Arr**	**23.90**	**227**	P	**P**	**05 56 09.6**	**-0.1**
9.7nm,0.6s,mb4.4,baz=52,slow=10,SNR=95							
WRA				PcP	PcP	05 59 52.9	+0.9
0.3nm,0.6s,baz=44,slow=2.3,SNR=4.7							
WRA	**Warramunga Arr**	**23.90**	**227**	P	**P**	**05 56 09.6**	**-0.1**
WRA				PcP	PcP	05 59 52.9	+0.9
ASAR	**Alice Springs**	**26.65**	**221**	P	**P**	**05 56 34.6**	**0.0**
1.2nm,0.6s,mb3.6,baz=55,slow=8.6,SNR=15							
ASAR				PcP	PcP	05 59 58.3	+0.2
0.3nm,0.8s,baz=45,slow=4.1,SNR=4.0							
FITZ	**Fitzroy Crossi**	**30.00**	**240**	P	**P**	**05 57 04.5**	**0.0**
3.2nm,0.6s,mb4.2,baz=60,slow=6.5,SNR=12							
ILAR	**Eielson Array**	**81.54**	**22**	P	**P**	**06 03 12.6**	**0.0**
0.3nm,0.7s,mb3.3,baz=240,slow=5.1,SNR=3.4							
TORD	**Torodi Ar. Bea**	**150.11**	**289**	PKPbc	PKPbc	06 10 48.0	+0.9
1.4nm,0.4s,baz=72,slow=2.3,SNR=43							
BDFB	**Brasilia**	**151.52**	**134**	PKPbc	PKPbc	06 10 51.2	+0.8
1.7nm,0.8s,baz=195,slow=12,SNR=3.1							

IDC 08 05:51:41.4±536.0, 33°.80N×149°.99E, h0km, Error ellipse: s-maj=1067.0km s-min=50.7km az=118.0, North Pacific Ocean

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IDC 08 06:11:24.9±580.0, 33°.99N×149°.62E, h0km, Error ellipse: s-maj=1155.0km s-min=51.2km az=117.0, North Pacific Ocean

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*BJI **08** 06:21:40.6, 29°.17N×139°.20E, h416km, mB4.3/3, mb4.3/9*
*ISCJB **08** 06:21:42.0±0.4, 29°.29N±0°.04×139°.4E±0°.1, h439km±8km, mb3.6/13, Error ellipse: s-maj=19.3km s-min=6.2km az=169.2*
*IDC **08** 06:21:42.9±0.7, 29°.31N×139°.56E, h436km±10km, mb3.2/9, mb1 3.2/12, mb1mx3.1/23, mbtmp3.2/12, Error ellipse: s-maj=29.0km s-min=11.8km az=68.0*
*JMA **08** 06:21:42.8±0.3, 29°.32N×139°.59E, h440km±5km, M3.7*
*NEIC **08** 06:21:42.8, 29°.32N×139°.59E, h440km, mb4.1/2, After JMA.*
ISC 08 06:21:42.9±0.4, 29°.35N±0°.04×139°.6E±0°.1, h437km±8km, n32, σ1§14/40, mb3.6/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.23**	**133**	P	**P**	**06 22 50.5**	**-0.2**
19nm,0.3s,baz=331,slow=6.1,SNR=37							
CBIJ				S	**S**	**06 23 44.8**	**-0.9**
68nm,0.3s,baz=270,slow=21,SNR=31							
CBIJ	**Chichi jima**	**3.23**	**133**	P	**P**	**06 22 51.0**	**+0.2**
CBIJ				S	**S**	**06 23 45.0**	**-0.7**
JHHJ	**Haha-jima-NKT**	**3.56**	**139**	P	**P**	**06 22 53.3**	**-0.2**
JHHJ				S	**S**	**06 23 49.8**	**-1.0**
JHJ2	**Mitsune**	**3.76**	**3**	P	**P**	**06 22 57.3**	**+2.3**
JHJ	**Hachijo jima 2**	**3.77**	**3**	P	**P**	**06 22 57.2**	**+2.1**
7.7nm,0.3s,baz=228,slow=14,SNR=2.8							
JHJ				S	**S**	**06 23 53.4**	**-0.4**
8.2nm,0.3s,baz=58,slow=19,SNR=4.6							
BSO1	**Boso 1**	**5.43**	**12**	P	**P**	**06 23 11.6**	**+0.9**
BSO1				*e*S	**S**	**06 24 21.1**	**-1.4**
JNY	**Yasuok**	**6.16**	**347**	P	**P**	**06 23 19.7**	**+1.4**
JRY	**Ryogami san**	**6.67**	**355**	P	**P**	**06 23 24.8**	**+1.1**
JRY				S	**S**	**06 24 46.2**	**0.0**
JYT	**Yasato**	**6.88**	**4**	S	**S**	**06 24 49.2**	**-1.1**
JAG	**Ashikaga**	**7.06**	**359**	P	**P**	**06 23 28.2**	**+0.4**
JAG				S	**S**	**06 24 51.6**	**-2.1**
JHO	**Hitachi**	**7.29**	**6**	P	**P**	**06 23 32.0**	**+1.7**
JHO				S	**S**	**06 24 57.2**	**-1.2**
JHS	**Saijyo**	**7.84**	**318**	P	**P**	**06 23 37.7**	**+1.4**
JFK	**Kawauchi**	**8.07**	**8**	P	**P**	**06 23 41.3**	**+2.5**
JFK				*e*S	**S**	**06 25 12.9**	**-1.0**
KSRS	**Korea Array**	**12.63**	**313**	P	**P**	**06 24 28.8**	**+0.1**
0.4nm,0.3s,baz=128,slow=11,SNR=13							
ENH	**Enshi**	**26.07**	**280**	*e*P	**P**	**06 26 38.1**	**-1.6**
16nm,0.8s,mb4.5							
XAN	**Xi'an**	**26.43**	**288**	P	**P**	**06 26 40.5**	**-2.3**
XAN				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.0							
SONM	**Songino Array**	**31.49**	**315**	P	**P**	**06 27 26.9**	**+0.1**
comp=Z,1.7nm,0.8s,mb3.4,baz=113,slow=8.3,SNR=9.5							
GTA	**Gaotai**	**34.06**	**298**	*e*P	**P**	**06 27 48.1**	**-0.9**
GTA				pmax	pmax		
comp=Z,5.0nm,1.3s,mb3.7							
ZALV	**Zalesovo Beam**	**46.27**	**318**	P	**P**	**06 29 26.1**	**-1.1**
comp=Z,0.7nm,0.3s,mb3.4,baz=69,slow=8.1,SNR=4.4							
MKAR	**Makanchi Array**	**47.26**	**308**	P	**P**	**06 29 34.3**	**-0.6**
comp=Z,1.3nm,0.8s,mb3.3,baz=90,slow=9.7,SNR=7.5							
WRA	**Warramunga Arr**	**49.26**	**186**	P	**P**	**06 29 50.2**	**+0.1**
comp=Z,0.6nm,0.4s,mb3.3,baz=3.4,slow=7.8,SNR=15							
WRA	**Warramunga Arr**	**49.26**	**186**	P	**P**	**06 29 50.2**	**+0.1**
ASAR	**Alice Springs**	**52.99**	**186**	P	**P**	**06 30 17.6**	**+0.2**
comp=Z,0.2nm,0.5s,mb2.6,baz=6.9,slow=15,SNR=4.7							
KKAR	**Karatay Array**	**55.90**	**304**	*e*P	**P**	**06 30 37.5**	**-0.3**
comp=Z,2.5nm,0.7s,mb3.6							
ARCES	**ARCESS Array B**	**70.65**	**340**	P	**P**	**06 32 13.8**	**+1.2**
comp=Z,2.0nm,0.5s,mb3.9,baz=72,slow=8.5,SNR=20							
ARCES	**ARCESS Array B**	**70.65**	**340**	P	**P**	**06 32 13.8**	**+1.2**
FINES	**FINESS Array B**	**74.90**	**333**	P	**P**	**06 32 37.9**	**+0.5**
comp=Z,1.4nm,0.6s,mb3.8,baz=74,slow=8.1,SNR=4.9							
NB2	**NORSAR Subarra**	**80.66**	**337**	P	**P**	**06 33 08.8**	**+0.1**
comp=Z,0.7nm,0.5s,mb3.6,baz=51,slow=4.6							
NOA	**NORSAR Array B**	**80.66**	**337**	P	**P**	**06 33 09.1**	**+0.4**
comp=Z,1.0nm,0.5s,mb3.8,baz=48,slow=4.8,SNR=4.2							
NOA	**NORSAR Array B**	**80.66**	**337**	P	**P**	**06 33 09.1**	**+0.4**
BRTR	**Keskin Array B**	**82.78**	**312**	P	**P**	**06 33 20.4**	**+0.4**
comp=Z,1.4nm,0.8s,mb3.8,baz=90,slow=4.9,SNR=6.7							
LPAZ	**La Paz**	**151.45**	**69**	PKPbc	PKPbc	06 40 46.9	-0.1
comp=Z,0.8nm,0.4s,baz=285,slow=7.6,SNR=17							

IDC 08 06:30:17.7±543.0, 34°.34N×149°.20E, h0km, Error ellipse: s-maj=1082.0km s-min=50.6km az=117.0, North Pacific Ocean

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*JMA **08** 06:35:03.0±0.3, 34°.68N×128°.15E, h11km, M3.3*
*KMA **08** 06:35:04.7, 34°.56N×128°.24E, ML2.8*
*ISCJB **08** 06:35:05.6±0.5, 34°.57N±0°.03×128°.24E±0°.03, h10km, Error ellipse: s-maj=4.6km s-min=3.5km az=39.9*
ISC 08 06:35:05.7±0.5, 34°.57N±0°.03×128°.23E±0°.04, h10km, n22, σ1§06/32, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSTOY	**TONGYEONG**	**0.32**	**31**	P	**Pg**	**06 35 11.2**	**-0.9**
KSJIN	**Jinju**	**0.61**	**344**	P	**Pg**	**06 35 17.0**	**-0.6**
KSJIN				S	**Sg**	**06 35 25.2**	**-0.4**
KSYSU	**YEOSU**	**0.75**	**316**	P	**Pg**	**06 35 19.5**	**-0.6**
JTU	**Tsushima**	**0.96**	**92**	P	**Pg**	**06 35 22.3**	**-1.9**
JTU				S	**Sg**	**06 35 37.1**	**+0.4**
KSKCH	**Geochang**	**1.07**	**346**	P	**Pg**	**06 35 25.0**	**-1.3**
KSKWJ	**Gwangju**	**1.18**	**300**	P	**Pb**	**06 35 27.4**	**-0.7**
KSKWJ				S	**Sb**	**06 35 43.6**	**+0.2**
KSMOK	**Mokpo**	**1.25**	**279**	P	**Pn**	**06 35 28.6**	**-0.6**
KSWAN	**Wando**	**1.28**	**262**	P	**Pn**	**06 35 29.2**	**-0.4**
KSDAG	**Daegu**	**1.31**	**24**	P	**Pn**	**06 35 28.8**	**-1.3**
KSDAG				S	**Sb**	**06 35 46.1**	**-1.1**
KSUSN	**Ulsan**	**1.34**	**33**	P	**Pn**	**06 35 29.2**	**-1.3**
KSHAN	**Haenam**	**1.37**	**271**	P	**Pn**	**06 35 30.8**	**-0.1**
KSJEU	**Jeongeup**	**1.41**	**311**	P	**Pn**	**06 35 31.3**	**-0.1**
KSJEU				S	**Sn**	**06 35 50.3**	**+0.2**
JII	**Iki**	**1.46**	**122**	*e*S	**Sn**	**06 35 50.6**	**-0.7**
KSJEO	**Jeonju**	**1.57**	**331**	S	**Sn**	**06 35 54.5**	**+0.6**
KSCPR	**CHUPUNGNYEONG**	**1.66**	**353**	S	**Sn**	**06 35 57.3**	**+1.1**
KSPHA	**Pohang**	**1.87**	**30**	P	**Pn**	**06 35 38.4**	**+0.8**
KSPHA				S	**Sn**	**06 36 03.0**	**+1.8**
KSADO	**Andong**	**1.93**	**17**	P	**Pn**	**06 35 39.3**	**+0.8**
JFU	**Fukue jima 2**	**1.96**	**167**	P	**Pn**	**06 35 39.0**	**+0.1**
JFU				*e*S	**Sn**	**06 36 05.0**	**+1.5**
KSHUK	**Heuksando**	**2.30**	**274**	S	**Sn**	**06 36 17.5**	**+5.6**
KSCHJ	**Chungju**	**2.31**	**355**	P	**Pn**	**06 35 45.8**	**+2.1**
KSCHJ				S	**Sn**	**06 36 17.2**	**+5.1**
KSULJ	**Uljin**	**2.33**	**24**	P	**Pn**	**06 35 46.1**	**+2.1**
KSULJ				S	**Sn**	**06 36 16.8**	**+4.1**
KSCEA	**Cheonan**	**2.38**	**341**	P	**Pn**	**06 35 48.4**	**+3.6**
KSCEA				S	**Sn**	**06 36 19.6**	**+5.6**

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*IDC **08** 06:48:58.1±1.1, 12°.40N×87°.84W, h0km, mb4.0/12, mb1 4.2/13, mb1mx4.0/26, mbtmp4.0/13, ML3.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/29, Error ellipse: s-maj=34.4km s-min=17.3km az=46.0*
*CASC **08** 06:49:01.4±2.2, 12°.09N×88°.25W, h22km±23km, MD4.0, mb4.4(NEIC)*
*ISCJB **08** 06:49:02.9±0.6, 12°.15N±0°.06×88°.14W±0°.05, h48km±4km, mb4.1/24, Error ellipse: s-maj=12.0km s-min=3.9km az=40.3*
*NEIC **08** 06:49:04.7±1.2, 12°.16N×88°.03W, h60km±10km, mb4.4/12, Error ellipse: s-maj=16.9km s-min=9.2km az=223.0*
ISC 08 06:49:04.3±0.6, 12°.22N±0°.06×88°.09W±0°.05, h42km±4km, n102, σ0§98/106, mb4.1/24, 19C-20D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.08**	**13**	*e*P	**Pn**	**06 49 23.4**	**+0.4**
CNCH				*e*S	**Sn**	**06 49 42.7**	**+5.9**
CRIN	**San Cristobal**	**1.12**	**65**	*e*P	**Pn**	**06 49 24.2**	**+0.6**
VSM	**San Miguel**	**1.21**	**352**	*e*P	**Pn**	**06 49 24.7**	**-0.1**
BLLM	**Bellamira**	**1.22**	**353**	*e*P	**Pn**	**06 49 24.7**	**-0.2**
TEL3	**Telica 3**	**1.27**	**74**	*e*P	**Pn**	**06 49 25.6**	**+0.1**
CNGN	**Cerro Negro**	**1.39**	**78**	*e*P	**Pn**	**06 49 27.1**	**-0.1**
COPN	**Copaltepe**	**1.47**	**91**	*e*P	**Pn**	**06 49 28.0**	**-0.3**
MOMN	**Momotombo**	**1.53**	**83**	*e*P	**Pn**	**06 49 29.5**	**+0.4**
CAHU	**Cacaouatique**	**1.54**	**356**	*e*P	**Pn**	**06 49 29.9**	**+0.5**
CAHU				*e*S	**Sn**	**06 49 53.6**	**+5.4**
SNVI	**San Vicente**	**1.56**	**332**	*e*P	**Pn**	**06 49 30.1**	**+0.4**
CSAN		**1.63**	**91**	*e*P	**Pn**	**06 49 30.3**	**-0.3**
LFRS	**El Faro**	**1.68**	**326**	*e*P	**Pn**	**06 49 29.4**	**-1.9**
LFRS				*e*S	**Sn**	**06 49 51.8**	**+0.2**
XAVN	**Gruta Xavier**	**1.73**	**92**	*e*P	**Pn**	**06 49 31.6**	**-0.3**
CRUN	**El Crucero**	**1.77**	**98**	*e*P	**Pn**	**06 49 32.4**	**0.0**
TISN	**Laguna Tiscapa**	**1.78**	**92**	*e*P	**Pn**	**06 49 32.4**	**-0.3**
SNET	**Serv Nac Est T**	**1.83**	**323**	*e*P	**Pn**	**06 49 31.8**	**-1.5**
HUEN		**1.88**	**86**	*e*P	**Pn**	**06 49 34.2**	**+0.2**
BOQS	**Boqueron**	**1.90**	**323**	*e*P	**Pn**	**06 49 33.0**	**-1.3**
BOQS				*e*S	**Sn**	**06 49 57.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.99**	**24**	*e*Pn	**Pn**	**06 49 36.7**	**+1.1**
SBLS	**San Blas**	**2.19**	**317**	*e*P	**Pn**	**06 49 36.7**	**-1.6**
SBLS				*e*S	**Sn**	**06 50 04.8**	**+0.6**
BOAB	**BOACO BROADBAN**	**2.38**	**84**	*e*P	**Pn**	**06 49 41.0**	**+0.1**
RBDL	**Robledal**	**2.44**	**321**	*e*P	**Pn**	**06 49 40.6**	**-1.0**
JTS	**JuntasAbangare**	**3.63**	**122**	*e*Pn	**Pn**	**06 49 57.3**	**-0.8**
JCR	**Jicaral**	**3.76**	**129**	*e*P	**Pn**	**06 49 59.1**	**-0.7**
CGA2	**Cerro Gallo 2**	**4.18**	**121**	*e*P	**Pn**	**06 50 05.4**	**-0.2**
PRS1	**Puriscal**	**4.33**	**121**	*e*P	**Pn**	**06 50 09.6**	**+1.9**
LAJ	**Bijagual**	**4.55**	**121**	*e*P	**Pn**	**06 50 07.1**	**-3.5**
QCR	**Quepos**	**4.75**	**125**	*e*P	**Pn**	**06 50 12.9**	**-0.6**
URSC	**Urasca**	**4.85**	**119**	*e*P	**Pn**	**06 50 17.0**	**+2.1**
BUS	**Buena Vista**	**5.01**	**121**	*e*P	**Pn**	**06 50 18.4**	**+1.3**
BUS				*e*S	**Sn**	**06 51 05.9**	**-7.9**
ACR	**Cerro Adams**	**6.00**	**126**	*e*P	**Pn**	**06 50 31.4**	**+0.8**
TEIG	**Tepich**	**7.96**	**359**	Pn	**Pn**	**06 50 59.9**	**+2.4**
0.4nm,0.3s,baz=180,slow=19,SNR=4.6							
TEIG				LR	LR	06 54 30.5	
comp=Z,166nm,18.5s,baz=178,slow=43							
CMIG	**Matias Romero**	**8.16**	**307**	Pn	**Pn**	**06 50 59.8**	**-0.6**
0.6nm,0.3s,baz=95,slow=14,SNR=14							
CMIG				Sn	**Sn**	**06 52 25.8**	**-5.5**
0.0nm,0.3s,baz=324,slow=19,SNR=1.4							
LRAL	**Lakeview Retre**	**20.74**	**3**	*e*P	**P**	**06 53 43.5**	**+2.0**
JCT	**Junction City**	**21.16**	**331**	⇑P	**P**	**06 53 45.2**	**-0.8**
baz=20,SNR=7.0							
JCT	**Junction City**	**21.16**	**331**	*e*P	**P**	**06 53 45.3**	**-0.7**
6.7nm,0.6s,mb4.2							
GOGA	**Godfrey**	**21.51**	**11**	*e*P	**P**	**06 53 49.0**	**-0.7**
6.4nm,0.9s,mb4.0							
628A	**Black Gap, Mar**	**22.01**	**324**	⇓P	**P**	**06 53 54.9**	**-0.2**
baz=21							
627A	**Terlingua Ranc**	**22.28**	**323**	⇑P	**P**	**06 53 58.0**	**0.0**
baz=21,SNR=7.1							
TXAR	**Lajitas Array**	**22.36**	**322**	P	**P**	**06 53 58.9**	**0.0**
2.1nm,0.7s,mb3.7,baz=144,slow=11,SNR=20							
MIAR	**Mount Ida**	**22.78**	**348**	*e*P	**P**	**06 54 03.1**	**-0.1**
13nm,0.8s,mb4.4							
626A	**Big Bend Ranch**	**22.80**	**322**	⇑P	**P**	**06 54 03.8**	**+0.2**
baz=22							
JSC	**Jenkinsville**	**22.82**	**15**	*e*P	**P**	**06 54 04.2**	**+0.4**
428A	**Kincaid Ranch,**	**22.83**	**326**	⇓P	**P**	**06 54 03.9**	**0.0**
baz=22							
PCRV	**Puerto La Cruz**	**23.10**	**93**	P	**P**	**06 54 04.4**	**-2.4**
6.5nm,0.8s,mb4.1,baz=297,slow=4.1,SNR=3.6							
526A	**Mary Lane Ranc**	**23.14**	**323**	⇓P	**P**	**06 54 07.5**	**+0.4**
baz=22							
328A	**Wristen Ranch,**	**23.41**	**327**	⇑P	**P**	**06 54 08.5**	**-1.3**
baz=22,SNR=7.5							
TKL	**Tuckaleechee C**	**23.66**	**9**	P	**P**	**06 54 10.1**	**-2.0**
6.7nm,1.0s,mb4.0,baz=186,slow=11,SNR=7.2							
TKL	**Tuckaleechee C**	**23.66**	**9**	P	**P**	**06 54 10.1**	**-2.0**
TKL				*e*P		06 54 12.4	
326A	**Caldwell Ranch**	**24.00**	**325**	⇓P	**P**	**06 54 15.8**	**+0.6**
baz=23,SNR=6.4							
226A	**Malaga, Loving**	**24.63**	**326**	⇑P	**P**	**06 54 21.7**	**+0.8**
baz=24							
Z27A	**Tatum**	**25.14**	**329**	⇑P	**P**	**06 54 25.1**	**-0.5**
baz=24,SNR=6.7							
CPRX	**Cap Rock**	**25.25**	**328**	*e*P	**P**	**06 54 27.4**	**+0.7**
6.3nm,0.9s,mb4.2							
MSTX	**Muleshoe**	**25.45**	**331**	⇑P	**P**	**06 54 28.1**	**-0.3**
baz=24,SNR=7.9							
Z26A	**Caprock**	**25.50**	**328**	⇓P	**P**	**06 54 28.6**	**-0.3**
baz=24							
AMTX	**Amarillo**	**25.71**	**334**	⇓P	**P**	**06 54 30.5**	**-0.3**
baz=24,SNR=6.4							
AMTX	**Amarillo**	**25.71**	**334**	*e*P	**P**	**06 54 30.2**	**-0.6**
15nm,1.1s,mb4.4							
CCM	**Cathedral Cave**	**25.88**	**354**	*e*P	**P**	**06 54 31.3**	**-1.0**
3.3nm,0.6s,mb4.0							
Z25A	**Roswell**	**25.90**	**327**	⇑P	**P**	**06 54 33.6**	**+1.1**
baz=25							
Y25A	**Mesa, Roswell**	**26.38**	**328**	⇓P	**P**	**06 54 38.2**	**+1.4**
baz=25,SNR=9.0							
W27A	**Bowe Ranch, En**	**26.49**	**332**	⇓P	**P**	**06 54 38.6**	**+0.8**
baz=25,SNR=9.6							
Y24A	**Capitan**	**26.77**	**327**	⇑P	**P**	**06 54 41.8**	**+1.4**
baz=26,SNR=7.4							
Y23A	**Lovelace Mesa,**	**27.12**	**326**	⇑P	**P**	**06 54 44.8**	**+1.3**
baz=26,SNR=5.5							
W25A	**X Bar L Ranch,**	**27.28**	**330**	⇑P	**P**	**06 54 45.8**	**+0.9**
baz=26							
V26A	**Tequesquite Ra**	**27.42**	**331**	⇓P	**P**	**06 54 47.0**	**+0.8**
baz=26,SNR=7.7							
V25A	**Rancho No Teng**	**27.85**	**330**	⇑P	**P**	**06 54 51.2**	**+1.2**
baz=27,SNR=6.5							
ANMO	**Albuquerque**	**28.10**	**327**	P	**P**	**06 54 52.8**	**+0.6**
0.5nm,0.6s,mb3.3,baz=142,slow=13,SNR=3.2							
U25A	**Circle Dot Ran**	**28.21**	**331**	⇑P	**P**	**06 54 54.6**	**+1.4**
baz=27							
T24A	**Torres, Weston**	**29.05**	**331**	⇓P	**P**	**06 55 02.7**	**+2.0**
baz=28							
ECSD	**EROS Data Cent**	**32.25**	**348**	*e*P	**P**	**06 55 27.0**	**-1.8**
16nm,1.8s,mb4.6							
SADO	**Sadowa**	**33.33**	**12**	P	**P**	**06 55 36.6**	**-1.6**
4.5nm,0.7s,mb4.5,baz=135,slow=22,SNR=3.5							
PDAR	**Pinedale

*KISR **08** 06:57:14.7±0.8, 32°.49N×47°.44E, h34km±999km, ML2.8*
*CSEM **08** 06:57:16.4±0.2, 32°.32N×47°.34E, h2km, ML2.8, Error ellipse: s-maj=7.1km s-min=3.6km az=100.0*
*TEH **08** 06:57:16.5, 32°.22N×47°.30E, h11km*
ISC 08 06:57:16.7±1.5, **32°.31N**±0°.04×**47°.36E**±0°.06, **h2**km±11km, **n18**, σ0^{s}**50**/27, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.24**	**99**	*e*Pg	**Pg**	**06 57 40.4**	**-0.1**
IKOM	**Komasi**	**1.86**	**4**	*e*Pn	**Pn**	**06 57 49.7**	**0.0**
IKOM				*e*		06 57 51.4	
	comp=Z,2μm,0.2s						
IKOM				*e*Sg	**Sg**	**06 58 17.7**	**+1.1**
IGHG	**Ghaleghazi**	**2.12**	**342**	*e*Pn	**Pn**	**06 57 52.8**	**-0.4**
IGHG				*e*Sg	**Sg**	**06 58 24.9**	**0.0**
IGHG				*e*		06 58 34.2	
	comp=Z,3μm,0.3s						
MIB	**Mutribah**	**2.50**	**180**	*e*P	**Pn**	**06 57 58.0**	**-0.4**
MIB				*e*S	**Sn**	**06 58 29.8**	**+0.3**
MIB				AML	AML	06 58 34.5	
	comp=Z,58nm,0.6s						
MIB	**Mutribah**	**2.50**	**180**	*e*P	**Pn**	**06 57 58.0**	**-0.4**
MIB				*e*S	**Sn**	**06 58 29.8**	**+0.4**
IDHR	**Dehrash**	**2.52**	**341**	*e*Pn	**Pn**	**06 57 58.4**	**-0.3**
IDHR				*e*		06 58 39.6	
	comp=Z,2μm,0.2s						
BHD	**Baghdad**	**2.69**	**292**	*e*x	**Pn**	**06 58 01.0**	**0.0**
BHD				*e*x	**Sn**	**06 58 34.0**	**-0.1**
SNGE	**Sanandaj**	**2.77**	**360**	*e*Pn	**Pn**	**06 58 02.3**	**+0.1**
IPIR	**Pirpir**	**3.01**	**82**	*e*Pn	**Pn**	**06 58 05.1**	**-0.3**
IPIR				*e*		06 58 57.2	
	comp=Z,547nm,0.3s						
NAY	**Al-Naaiem**	**3.05**	**182**	*e*P	**Pn**	**06 58 05.3**	**-0.7**
NAY				*e*S	**Sn**	**06 58 43.8**	**+0.7**
NAY				AML	AML	06 58 45.3	
	comp=Z,8.6nm,0.6s						
NAY	**Al-Naaiem**	**3.05**	**182**	*e*P	**Pn**	**06 58 05.3**	**-0.7**
NAY				*e*S	**Sn**	**06 58 43.8**	**+0.7**
RDF	**Al-Radifah**	**3.38**	**177**	*e*P	**Pn**	**06 58 10.5**	**0.0**
RDF				*e*S	**Sn**	**06 58 51.9**	**+0.8**
RDF				AML	AML	06 58 53.5	
	comp=Z,24nm,0.4s						
RDF	**Al-Radifah**	**3.38**	**177**	*e*P	**Pn**	**06 58 10.5**	**0.0**
RDF				*e*S	**Sn**	**06 58 51.9**	**+0.8**
QRN	**Al-Qurain**	**3.59**	**172**	*e*P	**Pn**	**06 58 12.7**	**-0.7**
IRAZ	**Razeghan**	**3.75**	**34**	*e*Pn	**Pn**	**06 58 15.5**	**-0.1**
IRAZ				*e*		06 59 10.3	
	comp=Z,351nm,0.2s						
IZEF	**Zefreh**	**4.23**	**81**	*e*Pn	**Pn**	**06 58 21.4**	**-0.8**
IZEF				*e*		06 59 20.9	
	comp=Z,362nm,0.1s						
ZNJK	**Zanjan**	**4.49**	**14**	*e*Pn	**Pn**	**06 58 25.5**	**-0.2**
NASN	**Na'in**	**4.62**	**82**	*e*Pn	**Pn**	**06 58 28.5**	**+0.9**

*ISK **08** 07:03:25.6, 37°.37N×36°.21E, h6km, MD2.8*
*DDA **08** 07:03:26.7, 37°.56N×36°.25E, h16km±2km, Md3.0*
*CSEM **08** 07:03:26.6±0.2, 37°.51N×36°.20E, h5km, MD3.0, Error ellipse: s-maj=5.8km s-min=3.6km az=1.0*
*ISCJB **08** 07:03:27.1±0.4, 37°.50N±0°.04×36°.20E±0°.03, h10km, Error ellipse: s-maj=5.1km s-min=3.0km az=4.1*
ISC 08 07:03:27.0±0.4, **37°.50N**±0°.03×**36°.20E**±0°.03, **h6**km±4km, **n27**, σ0^{s}**94**/47, **2C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.14**	**57**	⇑*i*P	**Pg**	**07 03 29.9**	**0.0**
ANDN				*i* S	**Sg**	**07 03 32.4**	**+0.6**
ANDN	**Andirin**	**0.14**	**57**	*i* P	**Pg**	**07 03 29.9**	**0.0**
ANDN				*i* S	**Sg**	**07 03 32.4**	**+0.6**
KOZT	**Kozan**	**0.29**	**266**	*e*PG	**Pg**	**07 03 32.8**	**+0.1**
KOZT				*e*SG	**Sg**	**07 03 37.6**	**+1.0**
KMRS	**Kahramanmaras**	**0.56**	**90**	*e*PG	**Pg**	**07 03 37.0**	**-0.8**
KMRS				*e*SG	**Sg**	**07 03 45.4**	**+0.4**
KMRS	**Kahramanmaras**	**0.56**	**90**	*e*Pg	**Pg**	**07 03 37.0**	**-0.7**
KMRS				*e*Sg	**Sg**	**07 03 45.4**	**+0.4**
CEYT	**Ceyhan**	**0.61**	**216**	*e*PG	**Pg**	**07 03 35.5**	**-3.2**
CEYT	**Ceyhan**	**0.61**	**216**	*e*Pg	**Pg**	**07 03 35.5**	**-3.2**
GAZ	**Gaziantep**	**0.87**	**112**	*e*PG	**Pg**	**07 03 41.5**	**-2.2**
GAZ				*e*SG	**Sg**	**07 03 54.1**	**-1.0**
GAZ	**Gaziantep**	**0.87**	**112**	*e*Pg	**Pg**	**07 03 41.5**	**-2.3**
GAZ				*e*Sg	**Sg**	**07 03 54.1**	**-1.0**
KARA	**Karaisali**	**0.94**	**255**	*e*PG	**Pg**	**07 03 43.5**	**-1.5**
KARA	**Karaisali**	**0.94**	**255**	*e*Pg	**Pg**	**07 03 43.5**	**-1.5**
KUZU	**Kuzuini**	**1.01**	**136**	⇑*i*P	**Pg**	**07 03 47.8**	**+1.4**
KUZU				*i* S	**Sg**	**07 04 00.9**	**+1.4**
KUZU	**Kuzuini**	**1.01**	**136**	*i* P	**Pg**	**07 03 47.8**	**+1.4**
KUZU				*i* S	**Sg**	**07 04 00.9**	**+1.4**
GZT	**Gaziantep**	**1.10**	**97**	⇓*i*P	**Pg**	**07 03 46.8**	**-1.2**
GZT				*i* S	**Sg**	**07 04 02.8**	**+0.5**
GULE	**Gulek**	**1.15**	**259**	*e*P	**Pg**	**07 03 49.2**	**+0.1**
GULE				*e*S	**Sg**	**07 04 05.1**	**+1.1**
GULE	**Gulek**	**1.15**	**259**	*e*P	**Pg**	**07 03 49.2**	**+0.1**
GULE				*e*S	**Sg**	**07 04 05.1**	**+1.1**
PINB	**Pinarbasi**	**1.18**	**8**	*e*P	**Pg**	**07 03 49.8**	**+0.2**
PINB				*e*S	**Sg**	**07 04 05.3**	**+0.3**
PINB	**Pinarbasi**	**1.18**	**8**	*e*P	**Pg**	**07 03 49.8**	**+0.1**
PINB				*e*S	**Sg**	**07 04 05.3**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.24**	**18**	*e*PG	**Pg**	**07 03 45.1**	**-5.6**
AKCD	**Akcadag**	**1.58**	**59**	*e*P	**Pn**	**07 03 55.1**	**-0.4**
AKCD				*e*S	**Sn**	**07 04 16.3**	**+0.1**
AKCD	**Akcadag**	**1.58**	**59**	*e*P	**Pn**	**07 03 55.1**	**-0.4**
AKCD				*e*S	**Sn**	**07 04 16.3**	**+0.1**
AVNT	**Avonos**	**1.66**	**321**	*e*P	**Pn**	**07 03 56.5**	**-0.1**
AVNT				*e*S	**Sn**	**07 04 17.7**	**-0.5**
AVNT	**Avonos**	**1.66**	**321**	*e*P	**Pn**	**07 03 56.5**	**-0.1**
AVNT				*e*S	**Sn**	**07 04 17.7**	**-0.4**
ATAB	**Bozova**	**1.67**	**91**	*e*P	**Pn**	**07 03 56.5**	**-0.3**
ATAB				*e*S	**Sn**	**07 04 19.7**	**+1.2**
ATAB	**Bozova**	**1.67**	**91**	*e*P	**Pn**	**07 03 56.5**	**-0.3**
ATAB				*e*S	**Sn**	**07 04 19.7**	**+1.2**
MYA	**Malataya**	**1.94**	**64**	*e*PN	**Pn**	**07 04 00.8**	**+0.3**
MYA	**Malataya**	**1.94**	**64**	*e*Pn	**Pn**	**07 04 00.8**	**+0.3**

DJA 08 07:33:58, 1°.46S×100°.82E, h7km, MLv3.5/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.65**	**327**	P	Pg	07 34 10.0	-0.6
PDSI				S	Sg	07 34 21.2	+2.1
SDSI	**Sungai Dareh**	**0.80**	**49**	P	Pg	07 34 15.4	+1.9
KRJI	**Kerinci**	**0.90**	**134**	P	Pg	07 34 13.7	-1.6
KRJI				S	Sg	07 34 27.9	+1.0
PPI	**Padang Panjang**	**1.08**	**337**	P	Pg	07 34 16.9	-1.9
PPI				S	Sg	07 34 32.9	0.0
SISI	**Saibi**	**1.73**	**274**	P	Pn	07 34 30.3	+1.7

*ISCJB **08** 07:42:35.1±0.6, 39°.70N±0°.10×95°.50E±0°.06, h10km, mb3.5/8, Error ellipse: s-maj=14.2km s-min=6.1km az=14.0*
*IDC **08** 07:42:35.7±0.8, 39°.62N×95°.48E, h0km, mb3.5/8, mb1 3.7/11, mb1mx3.6/28, mbtmp3.6/11, ML3.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/27, Error ellipse: s-maj=26.0km s-min=16.1km az=54.0*
*BJI **08** 07:42:36.8, 39°.78N×95°.20E, h8km, ML3.7/9, Ms3.4/4, Ms7 3.2/3*
*NEIC **08** 07:42:37.3±0.6, 39°.68N×95°.34E, h10km, Error ellipse: s-maj=14.3km s-min=10.4km az=224.0*
ISC 08 07:42:37.2±0.6, **39°.68N**±0°.09×**95°.44E**±0°.06, **h10**km, **n16**, σ0^{s}**88**/22, **mb3.5/8, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**3.40**	**93**	Pn	**Pn**	**07 43 36.1**	**+5.9**
GTA				Pg	**Pg**	**07 43 42.3**	**0.0**
GTA				Sn	**Sn**	**07 44 16.8**	**+6.3**
GTA				Sg	**Sg**	**07 44 25.5**	**-0.7**
GTA				smax			
	comp=N,130nm,0.7s						
GTA				smax			
	comp=E,100nm,0.8s						
GTA				LR	LR		
	comp=N,390nm,7.8s						
GTA				LR	LR		
	comp=E,310nm,7.8s						
GTA				LR	LR		
	comp=Z,250nm,9.5s						
WMQ	**Urumqi**	**7.12**	**308**	Pn	**Pn**	**07 44 22.0**	**+0.7**
WMQ				Sn	**Sn**	**07 45 36.0**	**-6.2**
LZH	**Lanzhou**	**7.55**	**116**	*e*Pg	**Pg**	**07 44 54.6**	**-7.2**
LZH				Sg	**Sg**	**07 46 32.8**	**-6.8**
LZH				smax			
	comp=N,28nm,0.6s						
LZH				smax			
	comp=E,20nm,0.8s						
SONM	**Songino Array**	**11.36**	**41**	Pn	**Pn**	**07 45 20.3**	**+0.8**
	comp=E,0.3nm,0.3s,baz=222,slow=15,SNR=3.2						
SONM				Lg		07 48 37.5	
	comp=E,0.4nm,0.3s,baz=225,slow=32,SNR=4.5						
SONM				LR	LR	07 49 51.1	
	comp=E,75nm,18.9s,baz=262,slow=38						
MKAR	**Makanchi Array**	**11.93**	**311**	Pn	**Pn**	**07 45 25.3**	**-1.9**
	comp=E,0.7nm,0.3s,baz=113,slow=13,SNR=20						
MKAR				Sn	**Sn**	**07 47 32.4**	**-7.9**
	comp=E,0.2nm,0.3s,baz=124,slow=13,SNR=3.6						
AAK	**Ala-Archa**	**16.05**	**287**	Pn	**Pn**	**07 46 22.1**	**-0.8**
	comp=E,0.0nm,0.3s,baz=240,slow=8.1,SNR=2.1						
CMAR	**Chiang Mai Arr**	**21.36**	**171**	P	**P**	**07 47 25.9**	**+1.2**
	comp=E,0.7nm,0.3s,mb3.5,baz=343,slow=8.8,SNR=4.1						
BVAR	**Borovoye Array**	**21.70**	**316**	P	**P**	**07 47 27.5**	**-0.7**
	comp=E,0.9nm,0.6s,mb3.4,baz=104,slow=12,SNR=5.7						
ARCES	**ARCESS Array B**	**46.49**	**333**	P	**P**	**07 51 05.0**	**+0.9**
	comp=E,1.3nm,1.0s,mb3.8,baz=89,slow=7.4,SNR=5.9						
ARCES	**ARCESS Array B**	**46.49**	**333**	P	**P**	**07 51 05.0**	**+0.9**
BRTR	**Keskin Array B**	**46.68**	**291**	P	**P**	**07 51 06.8**	**+0.8**
	comp=E,0.6nm,0.7s,mb3.6,baz=99,slow=6.4,SNR=3.7						
NOA	**NORSAR Array B**	**53.61**	**323**	P	**P**	**07 51 58.2**	**0.0**
	comp=E,0.5nm,0.6s,mb3.6,baz=71,slow=8.0,SNR=2.8						
NOA	**NORSAR Array B**	**53.61**	**323**	P	**P**	**07 51 58.2**	**0.0**
ILAR	**Eielson Array**	**65.11**	**25**	P	**P**	**07 53 18.6**	**+1.0**
	comp=E,0.2nm,0.6s,mb3.3,baz=300,slow=6.3,SNR=4.2						
WRA	**Warramunga Arr**	**69.55**	**141**	P	**P**	**07 53 45.5**	**-0.8**
	comp=E,0.3nm,0.9s,mb3.2,baz=330,slow=5.5,SNR=3.4						
ASAR	**Alice Springs**	**72.53**	**143**	P	**P**	**07 54 03.7**	**-0.6**
	comp=E,0.2nm,0.6s,mb3.2,baz=340,slow=6.9,SNR=3.6						

*IDC **08** 07:54:13.3±1.1, 6°.14S×149°.33E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/16, mbtmp4.0/5, MS3.7/4, Ms1 3.7/4, ms1mx3.1/20, Error ellipse: s-maj=52.5km s-min=23.5km az=127.0*
*ISCJB **08** 07:54:19.1±3.7, 6°.1S±0°.2×149°.1E±0°.3, h52km±31km, mb3.8/4, MS3.8/3, Error ellipse: s-maj=60.4km s-min=25.8km az=33.8*
*NEIC **08** 07:54:19.9±2.9, 6°.12S×149°.17E, h47km±23km, Error ellipse: s-maj=37.7km s-min=21.0km az=133.0*
ISC 08 07:54:19.6±3.9, **6°.0S**±0°.2×**148°.9E**±0°.3, **h42**km±34km, **n16**, σ0^{s}**93**/9, **mb3.8**/4, **MS3.8**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.84**	**207**	*e*Pn	**Pn**	**07 55 16.4**	**+0.2**
PMG				*e*Sn	**Sn**	**07 56 00.7**	**+0.6**
CTA	**Charters Tower**	**14.28**	**190**	LR	LR	08 02 52.9	
	comp=Z,136nm,20.1s,baz=46,slow=37						
WB2	**Warramunga Arr**	**19.84**	**224**	*e*P	**Pn**	**07 58 47.5**	**-1.3**
WRA	**Warramunga Arr**	**19.85**	**224**	P	**Pn**	**07 58 47.6**	**-1.3**
	3.6nm,0.4s,baz=51,slow=11,SNR=34						
ASAR	**Alice Springs**	**22.77**	**218**	P	**P**	**07 59 18.6**	**+0.1**
	1.7nm,0.6s,mb3.7,baz=54,slow=9.4,SNR=52						
FITZ	**Fitzroy Crossi**	**25.72**	**240**	P	**P**	**07 59 48.0**	**+1.8**
	3.1nm,0.5s,mb4.1,baz=75,slow=7.1,SNR=21						
FITZ	**Fitzroy Crossi**	**25.72**	**240**	P	**P**	**07 59 48.0**	**+1.8**
FITZ				*e*P		07 59 48.3	
STKA	**Stephens Creek**	**26.68**	**194**	P	**P**	**07 59 54.4**	**-0.3**
	1.2nm,0.5s,mb3.7,baz=16,slow=13,SNR=3.3						
STKA				LR	LR	08 09 28.2	
	comp=Z,118nm,21.5s,MS3.4,baz=205,slow=34						
MJAR	**Matsushiro Arr**	**43.45**	**347**	LR	LR	08 17 27.6	
	comp=Z,37nm,18.6s,MS3.3,baz=245,slow=32						
ILAR	**Eielson Array**	**84.70**	**23**	P	**P**	**08 06 48.9**	**+0.2**
	0.6nm,0.7s,mb3.9,baz=248,slow=5.0,SNR=12						
RPN	**Rapa Nui**	**97.69**	**118**	LR	LR	08 41 53.8	
	comp=Z,217nm,19.1s,MS4.7,baz=95,slow=29						
TORD	**Torodi Ar. Bea**	**146.92**	**285**	PKPbc	PKPbc	08 14 00.1	+1.5
	1.1nm,0.7s,baz=65,slow=2.5,SNR=13						
TORD	**Torodi Ar. Bea**	**146.92**	**285**	PKPbc	PKPbc	08 14 00.1	+1.5
BDFB	**Brasilia**	**152.77**	**142**	PKPbc	PKPbc	08 14 11.9	-1.0
	1.6nm,0.5s,baz=150,slow=1.8,SNR=8.6						
DBIC	**Dimbokro**	**153.92**	**273**	PKPab	PKPab	08 14 30.3	+1.4
	2.3nm,0.8s,baz=55,slow=5.9,SNR=3.4						
DBIC	**Dimbokro**	**153.92**	**273**	PKPab	PKPab	08 14 30.3	+1.4

MAN 08 07:55:03, 17°.27N×122°.51E, h21km, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.23**	**202**	*e*P	Pb	07 55 10.0	+1.3
PALP				*e*S	Sb	07 55 17.4	+4.9
CAUP	**Cauayan**	**0.74**	**244**	*e*P	Pb	07 55 20.0	+2.8
CAUP				*e*S	Sb	07 55 32.2	+5.4
CVP	**Callao Caves**	**0.79**	**303**	*e*P	Pb	07 55 17.1	-0.9
CVP				*e*S	Sb	07 55 31.1	+2.9
APYP	**Conner**	**1.34**	**296**	*e*P	Pn	07 55 26.6	0.0
APYP				*e*S	Sn	07 55 39.3	-4.5

*ISCJB **08** 07:55:18.5±0.9, 31°.16N±0°.04×103°.13E±0°.07, h10km, mb3.5/5, Error ellipse: s-maj=9.3km s-min=5.8km az=170.2*
*IDC **08** 07:55:21.2±1.2, 30°.95N×103°.46E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/22, mbtmp3.6/6, Error ellipse: s-maj=38.6km s-min=22.6km az=62.0*
*BJI **08** 07:55:23.9, 30°.90N×103°.46E, h15km, ML3.7/13, Ms3.2/2, Ms7 3.1/1*
ISC 08 07:55:22.7±0.7, **31°.11N**±0°.04×**103°.37E**±0°.06, **h10**km, **n11**, σ1^{s}**50**/16, **mb3.5/5, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.39**	**120**	Pg	**Pg**	**07 55 31.2**	**+0.8**
CD2				Sg	**Sg**	**07 55 38.1**	**+2.5**
CD2				smax			
	comp=N,6μm,0.5s						
CD2				smax			
	comp=E,12μm,0.5s						
LZH	**Lanzhou**	**4.98**	**4**	*e*Pg	**Pg**	**07 56 56.5**	**-1.7**
LZH				Sg	**Sg**	**07 58 03.0**	**+0.3**
LZH				smax			
	comp=N,26nm,0.6s						
LZH				smax			
	comp=E,39nm,0.6s						
GYA	**Guiyang**	**5.46**	**147**	Pn	**Pn**	**07 56 43.1**	**-1.1**
GYA				Pg	**Pb**	**07 56 52.9**	**-5.3**
GYA				smax			
	comp=N,120nm,0.7s						
GYA				smax			
	comp=E,90nm,0.8s						
XAN	**Xi'an**	**5.53**	**57**	Pn	**Pn**	**07 56 47.1**	**+2.1**
XAN				Pg	**Pg**	**07 57 06.8**	**-1.8**
XAN				Sn	**Sn**	**07 57 50.6**	**+2.0**
XAN				Sg	**Sg**	**07 58 18.3**	**-1.9**
XAN				smax			
	comp=N,97nm,0.9s						
XAN				smax			
	comp=E,63nm,0.8s						
XAN				LR	LR		
	comp=N,110nm,10.9s						
XAN				LR	LR		
	comp=E,27nm,8.9s						
GTA	**Gaotai**	**8.78**	**342**	*e*P	Px	07 58 17.8	
GTA				sP		07 58 25.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
CMAR	**Chiang Mai Arr**	**13.22**	**199**	Pn	**Pn**	**07 58 30.1**	**-0.4**
	baz=19,slow=8.6,SNR=2.3						
KSRS	**Korea Array**	**21.23**	**66**	P	**P**	**08 00 08.9**	**+0.2**
	comp=Z,1.5nm,0.7s,mb3.4,baz=242,slow=9.6,SNR=4.7						
MKAR	**Makanchi Array**	**22.57**	**320**	P	**P**	**08 00 25.2**	**+2.2**
	comp=Z,0.5nm,0.7s,mb3.0,baz=146,slow=8.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**26.45**	**335**	P	**P**	**08 01 00.8**	**+1.2**
	comp=Z,0.6nm,0.3s,mb3.6,baz=141,slow=7.1,SNR=2.3						
WRA	**Warramunga Arr**	**58.83**	**146**	P	**P**	**08 05 20.0**	**-1.6**
	comp=Z,0.5nm,0.6s,mb3.8,baz=338,slow=7.5,SNR=4.8						
ASAR	**Alice Springs**	**61.83**	**148**	P	**P**	**08 05 40.8**	**-1.2**
	comp=Z,0.4nm,0.8s,mb3.6,baz=334,slow=6.5,SNR=5.0						

*ISCJB **08** 07:58:26.8±1.1, 0°.78N±0°.08×122°.52E±0°.07, h10km, mb3.5/3, Error ellipse: s-maj=12.5km s-min=8.5km az=148.5*
*IDC **08** 07:58:27.9±1.8, 0°.50N×122°.35E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/21, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=143.7km s-min=26.3km az=64.0*
*DJA **08** 07:58:27, 1°.07N×121°.66E, h10km, MLv4.1/3*
*NEIC **08** 07:58:32.9±1.1, 0°.63N×122°.68E, h35km, Error ellipse: s-maj=80.6km s-min=16.5km az=65.0*
ISC 08 07:58:28.0±1.2, **0.79N**±0°.09×**122°.50E**±0°.06, **h10**km, **n10**, σ1^{s}**39**/12, **mb3.5/3, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.64**	**241**	P	**Pg**	**07 58 39.1**	**-1.3**
MRSI				S	**Sg**	**07 58 48.8**	**0.0**
KMSI	**Cibinong**	**1.50**	**98**	P	**Pg**	**07 59 07.5**	**+11**
LUWI	**Luwuk**	**1.84**	**172**	P	**Pg**	**07 59 05.8**	**+2.5**
APSI	**Ampana**	**1.89**	**207**	P	**Pg**	**07 59 02.7**	**-1.6**
APSI				S	**Sg**	**07 59 30.6**	**+1.8**
KDI	**Kendari**	**4.72**	**179**	P	**Pn**	**07 59 43.9**	**+4.7**
	22nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.02**	**171**	P	**Pn**	**08 02 49.9**	**-1.0**
	0.2nm,0.3s,baz=16,slow=7.9,SNR=4.9						
WRA	**Warramunga Arr**	**23.65**	**151**	P	**P**	**08 03 39.4**	**-0.4**
	0.9nm,0.4s,mb3.5,baz=325,slow=10,SNR=14						
WB2	**Warramunga Arr**	**23.65**	**151**	*e*P	**P**	**08 03 39.2**	**-0.6**
ASAR	**Alice Springs**	**26.72**	**156**	P	**P**	**08 04 06.8**	**-0.8**
	0.7nm,0.5s,mb3.5,baz=335,slow=8.6,SNR=14						
MKAR	**Makanchi Array**	**57.68**	**328**	P	**P**	**08 08 21.6**	**+2.9**
	0.2nm,0.4s,mb3.5,baz=138,slow=7.4,SNR=2.9						

*NEIC **08** 08:17:40.8, 20°.29N×65°.20W, h0km, MD3.5(RSPR), After RSPR.*
RSPR 08 08:17:40.8, 20°.29N×65°.20W, h0km±5km, **MD3.5**/6, **2C-10D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.94**	**173**	⇑*e*P	Pn	08 18 12.5	-2.5
STVI				*e*S	Sn	08 18 36.7	-3.4
STVI	**Saint Thomas**	**1.94**	**173**	⇓*e*P	Pn	08 18 12.5	-2.5
STVI				*e*S	Sn	08 18 36.7	-3.4
TBVI	**Tortola**	**1.94**	**164**	⇓*e*P	Pn	08 18 12.7	-2.3
TBVI				*e*S	Sn	08 18 37.2	-2.9
TBVI	**Tortola**	**1.94**	**164**	⇓*e*P	Pn	08 18 12.7	-2.3
TBVI				*e*S	Sn	08 18 37.2	-2.9
HUMP	**Col San Antoni**	**2.22**	**196**	⇓*e*P	Pn	08 18 16.2	-2.7
HUMP				*e*S	Sn	08 18 43.8	-3.3
HUMP	**Col San Antoni**	**2.22**	**196**	⇓*e*P	Pn	08 18 16.2	-2.7
HUMP				*e*S	Sn	08 18 43.8	-3.3
SJG	**San Juan**	**2.34**	**203**	⇓*e*P	Pn	08 18 18.1	-2.4
SJG	**San Juan**	**2.34**	**203**	⇓*e*P	Pn	08 18 18.1	-2.4
SJG				*e*S	Sn	08 18 47.0	-3.1
AOPR	**Arecibo Observ**	**2.43**	**218**	⇓*e*P	Pn	08 18 19.7	-2.0
AOPR	**Arecibo Observ**	**2.43**	**218**	⇓*e*P	Pn	08 18 19.7	-2.0
CRPR	**Cabo Rojo, PR**	**2.90**	**219**	⇓*e*P	Pn	08 18 25.9	-2.3
CRPR				*e*S	Sn	08 19 01.0	-2.8
CRPR	**Cabo Rojo, PR**	**2.90**	**219**	⇓*e*P	Pn	08 18 25.9	-2.3
CRPR				*e*S	Sn	08 19 01.2	-2.6

*IDC **08** 08:31:36.7±1.0, 23°.07N×121°.18E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/23, mbtmp3.7/6, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/35, Error ellipse: s-maj=48.6km s-min=19.8km az=75.0*
*BJI **08** 08:31:37.0, 23°.30N×121°.70E, h20km, mb3.9/1, ML3.6/4*
*NEIC **08** 08:31:38.0±0.8, 23°.34N×121°.69E, h10km, ML4.7(TAP), Error ellipse: s-maj=10.6km s-min=9.0km az=93.0*
NEIC Recorded [3 TAP] in Hua-lien and T'ai-tung; [1 TAP] in Chang-hua and Chia-i.
*ISCJB **08** 08:31:40.3±0.3, 23°.39N±0°.02×121°.60E±0°.02, h27km±2km, mb3.8/5, Error ellipse: s-maj=3.1km s-min=2.2km az=35.4*
*TAP **08** 08:31:40.9, 23°.43N×121°.51E, h31km, ML4.3, B*
*JMA **08** 08:31:42.0±0.3, 23°.45N×121°.63E, h79km, M3.4*
ISC 08 08:31:40.5±0.3, **23°.39N**±0°.02×**121°.59E**±0°.02, **h24**km±2km, **n81**, σ0^{s}**96**/129, **mb3.8**/5, **23C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YULB	**Yu-li**	**0.27**	**270**	*e*Pg	**Pb**	**08 31 46.1**	**-0.8**
EHY	**Hungye**	**0.27**	**295**	⇑*i*P	**Pb**	**08 31 47.2**	**+0.2**
	baz=294						
EHY				S	**Sb**	**08 31 51.4**	**0.0**
	baz=294						
TWF1	**Yuli**	**0.27**	**262**	⇑*i*P	**Pb**	**08 31 47.6**	**+0.6**
	baz=259						
TWF1				S	**Sb**	**08 31 52.0**	**+0.6**
	baz=259						
TEGC	**Jichi Village**	**0.32**	**352**	*e*P	**Pb**	**08 31 48.5**	**+0.7**
	baz=14						
TEGC				S	**Sb**	**08 31 54.5**	**+1.7**
	baz=14						
CHKT	**Chengkung**	**0.35**	**215**	⇑*e*P	**Pb**	**08 31 49.3**	**+1.0**
	baz=193						
ESL	**Shilin**	**0.44**	**342**	⇑*i*P	**Pb**	**08 31 49.4**	**-0.4**
	baz=342						
ESL				*e*S	**Sb**	**08 31 57.0**	**+0.9**
	baz=342						
ESF	**Shoufeng Towns**	**0.48**	**351**	P	**Pb**	**08 31 50.1**	**-0.3**
	baz=353						
ESF				*e*S	**

WNT	Mingjian	0.96	301	⇑iP	Pb	08 31 58.5	0.0
	baz=300						
WNT				S	Sb	08 32 11.0	+0.2
	baz=300						
SGST	Jiashian	0.97	252	eP	Pn	08 31 58.7	+0.1
	baz=239						
SGST				S	Sb	08 32 11.8	+0.7
	baz=239						
ECL	Taimali	0.98	217	eP	Pn	08 31 56.8	-2.0
	baz=211						
WGK	Gukeng	0.98	288	eP	Pn	08 31 58.7	-0.1
	baz=286						
WGK				eS	Sb	08 32 11.5	0.0
	baz=286						
CHN1	Nanshi	0.99	258	⇑iP	Pn	08 31 59.1	+0.1
	baz=261						
CHN1				eS	Sb	08 32 12.6	+0.9
	baz=261						
ENA	Nanau	1.04	8	⇑iP	Pn	08 31 58.5	-1.1
	baz=1.0						
NNS	Nan Shan	1.06	349	eP	Pn	08 31 58.8	-1.1
	baz=6.0						
CHY	Chiayi	1.07	276	P	Pn	08 32 00.3	+0.2
	baz=284						
CHY				S	Sb	08 32 14.2	+0.2
	baz=284						
TCU	Taichung	1.12	312	⇑iP	Pn	08 32 01.2	+0.5
	baz=313						
TCU				S	Sn	08 32 15.3	-0.1
	baz=313						
CHN3	Shinhua	1.17	255	eP	Pn	08 32 02.6	+1.2
	baz=264						
CHN3				eS	Sn	08 32 19.5	+3.1
	baz=264						
TAW	Tawu	1.21	212	eP	Pn	08 32 00.4	-1.6
	baz=207						
TWQ1	Liyutan	1.21	322	⇑iP	Pn	08 32 02.7	+0.8
	baz=323						
TWQ1				eS	Sn	08 32 18.3	+0.8
	baz=323						
TWM1	Shoushan	1.21	242	eP	Pn	08 32 03.6	+1.7
	baz=238						
EAST	Anshuo	1.21	214	eP	Pn	08 32 00.0	-1.9
	baz=202						
TWC	Suao	1.24	11	P	Pn	08 32 02.0	-0.3
	baz=28						
ENTT	Nioudou	1.24	359	P	Pn	08 32 01.2	-1.2
	baz=5.0						
NSY	Sanyi	1.27	324	iP	Pn	08 32 03.6	+0.9
	baz=324						
NSY				S	Sn	08 32 20.6	+1.6
	baz=324						
WTCT	Ta-ch'eng	1.29	292	eP	Pn	08 32 03.0	+0.1
	baz=290						
WTCT				eS	Sn	08 32 19.5	0.0
	baz=290						
YHNB	Yeheng	1.29	351	ePn	Pn	08 32 02.5	-0.5
YHNB				eSn	Sn	08 32 19.9	+0.4
NSK	Sanguang	1.30	351	P	Pn	08 32 02.5	-0.6
	baz=7.0						
NSK				S	Sn	08 32 18.5	-1.2
	baz=7.0						
SCLT	Jiali	1.30	261	eP	Pn	08 32 03.7	+0.5
	baz=257						
SCLT				eS	Sn	08 32 20.9	+1.1
	baz=257						
TWE	Neicheng	1.33	3	eP	Pn	08 32 02.8	-0.7
	baz=10.0						
NSTT	Nanjuang	1.34	337	⇑iP	Pn	08 32 04.4	+0.6
	baz=339						
NSTT				S	Sn	08 32 20.8	-0.1
	baz=339						
LAY	Lan-yu	1.35	181	eP	Pn	08 32 02.3	-1.5
	baz=171						
SCZT	Fangliau	1.35	221	eP	Pn	08 32 03.6	-0.3
	baz=207						
KAU	Kaohsiung	1.43	235	eP	Pn	08 32 09.8	+4.7
	baz=230						
HSN	Hsinchu	1.51	338	eP	Pn	08 32 08.9	+2.8
	baz=324						
TWP	Hsiaoliuchiu	1.53	228	eP	Pn	08 32 08.3	+1.9
	baz=224						
TATO	Taipei	1.58	357	ePn	Pn	08 32 07.1	0.0
TATO				eSn	Sn	08 32 26.9	+0.2
TWA	Mucha	1.58	360	eP	Pn	08 32 06.8	-0.3
	baz=5.0						
TWA				eS	Sn	08 32 27.0	+0.3
	baz=5.0						
HEN	Hengchun	1.58	210	eP	Pn	08 32 08.9	+1.8
	baz=196						
TWK1	Hengchun	1.61	207	eP	Pn	08 32 07.0	-0.4
	baz=195						
TSEB	Hengchuen, Pin	1.61	203	eP	Pn	08 32 06.2	-1.3
	baz=202						
TSEB				eS	Sn	08 32 29.1	+1.6
	baz=202						
NCU	National Centr	1.61	347	eP	Pn	08 32 07.6	+0.1
	baz=350						
NCU				eS	Sn	08 32 29.1	+1.5
	baz=350						
TAP1	Taipei	1.64	358	eP	Pn	08 32 08.7	+0.8
	baz=2.0						
TWB1	Santiao Chiao	1.65	13	eP	Pn	08 32 08.2	+0.2
	baz=6.0						
NWF	Wu-fen Shan	1.68	6	eP	Pn	08 32 08.4	0.0
	baz=11						
NWF				eS	Sn	08 32 29.1	-0.2
	baz=11						
YOJ	Yonaguni jima	1.68	50	eP	Pn	08 32 09.5	+1.0
	baz=55						
YOJ				eS	Sn	08 32 29.8	+0.5
	baz=55						
YOJ	Yonaguni jima	1.68	50	P	Pn	08 32 09.1	+0.6
YOJ				S	Sn	08 32 29.6	+0.3
TWS1	Kuangyinshan	1.71	355	eP	Pn	08 32 08.7	-0.1
	baz=13						
TWS1				eS	Sn	08 32 30.6	+0.7
	baz=13						
PNG	Penghu	1.87	276	⇓iP	Pn	08 32 10.6	-0.5
	baz=273						
PNG				eS	Sn	08 32 32.1	-1.8
	baz=273						
TWY	Chenhua	1.88	0	eP	Pn	08 32 10.4	-0.7
	baz=5.0						
HATJ	Hateruma jima	2.14	72	P	Pn	08 32 15.3	+0.6
HATJ				S	Sn	08 32 40.3	-0.2
IRIF	Iriomote-Funau	2.18	64	P	Pn	08 32 16.2	+1.0
IRIF				S	Sn	08 32 41.8	+0.4
JKRS	Kuro-shima	2.37	69	P	Pn	08 32 19.2	+1.2
JKRS				S	Sn	08 32 47.1	+0.8
JIJ	Ishigaki jima	2.53	67	P	Pn	08 32 20.8	+0.7
JIJ				S	Sn	08 32 49.4	-0.8
KNM	Kinmen	3.06	290	eP	Pn	08 32 27.4	0.0
	baz=286						
JTJ	Tarama	3.11	66	P	Pn	08 32 28.4	+0.3
JTJ				S	Sn	08 33 04.0	-0.5
QZH	Quanzhou	3.14	300	⇑iPn	Pn	08 32 26.6	-1.9
QZH				Sn	Sn	08 33 00.4	-4.8
QZH				smax			
	comp=N,760nm,0.6s						
QZH				smax			
	comp=E,430nm,0.5s						
KSRS	Korea Array	15.04	20	Pn	Pn	08 35 15.4	+4.0
	comp=E,0.2nm,0.3s,baz=196,slow=12,SNR=4.1						
MKAR	Makanchi Array	39.16	316	P	P	08 39 05.9	-0.4
	comp=E,1.5nm,0.7s,mb3.8,baz=110,slow=10.0,SNR=14						
ZALV	Zalesovo Beam	41.11	327	LR	LR	08 59 29.8	
	comp=E,30nm,20.0s,baz=352,slow=41						
WRA	Warramunga Arr	44.83	163	P	P	08 39 50.6	-2.1
	comp=E,1.0nm,0.5s,mb3.9,baz=344,slow=8.7,SNR=15						
ASAR	Alice Springs	48.28	165	P	P	08 40 18.2	-1.6
	comp=E,0.5nm,0.6s,mb3.7,baz=351,slow=7.7,SNR=8.2						
STKA	Stephens Creek	58.19	160	P	P	08 41 31.8	-0.9
	comp=E,1.9nm,0.6s,mb4.3,baz=345,slow=9.0,SNR=10						
ILAR	Eielson Array	69.75	27	P	P	08 42 51.2	+3.0
	comp=E,0.2nm,0.9s,mb3.0,baz=288,slow=5.6,SNR=3.1						

*IDC **08** 08:39:02.4±0.9, 12°.53N×87°.73W, h0km, mb3.9/11, mb1 4.2/12, mb1mx3.9/25, mbtmp3.9/12, ML3.5/1, MS3.6/3, Ms1 3.5/3, ms1mx2.8/34, Error ellipse: s-maj=37.2km s-min=17.9km az=56.0*
*CASC **08** 08:39:02.8±2.5, 11°.97N×88°.34W, h8km±11km, MD4.0, mb4.2(NEIC)*
*NEIC **08** 08:39:08.1±1.5, 12°.22N×88°.06W, h46km±13km, mb4.2/13, Error ellipse: s-maj=22.0km s-min=10.2km az=46.0*

ISC 08 08:39:02.6±1.4, 12°.02N±0°.04×88°.26W±0°.03, h3km±9km, n102, σ0°99/107, mb4.1/25, MS3.6/3, 18C-21D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	1.32	18	eP	Pn	08 39 27.6	-0.4
CRIN	San Cristobal	1.36	60	eP	Pn	08 39 28.2	-0.3
CRIN				eS	Sg	08 39 51.5	+5.0
VSM	San Miguel	1.40	359	eP	Pn	08 39 29.3	+0.2
BLLM	Bellamira	1.42	1	eP	Pn	08 39 28.9	-0.4
BLLM				eS	Sb	08 39 49.2	+1.1
TEL3	Telica 3	1.49	68	eP	Pn	08 39 29.6	-0.7
TELN	Telica	1.51	67	eP	Pn	08 39 30.3	-0.3
CNGN	Cerro Negro	1.60	72	eP	Pn	08 39 31.2	-0.6
COPN	Copaltepe	1.64	84	eP	Pn	08 39 32.1	-0.3
COPN				eS	Sn	08 39 54.4	+0.4
SNVI	San Vicente	1.68	340	eP	Pn	08 39 33.0	0.0
MOMN	Momotombo	1.73	77	eP	Pn	08 39 33.6	0.0
CAHU	Cacacuatique	1.74	2	eP	Pn	08 39 34.0	+0.2
CAHU				eS	Sn	08 39 58.1	+1.5
LFRS	El Faro	1.78	334	eP	Pn	08 39 33.5	-0.8
LFRS				eS	Sn	08 39 57.4	0.0
CSAN		1.80	85	eP	Pn	08 39 34.6	0.0
CSAN				eS	Sg	08 40 00.8	+0.2
LBRS	Las Brisas	1.87	336	eP	Pn	08 39 35.5	-0.1
XAVN	Gruta Xavier	1.90	86	eP	Pn	08 39 35.7	-0.2
XAVN				eS	Sn	08 40 02.5	+2.1
SNET	Serv Nac Est T	1.91	330	eP	Pn	08 39 35.3	-0.8
CRUN	El Crucero	1.92	91	eP	Pn	08 39 36.4	+0.2
BOQS	Boqueron	1.98	330	eP	Pn	08 39 36.9	-0.2
TICN	Ticuantepe	1.98	89	eP	Pn	08 39 37.5	+0.4
SBLS	San Blas	2.25	324	eP	Pn	08 39 40.9	+0.2
SBLS				eS	Sn	08 40 08.6	-0.4
RTR	El Retiro	2.31	324	eP	Pn	08 39 41.5	0.0
BOAB	BOACO BROADBAN	2.57	80	eP	Pn	08 39 44.6	-0.6
CONN	Concepcion	2.62	100	eP	Pn	08 39 45.9	0.0
CONN				eS	Sn	08 40 16.3	-1.9
JTS	JuntasAbangare	3.67	118	ePn	Pn	08 40 01.4	+1.0
PRS1	Puriscal	4.37	117	eP	Pn	08 40 12.9	+2.9
URSC	Urasca	4.91	116	eP	Pn	08 40 20.1	+2.7
BUS	Buena Vista	5.05	119	eP	Pn	08 40 19.4	0.0
CMIG	Matias Romero	8.16	309	Pn	Pn	08 41 03.1	+1.1
	0.6nm,0.3s,baz=137,slow=12,SNR=3.7						
TEIG	Tepich	8.16	360	Pn	Pn	08 41 01.8	-0.2
	0.4nm,0.3s,baz=7.4,slow=19,SNR=3.3						
JCT	Junction City	21.26	332	⇑P	P	08 43 49.7	-0.4
	baz=20,SNR=7.1						
JCT	Junction City	21.26	332	eP	P	08 43 49.6	-0.5
	10nm,0.8s,mb4.2						
GOGA	Godfrey	21.74	11	eP	P	08 43 55.6	+0.3
	6.7nm,0.8s,mb4.1						
628A	Black Gap, Mar	22.08	324	⇓P	P	08 43 59.4	+0.4
	baz=21						
627A	Terlingua Ranc	22.34	323	P	P	08 44 02.5	+0.7
	baz=22,SNR=7.2						
TXAR	Lajitas Array	22.42	323	P	P	08 44 02.4	-0.1
	1.6nm,0.6s,mb3.7,baz=147,slow=11,SNR=42						
TXAR	Lajitas Array	22.42	323	P	P	08 44 02.4	-0.1
MIAR	Mount Ida	22.94	349	eP	P	08 44 07.4	-0.7
	14nm,0.8s,mb4.5						
UALR	University of	22.96	351	eP	P	08 44 07.8	-0.5
	10nm,0.8s,mb4.3						
527A	Woodward Ranch	22.98	324	⇑P	P	08 44 08.3	-0.3
	baz=22						
526A	Mary Lane Ranc	23.20	323	⇑P	P	08 44 10.4	-0.5
	baz=22						
PCRV	Puerto La Cruz	23.25	92	P	P	08 44 10.2	-1.3
	9.9nm,0.9s,mb4.2,baz=113,slow=7.7,SNR=3.3						
427A	Hayter Ranch,	23.40	326	⇓P	P	08 44 12.9	-0.1
	baz=22						
328A	Wristen Ranch,	23.49	327	⇑P	P	08 44 12.5	-1.4
	baz=23,SNR=7.5						
TKL	Tuckaleechee C	23.88	9	P	P	08 44 13.1	-4.4
	8.7nm,1.0s,mb4.1,baz=179,slow=13,SNR=10						
TKL	Tuckaleechee C	23.88	9	P	P	08 44 13.1	-4.4
TKL				eP		08 44 16.6	
326A	Caldwell Ranch	24.07	325	⇓P	P	08 44 20.3	+0.9
	baz=23,SNR=5.8						
WMOK	Wichita Mounta	24.56	339	eP	P	08 44 22.5	-1.2
	5.5nm,1.0s,mb4.0						
325A	Bean Ranch, Si	24.68	324	⇑P	P	08 44 24.4	-0.4
	baz=24						
324A	Moseley Ranch,	25.02	323	⇓P	P	08 44 27.1	-1.0
	baz=24						
MNTX	Cornudas Mount	25.15	324	⇑P	P	08 44 28.4	-0.8
	baz=24						
Z27A	Tatum	25.23	330	⇑P	P	08 44 28.9	-1.0
	baz=24,SNR=8.8						
125A	Gardner Draw,	25.47	326	⇓P	P	08 44 32.5	+0.5
	baz=25						
224A	Cornudas Mount	25.51	324	⇑P	P	08 44 33.3	+0.9
	baz=25						
MSTX	Muleshoe	25.55	331	⇑P	P	08 44 32.2	-0.5
	baz=25,SNR=8.1						
Z26A	Caprock	25.58	328	⇓P	P	08 44 33.0	-0.1
	baz=25						
Y27A	Causey	25.67	330	⇓P	P	08 44 33.3	-0.5
	baz=25,SNR=7.5						
AMTX	Amarillo	25.82	334	⇓P	P	08 44 34.3	-0.9
	baz=25,SNR=6.9						
AMTX	Amarillo	25.82	334	eP	P	08 44 34.2	-1.0
	25nm,1.2s,mb4.6						
124A	Stringfield Ra	25.94	325	⇑P	P	08 44 37.7	+1.4
	baz=25						
Y26A	Elida	26.02	329	⇑P	P	08 44 37.1	0.0
	baz=25						
CCM	Cathedral Cave	26.07	355	eP	P	08 44 34.7	-2.7
	6.0nm,0.8s,mb4.2						
X27A	F and S Farms,	26.26	331	⇑P	P	08 44 39.3	+0.1
	baz=25						
Y25A	Mesa, Roswell	26.46	328	⇑P	P	08 44 41.9	+0.9
	baz=26,SNR=12						
W27A	Bowe Ranch, En	26.59	332	⇓P	P	08 44 42.8	+0.7
	baz=26,SNR=12						
Y24A	Capitan	26.85	327	⇓P	P	08 44 46.0	+1.4
	baz=26,SNR=6.0						
Y23A	Lovelace Mesa,	27.19	326	⇓P	P	08 44 49.1	+1.5
	baz=26						
W25A	X Bar L Ranch,	27.37	330	P	P	08 44 50.1	+0.9
	baz=26,SNR=6.9						
V26A	Tequesquite Ra	27.52	332	⇓P	P	08 44 50.9	+0.3
	baz=27,SNR=7.5						
V25A	Rancho No Teng	27.95	331	⇓P	P	08 44 55.4	+1.1
	baz=27,SNR=6.7						
ANMO	Albuquerque	28.18	327	P	P	08 44 57.0	+0.5
	0.3nm,0.3s,mb3.4,baz=135,slow=4.3,SNR=3.6						
U25A	Circle Dot Ran	28.30	332	⇓P	P	08 44 58.8	+1.2
	baz=27						
T25A	Trinidad	28.91	333	⇑P	P	08 45 04.5	+1.5
	baz=28						
U23A	El Rito	29.11	329	⇑P	P	08 45 05.4	+0.7
	baz=28						
SDCO	Great Sand Dun	29.91	332	eP	P	08 45 13.4	+1.6
	2.3nm,1.0s,mb3.9						
PDAR	Pinedale Array	35.78	333	P	P	08 46 02.0	-1.1
	0.9nm,1.0s,mb3.6,baz=127,slow=10,SNR=4.6						
PDAR				PcP	PcP	08 48 30.8	-0.2
	0.3nm,0.6s,baz=126,slow=2.8,SNR=4.0						
J18A	Kendall Valley	36.34	333	⇑P	P	08 46 07.0	-0.9
	baz=35,SNR=5.5						
AGMN	Agassiz Nation	36.72	352	eP	P	08 46 08.2	-2.8
	4.4nm,0.4s,mb4.6						
REDW	Red Top Meadow	36.84	332	eP	P	08 46 11.8	-0.2
	8.2nm,1.1s,mb4.5						
FLWY	Flagg Ranch	37.33	333	eP	P	08 46 15.2	-1.1
	2.0nm,0.6s,mb4.1						
NVAR	Mina Array Bea	37.51	320	P	P	08 46 18.1	+0.2
	1.0nm,1.0s,mb3.5,baz=123,slow=6.6,SNR=4.5						
NVAR				PcP	PcP	08 48 36.7	+0.4
	0.9nm,0.8s,baz=126,slow=4.6,SNR=5.7						
G18A	Lazy EL Ranch,	37.84	335	⇑P	P	08 46 19.5	-1.0
	baz=37						
E20A	Meyer Farm, Mu	38.26	338	⇓P	P	08 46 23.7	-0.4
	baz=37,SNR=6.5						
F18A	Big Timber	38.38	336	⇓P	P	08 46 24.5	-0.6
	baz=37,SNR=5.2						
ULM	Lac du Bonnet	38.63	352	P	P	08 46 23.0	-4.1
	7.7nm,0.6s,mb4.6,baz=168,slow=12,SNR=9.7						
ULM				LR	LR	09 01 52.4	
	comp=Z,56nm,20.0s,MS3.4,baz=113,slow=36						
SIV	San Ignacio	38.70	135	P	P	08 46 27.8	-0.4
	1.7nm,0.7s,mb3.9,baz=316,slow=10,SNR=10						
SIV				PcP	PcP	08 48 42.0	+1.8
	0.6nm,0.5s,baz=263,slow=8.1,SNR=4.6						
G16A	Moss Hill, Enn	38.72	333	⇓P	P	08 46 30.8	+2.8
	baz=38						
D20A	Manuel Ranch,	38.76	338	⇓P	P	08 46 27.9	-0.4
	baz=38,SNR=5.2						
H14A	Leadore	38.97	331	⇓P	P	08 46 30.4	+0.4
	baz=38						
BOZ	Bozeman (W)	38.97	334	eP	P	08 46 27.6	-2.5
	2.6nm,1.1s,mb3.9						
G15A	Dillon	38.98	333	⇑P	P	08 46 31.9	+1.7
	baz=38						
E18A	Harlowton	39.00	336	⇓P	P	08 46 29.6	-0.7
	baz=38						
DLMT	Dillon	39.18	333	eP	P	08 46 32.2	+0.4
	4.1nm,1.1s,mb4.1						
H13A	Challis	39.35	330	⇓P	P	08 46 34.5	+1.2
	baz=38						
SCHQ	Schefferville	45.92	17	P	P	08 47 22.4	-4.0
	2.3nm,0.5s,mb4.3,baz=223,slow=7.9,SNR=6.8						
SCHQ				LR	LR	09 09 36.0	
	comp=Z,86nm,18.9s,MS3.7,baz=103,slow=40						
YKA	Yellowknife Ar	53.82	345	P	P	08 48 22.7	-3.7
	1.0nm,0.7s,mb3.9,baz=146,slow=6.1,SNR=3.8						
ILAR	Eielson Array	66.09	336	P	P	08 49 48.1	-2.7
	0.5nm,0.9s,mb3.5,baz=113,slow=6.0,SNR=5.0						
RSO	Redoubt South	67.14	331	eP	P	08 49 58.8	+1.2
ARCES	ARCESS Array B	86.85	19	P	P	08 51 44.8	-3.5
	1.1nm,0.9s,mb4.1,baz=301,slow=10,SNR=3.6						
ARCES				LR	LR	09 30 07.5	
	comp=Z,27nm,20.1s,MS3.6,baz=162,slow=36						
MKAR	Makanchi Array	120.85	8	PKP	PKPdf	08 57 54.1	-2.5
	0.1nm,0.4s,baz=257,slow=2.7,SNR=2.7						
ASAR	Alice Springs	138.38	248	PKP	PKPdf	08 58 32.8	+2.4
	0.1nm,0.5s,baz=106,slow=3.0,SNR=2.7						
WRA	Warramunga Arr	138.39	254	PKP	PKPdf	08 58 33.5	+3.0
	0.2nm,0.5s,baz=90,slow=3.2,SNR=2.7						
CMAR	Chiang Mai Arr	148.90	347	PKPbc	PKPbc	08 58 51.4	-1.4
	1.4nm,0.8s,baz=336,slow=3.4,SNR=6.6						

*MOS **08** 09:15:50.3±2.1, 53°.38N×161°.69E, h15km, mb4.3/3, Error ellipse: s-maj=21.8km s-min=12.8km az=87.6*
*IDC **08** 09:15:51.9±1.7, 53°.87N×161°.27E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.5/26, mbtmp3.6/7, ML2.7/1, Error ellipse: s-maj=47.7km s-min=21.1km az=164.0*
*KRSC **08** 09:15:54.3±0.8, 53°.62N×161°.15E, h5km±5km, ML4.1*
ISC 08 09:15:53.4±0.9, 53°.53N±0°.04×161°.33E±0°.07, h1km±5km, n34, σ1°28/52, mb3.7/6, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.90	241	eP	Pg	09 16 11.7	+1.2
SPN				iS	Sg	09 16 23.8	+1.7
MKZ	Mys Kozlova	1.05	13	eP	Pg	09 16 12.7	-0.9
MKZ				iS	Sg	09 16 25.7	-1.5
KII	Karymskiy	1.22	295	eP	Pg	09 16 15.8	-1.0
KII				iS	Sg	09 16 30.9	-1.8
AVH	Avacha	1.57	261	eP	Pn	09 16 22.2	-0.2
AVH				iS	Sn	09 16 42.2	-1.2
PET	Petropavlovsk	1.68	253	eP	Pn	09 16 23.1	-0.9
PET				iS	Sn	09 16 44.4	-1.7
PET	Petropavlovsk	1.68	253	⇑iPN	Pn	09 16 23.4	-0.6
PET				eS	Sn	09 16 44.3	-1.8
PET				pmax	pmax		
	comp=Z,21nm,0.6s						
PET				smax			
	comp=E,180nm,0.4s						
PET				smax			
	comp=N,257nm,0.4s						
GNL	Ganaly	2.02	276	eP	Pn	09 16 28.9	+0.3
GNL				iS	Sn	09 16 54.1	-0.4
GRL	Gorelyy	2.20	245	eP	Pn	09 16 32.7	+1.7
GRL				iS	Sn	09 17 00.6	+1.8
PETK	Petropavlovsk-	2.22	260	Pn	Pn	09 16 30.9	-0.3
	comp=N,2.0nm,0.3s,baz=66,slow=14,SNR=20						
PETK				Sn	Sn	09 16 59.2	-0.1
	comp=N,15nm,0.3s,baz=260,slow=20,SNR=7.8						
PETK	Petropavlovsk-	2.22	260	ePN	Pn	09 16 29.3	-2.0
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BZGR	Bezymyannyi-Gr	2.44	352	eP	Pn	09 16 33.3	-1.0
BZGR				iS	Sn	09 17 02.0	-2.8
BZMR	Bezymyannaya	2.46	349	eP	Pn	09 16 35.3	+0.7
BZMR				iS	Sn	09 17 05.1	-0.1
ZLN	Zelenaya	2.51	353	eP	Pn	09 16 37.1	+1.8
KPT	Kopyto	2.52	346	eP	Pn	09 16 36.4	+0.9
KOZ	Kozyrevsk	2.67	342	eP	Pn	09 16 38.3	+0.8
KOZ				iS	Sn	09 17 11.1	+0.7
KOZR	Kozyr	2.67	343	PN	Pn	09 16 38.3	+0.8
KOZR				S	Sn	09 17 11.1	+0.6
KRSR	Krestovskiy	2.73	351	eP	Pn	09 16 38.6	+0.3
KRSR				iS	Sn	09 17 11.6	-0.2
KLY	Klyuchi	2.81	352	eP	Pn	09 16 40.3	+0.8
KLY				iS	Sn	09 17 13.6	-0.4
SRDR	Sredinnyy	2.94	342	eP	Pn	09 16 41.5	+0.3
SRDR				iS	Sn	09 17 16.5	-0.6
BDR	Baidarnaya	3.04	359	P	Pn	09 16 43.1	+0.5
SMKR	Semkarok	3.06	1	eP	Pn	09 16 44.4	+1.6
SMKR				iS	Sn	09 17 21.8	+1.8
SRKR	Sorokina	3.13	358	eP	Pn	09 16 45.5	+1.7
SRKR				iS	Sn	09 17 23.5	+1.7
ILAR	Eielson Array	27.98	46	P	P	09 21 41.8	-3.3
	comp=Z,0.2nm,0.8s,mb3.0,baz=272,slow=9.8,SNR=4.3						
ILAR	Eielson Array	27.98	46	P	P	09 21 41.8	-3.4
PDAR	Pinedale Array	56.66	62	P	P	09 25 36.2	-1.8
	comp=Z,0.2nm,0.6s,mb3.3,baz=332,slow=3.6,SNR=2.7						
FINES	FINESS Array B	60.01	337	P	P	09 25 57.6	-3.4
	comp=Z,1.2nm,0.6s,mb4.1,baz=18,slow=9.5,SNR=3.6						
FINES	FINESS Array B	60.01	337	P	P	09 25 57.6	-3.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	63.32	344	P	P	09 26 20.2	-3.2
	comp=Z,0.5nm,0.5s,mb3.9,baz=19,slow=6.9						
NOA	NORSAR Array B	63.32	344	P	P	09 26 19.9	-3.5
	comp=Z,0.8nm,0.6s,mb4.0,baz=26,slow=6.0,SNR=3.7						
NOA	NORSAR Array B	63.32	344	P	P	09 26 20.0	-3.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	63.76	343	P	P	09 26 22.6	-3.6
	comp=Z,0.8nm,0.5s,mb4.2,baz=43,slow=6.9						
HFS	Hagfors	63.76	343	P	P	09 26 22.6	-3.7
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s			

MDSI	**Maura Dua**	**9.30**	**126**	P	**Pn**	**09 28 52.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**17.44**	**7**	P	**Pn**	**09 30 43.2**	**+0.1**
	0.3nm,0.3s,baz=195,slow=11,SNR=18						
FITZ	**Fitzroy Crossi**	**34.27**	**125**	P	**P**	**09 33 25.3**	**-0.9**
	3.7nm,0.8s,mb4.4,baz=307,slow=5.1,SNR=10						
XAN	**Xi'an**	**34.77**	**18**	P	**P**	**09 33 29.6**	**-0.6**
XAN				pP	pP	09 33 36.2	+3.0
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
LZH	**Lanzhou**	**35.49**	**10**	*e*P	**P**	**09 33 36.5**	**0.0**
LZH				pP	pP	09 33 42.5	+3.1
LZH				sP	sP	09 33 45.0	+4.4
LZH				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
GTA	**Gaotai**	**38.29**	**4**	*e*P	**P**	**09 34 00.9**	**+0.7**
GTA				pP	pP	09 34 07.8	+4.6
GTA				sP	sP	09 34 11.7	+7.3
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
NWAO	**Narrogin (SRO)**	**38.97**	**152**	P	**P**	**09 34 06.0**	**0.0**
	comp=Z,10nm,1.1s,mb4.5,baz=260,slow=3.9,SNR=4.2						
WRA	**Warramunga Arr**	**42.41**	**122**	P	**P**	**09 34 34.1**	**-0.5**
	comp=Z,5.5nm,0.8s,mb4.2,baz=300,slow=9.1,SNR=42						
WRA				LR	LR	09 51 44.6	
	comp=Z,115nm,21.8s,MS3.7,baz=0.0,slow=36						
BJI	**Beijing**	**42.68**	**22**	P	**P**	**09 34 39.2**	**+2.7**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**43.73**	**127**	P	**P**	**09 34 44.7**	**-0.6**
	comp=Z,1.2nm,0.8s,mb3.7,baz=301,slow=7.8,SNR=14						
KSRS	**Korea Array**	**46.27**	**35**	P	**P**	**09 35 04.8**	**-0.6**
	comp=Z,6.3nm,0.9s,mb4.5,baz=223,slow=8.1,SNR=18						
MKAR	**Makanchi Array**	**47.26**	**347**	P	**P**	**09 35 13.3**	**+0.4**
	comp=Z,6.4nm,0.7s,mb4.7,baz=163,slow=8.2,SNR=40						
MKAR				LR	LR	09 56 05.4	
	comp=Z,38nm,19.4s,MS3.4,baz=355,slow=37						
MKAR	**Makanchi Array**	**47.26**	**347**	P	**P**	**09 35 13.3**	**+0.4**
MKAR				LR	LR	09 56 05.3	
SONM	**Songino Array**	**47.36**	**9**	P	**P**	**09 35 13.9**	**+0.3**
	comp=Z,2.0nm,0.8s,mb4.1,baz=199,slow=7.7,SNR=7.1						
KKAR	**Karatay Array**	**47.96**	**334**	*e*P	**P**	**09 35 19.2**	**+0.7**
	comp=Z,2.6nm,0.8s,mb4.3						
CBIJ	**Chichi jima**	**50.74**	**55**	P	**P**	**09 35 40.5**	**+0.5**
	comp=Z,15nm,0.6s,mb5.1,baz=300,slow=18,SNR=4.1						
KURK	**Kurchatov**	**51.80**	**345**	*e*P	**P**	**09 35 47.6**	**+0.1**
	comp=Z,6.6nm,1.1s,mb4.5						
ZALV	**Zalesovo Beam**	**53.62**	**351**	P	**P**	**09 36 01.1**	**+0.2**
	comp=Z,9.9nm,0.7s,mb4.9,baz=174,slow=6.9,SNR=15						
STKA	**Stephens Creek**	**53.65**	**132**	P	**P**	**09 36 01.1**	**-0.4**
	comp=Z,1.9nm,0.7s,mb4.1,baz=302,slow=7.0,SNR=5.2						
BVAR	**Borovoye Array**	**56.22**	**341**	P	**P**	**09 36 19.3**	**-0.5**
	comp=Z,2.9nm,0.8s,mb4.4,baz=146,slow=8.0,SNR=12						
ABKAR	**Akbulak array**	**57.40**	**332**	*e*P	**P**	**09 36 28.0**	**-0.2**
	comp=Z,3.4nm,0.8s,mb4.4						
ARCES	**ARCESS Array B**	**82.50**	**340**	P	**P**	**09 39 02.0**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=114,slow=6.0,SNR=11						
PLCA	**Paso Flores**	**138.83**	**195**	PKP	PKPdf	09 46 03.8	-2.7
	comp=Z,2.0nm,1.0s,baz=225,slow=2.9,SNR=2.9						
TXAR	**Lajitas Array**	**144.07**	**31**	PKP	PKPdf	09 46 14.0	-2.3
	comp=Z,0.4nm,0.8s,baz=326,slow=4.7,SNR=4.1						
CPUP	**Villa Florida**	**144.54**	**223**	PKP	PKPdf	09 46 14.5	-2.7
	comp=Z,0.5nm,0.5s,baz=117,slow=6.8,SNR=3.6						

*ISCJB **08** 09:33:25.7±0.5, 52°.61N±0°.07×158°.4E±0°.1, h120km±4km, mb3.3/7, Error ellipse: s-maj=14.9km s-min=6.9km az=136.4*
*MOS **08** 09:33:25.1±0.8, 52°.77N×158°.06E, h124km, mb3.9/1, Error ellipse: s-maj=82.8km s-min=21.7km az=66.4*
*IDC **08** 09:33:26.5±2.0, 52°.63N×158°.00E, h119km±32km, mb3.1/6, mb1 3.5/6, mb1mx3.2/22, mbtmp3.1/6, Error ellipse: s-maj=131.2km s-min=17.6km az=135.0*
*KRSC **08** 09:33:27.6±0.6, 52°.65N×158°.43E, h105km±25km, ML3.7*
ISC 08 09:33:26.8±0.5, 52°.60N±0°.07×158°.3E±0°.1, h114km±4km, n21, σ0s85/31, mb3.3/7, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**0.17**	**254**	*e*P	**Pn**	**09 33 43.0**	**+0.5**
GRL				*i* S	**Sn**	09 33 53.9	-0.4
PET	**Petropavlovsk**	**0.47**	**24**	*e*P	**Pn**	**09 33 44.1**	**+0.3**
PET				*i* S	**Sn**	**09 33 55.8**	**-0.8**
PET	**Petropavlovsk**	**0.47**	**24**	↑*i*PN	**Pn**	**09 33 43.8**	**0.0**
PET				*i* S	**Sn**	**09 33 55.7**	**-0.9**
PET				pmax	pmax		
	comp=Z,300nm,0.3s						
PET				pmax	pmax		
	comp=Z,357nm,0.3s						
PET				smax			
	comp=N,1μm,0.7s						
PET				smax			
	comp=N,1μm,0.6s						
PET				smax			
	comp=E,433nm,0.5s						
PETK	**Petropavlovsk-**	**0.64**	**323**	P	**Pn**	**09 33 44.6**	**-0.4**
	comp=E,48nm,0.3s,baz=125,slow=12,SNR=568						
PETK				S	**Sn**	**09 33 59.6**	**+0.9**
	comp=E,5.3nm,0.3s,baz=332,slow=26,SNR=9.6						
PETK	**Petropavlovsk-**	**0.64**	**323**	PN	**Pn**	**09 33 44.6**	**-0.4**
PETK				S	**Sn**	**09 33 59.7**	**+0.9**
PETK				pmax	pmax		
	comp=Z,48nm,0.3s						
PETK				smax			
	comp=N,5.0nm,0.3s						
AVH	**Avacha**	**0.71**	**20**	*e*P	**Pn**	**09 33 46.6**	**+1.1**
AVH				*i* S	**Sn**	**09 33 59.9**	**+0.2**
MIPR	**Malaya Ipel'ka**	**1.02**	**252**	*e*P	**Pn**	**09 33 48.0**	**-0.5**
GNL	**Ganaly**	**1.12**	**348**	*e*P	**Pn**	**09 33 50.1**	**+0.6**
GNL				*i* S	**Sn**	**09 34 05.9**	**-0.9**
SPN	**Mys Shipunski**	**1.14**	**63**	*e*P	**Pn**	**09 33 49.6**	**0.0**
SPN				*i* S	**Sn**	**09 34 06.3**	**-0.7**
KII	**Karymskiy**	**1.59**	**24**	*e*P	**Pn**	**09 33 55.7**	**+0.9**
SKR	**Severo-Kuril's**	**2.37**	**217**	*e*PN	**Pn**	**09 34 05.9**	**+1.3**
SKR				*e*		09 34 33.5	
MKZ	**Mys Kozlova**	**2.81**	**45**	*e*P	**Pn**	**09 34 10.8**	**+0.4**
MKZ				*i* S	**Sn**	**09 34 43.1**	**-0.8**
KBTR	**Krutoberegovo**	**4.46**	**34**	*e*P	**Pn**	**09 34 33.0**	**+0.7**
KBTR				*i* S	**Sn**	**09 35 22.2**	**-1.0**
MJAR	**Matsushiro Arr**	**21.41**	**229**	P	**P**	**09 38 03.5**	**-1.9**
	comp=N,0.7nm,0.5s,mb3.2,baz=23,slow=9.6,SNR=4.0						
MJAR	**Matsushiro Arr**	**21.41**	**229**	P	**P**	**09 38 03.5**	**-1.8**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**29.92**	**45**	P	**P**	**09 39 23.1**	**-0.2**
	comp=Z,0.3nm,0.8s,mb3.0,baz=261,slow=5.6,SNR=6.5						
ILAR				pP	pP	09 39 50.6	+2.3
	comp=Z,0.2nm,0.6s,baz=286,slow=7.0,SNR=4.4						
NVAR	**Mina Array Bea**	**56.91**	**69**	P	**P**	**09 43 00.9**	**+1.2**
	comp=Z,0.3nm,0.5s,mb3.6,baz=302,slow=8.4,SNR=3.2						
PDAR	**Pinedale Array**	**58.69**	**59**	P	**P**	**09 43 13.4**	**+1.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=322,slow=2.5,SNR=5.4						
TXAR	**Lajitas Array**	**71.81**	**66**	P	**P**	**09 44 37.0**	**+0.1**
	comp=Z,0.3nm,0.4s,mb3.4,baz=290,slow=5.3,SNR=11						
WRA	**Warramunga Arr**	**75.19**	**203**	P	**P**	**09 44 55.0**	**-1.5**
	comp=Z,0.2nm,0.8s,mb2.9,baz=24,slow=6.4,SNR=2.6						
ASAR	**Alice Springs**	**78.88**	**203**	P	**P**	**09 45 16.6**	**-0.5**
	comp=Z,0.4nm,1.1s,mb3.2,baz=13,slow=5.2,SNR=4.2						

*ISCJB **08** 09:42:29.4±3.5, 1°.20N±0°.08×96°.77E±0°.08, h14km±22km, mb3.7/7, Error ellipse: s-maj=16.4km s-min=10.3km az=139.8*
*IDC **08** 09:42:32.4±2.2, 1°.04N×96°.74E, h26km±5km, mb3.6/7, mb1 3.7/7, mb1mx3.5/20, mbtmp3.6/7, Error ellipse: s-maj=98.6km s-min=16.6km az=54.0*
*DJA **08** 09:42:32, 1°.32N×96°.87E, h20km, MLv3.7/3*
ISC 08 09:42:31.5±4.4, 1°.23N±0°.08×96°.82E±0°.09, h15km±28km, h28km±.3km: pP-P, n10, σ0s93/12, mb3.7/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**2.05**	**10**	P	**Pn**	**09 43 03.1**	**-2.3**
TPTI				S	**Sn**	**09 43 30.2**	**-0.6**
MNSI	**Mandailing Nat**	**2.79**	**99**	P	**Pn**	**09 43 16.1**	**+0.4**
MNSI				S	**Sn**	**09 43 49.4**	**+0.2**
KULM	**Kulim**	**5.56**	**43**	P	**Pn**	**09 43 54.9**	**+1.2**
WRA	**Warramunga Arr**	**42.38**	**122**	P	**P**	**09 50 24.4**	**-1.2**
	0.8nm,0.7s,mb3.5,baz=300,slow=9.1,SNR=7.7						
WRA				pP	pP	09 50 32.3	+2.2
	0.6nm,0.6s,baz=299,slow=9.0,SNR=5.4						
ASAR	**Alice Springs**	**43.72**	**127**	P	**P**	**09 50 35.7**	**-0.7**
	0.2nm,0.6s,mb3.0,baz=306,slow=8.5,SNR=4.3						
MKAR	**Makanchi Array**	**47.12**	**346**	P	**P**	**09 51 03.4**	**+0.4**
	1.0nm,0.7s,mb3.9,baz=158,slow=8.0,SNR=8.2						
MKAR				pP	pP	09 51 11.5	+3.9
	0.8nm,0.6s,baz=163,slow=9.8,SNR=7.0						
SONM	**Songino Array**	**47.16**	**9**	P	**P**	**09 51 04.3**	**+1.0**
	0.4nm,0.5s,mb3.6,baz=185,slow=10,SNR=2.9						
ZALV	**Zalesovo Beam**	**53.47**	**351**	P	**P**	**09 51 51.6**	**+0.6**
	1.7nm,0.5s,mb4.2,baz=178,slow=8.5,SNR=5.8						
ZALV				pP	pP	09 51 59.4	+3.7
	1.9nm,0.6s,baz=166,slow=6.4,SNR=3.2						
BVAR	**Borovoye Array**	**56.10**	**341**	P	**P**	**09 52 10.7**	**+0.7**
	0.3nm,0.4s,mb3.7,baz=148,slow=9.3,SNR=2.1						
BVAR				pP	pP	09 52 18.9	+4.2
	0.5nm,0.5s,baz=146,slow=10,SNR=2.1						
ARCES	**ARCESS Array B**	**82.38**	**340**	P	**P**	**09 54 52.3**	**-0.3**
	2.1nm,1.0s,mb4.0,baz=101,slow=4.7,SNR=2.9						

*IDC **08** 09:46:12.5±4.1, 36°.87S×179°.50E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.7/15, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=90.2km s-min=37.3km az=129.0*
*WEL **08** 09:46:13.8±0.4, 37°.23S×179°.98W, h33km, ML4.0/7, Error ellipse: s-maj=3.7km s-min=3.6km az=90.0*
ISC 08 09:46:13.4±2.1, 37°.36S±0°.08×179°.9W±0°.1, h34km±25km, n24, σ0s64/30, mb3.4/2, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.42**	**261**	PN	**Pn**	**09 46 36.2**	**-0.5**
MXZ				SN	**Sn**	**09 46 53.0**	**-1.2**
PUZ	**Puketiti**	**1.61**	**243**	PN	**Pn**	**09 46 39.8**	**+0.5**
CNGZ	**Carnagh Statio**	**1.86**	**232**	PN	**Pn**	**09 46 44.0**	**+1.2**
MWZ	**Matawai**	**2.24**	**243**	PN	**Pn**	**09 46 48.0**	**0.0**
MWZ				SN	**Sn**	**09 47 14.8**	**+0.4**
PRGZ	**Paritu Road**	**2.33**	**227**	PN	**Pn**	**09 46 49.9**	**+0.7**
URZ	**Urewera**	**2.51**	**248**	PN	**Pn**	**09 46 52.2**	**+0.4**
URZ				SN	**Sn**	**09 47 21.2**	**+0.1**
URZ	**Urewera**	**2.51**	**248**	Pn	**Pn**	**09 46 52.3**	**+0.5**
	13nm,0.3s,baz=74,slow=4.8,SNR=47						
URZ				Sn	**Sn**	**09 47 21.2**	**+0.1**
	24nm,0.3s,baz=292,slow=19,SNR=12						
KNZ	**Kokohu**	**2.52**	**228**	PN	**Pn**	**09 46 52.0**	**+0.2**
KNZ				SN	**Sn**	**09 47 21.3**	**0.0**
RAHZ	**Arahi**	**2.82**	**236**	PN	**Pn**	**09 46 56.5**	**+0.5**
RAHZ				SN	**Sn**	**09 47 28.7**	**-0.1**
NMHZ	**Naumai**	**3.10**	**235**	PN	**Pn**	**09 47 00.4**	**+0.6**
NMHZ				SN	**Sn**	**09 47 36.3**	**+0.6**
BKZ	**Black Stump Fm**	**3.35**	**236**	PN	**Pn**	**09 47 03.3**	**+0.1**
MCHZ	**McNeill Hill**	**3.37**	**231**	PN	**Pn**	**09 47 03.9**	**+0.3**
KAHZ	**Kahuranaki**	**3.49**	**225**	PN	**Pn**	**09 47 05.0**	**-0.3**
BHHZ	**Black Hill Sta**	**3.80**	**235**	PN	**Pn**	**09 47 10.0**	**+0.5**
MKAZ	**Moumakai**	**3.92**	**272**	PN	**Pn**	**09 47 11.1**	**0.0**
WPHZ	**Waipukurau**	**3.92**	**225**	PN	**Pn**	**09 47 11.1**	**-0.1**
PNHZ	**Pukenui**	**3.96**	**229**	PN	**Pn**	**09 47 11.1**	**-0.6**
TSZ	**Takapari Road**	**4.20**	**229**	PN	**Pn**	**09 47 13.8**	**-1.1**
BFZ	**Birch Farm**	**4.46**	**221**	PN	**Pn**	**09 47 17.0**	**-1.5**
MRZ	**Mangatainoka R**	**4.81**	**225**	PN	**Pn**	**09 47 21.8**	**-1.5**
WCZ	**Waipu Caves**	**4.82**	**285**	PN	**Pn**	**09 47 23.6**	**+0.2**
ASAR	**Alice Springs**	**41.66**	**276**	P	**P**	**09 53 58.6**	**0.0**
	0.5nm,0.5s,mb3.4,baz=119,slow=7.9,SNR=15						
WRA	**Warramunga Arr**	**43.27**	**281**	P	**P**	**09 54 11.9**	**+0.2**
	0.4nm,0.6s,mb3.4,baz=121,slow=7.8,SNR=11						
ARCES	**ARCESS Array B**	**144.95**	**345**	PKP	PKPdf	10 05 48.1	+2.4
	1.0nm,0.8s,baz=54,slow=4.6,SNR=7.5						

*ATH **08** 10:05:13.2, 37°.75N×26°.24E, h10km±2km, MD3.3/4*
*ISK **08** 10:05:16.8, 37°.91N×27°.02E, h13km, MD2.9*
*ISCJB **08** 10:05:17.1±0.5, 37°.91N±0°.02×27°.01E±0°.04, h8km±5km, Error ellipse: s-maj=5.3km s-min=3.5km az=177.0*
*DDA **08** 10:05:17.7, 37°.92N×27°.10E, h7km±4km, Md3.0*
*CSEM **08** 10:05:17.4±0.2, 37°.92N×27°.02E, h10km, MD2.9, Error ellipse: s-maj=4.6km s-min=2.9km az=80.0*
ISC 08 10:05:17.8±0.4, 37°.92N±0°.02×27°.04E±0°.04, h13km±4km, n40, σ0s88/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.26**	**217**	*e*PB	**Pg**	**10 05 22.8**	**-0.5**
SMG				*e*SB	**Sg**	**10 05 29.0**	**+2.0**
SMG	**Samos**	**0.26**	**217**	*e*Pb	**Pg**	**10 05 22.8**	**-0.5**
BLCB	**Balcova**	**0.47**	**1**	*e*PG	**Pg**	**10 05 26.9**	**0.0**
BLCB				*e*SG	**Sg**	**10 05 33.4**	**+0.2**
BLCB	**Balcova**	**0.47**	**1**	*e*Pg	**Pg**	**10 05 26.9**	**-0.1**
BLCB				*e*Sg	**Sg**	**10 05 33.4**	**+0.2**
IZM	**Izmir**	**0.51**	**20**	*e*PG	**Pg**	**10 05 27.6**	**-0.2**
IZM	**Izmir**	**0.51**	**20**	*e*Pg	**Pg**	**10 05 27.6**	**-0.2**
KDAG	**Bornova**	**0.52**	**21**	*i* P	**Pg**	**10 05 26.8**	**-1.1**
KDAG				*i* S	**Sg**	**10 05 35.4**	**+0.6**
KDAG	**Bornova**	**0.52**	**21**	*i* P	**Pg**	**10 05 26.8**	**-1.1**
KDAG				*i* S	**Sg**	**10 05 35.4**	**+0.6**
URLA	**Izmir**	**0.56**	**322**	*i* P	**Pg**	**10 05 28.7**	**-0.1**
URLA				*i* S	**Sg**	**10 05 37.3**	**+1.1**
URLA	**Izmir**	**0.56**	**322**	*i* P	**Pg**	**10 05 28.7**	**-0.1**
URLA				*i* S	**Sg**	**10 05 37.3**	**+1.1**
AYDN	**Tasoluk**	**0.72**	**111**	*i* P	**Pg**	**10 05 31.1**	**-0.5**
AYDN				*i* S	**Sg**	**10 05 40.3**	**-0.8**
AYDN	**Tasoluk**	**0.72**	**111**	*i* P	**Pg**	**10 05 31.1**	**-0.6**
AYDN				*i* S	**Sg**	**10 05 40.3**	**-0.8**
MLSB	**Milas**	**0.86**	**136**	*e*PG	**Pg**	**10 05 34.1**	**-0.2**
MLSB	**Milas**	**0.86**	**136**	*e*Pg	**Pg**	**10 05 34.2**	**-0.1**
BODT	**Bodrum**	**0.88**	**166**	*e*PG	**Pg**	**10 05 34.0**	**-0.8**
BODT				*e*SG	**Sg**	**10 05 46.9**	**+0.5**
BODT	**Bodrum**	**0.88**	**166**	*e*Pg	**Pg**	**10 05 34.0**	**-0.8**
BODT				*e*Sg	**Sg**	**10 05 46.9**	**+0.5**
BDRM	**Kayabasi**	**0.91**	**159**	*i* P	**Pg**	**10 05 35.1**	**-0.3**
BDRM				*i* S	**Sg**	**10 05 47.1**	**-0.2**
BDRM	**Kayabasi**	**0.91**	**159**	*i* P	**Pg**	**10 05 35.1**	**-0.3**
BDRM				*i* S	**Sg**	**10 05 47.1**	**-0.2**
AKHS	**Akhisar**	**1.14**	**32**	*i* P	**Pb**	**10 05 39.3**	**0.0**
AKHS				*i* S	**Sb**	**10 05 54.8**	**+0.9**
AKHS	**Akhisar**	**1.14**	**32**	*i* P	**Pb**	**10 05 39.3**	**0.0**
AKS	**Akhisar**	**1.14**	**32**	*e*PN	**Pn**	**10 05 38.8**	**-0.6**
AKS	**Akhisar**	**1.14**	**32**	*e*Pn	**Pn**	**10 05 38.8**	**-0.6**
DAT	**Datca**	**1.26**	**160**	*e*PN	**Pn**	**10 05 40.6**	**-0.5**
DAT	**Datca**	**1.26**	**160**	*e*Pn	**Pn**	**10 05 40.6**	**-0.5**
YER	**Yerkesik**	**1.26**	**128**	*e*PN	**Pn**	**10 05 40.6**	**-0.5**
YER	**Yerkesik**	**1.26**	**128**	*e*Pn	**Pn**	**10 05 40.6**	**-0.5**
KULA	**Kula-Manisa**	**1.41**	**65**	*e*PN	**Pn**	**10 05 43.1**	**0.0**
KULA	**Kula-Manisa**	**1.41**	**65**	*e*Pn	**Pn**	**10 05 43.1**	**-0.1**
PRK	**Paraskevi**	**1.45**	**336**	*e*PG	**Pn**	**10 05 41.1**	**-2.6**
PRK				*e*SB	**Sn**	**10 06 01.9**	**-0.8**
PRK	**Paraskevi**	**1.45**	**336**	*e*Pg	**Pn**	**10 05 41.1**	**-2.6**
APE	**Apeiranthos**	**1.47**	**235**	*e*PN	**Pn**	**10 05 43.7**	**-0.3**
APE	**Apeiranthos**	**1.47**	**235**	*e*Pn	**Pn**	**10 05 43.7**	**-0.2**
DNZL	**Cakiroluk**	**1.61**	**98**	*i* P	**Pn**	**10 05 45.7**	**-0.2**
DNZL				*i* S	**Sn**	**10 06 10.0**	**+3.5**
DNZL	**Cakiroluk**	**1.61**	**98**	*i* P	**Pn**	**10 05 45.7**	**-0.2**
DNZL				*i* S	**Sn**	**10 06 10.0**	**+3.5**
ARG	**Arkhangelos**	**1.91**	**153**	*e*PN	**Pn**	**10 05 51.4**	**+1.4**
ARG	**Arkhangelos**	**1.91**	**153**	*e*Pn	**Pn**	**10 05 51.4**	**+1.4**
KHAL	**Karahalli**	**1.99**	**76**	*i* P	**Pn**	**10 05 51.5**	**+0.4**
KHAL				*i* S	**Sn**	**10 06 19.1**	**+3.3**
KHAL	**Karahalli**	**1.99**	**76**	*i* P	**Pn**	**10 05 51.5**	**+0.4**
KHL	**Karahalli**	**2.00**	**78**	*e*PN	**Pn**	**10 05 52.0**	**+0.7**
KHL	**Karahalli**	**2.00**	**78**	*e*Pn	**Pn**	**10 05 52.0**	**+0.7**

*BJI **08** 10:05:41.0, 53°.67N×161°.91E, h32km, mB4.3/3, mb4.5/7, Ms3.9/3, Ms7 3.6/3*
*IDC **08** 10:05:43.2±0.6, 53°.82N×161°.10E, h0km, mb4.2/23, mb1 4.4/25, mb1mx4.4/28, mbtmp4.2/25, ML3.6/2, MS3.5/4, Ms1 3.6/4, ms1mx3.0/27, Error ellipse: s-maj=19.1km s-min=11.4km az=150.0*
*KRSC **08** 10:05:47.6±0.0, 53°.56N×161°.38E, h42km±32km, ML4.8*
*NEIC **08** 10:05:47.8±3.0, 53°.78N×161°.14E, h29km±21km, mb4.6/16, Error ellipse: s-maj=11.0km s-min=6.8km az=151.0*
*ISCJB **08** 10:05:47.7±0.5, 53°.56N±0°.03×161°.42E±0°.06, h49km±4km, mb4.4/53, MS3.6/6, Error ellipse: s-maj=6.6km s-min=3.0km az=34.6*
*MOS **08** 10:05:47.6±1.3, 53°.65N×161°.22E, h44km, mb4.8/27, Error ellipse: s-maj=11.2km s-min=6.1km az=88.4*
ISC 08 10:05:49.2±0.5, 53°.56N±0°.03×161°.35E±0°.06, h46km±4km, n164, σ1s09/187, mb4.4/53, MS3.6/6, 6C-12D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.92**	**241**	*e*P	**Pn**	**10 06 04.0**	**-1.8**
SPN				*i* S	**Sn**	**10 06 16.1**	**-1.8**
MKZ	**Mys Kozlova**	**1.02**	**12**	*e*P	**Pn**	**10 06 04.8**	**-2.3**
MKZ				*i* S	**Sn**	**10 06 17.4**	**-3.0**
KII	**Karymskiy**	**1.23**	**294**	*e*P	**Pn**	**10 06 08.1**	**-1.8**
AVH	**Avacha**	**1.59**	**260**	*e*P	**Pn**	**10 06 14.4**	**-0.5**
AVH				*i* S	**Sn**	**10 06 34.8**	**+0.5**
PET	**Petropavlovsk**	**1.71**	**253**	*e*P	**Pn**	**10 06 15.5**	**-1.0**
PET				*i* S	**Sn**	**10 06 36.6**	**-0.5**
PET	**Petropavlovsk**	**1.71**	**253**	↑*i*PN	**Pn**	**10 06 15.3**	**-1.2**
PET				*i* S	**Sn**	**10 06 36.4**	**-0.7**
PET				pmax	pmax		
	comp=Z,200nm,0.6s						
PET				pmax	pmax		
	comp=Z,386nm,0.5s						
PET				smax			
	comp=N,300nm,4.0s						
PET				smax			
	comp=N,2μm,0.5s						
PET				smax			
	comp=N,2μm,0.7s						
PET				smax			
	comp=E,2μm,0.4s						
PET	**Petropavlovsk**	**1.71**	**253**	*e*Pn	**Pn**	**10 06 15.2**	**-1.3**
INSR	**Institute**	**1.72**	**254**	*e*P	**Pn**	**10 06 16.4**	**-0.3**
INSR				*i* S	**Sn**	**10 06 38.1**	**+0.7**
GNL	**Ganaly**	**2.04**	**275**	*e*P	**Pn**	**10 06 21.1**	**+0.1**
GNL				*i* S	**Sn**	**10 06 46.2**	**+1.0**
GRL	**Gorelyy**	**2.22**	**244**	*e*P	**Pn**	**10 06 23.8**	**+0.3**
GRL				*i* S	**Sn**	**10 06 50.3**	**+0.6**
PETK	**Petropavlovsk-**	**2.24**	**260**	Pn	**Pn**	**10 06 22.2**	**-1.5**
	comp=E,20nm,0.3s,baz=67,slow=12,SNR=324						
PETK				Sn	**Sn**	**10 06 51.6**	**+1.5**
	comp=E,66nm,0.3s,baz=267,slow=18,SNR=18						
PETK	**Petropavlovsk-**	**2.24**	**260**	PN	**Pn**	**10 06 22.2**	**-1.5**
PETK						10 06 51.6	
PETK				pmax	pmax		
	comp=Z,20nm,0.3s						
PETK				smax			
	comp=N,66nm,0.3s						
KMNR	**Kamenistaya**	**2.30**	**344**	P	**Pn**	**10 06 26.0**	**+1.5**
BZGR	**Bezymyannyi-Gr**	**2.42**	**351**	*e*P	**Pn**	**10 06 27.0**	**+0.8**
BZGR				*i* S	**Sn**	**10 06 55.9**	**+1.4**
BZMR	**Bezymyannaya**	**2.43**	**348**	*e*P	**Pn**	**10 06 27.3**	**+0.9**
BZMR				*i* S	**Sn**	**10 06 56.5**	**+1.6**
BZWR	**Bezymyannyi-We**	**2.46**	**349**	*e*P	**Pn**	**10 06 26.8**	**0.0**
KIRR	**Kirishev**	**2.47**	**347**	P	**Pn**	**10 06 26.9**	**0.0**
ZLN	**Zelenaya**	**2.48**	**353**	*e*P	**Pn**	**10 06 28.0**	**+0.9**
ZLN				*i* S	**Sn**	**10 06 57.2**	**+1.0**
KPT	**Kopyto**	**2.50**	**345**	*e*P	**Pn**	**10 06 28.2**	**+0.9**
KPT				*i* S	**Sn**	**10 06 57.5**	**+0.9**
KOZ	**Kozyrevsk**	**2.65**	**342**	*e*P	**Pn**	**10 06 29.9**	**+0.6**
KOZ				*i* S	**Sn**	**10 07 00.2**	**0.0**
KOZR	**Kozyr**	**2.65**	**342**	PN	**Pn**	**10 06 29.9**	**+0.5**
KOZR				S	**Sn**	**10 07 00.2**	**-0.1**
KRSR	**Krestovskiy**	**2.70**	**351**	*e*P	**Pn**	**10 06 30.6**	**+0.5**
KRSR				*i* S	**Sn**	**10 07 01.5**	**0.0**
KBTR	**Krutoberegovo**	**2.79**	**17**	*e*P	**Pn**	**10 06 30.6**	**-0.7**
KBTR				*i* S	**Sn**	**10 07 01.2**	**-2.4**
KLY	**Klyuchi**	**2.79**	**352**	*e*P	**Pn**	**10 06 31.6**	**+0.3**
KLY				*i* S	**Sn**	**10 07 03.6**	**-0.1**
SRDR	**Sredinnyy**	**2.92**	**342**	*e*P	**Pn**	**10 06 33.0**	**-0.1**
SRDR				*i* S	**Sn**	**10 07 05.1**	**-1.8**
BDR	**Baidarnaya**	**3.02**	**358**	*e*P	**Pn**	**10 06 35.5**	**+1.1**
BDR				*i* S	**Sn**	**10 07 09.0**	**-0.3**
MIPR	**Malaya

SONM	**Songino Array**	**34.53**	**283**	P	**P**	**10 12 32.0**	**-0.8**
SONM						10 15 06.9	
NJ2	**Nanjing**	**37.12**	**252**	*eP*	**P**	**10 12 52.2**	**-2.9**
YKA	**Yellowknife Ar**	**42.31**	**43**	P	**P**	**10 13 37.7**	**-0.1**
	comp=Z,2.0nm,0.7s,mb3.8,baz=303,slow=8.3,SNR=3.8						
RES	**Resolute Bay**	**42.61**	**22**	P	**P**	**10 13 37.8**	**-2.3**
	comp=Z,5.6nm,0.8s,mb4.3,baz=301,slow=10,SNR=5.6						
RES	**Resolute Bay**	**42.61**	**22**	P	**P**	**10 13 37.8**	**-2.4**
RES				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
ZALV	**Zalesovo Beam**	**43.16**	**303**	P	**P**	**10 13 41.4**	**-3.4**
	comp=Z,1.1nm,0.5s,mb3.9,baz=64,slow=6.6,SNR=3.9						
ZALV				LR	LR	10 33 05.9	
	comp=Z,64nm,18.2s,MS3.6,baz=14,slow=38						
KURK	**Kurchatov**	**48.13**	**302**	*eP*	**P**	**10 14 22.5**	**-1.6**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
KURK	**Kurchatov**	**48.13**	**302**	*eP*	**P**	**10 14 22.5**	**-1.6**
	comp=Z,6.6nm,0.5s,mb4.9						
MKAR	**Makanchi Array**	**48.63**	**296**	P	**P**	**10 14 25.0**	**-3.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=54,slow=6.3,SNR=12						
MKAR	**Makanchi Array**	**48.63**	**296**	*i P*	**P**	**10 14 25.5**	**-2.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**48.63**	**296**	P	**P**	**10 14 24.9**	**-3.1**
BVAR	**Borovoye Array**	**50.69**	**309**	P	**P**	**10 14 40.9**	**-2.7**
	comp=Z,1.3nm,0.3s,mb4.3,baz=50,slow=5.6,SNR=6.6						
BVAR	**Borovoye Array**	**50.69**	**309**	P	**P**	**10 14 40.9**	**-2.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	**Kevo**	**52.61**	**342**	*ep*	**P**	**10 14 53.9**	**-3.8**
ARCES	**ARCESS Array B**	**53.08**	**342**	P	**P**	**10 14 59.2**	**-2.0**
	comp=Z,2.7nm,0.7s,mb4.3,baz=38,slow=8.0,SNR=15						
ARCES	**ARCESS Array B**	**53.08**	**342**	P	**P**	**10 14 59.2**	**-2.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SUMG	**Summit**	**53.41**	**7**	*eP*	**P**	**10 15 03.4**	**-0.1**
	comp=Z,17nm,0.9s,mb5.0						
SUMG	**Summit**	**53.41**	**7**	*i P*	**P**	**10 15 03.7**	**+0.2**
	comp=Z,16nm,1.0s,mb4.9						
ARU	**Arti**	**53.56**	**318**	P	**P**	**10 15 02.8**	**-2.1**
NVAR	**Mina Array Bea**	**54.88**	**71**	P	**P**	**10 15 16.4**	**+1.7**
	comp=Z,1.6nm,0.8s,mb4.1,baz=300,slow=7.2,SNR=12						
PDAR	**Pinedale Array**	**56.64**	**62**	P	**P**	**10 15 28.3**	**+1.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=318,slow=2.4,SNR=16						
KLMR	**Klimovskoe**	**56.92**	**330**	*eP*	**P**	**10 15 28.1**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
JOF	**Joensuu**	**57.46**	**335**	*ep*	**P**	**10 15 31.9**	**-0.9**
	comp=Z,7.4nm,0.6s,mb4.9						
ABKAR	**Akbulak array**	**58.07**	**311**	*eP*	**P**	**10 15 35.3**	**-1.9**
	comp=Z,0.7nm,0.4s,mb4.0						
RSSD	**Black Hills**	**58.52**	**57**	*eP*	**P**	**10 15 40.9**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
RSSD	**Black Hills**	**58.52**	**57**	*eP*	**P**	**10 15 40.9**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.4						
SRU	**San Rafael**	**58.71**	**66**	*eP*	**P**	**10 15 43.8**	**+2.0**
SRU				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
SRU	**San Rafael**	**58.71**	**66**	*eP*	**P**	**10 15 43.8**	**+2.0**
	comp=Z,3.3nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**58.74**	**259**	*eP*	**P**	**10 15 42.8**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**58.74**	**259**	*eP*	**P**	**10 15 42.8**	**+0.5**
	comp=Z,5.1nm,0.9s,mb4.5						
CMAR	**Chiang Mai Arr**	**59.02**	**259**	P	**P**	**10 15 45.1**	**+0.9**
	comp=Z,6.3nm,0.7s,mb4.8,baz=26,slow=7.0,SNR=31						
CMAR	**Chiang Mai Arr**	**59.02**	**259**	P	**P**	**10 15 45.2**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KAF	**Kangasniemi**	**59.35**	**337**	*ep*	**P**	**10 15 45.2**	**-0.7**
	comp=Z,6.1nm,0.5s,mb4.9						
FINES	**FINESS Array B**	**59.99**	**337**	P	**P**	**10 15 49.7**	**-0.6**
	comp=Z,7.0nm,0.6s,mb4.9,baz=40,slow=9.1,SNR=20						
FINES				LR	LR	10 47 30.8	
	comp=Z,40nm,20.1s,MS3.5,baz=347,slow=42						
OBN	**Obninsk**	**62.53**	**328**	*eP*	**P**	**10 16 07.3**	**-0.3**
OBN				*e*SS	SS	10 28 31.5	-3.4
OBN				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.0						
NB2	**NORSAR Subarra**	**63.30**	**344**	P	**P**	**10 16 12.0**	**-0.6**
	comp=Z,5.2nm,0.5s,mb4.9,baz=23,slow=6.9						
NOA	**NORSAR Array B**	**63.30**	**344**	P	**P**	**10 16 11.8**	**-0.9**
	comp=Z,7.7nm,0.7s,mb4.9,baz=22,slow=6.6,SNR=28						
NOA				LR	LR	10 49 52.5	
	comp=Z,29nm,18.6s,MS3.5,baz=30,slow=42						
NOA	**NORSAR Array B**	**63.30**	**344**	P	**P**	**10 16 11.8**	**-0.9**
NOA				LR	LR	10 49 52.5	
VRHR	**Novokhopersk**	**64.13**	**323**	*eP*	**P**	**10 16 16.4**	**-1.9**
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
SCHQ	**Schefferville**	**64.88**	**28**	P	**P**	**10 16 22.5**	**-0.6**
	comp=Z,2.4nm,0.6s,mb4.4,baz=323,slow=5.1,SNR=5.1						
VSR	**Storozhevoye**	**64.91**	**324**	*eP*	**P**	**10 16 21.9**	**-1.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
VSR				pmax	pmax		
	comp=N,4.0nm,0.3s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.3s						
VORD	**Divnogorie**	**65.07**	**324**	*eP*	**P**	**10 16 23.5**	**-0.9**
VORD				pmax	pmax		
	comp=N,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,8.0nm,0.7s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
BSD	**Bornholm Skovb**	**68.21**	**340**	*i P*	**P**	**10 16 44.7**	**+0.4**
BSD				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
BSD	**Bornholm Skovb**	**68.21**	**340**	*i P*	**P**	**10 16 44.7**	**+0.4**
	comp=Z,9.0nm,0.8s,mb4.8						
TXAR	**Lajitas Array**	**69.76**	**68**	P	**P**	**10 16 55.5**	**+1.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=308,slow=4.4,SNR=25						
TXAR	**Lajitas Array**	**69.76**	**68**	P	**P**	**10 16 55.5**	**+1.1**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZEI	**Tsey**	**70.10**	**316**	*eP*	**P**	**10 16 53.8**	**-2.4**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
KOLS	**Kolonicke sedl**	**72.18**	**333**	*eP*	**P**	**10 17 09.3**	**+0.6**
KOLS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KOLS	**Kolonicke sedl**	**72.18**	**333**	*eP*	**P**	**10 17 09.3**	**+0.6**
CLL	**Collm**	**72.19**	**340**	⇓*iP*	**P**	**10 17 09.0**	**+0.3**
CLL				*i*		10 17 28.5	
CLL				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
CLL	**Collm**	**72.19**	**340**	⇓*iP*	**P**	**10 17 09.0**	**+0.3**
	comp=Z,15nm,1.1s,mb4.8						
CLL				*i*		10 17 28.5	
CLL	**Collm**	**72.19**	**340**	⇓*iP*	**P**	**10 17 09.0**	**+0.3**
	comp=Z,15nm,1.1s,mb4.8						
CLL				*i* PcP	PcP	10 17 28.5	+1.8
UPC	**Upice**	**72.28**	**338**	*eP*	**P**	**10 17 10.4**	**+1.1**
UPC	**Upice**	**72.28**	**338**	*eP*	**P**	**10 17 10.4**	**+1.1**
DPC	**Dobruska-Polom**	**72.36**	**337**	*eP*	**P**	**10 17 10.9**	**+1.1**
DPC	**Dobruska-Polom**	**72.36**	**337**	*eP*	**P**	**10 17 10.9**	**+1.1**
BURAR	**Bucovina Array**	**72.55**	**331**	⇓P	**P**	**10 17 10.7**	**-0.2**
BURAR	**Bucovina Array**	**72.55**	**331**	⇓*iP*	**P**	**10 17 10.7**	**-0.2**
PRU	**Pruhonice**	**73.10**	**338**	*eP*	**P**	**10 17 15.8**	**+1.6**
PRU	**Pruhonice**	**73.10**	**338**	*eP*	**P**	**10 17 15.8**	**+1.6**
VYHS	**Vyhne**	**73.48**	**335**	*eP*	**P**	**10 17 17.5**	**+1.1**
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
VYHS	**Vyhne**	**73.48**	**335**	*eP*	**P**	**10 17 17.5**	**+1.1**
	comp=Z,2.7nm,1.2s,mb4.0						
VYHS	**Vyhne**	**73.48**	**335**	*eP*	**P**	**10 17 17.5**	**+1.1**
KHC	**Kasperske Hory**	**74.12**	**339**	*eP*	**P**	**10 17 21.4**	**+1.2**
KHC	**Kasperske Hory**	**74.12**	**339**	*eP*	**P**	**10 17 21.4**	**+1.2**
MLR	**Muntele Rosu**	**74.24**	**329**	⇑P	**P**	**10 17 21.9**	**+1.0**
MLR	**Muntele Rosu**	**74.24**	**329**	⇑*iP*	**P**	**10 17 21.9**	**+1.0**
TIRR	**Tirgusor**	**74.39**	**327**	⇓P	**P**	**10 17 22.0**	**+0.2**
TIRR	**Tirgusor**	**74.39**	**327**	⇓*iP*	**P**	**10 17 22.0**	**+0.2**
VOIR		**74.56**	**330**	⇓P	**P**	**10 17 23.7**	**+0.9**
VOIR		**74.56**	**330**	⇓*iP*	**P**	**10 17 23.7**	**+0.9**
CONA	**Conrad Observa**	**74.73**	**337**	⇑*iP*	**P**	**10 17 24.7**	**+1.0**
	comp=Z,3.3nm,0.7s,mb4.4						
BAIF	**Baives**	**74.97**	**345**	*eP*	**P**	**10 17 25.3**	**+0.2**
GZR	**Gura Zlata**	**75.27**	**331**	⇓P	**P**	**10 17 27.3**	**+0.4**
GZR	**Gura Zlata**	**75.27**	**331**	⇓*iP*	**P**	**10 17 27.3**	**+0.4**
CDF	**Champ du Feu**	**76.06**	**343**	*eP*	**P**	**10 17 31.6**	**+0.3**
SOKA	**Soboth**	**76.10**	**337**	⇑*iP*	**P**	**10 17 32.3**	**+0.7**
	comp=Z,3.1nm,0.5s,mb4.5						
FETA	**Feichten**	**76.73**	**340**	⇑*iP*	**P**	**10 17 36.2**	**+1.1**
	comp=Z,5.9nm,1.1s,mb4.4						
BRTR	**Keskin Array B**	**76.74**	**321**	P	**P**	**10 17 34.8**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.3,baz=44,slow=3.0,SNR=10						
BRTR	**Keskin Array B**	**76.74**	**321**	*i P*	**P**	**10 17 35.5**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**76.83**	**206**	P	**P**	**10 17 36.6**	**+0.8**
	comp=Z,0.5nm,0.7s,mb3.6,baz=20,slow=6.0,SNR=5.5						
FLN	**La Foliniere**	**76.90**	**348**	*eP*	**P**	**10 17 35.9**	**-0.2**
	comp=Z,15nm,0.8s,mb4.7						
FLN	**La Foliniere**	**76.90**	**348**	*eP*	**P**	**10 17 35.9**	**-0.2**
FLN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
FLN	**La Foliniere**	**76.90**	**348**	*eP*	**P**	**10 17 35.9**	**-0.2**
	comp=Z,7.7nm,0.8s,mb4.7						
GRR	**Gorron**	**77.32**	**348**	*eP*	**P**	**10 17 38.5**	**+0.1**
	comp=Z,18nm,0.7s,mb4.8						
GRR	**Gorron**	**77.32**	**348**	*eP*	**P**	**10 17 38.5**	**+0.1**
GRR				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
GRR	**Gorron**	**77.32**	**348**	*eP*	**P**	**10 17 38.5**	**+0.1**
	comp=Z,9.3nm,0.7s,mb4.8						
ROSF	**Rostrenen**	**77.65**	**350**	*eP*	**P**	**10 17 40.4**	**+0.1**
SGMF	**Saint Gilles**	**77.65**	**349**	*eP*	**P**	**10 17 40.5**	**+0.2**
	comp=Z,29nm,0.9s,mb4.9						
SGMF	**Saint Gilles**	**77.65**	**349**	*eP*	**P**	**10 17 40.5**	**+0.2**
SGMF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
SGMF	**Saint Gilles**	**77.65**	**349**	*eP*	**P**	**10 17 40.5**	**+0.2**
	comp=Z,14nm,0.9s,mb4.9						
LOR	**Lormes**	**77.74**	**345**	*eP*	**P**	**10 17 40.9**	**+0.1**
	comp=Z,9.5nm,0.8s,mb4.5						
LOR	**Lormes**	**77.74**	**345**	*eP*	**P**	**10 17 40.9**	**+0.1**
LOR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LOR	**Lormes**	**77.74**	**345**	*eP*	**P**	**10 17 40.9**	**+0.1**
	comp=Z,4.8nm,0.8s,mb4.5						
SSF	**Saint Saulge**	**78.00**	**345**	*eP*	**P**	**10 17 42.3**	**0.0**
	comp=Z,4.9nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**78.00**	**345**	*eP*	**P**	**10 17 42.3**	**0.0**
SSF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**78.00**	**345**	*eP*	**P**	**10 17 42.3**	**0.0**
	comp=Z,2.5nm,0.7s,mb4.2						
QUIF	**Quistinic**	**78.05**	**349**	*eP*	**P**	**10 17 42.5**	**0.0**
AVF	**Avril sur Loir**	**78.29**	**345**	*eP*	**P**	**10 17 44.0**	**+0.1**
	comp=Z,9.0nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**78.29**	**345**	*eP*	**P**	**10 17 44.0**	**+0.1**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**78.29**	**345**	*eP*	**P**	**10 17 44.0**	**+0.1**
	comp=Z,4.5nm,0.9s,mb4.4						
LPL	**La Plagne**	**78.95**	**342**	*eP*	**P**	**10 17 49.1**	**+1.6**
	comp=Z,8.1nm,0.8s,mb4.4						
LPG	**La Plagne**	**78.96**	**342**	*eP*	**P**	**10 17 49.2**	**+1.6**
	comp=Z,15nm,0.9s,mb4.6						
ORIF	**Oris-en-Rattie**	**79.68**	**343**	*eP*	**P**	**10 17 52.2**	**+0.7**
SBF	**Sospel**	**80.41**	**341**	*eP*	**P**	**10 17 55.8**	**+0.3**
ASAR	**Alice Springs**	**80.50**	**205**	P	**P**	**10 17 57.1**	**+1.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=16,slow=5.5,SNR=10.0						
ASAR	**Alice Springs**	**80.50**	**205**	P	**P**	**10 17 57.1**	**+1.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESDC	**Sonseca Array**	**86.28**	**349**	P	**P**	**10 18 25.9**	**+0.2**
	comp=Z,0.3nm,0.3s,mb4.0,baz=1,0,slow=5.6,SNR=5.3						
KEST	**Kesra**	**87.82**	**338**	P	**P**	**10 18 32.6**	**-0.7**
	comp=Z,0.9nm,0.5s,mb4.3,baz=79,slow=4.0,SNR=6.5						
QSPA	**South Pole Qui**	**143.30**	**180**	PKP	PKPdf	10 25 16.2	-0.2
	comp=Z,0.9nm,0.8s,baz=194,slow=1.4,SNR=3.8						
QSPA	**South Pole Qui**	**143.30**	**180**	PKP	PKPdf	10 25 16.2	-0.2

CSEM ***08*** *10:15:22.2, 37°.81N×25°.44W, h0km, ML1.8, After PDA*
PDA 08 10:15:22.2±0.5, 37°.81N×25°.44W, h0km±1km, MD3.6, ML1.8, Error ellipse: s-maj=2.6km s-min=0.9km az=19.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRON	**Grota Negra**	**0.08**	**244**	*i* P	Pg	10 15 24.1	+0.3
GRON				*e*S	Sg	10 15 25.6	+0.7
GRON				A		10 15 27.5	
	319nm,0.2s						
PDA	**Ponta Delgada**	**0.19**	**252**	*eP*	Pg	10 15 26.7	+0.9
PDA				*e*S	Sg	10 15 30.1	+1.9
PDA	**Ponta Delgada**	**0.19**	**252**	*eP*	Pg	10 15 26.7	+0.9
PDA				*e*S	Sg	10 15 30.1	+1.9
BART	**Pico Bartolome**	**0.22**	**97**	*e*S	Sg	10 15 31.6	+2.5
BART				A		10 15 33.6	
	56nm,0.2s						
BART	**Pico Bartolome**	**0.22**	**97**	*e*S	Sg	10 15 31.6	+2.5
PSET	**Sete Cidades**	**0.22**	**275**	*eP*	Pg	10 15 27.7	+1.2
PSET				*e*S	Sg	10 15 31.9	+2.5
PSET				A		10 15 36.6	
	116nm,0.4s						
PSET	**Sete Cidades**	**0.22**	**275**	*eP*	Pg	10 15 27.7	+1.2
PSET				*e*S	Sg	10 15 31.9	+2.5

MOS ***08*** *10:43:24.3±1.0, 2°.13S×100°.56E, h33km, mb5.3/47, Error ellipse: s-maj=13.1km s-min=5.8km az=109.2*
BJI ***08*** *10:43:24.4, 2°.67S×100°.60E, h65km, mB4.9/26, mb4.9/43, Ms4.8/40, Ms7 4.5/38*
ISCJB ***08*** *10:43:26.5±0.2, 2°.31S±0°.02×100°.36E±0°.02, h56km, mb5.0/107, MS4.4/47, Error ellipse: s-maj=4.3km s-min=2.4km az=135.6*
DJA ***08*** *10:43:27, 2°.33S×100°.24E, h52km, Mw5.4/34*
IDC ***08*** *10:43:27.6±0.6, 2°.21S×100°.58E, h51km±4km, mb4.6/19, mb1 4.7/19, mb1mx4.6/21, mbtmp4.6/19, MS4.2/24, Ms1 4.2/24, ms1mx4.1/30, Error ellipse: s-maj=16.3km s-min=7.3km az=54.0*
GCMT ***08*** *10:43:29.6±0.3, 2°.42S×100°.14E, h37km, MW5.1, Moment Tensor Solution. s45,c66; s57,c87; Moment tensor: Scale 10^16^Nm; Mrr=3.90±.19; Mθθ=2.90±.13; Mφφ=1.01±.19; Mrθ=1.57±.14; Mrφ=-2.98±.10; Mθφ=0.47±.20; Best double couple: M=4.90000×10^16^ NP1:φs=327.00000°, δ=43.00000°, λ=-58.00000°. NP2:φs=107.00000°, δ=55.00000°, λ=-116.00000°. Principal axes: T 5.1900, Plg6.0000°, Azm215.0000°; N -0.6700, Plg21.0000°, Azm122.0000°; P -4.5100, Plg68.0000°, Azm321.0000°; Data Used: II IU IC G.*
NEIC ***08*** *10:43:29.8±1.1, 2°.22S×100°.51E, h67km±8km, mb5.1/38 Error ellipse: s-maj=9.5km s-min=4.5km az=55.0*
NEIC Felt [III] at Padang and Pesisir Selatan, Sumatra.
TEH ***08*** *10:43:30.0, 2°.22S×100°.45E, h66km*
ISC 08 10:43:28.7±0.2, 2°.28S±0°.02×100°.40E±0°.02, h58km, h58km±1.1km: pP-P, n326, σ1§10/317, mb5.0/107, MS4.4/47, 17C-18D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.07**	**80**	P	**Pn**	**10 43 48.1**	**+0.5**
KRJI				S	**Sn**	**10 44 03.6**	**+1.9**
PDSI	**Padang**	**1.36**	**2**	P	**Pn**	**10 43 50.2**	**-1.3**
PDSI				S	**Sn**	**10 44 08.2**	**-0.4**
SISI	**Saibi**	**1.62**	**306**	P	**Pn**	**10 43 53.1**	**-1.9**
SDSI	**Sungai Dareh**	**1.69**	**37**	P	**Pn**	**10 43 56.2**	**+0.3**
PPI	**Padang Panjang**	**1.81**	**360**	P	**Pn**	**10 43 57.6**	**0.0**
PPI				S	**Sn**	**10 44 14.8**	**-4.7**
KSI	**Kapahiang**	**2.58**	**122**	P	**Pn**	**10 44 08.3**	**+0.3**
BKNI	**Bangkinang**	**2.67**	**14**	P	**Pn**	**10 44 09.5**	**+0.2**
RGRI	**Rengat**	**2.72**	**45**	P	**Pn**	**10 44 08.7**	**-1.3**
MNSI	**Mandailing Nat**	**3.17**	**345**	P	**Pn**	**10 44 14.6**	**-1.5**
MNAI	**Manna**	**3.28**	**129**	P	**Pn**	**10 44 17.6**	**0.0**
MDSI	**Maura Dua**	**4.36**	**120**	P	**Pn**	**10 44 33.2**	**+0.8**
LWLI	**Liwa**	**4.55**	**127**	P	**Pn**	**10 44 35.3**	**+0.3**
KLSI		**4.94**	**119**	P	**Pn**	**10 44 41.4**	**+1.1**
	5.3nm1μm,0.8s						
KLI	**Kotabumi**	**5.13**	**120**	P	**Pn**	**10 44 44.1**	**+1.1**
	11nm1μm,0.9s						
KGM	**Kluang**	**5.17**	**34**	P	**Pn**	**10 44 44.7**	**+1.1**
KASI	**Kota Agung**	**5.20**	**128**	P	**Pn**	**10 44 43.9**	**-0.1**
	11nm1μm,0.8s						
MYKOM	**Kota Tinggi**	**5.32**	**40**	P	**Pn**	**10 44 46.6**	**+1.1**
MYKOM	**Kota Tinggi**	**5.32**	**40**	P	**Pn**	**10 44 45.4**	**-0.1**
	1.8nm4μm240nm,0.7s						
FRIM	**Kepong**	**5.62**	**13**	P	**Pn**	**10 44 50.9**	**+1.2**
BLSI	**Bandar Lampung**	**5.72**	**123**	P	**Pn**	**10 44 51.4**	**+0.3**
	2.7nm8μm647nm,1.1s						
TSI	**Tuntungan**	**6.03**	**342**	P	**Pn**	**10 44 57.1**	**+1.7**
TPTI		**6.38**	**330**	P	**Pn**	**10 44 58.9**	**-1.2**
	1.3nm3μm140nm,0.9s						
RBSI	**Rajabasa**	**6.39**	**124**	P	**Pn**	**10 45 00.4**	**+0.1**
	2.1nm5μm424nm,1.0s						
IPM	**Ipoh**	**6.75**	**5**	P	**Pn**	**10 45 07.2**	**+2.1**
IPM	**Ipoh**	**6.75**	**5**	*e*Pn	**Pn**	**10 45 06.7**	**+1.6**
	86nm,0.6s						
IPM	**Ipoh**	**6.75**	**5**	P	**Pn**	**10 45 07.5**	**+2.3**
	0.7nm2μm152nm,0.8s						
SBJI	**Serang**	**6.87**	**124**	P	**Pn**	**10 45 06.7**	**-0.1**
	2.5nm295nm,1.1s						
TPI	**Tanjungpandan**	**7.26**	**94**	P	**Pn**	**10 45 12.7**	**+0.5**
	0.4nm587nm33nm,1.0s						
TNG	**Tangerang**	**7.33**	**122**	P	**Pn**	**10 45 14.2**	**+1.1**
	6.5nm916nm,0.8s						
KULM	**Kulim**	**7.53**	**2**	P	**Pn**	**10 45 16.4**	**+0.6**
KULM	**Kulim**	**7.53**	**2**	*e*Pn	**Pn**	**10 45 15.6**	**-0.3**
	77nm,0.7s						
KULM	**Kulim**	**7.53**	**2**	P	**Pn**	**10 45 16.1**	**+0.2**
	0.6nm2μm124nm,0.8s						
DBJI	**Dramaga**	**7.62**	**124**	P	**Pn**	**10 45 16.6**	**-0.5**
	1.4nm5μm280nm,0.7s						
SKJI	**Sukabumi**	**7.72**	**128**	P	**Pn**	**10 45 19.0**	**+0.5**
	2.7nm7μm621nm,0.5s						
LEM	**Lembang**	**8.49**	**122**	P	**Pn**	**10 45 30.3**	**+1.3**
	3μm326nm,1.0s						
CISI	**Cisompet, Garu**	**9.05**	**126**	P	**Pn**	**10 45 34.0**	**-2.7**
	4μm360nm,0.6s						
SNG	**Songkhla**	**9.40**	**1**	P	**Pn**	**10 45 43.0**	**+1.5**
	160nm,0.8s						
XMIS	**Christmas Isla**	**9.67**	**148**	*eP*	**Pn**	**10 45 33.5**	**-12**
XMIS				*e*S	**Sn**	**10 47 16.9**	**-15**
BJII	**Banjamegara**	**10.54**	**119**	P	**Pn**	**10 45 57.6**	**+0.5**
	2μm105nm,0.8s						
KSM	**Kuching**	**10.58**	**69**	*e*Pn	**Pn**	**10 45 58.7**	**+1.0**
	41nm,1.3s						
KSM	**Kuching**	**10.58**	**69**	P	**Pn**	**10 45 59.5**	**+1.8**
	24nm,1.4s						
SMRI	**Semarang**	**11.07**	**116**	P	**Pn**	**10 46 06.0**	**+1.7**
	448nm,0.7s						
PBKI	**Pangkalan Bun**	**11.26**	**92**	P	**Pn**	**10 46 10.5**	**+3.5**
	2μm196nm,1.2s						
STKI	**Sintang**	**11.31**	**78**	P	**Pn**	**10 46 13.2**	**+5.5**
	64nm,0.9s						
UGM	**Wanagama**	**11.52**	**119**	P	**Pn**	**10 46 09.6**	**-1.0**
	207nm,0.7s						
NGJI	**Ngawi**	**12.12**	**115**	P	**Pn**	**10 46 21.0**	**+2.3**
	206nm,1.2s						
PCJI	**Pacitan**	**12.23**	**119**	P	**Pn**	**10 46 16.5**	**-3.7**
	115nm,0.9s						
SJI	**Sawahan**	**12.55**	**116**	P	**Pn**	**10 46 23.7**	**-0.8**
	3μm185nm,0.7s						
PWJI	**Pagerwojo**	**12.70**	**117**	P	**Pn**	**10 46 25.3**	**-1.3**
	3μm105nm,1.1s						
SBUM	**Sibu**	**12.71**	**68**	P	**Pn**	**10 46 29.1**	**+2.3**
	971nm62nm,1.7s						
PLKI	**Palangkaraya**	**13.53**	**90**	P	**Pn**	**10 46 47.0**	**+9.0**
GMJI	**Gumukmas**	**14.28**	**115**	P	**Pn**	**10 46 47.4**	**-0.5**
	61nm,1.1s						
KMMI	**Kalianget**	**14.32**	**110**	P	**Pn**	**10 46 49.1**	**+0.6**
	2μm215nm,1.3s						
JAGI	**Jajag, Banyuwa**	**15.00**	**115**	P	**Pn**	**10 46 54.5**	**-2.8**
	2μm122nm,0.8s						
KBKI	**Kotaboru**	**15.78**	**94**	P	**Pn**	**10 47 06.5**	**-0.9**
	1μm99nm,1.3s						
SRBI	**Singaraja**	**15.83**	**112**	P	**Pn**	**10 47 08.4**	**+0.4**
	162nm,0.8s						
KHKI	**Kahang-Kahang**	**16.29**	**112**	P	**Pn**	**10 47 12.1**	**-1.8**
	120nm,0.7s						

TAPN	**Taplejung**	**31.90**	**338**	*e*P	**P**	**10 49 50.1 +1.4**
PKI	**Pulchoki**	**33.01**	**335**	*e*P	**P**	**10 49 58.7 +0.3**
LSA	**Lhasa**	**33.01**	**345**	P	**P**	**10 49 59.3 +0.9**
LSA				S	**S**	**10 55 10.4 -2.5**
LSA				LR	LR	
	comp=E,380nm,41.6s					
LSA				LR	LR	
	comp=Z,480nm,26.8s					
LSA	**Lhasa**	**33.01**	**345**	*e*P	**P**	**10 49 59.5 +1.1**
LSA				pmax	pmax	
	comp=Z,51nm,0.8s,mb5.5					
LSA	**Lhasa**	**33.01**	**345**	*e*P	**P**	**10 49 59.5 +1.1**
	comp=Z,51nm,0.8s,mb5.5					
GUN	**Gumba**	**33.11**	**336**	*e*P	**P**	**10 50 00.4 +1.1**
CD2	**Chengdu**	**33.16**	**5**	*e*P	**P**	**10 50 02.7 +3.0**
CD2				sP	sP	10 50 25.9 +4.8
CD2				PP	PP	10 51 15.4 -0.3
CD2				PcP	PcP	10 52 44.7 +3.1
CD2				S	**S**	**10 55 17.2 +2.0**
CD2				sS	sS	10 55 43.3 +3.4
CD2				SS	SS	10 57 21.6 -19
CD2				pmax	pmax	
	comp=Z,10.0nm,0.6s,mb4.9					
CD2				pmax	pmax	
	comp=Z,30nm,5.2s					
CD2				LR	LR	
	comp=N,1μm,21.4s					
CD2				LR	LR	
	comp=E,1μm,15.5s					
CD2				LR	LR	
	comp=Z,1μm,16.7s,MS4.7					
KKN	**Kakani**	**33.25**	**335**	*e*P	**P**	**10 50 00.6 +0.1**
POO	**Poona**	**33.33**	**309**	*e*PKP	**P**	**10 49 56.5 -4.8**
KAKA	**Kakadu**	**33.36**	**110**	*e*P	**P**	**10 49 58.2 -3.5**
	comp=Z,14nm,0.8s,mb5.0					
KAKA	**Kakadu**	**33.36**	**110**	*e*P	**P**	**10 49 58.2 -3.5**
	comp=Z,23nm,0.6s,mb5.3					
KLBR	**Kellerberrin**	**33.43**	**152**	*e*P	**P**	**10 50 02.5 +0.4**
	comp=Z,29nm,1.1s,mb5.1					
GKN	**Gorkha**	**33.71**	**334**	*e*P	**P**	**10 50 05.0 +0.4**
KOLN	**Koldanda**	**33.98**	**333**	*e*P	**P**	**10 50 07.5 +0.7**
	comp=Z,36nm,0.6s,mb5.5					
NWAO	**Narrogin (SRO)**	**34.33**	**154**	P	**P**	**10 50 09.0 -0.8**
	comp=Z,18nm,0.7s,mb5.1,baz=321,slow=11,SNR=16					
NWAO				pP	pP	10 50 23.4 -1.0
	comp=Z,36nm,1.0s,baz=324,slow=8.6,SNR=8.7					
NWAO				LR	LR	11 03 00.0
	comp=Z,675nm,18.5s,MS4.4,baz=312,slow=34					
NWAO	**Narrogin (SRO)**	**34.33**	**154**	*e*P	**P**	**10 50 09.7 -0.2**
NWAO				*e**PP	pP	10 50 24.8 +0.3
NWAO				pmax	pmax	
	comp=Z,46nm,1.1s					
NWAO	**Narrogin (SRO)**	**34.33**	**154**	*e*P	**P**	**10 50 09.7 -0.2**
	comp=Z,46nm,1.1s,mb5.3					
NWAO				*e*pP	pP	10 50 24.8 +0.3
DANN	**Dangsing**	**34.40**	**333**	*e*P	**P**	**10 50 11.1 +0.6**
	comp=Z,64nm,0.5s,mb5.8					
WHN	**Wuhan**	**35.25**	**21**	P	**P**	**10 50 19.0 +1.2**
WHN				LR	LR	
	comp=N,2μm,15.7s,MS5.0					
WHN				LR	LR	
	comp=E,1μm,19.4s,MS5.0					
WHN				LR	LR	
	comp=Z,3μm,17.0s,MS5.1					
XAN	**Xi'an**	**37.01**	**12**	P	**P**	**10 50 31.5 -1.3**
XAN				pmax	pmax	
	comp=Z,7.0nm,1.1s,mb4.4					
WRA	**Warramunga Arr**	**37.50**	**120**	P	**P**	**10 50 35.7 -1.5**
	comp=Z,66nm,0.7s,mb5.5,baz=297,slow=9.6,SNR=386					
WRA				PcP	PcP	10 52 54.1 -0.5
	comp=Z,4.4nm,0.8s,baz=312,slow=2.2,SNR=4.4					
WRA				S	**S**	**10 56 19.0 -3.2**
	comp=Z,8.1nm,0.9s,baz=294,slow=16,SNR=14					
WRA				LR	LR	11 09 21.1
	comp=Z,258nm,18.8s,MS4.0,baz=315,slow=42					
WRA	**Warramunga Arr**	**37.50**	**120**	P	**P**	**10 50 35.7 -1.5**
WRA						10 52 54.1
WRA				S	**S**	**10 56 19.1 -3.1**
WRA	**Warramunga Arr**	**37.50**	**120**	P	**P**	**10 50 35.7 -1.5**
WRA				PcP	PcP	10 52 54.1 -0.5
WRA				S	**S**	**10 56 19.1 -3.2**
WRA				LR	LR	11 09 21.1
LZH	**Lanzhou**	**38.31**	**4**	*e*P	**P**	**10 50 45.1 +1.4**
LZH				pP	pP	10 51 00.2 +1.7
LZH				sP	sP	10 51 07.0 +1.8
LZH				PcP	PcP	10 52 59.6 +2.9
LZH				*e*S	**S**	**10 56 35.0 +1.1**
LZH				sS	sS	10 57 02.0 +3.1
LZH				SS	SS	10 59 15.4 -9.1
LZH				pmax	pmax	
	comp=Z,20nm,1.0s,mb4.8					
LZH				pmax	pmax	
	comp=Z,81nm,4.8s					
LZH				LR	LR	
	comp=N,890nm,16.6s,MS4.8					
LZH				LR	LR	
	comp=E,430nm,12.4s,MS4.8					
LZH				LR	LR	
	comp=Z,1μm,17.7s					
NJ2	**Nanjing**	**38.37**	**26**	*e*P	**P**	**10 50 42.7 -1.6**
NJ2				pP	pP	10 50 57.7 -1.4
NJ2				sP	sP	10 51 04.6 -1.3
NJ2				PP	PP	10 52 13.9 +0.8
NJ2				S	**S**	**10 56 32.0 -3.0**
NJ2				pmax	pmax	
	comp=Z,30nm,1.0s,mb5.0					
NJ2				pmax	pmax	
	comp=Z,110nm,6.1s					
NJ2				LR	LR	
	comp=N,130nm,18.0s,MS3.9					
NJ2				LR	LR	
	comp=E,130nm,19.4s,MS3.9					
NJ2				LR	LR	
	comp=Z,150nm,16.6s,MS3.9					
FORT	**Forrest**	**38.57**	**140**	*e*P	**P**	**10 50 46.7 +0.7**
	comp=Z,21nm,0.6s,mb5.0					
FORT	**Forrest**	**38.57**	**140**	*e*P	**P**	**10 50 46.6 +0.6**
	comp=Z,34nm,0.7s,mb5.2					
SSE	**Sheshan**	**38.64**	**29**	P	**P**	**10 50 43.0 -3.6**
SSE				PP	PP	10 52 14.4 -1.7
SSE				S	**S**	**10 56 43.0 +3.9**
SSE				sS	sS	10 57 06.6 +2.5
SSE				pmax	pmax	
	comp=Z,37nm,0.7s,mb5.2					
SSE				pmax	pmax	
	comp=Z,56nm,11.0s					
SSE				LR	LR	
	comp=N,410nm,20.5s,MS4.3					
SSE				LR	LR	
	comp=E,330nm,20.5s,MS4.3					
SSE				LR	LR	
	comp=Z,500nm,13.3s					
ASAR	**Alice Springs**	**38.76**	**126**	P	**P**	**10 50 47.2 -0.5**
	comp=Z,31nm,0.5s,mb5.3,baz=302,slow=8.0,SNR=542					
ASAR				PcP	PcP	10 52 58.2 -0.3
	comp=Z,6.2nm,0.7s,baz=293,slow=2.1,SNR=5.6					
ASAR				S	**S**	**10 56 38.9 -2.3**
	comp=Z,22nm,1.2s,baz=305,slow=14,SNR=22					
GTA	**Gaotai**	**41.49**	**359**	⇑P	**P**	**10 51 10.3 +0.2**
GTA				pP	pP	10 51 25.6 +0.6
GTA				sP	sP	10 51 32.8 +1.1
GTA				S	**S**	**10 57 21.9 +0.4**
GTA				sS	sS	10 57 48.0 +1.3
GTA				SS	SS	11 00 23.5 -4.5
GTA				pmax	pmax	
	comp=Z,11nm,1.5s,mb4.3					
GTA				pmax	pmax	
	comp=Z,59nm,6.6s					
GTA				LR	LR	
	comp=N,520nm,15.9s,MS4.7					
GTA				LR	LR	
	comp=E,660nm,16.1s,MS4.7					
GTA				LR	LR	
	comp=Z,590nm,15.7s,MS4.6					
HHC	**Hu-ho-hao-te**	**44.12**	**12**	*e*P	**P**	**10 51 33.0 +1.7**
HHC				pP	pP	10 51 48.4 +2.0
HHC				sP	sP	10 51 55.8 +2.7
HHC				PP	PP	10 53 18.2 +3.0
HHC				ScP	ScP	10 57 02.3 -0.4
HHC				S	**S**	**10 58 01.4 +1.4**
HHC				sS	sS	10 58 27.6 +2.3
HHC				SS	SS	11 01 12.4 -7.1
HHC				ScS	ScS	11 01 23.2 -1.5
HHC				pmax	pmax	
	comp=Z,14nm,1.1s,mb4.6					
HHC				pmax	pmax	
	comp=Z,130nm,5.8s					
HHC				LR	LR	
	comp=N,660nm,18.4s,MS4.7					
HHC				LR	LR	
	comp=E,430nm,18.4s,MS4.7					
HHC				LR	LR	
	comp=Z,460nm,18.7s,MS4.4					
BJT	**Baijiatuau**	**44.51**	**17**	*e*P	**P**	**10 51 34.6 +0.1**
BJT				pmax	pmax	
	comp=Z,17nm,0.8s					
BJT	**Baijiatuau**	**44.51**	**17**	*e*P	**P**	**10 51 34.5 +0.1**
	comp=Z,17nm,0.8s,mb4.9					
BJI	**Beijing**	**44.53**	**17**	P	**P**	**10 51 35.3 +0.7**
BJI				pP	pP	10 51 51.8 +2.1
BJI				sP	sP	10 51 58.9 +2.5
BJI				PP	PP	10 53 18.4 -1.2
BJI				pmax	pmax	
	comp=Z,27nm,1.3s,mb4.9					
BJI				LR	LR	
	comp=N,1μm,15.7s,MS4.8					
BJI				LR	LR	
	comp=E,180nm,17.4s,MS4.8					
BJI				LR	LR	
	comp=Z,550nm,16.5s,MS4.6					
BBOO	**Buckleboo**	**45.16**	**136**	*e*P	**P**	**10 51 39.7 -0.1**
	comp=Z,55nm,0.9s,mb5.4					
JNU	**Nakatsue**	**45.48**	**37**	*e*P	**P**	**10 51 41.1 -1.2**
	comp=Z,20nm,1.4s,mb4.8					
JNU				*e*pP	pP	10 51 57.8 +0.4
GUMO	**Guam**	**46.83**	**69**	LR	LR	11 11 02.3
	comp=Z,126nm,21.5s,MS3.8,baz=91,slow=36					
KSRS	**Korea Array**	**47.06**	**30**	P	**P**	**10 51 54.0 -0.6**
	comp=Z,4.9nm,0.6s,mb4.6,baz=222,slow=7.8,SNR=23					
KSRS				LR	LR	11 15 42.1
	comp=Z,252nm,18.2s,MS4.2,baz=224,slow=41					
WMQ	**Urumqi**	**47.29**	**347**	P	**P**	**10 51 57.0 +0.7**
WMQ				pP	pP	10 52 13.0 +1.5
WMQ				sP	sP	10 52 20.0 +1.8
WMQ				PP	PP	10 53 48.0 0.0
WMQ				S	**S**	**10 58 44.0 -1.6**
WMQ				ScS	ScS	11 01 43.0 -2.1
WMQ				SS	SS	11 02 06.0 -7.9
WMQ				pmax	pmax	
	comp=Z,64nm,1.0s,mb5.5					
WMQ				pmax	pmax	
	comp=Z,160nm,5.0s					
WMQ				LR	LR	
	comp=N,180nm,16.0s,MS4.3					
WMQ				LR	LR	
	comp=E,220nm,16.0s,MS4.3					
WMQ				LR	LR	
	comp=Z,200nm,16.0s,MS4.2					
CTA	**Charters Tower**	**48.11**	**115**	LR	LR	11 11 45.5
	comp=Z,367nm,20.2s,MS4.3,baz=271,slow=35					
CTA	**Charters Tower**	**48.11**	**115**	*e*P	**P**	**10 52 02.4 -0.7**
	comp=Z,24nm,1.1s,mb5.1					
CTAO	**Charters Tower**	**48.11**	**115**	*e*P	**P**	**10 52 02.4 -0.7**
CTAO				pmax	pmax	
	comp=Z,45nm,1.1s,mb5.4					
CTAO	**Charters Tower**	**48.11**	**115**	*e*P	**P**	**10 52 02.4 -0.7**
	comp=Z,45nm,1.1s,mb5.4					
STKA	**Stephens Creek**	**48.66**	**132**	P	**P**	**10 52 07.3 +0.1**
	comp=Z,27nm,0.6s,mb5.5,baz=306,slow=8.5,SNR=126					
STKA				pP	pP	10 52 21.4 -1.0
	comp=Z,39nm,0.7s,baz=300,slow=7.6,SNR=12					
STKA				S	**S**	**10 59 06.8 +1.4**
	comp=Z,3.0nm,0.8s,baz=164,slow=18,SNR=5.1					
STKA				LR	LR	11 12 49.9
	comp=Z,736nm,21.7s,MS4.6,baz=287,slow=36					
STKA	**Stephens Creek**	**48.66**	**132**	⇓*i*P	**P**	**10 52 07.5 +0.3**
	comp=Z,36nm,0.8s,mb5.5					
STKA	**Stephens Creek**	**48.66**	**132**	P	**P**	**10 52 07.3 +0.1**
STKA				pP	pP	10 52 21.4 -1.0
STKA				S	**S**	**10 59 06.8 +1.4**
STKA				LR	LR	11 12 49.9
ULHL	**Ulahol**	**49.42**	**336**	P	**P**	**10 52 13.7 +0.9**
	SNR=8.8					
KZA	**Kyzart**	**49.69**	**335**	P	**P**	**10 52 16.2 +1.4**
	SNR=20					
KZA	**Kyzart**	**49.69**	**335**	*e*P	**P**	**10 52 15.8 +1.0**
	comp=Z,62nm,1.3s,mb5.5					
KZA				*e*pP	pP	10 52 32.3 +2.3
SONM	**Songino Array**	**50.19**	**5**	P	**P**	**10 52 18.4 -0.1**
	comp=Z,8.8nm,0.6s,mb5.0,baz=190,slow=9.9,SNR=44					
SONM				PcP	PcP	10 53 37.1 +0.1
	comp=Z,4.1nm,1.0s,baz=186,slow=4.3,SNR=4.0					
TKM2	**Tokmak 2**	**50.25**	**336**	P	**P**	**10 52 20.1 +1.0**
	SNR=54					
TKM2	**Tokmak 2**	**50.25**	**336**	*e*P	**P**	**10 52 19.8 +0.8**
TKM2				*e**PP	pP	10 52 34.3 0.0
TKM2				pmax	pmax	
	comp=Z,20nm,0.4s,mb5.5					
TKM2	**Tokmak 2**	**50.25**	**336**	*e*P	**P**	**10 52 19.8 +0.7**
	comp=Z,20nm,0.4s,mb5.5					
TKM2				*e*pP	pP	10 52 34.3 0.0
ULN	**Ulaanbaatar**	**50.28**	**6**	*e*P	**P**	**10 52 19.1 -0.1**
ULN				pmax	pmax	
	comp=Z,52nm,1.5s,mb5.3					
ULN	**Ulaanbaatar**	**50.28**	**6**	*e*P	**P**	**10 52 19.1 -0.1**
	comp=Z,52nm,1.5s,mb5.3					
KBK	**Karagaybulak**	**50.29**	**336**	P	**P**	**10 52 20.9 +1.5**
	SNR=13					
AML	**Almayashu**	**50.39**	**334**	P	**P**	**10 52 21.5 +1.4**
	SNR=7.6					
AML	**Almayashu**	**50.39**	**334**	*e*P	**P**	**10 52 21.2 +1.1**
	comp=Z,25nm,0.8s,mb5.3					
AML				*e*pP	pP	10 52 37.0 +1.6
AAK	**Ala-Archa**	**50.46**	**335**	P	**P**	**10 52 22.0 +1.3**
	SNR=8.1					
AAK	**Ala-Archa**	**50.46**	**335**	*e*P	**P**	**10 52 21.7 +1.0**
	comp=Z,1μm,0.6s					
AAK	**Ala-Archa**	**50.46**	**335**	P	**P**	**10 52 21.1 +0.4**
	comp=Z,43nm,0.6s,mb5.7,SNR=7.9					
FRU	**Bishkek**	**50.58**	**336**	*e*P	**P**	**10 52 22.0 +0.5**
FRU				*e*	pP	10 52 36.0 -0.8
FRU				pmax	pmax	
	comp=Z,100nm,1.4s,mb5.5					
CHMS	**Chumysh**	**50.66**	**336**	P	**P**	**10 52 22.7 +0.6**
	SNR=6.4					
EKS2	**Erkin-Say**	**50.79**	**335**	P	**P**	**10 52 24.5 +1.4**
	SNR=11					
EKS2	**Erkin-Say**	**50.79**	**335**	*e*P	**P**	**10 52 24.1 +1.0**
	comp=Z,32nm,0.9s,mb5.3					
EKS2				*e*pP	pP	10 52 39.1 +0.7
USP	**Ospenovka**	**50.98**	**336**	P	**P**	**10 52 25.2 +0.7**
	SNR=28					
CN2	**Changchun**	**51.08**	**23**	*e*P	**P**	**10 52 24.7 -0.6**
CN2				*e*pP	pP	10 52 40.4 -0.2
CN2				*e*sP	sP	10 52 47.4 +0.1
CN2				*e*PP	PP	10 54 23.1 +0.6
CN2				*e*S	**S**	**10 59 37.2 -1.5**
CN2				*e*SS	SS	11 03 10.9 -3.8
CN2				pmax	pmax	
	comp=Z,30nm,1.2s,mb5.1					
CN2				pmax	pmax	
	comp=Z,100nm,6.0s					
CN2				LR	LR	
	comp=N,200nm,16.0s,MS4.6					
CN2				LR	LR	
	comp=E,400nm,16.0s,MS4.6					
CN2				LR	LR	
	comp=Z,400nm,16.0s,MS4.5					
JHJ	**Hachijo jima 2**	**51.20**	**43**	LR	LR	11 12 41.5
	comp=Z,145nm,21.8s,MS4.0,baz=257,slow=34					
MKAR	**Makanchi Array**	**51.41**	**344**	P	**P**	**10 52 27.4 -0.3**
	comp=Z,5.4nm,0.6s,mb4.7,baz=160,slow=8.6,SNR=60					
MKAR				S	**S**	**10 59 43.8 +0.7**
	comp=Z,0.5nm,0.8s,baz=158,slow=12,SNR=2.8					
MKAR				LR	LR	11 18 31.4
	comp=Z,235nm,21.0s,MS4.2,baz=158,slow=41					
MKAR	**Makanchi Array**	**51.41**	**344**	P	**P**	**10 52 27.4 -0.3**
MKAR				S	**S**	**10 59 43.8 +0.7**
MKAR	**Makanchi Array**	**51.41**	**344**	P	**P**	**10 52 27.4 -0.3**
MKAR				S	**S**	**10 59 43.8 +0.7**
MKAR				LR	LR	11 18 31.4
MAT	**Matsushiro**	**52.24**	**39**	P	**P**	**10 52 32.9 -1.2**
MAT				*e*S	**S**	**10 59 55.0 +0.1**
MJAR	**Matsushiro Arr**	**52.24**	**39**	P	**P**	**10 52 32.9 -1.2**
	comp=Z,6.7nm,1.1s,mb4.5,baz=230,slow=8.2,SNR=13					
ZAK	**Zakamensk**	**52.52**	**2**	*e*P	**P**	**10 52 35.6 -0.3**
KK31	**Karatay Array**	**52.59**	**333**	*c e*P	**P**	**10 52 36.2 -0.3**
KK31				pmax	pmax	
	comp=Z,2.0nm,0.3s,mb4.5					
KKAR	**Karatay Array**	**52.59**	**333**	*e*P	**P**	**10 52 36.3 -0.2**
KKAR				pmax	pmax	
	comp=Z,5.0nm,0.8s,mb4.5					
KKAR	**Karatay Array**	**52.59**	**333**	*e*P	**P**	**10 52 36.3 -0.2**
	comp=Z,5.4nm,0.8s,mb4.5					
MDJ	**Mudanjiang**	**53.47**	**26**	P	**P**	**10 52 43.7 +0.8**
MDJ				pP	pP	10 52 59.4 +1.0
MDJ				sP	sP	10 53 06.1 +1.1
MDJ				PcP	PcP	10 53 49.6 +0.3
MDJ				PP	PP	10 54 44.0 0.0
MDJ				ScP	ScP	10 57 42.4 +0.1
MDJ				PcS	PcS	10 57 49.2 +1.0
MDJ				S	**S**	**11 00 13.1 +1.8**
MDJ				SS	SS	11 03 53.5 +1.2
MDJ				pmax	pmax	
	comp=Z,8.0nm,1.3s,mb4.5					
MDJ				pmax	pmax	
	comp=Z,88nm,10.1s					
MDJ				LR	LR	
	comp=N,340nm,18.6s,MS4.6					
MDJ				LR	LR	
	comp=E,380nm,21.9s,MS4.6					
MDJ				LR	LR	
	comp=Z,320nm,22.5s,MS4.3					
IMYA	**Miami**	**53.70**	**320**	*e*P	**P**	**10 52 43.2 -1.7**
TLY	**Talaya**	**53.83**	**2**	*e*P	**P**	**10 52 46.4 +0.9**
TLY				*e*S	**S**	**11 00 34.9 +19**
TLY				pmax	pmax	
	comp=Z,28nm,1.8s,mb4.9					
TLY				MLR	MLR	
	comp=Z,679nm,16.0s,MS4.8					
EIDS	**Eidsvold**	**53.87**	**120**	*e*P	**P**	**10 52 45.8 -0.5**
	comp=Z,20nm,0.6s,mb5.2					
IMOG	**Moghan**	**54.06**	**319**	*e*P	**P**	**10 52 46.8 -0.7**
TOO	**Toolangi**	**54.23**	**136**	*e*P	**P**	**10 52 50.3 +1.6**
IBAF	**Bafgh**	**54.26**	**312**	*e*P	**P**	**10 52 48.7 -0.3**
IRK	**Irkutsk**	**54.42**	**3**	*e*P	**P**	**10 52 50.3 +0.5**
IRK				pmax	pmax	
	comp=Z,54nm,1.7s,mb5.2					
IAKL	**Akhelmad**	**54.73**	**319**	*e*P	**P**	**10 52 52.2 -0.2**
ISRV	**Sarvestan**	**55.09**	**309**	*e*P	**P**	**10 52 55.6 +0.5**
IPAR	**Pars**	**55.35**	**309**	*e*P	**P**	**10 52 57.5 +0.6**
ARMA	**Armidale**	**55.91**	**126**	*e*P	**P**	**10 53 01.0 0.0**
ISHV	**Shirvan**	**55.96**	**319**	*e*P	**P**	**10 53 00.3 -0.9**
KURK	**Kurchatov**	**55.99**	**343**	*d i*P	**P**	**10 53 00.7 -0.4**
KURK				pmax	pmax	
	comp=Z,28nm,1.7s,mb5.0					
KURK				MLR	MLR	
	comp=Z,451nm,28.0s,MS4.4					
KURK	**Kurchatov**	**55.99**	**343**	*e*P	**P**	**10 53 00.8 -0.3**
	comp=Z,51nm,1.3s,mb5.4					
IANJ	**Anjilo**	**57.40**	**315**	*e*P	**P**	**10 53 11.1 -0.4**
ZALV	**Zalesovo Beam**	**57.52**	**349**	P	**P**	**10 53 11.2 -0.7**
	comp=Z,20nm,1.0s,mb5.1,baz=165,slow=6.0,SNR=15					
ZALV				S	**S**	**11 01 03.8 -1.2**
	comp=Z,2.7nm,0.4s,baz=163,slow=10,SNR=5.2					
ZALV				LR	LR	11 21 34.6
	comp=Z,150nm,19.6s,MS4.1,baz=170,slow=40					
ZALV	**Zalesovo Beam**	**57.52**	**349**	P	**P**	**10 53 11.2 -0.7**
ZALV				S	**S**	**11 01 03.8 -1.2**
IKIA	**Kiasar**	**57.94**	**316**	*e*P	**P**	**10 53 15.4 +0.2**
KLR	**Kul'dur**	**58.03**	**24**	*e*P	**P**	**10 53 10.9 -4.6**
KLR				pmax	pmax	
	comp=Z,60nm,1.2s,mb5.5					
NVS	**Novosibirsk**	**58.67**	**348**	*e*P	**P**	**10 53 18.1 -1.8**
NVS				pmax	pmax	
	comp=Z,20nm,1.5s,mb4.9					
NVS				pmax	pmax	
	comp=N,15nm,1.8s					
IVRN	**Varamin**	**58.73**	**314**	*e*P	**P**	**10 53 20.4 -0.3**
IVRN				*e*P		10 53 21.0
HABR	**Khabarovsk**	**58.84**	**26**	*e*P	**P**	**10 53 18.3 -2.9**
HABR				*e**PP	pP	10 53 34.4 -2.4
HABR						10 54 08.4
HABR				*e*		10 55 29.8
HABR				*e*S	**S**	**11 01 19.2 -3.2**
HABR				*e*		11 03 01.4
HABR				pmax	pmax	
	comp=N,18nm,2.0s					
HABR				pmax	pmax	
	comp=Z,54nm,2.0s,mb5.2					
HABR				pmax	pmax	
	comp=E,24nm,1.7s					
HABR				MLR	MLR	
	comp=Z,382nm,23.0s,MS4.5					
IR3	**Iran Long-Peri**	**59.46**	**314**	*e*P	**P**	**10 53 26.5 +0.7**
ASAJ	**Asahikawa**	**59.62**	**34**	LR	LR	11 22 27.1
	comp=Z,61nm,18.4s,MS3.8,baz=261,slow=39					
ASAJ	**Asahikawa**	**59.62**	**34**	*e*P	**P**	**10 53 27.0 +0.3**
	comp=Z,4.9nm,0.8s,mb4.6					
VOSK	**Vostochnaya**	**60.13**	**340**	P	**P**	**10 53 28.6 -1.5**
VOSK				pmax	pmax	
	comp=Z,14nm,0.7s,mb5.1					
IRAZ	**Razeghan**	**60.22**	**313**	*e*P	**P**	**10 53 31.1 +0.1**
BRVK	**Borovoye**	**60.65**	**340**	*d i*P	**P**	**10 53 33.0 -0.6**
BRVK				pmax	pmax	
	comp=Z,18nm,1.7s,mb4.9					
BRVK				MLR	MLR	
	comp=Z,191nm,19.0s,MS4.3					
BRVK	**Borovoye**	**60.65**	**340**	*e*P	**P**	**10 53 32.3 -1.3**
	comp=Z,8.2nm,0.6s,mb5.0					
ZRNK	**Zerenda**	**61.02**	**339**	*i*P	**P**	**10 53 34.5 -1.6**
ZRNK				pmax	pmax	
	comp=Z,12nm,1.1s,mb4.9					
YSS	**Yuzh-Sakhalins**	**61.51**	**32**	*e*P	**P**	**10 53 39.6 +0.1**
YSS				pmax	pmax	
	comp=Z,38nm,1.1s,mb5.4					
YSS	**Yuzh-Sakhalins**	**61.51**	**32**	*e*P	**P**	**10 53 39.6 0.0**
	comp=Z,38nm,1.1s,mb5.4					
AB31	**Akbulak array**	**62.08**	**331**	*c e*P	**P**	**10 53 42.6 -0.7**
AB31				pmax	pmax	
	comp=Z,14nm,0.6s,mb5.3					
ABKAR	**Akbulak array**	**62.08**	**331**	*e*P	**P**	**10 53 42.6 -0.7**
	comp=Z,9.8nm,0.6s,mb5.1					
CLNS	**Chul'man**	**62.18**	**15**	*e*P	**P**	**10 53 43.0 -0.8**
CLNS				pmax	pmax	
	comp=E,12nm,1.4s					
CLNS				pmax	pmax	
	comp=Z,19nm,1.2s,mb5.1					
CLNS				pmax	pmax	
	comp=N,9.0nm,0.9s					
CLNS				MLR	MLR	
	comp=Z,388nm,17.0s,MS4.6					
CLNS				MLR	MLR	
	comp=N,220nm,12.0s,MS4.7					
CLNS				MLR	MLR	
	comp=E,289nm,14.0s,MS4.7					
ISRB	**Sarab**	**62.94**	**315**	*e*P	**P**	**10 53 50.2 +0.9**
KMBO	**Kilima Mbogo**	**63.13**	**270**	LR	LR	11 16 50.5
	comp=E,310nm,20.2s,MS4.5,baz=270,slow=32					
CASY	**Casey**	**64.27**	**175**	*e*P	**P**	**10 53 57.8 +0.3**
CASY	**Casey**	**64.27**	**175**	*e*P	**P**	**10 53 58.5 +1.0**
	comp=E,25nm,1.4s,mb5.0					
GNI	**Garni**	**66.01**	**316**	LR	LR	11 24 04.2
	comp=E,105nm,21.0s,MS4.0,baz=312,slow=37					
GNI	**Garni**	**66.01**	**316**	⇓*e*P	**P**	**10 54 10.0 +0.7**
GNI				pmax	pmax	
	comp=Z,28nm,1.2s					
GNI				MLR	MLR	
	comp=Z,108nm,21.0s					
DZM	**Mont Dzumac**	**66.97**	**113**	*e*P	**P**	**10 54 15.4 -0.4**
	comp=Z,39nm,1.2s,mb5.3					
DZM				*e*LR	LR	11 14 10.8
	comp=Z,466nm,23.4s					
SVE	**Sverdlovsk**	**67.10**	**338**	⇑*e*P	**P**	**10 54 15.8 -0.1**
SVE				pmax	pmax	
	comp=Z,48nm,1.4s,mb5.3					
ARU	**Arti**	**67.63**	**336**	*d i*P	**P**	**10 54 18.6 -0.6**
ARU				*PP	pP	10 54 33.6 -1.5
ARU						10 54 44.3
ARU				*e*		10 56 43.4

comp=E,22nm,1.5s
YAK Yakutsk 67.91 14 *e*P **P 10 54 19.5 -1.4**
comp=E,148nm,1.4s,mb5.8
KIV Kislovodsk 69.02 319 *d i*P **P 10 54 28.7 +0.5**
KIV *e**PP pP 10 54 42.1 -2.1
KIV *e**SP sP 10 54 52.3 +1.6
KIV pmax pmax
comp=Z,18nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,100nm,24.0s,MS4.0
ASF Jabal al Asfar 69.08 306 LR LR 11 25 30.4
comp=Z,180nm,19.3s,MS4.3,baz=327,slow=36
MALT Malatya 69.83 312 *e*P **P 10 54 34.1 +0.8**
MALT pmax pmax
comp=Z,15nm,1.1s,mb4.8
MALT Malatya 69.83 312 *e*P **P 10 54 34.1 +0.8**
comp=Z,15nm,1.1s,mb4.8
MAW Mawson 70.11 194 P **P 10 54 35.7 +1.2**
comp=Z,9.0nm,0.6s,mb4.8,baz=49,slow=5.3,SNR=34
MAW LR LR 11 18 27.3
comp=Z,491nm,21.2s,MS4.7,baz=28,slow=30
MAW Mawson 70.11 194 ⇓ *i*P **P 10 54 36.1 +1.6**
comp=Z,8.5nm,0.8s,mb4.7
SOKR Solikamsk 70.47 338 *d i*P **P 10 54 36.8 0.0**
SOKR pmax pmax
comp=Z,20nm,1.3s,mb4.9
SOKR MLR MLR
comp=Z,310nm,24.0s,MS4.5
SOC Sochi 70.83 318 *e*P **P 10 54 38.5 -0.9**
SOC *e**PP pP 10 54 52.1 -3.3
SOC *e**SP sP 10 55 02.2 +0.3
SOC *e* 10 57 20.4
SOC *e*S S 11 03 47.9 -2.2
SOC *e**SS sS 11 04 19.0 +1.8
SOC pmax pmax
comp=Z,11nm,0.5s,mb5.0
VRHR Novokhopersk 72.79 326 *e*P **P 10 54 47.9 -3.0**
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,40nm,1.0s
VRHR pmax pmax
comp=Z,30nm,1.0s,mb5.2
ANN Anapa 72.81 318 *e*P **P 10 54 49.0 -2.2**
ANN pmax pmax
comp=Z,32nm,1.3s,mb5.1
PETK Petropavlovsk- 72.91 32 P **P 10 54 50.3 -1.3**
comp=Z,3.4nm,0.7s,mb4.4,baz=232,slow=1.6,SNR=4.8
PETK PKPPKP 11 22 32.0
comp=Z,2.8nm,0.8s,baz=298,slow=4.6,SNR=3.7
PETK LR LR 11 29 05.4
comp=Z,118nm,19.2s,MS4.2,baz=81,slow=38
PET Petropavlovsk 73.38 32 ⇓ *i*P **P 10 54 53.9 -0.5**
PET *e*S S 11 04 19.3 +0.4
PET *e**SS sS 11 04 48.4 +2.3
PET *e*SS SS 11 08 58.8 -3.4
PET pmax pmax
comp=Z,35nm,1.6s,mb5.0
PET MLR MLR
comp=Z,100nm,16.0s,MS4.2
BRTR Keskin Array B 73.81 312 P **P 10 54 56.0 -1.2**
comp=Z,2.6nm,0.8s,mb4.2,baz=123,slow=5.3,SNR=16
BRTR pP pP 10 55 10.8 -2.5
comp=Z,8.6nm,0.8s,baz=120,slow=7.3,SNR=17
BRTR LR LR 11 29 58.4
comp=Z,98nm,19.3s,MS4.1,baz=105,slow=38
BRTR Keskin Array B 73.81 312 *ce*P **P 10 54 56.5 -0.7**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
VORD Divnogorie 74.06 325 *e*P **P 10 54 57.6 -0.8**
VORD pmax pmax
comp=N,10.0nm,0.4s
VORD pmax pmax
comp=E,6.0nm,0.4s
VORD pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
VSR Storozhevoye 74.24 325 *e*P **P 10 54 58.7 -0.7**
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,1.0nm,0.3s
BOSA Boshof 75.87 241 P **P 10 55 09.6 +0.2**
comp=N,2.7nm,0.4s,mb4.5,baz=95,slow=5.2,SNR=14
BOSA LR LR 11 24 47.3
comp=N,434nm,19.8s,MS4.8,baz=166,slow=33
TIXI Tiksi 76.07 9 *e*P **P 10 55 07.8 -1.8**
TIXI *e**PP pP 10 55 24.9 -0.9
TIXI pmax pmax
comp=Z,47nm,1.5s,mb5.2
PRGR Permogore 76.09 336 *e*P **P 10 55 08.4 -1.4**
PRGR *e* 10 55 17.1
PRGR *e**PP pP 10 55 25.2 -0.8
PRGR pmax pmax
comp=Z,17nm,0.6s,mb5.2
MOS Moscow 76.95 329 *e*P **P 10 55 13.2 -1.6**
OBN Obninsk 77.25 328 *de*P **P 10 55 16.4 -0.1**
OBN *e* 10 55 24.1
OBN *e**PP pP 10 55 32.5 -0.2
OBN *e* 10 58 11.2
OBN *e*S S 11 05 01.4 -0.3
OBN pmax pmax
comp=Z,81nm,1.7s,mb5.4
SYO Syowa Base 77.73 199 ⇑ *e*P **P 10 55 19.0 0.0**
KLMR Klimovskoe 78.26 334 ⇓ *i*P **P 10 55 22.2 +0.2**
KLMR pmax pmax
comp=Z,71nm,1.7s,mb5.3
TIRR Tirgusor 78.84 316 *e*P **P 10 55 25.3 -0.3**
comp=Z,17nm,0.9s,mb5.0
TIRR Tirgusor 78.84 316 ⇑ *i*P **P 10 55 25.3 -0.3**
VRI Vrincioaia 80.33 317 ⇑ P **P 10 55 34.3 +0.6**
VRI Vrincioaia 80.33 317 ⇑ *i*P **P 10 55 34.3 +0.6**
PLOR Plostina 80.38 317 ⇑ P **P 10 55 34.5 +0.6**
PLOR Plostina 80.38 317 ⇑ *i*P **P 10 55 34.5 +0.6**
TESR 80.53 316 ⇑ *i*P **P 10 55 35.1 +0.3**
MLR Muntele Rosu 80.78 317 ⇓ P **P 10 55 36.8 +0.7**
MLR Muntele Rosu 80.78 317 ⇓ *i*P **P 10 55 36.8 +0.7**
BURAR Bucovina Array 81.74 319 ⇓ P **P 10 55 42.2 +1.1**
BURAR Bucovina Array 81.74 319 ⇓ *i*P **P 10 55 42.2 +1.1**
MNK Minsk 81.81 326 *e*P **P 10 55 40.0 -1.3**
SBA Scott Base 82.90 169 *e*P **P 10 55 48.0 +1.3**
SBA pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
SBA Scott Base 82.90 169 *e*P **P 10 55 48.0 +1.3**
comp=Z,4.0nm,0.6s,mb4.6
LVZ Lovozero 83.18 340 *d i*P **P 10 55 48.0 -0.2**
LVZ pmax pmax
comp=Z,26nm,2.7s,mb4.8
LVZ Lovozero 83.18 340 P **P 10 55 48.2 0.0**
comp=Z,64nm,0.5s,mb5.9,SNR=5.2
BILL Bilibino 83.28 20 ⇑ *e*P **P 10 55 48.8 +0.1**
BILL pmax pmax
comp=Z,15nm,1.7s,mb4.8
BILL MLR MLR
comp=Z,300nm,18.0s,MS4.7
VSU Vasula 83.45 329 *i*P **P 10 55 50.2 +0.4**
VSU pmax pmax
comp=Z,41nm,1.6s,mb5.2
APA Apatity 83.49 339 ⇑ *i*P **P 10 55 49.4 -0.4**
APA pmax pmax
comp=Z,32nm,1.4s,mb5.2
APA MLR MLR
comp=Z,200nm,21.0s,MS4.5
KWP Kalwaria Pacla 83.78 320 *e*P **P 10 55 52.4 +0.7**
KWP pmax pmax
comp=Z,9.0nm,0.3s,mb5.4
KWP Kalwaria Pacla 83.78 320 *e*P **P 10 55 52.4 +0.7**
comp=Z,9.2nm,0.3s,mb5.4
UZH Uzhgorod 83.86 319 *e*P **P 10 55 40.2 -12**
KOLS Kolonicke sedl 83.93 320 *e*P **P 10 55 53.9 +1.5**
KOLS pmax pmax
comp=Z,33nm,1.5s,mb5.2
KOLS Kolonicke sedl 83.93 320 *e*P **P 10 55 53.9 +1.5**
comp=Z,33nm,1.5s,mb5.2
KOLS *e*PP pP 10 56 08.5 -0.3
KOLS Kolonicke sedl 83.93 320 *e*P **P 10 55 53.9 +1.5**
KOLS *e*pP pP 10 56 08.5 -0.3
SUW Suwalki 84.35 325 *e*P **P 10 55 54.7 +0.2**
CRVS Cervenica-Dubn 84.45 319 *e*P **P 10 55 58.1 +3.0**
CRVS pmax pmax
comp=Z,13nm,1.7s,mb4.8
CRVS Cervenica-Dubn 84.45 319 *e*P **P 10 55 58.1 +3.0**
comp=Z,13nm,1.7s,mb4.8
CRVS *e*PP pP 10 56 12.7 +1.2
CRVS Cervenica-Dubn 84.45 319 *e*P **P 10 55 58.1 +3.0**
CRVS *e*pP pP 10 56 12.7 +1.2
FINES Finess Array B 84.55 332 P **P 10 55 55.2 -0.1**
comp=Z,2.3nm,0.6s,mb4.5,baz=116,slow=6.3,SNR=9.9
FINES LR LR 11 40 12.0
comp=Z,93nm,18.6s,MS4.2,baz=168,slow=40
KECS Kecovo 85.02 319 *e*P **P 10 55 59.0 +1.0**
KECS pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
KECS Kecovo 85.02 319 *e*P **P 10 55 59.0 +1.0**
comp=Z,4.9nm,1.2s,mb4.5
KECS Kecovo 85.02 319 *e*P **P 10 55 59.0 +1.0**
PSZ Piszkesteto 85.32 318 ⇓ *e*PcP PcP 10 56 00.0 -2.5
PKSM Moragy 85.93 316 ⇑ P **P 10 56 03.4 +0.8**
PKSM Moragy 85.93 316 ⇑ *i*P **P 10 56 03.4 +0.8**
VYHS Vyhne 86.11 319 *e*P **P 10 56 04.0 +0.6**
VYHS pmax pmax
comp=Z,15nm,2.0s,mb4.9
VYHS Vyhne 86.11 319 *e*P **P 10 56 04.0 +0.6**
comp=Z,15nm,2.0s,mb4.9
VYHS Vyhne 86.11 319 *e*P **P 10 56 04.0 +0.6**
ARCES ARCESS Array B 86.87 340 P **P 10 56 06.5 -0.2**
comp=Z,2.8nm,0.4s,mb4.9,baz=96,slow=4.2,SNR=101
ARCES LR LR 11 40 56.4
comp=Z,175nm,20.1s,MS4.5,baz=104,slow=40
CEL Celeste 87.08 308 *e*P **P 10 56 09.3 +0.9**
comp=Z,14nm,1.3s,mb5.0
MORC Moravsky Berou 87.11 320 *e*P **P 10 56 08.6 +0.3**
MORC pmax pmax
comp=Z,4.0nm,1.1s,mb4.6
MORC Moravsky Berou 87.11 320 *e*P **P 10 56 08.6 +0.3**
comp=Z,3.6nm,1.1s,mb4.5
DPC Dobruska-Polom 87.96 320 *e*P **P 10 56 13.9 +1.6**
DPC *e*pP pP 10 56 28.1 -0.7
KHC Kasperske Hory 89.63 319 *e*P **P 10 56 21.2 +1.0**
KHC *e*pP pP 10 56 35.8 -0.9
CLL Collm 90.14 321 *e*P **P 10 56 23.0 +0.5**
CLL *e**PP pP 10 56 38.0 -1.1
CLL Collm 90.14 321 *e*P **P 10 56 23.0 +0.5**
CLL *e*pP pP 10 56 38.0 -1.1
MOX Moxa 90.98 320 *e*P **P 10 56 27.9 +1.5**
comp=Z,29nm,1.9s,mb5.3
MOX Moxa 90.98 320 *e*P **P 10 56 27.9 +1.5**
MOX pmax pmax
comp=Z,29nm,1.9s,mb5.3
NB2 NORSAR Subarra 91.59 331 P **P 10 56 28.5 -0.5**
comp=Z,6.9nm,1.2s,mb4.9,baz=91,slow=5.3
NOA NORSAR Array B 91.59 331 P **P 10 56 28.8 -0.2**
comp=Z,0.7nm,0.7s,mb4.1,baz=93,slow=5.3,SNR=3.1
NOA LR LR 11 41 48.3
comp=Z,110nm,19.3s,MS4.3,baz=90,slow=38
NOA NORSAR Array B 91.59 331 P **P 10 56 28.8 -0.2**
NOA LR LR 11 41 48.3
KEST Kesra 92.18 306 P **P 10 56 33.0 +0.7**
comp=Z,3.9nm,1.1s,mb4.7,baz=74,slow=1.6,SNR=7.0
KEST pP pP 10 56 47.5 -1.4
comp=Z,3.3nm,0.9s,baz=315,slow=1.5,SNR=7.1
KEST Kesra 92.18 306 *e*P **P 10 56 33.6 +1.2**
VNA2 Neumayer--Watz 93.61 198 *e*P **P 10 56 37.1 -1.1**
TORD Torodi Ar. Bea 98.99 283 LR LR 11 36 08.7
comp=Z,89nm,20.8s,MS4.2,baz=110,slow=32
ILAR Eielson Array 101.60 24 PKKPbc PKKPbc 11 13 21.7 -2.4
comp=Z,0.5nm,0.7s,baz=140,slow=1.8,SNR=9.0
PPT Papeete 108.33 109 *e*LR LR 11 33 18.7
comp=Z,158nm,23.5s
SCHQ Schefferville 126.59 351 PKP PKPdf 11 02 24.6 -0.7
comp=Z,3.9nm,1.0s,baz=22,slow=5.4,SNR=4.1
NVAR Mina Array Bea 129.56 40 PKP PKPdf 11 02 32.1 +0.6
comp=Z,0.9nm,0.8s,baz=318,slow=1.2,SNR=7.9
LAO LASA Array 130.06 24 *e*PKPdf PKPdf 11 02 33.6 +1.4
ULM Lac du Bonnet 130.25 14 PKP PKPdf 11 02 32.2 -0.2
comp=Z,1.3nm,0.6s,baz=348,slow=4.7,SNR=3.1
ULM Lac du Bonnet 130.25 14 PKP PKPdf 11 02 32.2 -0.2
PDAR Pinedale Array 131.63 29 PKP PKPdf 11 02 36.0 +0.7
comp=Z,0.3nm,0.6s,baz=298,slow=1.9,SNR=5.8
PDAR SKPbc SKPbc 11 05 56.7 +0.7
comp=Z,0.8nm,0.8s,baz=315,slow=0.4,SNR=4.9
PDAR SKP 11 06 08.7
comp=Z,1.7nm,0.8s,baz=325,slow=1.4,SNR=9.0
RSSD Black Hills 133.05 24 *e*PKIKP PKPdf 11 02 37.4 -0.5
SRU San Rafael 133.77 34 *e*PKIKP PKPdf 11 02 41.3 +1.8
WMOK Wichita Mounta 143.10 27 *e*PKIKP PKPdf 11 02 52.9 -3.8
BDFB Brasilia 144.05 239 PKP PKPdf 11 02 57.3 -1.5
comp=Z,2.1nm,0.4s,baz=256,slow=4.2,SNR=3.8
CPUP Villa Florida 144.33 216 PKP PKPdf 11 02 57.8 -1.3
comp=Z,12nm,0.7s,baz=128,slow=2.9,SNR=33
TXAR Lajitas Array 144.68 38 PKP PKPdf 11 02 59.2 -0.4
comp=Z,17nm,0.7s,baz=302,slow=0.9,SNR=237
BLA Blacksburg 145.23 1 *e*PKIKP PKPdf 11 02 59.5 -0.8
HBAR Harrisburg 145.34 16 *e*PKPdf PKPdf 11 03 00.2 -0.3
MIAR Mount Ida 145.36 21 *e*PKIKP PKPdf 11 03 00.2 -0.4
WVT Waverly 145.47 12 *e*PKIKP PKPdf 11 03 00.3 -0.5
UALR University of 145.56 19 *e*PKPdf PKPdf 11 03 00.6 -0.4
JCT Junction City 146.05 32 *e*PKP2 PKPab 11 03 02.5 -0.9
OXF Oxford 146.66 15 *e*PKP2 PKPab 11 03 03.6 -2.0
CPCT Cooper Cave 146.69 7 *e*PKPbc PKPbc 11 03 03.7 -0.8
SWET Sewanee 146.71 9 *e*PKPdf PKPdf 11 03 03.2 +0.3
JSC Jenkinsville 148.13 3 *e*PKP2 PKPbc 11 03 08.0 -0.5
HKT Hockley 148.46 28 *e*PKIKP PKPdf 11 03 07.1 +1.1
VBMS Vicksburg 148.50 18 *e*PKPbc PKPbc 11 03 09.3 -0.2
LRAL Lakeview Retre 148.63 12 *e*PKPdf PKPdf 11 03 06.9 +0.8
GOGA Godfrey 148.82 6 *e*PKP2 PKPbc 11 03 09.9 -0.4
LPAZ La Paz 158.35 211 PKP PKPdf 11 03 21.1 +0.7
comp=Z,0.7nm,0.3s,baz=114,slow=2.5,SNR=6.5
OTAV Otavalo 177.67 209 *e*PKPdf PKPdf 11 03 34.5 +0.7

*ISK **08** 11:06:56.8, 37.°13N×29.°30E, h14km, MD2.7*
*ISCJB **08** 11:06:57.9±0.6, 36.°98N±0.°04×29.°26E±0.°04, h10km, Error ellipse: s-maj=6.0km s-min=4.4km az=14.6*
*CSEM **08** 11:06:57.5±0.3, 37.°01N×29.°27E, h10km, MD2.7, Error ellipse: s-maj=8.2km s-min=6.2km az=23.0*
*DDA **08** 11:06:57.5, 36.°96N×29.°20E, h7km±3km, Md2.9*
ISC 08 11:06:58.1±0.7, 36.°98N±0.°05×29.°24E±0.°05, h9km±11km, n16, σ1.°03/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**49**	*e*PG	**Pg**	**11 07 00.8**	**-2.8**
GLHS	**Glhisar (BURDU**	**0.28**	**49**	*e*Pg	**Pg**	**11 07 00.9**	**-2.7**
GOLH	**Golhisar**	**0.37**	**45**	*i* P	**Pg**	**11 07 04.1**	**-1.2**
GOLH				*i* S	**Sg**	**11 07 11.4**	**+1.2**
GOLH	**Golhisar**	**0.37**	**45**	*i* P	**Pg**	**11 07 04.1**	**-1.2**
GOLH				*i* S	**Sg**	**11 07 11.4**	**+1.2**
ELL	**Elmali**	**0.58**	**113**	*e*PG	**Pg**	**11 07 09.4**	**-0.1**
ELL				*e*SG	**Sg**	**11 07 18.4**	**+1.3**
ELL	**Elmali**	**0.58**	**113**	*e*Pg	**Pg**	**11 07 09.4**	**0.0**
ELL				*e*Sg	**Sg**	**11 07 18.4**	**+1.3**
DNZL	**Cakiroluk**	**0.73**	**348**	*i* P	**Pg**	**11 07 11.9**	**-0.2**
DNZL				*i* S	**Sg**	**11 07 22.6**	**+0.9**
DNZL	**Cakiroluk**	**0.73**	**348**	*i* P	**Pg**	**11 07 11.9**	**-0.3**
DNZL				*i* S	**Sg**	**11 07 22.6**	**+0.9**
YER	**Yerkesik**	**0.78**	**282**	*e*PG	**Pg**	**11 07 13.0**	**-0.1**
YER	**Yerkesik**	**0.78**	**282**	*e*Pg	**Pg**	**11 07 13.0**	**-0.1**
AKAS	**Kas**	**0.80**	**158**	*i* P	**Pg**	**11 07 13.1**	**-0.4**
AKAS	**Kas**	**0.80**	**158**	*i* P	**Pg**	**11 07 13.1**	**-0.4**
AYDN	**Tasoluk**	**1.28**	**303**	*i* P	**Pn**	**11 07 20.6**	**-1.5**
AYDN				*i* S	**Sg**	**11 07 39.7**	**+0.4**
AYDN	**Tasoluk**	**1.28**	**303**	*i* P	**Pn**	**11 07 20.6**	**-1.6**
AYDN				*i* S	**Sg**	**11 07 39.7**	**+0.4**
DAT	**Datca**	**1.35**	**260**	*e*PN	**Pn**	**11 07 23.3**	**+0.1**
DAT				*e*SN	**Sn**	**11 07 42.2**	**+0.9**
DAT	**Datca**	**1.35**	**260**	*e*Pn	**Pn**	**11 07 23.3**	**+0.1**
DAT				*e*Sn	**Sn**	**11 07 42.2**	**+1.0**

*MOS **08** 11:08:37.9±0.9, 49.°21N×155.°57E, h76km, mb4.3/4, Error ellipse: s-maj=24.2km s-min=8.3km az=64.9*
*KRSC **08** 11:08:39.8±1.6, 49.°22N×156.°54E, h52km±52km, ML4.3*
*ISCJB **08** 11:08:40.1±0.8, 49.°4N±0.°1×155.°2E±0.°2, h97km±8km, mb3.6/11, Error ellipse: s-maj=22.7km s-min=6.5km az=135.9*
*IDC **08** 11:08:42.3±2.9, 49.°50N×155.°11E, h102km±27km, mb3.3/10, mb1 3.6/12, mb1mx3.4/24, mbtmp3.3/12, Error ellipse: s-maj=31.6km s-min=13.8km az=149.0*
*NEIC **08** 11:08:42.5±0.9, 49.°56N×155.°10E, h103km±8km, mb4.3/1, Error ellipse: s-maj=19.3km s-min=6.7km az=141.0*
ISC 08 11:08:41.5±0.8, 49.°46N±0.°10×155.°2E±0.°2, h93km±7km, n36, σ1.°03/43, mb3.6/11, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.36**	**25**	*e*PN	**Pn**	**11 09 06.0**	**+0.3**
SKR				*e*S	**Sn**	**11 09 23.0**	**-0.9**
SKR				pmax	pmax		
SKR				smax			
SKR				smax			
SKR				smax			
SKR				smax			
ALID	**Alaid**	**1.43**	**9**	P	**Pn**	**11 09 07.1**	**+0.6**
GRL	**Gorelyy**	**3.59**	**29**	*e*P	**Pn**	**11 09 35.7**	**+0.7**
GRL				*e*S	**Sn**	**11 10 16.9**	**+0.6**
PETK	**Petropavlovsk-**	**3.98**	**22**	P	**Pn**	**11 09 40.4**	**+0.2**
PETK				pmax	pmax		
PETK	**Petropavlovsk-**	**3.98**	**22**	PN	**Pn**	**11 09 40.4**	**+0.2**
PETK				pmax	pmax		
PET	**Petropavlovsk**	**4.18**	**30**	*e*S	**Sn**	**11 10 30.2**	**-0.4**
PET	**Petropavlovsk**	**4.18**	**30**	*e*PN	**Pn**	**11 09 42.4**	**-0.5**
PET				*e*S	**Sn**	**11 10 29.4**	**-1.2**
PET				pmax	pmax		
PET				smax			
PET				smax			
PET	**Petropavlovsk**	**4.18**	**30**	*e*Pn	**Pn**	**11 09 43.1**	**+0.2**
PET				*e*Sn	**Sn**	**11 10 31.0**	**+0.4**
AVH	**Avacha**	**4.41**	**29**	P	**Pn**	**11 09 47.2**	**+1.1**
AVH				*e*S	**Sn**	**11 10 35.9**	**-0.3**
GNL	**Ganaly**	**4.58**	**21**	P	**Pn**	**11 09 50.6**	**+2.3**
SPN	**Mys Shipunski**	**4.74**	**38**	*e*P	**Pn**	**11 09 49.1**	**-1.4**
SPN				*e*S	**Sn**	**11 10 38.7**	**-5.5**
MKZ	**Mys Kozlova**	**6.50**	**36**	*e*P	**Pn**	**11 10 11.8**	**-2.7**
MKZ				*e*S	**Sn**	**11 11 19.6**	**-7.5**
YUK	**Yuzh-Kuril'sk**	**8.39**	**233**	⇓ *i*PN	**Pn**	**11 10 39.7**	**-0.6**
YUK				pmax	pmax		
YUK				pmax	pmax		
YUK				pmax	pmax		
YUK				pmax	pmax		
YSS	**Yuzh-Sakhalins**	**8.68**	**258**	PN	**Pn**	**11 10 43.7**	**-0.5**
ASAJ	**Asahikawa**	**10.15**	**243**	P	**Pn**	**11 11 05.5**	**+1.3**
ASAJ	**Asahikawa**	**10.15**	**243**	*e*Pn	**Pn**	**11 11 06.3**	**+2.1**
ERM	**Erimo**	**11.22**	**233**	*i* PN	**Pn**	**11 11 17.1**	**-1.7**
ERM	**Erimo**	**11.22**	**233**	*e*Pn	**Pn**	**11 11 19.4**	**+0.6**
BILL	**Bilibino**	**19.44**	**13**	*e*P	**Pn**	**11 13 01.6**	**-0.7**
BILL				pmax	pmax		
KSRS	**Korea Array**	**23.01**	**249**	P	**P**	**11 13 37.0**	**-1.4**
KSRS	**Korea Array**	**23.01**	**249**	*e*P	**P**	**11 13 40.1**	**+1.7**
KSRS				pmax	pmax		
SONM	**Songino Array**	**31.84**	**286**	P	**P**	**11 14 56.7**	**-0.5**
SONM	**Songino Array**	**31.84**	**286**	P	**P**	**11 14 56.7**	**-0.5**
MKAR	**Makanchi Array**	**46.97**	**296**	P	**P**	**11 17 01.3**	**-1.5**
YKA	**Yellowknife Ar**	**47.93**	**39**	P	**P**	**11 17 10.0**	**+0.1**
YKA	**Yellowknife Ar**	**47.93**	**39**	P	**P**	**11 17 10.0**	**0.0**
YKA				pmax	pmax		
CMAR	**Chiang Mai Arr**	**54.37**	**256**	P	**P**	**11 17 59.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**54.37**	**256**	P	**P**	**11 17 59.5**	**+0.8**
CMAR				pmax	pmax		
NVAR	**Mina Array Bea**	**59.98**	**65**	P	**P**	**11 18 38.5**	**+0.5**
PDAR	**Pinedale Array**	**62.05**	**56**	P	**P**	**11 18 52.4**	**+0.5**
OBN	**Obninsk**	**63.86**	**326**	*e*P	**P**	**11 19 07.0**	**+3.3**
OBN				*e**PP	pP	11 19 24.5	-2.5
OBN				*e**SP	sP	11 19 32.8	-4.4
OBN				*e*		11 21 25.8	
OBN				pmax	pmax		
WRA	**Warramunga Arr**	**71.53**	**201**	P	**P**	**11 19 51.4**	**-0.8**
TXAR	**Lajitas Array**	**74.97**	**63**	P	**P**	**11 20 12.6**	**0.0**
TXAR	**Lajitas Array**	**74.97**	**63**	P	**P**	**11 20 12.6**	**0.0**
TXAR				pmax	pmax		
ASAR	**Alice Springs**	**75.22**	**200**	P	**P**	**11 20 14.1**	**+0.2**
ASAR				pP	pP	11 20 37.6	-0.2
ASAR	**Alice Springs**	**75.22**	**200**	*e*P	**P**	**11 20 14.0**	**+0.2**

*NEIC **08** 11:29:34.0, 16.°49N×94.°73W, h85km, MD3.9(MEX), After MEX.*
MEX 08 11:29:34.0±1.4, 16.°50N×94.°73W, h85km±32km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.51**	**242**	*i* P	Pn	11 29 57.2	-2.4
HUIG				*i* S	Sn	11 30 18.1	-1.0
HUIG	**Huatulco**	**1.51**	**242**	*i* P	Pn	11 29 57.2	-2.4
HUIG				*i* S	Sn	11 30 18.1	-1.0
TGIG		**1.56**	**79**	*i* P	Pn	11 29 58.9	-1.4
TGIG				*i* S	Sn	11 30 18.4	-1.9
PCIG		**1.65**	**118**	*e*P	Pn	11 30 01.1	-0.3
PCIG				*i* S	Sn	11 30 20.0	-2.2
VHO	**Vista Hermosa**	**2.01**	**287**	*i* P	Pn	11 30 05.7	-0.4
VHO				*i* S	Sn	11 30 29.7	-0.9
VHO	**Vista Hermosa**	**2.01**	**287**	*i* P	Pn	11 30 05.7	-0.4
VHO				*i* S	Sn	11 30 29.7	-0.9
CCIG	**Comitan**	**2.50**	**95**	*i* P	Pn	11 30 12.1	-0.6
CCIG	**Comitan**	**2.50**	**95**	*i* P	Pn	11 30 12.1	-0.6
UTMO	**Huajuapan**	**3.23**	**295**	*e*P	Pn	11 30 22.3	-0.2
UTMO				*i* S	Sn	11 30 57.3	-2.6
PNIG	**Pinotepa**	**3.26**	**269**	*i* P	Pn	11 30 20.3	-2.7
PNIG				*i* S	Sn	11 30 58.4	-2.4
PNIG	**Pinotepa**	**3.26**	**269**	*i* P	Pn	11 30 20.3	-2.7
PNIG				*i* S	Sn	11 30 58.4	-2.4

JMA 08 11:33:00.5±0.2, 43.°30N×139.°45E, h32km±3km, M3.6, 3C-2D, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**0.75**	**86**	⇑ P	Pn	11 33 14.5	-0.3
JSK				*e*S	Sb	11 33 23.9	-1.2
JSH	**Shimam**	**0.79**	**146**	⇓ P	Pn	11 33 15.1	-0.3
JSH				*e*S	Sn	11 33 25.3	-0.7
JOSM	**Okushiri--Mats**	**1.22**	**179**	P	Pn	11 33 21.0	-0.3
JOSM				*e*S	Sn	11 33 35.9	-0.7
JYM2	**Yakumo 2**	**1.36**	**150**	⇓ P	Pn	11 33 24.3	+1.0
JYM2				*e*S	Sn	11 33 41.1	+0.9
JNB	**Noboribetsu**	**1.43**	**125**	P	Pn	11 33 25.1	+0.9
JNB				*e*S	Sn	11 33 42.7	+0.8
JEW	**Eniwo**	**1.54**	**107**	P	Pn	11 33 26.1	+0.5
JHR	**Hokuryu**	**1.71**	**74**	⇑ P	Pn	11 33 29.2	+1.1
JHR				*e*S	Sn	11 33 50.5	+1.7
JYG	**Yagishiri**	**1.82**	**51**	P	Pn	11 33 30.2	+0.7
JKB	**Kayabe**	**1.83**	**140**	P	Pn	11 33 30.7	+1.0
JSR	**Shiriuchi**	**1.91**	**158**	⇑ P	Pn	11 33 32.2	+1.4

DJA 08 11:48:19, 9.°02S×112.°44E, h66km, MLv3.7/10, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**0.86**	**1**	P	Pn	11 48 36.9	+1.4
KRKI				S	Sn	11 48 49.8	+2.1
PWJI	**Pagerwojo**	**1.17**	**328**	P	Pn	11 48 39.8	+0.2
PWJI				S	Sn	11 48 56.1	+1.2
GMJI	**Gumukmas**	**1.24**	**53**	P	Pn	11 48 40.5	+0.1
GMJI				S	Sn	11 48 57.1	+0.7
SJI	**Sawahan**	**1.44**	**332**	P	Pn	11 48 44.9	+1.8
PCJI	**Pacitan**	**1.49**	**303**	P	Pn	11 48 44.1	+0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI				S	Sn	11 49 02.8	+0.4
JAGI	**Jajag, Banyuwa**	**1.78**	**72**	P	Pn	11 48 47.8	+0.2
JAGI				S	Sn	11 49 09.1	-0.2
NGJI	**Ngawi**	**1.91**	**329**	P	Pn	11 48 48.6	-0.7
BYJI	**Banyuwangi**	**2.06**	**67**	P	Pn	11 48 53.7	+2.4
UGM	**Wanagama**	**2.19**	**300**	P	Pn	11 48 52.5	-0.7
IGBI	**Denpasar**	**2.68**	**86**	P	Pn	11 48 59.5	-0.3

*MEX **08** 11:50:37.1±0.9, 15°.35N×89°.56W, h175km±41km, MD4.1*
CASC 08 11:50:43.2±3.3, 15°.16N×90°.07W, h0km±8km, MD3.6, 1C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.37**	**105**	⇑eP	Pg	11 50 48.2	-2.1
NBG	**Las Nubes**	**0.63**	**205**	eP	Pg	11 50 56.2	+0.8
PCG	**Pacaya**	**0.93**	**215**	eP	Pg	11 51 02.0	+1.0
FG6		**0.99**	**233**	eP	Pg	11 51 02.8	+0.6
TP2	**Tecpan 2**	**1.00**	**248**	⇓eP	Pg	11 51 02.2	-0.1
TP2				eS	Sg	11 51 19.7	+4.4
FUG	**Fuego 3**	**1.03**	**227**	eP	Pg	11 51 03.3	+0.3
RBDL	**Robledal**	**1.11**	**161**	eP	Pg	11 51 03.4	-1.0
RBDL				eS	Sg	11 51 19.8	+1.0
RTR	**El Retiro**	**1.32**	**162**	eP	Pg	11 51 07.5	-1.1
SNJE	**San Jose**	**1.36**	**161**	eP	Pg	11 51 08.0	-1.3
SNJE				eS	Sg	11 51 27.9	+0.9
SBLS	**San Blas**	**1.38**	**162**	eP	Pg	11 51 08.4	-1.4
SBLS				eS	Sg	11 51 31.7	+4.0
BOQS	**Boqueron**	**1.61**	**152**	eP	Pn	11 51 11.9	-1.0
BOQS				eS	Sn	11 51 35.6	+1.2
LBRS	**Las Brisas**	**1.73**	**145**	eP	Pn	11 51 13.2	-1.3
LBRS				eS	Sn	11 51 38.3	+1.0
JAT	**Jato**	**1.74**	**241**	eP	Pn	11 51 16.0	+1.4
LFRS	**El Faro**	**1.81**	**147**	eP	Pn	11 51 14.6	-1.1
LFRS				eS	Sn	11 51 40.7	+1.3
SNVI	**San Vicente**	**1.95**	**142**	eP	Pn	11 51 17.0	-0.5
SNVI				eS	Sn	11 51 46.9	+4.3
THIG		**2.14**	**263**	iP	Pn	11 51 19.1	-1.2
THIG				iS	Sn	11 51 53.9	+6.4
CAHU	**Cacacuatique**	**2.27**	**127**	eP	Pn	11 51 22.2	+0.2
CAHU				eS	Sn	11 51 54.8	+4.2
CCIG	**Comitan**	**2.29**	**299**	iP	Pn	11 51 20.9	-1.3
CCIG				iS	Sn	11 51 53.4	+2.4
VSM	**San Miguel**	**2.45**	**135**	eP	Pn	11 51 27.1	+2.7
BLLM	**Bellamira**	**2.46**	**134**	eP	Pn	11 51 24.7	+0.1
CNCH	**Conchagua**	**2.86**	**131**	eP	Pn	11 51 31.8	+1.6
CNCH				eS	Sn	11 52 07.5	+2.2
SCX	**San Cristobal**	**2.92**	**303**	iP	Pn	11 51 29.0	-2.0
SCX				iS	Sn	11 52 06.5	-0.3
PCIG		**3.09**	**280**	iP	Pn	11 51 31.2	-2.0
PCIG				iS	Sn	11 52 13.6	+2.7
TGIG		**3.35**	**299**	iP	Pn	11 51 32.9	-3.9
TGIG				iS	Sn	11 52 16.3	-1.1

IDC 08 11:54:19.4±1.8, 16°.61S×178°.21W, h0km, mb4.1/5, mb1 4.4/5, mb1mx4.0/18, mbtmp4.1/5, Error ellipse: s-maj=137.0km s-min=30.8km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.43**	**240**	P	P	12 01 51.5	+0.1
2.2nm,0.5s,baz=85,slow=12,SNR=8.9							
WRA	**Warramunga Arr**	**45.06**	**258**	P	P	12 02 37.9	+0.4
1.3nm,0.3s,baz=94,slow=7.2,SNR=85							
ASAR	**Alice Springs**	**45.34**	**253**	P	P	12 02 39.9	+0.3
8.5nm,0.5s,baz=87,slow=9.0,SNR=357							
FITZ	**Fitzroy Crossi**	**53.44**	**260**	P	P	12 03 40.5	-1.1
0.4nm,0.4s,baz=90,slow=7.1,SNR=8.3							
TXAR	**Lajitas Array**	**85.14**	**58**	P	P	12 06 58.1	+0.2
0.3nm,1.0s,baz=215,slow=7.7,SNR=4.3							

IDC 08 12:35:07.3±19.0, 22°.75S×175°.32W, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.9/19, mbtmp4.2/5, Error ellipse: s-maj=348.5km s-min=128.0km az=82.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.80**	**267**	P	P	12 42 09.2	+0.6
3.9nm,0.3s,baz=94,slow=9.8,SNR=10.0							
STKA	**Stephens Creek**	**39.13**	**247**	P	P	12 42 37.0	+0.3
2.2nm,0.5s,baz=95,slow=11,SNR=21							
ASAR	**Alice Springs**	**46.47**	**258**	P	P	12 43 35.8	-0.6
1.9nm,0.8s,baz=97,slow=8.4,SNR=22							
WRA	**Warramunga Arr**	**46.79**	**264**	P	P	12 43 38.3	-0.6
1.8nm,0.5s,baz=103,slow=8.3,SNR=56							
FITZ	**Fitzroy Crossi**	**55.22**	**263**	P	P	12 44 42.7	+0.3
1.3nm,0.8s,baz=98,slow=7.1,SNR=2.8							

IDC 08 12:45:52.2±3.6, 5°.10S×131°.98E, h0km, mb3.8/1, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, ML3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/20, Error ellipse: s-maj=73.2km s-min=30.6km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.33**	**205**	Pn	Pn	12 49 14.6	-1.9
0.1nm,0.3s,baz=29,slow=14,SNR=5.3							
FITZ				Sn	Sn	12 51 56.4	+0.2
0.1nm,0.3s,baz=0.0,slow=20,SNR=2.8							
WRA	**Warramunga Arr**	**14.93**	**171**	Pn	Pn	12 49 24.1	-0.5
0.1nm,0.3s,baz=351,slow=13,SNR=10							
WRA				Sn	Sn	12 52 12.8	+2.0
0.1nm,0.3s,baz=354,slow=24,SNR=4.0							
ASAR	**Alice Springs**	**18.55**	**174**	P	Pn	12 50 12.0	+1.3
0.2nm,0.3s,baz=352,slow=12,SNR=33							
ASAR				S	Sn	12 53 40.0	+1.3
0.0nm,0.3s,baz=354,slow=26,SNR=5.3							
STKA	**Stephens Creek**	**28.12**	**162**	P	P	12 51 45.8	-0.2
0.7nm,0.7s,baz=340,slow=12,SNR=3.0							
MJAR	**Matsushiro Arr**	**41.84**	**8**	LR	LR	13 09 28.4	
comp=Z,32nm,20.4s,baz=245,slow=34							

*NIED **08** 12:53:00, 21°.60N×121°.30E, h8km, Mw4.0 Best double couple: M0 1.18000×10^15 NP1:φ0=288.00000°, δ66.00000°, λ-97.00000°. NP2:φ0=125.00000°, δ25.00000°, λ-74.00000°.*
*IDC **08** 12:53:02.4±0.9, 21°.44N×121°.00E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/23, mbtmp4.0/9, MS3.5/5, Ms1 3.6/5, ms1mx3.0/37, Error ellipse: s-maj=33.7km s-min=16.4km az=74.0*
*ISCJB **08** 12:53:03.6±0.6, 21°.58N±0°.03×121°.13E±0°.03, h20km±4km, mb3.9/9, MS3.7/4, Error ellipse: s-maj=5.4km s-min=4.5km az=168.2*
*TAP **08** 12:53:03.9, 21°.60N×121°.02E, h17km±1km, ML4.1, D*
*JMA **08** 12:53:03.0±0.5, 21°.64N×121°.30E, h0km, M4.1*
*NEIC **08** 12:53:03.8±0.8, 21°.59N×121°.13E, h10km, MG4.1(JMA), Error ellipse: s-maj=22.0km s-min=10.4km az=84.0*
ISC 08 12:53:04.6±0.6, 21°.60N±0°.03×121°.07E±0°.03, h17km±3km, n72, σ0=94/107, mb3.9/9, MS3.7/4, 4C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.33**	**332**	⇑iP	Pg	12 53 11.6	+0.1
baz=333							
TSEB				eS	Sg	12 53 17.6	+1.3
baz=333							
TWK1	**Hengchun**	**0.42**	**324**	⇑iP	Pg	12 53 12.3	-0.7
baz=330							
TWK1				S	Sg	12 53 18.7	-0.1
baz=330							
HEN	**Hengchun**	**0.50**	**323**	⇑iP	Pg	12 53 14.0	-0.6
baz=327							
HEN				iS	Sg	12 53 21.5	0.0
baz=327							
LAY	**Lan-yu**	**0.62**	**46**	P	Pg	12 53 17.3	+0.4
baz=48							
LAY				S	Sg	12 53 27.7	+2.4
baz=48							
TAW	**Tawu**	**0.77**	**348**	⇓iP	Pb	12 53 18.2	-1.3
baz=351							
TAW				S	Sg	12 53 29.9	+0.1
baz=351							
EAST	**Anshuo**	**0.80**	**345**	iP	Pb	12 53 18.7	-1.4
baz=349							
SCZT	**Fangliau**	**0.87**	**332**	⇑iP	Pb	12 53 20.8	-0.5
baz=334							
SCZT				S	Sb	12 53 32.2	-0.4
baz=334							
TWP	**Hsiaoliuchiu**	**0.99**	**319**	P	Pb	12 53 23.0	-0.2
baz=320							
TWP				eS	Sb	12 53 34.8	-1.2
baz=320							
TTN	**Taitung**	**1.15**	**4**	eP	Pn	12 53 24.8	-1.1
baz=6.0							
TTN				S	Sb	12 53 40.7	+0.1
baz=6.0							
KAU	**Kaohsiung**	**1.19**	**324**	eP	Pn	12 53 26.2	-0.3
baz=325							
TWG	**Pinlang**	**1.21**	**0**	ePn	Pn	12 53 26.7	-0.1
TWG				eSn	Sn	12 53 41.9	-1.0
TWG	**Pinlang**	**1.21**	**0**	eP	Pn	12 53 23.5	-3.3
baz=2.0							
TWM1	**Shoushan**	**1.35**	**334**	eP	Pn	12 53 27.7	-1.0
baz=335							
SGST	**Jiashian**	**1.54**	**343**	eP	Pn	12 53 31.2	0.0
baz=344							
ELDTW	**Lidau**	**1.58**	**358**	eP	Pn	12 53 32.0	+0.2
ELDTW				eS	Sn	12 53 51.8	-0.1
STYT	**Tauyuan**	**1.58**	**350**	eS	Sn	12 53 52.4	+0.5
baz=351							
CHN3	**Shinhua**	**1.60**	**336**	eP	Pn	12 53 35.1	+2.9
baz=337							
CHN1	**Nanshi**	**1.65**	**343**	eP	Pn	12 53 32.3	-0.6
baz=343							
CHN1				eS	Sn	12 53 53.6	-0.1
baz=343							
WTP	**Ta-pu**	**1.69**	**346**	eP	Pn	12 53 33.4	+0.1
baz=347							
TPUB	**Ta-pu**	**1.74**	**347**	ePn	Pn	12 53 34.7	+0.7
TPUB				eSn	Sn	12 53 58.5	+2.7
TWF1	**Yuli**	**1.75**	**7**	P	Pn	12 53 32.8	-1.5
baz=8.0							
TWF1				eS	Sn	12 53 56.3	+0.1
baz=8.0							
YULB	**Yu-li**	**1.79**	**7**	ePn	Pn	12 53 34.2	-0.6
YULB				eSn	Sn	12 53 60.0	+2.8
YUS	**Yu-Shan**	**1.88**	**357**	P	Pn	12 53 35.3	-0.7
baz=358							
EHY	**Hungye**	**1.91**	**7**	eP	Pn	12 53 35.8	-0.6
baz=8.0							
EHY				eS	Sn	12 53 59.4	-0.6
baz=8.0							
ALS	**Alishan**	**1.91**	**353**	eP	Pn	12 53 36.8	+0.4
baz=354							
ALS				eS	Sn	12 54 00.5	+0.4
baz=354							
CHY	**Chiayi**	**1.98**	**343**	eP	Pn	12 53 36.1	-1.2
baz=343							
WGK	**Gukeng**	**2.12**	**347**	eP	Pn	12 53 39.0	-0.4
baz=348							
SSLB	**Suanglung**	**2.18**	**357**	ePn	Pn	12 53 40.2	+0.2
SSLB				eSg	Sg	12 54 13.1	-1.6
ESL	**Shilin**	**2.23**	**9**	eP	Pn	12 53 40.8	0.0
baz=10.0							
ESL				eS	Sn	12 54 08.1	+0.2
baz=10.0							
SMLT	**Sun Moon Lake**	**2.27**	**356**	eP	Pn	12 53 41.8	+0.4
baz=357							
SMLT				eS	Sn	12 54 09.2	+0.1
baz=357							
WNT	**Mingjian**	**2.29**	**351**	eP	Pn	12 53 41.5	-0.1
baz=352							
TYC	**Yuchr**	**2.30**	**355**	P	Pn	12 53 41.9	+0.2
baz=356							
TYC				eS	Sn	12 54 10.1	+0.5
baz=356							
WTCT	**Ta-ch'eng**	**2.36**	**342**	eP	Pn	12 53 41.3	-1.3
baz=343							
PNG	**Penghu**	**2.40**	**325**	eP	Pn	12 53 39.7	-3.5
baz=325							
TWD	**Chiawan**	**2.51**	**11**	eP	Pn	12 53 44.4	-0.3
baz=12							
TWD				eS	Sn	12 54 15.4	+0.4
baz=12							
WHF	**Hehuan Shan**	**2.54**	**4**	eP	Pn	12 53 45.1	+0.1
baz=5.0							
WHF				eS	Sn	12 54 16.3	+0.8
baz=5.0							
TCU	**Taichung**	**2.56**	**352**	eP	Pn	12 53 48.8	+3.5
baz=353							
NACB	**Ninganchiao**	**2.60**	**11**	ePn	Pn	12 53 44.6	-1.3
TWT	**Tachien**	**2.64**	**2**	eP	Pn	12 53 46.8	+0.3
baz=2.0							
TWT				eS	Sn	12 54 17.7	-0.4
baz=2.0							
TWQ1	**Liyutan**	**2.75**	**354**	eP	Pn	12 53 48.5	+0.6
baz=355							
TWQ1				eS	Sn	12 54 20.8	+0.1
baz=355							
NSY	**Sanyi**	**2.81**	**354**	eP	Pn	12 53 52.5	+3.7
baz=355							
NNS	**Nan Shan**	**2.84**	**6**	eP	Pn	12 53 51.2	+2.0
baz=6.0							
NNS				eS	Sn	12 54 23.4	+0.4
baz=6.0							
ENA	**Nanau**	**2.88**	**12**	eP	Pn	12 53 50.1	+0.4
baz=13							
ENA				eS	Sn	12 54 23.9	-0.2
baz=13							
NSTT	**Nanjuang**	**3.01**	**359**	eP	Pn	12 53 51.9	+0.4
baz=359							
NSTT				eS	Sn	12 54 27.4	+0.1
baz=359							
ENTT	**Nioudou**	**3.06**	**9**	eP	Pn	12 53 52.5	+0.3
baz=9.0							
ENTT				eS	Sn	12 54 28.2	-0.2
baz=9.0							
YHNB	**Yeheng**	**3.06**	**5**	ePn	Pn	12 53 52.3	0.0
YHNB				eSn	Sn	12 54 29.0	+0.4
NSK	**Sanguang**	**3.07**	**5**	eP	Pn	12 53 52.6	+0.2
baz=5.0							
NSK				eS	Sn	12 54 28.9	+0.2
baz=5.0							
TWC	**Suao**	**3.08**	**13**	eP	Pn	12 53 53.3	+0.9
baz=14							
TWC				eS	Sn	12 54 28.7	-0.2
baz=14							
TWE	**Neicheng**	**3.15**	**10**	eP	Pn	12 53 55.1	+1.6
baz=11							
TWE				eS	Sn	12 54 30.2	-0.6
baz=11							
YOJ	**Yonaguni jima**	**3.36**	**32**	P	Pn	12 53 56.2	-0.2
YOJ				S	Sn	12 54 36.3	+0.4
TWB1	**Santiao Chiao**	**3.49**	**14**	eP	Pn	12 54 01.4	+3.3
baz=14							
HATJ	**Hateruma jima**	**3.51**	**45**	P	Pn	12 53 57.4	-1.0
HATJ				S	Sn	12 54 38.5	-1.2
NWF	**Wu-fen Shan**	**3.51**	**11**	eP	Pn	12 53 59.4	+1.0
baz=11							
NWF				eS	Sn	12 54 39.0	-0.6
baz=11							
IRIF	**Iriomote-Funau**	**3.66**	**42**	P	Pn	12 54 00.4	-0.1
IRIF				S	Sn	12 54 42.5	-0.8
KNM	**Kinmen**	**3.71**	**320**	eP	Pn	12 54 01.1	0.0
baz=318							
JKRS	**Kuro-shima**	**3.77**	**45**	P	Pn	12 54 02.1	+0.1
JKRS				S	Sn	12 54 44.9	-1.2
JIJ	**Ishigaki jima**	**3.95**	**45**	P	Pn	12 54 04.0	-0.4
JIJ				S	Sn	12 54 47.9	-2.5
JTJ	**Tarama**	**4.51**	**47**	P	Pn	12 54 12.5	+0.4
JTJ				S	Sn	12 55 04.2	0.0
KSRS	**Korea Array**	**16.88**	**19**	LR	LR	13 04 10.1	
comp=Z,61nm,19.9s,baz=200,slow=39							
MJAR	**Matsushiro Arr**	**21.07**	**41**	P	P	12 57 50.1	+2.2
6.5nm,0.3s,mb4.5,baz=236,slow=12,SNR=3.5							
ASAJ	**Asahikawa**	**28.67**	**33**	P	P	12 59 02.5	+2.1
2.1nm,0.7s,mb4.0,baz=199,slow=13,SNR=7.6							
SONM	**Songino Array**	**28.71**	**339**	P	P	12 59 02.4	+1.5
0.4nm,0.5s,mb3.4,baz=158,slow=12,SNR=3.9							
SONM				LR	LR	13 11 47.9	
comp=Z,80nm,19.9s,MS3.3,baz=238,slow=39							
SONM	**Songino Array**	**28.71**	**339**	P	P	12 59 02.4	+1.5
SONM				LR	LR	13 11 47.9	
MKAR	**Makanchi Array**	**40.14**	**318**	P	P	13 00 40.4	+0.8
0.4nm,0.8s,mb3.2,baz=118,slow=8.6,SNR=3.1							
ZALV	**Zalesovo Beam**	**42.37**	**329**	P	P	13 00 57.9	+0.2
1.0nm,0.3s,mb3.9,baz=122,slow=10,SNR=2.7							
WRA	**Warramunga Arr**	**43.28**	**162**	P	P	13 01 04.5	-1.0
1.5nm,0.7s,mb3.9,baz=344,slow=8.9,SNR=20							
ASAR	**Alice Springs**	**46.70**	**164**	P	P	13 01 32.7	0.0
0.4nm,0.3s,mb3.8,baz=345,slow=7.4,SNR=28							
BVAR	**Borovoye Array**	**49.62**	**322**	P	P	13 01 57.3	+2.4
0.6nm,0.4s,mb3.9,baz=124,slow=8.8,SNR=3.6							
STKA	**Stephens Creek**	**56.70**	**159**	P	P	13 02 46.1	-1.1
1.4nm,0.7s,mb4.1,baz=319,slow=8.6,SNR=5.4							
ILAR	**Eielson Array**	**71.55**	**27**	LR	LR	13 34 37.1	
comp=Z,41nm,19.5s,MS3.7,baz=45,slow=35							
AFI	**Afiamalu**	**74.73**	**112**	LR	LR	13 30 18.3	
comp=Z,43nm,20.9s,MS3.7,baz=119,slow=30							
HFS	**Hagfors**	**79.76**	**331**	LR	LR	13 44 27.0	
comp=Z,61nm,19.3s,MS4.0,baz=205,slow=39							

*ISCJB **08** 13:01:48.7±0.6, 36°.89N±0°.03×7°.50W±0°.03, h63km±7km, Error ellipse: s-maj=6.0km s-min=3.6km az=26.0*
*MDD **08** 13:01:50.0±0.6, 36°.80N×7°.57W, h43km±13km, mb4.1/9, Error ellipse: s-maj=6.7km s-min=4.2km az=16.0, PRIMO*
*INMG **08** 13:01:50.2±1.1, 36°.79N×7°.58W, h30km±3km, ML2.1, Error ellipse: s-maj=2.5km s-min=2.2km az=23.0*
*NEIC **08** 13:01:50.1, 36°.82N×7°.57W, h47km, MG3.1(MDD), After MDD.*
*IGIL **08** 13:01:50.3, 36°.79N×7°.58W, h30km, ML2.0*
*CSEM **08** 13:01:50.0±0.2, 36°.87N×7°.51W, h40km, ML3.0/6, Error ellipse: s-maj=4.9km s-min=2.6km az=27.0*
ISC 08 13:01:49.7±0.6, 36°.88N±0°.03×7°.51W±0°.03, h52km±9km, n127, σ0=90/235, 2C-18D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.49**	**317**	iPg	Pn	13 02 00.7	-0.3
PBDV				eSg	Sn	13 02 08.7	-0.5
PBDV				A		13 02 09.4	
26nm,0.2s							
PBDV	**Barranco-do-Ve**	**0.49**	**317**	⇓P	Pn	13 02 00.7	-0.3
PBDV				S	Sn	13 02 08.7	-0.5
26nm,0.2s							
PBDV	**Barranco-do-Ve**	**0.49**	**317**	⇓P	Pn	13 02 00.7	-0.3
PBDV				S	Sn	13 02 08.7	-0.5
26nm,0.2s							
PVAQ	**Vaqueiros**	**0.55**	**342**	iPg	Pn	13 02 01.8	+0.1
PVAQ				eSg	Sn	13 02 10.1	-0.1
PVAQ				A		13 02 10.9	
81nm,0.2s							
PVAQ	**Vaqueiros**	**0.55**	**342**	⇓P	Pn	13 02 01.8	+0.1
PVAQ				S	Sn	13 02 10.1	-0.1
81nm,0.2s							
PVAQ	**Vaqueiros**	**0.55**	**342**	⇓P	Pn	13 02 01.8	+0.1
PVAQ				S	Sn	13 02 10.1	-0.1
81nm,0.2s							
EGRO	**El Granado**	**0.65**	**2**	⇓P	Pn	13 02 03.6	+0.7
EGRO				S	Sn	13 02 12.9	+0.4
EGRO	**El Granado**	**0.65**	**2**	⇓P	Pn	13 02 03.6	+0.7
10nm,0.0s,SNR=18							
EGRO				S	Sn	13 02 13.4	+0.9
41nm,0.1s,SNR=5.0							
EGRO	**El Granado**	**0.65**	**2**	⇓P	Pn	13 02 03.6	+0.7
10nm,0.0s,SNR=18							
EGRO				S	Sn	13 02 13.4	+0.9
41nm,0.1s,SNR=5.0							
EGRO	**El Granado**	**0.65**	**2**	P	Pn	13 02 03.6	+0.7
10nm,0.0s,SNR=18							
EGRO				S	Sn	13 02 13.4	+0.9
41nm,0.1s,SNR=5.0							
PCVE	**Castro Verde**	**0.86**	**331**	eP	Pn	13 02 06.0	+0.4
PCVE				eS	Sn	13 02 17.8	+0.5
PCVE				A		13 02 18.2	
18nm,0.2s							
PCVE	**Castro Verde**	**0.86**	**331**	P	Pn	13 02 06.0	+0.4
PCVE				S	Sn	13 02 17.8	+0.5
18nm,0.2s							
PCVE	**Castro Verde**	**0.86**	**331**	P	Pn	13 02 06.0	+0.4
PCVE				S	Sn	13 02 17.8	+0.5
18nm,0.2s							
PCVE	**Castro Verde**	**0.86**	**331**	eP	Pn	13 02 06.0	+0.4
PCVE				eS	Sn	13 02 17.8	+0.5
18nm,0.2s							
MORF	**Marmelete**	**1.01**	**295**	iP	Pn	13 02 06.7	-0.9
MORF				eS	Sn	13 02 19.3	-1.5
MORF				A		13 02 19.9	
50nm,0.1s							
MORF	**Marmelete**	**1.01**	**295**	⇓P	Pn	13 02 06.7	-0.9
MORF				S	Sn	13 02 19.3	-1.5
50nm,0.1s							
MORF	**Marmelete**	**1.01**	**295**	⇓P	Pn	13 02 06.7	-0.9
MORF				S	Sn	13 02 19.3	-1.5
50nm,0.1s							
PFVI	**Vila Bisbo**	**1.08**	**284**	eP	Pn	13 02 07.6	-1.0
PFVI				eS	Sn	13 02 20.5	-2.1
PFVI				A		13 02 21.5	
31nm,0.1s							
PFVI	**Vila Bisbo**	**1.08**	**284**	P	Pn	13 02 07.6	-1.0
PFVI				S	Sn	13 02 20.2	-2.4
PFVI	**Vila Bisbo**	**1.08**	**284**	⇑P	Pn	13 02 07.6	-1.0
9.2nm,0.1s,SNR=18							
PFVI				S	Sn	13 02 20.2	-2.4
2.7nm,0.1s,SNR=17							
PFVI	**Vila Bisbo**	**1.08**	**284**	⇑P	Pn	13 02 07.6	-1.0
9.2nm,0.1s,SNR=18							
PFVI				S	Sn	13 02 20.2	-2.4
2.7nm,0.1s,SNR=17							
PFVI	**Vila Bisbo**	**1.08**	**284**	P	Pn	13 02 07.6	-1.0
9.2nm,0.1s,SNR=18							
PFVI				eS	Sn	13 02 20.5	-2.1
31nm,0.1s							
EMIN	**Mina Concepcio**	**1.11**	**37**	P	Pn	13 02 10.2	+1.3
EMIN				S	Sn	13 02 23.4	+0.3
EMIN	**Mina Concepcio**	**1.11**	**37**	P	Pn	13 02 09.5	+0.6
1.0nm,0.1s,SNR=17							
EMIN				S	Sn	13 02 23.4	+0.2
3.9nm,0.1s,SNR=6.9							
EMIN	**Mina Concepcio**	**1.11**	**37**	P	Pn	13 02 09.5	+0.6
1.0nm,0.1s,SNR=17							
EMIN				S	Sn	13 02 23.4	+0.2
3.9nm,0.1s,SNR=6.9							
EMIN	**Mina Concepcio**	**1.11**	**37**	P	Pn	13 02 09.5	+0.6
1.0nm,0.1s,SNR=17							
EMIN				S	Sn	13 02 23.4	+0.3
3.9nm,0.1s,SNR=6.9							
MESJ	**Messejana**	**1.11**	**329**	eP	Pn	13 02 09.5	+0.5
MESJ				eS	Sn	13 02 23.0	-0.3
MESJ	**Vila Bisbo**	**1.11**	**329**	P	Pn	13 02 09.5	+0.5
MESJ				S	Sn	13 02 23.0	-0.3
MESJ	**Messejana**	**1.11**	**329**	P	Pn	13 02 09.5	+0.5
MESJ				S	Sn	13 02 23.0	-0.3
MESJ	**Messejana**	**1.11**	**329**	eP	Pn	13 02 09.5	+0.5
MESJ				eS	Sn	13 02 23.0	-0.3
PTEO	**Sao Teotonio**	**1.18**	**305**	iP	Pn	13 02 09.8	0.0
PTEO				eS	Sn	13 02 23.9	-0.9
PTEO				A		13 02 24.6	
8.4nm,0.1s							
PTEO	**Sao Teotonio**	**1.18**	**305**	⇓P	Pn	13 02 09.8	0.0
PTEO				S	Sn	13 02 23.9	-0.9
4.2nm,0.1s							
PTEO	**Sao Teotonio**	**1.18**	**305**	⇓P	Pn	13 02 09.8	0.0
PTEO				S	Sn

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
PBAR	Barrancos	1.34	16	⇓P	Pn	13 02 13.1	+1.0
PBAR				S	Sn	13 02 29.8	+1.0
	8.5nm,0.1s						
PBAR	Barrancos	1.34	16	⇓P	Pn	13 02 13.1	+1.0
PBAR				S	Sn	13 02 29.8	+1.0
	8.5nm,0.1s						
EJIF	Jimena Fronter	1.69	104	P	Pn	13 02 16.5	-0.4
	2.3nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	1.69	104	P	Pn	13 02 16.5	-0.4
	2.3nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	1.69	104	P	Pn	13 02 16.5	-0.4
	2.3nm,0.2s,SNR=7.9						
MOE	Montemor	1.77	338	eSn	Sn	13 02 39.9	+0.7
MOE	Montemor	1.77	338	eSn	Sn	13 02 39.9	+0.7
EBAD	Badajoz	1.91	12	⇓P	Pn	13 02 20.6	+0.8
EBAD				S	Sn	13 02 42.9	+0.2
EBAD	Badajoz	1.91	12	⇓P	Pn	13 02 20.6	+0.8
	1.4nm,0.1s,SNR=18						
EBAD				S	Sn	13 02 42.9	+0.2
	2.0nm,0.1s,SNR=8.7						
EBAD	Badajoz	1.91	12	⇓P	Pn	13 02 20.6	+0.8
	1.4nm,0.1s,SNR=18						
EBAD				S	Sn	13 02 42.9	+0.2
	2.0nm,0.1s,SNR=8.7						
EBAD	Badajoz	1.91	12	P	Pn	13 02 20.6	+0.8
	1.4nm,0.1s,SNR=18						
EBAD				S	Sn	13 02 42.9	+0.2
	2.0nm,0.1s,SNR=8.7						
PESTR	Estremoz	1.98	358	eP	Pn	13 02 21.6	+0.8
PESTR				eSn	Sn	13 02 44.6	+0.1
PESTR				A		13 02 46.8	
	3.6nm,0.1s						
PESTR	Estremoz	1.98	358	P	Pn	13 02 21.6	+0.8
PESTR				S	Sn	13 02 44.6	+0.1
	1.8nm,0.1s						
PESTR	Estremoz	1.98	358	P	Pn	13 02 21.6	+0.8
PESTR				S	Sn	13 02 44.6	+0.1
	1.8nm,0.1s						
PESTR	Estremoz	1.98	358	ePn	Pn	13 02 21.6	+0.8
PESTR				eSn	Sn	13 02 44.6	+0.1
	3.6nm,0.1s						
ECAB	El Cabril	2.04	54	P	Pn	13 02 22.5	+0.8
ECAB				S	Sn	13 02 45.2	-0.8
ECAB	El Cabril	2.04	54	P	Pn	13 02 22.5	+0.8
	0.8nm,0.1s,SNR=7.9						
ECAB				S	Sn	13 02 45.5	-0.5
	2.1nm,0.2s,SNR=7.9						
ECAB	El Cabril	2.04	54	P	Pn	13 02 22.5	+0.8
	0.8nm,0.1s,SNR=7.9						
ECAB				S	Sn	13 02 45.5	-0.5
	2.1nm,0.2s,SNR=7.9						
ECAB	El Cabril	2.04	54	P	Pn	13 02 22.5	+0.8
	0.8nm,0.1s,SNR=7.9						
ECAB				S	Sn	13 02 45.5	-0.5
	2.1nm,0.2s,SNR=7.9						
EMIJ	Mijas	2.22	97	P	Pn	13 02 24.4	+0.3
EMIJ				S	Sn	13 02 50.8	+0.4
EMIJ	Mijas	2.22	97	P	Pn	13 02 24.4	+0.3
	0.6nm,0.1s,SNR=7.9						
EMIJ				S	Sn	13 02 50.8	+0.4
	1.9nm,0.2s,SNR=7.9						
EMIJ	Mijas	2.22	97	P	Pn	13 02 24.4	+0.3
	0.6nm,0.1s,SNR=7.9						
EMIJ				S	Sn	13 02 50.8	+0.4
	1.9nm,0.2s,SNR=7.9						
EMIJ	Mijas	2.22	97	P	Pn	13 02 24.4	+0.3
	0.6nm,0.1s,SNR=7.9						
EMIJ				S	Sn	13 02 50.8	+0.5
	1.9nm,0.2s,SNR=7.9						
PMAFR	Mafra	2.50	326	ePn	Pn	13 02 28.8	+0.9
PMAFR	Mafra	2.50	326	P	Pn	13 02 28.4	+0.5
	7.1nm,0.1s,SNR=7.9						
PMAFR				S	Sn	13 02 57.3	+0.2
	16nm,0.2s,SNR=7.9						
PMAFR	Mafra	2.50	326	P	Pn	13 02 28.4	+0.5
	7.1nm,0.1s,SNR=7.9						
PMAFR				S	Sn	13 02 57.3	+0.2
	16nm,0.2s,SNR=7.9						
PMAFR	Mafra	2.50	326	P	Pn	13 02 28.4	+0.5
	7.1nm,0.1s,SNR=7.9						
PMAFR	Mafra	2.50	326	ePn	Pn	13 02 28.8	+0.9
PMAFR				S	Sn	13 02 57.3	+0.1
	16nm,0.2s,SNR=7.9						
PMRV	Marv??o	2.54	2	i Pn	Pn	13 02 29.5	+1.0
PMRV				eSn	Sn	13 02 58.3	+0.1
PMRV				A		13 03 00.1	
	3.6nm,0.1s						
PMRV	Marv??o	2.54	2	⇓P	Pn	13 02 29.5	+1.0
PMRV				S	Sn	13 02 58.3	+0.1
	3.6nm,0.1s						
PMRV	Marv??o	2.54	2	⇓P	Pn	13 02 29.5	+1.0
PMRV				S	Sn	13 02 58.3	+0.1
	3.6nm,0.1s						
EADA	Adamuz	2.66	60	S	Sn	13 03 00.8	-0.3
	1.1nm,0.0s,SNR=7.9						
EADA	Adamuz	2.66	60	S	Sn	13 03 00.8	-0.3
	1.1nm,0.0s,SNR=7.9						
EADA	Adamuz	2.66	60	S	Sn	13 03 00.8	-0.3
	1.1nm,0.0s,SNR=7.9						
PTOM	Tomar	2.82	346	ePn	Pn	13 02 32.9	+0.6
PTOM				A		13 02 46.9	
	17nm,0.2s						
PTOM	Tomar	2.82	346	P	Pn	13 02 32.9	+0.6
PTOM	Tomar	2.82	346	P	Pn	13 02 32.9	+0.6
PTOM	Tomar	2.82	346	ePn	Pn	13 02 32.9	+0.6
	17nm,0.2s						
PCBR	Castelo Branco	2.95	0	ePn	Pn	13 02 35.3	+1.2
PCBR				eSn	Sn	13 03 08.9	+0.6
PCBR				A		13 03 10.5	
	3.6nm,0.1s						
PCBR	Castelo Branco	2.95	0	P	Pn	13 02 35.3	+1.2
PCBR				S	Sn	13 03 08.9	+0.6
	1.8nm,0.1s						
PCBR	Castelo Branco	2.95	0	P	Pn	13 02 35.3	+1.2
PCBR				S	Sn	13 03 08.9	+0.6
	1.8nm,0.1s						
PCBR	Castelo Branco	2.95	0	ePn	Pn	13 02 35.3	+1.2
PCBR				eSn	Sn	13 03 08.9	+0.6
	3.6nm,0.1s						
EGUA	Guajares	3.16	90	P	Pn	13 02 36.5	-0.5
EGUA				S	Sn	13 03 13.1	-0.3
EGUA	Guajares	3.16	90	P	Pn	13 02 36.5	-0.5
	1.3nm,0.2s,SNR=7.9						
EGUA				S	Sn	13 03 13.1	-0.3
	3.7nm,0.2s,SNR=7.9						
EGUA	Guajares	3.16	90	P	Pn	13 02 36.5	-0.5
	1.3nm,0.2s,SNR=7.9						
EGUA				S	Sn	13 03 13.1	-0.3
	3.7nm,0.2s,SNR=7.9						
EGUA	Guajares	3.16	90	P	Pn	13 02 36.5	-0.5
	1.3nm,0.2s,SNR=7.9						
EGUA				S	Sn	13 03 13.1	-0.3
	3.7nm,0.2s,SNR=7.9						
EBAN	Banos Encina	3.22	66	S	Sn	13 03 12.9	-2.0
	1.2nm,0.1s,SNR=7.9						
EBAN	Banos Encina	3.22	66	S	Sn	13 03 12.9	-2.0
	1.2nm,0.1s,SNR=7.9						
EBAN	Banos Encina	3.22	66	S	Sn	13 03 12.9	-2.1
	1.2nm,0.1s,SNR=7.9						
EQUE	Quentar	3.27	83	P	Pn	13 02 39.9	+1.4
	0.2nm,0.1s,SNR=4.0						
EQUE				S	Sn	13 03 15.4	-0.7
	SNR=7.9						
EQUE	Quentar	3.27	83	P	Pn	13 02 39.9	+1.4
	0.2nm,0.1s,SNR=4.0						
EQUE				S	Sn	13 03 15.4	-0.7
	SNR=7.9						
EQUE	Quentar	3.27	83	P	Pn	13 02 39.9	+1.4
	0.2nm,0.1s,SNR=4.0						
EQUE				S	Sn	13 03 15.4	-0.7
	SNR=7.9						
EPLA	Plasencia	3.37	19	P	Pn	13 02 40.2	+0.4
EPLA				S	Sn	13 03 17.4	-1.1
EPLA	Plasencia	3.37	19	P	Pn	13 02 40.2	+0.4
	0.1nm,0.0s,SNR=7.9						
EPLA				S	Sn	13 03 17.4	-1.1
	1.0nm,0.0s,SNR=7.9						
EPLA	Plasencia	3.37	19	P	Pn	13 02 40.2	+0.4
	0.1nm,0.0s,SNR=7.9						
EPLA				S	Sn	13 03 17.4	-1.1
	1.0nm,0.0s,SNR=7.9						
EPLA	Plasencia	3.37	19	P	Pn	13 02 40.2	+0.4
EPLA				S	Sn	13 03 17.4	-1.1
	1.0nm,0.0s,SNR=7.9						
MTE	Manteigas	3.51	360	eSn	Sn	13 03 22.0	0.0
MTE	Manteigas	3.51	360	eSn	Sn	13 03 22.0	0.0
EQES	Quesada	3.65	74	P	Pn	13 02 44.5	+0.8
EQES				S	Sn	13 03 25.4	-0.1
EQES	Quesada	3.65	74	P	Pn	13 02 44.5	+0.8
	0.0nm,0.0s,SNR=7.9						
EQES				S	Sn	13 03 25.4	-0.1
	0.0nm,0.1s,SNR=7.9						
EQES	Quesada	3.65	74	P	Pn	13 02 44.5	+0.8
	0.0nm,0.0s,SNR=7.9						
EQES				S	Sn	13 03 25.4	-0.1
	0.0nm,0.1s,SNR=7.9						
EQES	Quesada	3.65	74	P	Pn	13 02 44.5	+0.8
EQES				S	Sn	13 03 25.4	-0.1
	SNR=7.9						
ESDC	Sonseca Array	3.94	44	P	Pn	13 02 49.1	+1.4
ESDC				S	Sn	13 03 29.7	-3.0
ESDC	Sonseca Array	3.94	44	P	Pn	13 02 49.1	+1.4
ESDC				S	Sn	13 03 29.7	-2.9
MVO	Moncorvo	4.29	5	eSn	Sn	13 03 40.5	-0.7
MVO				A		13 03 41.4	
	3.7nm,0.3s						
MVO	Moncorvo	4.29	5	P	Pn	13 02 52.2	-0.2
MVO				S	Sn	13 03 39.4	-1.8
MVO	Moncorvo	4.29	5	P	Pn	13 02 52.2	-0.2
	2.0nm,0.1s,SNR=7.9						
MVO				S	Sn	13 03 39.4	-1.8
	1.1nm,0.1s,SNR=7.9						
MVO	Moncorvo	4.29	5	P	Pn	13 02 52.2	-0.2
	2.0nm,0.1s,SNR=7.9						
MVO				S	Sn	13 03 39.4	-1.8
	1.1nm,0.1s,SNR=7.9						
MVO	Moncorvo	4.29	5	P	Pn	13 02 52.2	-0.3
	2.0nm,0.1s,SNR=7.9						
MVO				S	Sn	13 03 39.4	-1.8
	1.1nm,0.1s,SNR=7.9						
MVO				eSn	Sn	13 03 40.5	-0.7
	3.7nm,0.3s						
EVIA	Vianos	4.34	65	P	Pn	13 02 53.3	+0.2
EVIA				S	Sn	13 03 41.7	-0.6
EVIA	Vianos	4.34	65	P	Pn	13 02 53.3	+0.2
	0.9nm,0.1s						
EVIA				S	Sn	13 03 41.7	-0.6
	2.9nm,0.2s,SNR=11						
EVIA	Vianos	4.34	65	P	Pn	13 02 53.3	+0.2
	0.9nm,0.1s						
EVIA				S	Sn	13 03 41.7	-0.6
	2.9nm,0.2s,SNR=11						
EVIA	Vianos	4.34	65	P	Pn	13 02 53.3	+0.2
	0.9nm,0.1s						
EVIA				S	Sn	13 03 41.7	-0.6
	2.9nm,0.2s,SNR=11						
ELOB	Lobios	5.00	355	P	Pn	13 03 02.9	+0.8
ELOB				S	Sn	13 03 56.3	-2.2
ELOB	Lobios	5.00	355	P	Pn	13 03 02.9	+0.8
	0.6nm,0.0s,SNR=7.9						
ELOB				S	Sn	13 03 56.3	-2.2
	0.3nm,0.1s,SNR=7.9						
ELOB	Lobios	5.00	355	P	Pn	13 03 02.9	+0.8
	0.6nm,0.0s,SNR=7.9						
ELOB				S	Sn	13 03 56.3	-2.2
	0.3nm,0.1s,SNR=7.9						
ELOB	Lobios	5.00	355	P	Pn	13 03 02.9	+0.8
	0.6nm,0.0s,SNR=7.9						
ELOB				S	Sn	13 03 56.3	-2.2
	0.3nm,0.1s,SNR=7.9						
ETOB	Tobarra	5.04	68	P	Pn	13 03 02.2	-0.5
ETOB				S	Sn	13 03 57.3	-2.3
ETOB	Tobarra	5.04	68	P	Pn	13 03 02.7	0.0
	0.0nm,0.0s,SNR=7.9						
ETOB				S	Sn	13 03 57.3	-2.3
	0.1nm,0.1s,SNR=7.9						
ETOB	Tobarra	5.04	68	P	Pn	13 03 02.7	0.0
	0.0nm,0.0s,SNR=7.9						
ETOB				S	Sn	13 03 57.3	-2.3
	0.1nm,0.1s,SNR=7.9						
ETOB	Tobarra	5.04	68	P	Pn	13 03 02.7	0.0
	SNR=7.9						
ETOB				S	Sn	13 03 57.3	-2.3
	0.1nm,0.1s,SNR=7.9						
ECAL	Calabor	5.09	6	P	Pn	13 03 04.5	+1.2
ECAL				S	Sn	13 03 58.8	-1.9
ECAL	Calabor	5.09	6	P	Pn	13 03 04.5	+1.2
	0.7nm,0.1s,SNR=7.9						
ECAL				S	Sn	13 03 59.4	-1.4
	0.3nm,0.1s,SNR=7.9						
ECAL	Calabor	5.09	6	P	Pn	13 03 04.5	+1.2
	0.7nm,0.1s,SNR=7.9						
ECAL				S	Sn	13 03 59.4	-1.4
	0.3nm,0.1s,SNR=7.9						
ECAL	Calabor	5.09	6	P	Pn	13 03 04.5	+1.1
	0.7nm,0.1s,SNR=7.9						
ECAL				S	Sn	13 03 58.8	-1.9

NEIC 08 13:58:10.4, 16.67N×94.95W, h104km, MD3.9(MEX), After MEX.

MEX 08 13:58:10.4±1.6, 16.67N×94.95W, h104km±31km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.43	231	i P	Pn	13 58 34.0	-2.0
HUIG				i S	Sn	13 58 54.7	-0.8
HUIG	Huatulco	1.43	231	i P	Pn	13 58 34.0	-2.0
HUIG				i S	Sn	13 58 54.7	-0.8
VHO	Vista Hermosa	1.75	283	i P	Pn	13 58 39.4	-0.6
VHO				i S	Sn	13 59 01.5	-0.9
VHO	Vista Hermosa	1.75	283	i P	Pn	13 58 39.4	-0.6
VHO				i S	Sn	13 59 01.5	-0.9
TGIG		1.76	86	i P	Pn	13 58 39.0	-1.0
TGIG				i S	Sn	13 59 00.4	-2.3
PCIG		1.93	120	i P	Pn	13 58 42.1	-0.1
PCIG				i S	Sn	13 59 03.9	-2.6
CCIG	Comitan	2.73	98	i P	Pn	13 58 53.0	+0.3
CCIG				i S	Sn	13 59 24.9	-0.3
CCIG	Comitan	2.73	98	i P	Pn	13 58 53.0	+0.3
CCIG				i S	Sn	13 59 24.9	-0.3
PNIG	Pinotepa	3.06	265	i P	Pn	13 58 54.5	-2.5
PNIG	Pinotepa	3.06	265	i P	Pn	13 58 54.5	-2.5

DJA 08 13:58:45, 10.36S×119.47E, h20km, MLv3.9/6, Sumba region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WSI	Waingapu	1.07	50	P	Pb	13 59 04.3	-0.5
WSI				S	Sb	13 59 18.6	+0.3
BMNI	Bima	1.96	337	P	Pn	13 59 17.8	+0.6
BMNI				S	Sn	13 59 42.9	+1.7
MMRI	Maumere	3.22	58	P	Pn	13 59 35.2	+0.7
MTNI	Mataram	3.68	297	P	Pn	13 59 42.1	+1.3
BKSI	Bulukumba	5.05	7	P	Pn	14 00 00.8	+1.2
	0.1nm28nm,0.5s						
BYJI	Banyuwangi	5.48	292	P	Pn	14 00 05.6	0.0

MEX 08 14:01:45.9±1.3, 14.32N×93.40W, h16km±90km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		1.24	62	i P	Pn	14 02 04.2	-4.4
THIG				i S	Sb	14 02 19.8	-5.0
PCIG		1.39	7	i P	Pn	14 02 07.6	-3.1
PCIG				i S	Sn	14 02 22.8	-5.8
CCIG	Comitan	2.30	32	i P	Pn	14 02 21.6	-1.5
CCIG				i S	Sn	14 02 48.2	-3.0
TGIG		2.46	6	i P	Pn	14 02 23.2	-2.2
TGIG				i S	Sn	14 02 51.5	-3.6

ISK 08 14:37:21.8, 38.69N×39.23E, h12km, MD2.9
ISCJB 08 14:37:22.4±0.8, 38.68N±0.04×39.25E±0.08, h11km±9km, Error ellipse: s-maj=11.8km s-min=5.4km az=23.3
CSEM 08 14:37:22.3±0.1, 38.69N×39.24E, h10km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.4km az=110.0
DDA 08 14:37:22.9, 38.69N×39.19E, h7km±2km, Md2.8

ISC 08 14:37:22.3±0.9, 38.69N±0.04×39.25E±0.09, h16km±8km, n14, σ0.74/24, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTK	Pertek	0.23	28	ePG	Pg	14 37 27.2	-0.2
PTK				eSG	Sg	14 37 31.3	+0.2
PTK	Pertek	0.23	28	ePg	Pg	14 37 27.3	-0.2
PTK				eSg	Sg	14 37 31.3	+0.2
ELZG	Elazig	0.28	228	i P	Pg	14 37 28.3	0.0
ELZG				i S	Sg	14 37 32.3	0.0
SVRC	Sivrice-ELAZID	0.31	172	ePG	Pg	14 37 28.8	0.0
SVRC				eSG	Sg	14 37 33.8	+0.6
SVRC	Sivrice-ELAZID	0.31	172	ePg	Pg	14 37 28.8	0.0
SVRC				eSg	Sg	14 37 33.8	+0.7
MYA	Malataya	0.74	241	ePG	Pg	14 37 36.4	-0.4
MYA	Malataya	0.74	241	ePg	Pg	14 37 36.4	-0.3
MALT	Malatya	0.75	240	ePG	Pg	14 37 36.3	-0.5
MALT	Malatya	0.75	240	ePg	Pg	14 37 36.3	-0.5
KEMA	Kemaliye	0.83	315	i P	Pb	14 37 38.0	-0.3
KEMA				i S	Sb	14 37 50.0	+0.7
KEMA	Kemaliye	0.83	315	i P	Pb	14 37 38.0	-0.3
KEMA				i S	Sb	14 37 50.0	+0.7
AKCD	Akcadag	1.11	250	i P	Pb	14 37 43.6	+0.4
AKCD				i S	Sb	14 37 58.4	+0.9
AKCD	Akcadag	1.11	250	i P	Pb	14 37 43.6	+0.4
AKCD				i S	Sb	14 37 58.4	+1.0
KOZT	Kozan	2.96	247	ePG	Pb	14 38 12.4	-2.2
KOZT				eSG	Pg	14 38 23.0	+4.1

ISCJB 08 15:21:05.7±0.5, 52.07S±0.06×28.1E±0.2, h10km, mb3.9/9, MS3.8/12, Error ellipse: s-maj=18.0km s-min=8.7km az=171.8
IDC 08 15:21:05.6±0.7, 52.01S×28.40E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.9/20, mbtmp4.0/10, MS3.7/11, Ms1 3.7/11, ms1mx3.5/22, Error ellipse: s-maj=33.4km s-min=15.6km az=71.0
NEIC 08 15:21:07.3±0.4, 52.05S×28.44E, h10km, mb4.1/2, Error ellipse: s-maj=20.2km s-min=8.8km az=72.0

ISC 08 15:21:07.1±0.5, 52.10S±0.06×28.4E±0.2, h10km, n35, σ0.88/24, mb3.9/9, MS3.8/12, 2C, South of Africa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SYO	Syowa Base	17.78	167	⇑eP	Pn	15 25 11.0	-3.4
SYO	Syowa Base	17.78	167	⇑iP	Pn	15 25 14.5	+0.1
MAIT	Maitri	20.22	196	eP	P	15 25 43.0	+1.2
MAIT				e		15 25 47.1	
SUR	Sutherland	20.46	341	P	P	15 25 45.2	+0.5
	11nm,1.0s,baz=86,slow=10,SNR=1.9						
SUR				LR	LR	15 31 38.8	
	comp=Z,460nm,19.7s,MS3.8,baz=72,slow=31						
SUR	Sutherland	20.46	341	eP	P	15 25 45.6	+0.9
SUR				LR	LR	15 31 38.8	
MAW	Mawson	22.81	146	P	P	15 26 10.2	+0.5
	19nm,0.9s,mb4.5,baz=290,slow=9.9,SNR=32						
MAW				S	S	15 30 16.8	-1.9
	5.9nm,0.7s,baz=264,slow=15,SNR=10.0						
MAW				LR	LR	15 31 58.4	
	comp=Z,119nm,22.0s,MS3.3,baz=316,slow=28						
MAW	Mawson	22.81	146	eP	P	15 26 09.9	+0.3
	16nm,0.9s,mb4.5						
BOSA	Boshof	23.57	353	P	P	15 26 17.3	-0.6
	1.7nm,0.6s,mb3.6,baz=178,slow=6.5,SNR=5.0						
BOSA				LR	LR	15 33 44.0	
	comp=Z,332nm,20.4s,MS3.8,baz=169,slow=32						
BOSA	Boshof	23.57	353	eP	P	15 26 18.0	+0.1
	1.6nm,0.6s,mb3.6						
BOSA				LR	LR	15 33 44.0	
VNA2	Neumayer--Watz	24.79	207	e	P	15 26 27.2	-1.5
	baz=52,slow=9.9						
VNA2				e		15 26 39.7	
VNA2				e		15 26 42.0	
VNA1	Neumayer--Stat	24.90	208	e	P	15 26 28.9	-0.8
VNA1				e		15 26 41.2	
VNA1				e		15 26 43.6	
VNA3	Neumayer Olymp	25.59	207	e	P	15 26 35.8	-0.2
LBTB	Lobatse	27.12	354	P	P	15 26 49.1	-1.0
	1.4nm,0.6s,mb3.7,baz=194,slow=7.9,SNR=3.6						
LBTB				LR	LR	15 35 51.3	
	comp=Z,240nm,19.8s,MS3.8,baz=180,slow=33						
TSUM	Tsumeb	33.90	342	P	P	15 27 49.1	-1.0
	1.4nm,0.6s,mb4.1,baz=175,slow=9.9,SNR=8.4						
TSUM	Tsumeb	33.90	342	eP	P	15 27 50.3	+0.3
QSPA	South Pole Qui	38.12	180	P	P	15 28 26.6	+1.0
	2.1nm,0.6s,mb4.0,baz=237,slow=3.9,SNR=31						
QSPA	South Pole Qui	38.12	180	eP	P	15 28 26.4	+0.7
	8.4nm,0.8s,mb4.5						
KMBO	Kilima Mbogo	51.33	11	LR	LR	15 49 08.5	
	comp=Z,107nm,21.8s,MS3.8,baz=270,slow=33						
PLCA	Paso Flores	63.97	237	P	P	15 31 41.0	+0.7
	0.3nm,0.4s,mb3.7,baz=148,slow=13,SNR=2.1						
PLCA				LR	LR	15 55 29.1	
	comp=Z,71nm,18.4s,MS3.9,baz=90,slow=32						
PLCA	Paso Flores	63.97	237	P	P	15 31 41.0	+0.7
PLCA				LR	LR	15 55 29.1	
DBIC	Dimbokro	65.05	323	LR	LR	15 52 28.8	
	comp=Z,47nm,19.7s,MS3.7,baz=104,slow=29						
CPUP	Villa Florida	67.13	256	LR	LR	15 54 48.6	
	comp=Z,57nm,19.4s,MS3.8,baz=285,slow=30						
TORD	Torodi Ar. Bea	68.96	332	P	P	15 32 12.6	+0.3
	0.1nm,0.4s,mb3.1,baz=172,slow=6.1,SNR=2.7						
BBTS	Babate	77.00	315	LR	LR	15 59 11.2	
	comp=Z,22nm,21.1s,MS3.5,slow=30						
ASAR	Alice Springs	80.64	116	P	P	15 33 20.9	+0.9
	0.8nm,0.5s,mb3.9,baz=219,slow=4.9,SNR=29						
LPAZ	La Paz	81.24	255	LR	LR	16 04 10.1	
	comp=Z,54nm,20.3s,MS3.9,baz=314,slow=32						
WRA	Warramunga Arr	83.84	115	P	P	15 33 37.0	+0.1
	1.0nm,1.0s,mb3.9,baz=216,slow=4.7,SNR=6.7						
WRA	Warramunga Arr	83.84	115	P	P	15 33 37.0	+0.1
KEST	Kesra	89.03	345	LR	LR	16 11 50.3	
	comp=Z,34nm,20.2s,MS3.8,baz=333,slow=34						
HHC	Hu-ho-hao-te	117.21	58	ePKP	PKPdf	15 39 52.3	+0.5
HHC				PP	PP	15 41 01.3	-1.7
HHC				PKS		15 43 28.1	
HHC				SKS	SKSdf	15 47 03.4	-0.1
HHC				SKKS	SKSac	15 47 54.6	-8.2
HHC				SS	SS	15 57 01.6	-11
HHC				AMB	AMB		
	comp=Z,110nm,7.6s						
HHC				LR	LR		
	comp=N,100nm,19.2s,MS4.8						
HHC				LR	LR		
	comp=E,190nm,20.4s,MS4.8						
HHC				LR	LR		
	comp=Z,130nm,19.2s,MS4.6						
SONM	Songino Array	119.69	49	PKP	PKPdf	15 39 55.8	-0.4
	comp=Z,0.1nm,0.5s,baz=243,slow=2.9,SNR=2.2						
ARCES	ARCESS Array B	121.34	359	PKP	PKPdf	15 39 58.6	-0.2
	comp=Z,0.2nm,0.6s,baz=190,slow=3.7,SNR=3.6						
TXAR	Lajitas Array	138.10	256	PKP	PKPdf	15 40 33.8	+2.0
	comp=Z,0.3nm,0.8s,baz=132,slow=7.4,SNR=2.9						
PDAR	Pinedale Array	150.43	269	PKPbc	PKPbc	15 40 57.9	-0.2
	comp=Z,0.6nm,0.8s,baz=120,slow=3.6,SNR=3.2						
NVAR	Mina Array Bea	153.13	253	PKPbc	PKPbc	15 41 04.8	+0.5
	comp=Z,0.3nm,0.6s,baz=141,slow=1.7,SNR=3.3						

ISCJB 08 15:37:10.4±0.9, 16.08N±0.07×95.27W±0.03, h88km±17km, Error ellipse: s-maj=12.6km s-min=4.3km az=14.7
MEX 08 15:37:12.4±1.0, 16.09N×95.25W, h84km±19km, MD4.1
NEIC 08 15:37:12.3, 16.07N×95.25W, h86km, MD4.1(MEX), After MEX.

ISC 08 15:37:11.6±0.9, 16.09N±0.07×95.26W±0.03, h76km±20km, n17, σ0.79/32, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.88	249	i P	Pn	15 37 28.8	-0.1
HUIG				i S	Sn	15 37 42.3	+0.5
HUIG	Huatulco	0.88	249	i P	Pn	15 37 28.8	-0.1
HUIG				i S	Sn	15 37 42.3	+0.5
OXX	Oaxaca	1.71	305	i P	Pn	15 37 40.0	+0.5
OXX				i S	Sn	15 38 00.7	0.0
OXX	Oaxaca	1.71	305	i P	Pn	15 37 40.0	+0.5
OXX				i S	Sn	15 38 00.7	0.0
VHO	Vista Hermosa	1.71	305	eP	Pn	15 37 40.2	+0.6
VHO				i S	Sn	15 38 00.3	-0.5
VHO	Vista Hermosa	1.71	305	eP	Pn	15 37 40.2	+0.6
VHO				i S	Sn	15 38 00.3	-0.5
PCIG		2.00	101	eP	Pn	15 37 43.5	+0.1
PCIG				i S	Sn	15 38 06.8	-0.9
TGIG		2.16	71	eP	Pn	15 37 44.6	-0.9
TGIG				i S	Sn	15 38 11.8	+0.3
PNIG	Pinotepa	2.77	277	i P	Pn	15 37 53.5	-0.2
PNIG				i S	Sn	15 38 25.6	-0.6
PNIG	Pinotepa	2.77	277	i P	Pn	15 37 53.5	-0.2
PNIG				i S	Sn	15 38 25.6	-0.6
UTMO	Huajuapan	2.98	306	eP	Pn	15 37 57.9	+1.2

UTMO				*i* S	**Sn**	**15 38 30.0**	**-1.4**
CCIG	**Comitan**	**3.01**	**86**	*i* P	**Pn**	**15 37 56.0**	**-1.0**
CCIG				*i* S	**Sn**	**15 38 33.4**	**+1.5**
CCIG	**Comitan**	**3.01**	**86**	*i* P	**Pn**	**15 37 56.0**	**-1.0**
CCIG				*i* S	**Sn**	**15 38 33.4**	**+1.5**
TPIG	**Tehuac#an**	**3.06**	**319**	*i* P	**Pn**	**15 37 58.8**	**+1.1**
TPIG				*i* S	**Sn**	**15 38 33.0**	**-0.3**
THIG		**3.12**	**112**	*i* P	**Pn**	**15 38 02.2**	**+3.7**
THIG				*i* S	**Sn**	**15 38 34.1**	**-0.6**
ACX	**Acapulco**	**4.48**	**281**	*i* P	**Pn**	**15 38 17.3**	**+0.3**
ACX	**Acapulco**	**4.48**	**281**	*i* P	**Pn**	**15 38 17.3**	**+0.3**

*ISCJB **08** 15:37:54.3±0.6, 52°.16S±0°.08×27°.8E±0°.2, h10km, mb3.7/6, MS3.1/2, Error ellipse: s-maj=20.7km s-min=10.8km az=166.2*
*IDC **08** 15:37:54.3±1.1, 52°.07S×28°.21E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/18, mbtmp3.8/7, MS3.2/2, Ms1 3.1/2, ms1mx2.9/17, Error ellipse: s-maj=41.7km s-min=21.2km az=64.0*
*NEIC **08** 15:37:56.2±0.7, 52°.13S×28°.26E, h10km, mb3.9/1, Error ellipse: s-maj=28.2km s-min=11.4km az=64.0*
ISC 08 15:37:55.6±0.6, 52°.22S±0°.08×28°.0E±0°.2, h10km, n14, σ0s87/14, mb3.7/6, MS3.1/2, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.52**	**342**	P	**P**	**15 42 32.4**	**-1.4**
	9.0nm,0.9s,baz=179,slow=4.9,SNR=3.0						
SUR	**Sutherland**	**20.52**	**342**	P	**P**	**15 42 35.3**	**+1.5**
MAW	**Mawson**	**22.82**	**146**	P	**P**	**15 42 59.0**	**+0.8**
	2.2nm,0.9s,mb3.6,baz=295,slow=15,SNR=4.9						
MAW				S	**S**	**15 47 06.2**	**-1.1**
	1.1nm,0.5s,baz=233,slow=20,SNR=4.8						
BOSA	**Boshof**	**23.67**	**354**	P	**P**	**15 43 06.3**	**-0.9**
	2.0nm,0.5s,mb3.8,baz=174,slow=13,SNR=3.0						
BOSA				LR	LR	15 51 10.1	
	comp=Z,42nm,19.9s,MS2.9,baz=348,slow=34						
BOSA	**Boshof**	**23.67**	**354**	*e*P	**P**	**15 43 06.9**	**-0.4**
	2.2nm,0.6s,mb3.8						
BOSA				LR	LR	15 51 10.1	
VNA2	**Neumayer--Watz**	**24.59**	**207**	*e*	**P**	**15 43 14.4**	**-0.9**
	baz=47,slow=9.0						
VNA1	**Neumayer--Stat**	**24.70**	**208**	*e*	**P**	**15 43 15.8**	**-0.5**
LBTB	**Lobatse**	**27.23**	**355**	P	**P**	**15 43 38.7**	**-0.9**
	1.1nm,0.3s,mb3.8,baz=190,slow=12,SNR=2.3						
LBTB	**Lobatse**	**27.23**	**355**	P	**P**	**15 43 38.7**	**-0.9**
TSUM	**Tsumeb**	**33.96**	**342**	*e*P	**P**	**15 44 39.6**	**+0.7**
QSPA	**South Pole Qui**	**38.00**	**180**	LR	LR	15 59 49.2	
	comp=Z,51nm,19.9s,MS3.3,slow=34						
CPUP	**Villa Florida**	**66.90**	**257**	P	**P**	**15 48 49.1**	**+1.3**
	0.9nm,0.5s,mb4.0,baz=124,slow=3.6,SNR=3.7						
ASAR	**Alice Springs**	**80.76**	**117**	P	**P**	**15 50 09.4**	**+0.2**
	0.3nm,0.6s,mb3.4,baz=213,slow=5.0,SNR=5.1						
WRA	**Warramunga Arr**	**83.98**	**115**	P	**P**	**15 50 26.5**	**+0.5**
	0.4nm,0.9s,mb3.5,baz=217,slow=3.8,SNR=3.7						

*TEH **08** 15:51:44.3, 32°.56N×47°.22E, h11km*
*CSEM **08** 15:51:45.7, 32°.78N×47°.40E, h14km, ML3.0, After THR*
ISC 08 15:51:45.3±1.3, 32°.73N±0°.06×47°.40E±0°.06, h3km±9km, n12, σ0s82/17, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.34**	**117**	*e*Pg	**Pg**	**15 52 10.7**	**-0.3**
SHGR				*e*Sg	**Sg**	**15 52 29.1**	**+0.7**
IKOM	**Komasi**	**1.44**	**4**	*e*Pn	**Pn**	**15 52 12.8**	**+0.5**
IKOM				*e*		15 52 18.7	
	comp=Z,4μm,0.1s						
IGHG	**Ghaleghazi**	**1.74**	**337**	*e*Pn	**Pn**	**15 52 16.2**	**-0.2**
IGHG				*e*Sg	**Sg**	**15 52 42.8**	**+1.6**
IGHG				*e*		15 52 46.5	
	comp=Z,5μm,0.3s						
IVIS	**Veis**	**1.85**	**346**	*e*Pn	**Pn**	**15 52 18.3**	**+0.4**
IDHR	**Dehrash**	**2.14**	**337**	*e*Pn	**Pn**	**15 52 21.1**	**-0.8**
IDHR				*e*Sg	**Sg**	**15 52 53.6**	**-0.4**
IDHR				*e*		15 52 59.2	
	comp=Z,3μm,0.2s						
SNGE	**Sanandaj**	**2.35**	**359**	*e*Pn	**Pn**	**15 52 25.3**	**+0.4**
BHD	**Baghdad**	**2.59**	**283**	*ex*	**Pn**	**15 52 27.0**	**-1.2**
BHD				*ex*	**Sn**	**15 53 00.0**	**-0.2**
ASAO	**Ashtian**	**2.84**	**50**	*e*Pn	**Pn**	**15 52 32.6**	**+1.0**
ASAO				*e*Sg	**Sg**	**15 53 13.6**	**-3.1**
IKLH	**Kolahrood**	**3.56**	**79**	*e*Pn	**Pn**	**15 52 41.9**	**+0.5**
IKLH				*e*		15 52 43.5	
	comp=Z,345nm,0.1s						
GHVR	**GHOM**	**3.69**	**61**	*e*Pn	**Pn**	**15 52 43.6**	**+0.4**
IGAR	**Gharneh**	**3.93**	**94**	*e*Pn	**Pn**	**15 52 46.2**	**-0.4**
IGAR				*e*		15 53 34.4	
	comp=Z,244nm,0.1s						
IZEF	**Zefreh**	**4.15**	**86**	*e*Pn	**Pn**	**15 52 49.5**	**-0.1**
IZEF				*e*		15 52 51.7	
	comp=Z,136nm,0.1s						

*ISCJB **08** 15:53:59.8±0.4, 42°.66N±0°.02×18°.78E±0°.03, h11km±3km, Error ellipse: s-maj=3.7km s-min=3.1km az=150.5*
*PDG **08** 15:53:59.7±0.1, 42°.66N×18°.80E, h18km, MD2.5/5, ML2.4/8, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*CSEM **08** 15:54:00.0±0.2, 42°.65N×18°.77E, h12km, ML2.6, Error ellipse: s-maj=3.4km s-min=3.2km az=70.0*
*TIR **08** 15:54:00.2, 42°.81N×18°.98E, h7km, ML2.6*
*BEO **08** 15:54:00.0±1.0, 42°.62N×18°.67E, h16km±4km, ML2.5/7*
ISC 08 15:54:00.4±0.4, 42°.66N±0°.02×18°.77E±0°.03, h11km±3km, n37, σ0s96/70, 8C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKY	**Niksic**	**0.23**	**47**	⇑*i*Pg	**Pg**	**15 54 05.0**	**-0.2**
NKY				*e*Sg	**Sg**	**15 54 08.9**	**+0.4**
NKY	**Niksic**	**0.23**	**47**	*i* PG	**Pg**	**15 54 05.6**	**+0.3**
NKY				*i* SG	**Sg**	**15 54 08.8**	**+0.3**
NKY	**Niksic**	**0.23**	**47**	*i* Pg	**Pg**	**15 54 05.6**	**+0.4**
NKY				*i* Sg	**Sg**	**15 54 08.8**	**+0.3**
HCY	**Herceg Novi**	**0.29**	**224**	⇓*i*Pg	**Pg**	**15 54 06.1**	**-0.1**
HCY				*e*Sg	**Sg**	**15 54 11.6**	**+1.5**
HCY	**Herceg Novi**	**0.29**	**224**	*i* PG	**Pg**	**15 54 06.1**	**-0.1**
HCY				*i* SG	**Sg**	**15 54 11.6**	**+1.5**
HCY	**Herceg Novi**	**0.29**	**224**	*i* Pg	**Pg**	**15 54 06.1**	**-0.1**
HCY				*i* Sg	**Sg**	**15 54 11.6**	**+1.5**
BRY	**Bratogost**	**0.29**	**326**	*e*Pg	**Pg**	**15 54 06.2**	**-0.1**
BRY				*e*Sg	**Sg**	**15 54 11.4**	**+1.0**
BUM	**Brajici-Budva**	**0.37**	**164**	⇓*i*Pg	**Pg**	**15 54 07.2**	**-0.5**
BUM				*e*Sg	**Sg**	**15 54 13.2**	**+0.6**
BUM	**Brajici-Budva**	**0.37**	**164**	⇓*i*Pg	**Pg**	**15 54 07.2**	**-0.5**
BUM				*e*Sg	**Sg**	**15 54 13.2**	**+0.6**
PDG	**Podgorica**	**0.43**	**121**	⇓*i*Pg	**Pg**	**15 54 07.7**	**-1.1**
PDG				*e*Sg	**Sg**	**15 54 14.5**	**-0.1**
TTG	**Podgorica**	**0.43**	**121**	⇓*i*Pg	**Pg**	**15 54 07.7**	**-1.1**
TTG				*e*Sg	**Sg**	**15 54 14.5**	**-0.1**
UPM	**Unac-Piva**	**0.56**	**11**	⇑*i*Pg	**Pg**	**15 54 10.1**	**-1.2**
UPM				*e*Sg	**Sg**	**15 54 19.1**	**+0.5**
ULC	**Ulcinj**	**0.78**	**152**	⇑*i*Pg	**Pg**	**15 54 14.2**	**-1.2**
ULC				*e*Sg	**Sg**	**15 54 26.6**	**+1.0**
STON	**Ston**	**0.81**	**286**	*i* Pg	**Pg**	**15 54 14.6**	**-1.5**
STON				Sg	**Sg**	**15 54 27.5**	**+0.8**
STON	**Ston**	**0.81**	**286**	*i* Pg	**Pg**	**15 54 14.6**	**-1.5**
STON				Sg	**Sg**	**15 54 27.4**	**+0.7**
PLE	**Pljevlja**	**0.82**	**34**	⇓*i*Pg	**Pg**	**15 54 14.8**	**-1.4**
PLE				*e*Sg	**Sg**	**15 54 27.7**	**+0.9**
BEY	**Berane**	**0.86**	**75**	⇑*i*Pg	**Pg**	**15 54 15.6**	**-1.4**
BEY				*e*Sg	**Sg**	**15 54 28.7**	**+0.4**
IVA	**Berane**	**0.86**	**75**	⇑*i*Pg	**Pg**	**15 54 15.6**	**-1.4**
IVA				*e*Sg	**Sg**	**15 54 28.7**	**+0.4**
PVY	**Plav**	**0.89**	**93**	⇑*i*Pg	**Pg**	**15 54 16.4**	**-1.2**
PVY				*e*Sg	**Sg**	**15 54 29.9**	**+0.6**
PVY	**Plav**	**0.89**	**93**	⇑*i*Pg	**Pg**	**15 54 16.4**	**-1.2**
PVY				*e*Sg	**Sg**	**15 54 29.9**	**+0.6**
BCI	**Bajram Curri**	**1.00**	**106**	*i* PG	**Pg**	**15 54 18.6**	**-1.1**
BCI				*i* SG	**Sg**	**15 54 31.8**	**-1.0**
BCI	**Bajram Curri**	**1.00**	**106**	*i* Pg	**Pg**	**15 54 18.6**	**-1.1**
BCI				*i* Sg	**Sg**	**15 54 31.8**	**-1.0**
PUK	**Puka**	**1.04**	**126**	*i* PG	**Pg**	**15 54 20.1**	**-0.3**
PUK				*i* SG	**Sg**	**15 54 35.6**	**+1.8**
PUK	**Puka**	**1.04**	**126**	*i* Pg	**Pg**	**15 54 20.1**	**-0.2**
PUK				*i* Sg	**Sg**	**15 54 35.6**	**+1.8**
SJES	**Sjenica**	**1.07**	**55**	⇓*i*Pg	**Pg**	**15 54 20.5**	**-0.6**
SJES				*e*Sg	**Sg**	**15 54 36.4**	**+1.4**
BBLS	**Lazići**	**1.30**	**21**	⇓*i*Pg	**Pg**	**15 54 24.6**	**-0.7**
BBLS				*e*Sg	**Sg**	**15 54 43.4**	**+1.2**
BBLS	**Lazići**	**1.30**	**21**	⇓*i*Pg	**Pg**	**15 54 24.6**	**-0.7**
BBLS				*e*Sg	**Sg**	**15 54 43.4**	**+1.2**
DIVS	**Divibare**	**1.70**	**31**	⇓*i*Pn	**Pn**	**15 54 30.4**	**+0.4**
DIVS				*e*Sn	**Sn**	**15 54 52.2**	**+0.5**
DIVS	**Divibare**	**1.70**	**31**	⇓*i*Pn	**Pn**	**15 54 30.4**	**+0.4**
DIVS				*e*Sn	**Sn**	**15 54 52.2**	**+0.5**
TRUS	**Trudelj**	**1.97**	**37**	*e*Pn	**Pn**	**15 54 33.5**	**-0.2**
TRUS	**Trudelj**	**1.97**	**37**	*e*Pn	**Pn**	**15 54 33.5**	**-0.2**
SKO	**Skopje**	**2.10**	**108**	*e*Sg	**Sg**	**15 55 07.5**	**-0.3**
SKO	**Skopje**	**2.10**	**108**	*e*Sg	**Sg**	**15 55 07.5**	**-0.3**
BARS	**Barje**	**2.25**	**85**	⇓*e*Pn	**Pn**	**15 54 37.9**	**+0.3**
BARS				*e*Sn	**Sn**	**15 55 06.7**	**+1.3**
ZAPS	**Zavoj**	**2.91**	**76**	*e*Pn	**Pn**	**15 54 47.4**	**+0.8**
ZAPS				*e*Sn	**Sn**	**15 55 22.4**	**+0.9**
BZS	**Buzias**	**3.60**	**34**	*e*Pn	**Pn**	**15 54 55.5**	**-0.6**
BZS				*e*Sn	**Sn**	**15 55 36.5**	**-2.2**
BZS	**Buzias**	**3.60**	**34**	*e*Pn	**Pn**	**15 54 55.5**	**-0.6**
BZS				*e*Sn	**Sn**	**15 55 36.5**	**-2.2**

*IDC **08** 16:04:19.0±0.7, 51°.70N×176°.59W, h0km, mb3.8/10, mb1 4.2/11, mb1mx3.9/24, mbtmp3.9/11, ML3.7/1, Error ellipse: s-maj=31.7km s-min=15.7km az=163.0*
*ISCJB **08** 16:04:26.5±0.8, 51°.8N±0°.1×176°.49W±0°.07, h67km±7km, mb3.7/12, Error ellipse: s-maj=22.7km s-min=6.1km az=167.6*
*NEIC **08** 16:04:27.4±0.9, 51°.76N×176°.48W, h62km±8km, mb3.7/3, ML3.5(AEIC), Error ellipse: s-maj=19.2km s-min=6.8km az=167.0*
ISC 08 16:04:27.7±0.8, 51°.8N±0°.1×176°.47W±0°.08, h63km±7km, n25, σ1s00/24, mb3.8/12, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.47**	**73**	P	**Pn**	**16 04 50.3**	**-1.7**
ATKA				S	**Sn**	**16 05 10.3**	**+0.1**
AMKA	**Amchitka**	**2.67**	**263**	*e*P	**Pn**	**16 05 07.3**	**-0.9**
AMKA				*e*S	**Sn**	**16 05 40.3**	**+0.9**
NIKO	**Nikolski**	**4.81**	**73**	*e*P	**Pn**	**16 05 38.7**	**+1.2**
SMY	**Shemya**	**5.87**	**283**	*e*P	**Pn**	**16 05 52.6**	**+0.7**
UNV	**Unalaska Valle**	**6.39**	**67**	*e*Pn	**Pn**	**16 06 01.5**	**+2.5**
	23nm,0.7s						
OHAK	**Old Harbor**	**14.49**	**59**	*e*P	**Pn**	**16 07 46.8**	**-2.2**
	30nm,1.2s						
KDAK	**Kodiak Island**	**14.98**	**57**	Pn	**Pn**	**16 07 53.5**	**-1.9**
	0.3nm,0.3s,baz=183,slow=18,SNR=5.3						
PETK	**Petropavlovsk-**	**15.78**	**285**	Pn	**Pn**	**16 08 05.1**	**-0.5**
	0.0nm,0.3s,baz=103,slow=14,SNR=2.5						
BPAW	**Bear Paw Mtn.**	**18.14**	**37**	*e*P	**Pn**	**16 08 35.9**	**+1.2**
	3.9nm,0.7s						
ILAR	**Eielson Array**	**20.02**	**38**	P	**P**	**16 08 54.1**	**-0.7**
	1.9nm,0.6s,baz=240,slow=8,SNR=16						
EGAK	**Eagle**	**22.29**	**41**	*e*P	**P**	**16 09 19.6**	**+0.4**
	2.9nm,0.6s,mb3.9						
KSRS	**Korea Array**	**41.08**	**272**	P	**P**	**16 12 04.4**	**-0.5**
	1.8nm,0.9s,mb3.7,baz=50,slow=9.7,SNR=5.7						
MCMT	**McKenzie Canyo**	**41.67**	**74**	*e*P	**P**	**16 12 10.2**	**+0.6**
	0.8nm,0.6s,mb3.5						
NVAR	**Mina Array Bea**	**42.06**	**85**	P	**P**	**16 12 13.7**	**+0.8**
	0.6nm,0.7s,mb3.3,baz=288,slow=7.6,SNR=4.3						
PDAR	**Pinedale Array**	**44.80**	**74**	P	**P**	**16 12 35.6**	**+0.7**
	2.5nm,0.8s,mb4.1,baz=315,slow=3.9,SNR=22						
TXAR	**Lajitas Array**	**57.16**	**83**	P	**P**	**16 14 07.8**	**0.0**
	1.4nm,0.8s,mb4.0,baz=294,slow=5.5,SNR=16						
MKAR	**Makanchi Array**	**60.91**	**310**	P	**P**	**16 14 32.8**	**-0.6**
	0.3nm,0.7s,mb3.5,baz=50,slow=5.8,SNR=4.0						
CMAR	**Chiang Mai Arr**	**72.41**	**278**	P	**P**	**16 15 47.4**	**+0.4**
	1.2nm,0.9s,mb3.8,baz=25,slow=7.2,SNR=4.9						
WRA	**Warramunga Arr**	**83.33**	**226**	P	**P**	**16 16 46.8**	**-0.7**
	0.5nm,0.5s,mb3.8,baz=32,slow=5.9,SNR=9.9						
BRTR	**Keskin Array B**	**85.16**	**337**	P	**P**	**16 16 57.1**	**+0.5**
	0.3nm,0.6s,mb3.6,baz=5.2,slow=1.6,SNR=2.8						
ASAR	**Alice Springs**	**86.78**	**224**	P	**P**	**16 17 04.0**	**-0.6**
	0.9nm,0.7s,mb4.1,baz=30,slow=4.2,SNR=19						
STKA	**Stephens Creek**	**91.07**	**215**	P	**P**	**16 17 24.9**	**+0.2**
	1.0nm,0.8s,mb4.2,baz=320,slow=16,SNR=3.8						
MAW	**Mawson**	**147.70**	**218**	PKPbc	PKPbc	16 24 02.6	-0.9
	1.4nm,0.8s,baz=22,slow=5.4,SNR=3.6						
BOSA	**Boshof**	**151.73**	**317**	PKPbc	PKPbc	16 24 14.8	+0.2
	4.8nm,0.6s,baz=1.0,slow=2.8,SNR=9.6						
BOSA	**Boshof**	**151.73**	**317**	PKPbc	PKPbc	16 24 14.8	+0.2

IDC 08 16:04:39.5±2.9, 13°.66S×167°.41E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/17, mbtmp3.5/3, Error ellipse: s-maj=117.0km s-min=47.2km az=140.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.80**	**228**	P	P	16 10 48.4	+0.2
	0.6nm,0.4s,baz=58,slow=9.5,SNR=5.6						
WRA	**Warramunga Arr**	**32.23**	**254**	P	P	16 11 10.0	+0.2
	0.2nm,0.4s,baz=86,slow=9.4,SNR=6.6						
ASAR	**Alice Springs**	**33.19**	**248**	P	P	16 11 17.9	-0.2
	0.3nm,0.6s,baz=77,slow=9.5,SNR=17						
ARCES	**ARCESS Array B**	**119.25**	**346**	PKP	PKPdf	16 23 29.8	-0.2
	1.1nm,1.1s,baz=87,slow=2.0,SNR=4.8						

*ISCJB **08** 16:20:14.9±0.6, 37°.48N±0°.03×35°.12E±0°.04, h10km, Error ellipse: s-maj=5.2km s-min=4.7km az=34.4*
*CSEM **08** 16:20:14.7±0.1, 37°.49N×35°.09E, h2km, MD2.7, Error ellipse: s-maj=2.8km s-min=2.2km az=117.0*
*DDA **08** 16:20:14.8, 37°.51N×35°.07E, h7km±4km, Md2.9*
*ISK **08** 16:20:15.0, 37°.28N×35°.23E, h19km, MD2.7*
ISC 08 16:20:15.2±0.6, 37°.50N±0°.04×35°.11E±0°.05, h10km, n15, σ0s93/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.24**	**190**	*e*PG	**Pg**	**16 20 19.2**	**-0.9**
KARA				*e*SG	**Sg**	**16 20 22.9**	**-0.5**
KARA	**Karaisali**	**0.24**	**190**	*e*Pg	**Pg**	**16 20 19.2**	**-0.9**
KARA				*e*Sg	**Sg**	**16 20 22.9**	**-0.5**
GULE	**Gulek**	**0.34**	**231**	*i* P	**Pg**	**16 20 21.2**	**-0.7**
GULE				*i* S	**Sg**	**16 20 27.5**	**+1.0**
GULE	**Gulek**	**0.34**	**231**	*i* P	**Pg**	**16 20 21.2**	**-0.7**
GULE				*i* S	**Sg**	**16 20 27.5**	**+1.1**
KOZT	**Kozan**	**0.57**	**91**	*e*PG	**Pg**	**16 20 25.8**	**-0.6**
KOZT				*e*SG	**Sg**	**16 20 33.6**	**-0.2**
KOZT	**Kozan**	**0.57**	**91**	*e*Pg	**Pg**	**16 20 25.8**	**-0.5**
KOZT				*e*Sg	**Sg**	**16 20 33.6**	**-0.2**
MERS	**Mersin**	**0.78**	**217**	*e*PG	**Pg**	**16 20 29.1**	**-1.2**
MERS	**Mersin**	**0.78**	**217**	*e*Pg	**Pg**	**16 20 29.1**	**-1.2**
AVNT	**Avonos**	**1.30**	**351**	*i* P	**Pn**	**16 20 39.5**	**+0.1**
AVNT				*i* S	**Sb**	**16 20 56.9**	**+0.5**
AVNT	**Avonos**	**1.30**	**351**	*i* P	**Pn**	**16 20 39.5**	**+0.1**
AVNT				*i* S	**Sb**	**16 20 56.9**	**+0.5**
YAYL	**Yayladag**	**1.67**	**151**	*i* P	**Pg**	**16 20 47.3**	**+0.2**
YAYL				*i* S	**Sg**	**16 21 11.3**	**+2.5**
YAYL	**Yayladag**	**1.67**	**151**	*i* P	**Pg**	**16 20 47.3**	**+0.1**
YAYL				*i* S	**Sg**	**16 21 11.3**	**+2.6**
SARI	**SarD1z-Kayseri**	**1.72**	**46**	*e*PN	**Pn**	**16 20 41.1**	**-4.2**
SARI				*e*SN	**Sn**	**16 21 00.4**	**-6.9**
HDMB	**Hadim**	**2.16**	**257**	*e*PN	**Pn**	**16 20 52.0**	**+0.7**
HDMB	**Hadim**	**2.16**	**257**	*e*Pn	**Pn**	**16 20 52.0**	**+0.8**

*NOU **08** 17:00:28.8±1.2, 14°.77S×167°.31E, h30km, MD3.8, ML4.0*
*IDC **08** 17:00:31.4±3.7, 15°.43S×167°.77E, h98km±24km, mb4.0/9, mb1 4.2/10, mb1mx3.9/20, mbtmp4.1/10, Error ellipse: s-maj=37.7km s-min=21.9km az=124.0*
*ISCJB **08** 17:00:34.8±1.4, 15°.37S±0°.06×167°.6E±0°.1, h138km±10km, mb4.4/15, Error ellipse: s-maj=18.3km s-min=7.5km az=159.5*
*NEIC **08** 17:00:36.3±5.4, 15°.34S×167°.60E, h136km±38km, mb4.5/3, Error ellipse: s-maj=51.4km s-min=17.0km az=117.0*
ISC 08 17:00:35.4±1.3, 15°.34S±0°.06×167°.6E±0°.1, h131km±9km, n51, σ0s99/41, mb4.4/15, 2C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.79**	**189**	*e*P	**Pn**	**17 02 11.9**	**-0.7**
DZM				*e*S	**Sn**	**17 03 28.3**	**-0.3**
DZM				AMP		17 03 32.7	
	comp=Z,1μm,1.3s						
BAYA	**Yate Dam**	**6.82**	**186**	*e*S	**Sn**	**17 03 30.5**	**+1.2**
NOUC	**Port Laguerre**	**6.85**	**190**	*e*P	**Pn**	**17 02 12.9**	**-0.4**
NOUC				*e*S	**Sn**	**17 03 30.2**	**+0.3**
NOUC				AMP		17 03 37.0	
	comp=Z,36nm,1.7s						
LASL	**Noumea**	**6.94**	**188**	*e*P	**Pn**	**17 02 14.0**	**-0.5**
NORM	**Noumea**	**6.94**	**189**	*e*P	**Pn**	**17 02 14.8**	**+0.1**
NORM				*e*S	**Sn**	**17 03 31.9**	**-0.3**
PLUM	**Mont Dore**	**6.96**	**188**	*e*P	**Pn**	**17 02 15.0**	**0.0**
PLUM				*e*S	**Sn**	**17 03 33.7**	**+0.9**
HNR	**Honiara**	**9.53**	**307**	P	**Pn**	**17 02 50.0**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=146,slow=18,SNR=1.9						
HNR				S	**Sn**	**17 04 34.2**	**-0.8**
	comp=Z,1.7nm,0.3s,baz=358,slow=1.5,SNR=2.0						
EIDS	**Eidsvold**	**18.44**	**235**	⇑*i*P	**P**	**17 04 42.5**	**+1.6**
EIDS	**Eidsvold**	**18.44**	**235**	*e*P	**P**	**17 04 42.6**	**+1.7**
	comp=Z,26nm,0.8s						
CTA	**Charters Tower**	**20.91**	**254**	P	**P**	**17 05 08.6**	**+1.0**
	comp=Z,6.3nm,0.8s,baz=114,slow=10,SNR=8.4						
CTA	**Charters Tower**	**20.91**	**254**	P	**P**	**17 05 08.6**	**+1.0**
CTAO	**Charters Tower**	**20.91**	**254**	*e*P	**P**	**17 05 06.3**	**-1.3**
	comp=Z,9.1nm,0.9s						
MTSU	**Mount Surprise**	**22.50**	**260**	*e*P	**P**	**17 05 24.7**	**+0.2**
	comp=Z,104nm,1.8s,mb5.0						
QLP	**Quilpie**	**24.51**	**239**	*e*P	**P**	**17 05 43.1**	**+0.4**
STKA	**Stephens Creek**	**28.88**	**231**	P	**P**	**17 06 22.5**	**+0.7**
	comp=Z,4.2nm,0.4s,mb4.5,baz=48,slow=9.0,SNR=42						
STKA	**Stephens Creek**	**28.88**	**231**	*e*P	**P**	**17 06 22.4**	**+0.5**
	comp=Z,3.1nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**28.88**	**231**	P	**P**	**17 06 22.5**	**+0.7**
WRA	**Warramunga Arr**	**32.03**	**257**	P	**P**	**17 06 48.2**	**-1.5**
	comp=Z,3.6nm,0.6s,mb4.3,baz=86,slow=8.9,SNR=40						
WRA				ScP	ScP	17 13 12.3	+4.2
	comp=Z,0.3nm,1.0s,baz=81,slow=3.8,SNR=5.4						
ASAR	**Alice Springs**	**32.80**	**250**	P	**P**	**17 06 55.6**	**-0.8**
	comp=Z,10nm,0.4s,mb4.9,baz=78,slow=9.0,SNR=545						
ASAR				ScP	ScP	17 13 13.8	+3.1
	comp=Z,1.2nm,0.9s,baz=83,slow=3.1,SNR=7.4						
BBOO	**Buckleboo**	**33.50**	**233**	⇓*i*P	**P**	**17 07 02.9**	**+0.5**
	comp=Z,13nm,0.5s,mb4.9						
KNA	**Kununurra**	**37.42**	**264**	*e*P	**P**	**17 07 35.4**	**-0.7**
	comp=Z,16nm,0.8s,mb4.7						
FORT	**Forrest**	**39.30**	**240**	⇑*i*P	**P**	**17 07 51.9**	**+0.2**
	comp=Z,32nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**40.26**	**260**	P	**P**	**17 07 59.5**	**-0.3**
	comp=Z,9.7nm,0.4s,mb4.7,baz=90,slow=7.8,SNR=126						
FITZ	**Fitzroy Crossi**	**40.26**	**260**	*e*P	**P**	**17 07 59.2**	**-0.6**
	comp=Z,22nm,0.5s,mb5.0						
MBWA	**Marble Bar**	**45.73**	**255**	*e*P	**P**	**17 08 43.8**	**-0.1**
MBWA	**Marble Bar**	**45.73**	**255**	*e*P	**P**	**17 08 43.8**	**0.0**
	comp=Z,7.7nm,0.6s,mb4.5						
MEEK	**Meekatharra**	**46.88**	**248**	*e*P	**P**	**17 08 52.6**	**-0.2**
KLBR	**Kellerberrin**	**48.12**	**241**	*e*P	**P**	**17 09 01.5**	**-0.8**
	comp=Z,6.7nm,0.7s,mb4.4						
MORW	**Morawa**	**49.33**	**245**	*e*P	**P**	**17 09 10.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**75.52**	**294**	P	**P**	**17 12 07.2**	**+1.2**
	comp=Z,0.4nm,0.3s,mb3.5,baz=122,slow=3.9,SNR=3.8						
HHC	**Hu-ho-hao-te**	**76.28**	**320**	*e*P	**P**	**17 12 11.8**	**+2.1**
HHC				PcP	PcP	17 12 23.4	+2.3
HHC				pP	pP	17 12 46.6	+4.2
HHC				sP	sP	17 13 02.1	+5.8
HHC				PP	PP	17 15 06.8	+3.7
HHC				S	S	17 21 44.5	+0.8
HHC				SKS		17 22 04.0	
HHC				sS	sS	17 22 44.1	+4.1
HHC				SS	SS	17 26 44.0	+3.1
HHC				pmax	pmax		
	comp=Z,

mb1 4.1/10, mb1mx3.9/20, mbtmp4.0/10, ML4.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.8/24, Error ellipse: s-maj=36.2km s-min=11.6km az=53.0
ISCJB ***08*** *17:36:20.2±0.5, 8°.20S±0°.04×118°.53E±0°.03, h34km±6km, mb4.0/10, Error ellipse: s-maj=6.2km s-min=4.2km az=13.6*
DJA ***08*** *17:36:20, 8°.25S×118°.47E, h19km, MLv4.4/14*
NEIC ***08*** *17:36:20.9±0.5, 8°.22S×118°.55E, h25km, mb4.1/1, Error ellipse: s-maj=16.0km s-min=7.4km az=69.0*
ISC 08 17:36:21.2±0.7, 8°.24S±0°.04×118°.53E±0°.03, h28km±6km, n39, σ1§15/53, mb4.0/10, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.34**	**152**	P	**Pb**	**17 36 28.6**	**-0.5**
BMNI				S	**Sb**	**17 36 35.4**	**+0.9**
WSI	**Waingapu**	**2.25**	**129**	P	**Pn**	**17 36 58.1**	**+1.5**
WSI				S	**Sn**	**17 37 39.3**	**+16**
MTNI	**Mataram**	**2.37**	**260**	P	**Pn**	**17 36 58.4**	**+0.2**
MTNI				S	**Sn**	**17 37 26.2**	**-0.1**
KHKI	**Kahang-Kahang**	**2.89**	**267**	P	**Pn**	**17 37 04.5**	**-1.0**
KHKI				S	**Sn**	**17 37 41.4**	**+2.0**
SRBI	**Singaraja**	**3.29**	**272**	P	**Pn**	**17 37 10.8**	**-0.1**
SRBI				S	**Sn**	**17 37 48.4**	**-0.7**
BKSI	**Bulukumba**	**3.30**	**29**	P	**Pn**	**17 37 11.3**	**+0.2**
BKSI				S	**Sn**	**17 37 46.2**	**-3.2**
IGBI	**Denpasar**	**3.40**	**260**	P	**Pn**	**17 37 12.4**	**0.0**
IGBI				S	**Sn**	**17 37 53.5**	**+1.7**
KAPI	**Kappang**	**3.43**	**21**	*e*P	**Pn**	**17 37 11.8**	**-1.0**
MMRI	**Maumere**	**3.69**	**96**	P	**Pn**	**17 37 17.3**	**+0.9**
MMRI				S	**Sn**	**17 38 02.2**	**+3.2**
NBBI	**Negara**	**3.87**	**268**	P	**Pn**	**17 37 16.5**	**-2.4**
NBBI				S	**Sn**	**17 38 03.5**	**0.0**
KMMI	**Kalianget**	**4.67**	**284**	P	**Pn**	**17 37 28.9**	**-1.1**
GMJI	**Gumukmas**	**5.03**	**269**	P	**Pn**	**17 37 34.4**	**-0.5**
TTSI	**Tana Toraja**	**5.32**	**14**	P	**Pn**	**17 37 39.6**	**+0.8**
	0.2nm872nm33nm,0.9s						
KBKI	**Kotabaru**	**5.44**	**334**	P	**Pn**	**17 37 41.1**	**+0.6**
	0.3nm32nm,0.8s						
PWJI	**Pagerwojo**	**6.66**	**271**	P	**Pn**	**17 37 57.4**	**+0.1**
	0.2nm32nm,0.8s						
SJI	**Sawahan**	**6.72**	**274**	P	**Pn**	**17 37 56.2**	**-1.8**
FITZ	**Fitzroy Crossi**	**12.00**	**146**	Pn	**Pn**	**17 39 10.5**	**0.0**
	1.2nm,0.3s,baz=341,slow=7.0,SNR=54						
FITZ				Sn	**Sn**	**17 41 24.8**	**+1.4**
	0.7nm,0.3s,baz=201,slow=17,SNR=7.3						
FITZ				LR	LR	17 44 36.9	
	comp=Z,87nm,21.3s,baz=315,slow=42						
FITZ	**Fitzroy Crossi**	**12.00**	**146**	*e*P	**Pn**	**17 39 11.3**	**+0.9**
	32nm,0.8s						
FITZ				*e*S	**Sn**	**17 41 20.9**	**-2.5**
KNA	**Kununurra**	**12.48**	**128**	*e*P	**Pn**	**17 39 16.7**	**-0.4**
	8.7nm,0.6s						
KNA				*e*S	**Sn**	**17 41 33.5**	**-1.9**
MBWA	**Marble Bar**	**12.90**	**175**	*e*P	**Pn**	**17 39 21.8**	**-0.9**
MBWA				*e*S	**Sn**	**17 41 37.2**	**-8.2**
MBWA	**Marble Bar**	**12.90**	**175**	*e*P	**Pn**	**17 39 21.6**	**-1.2**
	2.9nm,0.6s						
MEEK	**Meekatharra**	**18.30**	**180**	*e*P	**Pn**	**17 40 36.3**	**+3.2**
WRA	**Warramunga Arr**	**19.23**	**129**	P	**Pn**	**17 40 43.5**	**-0.9**
	0.4nm,0.3s,baz=306,slow=13,SNR=14						
WRA				S	**Sn**	**17 44 17.8**	**-1.5**
	0.1nm,0.3s,baz=301,slow=22,SNR=4.2						
WB2	**Warramunga Arr**	**19.23**	**129**	*e*P	**Pn**	**17 40 43.1**	**-1.4**
MORW	**Morawa**	**20.85**	**186**	*e*P	**P**	**17 41 04.4**	**+3.5**
ASAR	**Alice Springs**	**21.27**	**138**	P	**P**	**17 41 06.2**	**+0.7**
	6.7nm,0.8s,mb4.0,baz=310,slow=9.4,SNR=74						
ASAR				PcP	PcP	17 45 10.0	+0.1
	0.5nm,0.4s,baz=320,slow=1.8,SNR=8.1						
NWAO	**Narrogin (SRO)**	**24.60**	**183**	P	**P**	**17 41 39.4**	**+0.4**
	4.4nm,0.6s,mb4.2,baz=7.7,slow=2.7,SNR=5.2						
NWAO	**Narrogin (SRO)**	**24.60**	**183**	*e*P	**P**	**17 41 39.2**	**+0.1**
	3.5nm,0.7s,mb4.0						
COEN	**Coen**	**24.83**	**105**	*e*P	**P**	**17 41 41.4**	**0.0**
BBOO	**Buckleboo**	**29.35**	**149**	*e*P	**P**	**17 42 22.3**	**+0.5**
	2.9nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**31.83**	**141**	P	**P**	**17 42 44.9**	**+1.1**
	4.3nm,0.5s,mb4.5,baz=326,slow=8.0,SNR=36						
STKA				PcP	PcP	17 45 34.5	+0.1
	0.8nm,0.4s,baz=344,slow=8.0,SNR=3.8						
STKA	**Stephens Creek**	**31.83**	**141**	*e*P	**P**	**17 42 44.5**	**+0.8**
	2.8nm,0.4s,mb4.5						
CMAR	**Chiang Mai Arr**	**32.82**	**324**	P	**P**	**17 42 53.7**	**+1.2**
	0.4nm,0.5s,mb3.6,baz=154,slow=6.8,SNR=2.8						
KSRS	**Korea Array**	**46.30**	**10**	P	**P**	**17 44 45.0**	**+0.6**
	0.4nm,0.6s,mb3.5,baz=159,slow=28,SNR=4.2						
HHC	**Hu-ho-hao-te**	**49.26**	**353**	*e*P	**P**	**17 45 11.4**	**+4.0**
HHC				pP	pP	17 45 19.0	+3.0
HHC				sP	sP	17 45 22.4	+3.1
HHC				PcP	PcP	17 46 32.5	+2.4
HHC				PP	PP	17 47 06.8	+5.2
HHC				ScP	ScP	17 50 26.0	+2.4
HHC				S	**S**	**17 52 17.1**	**+5.4**
HHC				sS	sS	17 52 30.1	+4.3
HHC				ScS	ScS	17 54 58.6	+1.1
HHC				SS	SS	17 55 45.2	+1.5
HHC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
HHC				pmax	pmax		
	comp=Z,62nm,6.0s						
HHC				LR	LR		
	comp=N,170nm,16.9s						
HHC				LR	LR		
	comp=E,120nm,15.6s						
HHC				LR	LR		
	comp=Z,200nm,16.2s						
SONM	**Songino Array**	**56.85**	**350**	P	**P**	**17 46 04.0**	**+0.8**
	comp=Z,0.3nm,0.7s,mb3.5,baz=193,slow=5.8,SNR=2.8						
MKAR	**Makanchi Array**	**63.57**	**333**	P	**P**	**17 46 49.2**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.7,baz=134,slow=6.7,SNR=3.4						
ZALV	**Zalesovo Beam**	**68.17**	**339**	P	**P**	**17 47 17.4**	**-1.3**
	comp=Z,1.1nm,0.5s,mb4.1,baz=148,slow=3.9,SNR=3.4						
CPUP	**Villa Florida**	**145.40**	**187**	PKPbc	PKPbc	17 55 58.4	+1.1
	comp=Z,1.5nm,0.5s,baz=153,slow=4.3,SNR=6.6						

IDC 08 17:38:28.8±3.5, 5°.59S×151°.25E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.5/16, mbtmp3.8/3, Error ellipse: s-maj=118.8km s-min=49.1km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.77**	**228**	P	P	17 43 22.1	-0.3
	1.1nm,0.6s,baz=53,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**24.54**	**221**	P	P	17 43 50.2	0.0
	1.1nm,0.6s,baz=59,slow=8.9,SNR=8.6						
FITZ	**Fitzroy Crossi**	**27.93**	**241**	P	P	17 44 21.4	+0.4
	1.3nm,0.6s,baz=64,slow=12,SNR=2.8						
TORD	**Torodi Ar. Bea**	**149.07**	**286**	PKPbc	PKPbc	17 58 19.5	-0.6
	1.5nm,0.9s,baz=68,slow=3.2,SNR=6.1						

ISCJB ***08*** *17:39:14.1±1.5, 32°.22N±0°.04×47°.50E±0°.07, h10km±11km, Error ellipse: s-maj=10.2km s-min=6.7km az=160.6*
TEH ***08*** *17:39:16.8, 32°.20N×47°.44E, h27km*
CSEM ***08*** *17:39:16.5±1.0, 32°.36N×47°.61E, h2km, ML3.3, Error ellipse: s-maj=26.4km s-min=12.6km az=43.0*
ISC 08 17:39:14.0±1.6, 32°.19N±0°.04×47°.38E±0°.06, h8km±11km, n20, σ1§04/24, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.21**	**94**	*e*Pg	**Pg**	**17 39 36.0**	**-1.1**
SHGR				*e*Sg	**Sg**	**17 39 51.8**	**-1.0**
IKOM	**Komasi**	**1.98**	**3**	*e*Pn	**Pn**	**17 39 48.7**	**+0.9**
IKOM				*e*Sg	**Sg**	**17 40 18.8**	**+1.2**
IKOM				*e*		17 40 21.5	
	comp=Z,3μm,0.2s						
IDHR	**Dehrash**	**2.63**	**342**	*e*Pn	**Pn**	**17 39 57.5**	**+0.7**
IDHR				*e*		17 40 41.2	
	comp=Z,3μm,0.3s						
UMR	**Umm Al-Rimmam**	**2.65**	**174**	*e*P	**Pn**	**17 39 58.2**	**+1.2**
UMR	**Umm Al-Rimmam**	**2.65**	**174**	*e*P	**Pn**	**17 39 58.2**	**+1.2**
BHD	**Baghdad**	**2.75**	**294**	*ex*	**Pn**	**17 39 56.0**	**-2.4**
BHD				*ex*	**Sn**	**17 40 29.0**	**-2.8**
SNGE	**Sanandaj**	**2.89**	**359**	*e*Pn	**Pn**	**17 40 01.5**	**+1.1**
NAY	**Al-Naaiem**	**2.94**	**182**	*e*P	**Pn**	**17 40 01.8**	**+0.8**
NAY	**Al-Naaiem**	**2.94**	**182**	*e*P	**Pn**	**17 40 01.8**	**+0.8**
IPIR	**Pirpir**	**3.01**	**80**	*e*Pn	**Pn**	**17 40 02.1**	**+0.1**
IPIR				*e*		17 40 51.5	
	comp=Z,667nm,0.3s						
ASAO	**Ashtian**	**3.23**	**43**	*e*Pn	**Pn**	**17 40 05.6**	**+0.6**
ASAO				*e*Sg	**Sg**	**17 40 51.4**	**-6.2**
RDF	**Al-Radifah**	**3.26**	**177**	*e*P	**Pn**	**17 40 06.8**	**+1.4**
RDF	**Al-Radifah**	**3.26**	**177**	*e*P	**Pn**	**17 40 06.8**	**+1.3**
IKLH	**Kolahrood**	**3.71**	**71**	*e*Pn	**Pn**	**17 40 11.8**	**+0.2**
IKLH				*e*		17 40 13.6	
	comp=Z,541nm,0.2s						
IGAR	**Gharneh**	**3.95**	**86**	*e*Pn	**Pn**	**17 40 14.5**	**-0.5**
IGAR				*e*		17 41 02.5	
	comp=Z,844nm,0.1s						
GHVR	**GHOM**	**3.99**	**54**	*e*Pn	**Pn**	**17 40 15.8**	**+0.3**
IZEF	**Zefreh**	**4.24**	**79**	*e*Pn	**Pn**	**17 40 18.6**	**-0.3**
IZEF				*e*		17 40 30.6	
	comp=Z,145nm,0.1s						
ISFB	**Sefidab**	**4.60**	**61**	*e*Pn	**Pn**	**17 40 22.9**	**-1.0**
IDMV	**Damavand**	**5.13**	**48**	*e*Pn	**Pn**	**17 40 30.6**	**-0.6**
IDMV				*e*		17 40 41.4	
	comp=Z,139nm,0.3s						
ISHM	**Shahmirzad**	**6.09**	**52**	*e*Pn	**Pn**	**17 40 44.1**	**-0.2**
ISHM				*e*		17 40 56.5	
	comp=Z,173nm,0.2s						

ISCJB ***08*** *17:41:05.4±0.5, 35°.60N±0°.06×99°.42E±0°.06, h10km, mb3.6/9, Error ellipse: s-maj=9.4km s-min=6.9km az=22.1*
IDC ***08*** *17:41:05.7±0.9, 35°.48N×99°.44E, h0km, mb3.6/10, mb1 3.8/13, mb1mx3.7/27, mbtmp3.7/13, ML3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=29.6km s-min=17.1km az=52.0*
BJI ***08*** *17:41:06.0, 35°.55N×99°.43E, h13km, mb3.7/2, ML3.6/11, Ms3.6/5, Ms7 3.3/5*
NEIC ***08*** *17:41:07.4±0.5, 35°.57N×99°.46E, h10km, mb3.6/3, Error ellipse: s-maj=14.7km s-min=8.1km az=72.0*
ISC 08 17:41:07.5±0.5, 35°.63N±0°.05×99°.44E±0°.06, h10km, n20, σ1§15/26, mb3.6/9, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.61**	**81**	*e*Pn	**Pn**	**17 42 04.9**	**+1.5**
LZH				Pg	**Pg**	**17 42 09.5**	**-7.1**
LZH				Sn	**Sn**	**17 42 46.7**	**+0.6**
LZH				Sg	**Sg**	**17 42 54.9**	**-8.5**
LZH				smax			
	comp=N,490nm,0.6s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=N,1μm,4.1s						
LZH				LR	LR		
	comp=E,490nm,4.2s						
LZH				LR	LR		
	comp=Z,1μm,5.7s						
GTA	**Gaotai**	**3.79**	**4**	Pn	**Pn**	**17 42 10.4**	**+4.5**
GTA				Pg	**Pg**	**17 42 18.7**	**-1.4**
GTA				Sn	**Sn**	**17 42 56.2**	**+5.7**
GTA				Sg	**Sg**	**17 43 07.7**	**-1.4**
GTA				smax			
	comp=N,73nm,1.2s						
GTA				smax			
	comp=E,100nm,0.9s						
GTA				LR	LR		
	comp=N,360nm,7.8s						
GTA				LR	LR		
	comp=E,450nm,7.1s						
GTA				LR	LR		
	comp=Z,370nm,9.3s						
XAN	**Xi'an**	**7.96**	**99**	P	**Pn**	**17 43 00.9**	**-2.2**
XAN				pP		17 43 10.5	
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WMQ	**Urumqi**	**12.18**	**316**	P	**Pn**	**17 44 01.5**	**+0.5**
SONM	**Songino Array**	**13.25**	**21**	Pn	**Pn**	**17 44 16.4**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=199,slow=15,SNR=12						
SONM				LR	LR	17 49 51.5	
	comp=Z,112nm,19.6s,baz=64,slow=39						
CHTO	**Chiang Mai**	**16.75**	**182**	*e*P	**Pn**	**17 45 03.6**	**+1.3**
	comp=Z,7.3nm,1.3s						
MKAR	**Makanchi Array**	**17.02**	**316**	P	**Pn**	**17 45 05.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=122,slow=15,SNR=8.1						
CMAR	**Chiang Mai Arr**	**17.11**	**182**	Pn	**Pn**	**17 45 04.5**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=356,slow=9.5,SNR=9.3						
TKM2	**Tokmak 2**	**19.80**	**299**	*e*P	**Pn**	**17 45 37.9**	**-1.5**
	comp=Z,3.3nm,1.0s						
KZA	**Kyzart**	**19.87**	**296**	*e*P	**Pn**	**17 45 39.6**	**-0.7**
	comp=Z,2.8nm,0.9s						
ZALV	**Zalesovo Beam**	**20.98**	**335**	P	**P**	**17 45 50.6**	**0.0**
	comp=Z,2.0nm,0.5s,baz=138,slow=12,SNR=10						
KSRS	**Korea Array**	**22.93**	**77**	P	**P**	**17 46 11.9**	**+0.4**
	comp=Z,1.3nm,0.7s,mb3.5,baz=262,slow=7.9,SNR=6.1						
BVAR	**Borovoye Array**	**26.83**	**319**	P	**P**	**17 46 49.0**	**+1.3**
	comp=Z,0.3nm,0.6s,mb3.0,baz=94,slow=5.8,SNR=2.7						
BRTR	**Keskin Array B**	**51.19**	**295**	P	**P**	**17 50 12.2**	**+1.3**
	comp=Z,0.4nm,0.4s,mb3.7,baz=116,slow=5.6,SNR=3.9						
ARCES	**ARCESS Array B**	**51.53**	**334**	P	**P**	**17 50 13.6**	**+0.7**
	comp=Z,2.4nm,1.1s,mb4.0,baz=72,slow=5.8,SNR=3.4						
FINES	**FINESS Array B**	**51.63**	**324**	P	**P**	**17 50 14.8**	**+0.9**
	comp=Z,4.2nm,1.0s,mb4.3,baz=98,slow=9.8,SNR=5.8						
NOA	**NORSAR Array B**	**58.74**	**325**	P	**P**	**17 51 05.3**	**+0.1**
	comp=Z,0.3nm,0.6s,mb3.5,baz=66,slow=6.6,SNR=2.8						
WRA	**Warramunga Arr**	**64.41**	**143**	P	**P**	**17 51 42.3**	**-1.5**
	comp=Z,0.3nm,0.4s,mb3.7,baz=53,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**67.39**	**146**	P	**P**	**17 52 02.3**	**-0.7**
	comp=Z,0.4nm,0.9s,mb3.5,baz=334,slow=6.3,SNR=5.4						
ILAR	**Eielson Array**	**67.44**	**25**	P	**P**	**17 52 03.9**	**+1.1**
	comp=Z,0.6nm,1.0s,mb3.6,baz=282,slow=5.5,SNR=4.7						

IDC ***08*** *17:50:15.2±1.6, 32°.38N×47°.16E, h0km, mb3.8/8, mb1 3.8/12, mb1mx3.6/27, mbtmp3.7/12, ML3.6/4, MS3.3/2, Ms1 3.3/2, ms1mx2.5/35, Error ellipse: s-maj=34.4km s-min=17.9km az=165.0*
ISCJB ***08*** *17:50:16.0±1.0, 32°.36N±0°.03×47°.30E±0°.04, h9km±7km, mb3.7/10, MS3.2/2, Error ellipse: s-maj=5.9km s-min=4.0km az=150.0*
NEIC ***08*** *17:50:16.2, 32°.25N×47°.26E, h14km, mb3.5/3, ML3.7(THR), After THR.*
THR ***08*** *17:50:16.2±0.6, 32°.24N×47°.26E, h14km±9km, ML3.7*
CSEM ***08*** *17:50:18.5±0.2, 32°.36N×47°.29E, h15km, ML3.7, Error ellipse: s-maj=6.1km s-min=4.8km az=81.0*
TEH ***08*** *17:50:20.5, 32°.39N×47°.40E, h16km*
ISC 08 17:50:17.1±1.1, 32°.34N±0°.03×47°.28E±0°.04, h6km±7km, n88, σ1§23/99, mb3.7/10, MS3.2/2, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.31**	**100**	*e*Pg	**Pg**	**17 50 40.0**	**-2.2**
SHGR	**Shooshtar-Gavs**	**1.31**	**100**	*e*Pg	**Pg**	**17 50 40.5**	**-1.8**
SHGR				*e*Sg	**Sg**	**17 50 58.3**	**-1.0**
SHGR				AML	AML	17 51 06.2	
	comp=N,1μm,0.5s						
SHGR				AML	AML	17 51 08.5	
	comp=E,1μm,0.5s						
IKOM	**Komasi**	**1.84**	**6**	*e*Pn	**Pn**	**17 50 50.4**	**+1.2**
IKOM				*e*Sg	**Sg**	**17 51 15.4**	**-0.8**
IKOM				*e*		17 51 19.1	
	comp=Z,19μm,0.4s						
IKOM	**Komasi**	**1.84**	**6**	*e*Pn	**Pn**	**17 50 50.4**	**+1.2**
IKOM				*e*Sg	**Sg**	**17 51 15.4**	**-0.8**
IGHG	**Ghaleghazi**	**2.07**	**343**	*e*Pn	**Pn**	**17 50 54.4**	**+2.0**
IGHG				*e*		17 51 33.4	
	comp=Z,11μm,0.3s						
IGHG	**Ghaleghazi**	**2.07**	**343**	*e*Pn	**Pn**	**17 50 54.4**	**+2.0**
IVIS	**Veis**	**2.21**	**351**	*e*Pn	**Pn**	**17 50 56.2**	**+1.9**
IVIS				*e*		17 51 36.6	
	comp=Z,6μm,0.3s						
IVIS	**Veis**	**2.21**	**351**	*e*Pn	**Pn**	**17 50 56.2**	**+1.9**
IDHR	**Dehrash**	**2.47**	**343**	*e*Pn	**Pn**	**17 50 59.0**	**+1.1**
IDHR				*e*Sg	**Sg**	**17 51 38.1**	**+1.7**
IDHR				*e*		17 51 44.7	
	comp=Z,9μm,0.3s						
IDHR	**Dehrash**	**2.47**	**343**	*e*Pn	**Pn**	**17 50 59.0**	**+1.1**
IDHR				*e*Sg	**Sg**	**17 51 38.1**	**+1.7**
BHD	**Baghdad**	**2.61**	**292**	*ex*	**Pn**	**17 50 58.0**	**-1.9**
BHD				*ex*	**Sn**	**17 51 32.0**	**+0.1**
SNGE	**Sanandaj**	**2.74**	**1**	*e*Pn	**Pn**	**17 51 03.0**	**+1.3**
SNGE	**Sanandaj**	**2.74**	**1**	*e*Pn	**Pn**	**17 51 03.5**	**+1.8**
SNGE				AML	AML	17 51 50.2	
	comp=E,204nm,0.6s						
SNGE	**Sanandaj**	**2.74**	**1**	*e*Pn	**Pn**	**17 51 03.0**	**+1.3**
IPIR	**Pirpir**	**3.07**	**83**	*e*Pn	**Pn**	**17 51 07.0**	**+0.8**
IPIR				*e*		17 52 02.8	
	comp=Z,2μm,0.3s						
IPIR	**Pirpir**	**3.07**	**83**	*e*Pn	**Pn**	**17 51 07.0**	**+0.8**
NAY	**Al-Naaiem**	**3.08**	**181**	*e*P	**Pn**	**17 51 07.4**	**+1.0**
NAY				*e*S	**Sn**	**17 51 42.5**	**-1.1**
NAY	**Al-Naaiem**	**3.08**	**181**	*e*P	**Pn**	**17 51 07.4**	**+1.0**
NAY				*e*S	**Sn**	**17 51 42.5**	**-1.1**
KBD	**Kabd**	**3.18**	**173**	*e*P	**Pn**	**17 51 09.1**	**+1.5**
KBD	**Kabd**	**3.18**	**173**	*e*P	**Pn**	**17 51 09.1**	**+1.5**
ASAO	**Ashtian**	**3.18**	**45**	*e*Pn	**Pn**	**17 51 09.0**	**+1.3**
ASAO	**Ashtian**	**3.18**	**45**	*e*Pn	**Pn**	**17 51 09.3**	**+1.7**
ASAO				*e*Sg	**Sg**	**17 51 58.0**	**-1.2**
ASAO				AML	AML	17 52 02.7	
	comp=N,254nm,0.6s						
ASAO				AML	AML	17 52 04.5	
	comp=E,204nm,0.6s						
ASAO	**Ashtian**	**3.18**	**45**	*e*Pn	**Pn**	**17 51 09.0**	**+1.3**
RDF	**Al-Radifah**	**3.41**	**176**	*e*P	**Pn**	**17 51 12.6**	**+1.7**
RDF				*e*S	**Sn**	**17 51 51.5**	**-0.2**
RDF	**Al-Radifah**	**3.41**	**176**	*e*P	**Pn**	**17 51 12.6**	**+1.7**
RDF				*e*S	**Sn**	**17 51 51.5**	**-0.2**
QRN	**Al-Qurain**	**3.63**	**171**	*e*P	**Pn**	**17 51 15.1**	**+1.2**
QRN				*e*S	**Sn**	**17 51 57.6**	**+0.6**
IKLH	**Kolahrood**	**3.75**	**74**	*e*Pn	**Pn**	**17 51 16.1**	**+0.6**
IKLH				*e*		17 52 31.1	
	comp=Z,2μm,0.4s						
IKLH	**Kolahrood**	**3.75**	**74**	*e*Pn	**Pn**	**17 51 16.1**	**+0.6**
GHVR	**GHOM**	**3.98**	**56**	*e*Pn	**Pn**	**17 51 19.6**	**+1.0**
GHVR	**GHOM**	**3.98**	**56**	*e*Pn	**Pn**	**17 51 19.6**	**+1.0**
IGAR	**Gharneh**	**4.03**	**88**	*e*Pn	**Pn**	**17 51 19.3**	**-0.1**
IGAR				*e*		17 52 14.6	
	comp=Z,991nm,0.4s						
IZEF	**Zefreh**	**4.30**	**81**	*e*Pn	**Pn**	**17 51 23.4**	**+0.4**
IZEF				*e*		17 51 25.9	
	comp=Z,736nm,0.2s						
IZEF	**Zefreh**	**4.30**	**81**	*e*Pn	**Pn**	**17 51 23.4**	**+0.4**
ZNJK	**Zanjan**	**4.47**	**15**	*e*Pn	**Pn**	**17 51 26.9**	**+1.5**
ZNJK	**Zanjan**	**4.47**	**15**	*e*Pn	**Pn**	**17 51 26.9**	**+1.5**
IVRN	**Varamin**	**4.55**	**53**	*e*Pn	**Pn**	**17 51 26.8**	**+0.2**
IVRN				*e*Pn	**Pn**	**17 51 26.9**	**+0.3**
IVRN				*e*		17 52 45.6	
	comp=Z,747nm,0.4s						
IVRN	**Varamin**	**4.55**	**53**	*e*Pn	**Pn**	**17 51 26.8**	**+0.2**
ISFB	**Sefidab**	**4.61**	**63**	*e*Pn	**Pn**	**17 51 28.2**	**+0.9**
ISFB				*e*		17 52 48.5	
	comp=Z,599nm,0.3s						
ISFB	**Sefidab**	**4.61**	**63**	*e*Pn	**Pn**	**17 51 28.2**	**+0.9**
IDMV	**Damavand**	**5.10**	**49**	*e*Pn	**Pn**	**17 51 33.7**	**-0.4**
IDMV				*e*		17 53 18.6	
	comp=Z,771nm,0.5s						
IDMV	**Damavand**	**5.10**	**49**	*e*Pn	**Pn**	**17 51 33.7**	**-0.4**
IFIR	**Firoozkooh**	**5.61**	**53**	*e*Pn	**Pn**	**17 51 41.6**	**+0.5**
IFIR				*e*		17 52 15.8	
	comp=Z,199nm,0.2s						
IFIR	**Firoozkooh**	**5.61**	**53**	*e*Pn	**Pn**	**17 51 41.6**	**+0.5**
ILAS	**Lasjerd**	**5.61**	**56**	*e*Pn	**Pn**	**17 51 41.1**	**0.0**
ILAS				*e*		17 53 27.2	
	comp=Z,459nm,0.3s						
ILAS	**Lasjerd**	**5.61**	**56**	*e*Pn	**Pn**	**17 51 41.1**	**0.0**
ISRV	**Sarvestan**	**5.82**	**119**	*e*Pn	**Pn**	**17 51 44.5**	**+0.5**
ISRV				*e*		17 53 03.7	
	comp=Z,413nm,0.3s						
ISRV	**Sarvestan**	**5.82**	**119**	*e*Pn	**Pn**	**17 51 44.5**	**+0.5**
IHRS	**Heris**	**5.97**	**358**	*e*Pn	**Pn**	**17 51 47.2**	**+1.2**
IHRS				*e*		17 52 57.8	
	comp=Z,166nm,0.3s						
ISHM	**Shahmirzad**	**6.07**	**54**	*e*Pn	**Pn**	**17 51 47.7**	**+0.3**
ISHM				*e*		17 53 48.3	
	comp=Z,657nm,0.4s						
ISHM	**Shahmirzad**	**6.07**	**54**	*e*Pn	**Pn**	**17 51 47.7**	**+0.3**
IGLO	**Ghaloghah**	**6.82**	**51**	*e*Pn	**Pn**	**17 51 58.1**	**+0.4**
IGLO				*e*		17 52 46.5	
	comp=Z,229nm,0.3s						
IGLO	**Ghaloghah**	**6.82**	**51**	*e*Pn	**Pn**	**17 51 58.1**	**+0.4**
ASF	**Jabal al Asfar**	**8.80**	**272**	Pn	**Pn**	**17 52 24.5**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=293,slow=3.4,SNR=6.5						
ASF				Lg		17 54 57.6	
	comp=Z,0.6nm,0.3s,baz=136,slow=19,SNR=2.4						
MMAI	**Mount Meron Ar**	**10.03**	**277**	Pn	**Pn**	**17 52 38.9**	**-2.9**
	comp=Z,0.5nm,0.3s,baz=264,slow=37,SNR=2.7						
MMAI				Lg		17 55 31.4	
	comp=Z,1.3nm,0.3s,baz=283,slow=27,SNR=4.2						
EIL	**Elat**	**10.91**	**259**	Lg		17 56 03.7	
	comp=Z,0.2nm,0.3s,baz=108,slow=22,SNR=2.3						
BRTR	**Keskin Array B**	**13.26**	**308**	Pn	**Pn**	**17 53 24.6**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=137,slow=11,SNR=6.1

6.1nm,0.4s
VNA3 **Neumayer Olymp 46.71 157** *e* **P** **18 07 11.7 -0.4**
VNA3 *e* 18 07 20.4
VNA2 **Neumayer--Watz 47.44 158** *e* **P** **18 07 17.8 0.0**
baz=223,slow=8.5
VNA2 *e* 18 07 26.2
CPUP Villa Florida 58.87 92 LR LR 18 30 28.1
comp=Z,70nm,18.1s,MS3.8,baz=4.0,slow=32
NNA Nana 59.63 65 LR LR 18 28 16.1
comp=Z,62nm,21.4s,MS3.7,baz=331,slow=30
LPAZ La Paz 60.73 76 P **P** **18 08 54.5 -0.9**
0.8nm,0.8s,mb3.9,baz=181,slow=7.5,SNR=3.4
LPAZ LR LR 18 28 35.0
comp=Z,38nm,21.0s,MS3.5,baz=53,slow=30
ATAH Atahualpa 62.99 60 LR LR 18 30 27.1
comp=Z,39nm,21.1s,MS3.5,baz=22,slow=30
STKA Stephens Creek 63.67 252 P **P** **18 09 15.4 +0.4**
1.5nm,0.7s,mb4.1,baz=144,slow=10,SNR=5.3
ASAR Alice Springs 74.31 251 P **P** **18 10 21.4 +0.2**
2.2nm,0.8s,mb4.2,baz=144,slow=6.8,SNR=30
WRA Warramunga Arr 77.08 254 P **P** **18 10 36.8 -0.3**
1.5nm,0.8s,mb4.0,baz=144,slow=5.3,SNR=19
FITZ Fitzroy Crossi 83.26 248 P **P** **18 11 10.5 0.0**
4.1nm,0.9s,mb4.5,baz=185,slow=3.2,SNR=12
ILAR Eielson Array 120.65 352 PKP PKPdf 18 17 33.1 -1.0
0.7nm,0.7s,baz=196,slow=3.0,SNR=9.0
TORD Torodi Ar. Bea 123.55 119 PKP PKPdf 18 17 41.2 -0.1
0.2nm,0.6s,baz=286,slow=0.2,SNR=2.8
SONM Songino Array 145.21 281 PKPbc PKPbc 18 18 20.1 0.0
1.6nm,0.6s,baz=123,slow=2.7,SNR=8.4
MKAR Makanchi Array 158.27 260 PKPab PKPab 18 19 14.3 -0.1
1.6nm,0.7s,baz=120,slow=4.3,SNR=13
ZALV Zalesovo Beam 160.09 280 PKPab PKPab 18 19 21.5 -0.6
0.4nm,0.3s,baz=104,slow=3.1,SNR=3.5
BRTR Keskin Array B 160.74 138 PKPab PKPab 18 19 25.8 +0.5
1.0nm,0.8s,baz=179,slow=7.3,SNR=5.9

*IDC **08** 18:18:16.1±0.7,2°.26N×126°.84E,h0km,mb3.9/8, mb1 4.1/8,mb1mx3.9/18,mbtmp3.9/8,MS3.1/1,Ms1 3.1/1, ms1mx2.3/32,Error ellipse: s-maj=41.7km s-min=14.1km az=74.0*
*ISCJB **08** 18:18:24.0±2.2,2°.23N±0°.09×126°.8E±0°.1,h81km±21km, mb4.0/11,Error ellipse: s-maj=24.1km s-min=10.1km az=149.4*
*DJA **08** 18:18:28,1°.14N×126°.72E,h104km,MLv3.9/4*
*NEIC **08** 18:18:28.4±3.8,2°.21N×126°.76E,h106km±39km,mb4.3/3, Error ellipse: s-maj=29.9km s-min=12.1km az=66.0*
ISC 08 18:18:25.7±2.0,2°.21N±0°.09×126°.8E±0°.1,h79km±20km, n24,σ0°99/23,mb4.0/11,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.53**	**159**	P	x	18 18 48.7	
TNTI				S	x	18 19 02.6	
MNI	**Manado**	**2.11**	**249**	P	**Pn**	**18 18 58.2**	**-0.9**
MNI				S	**Sn**	**18 19 25.1**	**+1.0**
KMSI	**Cibinong**	**3.26**	**240**	P	**Pn**	**18 19 13.4**	**-1.2**
MRSI	**Marisa**	**5.16**	**251**	P	**Pn**	**18 19 42.1**	**+1.6**
LUWI	**Luwuk**	**5.17**	**231**	P	x	18 19 33.8	
LUWI				S	x	18 20 10.5	
KAKA	**Kakadu** 12nm,0.6s	**15.84**	**159**	*eP*	**Pn**	**18 22 07.1**	**+3.0**
KAKA	**Kakadu** 31nm,0.6s	**15.84**	**159**	*eP*	**Pn**	**18 22 07.1**	**+3.0**
KNA	**Kununurra** 12nm,0.8s	**17.94**	**174**	*eP*	**Pn**	**18 22 29.3**	**-0.8**
FITZ	**Fitzroy Crossi** 1.3nm,0.3s,baz=18,slow=7.7,SNR=19	**20.21**	**183**	P	**P**	**18 22 54.4**	**0.0**
FITZ	**Fitzroy Crossi** 4.1nm,0.6s	**20.21**	**183**	*eP*	**P**	**18 22 54.3**	**-0.1**
WRA	**Warramunga Arr** 4.3nm,0.7s,mb3.9,baz=339,slow=10,SNR=22	**23.22**	**162**	P	**P**	**18 23 24.9**	**-1.1**
WRA				PcP	PcP	18 27 13.3	+1.5
	0.3nm,0.6s,baz=328,slow=2.1,SNR=4.7						
ASAR	**Alice Springs** 0.8nm,0.6s,mb3.4,baz=343,slow=7.7,SNR=24	**26.63**	**165**	P	**P**	**18 23 56.7**	**-0.3**
ASAR				PcP	PcP	18 27 20.7	+1.3
	0.4nm,0.6s,baz=1.3,slow=2.7,SNR=4.4						
CMAR	**Chiang Mai Arr** 1.6nm,0.8s,mb3.8,baz=118,slow=6.6,SNR=8.6	**31.73**	**302**	P	**P**	**18 24 42.3**	**-0.1**
CHTO	**Chiang Mai** 3.1nm,0.8s,mb4.1	**31.89**	**303**	*eP*	**P**	**18 24 43.1**	**-0.8**
KSRS	**Korea Array** 0.6nm,0.4s,mb3.7,baz=177,slow=9.5,SNR=5.5	**35.09**	**2**	P	**P**	**18 25 11.1**	**-0.3**
KSRS				LR	LR	18 39 23.7	
	comp=Z,28nm,19.2s,baz=235,slow=36						
MJAR	**Matsushiro Arr** 0.6nm,0.3s,mb4.0,baz=202,slow=6.0,SNR=4.2	**35.75**	**16**	P	**P**	**18 25 16.3**	**-0.7**
STKA	**Stephens Creek** 5.4nm,0.6s,mb4.6,baz=336,slow=7.5,SNR=32	**36.69**	**159**	P	**P**	**18 25 25.1**	**0.0**
STKA	**Stephens Creek** 4.8nm,0.6s,mb4.6	**36.69**	**159**	*eP*	**P**	**18 25 25.1**	**+0.1**
ARMA	**Armidale**	**40.16**	**146**	*eP*	**P**	**18 25 55.5**	**+1.3**
HHC	**Hu-ho-hao-te**	**40.86**	**342**	*eP*	**P**	**18 26 02.0**	**+2.1**
HHC				pP	pP	18 26 27.5	+8.6
HHC				sP	sP	18 26 40.5	+13
HHC				PP	PP	18 27 41.8	+6.2
HHC				PcP	PcP	18 28 00.7	+1.4
HHC				ScP	ScP	18 31 38.7	-3.4
HHC				S	**S**	**18 32 06.0**	**+0.6**
HHC				sS	sS	18 32 49.2	+11
HHC				SS	SS	18 35 07.6	-2.2
HHC				ScS	ScS	18 35 52.9	-4.3
HHC				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
HHC				pmax	pmax		
	comp=Z,66nm,5.1s						
HHC				LR	LR		
	comp=N,110nm,14.6s						
HHC				LR	LR		
	comp=E,130nm,15.3s						
HHC				LR	LR		
	comp=Z,150nm,15.2s						
SONM	**Songino Array** comp=Z,0.5nm,0.4s,mb3.8,baz=161,slow=9.2,SNR=3.0	**48.76**	**342**	P	**P**	**18 27 02.5**	**0.0**
MKAR	**Makanchi Array** comp=Z,0.7nm,0.5s,mb4.0,baz=121,slow=7.1,SNR=12	**58.85**	**326**	P	**P**	**18 28 15.7**	**-0.4**
KURK	**Kurchatov** comp=Z,2.4nm,0.7s,mb4.2	**63.06**	**328**	*eP*	**P**	**18 28 44.5**	**-0.1**
CFAA	**Coronel Fontan** comp=Z,0.2nm,0.4s,baz=224,slow=6.6,SNR=4.1	**147.49**	**156**	PKPbc	PKPbc	18 38 02.8	+1.4

*NEIC **08** 18:25:17.5,16°.87N×95°.05W,h132km,MD3.8(MEX),After MEX.*
MEX 08 18:25:17.5±1.4,16°.87N×95°.05W,h132km±22km,MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.50**	**223**	*eP*	Pn	18 25 43.8	-2.0
HUIG				*i* S	Sn	18 26 05.7	-1.6
HUIG	**Huatulco**	**1.50**	**223**	*eP*	Pn	18 25 43.8	-2.0
HUIG				*i* S	Sn	18 26 05.7	-1.6
OXX	**Oaxaca**	**1.62**	**278**	*i* P	Pn	18 25 47.5	+0.4
OXX				*i* S	Sn	18 26 09.3	-0.4
OXX	**Oaxaca**	**1.62**	**278**	*i* P	Pn	18 25 47.5	+0.4
OXX				*i* S	Sn	18 26 09.3	-0.4
VHO	**Vista Hermosa**	**1.63**	**277**	*eP*	Pn	18 25 47.0	-0.2
VHO				*i* S	Sn	18 26 08.6	-1.2
VHO	**Vista Hermosa**	**1.63**	**277**	*eP*	Pn	18 25 47.0	-0.2
VHO				*i* S	Sn	18 26 08.6	-1.2
TGIG		**1.85**	**92**	*i* P	Pn	18 25 48.6	-1.1
TGIG				*i* S	Sn	18 26 11.9	-2.5
PCIG		**2.10**	**123**	*eP*	Pn	18 25 51.8	-1.1
PCIG				*i* S	Sn	18 26 18.9	-1.0
TPIG	**Tehuac#an**	**2.69**	**305**	*eP*	Pn	18 25 58.6	-1.6
TPIG				*i* S	Sn	18 26 31.4	-1.8
UTMO	**Huajuapan**	**2.80**	**290**	*i* P	Pn	18 26 01.8	+0.2
UTMO				*i* S	Sn	18 26 33.0	-2.7
CCIG	**Comitan**	**2.85**	**101**	*i* P	Pn	18 26 01.7	-0.6
CCIG				*i* S	Sn	18 26 34.2	-2.6
CCIG	**Comitan**	**2.85**	**101**	*i* P	Pn	18 26 01.7	-0.6
CCIG				*i* S	Sn	18 26 34.2	-2.6
PNIG	**Pinotepa**	**2.99**	**261**	*i* P	Pn	18 26 02.1	-2.0
PNIG				*i* S	Sn	18 26 38.0	-2.0
PNIG	**Pinotepa**	**2.99**	**261**	*i* P	Pn	18 26 02.1	-2.0
PNIG				*i* S	Sn	18 26 38.0	-2.0

*CSEM **08** 18:26:21.4,38°.77N×29°.82W,h5km,ML3.5,After PDA*
PDA 08 18:26:21.4±0.8,38°.77N×29°.82W,h5km,MD3.4,ML3.5, Error ellipse: s-maj=15.7km s-min=6.9km az=16.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.89**	**99**	*eP*	Pg	18 26 35.1	-3.3
PCED				*eS*	Sg	18 26 45.8	-4.1
PCED				A		18 26 48.4	
	457nm,0.3s						
PCED	**Cedros**	**0.89**	**99**	*eP*	Pg	18 26 35.1	-3.3
PCED				*eS*	Sg	18 26 45.8	-4.1
CALA	**Caldeira**	**0.90**	**102**	*eS*	Sg	18 26 46.6	-3.6
CALA	**Caldeira**	**0.90**	**102**	*eS*	Sg	18 26 46.6	-3.6
HOR	**Horta**	**0.96**	**104**	*eS*	Sg	18 26 48.0	-4.3
HOR	**Horta**	**0.96**	**104**	*eS*	Sg	18 26 48.0	-4.3
PICO	**Pico**	**1.12**	**103**	*eP*	Pg	18 26 39.3	-3.7
PICO				*eS*	Sg	18 26 52.2	-5.3
PICO	**Pico**	**1.12**	**103**	*eP*	Pg	18 26 39.3	-3.7
PICO				*eS*	Sg	18 26 52.2	-5.3
ROSA	**Rosais**	**1.23**	**92**	*eP*	Pg	18 26 40.6	-4.5
ROSA				*eS*	Sg	18 26 55.0	-6.1
ROSA	**Rosais**	**1.23**	**92**	*eP*	Pg	18 26 40.6	-4.5
ROSA				*eS*	Sg	18 26 55.0	-6.1
PMAN	**Manadas**	**1.36**	**95**	*eP*	Pn	18 26 42.0	-5.0
PMAN				*eS*	Sb	18 26 57.8	-7.2
PMAN				A		18 27 02.1	
	105nm,0.2s						
PMAN	**Manadas**	**1.36**	**95**	*eP*	Pn	18 26 42.0	-5.0
PMAN				*eS*	Sb	18 26 57.8	-7.2
PID	**Ribeirinha**	**1.37**	**103**	*eS*	Sb	18 26 58.2	-7.1
PID	**Ribeirinha**	**1.37**	**103**	*eS*	Sb	18 26 58.2	-7.1
ADH	**Angra Heroismo**	**2.03**	**92**	*eS*	Sn	18 27 13.9	-7.9
ADH				A		18 27 16.9	
	117nm,0.5s						
ADH	**Angra Heroismo**	**2.03**	**92**	*eS*	Sn	18 27 13.9	-7.9

*ISCJB **08** 18:28:36.3±0.6, 18°.58N±0°.10×64°.85W±0°.03,h92km±8km, Error ellipse: s-maj=16.1km s-min=3.7km az=7.2*
*TRN **08** 18:28:36.4,18°.49N×64°.87W,h85km*
*RSPR **08** 18:28:38.2,18°.47N×64°.87W,h85km,MD3.7/18*
*NEIC **08** 18:28:38.2,18°.47N×64°.87W,h86km,MD3.7(RSPR), After RSPR.*
ISC 08 18:28:37.2±0.6,18°.58N±0°.09×64°.86W±0°.03,h85km±8km, n45,σ0°60/77,28C-10D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.24**	**203**	*eP*	**Pn**	**18 28 50.1**	**+0.3**
STVI				*eS*	**Sn**	**18 28 59.3**	**+0.2**
STVI	**Saint Thomas**	**0.24**	**203**	*eP*	**Pn**	**18 28 50.8**	**+1.0**
STVI				*eS*	**Sn**	**18 28 59.3**	**+0.2**
TBVI	**Tortola**	**0.28**	**125**	⇓*eP*	**Pn**	**18 28 50.4**	**+0.5**
TBVI	**Tortola**	**0.28**	**125**	⇓*eP*	**Pn**	**18 28 50.4**	**+0.5**
CDVI	**St. Croix**	**0.83**	**174**	⇓*eP*	**Pn**	**18 28 54.2**	**-0.4**
CDVI				*eS*	**Sn**	**18 29 06.4**	**-1.2**
CDVI	**St. Croix**	**0.83**	**174**	⇓*eP*	**Pn**	**18 28 54.2**	**-0.4**
CDVI				*eS*	**Sn**	**18 29 06.4**	**-1.2**
HUMP	**Col San Antoni**	**1.04**	**245**	⇑*eP*	**Pn**	**18 28 56.8**	**-0.2**
HUMP				*eS*	**Sn**	**18 29 11.5**	**-0.4**
HUMP	**Col San Antoni**	**1.04**	**245**	⇑*eP*	**Pn**	**18 28 56.8**	**-0.2**
HUMP				*eS*	**Sn**	**18 29 11.5**	**-0.4**
SJG	**San Juan**	**1.31**	**250**	⇓*eP*	**Pn**	**18 29 00.1**	**-0.3**
SJG				*eS*	**Sn**	**18 29 17.6**	**-0.2**
SJG	**San Juan**	**1.31**	**250**	⇑*eP*	**Pn**	**18 29 00.5**	**+0.1**
SJG				*eS*	**Sn**	**18 29 17.7**	**-0.1**
SJG	**San Juan**	**1.31**	**250**	⇑*eP*	**Pn**	**18 29 00.5**	**+0.1**
SJG	**San Juan**	**1.31**	**250**	⇓*eP*	**Pn**	**18 29 00.6**	**+0.2**
SJG				*eS*	**Sn**	**18 29 17.6**	**-0.2**
SJG				*eS*	**Sn**	**18 29 17.7**	**-0.1**
CELP	**Cerrillos**	**1.71**	**253**	⇑*eP*	**Pn**	**18 29 05.4**	**-0.1**
CELP				*eS*	**Sn**	**18 29 26.6**	**-0.4**
CELP	**Cerrillos**	**1.71**	**253**	⇑*eP*	**Pn**	**18 29 05.4**	**-0.1**
CELP				*eS*	**Sn**	**18 29 26.6**	**-0.4**
ICM	**Isla Caja Muer**	**1.72**	**247**	⇑*eP*	**Pn**	**18 29 05.7**	**+0.1**
ICM				*eS*	**Sn**	**18 29 27.7**	**+0.5**
ICM	**Isla Caja Muer**	**1.72**	**247**	⇑*eP*	**Pn**	**18 29 05.7**	**+0.1**
ICM				*eS*	**Sn**	**18 29 27.7**	**+0.5**
OBIP	**Obispado Ponce**	**1.75**	**252**	⇑*eP*	**Pn**	**18 29 06.3**	**+0.4**
OBIP				*eS*	**Sn**	**18 29 27.4**	**-0.3**
OBIP	**Obispado Ponce**	**1.75**	**252**	⇑*eP*	**Pn**	**18 29 06.3**	**+0.4**
OBIP				*eS*	**Sn**	**18 29 27.4**	**-0.3**
SMRT	**St. Maarten**	**1.77**	**107**	⇑*eP*	**Pn**	**18 29 06.6**	**+0.3**
SMRT				*eS*	**Sn**	**18 29 28.3**	**-0.1**
SMRT	**St. Maarten**	**1.77**	**107**	⇑*eP*	**Pn**	**18 29 06.6**	**+0.3**
SMRT				*eS*	**Sn**	**18 29 28.3**	**-0.1**
SABA	**Saba**	**1.81**	**122**	⇑*eP*	**Pn**	**18 29 07.1**	**+0.4**
SABA				*eS*	**Sn**	**18 29 29.1**	**0.0**
SABA	**Saba**	**1.81**	**122**	⇑*eP*	**Pn**	**18 29 07.7**	**+1.0**
SABA				*eS*	**Sn**	**18 29 29.8**	**+0.7**
AOPR	**Arecibo Observ**	**1.82**	**263**	⇑*eP*	**Pn**	**18 29 06.8**	**0.0**
AOPR				*eS*	**Sn**	**18 29 29.7**	**+0.3**
AOPR	**Arecibo Observ**	**1.82**	**263**	⇑*eP*	**Pn**	**18 29 06.8**	**0.0**
AOPR				*eS*	**Sn**	**18 29 29.7**	**+0.3**
LRS	**Lares**	**1.91**	**262**	⇑*eP*	**Pn**	**18 29 08.0**	**-0.1**
LRS				*eS*	**Sn**	**18 29 31.1**	**-0.5**
LRS	**Lares**	**1.91**	**262**	⇑*eP*	**Pn**	**18 29 08.0**	**-0.1**
LRS				*eS*	**Sn**	**18 29 31.8**	**+0.2**
GBPR	**Guanica, Bosqu**	**2.02**	**253**	⇓*eP*	**Pn**	**18 29 10.3**	**+0.9**
GBPR				*eS*	**Sn**	**18 29 33.7**	**-0.3**
GBPR	**Guanica, Bosqu**	**2.02**	**253**	⇓*eP*	**Pn**	**18 29 10.3**	**+0.9**
GBPR				*eS*	**Sn**	**18 29 33.7**	**-0.3**
SEUS	**St. Eustatius**	**2.08**	**121**	⇑*eP*	**Pn**	**18 29 10.5**	**+0.1**
SEUS	**St. Eustatius**	**2.08**	**121**	⇑*eP*	**Pn**	**18 29 10.5**	**+0.1**
AGPR	**Aguadilla, PR**	**2.14**	**267**	⇑*eP*	**Pn**	**18 29 11.1**	**-0.1**
AGPR				*eS*	**Sn**	**18 29 37.1**	**0.0**
AGPR	**Aguadilla, PR**	**2.14**	**267**	⇑*eP*	**Pn**	**18 29 11.6**	**+0.5**
AGPR				*eS*	**Sn**	**18 29 37.8**	**+0.7**
LSP	**Las Mesas**	**2.16**	**260**	⇑*eP*	**Pn**	**18 29 11.6**	**+0.3**
LSP				*eS*	**Sn**	**18 29 37.5**	**+0.1**
LSP	**Las Mesas**	**2.16**	**260**	⇑*eP*	**Pn**	**18 29 11.6**	**+0.3**
LSP				*eS*	**Sn**	**18 29 37.5**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.22**	**255**	⇓*eP*	**Pn**	**18 29 12.7**	**+0.5**
CRPR				*eS*	**Sn**	**18 29 39.1**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.22**	**255**	⇓*eP*	**Pn**	**18 29 12.7**	**+0.5**
CRPR				*eS*	**Sn**	**18 29 39.1**	**+0.3**
ANWB	**Willy Bob**	**3.06**	**107**	*eP*	**Pn**	**18 29 21.2**	**-2.2**
LZG	**Guadaloupe-1**	**3.81**	**129**	*eP*	**Pn**	**18 29 33.6**	**0.0**
PHG	**Guadaloupe-2**	**3.99**	**129**	*eP*	**Pn**	**18 29 36.5**	**+0.4**
TBG	**Guadaloupe-3**	**4.09**	**131**	*eP*	**Pn**	**18 29 37.0**	**-0.5**
SMN1	**Samana, DR**	**4.23**	**279**	⇑*eP*	**Pn**	**18 29 38.7**	**-0.6**
SMN1	**Samana, DR**	**4.23**	**279**	⇑*eP*	**Pn**	**18 29 38.7**	**-0.6**
MGG	**Marie-Galante**	**4.29**	**128**	*eP*	**Pn**	**18 29 41.1**	**+0.9**
SDDR	**Presa de Saban** 53nm,0.5s	**6.11**	**275**	*eP*	**Pn**	**18 30 05.2**	**+0.3**
GRTK	**Grand Turk**	**6.58**	**297**	*eP*	**Pn**	**18 30 09.7**	**-1.7**

*DDA **08** 18:37:00.6,40°.79N×31°.94E,h7km±2km,Md3.0*
*ISK **08** 18:37:00.5,40°.85N×31°.79E,h5km,MD3.0*
*ISCJB **08** 18:37:01.4±0.4,40°.83N±0°.04×31°.87E±0°.03,h10km,Error ellipse: s-maj=5.2km s-min=3.5km az=162.8*
*CSEM **08** 18:37:01.3±0.2,40°.84N×31°.83E,h2km,MD3.0,Error ellipse: s-maj=5.4km s-min=3.6km az=162.0*
ISC 08 18:37:01.1±0.6,40°.82N±0°.04×31°.90E±0°.03,h2km±6km, n39,σ0°78/47,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGKT	**Sivrigoynuk**	**0.28**	**155**	*i* P	**Pg**	**18 37 06.1**	**-0.3**
SGKT				*i* S	**Sg**	**18 37 09.4**	**-0.6**
SGKT	**Sivrigoynuk**	**0.28**	**155**	*i* P	**Pg**	**18 37 06.1**	**-0.3**
KDZE	**Karadeniz Ereo**	**0.60**	**325**	*e*PG	**Pg**	**18 37 12.2**	**-0.4**
KDZE	**Karadeniz Ereo**	**0.60**	**325**	*e*Pg	**Pg**	**18 37 12.2**	**-0.4**
MDU	**Mudurnu**	**0.63**	**236**	*e*PG	**Pg**	**18 37 12.9**	**-0.3**
MDU				*e*SG	**Sg**	**18 37 21.9**	**+0.5**
MDU	**Mudurnu**	**0.63**	**236**	*e*Pg	**Pg**	**18 37 12.9**	**-0.3**
MDU				*e*Sg	**Sg**	**18 37 21.9**	**+0.5**
SAFT	**Safranbolu**	**0.73**	**55**	*e*PG	**Pg**	**18 37 15.9**	**+0.9**
SAFT	**Safranbolu**	**0.73**	**55**	*e*Pg	**Pg**	**18 37 15.9**	**+0.9**
HENT	**Hendek**	**0.76**	**270**	*i* P	**Pg**	**18 37 15.8**	**+0.2**
HENT				*i* S	**Sg**	**18 37 27.6**	**+2.2**
HENT	**Hendek**	**0.76**	**270**	*i* P	**Pg**	**18 37 15.8**	**+0.2**
GULT	**Gulveren**	**1.12**	**250**	*e*PG	**Pg**	**18 37 21.6**	**-1.0**
GULT	**Gulveren**	**1.12**	**250**	*e*Pg	**Pg**	**18 37 21.7**	**-0.9**
LOD	**Lodumlu**	**1.14**	**144**	*e*PN	**Pn**	**18 37 25.0**	**+0.9**
LOD	**Lodumlu**	**1.14**	**144**	*e*Pn	**Pn**	**18 37 25.0**	**+1.0**
CANT	**Cankiri**	**1.32**	**99**	*e*PN	**Pn**	**18 37 28.1**	**+1.5**
GPA	**Golpazari**	**1.32**	**247**	*e*PN	**Pn**	**18 37 25.4**	**-1.2**
GPA	**Golpazari**	**1.32**	**247**	*e*Pn	**Pn**	**18 37 25.4**	**-1.1**
BALT	**Daday**	**1.33**	**57**	*i* P	**Pg**	**18 37 25.7**	**-0.8**
BALT				*i* S	**Sg**	**18 37 44.1**	**+0.4**
BALT	**Daday**	**1.33**	**57**	*i* P	**Pg**	**18 37 25.7**	**-0.8**
BALT				*i* S	**Sg**	**18 37 44.1**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.41**	**192**	*e*PN	**Pn**	**18 37 28.1**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.41**	**192**	*e*Pn	**Pn**	**18 37 28.1**	**+0.5**
ESKT	**Eskisehir**	**1.53**	**212**	*i* P	**Pn**	**18 37 28.9**	**-0.4**
ESKT				*i* S	**Sn**	**18 37 49.9**	**+0.1**
SEYT	**Eskypehyr**	**1.53**	**212**	*i* P	**Pn**	**18 37 28.9**	**-0.5**
SEYT				*i* S	**Sn**	**18 37 49.9**	**+0.1**
AFSR	**Af¯ar-Bala (A**	**1.64**	**146**	*e*PN	**Pb**	**18 37 32.5**	**+0.5**
AFSR	**Af¯ar-Bala (A**	**1.64**	**146**	*e*Pn	**Pb**	**18 37 32.6**	**+0.6**
CAVI	**Cavuskoy**	**1.69**	**249**	*e*PN	**Pn**	**18 37 31.0**	**-0.5**
CAVI	**Cavuskoy**	**1.69**	**249**	*e*Pn	**Pn**	**18 37 31.0**	**-0.5**
ADVT	**Abdulvahap**	**1.69**	**257**	*e*PN	**Pn**	**18 37 31.1**	**-0.5**
ADVT	**Abdulvahap**	**1.69**	**257**	*e*Pn	**Pn**	**18 37 31.1**	**-0.5**
HRT	**Hereke**	**1.69**	**271**	*e*PN	**Pn**	**18 37 31.0**	**-0.6**
HRT	**Hereke**	**1.69**	**271**	*e*Pn	**Pn**	**18 37 31.0**	**-0.6**
KIZT	**Kizilcal**	**1.94**	**180**	*e*PN	**Pn**	**18 37 35.9**	**+0.9**
KIZT	**Kizilcal**	**1.94**	**180**	*e*Pn	**Pn**	**18 37 35.9**	**+0.9**
BZK	**Bozkurt**	**1.95**	**54**	*e*PN	**Pb**	**18 37 36.7**	**-0.5**
BZK	**Bozkurt**	**1.95**	**54**	*e*Pn	**Pb**	**18 37 36.7**	**-0.5**
KAMT	**Kaman**	**2.01**	**136**	*e*PN	**Pb**	**18 37 38.0**	**-0.3**
KAMT	**Kaman**	**2.01**	**136**	*e*Pn	**Pb**	**18 37 38.0**	**-0.3**
CORM	**Corum**	**2.18**	**106**	*e*PN	**Pb**	**18 37 40.4**	**-0.8**
CORM	**Corum**	**2.18**	**106**	*e*Pn	**Pb**	**18 37 40.4**	**-0.8**

IDC 08 18:37:50.9±11.0,3°.84N×96°.84E,h0km,mb3.5/2, mb1 3.8/3,mb1mx3.4/21,mbtmp3.5/3,ML3.2/1,Error ellipse: s-maj=313.5km s-min=47.4km az=77.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.0nm,0.3s,baz=194,slow=11,SNR=3.9	**14.67**	**8**	Pn	Pn	18 41 19.7	-0.2
WRA	**Warramunga Arr** 0.8nm,0.6s,baz=302,slow=9.2,SNR=6.0	**43.77**	**124**	P	P	18 45 58.5	-0.1
ASAR	**Alice Springs** 0.3nm,0.5s,baz=301,slow=7.4,SNR=15	**45.30**	**129**	P	P	18 46 10.8	0.0

*ASRS **08** 18:42:30.5±4.0,52°.10N×99°.91E,h15km,Ms3.6/2*
*MOS **08** 18:42:39.7±1.6,51°.98N×99°.44E,h17km,mb4.4/3,Error ellipse: s-maj=15.3km s-min=12.4km az=3.9*
MOS Felt (III) at Orlik.
*BYKL **08** 18:42:40.3±0.8,51°.89N×99°.57E,FELT I=III-IV MSK at Orlik*
*IDC **08** 18:42:41.0±1.5,50°.95N×98°.77E,h0km,mb3.6/2, mb1 3.4/5,mb1mx3.2/27,mbtmp3.4/5,ML2.4/1,Error ellipse: s-maj=80.8km s-min=14.9km az=23.0*
*NEIC **08** 18:42:41.0±0.7,51°.70N×99°.35E,h10km,mb3.3/2,Error ellipse: s-maj=29.9km s-min=8.4km az=195.0*
ISC 08 18:42:40.1±0.4,51°.92N±0°.04×99°.72E±0°.03,h10km,n58, σ1°67/95,mb3.4/4,8C-12D,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**0.62**	**5**	⇓*i*PG	**Pg**	**18 42 52.4**	**+0.2**
ORL				*e*		18 43 01.3	
ORL				pmax	pmax		
	comp=Z,2μm,0.3s						
ORL				smax			
	comp=E,7μm,0.5s						
ORL	**Orlik** comp=E,2μm,0.4s	**0.62**	**5**	⇓*i*Pg	**Pg**	**18 42 52.4**	**+0.2**
ORL				⇓*i*Pg	**Pg**	**18 42 52.4**	**+0.2**
	comp=E,500nm,0.4s						
ORL				⇓*i*Pg	**Pg**	**18 42 52.4**	**+0.2**
	comp=E,2μm,0.4s						
ORL				Pmax		18 42 52.5	
	comp=E,2μm,0.4s						
ORL				*i* Sg	**Sg**	**18 43 01.3**	**+1.0**
ORL				Smax		18 43 01.6	
	comp=E,7μm,0.5s						
MOY	**Mondy**	**0.83**	**107**	⇑*i*PG	**Pg**	**18 42 53.0**	**-3.1**
MOY				*e*S	**Sg**	**18 43 09.7**	**+2.8**
MOY				pmax	pmax		
	comp=Z,2μm,0.3s						
MOY				smax			
	comp=N,5μm,0.4s						
MOY	**Mondy** comp=N,210nm,0.6s	**0.83**	**107**	⇓*i*Pg	**Pg**	**18 42 57.0**	**+0.9**
MOY				⇑*i*Pg	**Pg**	**18 42 57.0**	**+0.9**
	comp=N,750nm,0.6s						
MOY				⇑*i*Pg	**Pg**	**18 42 57.0**	**+0.9**
	comp=N,2μm,0.6s						
MOY				Pmax		18 42 57.4	
	comp=N,2μm,

TRG	**Tyrgan**	**4.15**	**76**	*e*PN	**Pn**	**18 43 46.1**	**+2.6**
TRG				*e*		18 43 56.3	
TRG				*e*S	**Sn**	**18 44 33.4**	**+1.4**
TRG				*e*		18 44 49.4	
TRG				pmax	pmax		
	comp=Z,71nm,0.3s						
TRG				smax			
	comp=N,470nm,0.3s						
TRG	**Tyrgan**	**4.15**	**76**	*e*Pn	**Pn**	**18 43 46.2**	**+2.7**
TRG				*e*		18 43 48.7	
TRG				*e*Pg	**Pg**	**18 43 56.6**	**-3.0**
TRG				Pmax		18 43 59.5	
	comp=N,66nm,0.5s						
TRG				*e*		18 44 40.1	
TRG				*e*Sg	**Sg**	**18 44 52.3**	**-1.0**
TRG				*e*		18 44 58.0	
TRG				max		18 44 59.1	
	comp=N,465nm,0.3s						
KAB	**Kabansk**	**4.29**	**86**	*e*PN	**Pg**	**18 43 57.5**	**-4.7**
KAB	**Kabansk**	**4.29**	**86**	*e*	**Pn**	**18 43 51.0**	**+5.6**
KAB			⇑	*i*Pg	**Pg**	**18 44 00.0**	**-2.2**
KAB				Pmax		18 44 01.3	
	comp=N,137nm,0.3s						
KAB				*e*		18 44 46.7	
KAB				*e*Sg	**Sg**	**18 44 57.5**	**-0.2**
KAB				Smax		18 45 07.9	
	comp=N,2μm,1.7s						
HRMR	**Khuramsha**	**4.50**	**91**	*e*	**Pn**	**18 43 55.2**	**+6.9**
HRMR				*e*		18 43 58.8	
HRMR				*e*Pg	**Pg**	**18 44 02.3**	**-4.0**
HRMR				Pmax		18 44 12.3	
	comp=N,132nm,0.6s						
HRMR				*e*		18 44 39.4	
HRMR				*e*Sg	**Sg**	**18 45 02.6**	**-2.0**
HRMR				Smax		18 45 07.2	
	comp=N,2μm,0.6s						
ZRHB	**Zarechye**	**4.61**	**79**	*e*Pn	**Pn**	**18 43 53.6**	**+3.8**
ZRHB				*e*Pg	**Pg**	**18 44 05.8**	**-2.6**
ZRHB				*e*		18 44 11.8	
ZRHB				max		18 44 27.1	
	comp=N,312nm,0.9s						
ZRHB				*e*		18 44 55.7	
ZRHB				*e*Sg	**Sg**	**18 45 07.6**	**-0.5**
ZRHB				*e*		18 45 15.2	
ZRHB				max		18 45 24.7	
	comp=N,3μm,1.1s						
UUDB	**Ulan-Yde**	**4.92**	**87**	*e*Pn	**Pn**	**18 43 53.4**	**-0.6**
UUDB				*e*Pg	**Pg**	**18 44 09.8**	**-4.5**
UUDB				Pmax		18 44 19.9	
	comp=N,61nm,1.1s						
UUDB				*e*		18 45 00.5	
UUDB				*i* Sg	**Sg**	**18 45 15.9**	**-2.1**
UUDB				Smax		18 45 19.3	
	comp=N,395nm,1.1s						
OGRR	**Ongureny**	**5.08**	**67**	*e*PN	**Pn**	**18 43 58.5**	**+2.2**
OGRR				*e*		18 44 13.1	
OGRR				*e*		18 45 19.0	
OGRR				pmax	pmax		
	comp=Z,54nm,0.3s						
OGRR				smax			
	comp=N,509nm,0.9s						
OGRR	**Ongureny**	**5.08**	**67**	⇓*i*Pn	**Pn**	**18 43 58.6**	**+2.3**
OGRR				⇑*i*		18 44 02.4	
OGRR				*e*		18 44 11.5	
OGRR				*e*Pg	**Pg**	**18 44 12.4**	**-5.0**
OGRR				Pmax		18 44 18.6	
	comp=N,58nm,0.3s						
OGRR				*e*		18 45 00.6	
OGRR				*e*Sg	**Sg**	**18 45 19.0**	**-4.2**
OGRR				*e*		18 45 21.8	
OGRR				max		18 45 25.8	
	comp=N,507nm,0.9s						
CERR	**Cheremushki**	**5.17**	**284**	*e*PN	**Pb**	**18 44 08.6**	**-2.0**
CERR				*e*		18 45 13.1	
CERR	**Cheremushki**	**5.17**	**284**	*e*Pg	**Pb**	**18 44 08.6**	**-2.0**
CERR				*e*Sg	**Sb**	**18 45 13.1**	**+0.4**
MXMB	**Maximikha**	**5.67**	**73**	⇑*i*Pn	**Pn**	**18 44 06.5**	**+2.3**
MXMB				*e*		18 44 11.3	
MXMB				*e*		18 44 18.6	
MXMB				*e*Pg	**Pg**	**18 44 24.2**	**-4.3**
MXMB				*e*		18 44 26.9	
MXMB				max		18 44 29.0	
	comp=N,31nm,0.4s						
MXMB				*e*		18 45 16.0	
MXMB				*e*Sg	**Sg**	**18 45 39.0**	**-2.8**
MXMB				Smax		18 45 52.1	
	comp=N,493nm,0.9s						
SONM	**Songino Array**	**5.94**	**131**	Pn	**Pn**	**18 44 09.2**	**+1.1**
	comp=N,0.1nm,0.3s,baz=306,slow=12,SNR=2.7						
SONM				Pg	**Pg**	**18 44 26.3**	**-7.6**
	comp=N,9.3nm,0.3s,baz=307,slow=17,SNR=71						
SONM				Sn	**Sn**	**18 45 16.4**	**+0.2**
	comp=N,3.8nm,0.3s,baz=311,slow=20,SNR=4.2						
SONM				Lg		18 45 48.4	
	comp=N,19nm,0.3s,baz=304,slow=27,SNR=15						
SONM	**Songino Array**	**5.94**	**131**	PN	**Pn**	**18 44 09.2**	**+1.1**
SONM						18 44 26.3	
SONM						18 45 16.4	
SONM						18 45 48.4	
SONM				pmax	pmax		
	comp=Z,9.0nm,0.3s						
SONM				smax			
	comp=N,4.0nm,0.3s						
SYVR	**Suvo**	**6.47**	**70**	⇑*i*Pn	**Pn**	**18 44 18.0**	**+2.6**
SYVR				*e*		18 44 20.7	
SYVR				*e*Pg	**Pg**	**18 44 38.8**	**-5.2**
SYVR				Pmax		18 44 51.8	
	comp=N,13nm,0.7s						
SYVR				*e*		18 45 35.8	
SYVR				*e*Sg	**Sg**	**18 46 03.7**	**-4.1**
SYVR				Smax		18 46 08.3	
	comp=N,209nm,1.9s						
SYVR				*e*		18 46 09.4	
NIZ	**Nizh Angarsk**	**6.98**	**53**	*e*Pn	**Pn**	**18 44 26.9**	**+4.7**
NIZ				*e*		18 44 30.7	
NIZ				max		18 44 45.9	
	comp=N,34nm,1.3s						
NIZ				Pg	**Pg**	**18 44 46.7**	**-6.9**
NIZ				*e*		18 44 49.9	
NIZ				*e*Sn	**Sn**	**18 45 42.1**	**+0.6**
NIZ				*e*		18 45 45.8	
NIZ				*i* Sg	**Sg**	**18 46 18.0**	**-5.8**
NIZ				Smax		18 46 20.9	
	comp=N,555nm,1.3s						
TASR	**Tashtagol**	**7.30**	**281**	*e*PN	**Pb**	**18 44 41.7**	**-5.1**
TASR				*e*		18 46 19.5	
TASR	**Tashtagol**	**7.30**	**281**	*e*Pg	**Pb**	**18 44 41.7**	**-5.1**
TASR				*e*Sg	**Sb**	**18 46 19.5**	**+5.6**
YLYR	**Ulyunkhan**	**7.45**	**62**	*e*PG	**Pb**	**18 44 54.4**	**+5.0**
YLYR				*e*		18 46 31.9	
YLYR				pmax	pmax		
	comp=Z,13nm,0.5s						
YLYR				smax			
	comp=N,182nm,1.7s						
YLYR	**Ulyunkhan**	**7.45**	**62**	*e*	**Pn**	**18 44 31.5**	**+2.7**
YLYR				*e*Pg	**Pg**	**18 44 54.5**	**-8.2**
YLYR				Pmax		18 44 59.1	
	comp=N,13nm,0.3s						
YLYR				*e*		18 46 01.7	
YLYR				*e*Sg	**Sg**	**18 46 31.6**	**-7.5**
YLYR				Smax		18 46 36.8	
	comp=N,182nm,2.3s						
YLYR				*e*		18 46 47.2	
KMO	**Kumora**	**7.86**	**55**	*e*PN	**Pn**	**18 44 36.7**	**+2.4**
KMO	**Kumora**	**7.86**	**55**	⇓*i*Pn	**Pn**	**18 44 36.8**	**+2.5**
KMO				max		18 44 47.3	
	comp=N,24nm,0.4s						
KMO				*e*Pg	Pn	18 45 04.2	+30
KMO				*e*		18 46 07.1	
KMO				*e*Sg	Sn	18 46 47.6	+44
KMO				Smax		18 47 04.3	
	comp=N,264nm,1.5s						
YOA	**Uoyan**	**8.23**	**54**	*e*Pn	**Pn**	**18 44 44.6**	**+5.2**
YOA				max		18 45 01.4	
	comp=N,58μm,1.5s						
YOA				*e*Pg	Pn	18 45 12.0	+33
YOA				*e*		18 46 15.9	
YOA				*e*Sg	Sn	18 47 00.2	+48
YOA				Smax		18 47 07.8	
	comp=N,790nm,1.8s						
ELT	**Yel'tsovka**	**8.32**	**285**	*e*Sg	Sx	18 46 52.7	
CIT	**Chita**	**8.55**	**84**	*e*	**Sn**	**18 46 22.0**	**+1.9**
CIT				*e*Sg	Sn	18 47 08.2	+48
CIT				Smax		18 47 19.0	
	comp=N,112nm,1.2s						
ZALV	**Zalesovo Beam**	**9.23**	**289**	Pn	**Pn**	**18 44 51.7**	**-1.4**
	comp=N,0.2nm,0.3s,baz=90,slow=12,SNR=2.5						
ZALV				Pg	Pn	18 45 24.3	+31
	comp=N,0.7nm,0.3s,baz=92,slow=16,SNR=6.7						
ZALV				Lg		18 47 21.6	
	comp=N,1.1nm,0.3s,baz=102,slow=21,SNR=3.8						
ZALV	**Zalesovo Beam**	**9.23**	**289**	Pn	**Pn**	**18 44 51.7**	**-1.4**
ZALV				Pg	Pn	18 45 24.3	+31
ZALV				Lg		18 47 21.6	
UKR	**Ust'-Kan**	**9.39**	**270**	*e*Sg	Sx	18 47 26.6	
NVS	**Novosibirsk**	**10.27**	**293**	*e*Sg	Sx	18 47 50.9	
CRS	**Chara**	**11.89**	**58**	*e*	Px	18 46 07.1	
CRS				*e*		18 48 14.5	
CRS				*e*		18 48 44.7	
CRS				*e*Sg	Sx	18 48 52.5	
CRS				Smax		18 49 02.6	
	comp=N,86nm,2.0s						
TUP	**Tupik**	**12.39**	**70**	*e*	Sx	18 46 31.0	
TUP				max		18 46 33.4	
	comp=N,2.0nm,1.6s						
TUP				*e*		18 48 23.6	
TUP				*e*		18 48 55.8	
TUP				*i* Sg	Sx	18 49 03.9	
TUP				Smax		18 49 38.0	
	comp=N,61nm,1.8s						
MKAR	**Makanchi Array**	**12.46**	**253**	Pg	Px	18 46 11.7	
	comp=N,0.1nm,0.3s,baz=62,slow=15,SNR=3.4						
HIA	**Hailar**	**12.99**	**94**	*e*	Sx	18 49 11.8	
HIA				*e*Sg	Sx	18 49 24.8	
BVAR	**Borovoye Array**	**17.85**	**285**	P	**Pn**	**18 46 46.7**	**-1.6**
	baz=92,slow=10,SNR=5.5						
KKAR	**Karatay Array**	**21.49**	**257**	*e*P	**P**	**18 47 27.6**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
KKAR	**Karatay Array**	**21.49**	**257**	*e*P	**P**	**18 47 27.6**	**-1.1**
	comp=Z,0.5nm,0.5s,mb3.1						
KSRS	**Korea Array**	**24.52**	**115**	P	**P**	**18 48 04.0**	**+4.5**
	comp=Z,1.1nm,0.8s,mb3.4,baz=316,slow=11,SNR=4.8						
KSRS	**Korea Array**	**24.52**	**115**	P	**P**	**18 48 04.0**	**+4.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
ABKAR	**Akbulak array**	**25.18**	**280**	*e*P	**P**	**18 48 04.4**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.2						
AKTK	**Aktyubinsk**	**25.93**	**283**	P	**P**	**18 48 12.2**	**-0.1**
AKTO	**Aktyubinsk**	**25.93**	**283**	P	**P**	**18 48 12.2**	**-0.1**
	comp=Z,0.5nm,0.4s,mb3.4,baz=96,slow=11,SNR=3.2						
AKTO	**Aktyubinsk**	**25.93**	**283**	P	**P**	**18 48 12.2**	**0.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						

DJA ***08*** *18:52:00, 13.°69S×167.°86E, h102km, Mw7.5/22*
SZGRF ***08*** *18:52:03.9, 11.°86S×168.°16E, h33km, mb6.7, Santa Cruz Islands region*
NOU ***08*** *18:52:05.2±1.2, 13.°18S×167.°50E, h30km*
NEIC ***08*** *18:52:07.0±0.1, 13.°50S×166.°97E, h110km, mb6.4/202, ME6.8, MW6.9, MW6.9, Error ellipse: s-maj=3.5km s-min=2.7km az=152.0 Broadband fault plane solution: P waves. NP1:φs180.00000°, δ45.00000°, λ90.00000°. NP2:φs0.00000°, δ45.00000°, λ90.00000°. Principal axes: T Plg90.0000°, Azm0.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm90.0000°; Moment Tensor Solution. s95 Moment tensor: Scale 10^19 Nm; Mrr3.25; Mθθ-0.32; Mφφ-2.93; Mrθ0.03; Mrφ-0.02; Mθφ0.01; Best double couple: M0 3.10000×10^19 NP1:φs1.00000°, δ45.00000°, λ91.00000°. NP2:φs180.00000°, δ45.00000°, λ89.00000°. Principal axes: T 3.2500, Plg89.0000°, Azm353.0000°; N -0.3200, Plg0.0000°, Azm180.0000°; P -2.9300, Plg0.0000°, Azm90.0000°; Two events about 6 seconds apart. Depth from synthetics of broadband displacement seismograms based on first event. Energy computed from BB mechanism.*
NEIC Felt at Honiara, Solomon Islands.
ISCJB ***08*** *18:52:07.3±0.1, 13.°53S±0.°02×166.°93E±0.°02, h123km, mb6.5/266 Error ellipse: s-maj=2.3km s-min=2.1km az=42.8*
MOS ***08*** *18:52:07.7±0.8, 13.°49S×166.°93E, h127km, mb6.5/39, MS6.5/49, Error ellipse: s-maj=7.0km s-min=6.4km az=137.2*
IDC ***08*** *18:52:08.1±0.5, 13.°54S×166.°96E, h116km±3km, mb6.0/32, mb1 6.0/33, mb1mx6.0/33, mbtmp6.1/33, MS6.4/25, Ms1 6.4/25, ms1mx6.3/33, Error ellipse: s-maj=8.8km s-min=8.5km az=36.0*
TEH ***08*** *18:52:08.0, 13.°51S×166.°97E, h122km*
IGIL ***08*** *18:52:09.2, 13.°51S×166.°97E, h122km, MS6.7*
BJI ***08*** *18:52:09.5, 13.°03S×167.°01E, h129km, mB7.2/55, mb6.7/71*
GCMT ***08*** *18:52:14.4±0.0, 13.°37S×166.°75E, h125km, MW6.9, Moment Tensor Solution. s108, c280; s99, c249; Moment tensor: Scale 10^19 Nm; Mrr3.21±.01; Mθθ-0.42±.01; Mφφ-2.79±.01; Mrθ-0.16±.01; Mrφ-0.10±.01; Mθφ-0.59±.01; Best double couple: M0 3.10000×10^19 NP1:φs0.00000°, δ39.00000°, λ87.00000°. NP2: φs185.00000°, δ51.00000°, λ93.00000°. Principal axes: T 3.2700, Plg84.0000°, Azm112.0000°; N -0.4200, Plg2.0000°, Azm3.0000°; P -2.8500, Plg6.0000°, Azm273.0000°; Data Used: II IU IC G. LP body wave period 50 sec. Mantle waves from 107 sta. Surface waves: sta=110, comp=284, per= 50.*
ISC 08 18:52:09.0±0.1, 13.°52S±0.°02×166.°99E±0.°02, h125km, h125km±.7km:pP-P, n2067, σ0=71/1026, mb6.5/266, 373C-237D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.00**	**300**	P	**Pn**	**18 54 02.5**	**-0.2**
	827nm,0.3s,baz=140,slow=8.9,SNR=306						
HNR				S	**Sn**	**18 55 31.4**	**-0.2**
	3μm,0.3s,baz=50,slow=15,SNR=8.3						
HNR	**Honiara**	**8.00**	**300**	⇓*i*P	**Pn**	**18 54 02.1**	**-0.6**
HNR				pmax	pmax		
	comp=Z,10μm,1.0s						
HNR	**Honiara**	**8.00**	**300**	⇓*i*P	**Pn**	**18 54 02.1**	**-0.6**
	comp=Z,46μm,1.0s						
DZM	**Mont Dzumac**	**8.52**	**183**	*e*Pn	**Pn**	**18 54 11.1**	**+1.5**
	comp=Z,2μm,0.3s						
DZM				*e*Sn	**Sn**	**18 55 44.8**	**+0.8**
	comp=Z,2μm,0.3s						
DZM	**Mont Dzumac**	**8.52**	**183**	*e*P	**Pn**	**18 54 10.2**	**+0.6**
DZM				*e*S	**Sn**	**18 55 44.0**	**0.0**
NOUC	**Port Laguerre**	**8.56**	**184**	*e*P	**Pn**	**18 54 10.8**	**+0.7**
NOUC				*e*S	**Sn**	**18 55 44.0**	**-1.0**
BAYA	**Yate Dam**	**8.59**	**181**	*e*P	**Pn**	**18 54 11.4**	**+0.8**
BAYA				*e*S	**Sn**	**18 55 44.2**	**-1.5**
NORM	**Noumea**	**8.68**	**183**	*e*P	**Pn**	**18 54 12.9**	**+1.3**
NORM				*e*S	**Sn**	**18 55 45.7**	**-2.0**
PLUM	**Mont Dore**	**8.71**	**182**	*e*P	**Pn**	**18 54 12.9**	**+0.7**
PLUM				*e*S	**Sn**	**18 55 48.3**	**-0.4**
MSVF	**Nonsavu**	**11.45**	**113**	⇓*i*P	**Pn**	**18 54 53.3**	**+4.4**
	comp=Z,39μm,1.8s						
MSVF	**Nonsavu**	**11.45**	**113**	Pn	**Pn**	**18 54 53.0**	**+4.1**
	comp=Z,42μm,1.3s						
FUNA	**Funafuti**	**12.97**	**69**	*e*P	**Pn**	**18 55 11.4**	**+2.5**
	comp=Z,11μm,1.3s						
EIDS	**Eidsvold**	**19.05**	**229**	⇑*i*P	**P**	**18 56 23.0**	**+1.3**
	comp=Z,4μm,1.2s						
PMG	**Port Moresby**	**19.85**	**280**	*e*P	**P**	**18 56 31.2**	**+0.8**
PMG				pmax	pmax		
	comp=Z,5μm,1.3s						
PMG	**Port Moresby**	**19.85**	**280**	*e*P	**P**	**18 56 31.2**	**+0.7**
	comp=Z,5μm,1.3s						
PMG	**Port Moresby**	**19.85**	**280**	P	**P**	**18 56 32.3**	**+1.9**
	comp=Z,3μm,2.0s						
AFI	**Afiamalu**	**20.64**	**94**	P	**P**	**18 56 40.2**	**+1.3**
	comp=Z,3μm,1.1s,baz=256,slow=6.9,SNR=78						
AFI				S	**S**	**19 00 21.4**	**-1.3**
	comp=Z,112nm,0.9s,baz=192,slow=21,SNR=2.1						
AFI				ScP	ScP	19 04 11.5	+1.8
	comp=Z,121nm,0.9s,baz=227,slow=5.7,SNR=5.4						
AFI	**Afiamalu**	**20.64**	**94**	*e*P	**P**	**18 56 40.0**	**+1.2**
	comp=Z,4μm,1.1s						
CTA	**Charters Tower**	**20.88**	**249**	P	**P**	**18 56 41.8**	**+0.3**
	comp=Z,486nm,0.7s,baz=77,slow=12,SNR=179						
CTA				S	**S**	**19 00 25.3**	**-2.2**
	comp=Z,64nm,0.9s,baz=231,slow=23,SNR=1.3						
CTA				LR	LR	19 03 39.2	
	comp=Z,316μm,21.6s,baz=42,slow=33						
CTA	**Charters Tower**	**20.88**	**249**	*e*P	**P**	**18 56 41.5**	**+0.1**
	comp=Z,514nm,0.6s						
CTA				*e*S	**S**	**19 00 25.0**	**-2.5**
CTA				*e*PCS	PcS	19 04 24.0	+0.9
CTA				*e*SCS	ScS	19 07 56.8	+2.8
CTA	**Charters Tower**	**20.88**	**249**	P	**P**	**18 56 41.8**	**+0.3**
CTA				S	**S**	**19 00 25.3**	**-2.2**
CTA				pmax	pmax		
	comp=Z,486nm,0.7s						
CTA				smax			
	comp=N,64nm,0.9s						
CTA				MLR	MLR		
	comp=Z,316μm,21.6s						
CTAO	**Charters Tower**	**20.88**	**249**	*e*P	**P**	**18 56 41.6**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,4μm,1.5s						
CTAO	**Charters Tower**	**20.88**	**249**	*e*P	**P**	**18 56 41.6**	**+0.2**
	comp=Z,4μm,1.5s						
ARMA	**Armidale**	**21.99**	**218**	*e*P	**P**	**18 56 54.5**	**+1.4**
ARMA				*e*PCP	PcP	19 00 48.7	+1.8
ARMA				*e*S	**S**	**19 00 49.9**	**+2.2**
ARMA				*e*SCP	ScP	19 04 15.6	+2.8
ARMA				*e*SCS	ScS	19 08 01.9	+4.2
ARMA	**Armidale**	**21.99**	**218**	*e*P	**P**	**18 56 53.9**	**+0.7**
	comp=Z,10μm,1.4s,mb7.0						
KWAJ	**Kwajalein Atol**	**22.18**	**2**	⇑*i*P	**P**	**18 56 54.3**	**-0.9**
	comp=Z,6μm,1.5s,mb6.7						
OUZ	**Omahuta**	**22.42**	**166**	*e*P	**P**	**18 56 58.5**	**+1.0**
	comp=Z,2μm,1.4s,mb6.3						
COEN	**Coen**	**23.13**	**266**	⇑*i*P	**P**	**18 57 05.0**	**+0.5**
	comp=Z,257nm,1.3s,mb5.4						
COEN	**Coen**	**23.13**	**266**	P	**P**	**18 57 05.5**	**+1.0**
	comp=Z,7μm,1.1s,mb6.9						
MGCD	**Mangrove Creek**	**24.36**	**214**	⇑*i*P	**P**	**18 57 16.2**	**+0.7**
	comp=Z,5μm,0.9s,mb6.8						
MKAZ	**Moumakai**	**24.61**	**164**	PN	**P**	**18 57 19.3**	**+1.6**
MKAZ				pP		18 57 45.2	
RIV	**Riverview**	**24.81**	**213**	*e*P	**P**	**18 57 20.3**	**+0.7**
RIV				*e*PCP	PcP	19 00 54.4	+1.6
RIV				*e*SCP	ScP	19 04 23.1	+2.8
HIZ	**Hauiti**	**25.86**	**166**	ScP	ScP	19 04 25.1	+1.9
URZ	**Urewera**	**26.23**	**162**	P	**P**	**18 57 31.4**	**-1.0**
	comp=Z,34nm,0.4s,mb5.2,baz=307,slow=5.3,SNR=26						
URZ				S	**S**	**19 01 55.8**	**+0.4**
	comp=Z,58nm,1.0s,baz=176,slow=18,SNR=2.3						
URZ				LR	LR	19 06 08.3	
	comp=Z,34μm,18.3s,baz=174,slow=32						
URZ	**Urewera**	**26.23**	**162**	*e*P	**P**	**18 57 31.0**	**-1.4**
	comp=Z,4μm,1.9s,mb6.5						
URZ	**Urewera**	**26.23**	**162**	*e*PN	**P**	**18 57 31.8**	**-0.6**
PUZ	**Puketiti**	**26.43**	**160**	PN	**P**	**18 57 31.4**	**-2.8**
MWZ	**Matawai**	**26.43**	**161**	PN	**P**	**18 57 34.2**	**+0.1**
MMPI	**Merauke**	**26.58**	**278**	P	**P**	**18 57 38.0**	**+2.2**
MMPI	**Merauke**	**26.58**	**278**	P	**P**	**18 57 36.8**	**+1.0**
	comp=Z,2μm,2.0s,mb6.3						
WPVZ	**Whakapapa**	**26.68**	**165**	P	**P**	**18 57 39.7**	**+3.3**
FWVZ	**Far West T-bar**	**26.73**	**165**	*e*PN	**P**	**18 57 39.6**	**+2.8**
BKZ	**Black Stump Fm**	**26.89**	**164**	P	**P**	**18 57 40.2**	**+1.9**
BKZ	**Black Stump Fm**	**26.89**	**164**	*e*PN	**P**	**18 57 38.7**	**+0.4**
CNB	**Canberra Magne**	**26.90**	**213**	*e*P	**P**	**18 57 38.9**	**+0.5**
CNB				*e*PCP	PcP	19 00 58.9	+1.4
CNB				*e*SCP	ScP	19 04 28.6	+2.2
CNB				*e*SCS	ScS	19 08 20.9	+3.5
NMHZ	**Naumai**	**26.92**	**163**	PN	**P**	**18 57 39.4**	**+0.9**
BHHZ	**Black Hill Sta**	**27.08**	**164**	PN	**P**	**18 57 40.0**	**0.0**
CAN	**Canberra**	**27.10**	**214**	*e*P	**P**	**18 57 40.8**	**+0.6**
CAN				pmax	pmax		
	comp=Z,3μm,1.4s,mb6.6						
CAN	**Canberra**	**27.10**	**214**	*e*P	**P**	**18 57 40.8**	**+0.6**
	comp=Z,3μm,1.4s,mb6.6						
KNZ	**Kokohu**	**27.10**	**162**	*e*PN	**P**	**18 57 39.4**	**-0.8**
PNHZ	**Pukenui**	**27.52**	**165**	PN	**P**	**18 57 43.4**	**-0.4**
KAHZ	**Kahuranaki**	**27.59**	**163**	*e*PN	**P**	**18 57 44.0**	**-0.4**
TSZ	**Takapari Road**	**27.59**	**165**	PN	**P**	**18 57 44.1**	**-0.4**
QRZ	**Quartz Range**	**27.64**	**171**	*e*PN	**P**	**18 57 46.9**	**+2.1**
DUWZ	**D'Urville Isla**	**27.85**	**169**	*e*PN	**P**	**18 57 48.6**	**+1.8**
MRZ	**Mangatainoka R**	**28.07**	**166**	PN	**P**	**18 57 48.2**	**-0.5**
MRZ				PcP	PcP	19 01 00.1	-0.2
MRZ				SN	**S**	**19 02 23.0**	**-1.3**
OGWZ	**Otaki Gorge**	**28.12**	**167**	*e*PN	**P**	**18 57 48.9**	**-0.3**
BFZ	**Birch Farm**	**28.25**	**165**	P	**P**	**18 57 50.9**	**+0.6**
BFZ	**Birch Farm**	**28.25**	**165**	PN	**P**	**18 57 49.2**	**-1.2**
BFZ				SN	**S**	**19 02 24.5**	**-2.6**
HOWZ	**Holdsworth Sta**	**28.28**	**166**	*e*PN	**P**	**18 57 50.2**	**-0.4**
CAW	**Cannon Point**	**28.38**	**167**	PN	**P**	**18 57 51.5**	**0.0**
TUWZ	**Tuamarina**	**28.46**	**169**	*e*PN	**P**	**18 57 52.9**	**+0.7**
SNZO	**South Karori**	**28.50**	**168**	*e*P	**P**	**18 57 50.8**	**-1.7**
	comp=Z,1μm,1.7s,mb6.1						
SNZO	**South Karori**	**28.50**	**168**	PN	**P**	**18 57 52.8**	**+0.3**
MTW	**Mount Morrison**	**28.52**	**166**	PN	**P**	**18 57 52.3**	**-0.5**
THZ	**Tophouse**	**28.61**	**171**	PN	**P**	**18 57 53.4**	**-0.1**
THZ				PcP	PcP	19 01 00.7	-0.9
MSWZ	**Moikau Station**	**28.71**	**167**	*e*PN	**P**	**18 57 53.7**	**-0.7**
PAWZ	**Paruwai Farm**	**28.72**	**167**	*e*PN	**P**	**18 57 53.9**	**-0.6**
TRWZ	**Traveller**	**28.80**	**166**	PN	**P**	**18 57 55.0**	**-0.1**
KHZ	**Kahutara**	**29.35**	**170**	*e*P	**P**	**18 57 58.0**	**-2.1**
	comp=Z,761nm,1.4s,mb6.1						
LTZ	**Lake Taylor**	**29.52**	**172**	PN	**P**	**18 58 01.8**	**+0.3**
STKA	**Stephens Creek**	**29.58**	**228**	P	**P**	**18 58 02.6**	**+0.3**
	comp=Z,798nm,0.8s,mb6.4,baz=41,slow=7.4,SNR=706						
STKA				PcP	PcP	19 01 04.3	+0.1
	comp=Z,733nm,1.1s,baz=65,slow=2.8,SNR=5.7						
STKA				S	**S**	**19 02 46.2**	**-2.1**
	comp=Z,51nm,0.9s,baz=266,slow=20,SNR=1.6						
STKA				ScP	ScP	19 04 37.0	+2.1
	comp=Z,246nm,0.9s,baz=52,slow=3.4,SNR=12						
STKA				PKiKP	PKiKP	19 08 36.7	-0.5
	comp=Z,36nm,0.9s,baz=347,slow=23,SNR=5.1						
STKA				LR	LR	19 10 14.1	
	comp=Z,109μm,18.1s,baz=55,slow=37						
STKA	**Stephens Creek**	**29.58**	**228**	*e*P	**P**	**18 58 02.3**	**0.0**
	comp=Z,2μm,1.5s,mb6.5						
STKA				*e*PCP	PcP	19 01 04.3	0.0
STKA				*e*S	**S**	**19 02 48.9**	**+0.6**
STKA				*i* SCP	ScP	19 04 36.9	+2.1
STKA				*e*PCS	PcS	19 04 45.3	-2.2
STKA				*e*SCS	ScS	19 08 30.3	+0.5
STKA				*e*PKPPKP		19 31 19.3	
STKA	**Stephens Creek**	**29.58**	**228**	P	**P**	**18 58 02.6**	**+0.3

comp=Z,110nm,1.1s,baz=85,slow=3.6,SNR=7.4
WRA PKiKP PKiKP 19 08 38.5 -0.5
comp=Z,46nm,1.0s,baz=360,slow=0.5,SNR=23
WRA LR LR 19 10 38.9
comp=Z,242μm,19.8s,baz=80,slow=35
WRA P3KPbc 19 29 53.8
comp=Z,3.2nm,1.1s,baz=263,slow=2.1,SNR=5.6
WRA P4KPbc 19 37 10.6
comp=Z,1.0nm,0.8s,baz=86,slow=4.0,SNR=6.8
WRA Warramunga Arr 31.87 254 P **P** **18 58 20.8 -1.8**
WRA 19 01 10.8
WRA S **S** **19 03 16.9 -7.5**
WRA *i* 19 08 38.6
WRA pmax pmax
comp=Z,264nm,0.7s
WRA smax
comp=N,24nm,1.0s
WRA MLR MLR
comp=Z,242μm,19.8s
WRA Warramunga Arr 31.87 254 P **P** **18 58 20.8 -1.8**
WRA PcP PcP 19 01 10.8 +0.2
WRA S **S** **19 03 16.9 -7.5**
WRA ScP ScP 19 04 44.7 +2.1
WHZ Wether Hill Ro 32.28 179 PN **P** **18 58 25.6 -0.2**
TUZ Tuapeka 32.41 177 PN **P** **18 58 27.1 +0.2**
PYZ Puysegur Point 32.55 180 *e*PN **P** **18 58 28.2 +0.1**
RAR Rarotonga 32.59 108 P **P** **18 58 29.2 +0.3**
comp=Z,675nm,1.0s,mb6.4,baz=252,slow=5.9,SNR=22
RAR Rarotonga 32.59 108 P **P** **18 58 29.2 +0.4**
RAR pmax pmax
comp=Z,675nm,1.0s
WAKE Wake Island 32.60 359 *e*P **P** **18 58 29.1 +0.3**
comp=Z,3μm,1.8s,mb6.9
ASAR Alice Springs 32.86 247 P **P** **18 58 29.6 -1.6**
comp=Z,481nm,0.7s,mb6.5,baz=74,slow=8.3,SNR=1200
ASAR PcP PcP 19 01 12.9 -0.3
comp=Z,474nm,1.0s,baz=87,slow=2.6,SNR=206
ASAR ScP ScP 19 04 47.8 +1.8
comp=Z,100nm,0.9s,baz=78,slow=3.8,SNR=11
ASAR PKiKP PKiKP 19 08 39.1 -0.6
comp=Z,20nm,0.9s,baz=108,slow=1.2,SNR=7.5
ASAR P3KPbc 19 29 50.7
comp=Z,2.1nm,1.0s,baz=269,slow=2.7,SNR=6.2
ASAR P4KPbc 19 37 09.8
comp=Z,0.9nm,0.8s,baz=99,slow=3.7,SNR=5.6
ASAR Alice Springs 32.86 247 P **P** **18 58 29.6 -1.6**
ASAR 19 01 13.0
ASAR *i* 19 08 39.2
ASAR pmax pmax
comp=Z,481nm,0.7s
ASAR Alice Springs 32.86 247 P **P** **18 58 29.6 -1.6**
ASAR PcP PcP 19 01 12.9 -0.3
ASAR ScP ScP 19 04 47.8 +1.8
BAKI Biak 32.92 289 P **P** **18 58 33.0 +1.2**
BAKI Biak 32.92 289 P **P** **18 58 31.9 +0.1**
MOO Moorlands 33.53 207 *e*P **P** **18 58 37.2 +0.5**
MOO *e*PCP PcP 19 01 15.5 +0.8
MOO *e*S **S** **19 03 49.7 +0.2**
MOO *e*SCP ScP 19 04 49.8 +1.9
MOO *e*SCS ScS 19 08 36.2 -13
KAKA Kakadu 33.64 267⇑*i*P **P** **18 58 37.4 -0.6**
comp=Z,3μm,1.5s,mb6.9
KAKA *e*PCP PcP 19 01 16.2 +0.7
KAKA *e*S **S** **19 03 45.3 -6.6**
KAKA Kakadu 33.64 267 *e*P **P** **18 58 37.3 -0.8**
comp=Z,2μm,2.5s,mb6.5
KAKA Kakadu 33.64 267 P **P** **18 58 38.0 0.0**
comp=Z,10μmcomp=Z,1μm,0.8s,mb6.8
BBOO Buckleboo 34.12 231 *e*P **P** **18 58 41.3 -0.7**
comp=Z,11μm,1.3s,mb7.5
GUMO Guam 34.72 320 P **P** **18 58 46.8 -0.5**
comp=Z,342nm,0.5s,mb6.4,baz=147,slow=5.0,SNR=54
GUMO S **S** **19 03 57.5 -11**
comp=Z,41nm,0.9s,baz=352,slow=21,SNR=2.1
GUMO LR LR 19 11 25.2
comp=Z,24μm,18.9s,baz=349,slow=33
GUMO Guam 34.72 320 P **P** **18 58 46.8 -0.5**
GUMO S **S** **19 03 57.5 -11**
GUMO pmax pmax
comp=Z,342nm,0.5s,mb6.4
GUMO smax
comp=N,41nm,0.9s
GUMO MLR MLR
comp=Z,24μm,18.9s
GUMO Guam 34.72 320 *e*P **P** **18 58 46.4 -0.9**
comp=Z,3μm,1.4s,mb6.9
KNA Kununurra 37.01 262 P **P** **18 59 07.0 +0.1**
comp=Z,4μm,1.1s,mb7.3
BNDI Bandanaira 37.65 280 P **P** **18 59 13.0 +0.7**
JOHN Johnston Islan 37.97 38 *e*P **P** **18 59 15.2 +0.3**
comp=Z,483nm,1.3s,mb6.2
JOHN *e*pP pP 18 59 45.2 +2.5
XMAS Kiritimati 38.52 69 *e*P **P** **18 59 20.9 +1.3**
comp=Z,2μm,1.4s,mb6.7
FORT Forrest 39.69 238⇑*i*P **P** **18 59 28.4 -0.8**
comp=Z,4μm,1.4s,mb7.1
FORT *e*S **S** **19 05 21.9 -1.7**
FORT *e*PKPPKP 19 31 21.8
FORT Forrest 39.69 238 *e*P **P** **18 59 28.4 -0.8**
comp=Z,6μm,1.1s,mb7.3
FITZ Fitzroy Crossi 39.98 258 P **P** **18 59 30.9 -0.9**
comp=Z,181nm,0.7s,mb6.0,baz=89,slow=9.6,SNR=247
FITZ PcP PcP 19 01 35.0 +0.3
comp=Z,430nm,0.9s,baz=74,slow=5.4,SNR=5.8
FITZ S **S** **19 05 14.6 -14**
comp=Z,68nm,1.2s,baz=161,slow=2.9,SNR=3.4
FITZ LR LR 19 15 24.7
comp=Z,68μm,18.2s,baz=84,slow=35
FITZ Fitzroy Crossi 39.98 258⇑*i*P **P** **18 59 30.8 -1.0**
comp=Z,2μm,2.0s,mb6.6
FITZ *e*PCP PcP 19 01 35.6 +0.9
FITZ *e*S **S** **19 05 23.1 -5.1**
FITZ Fitzroy Crossi 39.98 258 *e*P **P** **18 59 30.6 -1.1**
comp=Z,168nm,0.8s,mb5.9
FITZ *e*PcP PcP 19 01 36.4 +1.7
FITZ Fitzroy Crossi 39.98 258 P **P** **18 59 31.0 -0.8**
comp=Z,1μm,2.4s,mb6.4
NLAI Namlea 40.69 281 P **P** **18 59 38.6 +0.9**
comp=Z,7μm,1.5s,mb7.3
MCQ Macquarie Isla 41.37 187 *e*P **P** **18 59 43.4 +0.8**
MCQ Macquarie Isla 41.37 187 *e*P **P** **18 59 43.4 +0.8**
TNTI Ternate 41.75 287 P **P** **18 59 46.6 +0.3**
comp=Z,2μm,2.0s,mb6.5
PAE Paea 41.97 101 *e*P **P** **18 59 47.7 -0.4**
comp=Z,235nm,1.3s,mb5.8
PAE *e*pP pP 19 00 18.5 +2.2
comp=Z,216nm,1.3s
PAE Paea 41.97 101 *e*P **P** **18 59 47.7 -0.4**
PAE *e**PP pP 19 00 18.5 +2.2
PAE pmax pmax
comp=Z,235nm,1.3s,mb5.8
PPT Papeete 41.98 101 *e*P **P** **18 59 49.1 +1.0**
comp=Z,661nm,1.3s,mb6.2
PPT *e*pP pP 19 00 20.0 +3.7
comp=Z,1μm,1.4s
PPT *e*S **S** **19 06 01.0 +3.2**
comp=Z,25μm,25.8s
PPT *e*LQ 19 09 58.2
comp=Z,148μm,27.2s
PPT *e*LR LR 19 11 43.8
comp=Z,389μm,35.5s,baz=266
PPT Papeete 41.98 101 P **P** **18 59 49.1 +1.0**
comp=Z,161nm,0.5s,mb6.0,baz=292,slow=3.0,SNR=10
TIAR Tiarei 42.20 101 *e*P **P** **18 59 49.9 0.0**
comp=Z,823nm,1.3s,mb6.3
TIAR *e*pP pP 19 00 20.6 +2.5
comp=Z,1μm,1.2s
TBI Tubuai 42.32 110 *e*P **P** **18 59 52.3 +1.5**
comp=Z,839nm,1.1s,mb6.4
TBI *e*pP pP 19 00 22.5 +3.5
comp=Z,974nm,1.0s
MEH Mehetia 43.41 102 *e*P **P** **18 59 59.5 -0.2**
comp=Z,2μm,1.3s,mb6.7
MEH *e*pP pP 19 00 30.3 +2.3
comp=Z,3μm,1.2s
PMOR Pomariorio Ree 43.70 98 *e*P **P** **19 00 03.5 +1.5**
comp=Z,4μm,1.2s,mb7.0
PMOR *e*pP pP 19 00 34.4 +4.0
comp=Z,4μm,1.2s
VAH Vaihoa 43.94 98 *e*P **P** **19 00 05.1 +1.1**
comp=Z,2μm,1.2s,mb6.8
VAH *e*pP pP 19 00 35.8 +3.5
comp=Z,3μm,1.1s
MMRI Maumere 44.13 271 P **P** **19 00 05.1 -0.4**
MMRI Maumere 44.13 271 P **P** **19 00 04.8 -0.7**
comp=Z,3μm,2.0s,mb6.7

MIDW Midway 44.17 20 *e*P **P** **19 00 04.9 -0.6**
comp=Z,595nm,1.4s,mb6.1
MNI Manado 44.35 286 P **P** **19 00 06.5 -0.7**
MNI Manado 44.35 286 P **P** **19 00 06.8 -0.4**
comp=Z,3μm,1.5s,mb6.8
BBSI Bau Bau 44.46 276 P **P** **19 00 09.1 +0.9**
comp=Z,3μm,2.2s,mb6.7
KDI Kendari 44.80 278 P **P** **19 00 10.4 -0.4**
comp=Z,865nm,2.2s,mb6.1
MATI Mati 45.26 294 *e*P **P** **19 00 13.8 -0.7**
LUWI Luwuk 45.47 282 P **P** **19 00 16.0 -0.2**
comp=Z,4μm,1.7s,mb6.8
MBWA Marble Bar 45.61 254 *e*P **P** **19 00 16.8 -0.4**
comp=Z,7.8nm,0.3s
MBWA *e*PcP PcP 19 01 54.0 +0.5
MBWA Marble Bar 45.61 254 P **P** **19 00 17.4 +0.3**
SNR=219
WSI Waingapu 45.84 270 P **P** **19 00 18.9 -0.2**
comp=Z,4μm,2.3s,mb6.8
DAV Davao City (W) 45.92 294 P **P** **19 00 19.1 -0.5**
comp=Z,364nm,0.8s,mb6.2,baz=100,slow=2.0,SNR=25
DAV Davao City (W) 45.92 294 *e*P **P** **19 00 19.2 -0.4**
comp=Z,2μm,1.3s,mb6.7
DAV Davao City (W) 45.92 294⇓*e*P **P** **19 00 13.1 -6.6**
DAV Davao City (W) 45.92 294 P **P** **19 00 20.7 +1.1**
SNR=26
DMPH Davao City--Mi 45.99 294⇑*e*P **P** **19 00 19.7 -0.5**
GSPH General Santos 46.06 292⇑*e*P **P** **19 00 19.5 -1.2**
KCP Kidapawan 46.33 294⇓*i*P **P** **19 00 23.3 +0.5**
BUKP Musuan 46.74 295 *e*P **P** **19 00 26.9 +0.8**
BUTP Butuan 46.75 296 *e*P **P** **19 00 27.1 +1.0**
CBIJ Chichi jima 47.01 329 P **P** **19 00 27.0 -0.9**
comp=Z,2μm,0.7s,mb6.9,baz=188,slow=2.8,SNR=219
CBIJ S **S** **19 06 59.4 -11**
comp=Z,25nm,0.8s,baz=268,slow=15,SNR=1.6
BNSI Bone 47.11 277 P **P** **19 00 30.4 +1.4**
comp=Z,5μm,1.7s,mb7.0
SCPH Surigao 47.24 297⇑*e*P **P** **19 00 29.9 -0.1**
KAPI Kappang 47.30 276 *e*P **P** **19 00 29.5 -1.0**
comp=Z,6μm,1.6s,mb7.1
KAPI Kappang 47.30 276 P **P** **19 00 30.2 -0.2**
SNR=153
BMNI Bima 47.60 271 P **P** **19 00 32.8 +0.1**
comp=Z,3μm,1.7s,mb6.9
TTSI Tana Toraja 47.73 278 P **P** **19 00 34.1 +0.3**
comp=Z,957nm,1.9s,mb6.3
MSLP Maasin 47.96 297 *e*P **P** **19 00 36.5 +1.0**
TOLI Toli-Toli 48.03 284 P **P** **19 00 35.5 -0.6**
comp=Z,1μm,1.1s,mb6.6
PAGZ Pagadian 48.22 294 *e*P **P** **19 00 38.3 +0.8**
PCI Palu 48.31 281 P **P** **19 00 38.5 +0.2**
KLBR Kellerberrin 48.46 240⇑*i*P **P** **19 00 37.8 -1.4**
comp=Z,2μm,1.0s,mb6.9
KLBR *e*S **S** **19 07 27.5 -3.3**
OCLP Ormoc 48.61 298 *e*P **P** **19 00 41.2 +0.8**
TBP Tagbilaran 48.62 296 *e*P **P** **19 00 40.2 -0.3**
LLP Lapu-Lapu 48.82 297 *e*P **P** **19 00 41.8 -0.2**
KIP Kipapa 48.85 45 *e*P **P** **19 00 42.1 -0.1**
comp=Z,394nm,1.0s,mb6.3
IPIL Ipil 48.91 293 *e*P **P** **19 00 43.1 +0.3**
ZMPH Zamboanga City 49.02 292⇑*i*P **P** **19 00 43.6 -0.1**
NWAO Narrogin (SRO) 49.14 238 P **P** **19 00 43.3 -1.0**
comp=Z,1μm,0.8s,mb6.8,baz=76,slow=7.1,SNR=291
NWAO PP PP 19 02 39.6 +0.5
comp=Z,279nm,1.1s,baz=84,slow=14,SNR=3.7
NWAO S **S** **19 07 30.8 -10**
comp=Z,20nm,0.9s,baz=137,slow=21,SNR=1.8
NWAO LR LR 19 21 01.4
comp=Z,105μm,20.8s,baz=67,slow=35
NWAO Narrogin (SRO) 49.14 238 P **P** **19 00 43.3 -1.0**
NWAO 19 02 39.7
NWAO S **S** **19 07 30.8 -10**
NWAO pmax pmax
comp=Z,279nm,1.2s
NWAO smax
comp=N,20nm,0.9s
NWAO MLR MLR
comp=Z,105μm,20.8s
NWAO Narrogin (SRO) 49.14 238 *e*P **P** **19 00 43.2 -1.1**
comp=Z,7μm,1.5s,mb7.3
NWAO Narrogin (SRO) 49.14 238 P **P** **19 00 43.7 -0.6**
SNR=262
KHU Kahuku 49.16 49 *e*P **P** **19 00 44.2 -0.4**
CNP Catarman 49.28 300 *e*P **P** **19 00 46.7 +1.1**
PUH Pauahi 49.54 50 *e*P **P** **19 00 47.3 -0.1**
PUH *e*pP pP 19 01 16.9 +0.5
POHA Pohakuloa 49.54 49 *e*P **P** **19 00 48.3 +0.8**
comp=Z,297nm,0.9s,mb6.2
STCH Steam Cracks 49.61 50 *e*P **P** **19 00 48.1 +0.1**
STCH *e*pP pP 19 01 19.0 +2.1
GUIM Jordan 50.16 296 *e*P **P** **19 00 52.5 +0.2**
RCP Roxas 50.46 298⇓*e*P **P** **19 00 55.7 +1.2**
AUQP San Andres 51.37 299 *e*P **P** **19 01 04.0 +2.8**
OTRP Odiongan 51.46 298 *e*P **P** **19 01 02.3 +0.3**
MYLDM Lahad Datu 51.59 288 P **P** **19 01 05.1 +2.1**
CUYO Cuyo Island 51.63 296 *e*P **P** **19 01 03.9 +0.6**
TSM Tawau 51.86 287 P **P** **19 01 05.5 +0.5**
BOAC Boac 52.14 299 *e*P **P** **19 01 08.2 +1.2**
POLP Polillo Island 52.68 301 *e*P **P** **19 01 11.6 +0.6**
LQP Luuban 52.71 300 *e*P **P** **19 01 11.1 -0.1**
BUSP Coron 52.87 297 *e*P **P** **19 01 13.1 +0.7**
SDKM Sandakan 52.97 288 P **P** **19 01 13.1 -0.1**
JHJ Hachijo jima 2 53.15 331 P **P** **19 01 14.6 +0.4**
comp=Z,2μm,0.9s,mb7.1,baz=170,slow=4.7,SNR=25
JHJ S **S** **19 08 25.5 -10**
comp=Z,182nm,0.9s,baz=360,slow=24,SNR=1.9
ENPP El Nido 53.19 295 *e*P **P** **19 01 15.8 +1.0**
PALP Palanan 53.48 303 *e*P **P** **19 01 17.9 +1.1**
BALP Baler 53.49 301 *e*P **P** **19 01 17.5 +0.5**
BATP Bataraza 53.62 292 *e*P **P** **19 01 18.9 +0.9**
LUBP Lubang 53.63 298 *e*P **P** **19 01 17.0 -0.9**
KDM Kudat 53.77 289 P **P** **19 01 19.8 +0.7**
CAUP Cauayan 53.90 303 *e*P **P** **19 01 21.2 +1.3**
KKM Kota Kinabalu 54.02 288 P **P** **19 01 22.0 +1.1**
KKM Kota Kinabalu 54.02 288 *e*P **P** **19 01 20.8 -0.1**
comp=Z,9μm,1.5s,mb7.6
BCPH Baguio City Da 54.64 302⇓*i*P **P** **19 01 24.8 -0.5**
APYP Conner 54.85 303 *e*P **P** **19 01 26.8 0.0**
SCZP Santa Cruz 54.90 300 *e*P **P** **19 01 26.0 -1.1**
JOW Kunigami 54.98 317⇑*i*P **P** **19 01 28.2 +0.7**
comp=Z,3μm,1.4s,mb7.1
ABRA Dolores 55.17 303 *e*P **P** **19 01 29.1 0.0**
BOLP Bolinao 55.19 301 *e*P **P** **19 01 28.3 -0.9**
RKT Rikitea 55.62 109 *e*P **P** **19 01 34.0 +1.7**
comp=Z,134nm,1.1s,mb5.9
RKT *e*pP pP 19 02 03.7 +1.8
comp=Z,6μm,2.3s
RKT *e*S **S** **19 09 09.9 +1.0**
comp=Z,62μm,26.2s
RKT *e*LQ 19 15 43.4
comp=Z,59μm,35.2s
RKT *e*LR LR 19 18 06.4
comp=Z,106μm,38.2s,baz=270
RKT Rikitea 55.62 109 *e*P **P** **19 01 34.0 +1.7**
RKT *e**PP pP 19 02 03.7 +1.8
RKT *e*S **S** **19 09 09.9 +1.0**
RKT pmax pmax
comp=Z,134nm,1.1s,mb5.9
RKT Rikitea 55.62 109 *e*P **P** **19 01 34.0 +1.7**
comp=Z,134nm,1.1s,mb5.9
RKT *e*pP pP 19 02 03.7 +1.8
RKT *e*S **S** **19 09 09.9 +1.0**
RKT *e*LQ 19 15 43.4
BTM Bintulu 55.99 283 P **P** **19 01 36.0 +0.9**
DRV Dumont d'Urvil 56.06 193 P **P** **19 01 44.0 +9.4**
DRV S **S** **19 09 12.0 -1.3**
SBUM Sibu 56.58 282 P **P** **19 01 39.8 +0.6**
MJAR Matsushiro Arr 56.71 332 P **P** **19 01 39.1 -0.6**
comp=Z,668nm,0.8s,mb6.8,baz=165,slow=7.4,SNR=355
MJAR S **S** **19 09 13.9 -8.8**
comp=Z,6.1nm,0.3s,baz=235,slow=42,SNR=2.0
MJAR PKPPKP 19 31 31.7
comp=Z,6.9nm,0.3s,baz=281,slow=5.8,SNR=6.4
MJAR Matsushiro Arr 56.71 332 P **P** **19 01 39.1 -0.6**
MJAR S **S** **19 09 13.9 -8.8**
MJAR pmax pmax
comp=Z,668nm,0.8s
MJAR smax
comp=N,6.0nm,0.3s
MAJO Matsushiro 56.71 332⇑*i*P **P** **19 01 39.0 -0.7**
MAJO pmax pmax
comp=Z,3μm,1.1s,mb7.2
MAJO Matsushiro 56.71 332⇑*i*P **P** **19 01 39.0 -0.7**
comp=Z,3μm,1.1s,mb7.2
MAT Matsushiro 56.71 332 P **P** **19 01 39.0 -0.7**

MAT S **S** **19 09 23.0 +0.3**
TWG Pinlang 57.67 308⇑*i*P **P** **19 01 44.9 -1.8**
comp=Z,2μm,1.5s,mb7.0
JNU Nakatsue 57.78 324⇑*i*P **P** **19 01 47.2 -0.1**
comp=Z,2μm,1.2s,mb7.0
YULB Yu-li 57.82 309 *e*P **P** **19 01 47.1 -0.6**
comp=Z,2μm,1.5s,mb7.0
NACB Ninganchiao 58.04 310⇑*i*P **P** **19 01 48.8 -0.5**
comp=Z,6μm,1.6s,mb7.4
KSM Kuching 58.11 280 P **P** **19 01 50.6 +0.6**
KSM Kuching 58.11 280⇑*i*P **P** **19 01 49.7 -0.4**
comp=Z,5μm,1.6s,mb7.2
TPUB Ta-pu 58.27 309⇑*i*P **P** **19 01 49.8 -1.2**
comp=Z,7μm,1.5s,mb7.4
SSLB Suanglung 58.30 309 *e*P **P** **19 01 50.0 -1.2**
comp=Z,3μm,1.5s,mb7.1
YHNB Yeheng 58.49 310⇑*i*P **P** **19 01 52.0 -0.4**
comp=Z,3μm,1.2s,mb7.2
TATO Taipei 58.59 311⇑*i*P **P** **19 01 52.3 -0.7**
comp=Z,5μm,1.5s,mb7.3
TATO Taipei 58.59 311 P **P** **19 01 53.9 +0.8**
SNR=49
ERM Erimo 59.46 340 P **P** **19 02 00.7 +2.0**
comp=Z,2μm,1.5s,mb7.0,SNR=38
ERM Erimo 59.46 340 *e*P **P** **19 01 59.7 +1.0**
ERM pmax pmax
comp=Z,424nm,0.8s,mb6.5
ERM Erimo 59.46 340 *e*P **P** **19 01 59.7 +1.0**
comp=Z,424nm,0.8s,mb6.5
XMIS Christmas Isla 59.94 266 *e*P **P** **19 02 02.6 0.0**
XMIS *e*S **S** **19 10 03.6 -1.9**
YUK Yuzh-Kuril'sk 60.43 343⇓*i*P **P** **19 01 59.1 -6.2**
YUK *i* S **S** **19 10 10.4 -0.2**
YUK pmax pmax
comp=Z,7μm,1.8s,mb7.4
YUK smax
comp=N,46μm,17.0s
YUK smax
comp=E,24μm,17.0s
YUK MLR MLR
comp=N,19μm,21.6s
YUK MLR MLR
comp=E,5μm,21.6s
YUK MLR MLR
comp=Z,18μm,21.6s
QZH Quanzhou 60.73 309⇑*i*P **P** **19 02 06.9 -0.9**
QZH sP sP 19 02 50.8 -0.6
QZH S **S** **19 10 12.7 -2.5**
QZH pmax pmax
comp=Z,5μm,1.4s,mb7.4
QZH LR LR
comp=N,30μm,16.5s
QZH LR LR
comp=E,20μm,12.7s
QZH LR LR
comp=Z,131μm,30.8s
ASAJ Asahikawa 61.52 340 P **P** **19 02 13.4 +0.8**
comp=Z,369nm,0.8s,mb6.5,baz=206,slow=8.1,SNR=242
ASAJ S **S** **19 10 18.4 -6.0**
comp=Z,6.9nm,1.0s,baz=244,slow=20,SNR=1.7
ASAJ LR LR 19 24 53.3
comp=Z,28μm,21.6s,baz=161,slow=32
ASAJ PKPPKP 19 31 21.6
comp=Z,62nm,1.3s,baz=284,slow=12,SNR=4.8
ASAJ Asahikawa 61.52 340 P **P** **19 02 13.5 +0.9**
ASAJ S **S** **19 10 18.4 -6.0**
ASAJ pmax pmax
comp=Z,369nm,0.8s
ASAJ smax
comp=N,7.0nm,1.0s
ASAJ MLR MLR
comp=Z,28μm,21.6s
ASAJ Asahikawa 61.52 340 *e*P **P** **19 02 13.2 +0.6**
comp=Z,2μm,1.8s,mb6.9
SSE Sheshan 62.46 316 P **P** **19 02 19.7 +0.4**
SSE pP pP 19 02 50.3 +0.8
SSE sP sP 19 03 05.2 +2.2
SSE PP PP 19 04 38.5 +0.1
SSE S **S** **19 10 38.0 +1.2**
SSE pmax pmax
comp=Z,1μm,1.7s,mb6.7
SSE pmax pmax
comp=Z,9μm,5.4s
SSE LR LR
comp=N,32μm,20.0s
SSE LR LR
comp=E,34μm,20.0s
SSE LR LR
comp=Z,39μm,20.0s
KSRS Korea Array 62.59 326 P **P** **19 02 20.2 +0.2**
comp=Z,508nm,1.0s,mb6.4,baz=144,slow=4.3,SNR=211
KSRS PKiKP PKiKP 19 09 09.4 +0.1
comp=Z,4.9nm,0.9s,baz=243,slow=1.4,SNR=3.4
KSRS S **S** **19 10 24.0 -14**
comp=Z,1.6nm,0.8s,baz=29,slow=8.8,SNR=4.5
KSRS LR LR 19 26 40.5
comp=Z,16μm,21.0s,baz=126,slow=33
KSRS PKPPKP 19 31 17.2
comp=Z,9.5nm,1.1s,baz=336,slow=3.0,SNR=4.6
KSRS P4KPbc 19 39 22.6
comp=Z,2.2nm,1.0s,baz=104,slow=5.1,SNR=6.7
HKC Hong Kong Obse 62.82 304⇑*i*P **P** **19 02 22.0 +0.2**
INCN Inchon 63.33 325⇑*i*P **P** **19 02 24.7 -0.1**
comp=Z,6μm,1.7s,mb7.3
INCN Inchon 63.33 325 P **P** **19 02 25.0 +0.2**
SNR=269
GZH Guangzhou 63.87 304 P **P** **19 02 29.5 +0.8**
GZH S **S** **19 10 53.1 -1.5**
GZH LR LR
comp=N,29μm,24.1s
GZH LR LR
comp=E,11μm,15.5s
GZH LR LR
comp=Z,55μm,26.0s
YSS Yuzh-Sakhalins 64.00 342α*i*P **P** **19 02 30.0 +1.0**
YSS *i* *PP pP 19 02 58.0 -1.4
YSS *e* 19 03 14.0
YSS *i* S **S** **19 10 48.0 -7.3**
YSS *e*PS 19 11 18.0
YSS *e**SS sS 19 11 40.0 -7.5
YSS pmax pmax
comp=Z,26μm,6.0s
YSS pmax pmax
comp=N,14μm,4.0s
YSS pmax pmax
comp=E,5μm,2.0s
YSS pmax pmax
comp=N,890nm,1.0s
YSS pmax pmax
comp=Z,2μm,1.0s,mb6.8
YSS pmax pmax
comp=E,630nm,1.2s
YSS smax
comp=N,19μm,20.0s
YSS MLR MLR
comp=N,14μm,18.0s
YSS MLR MLR
comp=E,15μm,18.0s
YSS Yuzh-Sakhalins 64.00 342 *e*P **P** **19 02 29.6 +0.6**
comp=Z,5μm,1.6s,mb7.1
SBA Scott Base 64.34 180⇑*i*P **P** **19 02 31.8 +0.9**
comp=Z,15nm,1.0s
MYKOM Kota Tinggi 64.40 279 P **P** **19 02 33.3 +0.9**
CASY Casey 64.54 202⇑*i*P **P** **19 02 31.6 -0.8**
CASY *e*S **S** **19 11 01.0 -0.6**
CASY *e*PKPPKP 19 31 14.2
NJ2 Nanjing 64.62 316 *e*P **P** **19 02 33.6 +0.1**
NJ2 PP PP 19 05 02.0 +4.7
NJ2 S **S** **19 11 07.5 +3.9**
NJ2 pmax pmax
comp=Z,3μm,1.0s,mb7.1
NJ2 pmax pmax
comp=Z,17μm,3.6s
NJ2 LR LR
comp=N,15μm,13.3s
NJ2 LR LR
comp=E,26μm,18.1s
NJ2 LR LR
comp=Z,20μm,14.6s
SKR Severo-Kuril's 64.63 352⇓*i*P **P** **19 02 33.0 -0.1**
SKR *PP pP 19 03 02.0 -1.5
SKR *e* 19 05 04.0
SKR *e*PPP 19 06 31.0
SKR *i* S **S** **19 11 04.0 +1.1**
SKR *e*SS SS 19 15 18.0 +1.6
SKR *e*SSS 19 18 14.0

SKR pmax pmax
comp=N,2μm,1.5s
SKR pmax pmax
comp=E,2μm,1.5s
SKR pmax pmax
comp=Z,6μm,1.5s,mb7.2
SKR pmax pmax
comp=Z,23μm,6.0s
SKR pmax pmax
comp=N,11μm,4.0s
SKR pmax pmax
comp=E,24μm,4.0s
SKR smax
comp=N,13μm,14.0s
SKR smax
comp=E,11μm,14.0s
SKR MLR MLR
comp=N,6μm,18.0s
SKR MLR MLR
comp=E,6μm,18.0s
SKR MLR MLR
comp=Z,8μm,18.0s
QIZ Qiongzhong 64.92 299 P **P** **19 02 36.2 +0.6**
QIZ pP pP 19 03 04.4 -1.6
QIZ S **S** **19 11 09.1 +1.5**
QIZ sS sS 19 11 57.0 -2.9
QIZ pmax pmax
comp=Z,1μm,1.9s,mb6.4
QIZ pmax pmax
comp=Z,12μm,6.4s
QIZ Qiongzhong 64.92 299 *e*P **P** **19 02 35.9 +0.3**
comp=Z,3μm,1.6s,mb6.9
KGM Kluang 64.97 279 P **P** **19 02 37.0 +0.9**
AMKA Amchitka 65.51 8 *e*P **P** **19 02 38.7 0.0**
comp=Z,423nm,1.4s,mb6.1
AMKA LR LR
comp=Z,100nm,19.0s
KTGM Kuala Trenggan 66.08 282 P **P** **19 02 44.6 +1.3**
SMY Shemya 66.26 5 *e*P **P** **19 02 43.7 +0.2**
SMY pmax pmax
comp=Z,5μm,1.6s,mb7.1
SMY MLR MLR
comp=Z,29μm,23.0s
SMY Shemya 66.26 5 *e*P **P** **19 02 43.7 +0.2**
comp=Z,5μm,1.6s,mb7.1
SMY LR LR
comp=Z,29μm,23.0s
PET Petropavlovsk 66.66 355α *i*P **P** **19 02 45.9 -0.1**
PET *e**PP pP 19 03 15.8 -0.8
PET *e**SP sP 19 03 28.5 -1.6
PET *e* 19 05 17.3
PET *i* S S 19 11 26.6 -0.9
PET *e*SP 19 11 47.0
PET *e*SS SS 19 15 47.1 -0.7
PET *e*SSS 19 18 47.2
PET pmax pmax
comp=Z,20μm,5.5s
PET pmax pmax
comp=Z,2μm,1.5s,mb6.6
PET pmax pmax
comp=Z,10μm,16.4s
PET pmax pmax
comp=Z,5μm,16.6s
PET smax
comp=N,14μm,17.2s
PET smax
comp=N,14μm,18.6s
PET Petropavlovsk 66.66 355 *e*P **P** **19 02 45.9 -0.1**
comp=N,3μm,1.5s,mb7.0
PETK Petropavlovsk- 66.83 354 P **P** **19 02 48.0 +0.8**
comp=N,963nm,1.1s,mb6.5,baz=134,slow=3.7,SNR=274
PETK LR LR 19 29 37.6
comp=N,11μm,19.8s,baz=338,slow=34
PETK PKPPKP 19 31 14.9
comp=N,13nm,0.8s,baz=58,slow=4.2,SNR=14
PETK Petropavlovsk- 66.83 354 P **P** **19 02 48.0 +0.8**
PETK LR LR 19 29 37.6
PETK P'P' 19 31 14.9
FRIM Kepong 66.93 279 P **P** **19 02 48.9 +0.2**
WHN Wuhan 66.93 312⇑ *i*P **P** **19 02 48.1 -0.2**
WHN pP pP 19 03 17.2 -1.7
WHN sP sP 19 03 32.4 0.0
WHN S S 19 11 28.0 -3.7
WHN LR LR
comp=N,15μm,13.0s
WHN LR LR
comp=E,38μm,15.8s
WHN LR LR
comp=Z,101μm,23.8s
MDJ Mudanjiang 67.09 332 P **P** **19 02 49.3 +0.3**
MDJ pP pP 19 03 19.0 -0.5
MDJ sP sP 19 03 32.2 -0.8
MDJ PP PP 19 05 19.2 +0.6
MDJ S S 19 11 35.3 +2.3
MDJ pmax pmax
comp=Z,2μm,1.7s,mb6.7
MDJ pmax pmax
comp=Z,18μm,5.5s
MDJ LR LR
comp=N,28μm,35.0s
MDJ LR LR
comp=E,14μm,25.0s
MDJ LR LR
comp=Z,40μm,33.3s
MDJ Mudanjiang 67.09 332 *e*P **P** **19 02 49.3 +0.3**
comp=Z,4μm,1.4s,mb7.0
DL2 Dalian 67.17 323⇑ *i*P **P** **19 02 50.0 +0.4**
DL2 pP pP 19 03 20.0 -0.2
DL2 S S 19 11 32.9 -1.3
DL2 pmax pmax
comp=Z,1μm,1.1s,mb6.6
DL2 pmax pmax
comp=Z,12μm,5.4s
DL2 LR LR
comp=E,12μm,27.0s
DL2 LR LR
comp=Z,24μm,36.3s
UBT Ubonrachathani 67.63 293 ⇓P **P** **19 02 53.0 0.0**
comp=Z,28μm,1.5s,mb7.9
IPM Ipoh 67.85 281 P **P** **19 02 55.0 +0.5**
IPM Ipoh 67.85 281 *e*P **P** **19 02 54.4 -0.1**
comp=Z,6μm,1.6s,mb7.1
HABR Khabarovsk 67.92 338 *i* P **P** **19 02 55.3 +1.2**
HABR 19 03 18.6
HABR *e**PP pP 19 03 22.5 -2.2
HABR *e**SP sP 19 03 35.5 -2.7
HABR *e* 19 05 22.9
HABR PPP 19 07 01.7
HABR *e*S S 19 11 44.9 +2.1
HABR *e* 19 12 39.7
HABR *e*SS SS 19 16 05.4 -2.1
HABR pmax pmax
comp=E,3μm,1.9s
HABR pmax pmax
comp=N,4μm,1.7s
HABR MLR MLR
comp=Z,3μm,14.0s
SNY Shenyang 68.05 326 ⇑P **P** **19 02 54.3 -0.8**
SNY pP pP 19 03 28.0 +2.3
SNY S S 19 11 46.5 +1.9
SNY sS sS 19 12 37.6 +0.2
SNY pmax pmax
comp=Z,16μm,5.4s
SNY LR LR
comp=N,7μm,15.6s
SNY LR LR
comp=E,11μm,19.2s
SNY LR LR
comp=Z,14μm,19.2s
COCO West Island 68.18 262 *i* P **P** **19 02 58.7 +2.2**
COCO West Island 68.18 262 *e*P **P** **19 02 56.0 -0.5**
comp=Z,7μm,1.6s,mb7.2
COCO West Island 68.18 262 P **P** **19 02 58.8 +2.3**
SNR=18
TIA Tai'an 68.25 318 ⇑P **P** **19 02 58.0 +1.5**
TIA pP pP 19 03 30.0 +2.8
TIA sP sP 19 03 45.0 +4.4
TIA PP PP 19 05 27.0 -1.9
TIA S S 19 11 46.0 -1.3
TIA sS sS 19 12 35.0 -5.1
TIA pmax pmax
comp=Z,2μm,1.5s,mb6.6
TIA LR LR
comp=N,52μm,20.6s
TIA LR LR
comp=E,39μm,26.5s
TIA LR LR
comp=Z,73μm,31.4s
KULM Kulim 68.44 281 P **P** **19 02 59.0 +0.9**
KULM Kulim 68.44 281 *e*P **P** **19 02 57.9 -0.3**
comp=Z,7μm,1.8s,mb7.2
CN2 Changchun 68.47 329 *e*P **P** **19 02 57.9 +0.2**
CN2 *e*pP pP 19 03 27.9 -0.4
CN2 *e*S S 19 11 47.9 -1.6
CN2 pmax pmax
comp=Z,2μm,1.4s,mb6.8
CN2 LR LR
comp=N,21μm,21.0s
CN2 LR LR
comp=E,19μm,21.0s
CN2 LR LR
comp=Z,34μm,21.0s
SNG Songkhla 69.02 283 P **P** **19 03 02.0 +0.3**
comp=Z,660nm,1.1s,mb6.4
NIKO Nikolski 69.41 15 *e*P **P** **19 03 02.6 -0.7**
comp=Z,4μm,1.6s,mb7.0
KLR Kul'dur 69.79 336⇓ *i*P **P** **19 03 02.1 -3.6**
KLR *e* pP 19 03 36.5 0.0
KLR *e*S S 19 11 56.5 -8.4
KLR *e* 19 12 43.0
KLR pmax pmax
comp=N,11μm,5.5s
KLR pmax pmax
comp=E,6μm,5.5s
KLR pmax pmax
comp=Z,31μm,5.5s
KLR smax
comp=N,10μm,11.5s
KLR smax
comp=E,6μm,11.5s
ENH Enshi 70.39 309 *e*P **P** **19 03 09.1 -0.7**
comp=E,8μm,1.5s,mb7.3
GYA Guiyang 70.80 304⇑ *i*P **P** **19 03 12.8 +0.4**
GYA PcP PcP 19 03 32.1 -0.3
GYA pP pP 19 03 43.9 +0.7
GYA sP sP 19 03 57.8 +1.1
GYA PP PP 19 05 54.5 +3.4
GYA S S 19 12 17.9 +0.3
GYA SKS 19 12 59.2
GYA sS sS 19 13 12.3 +1.6
GYA pmax pmax
comp=Z,1μm,1.0s,mb6.6
GYA pmax pmax
comp=Z,7μm,6.8s
GYA LR LR
comp=N,20μm,20.8s
GYA LR LR
comp=E,23μm,20.7s
GYA LR LR
comp=Z,33μm,20.5s
UNV Unalaska Valle 70.81 16 *e*P **P** **19 03 10.7 -1.1**
comp=Z,431nm,1.2s,mb6.2
BJI Beijing 71.15 321 P **P** **19 03 14.6 +0.4**
BJI pP pP 19 03 43.7 -1.4
BJI sP sP 19 03 56.7 -1.8
BJI PP PP 19 05 53.8 0.0
BJI S S 19 12 23.9 +2.8
BJI sS sS 19 13 08.4 -5.8
BJI pmax pmax
comp=Z,2μm,1.3s,mb6.7
BJI pmax pmax
comp=Z,26μm,5.6s
BJI LR LR
comp=N,10μm,27.5s
BJI LR LR
comp=E,33μm,25.9s
BJI LR LR
comp=Z,83μm,40.9s
AKUT Akutan 71.27 17 *e*P **P** **19 03 14.0 -0.6**
comp=Z,2μm,1.8s,mb6.6
AKUT LR LR
comp=Z,38μm,22.0s
MIR Mirnyy 71.31 204⇑ *i*P **P** **19 03 14.2 -0.6**
MIR *i* 19 03 32.0
MIR *e*S S 19 12 20.0 -2.2
MIR pmax pmax
comp=Z,3μm,1.0s,mb7.0
MIR pmax pmax
comp=Z,20μm,7.0s
MIR pmax pmax
comp=N,2μm,5.0s
MIR smax
comp=N,5μm,16.0s
NST Nakhon Sawan 72.18 292 ⇓P **P** **19 03 21.8 +1.0**
comp=N,992nm,1.0s,mb6.6
TIY Taiyuan 72.19 317 *e*P **P** **19 03 21.2 +0.8**
TIY pP pP 19 03 52.6 +1.2
TIY PP PP 19 06 08.1 +5.4
TIY S S 19 12 27.6 -5.4
TIY sS sS 19 13 25.2 -1.1
TIY pmax pmax
comp=Z,6μm,1.3s,mb7.2
TIY pmax pmax
comp=Z,20μm,8.4s
TIY LR LR
comp=N,13μm,14.6s
TIY LR LR
comp=E,7μm,16.1s
TIY LR LR
comp=Z,19μm,20.6s
XAN Xi'an 72.67 312 P **P** **19 03 23.9 +0.5**
XAN S S 19 12 39.5 +0.8
XAN SS SS 19 17 13.4 -7.7
XAN pmax pmax
comp=Z,580nm,1.8s,mb6.1
XAN pmax pmax
comp=Z,5μm,6.6s
XAN LR LR
comp=N,21μm,26.6s
XAN LR LR
comp=E,9μm,41.8s
XAN LR LR
comp=Z,10μm,39.8s
KMI Kunming 73.44 302 ⇑P **P** **19 03 29.4 +1.3**
KMI pP pP 19 04 00.4 +1.3
KMI sP sP 19 04 14.3 +1.8
KMI PP PP 19 06 19.7 +6.1
KMI S S 19 12 46.9 -0.8
KMI SKS 19 13 19.0
KMI sS sS 19 13 41.2 0.0
KMI pmax pmax
comp=Z,3μm,1.6s,mb6.9
KMI pmax pmax
comp=Z,23μm,5.6s
KMI LR LR
comp=N,11μm,23.2s
KMI LR LR
comp=E,14μm,21.9s
KMI LR LR
comp=Z,18μm,24.6s
BDT Bhumibol Dam 73.74 293 ⇓P **P** **19 03 30.0 0.0**
comp=Z,180nm,1.1s,mb5.7
SDPT Sand Point 73.88 19 *e*P **P** **19 03 28.9 -1.1**
SDPT LR LR
comp=Z,40μm,23.0s
CHRT Chiangrai 73.96 295 ⇑P **P** **19 03 31.0 -0.3**
comp=Z,3μm,1.1s,mb7.0
CMAR Chiang Mai Arr 74.21 294 P **P** **19 03 33.5 +0.8**
comp=Z,1μm,1.1s,mb6.5,baz=121,slow=3.3,SNR=509
CMAR PKiKP PKiKP 19 09 27.0 +1.1
comp=Z,3.7nm,0.8s,baz=178,slow=0.7,SNR=6.9
CMAR S S 19 12 57.8 +1.2
comp=Z,1.6nm,0.3s,baz=6.0,slow=15,SNR=5.2
CMAR PKKPbc PKKPbc 19 23 02.9 +0.8
comp=Z,2.3nm,0.8s,baz=294,slow=5.4,SNR=4.1
CMAR PKP2bc 19 30 52.8
comp=Z,5.9nm,1.1s,baz=277,slow=4.3,SNR=6.7
CMAR P4KPbc 19 40 13.3
comp=Z,3.8nm,1.2s,baz=132,slow=2.6,SNR=9.5
CMAR Chiang Mai Arr 74.21 294 P **P** **19 03 33.5 +0.8**
CMAR S S 19 12 57.8 +1.2
CMAR smax
comp=N,2.0nm,0.3s
CHG Chiang Mai 74.33 294 ⇑P **P** **19 03 34.1 +0.7**
comp=N,2μm,1.3s,mb6.8
CHTO Chiang Mai 74.33 294 *e*P **P** **19 03 33.8 +0.4**
CHTO pmax pmax
comp=Z,4μm,1.4s,mb7.0
CHTO Chiang Mai 74.33 294 *e*P **P** **19 03 33.8 +0.4**
comp=Z,4μm,1.4s,mb7.0
CHTO Chiang Mai 74.33 294 P **P** **19 03 34.2 +0.8**
SNR=828
HHC Hu-ho-hao-te 74.49 320⇑ *i*P **P** **19 03 34.7 +0.8**
HHC PcP PcP 19 03 48.8 +1.0
HHC pP pP 19 04 06.2 +1.2
HHC sP sP 19 04 19.8 +1.4
HHC PP PP 19 06 25.6 +3.4
HHC S S 19 12 58.4 -0.5
HHC SKS 19 13 26.0
HHC ScS ScS 19 13 31.7 -2.0
HHC sS sS 19 13 53.4 +0.9
HHC pmax pmax
comp=Z,1μm,1.4s,mb6.4
HHC LR LR
comp=N,16μm,18.1s
HHC LR LR
comp=E,22μm,20.1s
HHC LR LR
comp=Z,20μm,19.6s
CD2 Chengdu 75.06 307⇑ *i*P **P** **19 03 37.8 +0.4**
CD2 pP pP 19 04 09.3 +0.8
CD2 PP PP 19 06 29.6 +2.4
CD2 S S 19 13 03.7 -1.9
CD2 sS sS 19 13 58.5 -0.8
CD2 SS SS 19 17 57.0 -0.5
CD2 pmax pmax
comp=Z,3μm,1.3s,mb6.8
CD2 pmax pmax
comp=Z,35μm,5.9s
CD2 LR LR
comp=N,30μm,21.2s
CD2 LR LR
comp=E,41μm,23.0s
CD2 LR LR
comp=Z,36μm,32.0s
HIA Hailar 75.10 330 *e*P **P** **19 03 37.2 0.0**
HIA pmax pmax
comp=Z,4μm,1.4s
HIA Hailar 75.10 330 *e*P **P** **19 03 37.2 0.0**
comp=Z,4μm,1.4s,mb6.9
CHGN Chignik 75.32 19 *e*P **P** **19 03 37.7 -0.6**
BTO Baotou 75.34 319 *e*P **P** **19 03 39.2 +0.4**
BTO pmax pmax
comp=Z,690nm,1.7s,mb6.1
QSPA South Pole Qui 76.50 180 P **P** **19 03 44.8 +0.1**
comp=Z,2μm,1.0s,mb6.8,baz=16,slow=2.0,SNR=860
QSPA S S 19 13 20.7 +0.7
comp=Z,46nm,1.1s,baz=159,slow=22,SNR=3.7
QSPA PKKPbc PKKPbc 19 22 56.4 -2.4
comp=Z,9.0nm,1.0s,baz=276,slow=1.1,SNR=11
QSPA PKPPKP 19 30 53.7
comp=Z,15nm,1.0s,baz=217,slow=2.5,SNR=5.4
QSPA LR LR 19 35 56.6
comp=Z,11μm,20.0s,baz=20,slow=34
QSPA South Pole Qui 76.50 180 *e*P **P** **19 03 44.6 -0.1**
comp=Z,29nm,0.7s,mb5.1
SEY Seymchan 77.05 353c *i*P **P** **19 03 47.9 0.0**
LZH Lanzhou 77.31 312⇑ *i*P **P** **19 03 51.5 +1.5**
LZH PcP PcP 19 04 00.6 +0.5
LZH pP pP 19 04 22.6 +1.3
LZH sP sP 19 04 36.3 +1.7
LZH *e*S S 19 13 28.6 -1.4
LZH SKS 19 13 47.0
LZH sS sS 19 14 23.3 -0.7
LZH pmax pmax
comp=Z,2μm,1.3s,mb6.8
LZH pmax pmax
comp=Z,15μm,6.5s
OHAK Old Harbor 77.76 21 *e*P **P** **19 03 52.3 +0.3**
comp=Z,2μm,1.7s,mb6.6
OHAK LR LR
comp=Z,58μm,19.0s
CLNS Chul'man 78.31 338c *i*P **P** **19 03 55.6 +0.6**
CLNS *e* 19 04 03.5
CLNS *e* 19 06 51.1
CLNS *e*PPP 19 08 38.7
CLNS *e*S S 19 13 41.3 +1.4
CLNS *e* 19 14 04.3
CLNS *e*SSS 19 22 02.0
CLNS pmax pmax
comp=Z,3μm,1.6s,mb6.8
CLNS pmax pmax
comp=E,429nm,1.3s
CLNS pmax pmax
comp=N,1μm,1.3s
CLNS pmax pmax
comp=Z,126nm,1.2s,mb5.5
CLNS pmax pmax
comp=E,109nm,1.2s
CLNS pmax pmax
comp=N,214nm,1.3s
CLNS smax
comp=N,11μm,15.4s
CLNS smax
comp=E,3μm,12.8s
RPN Rapa Nui 78.42 115 LR LR 19 28 21.5
comp=E,8μm,20.9s,baz=319,slow=28
KDAK Kodiak Island 78.44 21 P **P** **19 03 55.8 +0.1**
comp=E,192nm,1.2s,mb5.7,baz=205,slow=3.7,SNR=26
KDAK S S 19 13 37.9 -3.3
comp=E,16nm,1.1s,baz=329,slow=7.4,SNR=2.3
KDAK PKPPKP 19 30 56.3
comp=E,40nm,1.2s,baz=126,slow=3.0,SNR=4.7
KDAK LR LR 19 35 55.0
comp=E,45μm,20.1s,baz=220,slow=34
KDAK Kodiak Island 78.44 21 *i* P **P** **19 03 55.7 0.0**
KDAK Kodiak Island 78.44 21 *e*P **P** **19 03 55.1 -0.6**
comp=E,369nm,1.1s,mb6.0
GAMB Gambell 78.79 9 *e*P **P** **19 03 58.3 +0.8**
comp=E,2μm,1.8s,mb6.7
CIT Chita 79.89 330 *e*P **P** **19 04 05.0 +1.2**
CIT *e* pP 19 04 35.9 +0.6
CIT *e* 19 07 04.7
CIT *e* 19 13 58.4
CIT pmax pmax
comp=Z,10μm,1.8s,mb7.3
SVW2 Sparrevohn 80.08 17 *e*P **P** **19 04 04.4 -0.2**
comp=Z,1μm,1.9s,mb6.5
SVW2 LR LR
comp=Z,39μm,23.0s
RSO Redoubt South 80.44 19 *e*P **P** **19 04 06.1 -0.4**
IMP Imphal 80.74 298 *ex* x 19 04 55.0
YAK Yakutsk 80.80 343c *i*P **P** **19 04 08.1 -0.3**
YAK *e**PP pP 19 04 38.9 -1.1
YAK *e* 19 07 15.0
YAK *e*S S 19 14 03.7 -2.2
YAK *e**SS sS 19 14 51.7 -8.6
YAK *e*SS SS 19 19 19.0 -3.5
YAK pmax pmax
comp=Z,3μm,1.5s,mb6.9
YAK pmax pmax
comp=N,2μm,2.0s
YAK pmax pmax
comp=E,761nm,1.6s
YAK pmax pmax
comp=N,975nm,2.1s
YAK pmax pmax
comp=Z,3μm,3.9s
YAK pmax pmax
comp=E,479nm,1.8s
YAK smax
comp=N,2μm,3.8s
YAK smax
comp=E,1μm,3.0s
YAK Yakutsk 80.80 343 *e*P **P** **19 04 08.1 -0.3**
comp=E,6μm,1.4s,mb7.2
TNA Tin City 81.07 10 *e*P **P** **19 04 09.8 +0.1**
comp=E,4μm,2.2s,mb6.8
SLKM Skilak Lake 81.30 20 *e*P **P** **19 04 10.8 -0.3**
BILL Bilibino 81.34 360c *i*P **P** **19 04 10.9 -0.2**
BILL *e**PP pP 19 04 41.5 -1.2
BILL *e**SP sP 19 04 53.5 -2.5
BILL *e* 19 07 16.7
BILL *e*S S 19 14 12.4 +1.1
BILL pmax pmax
comp=Z,3μm,1.7s,mb6.8
BILL Bilibino 81.34 360 *e*P **P** **19 04 10.7 -0.4**
comp=Z,3μm,1.5s,mb7.0
SONM Songino Array 81.36 324 P **P** **19 04 11.9 +0.2**
comp=Z,468nm,1.1s,mb6.2,baz=140,slow=3.3,SNR=499
SONM S S 19 14 12.8 +0.4
comp=Z,5.8nm,1.2s,baz=206,slow=2.4,SNR=2.8
SONM PKKPbc PKKPbc 19 22 46.3 -1.6
comp=Z,13nm,0.9s,baz=276,slow=3.0,SNR=12
SONM PKPPKP 19 30 48.7
comp=Z,6.7nm,1.3s,baz=239,slow=1.6,SNR=6.8

SONM LR LR 19 36 54.6
comp=Z,22µm,21.6s,baz=118,slow=33
TTA Tatalina 81.44 16 *e*P **P 19 04 12.1 +0.3**
GTA Gaotai 81.63 314 ⇑P **P 19 04 14.0 +0.6**
GTA pP pP 19 04 44.8 -0.2
GTA sP sP 19 04 59.4 +1.2
GTA S S 19 14 15.1 -0.4
GTA sS sS 19 15 10.6 +0.6
GTA pmax pmax
comp=Z,2µm,1.6s,mb6.8
GTA pmax pmax
comp=Z,29µm,5.9s
GTA LR LR
comp=N,10µm,16.6s
GTA LR LR
comp=E,13µm,17.6s
GTA LR LR
comp=Z,22µm,21.8s
MID Middleton Isla 81.87 22 *e*P **P 19 04 14.7 +0.6**
MID pmax pmax
comp=Z,6µm,2.4s,mb7.0
MID MLR MLR
comp=Z,34µm,19.0s
MID Middleton Isla 81.87 22 *e*P **P 19 04 14.7 +0.6**
comp=Z,6µm,2.4s,mb7.0
MID LR LR
comp=Z,34µm,19.0s
RC01 Rabbit Creek A 81.89 20 *e*P **P 19 04 13.7 -0.4**
comp=Z,6µm,2.3s,mb7.0
RC01 *e*pP pP 19 04 44.1 -1.7
RC01 *e*PKKP PKKPbc 19 22 45.1 -2.3
PMR Palmer 82.46 20 *e*P **P 19 04 17.6 +0.5**
PMR pmax pmax
comp=Z,5µm,2.3s,mb7.0
PMR MLR MLR
comp=Z,66µm,19.0s
PMR Palmer 82.46 20 *e*P **P 19 04 17.6 +0.5**
comp=Z,5µm,2.3s,mb7.0
PMR LR LR
comp=Z,66µm,19.0s
PPLA Purkeypile 82.49 18 *e*P **P 19 04 15.5 -1.8**
comp=Z,51nm,1.3s,mb5.2
SHL Shillong 82.75 298 *e*PKP **P 19 04 20.0 +0.5**
SHL *i* x x 19 06 15.5
SHL *i* S S 19 14 29.0 +1.5
SML Sawmill 82.88 20 *e*P **P 19 04 19.1 -0.2**
SML pmax pmax
comp=Z,729nm,2.2s,mb6.1
SML Sawmill 82.88 20 *e*P **P 19 04 19.1 -0.2**
comp=Z,729nm,2.2s,mb6.1
MAW Mawson 82.90 202 P **P 19 04 19.2 -0.3**
comp=Z,726nm,1.1s,mb6.4,baz=104,slow=6.7,SNR=209
MAW S S 19 14 24.3 -3.3
comp=Z,8.2nm,1.1s,baz=235,slow=6.0,SNR=2.5
MAW PKKPbc PKKPbc 19 22 38.4 -5.7
comp=Z,7.8nm,1.0s,baz=282,slow=8.9,SNR=4.4
MAW PKPPKP 19 30 43.4
comp=Z,5.8nm,0.8s,baz=262,slow=9.5,SNR=4.6
MAW LR LR 19 35 51.9
comp=Z,21µm,20.2s,baz=91,slow=32
MAW Mawson 82.90 202 ⇑*i*P **P 19 04 18.9 -0.6**
comp=Z,688nm,1.5s,mb6.3
MAW *e*S S 19 14 28.9 +1.4
MAW *e*PKPPKP 19 30 42.0
MCCM Marconi Confer 83.24 48 *e*P **P 19 04 21.6 -0.1**
comp=Z,772nm,1.6s,mb6.3
KCPM Cahto Peak 83.34 47 *e*P **P 19 04 23.1 +0.9**
comp=Z,380nm,1.3s,mb6.1
HOPS Hopland 83.43 47 *e*P **P 19 04 23.6 +0.9**
comp=Z,692nm,1.4s,mb6.3
KIPM Iron Peak 83.46 47 *e*P **P 19 04 23.3 +0.5**
comp=Z,444nm,1.4s,mb6.1
KIPM *e*pP pP 19 04 55.0 +0.4
TRF Thorofare Moun 83.48 18 *e*P **P 19 04 20.9 -1.5**
comp=Z,5µm,2.2s,mb7.0
TRF *e*pP pP 19 04 52.5 -1.6
KHMM Horse Mountain 83.71 46 *e*P **P 19 04 25.0 +0.9**
comp=Z,536nm,1.4s,mb6.2
KHMM *e*pP pP 19 04 56.7 +0.8
KHMM *e*PKKP PKKPbc 19 22 43.3 +1.2
BPAW Bear Paw Mtn. 83.76 17 *e*P **P 19 04 21.9 -1.9**
comp=Z,1µm,1.9s,mb6.5
SAO San Andreas Ge 83.77 50 *e*P **P 19 04 24.0 -0.5**
KRMB Red Mountain 83.85 45 *e*P **P 19 04 25.6 +0.8**
comp=Z,2µm,2.3s,mb6.4
KBO Bosley Butte 83.92 44 *e*P **P 19 04 24.2 -0.9**
comp=Z,564nm,1.6s,mb6.2
MCK McKinley 84.09 18 *e*P **P 19 04 24.4 -1.1**
MCK *e**PP pP 19 04 54.4 -2.9
MCK pmax pmax
comp=Z,3µm,1.8s,mb6.9
MCK McKinley 84.09 18 *e*P **P 19 04 24.4 -1.0**
comp=Z,3µm,1.8s,mb6.9
MCK *e*pP pP 19 04 54.4 -2.8
KEBM Edson Butte 84.12 44 *e*P **P 19 04 25.4 -0.7**
comp=Z,321nm,1.4s,mb6.0
KEBM *e*pP pP 19 04 58.1 +0.2
VIB Van Inlet 84.12 32 P **P 19 04 26.5 +0.6**
DIB Dawson Inlet, 84.13 32 P **P 19 04 27.3 +1.4**
SNR=158
DIB Dawson Inlet, 84.13 32 T 20 37 43.1
SNR=198
BSC Santa Cruz Isl 84.16 53 ⇑P **P 19 04 26.5 0.0**
baz=84
PAF Port-aux-Franc 84.22 221 *e*P **P 19 04 26.8 +0.2**
PAF pmax pmax
comp=Z,6µm,1.1s,mb7.3
PAF Port-aux-Franc 84.22 221 *e*P **P 19 04 26.8 +0.2**
comp=Z,6µm,1.1s,mb7.3
SBC Santa Barbara 84.25 53 ⇑P **P 19 04 27.0 0.0**
baz=84
PKM Peak Mountain 84.33 52 ⇓P **P 19 04 27.8 +0.4**
baz=84,SNR=30
SMMC Simmler 84.33 52 ⇑P **P 19 04 27.8 +0.4**
baz=84,SNR=6.4
ZAK Zakamensk 84.41 325 *e*P **P 19 04 27.3 -0.1**
ZAK *e* 19 14 38.8
ZAK pmax pmax
comp=Z,1µm,1.4s,mb6.5
WDC Whiskeytown Da 84.43 46 *e*P **P 19 04 27.6 -0.1**
WDC *e**PP pP 19 04 59.0 -0.5
WDC pmax pmax
comp=Z,394nm,1.4s,mb6.0
WDC Whiskeytown Da 84.43 46 *e*P **P 19 04 27.6 -0.1**
comp=Z,394nm,1.4s,mb6.0
WDC *e*pP pP 19 04 59.0 -0.5
BLG Laguna Peak 84.64 53 ⇑P **P 19 04 28.6 -0.3**
baz=85
PAX Paxson 84.64 20 *e*P **P 19 04 26.9 -1.4**
PAX pmax pmax
comp=Z,735nm,1.6s,mb6.4
PAX Paxson 84.64 20 *e*P **P 19 04 26.9 -1.3**
comp=Z,734nm,1.6s,mb6.4
SCI San Clemente I 84.66 54 ⇑P **P 19 04 29.2 +0.1**
baz=85,SNR=6.5
PNL Peninsula 84.68 24 *e*P **P 19 04 28.6 +0.1**
comp=Z,275nm,1.0s,mb6.1
PNL *e*pP pP 19 04 59.1 -1.3
LSA Lhasa 84.69 302 P **P 19 04 30.4 +1.1**
LSA S S 19 14 39.9 -6.9
LSA pmax pmax
comp=Z,2µm,1.2s,mb6.8
LSA LR LR
comp=Z,37µm,51.3s
LSA Lhasa 84.69 302 *e*P **P 19 04 29.9 +0.6**
LSA pmax pmax
comp=Z,3µm,1.3s,mb7.0
LSA Lhasa 84.69 302 *e*P **P 19 04 29.9 +0.6**
comp=Z,3µm,1.3s,mb7.0
YBH Yreka Blue Hor 84.76 45 P **P 19 04 29.9 +0.5**
comp=Z,63nm,1.0s,mb5.5,baz=184,slow=3.2,SNR=36
YBH pP pP 19 05 00.8 -0.4
comp=Z,207nm,1.1s,baz=255,slow=1.0,SNR=8.0
YBH S S 19 14 44.9 -2.1
comp=Z,1.4nm,0.9s,baz=153,slow=15,SNR=1.8
YBH PKPPKP 19 30 41.1
comp=Z,13nm,1.1s,baz=55,slow=2.5,SNR=7.3
YBH LR LR 19 40 20.8
comp=Z,13µm,18.9s,baz=243,slow=34
YBH Yreka Blue Hor 84.76 45 P **P 19 04 29.9 +0.5**
YBH *PP pP 19 05 00.8 -0.4
YBH S S 19 14 44.9 -2.1
YBH pmax pmax
comp=Z,63nm,1.0s
YBH smax
comp=N,1.0nm,0.9s
YBH MLR MLR
comp=Z,13µm,18.9s
YBH Yreka Blue Hor 84.76 45 *e*P **P 19 04 29.3 -0.1**
comp=Z,355nm,1.3s,mb6.1
YBH *e*pP pP 19 05 01.4 +0.2
IRK Irkutsk 84.78 327 *i*P **P 19 04 29.0 -0.2**
IRK *e*S S 19 14 42.0 -4.7
IRK pmax pmax
comp=Z,4µm,1.9s,mb7.0
TLY Talaya 84.84 326 *c i*P **P 19 04 29.2 -0.3**
TLY *e* pP 19 04 59.6 -1.7
TLY *e* 19 05 15.1
TLY *e* 19 07 45.1
TLY *e*S S 19 14 44.1 -3.2
TLY *e*PS 19 15 40.9
TLY *e* 19 16 26.9
TLY *e*SS SS 19 20 28.7 +5.9
TLY pmax pmax
comp=Z,2µm,1.2s,mb7.0
TLY Talaya 84.84 326 *e*P **P 19 04 29.2 -0.3**
comp=Z,4µm,1.6s,mb7.1
TLY Talaya 84.84 326 P **P 19 04 29.2 -0.3**
comp=Z,7µm,1.0s,mb7.5
TLY Talaya 84.84 326 P **P 19 04 29.6 +0.1**
SNR=416
SIT Sitka 84.86 28 *e*P **P 19 04 29.2 -0.3**
SIT MLR MLR
comp=Z,20µm,19.0s
CIS Catalina Islan 84.92 54 ⇓P **P 19 04 29.7 -0.7**
baz=85,SNR=5.6
CAL Calcutta 84.93 294 *e*PKP **P 19 04 33.4 +2.7**
CAL *e*S S 19 14 49.1 -0.3
CAL AMP 19 16 35.7
comp=Z,12µm,16.3s
HUMO Hull Mountain 84.94 44 *e*P **P 19 04 30.9 +0.7**
comp=Z,258nm,1.0s,mb6.1
HUMO *e*pP pP 19 05 00.2 -1.9
RNO Roman Nose 84.94 43 P **P 19 04 31.2 +1.0**
CRAG Craig 85.02 30 *e*P **P 19 04 30.6 +0.3**
comp=Z,1µm,2.2s,mb6.4
CRAG LR LR
comp=Z,35µm,19.0s
CMB Columbia Colle 85.02 49 *e*P **P 19 04 30.6 -0.2**
CMB *e**PP pP 19 04 59.1 -3.5
CMB pmax pmax
comp=Z,262nm,1.3s,mb6.0
CMB Columbia Colle 85.02 49 *e*P **P 19 04 30.6 -0.2**
comp=Z,262nm,1.3s,mb6.0
CMB *e*pP pP 19 04 59.1 -3.5
OSI Osito Adit 85.08 53 ⇓P **P 19 04 31.0 -0.1**
baz=85,SNR=5.8
OSI Osito Adit 85.08 53 *e*P **P 19 04 31.6 +0.5**
comp=Z,494nm,1.5s,mb6.2
FMP Fort Macarthur 85.11 54 ⇓P **P 19 04 31.3 0.0**
baz=85
ARVC Arvin 85.17 52 P **P 19 04 31.6 0.0**
baz=85
MENT Mentasta 85.21 20 *e*P **P 19 04 31.8 +0.7**
VES Vestal, Richgr 85.22 52 ⇓P **P 19 04 31.1 -0.7**
baz=85,SNR=9.1
COLA College 85.25 18 *e*P **P 19 04 30.3 -1.0**
COLA *e**PP pP 19 05 00.8 -2.3
COLA pmax pmax
comp=Z,961nm,1.1s,mb6.6
COLA College 85.25 18 *e*P **P 19 04 30.2 -1.0**
comp=Z,961nm,1.1s,mb6.6
COLA *e*pP pP 19 05 00.8 -2.3
COLA *e*PKKP PKKPbc 19 22 35.5 -4.1
DECC Green Verdugo 85.26 53 ⇑P **P 19 04 31.9 -0.1**
baz=85
RCTC Rector, Farmer 85.26 51 ⇑P **P 19 04 31.9 -0.1**
baz=85
MPOR Mary's Peak 85.30 42 P **P 19 04 32.4 +0.4**
PASC Pasadena Art C 85.34 53 *e*P **P 19 04 32.5 0.0**
comp=Z,490nm,1.2s,mb6.3
HEBO Mount Hebo 85.46 42 *e*P **P 19 04 31.4 -1.4**
comp=Z,666nm,1.5s,mb6.3
MWC Mount Wilson 85.46 53 *e*P **P 19 04 33.6 +0.6**
MWC *e**PP pP 19 05 03.2 -1.7
MWC pmax pmax
comp=Z,783nm,1.6s,mb6.4
MWC Mount Wilson 85.46 53 *e*P **P 19 04 33.6 +0.6**
comp=Z,782nm,1.6s,mb6.4
MWC *e*pP pP 19 05 03.2 -1.7
ILAR Eielson Array 85.47 18 P **P 19 04 31.1 -1.2**
comp=Z,40nm,0.6s,mb5.5,baz=236,slow=4.2,SNR=257
ILAR pP pP 19 05 02.5 -1.7
comp=Z,298nm,0.8s,baz=238,slow=4.8,SNR=9.8
ILAR PKiKP PKiKP 19 09 43.2 +1.3
comp=Z,5.0nm,0.9s,baz=265,slow=2.7,SNR=4.7
ILAR S S 19 14 47.6 -5.3
comp=Z,13nm,1.2s,baz=247,slow=7.2,SNR=4.3
ILAR PKKPbc PKKPbc 19 22 36.0 -3.2
comp=Z,18nm,0.9s,baz=346,slow=1.5,SNR=20
ILAR PKPPKP 19 30 36.1
comp=Z,5.6nm,0.9s,baz=338,slow=2.7,SNR=7.7
ILAR LR LR 19 36 19.7
comp=Z,35µm,21.6s,baz=236,slow=31
ILAR Eielson Array 85.47 18 P **P 19 04 31.2 -1.1**
ILAR *PP pP 19 05 02.5 -1.7
ILAR S S 19 14 47.7 -5.2
ILAR smax
comp=N,13nm,1.2s
ILAR MLR MLR
comp=Z,35µm,21.6s
ILAR Eielson Array 85.47 18 P **P 19 04 31.1 -1.2**
ILAR pP pP 19 05 02.5 -1.7
COR Corvallis 85.50 42 *e*P **P 19 04 33.5 +0.5**
COR pmax pmax
comp=Z,289nm,1.2s,mb6.1
COR Corvallis 85.50 42 *e*P **P 19 04 33.5 +0.5**
comp=Z,288nm,1.2s,mb6.1
DOT Dot Lake 85.57 20 *e*P **P 19 04 32.3 -0.6**
comp=Z,3µm,1.6s,mb7.0
DOT *e*pP pP 19 05 03.1 -1.7
ISA Isabella 85.62 52 ⇓P **P 19 04 33.9 +0.1**
baz=86,SNR=81
ISA Isabella 85.62 52 *e*P **P 19 04 33.3 -0.5**
ISA *e**PP pP 19 05 05.8 +0.1
ISA Isabella 85.62 52 *e*P **P 19 04 33.3 -0.5**
comp=Z,4µm,0.8s,mb7.3
ISA *e*pP pP 19 05 05.8 +0.1
ISA *e*PKKP PKKPbc 19 22 38.7 +1.5
EDW2 Edwards Air Fo 85.73 53 ⇓P **P 19 04 34.6 +0.3**
baz=86,SNR=9.4
109C Camp Elliot, M 85.77 55 ⇑P **P 19 04 34.8 +0.2**
baz=86
BFSC Mount Baldy Ra 85.78 53 ⇓P **P 19 04 34.3 -0.3**
baz=86,SNR=48
F03A Seaside 85.88 41 ⇑P **P 19 04 34.8 0.0**
baz=86
WAKR Walker 85.89 49 *e*P **P 19 04 35.3 +0.2**
comp=Z,610nm,1.5s,mb6.3
WAKR *e*pP pP 19 05 06.8 -0.1
WRAK Wrangell Islan 85.89 29 *e*P **P 19 04 34.4 -0.2**
comp=Z,432nm,1.5s,mb6.2
WRAK *e*pP pP 19 05 06.0 -0.5
WRAK *e*PKKP PKKPbc 19 22 35.8 -1.9
BBB Bella Bella 85.93 34 LR LR 19 38 45.3
comp=Z,46µm,18.9s,baz=55,slow=32
MURC Murrieta 85.93 54 ⇓P **P 19 04 35.0 -0.3**
baz=86,SNR=9.7
WCN Washoe City 85.94 48 ⇑P **P 19 04 35.7 +0.4**
baz=86,SNR=15
WCN Washoe City 85.94 48 *e*P **P 19 04 35.7 +0.4**
WCN pmax pmax
comp=Z,348nm,1.5s,mb6.1
WCN Washoe City 85.94 48 *e*P **P 19 04 35.7 +0.4**
comp=Z,348nm,1.5s,mb6.1
MLAC Mammoth Lakes 86.03 50 ⇑P **P 19 04 35.8 +0.1**
baz=86
BAR Barrett 86.05 55 *e*P **P 19 04 35.9 -0.1**
comp=Z,1µm,2.3s,mb6.4
SLGI Shiliguri 86.06 298 *e*PKP **P 19 04 36.0 -0.2**
E03A Lebam 86.13 40 ⇓P **P 19 04 36.3 +0.3**
baz=86,SNR=25
LRMC Laurel Mountai 86.16 52 ⇑P **P 19 04 36.9 +0.5**
baz=86,SNR=39
CWC Cottonwood Cre 86.19 51 ⇑P **P 19 04 36.6 0.0**
baz=86,SNR=8.6
SKAG Skagway 86.23 26 *e*P **P 19 04 36.5 +0.3**
comp=Z,459nm,1.9s,mb6.1
SKAG LR LR
comp=Z,48µm,19.0s
H04A Detroit Lake 86.27 42 ⇑P **P 19 04 36.3 -0.5**
baz=86,SNR=16
G04A Mulino 86.28 42 ⇑P **P 19 04 36.8 0.0**
baz=86
NLWA Neilton Lookou 86.28 40 *e*P **P 19 04 37.1 +0.3**
comp=Z,291nm,1.5s,mb6.0
NLWA *e*PKKP PKKPbc 19 22 36.1 -0.2
TIN Tinemaha 86.28 51 ⇑P **P 19 04 37.4 +0.3**
baz=86,SNR=16
MOY Mondy 86.29 325 *e*P **P 19 04 36.0 -0.7**
MOY pmax pmax
comp=Z,4µm,2.3s,mb6.9
MONP Monument Peak 86.32 55 ⇓P **P 19 04 37.7 +0.3**
baz=86,SNR=51
COLD Coldfoot 86.34 15 *e*P **P 19 04 36.8 +0.2**
comp=Z,507nm,0.8s,mb6.5
PAHR Pah Rah Range 86.35 48 *e*P **P 19 04 36.9 -0.4**
comp=Z,531nm,1.3s,mb6.3
PAHR *e*pP pP 19 05 09.2 -0.1
BBRC Big Bear Solar 86.36 54 ⇓P **P 19 04 37.4 -0.1**
baz=86
MOD Modoc 86.49 46 *e*P **P 19 04 38.0 0.0**
comp=Z,407nm,1.4s,mb6.2
MOD *e*pP pP 19 05 08.4 -1.4
RRX Edison Barstow 86.50 53 ⇓P **P 19 04 38.3 +0.1**
baz=87
DVTC Desert V Tower 86.50 55 ⇑P **P 19 04 38.5 +0.3**
baz=87,SNR=22
MPMC Manual Prospec 86.51 52 ⇓P **P 19 04 38.3 +0.1**
baz=87,SNR=53
PFO Pinyon Flat Ob 86.52 54 ⇓P **P 19 04 38.3 +0.1**
baz=87,SNR=26
PFO Pinyon Flat Ob 86.52 54 *e*P **P 19 04 38.0 -0.3**
PFO pmax pmax
comp=Z,239nm,1.4s,mb5.9
PFO Pinyon Flat Ob 86.52 54 *e*P **P 19 04 38.0 -0.3**
comp=Z,239nm,1.4s,mb5.9
BWNR Bhubaneshwar 86.56 292 *ex* **P 19 04 34.0 -4.8**
BWNR *ex* x 19 05 05.0
F04A Amboy 86.61 41 ⇓P **P 19 04 38.2 -0.2**
baz=87,SNR=17
NVAR Mina Array Bea 86.69 49 P **P 19 04 40.0 +1.0**
comp=Z,55nm,0.9s,mb5.5,baz=231,slow=8.4,SNR=7.4
NVAR pP pP 19 05 10.5 -0.4
comp=Z,76nm,0.9s,baz=230,slow=8.8,SNR=4.1
NVAR PKKPbc PKKPbc 19 22 32.1 -2.7
comp=Z,9.8nm,0.7s,baz=95,slow=3.5,SNR=6.0
NVAR PKPPKP 19 30 40.8
comp=Z,76nm,1.0s,baz=90,slow=3.6,SNR=38
GSC Goldstone 86.79 53 ⇓P **P 19 04 39.3 -0.2**
baz=87,SNR=26
GSC Goldstone 86.79 53 *e*P **P 19 04 39.5 0.0**
GSC *e**PP pP 19 05 11.6 +0.1
GSC pmax pmax
comp=Z,484nm,1.7s,mb6.2
GSC Goldstone 86.79 53 *e*P **P 19 04 39.5 0.0**
comp=Z,484nm,1.7s,mb6.2
GSC *e*pP pP 19 05 11.6 +0.1
GSC *e*PKKP PKKPbc 19 22 34.4 -0.1
SWSC Sam W. Stewart 86.83 55 ⇓P **P 19 04 39.8 0.0**
baz=87,SNR=34
TAPN Taplejung 86.86 299 *e*P **P 19 04 40.2 +0.2**
HOOD Mount Hood Mea 86.86 42 *e*P **P 19 04 40.3 +0.6**
comp=Z,222nm,1.1s,mb6.0
HOOD *e*PKKP PKKPbc 19 22 34.1 -0.7
GRAC Grapevine Rang 86.91 51 ⇓P **P 19 04 40.1 0.0**
baz=87,SNR=15
ODAN Odare 86.99 298 *e*P **P 19 04 40.7 0.0**
GNW Green Mountain 87.00 40 P **P 19 04 39.7 -0.6**
BELC Belle Mtn. Jos 87.00 54 ⇓P **P 19 04 40.7 0.0**
baz=87,SNR=97
HEC Hector,Ludlow 87.01 53 ⇑P **P 19 04 40.5 -0.1**
baz=87,SNR=29
PGC Sidney 87.06 38 *e*P **P 19 04 39.9 -0.6**
comp=Z,19nm,1.3s
PGC *e*pP pP 19 05 11.6 -0.8
FURC Furnace Creek, 87.13 52 ⇑P **P 19 04 41.2 +0.1**
baz=87,SNR=44
VIPM Ingram Point 87.24 43 P **P 19 04 41.2 -0.3**
EGAK Eagle 87.28 20 *e*P **P 19 04 40.5 -0.7**
comp=Z,4µm,0.9s,mb7.3
LON Longmire 87.32 41 *e*P **P 19 04 41.4 -0.4**
LON pmax pmax
comp=Z,171nm,1.4s,mb5.8
LON Longmire 87.32 41 *e*P **P 19 04 41.4 -0.4**
comp=Z,171nm,1.4s,mb5.8
LON *e*PKKP PKKPbc 19 22 31.5 -2.3
BC3 Big Chuckawall 87.33 55 ⇓P **P 19 04 42.3 +0.2**
baz=87,SNR=87
D05A Enumclaw 87.37 40 ⇓P **P 19 04 42.6 +0.6**
baz=88,SNR=12
SHOC Shoshone 87.39 52 ⇓P **P 19 04 42.5 +0.1**
baz=88
DAWY Dawson 87.42 21 *e*P **P 19 04 40.9 -1.0**
TUQ Turquoise Moun 87.51 53 ⇑P **P 19 04 43.2 +0.2**
baz=88,SNR=22
U10A Ash Meadows, A 87.51 52 ⇑P **P 19 04 43.1 +0.1**
baz=88,SNR=15
GLA Glamis 87.64 55 *e*P **P 19 04 43.8 +0.1**
GLA *e**PP pP 19 05 16.0 +0.3
GLA pmax pmax
comp=Z,278nm,1.0s,mb6.2
GLA Glamis 87.64 55 *e*P **P 19 04 43.8 +0.1**
comp=Z,278nm,1.0s,mb6.2
GLA *e*pP pP 19 05 16.0 +0.2
112A Yuma 87.69 56 ⇑P **P 19 04 44.2 +0.3**
baz=88
IRM Iron Mountain 87.72 54 ⇓P **P 19 04 44.2 +0.2**
baz=88,SNR=32
S10A Tonopah Range, 87.80 50 ⇑P **P 19 04 44.4 +0.1**
baz=88,SNR=27
JCW Jim Creek 87.80 39 *e*P **P 19 04 43.9 -0.2**
comp=Z,387nm,1.4s,mb6.2
JCW *e*PKKP PKKPbc 19 22 31.4 -1.2
WVOR Wild Horse Val 87.84 46 *e*P **P 19 04 43.9 -0.5**
WVOR pmax pmax
comp=Z,433nm,1.6s,mb6.2
WVOR Wild Horse Val 87.84 46 *e*P **P 19 04 43.9 -0.5**
comp=Z,433nm,1.6s,mb6.2
DLBC Dease Lake 88.00 28 PKPPKP 19 30 36.6
comp=Z,24nm,1.1s,baz=46,slow=4.1,SNR=5.1
DLBC LR LR 19 39 52.7
comp=Z,28µm,19.1s,baz=242,slow=32
DLBC Dease Lake 88.00 28 *e*P **P 19 04 43.1 -1.7**
A05A Maple Falls 88.02 39 ⇑P **P 19 04 44.8 -0.3**
baz=88,SNR=8.4
V11A Goodsprings 88.02 53 ⇑P **P 19 04 45.3 -0.1**
baz=88,SNR=23
LDFC Landfair 88.04 53 *e*P **P 19 04 46.1 +0.6**
comp=Z,322nm,1.1s,mb6.3
PALK Pallekele 88.09 278 P **P 19 04 47.6 +1.4**
comp=Z,6µm,1.3s,mb7.4,SNR=62
PALK Pallekele 88.09 278 *i*P **P 19 04 47.6 +1.4**
PALK Pallekele 88.09 278 *e*P **P 19 04 47.0 +0.8**
comp=Z,5µm,1.7s,mb7.2
PALK Pallekele 88.09 278 P **P 19 04 48.1 +1.8**
SNR=77
Y12C Blythe 88.09 55 ⇓P **P 19 04 45.8 0.0**
baz=88,SNR=43
R10A Warm Springs 88.13 50 ⇓P **P 19 04 46.3 +0.4**
baz=88,SNR=32
VIS Vishakhapatnam 88.16 289 *e*PKP **P 19 04 45.8 -0.6**
VIS *i* P 19 04 47.2
VIS *i* x x 19 15 14.5
VIS *i* x x 19 15 23.0
BMN Battle Mountai 88.16 48 *e*P **P 19 04 46.0 0.0**
BMN pmax pmax
comp=Z,275nm,1.4s,mb6.1
BMN Battle Mountai 88.16 48 *e*P **P 19 04 46.0 +0.1**
comp=Z,275nm,1.4s,mb6.1
RPW Rockport 88.16 39 P **P 19 04 46.2 +0.4**
comp=Z,37µm,1.1s
B06A Marblemount 88.20 39 ⇓P **P 19 04 45.6 -0.3**
baz=88,SNR=9.6
F07A Phinny Hill Vi 88.20 42 ⇑P **P 19 04 46.2 +0.2**
baz=88,SNR=14
Q10A Clear Creek Ra 88.23 49 ⇑P **P 19 04 46.3 0.0**
baz=88,SNR=16
U11A Corn Creek 88.24 52 ⇑P **P 19 04 47.0 +0.5**
baz=88,SNR=14
TBM Table Mountain 88.24 41 P **P 19 04 46.6 +0.4**
J08A Circle Bar Ran 88.27 45 ⇑P **P 19 04 46.5 +0.1**
baz=88,SNR=13
W12A Cal Nev Ari 88.29 53 ⇑P **P 19 04 47.2 +0.5**
baz=88
WRW Wenatchee Ridg 88.32 40 P **P 19 04 46.4 -0.2**
NEE2 Needles Airpor 88.33 54 ⇓P **P 19 04 47.1 +0.2**
baz=88,SNR=6.8

S11A **Rachel** 88.34 51 ⇓P P 19 04 47.3 +0.4
baz=88,SNR=9.5
113A **Mohawk Valley,** 88.41 56 ⇓P P 19 04 47.4 +0.1
baz=88,SNR=36
SHPR **Sheep Range** 88.44 52 eP P 19 04 47.4 0.0
comp=Z,49nm,1.5s,mb5.3
SHPR epP pP 19 05 18.8 -0.7
SHPR ePKKP PKKPbc 19 22 29.0 -1.5
V12A **Nelson** 88.44 53 ⇓P P 19 04 47.6 +0.2
baz=89,SNR=38
P10A **Eureka** 88.44 49 ⇑P P 19 04 47.5 +0.2
baz=89,SNR=20
E07A **Sunnyside** 88.49 41 ⇑P P 19 04 47.6 +0.2
baz=89,SNR=16
PDMCI **Parker Dam,Lak** 88.56 54 ⇓P P 19 04 48.2 +0.1
baz=89,SNR=30
GUN **Gumba** 88.57 299 eP P 19 04 47.2 -1.0
ETW **Entiat** 88.57 40 eP P 19 04 47.6 -0.2
comp=Z,452nm,1.4s,mb6.3
ETW epP pP 19 05 19.5 -0.3
RSW **Rattlesnake Hi** 88.60 42 eP P 19 04 48.4 +0.5
comp=Z,276nm,1.3s,mb6.1
RSW epP pP 19 05 19.9 -0.1
RSW ePKKP PKKPbc 19 22 23.5 -7.0
Z13A **Yuma Proving G** 88.62 56 ⇓P P 19 04 48.7 +0.4
baz=89,SNR=78
HAWA **Hanford** 88.64 42 eP P 19 04 48.1 0.0
comp=Z,121nm,1.0s,mb5.9
HAWA ePKKP PKKPbc 19 22 22.9 -7.5
Y13A **Salome** 88.67 55 ⇑P P 19 04 48.9 +0.4
baz=89,SNR=33
TIXI **Tiksi** 88.73 349 i P P 19 04 46.7 -1.3
TIXI e*PP pP 19 05 17.1 -3.0
TIXI eS S 19 15 02.2 -22
TIXI e 19 15 24.5
TIXI eSS SS 19 21 22.9 +4.0
TIXI pmax pmax
comp=N,146nm,1.5s
TIXI pmax pmax
comp=Z,623nm,1.5s,mb6.4
TIXI pmax pmax
comp=E,263nm,1.8s
TIXI pmax pmax
comp=Z,4μm,5.4s
TIXI **Tiksi** 88.73 349 eP P 19 04 47.3 -0.7
comp=Z,873nm,1.5s,mb6.6
Q11A **Duckwater** 88.79 50 ⇓P P 19 04 49.2 +0.3
baz=89,SNR=72
T12A **Moapa** 88.84 52 ⇓P P 19 04 49.5 +0.2
baz=89
PKI **Pulchoki** 88.88 299 eP P 19 04 49.6 -0.1
U12A **Valley of Fire** 88.89 52 ⇑P P 19 04 50.0 +0.5
baz=89,SNR=42
PKIN **Phulchoki** 88.89 299 eP P 19 04 49.5 -0.2
comp=Z,2μm,0.7s,mb7.2
P11A **Circle Ranch,** 88.94 49 ⇑P P 19 04 49.9 +0.3
baz=89,SNR=27
214A **Organ Pipe Nat** 88.95 57 ⇓P P 19 04 50.2 +0.4
baz=89,SNR=45
S12A **Delamar Landin** 89.01 51 ⇑P P 19 04 50.9 +0.8
baz=89,SNR=22
KKN **Kakani** 89.05 299 eP P 19 04 49.0 -1.4
114A **Black Gap (USA** 89.12 56 ⇑P P 19 04 50.9 +0.2
baz=89,SNR=20
V13A **Grand Canyon W** 89.15 53 ⇑P P 19 04 51.2 +0.5
baz=89,SNR=54
DMN **Daman** 89.15 299 eP P 19 04 49.9 -1.0
Z14A **Wintersburg** 89.24 56 ⇑P P 19 04 51.8 +0.5
baz=89,SNR=26
LNOR **Lincton Mounta** 89.27 42 eP P 19 04 51.1 +0.1
LNOR pmax pmax
comp=Z,136nm,1.7s,mb5.7
LNOR **Lincton Mounta** 89.27 42 eP P 19 04 51.1 +0.1
comp=Z,136nm,1.7s,mb5.7
D08A **Wollman Farm,** 89.27 41 ⇓P P 19 04 51.4 +0.3
baz=89,SNR=37
U13A **Pakoon Wash** 89.33 52 ⇓P P 19 04 52.2 +0.6
baz=90,SNR=49
R12A **Pony Springs,** 89.41 50 ⇑P P 19 04 52.4 +0.5
baz=90,SNR=50
B08A **Colville Reser** 89.47 40 ⇓P P 19 04 51.4 -0.5
baz=90,SNR=41
OD2 **Odessa Site #2** 89.52 41 P P 19 04 51.8 -0.3
T13A **Saint George** 89.55 52 ⇓P P 19 04 52.8 +0.2
baz=90,SNR=46
X14A **Yava** 89.60 54 ⇑P P 19 04 53.6 +0.7
baz=90,SNR=68
115A **Sonoran Desert** 89.63 56 ⇑P P 19 04 53.1 +0.1
baz=90,SNR=22
GKN **Gorkha** 89.65 299 eP P 19 04 51.1 -2.2
S13A **Holt Ranch, En** 89.75 51 ⇑P P 19 04 54.0 +0.5
baz=90,SNR=32
V14A **Boquillas Ranc** 89.77 53 ⇑P P 19 04 54.2 +0.6
baz=90,SNR=30
SYO **Syowa Base** 89.78 197 ⇓i P P 19 04 50.3 -2.8
Z15A **Gila River Ind** 89.85 56 ⇓P P 19 04 54.5 +0.4
baz=90
Y15A **Casa Rosa Ranc** 89.90 55 ⇓P P 19 04 55.0 +0.7
baz=90,SNR=72
MDRS **Chennai** 89.90 283 ⇑i P x 19 05 09.9
MDRS eS x 19 15 28.2
C09A **Chrisman Ranch** 89.94 41 ⇑P P 19 04 54.2 0.0
baz=90,SNR=10
116A **Eloy** 90.02 57 ⇓P P 19 04 55.4 +0.5
baz=90,SNR=31
216A **Three Points,** 90.07 57 ⇓P P 19 04 55.9 +0.8
baz=90,SNR=23
CCUT **Cedar City** 90.12 51 eP P 19 04 55.7 +0.4
comp=Z,203nm,1.5s,mb6.0
X15A **Humboldt** 90.12 55 ⇑P P 19 04 55.9 +0.6
baz=90,SNR=55
ARUT **Antelope Range** 90.13 51 eP P 19 04 55.6 +0.3
ARUT e*PP pP 19 05 26.9 -0.5
ARUT pmax pmax
comp=Z,414nm,1.8s,mb6.3
ARUT **Antelope Range** 90.13 51 eP P 19 04 55.6 +0.3
comp=Z,414nm,1.8s,mb6.3
ARUT epP pP 19 05 26.9 -0.5
T14A **Hurricane** 90.19 52 ⇓P P 19 04 56.2 +0.6
baz=90,SNR=43
W15A **Williams** 90.29 54 ⇑P P 19 04 57.0 +0.9
baz=90,SNR=31
S14A **Cedar City** 90.33 51 ⇑P P 19 04 56.8 +0.6
baz=90,SNR=5.5
Z16A **Peralta Trail,** 90.46 56 ⇓P P 19 04 57.6 +0.7
baz=91,SNR=8.6
KOLN **Koldanda** 90.48 298 eP P 19 04 55.9 -1.2
DANN **Dangsing** 90.49 299 eP P 19 04 54.9 -2.3
217A **Green Valley** 90.53 58 ⇓P P 19 04 58.0 +0.8
baz=91,SNR=49
V15A **Kaibab Nationa** 90.55 53 ⇓P P 19 04 57.8 +0.6
baz=91,SNR=50
R14A **James Farms, M** 90.59 51 ⇑P P 19 04 58.2 +0.8
baz=91
Q14A **Sevier Lake (B** 90.60 50 ⇓P P 19 04 58.1 +0.7
baz=91,SNR=55
T15A **Red Dirt Ranch** 90.72 52 ⇓P P 19 04 58.5 +0.5
baz=91,SNR=11
117A **Oracle** 90.81 57 ⇓P P 19 04 59.3 +0.8
baz=91,SNR=79
NEW **Newport** 90.83 40 ⇑P P 19 04 58.1 -0.1
baz=91,SNR=20
NEW **Newport** 90.83 40 eP P 19 04 57.6 -0.6
NEW pmax pmax
comp=Z,166nm,1.3s
NEW **Newport** 90.83 40 eP P 19 04 57.6 -0.7
comp=Z,166nm,1.3s,mb6.0
W16A **Flagstaff** 90.85 54 ⇓P P 19 04 59.4 +0.7
baz=91,SNR=20
S15A **Panguitch** 90.92 52 ⇓P P 19 05 00.1 +1.2
baz=91,SNR=8.0
WUAZ **Wupatki** 91.09 54 ⇑P P 19 05 00.6 +0.9
baz=91,SNR=24
WUAZ **Wupatki** 91.09 54 eP P 19 05 00.5 +0.7
comp=Z,268nm,1.4s,mb6.2
WUAZ epP pP 19 05 32.4 +0.5
318A **Bisbee** 91.12 58 ⇓P P 19 05 00.8 +0.7
baz=91,SNR=33
H12A **Diamond D Ranc** 91.13 44 ⇑P P 19 04 60.0 +0.2
baz=91,SNR=52
R15A **Junction** 91.13 51 ⇓P P 19 05 00.7 +0.8
baz=91
HLID **Hailey** 91.13 45 ⇓P P 19 05 00.4 +0.6
baz=91,SNR=40
HLID **Hailey** 91.13 45 eP P 19 04 60.0 +0.2
comp=Z,30nm,0.6s,mb5.6
HLID epP pP 19 05 31.9 0.0

Z17A **San Carlos Hig** 91.21 56 ⇑P P 19 05 01.1 +0.6
baz=91
218A **Dragoon** 91.22 58 ⇑P P 19 05 00.9 +0.5
baz=91,SNR=24
X17A **Forest Lakes** 91.22 55 ⇑P P 19 05 01.4 +1.0
baz=91,SNR=26
J13A **Cove Ranch, Pi** 91.25 46 ⇓P P 19 05 01.1 +0.8
baz=91,SNR=22
Q15A **Fillmore** 91.28 50 ⇓P P 19 05 01.4 +0.8
baz=91,SNR=5.3
DUG **Dugway** 91.29 49 ⇑P P 19 05 00.7 +0.1
baz=91,SNR=27
DUG **Dugway** 91.29 49 eP P 19 05 00.5 -0.1
DUG pmax pmax
comp=Z,180nm,1.4s,mb6.0
DUG **Dugway** 91.29 49 eP P 19 05 00.5 -0.1
comp=Z,180nm,1.4s,mb6.0
MSU **Marysvale** 91.29 51 eP P 19 05 01.3 +0.7
MSU e*PP pP 19 05 33.4 +0.6
MSU pmax pmax
comp=Z,260nm,1.0s,mb6.3
MSU **Marysvale** 91.29 51 eP P 19 05 01.2 +0.6
comp=Z,260nm,1.0s,mb6.3
MSU epP pP 19 05 33.4 +0.6
BGU **Big Grassy Mou** 91.34 48 eP P 19 05 01.1 +0.3
comp=Z,165nm,1.2s,mb6.0
BGU epP pP 19 05 32.9 0.0
T16A **Glen Canyon Da** 91.38 52 ⇑P P 19 05 01.1 0.0
baz=92,SNR=6.8
I13A **Wihorse Cree** 91.44 45 ⇓P P 19 05 01.3 0.0
baz=92,SNR=58
U16A **Tuba City** 91.45 53 ⇑P P 19 05 02.1 +0.7
baz=92,SNR=30
118A **Homack Ranch,** 91.45 57 ⇓P P 19 05 02.0 +0.5
baz=92,SNR=70
W17A **Winslow** 91.49 54 ⇑P P 19 05 02.5 +0.8
baz=92
L14A **Malta** 91.51 47 ⇓P P 19 05 01.8 +0.3
baz=92,SNR=27
P15A **Leamington** 91.51 50 ⇓P P 19 05 01.8 +0.2
baz=92,SNR=8.2
Z18A **Geronimo** 91.51 56 ⇓P P 19 05 02.7 +0.9
baz=92
S16A **Weppner Ranch,** 91.52 52 ⇓P P 19 05 01.9 +0.2
baz=92,SNR=11
H13A **Challis** 91.54 45 ⇓P P 19 05 01.9 +0.2
baz=92,SNR=44
O15A **The Old Anders** 91.57 49 ⇓P P 19 05 02.1 +0.2
baz=92,SNR=12
J14A **Carey** 91.69 46 ⇓P P 19 05 03.1 +0.8
baz=92,SNR=26
WMQ **Urumqi** 91.69 315 P P 19 05 02.0 -0.3
WMQ pP pP 19 05 38.0 +3.5
WMQ sP sP 19 05 53.0 +5.4
WMQ PP PP 19 08 45.0 +2.2
WMQ SKS 19 15 20.0
WMQ S S 19 15 48.0 -4.3
WMQ SS SS 19 22 02.0 -0.7
WMQ pmax pmax
comp=Z,1μm,1.2s,mb7.1
WMQ pmax pmax
comp=Z,5μm,9.0s
WMQ LR LR
comp=N,25μm,25.0s
WMQ LR LR
comp=E,28μm,25.0s
WMQ LR LR
comp=Z,29μm,25.0s
319A **Douglas** 91.69 58 ⇑P P 19 05 03.1 +0.4
baz=92,SNR=32
Y18A **Canyon Day Jun** 91.69 56 ⇓P P 19 05 03.3 +0.6
baz=92,SNR=24
C12B **Naegeli Ranch,** 91.69 41 ⇓P P 19 05 02.3 0.0
baz=92
K14A **Jones Ranch, D** 91.70 47 ⇓P P 19 05 02.7 +0.3
baz=92,SNR=15
N15A **Stansbury Isla** 91.70 48 ⇑P P 19 05 02.6 +0.1
baz=92
R16A **Teasdale** 91.75 51 ⇓P P 19 05 03.7 +0.9
baz=92,SNR=17
HVU **Hansel Valley** 91.77 48 eP P 19 05 03.2 +0.4
HVU e*PP pP 19 05 35.0 +0.1
HVU pmax pmax
comp=Z,70nm,0.9s,mb5.9
HVU **Hansel Valley** 91.77 48 eP P 19 05 03.2 +0.5
comp=Z,70nm,0.9s,mb5.9
HVU epP pP 19 05 35.0 +0.1
NLU **North Lily Min** 91.77 49 eP P 19 05 03.2 +0.4
comp=Z,139nm,1.3s,mb6.0
INK **Inuvik** 91.84 19 P P 19 05 01.1 -1.4
comp=Z,45nm,1.3s,mb5.5,baz=242,slow=7.0,SNR=43
INK PKiKP PKiKP 19 09 53.2 +0.8
comp=Z,16nm,1.0s,baz=304,slow=4.2,SNR=3.9
INK S SKSac 19 15 24.5 +1.2
comp=Z,10.0nm,1.2s,baz=57,slow=31,SNR=12
INK PKKPbc PKKPbc 19 22 20.4 -2.9
comp=Z,33nm,0.9s,baz=48,slow=4.3,SNR=6.6
INK PKPPKP 19 30 22.3
comp=Z,42nm,1.3s,baz=67,slow=1.2,SNR=8.7
INK LR LR 19 40 54.5
comp=Z,29μm,21.6s,baz=229,slow=32
INK **Inuvik** 91.84 19 eP P 19 05 00.8 -1.7
comp=Z,531nm,2.0s,mb6.4
B12A **Libby** 91.86 41 ⇑P P 19 05 03.2 +0.1
baz=92
219A **White Tail Can** 91.87 58 ⇑P P 19 05 03.8 +0.3
baz=92,SNR=64
SPUT **South Promonto** 91.87 48 eP P 19 05 03.9 +0.6
comp=Z,243nm,1.8s,mb6.1
I14A **Mackay** 91.91 45 ⇓P P 19 05 03.8 +0.5
baz=92,SNR=30
M15A **Larsen Ranch,** 91.92 48 ⇑P P 19 05 03.4 0.0
baz=92,SNR=10
NOQ **North Oquirrh** 91.93 49 eP P 19 05 03.5 0.0
comp=Z,227nm,1.6s,mb6.2
X18A **Snowflake** 91.95 55 ⇑P P 19 05 04.2 +0.4
baz=92,SNR=21
A12A **Yaak River Ran** 91.97 40 ⇓P P 19 05 03.8 +0.3
baz=92,SNR=8.2
P16A **Fountain Green** 91.98 50 ⇑P P 19 05 04.8 +0.9
baz=92
TRD **Trivandrum** 91.98 278 ePKP P 19 05 04.0 -0.4
TRD ex x 19 08 51.0
119A **Ashpeak Ranch,** 92.03 57 ⇓P P 19 05 04.6 +0.5
baz=92,SNR=27
S17A **Black Ridge (B** 92.10 52 ⇓P P 19 05 04.3 -0.2
baz=92,SNR=13
L15A **Malad City** 92.11 47 ⇓P P 19 05 04.5 +0.1
baz=92,SNR=6.3
MPU **Maple Canyon** 92.11 49 eP P 19 05 04.9 +0.5
comp=Z,801nm,2.1s,mb6.6
MPU epP pP 19 05 36.1 -0.4
E13A **Victor** 92.15 43 ⇑P P 19 05 03.7 -0.7
baz=92,SNR=15
Q16A **Castle Valley** 92.16 51 ⇑P P 19 05 05.3 +0.6
baz=92,SNR=13
D13A **Huson** 92.16 42 ⇓P P 19 05 03.4 -1.1
baz=92,SNR=8.2
H14A **Leadore** 92.16 45 ⇑P P 19 05 04.7 +0.2
baz=92,SNR=32
BSMT **Bassoo Peak** 92.18 41 eP P 19 05 04.1 -0.4
comp=Z,101nm,0.6s,mb6.2
BSMT epP pP 19 05 35.6 -1.0
Z19A **T-Link Ranch,** 92.19 56 ⇓P P 19 05 05.2 +0.3
baz=92,SNR=5.9
K15A **Arbon** 92.20 47 ⇑P P 19 05 04.9 +0.1
baz=92,SNR=11
CTU **Camp Tracy** 92.21 49 eP P 19 05 05.2 +0.3
comp=Z,132nm,1.2s,mb6.0
CTU epP pP 19 05 36.8 -0.2
TMUT **Trail Mountain** 92.23 50 eP P 19 05 05.0 0.0
comp=Z,971nm,2.6s,mb6.6
TMUT epP pP 19 05 37.3 +0.2
V18A **Ganado** 92.27 54 ⇑P P 19 05 05.5 +0.2
baz=92,SNR=17
W18A **Petrified Fore** 92.28 55 ⇑P P 19 05 05.5 +0.2
baz=92,SNR=16
G14A **Jackson** 92.28 44 ⇑P P 19 05 05.1 0.0
baz=92,SNR=10
320A **Kipp Ranch, An** 92.31 58 ⇓P P 19 05 06.4 +0.8
baz=92,SNR=31
R17A **Hanksville Air** 92.37 51 ⇓P P 19 05 06.0 +0.3
baz=92,SNR=12
JLU **Jordanelle** 92.40 49 eP P 19 05 05.8 +0.1
comp=Z,408nm,1.7s,mb6.4
JLU epP pP 19 05 38.3 +0.4
MSO **Missoula** 92.42 42 ⇑P P 19 05 04.7 -0.9

baz=93,SNR=8.1
MSO **Missoula** 92.42 42 eP P 19 05 04.8 -0.9
comp=Z,34nm,1.1s,mb5.5
220A **Playas Peak, P** 92.45 58 ⇓P P 19 05 06.6 +0.4
baz=93,SNR=24
X19A **St. Johns** 92.45 55 ⇓P P 19 05 06.5 +0.3
baz=93,SNR=15
J15A **Blackfoot** 92.47 46 ⇑P P 19 05 07.0 +1.0
baz=93,SNR=14
M16A **Huntsville** 92.47 48 ⇓P P 19 05 05.8 -0.2
baz=93
JTMT **Jette** 92.47 41 eP P 19 05 05.7 -0.2
comp=Z,44nm,1.2s,mb5.6
N16A **Rees Ranch, Co** 92.49 49 ⇓P P 19 05 06.4 +0.2
baz=93,SNR=6.3
DAU **Daniels Canyon** 92.50 49 eP P 19 05 06.1 -0.1
DAU pmax pmax
comp=Z,248nm,1.1s,mb6.3
DAU **Daniels Canyon** 92.50 49 eP P 19 05 06.0 -0.1
comp=Z,248nm,1.1s,mb6.3
BLMT **Blacktail Moun** 92.50 41 eP P 19 05 05.8 -0.2
comp=Z,43nm,1.2s,mb5.6
U18A **Rough Rock, Ch** 92.50 53 ⇓P P 19 05 06.7 +0.4
baz=93,SNR=12
HYB **Hyderabad** 92.50 287 ⇑i P P 19 05 05.5 -1.2
comp=Z,820nm,1.0s,mb7.0
HYB epP pP 19 05 36.0 -2.9
HYB eSKS 19 15 44.0
HYB eS S 19 16 02.0 +1.3
F14A **Wisdom** 92.51 44 ⇑P P 19 05 05.8 -0.2
baz=93
120A **U Bar Ranch, L** 92.52 57 ⇑P P 19 05 07.1 +0.6
baz=93,SNR=24
JBP **Jabalpur** 92.52 293 ePKP P 19 05 07.1 +0.4
JBP ex x 19 15 25.0
B13A **Whitefish** 92.54 41 ⇓P P 19 05 05.7 -0.5
baz=93,SNR=12
W19A **Sanders** 92.55 55 ⇓P P 19 05 07.2 +0.7
baz=93,SNR=9.8
MCMT **McKenzie Canyo** 92.58 45 eP P 19 05 06.9 +0.5
comp=Z,60nm,0.6s,mb6.1
SWMT **Swartz Lake** 92.59 42 eP P 19 05 05.8 -0.6
comp=Z,2μm,1.3s,mb7.2
HWUT **Hardware Ranch** 92.59 48 eP P 19 05 06.2 -0.4
comp=Z,399nm,0.6s,mb6.9
HWUT epP pP 19 05 38.5 -0.3
I15A **Monteview** 92.60 45 ⇑P P 19 05 07.1 +0.6
baz=93
E14A **Clinton** 92.60 43 ⇑P P 19 05 06.1 -0.4
baz=93,SNR=7.2
P17A **Butcher Ranch,** 92.63 50 ⇑P P 19 05 06.8 0.0
baz=93
H15A **Lima** 92.66 45 ⇓P P 19 05 07.7 +0.9
baz=93,SNR=9.1
DGAR **Diego Garcia** 92.66 262 eP P 19 05 04.5 -3.1
comp=Z,3μm,1.7s,mb7.4
DGAR **Diego Garcia** 92.66 262 P P 19 05 07.2 -0.4
SNR=14
T18A **Mexican Hat** 92.68 53 ⇑P P 19 05 07.2 +0.1
baz=93,SNR=23
YBMT **Yellow Bay** 92.68 41 eP P 19 05 06.4 -0.4
comp=Z,37nm,1.5s,mb5.5
Z20A **Nine Sixteen R** 92.69 57 ⇑P P 19 05 07.3 0.0
baz=93
SRU **San Rafael** 92.70 51 ⇑P P 19 05 06.7 -0.4
baz=93,SNR=11
SRU **San Rafael** 92.70 51 eP P 19 05 07.2 +0.1
SRU pmax pmax
comp=Z,12nm,0.4s,mb5.6
SRU **San Rafael** 92.70 51 eP P 19 05 07.2 0.0
comp=Z,12nm,0.4s,mb5.6
S18A **Hurst Farm, Bl** 92.73 52 ⇓P P 19 05 07.4 +0.1
baz=93,SNR=27
A13A **Flathead Natio** 92.74 40 ⇓P P 19 05 06.9 -0.2
baz=93
D14A **Greenough** 92.78 42 ⇓P P 19 05 06.7 -0.7
baz=93,SNR=10
L16A **Fish Haven** 92.80 48 ⇑P P 19 05 07.5 -0.1
baz=93,SNR=7.9
O17A **Robinson Place** 92.82 49 ⇓P P 19 05 08.5 +0.8
baz=93,SNR=28
SLMT **Seeley Lake** 92.84 42 eP P 19 05 06.6 -1.0
comp=Z,37nm,1.1s,mb5.6
DLMT **Dillon** 92.90 44 eP P 19 05 07.9 0.0
comp=Z,145nm,0.9s,mb6.3
DLMT epP pP 19 05 40.1 0.0
CHMT **Chamberlain Mo** 92.90 42 eP P 19 05 07.5 -0.4
comp=Z,544nm,1.4s,mb6.7
CHMT epP pP 19 05 38.8 -1.3
K16A **Soda Springs** 92.91 47 ⇓P P 19 05 08.4 +0.4
baz=93
N17A **Moffit Pass** 92.95 49 ⇑P P 19 05 08.0 -0.2
baz=93,SNR=6.1
V19A **Window Rock** 92.97 54 ⇓P P 19 05 09.0 +0.5
baz=93
R18A **Canyonlands Na** 92.99 51 ⇓P P 19 05 08.5 0.0
baz=93,SNR=19
Q18A **Rafter H Ranch** 92.99 51 ⇓P P 19 05 07.7 -0.7
baz=93,SNR=9.2
U19A **Dine' College,** 92.99 54 ⇓P P 19 05 08.8 +0.2
baz=93,SNR=11
PMSA **Palmer Station** 93.00 161 P P 19 05 07.0 -1.1
comp=Z,274nm,1.1s,mb6.5,baz=223,slow=5.0,SNR=60
PMSA S SKSac 19 15 27.6 -2.6
comp=Z,14nm,1.0s,baz=248,slow=8.0,SNR=1.8
PMSA PKKPbc PKKPbc 19 22 16.7 -2.8
comp=Z,18nm,0.8s,baz=342,slow=4.9,SNR=4.5
PMSA PKPPKP 19 30 28.6
comp=Z,25nm,1.0s,baz=314,slow=3.7,SNR=5.0
PMSA **Palmer Station** 93.00 161 eP P 19 05 08.2 +0.1
comp=Z,2μm,1.8s,mb7.2
J16A **Bone** 93.01 46 ⇓P P 19 05 08.9 +0.4
baz=93,SNR=23
P18A **Preston Nutter** 93.04 50 ⇑P P 19 05 09.2 +0.5
baz=93,SNR=10
Y20A **Horse Springs,** 93.06 56 ⇓P P 19 05 09.2 +0.3
baz=93,SNR=20
221A **Mesquite Ranch** 93.09 58 ⇓P P 19 05 09.5 +0.4
baz=93,SNR=19
WALA **Waterton Lakes** 93.09 40 eP P 19 05 08.6 -0.1
comp=Z,1.0nm,1.3s
F15A **Butte** 93.10 44 ⇓P P 19 05 08.6 -0.3
baz=93,SNR=13
X20A **Quemado** 93.12 55 ⇓P P 19 05 09.7 +0.5
baz=93,SNR=25
LRM **Limekiln Ridge** 93.13 44 eP P 19 05 08.5 -0.4
comp=Z,277nm,1.1s,mb6.5
LRM epP pP 19 05 40.8 -0.3
E15A **Deer Lodge** 93.17 43 ⇑P P 19 05 08.6 -0.5
baz=93,SNR=14
M17A **Scullys Gap (B** 93.21 48 ⇓P P 19 05 08.9 -0.5
baz=93,SNR=7.8
121A **Cookes Peak, D** 93.21 57 ⇓P P 19 05 09.9 +0.3
baz=93,SNR=21
RRI2 **Red Ridge** 93.23 46 eP P 19 05 09.8 +0.3
comp=Z,327nm,1.7s,mb6.4
I16A **Newdale** 93.26 46 ⇓P P 19 05 10.5 +0.9
baz=93
W20A **Ramah** 93.26 55 ⇓P P 19 05 10.3 +0.5
baz=93,SNR=12
T19A **Beclabito** 93.26 53 ⇑P P 19 05 10.3 +0.5
baz=93,SNR=12
B14A **Marquette Ranc** 93.30 41 ⇓P P 19 05 09.3 -0.4
baz=93,SNR=32
K17A **Gardner Place,** 93.36 47 ⇑P P 19 05 10.3 +0.2
baz=94
O18A **Roosevelt** 93.38 50 ⇓P P 19 05 10.7 +0.5
baz=94
A14A **Double T Ranch** 93.38 40 ⇑P P 19 05 10.0 0.0
baz=94,SNR=17
G16A **Moss Hill, Enn** 93.40 44 ⇑P P 19 05 10.4 +0.2
baz=94,SNR=10
S19A **Harvey Farm, M** 93.40 52 ⇑P P 19 05 10.8 +0.4
baz=94
D15A **Lincoln** 93.42 43 ⇑P P 19 05 10.2 -0.1
baz=94,SNR=14
V20A **Brimhall** 93.45 54 ⇑P P 19 05 10.7 0.0
baz=94
Z21A **St. Cloud Mine** 93.49 57 ⇓P P 19 05 11.5 +0.6
baz=94,SNR=9.7
TPAW **Teton Pass** 93.53 46 eP P 19 05 11.2 +0.4
comp=Z,1μm,0.8s,mb7.2
U20A **Newcomb** 93.55 54 ⇓P P 19 05 11.5 +0.4
baz=94
C15A **Salmond Ranch,** 93.56 42 ⇑P P 19 05 10.1 -0.8
baz=94,SNR=48
REDW **Red Top Meadow** 93.56 46 eP P 19 05 10.9 -0.2
comp=Z,22nm,0.4s,mb5.8

Q19A Hogan Spring (93.61 51 ⇑P P 19 05 10.9 -0.5
baz=94,SNR=9.7
M18A Lyman 93.63 48 ⇓P P 19 05 11.3 -0.1
baz=94
BOZ Bozeman (W) 93.63 44 ⇑P P 19 05 11.4 +0.2
baz=94,SNR=26
BOZ Bozeman (W) 93.63 44 *e*P **P 19 05 11.3 0.0**
BOZ pmax pmax
comp=Z,305nm,1.8s,mb6.3
BOZ Bozeman (W) 93.63 44 *e*P **P 19 05 11.2 0.0**
comp=Z,304nm,1.8s,mb6.3
H16A Russell Place, 93.64 45 ⇑P P 19 05 11.9 +0.6
baz=94,SNR=18
IMW Indian Meadow 93.64 46 *e*P **P 19 05 12.0 +0.6**
comp=Z,5.6nm,0.5s,mb5.2
Y21A Point of Rocks 93.65 56 ⇑P P 19 05 12.2 +0.6
baz=94,SNR=13
J17A Brown Place, J 93.66 46 ⇑P P 19 05 11.3 -0.2
baz=94
X21A Alamocita Cree 93.67 56 ⇑P P 19 05 11.6 -0.1
baz=94,SNR=16
222A Williams Famil 93.67 58 ⇓P P 19 05 11.7 -0.1
baz=94
F16A Kennard Place, 93.67 44 ⇑P P 19 05 11.6 +0.2
baz=94,SNR=12
PV04 Paradox Valley 93.74 52 *e*P **P 19 05 11.7 -0.3**
B15A Bradely Ranch, 93.74 41 ⇓P P 19 05 10.9 -0.8
baz=94,SNR=24
MVCO Mesa Verde 93.77 53 ⇓P P 19 05 12.3 +0.2
baz=94
MVCO Mesa Verde 93.77 53 *e*P **P 19 05 11.8 -0.3**
comp=Z,88nm,1.4s,mb5.9
L18A Fontenelle, Gr 93.78 48 ⇓P P 19 05 12.1 +0.1
baz=94,SNR=8.1
HRY Holter Researc 93.78 43 *e*P **P 19 05 11.9 0.0**
comp=Z,43nm,1.0s,mb5.7
PTH Pithoragarh 93.80 299 *e*PKP **P 19 05 11.8 -0.6**
N18A Larsen Ranch, 93.80 49 ⇑P P 19 05 11.9 -0.3
baz=94,SNR=9.8
A15A Johnson Ranch, 93.82 41 ⇑P P 19 05 11.5 -0.5
baz=94,SNR=22
YMR Madison River 93.83 45 *e*P **P 19 05 12.5 +0.3**
comp=Z,38nm,1.0s,mb5.7
E16A East Helena 93.84 43 ⇑P P 19 05 11.9 -0.3
baz=94,SNR=18
FLWY Flagg Ranch 93.86 46 *e*P **P 19 05 12.6 +0.2**
comp=Z,51nm,1.1s,mb5.8
YFT Old Faithful 93.86 45 *e*P **P 19 05 13.8 +1.4**
comp=Z,74nm,1.4s,mb5.8
122A Conniff Cattle 93.89 57 ⇓P P 19 05 13.2 +0.4
baz=94
I17A Pilgrim Ck. 93.90 46 ⇓P P 19 05 13.5 +1.0
baz=94
PV01 Paradox Valley 93.93 52 *e*P **P 19 05 13.1 +0.3**
comp=Z,4μm,1.0s,mb7.7
W21A San Fidel 93.94 55 ⇑P P 19 05 13.1 +0.2
baz=94
K18A Toltan Ranch, 93.95 47 ⇓P P 19 05 13.0 +0.2
baz=94
P19A Cripple Cowboy 93.98 50 ⇓P P 19 05 12.9 -0.2
baz=94,SNR=12
S20A Disappointment 94.02 52 ⇓P P 19 05 12.9 -0.4
baz=94,SNR=17
H17A Grant Village 94.03 45 ⇑P P 19 05 14.4 +1.3
baz=94
YNR Norris Junctio 94.04 45 *e*P **P 19 05 11.8 -1.4**
comp=Z,128nm,1.9s,mb5.9
O19A Miners Draw (B 94.04 50 ⇓P P 19 05 12.8 -0.4
baz=94
Z22A Elephant Butte 94.05 57 ⇑P P 19 05 13.5 0.0
baz=94,SNR=24
D16A Dana Ranch, Ca 94.05 43 ⇑P P 19 05 13.2 0.0
baz=94,SNR=11
R20A Redvale 94.09 52 ⇓P P 19 05 13.4 -0.2
baz=94,SNR=6.9
V21A Milan 94.10 54 ⇓P P 19 05 13.9 +0.2
baz=94
J18A Kendall Valley 94.11 47 ⇓P P 19 05 13.5 -0.1
baz=94,SNR=9.4
C16A Fuhringer Ranc 94.13 42 ⇓P P 19 05 12.8 -0.7
baz=94,SNR=8.9
N19A John Jarvie Ra 94.15 49 ⇑P P 19 05 13.3 -0.4
baz=94
G17A Pierce Place, 94.15 45 ⇓P P 19 05 14.1 +0.4
baz=94
LAZ Ladron 94.17 56 *e*P **P 19 05 13.8 -0.2**
comp=Z,264nm,1.1s,mb6.5
LAZ *e*PKKP PKKPbc 19 22 16.1 +0.3
223A Chaparral, Ant 94.20 58 ⇑P P 19 05 14.5 +0.2
baz=94
NVL N'lazarevskaya 94.21 188*c i*P **P 19 05 12.7 -0.8**
NVL *e* 19 09 04.8
NVL *e*S SKSac 19 15 29.0 -7.6
NVL *e**SS S 19 16 05.3 -8.5
NVL *e* 19 26 23.9
NVL pmax pmax
comp=Z,2μm,1.3s,mb7.2
NVL MLR MLR
comp=Z,15μm,18.0s
Y22A Socorro 94.21 56 ⇓P P 19 05 14.0 -0.2
baz=94,SNR=10
MAIT Maitri 94.21 188 *e*P **P 19 05 13.1 -0.4**
MAIT *e*S SKSac 19 15 19.1 -18
U21A Nageezi 94.23 54 ⇑P P 19 05 14.5 +0.2
baz=94,SNR=22
LENM Lemitar 94.25 56 *e*P **P 19 05 14.8 +0.3**
comp=Z,28nm,1.2s,mb5.5
LENM *e*PKKP PKKPbc 19 22 14.6 -0.9
Y22D IRIS PASSCAL I 94.28 56 ⇓P P 19 05 14.9 +0.4
baz=94
L19A Farson 94.31 48 ⇓P P 19 05 14.1 -0.4
baz=94
M19A Rock Springs 94.31 48 ⇓P P 19 05 13.8 -0.7
baz=94
B16A M & M Farms, S 94.32 41 ⇓P P 19 05 13.7 -0.7
baz=94,SNR=8.6
BW06 Boulder Array 94.33 47 ⇑P P 19 05 13.9 -0.7
baz=94,SNR=11
PDAR Pinedale Array 94.33 47 P **P 19 05 13.7 -0.9**
comp=Z,3.3nm,0.8s,baz=205,slow=2.5,SNR=17
PDAR pP pP 19 05 45.6 -1.1
comp=Z,13nm,1.0s,baz=214,slow=14,SNR=6.7
PDAR PP PP 19 09 03.4 -0.1
comp=Z,3.9nm,1.0s,baz=237,slow=5.0,SNR=2.3
PDAR PKKPbc PKKPbc 19 22 11.8 -4.0
comp=Z,17nm,0.9s,baz=89,slow=0.7,SNR=19
PDAR PKP2bc 19 29 54.1
comp=Z,0.5nm,0.6s,baz=66,slow=3.7,SNR=3.6
PDAR LR LR 19 43 06.3
comp=Z,18μm,19.7s,baz=246,slow=32
PDAR Pinedale Array 94.33 47 P **P 19 05 13.7 -0.9**
PDAR pP pP 19 05 45.6 -1.1
PDAR PP PP 19 09 03.4 -0.1
PDAR PKKPbc PKKPbc 19 22 11.8 -4.0
PDAR ⇑*e* 19 29 54.1
PDAR LR LR 19 43 06.3
Q20A Ridgley Place, 94.34 51 ⇑P P 19 05 14.2 -0.5
baz=94,SNR=12
F17A Fitzpatrick Pl 94.36 44 ⇓P P 19 05 15.2 +0.6
baz=94,SNR=11
E17A Martinsdale 94.36 43 ⇑P P 19 05 14.3 -0.3
baz=94,SNR=7.7
I18A Diamond G Ranc 94.38 46 ⇑P P 19 05 14.5 -0.2
baz=94
P20A De Beque 94.40 51 ⇑P P 19 05 14.6 -0.3
baz=94,SNR=11
S21A Coal Bank Pass 94.42 52 ⇓P P 19 05 15.3 +0.2
baz=94,SNR=18
T21A Navajo Lake 94.46 53 ⇑P P 19 05 15.9 +0.6
baz=95
123A Bell Site, Whi 94.48 58 ⇑P P 19 05 15.3 -0.2
baz=95
BNM Barren Site 94.53 56 *e*P **P 19 05 15.1 -0.6**
comp=Z,26nm,0.4s,mb6.0
BNM *e*PKKP PKKPbc 19 22 12.7 -2.2
W22A Albuquerque 94.55 55 ⇑P P 19 05 16.2 +0.4
baz=95
LPM Los Pinos Moun 94.56 56 *e*P **P 19 05 16.3 +0.4**
comp=Z,33nm,1.4s,mb5.6
LPM *e*PKKP PKKPbc 19 22 12.8 -1.9
LATR Latur 94.58 288 *e*PKP **P 19 05 15.7 -0.5**
Z23A Rita Site, Whi 94.65 57 ⇑P P 19 05 15.9 -0.4
baz=95
AKL Akola 94.65 290 *i*P **P 19 05 15.7 -0.8**
AKL *i x* x 19 16 08.6
O20A White River Ci 94.66 50 ⇓P P 19 05 15.5 -0.6
baz=95,SNR=6.8

V22A San Miguel Ran 94.70 54 ⇑P P 19 05 16.3 -0.2
baz=95
H18A Shoshone NF, C 94.73 45 ⇑P P 19 05 16.7 +0.4
baz=95
R21A Cimarron 94.77 52 ⇑P P 19 05 17.2 +0.5
baz=95,SNR=19
N20A Spence Gulch, 94.81 49 ⇓P P 19 05 16.3 -0.5
baz=95,SNR=10
J19A Crowheart 94.81 47 ⇑P P 19 05 15.9 -0.8
baz=95,SNR=8.8
BHPL Bhopal 94.83 293 *e*PKP **P 19 05 16.6 -0.7**
ANMO Albuquerque 94.84 55 P **P 19 05 15.9 -1.2**
comp=Z,10nm,1.1s,mb5.2,baz=264,slow=4.2,SNR=17
ANMO PKPPKP 19 30 24.9
comp=Z,9.4nm,1.1s,baz=116,slow=2.8,SNR=8.1
ANMO LR LR 19 44 53.7
comp=Z,30μm,18.3s,baz=253,slow=33
ANMO Albuquerque 94.84 55 *e*P **P 19 05 15.9 -1.2**
comp=Z,41nm,1.2s,mb5.7
U22A Llaves 94.85 54 ⇑P P 19 05 17.3 +0.1
baz=95
K19A Absolon Red Bu 94.85 47 ⇑P P 19 05 16.1 -0.9
baz=95,SNR=10
Q21A Lamborn Mesa, 94.86 51 ⇓P P 19 05 17.3 +0.2
baz=95
324A Moseley Ranch, 94.86 59 ⇓P P 19 05 16.6 -0.7
baz=95
B17A L&G Farms, Che 94.87 42 ⇓P P 19 05 16.6 -0.3
baz=95,SNR=17
Y23A Lovelace Mesa, 94.94 56 ⇑P P 19 05 17.1 -0.5
baz=95,SNR=18
G18A Lazy EL Ranch, 94.95 45 ⇑P P 19 05 17.4 +0.1
baz=95,SNR=8.6
T22A Edith 94.96 53 ⇓P P 19 05 17.6 0.0
baz=95
X23A Hourglass Bar 94.98 56 ⇓P P 19 05 17.4 -0.3
baz=95
F18A Big Timber 94.99 44 ⇑P P 19 05 17.7 +0.2
baz=95,SNR=9.0
GCMT Greycliff 95.00 44 *e*P **P 19 05 17.6 +0.1**
comp=Z,21nm,1.3s,mb5.4
GCMT *e*pP pP 19 05 50.4 +0.7
MNTX Cornudas Mount 95.00 59 ⇑P P 19 05 17.5 -0.4
baz=95
MNTX Cornudas Mount 95.00 59 *e*P **P 19 05 17.2 -0.8**
comp=Z,533nm,0.8s,mb7.0
MNTX *e*PKKP PKKPbc 19 22 12.7 -0.7
M20A Sweetwater, Wa 95.02 49 ⇑P P 19 05 17.9 +0.1
baz=95,SNR=8.0
MNGI Mangalore 95.02 282 *i*P x 19 05 48.3
MNGI *i*S S 19 16 25.9 +3.1
E18A Harlowton 95.02 43 ⇑P P 19 05 18.3 +0.7
baz=95,SNR=12
L20A Wamsutter 95.03 48 ⇓P P 19 05 17.5 -0.3
baz=95
I19A Meeteetse 95.04 46 ⇓P P 19 05 17.8 0.0
baz=95,SNR=6.0
A17A Triple J Farms 95.10 41 ⇑P P 19 05 17.8 -0.1
baz=95,SNR=21
RLMT Red Lodge 95.11 45 ⇓P P 19 05 18.7 +0.7
baz=95
RLMT Red Lodge 95.11 45 *e*P **P 19 05 17.4 -0.6**
comp=Z,196nm,1.2s,mb6.4
RLMT *e*pP pP 19 05 50.3 0.0
P21A Newcastle 95.11 51 ⇓P P 19 05 18.0 -0.2
baz=95
W23A Werner Place, 95.14 55 ⇓P P 19 05 18.0 -0.5
baz=95
124A Stringfield Ra 95.16 58 ⇓P P 19 05 18.4 -0.3
baz=95
K20A Yellowstone Ra 95.18 48 ⇑P P 19 05 17.2 -1.2
baz=95,SNR=5.8
S22A 4UR Ranch, Cre 95.18 53 ⇑P P 19 05 18.9 +0.3
baz=95,SNR=14
H19A Powell 95.19 45 ⇓P P 19 05 18.5 +0.1
baz=95
V23A Ortiz Mt. (NFS 95.24 55 ⇑P P 19 05 19.5 +0.6
baz=95
D18A Linhart Farms, 95.25 43 ⇓P P 19 05 19.1 +0.4
baz=95
O21A Pagoda 95.25 50 ⇓P P 19 05 18.9 +0.1
baz=95
325A Bean Ranch, Si 95.28 59 ⇑P P 19 05 18.7 -0.4
baz=95
N21A Black Mountain 95.34 50 ⇓P P 19 05 19.2 -0.1
baz=96
R22A Saguache, Gunn 95.34 52 ⇑P P 19 05 19.9 +0.6
baz=96
U23A El Rito 95.36 54 ⇓P P 19 05 19.3 -0.2
baz=96
Q22A Crested Butte, 95.37 51 ⇓P P 19 05 19.4 0.0
baz=96,SNR=20
Z24A Sheeppen Canyo 95.37 57 ⇓P P 19 05 18.3 -1.3
baz=96
SMCO Snowmass 95.39 51 *e*P **P 19 05 19.3 -0.2**
comp=Z,44nm,1.1s,mb5.8
SMCO *e*PKKP PKKPbc 19 22 10.4 -2.3
VNA3 Neumayer Olymp 95.41 181 *e*P **P 19 05 15.3 -3.7**
VNA3 *e* pP 19 05 48.4 -2.8
Y24A Capitan 95.44 57 ⇑P P 19 05 19.0 -0.8
baz=96,SNR=12
EGMT Eagleton 95.48 42 ⇑P P 19 05 19.2 -0.5
baz=96,SNR=11
EGMT Eagleton 95.48 42 *e*P **P 19 05 19.3 -0.3**
comp=Z,404nm,0.5s,mb7.1
EGMT *e*pP pP 19 05 51.7 -0.2
F19A Roth Farm, Mol 95.50 44 ⇓P P 19 05 19.0 -0.8
baz=96,SNR=5.6
J20A Shoshoni 95.52 47 ⇑P P 19 05 19.2 -0.7
baz=96
225A Deer Hill, Car 95.56 58 ⇓P P 19 05 19.5 -0.9
baz=96
B18A Beardsley Farm 95.56 42 ⇓P P 19 05 19.5 -0.5
baz=96,SNR=8.7
X24A Lazy VL Ranch, 95.58 56 ⇑P P 19 05 19.8 -0.7
baz=96
626A Big Bend Ranch 95.59 61 ⇑P P 19 05 20.1 -0.5
baz=96
I20A Worland 95.63 46 ⇓P P 19 05 19.7 -0.7
baz=96
A18A Metzger Ranch, 95.64 41 ⇓P P 19 05 19.6 -0.8
baz=96,SNR=7.1
T23A Casias Ranch, 95.64 53 ⇑P P 19 05 20.8 +0.1
baz=96
M21A Separation Pea 95.64 49 ⇓P P 19 05 19.8 -0.8
baz=96,SNR=5.6
P22A Eagle 95.65 51 ⇑P P 19 05 20.7 0.0
baz=96
VNA2 Neumayer--Watz 95.67 182 *e*P **P 19 05 16.8 -3.4**
baz=187,slow=3.9
VNA2 *e* pP 19 05 50.0 -2.4
VNA2 *e* 19 06 03.4
VNA2 *e* 19 09 57.0
MNCY Minicoy 95.71 277 *ex* x 19 05 00.0
MNCY *ex* x 19 07 54.0
L21A Rawlins 95.72 48 ⇓P P 19 05 20.1 -0.8
baz=96
526A Mary Lane Ranc 95.74 61 ⇓P P 19 05 21.1 -0.2
baz=96
W24A Lazy 6 Ranch, 95.74 55 ⇑P P 19 05 21.0 -0.2
baz=96
E19A Rath Farm, Rou 95.75 44 ⇑P P 19 05 21.2 +0.2
baz=96,SNR=8.5
RWWY Rawlins 95.77 49 *e*P **P 19 05 20.2 -1.0**
comp=Z,188nm,0.6s,mb6.7
DDI Dehra Dun 95.79 300⇑*i*P **P 19 05 20.6 -0.9**
DDI *ex* x 19 09 07.5
125A Gardner Draw, 95.81 58 ⇑P P 19 05 20.8 -0.7
baz=96
S23A Nye Farm, Mont 95.81 53 ⇓P P 19 05 22.0 +0.6
baz=96
H20A Greybull 95.84 46 ⇑P P 19 05 20.2 -1.2
baz=96
D19A Cripps Ranch, 95.85 43 ⇓P P 19 05 21.5 +0.1
baz=96,SNR=14
G20A Bridger 95.86 45 ⇑P P 19 05 21.2 -0.3
baz=96
C19A Slack Wire Ran 95.88 42 ⇑P P 19 05 21.3 -0.2
baz=96,SNR=11
Z25A Roswell 95.89 57 ⇑P P 19 05 21.6 -0.3
baz=96
426A McDonald Obser 95.92 60 ⇓P P 19 05 21.4 -0.6
baz=96
O22A Kremmling 95.93 50 ⇓P P 19 05 21.7 -0.2
baz=96,SNR=21
TXAR Lajitas Array 95.94 61 P **P 19 05 21.9 -0.3**
comp=Z,4.2nm,0.7s,mb5.0,baz=212,slow=5.1,SNR=17

TXAR pP pP 19 05 54.2 -0.2
comp=Z,5.7nm,0.8s,baz=231,slow=7.1,SNR=4.0
TXAR PP PP 19 09 17.4 +1.1
comp=Z,40nm,1.4s,baz=255,slow=3.8,SNR=6.1
TXAR PKKPbc PKKPbc 19 22 10.2 -0.6
comp=Z,20nm,0.9s,baz=108,slow=3.6,SNR=20
TXAR PKPPKP 19 30 23.5
comp=Z,9.7nm,1.0s,baz=95,slow=1.5,SNR=9.5
TXAR LR LR 19 44 57.5
comp=Z,19μm,18.5s,baz=30,slow=33
TXAR Lajitas Array 95.94 61 P **P 19 05 22.0 -0.3**
TXAR *PP pP 19 05 54.2 -0.3
TXAR 19 09 17.5
TXAR pmax pmax
comp=Z,4.0nm,0.7s
TXAR MLR MLR
comp=Z,19μm,18.5s
TXAR Lajitas Array 95.94 61 P **P 19 05 21.9 -0.3**
TXAR pP pP 19 05 54.2 -0.2
TXAR PP PP 19 09 17.4 +1.1
TXAR PKKPbc PKKPbc 19 22 10.2 -0.6
TXAR P'P' 19 30 23.5
TXAR LR LR 19 44 57.5
K21A Alcova 95.95 48 ⇓P P 19 05 21.2 -0.8
baz=96
GDL2 Guadalupe Moun 95.96 58 *e*P **P 19 05 22.1 -0.1**
comp=Z,51nm,1.9s,mb5.6
V24A Rampart Ranch, 95.96 55 ⇑P P 19 05 22.0 -0.2
baz=96,SNR=5.5
J21A Lysite 95.97 47 ⇑P P 19 05 21.7 -0.3
baz=96
VNA1 Neumayer--Stat 95.98 182 *e*P **P 19 05 18.0 -3.6**
VNA1 *e* pP 19 05 51.3 -2.5
F20A Billings 96.03 44 ⇑P P 19 05 22.0 -0.3
baz=96
Y25A Mesa, Roswell 96.05 57 ⇑P P 19 05 21.6 -1.0
baz=96
326A Caldwell Ranch 96.09 59 ⇓P P 19 05 21.4 -1.5
baz=96
U24A Moreno Valley 96.10 54 ⇑P P 19 05 22.6 -0.2
baz=96
N22A Wattenberg Ran 96.14 50 ⇑P P 19 05 22.8 -0.1
baz=96
MKAR Makanchi Array 96.14 317 P **P 19 05 22.2 -0.5**
comp=Z,528nm,0.8s,mb7.0,baz=91,slow=6.1,SNR=399
MKAR pP pP 19 05 53.1 -1.8
comp=Z,199nm,0.9s,baz=92,slow=6.1,SNR=3.5
MKAR PP PP 19 09 16.4 -1.1
comp=Z,101nm,1.2s,baz=116,slow=5.5,SNR=5.5
MKAR PKiKP PKiKP 19 10 00.6 0.0
comp=Z,15nm,0.7s,baz=152,slow=0.5,SNR=6.8
MKAR S SKSac 19 15 46.1 -1.4
comp=Z,2.7nm,0.9s,baz=110,slow=7.8,SNR=2.1
MKAR PKKPbc PKKPbc 19 22 08.5 -2.5
comp=Z,73nm,1.2s,baz=298,slow=2.6,SNR=21
MKAR PKPPKP 19 30 23.9
comp=Z,4.9nm,1.1s,baz=306,slow=4.1,SNR=6.1
MKAR Makanchi Array 96.14 317 P **P 19 05 22.3 -0.4**
MKAR *PP pP 19 05 53.2 -1.7
MKAR 19 09 16.4
MKAR S SKSac 19 15 46.1 -1.4
MKAR pmax pmax
comp=Z,528nm,0.8s
MKAR pmax pmax
comp=Z,101nm,1.2s
MKAR smax
comp=N,3.0nm,0.9s
MKAR Makanchi Array 96.14 317 P **P 19 05 22.2 -0.5**
MKAR pP pP 19 05 53.1 -1.8
MKAR PP PP 19 09 16.4 -1.1
527A Woodward Ranch 96.16 61 ⇑P P 19 05 22.2 -1.0
baz=96
M22A Cedar Creek Ra 96.16 49 ⇓P P 19 05 22.3 -0.7
baz=96
NDI New Delhi 96.17 298⇑*i*P **P 19 05 19.5 -3.8**
NDI *e*S SKSac 19 15 44.0 -4.5
I21A Big Trails, Te 96.18 47 ⇑P P 19 05 22.2 -0.8
baz=96,SNR=6.7
Q23A Hartsel 96.20 52 ⇓P P 19 05 23.0 -0.1
baz=96,SNR=7.0
X25A Clemmons Ranch 96.20 56 ⇑P P 19 05 22.3 -1.0
baz=96
E20A Meyer Farm, Mu 96.20 44 ⇓P P 19 05 22.9 -0.1
baz=96,SNR=6.7
627A Terlingua Ranc 96.21 61 ⇓P P 19 05 23.0 -0.4
baz=96
SDCO Great Sand Dun 96.21 53 ⇑P P 19 05 22.9 -0.3
baz=96,SNR=7.3
SDCO Great Sand Dun 96.21 53 *e*P **P 19 05 22.9 -0.4**
comp=N,84nm,0.7s,mb6.3
ZALV Zalesovo Beam 96.26 324 P **P 19 05 21.5 -1.6**
comp=N,395nm,0.9s,mb6.9,baz=116,slow=3.6,SNR=342
ZALV pP pP 19 05 52.9 -2.4
comp=N,118nm,0.9s,baz=113,slow=3.9,SNR=3.2
ZALV PP PP 19 09 16.6 -1.5
comp=N,49nm,1.1s,baz=100,slow=6.3,SNR=3.8
ZALV PKiKP PKiKP 19 10 00.9 +0.4
comp=N,12nm,0.7s,baz=156,slow=1.4,SNR=4.4
ZALV PKKPbc PKKPbc 19 22 08.8 -2.2
comp=N,2.5nm,0.4s,baz=277,slow=2.7,SNR=5.1
ZALV PKPPKP 19 30 18.4
comp=N,1.1nm,0.6s,baz=289,slow=4.5,SNR=3.5
ZALV LR LR 19 45 37.3
comp=N,9μm,21.8s,baz=102,slow=33
ZALV Zalesovo Beam 96.26 324 P **P 19 05 21.5 -1.6**
ZALV *PP pP 19 05 52.9 -2.4
ZALV 19 09 16.6
ZALV pmax pmax
comp=Z,395nm,0.9s,mb6.8
ZALV MLR MLR
comp=Z,9μm,21.8s
D20A Manuel Ranch, 96.33 43 ⇑P P 19 05 23.3 -0.2
baz=96,SNR=11
126A Clayton Basin, 96.33 58 ⇑P P 19 05 23.0 -0.9
baz=96
CLNB Carlsbad 96.37 58 *e*P **P 19 05 23.9 -0.2**
comp=Z,1.0nm,0.4s
O23A Lake Granby, G 96.41 50 ⇑P P 19 05 24.6 +0.5
baz=96
S24A Houchin Ranch, 96.41 53 ⇑P P 19 05 24.3 +0.1
baz=96,SNR=7.9
T24A Torres, Weston 96.42 54 ⇓P P 19 05 24.6 +0.4
baz=96
427A Hayter Ranch, 96.48 60 ⇑P P 19 05 24.0 -0.7
baz=97
K22A Casper 96.48 48 ⇑P P 19 05 23.9 -0.5
baz=97
Z26A Caprock 96.50 57 ⇓P P 19 05 23.3 -1.3
baz=97
W25A X Bar L Ranch, 96.50 55 ⇑P P 19 05 23.8 -0.9
baz=97
V25A Rancho No Teng 96.51 55 ⇓P P 19 05 23.5 -1.1
baz=97
GOA Goa 96.51 284⇓*i*P **P 19 05 24.6 -0.5**
327A Balmorhea Ranc 96.51 59 ⇑P P 19 05 23.8 -1.0
baz=97
N23A Red Feather La 96.53 50 ⇑P P 19 05 25.1 +0.5
baz=97
H21A Big Horn, Sher 96.54 46 ⇓P P 19 05 24.2 -0.3
baz=97
CPRX Cap Rock 96.54 58 *e*P **P 19 05 25.3 +0.5**
comp=Z,47nm,1.0s,mb5.9
G21A Lodge Grass 96.55 45 ⇑P P 19 05 24.3 -0.3
baz=97
KAD Karad 96.55 286 *e*PKP **P 19 05 24.1 -1.2**
ISCO Idaho Springs 96.55 51 ⇓P P 19 05 24.8 0.0
baz=97,SNR=6.9
ISCO Idaho Springs 96.55 51 *e*P **P 19 05 24.7 -0.1**
ISCO pmax pmax
comp=Z,19nm,1.0s,mb5.5
ISCO Idaho Springs 96.55 51 *e*P **P 19 05 24.7 -0.1**
comp=Z,19nm,1.0s,mb5.5
C20A Veseth Ranch, 96.56 43 ⇓P P 19 05 23.6 -1.0
baz=97,SNR=6.5
YKA Yellowknife Ar 96.60 27 P **P 19 05 23.8 -0.6**
comp=Z,21nm,0.8s,mb5.6,baz=254,slow=4.6,SNR=49
YKA pP pP 19 05 54.1 -2.6
comp=Z,33nm,0.8s,baz=255,slow=4.5,SNR=6.7
YKA PKiKP PKiKP 19 10 00.8 -0.1
comp=Z,3.6nm,0.8s,baz=248,slow=1.5,SNR=6.6
YKA S SKSac 19 15 48.3 -0.9
comp=Z,1.2nm,0.8s,baz=334,slow=6.3,SNR=2.7
YKA PKKPbc PKKPbc 19 22 07.9 -2.5
comp=Z,14nm,0.9s,baz=76,slow=2.7,SNR=14
YKA PKPPKP 19 30 14.6
comp=Z,6.8nm,1.0s,baz=61,slow=2.2,SNR=9.4
YKA LR LR 19 52 08.0

comp=Z,1µm,18.0s,baz=165,slow=37
YKA Yellowknife Ar 96.60 27 P P 19 05 23.8 -0.6
YKA *PP pP 19 05 54.1 -2.6
YKA S SKSac 19 15 48.3 -0.9
YKA pmax pmax
comp=Z,21nm,0.8s
YKA smax
comp=N,1.0nm,0.8s
YKA MLR MLR
comp=Z,1µm,18.0s
R24A Sanders Place, 96.61 52 ⇑P P 19 05 24.7 -0.3
baz=97
628A Black Gap, Mar 96.64 61 ⇓P P 19 05 24.8 -0.6
baz=97
J22A Midwest 96.67 47 ⇓P P 19 05 24.6 -0.7
baz=97
SMLA Simla 96.71 300 *i* P P 19 05 23.6 -2.1
Q24A Divide 96.73 52 ⇓P P 19 05 25.9 +0.3
baz=97,SNR=9.6
F21A Absaloka Mine, 96.74 45 ⇓P P 19 05 25.4 0.0
baz=97
Y26A Elida 96.75 57 ⇑P P 19 05 24.9 -0.9
baz=97
U25A Circle Dot Ran 96.79 54 ⇑P P 19 05 25.5 -0.4
baz=97
227A Bennet, Jal 96.81 59 ⇓P P 19 05 25.3 -0.8
baz=97
M23A Laramie 96.82 49 ⇑P P 19 05 25.5 -0.4
baz=97
127A Arkansas Junct 96.89 58 ⇑P P 19 05 25.5 -0.9
baz=97
X26A CR and CF Fran 96.89 56 ⇓P P 19 05 24.8 -1.6
baz=97
E21A Keefer Ranch, 96.92 44 ⇑P P 19 05 26.0 -0.3
baz=97
T25A Trinidad 96.93 54 ⇓P P 19 05 26.6 +0.1
baz=97
SDNR Sundarnagar 96.95 301 *e*PKP P 19 05 26.5 -0.3
SDNR *ex* x 19 09 27.5
L23A Garrett 96.97 48 ⇑P P 19 05 26.2 -0.4
baz=97
PHWY Pilot Hill 96.98 49 *e*P P 19 05 26.1 -0.6
comp=Z,65nm,1.8s,mb5.8
PHWY *e*pP pP 19 05 58.5 -0.4
O24A Longmont 97.03 51 ⇓P P 19 05 27.6 +0.7
baz=97
P24A Kohler Place, 97.03 51 ⇑P P 19 05 26.9 0.0
baz=97
W26A Owens Ranch, T 97.03 56 ⇓P P 19 05 25.4 -1.6
baz=97
428A Kincaid Ranch, 97.06 60 ⇑P P 19 05 27.0 -0.3
baz=97
328A Wristen Ranch, 97.08 60 ⇑P P 19 05 26.2 -1.1
baz=97
D21A La Casta Ranch 97.09 43 ⇑P P 19 05 27.1 +0.2
baz=97
POO Poona 97.11 287 *e*PKP P 19 05 26.9 -0.9
V26A Tequesquite Ra 97.16 55 ⇑P P 19 05 26.6 -1.0
baz=97
R25A Fountain Ranch 97.23 53 ⇑P P 19 05 27.1 -0.8
baz=97
Y27A Causey 97.28 57 ⇓P P 19 05 27.3 -0.9
baz=97
N24A Carr 97.31 50 ⇑P P 19 05 28.0 -0.2
baz=97
U26A Atchley Ranch, 97.31 54 ⇓P P 19 05 27.6 -0.7
baz=97
NVS Novosibirsk 97.37 325⇑*i*P P 19 05 24.2 -3.8
NVS *e*S SKSac 19 15 48.7 -4.8
NVS pmax pmax
comp=N,342nm,2.1s
NVS pmax pmax
comp=E,661nm,2.1s
NVS pmax pmax
comp=Z,2µm,2.1s,mb7.1
NVS smax
comp=N,57nm,2.1s
NVS smax
comp=E,227nm,2.1s
BHK Bhakra 97.40 300 *ex* P 19 05 25.0 -3.8
Q25A Bedland, Calha 97.41 52 ⇓P P 19 05 28.0 -0.7
baz=98
USHA Ushuaia 97.47 151 P P 19 05 28.1 -0.6
comp=E,21nm,1.3s,mb5.4,baz=223,slow=4.8,SNR=6.3
USHA S SKSac 19 15 53.7 -0.7
comp=E,3.9nm,0.8s,baz=352,slow=1.8,SNR=2.7
USHA PKKPbc PKKPbc 19 22 06.5 -0.9
comp=E,30nm,1.0s,baz=23,slow=1.5,SNR=9.7
USHA PKPPKP 19 30 16.0
comp=E,20nm,1.0s,baz=341,slow=1.8,SNR=6.4
USHA LR LR 19 38 44.4
comp=E,3µm,20.7s,baz=206,slow=29
M24A Cheyenne 97.48 49 ⇑P P 19 05 28.7 -0.2
baz=98
X27A F and S Farms, 97.49 56 ⇓P P 19 05 28.2 -0.9
baz=98
L24A Wheatland 97.51 49 ⇓P P 19 05 28.9 -0.1
baz=98
LAO LASA Array 97.53 44 ⇓P P 19 05 28.8 -0.2
baz=98
LAO LASA Array 97.53 44 *e*P P 19 05 29.0 0.0
comp=E,136nm,0.7s,mb6.6
P25A Willow Gulch B 97.59 51 ⇑P P 19 05 29.5 +0.1
baz=98
W27A Bowe Ranch, En 97.59 56 ⇑P P 19 05 27.6 -2.0
baz=98
MSTX Muleshoe 97.62 57 ⇓P P 19 05 28.8 -0.9
baz=98
O25A Wiggins 97.74 51 ⇓P P 19 05 30.2 +0.1
baz=98
N25A Grover 97.90 50 ⇓P P 19 05 30.9 +0.1
baz=98
AJM Ajmer 97.97 295 *e*PKP P 19 05 30.5 -0.9
RSSD Black Hills 98.55 47 *e*P P 19 05 33.7 +0.1
RSSD pmax pmax
comp=Z,32nm,1.4s,mb5.7
RSSD Black Hills 98.55 47 *e*P P 19 05 33.7 0.0
comp=Z,32nm,1.4s,mb5.7
AMTX Amarillo 98.68 56 ⇓P P 19 05 33.2 -1.3
baz=99
AMTX Amarillo 98.68 56 *e*P P 19 05 33.3 -1.1
comp=Z,19nm,0.9s,mb5.6
AAA Alma-Ata 99.16 312 *e*P P 19 05 36.5 +0.1
AAA *e*S S 19 16 47.2 -10
AAA pmax pmax
comp=Z,5µm,6.0s
AAA smax
comp=E,18µm,12.9s
DGMT Dagmar 99.21 42 ⇓P P 19 05 35.8 -0.7
baz=99
KSH Kashi 99.23 308 P P 19 05 38.3 +1.5
KSH *e*pP pP 19 06 10.9 +1.8
KSH *e*sP sP 19 06 24.3 +2.1
KSH *e*PP PP 19 09 42.0 +0.7
KSH *e*SKS 19 16 03.0
KSH *e*S S 19 16 51.4 -6.5
KSH pmax pmax
comp=Z,410nm,1.6s,mb6.7
KSH pmax pmax
comp=Z,9µm,6.1s
KSH LR LR
comp=N,15µm,14.9s
KSH LR LR
comp=E,15µm,15.8s
KSH LR LR
comp=Z,42µm,29.1s
KURK Kurchatov 99.30 320 *e*P Pdif 19 05 35.3 -1.6
KURK pmax pmax
comp=Z,517nm,1.6s,mb6.8
KURK Kurchatov 99.30 320 *e*P Pdif 19 05 35.3 -1.6
comp=Z,517nm,1.6s
KURK Kurchatov 99.30 320 P Pdif 19 05 35.8 -1.1
SNR=172
OGNE Ogallala 99.45 50 ⇓P Pdif 19 05 37.5 -0.1
baz=100
JCT Junction City 99.46 61 ⇑P Pdif 19 05 36.5 -1.1
baz=100
JCT Junction City 99.46 61 *e*P Pdif 19 05 36.3 -1.3
JCT pmax pmax
comp=Z,32nm,1.1s,mb5.8
JCT Junction City 99.46 61 *e*Pdif Pdif 19 05 36.2 -1.3
comp=Z,32nm,1.1s
ULHL Ulahol 99.49 311 P Pdif 19 05 38.5 +0.7
SNR=24
TKM2 Tokmak 2 100.07 312 P Pdif 19 05 39.6 -0.6
SNR=59
TKM2 Tokmak 2 100.07 312 *e*P Pdif 19 05 39.3 -1.0
TKM2 pmax pmax
comp=Z,58nm,0.5s
TKM2 Tokmak 2 100.07 312 *e*Pdif Pdif 19 05 39.3 -1.0
comp=Z,58nm,0.5s
KZA Kyzart 100.19 311 P Pdif 19 05 42.1 +1.3
SNR=89
KZA Kyzart 100.19 311 *e*Pdif Pdif 19 05 41.7 +0.9
comp=Z,516nm,1.7s
KBK Karagaybulak 100.50 311 P Pdif 19 05 42.2 0.0
SNR=26
CHMS Chumysh 100.70 312 P Pdif 19 05 42.4 -0.6
SNR=52
FRU Bishkek 100.77 312⇑*i*P Pdif 19 05 42.0 -1.4
FRU pmax pmax
comp=Z,480nm,2.0s
AAK Ala-Archa 100.83 311 P Pdif 19 05 43.4 -0.3
SNR=34
CBKS Cedar Bluff 100.86 53 ⇑P Pdif 19 05 43.7 -0.1
baz=101
CBKS Cedar Bluff 100.86 53 *e*Pdif Pdif 19 05 43.1 -0.7
CBKS *e*PP PP 19 09 51.4 -2.3
USP Ospenovka 100.92 312 P Pdif 19 05 43.4 -0.7
SNR=53
WMOK Wichita Mounta 101.00 57 *e*P Pdif 19 05 45.8 +1.4
WMOK pmax pmax
comp=Z,3.0nm,1.0s
WMOK Wichita Mounta 101.00 57 *e*Pdif Pdif 19 05 45.8 +1.4
comp=Z,2.8nm,1.0s
AML Almayashu 101.35 311 P Pdif 19 05 46.2 +0.3
SNR=88
EKS2 Erkin-Say 101.36 311 P Pdif 19 05 46.5 +0.5
SNR=61
EKS2 Erkin-Say 101.36 311 *e*Pdif Pdif 19 05 45.5 -0.6
comp=Z,1µm,0.9s
CMIG Matias Romero 101.50 75 PP PP 19 09 58.0 -1.0
comp=Z,14nm,1.2s,baz=247,slow=6.4,SNR=8.1
FFC Flin Flon 101.50 36 *i* P Pdif 19 05 46.6 -0.1
FFC Flin Flon 101.50 36 *e*Pdif Pdif 19 05 45.6 -1.1
comp=Z,46nm,1.4s
FFC *e*PKKP PKKPdf 19 22 16.0 +14
BHJ Bhuj 101.85 291 *e*PKP Pdif 19 05 48.4 +0.2
BHJ AMS AMS 19 45 25.7
comp=Z,7µm,16.4s
KSU1 Kansas State U 103.32 53 *e*Pdif Pdif 19 05 54.8 +0.1
KSU1 *e*PP PP 19 10 09.6 -2.5
KKAR Karatay Array 103.80 311 *e*P Pdif 19 05 56.0 -0.8
KKAR pmax pmax
comp=Z,8.0nm,1.3s
KKAR Karatay Array 103.80 311 *e*Pdif Pdif 19 05 56.0 -0.9
comp=Z,8.0nm,1.3s
ECSD EROS Data Cent 103.81 48 *e*Pdif Pdif 19 05 57.8 +0.9
comp=Z,14nm,1.0s
KBL Kabul 104.01 303 *e*P Pdif 19 05 57.1 -0.7
KBL pmax pmax
comp=Z,7.0nm,0.1s
KBL Kabul 104.01 303 *e*Pdif Pdif 19 05 57.1 -0.7
comp=Z,6.7nm,0.1s
NATX Nacogdoches 104.01 60 *e*PKKPab PKKPab 19 22 07.7 +1.4
comp=Z,591nm,1.5s
PLCA Paso Flores 104.23 139 Pdiff Pdif 19 05 58.5 -0.3
comp=Z,1.2nm,0.4s,baz=96,slow=23,SNR=3.7
PLCA PP PP 19 10 14.6 -3.5
comp=Z,1.8nm,0.9s,baz=241,slow=7.3,SNR=3.0
PLCA PKKPbc PKKPbc 19 21 47.5 -0.1
comp=Z,27nm,1.1s,baz=32,slow=4.0,SNR=11
PLCA PKPPKP 19 29 57.5
comp=Z,11nm,1.2s,baz=54,slow=2.6,SNR=5.6
BVAR Borovoye Array 104.63 322 Pdiff Pdif 19 05 59.2 -1.3
comp=Z,48nm,0.9s,baz=106,slow=3.2,SNR=152
BVAR PP PP 19 10 16.5 -4.9
comp=Z,39nm,0.9s,baz=86,slow=7.6,SNR=3.9
BVAR PKKPbc PKKPbc 19 21 46.4 -0.5
comp=Z,11nm,1.0s,baz=258,slow=4.4,SNR=9.0
BVAR Borovoye Array 104.63 322 P Pdif 19 05 59.2 -1.4
BVAR 19 10 16.5
BVAR pmax pmax
comp=Z,48nm,0.9s
BVAR pmax pmax
comp=Z,39nm,0.9s
BRVK Borovoye 104.70 322 *e*P Pdif 19 05 59.8 -1.1
BRVK pmax pmax
comp=Z,251nm,1.5s
BRVK Borovoye 104.70 322 *e*Pdif Pdif 19 05 59.8 -1.1
comp=Z,251nm,1.5s
AGMN Agassiz Nation 104.70 43 *e*PKKPab PKKPab 19 22 02.5 -0.2
comp=Z,213nm,1.4s
ULM Lac du Bonnet 104.81 41 Pdiff Pdif 19 06 00.4 -1.0
comp=Z,0.6nm,0.3s,baz=141,slow=6.9,SNR=3.1
ULM PKiKP PKiKP 19 10 15.4 -0.6
comp=Z,13nm,0.9s,baz=294,slow=3.5,SNR=7.4
ULM PKKPbc PKKPbc 19 21 44.1 -2.1
comp=Z,15nm,0.8s,baz=85,slow=2.5,SNR=7.8
ULM PKPPKP 19 30 05.5
comp=Z,47nm,1.1s,baz=352,slow=4.1,SNR=4.1
RES Resolute Bay 105.09 16 PKKPbc PKKPbc 19 21 43.7 -2.4
comp=Z,24nm,0.9s,baz=98,slow=2.8,SNR=10
RES PKKP PKKPab 19 22 00.8 +0.3
comp=Z,56nm,1.0s,baz=84,slow=4.5,SNR=15
RES Resolute Bay 105.09 16 *e*P Pdif 19 06 02.3 -0.3
RES pmax pmax
comp=Z,98nm,1.8s
RES Resolute Bay 105.09 16 *e*Pdif Pdif 19 06 02.3 -0.3
comp=Z,98nm,1.8s
MIAR Mount Ida 105.24 58 *e*PKKPbc PKKPbc 19 21 44.5 +0.1
MIAR *e*PKKPab PKKPab 19 22 00.9 +0.1
FCC Fort Churchill 106.08 32 *e*PKKPbc PKKPbc 19 21 40.2 -2.5
FCC *e*PKKPab PKKPab 19 21 55.7 -0.7
VBMS Vicksburg 107.56 60 *e*PKKPbc PKKPbc 19 21 37.0 -0.1
VBMS *e*PKKPdf PKKPdf 19 21 51.8 +1.4
EYMN Ely 107.61 44 *e*PKKPbc PKKPbc 19 21 34.1 -3.4
EYMN *e*PKKPab PKKPab 19 21 48.5 -1.3
HBAR Harrisburg 107.71 57 *e*PKKPbc PKKPbc 19 21 37.3 +0.5
HBAR *e*PKKPab PKKPab 19 21 50.5 +0.7
FVM French Village 108.05 54 *e*PKKPab PKKPab 19 21 48.1 0.0
TGUH Tegucigalpa,Un 108.19 79 *e*PKKPbc PKKPbc 19 21 35.2 +0.5
TGUH *e*PKKPab PKKPab 19 21 47.4 -1.1
TEIG Tepich 108.19 73 PP PP 19 10 48.6 +0.1
comp=Z,8.7nm,1.1s,baz=302,slow=11,SNR=3.2
TEIG Tepich 108.19 73 *e*PKKPbc PKKPbc 19 21 32.2 -2.6
TEIG *e*PKKPab PKKPab 19 21 46.3 -1.9
SLM Saint Louis 108.24 54 *e*PKKPab PKKPab 19 21 47.3 -0.1
GNAR Gosnell 108.26 56 *e*PKKPbc PKKPbc 19 21 35.2 +0.1
GNAR *e*PKKPab PKKPab 19 21 47.4 +0.1
MET Memphis--Engin 108.27 57 *e*PKKPdf PKKPdf 19 21 47.9 -1.3
JFWS Jewell Farm 108.39 49 *e*PKKPbc PKKPbc 19 21 33.9 -1.0
JFWS *e*PKKPab PKKPab 19 21 44.4 -2.1
OXF Oxford 108.66 58 *e*PKKPbc PKKPbc 19 21 32.5 -1.2
OXF *e*PKKPab PKKPab 19 21 42.8 -2.8
HALT Halls 108.80 56 *e*PKKPab PKKPab 19 21 44.3 -0.6
HDIL Hopedale 109.04 52 *e*PKKPab PKKPab 19 21 43.8 +0.1
UTMT University of 109.21 56 *e*PKKPbc PKKPbc 19 21 31.1 -1.0
UTMT *e*PKKPab PKKPab 19 21 43.2 +0.1
COWI Conover 109.22 46 *e*PKiKP PKiKP 19 10 22.2 -2.1
COWI *e*PKKPbc PKKPbc 19 21 30.5 -1.9
COWI *e*PKKPab PKKPab 19 21 41.5 -1.2
OLIL Olney 109.91 53 *e*PKKPab PKKPab 19 21 39.8 -0.2
WVT Waverly 110.04 56 *e*PKKPbc PKKPbc 19 21 27.4 -2.0
WVT *e*PKKPab PKKPab 19 21 39.4 0.0
LCO Las Campanas 110.08 128 *e*PKiKP PKiKP 19 10 26.6 0.0
SVE Sverdlovsk 110.15 326⇓*i*P Pdif 19 06 24.0 -1.1
SVE *e* 19 10 59.1
SVE *e*SS SS 19 26 17.9 -0.1
SVE pmax pmax
comp=Z,197nm,1.5s
SVE MLR MLR
comp=Z,14µm,23.0s
USIN University of 110.23 54 *e*PKKPab PKKPab 19 21 38.6 +0.1
LRAL Lakeview Retre 110.58 60 *e*PKiKP PKiKP 19 10 26.3 -1.0
LRAL *e*PKKPbc PKKPbc 19 21 27.0 -0.5
CFAA Coronel Fontan 110.62 132 PKiKP PKiKP 19 10 27.5 0.0
comp=Z,1.7nm,0.9s,baz=240,slow=2.6,SNR=9.7
CFAA PKKPbc PKKPbc 19 21 27.5 +0.1
comp=Z,2.2nm,0.8s,baz=46,slow=3.7,SNR=8.8
CFAA PKKP PKKPab 19 21 37.8 -1.3
comp=Z,9.5nm,1.1s,baz=49,slow=2.8,SNR=16
CFAA PKPPKP 19 29 58.2
comp=Z,0.3nm,0.5s,baz=357,slow=4.0,SNR=3.7
BLO Bloomington 111.15 53 *e*PKKPab PKKPab 19 21 34.4 0.0
TRQA Tornquist 111.19 140 *e*PKiKP PKiKP 19 10 27.5 -1.0
ABKAR Akbulak array 111.24 318 *e*Pdif Pdif 19 06 29.0 -0.9
ABKAR *e*PKiKP PKiKP 19 10 28.5 +0.4
WCI Wyandotte Cave 111.32 54 *e*PKKPbc PKKPbc 19 21 24.4 -0.9
WCI *e*PKKPab PKKPab 19 21 33.2 -0.5
ARU Arti 111.34 326 P Pdif 19 06 28.7 -1.7
ARU *i* 19 10 27.3
ARU 19 11 07.5
ARU PPP 19 13 29.7
ARU 19 16 57.4
ARU SP SP 19 20 30.3 +2.2
ARU PS PS 19 20 40.2 -3.2
ARU SSS 19 30 39.2
ARU Arti 111.34 326 *e*Pdif Pdif 19 06 28.8 -1.6
ARU *e*PKiKP PKiKP 19 10 24.6 -3.4
SWET Sewanee 111.55 57 *e*PKKPbc PKKPbc 19 21 23.7 -0.7
SOKR Solikamsk 111.77 329*c i*P Pdif 19 06 30.7 -1.6
SOKR *i* 19 10 28.5
SOKR SP SP 19 20 27.3 -4.5
SOKR pmax pmax
comp=Z,150nm,1.0s
SOKR MLR MLR
comp=Z,10µm,19.0s
IMOG Moghan 112.03 304 *e*P PKiKP 19 10 27.6 -2.4
JMDO Jabal Madar 112.29 289 P PKiKP 19 10 31.6 +0.7
SNR=9.2
IPAY Payeh 112.31 304 *e*P PKiKP 19 10 30.7 +0.2
AKTK Aktyubinsk 112.38 319 Pdif Pdif 19 06 34.1 -0.9
AKTK PKPdf PKiKP 19 10 29.9 -0.3
AKTK PP PP 19 11 17.2 -0.6
AKTK PKKPbc PKKPbc 19 21 20.9 -1.3
AKTK PP' 19 29 51.2
AKTO Aktyubinsk 112.38 319 Pdiff Pdif 19 06 34.1 -0.9
comp=Z,8.5nm,1.0s,baz=79,slow=6.0,SNR=30
AKTO PKiKP PKiKP 19 10 29.9 -0.3
comp=Z,49nm,0.7s,baz=93,slow=3.7,SNR=38
AKTO PP PP 19 11 17.2 -0.6
comp=Z,26nm,1.0s,baz=71,slow=9.9,SNR=8.6
AKTO PKKPbc PKKPbc 19 21 20.9 -1.3
comp=Z,9.1nm,0.9s,baz=267,slow=4.5,SNR=5.7
AKTO PKPPKP 19 29 51.2
comp=Z,1.1nm,0.8s,baz=292,slow=3.4,SNR=4.5
AKTO Aktyubinsk 112.38 319 P Pdif 19 06 34.1 -0.9
AKTO *i* 19 10 29.9
AKTO 19 11 17.2
AKTO pmax pmax
comp=Z,9.0nm,1.0s
AKTO pmax pmax
comp=Z,49nm,0.7s
AKTO pmax pmax
comp=Z,26nm,1.0s
SMDO Samad 112.41 290 P PKiKP 19 10 31.2 +0.1
SNR=13
ABPO Ambohimpanom 112.43 243 *e*P Pdif 19 06 35.1 -0.1
ABPO *i* 19 10 31.7
ABPO Ambohimpanom 112.43 243 *e*Pdif Pdif 19 06 35.1 -0.1
ABPO *e*PKiKP PKiKP 19 10 31.7 +0.4
IAKL Akhelmad 112.50 304 *e*P PKiKP 19 10 31.2 +0.3
IEMG Emamgholi 112.59 305 *e*P PKiKP 19 10 31.2 +0.2
OPO Ambohidratompo 112.64 243 Pdiff Pdif 19 06 36.6 +0.4
comp=Z,11nm,1.2s,baz=125,slow=5.2,SNR=9.3
OPO PKiKP PKiKP 19 10 31.9 +0.2
comp=Z,89nm,0.9s,baz=114,slow=1.4,SNR=66
OPO PP PP 19 11 20.2 +0.1
comp=Z,28nm,1.1s,baz=24,slow=1.9,SNR=3.4
IKRD Kardeh 112.70 304 *e*P PKiKP 19 10 30.0 -1.2
CPCT Cooper Cave 112.71 57 *e*PKiKP PKiKP 19 10 30.6 -0.7
CPCT *e*PKKPbc PKKPbc 19 21 20.6 0.0
VAN Vannovskaya 113.02 306⇑*i*P Pdif 19 06 38.3 +0.5
VAN *e*S PKiKP 19 10 28.9 -2.9
ISFR Sfrayin 113.11 305 *e*P PKiKP 19 10 32.9 +0.9
HOQ Hoqain 113.13 290 P PKiKP 19 10 32.5 0.0
SNR=5.8
BSY Bisya 113.16 289 P PKiKP 19 10 33.1 +0.6
SNR=11
TKL Tuckaleechee C 113.32 57 PKiKP PKiKP 19 10 32.3 -0.2
comp=Z,32nm,1.1s,baz=180,slow=4.1,SNR=16
TKL Tuckaleechee C 113.32 57 *i* PKIKP PKiKP 19 10 32.3 -0.2
TKL pmax pmax
comp=Z,32nm,1.1s
KBS Kingsbay 113.48 355 *e*PP PP 19 11 23.6 -1.0
KBS *e*SS SS 19 27 05.1 +4.1
KBS Kingsbay 113.48 355⇑*i*P Pdif 19 06 38.9 -1.0
GOGA Godfrey 113.55 59 *e*PKiKP PKiKP 19 10 31.8 -1.2
GOGA *e*PKKPbc PKKPbc 19 21 16.4 -1.3
ARQ Araqi 113.83 290 P PKiKP 19 10 33.8 0.0
SNR=6.3
ACSO Alum Creek Sta 113.86 52 *e*PKiKP PKiKP 19 10 32.1 -1.3
OTAV Otavalo 113.91 96 *e*PKiKP PKiKP 19 10 33.8 -0.4
ASHO Ashiyiah 114.36 291 P PKiKP 19 10 35.1 +0.3
SNR=12
NAZ Nazwa, Dubai 114.74 291 P PKiKP 19 10 35.3 -0.2
SNR=17
ASUD Al Ashush, Dub 115.02 291 P PKiKP 19 10 36.8 +0.8
SNR=7.6
IBAF Bafgh 115.10 299 *e*P PKiKP 19 10 35.8 -0.2
JSC Jenkinsville 115.39 58 *e*PKKPbc PKKPbc 19 21 11.7 +0.3
RBK Rabkut 115.39 283 P PKPdf 19 10 37.5 +0.6
SNR=16
LPA La Plata 115.71 140 PKiKP PKPdf 19 10 38.0 +0.8
LPA SKS SKSac 19 17 14.0 -1.6
IMEH Mehriz 115.91 298 *e*P PKPdf 19 10 36.2 -1.4
ALLY Alegheny Colle 115.92 50 *e*PKKPab PKKPab 19 21 13.8 +0.5
BLA Blacksburg 115.99 55 *e*PKiKP PKPdf 19 10 36.9 -0.6
ERPA Erie 115.99 50 *e*PKPdf PKPdf 19 10 36.7 -0.7
ERPA *e*PKKPab PKKPab 19 21 13.1 +0.2
ABTO Aybut 116.23 283 P PKPdf 19 10 39.0 +0.5
SNR=13
NHSC New Hope 116.30 60 *e*PKPdf PKPdf 19 10 38.9 +0.6
NHSC *e*PKKPbc PKKPbc 19 21 08.6 +0.4
SADO Sadowa 116.32 47 PKP PKPdf 19 10 37.0 -0.9
comp=Z,26nm,0.9s,baz=276,slow=2.9,SNR=8.9
SADO PKKPbc PKKPbc 19 21 07.5 -1.0
comp=Z,121nm,1.1s,baz=90,slow=4.3,SNR=5.4
VWCC Virginia Weste 116.34 55 *e*PKKPab PKKPab 19 21 12.8 +1.2
BJO Bjornoya 116.42 351 *e* PKPdf 19 10 35.3 -2.0
BJO AMB AMB 19 10 37.2
comp=Z,184nm,1.4s
BJO *e*PP PP 19 11 42.5 -2.9
IANJ Anjilo 116.44 303 *e*P PKPdf 19 10 38.6 +0.1
BJO1 Bjornoya 116.45 351 *e*P Pdif 19 06 52.1 -1.0
IGLO Ghaloghah 116.47 304 *e*P PKPdf 19 10 38.7 +0.2
PRGR Permogore 116.47 333⇑*i*P Pdif 19 06 52.0 -1.2
PRGR *e* 19 10 37.0
PRGR *e* 19 11 45.3
PRGR *e*PPP 19 14 13.3
PRGR *e* 19 21 09.8
PRGR pmax pmax
comp=Z,44nm,1.6s
IKIA Kiasar 116.60 304 *e*P PKPdf 19 10 38.6 -0.2
ISRV Sarvestan 117.19 296 *e*P PKPdf 19 10 40.3 +0.2
ILAS Lasjerd 117.22 303 *e*P PKPdf 19 10 39.6 -0.4
IPAR Pars 117.25 297 *e*P PKPdf 19 10 40.1 -0.1
IFIR Firoozkooh 117.38 303 *e*P PKPdf 19 10 40.3 0.0
LVZ Lovozero 117.57 342*c i*PKIKP PKPdf 19 10 38.9 -0.8
LVZ pmax pmax
comp=Z,316nm,1.0s
IPRN Peran 117.69 304 *e*P PKPdf 19 10 41.0 +0.2
SSPA Standing Stone 117.71 51 *e*PKPdf PKPdf 19 10 39.6 -1.1
SSPA *e*PKKP PKKPbc 19 21 01.6 -1.9
IZEF Zefreh 117.83 300 *e*P PKPdf 19 10 39.5 -1.7
ISFB Sefidab 117.86 302 *e*P PKPdf 19 10 41.6 +0.4
IDMV Damavand 117.97 303 *e*P PKPdf 19 10 41.7 +0.3
LPAZ La Paz 118.00 117 PKP PKPdf 19 10 41.7 -0.3
comp=Z,76nm,1.2s,baz=321,slow=0.9,SNR=4.9
LPAZ SKP 19 14 07.5
comp=Z,25nm,1.0s,baz=280,slow=1.7,SNR=4.3
LPAZ PKKPbc PKKPbc 19 21 01.2 -0.7
comp=Z,29nm,0.8s,baz=38,slow=3.3,SNR=19
LPAZ PKPPKP 19 29 46.4
comp=Z,5.4nm,1.1s,baz=0.6,slow=11,SNR=3.7
LPAZ La Paz 118.00 117 *e*PKPdf PKPdf 19 10 42.3 +0.3
IGAR Gharneh 118.09 300 *e*P PKPdf 19 10 41.6 -0.1
APA Apatity 118.15 342⇑*i*P Pdif 19 07 00.0 -0.7
APA *i* 19 10 39.6
APA *i* SP SP 19 21 29.0 -0.4
APA pmax pmax
comp=Z,110nm,2.0s
APA pmax pmax
comp=Z,300nm,1.0s
APA pmax pmax
comp=Z,2µm,6.6s
APA MLR MLR
comp=Z,13µm,21.0s
IVRN Varamin 118.25 303 *e*P PKPdf 19 10 42.5 +0.5
IKLH Kolahrood 118.45 301 *e*P PKPdf 19 10 42.3 -0.1
KEV Kevo 118.49 345 *e*PKPdf PKPdf 19 10 40.2 -1.1
KEV *e*PKKPab PKKPab 19 20 57.3 -3.9
KEV Kevo 118.49 345 *e*pkp PKPdf 19 10 40.5 -0.9
SDMD Soldier's Deli 118.64 52 *e*PKPdf PKPdf 19 10 41.4 -1.2

BINY Binghamton 118.94 49 *e*PKPdf PKPdf 19 10 42.1 -0.9
BINY *e*PKKPbc PKKPbc 19 20 56.5 -2.6
ROSC El Rosal 119.00 92 PKP PKPdf 19 10 44.1 0.0
comp=Z,9.3nm,0.3s,baz=100,slow=1.6,SNR=13
ROSC PP PP 19 12 06.4 +1.2
comp=Z,11nm,0.4s,baz=86,slow=21,SNR=2.1
ROSC PKKPbc PKKPbc 19 20 59.4 +1.3
comp=Z,23nm,0.7s,baz=97,slow=22,SNR=7.2
ROSC PKKP PKKPdf 19 21 29.4 +0.9
comp=Z,6.3nm,0.3s,baz=242,slow=10,SNR=3.6
ARCES ARCESS Array B 119.02 345 Pdiff Pdif 19 07 04.5 -0.1
comp=Z,7.4nm,1.0s,baz=19,slow=7.7,SNR=16
ARCES PKP PKPdf 19 10 41.5 -0.9
comp=Z,288nm,0.8s,baz=73,slow=2.0,SNR=235
ARCES SKP 19 14 07.7
comp=Z,12nm,0.6s,baz=100,slow=1.7,SNR=3.7
ARCES PKKPbc PKKPbc 19 20 56.0 -3.7
comp=Z,82nm,0.7s,baz=187,slow=2.6,SNR=96
ARCES PKKP PKKPdf 19 21 29.0 -0.5
comp=Z,17nm,0.7s,baz=222,slow=1.6,SNR=3.8
ARCES ARCESS Array B 119.02 345 P Pdif 19 07 04.5 0.0
ARCES 19 10 41.5
ARCES pmax pmax
comp=Z,7.0nm,1.0s
ARCES pmax pmax
comp=Z,288nm,0.8s
IPIR Pirpir 119.05 300 *e*P PKPdf 19 10 43.7 +0.1
IMHD Mahdasht 119.07 303 *e*P PKPdf 19 10 43.7 +0.2
SUMG Summit 119.08 9 *e*PKPdf PKPdf 19 10 42.4 -0.1
SUMG *e*PKKP PKKPbc 19 20 55.8 -3.7
SUMG Summit 119.08 9 ||*i*P Pdif 19 07 06.7 +1.9
SUMG Summit 119.08 9 *i* P PKPdf 19 10 43.2 +0.7
comp=Z,130nm,1.0s
SUMG *e* 19 12 01.0
SUMG *i* 19 21 34.5
SUMG *i* 19 21 51.4
SUMG
comp=Z,14μm,20.0s
MSNY Massena 119.29 46 *e*PKKPbc PKKPbc 19 20 56.1 -1.8
KLMR Klimovskoe 119.48 333*c i*P Pdif 19 07 05.5 -1.1
KLMR *i* 19 10 43.5
KLMR *e* 19 12 03.9
KLMR 19 28 14.2
KLMR pmax pmax
comp=Z,54nm,1.6s
KLMR MLR MLR
comp=Z,23μm,23.0s
LONY Lake Ozonia 119.56 46 *e*PKPdf PKPdf 19 10 42.8 -1.4
LONY *e*PKKP PKKPbc 19 20 55.5 -1.4
NCB Newcomb 119.93 47 *e*PKPdf PKPdf 19 10 44.1 -0.8
NCB *e*PKKP PKKPbc 19 20 54.4 -1.1
KTK1 Kautokeino 119.95 346 *e*PKPdf PKPdf 19 10 41.5 -2.8
KTK1 *e*PP PP 19 12 09.2 -0.5
KTK1 *e*SS SS 19 28 26.5 +1.2
KTK1 Kautokeino 119.95 346 *e*P Pdif 19 07 05.4 -3.3
MUKL Al Mukalla 119.95 279||*e*P PKPdf 19 10 46.8 +1.0
GRM Grahamstown 120.08 218 *e*P PKPdf 19 10 36.5 -9.2
GRM AMS AMS 19 52 26.2
comp=Z,16μm,20.8s
BRNJ Basking Ridge 120.21 51 *e*PKPdf PKPdf 19 10 45.0 -0.5
FRNY Flat Rock 120.21 46 *e*PKPdf PKPdf 19 10 44.1 -1.3
FRNY *e*PKKP PKKPbc 19 20 52.3 -2.2
ACCN Adirondack Com 120.43 47 *e*PKPdf PKPdf 19 10 44.7 -1.2
ACCN *e*PKKP PKKPbc 19 20 52.6 -1.1
TRO Tromso 120.43 348⇑*i*P PKPdf 19 10 44.1 -1.0
TRO *e*PP PP 19 12 10.8 -2.3
TRO *e*SS SS 19 28 33.5 +2.1
TRO Tromso 120.43 348 *e*P Pdif 19 07 07.7 -3.1
TRY Troy 120.55 48 *e*PKPdf PKPdf 19 10 45.7 -0.5
MAK Makhachkala 120.60 312 *e*P Pdif 19 07 09.5 -2.1
MAK *i* 19 10 44.3
MAK *e* 19 12 14.9
MAK *e*SP SP 19 21 53.2 +0.2
MAK *e*SS SS 19 28 36.1 +0.5
MAK *e*SSS 19 33 00.4
MAK pmax pmax
comp=Z,1μm,1.6s
MAK MLR MLR
comp=E,16μm,25.0s
MAK MLR MLR
comp=N,5μm,14.0s
MAK MLR MLR
comp=Z,13μm,22.0s
POGA Pongola 120.62 227 *e*P PKPdf 19 10 34.3 -12
POGA AMS AMS 19 50 24.9
comp=Z,21μm,33.7s
CPNY Central Park 120.65 50 *e*PKPdf PKPdf 19 10 45.7 -0.7
PAL Palisades 120.66 50 *e*PKPdf PKPdf 19 10 45.6 -0.8
PAL *e*PKKP PKKPbc 19 20 52.1 -0.6
MDV Middlebury 120.66 47 *e*PKPdf PKPdf 19 10 45.6 -0.7
MDV *e*PKKP PKKPbc 19 20 52.7 -0.1
SOE Somerset East 121.07 218 *e*P PKPdf 19 10 47.6 +0.1
ISRB Sarab 121.26 306 *e*P PKPdf 19 10 47.2 -0.5
YLE Yale 121.33 50 *e*PKPdf PKPdf 19 10 47.1 -0.6
HNH Hanover 121.36 47 *e*PKPdf PKPdf 19 10 46.1 -1.6
SCHQ Schefferville 121.44 33 PKP PKPdf 19 10 46.6 -0.9
comp=Z,94nm,1.2s,baz=343,slow=2.5,SNR=24
SCHQ PKKPbc PKKPbc 19 20 48.4 -1.8
comp=Z,47nm,0.6s,baz=89,slow=4.1,SNR=49
SCHQ Schefferville 121.44 33 PKP PKPdf 19 10 46.6 -0.9
SCHQ PKKPbc PKKPbc 19 20 48.4 -1.8
CPUP Villa Florida 121.47 133 PKP PKPdf 19 10 47.8 -0.7
comp=Z,62nm,0.9s,baz=234,slow=1.9,SNR=15
CPUP SKP 19 14 13.6
comp=Z,16nm,0.9s,baz=312,slow=2.4,SNR=4.7
CPUP PKKPbc PKKPbc 19 20 48.7 -0.8
comp=Z,16nm,0.7s,baz=32,slow=4.4,SNR=17
CPUP PKKP PKKPdf 19 21 22.9 -0.6
comp=Z,7.5nm,0.7s,baz=30,slow=5.7,SNR=4.6
CPUP Villa Florida 121.47 133 PKP PKPdf 19 10 47.8 -0.7
CPUP SKP 19 14 13.6
CPUP PKKPbc PKKPbc 19 20 48.7 -0.8
CPUP PKKP PKKPdf 19 21 22.9 -0.6
LBNH Lisbon 121.50 46 *e*PKPdf PKPdf 19 10 47.5 -0.4
LBNH *e*PKKP PKKPbc 19 20 49.0 -0.6
QUA2 Belchertown 121.59 49 *e*PKPdf PKPdf 19 10 47.6 -0.6
JOF Joensuu 121.67 338 *e*p Pdif 19 07 14.0 -2.3
JOF Joensuu 121.67 338 *e*pkp PKPdf 19 10 47.1 -0.6
comp=Z,262nm,0.8s
IHRS Heris 121.69 307 *e*P PKPdf 19 10 48.4 -0.1
QRN Al-Qurain 121.74 296 *e*P PKPdf 19 10 48.7 -0.1
QRN AMb AMB 19 10 50.6
comp=Z,2μm,1.0s
IKOM Komasi 121.78 302 *e*P PKPdf 19 10 47.7 -1.1
UMR Umm Al-Rimmam 121.89 296 *e*P PKPdf 19 10 48.9 -0.2
UMR AMb AMB 19 10 51.4
comp=Z,2μm,1.2s
KBD Kabd 121.92 296 *e*P PKPdf 19 10 49.1 -0.1
KBD AMb AMB 19 10 50.9
comp=Z,502nm,1.2s
RDF Al-Radifah 122.06 296 *e*P PKPdf 19 10 49.5 0.0
RDF AMb AMB 19 10 51.4
comp=Z,1μm,1.1s
IFTB Fath-abad 122.24 307 *e*P PKPdf 19 10 50.1 +0.6
BRYW Bryant College 122.25 49 *e*PKPdf PKPdf 19 10 49.1 -0.3
WES Weston 122.32 48 *e*PKIKP PKPdf 19 10 48.3 -1.2
VRHR Novokhopersk 122.36 322||*i*PKIKP PKPdf 19 10 48.6 -0.7
VRHR pmax pmax
comp=N,40nm,0.8s
VRHR pmax pmax
comp=E,110nm,0.8s
VRHR pmax pmax
comp=Z,740nm,0.8s
DGRG David-gareji 122.44 311 P PKPdf 19 10 50.1 +0.3
JMIC Jan Mayen 122.50 358 *e*PKPdf PKPdf 19 10 42.5 -6.5
JMIC *e*PP PP 19 12 23.7 -3.3
JMIC Jan Mayen 122.50 358 PP PP 19 12 25.8 -1.2
comp=Z,68nm,0.9s,baz=108,slow=4.2,SNR=3.6
JMIC Jan Mayen 122.50 358 *e*P Pdif 19 07 19.4 -0.6
IGHG Ghaleghazi 122.54 302 *e*P PKPdf 19 10 48.9 -1.3
HVD Gariep Dam 122.58 220⇑*i*P PKPdf 19 10 51.1 +0.6
HVD AMS AMS 20 01 42.4
comp=Z,13μm,19.7s
STEI Steigen 122.60 348 *e*P PKPdf 19 10 48.4 -0.9
STEI AMb AMB 19 10 50.6
comp=Z,450nm,1.8s
IDHR Dehrash 122.65 303 *e*P PKPdf 19 10 48.7 -1.7
MOS Moscow 122.71 329 *e*P Pdif 19 07 17.6 -3.3
MOS *e* 19 10 50.0
MOS *e* 19 11 21.6
MOS *e* 19 17 53.4
MOS *e*PS SP 19 22 14.1 +3.4
MOS *e*PPS 19 23 51.3
MOS *e*SS SS 19 29 00.0 -1.3
MOS pmax pmax
comp=N,242nm,1.4s
MOS pmax pmax
comp=Z,1μm,1.4s
LOF Lofoten 122.77 349 *e*P PKPdf 19 10 48.8 -0.8
LOF AMb AMB 19 10 50.6
comp=Z,557nm,1.4s
SCO Scoresbysund 122.80 4 *i*PKIKP PKPdf 19 10 49.1 -0.6
SCO pmax pmax
comp=Z,170nm,1.0s
SCO MLR MLR
comp=Z,12μm,21.0s
SCO Scoresbysund 122.80 4||*i*P Pdif 19 07 21.1 -0.2
SCO Scoresbysund 122.80 4 *i* P PKPdf 19 10 49.1 -0.6
comp=Z,173nm,1.0s
SCO *e* 19 12 21.7
SCO
comp=Z,12μm,21.0s
ISHB Shabestar 122.80 307 *e*P PKPdf 19 10 50.4 -0.2
MTA Mtatsminda 122.82 311 P PKPdf 19 10 51.1 +0.5
TBLG Delisi 122.85 311 PKIKP PKPdf 19 10 51.1 +0.5
TBLG Delisi 122.85 311 P PKPdf 19 10 51.1 +0.5
ELIM Elim 122.92 212⇑*i*P PKPdf 19 10 51.2 +0.2
WVL Waterville 123.01 45 *e*PKPdf PKPdf 19 10 49.0 -1.8
WVL *e*PKKP PKKPbc 19 20 41.4 -2.5
PKME Peaks-Kenny Pk 123.08 45 *e*PKPdf PKPdf 19 10 49.1 -1.8
GNI Garni 123.16 309 *e*P PKPdf 19 10 52.0 +0.8
GNI Garni 123.16 309*c i*PKIKP PKPdf 19 10 51.8 +0.6
GNI pmax pmax
comp=Z,1μm,1.7s
GNI Garni 123.16 309 *e*PKPdf PKPdf 19 10 52.1 +0.9
GNI Garni 123.16 309 P PKPdf 19 10 52.6 +1.4
SNR=23
BDHA Al Bayda' 123.23 278⇑*e*P PKPdf 19 10 53.4 +1.3
BDHA AMb AMB 19 10 55.4
comp=Z,2μm,1.5s
ZEI Tsey 123.24 312 *i* P Pdif 19 07 21.9 -1.4
ZEI *i* 19 10 49.3
ZEI *e* 19 12 32.7
ZEI *i* PPP 19 15 11.3
ZEI *e*PS PS 19 22 31.3 -0.2
ZEI pmax pmax
comp=Z,142μm,7.0s
ZEI pmax pmax
comp=Z,316nm,0.9s
ZEI pmax pmax
comp=N,256nm,1.0s
ZEI pmax pmax
comp=E,329nm,0.9s
GOR Gori 123.26 312 P PKPdf 19 10 52.2 +0.8
SDV Santo Domingo 123.39 88 *e*PKPdf PKPdf 19 10 51.7 -0.7
LBOS 123.52 278⇑*e*P PKPdf 19 10 54.0 +1.4
OBN Obninsk 123.53 328*c i*PKIKP PKPdf 19 10 51.0 -0.5
OBN *e* 19 11 24.3
OBN *e* 19 12 35.6
OBN *e* 19 17 48.7
OBN *e*PS PS 19 22 26.0 -7.4
OBN pmax pmax
comp=Z,1μm,1.7s
OBN Obninsk 123.53 328 *e*PKPdf PKPdf 19 10 50.2 -1.2
VOR Voronezh 123.54 324⇑*i*PKIKP PKPdf 19 10 49.0 -2.6
VOR pmax pmax
comp=Z,3μm,1.0s
ERPM east rand prop 123.61 225 *i* P PKPdf 19 10 52.7 +0.1
ADEN Aden 123.63 276||*e*P PKPdf 19 10 53.8 +1.0
ADEN AMb AMB 19 10 55.7
comp=Z,3μm,1.3s
VSR Storozhevoye 123.76 323 *e*P Pdif 19 07 23.7 -1.9
VSR *e* 19 10 50.7
VSR *e* 19 12 32.6
VSR *e*SP SP 19 22 17.0 -3.3
VSR *e*SS SS 19 29 12.9 -2.0
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=E,210nm,1.0s
VSR pmax pmax
comp=Z,840nm,1.0s
VSR pmax pmax
comp=E,2μm,3.7s
VSR pmax pmax
comp=Z,4μm,3.7s
VSR pmax pmax
comp=N,640nm,1.8s
VORD Divnogorie 123.78 323 *e*PKIKP PKPdf 19 10 51.2 -0.9
VORD *e* 19 12 32.4
VORD *e*SP SP 19 22 19.0 -1.5
VORD *e*SS SS 19 29 09.7 -5.4
VORD pmax pmax
comp=Z,730nm,1.3s
VORD pmax pmax
comp=N,100nm,0.6s
VORD pmax pmax
comp=E,140nm,0.6s
VORD pmax pmax
comp=Z,6μm,4.5s
VORD pmax pmax
comp=N,360nm,0.9s
VORD pmax pmax
comp=E,390nm,0.9s
KIV Kislovodsk 123.81 314*c i*PKIKP PKPdf 19 10 51.9 -0.5
KIV *e* 19 12 38.1
KIV *e* 19 17 37.2
KIV *e*PS PS 19 22 28.1 -8.4
KIV pmax pmax
comp=Z,820nm,1.7s
KIV Kislovodsk 123.81 314 *e*PKPdf PKPdf 19 10 52.5 +0.1
KIV Kislovodsk 123.81 314 P PKPdf 19 10 53.1 +0.8
SNR=40
PRYS Parys 123.84 224⇑*i*P PKPdf 19 10 52.4 -0.6
PRYS AMS AMS 19 57 33.3
comp=Z,18μm,13.8s
PUL Pulkovo 123.94 335*c i*PKIKP PKPdf 19 10 52.1 0.0
PUL pmax pmax
comp=Z,2μm,1.7s
CLDR Caldiran 123.97 308 *e*P PKPdf 19 10 52.3 -0.5
KAF Kangasniemi 123.97 339 *e*pkp PKPdf 19 10 50.7 -1.4
SLR Silverton 123.97 226⇑*i*P PKPdf 19 10 53.3 0.0
SLR AMS AMS 19 57 53.1
comp=Z,22μm,22.0s
SDDR Presa de Saban 124.00 76 *e*PKPdf PKPdf 19 10 52.8 -0.6
KLOF Kloof 124.05 225 *e*P PKPdf 19 10 53.2 -0.2
SUR Sutherland 124.05 215 PKhKP PKPpre 19 10 40.5
comp=Z,7.0nm,0.8s,baz=184,slow=6.8,SNR=3.6
SUR PKP PKPdf 19 10 53.2 -0.1
comp=Z,643nm,1.1s,baz=144,slow=1.9,SNR=73
SUR PP PP 19 12 36.8 -1.1
comp=Z,115nm,1.2s,baz=125,slow=10,SNR=4.9
SUR Sutherland 124.05 215 *e*PKPdf PKPdf 19 10 53.5 +0.2
SUR Sutherland 124.05 215 P PKPdf 19 10 54.7 +1.4
SNR=15
BOSA Boshof 124.11 221 PKP PKPdf 19 10 53.4 -0.1
comp=Z,557nm,1.0s,baz=129,slow=2.3,SNR=122
BOSA Boshof 124.11 221 PKIKP PKPdf 19 10 53.4 -0.1
BOSA pmax pmax
comp=Z,557nm,1.0s
BOSA Boshof 124.11 221 *e*PKPdf PKPdf 19 10 53.3 -0.1
CER Ceres 124.12 213 *e*P PKPdf 19 10 52.6 -0.8
CER AMS AMS 19 50 51.5
comp=Z,6μm,41.2s
SIV San Ignacio 124.17 120 PKKPbc PKKPbc 19 20 38.5 -0.2
comp=Z,35nm,1.0s,baz=80,slow=5.8,SNR=18
MOR8 Moi Rana 124.26 347 *e*P PKPdf 19 10 50.7 -1.8
MOR8 AMb AMB 19 10 53.1
comp=Z,266nm,1.4s
MOR8 *e*PP PP 19 12 37.8 -1.1
KONS Konsvik 124.26 348 *e*P PKPdf 19 10 52.1 -0.4
KARS Kars 124.31 310 *e*P PKPdf 19 10 54.3 +0.9
FLOS Flostrand 124.35 347 *e*P PKPdf 19 10 52.0 -0.7
DHBB Dhamar BB 124.43 279⇑*e*P PKPdf 19 10 55.7 +1.4
VANB Van 124.47 308 *e*P PKPdf 19 10 53.8 0.0
EMMW East Machias 124.48 45 *e*PKPdf PKPdf 19 10 51.9 -1.8
FINES FINESS Array B 124.50 338 Pdiff Pdif 19 07 28.6 -0.3
comp=Z,5.8nm,1.0s,baz=220,slow=7.4,SNR=8.5
FINES PKhKP PKPpre 19 10 42.5
comp=Z,3.4nm,0.7s,baz=61,slow=3.3,SNR=5.7
FINES PKP PKPdf 19 10 52.1 -1.0
comp=Z,89nm,0.9s,baz=111,slow=4.3,SNR=5.3
FINES PP PP 19 12 41.4 +0.6
comp=Z,48nm,0.9s,baz=102,slow=8.0,SNR=4.8
FINES PKKPbc PKKPbc 19 20 35.9 -2.6
comp=Z,12nm,0.9s,baz=223,slow=3.5,SNR=9.6
FINES FINESS Array B 124.50 338 P Pdif 19 07 28.7 -0.2
FINES 19 10 52.1
FINES 19 12 41.4
FINES pmax pmax
comp=Z,6.0nm,1.0s
FINES pmax pmax
comp=Z,89nm,0.9s
FINES pmax pmax
comp=Z,48nm,0.9s
FINES FINESS Array B 124.50 338 Pdif Pdif 19 07 28.6 -0.3
FINES PKP PKPdf 19 10 52.1 -1.0
FINES PP PP 19 12 41.4 +0.6
FINES PKKPbc PKKPbc 19 20 35.9 -2.6
TRBA At Turbah 124.53 277⇑*e*P PKPdf 19 10 55.8 +1.2
CUKT Cukurca 124.54 306 *e*P PKPdf 19 10 52.7 -1.3
AGRB Hanur-Agry 124.59 309 *e*P PKPdf 19 10 54.9 +0.9
SANA San'a 124.69 279||*e*P PKPdf 19 10 56.2 +1.4
UDYN Al 'Udayn 124.77 278||*e*P PKPdf 19 10 56.1 +1.1
MSNA Messina 124.78 230⇑*i*P PKPdf 19 10 54.9 0.0
MSNA AMS AMS 19 59 38.6
comp=Z,24μm,19.8s
KSR Koster 124.86 225 *e*P PKPdf 19 10 55.6 +0.6
KSR AMS AMS 19 52 27.5
comp=Z,8μm,49.4s
PKA Prieska 124.92 218 *e*P PKPdf 19 10 54.5 -0.5
PKA AMS AMS 20 04 26.6
comp=Z,4μm,21.1s
SWZ Schweizer 125.03 222⇑*i*P PKPdf 19 10 55.4 +0.1
SWZ AMS AMS 19 52 05.3
comp=Z,19μm,34.9s
BCA Borcka 125.19 311 *e*P PKPdf 19 10 55.2 +0.1
CVNA Calvinia 125.31 215⇑*i*P PKPdf 19 10 56.3 +0.6
CVNA AMS AMS 20 03 04.6
comp=Z,18μm,19.7s
ATD Arta Tunnel 125.53 275 PKP PKPdf 19 10 57.0 +0.5
comp=Z,224nm,1.1s,baz=57,slow=0.9,SNR=82
ATD PP PP 19 12 49.1 -0.3
comp=Z,24nm,0.8s,baz=86,slow=6.4,SNR=4.1
EZM Erzurum 125.75 310 *e*P PKPdf 19 10 57.6 +1.4
PZAR Pazar-Rize 125.79 311 *e*P PKPdf 19 10 56.9 +0.6
SOC Sochi 125.98 314*c i*PKIKP PKPdf 19 10 55.6 -0.9
SOC *e* 19 12 46.8
SOC *e*PPP 19 15 36.9
SOC *e*SP SP 19 22 37.8 -2.6
SOC *e*PS PS 19 22 55.7 +0.1
SOC *e*SS SS 19 29 42.1 -1.3
SOC *e*SSS 19 34 19.1
SOC pmax pmax
comp=Z,461nm,1.0s
NSS Namsos 126.20 347⇑*i*P PKPdf 19 10 54.5 -1.8
NSS AMB AMB 19 10 56.4
comp=Z,598nm,1.4s
NSS *e*PP PP 19 12 52.6 +0.7
VSU Vasula 126.20 335*c i*PKIKP PKPdf 19 10 56.1 -0.4
LBTB Lobatse 126.29 225 PKP PKPdf 19 10 57.7 -0.1
comp=Z,556nm,1.1s,baz=149,slow=3.3,SNR=117
LBTB PP PP 19 12 52.6 -0.6
comp=Z,34nm,0.9s,baz=221,slow=9.2,SNR=2.0
LBTB Lobatse 126.29 225 *e*PKPdf PKPdf 19 10 56.4 -1.3
BINT Bingol 126.64 309 *e*P PKPdf 19 10 58.7 +0.8
UPI Upington 126.77 218⇑*i*P PKPdf 19 10 59.5 +0.9
UPI AMS AMS 20 11 46.0
comp=Z,14μm,19.0s
GUMT Gumushane 127.01 311 *e*P PKPdf 19 10 59.8 +1.2
ANN Anapa 127.16 316 *e*P Pdif 19 07 38.9 -1.8
ANN *e* 19 17 42.8
ANN *i* PS PS 19 23 02.8 -3.0
ANN pmax pmax
comp=Z,170nm,4.9s
ANN pmax pmax
comp=Z,666nm,1.6s
ANN pmax pmax
comp=N,147nm,1.7s
ANN pmax pmax
comp=E,96nm,1.7s
ANN pmax pmax
comp=N,653nm,6.8s
ANN pmax pmax
comp=E,345nm,6.8s
EZC Erzincan 127.28 310 *e*P PKPdf 19 11 00.5 +1.3
ESPY Espiye-Giresun 127.44 311 *e*P PKPdf 19 10 58.3 -1.1
PTK Pertek 127.47 309 *e*P PKPdf 19 10 58.6 -0.9
SVRC Sivrice-ELAZID 127.65 308 *e*P PKPdf 19 11 00.3 +0.4
KOMG Komaggas 127.85 214⇑*i*P PKPdf 19 11 01.0 +0.4
KOMG AMS AMS 20 05 20.4
comp=Z,15μm,13.8s
CRPR Cabo Rojo, PR 127.89 78 *e*PKPdf PKPdf 19 10 59.6 -1.4
LSP Las Mesas 127.92 77 *e*PKPdf PKPdf 19 11 01.4 +0.5
KMBO Kilima Mbogo 128.10 258 PKP PKPdf 19 11 01.9 +0.4
comp=Z,262nm,1.2s,baz=85,slow=2.0,SNR=108
KMBO PP PP 19 13 06.0 -0.3
comp=Z,49nm,1.1s,baz=7.9,slow=22,SNR=5.6
KMBO Kilima Mbogo 128.10 258 *e*PKPdf PKPdf 19 11 02.6 +1.1
KMBO Kilima Mbogo 128.10 258 *e*P PKPdf 19 11 03.0 +1.5
KMBO Kilima Mbogo 128.10 258 P PKPdf 19 11 02.4 +0.9
SNR=79
MICGM Minsk 128.14 331⇑*i*PKP PKPdf 19 10 58.0 -2.3
MNK Minsk 128.16 331⇑*i*PKIKP PKPdf 19 10 58.0 -2.3
MNK *e* 19 17 50.0
MNK *e*PS SP 19 22 52.0 -6.4
MNK *e*SS SS 19 30 08.0 -1.3
MNK *e*SSS 19 34 50.0
MNK pmax pmax
comp=Z,2μm,1.0s
MNK pmax pmax
comp=E,870nm,1.6s
MNK pmax pmax
comp=N,870nm,2.0s
MNK MLR MLR
comp=E,23μm,22.0s
MNK MLR MLR
comp=Z,52μm,22.0s
LRS Lares 128.16 77 *e*PKPdf PKPdf 19 11 00.7 -0.7
IDID Didziasalis 128.17 332 *e*P PKPdf 19 11 00.6 +0.3
IDID AMB AMB 19 11 03.1
comp=Z,294nm,1.3s
ISAL Salakas 128.29 333 *e*P PKPdf 19 11 01.2 +0.6
ISAL AMB AMB 19 11 03.4
comp=Z,247nm,1.4s
MYA Malataya 128.34 308 *e*P PKPdf 19 11 02.7 +1.4
MALT Malatya 128.34 308 *e*P PKPdf 19 11 00.4 -0.8
MALT Malatya 128.34 308 PKIKP PKPdf 19 11 02.0 +0.8
MALT Malatya 128.34 308 *e*PKPdf PKPdf 19 11 01.2 0.0
MALT Malatya 128.34 308⇑*i*P PKPdf 19 11 01.0 -0.2
OBIP Obispado Ponce 128.37 78 *e*PKPdf PKPdf 19 11 00.9 -0.9
IIGN Ignalina 128.38 333 *e*P PKPdf 19 11 01.2 +0.5
IIGN AMB AMB 19 11 03.6
comp=Z,365nm,1.4s
NACGM Naroch 128.41 332 *e*PKIK PKPdf 19 10 56.0 -4.8
ICM Isla Caja Muer 128.45 78 *e*PKPdf PKPdf 19 11 02.2 +0.2
BORG Borgarnes 128.51 5 SKPbc 19 14 11.8
comp=Z,36nm,0.7s,baz=297,slow=4.8,SNR=4.7
DESE Dese 128.58 274 *i* P PKPdf 19 11 04.6 +2.2
DESE PKP PP 19 13 08.2 -1.4
RSDY Resadiye-TOKAT 128.61 311 *e*P PKPdf 19 11 01.7 +0.1
SJG San Juan 128.81 78 *e*PKIKP PKPdf 19 11 02.1 -0.6
MOL Molde 128.87 348⇑*i*P PKPdf 19 10 59.7 -1.8
MOL *e*PP PP 19 13 10.4 +1.0
SVSK Karacayir 128.99 311 *e*P PKPdf 19 11 02.3 -0.1
AAE Adis Abeba 129.09 271 *i* P PKPdf 19 11 05.1 +1.8
AAE *e*S 19 14 32.7
TOKT Tokat 129.20 311 *e*P PKPdf 19 11 03.6 +0.8
SIM Simferopol' 129.30 318 *e*P Pdif 19 07 59.0 +8.8
SIM *e* 19 11 03.0
SIM *e* 19 13 12.0
SIM pmax pmax
comp=Z,410nm,7.0s
KVT Kavak 129.34 312 *e*P PKPdf 19 11 03.0 0.0
BBSR BB Station 129.35 59 *e*PKPdf PKPdf 19 11 03.0 -0.3
NB2 NORSAR Subarra 129.39 345 PKPdf PKPdf 19 11 02.3 -0.2
baz=27,slow=1.8
NB2 NORSAR Subarra 129.39 345 PKIKP PKPdf 19 11 02.3 -0.2
NB2 NORSAR Subarra 129.39 345 PKPdf PKPdf 19 11 02.3 -0.2
NOA NORSAR Array B 129.39 345 Pdiff Pdif 19 07 50.9 +0.2
comp=Z,2.5nm,1.1s,baz=31,slow=4.1,SNR=3.4
NOA PKhKP PKPpre 19 10 45.1
comp=Z,4.3nm,0.7s,baz=53,slow=1.9,SNR=16
NOA PKP PKPdf 19 11 01.5 -1.0
comp=Z,198nm,0.9s,baz=33,slow=2.0,SNR=135
NOA PP PP 19 13 12.8 +0.1

comp=Z,11nm,0.9s,baz=32,slow=7.4,SNR=2.7
NOA SKPbc 19 14 14.0
comp=Z,40nm,0.9s,baz=32,slow=2.9,SNR=12
NOA PKKP 19 21 06.7
comp=Z,3.9nm,0.8s,baz=210,slow=1.9,SNR=8.5
NOA SKKPbc 19 23 41.9
comp=Z,21nm,1.1s,baz=170,slow=3.5,SNR=7.2
NOA NORSAR Array B 129.39 345 PKHKP PKPpre 19 10 45.1
NOA 19 11 01.5
NOA 19 13 12.9
NOA pmax pmax
comp=Z,4.0nm,0.7s
NOA pmax pmax
comp=Z,198nm,0.9s
NOA pmax pmax
comp=Z,11nm,0.9s
NOA NORSAR Array B 129.39 345 Pdif Pdif 19 07 50.9 +0.2
NOA PKP PKPdf 19 11 01.5 -1.0
NOA PP PP 19 13 12.8 +0.1
NOA SKPbc 19 14 14.0
NOA PKKP 19 21 06.7
NOA SKKPbc 19 23 41.9
HFS Hagfors 129.49 343 PKP PKPdf 19 11 01.7 -1.0
comp=Z,156nm,0.8s,baz=116,slow=3.4,SNR=72
HFS PP PP 19 13 11.9 -1.6
comp=Z,32nm,1.1s,baz=26,slow=3.7,SNR=2.5
HFS SKPbc 19 14 15.2
comp=Z,53nm,0.8s,baz=49,slow=6.6,SNR=8.2
HFS Hagfors 129.49 343 PKIKP PKPdf 19 11 01.7 -1.0
HFS 19 13 11.9
HFS pmax pmax
comp=Z,156nm,0.8s
HFS pmax pmax
comp=Z,32nm,1.1s
GAZ Gaziantep 129.55 307 *e*P PKPdf 19 11 03.3 -0.3
SARI SarD1z-Kayseri 129.56 309 *e*P PKPdf 19 11 02.9 -0.6
AKASG Malin Array Be 129.58 326 PKP PKPdf 19 11 02.1 -1.0
comp=Z,208nm,1.0s,baz=46,slow=2.5,SNR=160
AKASG Malin Array Be 129.58 326 PKIKP PKPdf 19 11 02.1 -1.1
AKASG pmax pmax
comp=Z,209nm,1.0s
KIEV Kiev 129.59 326 *e*PKIKP PKPdf 19 11 03.1 -0.1
NAO01 NORSAR Array S 129.64 345 *e*PKPdf PKPdf 19 11 02.7 -0.3
TRIS Tristan da Cun 129.68 181 *e*PKPdf PKPdf 19 11 03.4 -0.5
KMRS Kahramanmaras 129.71 308 *e*P PKPdf 19 11 03.4 -0.4
STVI Saint Thomas 129.96 77 *e*PKPdf PKPdf 19 11 04.2 -0.6
SPB Sao Paulo 130.07 137 *e*PKPdf PKPdf 19 11 04.9 -0.1
CDVI St. Croix 130.11 78 *e*PKPdf PKPdf 19 11 04.8 -0.3
BYBT Boyabat 130.12 313 *e*P PKPdf 19 11 05.6 +1.1
FOO Floro 130.25 349 *e*PKPdf PKPdf 19 11 02.4 -1.7
FOO ⇑*i*P 19 11 03.2
FOO *e*PP PP 19 13 18.6 +0.3
FOO Floro 130.25 349 *e*P Pdif 19 07 54.6 +0.1
YOZ Yozgat 130.31 311 *e*P PKPdf 19 11 05.6 +0.7
OSL Oslo 130.46 345 *e*P PKPdf 19 11 05.1 +0.5
OSL *e*PP PP 19 13 19.6 -0.2
BZK Bozkurt 130.49 314 *e*P PKPdf 19 11 04.6 -0.6
KOZT Kozan 130.54 308 *e*P PKPdf 19 11 04.2 -1.2
SUW Suwalki 130.60 333 *i* PKPc PKPdf 19 11 05.0 0.0
SUW *e*PP PP 19 13 25.3 +4.3
SUW *e*PKS 19 14 31.1
SUW *e*SP SP 19 23 16.4 -3.0
SUW LMZ 20 08 07.0
comp=Z,18μm,22.2s
SUW Suwalki 130.60 333 ⇑*i*PKIKP PKPdf 19 11 05.0 0.0
SUW *e* 19 13 25.3
SUW *e*SP SP 19 23 16.4 -3.0
SUW MLR MLR
comp=Z,18μm,22.2s
SUW Suwalki 130.60 333 *e*PKPdf PKPdf 19 11 04.8 -0.2
CORM Corum 130.64 312 *e*P PKPdf 19 11 05.5 -0.1
HTY Hatay 130.65 306 *e*P PKPdf 19 11 06.7 +1.0
CEYT Ceyhan 130.72 307 *e*P PKPdf 19 11 06.0 +0.2
TOS Tosya 130.79 313 *e*P PKPdf 19 11 06.6 +0.8
SUE Sulen 130.81 349 *e*P PKPdf 19 11 05.1 0.0
SUE AMb AMB 19 11 07.5
comp=Z,522nm,1.6s
SUE *e*PP PP 19 13 22.4 +0.5
ASF Jabal al Asfar 130.86 301 PP PP 19 13 23.8 0.0
comp=Z,19nm,1.0s,baz=21,slow=6.1,SNR=2.2
ASF SKPbc SKPbc 19 14 19.8 +0.7
comp=Z,99nm,1.1s,baz=6.3,slow=1.2,SNR=6.0
FKH Fakeheh 130.87 304 *e*P PKPdf 19 11 07.8 +1.6
KONO Kongsberg 131.00 345 *e*PKPdf PKPdf 19 11 04.8 -0.8
KONO *e*PP PP 19 13 23.0 -0.2
KONO *e*SS SS 19 30 47.1 +3.6
KONO Kongsberg 131.00 345 ⇑*i*P Pdif 19 07 59.2 +1.4
KONO *e* 19 11 05.7
KRTS Karatas 131.13 307 *e*P PKPdf 19 11 06.2 -0.4
KARA Karaisali 131.19 308 *e*P PKPdf 19 11 06.0 -0.7
HWQ Hawqa 131.23 304 *e*P PKPdf 19 11 06.5 -0.3
CANT Cankiri 131.23 313 *e*P PKPdf 19 11 06.3 -0.3
ASK Askoy 131.25 348 *e*P PKPdf 19 11 05.4 -0.7
RUND Rundenannen 131.28 348 *e*P PKPdf 19 11 06.0 -0.1
BER Bergen 131.31 348 *e*PKPdf PKPdf 19 11 05.9 -0.2
BER Bergen 131.31 348 *e*P Pdif 19 08 00.1 +0.9
ODD1 Odda 131.47 347 *e*P PKPdf 19 11 07.3 +0.9
ODD1 AMb AMB 19 11 09.0
comp=Z,648nm,1.5s
ODD1 *e*PP PP 19 13 27.5 +1.4
RCY Rachaya 131.50 303 *e*P PKPdf 19 11 07.5 +0.2
BRTR Keskin Array B 131.51 311 PKHKP PKPpre 19 10 54.0
comp=Z,10nm,1.1s,baz=103,slow=3.0,SNR=12
BRTR PKP PKPdf 19 11 06.6 -0.6
comp=Z,77nm,0.9s,baz=151,slow=2.8,SNR=29
BRTR PP PP 19 13 28.1 +0.5
comp=Z,49nm,1.1s,baz=106,slow=4.0,SNR=5.7
BRTR SKPbc SKPbc 19 14 23.1 +1.9
comp=Z,41nm,0.7s,baz=106,slow=2.7,SNR=10
BRTR SKKPbc 19 23 59.4
comp=Z,20nm,1.2s,baz=234,slow=4.3,SNR=4.0
BRTR Keskin Array B 131.51 311 PKHKP PKPpre 19 10 54.1
BRTR 19 11 06.6
BRTR 19 13 28.1
BRTR pmax pmax
comp=Z,10.0nm,1.1s
BRTR pmax pmax
comp=Z,77nm,0.9s
BRTR pmax pmax
comp=Z,49nm,1.1s
BRTR Keskin Array B 131.51 311 PKP PKPdf 19 11 06.6 -0.6
BRTR PP PP 19 13 28.1 +0.5
BRTR SKPbc SKPbc 19 14 23.1 +1.9
BRTR SKKPbc 19 23 59.4
BHL Bhannes 131.54 303 *e*P PKPdf 19 11 07.6 +0.2
KSHT Keshet 131.61 302 Pn PKPpre 19 10 54.5
HRI Mount Hermon 131.62 303 PKHKP PKPpre 19 10 55.0
SAFT Safranbolu 131.67 314 *e*P PKPdf 19 11 07.2 -0.3
KSDI Kefar Szold 131.69 303 Pn PKPpre 19 10 55.2
KIS Kishinev 131.71 322 *e*P Pdif 19 08 00.0 -1.0
KIS Kishinev 131.71 322 ⇑*i*PKP PKPdf 19 11 06.0 -1.3
KIS M 19 11 08.0
comp=Z,4μm,6.0s
KIS *i* pPKP pPKPdf 19 11 41.0 +0.1
KIS Kishinev 131.71 322 *i* PP PP 19 13 28.0 -0.5
comp=Z,6μm,16.0s
KIS Kishinev 131.71 322 *e*PS SP 19 23 22.0 -7.6
KIS LRM 20 06 20.0
comp=Z,13μm,24.0s
KIS Kishinev 131.71 322 ⇑PKIKP PKPdf 19 11 07.5 +0.2
KIS Kishinev 131.71 322 ⇑*i*P PKPdf 19 11 07.5 +0.2
MMAI Mount Meron Ar 131.94 302 SKPbc SKPbc 19 14 25.4 +2.4
comp=Z,94nm,0.9s,baz=68,slow=5.6,SNR=7.4
MMAI PKKP 19 21 04.7
comp=Z,2.2nm,0.7s,baz=268,slow=2.5,SNR=4.1
BLS5 Blasjo 131.95 347 *e*P PKPdf 19 11 08.9 +1.5
BLS5 AMb AMB 19 11 10.1
comp=Z,515nm,1.6s
AFSR Af´ar-Bala (A 132.02 311 *e*P PKPdf 19 11 07.2 -1.0
MMLI Mount Malkishu 132.04 302 Pn PKPpre 19 10 54.2
SULT Sultanhani-AKS 132.09 310 *e*P PKPdf 19 11 07.6 -0.8
LOD Lodumlu 132.09 312 *e*P PKPdf 19 11 07.2 -1.1
DSI Dead Sea 132.24 300 Pn PKPpre 19 10 55.7
MZDA Masada 132.31 300 Pn PKPpre 19 10 56.5
EREN Erenkoy 132.34 306 *e*P PKPdf 19 11 08.7 -0.2
IAS Iasi 132.35 323 PKIKP PKPdf 19 11 09.2 +0.7
IAS Iasi 132.35 323 ⇑*i*P PKPdf 19 11 08.4 -0.1
KDZE Karadeniz Ereo 132.51 314 *e*P PKPdf 19 11 07.6 -1.5
IKL Isikli 132.53 307 *e*P PKPdf 19 11 07.9 -1.4
PHNC Paralimni 132.59 305 P PKPdf 19 11 09.8 +0.4
comp=Z,18nm,1.8s
WAL1 Walls 132.59 352 P PKPdf 19 11 03.6 -5.0
WAL1 Walls 132.59 352 *e*P PKPdf 19 11 03.6 -5.0

ZFRI Zfri 132.59 299 Pn PKPpre 19 10 55.5
LRW Lerwick 132.65 352 P PKPpre 19 10 58.9
LRW 19 13 16.3
LRW AMS AMS 20 02 10.5
comp=Z,10μm,27.1s
LRW Lerwick 132.65 352 *e*P PKPpre 19 10 58.9
LRW *e* 19 13 16.3
LRW AMS AMS 20 02 10.5
comp=Z,10μm,27.1s
SNART Snartemo 132.75 346 *e*P PKPdf 19 11 09.8 +0.9
SNART AMb AMB 19 11 11.4
comp=Z,402nm,1.5s
WAR Warsaw 132.75 332 *i* PKPc PKPdf 19 11 09.9 +0.8
WAR *e*PP PP 19 13 35.6 +0.8
WAR *e*PKS 19 14 38.8
WAR LMZ 20 00 23.2
comp=Z,26μm,35.2s
WAR Warsaw 132.75 332 ⇑*i*PKIKP PKPdf 19 11 09.9 +0.8
WAR *e* 19 13 35.6
WAR MLR MLR
comp=Z,26μm,35.2s
PRNI Paran 132.78 299 PKHKP PKPpre 19 10 56.3
HRFI Mount Harif 132.80 298 Pn PKPpre 19 10 56.7
LVV L'vov 132.83 328 *d*PKIKP PKPdf 19 11 09.2 -0.2
LVV *e* 19 13 34.1
LVV *e*PS PS 19 23 58.8 +4.4
LFK Lefkose 132.91 306 *e*P PKPdf 19 11 09.4 -0.6
EIL Elat 132.94 298 PKhKP PKPpre 19 10 59.3
comp=Z,19nm,1.1s,baz=66,slow=4.2,SNR=8.0
EIL PKP PKPdf 19 11 10.4 +0.3
comp=Z,337nm,1.1s,baz=0.1,slow=2.0,SNR=59
EIL PP PP 19 13 37.5 +0.3
comp=Z,41nm,1.0s,baz=123,slow=2.7,SNR=5.7
EIL SKPbc SKPbc 19 14 28.3 +1.8
comp=Z,96nm,1.2s,baz=346,slow=4.8,SNR=3.4
EIL Elat 132.94 298 Pn PKPpre 19 10 57.1
EIL PKP PKPdf 19 11 10.4 +0.3
EIL PP PP 19 13 37.5 +0.3
EIL SKPbc SKPbc 19 14 28.3 +1.8
ANWB Willy Bob 132.94 78 *e*PKPdf PKPdf 19 11 09.9 -0.6
TBG Guadaloupe-3 132.98 81 *e*P PKPdf 19 11 10.0 -0.6
MDU Mudurnu 132.99 313 *e*P PKPdf 19 11 08.7 -1.3
PHG Guadaloupe-2 132.99 81 *e*P PKPdf 19 11 10.1 -0.5
CFR Carcaliu 133.02 320 PKIKP PKPdf 19 11 10.7 +0.8
CFR Carcaliu 133.02 320 ⇑*i*P PKPdf 19 11 10.4 +0.5
KONT Konya--Tatoy 133.03 310 *e*P PKPdf 19 11 09.1 -1.1
KRMI Paran Flat 133.06 299 Pn PKPpre 19 10 56.4
KIZT Kizilcal 133.08 311 *e*P PKPdf 19 11 10.1 -0.1
SVRH Sivrihisar-ESK 133.14 312 *e*P PKPdf 19 11 09.6 -0.7
BSD Bornholm Skovb 133.15 338 *i* PKIKP PKPdf 19 11 09.9 +0.1
BSD *i* 19 13 37.4
BSD pmax pmax
comp=Z,220nm,0.9s
BSD Bornholm Skovb 133.15 338 *i* P PKPdf 19 11 09.9 +0.1
comp=Z,224nm,0.9s
BSD *i* 19 13 37.4
CSS Prodhromos 133.15 305 P PKPdf 19 11 10.0 -0.4
comp=Z,14nm,2.0s
CSS Prodhromos 133.15 305 *e*P PKPdf 19 11 08.0 -2.4
CSS Prodhromos 133.15 305 Pn PKPpre 19 10 57.1
CSS P 19 11 10.0
CSS Prodhromos 133.15 305 P PKPpre 19 10 59.7
TIRR Tirgusor 133.19 319 *e*PKPdf PKPdf 19 11 10.0 -0.2
TIRR Tirgusor 133.19 319 ⇑*i*P PKPdf 19 11 10.0 -0.2
MAMC Mammari 133.19 306 P PKPdf 19 11 10.1 -0.4
HDMB Hadim 133.24 308 *e*P PKPdf 19 11 10.2 -0.4
TESR 133.24 323 ⇑*i*P PKPdf 19 11 10.0 -0.2
MGG Marie-Galante 133.30 81 *e*P PKPdf 19 11 11.3 +0.1
PETR 133.30 322 ⇑*i*P PKPdf 19 11 10.8 +0.4
FDF Fort de France 133.37 82 *e*PKIKP PKPdf 19 11 11.4 0.0
LEF Lefka 133.46 306 *e*P PKPdf 19 11 10.6 -0.4
BUR08 Bucovina Ar. S 133.46 325 *e*PKPdf PKPdf 19 11 11.6 +1.0
BURAR Bucovina Array 133.47 325 PKIKP PKPdf 19 11 11.8 +1.2
BURAR Bucovina Array 133.47 325 ⇑*i*P PKPdf 19 11 11.3 +0.7
CVD Cernavoda 133.49 319 ⇑PKIKP PKPdf 19 11 11.9 +1.1
CVD Cernavoda 133.49 319 ⇑*i*P PKPdf 19 11 11.9 +1.1
GULT Gulveren 133.50 314 *e*P PKPdf 19 11 10.5 -0.4
VRI Vrincioaia 133.53 322 PKIKP PKPdf 19 11 11.1 +0.3
VRI Vrincioaia 133.53 322 ⇑*i*P PKPdf 19 11 09.7 -1.1
COP Copenhagen 133.54 340 *i* PKIKP PKPdf 19 11 10.7 +0.2
COP *i* 19 13 39.8
COP pmax pmax
comp=Z,180nm,0.9s
COP Copenhagen 133.54 340 *i* P PKPdf 19 11 10.7 +0.2
comp=Z,177nm,0.9s
COP *i* 19 13 39.8
SPNC Sapanca-Adapaz 133.55 314 *e*P PKPdf 19 11 09.9 -1.1
SZAC Souni-Zanaja 133.56 305 P PKPdf 19 11 10.2 -1.0
PLOR Plostina 133.59 322 PKIKP PKPdf 19 11 11.1 +0.2
PLOR Plostina 133.59 322 ⇓*i*P PKPdf 19 11 08.7 -2.2
KWP Kalwaria Pacla 133.62 328 *i* PKPc PKPdf 19 11 11.2 +0.3
KWP *e*PP PP 19 13 41.8 +1.3
KWP *e*PKS 19 14 41.0
KWP LMZ 20 06 34.4
comp=Z,18μm,29.2s
KWP Kalwaria Pacla 133.62 328 ⇑*i*PKIKP PKPdf 19 11 11.1 +0.2
KWP *e* 19 13 41.8
KWP MLR MLR
comp=Z,18μm,29.2s
KWP Kalwaria Pacla 133.62 328 ⇑*i*P PKPdf 19 11 11.1 +0.2
GRER 133.63 321 ⇓*i*P PKPdf 19 11 12.6 +1.6
GKP Gorka Klasztor 133.66 335 *i* PKPc PKPdf 19 11 11.2 +0.4
GKP *e*PP PP 19 13 39.8 -0.6
GKP *e*PKS 19 14 42.6
GKP *e*SP SP 19 23 41.0 -4.6
GKP *e*PS PS 19 24 01.5 +0.3
GKP LMZ 20 01 16.5
comp=Z,29μm,26.3s
GKP Gorka Klasztor 133.66 335 ⇑*i*PKIKP PKPdf 19 11 11.2 +0.4
GKP *e* 19 13 39.8
GKP *e*SP SP 19 23 41.0 -4.6
GKP *e*PS PS 19 24 01.5 +0.2
GKP MLR MLR
comp=Z,29μm,26.3s
ALFC Alevga 133.68 306 P PKPdf 19 11 10.6 -0.8
comp=Z,10.0nm,1.6s
GPA Golpazari 133.70 313 *e*P PKPdf 19 11 11.8 +0.5
AMRR Amara 133.79 320 ⇑*i*P PKPdf 19 11 12.4 +1.1
SILT Sile 133.82 315 *e*P PKPdf 19 11 10.5 -1.0
PGOR Pogoanele 133.86 321 ⇑*i*P PKPdf 19 11 12.5 +1.0
MUD Monsted U'grnd 133.88 343 *i* PKIKP PKPdf 19 11 10.7 -0.4
MUD *i* 19 13 41.4
MUD pmax pmax
comp=Z,140nm,0.9s
MUD MLR MLR
comp=Z,10μm,25.0s
MUD Monsted U'grnd 133.88 343 *i* P PKPdf 19 11 10.7 -0.4
comp=Z,135nm,0.9s
MUD *i* 19 13 41.4
MUD
comp=Z,10μm,25.0s
HRT Hereke 133.94 314 *e*P PKPdf 19 11 11.3 -0.5
PPCY Paphos 133.96 306 P PKPdf 19 11 10.9 -1.1
ADVT Abdulvahap 134.04 314 *e*P PKPdf 19 11 11.4 -0.5
CAVI Cavuskoy 134.06 314 *e*P PKPdf 19 11 11.7 -0.3
CAM4 Nova Friburgo 134.06 141 ⇓*i*P PKPdf 19 11 13.3 +0.7
CAM4 *i* 19 11 21.5
CAM4 *i* 19 11 30.7
CAM4 *i* 19 11 42.6
RGN Rugen 134.16 339 *e*PKPdf PKPpre 19 10 53.9
RGN *e*PP PP 19 13 42.1 -1.4
RGN Rugen 134.16 339 *e*PKPdf PKPdf 19 11 11.2 -0.5
SHUT Suhut-Afyon 134.17 311 *e*P PKPdf 19 11 11.7 -0.6
KLYT Kilyos 134.19 315 *e*P PKPdf 19 11 11.0 -1.2
MLR Muntele Rosu 134.19 322 PKIKP PKPdf 19 11 12.5 +0.4
MLR Muntele Rosu 134.19 322 ⇑*i*P PKPdf 19 11 10.7 -1.4
SUTC Sutluce-Ispart 134.21 310 *e*P PKPdf 19 11 10.0 -2.4
ISK Istanbul-Kandi 134.26 315 *e*P PKPdf 19 11 10.4 -1.9
DOPR Dopca 134.27 323 ⇑*i*P PKPdf 19 11 12.6 +0.4
KOLS Kolonicke sedl 134.28 328 *e*PKIKP PKPdf 19 11 13.1 +1.0
KOLS *e* 19 13 44.1
KOLS MLR MLR
comp=Z,12μm,27.5s
KOLS Kolonicke sedl 134.28 328 *e*PKP PKPdf 19 11 13.1 +1.0
KOLS *e*PP PP 19 13 44.1 -0.6
KOLS *e*SS SS 19 31 38.4 +14
KOLS LR LR
comp=Z,12μm,27.5s
KOLS Kolonicke sedl 134.28 328 *e* PKPpre 19 10 49.6
KOLS *e* 19 10 58.8
KOLS Kolonicke sedl 134.28 328 *e*PKP PKPdf 19 11 13.1 +1.0
KOLS *e*PP PP 19 13 44.1 -0.6

KOLS *e*SS SS 19 31 38.4 +14
ALT Altintas 134.31 312 *e*P PKPdf 19 11 01.5 -11
BMR Baia Mare 134.39 326 ⇑PKIKP PKPdf 19 11 12.6 +0.2
BMR Baia Mare 134.39 326 ⇑*i*P PKPdf 19 11 12.6 +0.2
BGKT Bogazkoy 134.41 315 *e*P PKPdf 19 11 11.6 -1.0
SULR 134.42 321 ⇑*i*P PKPdf 19 11 11.4 -1.1
GEMT Gemlik 134.43 314 *e*P PKPdf 19 11 12.0 -0.7
MBAR Mbarara 134.44 256 *c i*PKIKP PKPdf 19 11 12.8 -0.7
UZH Uzhgorod 134.46 328 *e*P Pdif 19 08 27.0 +14
UZH *e* 19 10 58.0
UZH *i* 19 11 12.7
UZH *e* 19 11 43.5
UZH *i* 19 13 42.1
UZH *e* 19 24 04.3
UZH MLR MLR
comp=N,8μm,21.0s
UZH MLR MLR
comp=E,11μm,21.0s
UZH MLR MLR
comp=Z,4μm,21.0s
BCK Bucak 134.52 310 *e*P PKPdf 19 11 11.6 -1.3
CTKS Kestanelik-??a 134.57 315 *e*P PKPdf 19 11 11.8 -1.1
ARMT Armutlu 134.60 314 *e*P PKPdf 19 11 11.9 -1.1
TRPA Tarpa 134.63 327 ⇓*i*P PKPdf 19 11 12.1 -0.7
ANTB Antalya 134.66 309 *e*P PKPdf 19 11 11.6 -1.6
MDNY Mudanya-Bursa 134.67 314 *e*P PKPdf 19 11 12.2 -0.9
OJC Ojcow 134.68 331 *e*Pdiff Pdif 19 08 14.3 +0.2
OJC *e*PKPdf PKPdf 19 11 12.5 -0.3
OJC *e*PP PP 19 13 47.9 +0.8
OJC *e*SKKSac SKKSac 19 20 28.7 -2.0
OJC *e*SS SS 19 31 30.7 +1.9
OJC L 20 10 27.9
comp=Z,15nm,22.3s
OJC Ojcow 134.68 331 *e*PKIKP PKPdf 19 11 12.5 -0.3
OJC *e* 19 13 47.9
OJC *e*SS SS 19 31 30.6 +1.8
OJC MLR MLR
comp=Z,15μm,22.3s
CRVS Cervenica-Dubn 134.72 328 *e*PKHKP PKPpre 19 10 51.1
CRVS *e* 19 13 48.4
CRVS Cervenica-Dubn 134.72 328 *e* PKPpre 19 10 51.1
CRVS *e* 19 11 05.8
CRVS *e*PP PP 19 13 48.4 +1.0
CRVS *e*SS SS 19 31 43.4 +14
BUC1 Bucharest 134.73 320 PKIKP PKPdf 19 11 14.2 +1.1
VOIR 134.76 322 ⇓PKIKP PKPdf 19 11 13.0 -0.1
VOIR 134.76 322 ⇓*i*P PKPdf 19 11 13.0 -0.1
MDB Medias 134.77 324 PKIKP PKPdf 19 11 14.7 +1.6
SLVT Silivri 134.77 316 *e*P PKPdf 19 11 12.8 -0.5
BDFB Brasilia 134.86 129 PKhKP PKPpre 19 10 59.7
comp=Z,18nm,0.8s,baz=266,slow=2.4,SNR=8.6
BDFB PKP PKPdf 19 11 13.4 -0.8
comp=Z,85nm,0.8s,baz=211,slow=3.9,SNR=29
BDFB PP PP 19 13 49.7 +0.7
comp=Z,7.7nm,0.7s,baz=198,slow=18,SNR=1.6
BDFB SKPbc SKPbc 19 14 34.4 +1.1
comp=Z,41nm,0.9s,baz=298,slow=1.7,SNR=4.9
BDFB SKKPbc 19 23 34.9
comp=Z,31nm,1.1s,baz=127,slow=4.7,SNR=4.1
BDFB Brasilia 134.86 129 PKIKP PKPdf 19 11 13.4 -0.8
BDFB 19 13 49.7
BDFB Brasilia 134.86 129 PKP PKPdf 19 11 13.4 -0.8
BDFB PP PP 19 13 49.7 +0.7
BDFB SKPbc SKPbc 19 14 34.4 +1.1
BDFB SKKPbc 19 23 34.9
NIE Niedzica 134.96 330 *e*PKPdf PKPdf 19 11 14.4 +1.0
NIE *e*PP PP 19 13 49.9 +1.0
KHL Karahalli 135.00 311 *e*P PKPdf 19 11 14.2 +0.4
KCTX Karacabey (Bur 135.08 314 *e*P PKPdf 19 11 13.0 -0.8
CRLT Corlu 135.14 316 *e*P PKPdf 19 11 13.8 -0.1
MVH1 Achvaich 135.18 353 P PKPpre 19 11 04.1
MVH1 Achvaich 135.18 353 *e*P PKPpre 19 11 04.1
ELL Elmali 135.27 309 *e*P PKPdf 19 11 13.2 -1.2
JMB Yambol 135.30 318 P PKPpre 19 11 01.4
TKR Tekirdag 135.34 316 *e*P PKPdf 19 11 13.4 -0.9
DRGR 135.34 325 PKIKP PKPdf 19 11 15.0 +0.8
DRGR 135.34 325 ⇑*i*P PKPdf 19 11 14.1 -0.1
BNT Bandirma 135.34 315 *e*P PKPdf 19 11 14.2 -0.1
EDC Edincik 135.39 315 *e*P PKPdf 19 11 13.9 -0.6
MCD Coleburn Disti 135.40 353 P PKPdf 19 11 05.1 -8.8
MCD Coleburn Disti 135.40 353 *e*P PKPdf 19 11 05.1 -8.8
GLHS Glhisar (BURDU 135.44 310 *e*P PKPdf 19 11 13.9 -0.8
EDRB Edirne 135.48 317 *e*P PKPdf 19 11 13.5 -1.1
KECS Kecovo 135.48 328 *e*PKHKP PKPpre 19 10 51.4
KECS *e* 19 11 15.9
KECS *e* 19 13 53.3
KECS Kecovo 135.48 328 *e*P PKPpre 19 10 51.4
KECS *e* 19 11 02.6
KECS *e*PKP PKPdf 19 11 15.9 +1.5
KECS *e*PP PP 19 13 53.3 +1.1
KECS *e* 19 14 36.8
KECS Kecovo 135.48 328 *e* PKPpre 19 10 51.4
KECS *e* 19 11 02.6
KECS Kecovo 135.48 328 *e*PKP PKPdf 19 11 15.9 +1.5
KECS *e*PP PP 19 13 53.3 +1.1
KECS *e*SKP 19 14 36.8
RAC Raciborz 135.53 332 *e*PKIKP PKPdf 19 11 15.0 +0.6
KULA Kula-Manisa 135.56 312 *e*P PKPdf 19 11 14.4 -0.4
DENT Denizli 135.57 311 *e*P PKPdf 19 11 16.0 +1.1
MFT Murefte 135.60 315 *e*P PKPdf 19 11 13.7 -1.1
MME1 Meikle Cairn 135.62 352 P PKPpre 19 11 04.7
MME1 Meikle Cairn 135.62 352 *e*P PKPpre 19 11 04.7
RUE Ruedersdorf 135.62 337 *e*PKPdf PKPpre 19 10 56.6
RUE *e*PP PP 19 13 51.1 -1.7
RUE Ruedersdorf 135.62 337 *e*PKPdf PKPdf 19 11 14.7 +0.2
GONE Gonen-Balikesi 135.64 314 *e*P PKPdf 19 11 14.4 -0.5
TSUM Tsumeb 135.66 224 PKhKP PKPpre 19 10 59.6
comp=Z,39nm,1.2s,baz=122,slow=6.5,SNR=10
TSUM PKP PKPdf 19 11 15.0 -0.6
comp=Z,298nm,1.1s,baz=127,slow=3.3,SNR=36
TSUM PP PP 19 13 53.4 -0.3
comp=Z,45nm,1.1s,baz=104,slow=6.0,SNR=3.7
TSUM SKPbc SKPbc 19 14 37.0 +1.2
comp=Z,153nm,1.2s,baz=130,slow=2.9,SNR=8.2
TSUM Tsumeb 135.66 224 *e*PKPpre PKPpre 19 11 01.3
TSUM PKP PKPdf 19 11 15.0 -0.6
TSUM PP PP 19 13 53.5 -0.3
TSUM SKPbc SKPbc 19 14 37.0 +1.2
BALB Balikesir 135.67 314 *e*P PKPdf 19 11 13.8 -1.2
MDO Dochfour 135.67 353 P PKPpre 19 11 04.0
MDO Dochfour 135.67 353 *e*P PKPpre 19 11 04.0
RKY Sarkoy-Tekirda 135.71 315 *e*P PKPdf 19 11 14.0 -1.1
KAC Achnashellach 135.72 354 P PKPpre 19 11 03.2
KAC Achnashellach 135.72 354 *e*P PKPpre 19 11 03.2
OKC Ostrava-Krasne 135.72 331 *e*PKHKP PKPpre 19 11 04.7
OKC *e* 19 11 15.7
OKC *e* 19 13 51.0
OKC MLR MLR
comp=Z,18μm,31.6s
OKC Ostrava-Krasne 135.72 331 *e*PKPpre PKPpre 19 11 04.7
OKC *e*PKPdf PKPdf 19 11 15.7 +0.9
OKC *e*PP PP 19 13 51.0 -2.6
OKC *e*x x 19 31 54.4
OKC AMS AMS 20 02 10.0
comp=Z,18μm,31.6s
PVL Pavlikeni 135.74 319 *i* P PKPdf 19 11 15.6 +0.6
DEV Deva 135.76 324 ⇑PKIKP PKPdf 19 11 15.8 +0.8
DEV Deva 135.76 324 ⇑*i*P PKPdf 19 11 15.8 +0.8
LIKS Likavka 135.80 330 *e*PKIKP PKPdf 19 11 16.8 +1.9
LIKS Likavka 135.80 330 *e*PKP PKPdf 19 11 16.8 +1.9
KSP Ksiaz 135.84 334 *i* PKPc PKPdf 19 11 15.8 +0.9
KSP *e*PP PP 19 13 55.9 +1.6
KSP LMZ 20 07 53.0
comp=Z,34μm,23.2s
KPL Plockton 135.91 354 P PKPpre 19 11 01.0
KPL 19 13 40.5
KPL AMS AMS 20 07 06.3
comp=Z,9μm,27.0s
KPL Plockton 135.91 354 *e*P PKPpre 19 11 01.0
KPL *e* 19 13 40.5
KPL AMS AMS 20 07 06.3
comp=Z,9μm,27.0s
AKS Akhisar 136.03 313 *e*P PKPdf 19 11 15.7 0.0
MORC Moravsky Berou 136.04 332 ⇓PKIKP PKPdf 19 11 15.8 +0.4
MORC Moravsky Berou 136.04 332 *e*PKPpre PKPpre 19 11 03.1
MORC Moravsky Berou 136.04 332 ⇓*i*P PKPdf 19 11 15.8 +0.4
CRAR CRAIOVA 136.11 322 PKIKP PKPdf 19 11 16.8 +1.1
GZR Gura Zlata 136.12 324 ⇓PKIKP PKPdf 19 11 16.1 +0.4
GZR Gura Zlata 136.12 324 ⇓*i*P PKPdf 19 11 16.1 +0.4
LPK Lapseki 136.14 315 *e*P PKPdf 19 11 13.8 -2.1
PSZ Piszkesteto 136.15 328 *e*PKHKP PKPpre 19 11 03.0

PSZ			*e*		19 11 15.0	
PSZ	**Piszkesteto**	**136.15 328**	⇑*i*P	PKPdf	19 11 14.4	-1.2
PSZ	**Piszkesteto**	**136.15 328**	⇑*e*PKP	PKPdf	19 11 16.1	+0.5
PSZ			*e*PP	PP	19 13 54.4	-2.0
ERIK	**Erikli-Kesan**	**136.17 316**	*e*P	PKPdf	19 11 14.8	-1.1
DPC	**Dobruska-Polom**	**136.18 333**	*e*PKHKP	PKPpre	19 11 05.2	
DPC			*e*		19 11 16.9	
DPC			*e*		19 13 56.1	
DPC			*e*SS	SS	19 32 15.2	+29
DPC			MLR	MLR		
	comp=Z,16µm,30.4s					
DPC	**Dobruska-Polom**	**136.18 333**	*e*PKPpre	PKPpre	19 11 05.2	
DPC			*e*PKPdf	PKPdf	19 11 16.9	+1.3
DPC			*e*PP	PP	19 13 56.1	-0.4
DPC			*ex*	x	19 32 15.2	
DPC			AMS	AMS	20 00 40.0	
	comp=Z,16µm,30.4s					
UPC	**Upice**	**136.20 333**	*e*PKHKP	PKPpre	19 11 05.4	
UPC			*e*		19 11 16.9	
UPC	**Upice**	**136.20 333**	*e*PKPpre	PKPpre	19 11 05.4	
UPC			*e*PKPdf	PKPdf	19 11 16.9	+1.3
UPC			*e*PP	PP	19 13 51.6	-5.0
HLG	**Helgoland**	**136.22 342**	*e*PKPdf	PKPpre	19 10 57.9	
HLG			*e*PP	PP	19 13 54.7	-1.7
VYHS	**Vyhne**	**136.30 329**	*e*PKIKP	PKPdf	19 11 16.2	+0.3
VYHS			*e*		19 13 58.1	
VYHS			*e*SS	SS	19 31 53.1	+4.9
VYHS			MLR	MLR		
	comp=Z,12µm,28.0s					
VYHS	**Vyhne**	**136.30 329**	*e*PKP	PKPdf	19 11 16.2	+0.3
VYHS			*e*PP	PP	19 13 58.1	+0.8
VYHS			*e*		19 14 39.9	
VYHS			*e*SS	SS	19 31 53.1	+4.9
VYHS			LR	LR		
	comp=Z,12µm,28.0s					
VYHS	**Vyhne**	**136.30 329**	*e*	PKPpre	19 10 54.9	
VYHS			*e*		19 11 06.7	
VYHS	**Vyhne**	**136.30 329**	*e*PKP	PKPdf	19 11 16.2	+0.3
VYHS			*e*PP	PP	19 13 58.1	+0.8
VYHS			*e*SKP		19 14 39.9	
VYHS			*e*SS	SS	19 31 53.1	+4.9
GELI	**Tayfur-Gelibol**	**136.32 315**	*e*P	PKPdf	19 11 14.6	-1.6
KAR1	**Arisaig**	**136.34 354**	P	PKPdf	19 11 07.2	-8.4
KAR1	**Arisaig**	**136.34 354**	*e*P	PKPdf	19 11 07.2	-8.4
YER	**Yerkesik**	**136.35 310**	*e*P	PKPdf	19 11 13.6	-2.7
ALN	**Alexandroupoli**	**136.39 316**	P	PKPdf	19 11 14.7	-1.6
ENEZ	**Enez**	**136.39 316**	*e*P	PKPdf	19 11 15.1	-1.2
KDZ	**Kurdzhali**	**136.45 317**	*i* P	PKPdf	19 11 15.6	-0.8
KOLL	**Kolacno**	**136.46 330**	*e*PKHKP	PKPpre	19 11 05.8	
KOLL			*e*		19 11 17.7	
KOLL			*e*		19 13 58.9	
KOLL	**Kolacno**	**136.46 330**	*e*P	PKPpre	19 11 05.8	
KOLL			*e*PKP	PKPdf	19 11 17.7	+1.5
KOLL			*e*PP	PP	19 13 58.9	+0.6
KOLL			*e*		19 14 40.3	
KOLL	**Kolacno**	**136.46 330**	*e*	PKPpre	19 11 05.8	
KOLL	**Kolacno**	**136.46 330**	*e*PKP	PKPdf	19 11 17.7	+1.5
KOLL			*e*PP	PP	19 13 58.9	+0.6
KOLL			*e*SKP		19 14 40.3	
BZS	**Buzias**	**136.65 324**	⇑PKIKP	PKPdf	19 11 16.2	-0.4
BZS	**Buzias**	**136.65 324**	⇑*i*P	PKPdf	19 11 16.2	-0.4
MLSB	**Milas**	**136.67 311**	*e*P	PKPdf	19 11 15.7	-1.3
EZN	**Ezine**	**136.68 315**	*e*P	PKPdf	19 11 15.9	-0.9
PLD	**Plovdiv**	**136.69 318**	P	PKPpre	19 11 04.4	
EBH	**Black Hill**	**136.74 352**	P	PKPpre	19 11 06.0	
EBH	**Black Hill**	**136.74 352**	*e*P	PKPpre	19 11 06.0	
BLCB	**Balcova**	**136.78 312**	*e*P	PKPdf	19 11 16.4	-0.7
BLCB	**Balcova**	**136.78 312**	P	PKPpre	19 10 59.3	
TIM	**Timisoara**	**136.80 325**	PKIKP	PKPdf	19 11 18.2	+1.3
TIM	**Timisoara**	**136.80 325**	⇓*i*P	PKPdf	19 11 17.6	+0.7
BRG	**Berggiesshubel**	**136.80 335**	*e*PKPdf	PKPpre	19 10 59.1	
BRG			*e*PP	PP	19 13 59.2	-1.1
BRG	**Berggiesshubel**	**136.80 335**	PKHKP	PKPpre	19 11 04.0	
BRG			*e*		19 11 17.2	
BRG					19 13 59.1	
BRG			pmax	pmax		
	comp=Z,1.0nm,1.3s					
BRG			MLR	MLR		
	comp=Z,12µm,23.0s					
BRG			MLR	MLR		
	comp=N,12µm,23.5s					
BRG			MLR	MLR		
	comp=E,13µm,23.5s					
PVCC	**Panska Ves**	**136.81 334**	*e*PKHKP	PKPpre	19 11 09.1	
PVCC			*e*		19 11 18.0	
PVCC	**Panska Ves**	**136.81 334**	*e*PKPpre	PKPpre	19 11 09.1	
PVCC			*e*PKPdf	PKPdf	19 11 18.0	+1.2
PVCC			*ex*	x	19 13 46.3	
PVCC			*e*SS	SS	19 32 01.7	+7.8
PVCC			AMS	AMS	20 00 10.0	
	comp=E,41µm,46.2s					
GADA	**Gvkgeada**	**136.81 315**	*e*P	PKPdf	19 11 14.1	-3.0
VRAC	**Vranov**	**136.81 332**	PKhKP	PKPpre	19 11 03.4	
	comp=E,10nm,0.5s,baz=38,slow=2.1,SNR=11					
VRAC			PKP	PKPdf	19 11 16.4	-0.4
	comp=E,68nm,0.9s,baz=34,slow=1.5,SNR=22					
VRAC			PP	PP	19 13 58.4	-2.1
	comp=E,53nm,1.3s,baz=19,slow=3.9,SNR=3.3					
VRAC			SKPbc	SKPbc	19 14 39.6	+1.4
	comp=E,67nm,0.9s,baz=96,slow=4.6,SNR=6.8					
VRAC	**Vranov**	**136.81 332**	PKIKP	PKPdf	19 11 16.4	-0.4
VRAC					19 13 58.4	
VRAC	**Vranov**	**136.81 332**	PKP	PKPdf	19 11 16.4	-0.4
VRAC			PP	PP	19 13 58.4	-2.0
VRAC			SKPbc	SKPbc	19 14 39.6	+1.4
VRAC	**Vranov**	**136.81 332**	⇓*i*P	PKPdf	19 11 16.0	-0.8
PGB	**Panagyurishte**	**136.81 319**	*i* P	PKPdf	19 11 17.0	0.0
CLL	**Collm**	**136.84 336**	*e*PKPdf	PKPpre	19 10 59.0	
CLL			*e*PP	PP	19 13 59.0	-1.5
CLL	**Collm**	**136.84 336**	*i* PKIKP	PKPdf	19 11 17.6	+0.8
CLL			*e*		19 11 51.0	
CLL			*e*		19 14 00.0	
CLL			pmax	pmax		
	comp=Z,403nm,1.0s					
CLL	**Collm**	**136.84 336**	*i* PKP	PKPdf	19 11 17.6	+0.8
CLL			*i* PKP	PKPdf	19 11 19.6	+2.8
CLL			*ep*PKP	pPKPdf	19 11 51.0	+0.6
CLL			*e*PP	PP	19 14 00.0	-0.5
CLL			*e*SKP		19 14 41.0	
CLL			*e*PKS		19 14 51.0	
CLL	**Collm**	**136.84 336**	*e*Pdif	Pdif	19 08 22.0	-1.8
CLL			*e*PKPpre	PKPpre	19 11 05.0	
CLL			*i* PKPdf	PKPdf	19 11 17.6	+0.8
CLL			*i* PKiKP	PKiKP	19 11 19.6	+1.0
	comp=Z,403nm,1.0s					
CLL			*i*		19 11 25.4	
CLL			*ep*PKiKP		19 11 51.0	
CLL			*es*PKiKP		19 12 03.0	
CLL			*e*PP	PP	19 14 00.0	-0.5
CLL			*ep*PP		19 14 29.0	
CLL			*e*SKPdf	SKPdf	19 14 41.0	+0.6
CLL			*e*PKSdf		19 14 51.0	
CLL			*e*(PKSab)		19 14 55.0	
CLL			*es*PKSdf		19 15 33.0	
CLL			*e*		19 18 00.0	
CLL			*ep*PPPP		19 19 24.0	
CLL			*ep*PKKPdf		19 21 24.0	
CLL			*i*		19 22 18.3	
CLL			*e*SKSP		19 23 49.0	
CLL			*e*PSKS		19 24 11.0	
CLL			*e*PPS		19 26 06.0	
CLL			*e*PPPrev		19 27 04.0	
CLL			*e*SKKSdf	SKKSdf	19 27 57.0	+0.5
CLL			*e*SS	SS	19 32 06.0	+12
CLL			*e*SKSSKSac		19 34 00.0	
CLL			*e*SSS		19 37 24.0	
CLL			*e*		19 41 36.0	
CLL			LmV		20 16 00.0	
	comp=Z,12µm,20.4s					
BUD	**Budapest**	**136.88 328**	⇑*e*PKP	PKPdf	19 11 17.2	+0.2
BUD			*e*PP	PP	19 13 59.5	-1.5
RZN	**Rozhen**	**136.89 318**	*i* P	PKPdf	19 11 17.0	-0.2
EAB	**Aberfoyle**	**136.90 353**	P	PKPpre	19 11 09.1	
EAB	**Aberfoyle**	**136.90 353**	*e*P	PKPpre	19 11 09.1	
ESY	**Stoneypath**	**136.93 351**	P	PKPpre	19 11 07.5	
ESY	**Stoneypath**	**136.93 351**	*e*P	PKPpre	19 11 07.5	
NRDL	**Niedersach Rie**	**136.95 339**	*e*PKPdf	PKPpre	19 10 59.3	
NRDL			*e*PP	PP	19 13 59.6	-1.4
EDI	**Edinburgh**	**137.01 352**	P	PKPdf	19 11 07.8	-9.2
EDI					19 13 49.2	
EDI			AMS	AMS	20 03 28.1	
	comp=Z,9µm,25.3s					
EDI	**Edinburgh**	**137.01 352**	*e*P	PKPpre	19 11 07.8	
EDI			*e*		19 13 49.2	
EDI			AMS	AMS	20 03 28.1	
	comp=Z,9µm,25.3s					
DAT	**Datca**	**137.03 310**	*e*P	PKPdf	19 11 16.4	-1.2
BODT	**Bodrum**	**137.10 310**	*e*P	PKPdf	19 11 15.3	-2.5
EAU	**Auchinoon**	**137.12 352**	P	PKPpre	19 11 03.8	
EAU	**Auchinoon**	**137.12 352**	*e*P	PKPpre	19 11 03.8	
EBL	**Broad Law**	**137.13 352**	P	PKPpre	19 11 05.3	
EBL	**Broad Law**	**137.13 352**	*e*P	PKPpre	19 11 05.3	
MODS	**Modra-Piesok**	**137.15 330**	*e*PKIKP	PKPdf	19 11 10.6	-6.9
MODS			*e*		19 14 05.8	
MODS	**Modra-Piesok**	**137.15 330**	*e*P	PKPdf	19 11 10.6	-6.9
MODS			*e*PKP	PKPdf	19 11 19.3	+1.8
MODS			*e*PP	PP	19 14 05.8	+3.2
MODS			*e*		19 14 43.3	
MODS	**Modra-Piesok**	**137.15 330**	*e*	PKPdf	19 11 10.6	-6.9
MODS	**Modra-Piesok**	**137.15 330**	*e*PKP	PKPdf	19 11 19.3	+1.8
MODS			*e*PP	PP	19 14 05.8	+3.2
MODS			*e*SKP		19 14 43.2	
PRA	**Prague**	**137.21 334**	PKPpre	PKPpre	19 11 09.0	
PRA			PKPdf	PKPdf	19 11 20.0	+2.5
PRA			PP	PP	19 14 05.0	+2.2
PRA			SS	SS	19 32 10.0	+11
PRU	**Pruhonice**	**137.22 334**	*e*PKHKP	PKPpre	19 11 08.1	
PRU			*e*		19 11 19.7	
PRU			*e*		19 14 04.1	
PRU			*e*SS	SS	19 32 05.5	+6.6
PRU	**Pruhonice**	**137.22 334**	*e*PKPpre	PKPpre	19 11 08.1	
PRU			*e*PKPdf	PKPdf	19 11 19.7	+2.1
PRU			*e*PP	PP	19 14 04.1	+1.2
PRU			*e*SS	SS	19 32 05.5	+6.6
PRU			AMS	AMS	20 01 20.0	
	comp=Z,23µm,28.8s					
SIGR	**SIGRI**	**137.27 314**	P	PKPdf	19 11 12.7	-5.3
PGBU	**Glenifferbraes**	**137.28 353**	P	PKPpre	19 11 06.2	
PGBU					19 13 43.8	
PGBU			AMS	AMS	20 14 10.1	
	comp=Z,11µm,21.0s					
PGBU	**Glenifferbraes**	**137.28 353**	*e*P	PKPpre	19 11 06.2	
PGBU			*e*		19 13 43.8	
PGBU			AMS	AMS	20 14 10.1	
	comp=Z,11µm,21.0s					
TREC	**Trest**	**137.32 333**	*e*PKHKP	PKPpre	19 11 07.9	
TREC			*e*		19 11 18.7	
TREC			MLR	MLR		
	comp=Z,24µm,24.7s					
TREC	**Trest**	**137.32 333**	*e*PKPpre	PKPpre	19 11 07.9	
TREC			*e*PKPdf	PKPdf	19 11 18.7	+0.9
TREC			*ex*	x	19 13 50.3	
TREC			*e*SS	SS	19 32 09.6	+9.4
TREC			AMS	AMS	20 07 50.0	
	comp=Z,24µm,24.7s					
ZST	**Bratislava**	**137.35 330**	*e*PKIKP	PKPdf	19 11 11.2	-6.7
ZST			*e*		19 14 06.3	
ZST			*e*SS	SS	19 32 46.4	+46
ZST	**Bratislava**	**137.35 330**	*e*P	PKPdf	19 11 11.2	-6.7
ZST			*e*PKP	PKPdf	19 11 19.4	+1.5
ZST			*e*PP	PP	19 14 06.3	+2.4
ZST			*e*		19 14 43.5	
ZST			*e*SS	SS	19 32 46.4	+46
ZST	**Bratislava**	**137.35 330**	*e*	PKPdf	19 11 11.2	-6.7
ZST	**Bratislava**	**137.35 330**	*e*PKP	PKPdf	19 11 19.4	+1.5
ZST			*e*PP	PP	19 14 06.3	+2.4
ZST			*e*SKP		19 14 43.5	
ZST			*e*SS	SS	19 32 46.4	+46
KAVA	**Kavala**	**137.36 317**	P	PKPdf	19 11 07.6	-11
NEUB	**Neuenburg**	**137.39 337**	*e*PKPdf	PKPpre	19 11 00.1	
NEUB			*e*PP	PP	19 14 02.4	-1.5
CLZ	**Clausthal**	**137.40 339**	*e*PKPdf	PKPpre	19 11 00.4	
CLZ			*e*PP	PP	19 14 02.9	-0.9
VTS	**Vitosha**	**137.40 320**	⇑PKIKP	PKPdf	19 11 17.6	-0.5
VTS	**Vitosha**	**137.40 320**	P	PKPpre	19 11 01.2	
VTS	**Vitosha**	**137.40 320**	⇑*i*P	PKPdf	19 11 17.6	-0.5
VTS	**Vitosha**	**137.40 320**	*i* P	PKPdf	19 11 18.0	-0.1
CHOS	**Chios island**	**137.48 313**	P	PKPpre	19 11 04.5	
EKA	**Eskdalemuir Ar**	**137.58 352**	PKhKP	PKPpre	19 11 05.3	
	comp=Z,21nm,0.8s,baz=351,slow=2.3,SNR=21					
EKA			PKP	PKPdf	19 11 18.1	+0.1
	comp=Z,88nm,0.9s,baz=18,slow=3.0,SNR=24					
EKA			PP	PP	19 14 03.4	-1.3
	comp=Z,17nm,1.0s,baz=30,slow=4.0,SNR=4.6					
EKA			SKPbc	SKPbc	19 14 42.0	+1.7
	comp=Z,58nm,0.9s,baz=356,slow=2.4,SNR=12					
EKA			PKKP		19 20 50.0	
	comp=Z,7.2nm,1.0s,baz=154,slow=7.9,SNR=3.8					
EKA			SKKPbc		19 23 27.6	
	comp=Z,20nm,1.0s,baz=190,slow=4.2,SNR=5.1					
EKA	**Eskdalemuir Ar**	**137.58 352**	PKIKP	PKPdf	19 11 18.1	+0.1
EKA					19 14 03.4	
EKA	**Eskdalemuir Ar**	**137.58 352**	PKP	PKPdf	19 11 18.1	+0.1
EKA			PP	PP	19 14 03.4	-1.3
EKA			SKPbc	SKPbc	19 14 42.0	+1.7
EKA			PKKP		19 20 50.0	
EKA			SKKPbc		19 23 27.6	
MMB	**Musomiste**	**137.58 318**	*i* P	PKPdf	19 11 17.7	-0.8
ESK	**Eskdalemuir**	**137.60 352**	P	PKPpre	19 11 05.2	
ESK					19 13 40.0	
ESK			AMS	AMS	20 14 02.9	
	comp=Z,11µm,20.0s					
ESK	**Eskdalemuir**	**137.60 352**	*e*P	PKPpre	19 11 05.2	
ESK			*e*		19 13 40.0	
ESK			AMS	AMS	20 14 02.9	
	comp=Z,11µm,20.0s					
ESK	**Eskdalemuir**	**137.60 352**	*i* PKIKP	PKPdf	19 11 19.3	+1.2
ESK	**Eskdalemuir**	**137.60 352**	*e*PKPpre	PKPpre	19 11 07.1	
ECK	**Cauldkaine Hil**	**137.72 352**	P	PKPpre	19 11 06.3	
ECK	**Cauldkaine Hil**	**137.72 352**	*e*P	PKPpre	19 11 06.3	
TANN	**Tannenbergstha**	**137.76 336**	*e*PKPdf	PKPpre	19 11 01.1	
TANN			*e*PP	PP	19 14 05.3	-0.9
WIT	**Witteveen**	**137.77 342**	*e*PKPpre	PKPpre	19 11 09.3	
WIT	**Witteveen**	**137.77 342**	⇑*i*PKiKP	PKiKP	19 11 19.3	-1.2
	comp=Z,3µm,1.1s					
WIT	**Witteveen**	**137.77 342**	*i* x	PKPdf	19 11 22.6	+4.2
WIT	**Witteveen**	**137.77 342**	*i* x	PKPdf	19 11 29.1	+11
	comp=Z,2µm,1.6s					
WIT	**Witteveen**	**137.77 342**	*e*PP	PP	19 14 05.4	-0.7
KKB	**Krupnik**	**137.86 319**	*i* P	PKPdf	19 11 18.4	-0.6
IBBN	**Ibbenburen**	**137.88 341**	*e*PKPdf	PKPpre	19 11 00.8	
IBBN			*e*PP	PP	19 14 04.9	-1.9
XAL	**Allendale**	**137.89 351**	P	PKPpre	19 11 08.5	
XAL	**Allendale**	**137.89 351**	*e*P	PKPpre	19 11 08.5	
NKC	**Novy Kostel**	**137.90 336**	*e*PKHKP	PKPpre	19 11 09.1	
NKC			*e*		19 11 20.0	
NKC			*e*		19 14 04.1	
NKC			*e*SS	SS	19 32 08.6	+1.8
NKC			MLR	MLR		
	comp=Z,32µm,48.0s					
NKC	**Novy Kostel**	**137.90 336**	*e*PKPpre	PKPpre	19 11 09.1	
NKC			*e*PKPdf	PKPdf	19 11 20.0	+1.2
NKC			*e*PP	PP	19 14 04.1	-3.0
NKC			*e*SS	SS	19 32 08.6	+1.8
NKC			AMS	AMS	20 00 20.0	
	comp=Z,32µm,48.0s					
MOX	**Moxa**	**137.91 337**	*e*PKP	PKPpre	19 11 07.0	
	comp=Z,112nm,2.0s					
MOX			*e*		19 11 19.2	
MOX			*e*PP	PP	19 14 07.0	-0.1
MOX						
	comp=Z,6µm,21.0s					
MOX	**Moxa**	**137.91 337**	*e*PKPdf	PKPpre	19 11 01.2	
MOX			*e*PP	PP	19 14 06.0	-1.1
MOX	**Moxa**	**137.91 337**	*e*PKHKP	PKPpre	19 11 07.0	
MOX			*e*		19 11 19.2	
MOX			*e*		19 14 07.0	
MOX			pmax	pmax		
	comp=Z,112nm,2.0s					
MOX			MLR	MLR		
	comp=Z,6µm,21.0s					
PKSM	**Moragy**	**137.91 327**	⇓PKIKP	PKPdf	19 11 16.2	-2.7
PKSM	**Moragy**	**137.91 327**	⇓*i*P	PKPdf	19 11 16.2	-2.7
SRS	**Serrai**	**137.91 318**	P	PKPpre	19 11 06.9	
SOP	**Sopron**	**137.97 330**	⇑*e*PKP	PKPdf	19 11 19.4	+0.4
SOP			*e*PP	PP	19 14 07.6	-0.1
OUR	**Ouranopolis**	**138.04 317**	P	PKPpre	19 11 07.2	
CONA	**Conrad Observa**	**138.13 331**	P	PKPpre	19 11 09.7	
	comp=Z,630nm,1.1s,SNR=7.1					
GCD	**Castle Douglas**	**138.14 352**	P	PKPpre	19 11 07.1	
GCD	**Castle Douglas**	**138.14 352**	*e*P	PKPpre	19 11 07.1	
SOH	**Sokhos**	**138.21 318**	P	PKPpre	19 11 07.3	
GAL1	**Galloway**	**138.24 353**	P	PKPpre	19 11 10.2	
GAL1					19 14 05.7	
GAL1			AMS	AMS	19 58 13.3	
	comp=Z,9µm,34.3s					
GAL1	**Galloway**	**138.24 353**	*e*P	PKPpre	19 11 10.2	
GAL1			*e*		19 14 05.7	
GAL1			AMS	AMS	19 58 13.3	
	comp=Z,9µm,34.3s					
KHC	**Kasperske Hory**	**138.28 334**	*e*PKHKP	PKPpre	19 11 10.3	
KHC			*e*		19 11 20.7	
KHC	**Kasperske Hory**	**138.28 334**	*e*PKPpre	PKPpre	19 11 07.9	
KHC	**Kasperske Hory**	**138.28 334**	*e*PKPpre	PKPpre	19 11 10.3	
KHC			*e*PKPdf	PKPdf	19 11 20.7	+1.2
KHC			*e*PP	PP	19 14 03.4	-6.1
KHC			*ex*	x	19 32 32.9	
KHC			AMS	AMS	20 01 20.0	
	comp=Z,28µm,34.5s					
KESW	**Keswick, Cumbr**	**138.29 351**	P	PKPpre	19 11 09.4	
KESW	**Keswick, Cumbr**	**138.29 351**	*e*P	PKPpre	19 11 09.4	
ROTZ	**Rotzenmuhle**	**138.37 335**	*e*PKPdf	PKPpre	19 11 02.4	
ROTZ			*e*PP	PP	19 14 09.4	-0.6
UBBA	**Unterbreizbach**	**138.37 338**	*e*PKPdf	PKPpre	19 11 01.9	
UBBA			*e*PP	PP	19 14 08.5	-1.4
UBBA			*ep*PP		19 14 41.9	
APE	**Apeiranthos**	**138.41 311**	*e*P	PKPdf	19 11 17.6	-2.5
APE	**Apeiranthos**	**138.41 311**	⇑PKIKP	PKPdf	19 11 18.0	-2.2
APE	**Apeiranthos**	**138.41 311**	⇑*i*P	PKPdf	19 11 18.0	-2.2
XDE	**Dent Fell**	**138.43 352**	P	PKPpre	19 11 08.4	
XDE	**Dent Fell**	**138.43 352**	*e*P	PKPpre	19 11 08.4	
PAIG	**Paliouri**	**138.44 316**	P	PKPpre	19 11 08.8	
GEC2	**GERESS Array S**	**138.44 333**	*e*PKPdf	PKPpre	19 11 02.3	
GEC2			*e*PP	PP	19 14 09.4	-1.1
VAY	**Valandovo**	**138.47 319**	P	PKPpre	19 11 08.1	
VAY	**Valandovo**	**138.47 319**	*e*PKP	PKPpre	19 11 08.2	
WTSB	**Winterswijk**	**138.47 342**	*e*PKPpre	PKPpre	19 11 09.9	
	comp=Z,76nm,1.5s					
WTSB	**Winterswijk**	**138.47 342**	⇑*i*PKiKP	PKiKP	19 11 20.0	-1.9
	comp=Z,1µm,1.5s					
WTSB	**Winterswijk**	**138.47 342**	*i* x	PKPdf	19 11 23.2	+3.4
WTSB	**Winterswijk**	**138.47 342**	*i* x	PKPdf	19 11 29.8	+10
	comp=Z,450nm,1.6s					
WTSB	**Winterswijk**	**138.47 342**	*i* PP	PP	19 14 11.8	+1.4
DIVS	**Divibare**	**138.48 324**	P	PKPpre	19 11 06.7	
HORT	**Hortiatis**	**138.49 317**	P	PKPpre	19 11 08.8	
THE	**Thessaloniki**	**138.56 317**	P	PKPpre	19 11 08.5	
WET	**Wettzell**	**138.57 334**	*e*PKPdf	PKPpre	19 11 02.6	
WET			*e*PP	PP	19 14 10.4	-0.9
AOS	**Alonnisos**	**138.66 315**	P	PKPpre	19 11 06.2	
HPK	**Haverah Park**	**138.66 350**	P	PKPpre	19 11 10.7	
HPK					19 13 51.5	
HPK			AMS	AMS	20 02 49.7	
	comp=Z,11µm,27.7s					
HPK	**Haverah Park**	**138.66 350**	*e*P	PKPpre	19 11 10.7	
HPK			*e*		19 13 51.5	
HPK			AMS	AMS	20 02 49.7	
	comp=Z,11µm,27.7s					
GRG	**Griva**	**138.77 318**	P	PKPpre	19 11 06.1	
GIM	**North Isle of**	**138.77 352**	P	PKPpre	19 11 12.0	
GIM	**North Isle of**	**138.77 352**	*e*P	PKPpre	19 11 12.0	
ARSA	**Arzberg**	**138.78 330**	P	PKPpre	19 11 11.6	
	comp=Z,307nm,1.3s,SNR=11					
BUG	**Bochum--Univer**	**138.78 341**	*e*PKPdf	PKPpre	19 11 02.6	
BUG			*e*PP	PP	19 14 10.7	-1.7
GRF	**Grafenberg Arr**	**138.82 336**	*e*PKPdf	PKPpre	19 11 03.0	
GRF			*e*PP	PP	19 14 11.6	-1.1
GRF			*e*L		20 10 24.9	
	comp=Z,14µm,21.6s					
SKO	**Skopje**	**138.84 320**	P	PKPpre	19 11 11.1	
SKO	**Skopje**	**138.84 320**	*e*PKP	PKPpre	19 11 11.4	
MOA	**Molln**	**138.93 332**	P	PKPpre	19 11 11.4	
	comp=Z,260nm,1.0s,SNR=16					
GMM	**Mts of Mourne**	**139.00 354**	P	PKPpre	19 11 10.1	
GMM	**Mts of Mourne**	**139.00 354**	*e*P	PKPpre	19 11 10.1	
ABA1	**Baconsthorpe**	**139.13 347**	P	PKPdf	19 11 14.1	-6.8
ABA1	**Baconsthorpe**	**139.13 347**	*e*P	PKPdf	19 11 14.1	-6.8
LIT	**Litokhoron**	**139.15 317**	P	PKPpre	19 11 08.1	
LAST	**Lasithi**	**139.19 309**	P	PKPdf	19 11 15.6	-6.1
IVA	**Berane**	**139.26 322**	⇑*i*PKP	PKPpre	19 11 12.1	
PLE	**Pljevlja**	**139.29 323**	*e*PKP	PKPpre	19 11 12.8	
AEU	**East Anglia Un**	**139.37 347**	P	PKPdf	19 11 15.3	-6.1
AEU	**East Anglia Un**	**139.37 347**	*e*P	PKPdf	19 11 15.3	-6.1
PVY	**Plav**	**139.38 322**	⇑*i*PKP	PKPpre	19 11 12.5	
TNS	**Taunus Mts**	**139.42 339**	*e*PKPdf	PKPpre	19 11 04.2	
TNS			*e*PP	PP	19 14 15.2	-1.1
SOKA	**Soboth**	**139.42 330**	P	PKPpre	19 11 13.1	
	comp=Z,590nm,1.4s					
BIA	**Bitola**	**139.43 319**	P	PKPpre	19 11 12.2	
BIA	**Bitola**	**139.43 319**	*e*PKP	PKPpre	19 11 12.7	
BCI	**Bajram Curri**	**139.46 322**	*i* P	PKPpre	19 11 12.9	
FNA	**Florina**	**139.52 319**	P	PKPpre	19 11 13.8	
SISC	**Sisak**	**139.59 328**	P	PKPpre	19 11 13.8	
STNC	**Stoke**	**139.60 350**	P	PKPpre	19 11 13.4	
STNC					19 13 58.6	
STNC			AMS	AMS	20 16 23.0	
	comp=Z,13µm,19.2s					
STNC	**Stoke**	**139.60 350**	*e*P	PKPpre	19 11 13.4	
STNC			*e*		19 13 58.6	
STNC			AMS	AMS	20 16 23.0	
	comp=Z,13µm,19.2s					
UPM	**Unac-Piva**	**139.65 323**	⇑*i*PKP	PKPpre	19 11 12.5	
RJOB	**Jochberg**	**139.68 333**	*e*PKPdf	PKPpre	19 11 04.6	
RJOB			*e*PP	PP	19 14 17.4	-0

BOJS eSKPbc PP 19 14 19.9 -1.2
TIR Tirane 140.16 320 ePKHKP PKPpre 19 11 14.6
TIR Tirane 140.16 320 P PKPpre 19 11 13.0
ULC Ulcinj 140.19 322⇑iPKP PKPpre 19 11 13.7
BUM Brajici-Budva 140.20 322⇑iPKP PKPpre 19 11 12.7
UCC Uccle 140.23 343 PKP PKPpre 19 11 10.4
KARN Karanos 140.27 310 P PKPpre 19 11 12.5
BCLA Clavier 140.28 342 PKP PKPpre 19 11 15.7
BCLA PP PP 19 14 23.3 +1.7
BCLA SKiKP 19 14 52.2
STU Stuttgart 140.35 337 ePKPdf PKPpre 19 11 05.6
STU ePP PP 19 14 20.7 -1.4
HCY Herceg Novi 140.35 323⇑iPKP PKPpre 19 11 14.7
VOY Vojsko 140.43 330 ePKPdf PKPpre 19 11 15.9
VOY ePKiKP PKiKP 19 11 23.1 -3.0
VOY eSKPbc PP 19 14 24.0 +1.2
JAVS Javornik 140.45 330 ePKPdf PKPdf 19 11 23.3 -0.3
JAVS epPKPdf pPKPdf 19 11 59.1 +1.9
JAVS eSKP 19 14 22.2
JAVS Javornik 140.45 330 ePKPdf PKPpre 19 11 14.8
JAVS ePKiKP PKiKP 19 11 23.3 -2.8
JAVS epPKPdf pPKPdf 19 11 59.1 +1.9
JAVS eSKPbc PP 19 14 22.2 -0.7
SNF Seneffe 140.51 343 PKP PKPpre 19 11 16.9
SNF PKKSbc 19 23 20.3
WATA Walderalm 140.52 334⇓iPKPdf PKPpre 19 11 18.0
comp=Z,243nm,1.1s,SNR=8.8
WTTA Wattenberg 140.55 333 P PKPpre 19 11 17.6
comp=Z,1µm,1.7s,SNR=28
ABTA Abfaltersbach 140.55 332 P PKPpre 19 11 16.6
comp=Z,1µm,2.2s,SNR=52
STON Ston 140.55 324 P PKPpre 19 11 13.8
WLF Walferdange 140.67 340 PKP PKPpre 19 11 17.0
WLF PP PP 19 14 26.7 +2.7
WLF SKiKP 19 14 51.8
WLF PKKSbc 19 23 20.6
WLF Walferdange 140.67 340 ePKPdf PKPpre 19 11 07.0
WLF ePP PP 19 14 22.8 -1.2
WLF Walferdange 140.67 340 ePKPpre PKPpre 19 11 16.7
LANF Langenberg 140.69 338 PKP PKPpre 19 11 17.6
GIVF Givet 140.71 342 ePKP1 PKPpre 19 11 16.7
comp=Z,3µm,1.6s
MOTA Moosalm 140.72 334 P PKPpre 19 11 16.7
comp=Z,245nm,0.9s,SNR=23
TRI Trieste 140.73 330 ePKHKP PKPpre 19 11 17.3
HTR Trewern Hill 140.75 350 P PKPpre 19 11 16.7
HTR Trewern Hill 140.75 350 eP PKPpre 19 11 16.7
RETA Reutte 140.75 334 P PKPpre 19 11 17.3
comp=Z,494nm,1.9s,SNR=30
ELSH Elham, Standar 140.76 346 P PKPpre 19 11 13.2
ELSH Elham, Standar 140.76 346 eP PKPpre 19 11 13.2
DOU Dourbes 140.78 342 PKP PKPpre 19 11 16.6
DOU PP PP 19 14 22.2 -2.4
DOU SKiKP 19 14 51.6
MCH1 Michaelchurch 140.78 350 P PKPpre 19 11 14.0
MCH1 19 14 16.0
MCH1 AMS AMS 20 02 32.4
comp=Z,10µm,32.2s
MCH1 Michaelchurch 140.78 350 eP PKPpre 19 11 14.0
MCH1 e 19 14 16.0
MCH1 AMS AMS 20 02 32.4
comp=Z,10µm,32.2s
SRN Sarande 140.89 318 i P PKPpre 19 11 19.2
BAIF Baives 140.93 342 ePKP1 PKPpre 19 11 17.2
comp=Z,2µm,1.9s
NVLJ Novalja 140.98 328 P PKPpre 19 11 17.0
SWN1 Swindon 141.04 349 P PKPpre 19 11 18.1
SWN1 AMS AMS 20 06 46.3
comp=Z,12µm,28.3s
SWN1 Swindon 141.04 349 eP PKPpre 19 11 18.1
SWN1 AMS AMS 20 06 46.3
comp=Z,12µm,28.3s
BFO Black Forest 141.04 337 ePKPdf PKPpre 19 11 06.9
BFO ePP PP 19 14 24.9 -1.4
BFO Black Forest 141.04 337 ePKHKP PKPpre 19 11 17.6
HGH Gray Hill 141.10 350 P PKPpre 19 11 17.3
HGH Gray Hill 141.10 350 eP PKPpre 19 11 17.3
WOL Wolverton 141.12 348 P PKPpre 19 11 18.3
WOL AMS AMS 20 13 58.5
comp=Z,13µm,23.0s
WOL Wolverton 141.12 348 eP PKPpre 19 11 18.3
WOL AMS AMS 20 13 58.5
comp=Z,13µm,23.0s
FETA Feichten 141.13 334 P PKPpre 19 11 17.5
comp=Z,396nm,1.1s,SNR=61
DAVA Damuels 141.27 335 P PKPpre 19 11 18.6
comp=Z,479nm,1.2s,SNR=67
CDF Champ du Feu 141.36 338 ePKP1 PKPpre 19 11 18.3
comp=Z,2µm,1.4s
LIBD Limburg 141.46 338 PKP PKPpre 19 11 20.3
ECH Echery 141.56 338 PKP PKPpre 19 11 19.2
ECH Echery 141.56 338 ePKPpre PKPpre 19 11 20.1
VAL Valentia 141.61 357⇓iP PKPpre 19 11 20.3
VAL ePP PP 19 14 30.6 +1.1
DAVOX Davos/Dischmat 141.68 334 PKhKP PKPpre 19 11 20.0
comp=Z,137nm,0.8s,baz=28,slow=2.3,SNR=129
DAVOX eZ,51nm,1.2s,baz=46,slow=7.3,SNR=3.3 PP PP 19 14 29.1 -1.2
DAVOX comp=Z,92nm,0.7s,baz=10,slow=4.0,SNR=8.0 SKPbc SKPbc 19 14 53.4 +1.7
HEX Exmoor 141.81 351 P PKPpre 19 11 19.6
HEX Exmoor 141.81 351 eP PKPpre 19 11 19.6
MOF Molkenrain 141.88 338 PKP PKPpre 19 11 20.9
THEF They Montfort 141.97 339 PKP PKPpre 19 11 21.1
HTL Hartland 141.99 351 P PKPpre 19 11 20.3
HTL AMS AMS 20 17 27.8
comp=Z,11µm,20.5s
HTL Hartland 141.99 351 eP PKPpre 19 11 20.3
HTL AMS AMS 20 17 27.8
comp=Z,11µm,20.5s
HINF Hinteralfeld 142.01 338 ePKP1 PKPpre 19 11 20.2
comp=Z,6µm,1.9s
HAU Haudompre 142.03 339 ePKP1 PKPpre 19 11 20.5
comp=Z,774nm,1.1s
HAU eMLR MLR
comp=Z,14µm,21.2s
MEZF Maizieres J'vi 142.04 340 ePKP1 PKPpre 19 11 21.0
comp=Z,3µm,1.3s
BBS Basel-Blauen 142.06 337 PKP PKPpre 19 11 21.4
TUE Stuetta 142.14 335 ePKPpre PKPpre 19 11 21.9
SFTF Sexfontaines 142.31 340 ePKP1 PKPpre 19 11 21.7
comp=Z,1µm,1.2s
LOMF Lomont 142.41 338 PKP PKPpre 19 11 23.1
DYA Yadsworthy 142.45 350 P PKPpre 19 11 16.9
DYA 19 14 09.8
DYA AMS AMS 20 05 59.8
comp=Z,9µm,23.1s
DYA Yadsworthy 142.45 350 eP PKPpre 19 11 16.9
DYA e 19 14 09.8
DYA AMS AMS 20 05 59.8
comp=Z,9µm,23.1s
CCA1 Carnmenellis 142.88 352 P PKPpre 19 11 19.2
CCA1 AMS AMS 20 19 08.6
comp=Z,10µm,18.6s
CCA1 Carnmenellis 142.88 352 eP PKPpre 19 11 19.2
CCA1 AMS AMS 20 19 08.6
comp=Z,10µm,18.6s
AQU L'Aquila 143.28 327⇑PKIKP PKPdf 19 11 24.4 -4.4
AQU L'Aquila 143.28 327 ePKPpre PKPdf 19 11 25.8 -3.0
AQU L'Aquila 143.28 327⇑iP PKPdf 19 11 24.4 -4.4
CABF La Chapelle 143.31 338 ePKP1 PKPdf 19 11 25.3 -3.4
comp=Z,2µm,1.1s
OG01 Vacheresse 143.32 337 PKP PKPdf 19 11 25.9 -2.8
JSA Saint Aubin 143.33 348 P PKPdf 19 11 24.1 -4.5
JSA AMS AMS 20 15 38.2
comp=Z,11µm,21.3s
JSA Saint Aubin 143.33 348 eP PKPdf 19 11 24.1 -4.5
JSA AMS AMS 20 15 38.2
comp=Z,11µm,21.3s
FLN La Foliniere 143.36 346⇑iPKP1 PKPdf 19 11 25.6 -3.1
comp=Z,3µm,1.6s
FLN eMLR MLR
comp=Z,13µm,22.0s
FLN La Foliniere 143.36 346⇑iPKP PKPdf 19 11 25.6 -3.1
FLN LR LR
comp=Z,13µm,22.0s
LDF La Druitiere 143.43 346⇑iPKP1 PKPdf 19 11 25.8 -3.0
comp=Z,424nm,1.0s
CUC Castrocucco 143.45 322 ePKPpre PKPdf 19 11 24.4 -4.7
LOR Lormes 143.51 341⇑iPKP1 PKPdf 19 11 26.2 -2.8
comp=Z,3µm,1.7s
LOR eMLR MLR
comp=Z,15µm,21.8s
LOR Lormes 143.51 341⇑iPKP PKPdf 19 11 26.2 -2.8
LOR LR LR
comp=Z,15µm,21.8s
GRR Gorron 143.80 346 ePKP1 PKPdf 19 11 26.9 -2.6
comp=Z,2µm,1.2s
SSF Saint Saulge 143.81 341⇑iPKP1 PKPdf 19 11 26.9 -2.6
comp=Z,5µm,1.6s
HYF Humbligny 143.89 342 ePKP1 PKPdf 19 11 27.9 -1.8
LPL La Plagne 143.98 336⇑iPKP1 PKPdf 19 11 28.2 -1.7
comp=Z,2µm,1.2s
LPG La Plagne 143.99 336⇑iPKP1 PKPdf 19 11 28.3 -1.6
SMF Signal de Mont 144.06 340⇑iPKP1 PKPdf 19 11 27.2 -2.8
comp=Z,8µm,1.6s
AVF Avril sur Loir 144.10 341⇑iPKP1 PKPdf 19 11 27.8 -2.2
comp=Z,6µm,1.6s
SGMF Saint Gilles 144.29 348⇑iPKP1 PKPdf 19 11 28.5 -1.8
comp=Z,11µm,1.4s
ROSF Rostrenen 144.36 349⇑iPKP1 PKPdf 19 11 28.7 -1.7
comp=Z,8µm,1.4s
CEL Celeste 144.44 319 ePKPpre PKPdf 19 11 28.5 -2.4
BGF Bois d'Agland 144.46 341⇑iPKP1 PKPdf 19 11 29.3 -1.4
comp=Z,6µm,1.3s
GDM Grand'Maison 144.48 336 PKP PKPdf 19 11 29.9 -0.9
BST Brest 144.53 350 PKP PKPdf 19 11 30.0 -0.8
GRN Grenoble 144.59 337 PKP PKPdf 19 11 30.5 -0.5
MBDF Montbardon 144.62 335⇑iPKP1 PKPdf 19 11 29.6 -1.4
comp=Z,6µm,1.7s
QUIF Quistinic 144.74 349⇑iPKP1 PKPdf 19 11 29.7 -1.4
comp=Z,3µm,1.0s
SURF Saint Ours 144.80 335 PKP PKPdf 19 11 31.0 -0.3
ORIF Oris-en-Rattie 144.81 336⇑iPKP1 PKPdf 19 11 30.9 -0.5
comp=Z,10µm,1.2s
ORIF eMLR MLR
comp=Z,16µm,22.0s
SAOF Saorge 144.89 334 PKP PKPdf 19 11 31.4 -0.1
TCF Toulx Ste Croi 144.90 342⇑iPKP1 PKPdf 19 11 30.7 -0.8
comp=Z,18µm,1.8s
AUTN L'Aution 144.94 334 PKP PKPdf 19 11 31.1 -0.5
TOUF Mont Tournerai 145.00 334 PKP PKPdf 19 11 31.6 -0.1
SSB Saint Sauveur 145.01 338 PKP PKPdf 19 11 31.5 -0.2
SSB Saint Sauveur 145.01 338 ePKPdf PKPdf 19 11 30.9 -0.8
SBF Sospel 145.04 334⇑iPKP1 PKPdf 19 11 30.9 -0.9
comp=Z,20µm,1.4s
LUCF Luceram 145.06 334 PKP PKPdf 19 11 32.0 +0.2
COLF Collangettes 145.10 339 PKP PKPdf 19 11 32.6 +0.8
MVIF Mont Vial 145.14 334 PKP PKPdf 19 11 32.5 +0.6
REVF Revere 145.17 334 PKP PKPdf 19 11 32.3 +0.3
MFF Saint Martin d 145.29 344⇑iPKP1 PKPbc 19 11 31.7 -0.4
comp=Z,11µm,1.3s
VERF Verneugheol 145.30 341 PKP PKPdf 19 11 32.0 -0.2
OCF Saint Nazaire 145.32 337 PKP PKPdf 19 11 32.8 +0.6
OG26 St.-Nazaire-De 145.32 337 PKP PKPdf 19 11 32.8 +0.6
VIVF Saint-Julien-l 145.32 338⇑iPKP1 PKPbc 19 11 32.4 +0.1
comp=Z,18µm,1.6s
CALN Calern 145.37 334 PKP PKPdf 19 11 33.0 +0.7
PGF Pioggiola 145.37 331⇑iPKP1 PKPbc 19 11 32.3 -0.2
comp=Z,20µm,1.7s
FRNF Fournols 145.59 340 PKP PKPdf 19 11 33.6 +0.9
FRF La Foret Royal 145.62 334⇑iPKP1 PKPbc 19 11 32.7 -0.6
comp=Z,10µm,1.4s
SMRF Simiane la Rot 145.72 336⇑iPKP1 PKPbc 19 11 33.5 0.0
comp=Z,13µm,1.6s
VAE Valguarnera 145.85 319 PKPbc PKPbc 19 11 34.6 +0.4
LMR La Mourre 145.87 334⇑iPKP1 PKPbc 19 11 33.1 -0.9
comp=Z,5µm,1.1s
RJF Les Rejaudoux 146.00 342⇑iPKP1 PKPbc 19 11 33.6 -0.7
comp=Z,17µm,1.8s
RJF eMLR MLR
comp=Z,24µm,22.2s
RJF Les Rejaudoux 146.00 342⇑iPKP PKPdf 19 11 33.6 +0.2
RJF LR LR
comp=Z,24µm,22.3s
CAF Calviac 146.17 341⇑iPKP1 PKPbc 19 11 34.1 -0.7
comp=Z,2µm,1.2s
LASF Ste Croix 146.29 338⇑iPKP1 PKPdf 19 11 33.7 -0.2
comp=Z,6µm,1.4s
LFF La Frestale 146.56 342⇑iPKP1 PKPdf 19 11 34.8 +0.5
comp=Z,6µm,1.4s
WDD Wield Dalam 146.72 317 ePKPdf PKPdf 19 11 34.6 -0.3
VSL Villasalto 147.46 327 ePKPdf PKPdf 19 11 35.7 -0.3
MTLF Montolieu 147.52 339⇑iPKP1 PKPdf 19 11 36.2 +0.2
comp=Z,9µm,1.5s
EJON La Jonquera 148.05 337 PKP PKPdf 19 11 36.5 -0.4
CLLI Llivia 148.36 339 PKP PKPdf 19 11 36.9 -0.5
EPF Esparros 148.41 341⇑iPKP1 PKPdf 19 11 37.5 0.0
comp=Z,6µm,1.9s
CSOR Sort 148.74 340 PKP PKPdf 19 11 38.5 +0.5
EALK Alkurruntz 148.79 344 PKP PKPdf 19 11 38.5 +0.4
EBIE Bielsa 148.79 341 PKP PKPdf 19 11 38.5 +0.4
SJPF Ste Jean 148.81 343⇑iPKP1 PKPdf 19 11 38.4 +0.3
comp=Z,3µm,1.5s
ETSF Etsaut 148.81 342⇑iPKP1 PKPdf 19 11 38.9 +0.8
comp=Z,3µm,1.3s
CFON Fontmartina 148.81 337 PKP PKPdf 19 11 37.4 -0.7
ELIZ Elizondo 148.84 344 PKIKP PKPdf 19 11 39.1 +0.9
EMIR Miracle 149.01 339 PKP PKPdf 19 11 38.0 -0.4
ELAN Lanestosa 149.26 346 PKP PKPdf 19 11 39.1 +0.3
EARI Arriondas 149.57 349 PKP PKPdf 19 11 39.1 -0.2
ECRI Cripan 149.62 345 PKHKP PKPdf 19 11 40.2 +0.8
EPOB Poblet 149.67 339 PKP PKPdf 19 11 38.7 -0.9
ESAC San Caprasio 149.85 341 PKP PKPdf 19 11 40.4 +0.5
EPON Pontenova 149.87 351 PKP PKPdf 19 11 39.3 -0.5
KEST Kesra 150.10 322 PKP PKPdf 19 11 40.1 -0.3
comp=Z,42nm,1.0s,baz=180,slow=0.6,SNR=85
KEST PKPbc PKPbc 19 11 46.8 +1.3
comp=Z,710nm,1.0s,baz=260,slow=1.2,SNR=181
RCBR Riachuelo 150.24 129 ePKPdf PKPdf 19 11 41.5 +0.2
ERTA Horta de San J 150.28 339 PKP PKPdf 19 11 40.8 +0.3
ETOS Mallorca 150.37 335 PKP PKPdf 19 11 40.3 -0.4
EMAZ Mazaricos 150.47 354 PKP PKPdf 19 11 41.0 +0.3
STS Santiago 150.48 353 PKIKP PKPdf 19 11 40.9 +0.1
CMAH Djebel Manchou 150.60 325 P PKPdf 19 11 41.5 +0.3
ERUA La Rua 150.78 351 PKIKP PKPdf 19 11 41.2 -0.1
CAEH 'Ain El Ouahch 150.80 326 P PKPdf 19 11 41.0 -0.5
ABSA Djebel Ababsia 150.82 325 P PKPdf 19 11 42.0 +0.5
EMOS Mosqueruela 151.08 340 PKP PKPdf 19 11 43.0 +1.2
CKFL Kef-Lekhel 151.15 326 P PKPdf 19 11 42.5 +0.5
ECAL Calabor 151.16 350 PKP PKPdf 19 11 41.9 +0.1
ETOR Torete 151.16 343 PKIKP PKPdf 19 11 41.3 -0.6
EZAM Zamans 151.23 353 PKIKP PKPdf 19 11 41.6 -0.3
PBRG Braganca 151.29 350 ePKPdf PKPdf 19 11 42.9 +0.8
PBRG i P 19 11 49.1
PBRG Braganca 151.29 350 ePKPab PKPab 19 11 56.5 0.0
PBRG Braganca 151.29 350 ePP PP 19 15 27.0 +0.5
PCED Cedros 151.39 26 ePKP PKPdf 19 11 43.0 +0.7
CALA Caldeira 151.43 26 ePKP PKPdf 19 11 43.0 +0.6
ELOB Lobios 151.43 352 PKP PKPdf 19 11 41.8 -0.5
DFRA Djebel Bou Aff 151.50 327 P PKPdf 19 11 43.5 +1.0
ROSA Rosais 151.50 26 ePKP PKPdf 19 11 44.8 +2.3
CTEI Djebel Teioual 151.57 326 P PKPdf 19 11 43.5 +0.8
PCAB Cabril 151.58 352 ePKPdf PKPdf 19 11 42.6 +0.1
PCAB i P 19 11 49.8
PCAB Cabril 151.58 352 ePKPab PKPab 19 11 57.4 -0.2
PCAB Cabril 151.58 352 ePP PP 19 15 29.2 +1.1
EIBI Ibiza 151.60 336 PKP PKPdf 19 11 43.1 +0.5
PICO Pico 151.61 26 ePKP PKPab 19 11 53.4 -4.5
PMAN Manadas 151.64 25 ePKP PKPdf 19 11 43.1 +0.4
PID Ribeirinha 151.79 26 ePKP PKPdf 19 11 45.3 +2.4
GUD Guadarrama 151.88 346 PKIKP PKPdf 19 11 43.8 +0.8
ECHE Chera 151.94 340 PKIKP PKPdf 19 11 43.5 +0.4
PVRL Vila Real 151.96 351 ePKPdf PKPdf 19 11 43.3 +0.2
PVRL i P 19 11 51.0
PVRL Vila Real 151.96 351 ePP PP 19 15 31.8 +1.5
MVO Moncorvo 151.97 350 ePKPdf PKPdf 19 11 42.8 -0.3
MVO i P 19 11 50.5
MVO Moncorvo 151.97 350 ePKPab PKPab 19 11 58.3 -1.0
MVO Moncorvo 151.97 350 ePP PP 19 15 31.1 +0.8
MVO Moncorvo 151.97 350 PKP PKPdf 19 11 43.7 +0.6
ADH Angra Heroismo 151.97 24 ePKP PKPdf 19 11 43.7 +0.5
SET Setif 152.01 327 P PKPdf 19 11 43.0 -0.3
PTO Porto 152.22 353 ePKPdf PKPdf 19 11 44.2 +0.7
PTO i P 19 11 51.2
EBEN Beniarda 152.47 338 PKP PKPdf 19 11 44.5 +0.6
PVIS Viseu 152.54 352 ePKPdf PKPdf 19 11 43.8 -0.2
PVIS i P 19 11 52.1
PVIS Viseu 152.54 352 ePP PP 19 15 34.8 +1.2
ESDC Sonseca Array 152.75 345 PKP PKPdf 19 11 44.5 +0.2
comp=Z,32nm,1.0s,baz=2.3,slow=2.7,SNR=83
ESDC PKPbc PKPbc 19 11 52.2 +0.7
comp=Z,214nm,0.8s,baz=8.8,slow=4.0,SNR=125
ESDC PP PP 19 15 35.0 +0.1
comp=Z,36nm,0.9s,baz=14,slow=6.0,SNR=5.6
ESDC Sonseca Array 152.75 345 PKP PKPdf 19 11 44.5 +0.2
MTE Manteigas 152.79 351 ePKPdf PKPdf 19 11 43.6 -0.7
MTE i P 19 11 53.0
MTE Manteigas 152.79 351 ePKPab PKPab 19 11 59.9 -2.9
MTE Manteigas 152.79 351 ePP PP 19 15 36.3 +1.3
MTE Manteigas 152.79 351 ePKPdf PKPdf 19 11 44.7 +0.3
EPLA Plasencia 152.86 348 PKIKP PKPdf 19 11 43.5 -1.0
PAB San Pablo 152.97 345 ePKIKP PKPdf 19 11 44.8 +0.2
ETOB Tobarra 152.99 340 PKP PKPdf 19 11 45.3 +0.6
EMHD Djebel Mahouad 153.25 330 P PKPdf 19 11 45.5 +0.4
PSET Sete Cidades 153.28 23 ePKP PKPdf 19 11 45.5 +0.4
EVIA Vianos 153.30 341 PKIKP PKPdf 19 11 45.6 +0.5
PCBR Castelo Branco 153.33 350 ePKPdf PKPdf 19 11 45.3 +0.2
PCBR i P 19 11 53.9
PCBR Castelo Branco 153.33 350 ePKPab PKPab 19 12 06.2 +1.1
PCBR Castelo Branco 153.33 350 ePP PP 19 15 39.3 +1.2
PDA Ponta Delgada 153.37 23 ePKP PKPdf 19 11 46.3 +1.0
BART Pico Bartolome 153.53 22 ePKP PKPdf 19 11 46.3 +0.8
EMUR La Murta 153.60 339 PKP PKPdf 19 11 44.7 -0.9
PTOM Tomar 153.69 352 ePKPdf PKPdf 19 11 45.9 +0.2
PTOM i P 19 11 54.7
PMRV Marv??o 153.72 350 ePKPdf PKPdf 19 11 45.2 -0.5
PMRV i P 19 11 54.6
PMRV Marv??o 153.72 350 ePKPab PKPab 19 12 08.2 +1.5
PMRV Marv??o 153.72 350 ePP PP 19 15 42.0 +1.7
CART Cartagena 153.75 338 ePKPdf PKPdf 19 11 45.1 -0.7
EBNR Beni Rached 153.83 333 P PKPdf 19 11 46.2 +0.2
ECHA Ech Chlef 154.02 333 P PKPdf 19 11 46.5 +0.3
EHUE Huescar 154.08 341 PKIKP PKPdf 19 11 45.2 -1.1
EBAN Banos Encina 154.12 343 PKIKP PKPdf 19 11 46.6 +0.3
ALMR Almeirim 154.16 352 eP PKPdf 19 11 45.6 -0.7
ALMR Almeirim 154.16 352 eP PKPdf 19 11 45.6 -0.7
PSMA Santa Maria 154.23 23 ePKP PKPdf 19 11 46.3 -0.2
EQES Quesada 154.24 342 PKP PKPdf 19 11 46.5 -0.1
PSMN Pico do Norte, 154.25 23 ePKP PKPdf 19 11 46.7 +0.2
PESTR Estremoz 154.30 350 ePKPdf PKPdf 19 11 45.9 -0.6
PESTR i P 19 11 56.4
PESTR Estremoz 154.30 350 ePKPab PKPab 19 12 10.6 +1.4
PESTR Estremoz 154.30 350 ePP PP 19 15 44.0 +0.5
EBAD Badajoz 154.31 349 PKP PKPdf 19 11 46.4 -0.1
EANR 'Ain N'Sour 154.31 333 P PKPdf 19 11 47.0 +0.3
EADA Adamuz 154.33 345 PKP PKPdf 19 11 46.9 +0.3
PMAFR Mafra 154.45 353 ePKPdf PKPdf 19 11 46.2 -0.5
PMAFR i P 19 11 56.3
PMAFR Mafra 154.45 353 ePKPab PKPab 19 12 11.2 +1.4
PMAFR Mafra 154.45 353 ePP PP 19 15 44.7 +0.4
INMG Instituto de M 154.61 353 ePKPdf PKPdf 19 11 48.1 +1.1
LIS Lisbon 154.67 353 ePP PP 19 15 47.1 +1.5
LIS A 20 22 37.0
comp=Z,15µm,29.1s
LIS Lisbon 154.67 353 eP PKPdf 19 11 47.0 -0.1
LIS ePP PP 19 15 47.1 +1.6
LIS AMS AMS 20 22 37.0
comp=Z,15µm,29.1s
LIS Lisbon 154.67 353 ePKIKP PKPdf 19 11 47.0 -0.1
LIS e 19 15 47.1
ETRT Tiaret 154.68 332 P PKPdf 19 11 48.2 +1.0
EVO Evora 154.69 351⇑iPKIKP PKPdf 19 11 46.5 -0.6
comp=Z,2µm,1.8s
EVO eMLR MLR
comp=Z,31µm,19.8s
EVO Evora 154.69 351 ePKPdf PKPdf 19 11 46.6 -0.5
EVO Evora 154.69 351 ePKPab PKPab 19 12 12.4 +1.5
EVO Evora 154.69 351 ePP PP 19 15 46.5 +0.8
EVOP Sao Brissos 154.72 351 eP PKPdf 19 11 46.8 -0.3
EVOP ePP PP 19 15 46.8 +0.9
EVOP AMS AMS 20 22 34.7
comp=Z,23µm,23.9s
EVOP Sao Brissos 154.72 351 ePKIKP PKPdf 19 11 46.8 -0.3
EVOP e 19 15 46.8
ENIJ Nijar 154.72 339 PKIKP PKPdf 19 11 47.0 -0.2
PLML Palmela 154.80 352 ePKPdf PKPdf 19 11 48.4 +1.2
PLML i P 19 11 57.1
PLML Palmela 154.80 352 ePKPab PKPab 19 12 13.5 +2.2
ELUQ Luque 154.82 343 PKIKP PKPdf 19 11 47.5 +0.2
PBAR Barrancos 154.88 349 ePKPdf PKPdf 19 11 46.8 -0.6
PBAR i P 19 11 56.5
PBAR Barrancos 154.88 349 ePKPab PKPab 19 12 13.0 +1.3
PBAR Barrancos 154.88 349 ePP PP 19 15 47.2 +0.4
ECOG Cogollos-Vega 154.88 342 PKIKP PKPdf 19 11 46.6 -0.8
EBER Berja 155.02 341 PKP PKPdf 19 11 46.3 -1.3
PBEJ Beja 155.17 350 ePKPdf PKPdf 19 11 47.6 -0.2
PBEJ i P 19 11 56.7
PBEJ Beja 155.17 350 ePKPab PKPab 19 12 14.5 +1.6
PBEJ Beja 155.17 350 ePP PP 19 15 49.3 +0.9
ELOJ Sierra Loja 155.17 343 PKIKP PKPdf 19 11 47.1 -0.7
ERON Agron 155.19 342 PKP PKPdf 19 11 46.2 -1.6
EMIN Mina Concepcio 155.20 348 PKP PKPdf 19 11 48.1 +0.3
EGUA Guajares 155.29 342 PKIKP PKPdf 19 11 46.1 -1.9
MESJ Messejana 155.40 351 ePP PP 19 15 50.5 +0.8
MESJ A 20 20 37.8
comp=Z,14µm,23.9s
MESJ Messejana 155.40 351 eP PKPdf 19 11 47.5 -0.6
MESJ ePP PP 19 15 50.5 +0.8
MESJ AMS AMS 20 20 37.8
comp=Z,14µm,23.9s
MESJ Messejana 155.40 351 ePKIKP PKPdf 19 11 47.5 -0.6
MESJ e 19 15 50.5
EGRO El Granado 155.58 349 PKP PKPdf 19 11 48.5 +0.2
PCVE Castro Verde 155.58 350 ePKPdf PKPdf 19 11 48.0 -0.3
PCVE Castro Verde 155.58 350 ePKPab PKPab 19 12 16.5 +1.8
PCVE Castro Verde 155.58 350 ePP PP 19 15 51.5 +0.8
PVAQ Vaqueiros 155.75 350 ePKPdf PKPdf 19 11 48.1 -0.5
PVAQ Vaqueiros 155.75 350 ePKPab PKPab 19 12 17.2 +1.8
PVAQ Vaqueiros 155.75 350 ePP PP 19 15 52.6 +1.0
PTEO Sao Teotonio 155.77 352 ePKPdf PKPdf 19 11 48.5 -0.1
PTEO Sao Teotonio 155.77 352 ePKPab PKPab 19 12 16.9 +1.4
PTEO Sao Teotonio 155.77 352 ePP PP 19 15 53.3 +1.6
ESPR Espera 155.88 346 PKP PKPdf 19 11 49.3 +0.6
EMIJ Mijas 155.89 344 PKP PKPdf 19 11 47.7 -1.1
EALB Alboran 155.94 340 PKP PKPdf 19 11 47.8 -1.0
PBDV Barranco-do-Ve 155.94 350 ePKPdf PKPdf 19 11 48.4 -0.4
PBDV Barranco-do-Ve 155.94 350 ePKPab PKPab 19 12 18.4 +2.1
PBDV Barranco-do-Ve 155.94 350 ePP PP 19 15 54.2 +1.5
MORF Marmelete 155.99 351 ePKPdf PKPdf 19 11 48.5 -0.4
MORF Marmelete 155.99 351 ePKPab PKPab 19 12 18.3 +1.8
MORF Marmelete 155.99 351 ePP PP 19 15 54.2 +1.3
MORF Marmelete 155.99 351 ePKIKP PKPdf 19 11 48.4 -0.5
MORF e 19 15 54.0
EJIF Jimena Fronter 156.18 345 PKIKP PKPdf 19 11 48.4 -0.8
PFVI Vila Bisbo 156.19 352 ePKPdf PKPdf 19 11 48.6 -0.6
PFVI Vila Bisbo 156.19 352 ePKPab PKPab 19 12 19.3 +2.0
PFVI Vila Bisbo 156.19 352 ePP PP 19 15 55.3 +1.3
PFVI Vila Bisbo 156.19 352 PKP PKPdf 19 11 48.4 -0.7
MDT Midelt 159.31 340 PP PP 19 16 11.7 +0.3
comp=Z,43nm,1.1s,baz=326,slow=3.6,SNR=5.3
TAM Tamanrasset 160.13 300 ePKIKP PKPdf 19 11 54.1 -0.3
PMPS Porto Santo 160.32 8 ePKPdf PKPdf 19 11 54.8 +0.5
PMPS Porto Santo 160.32 8 ePKPab PKPab 19 12 36.5 +1.2
PMPS Porto Santo 160.32 8 ePP PP 19 16 16.9 +0.4
PMAR Madeira 160.55 10 ePKPdf PKPdf 19 11 55.2 +0.7
PMAR Madeira 160.55 10 ePKPab PKPab 19 12 37.2 +0.9
PMAR Madeira 160.55 10 ePP PP 19 16 18.7 +0.9
FUL Funchal 160.64 10 ePKPdf PKPdf 19 11 55.6 +1.0
FUL Funchal 160.64 10 ePKPab PKPab 19 12 38.5 +1.8
FUL Funchal 160.64 10 ePP PP 19 16 18.7 +0.4
EHIG Higuera 164.39 16 PKP PKPdf 19 12 00.3 +1.9
EFAM Famara 164.46 2 PKP PKPdf 19 11 59.2 +0.7
EBAJ Bajamar 164.74 11 PKP PKPdf 19 11 59.5 +0.7
CCAN Las Canadas 164.99 12 PKP PKPdf 19 12 00.2 +1.2
CHIE El Hierro 165.13 17 PKP PKPdf 19 12 01.3 +2.2
CFTV Fuerteventura 165.15 4 PKP PKPdf 19 11 59.2 +0.1
EDSO Osorio 165.33 9 PKP PKPdf 19 11 59.8 +0.5
TORD Torodi Ar. Bea 165.68 270 PKP PKPdf 19 11 58.7 -1.2
comp=Z,339nm,1.1s,baz=17,slow=0.4,SNR=502
TORD pPKP pPKPdf 19 12 32.4 -1.3
comp=Z,72nm,0.9s,baz=350,slow=1.1,SNR=3.1
TORD PKPab PKPab 19 13 00.1 +0.4
comp=Z,352nm,1.1s,baz=82,slow=4.2,SNR=19
TORD PP PP 19 16 46.1 -1.3
comp=Z,42nm,1.0s,baz=127,slow=5.4,SNR=3.9
TORD Torodi Ar. Bea 165.68 270 PKP PKPdf 19 11 58.7 -1.2
TORD pPKP pPKPdf 19 12 32.4 -1.3
TORD PKPab PKPab 19 13 00.1 +0.5
TORD PP PP 19 16 46.1 -1.2
KIC Kosan Boka 169.19 230 ePKIKP PKPdf 19 12 00.8 -1.7
comp=Z,2µm,1.4s
LIC Lamto 169.31 228 ePKIKP PKPdf 19 12 00.7 -1.9
comp=Z,3µm,1.8s
LIC Lamto 169.31 228 ePKIKP PKPdf 19 12 01.2 -1.4
comp=Z,3µm,1.5s
LIC eMLR MLR

*KRSC **08** 19:20:43.0±0.2, 51°.30N×157°.47E, h125km±65km, ML4.8*
*ISCJB **08** 19:20:44.1±0.4, 51°.51N±0°.06×156°.96E±0°.10, h139km±3km, mb3.7/17, Error ellipse: s-maj=12.7km s-min=4.6km az=41.4*
*MOS **08** 19:20:44.3±1.1, 51°.70N×156°.81E, h139km, mb4.0/11, Error ellipse: s-maj=18.4km s-min=8.7km az=63.2*
*IDC **08** 19:20:46.6±0.8, 51°.68N×156°.77E, h142km±7km, mb3.5/16, mb1 3.8/17, mb1mx3.7/28, mbtmp3.6/17, Error ellipse: s-maj=18.0km s-min=9.8km az=140.0*
*NEIC **08** 19:20:46.2±0.3, 51°.72N×156°.76E, mb4.6/4, Error ellipse: s-maj=11.6km s-min=6.5km az=138.0*

ISC 08 19:20:45.3±0.4, 51°.52N±0°.05×156°.96E±0°.10, h134km±3km, h142km±1.4km; pP-P, n63, σ1s09/78, mb3.7/17, 1C-1D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**0.77**	**351**	*e*P	**Pn**	**19 21 06.1**	**-0.4**
MIPR				*i* S	**Sn**	**19 21 22.3**	**-0.3**
SKR	**Severo-Kuril's**	**0.99**	**213**	↑*i*PN	**Pn**	**19 21 07.8**	**-0.6**
SKR				*i* S	**Sn**	**19 21 25.4**	**-0.6**
SKR	comp=E,280nm,0.5s			pmax	pmax		
SKR	comp=Z,710nm,0.5s			pmax	pmax		
SKR	comp=N,220nm,0.3s			pmax	pmax		
SKR	comp=N,2μm,0.5s			smax			
SKR	comp=E,1μm,0.5s			smax			
SKR	comp=Z,390nm,0.5s			smax			
ALID	**Alaid**	**1.10**	**234**	*e*P	**Pn**	**19 21 09.1**	**-0.3**
ALID				*i* S	**Sn**	**19 21 27.2**	**-0.5**
GRL	**Gorelyy**	**1.24**	**33**	*e*P	**Pn**	**19 21 10.9**	**+0.1**
GRL				*i* S	**Sn**	**19 21 32.0**	**+1.7**
PETK	**Petropavlovsk-**	**1.65**	**16**	P	**Pn**	**19 21 15.3**	**0.0**
PETK	comp=Z,69nm,0.3s,baz=175,slow=11,SNR=859			S	**Sn**	**19 21 39.0**	**+0.7**
PETK	**Petropavlovsk-**	**1.65**	**16**	PN	**Pn**	**19 21 15.3**	**0.0**
PETK	comp=Z,12nm,0.3s,baz=131,slow=10,SNR=6.8			S	**Sn**	**19 21 39.0**	**+0.8**
PETK	comp=Z,69nm,0.3s			pmax	pmax		
PETK	comp=N,13nm,0.3s			smax			
PETK	**Petropavlovsk-**	**1.65**	**16**	P	**Pn**	**19 21 15.3**	**0.0**
PETK				S	**Sn**	**19 21 39.0**	**+0.7**
PET	**Petropavlovsk**	**1.83**	**34**	*e*P	**Pn**	**19 21 17.1**	**-0.2**
PET				*i* S	**Sn**	**19 21 42.3**	**+0.4**
PET	**Petropavlovsk**	**1.83**	**34**	‖*i*PN	**Pn**	**19 21 17.0**	**-0.3**
PET				*e*S	**Sn**	**19 21 41.9**	**0.0**
PET	comp=Z,192nm,0.5s			pmax	pmax		
PET	comp=N,2μm,1.6s			smax			
PET	comp=N,692nm,0.7s			smax			
PET	comp=E,204nm,0.5s			smax			
PET	**Petropavlovsk**	**1.83**	**34**	*e*P	**Pn**	**19 21 16.9**	**-0.4**
AVH	**Avacha**	**2.06**	**31**	*e*P	**Pn**	**19 21 21.2**	**+1.1**
AVH				*i* S	**Sn**	**19 21 49.7**	**+2.9**
NLC	**Nalytchevo**	**2.21**	**41**	*e*P	**Pn**	**19 21 20.5**	**-1.4**
NLC				*i* S	**Sn**	**19 21 47.3**	**-2.7**
GNL	**Ganaly**	**2.26**	**15**	*e*P	**Pn**	**19 21 23.1**	**+0.6**
GNL				*i* S	**Sn**	**19 21 52.5**	**+1.3**
SPN	**Mys Shipunski**	**2.46**	**49**	*e*P	**Pn**	**19 21 24.0**	**-1.0**
SPN				*e*S	**Sn**	**19 21 54.1**	**-1.4**
KII	**Karymskiy**	**2.94**	**30**	*e*P	**Pn**	**19 21 31.6**	**+0.5**
KII				*i* S	**Sn**	**19 22 07.8**	**+1.3**
MKZ	**Mys Kozlova**	**4.19**	**42**	*e*P	**Pn**	**19 21 46.0**	**-1.5**
MKZ				*i* S	**Sn**	**19 22 30.7**	**-5.1**
SRDR	**Sredinnyy**	**5.07**	**18**	P	**Pn**	**19 22 01.3**	**+2.0**
KBTR	**Krutoberegovo**	**5.83**	**34**	*e*P	**Pn**	**19 22 08.3**	**-1.1**
KBTR				*i* S	**Sn**	**19 23 11.8**	**-3.3**
ASAJ	**Asahikawa**	**12.15**	**238**	P	**Pn**	**19 23 35.1**	**+1.2**
ASAJ	**Asahikawa**	**12.15**	**238**	PN	**Pn**	**19 23 35.1**	**+1.2**
ASAJ	comp=Z,7.0nm,0.3s			pmax	pmax		
ASAJ	**Asahikawa**	**12.15**	**238**	*e*P	**Pn**	**19 23 34.5**	**+0.6**
MJAR	**Matsushiro Arr**	**20.06**	**229**	P	**P**	**19 25 08.9**	**+1.1**
MJAR	**Matsushiro Arr**	**20.06**	**229**	P	**P**	**19 25 08.9**	**+1.0**
MJAR	comp=Z,12nm,0.4s			pmax	pmax		
MAJO	**Matsushiro**	**20.06**	**229**	*e*P	**P**	**19 25 08.1**	**+0.2**
MAJO	comp=Z,13nm,0.5s			pmax	pmax		
MAJO	**Matsushiro**	**20.06**	**229**	*e*P	**P**	**19 25 08.1**	**+0.2**
MAT	**Matsushiro**	**20.06**	**229**	P	**P**	**19 25 08.2**	**+0.3**
HIA	**Hailar**	**23.67**	**279**	*i* P	**P**	**19 25 43.7**	**-0.5**
KSRS	**Korea Array**	**24.83**	**247**	P	**P**	**19 25 55.8**	**+0.9**
KSRS	**Korea Array**	**24.83**	**247**	*e*P	**P**	**19 25 56.8**	**+1.9**
KSRS	comp=Z,1.0nm,0.4s,mb3.7			pmax	pmax		
ILAR	**Eielson Array**	**31.29**	**43**	P	**P**	**19 26 52.2**	**+0.2**
ILAR				pP	pP	19 27 22.3	+1.5
ILAR	**Eielson Array**	**31.29**	**43**	P	**P**	**19 26 52.3**	**+0.3**
ILAR				*PP	pP	19 27 22.3	+1.5
SONM	**Songino Array**	**32.40**	**284**	P	**P**	**19 27 02.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**32.70**	**269**	*e*P	**P**	**19 27 05.8**	**+1.2**
HHC				pP	pP	19 27 36.2	+2.7
HHC				sP	sP	19 27 52.5	+3.7
HHC				PP	PP	19 28 20.7	-0.3
HHC				PcP	PcP	19 29 49.5	+2.5
HHC				S	**S**	**19 32 10.7**	**-0.2**
HHC				sS	sS	19 33 03.0	+1.6
HHC				ScP	ScP	19 33 18.7	+0.4
HHC				SS	SS	19 34 17.4	-20
HHC				ScS	ScS	19 37 16.7	-1.5
HHC	comp=Z,430nm,1.1s			pmax	pmax		
HHC	comp=Z,250nm,6.3s			pmax	pmax		
HHC	comp=N,430nm,14.5s			LR	LR		
HHC	comp=E,250nm,15.5s			LR	LR		
HHC	comp=Z,240nm,15.8s			LR	LR		
YKA	**Yellowknife Ar**	**45.62**	**40**	P	**P**	**19 28 51.0**	**-0.6**
KURK	**Kurchatov**	**46.92**	**302**	*e*P	**P**	**19 29 00.6**	**-1.3**
KURK				*e*PP	pP	19 29 32.8	+0.5
KURK	comp=Z,2.0nm,0.5s,mb4.0			pmax	pmax		
KURK	**Kurchatov**	**46.92**	**302**	*e*P	**P**	**19 29 00.6**	**-1.3**
KURK	comp=Z,2.4nm,0.5s,mb4.1			*e*pP	pP	19 29 32.8	+0.5
MKAR	**Makanchi Array**	**47.09**	**295**	P	**P**	**19 29 02.4**	**-0.9**
MKAR	comp=Z,1.0nm,0.5s,mb3.7,baz=56,slow=6.6,SNR=16			pP	pP	19 29 34.9	+1.1
MKAR	comp=Z,2.9nm,0.9s,baz=57,slow=9.0,SNR=5.5			pmax	pmax		
MKAR	**Makanchi Array**	**47.09**	**295**	*e*P	**P**	**19 29 02.3**	**-1.0**
MKAR	comp=Z,1.0nm,0.5s			pmax	pmax		
BVAR	**Borovoye Array**	**49.85**	**308**	P	**P**	**19 29 22.2**	**-2.1**
BVAR	comp=Z,0.8nm,0.5s,mb3.6,baz=47,slow=8.3,SNR=4.7			pP	pP	19 29 53.7	-1.3
BVAR	comp=Z,1.2nm,0.6s,baz=54,slow=9.5,SNR=3.8			pmax	pmax		
BVAR	**Borovoye Array**	**49.85**	**308**	P	**P**	**19 29 22.2**	**-2.1**
BVAR				*PP	pP	19 29 53.7	-1.3
BVAR	comp=Z,1.0nm,0.5s			pmax	pmax		
KKAR	**Karatay Array**	**55.95**	**298**	*e*P	**P**	**19 30 08.4**	**-0.8**
KKAR	comp=Z,1.0nm,0.6s,mb3.8			pmax	pmax		
KKAR	**Karatay Array**	**55.95**	**298**	*e*P	**P**	**19 30 08.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**55.96**	**256**	P	**P**	**19 30 09.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**55.96**	**256**	P	**P**	**19 30 09.7**	**+0.2**
CMAR	comp=Z,1.0nm,0.5s			pmax	pmax		
CHM	**Chimkent**	**56.97**	**298**	*e*P	**P**	**19 30 13.8**	**-2.6**
CHM	comp=Z,59nm,1.5s			pmax	pmax		
CHM	**Chimkent**	**56.97**	**298**	*e*P	**P**	**19 30 13.8**	**-2.6**
NVAR	**Mina Array Bea**	**58.11**	**67**	P	**P**	**19 30 25.4**	**+1.0**
NOA	**NORSAR Array B**	**64.49**	**342**	P	**P**	**19 31 06.3**	**-0.7**
NOA	**NORSAR Array B**	**64.49**	**342**	P	**P**	**19 31 06.3**	**-0.7**
NOA	comp=Z,1.0nm,1.0s			pmax	pmax		
EKA	**Eskdalemuir Ar**	**72.24**	**348**	P	**P**	**19 31 54.8**	**-0.4**
EKA	**Eskdalemuir Ar**	**72.24**	**348**	P	**P**	**19 31 54.8**	**-0.5**
EKA	comp=Z,1.0nm,1.0s			pmax	pmax		
EKA	**Eskdalemuir Ar**	**72.24**	**348**	P	**P**	**19 31 54.8**	**-0.4**
TXAR	**Lajitas Array**	**73.04**	**64**	P	**P**	**19 32 01.1**	**+0.7**
TXAR	**Lajitas Array**	**73.04**	**64**	P	**P**	**19 32 01.2**	**+0.7**
TXAR	comp=Z,3.0nm,0.6s			pmax	pmax		
WRA	**Warramunga Arr**	**73.87**	**202**	P	**P**	**19 32 05.4**	**+0.2**
WRA	**Warramunga Arr**	**73.87**	**202**	P	**P**	**19 32 05.4**	**+0.2**
WRA	comp=Z,1.0nm,0.6s			pmax	pmax		
FITZ	**Fitzroy Crossi**	**74.54**	**211**	P	**P**	**19 32 09.5**	**+0.4**
ASAR	**Alice Springs**	**77.56**	**202**	P	**P**	**19 32 27.1**	**+1.1**
ASAR	**Alice Springs**	**77.56**	**202**	P	**P**	**19 32 27.2**	**+1.1**
ASAR	comp=Z,3.0nm,1.1s			pmax	pmax		
STKA	**Stephens Creek**	**84.13**	**193**	P	**P**	**19 33 03.8**	**+3.0**
STKA	**Stephens Creek**	**84.13**	**193**	*e*P	**P**	**19 33 04.7**	**+3.9**
PLCA	**Paso Flores**	**145.92**	**91**	PKPbc	PKPbc	19 40 08.7	+0.4
PLCA	**Paso Flores**	**145.92**	**91**	PKP2	PKPbc	19 40 08.7	+0.3
PLCA	comp=Z,2.0nm,0.6s			pmax	pmax		

*IDC **08** 19:49:15.4±1.0, 12°.42N×141°.46E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/23, mbtmp3.6/8, ML4.0/1, Error ellipse: s-maj=24.7km s-min=21.7km az=106.0*
*ISCJB **08** 19:49:18.5±0.7, 12°.3N±0°.1×141°.49E±0°.07, h33km, mb3.8/9, Error ellipse: s-maj=16.5km s-min=9.0km az=163.8*
*NEIC **08** 19:49:18.6±0.7, 12°.37N×141°.50E, h20km, mb4.7/1, Error ellipse: s-maj=16.5km s-min=14.9km az=143.0*

ISC 08 19:49:20.8±0.7, 12°.3N±0°.1×141°.51E±0°.07, h35km, n11, σ0s94/13, mb3.8/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.50**	**69**	Pn	**Pn**	**19 50 11.9**	**-1.0**
GUMO	12nm,0.3s,baz=187,slow=11,SNR=9.7			Sn	**Sn**	**19 50 53.6**	**+0.6**
WRA	**Warramunga Arr**	**32.84**	**193**	P	**P**	**19 55 51.5**	**+0.1**
WRA	**Warramunga Arr**	**32.84**	**193**	P	**P**	**19 55 51.5**	**+0.1**
ASAR	**Alice Springs**	**36.55**	**192**	P	**P**	**19 56 23.9**	**+0.6**
HHC	**Hu-ho-hao-te**	**38.68**	**323**	*e*P	**P**	**19 56 42.6**	**+1.4**
HHC				pP	pP	19 56 48.5	-2.9
HHC				sP	sP	19 56 51.6	-4.1
HHC				PP	PP	19 58 15.7	+5.5
HHC				PcP	PcP	19 58 54.6	+1.8
HHC				S	**S**	**20 02 40.5**	**+4.8**
HHC				sS	sS	20 02 49.5	-3.0
HHC				SS	SS	20 05 21.4	-5.5
HHC				ScS	ScS	20 06 50.0	+1.1
HHC	comp=Z,20nm,1.1s,mb4.8			pmax	pmax		
HHC	comp=Z,150nm,6.6s			pmax	pmax		
HHC	comp=N,900nm,14.5s			LR	LR		
HHC	comp=E,620nm,14.5s			LR	LR		
HHC	comp=Z,1μm,14.9s			LR	LR		
CMAR	**Chiang Mai Arr**	**41.41**	**284**	P	**P**	**19 57 02.5**	**-1.8**
MKAR	**Makanchi Array**	**60.14**	**317**	P	**P**	**19 59 24.4**	**-0.6**
ZALV	**Zalesovo Beam**	**60.76**	**326**	P	**P**	**19 59 29.3**	**+0.3**
KURK	**Kurchatov**	**63.45**	**321**	*e*P	**P**	**19 59 48.5**	**+1.4**
BVAR	**Borovoye Array**	**68.89**	**322**	P	**P**	**20 00 21.7**	**-0.3**
ILAR	**Eielson Array**	**71.10**	**25**	P	**P**	**20 00 34.4**	**-0.9**

*DJA **08** 19:50:25, 18°.49S×175°.81W, h50km, Mw6.3/8*
*SZGRF **08** 19:50:35.7, 19°.53S×179°.47W, h33km, Fiji Islands region*
*ISCJB **08** 19:51:43.5±0.7, 17°.68S±0°.05×179°.57E±0°.03, h601km±8km, mb5.1/126, Error ellipse: s-maj=7.4km s-min=4.3km az=156.1*
*MOS **08** 19:51:43.8±1.2, 17°.54S×179°.65E, h602km, mb5.3/24, Error ellipse: s-maj=11.5km s-min=9.2km az=45.1*
*IDC **08** 19:51:44.1±0.9, 17°.65S×179°.62E, h597km±10km, mb4.5/23, mb1 4.6/24, mb1mx4.6/27, mbtmp4.5/24, Error ellipse: s-maj=10.9km s-min=7.6km az=147.0*
*NEIC **08** 19:51:44.7±0.5, 17°.58S×179°.61E, h606km±5km, mb5.2/86, Error ellipse: s-maj=7.3km s-min=4.1km az=145.0*
*BJI **08** 19:51:45.9, 16°.98S×179°.67E, h605km, mB5.4/10, mb4.7/27*

ISC 08 19:51:44.9±0.5, 17°.66S±0°.04×179°.58E±0°.03, h602km±6km, h607km±1.9km; pP-P, n850, σ0s73/587, mb5.1/126, 183C-176D, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.46**	**267**	*e*P	**P**	**19 52 59.1**	**+1.6**
MSVF	**Nonsavu**	**1.46**	**267**	P	**P**	**19 52 59.4**	**+1.9**
FUNA	**Funafuti**	**9.09**	**358**	*e*P	**P**	**19 53 53.0**	**-1.9**
AFI	**Afiamalu**	**9.11**	**67**	P	**P**	**19 53 49.6**	**-5.4**
AFI	3.1nm,0.3s,baz=190,slow=21,SNR=2.2			S	**S**	**19 55 43.4**	**+1.6**
AFI	**Afiamalu**	**9.11**	**67**	P	**P**	**19 53 49.6**	**-5.4**
DZM	**Mont Dzumac**	**13.12**	**248**	*e*P	**P**	**19 54 34.7**	**-0.1**
NOUC	**Port Laguerre**	**13.25**	**248**	*e*P	**P**	**19 54 35.9**	**-0.3**
RAR	**Rarotonga**	**19.78**	**104**	P	**P**	**19 55 34.7**	**-1.9**
URZ	**Urewera**	**20.64**	**186**	P	**P**	**19 55 44.3**	**+0.3**
URZ				S	**S**	**19 59 02.7**	**+5.8**
URZ	**Urewera**	**20.64**	**186**	*e*P	**P**	**19 55 44.6**	**+0.6**
HNR	**Honiara**	**20.75**	**291**	P	**P**	**19 55 46.7**	**+1.2**
HNR	**Honiara**	**20.75**	**291**	*e*P	**P**	**19 55 48.3**	**+2.9**
HNR	comp=Z,182nm,0.8s			pmax	pmax		
HNR	**Honiara**	**20.75**	**291**	*e*P	**P**	**19 55 48.3**	**+2.9**
MRZ	**Mangatainoka R**	**23.18**	**188**	*e*PN	**P**	**19 56 04.1**	**-2.6**
QRZ	**Quartz Range**	**23.87**	**193**	PN	**P**	**19 56 12.7**	**-0.1**
NNZ	**Nelson**	**24.07**	**192**	PN	**P**	**19 56 13.1**	**-1.5**
TUWZ	**Tuamarina**	**24.18**	**190**	*e*PN	**P**	**19 56 13.9**	**-1.6**
THZ	**Tophouse**	**24.69**	**192**	PN	**P**	**19 56 18.5**	**-1.5**
THZ				SN	**S**	**19 59 55.9**	**-4.8**
KHZ	**Kahutara**	**25.21**	**191**	PN	**P**	**19 56 22.7**	**-1.9**
RPZ	**Rata Peaks**	**26.95**	**194**	P	**P**	**19 56 40.3**	**+0.5**
EIDS	**Eidsvold**	**27.56**	**249**	*e*P	**P**	**19 56 45.6**	**+0.1**
ARMA	**Armidale**	**28.43**	**238**	*e*P	**P**	**19 56 53.9**	**+1.0**
ARMA				*e*SCP	ScP	20 02 34.5	+4.6
ARMA	**Armidale**	**28.43**	**238**	*e*P	**P**	**19 56 53.6**	**+0.7**
EAZ	**Earnscleugh**	**28.80**	**195**	*e*PN	**P**	**19 56 54.3**	**-1.5**
XMAS	**Kiritimati**	**29.93**	**51**	*e*P	**P**	**19 57 04.8**	**-1.3**
CTA	**Charters Tower**	**31.60**	**260**	P	**P**	**19 57 20.3**	**0.0**
CTA				ScP	ScP	20 02 41.6	+1.1
CTA	**Charters Tower**	**31.60**	**260**	*e*P	**P**	**19 57 20.4**	**+0.1**
CTA				*e*SCP	ScP	20 02 42.5	+1.9
CTA	**Charters Tower**	**31.60**	**260**	P	**P**	**19 57 20.3**	**0.0**
CTA				ScP	ScP	20 02 41.6	+1.1
CTAO	**Charters Tower**	**31.60**	**260**	*e*P	**P**	**19 57 20.1**	**-0.1**
CTAO				pmax	pmax		
CTAO	**Charters Tower**	**31.60**	**260**	*e*P	**P**	**19 57 20.1**	**-0.1**
CNB	**Canberra Magne**	**32.08**	**231**	‖*i*P	**P**	**19 57 24.8**	**+0.7**
CAN	**Canberra**	**32.35**	**231**	*e*P	**P**	**19 57 27.0**	**+0.6**
CAN				pmax	pmax		
CAN	**Canberra**	**32.35**	**231**	*e*P	**P**	**19 57 27.0**	**+0.6**
PMG	**Port Moresby**	**32.53**	**280**	*c e*P	**P**	**19 57 29.3**	**+1.1**
PMG	**Port Moresby**	**32.53**	**280**	P	**P**	**19 57 29.9**	**+1.7**
COEN	**Coen**	**35.19**	**271**	*e*P	**P**	**19 57 50.8**	**+0.4**
COEN	**Coen**	**35.19**	**271**	P	**P**	**19 57 50.5**	**+0.1**
TOO	**Toolangi**	**35.86**	**229**	‖*i*P	**P**	**19 57 56.0**	**+0.4**
MOO	**Moorlands**	**36.99**	**221**	*e*P	**P**	**19 58 05.4**	**+0.6**
STKA	**Stephens Creek**	**37.08**	**240**	P	**P**	**19 58 06.3**	**+0.7**
STKA				ScP	ScP	20 03 02.5	+2.3
STKA	**Stephens Creek**	**37.08**	**240**	‖*i*P	**P**	**19 58 06.3**	**+0.6**
STKA				*e*SCP	ScP	20 03 02.9	+2.7
STKA	**Stephens Creek**	**37.08**	**240**	P	**P**	**19 58 06.3**	**+0.7**
STKA				ScP	ScP	20 03 02.5	+2.3
WAKE	**Wake Island**	**38.85**	**340**	*e*P	**P**	**19 58 19.2**	**-0.9**
BBOO	**Buckleboo**	**41.86**	**240**	*e*P	**P**	**19 58 43.5**	**-0.3**
WRA	**Warramunga Arr**	**42.80**	**260**	P	**P**	**19 58 50.3**	**-1.1**
WRA				PcP	PcP	20 00 28.2	-0.4
WRA				PP	PP	20 00 47.6	+3.4
WRA				ScP	ScP	20 03 23.9	+0.9
WRA				S	**S**	**20 04 32.2**	**-1.1**
WRA	**Warramunga Arr**	**42.80**	**260**	P	**P**	**19 58 50.3**	**-1.0**
WRA				PP	PP	20 00 28.2	
WRA						20 00 47.7	
WRA				S	**S**	**20 04 32.2**	**-1.1**
WRA	**Warramunga Arr**	**42.80**	**260**	P	**P**	**19 58 50.3**	**-1.1**
WRA				PcP	PcP	20 00 28.2	-0.4
WRA				PP	PP	20 00 47.6	+3.4
WRA				ScP	ScP	20 03 23.9	+0.9
WRA				S	**S**	**20 04 32.2**	**-1.1**
ASAR	**Alice Springs**	**43.02**	**254**	P	**P**	**19 58 52.8**	**-0.2**
ASAR	comp=Z,376nm,0.6s,mb6.1,baz=87,slow=8.2,SNR=879			PcP	PcP	20 00 29.5	+0.3
ASAR	comp=Z,7.7nm,0.6s,baz=105,slow=3.8,SNR=4.1			ScP	ScP	20 03 25.4	+1.6
ASAR	comp=Z,8.6nm,0.8s,baz=94,slow=4.2,SNR=13			S	**S**	**20 04 34.7**	**-1.6**
ASAR	**Alice Springs**	**43.02**	**254**	P	**P**	**19 58 52.8**	**-0.2**
ASAR						20 00 29.5	
ASAR				S	**S**	**20 04 34.7**	**-1.6**
KHU	**Kahuku**	**44.03**	**35**	*e*P	**P**	**19 59 00.2**	**-0.6**
STCH	**Steam Cracks**	**44.42**	**35**	*e*P	**P**	**19 59 03.5**	**-0.3**
KIP	**Kipapa**	**44.62**	**30**	*e*P	**P**	**19 59 05.1**	**-0.2**
KIP	comp=Z,312nm,1.4s,mb5.7			pmax	pmax		
KIP	**Kipapa**	**44.62**	**30**	*e*P	**P**	**19 59 05.0**	**-0.2**
BAKI	**Biak**	**45.74**	**286**	P	**P**	**19 59 15.4**	**+1.4**
GUMO	**Guam**	**46.24**	**310**	P	**P**	**19 59 18.0**	**+0.3**
FORT	**Forrest**	**48.39**	**244**	*e*P	**P**	**19 59 32.7**	**-0.9**
FORT	**Forrest**	**48.39**	**244**	*e*P	**P**	**19 59 32.5**	**-1.0**
KNA	**Kununurra**	**48.59**	**264**	P	**P**	**19 59 35.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**51.18**	**261**	P	**P**	**19 59 54.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**51.18**	**261**	*e*P	**P**	**19 59 54.2**	**0.0**
FITZ	**Fitzroy Crossi**	**51.18**	**261**	P	**P**	**19 59 53.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**51.18**	**261**	P	**P**	**19 59 55.1**	**+0.9**
NLAI	**Namlea**	**53.37**	**279**	P	**P**	**20 00 10.8**	**+0.9**
TNTI	**Ternate**	**54.55**	**284**	P	**P**	**20 00 19.3**	**+1.2**
MBWA	**Marble Bar**	**56.28**	**256**	*e*P	**P**	**20 00 29.1**	**-0.9**
MMRI	**Maumere**	**56.38**	**271**	P	**P**	**20 00 30.2**	**-0.6**
BBSI	**Bau Bau**	**56.95**	**275**	P	**P**	**20 00 37.9**	**+3.2**
KLBR	**Kellerberrin**	**57.23**	**243**	*e*P	**P**	**20 00 35.2**	**-1.1**
CBIJ	**Chichi jima**	**57.41**	**320**	P	**P**	**20 00 38.6**	**+1.1**
NWAO	**Narrogin (SRO)**	**57.64**	**242**	P	**P**	**20 00 38.5**	**-0.5**
NWAO	**Narrogin (SRO)**	**57.64**	**242**	*e*P	**P**	**20 00 38.1**	**-0.9**
NWAO	comp=Z,50nm,0.6s			pmax	pmax		
NWAO	**Narrogin (SRO)**	**57.64**	**242**	*e*P	**P**	**20 00 38.1**	**-0.9**
WSI	**Waingapu**	**57.96**	**270**	P	**P**	**20 00 42.3**	**+0.8**
BKSI	**Bulukumba**	**59.32**	**274**	P	**P**	**20 00 51.2**	**+0.5**
BMNI	**Bima**	**59.79**	**270**	P	**P**	**20 00 52.8**	**-0.9**
MTNI	**Mataram**	**62.16**	**269**	P	**P**	**20 01 09.9**	**+0.6**
IGBI	**Denpasar**	**63.09**	**269**	P	**P**	**20 01 16.0**	**+0.8**
SRBI	**Singaraja**	**63.23**	**270**	P	**P**	**20 01 16.7**	**+0.6**
TSM	**Tawau**	**64.65**	**284**	P	**P**	**20 01 26.2**	**+1.1**
CASY	**Casey**	**65.56**	**205**	*e*P	**P**	**20 01 29.5**	**-0.3**
CASY	**Casey**	**65.56**	**205**	*e*P	**P**	**20 01 29.1**	**-0.7**
SDKM	**Sandakan**	**65.78**	**285**	P	**P**	**20 01 33.0**	**+0.9**
MJAR	**Matsushiro Arr**	**66.58**	**325**	P	**P**	**20 01 36.1**	**-0.5**
MAJO	**Matsushiro**	**66.58**	**325**	*e*P	**P**	**20 01 35.1**	**-1.5**

MAT **Matsushiro** 66.58 325 P P 20 01 35.6 -1.0
KKM **Kota Kinabalu** 66.83 285 eP P 20 01 38.7 +0.1
comp=Z,48nm,0.6s,mb5.1
SBUM **Sibu** 69.28 280 P P 20 01 54.7 +1.2
ASAJ **Asahikawa** 70.16 333 P P 20 01 58.4 +0.4
comp=Z,24nm,0.7s,mb4.7,baz=224,slow=7.5,SNR=19
SSLB **Suanglung** 70.51 304 eP P 20 01 59.2 -1.2
comp=Z,28nm,0.4s,mb5.2
KSM **Kuching** 70.76 278 P P 20 02 03.0 +0.8
KSM **Kuching** 70.76 278 eP P 20 02 02.6 +0.4
comp=Z,125nm,1.0s,mb5.4
NIKO **Nikolski** 71.05 7 eP P 20 02 00.6 -2.3
comp=Z,216nm,1.1s,mb5.6
UNV **Unalaska Valle** 72.22 9 eP P 20 02 07.0 -2.7
comp=Z,183nm,1.0s,mb5.6
YSS **Yuzh-Sakhalins** 72.36 334⇑ eP P 20 02 11.0 +0.3
YSS e 20 02 20.0
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.1
YSS **Yuzh-Sakhalins** 72.36 334 eP P 20 02 11.0 +0.3
comp=Z,63nm,0.9s,mb5.2
QSPA **South Pole Qui** 72.39 180 eP P 20 02 10.4 0.0
comp=Z,43nm,1.0s,mb4.9
MIR **Mirnyy** 72.59 205⇑ iP P 20 02 12.2 +0.4
MIR pmax pmax
comp=Z,125nm,1.6s,mb5.2
AKUT **Akutan** 72.60 9 eP P 20 02 09.4 -2.5
comp=Z,83nm,0.8s,mb5.3
PETK **Petropavlovsk-** 72.97 346 P P 20 02 13.3 -0.8
comp=Z,31nm,0.9s,mb4.8,baz=123,slow=7.8,SNR=24
PETK **Petropavlovsk-** 72.97 346 P P 20 02 13.3 -0.8
KSRS **Korea Array** 73.26 319 P P 20 02 16.1 0.0
comp=Z,2.4nm,0.9s,baz=136,slow=7.0,SNR=8.7
SDPT **Sand Point** 74.67 12 eP P 20 02 22.3 -1.3
comp=Z,88nm,0.8s,mb5.3
MDJ **Mudanjiang** 76.90 326 P P 20 02 36.1 0.0
MDJ pP pP 20 04 41.6 +0.5
MDJ sP sP 20 05 43.8 +1.4
MDJ S S 20 11 35.2 -0.8
MDJ ScS ScS 20 11 57.2 -0.7
MDJ sS sS 20 15 15.2 -3.4
MDJ SS SS 20 16 50.4 -0.5
MDJ pmax pmax
comp=Z,22nm,1.4s,mb4.4
MDJ pmax pmax
comp=Z,2μm,14.1s
MDJ **Mudanjiang** 76.90 326 eP P 20 02 36.7 +0.6
comp=Z,32nm,1.1s,mb4.7
MYKOM **Kota Tinggi** 76.97 276 P P 20 02 38.5 +1.2
BSC **Santa Cruz Isl** 77.36 48 ⇑P P 20 02 39.1 +0.2
baz=78
SAO **San Andreas Ge** 77.58 45 eP P 20 02 39.4 -0.7
SAO pmax pmax
comp=Z,83nm,1.1s,mb5.1
SAO **San Andreas Ge** 77.58 45 eP P 20 02 39.4 -0.6
comp=Z,83nm,1.1s,mb5.1
SCI **San Clemente I** 77.61 49 ⇓P P 20 02 40.5 +0.2
baz=78
PKM **Peak Mountain** 77.70 47 ⇑P P 20 02 41.2 +0.4
baz=78
KIPM **Iron Peak** 77.97 41 eP P 20 02 41.9 -0.1
comp=Z,160nm,1.2s,mb5.3
OSI **Osito Adit** 78.32 48 eP P 20 02 44.6 +0.5
comp=Z,112nm,0.5s,mb5.5
ARVC **Arvin** 78.51 47 ⇑P P 20 02 45.7 +0.6
baz=79
MWC **Mount Wilson** 78.60 48 eP P 20 02 44.5 -1.0
MWC pmax pmax
comp=Z,124nm,1.1s,mb5.2
MWC **Mount Wilson** 78.60 48 eP P 20 02 44.5 -1.1
comp=Z,124nm,1.1s,mb5.2
KDAK **Kodiak Island** 78.64 15 P P 20 02 44.2 -0.9
comp=Z,55nm,0.8s,mb4.9,baz=234,slow=3.0,SNR=15
KDAK **Kodiak Island** 78.64 15 eP P 20 02 43.9 -1.2
comp=Z,162nm,1.3s,mb5.2
KDAK **Kodiak Island** 78.64 15 P P 20 02 45.0 -0.1
comp=Z,557nm,1.0s,mb5.8,SNR=11
CN2 **Changchun** 78.67 323 eP P 20 02 45.5 -0.2
CN2 PcP PcP 20 02 52.2 +0.2
CN2 esP sP 20 05 53.0 +0.5
CN2 eS S 20 11 55.0 +0.5
CN2 pmax pmax
comp=Z,30nm,1.0s,mb4.6
VES **Vestal, Richgr** 78.70 47 ⇓P P 20 02 46.4 +0.3
baz=79
BAR **Barrett** 78.83 50 eP P 20 02 45.5 -1.4
comp=Z,19nm,1.1s,mb4.3
BFSC **Mount Baldy Ra** 78.89 49 P P 20 02 46.5 -0.5
baz=79,SNR=15
MURC **Murrieta** 78.90 49 ⇑P P 20 02 47.8 +0.6
baz=79,SNR=7.5
WHN **Wuhan** 78.92 307 P P 20 02 46.5 -0.8
KLR **Kul'dur** 78.94 330 eP P 20 02 42.7 -4.3
EDW2 **Edwards Air Fo** 78.98 48 ⇓P P 20 02 47.2 -0.3
baz=79,SNR=57
CMB **Columbia Colle** 78.98 44 eP P 20 02 46.5 -1.0
CMB pmax pmax
comp=Z,73nm,0.9s,mb5.0
CMB **Columbia Colle** 78.98 44 eP P 20 02 46.5 -1.0
comp=Z,72nm,0.9s,mb5.0
ISA **Isabella** 79.04 47 P P 20 02 47.4 -0.4
baz=79,SNR=75
MONP **Monument Peak** 79.12 50 ⇓P P 20 02 48.4 0.0
baz=79,SNR=31
DVTC **Desert V Tower** 79.24 51 ⇑P P 20 02 49.1 +0.2
baz=79,SNR=16
PFO **Pinyon Flat Ob** 79.45 50 ⇑P P 20 02 49.9 -0.2
baz=80,SNR=12
PFO **Pinyon Flat Ob** 79.45 50 P P 20 02 49.0 -1.0
comp=Z,137nm,1.1s,mb5.2,SNR=6.2
FRIM **Kepong** 79.53 277 P P 20 02 52.0 +1.1
YBH **Yreka Blue Hor** 79.56 40 P P 20 02 50.4 0.0
comp=Z,62nm,1.0s,mb4.9,baz=180,slow=3.0,SNR=51
YBH **Yreka Blue Hor** 79.56 40 eP P 20 02 49.9 -0.5
YBH pmax pmax
comp=Z,94nm,1.1s
YBH **Yreka Blue Hor** 79.56 40 eP P 20 02 49.9 -0.5
comp=Z,94nm,1.1s,mb5.0
SWSC **Sam W. Stewart** 79.61 51 ⇑P P 20 02 50.5 -0.4
baz=80,SNR=12
CWC **Cottonwood Cre** 79.71 47 ⇑P P 20 02 51.2 -0.1
baz=80,SNR=14
WAKR **Walker** 79.87 44 eP P 20 02 51.7 -0.4
comp=Z,130nm,1.1s,mb5.2
LBCM **Butte Creek Ri** 79.90 41 P P 20 02 51.7 -0.5
HUMO **Hull Mountain** 79.91 39 eP P 20 02 52.2 0.0
comp=Z,82nm,1.1s,mb5.0
TIN **Tinemaha** 79.92 46 ⇓P P 20 02 52.7 +0.2
baz=80,SNR=10
MPMC **Manual Prospec** 79.93 47 ⇓P P 20 02 52.4 -0.1
baz=80,SNR=55
BELC **Belle Mtn. Jos** 79.97 50 ⇓P P 20 02 52.8 +0.1
baz=80,SNR=29
GSC **Goldstone** 80.03 48 ⇑P P 20 02 52.6 -0.4
baz=80,SNR=25
WCN **Washoe City** 80.08 43 ⇓P P 20 02 53.3 +0.1
baz=80,SNR=17
HEC **Hector,Ludlow** 80.14 49 ⇓P P 20 02 53.6 0.0
baz=80,SNR=13
BC3 **Big Chuckawall** 80.20 50 ⇓P P 20 02 54.2 +0.2
baz=80,SNR=10
GLA **Glamis** 80.37 51 ⇑P P 20 02 55.3 +0.5
baz=80,SNR=18
GRAC **Grapevine Rang** 80.49 46 P P 20 02 55.2 -0.1
baz=81,SNR=31
FURC **Furnace Creek,** 80.57 47 ⇓P P 20 02 55.7 -0.1
baz=81,SNR=19
NVAR **Mina Array Bea** 80.58 45 P P 20 02 55.5 -0.4
comp=Z,54nm,0.9s,mb5.0,baz=227,slow=6.5,SNR=121
GMRC **Granite Mounta** 80.59 49 ⇓P P 20 02 55.8 -0.2
baz=81,SNR=40
IRM **Iron Mountain** 80.66 50 ⇑P P 20 02 56.6 +0.2
baz=81,SNR=35
SHOC **Shoshone** 80.70 48 ⇑P P 20 02 56.8 +0.3
baz=81,SNR=7.8
TUQ **Turquoise Moun** 80.72 48 ⇑P P 20 02 57.2 +0.6
baz=81,SNR=5.8
U10A **Ash Meadows, A** 80.92 47 P P 20 02 57.7 +0.1
baz=81,SNR=17
Y12C **Blythe** 80.93 50 ⇑P P 20 02 58.8 +1.1
baz=81,SNR=6.1
RSO **Redoubt South** 81.00 13 eP P 20 02 55.4 -2.0
113A **Mohawk Valley,** 81.03 52 P P 20 02 58.1 -0.1
baz=81,SNR=20
LDFC **Landfair** 81.13 49 eP P 20 02 58.7 0.0
comp=Z,263nm,1.0s,mb5.6
MOD **Modoc** 81.14 41 eP P 20 02 57.9 -0.7
comp=Z,134nm,1.1s,mb5.3
K05A **Summer Lake** 81.23 40 ⇑P P 20 02 59.3 +0.3
baz=81,SNR=49
V11A **Goodsprings** 81.27 48 ⇑P P 20 02 59.8 +0.4
baz=81,SNR=17
Z13A **Yuma Proving G** 81.31 51 ⇑P P 20 02 59.6 -0.1
baz=81,SNR=34
NEE2 **Needles Airpor** 81.34 49 ⇑P P 20 03 00.7 +0.9
baz=81,SNR=5.4
214A **Organ Pipe Nat** 81.38 53 ⇓P P 20 03 00.6 +0.6
baz=82,SNR=24
W12A **Cal Nev Ari** 81.41 49 ⇑P P 20 03 01.2 +1.1
baz=82,SNR=6.6
PDMCI **Parker Dam,Lak** 81.47 50 ⇓P P 20 03 00.7 +0.2
baz=82,SNR=16
Y13A **Salome** 81.47 51 P P 20 03 00.4 -0.1
baz=82,SNR=38
S10A **Tonopah Range,** 81.48 46 ⇑P P 20 03 00.3 -0.1
baz=82,SNR=166
F03A **Seaside** 81.50 36 ⇓P P 20 03 00.8 +0.5
baz=82,SNR=6.8
H04A **Detroit Lake** 81.56 38 P P 20 02 59.8 -0.9
baz=82,SNR=24
U11A **Corn Creek** 81.59 48 ⇓P P 20 03 02.3 +1.3
baz=82,SNR=5.5
SLKM **Skilak Lake** 81.62 15 eP P 20 02 58.7 -1.9
V12A **Nelson** 81.63 48 P P 20 03 01.9 +0.6
baz=82,SNR=19
114A **Black Gap (USA** 81.68 52 ⇓P P 20 03 02.6 +1.0
baz=82,SNR=16
G04A **Mulino** 81.69 37 ⇑P P 20 03 02.5 +1.1
baz=82,SNR=7.9
SHPR **Sheep Range** 81.78 48 eP P 20 03 01.6 -0.4
comp=Z,60nm,1.1s,mb5.0
X13A **Yucca** 81.83 50 ⇑P P 20 03 02.2 -0.1
baz=82
E03A **Lebam** 81.86 36 ⇑P P 20 03 02.2 0.0
baz=82,SNR=26
R10A **Warm Springs** 81.87 46 P P 20 03 02.5 +0.2
baz=82,SNR=28
Z14A **Wintersburg** 81.91 51 ⇓P P 20 03 02.9 +0.2
baz=82,SNR=16
S11A **Rachel** 81.93 46 ⇑P P 20 03 03.5 +0.8
baz=82,SNR=17
Q10A **Clear Creek Ra** 82.07 45 ⇑P P 20 03 02.9 -0.5
baz=82,SNR=34
T11A **Corn Creek, Al** 82.10 47 ⇑P P 20 03 03.7 +0.1
baz=82,SNR=117
Y14A **Wickenburg** 82.13 51 P P 20 03 03.7 -0.1
baz=82,SNR=27
F04A **Amboy** 82.14 37 P P 20 03 03.1 -0.5
baz=82,SNR=17
115A **Sonoran Desert** 82.15 52 ⇓P P 20 03 04.3 +0.4
baz=82,SNR=14
U12A **Valley of Fire** 82.19 48 ⇑P P 20 03 04.2 +0.1
baz=82,SNR=27
NLWA **Neilton Lookou** 82.19 35 eP P 20 03 02.8 -1.1
comp=Z,109nm,1.2s,mb5.3
HOOD **Mount Hood Mea** 82.23 38 eP P 20 03 03.9 -0.1
comp=Z,104nm,1.1s,mb5.3
RC01 **Rabbit Creek A** 82.25 14 eP P 20 03 02.2 -1.5
comp=Z,190nm,1.2s,mb5.5
BJI **Beijing** 82.28 316 P P 20 03 03.1 -1.3
BJI pP pP 20 05 11.5 -0.1
BJI sP sP 20 06 14.7 +2.3
BJI pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
V13A **Grand Canyon W** 82.31 49 ⇓P P 20 03 04.8 +0.1
baz=82,SNR=8.3
BMN **Battle Mountai** 82.33 43 eP P 20 03 04.0 -0.7
BMN pmax pmax
comp=Z,124nm,1.1s,mb5.3
BMN **Battle Mountai** 82.33 43 eP P 20 03 04.0 -0.7
comp=Z,124nm,1.1s,mb5.3
VIPM **Ingram Point** 82.39 39 P P 20 03 04.3 -0.5
R11A **Troy Canyon, C** 82.39 46 ⇑P P 20 03 04.5 -0.5
baz=82,SNR=71
P10A **Eureka** 82.42 44 ⇓P P 20 03 05.0 -0.1
baz=82,SNR=34
216A **Three Points,** 82.43 53 ⇑P P 20 03 05.9 +0.6
baz=82,SNR=8.1
X14A **Yava** 82.46 50 ⇓P P 20 03 06.0 +0.6
baz=83,SNR=17
WVOR **Wild Horse Val** 82.47 41 eP P 20 03 04.9 -0.4
WVOR pmax pmax
comp=Z,114nm,1.0s,mb5.4
WVOR **Wild Horse Val** 82.47 41 eP P 20 03 04.9 -0.4
comp=Z,114nm,1.0s,mb5.4
116A **Eloy** 82.48 53 ⇓P P 20 03 05.8 +0.2
baz=83,SNR=28
TDL **Tradedollar La** 82.50 36 P P 20 03 05.1 -0.2
S12A **Delamar Landin** 82.53 47 ⇓P P 20 03 06.2 +0.4
baz=83,SNR=84
Q11A **Duckwater** 82.58 45 ⇓P P 20 03 05.8 -0.2
baz=83,SNR=113
U13A **Pakoon Wash** 82.59 48 ⇓P P 20 03 06.2 +0.2
baz=83,SNR=92
Y15A **Casa Rosa Ranc** 82.64 51 P P 20 03 06.3 -0.1
baz=83,SNR=73
W14A **Seligman** 82.66 50 ⇓P P 20 03 06.8 +0.3
baz=83,SNR=38
G06A **Carlson Farm,** 82.78 38 ⇓P P 20 03 06.2 -0.6
baz=83,SNR=24
217A **Green Valley** 82.82 54 P P 20 03 07.6 +0.3
baz=83,SNR=33
I07A **Izee** 82.82 39 ⇑P P 20 03 07.0 0.0
baz=83,SNR=88
V14A **Boquillas Ranc** 82.84 49 P P 20 03 07.3 0.0
baz=83,SNR=94
GNW **Green Mountain** 82.87 35 eP P 20 03 06.4 -0.8
comp=Z,42nm,1.0s,mb4.9
P11A **Circle Ranch,** 82.87 45 ⇓P P 20 03 07.3 -0.1
baz=83,SNR=19
T13A **Saint George** 82.91 48 ⇓P P 20 03 08.2 +0.5
baz=83,SNR=26
X15A **Humboldt** 82.95 51 ⇓P P 20 03 08.5 +0.6
baz=83,SNR=31
Z16A **Peralta Trail,** 83.04 52 ⇓P P 20 03 08.8 +0.5
baz=83,SNR=7.5
R12A **Pony Springs,** 83.05 46 ⇑P P 20 03 08.6 +0.3
baz=83,SNR=26
J08A **Circle Bar Ran** 83.06 40 ⇑P P 20 03 08.1 -0.1
baz=83,SNR=37
D05A **Enumclaw** 83.11 36 ⇓P P 20 03 09.6 +1.2
baz=83,SNR=16
SEY **Seymchan** 83.12 348⇑ eP P 20 03 07.0 -1.1
FMW **Mount Fremont** 83.14 36 P P 20 03 07.9 -0.7
U14A **Mt Trumbull** 83.15 49 ⇑P P 20 03 09.2 +0.3
baz=83,SNR=126
PGC **Sidney** 83.17 34 eP P 20 03 07.4 -1.3
comp=Z,4.8nm,1.1s,mb3.9
S13A **Holt Ranch, En** 83.21 47 ⇑P P 20 03 09.8 +0.6
baz=83,SNR=12
117A **Oracle** 83.22 53 ⇑P P 20 03 09.6 +0.3
baz=83,SNR=46
Y16A **Circle Bar Ran** 83.24 51 ⇑P P 20 03 09.6 +0.2
baz=83,SNR=69
W15A **Williams** 83.24 50 ⇑P P 20 03 10.3 +0.9
baz=83,SNR=16
GYA **Guiyang** 83.26 300 eP P 20 03 11.2 +1.6
GYA pP pP 20 05 19.0 +1.7
GYA sP sP 20 06 20.0 +2.1
GYA PP PP 20 06 33.7 +0.7
GYA SKS 20 12 31.5
GYA S S 20 12 40.0 -1.5
GYA sS sS 20 16 28.9 0.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,130nm,5.2s
318A **Bisbee** 83.31 54 P P 20 03 09.9 +0.2
baz=83,SNR=31
R13A **O'Grain Ranch,** 83.42 47 ⇓P P 20 03 10.4 +0.3
baz=84,SNR=20
MAW **Mawson** 83.44 200 P P 20 03 09.7 -0.1
comp=Z,16nm,0.6s,mb4.8,baz=116,slow=4.8,SNR=56
MAW **Mawson** 83.44 200 eP P 20 03 09.6 -0.2
comp=Z,13nm,0.6s,mb4.6
MAW **Mawson** 83.44 200 eP P 20 03 09.4 -0.3
comp=Z,5.9nm,0.9s,mb4.1
MAW epP pP 20 05 19.3 +1.9
218A **Dragoon** 83.49 54 ⇑P P 20 03 11.2 +0.5
baz=84,SNR=28
X16A **Lo Mia Camp, P** 83.50 51 ⇓P P 20 03 11.1 +0.4
baz=84,SNR=57
T14A **Hurricane** 83.51 48 ⇑P P 20 03 11.2 +0.6
baz=84,SNR=29
F07A **Phinny Hill Vi** 83.56 38 ⇓P P 20 03 10.8 +0.2
baz=84,SNR=7.5
V15A **Kaibab Nationa** 83.60 49 ⇓P P 20 03 11.4 +0.3
baz=84,SNR=37
Y17A **Roosevelt** 83.63 52 ⇑P P 20 03 11.5 +0.2
baz=84,SNR=27
JCW **Jim Creek** 83.72 35 eP P 20 03 10.4 -1.0
comp=Z,87nm,1.2s,mb5.2
W16A **Flagstaff** 83.74 50 P P 20 03 11.9 +0.1
baz=84,SNR=19
U15A **North Rim** 83.79 49 P P 20 03 12.3 +0.2
baz=84,SNR=64
G08A **Pilot Rock** 83.80 39 ⇓P P 20 03 11.7 -0.2
baz=84,SNR=73
319A **Douglas** 83.83 54 ⇑P P 20 03 13.1 +0.7
baz=84,SNR=21
118A **Homack Ranch,** 83.84 53 P P 20 03 12.9 +0.6
baz=84,SNR=29
X17A **Forest Lakes** 83.94 51 ⇑P P 20 03 12.5 -0.4
baz=84,SNR=11
PNL **Peninsula** 83.96 20 eP P 20 03 11.7 -0.6
comp=Z,117nm,1.2s,mb5.3
E07A **Sunnyside** 83.97 37 ⇑P P 20 03 12.4 -0.3
baz=84,SNR=18
T15A **Red Dirt Ranch** 83.99 48 ⇓P P 20 03 13.1 +0.1
baz=84,SNR=20
WUAZ **Wupatki** 84.04 50 ⇓P P 20 03 13.6 +0.3
baz=84,SNR=20
HAWA **Hanford** 84.06 37 eP P 20 03 12.3 -0.9
comp=Z,167nm,1.1s,mb5.5
WRAK **Wrangell Islan** 84.07 25 eP P 20 03 12.0 -0.9
comp=Z,79nm,1.0s,mb5.2
RPW **Rockport** 84.10 35 eP P 20 03 09.6 -3.6
comp=Z,57nm,1.3s,mb4.9
219A **White Tail Can** 84.11 54 P P 20 03 13.7 0.0
baz=84,SNR=24
TRF **Thorofare Moun** 84.19 13 eP P 20 03 11.0 -2.4
comp=Z,64nm,0.7s,mb5.3
ETW **Entiat** 84.28 36 P P 20 03 13.3 -0.9
Y18A **Canyon Day Jun** 84.28 52 ⇓P P 20 03 14.9 +0.4
baz=84,SNR=18
Q14A **Sevier Lake (B** 84.28 46 ⇑P P 20 03 14.6 +0.3
baz=84,SNR=51
S15A **Panguitch** 84.31 48 ⇑P P 20 03 13.8 -0.8
baz=84,SNR=6.4
119A **Ashpeak Ranch,** 84.40 53 ⇑P P 20 03 15.6 +0.4
baz=84,SNR=11
320A **Kipp Ranch, An** 84.40 55 ⇑P P 20 03 15.7 +0.5
baz=84,SNR=21
U16A **Tuba City** 84.50 50 P P 20 03 15.6 0.0
baz=85,SNR=30
LNOR **Lincton Mounta** 84.51 38 eP P 20 03 15.0 -0.3
LNOR pmax pmax
comp=Z,22nm,1.0s,mb4.7
LNOR **Lincton Mounta** 84.51 38 eP P 20 03 15.0 -0.3
comp=Z,22nm,1.0s,mb4.7
V17A **Tonalea, Kykot** 84.51 50 ⇓P P 20 03 15.7 +0.1
baz=85
WTV **Waterville** 84.54 36 P P 20 03 14.4 -1.0
XAN **Xi'an** 84.60 308 P P 20 03 17.6 +1.5
T16A **Glen Canyon Da** 84.60 49 ⇓P P 20 03 16.4 +0.4
baz=85,SNR=13
R15A **Junction** 84.61 47 ⇑P P 20 03 16.7 +0.7
baz=85,SNR=5.3
220A **Playas Peak, P** 84.64 54 P P 20 03 16.9 +0.6
baz=85,SNR=16
X18A **Snowflake** 84.66 51 ⇑P P 20 03 16.9 +0.6
baz=85,SNR=14
P14A **Drum Mountains** 84.70 46 ⇑P P 20 03 16.8 +0.4
baz=85,SNR=17
MCK **McKinley** 84.74 13 eP P 20 03 14.2 -1.8
MCK pmax pmax
comp=Z,78nm,1.0s,mb5.3
MCK **McKinley** 84.74 13 eP P 20 03 14.2 -1.8
comp=Z,78nm,1.0s,mb5.3
MFID **Camas Ranch** 84.74 41 ⇑P P 20 03 16.2 -0.3
baz=85,SNR=56
D08A **Wollman Farm,** 84.78 37 ⇓P P 20 03 16.1 -0.5
baz=85,SNR=33
120A **U Bar Ranch, L** 84.82 54 ⇑P P 20 03 17.5 +0.3
baz=85,SNR=13
S16A **Weppner Ranch,** 84.87 48 ⇑P P 20 03 17.5 +0.2
baz=85,SNR=6.7
PAX **Paxson** 84.91 15 eP P 20 03 14.6 -2.2
PAX pmax pmax
comp=Z,47nm,1.2s,mb5.0
PAX **Paxson** 84.91 15 eP P 20 03 14.6 -2.2
comp=Z,47nm,1.2s,mb5.0
E09A **Wood Farm, Sta** 84.94 38 ⇓P P 20 03 16.2 -1.2
baz=85,SNR=50
Y19A **Nutrioso** 84.94 52 ⇑P P 20 03 18.2 +0.5
baz=85,SNR=38
W18A **Petrified Fore** 85.07 51 ⇓P P 20 03 18.3 0.0
baz=85,SNR=12
OD2 **Odessa Site #2** 85.08 37 eP P 20 03 16.8 -1.2
comp=Z,105nm,1.1s,mb5.4
Z20A **Nine Sixteen R** 85.09 53 ⇓P P 20 03 18.2 -0.2
baz=85,SNR=20
T17A **Navajo Res., N** 85.11 49 ⇓P P 20 03 18.7 +0.3
baz=85,SNR=33
X19A **St. Johns** 85.11 52 P P 20 03 18.9 +0.3
baz=85,SNR=25
SKAG **Skagway** 85.15 21 eP P 20 03 18.4 +0.3
comp=Z,105nm,1.4s,mb5.3
DUG **Dugway** 85.16 45 ⇓P P 20 03 18.8 +0.2
baz=85,SNR=7.5
DUG **Dugway** 85.16 45 eP P 20 03 18.4 -0.2
DUG pmax pmax
comp=Z,11nm,1.1s,mb4.4
DUG **Dugway** 85.16 45 eP P 20 03 18.4 -0.2
comp=Z,11nm,1.1s,mb4.4
V18A **Ganado** 85.18 50 P P 20 03 18.9 0.0
baz=85,SNR=19
F10A **Beach Ranch, E** 85.19 39 ⇓P P 20 03 17.9 -0.8
baz=85,SNR=87
R16A **Teasdale** 85.20 47 ⇑P P 20 03 18.7 -0.1
baz=85,SNR=13
B08A **Colville Reser** 85.25 36 P P 20 03 17.7 -1.2
baz=85,SNR=19
221A **Mesquite Ranch** 85.26 54 ⇑P P 20 03 18.9 -0.4
baz=85,SNR=7.3
I12A **Atlanta** 85.37 41 ⇑P P 20 03 19.5 -0.1
baz=86,SNR=63
S17A **Black Ridge (B** 85.39 48 ⇓P P 20 03 19.9 +0.1
baz=86,SNR=12
121A **Cookes Peak, D** 85.47 54 ⇓P P 20 03 21.6 +1.3
baz=86,SNR=14
U18A **Rough Rock, Ch** 85.53 50 ⇑P P 20 03 20.1 -0.4
baz=86,SNR=17
C09A **Chrisman Ranch** 85.55 37 ⇓P P 20 03 20.4 +0.1
baz=86,SNR=17
Y20A **Horse Springs,** 85.58 53 P P 20 03 21.4 +0.6
baz=86,SNR=19
N15A **Stansbury Isla** 85.68 45 ⇑P P 20 03 21.8 +0.7
baz=86,SNR=5.7
Q16A **Castle Valley** 85.70 47 ⇓P P 20 03 22.5 +1.3
baz=86,SNR=6.7
HLID **Hailey** 85.71 42 ⇓P P 20 03 21.3 +0.1
baz=86,SNR=71
HLID **Hailey** 85.71 42 eP P 20 03 20.8 -0.4
comp=Z,43nm,0.9s,mb5.1
HHC **Hu-ho-hao-te** 85.74 315 eP P 20 03 22.7 +1.3
HHC pP pP 20 05 32.4 +2.3
HHC sP sP 20 06 31.3 +0.9
HHC PP PP 20 06 55.0 +2.5
HHC SKS 20 12 50.0
HHC S S 20 13 04.3 -0.5
HHC sS sS 20 16 53.6 -0.5
HHC pmax pmax
comp=Z,15nm,1.1s,mb4.5
HHC pmax pmax
comp=Z,730nm,7.8s
J13A **Cove Ranch, Pi** 85.78 42 ⇓P P 20 03 21.7 +0.1
baz=86,SNR=47
R17A **Hanksville Air** 85.81 48 ⇑P P 20 03 22.1 +0.4
baz=86,SNR=9.7
222A **Williams Famil** 85.82 55 ⇑P P 20 03 23.2 +1.2
baz=86,SNR=8.0
DOT **Dot Lake** 85.82 15 eP P 20 03 19.4 -1.9
comp=Z,190nm,1.1s,mb5.6
T18A **Mexican Hat** 85.84 49 ⇓P P 20 03 22.0 0.0
baz=86,SNR=66
Z21A **St. Cloud Mine** 85.87 53 ⇓P P 20 03 23.7 +1.6
baz=86,SNR=6.4
G12A **Big Creek, Yel** 85.91 40 ⇑P P 20 03 21.7 -0.3
baz=86,SNR=145
H12A **Diamond D Ranc** 85.92 41 ⇑P P 20 03 21.7 -0.4
baz=86,SNR=94

U19A **Dine' College,** 85.96 50 ⇓P P 20 03 22.4 -0.1
baz=86,SNR=29
COLA **College** 85.96 13 eP P 20 03 19.6 -2.2
COLA pmax pmax
comp=Z,80nm,1.1s,mb5.3
COLA **College** 85.96 13 eP P 20 03 19.6 -2.3
comp=Z,80nm,1.1s,mb5.3
M15A **Larsen Ranch,** 85.99 44 ⇓P P 20 03 22.5 -0.1
baz=86,SNR=19
W20A **Ramah** 85.99 51 ⇑P P 20 03 23.3 +0.5
baz=86,SNR=29
S18A **Hurst Farm, Bl** 85.99 49 ⇓P P 20 03 22.1 -0.6
baz=86,SNR=11
BILL **Bilibino** 86.01 355⇓eP P 20 03 21.3 -0.7
BILL e 20 06 57.3
BILL eSS SS 20 19 00.0 -3.5
BILL pmax pmax
comp=Z,85nm,1.2s,mb5.2
K14A **Jones Ranch, D** 86.02 43 ⇓P P 20 03 22.7 +0.1
baz=86,SNR=26
KMI **Kunming** 86.02 298 P P 20 03 24.9 +1.8
KMI pmax pmax
comp=Z,20nm,1.1s,mb4.7
I13A **Wildhorse Cree** 86.07 42 P P 20 03 23.0 +0.2
baz=86,SNR=27
ILAR **Eielson Array** 86.09 14 P P 20 03 20.1 -2.3
comp=Z,23nm,0.9s,mb4.8,baz=227,slow=4.9,SNR=96
ILAR PP PP 20 06 52.0 -2.8
comp=Z,3.8nm,1.0s,baz=214,slow=7.3,SNR=4.3
Y21A **Point of Rocks** 86.15 53 ⇑P P 20 03 24.2 +0.7
baz=86,SNR=24
J14A **Carey** 86.17 42 ⇓P P 20 03 23.8 +0.5
baz=86,SNR=81
SRU **San Rafael** 86.24 47 ⇑P P 20 03 23.5 -0.2
baz=86,SNR=32
X21A **Alamocita Cree** 86.25 52 P P 20 03 24.3 +0.4
baz=86,SNR=23
F12A **Elk City** 86.27 40 ⇓P P 20 03 22.9 -0.8
baz=86,SNR=155
L15A **Malad City** 86.28 44 ⇑P P 20 03 24.2 +0.3
baz=86,SNR=6.7
H13A **Challis** 86.30 41 ⇑P P 20 03 23.8 -0.1
baz=86,SNR=60
V20A **Brimhall** 86.30 51 ⇓P P 20 03 24.8 +0.7
baz=86,SNR=7.5
DAU **Daniels Canyon** 86.32 46 eP P 20 03 24.5 +0.4
DAU pmax pmax
comp=Z,38nm,1.2s,mb4.9
DAU **Daniels Canyon** 86.32 46 eP P 20 03 24.5 +0.4
comp=Z,38nm,1.2s,mb4.9
T19A **Beclabito** 86.32 50 P P 20 03 24.3 +0.1
baz=86,SNR=13
R18A **Canyonlands Na** 86.37 48 ⇓P P 20 03 24.2 -0.2
baz=86,SNR=21
Z22A **Elephant Butte** 86.39 54 P P 20 03 24.7 0.0
baz=86,SNR=35
N16A **Rees Ranch, Co** 86.41 45 ⇑P P 20 03 25.2 +0.7
baz=86,SNR=14
NEW **Newport** 86.45 37 P P 20 03 23.4 -1.1
baz=87,SNR=18
M16A **Huntsville** 86.47 45 ⇓P P 20 03 24.8 0.0
baz=87,SNR=18
I14A **Mackay** 86.50 42 ⇓P P 20 03 25.3 +0.4
baz=87,SNR=58
U20A **Newcomb** 86.50 50 ⇑P P 20 03 26.2 +1.1
baz=87,SNR=6.0
K15A **Arbon** 86.50 43 ⇓P P 20 03 24.9 0.0
baz=87,SNR=37
Q18A **Rafter H Ranch** 86.51 47 ⇑P P 20 03 24.6 -0.5
baz=87,SNR=22
G13A **Cobalt** 86.57 40 P P 20 03 24.6 -0.6
baz=87,SNR=44
O17A **Robinson Place** 86.57 46 ⇑P P 20 03 25.6 +0.3
baz=87,SNR=59
S19A **Harvey Farm, M** 86.63 49 ⇑P P 20 03 25.6 -0.1
baz=87,SNR=9.0
P18A **Preston Nutter** 86.66 47 ⇓P P 20 03 25.9 +0.2
baz=87,SNR=20
LAZ **Ladron** 86.72 52 eP P 20 03 25.9 -0.3
comp=Z,12nm,1.1s,mb4.5
C11A **Tepee Creek (N** 86.73 37 ⇑P P 20 03 25.5 -0.4
baz=87
R19A **Curley Farm, L** 86.78 48 ⇓P P 20 03 26.2 -0.1
baz=87
324A **Moseley Ranch,** 86.83 56 ⇑P P 20 03 26.5 -0.2
baz=87,SNR=29
N17A **Moffit Pass** 86.84 45 ⇑P P 20 03 26.6 0.0
baz=87,SNR=14
H14A **Leadore** 86.88 41 ⇓P P 20 03 26.7 +0.1
baz=87,SNR=67
J15A **Blackfoot** 86.90 43 P P 20 03 27.1 +0.3
baz=87,SNR=53
V21A **Milan** 86.92 51 ⇑P P 20 03 27.2 +0.2
baz=87,SNR=6.4
L16A **Fish Haven** 86.92 44 ⇓P P 20 03 26.6 -0.3
baz=87,SNR=34
Z23A **Rita Site, Whi** 86.96 54 ⇑P P 20 03 27.6 +0.3
baz=87,SNR=9.5
425A **Indio Mountain** 86.97 57 ⇑P P 20 03 27.4 0.0
baz=87
CMAR **Chiang Mai Arr** 87.00 290 P P 20 03 28.9 +1.1
comp=Z,7.9nm,1.0s,mb4.4,baz=113,slow=2.9,SNR=23
CMAR PP PP 20 07 07.0 +4.0
comp=Z,1.9nm,0.8s,baz=120,slow=6.3,SNR=7.3
MNTX **Cornudas Mount** 87.01 56 ⇑P P 20 03 27.3 -0.3
baz=87,SNR=39
Q19A **Hogan Spring (** 87.06 48 P P 20 03 27.1 -0.6
baz=87,SNR=42
LPM **Los Pinos Moun** 87.07 53 eP P 20 03 27.5 -0.3
comp=Z,24nm,1.0s,mb4.9
C12B **Naegeli Ranch,** 87.11 38 ⇓P P 20 03 28.3 +0.7
baz=87,SNR=8.7
G14A **Jackson** 87.12 41 ⇑P P 20 03 28.0 +0.2
baz=87,SNR=12
U21A **Nageezi** 87.16 50 P P 20 03 28.0 -0.2
baz=87,SNR=40
K16A **Soda Springs** 87.19 43 ⇑P P 20 03 28.7 +0.6
baz=87,SNR=10
M17A **Scullys Gap (B** 87.19 45 ⇑P P 20 03 28.5 +0.3
baz=87,SNR=24
626A **Big Bend Ranch** 87.19 58 P P 20 03 28.6 +0.1
baz=87,SNR=47
PV01 **Paradox Valley** 87.20 49 eP P 20 03 27.5 -0.8
comp=Z,2µm,1.1s
325A **Bean Ranch, Si** 87.21 56 ⇑P P 20 03 28.3 -0.2
baz=87,SNR=32
S20A **Disappointment** 87.22 49 P P 20 03 28.5 +0.1
baz=87,SNR=30
E13A **Victor** 87.25 39 ⇓P P 20 03 28.2 -0.2
baz=87,SNR=8.4
CD2 **Chengdu** 87.33 303 eP P 20 03 30.8 +1.7
CD2 pmax pmax
comp=Z,10.0nm,1.3s,mb4.4
H15A **Lima** 87.33 41 ⇑P P 20 03 29.0 +0.2
baz=87,SNR=54
124A **Stringfield Ra** 87.34 55 ⇑P P 20 03 29.3 +0.2
baz=87,SNR=16
Y23A **Lovelace Mesa,** 87.36 53 ⇑P P 20 03 29.1 -0.1
baz=88,SNR=18
J16A **Bone** 87.38 43 P P 20 03 29.1 +0.1
baz=88,SNR=101
DAWY **Dawson** 87.39 17 eP P 20 03 27.1 -1.5
D13A **Huson** 87.41 39 ⇑P P 20 03 28.3 -0.8
baz=88,SNR=19
526A **Mary Lane Ranc** 87.42 57 ⇓P P 20 03 29.7 +0.2
baz=88,SNR=16
F14A **Wisdom** 87.45 40 ⇓P P 20 03 28.8 -0.5
baz=88,SNR=14
ANMO **Albuquerque** 87.45 52 P P 20 03 30.0 +0.4
comp=Z,26nm,0.9s,mb4.9,baz=225,slow=4.9,SNR=38
ANMO **Albuquerque** 87.45 52 eP P 20 03 28.7 -0.9
ANMO pmax pmax
comp=Z,28nm,0.9s
ANMO **Albuquerque** 87.45 52 eP P 20 03 28.7 -0.9
comp=Z,28nm,0.9s,mb5.0
T21A **Navajo Lake** 87.48 50 ⇑P P 20 03 29.8 +0.2
baz=88,SNR=8.9
EGAK **Eagle** 87.49 16 eP P 20 03 27.2 -1.8
comp=Z,72nm,1.0s,mb5.4
TXAR **Lajitas Array** 87.49 58 P P 20 03 30.0 +0.1
comp=Z,32nm,1.0s,mb5.0,baz=223,slow=6.0,SNR=127
X23A **Hourglass Bar** 87.51 53 ⇑P P 20 03 29.9 +0.1
baz=88,SNR=7.3
COLD **Coldfoot** 87.54 11 eP P 20 03 27.9 -1.3
comp=Z,62nm,1.0s,mb5.3
P19A **Cripple Cowboy** 87.55 47 ⇓P P 20 03 30.1 +0.2
baz=88,SNR=24
S21A **Coal Bank Pass** 87.56 49 ⇑P P 20 03 30.1 +0.1
baz=88,SNR=37
M18A **Lyman** 87.57 45 P P 20 03 29.9 0.0
baz=88,SNR=31
BSMT **Bassoo Peak** 87.59 38 eP P 20 03 28.5 -1.4
comp=Z,18nm,0.8s,mb4.8
K17A **Gardner Place,** 87.59 44 ⇑P P 20 03 30.3 +0.3
baz=88,SNR=7.8
225A **Deer Hill, Car** 87.61 55 P P 20 03 30.2 -0.2
baz=88,SNR=20
C13A **Hot Springs** 87.63 38 ⇑P P 20 03 29.9 -0.2
baz=88,SNR=14
A12A **Yaak River Ran** 87.63 37 ⇑P P 20 03 30.8 +0.8
baz=88,SNR=5.5
N18A **Larsen Ranch,** 87.64 46 ⇓P P 20 03 30.3 0.0
baz=88,SNR=30
Z24A **Sheeppen Canyo** 87.65 54 ⇓P P 20 03 30.6 +0.1
baz=88,SNR=11
E14A **Clinton** 87.66 40 ⇓P P 20 03 29.9 -0.3
baz=88,SNR=15
426A **McDonald Obser** 87.69 57 ⇓P P 20 03 30.8 0.0
baz=88,SNR=38
U22A **Llaves** 87.73 51 ⇓P P 20 03 31.7 +0.8
baz=88,SNR=6.4
I16A **Newdale** 87.73 42 ⇓P P 20 03 31.6 +1.0
baz=88,SNR=17
O19A **Miners Draw (B** 87.73 46 ⇓P P 20 03 31.6 +0.9
baz=88,SNR=10
Q20A **Ridgley Place,** 87.74 48 P P 20 03 31.4 +0.5
baz=88,SNR=39
627A **Terlingua Ranc** 87.76 58 ⇑P P 20 03 31.5 +0.4
baz=88,SNR=58
W23A **Werner Place,** 87.77 52 ⇓P P 20 03 31.8 +0.8
baz=88,SNR=6.9
Y24A **Capitan** 87.83 53 ⇑P P 20 03 31.4 +0.1
baz=88,SNR=46
527A **Woodward Ranch** 87.83 58 ⇑P P 20 03 31.3 -0.1
baz=88,SNR=21
P20A **De Beque** 87.90 47 ⇓P P 20 03 31.8 +0.2
baz=88,SNR=31
125A **Gardner Draw,** 87.94 55 P P 20 03 32.4 +0.5
baz=88,SNR=19
T22A **Edith** 87.95 50 ⇑P P 20 03 32.0 +0.2
baz=88,SNR=13
326A **Caldwell Ranch** 87.97 56 ⇑P P 20 03 32.0 -0.1
baz=88,SNR=14
D14A **Grenough** 87.97 39 ⇑P P 20 03 31.4 -0.3
baz=88,SNR=23
V23A **Ortiz Mt. (NFS** 87.97 52 ⇓P P 20 03 32.7 +0.7
baz=88,SNR=12
GDL2 **Guadalupe Moun** 88.00 55 eP P 20 03 32.1 -0.1
comp=Z,26nm,1.1s,mb4.9
F15A **Butte** 88.00 40 ⇓P P 20 03 31.9 0.0
baz=88,SNR=38
J17A **Brown Place, J** 88.00 43 ⇓P P 20 03 33.0 +1.1
baz=88,SNR=33
SNOW **Snow King Moun** 88.02 43 eP P 20 03 32.8 +0.7
comp=Z,97nm,1.1s,mb5.4
R21A **Cimarron** 88.03 49 ⇓P P 20 03 32.4 +0.2
baz=88,SNR=58
B13A **Whitefish** 88.03 38 ⇑P P 20 03 31.9 -0.1
baz=88,SNR=9.3
YBMT **Yellow Bay** 88.05 38 eP P 20 03 30.8 -1.2
comp=Z,17nm,1.1s,mb4.7
SLMT **Seey Lake** 88.06 39 eP P 20 03 30.6 -1.4
comp=Z,29nm,1.3s,mb4.8
K18A **Toltan Ranch,** 88.12 44 ⇓P P 20 03 32.8 +0.2
baz=88,SNR=58
Z25A **Roswell** 88.13 54 P P 20 03 32.9 +0.1
baz=88,SNR=14
G16A **Moss Hill, Enn** 88.15 41 ⇑P P 20 03 32.8 +0.3
baz=88,SNR=19
MOOW **Moose Ponds** 88.15 43 eP P 20 03 31.6 -1.0
comp=Z,37nm,1.1s,mb5.0
628A **Black Gap, Mar** 88.17 58 P P 20 03 33.3 +0.2
baz=88,SNR=32
LOHW **Long Hollow** 88.18 43 eP P 20 03 32.3 -0.5
comp=Z,45nm,1.1s,mb5.1
E15A **Deer Lodge** 88.18 40 ⇑P P 20 03 33.0 +0.3
baz=88,SNR=8.6
U23A **El Rito** 88.20 51 ⇓P P 20 03 33.5 +0.5
baz=88,SNR=11
Q21A **Lamborn Mesa,** 88.20 48 ⇓P P 20 03 34.1 +1.1
baz=88,SNR=9.7
M19A **Rock Springs** 88.22 45 ⇑P P 20 03 33.8 +0.7
baz=88,SNR=14
427A **Hayter Ranch,** 88.26 57 P P 20 03 33.4 0.0
baz=88,SNR=50
H16A **Russell Place,** 88.26 42 P P 20 03 33.8 +0.7
baz=88,SNR=38
O20A **White River Ci** 88.27 47 ⇓P P 20 03 33.3 +0.1
baz=88,SNR=20
S22A **4UR Ranch, Cre** 88.30 50 ⇓P P 20 03 33.8 +0.4
baz=88,SNR=48
A13A **Flathead Natio** 88.34 37 ⇑P P 20 03 33.7 +0.4
baz=88
I17A **Pilgrim Ck.** 88.34 43 ⇓P P 20 03 34.4 +0.9
baz=88,SNR=5.4
L19A **Farson** 88.34 45 ⇑P P 20 03 33.5 -0.1
baz=88,SNR=50
W24A **Lazy 6 Ranch,** 88.35 52 ⇓P P 20 03 33.8 0.0
baz=88,SNR=21
J18A **Kendall Valley** 88.39 44 ⇓P P 20 03 33.7 0.0
baz=88,SNR=79
Y25A **Mesa, Roswell** 88.40 54 P P 20 03 33.6 -0.4
baz=88,SNR=26
CLNB **Carlsbad** 88.40 56 eP P 20 03 33.6 -0.5
comp=Z,8.1nm,1.0s,mb4.4
BOZ **Bozeman (W)** 88.45 41 P P 20 03 34.4 +0.4
baz=89,SNR=31
BW06 **Boulder Array** 88.50 44 ⇑P P 20 03 33.6 -0.6
baz=89,SNR=45
PDAR **Pinedale Array** 88.50 44 P P 20 03 33.2 -1.0
comp=Z,28nm,1.0s,mb4.9,baz=222,slow=2.0,SNR=94
F16A **Kennard Place,** 88.51 41 ⇓P P 20 03 35.2 +0.9
baz=89,SNR=16
R22A **Saguache, Gunn** 88.54 49 ⇑P P 20 03 35.2 +0.6
baz=89,SNR=23
D15A **Lincoln** 88.55 39 ⇑P P 20 03 34.0 -0.4
baz=89,SNR=27
H17A **Grant Village** 88.55 42 ⇓P P 20 03 35.9 +1.5
baz=89,SNR=11
N20A **Spence Gulch,** 88.55 46 ⇓P P 20 03 34.5 -0.1
baz=89,SNR=42
P21A **Newcastle** 88.58 48 ⇑P P 20 03 35.4 +0.7
baz=89,SNR=7.3
V24A **Rampart Ranch,** 88.65 52 P P 20 03 36.3 +1.2
baz=89,SNR=8.1
YAK **Yakutsk** 88.65 339 eP P 20 03 33.1 -1.4
YAK pmax pmax
comp=Z,26nm,0.9s,mb5.1
YAK **Yakutsk** 88.65 339 eP P 20 03 33.1 -1.4
comp=Z,26nm,0.9s,mb5.1
Q22A **Crested Butte,** 88.69 48 ⇑P P 20 03 35.8 +0.5
baz=89,SNR=28
CPRX **Cap Rock** 88.70 55 eP P 20 03 35.0 -0.4
comp=Z,39nm,1.1s,mb5.2
Z26A **Caprock** 88.70 55 ⇑P P 20 03 35.4 0.0
baz=89,SNR=41
B14A **Marquette Ranc** 88.72 38 ⇓P P 20 03 34.2 -1.0
baz=89,SNR=64
I18A **Diamond G Ranc** 88.73 43 ⇓P P 20 03 36.2 +0.9
baz=89,SNR=6.4
428A **Kincaid Ranch,** 88.79 57 ⇑P P 20 03 36.1 +0.2
baz=89,SNR=14
HRY **Holter Researc** 88.81 40 eP P 20 03 34.9 -0.7
comp=Z,21nm,0.8s,mb5.0
E16A **East Helena** 88.83 40 ⇓P P 20 03 36.0 +0.3
baz=89,SNR=25
C15A **Salmond Ranch,** 88.84 39 ⇑P P 20 03 34.7 -1.0
baz=89,SNR=28
G17A **Pierce Place,** 88.86 41 ⇓P P 20 03 36.3 +0.5
baz=89,SNR=16
M20A **Sweetwater, Wa** 88.88 46 ⇓P P 20 03 36.2 +0.1
baz=89,SNR=14
328A **Wristen Ranch,** 88.92 57 ⇑P P 20 03 36.3 -0.2
baz=89,SNR=18
A14A **Double T Ranch** 88.93 37 ⇑P P 20 03 35.4 -0.7
baz=89,SNR=36
SYO **Syowa Base** 88.96 193⇑eP P 20 03 33.2 -2.8
L20A **Wamsutter** 88.99 45 ⇑P P 20 03 37.0 +0.4
baz=89,SNR=11
K19A **Absolon Red Bu** 89.00 44 ⇓P P 20 03 36.7 +0.1
baz=89,SNR=24
N21A **Black Mountain** 89.03 47 P P 20 03 37.1 +0.3
baz=89,SNR=12
J19A **Crowheart** 89.05 44 ⇑P P 20 03 36.5 -0.3
baz=89,SNR=32
Y26A **Elida** 89.06 54 ⇓P P 20 03 38.1 +1.0
baz=89,SNR=6.6
W25A **X Bar L Ranch,** 89.06 53 ⇑P P 20 03 36.7 -0.4
baz=89,SNR=23
P22A **Eagle** 89.09 48 ⇑P P 20 03 37.1 0.0
baz=89,SNR=8.2
B15A **Bradely Ranch,** 89.12 38 ⇓P P 20 03 35.5 -1.5
baz=89,SNR=20
D16A **Dana Ranch, Ca** 89.13 40 ⇓P P 20 03 36.8 -0.3
baz=89,SNR=27
F17A **Fitzpatrick Pl** 89.17 41 ⇓P P 20 03 37.5 +0.2
baz=89,SNR=20
V25A **Rancho No Teng** 89.18 52 ⇓P P 20 03 37.7 +0.1
baz=89,SNR=17
H18A **Shoshone NF, C** 89.26 42 ⇑P P 20 03 37.7 0.0
baz=89,SNR=12
K20A **Yellowstone Ra** 89.26 45 ⇓P P 20 03 38.1 +0.3
baz=89,SNR=14
SDCO **Great Sand Dun** 89.26 50 ⇓P P 20 03 38.2 +0.3
baz=89,SNR=43
E17A **Martinsdale** 89.30 40 ⇓P P 20 03 38.0 +0.1
baz=89,SNR=7.7
X26A **CR and CF Fran** 89.31 53 ⇓P P 20 03 38.6 +0.4
baz=89,SNR=5.8
A15A **Johnson Ranch,** 89.33 38 ⇓P P 20 03 37.7 -0.2
baz=89,SNR=19
T24A **Torres, Weston** 89.33 51 ⇑P P 20 03 38.9 +0.6
baz=89,SNR=9.2
C16A **Fuhringer Ranc** 89.36 39 ⇑P P 20 03 38.3 +0.1
baz=90,SNR=12
I19A **Meeteetse** 89.42 43 ⇓P P 20 03 38.6 +0.1
baz=90,SNR=23
S24A **Houchin Ranch,** 89.43 50 P P 20 03 38.9 +0.2
baz=90,SNR=26
O22A **Kremmling** 89.47 47 ⇓P P 20 03 39.1 +0.3
baz=90,SNR=75
Q23A **Hartsel** 89.47 49 ⇑P P 20 03 39.9 +1.0
baz=90,SNR=13
M21A **Separation Pea** 89.49 46 ⇑P P 20 03 38.9 0.0
baz=90,SNR=17
U25A **Circle Dot Ran** 89.55 52 ⇑P P 20 03 39.0 -0.3
baz=90,SNR=9.3
Y27A **Causey** 89.56 54 ⇑P P 20 03 39.1 -0.3
baz=90,SNR=31
G18A **Lazy EL Ranch,** 89.60 42 P P 20 03 39.5 +0.1
baz=90,SNR=22
L21A **Rawlins** 89.63 46 ⇑P P 20 03 39.6 +0.1
baz=90,SNR=14
B16A **M & M Farms, S** 89.67 38 ⇓P P 20 03 39.4 -0.2
baz=90,SNR=18
H19A **Powell** 89.69 43 ⇓P P 20 03 40.2 +0.4
baz=90,SNR=20
RLMT **Red Lodge** 89.71 42 ⇓P P 20 03 40.1 +0.3
baz=90,SNR=22
RLMT **Red Lodge** 89.71 42 eP P 20 03 39.9 +0.1
comp=Z,46nm,1.0s,mb5.3
D17A **Six Diamond Ra** 89.71 40 ⇑P P 20 03 39.5 -0.2
baz=90,SNR=46
J20A **Shoshoni** 89.72 44 ⇑P P 20 03 39.8 -0.1
baz=90,SNR=45
R24A **Sanders Place,** 89.74 50 P P 20 03 40.8 +0.7
baz=90,SNR=11
GCMT **Greycliff** 89.74 41 eP P 20 03 40.2 +0.2
comp=Z,26nm,1.2s,mb4.9
F18A **Big Timber** 89.76 41 ⇑P P 20 03 40.1 +0.1
baz=90,SNR=16
N22A **Wattenberg Ran** 89.79 47 ⇓P P 20 03 40.9 +0.6
baz=90,SNR=50
T25A **Trinidad** 89.83 51 ⇓P P 20 03 41.2 +0.7
baz=90,SNR=6.5
C17A **Wharram Farm,** 89.88 39 P P 20 03 39.6 -0.9
baz=90,SNR=28
MSTX **Muleshoe** 89.89 54 ⇑P P 20 03 40.6 -0.4
baz=90,SNR=28
E18A **Harlowton** 89.93 41 ⇓P P 20 03 41.0 +0.2
baz=90,SNR=39
O23A **Lake Granby, G** 89.93 48 ⇓P P 20 03 40.1 -0.8
baz=90,SNR=7.5
M22A **Cedar Creek Ra** 89.93 46 ⇓P P 20 03 41.7 +0.8
baz=90,SNR=11
I20A **Worland** 89.94 43 ⇑P P 20 03 41.7 +0.8
baz=90,SNR=22
ISCO **Idaho Springs** 89.98 48 ⇑P P 20 03 41.5 +0.3
baz=90,SNR=15
ISCO **Idaho Springs** 89.98 48 eP P 20 03 41.2 0.0
ISCO pmax pmax
comp=Z,24nm,1.0s,mb5.0
ISCO **Idaho Springs** 89.98 48 eP P 20 03 41.2 -0.1
comp=Z,24nm,1.0s,mb5.0
K21A **Alcova** 89.98 45 ⇓P P 20 03 40.8 -0.3
baz=90,SNR=26
Q24A **Divide** 89.99 49 P P 20 03 41.5 +0.3
baz=90,SNR=22
U26A **Atchley Ranch,** 90.05 52 P P 20 03 41.6 +0.1
baz=90,SNR=14
W27A **Bowe Ranch, En** 90.07 53 ⇓P P 20 03 41.7 -0.1
baz=90,SNR=7.8
J21A **Lysite** 90.15 44 ⇑P P 20 03 42.1 +0.2
baz=90,SNR=36
B17A **L&G Farms, Che** 90.15 39 ⇑P P 20 03 41.9 +0.1
baz=90,SNR=12
N23A **Red Feather La** 90.18 47 P P 20 03 42.4 +0.3
baz=90,SNR=32
F19A **Roth Farm, Mol** 90.23 42 ⇓P P 20 03 42.7 +0.5
baz=90,SNR=22
H20A **Greybull** 90.25 43 ⇑P P 20 03 43.0 +0.6
baz=90,SNR=5.3
D18A **Linhart Farms,** 90.27 40 ⇓P P 20 03 42.6 +0.3
baz=90,SNR=11
R25A **Fountain Ranch** 90.31 50 ⇑P P 20 03 43.0 +0.2
baz=90,SNR=9.6
G20A **Bridger** 90.42 42 ⇓P P 20 03 43.1 0.0
baz=90,SNR=7.7
I21A **Big Trails, Te** 90.44 44 ⇓P P 20 03 43.4 +0.2
baz=90,SNR=26
K22A **Casper** 90.48 45 ⇓P P 20 03 44.0 +0.5
baz=91,SNR=5.6
A17A **Triple J Farms** 90.51 38 ⇓P P 20 03 42.7 -0.6
baz=91,SNR=21
M23A **Laramie** 90.56 46 ⇑P P 20 03 43.9 +0.1
baz=91,SNR=16
E19A **Rath Farm, Rou** 90.58 41 ⇓P P 20 03 44.0 +0.1
baz=91,SNR=26
EGMT **Eagleton** 90.66 39 P P 20 03 44.1 0.0
baz=91,SNR=5.3
F20A **Billings** 90.71 42 ⇑P P 20 03 44.6 +0.2
baz=91,SNR=7.0
B18A **Beardsley Farm** 90.81 39 ⇓P P 20 03 45.2 +0.4
baz=91,SNR=18
J22A **Midwest** 90.82 44 ⇓P P 20 03 45.2 +0.2
baz=91,SNR=21
D19A **Cripps Ranch,** 90.83 40 ⇑P P 20 03 45.0 +0.1
baz=91,SNR=39
L23A **Garrett** 90.83 46 ⇑P P 20 03 45.0 0.0
baz=91,SNR=19
P25A **Willow Gulch B** 90.90 49 ⇑P P 20 03 46.1 +0.6
baz=91,SNR=19
C19A **Slack Wire Ran** 90.97 40 ⇓P P 20 03 45.6 +0.1
baz=91,SNR=20
CMIG **Matias Romero** 90.98 72 P P 20 03 47.0 +0.6
comp=Z,6.5nm,0.8s,mb4.6,baz=302,slow=4.8,SNR=8.1
A18A **Metzger Ranch,** 91.00 38 ⇓P P 20 03 45.0 -0.7
baz=91,SNR=23
E20A **Meyer Farm, Mu** 91.01 41 ⇓P P 20 03 46.1 +0.3
baz=91,SNR=9.9
JCT **Junction City** 91.03 58 eP P 20 03 46.0 -0.3
JCT pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
JCT **Junction City** 91.03 58 eP P 20 03 46.0 -0.2
comp=Z,7.5nm,0.6s,mb4.8
AMTX **Amarillo** 91.06 54 ⇓P P 20 03 46.5 +0.2
baz=91,SNR=12
VNA3 **Neumayer Olymp** 91.09 177 eP P 20 03 41.6 -4.2
VNA3 e pP 20 05 53.5 -2.5
M24A **Cheyenne** 91.18 47 ⇓P P 20 03 47.4 +0.6
baz=91,SNR=8.6
D20A **Manuel Ranch,** 91.25 41 ⇓P P 20 03 46.7 -0.2
baz=91,SNR=32
N25A **Grover** 91.45 48 ⇑P P 20 03 48.2 +0.3
baz=92,SNR=5.2
VNA2 **Neumayer--Watz** 91.51 178 eP P 20 03 43.6 -4.1
baz=190,slow=3.6
C20A **Veseth Ranch,** 91.60 40 ⇑P P 20 03 48.2 -0.2
baz=92,SNR=42
E21A **Keefer Ranch,** 91.69 41 P P 20 03 49.1 +0.2
baz=92,SNR=20
VNA1 **Neumayer--Stat** 91.75 177 eP P 20 03 45.4 -3.4
D21A **La Casta Ranch** 91.96 41 ⇓P P 20 03 51.0 +0.8
baz=92,SNR=8.7

SONM Songino Array 92.12 320 P P 20 03 52.0 +1.1
comp=Z,1.0nm,0.7s,mb4.0,baz=146,slow=5.0,SNR=5.3
SONM PP PP 20 07 47.3 +5.0
comp=Z,1.6nm,1.1s,baz=104,slow=6.3,SNR=4.1
C21A Desert Coulee 92.20 40 ⇑P P 20 03 52.0 +0.8
baz=92
LAO LASA Array 92.29 42 *e*P **P 20 03 51.7 +0.1**
comp=Z,129nm,1.2s,mb5.8
RSSD Black Hills 92.72 44 *e*P **P 20 03 52.4 -1.3**
RSSD pmax pmax
comp=Z,15nm,0.9s,mb5.0
RSSD Black Hills 92.72 44 *e*P **P 20 03 52.4 -1.4**
comp=Z,15nm,0.9s,mb5.0
WMOK Wichita Mounta 93.26 55 *e*P **P 20 03 55.8 -0.6**
WMOK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
WMOK Wichita Mounta 93.26 55 *e*P **P 20 03 55.8 -0.6**
comp=Z,2.4nm,0.8s,mb4.3
GTA Gaotai 93.41 310 *e*P **P 20 03 58.6 +1.6**
GTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
DGMT Dagmar 94.24 40 *e*P **P 20 03 60.0 -0.5**
comp=Z,61nm,1.1s,mb5.6
YKA Yellowknife Ar 94.92 25 P **P 20 04 02.5 -0.8**
comp=Z,14nm,0.9s,mb5.1,baz=247,slow=4.5,SNR=28
YKA PP PP 20 08 00.4 -2.8
comp=Z,1.8nm,0.9s,baz=248,slow=7.5,SNR=4.3
YKA Yellowknife Ar 94.92 25 P **P 20 04 02.5 -0.8**
YKA PP PP 20 08 00.4 -2.8
KSU1 Kansas State U 96.28 51 *e*P **P 20 04 10.2 +0.2**
comp=Z,37nm,1.3s,mb5.5
ZALV Zalesovo Beam 106.86 322 PKiKP PKiKP 20 09 03.2 +0.6
comp=Z,0.4nm,0.3s,baz=210,slow=2.1,SNR=4.2
MKAR Makanchi Array 107.59 314 PKiKP PKiKP 20 09 03.2 -1.0
comp=Z,1.6nm,0.6s,baz=208,slow=0.8,SNR=12
KURK Kurchatov 110.37 318 ⇑*i*PKIKP PKiKP 20 09 07.8 -1.5
KURK pmax pmax
comp=Z,7.0nm,2.5s
BRVK Borovoye 115.51 321 *i*PKIKP PKPdf 20 09 17.9 -1.2
KKAR Karatay Array 115.69 310 *e*PKIKP PKPdf 20 09 17.9 -1.9
ARU Arti 121.58 326 *i*PKIKP PKPdf 20 09 30.2 -0.5
ARU 20 11 11.1
ARU 20 15 32.4
ARU SS SS 20 26 59.7 -4.3
AKTK Aktyubinsk 123.44 319 PKP PKPdf 20 09 33.4 -1.0
AKTO Aktyubinsk 123.44 319 PKP PKPdf 20 09 33.4 -1.0
comp=Z,4.0nm,0.7s,baz=41,slow=2.1,SNR=24
KEV Kevo 125.26 349 *ep* PKPdf 20 09 35.7 -1.7
comp=Z,3.5nm,0.7s
PRGR Permogore 125.52 335 *e*PKIKP PKPdf 20 09 37.0 -1.1
PRGR pmax pmax
comp=Z,8.0nm,0.9s
SCO Scoresbysund 125.60 9 *i*PKIKP PKPdf 20 09 37.6 -0.4
SCO Scoresbysund 125.60 9 *i*P PKPdf 20 09 37.6 -0.4
ARCES ARCESS Array B 125.73 349 PKP PKPdf 20 09 37.2 -1.0
comp=Z,9.5nm,0.8s,baz=17,slow=1.1,SNR=30
ARCES SKPbc 20 12 00.0
comp=Z,2.4nm,0.8s,baz=46,slow=3.5,SNR=4.4
ARCES PKKPbc PKKPbc 20 19 16.6 -2.2
comp=Z,1.8nm,1.0s,baz=186,slow=2.4,SNR=4.4
ARCES ARCESS Array B 125.73 349 PKP PKPdf 20 09 37.2 -1.0
ARCES SKPbc 20 12 00.0
ARCES PKKPbc PKKPbc 20 19 16.6 -2.2
KLMR Klimovskoe 128.38 336 *e*PKIKP PKPdf 20 09 43.3 -0.2
KLMR *e* 20 12 01.4
KLMR pmax pmax
comp=Z,17nm,1.8s
JOF Joensuu 129.74 342 *ep* PKPdf 20 09 44.9 -1.2
comp=Z,7.0nm,0.6s
JOF Joensuu 129.74 342 *ep* SKPbc 20 12 12.6 -0.4
comp=Z,6.8nm,0.6s
KAF Kangasniemi 131.80 344 *ep* PKPdf 20 09 47.9 -2.1
comp=Z,3.7nm,0.6s
KAF Kangasniemi 131.80 344 *ep* SKPbc 20 12 19.5 -1.0
comp=Z,4.9nm,0.7s
FINES FINESS Array B 132.42 343 PKhKP PKPpre 20 09 42.0
comp=Z,1.9nm,0.7s,baz=112,slow=5.1,SNR=6.6
FINES PKP PKPdf 20 09 50.6 -0.6
comp=Z,5.9nm,0.8s,baz=93,slow=12,SNR=6.8
FINES SKPbc SKPbc 20 12 22.6 0.0
comp=Z,4.9nm,0.5s,baz=64,slow=2.9,SNR=20
FINES FINESS Array B 132.42 343 PKP PKPdf 20 09 50.6 -0.6
FINES SKPbc SKPbc 20 12 22.6 0.0
VRHR Novokhopersk 132.89 325 *e*PKIKP PKPdf 20 09 52.9 +0.5
VRHR pmax pmax
comp=N,9.0nm,0.6s
VRHR pmax pmax
comp=E,6.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 133.19 332 *e*PKIKP PKPdf 20 09 52.7 -0.1
OBN *e* 20 12 25.2
OBN *e*PS PS 20 22 58.5 +2.1
OBN *e*SS SS 20 29 24.5 -1.0
OBN pmax pmax
comp=Z,5.0nm,1.1s
VSR Storozhevoye 134.16 326 *e*PKIKP PKPdf 20 09 53.3 -1.4
VSR pmax pmax
comp=N,3.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.8s
VSR pmax pmax
comp=Z,6.0nm,0.8s
KIV Kislovodsk 135.34 315 *e*PKIKP PKPdf 20 09 58.7 +1.5
KIV *e*PS 20 23 13.5
KIV pmax pmax
comp=Z,5.0nm,1.1s
NOA NORSAR Array B 135.89 352 PKhKP PKPpre 20 09 46.1
comp=Z,1.4nm,0.9s,baz=34,slow=2.1,SNR=4.7
NOA PKP PKPdf 20 09 58.0 +0.3
comp=Z,2.1nm,0.7s,baz=14,slow=4.0,SNR=8.3
NOA SKPbc SKPbc 20 12 34.6 +0.9
comp=Z,18nm,1.2s,baz=16,slow=4.5,SNR=10
NOA NORSAR Array B 135.89 352 PKP PKPdf 20 09 58.0 +0.3
NOA SKPbc SKPbc 20 12 34.6 +0.9
NACGM Naroch 137.39 337 *e* SKPbc 20 12 35.0 -3.3
KMBO Kilima Mbogo 138.48 247 SKPbc SKPbc 20 12 44.6 +1.9
comp=Z,12nm,1.2s,baz=360,slow=24,SNR=10
KMBO Kilima Mbogo 138.48 247 *e*PKHKP PKPpre 20 09 57.2
LVV L'vov 142.37 334 *e*PKIKP PKPdf 20 10 06.6 -3.2
KWP Kalwaria Pacla 143.06 335 *e*PKP PKPdf 20 10 08.9 -2.0
KWP *e* 20 10 10.3
KWP Kalwaria Pacla 143.06 335 *e*PKPpre PKPdf 20 10 08.1 -2.9
KWP *e*SKP SKPbc 20 12 53.5 +0.3
KWP Kalwaria Pacla 143.06 335 ⇑*i*P PKPdf 20 10 08.9 -2.1
KWP Kalwaria Pacla 143.06 335 ⇓*i*P SKPbc 20 12 54.2 +1.0
BRTR Keskin Array B 143.24 314 PKP PKPdf 20 10 09.7 -2.0
comp=Z,6.9nm,0.6s,baz=132,slow=5.1,SNR=43
BRTR SKPbc SKPbc 20 12 53.8 -0.3
comp=Z,2.4nm,0.8s,baz=141,slow=4.1,SNR=5.2
TLCR 143.29 325 ⇓PKIKP PKPdf 20 10 09.6 -1.9
TLCR 143.29 325 ⇓*i*P PKPdf 20 10 09.6 -1.9
BUR08 Bucovina Ar. S 143.47 331 *e*PKPdf PKPdf 20 10 10.7 -1.0
BUR08 *e*SKP 20 12 55.5
BURAR Bucovina Array 143.48 331 ⇓PKIKP PKPdf 20 10 10.5 -1.3
BURAR Bucovina Array 143.48 331 ⇓*i*P PKPdf 20 10 10.5 -1.3
BURAR Bucovina Array 143.48 331 ⇑*i*P SKPbc 20 12 57.5 +3.2
RUE Ruedersdorf 143.51 345 *e*PKPbc PKPdf 20 10 09.9 -1.8
TESR 143.56 328 ⇓*i*P PKPdf 20 10 10.1 -1.9
TESR 143.56 328 ⇓*i*P SKPbc 20 12 56.0 +1.5
OJC Ojcow 143.69 338 *e*PKPdf PKPdf 20 10 11.1 -1.0
OJC Ojcow 143.69 338 *e*PX SKPbc 20 12 55.0 +0.3
KOLS Kolonicke sedl 143.78 334 *e*PKP PKPdf 20 10 11.4 -0.9
KOLS *e* 20 12 56.0
KOLS Kolonicke sedl 143.78 334 *e*PKP PKPdf 20 10 11.4 -0.9
KOLS *e*SKP 20 12 56.0
VRI Vrincioaia 143.96 327 PKIKP PKPdf 20 10 13.3 +0.6
VRI Vrincioaia 143.96 327 ⇓*i*P PKPdf 20 10 12.3 -0.4
VRI Vrincioaia 143.96 327 ⇓*i*P SKPbc 20 12 57.0 +1.5
TIRR Tirgusor 143.96 324 ⇓PKIKP PKPdf 20 10 11.8 -0.9
TIRR Tirgusor 143.96 324 ⇓*i*P PKPdf 20 10 11.8 -0.9
PLOR Plostina 144.01 327 ⇑*i*P SKPbc 20 12 57.0 +1.4
UZH Uzhgorod 144.01 334 *e*PKIKP PKPdf 20 10 11.7 -1.0
UZH *e* 20 12 29.0
DLF Lyons Farm 144.12 6 ⇑*i*P PKPdf 20 10 10.4 -2.3
CRVS Cervenica-Dubn 144.14 335 *e*PKP PKPdf 20 10 13.0 +0.1
CRVS *e* 20 12 54.9
CRVS Cervenica-Dubn 144.14 335 *e*PKP PKPdf 20 10 13.0 +0.1
CRVS *e*SKP 20 12 54.8
NIE Niedzica 144.17 337 *e*PKPdf PKPdf 20 10 12.7 -0.2
NIE Niedzica 144.17 337 *e*PX SKPbc 20 12 57.3 +1.4
BMR Baia Mare 144.23 332 PKIKP PKPdf 20 10 14.0 +0.9
NRDL Niedersach Rie 144.27 349 *e*PKPbc PKPdf 20 10 12.0 -1.0
TRPA Tarpa 144.30 333 ⇑*i*P PKPdf 20 10 13.1 -0.1

KSP Ksiaz 144.31 342 *e*PKP PKPdf 20 10 13.2 +0.1
KSP *e* 20 10 14.8
DOPR Dopca 144.57 328 ⇑*i*P PKPdf 20 10 14.3 +0.6
DOPR Dopca 144.57 328 ⇓*i*P SKPbc 20 12 58.7 +1.8
OKC Ostrava-Krasne 144.59 339 *e*PKIKP PKPdf 20 10 12.9 -0.7
OKC Ostrava-Krasne 144.59 339 *e*PKP PKPdf 20 10 12.9 -0.7
OKC *e*SKP 20 12 57.7
UPC Upice 144.69 342 *e*PKIKP PKPdf 20 10 14.0 +0.2
UPC Upice 144.69 342 *e*PKP PKPdf 20 10 14.0 +0.2
UPC *e*SKP 20 12 57.9
DPC Dobruska-Polom 144.74 341 *e*PKIKP PKPdf 20 10 14.3 +0.4
DPC Dobruska-Polom 144.74 341 *e*PKP PKPdf 20 10 14.3 +0.4
DPC *e*SKP 20 12 58.3
CLL Collm 144.78 345 ⇑*i*PKIKP PKPdf 20 10 13.8 -0.1
CLL pmax pmax
comp=Z,281nm,0.6s
CLL Collm 144.78 345 ⇑*i*PKP PKPdf 20 10 13.8 -0.1
CLL ⇑*i*PKP PKPdf 20 10 14.9 +1.0
CLL *i* SKP 20 12 57.6
CLL Collm 144.78 345 ⇑*i*PKPdf PKPdf 20 10 13.8 -0.1
comp=Z,28nm,0.6s
CLL ⇑*i*PKPbc PKPdf 20 10 14.9 +1.0
comp=Z,107nm,0.7s
CLL *i* SKPbc SKPbc 20 12 57.6 +0.4
comp=Z,25nm,1.0s
IBBN Ibbenburen 144.84 351 *e*PKPbc PKPdf 20 10 13.8 -0.2
CLZ Clausthal 144.84 348 *e*PKPbc PKPdf 20 10 14.2 +0.2
CLZ Clausthal 144.84 348 *e*PKIKP PKPdf 20 10 14.2 +0.2
CLZ Clausthal 144.84 348 *e*PKPbc PKPdf 20 10 14.2 +0.2
MORC Moravsky Berou 144.85 340 ⇑PKIKP PKPdf 20 10 14.8 +0.7
MORC Moravsky Berou 144.85 340 ⇑*i*P PKPdf 20 10 14.8 +0.7
MORC Moravsky Berou 144.85 340 ⇓*i*P SKPbc 20 12 59.2 +1.8
KECS Kecovo 144.86 336 *e*PKP PKPdf 20 10 16.4 +2.3
KECS *e* 20 12 59.5
KECS Kecovo 144.86 336 *e*PKP PKPdf 20 10 16.4 +2.3
KECS *e*SKP 20 12 59.4
BRG Berggiesshubel 144.94 344 *i* PKP PKPdf 20 10 14.4 +0.2
comp=Z,8.9nm,0.7s
BRG *i* 20 10 15.8
comp=Z,51nm,0.8s
BRG pPKP SKPdf 20 12 51.9 -0.2
comp=Z,3.7nm,0.9s
BRG *e* 20 12 57.9
comp=Z,20nm,0.9s
BRG Berggiesshubel 144.94 344 *i* PKIKP PKPdf 20 10 14.4 +0.2
BRG pmax pmax
comp=Z,8.0nm,0.7s
FBE Freiberg 145.05 345 *e*PKPbc PKPbc 20 10 15.1 -0.2
PVCC Panska Ves 145.09 343 *e*PKIKP PKPdf 20 10 15.2 +0.7
PVCC Panska Ves 145.09 343 *e*PKP PKPdf 20 10 15.2 +0.7
PVCC *e*SKP 20 12 59.2
VOIR 145.11 328 PKP2 PKPab 20 10 17.5 +0.6
VOIR 145.11 328 ⇓*i*P PKPab 20 10 17.1 +0.2
VOIR 145.11 328 ⇓*i*P SKPbc 20 13 00.3 +2.1
NEUB Neuenburg 145.15 347 *e*PKPbc PKPbc 20 10 14.9 -0.7
DRGR 145.24 332 ⇓PKIKP PKPdf 20 10 15.3 +0.4
DRGR 145.24 332 ⇓*i*P PKPdf 20 10 15.3 +0.4
DRGR 145.24 332 ⇓*i*P SKPbc 20 12 59.6 +1.2
CSS Prodhromos 145.40 307 *e*PKPbc PKPbc 20 10 16.8 -0.1
VYHS Vyhne 145.48 337 *e*PKP PKPdf 20 10 16.2 +1.0
VYHS *e* 20 12 59.0
VYHS Vyhne 145.48 337 *e*PKP PKPdf 20 10 16.2 +1.0
VYHS *e*SKP 20 12 59.0
PSZ Piszkesteto 145.55 336 PKP2 PKPab 20 10 17.9 -0.7
PSZ Piszkesteto 145.55 336 ⇓*i*P PKPbc 20 10 17.3 +0.4
PSZ Piszkesteto 145.55 336 ⇑*i*P PKPbc 20 10 17.7 +0.8
VRAC Vranov 145.56 340 ⇑PKP2 PKPab 20 10 19.6 +1.1
VRAC Vranov 145.56 340 ⇑*i*P PKPab 20 10 19.6 +1.1
VRAC Vranov 145.56 340 ⇑*i*P SKPbc 20 13 00.1 +1.1
KOLL Kolacno 145.57 338 *e*PKP PKPdf 20 10 16.4 +1.1
KOLL *e* 20 12 59.6
KOLL Kolacno 145.57 338 *e*PKP PKPdf 20 10 16.4 +1.1
KOLL *e*SKP 20 12 59.6
PRU Pruhonice 145.58 343 *e*PKP2 PKPab 20 10 17.0 -1.6
PRU Pruhonice 145.58 343 *e*PKP PKPdf 20 10 17.0 +1.7
PRU *e*SKP 20 13 00.4
MOX Moxa 145.72 346 *e*PKP PKPbc 20 10 17.5 +0.2
comp=Z,45nm,1.4s
MOX Moxa 145.72 346 *e*PKPbc PKPbc 20 10 16.5 -0.8
MOX Moxa 145.72 346 *e*PKP2 PKPab 20 10 17.5 -1.6
MOX pmax pmax
comp=Z,45nm,1.4s
TANN Tannenbergstha 145.73 345 *e*PKPbc PKPbc 20 10 16.9 -0.4
TANN *e*PKPab PKPab 20 10 19.6 +0.4
WERD Werda 145.74 346 *e*PKPbc PKPbc 20 10 16.6 -0.8
GUNZ Gunzen 145.81 345 *e*PKPbc PKPbc 20 10 17.0 -0.6
GUNZ *e*PKPab PKPab 20 10 20.0 +0.5
NKC Novy Kostel 145.91 345 *e*PKP2 PKPbc 20 10 17.2 -0.6
NKC Novy Kostel 145.91 345 *e*PKP PKPdf 20 10 17.2 +1.3
NKC *e*SKP 20 13 01.2
TREC Trest 145.92 341 *e*PKIKP PKPdf 20 10 17.1 +1.2
TREC Trest 145.92 341 *e*PKP PKPdf 20 10 17.1 +1.2
TREC *e*SKP 20 13 00.5
MODS Modra-Piesok 146.14 339 *e*PKP2 PKPab 20 10 19.7 -1.2
MODS Modra-Piesok 146.14 339 *e*PKP PKPab 20 10 19.7 -1.2
BUD Budapest 146.25 336 ⇑*e*PKP PKPab 20 10 19.5 -1.8
GZR Gura Zlata 146.25 330 ⇓PKIKP PKPdf 20 10 18.1 +1.5
GZR Gura Zlata 146.25 330 ⇓*i*P PKPdf 20 10 18.1 +1.5
GZR Gura Zlata 146.25 330 ⇓*i*P SKPbc 20 12 59.9 -0.8
ZST Bratislava 146.35 339 *e*PKIKP PKPdf 20 10 17.6 +0.9
ZST Bratislava 146.35 339 *e*PKP PKPdf 20 10 17.6 +0.9
ROTZ Rotzenmuhle 146.40 345 *e*PKPbc PKPbc 20 10 18.7 -0.5
BEBN Eben Emael 146.59 353 PKPab PKPbc 20 10 20.3 +0.7
KHC Kasperske Hory 146.62 343 *e*PKP2 PKPbc 20 10 19.3 -0.5
KHC Kasperske Hory 146.62 343 *e*PKP PKPbc 20 10 19.3 -0.5
KHC *e*SKP 20 13 02.0
BZS Buzias 146.63 331 ⇑PKIKP PKPdf 20 10 18.7 +1.5
BZS Buzias 146.63 331 ⇑*i*P PKPdf 20 10 18.7 +1.5
BZS Buzias 146.63 331 ⇓*i*P SKPbc 20 13 01.2 -0.3
GRA1 Grafenberg Arr 146.70 346 *e*PKPab PKPab 20 10 23.2 +0.1
GRF Grafenberg Arr 146.70 346 *e*PKPab PKPab 20 10 23.2 +0.1
GRF Grafenberg Arr 146.70 346 *e*PKP2 PKPab 20 10 23.2 +0.1
GRF Grafenberg Arr 146.70 346 *e*PKP2 PKPab 20 10 23.2 +0.1
GRF Grafenberg Arr 146.70 346 *e*PKP PKPab 20 10 23.2 +0.1
GRFO Grafenberg 146.70 346 *e*PKPab PKPab 20 10 23.3 +0.2
GRFO Grafenberg 146.70 346 *e*PKP2 PKPbc 20 10 19.5 -0.5
GRFO Grafenberg 146.70 346 *e*PKPbc PKPbc 20 10 19.5 -0.5
UCC Uccle 146.72 354 *e*PKPbc PKPbc 20 10 20.5 +0.4
MEM Membach 146.73 353 PKPbc PKPbc 20 10 19.4 -0.7
MEM E 20 10 20.4
TNS Taunus Mts 146.75 350 *e*PKPbc PKPbc 20 10 19.5 -0.6
TNS *e*PKPab PKPab 20 10 23.1 -0.1
TNS Taunus Mts 146.75 350 *e*PKP2 PKPab 20 10 23.1 -0.1
TNS Taunus Mts 146.75 350 *e*PKPbc PKPbc 20 10 19.5 -0.6
TNS *e*PKPab PKPab 20 10 23.1 -0.1
WET Wettzell 146.80 344 *e*PKPab PKPab 20 10 24.1 +0.6
WET Wettzell 146.80 344 *e*PKP2 PKPab 20 10 24.1 +0.6
WET Wettzell 146.80 344 *e*PKPab PKPab 20 10 24.1 +0.6
GEC2 GERESS Array S 146.85 343 *e*PKPbc PKPbc 20 10 19.7 -0.7
GEC2 GERESS Array S 146.85 343 *e*PKP2 PKPbc 20 10 19.7 -0.7
GEC2 GERESS Array S 146.85 343 *e*PKPbc PKPbc 20 10 19.7 -0.7
SOP Sopron 146.98 339 ⇑*e*PKP PKPab 20 10 21.7 -2.6
BCLA Clavier 147.00 353 PKPbc PKPbc 20 10 20.6 -0.2
BCLA PKPab PKPab 20 10 24.4 +0.2
CONA Conrad Observa 147.00 340 ⇑*i*PKPbc PKPbc 20 10 20.5 -0.4
comp=Z,28nm,0.9s,SNR=23
SNF Seneffe 147.02 354 PKPbc PKPbc 20 10 20.6 -0.2
SNF PKPab PKPab 20 10 24.4 +0.1
TOD Tromm 147.28 349 PKP PKPbc 20 10 22.1 +0.6
GIVF Givet 147.37 354 *e*PKP1 PKPbc 20 10 20.9 -0.8
comp=Z,124nm,1.0s
DOU Dourbes 147.40 354 PKPbc PKPbc 20 10 21.1 -0.7
PKSM Moragy 147.44 335 ⇑PKP2 PKPbc 20 10 22.0 -0.1
PKSM Moragy 147.44 335 ⇑*i*P PKPbc 20 10 22.0 -0.1
PKSM Moragy 147.44 335 ⇑*i*P SKPbc 20 13 03.1 -0.2
BAIF Baives 147.47 354 *e*PKP1 PKPbc 20 10 21.3 -0.7
comp=Z,118nm,1.0s
RUP Ruppelstein 147.48 351 PKP PKPbc 20 10 22.8 +0.8
ALN Alexandroupoli 147.54 321 P PKPbc 20 10 21.2 -1.3
WLF Walferdange 147.64 352 PKPbc PKPbc 20 10 22.4 0.0
WLF PKPab PKPab 20 10 26.0 -0.8
WLF Walferdange 147.64 352 *e*PKPbc PKPbc 20 10 22.2 -0.3
WLF *e*PKPab PKPab 20 10 27.3 +0.4
WLF Walferdange 147.64 352 *e*PKP2 PKPbc 20 10 22.2 -0.3
WLF Walferdange 147.64 352 *e*PKPbc PKPbc 20 10 22.2 -0.2
STU Stuttgart 148.00 348 *e*PKPbc PKPbc 20 10 22.6 -0.8
VTS Vitosha 148.04 326 ⇓PKHKP PKPbc 20 10 22.5 -1.2
VTS Vitosha 148.04 326 ⇓*i*P PKPbc 20 10 22.5 -1.2
LANF Langenberg 148.06 350 PKP PKPbc 20 10 23.9 +0.4
RJOB Jochberg 148.11 343 *e*PKPab PKPab 20 10 29.4 +0.5
FUR Furstenfeldbru 148.11 345 *e*PKPbc PKPbc 20 10 22.9 -0.8

FUR *e*PKPab PKPab 20 10 28.9 0.0
FUR Furstenfeldbru 148.11 345 *e*PKP2 PKPab 20 10 28.9 0.0
FUR Furstenfeldbru 148.11 345 *e*PKPbc PKPbc 20 10 22.9 -0.8
FUR *e*PKPab PKPab 20 10 28.9 0.0
SOKA Soboth 148.37 340 ⇑*i*PKPbc PKPbc 20 10 23.0 -1.4
comp=Z,14nm,0.9s
KAVA Kavala 148.38 323 P PKPbc 20 10 23.4 -1.2
DIVS Divibare 148.53 331 P PKPbc 20 10 24.0 -0.9
KBA Koelnbreinsper 148.55 342 *i* PKPbc PKPbc 20 10 23.3 -1.5
comp=Z,20nm,1.0s,SNR=15
BFO Black Forest 148.59 349 *e*PKPbc PKPbc 20 10 24.0 -0.9
BFO Black Forest 148.59 349 *e*PKHKP PKPbc 20 10 24.0 -0.9
BFO Black Forest 148.59 349 *e*PKPbc PKPbc 20 10 24.0 -0.9
OBKA Obir 148.68 340 ⇑*i*PKiKP PKiKP 20 10 25.1 -1.0
comp=Z,13nm,1.3s
CDF Champ du Feu 148.70 350 *e*PKP1 PKPbc 20 10 24.3 -0.8
comp=Z,57nm,0.9s
SPAK Spaichingen-Ko 148.72 348 PKP PKPbc 20 10 24.2 -1.0
WATA Walderalm 148.81 344 ⇓*i*PKPbc PKPbc 20 10 24.4 -1.1
comp=Z,14nm,0.6s,SNR=10
SRS Serrai 148.83 324 P PKPbc 20 10 23.1 -2.6
WTTA Wattenberg 148.86 344 *i* PKPbc PKPbc 20 10 24.8 -0.8
comp=Z,28nm,0.5s,SNR=29
ECH Echery 148.91 350 PKP PKPbc 20 10 25.7 +0.1
MOTA Moosalm 148.92 345 ⇑*i*PKPbc PKPbc 20 10 24.6 -1.1
comp=Z,41nm,1.0s,SNR=20
MEZF Maizieres J'vi 148.92 353 *e*PKP1 PKPbc 20 10 25.0 -0.7
comp=Z,124nm,1.2s
FLN La Foliniere 148.98 0 *e*PKP1 PKPbc 20 10 24.6 -1.2
comp=Z,52nm,0.4s
THEF They Montfort 149.07 352 PKP PKPbc 20 10 26.5 +0.5
ABTA Abfaltersbach 149.09 343 ⇑*i*PKPbc PKPbc 20 10 24.7 -1.4
comp=Z,44nm,1.0s,SNR=25
LJU Ljubljana 149.10 340 *i* PKPbc PKPbc 20 10 26.4 +0.3
OUR Ouranopolis 149.11 322 P PKPbc 20 10 24.2 -2.2
LDF La Druitiere 149.15 360 *e*PKP1 PKPbc 20 10 24.9 -1.3
comp=Z,37nm,0.5s
SOH Sokhos 149.16 323 P PKPbc 20 10 25.6 -0.9
SFTF Sexfontaines 149.21 353 *e*PKP1 PKPbc 20 10 25.7 -0.7
comp=Z,196nm,1.1s
HAU Haudompre 149.24 351 *e*PKP1 PKPbc 20 10 25.4 -1.0
comp=Z,37nm,0.8s
VAY Valandovo 149.26 325 *e*PKP PKPdf 20 10 21.8 +0.2
VAY *e*PKP PKPbc 20 10 25.6 -1.1
MOF Molkenrain 149.26 350 PKP PKPbc 20 10 26.8 +0.3
DAVA Damuels 149.26 346 ⇑*i*PKiKP PKiKP 20 10 26.4 -0.9
comp=Z,40nm,1.3s
FETA Feichten 149.31 345 ⇑*i*PKPbc PKPbc 20 10 25.9 -0.7
comp=Z,35nm,1.0s,SNR=9.1
BOJS Bojanci 149.32 338 *i* PKPbc PKPbc 20 10 26.8 0.0
ROSF Rostrenen 149.32 4 *e*PKP1 PKPbc 20 10 25.2 -1.4
comp=Z,151nm,1.3s
HINF Hinteralfeld 149.34 350 *e*PKP1 PKPbc 20 10 25.5 -1.2
comp=Z,34nm,1.1s
GRR Gorron 149.35 1 *e*PKP1 PKPbc 20 10 25.7 -1.0
comp=Z,29nm,0.3s
JAVS Javornik 149.38 340 *i* PKPbc PKPbc 20 10 26.8 0.0
SGMF Saint Gilles 149.44 3 *e*PKP1 PKPbc 20 10 25.5 -1.4
comp=Z,127nm,1.1s
HORT Hortiatis 149.45 323 P PKPbc 20 10 25.2 -2.0
PAIG Paliouri 149.55 322 P PKPbc 20 10 25.5 -2.0
GRG Griva 149.60 325 P PKPbc 20 10 25.9 -1.7
QUIF Quistinic 149.74 4 *e*PKP1 PKPbc 20 10 26.3 -1.4
comp=Z,150nm,1.5s
LOMF Lomont 149.80 350 PKP PKPbc 20 10 28.3 +0.5
KRUS Krusevo 149.94 326 *e*PKP PKPbc 20 10 26.3 -2.0
LIT Litokhoron 150.13 323 P PKPbc 20 10 27.2 -1.6
BIA Bitola 150.15 326 *e*PKP PKPbc 20 10 27.7 -1.1
TUE Stuetta 150.16 346 *e*PKPbc PKPbc 20 10 28.2 -0.4
LOR Lormes 150.27 354 *e*PKP1 PKPbc 20 10 28.0 -0.9
comp=Z,103nm,1.1s
FNA Florina 150.28 325 P PKPbc 20 10 27.5 -1.7
HYF Humbligny 150.37 356 *e*PKP1 PKPbc 20 10 28.6 -0.5
SSF Saint Saulge 150.50 355 *e*PKP1 PKPbc 20 10 28.5 -1.0
comp=Z,44nm,0.8s
CABF La Chapelle 150.64 351 *e*PKP1 PKPbc 20 10 29.4 -0.4
comp=Z,61nm,0.9s
NEST Nestorio 150.72 325 P PKPbc 20 10 29.2 -1.0
AVF Avril sur Loir 150.79 355 *e*PKP1 PKPbc 20 10 28.7 -1.4
comp=Z,18nm,0.8s
SMF Signal de Mont 150.89 354 *e*PKP1 PKPbc 20 10 29.3 -1.0
comp=Z,32nm,1.1s
AGG Agios Georgios 150.93 322 P PKPbc 20 10 26.9 -3.8
BGF Bois d'Agland 151.06 355 *e*PKP1 PKPbc 20 10 29.7 -1.0
comp=Z,50nm,0.9s
MFF Saint Martin d 151.14 360 *e*PKP1 PKPbc 20 10 29.8 -1.1
comp=Z,90nm,1.0s
TCF Toulx Ste Croi 151.37 356 *e*PKP1 PKPbc 20 10 30.3 -1.1
comp=Z,45nm,1.1s
AGO Saint Agoulin 151.54 355 PKP PKPbc 20 10 32.3 +0.5
PLDF La Plantade 151.58 354 PKP PKPbc 20 10 32.7 +0.8
LPL La Plagne 151.59 349 *e*PKP1 PKPbc 20 10 31.8 -0.2
comp=Z,16nm,0.8s
LPG La Plagne 151.61 349 *e*PKP1 PKPbc 20 10 31.8 -0.2
comp=Z,23nm,0.9s
ORIF Oris-en-Rattie 152.32 350 *e*PKP1 PKPbc 20 10 32.8 -0.8
comp=Z,18nm,0.7s
MBDF Montbardon 152.35 349 *e*PKP1 PKPbc 20 10 32.8 -0.9
comp=Z,21nm,0.8s
RJF Les Rejaudoux 152.39 357 *e*PKP1 PKPbc 20 10 32.6 -1.1
comp=Z,23nm,0.8s
VIVF Saint-Julien-l 152.56 352 *e*PKP1 PKPbc 20 10 33.2 -0.9
comp=Z,14nm,0.8s
CAF Calviac 152.74 356 *e*PKP1 PKPbc 20 10 33.6 -0.9
LFF La Frestale 152.79 358 *e*PKP1 PKPbc 20 10 33.6 -1.0
comp=Z,17nm,0.8s
SBF Sospel 153.05 347 *e*PKP1 PKPbc 20 10 33.7 -1.5
SMRF Simiane la Rot 153.29 350 *e*PKP1 PKPbc 20 10 35.2 -0.5
comp=Z,38nm,1.3s
LMR La Mourre 153.75 349 *e*PKP1 PKPbc 20 10 36.3 -0.4
comp=Z,28nm,1.2s
MTLF Montolieu 154.31 356 *e*PKP1 PKPbc 20 10 37.0 -0.9
comp=Z,9.2nm,1.0s
PCAB Cabril 155.16 14 *e*PKPab PKPab 20 10 59.6 +0.8
PTO Porto 155.57 15 *e*PKPab PKPab 20 11 01.1 +0.5
PVRL Vila Real 155.65 13 *e*PKPab PKPab 20 11 01.8 +0.9
PVIS Viseu 156.14 14 *e*PKPab PKPab 20 11 04.0 +0.9
MTE Manteigas 156.52 14 *e*PKPab PKPab 20 11 05.6 +0.9
PTOM Tomar 157.05 16 *e*PKPab PKPab 20 11 07.5 +0.4
PCBR Castelo Branco 157.07 14 *e*PKPab PKPab 20 11 07.5 +0.4
PMAFR Mafra 157.42 18 *e*PKPab PKPab 20 11 09.3 +0.6
PMRV Marv??o 157.48 14 *e*PKPab PKPab 20 11 09.0 +0.1
ESDC Sonseca Array 157.85 7 PKPab PKPab 20 11 09.1 -1.5
comp=Z,5.0nm,0.8s,baz=343,slow=3.8,SNR=18
PESTR Estremoz 157.97 15 *e*PKPab PKPab 20 11 11.3 +0.2
EVO Evora 158.17 16 *e*PKIKP PKPdf 20 10 29.5 -4.7
comp=Z,17nm,1.2s
EVO Evora 158.17 16 *e*PKPab PKPab 20 11 12.2 +0.2
PBEJ Beja 158.69 16 *e*PKPab PKPab 20 11 13.9 -0.3
PBAR Barrancos 158.76 15 *e*PKPab PKPab 20 11 15.0 +0.5
PTEO Sao Teotonio 158.89 19 *e*PKPab PKPab 20 11 15.7 +0.6
PCVE Castro Verde 159.01 17 *e*PKPab PKPab 20 11 15.4 -0.3
MORF Marmelete 159.13 19 *e*PKPab PKPab 20 11 16.5 +0.3
PFVI Vila Bisbo 159.24 19 *e*PKPab PKPab 20 11 17.1 +0.4
PVAQ Vaqueiros 159.31 17 *e*PKPab PKPab 20 11 17.1 +0.1
PBDV Barranco-do-Ve 159.40 17 *e*PKPab PKPab 20 11 18.4 +1.0
KEST Kesra 160.03 336 PKPab PKPab 20 11 19.6 -0.6
comp=Z,2.7nm,0.9s,baz=283,slow=2.6,SNR=7.2
TORD Torodi Ar. Bea 175.07 205 PKP PKPdf 20 10 45.8 -1.6
comp=Z,1.8nm,0.8s,baz=132,slow=2.1,SNR=7.9
TORD PKPab PKPab 20 12 26.0 -1.1
comp=Z,2.5nm,0.6s,baz=156,slow=3.4,SNR=11
TORD PP PP 20 16 14.8 -4.2
comp=Z,0.5nm,1.0s,baz=176,slow=5.7,SNR=4.4

**IDC 08 19:53:37.2±2.2, 7°.04S×130°.75E, h0km, mb3.8/1, m

*ATH **08** 20:04:08.1, 35.°91N×21.°32E, h5km±3km, MD3.4/20, ML3.3*
*ISCJB **08** 20:04:11.5±1.2, 36.°06N±0.°05×21.°48E±0.°06, h8km±6km, Error ellipse: s-maj=10.3km s-min=5.6km az=135.4*
*THE **08** 20:04:12.5, 36.°15N×21.°62E, h0km±5km, ML2.9/2, Error ellipse: s-maj=10.9km s-min=1.3km az=243.0*
*NEIC **08** 20:04:12.8, 36.°07N×21.°55E, h5km, ML3.5(ATH), After ATH.*
*CSEM **08** 20:04:12.3±0.5, 36.°07N×21.°55E, h2km, MD3.4, Error ellipse: s-maj=11.8km s-min=6.0km az=44.0*

ISC 08 20:04:11.9±1.3, 36.°06N±0.°05×21.°51E±0.°06, h2km±7km, n97, σ1.9°21/108, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.86**	**13**	*e*P*n*	**Pg**	**20 04 28.3**	**-0.1**
PYL				*e*SB	**Sg**	**20 04 42.3**	**+2.8**
PYL	**PYLOS**	**0.86**	**13**	*e*P*n*	**Pg**	**20 04 28.3**	**-0.1**
ITM	**Ithomi**	**1.17**	**17**	P	**Pg**	**20 04 33.0**	**-1.4**
ITM	**Ithomi**	**1.17**	**17**	*e*PG	**Pg**	**20 04 33.5**	**-0.9**
ITM	**Ithomi**	**1.17**	**17**	P	**Pg**	**20 04 33.0**	**-1.4**
ITM	**Ithomi**	**1.17**	**17**	*e*Pg	**Pg**	**20 04 33.5**	**-0.9**
KYTH	**Kithira**	**1.26**	**79**	*e*PB	**Pb**	**20 04 35.7**	**-0.7**
KYTH	**Kithira**	**1.26**	**79**	*e*Pb	**Pb**	**20 04 35.7**	**-0.7**
VLI	**Veliai**	**1.33**	**60**	P	**Pg**	**20 04 36.2**	**-1.2**
VLI	**Veliai**	**1.33**	**60**	*e*PG	**Pg**	**20 04 36.8**	**-0.6**
VLI	**Veliai**	**1.33**	**60**	P	**Pg**	**20 04 36.2**	**-1.2**
VLI	**Veliai**	**1.33**	**60**	*e*Pg	**Pg**	**20 04 36.8**	**-0.6**
VLX	**Vlachokerasia**	**1.49**	**28**	*e*PB	**Pb**	**20 04 40.0**	**-0.3**
VLX	**Vlachokerasia**	**1.49**	**28**	*e*Pb	**Pb**	**20 04 40.0**	**-0.3**
GUR	**Goura**	**1.99**	**19**	*e*P*n*	**Pn**	**20 04 47.6**	**+0.9**
GUR	**Goura**	**1.99**	**19**	*e*P*n*	**Pn**	**20 04 47.6**	**+0.9**
RLS	**Riolos of Patr**	**2.00**	**359**	P	**Pn**	**20 04 47.1**	**+0.4**
RLS	**Riolos of Patr**	**2.00**	**359**	*e*PN	**Pn**	**20 04 47.1**	**+0.4**
RLS	**Riolos of Patr**	**2.00**	**359**	*e*P*n*	**Pn**	**20 04 47.1**	**+0.4**
DID	**Didima**	**2.01**	**43**	*e*PN	**Pn**	**20 04 48.5**	**+1.7**
DID	**Didima**	**2.01**	**43**	*e*P*n*	**Pn**	**20 04 48.5**	**+1.7**
KARN	**Karanos**	**2.07**	**108**	*e*PN	**Pn**	**20 04 47.5**	**-0.2**
KARN	**Karanos**	**2.07**	**108**	P	**Pn**	**20 04 47.2**	**-0.5**
KARN				S	**Sn**	**20 05 14.3**	**+0.3**
KARN	**Karanos**	**2.07**	**108**	P	**Pn**	**20 04 47.2**	**-0.5**
KARN	**Karanos**	**2.07**	**108**	*e*P*n*	**Pn**	**20 04 47.5**	**-0.2**
KARN				S	**Sn**	**20 05 14.3**	**+0.3**
UPR	**University Cam**	**2.23**	**6**	*e*PN	**Pn**	**20 04 51.0**	**+1.0**
UPR	**University Cam**	**2.23**	**6**	*e*P*n*	**Pn**	**20 04 51.0**	**+1.0**
VLS	**Valsamata**	**2.24**	**341**	P	**Pn**	**20 04 51.1**	**+1.0**
VLS	**Valsamata**	**2.24**	**341**	*e*PN	**Pn**	**20 04 50.0**	**-0.1**
VLS	**Valsamata**	**2.24**	**341**	*e*P*n*	**Pn**	**20 04 50.0**	**-0.1**
VLS	**Valsamata**	**2.24**	**341**	P	**Pn**	**20 04 51.1**	**+1.0**
LTK	**Loutraki**	**2.29**	**30**	*e*PN	**Pn**	**20 04 52.2**	**+1.5**
LTK	**Loutraki**	**2.29**	**30**	*e*P*n*	**Pn**	**20 04 52.2**	**+1.5**
VAM	**Vamos**	**2.29**	**106**	P	**Pn**	**20 04 50.2**	**-0.5**
VAM	**Vamos**	**2.29**	**106**	*e*PN	**Pn**	**20 04 50.7**	**0.0**
VAM	**Vamos**	**2.29**	**106**	P	**Pn**	**20 04 50.2**	**-0.5**
VAM	**Vamos**	**2.29**	**106**	*e*P*n*	**Pn**	**20 04 50.7**	**0.0**
NAIG	**Nisos Aigina**	**2.33**	**42**	*e*PN	**Pn**	**20 04 53.2**	**+2.0**
NAIG	**Nisos Aigina**	**2.33**	**42**	*e*P*n*	**Pn**	**20 04 53.2**	**+2.0**
EFP	**Efpalio**	**2.39**	**8**	*e*PN	**Pn**	**20 04 53.4**	**+1.3**
EFP	**Efpalio**	**2.39**	**8**	*e*P*n*	**Pn**	**20 04 53.4**	**+1.3**
VLY	**Voula,Athens**	**2.56**	**45**	*e*PN	**Pn**	**20 04 56.4**	**+1.9**
VLY	**Voula,Athens**	**2.56**	**45**	*e*P*n*	**Pn**	**20 04 56.4**	**+1.9**
ATH	**Athens Observa**	**2.61**	**42**	*e*PN	**Pn**	**20 04 56.5**	**+1.4**
ATH	**Athens Observa**	**2.61**	**42**	*e*P*n*	**Pn**	**20 04 56.5**	**+1.4**
LKR	**Lokris**	**2.85**	**24**	P	**Pn**	**20 04 59.6**	**+1.2**
LKR	**Lokris**	**2.85**	**24**	P	**Pn**	**20 04 59.6**	**+1.2**
EVR	**Evrytania**	**2.87**	**5**	*e*PN	**Pn**	**20 05 00.0**	**+1.3**
EVR	**Evrytania**	**2.87**	**5**	*e*P*n*	**Pn**	**20 05 00.0**	**+1.3**
AGG	**Agios Georgios**	**3.03**	**12**	*e*PN	**Pn**	**20 05 02.2**	**+1.2**
AGG	**Agios Georgios**	**3.03**	**12**	P	**Pn**	**20 05 00.1**	**-0.8**
AGG				S	**Sn**	**20 05 37.0**	**-0.9**
AGG	**Agios Georgios**	**3.03**	**12**	P	**Pn**	**20 05 00.1**	**-0.8**
AGG	**Agios Georgios**	**3.03**	**12**	*e*P*n*	**Pn**	**20 05 02.2**	**+1.2**
AGG				S	**Sn**	**20 05 37.0**	**-0.9**
THR5	**Thira Island,**	**3.13**	**82**	P	**Pn**	**20 05 00.1**	**-2.1**
THR5	**Thira Island,**	**3.13**	**82**	P	**Pn**	**20 05 00.1**	**-2.1**
LAST	**Lasithi**	**3.36**	**104**	P	**Pn**	**20 05 05.0**	**-0.4**
LAST				S	**Sn**	**20 05 46.5**	**+0.6**
LAST	**Lasithi**	**3.36**	**104**	P	**Pn**	**20 05 05.0**	**-0.4**
LAST				S	**Sn**	**20 05 46.5**	**+0.6**
NPS	**Neapolis**	**3.44**	**102**	*e*PB	**Pb**	**20 05 07.4**	**-6.1**
NEO	**Neokhori**	**3.52**	**22**	P	**Pn**	**20 05 07.7**	**+0.1**
NEO	**Neokhori**	**3.52**	**22**	P	**Pn**	**20 05 07.7**	**+0.1**
THL	**Klokotos Trika**	**3.53**	**6**	*e*PN	**Pn**	**20 05 09.1**	**+1.4**
THL	**Klokotos Trika**	**3.53**	**6**	*e*P*n*	**Pn**	**20 05 09.1**	**+1.4**
AOS	**Alonnisos**	**3.64**	**31**	P	**Pn**	**20 05 09.3**	**+0.1**
AOS	**Alonnisos**	**3.64**	**31**	P	**Pn**	**20 05 08.4**	**-0.8**
AOS				S	**Sn**	**20 05 51.0**	**-1.7**
AOS	**Alonnisos**	**3.64**	**31**	P	**Pn**	**20 05 09.3**	**+0.1**
AOS				S	**Sn**	**20 05 51.0**	**-1.7**
KEK	**Kerkira**	**3.89**	**340**	P	**Pn**	**20 05 12.9**	**+0.1**
KEK	**Kerkira**	**3.89**	**340**	P	**Pn**	**20 05 12.9**	**+0.1**
LIT	**Litokhoron**	**4.11**	**11**	P	**Pn**	**20 05 16.2**	**+0.4**
LIT	**Litokhoron**	**4.11**	**11**	P	**Pn**	**20 05 16.2**	**+0.4**
PAIG	**Paliouri**	**4.23**	**23**	P	**Pn**	**20 05 17.3**	**-0.1**
PAIG	**Paliouri**	**4.23**	**23**	P	**Pn**	**20 05 17.3**	**-0.1**
KZN	**Kozani**	**4.25**	**3**	P	**Pn**	**20 05 18.6**	**+0.9**
KZN	**Kozani**	**4.25**	**3**	P	**Pn**	**20 05 18.6**	**+0.9**
HORT	**Hortiatis**	**4.71**	**15**	P	**Pn**	**20 05 22.6**	**-1.3**
HORT	**Hortiatis**	**4.71**	**15**	P	**Pn**	**20 05 22.6**	**-1.3**
FNA	**Florina**	**4.72**	**359**	P	**Pn**	**20 05 23.1**	**-1.1**
FNA	**Florina**	**4.72**	**359**	P	**Pn**	**20 05 23.2**	**-1.0**
FNA	**Florina**	**4.72**	**359**	P	**Pn**	**20 05 23.2**	**-1.0**
GRG	**Griva**	**4.94**	**8**	P	**Pn**	**20 05 25.5**	**-1.7**
GRG	**Griva**	**4.94**	**8**	P	**Pn**	**20 05 25.6**	**-1.6**
GRG	**Griva**	**4.94**	**8**	P	**Pn**	**20 05 25.6**	**-1.6**
BIA	**Bitola**	**4.96**	**358**	*e*P*n*	**Pn**	**20 05 25.5**	**-1.9**
SOH	**Sokhos**	**4.97**	**16**	P	**Pn**	**20 05 27.3**	**-0.3**
SOH	**Sokhos**	**4.97**	**16**	P	**Pn**	**20 05 27.4**	**-0.2**
SOH	**Sokhos**	**4.97**	**16**	P	**Pn**	**20 05 27.4**	**-0.2**
CEL	**Celeste**	**4.99**	**298**	P	**Pn**	**20 05 28.9**	**+1.0**
CEL	**Celeste**	**4.99**	**298**	P	**Pn**	**20 05 28.9**	**+1.0**
KRUS	**Krusevo**	**5.31**	**358**	*e*P*n*	**Pn**	**20 05 29.4**	**-2.8**
SRS	**Serrai**	**5.31**	**17**	P	**Pn**	**20 05 30.7**	**-1.6**
SRS	**Serrai**	**5.31**	**17**	P	**Pn**	**20 05 30.4**	**-1.9**
SRS	**Serrai**	**5.31**	**17**	P	**Pn**	**20 05 30.7**	**-1.6**
VAY	**Valandovo**	**5.32**	**9**	*e*P*n*	**Pn**	**20 05 30.0**	**-2.4**
NVR	**Nevrokopi**	**5.60**	**18**	P	**Pn**	**20 05 36.3**	**+0.1**
NVR	**Nevrokopi**	**5.60**	**18**	P	**Pn**	**20 05 36.3**	**+0.1**
STON	**Ston**	**7.42**	**338**	*e*P*n*	**Pn**	**20 05 55.5**	**-5.6**
STON				Sn	**Sn**	**20 07 13.2**	**-13**
NVLJ	**Novalja**	**9.89**	**331**	*i* P*n*	**Pn**	**20 06 33.5**	**-1.5**
NVLJ				Sn	**Sn**	**20 08 15.0**	**-12**
NVLJ	**Novalja**	**9.89**	**331**	Sn	**Sn**	**20 08 15.0**	**-12**

*ISCJB **08** 20:15:37.7±0.5, 24.°83N±0.°03×122.°00E±0.°02, h94km±4km, Error ellipse: s-maj=5.5km s-min=2.9km az=160.1*
*TAP **08** 20:15:37.5, 24.°84N×122.°00E, h95km±1km, ML3.9, D*
*JMA **08** 20:15:37.6±0.3, 24.°94N×122.°00E, h84km, M3.0*

ISC 08 20:15:38.2±0.5, 24.°82N±0.°03×122.°00E±0.°02, h92km±4km, n54, σ0.9°77/101, 3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=359	**0.19**	**357**	*i* P	**Pn**	**20 15 51.1**	**-0.3**
TWB1	baz=359			S	**Sn**	**20 16 00.6**	**-0.5**
ILA	**Ilan** baz=250	**0.23**	**256**	*e*P	**Pn**	**20 15 52.7**	**+1.2**
ILA	baz=250			*e*S	**Sn**	**20 16 01.3**	**-0.1**
TWC	**Suao** baz=208	**0.25**	**213**	*i* P	**Pn**	**20 15 51.4**	**-0.2**
TWC	baz=208			S	**Sn**	**20 16 01.2**	**-0.3**
TWE	**Neicheng** baz=246	**0.32**	**252**	*i* P	**Pn**	**20 15 52.1**	**+0.1**
TWE	baz=246			*e*S	**Sn**	**20 16 03.0**	**+0.9**
NWF	**Wu-fen Shan** baz=319	**0.32**	**322**	P	**Pn**	**20 15 51.8**	**-0.2**
NWF	baz=319			*e*S	**Sn**	**20 16 01.3**	**-0.8**
TWA	**Mucha** baz=289	**0.41**	**293**	*e*P	**Pn**	**20 15 52.3**	**-0.2**
TWA	baz=289			*e*S	**Sn**	**20 16 02.7**	**-0.4**
ENTT	**Nioudou** baz=241	**0.43**	**245**	*i* P	**Pn**	**20 15 53.0**	**+0.4**
ENTT	baz=241			S	**Sn**	**20 16 04.5**	**+1.1**
ENA	**Nanau** baz=208	**0.46**	**211**	*i* P	**Pn**	**20 15 53.0**	**+0.1**
ENA	baz=208			*e*S	**Sn**	**20 16 04.2**	**+0.5**
TAP1	**Taipei** baz=293	**0.48**	**297**	P	**Pn**	**20 15 53.0**	**0.0**
TWY	**Chenhua** baz=320	**0.58**	**321**	P	**Pn**	**20 15 53.4**	**-0.4**
TWY	baz=320			S	**Sn**	**20 16 05.1**	**-0.3**
TWS1	**Kuangyinshan** baz=296	**0.60**	**298**	P	**Pn**	**20 15 54.0**	**+0.1**
TWS1	baz=296			*e*S	**Sn**	**20 16 05.8**	**+0.1**
NSK	**Sanguang** baz=253	**0.60**	**256**	⇓*i* P	**Pn**	**20 15 53.6**	**-0.3**
NSK	baz=253			S	**Sn**	**20 16 05.1**	**-0.6**
NNS	**Nan Shan** baz=234	**0.68**	**236**	*i* P	**Pn**	**20 15 54.8**	**+0.1**
NNS	baz=234			*e*S	**Sn**	**20 16 07.6**	**+0.6**
NCU	**National Centr** baz=279	**0.75**	**282**	P	**Pn**	**20 15 55.3**	**0.0**
NCU	baz=279			*e*S	**Sn**	**20 16 08.8**	**+0.6**
TWD	**Chiawan** baz=205	**0.82**	**207**	P	**Pn**	**20 15 55.2**	**-0.9**
TWD	baz=205			*e*S	**Sn**	**20 16 07.9**	**-1.6**
HWA	**Hwalien** baz=202	**0.91**	**203**	P	**Pn**	**20 15 56.7**	**-0.4**
HWA	baz=202			*e*S	**Sn**	**20 16 11.6**	**+0.4**
NSTT	**Nanjuang** baz=256	**0.93**	**258**	*i* P	**Pn**	**20 15 56.7**	**-0.5**
NSTT	baz=256			*i* S	**Sn**	**20 16 10.8**	**-0.6**
HSN	**Hsinchu** baz=269	**0.94**	**269**	P	**Pn**	**20 15 56.7**	**-0.5**
HSN	baz=269			*e*S	**Sn**	**20 16 11.1**	**-0.5**
TWT	**Tachien** baz=232	**0.94**	**233**	⇓*i* P	**Pn**	**20 15 58.1**	**+0.8**
TWT	baz=232			S	**Sn**	**20 16 12.7**	**+1.0**
WHF	**Hehuan Shan** baz=223	**0.95**	**225**	⇓*i* P	**Pn**	**20 15 57.6**	**+0.1**
WHF	baz=223			*e*S	**Sn**	**20 16 12.6**	**+0.7**
YOJ	**Yonaguni jima**	**0.99**	**111**	P	**Pn**	**20 15 57.5**	**-0.4**
YOJ				S	**Sn**	**20 16 12.6**	**-0.1**
ESL	**Shilin** baz=206	**1.13**	**207**	P	**Pn**	**20 15 58.1**	**-1.3**
ESL	baz=206			*e*S	**Sn**	**20 16 13.8**	**-1.6**
NSY	**Sanyi** baz=249	**1.20**	**251**	P	**Pn**	**20 16 00.3**	**+0.1**
NSY	baz=249			*e*S	**Sn**	**20 16 16.8**	**-0.2**
TWQ1	**Liyutan** baz=245	**1.21**	**247**	*i* P	**Pn**	**20 16 00.2**	**-0.2**
TWQ1	baz=245			S	**Sn**	**20 16 16.8**	**-0.5**
SMLT	**Sun Moon Lake** baz=226	**1.37**	**227**	P	**Pn**	**20 16 02.7**	**+0.3**
SMLT	baz=226			*e*S	**Sn**	**20 16 22.6**	**+1.9**
TCU	**Taichung** baz=239	**1.38**	**241**	P	**Pn**	**20 16 02.2**	**-0.3**
TYC	**Yuchr** baz=227	**1.38**	**229**	*i* P	**Pn**	**20 16 02.6**	**0.0**
TYC	baz=227			*e*S	**Sn**	**20 16 21.6**	**+0.6**
EHY	**Hungye** baz=204	**1.45**	**205**	*e*P	**Pn**	**20 16 02.2**	**-1.1**
WNT	**Mingjian** baz=231	**1.52**	**232**	P	**Pn**	**20 16 04.5**	**+0.1**
WNT	baz=231			*e*S	**Sn**	**20 16 24.5**	**+0.4**
TWF1	**Yuli** baz=203	**1.60**	**204**	*e*P	**Pn**	**20 16 03.8**	**-1.4**
TWF1	baz=203			*e*S	**Sn**	**20 16 24.2**	**-1.6**
YUS	**Yu-Shan** baz=215	**1.63**	**216**	*i* P	**Pn**	**20 16 06.7**	**+0.9**
YUS	baz=215			*e*S	**Sn**	**20 16 28.6**	**+1.9**
IRIF	**Iriomote-Funau**	**1.65**	**107**	P	**Pn**	**20 16 05.5**	**-0.4**
IRIF				S	**Sn**	**20 16 26.8**	**-0.2**
ALS	**Alishan** baz=219	**1.70**	**220**	*i* P	**Pn**	**20 16 07.1**	**+0.5**
ALS	baz=219			*e*S	**Sn**	**20 16 30.6**	**+2.5**
CHN5	**Tsauling** baz=224	**1.71**	**225**	P	**Pn**	**20 16 06.8**	**0.0**
CHN5	baz=224			*e*S	**Sn**	**20 16 29.6**	**+1.2**
WGK	**Gukeng** baz=228	**1.73**	**230**	*e*P	**Pn**	**20 16 07.0**	**+0.1**
WGK	baz=228			*e*S	**Sn**	**20 16 29.2**	**+0.4**
HATJ	**Hateruma jima**	**1.81**	**114**	P	**Pn**	**20 16 08.6**	**+0.6**
HATJ				*e*S	**Sn**	**20 16 31.6**	**+0.9**
ELDTW	**Lidau** baz=208	**1.86**	**209**	*e*P	**Pn**	**20 16 08.0**	**-0.6**
ELDTW	baz=208			S	**Sn**	**20 16 31.4**	**-0.3**
JKRS	**Kuro-shima**	**1.92**	**107**	P	**Pn**	**20 16 09.7**	**+0.3**
JKRS				S	**Sn**	**20 16 33.2**	**0.0**
CHY	**Chiayi** baz=226	**1.95**	**228**	*e*P	**Pn**	**20 16 09.5**	**-0.3**
CHY	baz=226			*e*S	**Sn**	**20 16 33.8**	**-0.1**
STYT	**Tauyuan** baz=213	**2.00**	**215**	*e*P	**Pn**	**20 16 11.1**	**+0.6**
STYT	baz=213			*e*S	**Sn**	**20 16 35.7**	**+0.5**
WSF	**Szhu** baz=233	**2.00**	**234**	*e*P	**Pn**	**20 16 10.4**	**-0.2**
WSF	baz=233			*e*S	**Sn**	**20 16 35.5**	**+0.3**
JIJ	**Ishigaki jima**	**2.00**	**103**	P	**Pn**	**20 16 10.3**	**-0.2**
JIJ				S	**Sn**	**20 16 34.3**	**-0.9**
WTP	**Ta-pu** baz=218	**2.02**	**219**	P	**Pn**	**20 16 10.8**	**+0.1**
WTP	baz=218			*e*S	**Sn**	**20 16 36.1**	**+0.7**
CHN1	**Nanshi** baz=219	**2.11**	**220**	P	**Pn**	**20 16 11.7**	**-0.2**
CHN1	baz=219			*e*S	**Sn**	**20 16 37.7**	**0.0**
SGST	**Jiashian** baz=216	**2.16**	**217**	*e*P	**Pn**	**20 16 12.7**	**+0.1**
SGST	baz=216			*e*S	**Sn**	**20 16 38.8**	**-0.1**
TWG	**Pinlang** baz=202	**2.16**	**203**	*e*P	**Pn**	**20 16 11.8**	**-0.8**
TWG	baz=202			*e*S	**Sn**	**20 16 37.3**	**-1.7**
CHN3	**Shinhua** baz=220	**2.29**	**221**	*e*P	**Pn**	**20 16 14.8**	**+0.5**
SCLT	**Jiali** baz=224	**2.33**	**226**	*e*P	**Pn**	**20 16 18.8**	**+4.0**
SCLT	baz=224			*e*S	**Sn**	**20 16 42.7**	**-0.1**
TWM1	**Shoushan** baz=215	**2.46**	**216**	*e*P	**Pn**	**20 16 17.5**	**+1.0**
JTJ	**Tarama**	**2.46**	**94**	P	**Pn**	**20 16 17.1**	**+0.5**
JTJ				S	**Sn**	**20 16 47.0**	**+0.9**
PNG	**Penghu** baz=240	**2.56**	**241**	*e*P	**Pn**	**20 16 16.6**	**-1.2**
SCZT	**Fangliau** baz=207	**2.75**	**208**	*e*P	**Pn**	**20 16 20.4**	**+0.1**
LAY	**Lan-yu** baz=188	**2.80**	**189**	*e*P	**Pn**	**20 16 19.6**	**-1.5**
LAY	baz=188			*e*S	**Sn**	**20 16 51.1**	**-3.0**
JOGS	**Gusukube**	**3.10**	**90**	P	**Pn**	**20 16 26.2**	**+1.1**
JOGS				S	**Sn**	**20 17 02.3**	**+1.1**

KRSC 08 20:29:46.4±0.8, 56.°05N×160.°73E, h171km±21km, ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZGR	**Bezymyannyi-Gr**	**0.11**	**190**	*e*P	Pn	20 30 11.0	+1.9
BZGR				*e*S	Sn	20 30 28.9	+2.6
BZMR	**Bezymyannaya**	**0.18**	**230**	*e*P	Pn	20 30 10.4	+1.3
BZMR				*e*S	Sn	20 30 27.7	+1.2
KRSR	**Krestovskiy**	**0.19**	**331**	*e*P	Pn	20 30 10.3	+1.2
KRSR				*e*S	Sn	20 30 27.2	+0.5
KIRR	**Kirishev**	**0.24**	**246**	*e*S	Sn	20 30 28.7	+2.0
KLY	**Klyuchi**	**0.27**	**351**	*e*P	Pn	20 30 10.0	+0.7
KLY				*e*S	Sn	20 30 27.8	+0.8
KPT	**Kopyto**	**0.30**	**254**	*e*P	Pn	20 30 10.0	+0.6
KOZ	**Kozyrevsk**	**0.48**	**271**	*e*P	Pn	20 30 10.5	+0.5
KOZ				*e*S	Sn	20 30 28.5	+0.4
SRDR	**Sredinnyy**	**0.63**	**296**	*e*P	Pn	20 30 10.8	+0.1
SRDR				*e*S	Sn	20 30 29.1	-0.2
SRKR	**Sorokina**	**0.65**	**22**	*e*P	Pn	20 30 12.0	+1.2
SMKR	**Semkarok**	**0.67**	**37**	*e*P	Pn	20 30 12.0	+1.1
SMKR				*e*S	Sn	20 30 30.8	+1.0
KBTR	**Krutoberegovo**	**1.18**	**81**	*e*P	Pn	20 30 15.3	+0.7
KBTR				*e*S	Sn	20 30 36.7	+0.4
MKZ	**Mys Kozlova**	**1.60**	**159**	*e*P	Pn	20 30 19.1	+0.5
MKZ				*e*S	Sn	20 30 43.2	-0.1
GNL	**Ganaly**	**2.86**	**215**	*e*P	Pn	20 30 34.6	+1.8
AVH	**Avacha**	**3.02**	**203**	*e*P	Pn	20 30 36.4	+1.6
BKI	**Bering**	**3.09**	**104**	*e*P	Pn	20 30 37.4	+1.8
BKI				*e*S	Sn	20 31 14.4	+0.5

KRSC 08 20:38:07.7±0.4, 50.°95N×158.°69E, h44km±43km, ML4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.65**	**347**	*e*P	Pn	20 38 36.2	+2.1
GRL				*i* S	Sn	20 38 56.3	+2.2
MIPR	**Malaya Ipel'ka**	**1.79**	**319**	*e*P	Pn	20 38 37.5	+1.4
MIPR				*i* S	Sn	20 38 59.4	+1.8
ALID	**Alaid**	**1.99**	**269**	*e*P	Pn	20 38 39.5	+0.7
ALID				*i* S	Sn	20 39 03.4	+1.0
PET	**Petropavlovsk**	**2.08**	**359**	*e*P	Pn	20 38 41.5	+1.5
PET				*i* S	Sn	20 39 06.0	+1.4
AVH	**Avacha**	**2.32**	**1**	*e*P	Pn	20 38 46.6	+3.3
AVH				*e*S	Sn	20 39 15.3	+4.7
GNL	**Ganaly**	**2.79**	**351**	*e*P	Pn	20 38 52.6	+2.9
GNL				*i* S	Sn	20 39 26.4	+4.3
MKZ	**Mys Kozlova**	**4.06**	**26**	P	Pn	20 39 08.8	+1.7
MKZ				*i* S	Sn	20 39 54.1	+0.8
KBTR	**Krutoberegovo**	**5.81**	**23**	*e*P	Pn	20 39 34.4	+3.2

*IDC **08** 20:39:49.6±0.9, 34.°51N×69.°60E, h0km, mb3.9/13, mb1 4.1/16, mb1mx3.9/28, mbtmp4.0/16, ML3.9/3, Error ellipse: s-maj=22.4km s-min=17.9km az=13.0*
*ISCJB **08** 20:39:51.1±1.0, 34.°56N±0.°03×69.°66E±0.°04, h20km±8km, mb4.0/17, Error ellipse: s-maj=6.7km s-min=3.8km az=141.6*
*BJI **08** 20:39:51.9, 34.°69N×69.°74E, h14km, mb3.9/4, ML4.1/2*
*NEIC **08** 20:39:51.9±1.8, 34.°52N×69.°60E, h12km±10km, mb4.1/8, Error ellipse: s-maj=12.1km s-min=7.7km az=156.0*
*NNC **08** 20:39:58.5±3.9, 35.°20N×69.°40E, h0km, mb4.3, mpv4.5, Error ellipse: s-maj=34.1km s-min=29.1km az=87.0*

ISC 08 20:39:52.8±1.1, 34.°59N±0.°03×69.°58E±0.°04, h17km±7km, n79, σ1.9°57/93, mb3.9/17, 6C-8D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.45**	**265**	*e*P	**Pg**	**20 40 00.6**	**-1.2**
CEP	**Cherat**	**2.07**	**111**	⇑P	**Pn**	**20 40 30.1**	**+3.3**
CEP				S	**Sn**	**20 41 01.0**	**+8.7**
THW	**Thamme Wali**	**2.54**	**134**	P	**Pn**	**20 40 36.7**	**+3.5**
CHCP	**Chirah Chowk**	**3.19**	**106**	P	**Pn**	**20 40 45.7**	**+3.5**
SDNR	**Sundarnagar**	**6.92**	**114**	*e*PKP	**Pn**	**20 41 35.5**	**+2.0**
SDNR				*ex*	x	20 42 54.5	
KSH	**Kashi**	**7.09**	**44**	Pn	**Pn**	**20 41 34.9**	**-0.9**
KSH				Sn	Sn	20 42 35.4	-21
KSH	comp=N,64nm,0.7s			smax			
KSH	comp=E,210nm,1.2s			smax			
SMLA	**Simla**	**7.25**	**116**	*i* P	**Pn**	**20 41 39.5**	**+1.5**
SMLA				*i* S	**Sn**	**20 43 01.4**	**+1.4**
SMLA				*i* S	**Sn**	**20 43 02.3**	**+2.3**
SMLA	comp=N,1μm,0.4s			⇓		20 43 05.5	
SMLA	comp=E,1μm,0.3s			⇓		20 43 06.5	
KKR	**Kurukshetra** comp=Z,69nm,0.4s	**7.67**	**125**	AML	AML	20 44 16.4	
AML	**Almayashu** SNR=68	**8.20**	**22**	P	**Pn**	**20 41 53.2**	**+2.3**
AML	**Almayashu** comp=Z,43nm,0.5s	**8.20**	**22**	*e*P	**Pn**	**20 41 52.8**	**+1.9**
DDI	**Dehra Dun**	**8.32**	**118**	*ex*	**Pn**	**20 41 53.0**	**+0.3**
KHET	**Khetri**	**8.39**	**139**	*e*PKP	**Pn**	**20 41 54.6**	**+1.0**
KHET				*e*S	**Sn**	**20 43 25.9**	**-2.1**
KK31	**Karatay Array** comp=Z,16nm,0.7s,baz=175,slow=12	**8.54**	**5**	⇑Pn	**Pn**	**20 41 57.6**	**+2.0**
KK31	comp=Z,10nm,0.5s,baz=188,slow=17			⇑Sn	**Sn**	**20 43 30.7**	**-0.8**
KKAR	**Karatay Array** comp=Z,12nm,0.4s	**8.54**	**5**	*e*P	**Pn**	**20 41 57.2**	**+1.6**
KZA	**Kyzart** SNR=24	**8.70**	**29**	P	**Pn**	**20 42 03.0**	**+5.1**
KZA	**Kyzart** comp=Z,16nm,0.6s	**8.70**	**29**	*e*P	**Pn**	**20 42 00.2**	**+2.3**
EKS2	**Erkin-Say** SNR=12	**8.71**	**21**	P	**Pn**	**20 42 00.1**	**+2.2**
EKS2	**Erkin-Say** comp=Z,9.5nm,0.5s	**8.71**	**21**	*e*P	**Pn**	**20 41 59.8**	**+1.9**
EKS2				*e*S	**Sn**	**20 43 34.2**	**-1.5**
NDI	**New Delhi**	**8.77**	**130**	*e*PKP	**Pn**	**20 42 01.0**	**+2.1**
NDI				*ex*	**Sn**	**20 43 38.0**	**+0.6**
AAK	**Ala-Archa** SNR=18	**8.91**	**24**	P	**Pn**	**20 42 05.0**	**+4.4**
CHMS	**Chumysh** SNR=20	**9.32**	**24**	P	**Pn**	**20 42 09.6**	**+3.3**
JOSI	**Joshimath**	**9.33**	**113**	*e*PKP	**Pn**	**20 42 09.5**	**+3.1**
JOSI				*ex*	**Sn**	**20 43 45.7**	**-5.3**
JOSI	comp=E,142nm,0.6s			AML	AML	20 45 01.0	
JOSI	comp=N,190nm,0.9s			AML	AML	20 45 03.3	
USP	**Ospenovka** SNR=22	**9.

comp=N,0.9nm,0.6s
AKTO ⇓Sn **Sn** **20 47 18.8 -2.4**
comp=N,0.8nm,1.0s
AKTO Aktyubinsk 17.95 335 P **Pn** **20 44 02.0 +0.5**
comp=N,0.7nm,0.3s,baz=140,slow=11,SNR=17
AKTO S **Sn** **20 47 19.3 -1.9**
comp=N,0.2nm,0.3s,baz=197,slow=19,SNR=3.9
VOSK Vostochnaya 18.16 3 ⇓Pn **Pn** **20 44 02.5 -1.5**
comp=N,3.9nm,0.6s
VOSK ⇓Sn **Sn** **20 47 21.8 -4.4**
comp=N,3.0nm,1.1s
ZRNK Zerenda 18.36 359 ⇑Pn **Pn** **20 44 06.2 -0.3**
comp=N,3.0nm,0.5s
ZRNK ⇓Sn **Sn** **20 47 26.6 -4.5**
comp=N,2.3nm,0.8s
BVAR Borovoye Array 18.44 2 P **Pn** **20 44 06.4 -1.1**
comp=N,0.5nm,0.3s,baz=165,slow=12,SNR=12
BRVK Borovoye 18.47 1 *eP* **Pn** **20 44 05.4 -2.4**
comp=N,5.6nm,0.6s
LSA Lhasa 18.89 99 P **Pn** **20 44 15.9 +2.8**
LSA Lhasa 18.89 99 *eP* **Pn** **20 44 12.2 -0.9**
comp=N,4.2nm,0.8s
GNI Garni 20.48 293 P **P** **20 44 30.3 +0.6**
comp=N,2.1nm,0.5s,baz=37,slow=20,SNR=2.2
ZALV Zalesovo Beam 22.13 24 P **P** **20 44 46.5 -0.9**
comp=N,4.6nm,0.5s,mb4.2,baz=221,slow=10,SNR=14
ZALV Zalesovo Beam 22.13 24 P **P** **20 44 46.5 -0.9**
ARU Arti 23.11 344 *eP* **P** **20 44 57.9 +0.1**
comp=N,5.1nm,0.7s,mb4.1
GTA Gaotai 24.56 70 *eP* **P** **20 45 14.0 +2.3**
GTA pP 20 45 18.7
GTA sP sP 20 45 21.0 +2.2
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb3.7
BRTR Keskin Array B 28.98 291 P **P** **20 45 51.9 +0.4**
comp=Z,0.8nm,0.8s,mb3.5,baz=55,slow=7.6,SNR=3.8
SONM Songino Array 30.39 53 P **P** **20 46 03.8 -0.1**
comp=Z,1.1nm,0.8s,mb3.7,baz=257,slow=9.3,SNR=10
AKASG Malin Array Be 33.29 311 P **P** **20 46 29.0 -0.4**
comp=Z,1.1nm,0.4s,mb4.1,baz=110,slow=8.6,SNR=6.2
FINES FINESS Array B 38.46 328 P **P** **20 47 14.0 +0.5**
comp=Z,1.7nm,0.6s,mb3.9,baz=115,slow=8.6,SNR=7.9
ARCES ARCESS Array B 42.49 339 P **P** **20 47 43.3 +0.6**
comp=Z,6.9nm,0.8s,mb4.3,baz=119,slow=10.0,SNR=41
NB2 NORSAR Subarra 45.23 324 P **P** **20 48 08.5 -0.4**
comp=Z,0.8nm,0.5s,mb3.8,baz=99,slow=8.6
NOA NORSAR Array B 45.23 324 P **P** **20 48 08.8 -0.1**
comp=Z,1.4nm,0.7s,mb3.9,baz=100,slow=7.9,SNR=9.3
HINF Hinteralfeld 47.76 306 *eP* **P** **20 48 31.6 +2.7**
HAU Haudompre 48.07 306 *eP* **P** **20 48 32.5 +1.2**
comp=Z,2.7nm,0.5s,mb4.3
HAU Haudompre 48.07 306 *eP* **P** **20 48 32.5 +1.2**
comp=Z,1.4nm,0.5s,mb4.2
MEZF Maizieres J'vi 48.86 307 *eP* **P** **20 48 39.1 +1.8**
LOR Lormes 49.85 306 *eP* **P** **20 48 45.4 +0.5**
SMF Signal de Mont 49.98 305 *eP* **P** **20 48 46.8 +0.9**
comp=Z,3.7nm,0.7s,mb4.2
SMF Signal de Mont 49.98 305 *eP* **P** **20 48 46.8 +0.9**
comp=Z,1.9nm,0.6s,mb4.3
SSF Saint Saulge 50.13 305 *eP* **P** **20 48 47.7 +0.7**
AVF Avril sur Loir 50.28 305 *eP* **P** **20 48 49.0 +0.8**
comp=Z,3.0nm,0.7s,mb4.1
AVF Avril sur Loir 50.28 305 *eP* **P** **20 48 49.0 +0.8**
comp=Z,1.5nm,0.7s,mb4.1
TORD Torodi Ar. Bea 64.52 269 P **P** **20 50 27.9 -1.2**
comp=Z,0.7nm,0.7s,mb3.8,baz=50,slow=5.6,SNR=12
TORD Torodi Ar. Bea 64.52 269 P **P** **20 50 27.9 -1.2**
ILAR Eielson Array 76.93 15 P **P** **20 51 43.0 -0.9**
comp=Z,0.4nm,0.6s,mb3.5,baz=282,slow=3.6,SNR=4.7
WRA Warramunga Arr 81.98 121 P **P** **20 52 12.1 +0.1**
comp=Z,0.7nm,0.9s,mb3.6,baz=324,slow=4.9,SNR=5.1
WRA Warramunga Arr 81.98 121 P **P** **20 52 12.1 +0.1**
YKA Yellowknife Ar 83.20 2 P **P** **20 52 17.4 -0.3**
comp=Z,1.4nm,0.7s,mb4.1,baz=339,slow=4.7,SNR=4.7
YKA Yellowknife Ar 83.20 2 P **P** **20 52 17.4 -0.3**
ASAR Alice Springs 84.13 124 P **P** **20 52 22.6 -0.5**
comp=Z,0.7nm,0.8s,mb3.9,baz=309,slow=5.1,SNR=8.7

IDC 08 20:43:13.3±6.4, 30°.52S×177°.93W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/16, mbtmp3.7/2, Error ellipse: s-maj=256.7km s-min=59.3km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.17**	**267**	P	P	20 51 15.7	-0.2
	0.4nm,0.6s,baz=110,slow=8.1,SNR=7.9						
WRA	**Warramunga Arr**	**44.17**	**272**	P	P	20 51 24.1	+0.1
	1.1nm,0.6s,baz=113,slow=7.6,SNR=14						
FINES	**FINESS Array B**	**145.28**	**340**	PKPbc	PKPbc	21 02 51.1	-0.8
	1.4nm,0.9s,baz=69,slow=7.6,SNR=4.4						

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*CSEM **08** 20:49:29.3±0.2, 44°.31N×11°.33E, h24km±1km, MD1.8/4, Error ellipse: s-maj=5.8km s-min=3.8km az=118.0*

ROM 08 20:49:28.8±0.3, 44°.30N×11°.32E, h29km±3km, Md1.8/4, 2C, Error ellipse: s-maj=3.7km s-min=3.1km az=157.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTRZ	**Monterenzio**	**0.13**	**52**	Pg	Pb	20 49 34.0	-0.2
MTRZ				Sg	Sb	20 49 37.8	-0.1
MTRZ	**Monterenzio**	**0.13**	**52**	Pg	Pb	20 49 34.0	-0.2
MTRZ				Sg	Sb	20 49 37.8	-0.1
FNVD	**Fontana Vidola**	**0.19**	**228**	⇑*i*Pg	Pb	20 49 35.2	+0.4
FNVD				Sg	Sb	20 49 39.3	+0.5
FNVD	**Fontana Vidola**	**0.19**	**228**	⇑*i*Pg	Pb	20 49 35.2	+0.4
FNVD				Sg	Sb	20 49 39.3	+0.5
SEI	**Scarperia**	**0.24**	**174**	Pg	Pb	20 49 35.6	+0.2
SEI				Sg	Sb	20 49 40.4	+0.6
SEI	**Scarperia**	**0.24**	**174**	Pg	Pb	20 49 35.6	+0.2
SEI				Sg	Sb	20 49 40.4	+0.6
VMG	**Vicchio**	**0.37**	**154**	Pg	Pb	20 49 37.2	+0.1
VMG				Sg	Sb	20 49 44.0	+1.2
VMG	**Vicchio**	**0.37**	**154**	Pg	Pb	20 49 37.2	+0.1
VMG				Sg	Sb	20 49 44.0	+1.2
NVLJ	**Novalja**	**2.56**	**83**	*e*Pn	Pn	20 50 09.3	+1.0
NVLJ				Sn	Sn	20 50 39.8	+1.4
NVLJ	**Novalja**	**2.56**	**83**	*e*Pn	Pn	20 50 09.2	+1.0
NVLJ				Sn	Sn	20 50 39.7	+1.3

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*IDC **08** 21:07:10.1±11.0, 35°.82N×77°.03E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.3/24, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=196.5km s-min=58.8km az=151.0*

*NEIC **08** 21:07:17.8±2.3, 36°.00N×76°.94E, h55km±10km, mb3.4/4, Error ellipse: s-maj=29.9km s-min=10.3km az=133.0*

ISC 08 21:07:18.2±2.0, 36°.0N±0°.1×76°.9E±0°.2, h62km±12km, n26, σ0°85/26, mb3.8/4, 2C-3D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.59**	**348**	Pn	**Pn**	**21 08 11.2**	**-0.2**
KSH				Sn		21 08 42.5	
KSH				smax			
	comp=N,110nm,0.4s						
KSH				smax			
	comp=E,120nm,0.4s						
SMLA	**Simla**	**4.86**	**178**	*i* P	x	21 08 50.3	
SMLA				*i* S	x	21 09 49.5	
SMLA				*i* S	x	21 09 49.8	
SMLA				⇓		21 09 52.2	
	comp=E,1μm,0.3s						
SMLA				⇓		21 09 53.0	
	comp=N,2μm,0.3s						
KZA	**Kyzart**	**6.21**	**348**	*e*Pn	**Pn**	**21 08 47.4**	**+0.2**
	comp=N,3.3nm,0.3s						
KZA				*e*Sn	**Sn**	**21 09 57.4**	**+0.7**
UCH	**Uchtor**	**6.50**	**344**	*e*Pn	**Pn**	**21 08 51.8**	**+0.6**
KBL	**Kabul**	**6.61**	**260**	Pn	**Pn**	**21 08 52.8**	**+0.1**
AML	**Almayashu**	**6.62**	**339**	*e*Pn	**Pn**	**21 08 52.9**	**+0.1**
TKM2	**Tokmak 2**	**6.99**	**352**	⇑Pn	**Pn**	**21 08 59.1**	**+1.3**
	comp=N,0.9nm,0.4s						
TKM2	**Tokmak 2**	**6.99**	**352**	*e*Pn	**Pn**	**21 08 56.2**	**-1.6**
	comp=N,1.7nm,0.6s						
EKS2	**Erkin-Say**	**7.08**	**341**	*e*Pn	**Pn**	**21 08 59.0**	**-0.2**
KK31	**Karatay Array**	**8.65**	**327**	⇑Pn	**Pn**	**21 09 21.2**	**+0.6**
	comp=N,0.2nm,0.2s,baz=146,slow=13,SNR=7.7						
KK31				⇓Sn		21 10 47.6	
	comp=N,1.1nm,0.5s,baz=152,slow=26,SNR=9.3						
KKAR	**Karatay Array**	**8.65**	**327**	*e*Pn	**Pn**	**21 09 20.2**	**-0.3**
	comp=N,1.1nm,0.3s						
KKAR				*e*Sn		21 10 48.3	
MKAR	**Makanchi Array**	**11.51**	**19**	Pn	**Pn**	**21 09 59.8**	**+0.2**
	comp=N,0.2nm,0.3s,baz=195,slow=12,SNR=7.6						
MKAR				Sn		21 11 55.9	
	comp=N,0.2nm,0.3s,baz=201,slow=26,SNR=7.5						
KURK	**Kurchatov**	**14.76**	**4**	*e*Pn	**Pn**	**21 10 42.9**	**-0.4**
BRVK	**Borovoye**	**17.69**	**347**	*e*P	**Pn**	**21 11 18.7**	**-1.4**
	comp=N,0.8nm,0.5s						
ABKAR	**Abkulak array**	**18.15**	**322**	*e*P	**Pn**	**21 11 26.5**	**+0.7**
	comp=N,0.5nm,0.3s						
AKTK	**Aktyubinsk**	**19.87**	**322**	P	**Pn**	**21 11 44.6**	**-1.6**
AKTO	**Aktyubinsk**	**19.87**	**322**	P	**Pn**	**21 11 44.6**	**-1.6**
	comp=N,0.7nm,0.4s,baz=107,slow=12,SNR=3.2						
ARU	**Arti**	**23.92**	**334**	*e*P	**P**	**21 12 25.7**	**-0.4**
	comp=N,1.0nm,0.4s,mb3.6						
KIV	**Kislovodsk**	**27.26**	**297**	*e*P	**P**	**21 12 57.2**	**+0.7**
	comp=N,2.4nm,0.4s,mb4.1						
MALT	**Malatya**	**30.62**	**286**	*e*P	**P**	**21 13 27.2**	**+0.8**
CSS	**Prodhromos**	**35.29**	**281**	*e*P	**P**	**21 14 06.7**	**-0.5**
FINES	**FINESS Array B**	**40.60**	**325**	P	**P**	**21 14 52.9**	**+1.4**
	comp=N,2.4nm,0.9s,mb3.8,baz=112,slow=8.8,SNR=7.3						
FINES	**FINESS Array B**	**40.60**	**325**	P	**P**	**21 14 52.9**	**+1.4**
ARCES	**ARCESS Array B**	**43.48**	**336**	P	**P**	**21 15 16.0**	**+1.2**
	comp=N,1.0nm,0.9s,mb3.5,baz=107,slow=8.0,SNR=8.8						
ARCES	**ARCESS Array B**	**43.48**	**336**	P	**P**	**21 15 16.0**	**+1.2**
AQU	**L'Aquila**	**48.64**	**298**	P	**P**	**21 15 55.0**	**-0.8**

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*ISK **08** 21:07:23.6, 37°.91N×27°.12E, h5km, MD3.4*
*DDA **08** 21:07:23.5, 37°.92N×27°.11E, h10km±4km, Md3.3*
*ATH **08** 21:07:23.1, 37°.83N×27°.16E, h24km±2km, MD3.6/4*
*ISCJB **08** 21:07:24.6±0.3, 37°.88N±0°.02×27°.08E±0°.03, h10km, Error ellipse: s-maj=3.3km s-min=2.1km az=154.5*
*CSEM **08** 21:07:24.7±0.1, 37°.89N×27°.10E, h2km, MD3.3, Error ellipse: s-maj=3.9km s-min=2.6km az=65.0*
*THE **08** 21:07:25.3, 37°.98N×27°.08E, h2km±2km, ML3.4/3, Error ellipse: s-maj=2.5km s-min=0.9km az=51.0*

ISC 08 21:07:25.1±0.3, 37°.87N±0°.02×27°.07E±0°.03, h10km, n103, σ1°13/133, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.21**	**141**	*i* P	**Pg**	**21 07 29.1**	**-0.5**
GCAM				*i* S	**Sg**	**21 07 32.4**	**-0.1**
GCAM	**G?zelcaml?**	**0.21**	**141**	*i* P	**Pg**	**21 07 29.1**	**-0.5**
GCAM				*i* S	**Sg**	**21 07 32.4**	**-0.1**
SMG	**Samos**	**0.24**	**229**	*e*PB	**Pg**	**21 07 30.0**	**-0.1**
SMG				*e*SB	**Sg**	**21 07 34.6**	**+1.2**
SMG	**Samos**	**0.24**	**229**	*e*Pb	**Pg**	**21 07 30.0**	**-0.1**
SMG				*e*Sb	**Sg**	**21 07 34.6**	**+1.2**
BLCB	**Balcova**	**0.52**	**358**	PG	**Pg**	**21 07 33.3**	**-1.9**
BLCB	**Balcova**	**0.52**	**358**	P	**Pg**	**21 07 33.4**	**-1.8**
BLCB				S	**Sg**	**21 07 39.7**	**-2.3**
BLCB	**Balcova**	**0.52**	**358**	P	**Pg**	**21 07 33.4**	**-1.8**
BLCB				S	**Sg**	**21 07 39.7**	**-2.3**
IZM	**Izmir**	**0.55**	**16**	PG	**Pg**	**21 07 33.6**	**-2.2**
IZM				*e*SG	**Sg**	**21 07 42.3**	**-0.9**
IZM	**Izmir**	**0.55**	**16**	*i* Pg	**Pg**	**21 07 33.6**	**-2.3**
IZM				*e*Sg	**Sg**	**21 07 42.3**	**-0.8**
KDAG	**Bornova**	**0.56**	**16**	*i* P	**Pg**	**21 07 32.9**	**-3.1**
URLA	**Izmir**	**0.62**	**323**	*i* P	**Pg**	**21 07 34.9**	**-2.2**
URLA				*i* S	**Sg**	**21 07 43.0**	**-2.1**
URLA	**Izmir**	**0.62**	**323**	*i* P	**Pg**	**21 07 34.9**	**-2.2**
URLA				*i* S	**Sg**	**21 07 43.0**	**-2.2**
AYDN	**Tasoluk**	**0.68**	**108**	*i* P	**Pg**	**21 07 37.2**	**-1.0**
AYDN				*i* S	**Sg**	**21 07 45.6**	**-1.5**
AYDN	**Tasoluk**	**0.68**	**108**	*i* P	**Pg**	**21 07 37.2**	**-1.0**
AYDN				*i* S	**Sg**	**21 07 45.6**	**-1.5**
MLSB	**Milas**	**0.80**	**135**	*e*PG	**Pg**	**21 07 40.1**	**-0.6**
MLSB	**Milas**	**0.80**	**135**	*e*Pg	**Pg**	**21 07 40.1**	**-0.5**
BODT	**Bodrum**	**0.83**	**166**	*e*PG	**Pg**	**21 07 40.4**	**-0.7**
BODT	**Bodrum**	**0.83**	**166**	*e*Pg	**Pg**	**21 07 40.4**	**-0.7**
BDRM	**Kayabasi**	**0.86**	**159**	*i* P	**Pg**	**21 07 40.9**	**-0.7**
BDRM				*i* S	**Sg**	**21 07 52.6**	**-0.2**
BDRM	**Kayabasi**	**0.86**	**159**	*i* P	**Pg**	**21 07 40.9**	**-0.7**
BDRM				*i* S	**Sg**	**21 07 52.6**	**-0.2**
CHOS	**Chios island**	**0.95**	**303**	P	**Pg**	**21 07 42.7**	**-0.7**
CHOS				S	**Sg**	**21 07 56.2**	**+0.4**
CHOS	**Chios island**	**0.95**	**303**	P	**Pg**	**21 07 42.7**	**-0.7**
CHOS				S	**Sg**	**21 07 56.2**	**+0.4**
AKHS	**Akhisar**	**1.17**	**30**	*i* P	**Pn**	**21 07 45.0**	**-2.6**
AKHS				*i* S	**Sn**	**21 08 00.2**	**-3.3**
AKHS	**Akhisar**	**1.17**	**30**	*i* P	**Pn**	**21 07 45.0**	**-2.5**
AKHS				*i* S	**Sn**	**21 08 00.2**	**-3.3**
AKS	**Akhisar**	**1.17**	**30**	*e*PN	**Pn**	**21 07 45.0**	**-2.6**
AKS	**Akhisar**	**1.17**	**30**	*e*Pn	**Pn**	**21 07 45.0**	**-2.5**
DAT	**Datca**	**1.21**	**160**	*e*PN	**Pn**	**21 07 47.4**	**-0.6**
DAT	**Datca**	**1.21**	**160**	*e*Pn	**Pn**	**21 07 47.4**	**-0.7**
YER	**Yerkesik**	**1.21**	**127**	*e*PN	**Pn**	**21 07 48.0**	**-0.1**
YER	**Yerkesik**	**1.21**	**127**	*e*Pn	**Pn**	**21 07 48.0**	**-0.1**
NIS1	**Nisyros Isl.**	**1.27**	**176**	P	**Pn**	**21 07 49.6**	**+0.7**
NIS1				S	**Sg**	**21 08 09.9**	**+4.0**
NIS1	**Nisyros Isl.**	**1.27**	**176**	P	**Pn**	**21 07 49.6**	**+0.7**
NIS1				S	**Sg**	**21 08 09.9**	**+4.0**
KULA	**Kula-Manisa**	**1.41**	**62**	*e*PN	**Pn**	**21 07 50.0**	**-0.8**
KULA	**Kula-Manisa**	**1.41**	**62**	*e*Pn	**Pn**	**21 07 50.1**	**-0.8**
APE	**Apeiranthos**	**1.46**	**237**	*e*PN	**Pn**	**21 07 53.2**	**+1.7**
APE	**Apeiranthos**	**1.46**	**237**	*e*PN	**Pn**	**21 07 51.0**	**-0.5**
APE	**Apeiranthos**	**1.46**	**237**	*e*Pn	**Pn**	**21 07 53.2**	**+1.7**
AYVA	**Ayvalik**	**1.47**	**349**	*i* P	**Pn**	**21 07 51.4**	**-0.2**
AYVA				*i* S	**Sn**	**21 08 09.8**	**-1.2**
AYVA	**Ayvalik**	**1.47**	**349**	*i* P	**Pn**	**21 07 51.4**	**-0.2**
AYVA				*i* S	**Sn**	**21 08 09.8**	**-1.1**
PRK	**Paraskevi**	**1.51**	**336**	*e*PN	**Pn**	**21 07 51.8**	**-0.4**
PRK				*e*SN	**Sn**	**21 08 12.4**	**+0.4**
DENT	**Denizli**	**1.56**	**94**	*e*PN	**Pn**	**21 07 53.5**	**+0.5**
DENT	**Denizli**	**1.56**	**94**	*e*Pn	**Pn**	**21 07 53.5**	**+0.6**
TURN	**Turunc**	**1.58**	**129**	*i* P	**Pn**	**21 07 49.9**	**-3.3**
TURN				*i* S	**Sn**	**21 08 11.4**	**-2.2**
DNZL	**Cakiroluk**	**1.58**	**96**	*i* P	**Pn**	**21 07 52.3**	**-0.9**
DNZL				*i* S	**Sn**	**21 08 14.7**	**+1.1**
DNZL	**Cakiroluk**	**1.58**	**96**	*i* P	**Pn**	**21 07 52.3**	**-0.9**
DNZL				*i* S	**Sn**	**21 08 14.7**	**+1.1**
SIGR	**SIGRI**	**1.64**	**325**	P	**Pn**	**21 07 53.7**	**-0.4**
SIGR				S	**Sn**	**21 08 13.9**	**-1.3**
SIGR	**SIGRI**	**1.64**	**325**	P	**Pn**	**21 07 53.7**	**-0.4**
SIGR				S	**Sn**	**21 08 13.9**	**-1.3**
BALB	**Balikesir**	**1.88**	**20**	*e*PN	**Pn**	**21 07 57.5**	**+0.2**
BALB	**Balikesir**	**1.88**	**20**	*e*Pn	**Pn**	**21 07 57.5**	**+0.2**
KHAL	**Karahalli**	**1.98**	**75**	*i* P	**Pn**	**21 07 58.0**	**-0.7**
KHAL				*i* S	**Sn**	**21 08 24.2**	**+0.7**
KHAL	**Karahalli**	**1.98**	**75**	*i* P	**Pn**	**21 07 58.0**	**-0.7**
KHAL				*i* S	**Sn**	**21 08 24.2**	**+0.7**
KHL	**Karahalli**	**1.99**	**76**	*e*PN	**Pn**	**21 07 59.6**	**+0.8**
KHL	**Karahalli**	**1.99**	**76**	*e*Pn	**Pn**	**21 07 59.6**	**+0.8**
EZN	**Ezine**	**2.04**	**344**	*e*PN	**Pn**	**21 08 00.1**	**+0.6**
EZN	**Ezine**	**2.04**	**344**	*e*Pn	**Pn**	**21 08 00.1**	**+0.6**
GLHS	**Glhisar (BURDU**	**2.06**	**109**	*e*PN	**Pn**	**21 08 00.6**	**+0.8**
GLHS	**Glhisar (BURDU**	**2.06**	**109**	*e*Pn	**Pn**	**21 08 00.6**	**+0.8**
GONE	**Gonen-Balikesi**	**2.23**	**12**	*e*PN	**Pn**	**21 08 02.7**	**+0.6**
KARP	**Karpathos**	**2.32**	**178**	*e*PN	**Pn**	**21 08 01.1**	**-2.2**
KARP	**Karpathos**	**2.32**	**178**	*e*Pn	**Pn**	**21 08 01.1**	**-2.2**
GADA	**Gvkgeada**	**2.49**	**339**	*e*PN	**Pn**	**21 08 06.7**	**+0.9**
GADA	**Gvkgeada**	**2.49**	**339**	*e*Pn	**Pn**	**21 08 06.7**	**+1.0**
LPK	**Lapseki**	**2.51**	**355**	*e*PN	**Pn**	**21 08 06.7**	**+0.7**
LPK	**Lapseki**	**2.51**	**355**	*e*Pn	**Pn**	**21 08 06.7**	**+0.7**
ELL	**Elmali**	**2.53**	**115**	*e*PN	**Pn**	**21 08 07.3**	**+1.1**
ELL	**Elmali**	**2.53**	**115**	*e*Pn	**Pn**	**21 08 07.3**	**+1.1**
EDC	**Edincik**	**2.55**	**14**	*e*PN	**Pn**	**21 08 07.2**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.57**	**350**	*e*PN	**Pn**	**21 08 07.6**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.57**	**350**	*e*Pn	**Pn**	**21 08 07.6**	**+0.8**
BNT	**Bandirma**	**2.57**	**15**	*e*PN	**Pn**	**21 08 07.4**	**+0.6**
KCTX	**Karacabey (Bur**	**2.60**	**22**	*e*PN	**Pn**	**21 08 08.2**	**+1.0**
ALT	**Altintas**	**2.67**	**63**	*e*PN	**Pn**	**21 08 08.4**	**+0.3**
ALT	**Altintas**	**2.67**	**63**	*e*Pn	**Pn**	**21 08 08.4**	**+0.3**
RKY	**Sarkoy-Tekirda**	**2.82**	**2**	*e*PN	**Pn**	**21 08 11.2**	**+1.0**
RKY	**Sarkoy-Tekirda**	**2.82**	**2**	*e*Pn	**Pn**	**21 08 11.2**	**+1.0**
SHUT	**Suhut-Afyon**	**2.83**	**75**	*e*PN	**Pn**	**21 08 11.0**	**+0.7**
SHUT	**Suhut-Afyon**	**2.83**	**75**	*e*Pn	**Pn**	**21 08 11.0**	**+0.6**
ERIK	**Erikli-Kesan**	**2.83**	**351**	*e*PN	**Pn**	**21 08 11.4**	**+1.0**
ERIK	**Erikli-Kesan**	**2.83**	**351**	*e*Pn	**Pn**	**21 08 11.4**	**+1.0**
MDNY	**Mudanya-Bursa**	**2.87**	**29**	*e*PN	**Pn**	**21 08 11.6**	**+0.7**
MFT	**Murefte**	**2.92**	**3**	*e*PN	**Pn**	**21 08 12.9**	**+1.3**
MFT	**Murefte**	**2.92**	**3**	*e*Pn	**Pn**	**21 08 12.9**	**+1.3**
ENEZ	**Enez**	**2.95**	**346**	*e*PN	**Pn**	**21 08 12.8**	**+0.7**
ENEZ	**Enez**	**2.95**	**346**	*e*Pn	**Pn**	**21 08 12.8**	**+0.8**
ARMT	**Armutlu**	**3.03**	**27**	*e*PN	**Pn**	**21 08 13.9**	**+0.8**
GEMT	**Gemlik**	**3.05**	**32**	*e*PN	**Pn**	**21 08 13.8**	**+0.4**
SUTC	**Sutluce-Ispart**	**3.15**	**96**	*e*PN	**Pn**	**21 08 15.7**	**+1.0**
SUTC	**Sutluce-Ispart**	**3.15**	**96**	*e*Pn	**Pn**	**21 08 15.7**	**+1.0**
CAVI	**Cavuskoy**	**3.18**	**42**	*e*PN	**Pn**	**21 08 15.9**	**+0.7**
ADVT	**Abdulvahap**	**3.30**	**38**	*e*PN	**Pn**	**21 08 17.6**	**+0.8**
CRLT	**Corlu**	**3.30**	**9**	*e*PN	**Pn**	**21 08 17.9**	**+1.1**
CRLT	**Corlu**	**3.30**	**9**	*e*Pn	**Pn**	**21 08 17.9**	**+1.1**
SLVT	**Silivri**	**3.47**	**14**	*e*PN	**Pn**	**21 08 20.3**	**+1.1**
SLVT	**Silivri**	**3.47**	**14**	*e*Pn	**Pn**	**21 08 20.3**	**+1.1**
GPA	**Golpazari**	**3.50**	**45**	*e*PN	**Pn**	**21 08 20.4**	**+0.9**
CTKS	**Kestanelik-??a**	**3.54**	**18**	*e*PN	**Pn**	**21 08 21.5**	**+1.3**
CTKS	**Kestanelik-??a**	**3.54**	**18**	*e*Pn	**Pn**	**21 08 21.5**	**+1.3**
ISK	**Istanbul-Kandi**	**3.55**	**25**	*e*PN	**Pn**	**21 08 21.3**	**+1.1**
ISK	**Istanbul-Kandi**	**3.55**	**25**	*e*Pn	**Pn**	**21 08 21.3**	**+1.1**
BGKT	**Bogazkoy**	**3.56**	**21**	*e*PN	**Pn**	**21 08 21.6**	**+1.2**
BGKT	**Bogazkoy**	**3.56**	**21**	*e*Pn	**Pn**	**21 08 21.6**	**+1.2**
HRT	**Hereke**	**3.57**	**34**	*e*PN	**Pn**	**21 08 21.6**	**+1.0**
HRT	**Hereke**	**3.57**	**34**	*e*Pn	**Pn**	**21 08 21.6**	**+1.0**

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*ISCJB **08** 21:17:14.5±0.2, 72°.62N±0°.03×0°.84E±0°.09, h10km, mb4.5/132, MS4.6/10, Error ellipse: s-maj=4.1km s-min=3.3km az=143.4*
*CSEM **08** 21:17:14.0±0.1, 72°.67N×1°.00E, h2km, mb4.7/87, Error ellipse: s-maj=5.4km s-min=4.2km az=40.0*
*NEIC **08** 21:17:15.9±0.2, 72°.62N×0°.95E, h10km, mb4.7/85, Error ellipse: s-maj=5.1km s-min=4.0km az=48.0*
*MOS **08** 21:17:15.1±2.2, 72°.63N×0°.96E, h10km, mb5.0/81, Error ellipse: s-maj=15.2km s-min=2.9km az=96.1*
*NAO **08** 21:17:17.8±10.0, 72°.30N×1°.46E, h23km±91km, ML2.6*
*IDC **08** 21:17:17.2±0.4, 72°.24N×1°.27E, h0km, mb4.3/24, mb1 4.5/30, mb1mx4.4/37, mbtmp4.3/30, ML4.0/6, MS4.5/6, Ms1 4.5/6, ms1mx4.0/39, Error ellipse: s-maj=13.1km s-min=9.1km az=36.0*
*BER **08** 21:17:18.4±3.6, 72°.28N×1°.39E, h10km, MD3.1, ML3.2, ML2.6(NAO)*
*BJI **08** 21:17:21.8, 73°.54N×1°.65E, h10km, mB5.0/3, mb4.5/9, Ms4.8/2, Ms7 4.4/2*
*SZGRF **08** 21:17:33.9, 71°.55N×5°.29E, h33km, mb4.8, Norwegian Sea*

ISC 08 21:17:16.5±0.2, 72°.57N±0°.02×1°.04E±0°.08, h10km, (h19km±3.2km: pP-P), n619, σ1°27/617, mb4.5/132, MS4.6/10, 29C-27D, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**3.33**	**246**	*e*P	**Pn**	**21 18 08.7**	**+0.2**
JNE	**Jan Mayen East**	**3.33**	**246**	*e*P	**Pn**	**21 18 08.7**	**+0.1**
SNR=50							
JNW	**Jan Mayen West**	**3.35**	**247**	*e*P	**Pn**	**21 18 08.9**	**+0.1**
JNW	**Jan Mayen West**	**3.35**	**247**	*e*P	**Pn**	**21 18 08.9**	**+0.1**
SNR=50							
JMIC	**Jan Mayen**	**3.39**	**247**	Pn	**Pn**	**21 18 09.5**	**+0.1**
JMIC	**Jan Mayen**	**3.39**	**247**	Pn	**Pn**	**21 18 09.4**	**0.0**
32nm,0.3s,baz=37,slow=4.5,SNR=14							
JMIC				LR	LR	21 18 52.0	
	comp=Z,428nm,19.5s,baz=45,slow=28						
JMIC	**Jan Mayen**	**3.39**	**247**	Pn	**Pn**	**21 18 09.5**	**+0.1**
SNR=50							
JMI	**Jan Mayen**	**3.48**	**247**	*e*P	**Pn**	**21 18 10.8**	**+0.1**
JMI	**Jan Mayen**	**3.48**	**247**	*e*P	**Pn**	**21 18 10.8**	**+0.1**
SNR=50							
BJO1	**Bjornoya**	**5.46**	**61**	*e*P	**Pn**	**21 18 37.6**	**-0.1**
BJO1	**Bjornoya**	**5.46**	**61**	*e*P	**Pn**	**21 18 37.6**	**-0.1**
BJO	**Bjornoya**	**5.50**	**61**	*e*P	**Pn**	**21 18 37.6**	**-0.8**
LOF	**Lofoten

comp=Z,0.4nm,0.3s,baz=162,slow=19,SNR=3.8
NOA LR LR 21 24 38.6
comp=Z,1µm,18.8s,baz=335,slow=37
NOA NORSAR Array B 12.22 156 Pn **Pn 21 20 07.1 -3.2**
NOA Sn **Sn 21 22 07.3 -19**
NOA LR LR 21 24 38.6
KONO Kongsberg 13.40 161 *eP* **Pn 21 20 21.8 -4.7**
HFS Hagfors 13.43 152 Pn **Pn 21 20 22.9 -3.9**
baz=344,slow=12
HFS Hagfors 13.43 152 Pn **Pn 21 20 22.9 -3.9**
comp=Z,1.6nm,0.3s,baz=357,slow=13,SNR=38
HFS Sn **Sn 21 22 35.0 -21**
comp=Z,0.3nm,0.3s,baz=346,slow=17,SNR=2.2
HFS LR LR 21 24 55.5
comp=Z,2µm,21.4s,baz=294,slow=35
KAF Kangasniemi 14.14 125 *ep* **Pn 21 20 31.5 -5.0**
comp=Z,20nm,0.6s
FIA0 FINESS Array S 14.66 127 Pn **Pn 21 20 39.0 -4.6**
baz=335,slow=16
FIA0 FINESS Array S 14.66 127 Pn **Pn 21 20 39.0 -4.6**
baz=335,slow=14,SNR=50
FINES FINESS Array B 14.66 127 Pn **Pn 21 20 39.5 -4.1**
comp=Z,0.8nm,0.3s,baz=336,slow=13,SNR=30
FINES LR LR 21 25 45.3
comp=Z,2µm,18.1s,baz=299,slow=35
FINES FINESS Array B 14.66 127 P **Pn 21 20 39.5 -4.1**
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES MLR MLR
comp=Z,2µm,18.1s
FINES FINESS Array B 14.66 127 Pn **Pn 21 20 39.5 -4.1**
FINES LR LR 21 25 45.3
JOF Joensuu 14.78 115 *ep* **Pn 21 20 39.5 -5.7**
comp=Z,20nm,0.7s
MUD Monsted U'grnd 16.52 164 *i* P **Pn 21 21 12.0 +4.0**
MUD pmax pmax
comp=Z,21nm,1.0s
MUD Monsted U'grnd 16.52 164 *i* P **Pn 21 21 12.0 +4.0**
comp=Z,21nm,1.0s
MUD Monsted U'grnd 16.52 164 *i* P **Pn 21 21 12.0 +4.0**
comp=Z,21nm,1.0s
PUL Pulkovo 17.17 123⇑ *eP* **Pn 21 21 18.2 +2.1**
PUL pmax pmax
comp=Z,76nm,0.4s
PUL MLR MLR
comp=Z,2µm,18.0s
PUL Pulkovo 17.17 123 *eP* **Pn 21 21 18.2 +2.1**
comp=Z,2µm,18.0s
EKA Eskdalemuir Ar 17.39 188 Pn **Pn 21 21 16.9 -2.0**
comp=Z,0.2nm,0.3s,baz=4.5,slow=11,SNR=14
EKA Eskdalemuir Ar 17.39 188 Pn **Pn 21 21 16.9 -2.0**
ESK Eskdalemuir 17.41 188 *eP* **Pn 21 21 17.3 -1.8**
ESK pmax pmax
comp=Z,10.0nm,0.7s
ESK Eskdalemuir 17.41 188 *eP* **Pn 21 21 17.3 -1.8**
comp=Z,9.6nm,0.7s
BSD Bornholm Skovb 18.46 154 *i* P **Pn 21 21 28.9 -3.1**
BSD pmax pmax
comp=Z,27nm,0.9s
BSD Bornholm Skovb 18.46 154 *i* P **Pn 21 21 28.9 -3.1**
comp=Z,27nm,0.9s
KLMR Klimovskoe 18.75 109 *eP* **Pn 21 21 33.4 -2.1**
KLMR pmax pmax
comp=Z,78nm,1.7s
KLMR Klimovskoe 18.75 109 *eP* **Pn 21 21 33.4 -2.1**
comp=Z,78nm,1.7s
ISAL Salakas 19.98 135 *eP* **Pn 21 21 47.8 -2.5**
ISAL AMB AMB 21 21 48.9
comp=Z,8.5nm,1.5s
ISAL Salakas 19.98 135 *eP* **Pn 21 21 47.8 -2.5**
comp=Z,8.5nm,1.5s,SNR=34
IIGN Ignalina 20.20 135 *eP* **P 21 21 50.2 -0.8**
IIGN AMB AMB 21 21 51.7
comp=Z,11nm,2.1s
IIGN Ignalina 20.20 135 *eP* **P 21 21 50.2 -0.8**
comp=Z,11nm,2.1s,SNR=34
IDID Didziasalis 20.35 135 *eP* **P 21 21 51.8 -0.8**
IDID AMB AMB 21 21 53.1
comp=Z,12nm,2.1s
IDID Didziasalis 20.35 135 *eP* **P 21 21 51.8 -0.8**
comp=Z,12nm,2.1s,SNR=34
NRDL Niedersach Rie 20.53 164 *eP* **P 21 21 54.9 +0.4**
comp=Z,124nm,1.8s
GKP Gorka Klasztor 20.58 152 *eP* **P 21 21 54.2 -0.9**
GKP *ep*P 21 21 55.5
GKP Gorka Klasztor 20.58 152 *eP* **P 21 21 54.2 -0.9**
SUW Suwalki 20.85 141 *eP* **P 21 21 56.8 -1.3**
SUW *ep*P 21 21 59.0
SUW *es*P sP 21 22 00.3 -1.9
SUW Suwalki 20.85 141 *eP* **P 21 21 56.8 -1.3**
comp=Z,170nm,0.8s
SUW Suwalki 20.85 141 *eP* **P 21 21 56.8 -1.3**
RUE Ruedersdorf 20.90 158 *eP* **P 21 21 58.5 -0.1**
comp=Z,91nm,1.1s
RUE Ruedersdorf 20.90 158 *eP* **P 21 21 58.7 +0.1**
comp=Z,114nm,1.3s
RUE Ruedersdorf 20.90 158 *eP* **P 21 21 58.7 +0.1**
comp=Z,114nm,1.3s
CLZ Clausthal 21.20 164 *eP* **P 21 22 01.8 0.0**
comp=Z,90nm,1.2s,mb5.0
CLZ Clausthal 21.20 164 *eP* **P 21 22 01.8 0.0**
CLZ pmax pmax
comp=Z,90nm,1.2s,mb5.0
CLZ Clausthal 21.20 164 *eP* **P 21 22 01.8 0.0**
comp=Z,90nm,1.2s,mb5.0
MNK Minsk 21.34 134 *eP* **P 21 22 02.0 -1.3**
MICGM Minsk 21.35 134 *eP* **P 21 22 02.0 -1.4**
BUG Bochum--Univer 21.38 169 *eP* **P 21 22 03.4 -0.3**
comp=Z,65nm,1.1s,mb4.9
BEBN Eben Emael 21.94 172 P **P 21 22 10.4 +0.6**
NEUB Neuenburg 21.95 162 *eP* **P 21 22 08.8 -1.1**
comp=Z,185nm,1.2s,mb5.4
CLL Collm 21.97 160 *eP* **P 21 22 08.4 -1.7**
comp=Z,26nm,1.0s,mb4.6
CLL Collm 21.97 160 *i* P **P 21 22 08.8 -1.3**
CLL *i* 21 22 11.9
CLL pmax pmax
comp=Z,27nm,1.0s,mb4.6
CLL Collm 21.97 160 *i* P **P 21 22 08.8 -1.3**
comp=Z,27nm,1.0s,mb4.6
CLL *i* 21 22 11.9
CLL Collm 21.97 160 *i* P **P 21 22 08.8 -1.3**
comp=Z,27nm,1.0s,mb4.6
CLL *i* pP 21 22 11.9
CLL *e* 21 22 19.0
CLL Collm 21.97 160 *i* P **P 21 22 08.8 -1.3**
MEM Membach 22.14 172 P **P 21 22 12.4 +0.5**
UBBA Unterbreizbach 22.18 165 *eP* **P 21 22 12.5 +0.2**
comp=Z,59nm,1.5s,mb4.8
SNF Seneffe 22.18 175 P **P 21 22 13.4 +1.0**
FBE Freiberg 22.39 159 *eP* **P 21 22 13.5 -1.1**
comp=Z,80nm,1.3s,mb5.0
MOX Moxa 22.49 162 *eP* **P 21 22 16.1 +0.5**
comp=Z,98nm,1.6s,mb5.0
MOX Moxa 22.49 162 *eP* **P 21 22 15.4 -0.2**
comp=Z,70nm,1.3s,mb4.9
MOX Moxa 22.49 162 *eP* **P 21 22 16.1 +0.5**
MOX pmax pmax
comp=Z,98nm,1.6s,mb5.0
MOX Moxa 22.49 162 *eP* **P 21 22 16.1 +0.5**
comp=Z,98nm,1.6s,mb5.0
BRG Berggiesshubel 22.50 158 *eP* **P 21 22 14.2 -1.6**
comp=Z,45nm,1.4s,mb4.7
BRG Berggiesshubel 22.50 158 *i* P **P 21 22 14.7 -1.0**
comp=Z,46nm,1.4s,mb4.7
BRG *i* 21 22 20.0
comp=Z,64nm,1.6s
BRG Berggiesshubel 22.50 158 *i* P **P 21 22 14.7 -1.1**
BRG *i* 21 22 20.0
BRG pmax pmax
comp=Z,12nm,1.4s,mb4.1
MOS Moscow 22.60 119 *eP* **P 21 22 15.7 -1.0**
MOS *e* 21 22 45.3
MOS *eS* **S 21 26 27.3 +3.0**
MOS pmax pmax
comp=Z,300nm,1.4s,mb5.5
MOS pmax pmax
comp=Z,190nm,1.2s,mb5.4
MOS MLR MLR
comp=N,1µm,15.0s,MS4.6
MOS MLR MLR
comp=E,2µm,15.0s,MS4.6
MOS MLR MLR
comp=Z,2µm,15.0s,MS4.7
DOU Dourbes 22.61 174 P **P 21 22 17.6 +0.7**
GIVF Givet 22.61 174 *eP* **P 21 22 17.1 +0.2**
comp=Z,113nm,1.4s,mb4.8
GIVF Givet 22.61 174 *eP* **P 21 22 17.1 +0.2**
GIVF pmax pmax
comp=Z,56nm,1.4s,mb4.8
GIVF Givet 22.61 174 *eP* **P 21 22 17.1 +0.2**
comp=Z,56nm,1.4s,mb4.8
GIVF Givet 22.61 174 *eP* **P 21 22 17.1 +0.2**
comp=Z,56nm,1.4s,mb4.8
BAIF Baives 22.63 175 *eP* **P 21 22 15.2 -1.9**
comp=Z,68nm,1.2s,mb4.7
BAIF Baives 22.63 175 *eP* **P 21 22 15.2 -1.9**
BAIF pmax pmax
comp=Z,34nm,1.2s,mb4.7
BAIF Baives 22.63 175 *eP* **P 21 22 15.2 -1.9**
comp=Z,34nm,1.2s,mb4.7
BAIF Baives 22.63 175 *eP* **P 21 22 15.2 -1.9**
comp=Z,34nm,1.2s,mb4.7
TNS Taunus Mts 22.66 168 *eP* **P 21 22 17.9 +0.4**
comp=Z,124nm,1.6s,mb5.1
TNS Taunus Mts 22.66 168 *eP* **P 21 22 17.9 +0.4**
TNS pmax pmax
comp=Z,124nm,1.6s,mb5.1
TNS Taunus Mts 22.66 168 *eP* **P 21 22 17.9 +0.4**
comp=Z,124nm,1.6s,mb5.1
WERD Werda 22.75 161 *eP* **P 21 22 18.4 0.0**
comp=Z,52nm,1.5s,mb4.7
TANN Tannenbergstha 22.80 161 *eP* **P 21 22 18.8 -0.1**
comp=Z,47nm,1.3s,mb4.8
KSP Ksiaz 22.82 155 *eP* **P 21 22 19.1 +0.1**
KSP *ep*P 21 22 20.7
GUNZ Gunzen 22.84 161 *eP* **P 21 22 18.1 -1.2**
OBN Obninsk 22.88 121⇓ *eP* **P 21 22 19.0 -0.7**
OBN *e* 21 26 12.1
OBN pmax pmax
comp=Z,116nm,1.7s,mb5.0
OBN MLR MLR
comp=Z,2µm,19.0s,MS4.6
OBN Obninsk 22.88 121 *eP* **P 21 22 18.5 -1.2**
comp=Z,173nm,1.4s,mb5.3
OBN Obninsk 22.88 121 *eP* **P 21 22 18.5 -1.2**
comp=Z,173nm,1.4s,mb5.3
PVCC Panska Ves 22.91 157 *eP* **P 21 22 20.3 +0.2**
PVCC Panska Ves 22.91 157 *eP* **P 21 22 20.3 +0.2**
PVCC Panska Ves 22.91 157 P **P 21 22 20.3 +0.2**
WERN Wernitzgruen 22.92 161 *eP* **P 21 22 19.9 -0.3**
ABH Alteburg 22.95 169 *eP* **P 21 22 22.7 +2.2**
NKC Novy Kostel 22.98 161 *eP* **P 21 22 20.3 -0.5**
NKC Novy Kostel 22.98 161 *eP* **P 21 22 20.3 -0.5**
NKC Novy Kostel 22.98 161 P **P 21 22 20.3 -0.5**
WLF Walferdange 23.09 172 P **P 21 22 23.5 +1.4**
WLF Walferdange 23.09 172 *eP* **P 21 22 22.6 +0.6**
WLF Walferdange 23.09 172 *eP* **P 21 22 20.7 -1.3**
WLF pmax pmax
comp=Z,50nm,1.4s,mb4.8
WLF Walferdange 23.09 172 *eP* **P 21 22 20.7 -1.3**
comp=Z,50nm,1.4s,mb4.8
WLF Walferdange 23.09 172 P **P 21 22 23.4 +1.4**
RUP Ruppelstein 23.10 170 *eP* **P 21 22 22.9 +0.8**
UPC Upice 23.11 155 *eP* **P 21 22 21.1 -1.1**
UPC Upice 23.11 155 *eP* **P 21 22 21.1 -1.1**
UPC Upice 23.11 155 P **P 21 22 21.1 -1.1**
DPC Dobruska-Polom 23.30 155 *eP* **P 21 22 23.9 -0.3**
DPC Dobruska-Polom 23.30 155 *eP* **P 21 22 23.9 -0.3**
DPC Dobruska-Polom 23.30 155 P **P 21 22 23.9 -0.3**
GRA1 Grafenberg Arr 23.40 163 *eP* **P 21 22 26.3 +1.0**
comp=Z,60nm,1.2s,mb4.9
GRA1 Grafenberg Arr 23.40 163 *eP* **P 21 22 26.3 +1.0**
comp=Z,60nm,1.2s,mb4.9
GRF Grafenberg Arr 23.40 163 *eP* **P 21 22 26.3 +1.0**
comp=Z,60nm,1.2s,mb4.9
GRF Grafenberg Arr 23.40 163 *eP* **P 21 22 26.3 +1.0**
GRF pmax pmax
comp=Z,60nm,1.2s,mb4.9
GRF Grafenberg Arr 23.40 163 *eP* **P 21 22 26.3 +1.0**
GRF pmax pmax
comp=Z,60nm,1.2s,mb4.9
GRF Grafenberg Arr 23.40 163 *eP* **P 21 22 26.3 +1.0**
comp=Z,60nm,1.2s,mb4.9
GRFO Grafenberg 23.40 163 *eP* **P 21 22 24.3 -1.0**
GRFO pmax pmax
comp=Z,38nm,1.1s,mb4.7
GRFO Grafenberg 23.40 163 *eP* **P 21 22 24.3 -1.0**
comp=Z,38nm,1.1s,mb4.7
GRFO Grafenberg 23.40 163 *eP* **P 21 22 24.3 -1.0**
comp=Z,38nm,1.1s,mb4.7
ROTZ Rotzenmuhle 23.42 162 *eP* **P 21 22 26.1 +0.7**
PRU Pruhonice 23.44 158 *eP* **P 21 22 25.3 -0.4**
PRU Pruhonice 23.44 158 *eP* **P 21 22 25.3 -0.4**
PRU Pruhonice 23.44 158 P **P 21 22 25.3 -0.4**
LANF Langenberg 23.86 169 *eP* **P 21 22 30.4 +0.8**
FLN La Foliniere 23.89 182 *eP* **P 21 22 28.5 -1.4**
comp=Z,94nm,1.5s,mb4.7
FLN La Foliniere 23.89 182 *eP* **P 21 22 28.5 -1.4**
FLN pmax pmax
comp=Z,47nm,1.5s,mb4.7
FLN La Foliniere 23.89 182 *eP* **P 21 22 28.5 -1.4**
comp=Z,47nm,1.5s,mb4.7
FLN La Foliniere 23.89 182 *eP* **P 21 22 28.5 -1.4**
comp=Z,47nm,1.5s,mb4.7
OJC Ojcow 23.92 149 *eP* **P 21 22 30.7 +0.5**
OJC Ojcow 23.92 149 *eP* **P 21 22 30.7 +0.5**
MORC Moravsky Berou 24.03 153 ‖P **P 21 22 30.3 -0.9**
MORC Moravsky Berou 24.03 153 *eP* **P 21 22 30.1 -1.0**
comp=Z,19nm,1.0s,mb4.5
MORC Moravsky Berou 24.03 153‖ *i* P **P 21 22 30.3 -0.9**
MORC Moravsky Berou 24.03 153 *eP* **P 21 22 30.1 -1.1**
comp=Z,19nm,1.0s,mb4.5
OKC Ostrava-Krasne 24.05 152 *eP* **P 21 22 31.1 -0.3**
OKC Ostrava-Krasne 24.05 152 *eP* **P 21 22 31.1 -0.3**
OKC Ostrava-Krasne 24.05 152 P **P 21 22 31.1 -0.3**
LDF La Druitiere 24.06 182 *eP* **P 21 22 28.4 -3.0**
comp=Z,12nm,0.7s,mb4.2
LDF La Druitiere 24.06 182 *eP* **P 21 22 28.4 -3.0**
LDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
LDF La Druitiere 24.06 182 *eP* **P 21 22 28.4 -3.0**
comp=Z,6.0nm,0.7s,mb4.1
WET Wettzell 24.10 161 *eP* **P 21 22 32.3 +0.5**
comp=Z,38nm,1.4s,mb4.6
WET Wettzell 24.10 161 *eP* **P 21 22 32.3 +0.5**
WET pmax pmax
comp=Z,38nm,1.4s,mb4.6
WET Wettzell 24.10 161 *eP* **P 21 22 32.3 +0.5**
comp=Z,38nm,1.4s,mb4.6
STU Stuttgart 24.16 167 *eP* **P 21 22 30.9 -1.4**
STU Stuttgart 24.16 167 *eP* **P 21 22 30.9 -1.4**
KHC Kasperske Hory 24.18 160 *eP* **P 21 22 32.5 -0.1**
KHC Kasperske Hory 24.18 160 *eP* **P 21 22 32.1 -0.5**
comp=Z,11nm,0.9s,mb4.3
KHC *e*PcP PcP 21 26 08.7 -4.0
KHC Kasperske Hory 24.18 160 *eP* **P 21 22 32.5 -0.1**
KHC Kasperske Hory 24.18 160 *eP* **P 21 22 32.1 -0.5**
comp=Z,11nm,0.9s,mb4.3
MEZF Maizieres J'vi 24.21 173 *eP* **P 21 22 32.2 -0.7**
comp=Z,93nm,1.5s,mb4.7
MEZF Maizieres J'vi 24.21 173 *eP* **P 21 22 32.2 -0.7**
comp=Z,93nm,1.5s,mb5.0
MEZF Maizieres J'vi 24.21 173 *eP* **P 21 22 32.2 -0.7**
comp=Z,46nm,1.5s,mb4.7
TREC Trest 24.24 157 *eP* **P 21 22 34.2 +1.1**
TREC Trest 24.24 157 *eP* **P 21 22 34.2 +1.1**
GRR Gorron 24.27 183 *eP* **P 21 22 31.7 -1.7**
comp=Z,66nm,1.4s,mb4.6
GRR Gorron 24.27 183 *eP* **P 21 22 31.7 -1.7**
GRR pmax pmax
comp=Z,33nm,1.4s,mb4.6
GRR Gorron 24.27 183 *eP* **P 21 22 31.7 -1.7**
comp=Z,33nm,1.4s,mb4.6
GRR Gorron 24.27 183 *eP* **P 21 22 31.7 -1.7**
comp=Z,33nm,1.4s,mb4.6
VRAC Vranov 24.36 155 P **P 21 22 33.6 -0.6**
comp=Z,30nm,0.8s,mb4.8,baz=351,slow=10.0,SNR=46
VRAC Vranov 24.36 155 ‖P **P 21 22 34.4 +0.2**
VRAC Vranov 24.36 155‖ *i* P **P 21 22 34.4 +0.2**
VRAC Vranov 24.36 155‖ *i* P **P 21 22 34.4 +0.2**
ROSF Rostrenen 24.39 187 *eP* **P 21 22 33.9 -0.6**
ROSF Rostrenen 24.39 187 *eP* **P 21 22 33.9 -0.6**
CDF Champ du Feu 24.40 170 *eP* **P 21 22 33.8 -0.8**
comp=Z,67nm,1.5s,mb4.5
CDF Champ du Feu 24.40 170 *eP* **P 21 22 33.8 -0.8**
CDF pmax pmax
comp=Z,34nm,1.5s,mb4.6
CDF Champ du Feu 24.40 170 *eP* **P 21 22 33.8 -0.8**
comp=Z,34nm,1.5s,mb4.5
CDF Champ du Feu 24.40 170 *eP* **P 21 22 33.8 -0.8**
comp=Z,34nm,1.5s,mb4.5
SGMF Saint Gilles 24.45 186 *eP* **P 21 22 33.9 -1.1**
SGMF Saint Gilles 24.45 186 *eP* **P 21 22 33.9 -1.1**
GEC2 GERESS Array S 24.48 160 *eP* **P 21 22 36.1 +0.8**
comp=Z,32nm,1.2s,mb4.6
GEC2 GERESS Array S 24.48 160 *eP* **P 21 22 36.1 +0.8**
GEC2 pmax pmax
comp=Z,32nm,1.2s,mb4.6
GEC2 GERESS Array S 24.48 160 *eP* **P 21 22 36.1 +0.8**
comp=Z,32nm,1.2s,mb4.6
SFTF Sexfontaines 24.51 174 *eP* **P 21 22 35.3 -0.3**
comp=Z,63nm,1.3s,mb4.7
SFTF Sexfontaines 24.51 174 *eP* **P 21 22 35.3 -0.3**
comp=Z,63nm,1.3s,mb5.0
SFTF Sexfontaines 24.51 174 *eP* **P 21 22 35.3 -0.3**
comp=Z,32nm,1.3s,mb4.7
THEF They Montfort 24.52 172 *eP* **P 21 22 36.7 +1.0**
BFO Black Forest 24.54 168 *eP* **P 21 22 37.7 +1.9**
comp=Z,21nm,1.0s,mb4.6
BFO Black Forest 24.54 168 *eP* **P 21 22 37.7 +1.9**
BFO pmax pmax
comp=Z,21nm,1.0s,mb4.6
BFO Black Forest 24.54 168 *eP* **P 21 22 37.7 +1.9**
comp=Z,21nm,1.0s,mb4.6
ECH Echery 24.59 170 *eP* **P 21 22 36.2 -0.1**
ECH Echery 24.59 170 *eP* **P 21 22 34.6 -1.7**
ECH pmax pmax
comp=Z,18nm,1.0s,mb4.6
ECH Echery 24.59 170 *eP* **P 21 22 34.6 -1.7**
comp=Z,18nm,1.0s,mb4.6
ECH Echery 24.59 170 *eP* **P 21 22 36.2 -0.1**
HAU Haudompre 24.76 171 *eP* **P 21 22 37.9 +0.1**
comp=Z,26nm,1.0s,mb4.4
HAU Haudompre 24.76 171 *eP* **P 21 22 37.9 +0.1**
HAU pmax pmax
comp=Z,13nm,1.0s,mb4.4
HAU Haudompre 24.76 171 *eP* **P 21 22 37.9 +0.1**
comp=Z,13nm,1.0s,mb4.4
HAU Haudompre 24.76 171 *eP* **P 21 22 37.9 +0.1**
comp=Z,13nm,1.0s,mb4.4
NIE Niedzica 24.78 149 *eP* **P 21 22 38.3 +0.3**
NIE Niedzica 24.78 149 *eP* **P 21 22 38.3 +0.3**
SPAK Spaichingen-Ko 24.80 168 *eP* **P 21 22 41.0 +2.8**
QUIF Quistinic 24.80 187 *eP* **P 21 22 36.7 -1.5**
QUIF Quistinic 24.80 187 *eP* **P 21 22 36.7 -1.5**
SOKR Solikamsk 24.90 92*c i*P **P 21 22 40.0 +1.0**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.6
FUR Furstenfeldbru 24.92 164 *eP* **P 21 22 40.9 +1.6**
comp=Z,53nm,1.1s,mb5.0
FUR Furstenfeldbru 24.92 164 *eP* **P 21 22 40.9 +1.6**
FUR pmax pmax
comp=Z,53nm,1.1s,mb5.0
FUR Furstenfeldbru 24.92 164 *eP* **P 21 22 40.9 +1.6**
comp=Z,53nm,1.1s,mb5.0
KWP Kalwaria Pacla 24.97 145 *eP* **P 21 22 40.5 +0.8**
KWP *ep*P 21 22 42.2
KWP Kalwaria Pacla 24.97 145 *eP* **P 21 22 40.5 +0.8**
KWP *e**PP 21 22 42.2
KWP Kalwaria Pacla 24.97 145 *eP* **P 21 22 39.4 -0.3**
comp=Z,27nm,0.8s,mb4.8
KWP Kalwaria Pacla 24.97 145⇑ *i* P **P 21 22 40.5 +0.8**
KWP Kalwaria Pacla 24.97 145 *eP* **P 21 22 39.4 -0.3**
comp=Z,27nm,0.8s,mb4.8
HINF Hinteralfeld 24.97 171 *eP* **P 21 22 40.1 +0.3**
comp=Z,26nm,1.3s,mb4.3
HINF Hinteralfeld 24.97 171 *eP* **P 21 22 40.1 +0.3**
HINF pmax pmax
comp=Z,13nm,1.3s,mb4.3
HINF Hinteralfeld 24.97 171 *eP* **P 21 22 40.1 +0.3**
comp=Z,13nm,1.3s,mb4.3
HINF Hinteralfeld 24.97 171 *eP* **P 21 22 40.1 +0.3**
comp=Z,13nm,1.3s,mb4.3
FELD Feldberg im Sc 24.98 169 *eP* **P 21 22 40.7 +0.9**
LVV L'vov 25.02 143 *eP* **P 21 22 40.6 +0.4**
AKASG Malin Array Be 25.20 135 LR LR 21 32 14.6
comp=Z,2µm,18.9s,MS4.6,baz=240,slow=36
KIEV Kiev 25.20 135 *eP* **P 21 22 40.2 -1.6**
KIEV pmax pmax
comp=Z,13nm,0.6s,mb4.6
KIEV Kiev 25.20 135 *eP* **P 21 22 40.2 -1.6**
comp=Z,13nm,0.6s,mb4.6
KIEV Kiev 25.20 135 *eP* **P 21 22 40.2 -1.6**
comp=Z,13nm,0.6s,mb4.6
KOLL Kolacno 25.32 152 *eP* **P 21 22 43.4 +0.5**
KOLL Kolacno 25.32 152 *eP* **P 21 22 43.4 +0.5**
KOLL Kolacno 25.32 152 *eP* **P 21 22 43.4 +0.5**
BBS Basel-Blauen 25.36 170 *eP* **P 21 22 44.1 +0.8**
BBS Basel-Blauen 25.36 170 *eP* **P 21 22 44.1 +0.8**
MODS Modra-Piesok 25.37 154 *eP* **P 21 22 46.2 +2.9**
MODS Modra-Piesok 25.37 154 *eP* **P 21 22 46.2 +2.9**
MODS Modra-Piesok 25.37 154 *eP* **P 21 22 46.2 +2.9**
LOR Lormes 25.41 176 *eP* **P 21 22 42.6 -1.2**
comp=Z,30nm,1.1s,mb4.4
LOR Lormes 25.41 176 *eP* **P 21 22 42.6 -1.2**
LOR pmax pmax
comp=Z,15nm,1.1s,mb4.4
LOR Lormes 25.41 176 *eP* **P 21 22 42.6 -1.2**
comp=Z,15nm,1.1s,mb4.4
LOR Lormes 25.41 176 *eP* **P 21 22 42.6 -1.2**
comp=Z,15nm,1.1s,mb4.4
LOMF Lomont 25.44 171 *eP* **P 21 22 46.7 +2.7**
LOMF Lomont 25.44 171 *eP* **P 21 22 46.7 +2.7**
VYHS Vyhne 25.46 152 *eP* **P 21 22 44.0 -0.2**
VYHS pmax pmax
comp=Z,15nm,1.4s,mb4.3
VYHS Vyhne 25.46 152 *eP* **P 21 22 44.0 -0.2**
comp=Z,14nm,1.4s,mb4.3
VYHS Vyhne 25.46 152 *eP* **P 21 22 44.0 -0.2**
comp=Z,14nm,1.4s,mb4.3
VYHS Vyhne 25.46 152 *eP* **P 21 22 44.0 -0.2**
comp=Z,14nm,1.4s,mb4.3
CRVS Cervenica-Dubn 25.46 148 *eP* **P 21 22 46.1 +1.9**
CRVS pmax pmax
comp=Z,27nm,1.3s,mb4.6
CRVS Cervenica-Dubn 25.46 148 *eP* **P 21 22 46.1 +1.9**
comp=Z,27nm,1.3s,mb4.6
CRVS Cervenica-Dubn 25.46 148 *eP* **P 21 22 46.1 +1.9**
CRVS Cervenica-Dubn 25.46 148 *eP* **P 21 22 46.1 +1.9**
comp=Z,27nm,1.3s,mb4.6
RJOB Jochberg 25.48 161 *eP* **P 21 22 46.6 +2.2**
ZST Bratislava 25.52 155 *eP* **P 21 22 47.7 +3.0**
ZST pmax pmax
comp=Z,16nm,0.9s,mb4.5
ZST Bratislava 25.52 155 *eP* **P 21 22 47.7 +3.0**
comp=Z,16nm,0.9s,mb4.5
ZST Bratislava 25.52 155 *eP* **P 21 22 47.7 +3.0**
ZST Bratislava 25.52 155 *eP* **P 21 22 47.7 +3.0**
comp=Z,16nm,0.9s,mb4.5
MOA Molln 25.52 159⇑ *i* P **P 21 22 46.3 +1.6**
comp=Z,48nm,1.5s,mb4.8,SNR=16
MOA Molln 25.52 159 P **P 21 22 46.3 +1.5**
comp=Z,48nm,1.5s,mb4.8,SNR=16
KOLS Kolonicke sedl 25.57 146 *eP* **P 21 22 46.7 +1.5**
KOLS pmax pmax
comp=Z,27nm,1.3s,mb4.6
KOLS Kolonicke sedl 25.57 146 *eP* **P 21 22 46.7 +1.5**
comp=Z,27nm,1.3s,mb4.6
KOLS Kolonicke sedl 25.57 146 *eP* **P 21 22 46.7 +1.5**
KOLS Kolonicke sedl 25.57 146 *eP* **P 21 22 46.7 +1.5**
comp=Z,27nm,1.3s,mb4.6
SSF Saint Saulge 25.61 176 *eP* **P 21 22 45.6 0.0**
comp=Z,38nm,1.2s,mb4.5
SSF Saint Saulge 25.61 176 *eP* **P 21 22 45.6 0.0**
SSF pmax pmax
comp=Z,19nm,1.2s,mb4.5
SSF Saint Saulge 25.61 176 *eP* **P 21 22 45.6 0.0**
comp=Z,19nm,1.2s,mb4.5
SSF Saint Saulge 25.61 176 *eP* **P 21 22 45.6 0.0**
comp=Z,19nm,1.2s,mb4.5
CONA Conrad Observa 25.63 157‖ *i* P **P 21 22 46.7 +1.0**
comp=Z,62nm,1.2s,mb5.0,SNR=30
CONA Conrad Observa 25.63 157 P **P 21 22 46.7 +1.0**
comp=Z,62nm,1.2s,mb5.0,SNR=30
DAVA Damuels 25.68 166⇑ *i* P **P 21 22 47.5 +1.3**
comp=Z,41nm,1.1s,mb4.9,SNR=13
DAVA Damuels 25.68 166 P **P 21 22 47.5 +1.3**
comp=Z,41nm,1.1s,mb4.9,SNR=13
KECS Kecovo 25.72 149 *eP* **P 21 22 46.5 0.0**
KECS pmax pmax
comp=Z,14nm,1.4s,mb4.3
KECS Kecovo 25.72 149 *eP* **P 21 22 46.5 0.0**
comp=Z,14nm,1.4s,mb4.3
KECS Kecovo 25.72 149 *eP* **P 21 22 46.5 0.0**
MOTA Moosalm 25.72 164⇑ *i* P **P 21 22 47.6 +1.0**
comp=Z,13nm,1.0s,mb4.4,SNR=5.3
MOTA Moosalm 25.72 164 P **P 21 22 47.6 +1.0**

comp=Z,13nm,1.0s,mb4.4,SNR=5.3
FRB Frobisher Bay 25.74 286 P **P 21 22 50.8 +4.2**
comp=Z,5.4nm,0.9s,mb4.1,baz=20,slow=15,SNR=4.3
FRB Frobisher Bay 25.74 286 P **P 21 22 50.8 +4.2**
FRB pmax pmax
comp=Z,5.0nm,0.9s
UZH Uzhgorod 25.86 147 *e*P **P 21 22 48.3 +0.5**
AVF Avril sur Loir 25.88 176 *e*P **P 21 22 47.4 -0.6**
comp=Z,51nm,1.3s,mb4.6
AVF Avril sur Loir 25.88 176 *e*P **P 21 22 47.4 -0.6**
AVF pmax pmax
comp=Z,26nm,1.3s,mb4.6
AVF Avril sur Loir 25.88 176 *e*P **P 21 22 47.4 -0.6**
comp=Z,26nm,1.3s,mb4.6
AVF Avril sur Loir 25.88 176 *e*P **P 21 22 47.4 -0.6**
comp=Z,26nm,1.3s,mb4.6
SOP Sopron 25.95 156 *e*P **P 21 22 50.8 +2.1**
FETA Feichten 26.01 165 ⇑*p*P pP 21 22 52.1 -0.1
comp=Z,20nm,1.2s
FETA Feichten 26.01 165 P **P 21 22 52.1 +2.9**
comp=Z,20nm,1.2s,mb4.5
SMF Signal de Mont 26.04 176 *e*P **P 21 22 49.3 -0.1**
comp=Z,40nm,1.2s,mb4.5
SMF Signal de Mont 26.04 176 *e*P **P 21 22 49.3 -0.1**
SMF pmax pmax
comp=Z,20nm,1.2s,mb4.5
SMF Signal de Mont 26.04 176 *e*P **P 21 22 49.3 -0.1**
comp=Z,20nm,1.2s,mb4.5
SMF Signal de Mont 26.04 176 *e*P **P 21 22 49.3 -0.1**
comp=Z,20nm,1.2s,mb4.5
MFF Saint Martin d 26.05 182 *e*P **P 21 22 48.6 -1.0**
comp=Z,55nm,1.4s,mb4.6
MFF Saint Martin d 26.05 182 *e*P **P 21 22 48.6 -1.0**
MFF pmax pmax
comp=Z,28nm,1.4s,mb4.6
MFF Saint Martin d 26.05 182 *e*P **P 21 22 48.6 -1.0**
comp=Z,28nm,1.4s,mb4.6
MFF Saint Martin d 26.05 182 *e*P **P 21 22 48.6 -1.0**
comp=Z,28nm,1.4s,mb4.6
BGF Bois d'Agland 26.10 177 *e*P **P 21 22 49.6 -0.4**
comp=Z,15nm,0.8s,mb4.2
BGF Bois d'Agland 26.10 177 *e*P **P 21 22 49.6 -0.4**
BGF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
BGF Bois d'Agland 26.10 177 *e*P **P 21 22 49.6 -0.4**
comp=Z,7.3nm,0.8s,mb4.3
BGF Bois d'Agland 26.10 177 *e*P **P 21 22 49.6 -0.4**
comp=Z,7.3nm,0.8s,mb4.2
CABF La Chapelle 26.14 172 *e*P **P 21 22 50.2 -0.2**
comp=Z,56nm,1.2s,mb4.7
CABF La Chapelle 26.14 172 *e*P **P 21 22 50.2 -0.2**
CABF pmax pmax
comp=Z,28nm,1.2s,mb4.7
CABF La Chapelle 26.14 172 *e*P **P 21 22 50.2 -0.2**
comp=Z,28nm,1.2s,mb4.7
CABF La Chapelle 26.14 172 *e*P **P 21 22 50.2 -0.2**
comp=Z,28nm,1.2s,mb4.7
PSZ Piszkesteto 26.18 150 *e*P **P 21 22 51.1 +0.4**
PSZ pmax pmax
comp=Z,22nm,1.1s,mb4.6
PSZ Piszkesteto 26.18 150 ⇑P **P 21 22 52.4 +1.7**
PSZ Piszkesteto 26.18 150 *e*P **P 21 22 51.1 +0.4**
comp=Z,22nm,1.1s,mb4.6
PSZ Piszkesteto 26.18 150 ⇑*i*P **P 21 22 52.4 +1.7**
PSZ Piszkesteto 26.18 150 ⇑*e*P **P 21 22 52.4 +1.7**
PSZ Piszkesteto 26.18 150 *e*P **P 21 22 51.1 +0.4**
comp=Z,22nm,1.1s,mb4.6
DAVOX Davos/Dischmat 26.19 166 P **P 21 22 53.0 +2.3**
comp=Z,6nm,0.8s,mb3.8,baz=0.2,slow=8.3,SNR=4.3
DAVOX LR LR 21 32 54.3
comp=Z,1μm,20.9s,MS4.4,baz=102,slow=36
DAVOX Davos/Dischmat 26.19 166 P **P 21 22 53.0 +2.2**
TCF Toulx Ste Croi 26.36 178 *e*P **P 21 22 51.5 -0.9**
comp=Z,40nm,1.3s,mb4.5
TCF Toulx Ste Croi 26.36 178 *e*P **P 21 22 51.5 -0.9**
TCF pmax pmax
comp=Z,20nm,1.3s,mb4.5
TCF Toulx Ste Croi 26.36 178 *e*P **P 21 22 51.5 -0.9**
comp=Z,20nm,1.3s,mb4.5
TCF Toulx Ste Croi 26.36 178 *e*P **P 21 22 51.5 -0.9**
comp=Z,20nm,1.3s,mb4.5
TRPA Tarpa 26.39 146 ⇓*i*P **P 21 22 53.9 +1.3**
TRPA Tarpa 26.39 146 ⇓*i*P **P 21 22 53.9 +1.3**
TUE Stuetta 26.46 167 *e*P **P 21 22 52.2 -1.0**
comp=Z,20nm,1.4s,mb4.5
TUE Stuetta 26.46 167 *e*P **P 21 22 52.2 -1.0**
comp=Z,20nm,1.4s,mb4.5
BUD Budapest 26.48 152 ⇑*e*P **P 21 22 57.4 +4.0**
SOKA Soboth 26.76 158 ⇑*i*P **P 21 22 56.9 +0.9**
comp=Z,14nm,1.3s,mb4.3
SOKA Soboth 26.76 158 P **P 21 22 56.9 +0.9**
comp=Z,14nm,1.3s,mb4.3
VSR Storozhevoye 27.07 121 *e*P **P 21 22 58.6 -0.1**
VSR *i* 21 23 45.5
VSR pmax pmax
comp=N,40nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s,mb4.8
VSR MLR MLR
comp=N,970nm,17.0s,MS4.5
VSR MLR MLR
comp=E,490nm,17.0s,MS4.5
VSR MLR MLR
comp=Z,2μm,17.0s,MS4.7
LPL La Plagne 27.26 171 *e*P **P 21 23 01.8 +1.3**
comp=Z,14nm,1.1s,mb4.1
LPL La Plagne 27.26 171 *e*P **P 21 23 01.8 +1.3**
LPL pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
LPL La Plagne 27.26 171 *e*P **P 21 23 01.8 +1.3**
comp=Z,7.2nm,1.1s,mb4.1
LPL La Plagne 27.26 171 *e*P **P 21 23 01.8 +1.3**
comp=Z,7.2nm,1.1s,mb4.1
LPG La Plagne 27.28 171 *e*P **P 21 23 02.2 +1.5**
comp=Z,25nm,1.1s,mb4.4
LPG La Plagne 27.28 171 *e*P **P 21 23 02.2 +1.5**
LPG pmax pmax
comp=Z,13nm,1.1s,mb4.4
LPG La Plagne 27.28 171 *e*P **P 21 23 02.2 +1.5**
comp=Z,13nm,1.1s,mb4.4
LPG La Plagne 27.28 171 *e*P **P 21 23 02.2 +1.5**
comp=Z,13nm,1.1s,mb4.4
BUR08 Bucovina Ar. S 27.32 143 *e*P **P 21 23 00.9 -0.1**
BUR08 Bucovina Ar. S 27.32 143 *e*P **P 21 23 00.9 -0.1**
VORD Divnogorie 27.34 121 *e*P **P 21 23 00.8 -0.3**
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,7.0nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s,mb4.8
VORD MLR MLR
comp=N,1μm,16.0s,MS4.5
VORD MLR MLR
comp=E,350nm,16.0s,MS4.5
VORD MLR MLR
comp=Z,2μm,16.0s,MS4.8
RJF Les Rejaudoux 27.34 179 *e*P **P 21 23 00.6 -0.6**
RJF Les Rejaudoux 27.34 179 *e*P **P 21 23 00.6 -0.6**
BURAR Bucovina Array 27.36 143 ⇑P **P 21 23 01.1 -0.2**
BURAR Bucovina Array 27.36 143 ⇑*i*P **P 21 23 01.1 -0.2**
BURAR Bucovina Array 27.36 143 ⇑*i*P **P 21 23 01.1 -0.2**
PKSM Moragy 27.67 153 ⇑P **P 21 23 04.9 +0.8**
PKSM Moragy 27.67 153 ⇑*i*P **P 21 23 04.9 +0.8**
PKSM Moragy 27.67 153 ⇑*i*P **P 21 23 04.9 +0.8**
LFF La Frestale 27.71 180 *e*P **P 21 23 04.4 -0.1**
comp=Z,60nm,1.5s,mb4.7
LFF La Frestale 27.71 180 *e*P **P 21 23 04.4 -0.1**
LFF pmax pmax
comp=Z,30nm,1.5s,mb4.7
LFF La Frestale 27.71 180 *e*P **P 21 23 04.4 -0.1**
comp=Z,30nm,1.5s,mb4.7
LFF La Frestale 27.71 180 *e*P **P 21 23 04.4 -0.1**
comp=Z,30nm,1.5s,mb4.7
DRGR 27.72 147 ⇓P **P 21 23 05.3 +0.8**
DRGR 27.72 147 ⇓*i*P **P 21 23 05.3 +0.8**
DRGR 27.72 147 ⇓*i*P **P 21 23 05.3 +0.8**
CAF Calviac 27.73 178 *e*P **P 21 23 05.1 +0.5**
comp=Z,12nm,1.1s,mb4.2
CAF Calviac 27.73 178 *e*P **P 21 23 05.1 +0.5**
CAF pmax pmax
comp=Z,6.0nm,1.1s,mb4.1
CAF Calviac 27.73 178 *e*P **P 21 23 05.1 +0.5**
comp=Z,6.2nm,1.1s,mb4.2
CAF Calviac 27.73 178 *e*P **P 21 23 05.1 +0.5**
comp=Z,6.2nm,1.1s,mb4.2
ORIF Oris-en-Rattie 27.82 173 *e*P **P 21 23 06.4 +0.9**
comp=Z,41nm,1.4s,mb4.6
ORIF Oris-en-Rattie 27.82 173 *e*P **P 21 23 06.4 +0.9**
ORIF pmax pmax
comp=Z,20nm,1.4s,mb4.5
ORIF Oris-en-Rattie 27.82 173 *e*P **P 21 23 06.4 +0.9**
comp=Z,20nm,1.4s,mb4.6
ORIF Oris-en-Rattie 27.82 173 *e*P **P 21 23 06.4 +0.9**
comp=Z,20nm,1.4s,mb4.6
VRHR Novokhopersk 27.82 118 *e*P **P 21 23 04.7 -0.8**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
VRHR pmax pmax
comp=E,3.0nm,0.4s
VIVF Saint-Julien-l 27.84 174 *e*P **P 21 23 05.4 -0.3**
comp=E,22nm,1.1s,mb4.4
VIVF Saint-Julien-l 27.84 174 *e*P **P 21 23 05.4 -0.3**
VIVF pmax pmax
comp=Z,11nm,1.1s,mb4.4
VIVF Saint-Julien-l 27.84 174 *e*P **P 21 23 05.4 -0.3**
comp=Z,11nm,1.1s,mb4.4
VIVF Saint-Julien-l 27.84 174 *e*P **P 21 23 05.4 -0.3**
comp=Z,11nm,1.1s,mb4.4
ARU Arti 28.03 94*c i*P **P 21 23 08.8 +1.6**
ARU *e* 21 23 53.8
ARU *e*PPP 21 24 05.0
ARU S **S 21 27 53.3 +2.1**
ARU pmax pmax
comp=Z,24nm,2.5s,mb4.4
ARU Arti 28.03 94 *e*P **P 21 23 08.3 +1.0**
comp=Z,15nm,0.9s,mb4.6
ARU Arti 28.03 94 *e*P **P 21 23 08.3 +1.1**
comp=Z,15nm,0.9s,mb4.6
MBDF Montbardon 28.05 171 *e*P **P 21 23 07.9 +0.4**
comp=Z,10nm,0.7s,mb4.2
MBDF Montbardon 28.05 171 *e*P **P 21 23 07.9 +0.4**
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
MBDF Montbardon 28.05 171 *e*P **P 21 23 07.9 +0.4**
comp=Z,5.2nm,0.7s,mb4.3
MBDF Montbardon 28.05 171 *e*P **P 21 23 07.9 +0.4**
comp=Z,5.2nm,0.7s,mb4.2
SVE Sverdlovsk 28.32 92 *e*P **P 21 23 26.0 +16**
SVE pmax pmax
comp=Z,24nm,1.6s,mb4.6
LASF Ste Croix 28.60 176 *e*P **P 21 23 13.0 +0.5**
comp=Z,7.3nm,1.0s,mb4.1
LASF Ste Croix 28.60 176 *e*P **P 21 23 13.0 +0.5**
comp=Z,3.7nm,1.0s,mb4.1
TESR 28.68 142 ⇑*i*P **P 21 23 13.9 +0.8**
TESR 28.68 142 ⇑*i*P **P 21 23 13.9 +0.8**
BZS Buzias 28.69 149 ⇓P **P 21 23 13.4 +0.2**
BZS Buzias 28.69 149 ⇓*i*P **P 21 23 13.4 +0.2**
BZS Buzias 28.69 149 ⇓*i*P **P 21 23 13.4 +0.2**
SMRF Simiane la Rot 28.75 173 *e*P **P 21 23 14.7 +0.9**
comp=Z,7.2nm,0.8s,mb4.1
SMRF Simiane la Rot 28.75 173 *e*P **P 21 23 14.7 +0.9**
comp=Z,7.2nm,0.8s,mb4.5
SMRF Simiane la Rot 28.75 173 *e*P **P 21 23 14.7 +0.9**
comp=Z,3.6nm,0.8s,mb4.1
SBF Sospel 28.95 170 *e*P **P 21 23 15.8 +0.3**
SBF Sospel 28.95 170 *e*P **P 21 23 15.8 +0.3**
FRF La Foret Royal 29.21 172 *e*P **P 21 23 18.6 +0.7**
comp=Z,34nm,1.2s,mb4.6
FRF La Foret Royal 29.21 172 *e*P **P 21 23 18.6 +0.7**
FRF pmax pmax
comp=Z,17nm,1.2s,mb4.7
FRF La Foret Royal 29.21 172 *e*P **P 21 23 18.6 +0.7**
comp=Z,17nm,1.2s,mb4.7
FRF La Foret Royal 29.21 172 *e*P **P 21 23 18.6 +0.7**
comp=Z,17nm,1.2s,mb4.6
VRI Vrincioaia 29.32 142 ⇑P **P 21 23 19.0 +0.2**
VRI Vrincioaia 29.32 142 ⇑*i*P **P 21 23 19.0 +0.2**
VRI Vrincioaia 29.32 142 ⇑*i*P **P 21 23 19.0 +0.2**
PLOR Plostina 29.32 142 ⇓P **P 21 23 20.4 +1.6**
PLOR Plostina 29.32 142 ⇓*i*P **P 21 23 20.4 +1.6**
PLOR Plostina 29.32 142 ⇓*i*P **P 21 23 20.4 +1.6**
LMR La Mourre 29.43 172 *e*P **P 21 23 20.2 +0.4**
comp=Z,32nm,1.3s,mb4.6
LMR La Mourre 29.43 172 *e*P **P 21 23 20.2 +0.4**
LMR pmax pmax
comp=Z,16nm,1.3s,mb4.6
LMR La Mourre 29.43 172 *e*P **P 21 23 20.2 +0.4**
comp=Z,16nm,1.3s,mb4.6
LMR La Mourre 29.43 172 *e*P **P 21 23 20.2 +0.4**
comp=Z,16nm,1.3s,mb4.6
MLR Muntele Rosu 29.54 143 ⇓P **P 21 23 21.2 +0.5**
MLR Muntele Rosu 29.54 143 ⇓*i*P **P 21 23 21.2 +0.5**
MLR Muntele Rosu 29.54 143 ⇓*i*P **P 21 23 21.2 +0.5**
SJPF Ste Jean 29.55 183 *e*P **P 21 23 21.8 +0.9**
comp=Z,40nm,1.6s,mb4.6
SJPF Ste Jean 29.55 183 *e*P **P 21 23 21.8 +0.9**
SJPF pmax pmax
comp=Z,20nm,1.6s,mb4.6
SJPF Ste Jean 29.55 183 *e*P **P 21 23 21.8 +0.9**
comp=Z,20nm,1.6s,mb4.6
SJPF Ste Jean 29.55 183 *e*P **P 21 23 21.8 +0.9**
comp=Z,20nm,1.6s,mb4.6
EPF Esparros 29.62 181 *e*P **P 21 23 21.7 +0.2**
comp=Z,15nm,1.2s,mb4.3
EPF Esparros 29.62 181 *e*P **P 21 23 21.7 +0.2**
EPF pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
EPF Esparros 29.62 181 *e*P **P 21 23 21.7 +0.2**
comp=Z,7.7nm,1.2s,mb4.3
EPF Esparros 29.62 181 *e*P **P 21 23 21.7 +0.2**
comp=Z,7.7nm,1.2s,mb4.3
ETSF Etsaut 29.76 182 *e*P **P 21 23 22.9 +0.2**
comp=Z,25nm,1.4s,mb4.5
ETSF Etsaut 29.76 182 *e*P **P 21 23 22.9 +0.2**
ETSF pmax pmax
comp=Z,12nm,1.4s,mb4.4
ETSF Etsaut 29.76 182 *e*P **P 21 23 22.9 +0.2**
comp=Z,12nm,1.4s,mb4.5
ETSF Etsaut 29.76 182 *e*P **P 21 23 22.9 +0.2**
comp=Z,12nm,1.4s,mb4.5
TRUS Trudelj 29.87 151 *e*P **P 21 23 24.4 +0.7**
DIVS Divibare 29.93 152 ⇑*i*P **P 21 23 25.0 +0.8**
BBLS Lazići 30.08 153 *e*P **P 21 23 27.2 +1.7**
GRUS Gruza 30.24 151 *e*P **P 21 23 28.4 +1.4**
PGF Pioggiola 30.34 168 *e*P **P 21 23 28.7 +0.8**
comp=Z,39nm,1.2s,mb4.7
PGF Pioggiola 30.34 168 *e*P **P 21 23 28.7 +0.8**
PGF pmax pmax
comp=Z,19nm,1.2s,mb4.7
PGF Pioggiola 30.34 168 *e*P **P 21 23 28.7 +0.8**
comp=Z,19nm,1.2s,mb4.7
PGF Pioggiola 30.34 168 *e*P **P 21 23 28.7 +0.8**
comp=Z,19nm,1.2s,mb4.7
TLCR 30.37 139 ⇓P **P 21 23 28.2 +0.1**
TLCR 30.37 139 ⇓*i*P **P 21 23 28.1 0.0**
TLCR 30.37 139 ⇓*i*P **P 21 23 28.1 0.0**
AQU L'Aquila 30.88 162 *e*P **P 21 23 31.4 -1.2**
AQU L'Aquila 30.88 162 *e*P **P 21 23 31.4 -1.2**
TIRR Tirgusor 31.00 140 ⇓P **P 21 23 34.3 +0.7**
TIRR Tirgusor 31.00 140 *e*P **P 21 23 33.0 -0.6**
comp=Z,14nm,1.1s,mb4.7
TIRR Tirgusor 31.00 140 ⇓*i*P **P 21 23 34.3 +0.7**
TIRR Tirgusor 31.00 140 *e*P **P 21 23 33.0 -0.6**
comp=Z,14nm,1.1s,mb4.7
BARS Barje 31.45 150 *e*P **P 21 23 37.2 -0.5**
SCHQ Schefferville 32.50 274 P **P 21 23 49.4 +2.6**
comp=Z,5.2nm,0.8s,mb4.5,baz=24,slow=15,SNR=4.5
AKTK Aktyubinsk 33.06 101 P **P 21 23 52.7 +1.0**
AKTK Aktyubinsk 33.06 101 P **P 21 23 52.7 +1.0**
AKTO Aktyubinsk 33.06 101 P **P 21 23 52.7 +1.0**
comp=Z,2.7nm,0.9s,mb4.2,baz=339,slow=12,SNR=9.1
AKTO Aktyubinsk 33.06 101 P **P 21 23 52.7 +1.0**
AKTO pmax pmax
comp=Z,30nm,0.9s,mb5.2
ESDC Sonseca Array 33.06 187 P **P 21 23 51.6 -0.2**
comp=Z,1.2nm,0.8s,mb3.9,baz=353,slow=9.7,SNR=3.7
ESDC Sonseca Array 33.06 187 P **P 21 23 51.6 -0.2**
BRVK Borovoye 34.44 86 *e*P **P 21 24 04.5 +0.8**
BRVK Borovoye 34.44 86 *e*P **P 21 24 04.5 +0.8**
BVAR Borovoye Array 34.50 86 P **P 21 24 06.4 +2.2**
comp=Z,1.2nm,0.6s,mb4.0,baz=321,slow=6.1,SNR=7.5
BVAR PP PP 21 25 13.8 -8.4
comp=Z,2.7nm,0.8s,baz=329,slow=10,SNR=4.7
BVAR PcP PcP 21 26 41.9 +3.1
comp=Z,1.5nm,0.8s,baz=304,slow=2.6,SNR=3.4
BVAR Borovoye Array 34.50 86 P **P 21 24 06.4 +2.2**
BVAR 21 26 41.9
BVAR pmax pmax
comp=Z,10.0nm,0.6s
BVAR Borovoye Array 34.50 86 P **P 21 24 06.4 +2.2**
ABKAR Akbulak array 34.68 100 *e*P **P 21 24 06.6 +0.8**
comp=Z,3.1nm,0.6s,mb4.4
ABKAR PcP PcP 21 26 40.3 +1.0
ABKAR Akbulak array 34.68 100 *e*P **P 21 24 06.6 +0.8**
comp=Z,3.1nm,0.6s,mb4.4
KIV Kislovodsk 34.70 123 *i*P **P 21 24 09.1 +3.1**
KIV *e* 21 25 19.8
KIV pmax pmax
comp=Z,11nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,1μm,17.0s,MS4.6
KIV Kislovodsk 34.70 123 *e*P **P 21 24 06.5 +0.6**
comp=Z,8.9nm,0.8s,mb4.8
KIV Kislovodsk 34.70 123 *e*P **P 21 24 06.5 +0.5**
comp=Z,8.9nm,0.8s,mb4.8
VAE Valguarnera 35.80 162 LR LR 21 39 50.0
comp=Z,2μm,19.4s,MS4.8,baz=293,slow=38
ZEI Tsey 36.12 122 *e*P **P 21 24 18.5 +0.3**
ZEI pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
INK Inuvik 36.25 333 P **P 21 24 23.2 +4.2**
comp=Z,14nm,1.1s,mb4.8,baz=12,slow=8.8,SNR=8.9
INK Inuvik 36.25 333 P **P 21 24 23.2 +4.2**
INK pmax pmax
comp=Z,14nm,1.1s
INK Inuvik 36.25 333 *e*P **P 21 24 15.7 -3.3**
comp=Z,14nm,1.0s,mb4.9
INK Inuvik 36.25 333 *e*P **P 21 24 15.7 -3.3**
comp=Z,14nm,1.0s,mb4.9
BRTR Keskin Array B 36.60 136 P **P 21 24 23.1 +0.7**
comp=Z,8.6nm,0.8s,mb4.6,baz=337,slow=6.3,SNR=38
BRTR Keskin Array B 36.60 136 *i*P **P 21 24 23.7 +1.4**
BRTR pmax pmax
comp=Z,9.0nm,0.8s
BRTR Keskin Array B 36.60 136 P **P 21 24 23.0 +0.7**
ZALV Zalesovo Beam 37.97 73 P **P 21 24 36.4 +2.6**
comp=Z,1.9nm,0.8s,mb3.9,baz=328,slow=9.1,SNR=6.8
ZALV PP PP 21 26 05.5 +5.3
comp=Z,2.1nm,0.8s,baz=327,slow=11,SNR=4.1
ZALV PcP PcP 21 26 51.7 +2.6
comp=Z,0.6nm,0.4s,baz=315,slow=0.6,SNR=2.6
ZALV Zalesovo Beam 37.97 73 P **P 21 24 36.4 +2.6**
ZALV 21 26 05.5
ZALV 21 26 51.7
ZALV pmax pmax
comp=Z,20nm,0.8s,mb4.9
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
YKA Yellowknife Ar 38.38 318 P **P 21 24 41.1 +3.9**
comp=Z,7.1nm,0.8s,mb4.5,baz=22,slow=8.7,SNR=17
YKA PcP PcP 21 26 54.0 +3.8
comp=Z,2.2nm,0.9s,baz=8.8,slow=3.7,SNR=5.2
YKA Yellowknife Ar 38.38 318 P **P 21 24 41.1 +3.9**
YKA 21 26 54.0
YKA pmax pmax
comp=Z,7.0nm,0.8s
GNI Garni 38.79 122 P **P 21 24 44.2 +3.4**
comp=Z,8.5nm,0.8s,mb4.5,baz=16,slow=8.1,SNR=4.8
GNI Garni 38.79 122 P **P 21 24 44.2 +3.3**
GNI pmax pmax
comp=Z,9.0nm,0.8s
GNI Garni 38.79 122 *e*P **P 21 24 40.3 -0.6**
GNI Garni 38.79 122 *e*P **P 21 24 40.3 -0.6**
AGRB Hanur-Agry 38.90 125 *e*PG **P 21 24 44.7 +2.9**
KURK Kurchatov 38.99 81 *de*P **P 21 24 45.8 +3.4**
KURK pmax pmax
comp=Z,6.0nm,1.2s,mb4.2
KURK MLR MLR
comp=Z,614nm,15.0s,MS4.5
KURK Kurchatov 38.99 81 *e*P **P 21 24 43.3 +0.9**
comp=Z,6.1nm,1.1s,mb4.2
KURK *e*PP PP 21 26 14.5 +3.0
KURK Kurchatov 38.99 81 *e*P **P 21 24 43.3 +0.9**
comp=Z,6.1nm,1.1s,mb4.2
MALT Malatya 39.01 131 *e*P **P 21 24 44.1 +1.4**
MALT pmax pmax
comp=Z,11nm,0.9s,mb4.6
MALT Malatya 39.01 131 *e*P **P 21 24 44.1 +1.5**
comp=Z,11nm,0.9s,mb4.6
MALT Malatya 39.01 131 *e*P **P 21 24 44.1 +1.4**
comp=Z,11nm,0.9s,mb4.6
BILL Bilibino 39.30 9*ce*P **P 21 24 49.8 +5.0**
BILL pmax pmax
comp=Z,19nm,1.2s,mb4.7
DAWY Dawson 41.05 335 P **P 21 24 58.4 -1.0**
DAWY Dawson 41.05 335 P **P 21 24 58.4 -0.9**
CSS Prodhromos 41.13 138 *e*P **P 21 25 00.4 0.0**
CSS Prodhromos 41.13 138 *e*P **P 21 25 00.4 +0.1**
COLA College 41.24 340 *e*P **P 21 24 58.4 -2.5**
COLA College 41.24 340 *e*P **P 21 24 58.3 -2.6**
ILAR Eielson Array 41.24 340 P **P 21 25 06.1 +5.2**
comp=Z,3.6nm,0.8s,mb4.0,baz=7.6,slow=6.8,SNR=41
ILAR Eielson Array 41.24 340 P **P 21 25 06.1 +5.2**
ILAR pmax pmax
comp=Z,4.0nm,0.8s
FFC Flin Flon 42.50 303 *i*P **P 21 25 15.5 +4.2**
FFC Flin Flon 42.50 303 P **P 21 25 11.0 -0.3**
comp=Z,12nm,0.6s,mb4.8
FFC Flin Flon 42.50 303 P **P 21 25 11.0 -0.3**
comp=Z,12nm,0.6s,mb4.8
KKAR Karatay Array 43.40 93 *e*P **P 21 25 20.2 +1.5**
KKAR *e* 21 27 01.5
KKAR pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
KKAR Karatay Array 43.40 93 *e*P **P 21 25 20.2 +1.5**
comp=Z,4.2nm,0.8s,mb4.2
KKAR *e*PP PP 21 27 01.4 +2.1
MMAI Mount Meron Ar 43.44 136 P **P 21 25 19.7 +0.6**
comp=Z,8.7nm,1.0s,mb4.4,baz=6.2,slow=8.5,SNR=8.2
MMAI PP PP 21 26 59.3 -0.6
comp=Z,6.2nm,1.1s,baz=351,slow=7.4,SNR=4.1
MKAR Makanchi Array 43.59 80 P **P 21 25 22.1 +1.9**
comp=Z,1.3nm,1.0s,mb3.6,baz=348,slow=5.1,SNR=7.5
MKAR PcP PcP 21 27 10.1 +2.6
comp=Z,1.3nm,0.9s,baz=348,slow=2.4,SNR=3.3
MKAR Makanchi Array 43.59 80 *i*P **P 21 25 22.6 +2.4**
MKAR pmax pmax
comp=Z,10.0nm,1.0s
SML Sawmill 44.28 340 P **P 21 25 25.0 -0.6**
SML Sawmill 44.28 340 P **P 21 25 25.0 -0.6**
EKS2 Erkin-Say 44.78 90 P **P 21 25 29.2 -0.6**
comp=Z,3.0nm,1.1s,mb4.0
EKS2 Erkin-Say 44.78 90 P **P 21 25 29.2 -0.6**
comp=Z,3.0nm,1.1s,mb4.0
ULM Lac du Bonnet 44.95 296 P **P 21 25 34.5 +3.5**
comp=Z,5.9nm,0.8s,mb4.5,baz=49,slow=4.7,SNR=7.0
TKM2 Tokmak 2 45.10 89 *e*P **P 21 25 33.2 +0.9**
TKM2 *e* 21 27 10.5
TKM2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
TKM2 Tokmak 2 45.10 89 *e*P **P 21 25 33.2 +0.9**
comp=Z,2.4nm,0.8s,mb4.1
TKM2 *e*PcP PcP 21 27 10.5 -2.2
TKM2 Tokmak 2 45.10 89 *e*P **P 21 25 33.2 +0.9**
comp=Z,2.3nm,0.8s,mb4.1
TLY Talaya 45.16 59 P **P 21 25 31.4 -1.3**
TLY Talaya 45.16 59 P **P 21 25 31.4 -1.3**
UCH Uchtor 45.40 90 P **P 21 25 35.2 +0.4**
UCH Uchtor 45.40 90 P **P 21 25 35.2 +0.5**
EYMN Ely 45.82 291 *e*P **P 21 25 35.8 -2.2**
EYMN Ely 45.82 291 *e*P **P 21 25 35.8 -2.2**
ZAK Zakamensk 46.25 60 *e*P **P 21 25 40.4 -0.9**
EIL Elat 46.58 138 P **P 21 25 44.1 0.0**
comp=Z,7.5nm,0.9s,mb4.6,baz=1.1,slow=6.5,SNR=7.4
EIL Elat 46.58 138 P **P 21 25 44.2 0.0**
BRNJ Basking Ridge 47.46 271 *e*P **P 21 25 40.5 -10**
KDAK Kodiak Island 48.67 342 P **P 21 26 04.8 +4.8**
comp=Z,7.6nm,0.6s,mb4.9,baz=343,slow=20,SNR=4.2
KDAK Kodiak Island 48.67 342 P **P 21 26 04.8 +4.8**
KDAK pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
SONM Songino Array 49.40 59 P **P 21 26 09.5 +3.8**
comp=Z,2.2nm,1.0s,mb4.1,baz=335,slow=9.8,SNR=6.9
SONM PcP PcP 21 27 31.1 +3.2
comp=Z,1.2nm,1.1s,baz=346,slow=4.7,SNR=4.0
SONM Songino Array 49.40 59 P **P 21 26 09.5 +3.7**
SONM 21 27 31.1
SONM pmax pmax
comp=Z,20nm,1.0s
TAM Tamanrasset 49.86 175 *e*P **P 21 26 07.4 -2.2**
TAM pmax pmax

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,6.0nm,1.1s,mb4.5						
TAM	Tamanrasset	49.86	175	eP	P	21 26 07.4	-2.2
	comp=Z,6.1nm,1.1s,mb4.5						
TAM	Tamanrasset	49.86	175	eP	P	21 26 07.4	-2.2
	comp=Z,6.1nm,1.1s,mb4.5						
WALA	Waterton Lakes	50.62	309	eP	P	21 26 13.2	-1.8
	comp=Z,0.5nm,1.2s,mb3.3						
WALA	Waterton Lakes	50.62	309	eP	P	21 26 13.2	-1.8
	comp=Z,0.5nm,1.2s,mb3.3						
KBL	Kabul	50.85	99	P	P	21 26 17.4	+0.5
KBL	Kabul	50.85	99	P	P	21 26 17.4	+0.5
YBMT	Yellow Bay	51.76	309	eP	P	21 26 22.6	-1.0
YBMT	Yellow Bay	51.76	309	eP	P	21 26 22.5	-1.1
JTMT	Jette	51.93	309	eP	P	21 26 23.0	-1.9
JTMT	Jette	51.93	309	eP	P	21 26 23.0	-1.9
BSMT	Bassoo Peak	51.95	310	P	P	21 26 23.2	-1.8
	comp=Z,10.0nm,1.1s,mb4.7						
BSMT	Bassoo Peak	51.95	310	P	P	21 26 23.2	-1.8
	comp=Z,10.0nm,1.1s,mb4.7						
NEW	Newport	52.10	312	eP	P	21 26 26.0	-0.1
NEW				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NEW	Newport	52.10	312	eP	P	21 26 26.0	-0.1
	comp=Z,4.9nm,1.1s,mb4.3						
NEW	Newport	52.10	312	eP	P	21 26 26.0	-0.1
	comp=Z,4.9nm,1.1s,mb4.3						
SLMT	Seeley Lake	52.22	308	eP	P	21 26 26.2	-0.8
SLMT	Seeley Lake	52.22	308	eP	P	21 26 26.2	-0.8
CHMT	Chamberlain Mo	52.47	308	eP	P	21 26 28.5	-0.4
CHMT	Chamberlain Mo	52.47	308	eP	P	21 26 28.5	-0.4
GCMT	Greycliff	52.65	305	eP	P	21 26 29.1	-1.1
	comp=Z,25nm,1.5s,mb4.9						
GCMT	Greycliff	52.65	305	eP	P	21 26 29.1	-1.1
	comp=Z,25nm,1.5s,mb4.9						
MSO	Missoula	52.72	309	eP	P	21 26 27.9	-2.8
	comp=Z,10nm,1.0s,mb4.7						
MSO	Missoula	52.72	309	eP	P	21 26 27.9	-2.8
	comp=Z,10nm,1.0s,mb4.7						
RSSD	Black Hills	52.77	299	eP	P	21 26 30.5	-0.6
RSSD	Black Hills	52.77	299	eP	P	21 26 30.5	-0.6
SLM	Saint Louis	54.01	285	P	P	21 26 38.6	-1.7
SLM	Saint Louis	54.01	285	P	P	21 26 38.6	-1.7
MCMT	McKenzie Canyo	54.34	307	eP	P	21 26 42.0	-0.6
	comp=Z,7.6nm,1.4s,mb4.4						
MCMT	McKenzie Canyo	54.34	307	eP	P	21 26 42.0	-0.6
	comp=Z,7.6nm,1.4s,mb4.4						
GTA	Gaotai	55.44	68	eP	P	21 26 58.9	+8.2
GTA				pP	pP	21 27 03.2	+9.3
GTA				sP	sP	21 27 05.0	+10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.3						
PDAR	Pinedale Array	55.46	303	P	P	21 26 54.6	+3.8
	comp=Z,2.7nm,1.0s,mb4.2,baz=44,slow=4.5,SNR=12						
PDAR				PP	PP	21 28 54.0	-0.3
	comp=Z,0.3nm,0.4s,baz=46,slow=6.5,SNR=3.2						
PDAR	Pinedale Array	55.46	303	PP	PP	21 28 54.0	-0.2
HLID	Hailey	55.90	308	eP	P	21 26 52.8	-1.2
	comp=Z,15nm,1.2s,mb4.9						
HLID	Hailey	55.90	308	eP	P	21 26 52.8	-1.1
	comp=Z,15nm,1.2s,mb4.9						
GOGA	Godfrey	56.86	276	eP	P	21 26 59.8	-1.1
GOGA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
GOGA	Godfrey	56.86	276	eP	P	21 26 59.8	-1.1
	comp=Z,6.1nm,0.6s,mb4.8						
GOGA	Godfrey	56.86	276	eP	P	21 26 59.8	-1.1
	comp=Z,6.1nm,0.6s,mb4.8						
HHC	Hu-ho-hao-te	57.24	58	eP	P	21 27 05.4	+1.9
HHC				pP	pP	21 27 10.0	+3.3
HHC				sP	sP	21 27 12.6	+4.7
HHC				PcP	PcP	21 27 58.9	+1.2
HHC				PP	PP	21 29 14.5	+4.4
HHC				ScP	ScP	21 31 56.7	-0.3
HHC				S	S	21 35 00.3	+1.4
HHC				sS	sS	21 35 07.8	+3.6
HHC				ScS	ScS	21 36 50.9	-1.5
HHC				SS	SS	21 38 50.7	+3.5
HHC				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
HHC				LR	LR		
	comp=N,170nm,16.1s,MS4.4						
HHC				LR	LR		
	comp=E,200nm,16.9s,MS4.4						
HHC				LR	LR		
	comp=Z,200nm,16.5s,MS4.3						
SRU	San Rafael	59.15	303	eP	P	21 27 16.5	-0.3
SRU	San Rafael	59.15	303	eP	P	21 27 16.5	-0.3
SRU	San Rafael	59.15	303	eP	P	21 27 16.5	-0.3
TORD	Torodi Ar. Bea	59.39	179	P	P	21 27 18.7	-0.1
	comp=Z,4.4nm,0.7s,mb4.6,baz=354,slow=6.1,SNR=24						
TORD				PcP	PcP	21 28 07.1	+0.5
	comp=Z,0.9nm,0.8s,baz=6.2,slow=5.7,SNR=2.3						
TORD	Torodi Ar. Bea	59.39	179	P	P	21 27 18.7	-0.1
TORD				PcP	PcP	21 28 07.0	+0.5
WMOK	Wichita Mounta	60.10	291	eP	P	21 27 21.5	-2.0
WMOK				pmax	pmax		
	comp=Z,24nm,1.8s,mb4.9						
WMOK	Wichita Mounta	60.10	291	eP	P	21 27 21.4	-2.0
	comp=Z,24nm,1.8s,mb4.9						
WMOK	Wichita Mounta	60.10	291	eP	P	21 27 21.5	-2.0
	comp=Z,24nm,1.8s,mb4.9						
MSU	Marysvale	60.13	304	eP	P	21 27 21.4	-2.2
MSU				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.9						
MSU	Marysvale	60.13	304	eP	P	21 27 21.4	-2.2
	comp=Z,17nm,1.4s,mb4.9						
MSU	Marysvale	60.13	304	eP	P	21 27 21.4	-2.2
	comp=Z,17nm,1.4s,mb4.9						
NVAR	Mina Array Bea	61.70	309	P	P	21 27 38.8	+4.5
	comp=Z,1.8nm,0.8s,mb4.2,baz=34,slow=5.2,SNR=11						
ANMO	Albuquerque	62.01	297	eP	P	21 27 35.3	-1.1
ANMO				pmax	pmax		
	comp=Z,13nm,1.6s						
ANMO	Albuquerque	62.01	297	eP	P	21 27 35.3	-1.2
	comp=Z,13nm,1.6s,mb4.8						
ANMO	Albuquerque	62.01	297	eP	P	21 27 35.3	-1.1
	comp=Z,13nm,1.6s,mb4.8						
SHPR	Sheep Range	62.77	306	eP	P	21 27 40.8	-0.7
	comp=Z,8.1nm,1.3s,mb4.7						
SHPR	Sheep Range	62.77	306	eP	P	21 27 40.8	-0.7
	comp=Z,8.1nm,1.3s,mb4.7						
BNM	Barren Site	62.81	297	eP	P	21 27 40.6	-1.2
	comp=Z,4.2nm,1.1s,mb4.5						
BNM	Barren Site	62.81	297	eP	P	21 27 40.6	-1.2
	comp=Z,4.2nm,1.1s,mb4.5						
XAN	Xi'an	62.98	63	P	P	21 27 48.2	+5.3
XAN				pP	pP	21 27 56.0	+10
XAN				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb4.0						
KSRS	Korea Array	64.32	45	P	P	21 27 54.5	+2.8
	comp=Z,0.6nm,0.4s,mb3.9,baz=347,slow=6.5,SNR=2.7						
KSRS	Korea Array	64.32	45	P	P	21 27 54.5	+2.8
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
TXAR	Lajitas Array	66.55	293	P	P	21 28 09.3	+3.0
	comp=Z,0.7nm,0.5s,mb4.0,baz=44,slow=5.8,SNR=13						
TXAR				PP	PP	21 30 35.3	+2.9
	comp=Z,0.3nm,0.7s,baz=28,slow=5.7,SNR=3.5						
TXAR	Lajitas Array	66.55	293	P	P	21 28 09.3	+3.0
TXAR						21 30 35.3	
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	Lajitas Array	66.55	293	P	P	21 28 09.3	+3.0
TXAR				PP	PP	21 30 35.3	+2.9
MJAR	Matsushiro Arr	67.22	36	P	P	21 28 14.3	+3.8
	comp=Z,3.7nm,1.0s,mb4.4,baz=333,slow=6.9,SNR=8.0						
MJAR	Matsushiro Arr	67.22	36	P	P	21 28 14.3	+3.9
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHTO	Chiang Mai	74.55	77	eP	P	21 28 54.3	-0.9
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
CHTO	Chiang Mai	74.55	77	eP	P	21 28 54.3	-0.9
	comp=Z,2.9nm,0.8s,mb4.3						
CHTO	Chiang Mai	74.55	77	eP	P	21 28 54.3	-0.9
	comp=Z,2.9nm,0.8s,mb4.3						
CMAR	Chiang Mai Arr	74.89	77	P	P	21 29 00.1	+2.9
	comp=Z,1.9nm,0.9s,mb4.0,baz=321,slow=6.3,SNR=7.8						
CMAR	Chiang Mai Arr	74.89	77	P	P	21 29 00.1	+3.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	121.18	53	PKP	PKPdf	21 36 09.9	+1.0
	comp=Z,1.1nm,0.9s,baz=330,slow=2.1,SNR=7.7						
WRA	Warramunga Arr	121.18	53	PKIKP	PKPdf	21 36 10.0	+1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	121.18	53	PKIKP	PKPdf	21 36 09.9	+1.0
PLCA	Paso Flores	123.19	239	PKP	PKPdf	21 36 15.7	+3.6
	comp=Z,1.4nm,0.9s,baz=74,slow=6.8,SNR=3.3						
PLCA	Paso Flores	123.19	239	PKIKP	PKPdf	21 36 15.7	+3.6
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PLCA	Paso Flores	123.19	239	PKIKP	PKPdf	21 36 15.7	+3.6
ASAR	Alice Springs	124.65	55	PKP	PKPdf	21 36 17.1	+1.6
	comp=Z,1.6nm,0.8s,baz=7.1,slow=1.8,SNR=24						
ASAR	Alice Springs	124.65	55	PKIKP	PKPdf	21 36 17.1	+1.6
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR	Alice Springs	124.65	55	PKIKP	PKPdf	21 36 17.1	+1.6
MAW	Mawson	145.71	143	PKPbc	PKPab	21 36 55.8	+1.9
	comp=Z,2.1nm,0.7s,baz=327,slow=8.2,SNR=6.2						
MAW	Mawson	145.71	143	PKP2	PKPab	21 36 55.8	+1.9
MAW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAW	Mawson	145.71	143	PKPbc	PKPab	21 36 55.8	+1.9
QSPA	South Pole Qui	162.51	180	PKPab	PKPab	21 38 05.7	+1.3
	comp=Z,1.5nm,0.9s,baz=284,slow=1.7,SNR=2.8						

IDC 08 21:20:47.3±529.0, 34°.37N×149°.63E, h0km, Error ellipse: s-maj=1055.0km s-min=51.0km az=117.0, North Pacific Ocean

KRSC 08 21:31:26.6±1.4, 53°.25N×167°.79E, h21km±21km, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.23	332	eP	Pn	21 32 03.9	+1.6
BKI				eS	Sn	21 32 31.0	+1.9
MKZ	Mys Kozlova	3.82	292	eP	Pn	21 32 26.6	+2.6
MKZ				eS	Sn	21 33 10.3	+2.1
KBTR	Krutoberegovo	4.13	318	eP	Pn	21 32 29.8	+1.4
KBTR				eS	Sn	21 33 16.8	+0.8
SPN	Mys Shipunski	4.68	271	eP	Pn	21 32 38.0	+2.2
SPN				eS	Sn	21 33 29.8	+0.4
KII	Karymskiy	5.03	282	eP	Pn	21 32 43.9	+3.3
AVH	Avacha	5.43	274	eP	Pn	21 32 49.8	+3.5
AVH				eS	Sn	21 33 51.8	+3.7
SRDR	Sredinnyy	5.59	307	S	Sn	21 33 54.7	+2.8
GNL	Ganaly	5.90	278	eP	Pn	21 32 56.6	+4.0
GNL				eS	Sn	21 34 03.2	+3.7
ALID	Alaid	7.91	257	eP	Pn	21 33 23.4	+3.1

ISCJB 08 21:38:07.6±0.9, 37°.92N±0°.03×27°.10E±0°.10, h9km±8km, Error ellipse: s-maj=13.0km s-min=4.7km az=166.7
DDA 08 21:38:08.0, 37°.93N×27°.13E, h7km±4km, Md3.1
ISK 08 21:38:07.4, 37°.93N×27°.10E, h11km, MD2.8
CSEM 08 21:38:07.6±0.2, 37°.93N×27°.07E, h10km, MD3.1, Error ellipse: s-maj=4.9km s-min=2.0km az=81.0
ISC 08 21:38:07.9±0.9, 37°.92N±0°.03×27°.09E±0°.10, h11km±8km, n18, σ0s.38/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.25	152	i P	Pg	21 38 13.1	0.0
GCAM				i S	Sg	21 38 16.4	-0.1
GCAM	G?zelcaml?	0.25	152	i P	Pg	21 38 13.1	0.0
GCAM				i S	Sg	21 38 16.4	-0.2
BLCB	Balcova	0.46	356	ePG	Pg	21 38 16.8	-0.2
BLCB				eSG	Sg	21 38 23.9	+0.7
BLCB	Balcova	0.46	356	ePg	Pg	21 38 16.8	-0.2
BLCB				eSg	Sg	21 38 23.9	+0.7
IZM	Izmir	0.49	16	ePG	Pg	21 38 17.3	-0.3
IZM	Izmir	0.49	16	ePg	Pg	21 38 17.3	-0.3
KDAG	Bornova	0.50	17	i P	Pg	21 38 16.8	-0.9
KDAG				i S	Sg	21 38 24.6	+0.2
KDAG	Bornova	0.50	17	i P	Pg	21 38 16.8	-0.9
KDAG				i S	Sg	21 38 24.6	+0.3
AYDN	Tasoluk	0.68	112	i P	Pg	21 38 21.3	+0.2
AYDN				i S	Sg	21 38 30.1	+0.1
AYDN	Tasoluk	0.68	112	i P	Pg	21 38 21.3	+0.2
AYDN				i S	Sg	21 38 30.1	+0.1
MLSB	Milas	0.83	139	ePG	Pg	21 38 24.3	+0.3
MLSB	Milas	0.83	139	ePg	Pg	21 38 24.3	+0.3
BODT	Bodrum	0.88	168	ePG	Pg	21 38 24.7	-0.1
BODT	Bodrum	0.88	168	ePg	Pg	21 38 24.7	-0.1
DAT	Datca	1.25	162	ePN	Pn	21 38 31.6	+0.3
DAT	Datca	1.25	162	ePn	Pn	21 38 31.6	+0.3
KULA	Kula-Manisa	1.37	64	ePN	Pn	21 38 32.7	-0.2
KULA	Kula-Manisa	1.37	64	ePn	Pn	21 38 32.7	-0.3

IDC 08 22:05:13.3±2.2, 7°.00S×128°.52E, h0km, mb3.5/1, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, ML3.5/3, MS4.2/1, Ms1 4.2/1, ms1mx2.8/21, Error ellipse: s-maj=105.4km s-min=27.8km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.38	194	Pn	Pn	22 07 57.3	0.0
	0.5nm,0.3s,baz=34,slow=9.7,SNR=21						
FITZ				Sn	Sn	22 09 50.5	-15
	0.6nm,0.3s,baz=100,slow=22,SNR=8.8						
FITZ				LR	LR	22 13 17.1	
	comp=Z,1μm,18.9s,baz=344,slow=42						
WRA	Warramunga Arr	14.04	157	Pn	Pn	22 08 33.4	-0.3
	0.2nm,0.3s,baz=334,slow=13,SNR=5.0						
WRA				Sn	Sn	22 10 54.5	-16
	0.8nm,0.3s,baz=331,slow=21,SNR=10						
ASAR	Alice Springs	17.36	163	P	Pn	22 09 17.4	+0.3
	0.2nm,0.3s,baz=344,slow=11,SNR=18						
ASAR				S	Sn	22 12 20.7	-10
	0.2nm,0.3s,baz=321,slow=22,SNR=5.4						
MKAR	Makanchi Array	67.43	327	P	P	22 16 10.9	+0.1
	0.2nm,0.5s,baz=125,slow=8.4,SNR=6.1						

ISCJB 08 22:06:23.8±0.4, 22°.40S±0°.07×12°.44W±0°.07, h10km, mb4.5/33, MS4.3/7, Error ellipse: s-maj=10.5km s-min=8.8km az=150.9
IDC 08 22:06:24.2±0.8, 22°.29S×12°.38W, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.2/19, mbtmp4.2/12, MS4.3/6, Ms1 4.2/6, ms1mx4.0/21, Error ellipse: s-maj=24.8km s-min=17.1km az=172.0
NEIC 08 22:06:25.4±0.5, 22°.45S×12°.49W, h10km, mb4.8/18, Error ellipse: s-maj=14.2km s-min=9.3km az=147.0
ISC 08 22:06:25.8±0.4, 22°.43S±0°.07×12°.46W±0°.07, h10km, n69, σ1s.16/63, mb4.5/33, MS4.3/7, 3C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEL	Horse Pasture	9.04	46	Pn	Pn	22 08 35.7	-0.6
RCBR	Riachuelo	28.01	303	LR	LR	22 20 49.1	
	comp=Z,567nm,18.8s,MS4.2,baz=51,slow=31						
RCBR	Riachuelo	28.01	303	P	P	22 12 16.8	-0.3
TSUM	Tsumeb	28.25	89	P	P	22 12 18.2	-1.1
	5.4nm,0.9s,mb4.2,baz=244,slow=12,SNR=4.6						
TSUM				LR	LR	22 21 39.9	
	comp=Z,660nm,21.2s,MS4.2,baz=116,slow=32						
TSUM	Tsumeb	28.25	89	eP	P	22 12 19.0	-0.2
TSUM				LR	LR	22 21 39.9	
LIC	Lamto	29.39	15	eP	P	22 12 27.9	-1.5
	50nm,1.2s,mb5.1						
LIC	Lamto	29.39	15	eP	P	22 12 28.0	-1.4
	45nm,1.2s,mb4.8						
LIC	Lamto	29.39	15	eP	P	22 12 28.0	-1.4
	22nm,1.2s,mb4.8						
KIC	Kosan Boka	29.59	16	eP	P	22 12 29.7	-1.5
	70nm,1.4s,mb5.2						
TIC	Toumodi	29.80	15	eP	P	22 12 31.4	-1.6
	4.7nm,0.2s,mb4.9						
DBIC	Dimbokro	29.86	15	P	P	22 12 30.6	-2.9
	5.8nm,0.8s,mb4.3,baz=168,slow=13,SNR=4.8						
DBIC				LR	LR	22 21 39.6	
	comp=Z,511nm,21.4s,MS4.1,baz=156,slow=31						
DBIC	Dimbokro	29.86	15	eP	P	22 12 31.6	-2.0
	74nm,1.9s,mb5.1						
DBIC				LR	LR	22 21 39.6	
SUR	Sutherland	31.05	116	LR	LR	22 22 01.6	
	comp=Z,564nm,20.8s,MS4.2,baz=258,slow=30						
SUR	Sutherland	31.05	116	P	P	22 12 44.0	0.0
SPB	Sao Paulo	32.16	261	P	P	22 12 53.0	-0.8
BDFB	Brasilia	34.22	275	LR	LR	22 24 30.4	
	comp=Z,497nm,20.3s,MS4.2,baz=43,slow=32						
BOSA	Boshof	34.49	108	P	P	22 13 13.2	-0.9
	7.4nm,0.7s,mb4.7,baz=275,slow=8.5,SNR=9.4						
BOSA				LR	LR	22 24 51.6	
	comp=Z,446nm,18.2s,MS4.2,baz=186,slow=32						
LBTB	Lobatse	34.87	102	P	P	22 13 17.8	+0.3
	7.7nm,0.7s,mb4.8,baz=278,slow=11,SNR=13						
TORD	Torodi Ar. Bea	37.98	23	P	P	22 13 42.1	-1.9
	17nm,0.8s,mb4.8,baz=202,slow=8.2,SNR=86						
LSZ	Lusaka	39.03	87	eP	P	22 13 52.1	-0.8
	27nm,1.0s,mb4.9						
CPUP	Villa Florida	40.90	255	P	P	22 14 09.8	+1.4
	0.4nm,0.3s,mb3.5,baz=64,slow=5.9,SNR=3.5						
CPUP	Villa Florida	40.90	255	eP	P	22 14 06.9	-1.5
	4.0nm,0.6s,mb4.2						
TRQA	Tornquist	45.00	238	eP	P	22 14 39.2	-2.3
	6.8nm,0.9s,mb4.5						
TRQA				PcP	PcP	22 16 21.5	-1.1
SIV	San Ignacio	46.19	269	P	P	22 14 50.7	-0.5
	0.3nm,0.4s,mb3.5,baz=114,slow=12,SNR=5.2						
TAM	Tamanrasset	48.23	22	eP	P	22 15 05.6	-1.3
	5.4nm,0.8s,mb4.6						
LPAZ	La Paz	52.63	266	P	P	22 15 41.7	+1.2
	1.8nm,0.8s,mb4.0,baz=142,slow=6.6,SNR=6.3						
LPAZ	La Paz	52.63	266	eP	P	22 15 40.2	-0.3
	3.8nm,1.1s,mb4.2						
SYO	Syowa Base	56.03	160⇑	eP	P	22 16 04.6	+0.3
EVO	Evora	60.78	4	eP	P	22 16 38.2	+0.4
	9.7nm,0.9s,mb4.6						
KEST	Kesra	61.42	20	P	P	22 16 41.2	-1.0
	1.3nm,0.7s,mb4.2,baz=47,slow=3.1,SNR=4.5						
ESDC	Sonseca Array	62.28	7	P	P	22 16 47.9	-0.1
	0.6nm,0.7s,mb3.8,baz=186,slow=9.2,SNR=4.1						
SJPF	Ste Jean	66.03	9	eP	P	22 17 14.0	+1.5
QSPA	South Pole Qui	67.78	180	eP	P	22 17 24.5	+1.2
	6.8nm,0.9s,mb4.7						
VIVF	Saint-Julien-l	68.76	13	eP	P	22 17 31.6	+1.9
	17nm,1.1s,mb4.6						
VIVF	Saint-Julien-l	68.76	13	eP	P	22 17 31.6	+1.9
	8.6nm,1.1s,mb4.6						
ORIF	Oris-en-Rattie	69.08	14	eP	P	22 17 33.0	+1.3
	8.7nm,0.9s,mb4.4						
ORIF	Oris-en-Rattie	69.08	14	eP	P	22 17 33.0	+1.3
	4.3nm,0.9s,mb4.4						
MBDF	Montbardon	69.10	15	eP	P	22 17 33.2	+1.3
	12nm,0.9s,mb4.5						
MBDF	Montbardon	69.10	15	eP	P	22 17 33.2	+1.3
	6.0nm,0.9s,mb4.5						
LPG	La Plagne	69.82	14	eP	P	22 17 37.2	+0.9
	14nm,1.0s,mb4.6						
LPG	La Plagne	69.82	14	eP	P	22 17 37.2	+0.9
	7.3nm,1.0s,mb4.6						
LPL	La Plagne	69.84	14	eP	P	22 17 37.0	+0.6
	12nm,0.8s,mb4.6						
LPL	La Plagne	69.84	14	eP	P	22 17 37.0	+0.6
	5.9nm,0.8s,mb4.6						
SMF	Signal de Mont	70.31	12	eP	P	22 17 40.5	+1.2
AVF	Avril sur Loir	70.36	11	eP	P	22 17 40.7	+1.1
	15nm,1.3s,mb4.5						
AVF	Avril sur Loir	70.36	11	eP	P	22 17 40.7	+1.1
	7.6nm,1.3s,mb4.5						
CABF	La Chapelle	70.73	13	eP	P	22 17 44.4	+2.5
	11nm,0.9s,mb4.5						
CABF	La Chapelle	70.73	13	eP	P	22 17 44.4	+2.5
	5.4nm,0.9s,mb4.5						
MEZF	Maizieres J'vi	72.32	12	eP	P	22 17 52.5	+1.1
	9.7nm,0.8s,mb4.5						
MEZF	Maizieres J'vi	72.32	12	eP	P	22 17 52.5	+1.1
	9.7nm,0.8s,mb4.8						
ABTA	Abfaltersbach	72.46	18⇑	iP	P	22 17 53.6	+1.3
	3.1nm,0.8s,mb4.3						
MOA	Molln	73.96	18⇑	iP	P	22 17 59.8	-1.3
	4.8nm,0.9s,mb4.4						
BRTR	Keskin Array B	75.32	35	P	P	22 18 09.7	+0.5
	3.0nm,1.0s,mb4.2,baz=199,slow=7.0,SNR=13						
VYHS	Vyhne	75.95	21	eP	P	22 18 13.7	+1.1
VYHS	Vyhne	75.95	21	eP	P	22 18 13.7	+1.1
MALT	Malatya	77.00	39	eP	P	22 18 19.2	+0.3
	7.6nm,1.1s,mb4.5						
CRVS	Cervenica-Dubn	77.19	22	eP	P	22 18 18.6	-1.0
CRVS	Cervenica-Dubn	77.19	22	eP	P	22 18 18.6	-1.0
KOLS	Kolonicke sedl	77.51	23	eP	P	22 18 24.5	+3.1
KOLS	Kolonicke sedl	77.51	23	eP	P	22 18 24.5	+3.1
NB2	NORSAR Subarra	85.35	11	P	P	22 19 03.8	+1.1
	comp=Z,1.6nm,0.8s,mb4.2,baz=202,slow=5.1						
NOA	NORSAR Array B	85.35	11	P	P	22 19 02.7	0.0
	comp=Z,0.9nm,0.9s,mb3.9,baz=201,slow=5.1,SNR=4.5						
NOA	NORSAR Array B	85.35	11	P	P	22 19 02.7	0.0
BLA	Blacksburg	87.20	312	eP	P	22 19 12.2	-0.2
	comp=Z,19nm,0.8s,mb5.4						
SWET	Sewanee	90.12	308	eP	P	22 19 26.0	-0.3
ACSO	Alum Creek Sta	90.44	314	eP	P	22 19 27.2	-0.4
	comp=Z,12nm,0.6s,mb5.4						
ILAR	Eielson Array	128.34	337	PKP	PKPdf	22 25 33.6	+1.6
	comp=Z,0.9nm,0.8s,baz=345,slow=1.1,SNR=11						
HHC	Hu-ho-hao-te	129.79	55	ePKP	PKPdf	22 25 34.1	-1.4
HHC				PP	PP	22 27 42.4	-4.5
HHC				PKS	SKPdf	22 29 09.3	-1.7
HHC				SKS	SKSdf	22 32 45.0	-2.2
HHC				SKKS	SKKSac	22 34 34.5	-9.3
HHC				SS	SS	22 44 58.0	-13
HHC				AMB	AMB		
	comp=Z,560nm,9.0s						
HHC				LR	LR		
	comp=N,230nm,19.1s,MS5.2						
HHC				LR	LR		
	comp=E,400nm,20.7s,MS5.2						
HHC				LR	LR		
	comp=Z,360nm,21.4s,MS5.0						
MJAR	Matsushiro Arr	150.99	54	PKPbc	PKPbc	22 26 17.5	-1.7
	comp=Z,1.3nm,0.4s,baz=275,slow=3.0,SNR=3.7						

IDC 08 22:07:09.2±4.1, 21°.16S×176°.15W, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/18, mbtmp4.0/5, Error ellipse: s-maj=271.1km s-min=34.9km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	35.15	265	P	P	22 14 06.9	+2.0
	2.2nm,0.3s,baz=85,slow=8.9,SNR=4.6						
ASAR	Alice Springs	46.05	257	P	P	22 15 33.5	-1.5
	0.7nm,0.7s,baz=91,slow=7.3,SNR=6.0						
WRA	Warramunga Arr	46.22	262	P	P	22 15 36.0	-0.4
	1.0nm,0.3s,baz=96,slow=8.5,SNR=20						
FITZ	Fitzroy Crossi	54.65	262	P	P	22 16 40.4	+0.1
	1.5nm,0.9s,baz=96,slow=6.7,SNR=2.7						
PDAR	Pinedale Array	88.26	43	P	P	22 20 02.9	+0.4
	0.2nm,0.3s,baz=234,slow=7.7,SNR=3.6						

ISK 08 22:22:13.8, 37°.71N×36°.19E, h5km, MD3.4
DDA 08 22:22:14.8, 37°.71N×36°.21E, h10km±2km, Md3.6
ISCJB 08 22:22:15.5±0.4, 37°.69N±0°.03×36°.21E±0°.03, h10km, Error ellipse: s-maj=4.2km s-min=3.2km az=13.0
CSEM 08 22:22:15.3±0.1, 37°.69N×36°.20E, h2km, MD3.6, Error ellipse: s-maj=1.6km s-min=1.5km az=128.0
ISC 08 22:22:16.1±0.4, 37°.67N±0°.03×36°.21E±0°.03, h10km, n51, σ0s.78/62, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANDN	Andirin	0.14	128	i P	Pg	22 22 18.9	-0.4
ANDN				i S	Sg	22 22 21.7	+0.1
ANDN	Andirin	0.14	128	i P	Pg	22 22 18.9	-0.4
ANDN				i S	Sg	22 22 21.7	+0.2
KOZT	Kozan	0.35	238	ePG	Pg	22 22 22.1	-1.0
KOZT				eSG	Sg	22 22 28.2	+0.4
CEYT	Ceyhan	0.75	209	ePG	Pg	22 22 30.1	-0.5
CEYT	Ceyhan	0.75	209	ePg	Pg	22 22 29.9	-0.7
GAZ	Gaziantep	0.94	121	ePG	Pg	22 22 33.3	-0.9
GAZ	Gaziantep	0.94	121	ePg	Pg	22 22 34.1	-0.1
GAZ				eSg	Sg	22 22 48.0	+1.5
KARA	Karaisali	1.00	246	ePG	Pg	22 22 33.5	-1.9
KARA	Karaisali	1.00	246	ePg	Pg	22 22 33.5	-1.9
SARI	SarD1z-Kayseri	1.08	21	ePG	Pg	22 22 27.7	-9.2
GZT	Gaziantep	1.12	106	i P	Pg	22 22 35.9	-1.8
GZT				i S	Sg	22 22 51.9	-0.5
KUZU	Kuzuini	1.13	142	i P	Pb	22 22 37.2	-0.5
KUZU				i S	Sb	22 22 53.5	+1.0
KUZU	Kuzuini	1.13	142	i P	Pb	22 22 37.2	-0.5
KUZU				i S	Sb	22 22 53.5	+1.0
COBT	Iskenderun	1.15	178	i P	Pb	22 22 36.4	-1.6

COBT				*i* S		**Sb**		**22 22 53.8**	**+0.8**
COBT	**Iskenderun**	**1.15**	**178**	*i* P		**Pb**		**22 22 36.4**	**-1.6**
COBT				*i* S		**Sb**		**22 22 53.8**	**+0.9**
GULE	**Gulek**	**1.20**	**252**	*i* P		**Pb**		**22 22 38.0**	**-0.9**
GULE				*i* S		**Sn**		**22 22 56.0**	**+0.8**
GULE	**Gulek**	**1.20**	**252**	*i* P		**Pb**		**22 22 38.0**	**-0.9**
GULE				*i* S		**Sn**		**22 22 56.0**	**+0.8**
KRTS	**Karatas**	**1.28**	**211**	*e*PN		**Pn**		**22 22 40.1**	**+0.1**
KRTS	**Karatas**	**1.28**	**211**	*e*Pn		**Pn**		**22 22 40.1**	**+0.1**
HTY	**Hatay**	**1.54**	**182**	*e*PN		**Pn**		**22 22 44.2**	**+0.5**
HTY	**Hatay**	**1.54**	**182**	*e*Pn		**Pn**		**22 22 44.2**	**+0.5**
MERS	**Mersin**	**1.56**	**240**	*e*PN		**Pn**		**22 22 44.3**	**+0.4**
MERS	**Mersin**	**1.56**	**240**	*e*Pn		**Pn**		**22 22 44.3**	**+0.4**
MALT	**Malatya**	**1.87**	**69**	*e*PN		**Pn**		**22 22 48.0**	**-0.1**
MALT	**Malatya**	**1.87**	**69**	*e*Pn		**Pn**		**22 22 48.0**	**-0.1**
MYA	**Malataya**	**1.87**	**69**	*e*PN		**Pn**		**22 22 48.2**	**0.0**
MYA	**Malataya**	**1.87**	**69**	*e*Pn		**Pn**		**22 22 48.2**	**0.0**
YOZ	**Yozgat**	**2.09**	**341**	*e*PN		**Pn**		**22 22 50.9**	**-0.2**
YOZ	**Yozgat**	**2.09**	**341**	*e*Pn		**Pn**		**22 22 50.9**	**-0.2**
SULT	**Sultanhani-AKS**	**2.19**	**285**	*e*PN		**Pn**		**22 22 52.5**	**-0.1**
SULT	**Sultanhani-AKS**	**2.19**	**285**	*e*Pn		**Pn**		**22 22 52.5**	**-0.1**
SVSK	**Karacayir**	**2.33**	**15**	*e*PN		**Pn**		**22 22 54.1**	**-0.3**
SVSK	**Karacayir**	**2.33**	**15**	*e*Pn		**Pn**		**22 22 54.1**	**-0.4**
IKL	**Isikli**	**2.47**	**235**	*e*PN		**Pn**		**22 22 56.9**	**+0.5**
IKL	**Isikli**	**2.47**	**235**	*e*Pn		**Pn**		**22 22 56.9**	**+0.5**
SVRC	**Sivrice-ELAZID**	**2.55**	**73**	*e*PN		**Pn**		**22 22 57.9**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.55**	**73**	*e*Pn		**Pn**		**22 22 57.9**	**+0.4**
KAMT	**Kaman**	**2.59**	**312**	*e*PN		**Pn**		**22 22 58.4**	**+0.3**
KAMT	**Kaman**	**2.59**	**312**	*e*Pn		**Pn**		**22 22 58.4**	**+0.4**
PTK	**Pertek**	**2.79**	**63**	*e*PN		**Pn**		**22 23 01.4**	**+0.6**
PTK	**Pertek**	**2.79**	**63**	*e*Pn		**Pn**		**22 23 01.4**	**+0.6**
CORM	**Corum**	**2.79**	**334**	*e*PN		**Pn**		**22 23 00.9**	**+0.1**
CORM	**Corum**	**2.79**	**334**	*e*Pn		**Pn**		**22 23 00.9**	**+0.1**
RSDY	**Resadiye-TOKAT**	**2.86**	**17**	*e*PN		**Pn**		**22 23 02.0**	**+0.3**
RSDY	**Resadiye-TOKAT**	**2.86**	**17**	*e*Pn		**Pn**		**22 23 02.1**	**+0.3**
AFSR	**Af´ar-Bala (A**	**3.03**	**307**	*e*PN		**Pn**		**22 23 04.6**	**+0.5**
AFSR	**Af´ar-Bala (A**	**3.03**	**307**	*e*Pn		**Pn**		**22 23 04.6**	**+0.5**
HDMB	**Hadim**	**3.05**	**258**	*e*PN		**Pn**		**22 23 05.2**	**+0.8**
HDMB	**Hadim**	**3.05**	**258**	*e*Pn		**Pn**		**22 23 05.2**	**+0.9**
KONT	**Konya--Tatoy**	**3.06**	**276**	*e*PN		**Pn**		**22 23 05.3**	**+0.8**
KONT	**Konya--Tatoy**	**3.06**	**276**	*e*Pn		**Pn**		**22 23 05.3**	**+0.8**

*ATH **08** 22:45:04.1, 37.°81N×27.°31E, h20km±4km, MD3.3/3*
*ISK **08** 22:45:05.5, 37.°90N×27.°10E, h5km, MD3.2*
*ISCJB **08** 22:45:06.3±0.5, 37.°89N±0.°02×27.°06E±0.°03, h2km±4km, Error ellipse: s-maj=4.4km s-min=3.0km az=161.6*
*DDA **08** 22:45:06.7, 37.°92N×27.°12E, h10km±4km, Md3.1*
*CSEM **08** 22:45:06.8±0.1, 37.°89N×27.°08E, h5km, MD3.1, Error ellipse: s-maj=4.2km s-min=2.5km az=72.0*

ISC 08 22:45:07.1±0.4, 37.°91N±0.°02×27.°09E±0.°03, h3km±3km, n73, σ0.°86/94, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.23**	**151**	*i* P	**Pg**	**22 45 12.0**	**+0.4**
GCAM				*i* S	**Sg**	**22 45 15.6**	**+0.9**
GCAM	**G?zelcaml?**	**0.23**	**151**	*i* P	**Pg**	**22 45 12.0**	**+0.4**
GCAM				*i* S	**Sg**	**22 45 15.6**	**+1.0**
SMG	**Samos**	**0.28**	**226**	*e*PB	**Pg**	**22 45 12.5**	**0.0**
SMG				*e*SB	**Sg**	**22 45 17.9**	**+1.8**
SMG	**Samos**	**0.28**	**226**	*e*Pb	**Pg**	**22 45 12.5**	**0.0**
BLCB	**Balcova**	**0.48**	**355**	PG	**Pg**	**22 45 16.2**	**-0.1**
BLCB	**Balcova**	**0.48**	**355**	*i* Pg	**Pg**	**22 45 16.2**	**-0.1**
IZM	**Izmir**	**0.51**	**15**	PG	**Pg**	**22 45 16.6**	**-0.3**
IZM				*e*SG	**Sg**	**22 45 25.0**	**+1.5**
IZM	**Izmir**	**0.51**	**15**	*i* Pg	**Pg**	**22 45 16.6**	**-0.3**
IZM				*e*Sg	**Sg**	**22 45 25.0**	**+1.5**
KDAG	**Bornova**	**0.52**	**16**	*i* P	**Pg**	**22 45 16.0**	**-1.0**
KDAG				*i* S	**Sg**	**22 45 23.6**	**-0.1**
KDAG	**Bornova**	**0.52**	**16**	*i* P	**Pg**	**22 45 16.0**	**-1.0**
KDAG				*i* S	**Sg**	**22 45 23.6**	**-0.1**
URLA	**Izmir**	**0.60**	**319**	*i* P	**Pg**	**22 45 17.8**	**-0.7**
URLA				*i* S	**Sg**	**22 45 26.6**	**+0.2**
URLA	**Izmir**	**0.60**	**319**	*i* P	**Pg**	**22 45 17.8**	**-0.8**
URLA				*i* S	**Sg**	**22 45 26.5**	**+0.1**
AYDN	**Tasoluk**	**0.67**	**111**	*i* P	**Pg**	**22 45 20.2**	**+0.3**
AYDN				*i* S	**Sg**	**22 45 28.8**	**+0.2**
AYDN	**Tasoluk**	**0.67**	**111**	*i* P	**Pg**	**22 45 20.2**	**+0.2**
AYDN				*i* S	**Sg**	**22 45 28.8**	**+0.1**
MLSB	**Milas**	**0.82**	**138**	*e*PG	**Pg**	**22 45 22.4**	**-0.3**
MLSB	**Milas**	**0.82**	**138**	*e*Pg	**Pg**	**22 45 22.4**	**-0.3**
BODT	**Bodrum**	**0.86**	**168**	*e*PG	**Pg**	**22 45 22.8**	**-0.8**
BODT	**Bodrum**	**0.86**	**168**	*e*Pg	**Pg**	**22 45 22.8**	**-0.8**
BDRM	**Kayabasi**	**0.89**	**161**	*i* P	**Pg**	**22 45 23.6**	**-0.5**
BDRM				*i* S	**Sg**	**22 45 36.4**	**+0.9**
BDRM	**Kayabasi**	**0.89**	**161**	*i* P	**Pg**	**22 45 23.6**	**-0.4**
BDRM				*i* S	**Sg**	**22 45 36.4**	**+0.9**
AKHS	**Akhisar**	**1.13**	**30**	*i* P	**Pg**	**22 45 27.8**	**-0.9**
AKHS				*i* S	**Sg**	**22 45 43.5**	**+0.2**
AKHS	**Akhisar**	**1.13**	**30**	*i* P	**Pg**	**22 45 27.8**	**-0.9**
AKS	**Akhisar**	**1.13**	**30**	*e*PN	**Pn**	**22 45 28.0**	**-1.7**
AKS	**Akhisar**	**1.13**	**30**	*e*Pn	**Pn**	**22 45 28.0**	**-1.7**
YER	**Yerkesik**	**1.22**	**129**	*e*PN	**Pn**	**22 45 29.4**	**-1.6**
YER	**Yerkesik**	**1.22**	**129**	*e*Pn	**Pn**	**22 45 29.4**	**-1.6**
DAT	**Datca**	**1.24**	**162**	*e*PN	**Pn**	**22 45 30.2**	**-1.0**
DAT	**Datca**	**1.24**	**162**	*e*Pn	**Pn**	**22 45 30.2**	**-1.0**
KULA	**Kula-Manisa**	**1.38**	**63**	*e*PN	**Pn**	**22 45 33.0**	**-0.1**
KULA	**Kula-Manisa**	**1.38**	**63**	*e*Pn	**Pn**	**22 45 33.0**	**-0.2**
AYVA	**Ayvalik**	**1.44**	**348**	*i* P	**Pn**	**22 45 33.8**	**-0.2**
AYVA				*i* S	**Sb**	**22 45 53.4**	**+0.3**
AYVA	**Ayvalik**	**1.44**	**348**	*i* P	**Pn**	**22 45 33.8**	**-0.2**
PRK	**Paraskevi**	**1.48**	**335**	*e*PN	**Pn**	**22 45 33.6**	**-1.0**
PRK				*e*SN	**Sn**	**22 45 55.9**	**+1.4**
PRK	**Paraskevi**	**1.48**	**335**	*e*Pn	**Pn**	**22 45 33.6**	**-1.0**
PRK				*e*Sn	**Sn**	**22 45 55.9**	**+1.4**
APE	**Apeiranthos**	**1.50**	**237**	*e*PN	**Pn**	**22 45 35.0**	**+0.2**
APE	**Apeiranthos**	**1.50**	**237**	*e*PN	**Pn**	**22 45 33.4**	**-1.4**
APE	**Apeiranthos**	**1.50**	**237**	*e*Pn	**Pn**	**22 45 33.4**	**-1.4**
DENT	**Denizli**	**1.55**	**95**	*e*PN	**Pn**	**22 45 35.3**	**-0.2**
DENT	**Denizli**	**1.55**	**95**	*e*Pn	**Pn**	**22 45 35.3**	**-0.2**
DNZL	**Cakiroluk**	**1.56**	**97**	*i* P	**Pn**	**22 45 34.9**	**-0.8**
DNZL				*i* S	**Sn**	**22 45 57.5**	**+1.0**
DNZL	**Cakiroluk**	**1.56**	**97**	*i* P	**Pn**	**22 45 34.9**	**-0.8**
DEMI	**Demirci**	**1.71**	**48**	*i* P	**Pn**	**22 45 38.8**	**+1.1**
DEMI				*i* S	**Sn**	**22 45 58.3**	**-1.8**
DEMI	**Demirci**	**1.71**	**48**	*i* P	**Pn**	**22 45 38.8**	**+1.1**
BALB	**Balikesir**	**1.84**	**19**	*e*PN	**Pn**	**22 45 39.6**	**+0.1**
BALB	**Balikesir**	**1.84**	**19**	*e*Pn	**Pn**	**22 45 39.6**	**+0.1**
BALY	**Balya**	**1.88**	**13**	*i* P	**Pn**	**22 45 38.5**	**-1.6**
BALY				*i* S	**Sn**	**22 46 06.3**	**+2.0**
BALY	**Balya**	**1.88**	**13**	*i* P	**Pn**	**22 45 38.5**	**-1.6**
KHAL	**Karahalli**	**1.95**	**75**	*i* P	**Pn**	**22 45 40.5**	**-0.6**
KHAL				*i* S	**Sn**	**22 46 07.4**	**+1.4**
KHAL	**Karahalli**	**1.95**	**75**	*i* P	**Pn**	**22 45 40.5**	**-0.5**
KHL	**Karahalli**	**1.96**	**77**	*e*PN	**Pn**	**22 45 41.5**	**+0.3**
KHL	**Karahalli**	**1.96**	**77**	*e*Pn	**Pn**	**22 45 41.5**	**+0.3**
EZN	**Ezine**	**2.01**	**343**	*e*PN	**Pn**	**22 45 42.0**	**+0.2**
EZN	**Ezine**	**2.01**	**343**	*e*Pn	**Pn**	**22 45 42.1**	**+0.3**
GONE	**Gonen-Balikesi**	**2.19**	**12**	*e*PN	**Pn**	**22 45 44.6**	**+0.3**
GONE	**Gonen-Balikesi**	**2.19**	**12**	*e*Pn	**Pn**	**22 45 44.6**	**+0.3**
GADA	**Gvkgeada**	**2.46**	**338**	*e*PN	**Pn**	**22 45 48.1**	**0.0**
GADA	**Gvkgeada**	**2.46**	**338**	*e*Pn	**Pn**	**22 45 48.1**	**0.0**
EDC	**Edincik**	**2.51**	**14**	*e*PN	**Pn**	**22 45 49.2**	**+0.5**
EDC	**Edincik**	**2.51**	**14**	*e*Pn	**Pn**	**22 45 49.3**	**+0.6**
ELL	**Elmali**	**2.53**	**116**	*e*PN	**Pn**	**22 45 49.2**	**+0.2**
ELL	**Elmali**	**2.53**	**116**	*e*Pn	**Pn**	**22 45 49.2**	**+0.2**
BNT	**Bandirma**	**2.53**	**15**	*e*PN	**Pn**	**22 45 49.1**	**+0.1**
BNT	**Bandirma**	**2.53**	**15**	*e*Pn	**Pn**	**22 45 49.1**	**+0.1**
GELI	**Tayfur-Gelibol**	**2.54**	**349**	*e*PN	**Pn**	**22 45 49.7**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.54**	**349**	*e*Pn	**Pn**	**22 45 49.7**	**+0.6**
KCTX	**Karacabey (Bur**	**2.56**	**22**	*e*PN	**Pn**	**22 45 49.6**	**+0.3**
KCTX	**Karacabey (Bur**	**2.56**	**22**	*e*Pn	**Pn**	**22 45 49.7**	**+0.4**
ERIK	**Erikli-Kesan**	**2.80**	**351**	*e*PN	**Pn**	**22 45 52.2**	**-0.5**
ERIK	**Erikli-Kesan**	**2.80**	**351**	*e*Pn	**Pn**	**22 45 52.2**	**-0.5**
ENEZ	**Enez**	**2.92**	**346**	*e*PN	**Pn**	**22 45 54.2**	**-0.2**
ENEZ	**Enez**	**2.92**	**346**	*e*Pn	**Pn**	**22 45 54.2**	**-0.2**
ARMT	**Armutlu**	**2.99**	**27**	*e*PN	**Pn**	**22 45 56.2**	**+0.8**
ARMT	**Armutlu**	**2.99**	**27**	*e*Pn	**Pn**	**22 45 56.2**	**+0.8**

*ISCJB **08** 22:53:02.0±1.3, 17.°1S±0.°1×178.°9W±0.°1, h517km±19km, mb4.0/12, Error ellipse: s-maj=19.4km s-min=16.3km az=31.1*
*IDC **08** 22:53:03.0±4.7, 17.°13S×178.°97W, h505km±39km, mb3.5/4, mb1 3.7/4, mb1mx3.2/17, mbtmp3.5/4, Error ellipse: s-maj=56.9km s-min=41.8km az=157.0*
*NEIC **08** 22:53:04.8±0.8, 17.°03S×178.°83W, h539km±9km, mb4.1/9, Error ellipse: s-maj=17.2km s-min=14.7km az=171.0*

ISC 08 22:53:03.3±1.3, 17.°1S±0.°1×178.°8W±0.°1, h521km±18km, n35, σ0.°84/24, mb4.0/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.04**	**257**	*e*P	**P**	**22 54 21.8**	**+5.6**
AFI	**Afiamalu**	**7.50**	**66**	*e*P	**P**	**22 54 55.3**	**+0.1**
	106nm,1.5s						
URZ	**Urewera**	**21.40**	**189**	*e*P	**P**	**22 57 13.6**	**+0.3**
	25nm,1.1s,mb4.8						
CTAO	**Charters Tower**	**33.18**	**259**	*e*P	**P**	**22 58 55.8**	**-1.0**
PMG	**Port Moresby**	**33.92**	**279**	*e*P	**P**	**22 59 03.0**	**0.0**
	11nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**38.68**	**240**	P	**P**	**22 59 41.5**	**-0.6**
	4.6nm,0.8s,mb4.1,baz=55,slow=8.9,SNR=8.6						
STKA	**Stephens Creek**	**38.68**	**240**	*e*P	**P**	**22 59 42.4**	**+0.3**
	1.3nm,0.9s,mb3.5						
WRA	**Warramunga Arr**	**44.38**	**259**	P	**P**	**23 00 27.1**	**-0.4**
	0.8nm,0.3s,mb3.7,baz=96,slow=7.1,SNR=7.7						
ASAR	**Alice Springs**	**44.62**	**253**	P	**P**	**23 00 29.4**	**+0.1**
	11nm,0.6s,mb4.6,baz=88,slow=8.1,SNR=116						
ASAR				PcP	PcP	23 02 01.8	+0.8
	1.0nm,0.7s,baz=109,slow=3.9,SNR=5.3						
ASAR				ScP	ScP	23 05 05.2	+1.7
	0.5nm,0.7s,baz=101,slow=4.2,SNR=4.7						
GUMO	**Guam**	**47.04**	**308**	*e*P	**P**	**23 00 47.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**52.76**	**260**	*e*P	**P**	**23 01 31.0**	**+1.2**
	1.5nm,0.6s,mb3.5						
MBWA	**Marble Bar**	**57.88**	**255**	*e*P	**P**	**23 02 05.5**	**0.0**
	4.6nm,0.6s,mb3.9						
NWAO	**Narrogin (SRO)**	**59.24**	**242**	P	**P**	**23 02 14.6**	**+0.1**
CASY	**Casey**	**66.72**	**205**	*e*P	**P**	**23 03 02.3**	**+0.3**
	2.5nm,0.7s,mb3.9						
KSM	**Kuching**	**72.17**	**277**	*e*P	**P**	**23 03 35.6**	**0.0**
	4.4nm,0.4s,mb4.2						
QSPA	**South Pole Qui**	**72.98**	**180**	*e*P	**P**	**23 03 40.0**	**+1.0**
	2.8nm,0.7s,mb3.8						
KULM	**Kulim**	**82.51**	**278**	P	**P**	**23 04 32.4**	**+0.6**
MAW	**Mawson**	**84.50**	**200**	P	**P**	**23 04 41.4**	**+0.8**
	1.4nm,0.5s,mb3.8,baz=118,slow=7.2,SNR=7.6						
MAW	**Mawson**	**84.50**	**200**	*e*P	**P**	**23 04 41.2**	**+0.6**
PMSA	**Palmer Station**	**84.74**	**157**	*e*P	**P**	**23 04 42.9**	**+1.0**
HHC	**Hu-ho-hao-te**	**86.39**	**315**	*e*P	**P**	**23 04 51.1**	**+0.9**
HHC				pP	pP	23 06 49.5	+4.8
HHC				sP	sP	23 07 43.5	+5.8
HHC				PP	PP	23 08 24.7	+3.4
HHC				SKS		23 14 25.4	
HHC				S	S	23 14 41.1	-1.3
HHC				sS	sS	23 18 11.1	+4.7
HHC				SS	SS	23 20 42.0	+3.8
HHC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,230nm,5.2s						
YAK	**Yakutsk**	**88.65**	**338**	P	**P**	**23 04 59.9**	**-0.4**
VNA3	**Neumayer Olymp**	**91.59**	**177**	*e*	**P**	**23 05 11.7**	**-2.2**
VNA2	**Neumayer--Watz**	**92.03**	**177**	*e*	**P**	**23 05 13.7**	**-2.2**
	baz=196,slow=3.5						
ARCES	**ARCESS Array B**	**125.42**	**350**	PKP	PKPdf	23 11 05.2	+1.1
	comp=Z,1.1nm,1.0s,baz=37,slow=6.2,SNR=3.6						
BRTR	**Keskin Array B**	**143.90**	**315**	PKP	PKPdf	23 11 40.4	+1.1
	comp=Z,0.4nm,0.6s,baz=52,slow=2.4,SNR=4.1						
LOR	**Lormes**	**149.81**	**356**	*e*PKP1	PKPab	23 12 01.6	-0.3
	comp=Z,13nm,1.0s						
LOR	**Lormes**	**149.81**	**356**	*e*PKPbc	PKPab	23 12 01.6	-0.3
	comp=Z,12nm,1.0s						
SSF	**Saint Saulge**	**150.03**	**357**	*e*PKP1	PKPab	23 12 01.6	-1.2
	comp=Z,22nm,1.3s						
SSF	**Saint Saulge**	**150.03**	**357**	*e*PKPbc	PKPab	23 12 01.6	-1.2
	comp=Z,22nm,1.3s						
AVF	**Avril sur Loir**	**150.31**	**357**	*e*PKP1	PKPab	23 12 02.4	-1.6
	comp=Z,44nm,1.7s						
AVF	**Avril sur Loir**	**150.31**	**357**	*e*PKPbc	PKPab	23 12 02.4	-1.6
	comp=Z,44nm,1.7s						
SMF	**Signal de Mont**	**150.43**	**356**	*e*PKP1	PKPab	23 12 02.7	-1.8
	comp=Z,40nm,1.5s						
BGF	**Bois d'Agland**	**150.57**	**358**	*e*PKP1	PKPab	23 12 03.3	-1.7
	comp=Z,16nm,0.9s						
BGF	**Bois d'Agland**	**150.57**	**358**	*e*PKPbc	PKPab	23 12 03.3	-1.7
	comp=Z,16nm,0.9s						

*ISCJB **08** 23:11:00.6±0.4, 22.°38S±0.°07×12.°81W±0.°07, h10km, mb4.3/25, MS4.0/5, Error ellipse: s-maj=12.0km s-min=8.3km az=143.1*
*IDC **08** 23:11:01.4±0.6, 22.°42S×12.°82W, h0km, mb4.2/14, MS3.9/4, Ms1 3.9/4, ms1mx3.6/21, Error ellipse: s-maj=22.5km s-min=15.3km az=150.0*
*NEIC **08** 23:11:02.6±0.3, 22.°42S×12.°82W, h10km, mb4.5/16, Error ellipse: s-maj=11.1km s-min=7.8km az=145.0*

ISC 08 23:11:02.6±0.4, 22.°41S±0.°07×12.°82W±0.°07, h10km, n50, σ0.°97/44, mb4.3/25, MS4.0/5, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**9.26**	**47**	Pn	**Pn**	**23 13 16.2**	**-0.1**
RCBR	**Riachuelo**	**27.73**	**303**	LR	LR	23 24 55.0	
	comp=Z,317nm,20.7s,MS3.9,baz=57,slow=30						
TSUM	**Tsumeb**	**28.57**	**89**	P	**P**	**23 16 59.2**	**+0.3**
	3.3nm,0.9s,mb4.1,baz=251,slow=11,SNR=3.2						
TSUM				LR	LR	23 26 10.2	
	comp=Z,229nm,20.5s,MS3.8,baz=133,slow=32						
TSUM	**Tsumeb**	**28.57**	**89**	*e*P	**P**	**23 16 59.6**	**+0.7**
	5.3nm,1.0s,mb4.2						
TSUM				LR	LR	23 26 10.2	
LIC	**Lamto**	**29.46**	**16**	*e*P	**P**	**23 17 04.6**	**-2.3**
DBIC	**Dimbokro**	**29.93**	**16**	P	**P**	**23 17 10.9**	**-0.1**
	3.8nm,0.8s,mb4.2,baz=152,slow=17,SNR=4.3						
DBIC	**Dimbokro**	**29.93**	**16**	*e*P	**P**	**23 17 10.6**	**-0.4**
	31nm,1.5s,mb4.8						
BDFB	**Brasilia**	**33.89**	**275**	P	**P**	**23 17 45.8**	**-0.1**
	6.5nm,0.9s,mb4.6,baz=137,slow=6.8,SNR=7.5						
BDFB				LR	LR	23 29 16.2	
	comp=Z,279nm,18.5s,MS4.0,baz=152,slow=32						
BOSA	**Boshof**	**34.81**	**108**	P	**P**	**23 17 54.2**	**+0.5**
	3.2nm,0.9s,mb4.2,baz=290,slow=11,SNR=3.3						
BOSA	**Boshof**	**34.81**	**108**	*e*P	**P**	**23 17 53.6**	**-0.1**
	6.7nm,1.2s,mb4.5						
LBTB	**Lobatse**	**35.19**	**102**	*e*P	**P**	**23 17 55.7**	**-1.3**
	18nm,1.6s,mb4.8						
TOA0	**Torodi Ar. Sit**	**38.09**	**23**	P	**P**	**23 18 23.1**	**+1.4**
TORD	**Torodi Ar. Bea**	**38.09**	**23**	P	**P**	**23 18 20.1**	**-1.7**
	16nm,1.0s,mb4.7,baz=201,slow=3.8,SNR=41						
LSZ	**Lusaka**	**39.36**	**87**	*e*P	**P**	**23 18 32.7**	**+0.2**
	8.4nm,0.9s,mb4.5						
CPUP	**Villa Florida**	**40.59**	**255**	P	**P**	**23 18 43.0**	**+0.3**
	2.7nm,0.8s,mb3.9,baz=70,slow=7.8,SNR=6.5						
CPUP	**Villa Florida**	**40.59**	**255**	*e*P	**P**	**23 18 42.8**	**+0.1**
	13nm,0.8s,mb4.6						
TRQA	**Tornquist**	**44.73**	**238**	*e*P	**P**	**23 19 16.4**	**+0.2**
	17nm,1.0s,mb4.8						
SIV	**San Ignacio**	**45.86**	**269**	P	**P**	**23 19 26.7**	**+1.3**
	1.4nm,0.8s,mb3.9,baz=115,slow=10,SNR=6.0						
TAM	**Tamanrasset**	**48.35**	**23**	*e*P	**P**	**23 19 45.0**	**+0.4**
	1.1nm,0.6s,mb4.1						
VNA2	**Neumayer--Watz**	**48.63**	**178**	*e*	**P**	**23 19 42.3**	**-4.0**
VNA2				*e*		23 19 47.3	
VNA3	**Neumayer Olymp**	**48.88**	**179**	*e*	**P**	**23 19 44.3**	**-3.9**
VNA3				*e*		23 19 50.3	
PLCA	**Paso Flores**	**51.55**	**235**	P	**P**	**23 20 08.6**	**-0.3**
	4.9nm,1.2s,mb4.3,baz=106,slow=9.8,SNR=3.2						
PLCA	**Paso Flores**	**51.55**	**235**	*e*P	**P**	**23 20 08.7**	**-0.2**
	4.5nm,1.1s,mb4.3						
USHA	**Ushuaia**	**52.30**	**217**	P	**P**	**23 20 13.1**	**-1.1**
	14nm,1.2s,mb4.7,baz=26,slow=5.4,SNR=3.2						
LPAZ	**La Paz**	**52.31**	**266**	P	**P**	**23 20 15.2**	**+0.4**
	1.7nm,1.1s,mb3.9,baz=91,slow=2.3,SNR=3.7						
LPAZ	**La Paz**	**52.31**	**266**	*e*P	**P**	**23 20 14.8**	**-0.1**
	1.7nm,0.8s,mb4.0						
GRGR	**Grenville**	**58.90**	**301**	P	**P**	**23 21 00.9**	**-1.3**
EVO	**Evora**	**60.79**	**4**	*e*P	**P**	**23 21 14.2**	**-0.5**
	8.4nm,0.8s,mb4.6						
KEST	**Kesra**	**61.52**	**20**	P	**P**	**23 21 22.0**	**+2.3**
	1.1nm,0.9s,mb4.0,baz=184,slow=7.6,SNR=3.6						
KEST	**Kesra**	**61.52**	**20**	P	**P**	**23 21 22.0**	**+2.3**
MTE	**Manteigas**	**62.68**	**5**	P	**P**	**23 21 28.2**	**+0.8**
MAW	**Mawson**	**64.04**	**156**	P	**P**	**23 21 37.1**	**+0.9**
	3.7nm,1.1s,mb4.3,baz=278,slow=11,SNR=5.0						
QSPA	**South Pole Qui**	**67.79**	**180**	*e*P	**P**	**23 22 00.4**	**+0.3**
	5.2nm,1.0s,mb4.5						
MBDF	**Montbardon**	**69.17**	**15**	*e*P	**P**	**23 22 09.3**	**+0.2**
	5.8nm,0.8s,mb4.2						
MBDF	**Montbardon**	**69.17**	**15**	*e*P	**P**	**23 22 09.3**	**+0.2**
	2.9nm,0.8s,mb4.3						
LPG	**La Plagne**	**69.89**	**15**	*e*P	**P**	**23 22 13.3**	**-0.3**
	4.6nm,0.8s,mb4.2						
LPG	**La Plagne**	**69.89**	**15**	*e*P	**P**	**23 22 13.3**	**-0.3**
	2.3nm,0.8s,mb4.2						
LPL	**La Plagne**	**69.90**	**15**	*e*P	**P**	**23 22 12.9**	**-0.7**
	5.7nm,0.8s,mb4.2						
LPL	**La Plagne**	**69.90**	**15**	*e*P	**P**	**23 22 12.9**	**-0.7**
	2.8nm,0.8s,mb4.2						
SMF	**Signal de Mont**	**70.36**	**12**	*e*P	**P**	**23 22 16.6**	**+0.2**
AVF	**Avril sur Loir**	**70.41**	**12**	*e*P	**P**	**23 22 16.6**	**-0.1**
	2.8nm,0.9s,mb3.9						
AVF	**Avril sur Loir**	**70.41**	**12**	*e*P	**P**	**23 22 16.6**	**-0.1**
	1.4nm,0.9s,mb3.9						
BRTR	**Keskin Array B**	**75.50**	**35**	P	**P**	**23 22 46.9**	**-0.2**
	0.9nm,0.7s,mb3.8,baz=193,slow=5.1,SNR=9.8						
TEIG	**Tepich**	**84.96**	**294**	*e*P	**P**	**23 23 38.1**	**-0.4**
	31nm,1.4s,mb5.2						
NOA	**NORSAR Array B**	**85.40**	**11**	P	**P**	**23 23 42.0**	**+2.3**
	0.6nm,0.8s,mb3.8,baz=200,slow=5.4,SNR=3.4						
NOA				LR	LR	23 57 47.0	
	comp=Z,33nm,19.3s,MS3.7,baz=75,slow=33						
ASAR	**Alice Springs**	**123.92**	**143**	PKP	PKPdf	23 30 01.4	-0.3
	0.5nm,0.8s,baz=221,slow=2.8,SNR=4.8						
ILAR	**Eielson Array**	**128.19**	**337**	PKP	PKPdf	23 30 09.2	+0.7
	0.8nm,0.8s,baz=318,slow=0.9,SNR=9.1						
HHC	**Hu-ho-hao-te**	**130.04**	**55**	*e*PKP	PKPdf	23 30 12.8	0.0
HHC				PP	PP	23 32 24.7	-0.7
HHC				PKS		23 33 48.7	
HHC				SKS	SKSdf	23 37 23.7	-0.8
HHC				SKKS	SKKSac	23 39 15.1	-7.1
HHC				SS	SS	23 49 42.4	-8.8
HHC				AMB	AMB		
	comp=Z,290nm,

KURK	Kurchatov	47.87	301	eP	P	23 20 38.6	-2.9
	comp=Z,0.8nm,0.3s,mb4.2						
FFC	Flin Flon	50.18	49	i P	P	23 21 00.0	+0.9
BRVK	Borovoye	50.21	308	eP	P	23 20 57.7	-1.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
BRVK	Borovoye	50.21	308	eP	P	23 20 57.7	-1.7
	comp=Z,1.8nm,0.8s,mb4.2						
FCC	Fort Churchill	50.57	41	eP	P	23 21 01.3	-0.7
NVAR	Mina Array Bea	53.42	74	P	P	23 21 25.5	+2.0
	comp=Z,0.2nm,0.5s,mb3.4,baz=294,slow=8.8,SNR=3.4						
EKS2	Erkin-Say	55.83	297	P	P	23 21 39.7	-1.2
AML	Almayashu	56.26	297	eP	P	23 21 43.6	-0.3
FINES	FINESS Array B	58.55	337	P	P	23 22 06.5	+6.7
	comp=Z,1.5nm,0.8s,mb4.1,baz=29,slow=8.7,SNR=4.1						
FINES	FINESS Array B	58.55	337	P	P	23 22 06.5	+6.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	58.55	337	P	P	23 22 06.5	+6.7
TXAR	Lajitas Array	68.22	70	P	P	23 23 05.3	+1.2
	comp=Z,0.8nm,0.5s,mb4.0,baz=301,slow=5.0,SNR=9.3						
TXAR	Lajitas Array	68.22	70	P	P	23 23 05.4	+1.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
QSPA	South Pole Qui	145.25	180	PKP	PKPdf	23 31 38.2	-1.0
	comp=Z,0.9nm,0.7s,baz=300,slow=5.4,SNR=6.3						

*NEIC **08** 23:18:26.8, 32°.17S×70°.30W, h114km, MD4.0(GUC), After GUC.*

GUC 08 23:18:26.8±0.6, 32°.17S×70°.30W, h114km±8km, MD3.8, ML4.0, 3C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	Jahuel	0.57	206	⇑iP	Pn	23 18 44.9	+0.3
JACH	Jahuel	0.57	206	⇑iP	Pn	23 18 44.9	+0.3
ROCH	El Roble	1.00	217	eP	Pn	23 18 49.0	+0.7
ROCH				i S	Sn	23 19 06.1	+1.4
ROCH	El Roble	1.00	217	eP	Pn	23 18 49.0	+0.7
ROCH				eP		23 18 49.1	
ROCH				i S	Sn	23 19 06.1	+1.4
ROCH				i S	Sn	23 19 06.4	+1.7
PEL	Peldehue	1.03	199	⇑iP	Pn	23 18 48.9	+0.3
PEL				i S	Sn	23 19 05.5	+0.4
PEL				AML	AML	23 19 07.0	
	comp=N,6μm,0.3s						
PCH	Pirque	1.46	187	eP	Pn	23 18 54.0	+0.6
PCH				i S	Sn	23 19 14.6	+1.0
PCH	Pirque	1.46	187	eP	Pn	23 18 54.0	+0.6
PCH				i S	Sn	23 19 14.6	+1.0
SJCH	San Jose de Ma	1.47	182	eP	Pn	23 18 53.6	+0.1
SJCH				i S	Sn	23 19 15.2	+1.4
SJCH	San Jose de Ma	1.47	182	eP	Pn	23 18 53.6	+0.1
SJCH				i S	Sn	23 19 15.2	+1.4
TACH	Talagante	1.58	200	eP	Pn	23 18 55.0	+0.3
TACH				i S	Sn	23 19 17.0	+0.9
TACH	Talagante	1.58	200	eP	Pn	23 18 55.0	+0.3
TACH				i S	Sn	23 19 17.0	+0.9
OVCH	Ovalle	1.74	333	eP	Pn	23 18 57.2	+0.5
OVCH				i S	Sn	23 19 20.1	+0.6
OVCH	Ovalle	1.74	333	eP	Pn	23 18 57.2	+0.5
OVCH				i S	Sn	23 19 20.1	+0.6
OVCH				AML	AML	23 19 24.8	
	comp=N,1μm,0.8s						
LCO	Las Campanas	3.17	354	ePn	Pn	23 19 14.7	-0.5
LCO				eSn	Sn	23 19 51.4	-1.0
TRQA	Tornquist	8.99	133	ePn	Pn	23 20 31.3	-2.4
	comp=N,7.9nm,0.4s						
TRQA				eSn	Sn	23 22 07.3	-5.8

*ISCJB **08** 23:20:28.6±0.6, 50°.56S±0°.08×112°.5E±0°.2, h10km, mb4.3/8, MS4.4/2, Error ellipse: s-maj=17.8km s-min=11.2km az=13.3*

*IDC **08** 23:20:30.9±1.3, 50°.25S×112°.34E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/13, mbtmp4.0/4, MS4.3/1, Ms1 4.3/1, ms1mx3.5/11, Error ellipse: s-maj=60.8km s-min=24.7km az=102.0*

*NEIC **08** 23:20:30.3±0.6, 50°.57S×112°.45E, h10km, mb4.5/4, Error ellipse: s-maj=16.2km s-min=9.7km az=103.0*

ISC 08 23:20:30.6±0.6, 50°.58S±0°.08×112°.5E±0°.2, h10km, n18, σ0.99/15, mb4.3/8, MS4.4/2, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	Casey	15.78	183	ePn	Pn	23 24 11.7	-0.9
	1.8nm,1.0s						
BBOO	Buckleboo	24.82	53	P	P	23 25 53.4	+0.6
MCQ	Macquarie Isla	28.12	116	P	P	23 26 24.3	+1.9
MAW	Mawson	29.56	216	eP	P	23 26 35.6	+0.6
MBWA	Marble Bar	29.91	14	eP	P	23 26 37.2	-1.2
CAN	Canberra	30.40	74	eP	P	23 26 41.8	-1.0
	7.7nm,1.0s,mb4.4						
ASAR	Alice Springs	31.59	40	P	P	23 26 53.5	+0.1
	0.9nm,0.9s,mb3.6,baz=216,slow=8.6,SNR=6.3						
FITZ	Fitzroy Crossi	34.06	23	eP	P	23 27 15.0	+0.1
	6.9nm,1.0s,mb4.5						
WRA	Warramunga Arr	35.12	37	P	P	23 27 24.1	0.0
	1.0nm,0.4s,mb4.1,baz=204,slow=7.9,SNR=5.5						
RPZ	Rata Peaks	39.49	103	LR	LR	23 39 27.0	
	comp=Z,355nm,18.9s,MS4.2,baz=358,slow=29						
QSPA	South Pole Qui	39.55	180	P	P	23 28 05.6	+4.5
	2.2nm,0.7s,mb4.0,baz=276,slow=4.8,SNR=10						
QSPA	South Pole Qui	39.55	180	eP	P	23 28 00.7	-0.4
	2.4nm,0.7s,mb4.0						
COCO	West Island	40.37	336	eP	P	23 28 07.9	-0.6
	67nm,0.4s						
SNZO	South Karori	43.06	103	eP	P	23 28 29.4	-1.0
	25nm,0.9s,mb4.9						
CMAR	Chiang Mai Arr	69.76	346	P	P	23 31 40.6	0.0
	0.7nm,0.3s,mb4.0,baz=183,slow=6.8,SNR=4.8						
HHC	Hu-ho-hao-te	91.05	359	eP	P	23 33 36.8	+2.3
HHC				pP	pP	23 33 41.6	+3.8
HHC				PP	PP	23 37 17.4	+5.8
HHC				SKS		23 44 07.5	
HHC				S	S	23 44 33.8	+2.1
HHC				sS	sS	23 44 40.9	+3.7
HHC				SS	SS	23 50 42.1	+5.6
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
HHC				pmax	pmax		
	comp=Z,140nm,6.1s						
HHC				LR	LR		
	comp=N,190nm,18.6s,MS4.7						
HHC				LR	LR		
	comp=E,160nm,18.1s,MS4.7						
HHC				LR	LR		
	comp=Z,200nm,19.9s,MS4.5						
TXAR	Lajitas Array	145.58	114	PKPbc	PKPab	23 40 11.7	+2.4
	comp=Z,1.0nm,1.1s,baz=213,slow=6.0,SNR=4.1						
PDAR	Pinedale Array	150.44	89	PKPbc	PKPbc	23 40 24.3	+2.7
	comp=Z,0.7nm,0.7s,baz=294,slow=1.5,SNR=4.9						

*IDC **08** 23:22:14.4±1.5, 20°.34S×169°.40E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.9/16, mbtmp3.9/5, Error ellipse: s-maj=39.0km s-min=36.1km az=31.0*

*ISCJB **08** 23:22:17.5±1.0, 20°.6S±0°.2×169°.4E±0°.1, h33km, mb3.9/5, Error ellipse: s-maj=29.0km s-min=10.8km az=153.0*

ISC 08 23:22:19.4±1.0, 20°.7S±0°.2×169°.5E±0°.1, h35km, n10, σ1.39/9, mb3.9/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	2.83	238	eS	Sn	23 23 35.6	+0.7
NOUC	Port Laguerre	3.28	244	eS	Sn	23 23 45.1	-1.0
STKA	Stephens Creek	27.30	240	P	P	23 28 02.7	+2.0
	0.7nm,0.4s,mb3.5,baz=59,slow=5.9,SNR=3.1						
WRA	Warramunga Arr	32.92	265	P	P	23 28 49.3	-1.3
	0.4nm,0.4s,mb3.7,baz=92,slow=8.4,SNR=3.4						
ASAR	Alice Springs	33.02	258	P	P	23 28 51.7	+0.2
	1.5nm,0.6s,mb4.1,baz=78,slow=9.4,SNR=20						
QSPA	South Pole Qui	69.40	180	P	P	23 33 25.9	+2.8
	2.4nm,0.7s,mb4.2,baz=16,slow=2.8,SNR=11						
VNA3	Neumayer Olymp	88.34	180	e	P	23 35 05.3	-1.7
VNA3				e		23 35 10.1	
SONM	Songino Array	88.48	323	P	P	23 35 08.7	+0.7
	0.5nm,0.7s,mb3.9,baz=134,slow=8.3,SNR=2.9						
VNA2	Neumayer--Watz	88.63	181	e	P	23 35 07.0	-1.4
VNA2				e		23 35 12.1	
ARCES	ARCESS Array B	126.49	345	PKP	PKPdf	23 41 16.9	-1.0
	0.7nm,0.9s,baz=17,slow=3.8,SNR=4.3						

*BJI **08** 23:26:49.5, 36°.15N×71°.03E, h106km, mB4.9/1, mb4.5/1*

*NNC **08** 23:26:55.9±6.6, 36°.95N×71°.26E, h0km, mb4.4, mpv4.3, Error ellipse: s-maj=56.4km s-min=47.5km az=151.0*

*ISCJB **08** 23:26:56.3±0.5, 36°.61N±0°.03×71°.60E±0°.06, h118km±7km, mb3.9/9, Error ellipse: s-maj=7.6km s-min=4.2km az=174.3*

*NEIC **08** 23:26:56.4±0.9, 36°.47N×71°.56E, h107km±8km, mb4.4/11, Error ellipse: s-maj=14.3km s-min=7.2km az=134.0*

*IDC **08** 23:26:58.1±4.0, 36°.63N×71°.64E, h97km±39km, mb3.5/6, mb1 3.6/11, mb1mx3.4/27, mbtmp3.6/11, Error ellipse: s-maj=25.9km s-min=23.4km az=64.0*

ISC 08 23:26:56.4±0.4, 36°.53N±0°.03×71°.56E±0°.05, h102km±6km, n66, σ1.44/84, mb3.9/9, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.71	174	⇑P	Pn	23 27 43.3	+4.9
CEP				S	Sn	23 28 18.0	+7.4
KBL	Kabul	2.85	227	ePn	Pn	23 27 40.4	+0.2
KBL				eSn	Sn	23 28 12.2	-1.6
CHCP	Chirah Chowk	3.19	153	P	Pn	23 27 50.5	+5.9
THW	Thamme Wali	3.73	178	P	Pn	23 27 56.2	+4.3
THW				S	Sn	23 28 40.0	+5.1
KSH	Kashi	4.59	48	P	Pn	23 28 01.4	-2.0
KSH				S	Sn	23 28 44.8	-11
KSH				smax			
	comp=N,320nm,0.2s						
KSH				smax			
	comp=E,260nm,0.4s						
AML	Almayashu	5.83	16	P	Pn	23 28 21.2	+0.9
	SNR=122						
AML	Almayashu	5.83	16	ePn	Pn	23 28 21.6	+1.3
	comp=E,67nm,0.3s						
AML				eSn	Sn	23 29 23.7	-2.1
KZA	Kyzart	6.24	26	P	Pn	23 28 27.6	+1.8
	SNR=12						
KZA	Kyzart	6.24	26	ePn	Pn	23 28 26.6	+0.9
	comp=E,5.5nm,0.4s						
KZA				eSn	Sn	23 29 36.4	+0.8
EKS2	Erkin-Say	6.36	15	P	Pn	23 28 28.8	+1.3
	SNR=41						
EKS2	Erkin-Say	6.36	15	ePn	Pn	23 28 28.6	+1.1
	comp=E,15nm,0.5s						
EKS2				eSn	Sn	23 29 35.6	-3.0
AAK	Ala-Archa	6.50	20	P	Pn	23 28 30.9	+1.5
	SNR=30						
AAK	Ala-Archa	6.50	20	P	Pn	23 28 31.2	+1.7
	comp=E,0.2nm,0.3s,baz=172,slow=5.8,SNR=58						
AAK				S	Sn	23 29 40.5	-1.6
	comp=E,0.0nm,0.3s,baz=118,slow=20,SNR=14						
AAK	Ala-Archa	6.50	20	ePn	Pn	23 28 31.6	+2.2
	comp=E,28nm,0.4s						
AAK				Sn	Sn	23 29 41.1	-1.0
KK31	Karatay Array	6.62	353	P	Pn	23 28 30.7	-0.2
	comp=E,27nm,0.4s,baz=177,slow=9.9,SNR=350						
KK31				S	Sn	23 29 41.2	-3.6
	comp=E,7.9nm,0.4s,baz=173,slow=19,SNR=8.5						
KKAR	Karatay Array	6.62	353	ePn	Pn	23 28 30.9	0.0
	comp=E,53nm,0.4s						
KKAR				eSn	Sn	23 29 40.9	-3.9
KBK	Karagaybulak	6.66	22	P	Pn	23 28 34.0	+2.5
	SNR=8.1						
SDNR	Sundarnagar	6.73	137	ePKP	Pn	23 28 37.5	+4.9
ULHL	Ulahol	6.76	31	P	Pn	23 28 36.8	+3.9
	SNR=5.3						
CHMS	Chumysh	6.91	20	P	Pn	23 28 36.4	+1.4
	SNR=10						
USP	Ospenovka	7.10	18	P	Pn	23 28 38.6	+1.2
	SNR=20						
TKM2	Tokmak 2	7.10	25	⇑P	Pn	23 28 38.6	+1.1
	comp=E,6.0nm,0.5s						
TKM2				⇑S	Sn	23 29 56.3	-0.3
	comp=E,3.0nm,0.5s						
TKM2	Tokmak 2	7.10	25	P	Pn	23 28 39.4	+1.9
	SNR=22						
TKM2	Tokmak 2	7.10	25	ePn	Pn	23 28 38.5	+1.0
	comp=E,9.1nm,0.5s						
TKM2				Sn	Sn	23 30 01.6	+4.9
SMLA	Simla	7.13	137	i P	Pn	23 28 39.9	+2.0
SMLA				i S	Sn	23 29 55.5	-1.9
SMLA				i S	Sn	23 29 55.5	-1.8
SMLA				⇓		23 29 58.3	
	comp=N,1μm,0.3s						
SMLA				⇓		23 29 59.4	
	comp=E,1μm,0.4s						
DDI	Dehra Dun	8.23	137	ex	x	23 30 05.8	
JOSI	Joshimath	8.95	129	ePKP	Pn	23 29 06.9	+4.2
JOSI				eS	Sn	23 30 38.0	-3.6
KHET	Khetri	9.16	156	ePKP	Pn	23 29 07.6	+1.9
KHET				AMb	AMB	23 29 07.9	
	comp=Z,5.6nm,0.4s						
KHET				eS	Sn	23 30 41.9	-5.1
SONA	Sohna	9.48	149	ePKP	Pn	23 29 12.3	+2.3
SONA				eS	Sn	23 30 48.2	-6.6
MKAR	Makanchi Array	13.01	35	P	Pn	23 29 58.0	+0.8
	comp=Z,0.1nm,0.3s,baz=226,slow=16,SNR=4.0						
DANN	Dangsing	13.13	125	eP	Pn	23 29 58.4	-0.5
	comp=Z,12nm,0.5s						
KOLN	Koldanda	13.42	127	eP	Pn	23 30 02.9	+0.2
	comp=Z,6.2nm,0.3s						
GKN	Gorkha	13.94	124	eP	Pn	23 30 08.5	-1.0
KKN	Kakani	14.51	123	eP	Pn	23 30 15.2	-1.6
DMN	Daman	14.52	124	eP	Pn	23 30 16.3	-0.5
	comp=Z,9.2nm,0.4s						
KURK	Kurchatov	15.06	18	ePn	Pn	23 30 24.6	+1.0
	comp=Z,3.2nm,0.7s						
AB31	Akbulak array	15.28	330	P	Pn	23 30 23.7	-2.6
	comp=Z,2.8nm,0.4s,baz=143,slow=14,SNR=116						
ABKAR	Akbulak array	15.28	330	ePn	Pn	23 30 23.5	-2.8
	comp=Z,5.7nm,0.4s						
ABKAR				eSn	Sn	23 32 58.8	-16
VOSK	Vostochnaya	16.20	359	⇑P	Pn	23 30 35.6	-2.1
	comp=Z,4.9nm,1.1s						
TAPN	Taplejung	16.47	119	eP	Pn	23 30 39.6	-1.7
	comp=Z,10.0nm,0.5s						
BVAR	Borovoye Array	16.52	358	P	Pn	23 30 41.0	-0.6
	comp=Z,0.5nm,0.3s,baz=172,slow=12,SNR=8.5						
ZRNK	Zerenda	16.52	355	⇓P	Pn	23 30 39.4	-2.3
	comp=Z,2.0nm,0.5s						
ODAN	Odare	16.55	121	eP	Pn	23 30 40.6	-1.7
	comp=Z,6.3nm,0.5s						
BRVK	Borovoye	16.55	357	ePn	Pn	23 30 41.2	-0.9
	comp=Z,2.0nm,0.5s						
AKTK	Aktyubinsk	16.98	329	P	Pn	23 30 47.0	-0.4
AKTO	Aktyubinsk	16.98	329	P	Pn	23 30 47.0	-0.4
	comp=Z,1.5nm,0.3s,baz=138,slow=13,SNR=26						
ZAA0	Zalesovo Array	19.70	24	eP	P	23 31 17.5	+0.1
ZALV	Zalesovo Beam	19.70	24	P	P	23 31 18.6	+1.2
	comp=Z,0.7nm,0.3s,baz=219,slow=10,SNR=16						
GNI	Garni	21.31	288	eP	P	23 31 34.0	-0.9
ARU	Arti	21.75	340	eP	P	23 31 40.4	+1.0
	comp=Z,5.4nm,1.0s,mb3.8						
TLY	Talaya	27.30	46	P	P	23 32 29.6	-1.5
CSS	Prodhromos	30.93	279	eP	P	23 33 03.5	0.0
HHC	Hu-ho-hao-te	31.33	70	eP	P	23 33 07.0	0.0
HHC				sP	sP	23 33 43.9	+2.4
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
HHC				pmax	pmax		
	comp=Z,140nm,6.1s						
HHC				LR	LR		
	comp=N,190nm,18.6s						
HHC				LR	LR		
	comp=E,160nm,18.1s						
HHC				LR	LR		
	comp=Z,200nm,19.9s						
TIRR	Tirgusor	33.44	297	eP	P	23 33 25.1	-0.2
FINES	FINESS Array B	37.71	326	P	P	23 34 04.0	+2.3
	comp=Z,2.0nm,0.9s,mb4.1,baz=124,slow=7.7,SNR=7.8						
FINES	FINESS Array B	37.71	326	P	P	23 34 04.0	+2.3
KEV	Kevo	40.94	338	eP	P	23 34 28.4	0.0
	comp=Z,6.4nm,1.1s,mb4.4						
ARCES	ARCESS Array B	41.29	337	P	P	23 34 33.8	+2.6
	comp=Z,0.9nm,0.5s,mb3.9,baz=116,slow=8.5,SNR=22						
NB2	NORSAR Subarra	44.63	323	P	P	23 34 59.9	+1.7
	comp=Z,1.1nm,0.6s,mb3.8,baz=94,slow=7.9						
NOA	NORSAR Array B	44.63	323	P	P	23 35 00.2	+1.9
	comp=Z,1.4nm,0.6s,mb3.9,baz=95,slow=7.8,SNR=9.1						
NOA	NORSAR Array B	44.63	323	P	P	23 35 00.2	+1.9
KMBO	Kilima Mbogo	49.18	228	P	P	23 35 39.0	+4.8
	comp=Z,1.0nm,1.0s,mb3.7,baz=180,slow=20,SNR=3.3						
KMBO	Kilima Mbogo	49.18	228	eP	P	23 35 32.4	-1.9
YSS	Yuzh-Sakhalins	52.44	55	eP	P	23 35 57.8	-0.5
TORD	Torodi Ar. Bea	66.17	269	P	P	23 37 34.5	+1.1
	comp=Z,0.4nm,0.3s,mb3.7,baz=52,slow=6.1,SNR=15						
ASAR	Alice Springs	83.90	125	P	P	23 39 16.7	+1.8
	comp=Z,0.3nm,0.8s,mb3.1,baz=300,slow=4.1,SNR=2.6						

*ATH **09** 00:41:16.8, 39°.76N×26°.66E, h23km±1km, MD3.5/5*

*THE **09** 00:41:17.7, 39°.77N×26°.54E, h0km±1km, ML2.7/4, Error ellipse: s-maj=1.5km s-min=0.6km az=33.0*

*ISCJB **09** 00:41:17.5±0.4, 39°.78N±0°.02×26°.57E±0°.02, h5km±3km, Error ellipse: s-maj=2.8km s-min=2.7km az=3.3*

*CSEM **09** 00:41:17.8±0.1, 39°.78N×26°.57E, h5km, MD3.2, Error ellipse: s-maj=2.1km s-min=2.0km az=31.0*

*DDA **09** 00:41:17.2, 39°.79N×26°.60E, h7km±9km, Md3.3*

*SOF **09** 00:41:17.8, 39°.82N×26°.37E, h10km, MD2.8*

*NEIC **09** 00:41:17.1, 39°.80N×26°.58E, h4km, MD3.5(ATH), MD3.2(ISK), After ISK.*

*ISK **09** 00:41:17.3, 39°.80N×26°.58E, h4km, MD3.2*

ISC 09 00:41:18.0±0.3, 39°.78N±0°.02×26°.58E±0°.02, h6km±3km, n132, σ0.82/164, 4C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	Ezine	0.20	284	PG	Pg	00 41 21.4	-0.6
EZN				SG	Sg	00 41 25.4	+0.7
EZN	Ezine	0.20	284	Pg	Pg	00 41 21.4	-0.6
EZN				Sg	Sg	00 41 25.4	+0.7
EZN	Ezine	0.20	284	i Pg	Pg	00 41 21.4	-0.6
EZN				i Sg	Sg	00 41 25.4	+0.7
BOZC	Bozcaada	0.41	279	i P	Pg	00 41 26.6	+0.6
BOZC				i S	Sg	00 41 32.5	+1.2
AYVA	Ayvalik	0.48	170	i P	Pg	00 41 26.9	-0.3
AYVA				i S	Sg	00 41 33.9	+0.5
AYVA	Ayvalik	0.48	170	i P	Pg	00 41 26.9	-0.3
AYVA				i S	Sg	00 41 33.9	+0.5
PRK	Paraskevi	0.58	204	P	Pg	00 41 28.3	-0.9
PRK	Paraskevi	0.58	204	ePN	Pg	00 41 28.5	-0.7
PRK				eSN	Sg	00 41 37.7	+1.0
PRK	Paraskevi	0.58	204	P	Pg	00 41 28.4	-0.8
PRK				S	Sg	00 41 37.6	+0.9
PRK	Paraskevi	0.58	204	ePn	Pg	00 41 28.5	-0.7
PRK				S	Sg	00 41 37.6	+0.9
LPK	Lapseki	0.61	13	ePG	Pg	00 41 28.8	-1.0
LPK				eSG	Sg	00 41 37.8	0.0
LPK	Lapseki	0.61	13	Pg	Pg	00 41 28.8	-1.0
LPK				Sg	Sg	00 41 37.8	0.0
LPK	Lapseki	0.61	13	ePg	Pg	00 41 28.8	-1.0
LPK				eSg	Sg	00 41 37.8	0.0
GELI	Tayfur-Gelibol	0.63	353	ePG	Pg	00 41 30.2	+0.1
GELI	Tayfur-Gelibol	0.63	353	ePg	Pg	00 41 30.2	+0.1
GADA	Gvkgeada	0.67	309	ePG	Pg	00 41 30.4	-0.5
GADA	Gvkgeada	0.67	309	ePg	Pg	00 41 30.4	-0.4
SIGR	SIGRI	0.80	225	P	Pg	00 41 32.3	-1.0
SIGR				S	Sg	00 41 44.0	+0.4
SIGR	SIGRI	0.80	225	P	Pg	00 41 32.3	-1.0
SIGR				S	Sg	00 41 44.0	+0.4
BALY	Balya	0.80	92	i P	Pg	00 41 33.0	-0.4
BALY				i S	Sg	00 41 44.2	+0.4
BALY	Balya	0.80	92	i P	Pg	00 41 33.0	-0.4
BALY				i S	Sg	00 41 44.2	+0.3
GONE	Gonen-Balikesi	0.89	72	ePG	Pg	00 41 34.5	-0.6
GONE	Gonen-Balikesi	0.89	72	ePg	Pg	00 41 34.5	-0.7
ERIK	Erikli-Kesan	0.89	357	ePG	Pg	00 41 34.3	-0.9
ERIK	Erikli-Kesan	0.89	357	ePg	Pg	00 41 34.3	-0.9
ENEZ	Enez	1.01	341	ePG	Pg	00 41 37.2	-0.3
ENEZ	Enez	1.01	341	ePg	Pg	00 41 37.2	-0.3
BALB	Balikesir	1.01	97	ePG	Pg	00 41 37.4	0.0
BALB	Balikesir	1.01	97	ePg	Pg	00 41 37.4	0.0
RKY	Sarkoy-Tekirda	1.02	27	ePG	Pg	00 41 37.1	-0.5
RKY	Sarkoy-Tekirda	1.02	27	ePg	Pg	00 41 37.1	-0.5
LIA	Limnos Island	1.08	277	P	Pg	00 41 38.8	0.0
LIA	Limnos Island	1.08	277	P	Pg	00 41 38.6	-0.2
LIA				S	Sg	00 41 53.2	+0.4
LIA	Limnos Island	1.08	277	P	Pg	00 41 38.6	-0.2
LIA				S	Sg	00 41 53.2	+0.4
MFT	Murefte	1.14	28	ePN	Pn	00 41 39.6	-0.9
MFT	Murefte	1.14	28	ePn	Pn	00 41 39.6	-0.9
BNT	Bandirma	1.18	60	ePN	Pn	00 41 40.2	-0.9
ALN	Alexandroupoli	1.19	340	P	Pg	00 41 40.0	-0.9
ALN	Alexandroupoli	1.19	340	ePN	Pg	00 41 40.0	-0.9
ALN				eSN	Sn	00 41 56.9	-0.8
ALN	Alexandroupoli	1.19	340	P	Pg	00 41 39.6	-1.3
ALN				S	Sg	00 41 57.2	+0.9
ALN	Alexandroupoli	1.19	340	P	Pg	00 41 39.6	-1.3
ALN	Alexandroupoli	1.19	340	ePn	Pg	00 41 40.0	-0.9
ALN				eSn	Sn	00 41 56.9	-0.8
ALN				S	Sg	00 41 57.2	+0.9
AKS	Akhisar	1.31	133	ePN	Pn	00 41 42.9	+0.1
AKS	Akhisar	1.31	133	ePn	Pn	00 41 42.9	+0.1
TKR	Tekirdag	1.42	31	ePN	Pn	00 41 44.3	0.0
TKR	Tekirdag	1.42	31	ePn	Pn	00 41 44.3	0.0
BLCB	Balcova	1.44	165	ePN	Pn	00 41 45.0	+0.4
BLCB	Balcova	1.44	165	P	Pn	00 41 44.2	-0.3
BLCB				S	Sb	00 42 03.4	+0.7
BLCB	Balcova	1.44	165	P	Pn	00 41 44.2	-0.3
BLCB	Balcova	1.44	165	ePn	Pn	00 41 45.0	+0.5
BLCB				S	Sb	00 42 03.4	+0.7
CHOS	Chios island	1.45	197	ePN	Pn	00 41 43.4	-1.3
CHOS				eSN	Sn	00 42 03.5	-0.5
CHOS	Chios island	1.45	197	P	Pn	00 41 43.4	-1.3
CHOS				S	Sn	00 42 04.1	+0.1
CHOS	Chios island	1.45	197	P	Pn	00 41 43.4	-1.3
CHOS				eSn	Sn	00 42 03.5	-0.5
CHOS				S	Sn	00 42 04.1	+0.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**2.60**	**308**	P	**Pn**	**00 42 00.2**	**-0.3**
NVR	**Nevrokopi**	**2.60**	**308**	P	**Pn**	**00 42 00.2**	**-0.3**
SRS	**Serrai**	**2.64**	**301**	P	**Pn**	**00 42 00.5**	**-0.7**
SRS	**Serrai**	**2.64**	**301**	P	**Pn**	**00 42 00.6**	**-0.6**
SRS	**Serrai**	**2.64**	**301**	P	**Pn**	**00 42 00.6**	**-0.6**
SOH	**Sokhos**	**2.68**	**294**	P	**Pn**	**00 42 03.1**	**+1.5**
SOH	**Sokhos**	**2.68**	**294**	P	**Pn**	**00 42 03.1**	**+1.5**
MMB	**Musomiste**	**2.83**	**311**	*i* P	**Pn**	**00 42 01.2**	**-2.4**
MMB	**Musomiste**	**2.83**	**311**	*i* P	**Pn**	**00 42 01.2**	**-2.4**
GULT	**Gulveren**	**3.09**	**77**	*e*PN	**Pn**	**00 42 08.7**	**+1.4**
GULT	**Gulveren**	**3.09**	**77**	Pn	**Pn**	**00 42 08.6**	**+1.3**
LIT	**Litokhoron**	**3.16**	**277**	*e*Pn	**Pn**	**00 42 09.0**	**+0.7**
LIT	**Litokhoron**	**3.16**	**277**	*e*Pn	**Pn**	**00 42 09.0**	**+0.7**
KKB	**Krupnik**	**3.38**	**309**	*i* P	**Pn**	**00 42 11.2**	**0.0**
KKB	**Krupnik**	**3.38**	**309**	*i* P	**Pn**	**00 42 11.2**	**0.0**
AGG	**Agios Georgios**	**3.38**	**258**	*e*PN	**Pn**	**00 42 11.4**	**+0.2**
AGG	**Agios Georgios**	**3.38**	**258**	*e*Pn	**Pn**	**00 42 11.4**	**+0.2**
VTS	**Vitosha**	**3.79**	**319**	P	**Pn**	**00 42 18.3**	**+1.4**
VTS	**Vitosha**	**3.79**	**319**	⇓*i*P	**Pn**	**00 42 17.5**	**+0.6**
VTS	**Vitosha**	**3.79**	**319**	*i* P	**Pn**	**00 42 17.0**	**+0.1**
VTS	**Vitosha**	**3.79**	**319**	*i* P	**Pn**	**00 42 17.0**	**+0.1**
BARS	**Barje**	**4.70**	**312**	⇑*i*Pn	**Pn**	**00 42 30.0**	**+0.6**
MLR	**Muntele Rosu**	**5.73**	**356**	⇓*i*P	**Pn**	**00 42 46.5**	**+2.9**
PLOR	**Plostina**	**6.07**	**0**	⇓*i*P	**Pn**	**00 42 51.4**	**+3.2**
VRI	**Vrincioaia**	**6.09**	**1**	⇑*i*P	**Pn**	**00 42 52.6**	**+4.1**
GZR	**Gura Zlata**	**6.28**	**335**	⇓*i*P	**Pn**	**00 42 52.7**	**+1.7**
GZR	**Gura Zlata**	**6.28**	**335**	⇓*i*P	**Pn**	**00 42 52.7**	**+1.7**
BZS	**Buzias**	**6.88**	**330**	⇑*i*P	**Pn**	**00 42 59.3**	**-0.1**
BZS	**Buzias**	**6.88**	**330**	⇑*i*P	**Pn**	**00 42 59.3**	**-0.1**

ISCJB ***09*** *00:43:00.1±0.3, 5°.16S±0°.04×29°.59E±0°.08, h10km, mb4.3/15, MS3.6/5, Error ellipse: s-maj=11.7km s-min=5.8km az=6.5*
IDC ***09*** *00:43:00.4±0.8, 5°.12S×29°.58E, h0km, mb4.1/10, mb1 4.2/12, mb1mx4.0/23, mbtmp4.1/12, ML2.1/1, MS3.5/5, Ms1 3.4/5, ms1mx3.2/31, Error ellipse: s-maj=23.9km s-min=16.8km az=125.0*
NEIC ***09*** *00:43:01.8±0.3, 5°.13S×29°.60E, h10km, mb4.2/7, Error ellipse: s-maj=8.7km s-min=6.1km az=101.0*

ISC 09 00:43:02.3±0.3, 5°.13S±0°.04×29°.60E±0°.08, h10km, n49, σ0§84/49, mb4.3/15, MS3.6/5, 6C-4D, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**8.61**	**63**	Pn	**Pn**	**00 45 05.6**	**-1.4**
	3.5nm,0.3s,baz=0.4,slow=24,SNR=38						
KMBO				Lg		00 47 32.9	
	42nm,0.3s,baz=336,slow=20,SNR=14						
KMBO				LR	LR	00 47 59.9	
	comp=Z,94nm,21.8s,baz=90,slow=35						
KMBO	**Kilima Mbogo**	**8.61**	**63**	*e*Pn	**Pn**	**00 45 05.1**	**-2.0**
KMBO				*e*Sn	**Sn**	**00 46 36.2**	**-8.2**
KMBO				Lg		00 47 32.9	
KMBO				LR	LR	00 47 59.9	
LSZ	**Lusaka**	**10.18**	**188**	*e*Pn	**Pn**	**00 45 29.0**	**+0.5**
	16nm,0.8s						
LSZ				*e*Sn	**Sn**	**00 47 23.8**	**+1.0**
MSNA	**Messina**	**17.12**	**179**	*e*P	**Pn**	**00 47 08.0**	**+6.3**
TSUM	**Tsumeb**	**18.25**	**219**	P	**Pn**	**00 47 14.1**	**-1.6**
	0.4nm,0.3s,baz=20,slow=13,SNR=12						
TSUM	**Tsumeb**	**18.25**	**219**	*e*Pn	**Pn**	**00 47 14.1**	**-1.6**
	1.0nm,0.5s						
TSUM				*e*Sn	**Sn**	**00 50 25.6**	**-14**
LBTB	**Lobatse**	**20.14**	**191**	P	**P**	**00 47 37.9**	**+1.3**
	3.0nm,0.9s,baz=33,slow=10,SNR=5.3						
LBTB				LR	LR	00 54 42.6	
	comp=Z,109nm,19.0s,MS3.2,baz=64,slow=35						
LBTB	**Lobatse**	**20.14**	**191**	*e*P	**P**	**00 47 36.7**	**+0.1**
	3.9nm,0.6s						
LBTB				LR	LR	00 54 42.6	
KSR	**Koster**	**20.77**	**187**	*e*P	Px	00 47 56.0	
KSR				AMB	AMB	00 48 24.1	
	comp=Z,26nm,3.7s						
OPO	**Ambohidratompo**	**21.75**	**129**	LR	LR	00 56 33.9	
	comp=Z,79nm,18.2s,MS3.2,baz=151,slow=37						
PRYS	**Parys**	**21.78**	**185**	*e*P	**P**	**00 48 00.9**	**+6.5**
PRYS				AMB	AMB	00 48 01.3	
	comp=Z,16nm,5.1s						
PRYS				AML	AML	00 54 45.7	
	comp=Z,4.3nm,0.8s						
ABPO	**Ambohimpanom**	**22.04**	**130**	*e*P	**P**	**00 47 56.9**	**-0.3**
	comp=Z,2.9nm,0.6s,mb3.9						
POGA	**Pongola**	**22.20**	**175**	AML	AML	00 47 50.8	
	comp=Z,67nm,8.8s						
POGA				*e*P		00 48 05.6	
POGA				AMB	AMB	00 48 11.7	
	comp=Z,18nm,1.9s,mb4.2						
SWZ	**Schweizer**	**22.30**	**190**	*e*P	**P**	**00 48 06.1**	**+6.2**
SWZ				AMB	AMB	00 48 39.0	
	comp=Z,64nm,3.9s						
BOSA	**Boshof**	**23.71**	**190**	P	**P**	**00 48 14.2**	**-0.5**
	comp=Z,3.3nm,0.8s,mb3.8,baz=4.0,slow=12,SNR=6.9						
BOSA				LR	LR	00 57 16.9	
	comp=Z,150nm,19.4s,MS3.5,baz=166,slow=36						
BOSA	**Boshof**	**23.71**	**190**	*e*P	**P**	**00 48 14.5**	**-0.1**
	comp=Z,16nm,1.3s,mb4.3						
BOSA				LR	LR	00 57 16.9	
SUR	**Sutherland**	**28.33**	**196**	P	**P**	**00 48 56.0**	**-0.3**
TOA0	**Torodi Ar. Sit**	**33.14**	**303**	P	**P**	**00 49 38.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**33.14**	**303**	P	**P**	**00 49 39.0**	**0.0**
	comp=Z,3.6nm,0.7s,mb4.4,baz=114,slow=7.9,SNR=32						
TORD				LR	LR	01 03 51.8	
	comp=Z,244nm,18.9s,MS3.9,baz=125,slow=38						
DBIC	**Dimbokro**	**36.34**	**288**	*e*P	**P**	**00 50 06.8**	**+0.1**
	comp=Z,25nm,1.4s,mb5.0						
TAM	**Tamanrasset**	**36.39**	**321**	P	**P**	**00 50 06.3**	**-0.7**
CSS	**Prodhromos**	**40.03**	**5**	*e*P	**P**	**00 50 37.0**	**-0.6**
	comp=Z,2.9nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**44.79**	**4**	P	**P**	**00 51 17.0**	**+0.8**
	comp=Z,4.6nm,0.8s,mb4.3,baz=180,slow=8.8,SNR=34						
KEST	**Kesra**	**44.88**	**336**	*e*P	**P**	**00 51 16.3**	**-0.7**
GNI	**Garni**	**47.16**	**16**	P	**P**	**00 51 34.9**	**0.0**
BBTS	**Babate**	**49.78**	**294**	P	**P**	**00 51 53.7**	**-1.9**
	comp=Z,40nm,1.0s,baz=120,slow=16,SNR=2.8						
BBTS	**Babate**	**49.78**	**294**	P	**P**	**00 51 53.7**	**-1.9**
MLR	**Muntele Rosu**	**50.50**	**357**	⇓*i*P	**P**	**00 52 01.2**	**+0.7**
GZR	**Gura Zlata**	**50.67**	**354**	⇑*i*P	**P**	**00 52 02.5**	**+0.7**
PLOR	**Plostina**	**50.82**	**357**	⇑*i*P	**P**	**00 52 03.6**	**+0.7**
VRI	**Vrincioaia**	**50.84**	**357**	⇑*i*P	**P**	**00 52 03.5**	**+0.5**
BZS	**Buzias**	**51.02**	**353**	⇓*i*P	**P**	**00 52 05.3**	**+0.9**
PKSM	**Moragy**	**52.04**	**350**	⇓*i*P	**P**	**00 52 12.5**	**+0.5**
DRGR		**52.06**	**354**	⇑*i*P	**P**	**00 52 13.3**	**+1.2**
BURAR	**Bucovina Array**	**52.66**	**356**	⇓*i*P	**P**	**00 52 18.7**	**+2.1**
KWP	**Kalwaria Pacla**	**54.87**	**355**	⇑*i*P	**P**	**00 52 33.5**	**+0.8**
VRAC	**Vranov**	**55.39**	**350**	⇑*i*P	**P**	**00 52 36.5**	**0.0**
KHC	**Kasperske Hory**	**55.82**	**347**	*e*P	**P**	**00 52 39.3**	**-0.3**
	comp=Z,6.4nm,1.1s,mb4.6						
KHC	**Kasperske Hory**	**55.82**	**347**	*e*P	**P**	**00 52 39.0**	**-0.6**
NIL	**Nilore**	**56.48**	**44**	*e*P	**P**	**00 52 44.2**	**-0.5**
FINES	**FINESS Array B**	**66.44**	**358**	P	**P**	**00 53 51.0**	**-0.4**
	comp=Z,2.9nm,1.0s,mb4.3,baz=165,slow=7.9,SNR=5.2						
NB2	**NORSAR Subarra**	**67.52**	**350**	P	**P**	**00 53 58.0**	**-0.3**
	comp=Z,5.2nm,0.9s,mb4.6,baz=163,slow=5.9						
NOA	**NORSAR Array B**	**67.52**	**350**	P	**P**	**00 53 58.5**	**+0.2**
	comp=Z,3.0nm,0.8s,mb4.4,baz=163,slow=5.8,SNR=12						
MKAR	**Makanchi Array**	**69.50**	**36**	P	**P**	**00 54 11.2**	**+0.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=241,slow=7.1,SNR=7.1						
ARCES	**ARCESS Array B**	**74.56**	**359**	P	**P**	**00 54 39.9**	**-1.0**
	comp=Z,1.2nm,0.7s,mb3.9,baz=163,slow=3.4,SNR=7.4						
ARCES	**ARCESS Array B**	**74.56**	**359**	P	**P**	**00 54 39.9**	**-1.0**
ZALV	**Zalesovo Beam**	**74.68**	**30**	P	**P**	**00 54 40.7**	**-1.2**
	comp=Z,1.3nm,0.7s,mb4.0,baz=266,slow=5.9,SNR=5.1						
SONM	**Songino Array**	**84.97**	**41**	P	**P**	**00 55 38.9**	**+1.1**
	comp=Z,0.8nm,0.4s,mb4.2,baz=235,slow=6.8,SNR=4.2						
HHC	**Hu-ho-hao-te**	**87.26**	**49**	*e*P	**P**	**00 55 49.3**	**0.0**
HHC				pP	pP	00 55 54.2	+1.5
HHC				sP	sP	00 55 56.4	+2.5
HHC				PP	PP	00 59 16.7	+3.2
HHC				SKS		01 06 13.4	
HHC				S	S	01 06 28.2	-1.4
HHC				sS	sS	01 06 35.4	+0.3
HHC				SS	SS	01 12 15.7	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,75nm,6.6s						
HHC				LR	LR		
	comp=N,85nm,18.5s,MS4.4						
HHC				LR	LR		
	comp=E,110nm,18.6s,MS4.4						
HHC				LR	LR		
	comp=Z,71nm,18.4s,MS4.1						

NNC 09 01:12:32.9±8.6, 36°.95N×70°.13E, h0km, mb3.6, mpv3.5, 1C-3D, Error ellipse: s-maj=81.0km s-min=68.9km az=48.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.15**	**3**	⇓Pn	Pn	01 14 06.8	+1.8
	1.4nm,0.4s,baz=186,slow=13,SNR=27						
KK31				⇓Sn	Sn	01 15 17.0	+1.0
	0.7nm,0.4s,baz=184,slow=20						
TKM2	**Tokmak 2**	**7.29**	**33**	⇑Pn	Pn	01 14 19.3	-1.3
	2.3nm,0.6s						
AB31	**Akbulak array**	**14.36**	**332**	⇓P	Pn	01 15 57.0	-0.3
	0.1nm,0.3s,baz=175,slow=11,SNR=10						

ISK ***09*** *01:19:27.6, 38°.33N×28°.84E, h6km, MD2.9*
DDA ***09*** *01:19:27.8, 38°.59N×28°.96E, h7km±5km, Md2.9*
ISCJB ***09*** *01:19:28.2±0.5, 38°.58N±0°.03×28°.95E±0°.03, h10km, Error ellipse: s-maj=4.0km s-min=3.7km az=20.2*
CSEM ***09*** *01:19:28.7±0.2, 38°.57N×28°.96E, h2km, MD2.9, Error ellipse: s-maj=5.6km s-min=4.2km az=9.0*

ISC 09 01:19:28.8±0.5, 38°.58N±0°.03×28°.96E±0°.03, h10km, n24, σ1§12/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULA	**Kula-Manisa**	**0.24**	**254**	*e*PG	**Pg**	**01 19 33.1**	**-0.6**
KULA				*e*SG	**Sg**	**01 19 36.2**	**-0.8**
KULA	**Kula-Manisa**	**0.24**	**254**	*e*Pg	**Pg**	**01 19 33.2**	**-0.5**
KULA				*e*Sg	**Sg**	**01 19 36.3**	**-0.7**
KHAL	**Karahalli**	**0.47**	**117**	*i* P	**Pg**	**01 19 37.8**	**-0.2**
KHAL				*i* S	**Sg**	**01 19 43.9**	**-0.3**
KHAL	**Karahalli**	**0.47**	**117**	*i* P	**Pg**	**01 19 37.8**	**-0.2**
KHAL				*i* S	**Sg**	**01 19 43.9**	**-0.3**
DEMI	**Demirci**	**0.49**	**338**	*i* P	**Pg**	**01 19 38.1**	**-0.3**
DEMI				*i* S	**Sg**	**01 19 44.3**	**-0.7**
KHL	**Karahalli**	**0.52**	**120**	*e*PG	**Pg**	**01 19 38.5**	**-0.3**
KHL	**Karahalli**	**0.52**	**120**	*e*Pg	**Pg**	**01 19 38.5**	**-0.3**
GDZ	**Gediz**	**0.65**	**39**	*i* P	**Pg**	**01 19 40.5**	**-0.9**
GDZ				*i* S	**Sg**	**01 19 48.9**	**-1.0**
GDZ	**Gediz**	**0.65**	**39**	*i* P	**Pg**	**01 19 40.5**	**-0.9**
GDZ				*i* S	**Sg**	**01 19 48.9**	**-1.0**
DNZL	**Cakiroluk**	**0.90**	**175**	*i* P	**Pg**	**01 19 45.7**	**-0.3**
DNZL				*i* S	**Sg**	**01 19 59.8**	**+2.1**
AKHS	**Akhisar**	**0.94**	**289**	*i* P	**Pg**	**01 19 46.7**	**-0.1**
AKHS				*i* S	**Sg**	**01 20 00.4**	**+1.2**
AKHS	**Akhisar**	**0.94**	**289**	*i* P	**Pg**	**01 19 46.7**	**-0.2**
AKHS				*i* S	**Sg**	**01 20 00.4**	**+1.3**
AKS	**Akhisar**	**0.94**	**289**	*e*PG	**Pg**	**01 19 46.6**	**-0.3**
AKS	**Akhisar**	**0.94**	**289**	*e*Pg	**Pg**	**01 19 46.6**	**-0.3**
SHUT	**Suhut-Afyon**	**1.25**	**91**	*e*PN	**Pn**	**01 19 53.7**	**+1.4**
SHUT	**Suhut-Afyon**	**1.25**	**91**	*e*Pn	**Pn**	**01 19 53.7**	**+1.4**
AYDN	**Tasoluk**	**1.25**	**223**	*i* P	**Pg**	**01 19 51.4**	**-1.5**
AYDN				*i* S	**Sg**	**01 20 08.1**	**-1.0**
AYDN	**Tasoluk**	**1.25**	**223**	*i* P	**Pg**	**01 19 51.4**	**-1.4**
AYDN				*i* S	**Sg**	**01 20 08.1**	**-1.0**
BALB	**Balikesir**	**1.35**	**322**	*e*PN	**Pn**	**01 19 55.6**	**+2.0**
BALB	**Balikesir**	**1.35**	**322**	*e*Pn	**Pn**	**01 19 55.6**	**+2.0**
GONE	**Gonen-Balikesi**	**1.76**	**326**	*e*PN	**Pn**	**01 20 01.9**	**+2.5**
GONE	**Gonen-Balikesi**	**1.76**	**326**	*e*Pn	**Pn**	**01 20 01.9**	**+2.6**
ARMT	**Armutlu**	**1.98**	**358**	*e*PN	**Pn**	**01 20 06.3**	**+3.9**
GULT	**Gulveren**	**2.21**	**33**	*e*PN	**Pn**	**01 20 09.5**	**+4.1**

IDC 09 01:28:09.2±5.3, 29°.09S×178°.46W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/15, mbtmp3.9/3, Error ellipse: s-maj=197.9km s-min=82.8km az=158.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.41**	**255**	P	P	01 34 58.1	-0.1
	1.3nm,0.7s,baz=72,slow=9.1,SNR=3.0						
ASAR	**Alice Springs**	**42.80**	**266**	P	P	01 36 08.2	-0.7
	0.4nm,0.5s,baz=103,slow=7.2,SNR=5.7						
WRA	**Warramunga Arr**	**43.66**	**271**	P	P	01 36 16.4	+0.5
	0.9nm,0.3s,baz=110,slow=7.8,SNR=3.7						
FINES	**FINESS Array B**	**143.78**	**340**	PKP	PKPdf	01 47 45.0	-0.6
	1.9nm,0.8s,baz=45,slow=3.2,SNR=5.7						

NNC ***09*** *01:32:59.7±6.7, 38°.26N×73°.82E, h0km, mb5.0, mpv5.3, Error ellipse: s-maj=56.3km s-min=37.0km az=164.0*
MOS ***09*** *01:33:00.9±1.4, 38°.05N×74°.24E, h155km, mb4.0/20, Error ellipse: s-maj=10.6km s-min=5.3km az=98.3*
NEIC ***09*** *01:33:02.2±0.8, 38°.02N×74°.27E, h155km±7km, mb4.4/10, Error ellipse: s-maj=10.9km s-min=8.4km az=105.0*
ISCJB ***09*** *01:33:02.6±0.2, 38°.06N±0°.02×74°.18E±0°.03, h174km, mb4.0/36, Error ellipse: s-maj=3.8km s-min=2.4km az=172.5*
BJI ***09*** *01:33:03.8, 38°.22N×74°.18E, h172km, mB4.5/19, mb4.7/29*
IDC ***09*** *01:33:04.6±0.6, 38°.05N×74°.22E, h180km±5km, mb3.7/16, mb1 3.9/20, mb1mx3.7/29, mbtmp3.8/20, MS3.3/1, Ms1 3.5/1, ms1mx2.5/30, Error ellipse: s-maj=12.5km s-min=9.7km az=16.0*

ISC 09 01:33:03.8±0.2, 38°.08N±0°.02×74°.20E±0°.04, h176km, h176km±2.7km: pP-P, n161, σ1§39/199, mb4.0/36, 15C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.00**	**43**	P	**Pn**	**01 33 35.9**	**-4.6**
KSH				S	**Sn**	**01 33 58.1**	**-11**
KSH				smax			
	comp=N,14μm,0.3s						
KSH				smax			
	comp=E,11μm,0.2s						
AML	**Almayashu**	**4.07**	**355**	P	**Pn**	**01 34 05.0**	**-0.6**
	SNR=3096						
AML	**Almayashu**	**4.07**	**355**	*e*Pn	**Pn**	**01 34 04.7**	**-0.9**
AML				*e*S	**Sn**	**01 34 48.9**	**-5.0**
KZA	**Kyzart**	**4.08**	**11**	P	**Pn**	**01 34 05.3**	**-0.3**
	SNR=1014						
KZA	**Kyzart**	**4.08**	**11**	*e*Pn	**Pn**	**01 34 05.4**	**-0.3**
KZA				*e*S	**Sn**	**01 34 48.4**	**-5.7**
ULHL	**Ulahol**	**4.45**	**20**	P	**Pn**	**01 34 10.2**	**-0.3**
	SNR=240						
CHCP	**Chirah Chowk**	**4.47**	**190**	⇓P	**Pn**	**01 34 12.3**	**+1.4**
NIL	**Nilore**	**4.49**	**190**	*e*PN	**Pn**	**01 34 07.2**	**-3.8**
AAK	**Ala-Archa**	**4.55**	**3**	P	**Pn**	**01 34 11.5**	**-0.3**
	SNR=306						
AAK	**Ala-Archa**	**4.55**	**3**	P	**Pn**	**01 34 11.7**	**-0.1**
	comp=E,1.5nm,0.3s,baz=150,slow=7.0,SNR=389						
AAK	**Ala-Archa**	**4.55**	**3**	PN	**Pn**	**01 34 11.7**	**-0.1**
AAK				pmax	pmax		
	comp=Z,73nm,0.3s						
EKS2	**Erkin-Say**	**4.59**	**356**	P	**Pn**	**01 34 11.7**	**-0.6**
	SNR=349						
EKS2	**Erkin-Say**	**4.59**	**356**	*e*Pn	**Pn**	**01 34 11.6**	**-0.6**
EKS2				*e*S	**Sn**	**01 35 01.2**	**-4.8**
KBK	**Karagaybulak**	**4.61**	**7**	P	**Pn**	**01 34 12.2**	**-0.3**
	SNR=347						
CEP	**Cherat**	**4.63**	**204**	⇓P	**Pn**	**01 34 13.3**	**+0.3**
CEP				S	**Sn**	**01 35 07.0**	**-0.1**
FRU	**Bishkek**	**4.76**	**4**	⇑*i*PN	**Pn**	**01 34 14.0**	**-0.5**
FRU				*e*S	**Sn**	**01 35 13.0**	**+3.1**
FRU				pmax	pmax		
	comp=Z,510nm,1.8s						
FRU				pmax	pmax		
	comp=E,640nm,1.8s						
CHMS	**Chumysh**	**4.93**	**5**	P	**Pn**	**01 34 16.6**	**-0.1**
	SNR=267						
CHMS	**Chumysh**	**4.93**	**5**	*e*Pn	**Pn**	**01 34 16.6**	**-0.1**
TKM2	**Tokmak 2**	**4.95**	**12**	⇑Pn	**Pn**	**01 34 17.0**	**0.0**
	comp=E,460nm,0.5s						
TKM2				⇑Sn	**Sn**	**01 35 13.5**	**-0.9**
	comp=E,194nm,0.6s						
TKM2	**Tokmak 2**	**4.95**	**12**	P	**Pn**	**01 34 16.9**	**0.0**
	SNR=1192						
TKM2	**Tokmak 2**	**4.95**	**12**	*i* PN	**Pn**	**01 34 16.9**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,460nm,0.5s						
TKM2	**Tokmak 2**	**4.95**	**12**	*e*Pn	**Pn**	**01 34 17.0**	**0.0**
	comp=Z,600nm,0.5s						
USP	**Ospenovka**	**5.19**	**2**	P	**Pn**	**01 34 19.5**	**-0.5**
	SNR=162						
KBL	**Kabul**	**5.46**	**231**	*e*PN	**Pn**	**01 34 23.3**	**-0.3**
KBL				*e*S	**Sn**	**01 35 23.5**	**-2.8**
KBL				pmax	pmax		
	comp=Z,116nm,0.5s						
KBL	**Kabul**	**5.46**	**231**	*e*Pn	**Pn**	**01 34 23.3**	**-0.4**
	comp=Z,116nm,0.5s						
KBL				*e*S	**Sn**	**01 35 23.5**	**-2.8**
KNDC	**Almaty**	**5.55**	**21**	Pn	**Pn**	**01 34 25.4**	**+0.7**
KNDC				Sn	**Sn**	**01 35 27.2**	**-1.2**
	baz=141,slow=14						
THW	**Thamme Wali**	**5.64**	**202**	⇓P	**Pn**	**01 34 25.7**	**-0.4**
KK31	**Karatay Array**	**5.75**	**332**	⇑Pn	**Pn**	**01 34 25.8**	**-1.6**
	comp=Z,66nm,0.3s,baz=141,slow=14,SNR=2542						
KK31				Sn	**Sn**	**01 35 26.6**	**-6.5**
	comp=Z,512nm,0.4s,baz=146,slow=26,SNR=26						
KK31	**Karatay Array**	**5.75**	**332**	*ce*PN	**Pn**	**01 34 25.7**	**-1.7**
KK31				pmax	pmax		
	comp=Z,128nm,0.1s						
KKAR	**Karatay Array**	**5.75**	**332**	*e*PN	**Pn**	**01 34 25.7**	**-1.7**
KKAR				pmax	pmax		
	comp=Z,224nm,0.4s						
KKAR	**Karatay Array**	**5.75**	**332**	*e*Pn	**Pn**	**01 34 25.7**	**-1.6**
	comp=Z,224nm,0.4s						
KKAR				*e*S	**Sn**	**01 35 26.2**	**-6.9**
BHK	**Bhakra**	**6.89**	**164**	*e*PKP	**Pn**	**01 34 39.4**	**-3.1**
BHK				*ex*	x	01 35 56.2	
SDNR	**Sundarnagar**	**6.95**	**160**	*e*PKP	**Pn**	**01 34 43.0**	**-0.2**
SDNR				*ex*	x	01 35 56.9	
KLP	**Kalpa**	**7.33**	**152**	*e*PKP	**Pn**	**01 34 46.5**	**-1.8**
KLP				*e*S	**Sn**	**01 36 01.7**	**-9.0**
KLP				AML	AML	01 36 12.5	
	comp=E,1μm,0.3s						
KLP				AML	AML	01 36 15.8	
	comp=N,1μm,0.7s						
SMLA	**Simla**	**7.35**	**160**	*i* P	**Pn**	**01 34 47.3**	**-1.3**
SMLA				*i* S	**Sn**	**01 36 03.0**	**-8.3**
SMLA				⇓		01 36 05.8	
	comp=N,5μm,0.5s						
SMLA				⇓		01 36 06.2	
	comp=E,4μm,0.5s						
DDI	**Dehra Dun**	**8.37**	**156**	*e*PKP	**Pn**	**01 34 59.0**	**-3.0**
DDI				*ex*	x	01 36 32.0	
KKR	**Kurukshetra**	**8.38**	**164**	*e*PKP	**Pn**	**01 35 00.4**	**-1.8**
JOSI	**Joshimath**	**8.71**	**148**	*e*PKP	**Pn**	**01 35 04.9**	**-1.6**
JOSI				*e*S	**Sn**	**01 36 34.3**	**-10**
JOSI				AML	AML	01 36 41.5	
	comp=E,990nm,0.8s						
JOSI				AML	AML	01 36 41.9	
	comp=N,604nm,0.4s						
NDI	**New Delhi**	**9.70**	**164**	*e*PKP	**Pn**	**01 35 18.0**	**-1.5**
NDI				*e*S	**Sn**	**01 36 59.0**	**-8.5**
KHET	**Khetri**	**10.07**	**172**	*e*PKP	**Pn**	**01 35 21.7**	**-2.6**
KHET				*e*S	**Sn**	**01 37 06.5**	**-10**
KHET				AML	AML	01 37 12.9	
	comp=N,44nm,0.5s						
KHET				AML	AML	01 37 13.3	
	comp=E,73nm,0.4s						
SONA	**Sohna**	**10.10**	**165**	*e*PKP	**Pn**	**01 35 23.4**	**-1.3**
SONA				*e*S	**Sn**	**01 37 07.7**	**-9.2**
SONA				AML	AML	01 37 14.0	
	comp=E,115nm,0.3s						
SONA				AML	AML	01 37 15.3	
	comp=N,51nm,0.5s						
MK31	**Makanchi Array**	**10.56**	**32**	P	**Pn**	**01 35 30.6**	**+0.1**
	comp=N,36nm,0.8s,baz=209,slow=14,SNR=99						
MKAR	**Makanchi Array**	**10.56**	**32**	P	**Pn**	**01 35 30.1**	**-0.4**
	comp=N,1.4nm,0.3s,baz=214,slow=13,SNR=107						
MKAR	**Makanchi Array**	**10.56**	**32**	P	**Pn**	**01 35 30.1**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AJM	**Ajmer**	**11.57**	**178**	*e*PKP	**Pn**	**01 35 42.0**	**-1.9**
WMQ	**Urumqi**	**11.70**	**56**	P	**Pn**	**01 35 45.0**	**-0.4**
WMQ				sP		01 36 26.0	
WMQ				S	**Sn**	**01 37 56.0**	**+0.8**
WMQ				PcP	PcP	01 41 18.0	-0.6
WMQ				pmax	pmax		
	comp=Z,35nm,0.7s						
WMQ				LR	LR		
	comp=N,50nm,6.0s						
WMQ				LR	LR		
	comp=E,74nm,6.0s						
WMQ				LR	LR		
	comp=Z,86nm,6.0s						
DANN	**Dangsing**	**12.57**	**138**	*e*P	**Pn**	**01 35 55.9**	**-0.7**
	comp=Z,69nm,0.3s				

ZAA0				*e*			01 37 22.1
ZAA0				*e*S		**S**	**01 40 07.2 -0.1**
ZALV	**Zalesovo Beam**	**17.47**	**21**	P		**Pn**	**01 36 56.3 -0.3**
	comp=N,5.9nm,0.3s,baz=213,slow=12,SNR=120						
ZALV				S		**S**	**01 40 05.2 -2.2**
	baz=216,slow=20,SNR=4.4						
ZALV	**Zalesovo Beam**	**17.47**	**21**	P		**Pn**	**01 36 56.3 -0.3**
ZALV				S		**S**	**01 40 05.2 -2.2**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.3s						
AKL	**Akola**	**17.49**	**171**	*e*PKP		**Pn**	**01 36 56.1 -1.0**
NVS	**Novosibirsk**	**17.86**	**17**	*e*P		**Pn**	**01 36 58.7 -2.4**
NVS				*e*S		**S**	**01 40 13.1 -2.0**
NVS				pmax	pmax		
	comp=N,6.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NVS				smax			
	comp=N,19nm,1.7s						
NVS				smax			
	comp=E,9.0nm,1.2s						
POO	**Poona**	**19.48**	**181**	*e*PKP		**P**	**01 37 19.7 +2.4**
LATR	**Latur**	**19.70**	**173**	*e*PKP		**P**	**01 37 20.8 +1.2**
GTA	**Gaotai**	**20.01**	**78**	⇓P		**P**	**01 37 25.4 +2.6**
GTA				sP	sP		01 38 15.0 -0.1
GTA				S		**S**	**01 41 00.0 +2.0**
GTA				pmax	pmax		
	comp=Z,24nm,1.1s						
GTA				pmax	pmax		
	comp=Z,90nm,4.5s						
GTA				LR	LR		
	comp=N,120nm,16.6s						
GTA				LR	LR		
	comp=E,110nm,16.1s						
GTA				LR	LR		
	comp=Z,120nm,16.6s						
KAD	**Karad**	**20.69**	**180**	*e*PKP		**P**	**01 37 31.9 +1.7**
SVE	**Sverdlovsk**	**20.81**	**339**	*e*P		**P**	**01 37 32.0 +0.9**
HYB	**Hyderabad**	**20.94**	**168**	*i* P		**P**	**01 37 34.0 +1.2**
ARU	**Arti**	**21.11**	**335***c*	*i*P		**P**	**01 37 36.1 +1.7**
ARU				*e*			01 38 06.1
ARU				SS			01 42 08.5
ARU				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.4						
ARU	**Arti**	**21.11**	**335**	*e*P		**P**	**01 37 36.4 +2.0**
	comp=Z,18nm,0.8s,mb4.4						
MTA	**Mtatsminda**	**22.80**	**288**	P		**P**	**01 37 56.1 +4.9**
TBLG	**Delisi**	**22.84**	**288**	P		**P**	**01 37 56.2 +4.6**
TBLG	**Delisi**	**22.84**	**288**	P		**P**	**01 37 56.2 +4.7**
GNI	**Garni**	**22.90**	**284**	P		**P**	**01 37 51.6 -0.6**
	comp=Z,0.8nm,0.4s,mb3.5,baz=162,slow=20,SNR=1.6						
GNI	**Garni**	**22.90**	**284**	*e*P		**P**	**01 37 59.4 +7.2**
GNI				pmax	pmax		
	comp=Z,15nm,1.0s						
GNI	**Garni**	**22.90**	**284**	*e*P		**P**	**01 37 58.1 +6.0**
	comp=Z,15nm,0.8s,mb4.5						
GOR	**Gori**	**23.31**	**289**	P		**P**	**01 37 56.5 +0.7**
ZEI	**Tsey**	**23.47**	**291**	*e*P		**P**	**01 37 59.4 +2.1**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
LZH	**Lanzhou**	**23.69**	**86**	*e*P		**P**	**01 38 02.8 +3.4**
LZH				pP			01 38 36.8
LZH				sP	sP		01 38 57.0 +2.1
LZH				PcP	PcP		01 41 45.9 +7.4
LZH				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,62nm,4.7s						
MIB	**Mutribah**	**23.70**	**258**	*e*P		**P**	**01 38 01.2 +1.6**
MIB				AMb	AMB		01 38 02.0
	comp=Z,23nm,1.0s,mb4.7						
RDF	**Al-Radifah**	**23.96**	**256**	*e*P		**P**	**01 38 03.5 +1.6**
NAY	**Al-Naaiem**	**24.04**	**257**	*e*P		**P**	**01 38 04.1 +1.5**
NAY				AMb	AMB		01 38 05.0
	comp=Z,17nm,0.6s,mb4.8						
KIV	**Kislovodsk**	**24.40**	**294**⇑	*e*P		**P**	**01 38 11.1 +5.4**
KIV				*e*S		**S**	**01 42 20.2 +7.9**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
CD2	**Chengdu**	**25.32**	**97**	*e*P		**P**	**01 38 16.7 +2.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
SONM	**Songino Array**	**25.34**	**57**	P		**P**	**01 38 14.5 +0.3**
	comp=Z,4.9nm,0.8s,mb4.1,baz=259,slow=10,SNR=7.8						
SONM				pP	pP		01 38 52.1 +2.0
	comp=Z,2.7nm,0.7s,baz=251,slow=9.2,SNR=3.1						
KMI	**Kunming**	**27.41**	**110**	P		**P**	**01 38 38.1 +5.1**
KMI				pP	pP		01 39 10.1 +0.9
KMI				sP	sP		01 39 28.2 -1.4
KMI				PP	PP		01 39 34.6 -3.8
KMI				S	**S**		**01 43 07.1 +7.0**
KMI				sS	sS		01 44 06.0 +1.4
KMI				SS	SS		01 44 40.7 -22
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
KMI				pmax	pmax		
	comp=Z,97nm,6.5s						
KMI				LR	LR		
	comp=N,64nm,18.7s						
KMI				LR	LR		
	comp=E,88nm,16.0s						
KMI				LR	LR		
	comp=Z,140nm,19.8s						
HHC	**Hu-ho-hao-te**	**28.84**	**73**	*e*P		**P**	**01 38 50.6 +5.1**
HHC				pP	pP		01 39 24.2 +2.3
HHC				PP	PP		01 39 52.5 -1.6
HHC				PcP	PcP		01 41 53.8 +3.4
HHC				S	**S**		**01 43 30.5 +8.2**
HHC				sS	sS		01 44 28.8 +1.9
HHC				ScP	ScP		01 45 18.7 +3.6
HHC				ScS	ScS		01 49 12.3 +3.3
HHC				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
HHC				pmax	pmax		
	comp=Z,300nm,6.9s						
HHC				LR	LR		
	comp=N,960nm,11.7s						
HHC				LR	LR		
	comp=E,460nm,13.6s						
HHC				LR	LR		
	comp=Z,530nm,12.6s						
CMAR	**Chiang Mai Arr**	**29.12**	**125**	P		**P**	**01 38 47.5 -0.7**
	comp=Z,0.7nm,0.3s,mb3.8,baz=316,slow=8.7,SNR=3.6						
CMAR				LR	LR		01 52 52.5
	comp=Z,56nm,19.8s,baz=205,slow=41						
CMAR	**Chiang Mai Arr**	**29.12**	**125**	P		**P**	**01 38 47.5 -0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,56nm,19.8s						
GYA	**Guiyang**	**29.65**	**103**	*e*P		**P**	**01 38 55.1 +2.3**
GYA				pP	pP		01 39 30.2 +0.9
GYA				sP	sP		01 39 50.7 +1.1
GYA				PP	PP		01 40 02.0 -1.3
GYA				PcP	PcP		01 41 55.4 +2.6
GYA				S	**S**		**01 43 42.7 +7.4**
GYA				sS	sS		01 44 42.3 +2.4
GYA				ScP	ScP		01 45 21.0 +3.1
GYA				PcS	PcS		01 45 38.5 +2.3
GYA				ScS	ScS		01 49 15.6 +2.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
OBN	**Obninsk**	**30.48**	**316**⇑	*e*P		**P**	**01 39 01.2 +1.4**
OBN				*e*			01 40 08.1
OBN				*e*S		**S**	**01 43 50.5 +2.8**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
BRTR	**Keskin Array B**	**31.42**	**286**	P		**P**	**01 39 09.7 +1.4**
	comp=Z,0.4nm,0.7s,mb3.2,baz=142,slow=6.3,SNR=3.6						
BRTR				pP	pP		01 39 46.9 +2.0
	comp=Z,2.0nm,0.8s,baz=81,slow=7.6,SNR=6.7						
BRTR	**Keskin Array B**	**31.42**	**286**	*i* P		**P**	**01 39 10.8 +2.6**
BJI	**Beijing**	**32.44**	**73**	P		**P**	**01 39 19.7 +2.6**
BJI				pP	pP		01 39 51.3 -2.6
BJI				S	**S**		**01 44 27.7 +9.2**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
BJI				pmax	pmax		
	comp=Z,54nm,4.7s						
WHN	**Wuhan**	**33.80**	**91**	P		**P**	**01 39 31.5 +2.4**
JOF	**Joensuu**	**35.83**	**328**	*e*P		**P**	**01 39 47.2 +1.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
JOF	**Joensuu**	**35.83**	**328**	*e*p		**P**	**01 39 47.2 +1.2**
	comp=Z,1.2nm,0.4s,mb3.9						
FINES	**FINESS Array B**	**37.65**	**324**	P		**P**	**01 40 02.5 +1.1**
	comp=Z,0.8nm,0.3s,mb3.8,baz=114,slow=9.1,SNR=11						
FINES				pP	pP		01 40 39.8 +1.0
	comp=Z,3.0nm,0.5s,baz=112,slow=9.5,SNR=3.6						
FINES	**FINESS Array B**	**37.65**	**324**	P		**P**	**01 40 02.5 +1.1**
FINES				*PP	pP		01 40 39.8 +0.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KAF	**Kangasniemi**	**37.73**	**325**	*e*P		**P**	**01 40 04.1 +2.0**
KAF	**Kangasniemi**	**37.73**	**325**	*e*p		**P**	**01 40 04.1 +2.0**
	comp=Z,0.3nm,0.3s,mb3.4						
CN2	**Changchun**	**38.62**	**65**	*e*P		**P**	**01 40 12.7 +2.9**
KEV	**Kevo**	**40.32**	**337**	*e*P		**P**	**01 40 24.0 +0.6**
KEV	**Kevo**	**40.32**	**337**	*e*p		**P**	**01 40 24.0 +0.6**
	comp=Z,0.3nm,0.3s,mb3.4						
ARCES	**ARCESS Array B**	**40.70**	**336**	P		**P**	**01 40 28.1 +1.6**
	comp=Z,1.7nm,0.6s,mb3.9,baz=111,slow=8.9,SNR=26						
ARCES				pP	pP		01 41 05.7 +1.2
	comp=Z,2.1nm,0.5s,baz=106,slow=8.9,SNR=4.4						
ARCES	**ARCESS Array B**	**40.70**	**336**	P		**P**	**01 40 28.1 +1.6**
ARCES				*PP	pP		01 41 05.7 +1.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MDJ	**Mudanjiang**	**41.41**	**63**	P		**P**	**01 40 34.6 +1.9**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,61nm,8.0s						
KSRS	**Korea Array**	**41.97**	**74**	P		**P**	**01 40 39.0 +1.6**
	comp=Z,2.1nm,0.8s,mb3.8,baz=281,slow=6.9,SNR=6.4						
KSRS	**Korea Array**	**41.97**	**74**	*e*P		**P**	**01 40 38.9 +1.6**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
HFS	**Hagfors**	**43.43**	**321**	P		**P**	**01 40 49.3 +0.6**
	baz=100,slow=12						
NB2	**NORSAR Subarra**	**44.68**	**322**	P		**P**	**01 40 59.3 +0.6**
	comp=Z,0.8nm,0.6s,mb3.5,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.68**	**322**	P		**P**	**01 40 59.6 +0.9**
	comp=Z,0.7nm,0.6s,mb3.5,baz=93,slow=7.7,SNR=4.0						
NOA				pP	pP		01 41 38.8 +1.5
	comp=Z,3.3nm,0.7s,baz=91,slow=7.9,SNR=7.5						
NOA	**NORSAR Array B**	**44.68**	**322**	P		**P**	**01 40 59.6 +0.9**
NOA				*PP	pP		01 41 38.8 +1.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HINF	**Hinteralfeld**	**48.81**	**304**	*e*P		**P**	**01 41 35.0 +4.1**
	comp=Z,1.7nm,0.6s,mb3.5						
HINF	**Hinteralfeld**	**48.81**	**304**	*e*P		**P**	**01 41 35.0 +4.1**
HINF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
HINF	**Hinteralfeld**	**48.81**	**304**	*e*P		**P**	**01 41 35.0 +4.1**
	comp=Z,0.9nm,0.6s,mb3.6						
LPL	**La Plagne**	**49.51**	**301**	*e*P		**P**	**01 41 39.9 +3.7**
LPL	**La Plagne**	**49.51**	**301**	*e*P		**P**	**01 41 39.9 +3.7**
LPL				epP	pP		01 42 20.7 +5.2
MAT	**Matsushiro**	**50.01**	**71**	P		**P**	**01 41 41.0 +0.8**
MJAR	**Matsushiro Arr**	**50.02**	**71**	P		**P**	**01 41 41.2 +1.0**
	comp=Z,3.2nm,0.6s,mb4.1,baz=284,slow=9.9,SNR=7.5						
MJAR	**Matsushiro Arr**	**50.02**	**71**	P		**P**	**01 41 41.2 +1.0**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SSF	**Saint Saulge**	**51.20**	**304**	*e*P		**P**	**01 41 52.6 +3.7**
	comp=Z,5.8nm,1.0s,mb3.9						
SSF	**Saint Saulge**	**51.20**	**304**	*e*P		**P**	**01 41 52.6 +3.7**
SSF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
SSF	**Saint Saulge**	**51.20**	**304**	*e*P		**P**	**01 41 52.6 +3.7**
	comp=Z,2.9nm,1.0s,mb3.9						
BILL	**Bilibino**	**56.06**	**27**⇑	*e*P		**P**	**01 42 25.4 +1.5**
BILL				*e*S		**S**	**01 49 56.8 -1.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
TORD	**Torodi Ar. Bea**	**68.29**	**270**	P		**P**	**01 43 46.1 +0.1**
	comp=Z,3.2nm,0.5s,mb4.3,baz=48,slow=5.6,SNR=66						
BPAW	**Bear Paw Mtn.**	**72.09**	**19**	*e*P		**P**	**01 44 09.3 +1.0**
	comp=Z,1.4nm,0.6s,mb3.9						
ILAR	**Eielson Array**	**72.55**	**17**	P		**P**	**01 44 11.4 +0.5**
	comp=Z,2.0nm,0.9s,mb3.9,baz=320,slow=5.0,SNR=22						
ILAR				pP	pP		01 44 54.8 +1.6
	comp=Z,0.9nm,0.8s,baz=316,slow=3.8,SNR=4.2						
DBIC	**Dimbokro**	**77.31**	**269**	P		**P**	**01 44 40.3 +1.2**
	comp=Z,2.6nm,0.8s,mb3.9,baz=39,slow=6.5,SNR=3.5						
DBIC	**Dimbokro**	**77.31**	**269**	P		**P**	**01 44 40.3 +1.2**
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**79.52**	**4**	P		**P**	**01 44 51.6 +1.2**
	comp=Z,2.9nm,0.7s,mb4.0,baz=346,slow=5.5,SNR=9.8						
YKA				pP	pP		01 45 35.6 +2.2
	comp=Z,2.0nm,0.7s,baz=348,slow=5.4,SNR=4.4						
BOSA	**Boshof**	**80.61**	**222**	P		**P**	**01 44 56.2 -0.4**
	comp=Z,3.0nm,1.0s,mb3.9,baz=130,slow=7.3,SNR=3.1						
BOSA	**Boshof**	**80.61**	**222**	P		**P**	**01 44 56.2 -0.4**
BOSA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
WRA	**Warramunga Arr**	**80.71**	**124**	P		**P**	**01 44 57.4 0.0**
	comp=Z,2.2nm,0.5s,mb4.0,baz=325,slow=5.0,SNR=12						
WRA	**Warramunga Arr**	**80.71**	**124**	P		**P**	**01 44 57.4 0.0**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**83.12**	**127**	P		**P**	**01 45 10.7 +0.8**
	comp=Z,0.9nm,0.7s,mb3.6,baz=317,slow=5.2,SNR=9.3						
ASAR				pP	pP		01 45 53.9 +0.7
	comp=Z,0.5nm,0.7s,baz=318,slow=5.4,SNR=3.0						
ASAR	**Alice Springs**	**83.12**	**127**	*e*P		**P**	**01 45 11.0 +1.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

DJA 09 01:41:59, 4°.02S×103°.08E, h8km, MLv3.8/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.36**	**200**	P	Pg	01 42 07.2	+1.1
MNAI				S	Sg	01 42 15.2	+4.3
KSI	**Kapahiang**	**0.61**	**307**	P	Pg	01 42 10.0	-0.8
KSI				S	Sg	01 42 20.6	+1.9
MDSI	**Maura Dua**	**1.19**	**113**	P	Pb	01 42 18.9	-2.9
MDSI				S	Sg	01 42 36.7	-0.6
LWLI	**Liwa**	**1.39**	**135**	P	Pn	01 42 25.1	+0.4
KLSI		**1.77**	**112**	P	Pn	01 42 28.8	-1.2
KLSI				S	Sn	01 42 53.3	+0.5
KLI	**Kotabumi**	**1.96**	**115**	P	Pn	01 42 32.7	+0.1
KLI				S	Sn	01 42 58.5	+1.2
KASI	**Kota Agung**	**2.06**	**137**	P	Pn	01 42 34.5	+0.6
KASI				S	Sn	01 43 01.4	+1.7

WEL 09 02:11:22.3±0.3, 37°.08S×176°.80E, h187km±3km, ML4.0/15, Error ellipse: s-maj=4.1km s-min=3.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.21**	**168**	PN	Pn	02 11 52.2	0.0
URZ				SN	Sn	02 12 16.0	+0.5
MXZ	**Matakaoa Point**	**1.30**	**112**	PN	Pn	02 11 53.3	+0.3
MXZ				SN	Sn	02 12 16.8	+0.1
MWZ	**Matawai**	**1.38**	**155**	PN	Pn	02 11 53.8	+0.1
MWZ				SN	Sn	02 12 18.5	+0.3
PUZ	**Puketiti**	**1.53**	**131**	PN	Pn	02 11 53.4	-1.6
PUZ				SN	Sn	02 12 19.4	-1.0
CNGZ	**Carnagh Statio**	**1.79**	**142**	PN	Pn	02 11 58.4	+0.7
RAHZ	**Arahi**	**1.85**	**173**	PN	Pn	02 11 58.5	+0.3
NMHZ	**Naumai**	**2.02**	**180**	PN	Pn	02 12 00.3	+0.4
PRGZ	**Paritu Road**	**2.03**	**155**	PN	Pn	02 12 00.1	0.0
KNZ	**Kokohu**	**2.06**	**161**	PN	Pn	02 12 00.1	-0.3
BKZ	**Black Stump Fm**	**2.10**	**186**	PN	Pn	02 12 00.2	-0.6
WTVZ	**West Tongariro**	**2.25**	**205**	PN	Pn	02 12 03.1	+0.6
MHGZ	**Mahia Peninsul**	**2.25**	**157**	PN	Pn	02 12 02.2	-0.3
WPVZ	**Whakapapa**	**2.34**	**205**	PN	Pn	02 12 04.2	+0.7
MCHZ	**McNeill Hill**	**2.36**	**182**	PN	Pn	02 12 03.7	0.0
FWVZ	**Far West T-bar**	**2.38**	**204**	PN	Pn	02 12 04.4	+0.5
TRVZ	**Turoa**	**2.43**	**204**	PN	Pn	02 12 04.6	+0.1
WNVZ	**Wahianoa**	**2.44**	**202**	PN	Pn	02 12 04.5	-0.1
MOVZ	**Moawhango**	**2.47**	**199**	PN	Pn	02 12 04.2	-0.8
BHHZ	**Black Hill Sta**	**2.48**	**193**	PN	Pn	02 12 04.2	-0.8
MTVZ	**Mangateitei**	**2.53**	**204**	PN	Pn	02 12 05.9	+0.3
CKHZ	**Cape Kidnapper**	**2.59**	**175**	PN	Pn	02 12 05.8	-0.5
KAHZ	**Kahuranaki**	**2.71**	**179**	PN	Pn	02 12 07.2	-0.6
PNHZ	**Pukenui**	**2.87**	**189**	PN	Pn	02 12 08.3	-1.3
PXZ	**Pawanui**	**2.95**	**179**	PN	Pn	02 12 09.1	-1.5
WPHZ	**Waipukurau**	**3.00**	**185**	PN	Pn	02 12 09.8	-1.3
WAZ	**Wanganui**	**3.03**	**207**	PN	Pn	02 12 11.0	-0.5
TSZ	**Takapari Road**	**3.05**	**192**	PN	Pn	02 12 10.3	-1.4
PRHZ	**Porangahau**	**3.19**	**182**	PN	Pn	02 12 11.7	-1.8
DVHZ	**Dannevirke**	**3.25**	**189**	PN	Pn	02 12 12.2	-2.1
POWZ	**Post Office Ro**	**3.41**	**193**	PN	Pn	02 12 14.4	-1.7
BFZ	**Birch Farm**	**3.62**	**187**	PN	Pn	02 12 16.3	-2.5
MRZ	**Mangatainoka R**	**3.70**	**194**	PN	Pn	02 12 17.2	-2.6
TIWZ	**Tintock**	**3.76**	**191**	PN	Pn	02 12 18.2	-2.4
HOWZ	**Holdsworth Sta**	**3.94**	**194**	PN	Pn	02 12 19.8	-3.0
OGWZ	**Otaki Gorge**	**3.94**	**198**	PN	Pn	02 12 20.2	-2.6
KIW	**Kapiti Island**	**4.05**	**201**	PN	Pn	02 12 21.4	-2.8
TMWZ	**Te Maipa**	**4.08**	**190**	PN	Pn	02 12 21.9	-2.7
MTW	**Mount Morrison**	**4.20**	**193**	PN	Pn	02 12 22.7	-3.3
CAW	**Cannon Point**	**4.24**	**198**	PN	Pn	02 12 23.3	-3.3
DUWZ	**D'Urville Isla**	**4.34**	**210**	PN	Pn	02 12 25.3	-2.6
TRWZ	**Traveller**	**4.40**	**191**	PN	Pn	02 12 25.1	-3.5
PAWZ	**Paruwai Farm**	**4.43**	**193**	PN	Pn	02 12 25.4	-3.6
WEL	**Wellington**	**4.49**	**200**	PN	Pn	02 12 26.5	-3.2
MSWZ	**Moikau Station**	**4.50**	**195**	PN	Pn	02 12 26.1	-3.7
TCW	**Tory Channel**	**4.57**	**205**	PN	Pn	02 12 27.4	-3.3
BHW	**Baring Head**	**4.58**	**198**	PN	Pn	02 12 27.1	-3.8
PLWZ	**Palliser**	**4.64**	**194**	PN	Pn	02 12 27.7	-4.0
TUWZ	**Tuamarina**	**4.88**	**206**	PN	Pn	02 12 31.1	-3.6
BSWZ	**Blackbirch Sta**	**5.15**	**205**	PN	Pn	02 12 34.6	-3.6
THZ	**Tophouse**	**5.56**	**212**	PN	Pn	02 12 41.0	-2.6
KHZ	**Kahutara**	**5.89**	**204**	PN	Pn	02 12 43.7	-4.1
LTZ	**Lake Taylor**	**6.67**	**210**	PN	Pn	02 12 54.1	-3.9
MQZ	**McQueen's Vall**	**7.34**	**204**	PN	Pn	02 13 01.1	-5.7

DJA 09 02:36:23, 0°.53S×125°.03E, h11km, MLv3.9/5, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.97**	**354**	P	Pn	02 36 57.0	+0.7
MNI				S	Sn	02 37 22.9	+1.8
LUWI	**Luwuk**	**2.31**	**257**	P	Pn	02 37 02.5	+1.4
LBMI	**Labuha**	**2.47**	**92**	P	Pn	02 37 04.3	+1.0
TNTI	**Ternate**	**2.67**	**61**	P	Pn	02 37 05.6	-0.4
TOLI	**Toli-Toli**	**4.54**	**291**	P	Pn	02 37 29.6	-2.1

*BJI **09** 02:39:44.5, 39°.31N×77°.32E, h24km, ML3.4/7, Ms3.3/1*
ISC 09 02:39:42.9±5.2, 39°.4N±0°.4×77°.7E±0°.2, h10km, n11, σ19°13/12, 2C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.34**	**277**⇑	*i*Pg	**Pg**	**02 40 08.2**	**-0.3**
KSH				Sg	**Sg**	**02 40 26.7**	**+0.8**
KSH				smax			
	comp=N,410nm,0.5s						
KSH				smax			
	comp=E,390nm,0.6s						
ULHL	**Ulahol**	**3.08**	**340**	P	**Pn**	**02 40 32.8**	**+1.3**
	SNR=82						
KZA	**Kyzart**	**3.28**	**326**	P	**Pn**	**02 40 34.0**	**-0.3**
	SNR=69						
KBK	**Karagaybulak**	**3.88**	**329**	P	**Pb**	**02 40 48.1**	**-3.3**
	SNR=11						
TKM2	**Tokmak 2**	**3.88**	**337**	⇓Pn	**Pn**	**02 40 43.8**	**+1.2**
	comp=E,17nm,0.4s						
TKM2				⇓Lg		02 41 35.7	
	comp=E,25nm,0.3s						
TKM2	**Tokmak 2**	**3.88**	**337**	P	**Pn**	**02 40 43.6**	**+1.0**
	SNR=28						
AAK	**Ala-Archa**	**4.06**	**324**	P	**Pn**	**02 40 49.3**	**+4.2**
	SNR=14						
AML	**Almayashu**	**4.10**	**314**	P	**Pn**	**02 40 45.7**	**+0.1**
	SNR=7.2						
CHMS	**Chumysh**	**4.25**	**330**	P	**Pn**	**02 40 47.5**	**-0.1**
	SNR=12						
EKS2	**Erkin-Say**	**4.42**	**319**	P	**Pn**	**02 40 49.6**	**-0.5**
	SNR=8.2						
KK31	**Karatay Array**	**6.57**	**307**	⇑Pg	**Pb**	**02 41 34.4**	**-2.8**
	comp=E,1.0nm,0.4s,baz=125,slow=16,SNR=8.4						
KK31				⇓Lg		02 42 53.3	
	comp=E,5.6nm,0.5s,baz=124,slow=27,SNR=6.2						

*ATH **09** 02:54:42.9, 37°.99N×26°.46E, h33km, MD3.5/3*
*ISK **09** 02:54:42.3, 38°.09N×26°.62E, h5km, MD3.4*
*DDA **09** 02:54:43.8, 38°.16N×26°.70E, h17km±1km, Md3.0*
*ISCJB **09** 02:54:43.6±0.6, 38°.11N±0°.02×26°.64E±0°.03, h3km±4km,*
Error ellipse: s-maj=4.1km s-min=2.7km az=157.0
*THE **09** 02:54:43.9, 38°.09N×26°.69E, h9km±1km, ML3.3/3, Error ellipse: s-maj=1.5km s-min=0.8km az=71.0*
*CSEM **09** 02:54:43.8±0.1, 38°.10N×26°.63E, h2km, MD3.0, Error ellipse: s-maj=3.3km s-min=2.3km az=65.0*
ISC 09 02:54:43.8±0.4, 38°.11N±0°.02×26°.62E±0°.03, h1km±3km, n91, σ0°86/125, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.25**	**356**	*i* P	**Pg**	**02 54 48.3**	**-0.4**
URLA				*i* S	**Sg**	**02 54 52.3**	**+0.4**
URLA	**Izmir**	**0.25**	**356**	*i* P	**Pg**	**02 54 48.3**	**-0.4**
URLA				*i* S	**Sg**	**02 54 52.3**	**+0.3**
BLCB	**Balcova**	**0.43**	**50**	*e*PG	**Pg**	**02 54 51.9**	**-0.2**
BLCB	**Balcova**	**0.43**	**50**	P	**Pg**	**02 54 52.1**	**0.0**
BLCB				S	**Sg**	**02 54 57.6**	**-0.1**
BLCB	**Balcova**	**0.43**

APE	Apeiranthos	1.35	220	*e*PN	Pn	02 55 05.0	-0.8
APE	Apeiranthos	1.35	220	P	Pg	02 55 08.2	-1.5
APE				S	Sg	02 55 26.5	-0.7
APE	Apeiranthos	1.35	220	P	Pg	02 55 08.2	-1.5
APE	Apeiranthos	1.35	220	*e*Pn	Pn	02 55 08.9	-0.9
APE				S	Sg	02 55 26.5	-0.7
DAT	Datca	1.57	151	*e*PN	Pn	02 55 12.0	-0.8
DAT	Datca	1.57	151	*e*Pn	Pn	02 55 12.0	-0.8
YER	Yerkesik	1.64	126	*e*PN	Pn	02 55 13.4	-0.4
YER	Yerkesik	1.64	126	*e*Pn	Pn	02 55 13.4	-0.4
KULA	Kula-Manisa	1.66	75	*e*PN	Pn	02 55 14.0	0.0
KULA	Kula-Manisa	1.66	75	*e*Pn	Pn	02 55 14.0	0.0
EZN	Ezine	1.73	352	*e*PN	Pn	02 55 15.0	-0.1
EZN	Ezine	1.73	352	*e*Pn	Pn	02 55 15.0	0.0
BALY	Balya	1.81	25	*i* P	Pn	02 55 15.1	-1.0
BALY				*i* S	Sn	02 55 38.4	-1.2
BALY	Balya	1.81	25	*i* P	Pn	02 55 15.1	-1.0
BALY				*i* S	Sn	02 55 38.4	-1.2
BALB	Balikesir	1.82	32	*e*PN	Pn	02 55 16.4	+0.2
BALB	Balikesir	1.82	32	*e*Pn	Pn	02 55 16.4	+0.2
DENT	Denizli	1.94	100	*e*PN	Pn	02 55 18.0	+0.1
DENT	Denizli	1.94	100	*e*Pn	Pn	02 55 18.0	+0.1
DNZL	Cakiroluk	1.96	102	*i* P	Pn	02 55 19.8	+1.6
DNZL				*i* S	Sn	02 55 45.1	+1.6
DNZL	Cakiroluk	1.96	102	*i* P	Pn	02 55 19.8	+1.6
DNZL				*i* S	Sn	02 55 45.1	+1.6
GONE	Gonen-Balikesi	2.11	23	*e*PN	Pn	02 55 20.0	-0.2
GONE	Gonen-Balikesi	2.11	23	*e*Pn	Pn	02 55 20.0	-0.2
GADA	Gvkgeada	2.15	345	*e*PN	Pn	02 55 20.7	-0.1
GADA	Gvkgeada	2.15	345	*e*Pn	Pn	02 55 20.7	-0.1
LPK	Lapseki	2.26	3	*e*PN	Pn	02 55 22.6	+0.2
LPK	Lapseki	2.26	3	*e*Pn	Pn	02 55 22.6	+0.3
GELI	Tayfur-Gelibol	2.29	357	*e*PN	Pn	02 55 22.9	+0.2
GELI	Tayfur-Gelibol	2.29	357	*e*Pn	Pn	02 55 22.9	+0.2
KHL	Karahalli	2.30	84	*e*PN	Pn	02 55 23.0	+0.2
KHL	Karahalli	2.30	84	*e*Pn	Pn	02 55 23.0	+0.2
BNT	Bandirma	2.46	24	*e*PN	Pn	02 55 25.3	+0.3
BNT	Bandirma	2.46	24	*e*Pn	Pn	02 55 25.3	+0.2
GLHS	Glhisar (BURDU	2.48	112	*e*PN	Pn	02 55 25.4	+0.1
GLHS	Glhisar (BURDU	2.48	112	*e*Pn	Pn	02 55 25.4	+0.2
KCTX	Karacabey (Bur	2.54	32	*e*PN	Pn	02 55 26.5	+0.3
KCTX	Karacabey (Bur	2.54	32	*e*Pn	Pn	02 55 26.5	+0.3
ERIK	Erikli-Kesan	2.56	358	*e*PN	Pn	02 55 26.9	+0.5
ERIK	Erikli-Kesan	2.56	358	*e*Pn	Pn	02 55 26.9	+0.5
RKY	Sarkoy-Tekirda	2.61	9	*e*PN	Pn	02 55 27.5	+0.4
RKY	Sarkoy-Tekirda	2.61	9	*e*Pn	Pn	02 55 27.5	+0.4
ENEZ	Enez	2.65	352	*e*PN	Pn	02 55 28.2	+0.5
ENEZ	Enez	2.65	352	*e*Pn	Pn	02 55 28.2	+0.6
MFT	Murefte	2.72	11	*e*PN	Pn	02 55 29.4	+0.7
MFT	Murefte	2.72	11	*e*Pn	Pn	02 55 29.4	+0.7
MDNY	Mudanya-Bursa	2.86	37	*e*PN	Pn	02 55 31.2	+0.7
MDNY	Mudanya-Bursa	2.86	37	*e*Pn	Pn	02 55 31.2	+0.6
ARMT	Armutlu	3.01	35	*e*PN	Pn	02 55 33.2	+0.7
ARMT	Armutlu	3.01	35	*e*Pn	Pn	02 55 33.2	+0.6
SHUT	Suhut-Afyon	3.12	81	*e*PN	Pn	02 55 34.8	+0.7
SHUT	Suhut-Afyon	3.12	81	*e*Pn	Pn	02 55 34.8	+0.6
SLVT	Silivri	3.35	21	*e*PN	Pn	02 55 38.2	+0.9
SLVT	Silivri	3.35	21	*e*Pn	Pn	02 55 38.2	+0.9
ADVT	Abdulvahap	3.35	45	*e*PN	Pn	02 55 38.2	+0.9
ADVT	Abdulvahap	3.35	45	*e*Pn	Pn	02 55 38.3	+1.0
CTKS	Kestanelik-??a	3.45	24	*e*PN	Pn	02 55 39.5	+0.9
CTKS	Kestanelik-??a	3.45	24	*e*Pn	Pn	02 55 39.5	+0.9

IDC ***09*** *03:07:24.0±0.3, 3˙73S×103˙29E, h0km, mb5.2/31, mb1 5.2/31, mb1mx5.2/31, mbtmp5.2/31, MS4.6/21, Ms1 4.6/21, ms1mx4.5/25, Error ellipse: s-maj=14.4km s-min=9.4km az=52.0*

MOS ***09*** *03:07:27.8±1.0, 3˙68S×103˙18E, h33km, mb5.5/93, MS4.8/26, Error ellipse: s-maj=8.5km s-min=4.5km az=122.9*

ISCJB ***09*** *03:07:27.8±0.1, 3˙88S±0˙02×102˙95E±0˙02, h33km, mb5.3/203, MS4.9/65, Error ellipse: s-maj=3.4km s-min=2.1km az=37.7*

NEIC ***09*** *03:07:27.5±0.9, 3˙94S×103˙06E, h25km±6km, mb5.4/101, Error ellipse: s-maj=5.6km s-min=4.5km az=48.0*

NEIC Two people killed and 113 homes severely damaged [VI] at Lahat. Several buildings also damaged at Jarai. Felt [IV] at Kapahiang and Pagaralam and [III] at Bengkulu.

GCMT ***09*** *03:07:27.8±0.3, 3˙99S×103˙15E, h12km±1km, MW5.2, Moment Tensor Solution. s29,c41; s66,c114; Moment tensor: Scale 10^16^Nm; Mrr6.16±.43; Mθθ-8.34±.28; Mφφ2.18±.32; Mrθ-0.91±.61; Mrφ1.99±.19; Mθr-2.12±.88; Best double couple: M0 8.00000×10^16^ NP1:φs124.00000°, δ48.00000°, λ125.00000°. NP2:φs257.00000°, δ52.00000°, λ57.00000°. Principal axes: T 7.2500, Plg64.0000°, Azm104.0000°; N 1.4700, Plg25.0000°, Azm279.0000°; P -8.7200, Plg2.0000°, Azm10.0000°; Data Used: II IC IU CN G.*

BJI ***09*** *03:07:28.5, 3˙90S×103˙10E, h45km, mB5.1/47, mb5.0/55, Ms5.3/59, Ms7 5.2/57*

TEH ***09*** *03:07:30.0, 3˙87S×103˙07E, h39km*

DJA ***09*** *03:07:32, 3˙98S×103˙01E, h36km, Mw5.6/44*

SZGRF ***09*** *03:07:37.5, 3˙63S×100˙37E, h33km, mb5.2, MS5.0, Southern Sumatera, Indonesia*

ISC 09 03:07:29.6±0.1, 3˙90S±0˙02×102˙93E±0˙02, h35km, (h36km±2.3km; pP-P), n796, σ1§16/732, mb5.3/203, MS4.9/65, 66C-27D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.41**	**306**	P	**Pn**	**03 07 37.5**	**-1.6**
KSI	**Kapahiang**	**0.41**	**306**	P	**Pn**	**03 07 38.5**	**-0.6**
KSI				S	**Sn**	**03 07 47.3**	**+1.7**
MNAI	**Manna**	**0.46**	**177**	P	**Pn**	**03 07 35.0**	**-4.8**
MNAI	**Manna**	**0.46**	**177**	P	**Pn**	**03 07 35.4**	**-4.4**
MNAI				S	**Sn**	**03 07 44.6**	**-2.1**
LHSI	**Lahat**	**0.60**	**83**	P	**Pn**	**03 07 35.0**	**-6.7**
MDSI	**Maura Dua**	**1.38**	**115**	P	**Pn**	**03 07 47.0**	**-5.4**
MDSI				S	**Sn**	**03 08 09.3**	**-0.1**
LWLI	**Liwa**	**1.58**	**135**	P	**Pn**	**03 07 52.9**	**-2.3**
KLSI		**1.96**	**114**	P	**Pn**	**03 07 57.2**	**-3.2**
KLSI				S	**Sn**	**03 08 21.7**	**-2.1**
KLI	**Kotabumi**	**2.15**	**117**	P	**Pn**	**03 07 59.7**	**-3.3**
KLI	**Kotabumi**	**2.15**	**117**	P	**Pn**	**03 08 00.3**	**-2.7**
KASI	**Kota Agung**	**2.25**	**136**	P	**Pn**	**03 08 03.3**	**-1.1**
KASI				S	**Sn**	**03 08 32.3**	**+1.4**
KRJI	**Kerinci**	**2.32**	**321**	P	**Pn**	**03 08 11.5**	**+6.2**
BLSI	**Bandar Lampung**	**2.73**	**122**	P	**Pn**	**03 08 10.0**	**-1.0**
SDSI	**Sungai Dareh**	**3.31**	**333**	P	**Pn**	**03 08 24.8**	**+5.9**
RBSI	**Rajabasa**	**3.41**	**125**	P	**Pn**	**03 08 20.1**	**-0.2**
RGRI	**Rengat**	**3.58**	**350**	P	**Pn**	**03 08 24.9**	**+2.2**
PDSI	**Padang**	**3.86**	**320**	P	**Pn**	**03 08 31.8**	**+5.3**
SBJI	**Serang**	**3.88**	**125**	P	**Pn**	**03 08 29.6**	**+2.8**
PPI	**Padang Panjang**	**4.25**	**323**	P	**Pn**	**03 08 36.1**	**+4.1**
TNG	**Tangerang**	**4.34**	**122**	P	**Pn**	**03 08 37.1**	**+4.0**
TNG	**Tangerang**	**4.34**	**122**	P	**Pn**	**03 08 37.2**	**+4.1**
BKNI	**Bangkinang**	**4.60**	**336**	P	**Pn**	**03 08 41.3**	**+4.5**
SISI	**Saibi**	**4.61**	**304**	P	**Pn**	**03 08 40.7**	**+3.8**
DBJI	**Dramaga**	**4.63**	**125**	P	**Pn**	**03 08 38.9**	**+1.7**
CBJI	**Citeko**	**4.64**	**123**	P	**Pn**	**03 08 41.7**	**+4.4**
SKJI	**Sukabumi**	**4.75**	**131**	P	**Pn**	**03 08 39.6**	**+0.8**
TPI	**Tanjungpandan**	**4.85**	**77**	P	**Pn**	**03 08 35.4**	**-4.8**
LEM	**Lembang**	**5.50**	**122**	P	**Pn**	**03 08 51.4**	**+2.3**
	10.0nm2μm,1.3s						
MYKOM	**Kota Tinggi**	**5.73**	**9**	P	**Pn**	**03 08 53.4**	**+1.2**
MYKOM	**Kota Tinggi**	**5.73**	**9**	P	**Pn**	**03 08 52.8**	**+0.6**
	6.0nm2μm,1.0s						
MNSI	**Mandailing Nat**	**5.74**	**324**	P	**Pn**	**03 08 57.2**	**+4.8**
	6.5nm7μm741nm,1.1s						
KGM	**Kluang**	**5.89**	**4**	P	**Pn**	**03 08 55.5**	**+1.1**
JCJI	**Jatiwangi**	**5.91**	**116**	P	**Pn**	**03 08 58.9**	**+4.2**
	11nm2μm,1.1s						
CISI	**Cisompet, Garu**	**6.07**	**127**	P	**Pn**	**03 08 57.8**	**+0.9**
	2.9nm9μm1μm,1.1s						
XMIS	**Christmas Isla**	**7.08**	**158**	P	**Pn**	**03 09 04.3**	**-6.5**
FRIM	**Kepong**	**7.21**	**350**	P	**Pn**	**03 09 14.5**	**+1.9**
BJII	**Banjamegara**	**7.56**	**117**	P	**Pn**	**03 09 20.3**	**+2.9**
	3.5nm4μm148nm,1.3s						
SMRI	**Semarang**	**8.11**	**113**	P	**Pn**	**03 09 27.7**	**+2.8**
	12nm8μm236nm,1.0s						
YOGI	**Yogyakarta**	**8.30**	**118**	P	**Pn**	**03 09 38.6**	**+11**
IPM	**Ipoh**	**8.54**	**347**	P	**Pn**	**03 09 32.8**	**+1.9**
IPM	**Ipoh**	**8.54**	**347**	*e*Pn	**Pn**	**03 09 33.9**	**+3.0**
	327nm,1.0s						
IPM				*e*S	Sn	03 11 30.2	+24
IPM	**Ipoh**	**8.54**	**347**	P	**Pn**	**03 09 34.7**	**+3.8**
	3μm336nm,1.1s						
UGM	**Wanagama**	**8.54**	**118**	P	**Pn**	**03 09 32.1**	**+1.2**
	8μm485nm,1.6s						
TSI	**Tuntungan**	**8.55**	**329**	P	**Pn**	**03 09 36.1**	**+5.1**
	7μm679nm,1.1s						
KSM	**Kuching**	**9.10**	**54**	*e*Pn	**Pn**	**03 09 35.6**	**-3.1**
	86nm,0.9s						
KSM				*e*S	**Sn**	**03 11 27.1**	**+7.2**
KSM	**Kuching**	**9.10**	**54**	P	**Pn**	**03 09 36.7**	**-1.9**
	964nm97nm,0.9s						
TPTI		**9.14**	**321**	P	**Pn**	**03 09 41.2**	**+2.0**
	3μm116nm,1.3s						
NGJI	**Ngawi**	**9.16**	**112**	P	**Pn**	**03 09 42.7**	**+3.3**
	7μm197nm,0.9s						
KTGM	**Kuala Trenggan**	**9.17**	**1**	P	**Pn**	**03 09 41.6**	**+2.1**
PCJI	**Pacitan**	**9.24**	**118**	P	**Pn**	**03 09 42.2**	**+1.6**
	3μm172nm,1.2s						
STKI	**Sintang**	**9.41**	**65**	P	**Pn**	**03 09 45.7**	**+2.9**
	141nm,1.1s						
KULM	**Kulim**	**9.41**	**346**	P	**Pn**	**03 09 44.9**	**+2.1**
KULM	**Kulim**	**9.41**	**346**	*e*Pn	**Pn**	**03 09 44.9**	**+2.1**
	689nm,1.1s						
KULM				*e*S	Sn	03 12 13.5	+46
KULM	**Kulim**	**9.41**	**346**	P	**Pn**	**03 09 46.1**	**+3.3**
	6μm608nm,1.1s						
SJI	**Sawahan**	**9.58**	**114**	P	**Pn**	**03 09 46.2**	**+1.0**
	4μm190nm,1.0s						
PWJI	**Pagerwojo**	**9.73**	**115**	P	**Pn**	**03 09 50.5**	**+3.3**
	4μm327nm,1.1s						
COCO	**West Island**	**10.21**	**216**	*i* P	**Pn**	**03 09 55.9**	**+2.1**
COCO	**West Island**	**10.21**	**216**	*e*Pn	**Pn**	**03 09 53.7**	**-0.1**
	1μm,0.9s						
COCO	**West Island**	**10.21**	**216**	Pn	**Pn**	**03 09 53.8**	**0.0**
	7μm,0.8s,SNR=5.3						
COCO	**West Island**	**10.21**	**216**	P	**Pn**	**03 09 56.2**	**+2.5**
	SNR=6.2						
KRKI	**Karangkates**	**10.37**	**115**	P	**Pn**	**03 09 59.0**	**+3.0**
	420nm,1.2s						
SBUM	**Sibu**	**11.22**	**56**	P	**Pn**	**03 10 08.2**	**+0.5**
SBUM	**Sibu**	**11.22**	**56**	P	**Pn**	**03 10 14.1**	**+6.4**
	3μm72nm,1.0s						
GMJI	**Gumukmas**	**11.32**	**113**	P	**Pn**	**03 10 10.2**	**+1.2**
	3μm152nm,1.2s						
KMMI	**Kalianget**	**11.42**	**106**	P	**Pn**	**03 10 13.9**	**+3.5**
	3μm177nm,1.2s						
JAGI	**Jajag, Banyuwa**	**12.04**	**113**	P	**Pn**	**03 10 20.3**	**+1.4**
	4μm380nm,1.1s						
BTM	**Bintulu**	**12.36**	**55**	P	**Pn**	**03 10 23.8**	**+0.6**
NBBI	**Negara**	**12.44**	**111**	P	**Pn**	**03 10 34.4**	**+10**
SRBI	**Singaraja**	**12.90**	**109**	P	**Pn**	**03 10 39.2**	**+8.5**
KBKI	**Kotabaru**	**13.23**	**88**	P	**Pn**	**03 10 36.7**	**+1.6**
	73nm,1.0s						
KHKI	**Kahang-Kahang**	**13.36**	**110**	P	**Pn**	**03 10 38.7**	**+1.8**
	3μm175nm,1.6s						
MTNI	**Mataram**	**13.98**	**110**	P	**Pn**	**03 10 46.7**	**+1.4**
	129nm,1.1s						
BMNI	**Bima**	**16.33**	**107**	P	**Pn**	**03 11 18.1**	**+1.7**
	2μm86nm,1.3s						
KKM	**Kota Kinabalu**	**16.54**	**53**	P	**Pn**	**03 11 19.1**	**0.0**
KKM	**Kota Kinabalu**	**16.54**	**53**	*e*Pn	**Pn**	**03 11 17.8**	**-1.3**
	209nm,1.1s						
KKM	**Kota Kinabalu**	**16.54**	**53**	P	**Pn**	**03 11 18.2**	**-0.9**
	3μm190nm,1.3s						
SPSI	**Sidrap Palu**	**16.80**	**91**	P	**Pn**	**03 11 22.8**	**+0.4**
	2μm141nm,1.1s						
KAPI	**Kappang**	**16.81**	**94**	*e*Pn	**Pn**	**03 11 21.8**	**-0.7**
	88nm,0.9s						
KAPI	**Kappang**	**16.81**	**94**	P	**Pn**	**03 11 22.3**	**-0.2**
	SNR=8.9						
TTSI	**Tana Toraja**	**16.88**	**88**	P	**Pn**	**03 11 25.1**	**+1.7**
	2μm166nm,1.2s						
TSM	**Tawau**	**17.00**	**62**	P	**Pn**	**03 11 25.3**	**+0.3**
SDKM	**Sandakan**	**17.11**	**56**	P	**Pn**	**03 11 26.7**	**+0.4**
BKSI	**Bulukumba**	**17.20**	**95**	P	**Pn**	**03 11 27.4**	**+0.1**
	5μm461nm,1.3s						
KDM	**Kudat**	**17.55**	**52**	P	**Pn**	**03 11 32.1**	**+0.4**
MYLDM	**Lahad Datu**	**17.98**	**60**	P	**Pn**	**03 11 37.8**	**+0.8**
MYLDM	**Lahad Datu**	**17.98**	**60**	P	**Pn**	**03 11 39.9**	**+2.9**
	3μm138nm,1.6s						
UBT	**Ubonrachathani**	**19.13**	**6**	P	**Pn**	**03 11 52.0**	**+1.0**
BBSI	**Bau Bau**	**19.64**	**95**	P	**Pn**	**03 11 57.6**	**+0.5**
	3μm199nm,1.0s						
NST	**Nakhon Sawan**	**19.64**	**352**	P	**Pn**	**03 11 57.0**	**0.0**
	83nm,1.0s						
KDI	**Kendari**	**19.64**	**91**	P	**Pn**	**03 11 56.1**	**-1.0**
	3μm196nm,1.1s						
MMRI	**Maumere**	**19.76**	**105**	P	**Pn**	**03 11 55.7**	**-2.8**
	2μm197nm,1.0s						
LUWI	**Luwuk**	**20.02**	**82**	P	**P**	**03 12 03.7**	**+4.0**
	322nm,1.2s						
BDT	**Bhumibol Dam**	**21.36**	**350**	⇑P	**P**	**03 12 14.5**	**+0.4**
MNI	**Manado**	**22.53**	**77**	P	**P**	**03 12 31.3**	**+4.6**
	203nm,1.0s,mb5.5						
CMAR	**Chiang Mai Arr**	**22.56**	**350**	P	**P**	**03 12 26.9**	**0.0**
	187nm,1.1s,mb5.4,baz=185,slow=8.6,SNR=148						
CMAR				PcP	PcP	03 16 20.2	+0.3
	6.2nm,0.8s,baz=200,slow=2.5,SNR=7.0						
CMAR				ScP	ScP	03 19 56.0	+1.0
	1.5nm,0.5s,baz=177,slow=3.5,SNR=6.5						
CMAR				LR	LR	03 21 20.9	
	comp=Z,3μm,19.8s,MS4.7,baz=168,slow=37						
CHG	**Chiang Mai**	**22.91**	**350**	⇑P	**P**	**03 12 22.9**	**-7.7**
	207nm,41.5s						
CHTO	**Chiang Mai**	**22.91**	**350**	*e*P	**P**	**03 12 29.8**	**-0.8**
CHTO				*e*		03 16 20.5	
CHTO				pmax	pmax		
	comp=Z,116nm,1.1s,mb5.2						
CHTO	**Chiang Mai**	**22.91**	**350**	*e*P	**P**	**03 12 29.8**	**-0.8**
	comp=Z,116nm,1.1s,mb5.2						
CHTO				*e*		03 16 20.5	
CHTO				ScP	ScP	03 19 53.0	-3.0
CHTO	**Chiang Mai**	**22.91**	**350**	P	**P**	**03 12 30.7**	**+0.1**
	SNR=40						
MBWA	**Marble Bar**	**23.69**	**138**	*e*P	**P**	**03 12 36.7**	**-1.7**
MBWA	**Marble Bar**	**23.69**	**138**	*e*P	**P**	**03 12 35.6**	**-2.8**
	comp=Z,64nm,0.9s,mb5.0						
MBWA	**Marble Bar**	**23.69**	**138**	P	**P**	**03 12 35.8**	**-2.6**
	SNR=6.3						
QIZ	**Qiongzhong**	**23.78**	**16**	P	**P**	**03 12 40.5**	**+1.3**
QIZ				pP		03 12 47.6	
QIZ				sP	sP	03 12 51.8	-1.6
QIZ				sS	sS	03 17 09.3	+0.4
QIZ				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.2						
QIZ				pmax	pmax		
	comp=Z,500nm,5.3s						
QIZ				LR	LR		
	comp=N,3μm,14.5s						
QIZ				LR	LR		
	comp=Z,3μm,16.6s,MS4.8						
QIZ	**Qiongzhong**	**23.78**	**16**	*e*P	**P**	**03 12 40.6**	**+1.4**
	comp=Z,89nm,0.8s,mb5.2						
SGSI	**Sangihe**	**23.81**	**72**	P	**P**	**03 12 41.1**	**+1.5**
	comp=Z,331nm,1.0s,mb5.7						
CHRT	**Chiangrai**	**23.82**	**353**	P	**P**	**03 12 40.0**	**+0.4**
	comp=Z,618nm,0.7s,mb6.2						
NLAI	**Namlea**	**24.13**	**89**	P	**P**	**03 12 44.7**	**+2.1**
	comp=Z,3μmcomp=Z,184nm,1.2s,mb5.4						
LBMI	**Labuha**	**24.76**	**83**	P	**P**	**03 12 49.1**	**+0.8**
	comp=Z,3μmcomp=Z,296nm,1.1s,mb5.7						
PALK	**Pallekele**	**24.80**	**297**	P	**P**	**03 12 53.8**	**+5.1**
	comp=Z,337nm,1.2s,mb5.8,SNR=5.8						
PALK	**Pallekele**	**24.80**	**297**	*e*P	**P**	**03 12 52.9**	**+4.2**
PALK				pmax	pmax		
	comp=Z,97nm,1.2s,mb5.2						
PALK	**Pallekele**	**24.80**	**297**	*e*P	**P**	**03 12 52.9**	**+4.3**
	comp=Z,97nm,1.2s,mb5.2						
TBP	**Tagbilaran**	**24.85**	**57**	*e*P	**P**	**03 12 49.6**	**+0.6**
TNTI	**Ternate**	**24.86**	**80**	P	**P**	**03 12 50.1**	**+0.9**
	comp=Z,129nm,1.3s,mb5.3						
DAV	**Davao City (W)**	**25.10**	**64**	P	**P**	**03 12 52.1**	**+0.7**
	comp=Z,209nm,0.4s,mb6.1,baz=243,slow=7.3,SNR=3.1						
DAV				LR	LR	03 23 05.4	
	comp=Z,1000nm,19.7s,MS4.3,baz=222,slow=38						
FITZ	**Fitzroy Crossi**	**26.33**	**124**	P	**P**	**03 12 59.4**	**-3.1**
	comp=Z,40nm,0.8s,mb5.0,baz=320,slow=7.7,SNR=112						
FITZ				PcP	PcP	03 16 28.0	-0.1
	comp=Z,12nm,1.1s,baz=315,slow=3.6,SNR=5.4						
FITZ				ScP	ScP	03 20 08.2	+2.7
	comp=Z,12nm,1.1s,baz=297,slow=4.5,SNR=6.7						
FITZ				LR	LR	03 22 44.3	
	comp=Z,897nm,20.9s,MS4.3,baz=301,slow=35						
FITZ	**Fitzroy Crossi**	**26.33**	**124**	*e*P	**P**	**03 12 59.6**	**-2.9**
	comp=Z,67nm,0.8s,mb5.2						
FITZ				*e*PCP	PcP	03 16 27.9	-0.2
FITZ				*e*S	**S**	**03 17 35.6**	**+2.2**
FITZ				*e*SCP	ScP	03 20 07.9	+2.4
FITZ				*e*SCS	ScS	03 23 46.0	-10
FITZ	**Fitzroy Crossi**	**26.33**	**124**	*e*P	**P**	**03 12 60.0**	**-2.5**
	comp=Z,2.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.33**	**124**	P	**P**	**03 12 59.7**	**-2.8**
	comp=Z,106nm,0.9s,mb5.3						
MEEK	**Meekatharra**	**27.14**	**148**	⇓*i*P	**P**	**03 13 09.0**	**-0.7**
KNA	**Kununurra**	**28.00**	**117**	P	**P**	**03 13 14.4**	**-3.1**
	comp=Z,1μmcomp=Z,118nm,0.8s,mb5.6						
KMI	**Kunming**	**28.85**	**360**	P	**P**	**03 13 29.1**	**+4.2**
KMI				pP	pP	03 13 39.4	+4.4
KMI				sP	sP	03 13 44.6	+5.4
KMI				PP	PP	03 14 22.5	-8.0
KMI				S	**S**	**03 18 15.0**	**+2.2**
KMI				sS	sS	03 18 33.6	+4.2
KMI				SS	SS	03 19 44.4	-32
KMI				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0						
KMI				pmax	pmax		
	comp=Z,190nm,4.7s						
KMI				LR	LR		
	comp=N,7μm,14.9s,MS5.5						
KMI				LR	LR		
	comp=E,2μm,12.3s,MS5.5						
KMI				LR	LR		
	comp=Z,8μm,14.9s,MS5.4						
VIS	**Vishakhapatnam**	**28.90**	**319**	*e*PKP	**P**	**03 13 26.4**	**+0.9**
VIS				*ex*	x	03 13 30.6	
	comp=Z,104nm,1.2s						
VIS				*i* S	**S**	**03 18 18.2**	**+4.4**
GYA	**Guiyang**	**30.39**	**7**	⇑*i*P	**P**	**03 13 40.2**	**+1.6**
GYA				pP	pP	03 13 52.1	+3.4
GYA				PP	PP	03 14 41.6	-6.1
GYA				PcP	PcP	03 16 38.0	0.0
GYA				S	**S**	**03 18 37.9**	**+0.9**
GYA				SS	SS	03 20 21.1	-27
GYA				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.2						
GYA				pmax	pmax		
	comp=Z,350nm,7.3s						
GYA				LR	LR		
	comp=N,3μm,13.1s,MS5.2						
GYA				LR	LR		
	comp=E,2μm,12.8s,MS5.2						
GYA				LR	LR		
	comp=Z,5μm,13.0s,MS5.3						
KAKA	**Kakadu**	**30.45**	**108**	*e*P	**P**	**03 13 34.5**	**-4.8**
	comp=Z,22nm,0.8s,mb5.0						
KAKA				*e*PCP	PcP	03 16 37.6	-0.8
KAKA	**Kakadu**	**30.45**	**108**	*e*P	**P**	**03 13 34.6**	**-4.8**
	comp=Z,80nm,0.8s,mb5.5						
KAKA				*e*PcP	PcP	03 16 38.0	-0.4
KAKA				*e*ScP	ScP	03 20 19.6	+1.2
KAKA	**Kakadu**	**30.45**	**108**	P	**P**	**03 13 36.4**	**-2.9**
	comp=Z,361nmcomp=Z,50nm,0.8s,mb5.3						
KLBR	**Kellerberrin**	**30.88**	**155**	⇓*i*P	**P**	**03 13 42.4**	**-0.4**
	comp=Z,78nm,1.1s,mb5.5						
NWAO	**Narrogin (SRO)**	**31.83**	**157**	P	**P**	**03 13 50.4**	**-0.8**
	comp=Z,18nm,0.8s,mb5.0,baz=316,slow=9.3,SNR=9.9						
NWAO				LR	LR	03 25 24.2	
	comp=Z,2μm,18.6s,MS4.7,baz=325,slow=34						
NWAO	**Narrogin (SRO)**	**31.83**	**157**	P	**P**	**03 13 50.4**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,18nm,0.8s						
NWAO				MLR	MLR		
	comp=Z,2μm,18.6s						
NWAO	**Narrogin (SRO)**	**31.83**	**157**	*e*P	**P**	**03 13 50.2**	**-1.0**
	comp=Z,41nm,1.2s,mb5.1						
TWG	**Pinlang**	**31.93**	**33**	*e*P	**P**	**03 13 52.8**	**+0.6**
	comp=Z,102nm,1.0s,mb5.6						
TPUB	**Ta-pu**	**32.08**	**32**	*e*P	**P**	**03 13 54.8**	**+1.3**
	comp=Z,136nm,0.9s,mb5.8						
QZH	**Quanzhou**	**32.46**	**27**	P	**P**	**03 13 57.2**	**+0.4**
QZH				S	**S**	**03 19 10.0**	**+0.6**
QZH				LR	LR		
	comp=N,4μm,13.6s,MS5.3						
QZH				LR	LR		
	comp=E,2μm,13.6s,MS5.3						
QZH				LR	LR		
	comp=Z,3μm,11.2s,MS5.2						
YULB

ASAR S **S** **03 19 57.4 -3.4**
ASAR pmax pmax
comp=Z,35nm,0.7s
ASAR smax
comp=N,7.0nm,1.1s
KKN Kakani 35.81 333 *e*P **P** **03 14 25.6 -0.2**
comp=N,75nm,0.9s,mb5.6
WHN Wuhan 35.95 17 P **P** **03 14 27.7 +0.7**
WHN S **S** **03 20 06.6 +3.5**
WHN LR LR
comp=N,3μm,11.2s,MS5.5
WHN LR LR
comp=E,3μm,11.7s,MS5.5
WHN LR LR
comp=Z,5μm,13.0s,MS5.4
GKN Gorkha 36.28 332 *e*P **P** **03 14 29.6 -0.3**
comp=Z,223nm,1.2s,mb6.0
POO Poona 36.30 309 *e*PKP **P** **03 14 32.2 +2.0**
POO AMb AMB 03 14 36.8
comp=Z,48nm,0.9s,mb5.4
KOLN Koldanda 36.59 331 *e*P **P** **03 14 32.7 +0.2**
comp=Z,77nm,0.9s,mb5.5
BHPL Bhopal 36.70 318 *e*PKP **P** **03 14 34.2 +0.6**
DANN Dangsing 36.99 331 *e*P **P** **03 14 36.0 +0.1**
comp=Z,118nm,0.5s,mb5.9
XAN Xi'an 38.16 8 P **P** **03 14 44.2 -1.5**
XAN pP pP 03 14 54.7 -1.2
XAN sP sP 03 15 00.3 +0.2
XAN PP PP 03 16 11.8 -1.6
XAN S **S** **03 20 35.7 -1.0**
XAN sS sS 03 20 55.4 +1.9
XAN pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
XAN pmax pmax
comp=Z,56nm,10.2s
XAN LR LR
comp=N,2μm,14.8s,MS5.1
XAN LR LR
comp=E,820nm,13.0s,MS5.1
XAN LR LR
comp=Z,1μm,15.9s,MS4.8
NJ2 Nanjing 38.83 22 *e*P **P** **03 14 52.5 +1.1**
NJ2 PP PP 03 16 28.5 +7.7
NJ2 S **S** **03 20 53.5 +6.6**
NJ2 pmax pmax
comp=Z,220nm,5.1s
NJ2 LR LR
comp=N,2μm,15.4s,MS5.2
NJ2 LR LR
comp=E,2μm,12.2s,MS5.2
NJ2 LR LR
comp=Z,2μm,15.8s,MS4.9
SSE Sheshan 38.91 25 P **P** **03 14 52.2 +0.1**
SSE sP sP 03 15 05.0 -1.6
SSE S **S** **03 20 50.1 +1.8**
SSE sS sS 03 21 06.5 +1.4
SSE pmax pmax
comp=Z,24nm,0.8s,mb5.0
SSE pmax pmax
comp=Z,110nm,4.7s
SSE LR LR
comp=N,2μm,13.8s,MS5.1
SSE LR LR
comp=E,1μm,13.7s,MS5.1
SSE LR LR
comp=Z,2μm,12.2s,MS5.0
JOW Kunigami 39.16 37 *e*P **P** **03 14 55.0 +0.8**
comp=Z,19nm,0.8s,mb4.9
PTH Pithoragarh 39.75 328 *e*PKP **P** **03 15 01.0 +1.8**
LZH Lanzhou 39.78 1 *e*P **P** **03 15 03.5 +4.2**
LZH pP pP 03 15 14.8 +5.2
LZH sP sP 03 15 18.2 +4.4
LZH PP PP 03 16 38.6 +7.4
LZH PcP PcP 03 17 05.4 +0.3
LZH *e*S **S** **03 21 07.6 +6.4**
LZH sS sS 03 21 24.2 +6.1
LZH pmax pmax
comp=Z,20nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,75nm,4.7s
LZH LR LR
comp=N,4μm,13.8s,MS5.4
LZH LR LR
comp=E,2μm,11.9s,MS5.4
LZH LR LR
comp=Z,4μm,14.9s,MS5.4
NDI New Delhi 40.75 324 *e*PKP **P** **03 15 06.0 -1.4**
NDI *e*S **S** **03 21 16.0 +0.2**
AJM Ajmer 40.75 319 *e*PKP **P** **03 15 08.9 +1.4**
DDI Dehra Dun 41.52 327 *e*PKP **P** **03 15 13.0 -0.7**
DDI *ex* x 03 16 46.0
BHJ Bhuj 42.21 311 *e*PKP **P** **03 15 21.7 +2.2**
BHJ AMb AMB 03 15 25.4
comp=Z,93nm,0.9s,mb5.4
BBOO Buckleboo 42.27 137 *e*P **P** **03 15 18.3 -1.5**
comp=Z,20nm,0.7s,mb4.8
BBOO Buckleboo 42.27 137 *e*P **P** **03 15 18.3 -1.6**
comp=Z,145nm,1.1s,mb5.5
TIY Taiyuan 42.33 11 *e*P **P** **03 15 19.4 -0.8**
TIY sP sP 03 15 33.8 -0.9
TIY PP PP 03 17 04.8 +6.0
TIY S **S** **03 21 37.0 -2.0**
TIY SS SS 03 24 41.2 -7.5
TIY pmax pmax
comp=Z,200nm,7.1s
TIY LR LR
comp=N,4μm,16.8s
TIY LR LR
comp=E,560nm,9.2s
TIY LR LR
comp=Z,4μm,17.7s,MS5.3
SDNR Sundarnagar 43.02 327 *e*PKP **P** **03 15 25.5 -0.4**
GTA Gaotai 43.19 356 ⇑P **P** **03 15 28.0 +0.8**
GTA pP pP 03 15 38.7 +1.2
GTA sP sP 03 15 42.7 +1.0
GTA S **S** **03 21 52.4 +0.9**
GTA sS sS 03 22 08.0 -0.6
GTA SS SS 03 24 58.2 -7.3
GTA pmax pmax
comp=Z,16nm,1.3s,mb4.6
GTA pmax pmax
comp=Z,150nm,5.2s
GTA LR LR
comp=N,5μm,15.4s,MS5.5
GTA LR LR
comp=E,2μm,14.2s,MS5.5
GTA LR LR
comp=Z,6μm,15.7s,MS5.6
PMG Port Moresby 44.24 99*c i*P **P** **03 15 35.5 -0.6**
PMG pmax pmax
comp=Z,61nm,1.7s
PMG Port Moresby 44.24 99 *e*P **P** **03 15 35.4 -0.7**
comp=Z,45nm,1.1s,mb5.1
PMG Port Moresby 44.24 99 P **P** **03 15 37.2 +1.1**
comp=Z,35nm,1.2s,mb5.0
CTA Charters Tower 45.15 115 P **P** **03 15 40.7 -2.5**
comp=Z,64nm,0.9s,mb5.5,baz=285,slow=9.1,SNR=23
CTA LR LR 03 34 44.3
comp=Z,480nm,19.9s,MS4.4,baz=156,slow=36
CTA Charters Tower 45.15 115 *e*P **P** **03 15 39.8 -3.4**
comp=Z,52nm,0.9s,mb5.4
CTA Charters Tower 45.15 115 P **P** **03 15 40.7 -2.5**
CTA pmax pmax
comp=Z,64nm,0.9s
CTA MLR MLR
comp=Z,480nm,19.9s
CTAO Charters Tower 45.15 115 *e*P **P** **03 15 40.6 -2.6**
CTAO pmax pmax
comp=Z,74nm,0.9s,mb5.5
CTAO Charters Tower 45.15 115 *e*P **P** **03 15 40.6 -2.7**
comp=Z,74nm,0.9s,mb5.5
HHC Hu-ho-hao-te 45.23 9 *e*P **P** **03 15 46.6 +3.1**
HHC pP pP 03 15 58.9 +5.1
HHC sP sP 03 16 04.3 +6.3
HHC PcP PcP 03 17 25.9 +2.7
HHC PP PP 03 17 33.8 +4.0
HHC ScP ScP 03 21 12.8 -0.5
HHC S **S** **03 22 24.7 +3.5**
HHC sS sS 03 22 45.0 +6.7
HHC SS SS 03 25 39.0 -6.1
HHC pmax pmax
comp=Z,13nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,99nm,5.2s
HHC LR LR
comp=N,1μm,17.1s,MS4.9
HHC LR LR
comp=E,790nm,16.5s,MS4.9
HHC LR LR
comp=Z,890nm,16.3s,MS4.8
JNU Nakatsue 45.34 34 *e*P **P** **03 15 44.0 -0.5**
comp=Z,24nm,1.2s,mb4.9
BJT Baijiatuau 45.37 14 *e*P **P** **03 15 44.6 0.0**
BJT pmax pmax
comp=Z,16nm,0.6s
BJT Baijiatuau 45.37 14 *e*P **P** **03 15 44.6 0.0**
comp=Z,16nm,0.6s,mb5.0
BJI Beijing 45.39 14 P **P** **03 15 44.6 -0.2**
BJI PP PP 03 17 31.9 +0.4
BJI S **S** **03 22 28.9 +5.4**
BJI pmax pmax
comp=Z,11nm,0.8s,mb4.7
BJI pmax pmax
comp=Z,180nm,4.6s
BJI LR LR
comp=N,2μm,18.4s,MS5.2
BJI LR LR
comp=E,2μm,16.2s,MS5.2
BJI LR LR
comp=Z,1μm,19.9s,MS4.9
STKA Stephens Creek 45.71 132 P **P** **03 15 46.4 -1.2**
comp=Z,48nm,0.7s,mb5.5,baz=300,slow=7.8,SNR=139
STKA LR LR 03 36 00.8
comp=Z,1μm,20.5s,MS4.8,baz=289,slow=38
STKA Stephens Creek 45.71 132⇑*i*P **P** **03 15 45.6 -1.9**
comp=Z,45nm,0.8s,mb5.5
STKA Stephens Creek 45.71 132 *e*P **P** **03 15 46.3 -1.2**
comp=Z,10nm,0.8s,mb4.8
STKA *e*PcP PcP 03 17 23.5 -1.6
KSRS Korea Array 47.26 27 P **P** **03 15 58.2 -1.2**
comp=Z,9.1nm,0.8s,mb4.8,baz=217,slow=7.5,SNR=9.4
KSRS LR LR 03 38 07.8
comp=Z,469nm,18.1s,MS4.5,baz=225,slow=39
KSRS Korea Array 47.26 27 P **P** **03 15 58.3 -1.2**
KSRS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KSRS MLR MLR
comp=Z,469nm,18.1s,MS4.5
ARPS Mount Arapiles 48.42 138⇓*i*P **P** **03 16 08.3 -0.3**
comp=Z,43nm,0.7s,mb5.6
SNY Shenyang 49.24 20 ⇑P **P** **03 16 10.8 -3.9**
SNY pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
SNY pmax pmax
comp=Z,150nm,4.7s
SNY LR LR
comp=N,750nm,13.7s,MS5.2
SNY LR LR
comp=E,2μm,14.5s,MS5.2
SNY LR LR
comp=Z,2μm,14.7s,MS5.2
WMQ Urumqi 49.44 346 P **P** **03 16 16.0 -0.2**
WMQ pP pP 03 16 28.0 +1.3
WMQ sP sP 03 16 34.0 +3.1
WMQ PP PP 03 18 11.0 +0.3
WMQ ScP ScP 03 21 28.0 -3.0
WMQ S **S** **03 23 19.0 -2.1**
WMQ ScS ScS 03 26 00.0 -5.4
WMQ SS SS 03 26 47.0 -6.5
WMQ pmax pmax
comp=Z,42nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,250nm,5.0s
WMQ LR LR
comp=N,760nm,16.0s,MS4.9
WMQ LR LR
comp=E,580nm,16.0s,MS4.9
WMQ LR LR
comp=Z,660nm,16.0s,MS4.7
KBL Kabul 49.79 323 *e*P **P** **03 16 18.6 -0.5**
KBL pmax pmax
comp=Z,30nm,1.2s,mb5.2
KBL Kabul 49.79 323 *e*P **P** **03 16 18.6 -0.4**
comp=Z,30nm,1.2s,mb5.2
KSH Kashi 49.83 333 *e*P **P** **03 16 17.4 -1.8**
KSH *ep*P pP 03 16 27.3 -2.4
KSH *es*P sP 03 16 31.2 -2.7
KSH *e*PcP PcP 03 17 41.4 +1.8
KSH *e*PP PP 03 18 11.0 -3.3
KSH *e*ScP ScP 03 21 32.5 -0.2
KSH *e*PcS PcS 03 21 36.3 -0.1
KSH *e*S **S** **03 23 18.9 -7.7**
KSH *e*ScS ScS 03 26 04.0 -4.2
KSH pmax pmax
comp=Z,31nm,0.8s,mb5.4
KSH LR LR
comp=N,1μm,12.4s,MS5.2
KSH LR LR
comp=E,710nm,10.4s,MS5.2
KSH LR LR
comp=Z,1μm,12.7s,MS5.2
WBK Wadi Bani Khal 50.37 304 P **P** **03 16 26.3 +2.7**
SNR=9.9
EIDS Eidsvold 50.88 120 *e*P **P** **03 16 23.3 -4.2**
comp=Z,18nm,1.0s,mb5.0
JMDO Jabal Madar 50.99 303 P **P** **03 16 30.5 +2.1**
SNR=12
TOO Toolangi 51.32 136 *e*P **P** **03 16 31.2 +0.6**
SMDO Samad 51.33 304 P **P** **03 16 33.4 +2.5**
SNR=17
SONM Songino Array 51.60 3 P **P** **03 16 32.8 +0.3**
comp=Z,42nm,0.9s,mb5.4,baz=181,slow=8.5,SNR=62
SONM LR LR 03 40 32.0
comp=Z,1μm,20.0s,MS4.9,baz=183,slow=39
SONM Songino Array 51.60 3 P **P** **03 16 32.8 +0.3**
SONM pmax pmax
comp=Z,42nm,0.9s
SONM MLR MLR
comp=Z,1μm,20.0s
CN2 Changchun 51.63 21 *e*P **P** **03 16 30.2 -2.5**
CN2 *e*S **S** **03 23 55.9 +4.4**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2μm,16.0s,MS5.3
CN2 LR LR
comp=E,1μm,16.0s,MS5.3
CN2 LR LR
comp=Z,2μm,16.0s,MS5.2
YNG Young 51.89 131 *e*P **P** **03 16 33.9 -1.0**
comp=Z,54nm,0.9s,mb5.5
BSY Bisya 51.90 303 P **P** **03 16 37.7 +2.5**
SNR=11
ULHL Ulahol 51.93 335 P **P** **03 16 35.0 +0.1**
SNR=22
MAJO Matsushiro 51.98 36 *e*P **P** **03 16 33.7 -1.8**
MAJO pmax pmax
comp=Z,17nm,0.9s,mb5.0
MAJO Matsushiro 51.98 36 *e*P **P** **03 16 33.7 -1.9**
comp=Z,17nm,0.9s,mb5.0
MAT Matsushiro 51.98 36 P **P** **03 16 33.9 -1.6**
MAT S **S** **03 23 55.0 -1.6**
MJAR Matsushiro Arr 51.98 36 P **P** **03 16 34.0 -1.5**
comp=Z,9.6nm,0.8s,mb4.8,baz=218,slow=7.7,SNR=22
MJAR Matsushiro Arr 51.98 36 P **P** **03 16 34.0 -1.5**
MJAR pmax pmax
comp=Z,10.0nm,0.8s
HOQ Hoqain 52.16 304 P **P** **03 16 39.6 +2.5**
SNR=12
KZA Kyzart 52.22 334 P **P** **03 16 37.3 +0.1**
SNR=21
KZA Kyzart 52.22 334 *e*P **P** **03 16 37.1 -0.1**
comp=Z,43nm,1.0s,mb5.3
RBK Rabkut 52.56 295 P **P** **03 16 43.0 +2.9**
SNR=8.1
ARQ Araqi 52.72 303 P **P** **03 16 43.7 +2.4**
SNR=11
TKM2 Tokmak 2 52.75 335 P **P** **03 16 40.4 -0.8**
SNR=62
TKM2 Tokmak 2 52.75 335 *e*P **P** **03 16 40.2 -0.9**
TKM2 pmax pmax
comp=Z,45nm,0.9s,mb5.4
TKM2 Tokmak 2 52.75 335 *e*P **P** **03 16 40.2 -0.9**
comp=Z,45nm,0.9s,mb5.4
CAN Canberra 52.78 132 *e*P **P** **03 16 40.9 -0.6**
CAN pmax pmax
comp=Z,46nm,1.0s,mb5.4
CAN Canberra 52.78 132 *e*P **P** **03 16 40.9 -0.6**
comp=Z,46nm,1.0s,mb5.4
KBK Karagaybulak 52.82 334 P **P** **03 16 41.4 -0.1**
SNR=14
ARMA Armidale 52.93 126 *e*P **P** **03 16 42.6 -0.1**
ARMA Armidale 52.93 126 *e*P **P** **03 16 42.8 +0.1**
comp=Z,76nm,1.3s,mb5.5
AML Almayashu 52.95 333 P **P** **03 16 42.6 0.0**
SNR=36
AML Almayashu 52.95 333 *e*P **P** **03 16 42.4 -0.2**
comp=Z,29nm,0.9s,mb5.2
AML *e*PP PP 03 18 46.4 +3.8
AML *e*ScP ScP 03 21 47.0 +0.8
AAK Ala-Archa 52.99 334 P **P** **03 16 42.8 -0.2**
SNR=14
CNB Canberra Magne 53.04 132 *e*P **P** **03 16 41.2 -2.3**
FRU Bishkek 53.10 334 *e*P **P** **03 16 43.0 -0.7**
FRU *e*S **S** **03 24 12.0 +0.3**
FRU pmax pmax
comp=Z,55nm,1.1s,mb5.4
FRU MLR MLR
comp=Z,800nm,22.0s,MS4.7
ABTO Aybut 53.33 295 P **P** **03 16 48.6 +2.7**
SNR=11
EKS2 Erkin-Say 53.34 333 P **P** **03 16 45.3 -0.1**
SNR=85
EKS2 Erkin-Say 53.34 333 *e*P **P** **03 16 45.3 -0.1**
comp=Z,61nm,0.9s,mb5.5
USP Ospenovka 53.50 334 P **P** **03 16 45.9 -0.8**
SNR=8.4
VLA Vladivostok 53.62 26⇓*e*P **P** **03 16 44.4 -3.1**
VLA *e* 03 17 50.3
VLA *e* 03 18 44.5
VLA pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
MK31 Makanchi Array 53.67 343 *e*P **P** **03 16 46.5 -1.3**
MKAR Makanchi Array 53.67 343 P **P** **03 16 46.6 -1.2**
comp=Z,19nm,0.9s,mb5.0,baz=141,slow=7.8,SNR=50
MKAR LR LR 03 42 39.2
comp=Z,569nm,21.8s,MS4.6,baz=154,slow=39
MKAR PKPPKP 03 47 09.0
comp=Z,0.9nm,1.0s,baz=344,slow=4.0,SNR=4.9
MKAR Makanchi Array 53.67 343 P **P** **03 16 46.6 -1.2**
MKAR LR LR 03 42 39.2
MKAR P'P' 03 47 09.0
MDJ Mudanjiang 53.88 23 P **P** **03 16 50.7 +1.3**
MDJ pP pP 03 16 58.9 -1.0
MDJ sP sP 03 17 02.7 -1.3
MDJ ScP ScP 03 21 51.2 +1.0
MDJ S **S** **03 24 22.0 -0.1**
MDJ sS sS 03 24 39.1 -0.4
MDJ pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MDJ pmax pmax
comp=Z,120nm,6.3s
MDJ LR LR
comp=N,310nm,30.8s,MS4.3
MDJ LR LR
comp=E,340nm,31.5s,MS4.3
MDJ LR LR
comp=Z,480nm,30.8s,MS4.4
MDJ Mudanjiang 53.88 23 *e*P **P** **03 16 51.0 +1.6**
ZAK Zakamensk 54.07 0⇑*i*P **P** **03 16 50.0 -0.6**
ZAK pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
IKOO Kooshah 55.13 314 *e*P **P** **03 16 59.0 +0.3**
KKAR Karatay Array 55.19 331 *e*P **P** **03 16 58.2 -0.7**
KKAR pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KKAR Karatay Array 55.19 331 *e*P **P** **03 16 58.2 -0.7**
comp=Z,8.1nm,0.8s,mb4.8
TLY Talaya 55.37 1 *e*P **P** **03 16 59.6 -0.4**
TLY *e*S **S** **03 24 40.8 -1.1**
TLY pmax pmax
comp=Z,26nm,0.9s,mb5.3
TLY MLR MLR
comp=Z,923nm,15.0s,MS5.0
TLY Talaya 55.37 1 *e*P **P** **03 17 00.2 +0.2**
comp=Z,27nm,0.9s,mb5.3
ABPO Ambohimpanom 56.37 250 *e*P **P** **03 17 10.6 +2.7**
ABPO pmax pmax
comp=Z,28nm,1.4s,mb5.1
ABPO Ambohimpanom 56.37 250 *e*P **P** **03 17 10.6 +2.7**
comp=Z,28nm,1.4s,mb5.1
IMOG Moghan 56.94 318 *e*P **P** **03 17 07.9 -3.7**
ISRO Mashad 56.97 318 *e*P **P** **03 17 09.3 -2.5**
IBAF Bafgh 57.21 312 *e*P **P** **03 17 14.0 +0.4**
IPAY Payeh 57.36 318 *e*P **P** **03 17 11.9 -2.6**
IAKL Akhelmad 57.60 318 *e*P **P** **03 17 14.3 -2.0**
IMEH Mehriz 57.83 311 *e*P **P** **03 17 17.3 -0.7**
IKRD Kardeh 57.86 318 *e*P **P** **03 17 12.2 -5.9**
ISRV Sarvestan 58.07 308 *e*P **P** **03 17 20.5 +0.8**
IEMG Emamgholi 58.13 319 *e*P **P** **03 17 16.6 -3.4**
KURK Kurchatov 58.27 342*c i*P **P** **03 17 19.0 -1.6**
KURK pmax pmax
comp=Z,52nm,1.0s,mb5.5
KURK MLR MLR
comp=Z,1μm,17.0s,MS5.0
KURK Kurchatov 58.27 342 *e*P **P** **03 17 19.4 -1.3**
comp=Z,47nm,0.9s,mb5.5
KURK *e*S **S** **03 25 19.1 -1.2**
KURK Kurchatov 58.27 342 P **P** **03 17 19.9 -0.7**
comp=Z,285nm,0.9s,mb6.3,SNR=56
KURK Kurchatov 58.27 342 P **P** **03 17 19.8 -0.9**
SNR=25
IPAR Pars 58.32 309 *e*P **P** **03 17 22.8 +1.4**
ISFR Sfrayin 58.36 318 *e*P **P** **03 17 21.1 -0.5**
ICHK Chekchek 58.39 312 *e*P **P** **03 17 21.4 -0.5**
KLR Kul'dur 58.53 22 *e*P **P** **03 17 16.3 -6.2**
KLR MLR MLR
comp=N,800nm,13.5s
KLR MLR MLR
comp=Z,2μm,13.5s,MS5.5
ISAD Sadrabad 58.77 311 *e*P **P** **03 17 24.4 -0.1**
HABR Khabarovsk 59.21 24 *e*P **P** **03 17 24.0 -3.2**
HABR *e**SP sP 03 17 38.0 -4.0
HABR *e* 03 18 12.1
HABR PPP 03 20 55.3
HABR S **S** **03 25 29.3 -3.3**
HABR *e**SS sS 03 25 46.4 -3.7
HABR *e* 03 27 11.3
HABR SS SS 03 29 24.2 -3.4
HABR pmax pmax
comp=N,22nm,0.8s
HABR pmax pmax
comp=E,79nm,1.6s
HABR pmax pmax
comp=Z,113nm,2.3s,mb5.5
HABR MLR MLR
comp=Z,569nm,17.0s,MS4.8
ASAJ Asahikawa 59.58 32 LR LR 03 45 12.2
comp=Z,326nm,18.2s,MS4.5,baz=244,slow=38
ASAJ Asahikawa 59.58 32 *e*P **P** **03 17 29.1 -0.8**
comp=Z,17nm,1.1s,mb5.0
ZAA0 Zalesovo Array 59.60 348 *e*P **P** **03 17 28.4 -1.4**
ZALV Zalesovo Beam 59.60 348 P **P** **03 17 28.4 -1.4**
comp=Z,121nm,1.1s,mb5.9,baz=160,slow=4.7,SNR=49
ZALV S **S** **03 25 36.0 -1.4**
comp=Z,1.7nm,0.9s,baz=143,slow=14,SNR=4.4
ZALV LR LR 03 46 20.7
comp=Z,2μm,18.6s,MS5.3,baz=150,slow=39
ZALV PKP2bc 03 47 09.6
comp=Z,0.7nm,0.3s,baz=325,slow=2.3,SNR=6.8
ZALV Zalesovo Beam 59.60 348 P **P** **03 17 28.4 -1.4**
ZALV S **S** **03 25 36.0 -1.4**
ZALV pmax pmax
comp=Z,121nm,1.1s,mb5.8
ZALV smax
comp=N,2.0nm,0.9s
ZALV MLR MLR
comp=Z,2μm,18.6s,MS5.3
ZALV Zalesovo Beam 59.60 348 P **P** **03 17 28.4 -1.4**
ZALV S **S** **03 25 36.0 -1.4**
ZALV LR LR 03 46 20.7
ZALV ⇑*e* 03 47 09.6
LBOS 59.87 288 *e*P **P** **03 17 35.8 +3.4**
NVS Novosibirsk 60.77 347⇓*i*P **P** **03 17 33.4 -4.4**
NVS *e*S **S** **03 25 49.0 -3.4**
NVS pmax pmax
comp=N,28nm,1.2s
NVS pmax pmax
comp=E,22nm,1.2s
NVS pmax pmax
comp=Z,55nm,1.2s,mb5.6
NVS smax
comp=N,20nm,2.0s
NVS smax

comp=E,18nm,2.0s
ISHM Shahmirzad 60.93 315 *e*P **P 03 17 39.4 +0.1**
ILAS Lasjerd 60.96 314 *e*P **P 03 17 39.5 0.0**
ISFB Sefidab 60.99 313 *e*P **P 03 17 39.7 0.0**
ISFB *e*P 03 17 40.2
IKLH Kolahrood 61.00 312 *e*P **P 03 17 38.4 -1.4**
IFIR Firoozkooh 61.23 314 *e*P **P 03 17 40.6 -0.7**
IPIR Pirpir 61.23 311 *e*P **P 03 17 42.7 +1.3**
YUK Yuzh-Kuril'sk 61.31 34 P **P 03 17 39.5 -2.2**
YUK S **S 03 25 55.7 -4.0**
YUK MLR MLR
comp=N,690nm,18.0s,MS5.0
YUK MLR MLR
comp=E,610nm,18.0s,MS5.0
YUK MLR MLR
comp=Z,480nm,18.0s,MS4.7
YSS Yuzh-Sakhalins 61.59 30 *e*P **P 03 17 42.5 -1.1**
YSS *e* pP 03 17 50.8 -3.5
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.4
YSS MLR MLR
comp=Z,500nm,14.0s,MS4.8
YSS Yuzh-Sakhalins 61.59 30 *e*P **P 03 17 42.5 -1.0**
comp=Z,33nm,0.8s,mb5.5
ATD Arta Tunnel 61.69 285 P **P 03 17 47.2 +2.4**
comp=Z,16nm,0.9s,mb5.2,baz=227,slow=21,SNR=13
ATD Arta Tunnel 61.69 285 P **P 03 17 47.2 +2.4**
KBD Kabd 62.30 306 *e*P **P 03 17 49.6 +0.9**
KBD AMb AMB 03 17 53.7
comp=Z,154nm,1.2s,mb6.0
RDF Al-Radifah 62.33 305 *e*P **P 03 17 49.7 +0.9**
RDF AMb AMB 03 17 53.9
comp=Z,275nm,1.1s,mb6.3
IR3 Iran Long-Peri 62.39 314 *e*P **P 03 17 48.6 -0.6**
CASY Casey 62.49 177 *e*P **P 03 17 50.8 +1.5**
CASY Casey 62.49 177 *e*P **P 03 17 50.7 +1.4**
comp=Z,101nm,1.1s,mb5.9
VOSK Vostochnaya 62.53 339 P **P 03 17 46.9 -2.8**
VOSK pmax pmax
comp=Z,29nm,1.1s,mb5.3
NAY Al-Naaiem 62.70 306 *e*P **P 03 17 51.7 +0.4**
NAY AMb AMB 03 17 57.0
comp=Z,72nm,0.8s,mb5.8
MIB Mutribah 62.83 306 *e*P **P 03 17 53.2 +1.0**
MIB AMb AMB 03 17 58.1
comp=Z,277nm,0.9s,mb6.4
MIR Mirnyy 62.92 184⇓*i*P **P 03 17 54.0 +1.9**
MIR pmax pmax
comp=Z,91nm,1.4s,mb5.7
BVAR Borovoye Array 62.98 339 P **P 03 17 51.1 -1.7**
comp=Z,23nm,0.9s,mb5.3,baz=140,slow=7.8,SNR=65
BVAR Borovoye Array 62.98 339 P **P 03 17 51.1 -1.6**
BVAR pmax pmax
comp=Z,23nm,0.9s
BRVK Borovoye 63.05 339*d i*P **P 03 17 51.5 -1.7**
BRVK pmax pmax
comp=Z,22nm,1.0s,mb5.2
BRVK MLR MLR
comp=Z,872nm,16.0s,MS5.0
BRVK Borovoye 63.05 339 *e*P **P 03 17 51.6 -1.5**
comp=Z,20nm,0.9s,mb5.2
BRVK Borovoye 63.05 339 P **P 03 17 51.4 -1.8**
comp=Z,127nm,0.8s,mb6.1,SNR=10.0
BRVK Borovoye 63.05 339 P **P 03 17 51.9 -1.2**
SNR=12
IRAZ Razeghan 63.16 313 *e*P **P 03 17 53.8 -0.5**
ZRNK Zerenda 63.44 338 P **P 03 17 53.5 -2.2**
ZRNK pmax pmax
comp=Z,23nm,0.8s,mb5.4
DZM Mont Dzumac 64.03 113 *e*P **P 03 18 01.5 +1.2**
comp=Z,56nm,1.0s,mb5.5
DZM *e*LR LR 03 37 10.0
comp=Z,740nm,24.3s
IKOM Komasi 64.42 311 *e*P **P 03 18 01.7 -0.9**
AB31 Akbulak array 64.71 330 *i*P **P 03 18 02.3 -1.9**
AB31 pmax pmax
comp=Z,32nm,0.7s,mb5.5
ABKAR Akbulak array 64.71 330 *e*P **P 03 18 02.7 -1.5**
comp=Z,37nm,0.7s,mb5.5
KMBO Kilima Mbogo 65.66 271 P **P 03 18 14.2 +3.1**
comp=Z,15nm,0.9s,mb5.0,baz=180,slow=24,SNR=42
KMBO Kilima Mbogo 65.66 271 *e*P **P 03 18 14.0 +2.9**
KMBO pmax pmax
comp=Z,28nm,1.1s
KMBO Kilima Mbogo 65.66 271 *e*P **P 03 18 14.0 +2.9**
comp=Z,28nm,1.1s,mb5.2
KMBO Kilima Mbogo 65.66 271 P **P 03 18 14.6 +3.6**
SNR=11
ISRB Sarab 65.86 315 *e*P **P 03 18 12.0 +0.1**
IHRS Heris 66.52 315 *e*P **P 03 18 15.7 -0.4**
ISHB Shabestar 67.52 314 *e*P **P 03 18 22.8 +0.3**
IMRD Marand 67.64 315 *e*P **P 03 18 23.6 +0.4**
YAK Yakutsk 68.87 13 *e*P **P 03 18 29.0 -1.4**
YAK pmax pmax
comp=Z,25nm,0.8s,mb5.2
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=N,10.0nm,1.3s
YAK MLR MLR
comp=Z,2μm,13.0s,MS5.4
YAK MLR MLR
comp=N,1μm,17.0s,MS5.3
YAK MLR MLR
comp=E,1μm,19.0s,MS5.3
GNI Garni 68.92 316 P **P 03 18 32.1 +0.9**
comp=E,26nm,0.8s,mb5.2,baz=354,slow=7.0,SNR=12
GNI LR LR 03 55 17.7
comp=E,115nm,19.8s,MS4.1,baz=323,slow=42
GNI Garni 68.92 316*c i*P **P 03 18 31.2 0.0**
GNI pmax pmax
comp=Z,36nm,1.0s
GNI Garni 68.92 316 *e*P **P 03 18 31.8 +0.7**
comp=Z,31nm,0.9s,mb5.2
GNI Garni 68.92 316 P **P 03 18 32.5 +1.3**
SNR=11
DGRG David-gareji 69.03 317 P **P 03 18 31.0 -0.8**
MAW Mawson 69.20 195 P **P 03 18 35.3 +2.8**
comp=Z,33nm,0.9s,mb5.2,baz=56,slow=8.9,SNR=21
MAW LR LR 03 42 22.1
comp=Z,1μm,21.2s,MS5.0,baz=20,slow=30
MAW Mawson 69.20 195 *e*P **P 03 18 34.9 +2.5**
comp=Z,24nm,0.9s,mb5.1
MAW Mawson 69.20 195 *e*P **P 03 18 34.5 +2.0**
MAW pmax pmax
comp=Z,12nm,1.1s
MAW Mawson 69.20 195 *e*P **P 03 18 34.5 +2.0**
comp=Z,12nm,1.1s,mb4.8
MTA Mtatsminda 69.53 317 P **P 03 18 34.6 -0.4**
SVE Sverdlovsk 69.55 337⇑*e*P **P 03 18 33.9 -0.9**
SVE *e*S S 03 27 36.3 -3.8
SVE pmax pmax
comp=Z,36nm,0.9s,mb5.3
TBLG Delisi 69.58 317 P **P 03 18 35.5 +0.2**
TBLG Delisi 69.58 317 P **P 03 18 35.5 +0.2**
GOR Gori 70.12 317 P **P 03 18 38.7 +0.2**
ARU Arti 70.12 336*c i*P **P 03 18 36.7 -1.5**
ARU *e* 03 18 53.7
ARU *e* 03 21 13.6
ARU PPP 03 22 48.2
ARU S S 03 27 45.1 -1.7
ARU pmax pmax
comp=Z,26nm,1.0s,mb5.1
ARU MLR MLR
comp=Z,865nm,22.0s,MS5.0
ARU Arti 70.12 336 *e*P **P 03 18 37.0 -1.2**
comp=Z,34nm,1.1s,mb5.2
ZEI Tsey 70.59 318 *e*P **P 03 18 41.1 -0.3**
ZEI *e*S S 03 27 56.1 +3.3
ZEI pmax pmax
comp=Z,47nm,1.0s,mb5.4
RPZ Rata Peaks 71.58 135 P **P 03 18 46.1 -1.3**
comp=Z,39nm,1.0s,mb5.3,baz=192,slow=5.8,SNR=6.2
KIV Kislovodsk 71.89 319⇓*e*P **P 03 18 48.9 -0.3**
KIV *e* 03 21 32.7
KIV *i*S S 03 28 03.1 -4.7
KIV pmax pmax
comp=Z,45nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,200nm,23.0s,MS4.3
KIV Kislovodsk 71.89 319 *e*P **P 03 18 48.6 -0.6**
comp=Z,45nm,1.0s,mb5.3
KIV Kislovodsk 71.89 319 P **P 03 18 49.6 +0.4**
comp=Z,254nm,1.1s,mb6.1,SNR=5.9
KIV Kislovodsk 71.89 319 P **P 03 18 49.9 +0.6**
SNR=12

ASF Jabal al Asfar 72.06 305 P **P 03 18 52.4 +1.8**
comp=Z,53nm,1.1s,mb5.4,baz=331,slow=3.7,SNR=39
ASF Jabal al Asfar 72.06 305 P **P 03 18 52.4 +1.8**
ASF pmax pmax
comp=Z,53nm,1.1s
MBAR Mbarara 72.19 271*c i*P **P 03 18 53.8 +2.1**
MBAR Mbarara 72.19 271 P **P 03 18 54.4 +2.7**
comp=Z,78nm,0.8s,mb5.7,SNR=11
MALT Malatya 72.77 312 *e*P **P 03 18 55.2 +0.5**
MALT pmax pmax
comp=Z,40nm,1.0s,mb5.3
MALT Malatya 72.77 312 *e*P **P 03 18 55.2 +0.5**
comp=Z,40nm,1.0s,mb5.3
MALT Malatya 72.77 312⇑*i*P **P 03 18 53.3 -1.4**
MALT Malatya 72.77 312 P **P 03 18 55.3 +0.6**
comp=Z,400nmcomp=Z,35nm,1.0s,mb5.2
SOKR Solikamsk 72.92 337*c i*P **P 03 18 53.8 -1.2**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,830nm,22.0s,MS5.0
PETK Petropavlovsk- 72.96 31 P **P 03 18 53.4 -2.0**
comp=Z,5.9nm,0.7s,mb4.6,baz=224,slow=4.0,SNR=6.9
PETK Petropavlovsk- 72.96 31 P **P 03 18 53.4 -2.0**
PETK pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
EIL Elat 73.00 302 P **P 03 18 57.1 +0.9**
comp=Z,57nm,1.1s,mb5.4,baz=66,slow=0.8,SNR=25
PET Petropavlovsk 73.41 31 *e*P **P 03 18 56.6 -1.5**
PET Petropavlovsk 73.41 31 *e*P **P 03 18 56.9 -1.2**
comp=Z,27nm,0.8s,mb5.2
MMAI Mount Meron Ar 73.51 306 P **P 03 19 00.5 +1.4**
comp=Z,13nm,0.6s,mb5.1,baz=99,slow=8.5,SNR=23
SOC Sochi 73.72 317*c i*P **P 03 18 58.5 -1.6**
SOC *e* 03 19 12.0
SOC *e* 03 21 41.3
SOC *e*PPP 03 23 30.3
SOC *e*S S 03 28 24.7 -4.0
SOC pmax pmax
comp=Z,37nm,0.8s,mb5.4
LSZ Lusaka 74.27 255 *e*P **P 03 19 05.8 +1.9**
LSZ pmax pmax
comp=Z,34nm,1.2s,mb5.2
LSZ Lusaka 74.27 255 *e*P **P 03 19 05.8 +1.8**
comp=Z,34nm,1.2s,mb5.2
URZ Urewera 75.18 128 P **P 03 19 06.5 -2.3**
comp=Z,21nm,1.0s,mb5.0,baz=253,slow=5.0,SNR=3.9
VRHR Novokhopersk 75.54 325 *e*P **P 03 19 09.8 -0.7**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.3
ANN Anapa 75.69 318 *e*P **P 03 19 08.3 -3.2**
ANN *e*S S 03 28 48.4 -2.2
ANN pmax pmax
comp=Z,82nm,6.2s
CSS Prodhromos 75.69 307 *e*P **P 03 19 12.2 +0.4**
comp=Z,128nm,1.1s,mb5.8
CSS Prodhromos 75.69 307 P **P 03 19 12.6 +0.8**
SEY Seymchan 76.31 21⇑*e*P **P 03 19 14.7 0.0**
BRTR Keskin Array B 76.75 312 P **P 03 19 17.5 -0.2**
comp=Z,75nm,1.0s,mb5.6,baz=128,slow=6.8,SNR=252
BRTR LR LR 03 56 36.2
comp=Z,129nm,19.8s,MS4.2,baz=92,slow=38
BRTR Keskin Array B 76.75 312*c e*P **P 03 19 17.5 -0.2**
BRTR pmax pmax
comp=Z,75nm,1.0s
LBTB Lobatse 76.88 245 *e*P **P 03 19 20.5 +1.7**
LBTB pmax pmax
comp=Z,36nm,0.9s,mb5.3
LBTB Lobatse 76.88 245 *e*P **P 03 19 20.5 +1.8**
comp=Z,36nm,0.9s,mb5.3
VSR Storozhevoye 77.00 325 *e*P **P 03 19 17.6 -1.2**
VSR *e*S S 03 29 02.0 -2.8
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VSR smax
comp=E,60nm,1.8s
VSR smax
comp=Z,3.0nm,0.4s
VSR smax
comp=N,20nm,0.9s
VSR MLR MLR
comp=N,90nm,22.0s,MS4.5
VSR MLR MLR
comp=E,220nm,22.0s,MS4.5
VSR MLR MLR
comp=Z,300nm,22.0s,MS4.6
SYO Syowa Base 77.04 199⇑*i*P **P 03 19 19.8 +1.1**
SYO Syowa Base 77.04 199⇓*e*PcP PcP 03 19 30.0 +0.5
TIXI Tiksi 77.28 8 *e*P **P 03 19 17.7 -2.3**
TIXI pmax pmax
comp=Z,23nm,1.3s,mb5.0
TIXI MLR MLR
comp=Z,3μm,18.0s,MS5.6
BOSA Boshof 77.32 242 P **P 03 19 23.7 +2.6**
comp=Z,50nm,0.9s,mb5.5,baz=98,slow=6.3,SNR=54
BOSA LR LR 03 46 44.2
comp=Z,619nm,20.9s,MS4.9,baz=100,slow=30
BOSA Boshof 77.32 242 *e*P **P 03 19 23.4 +2.2**
comp=Z,59nm,1.0s,mb5.5
SIM Simferopol' 77.97 317 *e*P **P 03 19 24.7 +0.3**
SIM *e*S S 03 29 15.0 -0.5
SIM pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
PRGR Permogore 78.58 336 *e*P **P 03 19 21.5 -5.9**
PRGR *e* pP 03 19 29.6 -8.8
PRGR *e*PP pP 03 19 31.9 -6.5
PRGR *e*S S 03 29 18.4 -3.0
PRGR *e*SS sS 03 29 35.6 -3.9
PRGR pmax pmax
comp=Z,18nm,0.6s,mb5.2
MOS Moscow 79.63 329 *e*P **P 03 19 30.1 -3.1**
MOS *e* 03 19 48.3
MOS *e*S S 03 29 29.7 -3.1
MOS *e* 03 29 51.1
MOS pmax pmax
comp=Z,68nm,1.0s,mb5.5
OBN Obninsk 79.95 328⇓*e*P **P 03 19 34.4 -0.6**
OBN *e* 03 22 35.4
OBN *i*S S 03 29 34.0 -2.2
OBN pmax pmax
comp=Z,52nm,1.7s,mb5.2
KLMR Klimovskoe 80.81 334*c i*P **P 03 19 38.3 -1.2**
KLMR pmax pmax
comp=Z,60nm,1.2s,mb5.4
SBA Scott Base 80.84 169 *e*P **P 03 19 41.0 +1.6**
SBA pmax pmax
comp=Z,48nm,1.2s,mb5.3
SBA Scott Base 80.84 169 *e*P **P 03 19 41.0 +1.6**
comp=Z,48nm,1.2s,mb5.3
SUR Sutherland 81.27 238 LR LR 03 48 16.1
comp=Z,310nm,20.7s,MS4.7,baz=243,slow=30
SUR Sutherland 81.27 238 *e*P **P 03 19 44.8 +2.1**
comp=Z,107nm,1.4s,mb5.6
SUR Sutherland 81.27 238 P **P 03 19 46.5 +3.9**
comp=Z,286nm,0.7s,mb6.3,SNR=9.3
TIRR Tirgusor 81.74 316 P **P 03 19 45.3 +0.5**
TIRR Tirgusor 81.74 316 *e*P **P 03 19 44.9 0.0**
comp=Z,48nm,1.0s,mb5.4
TIRR Tirgusor 81.74 316⇓*i*P **P 03 19 44.1 -0.7**
LAST Lasithi 82.02 306 P **P 03 19 47.5 +1.0**
KIS Kishinev 82.08 318 *e*P **P 03 19 45.0 -1.6**
KIS *e* 03 19 50.0
CHOS Chios island 82.17 309 P **P 03 19 48.2 +1.0**
SIVA Sivas 82.53 306 P **P 03 19 50.1 +0.9**
JMB Yambol 82.60 314 P **P 03 19 50.6 +1.2**
ALN Alexandroupoli 82.67 312 P **P 03 19 49.8 0.0**
AKASG Malin Array Be 82.77 322 P **P 03 19 49.5 -0.5**
comp=Z,17nm,0.9s,mb5.1,baz=87,slow=5.1,SNR=8.1
AKASG Malin Array Be 82.77 322 P **P 03 19 49.5 -0.5**
AKASG pmax pmax
comp=Z,17nm,0.9s
KIEV Kiev 82.78 322 *e*P **P 03 19 48.8 -1.3**
KIEV pmax pmax
comp=Z,24nm,1.0s,mb5.2
KIEV Kiev 82.78 322 *e*P **P 03 19 48.8 -1.2**
comp=Z,24nm,1.0s,mb5.2
LIA Limnos Island 83.12 311 P **P 03 19 53.1 +1.0**

VRI Vrincioaia 83.22 317⇑P **P 03 19 52.8 +0.3**
VRI Vrincioaia 83.22 317⇑*i*P **P 03 19 52.8 +0.3**
SZH Strazhica 83.23 314 *i*P **P 03 19 51.8 -0.8**
SZH Strazhica 83.23 314 *i*P **P 03 19 51.8 -0.8**
PLOR Plostina 83.28 317⇓P **P 03 19 53.1 +0.3**
PLOR Plostina 83.28 317⇓*i*P **P 03 19 53.0 +0.2**
KDZ Kurdzhali 83.28 313 *i*P **P 03 19 52.3 -0.6**
KDZ Kurdzhali 83.28 313 *i*P **P 03 19 52.3 -0.6**
KARN Karanos 83.31 306 P **P 03 19 54.5 +1.3**
TESR 83.42 318⇑*i*P **P 03 19 53.5 0.0**
MLR Muntele Rosu 83.68 316 P **P 03 19 55.8 +0.9**
MLR Muntele Rosu 83.68 316⇓*i*P **P 03 19 54.2 -0.7**
RZN Rozhen 83.81 312 *i*P **P 03 19 55.0 -0.6**
RZN Rozhen 83.81 312 *i*P **P 03 19 55.0 -0.6**
KAVA Kavala 83.83 312 P **P 03 19 56.2 +0.5**
ATHU Athens Univers 83.85 309 P **P 03 19 57.0 +1.1**
PLD Plovdiv 83.89 313 P **P 03 19 56.6 +0.6**
BILL Bilibino 83.93 20⇑*e*P **P 03 19 54.7 -0.9**
BILL *e*S S 03 30 14.2 -2.5
BILL *e*SS SS 03 35 36.0 -9.1
BILL pmax pmax
comp=Z,12nm,1.5s,mb4.8
DOPR Dopca 84.16 317⇑*i*P **P 03 19 58.1 +0.8**
DID Didima 84.20 308 P **P 03 19 56.8 -0.9**
PAIG Paliouri 84.26 311 P **P 03 19 57.9 -0.1**
TSUM Tsumeb 84.34 251 *e*P **P 03 20 01.1 +2.2**
comp=Z,6.8nm,0.9s,mb4.8
PGB Panagyuriste 84.37 313 *i*P **P 03 19 56.7 -1.7**
LTK Loutraki 84.50 309 P **P 03 19 58.5 -0.7**
MMB Musomiste 84.52 312 *i*P **P 03 19 57.6 -1.6**
PLG Polygyros 84.52 311 P **P 03 19 59.5 +0.2**
MICGM Minsk 84.53 326 *e* **P 03 19 58.0 -1.0**
SRS Serrai 84.53 312 P **P 03 19 58.9 -0.4**
MNK Minsk 84.56 326 *e*P **P 03 19 58.0 -1.1**
ATAL Atalanti 84.56 309 P **P 03 19 58.9 -0.6**
LKR Lokris 84.57 309 P **P 03 19 58.7 -0.9**
BURAR Bucovina Array 84.61 318⇓P **P 03 20 00.2 +0.6**
BURAR Bucovina Array 84.61 318⇓*i*P **P 03 20 00.2 +0.6**
BUR08 Bucovina Ar. S 84.63 318 *e*P **P 03 20 00.7 +1.1**
SOH Sokhos 84.66 311 P **P 03 19 59.8 -0.2**
VLX Vlachokerasia 84.85 308 P **P 03 20 01.2 +0.2**
DSF Desfina 84.90 309 P **P 03 20 00.3 -0.9**
GUR Goura 84.97 308 P **P 03 20 02.0 +0.4**
KKB Krupnik 85.04 312 *i*P **P 03 20 00.3 -1.6**
KKB Krupnik 85.04 312 *i*P **P 03 20 00.3 -1.6**
VTS Vitosha 85.07 313⇑P **P 03 20 01.1 -0.9**
VTS Vitosha 85.07 313 P **P 03 20 01.9 -0.1**
VTS Vitosha 85.07 313 *i*P **P 03 20 01.3 -0.7**
AGG Agios Georgios 85.15 310 P **P 03 20 01.4 -1.1**
ITM Ithomi 85.18 308 P **P 03 20 02.6 -0.1**
JOF Joensuu 85.18 334 *e*P **P 03 19 58.1 -4.0**
JOF Joensuu 85.18 334 *e*p **P 03 19 58.1 -4.0**
comp=Z,0.7nm,0.4s,mb4.1
LIT Litokhoron 85.19 311 P **P 03 20 02.4 -0.3**
KALE Kalithea 85.20 309 P **P 03 20 02.3 -0.4**
TRIZ Trizonia 85.25 309 P **P 03 20 02.6 -0.4**
NACGM Naroch 85.25 326 *e* **P 03 20 01.0 -1.6**
PYL PYLOS 85.29 307 P **P 03 20 02.6 -0.6**
LAKA Lakka 85.30 309 P **P 03 20 03.3 +0.1**
VAY Valandovo 85.33 312 *e*P **P 03 20 02.9 -0.5**
IDID Didziasalis 85.37 326 *e*P **P 03 20 02.9 -0.3**
IDID AMB AMB 03 20 09.2
comp=Z,14nm,1.3s,mb4.9
GRG Griva 85.40 311 P **P 03 20 02.9 -0.8**
THL Klokotos Trika 85.47 310 P **P 03 20 02.9 -1.2**
IIGN Ignalina 85.67 326 *e*P **P 03 20 04.4 -0.2**
IIGN AMB AMB 03 20 09.2
comp=Z,16nm,0.8s,mb5.3
BMR Baia Mare 85.76 318 P **P 03 20 06.7 +1.4**
ISAL Salakas 85.77 326 *e*P **P 03 20 04.9 -0.2**
ISAL AMB AMB 03 20 11.0
comp=Z,9.4nm,1.4s,mb4.8
LVV L'vov 85.81 320 *e*P **P 03 20 05.0 -0.5**
DEV Deva 85.85 316⇓P **P 03 20 06.8 +1.0**
DEV Deva 85.85 316⇓*i*P **P 03 20 06.8 +1.0**
GZR Gura Zlata 85.85 316 P **P 03 20 06.7 +0.9**
GZR Gura Zlata 85.85 316⇑*i*P **P 03 20 06.2 +0.4**
APA Apatity 85.90 339⇓*e*P **P 03 20 03.0 -2.5**
APA *e* 03 30 26.0
APA *e*S S 03 30 38.0 +1.8
APA *e*PS 03 31 57.0
APA pmax pmax
comp=Z,30nm,1.3s,mb5.4
QSPA South Pole Qui 86.07 180 P **P 03 20 07.3 +1.0**
comp=Z,16nm,1.1s,mb5.2,baz=315,slow=1.8,SNR=26
QSPA South Pole Qui 86.07 180 P **P 03 20 07.3 +1.0**
VSU Vasula 86.12 329 *i*P **P 03 20 05.8 -1.0**
VSU pmax pmax
comp=Z,42nm,1.5s,mb5.5
DRGR 86.14 317⇑P **P 03 20 07.3 +0.1**
DRGR 86.14 317⇑*i*P **P 03 20 07.3 +0.1**
KRUS Krusevo 86.32 312 *e*P **P 03 20 07.2 -1.0**
NEST Nestorio 86.33 311 P **P 03 20 08.0 -0.3**
VLS Valsamata 86.37 308 P **P 03 20 08.9 +0.3**
TRPA Tarpa 86.48 319⇑*i*P **P 03 20 08.6 -0.2**
KBN Korca 86.56 311 *i*P **P 03 20 09.3 -0.1**
KWP Kalwaria Pacla 86.62 320 *e*P **P 03 20 09.7 +0.1**
KWP LMZ 04 07 22.6
comp=Z,200nm,22.8s
KWP Kalwaria Pacla 86.62 320⇑P **P 03 20 09.4 -0.1**
KWP Kalwaria Pacla 86.62 320 *e*P **P 03 20 09.8 +0.3**
comp=Z,55nm,1.2s,mb5.7
KWP Kalwaria Pacla 86.62 320⇑*i*P **P 03 20 09.4 -0.1**
BZS Buzias 86.69 316⇓P **P 03 20 09.8 -0.2**
BZS Buzias 86.69 316⇓*i*P **P 03 20 09.8 -0.2**
NVL N'lazarevskaya 86.71 199 *e*P **P 03 20 11.7 +2.1**
NVL *e*PP pP 03 20 18.1 -2.6
NVL pmax pmax
comp=Z,33nm,0.8s,mb5.6
UZH Uzhgorod 86.72 319⇑*i*P **P 03 20 10.0 0.0**
UZH *i* 03 20 15.5
UZH *e* 03 23 32.7
UZH *e* 03 30 29.0
UZH *e*S S 03 30 42.0 -3.0
UZH *e* 03 31 50.0
KOLS Kolonicke sedl 86.79 319 *e*P **P 03 20 11.0 +0.7**
KOLS pmax pmax
comp=Z,111nm,1.0s,mb6.0
KOLS Kolonicke sedl 86.79 319 *e*P **P 03 20 11.0 +0.7**
comp=Z,111nm,1.0s,mb6.0
KOLS Kolonicke sedl 86.79 319 *e*P **P 03 20 11.0 +0.7**
SRN Sarande 87.05 310 *i*P **P 03 20 11.8 -0.1**
SUW Suwalki 87.12 324 *e*P **P 03 20 11.3 -0.5**
SUW LMZ 04 05 29.1
comp=Z,400nm,20.6s
SUW Suwalki 87.12 324 *e*P **P 03 20 11.1 -0.7**
comp=Z,132nm,1.1s,mb6.1
FINES FINESS Array B 87.14 332 P **P 03 20 11.1 -0.7**
comp=Z,10nm,1.0s,mb5.0,baz=125,slow=5.6,SNR=12
FINES LR LR 04 04 22.8
comp=Z,485nm,19.9s,MS4.9,baz=117,slow=39
KEK Kerkira 87.19 310 P **P 03 20 12.2 -0.3**
KAF Kangasniemi 87.20 333 *e*P **P 03 20 03.9 -8.1**
KAF Kangasniemi 87.20 333 *e*p **P 03 20 03.9 -8.1**
comp=Z,1.4nm,0.5s,mb4.5
CRVS Cervenica-Dubn 87.31 319 *e*P **P 03 20 13.1 +0.2**
CRVS pmax pmax
comp=Z,27nm,1.3s,mb5.3
CRVS Cervenica-Dubn 87.31 319 *e*P **P 03 20 13.1 +0.2**
comp=Z,26nm,1.3s,mb5.3
BCI Bajram Curri 87.33 313 *i*P **P 03 20 12.1 -1.1**
TIR Tirane 87.35 312 *e*P **P 03 20 15.7 +2.4**
TIR pmax pmax
comp=Z,46nm,1.1s,mb5.6
TIR Tirane 87.35 312 *e*P **P 03 20 15.7 +2.4**
comp=Z,46nm,1.1s,mb5.6
PVY Plav 87.43 313⇑*i*P **P 03 20 13.1 -0.5**
PVY Plav 87.43 313⇑*i*P **P 03 20 13.1 -0.5**
IVA Berane 87.52 313⇑*i*P **P 03 20 14.1 0.0**
IVA Berane 87.52 313⇑*i*P **P 03 20 14.1 +0.1**
DIVS Divibare 87.62 314 P **P 03 20 14.9 +0.4**
ULC Ulcinj 87.88 312⇑*i*P **P 03 20 16.2 +0.4**
ULC Ulcinj 87.88 312⇑*i*P **P 03 20 16.2 +0.4**
KECS Kecovo 87.89 319 *e*P **P 03 20 16.0 +0.3**
KECS pmax pmax
comp=Z,17nm,1.0s,mb5.2
KECS Kecovo 87.89 319 *e*P **P 03 20 16.0 +0.3**
comp=Z,17nm,1.0s,mb5.2
KECS Kecovo 87.89 319 *e*P **P 03 20 16.0 +0.3**
TTG Podgorica 87.93 313⇑*i*P **P 03 20 16.1 +0.1**
TTG Podgorica 87.93 313⇑*i*P **P 03 20 16.1 +0.1**
PLE Pljevlja 87.95 313⇑*i*P **P 03 20 16.9 +0.8**

PLE	Pljevlja	87.95	313	⇑iP	P	03 20 17.0	+0.9
NIE	Niedzica	88.13	320	eP	P	03 20 17.3	+0.5
NKY	Niksic	88.17	313	⇑iP	P	03 20 17.2	0.0
NKY	Niksic	88.17	313	⇑iP	P	03 20 17.3	+0.1
BUM	Brajici-Budva	88.18	312	⇑iP	P	03 20 17.5	+0.3
BUM	Brajici-Budva	88.18	312	⇑iP	P	03 20 17.6	+0.3
PSZ	Piszkesteto	88.20	318	eP	P	03 20 17.5	+0.3
PSZ				e		03 23 44.6	
PSZ				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.7						
PSZ	Piszkesteto	88.20	318	eP	P	03 20 17.5	+0.4
	comp=Z,76nm,1.4s,mb5.7						
PSZ				ePP	PP	03 23 44.6	+0.1
PSZ	Piszkesteto	88.20	318	⇑iP	P	03 20 17.5	+0.3
PSZ	Piszkesteto	88.20	318	⇑eP	P	03 20 17.0	-0.2
UPM	Unac-Piva	88.28	313	⇑iP	P	03 20 17.8	+0.1
UPM	Unac-Piva	88.28	313	⇑iP	P	03 20 17.8	+0.1
HCY	Herceg Novi	88.50	313	⇑iP	P	03 20 17.9	-0.8
HCY	Herceg Novi	88.50	313	⇑iP	P	03 20 17.9	-0.8
BRY	Bratogost	88.51	313	⇑iP	P	03 20 18.3	-0.5
BRY	Bratogost	88.51	313	⇑iP	P	03 20 18.3	-0.4
OJC	Ojcow	88.57	320	eP	P	03 20 18.9	0.0
OJC				esP	sP	03 20 31.6	-2.4
OJC				eS	S	03 31 03.9	+1.2
OJC				L		04 08 34.6	
	comp=Z,0.5nm,19.5s						
OJC	Ojcow	88.57	320	eP	P	03 20 18.9	0.0
OJC				e*SP	sP	03 20 31.6	-2.4
OJC				eS	S	03 31 03.9	+1.2
BUD	Budapest	88.73	318	eP	P	03 20 20.3	+0.6
KEV	Kevo	88.79	340	eP	P	03 20 18.0	-1.5
KEV				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.8						
KEV	Kevo	88.79	340	eP	P	03 20 18.0	-1.4
	comp=Z,4.7nm,1.1s,mb4.7						
KEV	Kevo	88.79	340	ep	P	03 20 16.8	-2.7
	comp=Z,0.6nm,0.4s,mb4.3						
PKSM	Moragy	88.83	316	P	P	03 20 20.4	+0.2
PKSM	Moragy	88.83	316	⇓iP	P	03 20 19.6	-0.6
VYHS	Vyhne	88.98	319	eP	P	03 20 20.9	+0.1
VYHS				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.3						
VYHS	Vyhne	88.98	319	eP	P	03 20 20.9	+0.1
	comp=Z,18nm,1.2s,mb5.3						
VYHS	Vyhne	88.98	319	eP	P	03 20 20.9	+0.1
ARCES	ARCESS Array B	89.25	340	P	P	03 20 20.5	-1.1
	comp=Z,10nm,0.8s,mb5.2,baz=99,slow=7.5,SNR=33						
ARCES				LR	LR	04 06 02.3	
	comp=Z,592nm,19.6s,MS5.0,baz=292,slow=39						
ARCES	ARCESS Array B	89.25	340	P	P	03 20 20.5	-1.1
ARCES				LR	LR	04 06 02.3	
KOLL	Kolacno	89.27	319	eP	P	03 20 22.5	+0.3
KOLL	Kolacno	89.27	319	eP	P	03 20 22.5	+0.3
OKC	Ostrava-Krasne	89.58	320	eP	P	03 20 24.2	+0.6
OKC				eS	S	03 31 15.2	+3.0
OKC				MLR	MLR		
	comp=Z,400nm,18.5s,MS4.9						
OKC	Ostrava-Krasne	89.58	320	eP	P	03 20 24.2	+0.6
OKC				eS	S	03 31 15.2	+3.0
OKC				AMS	AMS	04 09 00.0	
	comp=Z,400nm,18.5s						
MORC	Moravsky Berou	89.97	320	⇑P	P	03 20 25.0	-0.4
MORC	Moravsky Berou	89.97	320	eP	P	03 20 26.0	+0.6
	comp=Z,36nm,1.0s,mb5.7						
MORC	Moravsky Berou	89.97	320	⇑iP	P	03 20 25.0	-0.4
MODS	Modra-Piesok	89.99	318	eP	P	03 20 26.6	+1.0
MODS	Modra-Piesok	89.99	318	eP	P	03 20 26.6	+1.0
CEL	Celeste	90.06	308	eP	P	03 20 27.4	+1.3
	comp=Z,129nm,1.0s,mb6.2						
ZST	Bratislava	90.09	318	eP	P	03 20 26.8	+0.8
ZST				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.7						
ZST	Bratislava	90.09	318	eP	P	03 20 26.8	+0.8
	comp=Z,33nm,0.9s,mb5.7						
ZST	Bratislava	90.09	318	eP	P	03 20 26.8	+0.8
CUC	Castrocucco	90.27	310	eP	P	03 20 27.3	+0.2
	comp=Z,30nm,1.0s,mb5.6						
SOP	Sopron	90.41	318	⇓eP	P	03 20 27.4	-0.1
KOGS	Kog	90.50	316	eP	P	03 20 28.0	0.0
KOGS	Kog	90.50	316	eP	P	03 20 28.0	0.0
DPC	Dobruska-Polom	90.80	320	eP	P	03 20 30.3	+1.0
DPC				eS	S	03 31 25.2	+1.8
DPC				MLR	MLR		
	comp=Z,500nm,20.2s,MS4.9						
DPC	Dobruska-Polom	90.80	320	eP	P	03 20 30.3	+1.0
DPC				eS	S	03 31 25.2	+1.8
DPC				AMS	AMS	04 09 40.0	
	comp=Z,500nm,20.2s						
KSP	Ksiaz	90.87	321	eP	P	03 20 30.3	+0.7
KSP				LMZ		04 09 47.6	
	comp=Z,800nm,18.1s						
CONA	Conrad Observa	90.90	318	⇓iP	P	03 20 29.3	-0.5
	comp=Z,13nm,1.1s,mb5.2,SNR=7.9						
GOLS	Golise	90.90	316	eP	P	03 20 30.4	+0.5
GOLS	Golise	90.90	316	eP	P	03 20 30.4	+0.5
UPC	Upice	91.02	320	eP	P	03 20 31.0	+0.7
UPC	Upice	91.02	320	eP	P	03 20 31.0	+0.7
GROS	Grobnik	91.02	316	eP	P	03 20 30.5	+0.1
GROS	Grobnik	91.02	316	eP	P	03 20 30.5	+0.1
ARSA	Arzberg	91.07	317	⇑iP	P	03 20 30.7	+0.1
	comp=Z,31nm,1.2s,mb5.5,SNR=13						
BOJS	Bojanci	91.12	315	eP	P	03 20 31.0	+0.1
BOJS				eS	S	03 31 27.4	+0.8
BOJS	Bojanci	91.12	315	eP	P	03 20 31.0	+0.1
BOJS				eS	S	03 31 27.4	+0.8
TREC	Trest	91.25	319	eP	P	03 20 32.0	+0.6
TREC	Trest	91.25	319	eP	P	03 20 32.0	+0.6
SOKA	Soboth	91.36	317	⇓iP	P	03 20 31.9	-0.1
	comp=Z,49nm,1.2s,mb5.7						
LJU	Ljubljana	91.67	316	eP	P	03 20 33.7	+0.3
LJU	Ljubljana	91.67	316	eP	P	03 20 33.6	+0.2
OBKA	Obir	91.68	316	⇑iPcP	PcP	03 20 33.8	-0.6
	comp=Z,27nm,1.0s,SNR=14						
PRU	Pruhonice	91.92	320	eP	P	03 20 35.7	+1.2
PRU				eS	S	03 31 38.3	+4.8
PRU				MLR	MLR		
	comp=Z,400nm,17.3s,MS4.9						
PRU	Pruhonice	91.92	320	eP	P	03 20 35.7	+1.2
PRU				eS	S	03 31 38.3	+4.8
PRU				AMS	AMS	04 10 20.0	
	comp=Z,400nm,17.3s						
PVCC	Panska Ves	91.94	320	eP	P	03 20 35.2	+0.7
PVCC				AMS	AMS	04 10 10.0	
	comp=Z,400nm,17.5s						
VOY	Vojsko	92.11	316	eP	P	03 20 35.0	-0.4
VOY	Vojsko	92.11	316	eP	P	03 20 35.0	-0.4
VOY				e		03 20 37.8	
CADS	Cadrg	92.23	316	i P	P	03 20 35.9	-0.1
CADS	Cadrg	92.23	316	i P	P	03 20 35.9	-0.1
AQU	L'Aquila	92.25	312	⇑P	P	03 20 36.5	+0.3
AQU	L'Aquila	92.25	312	eP	P	03 20 36.8	+0.6
	comp=Z,33nm,0.9s,mb5.7						
AQU	L'Aquila	92.25	312	⇑iP	P	03 20 36.5	+0.3
BRG	Berggiesshubel	92.35	321	eP	P	03 20 36.3	-0.2
	comp=Z,11nm,0.9s,mb5.2						
BRG	Berggiesshubel	92.35	321	i P	P	03 20 37.1	+0.6
	comp=Z,12nm,0.9s,mb5.2						
BRG							
	comp=Z,399nm,18.0s						
BRG							
	comp=N,261nm,17.2s						
BRG							
	comp=E,271nm,17.2s						
GEC2	GERESS Array S	92.40	319	eP	P	03 20 35.8	-0.9
	comp=Z,31nm,1.5s,mb5.4						
GEC2	GERESS Array S	92.40	319	eP	P	03 20 35.8	-0.9
GEC2				pmax	pmax		
	comp=Z,31nm,1.5s,mb5.4						
GEC2	GERESS Array S	92.40	319	eP	P	03 20 35.8	-0.9
	comp=Z,31nm,1.5s,mb5.4						
KHC	Kasperske Hory	92.49	319	eP	P	03 20 37.3	+0.1
KHC				eS	S	03 31 42.9	+4.2
KHC				MLR	MLR		
	comp=Z,600nm,18.3s,MS5.1						
KHC	Kasperske Hory	92.49	319	eP	P	03 20 37.1	0.0
	comp=Z,4.1nm,0.7s,mb4.9						
KHC	Kasperske Hory	92.49	319	eP	P	03 20 37.3	+0.1
KHC				eS	S	03 31 42.9	+4.2
KHC				AMS	AMS	04 10 50.0	
	comp=Z,600nm,18.3s						
VNA2	Neumayer--Watz	92.87	198	eP	P	03 20 38.5	0.0
VNA2				e	pP	03 20 48.2	-1.5
RJOB	Jochberg	92.95	317	eP	P	03 20 38.3	-1.0
	comp=Z,11nm,1.2s,mb5.2						
WET	Wettzell	92.95	319	eP	P	03 20 39.0	-0.3
WET	Wettzell	92.95	319	eP	P	03 20 39.0	-0.3
WET	Wettzell	92.95	319	eP	P	03 20 39.0	-0.3
CLL	Collm	92.97	321	eP	P	03 20 38.6	-0.7
	comp=Z,7.0nm,1.1s,mb5.0						
CLL	Collm	92.97	321	i P	P	03 20 38.9	-0.4
CLL				eS	S	03 31 36.0	-6.8
CLL	Collm	92.97	321	i P	P	03 20 38.9	-0.4
	comp=Z,7.0nm,1.1s,mb5.0						
CLL				eS	S	03 31 36.0	-6.8
CLL	Collm	92.97	321	i P	P	03 20 38.9	-0.4
	comp=Z,7.0nm,1.1s,mb5.0						
CLL				i PcP	PcP	03 20 41.2	+1.3
	comp=Z,12nm,1.1s						
CLL				eS	S	03 31 36.0	-6.8
CLL				LmH		04 08 00.0	
	comp=N,300nm,21.2s						
CLL				LmH		04 08 00.0	
	comp=E,100nm,19.4s						
ABTA	Abfaltersbach	93.10	316	⇓iP	P	03 20 39.3	-0.7
	comp=E,14nm,1.0s,mb5.3						
VNA1	Neumayer--Stat	93.24	198	eP	P	03 20 40.4	+0.2
TANN	Tannenbergstha	93.27	320	eP	P	03 20 40.4	-0.3
NKC	Novy Kostel	93.28	320	eP	P	03 20 41.7	+1.0
NKC				MLR	MLR		
	comp=Z,400nm,16.8s,MS5.0						
NKC	Novy Kostel	93.28	320	eP	P	03 20 41.7	+1.0
NKC				AMS	AMS	04 11 00.0	
	comp=Z,400nm,16.8s						
ROTZ	Rotzenmuhle	93.42	319	eP	P	03 20 41.5	+0.1
VNA3	Neumayer Olymp	93.45	197	eP	P	03 20 40.6	-0.5
WTTA	Wattenberg	93.71	317	⇑iP	P	03 20 42.3	-0.5
	comp=Z,16nm,0.8s,mb5.5						
NEUB	Neuenburg	93.73	321	eP	P	03 20 42.3	-0.5
MOX	Moxa	93.82	320	eP	P	03 20 43.5	+0.3
	comp=Z,19nm,1.3s,mb5.4						
MOX	Moxa	93.82	320	eP	P	03 20 43.0	-0.2
	comp=Z,13nm,1.3s,mb5.2						
MOX	Moxa	93.82	320	eP	P	03 20 43.5	+0.3
MOX				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.4						
MOX	Moxa	93.82	320	eP	P	03 20 43.5	+0.3
	comp=Z,19nm,1.3s,mb5.4						
GRA1	Grafenberg Arr	94.05	319	eP	P	03 20 44.3	0.0
	comp=Z,26nm,1.0s,mb5.6						
GRA1				LR	LR		
	comp=Z,500nm,18.5s,MS5.0						
GRF	Grafenberg Arr	94.05	319	eP	P	03 20 44.3	0.0
	comp=Z,26nm,1.0s,mb5.6						
GRF				eL		04 11 58.0	
	comp=Z,472nm,18.5s						
GRF	Grafenberg Arr	94.05	319	eP	P	03 20 44.3	0.0
GRF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.6						
GRF	Grafenberg Arr	94.05	319	eP	P	03 20 44.3	0.0
GRF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.6						
GRF				MLR	MLR		
	comp=Z,500nm,18.5s,MS5.0						
GRF	Grafenberg Arr	94.05	319	eP	P	03 20 44.3	0.0
	comp=Z,26nm,1.0s,mb5.6						
GRF				LR	LR		
	comp=Z,500nm,18.5s,MS5.0						
GRFO	Grafenberg	94.05	319	eP	P	03 20 44.7	+0.4
GRFO				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.5						
GRFO	Grafenberg	94.05	319	eP	P	03 20 44.6	+0.3
	comp=Z,20nm,1.0s,mb5.5						
MOTA	Moosalm	94.08	317	⇓iP	P	03 20 44.0	-0.6
	comp=Z,14nm,0.8s,mb5.4,SNR=10						
NB2	NORSAR Subarra	94.22	331	P	P	03 20 43.7	-1.1
	comp=Z,7.3nm,1.1s,mb5.0,baz=92,slow=5.3						
NOA	NORSAR Array B	94.22	331	P	P	03 20 43.5	-1.3
	comp=Z,2.8nm,0.9s,mb4.7,baz=92,slow=4.7,SNR=5.9						
NOA				LR	LR	04 09 30.0	
	comp=Z,332nm,20.0s,MS4.8,baz=90,slow=40						
RETA	Reutte	94.31	317	⇑iP	P	03 20 45.0	-0.6
	comp=Z,15nm,0.8s,mb5.5,SNR=14						
FETA	Feichten	94.33	317	⇑iPcP	PcP	03 20 45.6	-0.4
	comp=Z,18nm,1.0s,SNR=12						
CLZ	Clausthal	94.62	322	eP	P	03 20 46.3	-0.6
	comp=Z,11nm,1.1s,mb5.2						
CLZ	Clausthal	94.62	322	eP	P	03 20 46.3	-0.6
CLZ				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.2						
CLZ	Clausthal	94.62	322	eP	P	03 20 46.3	-0.6
	comp=Z,11nm,1.1s,mb5.2						
NRDL	Niedersach Rie	94.79	322	eP	P	03 20 48.3	+0.7
UBBA	Unterbreizbach	94.85	321	eP	P	03 20 48.5	+0.5
DAVA	Damuels	94.91	317	⇑iPcP	PcP	03 20 48.4	-0.2
	comp=Z,24nm,0.9s,SNR=9.1						
KEST	Kesra	95.16	305	P	P	03 20 50.5	+0.8
	comp=Z,6.6nm,1.1s,mb5.0,baz=149,slow=3.1,SNR=9.2						
KEST				LR	LR	04 07 06.6	
	comp=Z,72nm,19.8s,MS4.1,baz=215,slow=38						
KEST	Kesra	95.16	305	eP	P	03 20 50.5	+0.7
PGF	Pioggiola	95.51	312	eP	P	03 20 51.4	+0.2
	comp=Z,38nm,1.2s,mb5.4						
PGF	Pioggiola	95.51	312	eP	P	03 20 51.4	+0.2
PGF				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.4						
PGF	Pioggiola	95.51	312	eP	P	03 20 51.4	+0.2
	comp=Z,19nm,1.2s,mb5.4						
TNS	Taunus Mts	95.84	320	eP	P	03 20 52.2	-0.3
TNS	Taunus Mts	95.84	320	eP	P	03 20 52.2	-0.3
TNS	Taunus Mts	95.84	320	eP	P	03 20 52.2	-0.3
BFO	Black Forest	95.95	318	eP	P	03 20 52.0	-1.1
	comp=Z,8.0nm,1.0s,mb5.1						
BFO	Black Forest	95.95	318	eP	P	03 20 52.0	-1.1
BFO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.1						
BFO	Black Forest	95.95	318	eP	P	03 20 52.0	-1.1
	comp=Z,8.0nm,1.0s,mb5.1						
SBF	Sospel	96.64	314	eP	P	03 20 56.1	-0.2
	comp=Z,24nm,0.7s,mb5.4						
SBF	Sospel	96.64	314	eP	P	03 20 56.1	-0.2
SBF				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.4						
SBF	Sospel	96.64	314	eP	P	03 20 56.1	-0.2
	comp=Z,12nm,0.7s,mb5.4						
CDF	Champ du Feu	96.65	318	eP	P	03 20 55.6	-0.6
	comp=Z,20nm,1.2s,mb5.1						
CDF	Champ du Feu	96.65	318	eP	P	03 20 55.6	-0.6
CDF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.1						
CDF	Champ du Feu	96.65	318	eP	P	03 20 55.6	-0.6
	comp=Z,10.0nm,1.2s,mb5.1						
ECH	Echery	96.74	318	eP	P	03 20 56.2	-0.4
ECH				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.2						
ECH	Echery	96.74	318	eP	P	03 20 56.2	-0.4
	comp=Z,12nm,1.1s,mb5.2						
LPG	La Plagne	97.09	315	eP	P	03 20 58.4	+0.1
	comp=Z,24nm,1.0s,mb5.3						
LPG	La Plagne	97.09	315	eP	P	03 20 58.4	+0.1
LPG				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.3						
LPG	La Plagne	97.09	315	eP	P	03 20 58.4	+0.1
	comp=Z,12nm,1.0s,mb5.3						
MBDF	Montbardon	97.10	314	eP	P	03 20 57.7	-0.7
	comp=Z,7.1nm,0.9s,mb4.8						
MBDF	Montbardon	97.10	314	eP	P	03 20 57.7	-0.7
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
MBDF	Montbardon	97.10	314	eP	P	03 20 57.7	-0.7
	comp=Z,3.5nm,0.9s,mb4.8						
LPL	La Plagne	97.11	315	eP	P	03 20 58.4	0.0
	comp=Z,27nm,1.0s,mb5.3						
LPL	La Plagne	97.11	315	eP	P	03 20 58.4	0.0
LPL				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.3						
LPL	La Plagne	97.11	315	eP	P	03 20 58.4	0.0
	comp=Z,13nm,1.0s,mb5.3						
FRF	La Foret Royal	97.22	313	eP	P	03 20 56.8	-2.1
	comp=Z,24nm,1.0s,mb5.3						
FRF	La Foret Royal	97.22	313	eP	P	03 20 56.8	-2.1
FRF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.3						
FRF	La Foret Royal	97.22	313	eP	P	03 20 56.8	-2.1
	comp=Z,12nm,1.0s,mb5.3						
HAU	Haudompre	97.29	318	eP	P	03 20 58.5	-0.6
	comp=Z,24nm,0.9s,mb5.3						
HAU				eMLR	MLR		
	comp=Z,336nm,18.2s,MS4.6						
HAU	Haudompre	97.29	318	eP	P	03 20 58.5	-0.6
HAU				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.3						
HAU				MLR	MLR		
	comp=Z,340nm,18.3s,MS4.9						
HAU	Haudompre	97.29	318	eP	P	03 20 58.5	-0.6
	comp=Z,12nm,0.9s,mb5.3						
HAU				LR	LR		
	comp=Z,340nm,18.3s,MS4.9						
LMR	La Mourre	97.33	313	eP	P	03 20 57.4	-2.0
	comp=Z,23nm,1.2s,mb5.2						
LMR	La Mourre	97.33	313	eP	P	03 20 57.4	-2.0
LMR				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.2						
LMR	La Mourre	97.33	313	eP	P	03 20 57.4	-2.0
	comp=Z,11nm,1.2s,mb5.2						
WLF	Walferdange	97.34	319	eP	P	03 20 59.0	-0.3
CABF	La Chapelle	97.52	316	eP	P	03 21 00.1	-0.1
	comp=Z,14nm,0.9s,mb5.2						
CABF	La Chapelle	97.52	316	eP	P	03 21 00.1	-0.1
CABF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.2						
CABF	La Chapelle	97.52	316	eP	P	03 21 00.1	-0.1
	comp=Z,6.9nm,0.9s,mb5.2						
ORIF	Oris-en-Rattie	97.73	315	eP	P	03 21 00.1	-1.1
	comp=Z,10nm,1.1s,mb5.0						
ORIF				eMLR	MLR		
	comp=Z,545nm,19.0s,MS4.8						
ORIF	Oris-en-Rattie	97.73	315	eP	P	03 21 00.1	-1.1
ORIF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb5.0						
ORIF	Oris-en-Rattie	97.73	315	eP	P	03 21 00.1	-1.1
	comp=Z,5.2nm,1.1s,mb5.0						
MEZF	Maizieres J'vi	98.13	318	eP	P	03 21 02.5	-0.4
SFTF	Sexfontaines	98.15	318	eP	P	03 21 02.6	-0.4
	comp=Z,32nm,0.9s,mb5.5						
SFTF	Sexfontaines	98.15	318	eP	P	03 21 02.6	-0.4
	comp=Z,32nm,0.9s,mb5.8						
GIVF	Givet	98.18	320	eP	P	03 21 02.7	-0.4
BAIF	Baives	98.58	320	eP	P	03 21 04.6	-0.3
LOR	Lormes	99.01	317	eP	P	03 21 06.4	-0.5
	comp=Z,16nm,0.9s,mb5.3						
LOR				eMLR	MLR		
	comp=Z,282nm,19.2s,MS4.5						
LOR	Lormes	99.01	317	eP	P	03 21 06.4	-0.5
LOR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.2						
LOR				MLR	MLR		
	comp=Z,280nm,19.3s,MS4.8						
LOR	Lormes	99.01	317	eP	P	03 21 06.4	-0.5
	comp=Z,8.2nm,0.9s,mb5.3						
LOR				LR	LR		
	comp=Z,280nm,19.3s,MS4.8						
SMF	Signal de Mont	99.06	316	eP	P	03 21 06.6	-0.5
	comp=Z,22nm,1.0s,mb5.3						
SMF	Signal de Mont	99.06	316	eP	P	03 21 06.6	-0.5
SMF				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.3						
SMF	Signal de Mont	99.06	316	eP	P	03 21 06.6	-0.5
	comp=Z,11nm,1.0s,mb5.3						
LASF	Ste Croix	99.22	314	eP	P	03 21 07.9	0.0
	comp=Z,42nm,1.4s,mb5.5						
SSF	Saint Saulge	99.26	317	eP	P	03 21 08.7	+0.7
	comp=Z,17nm,1.2s,mb5.1						
SSF	Saint Saulge	99.26	317	eP	P	03 21 08.7	+0.7
SSF				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb5.2						
SSF	Saint Saulge	99.26	317	eP	P	03 21 08.7	+0.7
	comp=Z,8.5nm,1.2s,mb5.2						
AVF	Avril sur Loir	99.39	317	eP	P	03 21 08.2	-0.4
	comp=Z,24nm,1.2s,mb5.3						
AVF	Avril sur Loir	99.39	317	eP	P	03 21 08.2	-0.4
AVF				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.3						
AVF	Avril sur Loir	99.39	317	eP	P	03 21 08.2	-0.4
	comp=Z,12nm,1.2s,mb5.3						
BGF	Bois d'Agland	99.75	316	eP	Pdif	03 21 10.2	+0.2
	comp=Z,14nm,0.9s						
BGF	Bois d'Agland	99.75	316	eP	Pdif	03 21 10.2	+0.2
BGF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
BGF	Bois d'Agland	99.75	316	eP	Pdif	03 21 10.2	+0.2
	comp=Z,6.9nm,0.9s						
TCF	Toulx Ste Croi	100.22	316	eP	Pdif	03 21 12.0	-0.1
	comp=Z,20nm,1.3s						
TCF	Toulx Ste Croi	100.22	316	eP	Pdif	03 21 12.0	-0.1
TCF				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TCF	Toulx Ste Croi	100.22	316	eP	Pdif	03 21 12.0	-0.1
	comp=Z,10.0nm,1.3s						
MTLF	Montolieu	100.46	313	eP	Pdif	03 21 13.3	+0.2
	comp=Z,25nm,1.4s						
MTLF	Montolieu	100.46	313	eP	Pdif	03 21 13.3	+0.2
MTLF				pmax	pmax		
	comp=Z,13nm,1.4s						
MTLF	Montolieu	100.46	313	eP	Pdif	03 21 13.3	+0.2
	comp=Z,13nm,1.4s						
RJF	Les Rejaudoux	100.79	315	eP	Pdif	03 21 14.3	-0.3
RJF				eMLR	MLR		
	comp=Z,330nm,22.0s,MS4.5						
RJF	Les Rejaudoux	100.79	315	eP	Pdif	03 21 14.3	-0.3
RJF				LR	LR		
	comp=Z,330nm,22.0s,MS4.8						
TORD	Torodi Ar. Bea	101.81	283	P	Pdif	03 21 20.6	+1.5
	comp=Z,1.2nm,1.0s,baz=60,slow=3.2,SNR=5.4						
TORD				PKiKP	PKiKP	03 25 43.0	-0.3
	comp=Z,4.5nm,1.2s,baz=92,slow=3.5,SNR=6.4						
TORD				PKKPbc	PKKPbc	03 37 25.7	0.0
	comp=Z,0.3nm,0.7s,baz=300,slow=4.3,SNR=4.3						
ILAR	Eielson Array	102.04	24	P	Pdif	03 21 19.5	-0.7
	comp=Z,0.2nm,0.6s,baz=305,slow=3.2,SNR=4.0						
ILAR				PKKPbc	PKKPbc	03 37 24.6	-2.0
	comp=Z,1.6nm,0.9s,baz=143,slow=2.3,SNR=13						
USHA	Ushuaia	121.04	186	PKP	PKPdf	03 26 18.8	+0.3
	comp=Z,11nm,1.1s,baz=270,slow=4.0,SNR=3.4						
BSMT	Bassoo Peak	125.56	30	ePKPdf	PKPdf	03 26 26.0	-1.4
MOD	Modoc	125.99	39	ePKPdf	PKPdf	03 26 28.0	-0.4
SWMT	Swartz Lake	126.18	30	ePKPdf	PKPdf	03 26 27.6	-1.0
SLMT	Seeley Lake	126.62	30	ePKPdf	PKPdf	03 26 27.7	-1.7
MSO	Missoula	126.67	31	ePKPdf	PKPdf	03 26 28.3	-1.2
CHMT	Chamberlain Mo	126.96	30	ePKPdf	PKPdf	03 26 28.8	-1.3
SAO	San Andreas Ge	127.80	45	ePKPpre	PKPpre	03 26 27.4	
SAO				ePKPdf	PKPdf	03 26 30.9	-1.1
DLMT	Dillon	128.34	31	ePKPdf	PKPdf	03 26 32.0	-0.8
SCHQ	Schefferville	128.55	352	PKP	PKPdf	03 26 31.3	-1.6
	comp=Z,4.6nm,0.8s,baz=217,slow=1.9,SNR=6.7						
MCMT	McKenzie Canyo	128.57	32	ePKPdf	PKPdf	03 26 33.3	+0.1
NVAR	Mina Array Bea	129.13	42	PKP	PKPdf	03 26 33.8	-0.7
	comp=Z,1.2nm,0.6s,baz=288,slow=1.9,SNR=13						
NVAR				SKPbc		03 29 55.6	
	comp=Z,0.5nm,0.7s,baz=246,slow=5.4,SNR=2.7						
GCMT	Greycliff	129.52	29	ePKPdf	PKPdf	03 26 34.7	-0.3
YMR	Madison River	129.66	31	ePKPdf	PKPdf	03 26 35.8	+0.5
TPAW	Teton Pass	130.48	32	ePKPdf	PKPdf	03 26 35.3	-1.6
REDW	Red Top Meadow	130.62	32	ePKPdf	PKPdf	03 26 37.0	-0.1
ULM	Lac du Bonnet	131.16	16	PKP	PKPdf	03 26 39.1	+1.1
	comp=Z,3.3nm,0.6s,baz=337,slow=4.5,SNR=5.9						
HWUT	Hardware Ranch	131.40	34	ePKPdf	PKPdf	03 26 38.5	-0.2
DUG	Dugway	131.59	37	ePKIKP	PKPdf	03 26 39.1	0.0
PDAR	Pinedale Array	131.72	32	PKP	PKPdf	03 26 38.7	-0.6
	comp=Z,0.8nm,0.6s,baz=26,slow=1.3,SNR=8.4						
PDAR				SKPbc	SKPbc	03 30 00.3	-2.1
	comp=Z,2.0nm,1.0s,baz=126,slow=1.2,SNR=7.3						
GSC	Goldstone	131.79	45	ePKIKP	PKPdf	03 26 39.3	-0.3
MSU	Marysvale	133.02	38	ePKIKP	PKPdf	03 26 43.2	+1.3
RSSD	Black Hills	133.42	27	ePKIKP	PKPdf	03 26 41.4	-1.0
SRU	San Rafael	133.64	36	ePKIKP	PKPdf	03 26 42.4	-0.6
EYMN	Ely	134.40	14	ePKPdf	PKPdf	03 26 44.3	+0.2
PLCA	Paso Flores	135.19	187	PKP	PKPdf	03 26 47.2	+1.3
	comp=Z,6.6nm,1.0s,baz=168,slow=2.0,SNR=7.3						
PLCA				PP	PP	03 29 23.4	+3.2
	comp=Z,1.9nm,0.9s,baz=177,slow=12,SNR=3.3						
PLCA	Paso Flores	135.19	187	PKIKP	PKPdf	03 26 47.2	+1.3
PLCA						03 29 23.4	
PLCA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA	Paso Flores	135.19	187	PKP	PKPdf	03 26 47.2	+1.3
PLCA				PP	PP	03 29 23.4	+3.2
ECSD	EROS Data Cent	136.73	21	ePKPdf	PKPdf	03 26 48.3	-0.3
ANMO	Albuquerque	138.82	38	PKP	PKPdf	03 26 52.9	+0.1
	comp=Z,1.5nm,0.7s,baz=76,slow=2.2,SNR=5.2						
ANMO				SKPbc	SKPbc	03 30 26.2	+1.1
	comp=Z,4.1nm,1.0s,baz=174,slow=1.4,SNR=6.2						
ANMO	Albuquerque	138.82	38	ePKPdf	PKPdf	03 26 50.2	-2.6
BNM	Barren Site	139.24	39	ePKPdf	PKPdf	03 26 53.8	+0.2
MDV	Middlebury	139.92	356	ePKPdf	PKPdf	03 26 55.2	+0.7

MNTX	Cornudas Mount	141.63	41	ePKPdf	PKPdf	03 26 57.6	-0.4
GDL2	Guadalupe Moun	141.96	39	ePKPdf	PKPdf	03 26 53.4	-5.1
WMOK	Wichita Mounta	143.29	31	ePKHKP	PKPdf	03 26 55.4	-5.4
SSPA	Standing Stone	143.42	1	ePKPdf	PKPdf	03 26 58.8	-2.0
ACSO	Alum Creek Sta	143.44	8	ePKPdf	PKPdf	03 26 58.0	-2.9
CCM	Cathedral Cave	143.62	19	ePKIKP	PKPdf	03 26 56.2	-5.1
BLO	Bloomington	143.85	12	ePKIKP	PKPdf	03 26 57.8	-3.9
OLIL	Olney	143.90	15	ePKPdf	PKPdf	03 26 59.3	-2.5
FVM	French Village	143.95	18	ePKIKP	PKPdf	03 26 58.8	-3.1
TXAR	Lajitas Array	144.28	42	PKP	PKPdf	03 26 60.0	-2.7
	comp=Z,3.2nm,0.6s,baz=295,slow=1.2,SNR=24						
TXAR				SKPbc	SKPbc	03 30 41.4	+2.1
	comp=Z,1.5nm,0.8s,baz=350,slow=1.5,SNR=4.1						
TXAR	Lajitas Array	144.28	42	PKP	PKPdf	03 26 60.0	-2.8
TXAR				SKPbc	SKPbc	03 30 41.4	+2.1
MCWV	Mont Chateau	144.32	4	ePKPdf	PKPdf	03 26 59.4	-3.0
CPUP	Villa Florida	144.39	211	PKP	PKPdf	03 27 02.4	-0.6
	comp=Z,73nm,0.7s,baz=118,slow=2.1,SNR=204						
CPUP	Villa Florida	144.39	211	PKIKP	PKPdf	03 27 02.4	-0.6
CPUP				pmax	pmax		
	comp=Z,73nm,0.7s						
CPUP	Villa Florida	144.39	211	PKP	PKPdf	03 27 02.4	-0.6
SIUC	Southern Illin	144.56	17	ePKPdf	PKPdf	03 26 60.0	-3.0
SDMD	Soldier's Deli	144.65	360	ePKPdf	PKPdf	03 26 59.8	-3.3
USIN	University of	144.74	15	ePKPdf	PKPdf	03 27 00.3	-2.9
WCI	Wyandotte Cave	144.81	13	ePKIKP	PKPdf	03 27 00.4	-3.0
BDFB	Brasilia	145.30	235	PKPbc	PKPbc	03 27 05.9	+1.3
	comp=Z,28nm,0.6s,baz=127,slow=3.4,SNR=60						
BDFB	Brasilia	145.30	235	PKP2	PKPab	03 27 05.9	+1.2
BDFB				pmax	pmax		
	comp=Z,28nm,0.6s						
PARMO	Parma	145.37	18	ePKPdf	PKPdf	03 27 02.6	-1.8
CBN	Corbin	145.85	0	ePKPdf	PKPdf	03 27 04.2	-1.0
MIAR	Mount Ida	145.87	25	ePKP2	PKPdf	03 27 03.4	-1.9
GLAT	Glass	145.88	18	ePKPdf	PKPdf	03 27 03.9	-1.4
GNAR	Gosnell	145.93	19	ePKPdf	PKPdf	03 27 04.6	-0.8
UTMT	University of	145.94	17	ePKPdf	PKPdf	03 27 04.4	-1.0
JCT	Junction City	145.95	37	ePKP2	PKPab	03 27 04.7	-2.0
HBAR	Harrisburg	146.09	20	ePKPbc	PKPbc	03 27 05.6	-0.9
UALR	University of	146.17	23	ePKPbc	PKPbc	03 27 05.3	-1.5
HALT	Halls	146.19	18	ePKPbc	PKPbc	03 27 05.4	-1.4
WVT	Waverly	146.43	16	ePKPdf	PKPdf	03 27 05.0	-1.2
WVT				ePKPbc	PKPbc	03 27 05.9	-1.6
BLA	Blacksburg	146.71	5	ePKP2	PKPbc	03 27 06.2	-2.1
LCO	Las Campanas	146.71	190	ePKPdf	PKPdf	03 27 08.1	+1.2
LCO				ePKPbc	PKPbc	03 27 09.7	+1.2
OXF	Oxford	147.46	19	ePKP2	PKPbc	03 27 08.3	-2.2
NATX	Nacogdoches	147.73	29	ePKPbc	PKPbc	03 27 10.8	-0.5
SWET	Sewanee	147.78	14	ePKPbc	PKPbc	03 27 09.1	-2.3
TKL	Tuckaleechee C	147.80	10	ePKIKP	PKPdf	03 27 07.3	-1.2
TKL				e		03 27 09.6	
CPCT	Cooper Cave	147.86	11	ePKPdf	PKPdf	03 27 06.6	-2.0
CPCT				ePKPbc	PKPbc	03 27 10.0	-1.6
VBMS	Vicksburg	149.13	23	ePKPdf	PKPdf	03 27 09.8	-0.9
VBMS				ePKPbc	PKPbc	03 27 13.9	-1.1
BBSR	BB Station	149.39	339	ePKPbc	PKPbc	03 27 14.9	-0.7
JSC	Jenkinsville	149.52	7	ePKPdf	PKPdf	03 27 10.8	-0.6
JSC				ePKPbc	PKPbc	03 27 14.8	-1.0
LRAL	Lakeview Retre	149.56	17	ePKPdf	PKPdf	03 27 13.4	+1.9
GOGA	Godfrey	150.04	11	ePKPdf	PKPdf	03 27 11.8	-0.4
GOGA				ePKPbc	PKPbc	03 27 16.0	-1.2
COW	Cow Castle Cre	150.47	6	ePKPbc	PKPbc	03 27 17.2	-1.0
BRAL	Brewton	151.44	18	ePKPdf	PKPdf	03 27 13.7	-0.7
BRAL				ePKPbc	PKPbc	03 27 19.8	-0.7
SIV	San Ignacio	154.68	218	PKP	PKPdf	03 27 19.7	+0.2
	comp=Z,4.7nm,0.9s,baz=114,slow=4.0,SNR=23						
SIV				PKPab	PKPab	03 27 43.4	+0.7
	comp=Z,13nm,0.8s,baz=143,slow=6.3,SNR=15						
LPAZ	La Paz	158.08	204	PKP	PKPdf	03 27 24.2	+0.3
	comp=Z,7.1nm,1.0s,baz=34,slow=3.3,SNR=15						
LPAZ				PKPab	PKPab	03 28 00.4	+3.1
	comp=Z,13nm,1.0s,baz=159,slow=5.3,SNR=11						
LPAZ	La Paz	158.08	204	PKIKP	PKPdf	03 27 24.3	+0.4
LPAZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LPAZ				pmax	pmax		
	comp=Z,13nm,1.0s						
LPAZ	La Paz	158.08	204	ePKPdf	PKPdf	03 27 24.8	+0.8
CMIG	Matias Romero	158.16	52	PKP	PKPdf	03 27 22.6	-1.4
	comp=Z,5.8nm,1.0s,baz=337,slow=4.7,SNR=6.2						
TGUH	Tegucigalpa,Un	165.75	44	ePKPdf	PKPdf	03 27 30.9	-0.9
OTAV	Otavalo	176.11	159	ePKPdf	PKPdf	03 27 37.5	+0.2
OTAV				PKPab	PKPab	03 29 21.1	+4.4

*ISCJB **09** 03:30:42.8±0.8,50°.81N±0°.07×73°.90E±0°.06,h10km,Error ellipse: s-maj=10.9km s-min=4.4km az=14.5*
*NNC **09** 03:30:44.7±1.5,50°.66N×73°.30E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=22.6km s-min=9.2km az=24.0*
*IDC **09** 03:30:51.1±1.2,51°.86N×74°.24E,h0km,mb3.6/1, mb1 3.5/4,mb1mx3.3/27,mbtmp3.3/4,ML3.1/3,Error ellipse: s-maj=35.2km s-min=12.2km az=28.0*

ISC 09 03:30:45.4±0.6,50°.84N±0°.06×73°.80E±0°.05,h10km,n12, σ1§17/17,6C-7D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOSK	Vostochnaya	2.57	318	⇑Pn	Pn	03 31 26.5	-0.6
	9.5nm,0.5s						
VOSK				⇑Sn	Sn	03 31 59.8	+1.5
	25nm,0.5s						
KURBB	Kurchatov Arra	3.02	92	⇓Pn	Pn	03 31 35.2	+2.0
	3.5nm,0.5s,baz=275,slow=14						
KURBB				⇓Sn	Sg	03 32 21.1	-1.1
	10nm,0.5s,baz=273,slow=26						
BVAR	Borovoye Array	3.04	317	Pn	Pn	03 31 34.7	+1.2
	4.1nm,0.3s,baz=124,slow=15,SNR=27						
BVAR				Lg		03 32 15.3	
	3.7nm,0.3s,baz=115,slow=16,SNR=4.7						
KURK	Kurchatov	3.06	90	⇓Pn	Pn	03 31 35.9	+2.1
	9.3nm,0.6s						
KURK				⇑Sn	Sg	03 32 23.1	-0.6
	30nm,0.6s						
ZRNK	Zerenda	3.64	307	⇑Pn	Pn	03 31 40.5	-1.3
	2.7nm,0.5s						
ZRNK				⇓Sn	Sn	03 32 24.9	+0.2
	10nm,0.5s						
MK31	Makanchi Array	6.92	123	⇓Pg	Pb	03 32 49.9	+4.4
	0.9nm,0.5s,baz=295,slow=13,SNR=4.8						
MK31				⇓Lg		03 34 31.7	
	7.1nm,0.6s,baz=316,slow=26,SNR=4.1						
MKAR	Makanchi Array	6.92	123	Pn	Pb	03 32 38.6	-6.9
	0.2nm,0.3s,baz=313,slow=14,SNR=4.3						
MKAR				Sn	Sb	03 34 08.8	+0.7
	0.5nm,0.3s,baz=312,slow=16,SNR=3.6						
ZALV	Zalesovo Beam	7.42	61	Pn	Pn	03 32 32.7	-1.0
	0.4nm,0.3s,baz=254,slow=15,SNR=7.1						
ZALV				Sn	Sn	03 33 57.6	-0.3
	0.9nm,0.3s,baz=248,slow=24,SNR=3.6						
TKM2	Tokmak 2	8.02	170	⇓Lg		03 34 55.3	
	9.2nm,0.6s						
KK31	Karatay Array	8.06	197	Pn	Pn	03 32 42.5	+0.1
	0.5nm,0.4s,baz=8.4,slow=13,SNR=4.4						
KK31				⇑Lg		03 34 49.6	
	2.1nm,0.6s,baz=12,slow=30,SNR=3.6						
AB31	Akbulak array	9.06	265	⇑Pn	Pn	03 32 54.0	-2.1
	0.3nm,0.4s,baz=78,slow=10,SNR=14						
ILAR	Eielson Array	60.49	19	P	P	03 40 54.3	-0.5
	0.4nm,0.5s,baz=329,slow=5.0,SNR=11						

*IDC **09** 03:52:32.5±1.1,3°.73S×103°.19E,h0km,mb4.0/8, mb1 4.1/8,mb1mx4.0/18,mbtmp4.0/8,Error ellipse: s-maj=63.8km s-min=16.1km az=52.0*
*ISCJB **09** 03:52:37.7±0.5,3°.98S±0°.06×103°.00E±0°.06,h52km±5km, mb4.1/11,Error ellipse: s-maj=13.9km s-min=5.8km az=44.5*
*DJA **09** 03:52:37,4°.03S×103°.13E,h6km,MLv4.4/10*
*NEIC **09** 03:52:37.9±0.7,3°.70S×103°.27E,h35km,mb4.0/1,Error ellipse: s-maj=37.6km s-min=10.0km az=53.0*
NEIC Felt [II] at Tebingtinggi.

ISC 09 03:52:38.5±0.5,3°.98S±0°.06×103°.01E±0°.06,h43km±6km, n31,σ1§47/34,mb4.1/11,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.38	188	P	Pn	03 52 45.4	-2.5
MNAI				S	Sn	03 52 54.4	-0.1
KSI	Kapahiang	0.53	308	P	Pn	03 52 48.1	-1.7
KSI				S	Sn	03 52 59.2	+1.4
LHSI	Lahat	0.53	73	P	Pn	03 52 48.5	-1.3
MDSI	Maura Dua	1.27	113	P	Pn	03 52 56.6	-3.2
MDSI				S	Sn	03 53 12.7	-2.9
LWLI	Liwa	1.47	135	P	Pn	03 53 03.4	+0.9
KLSI		1.85	112	P	Pn	03 53 06.8	-1.0
KLSI				S	Sn	03 53 30.6	+0.6
KLI	Kotabumi	2.04	116	P	Pn	03 53 12.3	+2.0
KASI	Kota Agung	2.13	136	P	Pn	03 53 12.6	+1.0
KASI				S	Sn	03 53 39.6	+2.7
KRJI	Kerinci	2.43	320	P	Pn	03 53 20.8	+5.0
BLSI	Bandar Lampung	2.62	122	P	Pn	03 53 23.9	+5.6
RBSI	Rajabasa	3.29	124	P	Pn	03 53 36.6	+9.0
SDSI	Sungai Dareh	3.42	332	P	Pn	03 53 36.6	+7.3
CGJI	Cibinong	3.74	135	P	Pn	03 53 36.7	+3.0
PDSI	Padang	3.97	320	P	Pn	03 53 40.7	+3.7
PPI	Padang Panjang	4.37	321	P	Pn	03 53 47.0	+4.6
TPI	Tanjungpandan	4.79	75	P	Px	03 54 03.2	
MYKOM	Kota Tinggi	5.79	8	P	Pn	03 54 03.4	+1.4
CMAR	Chiang Mai Arr	22.66	350	P	P	03 57 34.3	-1.8
	2.1nm,0.4s,mb3.9,baz=185,slow=8.7,SNR=9.0						
FITZ	Fitzroy Crossi	26.22	124	P	P	03 58 09.2	-0.4
	3.6nm,0.9s,mb3.9,baz=275,slow=4.2,SNR=6.3						
FITZ	Fitzroy Crossi	26.22	124	eP	P	03 58 09.2	-0.4
	4.1nm,1.0s,mb3.9						
KMI	Kunming	28.93	359	P	P	03 58 34.2	+0.4
KMI				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
WRA	Warramunga Arr	34.40	120	P	P	03 59 20.7	-1.3
	comp=Z,0.2nm,0.2s,mb3.6,baz=212,slow=3.4,SNR=5.3						
ASAR	Alice Springs	35.66	126	P	P	03 59 33.0	+0.2
	comp=Z,2.6nm,0.7s,mb4.3,baz=300,slow=8.0,SNR=30						
ASAR				PcP	PcP	04 02 01.4	+0.7
	comp=Z,0.4nm,0.8s,baz=312,slow=3.3,SNR=4.1						
HHC	Hu-ho-hao-te	45.30	9	eP	P	04 00 53.6	+1.5
HHC				pP	pP	04 01 03.6	-0.4
HHC				sP	sP	04 01 07.5	-1.6
HHC				PcP	PcP	04 02 34.2	+2.9
HHC				PP	PP	04 02 40.1	+1.4
HHC				ScP	ScP	04 06 23.2	+2.5
HHC				S	S	04 07 31.0	+1.4
HHC				sS	sS	04 07 47.3	-2.2
HHC				SS	SS	04 10 45.7	-8.1
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,65nm,5.1s						
STKA	Stephens Creek	45.60	132	P	P	04 00 55.4	+0.7
	comp=Z,3.1nm,0.7s,mb4.3,baz=296,slow=4.3,SNR=7.2						
SONM	Songino Array	51.68	3	P	P	04 01 36.5	-4.6
	comp=Z,0.7nm,0.5s,mb3.8,baz=185,slow=8.3,SNR=2.7						
MKAR	Makanchi Array	53.77	342	P	P	04 01 55.6	-1.0
	comp=Z,0.4nm,0.4s,mb3.7,baz=168,slow=6.9,SNR=4.1						
ZALV	Zalesovo Beam	59.70	348	P	P	04 02 36.6	-1.9
	comp=Z,0.6nm,0.4s,mb4.0,baz=138,slow=7.1,SNR=2.8						
BRTR	Keskin Array B	76.87	312	P	P	04 04 26.6	+0.3
	comp=Z,1.7nm,0.8s,mb4.1,baz=122,slow=6.3,SNR=8.9						
CPUP	Villa Florida	144.36	211	PKP	PKPdf	04 12 12.0	+1.2
	comp=Z,1.0nm,0.4s,baz=148,slow=2.0,SNR=12						
CPUP	Villa Florida	144.36	211	PKP	PKPdf	04 12 12.0	+1.2

*BJI **09** 04:22:39.0,80°.80N×3°.00W,h5km,mB4.8/16,mb4.7/26, Ms4.6/16,Ms7 4.4/16*
*MOS **09** 04:22:40.0±1.2,80°.76N×3°.41W,h10km,mb4.7/42,Error ellipse: s-maj=38.0km s-min=5.9km az=95.4*
*IDC **09** 04:22:40.0±0.5,80°.84N×3°.05W,h0km,mb4.2/19, mb1 4.4/22,mb1mx4.3/29,mbtmp4.2/22,ML4.1/3,MS3.8/19, Ms1 3.8/19,ms1mx3.6/34,Error ellipse: s-maj=15.6km s-min=10.5km az=26.0*
*CSEM **09** 04:22:40.4±0.1,80°.80N×3°.28W,h2km,mb4.7/54,Error ellipse: s-maj=6.7km s-min=3.1km az=32.0*
*ISCJB **09** 04:22:40.3±0.1,80°.73N±0°.03×3°.4W±0°.1,h10km,mb4.6/96, MS3.9/33,Error ellipse: s-maj=5.3km s-min=2.3km az=26.6*
*NEIC **09** 04:22:42.1±0.2,80°.81N×2°.97W,h10km,mb4.7/49,Error ellipse: s-maj=8.0km s-min=3.2km az=211.0*
*BER **09** 04:22:43.3±3.3,80°.73N×2°.22W,h10km,MD3.9, ML2.9(NAO)*
*NAO **09** 04:22:45.8±8.3,80°.70N×1°.58W,h21km±103km,ML2.9*

ISC 09 04:22:42.4±0.1,80.76N±0°.03×3°.4W±0°.1,h10km, (h19km±2.2km:pP-P),n483,σ0§80/477,mb4.6/96,MS3.9/33, 92C-112D,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	3.27	116	Pn	Pn	04 23 29.6	-4.0
KBS				Sn	Sn	04 24 03.8	-8.7
KBS	Kingsbay	3.27	116	eP	Pn	04 23 29.7	-3.9
KBS				eS	Sn	04 24 03.3	-9.2
KBS	Kingsbay	3.27	116	d iP	Pn	04 23 29.6	-4.0
KBS	Kingsbay	3.27	116	ePn	Pn	04 23 29.7	-3.9
KBS				eSn	Sn	04 24 03.2	-9.3
KBS	Kingsbay	3.27	116	i P	Pn	04 23 29.6	-4.0
KBS				eSn	Sn	04 24 03.2	-9.3
SPA0	Spitsbergen Ar	4.43	116	Pn	Pn	04 23 46.0	-3.5
	baz=319,slow=8.6						
SPA0				Sn	Sn	04 24 32.5	-8.5
SPITS	Spitsbergen Ar	4.43	116	Pn	Pn	04 23 46.1	-3.4
	baz=311,slow=12,SNR=329						
SPITS				Sn	Sn	04 24 32.4	-8.6
	baz=322,slow=19,SNR=3.0						
SPITS				LR	LR	04 25 21.5	
	comp=Z,2μm,20.6s,baz=310,slow=37						
SPITS	Spitsbergen Ar	4.43	116	P	Pn	04 23 46.1	-3.4
SPITS						04 24 32.4	
SPITS	Spitsbergen Ar	4.43	116	Pn	Pn	04 23 46.1	-3.4
SPITS				Sn	Sn	04 24 32.4	-8.6
SPITS				LR	LR	04 25 21.6	
SPITS	Spitsbergen Ar	4.43	116	P	Pn	04 23 46.1	-3.4
SPITS				Sn	Sn	04 24 32.4	-8.6
DAG	Danmarks Havn	4.97	224	⇑iP	Pn	04 23 55.6	-1.3
DAG	Danmarks Havn	4.97	224	⇑iP	Pn	04 23 55.6	-1.3
HSP	Hornsund	5.22	126	eP	Pn	04 23 57.5	-2.8
BJO1	Bjornoya	7.82	131	eP	Pn	04 24 34.1	-1.9
BJO1				eS	Sn	04 25 57.0	-7.4
BJO1	Bjornoya	7.82	131	eP	Pn	04 24 34.1	-1.9
BJO	Bjornoya	7.84	131	ePn	Pn	04 24 34.1	-2.2
BJO				eSn	Sn	04 25 56.5	-8.3
JMIC	Jan Mayen	9.90	190	Pn	Pn	04 25 04.5	+0.1
JMIC				Sn	Sn	04 26 47.6	-7.7
JMIC	Jan Mayen	9.90	190	Pn	Pn	04 25 04.3	-0.1
	7.5nm,0.3s,baz=6.4,slow=19,SNR=18						
JMIC				Sn	Sn	04 26 47.5	-7.8
	3.5nm,0.3s,baz=202,slow=15,SNR=7.2						
JMIC	Jan Mayen	9.90	190	Pn	Pn	04 25 04.3	-0.1
SCO	Scoresbysund	11.20	213	eP	Pn	04 25 21.5	-0.7
SCO	Scoresbysund	11.20	213	i P	Pn	04 25 21.5	-0.7
SCO				i S	Sn	04 27 20.4	-6.8
SCO	Scoresbysund	11.20	213	eP	Pn	04 25 21.5	-0.7
SUMG	Summit	11.23	243	ePn	Pn	04 25 19.8	-2.7
	176nm,0.8s						
SUMG				eSn	Sn	04 27 21.2	-6.6
SUMG	Summit	11.23	243	i P	Pn	04 25 20.6	-2.0
SUMG				i S	Sn	04 27 17.9	-10
SUMG	Summit	11.23	243	eP	Pn	04 25 20.6	-2.0
KEV	Kevo	13.18	129	ePn	Pn	04 25 48.9	-0.3
KEV				eS	Sn	04 28 03.5	-12
KEV	Kevo	13.18	129	eP	Pn	04 25 48.9	-0.3
ARA0	ARCESS Array S	13.20	132	Pn	Pn	04 25 47.9	-1.6
	baz=345,slow=14						
ARA0				Sn	Sn	04 28 05.0	-11
	baz=355,slow=22						
ARA0	ARCESS Array S	13.20	132	Pn	Pn	04 25 47.9	-1.6
	baz=345,slow=13,SNR=50						
ARCES	ARCESS Array B	13.20	132	Pn	Pn	04 25 48.0	-1.5
	0.3nm,0.3s,baz=354,slow=8.5,SNR=20						
ARCES				Sn	Sn	04 28 05.5	-11
	0.3nm,0.3s,baz=352,slow=21,SNR=3.7						
ARCES				LR	LR	04 30 40.8	
	comp=Z,202nm,20.6s,baz=151,slow=36						
ARCES	ARCESS Array B	13.20	132	P	Pn	04 25 48.0	-1.5
KTK1	Kautokeino	13.43	136	ePn	Pn	04 25 54.4	+1.7
KTK1	Kautokeino	13.43	136	ePn	Pn	04 25 54.4	+1.7
	SNR=50						
APA	Apatity	16.06	124	⇓iP	Pn	04 26 30.0	+2.1
APA				pmax	pmax		
	comp=Z,26nm,1.0s						
APA				MLR	MLR		
	comp=Z,600nm,15.0s						
APA	Apatity	16.06	124	i P	Pn	04 26 30.0	+2.1
	comp=Z,600nm,15.0s						
BORG	Borgarnes	16.78	207	LR	LR	04 33 25.9	
	comp=Z,93nm,20.0s,baz=43,slow=38						
RES	Resolute Bay	18.15	301	LR	LR	04 33 48.7	
	comp=Z,420nm,18.6s,baz=37,slow=37						
RES	Resolute Bay	18.15	301	eP	Pn	04 26 50.3	-3.7
RES				pmax	pmax		
	comp=Z,17nm,0.9s						
RES	Resolute Bay	18.15	301	ePn	Pn	04 26 50.3	-3.7
	comp=Z,17nm,0.9s						
JOF	Joensuu	20.24	131	eP	P	04 27 14.1	-3.1
JOF	Joensuu	20.24	131	ep	P	04 27 14.1	-3.1
	comp=Z,0.4nm,0.4s						
NB2	NORSAR Subarra	20.25	159	P	P	04 27 18.8	+1.6
	comp=Z,21nm,1.7s,baz=354,slow=11						
NB2	NORSAR Subarra	20.25	159	P	P	04 27 18.8	+1.5
	baz=12,slow=10						
NB2	NORSAR Subarra	20.25	159	P	P	04 27 18.8	+1.6
	comp=Z,21nm,1.7s,baz=354,slow=11,SNR=6.0						
NOA	NORSAR Array B	20.25	159	P	P	04 27 18.2	+0.9
	comp=Z,2.0nm,0.8s,baz=346,slow=9.6,SNR=6.6						
NOA				LR	LR	04 33 48.3	
	comp=Z,88nm,19.2s,MS3.1,baz=40,slow=33						
NOA	NORSAR Array B	20.25	159	P	P	04 27 18.2	+1.0
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,88nm,19.2s						
NOA	NORSAR Array B	20.25	159	P	P	04 27 18.1	+0.9
KAF	Kangasniemi	20.45	138	eP	P	04 27 17.7	-1.7
KAF	Kangasniemi	20.45	138	ep	P	04 27 17.7	-1.7
	comp=Z,0.4nm,0.3s						
KAF	Kangasniemi	20.45	138	eP	P	04 27 17.7	-1.7
	comp=Z,0.4nm,0.3s						
FIA0	FINESS Array S	21.08	139	P	P	04 27 26.1	-0.1
	baz=346,slow=12						
FIA0	FINESS Array S	21.08	139	P	P	04 27 26.2	-0.1
FINES	FINESS Array B	21.08	139	P	P	04 27 26.0	-0.3
	comp=Z,11nm,1.0s,mb4.2,baz=347,slow=7.8,SNR=10						
FINES				LR	LR	04 35 05.3	
	comp=Z,233nm,20.8s,MS3.5,baz=358,slow=35						
FINES	FINESS Array B	21.08	139	P	P	04 27 26.0	-0.3
FINES				pmax	pmax		
	comp=Z,11nm,1.0s						
FINES				MLR	MLR		
	comp=Z,233nm,20.8s						
FINES	FINESS Array B	21.08	139	P	P	04 27 26.0	-0.3
	comp=Z,233nm,20.8s						
HFS	Hagfors	21.30	156	P	P	04 27 28.2	-0.4
	baz=357,slow=8.6						
HFS	Hagfors	21.30	156	P	P	04 27 28.8	+0.1
	comp=Z,32nm,0.8s,mb4.7,baz=19,slow=9.2,SNR=45						
HFS				LR	LR	04 34 49.7	
	comp=Z,129nm,18.2s,MS3.4,baz=358,slow=34						
HFS	Hagfors	21.30	156	P	P	04 27 28.8	+0.2
HFS				pmax	pmax		
	comp=Z,32nm,0.8s						
HFS				MLR	MLR		
	comp=Z,129nm,18.2s						
HFS	Hagfors	21.30	156	P	P	04 27 28.8	+0.2
	comp=Z,129nm,18.2s						
PUL	Pulkovo	23.19	134	i P	P	04 27 50.0	+1.3
PUL				pmax	pmax		
	comp=Z,118nm,0.7s,mb5.4						
PUL				MLR	MLR		
	comp=Z,191nm,20.0s,MS3.5						
PUL	Pulkovo	23.19	134	i P	P	04 27 50.0	+1.3
	comp=Z,191nm,20.0s						
KLMR	Klimovskoe	23.30	123c	i P	P	04 27 50.1	+0.2
KLMR				pmax	pmax		
	comp=Z,53nm,1.5s,mb4.8						
KLMR				MLR	MLR		
	comp=Z,303nm,13.0s,MS3.9						
KLMR	Klimovskoe	23.30	123	i P	P	04 27 50.1	+0.2
	comp=Z,303nm,13.0s						
PRGR	Permogore	23.41	115	eP	P	04 27 47.1	-4.0
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.4						
FRB	Frobisher Bay	23.92	264	P	P	04 27 55.6	-0.3
	comp=Z,16nm,0.8s,mb4.5,baz=28,slow=9.8,SNR=12						
FRB				LR	LR	04 37 25.9	
	comp=Z,335nm,20.8s,MS3.8,baz=142,slow=37						
FRB	Frobisher Bay	23.92	264	P	P	04 27 55.7	-0.2
FRB				pmax	pmax		
	comp=Z,16nm,0.9s						
FRB				MLR	MLR		
	comp=Z,335nm,20.8s						
FRB	Frobisher Bay	23.92	264	P	P	04 27 55.7	-0.2
	comp=Z,335nm,20.8s						
VSU	Vasula	24.07	140d	i P	P	04 27 56.1	-1.2
VSU				pmax	pmax		
	comp=Z,39nm,1.1s,mb4.8						
VSU				MLR	MLR		
	comp=Z,220nm,21.0s,MS3.6						
VSU	Vasula	24.07	140	i P	P	04 27 56.1	-1.2
	comp=Z,220nm,21.0s						
ISAL	Salakas	26.86	142	eP	P	04 28 22.7	+0.1
ISAL				AMB	AMB	04 28 25.6	
	comp=Z,9.8nm,1.0s,mb4.3						
ISAL	Salakas	26.86	142	eP	P	04 28 22.7	+0.1
	comp=Z,9.8nm,1.0s,mb4.3						
IIGN	Ignalina	27.

SCHQ LR LR 04 42 01.9
SCHQ Schefferville 32.14 257 P **P 04 29 09.5 +0.1**
KWP Kalwaria Pacla 32.42 148 ⇓*i*P **P 04 29 12.7 +0.8**
KWP Kalwaria Pacla 32.42 148 ⇓*i*P **P 04 29 12.7 +0.8**
KWP Kalwaria Pacla 32.42 148 ⇓*i*P **P 04 29 12.7 +0.8**
NIE Niedzica 32.43 151 *e*P **P 04 29 12.9 +0.9**
NIE Niedzica 32.43 151 *e*P **P 04 29 12.9 +0.9**
VSR Storozhevoye 32.63 128 *e*P **P 04 29 13.1 -0.7**
VSR pmax pmax
comp=N,6.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
VSR MLR MLR
comp=N,150nm,18.0s
VSR MLR MLR
comp=Z,210nm,18.0s,MS3.9
VSR MLR MLR
comp=E,20nm,9.0s
VORD Divnogorie 32.90 128 *e*P **P 04 29 14.8 -1.3**
VORD pmax pmax
comp=N,10.0nm,1.1s
VORD pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD MLR MLR
comp=Z,70nm,13.0s,MS3.5
VORD MLR MLR
comp=E,9.0nm,5.0s
CRVS Cervenica-Dubn 33.04 149 *e*P **P 04 29 18.1 +0.8**
CRVS pmax pmax
comp=Z,31nm,2.6s,mb4.8
CRVS Cervenica-Dubn 33.04 149 *e*P **P 04 29 18.1 +0.8**
comp=Z,31nm,2.6s,mb4.8
CRVS Cervenica-Dubn 33.04 149 *e*P **P 04 29 18.1 +0.8**
CRVS Cervenica-Dubn 33.04 149 *e*P **P 04 29 18.1 +0.8**
comp=Z,31nm,2.6s,mb4.8
VRHR Novokhopersk 33.07 125 *e*P **P 04 29 16.1 -1.5**
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,40nm,0.9s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.5s
KOLS Kolonicke sedl 33.08 148 *e*P **P 04 29 18.6 +1.0**
KOLS pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KOLS Kolonicke sedl 33.08 148 *e*P **P 04 29 18.6 +1.0**
comp=Z,7.9nm,1.2s,mb4.5
KOLS Kolonicke sedl 33.08 148 *e*P **P 04 29 18.6 +1.0**
KOLS Kolonicke sedl 33.08 148 *e*P **P 04 29 18.6 +1.0**
comp=Z,7.9nm,1.2s,mb4.5
VYHS Vyhne 33.24 153 *e*P **P 04 29 20.3 +1.2**
VYHS *e* 04 29 27.9
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
VYHS Vyhne 33.24 153 *e*P **P 04 29 20.3 +1.2**
comp=Z,1.9nm,0.9s,mb4.0
VYHS *e* 04 29 27.9
VYHS Vyhne 33.24 153 *e*P **P 04 29 20.3 +1.2**
VYHS *e*pP pP 04 29 27.9 +5.8
VYHS Vyhne 33.24 153 *e*P **P 04 29 20.3 +1.2**
comp=Z,1.9nm,0.9s,mb4.0
ILAR Eielson Array 33.29 332 P **P 04 29 19.0 -0.4**
comp=Z,1.9nm,0.9s,mb4.0,baz=5.8,slow=7.7,SNR=23
ILAR PcP PcP 04 31 59.8 -1.2
comp=Z,0.7nm,0.7s,baz=336,slow=3.0,SNR=6.9
ILAR Eielson Array 33.29 332 P **P 04 29 19.0 -0.4**
ILAR 04 31 59.8
ILAR pmax pmax
comp=Z,2.0nm,0.9s
ILAR Eielson Array 33.29 332 P **P 04 29 19.0 -0.4**
ILAR Eielson Array 33.29 332 PcP PcP 04 31 59.8 -1.1
DAWY Dawson 33.37 326 *e*P **P 04 29 19.4 -0.6**
DAWY Dawson 33.37 326 *e*P **P 04 29 19.4 -0.6**
KECS Kecovo 33.38 151 *e*P **P 04 29 21.2 +0.9**
KECS *e* 04 29 29.5
KECS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
KECS Kecovo 33.38 151 *e*P **P 04 29 21.2 +0.9**
comp=Z,3.5nm,1.1s,mb4.2
KECS *e* 04 29 29.5
KECS Kecovo 33.38 151 *e*P **P 04 29 21.2 +0.9**
KECS *e*pP pP 04 29 29.5 +6.2
KECS Kecovo 33.38 151 *e*P **P 04 29 21.2 +0.9**
comp=Z,3.5nm,1.1s,mb4.2
CONA Conrad Observa 33.59 156 ⇓*i*pP pP 04 29 23.1 -2.1
comp=Z,9.9nm,1.6s
PSZ Piszkesteto 33.89 152 *e*P **P 04 29 19.2 -5.5**
PSZ pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
PSZ Piszkesteto 33.89 152 *e*P **P 04 29 19.2 -5.6**
comp=Z,6.2nm,1.1s,mb4.5
BUR08 Bucovina Ar. S 34.61 145 *e*P **P 04 29 31.5 +0.5**
BUR08 Bucovina Ar. S 34.61 145 *e*P **P 04 29 31.5 +0.5**
BURAR Bucovina Array 34.64 145 ⇑*i*P **P 04 29 31.8 +0.5**
BURAR Bucovina Array 34.64 145 ⇑*i*P **P 04 29 31.8 +0.5**
YAK Yakutsk 35.09 37 *e*P **P 04 29 32.9 -2.1**
YAK pmax pmax
comp=Z,16nm,1.1s,mb4.9
DRGR 35.24 148 ⇑P **P 04 29 37.4 +1.0**
DRGR 35.24 148 ⇑*i*P **P 04 29 37.4 +1.0**
DRGR 35.24 148 ⇑*i*P **P 04 29 37.4 +1.0**
BRVK Borovoye 35.49 94 ⇑*e*P **P 04 29 39.0 +0.5**
BRVK pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
BRVK MLR MLR
comp=Z,338nm,16.0s,MS4.2
BRVK Borovoye 35.49 94 *e*P **P 04 29 38.7 +0.2**
BRVK Borovoye 35.49 94 *e*P **P 04 29 38.7 +0.2**
TESR 35.87 144 ⇓*i*P **P 04 29 41.9 +0.1**
BZS Buzias 36.31 150 ⇑P **P 04 29 46.7 +1.1**
BZS Buzias 36.31 150 ⇑*i*P **P 04 29 46.7 +1.1**
BZS Buzias 36.31 150 ⇑*i*P **P 04 29 46.7 +1.1**
VRI Vrincioaia 36.52 144 ⇓P **P 04 29 48.1 +0.7**
VRI Vrincioaia 36.52 144 ⇓*i*P **P 04 29 48.0 +0.6**
VRI Vrincioaia 36.52 144 ⇓*i*P **P 04 29 48.0 +0.6**
PLOR Plostina 36.52 144 ⇑P **P 04 29 48.1 +0.7**
PLOR Plostina 36.52 144 ⇑*i*P **P 04 29 48.1 +0.7**
PLOR Plostina 36.52 144 ⇑*i*P **P 04 29 48.1 +0.7**
MLR Muntele Rosu 36.82 145 ⇓P **P 04 29 51.0 +1.1**
MLR Muntele Rosu 36.82 145 ⇓*i*P **P 04 29 51.0 +1.1**
MLR Muntele Rosu 36.82 145 ⇓*i*P **P 04 29 51.0 +1.1**
ZALV Zalesovo Beam 36.97 79 P **P 04 29 50.0 -1.1**
comp=Z,3.2nm,0.8s,mb4.2,baz=352,slow=9.0,SNR=12
ZALV LR LR 04 48 43.8
comp=Z,177nm,19.2s,MS3.9,baz=327,slow=42
ZALV Zalesovo Beam 36.97 79 P **P 04 29 50.0 -1.1**
ZALV pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
ZALV MLR MLR
comp=Z,177nm,19.2s,MS3.9
ABKAR Akbulak array 37.53 106 *e*P **P 04 29 55.5 -0.4**
comp=Z,2.9nm,0.9s,mb4.0
ABKAR Akbulak array 37.53 106 *e*P **P 04 29 55.5 -0.4**
comp=Z,2.9nm,0.9s,mb4.0
DLBC Dease Lake 37.95 317 LR LR 04 47 24.6
comp=Z,163nm,19.5s,MS3.8,baz=54,slow=39
TIRR Tirgusor 38.08 142 ⇓P **P 04 30 01.3 +0.7**
TIRR Tirgusor 38.08 142 ⇓*i*P **P 04 30 01.3 +0.7**
TIRR Tirgusor 38.08 142 ⇓*i*P **P 04 30 01.3 +0.7**
ANN Anapa 38.73 132 *e*P **P 04 30 04.2 -1.9**
ANN pmax pmax
comp=Z,21nm,1.0s,mb4.8
KURK Kurchatov 39.10 87 *d i*P **P 04 30 08.8 -0.3**
KURK pmax pmax
comp=Z,36nm,1.7s,mb4.8
KURK MLR MLR
comp=Z,282nm,16.0s,MS4.2
KURK Kurchatov 39.10 87 *e*P **P 04 30 09.0 -0.1**
comp=Z,24nm,1.1s,mb4.8
KURK Kurchatov 39.10 87 *e*P **P 04 30 09.0 -0.1**
comp=Z,24nm,1.1s,mb4.8
KIV Kislovodsk 40.22 126 ⇓*e*P **P 04 30 19.5 +1.0**
KIV *e* 04 31 54.1
KIV pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
ULM Lac du Bonnet 41.23 283 P **P 04 30 26.3 -0.5**
comp=Z,9.2nm,0.9s,mb4.4,baz=18,slow=6.8,SNR=8.1
ULM LR LR 04 47 53.2
comp=Z,286nm,20.6s,MS4.1,baz=54,slow=37
ULM Lac du Bonnet 41.23 283 P **P 04 30 26.3 -0.5**
ULM LR LR 04 47 53.2
ULM Lac du Bonnet 41.23 283 P **P 04 30 26.3 -0.4**
ZEI Tsey 41.55 125 *e*P **P 04 30 29.6 +0.2**
ZEI pmax pmax
comp=Z,15nm,1.1s,mb4.5
TLY Talaya 42.03 63 *e*P **P 04 30 31.7 -1.7**
TLY pmax pmax
comp=Z,4.0nm,1.2s,mb3.9
TLY MLR MLR
comp=Z,320nm,20.0s,MS4.2
EYMN Ely 42.77 278 *e*P **P 04 30 39.6 +0.2**
comp=Z,15nm,1.2s,mb4.6
EYMN Ely 42.77 278 *e*P **P 04 30 39.6 +0.3**
comp=Z,15nm,1.2s,mb4.6
AGMN Agassiz Nation 43.12 283 *e*P **P 04 30 42.5 +0.3**
comp=Z,25nm,1.3s,mb4.8
AGMN Agassiz Nation 43.12 283 *e*P **P 04 30 42.5 +0.3**
comp=Z,25nm,1.3s,mb4.8
BRTR Keskin Array B 43.30 137 P **P 04 30 44.4 +0.6**
comp=Z,5.9nm,0.9s,mb4.3,baz=344,slow=6.3,SNR=26
BRTR LR LR 04 49 59.9
comp=Z,49nm,18.8s,MS3.4,baz=216,slow=38
BRTR Keskin Array B 43.30 137 *ce*P **P 04 30 44.9 +1.1**
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 43.30 137 P **P 04 30 44.3 +0.5**
MKAR Makanchi Array 43.50 84 P **P 04 30 44.6 -0.6**
comp=Z,4.8nm,0.7s,mb4.3,baz=349,slow=7.2,SNR=32
MKAR LR LR 04 53 14.1
comp=Z,149nm,18.0s,MS3.9,baz=347,slow=42
MKAR Makanchi Array 43.50 84 P **P 04 30 44.7 -0.6**
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MKAR MLR MLR
comp=Z,149nm,18.0s
GNI Garni 44.23 125 ⇑*e*P **P 04 30 52.8 +1.5**
GNI pmax pmax
comp=Z,9.0nm,1.2s
GNI MLR MLR
comp=Z,63nm,17.0s
DGMT Damar 44.24 290 ⇓P **P 04 30 51.7 +0.5**
baz=44
A19A Klindworth Far 44.47 295 ⇓P **P 04 30 53.3 +0.2**
baz=44
A17A Triple J Farms 44.74 297 ⇓P **P 04 30 54.6 -0.6**
baz=44
A15A Johnson Ranch, 45.00 298 ⇓P **P 04 30 56.3 -1.0**
baz=45,SNR=5.6
WALA Waterton Lakes 45.09 300 *e*P **P 04 30 58.2 +0.2**
comp=Z,0.7nm,1.7s
WALA Werton Lakes 45.09 300 *e*P **P 04 30 58.2 +0.2**
comp=Z,0.7nm,1.7s
A14A Double T Ranch 45.10 299 ⇑P **P 04 30 58.1 0.0**
baz=45,SNR=6.1
KKAR Karatay Array 45.19 97 *e*P **P 04 30 59.5 +0.6**
KKAR pmax pmax
comp=Z,12nm,1.1s,mb4.6
KKAR Karatay Array 45.19 97 *e*P **P 04 30 59.5 +0.7**
comp=Z,12nm,1.1s,mb4.6
KKAR Karatay Array 45.19 97 *e*P **P 04 30 59.5 +0.6**
comp=Z,12nm,1.1s,mb4.6
MALT Malatya 45.25 132 *e*P **P 04 31 01.2 +1.9**
comp=Z,30nm,1.0s,mb5.1
MALT Malatya 45.25 132 ⇓*i*P **P 04 31 01.2 +1.8**
MALT Malatya 45.25 132 ⇓*i*P **P 04 31 01.2 +1.8**
A13A Flathead Natio 45.28 300 ⇑P **P 04 30 59.4 -0.1**
baz=45
C21A Desert Coulee 45.31 293 ⇓P **P 04 30 59.4 -0.3**
baz=45
B17A L&G Farms, Che 45.40 296 ⇑P **P 04 30 59.6 -0.8**
baz=45
A12A Yaak River Ran 45.45 301 ⇑P **P 04 31 01.0 +0.1**
baz=45
C20A Veseth Ranch, 45.55 294 ⇑P **P 04 31 01.5 -0.2**
baz=45,SNR=12
B15A Bradely Ranch, 45.63 298 ⇑P **P 04 31 01.2 -1.1**
baz=45
C19A Slack Wire Ran 45.69 295 ⇑P **P 04 31 02.7 0.0**
baz=46,SNR=5.9
B13A Whitefish 45.84 300 ⇓P **P 04 31 04.0 +0.1**
baz=46,SNR=5.7
C16A Fuhringer Ranc 46.01 297 ⇑P **P 04 31 04.8 -0.4**
baz=46,SNR=7.5
C17A Wharram Farm, 46.03 296 ⇑P **P 04 31 04.8 -0.7**
baz=46
FRU Bishkek 46.12 93 *e*P **P 04 31 06.0 -0.2**
C15A Salmond Ranch, 46.16 298 ⇑P **P 04 31 05.7 -0.8**
baz=46
D20A Manuel Ranch, 46.18 294 ⇓P **P 04 31 06.6 0.0**
baz=46,SNR=9.9
SONM Songino Array 46.18 61 P **P 04 31 05.6 -1.0**
comp=Z,2.4nm,0.8s,mb4.2,baz=330,slow=5.6,SNR=9.4
SONM LR LR 04 51 38.5
comp=Z,559nm,20.6s,MS4.5,baz=7.7,slow=38
SONM Songino Array 46.18 61 P **P 04 31 05.6 -1.0**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM MLR MLR
comp=Z,559nm,20.7s
SONM Songino Array 46.18 61 P **P 04 31 05.6 -1.0**
TKM2 Tokmak 2 46.19 92 *e*P **P 04 31 08.0 +1.3**
TKM2 pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
TKM2 Tokmak 2 46.19 92 *e*P **P 04 31 08.0 +1.3**
comp=Z,9.2nm,1.3s,mb4.5
TKM2 Tokmak 2 46.19 92 *e*P **P 04 31 08.0 +1.3**
comp=Z,9.2nm,1.3s,mb4.5
D19A Cripps Ranch, 46.22 294 ⇓P **P 04 31 07.0 +0.1**
baz=46,SNR=16
LAO LASA Array 46.29 292 *e*P **P 04 31 08.6 +1.2**
comp=Z,20nm,1.1s,mb5.0
LAO LASA Array 46.29 292 *e*P **P 04 31 08.6 +1.1**
comp=Z,20nm,1.1s,mb5.0
NEW Newport 46.31 302 ⇑P **P 04 31 07.8 +0.2**
baz=46
NEW Newport 46.31 302 *e*P **P 04 31 07.9 +0.2**
NEW pmax pmax
comp=Z,9.0nm,1.6s
NEW Newport 46.31 302 *e*P **P 04 31 07.9 +0.3**
comp=Z,8.7nm,1.6s,mb4.4
NEW Newport 46.31 302 *e*P **P 04 31 07.9 +0.2**
comp=Z,8.6nm,1.6s,mb4.4
C14A Swan Lake 46.33 299 ⇑P **P 04 31 07.3 -0.5**
baz=46,SNR=5.9
BSMT Bassoo Peak 46.39 300 *e*P **P 04 31 08.9 +0.6**
comp=Z,11nm,1.2s,mb4.7
BSMT Bassoo Peak 46.39 300 *e*P **P 04 31 08.9 +0.6**
comp=Z,11nm,1.2s,mb4.7
B08A Colville Reser 46.52 304 ⇑P **P 04 31 09.5 +0.2**
baz=46,SNR=5.4
C13A Hot Springs 46.53 300 ⇓P **P 04 31 09.2 -0.2**
baz=46,SNR=7.6
SWMT Swartz Lake 46.62 299 *e*P **P 04 31 10.1 0.0**
comp=Z,5.6nm,1.2s,mb4.4
SWMT Swartz Lake 46.62 299 *e*P **P 04 31 10.1 0.0**
comp=Z,5.6nm,1.2s,mb4.4
AML Almayashu 46.65 94 *e*P **P 04 31 12.1 +1.7**
comp=Z,6.9nm,0.8s,mb4.6
AML Almayashu 46.65 94 *e*P **P 04 31 12.1 +1.7**
comp=Z,6.9nm,0.8s,mb4.6
D16A Dana Ranch, Ca 46.74 297 ⇑P **P 04 31 10.9 -0.1**
baz=46,SNR=6.4
SLMT Seeley Lake 46.81 299 *e*P **P 04 31 11.1 -0.5**
comp=Z,6.0nm,1.1s,mb4.4
SLMT Seeley Lake 46.81 299 *e*P **P 04 31 11.1 -0.4**
comp=Z,6.0nm,1.1s,mb4.4
E19A Rath Farm, Rou 46.89 294 ⇑P **P 04 31 12.3 +0.1**
baz=47,SNR=13
D14A Greenough 46.97 299 ⇑P **P 04 31 12.3 -0.5**
baz=47,SNR=6.0
HRY Holter Researc 47.09 297 *e*P **P 04 31 13.7 -0.1**
comp=Z,9.2nm,0.9s,mb4.7
HRY Holter Researc 47.09 297 *e*P **P 04 31 13.7 0.0**
comp=Z,9.2nm,0.9s,mb4.7
CHMT Chmberlain Mo 47.09 298 *e*P **P 04 31 13.9 +0.1**
comp=Z,10nm,1.5s,mb4.5
CHMT Chamberlain Mo 47.09 298 *e*P **P 04 31 13.9 +0.1**
comp=Z,10nm,1.5s,mb4.5
E16A East Helena 47.24 297 ⇓P **P 04 31 14.7 -0.3**
baz=47,SNR=6.9
D12A Red Ives Fores 47.26 300 ⇑P **P 04 31 14.9 -0.1**
baz=47
WMQ Urumqi 47.26 80 *e*P **P 04 31 16.0 +0.9**
WMQ sP sP 04 31 23.0 +3.5
WMQ PP PP 04 33 07.0 +1.2
WMQ S **S 04 38 09.0 +1.2**
WMQ ScS ScS 04 41 07.0 -1.5
WMQ SS SS 04 41 30.0 -4.5
WMQ pmax pmax
comp=Z,15nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,75nm,5.0s
WMQ LR LR
comp=N,140nm,15.0s,MS4.2
WMQ LR LR
comp=E,140nm,15.0s,MS4.2
WMQ LR LR
comp=Z,150nm,15.0s,MS4.1
MSO Missoula 47.27 299 ⇓P **P 04 31 15.3 +0.1**
baz=47,SNR=9.9
MSO Missoula 47.27 299 *e*P **P 04 31 15.2 0.0**
comp=Z,11nm,1.3s,mb4.6
MSO Missoula 47.27 299 *e*P **P 04 31 15.2 0.0**
comp=Z,11nm,1.3s,mb4.6
E15A Deer Lodge 47.49 298 ⇓P **P 04 31 16.4 -0.4**
baz=47
F19A Roth Farm, Mol 47.51 294 ⇑P **P 04 31 17.2 +0.1**
baz=47,SNR=13
ECSD EROS Data Cent 47.68 282 *e*P **P 04 31 18.6 +0.2**
comp=Z,24nm,1.0s,mb5.2
ECSD EROS Data Cent 47.68 282 *e*P **P 04 31 18.6 +0.2**
comp=Z,24nm,1.0s,mb5.2
E13A Victor 47.69 299 ⇓P **P 04 31 18.2 -0.2**
baz=48,SNR=13
E12A Beaver Dam Sad 47.91 300 ⇑P **P 04 31 19.1 -1.0**
baz=48,SNR=7.7
G20A Bridger 48.02 293 ⇑P **P 04 31 21.2 +0.2**
baz=48,SNR=9.0
LRM Limekiln Ridge 48.05 297 *e*P **P 04 31 21.5 +0.3**
comp=Z,73nm,1.6s,mb5.5
LRM Limekiln Ridge 48.05 297 *e*P **P 04 31 21.5 +0.3**
comp=Z,73nm,1.6s,mb5.5
BOZ Bozeman (W) 48.10 296 ⇑P **P 04 31 22.1 +0.5**
baz=48
RLMT Red Lodge 48.27 294 ⇑pP pP 04 31 23.8 -2.3
baz=48,SNR=7.6
RLMT Red Lodge 48.27 294 *e*P **P 04 31 23.9 +0.9**
comp=Z,20nm,1.5s,mb4.9
RLMT Red Lodge 48.27 294 *e*P **P 04 31 23.9 +1.0**
comp=Z,20nm,1.5s,mb4.9
F13A Darby 48.35 299 ⇑P **P 04 31 22.6 -0.9**
baz=48
RSSD Black Hills 48.46 289 *e*P **P 04 31 25.1 +0.7**
RSSD pmax pmax
comp=Z,20nm,1.3s,mb5.0
RSSD Black Hills 48.46 289 *e*P **P 04 31 25.1 +0.7**
comp=Z,20nm,1.3s,mb5.0
RSSD Black Hills 48.46 289 *e*P **P 04 31 25.1 +0.7**
comp=Z,20nm,1.3s,mb5.0
G15A Dillon 48.70 297 ⇓P **P 04 31 25.4 -0.8**
baz=48
H20A Greybull 48.70 293 ⇓P **P 04 31 25.9 -0.3**
baz=48,SNR=10.0
G13A Cobalt 49.02 299 ⇑P **P 04 31 28.1 -0.5**
baz=49,SNR=6.9
MCMT McKenzie Canyo 49.08 297 *e*P **P 04 31 29.6 +0.5**
comp=Z,3.1nm,1.1s,mb4.2
MCMT McKenzie Canyo 49.08 297 *e*P **P 04 31 29.6 +0.5**
comp=Z,3.1nm,1.1s,mb4.2
H15A Lima 49.26 297 ⇑P **P 04 31 31.1 +0.6**
baz=49,SNR=12
I21A Big Trails, Te 49.26 292 ⇓P **P 04 31 30.3 -0.3**
baz=49,SNR=15
I19A Meeteetse 49.29 294 ⇑P **P 04 31 31.2 +0.5**
baz=49,SNR=7.2
H14A Leadore 49.36 298 ⇓pP pP 04 31 32.2 -2.3
baz=49,SNR=7.5
FLWY Flagg Ranch 49.50 295 *e*P **P 04 31 33.8 +1.4**
comp=Z,32nm,1.6s,mb5.1
FLWY Flagg Ranch 49.50 295 *e*P **P 04 31 33.8 +1.4**
comp=Z,32nm,1.6s,mb5.1
J22A Midwest 49.52 291 ⇑P **P 04 31 32.0 -0.6**
baz=49,SNR=9.4
H13A Challis 49.54 299 ⇑P **P 04 31 33.0 +0.4**
baz=49,SNR=9.4
KSH Kashi 49.57 93 *e*P **P 04 31 36.0 +3.0**
KSH *e*pP pP 04 31 40.4 +4.3
KSH *e*sP sP 04 31 42.9 +5.5
KSH *e*PcP PcP 04 32 57.7 +3.3
KSH *e*PP PP 04 33 30.9 +4.0
KSH *e*ScP ScP 04 36 50.5 +1.2
KSH *i* PcS PcS 04 36 52.2 +1.2
KSH *e*S **S 04 38 42.1 +1.6**
KSH *e*sS sS 04 38 51.3 +5.6
KSH *e*ScS ScS 04 41 24.2 +0.1
KSH *e*SS SS 04 42 12.6 +0.7
KSH pmax pmax
comp=Z,18nm,1.3s,mb4.9
KSH pmax pmax
comp=Z,130nm,4.6s
KSH LR LR
comp=N,360nm,9.9s
KSH LR LR
comp=E,630nm,15.5s
KSH LR LR
comp=Z,670nm,18.6s,MS4.7
H12A Diamond D Ranc 49.64 299 P **P 04 31 33.5 +0.1**
baz=49,SNR=9.6
IMW Indian Meadow 49.71 295 *e*P **P 04 31 34.9 +0.9**
comp=Z,24nm,1.5s,mb5.0
IMW Indian Meadow 49.71 295 *e*P **P 04 31 34.9 +0.9**
comp=Z,24nm,1.5s,mb5.0
J21A Lysite 49.74 292 ⇓P **P 04 31 34.4 +0.2**
baz=50,SNR=5.1
I16A Newdale 49.81 296 ⇓pP pP 04 31 36.3 -1.7
baz=50,SNR=5.9
J20A Shoshoni 49.83 293 ⇑P **P 04 31 35.1 +0.2**
baz=50,SNR=17
J19A Crowheart 50.05 293 ⇓P **P 04 31 37.0 +0.3**
baz=50,SNR=14
I13A Wildhorse Cree 50.16 298 ⇓P **P 04 31 37.6 +0.3**
baz=50,SNR=10
J18A Kendall Valley 50.25 294 ⇓P **P 04 31 38.2 +0.1**
baz=50,SNR=8.4
K22A Casper 50.28 291 ⇑P **P 04 31 37.5 -0.8**
baz=50,SNR=9.0
K21A Alcova 50.40 292 ⇓P **P 04 31 39.0 -0.3**
baz=50,SNR=5.8
I12A Atlanta 50.42 299 ⇑P **P 04 31 38.9 -0.4**
baz=50
J15A Blackfoot 50.42 297 ⇑pP pP 04 31 40.3 -2.3
baz=50,SNR=8.0
J16A Bone 50.42 296 ⇓P **P 04 31 39.5 +0.1**
baz=50,SNR=5.1
HLID Hailey 50.54 298 *e*P **P 04 31 40.0 -0.3**
comp=Z,11nm,1.7s,mb4.5
HLID Hailey 50.54 298 *e*P **P 04 31 40.0 -0.3**
comp=Z,11nm,1.7s,mb4.5
K20A Yellowstone Ra 50.54 293 ⇓P **P 04 31 40.0 -0.3**
baz=50,SNR=9.7
BW06 Boulder Array 50.62 294 ⇓P **P 04 31 40.4 -0.4**
baz=50,SNR=8.2
PDAR Pinedale Array 50.62 294 P **P 04 31 40.5 -0.4**
comp=Z,3.5nm,1.1s,mb4.2,baz=23,slow=8.0,SNR=19
PDAR LR LR 04 54 49.0
comp=Z,106nm,19.5s,MS3.9,baz=29,slow=38
PDAR Pinedale Array 50.62 294 P **P 04 31 40.5 -0.4**
J14A Carey 50.65 298 ⇓P **P 04 31 40.8 -0.3**
baz=50
J13A Cove Ranch, Pi 50.67 298 ⇑P **P 04 31 41.5 +0.3**
baz=50,SNR=14
K18A Toltan Ranch, 50.82 294 ⇓P **P 04 31 42.7 +0.3**
baz=51,SNR=8.7
L22A Ellis Ranch, M 50.87 291 ⇓P **P 04 31 43.1 +0.4**
baz=51
L21A Rawlins 51.08 292 ⇓P **P 04 31 43.9 -0.5**
baz=51,SNR=6.3
K15A Arbon 51.13 297 ⇑P **P 04 31 44.8 +0.1**
baz=51,SNR=5.6
OGNE Ogallala 51.26 286 *e*P **P 04 31 45.9 +0.2**
comp=Z,73nm,1.6s,mb5.4
OGNE Ogallala 51.26 286 *e*P **P 04 31 45.9 +0.2**
comp=Z,73nm,1.6s,mb5.4
RWWY Rawlins 51.32 291 *e*P **P 04 31 46.5 +0.3**
comp=Z,12nm,1.1s,mb4.7
RWWY Rawlins 51.32 291 *e*P **P 04 31 46.5 +0.3**
comp=Z,12nm,1.1s,mb4.7
M21A Separation Pea 51.43 291 ⇓P **P 04 31 46.9 0.0**
baz=51,SNR=14
BLA Blacksburg 51.45 264 *e*P **P 04 31 47.8 +0.6**
BLA pmax pmax
comp=Z,15nm,1.0s,mb4.9
BLA Blacksburg 51.45 264 *e*P **P 04 31 47.8 +0.6**
comp=Z,15nm,1.0s,mb4.9
BLA Blacksburg 51.45 264 *e*P **P 04 31 47.8 +0.6**
comp=Z,15nm,1.0s,mb4.9

L16A	Fish Haven	51.63	295	⇓P	P	04 31 48.6 +0.1
	baz=51,SNR=5.6					
M20A	Sweetwater, Wa	51.66	292	⇑P	P	04 31 49.2 +0.5
	baz=51,SNR=5.5					
USIN	University of	51.88	272	eP	P	04 31 50.5 +0.1
	comp=Z,32nm,1.3s,mb5.1					
USIN	University of	51.88	272	eP	P	04 31 50.5 +0.1
	comp=Z,32nm,1.3s,mb5.1					
N23A	Red Feather La	51.91	290	⇑P	P	04 31 51.0 +0.5
	baz=52,SNR=13					
HWUT	Hardware Ranch	52.05	295	eP	P	04 31 51.7 +0.1
	comp=Z,13nm,1.4s,mb4.7					
HWUT	Hardware Ranch	52.05	295	eP	P	04 31 51.7 +0.1
	comp=Z,13nm,1.4s,mb4.7					
N22A	Wattenberg Ran	52.08	290	⇑P	P	04 31 51.7 -0.1
	baz=52,SNR=8.6					
N20A	Spence Gulch,	52.32	292	⇑P	P	04 31 54.0 +0.4
	baz=52,SNR=12					
M15A	Larsen Ranch,	52.32	296	⇑P	P	04 31 53.7 +0.1
	baz=52,SNR=6.4					
M16A	Huntsville	52.34	295	P	P	04 31 54.4 +0.6
	baz=52,SNR=7.3					
N18A	Larsen Ranch,	52.39	293	⇓P	P	04 31 54.0 -0.1
	baz=52,SNR=10					
O23A	Lake Granby, G	52.57	290	⇓pP	pP	04 31 56.9 -1.8
	baz=52,SNR=5.5					
N17A	Moffit Pass	52.59	295	⇓P	P	04 31 55.5 -0.2
	baz=52,SNR=8.4					
CN2	Changchun	52.61	45	eP	P	04 31 57.6 +1.9
O22A	Kremmling	52.72	290	⇓pP	pP	04 31 57.7 -2.1
	baz=52,SNR=17					
ISCO	Idaho Springs	52.93	289	⇑P	P	04 31 58.5 +0.4
	baz=53,SNR=6.3					
ISCO	Idaho Springs	52.93	289	eP	P	04 31 59.4 +1.2
ISCO				pmax	pmax	
	comp=Z,10.0nm,1.3s,mb4.6					
ISCO	Idaho Springs	52.93	289	eP	P	04 31 59.4 +1.3
	comp=Z,9.8nm,1.3s,mb4.6					
ISCO	Idaho Springs	52.93	289	eP	P	04 31 59.4 +1.2
	comp=Z,9.8nm,1.3s,mb4.6					
O19A	Miners Draw (B	52.97	293	⇓pP	pP	04 31 59.7 -1.9
	baz=53					
CBKS	Cedar Bluff	52.98	283	⇑P	P	04 31 58.6 0.0
	baz=53					
O20A	White River Ci	53.00	292	⇓pP	pP	04 31 59.9 -1.9
	baz=53,SNR=14					
P22A	Eagle	53.30	290	⇓pP	pP	04 32 02.0 -2.1
	baz=53,SNR=10					
O17A	Robinson Place	53.31	294	⇓pP	pP	04 32 01.8 -2.3
	baz=53,SNR=5.2					
KBL	Kabul	53.33	101	eP	P	04 32 01.4 +0.3
KBL	Kabul	53.33	101	eP	P	04 32 01.4 +0.3
GTA	Gaotai	53.46	70	P	P	04 32 01.4 -0.7
GTA				pP	pP	04 32 06.1 +0.9
GTA				sP	sP	04 32 08.5 +2.0
GTA				S	S	04 39 33.8 -0.3
GTA				sS	sS	04 39 41.9 +2.6
GTA				SS	SS	04 43 14.2 +0.7
GTA				pmax	pmax	
	comp=Z,9.0nm,1.1s,mb4.6					
GTA				pmax	pmax	
	comp=Z,54nm,5.2s					
GTA				LR	LR	
	comp=N,200nm,13.8s,MS4.4					
GTA				LR	LR	
	comp=E,140nm,14.9s,MS4.4					
GTA				LR	LR	
	comp=Z,240nm,13.3s,MS4.4					
TKL	Tuckaleechee C	53.51	267	eP	P	04 32 02.6 +0.1
TKL	Tuckaleechee C	53.51	267	eP	P	04 32 02.6 +0.1
P19A	Cripple Cowboy	53.60	292	⇓pP	pP	04 32 04.0 -2.3
	baz=53,SNR=10					
P20A	De Beque	53.64	292	⇓P	P	04 32 03.9 +0.5
	baz=53,SNR=6.6					
Q24A	Divide	53.68	289	⇓pP	pP	04 32 04.3 -2.5
	baz=53					
SMCO	Snowmass	53.74	290	eP	P	04 32 05.2 +1.1
	comp=Z,34nm,1.4s,mb5.1					
SMCO	Snowmass	53.74	290	eP	P	04 32 05.2 +1.0
	comp=Z,34nm,1.4s,mb5.1					
HHC	Hu-ho-hao-te	53.76	59	eP	P	04 32 06.1 +1.9
HHC				pP	pP	04 32 10.7 +3.3
HHC				sP	sP	04 32 13.2 +4.6
HHC				PcP	PcP	04 33 11.2 +1.2
HHC				PP	PP	04 34 08.4 +3.6
HHC				ScP	ScP	04 37 08.1 +0.7
HHC				S	S	04 39 38.8 +0.7
HHC				sS	sS	04 39 46.8 +3.5
HHC				ScS	ScS	04 41 52.0 -1.0
HHC				SS	SS	04 43 18.8 +0.7
HHC				pmax	pmax	
	comp=Z,15nm,1.0s,mb4.9					
HHC				pmax	pmax	
	comp=Z,85nm,5.0s					
HHC				LR	LR	
	comp=N,470nm,15.3s,MS4.9					
HHC				LR	LR	
	comp=E,690nm,18.8s,MS4.9					
HHC				LR	LR	
	comp=Z,760nm,16.2s,MS4.8					
Q22A	Crested Butte,	54.04	290	⇓pP	pP	04 32 07.9 -1.7
	baz=54,SNR=14					
Q20A	Ridgley Place,	54.16	292	⇓P	P	04 32 06.8 -0.4
	baz=54					
Q21A	Lamborn Mesa,	54.17	291	⇓pP	pP	04 32 08.6 -1.8
	baz=54					
P14A	Drum Mountains	54.24	296	⇓P	P	04 32 08.3 +0.5
	baz=54,SNR=6.2					
SWET	Sewanee	54.29	269	eP	P	04 32 06.3 -1.9
SWET	Sewanee	54.29	269	eP	P	04 32 06.3 -1.9
Q18A	Rafter H Ranch	54.29	293	⇓P	P	04 32 07.5 -0.7
	baz=54,SNR=7.2					
R25A	Fountain Ranch	54.34	288	⇑P	P	04 32 08.3 -0.3
	baz=54					
JSC	Jenkinsville	54.45	264	eP	P	04 32 09.4 +0.1
JSC	Jenkinsville	54.45	264	eP	P	04 32 09.4 +0.1
R21A	Cimarron	54.62	291	⇓pP	pP	04 32 12.1 -1.7
	baz=54,SNR=15					
Q16A	Castle Valley	54.63	294	⇓pP	pP	04 32 11.6 -2.1
	baz=54,SNR=5.4					
R22A	Saguache, Gunn	54.64	290	⇓pP	pP	04 32 12.2 -1.6
	baz=54,SNR=9.5					
PV04	Paradox Valley	54.80	292	eP	P	04 32 12.6 +0.7
PV04	Paradox Valley	54.80	292	eP	P	04 32 12.6 +0.7
S25A	Robets Cordova	54.84	288	⇓P	P	04 32 12.5 +0.3
	baz=55,SNR=15					
Q14A	Sevier Lake (B	54.87	296	⇑pP	pP	04 32 13.3 -2.2
	baz=55,SNR=5.8					
SDCO	Great Sand Dun	54.92	289	P	P	04 32 13.2 +0.4
	baz=55,SNR=16					
SDCO	Great Sand Dun	54.92	289	eP	P	04 32 13.1 +0.4
	comp=Z,19nm,1.4s,mb4.9					
SDCO	Great Sand Dun	54.92	289	eP	P	04 32 13.1 +0.4
	comp=Z,19nm,1.4s,mb4.9					
R20A	Redvale	54.93	292	⇓P	P	04 32 13.3 +0.6
	baz=55,SNR=10					
R19A	Curley Farm, L	54.96	292	⇓P	P	04 32 12.9 -0.1
	baz=55,SNR=9.8					
R18A	Canyonlands Na	54.96	293	⇑P	P	04 32 12.8 -0.2
	baz=55,SNR=5.9					
PV01	Paradox Valley	55.01	292	eP	P	04 32 14.1 +0.7
	comp=Z,2μm,1.0s					
PV01	Paradox Valley	55.01	292	eP	P	04 32 14.1 +0.7
	comp=Z,2μm,1.0s					
R17A	Hanksville Air	55.05	294	⇓P	P	04 32 14.0 +0.4
	baz=55,SNR=10					
S22A	4UR Ranch, Cre	55.13	290	⇑pP	pP	04 32 15.5 -1.9
	baz=55,SNR=11					
BJI	Beijing	55.17	54	P	P	04 32 14.1 -0.4
BJI				S	S	04 39 58.8 +1.6
BJI				pmax	pmax	
	comp=Z,5.0nm,1.5s,mb4.3					
BJI				LR	LR	
	comp=Z,71nm,32.9s,MS3.5					
MSU	Marysvale	55.17	295	eP	P	04 32 15.1 +0.6
MSU				pmax	pmax	
	comp=Z,5.0nm,1.0s,mb4.5					
MSU	Marysvale	55.17	295	eP	P	04 32 15.1 +0.6
	comp=Z,4.7nm,1.0s,mb4.5					
MSU	Marysvale	55.17	295	eP	P	04 32 15.1 +0.6
	comp=Z,4.7nm,1.0s,mb4.5					
S20A	Disappointment	55.27	291	⇑pP	pP	04 32 16.5 -2.0
	baz=55,SNR=11					
Q11A	Duckwater	55.35	299	⇓P	P	04 32 15.3 -0.5
	baz=55,SNR=5.5					
S21A	Coal Bank Pass	55.35	291	⇓P	P	04 32 15.9 +0.1
	baz=55,SNR=5.3					
Q10A	Clear Creek Ra	55.47	299	⇑P	P	04 32 17.2 +0.5
	baz=55,SNR=7.3					
S19A	Harvey Farm, M	55.47	292	⇑P	P	04 32 17.1 +0.4
	baz=55,SNR=17					
T24A	Torres, Weston	55.51	288	⇓P	P	04 32 16.9 -0.1
	baz=55,SNR=6.0					
S18A	Hurst Farm, Bl	55.66	293	⇓P	P	04 32 18.0 -0.1
	baz=55,SNR=9.8					
R11A	Troy Canyon, C	55.83	298	⇑P	P	04 32 18.8 -0.4
	baz=56,SNR=5.4					
S16A	Weppner Ranch,	55.86	294	⇑pP	pP	04 32 20.6 -2.1
	baz=56,SNR=10					
MVCO	Mesa Verde	55.90	291	⇑P	P	04 32 20.4 +0.6
	baz=56,SNR=6.0					
MVCO	Mesa Verde	55.90	291	eP	P	04 32 20.8 +1.0
	comp=Z,20nm,1.4s,mb5.0					
MVCO	Mesa Verde	55.90	291	eP	P	04 32 20.8 +1.0
	comp=Z,20nm,1.4s,mb5.0					
S15A	Panguitch	56.02	295	⇑P	P	04 32 21.3 +0.6
	baz=56,SNR=7.4					
U25A	Circle Dot Ran	56.07	287	⇑P	P	04 32 20.8 -0.2
	baz=56					
NVAR	Mina Array Bea	56.13	301	P	P	04 32 21.7 +0.3
	comp=Z,2.3nm,0.9s,mb4.2,baz=18,slow=5.9,SNR=13					
NVAR	Mina Array Bea	56.13	301	P	P	04 32 21.7 +0.3
MIAR	Mount Ida	56.18	276	eP	P	04 32 21.9 +0.1
MIAR				pmax	pmax	
	comp=Z,33nm,1.6s,mb5.1					
MIAR	Mount Ida	56.18	276	eP	P	04 32 21.9 +0.1
	comp=Z,33nm,1.6s,mb5.1					
MIAR	Mount Ida	56.18	276	eP	P	04 32 21.9 +0.1
	comp=Z,33nm,1.6s,mb5.1					
T18A	Mexican Hat	56.18	293	⇑P	P	04 32 21.9 +0.1
	baz=56,SNR=10.0					
S13A	Holt Ranch, En	56.33	297	⇓pP	pP	04 32 23.8 -2.3
	baz=56					
S10A	Tonopah Range,	56.39	299	⇓P	P	04 32 22.6 -0.6
	baz=56,SNR=5.7					
U23A	El Rito	56.42	289	⇑P	P	04 32 23.8 +0.3
	baz=56,SNR=7.8					
S12A	Delamar Landin	56.45	298	⇓pP	pP	04 32 24.7 -2.2
	baz=56,SNR=6.0					
U22A	Llaves	56.47	290	⇓P	P	04 32 23.3 -0.5
	baz=56,SNR=6.7					
V26A	Tequesquite Ra	56.57	287	⇑P	P	04 32 23.4 -1.2
	baz=56,SNR=5.2					
V25A	Rancho No Teng	56.66	287	⇓P	P	04 32 25.5 +0.3
	baz=56,SNR=7.4					
T15A	Red Dirt Ranch	56.67	295	⇑P	P	04 32 25.7 +0.5
	baz=56,SNR=10					
WMOK	Wichita Mounta	56.82	282	eP	P	04 32 26.3 -0.1
WMOK				pmax	pmax	
	comp=Z,11nm,1.1s,mb4.8					
WMOK	Wichita Mounta	56.82	282	eP	P	04 32 26.3 -0.1
	comp=Z,11nm,1.1s,mb4.8					
WMOK	Wichita Mounta	56.82	282	eP	P	04 32 26.3 -0.1
	comp=Z,11nm,1.1s,mb4.8					
T11A	Corn Creek, Al	56.86	298	⇓P	P	04 32 26.5 -0.1
	baz=57					
V24A	Rampart Ranch,	56.87	288	⇓P	P	04 32 26.3 -0.4
	baz=57					
U18A	Rough Rock, Ch	56.88	293	⇓P	P	04 32 27.2 +0.4
	baz=57,SNR=5.9					
V22A	San Miguel Ran	56.93	290	⇓P	P	04 32 27.2 +0.1
	baz=57					
W27A	Bowe Ranch, En	57.17	286	⇓P	P	04 32 28.9 0.0
	baz=57					
U15A	North Rim	57.23	295	P	P	04 32 29.6 +0.3
	baz=57,SNR=7.1					
V20A	Brimhall	57.28	291	⇓P	P	04 32 29.3 -0.4
	baz=57					
LZH	Lanzhou	57.32	67	eP	P	04 32 29.8 -0.1
LZH				pP	pP	04 32 34.5 +1.4
LZH				sP	sP	04 32 38.1 +3.8
LZH				pmax	pmax	
	comp=Z,14nm,1.2s,mb4.9					
U16A	Tuba City	57.34	294	⇑pP	pP	04 32 31.0 -2.2
	baz=57,SNR=16					
W24A	Lazy 6 Ranch,	57.39	288	⇓P	P	04 32 30.3 -0.2
	baz=57,SNR=6.7					
V17A	Tonalea, Kykot	57.80	293	⇓P	P	04 32 33.5 +0.2
	baz=58					
ANMO	Albuquerque	57.81	289	eP	P	04 32 33.3 -0.1
ANMO				pmax	pmax	
	comp=Z,13nm,1.6s					
ANMO	Albuquerque	57.81	289	eP	P	04 32 33.3 -0.1
	comp=Z,13nm,1.6s,mb4.7					
ANMO	Albuquerque	57.81	289	eP	P	04 32 33.3 -0.1
	comp=Z,13nm,1.6s,mb4.7					
V15A	Kaibab Nationa	57.81	295	⇑P	P	04 32 33.8 +0.5
	baz=58,SNR=10.0					
W21A	San Fidel	57.83	290	⇑P	P	04 32 34.1 +0.6
	baz=58					
W20A	Ramah	57.95	291	⇓P	P	04 32 33.7 -0.7
	baz=58,SNR=6.9					
WUAZ	Wupatki	57.99	294	⇓P	P	04 32 34.4 -0.2
	baz=58,SNR=5.5					
WUAZ	Wupatki	57.99	294	eP	P	04 32 35.5 +0.8
	comp=Z,15nm,1.4s,mb4.8					
WUAZ	Wupatki	57.99	294	eP	P	04 32 35.5 +0.9
	comp=Z,15nm,1.4s,mb4.8					
V13A	Grand Canyon W	58.05	296	⇓P	P	04 32 35.3 +0.3
	baz=58,SNR=8.4					
V14A	Boquillas Ran	58.13	295	pP	pP	04 32 37.1 -1.7
	baz=58,SNR=12					
V12A	Nelson	58.30	297	⇑P	P	04 32 36.8 0.0
	baz=58					
MPMC	Manual Prospec	58.34	300	⇑P	P	04 32 35.9 -1.2
	baz=58,SNR=7.7					
Y27A	Causey	58.35	286	⇑P	P	04 32 37.3 +0.2
	baz=58,SNR=6.2					
W16A	Flagstaff	58.43	294	⇑P	P	04 32 37.7 0.0
	baz=58					
X20A	Quemado	58.52	291	⇑P	P	04 32 38.4 0.0
	baz=58,SNR=7.4					
W14A	Seligman	58.54	295	⇑pP	pP	04 32 39.7 -2.0
	baz=58,SNR=9.0					
Y24A	Capitan	58.66	288	⇓P	P	04 32 39.6 +0.3
	baz=58					
Z27A	Tatum	58.91	286	⇓P	P	04 32 41.2 +0.1
	baz=59,SNR=11					
Z26A	Caprock	59.07	286	⇑P	P	04 32 41.5 -0.7
	baz=59,SNR=6.7					
X16A	Lo Mia Camp, P	59.08	294	⇑P	P	04 32 42.1 -0.1
	baz=59					
X15A	Humboldt	59.13	294	⇑P	P	04 32 42.7 +0.1
	baz=59,SNR=6.0					
KSRS	Korea Array	59.16	44	P	P	04 32 40.6 -2.1
	comp=Z,0.4nm,0.3s,mb3.9,baz=347,slow=9.6,SNR=5.3					
KSRS				LR	LR	05 01 01.7
	comp=Z,51nm,19.2s,MS3.7,baz=74,slow=39					
Z25A	Roswell	59.18	287	⇓P	P	04 32 43.4 +0.5
	baz=59					
Y19A	Nutrioso	59.21	291	⇓P	P	04 32 43.6 +0.5
	baz=59					
X13A	Yucca	59.26	296	⇑P	P	04 32 44.3 +0.8
	baz=59					
Y18A	Canyon Day Jun	59.50	292	⇑P	P	04 32 45.7 +0.6
	baz=59					
Y16A	Circle Bar Ran	59.62	294	⇑P	P	04 32 45.2 -0.7
	baz=59,SNR=5.5					
125A	Gardner Draw,	59.78	287	⇓P	P	04 32 47.3 +0.3
	baz=60					
124A	Stringfield Ra	59.86	288	⇓P	P	04 32 48.3 +0.7
	baz=60,SNR=8.7					
GDL2	Guadalupe Moun	60.18	286	eP	P	04 32 49.6 -0.2
	comp=Z,3.5nm,1.0s,mb4.3					
GDL2	Guadalupe Moun	60.18	286	eP	P	04 32 49.7 -0.1
	comp=Z,3.5nm,1.0s,mb4.3					
328A	Wristen Ranch,	60.74	285	⇑P	P	04 32 53.2 -0.5
	baz=60,SNR=7.8					
117A	Oracle	60.79	293	⇓P	P	04 32 54.3 +0.3
	baz=61,SNR=6.1					
220A	Playas Peak, P	61.11	290	⇑P	P	04 32 56.1 0.0
	baz=61					
MJAR	Matsushiro Arr	61.12	35	P	P	04 32 54.6 -1.6
	comp=Z,0.7nm,0.3s,mb4.3,baz=356,slow=6.6,SNR=3.3					
MJAR	Matsushiro Arr	61.12	35	P	P	04 32 54.6 -1.6
MJAR				pmax	pmax	
	comp=Z,1.0nm,0.3s					
MJAR	Matsushiro Arr	61.12	35	P	P	04 32 54.6 -1.6
219A	White Tail Can	61.13	291	⇓P	P	04 32 56.8 +0.5
	baz=61					
JCT	Junction City	61.15	282	⇓P	P	04 32 56.8 +0.3
	baz=61,SNR=8.0					
JCT	Junction City	61.15	282	eP	P	04 32 56.6 +0.1
JCT				pmax	pmax	
	comp=Z,34nm,1.4s,mb5.3					
JCT	Junction City	61.15	282	eP	P	04 32 56.6 +0.1
	comp=Z,34nm,1.4s,mb5.3					
JCT	Junction City	61.15	282	eP	P	04 32 56.6 +0.1
	comp=Z,34nm,1.4s,mb5.3					
428A	Kincaid Ranch,	61.37	284	⇓P	P	04 32 58.1 +0.2
	baz=61,SNR=5.4					
217A	Green Valley	61.58	292	⇓P	P	04 33 00.2 +0.9
	baz=61,SNR=5.6					
425A	Indio Mountain	61.66	287	⇓P	P	04 32 59.6 -0.4
	baz=62,SNR=11					
DANN	Dangsing	61.76	88	eP	P	04 33 00.6 0.0
	comp=Z,64nm,1.0s,mb5.7					
528A	Cox Ranch, San	61.94	284	⇓P	P	04 33 01.8 0.0
	baz=62					
527A	Woodward Ranch	62.08	285	⇑P	P	04 33 02.5 -0.2
	baz=62					
GKN	Gorkha	62.24	87	eP	P	04 33 03.3 -0.5
	comp=Z,41nm,1.0s,mb5.5					
KOLN	Koldanda	62.30	88	eP	P	04 33 03.9 -0.3
CD2	Chengdu	62.39	68	eP	P	04 33 06.2 +1.4
CD2				pP	pP	04 33 10.8 +2.8
CD2				sP	sP	04 33 13.5 +4.3
CD2				PP	PP	04 35 25.5 +3.9
CD2				S	S	04 41 29.7 -1.4
CD2				sS	sS	04 41 37.4 +1.0
CD2				SS	SS	04 45 34.5 +0.5
CD2				pmax	pmax	
	comp=Z,10.0nm,0.6s,mb5.1					
CD2				pmax	pmax	
	comp=Z,30nm,5.8s					
CD2				LR	LR	
	comp=N,150nm,13.2s					
CD2				LR	LR	
	comp=Z,130nm,14.2s,MS4.2					
GUN	Gumba	62.53	86	eP	P	04 33 06.0 +0.2
KKN	Kakani	62.55	86	eP	P	04 33 05.9 0.0
	comp=Z,58nm,1.1s,mb5.6					
DMN	Daman	62.70	87	eP	P	04 33 06.5 -0.4
PKI	Pulchoki	62.78	86	eP	P	04 33 07.3 -0.2
TXAR	Lajitas Array	62.88	285	P	P	04 33 07.7 -0.4
	comp=Z,1.6nm,0.7s,mb4.2,baz=41,slow=4.4,SNR=19					
TXAR	Lajitas Array	62.88	285	P	P	04 33 07.7 -0.4
TXAR				pmax	pmax	
	comp=Z,2.0nm,0.7s					
TXAR	Lajitas Array	62.88	285	P	P	04 33 07.7 -0.4
TAPN	Taplejung	63.37	84	eP	P	04 33 10.3 -1.1
GYA	Guiyang	67.19	66	P	P	04 33 38.6 +2.4
GYA				PcP	PcP	04 34 06.8 +2.7
GYA				PP	PP	04 36 07.6 +3.8
GYA				ScP		04 38 09.0
GYA				S	S	04 42 31.4 +1.1
GYA				SKS		04 43 31.0
GYA				pmax	pmax	
	comp=Z,20nm,1.0s,mb5.1					
GYA				pmax	pmax	
	comp=Z,110nm,4.9s					
GYA				LR	LR	
	comp=N,520nm,18.1s,MS4.9					
GYA				LR	LR	
	comp=E,480nm,19.8s,MS4.9					
GYA				LR	LR	
	comp=Z,490nm,18.0s,MS4.8					
TORD	Torodi Ar. Bea	67.67	175	P	P	04 33 37.4 -1.9
	comp=Z,0.6nm,0.8s,mb3.7,baz=359,slow=6.3,SNR=11					
KMI	Kunming	67.92	70	P	P	04 33 43.6 +2.9
KMI				pmax	pmax	
	comp=Z,4.0nm,0.5s,mb4.7					
CMAR	Chiang Mai Arr	73.87	75	P	P	04 34 15.3 -1.7
	comp=Z,1.5nm,0.7s,mb4.0,baz=346,slow=7.0,SNR=11					
CMAR				LR	LR	05 10 21.8
	comp=Z,87nm,20.9s,MS4.0,baz=185,slow=39					
CMAR	Chiang Mai Arr	73.87	75	P	P	04 34 15.3 -1.7
CMAR				pmax	pmax	
	comp=Z,2.0nm,0.7s					
CMAR				MLR	MLR	
	comp=Z,87nm,20.9s					
CMAR	Chiang Mai Arr	73.87	75	P	P	04 34 15.3 -1.7
ASAR	Alice Springs	120.19	46	PKP	PKPdf	04 41 30.2 -2.4
	comp=Z,0.4nm,0.6s,baz=325,slow=1.7,SNR=5.3					
ASAR	Alice Springs	120.19	46	PKIKP	PKPdf	04 41 30.2 -2.4

NIED ***09*** *04:24:00,34°.70N×136°.00E,h41km,Mw4.1 Best double couple: M0 1.44000×10^15 NP1:φs291.00000°,δ71.00000°, λ-115.00000°. NP2:φs165.00000°,δ31.00000°, λ-40.00000°.*

ISCJB ***09*** *04:24:48.0±0.7,34°.70N±0°.03×136°.00E±0°.03,h60km±7km, Error ellipse: s-maj=5.2km s-min=4.4km az=155.7*

JMA ***09*** *04:24:48.5,34°.71N×136°.01E,h57km±1km,M3.3 Broadband fault plane solution: P waves. NP1: φs307.00000°,δ55.00000°,λ-42.00000°. NP2:φs64.00000°, δ57.00000°,λ-137.00000°. Principal axes: T Plg1.0000°, Azm185.0000°; N Plg38.0000°, Azm94.0000°; P Plg52.0000°, Azm276.0000°;*

JMA Felt I J1.

ISC 09 04:24:48.4±0.7,34°.70N±0°.03×135°.99E±0°.03,h58km±8km, n18,σ0°.30/33,7C-6D,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHE	Heguri	0.26	260	⇓P	Pn	04 24 58.2	+0.3
JHE				S	Sn	04 25 05.1	+0.3
TSUJ	Tsu 2	0.35	88	⇓P	Pn	04 24 58.7	0.0
TSUJ				S	Sn	04 25 06.2	+0.1
JKN2	Miekihoku	0.51	153	⇓P	Pn	04 25 00.2	-0.1
JKN2				S	Sn	04 25 08.7	-0.3
JEG	Eigenji	0.54	37	P	Pn	04 25 00.8	+0.1
JEG				S	Sn	04 25 09.3	-0.3
JWY	Kouya	0.58	215	⇑P	Pn	04 25 01.6	+0.5
JWY				S	Sn	04 25 10.7	+0.4
JIE	Ise	0.66	117	⇓P	Pn	04 25 02.3	+0.2
JIE				S	Sn	04 25 12.3	+0.3
JWT	Wachi	0.76	320	⇑P	Pn	04 25 03.1	-0.1
JWT				S	Sn	04 25 13.7	-0.4
JMIK	Miki	0.78	278	P	Pn	04 25 04.0	+0.5
JFM	Mihama	0.83	359	⇑P	Pn	04 25 04.0	-0.1
JFM				S	Sn	04 25 15.3	-0.3
JAA	Atsumi	0.95	94	⇓P	Pn	04 25 05.5	-0.2
JAA				S	Sn	04 25 18.1	-0.3
JAJ2	Tsuna	0.96	253	⇑P	Pn	04 25 06.0	+0.2
JAJ2				S	Sn	04 25 18.7	+0.1
JKS	Kasai	0.99	287	⇓P	Pn	04 25 06.2	+0.1
JKS				eS	Sn	04 25 19.1	-0.2
JWM	Minabe	1.00	212	⇑P	Pn	04 25 06.1	-0.2
JWM				eS	Sn	04 25 18.8	-0.8
JGM	Miyama	1.16	31	⇑P	Pn	04 25 08.4	-0.1
JGM				eS	Sn	04 25 23.4	0.0
JKY	Yasaka	1.18	322	⇑P	Pn	04 25 08.6	-0.1
JKY				S	Sn	04 25 23.9	+0.1
JAO	Obara	1.18	61	P	Pn	04 25 08.5	-0.2
JWZ	Kozaga	1.19	191	P	Pn	04 25 08.7	-0.1
MAT	Matsushiro	2.58	44	P	Pn	04 25 27.7	+0.1
MAT				eS	Sn	04 25 58.5	+0.7

IDC ***09*** *04:34:57.8±0.9,51°.86N×176°.68E,h0km,mb3.9/11, mb1 4.2/12,mb1mx3.9/27,mbtmp4.0/12,ML4.5/1,Error ellipse: s-maj=31.6km s-min=17.6km az=157.0*

NEIC ***09*** *04:35:01.4,51°.70N×176°.69E,h6km,ML3.9(PMR), ML3.7(AEIC),After AEIC.*

ISCJB ***09

1.4nm,0.3s,baz=235,slow=7.3,SNR=8.6
PPLA Purkeypile 19.86 44 *eP* **Pn 04 39 35.6 +2.7**
31nm,1.4s
ILAR Eielson Array 22.68 41 P **P 04 40 00.6 -0.9**
1.8nm,0.7s,mb3.6,baz=254,slow=8.5,SNR=18
INK Inuvik 28.71 36 P **P 04 40 58.1 +1.2**
1.3nm,0.6s,mb3.9,baz=224,slow=15,SNR=5.2
MDJ Mudanjiang 31.76 276 P **P 04 41 25.6 +1.5**
MDJ pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
MDJ pmax pmax
comp=Z,60nm,10.8s
YKA Yellowknife Ar 36.93 46 P **P 04 42 08.4 -0.2**
comp=Z,1.9nm,0.4s,mb4.2,baz=280,slow=9.3,SNR=20
SONM Songino Array 43.94 294 P **P 04 43 07.1 +0.5**
comp=Z,1.3nm,0.5s,mb3.9,baz=69,slow=8.6,SNR=4.9
NVAR Mina Array Bea 46.23 80 P **P 04 43 25.3 +0.3**
comp=Z,0.5nm,0.6s,mb3.6,baz=293,slow=7.8,SNR=2.5
PDAR Pinedale Array 48.79 70 P **P 04 43 43.6 -1.2**
comp=Z,0.3nm,0.4s,mb3.7,baz=314,slow=4.3,SNR=3.6
FRB Frobisher Bay 54.06 30 P **P 04 44 23.2 -0.7**
comp=Z,1.6nm,0.3s,mb4.4,baz=323,slow=9.9,SNR=10
MKAR Makanchi Array 57.55 306 P **P 04 44 46.5 -2.6**
comp=Z,0.7nm,0.4s,mb4.0,baz=52,slow=10.0,SNR=5.5
TXAR Lajitas Array 61.31 78 P **P 04 45 14.5 -0.9**
comp=Z,0.1nm,0.3s,mb3.4,baz=312,slow=5.7,SNR=6.0
SCHQ Schefferville 61.33 36 P **P 04 45 14.2 -0.9**
comp=Z,0.9nm,0.4s,mb4.2,baz=300,slow=9.8,SNR=7.7
ASAR Alice Springs 84.02 219 P **P 04 47 30.1 0.0**
comp=Z,0.6nm,0.6s,mb3.9,baz=26,slow=5.7,SNR=7.4
MAW Mawson 145.14 218 PKPbc PKPbc 04 54 35.2 -0.1
comp=Z,1.7nm,0.6s,baz=72,slow=6.4,SNR=3.3

*IDC **09** 05:21:28.2±1.2, 4°.21S×102°.74E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/19, mbtmp3.9/9, Error ellipse: s-maj=60.1km s-min=15.7km az=53.0*
*ISCJB **09** 05:21:32.7±0.7, 4°.00S±0°.07×102°.84E±0°.06, h40km±7km, mb3.9/9, Error ellipse: s-maj=14.0km s-min=6.6km az=41.6*
*DJA **09** 05:21:34, 4°.12S×103°.01E, h10km, MLv4.3/10*
ISC 09 05:21:33.2±0.8, 3°.97S±0°.06×102°.90E±0°.06, h25km±7km, n23, σ1°33/30, mb3.9/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.40**	**172**	P	**Pb**	**05 21 40.9**	**-0.8**
MNAI				S	**Sb**	**05 21 48.0**	**+0.5**
KSI	**Kapahiang**	**0.44**	**315**	P	**Pb**	**05 21 43.8**	**+1.4**
KSI				S	**Sb**	**05 21 55.3**	**+6.7**
LHSI	**Lahat**	**0.64**	**78**	P	**Pb**	**05 21 44.3**	**-1.4**
MDSI	**Maura Dua**	**1.38**	**112**	P	**Pn**	**05 21 51.8**	**-5.1**
MDSI				S	**Sn**	**05 22 13.8**	**-0.5**
LWLI	**Liwa**	**1.56**	**132**	P	**Pn**	**05 21 58.5**	**-0.9**
KLSI		**1.96**	**112**	P	**Pn**	**05 22 02.3**	**-2.7**
KLSI				S	**Sn**	**05 22 28.1**	**-0.7**
KLI	**Kotabumi**	**2.14**	**115**	P	**Pn**	**05 22 10.0**	**+2.5**
KLI				S	**Sn**	**05 22 35.1**	**+1.8**
KASI	**Kota Agung**	**2.22**	**134**	P	**Pn**	**05 22 08.3**	**-0.2**
KASI				S	**Sn**	**05 22 36.2**	**+1.0**
KRJI	**Kerinci**	**2.35**	**322**	P	**Pn**	**05 22 16.4**	**+6.1**
KRJI				S	**Sn**	**05 22 51.1**	**+13**
BLSI	**Bandar Lampung**	**2.72**	**121**	P	**Pn**	**05 22 17.1**	**+1.7**
BLSI				S	**Sn**	**05 22 49.7**	**+2.1**
RBSI	**Rajabasa**	**3.39**	**124**	P	**Pn**	**05 22 31.6**	**+7.0**
PDSI	**Padang**	**3.89**	**321**	P	**Pn**	**05 22 37.4**	**+5.9**
MYKOM	**Kota Tinggi**	**5.79**	**9**	P	**Pn**	**05 22 57.6**	**-0.1**
CMAR	**Chiang Mai Ar**	**22.62**	**350**	P	**P**	**05 26 33.0**	**+0.6**
1.0nm,0.3s,mb3.7,baz=182,slow=8.9,SNR=9.2							
FITZ	**Fitzroy Crossi**	**26.32**	**124**	P	**P**	**05 27 06.1**	**-1.2**
2.2nm,0.9s,mb3.7,baz=310,slow=8.8,SNR=8.9							
WRA	**Warramunga Arr**	**34.51**	**120**	P	**P**	**05 28 17.2**	**-2.5**
0.9nm,0.6s,mb3.9,baz=300,slow=9.1,SNR=5.9							
ASAR	**Alice Springs**	**35.76**	**126**	P	**P**	**05 28 28.4**	**-2.1**
2.7nm,0.6s,mb4.3,baz=302,slow=8.2,SNR=29							
STKA	**Stephens Creek**	**45.69**	**132**	P	**P**	**05 29 52.4**	**0.0**
2.7nm,0.7s,mb4.3,baz=306,slow=8.1,SNR=6.4							
SONM	**Songino Array**	**51.67**	**3**	P	**P**	**05 30 39.8**	**+1.8**
1.0nm,0.8s,mb3.8,baz=182,slow=9.5,SNR=3.7							
MKAR	**Makanchi Array**	**53.72**	**343**	P	**P**	**05 30 53.6**	**+0.4**
0.3nm,0.5s,mb3.5,baz=115,slow=6.5,SNR=2.6							
ZALV	**Zalesovo Beam**	**59.66**	**348**	P	**P**	**05 31 35.0**	**-0.3**
0.7nm,0.5s,mb4.0,baz=151,slow=6.4,SNR=4.1							
BRTR	**Keskin Array B**	**76.78**	**312**	P	**P**	**05 33 22.0**	**-1.0**
1.6nm,0.8s,mb4.0,baz=118,slow=6.7,SNR=7.6							
CPUP	**Villa Florida**	**144.32**	**211**	PKP	PKPdf	05 41 07.0	-1.0
2.7nm,0.9s,baz=155,slow=1.8,SNR=6.5							

IDC 09 06:09:19.9±2.4, 30°.28S×178°.41W, h0km, mb4.3/5, mb1 4.4/5, mb1mx4.1/17, mbtmp4.3/5, MS3.8/1, Ms1 3.8/1, ms1mx3.0/19, Error ellipse: s-maj=69.6km s-min=28.0km az=35.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.16**	**257**	P	P	06 16 06.1	-0.7
1.2nm,0.6s,baz=99,slow=11,SNR=3.9							
STKA				LR	LR	06 29 31.8	
comp=Z,168nm,19.9s,baz=203,slow=36							
ASAR	**Alice Springs**	**42.76**	**267**	P	P	06 17 19.2	0.0
2.3nm,0.6s,baz=105,slow=7.5,SNR=34							
WRA	**Warramunga Arr**	**43.74**	**272**	P	P	06 17 28.0	+0.8
4.9nm,0.6s,baz=114,slow=7.6,SNR=53							
FITZ	**Fitzroy Crossi**	**52.01**	**270**	P	P	06 18 30.8	-0.5
2.2nm,0.7s,baz=136,slow=7.1,SNR=8.4							
QSPA	**South Pole Qui**	**59.83**	**180**	P	P	06 19 26.4	-0.1
2.5nm,0.6s,baz=355,slow=4.0,SNR=20							
FINES	**FINESS Array B**	**144.91**	**340**	PKP	PKPdf	06 28 56.0	-2.2
1.6nm,0.5s,baz=66,slow=3.5,SNR=5.5							
TORD	**Torodi Ar. Bea**	**162.95**	**180**	PKPab	PKPab	06 30 15.4	+1.5
0.5nm,0.7s,baz=182,slow=2.8,SNR=3.1							

*NEIC **09** 06:13:41.0±2.8, 23°.18N×121°.88E, h10km, Error ellipse: s-maj=29.9km s-min=13.1km az=124.0*
*TAP **09** 06:13:44.6, 23°.22N×121°.66E, h32km, ML3.7, C*
*ISCJB **09** 06:13:45.1±0.3, 23°.23N±0°.02×121°.65E±0°.02, h37km±11km, Error ellipse: s-maj=3.3km s-min=2.3km az=35.9*
*JMA **09** 06:13:46.2±0.3, 23°.29N×121°.71E, h86km, M2.8*
ISC 09 06:13:45.4±0.4, 23°.23N±0°.02×121°.63E±0°.02, h32km±2km, n56, σ0°67/107, 2C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.33**	**291**	⇑*iP*	**Pb**	**06 13 53.6**	**+0.2**
baz=291							
TWF1				S	**Sb**	**06 13 59.5**	**+0.5**
baz=291							
YULB	**Yu-li**	**0.35**	**297**	*e*Pg	**Pb**	**06 13 53.3**	**-0.4**
YULB				*e*Sg	**Sb**	**06 14 01.0**	**+1.7**
EHY	**Hungye**	**0.40**	**314**	*i P*	**Pb**	**06 13 54.1**	**-0.2**
baz=312							
EHY				S	**Sb**	**06 14 01.2**	**+0.7**
baz=312							
ELDTW	**Lidau**	**0.57**	**266**	P	**Pb**	**06 13 56.3**	**-0.8**
baz=266							
ELDTW				*e*S	**Sb**	**06 14 05.4**	**+0.4**
baz=266							
ESL	**Shilin**	**0.61**	**342**	P	**Pb**	**06 13 56.7**	**-1.0**
baz=341							
ESL				*e*S	**Sb**	**06 14 04.6**	**-1.5**
baz=341							
TTN	**Taitung**	**0.65**	**223**	*e*P	**Pn**	**06 13 57.7**	**-0.8**
baz=224							
TTN				*e*S	**Sb**	**06 14 07.7**	**+0.4**
baz=224							
TWG	**Pinlang**	**0.66**	**232**	*e*Pg	**Pn**	**06 13 57.1**	**-1.4**
TWG				*e*Sg	**Sb**	**06 14 05.9**	**-1.6**
TWG	**Pinlang**	**0.66**	**232**	⇑*iP*	**Pn**	**06 13 57.5**	**-1.0**
baz=232							
TWG				*e*S	**Sb**	**06 14 06.8**	**-0.6**
baz=232							
YUS	**Yu-Shan**	**0.68**	**292**	P	**Pn**	**06 13 58.5**	**-0.3**
baz=292							
YUS				*e*S	**Sb**	**06 14 08.2**	**+0.3**
baz=292							
HWA	**Hwalien**	**0.74**	**358**	*e*P	**Pn**	**06 13 59.0**	**-0.7**
baz=356							
HWA				*e*S	**Sb**	**06 14 09.7**	**-0.1**
baz=356							
STYT	**Tauyuan**	**0.81**	**265**	P	**Pn**	**06 14 00.3**	**-0.3**
baz=265							
STYT				S	**Sn**	**06 14 10.7**	**-0.8**
baz=265							
ALS	**Alishan**	**0.81**	**290**	P	**Pn**	**06 14 00.8**	**+0.2**
baz=290							
ALS				*e*S	**Sn**	**06 14 11.7**	**+0.2**
baz=290							
SSLB	**Suanglung**	**0.83**	**312**	*e*Pg	**Pn**	**06 14 00.0**	**-0.9**
SSLB				*e*Sg	**Sn**	**06 14 09.8**	**-2.3**
TWD	**Chiawan**	**0.84**	**358**	P	**Pn**	**06 14 00.3**	**-0.8**
baz=356							
TWD				*e*S	**Sn**	**06 14 12.6**	**+0.2**
baz=356							
TPUB	**Ta-pu**	**0.93**	**274**	*e*Pn	**Pn**	**06 14 02.2**	**0.0**
TPUB				*e*Sn	**Sn**	**06 14 14.5**	**+0.1**
SMLT	**Sun Moon Lake**	**0.93**	**314**	P	**Pn**	**06 14 02.3**	**0.0**
baz=313							
SMLT				S	**Sn**	**06 14 13.9**	**-0.7**
baz=313							
NACB	**Ninganchiao**	**0.94**	**358**	*e*Pn	**Pn**	**06 14 00.9**	**-1.4**
NACB				*e*Sn	**Sn**	**06 14 12.6**	**-2.1**
WTP	**Ta-pu**	**0.94**	**271**	P	**Pn**	**06 14 02.5**	**+0.2**
baz=271							
WTP				S	**Sn**	**06 14 15.1**	**+0.4**
baz=271							
CHN5	**Tsauling**	**0.95**	**293**	P	**Pn**	**06 14 02.9**	**+0.4**
baz=292							
CHN5				S	**Sn**	**06 14 15.4**	**+0.4**
baz=292							
WHF	**Hehuan Shan**	**0.97**	**340**	P	**Pn**	**06 14 02.2**	**-0.6**
baz=338							
WHF				*e*S	**Sn**	**06 14 15.6**	**+0.1**
baz=338							
TYC	**Yuchr**	**0.98**	**313**	P	**Pn**	**06 14 02.9**	**0.0**
baz=313							
TYC				*e*S	**Sn**	**06 14 15.7**	**+0.1**
baz=313							
SGST	**Jiashian**	**0.98**	**261**	*e*P	**Pn**	**06 14 02.4**	**-0.5**
baz=261							
SGST				*e*S	**Sn**	**06 14 16.4**	**+0.7**
baz=261							
CHN1	**Nanshi**	**1.02**	**268**	P	**Pn**	**06 14 04.2**	**+0.7**
baz=267							
CHN1				S	**Sn**	**06 14 17.3**	**+0.7**
baz=267							
WGK	**Gukeng**	**1.08**	**295**	*e*P	**Pn**	**06 14 04.5**	**+0.1**
baz=294							
WGK				*e*S	**Sn**	**06 14 18.4**	**+0.1**
baz=294							
WNT	**Mingjian**	**1.08**	**307**	*e*P	**Pn**	**06 14 04.5**	**+0.1**
baz=306							
WNT				*e*S	**Sn**	**06 14 18.9**	**+0.6**
baz=306							
TWT	**Tachien**	**1.10**	**338**	*e*P	**Pn**	**06 14 04.5**	**-0.1**
baz=335							
TWT				*e*S	**Sn**	**06 14 17.6**	**-1.1**
baz=335							
EAST	**Anshuo**	**1.11**	**221**	*e*P	**Pn**	**06 14 04.0**	**-0.8**
baz=221							
CHY	**Chiayi**	**1.14**	**284**	*e*P	**Pn**	**06 14 05.1**	**-0.1**
baz=283							
CHY				*e*S	**Sn**	**06 14 20.1**	**+0.4**
baz=283							
CHN3	**Shinhua**	**1.18**	**263**	*e*S	**Sn**	**06 14 21.2**	**+0.7**
baz=262							
TWM1	**Shoushan**	**1.19**	**250**	P	**Pn**	**06 14 05.8**	**0.0**
baz=250							
TWM1				*e*S	**Sn**	**06 14 21.0**	**+0.2**
baz=250							
LAY	**Lan-yu**	**1.19**	**184**	P	**Pn**	**06 14 05.2**	**-0.6**
baz=184							
LAY				*e*S	**Sn**	**06 14 20.5**	**-0.4**
baz=184							
ENA	**Nanau**	**1.20**	**5**	*e*P	**Pn**	**06 14 05.5**	**-0.4**
baz=3.0							
ENA				*e*S	**Sn**	**06 14 21.0**	**0.0**
baz=3.0							
NNS	**Nan Shan**	**1.23**	**349**	*e*P	**Pn**	**06 14 07.3**	**+1.0**
baz=348							
NNS				*e*S	**Sn**	**06 14 21.4**	**-0.5**
baz=348							
TCU	**Taichung**	**1.27**	**316**	*e*P	**Pn**	**06 14 07.6**	**+0.7**
baz=315							
TCU				*e*S	**Sn**	**06 14 24.2**	**+1.4**
baz=315							
SCZT	**Fangliau**	**1.27**	**228**	P	**Pn**	**06 14 07.5**	**+0.7**
baz=228							
SCZT				*e*S	**Sn**	**06 14 23.0**	**+0.2**
baz=228							
TWQ1	**Liyutan**	**1.36**	**325**	P	**Pn**	**06 14 09.5**	**+1.3**
baz=324							
TWQ1				*e*S	**Sn**	**06 14 25.9**	**+0.7**
baz=324							
TWC	**Suao**	**1.39**	**8**	P	**Pn**	**06 14 08.3**	**-0.2**
baz=7.0							
TWC				*e*S	**Sn**	**06 14 25.6**	**-0.1**
baz=7.0							
ENTT	**Nioudou**	**1.40**	**358**	*e*P	**Pn**	**06 14 08.6**	**-0.2**
baz=356							
NSY	**Sanyi**	**1.42**	**326**	P	**Pn**	**06 14 09.4**	**+0.3**
baz=325							
NSY				*e*S	**Sn**	**06 14 28.7**	**+2.0**
baz=325							
YHNB	**Yeheng**	**1.45**	**351**	*e*Pn	**Pn**	**06 14 09.7**	**+0.2**
YHNB				*e*Sn	**Sn**	**06 14 27.0**	**-0.4**
NSK	**Sanguang**	**1.46**	**350**	P	**Pn**	**06 14 09.8**	**+0.3**
baz=349							
NSK				*e*S	**Sn**	**06 14 27.1**	**-0.4**
baz=349							
TWP	**Hsiaoliuchiu**	**1.47**	**233**	*e*S	**Sn**	**06 14 28.3**	**+0.6**
baz=233							
HEN	**Hengchun**	**1.48**	**214**	*e*P	**Pn**	**06 14 09.4**	**-0.3**
baz=214							
HEN				*e*S	**Sn**	**06 14 28.1**	**+0.2**
baz=214							
TWE	**Neicheng**	**1.48**	**1**	*e*P	**Pn**	**06 14 09.8**	**0.0**
TWE				*e*S	**Sn**	**06 14 28.4**	**+0.3**
TSEB	**Hengchuen, Pin**	**1.49**	**207**	*e*S	**Sn**	**06 14 28.4**	**+0.1**
baz=209							
TWK1	**Hengchun**	**1.49**	**211**	*e*P	**Pn**	**06 14 10.0**	**-0.1**
baz=211							
TWK1				*e*S	**Sn**	**06 14 28.2**	**-0.2**
baz=211							
NSTT	**Nanjuang**	**1.51**	**338**	*e*P	**Pn**	**06 14 10.3**	**+0.1**
baz=336							
NSTT				*e*S	**Sn**	**06 14 28.9**	**+0.1**
baz=336							
YOJ	**Yonaguni jima**	**1.76**	**46**	P	**Pn**	**06 14 13.0**	**+0.7**
YOJ				*e*S	**Sn**	**06 14 35.4**	**+0.5**
TWB1	**Santiao Chiao**	**1.80**	**10**	*e*P	**Pn**	**06 14 14.1**	**-0.1**
baz=9.0							
TWB1				*e*S	**Sn**	**06 14 36.1**	**+0.2**
baz=9.0							
NWF	**Wu-fen Shan**	**1.84**	**4**	*e*P	**Pn**	**06 14 14.9**	**+0.2**
baz=3.0							
NWF				*e*S	**Sn**	**06 14 37.0**	**+0.2**
baz=3.0							
PNG	**Penghu**	**1.94**	**280**	P	**Pn**	**06 14 15.8**	**-0.3**
baz=280							
PNG				*e*S	**Sn**	**06 14 37.7**	**-1.7**
baz=280							
HATJ	**Hateruma jima**	**2.15**	**67**	P	**Pn**	**06 14 19.5**	**+0.4**
HATJ				*e*S	**Sn**	**06 14 45.1**	**+0.4**
IRIF	**Iriomote-Funau**	**2.21**	**60**	P	**Pn**	**06 14 20.8**	**+0.9**
IRIF				*e*S	**Sn**	**06 14 46.5**	**+0.3**
JKRS	**Kuro-shima**	**2.40**	**65**	P	**Pn**	**06 14 23.3**	**+0.9**
JKRS				*e*S	**Sn**	**06 14 51.1**	**+0.4**
JIJ	**Ishigaki jima**	**2.56**	**63**	P	**Pn**	**06 14 24.8**	**+0.1**
JIJ				*e*S	**Sn**	**06 14 54.2**	**-0.5**
JTJ	**Tarama**	**3.14**	**63**	P	**Pn**	**06 14 33.1**	**+0.5**
JTJ				*e*S	**Sn**	**06 15 09.3**	**+0.3**

IDC 09 06:27:05.2±3.4, 5°.22S×153°.78E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/16, mbtmp3.5/3, Error ellipse: s-maj=114.8km s-min=34.7km az=117.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.91**	**231**	P	P	06 32 21.3	+0.3
0.7nm,0.6s,baz=54,slow=9.7,SNR=5.9							
ASAR	**Alice Springs**	**26.51**	**224**	P	P	06 32 45.0	+0.4
0.2nm,0.3s,baz=56,slow=9.2,SNR=3.3							
FITZ	**Fitzroy Crossi**	**30.32**	**243**	P	P	06 33 18.4	-0.3
baz=62,slow=8.6							
MKAR	**Makanchi Array**	**81.28**	**319**	P	P	06 39 24.2	+0.8
0.4nm,0.5s,baz=100,slow=7.0,SNR=5.2							
TORD	**Torodi Ar. Bea**	**151.37**	**288**	PKPbc	PKPbc	06 47 01.1	-1.0
0.7nm,0.7s,baz=93,slow=2.6,SNR=6.7							

*ISCJB **09** 06:53:02.8±0.5, 39°.22N±0°.02×29°.40E±0°.03, h3km±5km, Error ellipse: s-maj=3.9km s-min=3.5km az=42.9*
*ISK **09** 06:53:02.7, 39°.19N×29°.43E, h6km, MD2.9*
*CSEM **09** 06:53:02.9±0.1, 39°.23N×29°.42E, h2km, MD2.9, Error ellipse: s-maj=2.6km s-min=2.4km az=138.0*
ISC 09 06:53:03.2±0.4, 39°.22N±0°.02×29°.41E±0°.03, h5km±5km, n44, σ0°68/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.14**	**157**	*i P*	**Pg**	**06 53 05.9**	**-0.2**
GDZ	**Gediz**	**0.14**	**157**	*i P*	**Pg**	**06 53 05.9**	**-0.2**
GDZ				*i* S	**Sg**	**06 53 08.7**	**+0.7**
DEMI	**Demirci**	**0.57**	**252**	*i P*	**Pg**	**06 53 13.9**	**-0.2**
DEMI	**Demirci**	**0.57**	**252**	*i P*	**Pg**	**06 53 13.9**	**-0.2**
DEMI				*i* S	**Sg**	**06 53 21.6**	**+0.1**
DURS	**Dursunbey**	**0.82**	**298**	*i P*	**Pg**	**06 53 18.4**	**-0.5**
DURS	**Dursunbey**	**0.82**	**298**	*i P*	**Pg**	**06 53 18.4**	**-0.5**
DURS				*i* S	**Sg**	**06 53 29.6**	**+0.1**
KHAL	**Karahalli**	**0.85**	**176**	*i P*	**Pg**	**06 53 19.8**	**+0.3**
KHAL	**Karahalli**	**0.85**	**176**	*i P*	**Pg**	**06 53 19.8**	**+0.3**
KHAL				*i* S	**Sg**	**06 53 30.5**	**-0.1**
KHL	**Karahalli**	**0.90**	**174**	*e*PG	**Pg**	**06 53 20.7**	**+0.2**
KHL	**Karahalli**	**0.90**	**174**	*e*Pg	**Pg**	**06 53 20.7**	**+0.2**
KULA	**Kula-Manisa**	**0.92**	**220**	*e*PG	**Pg**	**06 53 20.5**	**-0.2**
KULA				*e*SG	**Sg**	**06 53 32.8**	**+0.2**
KULA	**Kula-Manisa**	**0.92**	**220**	*e*Pg	**Pg**	**06 53 20.5**	**-0.3**
KULA				*e*Sg	**Sg**	**06 53 32.8**	**+0.2**
ULDT	**Uludag**	**0.94**	**347**	*i P*	**Pg**	**06 53 19.5**	**-1.9**
ULDT	**Uludag**	**0.94**	**347**	*i P*	**Pg**	**06 53 19.5**	**-1.8**
ULDT				*i* S	**Sg**	**06 53 34.2**	**+0.6**
CAVI	**Cavuskoy**	**1.04**	**19**	*e*PG	**Pg**	**06 53 23.1**	**0.0**
CAVI				*e*SG	**Sg**	**06 53 38.5**	**+1.9**
CAVI	**Cavuskoy**	**1.04**	**19**	*e*Pg	**Pg**	**06 53 23.1**	**0.0**
CAVI				*e*Sg	**Sg**	**06 53 38.5**	**+2.0**
ESKT	**Eskisehir**	**1.16**	**75**	*i P*	**Pg**	**06 53 24.9**	**-0.5**
SEYT	**Eskypehyr**	**1.16**	**75**	*i P*	**Pg**	**06 53 24.9**	**-0.5**
SEYT				*i* S	**Sg**	**06 53 39.1**	**-1.3**
MDNY	**Mudanya-Bursa**	**1.22**	**341**	*e*PN	**Pn**	**06 53 27.5**	**+0.7**
MDNY	**Mudanya-Bursa**	**1.22**	**341**	*e*Pn	**Pn**	**06 53 27.5**	**+0.7**
ADVT	**Abdulvahap**	**1.24**	**12**	*e*PN	**Pn**	**06 53 26.7**	**-0.5**
ADVT	**Abdulvahap**	**1.24**	**12**	*e*Pn	**Pn**	**06 53 26.7**	**-0.4**
BALB	**Balikesir**	**1.26**	**290**	*e*PN	**Pn**	**06 53 28.2**	**+0.8**
BALB	**Balikesir**	**1.26**	**290**	*e*Pn	**Pn**	**06 53 28.2**	**+0.8**
GPA	**Golpazari**	**1.27**	**33**	*e*PN	**Pn**	**06 53 27.7**	**+0.1**
GPA	**Golpazari**	**1.27**	**33**	*e*Pn	**Pn**	**06 53 27.7**	**+0.1**
AKHS	**Akhisar**	**1.29**	**255**	*i P*	**Pg**	**06 53 27.8**	**-0.1**
AKHS	**Akhisar**	**1.29**	**255**	*i P*	**Pg**	**06 53 27.8**	**-0.1**
AKHS				*i* S	**Sg**	**06 53 44.4**	**-0.2**
BOLV	**Bolvadin**	**1.30**	**112**	*i P*	**Pn**	**06 53 28.0**	**0.0**
BOLV	**Bolvadin**	**1.30**	**112**	*i P*	**Pn**	**06 53 28.0**	**0.0**
BOLV				*i* S	**Sg**	**06 53 45.3**	**+0.3**
KCTX	**Karacabey (Bur**	**1.32**	**322**	*e*PN	**Pn**	**06 53 29.2**	**+0.9**
KCTX	**Karacabey (Bur**	**1.32**	**322**	*e*Pn	**Pn**	**06 53 29.2**	**+0.9**
BALY	**Balya**	**1.48**	**291**	*i P*	**Pn**	**06 53 30.4**	**0.0**
BALY	**Balya**	**1.48**	**291**	*i P*	**Pn**	**06 53 30.5**	**+0.1**
BALY				*i* S	**Sn**	**06 53 48.7**	**-1.4**
GULT	**Gulveren**	**1.48**	**35**	*e*PN	**Pn**	**06 53 30.4**	**0.0**
GULT	**Gulveren**	**1.48**	**35**	*e*Pn	**Pn**	**06 53 30.4**	**-0.1**
GONE	**Gonen-Balikesi**	**1.57**	**302**	*e*PN	**Pn**	**06 53 32.5**	**+0.8**
GONE	**Gonen-Balikesi**	**1.57**	**302**	*e*Pn	**Pn**	**06 53 32.5**	**+0.9**
BUY	**Buyukada**	**1.65**	**352**	*i P*	**Pn**	**06 53 31.8**	**-0.9**
BUY	**Buyukada**	**1.65**	**352**	*i P*	**Pn**	**06 53 31.8**	**-0.9**
BUY				*i* S	**Sn**	**06 53 54.7**	**+0.4**
MDU	**Mudurnu**	**1.86**	**48**	*e*PN	**Pn**	**06 53 35.6**	**-0.2**
MDU	**Mudurnu**	**1.86**	**48**	*e*Pn	**Pn**	**06 53 35.6**	**-0.2**
KIZT	**Kizilcal**	**1.95**	**99**	*e*PN	**Pn**	**06 53 36.9**	**0.0**
KIZT	**Kizilcal**	**1.95**	**99**	*e*Pn	**Pn**	**06 53 36.9**	**-0.1**

*IDC **09** 06:56:50.0±7.4, 51°.57N×176°.08W, h0km, mb3.5/3, mb1 4.1/4, mb1mx3.6/25, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=146.6km s-min=61.5km az=101.0*
*NEIC **09** 06:56:54.9, 51°.50N×176°.35W, h29km, ML3.7(AEIC), After AEIC.*
ISC 09 06:56:53.9±3.3, 51°.5N±0°.2×176°.2W±0°.1, h28km±21km, n10, σ1°04/13, mb3.9/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**0.51**	**325**	P	**Pb**	**06 57 08.5**	**-0.5**
ADK				S	**Sb**	**06 57 11.5**	**+0.1**
ATKA	**Atka Island**	**1.46**	**59**	P	**Pn**	**06 57 19.5**	**+1.2**
ATKA				S	**Sn**	**06 57 38.0**	**+1.5**
AMKA	**Amchitka**	**2.80**	**270**	P	**Pn**	**06 57 38.0**	**+1.2**
AMKA				S	**Sn**	**06 58 09.5**	**-0.1**
UNV	**Unalaska Valle**	**6.38**	**64**	P	**Pn**	**06 58 30.1**	**+4.3**
FX1	**Attu Island--F**	**6.68**	**286**	P	**Pn**	**06 58 30.8**	**+0.8**
KDAK	**Kodiak Island**	**15.03**	**56**	Pn	**Pn**	**07 00 22.2**	**-1.9**
0.4nm,0.3s,baz=270,slow=5.1,SNR=4.5							
ILAR	**Eielson Array**	**20.18**	**38**	P	**P**	**07 01 24.1**	**-1.7**
1.2nm,0.6s,baz=231,slow=10,SNR=20							
MDJ	**Mudanjiang**	**36.15**	**281**	P	**P**	**07 03 52.9**	**-0.5**
MDJ				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.5							
MDJ				pmax	pmax		
comp=Z,46nm,7.8s							
PDAR	**Pinedale Array**	**44.74**	**74**	P	**P**	**07 05 04.5**	**+0.1**
comp=Z,0.6nm,0.5s,mb3.7,baz=324,slow=3.0,SNR=8.9							
TXAR	**L

mb3.7/10, Error ellipse: s-maj=8.7km s-min=5.5km az=8.8
IDC ***09*** *07:34:11.1±0.8, 39.96N×71.40E, h0km, mb3.8/10, mb1 4.0/14, mb1mx3.8/27, mbtmp3.8/14, ML3.7/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/30, Error ellipse: s-maj=15.5km s-min=12.1km az=166.0*
NEIC ***09*** *07:34:13.2±0.8, 40.01N×71.21E, h10km, Error ellipse: s-maj=13.1km s-min=9.5km az=170.0*
ISC 09 07:34:12.7±0.7, 39.91N±0.06×71.14E±0.05, h10km, n40, σ1§15/51, mb3.7/10, 6C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.95**	**40**	P	**Pn**	**07 34 59.6**	**0.0**
	SNR=16						
AML	**Almayashu**	**2.95**	**40**	*e*Pn	**Pn**	**07 34 59.3**	**-0.3**
AML				*e*S	**Sn**	**07 35 37.0**	**+2.0**
KK31	**Karatay Array**	**3.23**	**352**	⇑Pn	**Pn**	**07 35 04.4**	**+0.9**
	106nm,0.6s,baz=176,slow=12,SNR=920						
KK31				⇓Sn	**Sn**	**07 35 49.1**	**+7.1**
	101nm,0.5s,baz=174,slow=28,SNR=5.2						
KKAR	**Karatay Array**	**3.23**	**352**	*e*Pn	**Pn**	**07 35 04.0**	**+0.6**
KKAR				*e*S	**Sn**	**07 35 59.5**	**+18**
EKS2	**Erkin-Say**	**3.40**	**35**	P	**Pn**	**07 35 06.1**	**+0.3**
	SNR=25						
AAK	**Ala-Archa**	**3.72**	**42**	P	**Pn**	**07 35 06.1**	**-4.1**
	SNR=25						
AAK	**Ala-Archa**	**3.72**	**42**	*e*Pn	**Pn**	**07 35 10.7**	**+0.5**
KSH	**Kashi**	**3.75**	**94**	Pn	**Pn**	**07 35 10.2**	**-0.4**
KSH				Sn	**Sn**	**07 35 55.2**	**+0.4**
KSH				smax			
	comp=N,150nm,0.8s						
KSH				smax			
	comp=E,190nm,0.7s						
KZA	**Kyzart**	**3.79**	**54**	P	**Pn**	**07 35 11.8**	**+0.6**
	SNR=63						
KZA	**Kyzart**	**3.79**	**54**	*e*Pn	**Pn**	**07 35 12.0**	**+0.8**
KBK	**Karagaybulak**	**3.98**	**45**	P	**Pn**	**07 35 18.4**	**+4.7**
	SNR=12						
CHMS	**Chumysh**	**4.12**	**40**	P	**Pn**	**07 35 16.7**	**+1.1**
	SNR=15						
USP	**Ospenovka**	**4.20**	**36**	P	**Pn**	**07 35 16.8**	**-0.1**
	SNR=28						
TKM2	**Tokmak 2**	**4.51**	**47**	⇓Pn	**Pn**	**07 35 21.8**	**+0.8**
	comp=E,31nm,0.3s						
TKM2				⇓Sn	**Sn**	**07 36 26.2**	**+13**
	comp=E,53nm,0.7s						
TKM2	**Tokmak 2**	**4.51**	**47**	P	**Pn**	**07 35 21.8**	**+0.7**
	SNR=107						
ULHL	**Ulahol**	**4.51**	**57**	P	**Pn**	**07 35 22.0**	**+0.9**
	SNR=10.0						
KBL	**Kabul**	**5.61**	**198**	*e*Pn	**Pn**	**07 35 45.2**	**+9.0**
	comp=E,42nm,0.9s						
KBL				*e*S	**Sn**	**07 36 54.0**	**+13**
MK31	**Makanchi Array**	**10.64**	**46**	Pn	**Pn**	**07 36 44.2**	**-0.9**
	comp=E,1.0nm,0.5s,baz=234,slow=15,SNR=10						
MK31				⇓Sn	**Sn**	**07 38 50.7**	**+6.4**
	comp=E,0.9nm,0.5s,baz=154,slow=28,SNR=4.0						
MK31				⇑Lg		07 40 03.4	
	comp=E,3.2nm,0.7s						
MKAR	**Makanchi Array**	**10.64**	**46**	Pn	**Pn**	**07 36 42.9**	**-2.2**
	comp=E,0.3nm,0.3s,baz=233,slow=14,SNR=10						
MKAR				Sn	**Sn**	**07 38 39.8**	**-4.4**
	comp=E,0.2nm,0.3s,baz=232,slow=20,SNR=2.5						
MKAR				Lg		07 39 42.9	
	comp=E,0.2nm,0.3s,baz=234,slow=25,SNR=3.2						
AB31	**Akbulak array**	**12.28**	**323**	⇑Pn	**Pn**	**07 37 06.0**	**-1.5**
	comp=E,2.0nm,0.5s,baz=135,slow=12,SNR=51						
AB31				⇓Sn	**Sn**	**07 39 26.9**	**+2.5**
	comp=E,3.5nm,0.5s,baz=129,slow=25,SNR=6.1						
ABKAR	**Akbulak array**	**12.28**	**323**	*e*Pn	**Pn**	**07 37 06.1**	**-1.4**
	comp=E,2.7nm,0.4s						
VOSK	**Vostochnaya**	**12.82**	**360**	⇑Pn	**Pn**	**07 37 19.5**	**+4.6**
	comp=E,1.1nm,0.7s						
VOSK				⇑Lg		07 41 09.2	
ZRNK	**Zerenda**	**13.13**	**354**	⇑Pn	**Pn**	**07 37 18.5**	**-0.7**
	comp=E,2.0nm,0.5s						
ZRNK				⇓Lg		07 41 14.6	
BVAR	**Borovoye Array**	**13.13**	**358**	Pn	**Pn**	**07 37 16.1**	**-3.0**
	comp=E,0.7nm,0.3s,baz=167,slow=13,SNR=4.3						
AKTK	**Aktyubinsk**	**13.99**	**323**	Pn	**Pn**	**07 37 30.2**	**-0.7**
AKTK				Sn	**Sn**	**07 39 59.3**	**-6.9**
AKTK				Lg		07 41 46.0	
AKTO	**Aktyubinsk**	**13.99**	**323**	Pn	**Pn**	**07 37 30.2**	**-0.7**
	comp=E,0.3nm,0.3s,baz=123,slow=14,SNR=8.0						
AKTO				Sn	**Sn**	**07 39 59.3**	**-6.9**
	comp=E,0.3nm,0.3s,baz=0.0,slow=20,SNR=3.8						
AKTO				Lg		07 41 46.0	
	baz=273,slow=19,SNR=1.9						
ZAA0	**Zalesovo Array**	**16.83**	**29**	*e*P	**Pn**	**07 38 07.7**	**-0.6**
ZALV	**Zalesovo Beam**	**16.83**	**29**	Pn	**Pn**	**07 38 05.8**	**-2.4**
	comp=E,0.2nm,0.3s,baz=236,slow=10,SNR=3.9						
SONM	**Songino Array**	**26.44**	**61**	P	**P**	**07 39 46.1**	**-3.5**
	comp=E,0.8nm,0.8s,mb3.3,baz=269,slow=7.2,SNR=3.1						
BRTR	**Keskin Array B**	**28.67**	**282**	P	**P**	**07 40 12.1**	**+2.5**
	comp=E,0.5nm,0.5s,mb3.5,baz=80,slow=8.9,SNR=3.2						
FINES	**FINESS Array B**	**34.77**	**323**	P	**P**	**07 41 03.7**	**+0.8**
	comp=E,2.4nm,0.7s,mb4.2,baz=114,slow=9.3,SNR=4.5						
FINES				LR	LR	07 58 09.8	
	comp=E,58nm,20.2s,baz=179,slow=41						
ARCES	**ARCESS Array B**	**38.06**	**336**	P	**P**	**07 41 31.3**	**+0.3**
	comp=E,0.5nm,0.4s,mb3.6,baz=111,slow=7.7,SNR=18						
ARCES	**ARCESS Array B**	**38.06**	**336**	P	**P**	**07 41 31.3**	**+0.3**
NOA	**NORSAR Array B**	**41.77**	**321**	P	**P**	**07 42 02.4**	**+0.5**
	comp=E,0.7nm,0.7s,mb3.4,baz=92,slow=7.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**65.95**	**267**	P	**P**	**07 45 00.2**	**+0.9**
	comp=E,2.1nm,0.7s,mb4.3,baz=45,slow=5.8,SNR=17						
TORD	**Torodi Ar. Bea**	**65.95**	**267**	P	**P**	**07 45 00.2**	**+0.9**
ILAR	**Eielson Array**	**71.48**	**16**	P	**P**	**07 45 32.1**	**-0.9**
	comp=E,0.9nm,0.9s,mb3.7,baz=324,slow=4.3,SNR=8.9						
YKA	**Yellowknife Ar**	**77.85**	**3**	P	**P**	**07 46 10.1**	**+0.1**
	comp=E,0.4nm,0.5s,mb3.6,baz=350,slow=5.4,SNR=6.0						
WRA	**Warramunga Arr**	**83.71**	**122**	P	**P**	**07 46 41.6**	**-0.2**
	comp=E,0.4nm,0.6s,mb3.7,baz=327,slow=4.8,SNR=4.1						
ASAR	**Alice Springs**	**86.12**	**125**	P	**P**	**07 46 53.9**	**-0.1**
	comp=E,0.3nm,0.7s,mb3.6,baz=314,slow=4.7,SNR=4.0						

NIED ***09*** *07:43:00, 24.70N×122.60E, h101km, Mw5.4 Best double couple: M0=1.58000×10^17 NP1:φ1=42.00000°, δ70.00000°, λ-58.00000°. NP2:φ2=161.00000°, δ37.00000°, λ-146.00000°.*
BJI ***09*** *07:43:08.8, 24.40N×122.83E, h100km, mB5.1/39, mb4.9/60*
MOS ***09*** *07:43:09.3±1.2, 24.80N×122.60E, h77km, mb5.3/60, Error ellipse: s-maj=7.5km s-min=4.9km az=103.2*
TAP ***09*** *07:43:13.3, 24.61N×122.63E, h104km, ML5.9, B*
IDC ***09*** *07:43:13.8±0.5, 24.71N×122.70E, h111km±4km, mb4.5/20, mb1 4.7/24, mb1mx4.6/28, mbtmp4.6/24, MS4.1/21, Ms1 4.1/21, ms1mx3.9/32, Error ellipse: s-maj=13.5km s-min=8.1km az=71.0*
ISCJB ***09*** *07:43:13.2±0.1, 24.62N±0.01×122.59E±0.01, h113km, mb5.1/189, Error ellipse: s-maj=1.9km s-min=1.3km az=143.2*
NEIC ***09*** *07:43:13.3±0.3, 24.67N×122.57E, h102km±3km, mb5.2/107, Error ellipse: s-maj=4.1km s-min=3.6km az=104.0*
NEIC Felt [III] at Taipei. Recorded [4 TAP] at I-lan; [3 TAP] in Hua-lien; [2 TAP] in Chang-hua, Miao-li, Nan-t'ou, T'ai-chung, T'ai-pei, T'ai-tung, T'ao-yuan and Yun-lin; [1 TAP] in Chia-i, Kao-hsiung and T'ai-nan. Recorded [2 JMA] on Iriomote-jima, Ishigaki-jima and Yonaguni-jima; [1 JMA] on Miyako-jima and Tarama-shima, Ryukyu Islands.
JMA ***09*** *07:43:13.7±0.1, 24.66N×122.63E, h99km±1km, M5.4*
JMA Felt II J1.
GCMT ***09*** *07:43:16.0±0.1, 24.60N×122.51E, h109km±1km, MW5.5, Moment Tensor Solution. s76,c123; s99,c211; Moment tensor: Scale 10^17Nm; Mrr-0.36±.03; Mθθ-1.36±.03; Mφφ1.71±.03; Mrθ1.05±.02; Mrφ0.12±.03; Mθφ-0.28±.02; Best double couple: M0=1.90000×10^17 NP1:φ1=222.00000°, δ62.00000°, λ-19.00000°. NP2:φ2=321.00000°, δ74.00000°, λ-150.00000°. Principal axes: T 1.7500, Plg8.0000°, Azm90.0000°; N 0.2900, Plg56.0000°, Azm348.0000°; P -2.0400, Plg32.0000°, Azm185.0000°; Data Used: II IU IC G CN. Surface waves from 105 sta.*
DJA ***09*** *07:43:19, 24.57N×122.60E, h152km, Mw6.0/32*
SZGRF ***09*** *07:43:50.7, 27.38N×121.68E, h33km, mb5.2, Near coast of southeastern China*
ISC 09 07:43:14.6±0.1, 24.63N±0.01×122.53E±0.01, h115km, h115km±1.1km: pP-P, n684, σ1§17/676, mb5.1/189,

68C-110D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**110**	*e*P	**Pn**	**07 43 28.9**	**-2.9**
	baz=119						
YOJ				*e*S	**Sn**	**07 43 39.8**	**-5.0**
	baz=119						
YOJ	**Yonaguni jima**	**0.47**	**110**	P	**Pn**	**07 43 28.8**	**-3.0**
YOJ				S	**Sn**	**07 43 40.2**	**-4.6**
TWC	**Suao**	**0.62**	**269**	⇓*i*P	**Pn**	**07 43 31.0**	**-1.9**
	baz=268						
TWB1	**Santiao Chiao**	**0.62**	**308**	⇓*i*P	**Pn**	**07 43 31.4**	**-1.5**
	baz=302						
TWB1				*e*S	**Sn**	**07 43 43.7**	**-3.0**
	baz=302						
ILA	**Ilan**	**0.73**	**281**	⇓*i*P	**Pn**	**07 43 32.6**	**-1.1**
	baz=277						
ILA				*e*S	**Sn**	**07 43 46.2**	**-1.9**
	baz=277						
ENA	**Nanau**	**0.75**	**255**	⇓*i*P	**Pn**	**07 43 32.3**	**-1.6**
	baz=254						
EHP	**Heping Village**	**0.79**	**247**	P	**Pn**	**07 43 32.6**	**-1.6**
	baz=244						
EHP				*e*S	**Sn**	**07 43 47.1**	**-1.9**
	baz=244						
TWE	**Neicheng**	**0.79**	**277**	⇓*i*P	**Pn**	**07 43 33.1**	**-1.2**
	baz=275						
TWE				*e*S	**Sn**	**07 43 47.2**	**-1.9**
	baz=275						
NWF	**Wu-fen Shan**	**0.81**	**303**	⇓*i*P	**Pn**	**07 43 33.6**	**-0.9**
	baz=295						
NWF				*e*S	**Sn**	**07 43 48.0**	**-1.5**
	baz=295						
ENTT	**Nioudou**	**0.88**	**271**	⇓*i*P	**Pn**	**07 43 34.3**	**-0.8**
	baz=270						
TWA	**Mucha**	**0.93**	**292**	⇓*i*P	**Pn**	**07 43 34.5**	**-1.1**
	baz=284						
TWA				*e*S	**Sn**	**07 43 49.5**	**-2.0**
	baz=284						
NACB	**Ninganchiao**	**0.97**	**242**	*e*Pn	**Pn**	**07 43 33.6**	**-2.3**
NACB				*e*Sn	**Sn**	**07 43 49.8**	**-2.2**
TAP1	**Taipei**	**1.01**	**294**	⇓*i*P	**Pn**	**07 43 35.2**	**-1.1**
	baz=285						
TAP1				*e*S	**Sn**	**07 43 50.8**	**-1.9**
	baz=285						
TATO	**Taipei**	**1.01**	**290**	*e*Pn	**Pn**	**07 43 34.8**	**-1.6**
TATO				*e*Sn	**Sn**	**07 43 51.6**	**-1.2**
TATO	**Taipei**	**1.01**	**290**	P	**Pn**	**07 43 35.2**	**-1.2**
	SNR=125						
TWD	**Chiawan**	**1.01**	**238**	⇓*i*P	**Pn**	**07 43 34.6**	**-1.8**
	baz=235						
TWD				*e*S	**Sn**	**07 43 50.1**	**-2.7**
	baz=235						
YHNB	**Yeheng**	**1.05**	**273**	*e*Pn	**Pn**	**07 43 36.0**	**-0.8**
YHNB				*e*Sn	**Sn**	**07 43 53.2**	**-0.4**
HWA	**Hwalien**	**1.06**	**233**	⇓*i*P	**Pn**	**07 43 35.4**	**-1.5**
	baz=236						
TWY	**Chenhua**	**1.07**	**308**	⇓*i*P	**Pn**	**07 43 36.3**	**-0.7**
	baz=296						
TWY				*e*S	**Sn**	**07 43 52.3**	**-1.5**
	baz=296						
NSK	**Sanguang**	**1.07**	**273**	⇓*i*P	**Pn**	**07 43 36.5**	**-0.5**
	baz=273						
NNS	**Nan Shan**	**1.07**	**260**	⇓*i*P	**Pn**	**07 43 36.1**	**-0.9**
	baz=255						
TWS1	**Kuangyinshan**	**1.12**	**295**	⇓*i*P	**Pn**	**07 43 36.7**	**-0.7**
	baz=294						
TWS1				*e*S	**Sn**	**07 43 53.4**	**-1.3**
	baz=294						
IRIF	**Iriomote-Funau**	**1.13**	**105**	P	**Pn**	**07 43 34.7**	**-2.9**
IRIF				S	**Sn**	**07 43 50.8**	**-4.2**
ESF	**Shoufeng Towns**	**1.20**	**231**	*e*P	**Pn**	**07 43 36.8**	**-1.6**
	baz=234						
ESF				*e*S	**Sn**	**07 43 54.1**	**-2.2**
	baz=234						
WHF	**Hehuan Shan**	**1.25**	**248**	⇓*i*P	**Pn**	**07 43 38.4**	**-0.5**
	baz=245						
NCU	**National Centr**	**1.27**	**286**	*e*P	**Pn**	**07 43 38.8**	**-0.3**
	baz=293						
NCU				*e*S	**Sn**	**07 43 57.0**	**-0.7**
	baz=293						
TEGC	**Jichi Village**	**1.29**	**225**	*e*P	**Pn**	**07 43 38.0**	**-1.3**
	baz=234						
TEGC				*e*S	**Sn**	**07 43 55.8**	**-2.3**
	baz=234						
ESL	**Shilin**	**1.29**	**231**	⇓*i*P	**Pn**	**07 43 37.6**	**-1.7**
	baz=230						
HATJ	**Hateruma jima**	**1.29**	**116**	P	**Pn**	**07 43 36.9**	**-2.5**
HATJ				S	**Sn**	**07 43 54.1**	**-4.0**
TWT	**Tachien**	**1.29**	**254**	⇓*i*P	**Pn**	**07 43 39.3**	**0.0**
	baz=253						
NSTT	**Nanjuang**	**1.39**	**271**	⇓*i*P	**Pn**	**07 43 40.1**	**-0.4**
	baz=271						
NSTT				*e*S	**Sn**	**07 43 59.2**	**-1.0**
	baz=271						
JKRS	**Kuro-shima**	**1.40**	**106**	P	**Pn**	**07 43 38.3**	**-2.3**
JKRS				S	**Sn**	**07 43 56.3**	**-4.0**
HSN	**Hsinchu**	**1.43**	**277**	⇓P	**Pn**	**07 43 40.3**	**-0.7**
	baz=279						
JIJ	**Ishigaki jima**	**1.49**	**100**	P	**Pn**	**07 43 38.8**	**-2.8**
JIJ				S	**Sn**	**07 43 57.4**	**-4.8**
EHY	**Hungye**	**1.57**	**225**	⇓*i*P	**Pn**	**07 43 40.8**	**-1.8**
	baz=226						
EHY				*e*S	**Sn**	**07 44 00.1**	**-3.8**
	baz=226						
NSY	**Sanyi**	**1.63**	**263**	⇓*i*P	**Pn**	**07 43 43.4**	**+0.2**
	baz=263						
NSY				*e*S	**Sn**	**07 44 04.9**	**-0.1**
	baz=263						
TWQ1	**Liyutan**	**1.63**	**261**	⇓*i*P	**Pn**	**07 43 43.2**	**-0.1**
	baz=261						
TWQ1				*e*S	**Sn**	**07 44 04.6**	**-0.5**
	baz=261						
SMLT	**Sun Moon Lake**	**1.66**	**244**	⇓*i*P	**Pn**	**07 43 43.6**	**-0.1**
	baz=240						
SMLT				*e*S	**Sn**	**07 44 05.9**	**0.0**
	baz=240						
SSLB	**Suanglung**	**1.67**	**240**	*e*Pn	**Pn**	**07 43 42.7**	**-1.0**
SSLB				*e*Sn	**Sn**	**07 44 05.3**	**-0.6**
YULB	**Yu-li**	**1.67**	**223**	*e*Pn	**Pn**	**07 43 41.6**	**-2.2**
YULB				*e*Sn	**Sn**	**07 44 06.0**	**+0.1**
TYC	**Yuchr**	**1.69**	**245**	⇓*i*P	**Pn**	**07 43 44.0**	**-0.1**
	baz=241						
TYC				*e*S	**Sn**	**07 44 06.5**	**+0.1**
	baz=241						
TWF1	**Yuli**	**1.70**	**222**	⇓*i*P	**Pn**	**07 43 42.6**	**-1.6**
	baz=230						
TWF1				*e*S	**Sn**	**07 44 04.0**	**-2.6**
	baz=230						
TCU	**Taichung**	**1.76**	**255**	⇓*i*P	**Pn**	**07 43 44.8**	**0.0**
	baz=264						
TCU				*e*S	**Sn**	**07 44 07.8**	**-0.1**
	baz=264						
YUS	**Yu-Shan**	**1.83**	**232**	⇓*i*P	**Pn**	**07 43 46.0**	**+0.1**
	baz=229						
YUS				*e*S	**Sn**	**07 44 08.7**	**-0.9**
	baz=229						
WNT	**Mingjian**	**1.84**	**247**	⇓*i*P	**Pn**	**07 43 46.2**	**+0.3**
	baz=248						
WNT				*e*S	**Sn**	**07 44 10.9**	**+1.1**
	baz=248						
CHKT	**Chengkung**	**1.86**	**215**	P	**Pn**	**07 43 44.1**	**-2.1**
	baz=210						
CHKT				*e*S	**Sn**	**07 44 06.6**	**-3.5**
	baz=210						
ALS	**Alishan**	**1.93**	**235**	⇓*i*P	**Pn**	**07 43 47.5**	**+0.5**
	baz=236						
ALS				*e*S	**Sn**	**07 44 11.9**	**+0.2**
	baz=236						
JTJ	**Tarama**	**1.97**	**89**	P	**Pn**	**07 43 45.3**	**-2.2**
JTJ				S	**Sn**	**07 44 09.7**	**-3.0**
CHN5	**Tsauling**	**1.98**	**239**	⇓*i*P	**Pn**	**07 43 48.0**	**+0.4**
	baz=241						
ELDTW	**Lidau**	**1.99**	**224**	⇓P	**Pn**	**07 43 46.5**	**-1.3**
	baz=226						
WGK	**Gukeng**	**2.03**	**243**	⇓P	**Pn**	**07 43 48.6**	**+0.4**
	baz=254						
WGK				*e*S	**Sn**	**07 44 15.1**	**+1.1**
	baz=254						
STYT	**Tauyuan**	**2.18**	**229**	⇓*i*P	**Pn**	**07 43 50.3**	**+0.1**
	baz=229						
STYT				*e*S	**Sn**	**07 44 17.2**	**-0.2**
	baz=229						
TPUB	**Ta-pu**	**2.18**	**233**	*e*Pn	**Pn**	**07 43 50.0**	**-0.2**
TPUB				*e*Sn	**Sn**	**07 44 19.7**	**+2.3**
WTCT	**Ta-ch'eng**	**2.19**	**250**	P	**Pn**	**07 43 49.8**	**-0.5**
	baz=251						
WTCT				*e*S	**Sn**	**07 44 17.2**	**-0.4**
	baz=251						
WTP	**Ta-pu**	**2.23**	**232**	⇓*i*P	**Pn**	**07 43 50.8**	**0.0**
	baz=233						
WTP				*e*S	**Sn**	**07 44 18.6**	**+0.1**
	baz=233						
CHY	**Chiayi**	**2.23**	**240**	⇓*i*P	**Pn**	**07 43 51.0**	**+0.2**
	baz=252						
CHY				*e*S	**Sn**	**07 44 17.7**	**-0.8**
	baz=252						
TWG	**Pinlang**	**2.24**	**217**	*e*Pn	**Pn**	**07 43 48.6**	**-2.3**
TWG				*e*Sn	**Sn**	**07 44 18.5**	**-0.2**
TWG	**Pinlang**	**2.24**	**217**	⇓P	**Pn**	**07 43 49.1**	**-1.8**
	baz=217						
TWG				*e*S	**Sn**	**07 44 15.6**	**-3.2**
	baz=217						
TTN	**Taitung**	**2.25**	**215**	*e*P	**Pn**	**07 43 50.1**	**-1.1**
	baz=210						
TTN				*e*S	**Sn**	**07 44 17.7**	**-1.4**
	baz=210						
CHN1	**Nanshi**	**2.33**	**232**	⇓*i*P	**Pn**	**07 43 52.1**	**0.0**
	baz=233						
CHN1				*e*S	**Sn**	**07 44 21.3**	**+0.6**
	baz=233						
WSF	**Szhu**	**2.33**	**246**	*e*P	**Pn**	**07 43 51.6**	**-0.4**
	baz=254						
WSF				*e*S	**Sn**	**07 44 20.6**	**-0.1**
	baz=254						
SGST	**Jiashian**	**2.35**	**230**	⇓P	**Pn**	**07 43 52.8**	**+0.4**
	baz=239						
SGST				*e*S	**Sn**	**07 44 21.8**	**+0.5**
	baz=239						
CHN3	**Shinhua**	**2.51**	**233**	*e*P	**Pn**	**07 43 54.9**	**+0.4**
	baz=242						
CHN3				*e*S	**Sn**	**07 44 27.3**	**+2.3**
	baz=242						
JMJ	**Miyako jima 2**	**2.52**	**85**	*e*P	**Pn**	**07 43 52.5**	**-2.0**
	baz=86						
JMJ				*e*S	**Sn**	**07 44 21.6**	**-3.5**
	baz=86						
JMJ	**Miyako jima 2**	**2.52**	**85**	P	**Pn**	**07 43 52.5**	**-2.0**
JMJ				S	**Sn**	**07 44 21.2**	**-3.9**
SCLT	**Jiali**	**2.58**	**236**	*e*P	**Pn**	**07 43 55.2**	**-0.1**
	baz=237						
SCLT				*e*S	**Sn**	**07 44 27.0**	**+0.4**
	baz=237						
JOGS	**Gusukube**	**2.62**	**86**	P	**Pn**	**07 43 54.0**	**-1.8**
JOGS				S	**Sn**	**07 44 24.0**	**-3.4**
TWM1	**Shoushan**	**2.64**	**228**	*e*P	**Pn**	**07 43 56.5**	**+0.4**
	baz=238						
TAW	**Tawu**	**2.71**	**214**	*e*P	**Pn**	**07 43 55.5**	**-1.5**
	baz=218						
TAW				*e*S	**Sn**	**07 44 26.4**	**-3.3**
	baz=218						
EAST	**Anshuo**	**2.72**	**215**	⇑*e*P	**Pn**	**07 43 55.3**	**-1.8**
	baz=215						
LAY	**Lan-yu**	**2.73**	**200**	*e*P	**Pn**	**07 43 55.1**	**-2.1**
	baz=193						
LAY				*e*S	**Sn**	**07 44 24.7**	**-5.3**
	baz=193						
SCZT	**Fangliau**	**2.85**	**218**	P	**Pn**	**07 43 58.3**	**-0.5**
	baz=230						
SCZT				*e*S	**Sn**	**07 44 32.8**	**0.0**
	baz=230						
KAU	**Kaohsiung**	**2.89**	**225**	*e*P	**Pn**	**07 43 59.8**	**+0.4**
	baz=237						
PNG	**Penghu**	**2.92**	**249**	⇓*i*P	**Pn**	**07 43 58.4**	**-1.3**
	baz=250						
PNG				*e*S	**Sn**	**07 44 32.0**	**-2.4**
	baz=250						
TWP	**Hsiaoliuchiu**	**3.02**	**222**	*e*P	**Pn**	**07 44 01.6**	**+0.5**
	baz=222						
HEN	**Hengchun**	**3.09**	**213**	*e*P	**Pn**	**07 44 01.9**	**0.0**
	baz=204						
HEN				*e*S	**Sn**	**07 44 37.0**	**-1.4**
	baz=204						
TSEB	**Hengchuen, Pin**	**3.10**	**209**	*e*P	**Pn**	**07 44 01.4**	**-0.7**
	baz=209						
TSEB				*e*S	**Sn**	**07 44 37.9**	**-0.9**
	baz=209						
TWK1	**Hengchun**	**3.11**	**211**	*e*P	**Pn**	**07 44 01.3**	**-0.9**
	baz=210						
TWK1				*e*S	**Sn**	**07 44 36.9**	**-2.0**
	baz=210						
QZH	**Quanzhou**	**3.60**	**276**	⇑*i*P	**Pn**	**07 44 06.8**	**-1.9**
QZH				S	**Sn**	**07 44 46.7**	**-3.8**
QZH				smax			
	comp=N,8μm,0.8s						
QZH				smax			
	comp=E,4μm,0.8s						
QZH				LR	LR		
	comp=N,14μm,4.5s						
QZH				LR	LR		
	comp=E,12μm,3.4s						
QZH				LR	LR		
	comp=Z,13μm,6.3s						
KNM	**Kinmen**	**3.74**	**268**	*e*P	**Pn**	**07 44 11.5**	**+0.9**
	baz=268						
KNM				*e*S	**Sn**	**07 44 54.2**	**+0.3**
	baz=268						
JKE	**Kume jima 2**	**4.20**	**65**	P	**Pn**	**07 44 14.8**	**-2.0**
JKE				*e*S	**Sn**	**07 45 02.6**	**-2.4**
JAGN	**Aguni-jima**	**4.68**	**64**	P	**Pn**	**07 44 20.9**	**-2.3**
JAGN				*e*S	**Sn**	**07 45 13.0**	**-3.5**
NAH1	**Naha**	**4.92**	**70**	P	**Pn**	**07 44 24.2**	**-2.2**
NAH1				S	**Sn**	**07 45 19.6**	**-2.7**
JJT2	**Tamagusuku 2**	**4.95**	**71**	P	**Pn**	**07 44 24.5**	**-2.4**
JJT2				S	**Sn**	**07 45 19.2**	**-3.9**
JIH	**Iheya**	**5.45**	**63**	P	**Pn**	**07 44 30.7**	**-2.9**
JIH				S	**Sn**	**07 45 30.0**	**-5.2**
JOW	**Kunigami**	**5.62**	**66**	*e*Pn	**Pn**	**07 44 32.4**	**-3.6**
JOW	**Kunigami**	**5.62**	**66**	⇑*e*P	**Pn**	**07 44 32.5**	**-3.4**
	baz=68						
JOW	**Kunigami**	**5.62**	**66**	P	**Pn**	**07 44 32.4**	**-3.6**
JOW				S	**Sn**	**07 45 32.9**	**-6.4**
SGCP	**Mt. Cagua**	**6.37**	**184**	*e*P	**Pn**	**07 44 45.3**	**-0.8**
SSE	**Sheshan**	**6.55**	**350**	P	**Pn**	**07 44 47.7**	**-0.8**
SSE				S	**Sn**	**07 46 11.8**	**+10**
SSE				smax			
	comp=N,560nm,1.2s						
SSE				smax			
	comp=E,720nm,1.2s						
SSE				LR	LR		
	comp=N,2μm,9.7s						
SSE				LR	LR		
	comp=E,2μm,9.7s						
SSE				LR	LR		
	comp=Z,2μm,7.9s						
**JT

WHN LR LR
comp=N,28μm,3.1s
WHN LR LR
comp=E,17μm,3.1s
WHN LR LR
comp=Z,11μm,3.8s
JSJ Shimokoshiki 9.46 40 P Pn 07 45 28.0 +0.1
POLP Polilio Island 9.86 183 *eP* **Sn 07 47 20.9 -1.4**
NGSJ Nagasakinomoza 10.21 37 P Pn 07 45 39.3 +1.2
JHD Hondo 10.28 39 P Pn 07 45 38.9 0.0
TGY Tagaytay City 10.58 188 P Pn 07 45 43.3 +0.3
LUBP Lubang 11.05 192 *eP* **Pn 07 45 50.2 +0.9**
JNU Nakatsue 11.18 39 *e*Pn **Pn 07 45 50.5 -0.5**
OTRP Odiongan 12.21 182 *eP* **Pn 07 46 05.4 +0.7**
TIA Tai'an 12.45 339 P Pn 07 46 09.3 +1.5
TIA S **Sn 07 48 28.7 +3.9**
TIA LR LR
comp=N,2μm,11.9s
TIA LR LR
comp=E,3μm,10.7s
TIA LR LR
comp=Z,3μm,9.2s
BUSP Coron 12.75 190 *eP* **Pn 07 46 10.8 -1.0**
QIZ Qiongzhong 13.03 247 P Pn 07 46 16.2 +0.7
QIZ pP 07 46 29.3
QIZ sP 07 46 44.2
QIZ S **Sn 07 48 41.6 +2.6**
QIZ sS 07 49 00.9
QIZ pmax pmax
comp=Z,50nm,1.5s
QIZ pmax pmax
comp=Z,630nm,9.7s
QIZ LR LR
comp=Z,2μm,17.7s
INCN Inchon 13.29 14 *eP* **Pn 07 46 23.0 +4.3**
INCN Inchon 13.29 14 P Pn 07 46 23.2 +4.6
SNR=27
MRT2 Murotomisaki 2 13.38 47 P Pn 07 46 12.8 -7.2
JMN Monobe 13.43 45 P Pn 07 46 13.6 -6.9
PLP Palo 13.59 170⇓ *eP* **Pn 07 46 23.6 +0.8**
KSRS Korea Array 13.59 19 P Pn 07 46 23.4 +0.8
comp=Z,6.5nm,0.3s,baz=197,slow=12,SNR=115
KSRS LR LR 07 52 45.8
comp=Z,941nm,18.8s,baz=199,slow=42
GUIM Jordan 13.92 180 *eP* **Pn 07 46 28.1 +1.0**
DL2 Dalian 14.26 357 P Pn 07 46 33.8 +2.6
DL2 sP 07 47 01.6
DL2 S **Sn 07 49 11.5 +3.1**
DL2 pmax pmax
comp=Z,60nm,1.4s
DL2 pmax pmax
comp=Z,300nm,7.9s
DL2 LR LR
comp=E,1μm,15.7s
DL2 LR LR
comp=Z,800nm,13.0s
GYA Guiyang 14.44 281 P Pn 07 46 34.3 +0.7
GYA pP 07 46 47.5
GYA S **Sn 07 49 08.2 -4.9**
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,350nm,6.5s
GYA LR LR
comp=N,2μm,4.3s
GYA LR LR
comp=E,2μm,3.8s
GYA LR LR
comp=Z,3μm,3.1s
MSLP Maasin 14.58 171 *eP* **Pn 07 46 36.3 +0.9**
XAN Xi'an 15.12 311 P Pn 07 46 41.0 -1.1
XAN pP 07 46 53.9
XAN S **S 07 49 23.3 -15**
XAN SS 07 49 49.2
XAN pmax pmax
comp=Z,30nm,1.4s
XAN pmax pmax
comp=Z,140nm,12.5s
XAN LR LR
comp=N,4μm,8.5s
XAN LR LR
comp=E,960nm,8.5s
XAN LR LR
comp=Z,650nm,6.7s
TIY Taiyuan 15.63 329 *eP* **Pn 07 46 50.0 +1.5**
TIY pP pP 07 47 04.6 -6.4
TIY S **S 07 49 42.3 -6.5**
TIY SS 07 50 06.6
TIY pmax pmax
comp=Z,580nm,5.9s
TIY LR LR
comp=N,2μm,7.2s
TIY LR LR
comp=E,4μm,7.6s
TIY LR LR
comp=Z,1μm,12.5s
BJI Beijing 16.27 342 P Pn 07 46 57.9 +1.5
BJI sP sP 07 47 26.8 -5.9
BJI S **S 07 49 57.6 -4.2**
BJI pmax pmax
comp=Z,55nm,0.8s
BJI pmax pmax
comp=Z,760nm,6.0s
BATP Bataraza 16.38 197 *eP* **Pn 07 46 59.3 +1.4**
PAGZ Pagadian 16.70 177 *eP* **Pn 07 47 00.9 -1.0**
BUKP Musuan 16.83 171 *eP* **Pn 07 47 05.3 +1.9**
JGF Kuroka 16.84 46 P Pn 07 46 58.3 -5.0
SNY Shenyang 17.18 3 ⇑P Pn 07 47 07.6 +0.2
SNY pP pP 07 47 24.1 -4.0
SNY S **S 07 50 20.3 +1.4**
SNY pmax pmax
comp=Z,25nm,0.5s
SNY pmax pmax
comp=Z,470nm,3.5s
SNY LR LR
comp=N,1μm,11.3s
SNY LR LR
comp=E,1μm,9.8s
SNY LR LR
comp=Z,1μm,10.2s
JHJ Hachijo jima 2 17.30 57 P Pn 07 47 09.3 +0.3
comp=Z,42nm,0.3s,baz=209,slow=9.1,SNR=9.8
JNT Takato 17.51 47 P Pn 07 47 09.6 -1.9
DAV Davao City (W) 17.70 170 P Pn 07 47 14.5 +0.6
comp=Z,52nm,0.3s,baz=49,slow=16,SNR=4.6
DAV LR LR 07 53 51.7
comp=Z,798nm,19.5s,baz=173,slow=36
CD2 Chengdu 17.75 295 *eP* **Pn 07 47 14.9 +0.5**
CD2 pP pP 07 47 30.5 -4.0
CD2 PP 07 47 33.0
CD2 sP sP 07 47 44.0 -5.1
CD2 S **S 07 50 27.1 -4.7**
CD2 sS sS 07 50 51.1 -15
CD2 SS 07 50 53.8
CD2 pmax pmax
comp=Z,150nm,1.3s
CD2 pmax pmax
comp=Z,180nm,5.2s
CD2 LR LR
comp=N,5μm,9.3s
CD2 LR LR
comp=Z,6μm,5.9s
CBIJ Chichi jima 17.86 78 P Pn 07 47 13.8 -2.0
comp=Z,22nm,0.3s,baz=233,slow=1.1,SNR=46
CBIJ LR LR 07 53 12.8
comp=Z,261nm,19.4s,baz=256,slow=34
MAJO Matsushiro 17.95 45 *eP* **Pn 07 47 14.7 -2.1**
MAJO pmax pmax
comp=Z,37nm,0.9s
MAJO Matsushiro 17.95 45 *eP* **Pn 07 47 14.7 -2.1**
comp=Z,37nm,0.9s
MJAR Matsushiro Arr 17.95 45 P Pn 07 47 13.2 -3.6
comp=Z,1.4nm,0.3s,baz=239,slow=11,SNR=23
MJAR LR LR 07 54 44.7
comp=Z,847nm,20.0s,baz=240,slow=39
KMI Kunming 17.97 276 ⇑P Pn 07 47 18.8 +1.7
KMI pP pP 07 47 36.7 -0.3
KMI PP 07 47 38.9
KMI sP sP 07 47 52.4 +0.8
KMI S **S 07 50 37.4 +1.0**
KMI pmax pmax
comp=Z,89nm,1.7s
KMI pmax pmax
comp=Z,2μm,5.7s
KMI LR LR
comp=N,2μm,7.4s
KMI LR LR
comp=E,1μm,8.1s
KMI LR LR
comp=Z,1μm,8.7s
JRY Ryogami san 18.10 47 P P 07 47 15.6 -1.8
KDM Kudat 18.44 198 P P 07 47 22.7 +1.4
HHC Hu-ho-hao-te 18.60 333 ⇑P P 07 47 25.0 +2.2
HHC pP 07 47 41.5
HHC PP 07 47 44.8
HHC sP sP 07 47 55.0 -3.5
HHC S **S 07 50 47.0 -1.7**
HHC sS sS 07 51 10.7 -13
HHC SS 07 51 15.9
HHC PcP PcP 07 51 50.7 +3.7
HHC pmax pmax
comp=Z,17nm,1.1s
HHC LR LR
comp=N,5μm,10.6s
HHC LR LR
comp=E,4μm,10.9s
HHC LR LR
comp=Z,4μm,10.4s
BTO Baotou 19.07 330 *eP* **P 07 47 28.4 +0.4**
CN2 Changchun 19.28 6 ⇑P P 07 47 30.0 -0.2
CN2 pmax pmax
comp=Z,40nm,0.6s
CN2 pmax pmax
comp=Z,300nm,3.0s
CN2 LR LR
comp=N,2μm,10.0s
CN2 LR LR
comp=E,2μm,10.0s
CN2 LR LR
comp=Z,2μm,10.0s
KKM Kota Kinabalu 19.45 199 P P 07 47 33.0 +0.7
KKM Kota Kinabalu 19.45 199 *eP* **P 07 47 33.1 +0.8**
comp=Z,1μm,1.4s
KKM Kota Kinabalu 19.45 199 P P 07 47 33.3 +1.0
comp=Z,8μmcomp=Z,646nm,1.4s
SDKM Sandakan 19.56 196 P P 07 47 33.2 -0.3
MYLDM Lahad Datu 19.72 192 P P 07 47 37.3 +2.1
MYLDM Lahad Datu 19.72 192 P P 07 47 37.4 +2.2
comp=Z,6μmcomp=Z,474nm,1.4s
LZH Lanzhou 19.73 310 *eP* **P 07 47 37.1 +2.0**
LZH pP 07 47 54.8
LZH PP 07 48 00.7
LZH *e*S **S 07 51 11.4 +0.1**
LZH sS sS 07 51 38.1 -8.3
LZH SS 07 51 43.7
LZH pmax pmax
comp=Z,130nm,1.2s
LZH pmax pmax
comp=Z,570nm,5.2s
LZH LR LR
comp=N,4μm,9.5s
LZH LR LR
comp=E,2μm,6.9s
LZH LR LR
comp=Z,3μm,10.2s
VLA Vladivostok 19.99 20⇓ *iP* **P 07 47 35.4 -2.5**
VLA *e*S **S 07 51 15.0 -1.4**
VLA pmax pmax
comp=Z,98nm,1.0s
TSM Tawau 20.71 193 P P 07 47 44.9 -1.0
MDJ Mudanjiang 20.75 14 P P 07 47 45.7 -0.4
MDJ S **S 07 51 30.2 -1.1**
MDJ pmax pmax
comp=Z,35nm,1.0s
MDJ pmax pmax
comp=Z,1μm,8.6s
MDJ LR LR
comp=N,1μm,20.2s
MDJ LR LR
comp=E,3μm,18.4s
MDJ LR LR
comp=Z,2μm,17.5s
CHG Chiang Mai 22.65 260 PG **P 07 48 07.7 +1.3**
CHG SG 07 48 31.1
CHTO Chiang Mai 22.65 260 *eP* **P 07 48 07.3 +0.9**
CHTO *e* 07 48 31.1
CHTO pmax pmax
comp=Z,100nm,1.5s,mb4.9
CHTO Chiang Mai 22.65 260 *eP* **P 07 48 07.3 +0.9**
comp=Z,100nm,1.5s,mb4.9
CHTO *e* 07 48 31.1
CHTO Chiang Mai 22.65 260 P P 07 48 09.1 +2.6
SNR=7.8
CMAR Chiang Mai Arr 22.77 259 P P 07 48 09.0 +1.5
comp=Z,2.8nm,0.5s,baz=56,slow=7.3,SNR=11
CMAR PcP PcP 07 51 56.0 +0.8
comp=Z,0.9nm,0.4s,baz=14,slow=1.0,SNR=3.3
CMAR LR LR 07 57 18.3
comp=Z,747nm,19.3s,baz=358,slow=37
CMAR Chiang Mai Arr 22.77 259 P P 07 48 09.0 +1.5
CMAR 07 51 56.1
BDT Bhumibol Dam 23.15 256 P P 07 48 13.5 +2.5
MNI Manado 23.15 174 P P 07 48 11.5 +0.5
comp=Z,5μmcomp=Z,374nm,1.3s,mb5.5
BTM Bintulu 23.17 205 P P 07 48 10.8 -0.3
GUMO Guam 23.75 113 P P 07 48 15.2 -1.3
comp=Z,56nm,0.8s,mb4.9,baz=198,slow=8.0,SNR=4.1
GUMO LR LR 07 55 31.2
comp=Z,291nm,21.2s,baz=82,slow=31
GUMO Guam 23.75 113 *eP* **P 07 48 15.4 -1.1**
GUMO *e* 07 48 40.8
GUMO pmax pmax
comp=Z,219nm,1.3s,mb5.3
GUMO Guam 23.75 113 *eP* **P 07 48 15.4 -1.1**
comp=Z,219nm,1.3s,mb5.3
GUMO *e* 07 48 40.8
KMSI Cibinong 23.95 176 P P 07 48 20.3 +2.0
comp=Z,890nm,1.3s,mb5.9
MRSI Marisa 24.01 181 P P 07 48 19.6 +0.7
comp=Z,6μmcomp=Z,252nm,1.6s,mb5.3
GTA Gaotai 24.16 313 ⇑P P 07 48 19.9 -0.2
GTA pP 07 48 41.2
GTA sP sP 07 48 53.1 -5.3
GTA S **S 07 52 32.8 +3.0**
GTA sS sS 07 53 09.8 -3.3
GTA SS 07 53 37.5
GTA pmax pmax
comp=Z,30nm,1.2s,mb4.5
GTA pmax pmax
comp=Z,230nm,5.7s
GTA LR LR
comp=N,2μm,13.3s
GTA LR LR
comp=E,2μm,12.6s
GTA LR LR
comp=Z,1μm,15.2s
TNTI Ternate 24.17 168 P P 07 48 21.4 +1.1
comp=Z,1μm,1.7s,mb6.0
SBUM Sibu 24.19 206 P P 07 48 20.4 -0.1
SBUM Sibu 24.19 206 P P 07 48 20.3 -0.2
comp=Z,8μmcomp=Z,534nm,1.5s,mb5.7
ERM Erimo 24.35 40 P P 07 48 16.6 -5.1
comp=Z,458nm,0.6s,mb6.0,SNR=7.0
ERM Erimo 24.35 40 *c iP* **P 07 48 18.5 -3.2**
ERM Erimo 24.35 40 *eP* **P 07 48 17.6 -4.1**
comp=Z,40nm,0.6s,mb4.9
ASAJ Asahikawa 25.42 35 P P 07 48 29.0 -2.4
comp=Z,29nm,0.6s,mb4.9,baz=229,slow=14,SNR=17
ASAJ Asahikawa 25.42 35 *eP* **P 07 48 29.7 -1.7**
comp=Z,12nm,0.6s,mb4.5
LUWI Luwuk 25.52 179 P P 07 48 34.3 +1.8
comp=Z,5μmcomp=Z,446nm,1.2s,mb5.8
HABR Khabarovsk 25.77 19 *eP* **P 07 48 31.9 -2.6**
HABR *PP pP 07 48 54.3 -5.1
HABR *e* 07 49 15.0
HABR *e* 07 51 59.1
HABR *e* 07 59 18.8
HABR MLR MLR
comp=Z,405nm,18.0s
KSM Kuching 25.87 209 P P 07 48 36.2 +0.5
KSM Kuching 25.87 209 *eP* **P 07 48 36.0 +0.2**
comp=Z,249nm,1.2s,mb5.5
KSM Kuching 25.87 209 P P 07 48 36.2 +0.4
comp=Z,3μmcomp=Z,189nm,1.2s,mb5.4
SONM Songino Array 26.46 335 P P 07 48 40.3 -0.4
comp=Z,34nm,0.9s,mb4.8,baz=146,slow=9.1,SNR=76
SONM pP pP 07 49 06.1 +0.4
comp=Z,41nm,1.1s,baz=157,slow=8.3,SNR=5.3
SONM ScP ScP 07 55 31.4 -0.9
comp=Z,2.6nm,1.0s,baz=151,slow=3.4,SNR=5.8
SONM LR LR 08 00 17.4
comp=Z,112nm,19.2s,baz=146,slow=39
SONM Songino Array 26.46 335 P P 07 48 40.3 -0.4
SONM *PP pP 07 49 06.1 +0.4
YUK Yuzh-Kuril'sk 27.15 39⇓ *iP* **P 07 48 43.7 -3.3**
YUK *i* 07 49 30.6
YUK *i* 07 52 01.7
YUK pmax pmax
comp=Z,1μm,2.0s,mb6.1
YUK pmax pmax
comp=Z,1.0nm,2.0s
YSS Yuzh-Sakhalins 27.51 31⇑ *iP* **P 07 48 51.0 +0.8**
YSS *e* pP 07 49 20.0 +4.7
YSS *e* 07 55 03.0
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,400nm,14.0s
YSS MLR MLR
comp=N,500nm,15.0s
YSS Yuzh-Sakhalins 27.51 31 *eP* **P 07 48 51.4 +1.3**
comp=N,59nm,0.7s,mb5.2
YSS *e* pP 07 49 16.5 +1.2
TTSI Tana Toraja 27.63 186 P P 07 48 51.7 +0.2
comp=N,45nm,1.6s,mb4.8
LSA Lhasa 28.32 287 P P 07 48 59.5 +1.9
KULM Kulim 28.49 231 P P 07 49 01.3 +2.1
KULM Kulim 28.49 231 P P 07 49 02.0 +2.8
comp=N,38nm,1.5s,mb4.7
SPSI Sidrap Palu 28.54 186 P P 07 49 02.4 +2.8
comp=N,35nm,1.6s,mb4.8
IPM Ipoh 28.80 229 P P 07 49 03.3 +1.4
IPM Ipoh 28.80 229 *eP* **P 07 49 02.8 +0.9**
comp=N,17nm,0.6s,mb4.9
IPM Ipoh 28.80 229 P P 07 49 03.4 +1.5
comp=N,62nm,1.6s,mb5.0
MYKOM Kota Tinggi 29.00 221 P P 07 49 06.3 +2.6
comp=N,52nm,1.8s,mb4.9
KAPI Kappang 29.58 186 *eP* **P 07 49 08.1 -0.7**
comp=N,180nm,1.7s,mb5.4
ZAK Zakamensk 29.73 335 *eP* **P 07 49 09.2 -0.6**
ZAK *e* pP 07 49 34.1 -0.9
TLY Talaya 30.64 337 *eP* **P 07 49 17.0 -0.8**
TLY *e* pP 07 49 42.5 -0.6
TLY pmax pmax
comp=Z,21nm,0.7s,mb5.0
TLY Talaya 30.64 337 *eP* **P 07 49 17.0 -0.8**
comp=Z,20nm,0.7s,mb5.0
TLY *e* pP 07 49 42.5 -0.6
TLY Talaya 30.64 337 P P 07 49 18.4 +0.6
SNR=6.0
TPI Tanjungpandan 30.82 210 P P 07 49 21.2 +1.4
comp=Z,896nmcomp=Z,64nm,1.2s,mb5.2
IRK Irkutsk 30.88 338 *eP* **P 07 49 18.8 -1.1**
IRK *e* pP 07 49 44.9 -0.4
IRK pmax pmax
comp=Z,48nm,1.8s,mb4.9
TAPN Taplejung 31.36 283 *eP* **P 07 49 27.0 +2.5**
MOY Mondy 31.63 334 *eP* **P 07 49 26.7 +0.2**
ODAN Odare 31.67 282 *eP* **P 07 49 29.5 +2.3**
MNSI Mandailing Nat 32.47 227 P P 07 49 35.9 +1.6
comp=Z,105nm,1.2s,mb5.4
KMMI Kalianget 32.57 196 P P 07 49 36.0 +0.9
comp=Z,93nm,1.5s,mb5.4
GUN Gumba 32.95 284 *eP* **P 07 49 40.6 +2.2**
MMRI Maumere 33.06 181 P P 07 49 39.3 0.0
comp=Z,6μmcomp=Z,377nm,1.6s,mb6.0
BMNI Bima 33.17 187 P P 07 49 44.1 +3.7
comp=Z,1μmcomp=Z,33nm,1.3s,mb5.0
PKI Pulchoki 33.39 283 *eP* **P 07 49 43.5 +1.3**
KHKI Kahang-Kahang 33.48 192 P P 07 49 44.3 +1.3
comp=Z,2μmcomp=Z,113nm,1.5s,mb5.5
KKN Kakani 33.49 284 *eP* **P 07 49 44.5 +1.4**
NGJI Ngawi 33.58 200 P P 07 49 45.9 +2.0
comp=Z,99nm,1.6s,mb5.4
SMRI Semarang 33.62 202 P P 07 49 45.7 +1.5
comp=Z,141nm,1.3s,mb5.6
DMN Daman 33.66 283 *eP* **P 07 49 45.6 +1.1**
SJI Sawahan 33.83 199 P P 07 49 46.9 +0.8
comp=Z,6μmcomp=Z,185nm,1.9s,mb5.6
KLSI 33.90 213 P P 07 49 48.0 +1.3
comp=Z,5μmcomp=Z,331nm,1.5s,mb6.0
KLI Kotabumi 33.99 213 P P 07 49 48.7 +1.3
comp=Z,8μmcomp=Z,201nm,1.3s,mb5.8
MDSI Maura Dua 34.00 214 P P 07 49 48.5 +0.9
comp=Z,2μmcomp=Z,153nm,1.3s,mb5.7
GKN Gorkha 34.05 284 *eP* **P 07 49 48.6 +0.7**
PWJI Pagerwojo 34.09 199 P P 07 49 48.5 +0.2
comp=Z,2μmcomp=Z,96nm,1.7s,mb5.4
BJII Banjamegara 34.14 203 P P 07 49 50.8 +2.1
comp=Z,4μmcomp=Z,193nm,1.7s,mb5.7
KSI Kapahiang 34.15 217 P P 07 49 50.1 +1.3
comp=Z,10μmcomp=Z,185nm,1.1s,mb5.8
WMQ Urumqi 34.25 313 P P 07 49 50.0 +0.6
WMQ pP pP 07 50 12.0 -3.0
WMQ sP sP 07 50 24.0 -4.3
WMQ PP PP 07 51 08.0 -1.2
WMQ S **S 07 55 10.0 +2.2**
WMQ sS sS 07 55 50.0 -2.3
WMQ SS SS 07 57 26.0 -15
WMQ pmax pmax
comp=Z,15nm,0.8s,mb4.9
WMQ pmax pmax
comp=Z,68nm,4.0s
WMQ LR LR
comp=N,780nm,15.0s
WMQ LR LR
comp=E,430nm,15.0s
WMQ LR LR
comp=Z,390nm,15.0s
SISI Saibi 34.39 225 P P 07 49 52.0 +1.1
comp=Z,97nm,1.1s,mb5.5
UGM Wanagama 34.40 201 P P 07 49 52.6 +1.7
comp=Z,7μmcomp=Z,318nm,1.8s,mb5.8
RBSI Rajabasa 34.42 211 P P 07 49 52.7 +1.5
comp=Z,5μmcomp=Z,324nm,1.5s,mb5.9
LEM Lembang 34.48 207 P P 07 49 53.7 +2.1
comp=Z,3μmcomp=Z,170nm,1.3s,mb5.7
SBJI Serang 34.48 210 P P 07 49 53.4 +1.7
comp=Z,430nm,1.4s,mb6.1
LWLI Liwa 34.52 214 P P 07 49 54.0 +2.0
comp=Z,8μmcomp=Z,256nm,1.2s,mb5.9
DBJI Dramaga 34.60 208 P P 07 49 54.7 +2.0
comp=Z,8μmcomp=Z,429nm,1.5s,mb6.0
KASI Kota Agung 34.73 213 P P 07 49 56.0 +2.1
comp=Z,129nm,1.2s,mb5.6
DANN Dangsing 34.80 285 *eP* **P 07 49 54.9 +0.5**
KOLN Koldanda 34.98 284 *eP* **P 07 49 56.4 +0.5**
comp=Z,9.6nm,0.6s,mb4.8
CISI Cisompet, Garu 35.06 206 P P 07 49 56.3 -0.3
comp=Z,2μmcomp=Z,175nm,1.2s,mb5.8
YAK Yakutsk 37.70 6 *eP* **P 07 50 16.8 -1.8**
YAK *e**PP pP 07 50 42.9 -1.6
YAK *e* 07 51 47.0
YAK *e* 07 52 10.3
YAK *eS **S 07 56 03.5 +3.5**
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,97nm,1.0s,mb5.6
YAK pmax pmax
comp=N,69nm,1.8s
YAK pmax pmax
comp=Z,13nm,0.5s,mb5.0
YAK smax
comp=N,97nm,3.6s
YAK smax
comp=E,115nm,3.5s
YAK Yakutsk 37.70 6 *eP* **P 07 50 16.8 -1.8**
comp=E,124nm,1.0s,mb5.7
YAK *e* pP 07 50 44.4 -0.1
KAKA Kakadu 38.35 164 *eP* **P 07 50 23.3 -1.2**
comp=E,88nm,1.6s,mb5.3
KAKA *e* 07 52 41.9
KAKA Kakadu 38.35 164 *eP* **P 07 50 22.9 -1.6**
comp=E,179nm,1.2s,mb5.8
PETK Petropavlovsk- 38.82 34 LR LR 08 08 43.0
comp=E,149nm,18.9s,baz=53,slow=40
MKAR Makanchi Array 38.89 315 P P 07 50 28.3 -0.4
comp=E,8.7nm,0.8s,mb4.6,baz=107,slow=10,SNR=50
MKAR pP pP 07 50 54.8 0.0
comp=E,11nm,0.9s,baz=102,slow=10.0,SNR=4.7
MKAR ScP ScP 07 56 14.9 -0.1
comp=E,1.3nm,0.8s,baz=120,slow=4.8,SNR=4.3
PET Petropavlovsk 39.26 34 *eP* **P 07 50 27.9 -3.8**
PET *e**PP pP 07 50 48.2 -10

PET e*SP sP 07 50 55.5 -15
PET eS **S** **07 56 20.2 -3.4**
PET pmax pmax
comp=Z,33nm,1.0s,mb5.1
PET pmax pmax
comp=Z,100nm,16.5s
PET MLR MLR
comp=Z,300nm,21.0s
PET MLR MLR
comp=Z,300nm,17.0s
ZAA0 Zalesovo Array 40.55 326 eP **P** **07 50 41.1 -1.3**
ZAA0 e pP 07 51 08.5 0.0
ZALV Zalesovo Beam 40.55 326 P **P** **07 50 41.2 -1.2**
comp=Z,12nm,0.6s,mb4.9,baz=107,slow=8.3,SNR=32
ZALV pP pP 07 51 07.9 -0.6
comp=Z,29nm,1.0s,baz=111,slow=8.1,SNR=7.1
ZALV ScP ScP 07 56 20.2 -1.1
comp=Z,0.5nm,0.4s,baz=163,slow=5.6,SNR=3.9
ZALV LR LR 08 08 27.1
comp=Z,282nm,18.5s,baz=123,slow=37
ZALV Zalesovo Beam 40.55 326 P **P** **07 50 41.2 -1.2**
ZALV *PP pP 07 51 08.0 -0.6
ZALV Zalesovo Beam 40.55 326 P **P** **07 50 41.2 -1.2**
ZALV pP pP 07 51 08.0 -0.6
ZALV ScP ScP 07 56 20.2 -1.1
ZALV LR LR 08 08 27.1
KNA Kununurra 40.59 171 P **P** **07 50 42.8 -0.3**
comp=Z,7μmcomp=Z,796nm,1.1s
PMG Port Moresby 41.49 142 deP **P** **07 50 50.3 -0.2**
PMG pmax pmax
comp=Z,90nm,1.0s
PMG Port Moresby 41.49 142 eP **P** **07 50 51.1 +0.6**
comp=Z,98nm,1.2s,mb5.5
PMG Port Moresby 41.49 142 P **P** **07 50 51.2 +0.7**
comp=Z,96nm,1.2s,mb5.5
KSH Kashi 41.70 302 eP **P** **07 50 55.1 +3.1**
KSH epP pP 07 51 17.9 -0.4
KSH esP sP 07 51 29.4 -2.0
KSH ePP PP 07 52 35.9 +5.3
KSH ePcP PcP 07 52 51.2 +4.7
KSH eScP ScP 07 56 31.1 +4.9
KSH ePcS PcS 07 56 41.4 +3.3
KSH eS **S** **07 57 04.2 +3.9**
KSH pmax pmax
comp=Z,7.0nm,0.5s,mb4.7
KSH LR LR
comp=N,1μm,9.9s
KSH LR LR
comp=E,900nm,8.9s
KSH LR LR
comp=Z,1μm,10.4s
NVS Novosibirsk 41.81 327 eP **P** **07 50 50.4 -2.2**
NVS pmax pmax
comp=E,5.0nm,0.9s
NVS pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
NVS pmax pmax
comp=N,10.0nm,1.6s
ULHL Ulahol 41.88 306 P **P** **07 50 55.1 +1.6**
SNR=15
TKM2 Tokmak 2 42.47 307 P **P** **07 50 59.3 +1.1**
SNR=16
TKM2 Tokmak 2 42.47 307 eP **P** **07 50 59.7 +1.5**
TKM2 e pP 07 51 26.1 +1.5
TKM2 pmax pmax
comp=Z,32nm,0.9s,mb5.0
TKM2 Tokmak 2 42.47 307 eP **P** **07 50 59.7 +1.5**
comp=Z,32nm,0.9s,mb5.0
TKM2 e pP 07 51 26.1 +1.5
KURK Kurchatov 42.55 319 eP **P** **07 50 58.6 -0.2**
KURK e pP 07 51 26.3 +1.2
KURK pmax pmax
comp=Z,80nm,1.4s,mb5.3
KURK Kurchatov 42.55 319 eP **P** **07 50 58.6 -0.2**
comp=Z,80nm,1.4s,mb5.3
KURK e pP 07 51 26.3 +1.2
KURK Kurchatov 42.55 319 P **P** **07 50 58.6 -0.2**
comp=Z,96nm,1.0s,mb5.5,SNR=7.0
KURK Kurchatov 42.55 319 P **P** **07 50 58.6 -0.2**
SNR=12
FITZ Fitzroy Crossi 42.58 176 eP **P** **07 50 58.1 -1.1**
comp=Z,235nm,1.2s,mb5.8
FITZ Fitzroy Crossi 42.58 176 eP **P** **07 50 58.4 -0.9**
comp=Z,280nm,1.3s,mb5.8
FITZ Fitzroy Crossi 42.58 176 P **P** **07 50 58.4 -0.8**
comp=Z,5μmcomp=Z,399nm,1.3s,mb6.0
KZA Kyzart 42.58 306 P **P** **07 51 01.9 +2.7**
SNR=12
KZA Kyzart 42.58 306 eP **P** **07 51 01.3 +2.1**
KZA e pP 07 51 27.9 +2.4
KZA pmax pmax
comp=Z,73nm,1.5s,mb5.2
KZA Kyzart 42.58 306 eP **P** **07 51 01.3 +2.1**
comp=Z,73nm,1.5s,mb5.2
KZA e pP 07 51 27.9 +2.4
KBK Karagaybulak 42.90 307 P **P** **07 51 03.9 +2.3**
SNR=6.2
CHMS Chumysh 43.09 307 P **P** **07 51 04.9 +1.6**
SNR=5.5
SEY Seymchan 43.15 19 ceP **P** **07 51 03.4 0.0**
SEY e*SP pP 07 51 31.8 +2.0
FRU Bishkek 43.16 307 eP **P** **07 51 05.0 +1.2**
FRU pmax pmax
comp=Z,50nm,1.8s,mb4.9
COEN Coen 43.32 150 eP **P** **07 51 05.7 +0.4**
comp=Z,1μm,1.1s
COEN e pP 07 51 32.0 +0.2
COEN Coen 43.32 150 P **P** **07 51 06.0 +0.7**
EKS2 Erkin-Say 43.75 307 P **P** **07 51 10.3 +1.8**
SNR=6.5
EKS2 Erkin-Say 43.75 307 eP **P** **07 51 09.9 +1.4**
EKS2 e pP 07 51 34.5 -0.5
EKS2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
EKS2 Erkin-Say 43.75 307 eP **P** **07 51 09.9 +1.4**
comp=Z,7.8nm,0.9s,mb4.4
EKS2 e pP 07 51 34.5 -0.5
MBWA Marble Bar 45.59 184 eP **P** **07 51 21.9 -1.4**
MBWA Marble Bar 45.59 184 eP **P** **07 51 22.1 -1.1**
comp=Z,132nm,1.5s,mb5.4
MBWA Marble Bar 45.59 184 P **P** **07 51 22.7 -0.6**
SNR=7.1
WRA Warramunga Arr 45.77 164 P **P** **07 51 24.4 -0.2**
comp=Z,62nm,0.8s,mb5.4,baz=347,slow=8.7,SNR=151
WRA pP pP 07 51 51.0 -0.3
comp=Z,13nm,0.7s,baz=346,slow=8.5,SNR=2.6
WRA S **S** **07 57 57.8 -1.9**
comp=Z,6.7nm,1.2s,baz=341,slow=13,SNR=11
WRA Warramunga Arr 45.77 164 P **P** **07 51 24.4 -0.2**
WRA pP pP 07 51 51.0 -0.3
WRA S **S** **07 57 57.8 -1.9**
KK31 Karatay Array 46.19 307 eP **P** **07 51 28.4 +0.6**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
KBL Kabul 47.09 295 eP **P** **07 51 37.1 +2.1**
KBL pmax pmax
comp=Z,17nm,1.0s,mb4.7
KBL Kabul 47.09 295 eP **P** **07 51 37.1 +2.1**
comp=Z,17nm,1.0s,mb4.7
TIXI Tiksi 47.19 3 eP **P** **07 51 32.9 -2.3**
TIXI i *PP pP 07 52 00.3 -1.7
TIXI pmax pmax
comp=Z,44nm,0.9s,mb5.2
TIXI MLR MLR
comp=Z,855nm,18.0s
TIXI Tiksi 47.19 3 eP **P** **07 51 33.9 -1.4**
comp=Z,16nm,0.6s,mb4.9
VOSK Vostochnaya 47.69 320 P **P** **07 51 37.0 -2.4**
VOSK pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
BRVK Borovoye 48.19 320 ceP **P** **07 51 42.9 -0.3**
BRVK e*SP pP 07 52 10.8 +0.7
BRVK pmax pmax
comp=Z,11nm,0.8s,mb4.7
BRVK Borovoye 48.19 320 eP **P** **07 51 42.8 -0.4**
comp=Z,7.3nm,0.6s,mb4.7
BRVK e pP 07 52 09.1 -1.0
BRVK Borovoye 48.19 320 P **P** **07 51 43.7 +0.5**
SNR=6.8
ZRNK Zerenda 48.91 320 P **P** **07 51 47.6 -1.1**
ASAR Alice Springs 49.26 166 P **P** **07 51 51.8 +0.1**
comp=Z,12nm,0.8s,mb4.9,baz=348,slow=7.0,SNR=87
ASAR S **S** **07 58 51.0 +2.0**
comp=Z,4.2nm,1.2s,baz=4.9,slow=22,SNR=8.0
CTA Charters Tower 50.08 150 eP **P** **07 51 58.8 +0.8**
comp=Z,38nm,1.2s,mb5.2
CTAO Charters Tower 50.08 150 eP **P** **07 51 58.6 +0.6**
CTAO pmax pmax
comp=Z,114nm,1.3s,mb5.6
CTAO Charters Tower 50.08 150 eP **P** **07 51 58.6 +0.6**
comp=Z,114nm,1.3s,mb5.6
BILL Bilibino 50.86 20 ||eP **P** **07 52 02.7 -0.5**
BILL e*PP pP 07 52 30.2 -0.1
BILL e 07 53 56.0
BILL eS **S** **07 59 07.8 -2.4**
BILL eS **S** **07 59 07.8 -2.4**
BILL pmax pmax
comp=Z,12nm,0.8s,mb5.0
BILL MLR MLR
comp=Z,200nm,16.0s
AB31 Akbulak array 54.02 314 P **P** **07 52 26.4 -0.4**
AB31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
FORT Forrest 55.34 174 eP **P** **07 52 36.6 +0.1**
comp=Z,151nm,1.0s,mb6.0
FORT epP pP 07 53 03.0 -1.1
FORT Forrest 55.34 174 eP **P** **07 52 36.6 +0.1**
comp=Z,381nm,1.3s,mb6.3
FORT e pP 07 53 04.5 +0.5
ARU Arti 55.50 323 c iP **P** **07 52 36.3 -1.1**
ARU e*PP pP 07 53 01.6 -3.3
ARU 07 53 33.2
ARU S **S** **08 00 14.0 +0.5**
ARU 08 02 08.6
ARU SS SS 08 04 00.1 +0.5
ARU pmax pmax
comp=Z,14nm,1.0s,mb5.0
ARU Arti 55.50 323 eP **P** **07 52 36.6 -0.7**
comp=Z,7.8nm,0.4s,mb5.1
ARU e pP 07 53 03.5 -1.5
KLBR Kellerberrin 56.09 185 eP **P** **07 52 41.5 -0.3**
comp=Z,53nm,1.3s,mb5.4
SOKR Solikamsk 56.84 326 c iP **P** **07 52 46.5 -0.3**
SOKR *PP pP 07 53 09.0 -5.5
SOKR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
SOKR MLR MLR
comp=Z,190nm,16.0s
EIDS Eidsvold 56.86 149 eP **P** **07 52 47.5 +0.1**
comp=Z,6.8nm,0.7s,mb4.8
NWAO Narrogin (SRO) 57.45 185 eP **P** **07 52 51.5 +0.1**
NWAO pmax pmax
comp=Z,110nm,1.5s
NWAO Narrogin (SRO) 57.45 185 eP **P** **07 52 51.5 +0.1**
comp=Z,110nm,1.5s,mb5.7
NWAO Narrogin (SRO) 57.45 185 P **P** **07 52 52.3 +0.9**
SNR=5.3
BBOO Buckleboo 58.55 167 eP **P** **07 52 58.8 -0.3**
comp=Z,33nm,1.1s,mb5.3
BBOO Buckleboo 58.55 167 eP **P** **07 52 59.0 -0.1**
comp=Z,560nm,1.6s,mb6.3
BBOO e pP 07 53 23.8 -3.2
STKA Stephens Creek 59.06 161 P **P** **07 53 02.3 -0.4**
comp=Z,9.2nm,0.9s,mb4.8,baz=338,slow=6.5,SNR=25
STKA LR LR 08 19 08.9
comp=Z,137nm,20.9s,baz=3.9,slow=36
STKA Stephens Creek 59.06 161 eP **P** **07 53 02.2 -0.4**
comp=Z,5.0nm,0.6s,mb4.7
STKA Stephens Creek 59.06 161 eP **P** **07 53 02.3 -0.3**
comp=Z,2.3nm,0.8s,mb4.3
ARMA Armidale 61.43 151 eP **P** **07 53 20.3 +1.5**
ARMA Armidale 61.43 151 eP **P** **07 53 19.9 +1.0**
comp=Z,36nm,1.1s,mb5.3
PRGR Permogore 62.45 328 eP **P** **07 53 24.2 -1.1**
PRGR pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
MAK Makhachkala 63.00 307 eP **P** **07 53 39.8 +11**
MAK e*PP pP 07 54 02.0 +4.6
MAK S S 08 02 15.5 +25
MAK MLR MLR
comp=Z,337nm,21.0s
DZM Mont Dzumac 63.04 134 eLR LR 08 12 24.6
comp=Z,922nm,25.1s
KLMR Klimovskoe 65.45 328 eP **P** **07 53 44.1 -0.8**
KLMR pmax pmax
comp=Z,34nm,1.6s,mb4.9
TOO Toolangi 65.53 160 eP **P** **07 53 46.3 +0.7**
GNI Garni 65.57 305 i P **P** **07 53 47.0 +0.9**
GNI pmax pmax
comp=Z,14nm,1.7s
ZEI Tsey 65.64 308 eP **P** **07 53 46.0 -0.5**
ZEI e pP 07 54 14.3 -0.6
ZEI pmax pmax
comp=Z,17nm,1.4s,mb4.7
GOF Gofitskoye 65.80 310 eP **P** **07 53 36.9 -11**
GOF pmax pmax
comp=Z,80nm,1.3s,mb5.4
PPLA Purkeypile 66.26 30 eP **P** **07 53 50.3 +0.3**
comp=Z,8.3nm,0.6s,mb4.7
KIV Kislovodsk 66.27 309 ||eP **P** **07 53 51.4 +0.9**
KIV e*PP pP 07 54 20.7 +1.8
KIV eS S 08 02 24.6 -6.0
KIV pmax pmax
comp=Z,24nm,1.5s,mb4.8
KIV MLR MLR
comp=Z,200nm,21.0s
KIV Kislovodsk 66.27 309 eP **P** **07 53 51.5 +1.0**
comp=Z,178nm,1.4s,mb5.7
KIV e pP 07 54 19.9 +1.0
COLD Coldfoot 66.51 25 eP **P** **07 53 51.8 +0.2**
comp=Z,8.6nm,1.0s,mb4.5
COLD e pP 07 54 20.8 +0.8
VORD Divnogorie 67.12 317 eP **P** **07 53 55.1 -0.7**
VORD e pP 07 54 23.5 -0.8
VORD pmax pmax
comp=N,9.0nm,0.4s
VORD pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
VORD pmax pmax
comp=E,1.0nm,0.2s
VSR Storozhevoye 67.15 317 eP **P** **07 53 54.9 -1.1**
VSR e pP 07 54 24.9 +0.5
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
APA Apatity 67.17 335 ||i iP **P** **07 53 55.0 -0.8**
APA i *PP pP 07 54 23.0 -1.3
APA pmax pmax
comp=Z,21nm,1.0s,mb4.9
APA MLR MLR
comp=Z,300nm,14.0s
MCK McKinley 67.58 29 eP **P** **07 53 57.9 -0.5**
MCK pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
MCK McKinley 67.58 29 eP **P** **07 53 57.9 -0.5**
comp=Z,9.2nm,0.7s,mb4.7
COLA College 67.83 27 eP **P** **07 53 59.9 -0.1**
COLA pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
COLA College 67.83 27 eP **P** **07 53 59.9 -0.1**
comp=Z,8.3nm,0.7s,mb4.7
PMR Palmer 67.88 31 eP **P** **07 53 59.7 -0.6**
PMR pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
PMR Palmer 67.88 31 eP **P** **07 53 59.7 -0.6**
comp=Z,7.8nm,0.6s,mb4.7
OBN Obninsk 67.92 322 ||eP **P** **07 54 00.4 -0.3**
OBN e*PP pP 07 54 26.9 -2.3
OBN e 07 56 29.9
OBN eS S 08 02 43.9 -6.1
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
OBN MLR MLR
comp=E,100nm,20.0s
SML Sawmill 68.21 31 eP **P** **07 54 02.1 -0.3**
SML pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
SML Sawmill 68.21 31 eP **P** **07 54 02.1 -0.3**
comp=Z,4.8nm,1.0s,mb4.3
ILAR Eielson Array 68.26 27 P **P** **07 54 01.1 -1.6**
comp=Z,2.1nm,0.5s,mb4.2,baz=265,slow=5.1,SNR=78
ILAR LR LR 08 28 09.9
comp=Z,126nm,18.5s,baz=153,slow=40
JOF Joensuu 68.93 331 eP **P** **07 54 05.6 -1.2**
JOF pmax pmax
comp=Z,5.0nm,0.3s,mb4.8
JOF Joensuu 68.93 331 ep **P** **07 54 05.6 -1.2**
comp=Z,4.5nm,0.3s,mb4.8
KEV Kevo 69.03 338 eP **P** **07 54 06.1 -1.2**
KEV e pP 07 54 37.4 +1.4
KEV pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
KEV Kevo 69.03 338 eP **P** **07 54 06.1 -1.3**
comp=Z,3.9nm,1.0s,mb4.2
KEV e pP 07 54 37.4 +1.5
KEV Kevo 69.03 338 ep **P** **07 54 05.2 -2.1**
comp=Z,1.4nm,0.4s,mb4.1
ARCES ARCESS Array B 69.59 338 P **P** **07 54 09.9 -0.9**
comp=Z,4.3nm,0.6s,mb4.5,baz=64,slow=8.5,SNR=20
ARCES LR LR 08 29 14.9
comp=Z,164nm,19.7s,baz=119,slow=40
DOT Dot Lake 69.72 28 eP **P** **07 54 11.2 -0.5**
comp=Z,25nm,0.7s,mb5.2
ANN Anapa 69.74 311 eP **P** **07 54 11.4 -0.8**
ANN e*PP pP 07 54 39.8 -1.0
ANN eS S 08 03 15.5 +3.6
ANN pmax pmax
comp=Z,25nm,1.4s,mb4.8
ANN MLR MLR
comp=Z,174nm,17.0s
KBS Kingsbay 69.84 349 e pP 07 54 41.2 +0.3
MENT Mentasta 70.05 29 eP **P** **07 54 13.8 +0.1**
KTK1 Kautokeino 70.51 338 e pP 07 54 45.0 -0.2
EGAK Eagle 70.64 27 eP **P** **07 54 16.6 -0.7**
comp=Z,12nm,0.7s,mb4.8
MALT Malatya 70.77 304 eP **P** **07 54 20.2 +1.6**
MALT e pP 07 54 46.7 -0.6
MALT pmax pmax
comp=Z,10.0nm,1.3s,mb4.5
MALT Malatya 70.77 304 eP **P** **07 54 20.2 +1.6**
comp=Z,9.5nm,1.3s,mb4.5
MALT e pP 07 54 46.7 -0.6
MALT Malatya 70.77 304 ||iP pP 07 54 47.0 -0.3
KAF Kangasniemi 71.38 330 eP **P** **07 54 17.4 -4.4**
KAF Kangasniemi 71.38 330 ep **P** **07 54 17.4 -4.4**
comp=Z,1.3nm,0.4s,mb4.1
DAWY Dawson 71.58 27 eP **P** **07 54 22.5 -0.4**
FINES FINESS Array B 71.69 330 P **P** **07 54 23.1 -0.5**
comp=Z,6.4nm,0.5s,mb4.7,baz=59,slow=5.5,SNR=29
FINES pP pP 07 54 52.1 -0.4
comp=Z,11nm,0.8s,baz=72,slow=6.2,SNR=6.3
FINES LR LR 08 28 13.6
comp=Z,238nm,20.3s,baz=79,slow=38
FINES FINESS Array B 71.69 330 P **P** **07 54 23.1 -0.5**
FINES *PP pP 07 54 52.1 -0.4
TRO Tromso 71.75 339 e pP 07 54 53.6 +0.9
INK Inuvik 72.36 22 eP **P** **07 54 26.6 -0.9**
INK pmax pmax
comp=Z,12nm,0.8s
INK Inuvik 72.36 22 eP **P** **07 54 26.6 -0.9**
comp=Z,12nm,0.8s,mb4.8
KIEV Kiev 73.37 318 eP **P** **07 54 33.6 -0.2**
KIEV e pP 07 55 01.1 -1.7
KIEV pmax pmax
comp=Z,26nm,1.3s,mb4.9
KIEV Kiev 73.37 318 eP **P** **07 54 33.6 -0.3**
comp=Z,26nm,1.3s,mb4.9
KIEV e pP 07 55 01.1 -1.7
NACGM Naroch 73.41 323 e pP 07 55 01.0 -1.9
ASF Jabal al Asfar 73.84 298 P **P** **07 54 37.9 +0.9**
comp=Z,1.9nm,0.6s,mb4.0,baz=178,slow=3.5,SNR=5.0
ASF pP pP 07 55 04.7 -1.2
comp=Z,4.3nm,0.8s,baz=16,slow=1.4,SNR=4.3
BRTR Keskin Array B 73.90 307 P **P** **07 54 38.0 +0.8**
comp=Z,2.1nm,0.8s,baz=104,slow=5.2,SNR=13
BRTR pP pP 07 55 04.0 -2.1
comp=Z,3.7nm,0.9s,baz=98,slow=6.6,SNR=5.6
SKAG Skagway 75.02 31 eP **P** **07 54 43.9 +0.7**
comp=Z,38nm,1.5s,mb4.9
VRI Vrincioaia 76.58 314 ⇑i iP pP 07 55 23.3 +1.8
PLOR Plostina 76.64 314 ⇑i iP **P** **07 55 01.6 +8.9**
BUR08 Bucovina Ar. S 76.90 316 eP **P** **07 54 54.2 +0.1**
BUR08 e pP 07 55 23.4 +0.1
BURAR Bucovina Array 76.90 316 ⇑i iP pP 07 55 25.9 +2.6
MLR Muntele Rosu 77.23 314 ||iP pP 07 55 24.4 -0.8
KWP Kalwaria Pacla 77.65 319 ||iP **P** **07 55 00.7 +2.4**
DLBC Dease Lake 77.94 31 eP **P** **07 55 00.5 +0.8**
NB2 NORSAR Subarra 78.41 332 P **P** **07 55 00.8 -1.5**
comp=Z,7.6nm,0.8s,mb4.5,baz=57,slow=5.6
NOA NORSAR Array B 78.41 332 P **P** **07 55 01.1 -1.1**
comp=Z,4.9nm,0.8s,mb4.3,baz=57,slow=5.8,SNR=19
NOA pP pP 07 55 30.1 -1.4
comp=Z,11nm,0.9s,baz=58,slow=5.7,SNR=11
NOA LR LR 08 33 51.9
comp=Z,138nm,21.1s,baz=50,slow=39
NOA NORSAR Array B 78.41 332 P **P** **07 55 01.1 -1.2**
NOA *PP pP 07 55 30.1 -1.4
CRVS Cervenica-Dubn 78.69 319 eP **P** **07 55 04.5 +0.4**
CRVS e pP 07 55 32.1 -1.2
CRVS Cervenica-Dubn 78.69 319 eP **P** **07 55 04.5 +0.4**
CRVS epP pP 07 55 32.1 -1.2
OJC Ojcow 79.12 320 eP pP 07 55 37.5 +1.8
VTS Vitosha 80.18 312 ⇑iP pP 07 55 43.4 +1.8
OKC Ostrava-Krasne 80.25 320 epP pP 07 55 43.1 +1.3
OKC ePS 08 06 10.0
OKC AMS AMS 08 28 20.0
comp=Z,100nm,7.3s
VYHS Vyhne 80.44 319 eP **P** **07 55 13.9 +0.4**
VYHS e pP 07 55 43.6 +0.7
VYHS Vyhne 80.44 319 eP **P** **07 55 13.9 +0.4**
VYHS epP pP 07 55 43.5 +0.6
URZ Urewera 80.81 139 LR LR 08 26 04.5
comp=Z,105nm,19.1s,baz=306,slow=32
DPC Dobruska-Polom 81.06 321 epP pP 07 55 48.7 +2.5
DPC eXS sS 08 06 00.3 -7.0
DPC AMS AMS 08 27 10.0
comp=Z,200nm,10.8s
UPC Upice 81.16 322 epP pP 07 55 48.8 +2.1
RPZ Rata Peaks 81.27 147 LR LR 08 30 18.8
comp=Z,244nm,18.4s,baz=317,slow=35
PVCC Panska Ves 81.96 322 epP pP 07 55 54.4 +3.4
PVCC AMS AMS 08 27 20.0
comp=Z,200nm,6.8s
TREC Trest 82.04 321 eXS sS 08 06 11.0 -6.5
TREC AMS AMS 08 27 50.0
comp=Z,200nm,12.3s
YKA Yellowknife Ar 82.08 23 P **P** **07 55 20.8 -1.1**
comp=Z,5.8nm,0.8s,mb4.5,baz=306,slow=5.2,SNR=30
YKA pP pP 07 55 47.5 -3.9
comp=Z,7.4nm,0.9s,baz=313,slow=5.1,SNR=4.7
YKA PKKPbc PKKPbc 08 13 46.9 -4.5
comp=Z,0.2nm,0.3s,baz=137,slow=2.1,SNR=8.7
YKA Yellowknife Ar 82.08 23 P **P** **07 55 20.8 -1.1**
YKA *PP pP 07 55 47.5 -3.9
YKA Yellowknife Ar 82.08 23 P **P** **07 55 20.8 -1.1**
YKA pP pP 07 55 47.5 -3.9
YKA PKKPbc PKKPbc 08 13 46.9 -4.5
BRG Berggiesshubel 82.14 323 eP pP 07 55 53.2 +1.3
comp=Z,72nm,2.5s
BRG Berggiesshubel 82.14 323 eP **P** **07 55 23.4 +0.9**
comp=Z,4.3nm,0.8s,mb4.3
BRG e pP 07 55 54.0 +2.0
comp=Z,8.3nm,1.1s
BRG Berggiesshubel 82.14 323 eP **P** **07 55 23.4 +0.9**
BRG e pP 07 55 54.0 +2.1
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.0
SUMG Summit 82.19 354 eP **P** **07 55 22.4 +0.1**
SUMG e pP 07 55 53.2 +1.4
SUMG pmax pmax
comp=Z,18nm,1.3s
SUMG Summit 82.19 354 eP **P** **07 55 22.4 +0.1**
comp=Z,18nm,1.3s,mb4.7
SUMG e pP 07 55 53.2 +1.4
SUMG Summit 82.19 354 i P **P** **07 55 22.3 0.0**
comp=Z,6.0nm,0.9s,mb4.4
SUMG i pP 07 55 53.1 +1.3
PRU Pruhonice 82.24 322 epP pP 07 55 54.8 +2.3
PRU eXS sS 08 06 18.2 -1.4
PRU AMS AMS 08 29 30.0
comp=Z,200nm,25.0s
CLL Collm 82.44 323 eP pP 07 55 54.3 +0.8
comp=Z,18nm,1.2s
CLL Collm 82.44 323 eP **P** **07 55 24.0 0.0**
CLL i *PP pP 07 55 54.9 +1.4
CLL eS S 08 05 36.0 +5.2
CLL pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
CLL Collm 82.44 323 eP **P** **07 55 24.0 0.0**
comp=Z,5.0nm,0.6s,mb4.5
CLL ePcP PcP 07 55 27.0 -1.9

CLL *i* pP pP 07 55 54.9 +1.4
CLL *e*S S 08 05 36.0 +5.2
CLL *es*S sS 08 06 15.0 -6.6
CLL Collm 82.44 323 *e*P **P 07 55 24.0 0.0**
comp=Z,5.0nm,0.6s,mb4.5
CLL *e*PcP PcP 07 55 27.0 -1.9
CLL *i* pP pP 07 55 54.9 +1.4
comp=Z,18nm,1.2s
CLL *e*PP PP 07 58 30.0 -4.0
CLL *e*pPP 07 59 02.0
CLL *e*S S 08 05 36.0 +5.2
CLL *es*S sS 08 06 15.0 -6.6
CLL *e*SS SS 08 10 54.0 +0.7
CLL *es*SS 08 11 40.0
CLL *e*(SSSS) 08 16 36.0
FBE Freiberg 82.44 323 *e*P pP 07 55 54.5 +1.0
comp=Z,26nm,1.2s
CONA Conrad Observa 82.47 319⇑*i*P **P 07 55 25.5 +1.3**
comp=Z,9.9nm,1.8s,mb4.3
TANN Tannenbergstha 83.19 323 *e*P pP 07 55 57.7 +0.3
comp=Z,9.0nm,1.3s
KHC Kasperske Hory 83.21 321 *e*pP pP 07 55 59.1 +1.5
KHC *e*XS sS 08 06 24.2 -5.3
KHC AMS AMS 08 30 50.0
comp=Z,200nm,14.8s
GEC2 GERESS Array S 83.28 321 *e*P pP 07 55 59.2 +1.2
comp=Z,12nm,1.1s
NKC Novy Kostel 83.29 323 *e*pP pP 07 55 59.8 +1.8
NKC AMS AMS 08 28 10.0
MOX Moxa 83.53 323 *e*P pP 07 56 00.3 +1.1
comp=Z,8.0nm,1.2s
CLZ Clausthal 83.57 325 *e*P pP 07 56 00.9 +1.5
comp=Z,26nm,1.2s
WET Wettzell 83.60 322 *e*P pP 07 56 01.7 +2.1
comp=Z,22nm,1.7s
PDKS Podkum 83.89 318 *i* P **P 07 55 32.2 +0.7**
PDKS *e*pP pP 07 56 02.9 +1.7
PDKS Podkum 83.89 318 *i* P **P 07 55 32.2 +0.7**
PDKS *e*pP pP 07 56 02.9 +1.7
GRF Grafenberg Arr 84.25 323 *e*P pP 07 56 04.5 +1.6
comp=Z,17nm,1.0s
UBBA Unterbreizbach 84.31 324 *e*P pP 07 56 04.1 +0.9
comp=Z,42nm,1.9s
KBA Koelnbreinsper 84.37 320⇑*i*P **P 07 55 33.8 -0.2**
comp=Z,5.7nm,0.8s,mb4.4
IBBN Ibbenburen 84.67 326 *e*P pP 07 56 06.5 +1.5
comp=Z,36nm,1.3s
FUR Furstenfeldbru 85.01 321 *e*P pP 07 56 08.9 +2.0
comp=Z,50nm,1.0s
ABTA Abfaltersbach 85.03 320⇑*i*P **P 07 55 37.1 -0.2**
comp=Z,7.0nm,1.0s,mb4.6
BUG Bochum--Univer 85.41 325 *e*P pP 07 56 09.9 +1.1
comp=Z,54nm,1.6s
TNS Taunus Mts 85.47 324 *e*P pP 07 56 10.5 +1.4
comp=Z,76nm,1.9s
STU Stuttgart 85.86 322 *e*P pP 07 56 12.9 +1.8
comp=Z,14nm,0.6s
FETA Feichten 85.93 320⇑*i*P **P 07 55 40.9 -0.9**
comp=Z,7.2nm,1.6s,mb4.3
KMBO Kilima Mbogo 86.17 267 *e*P **P 07 55 46.4 +2.8**
KMBO *e* pP 07 56 14.0 +0.7
KMBO pmax pmax
comp=Z,5.0nm,1.5s
KMBO Kilima Mbogo 86.17 267 *e*P **P 07 55 46.4 +2.8**
comp=Z,4.9nm,1.5s,mb4.2
KMBO *e* pP 07 56 14.0 +0.7
BFO Black Forest 86.58 322 *e*P pP 07 56 16.0 +1.3
comp=Z,26nm,1.6s
NLWA Neilton Lookou 86.76 39 *e*P **P 07 55 46.5 +0.7**
comp=Z,37nm,1.1s,mb5.2
WLF Walferdange 87.01 324 *e*P pP 07 56 18.8 +2.1
comp=Z,42nm,1.2s
CDF Champ du Feu 87.12 323 *e*P **P 07 55 47.3 -0.2**
comp=Z,35nm,1.3s,mb4.8
CDF *e*pP pP 07 56 18.2 +0.9
CDF Champ du Feu 87.12 323 *e*P **P 07 55 47.3 -0.2**
CDF *e**PP pP 07 56 18.2 +0.9
CDF pmax pmax
comp=Z,17nm,1.3s,mb4.8
CDF Champ du Feu 87.12 323 *e*P **P 07 55 47.3 -0.2**
comp=Z,17nm,1.3s,mb4.8
CDF *e*pP pP 07 56 18.2 +0.9
GNW Green Mountain 87.25 38 *e*P **P 07 55 49.5 +1.3**
comp=Z,18nm,1.0s,mb5.0
JCW Jim Creek 87.40 37 P **P 07 55 49.6 +0.7**
E03A Lebam 87.40 39⇓PcP PcP 07 55 49.8 -1.1
baz=87,SNR=6.2
RPW Rockport 87.48 37 *e*P **P 07 55 49.8 +0.5**
comp=Z,25nm,0.8s,mb5.2
F03A Seaside 87.75 40⇓PcP PcP 07 55 51.3 -1.1
baz=88,SNR=5.5
RMW Rattlesnake Mo 87.89 38 P **P 07 55 52.2 +1.0**
D05A Enumclaw 87.94 38⇑PcP PcP 07 55 52.2 -1.0
baz=88,SNR=19
WRW Wenatchee Ridg 88.17 37 P **P 07 55 53.2 +0.6**
FMW Mount Fremont 88.26 38 P **P 07 55 53.5 +0.5**
LON Longmire 88.29 38 *e*P **P 07 55 53.6 +0.5**
LON pmax pmax
comp=Z,37nm,1.0s,mb5.4
LON Longmire 88.29 38 *e*P **P 07 55 53.6 +0.4**
comp=Z,37nm,1.0s,mb5.4
NLW Nelson Butte 88.33 37 P **P 07 55 53.6 +0.3**
F04A Amboy 88.41 39⇓PcP PcP 07 55 53.9 -1.4
baz=88,SNR=23
WPW White Pass 88.47 38 P **P 07 55 55.1 +1.2**
ETW Entiat 88.62 37 *e*P **P 07 55 55.0 +0.3**
comp=Z,98nm,0.7s,mb6.0
EDM Edmonton 88.62 30 *e*P **P 07 55 54.4 -0.1**
B08A Colville Reser 88.71 36⇓PcP PcP 07 55 55.5 -1.1
baz=88,SNR=75
TBM Table Mountain 88.72 38 P **P 07 55 55.8 +0.6**
G04A Mulino 88.78 40⇑PcP PcP 07 55 55.9 -1.1
baz=88,SNR=11
EBG Ellensburg 88.89 38 P **P 07 55 56.9 +0.9**
LPG La Plagne 89.08 321 *e*P **P 07 55 57.1 +0.2**
comp=Z,21nm,0.8s,mb4.9
LPG La Plagne 89.08 321 *e*P **P 07 55 57.1 +0.2**
LPG pmax pmax
comp=Z,11nm,0.8s,mb4.9
LPG La Plagne 89.08 321 *e*P **P 07 55 57.1 +0.2**
comp=Z,11nm,0.8s,mb4.9
LPL La Plagne 89.08 321 *e*P **P 07 55 57.1 +0.2**
comp=Z,15nm,0.8s,mb4.8
LPL La Plagne 89.08 321 *e*P **P 07 55 57.1 +0.2**
LPL pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LPL La Plagne 89.08 321 *e*P **P 07 55 57.1 +0.2**
comp=Z,7.7nm,0.8s,mb4.8
HOOD Mount Hood Mea 89.19 39 *e*P **P 07 55 58.3 +0.9**
comp=Z,93nm,1.1s,mb5.7
H04A Detroit Lake 89.25 40⇑PcP PcP 07 55 58.0 -1.0
baz=89,SNR=8.2
VFP Flag Point 89.31 39 P **P 07 55 59.0 +1.0**
PGF Pioggiola 89.39 317 *e*P **P 07 55 58.3 -0.1**
comp=Z,16nm,1.0s,mb4.7
PGF Pioggiola 89.39 317 *e*P **P 07 55 58.3 -0.1**
PGF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
PGF Pioggiola 89.39 317 *e*P **P 07 55 58.3 -0.1**
comp=Z,7.9nm,1.0s,mb4.7
E07A Sunnyside 89.50 38⇓PcP PcP 07 55 59.4 -0.7
baz=89,SNR=38
MBDF Montbardon 89.50 320 *e*P **P 07 55 58.2 -0.7**
MDW Midway 89.51 38 P **P 07 55 59.8 +0.9**
C09A Chrisman Ranch 89.61 36⇓PcP PcP 07 55 60.0 -0.6
baz=89,SNR=19
OD2 Odessa Site #2 89.63 37 *e*P **P 07 55 59.4 0.0**
comp=Z,41nm,0.8s,mb5.6
LOR Lormes 89.66 323 *e*P **P 07 55 58.9 -0.6**
LOR *e*MLR MLR
comp=Z,170nm,20.2s
LOR Lormes 89.66 323 *e*P **P 07 55 58.9 -0.6**
LOR LR LR
comp=Z,170nm,20.3s
D08A Wollman Farm, 89.71 37⇑PcP PcP 07 56 00.2 -0.8
baz=89,SNR=56
RSW Rattlesnake Hi 89.74 38 *e*P **P 07 56 00.9 +0.9**
comp=Z,48nm,0.8s,mb5.7
HAWA Hanford 89.77 38 *e*P **P 07 56 00.8 +0.7**
comp=Z,59nm,1.0s,mb5.7
G06A Carlson Farm, 89.83 39⇑PcP PcP 07 56 00.8 -0.8
baz=90,SNR=26
ORIF Oris-en-Rattie 89.91 321 *e*P **P 07 56 00.6 -0.2**
comp=Z,14nm,1.0s,mb4.8
ORIF *e*MLR MLR
comp=Z,170nm,22.8s
ORIF Oris-en-Rattie 89.91 321 *e*P **P 07 56 00.6 -0.2**
ORIF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
ORIF Oris-en-Rattie 89.91 321 *e*P **P 07 56 00.6 -0.2**
comp=Z,6.9nm,1.0s,mb4.7
NEW Newport 89.94 35⇑PcP PcP 07 56 00.9 -1.1
baz=90,SNR=63
NEW Newport 89.94 35 *e*P **P 07 56 00.9 +0.1**
comp=Z,60nm,1.0s,mb5.7
NEW *e* pP 07 56 31.1 +0.3
SSF Saint Saulge 89.97 323 *e*P **P 07 56 00.3 -0.7**
SSF *e*pP pP 07 56 31.3 +0.4
SMF Signal de Mont 90.04 323 *e*P **P 07 56 00.9 -0.5**
comp=Z,24nm,0.8s,mb5.1
SMF *e*pP pP 07 56 31.6 +0.3
SMF Signal de Mont 90.04 323 *e*P **P 07 56 00.9 -0.5**
SMF *e**PP pP 07 56 31.6 +0.3
SMF pmax pmax
comp=Z,12nm,0.8s,mb5.1
SMF Signal de Mont 90.04 323 *e*P **P 07 56 00.9 -0.5**
comp=Z,12nm,0.8s,mb5.1
SMF *e*pP pP 07 56 31.6 +0.3
AVF Avril sur Loir 90.22 323 *e*P **P 07 56 01.6 -0.6**
comp=Z,20nm,1.1s,mb4.9
AVF Avril sur Loir 90.22 323 *e*P **P 07 56 01.6 -0.6**
AVF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
AVF Avril sur Loir 90.22 323 *e*P **P 07 56 01.6 -0.6**
comp=Z,9.9nm,1.1s,mb4.8
FRF La Foret Royal 90.25 319 *e*P **P 07 56 02.7 +0.3**
A12A Yaak River Ran 90.28 34⇑PcP PcP 07 56 03.2 -0.3
baz=90,SNR=16
E09A Wood Farm, Sta 90.47 37⇑PcP PcP 07 56 03.5 -0.9
baz=90,SNR=49
YBH Yreka Blue Hor 90.60 43 *e*P **P 07 56 05.3 +1.2**
YBH pmax pmax
comp=Z,33nm,1.3s
YBH Yreka Blue Hor 90.60 43 *e*P **P 07 56 05.3 +1.2**
comp=Z,34nm,1.3s,mb5.3
SMRF Simiane la Rot 90.64 320 *e*P **P 07 56 04.0 -0.2**
VIVF Saint-Julien-l 90.64 321 *e*P **P 07 56 03.2 -1.0**
C11A Tepee Creek (N 90.66 35⇑PcP PcP 07 56 04.3 -0.9
baz=90
G08A Pilot Rock 90.75 38⇑PcP PcP 07 56 05.1 -0.6
baz=90,SNR=15
LNOR Lincton Mounta 90.78 38 *e*P **P 07 56 06.3 +1.5**
LNOR pmax pmax
comp=Z,25nm,0.8s,mb5.4
LNOR Lincton Mounta 90.78 38 *e*P **P 07 56 06.3 +1.5**
comp=Z,25nm,0.8s,mb5.4
A13A Flathead Natio 90.91 34⇑PcP PcP 07 56 05.7 -0.6
baz=91,SNR=20
CASY Casey 91.08 185 *e*P **P 07 56 06.2 +0.8**
CASY Casey 91.08 185 *e*P **P 07 56 05.8 +0.4**
comp=Z,49nm,1.3s,mb5.5
WALA Waterton Lakes 91.08 33 *e*P **P 07 56 07.4 +1.3**
comp=Z,1.8nm,1.1s,mb4.1
K05A Summer Lake 91.14 41⇑PcP PcP 07 56 07.2 -0.3
baz=91,SNR=24
C12B Naegeli Ranch, 91.15 35⇓PcP PcP 07 56 06.8 -0.6
baz=91,SNR=15
I07A Izee 91.16 40⇓PcP PcP 07 56 07.5 -0.1
baz=91,SNR=15
B13A Whitefish 91.24 34⇓PcP PcP 07 56 07.2 -0.6
baz=91,SNR=46
F10A Beach Ranch, E 91.30 37⇑PcP PcP 07 56 08.0 -0.1
baz=91,SNR=24
WDC Whiskeytown Da 91.36 44 *e*P **P 07 56 08.6 +1.0**
WDC pmax pmax
comp=Z,16nm,1.0s,mb5.1
WDC Whiskeytown Da 91.36 44 *e*P **P 07 56 08.6 +1.0**
comp=Z,16nm,1.0s,mb5.1
A14A Double T Ranch 91.38 33⇑PcP PcP 07 56 08.0 -0.4
baz=91,SNR=66
BSMT Bassoo Peak 91.42 35 *e*P **P 07 56 08.3 +0.6**
comp=Z,22nm,0.9s,mb5.3
BSMT *e* pP 07 56 39.1 +1.4
BLMT Blacktail Moun 91.53 34 *e*P **P 07 56 09.3 +1.1**
comp=Z,35nm,1.4s,mb5.4
FCC Fort Churchill 91.55 18 *e*P **P 07 56 07.3 -0.8**
comp=Z,0.6nm,0.8s
C13A Hot Springs 91.64 35⇓PcP PcP 07 56 09.3 -0.3
baz=91,SNR=23
A15A Johnson Ranch, 91.72 33⇓PcP PcP 07 56 09.0 -0.9
baz=91,SNR=9.7
JTMT Jette 91.74 34 *e*P **P 07 56 10.0 +0.7**
comp=Z,24nm,0.9s,mb5.4
JTMT *e* pP 07 56 39.4 +0.2
YBMT Yellow Bay 91.81 34 *e*P **P 07 56 10.2 +0.6**
comp=Z,21nm,1.0s,mb5.3
YBMT *e* pP 07 56 41.1 +1.6
B14A Marquette Ranc 91.86 34⇓PcP PcP 07 56 10.2 -0.3
baz=92,SNR=32
E12A Beaver Dam Sad 91.92 36⇓PcP PcP 07 56 10.2 -0.6
baz=92
MOD Modoc 91.98 42 *e*P **P 07 56 11.0 +0.6**
comp=Z,33nm,1.1s,mb5.5
C14A Swan Lake 92.00 34⇑PcP PcP 07 56 10.5 -0.7
baz=92
SWMT Swartz Lake 92.04 34 *e*P **P 07 56 10.6 0.0**
comp=Z,22nm,1.0s,mb5.3
D13A Huson 92.07 35⇓PcP PcP 07 56 10.4 -1.1
baz=92,SNR=5.3
CAF Calviac 92.08 322 *e*P **P 07 56 11.1 +0.3**
comp=Z,27nm,0.9s,mb5.2
CAF *e*pP pP 07 56 42.1 +1.3
CAF Calviac 92.08 322 *e*P **P 07 56 11.1 +0.3**
CAF *e**PP pP 07 56 42.1 +1.3
CAF pmax pmax
comp=Z,14nm,0.9s,mb5.2
CAF Calviac 92.08 322 *e*P **P 07 56 11.1 +0.3**
comp=Z,14nm,0.9s,mb5.2
CAF *e*pP pP 07 56 42.1 +1.3
RJF Les Rejaudoux 92.14 323 *e*P **P 07 56 11.5 +0.4**
RJF *e*pP pP 07 56 42.3 +1.2
RJF *e*MLR MLR
comp=Z,200nm,22.8s
RJF Les Rejaudoux 92.14 323 *e*P **P 07 56 11.5 +0.4**
RJF *e*pP pP 07 56 42.3 +1.2
RJF LR LR
comp=Z,200nm,22.8s
J08A Circle Bar Ran 92.19 40⇑PcP PcP 07 56 11.4 -0.8
baz=92,SNR=42
FFC Flin Flon 92.23 24 *e*P **P 07 56 10.5 -0.8**
FFC *e* pP 07 56 40.7 -0.6
FFC pmax pmax
comp=Z,19nm,1.1s,mb5.2
FFC Flin Flon 92.23 24 *e*P **P 07 56 10.5 -0.9**
comp=Z,19nm,1.1s,mb5.2
FFC *e* pP 07 56 40.7 -0.6
FFC Flin Flon 92.23 24 P **P 07 56 10.6 -0.7**
comp=Z,234nm,0.9s,SNR=10
B15A Bradely Ranch, 92.24 33⇑PcP PcP 07 56 11.5 -0.7
baz=92,SNR=18
A16A West Butte Ran 92.29 32⇑PcP PcP 07 56 11.2 -1.2
baz=92
SLMT Seeley Lake 92.48 34 *e*P **P 07 56 12.7 +0.1**
comp=Z,53nm,1.1s,mb5.7
F12A Elk City 92.51 36⇓PcP PcP 07 56 12.1 -1.4
baz=92,SNR=24
MSO Missoula 92.52 35⇑PcP PcP 07 56 12.4 -1.1
baz=92,SNR=23
MSO Missoula 92.52 35 *e*P **P 07 56 13.1 +0.3**
comp=Z,23nm,1.2s,mb5.4
MSO *e* pP 07 56 42.3 -0.5
D14A Greenough 92.58 35⇓PcP PcP 07 56 12.5 -1.2
baz=92,SNR=16
C15A Salmond Ranch, 92.58 34⇓PcP PcP 07 56 13.2 -0.6
baz=92,SNR=23
B16A M & M Farms, S 92.60 33⇓PcP PcP 07 56 12.6 -1.2
baz=92
WVOR Wild Horse Val 92.66 40 *e*P **P 07 56 14.3 +0.7**
WVOR pmax pmax
comp=Z,29nm,1.0s,mb5.6
WVOR Wild Horse Val 92.66 40 *e*P **P 07 56 14.3 +0.7**
comp=Z,29nm,1.0s,mb5.6
A17A Triple J Farms 92.73 32⇓PcP PcP 07 56 13.2 -1.2
baz=92,SNR=34
LFF La Frestale 92.80 323 *e*P **P 07 56 13.6 -0.6**
CHMT Chamberlain Mo 92.82 35 *e*P **P 07 56 14.6 +0.4**
comp=Z,11nm,1.1s,mb5.1
KEST Kesra 92.90 312 P **P 07 56 15.3 +0.4**
comp=Z,0.9nm,0.8s,mb4.2,baz=286,slow=7.6,SNR=3.5
KEST LR LR 08 42 05.7
comp=Z,30nm,20.3s,baz=311,slow=38
KEST Kesra 92.90 312 P **P 07 56 15.3 +0.4**
KEST LR LR 08 42 05.7
MTLF Montolieu 92.97 321 *e*P **P 07 56 14.8 -0.2**
comp=Z,34nm,1.4s,mb5.2
MTLF Montolieu 92.97 321 *e*P **P 07 56 14.8 -0.2**
MTLF pmax pmax
comp=Z,17nm,1.4s,mb5.2
MTLF Montolieu 92.97 321 *e*P **P 07 56 14.8 -0.2**
comp=Z,17nm,1.4s,mb5.2
F13A Darby 92.98 36⇓PcP PcP 07 56 14.3 -1.3
baz=93,SNR=7.5
C16A Fuhringer Ranc 92.99 33⇑PcP PcP 07 56 14.3 -1.3
baz=93,SNR=24
D15A Lincoln 93.11 34⇓PcP PcP 07 56 14.8 -1.3
baz=93,SNR=5.7
B17A L&G Farms, Che 93.13 32⇑PcP PcP 07 56 15.3 -0.9
baz=93,SNR=34
A18A Metzger Ranch, 93.16 32⇓PcP PcP 07 56 15.4 -0.9
baz=93,SNR=26
E15A Deer Lodge 93.46 35⇑PcP PcP 07 56 16.9 -0.7
baz=93,SNR=12
F14A Wisdom 93.48 35⇑PcP PcP 07 56 17.1 -0.7
baz=93,SNR=20
G13A Cobalt 93.49 36⇓PcP PcP 07 56 16.6 -1.2
baz=93,SNR=13
H12A Diamond D Ranc 93.50 37⇑P **P 07 56 17.6 +0.2**
baz=93,SNR=38
B18A Beardsley Farm 93.55 32⇓P **P 07 56 16.9 -0.6**
baz=93,SNR=9.0
C17A Wharram Farm, 93.59 33⇓P **P 07 56 17.3 -0.5**
baz=93,SNR=8.6
MIR Mirnyy 93.60 191 *e*P **P 07 56 17.0 -0.1**
MIR pmax pmax
comp=Z,57nm,1.6s,mb5.7
D16A Dana Ranch, Ca 93.61 34⇓P **P 07 56 17.9 0.0**
baz=93,SNR=25
MFID Camas Ranch 93.68 38⇑P **P 07 56 19.1 +0.9**
baz=93,SNR=32
HRY Holter Researc 93.68 34 *e*P **P 07 56 18.7 +0.5**
comp=Z,15nm,0.7s,mb5.4
H13A Challis 93.82 37⇓P **P 07 56 19.0 +0.2**
baz=94,SNR=19
EGMT Eagleton 93.82 32⇓P **P 07 56 18.6 -0.2**
baz=94,SNR=12
EGMT Eagleton 93.82 32 *e*P **P 07 56 18.4 -0.4**
comp=Z,16nm,0.8s,mb5.4
I12A Atlanta 93.83 38⇑P **P 07 56 19.6 +0.7**
baz=94,SNR=16
PAHR Pah Rah Range 93.83 43 *e*P **P 07 56 19.8 +0.8**
comp=Z,34nm,1.0s,mb5.6
WCN Washoe City 93.84 44⇑P **P 07 56 19.7 +0.6**
baz=94
WCN Washoe City 93.84 44 *e*P **P 07 56 20.0 +0.9**
WCN pmax pmax
comp=Z,11nm,1.1s,mb5.1
WCN Washoe City 93.84 44 *e*P **P 07 56 20.0 +0.9**
comp=Z,11nm,1.1s,mb5.1
B19A Brinkman Farms 93.91 31⇓P **P 07 56 18.9 -0.3**
baz=94
F15A Butte 93.92 35⇑P **P 07 56 19.1 -0.2**
baz=94,SNR=15
LRM Limekiln Ridge 93.96 35 *e*P **P 07 56 20.0 +0.5**
comp=Z,89nm,1.0s,mb6.0
LRM *e* pP 07 56 49.5 +0.1
D17A Six Diamond Ra 93.96 33⇑P **P 07 56 19.5 0.0**
baz=94,SNR=12
CMB Columbia Colle 94.18 45 *e*P **P 07 56 20.7 0.0**
CMB pmax pmax
comp=Z,21nm,1.0s,mb5.4
CMB Columbia Colle 94.18 45 *e*P **P 07 56 20.7 +0.1**
comp=Z,21nm,1.0s,mb5.4
DLMT Dillon 94.19 35 *e*P **P 07 56 21.3 +0.7**
comp=Z,17nm,0.8s,mb5.4
DLMT *e* pP 07 56 50.7 +0.2
H14A Leadore 94.27 36⇑P **P 07 56 20.8 -0.1**
baz=94,SNR=6.0
I13A Wildhorse Cree 94.31 37⇓P **P 07 56 21.8 +0.6**
baz=94,SNR=47
C19A Slack Wire Ran 94.36 32⇓P **P 07 56 21.1 -0.2**
baz=94,SNR=22
D18A Linhart Farms, 94.37 33⇑P **P 07 56 21.1 -0.3**
baz=94,SNR=6.9
G15A Dillon 94.37 36⇓P **P 07 56 21.5 +0.2**
baz=94,SNR=39
HLID Hailey 94.38 38⇑P **P 07 56 22.4 +1.0**
baz=94,SNR=40
HLID Hailey 94.38 38 *e*P **P 07 56 22.8 +1.4**
comp=Z,22nm,0.9s,mb5.5
HLID *e* pP 07 56 52.2 +0.8
MCMT McKenzie Canyo 94.41 36 *e*P **P 07 56 22.1 +0.5**
comp=Z,2.0nm,0.6s,mb4.6
BOZ Bozeman (W) 94.50 35⇓P **P 07 56 22.6 +0.6**
baz=94,SNR=11
BOZ Bozeman (W) 94.50 35 *e*P **P 07 56 22.2 +0.2**
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
BOZ Bozeman (W) 94.50 35 *e*P **P 07 56 22.2 +0.3**
comp=Z,5.4nm,0.8s,mb5.0
WAKR Walker 94.51 44 *e*P **P 07 56 22.5 +0.3**
comp=Z,13nm,1.0s,mb5.3
J13A Cove Ranch, Pi 94.61 38⇓P **P 07 56 23.6 +1.0**
baz=94,SNR=19
H15A Lima 94.65 36⇓P **P 07 56 23.3 +0.6**
baz=94,SNR=6.5
I14A Mackay 94.67 37⇑P **P 07 56 23.8 +1.1**
baz=94,SNR=37
BMN Battle Mountai 94.72 41 *e*P **P 07 56 24.7 +1.6**
BMN pmax pmax
comp=Z,28nm,1.3s,mb5.5
BMN Battle Mountai 94.72 41 *e*P **P 07 56 24.7 +1.6**
comp=Z,28nm,1.3s,mb5.5
E18A Harlowton 94.75 33⇓P **P 07 56 23.4 +0.4**
baz=94,SNR=18
F17A Fitzpatrick Pl 94.83 34⇑P **P 07 56 24.3 +0.8**
baz=94,SNR=7.2
D19A Cripps Ranch, 94.84 32⇓P **P 07 56 23.2 -0.3**
baz=94,SNR=24
C20A Veseth Ranch, 94.88 32⇓P **P 07 56 23.4 -0.2**
baz=95,SNR=19
J14A Carey 95.03 37⇑P **P 07 56 26.1 +1.7**
baz=95,SNR=9.7
D20A Manuel Ranch, 95.25 32⇓P **P 07 56 25.6 +0.2**
baz=95,SNR=13
NVAR Mina Array Bea 95.27 44 P **P 07 56 26.4 +0.7**
comp=Z,9.3nm,0.8s,mb5.3,baz=293,slow=4.8,SNR=60
PPT Papeete 95.30 107 *e*SP PS 08 09 04.8 -0.1
comp=Z,201nm,28.8s
PPT *e*LR LR 08 27 07.5
comp=Z,466nm,29.8s
PPT Papeete 95.30 107 LR LR 08 37 09.7
comp=Z,117nm,19.0s,baz=147,slow=34
F18A Big Timber 95.31 34⇓P **P 07 56 26.1 +0.5**
baz=95,SNR=9.0
H16A Russell Place, 95.34 35⇓P **P 07 56 27.0 +1.2**
baz=95,SNR=11
E19A Rath Farm, Rou 95.38 33⇓P **P 07 56 26.6 +0.7**
baz=95,SNR=11
YMR Madison River 95.51 35 *e*P **P 07 56 28.5 +1.9**
comp=Z,5.7nm,0.7s,mb5.1
E20A Meyer Farm, Mu 95.67 32⇓P **P 07 56 27.2 -0.1**
baz=95
F19A Roth Farm, Mol 95.73 33⇓P **P 07 56 27.8 +0.3**
baz=95
IMW Indian Meadow 96.05 36 *e*P **P 07 56 30.6 +1.5**
comp=Z,2.2nm,0.7s,mb4.7
FLWY Flagg Ranch 96.05 35 *e*P **P 07 56 30.3 +1.3**
comp=Z,10nm,0.8s,mb5.3
RLMT Red Lodge 96.08 34⇑P **P 07 56 29.4 +0.2**
baz=96,SNR=8.7
RLMT Red Lodge 96.08 34 *e*P **P 07 56 29.7 +0.5**
comp=Z,9.8nm,1.0s,mb5.2
DGMT Dagmar 96.08 29⇑P **P 07 56 28.0 -1.1**
baz=96,SNR=6.3
DGMT Dagmar 96.08 29 *e*P **P 07 56 29.2 +0.1**
comp=Z,18nm,0.9s,mb5.5
VES Vestal, Richgr 96.31 46⇓P **P 07 56 29.3 -1.1**
baz=96
TPAW Teton Pass 96.31 36 *e*P **P 07 56 31.4 +1.1**
comp=Z,2.0nm,0.7s,mb4.7
LAO LASA Array 96.46 31 *e*P **P 07 56 31.5 +0.6**
comp=Z,8.8nm,0.9s,mb5.2
S10A Tonopah Range, 96.64 43⇑P **P 07 56 32.2 +0.3**
baz=96,SNR=14
ISA Isabella 96.82 46 *e*P **P 07 56 32.2 -0.5**
ISA pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
ISA Isabella 96.82 46 *e*P **P 07 56 32.2 -0.5**
comp=Z,4.9nm,1.1s,mb4.8
M15A Larsen Ranch, 96.85 38⇑P **P 07 56 32.8 +0.1**

baz=97,SNR=8.1
J18A Kendall Valley 97.00 36 ⇑P P 07 56 33.8 +0.4
baz=97,SNR=8.1
R11A Troy Canyon, C 97.00 42 ⇓P P 07 56 34.1 +0.6
baz=97,SNR=9.9
MPMC Manual Prospec 97.22 45 ⇑P P 07 56 34.9 +0.4
baz=97,SNR=10
HWUT Hardware Ranch 97.25 38 eP P 07 56 35.5 +1.0
comp=Z,7.6nm,1.1s,mb5.0
DUG Dugway 97.47 39 eP P 07 56 36.5 +0.9
DUG pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
DUG Dugway 97.47 39 eP P 07 56 36.5 +0.9
comp=Z,1.7nm,0.8s,mb4.5
BW06 Boulder Array 97.55 36 eP P 07 56 36.0 +0.1
comp=Z,1.2nm,0.7s,mb4.5
PDAR Pinedale Array 97.55 36 P P 07 56 35.7 -0.2
comp=Z,1.1nm,0.7s,mb4.5,baz=27,slow=0.6,SNR=11
PDAR LR LR 08 38 39.2
comp=Z,80nm,20.3s,baz=115,slow=34
EDW2 Edwards Air Fo 97.60 46 ⇓P P 07 56 37.1 +0.8
baz=97
R12A Pony Springs, 97.61 42 ⇑P P 07 56 37.2 +0.9
baz=97
P14A Drum Mountains 97.72 40 ⇓P P 07 56 37.7 +1.0
baz=97,SNR=8.8
U10A Ash Meadows, A 97.74 44 ⇓P P 07 56 38.1 +1.3
baz=98,SNR=5.1
T11A Corn Creek, Al 97.92 43 ⇓P P 07 56 38.6 +0.9
baz=98,SNR=10
Q14A Sevier Lake (B 97.99 41 ⇓P P 07 56 39.0 +1.1
baz=98,SNR=7.3
ULM Lac du Bonnet 98.06 24 P P 07 56 36.8 -1.2
comp=Z,2.9nm,0.8s,mb4.9,baz=341,slow=5.0,SNR=3.3
ULM LR LR 08 45 35.5
comp=Z,135nm,18.0s,baz=358,slow=38
SHOC Shoshone 98.09 45 ⇓P P 07 56 38.9 +0.4
baz=98
GSC Goldstone 98.12 45 ⇓P P 07 56 39.3 +0.7
baz=98
GSC Goldstone 98.12 45 eP P 07 56 39.5 +0.9
GSC pmax pmax
comp=Z,16nm,1.4s,mb5.4
GSC Goldstone 98.12 45 eP P 07 56 39.5 +0.9
comp=Z,16nm,1.4s,mb5.4
J21A Lysite 98.25 34 ⇓P P 07 56 39.1 0.0
baz=98,SNR=6.4
SHPR Sheep Range 98.42 44 eP P 07 56 40.7 +0.7
comp=Z,2.9nm,0.9s,mb4.8
S13A Holt Ranch, En 98.54 42 ⇓P P 07 56 41.6 +1.2
baz=98,SNR=7.2
J22A Midwest 98.70 34 ⇑P P 07 56 40.3 -0.7
baz=98,SNR=7.4
T13A Saint George 98.87 42 ⇑P P 07 56 43.1 +1.1
baz=99,SNR=6.0
ESDC Sonseca Array 98.88 321 LR LR 08 44 36.7
comp=Z,77nm,19.8s,baz=85,slow=37
MSU Marysvale 98.95 40 eP P 07 56 44.0 +1.8
MSU pmax pmax
comp=Z,15nm,1.6s,mb5.3
MSU Marysvale 98.95 40 eP P 07 56 44.0 +1.8
comp=Z,15nm,1.6s,mb5.3
S15A Panguitch 99.39 41 ⇓P Pdif 07 56 45.8 +1.9
baz=99,SNR=5.7
SRU San Rafael 99.51 39 eP Pdif 07 56 44.9 +0.4
SRU pmax pmax
comp=Z,3.0nm,0.7s,mb5.0
SRU San Rafael 99.51 39 eP Pdif 07 56 44.9 +0.4
comp=Z,3.0nm,0.7s
S16A Weppner Ranch, 99.81 41 ⇓P Pdif 07 56 46.9 +1.1
baz=100
U15A North Rim 100.25 42 ⇓P Pdif 07 56 49.0 +1.2
baz=100,SNR=5.5
PV10 Paradox Valley 100.86 39 ePdif Pdif 07 56 52.0 +1.5
comp=Z,106nm,0.8s
PV01 Paradox Valley 101.29 39 ePdif Pdif 07 56 53.8 +1.4
comp=Z,161nm,0.8s
WUAZ Wupatki 101.41 42 ePdif Pdif 07 56 54.7 +1.8
comp=Z,8.2nm,1.0s
TXAR Lajitas Array 110.37 42 Pdiff Pdif 07 57 35.0 +2.2
comp=Z,0.5nm,0.7s,baz=308,slow=4.1,SNR=5.7
TXAR PKIKP PKiKP 08 01 33.0 -0.7
comp=Z,0.2nm,0.5s,baz=17,slow=3.2,SNR=5.2
TXAR Lajitas Array 110.37 42 PKIKP PKiKP 08 01 33.0 -0.7
TXAR Lajitas Array 110.37 42 Pdif Pdif 07 57 35.0 +2.2
TXAR PKPdf PKiKP 08 01 33.0 -0.7
TORD Torodi Ar. Bea 111.15 296 PKiKP PKiKP 08 01 35.0 -0.4
comp=Z,0.6nm,0.7s,baz=25,slow=2.9,SNR=4.4
TORD PKKP PKKPab 08 12 44.8 +1.5
comp=Z,1.1nm,0.9s,baz=274,slow=3.2,SNR=4.2
DBIC Dimbokro 120.08 294 PKP PKPdf 08 01 53.0 +0.4
comp=Z,2.0nm,0.6s,baz=269,slow=15,SNR=4.1
SDV Santo Domingo 144.30 23 ePKPdf PKPdf 08 02 35.8 -2.2
ROSC El Rosal 146.41 32 PKPbc PKPbc 08 02 43.0 -0.1
comp=Z,5.6nm,0.5s,baz=66,slow=3.9,SNR=10
ROSC El Rosal 146.41 32 ePKPbc PKPbc 08 02 44.2 +1.2
OTAV Otavalo 148.00 43 ePKPbc PKPbc 08 02 47.3 -0.1
LPAZ La Paz 167.02 52 PKP PKPdf 08 03 08.0 +0.6
comp=Z,0.7nm,0.8s,baz=162,slow=3.2,SNR=2.2
LPAZ PKPab PKPab 08 04 11.1 -0.8
comp=Z,8.1nm,1.0s,baz=342,slow=6.4,SNR=13
LPAZ La Paz 167.02 52 ePKPdf PKPdf 08 03 09.2 +1.8
CFAA Coronel Fontan 168.23 129 PKPab PKPab 08 04 17.1 +0.2
comp=Z,0.4nm,0.9s,baz=242,slow=3.4,SNR=5.8
SIV San Ignacio 170.77 22 PKPab PKPab 08 04 27.0 -1.2
comp=Z,4.6nm,0.7s,baz=7.4,slow=3.3,SNR=14
CPUP Villa Florida 178.30 184 PKPab 08 05 00.3
comp=Z,3.3nm,0.9s,baz=117,slow=1.8,SNR=5.7

TRN 09 07:54:01.8, 14°01N×60°62W, h9km, MD3.7, M3.5(FDF), 4C-3D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLW	**Petit Monier**	**0.31**	**272**	⇓eP	Pg	07 54 11.6	+3.6
SLW	**Petit Monier**	**0.31**	**272**	⇓iP	Pg	07 54 12.2	+4.3
SLW				eS	Sg	07 54 16.3	+4.1
SLW				⇓eS	Sg	07 54 20.6	+8.5
SLPE	**Piton Saint Es**	**0.40**	**246**	eP	Pg	07 54 12.6	+3.0
SLPE				eS	Sg	07 54 19.5	+4.6
MCLT	**Moule a Chique**	**0.43**	**227**	eP	Pg	07 54 12.0	+1.8
MCLT				eS	Sg	07 54 20.2	+4.3
SLB	**Belfond**	**0.45**	**247**	⇑eP	Pg	07 54 14.6	+4.1
SLB				eS	Sg	07 54 23.0	+6.6
SLDE	**Delcer**	**0.47**	**245**	eP	Pg	07 54 13.9	+2.9
SLDE				eS	Sg	07 54 22.4	+5.2
MVM	**Montagne Vaucl**	**0.61**	**334**	⇑eP	Pg	07 54 15.5	+2.0
BIM	**Bigot**	**0.67**	**319**	eP	Pg	07 54 16.9	+2.2
BIM				eS	Sg	07 54 30.5	+7.0
BHS	**Barnard House**	**0.86**	**215**	eP	Pg	07 54 21.0	+2.6
FDF	**Fort de France**	**0.89**	**325**	⇑eP	Pg	07 54 20.3	+1.4
FDF				⇑eS	Sg	07 54 35.2	+4.8
DSTT	**Stowe**	**1.40**	**332**	eP	Pn	07 54 27.9	+0.5
DSTT				eS	Sb	07 54 48.4	+2.3
DSHT	**Scott's Head**	**1.41**	**329**	eP	Pn	07 54 28.3	+0.8
DSHT				eS	Sn	07 54 48.8	+2.6
DFBT	**Forest Bistro**	**1.42**	**330**	eP	Pn	07 54 28.4	+0.7
DFBT				eS	Sn	07 54 49.1	+2.6
DPMT	**Pointe Michel**	**1.45**	**330**	eP	Pn	07 54 29.3	+1.1
DPMT				eS	Sn	07 54 49.4	+2.2
DLPL	**La Plaine**	**1.45**	**335**	eP	Pn	07 54 29.5	+1.3
DLPL				eS	Sn	07 54 49.6	+2.2
DWS	**Wesley**	**1.69**	**337**	eP	Pn	07 54 33.5	+2.0
DWS				eS	Sn	07 54 56.4	+3.1
TBG	**Guadaloupe-3**	**2.09**	**332**	eP	Pn	07 54 38.6	+1.6
GRW	**Mount Saint Ca**	**2.10**	**209**	eP	Pn	07 54 39.0	+1.9
GRW				eS	Sn	07 55 05.5	+2.2
PHG	**Guadaloupe-2**	**2.23**	**334**	eP	Pn	07 54 40.9	+2.0
BCG	**Bois Riant Cap**	**2.28**	**335**	eP	Pn	07 54 42.2	+2.5
LZG	**Guadaloupe-1**	**2.40**	**332**	eP	Pn	07 54 43.0	+1.8
TOSP	**Speyside**	**2.69**	**178**	eP	Pn	07 54 47.7	+2.4
TOSP				eS	Sn	07 55 20.2	+2.2

IDC 09 08:06:28.3±2.0, 24°27S×67°06W, h163km±18km, mb3.0/3, mb1 3.2/6, mb1mx3.1/17, mbtmp3.0/6, Error ellipse: s-maj=26.0km s-min=20.1km az=77.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.38**	**188**	P	Pn	08 08 13.2	-0.2
	0.0nm,0.3s,baz=25,slow=8.4,SNR=11						
CFAA				S	Sn	08 09 31.6	-4.6
	0.1nm,0.3s,baz=118,slow=20,SNR=3.9						
LPAZ	**La Paz**	**8.00**	**353**	P	Pn	08 08 22.9	+1.2
	0.9nm,0.3s,baz=160,slow=8.2,SNR=30						
LPAZ				S	Sn	08 09 47.9	-3.2
	0.1nm,0.3s,baz=348,slow=20,SNR=2.6						
CPUP	**Villa Florida**	**9.04**	**105**	P	Pn	08 08 35.9	+0.5
	0.2nm,0.3s,baz=242,slow=13,SNR=2.9						
SIV	**San Ignacio**	**9.97**	**35**	P	Pn	08 08 47.3	-0.4
	0.3nm,0.3s,baz=249,slow=8.8,SNR=4.3						
TXAR	**Lajitas Array**	**63.86**	**325**	P	P	08 16 43.6	+0.1
	0.1nm,0.5s,baz=116,slow=4.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	**76.71**	**69**	P	P	08 18 01.5	-0.4
	0.3nm,0.4s,baz=261,slow=6.0,SNR=7.8						
PDAR	**Pinedale Array**	**77.35**	**329**	P	P	08 18 04.9	0.0
	0.2nm,0.6s,baz=130,slow=6.5,SNR=3.5						
ASAR	**Alice Springs**	**128.19**	**205**	PKP	PKPdf	08 25 15.8	-0.1
	0.4nm,0.7s,baz=183,slow=3.5,SNR=3.3						
WRA	**Warramunga Arr**	**131.37**	**207**	PKP	PKPdf	08 25 21.7	-0.2
	0.2nm,0.6s,baz=156,slow=1.6,SNR=4.6						
MKAR	**Makanchi Array**	**146.76**	**40**	PKPbc	PKPbc	08 25 51.2	+0.3
	0.9nm,0.5s,baz=285,slow=2.8,SNR=7.8						

*ISCJB **09** 08:29:56.1±0.7, 42°98N±0°05×17°25E±0°05, h10km, Error ellipse: s-maj=8.3km s-min=2.9km az=33.4*
*CSEM **09** 08:29:56.4±0.3, 42°95N×17°22E, h2km, ML2.4/10, Error ellipse: s-maj=8.9km s-min=3.1km az=30.0*
*VIE **09** 08:30:00.1±0.8, 43°15N×17°15E, h10km, mb2.7/2, ML2.6/2, Error ellipse: s-maj=23.6km s-min=5.7km az=69.0 69 km SE of Split*
*PDG **09** 08:30:00.7±0.1, 42°86N×17°48E, h13km, ML2.4/10, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
ISC 09 08:29:57.4±0.7, 42°95N±0°05×17°25E±0°05, h10km, n30, σ1§16/60, 14C-10D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.34**	**103**	*i* Pg	**Pg**	**08 30 01.7**	**-2.4**
STON				Sg	**Sg**	**08 30 07.2**	**-1.5**
STON	**Ston**	**0.34**	**103**	*i* Pg	**Pg**	**08 30 01.6**	**-2.5**
STON				Sg	**Sg**	**08 30 07.1**	**-1.5**
BRY	**Bratogost**	**0.95**	**92**	⇑iPg	**Pg**	**08 30 15.5**	**-0.2**
BRY				eSg	**Sg**	**08 30 27.7**	**-0.3**
BRY	**Bratogost**	**0.95**	**92**	⇑iPg	**Pg**	**08 30 15.5**	**-0.2**
BRY				eSg	**Sg**	**08 30 27.7**	**-0.3**
HCY	**Herceg Novi**	**1.05**	**118**	⇑iPg	**Pg**	**08 30 16.5**	**-1.0**
HCY				eSg	**Sg**	**08 30 30.2**	**-0.9**
HCY	**Herceg Novi**	**1.05**	**118**	⇑iPg	**Pg**	**08 30 16.5**	**-1.0**
HCY				eSg	**Sg**	**08 30 30.2**	**-0.9**
UPM	**Unac-Piva**	**1.24**	**78**	⇓iPg	**Pg**	**08 30 21.4**	**+0.2**
UPM				eSg	**Sg**	**08 30 38.3**	**+0.9**
UPM	**Unac-Piva**	**1.24**	**78**	⇓iPg	**Pg**	**08 30 21.4**	**+0.2**
UPM				eSg	**Sg**	**08 30 38.3**	**+0.9**
NKY	**Niksic**	**1.29**	**95**	⇑iPg	**Pg**	**08 30 21.2**	**-1.0**
NKY				eSg	**Sg**	**08 30 38.8**	**-0.1**
NKY	**Niksic**	**1.29**	**95**	⇑iPg	**Pg**	**08 30 21.2**	**-1.0**
NKY				eSg	**Sg**	**08 30 38.8**	**-0.1**
BUM	**Brajici-Budva**	**1.38**	**117**	⇓iPg	**Pg**	**08 30 22.6**	**-1.2**
BUM				eSg	**Sg**	**08 30 41.3**	**-0.4**
BUM	**Brajici-Budva**	**1.38**	**117**	⇓iPg	**Pg**	**08 30 22.6**	**-1.2**
BUM				eSg	**Sg**	**08 30 41.3**	**-0.4**
PDG	**Podgorica**	**1.57**	**109**	⇓iPg	**Pg**	**08 30 26.5**	**-1.0**
PDG				eSg	**Sg**	**08 30 47.2**	**-0.6**
TTG	**Podgorica**	**1.57**	**109**	⇓iPg	**Pg**	**08 30 26.5**	**-1.0**
TTG				eSg	**Sg**	**08 30 47.2**	**-0.6**
PLE	**Pljevlja**	**1.61**	**76**	⇑iPg	**Pg**	**08 30 28.1**	**-0.2**
PLE				eSg	**Sg**	**08 30 49.7**	**+0.4**
PLE	**Pljevlja**	**1.61**	**76**	⇑iPg	**Pg**	**08 30 28.1**	**-0.2**
PLE				eSg	**Sg**	**08 30 49.7**	**+0.4**
ULC	**Ulcinj**	**1.78**	**123**	⇓iPn	**Pn**	**08 30 29.7**	**+1.6**
ULC				eSn	**Sn**	**08 30 52.6**	**+1.9**
ULC	**Ulcinj**	**1.78**	**123**	⇓iPn	**Pn**	**08 30 29.7**	**+1.6**
ULC				eSn	**Sn**	**08 30 52.6**	**+1.9**
BEY	**Berane**	**1.95**	**91**	⇑iPn	**Pn**	**08 30 32.1**	**+1.7**
BEY				eSn	**Sn**	**08 30 57.2**	**+2.3**
IVA	**Berane**	**1.95**	**91**	⇑iPn	**Pn**	**08 30 32.1**	**+1.7**
IVA				eSn	**Sn**	**08 30 57.2**	**+2.3**
PVY	**Plav**	**2.04**	**99**	⇑iPn	**Pn**	**08 30 33.3**	**+1.6**
PVY				eSn	**Sn**	**08 30 59.0**	**+1.9**
PVY	**Plav**	**2.04**	**99**	⇑iPn	**Pn**	**08 30 33.3**	**+1.6**
PVY				eSn	**Sn**	**08 30 59.0**	**+1.9**
NVLJ	**Novalja**	**2.36**	**314**	ePn	**Pn**	**08 30 35.6**	**-0.6**
NVLJ				Sn	**Sn**	**08 31 08.5**	**+3.3**
NVLJ	**Novalja**	**2.36**	**314**	ePn	**Pn**	**08 30 35.6**	**-0.6**
NVLJ				Sn	**Sn**	**08 31 08.4**	**+3.2**
VOY	**Vojsko**	**3.91**	**323**	ePn	**Pn**	**08 30 57.6**	**+0.2**
VOY				eSn	**Sn**	**08 31 43.8**	**+0.5**
VOY	**Vojsko**	**3.91**	**323**	Pn	**Pn**	**08 30 57.6**	**+0.2**
VOY				eSn	**Sn**	**08 31 43.8**	**+0.5**
SOKA	**Soboth**	**4.05**	**338**	⇓iPn	**Pn**	**08 30 59.1**	**-0.2**
SOKA				⇑iSn	**Sn**	**08 31 45.8**	**-0.9**
SOKA	**Soboth**	**4.05**	**338**	Pn	**Pn**	**08 30 59.1**	**-0.2**
SOKA				Sn	**Sn**	**08 31 45.8**	**-1.0**
ARSA	**Arzberg**	**4.47**	**345**	⇑iPn	**Pn**	**08 31 05.5**	**+0.3**
ARSA				⇓iSn	**Sn**	**08 31 55.6**	**-1.6**
ARSA	**Arzberg**	**4.47**	**345**	Pn	**Pn**	**08 31 05.5**	**+0.3**
ARSA				Sn	**Sn**	**08 31 55.6**	**-1.6**

*CSEM **09** 08:50:35.5±0.2, 43°06N×17°38E, h2km, ML3.1/10, Error ellipse: s-maj=4.6km s-min=3.0km az=37.0*
*ISCJB **09** 08:50:35.9±0.4, 43°09N±0°02×17°41E±0°03, h10km, Error ellipse: s-maj=3.4km s-min=2.2km az=36.5*
*PDG **09** 08:50:36.0±0.3, 42°99N×17°45E, h8km, MD3.1/4, ML3.1/10, Error ellipse: s-maj=1.2km s-min=1.8km az=0.0*
*NEIC **09** 08:50:36.0, 42°99N×17°45E, h8km, ML3.1(PDG), After PDG.*
*BEO **09** 08:50:36.9±0.8, 43°11N×17°33E, h8km±3km, ML3.3/10*
*VIE **09** 08:50:39.0±0.5, 43°30N×17°52E, h10km, mb2.8/4, ML3.0/4, Error ellipse: s-maj=9.2km s-min=3.7km az=65.0 88 km ESE of Split*
ISC 09 08:50:36.8±0.4, 43°06N±0°02×17°40E±0°03, h10km, n68, σ1§36/125, 28C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.29**	**130**	*i* Pg	**Pg**	**08 50 39.3**	**-3.3**
STON				Sg	**Sg**	**08 50 44.4**	**-2.1**
STON	**Ston**	**0.29**	**130**	*i* Pg	**Pg**	**08 50 39.2**	**-3.4**
STON				Sg	**Sg**	**08 50 44.3**	**-2.2**
BRY	**Bratogost**	**0.85**	**100**	⇓iPg	**Pg**	**08 50 50.3**	**-3.0**
BRY				eSg	**Sg**	**08 51 03.8**	**-0.6**
HCY	**Herceg Novi**	**1.01**	**127**	⇑iPg	**Pg**	**08 50 53.7**	**-2.6**
HCY				eSg	**Sg**	**08 51 08.5**	**-0.9**
HCY	**Herceg Novi**	**1.01**	**127**	⇑iPg	**Pg**	**08 50 53.7**	**-2.6**
HCY				eSg	**Sg**	**08 51 08.5**	**-0.9**
UPM	**Unac-Piva**	**1.11**	**82**	⇓iPg	**Pg**	**08 50 55.9**	**-2.4**
UPM				eSg	**Sg**	**08 51 13.4**	**+0.7**
UPM	**Unac-Piva**	**1.11**	**82**	⇓iPg	**Pg**	**08 50 55.9**	**-2.4**
UPM				eSg	**Sg**	**08 51 13.4**	**+0.7**
NKY	**Niksic**	**1.20**	**101**	⇑iPg	**Pg**	**08 50 57.2**	**-2.6**
NKY				eSg	**Sg**	**08 51 15.5**	**+0.1**
NKY	**Niksic**	**1.20**	**101**	⇑iPg	**Pg**	**08 50 57.2**	**-2.6**
NKY				eSg	**Sg**	**08 51 15.5**	**+0.1**
BUM	**Brajici-Budva**	**1.34**	**124**	⇑iPg	**Pg**	**08 50 58.8**	**-3.7**
BUM				eSg	**Sg**	**08 51 19.3**	**-0.6**
PLE	**Pljevlja**	**1.48**	**79**	⇑iPg	**Pg**	**08 51 03.1**	**-2.2**
PLE				eSg	**Sg**	**08 51 25.8**	**+1.3**
PLE	**Pljevlja**	**1.48**	**79**	⇑iPg	**Pg**	**08 51 03.1**	**-2.2**
PLE				eSg	**Sg**	**08 51 25.8**	**+1.3**
PDG	**Podgorica**	**1.51**	**114**	eSg	**Sg**	**08 51 25.1**	**-0.2**
TTG	**Podgorica**	**1.51**	**114**	⇓iPg	**Pg**	**08 51 02.2**	**-3.5**
TTG				eSg	**Sg**	**08 51 25.1**	**-0.2**
TTG	**Podgorica**	**1.51**	**114**	⇓iPg	**Pg**	**08 51 02.2**	**-3.5**
TTG				eSg	**Sg**	**08 51 25.1**	**-0.2**
BBLS	**Lazići**	**1.67**	**60**	⇑iPn	**Pn**	**08 51 06.9**	**+0.8**
BBLS				eSg	**Sg**	**08 51 31.2**	**+0.7**
BBLS	**Lazići**	**1.67**	**60**	⇑iPn	**Pn**	**08 51 06.9**	**+0.8**
BBLS				eSg	**Sg**	**08 51 31.2**	**+0.7**
BLY	**Banja Luka**	**1.70**	**355**	⇓iPg	**Pg**	**08 51 06.5**	**-2.9**
BLY				eSg	**Sg**	**08 51 30.3**	**-1.2**
BLY	**Banja Luka**	**1.70**	**355**	⇓iPg	**Pg**	**08 51 06.5**	**-2.9**
BLY				eSg	**Sg**	**08 51 30.3**	**-1.2**
MS1	**Monte Sant'Ang**	**1.73**	**219**	ePn	**Pn**	**08 51 06.8**	**-0.1**
MS1				eSn	**Sn**	**08 51 30.8**	**+1.8**
ULC	**Ulcinj**	**1.75**	**128**	⇑iPn	**Pn**	**08 51 06.3**	**-0.9**
ULC				eSn	**Sn**	**08 51 31.2**	**+1.7**
ULC	**Ulcinj**	**1.75**	**128**	⇑iPn	**Pn**	**08 51 06.3**	**-0.9**
ULC				eSn	**Sn**	**08 51 31.2**	**+1.7**
BEY	**Berane**	**1.84**	**95**	⇑iPn	**Pn**	**08 51 09.0**	**+0.5**
BEY				eSn	**Sn**	**08 51 34.2**	**+2.4**
IVA	**Berane**	**1.84**	**95**	⇑iPn	**Pn**	**08 51 09.0**	**+0.5**
IVA				eSn	**Sn**	**08 51 34.2**	**+2.4**
IVA	**Berane**	**1.84**	**95**	⇑iPn	**Pn**	**08 51 09.0**	**+0.5**
IVA				eSn	**Sn**	**08 51 34.2**	**+2.4**
PVY	**Plav**	**1.95**	**103**	⇑iPn	**Pn**	**08 51 10.1**	**+0.2**
PVY				eSn	**Sn**	**08 51 36.7**	**+2.3**
PVY	**Plav**	**1.95**	**103**	⇑iPn	**Pn**	**08 51 10.1**	**+0.2**
PVY				eSn	**Sn**	**08 51 36.7**	**+2.3**
CDT	**Castel del Mon**	**2.14**	**203**	ePn	**Pn**	**08 51 13.1**	**+0.5**
CDT				eSn	**Sn**	**08 51 43.6**	**+4.3**
DIVS	**Divibare**	**2.15**	**60**	⇑iPn	**Pn**	**08 51 12.9**	**+0.2**
DIVS				eSn	**Sn**	**08 51 41.1**	**+1.6**
DIVS	**Divibare**	**2.15**	**60**	⇑iPn	**Pn**	**08 51 12.9**	**+0.2**
DIVS				eSn	**Sn**	**08 51 41.1**	**+1.6**
NVLJ	**Novalja**	**2.37**	**310**	ePn	**Pn**	**08 51 14.9**	**-0.9**
NVLJ				Sn	**Sn**	**08 51 46.6**	**+1.7**
NVLJ	**Novalja**	**2.37**	**310**	ePn	**Pn**	**08 51 14.8**	**-1.0**
NVLJ				Sn	**Sn**	**08 51 46.5**	**+1.6**
TRUS	**Trudelj**	**2.47**	**61**	⇑iPn	**Pn**	**08 51 16.1**	**-1.1**
TRUS				eSn	**Sn**	**08 51 48.6**	**+1.2**
TRUS	**Trudelj**	**2.47**	**61**	⇑iPn	**Pn**	**08 51 16.1**	**-1.1**
TRUS				eSn	**Sn**	**08 51 48.6**	**+1.2**
GRUS	**Gruza**	**2.55**	**70**	ePn	**Pn**	**08 51 20.4**	**+2.2**
GRUS				eSn	**Sn**	**08 51 49.3**	**0.0**
GRUS	**Gruza**	**2.55**	**70**	ePn	**Pn**	**08 51 20.4**	**+2.2**
GRUS				eSn	**Sn**	**08 51 49.3**	**0.0**
FRGS	**Fruska Gora**	**2.73**	**39**	ePn	**Pn**	**08 51 20.1**	**-0.5**
FRGS				eSn	**Sn**	**08 51 53.8**	**+0.2**
BARS	**Barje**	**3.25**	**93**	ePn	**Pn**	**08 51 28.6**	**+0.8**
BARS				eSn	**Sn**	**08 52 08.2**	**+1.6**
BARS	**Barje**	**3.25**	**93**	ePn	**Pn**	**08 51 28.6**	**+0.8**
BARS				eSn	**Sn**	**08 52 08.2**	**+1.6**
PKSM	**Moragy**	**3.28**	**15**	⇓iP	**Pn**	**08 51 29.4**	**+1.2**
PKSM	**Moragy**	**3.28**	**15**	⇓iP	**Pn**	**08 51 29.4**	**+1.2**
PKSM				S	**Sn**	**08 52 09.3**	**+2.1**
ZAVS	**Zavodnje**	**3.78**	**334**	ePn	**Pn**	**08 51 37.7**	**+2.6**
ZAVS				eSn	**Sn**	**08 52 21.4**	**+1.8**
ZAPS	**Zavoj**	**3.83**	**85**	ePn	**Pn**	**08 51 37.7**	**+1.8**
ZAPS				eSn	**Sn**	**08 52 21.4**	**+0.4**
VOY	**Vojsko**	**3.89**	**321**	ePn	**Pn**	**08 51 36.2**	**-0.4**
VOY				*e*		08 51 48.2	
VOY				eSn	**Sn**	**08 52 23.2**	**+0.9**
VOY	**Vojsko**	**3.89**	**321**	ePn	**Pn**	**08 51 36.2**	**-0.4**
VOY				*e*		08 51 48.2	
VOY				eSn	**Sn**	**08 52 23.2**	**+0.9**
VOY	**Vojsko**	**3.89**	**321**	ePn	**Pn**	**08 51 36.2**	**-0.4**
VOY				eSn	**Sn**	**08 52 23.2**	**+0.9**
BZS	**Buzias**	**3.96**	**48**	ePn	**Pn**	**08 51 37.6**	**0.0**
BZS				eSn	**Sn**	**08 52 23.1**	**-1.0**
BZS	**Buzias**	**3.96**	**48**	⇓iP	**Pn**	**08 51 37.8**	**+0.2**
BZS	**Buzias**	**3.96**	**48**	ePn	**Pn**	**08 51 37.6**	**0.0**
BZS	**Buzias**	**3.96**	**48**	⇓iP	**Pn**	**08 51 37.8**	**+0.2**
BZS				eSn	**Sn**	**08 52 23.1**	**-1.0**
BZS				S	**Sn**	**08 52 23.4**	**-0.7**
SOKA	**Soboth**	**3.99**	**336**	⇑iPn	**Pn**	**08 51 37.7**	**-0.3**
SOKA				⇓iSn	**Sn**	**08 52 24.2**	**-0.7**
SOKA	**Soboth**	**3.99**	**336**	Pn	**Pn**	**08 51 37.7**	**-0.3**
SOKA				Sn	**Sn**	**08 52 24.2**	**-0.7**
OBKA	**Obir**	**4.00**	**331**	⇑iPn	**Pn**	**08 51 38.7**	**+0.5**
OBKA				⇓iSn	**Sn**	**08 52 24.5**	**-0.6**
OBKA	**Obir**	**4.00**	**331**	Pn	**Pn**	**08 51 38.7**	**+0.5**
OBKA				Sn	**Sn**	**08 52 24.5**	**-0.7**
ARSA	**Arzberg**	**4.40**	**343**	ePn	**Pn**	**08 51 43.2**	**-0.4**
ARSA				eSn	**Sn**	**08 52 32.6**	**-2.3**
ARSA	**Arzberg**	**4.40**	**343**	⇑iPn	**Pn**	**08 51 43.0**	**-0.6**
ARSA				⇑iSn	**Sn**	**08 52 33.2**	**-1.7**
ARSA	**Arzberg**	**4.40**	**343**	ePn	**Pn**	**08 51 43.2**	**-0.4**
ARSA				Sn	**Sn**	**08 52 33.2**	**-1.7**
GZR	**Gura Zlata**	**4.51**	**57**	⇑iPn	**Pn**	**08 51 45.4**	**+0.2**
GZR	**Gura Zlata**	**4.51**	**57**	⇑iP	**Pn**	**08 51 45.4**	**+0.2**
GZR				S	**Sn**	**08 52 36.7**	**-1.0**
CONA	**Conrad Observa**	**4.99**	**348**	⇑iPn	**Pn**	**08 51 51.2**	**-0.5**
CONA				⇓iSn	**Sn**	**08 52 48.0**	**-1.5**
CONA	**Conrad Observa**	**4.99**	**348**	Pn	**Pn**	**08 51 51.2**	**-0.5**
CONA				Sn	**Sn**	**08 52 48.0**	**-1.4**
DRGR		**5.31**	**43**	S	**Sn**	**08 52 58.1**	**+0.9**
DRGR		**5.31**	**43**	S	**Sn**	**08 52 58.1**	**+0.9**
VYHS	**Vyhne**	**5.53**	**10**	ePG	**Pg**	**08 52 31.7**	**+9.0**
VOIR		**5.99**	**64**	⇑iP	**Pn**	**08 52 09.0**	**+3.6**
VOIR		**5.99**	**64**	S	**Sn**	**08 53 12.5**	**-1.5**
VOIR		**5.99**	**64**	S	**Sn**	**08 53 12.5**	**-1.5**
MORC	**Moravsky Berou**	**6.72**	**1**	eSn	**Sn**	**08 53 29.8**	**-2.3**

*ISCJB **09** 08:58:25.7±0.7, 37°01N±0°04×23°13E±0°05, h24km±5km, Error ellipse: s-maj=7.5km s-min=5.4km az=38.8*
*ATH **09**

*BEO **09** 09:26:39.3±1.0, 43°.07N×17°.28E, h4km±4km, ML2.8/8*
*NEIC **09** 09:26:40.3, 43°.03N×17°.49E, h3km, ML2.7(PDG), After PDG.*
*PDG **09** 09:26:40.3±0.1, 43°.03N×17°.49E, h3km, ML2.7/10, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*VIE **09** 09:26:42.6±1.0, 43°.36N×17°.75E, h10km, mb2.6/3, ML2.5/3, Error ellipse: s-maj=27.6km s-min=7.4km az=62.0 76 km SW of Sarajevo*

ISC 09 09:26:39.7±0.6, 43°.02N±0°.03×17°.37E±0°.04, h10km, n46, σ1º38/87, 17C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.29**	**121**	*e*Pg	**Pg**	**09 26 42.9**	**-2.5**
STON				Sg	**Sg**	**09 26 48.1**	**-1.2**
STON	**Ston**	**0.29**	**121**	*e*Pg	**Pg**	**09 26 42.9**	**-2.6**
STON				Sg	**Sg**	**09 26 48.1**	**-1.2**
BRY	**Bratogost**	**0.87**	**98**	⇓*i*Pg	**Pg**	**09 26 54.2**	**-2.3**
BRY				*e*Sg	**Sg**	**09 27 07.4**	**-0.5**
BRY	**Bratogost**	**0.87**	**98**	⇓*i*Pg	**Pg**	**09 26 54.2**	**-2.3**
BRY				*e*Sg	**Sg**	**09 27 07.4**	**-0.5**
HCY	**Herceg Novi**	**1.01**	**124**	⇓*i*Pg	**Pg**	**09 26 57.7**	**-1.5**
HCY				*e*Sg	**Sg**	**09 27 12.7**	**+0.4**
HCY	**Herceg Novi**	**1.01**	**124**	⇓*i*Pg	**Pg**	**09 26 57.7**	**-1.5**
HCY				*e*Sg	**Sg**	**09 27 12.7**	**+0.4**
UPM	**Unac-Piva**	**1.14**	**80**	*e*Pg	**Pg**	**09 26 59.6**	**-2.1**
UPM				*e*Sg	**Sg**	**09 27 16.3**	**-0.3**
UPM	**Unac-Piva**	**1.14**	**80**	*e*Pg	**Pg**	**09 26 59.6**	**-2.1**
UPM				*e*Sg	**Sg**	**09 27 16.3**	**-0.3**
NKY	**Niksic**	**1.22**	**99**	⇑*i*Pg	**Pg**	**09 27 01.0**	**-2.1**
NKY				*e*Sg	**Sg**	**09 27 19.1**	**+0.3**
NKY	**Niksic**	**1.22**	**99**	⇑*i*Pg	**Pg**	**09 27 01.0**	**-2.1**
NKY				*e*Sg	**Sg**	**09 27 19.1**	**+0.3**
BUM	**Brajici-Budva**	**1.34**	**122**	⇑*i*Pg	**Pg**	**09 27 03.7**	**-1.7**
BUM				*e*Sg	**Sg**	**09 27 23.7**	**+0.9**
BUM	**Brajici-Budva**	**1.34**	**122**	⇑*i*Pg	**Pg**	**09 27 03.7**	**-1.7**
BUM				*e*Sg	**Sg**	**09 27 23.7**	**+0.9**
PLE	**Pljevlja**	**1.51**	**78**	⇑*i*Pg	**Pg**	**09 27 06.8**	**-2.0**
PLE				*e*Sg	**Sg**	**09 27 29.0**	**+0.6**
PLE	**Pljevlja**	**1.51**	**78**	⇑*i*Pg	**Pg**	**09 27 06.8**	**-2.0**
PLE				*e*Sg	**Sg**	**09 27 29.0**	**+0.6**
PDG	**Podgorica**	**1.52**	**112**	⇓*i*Pg	**Pg**	**09 27 06.5**	**-2.3**
PDG				*e*Sg	**Sg**	**09 27 29.2**	**+0.8**
TTG	**Podgorica**	**1.52**	**112**	⇓*i*Pg	**Pg**	**09 27 06.5**	**-2.3**
TTG				*e*Sg	**Sg**	**09 27 29.2**	**+0.8**
TTG	**Podgorica**	**1.52**	**112**	⇓*i*Pg	**Pg**	**09 27 06.5**	**-2.3**
TTG				*e*Sg	**Sg**	**09 27 29.2**	**+0.8**
BBLS	**Lazići**	**1.71**	**60**	⇑*e*Pn	**Pn**	**09 27 10.4**	**+0.9**
BBLS				*e*Sg	**Sg**	**09 27 34.8**	**+0.2**
BBLS	**Lazići**	**1.71**	**60**	⇑*e*Pn	**Pn**	**09 27 10.4**	**+0.9**
BBLS				*e*Sg	**Sg**	**09 27 34.8**	**+0.2**
BLY	**Banja Luka**	**1.73**	**356**	*i* Pn	**Pn**	**09 27 10.2**	**+0.3**
BLY				*e*Sg	**Sg**	**09 27 34.0**	**-1.4**
BLY	**Banja Luka**	**1.73**	**356**	*i* Pn	**Pn**	**09 27 10.2**	**+0.3**
BLY				*e*Sg	**Sg**	**09 27 34.0**	**-1.4**
ULC	**Ulcinj**	**1.75**	**127**	⇑*i*Pn	**Pn**	**09 27 11.3**	**+1.2**
ULC				*e*Sn	**Sn**	**09 27 36.3**	**+3.9**
ULC	**Ulcinj**	**1.75**	**127**	⇑*i*Pn	**Pn**	**09 27 11.3**	**+1.2**
BEY	**Berane**	**1.86**	**94**	*e*Pn	**Pn**	**09 27 12.9**	**+1.2**
BEY				*e*Sn	**Sn**	**09 27 38.6**	**+3.4**
IVA	**Berane**	**1.86**	**94**	*e*Pn	**Pn**	**09 27 12.9**	**+1.2**
IVA				*e*Sn	**Sn**	**09 27 38.6**	**+3.4**
IVA	**Berane**	**1.86**	**94**	*e*Pn	**Pn**	**09 27 12.9**	**+1.2**
IVA				*e*Sn	**Sn**	**09 27 38.6**	**+3.4**
PVY	**Plav**	**1.96**	**102**	⇑*i*Pn	**Pn**	**09 27 14.4**	**+1.4**
PVY				*e*Sn	**Sn**	**09 27 41.1**	**+3.4**
PVY	**Plav**	**1.96**	**102**	⇑*i*Pn	**Pn**	**09 27 14.4**	**+1.4**
PVY				*e*Sn	**Sn**	**09 27 41.1**	**+3.4**
DIVS	**Divibare**	**2.19**	**60**	⇑*i*Pn	**Pn**	**09 27 16.6**	**+0.4**
DIVS				*e*Sn	**Sn**	**09 27 46.2**	**+2.9**
DIVS	**Divibare**	**2.19**	**60**	⇑*i*Pn	**Pn**	**09 27 16.6**	**+0.4**
DIVS				*e*Sn	**Sn**	**09 27 46.2**	**+2.9**
NVLJ	**Novalja**	**2.38**	**311**	*e*Pn	**Pn**	**09 27 17.6**	**-1.1**
NVLJ				Sn	**Sn**	**09 27 48.3**	**+0.4**
NVLJ	**Novalja**	**2.38**	**311**	*e*Pn	**Pn**	**09 27 17.5**	**-1.2**
NVLJ				Sn	**Sn**	**09 27 48.3**	**+0.4**
TRUS	**Trudelj**	**2.51**	**60**	*i* Pn	**Pn**	**09 27 19.8**	**-0.8**
TRUS	**Trudelj**	**2.51**	**60**	*i* Pn	**Pn**	**09 27 19.8**	**-0.8**
BARS	**Barje**	**3.27**	**92**	*e*Pn	**Pn**	**09 27 32.7**	**+1.7**
BARS				*e*Sn	**Sn**	**09 28 11.9**	**+1.9**
ZAVS	**Zavodnje**	**3.80**	**335**	*e*Pn	**Pn**	**09 27 40.4**	**+2.1**
ZAVS				*e*Sn	**Sn**	**09 28 25.1**	**+2.1**
ZAPS	**Zavoj**	**3.86**	**84**	*e*Pn	**Pn**	**09 27 40.4**	**+1.3**
ZAPS				*e*Sn	**Sn**	**09 28 25.1**	**+0.6**
BZS	**Buzias**	**4.00**	**48**	*e*Sn	**Sn**	**09 28 26.8**	**-1.2**
BZS	**Buzias**	**4.00**	**48**	*e*Sn	**Sn**	**09 28 26.8**	**-1.2**
SOKA	**Soboth**	**4.02**	**336**	⇓*i*Pn	**Pn**	**09 27 42.6**	**+1.4**
SOKA				⇑*i*Sn	**Sn**	**09 28 27.6**	**-0.7**
SOKA	**Soboth**	**4.02**	**336**	Pn	**Pn**	**09 27 42.6**	**+1.4**
SOKA				Sn	**Sn**	**09 28 27.6**	**-0.7**
ARSA	**Arzberg**	**4.43**	**343**	*e*Pn	**Pn**	**09 27 45.8**	**-1.1**
ARSA				*e*Sn	**Sn**	**09 28 36.3**	**-2.1**
ARSA	**Arzberg**	**4.43**	**343**	⇓*i*Pn	**Pn**	**09 27 45.9**	**-1.0**
ARSA				⇑*i*Sn	**Sn**	**09 28 37.2**	**-1.2**
ARSA	**Arzberg**	**4.43**	**343**	Pn	**Pn**	**09 27 45.9**	**-1.0**
ARSA				Sn	**Sn**	**09 28 37.2**	**-1.2**
MOA	**Molln**	**5.30**	**337**	⇓*i*Pn	**Pn**	**09 27 59.7**	**+0.8**
MOA				⇑*i*Sn	**Sn**	**09 28 59.6**	**-0.4**
MOA	**Molln**	**5.30**	**337**	Pn	**Pn**	**09 27 59.7**	**+0.8**
MOA				Sn	**Sn**	**09 28 59.6**	**-0.3**

*IDC **09** 10:21:46.6±8.1, 24°.71S×179°.89E, h387km±86km, mb3.4/6, mb1 3.7/7, mb1mx3.4/16, mbtmp3.4/7, Error ellipse: s-maj=49.9km s-min=26.3km az=1.0*
*ISCJB **09** 10:21:47.2±5.7, 24°.8S±0°.2×179°.9E±0°.2, h408km±62km, mb3.6/8, Error ellipse: s-maj=29.3km s-min=20.7km az=40.3*
*NEIC **09** 10:21:50.1±5.5, 24°.81S×179°.86E, h428km±66km, mb3.8/3, Error ellipse: s-maj=58.5km s-min=17.1km az=184.0*

ISC 09 10:21:52.5±4.4, 25°.0S±0°.2×179°.9E±0°.2, h457km±53km, n12, σ0º56/12, mb3.7/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.46**	**189**	P	**P**	**10 24 46.8**	**0.0**
	0.4nm,0.3s,baz=346,slow=19,SNR=4.9						
URZ				S	**S**	**10 27 10.8**	**0.0**
	0.3nm,0.3s,baz=234,slow=21,SNR=1.5						
CTAO	**Charters Tower**	**31.36**	**272**	*e*P	**P**	**10 27 35.5**	**+1.2**
	5.9nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**34.21**	**250**	P	**P**	**10 27 58.6**	**+0.1**
	0.8nm,0.5s,mb3.4,baz=102,slow=9.7,SNR=11						
STKA	**Stephens Creek**	**34.21**	**250**	*e*P	**P**	**10 27 58.4**	**-0.1**
	0.3nm,0.5s,mb3.0						
ASAR	**Alice Springs**	**41.74**	**262**	P	**P**	**10 29 00.1**	**-0.2**
	1.6nm,0.4s,mb3.8,baz=95,slow=7.2,SNR=65						
WRA	**Warramunga Arr**	**42.21**	**267**	P	**P**	**10 29 03.5**	**-0.7**
	2.2nm,0.3s,mb4.1,baz=100,slow=7.1,SNR=84						
KAKA	**Kakadu**	**46.28**	**276**	*e*P	**P**	**10 29 35.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**50.62**	**267**	*e*P	**P**	**10 30 08.1**	**-0.2**
	4.3nm,0.8s,mb3.8						
NVAR	**Mina Array Bea**	**85.61**	**44**	P	**P**	**10 33 41.3**	**-0.3**
	0.4nm,0.7s,mb3.2,baz=226,slow=7.5,SNR=4.7						
CMAR	**Chiang Mai Arr**	**89.77**	**290**	P	**P**	**10 34 02.4**	**+0.9**
	0.5nm,0.4s,mb3.7,baz=151,slow=2.1,SNR=4.6						
TXAR	**Lajitas Array**	**91.11**	**58**	P	**P**	**10 34 07.6**	**+0.1**
	0.5nm,0.8s,mb3.5,baz=231,slow=6.0,SNR=5.1						
BRTR	**Keskin Array B**	**148.10**	**306**	PKPbc	PKPbc	10 40 47.3	+1.4
	0.4nm,0.6s,baz=320,slow=3.8,SNR=2.4						

WEL 09 10:36:15.4±0.5, 37°.25S×177°.26E, h155km±3km, ML3.6/5, 2C, Error ellipse: s-maj=3.6km s-min=2.7km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.81**	**223**	PN	Pn	10 36 39.2	+0.1
OPRZ				SN	Sn	10 36 57.9	+0.6
MXZ	**Matakaoa Point**	**0.89**	**111**	PN	Pn	10 36 39.7	0.0
MXZ				SN	Sn	10 36 58.2	-0.1
URZ	**Urewera**	**1.01**	**187**	⇑PN	Pn	10 36 40.4	-0.3
MWZ	**Matawai**	**1.10**	**169**	⇑PN	Pn	10 36 41.4	-0.1
MWZ				SN	Sn	10 37 02.0	+0.5
PUZ	**Puketiti**	**1.14**	**136**	PN	Pn	10 36 41.9	+0.1
CNGZ	**Carnagh Statio**	**1.44**	**149**	PN	Pn	10 36 45.3	+0.6
RAHZ	**Arahi**	**1.67**	**185**	*e*PN	Pn	10 36 46.3	-0.8
MKAZ	**Moumakai**	**1.68**	**274**	PN	Pn	10 36 48.0	+0.8
PRGZ	**Paritu Road**	**1.74**	**164**	PN	Pn	10 36 47.9	+0.1
KNZ	**Kokohu**	**1.79**	**170**	PN	Pn	10 36 48.2	-0.3
NMHZ	**Naumai**	**1.88**	**191**	PN	Pn	10 36 49.9	+0.5
MHGZ	**Mahia Peninsul**	**1.96**	**165**	PN	Pn	10 36 50.4	+0.1
BKZ	**Black Stump Fm**	**2.00**	**197**	PN	Pn	10 36 49.9	-0.9
BKZ				SN	Sn	10 37 16.6	-1.5
MCHZ	**McNeill Hill**	**2.23**	**191**	PN	Pn	10 36 53.3	-0.2
CKHZ	**Cape Kidnapper**	**2.41**	**183**	PN	Pn	10 36 54.8	-0.7
BHHZ	**Black Hill Sta**	**2.42**	**202**	PN	Pn	10 36 54.6	-1.1
WNVZ	**Wahianoa**	**2.45**	**212**	PN	Pn	10 36 55.2	-0.9
MOVZ	**Moawhango**	**2.46**	**208**	PN	Pn	10 36 54.8	-1.4
KAHZ	**Kahuranaki**	**2.56**	**187**	PN	Pn	10 36 56.5	-0.9
PNHZ	**Pukenui**	**2.78**	**197**	PN	Pn	10 36 58.6	-1.6
PXZ	**Pawanui**	**2.79**	**186**	PN	Pn	10 36 58.4	-1.9
WPHZ	**Waipukurau**	**2.88**	**193**	PN	Pn	10 36 59.7	-1.7
TSZ	**Takapari Road**	**2.98**	**200**	PN	Pn	10 37 00.8	-1.9
PRHZ	**Porangahau**	**3.05**	**189**	PN	Pn	10 37 01.9	-1.6
DVHZ	**Dannevirke**	**3.16**	**195**	PN	Pn	10 37 02.6	-2.3
POWZ	**Post Office Ro**	**3.34**	**200**	PN	Pn	10 37 05.0	-2.2
MRZ	**Mangatainoka R**	**3.65**	**201**	PN	Pn	10 37 08.3	-2.8
OGWZ	**Otaki Gorge**	**3.91**	**204**	PN	Pn	10 37 11.5	-3.1
OGWZ				SN	Sn	10 37 56.0	-4.7
TMWZ	**Te Maipa**	**3.99**	**195**	PN	Pn	10 37 12.6	-3.0
KIW	**Kapiti Island**	**4.04**	**206**	PN	Pn	10 37 13.1	-3.2
MTW	**Mount Morrison**	**4.13**	**199**	PN	Pn	10 37 13.8	-3.6
CAW	**Cannon Point**	**4.21**	**203**	PN	Pn	10 37 14.9	-3.6
TRWZ	**Traveller**	**4.32**	**196**	PN	Pn	10 37 16.3	-3.5
MSWZ	**Moikau Station**	**4.44**	**200**	PN	Pn	10 37 17.3	-4.1
TCW	**Tory Channel**	**4.58**	**209**	*e*PN	Pn	10 37 19.0	-4.3
PLWZ	**Palliser**	**4.58**	**199**	PN	Pn	10 37 19.2	-4.2
TUWZ	**Tuamarina**	**4.90**	**211**	SN	Sn	10 38 17.9	-5.9
NNZ	**Nelson**	**4.97**	**216**	PN	Pn	10 37 25.1	-3.4
THZ	**Tophouse**	**5.62**	**215**	PN	Pn	10 37 33.5	-3.6
MQZ	**McQueen's Vall**	**7.34**	**207**	SN	Sn	10 39 10.7	-11

*ISCJB **09** 10:45:28.9±0.6, 11°.14N±0°.03×62°.11W±0°.03, h129km±5km, Error ellipse: s-maj=6.1km s-min=4.5km az=147.9*
*FUNV **09** 10:45:30.3, 11°.21N×62°.02W, h122km, MW3.6*
*TRN **09** 10:45:32.7, 11°.19N×61°.95W, h116km, MD3.6*

ISC 09 10:45:29.7±0.6, 11°.14N±0°.03×62°.10W±0°.03, h126km±6km, n27, σ1º09/46, 4C-5D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.51**	**193**	⇑*i*P	**Pn**	**10 45 49.0**	**+0.6**
GUIV				*e*S	**Sn**	**10 46 01.4**	**-1.0**
TCE	**Chacachacare**	**0.56**	**142**	⇓*i*P	**Pn**	**10 45 50.2**	**+1.5**
TCE				*e*S	**Sn**	**10 46 03.3**	**+0.3**
TRN	**Trinidad (W)**	**0.84**	**125**	⇓*e*P	**Pn**	**10 45 52.4**	**+1.5**
TRN				*e*S	**Sn**	**10 46 06.1**	**-0.7**
ITEV	**Isla Los Testi**	**1.03**	**282**	*e*P	**Pn**	**10 45 52.9**	**+0.3**
ITEV				*e*S	**Sn**	**10 46 09.7**	**-0.2**
TPP	**Pointe-a-Pierr**	**1.04**	**142**	⇑*e*P	**Pn**	**10 45 54.9**	**+2.3**
TPP				*e*S	**Sn**	**10 46 10.1**	**+0.1**
GRW	**Mount Saint Ca**	**1.10**	**23**	⇓*e*P	**Pn**	**10 45 55.0**	**+1.7**
CRUV	**Carupano**	**1.21**	**247**	⇑*e*P	**Pn**	**10 45 55.1**	**+0.8**
CRUV				*e*S	**Sn**	**10 46 12.7**	**-0.3**
TBH	**Brigand Hill**	**1.21**	**123**	⇓*e*P	**Pn**	**10 45 55.8**	**+1.5**
TBH				*e*S	**Sn**	**10 46 12.0**	**-1.0**
GUNV	**Guanoco**	**1.28**	**220**	*e*P	**Pn**	**10 45 56.9**	**+1.8**
GUNV				*e*S	**Sn**	**10 46 15.3**	**+1.0**
TPR	**Prospect**	**1.30**	**88**	⇓*e*P	**Pn**	**10 45 56.5**	**+1.2**
TPR				*e*S	**Sn**	**10 46 13.7**	**-1.1**
TOSP	**Speyside**	**1.55**	**84**	*e*P	**Pn**	**10 45 58.0**	**-0.1**
TOSP				*e*S	**Sn**	**10 46 17.2**	**-2.4**
SSV	**Crater Summit**	**2.35**	**22**	*e*S	**Sn**	**10 46 35.7**	**-1.4**
ORIV	**Oritupano**	**2.43**	**212**	*e*P	**Pn**	**10 46 10.1**	**+1.2**
ORIV				*e*S	**Sn**	**10 46 39.0**	**+0.2**
PCRV	**Puerto La Cruz**	**2.67**	**249**	*e*P	**Pn**	**10 46 12.4**	**+0.5**
PCRV				*e*S	**Sn**	**10 46 44.1**	**-0.2**
MCLT	**Moule a Chique**	**2.79**	**24**	*e*P	**Pn**	**10 46 14.2**	**+0.6**
MCLT				*e*S	**Sn**	**10 46 45.9**	**-1.4**
RIOV	**Rio Grande**	**3.07**	**175**	*e*P	**Pn**	**10 46 17.7**	**+0.6**
RIOV				*e*S	**Sn**	**10 46 52.3**	**-1.4**
PRGV	**PARIAGUAN**	**3.44**	**227**	*e*P	**Pn**	**10 46 22.6**	**+0.5**
PRGV				*e*S	**Sn**	**10 47 01.1**	**-1.4**
GURV	**El Guri**	**3.50**	**196**	⇑*e*P	**Pn**	**10 46 23.2**	**+0.4**
GURV				*e*S	**Sn**	**10 47 01.2**	**-2.6**
CUPV	**Cœpira**	**3.78**	**254**	*e*P	**Pn**	**10 46 27.3**	**+0.8**
CUPV				*e*S	**Sn**	**10 47 09.1**	**-1.3**
ORCV	**Isla La Orchil**	**4.06**	**280**	*e*P	**Pn**	**10 46 29.4**	**-0.8**
BIRV	**Birongo**	**4.14**	**261**	*e*P	**Pn**	**10 46 32.0**	**+0.7**
MERV	**Las Mercedes**	**4.54**	**246**	*e*P	**Pn**	**10 46 36.0**	**-0.5**
LUEV	**Luepa**	**5.30**	**173**	*e*P	**Pn**	**10 46 45.7**	**-1.2**
CAOV	**Caicara del Or**	**5.63**	**228**	*e*P	**Pn**	**10 46 51.6**	**+0.3**
CAOV				*e*S	**Sn**	**10 47 50.6**	**-4.3**
TURV	**Turiamo**	**5.68**	**264**	*e*P	**Pn**	**10 46 50.6**	**-1.3**
BAUV	**El Baul**	**6.24**	**250**	*e*P	**Pn**	**10 46 58.6**	**-0.9**
BAUV				*e*S	**Sn**	**10 48 05.0**	**-4.6**
MAPV	**Macapo**	**6.38**	**259**	*e*P	**Pn**	**10 47 01.6**	**+0.2**

*SZGRF **09** 11:03:14.0, 18°.38S×178°.98W, h33km, Fiji Islands region*
*ISCJB **09** 11:04:10.2±0.8, 17°.66S±0°.08×178°.30W±0°.07, h526km±10km, mb4.4/24, Error ellipse: s-maj=13.7km s-min=8.3km az=141.8*
*BJI **09** 11:04:11.0, 17°.64S×177°.77W, h552km, mB4.7/3, mb4.8/1*
*IDC **09** 11:04:12.6±0.7, 17°.65S×178°.48W, h537km±8km, mb3.7/16, mb1 3.9/16, mb1mx3.9/18, mbtmp3.7/16, Error ellipse: s-maj=12.9km s-min=9.0km az=134.0*
*NEIC **09** 11:04:12.1±0.6, 17°.67S×178°.32W, h534km±7km, mb5.2/7, Error ellipse: s-maj=13.3km s-min=8.1km az=147.0*

ISC 09 11:04:12.5±0.8, 17°.69S±0°.08×178°.30W±0°.07, h541km±9km, h535km±.9km: pP-P, n97, σ1º01/50, mb4.4/24, 1C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.48**	**269**	*e*P	**P**	**11 05 30.8**	**+0.9**
AFI	**Afiamalu**	**7.32**	**60**	P	**P**	**11 06 00.9**	**-2.4**
	14nm,0.3s,baz=76,slow=18,SNR=12						
AFI				S	**S**	**11 07 27.5**	**-6.5**
	2.6nm,0.3s,baz=17,slow=18,SNR=2.9						
URZ	**Urewera**	**20.89**	**190**	P	**P**	**11 08 15.6**	**-1.2**
	23nm,0.5s,baz=345,slow=4.5,SNR=21						
URZ				S	**S**	**11 11 35.7**	**+1.2**
	11nm,0.9s,baz=343,slow=20,SNR=2.8						
PPT	**Papeete**	**27.37**	**94**	P	**P**	**11 09 16.1**	**+1.4**
	69nm,0.8s,mb5.3,baz=257,slow=7.5,SNR=5.6						
RPZ	**Rata Peaks**	**27.47**	**197**	P	**P**	**11 09 15.0**	**-0.2**
	8.7nm,0.5s,mb4.7,baz=10,slow=3.6,SNR=9.3						
ARMA	**Armidale**	**30.14**	**240**	*e*P	**P**	**11 09 39.7**	**+1.0**
CTA	**Charters Tower**	**33.59**	**260**	*e*P	**P**	**11 10 07.7**	**-0.4**
	9.0nm,0.8s,mb4.3						
CNB	**Canberra Magne**	**33.64**	**232**	*e*P	**P**	**11 10 09.6**	**+1.2**
TOO	**Toolangi**	**37.39**	**231**	*e*P	**P**	**11 10 40.5**	**+1.0**
STKA	**Stephens Creek**	**38.83**	**241**	P	**P**	**11 10 52.0**	**+0.8**
	18nm,0.5s,mb4.9,baz=89,slow=9.4,SNR=138						
STKA	**Stephens Creek**	**38.83**	**241**	⇓*i*P	**P**	**11 10 52.2**	**+1.0**
	18nm,0.6s,mb4.8						
ARPS	**Mount Arapiles**	**39.87**	**233**	*e*P	**P**	**11 10 59.9**	**+0.4**
	31nm,0.6s,mb5.0						
BBOO	**Buckleboo**	**43.60**	**241**	⇓*i*P	**P**	**11 11 29.5**	**+0.4**
	37nm,0.4s,mb5.3						
BBOO	**Buckleboo**	**43.60**	**241**	*e*P	**P**	**11 11 29.3**	**+0.2**
	167nm,0.7s						
WRA	**Warramunga Arr**	**44.77**	**259**	P	**P**	**11 11 37.2**	**-1.2**
	10nm,0.5s,mb4.6,baz=97,slow=7.1,SNR=296						
WRA				PcP	PcP	11 13 09.2	+0.3
	3.1nm,0.7s,baz=86,slow=3.6,SNR=6.3						
WRA				S	**S**	**11 17 33.0**	**-3.2**
	1.0nm,0.8s,baz=92,slow=14,SNR=6.7						
ASAR	**Alice Springs**	**44.95**	**254**	P	**P**	**11 11 39.5**	**-0.1**
	123nm,0.6s,baz=89,slow=7.9,SNR=3223						
ASAR				PcP	PcP	11 13 10.0	+0.6
	4.8nm,0.7s,baz=101,slow=4.2,SNR=8.3						
ASAR				S	**S**	**11 17 36.5**	**-2.2**
	2.1nm,0.8s,baz=92,slow=16,SNR=12						
KAKA	**Kakadu**	**47.69**	**269**	*e*P	**P**	**11 12 00.0**	**-0.5**
	26nm,0.3s,mb5.2						
KAKA	**Kakadu**	**47.69**	**269**	*e*P	**P**	**11 11 59.8**	**-0.7**
	108nm,0.6s,mb5.5						
FORT	**Forrest**	**50.20**	**244**	*e*P	**P**	**11 12 18.4**	**-0.4**
	48nm,0.5s,mb5.2						
FORT	**Forrest**	**50.20**	**244**	*e*P	**P**	**11 12 18.3**	**-0.5**
	55nm,0.6s,mb5.2						
MBWA	**Marble Bar**	**58.23**	**256**	*e*P	**P**	**11 13 15.2**	**-0.3**
MBWA	**Marble Bar**	**58.23**	**256**	*e*P	**P**	**11 13 15.0**	**-0.5**
	30nm,0.6s,mb4.7						
MEEK	**Meekatharra**	**58.61**	**249**	⇓*i*P	**P**	**11 13 17.5**	**-0.5**
KLBR	**Kellerberrin**	**59.02**	**243**	*e*P	**P**	**11 13 20.3**	**-0.4**
	31nm,0.7s,mb4.7						
CASY	**Casey**	**66.38**	**205**	*e*P	**P**	**11 14 08.5**	**+1.0**
CASY	**Casey**	**66.38**	**205**	*e*P	**P**	**11 14 08.2**	**+0.8**
	21nm,1.0s,mb4.6						
MJAR	**Matsushiro Arr**	**67.79**	**323**	P	**P**	**11 14 15.9**	**-0.6**
	2.5nm,0.6s,mb3.9,baz=165,slow=7.0,SNR=8.6						
KSM	**Kuching**	**72.76**	**277**	*e*P	**P**	**11 14 47.0**	**+0.4**
	46nm,1.1s,mb4.8						
PETK	**Petropavlovsk-**	**73.49**	**345**	P	**P**	**11 14 49.5**	**-0.3**
	4.2nm,0.7s,mb4.0,baz=125,slow=7.4,SNR=4.8						
KSRS	**Korea Array**	**74.60**	**318**	P	**P**	**11 14 56.9**	**+0.5**
	1.2nm,0.7s,mb3.4,baz=140,slow=6.5,SNR=4.9						
NVAR	**Mina Array Bea**	**79.19**	**44**	P	**P**	**11 15 23.0**	**+1.4**
	1.3nm,0.6s,mb3.4,baz=225,slow=8.1,SNR=16						
NVAR				pP	pP	11 17 18.0	+1.0
	1.1nm,1.0s,baz=229,slow=8.3,SNR=5.2						
MSU	**Marysvale**	**83.37**	**46**	*e*P	**P**	**11 15 43.1**	**+0.2**
MAW	**Mawson**	**84.10**	**200**	P	**P**	**11 15 47.6**	**+1.5**
	8.8nm,0.5s,mb4.5,baz=129,slow=5.8,SNR=21						
MAW	**Mawson**	**84.10**	**200**	*e*P	**P**	**11 15 47.5**	**+1.4**
	6.5nm,0.5s,mb4.4						
MAW	**Mawson**	**84.10**	**200**	*e*P	**P**	**11 15 47.5**	**+1.3**
ILAR	**Eielson Array**	**85.65**	**13**	P	**P**	**11 15 52.4**	**-1.0**
	0.9nm,0.5s,mb3.7,baz=226,slow=5.1,SNR=21						
ILAR				pP	pP	11 17 49.4	-1.9
	1.2nm,1.0s,baz=217,slow=6.9,SNR=6.4						
TXAR	**Lajitas Array**	**85.79**	**58**	P	**P**	**11 15 57.2**	**+2.2**
	1.4nm,0.7s,mb3.7,baz=216,slow=6.3,SNR=20						
TXAR				pP	pP	11 17 54.5	+1.7
	0.2nm,0.7s,baz=246,slow=5.5,SNR=2.3						
PDAR	**Pinedale Array**	**87.12**	**43**	P	**P**	**11 16 01.8**	**+0.8**
	0.8nm,0.5s,mb3.6,baz=205,slow=2.9,SNR=14						
PDAR				pP	pP	11 18 00.0	+0.7
	0.5nm,0.7s,baz=230,slow=1.2,SNR=4.4						
CMAR	**Chiang Mai Arr**	**88.91**	**290**	P	**P**	**11 16 10.6**	**+0.7**
	2.2nm,0.9s,mb4.0,baz=109,slow=2.6,SNR=11						
SYO	**Syowa Base**	**89.39**	**193**	*e*P	**P**	**11 16 09.7**	**-1.5**
VNA3	**Neumayer Olymp**	**90.95**	**176**	*e*	**P**	**11 16 17.0**	**-1.3**
VNA3				*e*		11 21 35.6	
VNA2	**Neumayer--Watz**	**91.39**	**177**	*e*	**P**	**11 16 18.9**	**-1.5**
	baz=200,slow=4.4						
VNA2				*e*		11 21 40.6	
VNA1	**Neumayer--Stat**	**91.62**	**177**	*e*	**P**	**11 16 20.8**	**-0.6**
VNA1				*e*		11 21 39.0	
SONM	**

ANTU	**Antumapu**	**3.53**	**36**	*eP*	**Pn**	**11 13 59.7**	**+0.7**
ANTU				S	**Sn**	**11 14 41.5**	**+1.5**
ANTU	**Antumapu**	**3.53**	**36**	*eP*	**Pn**	**11 13 59.7**	**+0.7**
ANTU				*eS*	**Sn**	**11 14 41.5**	**+1.5**
ANTU				AML	AML	11 15 04.4	
	comp=E,4μm,0.7s						
PCH	**Pirque**	**3.55**	**38**	*eP*	**Pn**	**11 13 59.8**	**+0.6**
PCH	**Pirque**	**3.55**	**38**	*eP*	**Pn**	**11 13 59.8**	**+0.6**
PEL	**Peldehue**	**3.87**	**32**	*eP*	**Pn**	**11 14 03.4**	**-0.2**
ROCH	**El Roble**	**3.88**	**27**	*eP*	**Pn**	**11 14 03.9**	**0.0**
PLCA	**Paso Flores**	**4.74**	**155**	Pn	**Pn**	**11 14 17.0**	**+1.5**
	comp=E,2.8nm,0.3s,baz=322,slow=11,SNR=44						
PLCA				Sn	**Sn**	**11 15 16.6**	**+6.9**
	comp=E,2.6nm,0.3s,baz=301,slow=16,SNR=3.1						
PLCA				LR	LR	11 16 01.4	
	comp=E,404nm,19.8s,baz=314,slow=37						
PLCA	**Paso Flores**	**4.74**	**155**	Pn	**Pn**	**11 14 17.0**	**+1.5**
PLCA				Sn	**Sn**	**11 15 16.6**	**+6.9**
PLCA				LR	LR	11 16 01.4	
CFAA	**Coronel Fontan**	**6.32**	**42**	Pn	**Pn**	**11 14 37.1**	**-0.1**
	comp=E,1.9nm,0.3s,baz=212,slow=14,SNR=29						
CFAA				Sn	**Sn**	**11 16 03.7**	**+15**
	comp=E,1.0nm,0.3s,baz=78,slow=8.8,SNR=9.2						
CFAA				LR	LR	11 17 14.9	
	comp=E,71nm,18.7s,baz=222,slow=40						
CFAA	**Coronel Fontan**	**6.32**	**42**	Pn	**Pn**	**11 14 37.1**	**-0.1**
CFAA				Sn	**Sn**	**11 16 03.7**	**+15**
CFAA				LR	LR	11 17 14.9	
LCO	**Las Campanas**	**7.69**	**16**	*ePn*	**Pn**	**11 14 55.5**	**-0.7**
	comp=E,51nm,0.6s						
TRQA	**Tornquist**	**9.04**	**104**	*ePn*	**Pn**	**11 15 15.9**	**+1.3**
	comp=E,21nm,0.7s						
CPUP	**Villa Florida**	**16.83**	**58**	Pn	**Pn**	**11 16 58.1**	**-1.6**
	comp=E,0.7nm,0.3s,baz=215,slow=10,SNR=12						
CPUP				LR	LR	11 24 03.7	
	comp=E,365nm,19.7s,baz=213,slow=39						
LPAZ	**La Paz**	**20.57**	**14**	P	**P**	**11 17 44.6**	**+1.9**
	comp=E,2.5nm,0.7s,baz=188,slow=8.4,SNR=13						
SIV	**San Ignacio**	**23.03**	**31**	P	**P**	**11 18 07.6**	**-1.4**
	comp=E,6.2nm,0.8s,mb4.1,baz=216,slow=9.9,SNR=16						
BDFB	**Brasilia**	**30.48**	**54**	P	**P**	**11 19 17.0**	**+0.2**
	comp=E,1.7nm,0.3s,mb4.2,baz=291,slow=27,SNR=3.7						
BDFB				LR	LR	11 32 37.6	
	comp=E,203nm,19.1s,MS3.8,baz=150,slow=38						
QSPA	**South Pole Qui**	**53.80**	**180**	P	**P**	**11 22 26.7**	**+1.0**
	comp=E,4.5nm,0.8s,mb4.4,baz=148,slow=2.7,SNR=13						
QSPA				pP	pP	11 22 36.4	+3.3
	comp=E,1.8nm,0.7s,baz=98,slow=3.4,SNR=3.3						
SYO	**Syowa Base**	**63.93**	**158⇑**	*eP*	**P**	**11 23 34.4**	**-1.7**
PPT	**Papeete**	**69.03**	**263**	LR	LR	11 46 26.6	
	comp=E,112nm,19.6s,MS4.1,baz=162,slow=29						
MAW	**Mawson**	**71.09**	**164**	P	**P**	**11 24 21.5**	**+0.1**
	comp=E,3.6nm,0.7s,mb4.4,baz=224,slow=7.9,SNR=7.7						
TXAR	**Lajitas Array**	**71.45**	**332**	P	**P**	**11 24 24.5**	**+0.6**
	comp=E,1.5nm,0.7s,mb4.0,baz=148,slow=7.9,SNR=13						
TXAR				pP	pP	11 24 32.4	+0.7
	comp=E,1.8nm,0.7s,baz=140,slow=9.9,SNR=11						
TXAR				LR	LR	11 51 44.5	
	comp=E,71nm,18.6s,MS4.0,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**71.45**	**332**	P	**P**	**11 24 24.5**	**+0.6**
TXAR				pP	pP	11 24 32.4	+0.7
TXAR				LR	LR	11 51 44.5	
SWET	**Sewanee**	**72.28**	**349**	*eP*	**P**	**11 24 28.6**	**-0.3**
WVT	**Waverly**	**73.49**	**348**	*eP*	**P**	**11 24 35.3**	**-0.6**
	comp=E,9.1nm,1.2s,mb4.6						
DBIC	**Dimbokro**	**76.81**	**71**	P	**P**	**11 24 55.6**	**-0.1**
	comp=E,3.3nm,0.5s,mb4.5,baz=325,slow=9.0,SNR=7.9						
BOSA	**Boshof**	**79.73**	**118**	P	**P**	**11 25 11.7**	**-0.1**
	comp=E,7.8nm,0.8s,mb4.7,baz=220,slow=2.1,SNR=8.5						
BOSA	**Boshof**	**79.73**	**118**	*eP*	**P**	**11 25 11.3**	**-0.4**
ECSD	**EROS Data Cent**	**82.61**	**343**	*eP*	**P**	**11 25 23.7**	**-2.7**
	comp=E,5.9nm,0.9s,mb4.6						
DAU	**Daniels Canyon**	**84.12**	**332**	*eP*	**P**	**11 25 34.9**	**+0.7**
DUG	**Dugway**	**84.54**	**331**	*eP*	**P**	**11 25 34.9**	**-1.5**
	comp=E,3.0nm,0.9s,mb4.4						
TCUT	**Toone Canyon**	**84.79**	**332**	*eP*	**P**	**11 25 36.6**	**-1.1**
	comp=E,16nm,1.1s,mb5.0						
HWUT	**Hardware Ranch**	**85.27**	**332**	*eP*	**P**	**11 25 40.0**	**0.0**
	comp=E,4.3nm,1.0s,mb4.5						
NVAR	**Mina Array Bea**	**85.39**	**326**	P	**P**	**11 25 42.3**	**+1.6**
	comp=E,0.8nm,0.7s,mb4.0,baz=159,slow=5.5,SNR=7.8						
NVAR				pP	pP	11 25 49.7	+1.1
	comp=E,1.6nm,0.8s,baz=150,slow=6.0,SNR=11						
PDAR	**Pinedale Array**	**85.55**	**334**	P	**P**	**11 25 42.0**	**+0.6**
	comp=E,0.7nm,0.9s,mb3.9,baz=150,slow=6.2,SNR=5.9						
PDAR				pP	pP	11 25 50.3	+1.1
	comp=E,0.8nm,0.9s,baz=123,slow=5.5,SNR=4.8						
PDAR				LR	LR	11 59 16.9	
	comp=E,57nm,18.2s,MS4.0,baz=181,slow=32						
TORD	**Torodi Ar. Bea**	**85.88**	**70**	P	**P**	**11 25 43.0**	**-0.7**
	comp=E,2.0nm,0.8s,mb4.4,baz=252,slow=3.9,SNR=11						
TORD				PP	PP	11 28 56.3	-7.5
	comp=E,0.6nm,0.8s,baz=173,slow=2.2,SNR=5.5						
TORD	**Torodi Ar. Bea**	**85.88**	**70**	P	**P**	**11 25 43.0**	**-0.7**
TORD				PP	PP	11 28 56.3	-7.5
TPAW	**Teton Pass**	**86.67**	**333**	*eP*	**P**	**11 25 47.1**	**+0.2**
	comp=E,3.1nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**114.98**	**207**	PKP	PKiKP	11 31 43.4	-1.5
	comp=E,0.2nm,0.7s,baz=149,slow=1.1,SNR=5.8						
WRA	**Warramunga Arr**	**118.19**	**210**	PKP	PKPdf	11 31 50.0	-1.1
	comp=E,0.2nm,0.5s,baz=172,slow=1.7,SNR=5.9						
FITZ	**Fitzroy Crossi**	**122.92**	**201**	PKP	PKPdf	11 31 59.7	-0.6
	comp=E,0.8nm,0.7s,baz=170,slow=6.1,SNR=3.8						
BRTR	**Keskin Array B**	**123.78**	**63**	PKP	PKPdf	11 32 00.7	-0.5
	comp=E,0.7nm,0.7s,baz=162,slow=5.1,SNR=4.2						
DGRG	**David-gareji**	**132.80**	**64**	P	pPKPdf	11 32 30.6	+4.2
ABKAR	**Akbulak array**	**143.87**	**54**	*e*PKPdf	PKPdf	11 32 35.6	-2.7
HYB	**Hyderabad**	**148.62**	**120**	*i* PKP	PKPbc	11 32 50.0	-1.0
ZALV	**Zalesovo Beam**	**156.76**	**34**	PKP	PKPdf	11 32 57.4	-0.8
	comp=E,1.6nm,0.7s,baz=265,slow=1.6,SNR=8.3						
ZALV				pPKP	pPKPdf	11 33 07.2	+1.0
	comp=E,0.7nm,0.5s,baz=318,slow=2.0,SNR=2.6						
ZALV				PKPab	PKPab	11 33 27.4	-0.3
	comp=E,1.0nm,0.5s,baz=308,slow=4.9,SNR=4.0						
MKAR	**Makanchi Array**	**159.00**	**53**	PKP	PKPdf	11 33 00.3	-0.8
	comp=E,1.5nm,1.1s,baz=313,slow=2.5,SNR=5.5						
MKAR				PKPab	PKPab	11 33 37.0	-0.8
	comp=E,0.6nm,0.5s,baz=308,slow=4.0,SNR=5.9						
SONM	**Songino Array**	**168.62**	**2**	PKPab	PKPab	11 34 20.1	+0.3
	comp=E,0.3nm,0.4s,baz=54,slow=2.5,SNR=2.2						

*IDC **09** 11:27:01.4±0.9, 6°.46S×153°.61E, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.2/18, mbtmp4.1/12, ML3.7/1, MS2.9/1, Ms1 2.9/1, ms1mx2.6/17, Error ellipse: s-maj=29.8km s-min=17.5km az=115.0*

*ISCJB **09** 11:27:05.5±3.5, 6°.54S±0°.10×153°.6E±0°.1, h37km±30km, mb4.3/19, Error ellipse: s-maj=21.0km s-min=15.9km az=9.8*

*NEIC **09** 11:27:08.2±2.4, 6°.53S×153°.56E, h46km±21km, mb4.7/6, Error ellipse: s-maj=17.6km s-min=13.9km az=102.0*

ISC 09 11:27:08.4±3.0, 6°.56S±0°.10×153°.6E±0°.1, h49km±25km, n33, σ0s80/31, mb4.3/19, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.99**	**246**	*ePn*	**Pn**	**11 28 48.4**	**+0.2**
	33nm,0.6s						
PMG				*e*Sn	**Sn**	**11 30 06.9**	**+0.4**
CTA	**Charters Tower**	**15.23**	**207**	Pn	**Pn**	**11 30 39.9**	**-0.5**
	0.2nm,0.3s,baz=36,slow=17,SNR=2.2						
CTA				LR	LR	11 34 19.6	
	comp=Z,49nm,21.9s,baz=49,slow=29						
CTA	**Charters Tower**	**15.23**	**207**	*eP*	**Pn**	**11 30 44.9**	**+4.6**
	8.7nm,0.6s						
KAKA	**Kakadu**	**21.74**	**252**	*eP*	**P**	**11 31 54.5**	**-1.4**
	17nm,0.8s,mb4.5						
KAKA	**Kakadu**	**21.74**	**252**	*eP*	**P**	**11 31 54.5**	**-1.4**
	60nm,0.8s,mb5.1						
QLP	**Quilpie**	**21.82**	**203**	*eP*	**P**	**11 31 57.5**	**+0.9**
WB2	**Warramunga Arr**	**22.95**	**233**	*eP*	**P**	**11 32 09.9**	**+1.2**
WRA	**Warramunga Arr**	**22.96**	**233**	P	**P**	**11 32 08.3**	**-0.4**
	3.2nm,0.7s,mb3.9,baz=56,slow=11,SNR=14						
WRA	**Warramunga Arr**	**22.96**	**233**	P	**P**	**11 32 08.3**	**-0.4**
ASAR	**Alice Springs**	**25.46**	**226**	P	**P**	**11 32 31.9**	**0.0**
	4.2nm,0.7s,mb4.1,baz=62,slow=9.0,SNR=75						
CMSA	**Cobar Meteorol**	**25.93**	**196**	*eP*	**P**	**11 32 36.0**	**-0.1**
KNA	**Kununurra**	**26.00**	**247**	*eP*	**P**	**11 32 36.7**	**-0.3**
	7.4nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**27.58**	**203**	P	**P**	**11 32 50.6**	**-0.3**
	2.3nm,0.7s,mb3.9,baz=48,slow=11,SNR=6.7						
STKA	**Stephens Creek**	**27.58**	**203**	*eP*	**P**	**11 32 50.5**	**-0.4**
	3.4nm,0.8s,mb4.0						
FITZ	**Fitzroy Crossi**	**29.59**	**245**	P	**P**	**11 33 08.3**	**-0.7**
	2.1nm,0.7s,mb4.0,baz=99,slow=4.3,SNR=13						
FITZ	**Fitzroy Crossi**	**29.59**	**245**	*eP*	**P**	**11 33 08.1**	**-0.9**
	8.7nm,0.7s,mb4.6						
FORT	**Forrest**	**33.98**	**222**	*eP*	**P**	**11 33 46.7**	**-0.7**
	4.6nm,0.5s,mb4.7						
FORT				*i*	pP	11 33 56.6	-3.7
KSRS	**Korea Array**	**49.93**	**333**	P	**P**	**11 35 56.2**	**-1.1**
	1.8nm,0.8s,mb4.2,baz=152,slow=7.8,SNR=5.7						
CMAR	**Chiang Mai Arr**	**59.36**	**296**	P	**P**	**11 37 06.1**	**0.0**
	1.1nm,0.8s,mb3.9,baz=122,slow=5.2,SNR=7.0						
SONM	**Songino Array**	**68.24**	**328**	P	**P**	**11 38 04.6**	**+0.7**
	2.3nm,0.9s,mb4.2,baz=137,slow=4.8,SNR=10.0						
MCK	**McKinley**	**82.17**	**22**	*eP*	**P**	**11 39 23.7**	**0.0**
	11nm,1.2s,mb4.7						
MKAR	**Makanchi Array**	**82.18**	**319**	P	**P**	**11 39 24.4**	**+0.3**
	1.4nm,0.8s,mb4.0,baz=105,slow=5.1,SNR=6.2						
ZAA0	**Zalesovo Array**	**83.06**	**326**	*eP*	**P**	**11 39 27.8**	**-0.7**
ZALV	**Zalesovo Beam**	**83.06**	**326**	P	**P**	**11 39 27.6**	**-0.9**
	1.9nm,0.6s,mb4.3,baz=112,slow=5.5,SNR=9.2						
COLA	**College**	**83.18**	**22**	*eP*	**P**	**11 39 29.3**	**+0.4**
	2.9nm,0.7s,mb4.4						
ILAR	**Eielson Array**	**83.48**	**22**	P	**P**	**11 39 28.9**	**-1.5**
	1.8nm,0.8s,mb4.2,baz=254,slow=5.1,SNR=17						
TKM2	**Tokmak 2**	**85.73**	**314**	*eP*	**P**	**11 39 42.9**	**+0.6**
	3.6nm,1.0s,mb4.6						
KZA	**Kyzart**	**85.79**	**313**	*eP*	**P**	**11 39 44.2**	**+1.5**
	6.4nm,0.9s,mb4.8						
AML	**Almayashu**	**86.94**	**313**	*eP*	**P**	**11 39 49.6**	**+1.4**
	4.5nm,0.8s,mb4.8						
NVAR	**Mina Array Bea**	**92.53**	**52**	P	**P**	**11 40 15.4**	**+0.7**
	0.5nm,0.7s,mb4.1,baz=248,slow=4.6,SNR=5.0						
LPAZ	**La Paz**	**132.86**	**119**	PKP	PKPdf	11 46 22.1	+3.0
	0.7nm,0.6s,baz=266,slow=4.2,SNR=3.6						
BDFB	**Brasilia**	**149.25**	**136**	PKPbc	PKPbc	11 46 53.8	+1.2
	4.3nm,0.7s,baz=286,slow=26,SNR=5.1						
TORD	**Torodi Ar. Bea**	**151.59**	**285**	PKPbc	PKPbc	11 46 58.1	-0.2
	3.8nm,0.7s,baz=64,slow=2.5,SNR=27						

*CSEM **09** 11:29:56.7±0.2, 38°.41N×22°.02E, h15km, ML1.6/5, Error ellipse: s-maj=5.4km s-min=4.7km az=94.0*

*ISCJB **09** 11:29:57.6±0.5, 38°.41N±0°.03×22°.02E±0°.04, h10km±3km, Error ellipse: s-maj=5.4km s-min=4.9km az=42.3*

*ATH **09** 11:29:57.8, 38°.40N×22°.04E, h5km±3km, MD2.7/4*

*THE **09** 11:29:57.6, 38°.41N×22°.01E, h10km, ML1.6/5, Error ellipse: s-maj=0.8km s-min=0.4km az=264.0*

ISC 09 11:29:57.5±0.5, 38°.41N±0°.03×22°.01E±0°.04, h11km±4km, n20, σ0s44/38, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.07**	**132**	P	**Pg**	**11 29 59.6**	**-0.3**
TRIZ				S	**Sg**	**11 30 01.3**	**-0.3**
TRIZ	**Trizonia**	**0.07**	**132**	P	**Pg**	**11 29 59.6**	**-0.3**
TRIZ				S	**Sg**	**11 30 01.3**	**-0.3**
EFP	**Efpalio**	**0.08**	**281**	*e*PG	**Pg**	**11 30 00.0**	**-0.1**
EFP				*e*SG	**Sg**	**11 30 02.0**	**+0.1**
EFP	**Efpalio**	**0.08**	**281**	P	**Pg**	**11 30 00.0**	**-0.1**
EFP				S	**Sg**	**11 30 02.0**	**+0.1**
EFP	**Efpalio**	**0.08**	**281**	P	**Pg**	**11 30 00.0**	**-0.1**
EFP				S	**Sg**	**11 30 02.0**	**+0.1**
KALE	**Kalithea**	**0.10**	**101**	P	**Pg**	**11 30 00.3**	**0.0**
KALE				S	**Sg**	**11 30 02.4**	**+0.1**
KALE	**Kalithea**	**0.10**	**101**	P	**Pg**	**11 30 00.3**	**0.0**
KALE				S	**Sg**	**11 30 02.4**	**+0.1**
LAKA	**Lakka**	**0.17**	**188**	P	**Pg**	**11 30 01.2**	**-0.1**
LAKA				S	**Sg**	**11 30 04.1**	**+0.1**
LAKA	**Lakka**	**0.17**	**188**	P	**Pg**	**11 30 01.2**	**-0.1**
LAKA				S	**Sg**	**11 30 04.1**	**+0.1**
DSF	**Desfina**	**0.41**	**90**	P	**Pg**	**11 30 05.3**	**-0.2**
DSF				S	**Sg**	**11 30 11.8**	**+0.8**
DSF	**Desfina**	**0.41**	**90**	P	**Pg**	**11 30 05.3**	**-0.2**
DSF				S	**Sg**	**11 30 11.8**	**+0.8**
EVR	**Evrytania**	**0.53**	**343**	*e*PB	**Pb**	**11 30 08.1**	**-0.7**
EVR				*e*SB	**Sb**	**11 30 17.2**	**+0.8**
EVR	**Evrytania**	**0.53**	**343**	*e*Pb	**Pb**	**11 30 08.1**	**-0.7**
EVR				*e*Sb	**Sb**	**11 30 17.2**	**+0.8**
GUR	**Goura**	**0.54**	**151**	*e*PG	**Pg**	**11 30 07.7**	**-0.4**
GUR				*e*SB	**Sb**	**11 30 16.1**	**-0.6**
GUR	**Goura**	**0.54**	**151**	P	**Pg**	**11 30 07.7**	**-0.4**
GUR				S	**Sg**	**11 30 16.0**	**+0.8**
GUR	**Goura**	**0.54**	**151**	P	**Pg**	**11 30 07.7**	**-0.4**
GUR				S	**Sg**	**11 30 16.0**	**+0.8**
RLS	**Riolos of Patr**	**0.55**	**231**	*e*PG	**Pg**	**11 30 08.5**	**+0.2**
RLS				*e*SB	**Sb**	**11 30 17.3**	**+0.2**
RLS	**Riolos of Patr**	**0.55**	**231**	*e*Pg	**Pg**	**11 30 08.5**	**+0.2**
RLS				*e*Sb	**Sb**	**11 30 17.3**	**+0.2**
AGG	**Agios Georgios**	**0.66**	**22**	P	**Pg**	**11 30 09.9**	**-0.4**
AGG	**Agios Georgios**	**0.66**	**22**	P	**Pg**	**11 30 09.9**	**-0.4**

MAN 09 11:47:55, 13°.55N×120°.49E, h33km, mb4.0, ML2.8, MS2.5, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.30**	**307**	*eP*	Pb	11 48 04.8	+2.0
LUBP				*e*S	Sb	11 48 08.4	+0.4
PGP	**Puerto Galera**	**0.45**	**96⇑**	*i*P	Pb	11 48 08.0	+3.2
TGY	**Tagaytay City**	**0.70**	**38⇑**	*i*P	Pn	11 48 09.4	+0.8
BOAC	**Boac**	**1.32**	**94**	*eP*	Pn	11 48 18.6	+1.5
BOAC				*e*S	Sn	11 48 34.2	+0.7

*GRAL **09** 12:16:17.8±0.3, 34°.54N×36°.40E, h12km±3km, MD2.8*

*ISCJB **09** 12:16:18.9±0.5, 34°.49N±0°.03×36°.34E±0°.05, h7km±4km, Error ellipse: s-maj=6.4km s-min=4.1km az=10.9*

*NSSC **09** 12:16:18, 34°.50N×36°.34E, h6km±1km*

*CSEM **09** 12:16:18.6±0.2, 34°.48N×36°.36E, h5km, Mc1.6, Error ellipse: s-maj=5.9km s-min=3.3km az=99.0*

ISC 09 12:16:19.1±0.5, 34°.49N±0°.02×36°.34E±0°.05, h8km±6km, n20, σ0s93/37, 11D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAWK	**Haweek**	**0.07**	**59**	⇑P	**Pg**	**12 16 20.0**	**-0.9**
HAWK				⇓S	**Sg**	**12 16 22.0**	**-0.3**
HAWK	**Haweek**	**0.07**	**59**	⇑*i*P	**Pg**	**12 16 20.3**	**-0.6**
HAWK				⇓*i*S	**Sg**	**12 16 22.3**	**0.0**
FKH	**Fakeheh**	**0.26**	**168**	*e*P	**Pg**	**12 16 23.5**	**-0.7**
FKH				*e*S	**Sg**	**12 16 27.9**	**+0.2**
FKH	**Fakeheh**	**0.26**	**168**	*e*P	**Pg**	**12 16 23.5**	**-0.7**
FKH				*e*S	**Sg**	**12 16 27.9**	**+0.3**
HWQ	**Hawqa**	**0.39**	**237**	*e*P	**Pg**	**12 16 26.4**	**-0.2**
HWQ				*e*S	**Sg**	**12 16 32.6**	**+0.9**
HWQ	**Hawqa**	**0.39**	**237**	*e*P	**Pg**	**12 16 26.4**	**-0.2**
HWQ				*e*S	**Sg**	**12 16 32.6**	**+0.9**
BIDA	**Albida**	**0.53**	**358**	⇓P	**Pg**	**12 16 29.0**	**-0.3**
BIDA				⇑S	**Sg**	**12 16 38.0**	**+1.8**
BIDA	**Albida**	**0.53**	**358**	⇓*i*P	**Pg**	**12 16 29.4**	**+0.1**
BIDA				⇑*i*S	**Sg**	**12 16 38.1**	**+1.9**
BHL	**Bhannes**	**0.81**	**224**	*e*P	**Pg**	**12 16 33.5**	**-1.3**
BHL	**Bhannes**	**0.81**	**224**	*e*P	**Pg**	**12 16 33.5**	**-1.2**
ROOS	**tl_alroos**	**0.85**	**112**	⇓P	**Pg**	**12 16 34.0**	**-1.4**
ROOS				⇓S	**Sg**	**12 16 48.0**	**+1.6**
ROOS	**tl_alroos**	**0.85**	**112**	⇓*i*P	**Pg**	**12 16 34.6**	**-0.8**
QASN	**Qassioun**	**0.95**	**183**	⇑P	**Pg**	**12 16 36.0**	**-1.4**
QASN				⇓S	**Sg**	**12 16 51.0**	**+1.2**
QASN	**Qassioun**	**0.95**	**183**	⇑*i*P	**Pg**	**12 16 36.3**	**-1.1**
QASN				⇓*i*S	**Sg**	**12 16 51.7**	**+1.9**
WRDH	**Warideh**	**1.02**	**3**	⇑P	**Pg**	**12 16 38.0**	**-0.7**
WRDH				⇑S	**Sg**	**12 16 52.0**	**+0.1**
WRDH	**Warideh**	**1.02**	**3**	⇑*i*P	**Pg**	**12 16 38.1**	**-0.6**
WRDH				⇑*i*S	**Sg**	**12 16 52.2**	**+0.2**
BRBR	**Barbar**	**1.12**	**197**	⇑P	**Pg**	**12 16 40.0**	**-0.6**
BRBR				⇓S	**Sg**	**12 16 56.0**	**+0.8**
BRBR	**Barbar**	**1.12**	**197**	⇑*i*P	**Pg**	**12 16 40.2**	**-0.4**
BRBR				⇓*i*S	**Sg**	**12 16 56.2**	**+1.0**
SALA	**Sala**	**1.80**	**169**	⇑P	**Pn**	**12 16 50.0**	**-0.5**
SALA				⇑S	**Sn**	**12 17 13.0**	**-0.5**
SALA	**Sala**	**1.80**	**169**	⇑*i*P	**Pn**	**12 16 50.9**	**+0.4**
SALA				⇑*i*S	**Sn**	**12 17 13.9**	**+0.4**

*IDC **09** 12:22:46.7±0.4, 9°.27S×158°.39E, h0km, mb5.5/19, mb1 5.6/20, mb1mx5.6/21, mbtmp5.4/20, ML4.9/1, MS5.4/15, Ms1 5.4/15, ms1mx5.4/16, Error ellipse: s-maj=14.2km s-min=12.7km az=70.0*

*BJI **09** 12:22:46.1, 8°.98S×158°.61E, h8km, mB5.9/62, mb5.6/66, Ms5.8/75, Ms7 5.6/70*

*ISCJB **09** 12:22:47.2±0.9, 9°.22S±0°.03×158°.19E±0°.02, h5km±5km, mb5.7/228, MS5.6/243, Error ellipse: s-maj=5.1km s-min=3.3km az=174.8*

*NEIC **09** 12:22:49.1±0.1, 9°.27S×158°.26E, h12km, mb5.7/152, ME6.3, MS5.6/194, MW5.9, MW5.9, Error ellipse: s-maj=4.8km s-min=3.7km az=144.0, Moment Tensor Solution. s51 Moment tensor: Scale 1017Nm; Mrr3.95; Mθθ-1.34; Mφφ-2.62; Mrθ-0.48; Mrφ7.32; Mθφ-1.29; Best double couple: M0=8.20000×10^17 NP1:φ=276.00000°, δ67.00000°, λ20.00000°. NP2:φ=178.00000°, δ71.00000°, λ156.00000°. Principal axes: T 6.0800, Plg30.0000°, Azm136.0000°; N 3.2700, Plg59.0000°, Azm322.0000°; P -9.3600, Plg2.0000°, Azm227.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [III] at Honiara.

*MOS **09** 12:22:49.1±2.5, 9°.29S×158°.23E, h33km, mb5.9/50, MS5.6/54 Error ellipse: s-maj=7.3km s-min=6.2km az=73.7*

*IGIL **09** 12:22:49.2, 9°.29S×158°.25E, h10km, MS5.9*

*GCMT **09** 12:22:53.0±0.1, 9°.42S×158°.36E, h18km, MW5.9, Moment Tensor Solution. s113,c236; s87,c121; Moment tensor: Scale 1018Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M0=1.00000×1018 NP1:φ=6.00000°, δ74.00000°, λ170.00000°. NP2: φ=99.00000°, δ80.00000°, λ16.00000°. Principal axes: T 0.8600, Plg18.0000°, Azm323.0000°; N 0.3100, Plg71.0000°, Azm129.0000°; P -1.1700, Plg4.0000°, Azm232.0000°; Data Used: II IU CN IC G. Surface waves: sta=123, comp=264, per= 50.*

*DJA **09** 12:23:09, 9°.39S×157°.82E, h162km, mb5.5/27*

ISC 09 12:22:50.3±1.0, 9°.23S±0°.03×158°.24E±0°.02, h15km±6km, h17km±2.2km: pP-P, n882, σ0s95/583, mb5.7/228, MS5.6/243, 109C-74D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.70**	**97**	Pn	**Pn**	**12 23 13.3**	**-6.1**
	3μm,0.3s,baz=237,slow=4.5,SNR=402						
HNR				Sn	**Sn**	**12 23 31.7**	**-9.2**
	26μm,0.3s,baz=254,slow=15,SNR=39						
HNR	**Honiara**	**1.70**	**97**	*e*Pn	**Pn**	**12 23 13.4**	**-6.0**
HNR				*e*Sn	**Sn**	**12 23 33.9**	**-7.0**
PMG	**Port Moresby**	**10.94**	**268**	*c i*P	**Pn**	**12 25 33.7**	**+7.3**
PMG				pmax	pmax		
	comp=Z,84nm,1.0s						
PMG	**Port Moresby**	**10.94**	**268**	*e*Pn	**Pn**	**12 25 33.5**	**+7.1**
	comp=Z,209nm,1.0s						
PMG	**Port Moresby**	**10.94**	**268**	P	Px	12 25 36.4	
	comp=Z,10μmcomp=Z,200nm,1.4s						
NOUC	**Port Laguerre**	**14.96**	**150**	*e*P	**Pn**	**12 26 17.9**	**-3.5**
DZM	**Mont Dzumac**	**15.01**	**149**	*e*Pn	**Pn**	**12 26 19.6**	**-2.4**
	comp=Z,6.6nm,0.3s						
DZM				*e*Sn	**Sn**	**12 28 56.3**	**-12**
	comp=Z,4.8nm,0.3s						
DZM				*e*LQ		12 29 12.4	
	comp=Z,40μm,27.2s						
DZM				*e*LR	LR	12 29 51.3	
	comp=Z,65μm,26.2s						
DZM	**Mont Dzumac**	**15.01**	**149**	*e*P	**Pn**	**12 26 18.1**	**-3.9**
COEN	**Coen**	**15.48**	**251**	*e*P	**Pn**	**12 26 30.0**	**+1.7**
	comp=Z,4μm,1.4s						
COEN	**Coen**	**15.48**	**251**	P	**Pn**	**12 26 32.2**	**+3.9**
	comp=Z,1μm,2.8s						
CTA	**Charters Tower**	**15.83**	**226**	Pn	**Pn**	**12 26 31.5**	**-1.2**
	comp=Z,3.4nm,0.3s,baz=50,slow=13,SNR=37						
CTA				Sn	**Sn**	**12 29 20.6**	**-7.5**
	comp=Z,1.8nm,0.3s,baz=26,slow=16

WAKE	**Wake Island**	**29.52**	**16**	PFAKE		12 29 10.0 +16
WAKE				LR	LR	
	comp=Z,6μm,19.0s,MS5.2					
AFI	**Afiamalu**	**29.73**	**102**	P	**P**	**12 28 53.5 -2.7**
	comp=Z,72nm,0.9s,mb5.4,baz=243,slow=18,SNR=2.9					
AFI				LR	LR	12 38 26.6
	comp=Z,14μm,21.1s,MS5.6,baz=284,slow=32					
AFI	**Afiamalu**	**29.73**	**102**	P	**P**	**12 28 53.5 -2.7**
AFI				LR	LR	12 38 26.6
TOO	**Toolangi**	**30.48**	**200**	*e*P	**P**	**12 29 01.9 -0.7**
TOO				*e*S	**S**	**12 34 05.9 +2.5**
BBOO	**Buckleboo**	**31.15**	**218**	*e*P	**P**	**12 29 07.7 -1.0**
	comp=Z,322nm,0.8s,mb6.2					
FITZ	**Fitzroy Crossi**	**32.83**	**251**	*e*P	**P**	**12 29 22.6 -1.0**
	comp=Z,39nm,0.6s,mb5.5					
FITZ				*e*S	**S**	**12 34 26.4 -14**
FITZ	**Fitzroy Crossi**	**32.83**	**251**	*e*P	**P**	**12 29 22.5 -1.1**
	comp=Z,327nm,0.8s,mb6.3					
FITZ	**Fitzroy Crossi**	**32.83**	**251**	P	**P**	**12 29 23.7 +0.1**
	comp=Z,4μmcomp=Z,96nm,1.8s,mb5.4					
URZ	**Urewera**	**33.52**	**153**	P	**P**	**12 29 28.2 -1.2**
	comp=Z,14nm,0.8s,mb4.9,baz=284,slow=4.2,SNR=4.5					
URZ	**Urewera**	**33.52**	**153**	*e*P	**P**	**12 29 29.4 0.0**
	comp=Z,75nm,0.9s,mb5.6					
MOO	**Moorlands**	**34.48**	**195**	*e*P	**P**	**12 29 47.8 +10**
MOO				*e*S	**S**	**12 35 07.9 +2.4**
SNZO	**South Karori**	**35.12**	**158**	PFAKE		12 29 50.0 +6.9
SNZO				LR	LR	
	comp=Z,4μm,19.0s,MS5.2					
FORT	**Forrest**	**35.35**	**228**	*e*P	**P**	**12 29 43.9 -1.4**
	comp=Z,75nm,0.8s,mb5.7					
FORT				*e*S	**S**	**12 35 16.8 -2.5**
FORT	**Forrest**	**35.35**	**228**	*e*P	**P**	**12 29 45.5 +0.2**
	comp=Z,80nm,0.8s,mb5.7					
KMSI	**Cibinong**	**35.48**	**284**	P	**P**	**12 29 47.9 +1.2**
KHZ	**Kahutara**	**35.69**	**160**	*e*P	**P**	**12 29 47.1 -0.9**
	comp=Z,112nm,0.9s,mb5.8					
RPZ	**Rata Peaks**	**36.13**	**164**	P	**P**	**12 29 50.4 -1.4**
	comp=Z,39nm,0.7s,mb5.4,baz=307,slow=3.4,SNR=14					
RPZ	**Rata Peaks**	**36.13**	**164**	*e*P	**P**	**12 29 50.5 -1.3**
	comp=Z,168nm,1.0s,mb5.9					
DAV	**Davao City (W)**	**36.35**	**295**	PFAKE		12 30 10.0 +16
DAV				LR	LR	
	comp=Z,10μm,19.0s,MS5.6					
DAV	**Davao City (W)**	**36.35**	**295⇑**	*e*P	**P**	**12 29 53.0 -1.1**
BUKP	**Musuan**	**37.16**	**296**	*e*P	**P**	**12 30 02.1 +1.1**
MSLP	**Maasin**	**38.39**	**299**	*e*P	**P**	**12 30 12.3 +0.9**
KAPI	**Kappang**	**38.40**	**274**	*e*P	**P**	**12 30 10.8 -0.7**
	comp=Z,425nm,1.2s,mb6.0					
KAPI				LR	LR	
	comp=Z,4μm,20.0s,MS5.2					
KAPI	**Kappang**	**38.40**	**274**	P	**P**	**12 30 13.0 +1.4**
	SNR=13					
MBWA	**Marble Bar**	**38.90**	**248**	*e*P	**P**	**12 30 14.0 -1.6**
MBWA	**Marble Bar**	**38.90**	**248**	PFAKE		12 30 30.0 +14
MBWA				LR	LR	
	comp=Z,8μm,19.0s,MS5.6					
MBWA	**Marble Bar**	**38.90**	**248**	P	**P**	**12 30 16.2 +0.6**
	SNR=9.4					
TBP	**Tagbilaran**	**39.04**	**298**	*e*P	**P**	**12 30 17.6 +0.7**
CNP	**Cataraman**	**39.74**	**302**	*e*P	**P**	**12 30 23.6 +0.9**
JOHN	**Johnston Islan**	**41.01**	**51**	PFAKE		12 30 40.0 +6.8
JOHN				LR	LR	
	comp=Z,9μm,19.0s,MS5.7					
AUQP	**San Andres**	**41.82**	**302**	*e*P	**P**	**12 30 43.0 +3.2**
OTRP	**Odiongan**	**41.90**	**300**	*e*P	**P**	**12 30 42.1 +1.6**
CUYO	**Cuyo Island**	**42.06**	**297**	*e*P	**P**	**12 30 42.9 +1.1**
RAR	**Rarotonga**	**42.10**	**111**	PFAKE		12 30 50.0 +7.9
RAR				LR	LR	
	comp=Z,3μm,19.0s,MS5.1					
MYLDM	**Lahad Datu**	**42.12**	**288**	P	**P**	**12 30 44.0 +1.6**
MYLDM	**Lahad Datu**	**42.12**	**288**	P	**P**	**12 30 43.4 +1.1**
	comp=Z,5μmcomp=Z,302nm,1.4s,mb5.8					
TSM	**Tawau**	**42.42**	**287**	P	**P**	**12 30 45.5 +0.7**
KLBR	**Kellerberrin**	**43.63**	**233**	*e*P	**P**	**12 30 54.3 -0.1**
	comp=Z,52nm,0.8s,mb5.3					
KLBR				*e*		12 32 39.5
BALP	**Baler**	**43.98**	**304**	*e*P	**P**	**12 30 57.7 +0.3**
PALP	**Palanan**	**44.00**	**306**	*e*P	**P**	**12 30 58.4 +0.8**
MIDW	**Midway**	**44.07**	**32**	PFAKE		12 31 10.0 +12
MIDW				LR	LR	
	comp=Z,4μm,20.0s,MS5.3					
LUBP	**Lubang**	**44.07**	**301**	*e*P	**P**	**12 30 58.3 +0.2**
BATP	**Bataraza**	**44.07**	**293**	*e*P	**P**	**12 30 59.1 +1.0**
KDM	**Kudat**	**44.27**	**290**	P	**P**	**12 31 00.9 +1.1**
CAUP	**Cauayan**	**44.42**	**306**	*e*P	**P**	**12 31 02.9 +2.0**
NWAO	**Narrogin (SRO)**	**44.54**	**232**	*e*P	**P**	**12 31 02.1 +0.4**
NWAO				pmax	pmax	
	comp=Z,82nm,0.9s					
NWAO				MLR	MLR	
	comp=Z,6μm,21.0s					
NWAO	**Narrogin (SRO)**	**44.54**	**232**	*e*P	**P**	**12 31 02.1 +0.4**
	comp=Z,82nm,0.9s,mb5.6					
NWAO				LR	LR	
	comp=Z,6μm,21.0s,MS5.5					
KKM	**Kota Kinabalu**	**44.55**	**288**	P	**P**	**12 31 03.3 +1.4**
KKM	**Kota Kinabalu**	**44.55**	**288**	*e*P	**P**	**12 31 01.9 -0.1**
	comp=Z,434nm,1.2s,mb6.2					
KKM				LR	LR	
	comp=Z,3μm,20.0s,MS5.2					
KKM	**Kota Kinabalu**	**44.55**	**288**	P	**P**	**12 31 02.3 +0.3**
	comp=Z,4μmcomp=Z,341nm,1.2s,mb6.0					
PLKI	**Palangkaraya**	**44.58**	**276**	P	**P**	**12 31 03.1 +0.8**
	comp=Z,280nm,1.3s,mb5.9					
BCPH	**Baguio City Da**	**45.12**	**304⇓**	*i*P	**P**	**12 31 05.6 -0.9**
KRKI	**Karangkates**	**45.25**	**268**	P	**P**	**12 31 08.1 +0.5**
	comp=Z,362nm,1.4s,mb6.0					
APYP	**Conner**	**45.38**	**306**	*e*P	**P**	**12 31 08.8 +0.3**
RKGY	**Rocky Gully**	**45.40**	**230**	*e*P	**P**	**12 31 09.7 +1.2**
	comp=Z,104nm,1.3s,mb5.5					
RKGY				*e*		12 32 52.4
XMAS	**Kiritimati**	**45.55**	**78**	PFAKE		12 31 20.0 +10
XMAS				LR	LR	
	comp=Z,3μm,19.0s,MS5.2					
PWJI	**Pagerwojo**	**45.90**	**268**	P	**P**	**12 31 13.2 +0.4**
	comp=Z,133nm,1.4s,mb5.7					
SJI	**Sawahan**	**45.96**	**268**	P	**P**	**12 31 13.7 +0.4**
	comp=Z,218nm,1.5s,mb5.9					
JOW	**Kunigami**	**46.16**	**322**	*e*P	**P**	**12 31 16.2 +1.7**
	comp=Z,53nm,1.3s,mb5.3					
NGJI	**Ngawi**	**46.30**	**269**	P	**P**	**12 31 18.3 +2.4**
	comp=Z,135nm,1.3s,mb5.7					
PCJI	**Pacitan**	**46.50**	**267**	P	**P**	**12 31 17.7 +0.2**
	comp=Z,608nm,1.3s,mb6.4					
BTM	**Bintulu**	**46.66**	**283**	P	**P**	**12 31 20.1 +1.3**
SBUM	**Sibu**	**47.30**	**282**	P	**P**	**12 31 25.1 +1.4**
SBUM	**Sibu**	**47.30**	**282**	P	**P**	**12 31 24.7 +1.0**
	comp=Z,2μmcomp=Z,89nm,2.2s,mb5.3					
YOGI	**Yogyakarta**	**47.41**	**268**	P	**P**	**12 31 25.7 +1.1**
	comp=Z,988nm,1.2s,mb6.6					
STKI	**Sintang**	**47.46**	**279**	P	**P**	**12 31 25.8 +0.8**
	comp=Z,159nm,1.2s,mb5.8					
BJII	**Banjamegara**	**48.03**	**268**	P	**P**	**12 31 29.9 +0.5**
	comp=Z,147nm,2.5s,mb5.6					
YULB	**Yu-li**	**48.54**	**313**	*e*P	**P**	**12 31 33.6 +0.5**
	comp=Z,55nm,0.8s,mb5.6					
NACB	**Ninganchiao**	**48.81**	**314**	*e*P	**P**	**12 31 36.0 +0.8**
	comp=Z,116nm,1.0s,mb5.9					
KSM	**Kuching**	**48.91**	**280**	P	**P**	**12 31 36.5 +0.3**
KSM	**Kuching**	**48.91**	**280**	*e*P	**P**	**12 31 35.5 -0.7**
	comp=Z,161nm,1.2s,mb5.9					
KSM				LR	LR	
	comp=Z,3μm,22.0s,MS5.2					
KSM	**Kuching**	**48.91**	**280**	P	**P**	**12 31 37.0 +0.8**
	comp=Z,2μmcomp=Z,130nm,1.1s,mb5.9					
TPUB	**Ta-pu**	**48.98**	**312**	*e*P	**P**	**12 31 36.6 +0.1**
	comp=Z,274nm,1.4s,mb6.1					
SSLB	**Suanglung**	**49.03**	**313**	*e*P	**P**	**12 31 37.6 +0.7**
	comp=Z,86nm,0.9s,mb5.8					
MJAR	**Matsushiro Arr**	**49.27**	**339**	P	**P**	**12 31 37.6 -0.9**
	comp=Z,33nm,0.9s,mb5.4,baz=170,slow=8.5,SNR=55					
MJAR				LR	LR	12 50 03.2
	comp=Z,6μm,21.0s,MS5.6,baz=155,slow=33					
MAJO	**Matsushiro**	**49.27**	**339**	*e*P	**P**	**12 31 37.9 -0.6**
MAJO				pmax	pmax	
	comp=Z,43nm,0.9s,mb5.5					
MAJO				MLR	MLR	
	comp=Z,7μm,22.0s,MS5.6					
MAJO	**Matsushiro**	**49.27**	**339**	*e*P	**P**	**12 31 37.9 -0.6**
	comp=Z,43nm,0.9s,mb5.5					
MAJO				LR	LR	
	comp=Z,7μm,22.0s,MS5.6					
MAT	**Matsushiro**	**49.27**	**339**	P	**P**	**12 31 36.7 -1.8**
MAT				S	**S**	**12 38 44.0 -0.2**
YHNB	**Yeheng**	**49.27**	**314**	*e*P	**P**	**12 31 40.5 +1.7**
	comp=Z,149nm,1.0s,mb6.0					
YHNB				LR	LR	
	comp=Z,8μm,22.0s,MS5.7					
TATO	**Taipei**	**49.38**	**314**	*e*P	**P**	**12 31 41.4 +1.8**
	comp=Z,58nm,0.6s,mb5.8					
TATO				LR	LR	
	comp=Z,8μm,22.0s,MS5.7					
JNU	**Nakatsue**	**49.52**	**330**	*e*P	**P**	**12 31 41.5 +1.0**
	comp=Z,97nm,1.2s,mb5.7					
LEM	**Lembang**	**50.15**	**269**	P	**P**	**12 31 45.6 -0.1**
TPI	**Tanjungpandan**	**50.67**	**274**	P	**P**	**12 31 50.1 +0.4**
CBJI	**Citeko**	**50.95**	**269**	P	**P**	**12 31 51.2 -0.6**
DBJI	**Dramaga**	**51.04**	**269**	P	**P**	**12 31 51.8 -0.6**
SKJI	**Sukabumi**	**51.18**	**268**	P	**P**	**12 31 53.5 +0.1**
PPT	**Papeete**	**51.30**	**105**	*e*S	**S**	**12 39 12.1 -1.1**
	comp=Z,2μm,25.5s					
PPT				*e*LQ		12 44 35.1
	comp=Z,24μm,29.8s					
PPT				*e*LR	LR	12 46 46.0
	comp=Z,10μm,22.5s,baz=272					
PPT	**Papeete**	**51.30**	**105**	LR	LR	12 48 11.3
	comp=Z,5μm,20.9s,MS5.5,baz=277,slow=30					
QZH	**Quanzhou**	**51.45**	**312⇑**	*i*P	**P**	**12 31 54.4 -0.8**
QZH				S	**S**	**12 39 11.6 -3.3**
QZH				pmax	pmax	
	comp=Z,790nm,1.8s,mb6.3					
QZH				pmax	pmax	
	comp=Z,3μm,3.4s					
QZH				LR	LR	
	comp=N,5μm,19.1s,MS5.7					
QZH				LR	LR	
	comp=E,5μm,19.4s,MS5.7					
QZH				LR	LR	
	comp=Z,11μm,30.4s					
TIAR	**Tiarei**	**51.52**	**105**	*e*P	**P**	**12 31 57.7 +1.7**
	comp=Z,436nm,1.4s,mb6.2					
TBI	**Tubuai**	**51.86**	**112**	*e*S	**S**	**12 39 20.3 -0.4**
	comp=Z,3μm,28.8s					
TBI				*e*LQ		12 44 48.7
	comp=Z,25μm,32.2s					
TBI				*e*LR	LR	12 47 02.1
	comp=Z,10μm,28.5s,baz=288					
KIP	**Kipapa**	**52.66**	**54*d***	*i*P	**P**	**12 32 07.7 +3.4**
KIP	**Kipapa**	**52.66**	**54**	PFAKE		12 32 20.0 +16
KIP				LR	LR	
	comp=Z,5μm,19.0s,MS5.5					
ERM	**Erimo**	**52.84**	**346*d***	*i*P	**P**	**12 32 05.1 -0.1**
ERM	**Erimo**	**52.84**	**346**	*e*P	**P**	**12 32 05.5 +0.3**
	comp=Z,150nm,1.7s,mb5.7					
ERM				LR	LR	
	comp=Z,9μm,20.0s,MS5.8					
PMOR	**Pomariorio Ree**	**52.88**	**102**	*e*P	**P**	**12 32 07.7 +1.6**
	comp=Z,324nm,1.2s,mb6.1					
KLSI		**53.27**	**271**	P	**P**	**12 32 08.8 -0.2**
	comp=Z,120nm,1.4s,mb5.6					
KHU	**Kahuku**	**53.56**	**58**	*e*P	**P**	**12 32 10.3 -0.7**
SSE	**Sheshan**	**53.56**	**320**	P	**P**	**12 32 11.1 +0.3**
SSE				sP	sP	12 32 16.1 -1.2
SSE				PP	PP	12 34 13.4 +1.8
SSE				S	**S**	**12 39 47.6 +4.0**
SSE				sS	sS	12 39 52.9 +1.5
SSE				pmax	pmax	
	comp=Z,38nm,1.3s,mb5.2					
SSE				pmax	pmax	
	comp=Z,1μm,6.5s					
SSE				LR	LR	
	comp=N,2μm,20.1s,MS5.4					
SSE				LR	LR	
	comp=E,3μm,20.1s,MS5.4					
SSE				LR	LR	
	comp=Z,3μm,19.0s,MS5.4					
POHA	**Pohakuloa**	**53.87**	**57**	*e*P	**P**	**12 32 11.4 -1.9**
	comp=Z,170nm,0.9s,mb6.0					
POHA				LR	LR	
	comp=Z,6μm,20.0s,MS5.7					
GZH	**Guangzhou**	**54.42**	**307**	P	**P**	**12 32 16.3 -0.9**
GZH				S	**S**	**12 39 59.8 +4.3**
GZH				LR	LR	
	comp=N,2μm,23.7s,MS5.5					
GZH				LR	LR	
	comp=E,4μm,21.5s,MS5.5					
GZH				LR	LR	
	comp=Z,7μm,21.2s,MS5.7					
KSRS	**Korea Array**	**54.43**	**330**	P	**P**	**12 32 16.9 -0.2**
	comp=Z,162nm,1.2s,mb5.8,baz=149,slow=6.8,SNR=147					
KSRS				LR	LR	12 52 44.8
	comp=Z,3μm,21.2s,MS5.3,baz=135,slow=33					
ASAJ	**Asahikawa**	**54.96**	**346**	*e*P	**P**	**12 32 21.1 +0.4**
	comp=Z,83nm,1.5s,mb5.5					
INCN	**Inchon**	**55.09**	**329**	PFAKE		12 32 30.0 +8.2
INCN				LR	LR	
	comp=Z,2μm,19.0s,MS5.2					
INCN	**Inchon**	**55.09**	**329**	P	**P**	**12 32 22.9 +1.1**
	SNR=36					
MYKOM	**Kota Tinggi**	**55.27**	**279**	P	**P**	**12 32 24.3 +0.7**
MYKOM	**Kota Tinggi**	**55.27**	**279**	P	**P**	**12 32 24.1 +0.5**
	comp=Z,2μmcomp=Z,44nm,2.0s,mb5.1					
QIZ	**Qiongzhong**	**55.35**	**301**	P	**P**	**12 32 24.6 +0.5**
QIZ				pP	pP	12 32 26.5 -2.3
QIZ				sP	sP	12 32 28.1 -2.5
QIZ				PP	PP	12 34 28.7 +0.7
QIZ				S	**S**	**12 40 09.5 +1.3**
QIZ				sS	sS	12 40 14.5 -1.6
QIZ				pmax	pmax	
	comp=Z,200nm,1.3s,mb6.0					
QIZ				pmax	pmax	
	comp=Z,2μm,9.5s					
QIZ				LR	LR	
	comp=N,2μm,20.9s,MS5.2					
QIZ				LR	LR	
	comp=E,1μm,23.3s,MS5.2					
QIZ				LR	LR	
	comp=Z,6μm,26.9s,MS5.5					
QIZ	**Qiongzhong**	**55.35**	**301**	*e*P	**P**	**12 32 25.2 +1.1**
	comp=Z,318nm,1.3s,mb6.2					
QIZ				LR	LR	
	comp=Z,3μm,21.0s,MS5.3					
NJ2	**Nanjing**	**55.68**	**319**	*e*P	**P**	**12 32 27.4 +1.2**
NJ2				S	**S**	**12 40 12.0 -0.2**
NJ2				pmax	pmax	
	comp=Z,70nm,1.1s,mb5.6					
NJ2				pmax	pmax	
	comp=Z,2μm,10.2s					
NJ2				LR	LR	
	comp=N,3μm,17.4s,MS5.6					
NJ2				LR	LR	
	comp=E,3μm,20.7s,MS5.6					
NJ2				LR	LR	
	comp=Z,5μm,23.3s,MS5.5					
KGM	**Kluang**	**55.84**	**279**	P	**P**	**12 32 28.6 +0.8**
KTGM	**Kuala Trenggan**	**56.79**	**283**	P	**P**	**12 32 35.3 +0.8**
VLA	**Vladivostok**	**57.37**	**337⇓**	*i*P	**P**	**12 32 37.0 -1.0**
VLA				*e*		12 33 31.2
VLA				*e*		12 34 43.9
VLA				S	**S**	**12 40 31.2 -2.9**
VLA				pmax	pmax	
	comp=Z,135nm,1.7s,mb5.7					
YSS	**Yuzh-Sakhalins**	**57.61**	**347*c***	*i*P	**P**	**12 32 38.0 -1.6**
YSS				*e*		12 33 27.0
YSS				*e*S	**S**	**12 40 30.0 -7.2**
YSS				*e*PS		12 40 38.0
YSS				pmax	pmax	
	comp=Z,100nm,1.0s,mb5.8					
YSS				pmax	pmax	
	comp=Z,1μm,6.0s					
YSS				MLR	MLR	
	comp=Z,6μm,18.0s,MS5.7					
YSS				MLR	MLR	
	comp=N,5μm,16.0s					
YSS	**Yuzh-Sakhalins**	**57.61**	**347**	*e*P	**P**	**12 32 40.4 +0.8**
	comp=N,111nm,1.1s,mb5.8					
YSS				LR	LR	
	comp=Z,2μm,22.0s,MS5.2					
FRIM	**Kepong**	**57.76**	**280**	P	**P**	**12 32 42.1 +0.8**
WHN	**Wuhan**	**57.77**	**315**	P	**P**	**12 32 41.0 -0.1**
WHN				PP	PP	12 34 46.2 -3.2
WHN				S	**S**	**12 40 41.3 +1.4**
WHN				LR	LR	
	comp=N,5μm,18.2s,MS5.9					
WHN				LR	LR	
	comp=E,6μm,20.4s,MS5.9					
WHN				LR	LR	
	comp=Z,14μm,27.6s					
IPM	**Ipoh**	**58.62**	**281**	P	**P**	**12 32 48.1 +0.7**
IPM	**Ipoh**	**58.62**	**281**	*e*P	**P**	**12 32 47.6 +0.2**
	comp=Z,69nm,1.3s,mb5.5					
IPM	**Ipoh**	**58.62**	**281**	P	**P**	**12 32 47.8 +0.4**
	comp=Z,2μmcomp=Z,48nm,2.0s,mb5.2					
DL2	**Dalian**	**58.76**	**327**	P	**P**	**12 32 47.2 -0.6**
DL2				PP	PP	12 34 53.6 -4.4
DL2				S	**S**	**12 40 53.3 +0.8**
DL2				pmax	pmax	
	comp=Z,60nm,1.2s,mb5.5					
DL2				pmax	pmax	
	comp=Z,750nm,7.7s					
DL2				LR	LR	
	comp=N,1μm,14.7s,MS5.3					
DL2				LR	LR	
	comp=E,2μm,17.4s,MS5.3					
DL2				LR	LR	
	comp=Z,2μm,27.0s					
KULM	**Kulim**	**59.18**	**282**	P	**P**	**12 32 52.2 +0.9**
KULM	**Kulim**	**59.18**	**282**	*e*P	**P**	**12 32 51.4 +0.2**
	comp=Z,38nm,1.3s,mb5.3					
KULM				LR	LR	
	comp=Z,2μm,19.0s,MS5.3					
KULM	**Kulim**	**59.18**	**282**	P	**P**	**12 32 51.7 +0.4**
	comp=Z,1μmcomp=Z,48nm,1.8s,mb5.2					
TIA	**Tai'an**	**59.48**	**322**	⇑P	**P**	**12 32 51.6 -1.3**
TIA				S	**S**	**12 40 52.5 -9.5**
TIA				pmax	pmax	
	comp=Z,50nm,1.9s,mb5.2					
TIA				pmax	pmax	
	comp=Z,2μm,7.1s					
TIA				LR	LR	
	comp=N,3μm,20.2s,MS5.5					
TIA				LR	LR	
	comp=E,2μm,20.2s,MS5.5					
TIA				LR	LR	
	comp=Z,4μm,19.0s,MS5.6					
MDJ	**Mudanjiang**	**59.52**	**337**	P	**P**	**12 32 52.7 -0.3**
MDJ				sP	sP	12 32 57.1 -2.5
MDJ				PcP	PcP	12 33 39.3 -1.1
MDJ				PP	PP	12 35 05.1 +0.5
MDJ				S	**S**	**12 41 03.4 +1.3**
MDJ				SS	SS	12 44 55.9 -1.9
MDJ				pmax	pmax	
	comp=Z,130nm,1.8s,mb5.7					
MDJ				pmax	pmax	
	comp=Z,1μm,9.4s					
MDJ				LR	LR	
	comp=N,5μm,22.8s,MS5.6					
MDJ				LR	LR	
	comp=E,3μm,25.9s,MS5.6					
MDJ				LR	LR	
	comp=Z,6μm,23.6s,MS5.7					
MDJ	**Mudanjiang**	**59.52**	**337**	*e*P	**P**	**12 32 53.2 +0.2**
	comp=Z,333nm,1.5s,mb6.2					
MDJ				LR	LR	
	comp=Z,7μm,22.0s,MS5.7					
SKR	**Severo-Kuril's**	**59.69**	**358**	*e*P	**P**	**12 32 52.0 -2.0**
SKR				*e*S	**S**	**12 40 56.0 -8.1**
SKR				pmax	pmax	
	comp=N,1μm,10.0s					
SKR				pmax	pmax	
	comp=E,1μm,10.0s					
SKR				pmax	pmax	
	comp=Z,2μm,10.0s					
SKR				pmax	pmax	
	comp=N,640nm,1.5s					
SKR				pmax	pmax	
	comp=Z,800nm,1.5s,mb6.5					
SKR				smax		
	comp=N,3μm,12.0s					
SKR				smax		
	comp=E,4μm,12.0s					
SKR				MLR	MLR	
	comp=E,7μm,18.0s,MS5.9					
SKR				MLR	MLR	
	comp=Z,6μm,18.0s,MS5.8					
SKR				MLR	MLR	
	comp=N,3μm,14.0s,MS5.9					
SNY	**Shenyang**	**59.93**	**331**	⇑P	**P**	**12 32 55.0 -0.9**
SNY				S	**S**	**12 41 04.2 -3.3**
SNY				pmax	pmax	
	comp=Z,48nm,1.5s,mb5.3					
SNY				pmax	pmax	
	comp=Z,2μm,7.9s					
SNY				LR	LR	
	comp=N,2μm,18.1s,MS5.6					
SNY				LR	LR	
	comp=E,3μm,16.7s,MS5.6					
SNY				LR	LR	
	comp=Z,6μm,39.2s					
COCO	**West Island**	**60.30**	**261**	PFAKE		12 33 10.0 +11
COCO				LR	LR	
	comp=Z,3μm,20.0s,MS5.4					
CN2	**Changchun**	**60.59**	**333**	⇑P	**P**	**12 33 00.1 -0.2**
CN2				*e*S	**S**	**12 41 15.1 -0.8**
CN2				SS	SS	12 45 14.3 -0.4
CN2				pmax	pmax	
	comp=Z,300nm,1.1s,mb6.3					
CN2				pmax	pmax	
	comp=Z,2μm,3.0s					
CN2				LR	LR	
	comp=N,4μm,18.0s,MS5.8					
CN2				LR	LR	
	comp=E,4μm,18.0s,MS5.8					
CN2				LR	LR	
	comp=Z,3μm,20.0s,MS5.4					
TAOE	**Nuku Hiva Isla**	**60.78**	**95**	*e*LQ		12 48 33.6
	comp=Z,6μm,26.8s					
TAOE				*e*LR	LR	12 51 04.7
	comp=Z,5μm,22.2s,baz=268					
HABR	**Khabarovsk**	**60.99**	**343*c***	*i*P	**P**	**12 33 01.8 -1.1**
HABR				*e**SP	sP	12 33 13.0 +3.5
HABR				*e*		12 33 42.9
HABR				*e*		12 35 12.2
HABR				*e*S	**S**	**12 41 17.8 -3.0**
HABR				*e**SS	sS	12 41 29.8 +1.1
HABR						12 42 46.7
HABR				*e*SS	SS	12 45 12.5 -8.2
HABR				*e*SSS		12 47 57.7
HABR				pmax	pmax	
	comp=Z,423nm,2.1s,mb6.2					
HABR				pmax	pmax	
	comp=N,163nm,2.1s					
HABR				pmax	pmax	
	comp=E,91nm,1.6s					
HABR				MLR	MLR	
	comp=N,3μm,19.0s,MS5.6					
HABR				MLR	MLR	
	comp=Z,5μm,19.0s,MS5.7					
HABR				MLR	MLR	
	comp=E,3μm,19.0s,MS5.6					
ENH	**Enshi**	**61.11**	**312**	*e*P	**P**	**12 33 04.5 +0.4**
	comp=E,94nm,1.1s,mb5.8					
ENH				LR	LR	
	comp=Z,2μm,20.0s,MS5.3					
GYA	**Guiyang**	**61.35**	**307⇑**	*i*P	**P**	**12 33 06.2 +0.3**
GYA				PcP	PcP	12 33 49.9 +1.7
GYA				PP	PP	12 35 22.3 +1.1
GYA				S	**S**	**12 41 22.3 -4.0**
GYA				SS	SS	12 45 22.9 -4.3
GYA				pmax	pmax	
	comp=Z,90nm,1.0s,mb5.8					
GYA				pmax	pmax	
	comp=Z,1μm,8.1s					
GYA				LR	LR	
	comp=N,2μm,17.6s					
GYA				LR	LR	
	comp=E,3μm,23.0s					
GYA				LR	LR	
	comp=Z,4μm,22.1s,MS5.5					
PET	**Petropavlovsk**	**62.01**	**0*c***	*i*P	**P**	**12 33 08.5 -1.2**
PET				*e*S	**S**	**12 41 30.8 -2.8**
PET				pmax	pmax	
	comp=Z,1μm,8.2s					
PET				pmax	pmax	
	comp=Z,230nm,1.2s,mb6.2					
PET				pmax	pmax	
	comp=Z,800nm,11.9s					
PET				MLR	MLR	
	comp=Z,3μm,17.0s,MS5.5					
PET				MLR	MLR	
	comp=Z,3μm,18.0s					
PET	**Petropavlovsk**	**62.01**	**0**	PFAKE		12 33 20.0 +10
PET				LR	LR	
	com

TPTI 62.10 279 P P 12 33 09.8 -1.4
comp=Z,39nm,1.2s,mb5.4
BJT **Baijiatuau** 62.56 325 *e*P P 12 33 14.1 +0.3
BJT pmax pmax
comp=Z,22nm,0.7s
BJT MLR MLR
comp=Z,4μm,20.0s
BJT **Baijiatuau** 62.56 325 *e*P P 12 33 14.1 +0.3
comp=Z,22nm,0.7s,mb5.4
BJT LR LR
comp=Z,4μm,20.0s,MS5.5
BJI **Beijing** 62.58 325 P P 12 33 13.6 -0.2
BJI S S 12 41 41.1 -0.2
BJI pmax pmax
comp=Z,55nm,1.8s,mb5.4
BJI pmax pmax
comp=Z,2μm,11.0s
BJI LR LR
comp=N,2μm,25.4s,MS5.4
BJI LR LR
comp=E,2μm,22.2s,MS5.4
BJI LR LR
comp=Z,4μm,33.9s
NST **Nakhon Sawan** 62.63 293 P P 12 33 15.0 +0.3
comp=Z,323nm,1.2s,mb6.3
AMKA **Amchitka** 63.05 15 *e*P P 12 33 16.4 -0.3
comp=Z,85nm,1.6s,mb5.6
SMY **Shemya** 63.19 11 *e*P P 12 33 16.8 -0.8
SMY pmax pmax
comp=Z,282nm,1.2s,mb6.3
SMY **Shemya** 63.19 11 *e*P P 12 33 16.8 -0.8
comp=Z,282nm,1.2s,mb6.3
TIY **Taiyuan** 63.34 320 *e*P P 12 33 18.1 -0.8
TIY pP pP 12 33 22.7 -1.1
TIY PP PP 12 35 39.2 +0.7
TIY S S 12 41 49.5 -1.4
TIY SS SS 12 46 00.2 +2.3
TIY pmax pmax
comp=Z,1μm,11.3s
TIY LR LR
comp=N,2μm,14.9s,MS5.5
TIY LR LR
comp=E,1μm,17.3s,MS5.5
TIY LR LR
comp=Z,3μm,19.7s,MS5.5
XAN **Xi'an** 63.54 315 P P 12 33 19.6 -0.7
XAN pP pP 12 33 31.5 +6.3
XAN S S 12 41 52.8 -0.7
XAN pmax pmax
comp=Z,410nm,9.5s
XAN LR LR
comp=N,2μm,23.0s,MS5.2
XAN LR LR
comp=E,530nm,27.8s,MS5.2
XAN LR LR
comp=Z,1μm,24.3s,MS5.1
KMI **Kunming** 63.92 304 ⇑P P 12 33 24.2 +1.1
KMI pP pP 12 33 29.4 +1.5
KMI sP sP 12 33 31.3 +1.6
KMI PcP PcP 12 33 56.2 -2.4
KMI PP PP 12 35 48.1 +4.3
KMI S S 12 42 00.5 +1.9
KMI SKS 12 43 15.2
KMI SS SS 12 46 10.0 +2.5
KMI pmax pmax
comp=Z,170nm,1.4s,mb5.9
KMI pmax pmax
comp=Z,2μm,5.0s
KMI LR LR
comp=N,2μm,19.9s,MS5.5
KMI LR LR
comp=E,3μm,19.4s,MS5.5
KMI LR LR
comp=Z,4μm,20.3s,MS5.6
BDT **Bhumibol Dam** 64.17 294 P P 12 33 25.0 +0.1
comp=Z,24nm,1.0s,mb5.2
CHRT **Chiangrai** 64.39 297 ⇓P P 12 33 26.0 -0.2
comp=Z,2μm,1.2s
CMAR **Chiang Mai Arr** 64.64 295 P P 12 33 28.5 +0.6
comp=Z,100nm,1.0s,mb5.8,baz=119,slow=4.4,SNR=176
CMAR PKP2bc 13 02 19.5
comp=Z,1.3nm,0.8s,baz=285,slow=4.7,SNR=6.1
CMAR LR LR 13 03 01.5
comp=Z,2μm,18.6s,MS5.3,baz=291,slow=37
CMAR **Chiang Mai Arr** 64.64 295 P P 12 33 28.5 +0.6
CMAR ⇑*e* 13 02 19.5
CMAR LR LR 13 03 01.4
CHG **Chiang Mai** 64.76 296 ⇑P P 12 33 29.1 +0.4
comp=Z,30nm,1.1s,mb5.2
CHTO **Chiang Mai** 64.76 296 PFAKE 12 33 40.0 +11
CHTO LR LR
comp=Z,2μm,20.0s,MS5.2
CHTO **Chiang Mai** 64.76 296 P P 12 33 29.5 +0.8
SNR=79
RKT **Rikitea** 65.14 111 *e*S S 12 42 12.7 -1.2
comp=Z,2μm,35.8s
RKT *e*SS SS 12 46 26.2 -0.2
comp=Z,1μm,31.0s
RKT *e*LQ 12 50 21.6
comp=Z,6μm,35.5s
RKT *e*LR LR 12 53 10.6
comp=Z,8μm,29.0s,baz=281
CASY **Casey** 65.51 199 *e*P P 12 33 31.5 -1.2
CASY **Casey** 65.51 199 *e*P P 12 33 31.6 -1.2
comp=Z,53nm,1.2s,mb5.4
CASY LR LR
comp=Z,4μm,20.0s,MS5.7
CD2 **Chengdu** 65.70 310 ⇑*i*P P 12 33 34.8 +0.3
CD2 pP pP 12 33 39.5 +0.1
CD2 sP sP 12 33 42.1 +0.9
CD2 PP PP 12 36 02.4 +3.0
CD2 PcS 12 38 08.4
CD2 S S 12 42 20.6 +0.2
CD2 sS sS 12 42 28.5 +0.2
CD2 ScS ScS 12 43 26.7 -3.5
CD2 SS SS 12 46 37.1 +2.1
CD2 pmax pmax
comp=Z,210nm,0.9s,mb6.2
CD2 pmax pmax
comp=Z,2μm,7.7s
CD2 LR LR
comp=N,3μm,23.6s,MS5.6
CD2 LR LR
comp=E,4μm,24.0s,MS5.6
CD2 LR LR
comp=Z,5μm,25.0s,MS5.6
HHC **Hu-ho-hao-te** 65.79 323 ⇑P P 12 33 35.2 +0.3
HHC pP pP 12 33 40.0 +0.2
HHC sP sP 12 33 42.4 +0.8
HHC PcP PcP 12 34 05.7 -0.3
HHC PP PP 12 36 02.4 +2.4
HHC S S 12 42 21.4 +0.3
HHC sS sS 12 42 29.1 0.0
HHC ScS ScS 12 43 27.2 -3.3
HHC pmax pmax
comp=Z,100nm,1.3s,mb5.7
HHC pmax pmax
comp=Z,1μm,6.8s
HHC LR LR
comp=N,16μm,18.6s,MS6.4
HHC LR LR
comp=E,16μm,18.0s,MS6.4
HHC LR LR
comp=Z,16μm,19.6s,MS6.2
BTO **Baotou** 66.58 322 *e*P P 12 33 39.3 -0.7
HIA **Hailar** 67.31 334 *e*P P 12 33 44.2 -0.2
HIA pmax pmax
comp=Z,230nm,1.2s
HIA MLR MLR
comp=Z,3μm,19.0s
HIA **Hailar** 67.31 334 *e*P P 12 33 44.2 -0.2
comp=Z,230nm,1.2s,mb6.1
HIA LR LR
comp=Z,3μm,19.0s,MS5.6
NIKO **Nikolski** 68.02 21 *e*P P 12 33 46.2 -2.6
comp=Z,261nm,1.0s,mb6.2
LZH **Lanzhou** 68.15 315 *e*P P 12 33 50.9 +0.8
LZH pP pP 12 33 53.3 -1.6
LZH sP sP 12 33 56.6 -0.1
LZH PcP PcP 12 34 15.4 -0.6
LZH *e*S S 12 42 50.0 +0.2
LZH sS sS 12 42 59.3 +1.5
LZH pmax pmax
comp=Z,180nm,1.3s,mb5.9
LZH pmax pmax
comp=Z,800nm,5.9s
LZH LR LR
comp=N,790nm,13.1s,MS5.5
LZH LR LR
comp=E,2μm,16.5s,MS5.5
LZH LR LR
comp=Z,5μm,20.1s,MS5.7
SBA **Scott Base** 68.74 178 *e*P P 12 33 53.1 0.0
SBA pmax pmax
comp=Z,44nm,0.8s,mb5.4
SBA MLR MLR
comp=Z,6μm,20.0s,MS5.8
SBA **Scott Base** 68.74 178 *e*P P 12 33 53.1 0.0
comp=Z,44nm,0.8s,mb5.4
SBA LR LR
comp=Z,6μm,20.0s,MS5.8
UNV **Unalaska Valle** 69.56 21 *e*P P 12 33 57.2 -1.2
comp=Z,63nm,0.9s,mb5.5
PTCN **Pitcairn Islan** 69.59 113 PFAKE 12 34 10.0 +11
PTCN LR LR
comp=Z,5μm,20.0s,MS5.8
AKUT **Akutan** 70.05 22 *e*P P 12 34 00.2 -1.2
comp=Z,119nm,1.0s,mb5.8
CLNS **Chul'man** 71.33 341 *c i*P P 12 34 08.7 -0.5
CLNS *e**PP pP 12 34 17.2 +3.2
CLNS *e* 12 34 26.6
CLNS *e* 12 36 46.6
CLNS *e*PPP 12 38 28.4
CLNS *e*S S 12 43 23.6 -2.7
CLNS *e* 12 43 54.6
CLNS *e*SSS 12 51 02.0
CLNS pmax pmax
comp=Z,72nm,1.0s,mb5.6
CLNS pmax pmax
comp=N,62nm,1.3s
CLNS pmax pmax
comp=E,33nm,1.0s
CLNS pmax pmax
comp=Z,13nm,1.1s,mb4.8
CLNS pmax pmax
comp=N,17nm,1.2s
CLNS pmax pmax
comp=E,22nm,1.3s
CLNS smax
comp=E,730nm,11.0s
CLNS smax
comp=N,671nm,11.3s
CLNS MLR MLR
comp=N,2μm,16.0s,MS5.5
CLNS MLR MLR
comp=Z,2μm,17.0s,MS5.5
CLNS MLR MLR
comp=E,833nm,14.0s,MS5.5
FALS **False Pass** 71.48 22 *e*P P 12 34 07.3 -2.8
comp=E,124nm,0.8s,mb5.9
MIR **Mirnyy** 71.84 202 ⇓*i*P P 12 34 13.0 +0.8
MIR *e*S S 12 43 34.0 +1.9
MIR pmax pmax
comp=Z,255nm,2.0s,mb5.8
MIR pmax pmax
comp=Z,1μm,7.0s
MIR smax
comp=N,2μm,15.0s
MIR smax
comp=E,970nm,12.0s
CIT **Chita** 72.03 333 *e*P P 12 34 14.1 +0.6
CIT *e* 12 34 21.9
CIT *e* 12 34 29.3
CIT *e* 12 43 37.9
CIT pmax pmax
comp=Z,501nm,1.8s,mb6.1
SEY **Seymchan** 72.09 357 *c e*P P 12 34 12.2 -1.4
GTA **Gaotai** 72.56 316 ⇑P P 12 34 17.6 +0.6
GTA pP pP 12 34 22.4 +0.6
GTA sP sP 12 34 24.7 +1.1
GTA S S 12 43 43.6 +2.4
GTA sS sS 12 43 52.0 +2.8
GTA pmax pmax
comp=Z,85nm,1.8s,mb5.4
GTA pmax pmax
comp=Z,2μm,5.4s
GTA LR LR
comp=N,2μm,18.7s,MS5.6
GTA LR LR
comp=E,2μm,19.0s,MS5.6
GTA LR LR
comp=Z,3μm,23.7s,MS5.6
SONM **Songino Array** 72.95 326 P P 12 34 19.4 +0.3
comp=Z,72nm,1.0s,mb5.5,baz=138,slow=4.4,SNR=184
SONM PKPPKP 13 02 02.1
comp=Z,0.2nm,0.3s,baz=331,slow=1.9,SNR=4.4
SONM LR LR 13 07 51.0
comp=Z,3μm,18.8s,MS5.6,baz=130,slow=37
YAK **Yakutsk** 74.44 346 *i*P P 12 34 26.4 -1.1
YAK *e**PP pP 12 34 34.4 +2.0
YAK *e* 12 34 40.3
YAK *e* 12 37 09.3
YAK *e*PPP 12 38 56.6
YAK *e*S S 12 44 01.4 -0.1
YAK *e* 12 44 33.6
YAK *e*SSS 12 52 01.3
YAK pmax pmax
comp=E,19nm,1.1s
YAK pmax pmax
comp=Z,108nm,1.0s,mb5.7
YAK pmax pmax
comp=N,39nm,1.1s
YAK pmax pmax
comp=Z,157nm,2.6s,mb5.5
YAK pmax pmax
comp=N,163nm,2.8s
YAK pmax pmax
comp=E,78nm,1.5s
YAK smax
comp=E,403nm,2.5s
YAK smax
comp=N,2μm,9.4s
YAK MLR MLR
comp=Z,4μm,18.0s,MS5.7
YAK MLR MLR
comp=N,2μm,16.0s,MS5.6
YAK MLR MLR
comp=E,1μm,17.0s,MS5.6
YAK **Yakutsk** 74.44 346 *e*P P 12 34 27.8 +0.3
comp=E,79nm,0.8s,mb5.7
YAK LR LR
comp=Z,4μm,21.0s,MS5.7
LSA **Lhasa** 75.17 304 P P 12 34 33.5 +1.0
LSA PP PP 12 37 17.2 -3.9
LSA S S 12 44 06.7 -4.4
LSA pmax pmax
comp=Z,100nm,1.6s,mb5.5
LSA pmax pmax
comp=Z,1μm,9.8s
LSA LR LR
comp=E,2μm,25.7s
LSA LR LR
comp=Z,3μm,30.1s,MS5.4
LSA **Lhasa** 75.17 304 *e*P P 12 34 33.6 +1.1
LSA pmax pmax
comp=Z,135nm,1.3s,mb5.7
LSA MLR MLR
comp=Z,3μm,22.0s,MS5.5
LSA **Lhasa** 75.17 304 *e*P P 12 34 33.6 +1.1
comp=Z,135nm,1.3s,mb5.7
LSA LR LR
comp=Z,3μm,22.0s,MS5.5
CAL **Calcutta** 75.36 296 *e*PKP P 12 34 33.8 +0.1
CAL *e*x x 12 44 19.1
ZAK **Zakamensk** 76.08 327 *e*P P 12 34 37.1 -0.1
ZAK pmax pmax
comp=Z,46nm,1.5s,mb5.2
IRK **Irkutsk** 76.62 329 *e*P P 12 34 40.0 -0.2
IRK *e*S S 12 44 29.0 +2.9
IRK pmax pmax
comp=Z,159nm,1.6s,mb5.7
TLY **Talaya** 76.62 329 *c i*P P 12 34 39.4 -0.8
TLY *e* 12 34 46.8
TLY *e* 12 37 28.0
TLY *e*S S 12 44 25.6 -0.5
TLY *e*PS 12 44 57.8
TLY *e*PPS 12 45 19.1
TLY *e*SS SS 12 49 16.6 -5.3
TLY pmax pmax
comp=Z,66nm,1.1s,mb5.5
TLY MLR MLR
comp=Z,2μm,18.0s,MS5.5
TLY **Talaya** 76.62 329 PFAKE 12 34 50.0 +10
TLY LR LR
comp=Z,2μm,19.0s,MS5.5
TLY **Talaya** 76.62 329 P P 12 34 40.2 0.0
comp=Z,292nm,1.5s,mb6.0,SNR=13
TLY **Talaya** 76.62 329 P P 12 34 40.5 +0.3
SNR=20
OHAK **Old Harbor** 77.16 25 *e*P P 12 34 42.3 -0.8
comp=Z,334nm,1.9s,mb5.9
BILL **Bilibino** 77.29 3⇑*e*P P 12 34 42.6 -1.1
BILL *e* 12 37 34.5
BILL *i*S S 12 44 27.9 -4.9
BILL *e*SS SS 12 49 30.4 -0.9
BILL pmax pmax
comp=Z,274nm,1.4s,mb6.0
BILL **Bilibino** 77.29 3 *e*P P 12 34 42.7 -1.0
comp=Z,273nm,1.3s,mb6.0
BILL LR LR
comp=Z,3μm,21.0s,MS5.6
TAPN **Taplejung** 77.30 301 *e*P P 12 34 45.1 +0.5
comp=Z,571nm,1.4s,mb6.3
ODAN **Odare** 77.42 300 *e*P P 12 34 45.3 -0.1
comp=Z,634nm,1.2s,mb6.4
KDAK **Kodiak Island** 77.81 25 *e*P P 12 34 44.9 -1.9
KDAK pmax pmax
comp=Z,41nm,0.8s,mb5.4
KDAK MLR MLR
comp=Z,2μm,19.0s,MS5.5
KDAK **Kodiak Island** 77.81 25 *i*P P 12 34 46.4 -0.4
KDAK **Kodiak Island** 77.81 25 *e*P P 12 34 44.9 -1.9
comp=Z,41nm,0.8s,mb5.4
KDAK LR LR
comp=Z,2μm,19.0s,MS5.5
MOY **Mondy** 77.99 328 *e*P P 12 34 47.8 -0.2
MOY pmax pmax
comp=Z,229nm,3.6s
VIS **Vishakhapatnam** 78.65 290⇑*i*P P 12 34 52.2 -0.1
VIS *e*x x 12 34 56.3
comp=Z,170nm,1.8s
VIS *i*S S 12 44 48.6 -0.8
SVW2 **Sparrevohn** 78.88 21 *e*P P 12 34 52.7 0.0
comp=Z,292nm,1.7s,mb5.9
PALK **Pallekele** 78.97 279 *e*P P 12 34 56.2 +2.0
PALK pmax pmax
comp=Z,197nm,1.2s,mb5.9
PALK **Pallekele** 78.97 279 *e*P P 12 34 56.2 +2.0
comp=Z,197nm,1.2s,mb5.9
PALK **Pallekele** 78.97 279 P P 12 34 56.9 +2.7
SNR=6.0
GUN **Gumba** 79.01 301 *e*P P 12 34 54.4 +0.3
comp=Z,649nm,1.3s,mb6.4
PKI **Pulchoki** 79.32 300 *e*P P 12 34 55.8 0.0
comp=Z,466nm,1.3s,mb6.2
PKIN **Phulchoki** 79.33 300 *e*P P 12 34 56.0 +0.1
comp=Z,75nm,0.8s,mb5.7
RSO **Redoubt South** 79.49 22 *e*P P 12 34 55.1 -0.8
comp=Z,113nm,1.0s,mb5.8
KKN **Kakani** 79.49 301 *e*P P 12 34 56.9 +0.2
comp=Z,431nm,1.4s,mb6.2
DMN **Daman** 79.59 300 *e*P P 12 34 57.5 +0.2
comp=Z,708nm,1.2s,mb6.5
TTA **Tatalina** 80.01 19 *e*P P 12 34 58.9 +0.1
GKN **Gorkha** 80.09 301 *e*P P 12 34 59.9 -0.1
comp=Z,1μm,1.5s,mb6.7
QSPA **South Pole Qui** 80.76 180 *e*P P 12 35 01.7 -0.9
comp=Z,166nm,1.2s,mb5.8
QSPA LR LR
comp=Z,4μm,20.0s,MS5.8
KOLN **Koldanda** 80.92 300 *e*P P 12 35 03.3 -1.1
comp=Z,272nm,1.1s,mb6.1
DANN **Dangsing** 80.93 301 *e*P P 12 35 04.2 -0.3
comp=Z,568nm,1.4s,mb6.3
RC01 **Rabbit Creek A** 81.03 23 *e*P P 12 35 02.8 -1.5
comp=Z,158nm,1.3s,mb5.8
PPLA **Purkeypile** 81.28 21 *e*P P 12 35 04.4 -1.2
comp=Z,359nm,1.8s,mb6.0
PMR **Palmer** 81.57 23 *e*P P 12 35 06.1 -1.0
PMR pmax pmax
comp=Z,381nm,2.0s,mb6.0
PMR **Palmer** 81.57 23 *e*P P 12 35 06.1 -1.0
comp=Z,381nm,2.0s,mb6.0
PAF **Port-aux-Franc** 81.79 221 PFAKE 12 35 20.0 +11
PAF LR LR
comp=Z,3μm,20.0s,MS5.7
SML **Sawmill** 82.00 23 *e*P P 12 35 08.6 -0.8
SML pmax pmax
comp=Z,44nm,1.1s,mb5.3
SML **Sawmill** 82.00 23 *e*P P 12 35 08.6 -0.9
comp=Z,44nm,1.1s,mb5.3
TRF **Thorofare Moun** 82.30 21 *e*P P 12 35 09.7 -1.3
comp=Z,118nm,1.1s,mb5.7
BPAW **Bear Paw Mtn.** 82.47 20 *e*P P 12 35 10.2 -1.6
comp=Z,163nm,1.5s,mb5.7
WMQ **Urumqi** 82.64 317 P P 12 35 13.0 -0.2
WMQ sP sP 12 35 20.0 +0.1
WMQ PP PP 12 38 25.0 +1.9
WMQ S S 12 45 29.0 -1.2
WMQ SS SS 12 50 53.0 +0.5
WMQ pmax pmax
comp=Z,100nm,1.1s,mb5.8
WMQ pmax pmax
comp=Z,1μm,7.0s
WMQ LR LR
comp=N,3μm,22.0s,MS5.8
WMQ LR LR
comp=E,3μm,22.0s,MS5.8
WMQ LR LR
comp=Z,3μm,22.0s,MS5.6
TRD **Trivandrum** 82.84 280 *e*PKP P 12 35 15.4 +0.5
MCK **McKinley** 82.95 21 *e*P P 12 35 12.4 -1.9
MCK pmax pmax
comp=Z,395nm,1.2s,mb6.3
MCK **McKinley** 82.95 21 *e*P P 12 35 12.4 -1.9
comp=Z,395nm,1.2s,mb6.3
JBP **Jabalpur** 82.96 295 *e*PKP P 12 35 16.0 +0.7
JBP *e*x x 12 45 31.7
TIXI **Tiksi** 83.03 351 *e*P P 12 35 12.4 -2.2
TIXI *e*S S 12 45 31.5 -1.6
TIXI pmax pmax
comp=Z,137nm,1.9s,mb5.7
TIXI MLR MLR
comp=Z,2μm,18.0s,MS5.5
TIXI **Tiksi** 83.03 351 PFAKE 12 35 30.0 +15
TIXI LR LR
comp=Z,2μm,20.0s,MS5.5
HYB **Hyderabad** 83.03 289 *i*P P 12 35 14.0 -1.8
comp=Z,100nm,1.0s,mb5.8
HYB *e*sP sP 12 35 22.0 -0.5
HYB *e*S S 12 45 34.0 -1.2
NGP **Nagpur** 83.36 293 *e*PKP P 12 35 15.9 -1.5
MAW **Mawson** 83.58 203 P P 12 35 17.5 -0.1
comp=Z,4.5nm,0.7s,mb4.7,baz=84,slow=3.2,SNR=9.1
MAW LR LR 13 08 45.3
comp=Z,3μm,18.2s,MS5.7,baz=89,slow=33
MAW **Mawson** 83.58 203 *e*P P 12 35 17.1 -0.5
MAW pmax pmax
comp=Z,8.0nm,1.0s
MAW **Mawson** 83.58 203 *e*P P 12 35 17.1 -0.5
comp=Z,7.6nm,1.0s,mb4.8
COLA **College** 84.02 20 *e*P P 12 35 17.9 -1.9
COLA pmax pmax
comp=Z,115nm,1.0s,mb6.0
COLA MLR MLR
comp=Z,2μm,19.0s,MS5.4
COLA **College** 84.02 20 *e*P P 12 35 17.9 -1.9
comp=Z,115nm,1.0s,mb6.0
COLA LR LR
comp=Z,2μm,19.0s,MS5.4
PTH **Pithoragarh** 84.24 301 *e*PKP P 12 35 21.8 0.0
PTH *e*x x 12 36 23.8
ILAR **Eielson Array** 84.29 21 P P 12 35 19.1 -2.1
comp=Z,77nm,1.2s,mb5.7,baz=250,slow=5.0,SNR=138
ILAR PKKPbc PKKPbc 12 53 35.0 -2.0
comp=Z,0.7nm,0.7s,baz=323,slow=1.8,SNR=9.1
ILAR LR LR 13 14 56.3
comp=Z,2μm,18.1s,MS5.5,baz=349,slow=37
MENT **Mentasta** 84.42 23 *e*P P 12 35 20.3 -1.6
DOT **Dot Lake** 84.67 22 *e*P P 12 35 21.5 -1.6
comp=Z,638nm,1.4s,mb6.6
DGAR **Diego Garcia** 84.70 263 PFAKE 12 35 30.0 +5.6
DGAR LR LR
comp=Z,2μm,22.0s,MS5.5
COLD **Coldfoot** 84.71 18 *e*P P 12 35 23.2 -0.1
comp=Z,141nm,1.5s,mb5.9
JOSI **Joshimath** 85.03 302 *e*PKP P 12 35 25.5 -0.2
LATR **Latur** 85.09 289 *e*PKP P 12 35 25.6 -0.7

LATR AMb AMB 12 35 28.7
comp=Z,183nm,2.2s,mb5.8
AKL Akola 85.12 292⇑ *i*P P 12 35 25.3 -1.1
AKL *i* x x 12 45 44.2
BHPL Bhopal 85.27 294⇑ *i*P P 12 35 25.5 -1.6
BHPL AMb AMB 12 35 30.6
comp=Z,177nm,1.7s,mb5.9
DDI Dehra Dun 86.24 301 *e*x **P 12 35 29.5 -2.3**
SKAG Skagway 86.30 28 *e*P **P 12 35 30.4 -0.9**
comp=Z,278nm,1.7s,mb6.2
EGAK Eagle 86.35 22 *e*P **P 12 35 31.4 -0.1**
comp=Z,252nm,1.5s,mb6.2
EGAK LR LR
comp=Z,2µm,21.0s,MS5.5
KLP Kalpa 86.35 303 *e*PKP **P 12 35 32.2 -0.1**
KLP AMb AMB 12 35 36.2
comp=Z,128nm,1.7s,mb5.9
WRAK Wrangell Islan 86.54 31 *e*P **P 12 35 32.6 0.0**
comp=Z,47nm,1.2s,mb5.6
WRAK LR LR
comp=Z,2µm,19.0s,MS5.6
SONA Sohna 86.62 299 *e*PKP **P 12 35 31.1 -2.6**
SONA AMb AMB 12 35 35.7
comp=Z,84nm,1.3s,mb5.8
DAWY Dawson 86.66 23 *e*P **P 12 35 33.0 0.0**
KCPM Cahto Peak 86.86 49 *e*P **P 12 35 33.9 -0.7**
comp=Z,22nm,0.9s,mb5.4
KIPM Iron Peak 86.97 49 *e*P **P 12 35 35.5 +0.4**
comp=Z,66nm,1.3s,mb5.7
MCCM Marconi Confer 87.01 51 PFAKE 12 35 50.0 +15
MCCM LR LR
comp=Z,2µm,21.0s,MS5.5
HOPS Hopland 87.08 50 *e*P **P 12 35 35.7 0.0**
comp=Z,58nm,1.1s,mb5.7
HOPS LR LR
comp=Z,2µm,20.0s,MS5.6
KAD Karad 87.10 288⇑ *i*P P 12 35 34.6 -1.6
KAD AMb AMB 12 35 37.6
comp=Z,99nm,1.2s,mb5.9
MKAR Makanchi Array 87.19 318 P **P 12 35 35.1 -0.9**
comp=Z,16nm,0.8s,mb5.3,baz=96,slow=6.0,SNR=50
MKAR PKKPbc PKKPbc 12 53 32.8 +3.5
comp=Z,1.2nm,0.8s,baz=302,slow=2.7,SNR=5.5
MKAR PKPPKP 13 01 35.8
comp=Z,0.4nm,0.7s,baz=333,slow=2.3,SNR=5.1
MKAR LR LR 13 13 51.5
comp=Z,2µm,20.8s,MS5.4,baz=99,slow=35
POO Poona 87.64 289⇓ *i*P P 12 35 36.0 -2.8
comp=Z,40nm,1.0s,mb5.6
KHET Khetri 87.69 299 *e*PKP **P 12 35 37.2 -1.7**
KHET AMb AMB 12 35 40.8
comp=Z,46nm,2.3s,mb5.3
SAO San Andreas Ge 87.80 52 *e*P **P 12 35 39.7 +0.5**
SAO pmax pmax
comp=Z,31nm,1.2s,mb5.4
SAO MLR MLR
comp=Z,4µm,20.0s,MS5.8
SAO San Andreas Ge 87.80 52 *e*P **P 12 35 39.7 +0.5**
comp=Z,31nm,1.2s,mb5.4
SAO LR LR
comp=Z,4µm,20.0s,MS5.8
ZAA0 Zalesovo Array 87.82 325 *e*P **P 12 35 37.3 -1.5**
ZALV Zalesovo Beam 87.82 325 P **P 12 35 37.1 -1.8**
comp=Z,4.2nm,0.4s,mb5.0,baz=108,slow=5.2,SNR=23
ZALV PP PP 12 39 03.2 -1.7
comp=Z,0.6nm,0.4s,baz=101,slow=7.5,SNR=2.5
ZALV LR LR 13 15 32.8
comp=Z,1µm,18.4s,MS5.3,baz=99,slow=36
ZALV Zalesovo Beam 87.82 325 P **P 12 35 37.1 -1.8**
ZALV 12 39 03.2
WDC Whiskeytown Da 87.86 48 *e*P **P 12 35 39.1 -0.3**
WDC pmax pmax
comp=Z,53nm,1.4s,mb5.6
WDC MLR MLR
comp=Z,2µm,21.0s,MS5.6
WDC Whiskeytown Da 87.86 48 *e*P **P 12 35 39.1 -0.3**
comp=Z,53nm,1.4s,mb5.6
WDC LR LR
comp=Z,2µm,21.0s,MS5.6
YBH Yreka Blue Hor 88.01 47 LR LR 13 07 52.7
comp=Z,2µm,21.2s,MS5.5,baz=271,slow=31
YBH Yreka Blue Hor 88.01 47 *e*P **P 12 35 40.3 +0.2**
YBH pmax pmax
comp=Z,43nm,1.3s
YBH MLR MLR
comp=Z,2µm,21.0s
YBH Yreka Blue Hor 88.01 47 *e*P **P 12 35 40.3 +0.2**
comp=Z,43nm,1.3s,mb5.5
YBH LR LR
comp=Z,2µm,21.0s,MS5.5
COR Corvallis 88.30 44 PFAKE 12 35 50.0 +8.6
COR LR LR
comp=Z,2µm,19.0s,MS5.6
AJM Ajmer 88.39 297⇑ *i*P P 12 35 40.7 -1.6
AJM AMb AMB 12 35 43.6
comp=Z,81nm,0.6s,mb6.1
DLBC Dease Lake 88.44 30 *e*P **P 12 35 39.8 -1.9**
SMMC Simmler 88.62 54 ⇑P **P 12 35 44.1 +1.0**
baz=89,SNR=9.4
NLWA Neilton Lookou 88.64 42 PFAKE 12 35 50.0 +7.1
NLWA LR LR
comp=Z,2µm,20.0s,MS5.6
PKM Peak Mountain 88.68 54 P **P 12 35 44.9 +1.5**
baz=89,SNR=28
CMB Columbia Colle 88.90 51 *e*P **P 12 35 44.3 -0.1**
CMB pmax pmax
comp=Z,92nm,1.6s,mb5.9
CMB MLR MLR
comp=Z,2µm,22.0s,MS5.5
CMB Columbia Colle 88.90 51 *e*P **P 12 35 44.3 -0.1**
comp=Z,92nm,1.6s,mb5.9
CMB LR LR
comp=Z,2µm,22.0s,MS5.5
NVS Novosibirsk 88.98 326 *e*P **P 12 35 41.7 -2.6**
NVS *i* S SKSac 12 46 08.4 -5.0
NVS pmax pmax
comp=N,7.0nm,1.7s
NVS pmax pmax
comp=E,13nm,1.7s
NVS pmax pmax
comp=Z,36nm,1.7s,mb5.4
NVS smax
comp=N,12nm,2.0s
NVS smax
comp=E,75nm,3.6s
H04A Detroit Lake 89.10 45 ⇓P **P 12 35 45.0 -0.1**
baz=89
F04A Amboy 89.24 43 ⇑P **P 12 35 46.0 +0.3**
baz=89
GNW Green Mountain 89.37 42 *e*P **P 12 35 45.7 -0.7**
comp=E,7.1nm,0.9s,mb5.0
VES Vestal, Richgr 89.46 54 ⇑P **P 12 35 47.6 +0.5**
baz=90,SNR=11
CIS Catalina Islan 89.53 56 ⇓P **P 12 35 48.0 +0.6**
baz=90,SNR=10
K05A Summer Lake 89.56 47 ⇓P **P 12 35 47.6 +0.3**
baz=90
HOOD Mount Hood Mea 89.62 44 *e*P **P 12 35 46.1 -1.5**
comp=E,25nm,1.1s,mb5.5
WCN Washoe City 89.66 50 ⇑P **P 12 35 49.0 +1.1**
baz=90,SNR=30
WCN Washoe City 89.66 50 *e*P **P 12 35 48.8 +0.9**
WAKR Walker 89.73 51 *e*P **P 12 35 49.2 +1.0**
comp=E,0.4nm,1.1s
MOD Modoc 89.80 48 *e*P **P 12 35 48.3 -0.2**
comp=E,66nm,1.6s,mb5.7
MOD LR LR
comp=Z,1µm,21.0s,MS5.3
PASC Pasadena Art C 89.86 55 *e*P **P 12 35 48.6 -0.3**
comp=Z,347nm,1.9s,mb6.4
KSH Kashi 89.90 310 *e*P **P 12 35 50.0 +1.0**
KSH *e*pP pP 12 35 54.7 +0.7
KSH *e*sP sP 12 35 56.9 +1.1
KSH *e*PP PP 12 39 25.3 +3.4
KSH *e*SKS 12 46 18.3
KSH *e*S S 12 46 40.0 -1.2
KSH *e*sS sS 12 46 48.1 -1.3
KSH *e*SS SS 12 52 42.6 +3.4
KSH pmax pmax
comp=Z,130nm,1.5s,mb6.0
KSH LR LR
comp=N,5µm,19.7s,MS6.1
KSH LR LR
comp=E,6µm,20.4s,MS6.1
KSH LR LR
comp=Z,5µm,22.6s,MS5.9
ISA Isabella 89.92 54 ⇓P **P 12 35 49.5 +0.3**
baz=90,SNR=40
ISA Isabella 89.92 54 *e*P **P 12 35 49.1 0.0**
MWC Mount Wilson 89.97 55 *e*P **P 12 35 49.9 +0.4**
MWC pmax pmax
comp=Z,160nm,1.3s,mb6.2
MWC Mount Wilson 89.97 55 *e*P **P 12 35 49.9 +0.5**
comp=Z,160nm,1.3s,mb6.2
PAHR Pah Rah Range 90.02 50 *e*P **P 12 35 49.4 -0.2**
comp=Z,212nm,1.6s,mb6.2
JCW Jim Creek 90.10 41 *e*P **P 12 35 48.2 -1.5**
comp=Z,65nm,1.6s,mb5.7
EDW2 Edwards Air Fo 90.15 55 ⇑P **P 12 35 51.2 +0.9**
baz=90,SNR=44
ULHL Ulahol 90.27 313 P **P 12 35 51.3 +0.6**
SNR=9.3
BFSC Mount Baldy Ra 90.30 55 ⇓P **P 12 35 51.6 +0.6**
baz=90,SNR=31
TIN Tinemaha 90.38 53 ⇑P **P 12 35 52.4 +1.1**
baz=90,SNR=14
LRMC Laurel Mountai 90.51 54 ⇓P **P 12 35 52.8 +0.9**
baz=91,SNR=57
MURC Murrieta 90.56 56 ⇑P **P 12 35 52.7 +0.5**
baz=91,SNR=7.8
KURK Kurchatov 90.57 321 *c*e**P P 12 35 49.9 -1.9**
KURK pmax pmax
comp=Z,49nm,1.7s,mb5.6
KURK MLR MLR
comp=Z,5µm,26.0s,MS5.8
KURK Kurchatov 90.57 321 *e*P **P 12 35 50.6 -1.2**
comp=Z,126nm,1.8s,mb6.0
KURK LR LR
comp=Z,3µm,19.0s,MS5.8
KURK Kurchatov 90.57 321 P **P 12 35 51.1 -0.7**
SNR=34
NVAR Mina Array Bea 90.59 51 P **P 12 35 51.8 -0.5**
comp=Z,37nm,1.0s,mb5.7,baz=245,slow=5.2,SNR=44
NVAR PKKPbc PKKPbc 12 53 26.9 +6.4
comp=Z,1.3nm,0.7s,baz=102,slow=2.0,SNR=5.4
NVAR PKPPKP 13 01 28.0
comp=Z,0.5nm,0.7s,baz=92,slow=2.9,SNR=4.7
INK Inuvik 90.68 20 *e*P **P 12 35 51.4 -0.6**
INK pmax pmax
comp=Z,121nm,1.6s
INK Inuvik 90.68 20 *e*P **P 12 35 51.4 -0.6**
comp=Z,121nm,1.6s,mb6.0
DAC Darwin (Calif) 90.73 54 PFAKE 12 36 00.0 +7.0
DAC LR LR
comp=Z,3µm,20.0s,MS5.7
MPMC Manual Prospec 90.78 54 ⇓P **P 12 35 54.3 +1.1**
baz=91,SNR=54
BAR Barrett 90.82 57 *e*P **P 12 35 53.8 +0.3**
comp=Z,71nm,1.4s,mb5.8
I07A Izee 90.84 46 ⇓P **P 12 35 53.7 +0.4**
baz=91,SNR=20
TKM2 Tokmak 2 90.87 313 P **P 12 35 53.6 +0.1**
SNR=12
TKM2 Tokmak 2 90.87 313 *e*P **P 12 35 53.3 -0.2**
TKM2 pmax pmax
comp=Z,41nm,1.5s,mb5.5
TKM2 MLR MLR
comp=Z,2µm,19.0s,MS5.5
TKM2 Tokmak 2 90.87 313 *e*P **P 12 35 53.3 -0.2**
comp=Z,41nm,1.5s,mb5.5
TKM2 LR LR
comp=Z,2µm,19.0s,MS5.5
NIL Nilore 90.91 304 PFAKE 12 36 00.0 +6.1
NIL LR LR
comp=Z,76nm,19.0s
KZA Kyzart 90.95 312 P **P 12 35 55.0 +1.2**
SNR=24
KZA Kyzart 90.95 312 *e*P **P 12 35 54.6 +0.8**
comp=Z,130nm,1.5s,mb6.0
ETW Entiat 91.02 42 *e*P **P 12 35 52.6 -1.4**
comp=Z,35nm,1.1s,mb5.6
GRAC Grapevine Rang 91.05 53 ⇓P **P 12 35 55.5 +1.1**
baz=91,SNR=23
MONP Monument Peak 91.07 57 ⇓P **P 12 35 55.8 +1.2**
baz=91,SNR=22
WVOR Wild Horse Val 91.12 47 *e*P **P 12 35 54.4 -0.3**
WVOR pmax pmax
comp=Z,247nm,1.8s,mb6.2
WVOR MLR MLR
comp=Z,2µm,19.0s,MS5.5
WVOR Wild Horse Val 91.12 47 *e*P **P 12 35 54.4 -0.2**
comp=Z,248nm,1.8s,mb6.2
WVOR LR LR
comp=Z,2µm,19.0s,MS5.5
PFO Pinyon Flat Ob 91.17 56 ⇓P **P 12 35 55.7 +0.6**
baz=91,SNR=11
PFO Pinyon Flat Ob 91.17 56 *e*P **P 12 35 55.0 -0.1**
PFO pmax pmax
comp=Z,54nm,1.4s,mb5.7
PFO MLR MLR
comp=Z,4µm,21.0s,MS5.8
PFO Pinyon Flat Ob 91.17 56 *e*P **P 12 35 55.0 -0.1**
comp=Z,54nm,1.4s,mb5.7
PFO LR LR
comp=Z,4µm,21.0s,MS5.8
GSC Goldstone 91.19 55 ⇑P **P 12 35 56.0 +0.9**
baz=91,SNR=23
GSC Goldstone 91.19 55 *e*P **P 12 35 55.7 +0.6**
GSC pmax pmax
comp=Z,69nm,1.4s,mb5.8
GSC Goldstone 91.19 55 *e*P **P 12 35 55.7 +0.6**
comp=Z,69nm,1.4s,mb5.8
RSW Rattlesnake Hi 91.26 43 *e*P **P 12 35 54.6 -0.5**
comp=Z,27nm,1.1s,mb5.5
DVTC Desert V Tower 91.29 57 ⇓P **P 12 35 55.2 -0.5**
baz=91,SNR=8.8
HAWA Hanford 91.30 43 *e*P **P 12 35 54.7 -0.7**
comp=Z,30nm,1.3s,mb5.5
HAWA LR LR
comp=Z,2µm,20.0s,MS5.5
FURC Furnace Creek, 91.35 53 ⇑P **P 12 35 56.6 +0.7**
baz=91,SNR=28
TPH Tonopah 91.36 52 PFAKE 12 36 10.0 +14
TPH LR LR
comp=Z,263nm,20.0s,MS4.7
J08A Circle Bar Ran 91.42 46 ⇑P **P 12 35 56.6 +0.5**
baz=92,SNR=13
G08A Pilot Rock 91.46 44 ⇑P **P 12 35 55.7 -0.4**
baz=92,SNR=23
HEC Hector,Ludlow 91.48 55 ⇑P **P 12 35 57.0 +0.5**
baz=92,SNR=18
FRU Bishkek 91.56 313⇑ *e*P **P 12 35 55.5 -1.2**
FRU *i* 12 46 27.5
FRU pmax pmax
comp=Z,200nm,2.1s,mb6.1
FRU MLR MLR
comp=Z,2µm,19.0s,MS5.5
BELC Belle Mtn. Jos 91.61 56 ⇑P **P 12 35 58.1 +0.9**
baz=92,SNR=30
SHOC Shoshone 91.71 54 ⇑P **P 12 35 58.2 +0.7**
baz=92,SNR=7.2
USP Ospenovka 91.73 313 P **P 12 35 57.2 -0.2**
SNR=9.0
U10A Ash Meadows, A 91.76 54 ⇓P **P 12 35 59.0 +1.3**
baz=92,SNR=20
BMN Battle Mountai 91.79 49 *e*P **P 12 35 58.2 +0.4**
BMN pmax pmax
comp=Z,242nm,1.7s,mb6.2
BMN MLR MLR
comp=Z,2µm,22.0s,MS5.4
BMN Battle Mountai 91.79 49 *e*P **P 12 35 58.2 +0.4**
comp=Z,242nm,1.7s,mb6.2
BMN LR LR
comp=Z,2µm,22.0s,MS5.4
S10A Tonopah Range, 91.82 52 ⇑P **P 12 35 58.2 +0.2**
baz=92,SNR=76
B08A Colville Reser 91.83 41 ⇑P **P 12 35 57.2 -0.5**
baz=92,SNR=12
D08A Wollman Farm, 91.84 43 ⇓P **P 12 35 57.5 -0.4**
baz=92,SNR=8.0
TUQ Turquoise Moun 91.92 55 ⇓P **P 12 35 59.7 +1.2**
baz=92,SNR=33
BC3 Big Chuckawall 92.00 56 P **P 12 36 00.1 +1.1**
baz=92,SNR=12
GMRC Granite Mounta 92.02 55 P **P 12 35 59.9 +0.9**
baz=92,SNR=28
LNOR Lincton Mounta 92.04 44 *e*P **P 12 35 58.8 0.0**
LNOR pmax pmax
comp=Z,15nm,1.3s,mb5.2
LNOR Lincton Mounta 92.04 44 *e*P **P 12 35 58.8 0.0**
comp=Z,15nm,1.3s,mb5.2
OD2 Odessa Site #2 92.05 42 *e*P **P 12 35 57.7 -1.1**
comp=Z,40nm,1.2s,mb5.6
AML Almayashu 92.10 312 P **P 12 35 59.1 -0.1**
SNR=5.5
AML Almayashu 92.10 312 PFAKE 12 36 10.0 +11
AML LR LR
comp=Z,2µm,20.0s,MS5.6
R10A Warm Springs 92.11 52 P **P 12 36 00.1 +0.7**
baz=92,SNR=65
Q10A Clear Creek Ra 92.13 51 P **P 12 36 00.7 +1.3**
baz=92,SNR=42
EKS2 Erkin-Say 92.14 313 P **P 12 35 59.8 +0.4**
SNR=6.7
EKS2 Erkin-Say 92.14 313 *e*P **P 12 35 59.2 -0.1**
comp=Z,75nm,1.9s,mb5.7
EKS2 LR LR
comp=Z,2µm,20.0s,MS5.5
E09A Wood Farm, Sta 92.26 43 P **P 12 35 59.1 -0.7**
baz=92,SNR=20
BHJ Bhuj 92.30 293⇑ *i*P **P 12 35 59.5 -1.0**
BHJ AMb AMB 12 36 02.6
comp=Z,92nm,0.9s,mb6.1
IRM Iron Mountain 92.33 56 P **P 12 36 01.4 +1.0**
baz=92,SNR=43
V11A Goodsprings 92.38 54 ⇑P **P 12 36 01.5 +0.8**
baz=92,SNR=17
GLA Glamis 92.42 57 *e*P **P 12 36 01.7 +0.8**
GLA pmax pmax
comp=Z,98nm,1.6s,mb5.9
GLA Glamis 92.42 57 *e*P **P 12 36 01.7 +0.9**
comp=Z,98nm,1.6s,mb5.9
C09A Chrisman Ranch 92.42 42 ⇓P **P 12 35 59.8 -0.7**
baz=92,SNR=6.0
S11A Rachel 92.43 52 P **P 12 36 01.9 +1.0**
baz=92,SNR=18
LDFC Landfair 92.52 55 *e*P **P 12 36 01.5 +0.2**
R11A Troy Canyon, C 92.68 52 ⇓P **P 12 36 02.1 +0.1**
baz=93,SNR=52
Q11A Duckwater 92.71 51 ⇑P **P 12 36 02.0 0.0**
baz=93,SNR=118
SHPR Sheep Range 92.71 54 *e*P **P 12 36 02.7 +0.6**
comp=Z,182nm,1.9s,mb6.2
P11A Circle Ranch, 92.75 51 ⇑P **P 12 36 02.4 +0.1**
baz=93,SNR=28
Y12C Blythe 92.78 56 ⇑P **P 12 36 03.8 +1.2**
baz=93,SNR=9.7
T11A Corn Creek, Al 92.78 53 ⇓P **P 12 36 02.8 +0.3**
baz=93,SNR=44
F10A Beach Ranch, E 92.79 44 ⇓P **P 12 36 01.8 -0.4**
baz=93,SNR=23
V12A Nelson 92.83 54 ⇓P **P 12 36 02.9 +0.2**
baz=93,SNR=16
S12A Delamar Landin 93.13 53 ⇑P **P 12 36 04.6 +0.5**
baz=93,SNR=26
MFID Camas Ranch 93.33 47 P **P 12 36 04.9 0.0**
baz=93,SNR=22
Y13A Salome 93.36 56 ⇓P **P 12 36 06.8 +1.6**
baz=93,SNR=12
Z13A Yuma Proving G 93.41 57 ⇑P **P 12 36 06.7 +1.3**
baz=94,SNR=9.5
R12A Pony Springs, 93.43 52 ⇑P **P 12 36 06.4 +1.0**
baz=94,SNR=42
V13A Grand Canyon W 93.54 54 P **P 12 36 06.2 +0.2**
baz=94,SNR=24
U13A Pakoon Wash 93.64 54 ⇑P **P 12 36 07.5 +1.0**
baz=94,SNR=21
C11A Tepee Creek (N 93.76 42 ⇑P **P 12 36 06.3 -0.4**
baz=94
T13A Saint George 93.78 53 ⇓P **P 12 36 07.9 +0.9**
baz=94,SNR=15
I12A Atlanta 93.89 46 ⇓P **P 12 36 07.9 +0.5**
baz=94,SNR=33
S13A Holt Ranch, En 93.90 53 ⇓P **P 12 36 08.8 +1.2**
baz=94,SNR=12
R13A O'Grain Ranch, 93.91 52 ⇑P **P 12 36 08.5 +0.9**
baz=94,SNR=16
G12A Big Creek, Yel 93.96 45 ⇓P **P 12 36 07.2 -0.5**
baz=94
E12A Beaver Dam Sad 94.00 44 ⇓P **P 12 36 07.3 -0.6**
baz=94
F12A Elk City 94.11 44 P **P 12 36 07.9 -0.5**
baz=94,SNR=22
W14A Seligman 94.18 55 ⇓P **P 12 36 09.7 +0.8**
baz=94,SNR=9.7
H12A Diamond D Ranc 94.20 46 ⇓P **P 12 36 08.6 -0.2**
baz=94,SNR=18
V14A Boquillas Ranc 94.22 55 P **P 12 36 09.9 +0.8**
baz=94,SNR=12
D12A Red Ives Fores 94.24 43 ⇑P **P 12 36 08.2 -0.7**
baz=94,SNR=22
ARUT Antelope Range 94.26 53 *e*P **P 12 36 10.2 +0.9**
ARUT pmax pmax
comp=Z,33nm,1.3s,mb5.6
ARUT Antelope Range 94.26 53 *e*P **P 12 36 10.2 +1.0**
comp=Z,33nm,1.3s,mb5.6
U14A Mt Trumbull 94.27 54 ⇓P **P 12 36 10.1 +0.8**
baz=94,SNR=19
CCUT Cedar City 94.29 53 *e*P **P 12 36 09.8 +0.4**
comp=Z,65nm,1.6s,mb5.8
HLID Hailey 94.37 47 ⇑P **P 12 36 09.6 0.0**
baz=94,SNR=54
HLID Hailey 94.37 47 *e*P **P 12 36 09.7 +0.1**
comp=Z,73nm,1.5s,mb5.9
HLID LR LR
comp=Z,2µm,22.0s,MS5.6
KBL Kabul 94.50 304 *e*P **P 12 36 09.3 -1.1**
KBL pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
KBL Kabul 94.50 304 *e*P **P 12 36 09.3 -1.1**
comp=Z,4.6nm,0.7s,mb5.0
J13A Cove Ranch, Pi 94.52 47 ⇑P **P 12 36 10.5 +0.2**
baz=95,SNR=30
Q14A Sevier Lake (B 94.56 51 P **P 12 36 11.1 +0.4**
baz=95,SNR=32
KKAR Karatay Array 94.58 313 *e*P **P 12 36 09.5 -1.1**
KKAR pmax pmax
comp=Z,15nm,1.2s,mb5.3
KKAR Karatay Array 94.58 313 *e*P **P 12 36 09.5 -1.1**
comp=Z,15nm,1.2s,mb5.3
H13A Challis 94.63 46 ⇑P **P 12 36 10.7 -0.1**
baz=95,SNR=35
I13A Wildhorse Cree 94.64 46 P **P 12 36 10.9 +0.1**
baz=95,SNR=42
G13A Cobalt 94.72 45 ⇓P **P 12 36 10.4 -0.8**
baz=95,SNR=19
BSMT Bassoo Peak 94.74 42 *e*P **P 12 36 11.4 +0.2**
comp=Z,14nm,1.4s,mb5.2
F13A Darby 94.75 45 P **P 12 36 10.3 -1.0**
baz=95,SNR=22
P14A Drum Mountains 94.80 51 ⇑P **P 12 36 12.5 +0.8**
baz=95,SNR=31
E13A Victor 94.94 44 ⇓P **P 12 36 11.9 -0.3**
baz=95,SNR=8.5
U15A North Rim 94.98 54 ⇓P **P 12 36 13.7 +1.1**
baz=95,SNR=14
J14A Carey 94.98 47 ⇓P **P 12 36 13.4 +1.0**
baz=95,SNR=13
T15A Red Dirt Ranch 94.99 53 ⇓P **P 12 36 14.5 +1.8**
baz=95,SNR=8.9
BGU Big Grassy Mou 95.02 50 *e*P **P 12 36 12.6 0.0**
comp=Z,27nm,1.2s,mb5.5
B13A Whitefish 95.03 42 ⇑P **P 12 36 11.8 -0.7**
baz=95,SNR=9.3
JTMT Jette 95.06 43 *e*P **P 12 36 12.7 0.0**
DUG Dugway 95.08 50 ⇓P **P 12 36 13.2 +0.2**
baz=95,SNR=8.1
DUG Dugway 95.08 50 *e*P **P 12 36 12.9 -0.1**
DUG pmax pmax
comp=Z,19nm,1.1s,mb5.4
DUG MLR MLR
comp=Z,2µm,22.0s,MS5.4
DUG Dugway 95.08 50 *e*P **P 12 36 12.9 -0.1**
comp=Z,19nm,1.1s,mb5.4
DUG LR LR
comp=Z,2µm,22.0s,MS5.4
I14A Mackay 95.11 46 ⇓P **P 12 36 13.8 +0.8**
baz=95,SNR=17
K14A Jones Ranch, D 95.13 48 ⇑P **P 12 36 13.6 +0.5**
baz=95,SNR=16
A13A Flathead Natio 95.14 41 ⇓P **P 12 36 13.2 +0.1**
baz=95
MSO Missoula 95.17 44 PFAKE 12 36 20.0 +6.8
MSO LR LR
comp=Z,1µm,19.0s,MS5.4
SWMT Swartz Lake 95.22 43 *e*P **P 12 36 11.5 -1.9**
comp=Z,3.1nm,1.1s,mb4.7
H14A Leadore 95.27 46 ⇓P **P 12 36 14.0 +0.3**
baz=95,SNR=20
MVU Marysvale 95.32 52 PFAKE 12 36 20.0 +5.9
MVU LR LR
comp=Z,3µm,20.0s,MS5.8
HVU Hansel Valley 95.32 49 *e*P **P 12 36 14.4 +0.4**

HVU pmax pmax
comp=Z,54nm,1.1s,mb5.9
HVU Hansel Valley 95.32 49 *e*P **P 12 36 14.4 +0.4**
comp=Z,54nm,1.1s,mb5.9
MSU Marysvale 95.35 52 *e*P **P 12 36 15.3 +1.1**
O15A The Old Anders 95.35 50 ⇑P **P 12 36 14.9 +0.7**
baz=95,SNR=6.9
P15A Leamington 95.41 51 P **P 12 36 15.6 +1.1**
baz=96,SNR=6.0
WALA Waterton Lakes 95.49 41 *e*P **P 12 36 14.2 -0.4**
comp=Z,0.4nm,1.0s
SPUT South Promonto 95.50 49 *e*P **P 12 36 14.8 -0.1**
comp=Z,30nm,1.2s,mb5.6
M15A Larsen Ranch, 95.52 49 ⇑P **P 12 36 14.9 -0.1**
baz=96,SNR=25
NLU North Lily Min 95.61 51 *e*P **P 12 36 16.1 +0.7**
comp=Z,60nm,1.6s,mb5.8
K15A Arbon 95.62 48 ⇓P **P 12 36 16.0 +0.7**
baz=96,SNR=17
L15A Malad City 95.64 48 P **P 12 36 15.2 -0.2**
baz=96,SNR=16
CHMT Chamberlain Mo 95.65 44 *e*P **P 12 36 13.2 -2.2**
comp=Z,5.7nm,1.4s,mb4.8
MCMT McKenzie Canyo 95.66 46 *e*P **P 12 36 15.9 +0.4**
comp=Z,4.6nm,1.1s,mb4.8
NOQ North Oquirrh 95.67 50 *e*P **P 12 36 16.0 +0.3**
comp=Z,38nm,1.1s,mb5.7
TUC Tucson 95.68 58 PFAKE 12 36 30.0 +14
TUC LR LR
comp=Z,3μm,22.0s,MS5.7
J15A Blackfoot 95.78 47 ⇑P **P 12 36 16.5 +0.5**
baz=96,SNR=20
B14A Marquette Ranc 95.82 42 ⇓P **P 12 36 15.6 -0.5**
baz=96,SNR=7.8
R16A Teasdale 95.86 52 P **P 12 36 18.4 +1.8**
baz=96,SNR=18
DLMT Dillon 95.90 45 *e*P **P 12 36 16.1 -0.4**
comp=Z,39nm,1.4s,mb5.6
X17A Forest Lakes 95.92 56 ⇓P **P 12 36 18.8 +1.8**
baz=96,SNR=5.6
CTU Camp Tracy 95.95 50 *e*P **P 12 36 17.4 +0.5**
comp=Z,16nm,0.9s,mb5.5
MPU Maple Canyon 95.95 51 *e*P **P 12 36 17.4 +0.4**
comp=Z,27nm,1.3s,mb5.5
E15A Deer Lodge 96.00 44 ⇑P **P 12 36 16.9 -0.1**
baz=96,SNR=12
F15A Butte 96.03 45 ⇑P **P 12 36 16.4 -0.8**
baz=96
LRM Limekiln Ridge 96.06 45 *e*P **P 12 36 16.8 -0.4**
comp=Z,71nm,1.3s,mb5.9
BRVK Borovoye 96.07 323 *ce*P **P 12 36 14.9 -2.2**
BRVK pmax pmax
comp=Z,28nm,1.7s,mb5.4
BRVK MLR MLR
comp=Z,3μm,17.0s,MS5.9
BRVK Borovoye 96.07 323 *e*P **P 12 36 15.6 -1.5**
comp=Z,40nm,1.5s,mb5.6
BRVK LR LR
comp=Z,4μm,22.0s,MS5.9
BRVK Borovoye 96.07 323 P **P 12 36 15.8 -1.4**
SNR=17
M16A Huntsville 96.11 49 ⇓P **P 12 36 17.6 0.0**
baz=96,SNR=14
JLU Jordanelle 96.17 50 *e*P **P 12 36 18.3 +0.4**
comp=Z,84nm,1.7s,mb5.9
C15A Salmond Ranch, 96.19 43 ⇑P **P 12 36 17.4 -0.4**
baz=96,SNR=10.0
TMUT Trail Mountain 96.19 51 *e*P **P 12 36 19.0 +1.0**
HWUT Hardware Ranch 96.20 49 *e*P **P 12 36 17.7 -0.4**
comp=Z,12nm,0.9s,mb5.3
HWUT LR LR
comp=Z,1μm,19.0s,MS5.5
N16A Rees Ranch, Co 96.21 50 P **P 12 36 19.1 +1.1**
baz=96,SNR=8.8
T17A Navajo Res., N 96.24 54 ⇑P **P 12 36 18.8 +0.5**
baz=96,SNR=9.0
A15A Johnson Ranch, 96.25 42 ⇓P **P 12 36 17.7 -0.3**
baz=96,SNR=7.1
DAU Daniels Canyon 96.29 50 *e*P **P 12 36 19.3 +0.8**
DAU pmax pmax
comp=Z,15nm,1.1s,mb5.3
DAU Daniels Canyon 96.29 50 *e*P **P 12 36 19.3 +0.8**
comp=Z,15nm,1.1s,mb5.3
J16A Bone 96.36 47 ⇑P **P 12 36 19.4 +0.7**
baz=96,SNR=13
EDM Edmonton 96.36 37 *e*P **P 12 36 16.8 -1.7**
R17A Hanksville Air 96.48 52 ⇑P **P 12 36 20.1 +0.7**
baz=96,SNR=11
I16A Newdale 96.52 47 ⇓P **P 12 36 19.6 +0.2**
baz=97,SNR=14
RRI2 Red Ridge 96.58 47 *e*P **P 12 36 20.2 +0.5**
comp=Z,13nm,0.9s,mb5.4
HRY Holter Researc 96.59 44 *e*P **P 12 36 19.5 -0.1**
comp=Z,5.0nm,0.7s,mb5.0
BOZ Bozeman (W) 96.61 45 *e*P **P 12 36 19.2 -0.6**
BOZ pmax pmax
comp=Z,4.0nm,0.6s,mb5.0
BOZ MLR MLR
comp=Z,2μm,21.0s,MS5.5
BOZ Bozeman (W) 96.61 45 *e*P **P 12 36 19.2 -0.6**
comp=Z,3.6nm,0.6s,mb5.0
BOZ LR LR
comp=Z,2μm,21.0s,MS5.5
F16A Kennard Place, 96.63 45 ⇑P **P 12 36 19.8 -0.1**
baz=97,SNR=8.4
O17A Robinson Place 96.66 50 P **P 12 36 21.6 +1.4**
baz=97,SNR=6.2
AHID Auburn Hatcher 96.67 48 PFAKE 12 36 30.0 +10
AHID LR LR
comp=Z,2μm,22.0s,MS5.6
E16A East Helena 96.68 44 ⇑P **P 12 36 19.6 -0.4**
baz=97,SNR=6.7
SRU San Rafael 96.70 52 *e*P **P 12 36 20.9 +0.5**
H16A Russell Place, 96.78 46 ⇑P **P 12 36 21.3 +0.7**
baz=97,SNR=14
YKA Yellowknife Ar 96.80 28 P **P 12 36 18.8 -1.4**
comp=Z,5.8nm,1.0s,mb5.0,baz=259,slow=4.6,SNR=20
YKA PKiKP PKiKP 12 40 54.7 -2.0
comp=Z,0.5nm,0.9s,baz=272,slow=1.5,SNR=2.9
YKA PKKP PKKPbc 12 53 04.5 -0.6
comp=Z,1.2nm,0.8s,baz=79,slow=2.7,SNR=4.9
YKA LR LR 13 14 50.1
comp=Z,168nm,20.5s,MS4.5,baz=175,slow=32
M17A Scullys Gap (B 96.85 49 ⇑P **P 12 36 20.9 -0.1**
baz=97,SNR=11
TPAW Teton Pass 96.86 47 *e*P **P 12 36 21.3 +0.3**
comp=Z,23nm,1.3s,mb5.4
IMW Indian Meadow 96.91 47 *e*P **P 12 36 21.3 +0.1**
comp=Z,28nm,1.5s,mb5.5
REDW Red Top Meadow 96.92 47 *e*P **P 12 36 21.7 +0.5**
comp=Z,9.6nm,0.9s,mb5.2
P18A Preston Nutter 96.97 51 ⇑P **P 12 36 22.6 +1.1**
baz=97,SNR=8.9
YMR Madison River 96.97 46 *e*P **P 12 36 21.8 +0.4**
comp=Z,21nm,0.9s,mb5.6
SNOW Snow King Moun 97.00 47 *e*P **P 12 36 21.9 +0.3**
comp=Z,16nm,1.1s,mb5.4
MOOW Moose Ponds 97.04 47 *e*P **P 12 36 21.6 -0.2**
comp=Z,11nm,1.2s,mb5.2
YFT Old Faithful 97.04 46 *e*P **P 12 36 23.4 +1.7**
comp=Z,17nm,1.0s,mb5.4
LOHW Long Hollow 97.12 47 *e*P **P 12 36 22.5 +0.3**
comp=Z,10nm,1.2s,mb5.1
G17A Pierce Place, 97.20 45 ⇑P **P 12 36 23.6 +1.1**
baz=97
O18A Roosevelt 97.22 50 ⇑P **P 12 36 24.0 +1.3**
baz=97
H17A Grant Village 97.22 46 ⇓P **P 12 36 24.2 +1.6**
baz=97,SNR=6.6
M18A Lyman 97.30 49 ⇓P **P 12 36 23.5 +0.5**
baz=97,SNR=6.7
F17A Fitzpatrick Pl 97.32 45 P **P 12 36 23.6 +0.6**
baz=97,SNR=20
LKWY Lake 97.37 46 PFAKE 12 36 30.0 +6.8
LKWY LR LR
comp=Z,3μm,20.0s,MS5.8
C17A Wharram Farm, 97.41 43 P **P 12 36 22.8 -0.6**
baz=98,SNR=16
U19A Dine' College, 97.44 54 ⇑P **P 12 36 26.0 +2.2**
baz=98,SNR=6.1
B17A L&G Farms, Che 97.45 42 ⇑P **P 12 36 23.0 -0.6**
baz=98
J18A Kendall Valley 97.51 47 ⇓P **P 12 36 23.5 -0.4**
baz=98,SNR=8.0
N18A Larsen Ranch, 97.55 50 P **P 12 36 24.6 +0.4**
baz=98,SNR=12
S19A Harvey Farm, M 97.64 53 ⇑P **P 12 36 26.3 +1.7**
baz=98,SNR=19

PV10 Paradox Valley 97.78 52 *e*P **P 12 36 26.9 +1.6**
comp=Z,143nm,0.9s,mb6.5
BW06 Boulder Array 97.80 48 ⇑P **P 12 36 24.2 -1.1**
baz=98,SNR=20
BW06 Boulder Array 97.80 48 PFAKE 12 36 40.0 +15
BW06 LR LR
comp=Z,2μm,22.0s,MS5.6
PDAR Pinedale Array 97.80 48 P **P 12 36 23.6 -1.6**
comp=Z,8.5nm,0.8s,mb5.3,baz=244,slow=2.5,SNR=34
PDAR PKKP PKKPbc 12 53 05.5 +3.9
comp=Z,1.0nm,0.8s,baz=108,slow=4.8,SNR=4.9
PDAR PKPPKP 13 01 15.2
comp=Z,0.3nm,0.6s,baz=62,slow=2.1,SNR=5.7
PDAR LR LR 13 13 43.5
comp=Z,2μm,21.3s,MS5.5,baz=276,slow=31
PV04 Paradox Valley 97.89 52 *e*P **P 12 36 27.5 +1.8**
L19A Farson 97.89 49 ⇑P **P 12 36 25.4 -0.2**
baz=98,SNR=9.0
E18A Harlowton 97.89 44 ⇓P **P 12 36 24.9 -0.6**
baz=98,SNR=11
O19A Miners Draw (B 97.90 50 ⇓P **P 12 36 26.1 +0.4**
baz=98,SNR=6.7
F18A Big Timber 97.97 45 P **P 12 36 25.8 -0.2**
baz=98,SNR=9.7
GCMT Greycliff 98.00 45 *e*P **P 12 36 25.9 -0.1**
comp=Z,7.5nm,1.0s,mb5.2
EGMT Eagleton 98.12 43 *e*P **P 12 36 25.3 -1.3**
comp=Z,19nm,1.4s,mb5.4
EGMT LR LR
comp=Z,2μm,21.0s,MS5.5
PV01 Paradox Valley 98.12 53 *e*P **P 12 36 25.8 -1.0**
RLMT Red Lodge 98.22 46 *e*P **P 12 36 26.7 -0.4**
comp=Z,11nm,1.2s,mb5.3
RLMT LR LR
comp=Z,2μm,21.0s,MS5.6
K19A Absolon Red Bu 98.33 48 ⇓P **P 12 36 27.1 -0.5**
baz=98,SNR=14
F19A Roth Farm, Mol 98.50 45 ⇑P **P 12 36 28.6 +0.3**
baz=99,SNR=11
N20A Spence Gulch, 98.60 50 ⇓P **P 12 36 29.0 +0.2**
baz=99,SNR=5.9
E19A Rath Farm, Rou 98.66 44 P **P 12 36 29.0 0.0**
baz=99,SNR=14
LAZ Ladron 98.94 57 *e*P **P 12 36 30.5 -0.1**
comp=Z,9.7nm,1.7s,mb5.1
E20A Meyer Farm, Mu 99.11 44 ⇓P **P 12 36 31.0 0.0**
baz=99,SNR=12
D20A Manuel Ranch, 99.15 44 ⇑P **P 12 36 30.8 -0.4**
baz=99,SNR=5.8
M21A Separation Pea 99.33 49 P **P 12 36 32.3 +0.2**
baz=99,SNR=6.0
BNM Barren Site 99.34 57 *e*P **P 12 36 32.4 +0.1**
comp=Z,6.7nm,1.2s,mb5.0
L21A Rawlins 99.35 49 ⇑P **P 12 36 32.1 -0.2**
baz=99,SNR=8.3
J21A Lysite 99.39 48 ⇓P **P 12 36 32.0 -0.4**
baz=99,SNR=9.2
RWWY Rawlins 99.45 49 *e*P **P 12 36 32.5 -0.1**
comp=Z,29nm,1.4s,mb5.6
SMCO Snowmass 99.46 52 *e*P **P 12 36 33.5 +0.8**
comp=Z,5.5nm,0.9s,mb5.1
Q22A Crested Butte, 99.48 52 ⇑P **P 12 36 34.2 +1.3**
baz=100,SNR=6.4
K21A Alcova 99.49 48 ⇑P **P 12 36 32.8 0.0**
baz=100,SNR=8.0
I21A Big Trails, Te 99.53 47 ⇓P **P 12 36 32.7 -0.2**
baz=100,SNR=7.7
ANMO Albuquerque 99.54 56 *e*P **P 12 36 33.7 +0.5**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO MLR MLR
comp=Z,2μm,21.0s
ANMO Albuquerque 99.54 56 *e*P **P 12 36 33.7 +0.4**
comp=Z,2.2nm,1.0s,mb4.5
ANMO LR LR
comp=Z,2μm,21.0s,MS5.6
PMSA Palmer Station 99.73 163 PFAKE 12 36 40.0 +6.4
PMSA LR LR
comp=Z,2μm,19.0s,MS5.7
O22A Kremmling 99.85 51 ⇑P Pdif 12 36 34.3 +0.1
baz=100,SNR=7.0
K22A Casper 100.02 48 P Pdif 12 36 35.5 +0.5
baz=100,SNR=7.6
J22A Midwest 100.10 47 P Pdif 12 36 35.8 +0.5
baz=100,SNR=9.9
MNTX Cornudas Mount 100.19 59 PFAKE 12 36 50.0 +14
MNTX LR LR
comp=Z,2μm,22.0s,MS5.7
LAO LASA Array 100.44 44 *e*Pdif Pdif 12 36 36.8 0.0
comp=Z,25nm,0.9s
LAO LR LR
comp=Z,2μm,19.0s,MS5.6
SDCO Great Sand Dun 100.51 53 *e*Pdif Pdif 12 36 40.2 +3.0
comp=Z,25nm,2.1s
SDCO LR LR
comp=Z,1μm,19.0s,MS5.5
ISCO Idaho Springs 100.55 51 PFAKE 12 36 50.0 +13
ISCO LR LR
comp=Z,3μm,19.0s,MS5.8
PHWY Pilot Hill 100.75 50 *e*Pdif Pdif 12 36 38.2 +0.1
comp=Z,25nm,1.7s
TXAR Lajitas Array 101.48 62 P Pdif 12 36 41.4 -0.1
comp=Z,0.6nm,0.9s,baz=226,slow=3.3,SNR=5.7
TXAR PP PP 12 40 52.3 +0.2
comp=Z,2.6nm,1.2s,baz=260,slow=6.1,SNR=5.1
TXAR PKKP PKKPbc 12 52 53.2 +2.6
comp=Z,1.0nm,0.7s,baz=103,slow=3.6,SNR=7.8
TXAR Lajitas Array 101.48 62 P Pdif 12 36 41.4 0.0
TXAR 12 40 52.3
DGMT Dagmar 101.86 42 PFAKE 12 36 50.0 +6.9
DGMT LR LR
comp=Z,2μm,19.0s,MS5.5
RSSD Black Hills 101.90 47 *e*P Pdif 12 36 43.5 +0.2
RSSD pmax pmax
comp=Z,30nm,1.8s
RSSD MLR MLR
comp=Z,2μm,21.0s,MS5.6
RSSD Black Hills 101.90 47 *e*Pdif Pdif 12 36 43.5 +0.2
comp=Z,30nm,1.8s
RSSD LR LR
comp=Z,2μm,21.0s,MS5.6
ABKAR Akbulak array 102.34 318 *e*Pdif Pdif 12 36 43.9 -1.4
comp=Z,1.7nm,0.7s
ARU Arti 102.98 326 P Pdif 12 36 45.8 -2.3
ARU 12 40 58.4
ARU PPP 12 43 12.1
ARU S SKSac 12 47 22.7 -4.5
ARU SP SP 12 50 05.4 -2.9
ARU PS PS 12 50 12.0 +1.2
ARU MLR MLR
comp=Z,3μm,19.0s,MS5.8
ARU Arti 102.98 326 PFAKE 12 37 00.0 +12
ARU LR LR
comp=Z,3μm,19.0s,MS5.8
FFC Flin Flon 103.13 36 PFAKE 12 37 00.0 +11
FFC LR LR
comp=Z,2μm,19.0s,MS5.6
OGNE Ogallala 103.32 50 PFAKE 12 37 00.0 +10
OGNE LR LR
comp=Z,2μm,22.0s,MS5.7
AMTX Amarillo 103.46 56 PFAKE 12 37 00.0 +10
AMTX LR LR
comp=Z,3μm,20.0s,MS5.8
JCT Junction City 104.89 61 PFAKE 12 37 10.0 +13
JCT LR LR
comp=Z,2μm,19.0s,MS5.7
CBKS Cedar Bluff 105.08 52 PFAKE 12 41 20.0 +7.6
CBKS LR LR
comp=Z,1μm,20.0s,MS5.4
WMOK Wichita Mounta 105.84 57 PFAKE 12 41 20.0 +6.0
WMOK LR LR
comp=Z,2μm,20.0s,MS5.8
ABPO Ambohimpanom 106.45 247 PFAKE 12 41 30.0 +14
ABPO LR LR
comp=Z,2μm,20.0s,MS5.5
KVTX Kingsville 106.46 64 PFAKE 12 41 30.0 +15
KVTX LR LR
comp=Z,2μm,20.0s,MS5.7
ECSD EROS Data Cent 107.26 47 PFAKE 12 41 30.0 +14
ECSD LR LR
comp=Z,1μm,19.0s,MS5.5
AGMN Agassiz Nation 107.41 42 PFAKE 12 41 30.0 +14
AGMN LR LR
comp=Z,2μm,19.0s,MS5.6
KSU1 Kansas State U 107.51 52 PFAKE 12 41 30.0 +13
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.6

HKT Hockley 108.32 62 PFAKE 12 41 30.0 +11
HKT LR LR
comp=Z,2μm,20.0s,MS5.7
KBS Kingsbay 108.37 354 PFAKE 12 41 30.0 +13
KBS LR LR
comp=Z,2μm,20.0s,MS5.6
NATX Nacogdoches 109.31 60 PFAKE 12 41 30.0 +9.5
NATX LR LR
comp=Z,2μm,22.0s,MS5.7
MIAR Mount Ida 110.14 57 PFAKE 12 41 30.0 +8.0
MIAR LR LR
comp=Z,3μm,21.0s,MS5.8
EYMN Ely 110.36 42 PFAKE 12 41 30.0 +8.0
EYMN LR LR
comp=Z,1μm,21.0s,MS5.5
MAK Makhachkala 111.39 312 *i* PKIKP PKiKP 12 41 23.5 -0.6
MAK *e* 12 42 02.2
MAK *e*PPP 12 44 27.1
MAK *i* 12 48 04.5
MAK *e* 12 48 34.4
MAK *i* SP SP 12 51 34.0 -0.4
MAK *e*SS SS 12 57 36.7 -1.4
MAK pmax pmax
comp=Z,34nm,0.4s
CCM Cathedral Cave 111.78 53 PFAKE 12 41 40.0 +15
CCM LR LR
comp=Z,2μm,19.0s,MS5.7
KLMR Klimovskoe 111.79 332 *i* P Pdif 12 37 23.7 -3.5
KLMR pmax pmax
comp=Z,13nm,1.5s
JFWS Jewell Farm 111.97 47 PFAKE 12 41 40.0 +15
JFWS LR LR
comp=Z,1μm,20.0s,MS5.5
KEV Kevo 112.08 344 PFAKE 12 41 40.0 +15
KEV LR LR
comp=Z,3μm,22.0s,MS5.8
ARCES ARCESS Array B 112.63 344 PKiKP PKiKP 12 41 23.6 -2.0
comp=Z,1.1nm,0.8s,baz=90,slow=2.4,SNR=6.4
ARCES PKKPab PKKPab 12 52 20.5 -2.0
comp=Z,2.7nm,0.8s,baz=246,slow=1.2,SNR=8.0
VBMS Vicksburg 112.81 59 PFAKE 12 41 40.0 +13
VBMS LR LR
comp=Z,2μm,21.0s,MS5.6
HDIL Hopedale 113.00 50 PFAKE 12 41 40.0 +13
HDIL LR LR
comp=Z,3μm,22.0s,MS5.8
PLCA Paso Flores 113.00 142 PKiKP PKiKP 12 41 26.1 -1.1
comp=Z,1.1nm,0.8s,baz=272,slow=2.9,SNR=1.8
PLCA Paso Flores 113.00 142 PKPdf PKiKP 12 41 26.1 -1.1
PLCA LR LR
comp=Z,1μm,20.0s,MS5.5
OXF Oxford 113.57 56 PFAKE 12 41 40.0 +11
OXF LR LR
comp=Z,2μm,20.0s,MS5.8
VRHR Novokhopersk 113.74 322 *e*PKIKP PKiKP 12 41 35.2 +6.9
VRHR pmax pmax
comp=N,7.0nm,0.6s
VRHR pmax pmax
comp=E,5.0nm,0.6s
VRHR pmax pmax
comp=Z,7.0nm,0.6s
GNI Garni 113.83 310 PFAKE 12 41 40.0 +11
GNI LR LR
comp=Z,1μm,21.0s,MS5.4
KIV Kislovodsk 114.69 314⇑ *e*PKIKP PKiKP 12 41 30.8 +0.4
KIV *i* 12 42 26.9
KIV *e*PS PS 12 52 05.6 -1.4
KIV *e*SS SS 12 58 21.6 -0.1
KIV pmax pmax
comp=Z,2.0nm,0.5s
KIV Kislovodsk 114.69 314 PFAKE 12 41 40.0 +10
KIV LR LR
comp=Z,1μm,19.0s,MS5.5
WVT Waverly 114.69 55 PFAKE 12 41 40.0 +9.4
WVT LR LR
comp=Z,2μm,20.0s,MS5.7
TEIG Tepich 115.10 72 PFAKE 12 41 40.0 +8.2
TEIG LR LR
comp=Z,1μm,21.0s,MS5.5
VORD Divnogorie 115.19 322 *e*PKIKP PKiKP 12 41 39.9 +8.8
VORD *e* 12 42 28.9
VORD pmax pmax
comp=Z,450nm,5.2s
VORD pmax pmax
comp=N,30nm,0.9s
VORD pmax pmax
comp=E,40nm,0.7s
VSR Storozhevoye 115.19 323 PKIKP PKiKP 12 41 26.5 -4.6
VSR *e* 12 42 27.8
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,5.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s
VSR pmax pmax
comp=E,110nm,2.8s
VSR pmax pmax
comp=Z,220nm,2.8s
VSR pmax pmax
comp=N,10.0nm,0.9s
OBN Obninsk 115.35 327⇑ *e*PKIKP PKPdf 12 41 31.1 -0.2
OBN *i* 12 42 33.0
OBN *e* 12 45 06.0
OBN *e*S SKSac 12 48 12.7 -6.9
OBN *e*PS PS 12 52 03.7 -8.8
OBN *e*SS SS 12 58 46.9 +17
OBN pmax pmax
comp=Z,8.0nm,0.5s
OBN MLR MLR
comp=Z,2μm,19.0s,MS5.8
OBN Obninsk 115.35 327 PFAKE 12 41 40.0 +8.7
OBN LR LR
comp=Z,3μm,21.0s,MS5.9
GLMI Grayling 115.62 45 PFAKE 12 41 40.0 +7.9
GLMI LR LR
comp=Z,2μm,20.0s,MS5.7
WCI Wyandotte Cave 115.63 52 PFAKE 12 41 40.0 +7.7
WCI LR LR
comp=Z,2μm,20.0s,MS5.7
LRAL Lakeview Retre 115.71 58 PFAKE 12 41 40.0 +7.3
LRAL LR LR
comp=Z,2μm,22.0s,MS5.8
TGUH Tegucigalpa,Un 115.82 79 PFAKE 12 41 40.0 +6.7
TGUH LR LR
comp=Z,1μm,21.0s,MS5.5
BRAL Brewton 115.85 60 PFAKE 12 41 40.0 +7.0
BRAL LR LR
comp=Z,2μm,19.0s,MS5.6
AAM Ann Arbor 116.86 47 PFAKE 12 41 50.0 +15
AAM LR LR
comp=Z,2μm,20.0s,MS5.6
SOC Sochi 116.87 314 *i* PKIKP PKPdf 12 41 31.8 -2.8
SOC *e* 12 42 41.6
SOC *e*PPP 12 45 10.7
SOC *e*SP SP 12 52 26.7 +2.3
SOC *e*SS SS 12 59 01.0 +11
SOC pmax pmax
comp=Z,13nm,0.6s
SOC MLR MLR
comp=Z,1μm,17.0s,MS5.7
FINES FINESS Array B 117.27 336 PKP PKPdf 12 41 33.9 -0.9
comp=Z,2.6nm,0.8s,baz=80,slow=3.4,SNR=2.7
ACSO Alum Creek Sta 117.80 49 PFAKE 12 41 50.0 +14
ACSO LR LR
comp=Z,2μm,19.0s,MS5.7
JTS JuntasAbangare 117.81 83 PFAKE 12 41 50.0 +13
JTS LR LR
comp=Z,2μm,19.0s,MS5.8
ANN Anapa 118.15 316 *i* PKIKP PKPdf 12 41 34.1 -2.9
ANN *i* 12 42 49.0
ANN *e* 12 48 27.7
ANN *i* PS PS 12 52 29.8 -8.6
ANN pmax pmax
comp=Z,19nm,0.9s
GOGA Godfrey 118.60 57 PFAKE 12 41 50.0 +12
GOGA LR LR
comp=Z,2μm,21.0s,MS5.8
MALT Malatya 118.98 309 PFAKE 12 41 50.0 +11
MALT LR LR
comp=Z,2μm,21.0s,MS5.6
LCO Las Campanas 119.42 131 PFAKE 12 41 50.0 +10
LCO LR LR
comp=Z,1μm,22.0s,MS5.6
ERPA Erie 119.55 47 PFAKE 12 41 50.0 +10

ERPA LR LR
comp=Z,2µm,19.0s,MS5.8
CFAA Coronel Fontan 119.80 135 PKP PKPdf 12 41 40.0 -0.6
comp=Z,0.2nm,0.4s,baz=258,slow=1.3
TRQA Tornquist 119.82 144 PFAKE 12 41 50.0 +10
TRQA LR LR
comp=Z,901nm,19.0s,MS5.4
MNK Minsk 120.18 329 *e*PKIKP PKPdf 12 41 38.0 -2.6
MNK *e* 12 43 00.0
MNK *e* 12 48 36.0
MNK *e*PS PS 12 52 48.0 -8.1
MNK MLR MLR
comp=Z,6µm,16.0s,MS6.3
MNK MLR MLR
comp=E,5µm,16.0s
MCWV Mont Chateau 120.28 49 PFAKE 12 41 50.0 +8.7
MCWV LR LR
comp=Z,2µm,20.0s,MS5.8
KMBO Kilima Mbogo 120.33 263 PKP PKPdf 12 41 41.2 -0.9
comp=Z,1.1nm,0.6s,baz=0,0,slow=24,SNR=9.7
KMBO Kilima Mbogo 120.33 263 *e*PKPdf PKPdf 12 41 41.6 -0.5
KMBO LR LR
comp=Z,1µm,22.0s,MS5.6
BLA Blacksburg 120.39 52 PFAKE 12 41 50.0 +8.4
BLA LR LR
comp=Z,3µm,22.0s,MS5.9
DWPF Disney 121.00 63 PFAKE 12 41 50.0 +7.0
DWPF LR LR
comp=Z,1µm,21.0s,MS5.6
BOSA Boshof 121.06 229 PKP PKPdf 12 41 42.4 -0.8
comp=Z,3.8nm,0.6s,baz=134,slow=5.4,SNR=9.1
BOSA PKKPab PKKPab 12 51 46.9 -0.8
comp=Z,3.3nm,0.9s,baz=322,slow=9.9,SNR=3.8
BOSA Boshof 121.06 229 *e*PKPdf PKPdf 12 41 42.4 -0.8
BOSA LR LR
comp=Z,3µm,20.0s,MS5.9
KIEV Kiev 121.22 325 *e*PKIKP PKPdf 12 41 41.9 -0.8
NNA Nana 121.34 110 PFAKE 12 41 50.0 +6.0
NNA LR LR
comp=Z,923nm,20.0s,MS5.4
NHSC New Hope 121.37 57 PFAKE 12 41 50.0 +6.4
NHSC LR LR
comp=Z,2µm,22.0s,MS5.8
SSPA Standing Stone 121.47 48 *e*PKPdf PKPdf 12 41 41.3 -2.2
SUR Sutherland 122.02 222 PFAKE 12 42 00.0 +15
SUR LR LR
comp=Z,2µm,20.0s,MS5.9
SCHQ Schefferville 122.23 29 PKP PKPdf 12 41 43.2 -1.3
comp=Z,2.2nm,0.8s,baz=247,slow=6.9,SNR=2.3
BR131 Keskin Array S 122.26 311 *e*PKPdf PKPdf 12 41 44.2 -0.9
BR131 LR LR
comp=Z,658nm,20.0s,MS5.3
BRTR Keskin Array B 122.26 311 PKP PKPdf 12 41 44.5 -0.6
comp=Z,2.2nm,1.0s,baz=100,slow=2.8,SNR=7.7
BRTR PP PP 12 43 20.2 -0.2
comp=Z,1.7nm,0.9s,baz=40,slow=8.2,SNR=3.9
BRTR PKKPbc PKKPbc 12 51 49.2 +7.4
comp=Z,1.3nm,0.8s,baz=264,slow=3.7,SNR=5.7
BRTR SKKPbc 12 55 37.5
comp=Z,0.3nm,0.4s,baz=330,slow=2.3,SNR=3.7
BRTR Keskin Array B 122.26 311 PKIKP PKPdf 12 41 44.5 -0.6
BRTR 12 43 20.3
BINY Binghamton 122.38 46 PFAKE 12 42 00.0 +15
BINY LR LR
comp=Z,3µm,20.0s,MS5.9
CBN Corbin 122.51 50 PFAKE 12 42 00.0 +14
CBN LR LR
comp=Z,2µm,19.0s,MS5.9
LONY Lake Ozonia 122.52 42 PFAKE 12 42 00.0 +15
LONY LR LR
comp=Z,2µm,19.0s,MS5.7
LBTB Lobatse 122.67 232 *e*PKIKP PKPdf 12 41 45.6 -0.7
LBTB MLR MLR
comp=Z,2µm,19.0s,MS5.7
BCIP Isla Barro Col 122.73 85 PFAKE 12 42 00.0 +13
BCIP LR LR
comp=Z,1µm,20.0s,MS5.5
SUW Suwalki 122.75 330 *e*PKP PKPdf 12 41 45.0 -0.5
SUW LMZ 13 33 28.6
comp=Z,2µm,23.1s
CNNC Cliffs of the 122.81 54 PFAKE 12 42 00.0 +14
CNNC LR LR
comp=Z,3µm,22.0s,MS5.8
NB2 NORSAR Subarra122.84 342 PKPdf PKPdf 12 41 45.6 +0.1
comp=Z,2.3nm,0.9s,baz=39,slow=1.9
NOA NORSAR Array B122.84 342 PKP PKPdf 12 41 44.6 -0.9
comp=Z,1.3nm,0.9s,baz=34,slow=2.4,SNR=5.3
NOA PKKPbc PKKPbc 12 51 43.8 +3.7
comp=Z,1.3nm,0.8s,baz=217,slow=4.1,SNR=3.6
OTAV Otavalo 122.88 96 PFAKE 12 42 00.0 +13
OTAV LR LR
comp=Z,1µm,20.0s,MS5.6
NCB Newcomb 122.99 43 PFAKE 12 42 00.0 +14
NCB LR LR
comp=Z,2µm,20.0s,MS5.8
KIS Kishinev 123.04 321 *e*PP PP 12 43 18.0 -7.4
KIS LRM 13 36 52.0
comp=Z,2µm,20.0s
NAO01 NORSAR Array S 123.09 342 PFAKE 12 42 00.0 +14
NAO01 LR LR
comp=Z,4µm,22.0s,MS6.0
CSS Prodhromos 123.70 306 PFAKE 12 42 00.0 +12
CSS LR LR
comp=Z,1µm,20.0s,MS5.6
LBNH Lisbon 124.43 42 PFAKE 12 42 00.0 +11
LBNH LR LR
comp=Z,2µm,20.0s,MS5.8
KONO Kongsberg 124.43 341 PFAKE 12 42 00.0 +11
KONO LR LR
comp=Z,4µm,22.0s,MS6.0
LVV L'vov 124.56 326 *e*PKIKP PKPdf 12 41 48.4 -0.7
VRI Vrincioaia 124.83 320 ⇑PKIKP PKPdf 12 41 50.3 +0.5
LSZ Lusaka 124.84 244 PFAKE 12 42 00.0 +9.3
LSZ LR LR
comp=Z,1µm,21.0s,MS5.5
BUR08 Bucovina Ar. S 124.96 323 *e*PKPdf PKPdf 12 41 49.7 -0.3
BURAR Bucovina Array 124.96 323 ⇓PKIKP pPKPdf 12 41 56.2 +1.1
KWP Kalwaria Pacla 125.39 326 *e*PKP PKPdf 12 41 50.8 +0.1
KWP *e*PP PP 12 43 40.8 -0.2
KWP LMZ 13 37 29.1
comp=Z,4µm,21.0s
KWP Kalwaria Pacla 125.39 326 ⇓PKIKP PKPdf 12 41 51.3 +0.6
KWP Kalwaria Pacla 125.39 326 *e*PKPdf PKPdf 12 41 50.6 -0.2
KWP LR LR
comp=Z,4µm,20.0s,MS6.1
KWP Kalwaria Pacla 125.39 326 ⇓*i*P PKPdf 12 41 51.3 +0.6
MLR Muntele Rosu 125.49 320 PKIKP PKPdf 12 41 50.7 -0.4
PKME Peaks-Kenny Pk 125.70 40 PFAKE 12 42 00.0 +8.5
PKME LR LR
comp=Z,2µm,19.0s,MS5.8
KOLS Kolonicke sedl 126.00 325 *e*PKIKP PKPdf 12 41 52.0 +0.1
KOLS *e* 12 43 46.1
KOLS Kolonicke sedl 126.00 325 *e*PKP PKPdf 12 41 52.0 +0.1
KOLS *e*PP PP 12 43 46.0 +1.0
VOIR 126.08 321 ⇑PKIKP PKPdf 12 41 53.7 +1.5
UZH Uzhgorod 126.15 325 *e*PKIKP PKPdf 12 41 51.0 -1.2
UZH *i* 12 41 56.7
UZH *i* 12 42 03.0
UZH *e* 12 49 00.0
UZH *e* 12 53 35.5
UZH MLR MLR
comp=N,1µm,20.0s,MS5.7
UZH MLR MLR
comp=E,1µm,20.0s,MS5.7
UZH MLR MLR
comp=Z,700nm,20.0s,MS5.3
CRVS Cervenica-Dubn 126.47 326 *e*PKIKP PKPdf 12 41 51.8 -1.0
CRVS *e* 12 43 49.9
CRVS Cervenica-Dubn 126.47 326 *e*PKP PKPdf 12 41 51.8 -1.0
CRVS *e*PP PP 12 43 49.9 +1.8
OJC Ojcow 126.63 328 *e*PKPdf PKPdf 12 41 52.5 -0.6
OJC *e*PP PP 12 43 49.3 +0.2
OJC *e*SKSac SKSac 12 48 59.1 +0.7
OJC *e*SS SS 13 00 56.7 +2.9
OJC L 13 41 07.1
comp=Z,2.4nm,20.2s
OJC Ojcow 126.63 328 *e*PKIKP PKPdf 12 41 52.5 -0.6
OJC *e* 12 43 49.3
OJC *e* 12 48 59.1
OJC *e*SS SS 13 00 56.7 +2.9
NIE Niedzica 126.81 327 *e*PKPdf PKPdf 12 41 53.9 +0.4
MBAR Mbarara 126.82 262 PFAKE 12 42 10.0 +15
MBAR LR LR
comp=Z,762nm,21.0s,MS5.3

DRGR 126.86 323 ⇑PKIKP PKPdf 12 41 52.5 -1.1
DRGR 126.86 323 ⇑*i*P PKPdf 12 41 52.5 -1.1
KECS Kecovo 127.24 326 *e*PKIKP PKPdf 12 41 54.1 -0.2
KECS Kecovo 127.24 326 *e*PKP PKPdf 12 41 54.1 -0.2
GTBY Guantanamo Bay 127.48 72 PFAKE 12 42 10.0 +14
GTBY LR LR
comp=Z,1µm,21.0s,MS5.6
LPAZ La Paz 127.58 119 PKP PKPdf 12 41 54.7 -1.2
comp=Z,6.2nm,0.9s,baz=18,slow=2.6,SNR=12
LPAZ La Paz 127.58 119 *e*PKPdf PKPdf 12 41 55.5 -0.4
LPAZ LR LR
comp=Z,869nm,21.0s,MS5.4
ROSC El Rosal 127.69 91 PKP PKPdf 12 41 57.1 +0.9
comp=Z,5.2nm,0.3s,baz=98,slow=16,SNR=3.9
OKC Ostrava-Krasne 127.72 328 *e*PKIKP x 12 42 06.2
OKC *e* 12 43 58.0
OKC *e* 12 53 57.9
OKC MLR MLR
comp=Z,2µm,17.7s,MS5.8
OKC Ostrava-Krasne 127.72 328 *e*x x 12 42 06.2
OKC *e*PP PP 12 43 58.0 +1.7
OKC *e*x x 12 45 16.2
OKC *e*SP SP 12 53 57.9 -1.9
OKC *e*SS SS 13 01 16.3 +9.0
OKC AMS AMS 13 41 50.0
comp=Z,2µm,17.7s
PSZ Piszkesteto 127.88 325 PKIKP PKPdf 12 41 55.5 -0.1
PSZ Piszkesteto 127.88 325 PFAKE 12 42 10.0 +14
PSZ LR LR
comp=Z,2µm,21.0s,MS5.9
PSZ Piszkesteto 127.88 325 ⇓*e*PKP PKPdf 12 41 55.2 -0.4
KSP Ksiaz 128.03 330 *e*PKP PKPdf 12 41 55.4 -0.4
KSP LMZ 13 33 37.2
comp=Z,4µm,28.6s
MORC Moravsky Berou 128.06 329 *e*PKIKP PKPdf 12 41 55.3 -0.6
BZS Buzias 128.11 322 PKIKP PKPdf 12 41 55.7 -0.4
VYHS Vyhne 128.14 327 *e*PKIKP PKPdf 12 41 55.2 -0.8
VYHS *e* 12 43 59.7
VYHS Vyhne 128.14 327 *e*PKP PKPdf 12 41 55.2 -0.8
VYHS *e*PP PP 12 43 59.7 +0.6
VYHS *e* 12 45 14.3
VYHS Vyhne 128.14 327 *e*PKP PKPdf 12 41 55.2 -0.8
VYHS *e*PP PP 12 43 59.7 +0.6
VYHS *e* 12 45 14.3
DPC Dobruska-Polom 128.33 330 *e*PKIKP PKPdf 12 41 56.8 +0.5
DPC *e* 12 42 07.4
DPC *e* 12 44 02.8
DPC *e* 12 53 58.7
DPC MLR MLR
comp=Z,3µm,20.6s,MS5.9
DPC Dobruska-Polom 128.33 330 *e*PKPdf PKPdf 12 41 56.8 +0.5
DPC *e*x x 12 42 07.4
DPC *e*PP PP 12 44 02.8 +2.6
DPC *e*x x 12 45 18.0
DPC *e*SP SP 12 53 58.7 -6.4
DPC *e*SS SS 13 01 23.1 +8.3
DPC AMS AMS 13 41 40.0
comp=Z,3µm,20.6s
UPC Upice 128.38 330 *e*PKIKP PKPdf 12 41 56.7 +0.3
UPC *e* 12 42 07.4
UPC *e* 12 44 01.1
UPC Upice 128.38 330 *e*PKPdf PKPdf 12 41 56.7 +0.3
UPC *e*x x 12 42 07.4
UPC *e*PP PP 12 44 01.1 +0.5
BUD Budapest 128.62 325 *e*PKP PKPdf 12 41 56.6 -0.4
VRAC Vranov 128.84 329 PKIKP PKPdf 12 41 57.5 +0.1
PVCC Panska Ves 129.07 331 *e*x x 12 42 09.7
PVCC *e*PP PP 12 44 06.7 +1.6
PVCC AMS AMS 13 41 20.0
comp=Z,4µm,19.3s
BRG Berggiesshubel 129.14 332 *e*PKPdf PKPdf 12 41 56.3 -1.6
BRG Berggiesshubel 129.14 332 *i* PKP PKPdf 12 41 57.3 -0.5
comp=Z,52nm,1.7s
BRG *e* 12 42 08.9
comp=Z,41nm,1.5s
BRG *e* 12 42 24.0
comp=Z,27nm,1.6s
BRG PP PP 12 44 01.4 -4.1
comp=Z,57nm,2.2s
BRG SKP 12 45 25.0
BRG *e* 12 55 56.0
BRG SS SS 13 01 34.0 +9.3
BRG *e* 13 04 05.0
BRG
comp=Z,3µm,18.8s
BRG
comp=N,2µm,20.2s
BRG
comp=E,2µm,20.2s
BRG Berggiesshubel 129.14 332 *i* PKIKP PKPdf 12 41 57.3 -0.6
BRG *e* 12 42 08.9
BRG 12 44 01.4
BRG pmax pmax
comp=Z,3.0nm,1.7s
BRG pmax pmax
comp=Z,16nm,2.2s
BRG MLR MLR
comp=Z,340µm,18.8s
BRG MLR MLR
comp=N,2µm,20.2s,MS5.8
BRG MLR MLR
comp=E,1µm,20.2s,MS5.8
CLL Collm 129.28 332 *e*PKPdf PKPdf 12 41 56.3 -1.8
CLL *e*PP PP 12 44 03.9 -2.5
CLL Collm 129.28 332 ⇓*i*PKIKP PKPdf 12 41 57.6 -0.5
CLL *i* 12 42 07.7
CLL *i* 12 44 04.3
CLL pmax pmax
comp=Z,11nm,1.5s
CLL pmax pmax
comp=Z,29nm,1.8s
CLL MLR MLR
comp=Z,4µm,20.4s,MS6.0
CLL Collm 129.28 332 ⇓*i*PKP PKPdf 12 41 57.6 -0.5
CLL *i* 12 42 07.7
CLL *i* PP PP 12 44 04.3 -2.1
CLL *e*SKP 12 45 26.0
CLL LR LR
comp=Z,4µm,20.4s,MS6.0
CLL Collm 129.28 332 ⇓*i*PKPdf PKPdf 12 41 57.6 -0.5
comp=Z,29nm,1.5s
CLL *i* 12 42 07.7
CLL *i* 12 42 19.4
CLL *i* PP PP 12 44 04.3 -2.1
comp=Z,32nm,1.8s
CLL *e*(sPP) 12 44 14.0
CLL *e*(SKPdf) 12 45 26.0
CLL *e*SKSac SKSac 12 49 01.0 -5.1
CLL *e*SKKSac SKKSac 12 50 58.0 -5.5
CLL *e* 12 53 28.0
CLL *e*PS PS 12 54 07.0 -9.3
CLL *e*PPS 12 55 53.0
CLL *e* 12 57 03.0
CLL *e*SS SS 13 01 30.0 +3.6
CLL *e*SKSSKSac 13 03 59.0
CLL *e*SSS 13 06 06.0
CLL *e*SSSS 13 09 48.0
CLL Lm 13 40 00.0
comp=Z,4µm,20.4s
FBE Freiberg 129.38 332 *e*PKPdf PKPdf 12 41 57.1 -1.2
TREC Trest 129.41 329 *e*PP PP 12 44 10.0 +2.6
TREC *e*x x 12 45 23.8
TREC *e*SP SP 12 54 16.3 +1.7
TREC *e*SS SS 13 01 37.3 +9.0
TREC AMS AMS 13 39 50.0
comp=Z,3µm,20.1s
PRA Prague 129.44 330 PKPdf PKPdf 12 42 00.0 +1.5
PRA PP PP 12 44 12.0 +4.5
PRA SS SS 13 01 37.0 +8.5
PRA AMS AMS 13 39 00.0
PRU Pruhonice 129.44 330 *e*PKIKP PKPdf 12 41 59.5 +1.0
PRU *e* 12 42 09.9
PRU *e* 12 44 11.7
PRU MLR MLR
comp=Z,3µm,23.6s,MS5.9
PRU Pruhonice 129.44 330 *e*PKPdf PKPdf 12 41 59.5 +1.0
PRU *e*x x 12 42 09.9
PRU *e*PP PP 12 44 11.7 +4.2
PRU *e*PKS 12 45 25.5
PRU *e*SS SS 13 01 34.3 +5.8
PRU AMS AMS 13 38 00.0
comp=Z,3µm,23.6s
PKSM Moragy 129.55 324 ⇓PKIKP PKPdf 12 41 57.9 -0.9

PKSM Moragy 129.55 324 ⇓*i*P PKPdf 12 41 57.9 -0.9
SOP Sopron 129.85 327 ⇓*e*PKP PKPdf 12 41 58.9 -0.4
CLZ Clausthal 130.06 334 *e*PKPdf PKPdf 12 41 58.9 -0.7
CLZ *e*PP PP 12 44 11.1 -0.3
CONA Conrad Observa 130.07 328 ⇑*i*PKPdf PKPdf 12 41 58.9 -0.8
comp=Z,23nm,1.8s
CONA ⇑*i*PP PP 12 44 13.2 +1.4
CSNA Conrad Observa 130.08 328 ⇑*i*PKPdf PKPdf 12 41 58.9 -0.9
comp=Z,16nm,1.4s
CSNA ⇑*i*PP PP 12 44 13.0 +1.2
TANN Tannenbergstha 130.14 332 *e*PKPdf PKPdf 12 41 58.3 -1.5
NKC Novy Kostel 130.27 332 *e*PKIKP PKPdf 12 42 00.6 +0.6
NKC *e* 12 42 10.4
NKC *e* 12 44 14.6
NKC MLR MLR
comp=Z,2µm,22.7s,MS5.8
NKC Novy Kostel 130.27 332 *e*PKPdf PKPdf 12 42 00.6 +0.6
NKC *e*x x 12 42 10.4
NKC *e*PP PP 12 44 14.6 +1.7
NKC *e*PKS 12 45 28.3
NKC AMS AMS 13 41 30.0
comp=Z,2µm,22.7s
MOX Moxa 130.37 333 *e*PKP PKPdf 12 41 59.9 -0.3
comp=Z,51nm,2.0s
MOX *e*PP PP 12 44 11.0 -2.5
MOX *e*SS SS 13 01 43.0 +3.2
MOX
comp=Z,2µm,19.0s
MOX Moxa 130.37 333 *e*PKPdf PKPdf 12 41 58.8 -1.4
MOX *e*PP PP 12 44 10.8 -2.7
MOX Moxa 130.37 333 *e*PKIKP PKPdf 12 41 59.9 -0.3
MOX *e* 12 44 11.0
MOX *e*SS SS 13 01 43.0 +3.2
MOX pmax pmax
comp=Z,51nm,2.0s
MOX MLR MLR
comp=Z,2µm,19.0s,MS5.7
KHC Kasperske Hory 130.47 330 *e*PKIKP PKPdf 12 42 00.7 +0.2
KHC *e* 12 42 10.4
KHC *e* 12 44 12.4
KHC *e*SS SS 13 01 39.1 -2.2
KHC MLR MLR
comp=Z,3µm,20.0s,MS6.0
KHC Kasperske Hory 130.47 330 *e*PKPdf PKPdf 12 42 00.0 -0.4
KHC Kasperske Hory 130.47 330 *e*PKPdf PKPdf 12 42 00.7 +0.2
KHC *e*x x 12 42 10.4
KHC *e*PP PP 12 44 12.4 -1.8
KHC *e*PKS 12 45 27.7
KHC *e*SS SS 13 01 39.1 -2.2
KHC AMS AMS 13 39 20.0
comp=Z,3µm,20.0s
CPUP Villa Florida 130.57 137 PKP PKPdf 12 42 00.3 -1.1
comp=Z,7.9nm,1.2s,baz=212,slow=5.0,SNR=6.2
CPUP Villa Florida 130.57 137 *e*PKPdf PKPdf 12 42 00.6 -0.8
CPUP LR LR
comp=Z,194nm,21.0s,MS4.8
GEC2 GERESS Array S 130.60 330 *e*PKPdf PKPdf 12 41 59.1 -1.6
ARSA Arzberg 130.67 327 ⇑*i*PKPdf PKPdf 12 41 59.7 -1.2
comp=Z,17nm,1.5s
ROTZ Rotzenmuhle 130.71 331 *e*PKPdf PKPdf 12 41 59.5 -1.4
IBBN Ibbenburen 130.79 336 *e*PKPdf PKPdf 12 42 00.0 -1.0
WET Wettzell 130.81 330 *e*PKPdf PKPdf 12 41 59.7 -1.4
MOA Molln 130.96 328 ⇑*i*PKPdf PKPdf 12 41 59.7 -1.7
comp=Z,14nm,1.8s
MOA ⇑*i*PP PP 12 44 19.8 +2.4
UBBA Unterbreizbach 130.97 334 *e*PKPdf PKPdf 12 41 59.8 -1.5
GRTK Grand Turk 131.05 70 PFAKE 12 42 10.0 +7.6
GRTK LR LR
comp=Z,1µm,22.0s,MS5.6
SDDR Presa de Saban 131.14 73 PFAKE 12 42 10.0 +7.4
SDDR LR LR
comp=Z,1µm,20.0s,MS5.6
GRA1 Grafenberg Arr 131.22 332 *e*PKPdf PKPdf 12 42 00.8 -1.1
GRA1 *ep*PKPdf pPKPdf 12 42 11.3 +4.3
GRA1 *e*PP PP 12 44 17.7 -1.3
GRA1 LR LR
comp=Z,2µm,20.0s,MS5.8
GRF Grafenberg Arr 131.22 332 *e*PKPdf PKPdf 12 42 00.8 -1.1
GRF *ep*PKPdf pPKPdf 12 42 11.3 +4.3
GRF *e*PP PP 12 44 17.7 -1.3
GRF *e*L 13 45 04.0
comp=Z,2µm,20.0s
GRF Grafenberg Arr 131.22 332 *e*PKIKP PKPdf 12 42 00.8 -1.1
GRF *e* 12 42 11.3
GRF *e* 12 44 17.7
SOKA Soboth 131.29 327 ⇑*i*PKPdf PKPdf 12 42 00.3 -1.8
comp=Z,12nm,1.5s
SOKA ⇓*i*PP PP 12 44 19.7 +0.1
TIR Tirane 131.34 318 PFAKE 12 42 10.0 +7.7
TIR LR LR
comp=Z,2µm,20.0s,MS5.9
CRES Cresnjev 131.58 326 *e*PKPdf PKPdf 12 42 01.5 -1.2
CRES *e*PP PP 12 44 22.5 +1.0
CRES *e* 12 45 27.9
CRES Cresnjev 131.58 326 *e*PKPdf PKPdf 12 42 01.5 -1.2
CRES *e*PP PP 12 44 22.5 +1.0
CRES *e* 12 45 27.9
BUG Bochum--Univer 131.65 336 *e*PKPdf PKPdf 12 42 02.1 -0.5
OBKA Obir 131.66 327 ⇑*i*PKPdf PKPdf 12 42 00.8 -2.0
comp=Z,3.3nm,0.7s
ESK Eskdalemuir 131.74 346 PFAKE 12 42 10.0 +7.3
ESK LR LR
comp=Z,2µm,22.0s,MS5.7
SDV Santo Domingo 131.77 86 *e*PKPdf PKPdf 12 42 02.3 -1.7
SDV *e*SKPbc SKPbc 12 45 29.4 0.0
SDV LR LR
comp=Z,478nm,22.0s,MS5.2
RJOB Jochberg 131.79 329 *e*PKPdf PKPdf 12 42 01.9 -1.1
BOJS Bojanci 131.89 325 *e*PKPdf PKPdf 12 42 01.9 -1.3
BOJS *i* pPKPdf pPKPdf 12 42 12.9 +4.6
BOJS *e*PP PP 12 44 25.0 +1.4
BOJS *e* 12 45 29.3
BOJS *e* 12 48 59.3
BOJS *e* 12 51 16.3
BOJS *e* 12 54 27.1
BOJS *e* 13 04 14.8
BOJS Bojanci 131.89 325 *e*PKPdf PKPdf 12 42 01.9 -1.3
BOJS *i* pPKPdf pPKPdf 12 42 12.9 +4.6
BOJS *e*PP PP 12 44 25.0 +1.4
BOJS *e* 12 45 29.3
BOJS *e* 12 48 59.3
BOJS *e* 12 51 16.3
BOJS *e* 12 54 27.1
BOJS *e* 13 04 14.8
VISS Visnje 131.93 326 *e*PKPdf PKPdf 12 42 01.6 -1.7
VISS *e*PP PP 12 44 25.7 +1.8
VISS *e* 12 45 29.5
VISS Visnje 131.93 326 *e*PKPdf PKPdf 12 42 01.6 -1.7
VISS *e*PP PP 12 44 25.7 +1.8
VISS *e* 12 45 29.5
KBA Koelnbreinsper 131.94 328 ⇑*i*PKPdf PKPdf 12 42 01.4 -1.9
comp=Z,6.9nm,1.1s
KBA ⇓*i*PP PP 12 44 24.5 +0.8
LJU Ljubljana 131.96 326 *e*PKIKP PKPdf 12 42 01.8 -1.6
LJU *e* 12 44 25.3
LJU Ljubljana 131.96 326 *e*PKPdf PKPdf 12 42 01.8 -1.5
LJU *e*PP PP 12 44 25.3 +1.4
LJU *e* 12 45 28.9
LJU Ljubljana 131.96 326 *e*PKPdf PKPdf 12 42 01.8 -1.5
LJU *e*PP PP 12 44 25.3 +1.4
LJU *e* 12 45 28.9
TSUM Tsumeb 132.02 234 *e*PKPdf PKPdf 12 42 03.8 -0.5
TSUM LR LR
comp=Z,2µm,20.0s,MS5.8
MYKA Terra Mystica 132.07 327 ⇑*i*PKPdf PKPdf 12 42 01.6 -2.0
comp=Z,4.5nm,1.0s
TNS Taunus Mts 132.08 334 *e*PKPdf PKPdf 12 42 02.3 -1.2
FUR Furstenfeldbru 132.25 330 *e*PKPdf PKPdf 12 42 02.4 -1.5
TRI Trieste 132.58 326 PFAKE 12 42 20.0 +15
TRI LR LR
comp=Z,2µm,20.0s,MS5.9
WTTA Wattenberg 132.69 329 ⇑*i*PKPdf PKPdf 12 42 03.7 -1.0
comp=Z,32nm,1.7s
STU Stuttgart 132.81 332 *e*PKPdf PKPdf 12 42 03.8 -1.1
RETA Reutte 132.97 330 ⇑*i*PKPdf PKPdf 12 42 04.1 -1.2
comp=Z,17nm,2.1s
FETA Feichten 133.31 330 ⇓*i*PKPdf PKPdf 12 42 05.0 -0.9
comp=Z,11nm,1.4s
FETA ⇑*i*PP PP 12 44 32.9 +0.4
WLF Walferdange 133.47 335 *e*PKPdf PKPdf 12 42 05.9 -0.2
WLF Walferdange 133.47 335 PFAKE 12 42 20.0 +14
WLF LR LR
comp=Z,2µm,19.0s,MS5.9

BFO	**Black Forest**	**133.53**	**333**	*e*PKPdf	PKPdf	12 42 04.5	-1.8
BFO				LR	LR		
comp=Z,2μm,21.0s,MS5.8							
SIV	**San Ignacio**	**133.71**	**123**	PKP	PKPdf	12 42 05.3	-2.3
comp=Z,3.0nm,0.9s,baz=202,slow=3.5,SNR=8.9							
CDF	**Champ du Feu**	**133.94**	**333**	*e*PKIKP	PKPdf	12 42 06.5	-0.5
ECH	**Echery**	**134.14**	**333**	PFAKE		12 42 20.0	+13
ECH				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
BBSR	**BB Station**	**134.15**	**53**	PFAKE		12 42 20.0	+12
BBSR				LR	LR		
comp=Z,1μm,21.0s,MS5.6							
TUE	**Stuetta**	**134.37**	**330**	*e*PKPdf	PKPdf	12 42 06.9	-1.0
TUE				LR	LR		
comp=Z,4μm,21.0s,MS6.1							
CUC	**Castrocucco**	**134.68**	**319**	PFAKE		12 42 20.0	+11
CUC				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
AQU	**L'Aquila**	**134.84**	**323**	PFAKE		12 42 20.0	+11
AQU				LR	LR		
comp=Z,2μm,20.0s,MS5.8							
CEL	**Celeste**	**135.52**	**317**	PFAKE		12 42 20.0	+10
CEL				LR	LR		
comp=Z,1μm,22.0s,MS5.6							
CABF	**La Chapelle**	**135.82**	**332**	*e*PKIKP	PKPdf	12 42 09.1	-1.5
comp=Z,49nm,1.2s							
SJG	**San Juan**	**136.07**	**74**	*e*PKIKP	PKPdf	12 42 11.1	-0.8
SJG				MLR	MLR		
comp=Z,773nm,19.0s							
LOR	**Lormes**	**136.29**	**335**	*e*PKIKP	PKPdf	12 42 09.4	-2.1
MBDF	**Montbardon**	**136.89**	**330**	*e*PKIKP	PKPdf	12 42 11.3	-1.4
SBF	**Sospel**	**137.17**	**329**	*e*PKIKP	PKPdf	12 42 11.9	-1.3
ORIF	**Oris-en-Rattie**	**137.18**	**331**	*e*PKIKP	PKPdf	12 42 12.5	-0.7
comp=Z,13nm,0.8s							
SSB	**Saint Sauveur**	**137.53**	**332**	PFAKE		12 42 30.0	+16
SSB				LR	LR		
comp=Z,1μm,19.0s,MS5.7							
WDD	**Wield Dalam**	**137.67**	**314**	PFAKE		12 42 30.0	+16
WDD				LR	LR		
comp=Z,778nm,20.0s,MS5.4							
TCF	**Toulx Ste Croi**	**137.76**	**335**	*e*PKIKP	PKPdf	12 42 12.5	-1.7
FRF	**La Foret Royal**	**137.79**	**329**	*e*PKIKP	PKPdf	12 42 13.4	-1.0
VIVF	**Saint-Julien-l**	**137.80**	**332**	*e*PKIKP	PKPdf	12 42 12.2	-2.1
LMR	**La Mourre**	**138.02**	**329**	*e*PKIKP	PKPdf	12 42 13.8	-1.0
comp=Z,37nm,1.0s							
SMRF	**Simiane la Rot**	**138.02**	**330**	*e*PKIKP	PKPdf	12 42 12.9	-1.9
LASF	**Ste Croix**	**138.77**	**332**	*e*PKIKP	PKPdf	12 42 14.8	-1.3
SPB	**Sao Paulo**	**138.84**	**143**	PFAKE		12 42 30.0	+13
SPB				LR	LR		
comp=Z,1μm,21.0s,MS5.6							
VSL	**Villasalto**	**139.00**	**322**	PFAKE		12 42 30.0	+13
VSL				LR	LR		
comp=Z,1μm,22.0s,MS5.6							
MTLF	**Montolieu**	**140.09**	**332**	*e*PKIKP	PKPdf	12 42 16.8	-1.8
ANWB	**Willy Bob**	**140.25**	**74**	PFAKE		12 42 30.0	+10
ANWB				LR	LR		
comp=Z,837nm,21.0s,MS5.5							
GRGR	**Grenville**	**140.72**	**82**	PFAKE		12 42 30.0	+9.5
GRGR				LR	LR		
comp=Z,936nm,21.0s,MS5.5							
FDF	**Fort de France**	**141.12**	**78**	PFAKE		12 42 30.0	+8.8
FDF				LR	LR		
comp=Z,906nm,19.0s,MS5.5							
EPF	**Esparros**	**141.17**	**334**	*e*PKIKP	PKPdf	12 42 18.9	-1.6
KEST	**Kesra**	**141.29**	**318**	PKP	PKPdf	12 42 19.2	-1.8
comp=Z,1.8nm,0.9s,baz=275,slow=5.3,SNR=5.1							
KEST	**Kesra**	**141.29**	**318**	*e*PKPdf	PKPdf	12 42 19.3	-1.7
BBGH	**Gun Hill**	**142.74**	**80**	PFAKE		12 42 40.0	+16
BBGH				LR	LR		
comp=Z,2μm,21.0s,MS5.8							
BDFB	**Brasilia**	**144.13**	**133**	PKP	PKPdf	12 42 23.3	-3.2
comp=Z,9.3nm,0.6s,baz=198,slow=3.3,SNR=12							
PBRG	**Braganca**	**144.95**	**340**	*e*PKP	PKPdf	12 42 26.0	-1.3
PCAB	**Cabril**	**145.45**	**342**	*e*PKP	PKPdf	12 42 27.5	-0.6
MVO	**Moncorvo**	**145.62**	**340**	*e*PKP	PKPdf	12 42 26.9	-1.5
MVO				*e*LQ		13 20 32.5	
MVO				*e*LR	LR	13 32 51.0	
comp=Z,3μm,24.5s							
PVRL	**Vila Real**	**145.75**	**341**	*e*PKP	PKPdf	12 42 28.8	+0.2
ESDC	**Sonseca Array**	**145.77**	**335**	PKPbc	PKPbc	12 42 28.6	-0.5
comp=Z,6.4nm,0.8s,baz=23,slow=3.7,SNR=27							
ESLA	**Sonseca Array**	**145.77**	**335**	*e*PKPdf	PKPdf	12 42 28.8	+0.1
ESLA				LR	LR		
comp=Z,12μm,21.0s,MS6.6							
PAB	**San Pablo**	**146.04**	**336**	*e*PKP2	PKPab	12 42 29.4	-1.1
PAB				MLR	MLR		
comp=Z,2μm,20.0s,MS5.8							
PVIS	**Viseu**	**146.31**	**341**	*e*PKP	PKPdf	12 42 30.6	+1.0
MTE	**Manteigas**	**146.48**	**340**	*e*PKP	PKPdf	12 42 28.8	-1.1
MTE				*e*LQ		13 23 52.3	
MTE				*e*LR	LR	13 33 38.1	
comp=Z,2μm,22.0s							
MTE	**Manteigas**	**146.48**	**340**	*e*PKPdf	PKPdf	12 42 29.8	-0.2
MTE				LR	LR		
comp=Z,3μm,22.0s,MS6.0							
PCBR	**Castelo Branco**	**146.96**	**340**	*e*PKP	PKPdf	12 42 31.2	+0.5
PMRV	**Marv??o**	**147.30**	**339**	*e*PKP	PKPdf	12 42 32.2	+0.9
PMRV				*e*LQ		13 23 14.3	
PMRV				*e*LR	LR	13 33 49.8	
comp=Z,2μm,22.0s							
PTOM	**Tomar**	**147.47**	**341**	*e*PKP	PKPdf	12 42 33.6	+2.0
PESTR	**Estremoz**	**147.87**	**339**	*e*PKP	PKPdf	12 42 33.7	+1.4
PESTR				*e*LQ		13 23 41.6	
PESTR				*e*LR	LR	13 32 34.8	
comp=Z,2μm,22.4s							
PBAR	**Barrancos**	**148.28**	**338**	*e*PKP	PKPdf	12 42 34.4	+1.4
PBAR				*e*LQ		13 23 44.4	
PBAR				*e*LR	LR	13 33 56.2	
comp=Z,2μm,21.9s							
EVO	**Evora**	**148.31**	**339**	*e*PKP	PKPdf	12 42 35.5	+2.5
PMAFR	**Mafra**	**148.36**	**341**	*e*PKP	PKPdf	12 42 32.4	-0.7
PMAFR				*e*LR	LR	13 34 26.9	
comp=Z,2μm,17.8s							
EVOP	**Sao Brissos**	**148.36**	**339**	*e*P	PKPdf	12 42 32.0	-1.1
EVOP				*e*PP	PP	12 46 05.0	+0.9
EVOP				AMS	AMS	13 50 06.8	
comp=Z,2μm,18.8s,MS5.9							
EVOP	**Sao Brissos**	**148.36**	**339**	*e*PKIKP	PKPdf	12 42 32.0	-1.1
EVOP				*e*		12 46 05.0	
LIS	**Lisbon**	**148.53**	**341**	*e*PP	PP	12 46 06.0	+0.9
LIS				A		13 50 52.4	
comp=Z,2μm,22.2s							
LIS	**Lisbon**	**148.53**	**341**	*e*P	PKPdf	12 42 32.8	-0.6
LIS				*e*PP	PP	12 46 06.0	+0.9
LIS				AMS	AMS	13 50 52.4	
comp=Z,2μm,22.2s,MS5.8							
LIS	**Lisbon**	**148.53**	**341**	*e*PKP2	PKPdf	12 42 32.8	-0.6
LIS				*e*		12 46 06.0	
PBEJ	**Beja**	**148.71**	**339**	*e*PKP	PKPbc	12 42 36.3	-1.2
MESJ	**Messejana**	**149.00**	**339**	*e*PP	PP	12 46 08.6	+0.7
MESJ				A		13 50 48.3	
comp=Z,2μm,20.9s							
MESJ	**Messejana**	**149.00**	**339**	*e*P	PKPdf	12 42 32.3	-1.8
MESJ				*e*PP	PP	12 46 08.6	+0.7
MESJ				AMS	AMS	13 50 48.3	
comp=Z,2μm,20.9s,MS5.9							
MESJ	**Messejana**	**149.00**	**339**	*e*PKIKP	PKPdf	12 42 32.3	-1.9
MESJ				*e*		12 46 08.6	
PCVE	**Castro Verde**	**149.13**	**338**	*e*PKP	PKPbc	12 42 37.1	-1.4
PCVE				*e*LQ		13 24 26.9	
PCVE				*e*LR	LR	13 35 37.9	
PVAQ	**Vaqueiros**	**149.21**	**338**	*e*PKP	PKPbc	12 42 36.7	-2.0
PVAQ				*e*LQ		13 24 27.0	
PVAQ				*e*LR	LR	13 35 54.0	
comp=Z,2μm,31.2s							
SFS	**San Fernando**	**149.42**	**335**	PFAKE		12 42 50.0	+15
SFS				LR	LR		
comp=Z,4μm,20.0s,MS6.2							
PBDV	**Barranco-do-Ve**	**149.43**	**338**	*e*PKP	PKPbc	12 42 37.1	-2.2
PBDV				*e*LQ		13 24 14.2	
PBDV				*e*LR	LR	13 33 08.0	
comp=Z,3μm,26.7s							
PTEO	**Sao Teotonio**	**149.45**	**339**	*e*PKP	PKPdf	12 42 34.8	-0.1
MORF	**Marmelete**	**149.63**	**339**	*e*PKP	PKPdf	12 42 34.4	-0.8
MORF				*e*LQ		13 24 19.9	
MORF				*e*LR	LR	13 37 06.5	
comp=Z,2μm,22.0s							
MORF	**Marmelete**	**149.63**	**339**	*e*PKHKP	PKPdf	12 42 33.8	-1.4
MORF				*e*		12 46 12.1	
PFVI	**Vila Bisbo**	**149.85**	**339**	*e*PKP	PKPdf	12 42 37.2	+1.6
PFVI				*e*LQ		13 29 01.1	
PFVI				*e*LR	LR	13 36 03.0	
comp=Z,2μm,20.4s							
SHEL	**Horse Pasture**	**150.37**	**212**	PFAKE		12 42 50.0	+13
SHEL				LR	LR		
comp=Z,2μm,20.0s,MS5.9							
TAM	**Tamanrasset**	**150.58**	**301**	*e*PKIKP	PKPdf	12 42 37.4	+0.3
TAM				*e*		12 42 43.5	
TAM				MLR	MLR		
comp=Z,1μm,20.0s,MS5.7							
CMLA	**Cha da Macela**	**151.39**	**6**	PFAKE		12 42 50.0	+12
CMLA				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
TORD	**Torodi Ar. Bea**	**156.67**	**282**	PKP	PKPdf	12 42 44.8	-1.2
comp=Z,2.7nm,1.0s,baz=320,slow=0.8,SNR=12							
TORD				PKPab	PKPab	12 43 15.0	-0.2
comp=Z,47nm,1.3s,baz=71,slow=2.1,SNR=18							
TORD				PP	PP	12 46 53.3	-0.3
comp=Z,3.0nm,1.0s,baz=68,slow=5.8,SNR=3.8							
RCBR	**Riachuelo**	**159.45**	**136**	PFAKE		12 43 00.0	+11
RCBR				LR	LR		
comp=Z,2μm,20.0s,MS5.9							
KIC	**Kosan Boka**	**162.90**	**262**	*e*PKP1	PKPdf	12 42 52.6	-0.5
comp=Z,64nm,1.2s							
DBIC	**Dimbokro**	**163.06**	**263**	PKPab	PKPab	12 43 41.9	-1.2
comp=Z,6.8nm,1.0s,baz=88,slow=7.3,SNR=4.1							
DBIC	**Dimbokro**	**163.06**	**263**	PFAKE		12 43 00.0	+6.7
DBIC				LR	LR		
comp=Z,2μm,21.0s							
LIC	**Lamto**	**163.15**	**261**	*e*PKP1	PKPdf	12 42 52.8	-0.6
comp=Z,143nm,1.4s							
LIC	**Lamto**	**163.15**	**261**	*e*PKPdf	PKPdf	12 42 51.0	-2.4
TIC	**Toumodi**	**163.22**	**262**	*e*PKP1	PKPdf	12 42 51.7	-1.7
comp=Z,34nm,0.9s							

*CSEM **09** 13:07:57.2, 38.°55N×29.°84W, h5km, ML2.6, After PDA*
PDA 09 13:07:57.2±1.3, 38.°55N×29.°84W, h5km, MD3.6, ML2.6, Error ellipse: s-maj=39.8km s-min=11.6km az=172.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.90**	**85**	*e*P	Pg	13 08 11.8	-2.6
PCED				*e*S	Sg	13 08 22.5	-3.6
PCED				A		13 08 24.1	
66nm,0.2s							
PCED	**Cedros**	**0.90**	**85**	*e*P	Pg	13 08 11.8	-2.6
PCED				*e*S	Sg	13 08 22.5	-3.6
PCAN	**Candelaria**	**1.07**	**94**	*e*P	Pg	13 08 14.0	-3.7
PCAN				*e*S	Sg	13 08 26.6	-5.0
PCAN				A		13 08 28.6	
44nm,0.1s							
PCAN	**Candelaria**	**1.07**	**94**	*e*P	Pg	13 08 14.0	-3.7
PCAN				*e*S	Sg	13 08 26.6	-5.0
PICO	**Pico**	**1.11**	**92**	*e*P	Pg	13 08 16.3	-2.3
PICO				*e*S	Sg	13 08 29.2	-3.8
PICO	**Pico**	**1.11**	**92**	*e*P	Pg	13 08 16.3	-2.3
PICO				*e*S	Sg	13 08 29.2	-3.8
ROSA	**Rosais**	**1.27**	**82**	*e*P	Pg	13 08 16.9	-4.6
ROSA				*e*S	Sg	13 08 31.8	-6.1
ROSA	**Rosais**	**1.27**	**82**	*e*P	Pg	13 08 16.9	-4.6
ROSA				*e*S	Sg	13 08 31.8	-6.1
PID	**Ribeirinha**	**1.36**	**94**	*e*P	Sb	13 08 35.1	-5.6
PMAN	**Manadas**	**1.38**	**86**	*e*S	Sb	13 08 33.4	-7.9
PMAN				A		13 08 37.0	
24nm,0.2s							
PMAN	**Manadas**	**1.38**	**86**	*e*S	Sb	13 08 33.4	-7.9

*BJI **09** 13:11:22.8, 6.°49S×130.°09E, h162km, mB5.0/15, mb4.6/35*
*IDC **09** 13:11:23.2±2.8, 6.°30S×130.°13E, h138km±25km, mb4.2/18, mb1 4.2/18, mb1mx4.2/21, mbtmp4.2/18, Error ellipse: s-maj=18.6km s-min=9.5km az=72.0*
*ISCJB **09** 13:11:23.7±0.6, 6.°46S±0.°03×130.°10E±0.°05, h164km±6km, mb4.7/62, Error ellipse: s-maj=8.4km s-min=4.6km az=152.6*
*NEIC **09** 13:11:24.4±1.0, 6.°34S×130.°14E, h151km±9km, mb4.8/21, Error ellipse: s-maj=9.0km s-min=5.4km az=50.0*
*DJA **09** 13:11:25, 6.°53S×130.°02E, h137km, mb5.2/11*
*TEH **09** 13:11:25.0, 6.°39S×130.°14E, h158km*
ISC 09 13:11:24.5±0.6, 6.°45S±0.°04×130.°10E±0.°05, h153km±6km, h162km±2.6km: pP-P, n147, σ1.08/152, mb4.7/62, 3C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.93**	**354**	P	**Pn**	**13 11 59.2**	**+0.2**
KAKA	**Kakadu**	**6.63**	**160**	⇓*i*P	**Pn**	**13 12 58.4**	**-1.4**
854nm,0.4s							
KAKA				*e*S	**Sn**	**13 14 07.1**	**-7.3**
KAKA	**Kakadu**	**6.63**	**160**	*e*Pn	**Pn**	**13 12 58.3**	**-1.5**
154nm,0.7s							
KAKA				*e*S	**Sn**	**13 14 08.0**	**-6.4**
KAKA	**Kakadu**	**6.63**	**160**	P	**Pn**	**13 12 58.7**	**-1.1**
15nm2μm,0.6s							
TNTI	**Ternate**	**7.67**	**339**	P	**Pn**	**13 13 12.7**	**-1.0**
LUWI	**Luwuk**	**9.07**	**306**	P	**Pn**	**13 13 34.5**	**+2.2**
KNA	**Kununurra**	**9.34**	**188**	P	**Pn**	**13 13 34.8**	**-0.9**
3μm,0.6s							
KAPI	**Kappang**	**10.40**	**277**	P	**Pn**	**13 13 52.4**	**+2.6**
106nm,1.3s							
TOLI	**Toli-Toli**	**11.95**	**309**	P	Px	13 14 22.4	
FITZ	**Fitzroy Crossi**	**12.37**	**200**	P	**Pn**	**13 14 13.2**	**-2.4**
26nm,0.3s,baz=30,slow=12,SNR=157							
FITZ				S	**Sn**	**13 16 22.0**	**-11**
15nm,0.3s,baz=44,slow=14,SNR=6.5							
FITZ	**Fitzroy Crossi**	**12.37**	**200**	*e*P	**Pn**	**13 14 12.0**	**-3.6**
130nm,0.3s							
FITZ				*e*S	**Sn**	**13 16 21.2**	**-11**
FITZ	**Fitzroy Crossi**	**12.37**	**200**	*e*Pn	**Pn**	**13 14 12.1**	**-3.5**
3.0nm,0.9s							
FITZ				*e*S	**Sn**	**13 16 18.8**	**-14**
FITZ	**Fitzroy Crossi**	**12.37**	**200**	P	**Pn**	**13 14 12.9**	**-2.7**
191nm,0.6s							
WRA	**Warramunga Arr**	**14.03**	**163**	P	**Pn**	**13 14 33.6**	**-3.1**
13nm,0.3s,baz=340,slow=13,SNR=216							
WRA				S	**Sn**	**13 17 01.8**	**-11**
31nm,0.3s,baz=349,slow=22,SNR=12							
WB2	**Warramunga Arr**	**14.03**	**163**	*e*P	**Pn**	**13 14 32.9**	**-3.9**
WB2				*e*S	**Sn**	**13 17 01.4**	**-11**
COEN	**Coen**	**14.87**	**121**	*e*P	**Pn**	**13 14 47.1**	**-0.2**
471nm,0.5s							
COEN				*e*S	**Sn**	**13 17 14.9**	**-18**
COEN	**Coen**	**14.87**	**121**	P	**Pn**	**13 14 49.1**	**+1.8**
399nm,0.9s							
JAGI	**Jajag, Banyuwa**	**15.94**	**262**	P	**Pn**	**13 15 00.7**	**+0.2**
TSM	**Tawau**	**16.22**	**311**	P	**Pn**	**13 15 05.2**	**+1.3**
MYLDM	**Lahad Datu**	**16.36**	**315**	P	**Pn**	**13 15 07.6**	**+2.0**
MYLDM	**Lahad Datu**	**16.36**	**315**	P	**Pn**	**13 15 08.1**	**+2.5**
64nm,1.0s							
PMG	**Port Moresby**	**17.15**	**101**	*e*P	**Pn**	**13 15 16.0**	**+0.9**
35nm,0.6s							
PMG	**Port Moresby**	**17.15**	**101**	P	**Pn**	**13 15 16.4**	**+1.2**
90nm,1.1s							
ASAR	**Alice Springs**	**17.50**	**168**	P	**Pn**	**13 15 19.3**	**0.0**
16nm,0.3s,baz=327,slow=9.6,SNR=963							
ASAR				S	**S**	**13 18 25.9**	**-6.3**
7.3nm,0.3s,baz=358,slow=26,SNR=6.3							
SDKM	**Sandakan**	**17.61**	**313**	P	**Pn**	**13 15 21.3**	**+0.6**
MBWA	**Marble Bar**	**17.74**	**213**	⇑*i*P	**Pn**	**13 15 21.9**	**-0.2**
MBWA				*e*S	**S**	**13 18 20.8**	**-16**
MBWA	**Marble Bar**	**17.74**	**213**	*e*P	**Pn**	**13 15 21.7**	**-0.4**
24nm,0.6s							
MBWA				*e*S	**S**	**13 18 21.1**	**-16**
KKM	**Kota Kinabalu**	**18.60**	**312**	P	**P**	**13 15 31.4**	**+1.1**
KKM	**Kota Kinabalu**	**18.60**	**312**	*e*P	**P**	**13 15 30.2**	**-0.1**
54nm,0.5s							
KKM	**Kota Kinabalu**	**18.60**	**312**	P	**P**	**13 15 30.6**	**+0.3**
1μm114nm,0.8s							
KDM	**Kudat**	**18.75**	**315**	P	**P**	**13 15 33.4**	**+1.5**
BTM	**Bintulu**	**19.51**	**299**	P	**P**	**13 15 41.0**	**+0.8**
SBUM	**Sibu**	**19.92**	**296**	P	**P**	**13 15 45.4**	**+0.8**
SBUM	**Sibu**	**19.92**	**296**	P	**P**	**13 15 45.7**	**+1.1**
1μm88nm,1.2s							
CTA	**Charters Tower**	**20.73**	**132**	P	**P**	**13 15 54.4**	**+1.2**
33nm,1.0s,baz=308,slow=13,SNR=18							
CTA				S	**S**	**13 19 38.4**	**+2.2**
4.6nm,0.5s,baz=246,slow=19,SNR=2.2							
CTA	**Charters Tower**	**20.73**	**132**	*e*P	**P**	**13 15 54.4**	**+1.2**
20nm,0.8s							
CTAO	**Charters Tower**	**20.73**	**132**	*e*P	**P**	**13 15 54.2**	**+1.0**
31nm,0.9s							
KSM	**Kuching**	**21.27**	**291**	P	**P**	**13 15 59.8**	**+0.8**
KSM	**Kuching**	**21.27**	**291**	*e*P	**P**	**13 15 58.4**	**-0.6**
22nm,0.8s,mb4.5							
KSM	**Kuching**	**21.27**	**291**	P	**P**	**13 16 00.7**	**+1.7**
28nm,0.9s,mb4.6							
CISI	**Cisompet, Garu**	**22.15**	**266**	P	**P**	**13 16 07.8**	**-0.5**
FORT	**Forrest**	**24.28**	**184**	*e*P	**P**	**13 16 28.1**	**+0.4**
58nm,0.5s,mb5.4							
FORT				*i*		13 16 40.6	
FORT	**Forrest**	**24.28**	**184**	*e*P	**P**	**13 16 28.1**	**+0.4**
158nm,0.6s,mb5.7							
FORT				*e*		13 16 40.7	
GUMO	**Guam**	**24.73**	**36**	P	**P**	**13 16 31.8**	**-0.1**
13nm,0.5s,mb4.7,baz=183,slow=18,SNR=3.3							
KMBL	**Kambalda**	**25.96**	**196**	*e*P	**P**	**13 16 43.4**	**+0.6**
91nm,0.6s,mb5.6							
BBOO	**Buckleboo**	**26.81**	**169**	*e*P	**P**	**13 16 50.6**	**+0.1**
117nm,0.6s,mb5.7							
MYKOM	**Kota Tinggi**	**27.45**	**286**	P	**P**	**13 16 56.1**	**-0.4**
MYKOM	**Kota Tinggi**	**27.45**	**286**	P	**P**	**13 16 58.1**	**+1.6**
28nm,0.7s,mb5.0							
STKA	**Stephens Creek**	**27.48**	**158**	P	**P**	**13 16 56.9**	**+0.4**
17nm,0.7s,mb4.8,baz=335,slow=8.9,SNR=91							
STKA	**Stephens Creek**	**27.48**	**158**	*e*P	**P**	**13 16 56.8**	**+0.3**
7.1nm,1.3s,mb4.1							
STKA	**Stephens Creek**	**27.48**	**158**	*e*P	**P**	**13 16 56.8**	**+0.3**
0.1nm,0.4s							
KLBR	**Kellerberrin**	**27.55**	**203**	*e*P	**P**	**13 16 57.6**	**+0.5**
11nm,0.6s,mb4.8							
KGM	**Kluang**	**28.03**	**287**	P	**P**	**13 17 01.1**	**-0.5**
NWAO	**Narrogin (SRO)**	**28.94**	**203**	P	**P**	**13 17 10.2**	**+0.8**
6.9nm,0.5s,mb4.6,baz=43,slow=8.9,SNR=9.9							
KTGM	**Kuala Trenggan**	**29.35**	**293**	P	**P**	**13 17 13.0**	**-0.3**
FRIM	**Kepong**	**30.02**	**288**	P	**P**	**13 17 18.6**	**-0.6**
IPM	**Ipoh**	**30.99**	**290**	P	**P**	**13 17 27.7**	**-0.1**
ARMA	**Armidale**	**31.27**	**142**	*e*P	**P**	**13 17 31.4**	**+1.4**
ARMA	**Armidale**	**31.27**	**142**	*e*P	**P**	**13 17 31.4**	**+1.4**
KULM	**Kulim**	**31.63**	**291**	P	**P**	**13 17 32.9**	**-0.4**
CNB	**Canberra Magne**	**33.75**	**151**	*e*P	**P**	**13 17 53.0**	**+1.4**
TOO	**Toolangi**	**34.00**	**158**	*e*P	**P**	**13 17 55.6**	**+1.9**
BDT	**Bhumibol Dam**	**38.71**	**308**	P	**P**	**13 18 33.0**	**-0.9**
22nm,0.6s,mb5.0							
CMAR	**Chiang Mai Arr**	**39.46**	**309**	P	**P**	**13 18 39.9**	**-0.2**
11nm,0.6s,mb4.7,baz=135,slow=7.0,SNR=77							
CMAR				PcP	PcP	13 20 46.2	+1.1
1.6nm,0.7s,baz=169,slow=2.3,SNR=4.9							
CMAR				ScP	ScP	13 24 19.9	+0.3
0.3nm,0.5s,baz=95,slow=1.9,SNR=4.1							
CHG	**Chiang Mai**	**39.67**	**310**	⇑P	**P**	**13 18 41.5**	**-0.3**
28nm,0.6s,mb5.1							
CHTO	**Chiang Mai**	**39.67**	**310**	*e*P	**P**	**13 18 41.3**	**-0.5**
15nm,0.6s,mb4.8							
GYA	**Guiyang**	**39.83**	**326**	P	**P**	**13 18 42.5**	**-0.6**
GYA				pP	pP	13 19 19.8	+3.2
GYA				sP	sP	13 19 38.4	+4.4
GYA				PP	PP	13 20 23.5	+5.5
GYA				PcP	PcP	13 20 47.0	+0.9
GYA				ScP	ScP	13 24 19.8	-1.1
GYA				PcS	PcS	13 24 37.0	+0.4
GYA				S	**S**	**13 24 38.0**	**+1.8**
GYA				sS	sS	13 25 39.6	+4.9
GYA				SS	SS	13 27 35.2	-3.9
GYA				pmax	pmax		
comp=Z,20nm,0.6s,mb4.9							
GYA				pmax	pmax		
comp=Z,120nm,4.8s							
GYA				LR	LR		
comp=N,670nm,17.6s							
GYA				LR	LR		
comp=E,450nm,15.0s							
GYA				LR	LR		
comp=Z,540nm,16.1s							
KMI	**Kunming**	**41.16**	**321**	P	**P**	**13 18 54.7**	**+0.7**
KMI				pmax	pmax		
comp=Z,17nm,1.0s,mb4.6							
MJAR	**Matsushiro Arr**	**43.43**	**10**	P	**P**	**13 19 10.3**	**-1.9**
comp=Z,4.3nm,0.7s,mb4.2,baz=189,slow=9.8,SNR=13							
MAJO	**Matsushiro**	**43.44**	**10**	*e*P	**P**	**13 19 10.4**	**-1.8**
comp=Z,4.4nm,0.7s,mb4.2							
MAT	**Matsushiro**	**43.44**	**10**	P	**P**	**13 19 09.9**	**-2.3**
KSRS	**Korea Array**	**43.72**	**357**	P	**P**	**13 19 13.2**	**-1.3**
comp=Z,1.5nm,0.7s,mb3.7,baz=178,slow=11,SNR=8.2							
CD2	**Chengdu**	**44.90**	**327**	*e*P	**P**	**13 19 24.7**	**+0.7**
CD2				pP	pP	13 20 00.3	+2.2
CD2				sP	sP	13 20 18.6	+3.3
CD2				PP	PP	13 21 12.7	+0.6
CD2				S	**S**	**13 25 50.2**	**-0.1**
CD2				sS	sS	13 26 52.9	+3.1
CD2				SS	SS	13 29 08.7	-6.7
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.6							
CD2				pmax	pmax		
comp=Z,30nm,5.2s							
XAN	**Xi'an**	**44.98**	**335**	P	**P**	**13 19 22.9**	**-1.7**
XAN				pmax	pmax		
comp=Z,3.0nm,1.1s,mb3.8							
BJI

DANN	Dangsing	56.50	310	eP	P	13 20 50.7	-0.2
	comp=Z,92nm,0.9s,mb5.6						
NGP	Nagpur	57.10	300	ePKP	P	13 20 54.0	-1.3
SONM	Songino Array	57.95	341	P	P	13 21 00.8	+0.1
	comp=Z,2.5nm,0.6s,mb4.2,baz=162,slow=5.9,SNR=19						
LATR	Latur	58.29	296	ePKP	P	13 21 02.4	-1.3
LATR				AMb	AMB	13 21 08.0	
	comp=Z,25nm,1.1s,mb5.0						
AKL	Akola	58.70	299	ePKP	P	13 21 05.2	-1.3
AKL				AMb	AMB	13 21 14.2	
	comp=Z,20nm,1.6s,mb4.7						
BHPL	Bhopal	59.31	302	ePKP	P	13 21 09.5	-1.1
BHPL				AMb	AMB	13 21 09.8	
	comp=Z,17nm,0.9s,mb4.8						
KAD	Karad	60.07	294	ePKP	P	13 21 14.9	-1.0
KAD				AMb	AMB	13 21 15.1	
	comp=Z,22nm,0.8s,mb5.0						
AJM	Ajmer	62.90	304	ePKP	P	13 21 33.6	-1.1
AJM				AMb	AMB	13 21 34.3	
	comp=Z,19nm,0.6s,mb5.1						
WMQ	Urumqi	62.99	327	eP	P	13 21 36.0	+1.0
WMQ				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.0						
PETK	Petropavlovsk-	63.77	18	P	P	13 21 39.7	-0.2
	comp=Z,0.8nm,0.5s,mb3.9,baz=170,slow=2.3,SNR=5.8						
PETK	Petropavlovsk-	63.77	18	P	P	13 21 39.7	-0.2
KSH	Kashi	67.68	317	eP	P	13 22 06.3	+1.0
KSH				ePcP	PcP	13 22 33.3	+2.2
KSH				epP	pP	13 22 44.7	+2.5
KSH				esP	sP	13 23 02.2	+3.5
KSH				ePP	PP	13 24 37.6	+0.9
KSH				eScP		13 26 19.9	
KSH				ePcS		13 26 36.6	
KSH				eS	S	13 30 44.8	-5.7
KSH				eScS	ScS	13 31 44.3	-5.1
KSH				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.9						
KSH				LR	LR		
	comp=N,470nm,11.5s						
KSH				LR	LR		
	comp=E,500nm,12.9s						
KSH				LR	LR		
	comp=Z,1μm,19.3s						
MKAR	Makanchi Array	67.82	327	P	P	13 22 06.2	+0.2
	comp=Z,20nm,0.6s,mb5.0,baz=126,slow=7.8,SNR=222						
KZA	Kyzart	69.43	319	P	P	13 22 17.6	+1.5
	SNR=15						
KZA	Kyzart	69.43	319	eP	P	13 22 17.2	+1.1
	comp=Z,18nm,0.9s,mb4.8						
TKM2	Tokmak 2	69.63	320	P	P	13 22 18.0	+0.7
	SNR=18						
TKM2	Tokmak 2	69.63	320	eP	P	13 22 17.7	+0.4
	comp=Z,14nm,0.7s,mb4.8						
AAK	Ala-Archa	70.19	320	P	P	13 22 21.6	+0.9
	SNR=11						
AML	Almayashu	70.46	319	P	P	13 22 23.7	+1.3
	SNR=11						
AML	Almayashu	70.46	319	eP	P	13 22 23.6	+1.1
	comp=Z,37nm,1.1s,mb5.0						
KBL	Kabul	70.49	310	eP	P	13 22 22.4	-0.4
	comp=Z,12nm,0.9s,mb4.6						
USP	Ospenovka	70.50	320	P	P	13 22 23.1	+0.5
	SNR=22						
EKS2	Erkin-Say	70.66	319	P	P	13 22 24.6	+1.0
	SNR=12						
EKS2	Erkin-Say	70.66	319	eP	P	13 22 24.4	+0.8
	comp=Z,28nm,1.2s,mb4.9						
ZAA0	Zalesovo Array	71.14	334	eP	P	13 22 25.0	-1.2
ZALV	Zalesovo Beam	71.14	334	P	P	13 22 25.1	-1.1
	comp=Z,4.7nm,0.6s,mb4.4,baz=130,slow=5.2,SNR=20						
KURK	Kurchatov	72.10	328	eP	P	13 22 31.4	-0.7
	comp=Z,9.8nm,0.9s,mb4.5						
KKAR	Karatay Array	73.00	319	eP	P	13 22 37.4	-0.2
	comp=Z,11nm,1.0s,mb4.5						
MAW	Mawson	75.50	201	P	P	13 22 53.4	+1.9
	comp=Z,1.0nm,0.5s,mb3.7,baz=86,slow=9.0,SNR=4.3						
BVAR	Borovoye Array	77.65	328	P	P	13 23 03.2	-0.7
	comp=Z,2.8nm,0.5s,mb4.1,baz=132,slow=8.8,SNR=15						
BRVK	Borovoye	77.73	328	eP	P	13 23 03.7	-0.6
	comp=Z,6.8nm,1.0s,mb4.2						
IMOG	Moghan	78.48	309	eP	P	13 23 08.9	0.0
IAKL	Akhelmad	79.07	309	eP	P	13 23 12.5	+0.4
IKRD	Kardeh	79.31	309	eP	P	13 23 09.0	-4.4
ISHV	Shirvan	80.14	310	eP	P	13 23 18.3	+0.5
ABKAR	Akbulak array	82.14	322	eP	P	13 23 27.1	-1.1
	comp=Z,3.6nm,0.6s,mb4.2						
AKTK	Aktyubinsk	83.70	322	P	P	13 23 35.6	-0.5
AKTO	Aktyubinsk	83.70	322	P	P	13 23 35.6	-0.5
	comp=Z,2.5nm,0.5s,mb4.2,baz=116,slow=8.3,SNR=11						
ARU	Arti	85.29	328	eP	P	13 23 42.6	-1.4
	comp=Z,4.5nm,0.8s,mb4.2						
ILAR	Eielson Array	92.81	25	P	P	13 24 17.1	-2.2
	comp=Z,0.3nm,0.7s,baz=266,slow=4.5,SNR=5.7						
BRTR	Keskin Array B	99.05	309	P	P	13 24 46.9	-1.3
	comp=Z,0.4nm,0.5s,mb4.1,baz=75,slow=2.2,SNR=2.9						
CLL	Collm	111.78	323	ePKP	PKiKP	13 29 43.0	+1.9
CLL	Collm	111.78	323	ePKiKP	PKiKP	13 29 43.0	+1.9
	comp=Z,4.0nm,0.9s						
DAVOX	Davos/Dischmat	115.14	319	PKP	PKPdf	13 29 48.7	+1.0
	comp=Z,1.0nm,0.3s,baz=69,slow=8.6,SNR=2.9						
TORD	Torodi Ar. Bea	128.80	282	PKP	PKPdf	13 30 15.0	+0.2
	comp=Z,1.8nm,0.6s,baz=74,slow=2.0,SNR=9.7						
PLCA	Paso Flores	129.35	160	PKP	PKPdf	13 30 15.6	+0.3
	comp=Z,2.1nm,1.0s,baz=296,slow=2.2,SNR=3.6						
PLCA	Paso Flores	129.35	160	PKP	PKPdf	13 30 15.6	+0.3
DBIC	Dimbokro	135.26	273	PKP	PKPdf	13 30 27.4	+0.4
	comp=Z,2.0nm,0.5s,baz=127,slow=4.8,SNR=4.5						
BBTS	Babate	146.24	287	PKPbc	PKPbc	13 30 48.7	+0.7
	comp=Z,15nm,0.5s,baz=26,slow=0.4,SNR=4.3						
CPUP	Villa Florida	146.63	168	PKPbc	PKPbc	13 30 49.7	+0.8
	comp=Z,1.4nm,0.7s,baz=250,slow=0.9,SNR=4.4						
LPAZ	La Paz	151.09	142	PKPbc	PKPbc	13 31 02.4	+1.9
	comp=Z,0.5nm,0.4s,baz=242,slow=3.9,SNR=4.1						
LPAZ				PKPab	PKPab	13 31 10.1	+1.6
	comp=Z,2.1nm,0.6s,baz=279,slow=2.2,SNR=9.1						
LPAZ	La Paz	151.09	142	PKPbc	PKPbc	13 31 02.4	+1.9
LPAZ				PKPab	PKPab	13 31 10.1	+1.6

*CSEM **09** 13:20:22.7±0.3, 76°.14N×24°.41E, h10km, ML2.6, Error ellipse: s-maj=8.9km s-min=4.0km az=78.0*
*BER **09** 13:20:23.9±3.3, 76°.15N×24°.97E, h13km±25km, MD2.9, ML2.6, ML2.4(NAO)*
*NAO **09** 13:20:24.5±3.6, 75°.95N×23°.06E, h13km±25km, ML2.4*
ISC 09 13:20:24.2±3.9, 76°.1N±0°.1×24°.3E±0°.6, h19km±25km, n12, σ0°71/20, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO	Bjornoya	2.08	221	ePg	Pg	13 21 03.2	-0.9
BJO				eSg	Sg	13 21 31.3	+0.4
BJO				AML	AML	13 21 34.2	
	comp=Z,50nm,0.2s						
BJO	Bjornoya	2.08	221	ePg	Pg	13 21 03.2	-0.8
	SNR=90						
BJO				eSg	Sg	13 21 31.3	+0.3
	comp=Z,50nm,0.2s,SNR=90						
HSP	Hornsund	2.23	298	eP	Pn	13 21 01.1	+1.1
HSP				eS	Sn	13 21 34.7	+7.8
SPA0	Spitsbergen Ar	2.72	323	Pn	Pn	13 21 07.3	+0.5
	baz=142,slow=16						
SPA0				Lg		13 21 48.7	
	baz=138,slow=37						
SPA0	Spitsbergen Ar	2.72	323	Pn	Pn	13 21 07.3	+0.6
	baz=142,slow=15,SNR=55						
SPA0				Lg		13 21 48.7	
	baz=138,slow=33,SNR=9.5						
KBS	Kingsbay	3.88	322	Pn	Pn	13 21 22.5	-0.2
KBS				Sn	Sn	13 22 06.9	-0.7
KBS				Lg		13 22 25.7	
KBS	Kingsbay	3.88	322	eP	Pn	13 21 22.6	0.0
KBS				eS	Sn	13 22 06.4	-1.2
KBS				AML	AML	13 22 31.1	
	comp=Z,45nm,0.4s						
KBS	Kingsbay	3.88	322	eP	Pn	13 21 22.6	-0.1
	SNR=53						
KBS				eS	Sn	13 22 06.4	-1.2
	comp=Z,45nm,0.4s,SNR=53						
KBS				Sn	Sn	13 22 06.9	-0.7
KBS				Lg		13 22 25.7	
KEV	Kevo	6.45	172	ep	Pn	13 21 58.3	+0.5
KEV	Kevo	6.45	172	eP	Pn	13 21 58.3	+0.5
ARA0	ARCESS Array S	6.63	176	Pn	Pn	13 21 59.6	-0.7
	baz=358,slow=10						
ARA0				Sn	Sn	13 23 09.9	-5.3
	baz=11,slow=18						
ARA0	ARCESS Array S	6.63	176	Pn	Pn	13 21 59.7	-0.6
	baz=358,slow=9.8,SNR=55						

IDC 09 13:22:40.2±2.5, 10°.27N×91°.03E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/22, mbtmp3.3/4, Error ellipse: s-maj=75.9km s-min=29.4km az=68.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.18	42	Pn	Pn	13 25 21.6	+0.2
	baz=235,slow=14,SNR=4.3						
MKAR	Makanchi Array	37.15	350	P	P	13 29 52.7	0.0
	0.3nm,0.8s,baz=149,slow=6.1,SNR=2.5						
WRA	Warramunga Arr	52.15	125	P	P	13 31 52.3	-0.5
	0.2nm,0.3s,baz=308,slow=8.2,SNR=15						
ASAR	Alice Springs	53.80	129	P	P	13 32 05.5	+0.5
	0.3nm,0.7s,baz=306,slow=6.7,SNR=5.7						

*IDC **09** 13:36:35.7±2.9, 35°.57N×6°.95W, h0km, mb3.9/3, mb1 4.0/5, mb1mx3.6/29, mbtmp3.9/5, ML4.1/2, Error ellipse: s-maj=66.4km s-min=21.9km az=90.0*
*LDG **09** 13:36:36.1±0.3, 35°.67N×6°.89W, h2km, Ml4.7/18, Error ellipse: s-maj=5.5km s-min=4.4km az=39.0*
*NEIC **09** 13:36:38.8±1.8, 35°.53N×7°.05W, h26km±18km, ML4.0(CSEM), Error ellipse: s-maj=3.7km s-min=2.9km az=93.0*
*ISCJB **09** 13:36:39.6±0.3, 35°.65N±0°.02×6°.93W±0°.02, h59km±5km, mb3.9/4, Error ellipse: s-maj=3.3km s-min=2.3km az=42.2*
*INMG **09** 13:36:40.5±3.0, 35°.61N×7°.02W, h20km±11km, MD3.7, ML3.9, Error ellipse: s-maj=4.5km s-min=4.2km az=48.0*
*CSEM **09** 13:36:40.5±0.1, 35°.57N×6°.97W, h40km, ML4.8/11, Error ellipse: s-maj=2.7km s-min=2.1km az=63.0*
*SFS **09** 13:36:40.0, 35°.05N×6°.99W, h63km, ML5.0*
*IGIL **09** 13:36:40.6, 35°.58N×6°.92W, h20km, ML3.8*
*CNRM **09** 13:36:41.9, 35°.49N×6°.89W, h30km, MD3.8*
*MDD **09** 13:36:41.1±0.3, 35°.56N×6°.96W, h55km±17km, mb5.2/46, Error ellipse: s-maj=3.6km s-min=2.8km az=61.0, PRIMO*
*STR **09** 13:36:59.5±0.2, 36°.65N×5°.97W, h30km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 09 13:36:41.0±0.3, 35°.64N±0°.02×6°.94W±0°.02, h40km±9km, n521, σ1°07/911, mb3.9/4, 17C-52D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFS	San Fernando	1.02	36	eP	Pn	13 37 00.5	+1.7
SFS	San Fernando	1.02	36	⇓P	Pn	13 37 00.6	+1.8
SFS				S	Sn	13 37 11.4	-0.4
SFS	San Fernando	1.02	36	⇓P	Pn	13 37 00.6	+1.8
SFS				S	Sn	13 37 11.4	-0.4
SFS	San Fernando	1.02	36	eP	Pn	13 37 00.5	+1.7
SFS				eS	Sn	13 37 11.4	-0.5
CNIL	Conil	1.03	44	⇑P	Pn	13 37 00.8	+1.9
CNIL				S	Sn	13 37 09.9	-2.1
CNIL	Conil	1.03	44	⇑P	Pn	13 37 00.8	+1.9
CNIL				S	Sn	13 37 09.9	-2.1
CNIL	Conil	1.03	44	iP	Pn	13 37 00.8	+2.0
CNIL				eS	Sn	13 37 09.9	-2.1
RSA	Sarsar	1.19	129	iP	Pn	13 37 00.0	-1.0
RSA				iS	Sn	13 37 13.5	-2.4
RSA	Sarsar	1.19	129	P	Pn	13 37 00.0	-1.0
RSA				S	Sn	13 37 13.5	-2.4
RSA	Sarsar	1.19	129	P	Pn	13 37 00.0	-1.0
RSA				S	Sn	13 37 13.5	-2.4
RSA	Sarsar	1.19	129	iP	Pn	13 37 00.0	-1.0
RSA				iS	Sn	13 37 13.5	-2.4
ECEU	Ceuta	1.30	78	⇑P	Pn	13 37 03.9	+1.3
	227nm,0.1s,SNR=18						
ECEU				S	Sn	13 37 19.8	+1.1
	173nm,0.2s,SNR=4.0						
ECEU	Ceuta	1.30	78	⇑P	Pn	13 37 03.9	+1.3
	227nm,0.1s,SNR=18						
ECEU				S	Sn	13 37 19.8	+1.1
	173nm,0.2s,SNR=4.0						
ECEU	Ceuta	1.30	78	P	Pn	13 37 03.9	+1.3
	227nm,0.1s,SNR=18						
ECEU				S	Sn	13 37 19.8	+1.1
	173nm,0.2s,SNR=4.0						
GIBL	Gibalbin	1.43	33	⇑P	Pn	13 37 05.8	+1.4
GIBL				S	Sn	13 37 16.9	-5.0
GIBL	Gibalbin	1.43	33	⇑P	Pn	13 37 05.8	+1.4
GIBL				S	Sn	13 37 16.9	-5.0
GIBL	Gibalbin	1.43	33	iP	Pn	13 37 05.8	+1.4
EJIF	Jimena Fronter	1.44	55	P	Pn	13 37 06.3	+1.7
EJIF				S	Sn	13 37 22.2	-0.1
EJIF	Jimena Fronter	1.44	55	P	Pn	13 37 06.3	+1.7
	284nm,0.3s,SNR=7.9						
EJIF				S	Sn	13 37 22.2	-0.1
	782nm,0.5s,SNR=7.9						
EJIF	Jimena Fronter	1.44	55	P	Pn	13 37 06.3	+1.7
	284nm,0.3s,SNR=7.9						
EJIF				S	Sn	13 37 22.2	-0.1
	782nm,0.5s,SNR=7.9						
EJIF	Jimena Fronter	1.44	55	P	Pn	13 37 06.3	+1.7
	284nm,0.3s,SNR=7.9						
EJIF				S	Sn	13 37 22.2	-0.1
	782nm,0.5s,SNR=7.9						
ESPR	Espera	1.51	35	⇑P	Pn	13 37 06.3	+0.8
ESPR				S	Sn	13 37 24.7	+0.7
ESPR	Espera	1.51	35	⇑P	Pn	13 37 06.3	+0.8
	58nm,0.2s,SNR=18						
ESPR				S	Sn	13 37 24.7	+0.7
	2μm,0.3s,SNR=15						
ESPR	Espera	1.51	35	⇑P	Pn	13 37 06.3	+0.8
	58nm,0.2s,SNR=18						
ESPR				S	Sn	13 37 24.7	+0.7
	2μm,0.3s,SNR=15						
ESPR	Espera	1.51	35	P	Pn	13 37 06.3	+0.8
	58nm,0.2s,SNR=18						
ESPR				S	Sn	13 37 24.7	+0.8
	2μm,0.3s,SNR=15						
RTC	Rabat Centre	1.65	178	iP	Pn	13 37 06.0	-1.4
RTC				iS	Sn	13 37 24.0	-3.3
RTC	Rabat Centre	1.65	178	P	Pn	13 37 06.0	-1.4
RTC				S	Sn	13 37 24.0	-3.3
RTC	Rabat Centre	1.65	178	P	Pn	13 37 06.0	-1.4
RTC				S	Sn	13 37 24.0	-3.3
RTC	Rabat Centre	1.65	178	iP	Pn	13 37 06.0	-1.4
RTC				iS	Sn	13 37 24.0	-3.3
LIJA	Lijar	1.77	44	⇓P	Pn	13 37 10.4	+1.3
LIJA				S	Sn	13 37 24.8	-5.7
LIJA	Lijar	1.77	44	⇓P	Pn	13 37 10.4	+1.3
LIJA				S	Sn	13 37 24.8	-5.7
LIJA	Lijar	1.77	44	iP	Pn	13 37 10.4	+1.3
PBDV	Barranco-do-Ve	1.79	334	iPn	Pn	13 37 09.6	+0.3
PBDV				eSn	Sn	13 37 30.2	-0.6
PBDV				A		13 37 34.2	
	413nm,0.2s						
PBDV	Barranco-do-Ve	1.79	334	⇓P	Pn	13 37 09.6	+0.3
PBDV				S	Sn	13 37 30.2	-0.6
	413nm,0.2s						
PBDV	Barranco-do-Ve	1.79	334	⇓P	Pn	13 37 09.6	+0.3
PBDV				S	Sn	13 37 30.2	-0.6
	413nm,0.2s						
PVAQ	Vaqueiros	1.87	341	iPn	Pn	13 37 10.8	+0.4
PVAQ				eSn	Sn	13 37 32.0	-0.8
PVAQ				A		13 37 32.7	
	1μm,0.3s						
PVAQ	Vaqueiros	1.87	341	P	Pn	13 37 10.8	+0.4
PVAQ				S	Sn	13 37 32.0	-0.8
	1μm,0.3s						
PVAQ	Vaqueiros	1.87	341	P	Pn	13 37 10.8	+0.4
PVAQ				S	Sn	13 37 32.0	-0.8
	1μm,0.3s						
PVAQ	Vaqueiros	1.87	341	iPn	Pn	13 37 10.8	+0.4
PVAQ				eSn	Sn	13 37 32.0	-0.8
	1μm,0.3s						
EGRO	El Granado	1.94	347	⇓P	Pn	13 37 12.0	+0.6
EGRO				S	Sn	13 37 34.4	-0.2
EGRO	El Granado	1.94	347	⇓P	Pn	13 37 12.0	+0.5
	161nm,0.2s,SNR=18						
EGRO				S	Sn	13 37 34.4	-0.2
	945nm,0.2s						
EGRO	El Granado	1.94	347	⇓P	Pn	13 37 12.0	+0.5
	161nm,0.2s,SNR=18						
EGRO				S	Sn	13 37 34.4	-0.2
	945nm,0.2s						
EGRO	El Granado	1.94	347	P	Pn	13 37 12.0	+0.6
	161nm,0.2s,SNR=18						
EGRO				S	Sn	13 37 34.4	-0.2
	945nm,0.2s						
EMIJ	Mijas	1.98	62	⇑P	Pn	13 37 12.2	+0.2
EMIJ				S	Sn	13 37 35.0	-0.6
EMIJ	Mijas	1.98	62	⇑P	Pn	13 37 12.2	+0.2
	248nm,0.4s,SNR=18						
EMIJ				S	Sn	13 37 35.0	-0.6
	373nm,0.2s,SNR=5.3						
EMIJ	Mijas	1.98	62	⇑P	Pn	13 37 12.2	+0.2
	248nm,0.4s,SNR=18						
EMIJ				S	Sn	13 37 35.0	-0.6
	373nm,0.2s,SNR=5.3						
EMIJ	Mijas	1.98	62	P	Pn	13 37 12.2	+0.2
	248nm,0.4s,SNR=18						
EMIJ				S	Sn	13 37 35.0	-0.7
	373nm,0.2s,SNR=5.3						
PFVI	Vila Bisbo	2.13	315	iPn	Pn	13 37 14.1	+0.1
PFVI				eSn	Sn	13 37 38.9	-0.3
PFVI				A		13 37 45.7	
	348nm,0.1s						
PFVI	Vila Bisbo	2.13	315	⇓P	Pn	13 37 14.0	0.0
PFVI				S	Sn	13 37 38.8	-0.4
PFVI	Vila Bisbo	2.13	315	⇓P	Pn	13 37 14.0	0.0
	83nm,0.1s,SNR=18						
PFVI				S	Sn	13 37 38.8	-0.4
	830nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.13	315	⇓P	Pn	13 37 14.0	0.0
	83nm,0.1s,SNR=18						
PFVI				S	Sn	13 37 38.8	-0.4
	830nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.13	315	P	Pn	13 37 14.0	0.0
	83nm,0.1s,SNR=18						
PFVI				eSn	Sn	13 37 38.9	-0.3
	348nm,0.1s						
EMIN	Mina Concepcio	2.14	6	⇓P	Pn	13 37 14.6	+0.5
EMIN				S	Sn	13 37 37.7	-1.7
EMIN	Mina Concepcio	2.14	6	⇓P	Pn	13 37 14.6	+0.5
	134nm,0.2s,SNR=18						
EMIN				S	Sn	13 37 37.7	-1.7
	242nm,0.1s,SNR=24						
EMIN	Mina Concepcio	2.14	6	⇓P	Pn	13 37 14.6	+0.5
	134nm,0.2s,SNR=18						
EMIN				S	Sn	13 37 37.7	-1.7
	242nm,0.1s,SNR=24						
EMIN	Mina Concepcio	2.14	6	P	Pn	13 37 14.6	+0.5
	134nm,0.2s,SNR=18						
EMIN				S	Sn	13 37 37.7	-1.7
	242nm,0.1s,SNR=24						
MORF	Marmelete	2.16	321	iPn	Pn	13 37 14.4	0.0
MORF				eSn	Sn	13 37 40.5	+0.5
MORF				A		13 37 44.0	
	784nm,0.1s						
MORF	Marmelete	2.16	321	eP	Pn	13 37 14.4	0.0
MORF				eS	Sn	13 37 40.0	0.0
MORF	Marmelete	2.16	321	⇓P	Pn	13 37 14.4	0.0
MORF				S	Sn	13 37 40.5	+0.5
	784nm,0.1s						
MORF	Marmelete	2.16	321	⇓P	Pn	13 37 14.4	0.0
MORF				S	Sn	13 37 40.5	+0.5
	784nm,0.1s						
MORF	Marmelete	2.16	321	eP	Pn	13 37 14.4	0.0
MORF				eS	Sn	13 37 40.0	0.0
MORF				eSn	Sn	13 37 40.5	+0.5
	784nm,0.1s						
PCVE	Castro Verde	2.18	336	iPn	Pn	13 37 15.1	+0.4
PCVE				eSn	Sn	13 37 39.9	-0.5
PCVE				A		13 37 41.6	
	418nm,0.4s						
PCVE	Castro Verde	2.18	336	⇓P	Pn	13 37 15.1	+0.4
PCVE				S	Sn	13 37 39.9	-0.5
	418nm,0.4s						
PCVE	Castro Verde	2.18	336	⇓P	Pn	13 37 15.1	+0.4
PCVE				S	Sn	13 37 39.9	-0.5
	418nm,0.4s						
TGT	Taghat	2.20	135	P	Pn	13 37 14.0	-1.0
TGT				S	Sn	13 37 39.0	-2.0
TGT	Taghat	2.20	135	P	Pn	13 37 14.0	-1.0
TGT				S	Sn	13 37 39.0	-2.0
TGT	Taghat	2.20	135	iP	Pn	13 37 14.0	-1.0
TGT				iS	Sn	13 37 39.0	-2.0
EMAL	Malaga-Limoner	2.32	60	⇑P	Pn	13 37 17.0	+0.4
EMAL				S	Sn	13 37 37.7	-6.3
EMAL	Malaga-Limoner	2.32	60	⇑P	Pn	13 37 17.0	+0.4
EMAL				S	Sn	13 37 37.7	-6.3
EMAL	Malaga-Limoner	2.32	60	iP	Pn	13 37 17.0	+0.4
PTEO	Sao Teotonio	2.38	324	iPn	Pn	13 37 17.8	+0.3
PTEO				eSn	Sn	13 37 45.7	+0.2
PTEO				A		13 37 52.6	
	214nm,0.2s						
PTEO	Sao Teotonio	2.38	324	⇓P	Pn	13 37 17.8	+0.3
PTEO				S	Sn	13 37 45.7	+0.2
	107nm,0.2s						
PTEO	Sao Teotonio	2.38	324	⇓P	Pn	13 37 17.8	+0.3
PTEO				S	Sn	13 37 45.7	+0.2
	107nm,0.2s						
MESJ	Messejana	2.43	335	eP	Pn	13 37 18.5	+0.4
MESJ				eS	Sn	13 37 46.4	-0.2
MESJ				eS	Sn	13 37 46.4	-0.1
MESJ	Messejana	2.43	335	P	Pn	13 37 18.5	+0.4
MESJ				S	Sn	13 37 46.4	-0.1
MESJ	Messejana	2.43	335	P	Pn	13 37 18.5	+0.4
MESJ				S	Sn	13 37 46.4	-0.1
MESJ	Messejana	2.43	335	eP	Pn	13 37 18.5	+0.4
MESJ				eS	Sn	13 37 46.4	-0.1
MPAL	Palemas	2.48	99	P	Pn	13 37 19.0	+0.1
MPAL				S	Sn	13 37 45.0	-2.9
MPAL	Palemas	2.48	99	P	Pn	13 37 19.0	+0.1
MPAL				S	Sn	13 37 45.0	-2.9
MPAL	Palemas	2.48	99	iP	Pn	13 37 19.0	+0.1
MPAL				iS	Sn	13 37 45.0	-2.9
PBEJ	Beja	2.50	343	iPn	Pn	13 37 19.4	+0.3
PBEJ				eSn	Sn	13 37 47.0	-1.3
PBEJ				A		13 37 51.0	
	240nm,0.3s						
PBEJ	Beja	2.50	343	⇓P	Pn	13 37 19.4	+0.3
PBEJ				S	Sn	13 37 47.0	-1.3
	120nm,0.3s						
PBEJ	Beja	2.50	343	⇓P	Pn	13 37 19.4	+0.3
PBEJ				S	Sn	13 37 47.0	-1.3
	120nm,0.3s						
PBAR	Barrancos	2.53	358	iPn	Pn	13 37 20.2	+0.6
PBAR				eSn	Sn	13 37 47.7	-1.5
PBAR				A		13 37 53.5	
	413nm,0.4s						
PBAR	Barrancos	2.53	358	⇓P	Pn	13 37 20.2	+0.6
PBAR				S	Sn	13 37 47.7	-1.5
	413nm,0.4s						
PBAR	Barrancos	2.53	358	⇓P	Pn	13 37 20.2	+0.6
PBAR				S	Sn	13 37 47.7	-1.5
	413nm,0.4s						
TOU	Touzarine	2.69	104	P	Pn	13 37 22.0	+0.3
TOU				S	Sn	13 37 49.0	-4.1
TOU	Touzarine	2.69	104	P	Pn	13 37 22.0	+0.3
TOU				S	Sn	13 37 49.0	-4.1
TOU	Touzarine	2.69	104	iP	Pn	13 37 22.0	+0.3
ELOJ	Sierra Loja	2.71	55	P	Pn	13 37 23.5	+1.5
ELOJ				S	Sn	13 37 53.3	-0.2
ELOJ	Sierra Loja	2.71	55	P	Pn	13 37 23.5	+1.5
	150nm,0.2s,SNR=18						
ELOJ				S	Sn	13 37 53.3	-0.2
	425nm,0.3s,SNR=10						
ELOJ	Sierra Loja	2.71	55	P	Pn	13 37 23.5	+1.5
	150nm,0.2s,SNR=18						
ELOJ				S	Sn	13 37 53.3	-0.2
	425nm,0.3s,SNR=10						
ELOJ	Sierra Loja	2.71	55	P	Pn	13 37 23.5	+1.5
	150nm,0.2s,SNR=18						
ELOJ				S	Sn	13 37 53.3	-0.2
	425nm,0.3s,SNR=10						
ECAB	El Cabril	2.72	26	P	Pn	13 37 22.6	+0.5
ECAB				S	Sn	13 37 52.1	-1.7
ECAB	El Cabril	2.72	26	P	Pn	13 37 22.6	+0.5
	30nm,0.1s,SNR=7.9						
ECAB				S	Sn	13 37 52.1	-1.7
	464nm,0.2s,SNR=7.9						
ECAB	El Cabril	2.72	26	P	Pn	13 37 22.6	+0.5
	30nm,0.1s,SNR=7.9						
ECAB				S	Sn	13 37 52.1	-1.7
	464nm,0.2s,SNR=7.9						
ECAB	El Cabril	2.72	26	P	Pn	13 37 22.6	+0.4
	30nm,0.1s,SNR=7.9						
ECAB				S	Sn	13 37 52.1	-1.7
	464nm,0.2s,SNR=7.9						
TZK	Tazeka	2.74	123	iP	Pn	13 37 21.5	-0.9

TZK *i* S Sn 13 37 50.0 -4.4
TZK Tazeka 2.74 123 P Pn 13 37 21.5 -0.9
TZK S Sn 13 37 50.0 -4.4
TZK Tazeka 2.74 123 P Pn 13 37 21.5 -0.9
TZK S Sn 13 37 50.0 -4.4
TZK Tazeka 2.74 123 *i* P Pn 13 37 21.5 -0.9
ERON Agron 2.88 61 P Pn 13 37 24.5 +0.2
ERON S Sn 13 37 56.8 -1.0
ERON Agron 2.88 61 P Pn 13 37 24.5 +0.2
366nm,0.5s,SNR=7.9
ERON S Sn 13 37 56.8 -1.0
175nm,0.3s,SNR=7.9
ERON Agron 2.88 61 P Pn 13 37 24.5 +0.2
366nm,0.5s,SNR=7.9
ERON S Sn 13 37 56.8 -1.0
175nm,0.3s,SNR=7.9
ERON Agron 2.88 61 P Pn 13 37 24.5 +0.1
366nm,0.5s,SNR=7.9
ERON S Sn 13 37 56.8 -1.0
175nm,0.3s,SNR=7.9
ELUQ Luque 2.88 47 P Pn 13 37 25.4 +1.0
ELUQ S Sn 13 37 57.0 -0.8
ELUQ Luque 2.88 47 P Pn 13 37 25.4 +1.0
140nm,0.1s,SNR=18
ELUQ S Sn 13 37 57.0 -0.8
400nm,0.2s,SNR=7.9
ELUQ Luque 2.88 47 P Pn 13 37 25.4 +1.0
140nm,0.1s,SNR=18
ELUQ S Sn 13 37 57.0 -0.8
400nm,0.2s,SNR=7.9
ELUQ Luque 2.88 47 P Pn 13 37 25.4 +1.0
140nm,0.1s,SNR=18
ELUQ S Sn 13 37 57.0 -0.8
400nm,0.2s,SNR=7.9
EGUA Guajares 2.98 65 ⇓P Pn 13 37 25.0 -0.7
EGUA S Sn 13 37 59.4 -0.8
EGUA Guajares 2.98 65 ⇓P Pn 13 37 25.0 -0.7
278nm,0.3s,SNR=18
EGUA S Sn 13 37 59.4 -0.8
317nm,0.2s,SNR=7.9
EGUA Guajares 2.98 65 ⇓P Pn 13 37 25.0 -0.7
278nm,0.3s,SNR=18
EGUA S Sn 13 37 59.4 -0.8
317nm,0.2s,SNR=7.9
EGUA Guajares 2.98 65 P Pn 13 37 25.0 -0.7
278nm,0.3s,SNR=18
EGUA S Sn 13 37 59.4 -0.8
317nm,0.2s,SNR=7.9
EVO Evora 3.01 344 *e*Pn Pn 13 37 26.9 +0.8
EVO ⇓*i*Sn Sn 13 37 58.9 -2.1
268nm,0.2s
EVO Evora 3.01 344 *i* Pn Pn 13 37 26.7 +0.6
EVO *e*Sn Sn 13 37 59.9 -1.1
EVO A 13 38 01.6
312nm,0.1s
EVO Evora 3.01 344 ⇓P Pn 13 37 26.7 +0.6
EVO S Sn 13 37 59.9 -1.1
312nm,0.1s
EVO Evora 3.01 344 ⇓P Pn 13 37 26.7 +0.6
EVO S Sn 13 37 59.9 -1.1
312nm,0.1s
CZD Col de Zad 3.04 148 *i* P Pn 13 37 26.0 -0.5
CZD *i* S Sn 13 37 57.0 -4.6
CZD Col de Zad 3.04 148 P Pn 13 37 26.0 -0.5
CZD S Sn 13 37 57.0 -4.6
CZD Col de Zad 3.04 148 P Pn 13 37 26.0 -0.5
CZD S Sn 13 37 57.0 -4.6
CZD Col de Zad 3.04 148 *i* P Pn 13 37 26.0 -0.5
EVOP Sao Brissos 3.04 342 *e*Pn Pn 13 37 26.9 +0.4
EVOP ⇓*i*Sn Sn 13 37 58.9 -2.6
134nm,0.2s
MOE Montemor 3.09 339 *e*Pn Pn 13 37 28.1 +0.9
MOE *e*Sn Sn 13 38 02.0 -0.9
MOE Montemor 3.09 339 *e*Pn Pn 13 37 28.1 +0.9
MOE *e*Sn Sn 13 38 02.0 -0.9
EBAD Badajoz 3.11 359 ⇓P Pn 13 37 28.0 +0.5
EBAD S Sn 13 38 01.4 -2.1
EBAD Badajoz 3.11 359 ⇓P Pn 13 37 28.0 +0.5
89nm,0.2s,SNR=18
EBAD S Sn 13 38 01.4 -2.1
278nm,0.2s,SNR=7.0
EBAD Badajoz 3.11 359 ⇓P Pn 13 37 28.0 +0.5
89nm,0.2s,SNR=18
EBAD S Sn 13 38 01.4 -2.1
278nm,0.2s,SNR=7.0
EBAD Badajoz 3.11 359 P Pn 13 37 28.0 +0.5
89nm,0.2s,SNR=18
EBAD S Sn 13 38 01.4 -2.0
278nm,0.2s,SNR=7.0
KIB El Ksiba 3.14 166 P Pn 13 37 27.0 -1.0
KIB S Sn 13 38 00.0 -4.2
KIB El Ksiba 3.14 166 P Pn 13 37 27.0 -1.0
KIB S Sn 13 38 00.0 -4.2
KIB El Ksiba 3.14 166 *i* P Pn 13 37 27.0 -1.0
EADA Adamuz 3.16 36 P Pn 13 37 28.8 +0.7
EADA S Sn 13 38 02.7 -1.8
EADA Adamuz 3.16 36 P Pn 13 37 28.8 +0.7
77nm,0.2s,SNR=18
EADA S Sn 13 38 02.7 -1.8
255nm,0.2s,SNR=16
EADA Adamuz 3.16 36 P Pn 13 37 28.8 +0.7
77nm,0.2s,SNR=18
EADA S Sn 13 38 02.7 -1.8
255nm,0.2s,SNR=16
EADA Adamuz 3.16 36 P Pn 13 37 28.8 +0.7
77nm,0.2s,SNR=18
EADA S Sn 13 38 02.7 -1.8
255nm,0.2s,SNR=16
ECOG Cogollos-Vega 3.17 58 ⇓P Pn 13 37 29.7 +1.4
ECOG S Sn 13 38 04.7 -0.3
ECOG Cogollos-Vega 3.17 58 ⇓P Pn 13 37 29.7 +1.4
164nm,0.4s,SNR=18
ECOG S Sn 13 38 04.7 -0.3
366nm,0.2s,SNR=20
ECOG Cogollos-Vega 3.17 58 ⇓P Pn 13 37 29.7 +1.4
164nm,0.4s,SNR=18
ECOG S Sn 13 38 04.7 -0.3
366nm,0.2s,SNR=20
ECOG Cogollos-Vega 3.17 58 P Pn 13 37 29.7 +1.3
164nm,0.4s,SNR=18
ECOG S Sn 13 38 04.7 -0.3
366nm,0.2s,SNR=20
EQUE Quentar 3.23 60 P Pn 13 37 30.4 +1.3
38nm,0.2s,SNR=18
EQUE S Sn 13 38 06.1 -0.2
160nm,0.2s,SNR=7.8
EQUE Quentar 3.23 60 P Pn 13 37 30.4 +1.3
38nm,0.2s,SNR=18
EQUE S Sn 13 38 06.1 -0.2
160nm,0.2s,SNR=7.8
EQUE Quentar 3.23 60 P Pn 13 37 30.4 +1.3
38nm,0.2s,SNR=18
EQUE S Sn 13 38 06.1 -0.2
160nm,0.2s,SNR=7.8
PESTR Estremoz 3.27 351 *i* Pn Pn 13 37 29.9 +0.3
PESTR *e*Sn Sn 13 38 06.2 -1.0
PESTR A 13 38 09.1
161nm,0.6s
PESTR Estremoz 3.27 351 ⇓P Pn 13 37 29.9 +0.3
PESTR S Sn 13 38 06.2 -1.0
80nm,0.6s
PESTR Estremoz 3.27 351 ⇓P Pn 13 37 29.9 +0.3
PESTR S Sn 13 38 06.2 -1.0
80nm,0.6s
PLML Palmela 3.31 332 *e*Pn Pn 13 37 31.2 +1.0
PLML Palmela 3.31 332 P Pn 13 37 31.2 +1.0
PLML Palmela 3.31 332 P Pn 13 37 31.2 +1.0
PLML Palmela 3.31 332 *e*Pn Pn 13 37 31.2 +1.0
MDT Midelt 3.41 145 Pn Pn 13 37 30.8 -0.9
baz=325,slow=12
MDT Sn Sn 13 38 07.1 -3.7
74nm,0.3s,baz=168,slow=11,SNR=22
MDT Midelt 3.41 145 Pn Pn 13 37 30.8 -0.8
MDT Sn Sn 13 38 07.1 -3.7
ZAI Zaio 3.50 100 P Pn 13 37 32.0 -0.8
ZAI S Sn 13 38 09.0 -3.9
ZAI Zaio 3.50 100 P Pn 13 37 32.0 -0.8
ZAI S Sn 13 38 09.0 -3.9
ZAI Zaio 3.50 100 *i* P Pn 13 37 32.0 -0.8
TZC Tazercounte 3.50 174 *i* P Pn 13 37 31.0 -1.9
TZC *i* S Sn 13 38 07.0 -6.0
TZC Tazercounte 3.50 174 P Pn 13 37 31.0 -1.9
TZC S Sn 13 38 07.0 -6.0
TZC Tazercounte 3.50 174 P Pn 13 37 31.0 -1.9
TZC S Sn 13 38 07.0 -6.0
TZC Tazercounte 3.50 174 *i* P Pn 13 37 31.0 -1.9
EBER Berja 3.51 68 P Pn 13 37 32.5 -0.4
EBER S Sn 13 38 11.1 -2.0
EBER Berja 3.51 68 P Pn 13 37 32.5 -0.4
28nm,0.2s,SNR=112
EBER S Sn 13 38 11.1 -2.0
116nm,0.4s,SNR=5.0
EBER Berja 3.51 68 P Pn 13 37 32.5 -0.4
28nm,0.2s,SNR=112
EBER S Sn 13 38 11.1 -2.0
116nm,0.4s,SNR=5.0
EBER Berja 3.51 68 P Pn 13 37 32.5 -0.4
28nm,0.2s,SNR=112
EBER S Sn 13 38 11.1 -2.1
116nm,0.4s,SNR=5.0
LIS Lisbon 3.54 331 *e*P Pn 13 37 34.1 +0.7
LIS *e*S Sn 13 38 12.6 -1.4
LIS Lisbon 3.54 331 *e*P Pn 13 37 34.1 +0.7
LIS *e*S Sn 13 38 12.6 -1.4
LIS *e*S Sn 13 38 12.7 -1.3
LIS AML AML 13 38 15.4
comp=E,269nm,0.3s
LIS Lisbon 3.54 331 P Pn 13 37 34.1 +0.7
LIS S Sn 13 38 12.6 -1.4
LIS Lisbon 3.54 331 P Pn 13 37 34.1 +0.7
LIS S Sn 13 38 12.6 -1.4
LIS Lisbon 3.54 331 *e*P Pn 13 37 34.1 +0.7
LIS *e*S Sn 13 38 12.6 -1.4
EBAN Banos Encina 3.57 44 P Pn 13 37 34.4 +0.5
EBAN S Sn 13 38 12.4 -2.3
EBAN Banos Encina 3.57 44 P Pn 13 37 34.4 +0.5
comp=E,114nm,0.1s,SNR=18
EBAN S Sn 13 38 12.4 -2.3
comp=E,327nm,0.2s,SNR=6.9
EBAN Banos Encina 3.57 44 P Pn 13 37 34.4 +0.5
comp=E,114nm,0.1s,SNR=18
EBAN S Sn 13 38 12.4 -2.3
comp=E,327nm,0.2s,SNR=6.9
EBAN Banos Encina 3.57 44 P Pn 13 37 34.4 +0.6
comp=E,114nm,0.1s,SNR=18
EBAN S Sn 13 38 12.4 -2.4
comp=E,327nm,0.2s,SNR=6.9
INMG Instituto de M 3.58 332 *e*Pn Pn 13 37 35.1 +1.1
INMG Instituto de M 3.58 332 P Pn 13 37 35.1 +1.1
INMG Instituto de M 3.58 332 P Pn 13 37 35.1 +1.1
INMG Instituto de M 3.58 332 *e*Pn Pn 13 37 35.1 +1.1
ALMR Almeirim 3.75 340 *e*P Pn 13 37 36.9 +0.7
ALMR *e*S Sn 13 38 17.9 -1.1
ALMR Almeirim 3.75 340 *e*P Pn 13 37 36.9 +0.7
ALMR *e*S Sn 13 38 17.9 -1.1
ALMR *e*S Sn 13 38 17.9 -1.1
ALMR AML AML 13 38 19.1
comp=E,138nm,0.4s
ALMR Almeirim 3.75 340 P Pn 13 37 36.9 +0.7
ALMR S Sn 13 38 17.9 -1.1
ALMR Almeirim 3.75 340 P Pn 13 37 36.9 +0.7
ALMR S Sn 13 38 17.9 -1.1
ALMR Almeirim 3.75 340 *e*P Pn 13 37 36.9 +0.7
ALMR *e*S Sn 13 38 17.9 -1.1
EQES Quesada 3.79 54 P Pn 13 37 37.4 +0.7
EQES S Sn 13 38 18.3 -1.8
EQES Quesada 3.79 54 P Pn 13 37 37.4 +0.6
comp=E,36nm,0.2s,SNR=18
EQES S Sn 13 38 18.3 -1.8
comp=E,517nm,0.3s,SNR=5.0
EQES Quesada 3.79 54 P Pn 13 37 37.4 +0.6
comp=E,36nm,0.2s,SNR=18
EQES S Sn 13 38 18.3 -1.8
comp=E,517nm,0.3s,SNR=5.0
EQES Quesada 3.79 54 P Pn 13 37 37.4 +0.6
comp=E,36nm,0.2s,SNR=18
EQES S Sn 13 38 18.3 -1.8
comp=E,517nm,0.3s,SNR=5.0
PMRV Marv??o 3.80 355 *i* Pn Pn 13 37 37.6 +0.6
PMRV *e*Sn Sn 13 38 18.6 -1.8
PMRV A 13 38 20.5
comp=E,279nm,0.6s
PMRV Marv??o 3.80 355 ⇓P Pn 13 37 37.6 +0.6
PMRV S Sn 13 38 18.6 -1.8
comp=E,279nm,0.6s
PMRV Marv??o 3.80 355 ⇓P Pn 13 37 37.6 +0.6
PMRV S Sn 13 38 18.6 -1.8
comp=E,279nm,0.6s
PMAFR Mafra 3.80 331 *i* Pn Pn 13 37 37.6 +0.6
PMAFR *e*Sn Sn 13 38 19.2 -1.2
PMAFR A 13 38 21.4
comp=E,310nm,0.2s
PMAFR Mafra 3.80 331 P Pn 13 37 37.5 +0.5
comp=E,210nm,0.1s,SNR=18
PMAFR S Sn 13 38 19.1 -1.3
comp=E,300nm,0.2s,SNR=6.4
PMAFR Mafra 3.80 331 P Pn 13 37 37.5 +0.5
comp=E,210nm,0.1s,SNR=18
PMAFR S Sn 13 38 19.1 -1.3
comp=E,300nm,0.2s,SNR=6.4
PMAFR Mafra 3.80 331 P Pn 13 37 37.5 +0.5
comp=E,210nm,0.1s,SNR=18
PMAFR *e*Sn Sn 13 38 19.2 -1.2
comp=E,310nm,0.2s
ENIJ Nijar 4.05 69 P Pn 13 37 40.6 +0.2
ENIJ S Sn 13 38 26.5 -0.1
ENIJ Nijar 4.05 69 P Pn 13 37 40.6 +0.2
comp=E,66nm,0.4s,SNR=9.0
ENIJ S Sn 13 38 26.5 -0.1
comp=E,34nm,0.3s
ENIJ Nijar 4.05 69 P Pn 13 37 40.6 +0.2
comp=E,66nm,0.4s,SNR=9.0
ENIJ S Sn 13 38 26.5 0.0
comp=E,34nm,0.3s
ENIJ Nijar 4.05 69 P Pn 13 37 40.6 +0.2
comp=E,66nm,0.4s,SNR=9.0
ENIJ S Sn 13 38 26.5 0.0
comp=E,34nm,0.3s
EHUE Huescar 4.11 57 P Pn 13 37 41.8 +0.5
EHUE S Sn 13 38 26.7 -1.4
EHUE Huescar 4.11 57 P Pn 13 37 41.8 +0.5
comp=E,31nm,0.2s,SNR=18
EHUE S Sn 13 38 26.7 -1.4
comp=E,78nm,0.2s,SNR=7.9
EHUE Huescar 4.11 57 P Pn 13 37 41.8 +0.5
comp=E,31nm,0.2s,SNR=18
EHUE S Sn 13 38 26.7 -1.4
comp=E,78nm,0.2s,SNR=7.9
EHUE Huescar 4.11 57 P Pn 13 37 41.8 +0.5
comp=E,31nm,0.2s,SNR=18
EHUE S Sn 13 38 26.7 -1.4
comp=E,78nm,0.2s,SNR=7.9
PTOM Tomar 4.14 344 *i* Pn Pn 13 37 42.3 +0.7
PTOM *e*Sn Sn 13 38 27.3 -1.5
PTOM A 13 38 29.8
comp=E,125nm,0.3s
PTOM Tomar 4.14 344 ⇓P Pn 13 37 42.3 +0.7
PTOM S Sn 13 38 27.3 -1.5
comp=E,62nm,0.3s
PTOM Tomar 4.14 344 ⇓P Pn 13 37 42.3 +0.7
PTOM S Sn 13 38 27.3 -1.5
comp=E,62nm,0.3s
ZFT Errachidia 4.19 148 P Pn 13 37 42.0 -0.3
ZFT S Sn 13 38 24.0 -6.0
ZFT Errachidia 4.19 148 P Pn 13 37 42.0 -0.3
ZFT S Sn 13 38 24.0 -6.0
ZFT Errachidia 4.19 148 *i* P Pn 13 37 42.0 -0.3
PCBR Castelo Branco 4.22 354 *i* Pn Pn 13 37 43.3 +0.6
PCBR *e*Sn Sn 13 38 27.5 -3.2
PCBR A 13 38 29.7
comp=E,181nm,0.3s
PCBR Castelo Branco 4.22 354 ⇓P Pn 13 37 43.3 +0.6
PCBR S Sn 13 38 27.5 -3.2
comp=E,91nm,0.3s
PCBR Castelo Branco 4.22 354 ⇓P Pn 13 37 43.3 +0.6
PCBR S Sn 13 38 27.5 -3.2
comp=E,91nm,0.3s
PAB San Pablo 4.41 27 *e*P Pn 13 37 45.8 +0.4
PAB San Pablo 4.41 27 *e*P Pn 13 37 45.8 +0.5
EPLA Plasencia 4.47 9 ⇓P Pn 13 37 45.8 -0.4
EPLA S Sn 13 38 33.6 -3.4
EPLA Plasencia 4.47 9 ⇓P Pn 13 37 45.8 -0.4
comp=E,132nm,0.2s,SNR=18
EPLA S Sn 13 38 33.6 -3.4
comp=E,372nm,0.3s,SNR=7.9
EPLA Plasencia 4.47 9 ⇓P Pn 13 37 45.8 -0.4
comp=E,132nm,0.2s,SNR=18
EPLA S Sn 13 38 33.6 -3.4
comp=E,372nm,0.3s,SNR=7.9
EPLA Plasencia 4.47 9 P Pn 13 37 45.8 -0.4
comp=E,132nm,0.2s,SNR=18
EPLA S Sn 13 38 33.6 -3.3
comp=E,372nm,0.3s,SNR=7.9
EVIA Vianos 4.64 49 P Pn 13 37 48.6 0.0
EVIA S Sn 13 38 36.6 -4.6
EVIA Vianos 4.64 49 P Pn 13 37 48.6 0.0
comp=E,173nm,0.2s,SNR=240
EVIA S Sn 13 38 36.6 -4.6
comp=E,184nm,0.2s,SNR=20
EVIA Vianos 4.64 49 P Pn 13 37 48.6 0.0
comp=E,173nm,0.2s,SNR=240
EVIA S Sn 13 38 36.6 -4.6
comp=E,184nm,0.2s,SNR=20
EVIA Vianos 4.64 49 P Pn 13 37 48.6 +0.1
comp=E,173nm,0.2s,SNR=240
ESDC Sonseca Array 4.67 30 Pn Pn 13 37 49.6 +0.7
comp=E,15nm,0.3s,baz=213,slow=13,SNR=57
ESDC Sn Sn 13 38 37.7 -4.2
comp=E,142nm,0.3s,baz=216,slow=21,SNR=32
ESDC Sonseca Array 4.67 30 P Pn 13 37 49.6 +0.6
ESDC S Sn 13 38 38.3 -3.5
ESDC Sonseca Array 4.67 30 P Pn 13 37 49.6 +0.6
comp=E,26nm,0.2s,baz=214,slow=12,SNR=39
ESDC S Sn 13 38 38.3 -3.5
comp=E,264nm,0.2s,baz=214,slow=24,SNR=51
ESDC Sonseca Array 4.67 30 P Pn 13 37 49.6 +0.6
comp=E,26nm,0.2s,baz=214,slow=12,SNR=39
ESDC S Sn 13 38 38.3 -3.5
comp=E,264nm,0.2s,baz=214,slow=24,SNR=51
ESDC Sonseca Array 4.67 30 P Pn 13 37 49.6 +0.7
comp=E,26nm,0.2s,baz=214,slow=12,SNR=39
ESDC S Sn 13 38 38.3 -3.5
comp=E,264nm,0.2s,baz=214,slow=24,SNR=51
ESLA Sonseca Array 4.67 30 *e*P Pn 13 37 49.3 +0.4
ESLA Sonseca Array 4.67 30 *e*P Pn 13 37 49.3 +0.4
MTE Manteigas 4.78 354 *i* Pn Pn 13 37 50.9 +0.5
MTE *e*Sn Sn 13 38 41.7 -2.8
MTE A 13 38 44.7
comp=E,268nm,0.7s
MTE Manteigas 4.78 354 *e*P Pn 13 37 50.8 +0.4
MTE Manteigas 4.78 354 *e*P Pn 13 37 50.8 +0.4
MTE *e*Sn Sn 13 38 41.7 -2.8
comp=E,268nm,0.7s
EMUR La Murta 5.08 63 P Pn 13 37 54.7 +0.1
EMUR S Sn 13 38 48.5 -3.5
EMUR La Murta 5.08 63 P Pn 13 37 54.7 +0.1
comp=E,42nm,0.5s,SNR=11
EMUR S Sn 13 38 48.5 -3.5
comp=E,47nm,0.4s
EMUR La Murta 5.08 63 P Pn 13 37 54.7 +0.1
comp=E,42nm,0.5s,SNR=11
EMUR S Sn 13 38 48.5 -3.5
comp=E,47nm,0.4s
EMUR La Murta 5.08 63 P Pn 13 37 54.7 +0.2
comp=E,42nm,0.5s,SNR=11
EMUR S Sn 13 38 48.5 -3.4
comp=E,47nm,0.4s
PVIS Viseu 5.12 352 *e*Pn Pn 13 37 55.4 +0.3
PVIS *e*Sn Sn 13 38 50.7 -2.3
PVIS A 13 38 51.5
comp=E,81nm,0.3s
PVIS Viseu 5.12 352 P Pn 13 37 55.4 +0.3
PVIS S Sn 13 38 50.7 -2.3
comp=E,40nm,0.3s
PVIS Viseu 5.12 352 P Pn 13 37 55.4 +0.3
PVIS S Sn 13 38 50.7 -2.3
comp=E,40nm,0.3s
PVIS Viseu 5.12 352 *e*Pn Pn 13 37 55.4 +0.3
PVIS *e*Sn Sn 13 38 50.7 -2.3
comp=E,81nm,0.3s
CART Cartagena 5.16 66 ⇑P Pn 13 37 56.4 +0.8
CART S Sn 13 38 44.0 -10
CART Cartagena 5.16 66 ⇑P Pn 13 37 56.4 +0.8
CART S Sn 13 38 44.0 -10
CART Cartagena 5.16 66 *i* P Pn 13 37 56.4 +0.8
ETOB Tobarra 5.25 54 P Pn 13 37 56.9 0.0
ETOB S Sn 13 38 51.9 -4.3
ETOB Tobarra 5.25 54 P Pn 13 37 56.9 0.0
comp=E,107nm,0.1s,SNR=18
ETOB S Sn 13 38 51.9 -4.3
comp=E,189nm,0.3s,SNR=8.3
ETOB Tobarra 5.25 54 P Pn 13 37 56.9 0.0
comp=E,107nm,0.1s,SNR=18
ETOB S Sn 13 38 51.9 -4.3
comp=E,189nm,0.3s,SNR=8.3
ETOB Tobarra 5.25 54 P Pn 13 37 56.9 0.0
comp=E,107nm,0.1s,SNR=18
ETOB S Sn 13 38 51.8 -4.3
comp=E,189nm,0.3s,SNR=8.3
GUD Guadarrama 5.46 23 P Pn 13 38 00.6 +0.9
GUD S Sn 13 38 57.1 -4.1
GUD Guadarrama 5.46 23 P Pn 13 38 00.6 +0.9
comp=E,11nm,0.2s,SNR=18
GUD S Sn 13 38 57.1 -4.1
comp=E,256nm,0.4s,SNR=7.9
GUD Guadarrama 5.46 23 P Pn 13 38 00.6 +0.9
comp=E,11nm,0.2s,SNR=18
GUD S Sn 13 38 57.1 -4.1
comp=E,256nm,0.4s,SNR=7.9
GUD Guadarrama 5.46 23 P Pn 13 38 00.6 +0.9
comp=E,11nm,0.2s,SNR=18
MVO Moncorvo 5.52 359 *e*Pn Pn 13 38 01.0 +0.5
MVO *e*Sn Sn 13 38 59.0 -3.7
MVO A 13 39 02.2
comp=E,304nm,0.7s
MVO Moncorvo 5.52 359 ⇓P Pn 13 38 01.0 +0.5
MVO S Sn 13 38 58.9 -3.8
MVO Moncorvo 5.52 359 ⇓P Pn 13 38 01.0 +0.5
comp=E,175nm,0.3s,SNR=18
MVO S Sn 13 38 58.9 -3.8
comp=E,303nm,0.3s,SNR=20
MVO Moncorvo 5.52 359 ⇓P Pn 13 38 01.0 +0.5
comp=E,175nm,0.3s,SNR=18
MVO S Sn 13 38 58.9 -3.8
comp=E,303nm,0.3s,SNR=20
MVO Moncorvo 5.52 359 P Pn 13 38 01.0 +0.5
comp=E,175nm,0.3s,SNR=18
AFS Agadir Fac de 5.63 203 P Pn 13 38 02.0 -0.1
AFS S Sn 13 39 00.0 -5.5
AFS Agadir Fac de 5.63 203 P Pn 13 38 02.0 -0.1
AFS S Sn 13 39 00.0 -5.5
AFS Agadir Fac de 5.63 203 *i* P Pn 13 38 02.0 -0.1
PTO Porto 5.64 347 *e*Pn Pn 13 38 03.0 +0.7
PTO *e*Sn Sn 13 39 02.1 -3.7
PTO Porto 5.64 347 P Pn 13 38 03.0 +0.7
PTO S Sn 13 39 02.1 -3.7
PTO Porto 5.64 347 P Pn 13 38 03.0 +0.7
PTO S Sn 13 39 02.1 -3.7
PTO Porto 5.64 347 *e*Pn Pn 13 38 03.0 +0.7
PVRL Vila Real 5.66 354 *e*Pn Pn 13 38 03.0 +0.5
PVRL *e*Sn Sn 13 39 02.1 -4.1
PVRL Vila Real 5.66 354 P Pn 13 38 03.0 +0.5
PVRL S Sn 13 39 02.1 -4.1
PVRL Vila Real 5.66 354 P Pn 13 38 03.0 +0.5
PVRL S Sn 13 39 02.1 -4.1
PVRL Vila Real 5.66 354 *e*Pn Pn 13 38 03.0 +0.5
PCAB Cabril 6.12 352 *e*Pn Pn 13 38 09.2 +0.4
PCAB *e*Sn Sn 13 39 12.9 -4.7
PCAB A 13 39 16.9
comp=E,80nm,0.6s
PCAB Cabril 6.12 352 P Pn 13 38 09.2 +0.4
PCAB S Sn 13 39 12.9 -4.7
comp=E,40nm,0.6s
PCAB Cabril 6.12 352 P Pn 13 38 09.2 +0.4
PCAB S Sn 13 39 12.9 -4.7
comp=E,40nm,0.6s
PCAB Cabril 6.12 352 *e*Pn Pn 13 38 09.2 +0.4
PBRG Braganca 6.16 1 *e*Pn Pn 13 38 09.9 +0.6
PBRG *e*Sn Sn 13 39 13.7 -4.8
PBRG A 13 39 18.0
comp=E,58nm,0.4s
PBRG Braganca 6.16 1 P Pn 13 38 09.9 +0.6
PBRG S Sn 13 39 13.7 -4.8
comp=E,29nm,0.4s
PBRG Braganca 6.16 1 P Pn 13 38 09.9 +0.6
PBRG S Sn 13 39 13.7 -4.8
comp=E,29nm,0.4s
PBRG Braganca 6.16 1 *e*Pn Pn 13 38 09.9 +0.6
YBT Youssef Ben Ta 6.16 201 P Pn 13 38 08.0 -1.4
YBT S Sn 13 39 11.0 -7.7
YBT Youssef Ben Ta 6.16 201 P Pn 13 38 08.0 -1.4
YBT S Sn 13 39 11.0 -7.7
YBT Youssef Ben Ta 6.16 201 *i* P Pn 13 38 08.0 -1.4
ECHE Chera 6.17 48 P Pn 13 38 09.2 -0.3
ECHE S Sn 13 39 13.0 -5.7

ECHE Chera 6.17 48 P **Pn 13 38 09.2 -0.3**
comp=E,48nm,0.2s,SNR=18
ECHE S **Sn 13 39 13.0 -5.7**
comp=E,46nm,0.2s,SNR=6.3
ECHE Chera 6.17 48 P **Pn 13 38 09.2 -0.3**
comp=E,48nm,0.2s,SNR=18
ECHE S **Sn 13 39 13.0 -5.7**
comp=E,46nm,0.2s,SNR=6.3
ECHE Chera 6.17 48 P **Pn 13 38 09.2 -0.3**
comp=E,48nm,0.2s,SNR=18
EBEN Beniarda 6.17 58 P **Pn 13 38 09.0 -0.5**
EBEN S **Sn 13 39 13.2 -5.7**
EBEN Beniarda 6.17 58 P **Pn 13 38 09.0 -0.6**
comp=E,4.2nm,0.1s,SNR=18
EBEN S **Sn 13 39 13.2 -5.7**
comp=E,8.6nm,0.2s,SNR=31
EBEN Beniarda 6.17 58 P **Pn 13 38 09.0 -0.6**
comp=E,4.2nm,0.1s,SNR=18
EBEN S **Sn 13 39 13.2 -5.7**
comp=E,8.6nm,0.2s,SNR=31
EBEN Beniarda 6.17 58 P **Pn 13 38 09.0 -0.6**
comp=E,4.2nm,0.1s,SNR=18
ELOB Lobios 6.28 352 P **Pn 13 38 11.3 +0.2**
ELOB S **Sn 13 39 16.6 -4.9**
ELOB Lobios 6.28 352 P **Pn 13 38 11.3 +0.2**
comp=E,24nm,0.3s,SNR=18
ELOB S **Sn 13 39 16.6 -4.9**
comp=E,69nm,0.2s,SNR=9.1
ELOB Lobios 6.28 352 P **Pn 13 38 11.3 +0.2**
comp=E,24nm,0.3s,SNR=18
ELOB S **Sn 13 39 16.6 -4.9**
comp=E,69nm,0.2s,SNR=9.1
ELOB Lobios 6.28 352 P **Pn 13 38 11.3 +0.3**
comp=E,24nm,0.3s,SNR=18
ECAL Calabor 6.30 1 P **Pn 13 38 11.9 +0.7**
ECAL S **Sn 13 39 17.8 -4.1**
ECAL Calabor 6.30 1 P **Pn 13 38 11.9 +0.7**
comp=E,84nm,0.2s,SNR=18
ECAL S **Sn 13 39 17.8 -4.1**
comp=E,144nm,0.3s,SNR=33
ECAL Calabor 6.30 1 P **Pn 13 38 11.9 +0.7**
comp=E,84nm,0.2s,SNR=18
ECAL S **Sn 13 39 17.8 -4.1**
comp=E,144nm,0.3s,SNR=33
ECAL Calabor 6.30 1 P **Pn 13 38 11.9 +0.7**
comp=E,84nm,0.2s,SNR=18
ETOR Torete 6.45 35 P **Pn 13 38 13.1 -0.2**
ETOR S **Sn 13 39 19.6 -6.0**
ETOR Torete 6.45 35 P **Pn 13 38 13.1 -0.2**
comp=E,136nm,0.2s,SNR=18
ETOR S **Sn 13 39 19.6 -6.0**
comp=E,470nm,0.3s,SNR=7.9
ETOR Torete 6.45 35 P **Pn 13 38 13.1 -0.2**
comp=E,136nm,0.2s,SNR=18
ETOR S **Sn 13 39 19.6 -6.0**
comp=E,470nm,0.3s,SNR=7.9
ETOR Torete 6.45 35 P **Pn 13 38 13.1 -0.2**
comp=E,136nm,0.2s,SNR=18
EZAM Zamans 6.64 349 P **Pn 13 38 16.5 +0.5**
EZAM S **Sn 13 39 25.3 -5.1**
EZAM Zamans 6.64 349 P **Pn 13 38 16.5 +0.5**
comp=E,28nm,0.2s,SNR=18
EZAM S **Sn 13 39 25.3 -5.1**
comp=E,54nm,0.4s,SNR=7.9
EZAM Zamans 6.64 349 P **Pn 13 38 16.5 +0.5**
comp=E,28nm,0.2s,SNR=18
EZAM S **Sn 13 39 25.3 -5.1**
comp=E,54nm,0.4s,SNR=7.9
EZAM Zamans 6.64 349 P **Pn 13 38 16.5 +0.5**
comp=E,28nm,0.2s,SNR=18
ERUA La Rua 6.75 359 P **Pn 13 38 18.2 +0.8**
ERUA S **Sn 13 39 29.7 -3.3**
ERUA La Rua 6.75 359 P **Pn 13 38 18.2 +0.8**
comp=E,44nm,0.3s,SNR=7.9
ERUA S **Sn 13 39 29.7 -3.3**
comp=E,29nm,0.3s,SNR=7.9
ERUA La Rua 6.75 359 P **Pn 13 38 18.2 +0.8**
comp=E,44nm,0.3s,SNR=7.9
ERUA S **Sn 13 39 29.7 -3.3**
comp=E,29nm,0.3s,SNR=7.9
ERUA La Rua 6.75 359 P **Pn 13 38 18.2 +0.8**
comp=E,44nm,0.3s,SNR=7.9
EMOS Mosqueruela 6.95 45 P **Pn 13 38 21.0 +0.8**
EMOS S **Sn 13 39 33.8 -4.2**
EMOS Mosqueruela 6.95 45 P **Pn 13 38 21.0 +0.8**
comp=E,114nm,0.4s,SNR=18
EMOS S **Sn 13 39 33.8 -4.2**
comp=E,81nm,0.3s,SNR=9.5
EMOS Mosqueruela 6.95 45 P **Pn 13 38 21.0 +0.8**
comp=E,114nm,0.4s,SNR=18
EMOS S **Sn 13 39 33.8 -4.2**
comp=E,81nm,0.3s,SNR=9.5
EMOS Mosqueruela 6.95 45 P **Pn 13 38 21.0 +0.8**
comp=E,114nm,0.4s,SNR=18
STS Santiago 7.34 351 P **Pn 13 38 26.0 +0.4**
STS S **Sn 13 39 43.9 -3.8**
STS Santiago 7.34 351 P **Pn 13 38 26.0 +0.4**
comp=E,6.8nm,0.1s,SNR=6.5
STS S **Sn 13 39 43.9 -3.8**
comp=E,11nm,0.2s,SNR=6.2
STS Santiago 7.34 351 P **Pn 13 38 26.0 +0.4**
comp=E,6.8nm,0.1s,SNR=6.5
STS S **Sn 13 39 43.9 -3.8**
comp=E,11nm,0.2s,SNR=6.2
STS Santiago 7.34 351 P **Pn 13 38 26.0 +0.4**
comp=E,6.8nm,0.1s,SNR=6.5
EIBI Ibiza 7.42 60 P **Pn 13 38 26.0 -0.6**
EIBI S **Sn 13 39 44.3 -5.1**
EIBI Ibiza 7.42 60 P **Pn 13 38 26.0 -0.6**
comp=E,9.6nm,0.1s,SNR=22
EIBI S **Sn 13 39 44.3 -5.1**
comp=E,17nm,0.3s,SNR=7.9
EIBI Ibiza 7.42 60 P **Pn 13 38 26.0 -0.6**
comp=E,9.6nm,0.1s,SNR=22
EIBI S **Sn 13 39 44.3 -5.1**
comp=E,17nm,0.3s,SNR=7.9
EIBI Ibiza 7.42 60 P **Pn 13 38 26.0 -0.6**
comp=E,9.6nm,0.1s,SNR=22
EMAZ Mazaricos 7.47 348 P **Pn 13 38 27.7 +0.4**
EMAZ S **Sn 13 39 45.7 -5.0**
EMAZ Mazaricos 7.47 348 P **Pn 13 38 27.7 +0.4**
comp=E,15nm,0.3s,SNR=20
EMAZ S **Sn 13 39 45.7 -5.0**
comp=E,14nm,0.3s,SNR=7.9
EMAZ Mazaricos 7.47 348 P **Pn 13 38 27.7 +0.4**
comp=E,15nm,0.3s,SNR=20
EMAZ S **Sn 13 39 45.7 -5.0**
comp=E,14nm,0.3s,SNR=7.9
EMAZ Mazaricos 7.47 348 P **Pn 13 38 27.7 +0.4**
comp=E,15nm,0.3s,SNR=20
EPON Pontenova 7.68 359 P **Pn 13 38 30.8 +0.6**
EPON S **Sn 13 39 51.0 -4.9**
EPON Pontenova 7.68 359 P **Pn 13 38 30.8 +0.6**
comp=E,8.4nm,0.3s,SNR=7.9
EPON S **Sn 13 39 51.0 -4.9**
comp=E,18nm,0.2s,SNR=7.9
EPON Pontenova 7.68 359 P **Pn 13 38 30.8 +0.6**
comp=E,8.4nm,0.3s,SNR=7.9
EPON S **Sn 13 39 51.0 -4.9**
comp=E,18nm,0.2s,SNR=7.9
EPON Pontenova 7.68 359 P **Pn 13 38 30.8 +0.6**
comp=E,8.4nm,0.3s,SNR=7.9
ECRI Cripan 7.77 25 P **Pn 13 38 33.3 +1.9**
ECRI S **Sn 13 39 53.9 -4.0**
ECRI Cripan 7.77 25 P **Pn 13 38 33.3 +1.9**
comp=E,25nm,0.2s,SNR=7.9
ECRI S **Sn 13 39 53.9 -4.0**
comp=E,67nm,0.3s,SNR=7.9
ECRI Cripan 7.77 25 P **Pn 13 38 33.3 +1.9**
comp=E,25nm,0.2s,SNR=7.9
ECRI S **Sn 13 39 53.9 -4.0**
comp=E,67nm,0.3s,SNR=7.9
ECRI Cripan 7.77 25 P **Pn 13 38 33.3 +1.9**
comp=E,25nm,0.2s,SNR=7.9
EARI Arriondas 7.77 9 P **Pn 13 38 32.0 +0.6**
EARI S **Sn 13 39 52.9 -5.2**
EARI Arriondas 7.77 9 P **Pn 13 38 32.0 +0.6**
comp=E,10nm,0.2s,SNR=68
EARI S **Sn 13 39 52.9 -5.2**
comp=E,59nm,0.4s,SNR=9.4
EARI Arriondas 7.77 9 P **Pn 13 38 32.0 +0.6**
comp=E,10nm,0.2s,SNR=68
EARI S **Sn 13 39 52.9 -5.2**
comp=E,59nm,0.4s,SNR=9.4
EARI Arriondas 7.77 9 P **Pn 13 38 32.0 +0.6**
comp=E,10nm,0.2s,SNR=68
ERTA Horta de San J 7.80 45 P **Pn 13 38 32.2 +0.3**
ERTA S **Sn 13 39 53.3 -5.6**
ERTA Horta de San J 7.80 45 P **Pn 13 38 32.2 +0.3**
comp=E,11nm,0.2s,SNR=13
ERTA S **Sn 13 39 53.3 -5.6**
comp=E,24nm,0.3s,SNR=7.9
ERTA Horta de San J 7.80 45 P **Pn 13 38 32.2 +0.3**
comp=E,11nm,0.2s,SNR=13
ERTA S **Sn 13 39 53.3 -5.6**
comp=E,24nm,0.3s,SNR=7.9
ERTA Horta de San J 7.80 45 P **Pn 13 38 32.2 +0.3**
comp=E,11nm,0.2s,SNR=13
ESAC San Caprasio 7.91 38 P **Pn 13 38 34.4 +1.1**
ESAC S **Sn 13 39 57.2 -4.2**
ESAC San Caprasio 7.91 38 P **Pn 13 38 34.4 +1.1**
comp=E,30nm,0.2s,SNR=14
ESAC S **Sn 13 39 57.2 -4.2**
comp=E,359nm,0.4s,SNR=8.1
ESAC San Caprasio 7.91 38 P **Pn 13 38 34.4 +1.1**
comp=E,30nm,0.2s,SNR=14
ESAC S **Sn 13 39 57.2 -4.2**
comp=E,359nm,0.4s,SNR=8.1
ESAC San Caprasio 7.91 38 P **Pn 13 38 34.4 +1.1**
comp=E,30nm,0.2s,SNR=14
ELAN Lanestosa 8.05 19 P **Pn 13 38 35.9 +0.5**
ELAN S **Sn 13 39 57.7 -7.3**
ELAN Lanestosa 8.05 19 P **Pn 13 38 35.9 +0.5**
comp=E,12nm,0.3s,SNR=24
ELAN S **Sn 13 39 57.7 -7.3**
comp=E,32nm,0.3s,SNR=8.9
ELAN Lanestosa 8.05 19 P **Pn 13 38 35.9 +0.5**
comp=E,12nm,0.3s,SNR=24
ELAN S **Sn 13 39 57.7 -7.3**
comp=E,32nm,0.3s,SNR=8.9
ELAN Lanestosa 8.05 19 P **Pn 13 38 35.9 +0.6**
comp=E,12nm,0.3s,SNR=24
PMPS Porto Santo 8.18 254 *e*Sn **Sn 13 40 00.7 -7.6**
PMPS Porto Santo 8.18 254 S **Sn 13 40 00.7 -7.6**
PMPS Porto Santo 8.18 254 S **Sn 13 40 00.7 -7.6**
EARA Aranguren 8.25 29 S **Sn 13 40 05.0 -4.8**
comp=E,100nm,0.3s,SNR=11
EARA Aranguren 8.25 29 S **Sn 13 40 05.0 -4.8**
comp=E,100nm,0.3s,SNR=11
IUNC Unciti 8.27 29 P **Pn 13 38 40.1 +1.8**
comp=E,7.5nm,0.2s,SNR=7.9
IUNC S **Sn 13 40 06.0 -4.3**
comp=E,86nm,0.3s,SNR=7.3
IUNC Unciti 8.27 29 P **Pn 13 38 40.1 +1.8**
comp=E,7.5nm,0.2s,SNR=7.9
IUNC S **Sn 13 40 06.0 -4.3**
comp=E,86nm,0.3s,SNR=7.3
IUNC Unciti 8.27 29 P **Pn 13 38 40.1 +1.9**
comp=E,7.5nm,0.2s,SNR=7.9
IZUN Zunzarren 8.37 29 P **Pn 13 38 41.4 +1.7**
comp=E,12nm,0.3s,SNR=7.9
IZUN S **Sn 13 40 08.2 -4.7**
comp=E,57nm,0.4s,SNR=7.9
IZUN Zunzarren 8.37 29 P **Pn 13 38 41.4 +1.7**
comp=E,12nm,0.3s,SNR=7.9
IZUN S **Sn 13 40 08.2 -4.7**
comp=E,57nm,0.4s,SNR=7.9
IZUN Zunzarren 8.37 29 P **Pn 13 38 41.4 +1.7**
comp=E,12nm,0.3s,SNR=7.9
IUSE Utxeti 8.41 28 P **Pn 13 38 41.8 +1.6**
comp=E,6.2nm,0.2s,SNR=6.9
IUSE S **Sn 13 40 08.2 -5.6**
comp=E,49nm,0.4s,SNR=4.7
IUSE Utxeti 8.41 28 P **Pn 13 38 41.8 +1.6**
comp=E,6.2nm,0.2s,SNR=6.9
IUSE S **Sn 13 40 08.2 -5.6**
comp=E,49nm,0.4s,SNR=4.7
IUSE Utxeti 8.41 28 P **Pn 13 38 41.8 +1.6**
comp=E,6.2nm,0.2s,SNR=6.9
EORO Oroz-Betelu 8.46 29 P **Pn 13 38 42.4 +1.6**
comp=E,11nm,0.2s,SNR=7.9
EORO S **Sn 13 40 09.9 -5.1**
comp=E,112nm,0.5s,SNR=7.9
EORO Oroz-Betelu 8.46 29 P **Pn 13 38 42.4 +1.6**
comp=E,11nm,0.2s,SNR=7.9
EORO S **Sn 13 40 09.9 -5.1**
comp=E,112nm,0.5s,SNR=7.9
EORO Oroz-Betelu 8.46 29 P **Pn 13 38 42.4 +1.5**
comp=E,11nm,0.2s,SNR=7.9
EPOB Poblet 8.49 45 P **Pn 13 38 41.4 +0.2**
EPOB S **Sn 13 40 09.3 -6.4**
EPOB Poblet 8.49 45 P **Pn 13 38 41.4 +0.2**
comp=E,4.4nm,0.1s,SNR=16
EPOB S **Sn 13 40 09.3 -6.4**
comp=E,8.2nm,0.3s,SNR=7.3
EPOB Poblet 8.49 45 P **Pn 13 38 41.4 +0.2**
comp=E,4.4nm,0.1s,SNR=16
EPOB S **Sn 13 40 09.3 -6.4**
comp=E,8.2nm,0.3s,SNR=7.3
EPOB Poblet 8.49 45 P **Pn 13 38 41.4 +0.1**
comp=E,4.4nm,0.1s,SNR=16
EFAM Famara 8.55 222 P **Pn 13 38 37.5 -4.7**
EFAM S **Sn 13 40 07.7 -10**
EFAM Famara 8.55 222 P **Pn 13 38 37.5 -4.7**
comp=E,6.1nm,0.2s,SNR=8.1
EFAM S **Sn 13 40 07.7 -10**
comp=E,57nm,0.2s,SNR=16
EFAM Famara 8.55 222 P **Pn 13 38 37.5 -4.7**
comp=E,6.1nm,0.2s,SNR=8.1
EFAM S **Sn 13 40 07.7 -10**
comp=E,57nm,0.2s,SNR=16
ELIZ Elizondo 8.60 27 P **Pn 13 38 44.1 +1.2**
ELIZ S **Sn 13 40 12.0 -6.5**
ELIZ Elizondo 8.60 27 P **Pn 13 38 44.1 +1.2**
comp=E,20nm,0.2s,SNR=14
ELIZ S **Sn 13 40 12.0 -6.5**
comp=E,79nm,0.3s,SNR=9.4
ELIZ Elizondo 8.60 27 P **Pn 13 38 44.1 +1.2**
comp=E,20nm,0.2s,SNR=14
ELIZ S **Sn 13 40 12.0 -6.5**
comp=E,79nm,0.3s,SNR=9.4
ELIZ Elizondo 8.60 27 P **Pn 13 38 44.1 +1.3**
comp=E,20nm,0.2s,SNR=14
EALK Alkurruntz 8.66 27 P **Pn 13 38 44.5 +0.9**
EALK S **Sn 13 40 14.2 -5.7**
EALK Alkurruntz 8.66 27 P **Pn 13 38 44.5 +0.9**
comp=E,42nm,0.3s,SNR=56
EALK S **Sn 13 40 14.2 -5.7**
comp=E,196nm,0.3s,SNR=16
EALK Alkurruntz 8.66 27 P **Pn 13 38 44.5 +0.9**
comp=E,42nm,0.3s,SNR=56
EALK S **Sn 13 40 14.2 -5.7**
comp=E,196nm,0.3s,SNR=16
EALK Alkurruntz 8.66 27 P **Pn 13 38 44.5 +0.9**
comp=E,42nm,0.3s,SNR=56
SJPF Ste Jean 8.68 29 *e*P **Pn 13 38 45.1 +1.2**
SJPF *e*Sn **Sn 13 40 08.4 -12**
comp=E,81nm,0.3s
SJPF Ste Jean 8.68 29 P **Pn 13 38 45.1 +1.2**
SJPF S **Sn 13 40 08.4 -12**
comp=E,40nm,0.3s
SJPF Ste Jean 8.68 29 P **Pn 13 38 45.1 +1.2**
SJPF S **Sn 13 40 08.4 -12**
comp=E,40nm,0.3s
SJPF Ste Jean 8.68 29 *e*P **Pn 13 38 45.1 +1.2**
PMAR Madeira 8.76 253 *e*Pn **Pn 13 38 44.0 -1.0**
PMAR *e*Sn **Sn 13 40 17.5 -4.9**
PMAR A 13 40 19.8
comp=E,74nm,0.5s
PMAR Madeira 8.76 253 P **Pn 13 38 44.0 -1.0**
PMAR S **Sn 13 40 17.5 -4.9**
comp=E,37nm,0.5s
PMAR Madeira 8.76 253 P **Pn 13 38 44.0 -1.0**
PMAR S **Sn 13 40 17.5 -4.9**
comp=E,37nm,0.5s
PMAR Madeira 8.76 253 *e*Pn **Pn 13 38 44.0 -1.0**
ETOS Mallorca 8.76 59 P **Pn 13 38 45.3 +0.3**
ETOS S **Sn 13 40 16.6 -5.9**
ETOS Mallorca 8.76 59 P **Pn 13 38 45.3 +0.3**
comp=E,7.6nm,0.5s,SNR=7.1
ETOS S **Sn 13 40 16.6 -5.9**
comp=E,3.8nm,0.2s,SNR=6.1
ETOS Mallorca 8.76 59 P **Pn 13 38 45.3 +0.3**
comp=E,7.6nm,0.5s,SNR=7.1
ETOS S **Sn 13 40 16.6 -5.9**
comp=E,3.8nm,0.2s,SNR=6.1
ETOS Mallorca 8.76 59 P **Pn 13 38 45.3 +0.3**
comp=E,7.6nm,0.5s,SNR=7.1
ETSF Etsaut 8.78 32 *e*P **Pn 13 38 46.1 +0.9**
ETSF *e*Sn **Sn 13 40 12.7 -10**
comp=E,89nm,0.5s
ETSF Etsaut 8.78 32 P **Pn 13 38 46.1 +0.9**
ETSF S **Sn 13 40 12.7 -10**
comp=E,44nm,0.5s
ETSF Etsaut 8.78 32 *e*P **Pn 13 38 46.1 +0.9**
ETSF S **Sn 13 40 12.7 -10**
comp=E,44nm,0.5s
ETSF Etsaut 8.78 32 P **Pn 13 38 46.1 +0.9**
OSSF Osses 8.78 28 P **Pn 13 38 46.8 +1.5**
OSSF S **Sn 13 40 17.7 -5.3**
OSSF Osses 8.78 28 P **Pn 13 38 46.8 +1.5**
ORDF Ordiarp 8.88 30 P **Pn 13 38 48.0 +1.4**
ORDF Ordiarp 8.88 30 P **Pn 13 38 48.0 +1.4**
EBIE Bielsa 8.93 36 P **Pn 13 38 48.1 +0.7**
EBIE S **Sn 13 40 20.6 -6.0**
EBIE Bielsa 8.93 36 P **Pn 13 38 48.1 +0.7**
comp=E,38nm,0.4s,SNR=92
EBIE S **Sn 13 40 20.6 -6.0**
comp=E,58nm,0.4s,SNR=7.1
EBIE Bielsa 8.93 36 P **Pn 13 38 48.1 +0.7**
comp=E,38nm,0.4s,SNR=92
EBIE S **Sn 13 40 20.6 -6.0**
comp=E,58nm,0.4s,SNR=7.1
EBIE Bielsa 8.93 36 P **Pn 13 38 48.1 +0.8**
comp=E,38nm,0.4s,SNR=92
REYF Montagne du Re 8.99 32 P **Pn 13 38 49.3 +1.2**
REYF Montagne du Re 8.99 32 P **Pn 13 38 49.3 +1.2**
VIEF Viey 9.03 35 P **Pn 13 38 50.0 +1.4**
VIEF Viey 9.03 35 P **Pn 13 38 50.0 +1.4**
EMIR Miracle 9.11 44 P **Pn 13 38 50.0 +0.2**
EMIR S **Sn 13 40 24.9 -6.0**
EMIR Miracle 9.11 44 P **Pn 13 38 50.0 +0.2**
comp=E,14nm,0.1s,SNR=7.9
EMIR S **Sn 13 40 24.9 -6.0**
comp=E,56nm,0.4s,SNR=7.9
EMIR Miracle 9.11 44 P **Pn 13 38 50.0 +0.2**
comp=E,14nm,0.1s,SNR=7.9
EMIR S **Sn 13 40 24.9 -6.0**
comp=E,56nm,0.4s,SNR=7.9
EMIR Miracle 9.11 44 P **Pn 13 38 50.0 +0.2**
comp=E,14nm,0.1s,SNR=7.9
CFUE Fuerteventura 9.15 222 P **Pn 13 38 46.8 -3.6**
comp=E,5.4nm,0.1s,SNR=7.9
CFUE S **Sn 13 40 20.5 -12**
comp=E,61nm,0.2s,SNR=7.9
CFUE Fuerteventura 9.15 222 P **Pn 13 38 46.8 -3.6**
comp=E,5.4nm,0.1s,SNR=7.9
CFUE S **Sn 13 40 20.5 -12**
comp=E,61nm,0.2s,SNR=7.9
CFUE Fuerteventura 9.15 222 P **Pn 13 38 46.8 -3.6**
comp=E,5.4nm,0.1s,SNR=7.9
LABF Labassere 9.18 34 P **Pn 13 38 52.8 +2.1**
LABF Labassere 9.18 34 P **Pn 13 38 52.8 +2.1**
CSOR Sort 9.20 41 P **Pn 13 38 51.1 0.0**
CSOR S **Sn 13 40 26.9 -6.4**
CSOR Sort 9.20 41 P **Pn 13 38 51.1 0.0**
comp=E,9.5nm,0.2s,SNR=51
CSOR S **Sn 13 40 26.9 -6.4**
comp=E,28nm,0.3s,SNR=6.1
CSOR Sort 9.20 41 P **Pn 13 38 51.1 0.0**
comp=E,9.5nm,0.2s,SNR=51
CSOR S **Sn 13 40 26.9 -6.4**
comp=E,28nm,0.3s,SNR=6.1
CSOR Sort 9.20 41 P **Pn 13 38 51.1 0.0**
comp=E,9.5nm,0.2s,SNR=51
EPF Esparros 9.29 35 *e*P **Pn 13 38 53.4 +1.2**
EPF *e*Sn **Sn 13 40 26.3 -9.0**
comp=E,100nm,0.4s
EPF Esparros 9.29 35 *e*Pn **Pn 13 38 47.5 -4.7**
EPF *e*P 13 38 53.4
EPF *e*Sn **Sn 13 40 26.3 -9.0**
EPF Esparros 9.29 35 P **Pn 13 38 53.4 +1.2**
EPF S **Sn 13 40 26.3 -9.0**
comp=E,50nm,0.4s
EPF Esparros 9.29 35 P **Pn 13 38 53.4 +1.2**
EPF S **Sn 13 40 26.3 -9.0**
comp=E,50nm,0.4s
CFTV Fuerteventura 9.41 222 P **Pn 13 38 49.7 -4.3**
CFTV S **Sn 13 40 27.4 -11**
CFTV Fuerteventura 9.41 222 P **Pn 13 38 49.7 -4.3**
comp=E,1.8nm,0.2s,SNR=7.9
CFTV S **Sn 13 40 27.4 -11**
comp=E,16nm,0.2s,SNR=12
CFTV Fuerteventura 9.41 222 P **Pn 13 38 49.7 -4.3**
comp=E,1.8nm,0.2s,SNR=7.9
CFTV S **Sn 13 40 27.4 -11**
comp=E,16nm,0.2s,SNR=12
CFON Fontmartina 9.54 47 P **Pn 13 38 55.3 -0.4**
CFON S **Sn 13 40 36.2 -5.4**
CFON Fontmartina 9.54 47 P **Pn 13 38 55.3 -0.4**
comp=E,3.8nm,0.2s,SNR=7.9
CFON S **Sn 13 40 36.2 -5.4**
comp=E,16nm,0.3s,SNR=7.9
CFON Fontmartina 9.54 47 P **Pn 13 38 55.3 -0.4**
comp=E,3.8nm,0.2s,SNR=7.9
CFON S **Sn 13 40 36.2 -5.4**
comp=E,16nm,0.3s,SNR=7.9
CFON Fontmartina 9.54 47 P **Pn 13 38 55.3 -0.4**
comp=E,3.8nm,0.2s,SNR=7.9
MLS Moulis 9.60 38 P **Pn 13 38 57.9 +1.4**
MLS Moulis 9.60 38 P **Pn 13 38 57.9 +1.4**
VALF Valcebollere 9.70 43 S **Sn 13 40 40.5 -5.0**
CLLI Llivia 9.73 43 P **Pn 13 38 59.0 +0.8**
CLLI S **Sn 13 40 39.3 -6.9**
CLLI Llivia 9.73 43 P **Pn 13 38 59.0 +0.8**
comp=E,14nm,0.4s,SNR=16
CLLI S **Sn 13 40 39.3 -6.9**
comp=E,11nm,0.3s,SNR=7.9
CLLI Llivia 9.73 43 P **Pn 13 38 59.0 +0.8**
comp=E,14nm,0.4s,SNR=16
CLLI S **Sn 13 40 39.3 -6.9**
comp=E,11nm,0.3s,SNR=7.9
CLLI Llivia 9.73 43 P **Pn 13 38 59.0 +0.7**
comp=E,14nm,0.4s,SNR=16
EJON La Jonquera 10.23 45 P **Pn 13 39 04.8 -0.3**
comp=E,4.8nm,0.3s
EJON La Jonquera 10.23 45 P **Pn 13 39 04.8 -0.3**
comp=E,4.8nm,0.3s,SNR=4.0
EJON La Jonquera 10.23 45 P **Pn 13 39 04.8 -0.3**
comp=E,4.8nm,0.3s,SNR=4.0
EJON La Jonquera 10.23 45 P **Pn 13 39 04.8 -0.3**
comp=E,4.8nm,0.3s,SNR=4.0
MTLF Montolieu 10.45 40 *e*P **Pn 13 39 07.9 -0.2**
MTLF *e*Sn **Sn 13 40 52.3 -11**
comp=E,10nm,0.3s
MTLF Montolieu 10.45 40 P **Pn 13 39 07.9 -0.2**
MTLF S **Sn 13 40 52.3 -11**
comp=E,5.1nm,0.3s
MTLF Montolieu 10.45 40 P **Pn 13 39 07.9 -0.2**
MTLF S **Sn 13 40 52.3 -11**
comp=E,5.1nm,0.3s
MTLF Montolieu 10.45 40 *e*P **Pn 13 39 07.9 -0.2**
EOSO Osorio 10.51 227 S **Sn 13 40 53.8 -12**
comp=E,20nm,0.3s,SNR=7.9
EOSO Osorio 10.51 227 S **Sn 13 40 53.8 -12**
comp=E,20nm,0.3s,SNR=7.9
EBAJ Bajamar 10.66 231 P **Pn 13 39 05.5 -5.6**
comp=E,2.9nm,0.2s
EBAJ S **Sn 13 40 55.8 -13**
EBAJ Bajamar 10.66 231 P **Pn 13 39 05.5 -5.6**
comp=E,2.9nm,0.2s,SNR=7.9
EBAJ S **Sn 13 40 55.8 -13**
comp=E,16nm,0.3s,SNR=7.9
EBAJ Bajamar 10.66 231 P **Pn 13 39 05.5 -5.6**
comp=E,2.9nm,0.2s,SNR=7.9
EBAJ S **Sn 13 40 55.8 -13**
comp=E,16nm,0.3s,SNR=7.9
LFF La Frestale 10.98 30 *e*P **Pn 13 39 16.0 +0.6**
LFF *e*Sn **Sn 13 41 05.0 -12**
comp=E,44nm,0.3s
LFF La Frestale 10.98 30 P **Pn 13 39 16.0 +0.6**
LFF S **Sn 13 41 05.0 -12**
comp=E,22nm,0.3s
LFF La Frestale 10.98 30 P **Pn 13 39 16.0 +0.6**
LFF S **Sn 13 41 05.0 -12**
comp=E,22nm,0.3s
LFF La Frestale 10.98 30 *e*P **Pn 13 39 16.0 +0.6**
CCAN Las Canadas 11.04 231 S **Sn 13 41 05.6 -13**
comp=E,2.2nm,0.2s,SNR=4.0
CCAN Las Canadas 11.04 231 S **Sn 13 41 05.6 -13**
comp=E,2.2nm,0.2s,SNR=4.0
CHIO Chio 11.16 231 S **Sn 13 41 08.7 -13**
comp=E,13nm,0.1s,SNR=4.0
CHIO Chio 11.16 231 S **Sn 13 41 08.7 -13**
comp=E,13nm,0.1s,SNR=4.0
CAF Calviac 11.54 34 *e*P **Pn 13 39 23.5 +0.5**
CAF *e*Sn **Sn 13 41 18.1 -12**
comp=E,21nm,0.4s
CAF Calviac 11.54 34 P **Pn 13 39 23.5 +0.5**
CAF S **Sn 13 41 18.1 -12**

comp=E,11nm,0.4s
CAF Calviac 11.54 34 P **Pn 13 39 23.5 +0.5**
CAF S **Sn 13 41 18.1 -12**
comp=E,11nm,0.4s
CAF Calviac 11.54 34 *eP* **Pn 13 39 23.5 +0.5**
RJF Les Rejaudoux 11.60 31 *eP* **Pn 13 39 24.0 +0.2**
RJF *eSn* **Sn 13 41 19.7 -12**
comp=E,59nm,0.4s
RJF Les Rejaudoux 11.60 31 *e*Pn **Pn 13 39 19.0 -4.8**
RJF *eP* 13 39 24.0
RJF *eSn* **Sn 13 41 19.7 -12**
RJF Les Rejaudoux 11.60 31 P **Pn 13 39 24.0 +0.2**
RJF S **Sn 13 41 19.7 -12**
comp=E,30nm,0.4s
RJF Les Rejaudoux 11.60 31 P **Pn 13 39 24.0 +0.2**
RJF S **Sn 13 41 19.7 -12**
comp=E,30nm,0.4s
EHIG Higuera 11.60 236 S **Sn 13 41 21.5 -11**
comp=E,18nm,0.2s,SNR=4.0
EHIG Higuera 11.60 236 S **Sn 13 41 21.5 -11**
comp=E,18nm,0.2s,SNR=4.0
MFF Saint Martin d 12.09 23 *eP* **Pn 13 39 30.5 0.0**
MFF *eSn* **Sn 13 41 31.2 -13**
comp=E,20nm,0.4s
MFF Saint Martin d 12.09 23 P **Pn 13 39 30.5 0.0**
MFF S **Sn 13 41 31.2 -13**
comp=E,10nm,0.4s
MFF Saint Martin d 12.09 23 P **Pn 13 39 30.5 0.0**
MFF S **Sn 13 41 31.2 -13**
comp=E,10nm,0.4s
MFF Saint Martin d 12.09 23 *eP* **Pn 13 39 30.5 0.0**
QUIF Quistinic 12.59 12 *eP* **Pn 13 39 37.0 -0.3**
QUIF *eSn* **Sn 13 41 42.7 -13**
comp=E,14nm,0.4s
QUIF Quistinic 12.59 12 P **Pn 13 39 37.0 -0.3**
QUIF S **Sn 13 41 42.7 -13**
comp=E,7.1nm,0.4s
QUIF Quistinic 12.59 12 P **Pn 13 39 37.0 -0.3**
QUIF S **Sn 13 41 42.7 -13**
comp=E,7.1nm,0.4s
QUIF Quistinic 12.59 12 *eP* **Pn 13 39 37.0 -0.3**
TCF Toulx Ste Croi 12.68 30 *e*Pn **Pn 13 39 34.2 -4.4**
TCF *eSn* **Sn 13 41 45.2 -13**
comp=E,39nm,0.6s
TCF Toulx Ste Croi 12.68 30 P **Pn 13 39 34.2 -4.4**
TCF S **Sn 13 41 45.2 -13**
comp=E,20nm,0.6s
TCF Toulx Ste Croi 12.68 30 P **Pn 13 39 34.2 -4.4**
TCF S **Sn 13 41 45.2 -13**
comp=E,20nm,0.6s
ROSF Rostrenen 12.98 11 *eP* **Pn 13 39 42.2 -0.4**
ROSF *eSn* **Sn 13 41 52.6 -13**
comp=E,15nm,0.5s
ROSF Rostrenen 12.98 11 P **Pn 13 39 42.2 -0.4**
ROSF S **Sn 13 41 52.6 -13**
comp=E,7.5nm,0.5s
ROSF Rostrenen 12.98 11 P **Pn 13 39 42.2 -0.4**
ROSF S **Sn 13 41 52.6 -13**
comp=E,7.5nm,0.5s
ROSF Rostrenen 12.98 11 *eP* **Pn 13 39 42.2 -0.4**
SGMF Saint Gilles 13.02 13 *eP* **Pn 13 39 42.9 -0.3**
SGMF *eSn* **Sn 13 41 53.6 -13**
comp=E,26nm,0.5s
SGMF Saint Gilles 13.02 13 P **Pn 13 39 42.9 -0.3**
SGMF S **Sn 13 41 53.6 -13**
comp=E,13nm,0.5s
SGMF Saint Gilles 13.02 13 P **Pn 13 39 42.9 -0.3**
SGMF S **Sn 13 41 53.6 -13**
comp=E,13nm,0.5s
SGMF Saint Gilles 13.02 13 *eP* **Pn 13 39 42.9 -0.3**
BGF Bois d'Agland 13.16 31 *eSn* **Sn 13 41 56.1 -14**
comp=E,61nm,0.4s
BGF Bois d'Agland 13.16 31 S **Sn 13 41 56.1 -14**
comp=E,31nm,0.4s
BGF Bois d'Agland 13.16 31 S **Sn 13 41 56.1 -14**
comp=E,31nm,0.4s
KEST Kesra 13.24 85 Pn **Pn 13 39 49.0 +2.6**
comp=E,0.1nm,0.3s,baz=271,slow=5.8,SNR=4.4
KEST Kesra 13.24 85 Pn **Pn 13 39 49.0 +2.6**
GRR Gorron 13.51 18 *eP* **Pn 13 39 49.8 -0.1**
GRR *eSn* **Sn 13 42 06.5 -12**
comp=E,21nm,0.4s
GRR Gorron 13.51 18 P **Pn 13 39 49.8 -0.1**
GRR S **Sn 13 42 06.5 -12**
comp=E,11nm,0.4s
GRR Gorron 13.51 18 P **Pn 13 39 49.8 -0.1**
GRR S **Sn 13 42 06.5 -12**
comp=E,11nm,0.4s
GRR Gorron 13.51 18 *eP* **Pn 13 39 49.8 -0.1**
AVF Avril sur Loir 13.56 32 *eP* **Pn 13 39 50.0 -0.6**
AVF Avril sur Loir 13.56 32 P **Pn 13 39 50.0 -0.6**
AVF Avril sur Loir 13.56 32 P **Pn 13 39 50.0 -0.6**
AVF Avril sur Loir 13.56 32 *eP* **Pn 13 39 50.0 -0.6**
SSF Saint Saulge 13.84 31 *e*Pn **Pn 13 39 49.2 -5.1**
SSF Saint Saulge 13.84 31 P **Pn 13 39 49.2 -5.1**
SSF Saint Saulge 13.84 31 P **Pn 13 39 49.2 -5.1**
LDF La Druitiere 13.89 19 *eP* **Pn 13 39 54.7 -0.4**
LDF *eSn* **Sn 13 42 13.9 -14**
comp=E,12nm,0.5s
FLN La Foliniere 13.95 18 *eP* **Pn 13 39 56.0 0.0**
baz=201
FLN *eSn* **Sn 13 42 15.1 -14**
comp=E,11nm,0.4s
FLN La Foliniere 13.95 18 P **Pn 13 39 56.0 0.0**
FLN S **Sn 13 42 15.1 -14**
comp=E,5.7nm,0.4s
FLN La Foliniere 13.95 18 P **Pn 13 39 56.0 0.0**
FLN S **Sn 13 42 15.1 -14**
comp=E,5.7nm,0.4s
LOR Lormes 14.15 31 *e*Pn **Pn 13 39 53.4 -5.2**
LOR Lormes 14.15 31 P **Pn 13 39 53.4 -5.2**
LOR Lormes 14.15 31 P **Pn 13 39 53.4 -5.2**
TAM Tamanrasset 16.78 136 Pn **Pn 13 40 32.5 -0.5**
comp=E,2.7nm,0.8s
TAM Tamanrasset 16.78 136 Pn **Pn 13 40 32.5 -0.5**
comp=E,2.7nm,0.8s
EKA Eskdalemuir Ar 19.87 6 P **Pn 13 41 09.4 -0.9**
comp=E,0.1nm,0.3s,baz=192,slow=13,SNR=2.8
EKA Eskdalemuir Ar 19.87 6 P **Pn 13 41 09.4 -0.9**
CONA Conrad Observa 20.89 47 *i P* **P 13 41 18.9 -0.7**
comp=E,7.1nm,0.6s
CONA Conrad Observa 20.89 47 P **P 13 41 18.9 -0.7**
comp=E,7.1nm,0.6s
CLL Collm 21.22 36 *eP* **P 13 41 25.0 +1.8**
CLL *i* 13 41 27.6
CLL Collm 21.22 36 *eP* **P 13 41 25.0 +1.8**
CLL *i* Pmax 13 41 27.6
comp=Z,8.0nm,0.8s
CLL Collm 21.22 36 *eP* **P 13 41 25.0 +1.8**
BRG Berggiesshubel 21.41 38 *i P* **P 13 41 29.2 +3.9**
comp=Z,9.2nm,1.1s,mb4.0
VRAC Vranov 21.97 44 P **P 13 41 31.1 -0.1**
comp=Z,3.1nm,0.5s,mb4.0,baz=235,slow=10,SNR=3.6
VRAC Vranov 21.97 44 P **P 13 41 31.1 -0.1**
TORD Torodi Ar. Bea 23.71 159 P **P 13 41 48.6 -0.7**
comp=Z,2.8nm,0.6s,mb3.9,baz=339,slow=11,SNR=20
BRTR Keskin Array B 32.18 70 P **P 13 43 05.2 +0.2**
comp=Z,1.0nm,1.0s,mb3.6,baz=278,slow=7.9,SNR=5.0
BRTR Keskin Array B 32.18 70 P **P 13 43 05.2 +0.2**

IDC 09 13:50:31.2±17.0, 22°.18S×174°.89W, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.8/19, mbtmp4.1/5, Error ellipse: s-maj=330.9km s-min=149.9km az=81.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.23**	**266**	P	P	13 57 37.5	+1.3
	3.0nm,0.3s,baz=87,slow=12,SNR=4.1						
STKA	**Stephens Creek**	**39.72**	**246**	P	P	13 58 04.6	-0.9
	0.4nm,0.4s,baz=96,slow=11,SNR=3.6						
ASAR	**Alice Springs**	**46.98**	**258**	P	P	13 59 03.7	-0.5
	1.0nm,0.4s,baz=96,slow=7.6,SNR=53						
WRA	**Warramunga Arr**	**47.25**	**263**	P	P	13 59 06.0	-0.5
	1.5nm,0.3s,baz=96,slow=8.5,SNR=108						
FITZ	**Fitzroy Crossi**	**55.68**	**263**	P	P	14 00 10.0	+0.4
	0.7nm,0.5s,baz=135,slow=6.6,SNR=6.9						

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*SZGRF **09** 13:52:57.8, 21°.49S×177°.08W, h33km, Fiji Islands region*
*IDC **09** 13:53:49.4±2.1, 19°.73S×177°.74W, h436km±22km, mb3.9/15, mb1 4.1/17, mb1mx3.9/23, mbtmp3.9/17, Error ellipse: s-maj=16.0km s-min=11.4km az=138.0*

*ISCJB **09** 13:53:51.4±1.1, 19°.84S±0°.06×177°.82W±0°.09, h472km±11km, mb4.3/29, Error ellipse: s-maj=13.3km s-min=9.4km az=13.0*
*BJI **09** 13:53:51.5, 19°.70S×177°.90W, h468km, mB4.7/12, mb4.5/12*
*NEIC **09** 13:53:52.5±1.1, 19°.73S×177°.89W, h468km±11km, mb4.7/10, Error ellipse: s-maj=14.8km s-min=9.6km az=118.0*
ISC 09 13:53:51.9±1.1, 19°.84S±0°.07×177°.74W±0°.09, h468km±11km, h473km±5.5km: pP-P, n114, σ0s92/58, mb4.3/29, 10C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.50**	**297**	*eP*	**P**	13 55 12.0	-0.7
AFI	**Afiamalu**	**8.21**	**45**	P	**P**	13 55 44.6	-5.4
	14nm,0.3s,baz=353,slow=2.7,SNR=18						
AFI				S	**S**	13 57 14.5	-12
	17nm,0.3s,baz=211,slow=23,SNR=7.6						
AFI	**Afiamalu**	**8.21**	**45**	*eP*	**P**	13 55 44.5	-5.5
	39nm,0.4s						
URZ	**Urewera**	**18.89**	**193**	P	**P**	13 57 41.1	-0.9
	6.5nm,0.3s,baz=304,slow=3.6,SNR=37						
URZ				S	**S**	14 00 46.2	-3.5
	0.1nm,0.3s,baz=22,slow=22,SNR=3.2						
URZ	**Urewera**	**18.89**	**193**	*eP*	**P**	13 57 41.3	-0.7
	17nm,0.3s						
SNZO	**South Karori**	**22.34**	**195**	*eP*	**P**	13 58 13.3	-0.1
RPZ	**Rata Peaks**	**25.59**	**199**	P	**P**	13 58 41.9	-0.4
	5.4nm,0.5s,mb4.2,baz=140,slow=22,SNR=9.3						
ARMA	**Armidale**	**29.57**	**243**	*eP*	**P**	13 59 19.2	+1.7
CNB	**Canberra Magne**	**32.80**	**235**	*eP*	**P**	13 59 46.6	+1.4
CTA	**Charters Tower**	**33.80**	**263**	P	**P**	13 59 54.4	+0.5
	39nm,0.5s,mb5.1,baz=94,slow=10,SNR=48						
CTA	**Charters Tower**	**33.80**	**263**	*eP*	**P**	13 59 54.3	+0.3
	28nm,0.4s,mb5.0						
CTA	**Charters Tower**	**33.80**	**263**	P	**P**	13 59 54.4	+0.5
TOO	**Toolangi**	**36.48**	**233**	*eP*	**P**	14 00 17.1	+0.9
STKA	**Stephens Creek**	**38.29**	**243**	P	**P**	14 00 32.3	+1.1
	12nm,0.5s,mb4.6,baz=89,slow=9.5,SNR=76						
STKA	**Stephens Creek**	**38.29**	**243**	*i P*	**P**	14 00 32.2	+1.0
	11nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**38.29**	**243**	*eP*	**P**	14 00 32.1	+0.9
	4.5nm,0.8s,mb4.0						
BBOO	**Buckleboo**	**43.06**	**243**	*eP*	**P**	14 01 09.7	+0.3
	74nm,0.5s,mb5.4						
ASAR	**Alice Springs**	**44.91**	**256**	P	**P**	14 01 24.1	+0.2
	54nm,0.6s,mb5.1,baz=94,slow=8.1,SNR=781						
ASAR				PcP	PcP	14 02 55.8	0.0
	1.8nm,0.6s,baz=93,slow=5.4,SNR=4.5						
ASAR				S	**S**	14 07 26.9	-0.2
	0.9nm,0.6s,baz=92,slow=16,SNR=6.0						
WRA	**Warramunga Arr**	**44.93**	**261**	P	**P**	14 01 23.4	-0.7
	13nm,0.5s,mb4.6,baz=97,slow=8.3,SNR=238						
WRA				PcP	PcP	14 02 56.2	+0.2
	1.4nm,0.7s,baz=89,slow=3.3,SNR=3.4						
WRA				S	**S**	14 07 25.7	-1.8
	1.8nm,0.9s,baz=94,slow=14,SNR=5.1						
KAKA	**Kakadu**	**48.20**	**271**	*eP*	**P**	14 01 48.5	-0.6
	9.7nm,0.4s,mb4.5						
KAKA	**Kakadu**	**48.20**	**271**	*eP*	**P**	14 01 48.4	-0.8
	25nm,0.4s,mb4.9						
FORT	**Forrest**	**49.78**	**246**	*eP*	**P**	14 02 00.6	0.0
	28nm,0.5s,mb4.8						
FORT	**Forrest**	**49.78**	**246**	*eP*	**P**	14 02 00.4	-0.2
	29nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.36**	**262**	P	**P**	14 02 27.1	+0.3
	6.8nm,0.4s,mb4.3,baz=125,slow=3.5,SNR=92						
FITZ	**Fitzroy Crossi**	**53.36**	**262**	*eP*	**P**	14 02 26.9	+0.1
	16nm,0.5s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.36**	**262**	*eP*	**P**	14 02 26.9	+0.1
	6.0nm,0.4s,mb4.3						
MBWA	**Marble Bar**	**58.23**	**257**	*eP*	**P**	14 03 00.5	-0.3
MEEK	**Meekatharra**	**58.36**	**250**	*eP*	**P**	14 03 01.1	-0.5
SBA	**Scott Base**	**58.54**	**184**	*eP*	**P**	14 03 05.8	+3.9
	3.8nm,0.8s,mb3.8						
KLBR	**Kellerberrin**	**58.55**	**245**	*eP*	**P**	14 03 02.5	-0.3
	17nm,0.8s,mb4.4						
NWAO	**Narrogin (SRO)**	**58.88**	**243**	P	**P**	14 03 05.1	+0.1
	12nm,0.9s,mb4.2,baz=106,slow=4.9,SNR=7.2						
CASY	**Casey**	**64.66**	**205**	*eP*	**P**	14 03 43.5	+1.3
CASY	**Casey**	**64.66**	**205**	*eP*	**P**	14 03 43.3	+1.1
	13nm,0.9s,mb4.6						
MJAR	**Matsushiro Arr**	**69.83**	**323**	P	**P**	14 04 13.8	-0.8
	3.0nm,0.5s,mb4.1,baz=156,slow=5.8,SNR=9.4						
MAT	**Matsushiro**	**69.83**	**323**	P	**P**	14 04 13.7	-0.8
PETK	**Petropavlovsk-**	**75.70**	**345**	P	**P**	14 04 47.4	-0.7
	3.6nm,0.7s,mb4.0,baz=133,slow=7.1,SNR=12						
MDJ	**Mudanjiang**	**80.12**	**325**	P	**P**	14 05 11.9	-0.3
MDJ				S	S	14 14 29.3	-8.3
MDJ				pmax	pmax		
	comp=Z,5.0nm,2.6s,mb3.6						
MDJ				pmax	pmax		
	comp=Z,140nm,14.7s						
NVAR	**Mina Array Bea**	**80.38**	**43**	P	**P**	14 05 14.9	+1.1
	comp=Z,0.9nm,0.9s,mb3.3,baz=223,slow=8.6,SNR=4.5						
CN2	**Changchun**	**81.93**	**322**	*eP*	**P**	14 05 22.1	+0.5
CN2				*e*pP	pP	14 07 08.3	+3.4
CN2				*e*sP	sP	14 07 56.7	+3.4
CN2				*e*S	S	14 14 55.4	-0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
MAW	**Mawson**	**82.26**	**200**	P	**P**	14 05 24.1	+1.1
	comp=Z,4.1nm,0.8s,mb4.0,baz=92,slow=14,SNR=5.2						
BJI	**Beijing**	**85.59**	**315**	P	**P**	14 05 40.0	0.0
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
BJI				pmax	pmax		
	comp=Z,42nm,3.5s						
TXAR	**Lajitas Array**	**86.50**	**57**	P	**P**	14 05 46.8	+2.2
	comp=Z,1.5nm,0.6s,mb3.8,baz=218,slow=6.6,SNR=18						
GYA	**Guiyang**	**86.53**	**300**	P	**P**	14 05 45.0	+0.2
GYA				pP	pP	14 07 31.2	+1.7
GYA				sP	sP	14 08 18.3	+0.8
GYA				PP	PP	14 09 17.0	+1.9
GYA				SKS		14 15 25.0	
GYA				S	S	14 15 40.7	-1.1
GYA				sS	sS	14 18 47.6	-0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
GYA				pmax	pmax		
	comp=Z,90nm,5.8s						
SYO	**Syowa Base**	**87.42**	**193**	*eP*	**P**	14 05 47.4	-0.8
COLA	**College**	**87.52**	**12**	*eP*	**P**	14 05 48.0	-0.4
	comp=Z,4.9nm,0.6s,mb4.4						
ILAR	**Eielson Array**	**87.62**	**13**	P	**P**	14 05 48.3	-0.7
	comp=Z,1.3nm,0.5s,mb3.9,baz=226,slow=4.8,SNR=54						
ILAR				pP	pP	14 07 30.9	-3.2
	comp=Z,1.3nm,1.1s,baz=220,slow=5.4,SNR=5.0						
PDAR	**Pinedale Array**	**88.32**	**43**	P	**P**	14 05 54.1	+1.4
	comp=Z,0.7nm,0.7s,mb3.5,baz=208,slow=2.9,SNR=6.1						
VNA3	**Neumayer Olymp**	**88.78**	**176**	*eP*	**P**	14 05 52.8	-1.7
HHC	**Hu-ho-hao-te**	**89.07**	**314**	*eP*	**P**	14 05 56.1	-0.2
HHC				pP	pP	14 07 44.0	+2.3
HHC				sP	sP	14 08 31.9	+2.4
HHC				PP	PP	14 09 36.9	+2.1
HHC				SKS		14 15 39.9	
HHC				S	S	14 16 00.9	-3.8
HHC				sS	sS	14 19 12.4	-0.2
HHC				SS	SS	14 22 12.9	+0.7
HHC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,570nm,5.6s						
VNA2	**Neumayer--Watz**	**89.22**	**177**	*eP*	**P**	14 05 55.2	-1.4
	baz=208,slow=3.6						
KMI	**Kunming**	**89.27**	**297**	P	**P**	14 05 58.7	+1.1
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
VNA1	**Neumayer--Stat**	**89.45**	**177**	*eP*	**P**	14 05 56.7	-0.9
CMAR	**Chiang Mai Arr**	**90.12**	**289**	P	**P**	14 06 03.0	+1.3
	comp=Z,1.5nm,0.7s,mb3.9,baz=111,slow=2.5,SNR=8.4						
CD2	**Chengdu**	**90.64**	**303**	*eP*	**P**	14 06 02.9	-1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,30nm,5.8s						
ZALV	**Zalesovo Beam**	**110.13**	**321**	PKiKP	PKiKP	14 11 28.7	-0.6
	comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=3.4						
MKAR	**Makanchi Array**	**110.92**	**314**	PKiKP	PKiKP	14 11 30.1	-1.0
	comp=Z,0.5nm,0.6s,baz=117,slow=0.6,SNR=7.6						
BOSA	**Boshof**	**126.95**	**205**	PKP	PKPdf	14 12 03.0	+0.5
	comp=Z,1.6nm,0.6s,baz=161,slow=19,SNR=4.3						
ARCES	**ARCESS Array B**	**128.32**	**350**	PKP	PKPdf	14 12 03.6	-0.2
	comp=Z,1.5nm,0.4s,baz=60,slow=1.0,SNR=24						
FINES	**FINESS Array B**	**135.21**	**344**	PKP	PKPdf	14 12 18.0	+1.0
	comp=Z,2.0nm,0.7s,baz=92,slow=4.2,SNR=3.7						
NOA	**NORSAR Array B**	**138.36**	**353**	PKP	PKPdf	14 12 24.4	+1.6
	comp=Z,1.0nm,0.6s,baz=18,slow=3.9,SNR=6.4						
BURAR	**Bucovina Array**	**146.61**	**331**	*i P*	PKPbc	14 12 41.7	+1.5
KOLS	**Kolonicke sedl**	**146.82**	**336**	*eP*	PKPbc	14 12 41.3	+0.6
KOLS	**Kolonicke sedl**	**146.82**	**336**	*e*PKP	PKPbc	14 12 41.3	+0.6
NRDL	**Niedersach Rie**	**146.84**	**351**	*e*PKPbc	PKPbc	14 12 41.5	+0.9
TRPA	**Tarpa**	**147.36**	**334**	*i P*	PKPbc	14 12 42.7	+0.5
CLZ	**Clausthal**	**147.44**	**351**	*e*PKPbc	PKPbc	14 12 42.8	+0.6
CLL	**Collm**	**147.48**	**347**	*e*PKPbc	PKPbc	14 12 43.0	+0.6
CLL	**Collm**	**147.48**	**347**	*i P*PKPbc	PKPbc	14 12 42.9	+0.5
	comp=Z,13nm,0.6s						
DPC	**Dobruska-Polom**	**147.57**	**343**	*e*PKP	PKPbc	14 12 43.9	+1.3
BRG	**Berggiesshubel**	**147.69**	**346**	*e*PKPbc	PKPbc	14 12 43.8	+0.9
MOX	**Moxa**	**148.38**	**349**	*e*PKPbc	PKPbc	14 12 44.9	+0.2
TANN	**Tannenbergstha**	**148.44**	**347**	*e*PKPbc	PKPbc	14 12 45.4	+0.6
VYHS	**Vyhne**	**148.44**	**339**	*eP*	PKPbc	14 12 45.1	+0.2
VYHS	**Vyhne**	**148.44**	**339**	*e*PKP	PKPbc	14 12 45.1	+0.2
UBBA	**Unterbreizbach**	**148.49**	**351**	*e*PKPbc	PKPbc	14 12 45.2	+0.2
NKC	**Novy Kostel**	**148.61**	**347**	*e*PKP	PKPbc	14 12 47.0	+1.7
TREC	**Trest**	**148.76**	**343**	*e*PKP	PKPbc	14 12 46.3	+0.6
ROTZ	**Rotzenmuhle**	**149.10**	**347**	*e*PKPbc	PKPbc	14 12 47.3	+0.8
TNS	**Taunus Mts**	**149.29**	**352**	*e*PKPbc	PKPbc	14 12 47.5	+0.6
GRA1	**Grafenberg Arr**	**149.37**	**349**	*e*PKPbc	PKPbc	14 12 47.6	+0.5
GRF	**Grafenberg Arr**	**149.37**	**349**	*e*PKPbc	PKPbc	14 12 47.6	+0.5
KHC	**Kasperske Hory**	**149.40**	**345**	*e*PKP	PKPbc	14 12 48.1	+0.9
WET	**Wettzell**	**149.55**	**346**	*e*PKPbc	PKPbc	14 12 48.3	+0.7
GEC2	**GERESS Array S**	**149.63**	**345**	*e*PKPbc	PKPbc	14 12 48.3	+0.5
BZS	**Buzias**	**149.73**	**333**	*i P*	PKPdf	14 12 49.2	+6.3
GIVF	**Givet**	**149.74**	**357**	*e*PKP1	PKPbc	14 12 48.6	+0.6
	comp=Z,21nm,0.7s						
DOU	**Dourbes**	**149.76**	**357**	PKPbc	PKPbc	14 12 48.8	+0.7
DOU				PKPab	PKPab	14 12 55.4	+0.1
BAIF	**Baives**	**149.81**	**357**	*e*PKP1	PKPbc	14 12 48.9	+0.7
	comp=Z,12nm,0.6s						
CONA	**Conrad Observa**	**149.89**	**342**	*i*PKiKP	PKiKP	14 12 49.1	0.0
	comp=Z,6.9nm,0.8s						
WLF	**Walferdange**	**150.08**	**355**	PKPbc	PKPbc	14 12 50.3	+1.4
WLF	**Walferdange**	**150.08**	**355**	*e*PKPbc	PKPbc	14 12 49.9	+1.1
STU	**Stuttgart**	**150.60**	**351**	*e*PKPbc	PKPbc	14 12 50.9	+0.8
FUR	**Furstenfeldbru**	**150.82**	**348**	*e*PKPbc	PKPbc	14 12 51.0	+0.4
FLN	**La Foliniere**	**151.06**	**4**	*e*PKP1	PKPbc	14 12 51.3	+0.2
	comp=Z,20nm,0.5s						
BFO	**Black Forest**	**151.16**	**352**	*e*PKPbc	PKPbc	14 12 51.8	+0.4
CDF	**Champ du Feu**	**151.21**	**353**	*e*PKP1	PKPbc	14 12 52.0	+0.5
	comp=Z,10.0nm,0.5s						
ROSF	**Rostrenen**	**151.22**	**8**	*e*PKP1	PKPbc	14 12 51.9	+0.4
LDF	**La Druitiere**	**151.25**	**3**	*e*PKP1	PKPbc	14 12 51.6	0.0
	comp=Z,14nm,0.4s						
SOKA	**Soboth**	**151.26**	**342**	*i*PKPbc	PKPbc	14 12 51.2	-0.4
	comp=Z,4.7nm,0.9s						
KBA	**Koelnbreinsper**	**151.36**	**344**	*i*PKiKP	PKiKP	14 12 52.3	+0.1
	comp=Z,5.3nm,0.5s						
SGMF	**Saint Gilles**	**151.39**	**7**	*e*PKP1	PKPbc	14 12 52.4	+0.5
	comp=Z,18nm,0.6s						
GRR	**Gorron**	**151.41**	**4**	*e*PKP1	PKPbc	14 12 52.2	+0.3
	comp=Z,17nm,0.5s						
WTTA	**Wattenberg**	**151.60**	**347**	*i*PKiKP	PKiKP	14 12 52.8	+0.1
	comp=Z,11nm,0.6s						
SFTF	**Sexfontaines**	**151.62**	**356**	*e*PKP1	PKPbc	14 12 53.1	+0.7
	comp=Z,24nm,0.7s						
HAU	**Haudompre**	**151.71**	**354**	*e*PKP1	PKPbc	14 12 53.5	+0.9
	comp=Z,11nm,0.5s						
HINF	**Hinteralfeld**	**151.85**	**353**	*e*PKP1	PKPbc	14 12 53.7	+0.8
ABTA	**Abfaltersbach**	**151.88**	**345**	*i*PKPbc	PKPbc	14 12 53.1	+0.1
	comp=Z,8.4nm,0.5s						
LOR	**Lormes**	**152.61**	**358**	*e*PKP1	PKPbc	14 12 55.1	+0.5
	comp=Z,8.3nm,0.5s						
SSF	**Saint Saulge**	**152.83**	**358**	*e*PKP1	PKPbc	14 12 56.1	+1.0
	comp=Z,3.4nm,0.4s						
CABF	**La Chapelle**	**153.12**	**354**	*e*PKP1	PKPbc	14 12 56.8	+1.0
MFF	**Saint Martin d**	**153.24**	**4**	*e*PKP1	PKPbc	14 12 56.4	+0.4
	comp=Z,13nm,0.7s						
BGF	**Bois d'Agland**	**153.35**	**359**	*e*PKP1	PKPbc	14 12 57.1	+0.8
DBIC	**Dimbokro**	**165.20**	**151**	PKPab	PKPab	14 14 04.8	+1.9
	comp=Z,5.8nm,0.6s,baz=189,slow=6.0,SNR=7.3						
TORD	**Torodi Ar. Bea**	**173.32**	**175**	PKP	PKPdf	14 13 07.2	-0.4
	comp=Z,1.4nm,1.0s,baz=228,slow=1.7,SNR=4.7						
TORD				PKPab	PKPab	14 14 40.2	+1.5
	comp=Z,0.4nm,0.4s,baz=187,slow=3.1,SNR=5.6						

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*IDC **09** 14:12:26.4±0.6, 8°.54N×125°.81E, h0km, mb3.8/13, mb1 3.9/13, mb1mx3.9/21, mbtmp3.8/13, Error ellipse: s-maj=25.3km s-min=9.8km az=89.0*
*ISCJB **09** 14:12:29.3±0.9, 8°.55N±0°.03×125°.90E±0°.04, h29km±6km, mb4.0/18, Error ellipse: s-maj=7.8km s-min=5.3km az=156.2*
*MAN **09** 14:12:29, 8°.57N×125°.75E, h10km, mb4.7, ML3.6, MS3.6*
*BJI **09** 14:12:32.1, 8°.50N×125°.80E, h23km, mB5.0/4, mb4.3/6, Ms4.3/1, Ms7 4.1/1*
*NEIC **09** 14:12:32.2±1.8, 8°.46N×125°.76E, h42km±17km, mb4.4/3, Error ellipse: s-maj=20.0km s-min=8.0km az=67.0*
NEIC Felt [III PIVS] at San Francisco; [II PIVS] at Bayugan and Prosperidad; [I PIVS] at Compostela.
ISC 09 14:12:29.1±0.9, 8°.53N±0°.03×125°.86E±0°.04, h14km±5km, n44, σ1s09/46, mb4.0/18, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.50**	**332**	*eP*	**Pg**	14 12 38.6	-0.3
BUTP				*e*S	**Sg**	14 12 45.6	-0.1
BUKP	**Musuan**	**1.02**	**231**	*eP*	**Pb**	14 12 47.9	-0.6
BUKP				*e*S	**Sb**

HHC			ScP	ScP	14 25 33.2	-3.8
HHC			SS	SS	14 27 01.6	-15
HHC			ScS	ScS	14 29 35.2	-4.7
HHC			pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7					
HHC			pmax	pmax		
	comp=Z,99nm,5.3s					
SONM	**Songino Array**	**42.51 341**	P	**P**	**14 20 24.8**	**+1.0**
	comp=Z,0.3nm,0.5s,mb3.2,baz=163,slow=10,SNR=2.3					
STKA	**Stephens Creek**	**42.90 160**	P	**P**	**14 20 27.2**	**0.0**
	comp=Z,2.4nm,0.7s,mb4.0,baz=355,slow=7.0,SNR=7.8					
MK31	**Makanchi Array**	**53.17 324**	*e*P	**P**	**14 21 46.8**	**+0.2**
MKAR	**Makanchi Array**	**53.17 324**	P	**P**	**14 21 46.5**	**-0.1**
	comp=Z,1.8nm,0.8s,mb4.0,baz=128,slow=7.9,SNR=12					
MKAR			PcP	PcP	14 22 55.6	+1.0
	comp=Z,0.9nm,0.7s,baz=118,slow=4.3,SNR=3.7					
ZALV	**Zalesovo Beam**	**55.96 332**	P	**P**	**14 22 05.8**	**-0.9**
	comp=Z,0.3nm,0.3s,mb3.9,baz=161,slow=5.8,SNR=2.8					
KURK	**Kurchatov**	**57.27 326**	P	**P**	**14 22 15.4**	**-0.7**
	comp=Z,2.8nm,0.9s,mb4.3					
KBL	**Kabul**	**57.99 305**	*e*P	**P**	**14 22 20.9**	**-0.6**
ABKAR	**Akbulak array**	**67.93 320**	*e*P	**P**	**14 23 28.1**	**+0.7**
	comp=Z,1.8nm,0.7s,mb4.2					
ILAR	**Eielson Array**	**81.17 26**	P	**P**	**14 24 43.5**	**-0.4**
	comp=Z,0.3nm,0.7s,mb3.3,baz=244,slow=5.8,SNR=4.8					
ARCES	**ARCESS Array B**	**85.68 340**	P	**P**	**14 25 05.8**	**-1.3**
	comp=Z,1.0nm,0.8s,mb4.1,baz=102,slow=8.4,SNR=2.5					
TORD	**Torodi Ar. Bea**	**120.52 291**	PKP	PKPdf	14 31 19.3	-2.0
	comp=Z,0.2nm,0.6s,baz=51,slow=2.8,SNR=2.6					
PLCA	**Paso Flores**	**144.76 158**	PKP	PKiKP	14 32 08.6	-1.0
	comp=Z,1.4nm,0.7s,baz=244,slow=1.6,SNR=3.6					

*NEIC **09** 14:27:40.4, 15°.11N×95°.12W, h16km, MD3.9(MEX), After MEX.*

MEX 09 14:27:40.4±0.5, 15°.11N×95°.12W, h16km±13km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.15**	**305**	*i* P	Pn	14 27 58.0	-3.9
HUIG				*i* S	Sb	14 28 11.6	-5.1
HUIG	**Huatulco**	**1.15**	**305**	*i* P	Pn	14 27 58.0	-3.9
HUIG				*i* S	Sb	14 28 11.6	-5.1
PCIG		**1.93**	**72**	*i* P	Pn	14 28 09.0	-3.5
PCIG				*i* S	Sn	14 28 31.0	-5.4
VHO	**Vista Hermosa**	**2.49**	**322**	*i* P	Pn	14 28 17.4	-2.8
VHO				*i* S	Sn	14 28 46.9	-3.4
VHO	**Vista Hermosa**	**2.49**	**322**	*i* P	Pn	14 28 17.4	-2.8
VHO				*i* S	Sn	14 28 46.9	-3.4
TGIG		**2.54**	**49**	*i* P	Pn	14 28 18.9	-2.1
TGIG				*i* S	Sn	14 28 47.5	-4.1
SCX	**San Cristobal**	**2.89**	**56**	*i* S	Sn	14 29 03.5	+3.4
SCX	**San Cristobal**	**2.89**	**56**	*i* S	Sn	14 29 03.5	+3.4
CCIG	**Comitan**	**3.10**	**68**	*i* P	Pn	14 28 25.2	-3.5
CCIG				*i* S	Sn	14 29 02.0	-3.4
CCIG	**Comitan**	**3.10**	**68**	*i* P	Pn	14 28 25.2	-3.5
CCIG				*i* S	Sn	14 29 02.0	-3.4
PNIG	**Pinotepa**	**3.16**	**294**	*i* P	Pn	14 28 27.5	-2.0
PNIG				*i* S	Sn	14 29 02.9	-4.0
PNIG	**Pinotepa**	**3.16**	**294**	*i* P	Pn	14 28 27.5	-2.0
PNIG				*i* S	Sn	14 29 02.9	-4.0
UTMO	**Huajuapan**	**3.73**	**317**	*i* P	Pn	14 28 34.1	-3.2
UTMO				*i* S	Sn	14 29 18.0	-2.9

*ISCJB **09** 14:36:00.8±0.4, 35°.50N±0°.03×25°.91E±0°.03, h25km±4km, Error ellipse: s-maj=4.8km s-min=4.3km az=138.1*
*ATH **09** 14:36:00.0, 35°.54N×25°.90E, h28km±2km, MD2.8/7*
*CSEM **09** 14:36:00.6±0.2, 35°.51N×25°.93E, h17km±1km, MD2.8*
*THE **09** 14:36:01.1, 35°.49N×25°.90E, h17km±4km, Error ellipse: s-maj=4.5km s-min=1.2km az=179.0*

ISC 09 14:36:00.8±0.6, 35°.52N±0°.03×25°.92E±0°.03, h18km±4km, n40, σ0°.65/62, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.36**	**224**	*e*PB	**Pg**	**14 36 08.2**	**-0.1**
NPS				*e*SB	**Sg**	**14 36 13.5**	**+0.2**
NPS	**Neapolis**	**0.36**	**224**	*e*Pb	**Pg**	**14 36 08.2**	**-0.1**
NPS				*e*Sb	**Sg**	**14 36 13.5**	**+0.2**
ZKR	**Zakros**	**0.47**	**149**	*e*PB	**Pb**	**14 36 10.6**	**0.0**
ZKR				*e*SB	**Sb**	**14 36 17.6**	**+0.4**
ZKR	**Zakros**	**0.47**	**149**	P	**Pg**	**14 36 10.5**	**+0.2**
ZKR				S	**Sg**	**14 36 17.1**	**+0.3**
ZKR	**Zakros**	**0.47**	**149**	*e*Pb	**Pb**	**14 36 10.6**	**0.0**
ZKR				S	**Sg**	**14 36 17.1**	**+0.3**
ZKR				*e*Sb	**Sb**	**14 36 17.6**	**+0.4**
LAST	**Lasithi**	**0.51**	**225**	*e*PN	**Pg**	**14 36 10.6**	**-0.3**
LAST				*e*SN	**Sg**	**14 36 17.8**	**0.0**
LAST	**Lasithi**	**0.51**	**225**	P	**Pg**	**14 36 10.3**	**-0.6**
LAST				S	**Sg**	**14 36 17.4**	**-0.4**
LAST	**Lasithi**	**0.51**	**225**	P	**Pg**	**14 36 10.3**	**-0.6**
LAST	**Lasithi**	**0.51**	**225**	*e*Pn	**Pg**	**14 36 10.6**	**-0.3**
LAST				S	**Sg**	**14 36 17.4**	**-0.4**
XRY	**Khrisi**	**0.67**	**196**	*e*PN	**Pn**	**14 36 14.3**	**-1.0**
XRY	**Khrisi**	**0.67**	**196**	*e*Pn	**Pn**	**14 36 14.3**	**-1.0**
THR1	**Thera Island**	**0.93**	**337**	P	**Pb**	**14 36 18.2**	**-0.1**
THR1	**Thera Island**	**0.93**	**337**	P	**Pb**	**14 36 18.2**	**-0.1**
THR6	**Thira Island,**	**0.93**	**333**	P	**Pb**	**14 36 18.8**	**+0.4**
THR6	**Thira Island,**	**0.93**	**333**	P	**Pb**	**14 36 18.8**	**+0.4**
THR3	**Thira Island,**	**0.98**	**335**	P	**Pb**	**14 36 19.1**	**-0.1**
THR3				S	**Sb**	**14 36 32.8**	**+1.0**
THR3	**Thira Island,**	**0.98**	**335**	P	**Pb**	**14 36 19.1**	**-0.1**
THR3				S	**Sb**	**14 36 32.8**	**+1.0**
THR2	**Thira island,**	**1.00**	**337**	P	**Pb**	**14 36 20.1**	**+0.5**
THR2	**Thira island,**	**1.00**	**337**	P	**Pb**	**14 36 20.1**	**+0.5**
THR5	**Thira Island,**	**1.01**	**333**	P	**Pb**	**14 36 20.0**	**+0.3**
THR5	**Thira Island,**	**1.01**	**333**	P	**Pb**	**14 36 20.0**	**+0.3**
KARP	**Karpathos**	**1.02**	**88**	*e*PN	**Pn**	**14 36 19.7**	**-0.4**
KARP				*e*SN	**Sn**	**14 36 34.5**	**+0.6**
KARP	**Karpathos**	**1.02**	**88**	*e*Pn	**Pn**	**14 36 19.7**	**-0.4**
KARP				*e*Sn	**Sn**	**14 36 34.5**	**+0.6**
SIVA	**Sivas**	**1.03**	**241**	*e*PN	**Pn**	**14 36 21.1**	**+0.7**
SIVA				*e*SN	**Sn**	**14 36 34.6**	**+0.2**
SIVA	**Sivas**	**1.03**	**241**	*e*Pn	**Pn**	**14 36 21.1**	**+0.7**
SIVA				*e*Sn	**Sn**	**14 36 34.6**	**+0.2**
VAM	**Vamos**	**1.41**	**266**	*e*PB	**Pb**	**14 36 24.9**	**-1.5**
VAM				*e*SN	**Sn**	**14 36 44.6**	**+1.1**
APE	**Apeiranthos**	**1.58**	**349**	*e*PN	**Pn**	**14 36 27.9**	**+0.1**
APE	**Apeiranthos**	**1.58**	**349**	P	**Pn**	**14 36 28.5**	**+0.7**
APE				S	**Sn**	**14 36 45.9**	**-1.9**
APE	**Apeiranthos**	**1.58**	**349**	*e*Pn	**Pn**	**14 36 27.9**	**+0.1**
APE	**Apeiranthos**	**1.58**	**349**	P	**Pn**	**14 36 28.5**	**+0.7**
APE				S	**Sn**	**14 36 45.9**	**-1.9**
KARN	**Karanos**	**1.64**	**266**	*e*PN	**Pn**	**14 36 28.8**	**+0.2**
KARN	**Karanos**	**1.64**	**266**	P	**Pn**	**14 36 28.3**	**-0.3**
KARN				S	**Sn**	**14 36 48.7**	**-0.5**
KARN	**Karanos**	**1.64**	**266**	P	**Pn**	**14 36 28.3**	**-0.3**
KARN	**Karanos**	**1.64**	**266**	*e*Pn	**Pn**	**14 36 28.8**	**+0.2**
KARN				S	**Sn**	**14 36 48.7**	**-0.5**
ARG	**Arkhangelos**	**1.93**	**68**	P	**Pn**	**14 36 31.7**	**-0.9**
ARG				S	**Sn**	**14 36 56.4**	**0.0**
ARG	**Arkhangelos**	**1.93**	**68**	P	**Pn**	**14 36 31.7**	**-0.9**
ARG				S	**Sn**	**14 36 56.4**	**0.0**
KYTH	**Kithira**	**2.46**	**289**	*e*PN	**Pn**	**14 36 40.1**	**+0.2**
KYTH	**Kithira**	**2.46**	**289**	*e*Pn	**Pn**	**14 36 40.1**	**+0.2**
VLI	**Veliai**	**2.69**	**297**	*e*PN	**Pn**	**14 36 43.6**	**+0.5**
VLI	**Veliai**	**2.69**	**297**	*e*Pn	**Pn**	**14 36 43.6**	**+0.5**

*ISCJB **09** 14:58:04.6±1.2, 23°.97S±0°.08×179°.7W±0°.1, h482km±23km, mb3.5/4, Error ellipse: s-maj=20.4km s-min=11.2km az=23.9*
*NEIC **09** 14:58:05.5±0.9, 23°.97S×179°.66W, h481km±22km, Error ellipse: s-maj=23.1km s-min=15.0km az=91.0*
*IDC **09** 14:58:07.0±4.1, 24°.02S×179°.26W, h540km±117km, mb2.9/4, mb1 3.2/6, mb1mx3.0/18, mbtmp3.1/6, Error ellipse: s-maj=75.9km s-min=23.4km az=95.0*

ISC 09 14:58:04.9±1.0, 24°.03S±0°.08×179°.5W±0°.1, h483km±23km, n11, σ0°.85/15, mb3.5/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.66**	**340**	P	**P**	**14 59 46.6**	**-0.6**
AFI	**Afiamalu**	**12.44**	**37**	P	**P**	**15 00 49.2**	**+0.9**
	1.9nm,0.3s,baz=214,slow=3.6,SNR=5.6						
AFI				S	**S**	**15 03 02.3**	**-0.8**
	0.9nm,0.3s,baz=343,slow=19,SNR=1.9						
AFI	**Afiamalu**	**12.44**	**37**	*e*P	**P**	**15 00 49.7**	**+1.3**
AFI				S	**S**	**15 03 02.3**	**-0.8**
URZ	**Urewera**	**14.48**	**191**	P	**P**	**15 01 11.5**	**+1.7**
	3.9nm,0.3s,baz=289,slow=3.0,SNR=24						
URZ				S	**S**	**15 03 40.8**	**-1.4**
	0.3nm,0.3s,baz=192,slow=14,SNR=3.1						
URZ	**Urewera**	**14.48**	**191**	*e*P	**P**	**15 01 11.3**	**+1.6**
URZ				S	**S**	**15 03 40.8**	**-1.4**
RPZ	**Rata Peaks**	**21.11**	**199**	P	**P**	**15 02 14.3**	**-0.1**
	7.8nm,0.6s,mb4.4,baz=38,slow=4.9,SNR=6.2						
STKA	**Stephens Creek**	**35.08**	**248**	P	**P**	**15 04 17.2**	**+0.6**
	2.9nm,1.2s,mb3.6,baz=88,slow=6.8,SNR=4.3						
STKA	**Stephens Creek**	**35.08**	**248**	*e*P	**P**	**15 04 17.1**	**+0.5**
ASAR	**Alice Springs**	**42.45**	**261**	P	**P**	**15 05 16.6**	**+0.1**
	0.2nm,0.3s,mb3.0,baz=95,slow=7.0,SNR=13						
WB2	**Warramunga Arr**	**42.83**	**266**	*e*P	**P**	**15 05 19.6**	**-0.1**
WRA	**Warramunga Arr**	**42.84**	**266**	P	**P**	**15 05 19.4**	**-0.3**
	0.2nm,0.4s,mb2.9,baz=100,slow=8.2,SNR=14						

*NEIC **09** 15:00:04.7±2.7, 53°.77N×161°.13E, h22km±20km, mb4.7/17, Error ellipse: s-maj=11.6km s-min=6.5km az=160.0*
*ISCJB **09** 15:00:04.8±0.5, 53°.49N±0°.03×161°.47E±0°.05, h46km±3km, mb4.4/54, MS3.8/16, Error ellipse: s-maj=5.8km s-min=3.0km az=36.6*
*MOS **09** 15:00:04.9±1.4, 53°.64N×161°.28E, h42km, mb4.8/32, MS4.0/12, Error ellipse: s-maj=9.7km s-min=5.4km az=89.2*
*KRSC **09** 15:00:04.1±0.1, 53°.49N×161°.44E, h40km±40km, ML4.9*
*BJI **09** 15:00:05.3, 54°.69N×160°.74E, h21km, mB4.3/2, mb4.3/10, Ms7 4.0/2*
*SZGRF **09** 15:00:07.9, 53°.41N×160°.15E, h33km, mb5.1, Near east coast of Kamchatka Peninsula, Russia*
*IDC **09** 15:00:08.1±0.6, 53°.80N×161°.06E, h49km±4km, mb3.9/26, mb1 4.1/28, mb1mx4.1/31, mbtmp4.0/28, MS3.6/10, Ms1 3.6/10, ms1mx3.4/29, Error ellipse: s-maj=15.2km s-min=9.7km az=148.0*

ISC 09 15:00:06.4±0.5, 53°.49N±0°.03×161°.40E±0°.05, h44km±3km, h53km±2.8km; pP-P, n188, σ1s17/213, mb4.4/54, MS3.8/16, 13C-19D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.91**	**245**	*e*P	**Pn**	**15 00 21.4**	**-1.4**
SPN				*i* S	**Sn**	**15 00 33.5**	**-1.2**
MKZ	**Mys Kozlova**	**1.09**	**10**	*e*P	**Pn**	**15 00 22.5**	**-2.7**
MKZ				*e*S	**Sn**	**15 00 35.7**	**-3.3**
NLC	**Nalytchevo**	**1.27**	**256**	*e*P	**Pn**	**15 00 26.4**	**-1.2**
NLC				*i* S	**Sn**	**15 00 42.6**	**-0.9**
KII	**Karymskiy**	**1.28**	**296**	*e*P	**Pn**	**15 00 25.8**	**-2.0**
AVH	**Avacha**	**1.61**	**263**	*e*P	**Pn**	**15 00 32.0**	**-0.3**
AVH				*i* S	**Sn**	**15 00 52.4**	**+0.6**
PET	**Petropavlovsk**	**1.71**	**255**	*e*P	**Pn**	**15 00 33.1**	**-0.6**
PET				*i* S	**Sn**	**15 00 53.5**	**-0.8**
PET	**Petropavlovsk**	**1.71**	**255**	‖ *i* PN	**Pn**	**15 00 33.1**	**-0.6**
PET				*e*S	**Sn**	**15 00 54.4**	**+0.1**
PET				pmax	pmax		
	comp=Z,185nm,0.5s						
PET				smax			
	comp=N,2μm,0.7s						
PET				smax			
	comp=E,2μm,0.5s						
PET	**Petropavlovsk**	**1.71**	**255**	*e*P	**Pn**	**15 00 33.1**	**-0.6**
PET				*e*S	**Sn**	**15 00 54.3**	**-0.1**
INSR	**Institute**	**1.73**	**257**	*e*P	**Pn**	**15 00 33.1**	**-0.8**
INSR				*i* S	**Sn**	**15 00 53.7**	**-1.0**
GNL	**Ganaly**	**2.07**	**277**	*e*P	**Pn**	**15 00 38.7**	**+0.1**
GNL				*i* S	**Sn**	**15 01 04.2**	**+1.1**
GRL	**Gorelyy**	**2.22**	**246**	*e*P	**Pn**	**15 00 41.0**	**+0.4**
GRL				*i* S	**Sn**	**15 01 08.7**	**+2.0**
PETK	**Petropavlovsk-**	**2.25**	**262**	P	**Pn**	**15 00 41.7**	**+0.6**
	comp=E,43nm,0.3s,baz=76,slow=20,SNR=384						
PETK				S	**Sn**	**15 01 09.2**	**+1.6**
	comp=E,84nm,0.3s,baz=73,slow=39,SNR=19						
PETK				LR	LR	15 01 52.3	
	comp=E,802nm,19.1s,baz=178,slow=49						
PETK	**Petropavlovsk-**	**2.25**	**262**	PN	**Pn**	**15 00 41.7**	**+0.6**
PETK				S	**Sn**	**15 01 09.2**	**+1.6**
PETK				pmax	pmax		
	comp=Z,43nm,0.3s						
PETK				smax			
	comp=N,84nm,0.3s						
PETK	**Petropavlovsk-**	**2.25**	**262**	P	**Pn**	**15 00 41.7**	**+0.6**
PETK				S	**Sn**	**15 01 09.2**	**+1.6**
PETK				LR	LR	15 01 52.3	
BZGR	**Bezymyannyi-Gr**	**2.49**	**351**	*e*P	**Pn**	**15 00 44.5**	**+0.1**
BZGR				*i* S	**Sn**	**15 01 14.8**	**+1.3**
BZMR	**Bezymyannaya**	**2.51**	**348**	*e*P	**Pn**	**15 00 44.8**	**+0.2**
BZMR				*e*S	**Sn**	**15 01 15.2**	**+1.3**
ZLN	**Zelenaya**	**2.56**	**352**	P	**Pn**	**15 00 45.3**	**0.0**
KPT	**Kopyto**	**2.58**	**345**	*e*P	**Pn**	**15 00 45.6**	**+0.1**
KOZ	**Kozyrevsk**	**2.72**	**342**	*e*P	**Pn**	**15 00 47.7**	**+0.1**
KOZ				*e*S	**Sn**	**15 01 20.8**	**+1.6**
KOZR	**Kozyr**	**2.73**	**342**	PN	**Pn**	**15 00 47.7**	**+0.1**
KOZR				S	**Sn**	**15 01 20.8**	**+1.5**
KRSR	**Krestovskiy**	**2.78**	**350**	*e*P	**Pn**	**15 00 48.4**	**+0.1**
KRSR				*e*S	**Sn**	**15 01 21.6**	**+1.1**
KBTR	**Krutoberegovo**	**2.85**	**16**	*e*P	**Pn**	**15 00 48.1**	**-1.2**
KBTR				*e*S	**Sn**	**15 01 20.9**	**-1.4**
KLY	**Klyuchi**	**2.87**	**352**	*e*P	**Pn**	**15 00 49.2**	**-0.3**
KLY				*i* S	**Sn**	**15 01 22.0**	**-0.7**
SRDR	**Sredinnyy**	**3.00**	**342**	*e*P	**Pn**	**15 00 50.7**	**-0.6**
SRDR				*e*S	**Sn**	**15 01 25.3**	**-0.6**
BDR	**Baidarnaya**	**3.09**	**358**	*e*P	**Pn**	**15 00 53.8**	**+1.2**
BDR				*i* S	**Sn**	**15 01 29.2**	**+1.0**
SMKR	**Semkarok**	**3.10**	**1**	*e*P	**Pn**	**15 00 53.1**	**+0.4**
SMKR				*i* S	**Sn**	**15 01 29.8**	**+1.3**
SRKR	**Sorokina**	**3.18**	**358**	P	**Pn**	**15 00 54.0**	**+0.2**
SRKR				*i* S	**Sn**	**15 01 31.0**	**+0.7**
BKI	**Bering**	**3.18**	**55**	*e*P	**Pn**	**15 00 51.8**	**-2.0**
BKI				*i* S	**Sn**	**15 01 26.0**	**-4.5**
SKR	**Severo-Kuril's**	**4.30**	**231**	*e*PN	**Pn**	**15 01 11.5**	**+2.3**
SKR				*e*S	**Sn**	**15 02 03.2**	**+5.2**
SKR				smax			
	comp=N,1μm,2.0s						
SKR				smax			
	comp=E,1μm,2.0s						
SKR				smax			
	comp=N,310nm,0.5s						
SKR				smax			
	comp=E,670nm,1.0s						
SMY	**Shemya**	**7.68**	**91**	*e*PN	**Pn**	**15 01 55.3**	**-0.3**
SMY				pmax	pmax		
	comp=Z,27nm,0.4s						
SMY	**Shemya**	**7.68**	**91**	*e*Pn	**Pn**	**15 01 55.3**	**-0.2**
	comp=Z,27nm,0.4s						
SMY				*e*S	**Sn**	**15 03 17.3**	**-3.9**
AMKA	**Amchitka**	**11.13**	**94**	*e*Pn	**Pn**	**15 02 43.9**	**+1.1**
YUK	**Yuzh-Kuril'sk**	**13.92**	**233**	‖ *i* P	**Pn**	**15 03 20.8**	**0.0**
BILL	**Bilibino**	**14.79**	**7**	‖ *e*P	**Pn**	**15 03 36.8**	**+4.5**
BILL				*e*S	**Sn**	**15 06 18.3**	**+3.8**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,500nm,23.0s						
BILL	**Bilibino**	**14.79**	**7**	*e*P	**Pn**	**15 03 37.5**	**+5.2**
	comp=Z,5.2nm,0.4s						
ASAJ	**Asahikawa**	**15.49**	**240**	P	**Pn**	**15 03 41.9**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=337,slow=9.4,SNR=4.6						
ASAJ				LR	LR	15 09 30.0	
	comp=Z,212nm,18.9s,baz=219,slow=36						
ASAJ	**Asahikawa**	**15.49**	**240**	P	**Pn**	**15 03 42.5**	**+0.9**
ERM	**Erimo**	**16.74**	**234**	*e*P	**Pn**	**15 03 54.3**	**-3.2**
ERM				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ERM	**Erimo**	**16.74**	**234**	*e*P	**Pn**	**15 03 57.0**	**-0.5**
YAK	**Yakutsk**	**18.78**	**310**	*e*P	**Pn**	**15 04 18.1**	**-4.3**
YAK				pmax	pmax		
	comp=E,13nm,1.1s						
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
YAK	**Yakutsk**	**18.78**	**310**	*e*P	**Pn**	**15 04 18.5**	**-3.8**
	comp=Z,39nm,0.8s						
MAJO	**Matsushiro**	**23.41**	**233**	*e*P	**P**	**15 05 12.5**	**+1.2**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
MAJO	**Matsushiro**	**23.41**	**233**	*e*P	**P**	**15 05 12.5**	**+1.2**
	comp=Z,9.2nm,0.6s,mb4.4						
MAT	**Matsushiro**	**23.41**	**233**	P	**P**	**15 05 12.7**	**+1.4**
MJAR	**Matsushiro Arr**	**23.41**	**233**	P	**P**	**15 05 12.9**	**+1.6**
	comp=Z,5.3nm,0.8s,mb4.0,baz=15,slow=9.1,SNR=13						
MJAR				LR	LR	15 14 37.0	
	comp=Z,218nm,22.0s,MS3.6,baz=300,slow=37						
MJAR	**Matsushiro Arr**	**23.41**	**233**	P	**P**	**15 05 12.9**	**+1.6**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,218nm,22.0s						
HIA	**Hailar**	**26.07**	**278**	*e*P	**P**	**15 05 32.9**	**-2.5**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.3s						
HIA	**Hailar**	**26.07**	**278**	*e*P	**P**	**15 05 32.9**	**-2.5**
	comp=Z,6.2nm,0.3s,mb4.6						
COLA	**College**	**27.57**	**46**	*e*P	**P**	**15 05 49.6**	**+0.9**
ILAR	**Eielson Array**	**27.98**	**46**	P	**P**	**15 05 51.9**	**-0.5**
	comp=Z,1.2nm,0.7s,mb3.6,baz=264,slow=8.2,SNR=18						
ILAR				pP	pP	15 06 04.8	+0.6
	comp=Z,0.6nm,0.6s,baz=258,slow=7.3,SNR=3.6						
ILAR	**Eielson Array**	**27.98**	**46**	P	**P**	**15 05 51.9**	**-0.5**
ILAR				*PP	pP	15 06 04.8	+0.7
ILAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	**28.09**	**249**	P	**P**	**15 05 54.2**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.5,baz=40,slow=8.9,SNR=4.5						
KSRS	**Korea Array**	**28.09**	**249**	P	**P**	**15 05 54.2**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
EGAK	**Eagle**	**30.43**	**45**	*e*P	**P**	**15 06 13.0**	**-1.1**
INK	**Inuvik**	**33.08**	**38**	P	**P**	**15 06 36.6**	**-0.7**
	comp=Z,1.6nm,0.3s,mb4.4,baz=156,slow=20,SNR=5.7						
INK				pP	pP	15 06 50.4	+1.3
	comp=Z,2.5nm,0.8s,baz=181,slow=4.0,SNR=2.1						
INK	**Inuvik**	**33.08**	**38**	P	**P**	**15 06 36.7**	**-0.6**
INK				*PP	pP	15 06 50.4	+1.3
INK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TLY	**Talaya**	**34.32**	**291**	*e*P	**P**	**15 06 44.1**	**-4.2**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,157nm,16.0s,MS3.8						
SONM	**Songino Array**	**34.57**	**283**	P	**P**	**15 06 49.3**	**-1.2**
	comp=Z,0.4nm,0.6s,mb3.6,baz=62,slow=9.3,SNR=2.9						
SONM				PcP	PcP	15 09 25.7	+1.5
	comp=Z,1.1nm,0.6s,baz=56,slow=4.0,SNR=5.7						
SONM				LR	LR	15 22 13.6	
	comp=Z,252nm,18.3s,MS4.0,baz=154,slow=39						
HHC	**Hu-ho-hao-te**	**35.43**	**270**	*e*P	**P**	**15 06 58.0**	**0.0**
HHC				pP	pP	15 07 10.8	+1.0
HHC				PP	PP	15 08 18.0	-0.8
HHC				PcP	PcP	15 09 28.7	+1.9
HHC				S	**S**	**15 12 27.8**	**-1.8**
HHC				sS	sS	15 12 47.9	-1.6
HHC				ScP	ScP	15 13 09.7	+0.9
HHC				SS	SS	15 14 46.0	-19
HHC				ScS	ScS	15 17 11.8	-1.4
YKA	**Yellowknife Ar**	**42.34**	**43**	P	**P**	**15 07 55.6**	**+0.1**
	comp=Z,1.2nm,0.6s,mb3.7,baz=298,slow=7.7,SNR=7.3						
YKA				pP	pP	15 08 09.1	+1.6
	comp=Z,0.6nm,0.5s,baz=299,slow=7.6,SNR=2.9						
YKA				LR	LR	15 26 41.7	
	comp=Z,13nm,18.5s,MS2.9,baz=305,slow=38						
YKA	**Yellowknife Ar**	**42.34**	**43**	P	**P**	**15 07 55.7**	**+0.2**
YKA				*PP	pP	15 08 09.2	+1.6
ZALV	**Zalesovo Beam**	**43.22**	**303**	P	**P**	**15 08 00.3**	**-2.5**
	comp=Z,1.1nm,0.5s,mb3.9,baz=57,slow=5.5,SNR=6.4						
ZALV				LR	LR	15 27 15.2	
	comp=Z,84nm,20.6s,MS3.6,baz=337,slow=38						
ZALV	**Zalesovo Beam**	**43.22**	**303**	P	**P**	**15 08 00.3**	**-2.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,84nm,20.6s,MS3.6						
GTA	**Gaotai**	**43.34**	**277**	*e*P	**P**	**15 08 04.7**	**+0.8**
GTA				pP	pP	15 08 08.4	-7.6
GTA				sP	sP	15 08 10.7	-10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.7						
NVS	**Novosibirsk**	**43.54**	**305**	*e*P	**P**	**15 08 01.4**	**-3.9**
KBS	**Kingsbay**	**46.59**	**352**	*ce*P	**P**	**15 08 31.0**	**+1.7**
KBS				pmax	pmax		
	comp=Z,31nm,2.5s,mb4.8						
SPITS	**Spitsbergen Ar**	**46.88**	**351**	P	**P**	**15 08 30.8**	**-0.6**
	comp=Z,9.7nm,0.5s,mb5.0,baz=15,slow=8.3,SNR=31						
SPITS	**Spitsbergen Ar**	**46.88**	**351**	P	**P**	**15 08 30.8**	**-0.7**
SPITS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KURK

FINES FINESS Array B 60.07 337 P **P** **15 10 07.6 -0.7**
comp=Z,4.8nm,0.5s,mb4.8,baz=29,slow=8.8,SNR=36
FINES LR LR 15 41 30.0
comp=Z,102nm,18.9s,MS4.0,baz=149,slow=42
FINES FINESS Array B 60.07 337 P **P** **15 10 07.6 -0.7**
FINES pmax pmax
comp=Z,5.0nm,0.5s
FINES MLR MLR
comp=Z,102nm,18.9s
OBN Obninsk 62.60 328⇑*eP* **P** **15 10 24.3 -1.2**
OBN *e*SS SS 15 22 57.4 +3.8
OBN pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.3
NOA NORSAR Array B 63.38 344 P **P** **15 10 29.9 -0.7**
comp=Z,6.4nm,0.7s,mb4.8,baz=21,slow=6.6,SNR=24
NOA pP pP 15 10 42.7 -0.5
comp=Z,1.3nm,0.7s,baz=20,slow=6.6,SNR=2.3
NOA sP sP 15 10 48.8 +0.5
comp=Z,2.7nm,1.0s,baz=21,slow=6.6,SNR=2.5
NOA LR LR 15 44 00.8
comp=Z,46nm,18.1s,MS3.7,baz=40,slow=42
NOA NORSAR Array B 63.38 344 P **P** **15 10 29.9 -0.7**
NOA pP pP 15 10 42.7 -0.5
NOA sP sP 15 10 48.8 +0.5
NOA LR LR 15 44 00.8
HFS Hagfors 63.81 343 P **P** **15 10 32.4 -1.0**
comp=Z,4.0nm,0.5s,mb4.7,baz=33,slow=3.5,SNR=31
HFS Hagfors 63.81 343 P **P** **15 10 32.4 -1.0**
HFS pmax pmax
comp=Z,4.0nm,0.5s
VRHR Novokhopersk 64.20 323 *eP* **P** **15 10 33.8 -2.3**
VRHR pmax pmax
comp=N,6.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.4s
VRHR pmax pmax
comp=Z,30nm,0.4s,mb5.7
SCHQ Schefferville 64.93 28 P **P** **15 10 40.8 0.0**
comp=Z,5.4nm,1.1s,mb4.5,baz=9.7,slow=9.6,SNR=5.4
VSR Storozhevoye 64.98 324 *eP* **P** **15 10 40.0 -1.2**
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
VSR MLR MLR
comp=N,120nm,16.0s,MS4.2
VSR MLR MLR
comp=E,70nm,16.0s,MS4.2
VSR MLR MLR
comp=Z,190nm,16.0s,MS4.4
VORD Divnogorie 65.15 324 *eP* **P** **15 10 41.1 -1.2**
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
VORD pmax pmax
comp=N,1.0nm,0.3s
KIV Kislovodsk 69.68 318⇑*eP* **P** **15 11 09.8 -1.3**
KIV *e* 15 13 42.9
KIV pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.1
TXAR Lajitas Array 69.76 68 P **P** **15 11 13.4 +1.6**
comp=Z,1.3nm,0.5s,mb4.1,baz=298,slow=4.6,SNR=13
TXAR pP pP 15 11 28.2 +3.6
comp=Z,1.1nm,0.5s,baz=300,slow=4.6,SNR=6.9
TXAR Lajitas Array 69.76 68 P **P** **15 11 13.4 +1.6**
TXAR *PP pP 15 11 28.2 +3.6
TXAR pmax pmax
comp=Z,1.0nm,0.5s
KWP Kalwaria Pacla 71.50 333 *eP* **P** **15 11 22.1 0.0**
KWP Kalwaria Pacla 71.50 333 ⇓*eP* **P** **15 11 22.6 +0.6**
KWP Kalwaria Pacla 71.50 333 ⇓*iP* **P** **15 11 22.6 +0.6**
OJC Ojcow 71.72 335 *eP* **P** **15 11 24.0 +0.6**
KOLS Kolonicke sedl 72.26 333 *eP* **P** **15 11 26.7 +0.1**
KOLS pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
KOLS Kolonicke sedl 72.26 333 *eP* **P** **15 11 26.7 +0.1**
comp=Z,7.7nm,1.5s,mb4.4
KOLS Kolonicke sedl 72.26 333 *eP* **P** **15 11 26.7 +0.1**
CLL Collm 72.26 340⇓*iP* **P** **15 11 26.6 0.0**
CLL *i* *PP pP 15 11 46.0 +6.6
CLL pmax pmax
comp=Z,13nm,1.3s,mb4.7
CLL Collm 72.26 340⇓*iP* **P** **15 11 26.6 0.0**
comp=Z,24nm,1.3s,mb5.0
CLL *i* pP pP 15 11 46.0 +6.6
CLL Collm 72.26 340⇓*iP* **P** **15 11 26.6 0.0**
comp=Z,24nm,1.3s,mb5.0
CLL *i* PcP PcP 15 11 46.0 +1.5
CLL LmV 15 49 00.0
comp=Z,100nm,18.9s
UPC Upice 72.36 338 *eP* **P** **15 11 27.6 +0.4**
UPC Upice 72.36 338 *eP* **P** **15 11 27.6 +0.4**
DPC Dobruska-Polom 72.44 337 *eP* **P** **15 11 28.6 +1.0**
DPC MLR MLR
comp=Z,100nm,12.2s,MS4.3
DPC Dobruska-Polom 72.44 337 *eP* **P** **15 11 28.6 +1.0**
DPC AMS AMS 15 50 00.0
comp=Z,100nm,12.2s
BRG Berggiesshubel 72.47 339 *eP* **P** **15 11 28.2 +0.4**
comp=Z,10nm,1.4s,mb4.6
BRG Berggiesshubel 72.47 339 *eP* **P** **15 11 28.2 +0.4**
BRG pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
OKC Ostrava-Krasne 72.48 336 *eP* **P** **15 11 28.9 +1.0**
OKC MLR MLR
comp=Z,200nm,20.4s,MS4.4
OKC Ostrava-Krasne 72.48 336 *eP* **P** **15 11 28.9 +1.0**
OKC AMS AMS 15 50 40.0
comp=Z,200nm,20.4s
CRVS Cervenica-Dubn 72.50 334 *eP* **P** **15 11 27.8 -0.2**
CRVS pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
CRVS Cervenica-Dubn 72.50 334 *eP* **P** **15 11 27.8 -0.2**
comp=Z,4.8nm,1.3s,mb4.3
CRVS Cervenica-Dubn 72.50 334 *eP* **P** **15 11 27.8 -0.2**
BUR08 Bucovina Ar. S 72.60 331 *eP* **P** **15 11 27.8 -0.8**
BURAR Bucovina Array 72.62 331 ⇓*eP* **P** **15 11 28.7 -0.1**
BURAR Bucovina Array 72.62 331 ⇓*iP* **P** **15 11 28.7 -0.1**
PVCC Panska Ves 72.66 339 AMS AMS 15 48 40.0
comp=Z,200nm,8.8s
MORC Moravsky Berou 72.69 336 ⇓*eP* **P** **15 11 30.0 +0.9**
MORC Moravsky Berou 72.69 336 ⇓*iP* **P** **15 11 30.0 +0.9**
TRPA Tarpa 72.92 333 ⇓*iP* **P** **15 11 30.9 +0.4**
KECS Kecovo 73.14 334 *eP* **P** **15 11 28.9 -3.0**
comp=Z,1.8nm,1.2s,mb3.9
KECS Kecovo 73.14 334 *eP* **P** **15 11 28.9 -3.0**
PRU Pruhonice 73.18 338 *eP* **P** **15 11 33.4 +1.4**
PRU MLR MLR
comp=Z,100nm,9.3s
PRU Pruhonice 73.18 338 *eP* **P** **15 11 33.4 +1.4**
PRU AMS AMS 15 50 10.0
comp=Z,100nm,9.3s
VRAC Vranov 73.35 337 P **P** **15 11 32.0 -1.0**
comp=Z,2.2nm,0.4s,mb4.4,baz=13,slow=10,SNR=5.5
VRAC Vranov 73.35 337 ⇓*eP* **P** **15 11 32.4 -0.6**
VRAC Vranov 73.35 337 ⇓*iP* **P** **15 11 32.4 -0.6**
NKC Novy Kostel 73.39 340 AMS AMS 15 49 30.0
comp=Z,200nm,8.1s
VYHS Vyhne 73.56 335 *eP* **P** **15 11 34.8 +0.5**
VYHS Vyhne 73.56 335 *eP* **P** **15 11 34.8 +0.5**
TREC Trest 73.62 338 *eP* **P** **15 11 34.7 +0.1**
TREC MLR MLR
comp=Z,200nm,12.8s,MS4.6
TREC Trest 73.62 338 *eP* **P** **15 11 34.7 +0.1**
TREC AMS AMS 15 48 50.0
comp=Z,200nm,12.8s
PSZ Piszkesteto 73.82 334⇑*eP* **P** **15 11 36.2 +0.4**
PSZ Piszkesteto 73.82 334⇑*iP* **P** **15 11 36.2 +0.4**
DRGR 74.09 332⇑*eP* **P** **15 11 37.8 +0.4**
DRGR 74.09 332⇑*iP* **P** **15 11 37.8 +0.4**
GRA1 Grafenberg Arr 74.16 340 *eP* **P** **15 11 38.4 +0.6**
comp=Z,29nm,1.4s,mb5.0
GRF Grafenberg Arr 74.16 340 *eP* **P** **15 11 38.4 +0.6**
comp=Z,29nm,1.4s,mb5.0
GRF Grafenberg Arr 74.16 340 *eP* **P** **15 11 38.4 +0.6**
GRF pmax pmax
comp=Z,29nm,1.4s,mb5.0
GRF Grafenberg Arr 74.16 340 *eP* **P** **15 11 38.4 +0.6**
comp=Z,29nm,1.4s,mb5.0
KHC Kasperske Hory 74.20 339 *eP* **P** **15 11 38.7 +0.7**
KHC pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KHC Kasperske Hory 74.20 339 *eP* **P** **15 11 38.7 +0.7**
comp=Z,4.4nm,1.0s,mb4.3
KHC Kasperske Hory 74.20 339 *eP* **P** **15 11 39.0 +1.0**
KHC AMS AMS 15 51 00.0
comp=Z,100nm,17.1s
MLR Muntele Rosu 74.32 329⇑*iP* **P** **15 11 39.5 +0.7**
MLR Muntele Rosu 74.32 329⇑*iP* **P** **15 11 39.5 +0.7**
TIRR Tirgusor 74.46 327⇑*iP* **P** **15 11 40.0 +0.3**
TIRR Tirgusor 74.46 327⇑*iP* **P** **15 11 40.0 +0.3**
VOIR 74.64 330⇑*iP* **P** **15 11 41.7 +1.1**
VOIR 74.64 330⇑*iP* **P** **15 11 41.7 +1.1**
GZR Gura Zlata 75.35 331 ⇓*iP* **P** **15 11 44.9 +0.2**
GZR Gura Zlata 75.35 331 ⇓*iP* **P** **15 11 44.9 +0.2**
CDF Champ du Feu 76.13 343 *eP* **P** **15 11 50.0 +0.8**
WRA Warramunga Arr 76.77 206 P **P** **15 11 54.4 +1.4**
comp=Z,0.6nm,0.7s,mb3.6,baz=19,slow=6.1,SNR=6.6
BR131 Keskin Array S 76.81 321 *eP* **P** **15 11 53.3 +0.1**
comp=Z,0.9nm,0.5s,mb4.0
BRTR Keskin Array B 76.81 321 P **P** **15 11 53.2 +0.1**
comp=Z,1.8nm,0.5s,mb4.3,baz=36,slow=3.4,SNR=12
BRTR LR LR 15 46 55.3
comp=Z,40nm,21.0s,MS3.7,baz=227,slow=37
BRTR Keskin Array B 76.81 321 *iP* **P** **15 11 53.5 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.5s
LPL La Plagne 79.03 342 *eP* **P** **15 12 06.8 +1.4**
LPG La Plagne 79.04 342 *eP* **P** **15 12 07.0 +1.6**
MBDF Montbardon 79.78 342 *eP* **P** **15 12 10.1 +0.6**
comp=Z,6.6nm,0.7s,mb4.4
MBDF Montbardon 79.78 342 *eP* **P** **15 12 10.1 +0.6**
MBDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
MBDF Montbardon 79.78 342 *eP* **P** **15 12 10.1 +0.6**
comp=Z,3.3nm,0.7s,mb4.4
ASAR Alice Springs 80.44 205 P **P** **15 12 15.3 +2.2**
comp=Z,0.5nm,0.6s,mb3.6,baz=18,slow=4.9,SNR=19
ASAR pP pP 15 12 29.7 +3.6
comp=Z,0.8nm,0.5s,baz=17,slow=5.1,SNR=6.5
PPT Papeete 82.34 133 LR LR 15 50 12.6
comp=Z,1.7nm,18.1s,MS2.5,baz=333,slow=36
ESDC Sonseca Array 86.35 349 P **P** **15 12 43.6 +0.1**
comp=Z,0.8nm,0.5s,mb4.2,baz=360,slow=4.5,SNR=4.1
KEST Kesra 87.90 338 P **P** **15 12 50.9 -0.2**
comp=Z,0.6nm,0.4s,mb4.1,baz=303,slow=2.5,SNR=6.4
SIV San Ignacio 130.05 58 PKP PKPdf 15 19 12.1 +0.8
comp=Z,1.0nm,0.8s,baz=275,slow=7.5,SNR=4.9

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*IDC **09** 15:15:10.6±1.9, 1°.12N×97°.19E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/23, mbtmp3.7/9, ML4.0/1, Error ellipse: s-maj=69.8km s-min=17.9km az=61.0*
NEIC 09 15:15:15.7±0.6, 1°.15N×97°.20E, h35km, Error ellipse: s-maj=13.7km s-min=7.9km az=68.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.05**	**49**	*eP*	Pn	15 16 30.1	+1.1
KULM	**Kulim**	**5.37**	**40**	*eP*	Pn	15 16 33.4	+0.1
	11nm,0.6s						
CMAR	**Chiang Mai Arr**	**17.29**	**6**	P	Pn	15 19 13.8	-0.7
	0.2nm,0.3s,baz=198,slow=10.0,SNR=5.7						
WRA	**Warramunga Arr**	**42.01**	**122**	P	P	15 23 03.8	-0.1
	0.9nm,0.9s,baz=301,slow=9.1,SNR=9.6						
WB2	**Warramunga Arr**	**42.02**	**122**	*eP*	P	15 23 04.2	+0.2
ASAR	**Alice Springs**	**43.36**	**127**	P	P	15 23 15.0	+0.1
	0.2nm,0.4s,baz=300,slow=7.5,SNR=12						
KSRS	**Korea Array**	**45.89**	**34**	P	P	15 23 34.8	-0.1
	1.5nm,0.8s,baz=223,slow=8.1,SNR=4.2						
SONM	**Songino Array**	**47.18**	**8**	P	P	15 23 45.2	+0.4
	0.5nm,0.7s,baz=187,slow=9.4,SNR=4.6						
MK31	**Makanchi Array**	**47.29**	**346**	*eP*	P	15 23 45.6	0.0
MKAR	**Makanchi Array**	**47.29**	**346**	P	P	15 23 46.1	+0.5
	0.6nm,0.5s,baz=156,slow=9.1,SNR=9.0						
STKA	**Stephens Creek**	**53.32**	**132**	P	P	15 24 31.5	-0.1
	1.0nm,1.0s,baz=315,slow=14,SNR=3.2						
ZALV	**Zalesovo Beam**	**53.61**	**351**	P	P	15 24 33.5	+0.2
	1.1nm,0.5s,baz=175,slow=5.5,SNR=7.1						
BVAR	**Borovoye Array**	**56.30**	**341**	P	P	15 24 52.8	+0.1
	0.4nm,0.6s,baz=120,slow=8.7,SNR=3.6						

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*NNC **09** 15:17:43.5±3.2, 37°.00N×71°.32E, h149km±61km, mb3.0, mpv3.8, Error ellipse: s-maj=31.2km s-min=18.0km az=8.0*
ISC 09 15:17:43.4±3.3, 37°.0N±0°.2×71°.3E±0°.2, h152km±61km, n8, σ0°37/10, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.47**	**19**	P	**Pn**	**15 19 02.9**	**-0.1**
	SNR=54						
KZA	**Kyzart**	**5.94**	**30**	P	**Pn**	**15 19 08.7**	**-0.4**
	SNR=8.9						
EKS2	**Erkin-Say**	**5.99**	**18**	P	**Pn**	**15 19 10.0**	**+0.2**
	SNR=12						
KK31	**Karatay Array**	**6.16**	**355**	⇑P	**Pn**	**15 19 12.2**	**+0.2**
	2.4nm,0.2s,baz=175,slow=13,SNR=77						
KK31				S	**Sn**	**15 20 21.4**	**-0.2**
	4.3nm,0.5s,baz=174,slow=23,SNR=8.3						
KBK	**Karagaybulak**	**6.33**	**25**	P	**Pn**	**15 19 15.2**	**+0.8**
	SNR=5.6						
TKM2	**Tokmak 2**	**6.79**	**28**	⇑P	**Pn**	**15 19 20.1**	**-0.5**
	2.5nm,0.5s						
TKM2				⇑S	**Sn**	**15 20 36.9**	**+0.1**
	2.4nm,0.7s						
TKM2	**Tokmak 2**	**6.79**	**28**	P	**Pn**	**15 19 19.9**	**-0.7**
	SNR=7.9						
AB31	**Akbulak array**	**14.80**	**330**	⇓P	**Pn**	**15 21 05.0**	**0.0**
	0.6nm,0.4s,baz=134,slow=21,SNR=22						

IDC 09 15:29:22.4±2.2, 22°.60S×68°.60W, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=54.6km s-min=52.1km az=56.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.30**	**4**	Pn	Pn	15 30 58.5	+1.9
	0.5nm,0.3s,baz=185,slow=4.4,SNR=11						
SIV	**San Ignacio**	**9.68**	**49**	Pn	Pn	15 31 41.7	-1.4
	0.8nm,0.3s,baz=234,slow=14,SNR=27						
TORD	**Torodi Ar. Bea**	**77.46**	**70**	P	P	15 41 20.4	+0.3
	0.5nm,0.8s,baz=238,slow=4.9,SNR=2.9						
YKA	**Yellowknife Ar**	**92.32**	**340**	P	P	15 42 33.0	-1.0
	0.5nm,0.5s,baz=137,slow=4.5,SNR=5.1						
MKAR	**Makanchi Array**	**146.35**	**37**	PKPbc	PKPbc	15 49 05.0	-0.1
	0.5nm,0.7s,baz=305,slow=2.8,SNR=6.0						

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*ISCJB **09** 15:43:00.7±0.8, 19°.14N±0°.04×66°.76W±0°.04, h10km, Error ellipse: s-maj=6.1km s-min=5.3km az=19.1*
*NEIC **09** 15:43:02.0±1.9, 19°.11N×66°.79W, h16km±13km, ML3.6, Error ellipse: s-maj=11.8km s-min=6.0km az=210.0*
*RSPR **09** 15:43:05.2, 19°.08N×66°.83W, h20km±26km, MD3.3/14*
ISC 09 15:43:01.5±0.7, 19°.10N±0°.04×66°.75W±0°.04, h10km, n22, σ0°83/30, 7C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.71**	**209**⇓*eP*		**Pg**	**15 43 16.1**	**+0.8**
AGPR	**Aguadilla, PR**	**0.71**	**209**	*eS*	**Sg**	**15 43 26.2**	**+1.6**
AGPR	**Aguadilla, PR**	**0.71**	**209**	*eP*	**Pg**	**15 43 16.1**	**+0.8**
AOPR	**Arecibo Observ**	**0.74**	**180**⇑*eP*		**Pg**	**15 43 17.3**	**+1.4**
LRS	**Lares**	**0.81**	**186**⇓*iP*		**Pg**	**15 43 17.9**	**+0.8**
LSP	**Las Mesas**	**0.97**	**199**⇑*iP*		**Pg**	**15 43 20.2**	**+0.1**
LSP	**Las Mesas**	**0.97**	**199**	*eP*	**Pg**	**15 43 20.0**	**-0.2**
CELP	**Cerrillos**	**1.03**	**171**⇑*iP*		**Pg**	**15 43 21.9**	**+0.5**
CELP				*eS*	**Sg**	**15 43 34.7**	**0.0**
CELP	**Cerrillos**	**1.03**	**171**	*eP*	**Pg**	**15 43 21.4**	**+0.1**
OBIP	**Obispado Ponce**	**1.06**	**172**⇓*iP*		**Pg**	**15 43 22.0**	**+0.2**
OBIP				*eS*	**Sg**	**15 43 35.4**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.12**	**186**⇑*iP*		**Pb**	**15 43 22.9**	**-0.1**
GBPR				*eS*	**Sb**	**15 43 36.5**	**-1.2**
SJG	**San Juan**	**1.13**	**150**⇑*eP*		**Pb**	**15 43 23.5**	**+0.3**
SJG	**San Juan**	**1.13**	**150**⇑*eP*		**Pb**	**15 43 24.1**	**+0.8**
SJG				*eS*	**Sb**	**15 43 37.4**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.14**	**197**⇓*eP*		**Pb**	**15 43 22.6**	**-0.7**
CRPR				*eS*	**Sb**	**15 43 36.2**	**-1.8**
ICM	**Isla Caja Muer**	**1.22**	**170**⇑*iP*		**Pn**	**15 43 24.9**	**+0.3**
ICM				*eS*	**Sb**	**15 43 39.8**	**-0.6**
HUMP	**Col San Antoni**	**1.28**	**138**⇑*eP*		**Pn**	**15 43 25.6**	**+0.2**
HUMP				*eS*	**Sb**	**15 43 42.0**	**-0.1**
STVI	**Saint Thomas**	**1.86**	**113**⇑*eP*		**Pn**	**15 43 33.2**	**-0.2**
TBVI	**Tortola**	**2.13**	**108**⇓*eP*		**Pn**	**15 43 38.2**	**+1.0**
TBVI				*eS*	**Sn**	**15 44 03.7**	**-0.1**
CDVI	**St. Croix**	**2.31**	**125**	*eP*g	**Pg**	**15 43 45.5**	**-0.3**
SMN1	**Samana, DR**	**2.38**	**273**⇑*eP*		**Pn**	**15 43 40.1**	**-0.5**
SDDR	**Presa de Saban**	**4.29**	**269**	*eP*n	**Pn**	**15 44 07.8**	**+0.9**
GRTK	**Grand Turk**	**4.76**	**301**	*eP*	**Pn**	**15 44 11.3**	**-2.0**

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*ISCJB **09** 15:44:55.5±0.8, 38°.63N±0°.04×35°.75E±0°.04, h1km±7km, Error ellipse: s-maj=6.2km s-min=5.0km az=27.8*
*DDA **09** 15:44:55.4, 38°.69N×35°.79E, h5km±1km, Md3.0*
*ISK **09** 15:44:55.4, 38°.62N×35°.75E, h9km, MD2.9*
*CSEM **09** 15:44:55.5±0.2, 38°.60N×35°.75E, h2km, MD3.0, Error ellipse: s-maj=5.4km s-min=4.4km az=43.0*
ISC 09 15:44:56.1±0.7, 38°.61N±0°.04×35°.75E±0°.04, h5km±6km, n25, σ0°90/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.52**	**82**	*i* P	**Pg**	**15 45 05.0**	**-1.0**
PINB				*i* S	**Sg**	**15 45 12.5**	**-0.3**
PINB	**Pinarbasi**	**0.52**	**82**	*i* P	**Pg**	**15 45 05.0**	**-1.0**
PINB				*i* S	**Sg**	**15 45 12.5**	**-0.2**
AVNT	**Avonos**	**0.72**	**284**	*i* P	**Pg**	**15 45 09.9**	**-0.1**
AVNT				*i* S	**Sg**	**15 45 20.4**	**+1.1**
AVNT	**Avonos**	**0.72**	**284**	*i* P	**Pg**	**15 45 09.9**	**-0.1**
AVNT				*i* S	**Sg**	**15 45 20.5**	**+1.2**
SARI	**SarD1z-Kayseri**	**0.74**	**84**	*e*PG	**Pg**	**15 45 06.3**	**-4.1**
SARI				*e*SG	**Sg**	**15 45 15.4**	**-4.7**
SARI	**SarD1z-Kayseri**	**0.74**	**84**	*e*Pg	**Pg**	**15 45 06.3**	**-4.1**
SARI				*e*Sg	**Sg**	**15 45 15.4**	**-4.7**
YOZ	**Yozgat**	**1.08**	**342**	*e*PG	**Pg**	**15 45 16.5**	**-0.4**
YOZ	**Yozgat**	**1.08**	**342**	*e*Pg	**Pg**	**15 45 16.5**	**-0.4**
KOZT	**Kozan**	**1.13**	**177**	*e*PN	**Pn**	**15 45 17.8**	**-0.8**
KOZT				*e*SN	**Sn**	**15 45 34.0**	**-0.5**
ANDN	**Andirin**	**1.13**	**155**	*e*P	**Pg**	**15 45 18.0**	**+0.2**
ANDN				*e*S	**Sg**	**15 45 35.4**	**+3.0**
ANDN	**Andirin**	**1.13**	**155**	*e*P	**Pg**	**15 45 18.0**	**+0.2**
KMRS	**Kahramanmaras**	**1.43**	**140**	*e*PN	**Pn**	**15 45 22.0**	**-0.7**
KMRS	**Kahramanmaras**	**1.43**	**140**	*e*Pn	**Pn**	**15 45 22.0**	**-0.7**
KARA	**Karaisali**	**1.46**	**202**	*e*PN	**Pn**	**15 45 22.7**	**-0.4**
KARA	**Karaisali**	**1.46**	**202**	*e*Pn	**Pn**	**15 45 22.7**	**-0.4**
SVSK	**Karacayir**	**1.62**	**36**	*e*PN	**Pn**	**15 45 24.7**	**-0.7**
SVSK	**Karacayir**	**1.62**	**36**	*e*Pn	**Pn**	**15 45 24.7**	**-0.8**
CORM	**Corum**	**1.79**	**331**	*e*PN	**Pn**	**15 45 27.1**	**-0.7**
CORM	**Corum**	**1.79**	**331**	*e*Pn	**Pn**	**15 45 27.1**	**-0.6**
MALT	**Malatya**	**2.12**	**97**	*e*PN	**Pn**	**15 45 32.9**	**+0.6**
MALT	**Malatya**	**2.12**	**97**	*e*Pn	**Pn**	**15 45 32.9**	**+0.6**
CTKT	**Corum**	**2.14**	**340**	*i* P	**Pn**	**15 45 33.3**	**+0.8**
CTKT				*i* S	**Sn**	**15 45 59.3**	**-0.3**
CTKT	**Corum**	**2.14**	**340**	*i* P	**Pn**	**15 45 33.3**	**+0.7**
CTKT				*i* S	**Sn**	**15 45 59.3**	**-0.3**
KEMA	**Kemaliye**	**2.24**	**72**	*i* P	**Pn**	**15 45 34.7**	**+0.8**
KEMA				*i* S	**Sn**	**15 46 03.6**	**+1.7**
KEMA	**Kemaliye**	**2.24**	**72**	*i* P	**Pn**	**15 45 34.7**	**+0.8**
KEMA				*i* S	**Sn**	**15 46 03.6**	**+1.7**

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*IDC **09** 15:58:53.6±2.1, 9°.67N×122°.00E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/21, mbtmp3.9/4, Error ellipse: s-maj=176.4km s-min=24.0km az=65.0*
*ISCJB **09** 15:58:54.5±1.7, 9°.68N±0°.06×121°.82E±0°.05, h19km±16km, mb3.9/4, Error ellipse: s-maj=11.1km s-min=7.3km az=20.7*
*MAN **09** 15:58:56, 9°.71N×121°.84E, h30km, mb4.4, ML3.3, MS3.2*
ISC 09 15:58:53.9±1.7, 9°.70N±0°.06×121°.85E±0°.05, h4km±12km, n15, σ0°82/19, mb3.9/4, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.17**	**38**	*eP*	**Pg**	**15 59 16.0**	**-0.4**
GUIM				*e*S	**Sg**	**15 59 23.5**	**-8.1**
CUYO	**Cuyo Island**	**1.41**	**324**	*eP*	**Pn**	**15 59 20.0**	**-0.3**
SNPH	**Sibulan**	**1.41**	**105**⇑*iP*		**Pn**	**15 59 19.2**	**-1.2**
SNPH				*i* S	**Sg**	**15 59 42.7**	**+3.3**
TBP	**Tagbilaran**	**1.98**	**90**	*eP*	**Pn**	**15 59 28.5**	**+0.3**
TBP				*e*S	**Sn**	**15 59 54.4**	**+0.8**
IPIL	**Ipil**	**2.03**	**159**	*eP*	**Pn**	**15 59 28.4**	**-0.5**
LLP	**Lapu-Lapu**	**2.17**	**73**	*eP*	**Pn**	**15 59 30.3**	**-0.5**
LLP				*e*S	**Sn**	**15 59 57.1**	**-1.1**
PAGZ	**Pagadian**	**2.38**	**140**	*eP*	**Pn**	**15 59 34.5**	**+0.7**
BUSP	**Coron**	**2.80**	**325**	*eP*	**Pn**	**15 59 39.3**	**-0.2**
ENPP	**El Nido**	**2.82**	**302**	*eP*	**Pn**	**15 59 39.8**	**+0.1**
MSLP	**Maasin**	**2.99**	**82**	*eP*	**Pn**	**15 59 43.5**	**+1.4**
LUBP	**Lubang**	**4.30**	**339**	*eP*	**Pn**	**16 00 00.5**	**+0.3**
FITZ	**Fitzroy Crossi**	**27.88**	**172**	P	**P**	**16 04 44.7**	**-0.2**
	1.6nm,0.9s,mb3.6,baz=354,slow=9.2,SNR=3.3						
WRA	**Warramunga Arr**	**31.92**	**157**	P	**P**	**16 05 19.9**	**-0.8**
	1.6nm,0.7s,mb4.0,baz=335,slow=9.9,SNR=18						
ASAR	**Alice Springs**	**35.20**	**161**	P	**P**	**16 05 49.5**	**+0.2**
	2.3nm,0.6s,mb4.3,baz=339,slow=6.7,SNR=73						
MKAR	**Makanchi Array**	**49.92**	**325**	P	**P**	**16 07 49.9**	**+1.2**
	0.4nm,0.8s,mb3.5,baz=123,slow=8.7,SNR=3.2						

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*ISK **09** 17:00:30.5, 38°.15N×28°.83E, h10km, MD3.0*
*ISCJB **09** 17:00:33.8±0.6, 38°.01N±0°.03×29°.09E±0°.05, h9km±6km, Error ellipse: s-maj=6.8km s-min=4.1km az=26.2*
*CSEM **09** 17:00:33.8±0.2, 38°.03N×29°.08E, h10km, MD2.9, Error ellipse: s-maj=6.3km s-min=4.7km az=109.0*
*DDA **09** 17:00:33.5, 37°.98N×29°.11E, h6km±1km, Md2.9*
ISC 09 17:00:34.0±0.5, 38°.02N±0°.03×29°.07E±0°.04, h12km±5km, n31, σ0°97/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.26**	**186**	*e*PG	**Pg**	**17 00 39.1**	**-0.3**
DENT	**Denizli**	**0.26**	**186**	*e*Pg	**Pg**	**17 00 39.1**	**-0.3**
DNZL	**Cakiroluk**	**0.33**	**183**	*i* P	**Pg**	**17 00 40.0**	**-0.6**
DNZL				*i* S	**Sg**	**17 00 44.8**	**-0.3**
DNZL	**Cakiroluk**	**0.33**	**183**	*i* P	**Pg**	**17 00 40.0**	**-0.6**
DNZL				*i* S	**Sg**	**17 00 44.8**	**-0.2**
KHL	**Karahalli**	**0.47**	**50**	*e*PG	**Pg**	**17 00 42.6**	**-0.7**
KHL				*e*SG	**Sg**	**17 00 50.3**	**+0.8**
KHL	**Karahalli**	**0.47**	**50**	*e*Pg	**Pg**	**17 00 42.6**	**-0.7**
KHL				*e*Sg	**Sg**	**17 00 50.3**	**+0.7**
KHAL	**Karahalli**	**0.49**	**44**	*i* P	**Pg**	**17 00 43.3**	**-0.2**
KHAL				*i* S	**Sg**	**17 00 50.7**	**+0.7**
KHAL	**Karahalli**	**0.49**	**44**	*i* P	**Pg**	**17 00 43.3**	**-0.2**
KHAL				*i* S	**Sg**	**17 00 50.7**	**+0.7**
AYDN	**Tasoluk**	**1.00**	**250**	*i* P	**Pb**	**17 00 53.1**	**-0.1**
AYDN				*i* S	**Sg**	**17 01 07.2**	**+0.8**
AYDN	**Tasoluk**	**1.00**	**250**	*i* P	**Pb**	**17 00 53.1**	**-0.2**
AYDN				*i* S	**Sg**	**17 01 07.2**

mb1 4.0/9, mb1mx3.8/18, mbtmp3.9/9, ML4.5/3, Error ellipse: s-maj=55.4km s-min=21.9km az=80.0
*NEIC **09** 17:07:03.1±1.7, 7.40S×129.40E, h88km±18km, mb4.1/7, Error ellipse: s-maj=18.0km s-min=11.8km az=55.0*
*ISCJB **09** 17:07:04.8±0.7, 7.55S±0.04×129.44E±0.06, h133km±9km, mb3.9/9, Error ellipse: s-maj=9.8km s-min=6.6km az=156.9*
*DJA **09** 17:07:07, 7.50S×129.46E, h125km, mb4.7/8*
ISC 09 17:07:05.8±0.6, 7.59S±0.04×129.46E±0.06, h124km±8km, n37, σ1§30/48, mb3.9/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	3.08	8	P	Pn	17 07 52.3	-1.0
NLAI	Namlea	4.91	331	P	Pn	17 08 20.4	+2.7
KAKA	Kakadu	5.88	150	eP	Pn	17 08 32.2	+1.5
	36nm,0.5s						
KAKA				eS	Sn	17 09 37.6	+0.7
KAKA	Kakadu	5.88	150	ePn	Pn	17 08 32.0	+1.4
	86nm,0.4s						
KAKA				eSn	Sn	17 09 33.8	-3.1
KAKA	Kakadu	5.88	150	P	Pn	17 08 32.5	+1.8
	7μm66nm,0.5s						
BBSI	Bau Bau	7.15	287	P	Pn	17 08 48.6	+0.7
	0.3nm69nm,1.2s						
MMRI	Maumere	7.22	261	P	Pn	17 08 49.2	+0.4
	0.2nm52nm,1.1s						
KDI	Kendari	7.70	298	P	Pn	17 08 53.7	-1.6
	0.1nm28nm,1.2s						
KNA	Kununurra	8.14	185	eP	Pn	17 09 02.3	+1.0
KNA				eS	Sn	17 10 30.1	-1.5
KNA	Kununurra	8.14	185	P	Pn	17 09 02.6	+1.3
	5μm134nm,0.8s						
BAKI	Biak	9.18	47	P	Pn	17 09 13.7	-1.6
	74nm,0.8s						
MMPI	Merauke	10.86	95	P	Pn	17 09 39.1	+1.3
	315nm,1.2s						
FITZ	Fitzroy Crossi	11.09	199	P	Pn	17 09 40.8	-0.1
	4.8nm,0.3s,baz=33,slow=9.7,SNR=83						
FITZ				S	Sn	17 11 37.9	-5.3
	9.6nm,0.3s,baz=81,slow=19,SNR=13						
FITZ	Fitzroy Crossi	11.09	199	eP	Pn	17 09 40.5	-0.3
	20nm,0.3s						
FITZ				eS	Sn	17 11 34.9	-8.2
FITZ	Fitzroy Crossi	11.09	199	P	Pn	17 09 41.3	+0.5
WRA	Warramunga Arr	13.16	159	P	Pn	17 10 07.7	-0.4
	2.5nm,0.3s,baz=321,slow=14,SNR=75						
WRA				S	Sn	17 12 28.6	-4.6
	2.7nm,0.3s,baz=332,slow=24,SNR=10						
WB2	Warramunga Arr	13.17	159	ePn	Pn	17 10 07.1	-1.0
WB2				eSn	Sn	17 12 24.9	-8.5
COEN	Coen	14.89	116	eP	Pn	17 10 30.5	+0.4
COEN	Coen	14.89	116	ePn	Pn	17 10 30.3	+0.3
COEN				eSn	Sn	17 13 03.6	-11
MBWA	Marble Bar	16.44	214	eP	Pn	17 10 50.2	+0.9
MBWA				eS	S	17 13 40.5	-12
MBWA	Marble Bar	16.44	214	ePn	Pn	17 10 49.8	+0.4
	5.1nm,0.5s						
MBWA				eSn	Sn	17 13 40.9	-11
ASAR	Alice Springs	16.55	166	P	Pn	17 10 53.4	+2.8
	0.7nm,0.3s,baz=329,slow=9.3,SNR=88						
ASAR				S	S	17 13 53.2	-2.0
	1.0nm,0.3s,baz=356,slow=25,SNR=12						
PMG	Port Moresby	17.60	97	ePn	Pn	17 11 09.6	+6.1
	20nm,1.0s						
KKM	Kota Kinabalu	18.91	315	P	P	17 11 16.8	-0.2
	19nm,1.1s						
CTAO	Charters Tower	20.48	129	P	P	17 11 39.7	+5.8
KSM	Kuching	21.11	294	eP	P	17 11 39.7	-1.1
	4.1nm,0.5s,mb4.0						
STKA	Stephens Creek	26.69	157	P	P	17 12 37.6	+4.3
	1.1nm,0.7s,mb3.5,baz=349,slow=9.0,SNR=4.5						
STKA	Stephens Creek	26.69	157	eP	P	17 12 39.4	+6.1
	2.4nm,0.9s,mb3.7						
NWAO	Narrogin (SRO)	27.65	203	P	P	17 12 45.5	+3.6
	4.0nm,0.8s,mb4.0,baz=48,slow=13,SNR=4.5						
NWAO	Narrogin (SRO)	27.65	203	P	P	17 12 43.7	+1.8
	3.5nm,0.7s,mb4.0						
SONM	Songino Array	58.82	342	P	P	17 16 51.9	+0.9
	0.7nm,0.7s,mb3.8,baz=155,slow=6.8,SNR=5.4						
MK31	Makanchi Array	68.42	327	eP	P	17 17 53.5	-0.6
MKAR	Makanchi Array	68.42	327	P	P	17 17 53.6	-0.5
	1.9nm,0.6s,mb4.1,baz=128,slow=5.1,SNR=25						
ZALV	Zalesovo Beam	71.87	334	P	P	17 18 13.8	-1.2
	0.7nm,0.5s,mb3.8,baz=113,slow=4.7,SNR=3.3						
KURK	Kurchatov	72.73	329	eP	P	17 18 20.3	+0.1
	2.8nm,0.9s,mb4.1						
MAW	Mawson	74.21	201	P	P	17 18 32.4	+3.8
	0.9nm,0.6s,mb3.7,baz=83,slow=7.5,SNR=3.7						
QSPA	South Pole Qui	82.39	180	eP	P	17 19 16.5	+3.1
	1.8nm,0.7s,mb4.0						

IDC 09 17:24:42.1±5.7, 6.88S×149.98E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/15, mbtmp3.3/3, Error ellipse: s-maj=167.3km s-min=31.1km az=106.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.98	228	P	Pn	17 29 16.8	-1.0
	0.1nm,0.3s,baz=53,slow=11,SNR=6.1						
ASAR	Alice Springs	22.74	221	P	P	17 29 45.6	-0.3
	0.6nm,0.7s,baz=53,slow=10,SNR=8.7						
SONM	Songino Array	66.63	330	P	P	17 35 34.7	+0.3
	0.3nm,0.6s,baz=123,slow=5.3,SNR=3.0						

*ISCJB **09** 17:55:19.6±0.8, 18.0S±0.1×177.65W±0.10, h527km±14km, mb3.8/7, Error ellipse: s-maj=21.7km s-min=13.9km az=165.7*
*IDC **09** 17:55:19.9±2.1, 18.11S×177.84W, h492km±33km, mb3.3/5, mb1 3.5/6, mb1mx3.1/20, mbtmp3.4/6, Error ellipse: s-maj=30.9km s-min=28.8km az=145.0*
*NEIC **09** 17:55:20.7±0.9, 18.00S×177.70W, h522km±15km, mb3.8/4, Error ellipse: s-maj=21.1km s-min=19.1km az=163.0*
ISC 09 17:55:20.1±0.8, 18.0S±0.1×177.6W±0.1, h525km±14km, n16, σ0§99/17, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.18	273	eP	P	17 56 42.4	+0.8
AFI	Afiamalu	6.89	55	P	P	17 57 07.8	+1.7
	3.6nm,0.3s,baz=106,slow=4.7,SNR=5.1						
AFI	Afiamalu	6.89	55	eP	P	17 57 06.7	+0.6
AFI				eS	S	17 58 31.3	-1.5
URZ	Urewera	20.73	192	P	P	17 59 23.6	-0.3
	3.0nm,0.3s,baz=138,slow=4.9,SNR=7.2						
TARA	Tarawa	21.38	333	P	P	17 59 31.7	+1.7
	0.8nm,0.4s,mb3.7						
HNR	Honiara	23.42	288	P	P	17 59 47.1	-1.2
	60nm,1.0s						
EIDS	Eidsvold	29.99	250	P	P	18 00 44.9	-1.1
	5.2nm,0.9s,mb4.1						
CTA	Charters Tower	34.22	261	P	P	18 01 21.7	-0.4
	3.1nm,0.8s,mb3.9,baz=79,slow=15,SNR=2.7						
CTA	Charters Tower	34.22	261	P	P	18 01 21.7	-0.4
STKA	Stephens Creek	39.29	241	P	P	18 02 04.2	+0.5
	1.2nm,0.4s,mb3.8,baz=100,slow=11,SNR=4.4						
STKA	Stephens Creek	39.29	241	eP	P	18 02 04.0	+0.3
	0.8nm,0.9s,mb3.2						
WRA	Warramunga Arr	45.41	259	P	P	18 02 51.2	-0.6
	0.8nm,0.5s,mb3.5,baz=96,slow=6.8,SNR=36						
WRA				PcP	PcP	18 04 22.1	+1.8
	0.6nm,1.0s,baz=90,slow=3.7,SNR=6.3						
ASAR	Alice Springs	45.54	254	P	P	18 02 52.8	-0.1
	6.8nm,0.6s,mb4.4,baz=89,slow=8.4,SNR=146						
ASAR				PcP	PcP	18 04 22.6	+2.0
	0.3nm,0.4s,baz=105,slow=3.9,SNR=5.7						
QSPA	South Pole Qui	72.07	180	eP	P	18 05 53.7	+3.4
	1.8nm,0.5s,mb3.8						
VNA3	Neumayer Olymp	90.61	176	e	P	18 07 25.8	0.0
VNA2	Neumayer--Watz	91.06	177	e	P	18 07 28.3	+0.4
	baz=202,slow=4.4						

*ISCJB **09** 18:23:28.8±0.5, 12.24S±0.07×46.21E±0.1, h10km, mb3.9/11, MS3.3/5, Error ellipse: s-maj=15.1km s-min=9.8km az=178.6*
*IDC **09** 18:23:29.3±0.8, 12.25S×46.21E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.7/24, mbtmp3.8/10, ML4.1/2, MS3.4/6, Ms1 3.4/6, ms1mx3.2/26, Error ellipse: s-maj=30.3km s-min=19.7km az=115.0*
*NEIC **09** 18:23:30.8±0.6, 12.24S×46.17E, h10km, mb4.7/3, Error ellipse: s-maj=15.9km s-min=11.3km az=90.0*
ISC 09 18:23:30.8±0.5, 12.25S±0.07×46.2E±0.1, h10km, n24, σ1§12/25, mb3.9/11, MS3.3/5, Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	Ambohidratompo	6.36	171	Pn	Pn	18 25 04.9	+0.3
	15nm,0.3s,baz=351,slow=11,SNR=131						
OPO				Sn	Sn	18 26 10.7	-6.7
	125nm,0.3s,baz=267,slow=15,SNR=16						
ABPO	Ambohimpanom	6.81	171	ePn	Pn	18 25 10.5	-0.3
ABPO				eSn	Sn	18 26 12.7	-16
KMBO	Kilima Mbogo	14.15	321	Pn	Pn	18 26 51.8	+0.4
	0.2nm,0.3s,baz=354,slow=19,SNR=4.2						
KMBO				Sn	Sn	18 29 19.2	-9.4
	0.6nm,0.3s,baz=0.0,slow=20,SNR=5.3						
KMBO				LR	LR	18 31 57.2	
	comp=Z,111nm,19.3s,baz=180,slow=36						
KMBO	Kilima Mbogo	14.15	321	ePn	Pn	18 26 49.8	-1.6
KMBO				eSn	Sn	18 29 17.3	-11
KMBO				Sn	Sn	18 29 19.2	-9.4
KMBO				LR	LR	18 31 57.2	
LSZ	Lusaka	17.71	258	ePn	Pn	18 27 40.5	+2.8
LBTB	Lobatse	23.21	234	P	P	18 28 37.2	-1.0
	3.4nm,0.9s,mb3.8,baz=288,slow=19,SNR=3.3						
LBTB				LR	LR	18 37 23.1	
	comp=Z,105nm,19.3s,MS3.3,baz=170,slow=36						
LBTB	Lobatse	23.21	234	eP	P	18 28 36.3	-1.9
LBTB				LR	LR	18 37 23.1	
ATD	Arta Tunnel	23.85	352	LR	LR	18 37 10.0	
	comp=Z,40nm,18.6s,MS2.9,baz=157,slow=34						
BOSA	Boshof	25.40	227	P	P	18 28 59.1	+0.5
	2.5nm,0.7s,mb3.9,baz=72,slow=1.7,SNR=4.7						
BOSA				LR	LR	18 39 11.1	
	comp=Z,98nm,18.5s,MS3.4,baz=159,slow=37						
SUR	Sutherland	30.70	225	P	P	18 29 49.8	+3.9
	10.0nm,0.8s,mb4.7						
SHEL	Horse Pasture	50.38	259	P	P	18 32 27.6	-1.0
TORD	Torodi Ar. Bea	50.81	298	LR	LR	18 54 43.4	
	comp=Z,66nm,18.3s,MS3.7,baz=320,slow=37						
BRTR	Keskin Array B	53.00	348	P	P	18 32 49.2	+1.5
	0.5nm,0.6s,mb3.6,baz=160,slow=8.6,SNR=4.8						
ABKAR	Akbulak array	62.43	10	eP	P	18 33 53.8	-0.1
	1.6nm,0.7s,mb4.3						
CART	Cartagena	66.42	321	P	P	18 34 20.4	+0.1
	14nm,0.8s,mb5.0						
MKAR	Makanchi Array	67.09	26	P	P	18 34 22.8	-1.5
	0.5nm,0.8s,mb3.6,baz=234,slow=5.7,SNR=3.9						
ZALV	Zalesovo Beam	73.67	23	P	P	18 35 03.1	-1.4
	0.5nm,0.5s,mb3.7,baz=227,slow=5.5,SNR=3.0						
NOA	NORSAR Array B	78.12	343	LR	LR	19 10 54.4	
	comp=Z,17nm,20.2s,MS3.4,baz=310,slow=36						
SONM	Songino Array	80.14	36	P	P	18 35 42.4	+1.3
	0.4nm,0.7s,mb3.5,baz=259,slow=2.9,SNR=3.2						
SONM	Songino Array	80.14	36	P	P	18 35 42.4	+1.3
ARCES	ARCESS Array B	82.86	353	P	P	18 35 55.7	+0.7
	0.7nm,0.7s,mb3.8,baz=180,slow=4.4,SNR=3.8						
ARCES	ARCESS Array B	82.86	353	P	P	18 35 55.7	+0.7
ASAR	Alice Springs	83.14	113	P	P	18 35 58.0	+0.4
	0.2nm,0.8s,mb3.2,baz=264,slow=5.4,SNR=3.2						
TXAR	Lajitas Array	147.21	306	PKPbc	PKPbc	18 43 16.9	+1.9
	0.3nm,0.6s,baz=103,slow=4.0,SNR=4.5						

*IDC **09** 18:37:07.7±1.0, 30.74N×83.31E, h0km, mb3.5/7, mb1 3.7/9, mb1mx3.5/25, mbtmp3.5/9, ML3.0/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/24, Error ellipse: s-maj=28.8km s-min=21.9km az=65.0*
*ISCJB **09** 18:37:08.1±0.5, 30.78N±0.07×83.54E±0.07, h10km, mb3.4/8, Error ellipse: s-maj=10.8km s-min=7.6km az=36.4*
*NEIC **09** 18:37:08.9±0.6, 30.74N×83.17E, h10km, mb3.5/3, Error ellipse: s-maj=13.8km s-min=8.2km az=57.0*
ISC 09 18:37:09.4±0.5, 30.77N±0.07×83.44E±0.07, h10km, n22, σ1§08/22, mb3.4/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	4.66	266	ex	Pn	18 38 22.0	+2.1
LSA	Lhasa	6.76	97	P	Pn	18 38 54.4	+5.8
LSA				S	Sn	18 40 04.7	-1.0
LSA				LR	LR		
	comp=E,200nm,8.8s						
LSA				LR	LR		
	comp=Z,200nm,6.0s						
LSA	Lhasa	6.76	97	ePn	Pn	18 38 53.0	+4.4
	comp=Z,5.9nm,0.8s						
KBL	Kabul	12.70	291	ePn	Pn	18 40 06.9	-3.1
EKS2	Erkin-Say	14.16	330	Pn	Pn	18 40 26.6	-3.4
	comp=Z,1.0nm,0.7s						
MK31	Makanchi Array	16.02	357	Pn	Pn	18 40 55.6	+0.9
MKAR	Makanchi Array	16.02	357	Pn	Pn	18 40 54.2	-0.5
	comp=Z,0.0nm,0.3s,baz=178,slow=12,SNR=3.3						
CHTO	Chiang Mai	18.41	127	P	Pn	18 41 24.0	-0.9
	comp=Z,3.4nm,1.1s						
CMAR	Chiang Mai Arr	18.66	128	P	Pn	18 41 28.5	+0.7
	comp=Z,0.0nm,0.3s,baz=308,slow=11,SNR=6.1						
KURK	Kurchatov	20.25	351	eP	P	18 41 45.3	+0.7
	comp=Z,3.9nm,1.1s						
ZAA0	Zalesovo Array	23.18	2	P	P	18 42 16.2	+0.1
ZALV	Zalesovo Beam	23.18	2	P	P	18 42 14.6	-1.5
	comp=Z,0.4nm,0.4s,mb3.2,baz=180,slow=10,SNR=3.9						
ZALV	Zalesovo Beam	23.18	2	P	P	18 42 14.6	-1.5
PALK	Pallekele	23.52	187	eP	P	18 42 19.5	-0.4
	comp=Z,52nm,1.4s						
SONM	Songino Array	24.47	39	P	P	18 42 29.5	+1.1
	comp=Z,0.8nm,0.7s,mb3.2,baz=225,slow=9.5,SNR=6.3						
ABKAR	Akbulak array	25.61	323	eP	P	18 42 39.6	+0.9
	comp=Z,0.6nm,0.5s,mb3.4						
KSRS	Korea Array	37.16	67	P	P	18 44 20.7	+0.2
	comp=Z,1.0nm,0.8s,mb3.7,baz=283,slow=9.9,SNR=3.6						
ARCES	ARCESS Array B	50.41	337	LR	LR	19 10 27.2	
	comp=Z,37nm,19.8s,baz=191,slow=40						
WRA	Warramunga Arr	70.24	129	P	P	18 48 23.3	+0.4
	comp=Z,0.4nm,0.6s,mb3.5,baz=324,slow=6.3,SNR=7.9						
ASAR	Alice Springs	72.59	132	P	P	18 48 37.2	+0.2
	comp=Z,0.3nm,0.8s,mb3.3,baz=321,slow=5.5,SNR=3.4						
TORD	Torodi Ar. Bea	76.38	277	P	P	18 48 58.8	-0.6
	comp=Z,0.6nm,0.8s,mb3.6,baz=47,slow=4.6,SNR=4.0						
ILAR	Eielson Array	77.03	20	P	P	18 49 03.4	+1.2
	comp=Z,0.4nm,0.8s,mb3.4,baz=332,slow=7.5,SNR=3.7						

*ISCJB **09** 19:11:10.3±0.5, 24.37N±0.02×121.90E±0.02, h6km±3km, Error ellipse: s-maj=3.7km s-min=2.8km az=40.3*
*TAP **09** 19:11:10.9, 24.38N×121.84E, h12km, ML3.0, B*
*JMA **09** 19:11:11.5±0.2, 24.88N×121.91E, h42km, M2.2*
ISC 09 19:11:10.6±0.4, 24.36N±0.02×121.90E±0.02, h6km±5km, n34, σ0§66/60, 1C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.15	252	eP	Pg	19 11 14.0	+0.3
	baz=229						
EHP				eS	Sg	19 11 16.5	+0.7
	baz=229						
ENA	Nanau	0.16	297	⇓iP	Pg	19 11 13.9	0.0
	baz=301						
ENA				i S	Sg	19 11 15.8	-0.4
	baz=301						
TWD	Chiawan	0.39	225	⇑iP	Pg	19 11 18.3	+0.1
	baz=216						
TWD				eS	Sg	19 11 23.6	+0.4
	baz=216						
ENTT	Nioudou	0.41	313	⇓iP	Pg	19 11 18.7	0.0
	baz=317						
ENTT				eS	Sg	19 11 24.0	-0.1
	baz=317						
TWE	Neicheng	0.42	330	⇓iP	Pg	19 11 18.9	+0.1
	baz=338						
TWE				S	Sg	19 11 23.7	-0.6
	baz=338						
NNS	Nan Shan	0.49	280	⇓iP	Pg	19 11 19.9	-0.2
	baz=279						
NNS				S	Sg	19 11 25.6	-0.8
	baz=279						
NSK	Sanguang	0.59	303	i P	Pg	19 11 21.9	0.0
	baz=305						
NSK				S	Sg	19 11 28.6	-1.0
	baz=305						
WHF	Hehuan Shan	0.62	250	i P	Pg	19 11 22.4	-0.1
	baz=246						
WHF				S	Sg	19 11 30.5	0.0
	baz=246						
TWB1	Santiao Chiao	0.66	7	eP	Pg	19 11 23.9	+0.7
	baz=13						
TWB1				eS	Sg	19 11 31.9	+0.1
	baz=13						
TWT	Tachien	0.67	261	eP	Pg	19 11 23.8	+0.3
	baz=259						
TWT				eS	Sg	19 11 32.4	+0.2
	baz=259						
TWA	Mucha	0.69	335	P	Pg	19 11 24.2	+0.3
	baz=328						
TWA				S	Sg	19 11 32.2	-0.6
	baz=328						
ESL	Shilin	0.69	218	eP	Pg	19 11 23.5	-0.4
	baz=221						
NWF	Wu-fen Shan	0.72	351	eP	Pg	19 11 25.3	+0.8
	baz=347						
NWF				S	Sg	19 11 33.8	0.0
	baz=347						
TAP1	Taipei	0.76	333	eP	Pg	19 11 25.4	+0.1
	baz=336						
TAP1				eS	Sg	19 11 35.0	-0.2
	baz=336						
TWS1	Kuangyinshan	0.86	330	eP	Pg	19 11 27.9	+0.7
	baz=332						
TWS1				eS	Sg	19 11 39.0	+0.6
	baz=332						
NSTT	Nanjuang	0.86	289	P	Pg	19 11 27.4	+0.2
	baz=277						
NSTT				eS	Sg	19 11 37.2	-1.2
	baz=277						
TWY	Chenhua	0.95	344	eP	Pg	19 11 29.4	+0.4
	baz=347						
TWY				eS	Sg	19 11 42.5	+1.1
	baz=347						
EHY	Hungye	1.00	212	eP	Pg	19 11 29.6	-0.2
	baz=220						
YOJ	Yonaguni jima	1.02	84	eP	Pg	19 11 30.5	+0.3
	baz=74						
YOJ	Yonaguni jima	1.02	84	P	Pg	19 11 30.5	+0.3
YOJ				S	Sg	19 11 44.3	+0.8
SMLT	Sun Moon Lake	1.03	243	i P	Pg	19 11 30.0	-0.3
	baz=240						
SMLT				eS	Sg	19 11 43.4	-0.3
	baz=240						
TWQ1	Liyutan	1.03	270	eP	Pg	19 11 29.9	-0.5
	baz=269						
TWQ1				eS	Sg	19 11 43.3	-0.4
	baz=269						
TYC	Yuchr	1.05	245	P	Pg	19 11 30.4	-0.4
	baz=243						
TYC				eS	Sg	19 11 43.5	-1.0
	baz=243						
TWF1	Yuli	1.14	209	eP	Pg	19 11 31.8	-0.8
	baz=217						
YUS	Yu-Shan	1.22	225	eP	Pg	19 11 34.2	+0.1
	baz=222						
ALS	Alishan	1.31	230	eP	Pn	19 11 35.6	+0.1
	baz=213						
CHN5	Tsauling	1.35	236	eP	Pn	19 11 36.4	+0.4
	baz=226						
CHN5				eS	Sb	19 11 55.4	+1.6
	baz=226						
ELDTW	Lidau	1.42	215	eP	Pn	19 11 36.0	-0.9
	baz=197						
WTP	Ta-pu	1.61	227	eP	Pn	19 11 40.4	+0.7
	baz=227						
WTP				eS	Sn	19 12 04.7	+3.9
	baz=227						
IRIF	Iriomote-Funau	1.67	90	P	Pn	19 11 39.8	-0.6
IRIF				S	Sn	19 12 01.3	-0.9
CHN1	Nanshi	1.71	227	eP	Pn	19 11 42.2	+1.2
	baz=228						
CHN1				eS	Sn	19 12 07.1	+3.9
	baz=228						
SGST	Jiashian	1.75	224	eP	Pn	19 11 42.9	+1.3
	baz=222						
JKRS	Kuro-shima	1.93	93	P	Pn	19 11 44.1	+0.1
JKRS				S	Sn	19 12 08.2	-0.4
JIJ	Ishigaki jima	2.05	89	P	Pn	19 11 45.3	-0.3
JIJ				eS	Sn	19 12 09.8	-1.7

*ISCJB **09** 19:11:51.2±1.0, 28.91N±0.07×138.2E±0.3, h531km±16km, mb2.9/4, Error ellipse: s-maj=38.5km s-min=10.0km az=170.9*
*IDC **09** 19:11:52.2±1.4, 28.82N×138.11E, h519km±19km, mb2.5/4, mb1 2.8/5, mb1mx2.6/22, mbtmp2.6/5, Error ellipse: s-maj=31.9km s-min=17.5km az=91.0*
*JMA **09** 19:11:53.3±0.2, 29.02N×138.53E, h519km, M3.5*
ISC 09 19:11:52.1±1.0, 28.89N±0.08×138.2E±0.3, h518km±17km, n12, σ0§97/16, mb2.9/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.98	116	P	P	19 13 11.8	+0.2
	9.4nm,0.3s,baz=269,slow=18,SNR=16						
CBIJ				S	S	19 14 17.1	+0.8
	8.9nm,0.3s,baz=313,slow=22,SNR=8.1						
CBIJ	Chichi jima	3.98	116	P	P	19 13 11.5	-0.1
CBIJ				eS	S	19 14 15.2	-1.1
BSO3	Boso 3	6.23	18	eS	S	19 14 52.5	+0.1
BSO1	Boso 1	6.23	22	eS	S	19 14 44.1	-8.3
JHU	Hanno	7.01	7	eS	S	19 15 01.1	-5.2
JRY	Ryogami san	7.14	5	P	P	19 13 42.0	+2.0
JRY				eS	S	19 15 08.0	-0.6
JAG	Ashikaga	7.60	8	S	S	19 15 12.2	-4.8
JFK	Kawauchi	8.76	14	P	P	19 13 57.7	+1.2
JFK				eS	S	19 15 34.7	-4.0
MKAR	Makanchi Array	46.59	308	P	P	19 19 32.8	-0.1
	0.2nm,0.6s,mb2.8,baz=107,slow=9.2,SNR=3.2						
WRA	Warramunga Arr	48.68	185	P	P	19 19 49.0	+0.1
	1.4nm,0.4s,mb3.9,baz=12,slow=7.8,SNR=52						
ASAR	Alice Springs	52.41	185	P	P	19 20 14.7	-1.3
	0.2nm,0.6s,mb2.6,baz=9.2,slow=7.5,SNR=4.5						
ILAR	Eielson Array	57.87	29	P	P	19 20 54.4	+0.8
	0.1nm,0.4s,mb2.4,baz=252,slow=7.1,SNR=3.7						

*ISCJB **09** 19:50:27.3±2.5, 4.38S±0.08×153.2E±0.1, h41km±20km, mb4.4/26, MS3.4/1, Error ellipse: s-maj=25.8km s-min=10.8km az=18.7*
*IDC **09** 19:50:33.3±3.7, 4.47S×153.22E, h87km±34km, mb3.9/10, mb1 4.1/10, mb1mx4.0/17, mbtmp3.9/10, MS3.5/1, Ms1 3.4/1, ms1mx2.5/19, Error ellipse: s-maj=38.5km s-min=13.0km az=113.0*
*NEIC **09** 19:50:36.0±1.6, 4.42S×152.89E, h99km±16km, mb4.4/15, Error ellipse: s-maj=16.1km s-min=12.0km az=130.0*
ISC 09 19:50:31.4±2.1, 4.43S±0.08×153.1E±0.1, h61km±17km, n40, σ0§98/42, mb4.4/26, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.67	230	ePn	Pn	19 52 21.6	+1.1
PMG				eSn	Sn	19 53 43.8	-2.2
HNR	Honiara	8.45	126	Pn	Pn	19 52 39.3	+8.1
HNR				eSn	Sn	19 53 56.1	-9.1
QLP	Quilpie	23.59	200	eP	P	19 55 37.3	+0.5
WB2	Warramunga Arr	23.88

MORW	Morawa	42.78	231	*e*P	P	19 58 22.6	-0.7
JNU	Nakatsue	42.86	332	*e*P	P	19 58 24.1	+0.3
	2.4nm,0.8s,mb4.0						
MJAR	Matsushiro Arr	43.06	342	P	P	19 58 23.2	-2.2
	0.4nm,0.3s,mb3.6,baz=161,slow=7.2,SNR=4.1						
MJAR				PcP	PcP	20 00 14.2	-0.3
	0.5nm,0.5s,baz=161,slow=3.8,SNR=4.6						
MJAR	Matsushiro Arr	43.06	342	P	P	19 58 23.2	-2.2
MJAR				PcP	PcP	20 00 14.2	-0.3
KSRS	Korea Array	47.79	333	P	P	19 59 03.0	+0.2
	1.8nm,0.7s,mb4.2,baz=150,slow=7.9,SNR=9.5						
ENH	Enshi	54.10	313	P	P	19 59 51.6	+1.3
	5.2nm,1.0s,mb4.4						
CHTO	Chiang Mai	58.07	295	*e*P	P	20 00 18.2	-0.7
	4.7nm,1.3s,mb4.4						
SONM	Songino Array	66.16	328	P	P	20 01 13.4	+0.9
	1.3nm,0.7s,mb4.1,baz=147,slow=6.3,SNR=5.8						
SONM				pP	pP	20 01 42.5	+14
	0.7nm,0.6s,baz=142,slow=4.3,SNR=4.1						
BILL	Bilibino	72.90	5	P	P	20 01 53.9	+0.2
	4.3nm,0.7s,mb4.5						
TRF	Thorofare Moun	79.76	22	P	P	20 02 32.7	+0.1
	4.4nm,0.8s,mb4.4						
MK31	Makanchi Array	80.22	319	*e*P	P	20 02 35.5	0.0
MKAR	Makanchi Array	80.22	319	P	P	20 02 35.9	+0.4
	0.9nm,0.5s,mb4.0,baz=93,slow=7.4,SNR=22						
MKAR	Makanchi Array	80.22	319	P	P	20 02 35.9	+0.4
ZALV	Zalesovo Beam	80.99	326	P	P	20 02 38.9	-0.6
	1.0nm,0.8s,mb3.8,baz=104,slow=6.1,SNR=3.8						
ILAR	Eielson Array	81.72	22	P	P	20 02 41.1	-1.9
	1.1nm,0.8s,mb3.8,baz=245,slow=5.6,SNR=13						
KURK	Kurchatov	83.64	322	P	P	20 02 52.3	-1.1
	7.7nm,1.4s,mb4.6						
TKM2	Tokmak 2	83.87	314	*e*P	P	20 02 55.2	+0.5
	3.3nm,0.8s,mb4.5						
KZA	Kyzart	83.95	313	*e*P	P	20 02 56.3	+1.2
	4.7nm,0.9s,mb4.6						
AML	Almayashu	85.09	313	*e*P	P	20 03 02.2	+1.2
	11nm,1.0s,mb4.9						
EKS2	Erkin-Say	85.13	313	*e*P	P	20 03 01.7	+0.6
	4.5nm,0.7s,mb4.7						
QSPA	South Pole Qui	85.53	180	*e*P	P	20 03 02.1	-0.2
	2.3nm,1.0s,mb4.4						
KKAR	Karatay Array	87.57	313	*e*P	P	20 03 12.8	-0.2
	1.0nm,0.7s,mb4.2						
BRVK	Borovoye	89.17	323	*e*P	P	20 03 18.2	-2.2
	2.8nm,0.7s,mb4.7						
TORD	Torodi Ar. Bea	150.44	289	PKPbc	PKPbc	20 10 16.2	-1.0
	1.1nm,0.4s,baz=72,slow=1.7,SNR=16						

JMA 09 19:58:28.7±0.1,30°.29N×141°.47E,h47km,M3.8,
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.15	334	*e*S	Sn	19 59 53.5	+1.5
CBIJ	Chichi jima	3.24	169	P	Pn	19 59 18.5	+1.4
CBIJ				*e*S	Sn	19 59 55.5	+1.0
JMY	Miyakejima3	4.12	337	S	Sn	20 00 19.7	+3.7
BSO3	Boso 3	4.57	350	P	Pn	19 59 37.6	+2.3
BSO3				*e*S	Sn	20 00 29.0	+1.9
BSO4	Boso 4	4.78	349	*e*S	Sn	20 00 33.7	+1.4
JHU	Hanno	5.84	342	P	Pn	19 59 56.4	+3.7
JRY	Ryogami san	6.10	340	P	Pn	20 00 00.3	+4.0
JAG	Ashikaga	6.35	345	P	Pn	20 00 00.8	+1.2
JAG				*e*S	Sn	20 01 09.5	-1.3
JHO	Hitachi	6.35	353	P	Pn	20 00 01.8	+2.1
JHO				S	Sn	20 01 08.7	-2.1

*ISCJB **09** 20:06:14.8±0.6, 53°.5S±0°.1×24°.9E±0°.2, h10km, mb4.0/10, Error ellipse: s-maj=21.0km s-min=15.7km az=13.2*
*IDC **09** 20:06:14.8±1.1, 53°.55S×25°.01E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.8/17, mbtmp3.8/5, MS3.3/1, Ms1 3.2/1, ms1mx3.0/13, Error ellipse: s-maj=48.1km s-min=30.3km az=13.0*
*NEIC **09** 20:06:16.5±0.4, 53°.50S×25°.02E, h10km, mb4.6/5, Error ellipse: s-maj=14.7km s-min=11.1km az=103.0*
ISC 09 20:06:16.6±0.6,53°.5S±0°.1×25°.0E±0°.2,h10km,n12,
σ0§43/11,mb4.0/10,South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	24.88	0	LR	LR	20 20 38.7	
	comp=Z,67nm,18.8s,baz=349,slow=35						
LBTB	Lobatse	28.46	1	P	P	20 12 12.3	+0.8
	6.4nm,0.9s,mb4.2						
LSZ	Lusaka	38.23	5	*e*P	P	20 13 36.4	-0.2
	2.8nm,1.0s,mb4.0						
ABPO	Ambohimpanom	38.47	35	*e*P	P	20 13 38.0	-0.6
CASY	Casey	41.20	142	*e*P	P	20 14 01.1	+0.3
	1.8nm,0.8s,mb3.8						
PMSA	Palmer Station	43.21	219	*e*P	P	20 14 17.6	+0.4
	20nm,1.0s,mb4.8						
TRQA	Tornquist	58.87	247	P	P	20 16 11.1	-4.1
	15nm,1.5s,mb4.8						
PLCA	Paso Flores	61.49	239	P	P	20 16 33.0	-0.2
	0.7nm,0.6s,mb4.0,baz=114,slow=19,SNR=3.7						
CPUP	Villa Florida	64.84	259	P	P	20 16 55.3	-0.3
	0.3nm,0.3s,mb3.9,baz=129,slow=6.5,SNR=4.1						
TORD	Torodi Ar. Bea	69.33	336	P	P	20 17 24.2	+0.1
	0.3nm,0.7s,mb3.3,baz=160,slow=6.7,SNR=4.0						
ASAR	Alice Springs	81.78	119	P	P	20 18 35.4	-0.2
	0.4nm,0.7s,mb3.5,baz=209,slow=5.5,SNR=6.5						
WRA	Warramunga Arr	85.06	117	P	P	20 18 52.5	0.0
	1.1nm,1.1s,mb3.9,baz=213,slow=4.3,SNR=2.8						

*HLW **09** 20:12:18.7, 35°.31N×34°.19E, h23km±14km, Md2.9*
*ISCJB **09** 20:12:23.6±0.3, 34°.91N±0°.03×34°.00E±0°.03, h33km, Error ellipse: s-maj=4.2km s-min=3.6km az=143.0*
*CSEM **09** 20:12:23.8±0.2, 34°.92N×33°.98E, h22km±2km, Mw2.9, Error ellipse: s-maj=4.3km s-min=4.0km az=128.0*
*NEIC **09** 20:12:24.2, 35°.10N×33°.92E, h19km, ML3.0(NIC), After NIC.*
*ISK **09** 20:12:24.4, 35°.00N×33°.98E, h27km, MD3.2*
*NIC **09** 20:12:24.2±0.2, 35°.10N×33°.92E, h19km, ML3.0, MW2.9*
*DDA **09** 20:12:25.1, 35°.47N×33°.97E, h16km±4km, Md3.1, Ml3.4*
ISC 09 20:12:24.1±0.5,34°.94N±0°.03×33°.98E±0°.04,h27km±4km,
n61,σ1§10/81,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	Paralimni	0.07	33	P	Pb	20 12 28.3	-0.5
	36nm,0.2s						
PHNC				S	Sb	20 12 31.6	-0.5
PHNC	Paralimni	0.07	33	P	Pb	20 12 28.3	-0.5
	36nm,0.2s						
PHNC				S	Sb	20 12 31.6	-0.5
LFK	Lefkose	0.50	312	*e*PG	Pb	20 12 34.8	+0.4
LFK	Lefkose	0.50	312	*e*Pg	Pb	20 12 34.8	+0.4
CSS	Prodhromos	0.54	272	P	Pb	20 12 34.0	-1.0
	6.7nm,0.2s						
CSS				S	Sb	20 12 42.2	-0.2
CSS	Prodhromos	0.54	272	*e*PG	Pb	20 12 35.7	+0.7
CSS				*e*SG	Sb	20 12 44.5	+2.1
CSS	Prodhromos	0.54	272	*e*Pg	Pb	20 12 34.0	-1.0
	6.7nm,0.2s						
CSS	Prodhromos	0.54	272	*e*Pg	Pb	20 12 35.7	+0.7
CSS				S	Sb	20 12 42.2	-0.2
CSS				*e*Sg	Sb	20 12 44.5	+2.1
EREN	Erenkoy	0.60	15	*e*PG	Pb	20 12 36.2	+0.1
EREN	Erenkoy	0.60	15	*e*Pg	Pb	20 12 36.2	+0.1
MAMC	Mammari	0.67	290	P	Pb	20 12 35.8	-1.4
MAMC	Mammari	0.67	290	P	Pb	20 12 35.8	-1.4
LEF	Lefka	0.92	281	*e*PG	Pn	20 12 41.9	+0.8
LEF	Lefka	0.92	281	*e*Pg	Pn	20 12 41.9	+0.7
SZAC	Souni-Zanaja	0.93	259	P	Pn	20 12 40.9	-0.4
SZAC	Souni-Zanaja	0.93	259	P	Pn	20 12 40.9	-0.4
ALFC	Alevga	1.16	281	P	Pn	20 12 43.3	-1.2
	3.4nm,0.3s						
ALFC				S	Sn	20 12 58.0	-1.4
ALFC	Alevga	1.16	281	P	Pn	20 12 43.3	-1.2
	3.4nm,0.3s						
ALFC				S	Sn	20 12 58.0	-1.4
IKL	Isikli	1.31	349	*e*PN	Pn	20 12 46.1	-0.6
IKL	Isikli	1.31	349	*e*Pn	Pn	20 12 46.1	-0.6
PPCY	Paphos	1.35	268	P	Pn	20 12 46.9	-0.2
PPCY	Paphos	1.35	268	P	Pn	20 12 46.9	-0.2
BHL	Bhannes	1.73	126	*e*P	Pn	20 12 50.8	-1.5
BHL	Bhannes	1.73	126	*e*P	Pn	20 12 50.8	-1.5
HWQ	Hawqa	1.75	112	*e*P	Pn	20 12 52.2	-0.5
HWQ	Hawqa	1.75	112	*e*P	Pn	20 12 52.2	-0.5
GAZI	Gazipasa	1.87	314	*i*P	Pn	20 12 54.8	+0.4
GAZI	Gazipasa	1.87	314	*i*P	Pn	20 12 54.8	+0.4
ERMK	Ermenek	1.91	333	*i*P	Pn	20 12 51.4	-3.4
ERMK				*i*S	Sn	20 13 15.1	-2.8
ERMK	Ermenek	1.91	333	*i*P	Pn	20 12 51.4	-3.4
ERMK				*i*S	Sn	20 13 15.1	-2.8
MERS	Mersin	1.97	13	*e*PN	Pn	20 12 56.0	+0.3
MERS	Mersin	1.97	13	*e*Pn	Pn	20 12 56.0	+0.3
YAYL	Yayladag	2.05	57	*i*P	Pn	20 12 58.4	+1.7
YAYL				*i*S	Sn	20 13 18.9	-2.4
YAYL	Yayladag	2.05	57	*i*P	Pn	20 12 58.4	+1.7
YAYL				*i*S	Sn	20 13 19.0	-2.4
RCY	Rachaya	2.10	133	*e*P	Pn	20 12 57.2	-0.3
RCY	Rachaya	2.10	133	*e*P	Pn	20 12 57.2	-0.4
HTY	Hatay	2.11	56	*e*PN	Pn	20 12 58.6	+1.0
HTY	Hatay	2.11	56	*e*Pn	Pn	20 12 58.6	+0.9
YURE	YUREGIR	2.31	35	*i*P	Pn	20 13 00.4	+0.1
YURE				*i*S	Sn	20 13 26.5	-1.3
YURE	YUREGIR	2.31	35	*i*P	Pn	20 13 00.4	+0.1
YURE				*i*S	Sn	20 13 26.5	-1.3
HDMB	Hadim	2.35	329	*e*PN	Pn	20 13 01.6	+0.6
HDMB	Hadim	2.35	329	*e*Pn	Pn	20 13 01.6	+0.6
GULE	Gulek	2.42	15	*i*P	Pn	20 13 03.1	+1.2
GULE				*i*S	Sn	20 13 31.4	+0.7
GULE	Gulek	2.42	15	*i*P	Pn	20 13 03.1	+1.2
GULE				*i*S	Sn	20 13 31.4	+0.8
KARA	Karaisali	2.47	20	*e*PN	Pn	20 13 03.2	+0.7
KARA	Karaisali	2.47	20	*e*Pn	Pn	20 13 03.2	+0.6
KOZT	Kozan	2.94	30	*e*PN	Pn	20 13 10.3	+1.3
ANDN	Andirin	3.25	35	*i*P	Pn	20 13 15.2	+1.9
ANDN				*i*S	Sn	20 13 48.6	-2.5
ANDN	Andirin	3.25	35	*i*P	Pn	20 13 15.2	+1.9
ANDN				*i*S	Sn	20 13 48.6	-2.5
KONT	Konya--Tatoy	3.27	337	*e*PN	Pn	20 13 14.7	+1.1
KONT	Konya--Tatoy	3.27	337	*e*Pn	Pn	20 13 14.7	+1.1
SUTC	Sutluce-Ispart	3.49	317	*e*PN	Pn	20 13 18.0	+1.3
SUTC	Sutluce-Ispart	3.49	317	*e*Pn	Pn	20 13 18.0	+1.3
AMAG	Maghara	4.34	189	P	Pn	20 13 28.6	+0.3
	baz=191						
AMAG	Maghara	4.34	189	P	Pn	20 13 28.6	+0.3
SUZ		5.18	191	P	Pn	20 13 40.5	+0.6
	baz=193						
SUZ				S	Sn	20 14 38.4	-0.4
	baz=193						
SUZ		5.18	191	P	Pn	20 13 40.4	+0.5
SUZ				S	Sn	20 14 38.4	-0.3
HKAT	Jabal Katrina	6.40	180	P	Pn	20 13 57.2	+0.6
	baz=182						
HKAT	Jabal Katrina	6.40	180	P	Pn	20 13 57.2	+0.6
TR2		6.54	182	P	Pn	20 13 58.8	+0.2
	baz=184						
TR2		6.54	182	P	Pn	20 13 58.8	+0.2

IDC 09 20:48:02.0±4.7,30°.74N×84°.13E,h0km,mb3.4/2,
mb1 3.5/3,mb1mx3.2/24,mbtmp3.3/3,ML3.0/1,Error
ellipse: s-maj=135.0km s-min=37.9km az=84.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	5.26	267	*ex*	Pn	20 49 16.0	-5.9
MKAR	Makanchi Array	16.09	355	Pn	Pn	20 51 47.7	-1.9
	0.1nm,0.3s,baz=172,slow=14,SNR=4.1						
SONM	Songino Array	24.12	39	P	P	20 53 19.6	+0.3
	0.4nm,0.8s,baz=216,slow=9.0,SNR=4.4						
WRA	Warramunga Arr	69.76	130	P	P	20 59 14.2	+0.1
	0.4nm,0.7s,baz=320,slow=6.2,SNR=4.9						

*IDC **09** 21:31:24.4±1.9, 32°.47N×47°.20E, h0km, mb3.8/7, mb1 3.8/9, mb1mx3.6/25, mbtmp3.8/9, ML3.7/2, Error ellipse: s-maj=45.3km s-min=20.5km az=153.0*
*THR **09** 21:31:25.4±0.7, 32°.24N×47°.25E, h15km, ML3.5*
*KISR **09** 21:31:25.9±1.1, 32°.18N×48°.14E, h34km±999km, ML3.0*
*ISCJB **09** 21:31:26.2±0.3, 32°.49N±0°.02×47°.23E±0°.04, h10km, mb3.7/16, Error ellipse: s-maj=5.5km s-min=3.2km az=172.9*
*CSEM **09** 21:31:27.0±0.2, 32°.42N×47°.20E, h10km, mb3.8/10, Error ellipse: s-maj=7.1km s-min=5.9km az=48.0*
*NEIC **09** 21:31:28.0, 32°.38N×47°.27E, h9km, mb3.8/10, MN3.6(TEH), After TEH.*
*TEH **09** 21:31:28.0, 32°.38N×47°.27E, h9km*
ISC 09 21:31:27.6±0.3,32°.46N±0°.02×47°.22E±0°.04,h10km,n114,
σ1§19/128,mb3.7/16,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	Komasi	1.72	8	Pn	Pg	21 31 59.1	-1.6
IKOM				Sn	Sg	21 32 22.8	-0.3
IKOM	Komasi	1.72	8	*e*Pn	Pg	21 31 59.1	-1.6
IKOM				*e*Sn	Sg	21 32 22.8	-0.3
IKOM				*e*		21 32 26.9	
	comp=Z,19μm,0.2s						
IKOM	Komasi	1.72	8	*e*Pn	Pg	21 31 59.1	-1.6
IKOM				*e*Sn	Sg	21 32 22.8	-0.3
IGHG	Ghaleghazi	1.94	344	Pn	Pn	21 32 02.4	+1.8
IGHG	Ghaleghazi	1.94	344	*e*Pn	Pn	21 32 02.5	+1.9
IGHG				*e*		21 32 40.4	
	comp=Z,11μm,0.3s						
IGHG	Ghaleghazi	1.94	344	*e*Pn	Pn	21 32 02.5	+1.9
IVIS	Veis	2.08	352	Pn	Pn	21 32 03.9	+1.3
IVIS				Sg	Sg	21 32 35.5	+1.0
IVIS	Veis	2.08	352	*e*Sg	Sg	21 32 35.6	+1.1
IVIS				*e*Pn	Pn	21 32 04.0	+1.4
IVIS				*e*		21 32 42.2	
	comp=Z,8μm,0.2s						
IDHR	Dehrash	2.33	343	Pn	Pn	21 32 07.6	+1.5
IDHR				Sg	Sg	21 32 44.3	+1.6
IDHR	Dehrash	2.33	343	*e*Sg	Sg	21 32 44.4	+1.7
IDHR				*e*Pn	Pn	21 32 07.7	+1.6
IDHR				*e*		21 32 46.8	
	comp=Z,11μm,0.3s						
ILIN	Lien	2.46	355	Pn	Pn	21 32 09.7	+1.9
ILIN	Lien	2.46	355	*e*	Sg	21 32 53.5	+6.9
	comp=Z,3μm,0.2s						
ILIN				*e*Pn	Pn	21 32 09.7	+1.9
SNGE	Sanandaj	2.62	2	*e*Pn	Pn	21 32 12.7	+2.6
SNGE				AML	AML	21 33 01.7	
	comp=E,198nm,0.4s						
SNGE	Sanandaj	2.62	2	*e*Pn	Pn	21 32 12.7	+2.6
MIB	Mutribah	2.65	178	*e*P	Pn	21 32 11.2	+0.7
MIB				*e*S	Sn	21 32 44.6	+1.9
MIB				AML	AML	21 32 47.3	
	comp=Z,77nm,0.5s						
MIB	Mutribah	2.65	178	*e*P	Pn	21 32 11.2	+0.7
MIB				*e*S	Sn	21 32 44.7	+2.0
IPIR	Pirpir	3.11	85	Pn	Pn	21 32 17.0	+0.2
IPIR	Pirpir	3.11	85	*e*Pn	Pn	21 32 17.0	+0.2
IPIR				*e*		21 33 10.9	
	comp=Z,2μm,0.3s						
IPIR	Pirpir	3.11	85	*e*Pn	Pn	21 32 17.0	+0.2
ASAO	Ashtian	3.13	48	*e*Pn	Pn	21 32 18.8	+1.7
ASAO				AML	AML	21 33 09.7	
	comp=N,91nm,0.7s						
ASAO				AML	AML	21 33 09.9	
	comp=E,117nm,0.4s						
NAY	Al-Naaiem	3.20	180	*e*P	Pn	21 32 18.3	+0.2
NAY				*e*S	Sn	21 32 58.9	+2.6
NAY				AML	AML	21 33 03.4	
	comp=Z,39nm,0.5s						
NAY	Al-Naaiem	3.20	180	*e*P	Pn	21 32 18.3	+0.2
NAY				*e*S	Sn	21 32 58.9	+2.6
RDF	Al-Radifah	3.54	175	*e*P	Pn	21 32 22.9	+0.3
RDF				*e*S	Sn	21 33 04.9	+0.3
RDF				AML	AML	21 33 07.7	
	comp=Z,43nm,0.4s						
RDF	Al-Radifah	3.54	175	*e*P	Pn	21 32 22.9	+0.3
RDF				*e*S	Sn	21 33 04.9	+0.4
IRAZ	Razeghan	3.70	37	Pn	Pn	21 32 26.9	+2.0
IRAZ	Razeghan	3.70	37	*e*Pn	Pn	21 32 26.9	+2.0
IRAZ				*e*		21 32 41.3	
	comp=Z,1μm,0.3s						
IRAZ	Razeghan	3.70	37	*e*Pn	Pn	21 32 26.9	+2.0
IKLH	Kolahrood	3.77	76	Pn	Pn	21 32 25.8	0.0
IKLH	Kolahrood	3.77	76	*e*Pn	Pn	21 32 25.8	0.0
IKLH				*e*		21 33 45.0	
	comp=Z,801nm,0.3s						
IKLH	Kolahrood	3.77	76	*e*Pn	Pn	21 32 25.8	0.0
GHVR	GHOM	3.96	58	*e*Pn	Pn	21 32 29.0	+0.6
GHVR				AML	AML	21 33 16.6	
	comp=E,76nm,1.5s						
GHVR				AML	AML	21 33 17.4	
	comp=N,80nm,1.2s						
IGAR	Gharneh	4.08	90	*e*Pn	Pn	21 32 29.9	-0.2
IGAR				*e*		21 33 19.8	
	comp=Z,554nm,0.2s						
IZEF	Zefreh	4.33	83	Pn	Pn	21 32 33.1	-0.5
IZEF	Zefreh	4.33	83	*e*Pn	Pn	21 32 33.1	-0.5
IZEF				*e*		21 32 48.0	
	comp=Z,314nm,0.1s						
IZEF	Zefreh	4.33	83	*e*Pn	Pn	21 32 33.1	-0.5
ZNJK	Zanjan	4.37	16	*e*Pn	Pn	21 32 36.2	+2.2
ZNJK	Zanjan	4.37	16	*e*Pn	Pn	21 32 36.2	+2.2
ISFB	Sefidab	4.61	65	Pn	Pn	21 32 36.6	-0.7
ISFB	Sefidab	4.61	65	*e*Pn	Pn	21 32 36.7	-0.6
ISFB				*e*		21 33 59.3	
	comp=Z,220nm,0.3s						
ISFB	Sefidab	4.61	65	*e*Pn	Pn	21 32 36.7	-0.6
CHTH	Charan	4.72	42	*e*Pn	Pn	21 32 40.3	+1.4
CHTH	Charan	4.72	42	*e*Pn	Pn	21 32 39.9	+1.0
NASN	Na'in	4.73	84	*e*Pn	Pn	21 32 38.6	-0.5
NASN	Na'in	4.73	84	*e*Pn	Pn	21 32 38.6	-0.4
DAMV	Damavand	5.05	50	*e*Pn	Pn	21 32 44.4	+0.9
DAMV	Damavand	5.05	50	*e*Pn	Pn	21 32 44.4	+0.9
IDMV	Damavand	5.06	51	Pn	Pn	21 32 43.6	0.0
IDMV	Damavand	5.06	51	*e*Pn	Pn	21 32 43.7	+0.1
IDMV				*e*		21 33 06.7	
	comp=Z,293nm,0.2s						
IDMV	Damavand	5.06	51	Pn	Pn	21 32 43.6	0.0
ISAD	Sadrabad	5.51	94	Pn	Pn	21 32 49.3	-0.5
ISAD	Sadrabad	5.51	94	*e*Pn	Pn	21 32 49.4	-0.4
ISAD				*e*		21 34 23.1	
	comp=Z,182nm,0.3s						
ISAD	Sadrabad	5.51	94	*e*Pn	Pn	21 32 49.4	-0.4
IFIR	Firoozkooh	5.58	54	Pn	Pn	21 32 50.5	-0.2
IFIR	Firoozkooh	5.58	54	*e*Pn	Pn	21 32 50.6	-0.1
IFIR				*e*		21 33 17.1	
	comp=Z,198nm,0.2s						
IFIR	Firoozkooh	5.58	54	*e*Pn	Pn	21 32 50.6	-0.1
ILAS	Lasjerd	5.59	57	Pn	Pn	21 32 50.6	-0.3
ILAS	Lasjerd	5.59	57	*e*Pn	Pn	21 32 50.7	-0.2
ILAS				*e*		21 32 54.4	
	comp=Z,188nm,0.1s						
ILAS	Lasjerd	5.59	57	Pn	Pn	21 32 50.6	-0.3
ISHM	Shahmirzad	6.04	55	Pn	Pn	21 32 56.7	-0.3
ISHM	Shahmirzad	6.04	55	*e*Pn	Pn	21 32 56.8	-0.2
ISHM				*e*		21 33 18.7	
	comp=Z,339nm,0.3s						
ISHM	Shahmirzad	6.04	55	*e*Pn	Pn	21 32 56.8	-0.2
ASF	Jabal al Asfar	8.74	271	Pn	Pn	21 33 32.3	-1.7
	comp=Z,0.7nm,0.3s,baz=0,slow=3.0,SNR=8.6						
EZC	Erzincan	9.66	321	PG	Pn	21 33 49.9	+3.3
EZC	Erzincan	9.66	321	*i*Pg	Pn	21 33 49.9	+3.3
KIV	Kislovodsk	12.01	344	*e*P	Pn	21 34 18.4	-0.4
KIV	Kislovodsk	12.01	344	*e*P	Pn	21 34 18.5	-0.3
KBL	Kabul	18.32	78	*e*P	Pn	21 35 42.6	+0.7
KBL	Kabul	18.32	78	*e*P	Pn	21 35 42.6	+0.7
ABKAR	Akbulak array	19.29	26	*e*P	Pn	21 35 53.0	-0.5
	comp=Z,0.7nm,0.3s						
ABKAR	Akbulak array	19.29	26	*e*P	Pn	21 35 53.0	-0.5
	comp=Z,0.7nm,0.3s						
AKTK	Aktyubinsk	19.66	21	P	Pn	21 35 54.5	-3.4
AKTK	Aktyubinsk	19.66	21	P	Pn	21 35 54.5	-3.4
AKTO	Aktyubinsk	19.66	21	P	Pn	21 35 54.5	-3.4
	comp=Z,0.3nm,0.3s,baz=201,slow=10,SNR=4.1						
KKAR	Karatay Array	21.19	53	*e*P	P	21 36 13.3	+0.1
	comp=Z,0.6nm,0.4s,mb3.3						
BUR08	Bucovina Ar. S	22.56	319	*e*P	P	21 36 27.4	-0.3
BUR08	Bucovina Ar. S	22.56	319	*e*P	P	21 36 27.5	-0.3
EKS2	Erkin-Say	23.30	56	*e*P	P	21 36 36.3	+0.6
	comp=Z,6.0nm,2.1s,mb3.7						
EKS2	Erkin-Say	23.30	56	*e*P	P	21 36 36.3	+0.6
	comp=Z,5.9nm,2.1s,mb3.6						
UCH	Uchtor	23.70	58	P	P	21 36 39.8	+0.1
UCH	Uchtor	23.70	58	P	P	21 36 39.8	+0.1
OBN	Obninsk	23.86	345	P	P	21 36 40.0	-0.9
OBN	Obninsk	23.86	345	P	P	21 36 40.0	-1.0
TKM2	Tokmak 2	24.66	57	*e*P	P	21 36 48.2	-0.2
	comp=Z,1.7nm,0.8s,mb3.6						
TKM2	Tokmak 2	24.66	57	*e*P	P	21 36 48.2	-0.2
	comp=Z,1.7nm,0.8s,mb3.6						
KWP	Kalwaria Pacla	25.04	320	*e*P	P	21 36 50.8	-1.0
	comp=Z,4.7nm,0.6s,mb4.2						
KWP	Kalwaria Pacla	25.04	320	*e*P	P	21 36 50.8	-1.0
	comp=Z,4.7nm,0.6s,mb4.2						
ARU	Arti	25.23	15	*e*P	P	21 36 53.0	-0.4
	comp=Z,1.5nm,0.3s,mb4.0						
ARU	Arti	25.23	15	*e*P	P	21 36 53.0	-0.4
	comp=Z,1.5nm,0.3s,mb4.0						
BRVK	Borovoye	26.45	32	*e*P	P	21 37 04.3	-0.2
	comp=Z,1.5nm,0.6s,mb3.7						
BRVK	Borovoye	26.45	32	*e*P	P	21 37 04.3	-0.2
	comp=Z,1.5nm,

KEMA				*i* S	Sb	21 34 21.2	+0.7
KEMA	**Kemaliye**	**1.29**	**237**	*i* P	Pn	21 34 04.1	+0.5
KEMA				*i* S	Sb	21 34 21.2	+0.7
SUSE	**Susehri**	**1.31**	**280**	*i* P	Pn	21 34 03.5	-0.3
SUSE				*i* S	Sb	21 34 19.4	-1.6
SUSE	**Susehri**	**1.31**	**280**	*i* P	Pn	21 34 03.5	-0.3
SUSE				*i* S	Sb	21 34 19.4	-1.6
GRSN	**GIRESUNGRSN**	**1.54**	**308**	*i* P	Pn	21 34 06.9	-0.2
GRSN				*i* S	Sn	21 34 26.2	-1.1
GRSN	**GIRESUNGRSN**	**1.54**	**308**	*i* P	Pn	21 34 06.9	-0.2
GRSN				*i* S	Sn	21 34 26.2	-1.1
DDEM	**Demirkent**	**1.69**	**57**	*i* P	Pn	21 34 08.9	-0.2
DDEM				*i* S	Sn	21 34 29.4	-1.5
DDEM	**Demirkent**	**1.69**	**57**	*i* P	Pn	21 34 08.9	-0.2
DDEM				*i* S	Sn	21 34 29.4	-1.5
DBOC	**Borcka**	**1.92**	**44**	*i* P	Pn	21 34 12.7	+0.4
DBOC				*i* S	Sn	21 34 38.0	+1.5
DBOC	**Borcka**	**1.92**	**44**	*i* P	Pn	21 34 12.7	+0.4
DBOC				*i* S	Sn	21 34 38.0	+1.4
BCA	**Borcka**	**1.97**	**42**	*e*PN	Pn	21 34 12.9	0.0
BCA	**Borcka**	**1.97**	**42**	*e*Pn	Pn	21 34 13.0	+0.1
SVSK	**Karacayir**	**2.22**	**269**	*e*PN	Pn	21 34 17.7	+1.4
SVSK	**Karacayir**	**2.22**	**269**	*e*Pn	Pn	21 34 17.7	+1.4

WEL 09 22:03:55.1±0.2, 42°.09S×173°.00E, h82km±2km, ML3.9/19, 3C-3D, Error ellipse: s-maj=2.1km s-min=1.1km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.33**	**347**	⇓PN	Pn	22 04 07.5	-0.2
THZ				SN	Sn	22 04 15.8	-1.3
KHZ	**Kahutara**	**0.52**	**130**	⇑PN	Pn	22 04 09.5	+0.5
KHZ				SN	Sn	22 04 19.4	0.0
BSWZ	**Blackbirch Sta**	**0.75**	**60**	PN	Pn	22 04 11.7	+0.3
BSWZ				SN	Sn	22 04 23.4	-0.1
LTZ	**Lake Taylor**	**0.88**	**218**	⇑PN	Pn	22 04 13.3	+0.5
LTZ				SN	Sn	22 04 25.9	-0.1
NNZ	**Nelson**	**0.92**	**18**	⇓PN	Pn	22 04 12.9	-0.3
NNZ				SN	Sn	22 04 26.1	-0.6
TUWZ	**Tuamarina**	**0.96**	**47**	PN	Pn	22 04 13.5	-0.3
CMWZ	**Cape Campbell**	**0.97**	**70**	PN	Pn	22 04 14.2	+0.4
TCW	**Tory Channel**	**1.29**	**48**	PN	Pn	22 04 17.3	-0.4
QRZ	**Quartz Range**	**1.31**	**344**	⇓PN	Pn	22 04 17.8	-0.2
DUWZ	**D'Urville Isla**	**1.46**	**29**	PN	Pn	22 04 20.1	+0.2
SNZO	**South Karori**	**1.49**	**59**	PN	Pn	22 04 19.7	-0.6
CRLZ	**Canterbury Las**	**1.51**	**191**	PN	Pn	22 04 20.3	-0.3
WEL	**Wellington**	**1.55**	**59**	PN	Pn	22 04 20.6	-0.4
BHW	**Baring Head**	**1.55**	**65**	PN	Pn	22 04 20.2	-0.9
MQZ	**McQueen's Vall**	**1.64**	**189**	⇑PN	Pn	22 04 21.7	-0.5
PLWZ	**Palliser**	**1.76**	**74**	PN	Pn	22 04 22.6	-1.2
MSWZ	**Moikau Station**	**1.81**	**69**	PN	Pn	22 04 23.3	-1.1
CAW	**Cannon Point**	**1.83**	**58**	PN	Pn	22 04 23.9	-0.8
KIW	**Kapiti Island**	**1.89**	**50**	PN	Pn	22 04 25.1	-0.3
OGWZ	**Otaki Gorge**	**2.07**	**53**	PN	Pn	22 04 27.1	-0.7
MTW	**Mount Morrison**	**2.09**	**64**	PN	Pn	22 04 26.7	-1.5
TRWZ	**Traveller**	**2.12**	**72**	PN	Pn	22 04 27.2	-1.4
RPZ	**Rata Peaks**	**2.17**	**221**	PN	Pn	22 04 29.0	-0.2
HOWZ	**Holdsworth Sta**	**2.23**	**59**	PN	Pn	22 04 28.7	-1.4
TMWZ	**Te Maipa**	**2.38**	**67**	PN	Pn	22 04 30.3	-1.6
MRZ	**Mangatainoka R**	**2.41**	**55**	PN	Pn	22 04 31.2	-1.2
TIWZ	**Tintock**	**2.53**	**60**	PN	Pn	22 04 32.5	-1.6
POWZ	**Post Office Ro**	**2.69**	**52**	PN	Pn	22 04 34.7	-1.5
WAZ	**Wanganui**	**2.77**	**33**	PN	Pn	22 04 37.5	+0.1
BFZ	**Birch Farm**	**2.82**	**61**	PN	Pn	22 04 35.6	-2.3
FOZ	**Fox Glacier**	**2.85**	**238**	PN	Pn	22 04 37.2	-1.1
NEZ	**North Egmont**	**2.94**	**17**	*e*PN	Pn	22 04 39.7	+0.2
DVHZ	**Dannevirke**	**2.98**	**54**	*e*PN	Pn	22 04 38.0	-2.2
PKE	**Pukeiti**	**2.99**	**15**	PN	Pn	22 04 40.7	+0.4
RAEZ	**Rainy Point**	**2.99**	**21**	*e*PN	Pn	22 04 41.0	+0.7
TSZ	**Takapari Road**	**3.02**	**49**	PN	Pn	22 04 38.9	-1.7
DREZ	**Durham Road**	**3.04**	**18**	PN	Pn	22 04 41.3	+0.5
LBZ	**Lake Benmore**	**3.08**	**221**	*e*PN	Pn	22 04 41.3	-0.2
MHEZ	**Mangahewa**	**3.17**	**19**	SN	Sn	22 05 17.8	-1.7
VRZ	**Vera Road**	**3.25**	**25**	PN	Pn	22 04 44.2	+0.4
PNHZ	**Pukenui**	**3.25**	**49**	PN	Pn	22 04 41.8	-1.9
ODZ	**Otahua Downs**	**3.42**	**209**	*e*PN	Pn	22 04 45.7	-0.3
FWVZ	**Far West T-bar**	**3.43**	**35**	*e*PN	Pn	22 04 46.0	-0.2
BHHZ	**Black Hill Sta**	**3.48**	**43**	PN	Pn	22 04 45.7	-1.3
OTVZ	**Oturere**	**3.56**	**36**	PN	Pn	22 04 47.6	-0.3
PXZ	**Pawanui**	**3.57**	**56**	PN	Pn	22 04 45.4	-2.7
KRVZ	**Karewarewa**	**3.60**	**35**	PN	Pn	22 04 47.9	-0.7
JCZ	**Jackson Bay**	**3.69**	**236**	PN	Pn	22 04 49.3	-0.4
KAHZ	**Kahuranaki**	**3.72**	**53**	PN	Pn	22 04 48.0	-2.1
HIZ	**Hauiti**	**3.84**	**22**	PN	Pn	22 04 51.7	-0.1
BKZ	**Black Stump Fm**	**3.95**	**43**	PN	Pn	22 04 51.1	-2.1
EAZ	**Earnscleugh**	**4.13**	**219**	*e*PN	Pn	22 04 54.3	-1.4
TUZ	**Tuapeka**	**4.57**	**211**	PN	Pn	22 05 01.7	+0.1
URZ	**Urewera**	**4.95**	**41**	PN	Pn	22 05 03.4	-3.6
MWZ	**Matawai**	**5.10**	**44**	*e*PN	Pn	22 05 05.2	-3.8
MKAZ	**Moumakai**	**5.25**	**19**	PN	Pn	22 05 10.5	-0.4

KRSC 09 22:18:55.6±1.1, 54°.43N×162°.83E, h41km±31km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.65**	**282**	*e*P	Pn	22 19 09.2	+0.8
MKZ				*e*S	Sn	22 19 19.4	+1.9
KBTR	**Krutoberegovo**	**1.78**	**360**	*e*P	Pn	22 19 23.5	-0.3
KBTR				*e*S	Sn	22 19 43.8	-1.4
KII	**Karymskiy**	**2.02**	**260**	S	Sn	22 19 52.7	+1.5
KOZ	**Kozyrevsk**	**2.35**	**315**	P	Pn	22 19 33.5	+1.9
NLC	**Nalytchevo**	**2.42**	**240**	S	Sn	22 20 01.0	0.0
SRDR	**Sredinnyy**	**2.59**	**318**	P	Pn	22 19 36.5	+1.5
SRDR				S	Sn	22 20 06.3	+1.1
AVH	**Avacha**	**2.69**	**246**	*e*P	Pn	22 19 36.9	+0.6
AVH				*e*S	Sn	22 20 07.6	0.0
GNL	**Ganaly**	**2.97**	**258**	*e*P	Pn	22 19 42.4	+2.2
GNL				*e*S	Sn	22 20 16.0	+1.4

*KRSC **09** 22:36:18.2±0.6, 52°.05N×159°.42E, h25km±24km, ML4.0*
*IDC **09** 22:36:21.9±1.1, 52°.89N×156°.89E, h0km, mb3.7/6, mb1 4.1/6, mb1mx3.6/23, mbtmp3.7/6, Error ellipse: s-maj=50.5km s-min=22.8km az=152.0*
*MOS **09** 22:36:22.8±2.4, 52°.64N×157°.42E, h29km, mb3.9/5, Error ellipse: s-maj=37.4km s-min=17.7km az=64.7*
*ISCJB **09** 22:36:24.7±0.5, 52°.83N±0°.07×157°.26E±0°.09, h33km, mb3.9/8, Error ellipse: s-maj=11.5km s-min=5.4km az=144.7*

ISC 09 22:36:26.5±0.5, 52°.69N±0°.07×157°.4E±0°.1, h35km, n24, σ1§55/30, mb3.9/8, 1D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**0.46**	**108**	P	**Pn**	**22 36 36.9**	**+0.4**
GRL				*i* S	**Sn**	**22 36 50.0**	**+6.6**
MIPR	**Malaya Ipel'ka**	**0.56**	**222**	P	**Sn**	**22 36 46.0**	**+0.1**
PET	**Petropavlovsk**	**0.85**	**67**	P	**Pn**	**22 36 38.1**	**-3.8**
PET				*i* S	**Sn**	**22 36 52.1**	**-1.0**
PET	**Petropavlovsk**	**0.85**	**67**	⇓*i*PN	**Pn**	**22 36 37.9**	**-4.0**
PET				*e*S	**Sn**	**22 36 50.6**	**-2.5**
PET				pmax	pmax		
	comp=Z,125nm,0.6s						
PET				smax			
	comp=N,800nm,1.7s						
PET				smax			
	comp=N,716nm,0.7s						
AVH	**Avacha**	**1.01**	**55**	*e*P	**Pn**	**22 36 42.0**	**-2.1**
AVH				*i* S	**Sn**	**22 36 58.6**	**+1.6**
GNL	**Ganaly**	**1.06**	**19**	P	**Pn**	**22 36 50.2**	**+5.4**
GNL				*i* S	**Sn**	**22 37 13.3**	**+15**
KII	**Karymskiy**	**1.84**	**42**	*e*P	**Pn**	**22 36 53.1**	**-2.3**
ALID	**Alaid**	**2.15**	**212**	P	**Pn**	**22 37 00.5**	**+0.8**
SKR	**Severo-Kuril's**	**2.16**	**202**	*e*PN	**Pn**	**22 36 55.0**	**-4.8**
SKR				*e*S	**Sn**	**22 37 22.5**	**-2.8**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
MKZ	**Mys Kozlova**	**3.20**	**53**	*e*P	Px	22 37 03.6	
MKZ				*i* S	Sx	22 37 37.4	
KBTR	**Krutoberegovo**	**4.75**	**40**	*e*P	**Pn**	**22 37 27.9**	**-7.5**
KBTR				*i* S	**Sn**	**22 38 20.3**	**-8.8**
ERM	**Erimo**	**14.35**	**228**	*e*P	**Pn**	**22 39 48.4**	**+1.5**
MJAR	**Matsushiro Arr**	**21.03**	**227**	P	**P**	**22 41 05.9**	**-1.1**
	comp=Z,2.1nm,0.6s,mb3.7,baz=19,slow=10,SNR=9.0						
MJAR	**Matsushiro Arr**	**21.03**	**227**	P	**P**	**22 41 05.9**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**46.53**	**301**	*e*P	**P**	**22 44 51.1**	**+1.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BRVK	**Borovoye**	**49.36**	**307**	*e*P	**P**	**22 45 11.0**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
CMAR	**Chiang Mai Arr**	**56.48**	**256**	P	**P**	**22 46 04.4**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.8,baz=27,slow=6.4,SNR=4.6						
CMAR	**Chiang Mai Arr**	**56.48**	**256**	P	**P**	**22 46 04.4**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**57.43**	**68**	P	**P**	**22 46 13.2**	**+1.8**
	comp=Z,0.2nm,0.3s,mb3.6,baz=288,slow=9.4,SNR=3.0						
PDAR	**Pinedale Array**	**59.16**	**59**	P	**P**	**22 46 25.9**	**+2.6**
	comp=Z,0.8nm,0.8s,mb3.8,baz=320,slow=3.9,SNR=6.7						
NOA	**NORSAR Array B**	**63.44**	**342**	P	**P**	**22 46 50.8**	**-1.2**
	comp=Z,0.9nm,0.7s,mb4.0,baz=23,slow=6.6,SNR=4.7						
NOA	**NORSAR Array B**	**63.44**	**342**	P	**P**	**22 46 50.8**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**72.31**	**65**	P	**P**	**22 47 50.4**	**+2.0**
	comp=Z,0.5nm,0.7s,mb3.6,baz=294,slow=3.7,SNR=4.4						
TXAR	**Lajitas Array**	**72.31**	**65**	P	**P**	**22 47 50.4**	**+2.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

MAN 09 22:44:42, 9°.68N×126°.08E, h43km, mb4.1, ML2.9, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.28**	**290**	*e*P	Pn	22 45 04.7	+1.2
MSLP				*e*S	Sn	22 45 15.8	-3.8
BUKP	**Musuan**	**2.06**	**209**	*e*P	Pn	22 45 15.5	+1.4
BUKP				*e*S	Sn	22 45 30.1	-8.4
TBP	**Tagbilaran**	**2.19**	**270**	⇑*i*P	Pn	22 45 16.6	+0.7
TBP				*i* S	Sn	22 45 43.5	+1.8

*CSEM **09** 22:51:44.3, 38°.46N×29°.90W, h15km, ML3.4, After PDA*
PDA 09 22:51:44.3±0.6, 38°.46N×29°.90W, h15km, MD3.5, ML3.4, Error ellipse: s-maj=13.2km s-min=4.2km az=165.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.95**	**83**	*e*P	Pb	22 51 59.0	-3.4
CALA				*e*S	Sb	22 52 10.0	-4.7
CALA	**Caldeira**	**0.95**	**83**	*e*P	Pb	22 51 59.0	-3.4
CALA				*e*S	Sb	22 52 10.0	-4.7
PCED	**Cedros**	**0.95**	**80**	*e*P	Pb	22 51 58.6	-3.9
PCED				*e*S	Sb	22 52 09.6	-5.3
PCED				A		22 52 10.9	
	216nm,0.3s						
PCED	**Cedros**	**0.95**	**80**	*e*P	Pb	22 51 58.6	-3.9
PCED				*e*S	Sb	22 52 09.6	-5.3
HOR	**Horta**	**1.00**	**86**	*e*S	Sb	22 52 11.1	-5.1
HOR	**Horta**	**1.00**	**86**	*e*S	Sb	22 52 11.1	-5.1
PCAN	**Candelaria**	**1.11**	**90**	*e*P	Pb	22 52 01.0	-4.2
PCAN				*e*S	Sb	22 52 13.3	-6.2
PCAN				A		22 52 15.8	
	346nm,0.2s						
PCAN	**Candelaria**	**1.11**	**90**	*e*P	Pb	22 52 01.0	-4.2
PCAN				*e*S	Sb	22 52 13.3	-6.2
PICO	**Pico**	**1.16**	**88**	*e*S	Sb	22 52 16.1	-4.7
PICO	**Pico**	**1.16**	**88**	*e*S	Sb	22 52 16.1	-4.7
ROSA	**Rosais**	**1.32**	**78**	*e*P	Pn	22 52 04.8	-3.4
ROSA				*e*S	Sn	22 52 19.4	-6.2
ROSA	**Rosais**	**1.32**	**78**	*e*P	Pn	22 52 04.8	-3.4
ROSA				*e*S	Sn	22 52 19.4	-6.2
PID	**Ribeirinha**	**1.40**	**90**	*e*S	Sn	22 52 22.4	-5.0
PID	**Ribeirinha**	**1.40**	**90**	*e*S	Sn	22 52 22.4	-5.0
PMAN	**Manadas**	**1.43**	**83**	*e*P	Pn	22 52 05.4	-4.3
PMAN				*e*S	Sn	22 52 21.1	-7.1
PMAN				A		22 52 25.7	
	90nm,0.2s						
PMAN	**Manadas**	**1.43**	**83**	*e*P	Pn	22 52 05.4	-4.3
PMAN				*e*S	Sn	22 52 21.1	-7.1
ADH	**Angra Heroismo**	**2.10**	**84**	*e*S	Sn	22 52 37.5	-7.2
ADH				A		22 52 40.4	
	92nm,0.3s						
ADH	**Angra Heroismo**	**2.10**	**84**	*e*S	Sn	22 52 37.5	-7.2
PSET	**Sete Cidades**	**3.36**	**100**	*e*P	Pn	22 52 32.2	-4.0
PSET	**Sete Cidades**	**3.36**	**100**	*e*P	Pn	22 52 32.2	-4.0
CMLA	**Cha da Macela**	**3.52**	**100**	*e*P	Pn	22 52 34.8	-3.6
CMLA	**Cha da Macela**	**3.52**	**100**	*e*P	Pn	22 52 34.8	-3.6
BART	**Pico Bartolome**	**3.79**	**99**	*e*P	Pn	22 52 38.7	-3.5
BART	**Pico Bartolome**	**3.79**	**99**	*e*P	Pn	22 52 38.7	-3.5
PSMA	**Santa Maria**	**4.06**	**110**	*e*P	Pn	22 52 41.1	-4.7

IDC 09 22:57:57.0±1.5, 14°.38S×65°.99W, h0km, mb3.8/1, mb1 3.4/2, mb1mx3.3/18, mbtmp3.4/2, Error ellipse: s-maj=114.8km s-min=18.0km az=140.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.80**	**227**	Pn	Pn	22 58 41.7	-1.4
	0.4nm,0.3s,baz=90,slow=20,SNR=14						
LPAZ				Lg		22 59 28.1	
	0.3nm,0.3s,baz=60,slow=20,SNR=6.7						
TORD	**Torodi Ar. Bea**	**72.38**	**71**	P	P	23 09 25.6	+0.2
	0.6nm,0.6s,baz=262,slow=5.0,SNR=13						
SONM	**Songino Array**	**146.05**	**9**	PKPbc	PKPbc	23 17 38.6	-0.3
	0.2nm,0.3s,baz=2.7,slow=3.0,SNR=3.9						

*IDC **09** 23:10:15.1±2.3, 18°.65S×175°.27W, h0km, mb4.3/6, mb1 4.5/6, mb1mx4.1/18, mbtmp4.3/6, Error ellipse: s-maj=79.6km s-min=36.0km az=138.0*
*ISCJB **09** 23:10:17.5±0.9, 18°.75S±0°.2×175°.3W±0°.1, h33km, mb4.5/10, Error ellipse: s-maj=31.5km s-min=19.3km az=12.3*
*NEIC **09** 23:10:19.9±0.7, 18°.75S×175°.27W, h35km, mb4.5/3, Error ellipse: s-maj=25.9km s-min=17.1km az=188.0*

ISC 09 23:10:19.7±0.9, 18°.7S±0°.2×175°.3W±0°.1, h35km, n16, σ1§01/13, mb4.5/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.27**	**261**	P	**P**	**23 17 21.1**	**+1.2**
	3.6nm,0.7s,mb4.4,baz=89,slow=12,SNR=3.6						
PMG	**Port Moresby**	**37.53**	**279**	*e*P	**P**	**23 17 30.2**	**-0.5**
	11nm,0.7s,mb4.7						
WB2	**Warramunga Arr**	**47.42**	**260**	*e*P	**P**	**23 18 50.7**	**-0.3**
WRA	**Warramunga Arr**	**47.43**	**260**	P	**P**	**23 18 50.9**	**-0.3**
	2.8nm,0.7s,mb4.3,baz=94,slow=7.3,SNR=27						
WRA				PcP	PcP	23 20 21.7	+0.3
	0.3nm,0.3s,baz=92,slow=3.4,SNR=6.4						
ASAR	**Alice Springs**	**47.46**	**255**	P	**P**	**23 18 52.8**	**+1.4**
	11nm,0.7s,mb4.9,baz=87,slow=8.5,SNR=129						
ASAR				PcP	PcP	23 20 21.8	+0.4
	0.6nm,0.6s,baz=102,slow=4.2,SNR=5.2						
KAKA	**Kakadu**	**50.55**	**269**	*e*P	**P**	**23 19 13.3**	**-1.8**
	16nm,0.5s,mb5.2						
RPN	**Rapa Nui**	**60.73**	**111**	*e*P	**P**	**23 20 27.3**	**-0.8**
MBWA	**Marble Bar**	**60.78**	**256**	*e*P	**P**	**23 20 27.4**	**-1.1**
	1.1nm,0.4s,mb4.3						
MJAR	**Matsushiro Arr**	**70.34**	**322**	P	**P**	**23 21 30.1**	**+0.3**
	2.1nm,0.5s,mb4.3,baz=145,slow=6.1,SNR=5.1						
QSPA	**South Pole Qui**	**71.38**	**180**	*e*P	**P**	**23 21 36.4**	**+0.9**
	8.0nm,1.5s,mb4.4						
CMAR	**Chiang Mai Arr**	**91.96**	**289**	P	**P**	**23 23 24.6**	**-0.6**
	0.5nm,0.3s,mb4.3,baz=94,slow=2.2,SNR=5.2						
SONM	**Songino Array**	**96.10**	**318**	P	**P**	**23 23 45.1**	**+1.6**
	0.2nm,0.4s,mb3.9,baz=111,slow=3.7,SNR=2.4						
SONM	**Songino Array**	**96.10**	**318**	P	**P**	**23 23 45.1**	**+1.6**
BVAR	**Borovoye Array**	**119.33**	**321**	PKP	PKPdf	23 29 05.9	+0.8
	0.3nm,0.4s,baz=36,slow=1.7,SNR=3.0						
CLL	**Collm**	**146.80**	**351**	*i* PKPbc	PKPbc	23 30 03.4	+5.5
	comp=Z,4.0nm,0.8s						
BRTR	**Keskin Array B**	**147.43**	**316**	PKPbc	PKPbc	23 30 02.0	+1.9
	comp=Z,1.1nm,0.7s,baz=81,slow=4.5,SNR=6.3						

*NOU **09** 23:18:20.8±1.2, 11°.33S×166°.73E, h30km, MD4.6, ML5.5*
*ISCJB **09** 23:18:25.5±0.1, 11°.83S±0°.02×166°.47E±0°.02, h101km, mb5.5/176, Error ellipse: s-maj=3.1km s-min=2.5km az=160.5*
*IDC **09** 23:18:26.4±0.5, 11°.78S×166°.55E, h101km±4km, mb4.9/24, mb1 5.0/25, mb1mx5.0/27, mbtmp5.0/25, MS4.4/17, Ms1 4.4/17, ms1mx4.3/22, Error ellipse: s-maj=11.4km s-min=9.3km az=157.0*
*NEIC **09** 23:18:26.3±0.1, 11°.80S×166°.51E, mb5.4/81, MW5.6, MW5.5, Error ellipse: s-maj=5.5km s-min=3.9km az=153.0, Moment Tensor Solution. s42 Moment tensor: Scale 10^{17}Nm; M_{rr}2.35; $M_{\theta\theta}$-2.52; $M_{\phi\phi}$0.17; $M_{r\theta}$1.80; $M_{\theta\phi}$-1.15; $M_{\phi r}$-0.67; Best double couple: $M_0$3.30000×10^{17} NP1: ϕ_s226.00000°, δ36.00000°, λ49.00000°. NP2: ϕ_s93.00000°, δ64.00000°, λ115.00000°. Principal axes: T 3.2700, Plg62.0000°, Azm43.0000°; N 0.0700, Plg22.0000°, Azm261.0000°; P -3.3500, Plg15.0000°, Azm164.0000°;*
*MOS **09** 23:18:27.5±1.2, 11°.64S×166°.42E, h116km, mb5.4/30, MS5.0/7 Error ellipse: s-maj=7.7km s-min=7.5km az=92.2*
*BJI **09** 23:18:27.5, 11°.26S×166°.54E, h107km, mB5.4/34, mb5.5/60*
*DJA **09** 23:18:29, 12°.03S×166°.71E, h133km, Mw6.0/37*
*GCMT **09** 23:18:29.5±0.1, 11°.78S×166°.35E, h108km, MW5.6, Moment Tensor Solution. s96,c183; s23,c24; Moment tensor: Scale 10^{17}Nm; M_{rr}2.00±.04; $M_{\theta\theta}$-2.63±.04; $M_{\phi\phi}$0.63±.04; $M_{r\theta}$1.93±.03; $M_{\theta\phi}$-1.44±.04; $M_{\phi r}$-0.80±.03; Best double couple: $M_0$3.50000×10^{17} NP1: ϕ_s218.00000°, δ39.00000°, λ37.00000°. NP2: ϕ_s98.00000°, δ68.00000°, λ123.00000°. Principal axes: T 3.3100, Plg55.0000°, Azm50.0000°; N 0.3000, Plg30.0000°, Azm264.0000°; P -3.6200, Plg16.0000°, Azm164.0000°; Data Used: II IU IC G CN. Surface waves: sta=103, comp=214, per= 50.*

ISC 09 23:18:27.2±0.1, 11°.82S±0°.02×166°.51E±0°.02, h103km, h103km±.5km: pP-P, n779, σ0§80/538, mb5.5/174, 170C-114D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.88**	**290**	P	**Pn**	**23 20 06.7**	**+1.3**
	39nm,0.3s,baz=184,slow=1.7,SNR=31						
HNR				S	**Sn**	**23 21 22.4**	**+0.2**
	54nm,0.3s,baz=158,slow=19,SNR=2.4						
HNR				LR	LR	23 21 58.7	
	comp=Z,1μm,20.3s,baz=127,slow=31						
HNR	**Honiara**	**6.88**	**290**	⇓*i*Pn	**Pn**	**23 20 06.3**	**+0.8**
HNR				*e*Sn	**Sn**	**23 21 26.6**	**+4.3**
DZM	**Mont Dzumac**	**10.19**	**180**	*e*Pn	**Pn**	**23 20 51.3**	**+0.8**
	293nm,0.3s						
DZM				*e*Sn	**Sn**	**23 22 37.8**	**-5.1**
	81nm,0.3s						
DZM	**Mont Dzumac**	**10.19**	**180**	*e*P	**Pn**	**23 20 50.4**	**-0.1**
DZM				*e*S	**Sn**	**23 22 41.1**	**-1.8**
DZM				AMP		23 22 43.3	
	comp=Z,2μm,3.9s						
NOUC	**Port Laguerre**	**10.22**	**181**	*e*P	**Pn**	**23 20 51.6**	**+0.6**
NOUC				*e*S	**Sn**	**23 22 42.1**	**-1.6**
NOUC				AMP		23 22 49.3	
	comp=Z,116nm,5.1s						
BAYA	**Yate Dam**	**10.28**	**178**	*e*P	**Pn**	**23 20 51.6**	**-0.1**
BAYA				*e*S	**Sn**	**23 22 44.4**	**-0.7**
NORM	**Noumea**	**10.35**	**180**	*e*P	**Pn**	**23 20 53.1**	**+0.4**
MSVF	**Nonsavu**	**12.61**	**119**	⇑*e*Pn	**Pn**	**23 21 25.9**	**+3.1**
MSVF				Sn	**Sn**	**23 23 42.4**	**+0.7**
MSVF	**Nonsavu**	**12.61**	**119**	Pn	**Pn**	**23 21 26.0**	**+3.1**
	comp=Z,4μm,1.1s,SNR=30						
FUNA	**Funafuti**	**12.91**	**76**	*e*Pn	**Pn**	**23 21 26.9**	**0.0**
PMG	**Port Moresby**	**19.17**	**275**	*ce*P	**P**	**23 22 44.4**	**+1.6**
PMG				pmax	pmax		
	comp=Z,212nm,1.2s						
PMG	**Port Moresby**	**19.17**	**275**	⇑*e*Pn	**Pn**	**23 22 43.3**	**-1.5**
	comp=Z,544nm,1.4s						
PMG				*e*S	**S**	**23 26 11.6**	**-3.2**
PMG	**Port Moresby**	**19.17**	**275**	P	**P**	**23 22 44.7**	**+1.9**
	comp=Z,4μmcomp=Z,270nm,1.6s						
EIDS	**Eidsvold**	**19.86**	**225**	⇓*i*Pn	**Pn**	**23 22 52.3**	**-0.4**
	comp=Z,371nm,0.9s						
EIDS				*e*S	**S**	**23 26 33.6**	**+5.4**
KWAJ	**Kwajalein Atol**	**20.52**	**3**	*e*P	**P**	**23 22 57.6**	**+0.3**
	comp=Z,958nm,1.4s						
KWAJ				*e*		23 23 13.0	
CTA	**Charters Tower**	**21.12**	**245**	P	**P**	**23 23 05.3**	**+1.5**
	comp=Z,33nm,0.8s,mb4.7,baz=74,slow=12,SNR=19						
CTA				S	**S**	**23 26 53.6**	**+0.5**
	comp=Z,15nm,1.1s,baz=86,slow=14,SNR=2.2						
CTA				LR	LR	23 30 21.1	
	comp=Z,580nm,19.9s,baz=58,slow=34						
CTA	**Charters Tower**	**21.

comp=Z,1μm,18.1s,baz=75,slow=34
WRA Warramunga Arr 31.93 251 P **P 23 24 42.9 -0.4**
WRA 23 27 31.1
WRA Warramunga Arr 31.93 251 P **P 23 24 42.9 -0.4**
WRA PcP PcP 23 27 31.1 -0.4
WRA pPcP 23 27 57.6
WRA ScP ScP 23 31 06.1 +0.4
RPZ Rata Peaks 32.02 174 P **P 23 24 43.5 -0.3**
comp=Z,207nm,0.7s,mb6.0,baz=324,slow=1.2,SNR=127
RPZ LR LR 23 36 48.3
comp=Z,710nm,18.2s,baz=348,slow=34
RPZ Rata Peaks 32.02 174⇓*eP* **P 23 24 43.2 -0.5**
comp=Z,225nm,0.7s,mb6.0
RPZ *ep*P pP 23 25 04.1 -2.7
RPZ Rata Peaks 32.02 174 *e*PN **P 23 24 42.7 -1.0**
JCZ Jackson Bay 32.20 177 PN **P 23 24 46.1 +0.8**
ASAR Alice Springs 33.13 245 P **P 23 24 53.1 -0.6**
comp=Z,21nm,0.8s,mb5.0,baz=73,slow=9.5,SNR=104
ASAR PcP PcP 23 27 34.1 -0.6
comp=Z,20nm,0.9s,baz=75,slow=2.2,SNR=9.9
ASAR pPcP 23 28 00.9
comp=Z,23nm,0.9s,baz=77,slow=3.1,SNR=8.0
ASAR ScP ScP 23 31 09.3 -0.5
comp=Z,6.6nm,0.9s,baz=71,slow=3.9,SNR=6.5
ASAR PKiKP PKiKP 23 34 58.6 -2.1
comp=Z,1.0nm,0.8s,baz=120,slow=1.5,SNR=4.4
ASAR P3KPbc 23 56 07.8
comp=Z,0.7nm,0.9s,baz=270,slow=3.8,SNR=4.2
ASAR Alice Springs 33.13 245 P **P 23 24 53.1 -0.6**
ASAR 23 27 34.2
ASAR Alice Springs 33.13 245 P **P 23 24 53.1 -0.6**
ASAR PcP PcP 23 27 34.1 -0.6
ASAR pPcP 23 28 00.9
ASAR ScP ScP 23 31 09.3 -0.5
GUMO Guam 33.14 319 P **P 23 24 52.7 -1.1**
comp=Z,55nm,0.6s,mb5.5,baz=197,slow=12,SNR=6.4
KAKA Kakadu 33.29 265⇑*iP* **P 23 24 54.8 -0.4**
comp=Z,24nm,0.4s,mb5.4
KAKA Kakadu 33.29 265 *e*P **P 23 24 54.8 -0.5**
KAKA *ep*P pP 23 25 17.3 -1.2
KAKA *es*P sP 23 25 29.0 -1.4
KAKA *e*PcP PcP 23 27 34.9 -0.4
KAKA *e*S **S 23 30 10.0 +1.6**
KAKA Kakadu 33.29 265 P **P 23 24 55.6 +0.4**
comp=Z,715nmcomp=Z,74nm,0.6s,mb5.7
ODZ Otahua Downs 33.30 175 *e*P **P 23 24 54.5 -0.4**
comp=Z,1μm,1.6s,mb6.4
ODZ Otahua Downs 33.30 175 PN **P 23 24 53.7 -1.2**
EAZ Earnscleugh 33.38 176 PN **P 23 24 55.7 +0.1**
RAR Rarotonga 33.58 111 LR LR 23 34 34.7
comp=Z,669nm,21.1s,baz=70,slow=29
RAR Rarotonga 33.58 111 *ep*P pP 23 25 28.4 +7.5
TUZ Tuapeka 34.12 176 PN **P 23 25 02.6 +0.5**
MOO Moorlands 34.84 205⇓*iP* **P 23 25 08.8 +0.6**
BBOO Buckleboo 34.86 228⇓*eP* **P 23 25 08.6 0.0**
BBOO *ep*P pP 23 25 32.2 +0.3
KNA Kununurra 36.83 260 P **P 23 25 26.0 +0.4**
comp=Z,4μmcomp=Z,458nm,1.1s,mb6.3
JOHN Johnston Islan 36.96 40 *e*P **P 23 25 27.9 +1.3**
comp=Z,674nm,1.5s,mb6.3
FITZ Fitzroy Crossi 39.91 256⇑*iP* **P 23 25 51.4 -0.1**
comp=Z,201nm,1.0s,mb5.9
FITZ *e* pP 23 26 11.7 -3.5
NLAI Namlea 39.95 279 P **P 23 25 53.6 +1.8**
comp=Z,2μmcomp=Z,162nm,0.8s,mb5.9
FORT Forrest 40.22 236 *e*P **P 23 25 54.2 +0.3**
comp=Z,43nm,0.5s,mb5.5
FORT *e*S **S 23 31 52.7 -0.7**
FORT Forrest 40.22 236 *e*P **P 23 25 53.8 -0.1**
FORT *ep*P pP 23 26 16.6 -1.0
LBMI Labuha 40.27 283 P **P 23 25 55.5 +1.0**
comp=Z,3μmcomp=Z,264nm,1.0s,mb6.0
TNTI Ternate 40.84 285 P **P 23 26 00.3 +1.1**
comp=Z,2μmcomp=Z,81nm,1.5s,mb5.3
PPT Papeete 42.79 103 *e*S **S 23 32 28.6 -3.0**
comp=Z,707nm,25.2s
PPT *e*LR LR 23 38 13.5
comp=Z,3μm,28.8s
PPT Papeete 42.79 103 LR LR 23 42 43.9
comp=Z,392nm,18.3s,baz=275,slow=34
TBI Tubuai 43.35 111 *e*S **S 23 32 36.8 -2.9**
comp=Z,637nm,29.2s
TBI *e*LQ 23 36 39.7
comp=Z,8μm,29.2s
TBI *e*LR LR 23 38 33.4
comp=Z,2μm,33.2s
SGSI Sangihe 43.56 288 P **P 23 26 22.7 +1.4**
MMRI Maumere 43.65 270 P **P 23 26 21.8 -0.2**
comp=Z,2μmcomp=Z,174nm,1.2s,mb5.7
BBSI Bau Bau 43.85 274 P pP 23 26 45.9 -1.8
KMSI Cibinong 43.99 283 P **P 23 26 25.6 +0.9**
comp=Z,8μmcomp=Z,676nm,1.1s,mb6.3
KDI Kendari 44.12 277 P **P 23 26 27.1 +1.3**
LUWI Luwuk 44.69 281 P **P 23 26 30.7 +0.4**
comp=Z,2μmcomp=Z,186nm,1.3s,mb5.7
DAV Davao City (W) 44.83 293 *e*P **P 23 26 32.1 +0.7**
DAV Davao City (W) 44.83 293⇑*eP* **P 23 26 29.2 -2.1**
MBWA Marble Bar 45.66 252⇑*eP* **P 23 26 38.6 +0.7**
comp=Z,177nm,1.0s,mb5.8
MBWA *ep*P pP 23 27 00.2 -1.9
MBWA Marble Bar 45.66 252 P **P 23 26 39.0 +1.1**
SNR=15
MRSI Marisa 45.91 282 P **P 23 26 39.7 -0.2**
comp=Z,1μmcomp=Z,62nm,1.2s,mb5.2
BKSI Bulukumba 46.27 274 P **P 23 26 43.2 +0.4**
comp=Z,28nm,1.4s,mb4.8
KAPI Kappang 46.70 274⇑*eP* **P 23 26 45.3 -0.8**
comp=Z,148nm,1.3s,mb5.6
KAPI *ep*P pP 23 27 09.5 -0.9
KAPI *e*PcP PcP 23 28 17.3 -0.9
KAPI Kappang 46.70 274 P **P 23 26 46.4 +0.3**
SNR=5.7
SPSI Sidrap Palu 46.90 276 P **P 23 26 47.8 +0.2**
comp=Z,671nmcomp=Z,35nm,1.2s,mb5.0
TTSI Tana Toraja 47.05 277 P **P 23 26 49.6 +0.8**
comp=Z,2μmcomp=Z,37nm,1.2s,mb5.0
BMNI Bima 47.14 269 P **P 23 26 49.2 -0.3**
comp=Z,1μmcomp=Z,144nm,0.9s,mb5.7
TBP Tagbilaran 47.47 295⇓*eP* **P 23 26 52.7 +0.6**
OPA Opana 48.18 46 *eP* **P 23 26 57.4 0.0**
KLBR Kellerberrin 48.93 238⇑*iP* **P 23 27 02.7 -0.4**
comp=Z,33nm,0.3s,mb5.7
KLBR *e*S **S 23 33 58.1 -1.4**
MTNI Mataram 49.59 269 P **P 23 27 07.8 -0.6**
comp=Z,7μmcomp=Z,107nm,1.0s,mb5.7
NWAO Narrogin (SRO) 49.66 237 *eP* **P 23 27 08.9 +0.3**
NWAO *e**PP pP 23 27 31.6 -1.6
NWAO pmax pmax
comp=Z,76nm,0.9s
NWAO Narrogin (SRO) 49.66 237 *eP* **P 23 27 08.9 +0.3**
comp=Z,76nm,0.9s,mb5.6
NWAO *ep*P pP 23 27 31.6 -1.6
KHKI Kahang-Kahang 50.18 269 P **P 23 27 12.0 -0.8**
comp=Z,1μmcomp=Z,99nm,1.1s,mb5.6
KBKI Kotabaru 50.55 275 P **P 23 27 14.8 -0.8**
comp=Z,61nm,1.3s,mb5.5
IGBI Denpasar 50.57 268 P **P 23 27 15.6 -0.2**
comp=Z,10μmcomp=Z,262nm,1.1s,mb6.2
SRBI Singaraja 50.61 269 P **P 23 27 16.0 -0.1**
comp=Z,112nm,1.2s,mb5.8
MYLDM Lahad Datu 50.65 287 P **P 23 27 17.7 +1.3**
MYLDM Lahad Datu 50.65 287 P **P 23 27 18.1 +1.8**
comp=Z,2μmcomp=Z,228nm,1.2s,mb6.1
TSM Tawau 50.95 285 P **P 23 27 19.3 +0.7**
BYJI Banyuwangi 51.43 269 P **P 23 27 22.9 +0.7**
comp=Z,410nm,1.1s,mb6.4
GMJI Gumukmas 52.31 269 P **P 23 27 28.3 -0.5**
comp=Z,3μmcomp=Z,76nm,1.1s,mb5.7
TAOE Nuku Hiva Isla 52.50 92 *e*LR LR 23 42 32.0
comp=Z,1μm,30.9s
KDM Kudat 52.80 288 P **P 23 27 33.0 +0.7**
KKM Kota Kinabalu 53.08 287 P **P 23 27 35.2 +0.8**
KKM Kota Kinabalu 53.08 287⇑*eP* **P 23 27 34.5 0.0**
comp=Z,388nm,1.0s,mb6.4
KKM *ep*P pP 23 27 57.9 -1.4
KKM Kota Kinabalu 53.08 287 P **P 23 27 35.1 +0.7**
comp=Z,4μmcomp=Z,462nm,1.1s,mb6.4
KRKI Karangkates 53.30 269 P **P 23 27 38.7 +2.7**
comp=Z,296nm,0.8s,mb6.4
JOW Kunigami 53.43 316⇑*eP* **P 23 27 37.3 +0.6**
comp=Z,78nm,0.8s,mb5.8
JOW *ep*P pP 23 27 58.5 -3.1
JOW *e*PcP PcP 23 28 46.7 +4.0
PWJI Pagerwojo 53.95 269 P **P 23 27 40.7 -0.1**
comp=Z,145nm,1.0s,mb5.9

SJI Sawahan 54.04 269 P **P 23 27 42.0 +0.6**
comp=Z,172nm,1.3s,mb5.9
NGJI Ngawi 54.39 269 P **P 23 27 45.9 +1.9**
comp=Z,146nm,1.1s,mb5.9
MJAR Matsushiro Arr 55.00 332 P **P 23 27 46.4 -1.5**
comp=Z,15nm,0.9s,mb5.0,baz=171,slow=9.0,SNR=28
MJAR LR LR 23 46 25.2
comp=Z,331nm,21.7s,baz=135,slow=31
MAJO Matsushiro 55.00 332 *eP* **P 23 27 46.7 -1.2**
MAJO *e**PP pP 23 28 11.4 -1.6
MAJO pmax pmax
comp=Z,25nm,1.0s,mb5.2
MAJO Matsushiro 55.00 332 *eP* **P 23 27 46.7 -1.3**
comp=Z,25nm,1.0s,mb5.2
MAJO *ep*P pP 23 28 11.4 -1.6
BTM Bintulu 55.17 282 P **P 23 27 50.5 +0.9**
UGM Wanagama 55.23 269 *eP* **P 23 27 50.4 +0.3**
comp=Z,464nm,1.3s,mb6.3
SMRI Semarang 55.44 270 P **P 23 27 52.5 +0.9**
comp=Z,148nm,1.2s,mb5.9
SBUM Sibu 55.79 281 P **P 23 27 54.8 +0.7**
SBUM Sibu 55.79 281 P **P 23 27 54.7 +0.7**
comp=Z,1μmcomp=Z,87nm,1.4s,mb5.6
BJII Banjamegara 56.11 269 P **P 23 27 59.8 +3.4**
comp=Z,2μmcomp=Z,66nm,1.9s,mb5.3
JNU Nakatsue 56.15 324 *eP* **P 23 27 55.6 -0.6**
comp=Z,48nm,0.9s,mb5.5
YULB Yu-li 56.40 308 *eP* **P 23 27 57.3 -0.9**
comp=Z,52nm,0.9s,mb5.6
YULB *ep*P pP 23 28 21.7 -1.6
NACB Ninganchiao 56.61 309⇑*eP* **P 23 27 59.2 -0.5**
comp=Z,71nm,0.9s,mb5.7
NACB *ep*P pP 23 28 23.5 -1.3
NACB *es*P sP 23 28 33.5 -2.7
RKT Rikitea 56.62 110 *e*LR LR 23 44 38.9
comp=Z,1μm,30.8s
TPUB Ta-pu 56.87 308 *eP* **P 23 28 00.8 -0.6**
comp=Z,179nm,0.9s,mb6.1
TPUB *ep*P pP 23 28 25.1 -1.6
SSLB Suanglung 56.88 309 *eP* **P 23 28 00.7 -0.9**
comp=Z,46nm,0.8s,mb5.6
SSLB *ep*P pP 23 28 25.5 -1.2
YHNB Yeheng 57.05 310 *eP* **P 23 28 03.0 +0.2**
comp=Z,137nm,0.9s,mb6.0
YHNB *ep*P pP 23 28 27.0 -0.9
YHNB *e*PcP PcP 23 28 53.6 -3.1
TATO Taipei 57.14 310 *eP* **P 23 28 03.2 -0.1**
comp=Z,125nm,1.1s,mb5.9
TATO *ep*P pP 23 28 26.4 -2.1
TATO *e*PcP PcP 23 28 55.9 -1.2
KSM Kuching 57.37 279 P **P 23 28 05.6 +0.4**
KSM Kuching 57.37 279⇑*eP* **P 23 28 05.0 -0.2**
comp=Z,98nm,1.2s,mb5.7
KSM *ep*P pP 23 28 28.9 -1.5
KSM Kuching 57.37 279 P **P 23 28 05.2 -0.1**
comp=Z,72nm,1.4s,mb5.5
DRV Dumont d'Urvil 57.61 192 S **S 23 35 57.0 +1.2**
CISI Cisompet, Garu 57.93 268 P **P 23 28 08.5 -0.7**
comp=Z,3μmcomp=Z,263nm,1.1s,mb6.2
LEM Lembang 58.24 269 P **P 23 28 11.9 +0.5**
comp=Z,4μmcomp=Z,391nm,1.1s,mb6.3
YUK Yuzh-Kuril'sk 58.68 343⇑*iP* **P 23 28 09.0 -4.8**
CBJI Citeko 59.06 270 P **P 23 28 16.2 -0.9**
comp=Z,369nm,1.0s,mb6.4
DBJI Dramaga 59.14 269 P **P 23 28 17.4 -0.2**
comp=Z,4μmcomp=Z,175nm,1.4s,mb5.9
QZH Quanzhou 59.32 308⇑*iP* **P 23 28 18.0 -0.6**
QZH S **S 23 36 14.2 -5.1**
QZH pmax pmax
comp=Z,320nm,1.3s,mb6.2
QZH pmax pmax
comp=Z,890nm,3.5s
QZH LR LR
comp=Z,820nm,28.0s
ASAJ Asahikawa 59.77 340 P **P 23 28 21.6 +0.3**
comp=Z,46nm,0.7s,mb5.6,baz=220,slow=10,SNR=19
ASAJ Asahikawa 59.77 340 *eP* **P 23 28 20.8 -0.5**
comp=Z,14nm,0.8s,mb5.0
ASAJ *ep*P pP 23 28 45.6 -1.1
CGJI Cibinong 60.16 269 P **P 23 28 23.6 -1.0**
comp=Z,5μmcomp=Z,416nm,1.1s,mb6.4
SSE Sheshan 60.93 316 P **P 23 28 29.1 -0.4**
SSE pP pP 23 28 56.5 +1.6
SSE S **S 23 36 40.9 +1.2**
SSE pmax pmax
comp=Z,140nm,0.8s,mb6.0
SSE pmax pmax
comp=Z,210nm,4.2s
SSE LR LR
comp=N,440nm,30.9s
SSE LR LR
comp=E,640nm,30.6s
SSE LR LR
comp=Z,400nm,28.0s
KSRS Korea Array 60.94 325 P **P 23 28 29.2 -0.2**
comp=Z,23nm,0.8s,mb5.3,baz=137,slow=7.3,SNR=95
KSRS LR LR 23 52 59.5
comp=Z,334nm,18.2s,baz=132,slow=34
KLSI 61.45 271 P **P 23 28 31.9 -1.5**
comp=Z,42nm,3.3s
INCN Inchon 61.68 325 P **P 23 28 34.7 +0.3**
SNR=5.2
MDSI Maura Dua 62.03 271 P **P 23 28 36.2 -1.0**
comp=Z,56nm,1.3s,mb5.4
LWLI Liwa 62.05 271 P **P 23 28 36.8 -0.6**
comp=Z,3μmcomp=Z,180nm,1.1s,mb6.0
YSS Yuzh-Sakhalins 62.25 342*αeP* **P 23 28 37.8 -0.2**
YSS *e**PP pP 23 29 04.0 +0.5
YSS *e**SP sP 23 29 14.9 0.0
YSS *e*S **S 23 36 54.0 -1.8**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 62.25 342 *eP* **P 23 28 38.1 +0.1**
comp=Z,39nm,0.8s,mb5.5
YSS *ep*P pP 23 29 03.0 -0.6
GZH Guangzhou 62.54 304 P **P 23 28 40.8 +0.4**
GZH S **S 23 36 59.4 -0.9**
GZH pmax pmax
comp=Z,460nm,2.6s,mb6.0
VLA Vladivostok 63.17 332⇓*iP* **P 23 28 41.9 -2.3**
VLA *e* 23 29 18.7
VLA S **S 23 37 02.6 -4.8**
VLA pmax pmax
comp=Z,41nm,0.9s,mb5.4
MYKOM Kota Tinggi 63.70 278 P **P 23 28 48.8 +0.5**
MYKOM Kota Tinggi 63.70 278 P **P 23 28 49.2 +0.9**
comp=Z,1μmcomp=Z,84nm,1.3s,mb5.4
QIZ Qiongzhong 63.71 298 P **P 23 28 49.1 +0.9**
QIZ pP pP 23 29 13.7 -0.1
QIZ PP PP 23 31 11.1 +1.4
QIZ S **S 23 37 15.5 +0.5**
QIZ sS sS 23 37 56.4 -2.5
QIZ SS SS 23 41 25.0 +0.1
QIZ pmax pmax
comp=Z,99nm,1.1s,mb5.5
QIZ LR LR
comp=N,310nm,21.2s
QIZ LR LR
comp=Z,370nm,20.3s
KSI Kapahiang 63.74 272 P **P 23 28 48.0 -0.6**
comp=Z,158nm,1.1s,mb5.8
KGM Kluang 64.27 278 P **P 23 28 52.9 +0.9**
RGRI Rengat 64.68 275 P **P 23 28 56.5 +1.8**
comp=Z,645nm,1.1s,mb6.4
PET Petropavlovsk 64.93 355*c iP* **P 23 28 54.7 -0.8**
PET *e**PP pP 23 29 25.3 +4.1
PET *e*S **S 23 37 27.1 -1.7**
PET pmax pmax
comp=Z,500nm,5.1s
PET pmax pmax
comp=Z,300nm,13.0s
PETK Petropavlovsk- 65.11 354 LR LR 23 52 28.7
comp=Z,177nm,20.9s,baz=156,slow=31
KTGM Kuala Trenggan 65.29 282 P **P 23 28 59.6 +1.0**
MDJ Mudanjiang 65.38 332 P **P 23 28 58.5 -0.1**
MDJ pP pP 23 29 24.7 +0.3
MDJ PP PP 23 31 22.3 -1.6
MDJ S S 23 37 34.2 -0.5
MDJ pmax pmax
comp=Z,41nm,1.4s,mb5.1
MDJ pmax pmax
comp=Z,220nm,5.7s
MDJ LR LR
comp=N,540nm,32.4s
MDJ LR LR
comp=E,450nm,34.7s

MDJ LR LR
comp=Z,650nm,39.3s
MDJ Mudanjiang 65.38 332 *eP* **P 23 28 58.4 -0.2**
comp=Z,17nm,0.8s,mb4.9
MDJ *ep*P pP 23 29 22.6 -1.8
WHN Wuhan 65.47 312 P **P 23 28 59.0 -0.5**
WHN S S 23 37 28.1 -8.2
WHN LR LR
comp=Z,1μm,26.4s
CASY Casey 65.94 202 *eP* **P 23 29 00.4 -1.5**
CASY *e* pP 23 29 25.8 -1.9
CASY Casey 65.94 202 *eP* **P 23 29 01.0 -0.9**
comp=Z,90nm,1.3s,mb5.4
CASY *ep*P pP 23 29 25.9 -1.8
SBA Scott Base 66.03 180 *eP* **P 23 29 03.0 +0.7**
SBA *e**PP pP 23 29 26.7 -1.4
SBA pmax pmax
comp=Z,60nm,0.9s,mb5.4
SBA Scott Base 66.03 180 *eP* **P 23 29 03.0 +0.7**
comp=Z,60nm,0.9s,mb5.4
SBA *ep*P pP 23 29 26.6 -1.4
BKNI Bangkinang 66.09 276 P **P 23 29 04.6 +0.8**
comp=Z,5μmcomp=Z,631nm,1.1s,mb6.4
HABR Khabarovsk 66.18 338*cePP* **P 23 29 01.9 -1.7**
HABR pP 23 29 30.5 +1.0
HABR *e**PP pP 23 29 32.9 +3.4
HABR *e**SP sP 23 29 47.2 +6.5
HABR *e* 23 31 28.0
HABR *e*PPP 23 33 03.9
HABR S S 23 37 39.8 -4.4
HABR *e* 23 38 44.3
HABR SS SS 23 41 58.1 -4.3
HABR pmax pmax
comp=Z,133nm,1.8s,mb5.5
HABR pmax pmax
comp=N,86nm,1.8s
HABR pmax pmax
comp=E,57nm,1.0s
FRIM Kepong 66.20 279 P **P 23 29 04.8 +0.3**
PDSI Padang 66.38 274 P **P 23 29 04.6 -1.1**
comp=E,119nm,1.0s,mb5.7
SNY Shenyang 66.39 326⇑*P* **P 23 29 04.5 -0.6**
SNY pmax pmax
comp=Z,27nm,0.8s,mb5.1
SNY pmax pmax
comp=Z,410nm,3.7s
SNY LR LR
comp=N,390nm,14.1s
SNY LR LR
comp=E,280nm,15.7s
SNY LR LR
comp=Z,290nm,19.1s
PPI Padang Panjang 66.54 275 P **P 23 29 06.8 +0.1**
comp=Z,140nm,1.0s,mb5.8
CN2 Changchun 66.79 329⇑*P* **P 23 29 07.4 -0.2**
CN2 *ep*P pP 23 29 35.0 +1.5
CN2 *es*S S 23 37 50.3 -1.5
CN2 pmax pmax
comp=Z,90nm,0.7s,mb5.7
CN2 pmax pmax
comp=Z,400nm,3.0s
CN2 LR LR
comp=N,400nm,18.0s
CN2 LR LR
comp=E,300nm,18.0s
CN2 LR LR
comp=Z,300nm,20.0s
IPM Ipoh 67.09 280 P **P 23 29 10.7 +0.5**
IPM Ipoh 67.09 280⇑*eP* **P 23 29 10.6 +0.4**
comp=Z,269nm,1.1s,mb6.0
IPM *ep*P pP 23 29 34.3 -1.8
IPM Ipoh 67.09 280 P **P 23 29 10.8 +0.6**
comp=Z,3μmcomp=Z,254nm,1.2s,mb5.9
MNSI Mandailing Nat 67.62 276 P **P 23 29 12.9 -0.6**
comp=Z,2μmcomp=Z,226nm,1.0s,mb6.0
SISI Saibi 67.64 273 P **P 23 29 14.2 +0.5**
comp=Z,98nm,1.1s,mb5.5
KULM Kulim 67.66 281 P **P 23 29 13.7 -0.1**
KULM Kulim 67.66 281 *eP* **P 23 29 13.5 -0.3**
comp=Z,116nm,1.4s,mb5.5
KULM *ep*P pP 23 29 37.3 -2.4
KULM Kulim 67.66 281 P **P 23 29 14.1 +0.3**
comp=Z,79nm,1.6s,mb5.3
KLR Kul'dur 68.06 336 *eP* **P 23 29 11.2 -4.3**
KLR *e* pP 23 29 36.6 -4.9
KLR *e*S S 23 38 04.5 -2.3
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,100nm,1.8s,mb5.3
ENH Enshi 68.97 309⇑*eP* **P 23 29 20.9 -0.7**
comp=Z,161nm,0.9s,mb5.8
ENH *e*PcP PcP 23 29 44.7 -0.5
TSI Tuntungan 69.23 278 P **P 23 29 23.4 -0.2**
GYA Guiyang 69.47 304⇑*iP* **P 23 29 25.1 +0.3**
GYA PcP PcP 23 29 49.5 +2.1
GYA pP pP 23 29 52.8 +2.0
GYA sP sP 23 30 05.2 +3.2
GYA PP PP 23 32 02.5 +2.7
GYA S S 23 38 24.1 -0.3
GYA sS sS 23 39 11.0 +2.0
GYA SS SS 23 42 54.6 +0.5
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,270nm,6.5s
GYA LR LR
comp=N,1μm,18.6s
GYA LR LR
comp=E,1μm,18.6s
GYA LR LR
comp=Z,2μm,19.2s
BJT Baijiatuau 69.54 321 *eP* **P 23 29 24.9 0.0**
BJT *e**PP pP 23 29 49.8 -1.2
BJT pmax pmax
comp=Z,44nm,0.8s
BJT Baijiatuau 69.54 321 *eP* **P 23 29 24.9 0.0**
comp=Z,44nm,0.8s,mb5.3
BJT *ep*P pP 23 29 49.8 -1.1
TPTI 70.52 278 P **P 23 29 30.7 -0.8**
TIY Taiyuan 70.64 317 *eP* **P 23 29 31.7 0.0**
TIY pP pP 23 29 59.9 +2.1
TIY S S 23 38 30.2 -7.3
TIY sS sS 23 39 18.9 -3.4
TIY LR LR
comp=N,290nm,13.3s
TIY LR LR
comp=E,110nm,7.1s
TIY LR LR
comp=Z,500nm,26.2s
NST Nakhon Sawan 71.14 291⇓*P* **P 23 29 36.0 +0.9**
comp=Z,117nm,1.0s,mb5.7
XAN Xi'an 71.19 312 P **P 23 29 36.4 +1.3**
XAN PP PP 23 32 14.8 +0.3
XAN S S 23 38 41.9 -2.3
XAN SS SS 23 43 15.8 -4.5
XAN pmax pmax
comp=Z,29nm,0.9s,mb5.1
XAN pmax pmax
comp=Z,65nm,9.0s
XAN LR LR
comp=N,330nm,24.5s
XAN LR LR
comp=E,70nm,18.4s
XAN LR LR
comp=Z,140nm,24.5s
KMI Kunming 72.16 301⇑*P* **P 23 29 42.6 +1.5**
KMI pP pP 23 30 07.1 -0.2
KMI sP sP 23 30 17.7 -0.8
KMI S S 23 38 56.6 +1.0
KMI sS sS 23 39 40.5 0.0
KMI SS SS 23 43 35.2 -0.3
KMI pmax pmax
comp=Z,170nm,1.2s,mb5.8
KMI pmax pmax
comp=Z,540nm,4.5s
KMI LR LR
comp=N,360nm,19.7s
KMI LR LR
comp=E,220nm,21.1s
KMI LR LR
comp=Z,380nm,19.7s
BDT Bhumibol Dam 72.67 292 P **P 23 29 44.0 -0.2**
comp=Z,29nm,1.0s,mb5.1
MIR Mirnyy 72.67 204 *eP* **P 23 29 43.0 -0.4**

MIR *i* pP 23 30 08.0 -1.6
MIR pmax pmax
comp=Z,65nm,1.2s,mb5.3
CHRT Chiangrai 72.83 295 ⇑P **P 23 29 45.5 +0.3**
comp=Z,1μm,0.7s
HHC Hu-ho-hao-te 72.91 319 ⇑P **P 23 29 45.9 +0.7**
HHC PcP PcP 23 30 02.3 +0.6
HHC pP pP 23 30 14.1 +2.7
HHC sP sP 23 30 26.2 +3.6
HHC PP PP 23 32 32.7 +3.7
HHC S S 23 39 02.6 -0.9
HHC SKS 23 39 36.0
HHC ScS ScS 23 39 41.7 -2.0
HHC sS sS 23 39 50.1 +1.7
HHC pmax pmax
comp=Z,29nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,750nm,6.9s
CM31 Chiang Mai Arr 73.11 294 *e*P **P 23 29 48.0 +1.2**
comp=Z,124nm,0.8s,mb5.8
CM31 *e*PcP PcP 23 30 03.1 +0.1
CM31 epP pP 23 30 11.8 -1.2
CMAR Chiang Mai Arr 73.11 294 P **P 23 29 47.8 +1.0**
comp=Z,120nm,0.8s,mb5.8,baz=120,slow=4.4,SNR=393
CHG Chiang Mai 73.22 294 ⇑P **P 23 29 48.1 +0.6**
comp=Z,140nm,1.3s,mb5.6
CHTO Chiang Mai 73.22 294 ⇑*e*P **P 23 29 48.1 +0.6**
CHTO pmax pmax
comp=Z,158nm,1.1s,mb5.8
CHTO Chiang Mai 73.22 294 ⇑*e*P **P 23 29 48.1 +0.6**
comp=Z,158nm,1.1s,mb5.8
CHTO epP pP 23 30 10.8 -2.9
CHTO Chiang Mai 73.22 294 P **P 23 29 48.5 +1.0**
SNR=32
HIA Hailar 73.41 330 *e*P **P 23 29 47.5 -0.5**
HIA *e* 23 30 06.6
HIA pmax pmax
comp=Z,23nm,0.8s
HIA Hailar 73.41 330 *e*P **P 23 29 47.5 -0.5**
comp=Z,23nm,0.8s,mb5.0
HIA *e*PcP PcP 23 30 06.6 +2.9
CD2 Chengdu 73.67 307 ⇑*i*P **P 23 29 50.4 +0.5**
CD2 pP pP 23 30 18.4 +2.2
CD2 sP sP 23 30 30.7 +3.4
CD2 PP PP 23 32 37.7 +2.0
CD2 S S 23 39 11.2 -1.3
CD2 sS sS 23 39 59.9 +2.4
CD2 SS SS 23 43 59.0 +0.8
CD2 pmax pmax
comp=Z,180nm,1.0s,mb5.8
CD2 pmax pmax
comp=Z,130nm,4.8s
CD2 LR LR
comp=N,460nm,17.8s
CD2 LR LR
comp=Z,310nm,16.8s
BTO Baotou 73.77 319 *e*P **P 23 29 50.0 -0.2**
SEY Seymchan 75.32 353 *c*e**P 23 29 57.0 -1.7**
LZH Lanzhou 75.83 312 ⇑*i*P **P 23 30 03.8 +1.5**
LZH PcP PcP 23 30 15.1 +0.7
LZH pP pP 23 30 29.3 +0.6
LZH sP sP 23 30 41.7 +1.9
LZH PP PP 23 32 58.1 +4.2
LZH *e*S S 23 39 34.4 -2.0
LZH sS sS 23 40 24.2 +2.6
LZH pmax pmax
comp=Z,37nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,230nm,4.7s
OHAK Old Harbor 76.35 21 *e*P **P 23 30 04.0 -0.7**
OHAK epP pP 23 30 32.3 +1.1
CLNS Chul'man 76.57 338 *e*P **P 23 30 07.0 +1.0**
CLNS pmax pmax
comp=Z,18nm,1.0s,mb4.8
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS pmax pmax
comp=N,6.0nm,0.9s
QSPA South Pole Qui 78.19 180 *e*P **P 23 30 14.5 -0.3**
comp=N,74nm,1.0s,mb5.4
QSPA epP pP 23 30 40.2 -1.0
CIT Chita 78.20 330 *e*P **P 23 30 15.4 +0.2**
CIT *e* pP 23 30 41.3 -0.4
CIT pmax pmax
comp=Z,219nm,1.9s,mb5.6
SVW2 Sparrevohn 78.62 18 *e*P **P 23 30 17.4 +0.2**
comp=Z,45nm,1.4s,mb5.1
RSO Redoubt South 79.00 19 *e*pP pP 23 30 50.9 +5.0
YAK Yakutsk 79.05 343 *e*P **P 23 30 17.7 -1.9**
YAK pmax pmax
comp=Z,42nm,1.1s,mb5.2
YAK pmax pmax
comp=N,19nm,1.4s
YAK Yakutsk 79.05 343 ⇑*e*P **P 23 30 18.6 -1.0**
comp=N,46nm,0.7s,mb5.4
BILL Bilibino 79.65 360 ⇑*e*P **P 23 30 21.7 -1.0**
BILL *e*S S 23 40 15.1 -1.1
BILL pmax pmax
comp=Z,96nm,2.3s,mb5.2
BILL Bilibino 79.65 360 ⇑*e*P **P 23 30 21.8 -0.9**
comp=Z,56nm,1.3s,mb5.2
BILL epP pP 23 30 47.9 -1.5
SONM Songino Array 79.73 324 P **P 23 30 23.6 0.0**
comp=Z,17nm,0.7s,mb5.0,baz=152,slow=7.2,SNR=78
SONM pP pP 23 30 48.9 -1.3
comp=Z,7.5nm,0.8s,baz=133,slow=7.0,SNR=3.1
TTA Tatalina 79.95 16 *e*P **P 23 30 24.2 -0.3**
TTA *e**PP pP 23 30 52.3 +1.2
GTA Gaotai 80.13 314 ⇑P **P 23 30 26.9 +0.9**
GTA pP pP 23 30 55.3 +2.7
GTA sP sP 23 31 07.3 +3.6
GTA S S 23 40 24.7 +2.3
GTA sS sS 23 41 13.3 +5.1
GTA pmax pmax
comp=Z,83nm,1.1s,mb5.5
GTA pmax pmax
comp=Z,450nm,5.7s
GTA LR LR
comp=N,260nm,17.8s
GTA LR LR
comp=E,260nm,19.0s
GTA LR LR
comp=Z,290nm,20.4s
RC01 Rabbit Creek A 80.46 20 *e*pP pP 23 30 55.2 +1.3
PPLA Purkeypile 81.03 18 *e*P **P 23 30 29.5 -0.7**
PPLA epP pP 23 30 55.4 -1.5
SML Sawmill 81.44 20 *e*P **P 23 30 31.9 -0.6**
SML *e**PP pP 23 31 01.3 +2.1
TRF Thorofare Moun 82.02 18 *e*P **P 23 30 35.2 -0.2**
TRF *e*pP pP 23 31 04.8 +2.7
BPAW Bear Paw Mtn. 82.29 17 *e*P **P 23 30 34.8 -2.1**
comp=Z,15nm,1.2s,mb4.7
BPAW *e*pP pP 23 31 01.6 -2.0
KCPM Cahto Peak 82.53 47 *e*P **P 23 30 39.8 +1.2**
comp=Z,24nm,0.9s,mb5.0
HOPS Hopland 82.64 48 *e*P **P 23 30 42.4 +3.2**
MCK McKinley 82.64 18 *e*P **P 23 30 37.6 -1.0**
MCK *e**PP pP 23 31 07.1 +1.7
KIPM Iron Peak 82.64 47 *e*P **P 23 30 38.0 -1.2**
comp=Z,41nm,1.0s,mb5.2
KIPM *e*pP pP 23 31 04.4 -1.7
ZAK Zakamensk 82.76 325 *e*P **P 23 30 38.3 -1.3**
ZAK *e* pP 23 31 04.7 -1.7
ZAK pmax pmax
comp=Z,15nm,1.0s,mb4.8
SAO San Andreas Ge 83.04 50 *e*P **P 23 30 42.8 +1.4**
SAO pmax pmax
comp=Z,37nm,1.2s,mb5.1
SAO San Andreas Ge 83.04 50 *e*P **P 23 30 42.8 +1.4**
comp=Z,37nm,1.2s,mb5.1
TLY Talaya 83.18 326 ⇑*i*P **P 23 30 40.2 -1.5**
TLY *e* 23 31 13.6
TLY *e*S S 23 40 40.0 -13
TLY *e* 23 42 13.9
TLY pmax pmax
comp=Z,31nm,0.9s,mb5.1
TLY Talaya 83.18 326 ⇑*e*P **P 23 30 41.3 -0.4**
comp=Z,16nm,0.9s,mb4.9
TLY *e*pP pP 23 31 06.3 -2.2
TLY *e*sP sP 23 31 17.4 -2.2
TLY Talaya 83.18 326 P **P 23 30 41.4 -0.3**
comp=Z,188nm,1.1s,mb5.8,SNR=6.1
TLY Talaya 83.18 326 P **P 23 30 41.6 -0.1**
SNR=12

PAX Paxson 83.22 20 *e*P **P 23 30 41.1 -0.5**
LSA Lhasa 83.40 302 P **P 23 30 44.4 +1.0**
LSA Lhasa 83.40 302 ⇑*i*P **P 23 30 44.6 +1.2**
LSA pmax pmax
comp=Z,24nm,0.8s,mb5.1
LSA Lhasa 83.40 302 ⇑*i*P **P 23 30 44.6 +1.2**
comp=Z,24nm,0.8s,mb5.1
LSA *e*pP pP 23 31 09.1 -1.1
WDC Whiskeytown Da 83.60 46 *e*P **P 23 30 44.4 +0.3**
PKM Peak Mountain 83.66 53 ⇑pP pP 23 31 13.2 +1.8
baz=84
COLA College 83.79 18 *e*P **P 23 30 43.2 -1.3**
COLA *e**PP pP 23 31 09.6 -1.8
COLA pmax pmax
comp=Z,20nm,0.9s,mb5.0
COLA College 83.79 18 *e*P **P 23 30 43.2 -1.4**
comp=Z,20nm,0.9s,mb5.0
COLA *e*pP pP 23 31 09.6 -1.8
YBH Yreka Blue Hor 83.90 45 P **P 23 30 45.8 +0.1**
comp=Z,21nm,0.9s,mb5.0,baz=246,slow=3.6,SNR=20
YBH Yreka Blue Hor 83.90 45 *e*P **P 23 30 46.3 +0.6**
YBH *e*pP pP 23 31 11.1 -1.4
ILAR Eielson Array 84.01 18 P **P 23 30 44.0 -1.7**
comp=Z,13nm,0.9s,mb4.8,baz=245,slow=5.1,SNR=76
ILAR pP pP 23 31 10.7 -1.8
comp=Z,15nm,0.9s,baz=235,slow=5.8,SNR=7.9
ILAR LR LR 00 02 42.3
comp=Z,314nm,19.3s,baz=74,slow=32
ILAR Eielson Array 84.01 18 P **P 23 30 44.0 -1.7**
ILAR *PP pP 23 31 10.7 -1.8
HUMO Hull Mountain 84.05 44 *e*P **P 23 30 47.0 +0.6**
comp=Z,30nm,1.0s,mb5.1
HUMO *e*pP pP 23 31 13.0 -0.2
HUMO *e*sP sP 23 31 21.5 -2.8
DOT Dot Lake 84.14 20 *e*P **P 23 30 45.4 -1.0**
comp=Z,218nm,1.1s,mb5.9
DOT *e*pP pP 23 31 12.0 -1.3
CMB Columbia Colle 84.27 49 *e*P **P 23 30 47.1 -0.5**
CMB *e**PP pP 23 31 13.5 -1.0
CMB Columbia Colle 84.27 49 *e*P **P 23 30 47.1 -0.5**
CMB *e*pP pP 23 31 13.5 -1.0
CMB *e*sP sP 23 31 23.5 -2.0
MAW Mawson 84.29 202 P **P 23 30 46.5 -0.7**
comp=Z,5.9nm,0.8s,mb4.5,baz=108,slow=7.2,SNR=7.8
MAW Mawson 84.29 202 *e*P **P 23 30 46.5 -0.7**
comp=Z,3.7nm,0.8s,mb4.3
MAW *e* pP 23 31 11.7 -2.4
MAW Mawson 84.29 202 *e*P **P 23 30 46.7 -0.5**
MAW *e**PP pP 23 31 12.5 -1.6
MAW pmax pmax
comp=Z,9.0nm,1.0s
MAW Mawson 84.29 202 *e*P **P 23 30 46.7 -0.5**
comp=Z,8.5nm,1.0s,mb4.5
MAW *e*pP pP 23 31 12.5 -1.5
MAW *e*sP sP 23 31 22.3 -2.8
CIS Catalina Islan 84.30 54 ⇑pP pP 23 31 15.4 +0.6
baz=84
MOY Mondy 84.64 325 *e*P **P 23 30 48.8 -0.3**
MOY pmax pmax
comp=Z,99nm,3.1s
WRAK Wrangell Islan 84.64 29 *e*P **P 23 30 48.3 -0.7**
comp=Z,16nm,0.8s,mb5.0
WRAK *e*pP pP 23 31 16.8 +0.8
MWC Mount Wilson 84.83 54 *e*P **P 23 30 50.5 0.0**
comp=Z,282nm,2.0s,mb5.8
MWC *e*pP pP 23 31 18.2 +0.8
COLD Coldfoot 84.84 16 *e*P **P 23 30 50.1 +0.3**
ISA Isabella 84.95 52 ⇑P **P 23 30 51.3 +0.1**
baz=85,SNR=5.3
ISA Isabella 84.95 52 *e*P **P 23 30 50.8 -0.3**
ISA *e**PP pP 23 31 17.3 -0.7
ISA pmax pmax
comp=Z,34nm,1.2s,mb5.2
ISA Isabella 84.95 52 *e*P **P 23 30 50.8 -0.3**
comp=Z,34nm,1.2s,mb5.2
ISA *e*pP pP 23 31 17.3 -0.7
EDW2 Edwards Air Fo 85.08 53 ⇑P **P 23 30 51.9 +0.1**
baz=85,SNR=8.6
EDW2 ⇑pP pP 23 31 18.9 +0.2
baz=85
WAKR Walker 85.13 49 *e*P **P 23 30 52.6 +0.7**
WAKR *e*pP pP 23 31 19.4 +0.6
BFSC Mount Baldy Ra 85.15 54 ⇑P **P 23 30 52.0 -0.2**
baz=85
WCN Washoe City 85.16 48 *e*P **P 23 30 52.6 +0.5**
WCN *e**PP pP 23 31 19.2 +0.2
MTUM Tungsten Hills 85.41 51 *e*P **P 23 30 53.9 +0.5**
BAR Barrett 85.47 55 *e*pP pP 23 31 21.9 +1.2
K05A Summer Lake 85.52 45 ⇑P **P 23 30 54.3 +0.6**
baz=86
PAHR Pah Rah Range 85.56 48 *e*P **P 23 30 53.9 -0.1**
comp=Z,61nm,1.5s,mb5.3
PAHR *e*pP pP 23 31 19.9 -1.1
TAPN Taplejung 85.64 299 *e*P **P 23 30 54.9 +0.2**
comp=Z,187nm,1.2s,mb5.9
MOD Modoc 85.64 46 *e*P **P 23 30 54.2 -0.2**
MOD *e*pP pP 23 31 23.2 +1.9
MOD *e*PP PP 23 34 14.4 -0.5
MONP Monument Peak 85.74 55 ⇓P **P 23 30 55.4 +0.3**
baz=86,SNR=8.1
MONP ⇓pP pP 23 31 24.6 +2.6
baz=86,SNR=6.8
ODAN Odare 85.78 298 *e*P **P 23 30 55.6 +0.2**
comp=Z,333nm,1.3s,mb6.1
MPMC Manual Prospec 85.83 52 P **P 23 30 55.5 0.0**
baz=86,SNR=14
MPMC ⇑pP pP 23 31 24.6 +2.2
baz=86
EGAK Eagle 85.84 20 *e*P **P 23 30 53.9 -0.9**
comp=Z,57nm,0.9s,mb5.5
EGAK *e*pP pP 23 31 21.7 -0.1
PFO Pinyon Flat Ob 85.92 55 *e*P **P 23 30 56.1 +0.1**
PFO *e**PP pP 23 31 24.2 +1.3
PFO pmax pmax
comp=Z,26nm,1.3s,mb5.0
PFO Pinyon Flat Ob 85.92 55 *e*P **P 23 30 56.1 +0.1**
comp=Z,26nm,1.3s,mb5.0
PFO *e*pP pP 23 31 24.2 +1.3
HOOD Mount Hood Mea 85.92 42 *e*P **P 23 30 57.5 +1.7**
comp=Z,113nm,1.8s,mb5.5
DVTC Desert V Tower 85.93 56 ⇓pP pP 23 31 25.3 +2.3
baz=86,SNR=5.4
NVAR Mina Array Bea 85.95 50 P **P 23 30 55.9 -0.2**
comp=Z,12nm,0.8s,mb4.9,baz=233,slow=7.6,SNR=53
NVAR pP pP 23 31 22.5 -0.4
comp=Z,9.1nm,0.8s,baz=234,slow=7.4,SNR=5.7
NVAR PKPPKP 23 57 01.7
comp=Z,0.3nm,0.3s,baz=81,slow=4.7,SNR=3.8
NVAR Mina Array Bea 85.95 50 P **P 23 30 55.9 -0.2**
NVAR pP pP 23 31 22.5 -0.4
NVAR P'P' 23 57 01.7
GNW Green Mountain 86.00 40 *e*P **P 23 30 56.0 0.0**
comp=Z,9.1nm,0.8s,mb4.8
GNW *e*pP pP 23 31 21.9 -1.1
DAWY Dawson 86.01 21 *e*P **P 23 30 54.6 -1.1**
DAWY *e*pP pP 23 31 21.9 -0.7
PGC Sidney 86.03 39 *e*pP pP 23 31 24.7 +1.6
GSC Goldstone 86.14 53 ⇑P **P 23 30 57.2 +0.2**
baz=86,SNR=6.7
GSC Goldstone 86.14 53 *e*P **P 23 30 57.2 +0.2**
GSC *e**PP pP 23 31 23.4 -0.6
GSC pmax pmax
comp=Z,62nm,1.6s,mb5.3
GSC Goldstone 86.14 53 *e*P **P 23 30 57.2 +0.2**
comp=Z,62nm,1.6s,mb5.3
GSC *e*pP pP 23 31 23.4 -0.6
SWSC Sam W. Stewart 86.25 55 ⇓pP pP 23 31 24.4 -0.2
baz=86,SNR=5.5
HEC Hector,Ludlow 86.37 53 ⇑P **P 23 30 58.1 -0.1**
baz=86,SNR=9.0
BELC Belle Mtn. Jos 86.39 54 P **P 23 30 58.8 +0.5**
baz=86,SNR=7.8
FURC Furnace Creek, 86.44 52 ⇑P **P 23 30 58.8 +0.3**
baz=86,SNR=14
FURC ⇑pP pP 23 31 25.1 -0.3
baz=86
SHOC Shoshone 86.72 52 ⇓P **P 23 30 59.8 0.0**
baz=87
BC3 Big Chuckawall 86.73 55 ⇓pP pP 23 31 27.1 +0.2
baz=87
DLBC Dease Lake 86.73 28 *e*P **P 23 30 58.2 -1.1**
DLBC *e*pP pP 23 31 27.8 +1.4
JCW Jim Creek 86.79 39 *e*pP pP 23 31 30.8 +3.9
U10A Ash Meadows, A 86.84 52 ⇓pP pP 23 31 27.2 -0.2
baz=87

GMRC Granite Mounta 86.89 54 ⇓P **P 23 31 00.9 +0.2**
baz=87,SNR=11
I07A Izee 86.93 44 ⇓P **P 23 31 00.8 +0.1**
baz=87
WVOR Wild Horse Val 86.99 46 *e*P **P 23 31 00.5 -0.5**
WVOR *PP pP 23 31 27.7 -0.3
WVOR pmax pmax
comp=Z,27nm,1.2s,mb5.0
WVOR Wild Horse Val 86.99 46 *e*P **P 23 31 00.5 -0.5**
comp=Z,27nm,1.2s,mb5.1
WVOR pP pP 23 31 27.7 -0.3
TIXI Tiksi 86.99 349 *e*P **P 23 30 58.3 -2.0**
TIXI pmax pmax
comp=Z,31nm,1.4s,mb5.0
GLA Glamis 87.07 56 *e*P **P 23 30 59.9 -1.7**
GLA *e**PP pP 23 31 29.7 +1.1
GLA pmax pmax
comp=Z,53nm,1.0s,mb5.4
GLA Glamis 87.07 56 *e*P **P 23 30 59.9 -1.7**
comp=Z,53nm,1.0s,mb5.4
GLA *e*pP pP 23 31 29.7 +1.1
S10A Tonopah Range, 87.08 50 ⇑P **P 23 31 01.6 +0.1**
baz=87,SNR=9.3
IRM Iron Mountain 87.11 54 ⇓P **P 23 31 02.2 +0.4**
baz=87,SNR=7.8
RPW Rockport 87.14 39 *e*P **P 23 31 01.3 -0.3**
GUN Gumba 87.35 299 *e*P **P 23 31 03.2 +0.1**
comp=Z,114nm,1.0s,mb5.8
V11A Goodsprings 87.37 53 ⇑P **P 23 31 03.2 +0.3**
baz=88,SNR=7.6
V11A ⇓pP pP 23 31 30.1 +0.1
baz=88
BMN Battle Mountai 87.37 48 *e*P **P 23 31 02.5 -0.3**
BMN *e*pP pP 23 31 27.7 -2.2
BMN *e*PP PP 23 34 28.4 -0.4
J08A Circle Bar Ran 87.40 45 ⇑P **P 23 31 02.9 -0.1**
baz=88
PALK Pallekele 87.40 278 *i* P **P 23 31 05.1 +1.5**
PALK Pallekele 87.40 278 *e*pP pP 23 31 31.7 +1.0
LDFC Landfair 87.40 54 *e*P **P 23 31 03.3 +0.1**
LDFC *e*PcP PcP 23 31 05.2 +0.1
LDFC *e*pP pP 23 31 29.2 -1.0
Y12C Blythe 87.50 55 ⇑pP pP 23 31 31.1 +0.4
baz=88
ETW Entiat 87.59 40 *e*P **P 23 31 03.6 -0.1**
ETW *e*pP pP 23 31 32.3 +1.5
RSW Rattlesnake Hi 87.65 42 *e*P **P 23 31 04.4 +0.4**
RSW *e*pP pP 23 31 33.1 +2.0
W12A Cal Nev Ari 87.65 53 ⇓P **P 23 31 04.7 +0.3**
baz=88,SNR=6.2
PKI Pulchoki 87.67 299 *e*P **P 23 31 04.5 -0.1**
comp=Z,178nm,1.0s,mb6.1
PKIN Phulchoki 87.68 299 *e*P **P 23 31 04.8 +0.1**
comp=Z,75nm,0.9s,mb5.7
HAWA Hanford 87.69 42 *e*P **P 23 31 03.9 -0.3**
comp=Z,164nm,2.2s,mb5.7
HAWA *e*pP pP 23 31 33.0 +1.7
G08A Pilot Rock 87.70 43 ⇓P **P 23 31 04.6 +0.3**
baz=88
SHPR Sheep Range 87.76 52 *e*P **P 23 31 04.9 0.0**
SHPR *e*pP pP 23 31 28.4 -3.5
V12A Nelson 87.79 53 ⇑P **P 23 31 05.2 +0.2**
baz=88,SNR=5.8
KKN Kakani 87.83 299 *e*P **P 23 31 05.1 -0.3**
comp=Z,130nm,1.0s,mb5.9
113A Mohawk Valley, 87.85 56 ⇑P **P 23 31 05.4 +0.1**
baz=88,SNR=6.4
113A ⇑pP pP 23 31 32.6 +0.2
baz=88
T11A Corn Creek, Al 87.92 51 ⇓P **P 23 31 05.7 +0.1**
baz=88
DMN Daman 87.94 299 *e*P **P 23 31 06.0 +0.1**
comp=Z,283nm,0.9s,mb6.3
PDMCI Parker Dam,Lak 87.96 54 ⇑P **P 23 31 06.4 +0.6**
baz=88,SNR=7.2
PDMCI ⇑pP pP 23 31 33.2 +0.3
baz=88
R11A Troy Canyon, C 87.96 50 ⇑P **P 23 31 05.6 -0.2**
baz=88,SNR=12
Z13A Yuma Proving G 88.05 56 ⇑P **P 23 31 06.6 +0.3**
baz=88,SNR=14
Z13A ⇓pP pP 23 31 33.7 +0.4
baz=88
Q11A Duckwater 88.05 50 ⇑P **P 23 31 06.5 +0.3**
baz=88,SNR=24
X13A Yucca 88.28 54 ⇓P **P 23 31 07.4 0.0**
baz=88
X13A ⇑pP pP 23 31 34.7 +0.2
baz=88
D08A Wollman Farm, 88.30 41 ⇑P **P 23 31 07.1 -0.1**
baz=88
214A Organ Pipe Nat 88.42 57 ⇑pP pP 23 31 35.3 +0.2
baz=88
GKN Gorkha 88.44 299 *e*P **P 23 31 07.7 -0.5**
comp=Z,205nm,0.9s,mb6.2
B08A Colville Reser 88.47 40 ⇑P **P 23 31 07.2 -0.7**
baz=89,SNR=7.7
B08A ⇓pP pP 23 31 34.8 -0.2
baz=89
V13A Grand Canyon W 88.50 53 ⇓pP pP 23 31 35.7 +0.3
baz=89
OD2 Odessa Site #2 88.55 41 *e*P **P 23 31 08.2 0.0**
OD2 *e*pP pP 23 31 36.4 +1.0
114A Black Gap (USA 88.56 56 ⇑P **P 23 31 08.9 +0.1**
baz=89
114A ⇓pP pP 23 31 35.8 0.0
baz=89
E09A Wood Farm, Sta 88.63 42 ⇑P **P 23 31 08.5 -0.2**
baz=89,SNR=7.9
U13A Pakoon Wash 88.67 53 ⇓P **P 23 31 09.3 +0.2**
baz=89,SNR=10.0
Z14A Wintersburg 88.67 56 ⇓pP pP 23 31 36.9 +0.6
baz=89
R12A Pony Springs, 88.69 51 ⇑pP pP 23 31 36.2 -0.1
baz=89
Y14A Wickenburg 88.77 55 ⇓pP pP 23 31 37.0 +0.2
baz=89
T13A Saint George 88.87 52 P **P 23 31 10.4 +0.4**
baz=89,SNR=16
T13A ⇑pP pP 23 31 37.6 +0.4
baz=89
X14A Yava 89.00 55 P **P 23 31 11.1 +0.4**
baz=89,SNR=20
X14A ⇑pP pP 23 31 38.4 +0.6
baz=89
W14A Seligman 89.04 54 ⇑P **P 23 31 11.3 +0.4**
baz=89,SNR=12
W14A ⇓pP pP 23 31 38.5 +0.5
baz=89
S13A Holt Ranch, En 89.06 51 ⇓P **P 23 31 11.3 +0.3**
baz=89,SNR=10
S13A ⇑pP pP 23 31 38.4 +0.3
baz=89
F10A Beach Ranch, E 89.07 43 ⇑P **P 23 31 10.4 -0.4**
baz=89,SNR=9.1
F10A ⇓pP pP 23 31 38.2 +0.3
baz=89
V14A Boquillas Ranc 89.13 53 ⇑P **P 23 31 11.5 +0.2**
baz=89,SNR=18
V14A ⇑pP pP 23 31 38.6 +0.2
baz=89
R13A O'Grain Ranch, 89.14 51 ⇑P **P 23 31 11.5 +0.2**
baz=89,SNR=15
MFID Camas Ranch 89.25 45 P **P 23 31 11.5 -0.2**
baz=89,SNR=12
DANN Dangsing 89.27 299 *e*P **P 23 31 11.2 -0.9**
comp=Z,152nm,0.9s,mb6.0
KOLN Koldanda 89.27 298 *e*P **P 23 31 11.3 -0.9**
comp=Z,79nm,0.9s,mb5.8
U14A Mt Trumbull 89.28 53 ⇓P **P 23 31 12.1 +0.2**
baz=89,SNR=14
U14A ⇓pP pP 23 31 39.3 +0.2
baz=89
Y15A Casa Rosa Ranc 89.31 55 P **P 23 31 12.5 +0.3**
baz=89,SNR=13
Y15A ⇓pP pP 23 31 39.5 +0.1
baz=89
CCUT Cedar City 89.43 52 *e*P **P 23 31 13.2 +0.5**
CCUT *e*pP pP 23 31 38.6 -1.2
116A Eloy 89.48 57 ⇑pP pP 23 31 40.4 +0.2
baz=90
T14A Hurricane 89.52 52 ⇑P **P 23 31 13.5 +0.4**
baz=90,SNR=9.2
X15A Humboldt 89.53 55 ⇑P **P 23 31 13.6 +0.4**
baz=90,SNR=17
X15A ⇓pP pP 23 31 40.5 +0.2
baz=90

I12A	Atlanta	89.84	45	⇓P	P	23 31 14.3	-0.1
	baz=90,SNR=15						
I12A				⇑pP	pP	23 31 41.6	0.0
	baz=90						
Q14A	Sevier Lake (B	89.88	50	P	P	23 31 15.0	+0.3
	baz=90,SNR=29						
Q14A				⇓pP	pP	23 31 42.1	+0.2
	baz=90						
V15A	Kaibab Nationa	89.91	53	P	P	23 31 15.5	+0.5
	baz=90,SNR=20						
U15A	North Rim	89.97	53	P	P	23 31 15.9	+0.6
	baz=90,SNR=24						
U15A				⇓pP	pP	23 31 42.4	0.0
	baz=90						
Y16A	Circle Bar Ran	89.98	55	⇓P	P	23 31 15.7	+0.4
	baz=90,SNR=13						
Y16A				⇓pP	pP	23 31 42.8	+0.3
	baz=90						
217A	Green Valley	90.02	58	P	P	23 31 16.1	+0.5
	baz=90,SNR=9.4						
217A				⇑pP	pP	23 31 42.9	+0.2
	baz=90						
T15A	Red Dirt Ranch	90.05	52	⇑P	P	23 31 15.8	+0.2
	baz=90,SNR=9.5						
T15A				⇓pP	pP	23 31 42.6	-0.1
	baz=90						
G12A	Big Creek, Yel	90.09	44	⇑P	P	23 31 15.3	-0.3
	baz=90						
G12A				⇑pP	pP	23 31 42.6	-0.1
	baz=90						
X16A	Lo Mia Camp, P	90.14	55	⇑P	P	23 31 16.0	-0.1
	baz=90,SNR=11						
X16A				⇑pP	pP	23 31 43.9	+0.6
	baz=90						
TUC	Tucson	90.17	57	eP	P	23 31 15.2	-1.1
TUC				e*PP	pP	23 31 44.5	+1.1
WMQ	Urumqi	90.17	315	P	P	23 31 16.0	0.0
WMQ				pP	pP	23 31 45.0	+1.9
WMQ				sP	sP	23 31 56.0	+1.9
WMQ				PP	PP	23 34 53.0	+1.9
WMQ				SKS		23 41 35.0	
WMQ				S	S	23 41 58.0	-3.1
WMQ				SS	SS	23 48 02.0	-0.9
WMQ				pmax	pmax		
	comp=Z,65nm,1.0s,mb5.7						
WMQ				pmax	pmax		
	comp=Z,210nm,7.0s						
WMQ				LR	LR		
	comp=N,270nm,26.0s						
WMQ				LR	LR		
	comp=E,350nm,25.0s						
WMQ				LR	LR		
	comp=Z,360nm,25.0s						
P14A	Drum Mountains	90.19	50	⇓P	P	23 31 16.4	+0.2
	baz=90,SNR=14						
W16A	Flagstaff	90.24	54	⇓P	P	23 31 17.3	+0.8
	baz=90,SNR=10						
H12A	Diamond D Ranc	90.25	45	⇓P	P	23 31 16.3	0.0
	baz=90,SNR=22						
C11A	Tepee Creek (N	90.27	41	⇓P	P	23 31 16.1	-0.2
	baz=90						
117A	Oracle	90.27	57	⇑P	P	23 31 16.9	+0.2
	baz=90,SNR=12						
117A				⇑pP	pP	23 31 44.4	+0.5
	baz=90						
HLID	Hailey	90.28	46	P	P	23 31 16.6	+0.1
	baz=90,SNR=21						
HLID	Hailey	90.28	46	eP	P	23 31 16.4	-0.1
	comp=Z,13nm,1.0s,mb5.0						
HLID				epP	pP	23 31 42.4	-1.2
E12A	Beaver Dam Sad	90.30	43	⇑P	P	23 31 15.9	-0.6
	baz=90						
F12A	Elk City	90.32	43	P	P	23 31 15.9	-0.7
	baz=90,SNR=25						
INK	Inuvik	90.39	19	epP	pP	23 31 40.8	-2.8
J13A	Cove Ranch, Pi	90.40	46	P	P	23 31 17.2	+0.2
	baz=90,SNR=15						
DUG	Dugway	90.53	49	⇑P	P	23 31 18.0	+0.2
	baz=91						
DUG	Dugway	90.53	49	eP	P	23 31 18.1	+0.3
	comp=Z,138nm,2.3s,mb5.7						
DUG				epP	pP	23 31 41.5	-3.4
BGU	Big Grassy Mou	90.56	48	eP	P	23 31 17.4	-0.5
	comp=Z,37nm,1.4s,mb5.3						
BGU				epP	pP	23 31 44.3	-0.8
BGU				ePP	PP	23 34 51.8	-2.5
I13A	Wildhorse Cree	90.58	45	P	P	23 31 18.1	+0.3
	baz=91,SNR=28						
I13A				⇑pP	pP	23 31 44.5	-0.5
	baz=91						
MSU	Marysvale	90.58	51	eP	P	23 31 18.8	+0.8
MSU				e*PP	pP	23 31 45.3	+0.1
318A	Bisbee	90.62	58	⇑P	P	23 31 18.7	+0.3
	baz=91						
318A				⇓pP	pP	23 31 45.1	-0.4
	baz=91						
D12A	Red Ives Fores	90.62	42	⇓P	P	23 31 17.8	-0.2
	baz=91						
X17A	Forest Lakes	90.64	55	⇑pP	pP	23 31 45.4	-0.1
	baz=91						
H13A	Challis	90.67	45	⇓P	P	23 31 18.4	+0.2
	baz=91						
218A	Dragoon	90.70	58	⇑P	P	23 31 19.5	+0.8
	baz=91,SNR=12						
218A				⇓pP	pP	23 31 47.2	+1.4
	baz=91						
L14A	Malta	90.70	47	⇑P	P	23 31 19.0	+0.6
	baz=91						
L14A				⇑pP	pP	23 31 45.3	-0.3
	baz=91						
U16A	Tuba City	90.81	53	⇓P	P	23 31 19.6	+0.5
	baz=91,SNR=12						
G13A	Cobalt	90.82	44	P	P	23 31 18.6	-0.3
	baz=91,SNR=23						
S16A	Weppner Ranch,	90.83	52	⇓P	P	23 31 20.0	+0.8
	baz=91						
J14A	Carey	90.84	46	⇓P	P	23 31 19.4	+0.3
	baz=91,SNR=8.1						
118A	Homack Ranch,	90.92	57	⇓P	P	23 31 19.7	-0.1
	baz=91,SNR=7.8						
118A				⇑pP	pP	23 31 47.5	+0.6
	baz=91						
N15A	Stansbury Isla	90.93	48	P	P	23 31 19.9	+0.3
	baz=91,SNR=13						
N15A				⇓pP	pP	23 31 47.0	+0.2
	baz=91,SNR=7.1						
F13A	Darby	90.95	43	⇑P	P	23 31 19.2	-0.4
	baz=91,SNR=38						
HVU	Hansel Valley	90.97	48	eP	P	23 31 20.2	+0.5
HVU				e*PP	pP	23 31 47.7	+0.8
NLU	North Lily Min	91.02	49	eP	P	23 31 20.1	0.0
NLU				epP	pP	23 31 48.4	+1.2
I14A	Mackay	91.05	45	⇑P	P	23 31 20.8	+0.7
	baz=91,SNR=16						
R16A	Teasdale	91.06	51	⇑P	P	23 31 20.8	+0.6
	baz=91,SNR=14						
R16A				⇓pP	pP	23 31 48.5	+1.2
	baz=91,SNR=5.1						
SPUT	South Promonto	91.09	48	eP	P	23 31 20.5	+0.2
SPUT				epP	pP	23 31 45.7	-1.8
SPUT				ePP	PP	23 34 57.3	-1.1
M15A	Larsen Ranch,	91.13	48	⇑P	P	23 31 20.6	+0.2
	baz=91,SNR=24						
M15A				⇓pP	pP	23 31 47.7	0.0
	baz=91,SNR=5.1						
Y18A	Canyon Day Jun	91.13	56	⇑P	P	23 31 21.1	+0.5
	baz=91,SNR=8.4						
319A	Douglas	91.20	58	⇓P	P	23 31 21.9	+0.8
	baz=91,SNR=10.0						
BSMT	Bassoo Peak	91.22	41	eP	P	23 31 20.2	-0.5
BSMT				epP	pP	23 31 46.2	-1.7
BSMT				esP	sP	23 31 57.6	-1.3
D13A	Huson	91.22	42	⇓P	P	23 31 20.4	-0.3
	baz=91,SNR=7.6						
SYO	Syowa Base	91.26	197	⇓eP	P	23 31 30.8	+10
SYO	Syowa Base	91.26	197	⇑eP	pP	23 31 42.4	-5.4
T17A	Navajo Res., N	91.27	53	⇓P	P	23 31 21.4	+0.2
	baz=91,SNR=14						
T17A				⇑pP	pP	23 31 49.1	+0.7
	baz=91						
H14A	Leadore	91.29	45	⇓P	P	23 31 21.5	+0.4
	baz=91,SNR=17						
H14A				⇓pP	pP	23 31 48.4	+0.1
	baz=91						
C13A	Hot Springs	91.31	42	P	P	23 31 20.2	-1.0
	baz=91,SNR=6.1						
L15A	Malad City	91.31	47	⇑P	P	23 31 21.2	-0.1
	baz=91,SNR=15						
219A	White Tail Can	91.36	58	⇓P	P	23 31 22.3	+0.5
	baz=91,SNR=12						
219A				⇓pP	pP	23 31 49.0	+0.1
	baz=91						
MPU	Maple Canyon	91.37	50	eP	P	23 31 22.3	+0.7
MPU				epP	pP	23 31 47.7	-1.1
MPU				esP	sP	23 31 57.2	-2.5
X18A	Snowflake	91.37	55	⇓pP	pP	23 31 50.1	+1.1
	baz=91						
CTU	Camp Tracy	91.44	49	eP	P	23 31 23.2	+1.2
CTU				epP	pP	23 31 53.2	+4.1
MSO	Missoula	91.49	42	⇓P	P	23 31 21.4	-0.6
	baz=92						
MSO	Missoula	91.49	42	eP	P	23 31 18.8	-3.2
	comp=Z,2.9nm,0.9s,mb4.4						
MSO				epP	pP	23 31 48.1	-1.1
119A	Ashpeak Ranch,	91.49	57	⇓P	P	23 31 23.1	+0.7
	baz=92						
119A				⇓pP	pP	23 31 50.6	+1.1
	baz=92						
TMUT	Trail Mountain	91.51	50	eP	P	23 31 25.4	+3.1
TMUT				epP	pP	23 31 52.8	+3.3
JTMT	Jette	91.52	42	eP	P	23 31 21.6	-0.5
JTMT				epP	pP	23 31 50.3	+1.0
HYB	Hyderabad	91.56	287	i P	P	23 31 22.0	-1.0
HYB				epP	pP	23 31 47.5	-2.7
B13A	Whitefish	91.57	41	⇓P	P	23 31 22.0	-0.3
	baz=92,SNR=7.7						
SWMT	Swartz Lake	91.64	42	eP	P	23 31 21.8	-0.9
SWMT				epP	pP	23 31 50.6	+0.8
JLU	Jordanelle	91.64	49	eP	P	23 31 23.4	+0.5
JLU				epP	pP	23 31 44.0	-6.1
R17A	Hanksville Air	91.68	51	⇑P	P	23 31 23.8	+0.7
	baz=92,SNR=5.8						
E14A	Clinton	91.68	43	P	P	23 31 22.8	-0.2
	baz=92,SNR=6.6						
DAU	Daniels Canyon	91.74	49	eP	P	23 31 25.2	+1.8
H15A	Lima	91.79	45	⇑P	P	23 31 23.7	+0.3
	baz=92,SNR=14						
H15A				⇑pP	pP	23 31 49.9	-0.7
	baz=92						
HWUT	Hardware Ranch	91.80	48	eP	P	23 31 23.0	-0.6
	comp=Z,25nm,1.3s,mb5.3						
HWUT				epP	pP	23 31 49.5	-1.3
HWUT				ePP	PP	23 35 04.2	+0.1
320A	Kipp Ranch, An	91.82	59	⇑P	P	23 31 23.9	0.0
	baz=92,SNR=10						
320A				⇑pP	pP	23 31 51.7	+0.6
	baz=92						
D14A	Greenough	91.84	42	⇑P	P	23 31 23.2	-0.5
	baz=92						
C14A	Swan Lake	91.87	42	⇑P	P	23 31 22.8	-1.0
	baz=92						
220A	Playas Peak, P	91.94	58	⇓pP	pP	23 31 53.0	+1.3
	baz=92						
W19A	Sanders	91.95	55	⇑pP	pP	23 31 51.8	+0.2
	baz=92						
CHMT	Chamberlain Mo	91.97	43	eP	P	23 31 23.8	-0.4
CHMT				epP	pP	23 31 51.9	+0.5
L16A	Fish Haven	92.00	48	⇓P	P	23 31 24.8	+0.3
	baz=92,SNR=7.6						
L16A				⇓pP	pP	23 31 50.8	-0.9
	baz=92						
DLMT	Dillon	92.01	44	eP	P	23 31 24.5	+0.1
DLMT				epP	pP	23 31 51.0	-0.6
T18A	Mexican Hat	92.03	53	⇓P	P	23 31 24.7	-0.1
	baz=92						
G15A	Dillon	92.03	44	P	P	23 31 24.5	-0.1
	baz=92,SNR=12						
G15A				⇓pP	pP	23 31 51.6	-0.2
	baz=92						
S18A	Hurst Farm, Bl	92.06	52	⇑P	P	23 31 24.9	0.0
	baz=92						
O17A	Robinson Place	92.08	49	P	P	23 31 25.6	+0.7
	baz=92,SNR=21						
K16A	Soda Springs	92.09	47	⇓pP	pP	23 31 51.7	-0.3
	baz=92						
WALA	Waterton Lakes	92.11	40	eP	P	23 31 23.1	-1.7
Z20A	Nine Sixteen R	92.15	57	⇑P	P	23 31 25.9	+0.5
	baz=92						
J16A	Bone	92.18	46	⇓P	P	23 31 26.3	+1.0
	baz=92						
F15A	Butte	92.20	44	⇑P	P	23 31 24.3	-1.1
	baz=92,SNR=8.1						
F15A				⇓pP	pP	23 31 52.0	-0.5
	baz=92						
LRM	Limekiln Ridge	92.23	44	eP	P	23 31 25.0	-0.5
E15A	Deer Lodge	92.25	43	⇑P	P	23 31 25.3	-0.3
	baz=92,SNR=9.1						
E15A				⇓pP	pP	23 31 52.4	-0.3
	baz=92						
Q18A	Rafter H Ranch	92.28	51	⇓P	P	23 31 25.3	-0.6
	baz=92						
R18A	Canyonlands Na	92.29	51	⇑P	P	23 31 26.4	+0.5
	baz=92						
P18A	Preston Nutter	92.31	50	⇑P	P	23 31 26.7	+0.7
	baz=92						
B14A	Marquette Ranc	92.33	41	P	P	23 31 25.6	-0.3
	baz=92,SNR=17						
RRI2	Red Ridge	92.40	46	eP	P	23 31 26.8	+0.5
AHID	Auburn Hatcher	92.42	47	eP	P	23 31 26.3	-0.1
M17A	Scullys Gap (B	92.43	48	⇓P	P	23 31 26.4	-0.1
	baz=92,SNR=5.4						
D15A	Lincoln	92.49	43	⇓P	P	23 31 26.7	+0.1
	baz=93						
C15A	Salmond Ranch,	92.61	42	P	P	23 31 26.6	-0.6
	baz=93,SNR=30						
W20A	Ramah	92.66	55	⇑P	P	23 31 28.3	+0.5
	baz=93						
121A	Cookes Peak, D	92.69	57	⇓pP	pP	23 31 55.0	-0.1
	baz=93						
TPAW	Teton Pass	92.70	46	eP	P	23 31 28.6	+0.9
REDW	Red Top Meadow	92.74	46	eP	P	23 31 28.1	+0.3
BOZ	Bozeman (W)	92.74	44	P	P	23 31 28.1	+0.3
	baz=93,SNR=12						
BOZ	Bozeman (W)	92.74	44	eP	P	23 31 27.3	-0.5
BOZ				e*PP	pP	23 31 54.4	-0.6
BOZ				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.1						
BOZ	Bozeman (W)	92.74	44	eP	P	23 31 27.3	-0.6
	comp=Z,12nm,1.1s,mb5.1						
BOZ				epP	pP	23 31 54.4	-0.6
F16A	Kennard Place,	92.78	44	P	P	23 31 28.4	+0.4
	baz=93,SNR=12						
H16A	Russell Place,	92.78	45	P	P	23 31 28.7	+0.7
	baz=93,SNR=6.1						
B15A	Bradely Ranch,	92.78	41	⇑P	P	23 31 26.9	-1.1
	baz=93,SNR=7.3						
B15A				⇑pP	pP	23 31 54.7	-0.4
	baz=93						
A15A	Johnson Ranch,	92.84	41	⇑P	P	23 31 27.7	-0.5
	baz=93,SNR=6.6						
HRY	Holter Researc	92.86	43	eP	P	23 31 28.0	-0.4
MOOW	Moose Ponds	92.90	46	eP	P	23 31 28.8	+0.1
Z21A	St. Cloud Mine	92.95	57	P	P	23 31 29.9	+0.7
	baz=93,SNR=8.8						
LOHW	Long Hollow	92.97	46	eP	P	23 31 29.1	+0.1
YFT	Old Faithful	93.00	45	eP	P	23 31 29.3	+0.3
YFT				epP	pP	23 31 54.6	-1.6
PV04	Paradox Valley	93.05	52	eP	P	23 31 30.1	+0.7
Y21A	Point of Rocks	93.09	56	⇑P	P	23 31 30.3	+0.6
	baz=93						
D16A	Dana Ranch, Ca	93.13	43	⇑P	P	23 31 29.5	-0.1
	baz=93						
C16A	Fuhringer Ranc	93.18	42	⇑P	P	23 31 29.2	-0.6
	baz=93,SNR=8.4						
J18A	Kendall Valley	93.29	47	⇓P	P	23 31 30.6	+0.1
	baz=93,SNR=5.3						
S20A	Disappointment	93.35	52	⇓P	P	23 31 30.7	-0.1
	baz=93						
R20A	Redvale	93.41	52	⇓P	P	23 31 31.2	+0.1
	baz=94						
F17A	Fitzpatrick Pl	93.46	44	⇓P	P	23 31 31.5	+0.3
	baz=94,SNR=8.1						
Z22A	Elephant Butte	93.52	57	⇑P	P	23 31 31.4	-0.3
	baz=94						
PDAR	Pinedale Array	93.53	47	P	P	23 31 30.7	-0.8
	comp=Z,2.8nm,0.8s,mb4.6,baz=254,slow=5.5,SNR=17						
PDAR				pP	pP	23 31 58.1	-0.5
	comp=Z,3.2nm,1.0s,baz=243,slow=6.5,SNR=4.4						
PDAR				PKKPbc	PKKPbc	23 48 36.5	-2.1
	comp=Z,0.5nm,0.7s,baz=102,slow=6.5,SNR=3.5						
PDAR				PKPPKP		23 56 47.0	
	comp=Z,0.8nm,1.0s,baz=73,slow=5.1,SNR=3.7						
PDAR				LR	LR	00 10 42.6	
	comp=Z,145nm,18.3s,baz=256,slow=34						
EDM	Edmonton	93.54	36	eP	P	23 31 31.5	+0.2
A16A	West Butte Ran	93.56	41	⇓P	P	23 31 30.9	-0.6
	baz=94						
LAZ	Ladron	93.61	56	eP	P	23 31 32.6	+0.4
	comp=Z,2.4nm,1.1s,mb4.4						
U21A	Nageezi	93.61	54	⇑P	P	23 31 32.1	0.0
	baz=94						
D17A	Six Diamond Ra	93.73	43	⇓P	P	23 31 32.3	0.0
	baz=94						
S21A	Coal Bank Pass	93.76	52	⇓P	P	23 31 33.1	+0.4
	baz=94						
B17A	L&G Farms, Che	93.92	42	⇓P	P	23 31 32.7	-0.5
	baz=94,SNR=6.7						
BNM	Barren Site	93.97	56	eP	P	23 31 34.3	+0.5
	comp=Z,6.9nm,1.1s,mb4.9						
BNM				epP	pP	23 32 00.1	-0.9
K19A	Absolon Red Bu	94.05	47	⇓P	P	23 31 35.1	+1.2
	baz=94,SNR=5.6						
GCMT	Greycliff	94.11	44	eP	P	23 31 34.4	+0.2
	comp=Z,2.0nm,0.8s,mb4.5						
A17A	Triple J Farms	94.13	41	⇑P	P	23 31 33.9	-0.2
	baz=94,SNR=12						
RLMT	Red Lodge	94.24	45	eP	P	23 31 35.6	+0.8
	comp=Z,9.5nm,1.4s,mb4.9						
ANMO	Albuquerque	94.27	55	P	P	23 31 34.5	-0.6
	comp=Z,0.6nm,0.4s,baz=267,slow=6.9,SNR=4.0						
224A	Cornudas Mount	94.48	58	⇑P	P	23 31 36.1	-0.1
	baz=94						
S22A	4UR Ranch, Cre	94.52	53	⇑P	P	23 31 36.6	+0.4
	baz=95						
EGMT	Eagleton	94.54	42	eP	P	23 31 35.8	-0.2
DDI	Dehra Dun	94.56	300	ex	P	23 31 34.0	-2.6
MK31	Makanchi Array	94.60	317	eP	P	23 31 35.7	-0.6
MK31				e*PP	pP	23 32 01.6	-1.9
MKAR	Makanchi Array	94.60	317	P	P	23 31 35.9	-0.5
	comp=Z,56nm,0.7s,mb6.1,baz=94,slow=6.3,SNR=488						
MKAR				pP	pP	23 32 01.6	-1.9
	comp=Z,6.8nm,0.6s,baz=114,slow=5.9,SNR=2.2						
MKAR				PKKPbc	PKKPbc	23 48 31.6	-4.3
	comp=Z,0.6nm,0.6s,baz=282,slow=1.3,SNR=9.7						
MKAR				PKKPab		23 48 59.5	
	comp=Z,0.5nm,0.6s,baz=293,slow=2.5,SNR=4.1						
MKAR				LR	LR	00 12 24.1	
	comp=Z,157nm,21.1s,baz=145,slow=34						
MKAR	Makanchi Array	94.60	317	P	P	23 31 35.9	-0.4
MKAR				*PP	pP	23 32 01.6	-1.9
MKAR						23 48 59.5	
MKAR	Makanchi Array	94.60	317	P	P	23 31 35.9	-0.5
MKAR				pP	pP	23 32 01.6	-1.9
MKAR				PKKPbc	PKKPbc	23 48 31.6	-4.3
MKAR				PKKPab		23 48 59.5	
MKAR				LR	LR	00 12 24.1	
ZAA0	Zalesovo Array	94.62	324	eP	P	23 31 34.6	-1.7
ZAA0				epP	pP	23 32 00.2	-3.2
ZALV	Zalesovo Beam	94.62	324	P	P	23 31 34.5	-1.8
	comp=Z,15nm,0.8s,mb5.5,baz=110,slow=4.6,SNR=72						
ZALV				LR	LR	00 13 56.1	
	comp=Z,158nm,20.9s,baz=93,slow=35						
ZALV	Zalesovo Beam	94.62	324	P	P	23 31 34.5	-1.8
ZALV				LR	LR	00 13 56.1	
SMCO	Snowmass	94.69	51	eP	P	23 31 37.6	+0.7
J20A	Shoshoni	94.70	47	PP	PP	23 35 38.9	+12
	baz=95,SNR=45						
I20A	Worland	94.79	46	⇑PP	PP	23 35 38.2	+11
	baz=95,SNR=94						
H20A	Greybull	94.99	46	⇓PP	PP	23 35 37.4	+8.5
	baz=95,SNR=7.6						
J21A	Lysite	95.16	47	PP	PP	23 35 30.0	-0.3
	baz=95,SNR=50						
YKA	Yellowknife Ar	95.31	27	P	P	23 31 37.1	-2.2
	comp=Z,1.5nm,0.5s,mb4.7,baz=258,slow=4.9,SNR=10.0						
YKA				pP	pP	23 32 05.2	-1.2
	comp=Z,2.2nm,0.7s,baz=259,slow=4.7,SNR=4.6						
YKA				LR	LR	00 11 02.6	
	comp=Z,20nm,18.2s,baz=315,slow=33						
YKA	Yellowknife Ar	95.31	27	P	P	23 31 37.1	-2.1
YKA				*PP	pP	23 32 05.2	-1.2
I21A	Big Trails, Te	95.36	47	⇑PP	PP	23 35 27.8	-4.0
	baz=95,SNR=156						
TXAR	Lajitas Array	95.54	61	P	P	23 31 40.4	-0.7
	comp=Z,1.5nm,0.8s,mb4.5,baz=232,slow=4.6,SNR=8.0						
TXAR				pP	pP	23 32 07.4	-0.9
	comp=Z,2.1nm,0.8s,baz=225,slow=5.1,SNR=6.4						
TXAR				PP	PP	23 35 33.5	-0.1
	comp=Z,6.9nm,1.1s,baz=254,slow=7.3,SNR=9.6						
TXAR				PKKPbc	PKKPbc	23 48 32.2	-0.5
	comp=Z,0.4nm,0.7s,baz=99,slow=5.6,SNR=6.0						
TXAR				PKKPab		23 48 59.0	
	comp=Z,1.0nm,1.0s,baz=54,slow=6.4,SNR=3.9						
TXAR				LR	LR	00 07 27.0	
	comp=Z,243nm,19.1s,baz=185,slow=31						
TXAR	Lajitas Array	95.54	61	P	P	23 31 40.4	-0.7
TXAR				*PP	pP	23 32 07.4	-0.9
TXAR						23 35 33.5	
SDCO	Great Sand Dun	95.56	53	eP	P	23 31 44.0	+3.0
KAD	Karad	95.63	286	ex	P	23 31 38.4	-3.3
H21A	Big Horn, Sher	95.69	46	⇑PP	PP	23 35 30.7	-3.7
	baz=96,SNR=18						
NVS	Novosibirsk	95.72	325	i P	P	23 31 38.2	-3.1
NVS				i		23 35 28.4	
NVS				pmax	pmax		
	comp=Z,21nm,2.0s,mb5.2						
NVS				pmax	pmax		
	comp=N,4.0nm,1.8s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.8s						
MAIT	Maitri	95.82	188	eP	P	23 31 40.4	-1.1
MAIT				e	pP	23 32 06.4	-2.3
ISCO	Idaho Springs	95.84	51	eP	P	23 31 43.3	+1.1
VNA3	Neumayer Olymp	97.09	181	eP	P	23 31 42.0	-5.3
VNA3				e	pP	23 32 08.3	-6.2
VNA2	Neumayer--Watz	97.34	182	eP	P	23 31 44.0	-4.4
VNA2				e	pP	23 32 10.0	-5.7
VNA1	Neumayer--Stat	97.65	182	eP	pP	23 32 11.2	-5.8
KURK	Kurchatov	97.71	320	ceP	P	23 31 48.6	-1.8
KURK				pmax	pmax		
	comp=Z,21nm,2.2s,mb5.3						
KURK	Kurchatov	97.71	320	eP	P	23 31 48.6	-1.8
KURK	Kurchatov	97.71	320	P	P	23 31 49.1	-1.2
	SNR=5.1						
KSH	Kashi	97.82	309	eP	P	23 31 52.3	+1.1
KSH				epP	pP	23 32 21.4	+3.0
KSH				esP	sP	23 32 33.3	+3.9
KSH				ePP	PP	23 35 53.8	+2.9
KSH				eSKS		23 42 18.1	
KSH				eS	S	23 43 03.9	-4.7
KSH				esS	sS	23 43 55.2	-0.6
KSH				eSS	SS	23 49 50.2	-2.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.5						
KSH				pmax	pmax		
	comp=Z,160nm,4.6s						
KSH				LR	LR		
	comp=N,350nm,8.4s						
KSH				LR	LR		
	comp=E,300nm,6.5s						
KSH				LR	LR		
	comp=Z,540nm,8.6s						
KZA	Kyzart	98.74	311	eP	P	23 31 55.1	-0.1
	comp=Z,11nm,1.5s,mb5.2						
AAK

KEV	**Kevo**	**116.74 345**	*e*PKIKP	PKPdf	23 36 52.6	-6.2
KEV			pmax	pmax		
comp=Z,1.0nm,0.3s						
KEV	**Kevo**	**116.74 345**	*e*p	PKPdf	23 36 52.6	-6.2
comp=Z,0.6nm,0.3s						
ARCES	**ARCESS Array B**	**117.27 346**	PKP	PKPdf	23 36 58.6	-1.3
comp=Z,8.8nm,0.6s,baz=86,slow=2.0,SNR=89						
ARCES			PKPbc	PKKPbc	23 47 21.8	-4.9
comp=Z,0.4nm,0.4s,baz=212,slow=3.2,SNR=8.2						
ARE0	**ARCESS Array S**	**117.27 346**	*e*PKPdf	PKPdf	23 36 58.9	-1.0
KLMR	**Klimovskoe**	**117.77 334**	*e*PKIKP	PKPdf	23 36 59.1	-1.9
KLMR			pmax	pmax		
comp=Z,12nm,0.9s						
LPAZ	**La Paz**	**119.17 116**	PKP	PKPdf	23 37 05.0	-0.1
comp=Z,1.1nm,0.4s,baz=270,slow=1.0,SNR=9.5						
LPAZ			PKKPbc	PKKPbc	23 47 17.1	-1.4
comp=Z,2.1nm,0.8s,baz=39,slow=4.9,SNR=9.5						
LPAZ	**La Paz**	**119.17 116**	PKP	PKPdf	23 37 05.0	-0.1
LPAZ			PKKPbc	PKKPbc	23 47 17.1	-1.4
JOF	**Joensuu**	**119.93 338**	*e*PKIKP	PKPdf	23 36 58.3	-6.8
JOF			pmax	pmax		
comp=Z,1.0nm,0.3s						
JOF	**Joensuu**	**119.93 338**	*e*p	PKPdf	23 36 58.3	-6.8
comp=Z,0.9nm,0.3s						
VRHR	**Novokhopersk**	**120.74 323**	*e*PKIKP	PKPdf	23 37 05.5	-1.5
VRHR			pmax	pmax		
comp=N,10.0nm,0.8s						
VRHR			pmax	pmax		
comp=Z,20nm,0.8s						
VRHR			pmax	pmax		
comp=E,5.0nm,0.4s						
GNI	**Garni**	**121.72 310***c*	*i*PKIKP	PKPdf	23 37 09.2	-0.1
GNI			pmax	pmax		
comp=Z,12nm,0.8s						
GNI	**Garni**	**121.72 310**	*e*PKPdf	PKPdf	23 37 09.2	-0.1
ZEI	**Tsey**	**121.75 313**	*i* PKIKP	PKPdf	23 37 08.2	-1.1
ZEI			pmax	pmax		
comp=Z,10.0nm,1.0s						
OBN	**Obninsk**	**121.85 329**⇑	*i*PKIKP	PKPdf	23 37 07.8	-1.3
OBN			*e*PS	SP	23 48 15.7	-10
OBN			*e*SS	SS	23 55 03.9	-8.7
OBN			pmax	pmax		
comp=Z,31nm,2.5s						
VSR	**Storozhevoye**	**122.13 324**	*e*PKIKP	PKPdf	23 37 08.2	-1.5
VSR			*e*		23 37 35.7	
VSR			pmax	pmax		
comp=N,2.0nm,0.8s						
VSR			pmax	pmax		
comp=E,5.0nm,0.8s						
VSR			pmax	pmax		
comp=Z,20nm,0.8s						
KAF	**Kangasniemi**	**122.23 339**	*e*PKIKP	PKPdf	23 37 05.2	-4.4
KAF			pmax	pmax		
comp=Z,2.0nm,0.3s						
KAF	**Kangasniemi**	**122.23 339**	*e*p	PKPdf	23 37 05.2	-4.4
comp=Z,1.5nm,0.3s						
KIV	**Kislovodsk**	**122.30 315**⇓	*i*PKIKP	PKPdf	23 37 09.9	-0.4
KIV			*e*		23 38 50.0	
KIV			*e*		23 44 10.3	
KIV			*e*SS	SS	23 55 20.2	+1.0
KIV			pmax	pmax		
comp=Z,8.0nm,1.2s						
FINES	**FINESS Array B**	**122.76 339**	PKP	PKPdf	23 37 09.4	-1.2
comp=Z,8.6nm,0.8s,baz=34,slow=1.9,SNR=22						
FINES			PKKPbc	PKKPbc	23 47 02.2	-3.9
comp=Z,5.9nm,1.1s,baz=232,slow=6.3,SNR=3.7						
CPUP	**Villa Florida**	**122.95 132**	PKKPbc	PKKPbc	23 47 02.4	-2.1
comp=Z,0.6nm,0.6s,baz=135,slow=7.0,SNR=3.6						
SDV	**Santo Domingo**	**123.79 87**	*e*PKPdf	PKPdf	23 37 12.3	-1.7
BOSA	**Boshof**	**125.06 222**	PKP	PKPdf	23 37 15.7	-0.4
comp=Z,8.7nm,0.7s,baz=136,slow=2.5,SNR=16						
SIV	**San Ignacio**	**125.41 119**	PKP	PKPdf	23 37 15.8	-1.2
comp=Z,1.1nm,0.4s,baz=261,slow=5.2,SNR=12						
ANN	**Anapa**	**125.61 317**	*i* PKIKP	PKPdf	23 37 16.6	0.0
ANN			*e*		23 39 07.2	
ANN			pmax	pmax		
comp=Z,19nm,1.0s						
IDID	**Didziasalis**	**126.46 333**	*e*P	PKPdf	23 37 16.8	-1.1
IDID			AMB	AMB	23 37 18.7	
comp=Z,9.1nm,0.8s						
ISAL	**Salakas**	**126.58 333**	*e*P	PKPdf	23 37 17.1	-1.0
ISAL			AMB	AMB	23 37 18.1	
comp=Z,5.2nm,1.0s						
IIGN	**Ignalina**	**126.67 333**	*e*P	PKPdf	23 37 17.3	-1.0
IIGN			AMB	AMB	23 37 18.2	
comp=Z,9.3nm,1.1s						
NACGM	**Naroch**	**126.70 332**	*e*	PKPdf	23 37 15.0	-3.4
MALT	**Malatya**	**126.92 309**	*e*PKIKP	PKPdf	23 37 18.9	-0.4
MALT			*e*		23 37 46.5	
NB2	**NORSAR Subarra**	**127.64 345**	PKPdf	PKPdf	23 37 18.4	-1.6
comp=Z,9.5nm,1.1s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**127.64 345**	PKPdf	PKPdf	23 37 18.4	-1.6
baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**127.64 345**	PKIKP	PKPdf	23 37 18.4	-1.6
NB2	**NORSAR Subarra**	**127.64 345**	PKPdf	PKPdf	23 37 18.4	-1.6
NOA	**NORSAR Array B**	**127.64 345**	PKP	PKPdf	23 37 18.9	-1.0
comp=Z,5.1nm,0.8s,baz=32,slow=2.0,SNR=22						
NOA			pPKP	pPKPdf	23 37 45.8	-2.5
comp=Z,5.0nm,1.1s,baz=34,slow=2.0,SNR=3.0						
SIM	**Simferopol'**	**127.74 318**	*i* PKIKP	PKPdf	23 37 19.9	-0.8
SIM			*e*		23 39 23.0	
SIM			pmax	pmax		
comp=Z,12nm,0.8s						
KMBO	**Kilima Mbogo**	**127.99 259**	PKP	PKPdf	23 37 22.3	+0.2
comp=Z,4.8nm,1.0s,baz=180,slow=20,SNR=13						
KMBO			pPKP	pPKPdf	23 37 49.0	-1.4
comp=Z,7.0nm,1.0s,baz=180,slow=24,SNR=7.3						
SJG	**San Juan**	**128.88 76**	PKIKP	PKPdf	23 37 22.3	-1.3
SUW	**Suwalki**	**128.89 333**	*e*PKP	PKPdf	23 37 21.6	-1.0
BR131	**Keskin Array S**	**130.04 312**	*e*PKPdf	PKPdf	23 37 23.4	-1.8
BR131			*ep*PKPdf	pPKPdf	23 37 51.7	-1.8
BRTR	**Keskin Array B**	**130.04 312**	PKhKP	PKPpre	23 37 21.1	
comp=Z,2.4nm,0.8s,baz=107,slow=1.5,SNR=8.1						
BRTR			PKP	PKPdf	23 37 24.7	-0.5
comp=Z,2.2nm,0.7s,baz=72,slow=0.5,SNR=14						
BRTR			pPKP	pPKPdf	23 37 51.8	-1.8
comp=Z,3.4nm,0.9s,baz=100,slow=1.8,SNR=4.8						
BRTR			PP	PP	23 39 38.2	-0.4
comp=Z,3.1nm,0.9s,baz=94,slow=5.0,SNR=5.1						
BRTR			SKPbc		23 40 43.5	
comp=Z,10.0nm,1.1s,baz=104,slow=4.0,SNR=10						
BRTR	**Keskin Array B**	**130.04 312***c*	*i*PKIKP	PKPdf	23 37 24.1	-1.1
BRTR			pmax	pmax		
comp=Z,2.0nm,0.7s						
LSZ	**Lusaka**	**130.73 238**	*e*PKIKP	PKPdf	23 37 26.8	-0.4
LSZ			*e*		23 37 54.1	
LSZ	**Lusaka**	**130.73 238**	*e*PKPdf	PKPdf	23 37 26.8	-0.4
LSZ			*ep*PKPdf	pPKPdf	23 37 54.0	-1.5
LSZ			*es*PKPdf		23 38 03.8	
TIRR	**Tirgusor**	**131.60 320**⇓	*i*P	PKPdf	23 37 27.7	-0.3
BUR08	**Bucovina Ar. S**	**131.81 325**	*e*PKPdf	PKPdf	23 37 28.1	-0.2
BUR08			*e*PP	PP	23 39 49.2	-0.3
BURAR	**Bucovina Array**	**131.82 325**⇑	*i*P	PKPdf	23 37 29.0	+0.7
VRI	**Vrincioaia**	**131.91 323**⇑	*i*P	PKPdf	23 37 28.3	-0.3
GKP	**Gorka Klasztor**	**131.93 336**	*e*PKP	PKPdf	23 37 27.7	-0.7
KWP	**Kalwaria Pacla**	**131.94 329**	*e*PKP	PKPdf	23 37 27.9	-0.6
KWP	**Kalwaria Pacla**	**131.94 329**	*e*PKPdf	PKPdf	23 37 27.8	-0.7
KWP			*e*PP	PP	23 39 50.2	0.0
KWP	**Kalwaria Pacla**	**131.94 329**⇓	*i*P	PKPdf	23 37 28.1	-0.4
MLR	**Muntele Rosu**	**132.58 323**⇑	*i*P	PKPdf	23 37 27.2	-2.6
KOLS	**Kolonicke sedl**	**132.60 328**	*e*PKP	PKPdf	23 37 29.7	-0.1
KOLS			*e*		23 40 51.0	
KOLS	**Kolonicke sedl**	**132.60 328**	*e*PKP	PKPdf	23 37 29.7	-0.1
KOLS			*e*SKPDF		23 40 51.0	
UZH	**Uzhgorod**	**132.78 328**	*e*PKIKP	PKPdf	23 37 26.0	-4.1
UZH			*i*		23 37 57.0	
UZH			*i*		23 38 10.5	
TRPA	**Tarpa**	**132.97 327**⇑	*i*P	PKPdf	23 37 29.4	-1.1
OJC	**Ojcow**	**132.98 331**	*e*PKP	PKPdf	23 37 29.8	-0.6
CRVS	**Cervenica-Dubn**	**133.04 329**	*e*PKP	PKPdf	23 37 30.1	-0.5
CRVS			*e*		23 40 52.8	
CRVS	**Cervenica-Dubn**	**133.04 329**	*e*PKP	PKPdf	23 37 30.1	-0.5
CRVS			*e*SKPDF		23 40 52.8	
VOIR		**133.14 323**⇓	*i*P	PKPdf	23 37 30.3	-0.6
NIE	**Niedzica**	**133.27 330**	*e*PKP	PKPdf	23 37 31.0	0.0
DRGR		**133.69 326**⇓	*i*P	PKPdf	23 37 31.6	-0.3
KECS	**Kecovo**	**133.80 329**	*e*PKP	PKPdf	23 37 35.3	+3.3
KECS			*e*		23 40 56.8	
KECS	**Kecovo**	**133.80 329**	*e*PKP	PKPdf	23 37 35.3	+3.3
KECS			*e*SKPDF		23 40 56.8	
OKC	**Ostrava-Krasne**	**134.01 332**	*e*PKIKP	PKPdf	23 37 31.8	-0.6
OKC			MLR	MLR		
comp=Z,400nm,24.8s						
OKC	**Ostrava-Krasne**	**134.01 332**	*e*PKPdf	PKPdf	23 37 31.8	-0.6
OKC			*ex*	x	23 52 43.6	
OKC			*ex*	x	23 58 52.1	
OKC			AMS	AMS	00 31 30.0	
comp=Z,400nm,24.8s						
MORC	**Moravsky Berou**	**134.34 332**	*e*PKIKP	PKPdf	23 37 32.4	-0.6
MORC			*e*		23 38 00.2	
MORC	**Moravsky Berou**	**134.34 332**	*e*PKPdf	PKPdf	23 37 32.4	-0.6
MORC			*ep*PKPdf	pPKPdf	23 38 00.2	-1.1
MORC			*es*PKPdf		23 38 09.8	
MORC	**Moravsky Berou**	**134.34 332**⇑	*i*P	PKPdf	23 37 32.8	-0.2
DPC	**Dobruska-Polom**	**134.47 333**	*e*PKIKP	PKPdf	23 37 34.3	+1.1
DPC			MLR	MLR		
comp=Z,400nm,21.5s						
DPC	**Dobruska-Polom**	**134.47 333**	*e*PKPdf	PKPdf	23 37 34.3	+1.1
DPC			*e*SKP		23 40 59.5	
DPC			*ex*	x	23 52 41.6	
DPC			AMS	AMS	00 35 40.0	
comp=Z,400nm,21.5s						
PSZ	**Piszkesteto**	**134.47 329**⇑	*i*P	PKPdf	23 37 33.5	+0.2
PSZ	**Piszkesteto**	**134.47 329**⇓	*e*PKP	PKPdf	23 37 33.0	-0.3
UPC	**Upice**	**134.49 334**	*e*PKIKP	PKPdf	23 37 32.9	-0.4
UPC	**Upice**	**134.49 334**	*e*PKPdf	PKPdf	23 37 32.9	-0.4
UPC			*e*SKP		23 40 59.9	
VYHS	**Vyhne**	**134.61 330**	*e*PKP	PKPdf	23 37 32.7	-0.9
VYHS			*e*		23 40 58.9	
VYHS	**Vyhne**	**134.61 330**	*e*PKP	PKPdf	23 37 32.7	-0.9
VYHS			*e*SKPDF		23 40 58.9	
BZS	**Buzias**	**135.00 325**⇓	*i*P	PKPdf	23 37 33.4	-1.0
BRG	**Berggiesshubel**	**135.08 336**	*e*PKPdf	PKPdf	23 37 33.7	-0.6
BRG			*e*PKSbc		23 41 00.5	
BRG	**Berggiesshubel**	**135.08 336**⇑	*i*PKP	PKPdf	23 37 33.9	-0.4
comp=Z,8.7nm,0.8s						
BRG			*e*		23 37 41.5	
comp=Z,4.3nm,0.8s						
BRG			*e*		23 38 05.1	
comp=Z,6.5nm,1.1s						
BRG			*e*		23 39 34.4	
comp=Z,207nm,3.7s						
BRG			SKP		23 41 00.6	
comp=Z,16nm,1.2s						
BRG	**Berggiesshubel**	**135.08 336**⇑	*i*PKIKP	PKPdf	23 37 33.9	-0.4
BRG			*e*		23 38 05.1	
BRG			pmax	pmax		
comp=Z,7.0nm,0.8s						
PVCC	**Panska Ves**	**135.08 335**	*e*PKIKP	PKPdf	23 37 34.4	0.0
PVCC			MLR	MLR		
comp=Z,400nm,21.2s						
PVCC	**Panska Ves**	**135.08 335**	*e*PKPdf	PKPdf	23 37 34.4	0.0
PVCC			*e*SKP		23 40 58.8	
PVCC			AMS	AMS	00 30 30.0	
comp=Z,400nm,26.2s						
CLL	**Collm**	**135.11 337**	*e*PKPdf	PKPdf	23 37 34.0	-0.4
CLL			*e*PKSbc		23 41 00.5	
CLL	**Collm**	**135.11 337**	*i* PKIKP	PKPdf	23 37 33.7	-0.7
CLL			*e*		23 38 05.0	
CLL			*e*		23 40 11.0	
CLL			pmax	pmax		
comp=Z,24nm,0.9s						
CLL	**Collm**	**135.11 337**	*i* PKP	PKPdf	23 37 33.7	-0.7
CLL			*ep*PKP	pPKPdf	23 38 05.0	+2.3
CLL			*e*PP	PP	23 40 11.0	+0.9
CLL	**Collm**	**135.11 337**	*i* PKPdf	PKPdf	23 37 33.7	-0.7
comp=Z,11nm,0.9s						
CLL			*e*(pPKPdf)		23 38 05.0	
CLL			*e*		23 38 20.0	
CLL			*e*PP	PP	23 40 11.0	+0.9
CLL			*e*(SKPbc)		23 40 54.0	
CLL			*i* SKPdf	SKPdf	23 41 00.4	+0.2
comp=Z,8.0nm,0.9s						
CLL			*e*PKSdf		23 41 08.0	
CLL			*e*		23 41 50.0	
CLL			*e*PS	PS	23 50 42.0	+8.1
CLL			*ep*PPS		23 52 38.0	
CLL			*e*SKKSacre		23 53 52.0	
CLL			*e*SS	SS	23 58 06.0	+10
CLL			*e*		23 59 36.0	
CLL			*e*SSS		00 03 24.0	
NRDL	**Niedersach Rie**	**135.21 340**	*e*PKSbc		23 41 00.7	
MODS	**Modra-Piesok**	**135.45 331**	*e*PKIKP	PKPdf	23 37 35.0	-0.1
MODS	**Modra-Piesok**	**135.45 331**	*e*PKP	PKPdf	23 37 35.0	-0.1
PRA	**Prague**	**135.49 335**	PKPdf	PKPdf	23 37 35.0	-0.1
PRU	**Pruhonice**	**135.50 334**	*e*PKIKP	PKPdf	23 37 35.4	+0.2
PRU	**Pruhonice**	**135.50 334**	*e*PKPdf	PKPdf	23 37 35.4	+0.2
PRU			*e*SKP		23 41 03.1	
PRU			*ex*	x	23 52 45.4	
PRU			*ex*	x	23 59 08.9	
PRU			AMS	AMS	00 27 00.0	
comp=Z,500nm,30.6s						
TREC	**Trest**	**135.61 333**	*e*PKIKP	PKPdf	23 37 35.1	-0.3
TREC			MLR	MLR		
comp=Z,400nm,21.6s						
TREC	**Trest**	**135.61 333**	*e*PKPdf	PKPdf	23 37 35.1	-0.3
TREC			*e*SKP		23 41 01.0	
TREC			*ex*	x	23 53 04.3	
TREC			*ex*	x	23 59 02.7	
TREC			AMS	AMS	00 36 30.0	
comp=Z,400nm,21.6s						
CLZ	**Clausthal**	**135.66 339**	*e*PKPdf	PKPdf	23 37 34.9	-0.5
CLZ			*e*PKSbc		23 41 02.7	
VTS	**Vitosha**	**135.80 321**⇓	*i*P	PKPdf	23 37 35.6	-0.4
TANN	**Tannenbergstha**	**136.03 336**	*e*PKPdf	PKPdf	23 37 35.1	-1.0
TANN			*e*PKSbc		23 41 03.7	
MOX	**Moxa**	**136.17 337**	*e*PKP	pPKPdf	23 38 02.7	-2.0
MOX	**Moxa**	**136.17 337**	*e*PKPdf	PKPdf	23 37 35.2	-1.2
NKC	**Novy Kostel**	**136.18 336**	*e*PKIKP	PKPdf	23 37 37.5	+1.1
NKC			MLR	MLR		
comp=Z,300nm,21.2s						
NKC	**Novy Kostel**	**136.18 336**	*e*PKPdf	PKPdf	23 37 37.5	+1.1
NKC			*e*SKP		23 41 04.0	
NKC			AMS	AMS	00 28 20.0	
comp=Z,300nm,21.2s						
PKSM	**Moragy**	**136.24 328**⇑	*i*P	PKPdf	23 37 36.3	-0.4
SOP	**Sopron**	**136.28 331**⇓	*e*PKP	PKPdf	23 37 35.1	-1.6
CONA	**Conrad Observa**	**136.43 331**⇑	*i*PKPdf	PKPdf	23 37 31.5	-5.5
comp=Z,9.3nm,0.9s						
KHC	**Kasperske Hory**	**136.56 334**	*e*PKIKP	PKPdf	23 37 36.3	-0.9
KHC			*e*		23 38 03.0	
KHC	**Kasperske Hory**	**136.56 334**	*e*PKPdf	PKPdf	23 37 36.1	-1.1
KHC			*e*SKP		23 41 05.7	
KHC			*ex*	x	23 53 04.9	
KHC			AMS	AMS	00 27 00.0	
comp=Z,500nm,23.2s						
UBBA	**Unterbreizbach**	**136.63 338**	*e*PKPdf	PKPdf	23 37 35.7	-1.5
ROTZ	**Rotzenmuhle**	**136.64 336**	*e*PKPdf	PKPdf	23 37 36.3	-1.0
ROTZ			*e*PKSbc		23 41 05.9	
GEC2	**GERESS Array S**	**136.73 334**	*e*PKPdf	PKPdf	23 37 36.8	-0.7
GEC2			*e*PKSbc		23 41 06.1	
WET	**Wettzell**	**136.85 335**	*e*PKPdf	PKPdf	23 37 36.5	-1.2
GRA1	**Grafenberg Arr**	**137.09 337**	*e*PKPdf	PKPdf	23 37 37.8	-0.3
GRF	**Grafenberg Arr**	**137.09 337**	*e*PKPdf	PKPdf	23 37 37.8	-0.3
TNS	**Taunus Mts**	**137.68 339**	*e*PKPdf	PKPdf	23 37 38.6	-0.6
TNS			*e*PKSbc		23 41 09.0	
PERS	**Pernice**	**137.72 331**	*e*PKPdf	PKPdf	23 37 37.8	-1.6
PERS			*e*		23 41 04.7	
PERS			*e*		23 41 18.0	
PERS	**Pernice**	**137.72 331**	*e*PKPdf	PKPdf	23 37 37.8	-1.6
PERS			*e*		23 41 04.7	
PERS			*e*		23 41 18.0	
RJOB	**Jochberg**	**137.96 333**	*e*PKPdf	PKPdf	23 37 39.3	-0.5
RJOB			*e*PKSbc		23 41 09.2	
GCIS	**Gornji Cirnik**	**138.01 329**	*e*PKPdf	PKPdf	23 37 39.3	-0.7
GCIS	**Gornji Cirnik**	**138.01 329**	*e*PKPdf	PKPdf	23 37 39.3	-0.7
MEM	**Membach**	**138.15 341**	PKP	PKPdf	23 37 39.7	-0.3
FUR	**Furstenfeldbru**	**138.28 335**	*e*PKPdf	PKPdf	23 37 40.3	-0.1
FUR			*e*PKSbc		23 41 10.0	
LJU	**Ljubljana**	**138.43 330**	*e*PKIKP	PKPdf	23 37 39.7	-1.0
LJU	**Ljubljana**	**138.43 330**	*e*PKPdf	PKPdf	23 37 39.7	-1.0
STU	**Stuttgart**	**138.61 337**	*e*PKPdf	PKPdf	23 37 40.0	-1.0
STU			*e*PKSbc		23 41 11.6	
SNF	**Seneffe**	**138.76 343**	PKP	PKPdf	23 37 41.3	+0.1
WTTA	**Wattenberg**	**138.83 334**	P	PKPdf	23 37 31.8	-10
comp=Z,20nm,1.1s						
ABTA	**Abfaltersbach**	**138.84 333**	P	PKPdf	23 37 31.7	-10
comp=Z,16nm,1.3s						
WLF	**Walferdange**	**138.93 341**	PKP	PKPdf	23 37 41.6	0.0
WLF	**Walferdange**	**138.93 341**	*e*PKPdf	PKPdf	23 37 41.0	-0.5
WLF			*e*PKSbc		23 41 12.6	
WLF	**Walferdange**	**138.93 341**	*e*PKPdf	PKPdf	23 37 41.4	-0.1
MOTA	**Moosalm**	**139.00 334**	P	PKPdf	23 37 31.9	-10
comp=Z,9.2nm,0.7s						
DOU	**Dourbes**	**139.04 342**	PKP	PKPdf	23 37 41.4	-0.3
BAIF	**Baives**	**139.18 343**	*e*PKP1	PKPdf	23 37 38.9	-3.1
BFO	**Black Forest**	**139.30 338**	*e*PKPdf	PKPdf	23 37 42.4	+0.2
BFO			*e*PKSbc		23 41 12.6	
FETA	**Feichten**	**139.41 334**	P	PKPdf	23 37 32.3	-10
comp=Z,19nm,1.0s						
SSF	**Saint Saulge**	**142.06 341**	*e*PKP1	PKPdf	23 37 41.3	-6.0
comp=Z,20nm,1.0s						
LPL	**La Plagne**	**142.25 337**	*e*PKP1	PKPdf	23 37 42.6	-5.0
comp=Z,19nm,1.0s						
LPG	**La Plagne**	**142.26 337**⇑	*i*PKP1	PKPdf	23 37 42.7	-5.0
comp=Z,24nm,1.0s						
MBDF	**Montbardon**	**142.89 336**⇑	*i*PKP1	PKPdf	23 37 44.0	-4.8
comp=Z,24nm,1.0s						
PLDF	**La Plantade**	**142.99 340**	PKP	PKPdf	23 37 45.4	-3.5
AGO	**Saint Agoulin**	**143.07 341**	PKP	PKPdf	23 37 45.3	-3.8
ORIF	**Oris-en-Rattie**	**143.08 337**⇑	*i*PKP1	PKPdf	23 37 45.3	-3.8
comp=Z,58nm,0.8s						
ORIF			*e*MLR	MLR		
comp=Z,194nm,21.5s						
TCF	**Toulx Ste Croi**	**143.16 342**	*e*PKP1	PKPdf	23 37 44.4	-4.8
comp=Z,42nm,1.2s						
SAOF	**Saorge**	**143.17 334**	PKP	PKPdf	23 37 44.9	-4.4
AUTN	**L'Aution**	**143.22 335**	PKP	PKPdf	23 37 46.7	-2.7
SSB	**Saint Sauveur**	**143.27 339**	*e*PKHKP	PKPdf	23 37 44.2	-5.3
TOUF	**Mont Tournerai**	**143.28 335**	PKP	PKPdf	23 37 45.4	-4.1
SBF	**Sospel**	**143.32 334**⇑	*i*PKP1	PKPdf	23 37 45.3	-4.3
comp=Z,96nm,0.8s						
LUCF	**Luceram**	**143.34 334**	PKP	PKPdf	23 37 45.1	-4.5
PYM	**Petit Puy Mans**	**143.38 341**	PKP	PKPdf	23 37 46.4	-3.2
MVIF	**Mont Vial**	**143.42 335**	PKP	PKPdf	23 37 46.1	-3.7
REVF	**Revere**	**143.45 334**	PKP	PKPdf	23 37 45.8	-4.0
MFF	**Saint Martin d**	**143.54 344**	*e*PKP1	PKPdf	23 37 46.0	-3.9
comp=Z,41nm,0.9s						
VIVF	**Saint-Julien-l**	**143.59 338**⇑	*i*PKP1	PKPdf	23 37 47.0	-3.0
comp=Z,47nm,0.9s						
CALN	**Calern**	**143.64 335**	PKP	PKPdf	23 37 46.9	-3.3
PGF	**Pioggiola**	**143.67 332**⇑	*i*PKP1	PKPdf	23 37 46.8	-3.5
comp=Z,71nm,0.9s						
FRF	**La Foret Royal**	**143.90 335**⇑	*i*PKP1	PKPdf	23 37 47.4	-3.2
comp=Z,81nm,0.8s						
SMRF	**Simiane la Rot**	**143.99 336**⇑	*i*PKP1	PKPdf	23 37 48.4	-2.4
comp=Z,61nm,0.9s						
LMR	**La Mourre**	**144.15 335**⇑	*i*PKP1	PKPdf	23 37 48.4	-2.7
comp=Z,166nm,0.9s						
RJF	**Les Rejaudoux**	**144.25 342**⇑	*i*PKP1	PKPdf	23 37 49.0	-2.2
comp=Z,78nm,1.2s						
RJF			*e*MLR	MLR		
comp=Z,268nm,20.5s						
RJF	**Les Rejaudoux**	**144.25 342**⇑	*i*PKP	PKPdf	23 37 49.0	-2.2
RJF			LR	LR		
comp=Z,270nm,20.5s						
CAF	**Calviac**	**144.42 341**⇑	*i*PKP1	PKPdf	23 37 49.8	-1.7
comp=Z,70nm,1.0s						
LASF	**Ste Croix**	**144.56 338**⇑	*i*PKP1	PKPdf	23 37 50.3	-1.4
comp=Z,112nm,0.8s						
LFF	**La Frestale**	**144.82 342**⇑	*i*PKP1	PKPdf	23 37 50.9	-1.3
comp=Z,118nm,1.0s						
MTLF	**Montolieu**	**145.78 339**⇑	*i*PKP1	PKPbc	23 37 54.1	-0.4
comp=Z,114nm,1.0s						
FILF	**Fillols**	**146.34 338**	PKP	PKPdf	23 37 55.7	+0.8
MLS	**Moulis**	**146.49 340**	PKP	PKPdf	23 37 55.9	+0.8
EPF	**Esparros**	**146.67 341**	*e*PKP1	PKPdf	23 37 54.7	-0.7
comp=Z,31nm,0.8s						
VALF	**Valcebollere**	**146.67 339**	PKP	PKPdf	23 37 55.3	-0.1
LABF	**Labassere**	**146.74 342**	PKP	PKPdf	23 37 55.5	0.0
REYF	**Montagne du Re**	**146.86 342**	PKP	PKPdf	23 37 56.2	+0.5
RESF	**Ens**	**146.87 341**	PKP	PKPdf	23 37 55.9	+0.2
VIEF	**Viey**	**146.90 342**	PKP	PKPbc	23 37 57.8	0.0
SJPF	**Ste Jean**	**147.06 343**⇑	*i*PKP1	PKPbc	23 37 57.6	-0.6
comp=Z,41nm,1.1s						
ETSF	**Etsaut**	**147.06 342**	*e*PKP1	PKPbc	23 37 57.4	-0.9
comp=Z,85nm,0.9s						
KEST	**Kesra**	**148.48 323**	PKPbc	PKPbc	23 38 02.0	-0.3
comp=Z,16nm,0.8s,baz=359,slow=0.6,SNR=55						
CMAH	**Djebel Manchou**	**148.94 326**	P	PKPbc	23 38 02.6	-0.9
CKFL	**Kef-Lekhel**	**149.49 327**	P	PKPbc	23 38 04.4	-0.4
PBRG	**Braganca**	**

n31,σ0°89/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.09**	**103**	PG	**Pg**	**23 26 10.4**	**-1.0**
CEYT	**Ceyhan**	**0.09**	**103**	*i* Pg	**Pg**	**23 26 10.4**	**-1.1**
YURE	**YUREGIR**	**0.20**	**182**	*i* P	**Pg**	**23 26 13.0**	**-0.1**
YURE				*i* S	**Sg**	**23 26 18.7**	**+2.5**
YURE	**YUREGIR**	**0.20**	**182**	*i* P	**Pg**	**23 26 13.0**	**-0.1**
YURE				*i* S	**Sg**	**23 26 18.7**	**+2.5**
KOZT	**Kozan**	**0.47**	**18**	PG	**Pg**	**23 26 17.6**	**-0.4**
KOZT				*e*SG	**Sg**	**23 26 24.3**	**0.0**
KRTS	**Karatas**	**0.50**	**205**	*e*PG	**Pg**	**23 26 18.4**	**-0.1**
KRTS	**Karatas**	**0.50**	**205**	*e*Pg	**Pg**	**23 26 18.4**	**-0.1**
KARA	**Karaisali**	**0.52**	**296**	*e*PG	**Pg**	**23 26 17.9**	**-1.0**
KARA	**Karaisali**	**0.52**	**296**	*e*Pg	**Pg**	**23 26 17.9**	**-1.0**
GULE	**Gulek**	**0.74**	**290**	*i* P	**Pg**	**23 26 22.4**	**-0.5**
GULE				*i* S	**Sg**	**23 26 33.4**	**+0.9**
GULE	**Gulek**	**0.74**	**290**	*i* P	**Pg**	**23 26 22.4**	**-0.5**
GULE				*i* S	**Sg**	**23 26 33.4**	**+0.8**
ANDN	**Andirin**	**0.78**	**45**	*i* P	**Pg**	**23 26 23.1**	**-0.7**
ANDN				*i* S	**Sg**	**23 26 36.2**	**+2.1**
ANDN	**Andirin**	**0.78**	**45**	*i* P	**Pg**	**23 26 23.1**	**-0.7**
ANDN				*i* S	**Sg**	**23 26 36.2**	**+2.1**
MERS	**Mersin**	**0.91**	**260**	*e*PG	**Pg**	**23 26 25.3**	**-0.9**
MERS	**Mersin**	**0.91**	**260**	*e*Pg	**Pg**	**23 26 25.3**	**-0.9**
HTY	**Hatay**	**0.99**	**156**	*e*PG	**Pg**	**23 26 27.2**	**-0.5**
HTY	**Hatay**	**0.99**	**156**	*e*Pg	**Pg**	**23 26 27.2**	**-0.5**
YAYL	**Yayladag**	**1.06**	**159**	*i* P	**Pb**	**23 26 28.2**	**-0.5**
YAYL	**Yayladag**	**1.06**	**159**	*i* P	**Pb**	**23 26 28.2**	**-0.5**
KMRS	**Kahramanmaras**	**1.11**	**64**	*e*PN	**Pn**	**23 26 29.0**	**-0.7**
KMRS	**Kahramanmaras**	**1.11**	**64**	*e*Pn	**Pn**	**23 26 29.0**	**-0.7**
GAZ	**Gaziantep**	**1.26**	**83**	*e*PN	**Pn**	**23 26 32.2**	**+0.4**
GAZ	**Gaziantep**	**1.26**	**83**	*e*Pn	**Pn**	**23 26 32.2**	**+0.4**
IKL	**Isikli**	**1.76**	**244**	*e*PN	**Pn**	**23 26 38.8**	**+0.2**
IKL	**Isikli**	**1.76**	**244**	*e*Pn	**Pn**	**23 26 38.8**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.84**	**27**	*e*PN	**Pn**	**23 26 34.7**	**-5.1**
SARI	**SarD1z-Kayseri**	**1.84**	**27**	*e*Pn	**Pn**	**23 26 34.7**	**-5.1**
SULT	**Sultanhani-AKS**	**2.05**	**305**	*e*PN	**Pn**	**23 26 43.1**	**+0.5**
SULT	**Sultanhani-AKS**	**2.05**	**305**	*e*Pn	**Pn**	**23 26 43.1**	**+0.4**
HDMB	**Hadim**	**2.53**	**269**	*e*PN	**Pn**	**23 26 50.2**	**+1.0**
HDMB	**Hadim**	**2.53**	**269**	*e*Pn	**Pn**	**23 26 50.2**	**+1.0**

NIED ***09*** *23:57:00, 40°.30N×142°.10E, h59km, Mw3.9 Best double couple: M0 7.44000×10^14 NP1:φs 113.00000°, δ79.00000°, λ108.00000°. NP2:φs 233.00000°, δ21.00000°, λ32.00000°.*
ISCJB ***09*** *23:57:15.7±0.5, 40°.27N±0°.03×142°.02E±0°.07, h74km±3km, mb4.0/20, Error ellipse: s-maj=8.6km s-min=5.3km az=15.9*
BJI ***09*** *23:57:15.8, 40°.53N×142°.22E, h74km, mB4.4/2, mb4.4/3, Ms4.3/1, Ms7 4.0/1*
MOS ***09*** *23:57:16.8±1.0, 40°.31N×141°.93E, h81km, mb4.1/11, Error ellipse: s-maj=11.2km s-min=7.9km az=85.4*
JMA ***09*** *23:57:16.6, 40°.27N×142°.09E, h59km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs 37.00000°, δ17.00000°, λ101.00000°. NP2: φs 205.00000°, δ73.00000°, λ87.00000°. Principal axes: T Plg62.0000°, Azm110.0000°; N Plg3.0000°, Azm206.0000°; P Plg28.0000°, Azm298.0000°;*
JMA Felt III J1.
NEIC ***09*** *23:57:18.7±0.5, 40°.24N×141°.96E, h87km±4km, mb4.3/8 Error ellipse: s-maj=7.8km s-min=4.7km az=117.0*
NEIC Recorded [3 JMA] in Aomori and [2 JMA] in Iwate.
IDC ***09*** *23:57:18.9±2.4, 40°.23N×141°.97E, h87km±22km, mb3.7/9, mb1 3.8/12, mb1mx3.6/24, mbtmp3.6/12, MS3.1/1, Ms1 3.1/1, ms1mx2.6/35, Error ellipse: s-maj=21.0km s-min=15.9km az=111.0*

ISC 09 23:57:17.0±0.5, 40°.26N±0°.03×141°.98E±0°.07, h68km±3km, n65, σ0°97/77, mb4.0/20, 6C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.33**	**196**	⇑P	**Pn**	**23 57 27.3**	**-0.9**
JTH				S	**Sn**	**23 57 35.0**	**-1.3**
JANG	**Nango**	**0.38**	**288**	⇑P	**Pn**	**23 57 27.9**	**-0.7**
JANG				S	**Sn**	**23 57 36.1**	**-0.9**
JKZ	**Kuzumaki**	**0.57**	**242**	⇑P	**Pn**	**23 57 30.3**	**-0.1**
JKZ				S	**Sn**	**23 57 40.0**	**-0.1**
JTM	**Tenmabayashi**	**0.88**	**308**	⇑P	**Pn**	**23 57 33.5**	**-0.4**
JTM				S	**Sn**	**23 57 45.8**	**-0.5**
JOM	**Ohasama**	**0.94**	**214**	⇑P	**Pn**	**23 57 34.6**	**-0.1**
JOM				S	**Sn**	**23 57 48.2**	**+0.4**
JAH	**Hinai**	**1.03**	**267**	⇓P	**Pn**	**23 57 36.1**	**+0.3**
JAH				S	**Sn**	**23 57 50.8**	**+1.0**
JOT	**Ohata**	**1.33**	**328**	⇓P	**Pn**	**23 57 39.0**	**-0.7**
JOT				S	**Sn**	**23 57 55.9**	**-0.7**
JMK	**Ichinoseki**	**1.43**	**205**	⇑P	**Pn**	**23 57 41.0**	**0.0**
ERM	**Erimo**	**1.97**	**26**	*e*P	**Pn**	**23 57 49.5**	**+1.3**
ASAJ	**Asahikawa**	**3.88**	**7**	P	**Pn**	**23 58 16.6**	**+2.3**
	4.3nm,0.3s,baz=198,slow=12,SNR=6.8						
ASAJ				S	**Sn**	**23 58 58.0**	**-0.6**
	2.4nm,0.3s,baz=150,slow=9.4,SNR=3.8						
ASAJ				LR	LR	00 00 23.3	
	comp=Z,270nm,19.6s,baz=220,slow=47						
ASAJ	**Asahikawa**	**3.88**	**7**	P	**Pn**	**23 58 16.6**	**+2.4**
ASAJ				S	**Sn**	**23 58 58.0**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ	**Asahikawa**	**3.88**	**7**	*e*Pn	**Pn**	**23 58 16.4**	**+2.1**
MJAR	**Matsushiro Arr**	**4.75**	**220**	P	**Pn**	**23 58 28.0**	**+1.9**
	comp=N,3.4nm,0.3s,baz=26,slow=13,SNR=19						
MJAR	**Matsushiro Arr**	**4.75**	**220**	P	**Pn**	**23 58 28.0**	**+2.0**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MAJO	**Matsushiro**	**4.75**	**220**	*e*Pn	**Pn**	**23 58 27.8**	**+1.8**
MAJO				*e*Sn	**Sn**	**23 59 17.5**	**-2.2**
MAT	**Matsushiro**	**4.75**	**220**	P	**Pn**	**23 58 28.3**	**+2.3**
YUK	**Yuzh-Kuril'sk**	**4.75**	**36**	*e*P	**Pn**	**23 58 25.0**	**-1.1**
YUK				*e*S	**Sn**	**23 59 14.0**	**-5.8**
YUK				pmax	pmax		
	comp=E,30nm,0.4s						
YUK				pmax	pmax		
	comp=Z,90nm,0.4s						
YUK				pmax	pmax		
	comp=N,30nm,0.3s						
YUK				pmax	pmax		
	comp=Z,110nm,0.9s						
YUK				smax			
	comp=E,165nm,0.5s						
YUK				smax			
	comp=N,283nm,0.4s						
YUK				smax			
	comp=N,280nm,0.8s						
YUK				smax			
	comp=E,180nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.72**	**5**	*e*P	**Pn**	**23 58 55.4**	**+2.5**
MDJ	**Mudanjiang**	**10.14**	**300**	*e*Pn	**Pn**	**23 59 41.7**	**+2.0**
	comp=E,9.2nm,0.9s						
KSRS	**Korea Array**	**11.31**	**260**	P	**Pn**	**23 59 57.6**	**+1.8**
	comp=E,0.4nm,0.3s,baz=66,slow=15,SNR=3.0						
INCN	**Inchon**	**12.28**	**262**	P	**Pn**	**00 00 09.9**	**+1.0**
HIA	**Hailar**	**18.13**	**307**	P	**Pn**	**00 01 23.4**	**-0.5**
HHC	**Hu-ho-hao-te**	**23.07**	**281**	*e*P	**P**	**00 02 16.8**	**+0.1**
HHC				pP		00 02 33.8	
HHC				sP	sP	00 02 43.0	+3.2
HHC				PP		00 02 50.1	
HHC				PcP	PcP	00 06 06.6	+3.1
HHC				S	**S**	**00 06 18.7**	**-3.5**
HHC				sS	sS	00 06 45.9	-3.1
HHC				SS		00 07 06.9	
HHC				ScP	ScP	00 09 36.7	+1.4
HHC				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.3						
HHC				pmax	pmax		
	comp=Z,78nm,6.0s						
HHC				LR	LR		
	comp=N,400nm,13.5s						
HHC				LR	LR		
	comp=E,360nm,14.5s						
HHC				LR	LR		
	comp=Z,360nm,14.2s						
TWG	**Pinlang**	**24.79**	**232**	P	**P**	**00 02 31.2**	**-1.4**
SONM	**Songino Array**	**26.50**	**298**	P	**P**	**00 02 47.9**	**+0.2**
	comp=Z,1.1nm,0.6s,mb3.5,baz=90,slow=8.9,SNR=6.9						
TLY	**Talaya**	**28.67**	**306**	P	**P**	**00 03 06.8**	**-0.3**
ZAA0	**Zalesovo Array**	**40.14**	**310**	*e*P	**P**	**00 04 44.8**	**-1.2**
ZALV	**Zalesovo Beam**	**40.14**	**310**	P	**P**	**00 04 45.9**	**-0.1**
	comp=Z,3.9nm,0.5s,mb4.5,baz=91,slow=9.3,SNR=18						
ZALV	**Zalesovo Beam**	**40.14**	**310**	P	**P**	**00 04 45.9**	**0.0**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
LSA	**Lhasa**	**42.45**	**272**	*e*P	**P**	**00 05 05.1**	**-0.1**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
LSA	**Lhasa**	**42.45**	**272**	*e*P	**P**	**00 05 05.1**	**-0.1**
	comp=Z,2.8nm,0.4s,mb4.3						
CHTO	**Chiang Mai**	**42.59**	**253**	P	**P**	**00 05 06.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**42.82**	**252**	P	**P**	**00 05 08.8**	**+0.6**
	comp=Z,0.4nm,0.4s,mb3.5,baz=41,slow=8.6,SNR=2.5						
MK31	**Makanchi Array**	**42.86**	**299**	*e*P	**P**	**00 05 08.3**	**0.0**
MKAR	**Makanchi Array**	**42.86**	**299**	P	**P**	**00 05 08.2**	**-0.1**
	comp=Z,1.3nm,0.6s,mb3.8,baz=84,slow=9.6,SNR=23						
MKAR	**Makanchi Array**	**42.86**	**299**	P	**P**	**00 05 08.2**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**44.36**	**306**	*e*P	**P**	**00 05 20.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
KURK	**Kurchatov**	**44.36**	**306**	*e*P	**P**	**00 05 20.6**	**+0.4**
	comp=Z,3.9nm,0.5s,mb4.4						
ILAR	**Eielson Array**	**46.56**	**34**	P	**P**	**00 05 37.6**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.6,baz=264,slow=5.8,SNR=11						
ILAR	**Eielson Array**	**46.56**	**34**	P	**P**	**00 05 37.6**	**+0.2**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TKM2	**Tokmak 2**	**48.55**	**296**	*e*P	**P**	**00 05 52.3**	**-0.9**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
TKM2	**Tokmak 2**	**48.55**	**296**	*e*P	**P**	**00 05 52.3**	**-1.0**
	comp=Z,1.9nm,0.4s,mb4.4						
BRVK	**Borovoye**	**48.84**	**310**	*e*P	**P**	**00 05 55.6**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**48.84**	**310**	*e*P	**P**	**00 05 55.6**	**+0.3**
	comp=Z,2.3nm,0.6s,mb4.3						
EKS2	**Erkin-Say**	**49.90**	**296**	P	**P**	**00 06 02.5**	**-1.0**
AML	**Almayashu**	**50.15**	**296**	*e*P	**P**	**00 06 05.3**	**-0.1**
	comp=Z,0.6nm,0.3s,mb4.0						
KKAR	**Karatay Array**	**51.95**	**298**	*e*P	**P**	**00 06 18.3**	**-0.6**
	comp=Z,0.3nm,0.4s,mb3.7						
ARU	**Arti**	**54.27**	**317**	P	**P**	**00 06 35.9**	**+0.2**
ABKAR	**Akbulak array**	**56.24**	**309**	*e*P	**P**	**00 06 49.8**	**-0.2**
	comp=Z,0.6nm,0.3s,mb4.1						
KBL	**Kabul**	**56.73**	**289**	P	**P**	**00 06 53.3**	**-0.4**
WRA	**Warramunga Arr**	**60.31**	**188**	P	**P**	**00 07 17.7**	**-0.9**
	comp=Z,0.9nm,0.7s,mb3.9,baz=9.3,slow=7.1,SNR=4.6						
WRA	**Warramunga Arr**	**60.31**	**188**	P	**P**	**00 07 17.7**	**-0.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JOF	**Joensuu**	**63.34**	**331**	*e*P	**P**	**00 07 37.3**	**-1.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
JOF	**Joensuu**	**63.34**	**331**	*e*p	**P**	**00 07 37.3**	**-1.2**
	comp=Z,0.5nm,0.3s,mb3.9						
PALK	**Pallekele**	**63.53**	**256**	*e*P	**P**	**00 07 40.4**	**0.0**
PALK				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.0						
PALK	**Pallekele**	**63.53**	**256**	*e*P	**P**	**00 07 40.4**	**-0.1**
	comp=Z,25nm,1.1s,mb5.0						
ASAR	**Alice Springs**	**64.03**	**188**	P	**P**	**00 07 43.0**	**-0.5**
	comp=Z,0.6nm,0.6s,mb3.6,baz=14,slow=5.6,SNR=6.7						
ASAR	**Alice Springs**	**64.03**	**188**	P	**P**	**00 07 43.0**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KAF	**Kangasniemi**	**65.66**	**332**	*e*P	**P**	**00 07 54.9**	**+1.3**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
KAF	**Kangasniemi**	**65.66**	**332**	*e*p	**P**	**00 07 54.9**	**+1.3**
	comp=Z,0.5nm,0.4s,mb3.7						
FINES	**FINESS Array B**	**66.18**	**332**	P	**P**	**00 07 56.7**	**-0.3**
	comp=Z,5.7nm,0.9s,mb4.4,baz=88,slow=9.9,SNR=6.3						
FINES	**FINESS Array B**	**66.18**	**332**	P	**P**	**00 07 56.7**	**-0.3**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	**Kislovodsk**	**69.15**	**310**	P	**P**	**00 08 16.2**	**+0.2**
KIV	**Kislovodsk**	**69.15**	**310**	P	**P**	**00 08 16.2**	**+0.2**
PDAR	**Pinedale Array**	**75.11**	**46**	P	**P**	**00 08 52.4**	**+0.9**
	comp=Z,0.3nm,0.5s,mb3.3,baz=302,slow=1.4,SNR=4.2						

ISK ***10*** *00:15:53.5, 37°.90N×27°.09E, h6km, MD2.6*
ISCJB ***10*** *00:15:54.2±0.7, 37°.91N±0°.02×27°.16E±0°.08, h6km±8km, Error ellipse: s-maj=10.0km s-min=4.0km az=173.4*
CSEM ***10*** *00:15:54.3±0.2, 37°.92N×27°.12E, h5km, MD2.8, Error ellipse: s-maj=5.6km s-min=2.8km az=87.0*
DDA ***10*** *00:15:54.2, 37°.92N×27°.18E, h7km±6km, Md2.8*

ISC 10 00:15:54.6±0.7, 37°.92N±0°.02×27°.14E±0°.08, h6km±10km, n18, σ0°64/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.23**	**161**	*i* P	**Pg**	**00 15 58.9**	**-0.2**
GCAM				*i* S	**Sg**	**00 16 02.5**	**+0.4**
GCAM	**G?zelcaml?**	**0.23**	**161**	*i* P	**Pg**	**00 15 58.9**	**-0.2**
GCAM				*i* S	**Sg**	**00 16 02.5**	**+0.4**
IZM	**Izmir**	**0.49**	**11**	PG	**Pg**	**00 16 04.0**	**-0.1**
IZM				*e*SG	**Sg**	**00 16 11.4**	**+0.9**
IZM	**Izmir**	**0.49**	**11**	*i* Pg	**Pg**	**00 16 04.0**	**-0.1**
IZM				*e*Sg	**Sg**	**00 16 11.4**	**+0.9**
KDAG	**Bornova**	**0.50**	**11**	*i* P	**Pg**	**00 16 03.1**	**-1.1**
KDAG				*i* S	**Sg**	**00 16 10.6**	**0.0**
KDAG	**Bornova**	**0.50**	**11**	*i* P	**Pg**	**00 16 03.1**	**-1.1**
KDAG				*i* S	**Sg**	**00 16 10.6**	**0.0**
AYDN	**Tasoluk**	**0.64**	**113**	*i* P	**Pg**	**00 16 07.2**	**+0.4**
AYDN				*i* S	**Sg**	**00 16 13.9**	**-1.2**
AYDN	**Tasoluk**	**0.64**	**113**	*i* P	**Pg**	**00 16 07.2**	**+0.4**
AYDN				*i* S	**Sg**	**00 16 13.9**	**-1.2**
MLSB	**Milas**	**0.80**	**141**	*e*PG	**Pg**	**00 16 10.1**	**+0.2**
MLSB				*e*SG	**Sg**	**00 16 21.4**	**+1.1**
MLSB	**Milas**	**0.80**	**141**	*e*Pg	**Pg**	**00 16 10.1**	**+0.2**
MLSB				*e*Sg	**Sg**	**00 16 21.4**	**+1.1**
BODT	**Bodrum**	**0.86**	**171**	*e*PG	**Pg**	**00 16 10.4**	**-0.8**
BODT				*e*SG	**Sg**	**00 16 22.4**	**+0.1**
BODT	**Bodrum**	**0.86**	**171**	*e*Pg	**Pg**	**00 16 10.4**	**-0.8**
BODT				*e*Sg	**Sg**	**00 16 22.4**	**0.0**
BDRM	**Kayabasi**	**0.88**	**164**	*i* P	**Pg**	**00 16 12.3**	**+0.7**
BDRM				*i* S	**Sg**	**00 16 22.4**	**-0.6**
BDRM	**Kayabasi**	**0.88**	**164**	*i* P	**Pg**	**00 16 12.3**	**+0.8**
BDRM				*i* S	**Sg**	**00 16 22.4**	**-0.6**
KULA	**Kula-Manisa**	**1.34**	**63**	*e*PN	**Pn**	**00 16 20.0**	**+0.2**
KULA	**Kula-Manisa**	**1.34**	**63**	*e*Pn	**Pn**	**00 16 20.0**	**+0.2**
APE	**Apeiranthos**	**1.54**	**237**	*e*PN	**Pn**	**00 16 22.4**	**-0.1**
APE	**Apeiranthos**	**1.54**	**237**	*e*Pn	**Pn**	**00 16 22.4**	**-0.1**

NNC 10 00:17:30.4±2.1, 38°.93N×72°.16E, h0km, mb3.6, mpv3.3, 4C-5D, Error ellipse: s-maj=16.8km s-min=11.7km az=11.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.35**	**344**	⇓Pn	Pn	00 18 41.0	+3.2
	2.5nm,0.3s,baz=161,slow=12,SNR=121						
KK31				⇓Pg	Pg	00 18 50.5	-3.3
	2.5nm,0.4s,baz=163,slow=15,SNR=10						
KK31				⇑Sn	Sn	00 19 35.7	+6.4
	2.3nm,0.3s,baz=167,slow=24,SNR=2.6						
KK31				⇑Lg		00 19 47.4	
	8.8nm,0.6s,baz=162,slow=29,SNR=4.3						
TKM2	**Tokmak 2**	**4.76**	**32**	⇓Pn	Pn	00 18 42.8	-0.6
	1.7nm,0.7s						
TKM2				⇓Pg	Pg	00 18 56.9	-4.8
	3.5nm,0.7s						
TKM2				⇓Lg		00 20 01.2	
	8.8nm,0.9s						
AB31	**Akbulak array**	**13.53**	**324**	⇑P	Pn	00 20 43.7	+0.1
	0.5nm,0.5s,baz=136,slow=14,SNR=9.4						
AB31				⇑S	Sn	00 23 16.4	+1.8
	0.3nm,0.5s,baz=130,slow=23,SNR=4.8						

IDC ***10*** *00:18:47.4±0.4, 2°.51N×96°.38E, h0km, mb4.5/23, mb1 4.6/24, mb1mx4.5/29, mbtmp4.6/24, ML4.8/1, MS4.5/19, Ms1 4.5/19, ms1mx4.2/31, Error ellipse: s-maj=17.5km s-min=11.2km az=60.0*
BJI ***10*** *00:18:48.1, 2°.21N×96°.20E, h32km, mB5.2/38, mb5.1/52, Ms4.9/54, Ms7 4.8/51*
ISCJB ***10*** *00:18:51.4±0.6, 2°.46N±0°.03×96°.26E±0°.03, h37km±5km, mb4.9/115, MS4.6/46, Error ellipse: s-maj=5.6km s-min=4.4km az=139.1*
MOS ***10*** *00:18:51.0±1.1, 2°.52N×96°.29E, h33km, mb5.2/36, MS4.6/9, Error ellipse: s-maj=10.9km s-min=5.2km az=113.9*
DJA ***10*** *00:18:51, 2°.40N×96°.11E, h15km, mb5.1/25*
NEIC ***10*** *00:18:53.4±1.0, 2°.45N×96°.29E, h40km±8km, mb5.0/44, Error ellipse: s-maj=7.6km s-min=4.5km az=48.0*

ISC 10 00:18:54.0±0.5, 2°.47N±0°.03×96°.27E±0°.03, h43km±5km, h37km±1.7km: pP-P, n315, σ1°04/324, mb4.9/115, MS4.6/46, 23C-9D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.20**	**49**	P	**Pn**	**00 19 13.0**	**-1.4**
TPTI				S	**Sn**	**00 19 32.4**	**+2.8**
TSI	**Tuntungan**	**2.51**	**66**	P	**Pn**	**00 19 33.2**	**+0.8**
TSI				S	**Sn**	**00 20 10.6**	**+8.8**
MNSI	**Mandailing Nat**	**3.71**	**117**	P	**Pn**	**00 19 48.5**	**-0.3**
SISI	**Saibi**	**4.71**	**143**	P	**Pn**	**00 20 01.4**	**-1.2**
PPI	**Padang Panjang**	**5.05**	**125**	P	**Pn**	**00 20 07.7**	**+0.4**
	1.3nm230nm,1.2s						
IPM	**Ipoh**	**5.15**	**67**	P	**Pn**	**00 20 09.0**	**+0.3**
IPM	**Ipoh**	**5.15**	**67**	*e*Pn	**Pn**	**00 20 08.6**	**-0.1**
IPM				*e*Sn	**Sn**	**00 21 07.6**	**+0.6**
IPM	**Ipoh**	**5.15**	**67**	P	**Pn**	**00 20 09.0**	**+0.3**
	1.5nm4μm363nm,0.8s						
KULM	**Kulim**	**5.19**	**57**	P	**Pn**	**00 20 09.3**	**+0.1**
KULM	**Kulim**	**5.19**	**57**	*e*Pn	**Pn**	**00 20 08.8**	**-0.4**
KULM	**Kulim**	**5.19**	**57**	P	**Pn**	**00 20 09.2**	**0.0**
	1.4nm4μm355nm,0.9s						
BKNI	**Bangkinang**	**5.23**	**114**	P	**Pn**	**00 20 10.5**	**+0.8**
	2.7nm5μm339nm,1.2s						
PDSI	**Padang**	**5.38**	**129**	P	**Pn**	**00 20 10.9**	**-0.9**
	1.7nm4μm160nm,1.0s						
FRIM	**Kepong**	**5.41**	**82**	P	**Pn**	**00 20 12.5**	**+0.4**
KGM	**Kluang**	**7.06**	**94**	P	**Pn**	**00 20 36.0**	**+1.0**
KTGM	**Kuala Trenggan**	**7.42**	**67**	P	**Pn**	**00 20 40.4**	**+0.6**
MYKOM	**Kota Tinggi**	**7.61**	**95**	P	**Pn**	**00 20 42.4**	**0.0**
	0.4nm1μm72nm,1.0s						
KSI	**Kapahiang**	**8.78**	**134**	P	**Pn**	**00 20 59.1**	**+0.7**
	326nm,1.0s						
MNAI	**Manna**	**9.53**	**135**	P	**Pn**	**00 21 07.4**	**-1.3**
	350nm,0.9s						
MDSI	**Maura Dua**	**10.50**	**131**	P	**Pn**	**00 21 20.0**	**-2.1**
	979nm116nm,1.0s						
LWLI	**Liwa**	**10.77**	**134**	P	**Pn**	**00 21 26.0**	**+0.3**
	216nm,0.7s						
PPBI	**Pangkal Pinang**	**10.89**	**115**	P	**Pn**	**00 21 27.8**	**+0.4**
	3μm33nm,1.1s						
KLSI		**11.05**	**130**	P	**Pn**	**00 21 28.6**	**-1.0**
	96nm,1.0s						
KLI	**Kotabumi**	**11.26**	**130**	P	Px	00 21 47.4	
TPI	**Tanjungpandan**	**12.51**	**114**	P	**Pn**	**00 21 50.1**	**+0.5**
	392nm26nm,1.4s						
NST	**Nakhon Sawan**	**13.66**	**16**	P	**Pn**	**00 22 02.0**	**-3.2**
KSM	**Kuching**	**14.07**	**94**	*e*Pn	**Pn**	**00 22 10.7**	**-0.2**
KSM	**Kuching**	**14.07**	**94**	P	**Pn**	**00 22 16.1**	**+5.2**
	58nm,1.2s						
STKI	**Sintang**	**15.39**	**99**	P	**Pn**	**00 22 34.0**	**+5.6**
	80nm,1.1s						
SBUM	**Sibu**	**15.94**	**90**	P	**Pn**	**00 22 36.4**	**+0.9**
SBUM	**Sibu**	**15.94**	**90**	P	**Pn**	**00 22 39.3**	**+3.8**
	46nm,1.6s						
CM31	**Chiang Mai Arr**	**16.10**	**9**	*e*Pn	**Pn**	**00 22 37.8**	**+0.3**
	7.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**16.10**	**9**	Pn	**Pn**	**00 22 35.8**	**-1.6**
	1.2nm,0.3s,baz=199,slow=11,SNR=22						
CMAR				LR	LR	00 29 36.2	
	comp=Z,2μm,18.7s,baz=61,slow=40						
PALK	**Pallekele**	**16.22**	**288**	*e*P	**Pn**	**00 22 37.7**	**-1.3**
PALK				pmax	pmax		
	comp=Z,114nm,1.2s						
PALK	**Pallekele**	**16.22**	**288**	*e*Pn	**Pn**	**00 22 37.7**	**-1.3**
	comp=Z,114nm,1.2s						
CHG	**Chiang Mai**	**16.45**	**9**	⇓P	**Pn**	**00 22 40.7**	**-1.2**
	comp=Z,30nm,0.9s						
CHTO	**Chiang Mai**	**16.45**	**9**	*e*P	**Pn**	**00 22 40.5**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,32nm,1.1s						
CHTO	**Chiang Mai**	**16.45**	**9**	*e*Pn	**Pn**	**00 22 40.5**	**-1.4**
	comp=Z,32nm,1.1s						
CHTO	**Chiang Mai**	**16.45**	**9**	P	**Pn**	**00 22 41.0**	**-0.9**
	SNR=7.0						
BTM	**Bintulu**	**16.81**	**87**	P	**Pn**	**00 22 49.3**	**+2.9**
VIS	**Vishakhapatnam**	**19.77**	**321**	*i* P	**Pn**	**00 23 21.5**	**-0.9**
VIS				*ex*	x	00 23 27.7	
	comp=Z,98nm,1.5s						
VIS

comp=Z,133nm,0.9s,mb5.5
GUN Gumba 27.17 340 *e*P **P 00 24 34.3 +0.8**
comp=Z,182nm,0.8s,mb5.7
DMN Daman 27.18 338 *e*P **P 00 24 34.1 +0.5**
comp=Z,59nm,0.8s,mb5.2
KKN Kakani 27.28 338 *e*P **P 00 24 34.8 +0.3**
comp=Z,132nm,0.9s,mb5.5
LSA Lhasa 27.51 350 P **P 00 24 37.0 +0.5**
LSA sP sP 00 24 45.9 -7.4
LSA S **S 00 29 17.6 +3.0**
LSA sS sS 00 29 36.0 +1.9
LSA pmax pmax
comp=Z,60nm,1.3s,mb5.1
LSA LR LR
comp=E,760nm,25.5s
LSA LR LR
comp=Z,930nm,24.7s,MS4.3
LSA Lhasa 27.51 350 *e*P **P 00 24 37.0 +0.5**
LSA *e*S **S 00 29 16.3 +1.7**
LSA pmax pmax
comp=Z,91nm,1.1s,mb5.3
LSA Lhasa 27.51 350 *e*P **P 00 24 37.0 +0.4**
comp=Z,92nm,1.1s,mb5.3
LSA *e*S **S 00 29 16.3 +1.7**
GKN Gorkha 27.71 337 *e*P **P 00 24 38.8 +0.4**
comp=Z,168nm,0.9s,mb5.7
KOLN Koldanda 27.92 335 *e*P **P 00 24 40.9 +0.7**
comp=Z,172nm,1.0s,mb5.6
DANN Dangsing 28.36 336 *e*P **P 00 24 44.7 +0.5**
comp=Z,198nm,1.2s,mb5.6
CD2 Chengdu 29.16 13 *e*P **P 00 24 50.2 -1.0**
CD2 pP pP 00 24 59.7 -3.2
CD2 PP PP 00 25 45.2 -12
CD2 S **S 00 29 39.1 -1.4**
CD2 sS sS 00 29 55.0 -5.0
CD2 SS SS 00 31 10.4 -35
CD2 pmax pmax
comp=Z,30nm,1.1s,mb4.9
CD2 pmax pmax
comp=Z,100nm,6.2s
CD2 LR LR
comp=N,2μm,13.2s,MS5.0
CD2 LR LR
comp=E,2μm,15.4s,MS5.0
CD2 LR LR
comp=Z,2μm,11.9s,MS5.0
ENH Enshi 30.36 23 *e*P **P 00 24 59.6 -2.2**
comp=Z,29nm,0.9s,mb5.0
QZH Quanzhou 31.02 42 *e*P **P 00 25 12.4 +4.6**
QZH LR LR
comp=N,4μm,15.4s,MS5.2
QZH LR LR
comp=E,1μm,14.5s,MS5.2
QZH LR LR
comp=Z,4μm,17.6s,MS5.1
TWG Pinlang 31.43 48 *e*P **P 00 25 13.3 +1.8**
comp=Z,149nm,1.6s,mb5.6
MBWA Marble Bar 32.86 137 *e*P **P 00 25 23.3 -0.6**
comp=Z,18nm,1.0s,mb5.0
XAN Xi'an 33.56 19 P **P 00 25 28.4 -1.5**
XAN pP pP 00 25 38.0 -3.6
XAN sP sP 00 25 41.7 -5.1
XAN PP PP 00 26 40.6 -5.8
XAN PcP PcP 00 28 10.3 +0.5
XAN S **S 00 30 47.3 -1.9**
XAN ScS ScS 00 35 50.2 -2.1
XAN pmax pmax
comp=Z,19nm,1.1s,mb4.9
XAN pmax pmax
comp=Z,43nm,7.3s
XAN LR LR
comp=N,690nm,16.9s,MS4.5
XAN LR LR
comp=E,170nm,17.2s,MS4.5
XAN LR LR
comp=Z,340nm,15.8s,MS4.2
LZH Lanzhou 34.17 11 ⇓P **P 00 25 34.5 -0.7**
LZH sP sP 00 25 46.0 -6.1
LZH pmax pmax
comp=Z,44nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,210nm,4.0s
LZH LR LR
comp=N,430nm,9.8s
LZH LR LR
comp=E,2μm,16.7s
LZH LR LR
comp=Z,890nm,18.2s,MS4.5
FITZ Fitzroy Crossi 35.43 126 LR LR 00 41 23.0
comp=Z,715nm,18.9s,MS4.5,baz=308,slow=38
FITZ Fitzroy Crossi 35.43 126 *e*P **P 00 25 44.3 -2.0**
comp=Z,23nm,0.9s,mb5.1
FITZ Fitzroy Crossi 35.43 126 *e*P **P 00 25 44.9 -1.4**
comp=Z,15nm,0.9s,mb4.9
FITZ *e*PP PP 00 27 06.9 -0.5
FITZ Fitzroy Crossi 35.43 126 P **P 00 25 45.2 -1.1**
comp=Z,36nm,1.1s,mb5.2
MEEK Meekatharra 36.10 145 *e*P **P 00 25 56.5 +4.6**
NJ2 Nanjing 36.30 33 *e*P **P 00 25 52.2 -1.4**
NJ2 pP pP 00 26 01.4 -4.0
NJ2 sP sP 00 26 04.4 -6.1
NJ2 PP PP 00 27 16.8 0.0
NJ2 S **S 00 31 24.5 -7.0**
NJ2 pmax pmax
comp=Z,40nm,1.2s,mb5.2
NJ2 pmax pmax
comp=Z,150nm,8.0s
NJ2 LR LR
comp=N,1μm,17.9s,MS4.9
NJ2 LR LR
comp=E,2μm,14.8s,MS4.9
NJ2 LR LR
comp=Z,4μm,17.0s,MS5.3
KNA Kununurra 36.89 120 P **P 00 25 59.6 +0.8**
comp=Z,41nm,0.9s,mb5.3
GTA Gaotai 36.91 5 *e*P **P 00 25 57.9 -0.7**
GTA pP pP 00 26 07.2 -3.2
GTA sP sP 00 26 11.2 -4.4
GTA S **S 00 31 38.3 -2.3**
GTA pmax pmax
comp=Z,68nm,1.3s,mb5.3
GTA pmax pmax
comp=Z,300nm,5.7s
GTA LR LR
comp=N,710nm,16.4s,MS4.7
GTA LR LR
comp=E,520nm,14.5s,MS4.7
GTA LR LR
comp=Z,890nm,15.9s,MS4.7
SSE Sheshan 36.94 37 P **P 00 25 57.1 -2.0**
SSE pP pP 00 26 05.9 -5.0
SSE sP sP 00 26 09.9 -6.1
SSE S **S 00 31 41.2 -0.1**
SSE pmax pmax
comp=Z,28nm,0.6s,mb5.3
SSE pmax pmax
comp=Z,91nm,6.2s
SSE LR LR
comp=N,590nm,14.3s,MS4.8
SSE LR LR
comp=E,1μm,14.3s,MS4.8
SSE LR LR
comp=Z,1μm,15.5s,MS4.9
KAKA Kakadu 38.96 114 *e*P **P 00 26 14.1 -2.2**
comp=Z,26nm,0.6s,mb5.1
KAKA Kakadu 38.96 114 *e*P **P 00 26 14.1 -2.2**
comp=Z,67nm,0.6s,mb5.5
KAKA Kakadu 38.96 114 P **P 00 26 14.6 -1.7**
comp=Z,502nmcomp=Z,59nm,0.7s,mb5.5
BTO Baotou 39.95 16 *e*P **P 00 26 23.0 -1.2**
NWAO Narrogin (SRO) 40.41 152 P **P 00 26 28.4 +0.3**
comp=Z,10nm,0.9s,mb4.5,baz=333,slow=9.0,SNR=2.7
NWAO Narrogin (SRO) 40.41 152 P **P 00 26 28.4 +0.3**
HHC Hu-ho-hao-te 40.63 18 ⇑P **P 00 26 30.7 +0.9**
HHC pP pP 00 26 40.4 -1.3
HHC sP sP 00 26 44.7 -2.1
HHC PP PP 00 28 09.5 +5.5
HHC PcP PcP 00 28 32.1 +0.9
HHC ScP ScP 00 32 17.8 +0.4
HHC S **S 00 32 39.4 +2.8**
HHC sS sS 00 32 54.8 -1.7
HHC SS SS 00 35 36.4 -1.7
HHC ScS ScS 00 36 31.4 -0.4
HHC pmax pmax
comp=Z,14nm,1.2s,mb4.5
HHC pmax pmax
comp=Z,470nm,5.5s
HHC LR LR
comp=N,560nm,13.7s,MS4.9
HHC LR LR
comp=E,990nm,15.1s,MS4.9
HHC LR LR
comp=Z,790nm,13.6s,MS4.7
KSH Kashi 41.23 336 *e*P **P 00 26 33.2 -1.6**
KSH *e*pP pP 00 26 43.0 -3.8
KSH *e*sP sP 00 26 47.0 -4.9
KSH *e*PP PP 00 28 11.2 +0.5
KSH *e*PcP PcP 00 28 34.5 +1.3
KSH *e*ScP ScP 00 32 20.2 +0.4
KSH PcS PcS 00 32 24.1 -0.1
KSH S **S 00 32 41.0 -4.7**
KSH sS sS 00 32 57.9 -7.7
KSH SS SS 00 35 38.6 -12
KSH pmax pmax
comp=Z,15nm,0.6s,mb4.8
KSH pmax pmax
comp=Z,500nm,4.1s
KSH LR LR
comp=N,700nm,13.9s,MS5.0
KSH LR LR
comp=E,2μm,17.0s,MS5.0
KSH LR LR
comp=Z,2μm,21.5s,MS4.9
BJT Baijiatuau 41.51 23 *e*P **P 00 26 37.8 +0.8**
BJT pmax pmax
comp=Z,93nm,0.8s
BJT Baijiatuau 41.51 23 *e*P **P 00 26 37.8 +0.7**
comp=Z,93nm,0.8s,mb5.5
BJI Beijing 41.53 23 P **P 00 26 37.0 -0.2**
BJI PP PP 00 28 17.0 +3.2
BJI S **S 00 32 58.0 +8.0**
BJI pmax pmax
comp=Z,110nm,0.9s,mb5.5
BJI pmax pmax
comp=Z,300nm,3.1s
BJI LR LR
comp=N,640nm,14.0s,MS4.8
BJI LR LR
comp=E,620nm,15.6s,MS4.8
BJI LR LR
comp=Z,330nm,22.6s
WMQ Urumqi 41.87 351 P **P 00 26 40.0 +0.1**
WMQ pP pP 00 26 50.0 -1.9
WMQ sP sP 00 26 54.0 -3.0
WMQ PP PP 00 28 20.0 +2.5
WMQ S **S 00 32 55.0 +0.1**
WMQ SS SS 00 35 56.0 -6.7
WMQ pmax pmax
comp=Z,39nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,150nm,4.0s
WMQ LR LR
comp=N,520nm,15.0s,MS4.8
WMQ LR LR
comp=E,680nm,15.0s,MS4.8
WMQ LR LR
comp=Z,590nm,15.0s,MS4.6
ULHL Ulahol 43.47 338 P **P 00 26 54.7 +1.8**
SNR=10
WRA Warramunga Arr 43.50 123 P **P 00 26 52.1 -1.4**
comp=Z,2.6nm,0.5s,mb4.2,baz=300,slow=9.3,SNR=20
WRA LR LR 00 44 51.4
comp=Z,825nm,20.0s,MS4.6,baz=290,slow=36
WB2 Warramunga Arr 43.51 123 *e*P **P 00 26 52.5 -1.1**
KZA Kyzart 43.70 337 P **P 00 26 56.5 +1.7**
SNR=17
KZA Kyzart 43.70 337 *e*P **P 00 26 55.9 +1.0**
comp=Z,16nm,1.0s,mb4.7
TKM2 Tokmak 2 44.30 338 P **P 00 27 00.9 +1.3**
SNR=10
TKM2 Tokmak 2 44.30 338 *e*P **P 00 27 00.8 +1.2**
TKM2 pmax pmax
comp=Z,25nm,1.1s,mb4.9
TKM2 Tokmak 2 44.30 338 *e*P **P 00 27 00.8 +1.2**
comp=Z,25nm,1.1s,mb4.8
KBK Karagaybulak 44.31 337 P **P 00 27 01.0 +1.3**
SNR=26
KBK Karagaybulak 44.31 337 *e*P **P 00 27 01.0 +1.3**
comp=Z,35nm,0.8s,mb5.1
AML Almayashu 44.37 336 P **P 00 27 01.2 +1.1**
SNR=40
AML Almayashu 44.37 336 *e*P **P 00 27 01.2 +1.0**
comp=Z,40nm,1.1s,mb5.1
AAK Ala-Archa 44.47 337 P **P 00 27 01.8 +0.9**
SNR=13
AAK Ala-Archa 44.47 337 P **P 00 27 01.9 +1.0**
comp=Z,2.8nm,0.5s,mb4.3,baz=160,slow=4.1,SNR=17
AAK LR LR 00 47 12.3
comp=Z,748nm,20.6s,MS4.6,baz=145,slow=38
AAK Ala-Archa 44.47 337 *e*P **P 00 27 02.3 +1.3**
AAK *e* 00 28 43.5
AAK pmax pmax
comp=Z,32nm,1.2s,mb4.9
AAK Ala-Archa 44.47 337 *e*P **P 00 27 02.2 +1.3**
comp=Z,32nm,1.2s,mb4.9
AAK *e*PcP PcP 00 28 43.5 -0.5
AAK Ala-Archa 44.47 337 P **P 00 27 02.4 +1.4**
comp=Z,124nm,1.4s,mb5.5,SNR=5.2
FRU Bishkek 44.59 337 *e*P **P 00 27 02.0 +0.1**
FRU pmax pmax
comp=Z,110nm,2.5s,mb5.2
FRU MLR MLR
comp=Z,600nm,20.0s,MS4.5
CHMS Chumysh 44.68 338 P **P 00 27 03.5 +0.9**
SNR=7.1
EKS2 Erkin-Say 44.78 336 P **P 00 27 05.2 +1.8**
SNR=17
EKS2 Erkin-Say 44.78 336 *e*P **P 00 27 04.5 +1.0**
comp=Z,23nm,1.2s,mb4.9
FORT Forrest 44.84 140 *e*P **P 00 27 04.7 +0.5**
comp=Z,19nm,1.0s,mb4.9
FORT Forrest 44.84 140 *e*P **P 00 27 05.1 +0.9**
comp=Z,73nm,1.4s,mb5.3
ASAR Alice Springs 44.90 128 P **P 00 27 03.7 -1.0**
comp=Z,1.7nm,0.5s,mb4.1,baz=300,slow=7.7,SNR=34
ASAR PcP PcP 00 28 47.1 +1.3
comp=Z,0.6nm,0.6s,baz=310,slow=4.7,SNR=2.9
ASAR Alice Springs 44.90 128 P **P 00 27 03.7 -1.0**
ASAR PcP PcP 00 28 47.1 +1.3
USP Ospenovka 45.01 337 P **P 00 27 05.5 +0.3**
SNR=28
KSRS Korea Array 45.35 36 P **P 00 27 06.4 -1.7**
comp=Z,0.6nm,0.3s,mb3.9,baz=229,slow=9.3,SNR=5.1
KSRS LR LR 00 48 15.4
comp=Z,814nm,18.4s,MS4.7,baz=222,slow=39
MK31 Makanchi Array 45.79 347 *c e*P **P 00 27 11.0 -0.4**
MK31 pmax pmax
comp=Z,25nm,0.6s,mb5.3
MK31 Makanchi Array 45.79 347 *e*P **P 00 27 11.1 -0.3**
MKAR Makanchi Array 45.79 347 P **P 00 27 11.0 -0.4**
comp=Z,27nm,0.6s,mb5.3,baz=165,slow=7.0,SNR=222
MKAR LR LR 00 51 21.2
comp=Z,259nm,20.2s,MS4.2,baz=161,slow=43
SONM Songino Array 46.03 9 P **P 00 27 13.0 -0.2**
comp=Z,12nm,0.7s,mb4.9,baz=190,slow=9.4,SNR=66
SONM PcP PcP 00 28 49.7 +0.5
comp=Z,2.7nm,0.5s,baz=188,slow=3.5,SNR=4.9
SONM LR LR 00 48 57.6
comp=Z,1μm,18.2s,MS5.0,baz=189,slow=39
SONM Songino Array 46.03 9 P **P 00 27 13.0 -0.2**
SONM 00 28 49.7
KKAR Karatay Array 46.51 334 *e*P **P 00 27 17.4 +0.3**
ZAK Zakamensk 48.11 6 *e*P **P 00 27 29.0 -0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
CN2 Changchun 48.61 28 *e*P **P 00 27 31.9 -1.5**
CN2 *e*S **S 00 34 35.1 +2.7**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,16.0s,MS4.8
CN2 LR LR
comp=E,700nm,16.0s,MS4.8
CN2 LR LR
comp=Z,300nm,17.0s,MS4.3
MOY Mondy 49.18 4 *e*P **P 00 27 38.5 +0.8**
GUMO Guam 49.28 74 LR LR 00 45 46.3
comp=Z,233nm,21.1s,MS4.2,baz=264,slow=33
TLY Talaya 49.43 6 *e*P **P 00 27 40.2 +0.7**
TLY *e* pP 00 27 51.4 -0.3
TLY *e* 00 29 31.0
TLY *e* 00 34 35.8
TLY *e*SS SS 00 38 11.4 -4.5
TLY pmax pmax
comp=Z,13nm,0.8s,mb5.0
TLY pmax pmax
comp=Z,584nm,17.9s
TLY Talaya 49.43 6 *e*P **P 00 27 40.7 +1.2**
comp=Z,14nm,0.8s,mb5.0
TLY Talaya 49.43 6 P **P 00 27 40.8 +1.2**
SNR=5.5
ABKT Ailbek 49.64 320 P **P 00 27 41.1 -0.3**
comp=Z,119nm,1.1s,mb5.8,SNR=9.6
IRK Irkutsk 50.05 6 *e*P **P 00 27 44.8 +0.6**
IRK pmax pmax
comp=Z,56nm,2.1s,mb5.2
KURK Kurchatov 50.33 346 *e*P **P 00 27 46.2 -0.2**
KURK pmax pmax
comp=Z,53nm,1.2s,mb5.5
KURK Kurchatov 50.33 346 *e*P **P 00 27 46.0 -0.4**
comp=Z,54nm,1.2s,mb5.5
KURK Kurchatov 50.33 346 P **P 00 27 46.7 +0.3**
SNR=23
HIA Hailar 50.75 20 *e*P **P 00 27 49.3 -0.3**
HIA pmax pmax
comp=Z,50nm,1.3s
HIA Hailar 50.75 20 *e*P **P 00 27 49.3 -0.3**
comp=Z,50nm,1.3s,mb5.3
MDJ Mudanjiang 51.23 30 P **P 00 27 52.2 -1.1**
MDJ pP pP 00 28 01.3 -4.2
MDJ sP sP 00 28 05.0 -5.6
MDJ PP PP 00 29 48.9 -1.6
MDJ ScP ScP 00 33 01.7 +0.4
MDJ PcS PcS 00 33 05.5 -0.2
MDJ S **S 00 35 08.0 -0.9**
MDJ sS sS 00 35 23.6 -5.6
MDJ pmax pmax
comp=Z,13nm,1.5s,mb4.6
MDJ pmax pmax
comp=Z,98nm,3.6s
MDJ LR LR
comp=N,360nm,17.7s,MS4.6
MDJ LR LR
comp=E,390nm,17.0s,MS4.6
MDJ LR LR
comp=Z,490nm,17.0s,MS4.6
MJAR Matsushiro Arr 51.40 44 LR LR 00 51 26.5
comp=Z,327nm,19.3s,MS4.4,baz=235,slow=38
CIT Chita 51.45 14 *e*P **P 00 27 56.0 +1.2**
PMG Port Moresby 52.06 104 *e*P **P 00 28 00.0 0.0**
PMG pmax pmax
comp=Z,20nm,1.0s
ZAA0 Zalesovo Array 52.17 351 *e*P **P 00 27 59.5 -0.6**
ZALV Zalesovo Beam 52.17 351 P **P 00 27 59.8 -0.3**
comp=Z,32nm,0.5s,mb5.5,baz=167,slow=7.2,SNR=188
ZALV LR LR 00 54 43.2
comp=Z,321nm,19.9s,MS4.4,baz=268,slow=41
OPO Ambohidratompo 52.61 244 P **P 00 28 04.6 +0.5**
comp=Z,4.1nm,1.0s,mb4.3,baz=73,slow=8.2,SNR=4.5
ATD Arta Tunnel 53.70 282 LR LR 00 46 46.0
comp=Z,130nm,21.6s,MS4.0,baz=82,slow=31
CTA Charters Tower 53.91 117 P **P 00 28 10.8 -2.7**
comp=Z,3.5nm,0.6s,mb4.5,baz=270,slow=6.1,SNR=3.9
CTA LR LR 00 51 43.7
comp=Z,501nm,21.5s,MS4.5,baz=124,slow=37
CTAO Charters Tower 53.91 117 *e*P **P 00 28 14.5 +1.0**
CTAO pmax pmax
comp=Z,25nm,1.1s,mb5.1
CTAO Charters Tower 53.91 117 *e*P **P 00 28 14.5 +0.9**
comp=Z,25nm,1.1s,mb5.1
BVAR Borovoye Array 54.75 341 P **P 00 28 18.1 -1.0**
comp=Z,12nm,0.7s,mb5.1,baz=148,slow=9.3,SNR=60
BRVK Borovoye 54.81 341 *e*P **P 00 28 19.4 -0.1**
BRVK pmax pmax
comp=Z,19nm,1.2s,mb5.0
BRVK Borovoye 54.81 341 *e*P **P 00 28 19.0 -0.5**
comp=Z,13nm,0.7s,mb5.1
BRVK Borovoye 54.81 341 P **P 00 28 19.6 +0.1**
SNR=7.9
STKA Stephens Creek 54.90 132 P **P 00 28 19.7 -0.8**
comp=Z,3.5nm,0.7s,mb4.5,baz=299,slow=6.9,SNR=6.0
STKA LR LR 00 54 19.8
comp=Z,700nm,18.9s,MS4.8,baz=257,slow=39
STKA Stephens Creek 54.90 132 *e*P **P 00 28 20.1 -0.4**
comp=Z,8.4nm,1.0s,mb4.7
ZRNK Zerenda 55.15 340 P **P 00 28 20.4 -1.5**
ZRNK pmax pmax
comp=Z,11nm,0.7s,mb5.0
KLR Kul'dur 55.55 27 *e*P **P 00 28 20.3 -4.6**
KLR pmax pmax
comp=E,20nm,1.2s
KLR pmax pmax
comp=Z,60nm,1.2s,mb5.5
KLR MLR MLR
comp=Z,5μm,14.0s,MS5.7
AB31 Akbulak array 55.96 332 *c e*P **P 00 28 27.3 -0.6**
AB31 pmax pmax
comp=Z,36nm,1.1s,mb5.3
ABKAR Akbulak array 55.96 332 *e*P **P 00 28 27.4 -0.4**
AKTK Aktyubinsk 57.68 332 P **P 00 28 39.4 -0.6**
AKTO Aktyubinsk 57.68 332 P **P 00 28 39.4 -0.6**
comp=Z,4.0nm,0.5s,mb4.7,baz=124,slow=8.3,SNR=18
CMSA Cobar Meteorol 57.82 130 *e*P **P 00 28 41.2 -0.2**
KMBO Kilima Mbogo 59.11 267 P **P 00 28 52.3 +1.6**
comp=Z,9.6nm,0.8s,mb4.8,baz=0.1,slow=24,SNR=39
KMBO Kilima Mbogo 59.11 267 *e*P **P 00 28 51.6 +0.9**
KMBO pmax pmax
comp=Z,12nm,0.9s
KMBO Kilima Mbogo 59.11 267 *e*P **P 00 28 51.6 +0.9**
comp=Z,12nm,0.9s,mb4.9
KMBO Kilima Mbogo 59.11 267 P **P 00 28 52.8 +2.1**
SNR=6.2
GNI Garni 59.74 316 *e*P **P 00 28 58.9 +4.3**
GNI pmax pmax
comp=Z,16nm,1.2s
GNI Garni 59.74 316 P **P 00 28 55.5 +1.0**
comp=Z,23nm,1.4s,mb5.0
YUK Yuzh-Kuril'sk 60.22 39 ⇑*i*P **P 00 28 43.0 -15**
YUK *e*S **S 00 37 16.0 +7.4**
YUK MLR MLR
comp=N,970nm,20.0s,MS5.0
YUK MLR MLR
comp=E,350nm,20.0s,MS5.0
YUK MLR MLR
comp=Z,370nm,20.0s,MS4.5
SVE Sverdlovsk 61.17 339 ⇑*e*P **P 00 29 04.0 0.0**
SVE pmax pmax
comp=Z,41nm,1.2s,mb5.4
ZEI Tsey 61.43 318 *e*P **P 00 29 05.0 -1.1**
ZEI pmax pmax
comp=Z,19nm,1.5s,mb5.0
ARU Arti 61.66 337 *c i*P **P 00 29 06.2 -1.1**
ARU *e* 00 31 27.3
ARU S **S 00 37 27.9 +1.4**
ARU SS SS 00 41 21.7 -6.8
ARU pmax pmax
comp=Z,19nm,1.0s,mb5.2
ARU MLR MLR
comp=Z,479nm,18.0s,MS4.7
ARU Arti 61.66 337 *e*P **P 00 29 05.7 -1.6**
comp=Z,20nm,1.1s,mb5.2
ARU Arti 61.66 337 P **P 00 29 06.4 -0.9**
comp=Z,88nm,1.1s,mb5.8,SNR=7.9
KIV Kislovodsk 62.74 319 *e*P **P 00 29 15.2 +0.4**
KIV *i* pP 00 29 29.8 +2.5
KIV *i* 00 29 50.9
KIV pmax pmax
comp=Z,12nm,1.2s,mb4.9
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.0
KIV Kislovodsk 62.74 319 *e*P **P 00 29 14.8 0.0**
comp=Z,21nm,0.9s,mb5.3
KIV Kislovodsk 62.74 319 P **P 00 29 19.3 +4.5**
SNR=7.2
ASF Jabal al Asfar 62.97 305 P **P 00 29 17.6 +1.0**
comp=Z,1.1nm,0.7s,mb4.1,baz=140,slow=7.9,SNR=3.0
MALT Malatya 63.59 312 *e*P **P 00 29 20.6 0.0**
MALT pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
MALT Malatya 63.59 312 *e*P **P 00 29 20.6 +0.1**
comp=Z,10nm,1.3s,mb4.7
MMAI Mount Meron Ar 64.41 306 P **P 00 29 26.5 +0.4**
comp=Z,1.8nm,0.7s,mb4.2,baz=90,slow=12,SNR=4.9
YAK Yakutsk 64.47 17 *e*P **P 00 29 24.8 -1.1**
YAK pmax pmax
comp=Z,93nm,1.1s,mb5.7

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
YAK				pmax	pmax		
	comp=N,38nm,1.3s						
YAK				pmax	pmax		
	comp=E,33nm,1.4s						
YAK				MLR	MLR		
	comp=Z,546nm,14.0s,MS4.9						
YAK				MLR	MLR		
	comp=N,249nm,12.0s,MS4.7						
YAK				MLR	MLR		
	comp=E,133nm,11.0s,MS4.7						
YAK	Yakutsk	64.47	17	eP	P	00 29 25.3	-0.6
	comp=E,85nm,1.0s,mb5.7						
SOKR	Solikamsk	64.57	339c	iP	P	00 29 27.3	+0.8
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
SOKR				MLR	MLR		
	comp=Z,460nm,18.0s,MS4.7						
VRHR	Novokhopersk	66.56	326	eP	P	00 29 38.5	-1.1
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
VRHR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.6s						
BR131	Keskin Array S	67.57	312	eP	P	00 29 46.3	0.0
	comp=E,2.9nm,0.8s,mb4.4						
BRTR	Keskin Array B	67.57	312	P	P	00 29 45.2	-1.0
	comp=E,2.6nm,1.1s,mb4.2,baz=108,slow=4.7,SNR=8.2						
BRTR				LR	LR	01 00 43.5	
	comp=E,152nm,21.1s,MS4.2,baz=203,slow=37						
BRTR	Keskin Array B	67.57	312c	eP	P	00 29 45.4	-0.8
VSR	Storozhevoye	68.00	325	eP	P	00 29 48.0	-0.7
VSR				pmax	pmax		
	comp=N,7.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
VSR				MLR	MLR		
	comp=Z,220nm,19.0s,MS4.4						
VSR				MLR	MLR		
	comp=N,20nm,6.0s						
VSR				MLR	MLR		
	comp=E,20nm,6.0s						
LSZ	Lusaka	69.59	253	eP	P	00 29 59.9	+0.7
LSZ				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.9						
LSZ	Lusaka	69.59	253	eP	P	00 29 59.9	+0.6
	comp=Z,25nm,1.5s,mb4.9						
PRGR	Permogore	70.11	337⇑	iP	P	00 30 01.1	-0.5
PRGR				eS	S	00 39 06.8	-2.5
PRGR				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
MOS	Moscow	70.77	329	eP	P	00 30 03.2	-2.5
OBN	Obninsk	71.05	328	eP	P	00 30 07.0	-0.5
OBN				i	pP	00 30 19.2	-1.0
OBN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.4						
OBN	Obninsk	71.05	328	eP	P	00 30 06.9	-0.5
	comp=Z,49nm,1.4s,mb5.2						
TIXI	Tiksi	72.11	10	eP	P	00 30 12.0	-1.5
TIXI				pmax	pmax		
	comp=Z,59nm,1.5s,mb5.3						
TIXI				MLR	MLR		
	comp=Z,590nm,16.0s,MS5.0						
TIXI	Tiksi	72.11	10	eP	P	00 30 13.4	-0.1
	comp=Z,35nm,1.0s,mb5.2						
KLMR	Klimovskoe	72.21	335	eP	P	00 30 11.8	-2.5
KLMR				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0						
KLMR				MLR	MLR		
	comp=Z,277nm,17.0s,MS4.6						
SEY	Seymchan	72.97	23	eP	P	00 30 19.0	+0.2
KIEV	Kiev	73.69	322	eP	P	00 30 23.1	-0.2
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KIEV	Kiev	73.69	322	eP	P	00 30 23.1	-0.2
	comp=Z,3.1nm,0.6s,mb4.4						
MAW	Mawson	73.73	193	P	P	00 30 23.8	+0.7
	comp=Z,1.8nm,0.8s,mb4.1,baz=34,slow=9.6,SNR=3.5						
MAW				LR	LR	00 56 12.8	
	comp=Z,217nm,21.1s,MS4.4,baz=209,slow=30						
VRI	Vrincioaia	74.06	317	⇓P	P	00 30 26.3	+0.8
VRI	Vrincioaia	74.06	317⇓	iP	P	00 30 26.3	+0.8
PLOR	Plostina	74.11	317	⇑P	P	00 30 28.0	+2.2
PLOR	Plostina	74.11	317⇑	iP	P	00 30 28.0	+2.2
TESR		74.26	318⇑	iP	P	00 30 26.3	-0.4
MLR	Muntele Rosu	74.51	317	⇓P	P	00 30 29.2	+1.0
MLR	Muntele Rosu	74.51	317⇓	iP	P	00 30 29.2	+1.0
BOSA	Boshof	74.61	240	P	P	00 30 29.1	0.0
	comp=Z,4.6nm,0.9s,mb4.4,baz=127,slow=10,SNR=3.8						
BOSA				LR	LR	01 00 21.6	
	comp=Z,366nm,18.7s,MS4.7,baz=11,slow=33						
VOIR		75.11	316	⇑P	P	00 30 35.4	+3.7
VOIR		75.11	316⇑	iP	P	00 30 35.4	+3.7
BURAR	Bucovina Array	75.46	319	⇑P	P	00 30 33.8	+0.2
BURAR	Bucovina Array	75.46	319⇑	iP	P	00 30 33.8	+0.2
BUR08	Bucovina Ar. S	75.47	319	eP	P	00 30 34.2	+0.5
MNK	Minsk	75.58	326	eP	P	00 30 32.0	-2.1
JOF	Joensuu	76.60	335	eP	P	00 30 39.8	0.0
JOF	Joensuu	76.60	335	ep	P	00 30 39.8	0.0
	comp=Z,0.6nm,0.4s,mb3.9						
TARA	Tarawa	76.61	89	eP	P	00 30 41.2	+0.3
	comp=Z,4.1nm,0.6s,mb4.5						
DRGR		76.97	317	⇑P	P	00 30 42.3	+0.1
DRGR		76.97	317⇑	iP	P	00 30 42.3	+0.1
LVZ	Lovozero	77.33	340	eP	P	00 30 44.2	+0.4
LVZ				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.9						
TRPA	Tarpa	77.33	319⇓	iP	P	00 30 43.9	-0.3
KWP	Kalwaria Pacla	77.50	320	eP	P	00 30 45.5	+0.3
KWP	Kalwaria Pacla	77.50	320	eP	P	00 30 45.4	+0.3
KWP	Kalwaria Pacla	77.50	320	eP	P	00 30 45.3	+0.2
	comp=Z,15nm,0.9s,mb4.9						
KWP				ePP	PP	00 33 40.8	+0.6
KWP	Kalwaria Pacla	77.50	320⇓	iP	P	00 30 45.2	+0.1
UZH	Uzhgorod	77.58	319	e	P	00 30 46.6	+1.0
UZH				e	pP	00 30 59.2	+0.7
UZH	Uzhgorod	77.58	319	eP	P	00 30 35.6	-10
APA	Apatity	77.62	340⇑	iP	P	00 30 45.6	+0.2
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KOLS	Kolonicke sedl	77.65	320	eP	P	00 30 46.5	+0.5
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
KOLS	Kolonicke sedl	77.65	320	eP	P	00 30 46.5	+0.5
	comp=Z,7.3nm,1.1s,mb4.5						
KOLS	Kolonicke sedl	77.65	320	eP	P	00 30 46.5	+0.5
SUW	Suwalki	78.10	325	eP	P	00 30 47.6	-0.8
SUW	Suwalki	78.10	325	eP	P	00 30 47.5	-0.8
SUW				ePP	PP	00 33 42.0	-3.2
CRVS	Cervenica-Dubn	78.17	319	eP	P	00 30 50.7	+1.8
CRVS				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
CRVS	Cervenica-Dubn	78.17	319	eP	P	00 30 50.7	+1.8
	comp=Z,5.4nm,1.3s,mb4.3						
CRVS	Cervenica-Dubn	78.17	319	eP	P	00 30 50.7	+1.8
FINES	FINESS Array B	78.45	333	P	P	00 30 49.3	-0.8
	comp=Z,5.0nm,0.7s,mb4.6,baz=111,slow=6.1,SNR=12						
FINES				LR	LR	01 10 18.2	
	comp=Z,456nm,21.3s,MS4.8,baz=344,slow=39						
KAF	Kangasniemi	78.53	333	eP	P	00 30 48.3	-2.3
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
KAF	Kangasniemi	78.53	333	ep	P	00 30 48.3	-2.3
	comp=Z,1.0nm,0.4s,mb4.1						
KECS	Kecovo	78.74	319	eP	P	00 30 52.8	+0.8
KECS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
KECS	Kecovo	78.74	319	eP	P	00 30 52.8	+0.8
	comp=Z,2.3nm,0.9s,mb4.1						
KECS	Kecovo	78.74	319	eP	P	00 30 52.8	+0.8
NIE	Niedzica	79.00	320	eP	P	00 30 54.5	+1.1
PKSM	Moragy	79.66	316	⇑P	P	00 30 56.3	-0.8
PKSM	Moragy	79.66	316⇑	iP	P	00 30 56.3	-0.8
VYHS	Vyhne	79.83	319	eP	P	00 30 58.6	+0.7
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
VYHS	Vyhne	79.83	319	eP	P	00 30 58.6	+0.7
	comp=Z,2.8nm,1.4s,mb4.0						
VYHS	Vyhne	79.83	319	eP	P	00 30 58.6	+0.7
KOLL	Kolacno	80.12	319	eP	P	00 31 00.2	+0.6
KOLL	Kolacno	80.12	319	eP	P	00 31 00.2	+0.6
BILL	Bilibino	80.32	21	eP	P	00 31 03.0	+2.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
OKC	Ostrava-Krasne	80.45	320	eP	P	00 31 02.4	+1.1
OKC	Ostrava-Krasne	80.45	320	eP	P	00 31 02.4	+1.1
KEV	Kevo	80.60	341	eP	P	00 31 00.0	-1.7
KEV	Kevo	80.60	341	ep	P	00 31 00.0	-1.7
	comp=Z,0.4nm,0.4s,mb3.7						
ZST	Bratislava	80.94	318	eP	P	00 31 05.6	+1.7
ZST				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
ZST	Bratislava	80.94	318	eP	P	00 31 05.6	+1.7
	comp=Z,4.7nm,0.5s,mb4.7						
ZST	Bratislava	80.94	318	eP	P	00 31 05.6	+1.7
ARCES	ARCESS Array B	81.03	340	P	P	00 31 03.8	-0.2
	comp=Z,17nm,1.1s,mb4.9,baz=103,slow=5.9,SNR=50						
ARCES				LR	LR	01 13 00.3	
	comp=Z,352nm,18.8s,MS4.7,baz=299,slow=40						
ARE0	ARCESS Array S	81.03	340	eP	P	00 31 04.0	0.0
ARE0				ePcP	PcP	00 31 10.4	+0.1
DPC	Dobruska-Polom	81.68	320	eP	P	00 31 08.6	+0.8
DPC	Dobruska-Polom	81.68	320	eP	P	00 31 08.6	+0.8
BOJS	Bojanci	81.94	315	iP	P	00 31 09.2	-0.1
BOJS	Bojanci	81.94	315	iP	P	00 31 09.2	-0.1
SOKA	Soboth	82.19	317⇑	iP	P	00 31 10.7	+0.1
	comp=Z,6.5nm,1.3s,mb4.4						
VISS	Visnje	82.25	316	iP	P	00 31 11.8	+0.9
VISS	Visnje	82.25	316	iP	P	00 31 11.8	+0.9
PRU	Pruhonice	82.79	320	eP	P	00 31 11.2	-2.4
PRU	Pruhonice	82.79	320	eP	P	00 31 11.2	-2.4
JAVS	Javornik	82.80	316	iP	P	00 31 13.7	0.0
JAVS	Javornik	82.80	316	iP	P	00 31 13.7	0.0
BRG	Berggiesshubel	83.24	321	eP	P	00 31 23.7	+7.8
	comp=Z,6.3nm,1.3s,mb4.5						
BRG	Berggiesshubel	83.24	321	eP	P	00 31 23.7	+7.8
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
GEC2	GERESS Array S	83.25	319	eP	P	00 31 15.9	-0.1
KHC	Kasperske Hory	83.35	319	eP	P	00 31 10.7	-5.8
AMKA	Amchitka	83.72	39	P	P	00 31 18.2	-0.2
WET	Wettzell	83.81	319	eP	P	00 31 19.8	+0.9
CLL	Collm	83.86	321	eP	P	00 31 19.0	-0.1
CLL	Collm	83.86	321	eP	P	00 31 19.0	-0.1
CLL				e		00 31 54.0	
CLL				eSSS		00 50 36.0	
CLL				eSSSS		00 53 12.0	
CLL				LmV		01 14 00.0	
	comp=Z,100nm,19.7s						
MOX	Moxa	84.70	320	e(PKP)	P	00 31 24.2	+0.8
MOTA	Moosalm	84.91	317⇓	iP	P	00 31 24.0	-0.6
	comp=Z,4.6nm,1.0s,mb4.5						
GRA1	Grafenberg Arr	84.91	319	ePKP	P	00 31 22.9	-1.6
GRF	Grafenberg Arr	84.91	319	eP	P	00 31 22.9	-1.6
NB2	NORSAR Subarra	85.45	331	P	P	00 31 26.9	0.0
	comp=Z,6.6nm,1.1s,mb4.7,baz=97,slow=5.1						
NOA	NORSAR Array B	85.45	331	P	P	00 31 26.1	-0.8
	comp=Z,4.0nm,1.0s,mb4.5,baz=93,slow=5.7,SNR=6.2						
NOA				PP	PP	00 34 45.7	+0.3
	comp=Z,1.1nm,0.8s,baz=106,slow=6.7,SNR=4.1						
NOA	NORSAR Array B	85.45	331	P	P	00 31 26.1	-0.8
NOA				PP	PP	00 34 45.7	+0.3
DAVA	Damuels	85.74	317⇑	iP	P	00 31 29.3	+0.7
	comp=Z,10.0nm,1.4s,mb4.8						
KEST	Kesra	86.07	305	LR	LR	01 10 52.7	
	comp=Z,88nm,20.5s,MS4.1,baz=2.8,slow=36						
KEST	Kesra	86.07	305	eP	P	00 31 30.9	+0.3
TAM	Tamanrasset	89.74	293	eP	P	00 31 48.6	+0.2
TAM				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.8						
TAM	Tamanrasset	89.74	293	eP	P	00 31 48.6	+0.2
	comp=Z,7.4nm,1.3s,mb4.9						
QSPA	South Pole Qui	92.41	180	P	P	00 31 59.6	0.0
	comp=Z,2.4nm,1.0s,mb4.5,baz=304,slow=5.3,SNR=6.7						
QSPA	South Pole Qui	92.41	180	P	P	00 31 59.6	0.0
BPAW	Bear Paw Mtn.	97.54	24	eP	P	00 32 24.6	+1.2
	comp=Z,140nm,3.0s						
ULM	Lac du Bonnet	126.46	10	PKP	PKPdf	00 37 51.2	-1.2
	comp=Z,1.9nm,0.6s,baz=351,slow=2.7,SNR=4.4						
NVAR	Mina Array Bea	128.29	35	PKP	PKPdf	00 37 56.5	+0.2
	comp=Z,0.5nm,0.5s,baz=247,slow=1.9,SNR=4.6						
PDAR	Pinedale Array	129.29	24	PKP	PKPdf	00 37 57.3	-0.7
	comp=Z,0.5nm,0.5s,baz=224,slow=3.8,SNR=5.6						
DUG	Dugway	129.89	29	PKIKP	PKPdf	00 38 00.0	+0.7
ANMO	Albuquerque	137.10	28	ePKIKP	PKPdf	00 38 13.8	+0.8
TXAR	Lajitas Array	143.06	30	PKhKP	PKPpre	00 38 20.8	
	comp=Z,0.7nm,0.6s,baz=349,slow=1.8,SNR=10.0						
JCT	Junction City	143.82	24	ePKIKP	PKPdf	00 38 23.4	-1.9
CPUP	Villa Florida	145.28	224	PKPbc	PKPbc	00 38 25.4	-2.2
	comp=Z,1.5nm,0.5s,baz=102,slow=1.9,SNR=5.9						
CPUP	Villa Florida	145.28	224	PKPbc	PKPbc	00 38 25.4	-2.2
HKT	Hockley	145.75	19	ePKP2	PKPab	00 38 28.5	-0.9
LPAZ	La Paz	159.40	227	PKPab	PKPab	00 39 27.8	+1.3
	comp=Z,1.4nm,0.9s,baz=133,slow=4.7,SNR=3.6						

*IDC **10** 00:24:10.7±4.4, 18.°87S×168.°11E, h0km, mb3.9/4, mb1 4.2/5, mb1mx4.0/17, mbtmp4.2/5, ML5.0/1, Error ellipse: s-maj=90.8km s-min=45.8km az=118.0*

ISC 10 00:24:11.6±3.1**, 19.°0S**±0.°1×**168.°1E**±0.°4**, h10**km**, n7, σ1§37**/7**, mb3.9**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.39	207	eP	Pn	00 24 59.5	-5.2
NOUC	Port Laguerre	3.48	208	eP	Pn	00 25 04.0	-1.8
HNR	Honiara	12.38	319	Pn	Pn	00 27 06.0	-2.1
	9.3nm,0.3s,baz=153,slow=16,SNR=2.1						
WRA	Warramunga Arr	31.80	263	P	P	00 30 37.2	+0.6
	1.2nm,1.0s,mb3.7,baz=95,slow=8.5,SNR=3.2						
ASAR	Alice Springs	32.12	256	P	P	00 30 40.1	+0.8
	1.7nm,0.7s,mb4.0,baz=83,slow=9.1,SNR=11						
FITZ	Fitzroy Crossi	40.18	264	P	P	00 31 50.2	+1.8
	1.7nm,0.7s,mb3.9,baz=106,slow=7.8,SNR=5.1						
SONM	Songino Array	86.41	324	P	P	00 36 54.6	+0.4
	0.9nm,0.7s,mb4.1,baz=143,slow=5.4,SNR=5.6						

*NIED **10** 00:24:00, 37.°70N×142.°30E, h20km, Mw4.0 Best double couple: M₀1.04000×10¹⁵ NP1:φs16.00000°, δ84.00000°, λ108.00000°. NP2:φs124.00000°, δ19.00000°, λ19.00000°.*
*BJI **10** 00:24:13.5, 37.°80N×142.°30E, h20km, mB4.7/3, mb4.4/9, Ms3.9/2, Ms7 3.9/1*
*JMA **10** 00:24:13.6±0.1, 37.°71N×142.°29E, h35km±3km, M4.1*
JMA Felt I J1.
*ISCJB **10** 00:24:14.1±0.8, 37.°74N±0.°04×142.°31E±0.°07, h49km±6km, mb4.2/25, Error ellipse: s-maj=9.2km s-min=5.7km az=24.0*
*NEIC **10** 00:24:15.0±1.2, 37.°77N×142.°27E, h40km±10km, mb4.5/8, MW3.9(NIED), Error ellipse: s-maj=12.8km s-min=8.4km az=120.0*
NEIC Recorded [1 JMA] in Miyagi.
*IDC **10** 00:24:18.8±2.5, 37.°71N×142.°29E, h68km±22km, mb3.7/14, mb1 3.8/18, mb1mx3.7/29, mbtmp3.7/18, MS3.2/3, Ms1 3.2/3, ms1mx2.7/38, Error ellipse: s-maj=22.8km s-min=15.0km az=86.0*

ISC 10 00:24:15.7±0.8**, 37.°75N**±0.°04×**142.°25E**±0.°07**, h44**km±6km**, n60, σ1§15**/71**, mb4.2**/25**, 2C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
JIO	Ouri	0.99	315	⇓P	Pn	00 24 32.5	-0.7
JIO				eS	Sn	00 24 45.6	-0.5
JMM	Marumori	1.16	276	⇓P	Pn	00 24 34.5	-0.9
JMM				eS	Sn	00 24 49.3	-0.7
JFK	Kawauchi	1.16	251	⇓P	Pn	00 24 34.1	-1.3
JFK				eS	Sn	00 24 48.4	-1.6
JOU	Okura	1.39	297	⇓P	Pn	00 24 38.7	+0.1
JOU				eS	Sn	00 24 56.7	+0.9
JMK	Ichinoseki	1.44	326	⇑P	Pn	00 24 39.1	-0.2
JMK				S	Sn	00 24 57.5	+0.4
JFT	Otama	1.53	262	⇓P	Pn	00 24 40.7	+0.1
JFT				eS	Sn	00 25 00.5	+1.2
JOM	Ohasama	1.87	337	⇑P	Pn	00 24 45.2	0.0
JYK	Kaneyama	1.88	309	P	Pn	00 24 46.0	+0.6
JYA	Atsumi	2.16	294	P	Pn	00 24 50.0	+0.8
MJAR	Matsushiro Arr	3.44	251	P	Pn	00 25 09.1	+2.3
	5.1nm,0.3s,baz=71,slow=10,SNR=20						
MJAR				S	Sn	00 25 54.4	+8.1
	6.9nm,0.3s,baz=207,slow=25,SNR=5.4						
MJAR				LR	LR	00 26 42.8	
	comp=Z,403nm,18.1s,baz=85,slow=42						
MAJO	Matsushiro	3.44	251	ePn	Pn	00 25 08.1	+1.2
MAT	Matsushiro	3.44	251	P	Pn	00 25 08.1	+1.3
MAT				eS	Sn	00 25 47.5	+1.1
JHJ	Hachijo jima 2	5.04	204	P	Pn	00 25 30.3	+1.5
	29nm,0.3s,baz=261,slow=19,SNR=4.4						
JHJ				S	Sn	00 26 20.4	-5.3
	30nm,0.3s,baz=252,slow=20,SNR=4.6						
ASAJ	Asahikawa	6.36	2	P	Pn	00 25 51.5	+4.7
	1.9nm,0.3s,baz=280,slow=12,SNR=3.5						
ASAJ				S	Sn	00 26 58.5	+0.4
	0.6nm,0.3s,baz=0.0,slow=20,SNR=2.3						
ASAJ				LR	LR	00 28 45.9	
	comp=Z,110nm,19.7s,baz=194,slow=42						
ASAJ	Asahikawa	6.36	2	ePn	Pn	00 25 45.8	-1.1
ASAJ				eSn	Sn	00 27 00.7	+2.6
YSS	Yuzh-Sakhalins	9.20	2	Pn	Pn	00 26 24.6	-1.2
KSRS	Korea Array	11.37	273	P	Pn	00 27 00.5	+5.0
	0.3nm,0.3s,baz=62,slow=16,SNR=6.4						
KSRS				LR	LR	00 31 09.3	
	comp=Z,130nm,18.7s,baz=75,slow=36						
KSRS	Korea Array	11.37	273	P	Pn	00 27 00.5	+5.1
MDJ	Mudanjiang	11.73	310	ePn	Pn	00 26 58.1	-2.2
INCN	Inchon	12.39	274	Pn	Pn	00 27 07.8	-1.5
JOW	Kunigami	16.05	231	ePn	Pn	00 27 58.2	0.0
BJT	Baijiatuau	20.40	284	eP	P	00 28 47.1	-1.8
YHNB	Yeheng	22.05	240	P	P	00 29 04.8	-1.8
NACB	Ninganchiao	22.23	238	P	P	00 29 06.5	-2.0
TPUB	Ta-pu	23.46	238	eP	P	00 29 19.8	-1.6
HHC	Hu-ho-hao-te	23.88	287	eP	P	00 29 25.0	-0.1
HHC				pP		00 29 34.3	
HHC				sP	sP	00 29 38.4	-3.7
HHC				PP		00 29 58.7	
HHC				S	S	00 33 35.8	-2.3
HHC				ScP	ScP	00 36 43.2	+1.7
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
HHC				pmax	pmax		
	comp=Z,80nm,5.6s						
HHC				LR	LR		
	comp=N,260nm,14.3s						
HHC				LR	LR		
	comp=E,260nm,14.1s						
HHC				LR	LR		
	comp=Z,280nm,14.8s						
YAK	Yakutsk	25.52	346	eP	P	00 29 38.8	-0.9
SONM	Songino Array	27.94	303	P	P	00 30 03.8	+2.1
	comp=Z,4.6nm,0.7s,mb4.2,baz=101,slow=8.2,SNR=8.9						
ENH	Enshi	28.06	264	eP	P	00 30 02.5	-0.4
	comp=Z,18nm,0.8s,mb4.7						
MIDW	Midway	34.96	94	P	P	00 31 01.5	-2.0
KMI	Kunming	35.73	261	P	P	00 31 18.4	+8.2
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
ZALV	Zalesovo Beam	41.92	312	P	P	00 32 02.9	+1.2
	comp=Z,2.0nm,0.5s,mb4.0,baz=80,slow=7.9,SNR=6.8						
LSA	Lhasa	42.81	275	P	P	00 32 08.9	-0.3
MK31	Makanchi Array	44.30	302	ePn	P	00 32 22.7	+1.7
MKAR	Makanchi Array	44.30	302	P	P	00 32 22.3	+1.3
	comp=Z,1.7nm,0.5s,mb4.1,baz=87,slow=8.8,SNR=21						
MKAR	Makanchi Array	44.30	302	P	P	00 32 22.3	+1.3
KURK	Kurchatov	46.01	308	eP	P	00 32 34.4	-0.1
	comp=Z,6.1nm,0.5s,mb4.8						
ILAR	Eielson Array	48.53	33	P	P	00 32 54.8	+0.9
	comp=Z,0.4nm,0.6s,mb3.6,baz=271,slow=5.7,SNR=6.0						
TKM2	Tokmak 2	49.87	298	eP	P	00 33 03.9	-0.6
	comp=Z,5.6nm,0.7s,mb4.7						
BVAR	Borovoye Array	50.58	312	P	P	00 33 09.9	+0.3
	comp=Z,1.0nm,0.4s,mb4.1,baz=93,slow=5.0,SNR=3.7						
AAK	Ala-Archa	50.73	298	P	P	00 33 11.9	+0.9
	comp=Z,0.8nm,0.3s,mb4.1,baz=241,slow=10,SNR=1.8						
AAK	Ala-Archa	50.73	298	P	P	00 33 11.9	+0.9
EKS2	Erkin-Say	51.23	298	P	P	00 33 14.1	-0.6
	comp=Z,1.2nm,0.5s,mb4.1						
AML	Almayashu	51.46	298	eP	P	00 33 16.1	-0.3
	comp=Z,4.4nm,0.8s,mb4.4						
ARU	Arti	56.26	318	eP	P	00 33 51.0	-0.2
	comp=Z,2.8nm,0.7s,mb4.4						
FITZ	Fitzroy Crossi	57.71	199	P	P	00 34 02.1	+0.2
	comp=Z,1.9nm,1.0s,mb4.1,baz=27,slow=9.0,SNR=2.3						
WRA	Warramunga Arr	57.87	189	P	P	00 34 03.4	+0.4
	comp=Z,1.4nm,0.8s,mb4.0,baz=6.5,slow=7.3,SNR=7.4						
ABKAR	Akbulak array	57.98	310	eP	P	00 34 03.5	0.0
	comp=Z,1.0nm,0.5s,mb4.1						
AKTK	Aktyubinsk	58.69	312	P	P	00 34 09.9	+1.5
AKTO	Aktyubinsk	58.69	312	P	P	00 34 09.9	+1.5
	comp=Z,0.7nm,0.5s,mb4.0,baz=76,slow=9.9,SNR=4.2						
ASAR	Alice Springs	61.59	189	P	P	00 34 29.5	+1.0
	comp=Z,0.5nm,0.7s,mb3.7,baz=14,slow=8.6,SNR=5.1						
RES	Resolute Bay	61.74	15	P	P	00 34 28.2	-0.7
KEV	Kevo	63.00	339	ep	PcP	00 35 15.4	+0.4
	comp=Z,0.2nm,0.3s						
ARCES	ARCESS Array B	63.56	339	P	P	00 34 40.1	-1.0
	comp=Z,1.1nm,0.8s,mb3.9,baz=67,slow=6.9,SNR=3.1						
JOF	Joensuu	65.64	332	ep	P	00 34 56.5	+1.7
	comp=Z,0.5nm,0.4s,mb3.9						
OBN	Obninsk	67.92	323	P	P	00 35 08.2	-1.2
FINES	FINESS Array B	68.49	332	P	P	00 35 13.4	+0.5
	comp=Z,2.6nm,0.8s,mb4.3,baz=46,slow=8.0,SNR=8.3						
KIV	Kislovodsk	70.94	311	P	P	00 35 25.9	-2.4
	comp=Z,3.4nm,0.7s,mb4.4						
NOA	NORSAR Array B	73.78	338	P	P	00 35 45.9	+1.0
	comp=Z,1.1nm,0.8s,mb3.8,baz=39,slow=5.7,SNR=3.1						
PDAR	Pinedale Array	76.69	46	P	P	00 36 02.9	+0.9
	comp=Z,0.3nm,0.6s,mb3.4,baz=318,slow=3.8,SNR=2.8						

*CSEM **10** 00:42:48.9, 35.°96N×21.°53E, h68km, After ATH*

ATH 10 00:42:46.4, 35.°84N×21.°51E, h20km±1km**, MD3.2**/4**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PYL	PYLOS	1.07	10	ePN	Pn	00 43 06.8	+0.6
PYL				eSN	Sn	00 43 21.7	+1.2
PYL	PYLOS	1.07	10	eP	Pb	00 43 06.8	+0.6
PYL				eS	Sb	00 43 21.7	+1.9
KYTH	Kithira	1.31	70	ePN	Pn	00 43 11.3	+1.7
KYTH	Kithira	1.31	70	eP	Pn	00 43 11.3	+1.7
ITM	Ithomi	1.38	14	ePN	Pn	00 43 12.4	+1.9
ITM	Ithomi	1.38	14	eP	Pn	00 43 12.4	+1.9
ITM				eS	Sn	00 43 27.5	-0.6
VLI	Veliai	1.45	52	ePN	Pn	00 43 13.7	+2.3
VLI	Veliai	1.45	52	eP	Pn	00 43 13.7	+2.3
VLI				eS	Sn	00 43 30.9	+1.1

IDC 10 00:49:56.8±5.1**, 17.°02S**×**167.°58E, h0**km**, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.8**/17**, mbtmp3.9**/4**, Error ellipse: s-maj=136.6km s-min=41.6km az=121.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
NOUC	Port Laguerre	5.20	193	eP	Pn	00 50 47.9	-28
STKA	Stephens Creek	27.80	233	P	P	00 55 49.4	+1.7
	1.0nm,0.7s,baz=52,slow=8.9,SNR=2.1						
WRA	Warramunga Arr	31.63	260	P	P	00 56 22.3	+0.5
	0.9nm,0.8s,baz=95,slow=8.7,SNR=4.5						
ASAR	Alice Springs	32.20	253	P	P	00 56 25.0	-1.7
	1.9nm,0.7s,baz=84,slow=9.0,SNR=17						
SONM	Songino Array	84.50	324	P	P	01 02 31.6	+0.2
	0.4nm,0.5s,baz=134,slow=4.2,SNR=3.5						

DJA 10 01:05:01, 0.°06S×**123.°55E, h27**km**, MLv3.8**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KMSI	Cibinong	0.76	34	P	Pb	01 05 14.9	-0.8
KMSI				S	Sb	01 05 27.9	+2.2
LUWI	Luwuk	1.25	219	P	Pn	01 05 19.7	-3.0
LUWI				S	Sn	01 05 38.7	+0.1
MRSI	Marisa	1.70	288	P	Pn	01 05 29.0	+0.2
MNI	Manado	1.97	41	P	Pn	01 05 33.1	+0.4
TTSI	Tana Toraja	4.76	231	P	Pn	01 06 10.9	-0.2
SPSI	Sidrap Palu	5.41	224	P	Pn	01 06 19.7	-0.3

*DMN **10** 01:14:28.9±0.5, 31.°50N×83.°31E, h10km, Ml5.8/4, Error ellipse: s-maj=10.7km s-min=6.3km az=133.0*
*IDC **10** 01:14:29.9±0.4, 30.°77N×83.°63E, h0km, mb4.6/27, mb1 4.7/29, mb1mx4.7/32, mbtmp4.6/29, ML3.8/1, MS4.7/9, Ms1 4.7/9, ms1mx4.2/33, Error ellipse: s-maj=14.0km*

s-min=10.8km az=34.0
BJI **10** 01:14:30.5,30.°78N×83.°40E,h19km,mB5.1/37,mb4.7/49, Ms5.2/59,Ms7 5.0/53
NEIC **10** 01:14:31.9±0.2,30.°78N×83.°59E,h10km,mb5.0/42, MS5.0/2,Error ellipse: s-maj=5.8km s-min=3.7km az=49.0
MOS **10** 01:14:33.9±1.1,30.°78N×83.°56E,h33km,mb5.0/48, MS4.9/29,Error ellipse: s-maj=8.6km s-min=4.2km az=120.2
NDI **10** 01:14:33.0±7.4,30.°92N×83.°62E,h15km±66km,mb5.1, mb5.0(NEIC)
ISCJB **10** 01:14:34.3±0.8,30.°89N±0.°02×83.°51E±0.°02,h32km±6km, mb4.8/110,MS4.9/37,Error ellipse: s-maj=4.3km s-min=2.9km az=28.2
GCMT **10** 01:14:38.3±0.2,30.°79N×83.°71E,h20km±1km,MW5.3, Moment Tensor Solution. s56,c87; s97,c172; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.23±.03; $M_{\theta\theta}$-0.81±.02; $M_{\phi\phi}$1.03±.03; $M_{r\theta}$0.28±.05; $M_{\theta\phi}$-0.66±.02; $M_{\phi r}$0.05±.04; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s206.00000°, δ77.00000°,λ-12.00000°. NP2:ϕ_s298.00000°,δ79.00000°, λ-166.00000°. Principal axes: T 1.2500, Plg1.0000°, Azm72.0000°; N -0.1400, Plg72.0000°, Azm338.0000°; P -1.1100, Plg18.0000°, Azm162.0000°; Data Used: II IU IC CN G.
ISC 10 01:14:35.9±0.8,30.°90N±0.°02×83.°58E±0.°02,h31km±5km, h19km±6.3km;pP-P,n360,σ1§26/380,mb4.8/110,MS4.9/37, 35C-15D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.55**	**177**	*e*Pn	**Pn**	**01 15 16.8**	**+1.7**
DANN				*e*Sn	**Sn**	**01 15 51.8**	**+6.8**
39μm,1.3s							
PYUN	**Piuthan**	**2.84**	**191**	*e*Pn	**Pn**	**01 15 20.6**	**+1.5**
PYUN				*e*Sn	**Sn**	**01 15 58.2**	**+6.0**
35μm,1.2s							
GKN	**Gorkha**	**3.03**	**162**	*e*Pn	**Pn**	**01 15 23.7**	**+2.0**
GKN				*e*Sn	**Sn**	**01 16 05.0**	**+8.0**
20μm,1.3s							
KOLN	**Koldanda**	**3.12**	**180**	*e*Pn	**Pn**	**01 15 24.4**	**+1.4**
KOLN				*e*Sn	**Sn**	**01 16 05.8**	**+6.6**
7μm,1.0s							
PTH	**Pithoragarh**	**3.21**	**246**	*e*PKP	**Pn**	**01 15 24.5**	**+0.3**
PTH				*ex*	x	01 16 14.4	
KKN	**Kakani**	**3.44**	**154**	*e*Pn	**Pn**	**01 15 29.1**	**+1.8**
DMN	**Daman**	**3.54**	**158**	*e*Pn	**Pn**	**01 15 30.7**	**+2.0**
GUN	**Gumba**	**3.59**	**146**	*e*Pn	**Pn**	**01 15 31.4**	**+2.0**
PKIN	**Phulchoki**	**3.67**	**154**	*e*Pn	**Pn**	**01 15 32.3**	**+1.7**
PKI	**Pulchoki**	**3.68**	**154**	*e*Pn	**Pn**	**01 15 32.4**	**+1.7**
KLP	**Kalpa**	**4.61**	**279**	*e*PKP	**Pn**	**01 15 44.1**	**+0.6**
DDI	**Dehra Dun**	**4.80**	**264⇑**	*e*PKP	**Pn**	**01 15 46.3**	**+0.2**
DDI				*ex*	x	01 17 10.0	
TAPN	**Taplejung**	**5.05**	**133**	*e*Pn	**Pn**	**01 15 51.1**	**+1.5**
ODAN	**Odare**	**5.23**	**139**	*e*Pn	**Pn**	**01 15 53.5**	**+1.5**
SMLA	**Simla**	**5.51**	**274**	*i* P	**Pn**	**01 15 56.1**	**+0.2**
SDNR	**Sundarnagar**	**5.70**	**278**	*ex*	**Pn**	**01 16 00.5**	**+2.1**
SDNR				*ex*	x	01 17 57.5	
ALBI	**Allahabad**	**5.79**	**196**	*ex*	**Pn**	**01 16 00.0**	**+0.3**
NDI	**New Delhi**	**5.96**	**250**	*e*PKP	**Pn**	**01 16 00.5**	**-1.5**
NDI				*ex*	x	01 17 03.0	
BHK	**Bhakra**	**6.17**	**277**	*e*PKP	**Pn**	**01 16 03.0**	**-1.8**
BHK				*ex*	x	01 17 44.0	
SONA	**Sohna**	**6.25**	**247**	*e*PKP	**Pn**	**01 16 05.4**	**-0.5**
SONA				AMb	AMB	01 16 07.5	
comp=Z,139nm,1.1s							
LSA	**Lhasa**	**6.65**	**98**	Pn	**Pn**	**01 16 14.5**	**+3.0**
LSA				Sn	**Sn**	**01 17 33.6**	**+7.4**
LSA	**Lhasa**	**6.65**	**98**	*e*P	**Pn**	**01 16 13.6**	**+2.1**
LSA				pmax	pmax		
comp=Z,277nm,1.0s							
LSA	**Lhasa**	**6.65**	**98**	*e*Pn	**Pn**	**01 16 13.6**	**+2.1**
comp=Z,277nm,1.0s							
KHET	**Khetri**	**7.34**	**249**	*e*PKP	**Pn**	**01 16 17.7**	**-3.2**
KHET				AMb	AMB	01 16 22.9	
comp=Z,60nm,0.3s							
AJM	**Ajmer**	**9.00**	**243**	*e*PKP	**Pn**	**01 16 43.1**	**-0.7**
AJM				*ex*	x	01 18 21.9	
SHL	**Shillong**	**9.04**	**124**	*e*PKP	**Pn**	**01 16 43.0**	**-1.3**
comp=Z,12nm,0.6s							
SHL				*i* S	**Sn**	**01 18 16.0**	**-9.1**
CHCP	**Chirah Chowk**	**9.16**	**290**	⇑P	**Pn**	**01 16 45.3**	**-0.6**
CAL	**Calcutta**	**9.35**	**152**	*e*PKP	**Pn**	**01 16 52.9**	**+4.4**
CAL				*e*S	**Sn**	**01 18 35.9**	**+3.4**
BHPL	**Bhopal**	**9.40**	**217**	*e*PKP	**Pn**	**01 16 47.4**	**-1.8**
BHPL				*e*S	**Sn**	**01 18 25.9**	**-7.9**
THW	**Thamme Wali**	**10.25**	**284**	P	**Pn**	**01 16 59.5**	**-1.3**
CEP	**Cherat**	**10.29**	**289**	⇑P	**Pn**	**01 17 00.9**	**-0.5**
CEP				S	**Sn**	**01 18 55.0**	**-0.7**
KSH	**Kashi**	**10.61**	**326**	*e*P	**Pn**	**01 17 04.5**	**-1.2**
KSH				*ep*P		01 17 07.7	
KSH				*es*P		01 17 10.6	
KSH				*e*PP		01 17 12.9	
KSH				*e*S	**Sn**	**01 19 01.8**	**-1.6**
KSH				*e*SS		01 19 15.4	
KSH				LR	LR		
comp=Z,12μm,8.8s							
BWNR	**Bhubaneshwar**	**10.75**	**169**	*ex*	**Pn**	**01 17 01.0**	**-6.7**
BWNR				*ex*	x	01 19 21.0	
AKL	**Akola**	**11.75**	**212**	*i* P	**Pn**	**01 17 18.2**	**-3.2**
AKL				*i* x	x	01 19 22.1	
ULHL	**Ulahol**	**12.76**	**335**	P	**Pn**	**01 17 35.5**	**+0.4**
SNR=11							
KBL	**Kabul**	**12.77**	**290**	*e*P	**Pn**	**01 17 32.8**	**-2.5**
KZA	**Kyzart**	**13.00**	**331**	P	**Pn**	**01 17 38.7**	**+0.3**
SNR=36							
KZA	**Kyzart**	**13.00**	**331**	*e*Pn	**Pn**	**01 17 38.0**	**-0.4**
VIS	**Vishakhapatnam**	**13.12**	**181**	*i* P	**Pn**	**01 17 36.5**	**-3.8**
VIS				*i* x	x	01 19 53.8	
WMQ	**Urumqi**	**13.30**	**13**	P	**Pn**	**01 17 44.0**	**+1.5**
WMQ				sP		01 17 51.0	
WMQ				PP		01 17 55.0	
WMQ				S	**Sn**	**01 20 14.0**	**+4.8**
WMQ				SS		01 20 30.0	
WMQ				pmax	pmax		
comp=Z,46nm,0.6s							
WMQ				LR	LR		
comp=N,4μm,8.0s							
WMQ				LR	LR		
comp=E,10μm,8.0s							
WMQ				LR	LR		
comp=Z,3μm,8.0s							
AAA	**Alma-Ata**	**13.43**	**339**	*i* P	**Pn**	**01 17 56.3**	**+12**
AAA				pmax	pmax		
comp=Z,400nm,1.6s							
AAA				MLR	MLR		
comp=Z,9μm,10.0s							
TKM2	**Tokmak 2**	**13.58**	**334**	P	**Pn**	**01 17 47.0**	**+0.6**
SNR=17							
TKM2	**Tokmak 2**	**13.58**	**334**	*e*Pn	**Pn**	**01 17 46.9**	**+0.6**
KBK	**Karagaybulak**	**13.61**	**332**	P	**Pn**	**01 17 44.1**	**-2.6**
SNR=7.2							
KBK	**Karagaybulak**	**13.61**	**332**	*e*Pn	**Pn**	**01 17 47.3**	**+0.5**
AML	**Almayashu**	**13.73**	**327**	P	**Pn**	**01 17 47.5**	**-0.9**
SNR=16							
AML	**Almayashu**	**13.73**	**327**	*e*Pn	**Pn**	**01 17 47.4**	**-0.9**
AML				*e*Sn	**Sn**	**01 20 14.7**	**-5.0**
AAK	**Ala-Archa**	**13.78**	**331**	P	**Pn**	**01 17 49.2**	**+0.2**
SNR=7.0							
AAK	**Ala-Archa**	**13.78**	**331**	Pn	**Pn**	**01 17 48.4**	**-0.6**
comp=Z,0.0nm,0.3s,baz=134,slow=17,SNR=16							
AAK				LR	LR	01 23 42.7	
comp=Z,7μm,19.5s,baz=131,slow=40							
AAK	**Ala-Archa**	**13.78**	**331**	Pn	**Pn**	**01 17 49.1**	**+0.1**
comp=Z,171nm,0.9s,SNR=5.1							
FRU	**Bishkek**	**13.89**	**331**	*i* P	**Pn**	**01 17 51.0**	**+0.4**
FRU				*e*		01 20 18.0	
FRU				pmax	pmax		
comp=Z,90nm,1.5s							
FRU				MLR	MLR		
comp=E,17μm,12.0s							
FRU				MLR	MLR		
comp=Z,6μm,12.0s							
LATR	**Latur**	**13.97**	**209**	*ex*	**Pn**	**01 17 55.9**	**+4.2**
LATR				*ex*	x	01 20 15.7	
EKS2	**Erkin-Say**	**14.11**	**329**	P	**Pn**	**01 17 53.7**	**+0.2**
SNR=9.2							
EKS2	**Erkin-Say**	**14.11**	**329**	*e*Pn	**Pn**	**01 17 53.8**	**+0.2**
HYB	**Hyderabad**	**14.18**	**200**	*i* P	**Pn**	**01 17 51.0**	**-3.7**
comp=Z,160nm,1.0s							
HYB				*i*		01 20 28.0	
HYB				LR	LR	01 23 20.0	
comp=Z,13nm,12.0s							
POO	**Poona**	**15.15**	**218**	*ex*	**Pn**	**01 18 03.0**	**-4.7**
POO				*i* PP		01 18 14.0	
GTA	**Gaotai**	**15.74**	**53**	*e*P	**Pn**	**01 18 19.1**	**+3.8**
GTA				pP	pP	01 18 23.1	-4.1
GTA				sP	sP	01 18 26.8	-4.4
GTA				S	**Sn**	**01 21 18.6**	**+10**
GTA				sS	sS	01 21 24.3	-11
GTA				pmax	pmax		
comp=Z,8.0nm,0.9s							
GTA				pmax	pmax		
comp=Z,200nm,6.2s							
GTA				LR	LR		
comp=N,9μm,14.5s							
GTA				LR	LR		
comp=E,3μm,14.9s							
GTA				LR	LR		
comp=Z,3μm,15.4s							
MK31	**Makanchi Array**	**15.90**	**357**	*ce*P	**Pn**	**01 18 16.1**	**-1.2**
MK31				pmax	pmax		
comp=Z,134nm,1.5s							
MK31	**Makanchi Array**	**15.90**	**357**	*e*Pn	**Pn**	**01 18 17.0**	**-0.3**
MK31				*e*P		01 18 21.7	
MKAR	**Makanchi Array**	**15.90**	**357**	Pn	**Pn**	**01 18 16.4**	**-0.8**
comp=Z,0.4nm,0.3s,baz=176,slow=11,SNR=22							
MKAR				LR	LR	01 25 26.1	
comp=Z,4μm,18.4s,baz=174,slow=41							
KAD	**Karad**	**16.01**	**214**	*ex*	x	01 18 08.2	
KK31	**Karatay Array**	**16.02**	**323**	*ce*P	**Pn**	**01 18 15.1**	**-3.7**
KK31				pmax	pmax		
comp=Z,74nm,1.2s							
KKAR	**Karatay Array**	**16.02**	**323**	*e*P	**Pn**	**01 18 16.3**	**-2.5**
CD2	**Chengdu**	**17.32**	**85**	P	**Pn**	**01 18 34.0**	**-1.3**
CD2				pP	pP	01 18 37.5	-7.3
CD2				sP	sP	01 18 41.2	-7.6
CD2				PP		01 18 48.8	
CD2				S	**Sn**	**01 21 45.9**	**-1.1**
CD2				SS		01 22 07.5	
CD2				pmax	pmax		
comp=Z,40nm,1.2s							
CD2				pmax	pmax		
comp=Z,120nm,7.2s							
CD2				LR	LR		
comp=N,4μm,11.9s							
CD2				LR	LR		
comp=E,3μm,9.5s							
CD2				LR	LR		
comp=Z,3μm,9.8s							
LZH	**Lanzhou**	**17.66**	**68**	*e*P	**Pn**	**01 18 41.3**	**+1.7**
LZH				pP	pP	01 18 43.2	-5.4
LZH				S	**Sn**	**01 21 55.0**	**-0.4**
LZH				sS	sS	01 22 01.0	-14
LZH				SS		01 22 19.2	
LZH				pmax	pmax		
comp=Z,42nm,1.0s							
LZH				pmax	pmax		
comp=Z,220nm,4.0s							
LZH				LR	LR		
comp=N,4μm,11.3s							
LZH				LR	LR		
comp=E,5μm,11.2s							
LZH				LR	LR		
comp=Z,6μm,18.2s							
KMI	**Kunming**	**17.86**	**104**	P	**Pn**	**01 18 40.3**	**-1.7**
KMI				pP	pP	01 18 44.4	-6.4
KMI				sP	sP	01 18 46.2	-8.6
KMI				PP		01 18 57.2	
KMI				S	**Sn**	**01 21 59.5**	**-0.8**
KMI				SS		01 22 21.6	
KMI				pmax	pmax		
comp=Z,42nm,0.9s							
KMI				pmax	pmax		
comp=Z,370nm,7.7s							
KMI				LR	LR		
comp=N,11μm,16.8s							
KMI				LR	LR		
comp=E,4μm,14.4s							
KMI				LR	LR		
comp=Z,6μm,17.3s							
CHRT	**Chiangrai**	**18.27**	**123**	P	**Pn**	**01 18 45.0**	**-2.2**
comp=Z,182nm,0.9s							
CHG	**Chiang Mai**	**18.39**	**127**	⇓P	**Pn**	**01 18 47.2**	**-1.4**
comp=Z,39nm,1.1s							
CHTO	**Chiang Mai**	**18.39**	**127**	*e*P	**Pn**	**01 18 46.3**	**-2.3**
CHTO				pmax	pmax		
comp=Z,34nm,1.0s							
CHTO	**Chiang Mai**	**18.39**	**127**	*e*Pn	**Pn**	**01 18 46.2**	**-2.3**
comp=Z,34nm,1.0s							
CHTO	**Chiang Mai**	**18.39**	**127**	P	**Pn**	**01 18 47.4**	**-1.2**
SNR=9.2							
CM31	**Chiang Mai Arr**	**18.64**	**128**	*e*P	**Pn**	**01 18 50.5**	**-1.1**
comp=Z,37nm,1.0s							
CMAR	**Chiang Mai Arr**	**18.64**	**128**	Pn	**Pn**	**01 18 48.9**	**-2.7**
comp=Z,2.6nm,0.3s,baz=309,slow=9.3,SNR=50							
CMAR				LR	LR	01 26 50.2	
comp=Z,3μm,18.3s,baz=325,slow=40							
CMAR	**Chiang Mai Arr**	**18.64**	**128**	P	**Pn**	**01 18 48.9**	**-2.7**
CMAR				pmax	pmax		
comp=Z,3.0nm,0.3s							
CMAR				MLR	MLR		
comp=Z,3μm,18.3s							
BDT	**Bhumibol Dam**	**19.54**	**131**	P	**Pn**	**01 19 00.0**	**-2.4**
comp=Z,13nm,1.0s							
KURK	**Kurchatov**	**20.14**	**351**	*ce*P	**P**	**01 19 06.7**	**-0.5**
KURK				pmax	pmax		
comp=Z,234nm,1.7s							
KURK	**Kurchatov**	**20.14**	**351**	*e*P	**P**	**01 19 06.4**	**-0.8**
comp=Z,180nm,1.3s							
KURK	**Kurchatov**	**20.14**	**351**	P	**P**	**01 19 07.3**	**+0.1**
comp=Z,575nm,1.2s,SNR=28							
KURK	**Kurchatov**	**20.14**	**351**	P	**P**	**01 19 07.3**	**+0.1**
SNR=75							
GYA	**Guiyang**	**20.72**	**97**	P	**P**	**01 19 12.4**	**-1.4**
GYA				PP		01 19 32.1	
GYA				S	**S**	**01 22 55.0**	**-8.5**
GYA				PcP	PcP	01 23 26.7	+3.9
GYA				pmax	pmax		
comp=Z,30nm,1.0s							
GYA				pmax	pmax		
comp=Z,290nm,8.2s							
GYA				LR	LR		
comp=N,3μm,11.0s,MS5.0							
GYA				LR	LR		
comp=E,2μm,11.2s,MS5.0							
GYA				LR	LR		
comp=Z,4μm,12.5s,MS5.0							
NST	**Nakhon Sawan**	**21.42**	**131**	P	**P**	**01 19 09.5**	**-12**
comp=Z,72nm,0.8s,mb5.1							
XAN	**Xi'an**	**21.59**	**75**	P	**P**	**01 19 21.7**	**-1.4**
XAN				pP		01 19 25.4	
XAN				PP		01 19 44.8	
XAN				S	**S**	**01 23 12.6**	**-8.0**
XAN				pmax	pmax		
comp=Z,14nm,1.1s,mb4.3							
XAN				pmax	pmax		
comp=Z,98nm,11.2s							
XAN				LR	LR		
comp=N,2μm,12.5s,MS4.7							
XAN				LR	LR		
comp=E,890nm,14.5s,MS4.7							
XAN				LR	LR		
comp=Z,980nm,24.8s							
ABKT	**Ailbek**	**22.11**	**295**	P	**P**	**01 19 29.9**	**+1.3**
comp=Z,203nm,1.4s,mb5.4,SNR=16							
ENH	**Enshi**	**22.30**	**85**	*e*P	**P**	**01 19 30.0**	**-0.7**
comp=Z,60nm,1.1s,mb4.9							
ZAA0	**Zalesovo Array**	**23.05**	**2**	*e*P	**P**	**01 19 38.7**	**+0.3**
ZALV	**Zalesovo Beam**	**23.05**	**2**	P	**P**	**01 19 38.7**	**+0.3**
comp=Z,30nm,1.1s,mb4.6,baz=189,slow=7.0,SNR=56							
ZALV	**Zalesovo Beam**	**23.05**	**2**	P	**P**	**01 19 38.7**	**+0.3**
ZALV				pmax	pmax		
comp=Z,31nm,1.1s,mb4.7							
WBK	**Wadi Bani Khal**	**23.44**	**255**	P	**P**	**01 19 44.9**	**+2.1**
SNR=6.3							
BTO	**Baotou**	**23.46**	**58**	*e*P	**P**	**01 19 42.5**	**-0.3**
PALK	**Pallekele**	**23.66**	**187**	*e*P	**P**	**01 19 42.4**	**-2.4**
PALK				pmax	pmax		
comp=Z,58nm,1.0s,mb5.0							
PALK	**Pallekele**	**23.66**	**187**	*e*P	**P**	**01 19 42.4**	**-2.4**
comp=Z,58nm,1.0s,mb5.0							
NVS	**Novosibirsk**	**23.93**	**360**	*e*P	**P**	**01 19 46.1**	**-0.8**
NVS				pmax	pmax		
comp=N,20nm,1.7s							
NVS				pmax	pmax		
comp=E,15nm,1.7s							
NVS				pmax	pmax		
comp=Z,31nm,1.7s,mb4.5							
SMDO	**Samad**	**24.02**	**257**	P	**P**	**01 19 50.0**	**+1.9**
SNR=9.8							
BVAR	**Borovoye Array**	**24.11**	**340**	P	**P**	**01 19 49.3**	**+0.7**
comp=Z,3.5nm,0.5s,mb4.1,baz=145,slow=9.0,SNR=19							
BVAR	**Borovoye Array**	**24.11**	**340**	P	**P**	**01 19 49.3**	**+0.7**
BVAR				pmax	pmax		
comp=Z,4.0nm,0.5s							
BRVK	**Borovoye**	**24.17**	**340**	*ce*P	**P**	**01 19 50.4**	**+1.3**
BRVK				pmax	pmax		
comp=Z,27nm,1.7s,mb4.4							
BRVK	**Borovoye**	**24.17**	**340**	*e*P	**P**	**01 19 49.1**	**0.0**
comp=Z,64nm,1.4s,mb4.9							
BRVK	**Borovoye**	**24.17**	**340**	P	**P**	**01 19 50.9**	**+1.8**
comp=Z,128nm,1.3s,mb5.2,SNR=8.5							
BRVK	**Borovoye**	**24.17**	**340**	P	**P**	**01 19 50.6**	**+1.4**
SNR=23							
JMDO	**Jabal Madar**	**24.27**	**256**	P	**P**	**01 19 52.2**	**+1.8**
SNR=7.3							
SONM	**Songino Array**	**24.29**	**39**	P	**P**	**01 19 50.8**	**+0.4**
comp=Z,7.0nm,0.8s,mb4.1,baz=228,slow=10,SNR=23							
SONM	**Songino Array**	**24.29**	**39**	P	**P**	**01 19 50.8**	**+0.5**
SONM				pmax	pmax		
comp=Z,7.0nm,0.8s							
ZAK	**Zakamensk**	**24.40**	**31**	*e*P	**P**	**01 19 53.5**	**+2.2**
ZAK				*e*		01 20 41.4	
ZAK				pmax	pmax		
comp=Z,8.0nm,1.6s,mb3.9							
MOY	**Mondy**	**24.41**	**27**	*e*P	**P**	**01 19 53.7**	**+2.4**
MOY				pmax	pmax		
comp=Z,36nm,2.0s,mb4.5							
HOQ	**Hoqain**	**24.43**	**259**	P	**P**	**01 19 54.0**	**+2.2**
SNR=12							
ZRNK	**Zerenda**	**24.46**	**338**	*i* P	**P**	**01 19 52.3**	**+0.5**
ZRNK				pmax	pmax		
comp=Z,177nm,2.6s,mb5.0							
HHC	**Hu-ho-hao-te**	**24.66**	**59**	*e*P	**P**	**01 19 55.0**	**+1.2**
HHC				pP		01 19 59.2	
HHC				sP	sP	01 20 02.0	-4.6
HHC				PP		01 20 31.9	
HHC				PcP	PcP	01 23 32.3	+1.7
HHC				S	**S**	**01 24 15.9**	**+2.6**
HHC				sS	sS	01 24 21.8	-6.4
HHC				SS		01 25 11.4	
HHC				ScP	ScP	01 27 09.5	+2.4
HHC				pmax	pmax		
comp=Z,41nm,1.3s,mb4.8							
HHC				pmax	pmax		
comp=Z,290nm,6.4s							
HHC				LR	LR		
comp=N,1μm,15.5s,MS4.8							
HHC				LR	LR		
comp=E,2μm,15.1s,MS4.8							
HHC				LR	LR		
comp=Z,2μm,15.5s,MS4.7							
BSY	**Bisya**	**24.86**	**257**	P	**P**	**01 19 58.1**	**+2.3**
SNR=8.1							
ASHO	**Ashiyiah**	**25.09**	**263**	P	**P**	**01 20 00.0**	**+2.2**
SNR=17							
ARQ	**Araqi**	**25.20**	**259**	P	**P**	**01 20 01.7**	**+2.9**
SNR=13							
TLY	**Talaya**	**25.50**	**30**	*e*P	**P**	**01 20 04.1**	**+2.9**
TLY				pmax	pmax		
comp=Z,11nm,0.8s,mb4.4							
TLY				MLR	MLR		
comp=Z,1μm,15.0s,MS4.5							
AB31	**Akbulak array**	**25.58**	**323**	*ce*P	**P**	**01 20 02.2**	**+0.2**
AB31				pmax	pmax		
comp=Z,33nm,1.1s,mb4.8							
ABKAR	**Akbulak array**	**25.58**	**323**	*e*P	**P**	**01 20 01.6**	**-0.4**
comp=Z,16nm,0.8s,mb4.6							
WHN	**Wuhan**	**26.41**	**83**	P	**P**	**01 20 09.6**	**-0.2**
WHN				S	**S**	**01 24 43.1**	**+1.8**
WHN				LR	LR		
comp=N,6μm,9.6s							
WHN				LR	LR		
comp=E,2μm,8.1s							
WHN				LR	LR		
comp=Z,4μm,10.4s,MS5.3							
QIZ	**Qiongzhong**	**26.51**	**110**	P	**P**	**01 20 09.7**	**-1.0**
QIZ				pP	pP	01 20 12.2	-7.5
QIZ				S	**S**	**01 24 45.6**	**+2.6**
QIZ				pmax	pmax		
comp=Z,220nm,7.2s							
QIZ				LR	LR		
comp=N,2μm,16.9s							
QIZ				LR	LR		
comp=Z,3μm,20.3s,MS4.9							
AKTK	**Aktyubinsk**	**27.29**	**323**	P	**P**	**01 20 18.2**	**+0.8**
AKTK				LR	LR	01 33 09.8	
AKTO	**Aktyubinsk**	**27.29**	**323**	P	**P**	**01 20 18.2**	**+0.8**
comp=Z,2.8nm,0.6s,mb3.9,baz=119,slow=13,SNR=11							
AKTO				LR	LR	01 33 09.8	
comp=Z,649nm,20.5s,MS4.2,baz=293,slow=41							
AKTO	**Aktyubinsk**	**27.29**	**323**	P	**P**	**01 20 18.2**	**+0.8**
AKTO				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.0							
AKTO				MLR	MLR		
comp=Z,649nm,20.5s,MS4.2							
BJI	**Beijing**	**27.94**	**62**	P	**P**	**01 20 23.4**	**0.0**
BJI				S	**S**	**01 25 10.3**	**+5.1**
BJI				pmax	pmax		
comp=Z,19nm,1.2s,mb4.6							
NJ2	**Nanjing**	**30.02**	**79**	*e*P	**P**	**01 20 40.0**	**-2.0**
NJ2				pP	pP	01 20 44.9	-6.2
NJ2				sP	sP	01 20 47.8	-7.1
NJ2				PP	PP	01 21 37.9	-12
NJ2				S	**S**	**01 25 36.0**	**-2.2**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.8							
NJ2				pmax	pmax		
comp=Z,150nm,9.8s							
NJ2				LR	LR		
comp=N,2μm,11.4s							
NJ2				LR	LR		
comp=E,2μm,24.4s							
NJ2				LR	LR		
comp=Z,5μm,16.6s							
SVE	**Sverdlovsk**	**30.45**	**335⇑**	*e*P	**P**	**01 20 47.9**	**+2.4**
SVE				*es*S	**S**	**01 25 36.5**	**-7.8**
SVE				pmax	pmax		
comp=Z,28nm,1.2s,mb4.9							
SVE				MLR	MLR		
comp=Z,3μm,14.0s,MS5.1							
ARU	**Arti**	**30.95**	**333**	*d i*P	**P**	**01 20 51.1**	**+1.2**
ARU				*e*		01 21 48.5	
ARU				S	**S**	**01 25 51.4**	**-0.7**
ARU				pmax	pmax		
comp=Z,33nm,1.7s,mb4.9							
ARU	**Arti**	**30.95**	**333**	*e*P	**P**	**01 20 51.4**	**+1.6**
comp=Z,25nm,1.2s,mb4.9							
QZH	**Quanzhou**	**31.41**	**92**	*e*P	**P**	**01 21 00.4**	**+6.1**
QZH				S	**S**	**01 26 05.8**	**+5.8**
QZH				LR	LR		
comp=N,8μm,11.7s,MS5.6							
QZH				LR	LR		
comp=E,3μm,12.0s,MS5.6							
QZH				LR	LR		
comp=Z,7μm,19.0s							
SSE	**Sheshan**	**32.13**	**80**	P	**P**	**01 21 06.8**	**+6.2**
SSE				sP	sP	01 21 19.5	+6.0
SSE				S	**S**	**01 26 21.3**	**+10**
SSE				sS	sS	01 26 36.3	+10
SSE				ScP	ScP	01 27 33.8	+3.2
SSE				pmax	pmax		
comp=Z,23nm,0.7s,mb5.1							
SSE				pmax	pmax		
comp=Z,56nm,5.3s							
SSE				LR	LR		
comp=N,2μm,16.8s,MS4.9							
SSE				LR	LR		
comp=E,490nm,16.7s,MS4.9							
SSE				LR	LR		
comp=Z,1μm,18.4s,MS4.7							
DGRG	**David-gareji**	**32.36**	**300**	P	**P**	**01 21

TBLG Delisi 32.86 300 P **P** **01 21 08.7 +1.9**
TBLG S 01 34 42.1
GOR Gori 33.36 300 P **P** **01 21 12.8 +1.6**
GOR S 01 34 41.5
ZEI Tsey 33.61 302 *e*P **P** **01 21 12.0 -1.4**
ZEI pmax pmax
comp=Z,44nm,1.4s,mb5.2
SNY Shenyang 33.73 60 ⇑P **P** **01 21 17.3 +2.9**
SNY S **S** **01 26 37.9 +2.2**
SNY pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
SNY pmax pmax
comp=Z,250nm,3.5s
SNY LR LR
comp=N,3μm,16.7s
SNY LR LR
comp=Z,2μm,21.2s,MS4.8
SOKR Solikamsk 33.86 336*d i*P **P** **01 21 17.9 +2.6**
SOKR S **S** **01 26 33.4 -3.9**
SOKR pmax pmax
comp=Z,50nm,1.1s,mb5.4
SOKR MLR MLR
comp=Z,2μm,17.0s,MS5.0
KIV Kislovodsk 34.64 304 *e*P **P** **01 21 24.2 +1.9**
KIV *e* 01 22 42.0
KIV *e* 01 23 59.6
KIV *i* S **S** **01 26 47.7 -2.1**
KIV pmax pmax
comp=Z,35nm,1.6s,mb5.0
KIV MLR MLR
comp=Z,1μm,19.0s,MS4.7
KIV Kislovodsk 34.64 304 *e*P **P** **01 21 23.1 +0.8**
comp=Z,16nm,0.9s,mb5.0
KIV Kislovodsk 34.64 304 P **P** **01 21 24.5 +2.2**
SNR=7.7
CN2 Changchun 35.32 57 *e*P **P** **01 21 28.0 -0.1**
CN2 *e*S **S** **01 27 04.1 +3.9**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=N,3μm,15.0s,MS5.2
CN2 LR LR
comp=E,1μm,15.0s,MS5.2
CN2 LR LR
comp=Z,3μm,20.0s,MS5.0
VRHR Novokhopersk 36.90 315 *e*P **P** **01 21 41.8 +0.2**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.9s
KSRS Korea Array 36.99 68 P **P** **01 21 41.5 -1.0**
comp=E,4.4nm,1.0s,mb4.3,baz=272,slow=9.9,SNR=9.9
KSRS LR LR 01 38 11.0
comp=E,2μm,20.4s,MS4.9,baz=275,slow=38
KSRS Korea Array 36.99 68 P **P** **01 21 41.5 -1.1**
KSRS pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
KSRS MLR MLR
comp=Z,2μm,20.4s,MS4.9
MALT Malatya 37.60 294 *e*P **P** **01 21 48.0 +0.3**
MALT pmax pmax
comp=Z,11nm,1.2s,mb4.5
MALT Malatya 37.60 294 *e*P **P** **01 21 48.0 +0.3**
comp=Z,11nm,1.2s,mb4.5
VORD Divnogorie 38.28 315 *e*P **P** **01 21 52.8 -0.5**
VORD *e* 01 23 18.0
VORD pmax pmax
comp=E,60nm,1.0s
VORD pmax pmax
comp=Z,20nm,1.0s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=Z,230nm,4.9s
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,30nm,0.6s
VORD MLR MLR
comp=N,2μm,14.0s,MS5.1
VORD MLR MLR
comp=E,2μm,14.0s,MS5.1
VORD MLR MLR
comp=Z,3μm,14.0s,MS5.2
MDJ Mudanjiang 38.37 56 P **P** **01 21 53.0 -1.0**
MDJ PP PP 01 23 20.8 -1.2
MDJ S **S** **01 27 48.2 +1.6**
MDJ ScP ScP 01 27 54.3 +1.5
MDJ PcS PcS 01 27 55.7 -0.5
MDJ pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
MDJ pmax pmax
comp=Z,19nm,3.3s
MDJ LR LR
comp=N,1μm,16.0s
MDJ LR LR
comp=E,720nm,21.8s
MDJ LR LR
comp=Z,2μm,14.5s,MS5.1
VSR Storozhevoye 38.42 315 *e*P **P** **01 21 54.0 -0.4**
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=Z,20nm,1.1s,mb4.8
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR MLR MLR
comp=N,2μm,12.0s,MS5.2
VSR MLR MLR
comp=E,980nm,12.0s,MS5.2
VSR MLR MLR
comp=Z,2μm,12.0s,MS5.1
ANN Anapa 38.48 304 *e*P **P** **01 21 54.2 -0.8**
ANN *e* 01 23 22.0
ANN *e* 01 24 07.7
ANN *e*S **S** **01 27 45.0 -3.4**
ANN *e* 01 32 03.9
ANN pmax pmax
comp=Z,30nm,1.2s,mb4.9
PRGR Permogore 39.41 332 ⇓*i*P **P** **01 22 02.5 0.0**
PRGR *e**PP pP 01 22 12.0 +0.2
PRGR *e*S **S** **01 28 03.0 +1.1**
PRGR pmax pmax
comp=Z,27nm,0.6s,mb5.2
KLR Kul'dur 40.38 49 *e*P **P** **01 22 06.8 -4.0**
MOS Moscow 40.59 321 *e*P **P** **01 22 12.3 -0.1**
MOS *e* 01 23 46.9
MOS *e*S **S** **01 28 20.6 +0.9**
MOS pmax pmax
comp=Z,200nm,1.6s,mb5.5
MOS pmax pmax
comp=Z,85nm,1.3s,mb5.2
MOS MLR MLR
comp=Z,2μm,15.0s,MS5.2
MOS MLR MLR
comp=E,2μm,15.0s
MMAI Mount Meron Ar 40.65 286 P **P** **01 22 12.9 -0.4**
comp=E,1.4nm,0.7s,mb3.7,baz=64,slow=11,SNR=3.5
SIM Simferopol' 40.84 304*de*P **P** **01 22 15.8 +1.1**
SIM S **S** **01 28 26.5 +2.7**
SIM pmax pmax
comp=Z,22nm,1.2s,mb4.7
SIM MLR MLR
comp=Z,2μm,20.0s,MS4.8
OBN Obninsk 40.98 320 *e*P **P** **01 22 14.8 -0.8**
OBN *i* 01 23 51.7
OBN *i* 01 24 17.4
OBN pmax pmax
comp=Z,77nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,1μm,16.0s,MS4.9
OBN Obninsk 40.98 320 *e*P **P** **01 22 15.1 -0.5**
comp=Z,44nm,0.9s,mb5.1
BR131 Keskin Array S 41.24 296 *e*P **P** **01 22 18.6 +0.5**
comp=Z,19nm,1.3s,mb4.6
BRTR Keskin Array B 41.24 296 P **P** **01 22 18.4 +0.4**
comp=Z,19nm,1.2s,mb4.6,baz=97,slow=5.0,SNR=32
BRTR Keskin Array B 41.24 296*ce*P **P** **01 22 18.7 +0.6**
BRTR pmax pmax
comp=Z,19nm,1.2s
KLMR Klimovskoe 41.59 329*d i*P **P** **01 22 19.9 -0.6**
KLMR S **S** **01 28 25.4 -9.0**
KLMR pmax pmax
comp=Z,106nm,1.4s,mb5.3
KLMR pmax pmax
comp=Z,52nm,10.2s
KLMR MLR MLR
comp=Z,1μm,11.0s,MS5.1
EIL Elat 41.75 281 P **P** **01 22 22.3 0.0**
comp=Z,14nm,1.1s,mb4.5,baz=74,slow=7.4,SNR=11
ATD Arta Tunnel 42.28 252 P **P** **01 22 26.4 -0.5**
comp=Z,11nm,0.8s,mb4.5,baz=38,slow=8.3,SNR=8.8
KIEV Kiev 44.54 313 *e*P **P** **01 22 43.9 -0.7**
KIEV pmax pmax
comp=Z,11nm,0.9s,mb4.7
KIEV Kiev 44.54 313 *e*P **P** **01 22 43.9 -0.7**
comp=Z,11nm,0.9s,mb4.7
KIS Kishinev 44.60 307 *e*P **P** **01 22 45.0 -0.1**
KIS *e*LQ 01 39 36.0
KIS LRM 01 44 20.0
comp=Z,1μm,16.0s
KIS Kishinev 44.60 307 *e*P **P** **01 22 45.0 -0.1**
KIS MLR MLR
comp=Z,1μm,16.0s,MS4.9
KIS MLR MLR
comp=Z,1μm,15.0s
KIS MLR MLR
comp=N,1μm,14.0s,MS5.0
KIS MLR MLR
comp=E,1μm,14.0s,MS5.0
MJAR Matsushiro Arr 45.27 68 P **P** **01 22 49.4 -1.3**
comp=E,1.3nm,0.6s,mb3.9,baz=272,slow=9.6,SNR=4.6
MJAR LR LR 01 44 35.7
comp=E,681nm,19.5s,MS4.6,baz=260,slow=40
MJAR Matsushiro Arr 45.27 68 P **P** **01 22 49.4 -1.3**
MJAR pmax pmax
comp=Z,1.0nm,0.6s
MJAR MLR MLR
comp=Z,681nm,19.5s
JOF Joensuu 45.97 330 *e*P **P** **01 22 56.2 +0.5**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
JOF Joensuu 45.97 330 *e*p **P** **01 22 56.2 +0.5**
comp=Z,2.4nm,0.4s,mb4.5
VRI Vrincioaia 46.06 306 ⇑P **P** **01 22 57.8 +1.1**
VRI Vrincioaia 46.06 306 ⇑*i*P **P** **01 22 57.8 +1.1**
TESR 46.10 307 ⇓*i*P **P** **01 22 56.5 -0.5**
PLOR Plostina 46.11 306 ⇑P **P** **01 22 57.6 +0.5**
PLOR Plostina 46.11 306 ⇑*i*P **P** **01 22 57.6 +0.5**
SULR 46.44 304 ⇑*i*P **P** **01 22 57.2 -2.5**
MLR Muntele Rosu 46.62 305 ⇓P **P** **01 23 02.5 +1.4**
MLR Muntele Rosu 46.62 305 ⇓*i*P **P** **01 23 02.5 +1.4**
LVZ Lovozero 46.63 337*de*P **P** **01 23 02.2 +1.3**
LVZ pmax pmax
comp=Z,39nm,1.0s,mb5.3
LVZ Lovozero 46.63 337 P **P** **01 23 02.1 +1.2**
comp=Z,191nm,1.1s,mb5.9,SNR=6.9
APA Apatity 46.91 336 ⇑*i*P **P** **01 23 05.0 +1.9**
APA *e*S **S** **01 29 59.0 +7.4**
APA pmax pmax
comp=Z,18nm,1.2s,mb4.9
ALN Alexandroupoli 46.92 299 P **P** **01 23 04.4 +0.9**
BURAR Bucovina Array 47.05 308 ⇑P **P** **01 23 04.4 -0.1**
BURAR Bucovina Array 47.05 308 ⇑*i*P **P** **01 23 04.4 -0.1**
BUR08 Bucovina Ar. S 47.06 308 *e*P **P** **01 23 04.1 -0.4**
VOIR 47.25 305 ⇓P **P** **01 23 05.7 -0.3**
VOIR 47.25 305 ⇓*i*P **P** **01 23 05.7 -0.3**
TIXI Tiksi 47.45 18 *e*P **P** **01 23 08.6 +1.4**
TIXI pmax pmax
comp=Z,33nm,1.4s,mb5.1
ASAJ Asahikawa 47.68 57 LR LR 01 44 22.0
comp=Z,1μm,18.2s,MS5.0,baz=103,slow=38
LVV L'vov 47.82 311 *e*P **P** **01 23 11.1 +0.7**
LVV *e* 01 25 04.6
LVV MLR MLR
comp=N,600nm,18.0s,MS4.8
LVV MLR MLR
comp=E,800nm,18.0s,MS4.8
LVV MLR MLR
comp=Z,800nm,18.0s,MS4.7
FINES FINESS Array B 47.93 327 P **P** **01 23 10.6 -0.4**
comp=Z,12nm,0.6s,mb5.1,baz=108,slow=9.1,SNR=27
FINES FINESS Array B 47.93 327 P **P** **01 23 10.6 -0.5**
FINES pmax pmax
comp=Z,12nm,0.6s
KAF Kangasniemi 47.97 328 *e*P **P** **01 23 10.2 -1.2**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KAF Kangasniemi 47.97 328 *e*p **P** **01 23 10.2 -1.2**
comp=Z,1.0nm,0.4s,mb4.2
KWP Kalwaria Pacla 48.68 311 ⇑P **P** **01 23 17.2 +0.2**
KWP Kalwaria Pacla 48.68 311 *e*P **P** **01 23 17.4 +0.4**
comp=Z,21nm,1.1s,mb5.1
KWP Kalwaria Pacla 48.68 311 ⇑*i*P **P** **01 23 17.2 +0.2**
DRGR 48.79 307 ⇑P **P** **01 23 17.8 -0.2**
DRGR 48.79 307 ⇑*i*P **P** **01 23 17.8 -0.2**
VTS Vitosha 48.83 301 ⇓P **P** **01 23 19.4 +1.1**
VTS Vitosha 48.83 301 ⇓*i*P **P** **01 23 19.4 +1.1**
PAIG Paliouri 48.84 298 P **P** **01 23 18.1 -0.3**
PLG Polygyros 48.95 299 P **P** **01 23 18.5 -0.8**
UZH Uzhgorod 48.98 310 *e*P **P** **01 23 21.0 +1.6**
UZH *e* 01 23 33.0
UZH *e* 01 25 17.0
UZH *e*S **S** **01 30 25.3 +3.8**
UZH *e* 01 33 54.3
UZH MLR MLR
comp=N,600nm,15.0s,MS4.8
UZH MLR MLR
comp=E,520nm,15.0s,MS4.8
UZH MLR MLR
comp=Z,440nm,15.0s,MS4.6
KOLS Kolonicke sedl 48.98 310 *e*P **P** **01 23 21.8 +2.4**
KOLS *e* 01 24 46.2
KOLS pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
KOLS Kolonicke sedl 48.98 310 *e*P **P** **01 23 21.8 +2.4**
comp=Z,4.3nm,1.1s,mb4.4
KOLS *e* 01 24 46.2
KOLS Kolonicke sedl 48.98 310 *e*P **P** **01 23 21.8 +2.4**
KOLS *e*PCP PcP 01 24 46.2 +3.1
KARN Karanos 49.51 292 P **P** **01 23 23.2 -0.4**
CRVS Cervenica-Dubn 49.52 310 *e*P **P** **01 23 31.1 +7.6**
CRVS *e* 01 24 42.8
CRVS pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
CRVS Cervenica-Dubn 49.52 310 *e*P **P** **01 23 31.1 +7.6**
comp=Z,2.5nm,1.1s,mb4.2
CRVS *e* 01 24 42.8
CRVS Cervenica-Dubn 49.52 310 *e*pP pP 01 23 31.1 -1.8
CRVS *e*PCP PcP 01 24 42.8 -2.2
LKR Lokris 49.58 296 P **P** **01 23 23.5 -0.6**
BZS Buzias 49.64 306 ⇑P **P** **01 23 23.8 -0.7**
BZS Buzias 49.64 306 ⇑*i*P **P** **01 23 23.8 -0.7**
KAPI Kappang 49.69 130 *e*P **P** **01 23 24.0 -1.2**
comp=Z,31nm,1.3s,mb5.2
KEV Kevo 49.92 338 *e*P **P** **01 23 25.9 -0.3**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 49.92 338 *e*P **P** **01 23 25.1 -1.1**
comp=Z,5.2nm,1.2s,mb4.4
KEV Kevo 49.92 338 *e*p **P** **01 23 25.9 -0.3**
comp=Z,0.7nm,0.4s,mb4.0
AGG Agios Georgios 50.02 297 P **P** **01 23 25.5 -2.0**
VLX Vlachokerasia 50.30 295 P **P** **01 23 27.3 -2.3**
ARCES ARCESS Array B 50.34 337 P **P** **01 23 29.6 +0.2**
comp=Z,12nm,0.9s,mb4.9,baz=103,slow=7.5,SNR=24
ARCES ARCESS Array B 50.34 337 P **P** **01 23 29.6 +0.2**
ARCES pmax pmax
comp=Z,12nm,0.9s
ARE0 ARCESS Array S 50.34 337 *e*P **P** **01 23 30.5 +1.1**
VYHS Vyhne 51.28 310 *e*P **P** **01 23 37.1 +0.3**
VYHS pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
VYHS Vyhne 51.28 310 *e*P **P** **01 23 37.1 +0.3**
comp=Z,5.4nm,1.7s,mb4.2
VYHS Vyhne 51.28 310 *e*P **P** **01 23 37.1 +0.3**
KOLL Kolacno 51.56 310 *e*P **P** **01 23 38.9 0.0**
KOLL Kolacno 51.56 310 *e*P **P** **01 23 38.9 0.0**
OKC Ostrava-Krasne 51.63 311 *e*P **P** **01 23 41.3 +1.9**
OKC MLR MLR
comp=Z,700nm,15.5s,MS4.8
OKC Ostrava-Krasne 51.63 311 *e*P **P** **01 23 41.3 +1.9**
OKC AMS AMS 01 50 40.0
comp=Z,700nm,15.5s
PKSM Moragy 51.65 307 ⇑P **P** **01 23 38.3 -1.3**
PKSM Moragy 51.65 307 ⇑*i*P **P** **01 23 38.3 -1.3**
MORC Moravsky Berou 52.02 311 ⇑P **P** **01 23 41.6 -0.7**
MORC Moravsky Berou 52.02 311 *e*P **P** **01 23 41.4 -0.9**
comp=Z,2.4nm,0.6s,mb4.3
MORC Moravsky Berou 52.02 311 ⇑*i*P **P** **01 23 41.6 -0.7**
VRAC Vranov 52.68 311 ⇑P **P** **01 23 46.1 -1.1**
VRAC Vranov 52.68 311 ⇑*i*P **P** **01 23 46.1 -1.1**
DPC Dobruska-Polom 52.76 312 *e*P **P** **01 23 47.2 -0.5**
DPC MLR MLR
comp=Z,1μm,12.6s,MS5.2
DPC Dobruska-Polom 52.76 312 *e*P **P** **01 23 47.2 -0.5**
DPC AMS AMS 01 48 50.0
comp=Z,1μm,12.6s
UPC Upice 52.94 312 *e*P **P** **01 23 49.0 -0.1**
UPC Upice 52.94 312 *e*P **P** **01 23 49.0 -0.1**
CONA Conrad Observa 53.32 309 ⇑*i*P **P** **01 23 50.2 -1.8**
comp=Z,8.5nm,1.4s,mb4.5
SEY Seymchan 53.37 32*ce*P **P** **01 23 58.1 +6.0**
TREC Trest 53.40 311 *e*P **P** **01 23 59.4 +6.9**
TREC MLR MLR
comp=Z,1μm,18.6s,MS4.9
TREC Trest 53.40 311 *ep*P pP 01 23 59.4 -2.6
TREC AMS AMS 01 48 50.0
comp=Z,1μm,18.6s
PVCC Panska Ves 53.85 312 AMS AMS 01 49 00.0
comp=Z,2μm,14.3s
PRU Pruhonice 53.93 312 *e*P **P** **01 23 57.6 +1.2**
PRU MLR MLR
comp=Z,1μm,15.1s,MS5.1
PRU Pruhonice 53.93 312 *e*P **P** **01 23 57.6 +1.2**
PRU AMS AMS 01 49 40.0
comp=Z,1μm,15.1s
SOKA Soboth 54.05 308 ⇑*i*P **P** **01 23 56.8 -0.5**
comp=Z,9.3nm,1.2s,mb4.6
BOJS Bojanci 54.09 306 *i* P **P** **01 23 58.6 +1.0**
BOJS Bojanci 54.09 306 *i* P **P** **01 23 58.6 +1.0**
BRG Berggiesshubel 54.21 313 *i* P **P** **01 23 58.8 +0.4**
comp=Z,5.2nm,0.9s,mb4.5
BRG *e* 01 24 11.2
comp=Z,11nm,1.5s
BRG *e* 01 24 43.5
comp=Z,14nm,1.4s
BRG
comp=Z,2μm,16.2s
BRG
comp=N,1μm,17.0s
BRG
comp=E,2μm,17.0s
KMBO Kilima Mbogo 54.31 243 P **P** **01 23 58.9 -0.7**
comp=E,5.2nm,0.7s,mb4.6,baz=0.1,slow=24,SNR=14
KMBO Kilima Mbogo 54.31 243 *e*P **P** **01 23 59.3 -0.3**
KMBO pmax pmax
comp=Z,7.0nm,0.8s
KMBO Kilima Mbogo 54.31 243 *e*P **P** **01 23 59.3 -0.3**
comp=Z,6.8nm,0.8s,mb4.6
VISS Visnje 54.33 307 *i* P **P** **01 24 06.2 +6.8**
VISS Visnje 54.33 307 *i* P **P** **01 24 06.2 +6.8**
KHC Kasperske Hory 54.66 311 *e*P **P** **01 24 01.7 0.0**
KHC MLR MLR
comp=Z,1μm,13.3s,MS5.1
KHC Kasperske Hory 54.66 311 *e*P **P** **01 23 58.2 -3.5**
comp=Z,17nm,1.8s,mb4.8
KHC Kasperske Hory 54.66 311 *e*P **P** **01 24 01.7 0.0**
KHC AMS AMS 01 50 10.0
comp=Z,1μm,13.3s
CLL Collm 54.75 314 *e*P **P** **01 24 02.0 -0.3**
CLL pmax pmax
comp=Z,11nm,1.3s,mb4.7
CLL MLR MLR
comp=Z,2μm,19.4s,MS5.2
CLL Collm 54.75 314 *e*P **P** **01 24 02.0 -0.3**
comp=Z,7.0nm,1.3s,mb4.5
CLL *e* 01 24 22.0
CLL LR LR
comp=Z,2μm,19.4s,MS5.2
CLL Collm 54.75 314 *e*P **P** **01 24 02.0 -0.3**
comp=Z,7.0nm,1.3s,mb4.5
CLL *e* 01 24 22.0
CLL Lm 01 49 00.0
comp=N,2μm,20.5s
CLL Lm 01 49 00.0
comp=E,1μm,21.6s
CLL Lm 01 49 00.0
comp=Z,2μm,19.4s
JAVS Javornik 54.85 307 *i* P **P** **01 24 03.2 +0.1**
JAVS Javornik 54.85 307 *i* P **P** **01 24 03.2 +0.1**
NB2 NORSAR Subarra 55.03 326 P **P** **01 24 02.9 -1.3**
comp=Z,17nm,1.0s,mb5.0,baz=88,slow=7.4
NOA NORSAR Array B 55.03 326 P **P** **01 24 02.4 -1.8**
comp=Z,5.3nm,0.6s,mb4.7,baz=88,slow=7.1,SNR=16
NOA NORSAR Array B 55.03 326 P **P** **01 24 02.4 -1.8**
NOA pmax pmax
comp=Z,5.0nm,0.6s
NOA NORSAR Array B 55.03 326 P **P** **01 24 02.4 -1.8**
NAO01 NORSAR Array S 55.20 325 *e*P **P** **01 24 05.2 -0.2**
comp=Z,3.5nm,0.6s,mb4.6
NKC Novy Kostel 55.24 312 *e*P **P** **01 24 05.2 -0.6**
NKC MLR MLR
comp=Z,2μm,15.2s,MS5.3
NKC Novy Kostel 55.24 312 *e*P **P** **01 24 05.2 -0.6**
NKC AMS AMS 01 50 00.0
comp=Z,2μm,15.2s
MOX Moxa 55.70 313 *e*(P) **P** **01 24 09.4 +0.2**
MOX
comp=Z,1μm,21.0s
FETA Feichten 56.90 309 ⇓*i*P **P** **01 24 17.3 -0.5**
comp=Z,7.1nm,1.2s,mb4.6
BILL Bilibino 59.03 26 *e*P **P** **01 24 38.7 +6.3**
BILL *i* 01 26 51.6
BILL pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
BILL MLR MLR
comp=Z,700nm,15.0s,MS4.9
SENIN Lac Senin/Sane 59.35 309 *e*P **P** **01 24 34.9 0.0**
comp=Z,45nm,2.0s,mb5.2
KEST Kesra 60.85 296 P **P** **01 24 44.4 -1.0**
comp=Z,12nm,1.1s,mb4.9,baz=68,slow=3.1,SNR=14
KEST Kesra 60.85 296 *e*P **P** **01 24 46.1 +0.7**
DAG Danmarks Havn 62.91 345 *i* P **P** **01 24 59.5 +0.9**
DAG pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
DAG Danmarks Havn 62.91 345 *i* P **P** **01 24 59.5 +0.9**
comp=Z,65nm,1.0s,mb5.7
FITZ Fitzroy Crossi 63.31 135 P **P** **01 24 59.7 -2.3**
comp=Z,5.0nm,0.9s,mb4.7,baz=317,slow=6.0,SNR=9.8
FITZ Fitzroy Crossi 63.31 135 *e*P **P** **01 25 00.7 -1.3**
comp=Z,6.9nm,0.8s,mb4.8
TAM Tamanrasset 68.84 285 *e*P **P** **01 25 35.7 -2.0**
TAM pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
TAM Tamanrasset 68.84 285 *e*P **P** **01 25 35.7 -1.9**
comp=Z,2.9nm,1.2s,mb4.1
ESDC Sonseca Array 69.31 304 P **P** **01 25 38.7 -1.6**
comp=Z,2.0nm,0.8s,mb4.1,baz=57,slow=7.1,SNR=8.6
SUMG Summit 69.52 344 *e*P **P** **01 25 41.8 +0.8**
comp=Z,62nm,1.3s,mb5.4
SUMG Summit 69.52 344 *i* P **P** **01 25 42.1 +1.1**
comp=Z,16nm,0.8s,mb5.0
PAB San Pablo 69.63 304 *e*P **P** **01 25 43.2 +0.9**
PAB pmax pmax
comp=Z,24nm,1.5s,mb4.9
PAB San Pablo 69.63 304 *e*P **P** **01 25 43.2 +0.9**
comp=Z,24nm,1.5s,mb4.9
WRA Warramunga Arr 70.22 129 P **P** **01 25 44.7 -1.4**
comp=Z,24nm,0.8s,mb5.2,baz=323,slow=6.3,SNR=94
WRA Warramunga Arr 70.22 129 P **P** **01 25 44.7 -1.4**
WRA pmax pmax
comp=Z,24nm,0.8s
WRA Warramunga Arr 70.22 129 P **P** **01 25 44.7 -1.4**
WB2 Warramunga Arr 70.23 129 *e*P **P** **01 25 44.9 -1.2**
LSZ Lusaka 70.29 238 *e*P **P** **01 25 45.5 -1.0**
LSZ pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LSZ Lusaka 70.29 238 *e*P **P** **01 25 45.5 -1.1**
comp=Z,3.4nm,0.6s,mb4.5
PBRG Braganca 70.38 307 *e*P **P** **01 25 49.9 +3.0**
comp=Z,12nm,1.6s,mb4.6
MVO Moncorvo 70.84 307 *e*P **P** **01 25 50.1 +0.4**
comp=Z,11nm,1.5s,mb4.6
MTE Manteigas 71.52 306 *e*P **P** **01 25 53.5 -0.3**
comp=Z,25nm,1.5s,mb4.9
PVIS Viseu 71.63 307 *e*P **P** **01 25 53.8 -0.6**
comp=Z,12nm,1.2s,mb4.7
PCBR Castelo Branco 71.71 306 *e*P **P** **01 25 54.3 -0.6**
comp=Z,10nm,1.5s,mb4.5
PMRV Marv??o 71.83 305 *e*P **P** **01 25 54.5 -1.1**
comp=Z,15nm,1.7s,mb4.6

PBAR	Barrancos	72.11	304	eP	P	01 25 56.7	-0.7
	comp=Z,18nm,1.5s,mb4.8						
PTOM	Tomar	72.46	306	eP	P	01 25 59.9	+0.5
	comp=Z,23nm,1.7s,mb4.8						
ASAR	Alice Springs	72.59	132	P	P	01 25 58.7	-1.6
	comp=Z,7.5nm,0.8s,mb4.7,baz=317,slow=6.3,SNR=55						
ASAR	Alice Springs	72.59	132	P	P	01 25 58.7	-1.6
ASAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PBDV	Barranco-do-Ve	73.15	304	eP	P	01 26 02.7	-0.9
	comp=Z,33nm,1.8s,mb5.0						
PFVI	Vila Bisbo	73.84	304	eP	P	01 26 12.4	+4.7
	comp=Z,33nm,1.7s,mb5.0						
TTA	Tatalina	75.20	24	eP	P	01 26 16.0	+0.9
BPAW	Bear Paw Mtn.	76.10	22	eP	P	01 26 20.9	+0.7
	comp=Z,14nm,1.2s,mb4.8						
COLA	College	76.51	20	eP	P	01 26 20.7	-1.8
COLA				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
COLA	College	76.51	20	eP	P	01 26 20.7	-1.8
	comp=Z,32nm,1.1s,mb5.2						
PPLA	Purkeypile	76.54	23	eP	P	01 26 23.2	+0.5
	comp=Z,54nm,1.4s,mb5.3						
ILAR	Eielson Array	76.87	20	P	P	01 26 23.6	-0.8
	comp=Z,4.8nm,0.9s,mb4.5,baz=301,slow=4.6,SNR=44						
ILAR	Eielson Array	76.87	20	P	P	01 26 23.7	-0.8
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	Inuvik	77.32	13	eP	P	01 26 27.3	+0.3
INK				pmax	pmax		
	comp=Z,46nm,1.7s						
INK	Inuvik	77.32	13	eP	P	01 26 27.2	+0.3
	comp=Z,46nm,1.7s,mb5.1						
EGAK	Eagle	78.46	18	eP	P	01 26 33.7	+0.3
	comp=Z,56nm,1.6s,mb5.2						
PMR	Palmer	78.48	23	eP	P	01 26 33.7	+0.2
PMR				pmax	pmax		
	comp=Z,85nm,1.8s,mb5.4						
PMR	Palmer	78.48	23	eP	P	01 26 33.7	+0.2
	comp=Z,84nm,1.8s,mb5.4						
SML	Sawmill	78.58	22	eP	P	01 26 34.2	+0.1
SML				pmax	pmax		
	comp=Z,71nm,2.1s,mb5.2						
SML	Sawmill	78.58	22	eP	P	01 26 34.2	+0.1
	comp=Z,71nm,2.1s,mb5.2						
CTA	Charters Tower	78.67	122	P	P	01 26 33.8	-1.4
	comp=Z,12nm,1.0s,mb4.8,baz=301,slow=5.9,SNR=6.6						
CTA	Charters Tower	78.67	122	eP	P	01 26 34.7	-0.5
	comp=Z,8.8nm,0.9s,mb4.7						
CTA	Charters Tower	78.67	122	P	P	01 26 33.8	-1.4
CTA				pmax	pmax		
	comp=Z,12nm,1.0s						
CTAO	Charters Tower	78.67	122	eP	P	01 26 34.7	-0.5
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
CTAO	Charters Tower	78.67	122	eP	P	01 26 34.7	-0.5
	comp=Z,14nm,0.9s,mb4.9						
DAWY	Dawson	79.49	18	eP	P	01 26 39.3	+0.3
DAWY				e		01 28 56.1	
KDAK	Kodiak Island	79.91	27	P	P	01 26 41.1	-0.3
	comp=Z,12nm,0.8s,mb4.9,baz=296,slow=5.3,SNR=4.4						
KDAK	Kodiak Island	79.91	27	P	P	01 26 41.1	-0.3
KDAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
BOSA	Boshof	81.18	229	P	P	01 26 47.5	-1.1
	comp=Z,4.8nm,0.7s,mb4.5,baz=52,slow=3.9,SNR=12						
BOSA				LR	LR	01 59 33.8	
	comp=Z,656nm,21.0s,MS5.0,baz=50,slow=33						
STKA	Stephens Creek	83.17	133	P	P	01 26 57.5	-1.5
	comp=Z,10nm,0.8s,mb4.9,baz=309,slow=6.2,SNR=23						
STKA	Stephens Creek	83.17	133	iP	P	01 26 57.9	-1.1
	comp=Z,7.1nm,0.6s,mb4.9						
STKA	Stephens Creek	83.17	133	eP	P	01 26 57.2	-1.8
	comp=Z,2.4nm,0.8s,mb4.3						
DBIC	Dimbokro	85.28	275	P	P	01 27 09.4	-0.8
	comp=Z,4.1nm,0.7s,mb4.7,baz=28,slow=5.4,SNR=8.0						
DBIC	Dimbokro	85.28	275	P	P	01 27 09.5	-0.7
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIC	Kosan Boka	85.34	275	eP	P	01 27 09.7	-0.8
	comp=Z,36nm,1.2s,mb5.4						
TIC	Toumodi	85.44	275	eP	P	01 27 10.2	-0.8
	comp=Z,73nm,1.5s,mb5.6						
TIC	Toumodi	85.44	275	eP	P	01 27 10.2	-0.8
TIC				pmax	pmax		
	comp=Z,73nm,1.5s,mb5.6						
LIC	Lamto	85.66	275	eP	P	01 27 11.9	-0.2
	comp=Z,64nm,1.4s,mb5.7						
YKA	Yellowknife Ar	85.79	8	P	P	01 27 10.4	-1.4
	comp=Z,4.7nm,0.7s,mb4.8,baz=337,slow=5.2,SNR=12						
YKA				LR	LR	02 07 56.8	
	comp=Z,60nm,21.1s,MS4.0,baz=90,slow=37						
YKA	Yellowknife Ar	85.79	8	P	P	01 27 10.4	-1.4
YKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,60nm,21.1s						
YKA	Yellowknife Ar	85.79	8	P	P	01 27 10.4	-1.4
YKA				LR	LR	02 07 56.8	
DLBC	Dease Lake	86.67	17	eP	P	01 27 16.9	+0.6
FFC	Flin Flon	94.59	3	iP	P	01 27 55.8	+2.5
DZM	Mont Dzumac	95.27	112	eLR	LR	01 58 52.6	
	comp=Z,492nm,30.2s						
MAW	Mawson	99.43	188	P	P	01 28 12.1	-2.6
	comp=Z,2.6nm,0.9s,mb4.8,baz=29,slow=10,SNR=4.1						
MAW	Mawson	99.43	188	P	P	01 28 12.1	-2.5
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TXAR	Lajitas Array	119.70	7	PKP	PKPdf	01 33 22.5	-0.6
	comp=Z,0.6nm,0.8s,baz=352,slow=3.6,SNR=4.2						
TXAR	Lajitas Array	119.70	7	PKIKP	PKPdf	01 33 22.5	-0.7
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PPT	Papeete	130.16	87	eLR	LR	02 14 59.2	
	comp=Z,480nm,31.0s						
TBI	Tubuai	132.56	94	eLR	LR	02 16 08.3	
	comp=Z,397nm,30.2s						
TAOE	Nuku Hiva Isla	133.78	71	eLR	LR	02 16 40.7	
	comp=Z,420nm,24.9s						
OTAV	Otavalo	144.64	328	ePKPdf	PKPdf	01 34 09.4	-0.8
RKT	Rikitea	144.92	87	eLR	LR	02 21 49.7	
	comp=Z,320nm,28.5s						
CPUP	Villa Florida	145.51	268	PKPbc	PKPbc	01 34 09.3	-2.0
	comp=Z,5.4nm,0.8s,baz=38,slow=3.1,SNR=7.9						
CPUP	Villa Florida	145.51	268	PKIKP	PKPdf	01 34 09.4	-1.8
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LPAZ	La Paz	150.39	293	PKPbc	PKPbc	01 34 23.7	-1.1
	comp=Z,4.1nm,1.0s,baz=22,slow=5.0,SNR=9.6						
LPAZ	La Paz	150.39	293	PKIKP	PKPbc	01 34 23.7	-1.1
LPAZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LPAZ	La Paz	150.39	293	ePKPbc	PKPbc	01 34 24.7	0.0
TRQA	Tornquist	150.85	246	ePKPbc	PKPbc	01 34 24.7	-0.6

*IDC **10** 01:16:44.8±0.5, 30°.72N×83°.48E, h0km, mb4.5/23, mb1 4.6/26, mb1mx4.5/30, mbtmp4.4/26, ML3.8/2, Error ellipse: s-maj=15.6km s-min=13.0km az=17.0*

*ISCJB **10** 01:16:45.8±2.1, 30°.73N±0°.06×83°.40E±0°.06, h15km±15km, mb4.6/43, Error ellipse: s-maj=10.9km s-min=6.4km az=36.8*

*NEIC **10** 01:16:46.7±0.3, 30°.76N×83°.43E, h10km, mb4.8/19, Error ellipse: s-maj=8.1km s-min=5.1km az=42.0*

*MOS **10** 01:16:48.6±0.9, 30°.81N×83°.46E, h33km, mb4.9/27, Error ellipse: s-maj=14.6km s-min=7.0km az=118.2*

ISC 10 01:16:49.1±2.0, 30.76N±0°.06×83.45E±0°.06, h26km±14km, n108, σ0§98/100, mb4.6/43, 1C-1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	6.75	97	eP	Pn	01 18 28.9	+2.4
KBL	Kabul	12.71	291	eP	Pn	01 19 46.2	-1.9
KZA	Kyzart	13.07	332	ePn	Pn	01 19 53.8	+0.8
TKM2	Tokmak 2	13.65	335	eP	Pn	01 20 01.0	0.0
AML	Almayashu	13.78	328	ePn	Pn	01 20 01.8	-0.9
AAK	Ala-Archa	13.84	331	Pn	Pn	01 20 04.5	+1.0
	0.0nm,0.3s,baz=146,slow=18,SNR=2.0						
EKS2	Erkin-Say	14.17	330	ePn	Pn	01 20 09.2	+1.3
MK31	Makanchi Array	16.03	357	eP	Pn	01 20 32.2	-0.4
MKAR	Makanchi Array	16.03	357	Pn	Pn	01 20 31.8	-0.8
	baz=181,slow=12,SNR=3.7						
KKAR	Karatay Array	16.06	324	eP	Pn	01 20 31.7	-1.3
CHTO	Chiang Mai	18.40	127	eP	Pn	01 21 01.6	-0.8
CHTO				pmax	pmax		
	comp=Z,16nm,1.1s						
CHTO	Chiang Mai	18.40	127	eP	Pn	01 21 01.6	-0.8
	comp=Z,16nm,1.1s						
CM31	Chiang Mai Arr	18.65	128	eP	Pn	01 21 05.8	+0.4
	comp=Z,30nm,1.0s						
CMAR	Chiang Mai Arr	18.65	128	Pn	Pn	01 21 05.3	0.0
	comp=Z,0.4nm,0.3s,baz=312,slow=10,SNR=5.5						
KURK	Kurchatov	20.25	351	eP	P	01 21 20.4	-1.9
ENH	Enshi	22.43	85	eP	P	01 21 45.7	-0.2
	comp=Z,35nm,0.9s,mb4.8						
ZAA0	Zalesovo Array	23.19	2	eP	P	01 21 53.5	-0.1
ZALV	Zalesovo Beam	23.19	2	P	P	01 21 52.5	-1.2
	comp=Z,12nm,1.0s,mb4.3,baz=192,slow=10,SNR=3.3						
ZALV	Zalesovo Beam	23.19	2	P	P	01 21 52.5	-1.2
ZALV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
BVAR	Borovoye Array	24.20	341	P	P	01 22 03.8	+0.5
	comp=Z,2.6nm,0.5s,mb4.0,baz=161,slow=9.2,SNR=6.6						
BVAR	Borovoye Array	24.20	341	P	P	01 22 03.8	+0.6
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	Borovoye	24.26	340	eP	P	01 22 03.2	-0.6
BRVK				pmax	pmax		
	comp=Z,42nm,1.4s,mb4.7						
BRVK	Borovoye	24.26	340	eP	P	01 22 03.2	-0.5
	comp=Z,42nm,1.4s,mb4.7						
SONM	Songino Array	24.47	39	P	P	01 22 06.4	+0.6
	comp=Z,5.8nm,0.8s,mb4.1,baz=228,slow=9.9,SNR=5.4						
SONM	Songino Array	24.47	39	P	P	01 22 06.4	+0.6
SONM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ABKAR	Akbulak array	25.62	323	eP	P	01 22 16.5	+0.3
	comp=Z,45nm,1.2s,mb4.9						
ARU	Arti	31.02	333	eP	P	01 23 03.8	-0.5
ARU				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.9						
ARU	Arti	31.02	333	eP	P	01 23 03.8	-0.5
	comp=Z,27nm,1.4s,mb4.9						
GNI	Garni	32.67	297	eP	P	01 23 21.5	+2.4
GNI				pmax	pmax		
	comp=Z,36nm,1.3s						
GNI	Garni	32.67	297	eP	P	01 23 21.5	+2.5
	comp=Z,36nm,1.3s,mb5.1						
ZEI	Tsey	33.58	302	eP	P	01 23 28.0	+1.1
ZEI				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
KIV	Kislovodsk	34.62	304	eP	P	01 23 39.4	+3.4
KIV				i		01 26 09.7	
KIV				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
KIV	Kislovodsk	34.62	304	eP	P	01 23 36.8	+0.8
	comp=Z,11nm,0.8s,mb4.8						
KSRS	Korea Array	37.16	67	P	P	01 23 57.8	0.0
	comp=Z,5.4nm,0.7s,mb4.5,baz=277,slow=8.7,SNR=9.8						
KSRS	Korea Array	37.16	67	P	P	01 23 57.8	0.0
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
MALT	Malatya	37.54	294	eP	P	01 24 01.3	+0.2
MALT				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
MALT	Malatya	37.54	294	eP	P	01 24 01.3	+0.3
	comp=Z,12nm,1.1s,mb4.5						
PRGR	Permogore	39.48	333	iP	P	01 24 18.5	+1.6
PRGR				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.1						
MMAI	Mount Meron Ar	40.58	286	P	P	01 24 28.0	+1.5
	comp=Z,1.6nm,0.6s,mb3.8,baz=98,slow=4.4,SNR=3.2						
OBN	Obninsk	41.01	320	iP	P	01 24 29.3	-0.4
OBN				i		01 26 04.8	
OBN				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.9						
OBN	Obninsk	41.01	320	eP	P	01 24 29.1	-0.6
	comp=Z,34nm,1.1s,mb4.9						
BR131	Keskin Array S	41.20	297	eP	P	01 24 33.0	+1.4
BRTR	Keskin Array B	41.20	297	P	P	01 24 32.9	+1.4
	comp=Z,11nm,1.2s,mb4.4,baz=75,slow=7.8,SNR=6.7						
BRTR	Keskin Array B	41.20	297	P	P	01 24 32.9	+1.4
BRTR				pmax	pmax		
	comp=Z,11nm,1.2s						
EIL	Elat	41.66	281	P	P	01 24 36.2	+0.8
	comp=Z,11nm,1.1s,mb4.4,baz=87,slow=8.3,SNR=4.5						
EIL	Elat	41.66	281	P	P	01 24 36.2	+0.8
ATD	Arta Tunnel	42.13	252	P	P	01 24 40.2	+0.8
	comp=Z,2.6nm,0.3s,mb4.4,baz=218,slow=19,SNR=3.8						
ATD	Arta Tunnel	42.13	252	P	P	01 24 40.2	+0.8
MJAR	Matsushiro Arr	45.44	67	P	P	01 25 06.2	+0.4
	comp=Z,1.0nm,0.2s,mb4.2,baz=275,slow=10,SNR=4.5						
MJAR	Matsushiro Arr	45.44	67	P	P	01 25 06.2	+0.4
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
JOF	Joensuu	46.02	330	eP	P	01 25 10.1	+0.1
JOF				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.8						
FINES	FINESS Array B	47.98	327	P	P	01 25 24.7	-0.6
	comp=Z,6.2nm,0.7s,mb4.7,baz=103,slow=10,SNR=7.7						
FINES	FINESS Array B	47.98	327	P	P	01 25 24.7	-0.6
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES	FINESS Array B	47.98	327	P	P	01 25 24.7	-0.7
KAF	Kangasniemi	48.02	328	eP	P	01 25 25.6	-0.1
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KEV	Kevo	50.00	338	eP	P	01 25 41.2	+0.5
KEV				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
KEV	Kevo	50.00	338	eP	P	01 25 41.2	+0.5
	comp=Z,3.9nm,1.3s,mb4.3						
ARCES	ARCESS Array B	50.42	337	P	P	01 25 42.8	-1.0
	comp=Z,10nm,1.0s,mb4.8,baz=108,slow=5.8,SNR=7.8						
ARCES	ARCESS Array B	50.42	337	P	P	01 25 42.8	-1.1
ARCES				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARE0	ARCESS Array S	50.42	337	eP	P	01 25 43.9	+0.1
MORC	Moravsky Berou	52.02	311	eP	P	01 25 56.3	+0.1
MORC				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
MORC	Moravsky Berou	52.02	311	eP	P	01 25 56.3	+0.1
	comp=Z,9.6nm,1.3s,mb4.6						
KMBO	Kilima Mbogo	54.14	243	P	P	01 26 10.6	-1.7
	comp=Z,3.7nm,1.0s,mb4.3,baz=0.4,slow=24,SNR=4.4						
KMBO	Kilima Mbogo	54.14	243	eP	P	01 26 11.2	-1.1
KMBO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMBO	Kilima Mbogo	54.14	243	eP	P	01 26 11.2	-1.1
	comp=Z,4.0nm,1.0s,mb4.3						
NB2	NORSAR Subarra	55.08	326	P	P	01 26 17.2	-1.2
	comp=Z,1.8nm,0.7s,mb4.2,baz=86,slow=7.4						
NOA	NORSAR Array B	55.08	326	P	P	01 26 17.2	-1.2
	comp=Z,8.0nm,1.0s,mb4.7,baz=83,slow=7.2,SNR=5.2						
NOA	NORSAR Array B	55.08	326	P	P	01 26 17.2	-1.2
NOA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KEST	Kesra	60.80	296	P	P	01 26 58.5	-0.5
	comp=Z,5.8nm,1.1s,mb4.6,baz=27,slow=4.3,SNR=10						
KEST	Kesra	60.80	296	eP	P	01 26 58.8	-0.3
ESDC	Sonseca Array	69.29	304	P	P	01 27 52.5	-1.5
	comp=Z,1.5nm,0.8s,mb4.0,baz=56,slow=5.1,SNR=4.5						
WRA	Warramunga Arr	70.23	129	P	P	01 27 59.2	-0.8
	comp=Z,16nm,1.0s,mb4.9,baz=322,slow=6.4,SNR=14						
WRA	Warramunga Arr	70.23	129	P	P	01 27 59.2	-0.8
WRA				pmax	pmax		
	comp=Z,16nm,1.0s						
WRA	Warramunga Arr	70.23	129	P	P	01 27 59.2	-0.9
WB2	Warramunga Arr	70.24	129	eP	P	01 27 59.4	-0.6
ASAR	Alice Springs	72.58	132	P	P	01 28 13.6	-0.6
	comp=Z,3.5nm,0.9s,mb4.3,baz=320,slow=5.9,SNR=8.2						
ASAR	Alice Springs	72.58	132	P	P	01 28 13.6	-0.6
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BPAW	Bear Paw Mtn.	76.27	22	eP	P	01 28 35.6	+0.6
	comp=Z,10nm,0.9s,mb4.8						
COLA	College	76.68	20	eP	P	01 28 37.2	-0.2
COLA				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
COLA	College	76.68	20	eP	P	01 28 37.2	-0.1
	comp=Z,13nm,0.9s,mb4.8						
PPLA	Purkeypile	76.71	23	eP	P	01 28 40.0	+2.5
	comp=Z,24nm,1.3s,mb5.0						
ILAR	Eielson Array	77.04	20	P	P	01 28 39.2	-0.2
	comp=Z,5.8nm,0.8s,mb4.5,baz=310,slow=4.8,SNR=14						
ILAR	Eielson Array	77.04	20	P	P	01 28 39.2	-0.2
ILAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
INK	Inuvik	77.48	13	eP	P	01 28 39.2	-2.6
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	Inuvik	77.48	13	eP	P	01 28 39.2	-2.6
	comp=Z,7.1nm,1.0s,mb4.5						
EGAK	Eagle	78.62	18	eP	P	01 28 48.6	+0.4
	comp=Z,8.3nm,1.0s,mb4.6						
SML	Sawmill	78.76	22	eP	P	01 28 49.5	+0.5
SML				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
SML	Sawmill	78.76	22	eP	P	01 28 49.5	+0.5
	comp=Z,8.8nm,0.8s,mb4.7						
DAWY	Dawson	79.66	18	eP	P	01 28 55.2	+1.4
KDAK	Kodiak Island	80.09	27	P	P	01 28 57.2	+0.9
	comp=Z,14nm,1.0s,mb4.8,baz=240,slow=5.9,SNR=4.6						
KDAK	Kodiak Island	80.09	27	P	P	01 28 57.2	+0.9
KDAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
BOSA	Boshof	81.00	229	P	P	01 29 01.8	+0.2
	comp=Z,3.1nm,0.7s,mb4.3,baz=38,slow=4.4,SNR=5.6						
BOSA	Boshof	81.00	229	P	P	01 29 01.8	+0.2
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
STKA	Stephens Creek	83.17	133	P	P	01 29 11.2	-1.6
	comp=Z,4.0nm,0.7s,mb4.5,baz=304,slow=8.1,SNR=6.3						
STKA	Stephens Creek	83.17	133	eP	P	01 29 12.2	-0.7
DBIC	Dimbokro	85.18	275	P	P	01 29 23.1	-0.5
	comp=Z,2.7nm,0.7s,mb4.5,baz=45,slow=7.1,SNR=5.2						
DBIC	Dimbokro	85.18	275	P	P	01 29 23.2	-0.4
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	Yellowknife Ar	85.94	8	P	P	01 29 25.9	-0.6
	comp=Z,2.1nm,0.8s,mb4.4,baz=345,slow=5.2,SNR=3.8						
YKA	Yellowknife Ar	85.94	8	P	P	01 29 25.9	-0.6
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DLBC	Dease Lake	86.84	17	eP	P	01 29 30.9	-0.1
TXAR	Lajitas Array	119.85	7	PKP	PKPdf	01 35 39.5	+2.1
	comp=Z,0.5nm,0.9s,baz=357,slow=1.8,SNR=3.5						
TXAR	Lajitas Array	119.85	7	PKIKP	PKPdf	01 35 39.5	+2.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CPUP	Villa Florida	145.38	267	PKPbc	PKPbc	01 36 25.5	+0.6
	comp=Z,2.0nm,0.7s,baz=79,slow=3.3,SNR=4.5						
CPUP	Villa Florida	145.38	267	PKIKP	PKPdf	01 36 25.5	+0.5
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CPUP	Villa Florida	145.38	267	PKPbc	PKPbc	01 36 25.5	+0.6
LPAZ	La Paz	150.33	293	PKPbc	PKPbc	01 36 41.0	+2.4
	comp=Z,1.0nm,0.6s,baz=90,slow=2.0,SNR=2.6						
LPAZ	La Paz	150.33	293	PKIKP	PKPbc	01 36 41.0	+2.4
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TRQA	Tornquist	150.68	246	ePKPdf	PKPdf	01 36 33.4	+0.1
TRQA				ePKPbc	PKPbc	01 36 39.3	+0.5
TRQA				ePKPab	PKPab	01 36 46.7	+0.8

CASC 10 01:24:21.9±3.0, 11°.48N×86°.87W, h26km±9km, MD4.0, ML3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.75	22	eP	Pb	01 24 35.7	-0.6
COPN				eS	Sb	01 24 47.1	+1.0
CRUN	El Crucero	0.75	48	eP	Pb	01 24 36.6	+0.2
XAVN	Gruta Xavier	0.85	39	eP	Pb	01 24 37.5	-0.6
MGAN	Managua	0.90	43	eP	Pn	01 24 38.0	-0.9
MGAN				eS	Sb	01 24 51.5	+1.0
MGAN				AML	AML	01 24 54.8	
	comp=N,2μm,0.3s						
MOMN	Momotombo	0.98	19	eP	Pn	01 24 39.3	-0.6
CNGN	Cerro Negro	1.03	10	eP	Pn	01 24 39.7	-1.0
CNGN				eS	Sb	01 24 56.9	+2.8
CRIN	San Cristobal	1.22	352	eP	Pn	01 24 42.8	-0.6
CRIN				eS	Sn	01 25 01.0	+1.9
BOAB	BOACO BROADBAN	.52	51	eP	Pn	01 24 46.3	-1.2
BOAB				eS	Sn	01 25 06.7	+0.2
NY14	Universidad de	1.55	122	iP	Pn	01 24 46.8	-1.1
NY14				iS	Sn	01 25 10.0	+2.8
LAPC	Finca la Perla	1.58	117	iP	Pn	01 24 47.4	-0.8
BUEV	Buena Vista	1.59	115	iP	Pn	01 24 47.0	-1.4
GPS1	Guardaparques	1.65	115	iP	Pn	01 24 47.8	-1.5
LIM1	Limonal	1.77	116	iP	Pn	01 24 50.0	-0.8
VCR	Vista de Mar	1.82	138	eP	Pn	01 24 53.9	+2.4
CNCH	Conchagua	2.02	332	eP	Pn	01 24 53.7	-0.5
CNCH				eS	Sn	01 25 20.6	+2.0
BLLM	Bellamira	2.36	326	eP	Pn	01 24 58.9	-0.1
BLLM				eS	Sn	01 25 27.8	+0.7
VSM	San Miguel	2.37	325	eP	Pn	01 24 59.6	+0.5
JCR	Jicaral	2.37	133	eP	Pn	01 25 01.7	+2.5
TGUH	Tegucigalpa,Un	2.59	351	eP	Pn	01 25 02.3	+0.2
CAHU	Cacacuatique	2.62	330	eP	Pn	01 25 02.5	0.0
LFRS	El Faro	3.02	315	eP	Pn	01 25 07.4	-0.6
LFRS				eS	Sn	01 25 45.3	+2.0
BUS	Buena Vista	3.61	122	eP	Pn	01 25 21.0	+4.8
RBDL	Robledal	3.79	314	eP	Pn	01 25 19.8	+1.2

IDC 10 01:25:36.3±1.6, 16°.00S×167°.79E, h0km, mb4.1/6, mb1 4.4/6, mb1mx4.1/17, mbtmp4.1/6, MS3.7/3, Ms1 3.7/3, ms1mx3.3/20, Error ellipse: s-maj=106.9km s-min=22.8km az=148.0, Vanuatu Islands

| Code

DANN	**Dangsing**	**2.52 173**	*e*Pn	**Pn**	**01 28 49.9**	**+1.0**
DANN			*e*Sn	**Sn**	**01 29 26.9**	**+8.3**
18μm,1.1s						
PYUN	**Piuthan**	**2.78 188**	*e*Sn	**Sn**	**01 29 30.8**	**+5.8**
13μm,1.0s						
GKN	**Gorkha**	**3.03 159**	*e*Pn	**Pn**	**01 28 57.5**	**+1.5**
PTH	**Pithoragarh**	**3.07 246**	*ex*	**Pn**	**01 29 01.0**	**+4.5**
PTH			*ex*	x	01 29 48.1	
KOLN	**Koldanda**	**3.08 177**	*e*Pn	**Pn**	**01 28 58.1**	**+1.4**
KKN	**Kakani**	**3.46 152**	*e*Pn	**Pn**	**01 29 03.1**	**+1.3**
KKN			*e*Sn	**Sn**	**01 29 47.7**	**+5.9**
17μm,1.6s						
DMN	**Daman**	**3.55 155**	*e*Pn	**Pn**	**01 29 04.8**	**+1.7**
GUN	**Gumba**	**3.63 143**	*e*Pn	**Pn**	**01 29 06.0**	**+1.8**
GUN			*e*Sn	**Sn**	**01 29 53.0**	**+6.9**
7μm,0.9s						
PKIN	**Phulchoki**	**3.69 152**	*e*Pn	**Pn**	**01 29 06.2**	**+1.1**
PKI	**Pulchoki**	**3.70 152**	*e*Pn	**Pn**	**01 29 06.8**	**+1.6**
PKI			*e*Sn	**Sn**	**01 29 55.6**	**+7.7**
DDI	**Dehra Dun**	**4.67 265**	⇑*i*P	**Pn**	**01 29 20.5**	**+2.1**
DDI			*ex*	x	01 30 41.0	
TAPN	**Taplejung**	**5.12 132**	*e*Pn	**Pn**	**01 29 25.3**	**+0.6**
TAPN			*e*Sn	**Sn**	**01 30 27.5**	**+4.7**
3μm,1.2s						
ODAN	**Odare**	**5.28 138**	*e*Pn	**Pn**	**01 29 27.4**	**+0.5**
ODAN			*e*Sn	**Sn**	**01 30 30.7**	**+3.9**
976nm,0.6s						
SDNR	**Sundarnagar**	**5.58 278**	*ex*	x	01 29 57.5	
SDNR			*ex*	x	01 31 15.5	
BHK	**Bhakra**	**6.04 277**	*e*PKP	**Pn**	**01 29 36.2**	**-1.1**
BHK			*ex*	x	01 30 05.0	
SONA	**Sohna**	**6.11 246**	*e*PKP	**Pn**	**01 29 39.3**	**+1.0**
SONA			AMb	AMB	01 30 09.3	
comp=Z,293nm,0.7s						
LSA	**Lhasa**	**6.77 98**	Pn	**Pn**	**01 29 49.4**	**+2.0**
LSA			Sn	**Sn**	**01 31 09.3**	**+5.8**
LSA	**Lhasa**	**6.77 98**	*e*Pn	**Pn**	**01 29 49.4**	**+2.0**
KHET	**Khetri**	**7.20 249**	*e*PKP	**Pn**	**01 29 54.9**	**+1.6**
KHET			AMb	AMB	01 29 56.7	
comp=Z,27nm,0.8s						
AJM	**Ajmer**	**8.87 243**	*e*PKP	**Pn**	**01 30 16.7**	**+0.6**
AJM			*ex*	x	01 31 52.8	
CHCP	**Chirah Chowk**	**9.05 291**	P	**Pn**	**01 30 18.9**	**+0.3**
SHL	**Shillong**	**9.13 123**	⇓*i*x	**Pn**	**01 30 17.0**	**-2.7**
SHL			*i* x	x	01 32 45.0	
BHPL	**Bhopal**	**9.29 217**	*e*PKP	**Pn**	**01 30 21.6**	**-0.3**
BHPL			AMb	AMB	01 30 26.6	
comp=Z,41nm,1.2s						
BHPL			*ex*	x	01 32 02.8	
THW	**Thamme Wali**	**10.13 284**	⇓P	**Pn**	**01 30 33.2**	**-0.2**
CEP	**Cherat**	**10.19 290**	P	**Pn**	**01 30 35.3**	**+1.1**
CEP			S	**Sn**	**01 32 31.0**	**+3.6**
NGP	**Nagpur**	**10.44 203**	*ex*	**Pn**	**01 30 34.6**	**-3.1**
KSH	**Kashi**	**10.57 327**	*e*P	**Pn**	**01 30 37.8**	**-1.6**
KSH			*e*pP		01 30 41.0	
KSH			*e*sP		01 30 43.8	
KSH			*e*PP		01 30 46.1	
KSH			*e*S	**Sn**	**01 32 34.0**	**-2.8**
KSH			*e*SS		01 32 46.4	
KSH			pmax	pmax		
comp=Z,51nm,1.0s						
KSH			LR	LR		
comp=N,19μm,10.3s						
KSH			LR	LR		
comp=E,19μm,7.6s						
KSH			LR	LR		
comp=Z,25μm,8.0s						
BWNR	**Bhubaneshwar**	**10.73 168**	*ex*	**Pn**	**01 30 37.0**	**-4.7**
BWNR			*ex*	x	01 32 40.0	
AKL	**Akola**	**11.64 211**	*e*PKP	**Pn**	**01 30 52.4**	**-1.8**
KBL	**Kabul**	**12.66 291**	*e*P	**Pn**	**01 31 06.2**	**-1.9**
KBL			*e*		01 33 26.4	
KBL			pmax	pmax		
comp=Z,243nm,0.9s						
KBL	**Kabul**	**12.66 291**	*e*Pn	**Pn**	**01 31 06.2**	**-1.8**
comp=Z,243nm,0.9s						
KBL			*e*Sn	**Sn**	**01 33 26.4**	**-1.6**
ULHL	**Ulahol**	**12.74 335**	P	**Pn**	**01 31 09.0**	**-0.1**
SNR=13						
KZA	**Kyzart**	**12.98 332**	P	**Pn**	**01 31 11.2**	**-1.1**
SNR=25						
KZA	**Kyzart**	**12.98 332**	*e*Pn	**Pn**	**01 31 10.3**	**-2.0**
comp=Z,74nm,0.7s						
VIS	**Vishakhapatnam**	**13.08 180**	*i* P	**Pn**	**01 31 11.1**	**-2.7**
VIS			*i* S	**Sn**	**01 33 27.9**	**-10**
WMQ	**Urumqi**	**13.37 13**	P	**Pn**	**01 31 19.0**	**+1.3**
WMQ			sP		01 31 26.0	
WMQ			PP		01 31 30.0	
WMQ			S	**Sn**	**01 33 49.0**	**+3.7**
WMQ			SS		01 34 05.0	
WMQ			pmax	pmax		
comp=Z,52nm,0.6s						
WMQ			LR	LR		
comp=N,5μm,8.0s						
WMQ			LR	LR		
comp=E,11μm,8.0s						
WMQ			LR	LR		
comp=Z,4μm,8.0s						
AAA	**Alma-Ata**	**13.42 339**	*i* P	Px	01 31 31.8	
AAA			pmax	pmax		
comp=Z,1μm,1.9s						
AAA			MLR	MLR		
comp=Z,13μm,11.0s						
TKM2	**Tokmak 2**	**13.56 335**	P	**Pn**	**01 31 22.6**	**+2.3**
SNR=19						
TKM2	**Tokmak 2**	**13.56 335**	*e*P	**Pn**	**01 31 19.5**	**-0.8**
TKM2			pmax	pmax		
comp=Z,74nm,0.7s						
TKM2	**Tokmak 2**	**13.56 335**	*e*Pn	**Pn**	**01 31 19.4**	**-0.9**
comp=Z,74nm,0.7s						
KBK	**Karagaybulak**	**13.59 332**	P	**Pn**	**01 31 22.6**	**+2.0**
SNR=6.3						
AML	**Almayashu**	**13.70 328**	P	**Pn**	**01 31 20.6**	**-1.5**
SNR=18						
AML	**Almayashu**	**13.70 328**	*e*Pn	**Pn**	**01 31 20.5**	**-1.6**
comp=Z,109nm,1.3s						
AAK	**Ala-Archa**	**13.75 331**	P	**Pn**	**01 31 26.0**	**+3.1**
SNR=6.9						
AAK	**Ala-Archa**	**13.75 331**	Pn	**Pn**	**01 31 23.7**	**+0.9**
comp=Z,0.0nm,0.3s,baz=143,slow=16,SNR=18						
AAK			LR	LR	01 37 16.8	
comp=Z,10μm,19.1s,baz=128,slow=40						
AAK	**Ala-Archa**	**13.75 331**	P	**Pn**	**01 31 23.7**	**+0.8**
AAK			pmax	pmax		
comp=Z,1.0nm,0.3s						
AAK			MLR	MLR		
comp=Z,10μm,19.1s						
AAK	**Ala-Archa**	**13.75 331**	Pn	**Pn**	**01 31 25.3**	**+2.4**
comp=Z,326nm,1.7s,SNR=7.6						
FRU	**Bishkek**	**13.87 332**	*i* P	**Pn**	**01 31 26.0**	**+1.5**
FRU			*i*		01 34 06.0	
FRU			pmax	pmax		
comp=Z,180nm,1.9s						
FRU			MLR	MLR		
comp=Z,10μm,12.0s						
FRU			MLR	MLR		
comp=E,22μm,12.0s						
LATR	**Latur**	**13.87 208**	*ex*	**Pn**	**01 31 20.6**	**-4.0**
LATR			*ex*	x	01 33 51.8	
EKS2	**Erkin-Say**	**14.08 329**	P	**Pn**	**01 31 26.5**	**-0.8**
SNR=20						
EKS2	**Erkin-Say**	**14.08 329**	*e*Pn	**Pn**	**01 31 26.4**	**-0.9**
comp=E,53nm,1.0s						
HYB	**Hyderabad**	**14.10 199**	⇑*i*P	**Pn**	**01 31 23.0**	**-4.8**
HYB			*e*S	**Sn**	**01 34 04.0**	**+0.7**
HYB			LR	LR	01 36 54.0	
comp=E,17nm,16.0s						
BHJ	**Bhuj**	**14.42 242**	*ex*	x	01 34 09.4	
POO	**Poona**	**15.04 217**	*ex*	**Pn**	**01 31 34.5**	**-6.0**
POO			*ex*	x	01 31 34.6	
POO			*ex*	x	01 34 15.5	
GTA	**Gaotai**	**15.87 53**	*e*P	**Pn**	**01 31 51.2**	**0.0**
GTA			pP	pP	01 31 55.6	-6.9
GTA			sP	sP	01 31 58.6	-7.6
GTA			S	**Sn**	**01 34 49.3**	**+3.2**
GTA			sS	sS	01 34 55.6	-17
GTA			pmax	pmax		
comp=Z,7.0nm,1.4s						
GTA			pmax	pmax		
comp=Z,570nm,5.7s						
GTA			LR	LR		
comp=N,16μm,14.2s						
GTA			LR	LR		
comp=E,6μm,16.1s						
GTA			LR	LR		
comp=Z,4μm,17.3s						
KAD	**Karad**	**15.90 214**	*e*PKP	x	01 31 40.2	
KAD			AMb	AMB	01 31 52.8	
comp=Z,24nm,1.0s						
KAD			*e*S	**Sn**	**01 34 38.4**	**-8.7**
MK31	**Makanchi Array**	**15.94 357**	*ce*P	**Pn**	**01 31 50.6**	**-1.4**
MK31			pmax	pmax		
comp=Z,157nm,1.3s						
MK31	**Makanchi Array**	**15.94 357**	*e*Pn	**Pn**	**01 31 50.9**	**-1.1**
MK31			*e*P		01 31 55.5	
MKAR	**Makanchi Array**	**15.94 357**	Pn	**Pn**	**01 31 51.2**	**-0.8**
comp=Z,0.3nm,0.3s,baz=180,slow=11,SNR=20						
MKAR			LR	LR	01 39 01.3	
comp=Z,5μm,19.3s,baz=176,slow=41						
MKAR	**Makanchi Array**	**15.94 357**	Pn	**Pn**	**01 31 51.2**	**-0.8**
MKAR			LR	LR	01 39 01.3	
KK31	**Karatay Array**	**15.97 323**	*ce*P	**Pn**	**01 31 49.1**	**-3.4**
KK31			pmax	pmax		
comp=Z,85nm,1.0s						
KKAR	**Karatay Array**	**15.97 323**	*e*P	**Pn**	**01 31 49.8**	**-2.7**
KKAR			pmax	pmax		
comp=Z,55nm,1.0s						
KKAR	**Karatay Array**	**15.97 323**	*e*Pn	**Pn**	**01 31 49.8**	**-2.7**
comp=Z,55nm,1.0s						
LZH	**Lanzhou**	**17.80 68**	*e*P	**Pn**	**01 32 16.2**	**+0.7**
LZH			pP	pP	01 32 18.0	-5.9
LZH			sP	sP	01 32 20.0	-7.7
LZH			S	**Sn**	**01 35 32.0**	**-1.0**
LZH			sS	sS	01 35 37.2	-14
LZH			SS		01 35 54.0	
LZH			pmax	pmax		
comp=Z,64nm,1.0s						
LZH			pmax	pmax		
comp=Z,370nm,4.0s						
LZH			LR	LR		
comp=N,14μm,12.4s						
LZH			LR	LR		
comp=E,7μm,11.3s						
LZH			LR	LR		
comp=Z,6μm,10.8s						
KMI	**Kunming**	**17.98 104**	⇑P	**Pn**	**01 32 15.0**	**-2.7**
KMI			pP	pP	01 32 17.7	-8.2
KMI			sP	sP	01 32 19.9	-10
KMI			PP		01 32 34.6	
KMI			S	**Sn**	**01 35 33.7**	**-3.7**
KMI			sS	sS	01 35 37.6	-18
KMI			SS		01 35 57.5	
KMI			pmax	pmax		
comp=Z,71nm,1.7s						
KMI			pmax	pmax		
comp=Z,770nm,3.7s						
KMI			LR	LR		
comp=N,9μm,17.0s						
KMI			LR	LR		
comp=E,5μm,12.3s						
KMI			LR	LR		
comp=Z,8μm,17.0s						
CHRT	**Chiangrai**	**18.36 123**	P	**Pn**	**01 32 20.0**	**-2.5**
comp=Z,213nm,1.1s						
CHG	**Chiang Mai**	**18.47 127**	⇑P	**Pn**	**01 32 20.3**	**-3.5**
comp=Z,60nm,1.2s						
CHTO	**Chiang Mai**	**18.47 127**	*e*P	**Pn**	**01 32 20.1**	**-3.7**
CHTO			pmax	pmax		
comp=Z,80nm,1.4s						
CHTO	**Chiang Mai**	**18.47 127**	*e*Pn	**Pn**	**01 32 20.1**	**-3.7**
comp=Z,80nm,1.4s						
CHTO			*e*P		01 32 22.6	
CHTO	**Chiang Mai**	**18.47 127**	P	**Pn**	**01 32 23.8**	**+0.1**
SNR=25						
CM31	**Chiang Mai Arr**	**18.71 128**	*e*P	**Pn**	**01 32 25.9**	**-0.8**
comp=Z,132nm,1.3s						
CMAR	**Chiang Mai Arr**	**18.71 128**	P	**Pn**	**01 32 23.2**	**-3.5**
comp=Z,2.2nm,0.3s,baz=309,slow=8.9,SNR=46						
CMAR			LR	LR	01 40 24.3	
comp=Z,4μm,19.0s,baz=305,slow=40						
CMAR			ScP	ScP	01 40 26.5	-0.6
comp=Z,0.2nm,0.3s,baz=305,slow=3.2,SNR=5.7						
BDT	**Bhumibol Dam**	**19.61 130**	P	**Pn**	**01 32 34.5**	**-3.0**
comp=Z,18nm,1.0s						
KURK	**Kurchatov**	**20.16 351**	*de*P	**P**	**01 32 41.2**	**-0.6**
KURK			pmax	pmax		
comp=Z,203nm,1.2s						
KURK	**Kurchatov**	**20.16 351**	*e*P	**P**	**01 32 40.5**	**-1.2**
comp=Z,216nm,1.3s						
KURK	**Kurchatov**	**20.16 351**	P	**P**	**01 32 41.1**	**-0.7**
comp=Z,670nm,1.2s,SNR=83						
KURK	**Kurchatov**	**20.16 351**	P	**P**	**01 32 41.5**	**-0.3**
SNR=54						
GYA	**Guiyang**	**20.84 96**	P	**P**	**01 32 47.9**	**-1.5**
GYA			PP		01 33 09.8	
GYA			S	**S**	**01 36 35.9**	**-4.5**
GYA			SS		01 37 06.8	
GYA			pmax	pmax		
comp=Z,50nm,1.0s						
GYA			pmax	pmax		
comp=Z,330nm,8.2s						
GYA			LR	LR		
comp=N,2μm,10.6s						
GYA			LR	LR		
comp=E,2μm,9.3s						
GYA			LR	LR		
comp=Z,3μm,12.9s,MS4.9						
XAN	**Xi'an**	**21.73 75**	P	**P**	**01 32 56.6**	**-2.2**
XAN			pP		01 33 00.7	
XAN			sP	sP	01 33 03.4	-7.1
XAN			PP		01 33 20.7	
XAN			S	**S**	**01 36 56.2**	**-1.5**
XAN			pmax	pmax		
comp=Z,21nm,1.2s,mb4.4						
XAN			pmax	pmax		
comp=Z,140nm,7.9s						
XAN			LR	LR		
comp=N,4μm,11.6s,MS5.0						
XAN			LR	LR		
comp=E,1μm,12.5s,MS5.0						
XAN			LR	LR		
comp=Z,1μm,12.7s,MS4.5						
ABKT	**Ailbek**	**22.01 296**	P	**P**	**01 33 03.1**	**+1.3**
comp=Z,387nm,1.2s,mb5.7,SNR=25						
ENH	**Enshi**	**22.43 85**	*e*P	**P**	**01 33 05.5**	**-0.9**
comp=Z,81nm,1.1s,mb5.1						
ZAA0	**Zalesovo Array**	**23.10 2**	*e*P	**P**	**01 33 12.4**	**-0.8**
ZALV	**Zalesovo Beam**	**23.10 2**	P	**P**	**01 33 12.9**	**-0.3**
comp=Z,26nm,1.0s,mb4.6,baz=188,slow=9.9,SNR=47						
ZALV			ScP	ScP	01 40 38.0	+0.9
comp=Z,0.4nm,0.4s,baz=161,slow=9.2,SNR=3.4						
WBK	**Wadi Bani Khal**	**23.31 255**	P	**P**	**01 33 18.7**	**+3.1**
SNR=7.3						
PALK	**Pallekele**	**23.60 187**	*e*P	**P**	**01 33 20.2**	**+1.6**
PALK			pmax	pmax		
comp=Z,110nm,1.4s,mb5.1						
PALK	**Pallekele**	**23.60 187**	*e*P	**P**	**01 33 20.2**	**+1.6**
comp=Z,110nm,1.4s,mb5.1						
SMDO	**Samad**	**23.89 257**	P	**P**	**01 33 23.9**	**+2.8**
SNR=14						
NVS	**Novosibirsk**	**23.97 360**	*e*P	**P**	**01 33 18.5**	**-3.1**
NVS			pmax	pmax		
comp=N,87nm,2.4s						
NVS			pmax	pmax		
comp=E,8.0nm,2.4s						
NVS			pmax	pmax		
comp=Z,114nm,2.4s,mb4.9						
BVAR	**Borovoye Array**	**24.11 340**	P	**P**	**01 33 22.8**	**0.0**
comp=Z,9.0nm,0.8s,mb4.2,baz=146,slow=9.5,SNR=24						
BVAR	**Borovoye Array**	**24.11 340**	P	**P**	**01 33 22.8**	**-0.1**
BVAR			pmax	pmax		
comp=Z,9.0nm,0.8s						
JMDO	**Jabal Madar**	**24.13 256**	P	**P**	**01 33 26.6**	**+3.2**
SNR=10						
BRVK	**Borovoye**	**24.16 340**	*d*P	**P**	**01 33 24.0**	**+0.6**
BRVK			pmax	pmax		
comp=Z,87nm,2.5s,mb4.7						
BRVK	**Borovoye**	**24.16 340**	*e*P	**P**	**01 33 24.4**	**+1.0**
comp=Z,134nm,1.7s,mb5.1						
BRVK	**Borovoye**	**24.16 340**	P	**P**	**01 33 24.2**	**+0.8**
comp=Z,167nm,2.1s,mb5.1,SNR=7.5						
BRVK	**Borovoye**	**24.16 340**	P	**P**	**01 33 24.1**	**+0.7**
SNR=23						
HOQ	**Hoqain**	**24.30 259**	P	**P**	**01 33 28.1**	**+3.2**
SNR=9.1						
SONM	**Songino Array**	**24.41 40**	P	**P**	**01 33 26.3**	**+0.6**
comp=Z,7.9nm,0.7s,mb4.3,baz=232,slow=9.2,SNR=24						
SONM			ScP	ScP	01 40 41.1	+0.3
comp=Z,4.2nm,1.1s,baz=213,slow=2.9,SNR=10.0						
ZRNK	**Zerenda**	**24.46 339**	*i* P	**P**	**01 33 26.0**	**-0.1**
ZRNK			pmax	pmax		
comp=Z,184nm,2.2s,mb5.1						
MOY	**Mondy**	**24.50 27**	*e*P	**P**	**01 33 28.8**	**+2.3**
MOY			pmax	pmax		
comp=Z,81nm,2.5s,mb4.8						
ZAK	**Zakamensk**	**24.51 32**	*e*P	**P**	**01 33 28.5**	**+2.0**
ZAK			*e*		01 34 12.4	
HHC	**Hu-ho-hao-te**	**24.79 59**	*e*P	**P**	**01 33 30.0**	**+0.7**
HHC			pP		01 33 34.3	
HHC			sP	sP	01 33 37.1	-4.3
HHC			PP		01 34 06.9	
HHC			PcP	PcP	01 37 07.7	+2.5
HHC			S	**S**	**01 37 51.0**	**+1.1**
HHC			sS	sS	01 37 56.7	-7.2
HHC			SS		01 38 46.5	
HHC			ScP	ScP	01 40 44.4	+2.4
HHC			pmax	pmax		
comp=Z,45nm,1.2s,mb4.9						
HHC			pmax	pmax		
comp=Z,300nm,6.7s						
HHC			LR	LR		
comp=N,2μm,11.8s,MS4.9						
HHC			LR	LR		
comp=E,1μm,12.5s,MS4.9						
HHC			LR	LR		
comp=Z,2μm,10.0s,MS4.9						
ASHO	**Ashiyiah**	**24.95 262**	P	**P**	**01 33 34.1**	**+3.2**
SNR=16						
ARQ	**Araqi**	**25.06 259**	P	**P**	**01 33 35.1**	**+3.3**
SNR=10						
AB31	**Akbulak array**	**25.54 323**	*ce*P	**P**	**01 33 36.4**	**+0.5**
AB31			pmax	pmax		
comp=Z,58nm,1.0s,mb5.1						
ABKAR	**Akbulak array**	**25.54 323**	*e*P	**P**	**01 33 36.4**	**+0.5**
comp=Z,21nm,0.8s,mb4.7						
TLY	**Talaya**	**25.60 30**	*e*P	**P**	**01 33 39.3**	**+2.8**
TLY			*e*S	**S**	**01 38 06.7**	**+4.2**
TLY			pmax	pmax		
comp=Z,11nm,1.1s,mb4.3						
TLY			MLR	MLR		
comp=Z,1μm,15.0s,MS4.6						
TLY	**Talaya**	**25.60 30**	*e*P	**P**	**01 33 37.4**	**+1.0**
comp=Z,15nm,1.1s,mb4.4						
WHN	**Wuhan**	**26.55 83**	⇑P	**P**	**01 33 47.2**	**+1.9**
WHN			S	**S**	**01 38 19.0**	**+1.1**
WHN			LR	LR		
comp=N,7μm,8.8s						
WHN			LR	LR		
comp=E,4μm,10.1s						
WHN			LR	LR		
comp=Z,4μm,9.9s						
QIZ	**Qiongzhong**	**26.61 110**	P	**P**	**01 33 46.2**	**+0.2**
QIZ			S	**S**	**01 38 23.6**	**+4.5**
QIZ			pmax	pmax		
comp=Z,32nm,1.6s,mb4.6						
QIZ			LR	LR		
comp=N,4μm,22.4s						
QIZ			LR	LR		
comp=Z,3μm,15.9s						
AKTK	**Aktyubinsk**	**27.24 323**	P	**P**	**01 33 51.2**	**-0.1**
AKTK			LR	LR	01 44 47.0	
AKTO	**Aktyubinsk**	**27.24 323**	P	**P**	**01 33 51.2**	**-0.1**
comp=Z,9.5nm,0.9s,mb4.3,baz=121,slow=13,SNR=20						
AKTO			LR	LR	01 44 47.0	
comp=Z,2μm,20.9s,MS4.7,baz=293,slow=37						
AKTO	**Aktyubinsk**	**27.24 323**	P	**P**	**01 33 51.2**	**-0.1**
AKTO			pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.3						
AKTO			MLR	MLR		
comp=Z,2μm,20.9s,MS4.7						
BJI	**Beijing**	**28.07 62**	P	**P**	**01 33 58.3**	**-0.6**
BJI			S	**S**	**01 38 44.1**	**+2.3**
BJI			pmax	pmax		
comp=Z,21nm,1.5s,mb4.5						
BJI			pmax	pmax		
comp=Z,530nm,4.6s						
BJI			LR	LR		
comp=N,6μm,20.6s						
BJI			LR	LR		
comp=E,2μm,14.2s						
BJI			LR	LR		
comp=Z,2μm,21.1s,MS4.6						
NJ2	**Nanjing**	**30.16 78**	*e*P	**P**	**01 34 19.2**	**+1.7**
NJ2			pP	pP	01 34 23.4	-2.7
NJ2			sP	sP	01 34 26.3	-3.4
NJ2			PP	PP	01 35 17.1	-8.7
NJ2			S	**S**	**01 39 16.7**	**+1.9**
NJ2			sS	sS	01 39 25.3	-3.6
NJ2			pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.6						
NJ2			pmax	pmax		
comp=Z,1μm,9.2s						
NJ2			LR	LR		
comp=N,2μm,11.8s						
NJ2			LR	LR		
comp=E,2μm,19.0s						
NJ2			LR	LR		
comp=Z,11μm,17.1s						
SVE	**Sverdlovsk**	**30.44 335**	⇑*e*P	**P**	**01 34 20.6**	**+1.0**
SVE			pmax	pmax		
comp=Z,55nm,1.7s,mb5.0						
SVE			MLR	MLR		
comp=Z,3μm,12.0s,MS5.2						
UMR	**Umm Al-Rimmam**	**30.82 277**	*e*P	**P**	**01 34 24.5**	**+1.1**
UMR			AMb	AMB	01 34 29.5	
comp=Z,118nm,1.3s,mb5.6						
ARU	**Arti**	**30.93 333**	*d*P	**P**	**01 34 24.8**	**+0.8**
ARU			*e*		01 35 20.2	
ARU			S	**S**	**01 39 27.5**	**+1.3**
ARU			pmax	pmax		
comp=Z,37nm,1.2s,mb5.1						
ARU			MLR	MLR		
comp=Z,3μm,21.0s,MS4.9						
ARU	**Arti**	**30.93 333**	*e*P	**P**	**01 34 24.2**	**+0.3**
comp=Z,68nm,1.4s,mb5.3						
ARU	**Arti**	**30.93 333**	P	**P**	**01 34 24.8**	**+0.8**
comp=Z,137nm,0.8s,mb5.8,SNR=7.7						
MIB	**Mutribah**	**31.09 277**	*e*P	**P**	**01 34 26.8**	**+1.1**
MIB			AMb	AMB	01 34 28.2	
comp=Z,173nm,1.0s,mb5.8						
RDF	**Al-Radifah**	**31.09 276**	*e*P	**P**	**01 34 26.8**	**+1.1**
RDF			AMb	AMB	01 34 33.8	
comp=Z,234nm,1.6s,mb5.8						
NAY	**Al-Naaiem**	**31.28 276**	*e*P	**P**	**01 34 28.3**	**+0.9**
NAY			AMb	AMB	01 34 29.7	
comp=Z,68nm,1.3s,mb5.3						
GNI	**Garni**	**32.62 297**	*ce*P	**P**	**01 34 41.6**	**+2.6**
GNI			pmax	pmax		
comp=Z,65nm,1.2s						
GNI	**Garni**	**32.62 297**	*e*P	**P**	**01 34 42.1**	**+3.1**
comp=Z,101nm,1.3s,mb5.6						
GNI	**Garni**	**32.62 297**	P	**P**	**01 34 42.3**	**+3.3**
SNR=19						
ZEI	**Tsey**	**33.52 302**	*e*P	**P**	**01 34 45.4**	**-1.5**
ZEI			pmax	pmax		
comp=Z,63nm,1.3s,mb5.4						
SOKR	**Solikamsk**	**33.84 336**	*c i*P	**P**	**01 34 50.4**	**+1.0**
SOKR			pmax	pmax		
comp=Z,70nm,1.1s,mb5.5						
SOKR			MLR	MLR		
comp=Z,2μm,16.0s,MS5.0						
SNY	**Shenyang**	**33.86 60**	⇑P	**P**	**01 34 47.8**	**-2.1**
SNY			pmax	pmax		
comp=Z,8.0nm,0.5s,mb4.9						
SNY			pmax	pmax		
comp=Z,1μm,12.0s						
SNY			LR	LR		
comp=N,6μm,26.5s						
SNY			LR	LR		
comp=E,860nm,17.6s						
SNY			LR	LR		
comp=Z,2μm,11.8s						
NACB	**Ninganchiao**	**34.37 92**	*e*P	**P**	**01 34 56.4**	**+1.9**
comp=Z,37nm,1.1s,mb5.2						
KIV	**Kislovodsk**	**34.56 304**	*e*P	**P**	**01 34 57.0**	**+1.1**
KIV			*i*		01 36 15.3	
KIV			*i*		01 37 30.5	
KIV			pmax	pmax		
comp=Z,61nm,2.5s,mb5.1						
KIV			MLR	MLR		
comp=Z,2μm,19.0s,MS4.9						
KIV	**Kislovodsk**	**34.56 304**	*e*P	**P**	**01 34 56.7**	**+0.8**
comp=Z,75nm,1.4s,mb5.4						
KIV	**Kislovodsk**	**34.56 304**	P	**P**	**01 34 57.2**	**+1.3**
comp=Z,181nm,0.9s,mb6.0,SNR=6.9						

KIV Kislovodsk 34.56 304 P **P** **01 34 57.8 +1.9**
SNR=11
BKNI Bangkinang 34.66 148 P **P** **01 34 55.9 -1.1**
comp=Z,1μmcomp=Z,116nm,1.4s,mb5.6
PPI Padang Panjang 35.07 149 P **P** **01 35 00.0 -0.5**
comp=Z,28nm,1.5s,mb5.0
SISI Saibi 35.30 152 P **P** **01 35 02.8 +0.2**
comp=Z,56nm,1.4s,mb5.3
CN2 Changchun 35.45 57 *e*P **P** **01 35 04.1 +0.6**
CN2 *e*S **S** **01 40 36.1 -0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CN2 pmax pmax
comp=Z,500nm,10.0s
CN2 LR LR
comp=N,2μm,14.0s,MS5.3
CN2 LR LR
comp=E,3μm,14.0s,MS5.3
CN2 LR LR
comp=Z,4μm,17.0s,MS5.2
PDSI Padang 35.50 150 P **P** **01 35 03.3 -1.0**
comp=Z,79nm,1.1s,mb5.6
SOC Sochi 36.65 303 *d i*P **P** **01 35 15.1 +1.3**
SOC MLR MLR
comp=Z,2μm,18.0s,MS4.9
VRHR Novokhopersk 36.84 315 *e*P **P** **01 35 15.1 -0.2**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.4
VRHR pmax pmax
comp=E,4.0nm,0.3s
KSRS Korea Array 37.13 68 P **P** **01 35 17.1 -0.9**
comp=E,3.1nm,0.7s,mb4.3,baz=273,slow=9.1,SNR=11
KSRS ScP ScP 01 41 23.4 +0.6
comp=E,4.4nm,0.9s,baz=272,slow=4.5,SNR=10
KSRS LR LR 01 51 46.4
comp=E,2μm,18.8s,MS4.9,baz=277,slow=38
MALT Malatya 37.49 294 *e*P **P** **01 35 22.8 +1.7**
MALT pmax pmax
comp=Z,16nm,1.0s,mb4.8
MALT Malatya 37.49 294 *e*P **P** **01 35 22.8 +1.7**
comp=Z,16nm,1.0s,mb4.8
VORD Divnogorie 38.22 315 *e*P **P** **01 35 26.8 -0.2**
VORD pmax pmax
comp=N,30nm,0.9s
VORD pmax pmax
comp=E,70nm,0.9s
VORD pmax pmax
comp=Z,30nm,0.9s,mb5.0
VORD MLR MLR
comp=N,880nm,15.0s,MS5.1
VORD MLR MLR
comp=E,2μm,15.0s,MS5.1
VORD MLR MLR
comp=Z,3μm,15.0s,MS5.3
VSR Storozhevoye 38.36 315 *e*P **P** **01 35 28.1 -0.1**
VSR pmax pmax
comp=N,3.0nm,0.9s
VSR pmax pmax
comp=E,30nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s,mb5.0
VSR MLR MLR
comp=N,2μm,15.0s,MS5.2
VSR MLR MLR
comp=E,2μm,15.0s,MS5.2
VSR MLR MLR
comp=Z,4μm,15.0s,MS5.3
ANN Anapa 38.40 304 *e*P **P** **01 35 28.2 -0.4**
ANN *e* 01 36 57.4
ANN *e*PPP 01 37 16.5
ANN *e* 01 37 40.9
ANN *e*S **S** **01 41 19.6 -2.0**
ANN *e*SS SS 01 43 59.5 -11
ANN *e* 01 45 31.2
ANN pmax pmax
comp=Z,53nm,1.3s,mb5.1
ANN MLR MLR
comp=E,1μm,17.0s
ANN MLR MLR
comp=Z,1μm,17.0s,MS4.8
MDJ Mudanjiang 38.50 56 P **P** **01 35 28.8 -0.6**
MDJ pP pP 01 35 31.8 -6.4
MDJ sP sP 01 35 33.3 -8.4
MDJ S **S** **01 41 24.9 +1.8**
MDJ ScP ScP 01 41 29.7 +1.8
MDJ pmax pmax
comp=Z,11nm,2.2s,mb4.2
MDJ LR LR
comp=N,3μm,18.7s
MDJ LR LR
comp=E,410nm,11.8s
MDJ LR LR
comp=Z,2μm,15.9s,MS5.0
KSI Kapahiang 38.89 149 P **P** **01 35 31.3 -1.7**
comp=Z,9μmcomp=Z,102nm,0.8s,mb5.6
SBUM Sibu 39.23 130 P **P** **01 35 36.2 +0.3**
comp=Z,29nm,1.4s,mb4.8
PPBI Pangkal Pinang 39.32 143 P **P** **01 35 36.7 +0.1**
comp=Z,52nm,1.2s,mb5.1
PRGR Permogore 39.39 333⇑ *i*P **P** **01 35 36.8 +0.2**
PRGR *e**SP sP 01 35 51.1 +2.2
PRGR *e*PPP 01 37 31.1
PRGR *e* 01 37 43.6
PRGR *e*S **S** **01 41 37.6 +1.6**
PRGR pmax pmax
comp=Z,46nm,0.8s,mb5.3
MDSI Maura Dua 40.35 147 P **P** **01 35 41.7 -3.5**
comp=Z,13nm,0.9s,mb4.7
KLR Kul'dur 40.51 49 *e*P **P** **01 35 41.8 -4.4**
MMAI Mount Meron Ar 40.54 286 P **P** **01 35 47.8 +1.2**
comp=Z,6.0nm,0.8s,mb4.2,baz=64,slow=9.8,SNR=12
MOS Moscow 40.54 321 *e*P **P** **01 35 45.0 -1.3**
MOS *e* 01 37 19.4
MOS *e*S **S** **01 41 54.6 +1.2**
MOS pmax pmax
comp=Z,300nm,1.7s,mb5.7
MOS pmax pmax
comp=Z,134nm,1.4s,mb5.4
MOS MLR MLR
comp=Z,3μm,16.0s,MS5.2
STKI Sintang 40.58 134 P **P** **01 35 47.6 +0.5**
comp=Z,46nm,0.9s,mb5.1
TPI Tanjungpandan 40.63 141 P **P** **01 35 45.6 -1.9**
comp=Z,17nm,1.4s,mb4.5
SIM Simferopol' 40.76 304 *c e*P **P** **01 35 49.1 +0.8**
SIM pmax pmax
comp=Z,42nm,1.4s,mb4.9
KLSI 40.79 146 P **P** **01 35 45.7 -3.1**
comp=Z,50nm,1.2s,mb5.0
OBN Obninsk 40.93 320 *e*P **P** **01 35 49.5 0.0**
OBN *i* 01 36 05.1
OBN *i* 01 37 23.7
OBN *i* 01 37 46.1
OBN pmax pmax
comp=Z,112nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,900nm,16.0s,MS4.7
OBN Obninsk 40.93 320 *e*P **P** **01 35 49.3 -0.2**
comp=Z,153nm,1.3s,mb5.5
BR131 Keskin Array S 41.15 296 *e*P **P** **01 35 52.7 +1.1**
comp=Z,44nm,1.4s,mb4.9
BRTR Keskin Array B 41.15 296 P **P** **01 35 52.1 +0.5**
comp=Z,27nm,1.2s,mb4.7,baz=101,slow=7.5,SNR=50
BRTR ScP ScP 01 41 39.5 +1.2
comp=Z,0.8nm,0.9s,baz=90,slow=2.9,SNR=4.0
BRTR LR LR 01 55 40.5
comp=Z,766nm,21.7s,MS4.5,baz=210,slow=40
BRTR Keskin Array B 41.15 296 P **P** **01 35 52.1 +0.5**
BRTR ScP ScP 01 41 39.5 +1.2
BRTR LR LR 01 55 40.5
KLMR Klimovskoe 41.56 329 *c i*P **P** **01 35 54.8 +0.2**
KLMR pmax pmax
comp=Z,161nm,1.3s,mb5.5
MYLDM Lahad Datu 41.69 121 P **P** **01 35 56.8 +0.6**
comp=Z,52nm,1.5s,mb4.9
HABR Khabarovsk 42.59 50 *e*P **P** **01 36 04.2 +1.0**
HABR *e**PP pP 01 36 14.1 +2.1
HABR 01 37 43.4
HABR *e* 01 37 56.5
HABR S **S** **01 42 24.8 +0.9**
HABR *e**SS sS 01 42 41.5 +3.1
HABR *e*SS SS 01 45 36.4 +2.2
HABR *e* 01 46 03.3
HABR *e*SSS 01 46 10.5
HABR pmax pmax
comp=Z,41nm,1.2s,mb5.0
HABR pmax pmax
comp=E,41nm,1.2s
HABR pmax pmax
comp=N,13nm,0.9s
HABR MLR MLR
comp=Z,1μm,18.0s,MS4.8
KIEV Kiev 44.47 313 *e*P **P** **01 36 17.4 -0.9**
KIEV pmax pmax
comp=Z,16nm,0.9s,mb4.8
KIEV Kiev 44.47 313 *e*P **P** **01 36 17.4 -0.9**
comp=Z,16nm,0.9s,mb4.8
TLCR 44.52 305⇑ *i*P **P** **01 36 19.0 +0.2**
TLCR 44.52 305⇑ *i*P **P** **01 36 19.0 +0.2**
KIS Kishinev 44.53 307 *e*P **P** **01 36 18.0 -0.8**
KIS LRM 01 57 57.0
comp=Z,1μm,12.0s
KIS Kishinev 44.53 307 *e*P **P** **01 36 18.0 -0.8**
KIS MLR MLR
comp=Z,2μm,16.0s,MS5.1
KIS MLR MLR
comp=N,1μm,14.0s,MS5.2
KIS MLR MLR
comp=Z,2μm,14.0s
KIS MLR MLR
comp=E,1μm,12.0s,MS5.2
MJAR Matsushiro Arr 45.41 67 P **P** **01 36 25.3 -0.7**
comp=E,3.2nm,0.7s,mb4.3,baz=281,slow=9.7,SNR=11
MJAR Matsushiro Arr 45.41 67 P **P** **01 36 25.3 -0.7**
MJAR pmax pmax
comp=Z,3.0nm,0.7s
JOF Joensuu 45.94 330 *e*P **P** **01 36 30.3 +0.5**
JOF pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
JOF Joensuu 45.94 330 *e*p **P** **01 36 30.3 +0.5**
comp=Z,4.7nm,0.4s,mb4.8
VRI Vrincioaia 45.98 306 ⇓P **P** **01 36 31.9 +1.6**
VRI Vrincioaia 45.98 306 ⇓*i*P **P** **01 36 31.9 +1.6**
TESR 46.02 307⇑ *i*P **P** **01 36 30.9 +0.2**
PLOR Plostina 46.03 306 ⇑P **P** **01 36 32.1 +1.3**
PLOR Plostina 46.03 306⇑ *i*P **P** **01 36 32.1 +1.3**
IDID Didziasalis 46.47 319 *e*P **P** **01 36 34.2 +0.1**
IDID AMB AMB 01 36 38.8
comp=Z,13nm,1.5s,mb4.6
MLR Muntele Rosu 46.54 305 ⇑P **P** **01 36 36.4 +1.6**
MLR Muntele Rosu 46.54 305⇑ *i*P **P** **01 36 36.4 +1.6**
LVZ Lovozero 46.62 337 *de*P **P** **01 36 35.1 0.0**
LVZ pmax pmax
comp=Z,49nm,1.2s,mb5.3
LVZ Lovozero 46.62 337 P **P** **01 36 35.2 +0.1**
comp=Z,218nm,0.9s,mb6.1,SNR=7.6
IIGN Ignalina 46.77 319 *e*P **P** **01 36 36.6 +0.2**
IIGN AMB AMB 01 36 41.4
comp=Z,18nm,1.4s,mb4.8
ALN Alexandroupoli 46.83 299 P **P** **01 36 37.7 +0.6**
ISAL Salakas 46.85 319 *e*P **P** **01 36 37.2 +0.1**
ISAL AMB AMB 01 36 42.0
comp=Z,15nm,1.4s,mb4.7
APA Apatity 46.90 336⇑ *i*P **P** **01 36 38.0 +0.7**
APA *e*S **S** **01 43 33.0 +7.1**
APA pmax pmax
comp=Z,26nm,1.3s,mb5.0
BURAR Bucovina Array 46.98 308 ⇑P **P** **01 36 38.5 +0.3**
BURAR Bucovina Array 46.98 308⇑ *i*P **P** **01 36 38.5 +0.3**
BUR08 Bucovina Ar. S 46.99 308 *e*P **P** **01 36 38.5 +0.2**
VOIR 47.17 305 ⇑P **P** **01 36 40.4 +0.7**
VOIR 47.17 305⇑ *i*P **P** **01 36 40.3 +0.6**
MRSI Marisa 47.38 122 P **P** **01 36 41.3 -0.4**
comp=Z,700nmcomp=Z,43nm,1.5s,mb5.2
TIXI Tiksi 47.53 18 *d i*P **P** **01 36 44.2 +2.1**
TIXI pmax pmax
comp=Z,57nm,2.0s,mb5.2
TIXI Tiksi 47.53 18 *e*P **P** **01 36 44.1 +2.0**
comp=Z,52nm,1.4s,mb5.4
PLD Plovdiv 47.69 301 P **P** **01 36 44.5 +0.7**
LVV L'vov 47.75 311 *e*P **P** **01 36 43.8 -0.3**
LVV MLR MLR
comp=Z,1μm,18.0s,MS4.9
LVV MLR MLR
comp=N,500nm,17.0s,MS4.9
LVV MLR MLR
comp=E,1μm,17.0s,MS4.9
APE Apeiranthos 47.79 294 ⇓P **P** **01 36 45.3 +0.6**
APE Apeiranthos 47.79 294 ⇓*i*P **P** **01 36 45.3 +0.6**
ASAJ Asahikawa 47.81 57 LR LR 01 56 35.6
comp=E,1μm,20.1s,MS4.8,baz=289,slow=36
FINES FINESS Array B 47.90 327 P **P** **01 36 44.5 -0.6**
comp=E,19nm,0.7s,mb5.2,baz=100,slow=7.8,SNR=48
FINES LR LR 01 57 38.0
comp=E,3μm,18.4s,MS5.3,baz=103,slow=37
FINES FINESS Array B 47.90 327 P **P** **01 36 44.5 -0.6**
FINES pmax pmax
comp=Z,19nm,0.7s
FINES MLR MLR
comp=Z,3μm,18.5s
KAF Kangasniemi 47.94 328 *e*P **P** **01 36 45.4 0.0**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KAF Kangasniemi 47.94 328 *e*p **P** **01 36 45.4 0.0**
comp=Z,0.8nm,0.3s,mb4.2
THR1 Thera Island 47.98 293 P **P** **01 36 46.0 -0.1**
THR2 Thira island, 47.98 293 P **P** **01 36 46.5 +0.3**
THR3 Thira Island, 48.02 293 P **P** **01 36 46.6 +0.2**
THR5 Thira Island, 48.06 293 P **P** **01 36 46.9 +0.1**
BMR Baia Mare 48.14 308 ⇑P **P** **01 36 48.6 +1.4**
BMR Baia Mare 48.14 308⇑ *i*P **P** **01 36 48.6 +1.4**
LAST Lasithi 48.21 291 P **P** **01 36 48.6 +0.7**
TTSI Tana Toraja 48.36 128 P **P** **01 36 49.2 -0.1**
comp=Z,891nmcomp=Z,45nm,1.3s,mb5.3
SUW Suwalki 48.41 317 *e*P **P** **01 36 48.9 -0.2**
SUW *e*S **S** **01 43 50.0 +2.3**
SUW LMZ 01 56 47.8
comp=Z,3μm,25.8s
SUW Suwalki 48.41 317 *e*P **P** **01 36 48.4 -0.8**
SUW pmax pmax
comp=Z,61nm,1.2s,mb5.5
SUW Suwalki 48.41 317 *e*P **P** **01 36 48.4 -0.8**
comp=Z,61nm,1.2s,mb5.5
OUR Ouranopolis 48.46 298 P **P** **01 36 50.0 +0.2**
KWP Kalwaria Pacla 48.61 311 *e*P **P** **01 36 51.4 +0.6**
KWP LMZ 01 56 47.7
comp=Z,2μm,28.8s
KWP Kalwaria Pacla 48.61 311 ⇓P **P** **01 36 51.3 +0.5**
KWP Kalwaria Pacla 48.61 311 *e*P **P** **01 36 50.9 +0.1**
comp=Z,29nm,1.1s,mb5.2
KWP Kalwaria Pacla 48.61 311 ⇓*i*P **P** **01 36 51.3 +0.5**
SRS Serrai 48.64 299 P **P** **01 36 51.4 +0.2**
DRGR 48.72 307 ⇑P **P** **01 36 52.3 +0.6**
DRGR 48.72 307⇑ *i*P **P** **01 36 52.3 +0.6**
VTS Vitosha 48.74 301 ⇑P **P** **01 36 52.7 +0.8**
VTS Vitosha 48.74 301 P **P** **01 36 53.2 +1.3**
VTS Vitosha 48.74 301⇑ *i*P **P** **01 36 52.7 +0.8**
PAIG Paliouri 48.75 298 P **P** **01 36 52.7 +0.7**
TRPA Tarpa 48.76 309 ⇓*i*P **P** **01 36 52.8 +0.8**
GZR Gura Zlata 48.77 305 ⇑P **P** **01 36 52.3 +0.2**
GZR Gura Zlata 48.77 305⇑ *i*P **P** **01 36 52.3 +0.2**
PLG Polygyros 48.86 299 P **P** **01 36 53.5 +0.7**
UZH Uzhgorod 48.91 310 *e*P **P** **01 36 51.0 -2.1**
UZH *e* 01 37 03.5
UZH *e* 01 37 05.7
UZH *e*S **S** **01 43 52.0 -2.9**
UZH MLR MLR
comp=N,1μm,13.0s,MS5.2
UZH MLR MLR
comp=E,1μm,13.0s,MS5.2
UZH MLR MLR
comp=Z,600nm,13.0s,MS4.8
KOLS Kolonicke sedl 48.91 310 *e*P **P** **01 36 50.5 -2.6**
KOLS Kolonicke sedl 48.91 310 *e*P **P** **01 36 50.5 -2.6**
KNT Kendrikon 49.15 300 P **P** **01 36 55.0 -0.1**
VAY Valandovo 49.38 300 P **P** **01 36 56.8 0.0**
VAY Valandovo 49.38 300 *e*P **P** **01 36 56.0 -0.8**
CRVS Cervenica-Dubn 49.45 310 *e*P **P** **01 37 00.0 +2.8**
CRVS pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
CRVS Cervenica-Dubn 49.45 310 *e*P **P** **01 37 00.0 +2.8**
comp=Z,8.7nm,1.2s,mb4.7
CRVS Cervenica-Dubn 49.45 310 *e*P **P** **01 37 00.0 +2.8**
ATAL Atalanti 49.45 296 P **P** **01 36 57.1 -0.4**
LKR Lokris 49.48 296 P **P** **01 36 55.0 -2.6**
GRG Griva 49.55 299 P **P** **01 36 57.9 -0.3**
BZS Buzias 49.56 306 ⇑P **P** **01 36 58.4 +0.2**
BZS Buzias 49.56 306⇑ *i*P **P** **01 36 58.4 +0.2**
LIT Litokhoron 49.62 298 P **P** **01 36 58.5 -0.2**
DSF Desfina 49.89 296 P **P** **01 36 59.9 -0.8**
KEV Kevo 49.91 338 *e*P **P** **01 36 58.5 -1.9**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 49.91 338 *e*P **P** **01 37 00.4 0.0**
comp=Z,2.9nm,0.9s,mb4.3
KEV Kevo 49.91 338 *e*p **P** **01 36 58.5 -1.9**
comp=Z,1.0nm,0.4s,mb4.2
AGG Agios Georgios 49.93 297 P **P** **01 37 00.5 -0.5**
THL Klokotos Trika 50.07 298 P **P** **01 37 01.4 -0.7**
KECS Kecovo 50.12 309 *e*P **P** **01 37 02.4 +0.1**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KECS Kecovo 50.12 309 *e*P **P** **01 37 02.4 +0.1**
comp=Z,1.6nm,0.7s,mb4.2
KECS Kecovo 50.12 309 *e*P **P** **01 37 02.4 +0.1**
GUR Goura 50.12 296 P **P** **01 37 01.6 -0.9**
KZN Kozani 50.13 299 P **P** **01 37 02.3 -0.3**
NIE Niedzica 50.18 311 *e*P **P** **01 37 04.0 +1.2**
VLX Vlachokerasia 50.20 295 P **P** **01 37 01.7 -1.5**
ARCES ARCESS Array B 50.33 337 P **P** **01 37 03.2 -0.4**
comp=Z,16nm,0.8s,mb5.1,baz=102,slow=7.5,SNR=40
ARCES LR LR 01 59 52.7
comp=Z,1μm,18.9s,MS5.0,baz=293,slow=38
ARCES ARCESS Array B 50.33 337 P **P** **01 37 03.2 -0.4**
ARCES pmax pmax
comp=Z,16nm,0.8s
ARCES MLR MLR
comp=Z,1μm,18.9s
ARE0 ARCESS Array S 50.33 337 *e*P **P** **01 37 03.6 0.0**
LAKA Lakka 50.34 296 P **P** **01 37 03.2 -1.0**
KRUS Krusevo 50.35 300 *e*P **P** **01 37 04.0 -0.2**
OJC Ojcow 50.47 312 *e*P **P** **01 37 04.6 -0.4**
PSZ Piszkesteto 50.55 309 *e*P **P** **01 37 05.6 0.0**
PSZ pmax pmax
comp=Z,14nm,1.3s,mb4.7
PSZ Piszkesteto 50.55 309 *e*P **P** **01 37 05.6 0.0**
comp=Z,14nm,1.3s,mb4.7
PSZ Piszkesteto 50.55 309⇑ *e*P **P** **01 37 06.0 +0.4**
NEST Nestorio 50.66 299 P **P** **01 37 06.2 -0.3**
PYL PYLOS 50.80 294 P **P** **01 37 06.2 -1.5**
BUD Budapest 51.17 308⇑ *e*P **P** **01 37 10.7 +0.4**
VYHS Vyhne 51.21 310 *e*P **P** **01 37 09.7 -0.9**
VYHS Vyhne 51.21 310 *e*P **P** **01 37 09.7 -0.9**
KFL Anninata 51.29 296 P **P** **01 37 10.2 -1.1**
OKC Ostrava-Krasne 51.56 311 *e*P **P** **01 37 13.2 +0.1**
OKC MLR MLR
comp=Z,1μm,18.2s,MS4.9
OKC Ostrava-Krasne 51.56 311 *e*P **P** **01 37 13.2 +0.1**
OKC AMS AMS 01 58 00.0
comp=Z,1μm,18.2s
PKSM Moragy 51.57 307 ⇑P **P** **01 37 13.1 -0.2**
PKSM Moragy 51.57 307⇑ *i*P **P** **01 37 13.1 -0.2**
MORC Moravsky Berou 51.95 311 *e*P **P** **01 37 15.9 -0.2**
MORC pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MORC Moravsky Berou 51.95 311 *e*P **P** **01 37 15.9 -0.2**
comp=Z,5.6nm,0.7s,mb4.6
MORC Moravsky Berou 51.95 311⇑ *i*P **P** **01 37 16.3 +0.2**
LBMI Labuha 52.25 118 P **P** **01 37 18.6 -0.2**
comp=Z,1μmcomp=Z,58nm,1.3s,mb5.4
VRAC Vranov 52.61 311 ⇑P **P** **01 37 21.5 +0.5**
VRAC Vranov 52.61 311⇑ *i*P **P** **01 37 21.5 +0.5**
DPC Dobruska-Polom 52.69 312 *e*P **P** **01 37 21.8 +0.3**
DPC MLR MLR
comp=Z,2μm,13.2s,MS5.3
DPC Dobruska-Polom 52.69 312 *e*P **P** **01 37 21.8 +0.3**
DPC AMS AMS 02 02 20.0
comp=Z,2μm,13.2s
SOP Sopron 52.81 309⇑ *e*P **P** **01 37 22.5 0.0**
UPC Upice 52.87 312 *e*P **P** **01 37 23.3 +0.4**
UPC Upice 52.87 312 *e*P **P** **01 37 23.3 +0.4**
BSD Bornholm Skovb 53.23 318 *i*P **P** **01 37 27.0 +1.6**
BSD pmax pmax
comp=Z,14nm,0.9s,mb4.9
BSD MLR MLR
comp=Z,2μm,17.0s,MS5.3
BSD Bornholm Skovb 53.23 318 *i*P **P** **01 37 27.0 +1.6**
comp=Z,14nm,0.9s,mb4.9
BSD
comp=Z,2μm,17.0s
CSNA Conrad Observa 53.25 309⇑ *i*p P **P** **01 37 25.8 +0.1**
comp=Z,22nm,1.4s,mb4.9
TREC Trest 53.33 311 *e*P **P** **01 37 26.4 +0.1**
TREC MLR MLR
comp=Z,1μm,17.6s,MS5.1
TREC Trest 53.33 311 *e*P **P** **01 37 26.4 +0.1**
TREC AMS AMS 02 02 00.0
comp=Z,1μm,17.6s
SEY Seymchan 53.48 32 *c e*P **P** **01 37 30.5 +3.3**
PVCC Panska Ves 53.78 312 *e*P **P** **01 37 29.2 -0.4**
PVCC MLR MLR
comp=Z,2μm,15.7s,MS5.3
PVCC Panska Ves 53.78 312 *e*P **P** **01 37 29.2 -0.4**
PVCC AMS AMS 02 02 30.0
comp=Z,2μm,15.7s
PRU Pruhonice 53.86 312 *e*P **P** **01 37 31.0 +0.8**
PRU MLR MLR
comp=Z,2μm,14.7s,MS5.3
PRU Pruhonice 53.86 312 *e*P **P** **01 37 31.0 +0.8**
PRU AMS AMS 02 03 10.0
comp=Z,2μm,14.7s
SOKA Soboth 53.98 308⇓ *i*pP **P** **01 37 31.1 0.0**
comp=Z,14nm,0.9s,mb4.9
BOJS Bojanci 54.01 306 *i*P **P** **01 37 31.4 0.0**
BOJS Bojanci 54.01 306 *i*P **P** **01 37 31.4 0.0**
BRG Berggiesshubel 54.14 313 *e*P **P** **01 37 32.0 -0.2**
comp=Z,10.0nm,0.9s,mb4.8
BRG Berggiesshubel 54.14 313 *i*P **P** **01 37 32.2 -0.1**
comp=Z,8.7nm,0.8s,mb4.7
BRG *i* 01 37 37.6
comp=Z,9.7nm,0.9s
BRG
comp=Z,2μm,15.7s
BRG
comp=N,1μm,15.0s
BRG
comp=E,2μm,15.0s
KMBO Kilima Mbogo 54.17 243 P **P** **01 37 33.5 +0.5**
comp=E,11nm,0.9s,mb4.8,baz=0.3,slow=24,SNR=26
KMBO Kilima Mbogo 54.17 243 P **P** **01 37 33.5 +0.6**
KMBO pmax pmax
comp=Z,11nm,0.9s
KMBO Kilima Mbogo 54.17 243 *e*P **P** **01 37 33.7 +0.8**
comp=Z,16nm,1.0s,mb4.9
KMBO Kilima Mbogo 54.17 243 P **P** **01 37 34.8 +1.9**
SNR=6.0
VISS Visnje 54.25 307 *i*P **P** **01 37 32.7 -0.4**
VISS Visnje 54.25 307 *i*P **P** **01 37 32.7 -0.4**
MOA Molln 54.32 309⇑ *i*P **P** **01 37 33.2 -0.3**
comp=Z,6.5nm,0.7s,mb4.7
GEC2 GERESS Array S 54.55 310 *e*P **P** **01 37 34.9 -0.3**
comp=Z,39nm,2.2s,mb5.0
GEC2 GERESS Array S 54.55 310 *e*P **P** **01 37 34.9 -0.3**
GEC2 pmax pmax
comp=Z,39nm,2.2s,mb5.0
KHC Kasperske Hory 54.59 311 *e*P **P** **01 37 34.8 -0.7**
KHC pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KHC Kasperske Hory 54.59 311 *e*P **P** **01 37 34.8 -0.7**
comp=Z,7.0nm,0.9s,mb4.7
KHC Kasperske Hory 54.59 311 *e*P **P** **01 37 35.1 -0.4**
KHC AMS AMS 02 02 40.0
comp=Z,1μm,18.8s
COP Copenhagen 54.61 319 *e*P **P** **01 37 35.8 +0.3**
COP pmax pmax
comp=Z,14nm,0.8s,mb5.0
COP MLR MLR
comp=Z,1μm,18.0s,MS4.9
COP Copenhagen 54.61 319 *i*P **P** **01 37 35.8 +0.3**
comp=Z,14nm,0.8s,mb5.0
COP
comp=Z,1μm,18.0s
CLL Collm 54.68 314 *e*P **P** **01 37 37.0 +0.9**
CLL pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
CLL MLR MLR
comp=Z,1μm,21.1s,MS5.0
CLL Collm 54.68 314 *e*P **P** **01 37 37.0 +0.9**
comp=Z,8.0nm,1.4s,mb4.6
CLL LR LR
comp=Z,1μm,21.1s,MS5.0
CLL Collm 54.68 314 *e*P **P** **01 37 37.0 +0.9**
comp=Z,8.0nm,1.4s,mb4.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CLL				LmV		02 03 00.0	
	comp=Z,1µm,21.1s						
JAVS	**Javornik**	**54.77**	**307**	*i* P	**P**	**01 37 36.3**	**-0.5**
JAVS	**Javornik**	**54.77**	**307**	*i* P	**P**	**01 37 36.3**	**-0.5**
NB2	**NORSAR Subarra**	**54.99**	**326**	P	**P**	**01 37 37.5**	**-0.7**
	comp=Z,15nm,0.8s,mb5.1,baz=88,slow=7.4						
NOA	**NORSAR Array B**	**54.99**	**326**	P	**P**	**01 37 37.2**	**-1.0**
	comp=Z,13nm,0.8s,mb5.0,baz=88,slow=7.0,SNR=36						
NOA				LR	LR	02 02 53.4	
	comp=Z,2µm,18.1s,MS5.1,baz=80,slow=38						
NOA	**NORSAR Array B**	**54.99**	**326**	P	**P**	**01 37 37.2**	**-1.0**
NOA				pmax	pmax		
	comp=Z,13nm,0.8s						
NOA				MLR	MLR		
	comp=Z,2µm,18.1s						
WET	**Wettzell**	**55.05**	**311**	*e*P	**P**	**01 37 38.6**	**-0.2**
	comp=Z,7.0nm,0.9s,mb4.7						
WET	**Wettzell**	**55.05**	**311**	*e*P	**P**	**01 37 38.6**	**-0.2**
WET				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
TANN	**Tannenbergstha**	**55.13**	**313**	*e*P	**P**	**01 37 39.3**	**-0.1**
	comp=Z,16nm,1.7s,mb4.8						
NAO01	**NORSAR Array S**	**55.16**	**325**	*e*P	**P**	**01 37 37.9**	**-1.5**
	comp=Z,19nm,1.1s,mb5.0						
NKC	**Novy Kostel**	**55.17**	**312**	*e*P	**P**	**01 37 41.7**	**+2.0**
NKC				MLR	MLR		
	comp=Z,3µm,15.7s,MS5.4						
NKC	**Novy Kostel**	**55.17**	**312**	*e*P	**P**	**01 37 41.7**	**+2.0**
NKC				AMS	AMS	02 03 20.0	
	comp=Z,3µm,15.7s						
RJOB	**Jochberg**	**55.32**	**309**	*e*P	**P**	**01 37 40.2**	**-0.6**
	comp=Z,6.0nm,0.9s,mb4.6						
ROTZ	**Rotzenmuhle**	**55.39**	**312**	*e*P	**P**	**01 37 41.8**	**+0.5**
	comp=Z,44nm,2.2s,mb5.1						
MOX	**Moxa**	**55.64**	**313**	*e*P	**P**	**01 37 42.7**	**-0.3**
	comp=Z,12nm,1.4s,mb4.7						
MOX							
	comp=Z,1µm,20.0s						
MOX	**Moxa**	**55.64**	**313**	*e*P	**P**	**01 37 42.6**	**-0.4**
	comp=Z,43nm,2.4s,mb5.0						
MOX	**Moxa**	**55.64**	**313**	*e*P	**P**	**01 37 42.7**	**-0.3**
MOX				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.7						
MOX				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.0						
GRA1	**Grafenberg Arr**	**56.03**	**312**	*e*P	**P**	**01 37 45.8**	**-0.1**
	comp=Z,23nm,1.2s,mb5.1						
GRA1				LR	LR		
	comp=Z,3µm,18.3s,MS5.3						
GRF	**Grafenberg Arr**	**56.03**	**312**	*e*P	**P**	**01 37 45.8**	**-0.1**
	comp=Z,23nm,1.2s,mb5.1						
GRF				*e*L		02 04 27.3	
	comp=Z,3µm,18.3s						
GRF	**Grafenberg Arr**	**56.03**	**312**	*e*P	**P**	**01 37 45.8**	**-0.1**
GRF				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.1						
GRF				MLR	MLR		
	comp=Z,3µm,18.3s,MS5.3						
GRF	**Grafenberg Arr**	**56.03**	**312**	*e*P	**P**	**01 37 45.8**	**-0.1**
GRF				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.1						
GRF				MLR	MLR		
	comp=Z,3µm,18.3s,MS5.3						
WTTA	**Wattenberg**	**56.17**	**309⇑**	*i*P	**P**	**01 37 45.9**	**-1.0**
	comp=Z,12nm,1.2s,mb4.8						
CLZ	**Clausthal**	**56.24**	**314**	*e*P	**P**	**01 37 47.5**	**+0.2**
	comp=Z,17nm,1.0s,mb5.0						
CLZ	**Clausthal**	**56.24**	**314**	*e*P	**P**	**01 37 47.5**	**+0.2**
CLZ				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
FUR	**Furstenfeldbru**	**56.25**	**310**	*e*P	**P**	**01 37 47.1**	**-0.4**
	comp=Z,17nm,1.1s,mb5.0						
FUR	**Furstenfeldbru**	**56.25**	**310**	*e*P	**P**	**01 37 47.1**	**-0.4**
FUR				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
NRDL	**Niedersach Rie**	**56.31**	**315**	*e*P	**P**	**01 37 47.6**	**-0.2**
	comp=Z,27nm,1.1s,mb5.2						
KBS	**Kingsbay**	**56.39**	**347**	*e*P	**P**	**01 37 49.6**	**+1.6**
KBS				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
KBS	**Kingsbay**	**56.39**	**347**	*e*P	**P**	**01 37 48.0**	**0.0**
	comp=Z,26nm,0.8s,mb5.3						
MOTA	**Moosalm**	**56.52**	**309⇓**	*i*P	**P**	**01 37 47.7**	**-1.7**
	comp=Z,7.1nm,0.8s,mb4.7						
FETA	**Feichten**	**56.83**	**309⇑**	*i*P	**P**	**01 37 50.3**	**-1.3**
	comp=Z,8.8nm,1.1s,mb4.7						
DAVA	**Damuels**	**57.34**	**309⇑**	*i*P	**P**	**01 37 54.3**	**-0.9**
	comp=Z,18nm,1.2s,mb5.0						
TNS	**Taunus Mts**	**57.71**	**313**	*e*P	**P**	**01 37 57.7**	**0.0**
	comp=Z,60nm,2.3s,mb5.2						
TNS	**Taunus Mts**	**57.71**	**313**	*e*P	**P**	**01 37 57.7**	**0.0**
TNS				pmax	pmax		
	comp=Z,60nm,2.3s,mb5.2						
BFO	**Black Forest**	**58.15**	**311**	*e*P	**P**	**01 38 00.8**	**-0.1**
	comp=Z,44nm,2.2s,mb5.1						
BFO	**Black Forest**	**58.15**	**311**	*e*P	**P**	**01 38 00.8**	**-0.1**
BFO				pmax	pmax		
	comp=Z,44nm,2.2s,mb5.1						
BUG	**Bochum--Univer**	**58.21**	**314**	*e*P	**P**	**01 38 01.0**	**-0.3**
	comp=Z,13nm,0.9s,mb5.0						
LANF	**Langenberg**	**58.36**	**311**	*e*P	**P**	**01 38 02.2**	**-0.1**
GUMO	**Guam**	**58.74**	**92**	LR	LR	02 03 11.3	
	comp=Z,516nm,20.1s,MS4.7,baz=102,slow=36						
MOF	**Molkenrain**	**59.04**	**310**	*e*P	**P**	**01 38 05.9**	**-1.2**
BILL	**Bilibino**	**59.12**	**26**	*e*P	**P**	**01 38 10.8**	**+3.5**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
BILL				MLR	MLR		
	comp=Z,700nm,14.0s,MS4.9						
MEM	**Membach**	**59.16**	**314**	P	**P**	**01 38 07.8**	**-0.1**
	comp=Z,5.7nm,1.2s,mb4.5						
WLF	**Walferdange**	**59.27**	**312**	P	**P**	**01 38 09.0**	**+0.4**
	comp=Z,13nm,1.9s,mb4.6						
WLF	**Walferdange**	**59.27**	**312**	*e*P	**P**	**01 38 08.8**	**+0.1**
	comp=Z,16nm,1.3s,mb4.9						
BCLA	**Clavier**	**59.64**	**313**	P	**P**	**01 38 11.0**	**-0.2**
	comp=Z,22nm,2.5s,mb4.7						
SAOF	**Saorge**	**59.69**	**306**	*e*P	**P**	**01 38 11.3**	**-0.4**
AUTN	**L'Aution**	**59.78**	**306**	*e*P	**P**	**01 38 12.1**	**-0.1**
LUCF	**Luceram**	**59.86**	**306**	*e*P	**P**	**01 38 12.6**	**-0.2**
REVF	**Revere**	**59.89**	**306**	*e*P	**P**	**01 38 12.4**	**-0.6**
TOUF	**Mont Tournerai**	**59.90**	**306**	*e*P	**P**	**01 38 12.6**	**-0.5**
MVIF	**Mont Vial**	**59.99**	**306**	*e*P	**P**	**01 38 13.3**	**-0.4**
DOU	**Dourbes**	**60.16**	**313**	P	**P**	**01 38 14.6**	**-0.2**
	comp=Z,10nm,1.8s,mb4.5						
SNF	**Seneffe**	**60.25**	**314**	P	**P**	**01 38 15.1**	**-0.3**
KEST	**Kesra**	**60.75**	**296**	P	**P**	**01 38 19.0**	**-0.1**
	comp=Z,14nm,1.0s,mb5.0,baz=45,slow=3.4,SNR=24						
KEST				LR	LR	02 08 51.7	
	comp=Z,216nm,20.3s,MS4.3,baz=1.9,slow=40						
KEST	**Kesra**	**60.75**	**296**	*e*P	**P**	**01 38 19.4**	**+0.3**
AGO	**Saint Agoulin**	**62.15**	**309**	*e*P	**P**	**01 38 27.5**	**-0.8**
PYM	**Petit Puy Mans**	**62.32**	**309**	*e*P	**P**	**01 38 29.6**	**+0.1**
DAG	**Danmarks Havn**	**62.92**	**345**	*i* P	**P**	**01 38 32.7**	**-0.3**
DAG				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
DAG	**Danmarks Havn**	**62.92**	**345**	*i* P	**P**	**01 38 32.7**	**-0.3**
	comp=Z,111nm,1.1s,mb5.9						
FITZ	**Fitzroy Crossi**	**63.37**	**134**	*e*P	**P**	**01 38 35.4**	**-1.3**
	comp=Z,13nm,1.0s,mb5.0						
FITZ	**Fitzroy Crossi**	**63.37**	**134**	P	**P**	**01 38 35.5**	**-1.2**
	comp=Z,26nm,2.1s,mb5.0						
KNA	**Kununurra**	**63.61**	**130**	*e*P	**P**	**01 38 37.2**	**-1.2**
	comp=Z,54nm,1.4s,mb5.4						
KNA	**Kununurra**	**63.61**	**130**	P	**P**	**01 38 37.5**	**-0.9**
	comp=Z,684nmcomp=Z,72nm,1.2s,mb5.6						
KAKA	**Kakadu**	**63.97**	**125**	P	**P**	**01 38 39.7**	**-1.1**
	comp=Z,18nm,1.1s,mb5.0						
EMOS	**Mosqueruela**	**66.48**	**304**	P	**P**	**01 38 57.0**	**+0.2**
	comp=Z,201nm,3.8s						
ECRI	**Cripan**	**67.10**	**307**	P	**P**	**01 39 01.5**	**+0.9**
	comp=Z,804nm,4.2s						
ECHE	**Chera**	**67.12**	**303**	P	**P**	**01 39 01.7**	**+0.8**
	comp=Z,1µm,5.0s						
ELAN	**Lanestosa**	**67.50**	**308**	P	**P**	**01 39 03.3**	**+0.1**
	comp=Z,12nm,0.9s,mb4.9						
ETOB	**Tobarra**	**67.89**	**303**	P	**P**	**01 39 05.9**	**+0.1**
	comp=Z,8.4nm,0.7s,mb4.9						
EVIA	**Vianos**	**68.58**	**303**	P	**P**	**01 39 10.4**	**+0.3**
EVIA				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
EVIA	**Vianos**	**68.58**	**303**	P	**P**	**01 39 10.4**	**+0.2**
	comp=Z,11nm,0.6s,mb5.0						
EARI	**Arriondas**	**68.67**	**308**	P	**P**	**01 39 09.7**	**-0.9**
	comp=Z,10nm,0.8s,mb4.8						
TAM	**Tamanrasset**	**68.73**	**284**	*e*P	**P**	**01 39 10.7**	**-0.6**
TAM				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
TAM	**Tamanrasset**	**68.73**	**284**	*e*P	**P**	**01 39 10.7**	**-0.5**
	comp=Z,6.2nm,0.6s,mb4.7						
EHUE	**Huescar**	**68.97**	**302**	P	**P**	**01 39 12.1**	**-0.5**
EHUE				pmax	pmax		
	comp=Z,85nm,3.6s						
EHUE	**Huescar**	**68.97**	**302**	P	**P**	**01 39 12.1**	**-0.4**
	comp=Z,85nm,3.6s						
GUD	**Guadarrama**	**68.98**	**305**	P	**P**	**01 39 12.4**	**-0.2**
GUD				pmax	pmax		
	comp=Z,154nm,2.3s,mb5.5						
GUD	**Guadarrama**	**68.98**	**305**	P	**P**	**01 39 12.4**	**-0.1**
	comp=Z,154nm,2.3s,mb5.5						
ENIJ	**Nijar**	**69.02**	**301**	P	**P**	**01 39 13.1**	**+0.2**
ENIJ				pmax	pmax		
	comp=Z,95nm,2.4s,mb5.3						
ENIJ	**Nijar**	**69.02**	**301**	P	**P**	**01 39 13.1**	**+0.2**
	comp=Z,95nm,2.4s,mb5.3						
ESDC	**Sonseca Array**	**69.22**	**304**	P	**P**	**01 39 13.0**	**-1.1**
	comp=Z,3.3nm,0.7s,mb4.3,baz=58,slow=6.1,SNR=17						
ESDC				LR	LR	02 14 56.1	
	comp=Z,376nm,20.1s,MS4.6,baz=25,slow=40						
ESDC	**Sonseca Array**	**69.22**	**304**	P	**P**	**01 39 13.8**	**-0.3**
	comp=Z,3.6nm,0.8s,mb4.3						
EQES	**Quesada**	**69.33**	**302**	P	**P**	**01 39 14.6**	**-0.1**
	comp=Z,12nm,0.8s,mb4.9						
SUMG	**Summit**	**69.53**	**344**	*e*P	**P**	**01 39 15.8**	**+0.4**
	comp=Z,28nm,0.8s,mb5.2						
SUMG	**Summit**	**69.53**	**344⇑**	*i*P	**P**	**01 39 16.5**	**+1.1**
	comp=Z,26nm,0.8s,mb5.2						
EBER	**Berja**	**69.55**	**301**	P	**P**	**01 39 15.9**	**-0.2**
	comp=Z,13nm,0.8s,mb4.9						
EBAN	**Banos Encina**	**69.70**	**303**	P	**P**	**01 39 16.7**	**-0.3**
EBAN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
EBAN	**Banos Encina**	**69.70**	**303**	P	**P**	**01 39 16.7**	**-0.4**
	comp=Z,5.6nm,0.6s,mb4.7						
ECOG	**Cogollos-Vega**	**69.90**	**302**	P	**P**	**01 39 17.3**	**-1.0**
ECOG				pmax	pmax		
	comp=Z,263nm,3.5s						
ECOG	**Cogollos-Vega**	**69.90**	**302**	P	**P**	**01 39 17.3**	**-1.0**
	comp=Z,263nm,3.5s						
EGUA	**Guajares**	**70.08**	**302**	P	**P**	**01 39 17.7**	**-1.6**
	comp=Z,298nm,2.1s,mb5.8						
LSZ	**Lusaka**	**70.15**	**237**	*e*P	**P**	**01 39 19.8**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
LSZ	**Lusaka**	**70.15**	**237**	*e*P	**P**	**01 39 19.8**	**-0.3**
	comp=Z,9.5nm,1.0s,mb4.7						
ERON	**Agron**	**70.18**	**302**	P	**P**	**01 39 19.1**	**-0.9**
	comp=Z,112nm,2.3s,mb5.4						
ECAL	**Calabor**	**70.25**	**308**	P	**P**	**01 39 19.4**	**-0.9**
	comp=Z,223nm,3.6s						
EADA	**Adamuz**	**70.27**	**303**	P	**P**	**01 39 20.2**	**-0.3**
	comp=Z,8.1nm,0.9s,mb4.7						
ELUQ	**Luque**	**70.29**	**302**	P	**P**	**01 39 19.4**	**-1.3**
ELUQ				pmax	pmax		
	comp=Z,105nm,1.7s,mb5.5						
ELUQ	**Luque**	**70.29**	**302**	P	**P**	**01 39 19.4**	**-1.3**
	comp=Z,105nm,1.7s,mb5.5						
WRA	**Warramunga Arr**	**70.30**	**129**	P	**P**	**01 39 18.9**	**-2.0**
	comp=Z,18nm,0.8s,mb5.0,baz=324,slow=6.3,SNR=75						
WRA	**Warramunga Arr**	**70.30**	**129**	P	**P**	**01 39 18.9**	**-1.9**
WRA				pmax	pmax		
	comp=Z,18nm,0.8s						
WB2	**Warramunga Arr**	**70.31**	**129**	*e*P	**P**	**01 39 19.5**	**-1.4**
ELOJ	**Sierra Loja**	**70.38**	**302**	P	**P**	**01 39 21.4**	**+0.2**
ELOJ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ELOJ	**Sierra Loja**	**70.38**	**302**	P	**P**	**01 39 21.4**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.5						
EPLA	**Plasencia**	**70.56**	**306**	P	**P**	**01 39 20.9**	**-1.4**
EPLA				pmax	pmax		
	comp=Z,127nm,3.5s						
EPLA	**Plasencia**	**70.56**	**306**	P	**P**	**01 39 20.9**	**-1.4**
	comp=Z,127nm,3.5s						
MVO	**Moncorvo**	**70.77**	**307**	*e*P	**P**	**01 39 23.5**	**0.0**
	comp=Z,24nm,1.6s,mb4.9						
MVO				*i* P		01 51 52.3	
MVO				A		02 13 52.2	
	comp=Z,561nm,20.0s						
MVO	**Moncorvo**	**70.77**	**307**	P	**P**	**01 39 23.4**	**-0.1**
NWAO	**Narrogin (SRO)**	**71.04**	**150**	P	**P**	**01 39 22.4**	**-2.7**
	comp=Z,9.5nm,0.9s,mb4.7,baz=124,slow=3.6,SNR=3.6						
NWAO	**Narrogin (SRO)**	**71.04**	**150**	P	**P**	**01 39 22.4**	**-2.7**
NWAO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PVRL	**Vila Real**	**71.19**	**307**	*e*P	**P**	**01 39 25.9**	**-0.2**
	comp=Z,13nm,1.2s,mb4.7						
PCAB	**Cabril**	**71.22**	**308**	*e*P	**P**	**01 39 26.2**	**-0.1**
	comp=Z,19nm,1.5s,mb4.8						
MTE	**Manteigas**	**71.44**	**306**	*e*P	**P**	**01 39 27.6**	**0.0**
	comp=Z,26nm,2.1s,mb4.8						
MTE				*i* P		01 49 01.0	
MTE				A		02 14 34.4	
	comp=Z,754nm,20.0s						
MTE	**Manteigas**	**71.44**	**306**	*e*P	**P**	**01 39 27.0**	**-0.6**
	comp=Z,23nm,1.3s,mb5.0						
PVIS	**Viseu**	**71.55**	**307**	*e*P	**P**	**01 39 28.3**	**0.0**
	comp=Z,21nm,1.1s,mb5.0						
PCBR	**Castelo Branco**	**71.63**	**306**	*e*P	**P**	**01 39 28.8**	**0.0**
	comp=Z,14nm,1.1s,mb4.8						
PMRV	**Marv??o**	**71.74**	**305**	*e*P	**P**	**01 39 31.7**	**+2.2**
	comp=Z,12nm,1.9s,mb4.5						
PMRV				*e*LQ		01 55 30.2	
PMRV				*e*LR	LR	02 00 06.3	
	comp=Z,504nm,18.0s						
EBAD	**Badajoz**	**71.76**	**305**	P	**P**	**01 39 28.7**	**-0.9**
	comp=Z,9.4nm,0.8s,mb4.8						
EMIN	**Mina Concepcio**	**71.94**	**304**	P	**P**	**01 39 30.1**	**-0.6**
	comp=Z,6.4nm,0.8s,mb4.6						
PBAR	**Barrancos**	**72.03**	**304**	*e*P	**P**	**01 39 31.1**	**-0.1**
	comp=Z,21nm,1.6s,mb4.8						
PBAR				*e*LQ		01 55 48.5	
PBAR				*e*LR	LR	02 00 27.0	
	comp=Z,445nm,18.0s						
PESTR	**Estremoz**	**72.12**	**305**	*e*LQ		01 55 39.9	
PESTR				*e*LR	LR	02 02 34.5	
	comp=Z,453nm,18.0s						
PTOM	**Tomar**	**72.38**	**306**	*e*P	**P**	**01 39 33.3**	**0.0**
	comp=Z,28nm,1.7s,mb4.9						
EVO	**Evora**	**72.57**	**305**	*e*P	**P**	**01 39 34.5**	**+0.1**
	comp=Z,15nm,1.7s,mb4.6						
ASAR	**Alice Springs**	**72.66**	**132**	P	**P**	**01 39 33.1**	**-1.9**
	comp=Z,11nm,1.1s,mb4.7,baz=316,slow=5.9,SNR=48						
ASAR	**Alice Springs**	**72.66**	**132**	P	**P**	**01 39 33.1**	**-1.9**
ASAR				pmax	pmax		
	comp=Z,11nm,1.1s						
PBEJ	**Beja**	**72.68**	**304**	*e*P	**P**	**01 39 35.2**	**+0.1**
	comp=Z,21nm,1.8s,mb4.8						
PVAQ	**Vaqueiros**	**72.84**	**304**	*e*P	**P**	**01 39 36.2**	**+0.1**
	comp=Z,21nm,1.6s,mb4.8						
PVAQ				*e*LQ		01 56 22.9	
PVAQ				A		02 13 15.0	
	comp=Z,382nm,18.0s						
PCVE	**Castro Verde**	**72.98**	**304**	*e*LQ		01 56 10.2	
PBDV	**Barranco-do-Ve**	**73.07**	**303**	*e*P	**P**	**01 39 37.6**	**+0.2**
	comp=Z,50nm,1.2s,mb5.3						
PBDV				*e*LQ		01 56 20.9	
PBDV				*e*LR	LR	02 01 07.2	
	comp=Z,383nm,18.0s						
PMAFR	**Mafra**	**73.27**	**306**	*e*LQ		01 57 22.8	
PMAFR				A		02 13 22.1	
	comp=Z,312nm,20.0s						
MORF	**Marmelete**	**73.56**	**304**	*e*LQ		01 56 35.4	
MORF				A		02 16 51.6	
	comp=Z,566nm,18.0s						
PFVI	**Vila Bisbo**	**73.76**	**304**	*e*LQ		01 57 10.3	
PFVI				A		02 13 15.5	
	comp=Z,559nm,18.0s						
TTA	**Tatalina**	**75.30**	**24**	*e*P	**P**	**01 39 50.9**	**+1.0**
TTA				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
TTA	**Tatalina**	**75.30**	**24**	*e*P	**P**	**01 39 50.9**	**+1.0**
	comp=Z,28nm,1.2s,mb5.1						
BPAW	**Bear Paw Mtn.**	**76.19**	**22**	*e*P	**P**	**01 39 55.3**	**+0.3**
	comp=Z,30nm,1.0s,mb5.2						
COLA	**College**	**76.59**	**20**	*e*P	**P**	**01 39 57.8**	**+0.5**
COLA				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
COLA	**College**	**76.59**	**20**	*e*P	**P**	**01 39 57.8**	**+0.5**
	comp=Z,41nm,1.0s,mb5.3						
PPLA	**Purkeypile**	**76.63**	**23**	*e*P	**P**	**01 39 58.7**	**+1.2**
	comp=Z,55nm,1.4s,mb5.3						
TRF	**Thorofare Moun**	**76.86**	**22**	*e*P	**P**	**01 40 00.6**	**+1.7**
	comp=Z,8.0nm,1.0s,mb4.6						
ILAR	**Eielson Array**	**76.95**	**20**	P	**P**	**01 39 58.4**	**-0.9**
	comp=Z,17nm,1.0s,mb4.9,baz=304,slow=4.8,SNR=52						
ILAR				PP	PP	01 42 52.8	+0.8
	comp=Z,1.0nm,0.8s,baz=302,slow=6.7,SNR=4.5						
ILAR	**Eielson Array**	**76.95**	**20**	P	**P**	**01 39 58.4**	**-0.9**
ILAR						01 42 52.8	
ILAR				pmax	pmax		
	comp=Z,17nm,1.0s						
INK	**Inuvik**	**77.39**	**13**	P	**P**	**01 40 01.4**	**-0.3**
	comp=Z,17nm,0.9s,mb5.0,baz=324,slow=5.9,SNR=16						
INK	**Inuvik**	**77.39**	**13**	*e*P	**P**	**01 40 01.7**	**0.0**
INK				pmax	pmax		
	comp=Z,48nm,1.3s						
INK	**Inuvik**	**77.39**	**13**	*e*P	**P**	**01 40 01.7**	**0.0**
	comp=Z,48nm,1.3s,mb5.3						
EGAK	**Eagle**	**78.54**	**18**	*e*P	**P**	**01 40 08.3**	**+0.2**
	comp=Z,33nm,1.1s,mb5.2						
PMR	**Palmer**	**78.57**	**23**	*e*P	**P**	**01 40 08.5**	**+0.2**
PMR				*e*	pP	01 40 17.9	+0.2
PMR				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
PMR	**Palmer**	**78.57**	**23**	*e*P	**P**	**01 40 08.5**	**+0.1**
	comp=Z,13nm,0.9s,mb4.8						
PMR				*e*PcP	PcP	01 40 17.9	+0.6
DOT	**Dot Lake**	**78.61**	**20**	*e*P	**P**	**01 40 08.3**	**-0.2**
	comp=Z,67nm,1.0s,mb5.5						
SML	**Sawmill**	**78.67**	**22**	*e*P	**P**	**01 40 09.4**	**+0.5**
SML				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
SML	**Sawmill**	**78.67**	**22**	*e*P	**P**	**01 40 09.4**	**+0.5**
	comp=Z,14nm,1.0s,mb4.8						
CTA	**Charters Tower**	**78.76**	**122**	P	**P**	**01 40 09.6**	**-0.4**
	comp=Z,14nm,1.1s,mb4.8,baz=309,slow=2.9,SNR=4.3						
CTA	**Charters Tower**	**78.76**	**122**	P	**P**	**01 40 09.6**	**-0.4**
CTA				pmax	pmax		
	comp=Z,14nm,1.1s						
CTA	**Charters Tower**	**78.76**	**122**	P	**P**	**01 40 09.6**	**-0.4**
CTAO	**Charters Tower**	**78.76**	**122**	*e*P	**P**	**01 40 10.0**	**0.0**
CTAO				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
CTAO	**Charters Tower**	**78.76**	**122**	*e*P	**P**	**01 40 09.9**	**-0.1**
	comp=Z,29nm,1.2s,mb5.1						
DAWY	**Dawson**	**79.57**	**18**	*e*P	**P**	**01 40 13.8**	**0.0**
KDAK	**Kodiak Island**	**80.01**	**27**	*i* P	**P**	**01 40 19.2**	**+2.9**
OHAK	**Old Harbor**	**80.12**	**27**	*e*P	**P**	**01 40 17.1**	**+0.2**
	comp=Z,39nm,1.0s,mb5.3						
BOSA	**Boshof**	**81.05**	**229**	P	**P**	**01 40 21.4**	**-0.8**
	comp=Z,4.8nm,0.8s,mb4.5,baz=38,slow=4.6,SNR=8.3						
BOSA	**Boshof**	**81.05**	**229**	P	**P**	**01 40 21.5**	**-0.7**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
QLP	**Quilpie**	**81.46**	**128**	*e*P	**P**	**01 40 23.9**	**-0.5**
STKA	**Stephens Creek**	**83.24**	**133**	P	**P**	**01 40 32.2**	**-1.4**
	comp=Z,9.8nm,0.9s,mb4.8,baz=310,slow=5.4,SNR=18						
STKA	**Stephens Creek**	**83.24**	**133⇑**	*i*P	**P**	**01 40 32.4**	**-1.2**
	comp=Z,11nm,1.5s,mb4.7						
STKA	**Stephens Creek**	**83.24**	**133**	*e*P	**P**	**01 40 31.9**	**-1.7**
	comp=Z,8.6nm,1.4s,mb4.6						
RMQ	**Roma**	**84.53**	**125**	*e*P	**P**	**01 40 40.5**	**+0.2**
	comp=Z,124nm,1.7s,mb5.8						
DBIC	**Dimbokro**	**85.16**	**275**	P	**P**	**01 40 43.3**	**-0.6**
	comp=Z,8.5nm,0.8s,mb4.9,baz=54,slow=7.6,SNR=7.9						
DBIC	**Dimbokro**	**85.16**	**275**	P	**P**	**01 40 43.3**	**-0.6**
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KIC	**Kosan Boka**	**85.22**	**275**	*e*P	**P**	**01 40 44.0**	**-0.2**
	comp=Z,39nm,1.0s,mb5.5						
TIC	**Toumodi**	**85.31**	**275**	*e*P	**P**	**01 40 44.4**	**-0.3**
	comp=Z,173nm,1.9s,mb5.9						
LIC	**Lamto**	**85.53**	**275**	*e*P	**P**	**01 40 45.6**	**-0.2**
	comp=Z,40nm,1.1s,mb5.5						
YKA	**Yellowknife Ar**	**85.85**	**8**	P	**P**	**01 40 45.0**	**-1.5**
	comp=Z,4.2nm,0.8s,mb4.7,baz=341,slow=4.6,SNR=14						
YKA	**Yellowknife Ar**	**85.85**	**8**	P	**P**	**01 40 45.0**	**-1.4**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YKA	**Yellowknife Ar**	**85.85**	**8**	P	**P**	**01 40 45.0**	**-1.5**
DLBC	**Dease Lake**	**86.75**	**17**	*e*P	**P**	**01 40 51.4**	**+0.5**
BBTS	**Babate**	**90.90**	**288**	LR	LR	02 28 09.5	
	comp=Z,413nm,18.3s,MS4.9,baz=275,slow=40						
SCHQ	**Schefferville**	**90.90**	**343**	LR	LR	02 22 30.9	
	comp=Z,529nm,21.7s,MS4.9,baz=313,slow=36						
FFC	**Flin Flon**	**94.64**	**3**	*i* P	**P**	**01 41 31.1**	**+3.2**
ULM	**Lac du Bonnet**	**99.25**	**360**	LR	LR	02 32 37.6	
	comp=Z,392nm,18.2s,MS5.0,baz=345,slow=39						
MAW	**Mawson**	**99.37**	**188**	LR	LR	02 18 52.4	
	comp=Z,485nm,21.6s,MS5.0,baz=3.2,slow=31						
TXAR	**Lajitas Array**	**119.76**	**7**	PKP	PKPdf	01 46 57.4	-0.2
	comp=Z,0.3nm,0.6s,baz=46,slow=2.6,SNR=4.7						
TXAR				PKKPbc	PKKPbc	01 57 04.8	-2.6
	comp=Z,0.7nm,0.8s,baz=174,slow=4.9,SNR=3.6						
OTAV	**Otavalo**	**144.61**	**328**	*e*PKPdf	PKPdf	01 47 44.4	-0.1
CPUP	**Villa Florida**	**145.38**	**268**	PKPbc	PKPbc	01 47 44.9	-0.4
	comp=Z,4.3nm,0.9s,baz=59,slow=3.9,SNR=8.9						
CPUP	**Villa Florida**	**145.38**	**268**	PKIKP	PKPdf	01 47 44.9	-0.4
CPUP				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CPUP	**Villa Florida**	**145.38**	**268**	PKPbc	PKPbc	01 47 44.9	-0.4
LPAZ	**La Paz**	**150.28**	**293**	PKPbc	PKPbc	01 47 57.2	-1.6
	comp=Z,3.1nm,1.0s,baz=35,slow=4.7,SNR=9.5						
LPAZ	**La Paz**	**150.28**	**293**	*e*PKPbc	PKPbc	01 47 57.8	-1.0
TRQA	**Tornquist**	**150.71**	**246**	*e*PKPbc	PKPbc	01 47 59.2	-0.1

IDC ***10*** *01:29:14.4±1.0, 51°.62N×177°.60E, h0km, mb3.8/14, mb1 4.0/15, mb1mx3.9/27, mbtmp3.9/15, ML4.4/1, Error ellipse: s-maj=29.1km s-min=16.2km az=180.0*

BJI ***10*** *01:29:20.7, 51°.60N×177°.60E, h33km, mB4.9/2, mb4.7/5, Ms4.4/1, Ms7 4.1/1*

ISCJB ***10*** *01:29:22.4±0.7, 51°.7N±0°.1×177°.69E±0°.06, h72km±5km, mb4.0/20, Error ellipse: s-maj=18.8km s-min=5.4km az=10.8*

NEIC ***10*** *01:29:22.7, 51°.60N×177°.63E, h42km, mb4.2/3, ML4.3(PMR), ML4.0(AEIC), After AEIC.*

ISC 10 01:29:23.7±0.7**, 51°.6N**±0°.1×**177°.66E**±0°.06**, h68**km±5km**, n34,** σ1**§14**/38**, mb4.0**/20**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.05**	**102**	P	**Pn**	**01 29 41.6**	**-1.1**
AMKA				S	**Sn**	**01 29 55.6**	**-1.2**
SMY	**Shemya**	**2.46**	**298**	P	**Pn**	**01 30 00.6**	**-0.9**
SMY				S	**Sn**	**01 30 30.4**	**-0.1**
FX1	**Attu Island--F**	**3.04**	**296**	P	**Pn**	**01 30 07.5**	**-1.9**
FX1				S	**Sn**	**01 30 46.0**	**+1.5**
ADK	**Adak**	**3.52**	**83**	P	**Pn**	**01 30 16.2**	**+0.3**
ATKA	**Atka Island**	**5.08**	**80**	P	**Pn**	**01 30 37.7**	**+0.6**
NIKO	**Nikolski**	**8.38**	**75**	P	**Pn**	**01 31 24.1**	**+1.8**
UNV	**Unalaska Valle**	**9.87**	**71**	*e*Pn	**Pn**	**01 31 44.0**	**+1.6**
AKUT	**Akutan**	**10.33**	**69**	*e*Pn	**Pn**	**01 31 51.0**	**+2.2**
KDAK	**Kodiak Island**	**18.17**	**58**	P	**Pn**	**01 33 29.1**	**-1.8**
	1.1nm,0.3s,baz=236,slow=3.0,SNR=6.5						
PPLA	**Purkeypile**	**19.62**	**43**	*e*P	**Pn**	**01 33 51.2**	**+3.0**
	17nm,1.3s						
ILAR	**Eielson Array**	**22.48**	**41**	P	**P**	**01 34 16.4**	**-0.4**
	0.3nm,0.5s,mb2.9,baz=254,slow=7.2,SNR=8.1						
DAWY	**Dawson**	**25.46**	**44**	*e*P	**P**	**01 34 44.9**	**0.0**
MDJ	**Mudanjiang**	**32.35**	**277**	P	**P**	**01 35 47.0**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,280nm,11.1s						
YKA	**Yellowknife Ar**	**36.67**	**46**	P	**P**	**01 36 22.4**	**-0.9**
	comp=Z,1.0nm,0.8s,mb3.8,baz=283,slow=8.7,SNR=2.8						
BJI	**Beijing**	**43.16**	**280**	P	**P**	**01 37 19.5**	**+2.2**
BJI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
SONM	**Songino Array**	**44.55**	**295**	P	**P**	**01 37 29.0**	**+0.6**
	comp=Z,1.0nm,0.5s,mb3.8,baz=62,slow=8.0,SNR=5.3						
HHC	**Hu-ho-hao-te**	**45.49**	**283**	*e*P	**P**	**01 37 37.0**	**+1.1**
HHC				pP	pP	01 37 49.6	-3.3
HHC				sP	sP	01 37 54.7	-6.0
HHC				PcP	PcP	01 39 17.0	+3.3
HHC				PP	PP	01 39 24.9	+1.6
HHC				ScP	ScP	01 43 03.3	+3.1
HHC				S	**S**	**01 44 14.0**	**+1.5**
HHC				sS	sS	01 44 35.8	-5.5
HHC				SS	SS	01 47 29.9	-6.8
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,120nm,6.9s						
HHC				LR	LR		
	comp=N,170nm,15.7s						
HHC				LR	LR		

comp=E,180nm,16.9s
HHC LR LR
comp=Z,160nm,15.5s
NVAR Mina Array Bea 45.71 81 P **P** **01 37 38.1 +0.5**
comp=Z,0.9nm,0.6s,mb3.7,baz=300,slow=6.7,SNR=6.2
DUG Dugway 47.96 75 *e*P **P** **01 37 56.5 +1.3**
comp=Z,1.2nm,0.6s,mb3.9
PDAR Pinedale Array 48.33 70 P **P** **01 37 57.2 -0.8**
comp=Z,0.4nm,0.5s,mb3.5,baz=302,slow=4.1,SNR=5.2
ZALV Zalesovo Beam 52.24 312 P **P** **01 38 25.7 -1.7**
comp=Z,0.3nm,0.3s,mb3.8,baz=90,slow=5.8,SNR=2.3
LZH Lanzhou 53.19 284 *e*P **P** **01 38 39.0 +4.4**
LZH pP pP 01 38 44.2 -7.8
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
ARCES ARCESS Array B 57.46 349 P **P** **01 39 03.7 -1.1**
comp=Z,2.8nm,1.0s,mb4.2,baz=35,slow=8.0,SNR=5.1
ARCES ARCESS Array B 57.46 349 P **P** **01 39 03.7 -1.1**
MKAR Makanchi Array 58.13 306 P **P** **01 39 09.1 -0.8**
comp=Z,0.4nm,0.5s,mb3.7,baz=55,slow=7.3,SNR=2.5
BVAR Borovoye Array 59.26 318 *e*P **P** **01 39 17.1 -0.5**
comp=Z,3.4nm,0.6s,mb4.5,baz=47,slow=6.5,SNR=12
BRVK Borovoye 59.28 318 *e*P **P** **01 39 18.2 +0.4**
comp=Z,3.9nm,0.7s,mb4.5
TXAR Lajitas Array 60.79 79 P **P** **01 39 27.3 -1.1**
comp=Z,0.2nm,0.4s,mb3.5,baz=305,slow=6.4,SNR=4.4
AKTK Aktyubinsk 66.19 323 P **P** **01 40 03.0 -0.6**
AKTO Aktyubinsk 66.19 323 P **P** **01 40 03.0 -0.7**
comp=Z,2.3nm,0.6s,mb4.2,baz=53,slow=9.8,SNR=6.8
NB2 NORSAR Subarra 67.18 353 P **P** **01 40 09.3 -0.5**
comp=Z,2.0nm,0.6s,mb4.1,baz=8.6,slow=6.2
NOA NORSAR Array B 67.18 353 P **P** **01 40 09.4 -0.4**
comp=Z,2.4nm,0.6s,mb4.2,baz=9.7,slow=6.3,SNR=11
WRA Warramunga Arr 80.69 221 P **P** **01 41 29.3 +0.1**
comp=Z,0.4nm,0.7s,mb3.4,baz=29,slow=5.6,SNR=2.0
BRTR Keskin Array B 83.77 333 P **P** **01 41 44.8 -0.4**
comp=Z,0.5nm,0.6s,mb3.5,baz=21,slow=2.9,SNR=3.7

IDC 10 01:47:20.4±38.0, 14°.92S×167°.46E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/18, mbtmp4.1/4, MS3.5/1, Ms1 3.5/1, ms1mx3.1/19, Error ellipse: s-maj=664.8km s-min=101.7km az=70.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**20.13**	**90**	LR	LR	01 57 01.4	
	comp=Z,145nm,19.3s,baz=88,slow=29						
STKA	**Stephens Creek**	**29.01**	**230**	P	P	01 53 22.4	+0.3
	3.2nm,0.7s,baz=55,slow=7.7,SNR=5.9						
WRA	**Warramunga Arr**	**31.96**	**256**	P	P	01 53 48.3	-0.1
	1.2nm,0.8s,baz=89,slow=8.9,SNR=4.8						
ASAR	**Alice Springs**	**32.78**	**249**	P	P	01 53 55.4	-0.1
	4.1nm,0.8s,baz=78,slow=8.9,SNR=36						
FITZ	**Fitzroy Crossi**	**40.16**	**260**	P	P	01 54 58.6	0.0
	2.7nm,1.1s,baz=76,slow=9.5,SNR=2.7						

IDC 10 01:57:01.0±9.3, 0°.07N×67°.30E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.4/20, mbtmp3.7/2, MS3.8/1, Ms1 3.8/1, ms1mx3.3/27, Error ellipse: s-maj=840.6km s-min=52.2km az=38.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNI	**Garni**	**44.88**	**335**	LR	LR	02 21 22.8	
	comp=Z,121nm,21.8s,baz=78,slow=33						
WRA	**Warramunga Arr**	**68.49**	**111**	P	P	02 08 06.0	+0.3
	0.5nm,0.5s,baz=290,slow=5.7,SNR=6.2						
ASAR	**Alice Springs**	**68.68**	**115**	P	P	02 08 06.7	-0.1
	0.4nm,0.5s,baz=278,slow=5.5,SNR=4.6						
TXAR	**Lajitas Array**	**149.51**	**344**	PKPbc	PKPbc	02 16 52.7	-0.3
	0.6nm,0.9s,baz=64,slow=2.1,SNR=4.8						

*ATH **10** 01:58:16.6, 40°.12N×20°.89E, h15km±5km, MD3.1/6*
*CSEM **10** 01:58:17.3±0.3, 40°.11N×20°.87E, h19km, ML2.1/3, Error ellipse: s-maj=7.4km s-min=5.1km az=125.0*
*ISCJB **10** 01:58:18.1±0.4, 40°.09N±0°.03×20°.93E±0°.04, h25km±6km, Error ellipse: s-maj=5.5km s-min=4.0km az=39.7*
*THE **10** 01:58:18.2, 40°.11N×20°.92E, h18km±4km, ML2.1/3, Error ellipse: s-maj=4.7km s-min=0.8km az=320.0*
*SKO **10** 01:58:18.1, 40°.03N×20°.83E, h0km*
ISC 10 01:58:18.1±0.4, 40°.09N±0°.03×20°.93E±0°.04, h23km±7km, n31, σ1°.28/51, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.34**	**16**	P	**Pb**	**01 58 24.4**	**-1.2**
NEST				S	**Sb**	**01 58 31.1**	**+0.5**
NEST	**Nestorio**	**0.34**	**16**	P	**Pb**	**01 58 24.4**	**-1.2**
NEST				S	**Sb**	**01 58 31.1**	**+0.5**
JAN	**Janina**	**0.43**	**188**	*e*PB	**Pb**	**01 58 24.8**	**-2.3**
JAN				*e*SB	**Sb**	**01 58 32.5**	**-0.8**
JAN	**Janina**	**0.43**	**188**	*e*Pb	**Pb**	**01 58 24.8**	**-2.3**
JAN				*e*Sb	**Sb**	**01 58 32.5**	**-0.8**
KBN	**Korca**	**0.55**	**349**	*e*PG	**Pb**	**01 58 28.3**	**-0.7**
KBN				*i* SG	**Sb**	**01 58 36.6**	**+0.2**
KZN	**Kozani**	**0.68**	**71**	*e*PN	**Pn**	**01 58 29.9**	**-2.5**
KZN				*e*SN	**Sn**	**01 58 40.7**	**-1.6**
KZN	**Kozani**	**0.68**	**71**	P	**Pb**	**01 58 30.5**	**-0.8**
KZN				S	**Sb**	**01 58 41.1**	**+0.8**
KZN	**Kozani**	**0.68**	**71**	*e*Pn	**Pn**	**01 58 29.9**	**-2.5**
KZN	**Kozani**	**0.68**	**71**	P	**Pb**	**01 58 30.5**	**-0.8**
KZN				*e*Sn	**Sn**	**01 58 40.7**	**-1.6**
KZN				S	**Sb**	**01 58 41.1**	**+0.8**
IGT	**Igoumenitsa**	**0.72**	**220**	P	**Pb**	**01 58 31.8**	**-0.1**
IGT	**Igoumenitsa**	**0.72**	**220**	P	**Pb**	**01 58 31.8**	**-0.1**
SRN	**Sarande**	**0.74**	**254**	*e*PG	**Pb**	**01 58 31.7**	**-0.6**
SRN				*i* SG	**Sb**	**01 58 44.0**	**+2.0**
FNA	**Florina**	**0.78**	**26**	P	**Pb**	**01 58 32.0**	**-0.9**
FNA				S	**Sb**	**01 58 43.6**	**+0.6**
FNA	**Florina**	**0.78**	**26**	P	**Pb**	**01 58 32.0**	**-0.9**
FNA				S	**Sb**	**01 58 43.6**	**+0.6**
KEK	**Kerkira**	**0.94**	**247**	*e*PN	**Pn**	**01 58 34.7**	**-1.3**
KEK	**Kerkira**	**0.94**	**247**	P	**Pb**	**01 58 35.1**	**-0.7**
KEK				S	**Sb**	**01 58 49.5**	**+1.6**
KEK	**Kerkira**	**0.94**	**247**	*e*Pn	**Pn**	**01 58 34.7**	**-1.3**
KEK	**Kerkira**	**0.94**	**247**	P	**Pb**	**01 58 35.1**	**-0.7**
BIA	**Bitola**	**0.98**	**18**	P	**Pb**	**01 58 39.2**	**-0.9**
BIA				S	**Sb**	**01 58 49.5**	**+0.7**
BIA	**Bitola**	**0.98**	**18**	*e*Pg	**Pb**	**01 58 39.2**	**+2.9**
BIA				*e*Sg	**Sb**	**01 58 51.5**	**+2.7**
BIA	**Bitola**	**0.98**	**18**	P	**Pb**	**01 58 35.4**	**-0.9**
BIA				S	**Sb**	**01 58 49.5**	**+0.7**
THL	**Klokotos Trika**	**0.99**	**122**	*e*PN	**Pn**	**01 58 35.6**	**-1.0**
THL				*e*SN	**Sn**	**01 58 50.9**	**+1.1**
THL	**Klokotos Trika**	**0.99**	**122**	P	**Pn**	**01 58 36.4**	**-0.2**
THL				S	**Sb**	**01 58 51.4**	**+2.3**
THL	**Klokotos Trika**	**0.99**	**122**	*e*Pn	**Pn**	**01 58 35.6**	**-1.0**
THL	**Klokotos Trika**	**0.99**	**122**	P	**Pn**	**01 58 36.4**	**-0.2**
THL				*e*Sn	**Sn**	**01 58 50.9**	**+1.1**
THL				S	**Sb**	**01 58 51.4**	**+2.3**
LIT	**Litokhoron**	**1.20**	**89**	*e*PN	**Pn**	**01 58 39.7**	**+0.2**
LIT	**Litokhoron**	**1.20**	**89**	P	**Pn**	**01 58 39.7**	**+0.2**
LIT	**Litokhoron**	**1.20**	**89**	P	**Pn**	**01 58 39.7**	**+0.2**
KRUS	**Krusevo**	**1.30**	**11**	*e*Pg	**Pn**	**01 58 42.6**	**+1.7**
AGG	**Agios Georgios**	**1.52**	**134**	*e*PN	**Pn**	**01 58 46.0**	**+2.1**
AGG	**Agios Georgios**	**1.52**	**134**	*e*Pn	**Pn**	**01 58 46.0**	**+2.1**

RSPR 10 02:23:15.5, 19°.29N×64°.84W, h15km±17km, MD3.1/3, 8C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.89**	**166**	↓*e*P	Pb	02 23 30.6	-2.1
TBVI				*e*S	Sb	02 23 42.4	-2.0
TBVI	**Tortola**	**0.89**	**166**	↓*e*P	Pb	02 23 30.7	-1.9
TBVI				*e*S	Sb	02 23 42.2	-2.1
TBVI	**Tortola**	**0.89**	**166**	↓*e*P	Pb	02 23 30.6	-2.1
TBVI	**Tortola**	**0.89**	**166**	↓*e*P	Pb	02 23 30.7	-1.9
TBVI				*e*S	Sb	02 23 42.2	-2.1
TBVI				*e*S	Sb	02 23 42.4	-2.0
STVI	**Saint Thomas**	**0.94**	**187**	↑*e*P	Pb	02 23 30.8	-2.6
STVI	**Saint Thomas**	**0.94**	**187**	↑*e*P	Pb	02 23 30.8	-2.6
STVI	**Saint Thomas**	**0.94**	**187**	*e*S	Sb	02 23 42.8	-2.9
STVI	**Saint Thomas**	**0.94**	**187**	↑*e*P	Pb	02 23 30.8	-2.6
STVI	**Saint Thomas**	**0.94**	**187**	↑*e*P	Pb	02 23 30.8	-2.6
STVI				*e*S	Sb	02 23 42.8	-2.9
STVI				*e*S	Sb	02 23 42.8	-2.9
HUMP	**Col San Antoni**	**1.49**	**220**	↑*e*P	Pn	02 23 38.5	-3.2
HUMP	**Col San Antoni**	**1.49**	**220**	*e*S	Sn	02 23 57.4	-3.4
HUMP	**Col San Antoni**	**1.49**	**220**	↑*e*P	Pn	02 23 38.6	-3.1
HUMP				*e*S	Sn	02 23 57.4	-3.5
HUMP	**Col San Antoni**	**1.49**	**220**	↑*e*P	Pn	02 23 38.5	-3.2
HUMP	**Col San Antoni**	**1.49**	**220**	↑*e*P	Pn	02 23 38.6	-3.1
HUMP				*e*S	Sn	02 23 57.4	-3.5
HUMP				*e*S	Sn	02 23 57.4	-3.4

*IDC **10** 02:28:14.9±1.2, 37°.90N×142°.81E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/22, mbtmp3.7/7, ML3.2/1, Error ellipse: s-maj=30.9km s-min=22.9km az=60.0*
*JMA **10** 02:28:20.5±0.1, 37°.71N×142°.29E, h31km±3km, M3.7*
*NEIC **10** 02:28:20.3±0.7, 37°.88N×142°.75E, h35km, MG3.7(JMA), Error ellipse: s-maj=14.5km s-min=13.7km az=157.0*
*ISCJB **10** 02:28:21.1±1.4, 37°.75N±0°.06×142°.3E±0°.1, h48km±12km, mb3.7/6, Error ellipse: s-maj=16.6km s-min=8.7km az=21.4*
ISC 10 02:28:22.0±1.5, 37°.77N±0°.06×142°.3E±0°.1, h39km±13km, n20, σ1°.10/26, mb3.7/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.04**	**311**	P	**Pn**	**02 28 39.4**	**-0.6**
JIO				S	**Sn**	**02 28 52.5**	**-0.8**
JMM	**Marumori**	**1.23**	**275**	P	**Pn**	**02 28 41.4**	**-1.2**
JMM				S	**Sn**	**02 28 56.6**	**-1.4**
JFK	**Kawauchi**	**1.23**	**251**	P	**Pn**	**02 28 41.0**	**-1.7**
JFK				*e*S	**Sn**	**02 28 56.4**	**-1.8**
JOU	**Okura**	**1.45**	**295**	P	**Pn**	**02 28 45.8**	**+0.1**
JMK	**Ichinoseki**	**1.47**	**323**	P	**Pn**	**02 28 46.2**	**+0.2**
JMK				*e*S	**Sn**	**02 29 04.4**	**+0.4**
JFT	**Otama**	**1.61**	**261**	P	**Pn**	**02 28 47.5**	**-0.4**
JOM	**Ohasama**	**1.89**	**334**	P	**Pn**	**02 28 52.2**	**+0.5**
JYK	**Kaneyama**	**1.93**	**307**	P	**Pn**	**02 28 52.8**	**+0.5**
JFY	**Yanaizu**	**2.13**	**261**	P	**Pn**	**02 28 54.8**	**-0.2**
JYA	**Atsumi**	**2.23**	**292**	P	**Pn**	**02 28 57.0**	**+0.7**
MJAR	**Matsushiro Arr**	**3.52**	**251**	Pn	**Pn**	**02 29 16.6**	**+2.5**
	1.6nm,0.3s,baz=75,slow=9.3,SNR=5.4						
MJAR				Sn	**Sn**	**02 30 02.5**	**+7.9**
	1.8nm,0.3s,baz=105,slow=22,SNR=4.1						
MAJO	**Matsushiro**	**3.52**	**251**	*e*Pn	**Pn**	**02 29 17.8**	**+3.6**
MAT	**Matsushiro**	**3.52**	**251**	P	**Pn**	**02 29 15.3**	**+1.1**
MAT				S	**Sn**	**02 29 56.4**	**+1.8**
SONM	**Songino Array**	**28.00**	**303**	P	**P**	**02 34 09.1**	**+0.1**
	1.4nm,0.8s,mb3.7,baz=91,slow=7.9,SNR=6.5						
ZALV	**Zalesovo Beam**	**41.97**	**312**	P	**P**	**02 36 08.9**	**0.0**
	0.9nm,0.5s,mb3.7,baz=84,slow=5.9,SNR=2.1						
MK31	**Makanchi Array**	**44.36**	**302**	*e*P	**P**	**02 36 29.5**	**+1.2**
MKAR	**Makanchi Array**	**44.36**	**302**	P	**P**	**02 36 28.9**	**+0.7**
	0.4nm,0.5s,mb3.5,baz=83,slow=10,SNR=6.4						
WRA	**Warramunga Arr**	**57.90**	**189**	P	**P**	**02 38 10.1**	**+0.1**
	0.4nm,0.5s,mb3.7,baz=8.7,slow=7.4,SNR=3.4						
ASAR	**Alice Springs**	**61.62**	**189**	P	**P**	**02 38 35.2**	**-0.4**
	0.2nm,0.5s,mb3.5,baz=0.0,slow=6.5,SNR=3.3						
TXAR	**Lajitas Array**	**89.09**	**53**	P	**P**	**02 41 10.6**	**-2.7**
	1.0nm,1.2s,mb4.0,baz=320,slow=3.5,SNR=4.2						

MEX 10 02:34:51.1±1.9, 14°.41N×93°.06W, h16km±83km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.91**	**57**	*i* P	Pb	02 35 04.6	-4.0
THIG				*i* S	Sb	02 35 16.0	-4.5
PCIG		**1.29**	**353**	*e*P	Pn	02 35 10.4	-4.1
PCIG				*i* S	Sb	02 35 24.7	-6.7
CCIG	**Comitan**	**2.06**	**25**	*e*P	Pn	02 35 23.2	-1.9
CCIG				*e*S	Sn	02 35 47.0	-3.4
TGIG		**2.35**	**359**	*e*P	Pn	02 35 26.8	-2.2
TGIG				*i* S	Sn	02 35 53.5	-4.1

*CSEM **10** 02:48:15.4, 38°.50N×29°.84W, h5km, ML2.9, After PDA*
PDA 10 02:48:15.4±0.6, 38°.50N×29°.84W, h5km, MD3.5, ML2.9, Error ellipse: s-maj=13.7km s-min=5.7km az=174.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.90**	**84**	*e*S	Sg	02 48 40.6	-3.7
CALA	**Caldeira**	**0.90**	**84**	*e*S	Sg	02 48 40.6	-3.7
PCED	**Cedros**	**0.91**	**81**	*e*P	Pg	02 48 29.9	-2.9
PCED				*e*S	Sg	02 48 40.6	-3.9
PCED				A		02 48 42.4	
	61nm,0.3s						
PCED	**Cedros**	**0.91**	**81**	*e*P	Pg	02 48 29.9	-2.9
PCED				*e*S	Sg	02 48 40.6	-3.9
HOR	**Horta**	**0.95**	**88**	*e*S	Sg	02 48 42.1	-3.9
HOR	**Horta**	**0.95**	**88**	*e*S	Sg	02 48 42.1	-3.9
PCAN	**Candelaria**	**1.07**	**91**	*e*P	Pg	02 48 31.9	-3.9
PCAN				*e*S	Sg	02 48 44.7	-5.0
PCAN				A		02 48 48.4	
	87nm,0.3s						
PCAN	**Candelaria**	**1.07**	**91**	*e*P	Pg	02 48 31.9	-3.9
PCAN				*e*S	Sg	02 48 44.7	-5.0
PICO	**Pico**	**1.11**	**89**	*e*S	Sg	02 48 46.8	-4.3
PICO	**Pico**	**1.11**	**89**	*e*S	Sg	02 48 46.8	-4.3
ROSA	**Rosais**	**1.27**	**79**	*e*P	Pg	02 48 35.2	-4.6
ROSA				*e*S	Sg	02 48 49.6	-6.8
ROSA	**Rosais**	**1.27**	**79**	*e*P	Pg	02 48 35.2	-4.6
ROSA				*e*S	Sg	02 48 49.6	-6.8

*SZGRF **10** 03:00:20.9, 2°.39N×99°.07E, h80km, mb5.0, MS5.1, Northern Sumatera, Indonesia*
*IDC **10** 03:00:23.9±0.4, 2°.59N×96°.37E, h0km, mb4.8/21, mb1 4.9/22, mb1mx4.9/22, mbtmp4.8/22, ML5.0/1, MS5.2/26, Ms1 5.2/26, ms1mx5.0/37, Error ellipse: s-maj=15.7km s-min=12.7km az=62.0*
*BJI **10** 03:00:25.7, 2°.10N×96°.20E, h46km, mB5.7/52, mb5.3/61, Ms5.6/72, Ms7 5.4/68*
*DJA **10** 03:00:27, 2°.39N×96°.08E, h12km, mb5.5/32*
*MOS **10** 03:00:28.2±1.0, 2°.57N×96°.35E, h33km, mb5.4/64, MS5.1/33, Error ellipse: s-maj=8.3km s-min=4.6km az=114.0*
*ISCJB **10** 03:00:28.9±0.1, 2°.53N±0°.02×96°.32E±0°.02, h40km, mb5.2/184, MS5.3/71, Error ellipse: s-maj=3.9km s-min=2.5km az=37.7*
*NEIC **10** 03:00:30.9±0.9, 2°.51N×96°.32E, h43km±7km, mb5.2/75, MW5.4, Error ellipse: s-maj=6.1km s-min=4.3km az=222.0, Moment Tensor Solution. s78 Moment tensor: Scale 10^{17}Nm; M_{rr}1.10; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-0.30; $M_{r\theta}$0.96; $M_{\theta\phi}$0.59; $M_{\phi r}$-0.73; Best double couple: $M_0$1.70000×10^{17} NP1: ϕ_s301.00000°, δ22.00000°, λ85.00000°. NP2: ϕ_s126.00000°, δ68.00000°, λ92.00000°. Principal axes: T 1.6200, Plg66.0000°, Azm40.0000°; N 0.0900, Plg1.0000°, Azm305.0000°; P -1.7100, Plg23.0000°, Azm214.0000°;*
NEIC Felt [III] at Sinabang.
*GCMT **10** 03:00:30.4±0.1, 2°.13N×96°.03E, h30km, MW5.5, Moment Tensor Solution. s80,c127; s90,c149; Moment tensor: Scale 10^{17}Nm; M_{rr}1.17±.03; $M_{\theta\theta}$-0.84±.02; $M_{\phi\phi}$-0.33±.03; $M_{r\theta}$1.26±.04; $M_{\theta\phi}$0.88±.02; $M_{\phi r}$-1.02±.05; Best double couple: $M_0$2.10000×10^{17} NP1:ϕ_s304.00000°, δ20.00000°, λ86.00000°. NP2:ϕ_s129.00000°, δ70.00000°, λ92.00000°. Principal axes: T 1.9400, Plg65.0000°, Azm41.0000°; N 0.3300, Plg1.0000°, Azm308.0000°; P -2.2700, Plg25.0000°, Azm218.0000°; Data Used: II IU IC CN G.*
ISC 10 03:00:31.0±0.1, 2°.52N±0°.02×96°.30E±0°.02, h42km, h42km±2.0km: pP-P, n540, σ1°.01/498, mb5.2/183, MS5.3/71, 38C-26D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.14**	**50**	P	**Pn**	**03 00 49.4**	**-1.1**
TPTI				S	**Sn**	**03 01 10.1**	**+5.1**
TSI	**Tuntungan**	**2.46**	**67**	P	**Pn**	**03 01 10.3**	**+1.7**
TSI				S	**Sn**	**03 01 47.3**	**+10**
MNSI	**Mandailing Nat**	**3.70**	**118**	P	**Pn**	**03 01 25.7**	**+0.1**
SISI	**Saibi**	**4.73**	**144**	P	**Pn**	**03 01 38.0**	**-1.8**
PPI	**Padang Panjang**	**5.05**	**126**	P	**Pn**	**03 01 45.2**	**+1.0**
	5.5nm460nm,0.8s						
IPM	**Ipoh**	**5.10**	**67**	P	**Pn**	**03 01 45.5**	**+0.6**
IPM	**Ipoh**	**5.10**	**67**	*e*Pn	**Pn**	**03 01 45.4**	**+0.5**
IPM	**Ipoh**	**5.10**	**67**	P	**Pn**	**03 01 45.6**	**+0.7**
	5.9nm1μm,0.8s						
KULM	**Kulim**	**5.14**	**57**	P	**Pn**	**03 01 45.8**	**+0.4**
KULM	**Kulim**	**5.14**	**57**	*e*Pn	**Pn**	**03 01 44.7**	**-0.7**
KULM	**Kulim**	**5.14**	**57**	P	**Pn**	**03 01 45.9**	**+0.5**
	6.3nm1μm,0.6s						
BKNI	**Bangkinang**	**5.21**	**115**	P	**Pn**	**03 01 46.4**	**-0.1**
	11nm885nm,0.9s						
FRIM	**Kepong**	**5.36**	**82**	P	**Pn**	**03 01 49.4**	**+0.9**
PDSI	**Padang**	**5.38**	**129**	P	**Pn**	**03 01 48.1**	**-0.6**
	4.5nm655nm,1.0s						
SDSI	**Sungai Dareh**	**6.17**	**124**	P	**Pn**	**03 02 00.4**	**+0.8**
	133nm,0.7s						
KGM	**Kluang**	**7.03**	**94**	P	**Pn**	**03 02 12.2**	**+0.8**
KTGM	**Kuala Trenggan**	**7.36**	**68**	P	**Pn**	**03 02 16.3**	**+0.4**
MYKOM	**Kota Tinggi**	**7.58**	**95**	P	**Pn**	**03 02 19.3**	**+0.4**
MYKOM	**Kota Tinggi**	**7.58**	**95**	P	**Pn**	**03 02 19.2**	**+0.3**
	1.7nm3μm198nm,1.0s						
KSI	**Kapahiang**	**8.78**	**134**	P	**Pn**	**03 02 35.0**	**-0.5**
	8μm577nm,0.9s						
MNAI	**Manna**	**9.54**	**136**	P	**Pn**	**03 02 43.8**	**-2.0**
	9μm592nm,0.9s						
MDSI	**Maura Dua**	**10.51**	**131**	P	**Pn**	**03 02 56.3**	**-2.8**
	2μm263nm,0.9s						
LWLI	**Liwa**	**10.78**	**134**	P	**Pn**	**03 03 03.1**	**+0.3**
	8μm587nm,0.7s						
PPBI	**Pangkal Pinang**	**10.88**	**115**	P	**Pn**	**03 03 05.5**	**+1.3**
	77nm,1.1s						
KLSI		**11.06**	**130**	P	**Pn**	**03 03 04.4**	**-2.2**
	3μm261nm,0.7s						
KASI	**Kota Agung**	**11.44**	**134**	P	**Pn**	**03 03 09.1**	**-2.8**
	2μm171nm,0.6s						
TPI	**Tanjungpandan**	**12.50**	**115**	P	**Pn**	**03 03 26.4**	**0.0**
	827nm48nm,0.8s						
RBSI	**Rajabasa**	**12.57**	**131**	P	**Pn**	**03 03 29.2**	**+1.9**
	164nm,1.2s						
NST	**Nakhon Sawan**	**13.60**	**16**	P	**Pn**	**03 03 39.7**	**-1.7**
	48nm,0.8s						
DBJI	**Dramaga**	**13.79**	**131**	P	**Pn**	**03 03 49.1**	**+5.2**
KSM	**Kuching**	**14.04**	**94**	*e*Pn	**Pn**	**03 03 49.1**	**+1.7**
KSM	**Kuching**	**14.04**	**94**	P	**Pn**	**03 03 56.0**	**+8.6**
BDT	**Bhumibol Dam**	**14.87**	**10**	P	**Pn**	**03 03 57.5**	**-1.0**
	29nm,1.1s						
CISI	**Cisompet, Garu**	**15.24**	**131**	P	**Pn**	**03 04 04.5**	**+1.2**
	124nm,0.8s						
STKI	**Sintang**	**15.37**	**99**	P	**Pn**	**03 04 10.4**	**+5.4**
	159nm,1.2s						
SBUM	**Sibu**	**15.90**	**90**	P	**Pn**	**03 04 13.3**	**+1.3**
	2μm84nm,1.5s						
CM31	**Chiang Mai Arr**	**16.05**	**9**	*e*Pn	**Pn**	**03 04 15.0**	**+1.3**
	40nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.05**	**9**	Pn	**Pn**	**03 04 11.5**	**-2.2**
	2.3nm,0.3s,baz=199,slow=11,SNR=67						
CMAR				LR	LR	03 11 13.9	
	comp=Z,13μm,18.4s,baz=196,slow=41						
CMAR	**Chiang Mai Arr**	**16.05**	**9**	P	**Pn**	**03 04 11.5**	**-2.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,13μm,18.4s						
PALK	**Pallekele**	**16.24**	**287**	*e*P	**Pn**	**03 04 17.4**	**+1.1**
PALK				pmax	pmax		
	comp=Z,75nm,0.9s						
PALK	**Pallekele**	**16.24**	**287**	*e*Pn	**Pn**	**03 04 17.4**	**+1.1**
	comp=Z,75nm,0.9s						
CHG	**Chiang Mai**	**16.40**	**9**	↓↓P	**Pn**	**03 04 17.0**	**-1.2**
	comp=Z,49nm,1.0s						
CHTO	**Chiang Mai**	**16.40**	**9**	*e*P	**Pn**	**03 04 17.0**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,47nm,1.1s						
CHTO	**Chiang Mai**	**16.40**	**9**	*e*Pn	**Pn**	**03 04 16.9**	**-1.2**
	comp=Z,47nm,1.1s						
SMRI	**Semarang**	**17.02**	**124**	P	**Pn**	**03 04 34.2**	**+8.2**
CHRT	**Chiangrai**	**17.57**	**11**	P	**Pn**	**03 04 32.5**	**-0.4**
	comp=Z,355nm,0.8s						
NGJI	**Ngawi**	**18.04**	**123**	P	pP	03 04 48.7	-0.2
SJI	**Sawahan**	**18.49**	**124**	P	pP	03 04 55.6	+1.7
MDRS	**Chennai**	**19.03**	**304**	↓*e*PKP	Px	03 05 04.2	
MDRS				*e*S	Sx	03 08 36.2	
MDRS				*ex*	x	03 09 55.2	
VIS	**Vishakhapatnam**	**19.75**	**321**	*i* P	**Pn**	**03 04 57.8**	**-1.4**
VIS				*ex*	x	03 05 27.2	
	comp=Z,131nm,1.1s						
VIS				*i* x	x	03 08 24.4	
KMMI	**Kalianget**	**20.03**	**118**	P	**P**	**03 05 00.7**	**+0.2**
	comp=Z,3μmcomp=Z,156nm,0.9s						
TRD	**Trivandrum**	**20.14**	**288**	↓*ex*	x	03 05 12.0	
TRD				*ex*	x	03 08 51.0	
KKM	**Kota Kinabalu**	**20.16**	**79**	*e*P	**P**	**03 05 02.3**	**+0.3**
	comp=Z,125nm,0.6s						
KKM	**Kota Kinabalu**	**20.16**	**79**	P	**P**	**03 05 03.0**	**+1.0**
	comp=Z,3μmcomp=Z,193nm,0.8s						
SDKM	**Sandakan**	**21.07**	**81**	P	**P**	**03 05 11.9**	**+0.2**
QIZ	**Qiongzhong**	**21.09**	**38**	P	**P**	**03 05 11.4**	**-0.6**
QIZ				pP		03 05 22.9	
QIZ				sP	sP	03 05 28.4	+0.8
QIZ				S	**S**	**03 09 08.1**	**+3.6**
QIZ				sS	sS	03 09 22.6	+1.4
QIZ				pmax	pmax		
	comp=Z,61nm,0.8s,mb5.

AKL AMb AMB 03 06 12.9
comp=Z,65nm,0.9s,mb5.1
KAD Karad 26.23 306 *e*PKP **P** **03 06 04.5 +2.3**
KAD AMb AMB 03 06 16.5
comp=Z,38nm,1.1s,mb4.8
HKC Hong Kong Obse 26.23 40 P **P** **03 06 02.0 -0.1**
LUWI Luwuk 26.70 97 P pP 03 06 18.8 +0.9
PKI Pulchoki 27.00 338 *e*P **P** **03 06 09.4 +0.4**
comp=Z,146nm,0.7s,mb5.6
PKIN Phulchoki 27.01 338 *e*P **P** **03 06 09.5 +0.4**
comp=Z,237nm,0.8s,mb5.8
GUN Gumba 27.14 339 *e*P **P** **03 06 10.8 +0.5**
comp=Z,479nm,0.7s,mb6.2
POO Poona 27.15 307⇑*i*x x 03 06 25.0
comp=Z,40nm,1.0s
DMN Daman 27.15 338 *e*P **P** **03 06 10.8 +0.4**
comp=Z,110nm,0.7s,mb5.5
KKN Kakani 27.25 338 *e*P **P** **03 06 11.4 +0.2**
comp=Z,238nm,0.8s,mb5.8
LSA Lhasa 27.47 350 P **P** **03 06 13.5 +0.3**
LSA LR LR
comp=E,4μm,26.5s
LSA LR LR
comp=Z,5μm,25.9s,MS4.9
LSA Lhasa 27.47 350 *e*P **P** **03 06 13.6 +0.4**
LSA pmax pmax
comp=Z,152nm,1.0s,mb5.5
LSA Lhasa 27.47 350 *e*P **P** **03 06 13.6 +0.4**
comp=Z,152nm,1.0s,mb5.5
BHPL Bhopal 27.54 320 *e*PKP **P** **03 06 15.2 +1.2**
BHPL AMb AMB 03 06 27.4
comp=Z,56nm,1.2s,mb5.1
GKN Gorkha 27.68 337 *e*P **P** **03 06 15.5 +0.4**
comp=Z,386nm,1.0s,mb6.0
KOLN Koldanda 27.89 335 *e*P **P** **03 06 17.3 +0.3**
comp=Z,179nm,0.7s,mb5.8
MMRI Maumere 28.13 113 P **P** **03 06 18.4 -1.0**
comp=Z,68nm,1.0s,mb5.2
DANN Dangsing 28.34 336 *e*P **P** **03 06 21.2 +0.2**
comp=Z,194nm,0.8s,mb5.8
CD2 Chengdu 29.10 13 *e*P **P** **03 06 27.8 0.0**
CD2 pP pP 03 06 39.6 +0.4
CD2 sP sP 03 06 45.1 +0.9
CD2 PP PP 03 07 23.4 -11
CD2 PcP PcP 03 09 33.2 -1.9
CD2 S **S** **03 11 17.2 +0.4**
CD2 sS sS 03 11 37.3 +1.4
CD2 SS SS 03 12 51.3 -30
CD2 ScS ScS 03 17 03.0 -4.6
CD2 pmax pmax
comp=Z,50nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,10μm,15.2s,MS5.7
CD2 LR LR
comp=E,13μm,18.6s,MS5.7
CD2 LR LR
comp=Z,11μm,11.8s
ENH Enshi 30.30 23 *e*P **P** **03 06 37.0 -1.3**
comp=Z,38nm,0.8s,mb5.2
QZH Quanzhou 30.96 42⇑*i*P **P** **03 06 41.9 -2.4**
QZH S **S** **03 11 52.0 +5.8**
QZH pmax pmax
comp=Z,190nm,1.4s,mb5.7
QZH pmax pmax
comp=Z,780nm,4.4s
QZH LR LR
comp=N,22μm,14.4s,MS6.0
QZH LR LR
comp=E,8μm,13.8s,MS6.0
QZH LR LR
comp=Z,20μm,14.2s,MS5.9
TPUB Ta-pu 31.33 47 *e*P **P** **03 06 49.0 +1.4**
comp=Z,45nm,1.0s,mb5.3
LBMI Labuha 31.35 95 P **P** **03 06 56.8 +8.9**
TWG Pinlang 31.37 48 *e*P **P** **03 06 49.2 +1.3**
comp=Z,70nm,0.6s,mb5.7
SONA Sohna 31.48 326 *e*PKP **P** **03 06 48.6 -0.3**
SONA AMb AMB 03 06 50.7
comp=Z,88nm,0.8s,mb5.7
AJM Ajmer 31.61 321 *e*PKP **P** **03 06 51.5 +1.5**
AJM AMb AMB 03 07 03.6
comp=Z,68nm,0.9s,mb5.5
SSLB Suanglung 31.87 46 *e*P **P** **03 06 52.3 0.0**
comp=Z,66nm,1.2s,mb5.3
YULB Yu-li 31.88 47 *e*P **P** **03 06 53.0 +0.6**
comp=Z,49nm,0.7s,mb5.5
KHET Khetri 32.07 324 *e*PKP **P** **03 06 54.8 +0.8**
KHET AMb AMB 03 07 03.3
comp=Z,60nm,0.7s,mb5.5
JOSI Joshimath 32.07 332 *e*PKP **P** **03 06 54.7 +0.7**
NACB Ninganchiao 32.56 46 *e*P **P** **03 07 00.0 +1.6**
comp=Z,41nm,0.8s,mb5.4
DDI Dehra Dun 32.61 330 *e*PKP **P** **03 06 58.0 -0.7**
DDI *e*x x 03 08 20.0
WHN Wuhan 32.69 30 P **P** **03 06 59.1 -0.3**
WHN S **S** **03 12 23.7 +11**
WHN LR LR
comp=N,7μm,13.3s,MS5.9
WHN LR LR
comp=E,15μm,14.6s,MS5.9
WHN LR LR
comp=Z,20μm,15.2s,MS5.9
YHNB Yeheng 32.71 46 *e*P **P** **03 07 00.5 +0.8**
comp=Z,18nm,0.6s,mb5.2
MBWA Marble Bar 32.87 137 *e*P **P** **03 07 00.3 -0.8**
MBWA *e*S **S** **03 12 10.6 -5.3**
MBWA Marble Bar 32.87 137 *e*P **P** **03 07 00.1 -0.9**
comp=Z,14nm,0.6s,mb5.1
XAN Xi'an 33.50 19 P **P** **03 07 05.0 -1.4**
XAN pP pP 03 07 16.1 -1.8
XAN sP sP 03 07 21.8 -1.1
XAN PP PP 03 08 16.8 -6.0
XAN S **S** **03 12 21.1 -4.3**
XAN pmax pmax
comp=Z,36nm,0.8s,mb5.3
XAN pmax pmax
comp=Z,150nm,12.8s
XAN LR LR
comp=N,3μm,17.3s,MS5.1
XAN LR LR
comp=E,1μm,18.7s,MS5.1
XAN LR LR
comp=Z,2μm,16.1s,MS4.9
KLP Kalpa 33.51 331 *e*PKP **P** **03 07 06.9 +0.4**
SMLA Simla 33.71 330 *i*P **P** **03 07 07.3 -1.0**
SDNR Sundarnagar 34.11 330 *e*PKP **P** **03 07 11.5 -0.3**
LZH Lanzhou 34.12 11 *e*P **P** **03 07 11.1 -0.7**
LZH pP pP 03 07 20.0 -3.3
LZH sP sP 03 07 27.0 -1.3
LZH *e*S **S** **03 12 33.0 -2.0**
LZH sS sS 03 12 56.1 +1.9
LZH SS SS 03 14 44.0 -20
LZH pmax pmax
comp=Z,66nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,520nm,5.2s
LZH LR LR
comp=N,3μm,13.0s,MS5.7
LZH LR LR
comp=E,9μm,16.0s,MS5.7
LZH LR LR
comp=Z,6μm,16.8s,MS5.4
BHK Bhakra 34.32 329 *e*x **P** **03 07 10.6 -3.0**
FITZ Fitzroy Crossi 35.43 126 LR LR 03 22 50.5
comp=Z,4μm,21.0s,MS5.1,baz=293,slow=38
FITZ Fitzroy Crossi 35.43 126 *e*P **P** **03 07 21.1 -2.2**
comp=Z,60nm,0.8s,mb5.6
FITZ Fitzroy Crossi 35.43 126 *e*P **P** **03 07 21.0 -2.3**
comp=Z,37nm,0.9s,mb5.3
FITZ Fitzroy Crossi 35.43 126 P **P** **03 07 21.3 -2.0**
comp=Z,96nm,0.9s,mb5.7
NJ2 Nanjing 36.24 33 *e*P **P** **03 07 30.2 +0.1**
NJ2 pP pP 03 07 41.2 -0.5
NJ2 sP sP 03 07 47.6 +0.9
NJ2 PP PP 03 08 50.0 -3.1
NJ2 S **S** **03 13 07.5 -0.2**
NJ2 pmax pmax
comp=Z,40nm,0.8s,mb5.4
NJ2 pmax pmax
comp=Z,540nm,4.5s
NJ2 LR LR
comp=N,6μm,17.9s,MS5.7
NJ2 LR LR
comp=E,8μm,16.4s,MS5.7
NJ2 LR LR
comp=Z,5μm,19.7s,MS5.3
GTA Gaotai 36.85 5 P **P** **03 07 34.7 -0.5**
GTA pP pP 03 07 46.7 -0.1
GTA sP sP 03 07 51.8 0.0
GTA S **S** **03 13 16.5 -0.4**
GTA sS sS 03 13 35.8 -0.4
GTA SS SS 03 15 47.1 -12
GTA pmax pmax
comp=Z,31nm,0.8s,mb5.2
GTA pmax pmax
comp=Z,690nm,4.7s
GTA LR LR
comp=N,4μm,17.1s,MS5.3
GTA LR LR
comp=E,3μm,18.3s,MS5.3
GTA LR LR
comp=Z,5μm,15.9s,MS5.4
SSE Sheshan 36.88 37 P **P** **03 07 34.9 -0.7**
SSE sP sP 03 07 47.5 -4.7
SSE PP PP 03 09 01.5 +1.3
SSE S **S** **03 13 21.1 +3.6**
SSE ScP ScP 03 13 38.9 -1.5
SSE PcS PcS 03 13 42.2 -2.7
SSE pmax pmax
comp=Z,29nm,0.6s,mb5.3
SSE pmax pmax
comp=Z,260nm,6.5s
SSE LR LR
comp=N,3μm,14.7s,MS5.5
SSE LR LR
comp=E,5μm,14.7s,MS5.5
SSE LR LR
comp=Z,7μm,15.2s,MS5.5
KNA Kununurra 36.88 121 P **P** **03 07 35.9 +0.1**
comp=Z,957nmcomp=Z,129nm,0.9s,mb5.8
TLE Tual 37.28 103 P **P** **03 07 47.4 +8.1**
TIY Taiyuan 38.02 21 *e*P **P** **03 07 45.0 -0.2**
TIY pP pP 03 07 57.5 +0.7
TIY sP sP 03 08 02.2 +0.4
TIY PP PP 03 09 14.1 +1.4
TIY S **S** **03 13 31.5 -3.2**
TIY SS SS 03 16 15.8 -6.7
TIY pmax pmax
comp=Z,440nm,5.2s
TIY LR LR
comp=N,7μm,12.8s,MS5.7
TIY LR LR
comp=E,3μm,12.6s,MS5.7
TIY LR LR
comp=Z,11μm,14.3s,MS5.8
TIA Tai'an 38.66 27 *e*P **P** **03 07 49.6 -0.9**
TIA pmax pmax
comp=Z,40nm,0.8s,mb5.2
TIA pmax pmax
comp=Z,770nm,14.0s
TIA LR LR
comp=N,8μm,16.0s,MS5.8
TIA LR LR
comp=E,8μm,15.5s,MS5.8
TIA LR LR
comp=Z,4μm,14.9s,MS5.3
KAKA Kakadu 38.94 114 *e*P **P** **03 07 51.1 -2.1**
comp=Z,96nm,0.6s,mb5.7
KAKA Kakadu 38.94 114 *e*P **P** **03 07 51.1 -2.1**
comp=Z,274nm,0.6s,mb6.2
KAKA Kakadu 38.94 114 P **P** **03 07 51.5 -1.7**
comp=Z,2μmcomp=Z,239nm,0.6s,mb6.1
JOW Kunigami 39.02 49 *e*P **P** **03 07 54.0 +0.3**
KLBR Kellerberrin 39.58 151 *e*P **P** **03 07 58.3 0.0**
comp=Z,34nm,1.0s,mb5.0
BTO Baotou 39.89 16 *e*P **P** **03 07 59.5 -1.2**
NWAO Narrogin (SRO) 40.44 152 LR LR 03 25 12.6
comp=Z,5μm,20.0s,MS5.3,baz=330,slow=37
NWAO Narrogin (SRO) 40.44 152 *e*P **P** **03 08 06.5 +1.1**
HHC Hu-ho-hao-te 40.57 18⇓P **P** **03 08 07.6 +1.2**
HHC pP pP 03 08 19.8 +1.8
HHC sP sP 03 08 25.1 +2.1
HHC PP PP 03 09 46.0 +5.6
HHC PcP PcP 03 10 09.4 +1.3
HHC ScP ScP 03 13 53.4 -0.9
HHC S **S** **03 14 15.5 +2.6**
HHC sS sS 03 14 35.9 +3.6
HHC SS SS 03 17 13.0 -1.0
HHC ScS ScS 03 18 06.8 -1.8
HHC pmax pmax
comp=Z,65nm,1.2s,mb5.1
HHC pmax pmax
comp=Z,170nm,6.3s
KBL Kabul 40.73 325 *e*P **P** **03 08 08.0 +0.2**
KSH Kashi 41.20 336 *e*P **P** **03 08 07.7 -3.9**
KSH *e*pP pP 03 08 20.0 -3.3
KSH *e*sP sP 03 08 25.4 -2.9
KSH *e*PP PP 03 09 45.2 -2.2
KSH *e*PcP PcP 03 10 10.8 +0.6
KSH *e*ScP ScP 03 13 55.0 -1.9
KSH PcS PcS 03 14 00.2 -1.0
KSH S **S** **03 14 12.8 -10**
KSH pmax pmax
comp=Z,1.0nm,0.2s,mb4.1
KSH pmax pmax
comp=Z,310nm,4.9s
KSH LR LR
comp=N,7μm,22.7s
KSH LR LR
comp=E,3μm,16.4s
KSH LR LR
comp=Z,9μm,20.7s,MS5.6
BJT Baijiatuau 41.45 23 *e*P **P** **03 08 14.2 +0.6**
comp=Z,247nm,0.6s,mb6.0
BJI Beijing 41.47 23 P **P** **03 08 14.2 +0.4**
BJI PP PP 03 09 52.9 +2.7
BJI S **S** **03 14 28.7 +2.4**
BJI pmax pmax
comp=Z,330nm,0.7s,mb6.1
BJI pmax pmax
comp=Z,1μm,4.4s
BJI LR LR
comp=N,3μm,13.2s,MS5.5
BJI LR LR
comp=E,3μm,15.7s,MS5.5
BJI LR LR
comp=Z,2μm,19.8s,MS4.9
WMQ Urumqi 41.83 351 P **P** **03 08 16.0 -0.7**
WMQ pP pP 03 08 28.0 -0.4
WMQ sP sP 03 08 34.0 +0.7
WMQ PP PP 03 09 57.0 +3.0
WMQ S **S** **03 14 31.0 -0.5**
WMQ sS sS 03 14 52.0 +1.0
WMQ SS SS 03 17 32.0 -6.9
WMQ pmax pmax
comp=Z,37nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,150nm,4.0s
WMQ LR LR
comp=N,3μm,16.0s,MS5.5
WMQ LR LR
comp=E,4μm,16.0s,MS5.5
WMQ LR LR
comp=Z,3μm,16.0s,MS5.3
ULHL Ulahol 43.44 338 P **P** **03 08 30.4 +0.6**
SNR=43
WRA Warramunga Arr 43.49 123 P **P** **03 08 28.4 -2.2**
comp=Z,15nm,0.5s,mb5.0,baz=300,slow=9.1,SNR=61
WRA S **S** **03 15 09.1 +12**
comp=Z,0.5nm,0.7s,baz=292,slow=14,SNR=6.5
WRA LR LR 03 27 34.1
comp=Z,4μm,21.3s,MS5.2,baz=300,slow=38
WB2 Warramunga Arr 43.51 123 *e*P **P** **03 08 29.1 -1.6**
KZA Kyzart 43.67 337 P **P** **03 08 17.8 -14**
SNR=7.9
TKM2 Tokmak 2 44.26 338 P **P** **03 08 36.7 +0.3**
SNR=51
TKM2 Tokmak 2 44.26 338 *e*P **P** **03 08 36.4 0.0**
TKM2 pmax pmax
comp=Z,53nm,1.1s,mb5.2
TKM2 Tokmak 2 44.26 338 *e*P **P** **03 08 36.4 0.0**
comp=Z,53nm,1.1s,mb5.2
KBK Karagaybulak 44.28 337 P **P** **03 08 38.9 +2.3**
SNR=18
AML Almayashu 44.34 336 P **P** **03 08 37.7 +0.8**
SNR=52
AML Almayashu 44.34 336 *e*P **P** **03 08 37.7 +0.7**
comp=Z,60nm,1.0s,mb5.3
AAK Ala-Archa 44.44 337 P **P** **03 08 40.7 +2.9**
SNR=12
AAK Ala-Archa 44.44 337 LR LR 03 28 38.9
comp=Z,4μm,21.9s,MS5.3,baz=145,slow=38
AAK Ala-Archa 44.44 337 *e*P **P** **03 08 39.0 +1.2**
AAK pmax pmax
comp=Z,43nm,1.0s,mb5.1
AAK Ala-Archa 44.44 337 *e*P **P** **03 08 39.0 +1.2**
comp=Z,43nm,1.0s,mb5.1
AAK Ala-Archa 44.44 337 P **P** **03 08 39.5 +1.7**
comp=Z,176nm,1.1s,mb5.7,SNR=5.5
FRU Bishkek 44.56 337 *e*P **P** **03 08 39.0 +0.2**
FRU *i* 03 08 56.0
FRU *e* 03 15 28.0
FRU pmax pmax
comp=Z,200nm,3.0s
CHMS Chumysh 44.65 337 P **P** **03 08 40.8 +1.3**
SNR=10.0
EKS2 Erkin-Say 44.75 336 P **P** **03 08 41.0 +0.8**
SNR=32
EKS2 Erkin-Say 44.75 336 *e*P **P** **03 08 40.6 +0.4**
comp=Z,33nm,0.8s,mb5.2
FORT Forrest 44.86 140 *e*P **P** **03 08 41.5 +0.2**
comp=Z,73nm,0.6s,mb5.7
FORT Forrest 44.86 140 *e*P **P** **03 08 41.6 +0.3**
comp=Z,84nm,0.6s,mb5.8
ASAR Alice Springs 44.90 128 P **P** **03 08 40.2 -1.6**
comp=Z,8.0nm,0.7s,mb4.7,baz=301,slow=7.9,SNR=75
ASAR PcP PcP 03 10 23.4 +0.4
comp=Z,5.4nm,0.7s,baz=302,slow=5.0,SNR=3.6
ASAR ScP ScP 03 14 15.1 +3.0
comp=Z,1.5nm,0.9s,baz=302,slow=4.2,SNR=4.5
ASAR S **S** **03 15 34.2 +17**
comp=Z,1.1nm,0.9s,baz=299,slow=14,SNR=4.2
ASAR Alice Springs 44.90 128 P **P** **03 08 40.2 -1.6**
ASAR 03 10 23.4
ASAR S **S** **03 15 34.2 +17**
ASAR pmax pmax
comp=Z,8.0nm,0.7s
ASAR smax
comp=N,1.0nm,0.9s
USP Ospenovka 44.98 337 P **P** **03 08 42.2 +0.2**
SNR=73
KSRS Korea Array 45.29 36 P **P** **03 08 41.0 -3.7**
comp=N,6.4nm,0.8s,mb4.5,baz=220,slow=5.2,SNR=13
KSRS LR LR 03 28 34.2
comp=N,4μm,20.6s,MS5.4,baz=221,slow=37
KSRS Korea Array 45.29 36 P **P** **03 08 41.0 -3.7**
KSRS pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
KSRS MLR MLR
comp=Z,4μm,20.6s,MS5.4
MK31 Makanchi Array 45.75 347*ce*P **P** **03 08 47.8 -0.3**
MK31 pmax pmax
comp=Z,68nm,0.6s,mb5.8
MK31 Makanchi Array 45.75 347 *e*P **P** **03 08 47.6 -0.5**
MKAR Makanchi Array 45.75 347 P **P** **03 08 47.1 -1.1**
comp=Z,95nm,0.7s,mb5.8,baz=160,slow=6.7,SNR=307
MKAR LR LR 03 33 56.5
comp=Z,1μm,18.2s,MS4.9,baz=160,slow=44
SONM Songino Array 45.97 9 P **P** **03 08 49.1 -0.7**
comp=Z,43nm,0.6s,mb5.6,baz=189,slow=8.9,SNR=171
SONM PcP PcP 03 10 26.1 0.0
comp=Z,12nm,0.7s,baz=191,slow=2.8,SNR=4.3
SONM LR LR 03 30 35.0
comp=Z,8μm,18.2s,MS5.7,baz=191,slow=40
SONM Songino Array 45.97 9 P **P** **03 08 49.1 -0.8**
SONM 03 10 26.1
SONM pmax pmax
comp=Z,43nm,0.6s
SONM MLR MLR
comp=Z,8μm,18.2s
SNY Shenyang 46.16 28⇑P **P** **03 08 50.3 -1.1**
SNY PP PP 03 10 41.4 +1.1
SNY SS SS 03 18 50.4 -10
SNY pmax pmax
comp=Z,38nm,0.6s,mb5.5
SNY pmax pmax
comp=Z,650nm,5.9s
SNY LR LR
comp=N,3μm,15.3s,MS5.6
SNY LR LR
comp=E,5μm,15.5s,MS5.6
SNY LR LR
comp=Z,4μm,15.1s,MS5.5
KK31 Karatay Array 46.48 334*ce*P **P** **03 08 54.3 +0.3**
KK31 pmax pmax
comp=Z,14nm,0.5s,mb5.2
KKAR Karatay Array 46.48 334 *e*P **P** **03 08 54.0 0.0**
KKAR pmax pmax
comp=Z,17nm,0.6s,mb5.2
KKAR Karatay Array 46.48 334 *e*P **P** **03 08 54.0 +0.1**
comp=Z,17nm,0.6s,mb5.2
ZAK Zakamensk 48.05 6 *e*P **P** **03 09 05.8 -0.2**
ZAK pmax pmax
comp=Z,11nm,1.2s,mb4.8
CN2 Changchun 48.55 28 *e*P **P** **03 09 09.0 -1.0**
CN2 *e*S **S** **03 16 15.8 +7.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
CN2 pmax pmax
comp=Z,600nm,6.0s
CN2 LR LR
comp=N,2μm,17.0s,MS5.5
CN2 LR LR
comp=E,4μm,17.0s,MS5.5
CN2 LR LR
comp=Z,2μm,23.0s
MOY Mondy 49.13 4 *e*P **P** **03 09 14.9 +0.6**
COEN Coen 49.26 111 *e*P **P** **03 09 15.1 -0.9**
comp=Z,199nm,1.1s,mb6.1
TLY Talaya 49.37 6*c i*P **P** **03 09 16.2 0.0**
TLY *e* 03 11 07.9
TLY *e*S **S** **03 16 23.3 +3.4**
TLY *e*PS 03 16 39.6
TLY pmax pmax
comp=Z,27nm,0.7s,mb5.4
TLY MLR MLR
comp=Z,3μm,18.0s,MS5.3
TLY Talaya 49.37 6 *e*P **P** **03 09 16.6 +0.4**
comp=Z,30nm,0.7s,mb5.4
TLY Talaya 49.37 6 P **P** **03 09 17.2 +1.0**
comp=Z,265nm,0.7s,mb6.4,SNR=15
ABKT Ailbek 49.63 320 P **P** **03 09 18.5 +0.1**
comp=Z,454nm,0.6s,SNR=12
IRK Irkutsk 50.00 6 *e*P pP 03 09 31.4 -1.4
IRK pmax pmax
comp=Z,66nm,1.6s,mb5.4
KURK Kurchatov 50.29 345*ce*P **P** **03 09 22.6 -0.6**
KURK pmax pmax
comp=Z,65nm,1.0s,mb5.6
KURK Kurchatov 50.29 345 *e*P **P** **03 09 22.4 -0.7**
comp=Z,62nm,1.0s,mb5.6
KURK Kurchatov 50.29 345 P **P** **03 09 22.8 -0.4**
comp=Z,324nm,1.0s,mb6.3,SNR=52
HIA Hailar 50.70 20 *e*P **P** **03 09 27.2 +1.0**
HIA pmax pmax
comp=Z,35nm,0.9s
HIA Hailar 50.70 20 *e*P **P** **03 09 27.2 +0.9**
comp=Z,35nm,0.9s,mb5.3
MDJ Mudanjiang 51.17 30 P **P** **03 09 30.9 +1.0**
MDJ pP pP 03 09 42.4 +0.5
MDJ sP sP 03 09 47.4 +0.6
MDJ ScP ScP 03 14 38.3 +0.1
MDJ PcS PcS 03 14 43.1 +0.6
MDJ S **S** **03 16 47.7 +2.5**
MDJ sS sS 03 17 07.4 +2.3
MDJ pmax pmax
comp=Z,28nm,1.4s,mb5.0
MDJ pmax pmax
comp=Z,540nm,5.7s
MDJ LR LR
comp=N,2μm,17.7s,MS5.4
MDJ LR LR
comp=E,2μm,15.5s,MS5.4
MDJ LR LR
comp=Z,3μm,16.9s,MS5.3
MDJ Mudanjiang 51.17 30 *e*P **P** **03 09 30.8 +0.9**
comp=Z,30nm,0.9s,mb5.2
MAT Matsushiro 51.34 44 P **P** **03 09 31.7 +0.4**
MAT S **S** **03 16 51.0 +3.2**
MAJO Matsushiro 51.34 44 *e*P **P** **03 09 32.3 +1.0**
MAJO pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MAJO Matsushiro 51.34 44 *e*P **P** **03 09 32.3 +1.0**
comp=Z,9.5nm,0.8s,mb4.8
MJAR Matsushiro Arr 51.34 44 P **P** **03 09 30.4 -1.0**

comp=Z,5.5nm,0.8s,mb4.5,baz=242,slow=9.2,SNR=12
MJAR PcP PcP 03 10 45.0 -0.8
comp=Z,5.7nm,0.9s,baz=228,slow=3.7,SNR=4.5
MJAR LR LR 03 32 16.1
comp=Z,2μm,18.5s,MS5.1,baz=235,slow=37
MJAR Matsushiro Arr 51.34 44 P **P 03 09 30.4 -0.9**
MJAR 03 10 45.0
MJAR pmax pmax
comp=Z,6.0nm,0.8s
MJAR MLR MLR
comp=Z,2μm,18.5s
CIT Chita 51.40 14 *e*P **P 03 09 32.3 +0.9**
BBOO Buckleboo 51.45 136 *e*P **P 03 09 33.3 +1.1**
comp=Z,75nm,1.3s,mb5.5
PMG Port Moresby 52.03 104*ce*P **P 03 09 36.1 -0.8**
PMG pmax pmax
comp=Z,24nm,0.6s
PMG Port Moresby 52.03 104 *e*P **P 03 09 35.8 -1.1**
comp=Z,33nm,0.6s,mb5.4
PMG Port Moresby 52.03 104 P **P 03 09 46.0 +9.1**
ZALV Zalesovo Beam 52.12 351 P **P 03 09 36.0 -0.8**
comp=Z,100nm,0.6s,mb6.0,baz=176,slow=8.1,SNR=121
ZALV LR LR 03 36 20.3
comp=Z,2μm,19.8s,MS5.1,baz=183,slow=41
ZALV Zalesovo Beam 52.12 351 P **P 03 09 36.1 -0.7**
ZALV pmax pmax
comp=Z,100nm,0.6s,mb5.9
ZALV MLR MLR
comp=Z,2μm,19.8s,MS5.1
OPO Ambohidratompo 52.67 244 P **P 03 09 41.4 -0.1**
comp=Z,3.1nm,0.8s,mb4.3,baz=83,slow=7.8,SNR=4.7
ABPO Ambohimpanom 52.77 244 *e*P **P 03 09 42.3 0.0**
ABPO pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ABPO Ambohimpanom 52.77 244 *e*P **P 03 09 42.3 0.0**
comp=Z,6.0nm,0.7s,mb4.6
RDF Al-Radifah 53.24 305 *e*P **P 03 09 45.6 0.0**
RDF AMb AMB 03 09 49.7
comp=Z,162nm,1.2s,mb5.8
NAY Al-Naaiem 53.61 305 *e*P **P 03 09 47.8 -0.4**
NAY AMb AMB 03 09 50.9
comp=Z,34nm,1.0s,mb5.2
ATD Arta Tunnel 53.72 282 LR LR 03 30 38.8
comp=Z,1μm,18.4s,MS5.1,baz=261,slow=34
MIB Mutribah 53.72 306 *e*P **P 03 09 49.4 +0.3**
MIB AMb AMB 03 09 57.7
comp=Z,140nm,0.7s,mb6.0
CTA Charters Tower 53.90 117 *e*P **P 03 09 50.1 -0.4**
comp=Z,20nm,0.8s,mb5.1
CTAO Charters Tower 53.90 117 *e*P **P 03 09 50.1 -0.4**
CTAO pmax pmax
comp=Z,27nm,0.8s,mb5.2
CTAO Charters Tower 53.90 117 *e*P **P 03 09 50.1 -0.4**
comp=Z,27nm,0.8s,mb5.2
VOSK Vostochnaya 54.27 341 P **P 03 09 51.5 -1.2**
VOSK pmax pmax
comp=Z,33nm,0.7s,mb5.4
BRVK Borovoye 54.78 341 *e*P **P 03 09 55.9 -0.4**
BRVK pmax pmax
comp=Z,26nm,0.6s,mb5.4
BRVK Borovoye 54.78 341 *e*P **P 03 09 55.5 -0.8**
comp=Z,33nm,0.6s,mb5.5
BRVK Borovoye 54.78 341 P **P 03 09 55.9 -0.4**
comp=Z,299nm,0.6s,SNR=11
STKA Stephens Creek 54.90 132 P **P 03 09 57.5 -0.2**
comp=Z,13nm,0.7s,mb5.1,baz=309,slow=7.8,SNR=29
STKA LR LR 03 35 47.2
comp=Z,3μm,20.5s,MS5.4,baz=298,slow=39
STKA Stephens Creek 54.90 132 *e*P **P 03 09 58.2 +0.6**
comp=Z,20nm,1.0s,mb5.1
STKA Stephens Creek 54.90 132 *e*P **P 03 09 57.0 -0.6**
comp=Z,5.0nm,0.9s,mb4.5
KLR Kul'dur 55.49 27 *e*P **P 03 09 56.5 -5.1**
KLR *e*S **S 03 17 43.5 -0.2**
KLR pmax pmax
comp=Z,1μm,11.0s
AB31 Akbulak array 55.93 332*ce*P **P 03 10 03.9 -0.8**
AB31 pmax pmax
comp=Z,35nm,0.8s,mb5.4
ABKAR Akbulak array 55.93 332 *e*P **P 03 10 03.9 -0.9**
comp=Z,20nm,0.7s,mb5.3
HABR Khabarovsk 56.56 30 *e*P **P 03 10 08.8 -0.4**
HABR *e**PP pP 03 10 17.3 -4.0
HABR 03 11 02.7
HABR PPP 03 13 29.3
HABR *e*S **S 03 17 59.3 +1.4**
HABR *e**SS sS 03 18 14.7 -3.3
HABR pmax pmax
comp=Z,49nm,1.1s,mb5.5
HABR pmax pmax
comp=E,112nm,2.6s
HABR pmax pmax
comp=N,13nm,1.0s
HABR MLR MLR
comp=Z,2μm,20.0s,MS5.1
ERM Erimo 57.43 40 *e*P **P 03 10 16.7 +1.2**
ERM pmax pmax
comp=Z,41nm,2.5s,mb5.0
AKTO Aktyubinsk 57.65 332 LR LR 03 38 36.5
comp=Z,1μm,21.2s,MS5.0,baz=136,slow=40
ASAJ Asahikawa 58.16 38 *e*P **P 03 10 21.2 +0.6**
comp=Z,6.6nm,0.6s,mb4.8
CLNS Chul'man 58.76 18 *e*P **P 03 10 26.0 +1.5**
CLNS pmax pmax
comp=N,14nm,0.9s
CLNS pmax pmax
comp=E,14nm,0.8s
CLNS pmax pmax
comp=Z,23nm,0.9s,mb5.2
KMBO Kilima Mbogo 59.15 267 P **P 03 10 28.4 +0.3**
comp=Z,4.9nm,0.8s,mb4.6,baz=180,slow=20,SNR=12
KMBO LR LR 03 33 49.5
comp=Z,3μm,18.6s,MS5.5,baz=90,slow=34
KMBO Kilima Mbogo 59.15 267 *e*P **P 03 10 28.0 -0.1**
comp=Z,17nm,1.0s,mb5.0
MAK Makhachkala 59.15 320 *e*P **P 03 10 26.8 -0.7**
MAK *e* 03 11 22.4
MAK *e* 03 12 35.3
MAK *e*PPP 03 14 07.7
MAK *e*S **S 03 18 30.5 -1.6**
MAK *e* 03 20 15.2
MAK pmax pmax
comp=Z,212nm,1.4s,mb6.0
GNI Garni 59.73 316 LR LR 03 39 27.3
comp=Z,708nm,21.1s,MS4.8,baz=106,slow=39
GNI Garni 59.73 316*ce*P **P 03 10 32.3 +0.7**
GNI pmax pmax
comp=Z,15nm,1.2s
GNI Garni 59.73 316 *e*P **P 03 10 32.1 +0.6**
comp=Z,62nm,1.3s,mb5.5
YSS Yuzh-Sakhalins 59.78 35*ce*P **P 03 10 32.0 +0.2**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.4
YSS MLR MLR
comp=E,2μm,16.0s,MS5.4
YSS MLR MLR
comp=Z,2μm,16.0s,MS5.3
YSS MLR MLR
comp=N,1μm,15.0s,MS5.4
YSS Yuzh-Sakhalins 59.78 35 *e*P **P 03 10 31.7 -0.1**
comp=N,48nm,1.1s,mb5.4
EIDS Eidsvold 59.83 121 *e*P **P 03 10 31.6 -0.9**
comp=N,24nm,1.0s,mb5.2
DGRG David-gareji 59.86 318 P **P 03 10 30.1 -2.3**
YUK Yuzh-Kuril'sk 60.15 39⇓*i*P **P 03 10 32.0 -2.4**
YUK *e* 03 12 45.0
YUK MLR MLR
comp=N,1μm,22.0s,MS5.3
YUK MLR MLR
comp=E,2μm,22.0s,MS5.3
YUK MLR MLR
comp=Z,2μm,22.0s,MS5.2
MTA Mtatsminda 60.35 318 P **P 03 10 33.4 -2.4**
TBLG Delisi 60.41 318 P **P 03 10 35.2 -1.0**
TBLG Delisi 60.41 318 P **P 03 10 35.2 -1.0**
TOO Toolangi 60.51 136 *e*P **P 03 10 40.0 +3.1**
GOR Gori 60.94 318 P **P 03 10 34.8 -5.0**
YNG Young 61.08 132 *e*P **P 03 10 41.7 +0.8**
comp=Z,44nm,5.9s
SVE Sverdlovsk 61.14 339⇓*e*P **P 03 10 41.5 +0.7**
SVE *e* 03 12 55.8
SVE *e*S **S 03 18 57.5 +0.5**
SVE *e*SS SS 03 22 54.5 -3.0
SVE pmax pmax
comp=Z,47nm,0.8s,mb5.7
SVE MLR MLR
comp=Z,3μm,19.0s,MS5.4
ZEI Tsey 61.42 318 *e*P **P 03 10 43.0 0.0**
ZEI *e*S **S 03 19 00.4 -0.8**
ZEI *e* 03 20 31.5
ZEI pmax pmax
comp=Z,18nm,0.8s,mb5.2
ARU Arti 61.62 337*c i*P **P 03 10 43.9 -0.2**
ARU 03 11 21.8
ARU 03 12 56.0
ARU S **S 03 19 05.1 +1.8**
ARU SS SS 03 23 01.6 -3.6
ARU pmax pmax
comp=Z,25nm,1.0s,mb5.3
ARU MLR MLR
comp=Z,3μm,18.0s,MS5.5
ARU Arti 61.62 337 *e*P **P 03 10 43.2 -1.0**
comp=Z,18nm,0.6s,mb5.4
ARMA Armidale 62.03 126 *e*P **P 03 10 48.3 +0.9**
KIV Kislovodsk 62.73 319 *e*P **P 03 10 52.0 +0.2**
KIV *e* 03 13 07.9
KIV *i* S **S 03 19 08.8 -8.8**
KIV *i* SS SS 03 23 25.6 +2.6
KIV pmax pmax
comp=Z,23nm,1.2s,mb5.2
KIV MLR MLR
comp=Z,700nm,21.0s,MS4.8
KIV Kislovodsk 62.73 319 *e*P **P 03 10 51.9 +0.1**
comp=Z,29nm,0.8s,mb5.5
MALT Malatya 63.58 312 *e*P **P 03 10 57.7 +0.1**
MALT pmax pmax
comp=Z,24nm,1.3s,mb5.1
MALT Malatya 63.58 312 *e*P **P 03 10 57.7 +0.1**
comp=Z,24nm,1.3s,mb5.1
EIL Elat 64.00 302 LR LR 03 39 43.3
comp=Z,3μm,18.1s,MS5.5,baz=291,slow=37
YAK Yakutsk 64.41 17 *e*P **P 03 11 01.4 -1.2**
YAK *e**PP pP 03 11 12.4 -2.5
YAK *e* 03 11 36.7
YAK *e* 03 13 21.7
YAK *e*PPP 03 14 54.2
YAK *e*S **S 03 19 37.7 -0.3**
YAK *e* 03 20 45.1
YAK *e*SS SS 03 23 54.8 +6.2
YAK pmax pmax
comp=Z,109nm,0.9s,mb5.9
YAK pmax pmax
comp=N,29nm,1.0s
YAK pmax pmax
comp=E,36nm,1.0s
YAK pmax pmax
comp=Z,202nm,4.8s
YAK pmax pmax
comp=N,67nm,4.2s
YAK pmax pmax
comp=E,146nm,4.0s
YAK smax
comp=N,70nm,2.2s
YAK smax
comp=E,80nm,1.9s
YAK MLR MLR
comp=Z,2μm,15.0s,MS5.5
YAK MLR MLR
comp=E,894nm,15.0s,MS5.3
YAK MLR MLR
comp=N,1μm,14.0s,MS5.3
YAK Yakutsk 64.41 17 *e*P **P 03 11 01.7 -0.8**
comp=N,179nm,0.8s,mb6.2
YAK *e*pP pP 03 11 12.9 -2.0
SOKR Solikamsk 64.53 339*d i*P **P 03 11 03.0 -0.4**
SOKR S **S 03 19 39.0 -0.5**
SOKR SS SS 03 23 52.8 +2.3
SOKR pmax pmax
comp=Z,50nm,0.9s,mb5.5
SOKR MLR MLR
comp=Z,2μm,13.0s,MS5.4
SOC Sochi 64.54 318 *e*P **P 03 11 02.4 -1.4**
SOC *e**PP pP 03 11 12.4 -3.7
SOC *e*PPP 03 15 02.3
SOC *e*S **S 03 19 37.1 -3.1**
SOC *e*SS SS 03 23 50.0 -1.3
SOC pmax pmax
comp=Z,29nm,0.8s,mb5.4
SOC MLR MLR
comp=Z,455nm,17.0s,MS4.7
MBAR Mbarara 65.62 268 *e*P **P 03 11 11.5 +0.1**
ANN Anapa 66.52 318 *e*P **P 03 11 12.9 -3.6**
ANN *e*S S 03 20 00.3 -4.1
ANN pmax pmax
comp=Z,183nm,6.7s
ANN MLR MLR
comp=N,997nm,20.0s,MS5.1
ANN MLR MLR
comp=E,684nm,20.0s,MS5.1
ANN MLR MLR
comp=Z,490nm,20.0s,MS4.7
CSS Prodhromos 66.56 307 *e*P **P 03 11 16.5 -0.5**
BR131 Keskin Array S 67.56 312 *e*P **P 03 11 22.9 -0.4**
comp=Z,4.9nm,0.6s,mb4.7
BRTR Keskin Array B 67.56 312 P **P 03 11 21.8 -1.5**
comp=Z,4.9nm,0.8s,mb4.6,baz=127,slow=5.3,SNR=22
BRTR LR LR 03 46 09.2
comp=Z,552nm,18.6s,MS4.8,baz=245,slow=41
BRTR Keskin Array B 67.56 312*ce*P **P 03 11 22.8 -0.5**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
SIM Simferopol' 68.79 318*de*P **P 03 11 31.9 +1.1**
SIM S S 03 20 29.9 -1.7
SIM pmax pmax
comp=Z,13nm,0.7s,mb5.0
SIM pmax pmax
comp=Z,120nm,12.0s
CASY Casey 69.40 174 *e*P **P 03 11 39.8 +5.6**
CASY Casey 69.40 174 *e*P **P 03 11 34.1 -0.1**
comp=Z,15nm,1.2s,mb4.8
LSZ Lusaka 69.64 253 *e*P **P 03 11 38.4 +1.8**
LSZ pmax pmax
comp=Z,26nm,1.4s,mb5.0
LSZ Lusaka 69.64 253 *e*P **P 03 11 38.4 +1.8**
comp=Z,26nm,1.4s,mb5.0
PRGR Permogore 70.08 337⇓*i*P **P 03 11 37.0 -1.4**
PRGR *e**PP pP 03 11 47.2 -3.7
PRGR *e* 03 11 58.7
PRGR *e*S S 03 20 46.2 +0.1
PRGR pmax pmax
comp=Z,25nm,0.6s,mb5.3
MOS Moscow 70.75 329 *e*P **P 03 11 42.1 -0.5**
MOS *e* 03 12 02.7
MOS *e* 03 14 18.3
MOS *e*S S 03 20 52.4 -1.7
MOS *e*SS SS 03 25 31.0 +4.2
MOS pmax pmax
comp=Z,30nm,0.7s,mb5.3
MOS pmax pmax
comp=Z,33nm,0.8s,mb5.3
MOS MLR MLR
comp=Z,4μm,23.0s,MS5.5
OBN Obninsk 71.03 328*d i*P **P 03 11 44.8 +0.4**
OBN *i* 03 12 05.1
OBN *e* 03 14 24.4
OBN *i* S S 03 20 49.4 -8.0
OBN *i* SS SS 03 25 28.8 -2.4
OBN pmax pmax
comp=Z,27nm,0.7s,mb5.3
OBN MLR MLR
comp=Z,1μm,19.0s,MS5.2
PETK Petropavlovsk- 71.14 34 P **P 03 11 44.0 -1.1**
comp=Z,7.3nm,0.8s,mb4.7,baz=235,slow=5.1,SNR=3.1
PETK Petropavlovsk- 71.14 34 P **P 03 11 44.0 -1.1**
PETK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
PET Petropavlovsk 71.65 34 *e*P **P 03 11 48.1 -0.1**
PET *e* 03 14 31.9
PET *e*S S 03 21 06.0 +1.4
PET *e*PS 03 21 42.7
PET pmax pmax
comp=Z,55nm,0.9s,mb5.5
PET pmax pmax
comp=Z,600nm,14.9s
PET pmax pmax
comp=Z,1μm,15.7s
PET pmax pmax
comp=Z,200nm,21.0s
PET MLR MLR
comp=Z,2μm,20.0s,MS5.3
PET MLR MLR
comp=Z,2μm,16.0s
TIXI Tiksi 72.05 10 *e*P **P 03 11 48.5 -1.7**
TIXI *e*S S 03 21 10.9 +2.2
TIXI pmax pmax
comp=Z,37nm,1.1s,mb5.2
TIXI MLR MLR
comp=Z,3μm,18.0s,MS5.7
KLMR Klimovskoe 72.18 335 *e*P **P 03 11 50.3 -0.9**
KLMR S S 03 21 09.0 -1.5
KLMR pmax pmax
comp=Z,51nm,1.3s,mb5.3
KLMR MLR MLR
comp=Z,2μm,22.0s,MS5.3
TIRR Tirgusor 72.56 316 ⇑P **P 03 11 54.1 +0.3**
TIRR Tirgusor 72.56 316 *e*P **P 03 11 53.6 -0.2**
comp=Z,24nm,0.9s,mb5.1
TIRR Tirgusor 72.56 316⇑*i*P **P 03 11 54.1 +0.3**
DZM Mont Dzumac 72.63 114 *e*P **P 03 12 00.1 +5.4**
comp=Z,71nm,1.3s,mb5.4
DZM *e*S S 03 21 21.9 +4.8
comp=Z,2μm,27.0s
DZM *e*SS SS 03 25 54.9 -2.3
comp=Z,1μm,29.4s
DZM *e*LR LR 03 34 13.7
comp=Z,3μm,26.4s
SEY Seymchan 72.91 23 *e*P **P 03 11 56.6 +1.1**
LBTB Lobatse 73.67 243 *e*P **P 03 12 00.5 -0.3**
LBTB pmax pmax
comp=Z,18nm,1.0s,mb5.0
LBTB Lobatse 73.67 243 *e*P **P 03 12 00.5 -0.3**
comp=Z,18nm,1.0s,mb5.0
KIEV Kiev 73.68 322 *e*P **P 03 11 59.4 -0.9**
KIEV pmax pmax
comp=Z,14nm,0.8s,mb4.9
KIEV Kiev 73.68 322 *e*P **P 03 11 59.4 -0.9**
comp=Z,14nm,0.8s,mb4.9
MAW Mawson 73.79 193 P **P 03 12 01.0 +0.4**
comp=Z,2.2nm,0.5s,mb4.3,baz=33,slow=6.5,SNR=4.9
MAW Mawson 73.79 193 *e*P **P 03 12 00.8 +0.2**
comp=Z,7.1nm,1.5s,mb4.4
MAW Mawson 73.79 193 P **P 03 12 01.0 +0.4**
MAW pmax pmax
comp=Z,2.0nm,0.5s
VRI Vrincioaia 74.05 317 ⇑P **P 03 12 03.3 +0.8**
VRI Vrincioaia 74.05 317⇑*i*P **P 03 12 03.3 +0.8**
PLOR Plostina 74.09 317 ⇑P **P 03 12 03.6 +0.8**
PLOR Plostina 74.09 317⇑*i*P **P 03 12 03.6 +0.8**
TESR 74.25 318⇓*i*P **P 03 12 04.1 +0.4**
MLR Muntele Rosu 74.50 317 ⇑P **P 03 12 05.8 +0.6**
MLR Muntele Rosu 74.50 317⇑*i*P **P 03 12 05.8 +0.6**
BOSA Boshof 74.66 240 P **P 03 12 05.8 -0.7**
comp=Z,2.0nm,0.6s,mb4.2,baz=78,slow=4.9,SNR=6.1
BOSA LR LR 03 42 06.8
comp=Z,2μm,18.0s,MS5.5,baz=56,slow=34
BOSA Boshof 74.66 240 *e*P **P 03 12 05.9 -0.6**
BOSA pmax pmax
comp=Z,56nm,1.8s,mb5.2
BOSA Boshof 74.66 240 *e*P **P 03 12 05.9 -0.6**
comp=Z,56nm,1.8s,mb5.2
VOIR 75.10 316 ⇑P **P 03 12 07.4 -1.3**
VOIR 75.10 316⇑*i*P **P 03 12 07.4 -1.3**
BURAR Bucovina Array 75.45 319 ⇑P **P 03 12 11.7 +1.1**
BURAR Bucovina Array 75.45 319⇑*i*P **P 03 12 11.7 +1.1**
BUR08 Bucovina Ar. S 75.46 319 *e*P **P 03 12 10.8 +0.1**
MICGM Minsk 75.53 326 *e*P **P 03 12 10.0 -1.0**
MNK Minsk 75.56 326 *e*P **P 03 12 10.0 -1.1**
VTS Vitosha 75.88 313 ⇑P **P 03 12 12.7 -0.5**
VTS Vitosha 75.88 313⇑*i*P **P 03 12 12.7 -0.5**
NACGM Naroch 76.26 326 *e* **P 03 12 12.0 -3.1**
IDID Didziasalis 76.39 327 *e*P **P 03 12 15.5 -0.3**
IDID AMB AMB 03 12 19.3
comp=Z,11nm,0.9s,mb4.8
JOF Joensuu 76.58 335 *e*P **P 03 12 17.7 +1.0**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
JOF Joensuu 76.58 335 *e*p **P 03 12 17.7 +1.0**
comp=Z,1.4nm,0.4s,mb4.2
GZR Gura Zlata 76.67 316 ⇓P **P 03 12 19.4 +1.8**
GZR Gura Zlata 76.67 316⇓*i*P **P 03 12 19.4 +1.8**
LVV L'vov 76.68 321 *e*P **P 03 12 18.1 +0.5**
LVV *e*S S 03 22 01.2 -0.1
LVV *e*SS SS 03 26 58.1 +0.6
IIGN Ignalina 76.69 327 *e*P **P 03 12 17.2 -0.3**
IIGN AMB AMB 03 12 21.1
comp=Z,10nm,1.1s,mb4.7
ISAL Salakas 76.80 327 *e*P **P 03 12 17.9 -0.3**
ISAL AMB AMB 03 12 21.6
comp=Z,7.9nm,0.8s,mb4.7
DRGR 76.96 317 ⇓P **P 03 12 19.1 -0.1**
DRGR 76.96 317⇓*i*P **P 03 12 19.1 -0.1**
LVZ Lovozero 77.29 340 *e*P **P 03 12 21.3 +0.6**
LVZ pmax pmax
comp=Z,26nm,0.7s,mb5.3
TRPA Tarpa 77.31 319⇓*i*P **P 03 12 21.7 +0.5**
KWP Kalwaria Pacla 77.49 320 *e*P **P 03 12 21.7 -0.4**
KWP Kalwaria Pacla 77.49 320 *e*P **P 03 12 21.3 -0.8**
comp=Z,102nm,1.3s,mb5.6
KWP Kalwaria Pacla 77.49 320⇓*i*P **P 03 12 21.5 -0.6**
UZH Uzhgorod 77.57 319 *e*P **P 03 12 16.0 -6.6**
UZH *e* 03 12 21.0
UZH *e* pP 03 12 29.5 -5.7
UZH *e* 03 15 13.3
UZH *e* 03 22 24.0
UZH *e* 03 27 18.5
APA Apatity 77.58 340⇓*e*P **P 03 12 23.0 +0.7**
APA pmax pmax
comp=Z,21nm,1.0s,mb5.0
KOLS Kolonicke sedl 77.64 320 *e*P **P 03 12 23.0 0.0**
KOLS pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KOLS Kolonicke sedl 77.64 320 *e*P **P 03 12 23.0 0.0**
comp=Z,8.4nm,1.2s,mb4.5
KOLS Kolonicke sedl 77.64 320 *e*P **P 03 12 23.0 0.0**
SUW Suwalki 78.08 325 *e*P **P 03 12 25.3 -0.1**
SUW Suwalki 78.08 325 *e*P **P 03 12 25.0 -0.4**
comp=Z,102nm,1.0s,mb5.7
CRVS Cervenica-Dubn 78.16 319 *e*P **P 03 12 27.3 +1.4**
CRVS Cervenica-Dubn 78.16 319 *e*P **P 03 12 27.2 +1.3**
FINES FINESS Array B 78.42 333 P **P 03 12 25.7 -1.4**
comp=Z,20nm,0.7s,mb5.2,baz=101,slow=7.2,SNR=29
FINES LR LR 03 51 55.1
comp=Z,2μm,21.6s,MS5.5,baz=112,slow=39
FINES FINESS Array B 78.42 333 P **P 03 12 25.7 -1.3**
FINES pmax pmax
comp=Z,20nm,0.7s
FINES MLR MLR
comp=Z,2μm,21.7s
FINES FINESS Array B 78.42 333 P **P 03 12 25.7 -1.4**
FINES LR LR 03 51 55.1
KAF Kangasniemi 78.51 333 *e*P **P 03 12 27.2 -0.3**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
KAF Kangasniemi 78.51 333 *e*p **P 03 12 27.2 -0.3**
comp=Z,2.9nm,0.4s,mb4.6
KECS Kecovo 78.73 319 *e*P **P 03 12 27.0 -2.0**
comp=Z,1.2nm,0.7s
KECS Kecovo 78.73 319 *e*P **P 03 12 27.0 -2.0**
NIE Niedzica 78.99 320 *e*P **P 03 12 31.0 +0.6**
PSZ Piszkesteto 79.03 318 ⇓P **P 03 12 31.1 +0.4**
PSZ Piszkesteto 79.03 318 *e*P **P 03 12 30.9 +0.2**
comp=Z,13nm,0.8s,mb4.9
PSZ Piszkesteto 79.03 318⇓*i*P **P 03 12 31.1 +0.4**
PSZ Piszkesteto 79.03 318⇓*e*P **P 03 12 31.1 +0.4**
OJC Ojcow 79.44 321 *e*P **P 03 12 32.4 -0.5**
OJC *e*PcP PcP 03 12 39.2 -1.6
OJC *e*S S 03 22 29.7 -1.3
OJC L 03 52 47.3
comp=Z,0.8nm,21.2s
OJC Ojcow 79.44 321 *e*P **P 03 12 32.4 -0.5**
OJC *e* 03 12 39.2
OJC *e*S S 03 22 29.7 -1.3
BUD Budapest 79.55 318⇓*e*P **P 03 12 37.2 +3.6**
PKSM Moragy 79.65 316 ⇑P **P 03 12 33.6 -0.5**
PKSM Moragy 79.65 316⇑*i*P **P 03 12 33.6 -0.5**
VYHS Vyhne 79.81 319 *e*P **P 03 12 35.3 +0.3**
VYHS pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
VYHS Vyhne 79.81 319 *e*P **P 03 12 35.3 +0.3**
comp=Z,6.7nm,1.7s,mb4.3
VYHS Vyhne 79.81 319 *e*P **P 03 12 35.3 +0.3**
TSUM Tsumeb 80.19 250 *e*P **P 03 12 38.6 +1.0**
comp=Z,1.7nm,1.0s
BILL Bilibino 80.26 21 *e*P **P 03 12 38.8 +1.9**
BILL *i* 03 12 44.3

BILL *i* S S 03 22 38.7 -0.2
BILL pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
OKC Ostrava-Krasne 80.44 320 *e*P **P 03 12 39.0 +0.7**
OKC *e*S S 03 22 40.3 -1.2
OKC MLR MLR
comp=Z,500nm,19.9s,MS4.9
OKC Ostrava-Krasne 80.44 320 *e*P **P 03 12 39.0 +0.7**
OKC *e*S S 03 22 40.3 -1.2
OKC AMS AMS 03 53 10.0
comp=Z,500nm,19.9s
KEV Kevo 80.57 341 *e*P **P 03 12 37.9 -0.7**
KEV pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KEV Kevo 80.57 341 *e*P **P 03 12 37.9 -0.7**
comp=Z,5.5nm,0.9s,mb4.5
KEV Kevo 80.57 341 *e*p **P 03 12 37.0 -1.6**
comp=Z,0.9nm,0.4s,mb4.0
RPZ Rata Peaks 80.77 135 P **P 03 12 39.4 -0.8**
comp=Z,18nm,0.6s,mb5.1,baz=280,slow=7.9,SNR=16
RPZ LR LR 03 50 04.0
comp=Z,2μm,18.7s,MS5.5,baz=282,slow=37
MORC Moravsky Berou 80.82 320 *e*P **P 03 12 40.3 0.0**
MORC pmax pmax
comp=Z,35nm,1.5s,mb5.1
MORC Moravsky Berou 80.82 320 *e*P **P 03 12 40.3 -0.1**
comp=Z,35nm,1.5s,mb5.1
MORC Moravsky Berou 80.82 320⇑ *i*P **P 03 12 39.8 -0.5**
ZST Bratislava 80.92 318 *e*P **P 03 12 41.6 +0.7**
ZST Bratislava 80.92 318 *e*P **P 03 12 41.6 +0.7**
SYO Syowa Base 80.98 198⇓ *e*P **P 03 12 40.8 +0.1**
ARCES ARCESS Array B 81.00 340 P **P 03 12 39.3 -1.6**
comp=Z,14nm,0.8s,mb4.9,baz=108,slow=5.8,SNR=39
ARCES LR LR 03 54 46.1
comp=Z,2μm,19.0s,MS5.4,baz=297,slow=40
ARE0 ARCESS Array S 81.00 340 *e*P **P 03 12 41.7 +0.8**
SOP Sopron 81.23 318⇓ *e*P **P 03 12 43.1 +0.5**
DPC Dobruska-Polom 81.67 320 *e*P **P 03 12 44.8 0.0**
DPC *e*S S 03 22 55.9 +1.6
DPC MLR MLR
comp=Z,700nm,17.8s,MS5.1
DPC Dobruska-Polom 81.67 320 *e*P **P 03 12 44.8 0.0**
DPC *e*S S 03 22 55.9 +1.6
DPC AMS AMS 03 56 30.0
comp=Z,700nm,17.8s
CONA Conrad Observa 81.72 318⇑ *i*P **P 03 12 44.9 -0.3**
comp=Z,4.3nm,0.9s,mb4.4
KSP Ksiaz 81.74 321 *e*P **P 03 12 46.4 +1.2**
GROS Grobnik 81.84 316 *i* P **P 03 12 45.4 -0.4**
GROS Grobnik 81.84 316 *i* P **P 03 12 45.4 -0.4**
UPC Upice 81.88 321 *e*P **P 03 12 48.5 +2.6**
UPC Upice 81.88 321 *e*P **P 03 12 48.5 +2.6**
ARSA Arzberg 81.89 317⇑ *i*P **P 03 12 45.7 -0.4**
comp=Z,7.4nm,0.8s,mb4.7
BOJS Bojanci 81.93 315 *i* P **P 03 12 46.7 +0.4**
BOJS Bojanci 81.93 315 *i* P **P 03 12 46.7 +0.4**
TREC Trest 82.10 319 *e*P **P 03 12 46.0 -1.1**
TREC *e*S S 03 23 00.8 +2.0
TREC MLR MLR
comp=Z,500nm,18.3s,MS4.9
TREC Trest 82.10 319 *e*P **P 03 12 46.0 -1.1**
TREC *e*S S 03 23 00.8 +2.0
TREC AMS AMS 03 57 00.0
comp=Z,500nm,18.3s
PERS Pernice 82.12 317 *i* P **P 03 12 48.0 +0.8**
PERS Pernice 82.12 317 *i* P **P 03 12 48.0 +0.8**
SOKA Soboth 82.18 317⇑ *i*P **P 03 12 48.0 +0.4**
comp=Z,10nm,0.9s,mb4.8
LJU Ljubljana 82.48 316 *e*P **P 03 12 51.8 +2.6**
LJU Ljubljana 82.48 316 *e*P **P 03 12 51.8 +2.6**
PRU Pruhonice 82.77 320 *e*P **P 03 12 50.6 0.0**
PRU *e*S S 03 23 08.2 +2.6
PRU MLR MLR
comp=Z,500nm,19.3s,MS4.9
PRU Pruhonice 82.77 320 *e*P **P 03 12 50.6 0.0**
PRU *e*S S 03 23 08.2 +2.6
PRU AMS AMS 03 55 00.0
comp=Z,500nm,19.3s
MOA Molln 82.79 318⇑ *i*P **P 03 12 49.1 -1.7**
comp=Z,4.3nm,0.9s,mb4.5
JAVS Javornik 82.79 316 *i* P **P 03 12 52.6 +1.8**
JAVS Javornik 82.79 316 *i* P **P 03 12 52.6 +1.8**
PVCC Panska Ves 82.80 320 *e*P **P 03 12 51.6 +0.8**
PVCC *e*S S 03 23 08.6 +2.7
PVCC MLR MLR
comp=Z,900nm,18.6s,MS5.2
PVCC Panska Ves 82.80 320 *e*P **P 03 12 51.6 +0.8**
PVCC *e*S S 03 23 08.6 +2.7
PVCC AMS AMS 03 58 40.0
comp=Z,900nm,18.6s
VOY Vojsko 82.92 316 *e*P **P 03 12 51.4 -0.1**
VOY *e* 03 13 24.5
VOY Vojsko 82.92 316 *e*P **P 03 12 51.4 -0.1**
VOY *e* 03 13 24.5
MYKA Terra Mystica 83.13 316⇓ *i*P **P 03 12 52.4 -0.2**
comp=Z,7.1nm,0.8s,mb4.8
BRG Berggiesshubel 83.22 321 *e*P **P 03 12 52.9 0.0**
comp=Z,5.0nm,0.8s,mb4.6
BRG *e*pP pP 03 13 14.6 +9.0
BRG Berggiesshubel 83.22 321 *i* P **P 03 12 53.4 +0.4**
comp=Z,5.3nm,0.8s,mb4.6
BRG *e* 03 13 18.8
comp=Z,19nm,1.4s
BRG S S 03 23 12.0 +1.8
BRG SS SS 03 29 17.0 +42
BRG *e* 03 32 10.0
BRG
comp=Z,807nm,23.7s
BRG
comp=N,808nm,21.8s
BRG
comp=E,648nm,21.8s
BRG Berggiesshubel 83.22 321 *i* P **P 03 12 53.4 +0.5**
BRG S S 03 23 12.0 +1.8
BRG *e* 03 32 10.0
BRG pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
BRG MLR MLR
comp=Z,11μm,23.7s,MS6.2
BRG MLR MLR
comp=N,483nm,21.8s,MS5.0
BRG MLR MLR
comp=E,484nm,21.8s,MS5.0
GEC2 GERESS Array S 83.23 319 *e*P **P 03 12 53.6 +0.6**
comp=Z,10.0nm,0.9s,mb4.8
GEC2 GERESS Array S 83.23 319 *e*P **P 03 12 53.6 +0.6**
GEC2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GEC2 GERESS Array S 83.23 319 *e*P **P 03 12 53.6 +0.6**
comp=Z,10.0nm,0.9s,mb4.8
KHC Kasperske Hory 83.33 319 *e*P **P 03 12 53.5 0.0**
KHC pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KHC Kasperske Hory 83.33 319 *e*P **P 03 12 53.5 -0.1**
comp=Z,4.4nm,0.7s,mb4.6
KHC Kasperske Hory 83.33 319 *e*P **P 03 12 53.2 -0.3**
KHC *e*S S 03 23 11.8 +0.4
KHC AMS AMS 03 56 00.0
comp=Z,600nm,19.9s
KBA Koelnbreinsper 83.36 317⇓ *i*P **P 03 12 53.6 -0.1**
comp=Z,8.0nm,0.9s,mb4.7
RJOB Jochberg 83.77 318 *e*P **P 03 12 57.2 +1.4**
comp=Z,8.0nm,0.8s,mb4.9
RJOB *e*pP pP 03 13 18.7 +10
WET Wettzell 83.80 319 *e*P **P 03 12 56.2 +0.3**
comp=Z,8.0nm,0.8s,mb4.9
WET *e*pP pP 03 13 17.6 +9.0
WET Wettzell 83.80 319 *e*P **P 03 12 56.2 +0.3**
WET pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
WET Wettzell 83.80 319 *e*P **P 03 12 56.2 +0.3**
comp=Z,8.0nm,0.8s,mb4.9
WET *e*pP pP 03 13 17.6 +9.0
CLL Collm 83.85 321 *e*pP pP 03 13 17.1 +8.3
CLL Collm 83.85 321 *e*P **P 03 12 55.0 -1.1**
CLL *e*S S 03 23 17.0 +0.6
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
CLL MLR MLR
comp=Z,600nm,20.4s,MS5.0
CLL Collm 83.85 321 *e*P **P 03 12 55.0 -1.1**
comp=Z,3.0nm,0.8s,mb4.5
CLL *i* 03 12 58.1
CLL *e*S S 03 23 17.0 +0.6
CLL LR LR
comp=Z,600nm,20.4s,MS5.0
CLL Collm 83.85 321 *e*P **P 03 12 55.0 -1.1**
comp=Z,3.0nm,0.8s,mb4.5
CLL *i* 03 13 17.3
CLL *e*(PP) 03 16 17.0
CLL *e*S S 03 23 17.0 +0.6
comp=N,600nm,25.4s
CLL *e*S S 03 23 17.0 +0.6
comp=E,300nm,19.0s
CLL *e*SS SS 03 28 50.0 +5.5
CLL *e*SSS 03 32 12.0
CLL *e*SSSS 03 35 04.0
CLL LmV 03 57 00.0
comp=N,700nm,20.0s
CLL LmV 03 57 00.0
comp=E,500nm,21.4s
CLL LmV 03 57 00.0
comp=Z,600nm,20.4s
NKC Novy Kostel 84.14 320 *e*P **P 03 12 58.1 +0.5**
NKC *e*S S 03 23 22.1 +2.7
NKC MLR MLR
comp=Z,700nm,18.1s,MS5.1
NKC Novy Kostel 84.14 320 *e*P **P 03 12 58.1 +0.5**
NKC *e*S S 03 23 22.1 +2.7
NKC AMS AMS 03 58 10.0
comp=Z,700nm,18.1s
TANN Tannenbergstha 84.14 320 *e*P **P 03 12 58.3 +0.7**
comp=Z,3.0nm,1.0s,mb4.4
ROTZ Rotzenmuhle 84.27 320 *e*P **P 03 12 58.7 +0.4**
comp=Z,8.0nm,0.8s,mb4.9
URZ Urewera 84.34 129 P **P 03 12 57.7 -1.2**
comp=Z,8.7nm,0.7s,mb5.0,baz=149,slow=12,SNR=3.1
URZ LR LR 03 54 53.3
comp=Z,1μm,18.0s,MS5.3,baz=96,slow=39
WTTA Wattenberg 84.53 317⇑ *i*P **P 03 12 58.9 -0.8**
comp=Z,8.0nm,0.6s,mb5.0
MOX Moxa 84.69 320 *e*P **P 03 13 00.1 -0.3**
MOX *e* 03 13 25.9
comp=Z,16nm,1.4s
MOX *e*S S 03 23 28.0 +3.1
MOX
comp=Z,500nm,22.0s
MOX Moxa 84.69 320 *e*P **P 03 13 00.5 +0.1**
comp=Z,4.0nm,0.8s,mb4.6
MOX Moxa 84.69 320 *e*P **P 03 13 00.1 -0.3**
MOX *e*S S 03 23 28.0 +3.1
MOX pmax pmax
comp=Z,16nm,1.4s,mb5.0
MOX MLR MLR
comp=Z,500nm,22.0s,MS4.9
MOX Moxa 84.69 320 *e*P **P 03 13 00.1 -0.3**
comp=Z,16nm,1.4s,mb5.0
MOX *e* 03 13 25.9
MOX *e*S S 03 23 28.0 +3.1
MOX LR LR
comp=Z,500nm,22.0s,MS4.9
FUR Furstenfeldbru 84.81 318 *e*P **P 03 13 01.4 +0.3**
comp=Z,21nm,1.0s,mb5.2
FUR Furstenfeldbru 84.81 318 *e*P **P 03 13 01.4 +0.3**
FUR pmax pmax
comp=Z,21nm,1.0s,mb5.2
FUR Furstenfeldbru 84.81 318 *e*P **P 03 13 01.4 +0.3**
comp=Z,21nm,1.0s,mb5.2
MOTA Moosalm 84.90 317⇓ *i*P **P 03 13 00.5 -1.1**
comp=Z,8.7nm,0.9s,mb4.9
GRA1 Grafenberg Arr 84.90 319 *e*P **P 03 13 02.2 +0.7**
comp=Z,18nm,0.9s,mb5.2
GRA1 *e*S S 03 23 29.8 +2.8
GRA1 LR LR
comp=Z,700nm,21.6s,MS5.0
GRF Grafenberg Arr 84.90 319 *e*P **P 03 13 02.2 +0.7**
comp=Z,18nm,0.9s,mb5.2
GRF *e*S S 03 23 29.8 +2.8
GRF *e*L 03 56 07.2
comp=Z,745nm,21.6s
GRF Grafenberg Arr 84.90 319 *e*P **P 03 13 02.2 +0.7**
GRF *e*S S 03 23 29.8 +2.8
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.2
GRF Grafenberg Arr 84.90 319 *e*P **P 03 13 02.2 +0.7**
GRF *e*S S 03 23 29.8 +2.8
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.2
GRF MLR MLR
comp=Z,700nm,21.6s,MS5.0
GRF Grafenberg Arr 84.90 319 *e*P **P 03 13 02.2 +0.7**
comp=Z,18nm,0.9s,mb5.2
GRF *e*S S 03 23 29.8 +2.8
GRF LR LR
comp=Z,700nm,21.6s,MS5.0
GRFO Grafenberg 84.90 319 *e*P **P 03 13 01.9 +0.4**
GRFO pmax pmax
comp=Z,13nm,0.9s,mb5.1
GRFO Grafenberg 84.90 319 *e*P **P 03 13 01.9 +0.4**
comp=Z,13nm,0.9s,mb5.1
FETA Feichten 85.14 317⇑ *i*P **P 03 13 03.1 +0.3**
comp=Z,4.5nm,0.7s,mb4.7
NB2 NORSAR Subarra 85.42 331 P **P 03 13 03.5 -0.4**
comp=Z,17nm,1.2s,mb5.0,baz=91,slow=5.3
NOA NORSAR Array B 85.42 331 P **P 03 13 01.5 -2.3**
comp=Z,6.7nm,0.9s,mb4.8,baz=93,slow=5.9,SNR=11
NOA PP PP 03 16 18.1 -4.2
comp=Z,2.8nm,1.0s,baz=86,slow=9.1,SNR=3.4
NOA LR LR 03 55 32.6
comp=Z,1μm,21.0s,MS5.3,baz=100,slow=39
NOA NORSAR Array B 85.42 331 P **P 03 13 01.5 -2.4**
NOA 03 16 18.1
NOA pmax pmax
comp=Z,7.0nm,0.9s
NOA pmax pmax
comp=Z,3.0nm,1.0s
NOA MLR MLR
comp=Z,1μm,21.0s
NOA NORSAR Array B 85.42 331 P **P 03 13 01.5 -2.3**
NOA PP PP 03 16 18.1 -4.2
NOA LR LR 03 55 32.6
CLZ Clausthal 85.51 322 *e*P **P 03 13 04.9 +0.4**
comp=Z,8.0nm,0.8s,mb5.0
CLZ Clausthal 85.51 322 *e*P **P 03 13 04.9 +0.4**
CLZ pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
CLZ Clausthal 85.51 322 *e*P **P 03 13 04.9 +0.4**
comp=Z,8.0nm,0.8s,mb5.0
NAO01 NORSAR Array S 85.57 331 *e*P **P 03 13 05.2 +0.6**
comp=Z,5.5nm,0.8s,mb4.8
UBBA Unterbreizbach 85.72 321 *e*P **P 03 13 05.5 -0.1**
comp=Z,6.0nm,1.0s,mb4.8
DAVA Damuels 85.73 317⇑ *i*P **P 03 13 06.3 +0.7**
comp=Z,14nm,0.9s,mb5.2
KEST Kesra 86.07 305 P **P 03 13 08.3 +0.7**
comp=Z,3.3nm,0.8s,mb4.6,baz=349,slow=5.2,SNR=12
KEST LR LR 03 52 49.9
comp=Z,344nm,20.2s,MS4.7,baz=5.2,slow=36
KEST Kesra 86.07 305 *e*P **P 03 13 08.5 +0.8**
STU Stuttgart 86.21 319 *e*P **P 03 13 08.7 +0.7**
comp=Z,12nm,0.7s,mb5.2
TNS Taunus Mts 86.70 320 *e*P **P 03 13 10.6 +0.2**
comp=Z,15nm,0.8s,mb5.3
TNS Taunus Mts 86.70 320 *e*P **P 03 13 10.6 +0.2**
TNS pmax pmax
comp=Z,15nm,0.8s,mb5.3
TNS Taunus Mts 86.70 320 *e*P **P 03 13 10.6 +0.2**
comp=Z,15nm,0.8s,mb5.3
BFO Black Forest 86.78 318 *e*P **P 03 13 10.5 -0.4**
comp=Z,10.0nm,0.8s,mb5.1
BFO Black Forest 86.78 318 *e*P **P 03 13 10.5 -0.4**
BFO pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
BFO Black Forest 86.78 318 *e*P **P 03 13 10.5 -0.4**
comp=Z,10.0nm,0.8s,mb5.1
BFO Black Forest 86.78 318 P **P 03 13 10.5 -0.4**
comp=Z,72nm,0.8s,mb6.0,SNR=6.3
IBBN Ibbenburen 87.13 322 *e*P **P 03 13 12.0 -0.5**
comp=Z,22nm,1.2s,mb5.3
BUG Bochum--Univer 87.44 321 *e*P **P 03 13 13.8 -0.2**
comp=Z,13nm,0.6s,mb5.3
MEM Membach 88.26 320 P **P 03 13 17.9 0.0**
comp=Z,8.0nm,1.3s,mb4.8
DOU Dourbes 89.18 320 P **P 03 13 23.3 +1.0**
SNF Seneffe 89.36 320 P **P 03 13 23.6 +0.6**
comp=Z,13nm,1.7s,mb5.0
TAM Tamanrasset 89.75 293 *e*P **P 03 13 26.4 +0.9**
TAM pmax pmax
comp=Z,17nm,1.3s,mb5.2
TAM Tamanrasset 89.75 293 *e*P **P 03 13 26.4 +0.9**
comp=Z,17nm,1.3s,mb5.2
MAIT Maitri 90.57 199 *e*P **P 03 13 29.6 +1.3**
QSPA South Pole Qui 92.46 180 LR LR 03 50 51.8
comp=Z,2μm,18.1s,MS5.7,baz=322,slow=33
DAG Danmarks Havn 93.13 348 *i* P **P 03 13 39.5 -0.6**
DAG pmax pmax
comp=Z,8.0nm,0.7s,mb5.3
DAG Danmarks Havn 93.13 348 *i* P **P 03 13 39.5 -0.6**
comp=Z,77nm,0.7s,mb6.2
ALE Alert 94.52 357 P **P 03 13 46.0 -0.4**
comp=Z,140nm,0.7s,SNR=9.8
ESDC Sonseca Array 96.29 310 P **P 03 13 55.5 +0.2**
comp=Z,0.3nm,0.4s,mb4.1,baz=63,slow=3.9,SNR=3.5
ESDC LR LR 04 00 11.8
comp=Z,369nm,20.9s,MS4.8,baz=100,slow=37
BPAW Bear Paw Mtn. 97.48 24 *e*P **P 03 13 59.6 -0.5**
comp=Z,8.5nm,0.9s,mb5.2
ILAR Eielson Array 98.84 23 P **P 03 14 05.0 -1.2**
comp=Z,0.8nm,0.8s,mb4.3,baz=287,slow=4.8,SNR=11
ILAR PP PP 03 17 53.4 -14
comp=Z,0.5nm,0.6s,baz=294,slow=7.0,SNR=5.2
SUMG Summit 99.80 347 *i* P Pdif 03 14 13.7 +3.0
comp=Z,6.7nm,0.9s
TBI Tubuai 113.21 114 *e*SS SS 03 35 43.2 +5.3
comp=Z,532nm,27.2s
TBI *e*LR LR 03 53 08.3
comp=Z,1μm,23.5s
PPT Papeete 113.74 108 *e*PS PS 03 29 39.6 +3.0
comp=Z,337nm,24.5s
PPT *e*LR LR 03 53 26.0
comp=Z,905nm,25.0s
FFC Flin Flon 120.98 12 *e*PKIKP PKPdf 03 19 18.5 -0.3
SCHQ Schefferville 121.17 349 PKP PKPdf 03 19 19.3 +0.1
comp=Z,3.1nm,0.6s,baz=33,slow=5.6,SNR=4.8
BSMT Bassoo Peak 122.95 24 *e*PKPdf PKPdf 03 19 23.3 +0.4
YBMT Yellow Bay 123.26 24 *e*PKPdf PKPdf 03 19 24.3 +0.8
TAOE Nuku Hiva Isla 123.53 99 *e*SS SS 03 37 56.0 +3.8
comp=Z,152nm,28.9s
TAOE *e*LR LR 03 57 54.4
comp=Z,718nm,27.6s
SWMT Swartz Lake 123.55 24 *e*PKPdf PKPdf 03 19 24.2 +0.2
SLMT Seeley Lake 123.97 24 *e*PKPdf PKPdf 03 19 25.0 +0.2
MSO Missoula 124.11 25 *e*PKPdf PKPdf 03 19 24.5 -0.6
MOD Modoc 124.72 33 *e*PKPdf PKPdf 03 19 27.5 +1.1
EGMT Eagleton 124.76 21 *e*PKPdf PKPdf 03 19 25.9 -0.4
HRY Holter Researc 125.07 23 *e*PKPdf PKPdf 03 19 27.2 +0.3
DLMT Dillon 125.85 25 *e*PKPdf PKPdf 03 19 28.7 +0.3
BOZ Bozeman (W) 126.02 24 *e*PKIKP PKPdf 03 19 28.9 +0.1
DGMT Dagmar 126.17 17 *e*PKPdf PKPdf 03 19 29.5 +0.5
MCMT McKenzie Canyo 126.17 25 *e*PKPdf PKPdf 03 19 30.1 +1.0
RKT Rikitea 126.33 117 *e*LR LR 03 59 16.1
comp=Z,950nm,23.2s
ULM Lac du Bonnet 126.40 10 PKP PKPdf 03 19 28.1 -1.3
comp=Z,10nm,0.7s,baz=314,slow=2.1,SNR=9.7
HLID Hailey 126.47 27 *e*PKPdf PKPdf 03 19 30.3 +0.6
LAO LASA Array 127.13 19 *e*PKPdf PKPdf 03 19 32.1 +1.2
RRI2 Red Ridge 128.01 25 *e*PKPdf PKPdf 03 19 33.6 +0.9
TPAW Teton Pass 128.06 25 *e*PKPdf PKPdf 03 19 33.7 +1.0
LOHW Long Hollow 128.10 25 *e*PKPdf PKPdf 03 19 34.0 +1.1
SNOW Snow King Moun 128.16 25 *e*PKPdf PKPdf 03 19 33.9 +0.9
REDW Red Top Meadow 128.20 25 *e*PKPdf PKPdf 03 19 33.8 +0.8
NVAR Mina Array Bea 128.23 35 PKP PKPdf 03 19 33.0 -0.3
comp=Z,2.0nm,0.7s,baz=316,slow=2.5,SNR=15
PDAR Pinedale Array 129.23 24 PKP PKPdf 03 19 33.8 -1.3
comp=Z,1.4nm,0.5s,baz=225,slow=0.8,SNR=16
DUG Dugway 129.83 29 *e*PKIKP PKPdf 03 19 37.3 +1.1
RSSD Black Hills 130.12 19 *e*PKIKP PKPdf 03 19 36.2 -0.5
NLU North Lily Min 130.37 29 *e*PKPdf PKPdf 03 19 38.4 +1.1
MSU Marysvale 131.44 30 *e*PKIKP PKPdf 03 19 41.2 +1.9
SRU San Rafael 131.77 28 *e*PKIKP PKPdf 03 19 40.9 +0.9
PHWY Pilot Hill 132.09 22 *e*PKPdf PKPdf 03 19 40.4 -0.1
ECSD EROS Data Cent 132.51 13 *e*PKPpre PKPpre 03 19 33.9
ECSD *e*PKPdf PKPdf 03 19 41.3 +0.1
JFWS Jewell Farm 134.39 7 *e*PKIKP PKPdf 03 19 45.2 +0.4
ANMO Albuquerque 137.04 28 *e*PKIKP PKPdf 03 19 51.8 +1.8
LAZ Ladron 137.16 29 *e*PKPdf PKPdf 03 19 49.8 -0.4
TRQA Tornquist 139.42 207 *e*PKPdf PKPdf 03 19 53.7 -0.5
PLCA Paso Flores 140.15 196 PKP PKPdf 03 19 54.1 -1.3
comp=Z,2.2nm,1.0s,baz=221,slow=1.3,SNR=2.8
PLCA Paso Flores 140.15 196 *e*PKPdf PKPdf 03 19 55.4 0.0
MNTX Cornudas Mount 140.22 29 *e*PKPpre PKPpre 03 19 47.7
MNTX *e*PKPdf PKPdf 03 19 55.8 -0.1
GDL2 Guadalupe Moun 140.29 28 *e*PKPpre PKPpre 03 19 48.8
WMOK Wichita Mounta 140.32 20 *e*PKIKP PKPdf 03 19 56.5 +0.5
WVT Waverly 141.36 5 *e*PKHKP PKPpre 03 19 51.8
MIAR Mount Ida 141.98 13 *e*PKHKP PKPpre 03 19 53.2
BDFB Brasilia 142.51 247 PKP PKPdf 03 19 58.0 -2.4
comp=Z,2.4nm,0.8s,baz=37,slow=5.1,SNR=2.6
BDFB Brasilia 142.51 247 PKIKP PKPdf 03 19 58.0 -2.4
BDFB pmax pmax
comp=Z,2.0nm,0.8s
TXAR Lajitas Array 143.00 30 PKhKP PKPpre 03 19 57.5
comp=Z,2.3nm,0.6s,baz=329,slow=1.1,SNR=18
TXAR PP PP 03 23 07.6 -1.9
comp=Z,0.6nm,0.8s,baz=325,slow=4.5,SNR=2.8
TXAR SKPbc SKPbc 03 23 38.2 +2.3
comp=Z,1.5nm,0.8s,baz=58,slow=2.2,SNR=3.6
TXAR Lajitas Array 143.00 30 PKIKP PKPpre 03 19 57.5
TXAR 03 23 07.6
TXAR pmax pmax
comp=Z,2.0nm,0.6s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
JCT Junction City 143.76 24 *e*PKIKP PKPdf 03 19 59.8 -2.4
LRAL Lakeview Retre 144.50 5 *e*PKPdf PKPdf 03 20 01.7 -1.8
VBMS Vicksburg 144.85 10 *e*PKPdf PKPdf 03 20 04.3 +0.3
CPUP Villa Florida 145.34 225 PKPbc PKPbc 03 20 03.3 -1.7
comp=Z,4.6nm,0.5s,baz=96,slow=2.6,SNR=13
CPUP Villa Florida 145.34 225 *e*PKPbc PKPbc 03 20 04.0 -0.9
HKT Hockley 145.69 19 *e*PKP2 PKPab 03 20 05.1 -1.1
BRAL Brewton 146.50 5 *e*PKPbc PKPbc 03 20 08.7 +0.3
KVTX Kingsville 147.13 24 *e*PKPbc PKPdf 03 20 08.1 0.0
SDDR Presa de Saban 155.39 331 *e*PKPab PKPab 03 20 47.0 +0.8
LPAZ La Paz 159.46 227 PKP PKPdf 03 20 26.7 +0.7
comp=Z,0.9nm,0.9s,baz=298,slow=2.3,SNR=4.2
LPAZ PKPab PKPab 03 21 04.5 +0.6
comp=Z,1.4nm,0.7s,baz=153,slow=4.5,SNR=2.5
LPAZ La Paz 159.46 227 *e*PKPdf PKPdf 03 20 28.1 +2.1
OTAV Otavalo 174.08 298 *e*PKPdf PKPdf 03 20 37.3 +0.1

IDC ***10*** *03:13:39.2±0.8, 2.77N×96.86E, h0km, mb4.2/12, mb1 4.2/12, mb1mx4.0/22, mbtmp4.1/12, Error ellipse: s-maj=39.9km s-min=14.8km az=56.0*
ISCJB ***10*** *03:13:41.4±0.5, 2.48N±0.06×96.23E±0.06, h33km, mb4.3/22, Error ellipse: s-maj=10.8km s-min=7.2km az=42.0*
NEIC ***10*** *03:13:43.7±0.5, 2.51N×96.41E, h35km, mb4.5/8, Error ellipse: s-maj=14.8km s-min=9.6km az=57.0*
BJI ***10*** *03:13:45.9, 3.08N×96.55E, h32km, mB5.2/6, mb4.7/11*
DJA ***10*** *03:13:46, 2.64N×96.47E, h23km, MLv4.5/6*
ISC 10 03:13:43.8±0.5, 2.51N±0.06×96.28E±0.07, h35km, n41, σ1§28/39, mb4.3/22, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.17**	**50**	P	**Pn**	**03 14 03.6**	**-0.1**
TSI	**Tuntungan**	**2.48**	**67**	P	**Pn**	**03 14 24.3**	**+2.5**
MNSI	**Mandailing Nat**	**3.71**	**117**	P	**Pn**	**03 14 39.5**	**+0.8**
SISI	**Saibi**	**4.73**	**144**	P	**Pn**	**03 14 57.6**	**+4.9**
PPI	**Padang Panjang**	**5.06**	**126**	P	**Pn**	**03 14 58.8**	**+1.6**
IPM	**Ipoh**	**5.12**	**67**	*e*Pn	**Pn**	**03 14 58.9**	**+0.8**
IPM	**Ipoh**	**5.12**	**67**	P	**Pn**	**03 14 59.4**	**+1.3**
KULM	**Kulim**	**5.16**	**58**	*e*Pn	**Pn**	**03 14 59.2**	**+0.6**
KULM	**Kulim**	**5.16**	**58**	P	**Pn**	**03 14 59.2**	**+0.6**
BKNI	**Bangkinang**	**5.23**	**114**	P	**Pn**	**03 15 04.7**	**+5.2**
SNG	**Songkhla**	**6.34**	**43**	P	**Pn**	**03 15 15.0**	**+0.2**
	200nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.06**	**9**	Pn	**Pn**	**03 17 25.5**	**-1.6**
	0.7nm,0.3s,baz=199,slow=11,SNR=18						
CHTO	**Chiang Mai**	**16.41**	**9**	*e*Pn	**Pn**	**03 17 30.9**	**-0.7**
LSA	**Lhasa**	**27.48**	**350**	*e*P	**P**	**03 19 27.7**	**+0.9**
	5.4nm,0.4s,mb4.4						
XAN	**Xi'an**	**33.52**	**19**	P	**P**	**03 20 18.1**	**-2.0**
XAN				pP	pP	03 20 29.2	-1.0
XAN				sP	sP	03 20 35.3	+0.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
FITZ	**Fitzroy Crossi**	**35.44**	**126**	P	**P**	**03 20 34.4**	**-2.6**
	comp=Z,2.0nm,0.9s,mb4.0,baz=311,slow=5.4,SNR=3.9						
KAKA	**Kakadu**	**38.96**	**114**	*e*P	**P**	**03 21 04.6**	**-2.3**
BJT	**Baijiatuau**	**41.47**	**23**	*e*P	**P**	**03 21 27.7**	**+0.4**
	comp=Z,13nm,0.6s,mb4.7						
BJI	**Beijing**	**41.49**	**23**	P	**P**	**03 21 27.8**	**+0.3**

BJI pmax pmax
comp=Z,38nm,0.8s,mb5.1
BJI pmax pmax
comp=Z,150nm,3.8s
WRA Warrumunga Arr 43.51 123 P **P** **03 21 43.1 -1.1**
comp=Z,0.9nm,0.4s,mb3.8,baz=301,slow=9.0,SNR=9.3
TKM2 Tokmak 2 44.27 338 *eP* **P** **03 21 50.4 +0.4**
comp=Z,9.0nm,1.4s,mb4.3
EKS2 Erkin-Say 44.75 336 *eP* **P** **03 21 54.1 +0.3**
comp=Z,2.1nm,0.7s,mb4.1
FORT Forrest 44.86 140 *eP* **P** **03 21 53.7 -1.3**
comp=Z,7.6nm,0.7s,mb4.6
ASAR Alice Springs 44.91 128 P **P** **03 21 52.6 -2.9**
comp=Z,0.3nm,0.4s,mb3.5,baz=298,slow=7.8,SNR=6.2
MK31 Makanchi Array 45.76 347 *eP* **P** **03 22 01.1 -0.7**
MKAR Makanchi Array 45.76 347 P **P** **03 22 01.3 -0.5**
comp=Z,12nm,0.8s,mb4.9,baz=164,slow=7.8,SNR=30
SONM Songino Array 99 P **P** **03 22 02.3 -1.3**
comp=Z,4.2nm,0.7s,mb4.5,baz=190,slow=9.9,SNR=24
SONM PcP PcP 03 23 38.7 -1.1
comp=Z,1.1nm,0.8s,baz=197,slow=4.5,SNR=3.1
KKAR Karatay Array 46.48 334 *eP* **P** **03 22 08.4 +0.9**
comp=Z,2.6nm,0.8s,mb4.2
KURK Kurchatov 50.30 345 *eP* **P** **03 22 36.4 -0.4**
comp=Z,6.9nm,1.2s,mb4.6
ZALV Zalesovo Beam 52.13 351 P **P** **03 22 49.4 -1.0**
comp=Z,8.4nm,0.6s,mb4.8,baz=166,slow=6.7,SNR=29
STKA Stephens Creek 54.91 132 P **P** **03 23 10.6 -0.7**
comp=Z,0.7nm,0.4s,mb4.0,baz=302,slow=9.2,SNR=3.4
ABKAR Abkulak array 55.93 332 *eP* **P** **03 23 17.1 -1.2**
comp=Z,4.2nm,0.8s,mb4.5
AKTK Aktyubinsk 57.65 332 P **P** **03 23 32.4 +1.9**
AKTO Aktyubinsk 57.65 332 P **P** **03 23 32.4 +1.9**
comp=Z,1.8nm,0.8s,mb4.2,baz=135,slow=2.9
BRTR Keskin Array B 67.56 312 P **P** **03 24 40.2 +3.3**
comp=Z,0.3nm,0.4s,mb3.7,baz=115,slow=8.4,SNR=2.4
BUR08 Bucovina Ar. S 75.46 319 *eP* **P** **03 25 24.5 +0.2**
FINES FINESS Array B 78.42 333 P **P** **03 25 41.5 +0.8**
comp=Z,2.6nm,0.8s,mb4.2,baz=90,slow=4.2,SNR=6.9
ARCES ARCESS Array B 81.00 340 P **P** **03 25 54.1 -0.4**
comp=Z,0.8nm,0.4s,mb4.0,baz=99,slow=5.6,SNR=13
QSPA South Pole Qui 92.44 180 P **P** **03 26 53.0 +2.5**
comp=Z,1.5nm,1.1s,mb4.2,baz=302,slow=5.6,SNR=2.4
TXAR Lajitas Array 143.02 30 PKhKP PKPpre 03 33 11.0
comp=Z,0.2nm,0.7s,baz=350,slow=2.2,SNR=2.8
CPUP Villa Florida 145.32 225 PKPbc PKPbc 03 33 20.8 +2.2
comp=Z,1.2nm,0.8s,baz=162,slow=3.2,SNR=3.3

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*IDC **10** 03:21:24.4±0.8, 2°.63N×96°.58E, h0km, mb4.1/12, mb1 4.2/13, mb1mx4.1/23, mbtmp4.1/13, ML3.8/1, Error ellipse: s-maj=42.3km s-min=14.1km az=55.0*
*ISCJB **10** 03:21:27.1±1.6, 2°.32N±0°.05×96°.17E±0°.10, h42km±14km, mb4.3/19, Error ellipse: s-maj=16.8km s-min=7.8km az=169.3*
*NEIC **10** 03:21:29.3±0.5, 2°.48N×96°.32E, h35km, mb4.4/5, Error ellipse: s-maj=13.9km s-min=9.6km az=47.0*
*DJA **10** 03:21:30, 2°.27N×96°.42E, h21km, MLv4.4/5*
ISC 10 03:21:28.3±2.9, 2°.35N±0°.05×96°.16E±0°.06, h32km±21km, n35, σ0s76/35, mb4.3/19, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.36**	**48**	P	**Pn**	**03 21 49.7**	**-1.3**
TPTI				S	**Sn**	**03 22 08.8**	**+0.8**
TSI	**Tuntungan**	**2.66**	**64**	P	**Pn**	**03 22 09.8**	**+0.9**
TSI				S	**Sn**	**03 22 39.9**	**-0.1**
MNSI	**Mandailing Nat**	**3.75**	**114**	P	**Pn**	**03 22 24.9**	**+1.0**
SISI	**Saibi**	**4.68**	**141**	P	**Pn**	**03 22 36.7**	**0.0**
SISI				S	**Sn**	**03 23 29.3**	**-0.6**
PPI	**Padang Panjang**	**5.07**	**123**	P	**Pn**	**03 22 43.1**	**+1.1**
IPM	**Ipoh**	**5.29**	**66**	*e*Pn	**Pn**	**03 22 44.9**	**-0.3**
	55nm,0.5s						
IPM	**Ipoh**	**5.29**	**66**	P	**Pn**	**03 22 45.7**	**+0.5**
KULM	**Kulim**	**5.34**	**57**	*e*Pn	**Pn**	**03 22 45.4**	**-0.5**
	36nm,0.4s						
CMAR	**Chiang Mai Arr**	**16.24**	**9**	Pn	**Pn**	**03 25 11.0**	**-3.1**
	0.1nm,0.3s,baz=195,slow=12,SNR=2.7						
FITZ	**Fitzroy Crossi**	**35.44**	**126**	P	**P**	**03 28 20.6**	**-1.2**
	3.3nm,0.9s,mb4.3,baz=314,slow=7.6,SNR=9.9						
GTA	**Gaotai**	**37.04**	**5**	*e*P	**P**	**03 28 35.1**	**-0.1**
GTA				pP	pP	03 28 39.5	-5.1
GTA				sP	sP	03 28 42.6	-5.9
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
BJT	**Baijiatuau**	**41.66**	**23**	*e*P	**P**	**03 29 13.9**	**+0.2**
	comp=Z,16nm,0.6s,mb4.8						
BJI	**Beijing**	**41.68**	**23**	P	**P**	**03 29 14.0**	**+0.1**
BJI				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.0						
WRA	**Warrumunga Arr**	**43.52**	**122**	P	**P**	**03 29 28.4**	**-0.8**
	comp=Z,1.7nm,0.7s,mb3.9,baz=300,slow=9.2,SNR=8.3						
TKM2	**Tokmak 2**	**44.37**	**338**	*e*P	**P**	**03 29 36.1**	**+0.5**
	comp=Z,1.8nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**44.91**	**127**	P	**P**	**03 29 40.1**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=299,slow=8.1,SNR=12						
MK31	**Makanchi Array**	**45.89**	**347**	*e*P	**P**	**03 29 47.7**	**0.0**
MKAR	**Makanchi Array**	**45.89**	**347**	P	**P**	**03 29 47.6**	**0.0**
	comp=Z,5.8nm,0.6s,mb4.7,baz=164,slow=7.8,SNR=47						
SONM	**Songino Array**	**46.16**	**10**	P	**P**	**03 29 49.4**	**-0.4**
	comp=Z,2.2nm,0.6s,mb4.3,baz=191,slow=8.8,SNR=11						
SONM				PcP	PcP	03 31 25.6	+0.2
	comp=Z,0.9nm,0.6s,baz=199,slow=2.6,SNR=4.0						
KURK	**Kurchatov**	**50.42**	**346**	*e*P	**P**	**03 30 22.6**	**0.0**
	comp=Z,4.0nm,0.9s,mb4.5						
ZALV	**Zalesovo Beam**	**52.27**	**352**	P	**P**	**03 30 35.9**	**-0.5**
	comp=Z,6.4nm,0.5s,mb4.8,baz=174,slow=6.9,SNR=23						
BVAR	**Borovoye Array**	**54.83**	**341**	P	**P**	**03 30 54.5**	**-0.7**
	comp=Z,2.4nm,0.7s,mb4.4,baz=140,slow=7.6,SNR=11						
STKA	**Stephens Creek**	**54.89**	**132**	P	**P**	**03 30 56.3**	**+0.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=318,slow=9.0,SNR=4.5						
BRVK	**Borovoye**	**54.90**	**341**	*e*P	**P**	**03 30 55.6**	**0.0**
	comp=Z,2.9nm,0.5s,mb4.6						
ABKAR	**Abkulak array**	**56.02**	**332**	*e*P	**P**	**03 31 04.1**	**+0.3**
	comp=Z,2.3nm,0.7s,mb4.3						
AKTK	**Aktyubinsk**	**57.74**	**332**	P	**P**	**03 31 15.6**	**-0.3**
AKTO	**Aktyubinsk**	**57.74**	**332**	P	**P**	**03 31 15.6**	**-0.3**
	comp=Z,0.7nm,0.4s,mb4.0,baz=135,slow=10.0,SNR=2.7						
BRTR	**Keskin Array B**	**67.58**	**312**	P	**P**	**03 32 24.6**	**+2.7**
	comp=Z,0.2nm,0.4s,mb3.5,baz=123,slow=7.1,SNR=2.8						
BRTR	**Keskin Array B**	**67.58**	**312**	P	**P**	**03 32 24.6**	**+2.7**
FINES	**FINESS Array B**	**78.51**	**333**	P	**P**	**03 33 26.6**	**+0.5**
	comp=Z,4.9nm,1.0s,mb4.4,baz=104,slow=5.9,SNR=4.4						
ARCES	**ARCESS Array B**	**81.11**	**340**	P	**P**	**03 33 40.7**	**+0.6**
	comp=Z,0.7nm,0.5s,mb3.9,baz=95,slow=6.7,SNR=13						
ARCES	**ARCESS Array B**	**81.11**	**340**	P	**P**	**03 33 40.7**	**+0.6**
PDAR	**Pinedale Array**	**129.44**	**24**	PKP	PKPdf	03 40 34.2	+0.1
	comp=Z,0.3nm,0.6s,baz=40,slow=1.5,SNR=3.5						
TXAR	**Lajitas Array**	**143.21**	**30**	PKhKP	PKPpre	03 40 56.7	
	comp=Z,0.2nm,0.3s,baz=324,slow=0.9,SNR=6.9						
CPUP	**Villa Florida**	**145.12**	**224**	PKPbc	PKPbc	03 41 06.7	+3.8
	comp=Z,0.6nm,0.5s,baz=135,slow=5.7,SNR=3.4						

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*IDC **10** 03:23:35.7±2.3, 31°.04N×83°.75E, h0km, mb3.5/5, mb1 3.7/7, mb1mx3.5/25, mbtmp3.5/7, ML3.9/2, Error ellipse: s-maj=95.0km s-min=25.0km az=61.0*
*ISCJB **10** 03:23:37.2±4.5, 31°.0N±0°.1×83°.7E±0°.1, h23km±37km, mb3.4/6, Error ellipse: s-maj=22.8km s-min=14.9km az=150.6*
*NEIC **10** 03:23:37.3±0.9, 31°.02N×83°.71E, h10km, mb3.6/2, Error ellipse: s-maj=34.3km s-min=11.6km az=61.0*
ISC 10 03:23:38.6±6.3, 31°.0N±0°.1×83°.7E±0°.1, h19km±43km, n12, σ0s89/12, mb3.4/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.92**	**263**	*ex*	**Pn**	**03 24 51.0**	**-0.4**
EKS2	**Erkin-Say**	**14.04**	**328**	*e*Pn	**Pn**	**03 26 57.1**	**+0.6**
MK31	**Makanchi Array**	**15.77**	**356**	*e*Pn	**Pn**	**03 27 22.6**	**+3.1**
MKAR	**Makanchi Array**	**15.77**	**356**	Pn	**Pn**	**03 27 18.5**	**-0.9**
	0.2nm,0.3s,baz=180,slow=11,SNR=7.7						
CMAR	**Chiang Mai Arr**	**18.64**	**129**	Pn	**Pn**	**03 27 55.9**	**+0.2**
	0.3nm,0.3s,baz=315,slow=10,SNR=4.1						
KURK	**Kurchatov**	**20.01**	**351**	*e*P	**P**	**03 28 08.3**	**-1.8**
	3.5nm,0.8s						
ZALV	**Zalesovo Beam**	**22.90**	**2**	P	**P**	**03 28 40.8**	**-0.3**
	0.5nm,0.3s,mb3.4,baz=195,slow=10,SNR=3.2						
BVAR	**Borovoye Array**	**24.01**	**340**	P	**P**	**03 28 52.8**	**+0.8**
	0.3nm,0.4s,mb3.1,baz=125,slow=12,SNR=2.2						
ABKAR	**Abkulak array**	**25.53**	**322**	*e*P	**P**	**03 29 06.4**	**+0.6**
	0.6nm,0.6s,mb3.3						
ARCES	**ARCESS Array B**	**50.25**	**337**	P	**P**	**03 32 33.1**	**0.0**
	1.3nm,1.0s,mb3.9,baz=93,slow=7.7,SNR=5.7						
WRA	**Warrumunga Arr**	**70.24**	**129**	P	**P**	**03 34 50.6**	**0.0**
	0.4nm,0.7s,mb3.5,baz=321,slow=6.6,SNR=3.3						
ILAR	**Eielson Array**	**76.70**	**20**	P	**P**	**03 35 27.9**	**-0.2**
	0.5nm,1.0s,mb3.4,baz=308,slow=4.4,SNR=5.2						

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*DJA **10** 03:28:01, 2°.49N×95°.93E, h20km, MLv4.4/5*
*ISCJB **10** 03:28:02.7±1.2, 2°.6N±0°.1×96°.14E±0°.08, h33km, mb4.1/6, Error ellipse: s-maj=21.2km s-min=10.7km az=16.1*
*IDC **10** 03:28:04.6±2.1, 3°.16N×95°.47E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.8/22, mbtmp4.0/7, ML4.1/1, Error ellipse: s-maj=81.1km s-min=27.5km az=57.0*
*NEIC **10** 03:28:05.1±1.6, 2°.62N×96°.23E, h35km, mb4.0/1, Error ellipse: s-maj=31.0km s-min=11.1km az=182.0*
ISC 10 03:28:04.2±1.1, 2°.5N±0°.1×96°.07E±0°.07, h35km, n16, σ1s00/16, mb4.1/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.36**	**55**	P	**Pn**	**03 28 25.3**	**-1.3**
TPTI				S	**Sn**	**03 28 45.0**	**+1.6**
TSI	**Tuntungan**	**2.69**	**68**	P	**Pn**	**03 28 48.0**	**+3.0**
MNSI	**Mandailing Nat**	**3.88**	**115**	P	**Pn**	**03 29 01.4**	**+0.1**
IPM	**Ipoh**	**5.33**	**68**	*e*Pn	**Pn**	**03 29 20.2**	**-1.1**
IPM				*e*Sn	Sx	03 30 36.1	
IPM	**Ipoh**	**5.33**	**68**	P	**Pn**	**03 29 21.0**	**-0.3**
	0.3nm42nm,0.7s						
KULM	**Kulim**	**5.36**	**58**	*e*Pn	**Pn**	**03 29 19.5**	**-2.1**
KULM	**Kulim**	**5.36**	**58**	P	**Pn**	**03 29 20.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**16.14**	**10**	Pn	**Pn**	**03 31 47.1**	**-1.3**
	0.3nm,0.3s,baz=199,slow=10,SNR=6.3						
WRA	**Warrumunga Arr**	**43.66**	**122**	P	pP	03 36 18.8	+2.7
	0.8nm,0.7s,baz=302,slow=9.3,SNR=5.3						
MK31	**Makanchi Array**	**45.75**	**347**	*e*P	**P**	**03 36 22.6**	**+0.5**
MKAR	**Makanchi Array**	**45.75**	**347**	P	**P**	**03 36 22.4**	**+0.3**
	2.6nm,0.6s,mb4.3,baz=162,slow=7.6,SNR=29						
SONM	**Songino Array**	**46.06**	**10**	P	**P**	**03 36 24.3**	**-0.2**
	1.3nm,0.6s,mb4.0,baz=192,slow=10,SNR=5.9						
ZALV	**Zalesovo Beam**	**52.14**	**352**	P	**P**	**03 37 11.3**	**+0.4**
	2.5nm,0.4s,mb4.5,baz=174,slow=5.8,SNR=9.8						
BVAR	**Borovoye Array**	**54.69**	**341**	P	**P**	**03 37 29.7**	**0.0**
	1.2nm,0.7s,mb4.1,baz=148,slow=8.5,SNR=5.4						
ABKAR	**Abkulak array**	**55.87**	**332**	*e*P	**P**	**03 37 38.6**	**+0.4**
	1.5nm,0.8s,mb4.1						
ARCES	**ARCESS Array B**	**80.97**	**340**	P	**P**	**03 40 15.2**	**+0.4**
	0.3nm,0.5s,mb3.5,baz=102,slow=6.6,SNR=8.0						

IDC 10 03:28:45.1±31.0, 60°.23S×152°.40E, h0km, mb4.0/4, mb1 4.2/4, mb1mx4.0/13, mbtmp4.0/4, Error ellipse: s-maj=575.4km s-min=162.5km az=137.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	**Toolangi**	**23.11**	**346**	*e*P	P	03 33 49.7	-2.6
CMSA	**Cobar Meteorol**	**29.05**	**348**	*e*P	P	03 34 51.5	+4.8
STKA	**Stephens Creek**	**29.26**	**341**	P	P	03 34 48.9	+0.4
	1.6nm,0.6s,baz=163,slow=13,SNR=3.4						
FORT	**Forrest**	**33.64**	**320**	*e*P	P	03 35 29.2	+2.1
	12nm,0.7s						
ASAR	**Alice Springs**	**38.76**	**332**	P	P	03 36 10.3	-0.6
	1.7nm,0.6s,baz=165,slow=8.9,SNR=35						
WRA	**Warrumunga Arr**	**42.26**	**334**	P	P	03 36 39.2	-0.7
	1.5nm,0.8s,baz=162,slow=7.2,SNR=8.2						
FITZ	**Fitzroy Crossi**	**46.26**	**324**	P	P	03 37 13.0	+1.1
	1.5nm,0.7s,baz=178,slow=7.3,SNR=2.2						

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*BJI **10** 03:29:13.6, 2°.37N×96°.19E, h17km, mb4.6/9*
*IDC **10** 03:29:15.2±0.8, 2°.59N×96°.47E, h0km, mb4.1/13, mb1 4.2/14, mb1mx4.0/25, mbtmp4.1/14, ML4.5/1, Error ellipse: s-maj=41.8km s-min=14.2km az=59.0*
*ISCJB **10** 03:29:18.7±4.2, 2°.5N±0°.1×96°.3E±0°.2, h41km±34km, mb4.2/21, Error ellipse: s-maj=38.0km s-min=11.9km az=147.4*
*NEIC **10** 03:29:19.8±0.5, 2°.43N×96°.26E, h35km, mb4.5/5, Error ellipse: s-maj=14.9km s-min=8.8km az=60.0*
ISC 10 03:29:22.0±3.6, 2°.5N±0°.1×96°.4E±0°.2, h50km±30km, n31, σ0s85/29, mb4.2/21, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.08**	**57**	*e*Pn	**Pn**	**03 30 36.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**16.03**	**9**	Pn	**Pn**	**03 33 03.1**	**-1.0**
	0.6nm,0.3s,baz=197,slow=11,SNR=14						
CHTO	**Chiang Mai**	**16.38**	**9**	*e*Pn	**Pn**	**03 33 08.8**	**+0.3**
XAN	**Xi'an**	**33.47**	**19**	P	**P**	**03 35 55.6**	**-0.8**
XAN				pP	pP	03 36 05.0	-4.4
XAN				sP	sP	03 36 08.8	-6.5
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
FITZ	**Fitzroy Crossi**	**35.39**	**127**	P	**P**	**03 36 11.3**	**-2.0**
	comp=Z,2.8nm,0.8s,mb4.2,baz=299,slow=6.0,SNR=7.0						
FITZ	**Fitzroy Crossi**	**35.39**	**127**	*e*P	**P**	**03 36 12.7**	**-0.6**
	comp=Z,4.7nm,0.9s,mb4.4						
GTA	**Gaotai**	**36.84**	**4**	*e*P	**P**	**03 36 24.5**	**-0.9**
GTA				pP	pP	03 36 28.6	-10
GTA				sP	sP	03 36 31.7	-13
GTA				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
BJT	**Baijiatuau**	**41.41**	**23**	*e*P	**P**	**03 37 05.0**	**+1.5**
	comp=Z,12nm,0.9s,mb4.5						
BJI	**Beijing**	**41.44**	**23**	P	**P**	**03 37 04.9**	**+1.1**
BJI				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.8						
WRA	**Warrumunga Arr**	**43.46**	**123**	P	**P**	**03 37 19.9**	**-0.6**
	comp=Z,1.0nm,0.6s,mb3.7,baz=298,slow=9.4,SNR=5.7						
TKM2	**Tokmak 2**	**44.27**	**338**	*e*P	**P**	**03 37 27.3**	**+0.6**
	comp=Z,3.0nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**44.45**	**337**	P	**P**	**03 37 28.8**	**+0.7**
	comp=Z,0.6nm,0.3s,mb3.8,baz=153,slow=9.0,SNR=1.8						
ASAR	**Alice Springs**	**44.87**	**128**	P	**P**	**03 37 31.4**	**-0.3**
	comp=Z,0.7nm,0.7s,mb3.6,baz=297,slow=8.1,SNR=5.2						
MK31	**Makanchi Array**	**45.75**	**347**	*e*P	**P**	**03 37 38.4**	**0.0**
MKAR	**Makanchi Array**	**45.75**	**347**	P	**P**	**03 37 38.2**	**-0.2**
	comp=Z,5.1nm,0.7s,mb4.6,baz=161,slow=8.0,SNR=23						
SONM	**Songino Array**	**45.95**	**9**	P	**P**	**03 37 39.9**	**0.0**
	comp=Z,2.4nm,0.6s,mb4.3,baz=191,slow=9.8,SNR=11						
KURK	**Kurchatov**	**50.30**	**345**	*e*P	**P**	**03 38 13.9**	**+0.5**
	comp=Z,3.4nm,0.7s,mb4.5						
ZALV	**Zalesovo Beam**	**52.12**	**351**	P	**P**	**03 38 26.6**	**-0.3**
	comp=Z,6.0nm,0.5s,mb4.8,baz=177,slow=6.9,SNR=15						
BVAR	**Borovoye Array**	**54.72**	**341**	P	**P**	**03 38 44.7**	**-1.4**
	comp=Z,2.1nm,0.7s,mb4.3,baz=154,slow=8.0,SNR=8.0						
BRVK	**Borovoye**	**54.78**	**341**	*e*P	**P**	**03 38 46.2**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.4						
STKA	**Stephens Creek**	**54.87**	**132**	P	**P**	**03 38 47.6**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=319,slow=11,SNR=3.5						
ABKAR	**Abkulak array**	**55.95**	**332**	*e*P	**P**	**03 38 54.9**	**-0.1**
	comp=Z,4.5nm,0.9s,mb4.5						
AKTK	**Aktyubinsk**	**57.66**	**332**	P	**P**	**03 39 06.3**	**-0.8**
AKTO	**Aktyubinsk**	**57.66**	**332**	P	**P**	**03 39 06.3**	**-0.8**
	comp=Z,0.7nm,0.5s,mb4.0,baz=134,slow=9.4,SNR=2.9						
FINES	**FINESS Array B**	**78.43**	**333**	P	**P**	**03 41 18.7**	**+1.4**
	comp=Z,1.2nm,0.6s,mb4.0,baz=101,slow=7.2,SNR=3.7						
ARCES	**ARCESS Array B**	**81.00**	**340**	P	**P**	**03 41 31.4**	**+0.4**
	comp=Z,0.8nm,0.7s,mb3.8,baz=97,slow=7.4,SNR=9.6						
ARCES	**ARCESS Array B**	**81.00**	**340**	P	**P**	**03 41 31.4**	**+0.4**
QSPA	**South Pole Qui**	**92.47**	**180**	P	**P**	**03 42 28.8**	**+1.8**
	comp=Z,1.8nm,1.3s,mb4.2,baz=303,slow=4.8,SNR=2.9						
QSPA	**South Pole Qui**	**92.47**	**180**	P	**P**	**03 42 28.8**	**+1.8**
TXAR	**Lajitas Array**	**142.96**	**30**	PKhKP	PKPpre	03 48 48.8	
	comp=Z,0.4nm,1.0s,baz=306,slow=2.1,SNR=2.8						
CPUP	**Villa Florida**	**145.39**	**224**	PKPbc	PKPbc	03 48 55.6	+0.4
	comp=Z,0.6nm,0.5s,baz=146,slow=3.6,SNR=3.2						

IDC 10 03:30:42.9±10.0, 1°.73N×96°.39E, h0km, mb4.1/4, mb1 4.1/5, mb1mx3.7/21, mbtmp4.1/5, ML4.2/1, Error ellipse: s-maj=205.3km s-min=104.5km az=145.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.81**	**8**	Pn	Pn	03 34 40.1	+0.3
	0.3nm,0.3s,baz=200,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**46.54**	**347**	P	P	03 39 12.2	0.0
	2.4nm,0.6s,baz=162,slow=7.9,SNR=6.6						
SONM	**Songino Array**	**46.73**	**9**	P	P	03 39 13.7	0.0
	0.9nm,0.6s,baz=193,slow=8.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**52.91**	**351**	P	P	03 40 00.4	-0.3
	2.5nm,0.5s,baz=177,slow=6.2,SNR=4.3						
BVAR	**Borovoye Array**	**55.49**	**341**	P	P	03 40 19.8	+0.3
	1.2nm,0.7s,baz=139,slow=9.6,SNR=3.0						

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*NEIC **10** 03:57:19.7, 16°.89N×94°.30W, h137km, MD3.7(MEX), After MEX.*
MEX 10 03:57:19.7±1.5, 16°.89N×94°.30W, h137km±16km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.59**	**290**	*i* P	Pn	03 57 38.4	-1.7
CMIG				*i* S	Sn	03 57 53.5	-2.1
CMIG	**Matias Romero**	**0.59**	**290**	*i* P	Pn	03 57 38.4	-1.7
CMIG				*i* S	Sn	03 57 53.5	-2.1
TGIG		**1.13**	**96**	*i* P	Pn	03 57 43.2	-1.3
TGIG				*i* S	Sn	03 58 01.0	-2.4
PCIG		**1.57**	**139**	*e*P	Pn	03 57 48.7	-0.4
PCIG				*i* S	Sn	03 58 10.4	-1.1
HUIG	**Huatulco**	**2.06**	**238**	*e*P	Pn	03 57 52.1	-2.8
HUIG				*i* S	Sn	03 58 20.5	-1.3
HUIG	**Huatulco**	**2.06**	**238**	*e*P	Pn	03 57 52.1	-2.8
HUIG				*i* S	Sn	03 58 20.5	-1.3
CCIG	**Comitan**	**2.16**	**106**	*i* P	Pn	03 57 55.2	-0.8
CCIG				*e*S	Sn	03 58 23.6	-0.2
CCIG	**Comitan**	**2.16**	**106**	*i* P	Pn	03 57 55.2	-0.8
CCIG				*e*S	Sn	03 58 23.6	-0.2
VHO	**Vista Hermosa**	**2.34**	**275**	*i* P	Pn	03 57 58.5	+0.3
VHO				*i* S	Sn	03 58 27.4	-0.4
VHO	**Vista Hermosa**	**2.34**	**275**	*i* P	Pn	03 57 58.5	+0.3
VHO				*i* S	Sn	03 58 27.4	-0.4

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*DJA **10** 04:02:20, 2°.54N×95°.68E, h19km, MLv5.0/8*
*BJI **10** 04:02:21.3, 1°.96N×96°.17E, h36km, mB5.0/27, mb4.9/46, Ms4.8/37, Ms7 4.5/35*
*IDC **10** 04:02:21.4±0.7, 2°.44N×96°.28E, h0km, mb4.4/17, mb1 4.5/18, mb1mx4.3/24, mbtmp4.4/18, ML4.7/1, MS4.3/11, Ms1 4.4/11, ms1mx4.0/26, Error ellipse: s-maj=23.0km s-min=14.4km az=50.0*
*ISCJB **10** 04:02:25.3±0.3, 2°.42N±0°.04×96°.23E±0°.03, h33km, mb4.8/82, MS4.5/26, Error ellipse: s-maj=6.0km s-min=3.8km az=38.4*
*MOS **10** 04:02:25.1±1.2, 2°.49N×96°.38E, h33km, mb5.0/27, Error ellipse: s-maj=14.4km s-min=6.0km az=108.6*
*NEIC **10** 04:02:27.4±1.7, 2°.42N×96°.30E, h37km±14km, mb4.8/26, Error ellipse: s-maj=15.2km s-min=6.1km az=51.0*
NEIC Felt [II] at Sinabang.
*TEH **10** 04:02:28.0, 2°.42N×96°.32E, h38km*
ISC 10 04:02:27.8±0.3, 2°.46N±0°.04×96°.26E±0°.03, h35km, h35km±1.5km: pP-P, n194, σ1s15/189, mb4.8/82, MS4.5/26, 10C-7D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.22**	**49**	P	**Pn**	**04 02 47.5**	**-0.8**
TPTI				S	**Sn**	**04 03 08.7**	**+5.1**
TSI	**Tuntungan**	**2.53**	**66**	P	**Pn**	**04 03 08.2**	**+1.8**
TSI				S	**Sn**	**04 03 46.0**	**+10**
MNSI	**Mandailing Nat**	**3.71**	**116**	P	**Pn**	**04 03 23.4**	**+0.7**
SISI	**Saibi**	**4.71**	**143**	P	**Pn**	**04 03 37.4**	**+1.0**
	0.6nm10μm142nm,0.8s						
PPI	**Padang Panjang**	**5.05**	**125**	P	**Pn**	**04 03 43.6**	**+2.5**
	1.4nm88nm,0.8s						
IPM	**Ipoh**	**5.17**	**67**	P	**Pn**	**04 03 43.5**	**+0.8**
IPM	**Ipoh**	**5.17**	**67**	*e*Pn	**Pn**	**04 03 42.8**	**+0.1**
IPM	**Ipoh**	**5.17**	**67**	P	**Pn**	**04 03 43.3**	**+0.6**
	1.1nm3μm346nm,0.8s						
KULM	**Kulim**	**5.21**	**57**	P	**Pn**	**04 03 43.6**	**+0.4**
KULM	**Kulim**	**5.21**	**57**	P	**Pn**	**04 03 43.8**	**+0.5**
KULM	**Kulim**	**5.21**	**57**	*e*Pn	**Pn**	**04 03 43.6**	**+0.4**
KULM	**Kulim**	**5.21**	**57**	P	**Pn**	**04 03 43.5**	**+0.3**
	0.8nm2μm232nm,1.0s						
BKNI	**Bangkinang**	**5.23**	**114**	P	**Pn**	**04 03 43.4**	**-0.2**
	1.2nm111nm,0.7s						
PDSI	**Padang**	**5.38**	**129**	P	**Pn**	**04 03 47.8**	**+2.2**
FRIM	**Kepong**	**5.42**	**82**	P	**Pn**	**04

LSA pmax pmax
comp=Z,17nm,0.7s,mb4.8
LSA Lhasa 27.52 350 *eP* **P 04 08 12.1 +1.0**
comp=Z,17nm,0.7s,mb4.8
GKN Gorkha 27.72 337 *eP* **P 04 08 13.8 +0.9**
comp=Z,92nm,0.8s,mb5.5
KOLN Koldanda 27.92 336 *eP* **P 04 08 16.0 +1.2**
comp=Z,97nm,0.7s,mb5.5
DANN Dangsing 28.37 336 *eP* **P 04 08 19.3 +0.5**
comp=Z,56nm,0.7s,mb5.3
CD2 Chengdu 29.17 13 *eP* **P 04 08 27.2 +1.4**
CD2 pP pP 04 08 36.7 +0.7
CD2 sP sP 04 08 40.7 +0.4
CD2 PP PP 04 09 22.2 -10
CD2 S **S 04 13 16.1 +0.2**
CD2 sS sS 04 13 32.2 -0.5
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,50nm,4.6s
CD2 LR LR
comp=N,1μm,15.5s,MS4.8
CD2 LR LR
comp=E,2μm,15.5s,MS4.8
CD2 LR LR
comp=Z,1μm,11.9s,MS4.7
ENH Enshi 30.37 23 *eP* **P 04 08 34.5 -2.0**
comp=Z,7.9nm,0.6s,mb4.6
YULB Yu-li 31.95 47 *eP* **P 04 08 50.9 +0.4**
comp=Z,21nm,0.8s,mb5.0
MBWA Marble Bar 32.85 137 *eP* **P 04 08 58.6 +0.2**
comp=Z,15nm,1.3s,mb4.8
XAN Xi'an 33.57 19 P **P 04 09 02.7 -1.8**
XAN pP pP 04 09 10.9 -3.8
XAN pmax pmax
comp=Z,13nm,0.8s,mb4.9
XAN pmax pmax
comp=Z,37nm,8.7s
LZH Lanzhou 34.19 11 *eP* **P 04 09 09.0 -0.9**
LZH pP pP 04 09 19.6 -0.5
LZH sP sP 04 09 25.0 +0.6
LZH pmax pmax
comp=Z,42nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,93nm,7.3s
LZH LR LR
comp=N,370nm,12.8s,MS4.7
LZH LR LR
comp=E,920nm,14.1s,MS4.7
LZH LR LR
comp=Z,630nm,16.5s,MS4.4
FITZ Fitzroy Crossi 35.43 126 *eP* **P 04 09 19.1 -1.7**
comp=Z,9.2nm,0.9s,mb4.7
FITZ Fitzroy Crossi 35.43 126 *eP* **P 04 09 18.9 -1.9**
comp=Z,5.2nm,0.8s,mb4.5
NJ2 Nanjing 36.31 33 *eP* **P 04 09 29.2 +1.0**
NJ2 pP pP 04 09 39.6 +1.1
NJ2 sP sP 04 09 43.2 +0.4
NJ2 PP PP 04 10 53.1 +1.8
NJ2 S **S 04 15 06.0 -0.9**
NJ2 sS sS 04 15 23.7 -0.1
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
NJ2 pmax pmax
comp=Z,160nm,6.0s
NJ2 LR LR
comp=N,800nm,20.2s,MS4.7
NJ2 LR LR
comp=E,860nm,17.9s,MS4.7
GTA Gaotai 36.92 5 *eP* **P 04 09 32.4 -0.9**
GTA pP pP 04 09 41.6 -2.0
GTA sP sP 04 09 45.7 -2.1
GTA S **S 04 15 15.6 -0.3**
GTA sS sS 04 15 32.0 -0.9
GTA pmax pmax
comp=Z,40nm,0.9s,mb5.2
GTA pmax pmax
comp=Z,210nm,6.6s
GTA LR LR
comp=N,470nm,16.1s,MS4.5
GTA LR LR
comp=E,280nm,13.5s,MS4.5
GTA LR LR
comp=Z,580nm,15.4s,MS4.5
KAKA Kakadu 38.96 114 *eP* **P 04 09 48.9 -2.0**
comp=Z,21nm,0.6s,mb5.0
KAKA Kakadu 38.96 114 *eP* **P 04 09 48.8 -2.1**
comp=Z,56nm,0.6s,mb5.5
HHC Hu-ho-hao-te 40.64 18 *eP* **P 04 10 06.0 +1.5**
HHC pP pP 04 10 15.8 +1.0
HHC sP sP 04 10 19.8 +0.7
HHC PP PP 04 11 44.1 +5.5
HHC PcP PcP 04 12 07.2 +1.3
HHC ScP ScP 04 15 53.3 +0.4
HHC S **S 04 16 14.9 +3.0**
HHC sS sS 04 16 30.2 +1.2
HHC SS SS 04 19 11.9 -1.3
HHC pmax pmax
comp=Z,17nm,1.2s,mb4.5
HHC pmax pmax
comp=Z,690nm,5.8s
HHC LR LR
comp=N,500nm,13.1s,MS4.7
HHC LR LR
comp=E,510nm,13.6s,MS4.7
HHC LR LR
comp=Z,430nm,13.0s,MS4.5
KSH Kashi 41.24 336 *eP* **P 04 10 08.2 -1.2**
KSH *ep*P pP 04 10 18.0 -1.8
KSH *es*P sP 04 10 22.0 -2.1
KSH *eP*P PP 04 11 45.9 +0.8
KSH S **S 04 16 15.7 -5.2**
KSH pmax pmax
comp=Z,3.0nm,0.2s,mb4.6
KSH pmax pmax
comp=Z,97nm,3.4s
KSH LR LR
comp=N,760nm,14.2s,MS4.8
KSH LR LR
comp=E,440nm,12.4s,MS4.8
KSH LR LR
comp=Z,750nm,16.9s,MS4.6
BJT Baijiatuau 41.52 23 *eP* **P 04 10 12.2 +0.5**
BJT pmax pmax
comp=Z,69nm,0.6s
BJT Baijiatuau 41.52 23 *eP* **P 04 10 12.2 +0.5**
comp=Z,69nm,0.6s,mb5.5
BJI Beijing 41.54 23 P **P 04 10 11.8 -0.1**
BJI S **S 04 16 24.0 -1.4**
BJI pmax pmax
comp=Z,100nm,0.7s,mb5.5
BJI LR LR
comp=N,320nm,16.1s,MS4.4
BJI LR LR
comp=E,340nm,18.2s,MS4.4
BJI LR LR
comp=Z,170nm,21.5s,MS3.9
WMQ Urumqi 41.88 351 P **P 04 10 15.0 +0.4**
WMQ pP pP 04 10 25.0 0.0
WMQ sP sP 04 10 29.0 -0.2
WMQ PP PP 04 11 55.0 +3.1
WMQ S **S 04 16 31.0 +0.8**
WMQ sS sS 04 16 48.0 +0.6
WMQ SS SS 04 19 34.0 -3.7
WMQ pmax pmax
comp=Z,24nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,86nm,4.0s
WMQ LR LR
comp=N,390nm,15.0s,MS4.6
WMQ LR LR
comp=E,410nm,15.0s,MS4.6
WMQ LR LR
comp=Z,390nm,15.0s,MS4.4
ULHL Ulahol 43.48 338 P **P 04 10 28.7 +1.1**
SNR=12
WRA Warramunga Arr 43.50 123 P **P 04 10 26.5 -1.7**
comp=Z,2.4nm,0.4s,mb4.2,baz=301,slow=9.1,SNR=18
WB2 Warramunga Arr 43.51 123 *eP* **P 04 10 27.5 -0.7**
KZA Kyzart 43.71 337 P **P 04 10 22.4 -7.1**
SNR=7.5
KZA Kyzart 43.71 337 *eP* **P 04 10 32.6 +3.1**
KZA pmax pmax
comp=Z,13nm,1.3s,mb4.5
KZA Kyzart 43.71 337 *eP* **P 04 10 32.6 +3.1**
comp=Z,13nm,1.3s,mb4.5

TKM2 Tokmak 2 44.30 338 P **P 04 10 35.0 +0.8**
SNR=9.8
TKM2 Tokmak 2 44.30 338 *i* P **P 04 10 34.1 -0.1**
TKM2 pmax pmax
comp=Z,15nm,1.4s,mb4.5
TKM2 Tokmak 2 44.30 338 *eP* **P 04 10 35.0 +0.8**
comp=Z,20nm,1.4s,mb4.7
KBK Karagaybulak 44.32 337 P **P 04 10 36.1 +1.8**
SNR=6.2
KBK Karagaybulak 44.32 337 *eP* **P 04 10 36.4 +2.0**
KBK pmax pmax
comp=Z,17nm,1.0s,mb4.7
KBK Karagaybulak 44.32 337 *eP* **P 04 10 36.4 +2.0**
comp=Z,17nm,1.0s,mb4.7
AML Almayashu 44.37 336 P **P 04 10 35.5 +0.7**
SNR=5.7
AML Almayashu 44.37 336 *eP* **P 04 10 35.2 +0.4**
comp=Z,135nm,0.6s,mb5.8
AAK Ala-Archa 44.48 337 P **P 04 10 35.8 +0.2**
comp=Z,1.1nm,0.3s,mb4.0,baz=196,slow=7.4,SNR=6.4
EKS2 Erkin-Say 44.78 336 P **P 04 10 39.0 +0.9**
SNR=7.3
EKS2 Erkin-Say 44.78 336 *eP* **P 04 10 38.9 +0.9**
EKS2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
EKS2 Erkin-Say 44.78 336 *eP* **P 04 10 38.9 +0.9**
comp=Z,8.2nm,0.8s,mb4.6
FORT Forrest 44.84 140 *eP* **P 04 10 40.8 +2.1**
comp=Z,12nm,0.6s,mb4.9
ASAR Alice Springs 44.91 128 P **P 04 10 38.0 -1.3**
comp=Z,1.1nm,0.6s,mb3.9,baz=300,slow=7.7,SNR=14
USP Ospenovka 45.01 337 P **P 04 10 40.0 +0.1**
SNR=12
KSRS Korea Array 45.37 36 P **P 04 10 41.5 -1.4**
comp=Z,2.9nm,0.7s,mb4.2,baz=233,slow=8.4,SNR=14
KSRS LR LR 04 30 41.7
comp=Z,475nm,19.7s,MS4.4,baz=220,slow=38
IDAH Dahanechah 45.51 316 *eP* **P 04 10 44.9 +0.9**
MK31 Makanchi Array 45.80 347 *ceP* **P 04 10 45.3 -0.7**
MK31 pmax pmax
comp=Z,20nm,0.6s,mb5.2
MK31 Makanchi Array 45.80 347 *eP* **P 04 10 45.0 -1.0**
MKAR Makanchi Array 45.80 347 P **P 04 10 45.4 -0.7**
comp=Z,29nm,0.7s,mb5.3,baz=164,slow=7.2,SNR=148
MKAR LR LR 04 33 46.1
comp=Z,185nm,20.1s,MS4.0,baz=164,slow=41
SONM Songino Array 46.04 9 P **P 04 10 47.3 -0.6**
comp=Z,1nm,0.7s,mb5.0,baz=190,slow=8.9,SNR=60
SONM PcP PcP 04 12 23.6 -0.4
comp=Z,1.7nm,0.6s,baz=187,slow=5.8,SNR=2.8
KK31 Karatay Array 46.52 334 *ceP* **P 04 10 51.2 -0.5**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KKAR Karatay Array 46.52 334 *eP* **P 04 10 52.3 +0.6**
IMOG Moghan 47.79 319 *eP* **P 04 10 59.1 -2.7**
ZAK Zakamensk 48.12 6 *eP* **P 04 11 04.0 -0.1**
ZAK *e* pP 04 11 16.3 +1.7
ZAK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
IAKL Akhelmad 48.46 319 *eP* **P 04 11 07.1 +0.1**
CN2 Changchun 48.63 28 *eP* **P 04 11 06.5 -1.6**
CN2 *e*S **S 04 18 11.6 +3.8**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
CN2 pmax pmax
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,300nm,14.0s,MS4.7
CN2 LR LR
comp=E,400nm,14.0s,MS4.7
CN2 LR LR
comp=Z,300nm,19.0s,MS4.3
IKRD Kardeh 48.72 319 *eP* **P 04 11 02.4 -6.6**
IEMG Emamgholi 49.00 320 *eP* **P 04 11 11.0 -0.1**
TLY Talaya 49.44 6 *eP* **P 04 11 13.5 -0.7**
TLY pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
TLY MLR MLR
comp=Z,258nm,19.0s,MS4.2
TLY Talaya 49.44 6 *eP* **P 04 11 14.8 +0.6**
comp=Z,9.9nm,0.7s,mb5.0
KURK Kurchatov 50.34 346 *ceP* **P 04 11 20.3 -0.8**
KURK pmax pmax
comp=Z,17nm,1.2s,mb5.0
KURK Kurchatov 50.34 346 *eP* **P 04 11 21.6 +0.5**
comp=Z,46nm,1.7s,mb5.2
MDJ Mudanjiang 51.24 30 P **P 04 11 29.0 +1.0**
MDJ pP pP 04 11 38.1 -0.5
MDJ sP sP 04 11 42.0 -0.8
MDJ ScP ScP 04 16 37.7 +0.9
MDJ PcS PcS 04 16 41.4 +1.0
MDJ S **S 04 18 46.5 +2.2**
MDJ sS sS 04 19 02.0 +0.3
MDJ pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
MDJ LR LR
comp=N,260nm,15.7s,MS4.6
MDJ LR LR
comp=E,400nm,17.6s,MS4.6
MDJ LR LR
comp=Z,340nm,16.0s,MS4.5
MJAR Matsushiro Arr 51.41 44 P **P 04 11 28.0 -1.4**
comp=Z,2.2nm,0.7s,mb4.2,baz=204,slow=7.6,SNR=5.1
MJAR PcP PcP 04 12 43.7 0.0
comp=Z,0.8nm,0.2s,baz=230,slow=4.4,SNR=4.1
MJAR LR LR 04 34 13.4
comp=Z,209nm,19.8s,MS4.2,baz=255,slow=37
MJAR Matsushiro Arr 51.41 44 P **P 04 11 28.0 -1.4**
MJAR 04 12 43.7
MJAR Matsushiro Arr 51.41 44 P **P 04 11 28.0 -1.4**
MJAR PcP PcP 04 12 43.7 0.0
MJAR LR LR 04 34 13.4
ZAA0 Zalesovo Array 52.17 351 *eP* **P 04 11 33.5 -1.3**
ZALV Zalesovo Beam 52.17 351 P **P 04 11 33.9 -0.8**
comp=Z,16nm,0.6s,mb5.2,baz=179,slow=6.3,SNR=52
ZALV LR LR 04 38 26.1
comp=Z,197nm,18.5s,MS4.2,baz=286,slow=42
ZALV Zalesovo Beam 52.17 351 P **P 04 11 33.9 -0.8**
ZALV LR LR 04 38 26.1
NVS Novosibirsk 53.28 351 *eP* **P 04 11 40.5 -2.4**
NVS pmax pmax
comp=N,5.0nm,0.9s
NVS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
NVS pmax pmax
comp=E,2.0nm,0.7s
VOSK Vostochnaya 54.31 341 P **P 04 11 49.1 -1.4**
VOSK pmax pmax
comp=Z,12nm,0.9s,mb4.8
BVAR Borovoye Array 54.76 341 P **P 04 11 52.6 -1.2**
comp=Z,8.7nm,0.8s,mb4.9,baz=137,slow=8.8,SNR=27
BRVK Borovoye 54.82 341 *ceP* **P 04 11 53.5 -0.7**
BRVK pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
BRVK Borovoye 54.82 341 *eP* **P 04 11 53.6 -0.6**
comp=Z,8.8nm,0.7s,mb5.0
STKA Stephens Creek 54.90 132 P **P 04 11 54.3 -0.9**
comp=Z,2.9nm,0.7s,mb4.4,baz=302,slow=8.0,SNR=8.5
STKA LR LR 04 37 55.5
comp=Z,322nm,18.2s,MS4.4,baz=118,slow=39
STKA Stephens Creek 54.90 132 *eP* **P 04 11 54.8 -0.4**
comp=Z,2.9nm,0.6s,mb4.5
ZRNK Zerenda 55.15 340 *i* P **P 04 11 55.4 -1.2**
ZRNK pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KLR Kul'dur 55.56 27 *eP* **P 04 11 55.1 -4.5**
KLR MLR MLR
comp=E,500nm,13.5s
KLR MLR MLR
comp=Z,2μm,13.5s,MS5.4
AB31 Akbulak array 55.96 332 *i* P **P 04 12 01.4 -1.1**
AB31 pmax pmax
comp=Z,22nm,0.9s,mb5.2
ABKAR Akbulak array 55.96 332 *eP* **P 04 12 01.8 -0.7**
AKTK Aktyubinsk 57.68 332 P **P 04 12 13.9 -0.7**
AKTO Aktyubinsk 57.68 332 P **P 04 12 13.9 -0.7**
comp=Z,6.0nm,0.6s,mb4.8,baz=102,slow=7.5,SNR=11
CMSA Cobar Meteorol 57.82 130 *eP* **P 04 12 15.9 -0.1**
KMBO Kilima Mbogo 59.10 267 P **P 04 12 25.3 0.0**
comp=Z,3.0nm,0.8s,mb4.4,baz=180,slow=24,SNR=7.4
KMBO LR LR 04 34 20.0
comp=Z,385nm,18.2s,MS4.6,baz=90,slow=32
KMBO Kilima Mbogo 59.10 267 *eP* **P 04 12 26.1 +0.8**
KMBO pmax pmax
comp=Z,1.0nm,0.8s
KMBO Kilima Mbogo 59.10 267 *eP* **P 04 12 26.1 +0.9**

comp=Z,1.3nm,0.8s,mb4.0
GNI Garni 59.74 316 *eP* **P 04 12 28.2 -1.0**
GNI pmax pmax
comp=Z,4.0nm,1.0s
ZEI Tsey 61.43 318 *eP* **P 04 12 40.6 -0.1**
ZEI pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
ARU Arti 61.66 337 *eP* **P 04 12 41.4 -0.6**
ARU pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
ARU Arti 61.66 337 *eP* **P 04 12 41.4 -0.6**
comp=Z,6.2nm,0.6s,mb4.9
KIV Kislovodsk 62.74 319 *de*P **P 04 12 49.3 -0.2**
KIV *i* 04 13 27.1
KIV *i* 04 15 03.0
KIV pmax pmax
comp=Z,16nm,1.0s,mb5.1
MMAI Mount Meron Ar 64.41 306 P **P 04 13 01.3 +0.6**
comp=Z,0.4nm,0.3s,mb3.9,baz=153,slow=8.1,SNR=2.3
YAK Yakutsk 64.48 17 *eP* **P 04 12 59.0 -1.6**
YAK pmax pmax
comp=Z,43nm,1.0s,mb5.4
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.1s
SOKR Solikamsk 64.57 339 *eP* **P 04 13 04.6 +3.4**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,370nm,21.0s,MS4.5
MBAR Mbarara 65.57 268 *eP* **P 04 13 09.2 +0.6**
VRHR Novokhopersk 66.56 326 *eP* **P 04 13 16.3 +2.1**
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.4
VRHR pmax pmax
comp=N,7.0nm,0.3s
VRHR pmax pmax
comp=E,8.0nm,0.3s
BR131 Keskin Array S 67.57 312 *eP* **P 04 13 20.1 -0.8**
comp=E,1.9nm,0.8s,mb4.2
BRTR Keskin Array B 67.57 312 P **P 04 13 18.9 -2.0**
comp=E,0.9nm,0.7s,mb3.9,baz=148,slow=5.8,SNR=5.5
VORD Divnogorie 67.82 325 *eP* **P 04 13 24.6 +2.4**
VORD pmax pmax
comp=N,5.0nm,0.7s
VORD pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
VORD pmax pmax
comp=E,1.0nm,0.4s
VSR Storozhevoye 68.00 325 *eP* **P 04 13 24.1 +0.7**
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,2.0nm,0.3s
PRGR Permogore 70.11 337 *eP* **P 04 13 35.3 -1.0**
PRGR pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
MOS Moscow 70.77 329 *eP* **P 04 13 34.6 -5.8**
OBN Obninsk 71.06 328 *eP* **P 04 13 43.0 +0.9**
OBN pmax pmax
comp=Z,32nm,1.6s,mb5.0
KLMR Klimovskoe 72.21 335 *eP* **P 04 13 47.2 -1.8**
KLMR pmax pmax
comp=Z,18nm,1.8s,mb4.7
SEY Seymchan 72.98 23 *ceP* **P 04 13 53.0 -0.5**
VRI Vrincioaia 74.06 317 ||P **P 04 14 03.2 +3.0**
VRI Vrincioaia 74.06 317 ||*i*P **P 04 14 03.2 +3.0**
TESR 74.26 318 ||*i*P **P 04 14 00.6 -0.8**
MLR Muntele Rosu 74.51 317 ||P **P 04 14 03.6 +0.8**
MLR Muntele Rosu 74.51 317 ||*i*P **P 04 14 03.6 +0.8**
BOSA Boshof 74.59 240 LR LR 04 44 04.1
comp=Z,268nm,18.2s,MS4.6,baz=350,slow=34
BURAR Bucovina Array 75.46 319 ||P **P 04 14 08.5 +0.2**
BURAR Bucovina Array 75.46 319 ||*i*P **P 04 14 08.5 +0.2**
BUR08 Bucovina Ar. S 75.48 319 *eP* **P 04 14 08.8 +0.4**
JOF Joensuu 76.61 335 *eP* **P 04 14 15.7 +1.2**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
JOF Joensuu 76.61 335 *ep* **P 04 14 15.7 +1.2**
comp=Z,0.5nm,0.4s,mb3.8
KWP Kalwaria Pacla 77.50 320 *eP* **P 04 14 22.0 +2.2**
comp=Z,38nm,1.5s,mb5.1
KWP Kalwaria Pacla 77.50 320 ||*i*P **P 04 14 22.5 +2.7**
FINES FINESS Array B 78.45 333 P **P 04 14 23.9 -0.9**
comp=Z,3.4nm,0.6s,mb4.5,baz=72,slow=6.2,SNR=6.5
KAF Kangasniemi 78.54 333 *eP* **P 04 14 16.7 -8.6**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KAF Kangasniemi 78.54 333 *ep* **P 04 14 16.7 -8.6**
comp=Z,1.1nm,0.4s,mb4.1
PSZ Piszkesteto 79.05 318 *eP* **P 04 14 28.6 +0.2**
PSZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
PSZ Piszkesteto 79.05 318 *eP* **P 04 14 28.6 +0.2**
comp=Z,2.2nm,0.6s,mb4.3
KEV Kevo 80.61 341 *eP* **P 04 14 36.5 +0.1**
KEV pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KEV Kevo 80.61 341 *eP* **P 04 14 36.5 +0.1**
comp=Z,1.0nm,0.7s,mb3.9
KEV Kevo 80.61 341 *ep* **P 04 14 34.8 -1.6**
comp=Z,0.3nm,0.4s,mb3.6
ARCES ARCESS Array B 81.04 340 P **P 04 14 37.6 -1.1**
comp=Z,2.8nm,0.8s,mb4.3,baz=98,slow=5.9,SNR=16
ARCES LR LR 04 56 32.6
comp=Z,178nm,20.6s,MS4.4,baz=298,slow=40
ARE0 ARCESS Array S 81.04 340 *eP* **P 04 14 39.3 +0.6**
SOKA Soboth 82.19 317 ||*i*PcP PcP 04 14 52.2 +1.6
comp=Z,5.8nm,1.2s
BRG Berggiesshubel 83.24 321 *e*(P) PcP 04 14 57.6 +2.6
comp=Z,15nm,1.7s
BRG Berggiesshubel 83.24 321 *eP* PcP 04 14 57.6 +2.5
BRG pmax pmax
comp=Z,2.0nm,1.7s,mb3.9
URZ Urewera 84.33 129 LR LR 04 57 17.1
comp=Z,196nm,18.1s,MS4.5,baz=301,slow=39
NB2 NORSAR Subarra 85.45 331 P **P 04 15 01.4 -0.2**
comp=Z,3.8nm,0.9s,mb4.5,baz=94,slow=6.5
NOA NORSAR Array B 85.45 331 P **P 04 15 00.6 -1.0**
comp=Z,0.7nm,0.8s,mb3.9,baz=212,slow=20,SNR=3.2
NOA LR LR 04 57 39.1
comp=Z,140nm,19.9s,MS4.3,baz=90,slow=39
BFO Black Forest 86.80 318 *eP* **P 04 15 08.4 -0.1**
BFO pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
BFO Black Forest 86.80 318 *eP* **P 04 15 08.3 -0.2**
comp=Z,3.1nm,0.8s,mb4.6
BPAW Bear Paw Mtn. 97.55 24 *eP* **P 04 15 58.5 +0.5**
comp=Z,3.8nm,0.9s,mb4.9
MSO Missoula 124.19 25 *e*PKPdf PKPdf 04 21 22.5 -0.4
BOZ Bozeman (W) 126.09 24 *e*PKIKP PKPdf 04 21 26.5 -0.1
HLID Hailey 126.54 27 *e*PKPdf PKPdf 04 21 28.1 +0.6
LOHW Long Hollow 128.18 25 *e*PKPdf PKPdf 04 21 30.9 +0.2
NVAR Mina Array Bea 128.30 35 PKP PKPdf 04 21 28.8 -2.2
comp=Z,0.2nm,0.4s,baz=260,slow=3.6,SNR=2.6
MSU Marysvale 131.51 30 *e*PKIKP PKPdf 04 21 38.6 +1.4
ECSD EROS Data Cent 132.58 13 *e*PKPdf PKPdf 04 21 39.2 +0.2
ANMO Albuquerque 137.12 28 *e*PKIKP PKPdf 04 21 48.8 +1.0
MNTX Cornudas Mount 140.29 29 *e*PKPdf PKPdf 04 21 54.2 +0.5
TXAR Lajitas Array 143.07 30 PKhKP PKPpre 04 21 53.8
comp=Z,0.4nm,0.6s,baz=226,slow=4.9,SNR=6.6
JCT Junction City 143.84 24 *e*PKIKP PKPdf 04 21 57.8 -2.2
VBMS Vicksburg 144.92 10 *e*PKPdf PKPdf 04 22 01.6 -0.2
CPUP Villa Florida 145.27 224 PKPbc PKPbc 04 22 00.7 -1.7
comp=Z,0.7nm,0.5s,baz=116,slow=3.4,SNR=5.8
HKT Hockley 145.76 19 *e*PKP2 PKPab 04 22 03.1 -1.0

IDC 10 04:04:02.4±5.8, 30°68'N×84°42'E, h0km, mb3.4/3,
mb1 3.5/4, mb1mx3.4/23, mbtmp3.4/4, ML3.2/1, Error
ellipse: s-maj=111.5km s-min=71.2km az=46.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
						h m s	ISC
MKAR	**Makanchi Array**	**16.18**	**355**	Pn	Pn	04 07 51.2	+0.2
	0.1nm,0.3s,baz=174,slow=14,SNR=4.9						
ZALV	**Zalesovo Beam**	**23.26**	**1**	P	P	04 09 10.5	-0.8
	0.4nm,0.5s,baz=176,slow=8.7,SNR=2.4						
SONM	**Songino Array**	**24.02**	**38**	P	P	04 09 18.9	+0.2
	0.2nm,0.5s,baz=230,slow=9.1,SNR=2.4						
ILAR	**Eielson Array**	**76.83**	**20**	P	P	04 15 56.0	+0.3
	0.6nm,0.9s,baz=318,slow=3.9,SNR=5.9						
ILAR	**Eielson Array**	**76.83**	**20**	P	P	04 15 56.0	+0.3

ILAR	Eielson Array	76.83	20	P	P	04 15 56.0 +0.3

IDC 10 04:04:18.9±4.1, 15°.95S×174°.41W, h62km±37km, mb3.4/3, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, ML2.2/1, Error ellipse: s-maj=183.1km s-min=24.3km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.25	52	P	Pn	04 05 09.5	+2.0
	16nm,0.3s,baz=157,slow=13,SNR=8.0						
AFI				S	Sn	04 05 45.1	+0.1
	37nm,0.3s,baz=37,slow=21,SNR=11						
ASAR	Alice Springs	49.02	252	P	P	04 12 59.4	-0.5
	1.8nm,0.7s,baz=84,slow=8.4,SNR=12						
ILAR	Eielson Array	83.17	12	P	P	04 16 38.4	+0.6
	0.2nm,0.6s,baz=221,slow=4.9,SNR=5.4						
PDAR	Pinedale Array	83.32	42	P	P	04 16 39.4	+0.3
	0.4nm,0.6s,baz=216,slow=2.9,SNR=4.1						

WEL 10 04:33:38.4±0.4, 39°.07S×175°.03E, h219km±3km, ML3.6/17, Error ellipse: s-maj=4.3km s-min=2.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FWVZ	Far West T-bar	0.45	115	PN	Pn	04 34 07.4	0.0
KRVZ	Karewarewa	0.48	93	PN	Pn	04 34 07.3	-0.3
KRVZ				SN	S	04 34 30.1	-0.2
WNVZ	Wahianoa	0.51	120	PN	Pn	04 34 07.9	+0.3
WNVZ				SN	S	04 34 30.8	+0.3
MOVZ	Moawhango	0.66	121	PN	Pn	04 34 07.9	-0.3
MOVZ				SN	S	04 34 30.1	-1.5
WAZ	Wanganui	0.69	183	PN	Pn	04 34 08.8	+0.5
BHHZ	Black Hill Sta	0.91	118	PN	Pn	04 34 09.1	-0.3
BHHZ				SN	S	04 34 32.4	-1.3
BKZ	Black Stump Fm	1.14	95	PN	Pn	04 34 09.8	-1.2
TSZ	Takapari Road	1.22	144	PN	Pn	04 34 11.8	+0.3
PNHZ	Pukenui	1.24	133	PN	Pn	04 34 11.9	+0.3
MCHZ	McNeill Hill	1.35	107	PN	Pn	04 34 12.8	+0.3
POWZ	Post Office Ro	1.44	157	PN	Pn	04 34 13.3	+0.1
WPHZ	Waipukurau	1.48	133	PN	Pn	04 34 13.8	+0.3
WPHZ				SN	S	04 34 41.0	0.0
DVHZ	Dannevirke	1.51	145	PN	Pn	04 34 13.9	+0.1
KAHZ	Kahuranaki	1.60	117	PN	Pn	04 34 15.0	+0.4
MRZ	Mangatainoka R	1.65	165	PN	Pn	04 34 14.7	-0.2
PXZ	Pawanui	1.71	125	PN	Pn	04 34 15.5	-0.1
PRHZ	Porangahau	1.72	134	PN	Pn	04 34 15.7	0.0
OGWZ	Otaki Gorge	1.75	176	PN	Pn	04 34 15.9	0.0
KIW	Kapiti Island	1.79	183	PN	Pn	04 34 15.9	-0.3
URZ	Urewera	1.82	64	PN	Pn	04 34 14.1	-2.5
TIWZ	Tintock	1.83	159	PN	Pn	04 34 16.4	-0.2
BFZ	Birch Farm	1.86	150	PN	Pn	04 34 16.5	-0.4
HOWZ	Holdsworth Sta	1.86	169	PN	Pn	04 34 16.5	-0.4
DUWZ	D'Urville Isla	1.93	206	PN	Pn	04 34 17.0	-0.5
CAW	Cannon Point	2.04	179	PN	Pn	04 34 18.2	-0.4
KNZ	Kokohu	2.06	89	PN	Pn	04 34 17.9	-1.0
MTW	Mount Morrison	2.12	170	PN	Pn	04 34 18.7	-0.6
TCW	Tory Channel	2.21	195	PN	Pn	04 34 20.0	-0.4
SNZO	South Karori	2.25	186	PN	Pn	04 34 19.8	-0.9
PAWZ	Paruwai Farm	2.33	173	PN	Pn	04 34 20.9	-0.6
BHW	Baring Head	2.34	183	PN	Pn	04 34 20.9	-0.7
MSWZ	Moikau Station	2.35	176	PN	Pn	04 34 21.0	-0.7
NNZ	Nelson	2.49	210	PN	Pn	04 34 22.2	-1.1
TUWZ	Tuamarina	2.50	199	PN	Pn	04 34 22.7	-0.6
PLWZ	Palliser	2.50	176	PN	Pn	04 34 22.5	-0.9
QRZ	Quartz Range	2.60	227	PN	Pn	04 34 22.5	-1.9
BSWZ	Blackbirch Sta	2.78	198	PN	Pn	04 34 25.9	-0.5
THZ	Tophouse	3.14	210	PN	Pn	04 34 29.1	-1.4
KHZ	Kahutara	3.53	198	PN	Pn	04 34 33.9	-1.2
DSZ	Denniston Nort	3.63	222	PN	Pn	04 34 33.8	-2.5
LTZ	Lake Taylor	4.26	209	PN	Pn	04 34 41.7	-2.1
MQZ	McQueen's Vall	4.96	200	PN	Pn	04 34 49.6	-3.0

*NIED **10** 04:37:00, 24°.80N×125°.40E, h41km, Mw4.4 Best double couple: M₀4.07000×10¹⁵ NP1:φ₀57.00000°, δ86.00000°, λ102.00000°. NP2:φ₀163.00000°, δ12.00000°, λ17.00000°.*
*BJI **10** 04:37:17.3, 24°.77N×125°.43E, h48km, mB4.4/6, mb4.4/10, Ms4.0/3, Ms7 3.7/3*
*ISCJB **10** 04:37:18.9±0.4, 24°.81N±0°.06×125°.36E±0°.04, h53km±3km, mb4.2/28, MS3.4/2, Error ellipse: s-maj=10.9km s-min=4.6km az=152.0*
*IDC **10** 04:37:20.0±0.8, 24°.81N×125°.21E, h48km±8km, mb3.9/14, mb1 4.0/16, mb1mx3.9/24, mbtmp3.9/16, ML3.8/2, MS3.5/3, Ms1 3.5/3, ms1mx2.9/31, Error ellipse: s-maj=24.4km s-min=13.7km az=77.0*
*JMA **10** 04:37:19.5±0.1, 24°.81N×125°.40E, h49km±1km, M4.5*
JMA Felt III J1.
*NEIC **10** 04:37:21.0±1.1, 24°.77N×125°.21E, h55km±10km, mb4.4/13, Error ellipse: s-maj=11.1km s-min=9.9km az=118.0*
NEIC Recorded [2 JMA] on Miyako-jima and [1 JMA] on Tarama-shima.

ISC 10 04:37:20.1±0.3, 24°.84N±0°.05×125°.34E±0°.04, h47km±3km, h49km±.5km: pP-P, n62, σ1$07/69, mb4.2/28, MS3.4/2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ	Miyako jima 2	0.04	241	P	Pn	04 37 27.1	-0.3
JMJ				S	Sn	04 37 32.5	0.0
JOGS	Gusukube	0.10	140	P	Pn	04 37 27.1	-0.5
JOGS				S	Sn	04 37 32.5	-0.3
JTJ	Tarama	0.61	252	P	Pn	04 37 32.7	+0.1
JTJ				S	Sn	04 37 42.1	+0.6
JIJ	Ishigaki jima	1.18	247	P	Pn	04 37 40.3	0.0
JIJ				S	Sn	04 37 56.5	+1.3
JKRS	Kuro-shima	1.35	244	P	Pn	04 37 43.9	+1.4
JKRS				S	Sn	04 38 02.2	+3.0
IRIF	Iriomote-Funau	1.54	251	P	Pn	04 37 45.1	-0.1
HATJ	Hateruma jima	1.60	241	P	Pn	04 37 48.5	+2.6
JKE	Kume jima 2	1.98	41	P	Pn	04 37 51.3	+0.1
YOJ	Yonaguni jima	2.15	260	P	Pn	04 37 53.6	+0.1
JAGN	Aguni-jima	2.45	44	P	Pn	04 37 59.0	+1.4
JIH	Iheya	3.23	47	P	Pn	04 38 08.1	-0.2
JOW	Kunigami	3.31	52	P	Pn	04 38 09.2	-0.2
NACB	Ninganchiao	3.47	260	ePn	Pn	04 38 11.2	-0.4
TATO	Taipei	3.50	273	ePn	Pn	04 38 11.3	-0.7
YHNB	Yeheng	3.60	268	ePn	Pn	04 38 15.1	+1.6
YULB	Yu-li	3.96	250	ePn	Pn	04 38 16.4	-2.0
SSLB	Suanglung	4.13	256	ePn	Pn	04 38 20.4	-0.3
SSLB				eSn	Sn	04 39 05.8	-2.0
JTK	Tokunoshima	4.38	47	P	Pn	04 38 22.7	-1.4
TWG	Pinlang	4.39	244	ePn	Pn	04 38 21.6	-2.6
TPUB	Ta-pu	4.56	251	ePn	Pn	04 38 26.7	0.0
TPUB				eSn	Sn	04 39 18.7	+0.2
JAM	Amami Oshima	5.22	46	P	Pn	04 38 34.1	-1.6
KSRS	Korea Array	12.77	9	P	Pn	04 40 19.6	+0.6
	0.2nm,0.3s,baz=188,slow=14,SNR=6.9						
KSRS				LR	LR	04 44 53.5	
	comp=Z,118nm,18.7s,baz=178,slow=35						
MJAR	Matsushiro Arr	16.07	40	P	Pn	04 41 04.4	+1.6
	1.1nm,0.3s,baz=230,slow=12,SNR=9.6						
HHC	Hu-ho-hao-te	19.68	328	eP	Pn	04 41 48.0	+1.0
HHC				pP	pP	04 41 56.5	+0.3
HHC				sP	sP	04 42 01.0	-1.2
HHC				PP		04 42 07.0	
HHC				S	S	04 45 23.9	-0.7
HHC				sS	sS	04 45 36.1	-6.2
HHC				SS		04 45 52.0	
HHC				PcP	PcP	04 46 04.1	+1.3
HHC				pmax	pmax		
	comp=Z,190nm,1.0s						
HHC				pmax	pmax		
	comp=Z,410nm,5.6s						
HHC				LR	LR		
	comp=N,810nm,10.6s						
HHC				LR	LR		
	comp=E,860nm,9.5s						
HHC				LR	LR		
	comp=Z,980nm,14.3s						
GUMO	Guam	21.54	118	LR	LR	04 48 28.3	
	comp=Z,110nm,19.4s,MS3.3,baz=360,slow=31						
CHTO	Chiang Mai	25.20	261	eP	P	04 42 42.2	+0.7
	comp=Z,3.2nm,0.6s,mb4.0						
GTA	Gaotai	25.93	310	eP	P	04 42 48.2	+0.2
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
SONM	Songino Array	27.42	332	P	P	04 43 00.1	-1.1
	comp=Z,1.2nm,0.5s,mb3.6,baz=151,slow=11,SNR=4.9						
SONM				LR	LR	04 54 09.0	
	comp=Z,170nm,20.3s,MS3.6,baz=182,slow=37						
IPM	Ipoh	30.91	233	eP	P	04 43 30.1	-2.6
	comp=Z,9.4nm,0.4s,mb5.0						
MK31	Makanchi Array	40.56	314	eP	P	04 44 53.9	-1.0
MKAR	Makanchi Array	40.56	314	P	P	04 44 54.7	-0.2
	comp=Z,3.4nm,0.5s,mb4.2,baz=99,slow=10,SNR=37						
MKAR	Makanchi Array	40.56	314	P	P	04 44 54.7	-0.2
ZAA0	Zalesovo Array	41.82	325	eP	P	04 45 03.8	-1.4
ZALV	Zalesovo Beam	41.82	325	P	P	04 45 04.0	-1.1
	comp=Z,3.1nm,0.5s,mb4.2,baz=113,slow=8.4,SNR=13						
FITZ	Fitzroy Crossi	42.68	180	P	P	04 45 11.9	-0.5
	comp=Z,1.2nm,0.9s,mb3.6,baz=352,slow=6.5						
FITZ				pP	pP	04 45 24.5	-0.6
KURK	Kurchatov	44.07	318	eP	P	04 45 22.6	-0.8
	comp=Z,1.7nm,0.5s,mb4.0						
TKM2	Tokmak 2	44.38	307	eP	P	04 45 27.1	+1.2
	comp=Z,5.0nm,0.8s,mb4.3						
WRA	Warramunga Arr	45.36	168	P	P	04 45 33.5	-0.5
	comp=Z,1.0nm,0.6s,mb3.9,baz=349,slow=8.7,SNR=12						
WRA				pP	pP	04 45 46.5	-0.3
	comp=Z,14nm,0.9s,baz=350,slow=8.3,SNR=38						
WRA	Warramunga Arr	45.36	168	P	P	04 45 33.5	-0.5
WRA				pP	pP	04 45 46.5	-0.3
ASAR	Alice Springs	48.92	170	P	P	04 46 01.7	+0.1
	comp=Z,0.7nm,0.9s,mb3.7,baz=359,slow=7.6,SNR=8.1						
ASAR				pP	pP	04 46 14.6	0.0
	comp=Z,2.6nm,0.5s,baz=357,slow=7.2,SNR=15						
ABKAR	Abkulak array	55.71	314	eP	P	04 46 52.4	+0.6
	comp=Z,1.0nm,0.3s,mb4.3						
COLA	College	66.47	28	eP	P	04 48 07.7	+3.3
	comp=Z,2.6nm,0.6s,mb4.4						
ILAR	Eielson Array	66.89	28	P	P	04 48 06.7	-0.4
	comp=Z,1.1nm,0.6s,mb4.1,baz=247,slow=4.3,SNR=36						
EGAK	Eagle	69.29	27	eP	P	04 48 23.2	+1.0
	comp=Z,3.7nm,0.7s,mb4.4						
ARCES	ARCESS Array B	70.34	338	P	P	04 48 28.9	+0.3
	comp=Z,0.7nm,0.7s,mb3.7,baz=60,slow=5.8,SNR=4.5						
INK	Inuvik	71.19	23	eP	P	04 48 34.9	+1.2
	comp=Z,6.1nm,0.9s,mb4.5						
MALT	Malatya	72.76	305	eP	P	04 48 45.0	+1.4
	comp=Z,8.3nm,0.7s,mb4.8						
FINES	FINESS Array B	72.78	330	P	P	04 48 44.4	+1.1
	comp=Z,1.4nm,0.4s,mb4.2,baz=323,slow=36,SNR=5.8						
AKASG	Malin Array Be	74.88	319	P	P	04 48 55.3	-0.5
	comp=Z,3.2nm,0.5s,mb4.5,baz=57,slow=6.4,SNR=8.3						
AKBB	Malin Array Si	74.88	319	eP	P	04 48 55.1	-0.7
KIEV	Kiev	74.89	319	eP	P	04 48 54.6	-1.3
	comp=Z,4.4nm,0.6s,mb4.6						
BR131	Keskin Array S	75.81	307	eP	P	04 49 02.2	+0.8
	comp=Z,8.3nm,0.9s,mb4.7						
BRTR	Keskin Array B	75.81	307	P	P	04 49 01.0	-0.4
	comp=Z,7.1nm,0.8s,mb4.6,baz=92,slow=6.5,SNR=29						
BUR08	Bucovina Ar. S	78.49	317	eP	P	04 49 17.1	+0.8
ATD	Arta Tunnel	78.50	277	P	P	04 49 14.8	-2.2
	comp=Z,9.4nm,0.3s,mb5.1,baz=207,slow=19,SNR=5.6						
NB2	NORSAR Subarra	79.39	333	P	P	04 49 20.5	-0.4
	comp=Z,1.6nm,0.6s,mb4.1,baz=56,slow=5.6						
NOA	NORSAR Array B	79.39	333	P	P	04 49 20.8	-0.1
	comp=Z,2.5nm,0.7s,mb4.2,baz=55,slow=5.5,SNR=8.1						
YKA	Yellowknife Ar	80.87	24	P	P	04 49 28.6	-0.3
	comp=Z,0.7nm,0.7s,mb3.7,baz=300,slow=5.6,SNR=4.5						
YKA	Yellowknife Ar	80.87	24	P	P	04 49 28.6	-0.3
MORC	Moravsky Berou	82.07	321	eP	P	04 49 35.9	+0.4
	comp=Z,2.9nm,0.8s,mb4.3						
HLID	Hailey	92.63	39	eP	P	04 50 28.6	+1.7
	comp=Z,1.5nm,0.7s,mb4.5						
NVAR	Mina Array Bea	93.34	45	P	P	04 50 31.1	+0.8
	comp=Z,0.7nm,0.8s,mb4.1,baz=271,slow=3.8,SNR=3.6						

IDC 10 04:43:57.8±3.6, 2°.15N×96°.09E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/20, mbtmp3.7/5, Error ellipse: s-maj=148.2km s-min=22.2km az=59.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.48	122	P	P	04 52 03.7	+0.6
	0.5nm,0.6s,baz=300,slow=9.1,SNR=2.5						
ASAR	Alice Springs	44.85	127	P	P	04 52 13.4	-0.8
	0.2nm,0.6s,baz=301,slow=8.0,SNR=4.5						
MKAR	Makanchi Array	46.06	347	P	P	04 52 23.4	0.0
	1.4nm,0.7s,baz=162,slow=8.3,SNR=16						
SONM	Songino Array	46.37	10	P	P	04 52 25.7	0.0
	1.0nm,0.8s,baz=181,slow=7.2,SNR=5.5						
ZALV	Zalesovo Beam	52.45	352	P	P	04 53 12.1	0.0
	1.1nm,0.3s,baz=177,slow=5.9,SNR=6.0						

DJA 10 04:45:23, 6°.45S×104°.42E, h11km, MLv3.6/10, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	0.92	5	P	Pg	04 45 40.2	-0.6
KASI				S	Sg	04 45 52.0	-0.9
CGJI	Cibinong	1.27	97	P	Pn	04 45 45.2	-1.6
BLSI	Bandar Lampung	1.35	37	P	Pn	04 45 47.5	-0.3
BLSI				S	Sb	04 46 05.8	+0.1
RBSI	Rajabasa	1.45	65	P	Pn	04 45 49.1	0.0
RBSI				S	Sn	04 46 08.9	+0.8
LWLI	Liwa	1.47	346	P	Pn	04 45 49.5	+0.1
LWLI				S	Sn	04 46 10.5	+1.9
KLSI		1.77	10	P	Pn	04 45 53.5	-0.2
MDSI	Maura Dua	1.97	353	P	Pn	04 45 56.8	+0.5
DBJI	Dramaga	2.32	93	P	Pn	04 46 03.3	+2.2
CBJI	Citeko	2.42	89	P	Pn	04 46 03.3	+0.8
MNAI	Manna	2.54	325	P	Pn	04 46 04.3	+0.2

*ISCJB **10** 05:00:36.0±0.3, 32°.41N±0°.03×105°.48E±0°.04, h10km, mb4.0/13, Error ellipse: s-maj=5.5km s-min=4.7km az=179.7*
*IDC **10** 05:00:36.1±0.7, 32°.42N×105°.33E, h0km, mb4.0/9, mb1 4.1/12, mb1mx4.0/25, mbtmp4.0/12, ML3.9/3, MS3.3/1, Ms1 3.3/1, ms1mx2.7/31, Error ellipse: s-maj=34.4km s-min=14.5km az=58.0*
*BJI **10** 05:00:38.3, 32°.56N×105°.43E, h14km, mb4.3/6, ML4.0/20, Ms4.0/11, Ms7 3.7/8*
*NEIC **10** 05:00:41.8±1.1, 32°.42N×105°.33E, h39km±12km, mb4.1/4, Error ellipse: s-maj=12.9km s-min=6.8km az=56.0*

ISC 10 05:00:38.1±0.3, 32°.44N±0°.03×105°.44E±0°.04, h10km, n31, σ1$03/42, mb4.0/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.09	224	Pn	Pn	05 01 13.9	+0.6
CD2				Pg	Pg	05 01 16.5	-1.8
CD2				Sn	Sn	05 01 41.7	+2.3
CD2				Sg	Sg	05 01 45.1	-0.3
CD2				smax			
	comp=N,10μm,0.8s						
CD2				smax			
	comp=E,7μm,0.8s						
XAN	Xi'an	3.32	60	Pn	Pn	05 01 30.4	+0.2
XAN				Sn	Sn	05 02 04.2	-5.5
XAN				Sg	Sg	05 02 18.9	-6.0
XAN				smax			
	comp=N,750nm,0.8s						
XAN				smax			
	comp=E,300nm,0.9s						
XAN				LR	LR		
	comp=N,450nm,8.5s						
XAN				LR	LR		
	comp=E,260nm,8.2s						
XAN				LR	LR		
	comp=Z,300nm,7.2s						
LZH	Lanzhou	3.87	340	Pn	Pn	05 01 37.8	+0.1
LZH				Pg	Pg	05 01 45.8	-6.5
LZH				Sn	Sn	05 02 24.0	+0.8
LZH				Sg	Sg	05 02 33.8	-8.7
LZH				smax			
	comp=N,490nm,0.6s						
LZH				smax			
	comp=E,580nm,0.6s						
LZH				LR	LR		
	comp=N,2μm,6.6s						
LZH				LR	LR		
	comp=E,1μm,6.2s						
LZH				LR	LR		
	comp=Z,1μm,8.8s						
ENH	Enshi	4.08	121	ePn	Pn	05 01 43.0	+2.4
GYA	Guiyang	6.05	170	Pn	Pn	05 02 08.5	+0.8
GYA				Sn	Sn	05 03 17.0	-0.1
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,170nm,0.9s						
KMI	Kunming	7.67	199	Pn	Pn	05 02 35.6	+5.7
KMI				Sn	Sn	05 03 52.6	-4.2
KMI				smax			
	comp=N,34nm,1.3s						
KMI				smax			
	comp=E,44nm,1.1s						
KMI				LR	LR		
	comp=N,390nm,5.6s						
KMI				LR	LR		
	comp=E,540nm,7.5s						
WHN	Wuhan	7.84	102	P	Pn	05 02 33.2	+1.0
WHN				S	Sn	05 04 00.1	-0.9
WHN				LR	LR		
	comp=N,2μm,5.0s						
WHN				LR	LR		
	comp=E,1μm,6.1s						
WHN				LR	LR		
	comp=Z,1μm,4.8s						
BTO	Baotou	8.94	23	eP	Pn	05 02 36.9	-10
CMAR	Chiang Mai Arr	15.10	204	Pn	Pn	05 04 12.0	+0.4
	comp=Z,0.2nm,0.3s,baz=16,slow=11,SNR=6.9						
SONM	Songino Array	15.39	2	Pn	Pn	05 04 16.1	+0.8
	comp=Z,0.2nm,0.3s,baz=184,slow=12,SNR=3.2						
KSRS	Korea Array	19.08	69	P	Pn	05 05 01.5	-0.1
	comp=Z,0.6nm,0.3s,baz=257,slow=10,SNR=10						
KSRS				LR	LR	05 13 33.1	
	comp=Z,87nm,18.2s,baz=337,slow=41						
MK31	Makanchi Array	22.77	316	eP	P	05 05 40.7	+0.2
MKAR	Makanchi Array	22.77	316	P	P	05 05 39.7	-0.8
	comp=Z,2.2nm,0.8s,mb3.7,baz=118,slow=10,SNR=23						
MKAR	Makanchi Array	22.77	316	P	P	05 05 39.7	-0.8
KSH	Kashi	24.80	295	eP	P	05 06 02.9	+2.7
TKM2	Tokmak 2	25.71	303	eP	P	05 06 09.5	+1.0
	comp=Z,9.7nm,1.5s,mb4.1						
KZA	Kyzart	25.77	301	eP	P	05 06 07.8	-1.2
	comp=Z,13nm,1.4s,mb4.3						
ZALV	Zalesovo Beam	26.05	332	P	P	05 06 09.5	-1.9
	comp=Z,2.1nm,0.8s,mb3.7,baz=124,slow=8.0,SNR=6.6						
ZALV	Zalesovo Beam	26.05	332	P	P	05 06 09.5	-1.9
AML	Almayashu	26.92	300	eP	P	05 06 19.2	-0.2
	comp=Z,3.0nm,0.8s,mb3.7						
ABKAR	Abkulak array	37.66	310	eP	P	05 07 52.1	-1.1
	comp=Z,0.9nm,0.6s,mb3.7						
FITZ	Fitzroy Crossi	53.85	156	P	P	05 10 01.2	-0.2
	comp=Z,1.1nm,0.8s,mb3.9,baz=346,slow=11,SNR=6.1						
MBWA	Marble Bar	55.02	164	eP	P	05 10 09.0	-0.9
ARCES	ARCESS Array B	56.52	335	P	P	05 10 20.6	+0.5
	comp=Z,1.6nm,0.8s,mb4.1,baz=92,slow=8.7,SNR=6.1						
BRTR	Keskin Array B	57.08	299	P	P	05 10 24.0	-0.5
	comp=Z,0.5nm,0.7s,mb3.6,baz=77,slow=6.4,SNR=3.9						
WRA	Warramunga Arr	58.97	148	P	P	05 10 37.8	-0.1
	comp=Z,4.2nm,0.7s,mb4.6,baz=341,slow=7.4,SNR=36						
WB2	Warramunga Arr	58.98	148	eP	P	05 10 37.0	-0.9
ASAR	Alice Springs	62.06	150	P	P	05 10 58.9	-0.1
	comp=Z,2.8nm,0.8s,mb4.5,baz=335,slow=6.2,SNR=18						
NOA	NORSAR Array B	64.15	327	P	P	05 11 11.6	-0.9
	comp=Z,0.9nm,0.7s,mb3.9,baz=70,slow=7.0,SNR=2.5						
SLKM	Skilak Lake	68.88	31	eP	P	05 11 44.0	+1.3
STKA	Stephens Creek	72.52	148	P	P	05 12 04.0	-1.1
	comp=Z,2.5nm,0.8s,mb4.2,baz=342,slow=8.0,SNR=4.0						

*MEX **10** 05:04:59.4±1.4, 15°.91N×95°.07W, h78km±28km, MD4.2*
*NEIC **10** 05:04:59.4, 15°.91N×95°.07W, h78km, mb4.3/36, After MEX.*
*ISCJB **10** 05:05:00.5±0.4, 16°.33N±0°.04×94°.74W±0°.04, h69km±4km, mb4.2/42, Error ellipse: s-maj=8.8km s-min=3.1km az=39.3*
*IDC **10** 05:05:02.2±1.0, 16°.48N×94°.62W, h72km±6km, mb3.8/13, mb1 4.0/14, mb1mx3.9/22, mbtmp3.8/14, MS3.5/1, Ms1 3.5/1, ms1mx2.9/26, Error ellipse: s-maj=35.5km s-min=12.0km az=56.0*
*CASC **10** 05:05:02.1±1.8, 15°.97N×94°.68W, h166km±59km, MD4.4, mb4.3(NEIC)*

ISC 10 05:05:01.5±0.4, 16°.34N±0°.04×94°.79W±0°.04, h59km±4km, n265, σ0$90/284, mb4.2/42, 58C-45D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.75	353	P	Pn	05 05 16.3	0.0
	265nm,0.3s,baz=184,slow=9.1,SNR=6829						
CMIG				S	Sn	05 05 29.6	+2.4
	551nm,0.3s,baz=53,slow=20,SNR=65						
HUIG	Huatulco	1.39	246	iP	Pn	05 05 16.8	-7.9
HUIG				iS	Sn	05 05 31.1	-11
HUIG	Huatulco	1.39	246	iP	Pn	05 05 16.8	-7.9
HUIG				iS	Sn	05 05 31.1	-11
PCIG		1.64	113	eP	Pn	05 05 26.7	-1.3
PCIG				eS	Sn	05 05 48.5	+0.5
TGIG		1.66	75	eP	Pn	05 05 29.3	+1.0
TGIG				eS	Sn	05 05 56.6	+8.1
VHO	Vista Hermosa	2.00	292	eP	Pn	05 05 30.6	-2.4
VHO				iS	Sn	05 05 53.0	-3.9
VHO	Vista Hermosa	2.00	292	eP	Pn	05 05 30.6	-2.4
VHO				iS	Sn	05 05 53.0	-3.9
CCIG	Comitan	2.54	91	iP	Pn	05 05 40.7	+0.3
CCIG				eS	Sn	05 06 15.9	+5.7
CCIG	Comitan	2.54	91	iP	Pn	05 05 40.7	+0.3
CCIG				eS	Sn	05 06 15.9	+5.7
THIG		2.82	120	iP	Pn	05 05 43.2	-0.9
THIG				iS	Sn	05 06 15.0	-1.9
PNIG	Pinotepa	3.21	271	iP	Pn	05 05 43.3	-6.1
PNIG				iS	Sn	05 06 15.3	-11
PNIG	Pinotepa	3.21	271	iP	Pn	05 05 43.3	-6.1
PNIG				iS	Sn	05 06 15.3	-11
TPIG	Tehuac#an	3.21	310	eP	Pn	05 05 49.3	-0.2
TPIG				iS	Sn	05 06 24.3	-2.2
UTMO	Huajuapan	3.24	298	iP	Pn	05 05 48.6	-1.3
UTMO				iS	Sn	05 06 34.6	+7.2
JAT	Jato	3.65	123	⇓eP	Pn	05 05 55.3	-0.1
LVIG	Laguna Verde	3.70	335	eP	Pn	05 05

425A	Indio Mountain baz=17,SNR=14	17.13 329	P	Pn	05 08 57.1 +0.2
325A	Bean Ranch, Si baz=18,SNR=15	17.61 330	⇑P	Pn	05 09 02.7 -0.1
226A	Malaga, Loving baz=18,SNR=15	17.79 333	⇑P	Pn	05 09 06.2 +1.2
CLNB	Carlsbad 2.9nm,0.9s	17.87 334	*e*Pn	Pn	05 09 06.0 0.0
324A	Moseley Ranch, baz=18,SNR=20	17.91 329	⇓P	Pn	05 09 06.4 -0.1
127A	Arkansas Junct baz=18,SNR=9.2	18.02 336	⇑P	Pn	05 09 07.2 -0.6
GDL2	Guadalupe Moun	18.02 333	*e*Pn	Pn	05 09 07.9 +0.1
MNTX	Cornudas Mount baz=18,SNR=18	18.07 330	P	Pn	05 09 07.6 -0.9
MNTX	Cornudas Mount 7.5nm,0.9s	18.07 330	*e*Pn	Pn	05 09 07.3 -1.1
225A	Deer Hill, Car baz=18,SNR=13	18.15 332	P	Pn	05 09 09.8 +0.4
MIAR	Mount Ida 10nm,0.8s	18.16 3	*e*P	Pn	05 09 08.8 -0.6
126A	Clayton Basin, baz=18,SNR=5.4	18.26 334	P	Pn	05 09 10.1 -0.7
224A	Cornudas Mount baz=18,SNR=20	18.45 330	P	Pn	05 09 11.8 -1.2
UALR	University of 11nm,0.7s	18.49 6	*e*Pn	Pn	05 09 12.2 -1.2
CPRX	Cap Rock 20nm,0.8s	18.54 335	*e*P	Pn	05 09 13.1 -1.0
Z27A	Tatum baz=19	18.54 337	⇓P	Pn	05 09 12.7 -1.3
125A	Gardner Draw, baz=19,SNR=18	18.54 333	P	Pn	05 09 13.2 -0.9
WMOK	Wichita Mounta 18nm,0.9s	18.67 350	*e*P	Pn	05 09 13.5 -2.1
Z26A	Caprock baz=19,SNR=12	18.79 335	P	Pn	05 09 15.4 -1.7
124A	Stringfield Ra baz=19,SNR=13	18.94 331	P	Pn	05 09 18.2 -0.6
MSTX	Muleshoe baz=19,SNR=22	18.97 339	P	Pn	05 09 18.6 -0.6
Y27A	Causey baz=19,SNR=13	19.03 338	⇓P	Pn	05 09 19.0 -0.9
Z25A	Roswell baz=19,SNR=10	19.10 334	P	Pn	05 09 18.9 -1.9
123A	Bell Site, Whi baz=19	19.27 329	⇓P	Pn	05 09 21.2 -1.6
222A	Williams Famil baz=19,SNR=12	19.27 327	⇑P	Pn	05 09 21.0 -1.8
Z24A	Sheeppen Canyo baz=20,SNR=16	19.43 332	P	Pn	05 09 23.7 -0.9
AMTX	Amarillo baz=20,SNR=9.2	19.47 343	⇓P	Pn	05 09 23.9 -1.2
AMTX	Amarillo 42nm,0.8s	19.47 343	*e*P	Pn	05 09 23.0 -2.2
320A	Kipp Ranch, An baz=20,SNR=12	19.48 322	⇓P	Pn	05 09 23.9 -1.4
Y25A	Mesa, Roswell baz=20,SNR=25	19.65 335	P	Pn	05 09 26.3 -1.0
X27A	F and S Farms, baz=20,SNR=6.9	19.70 339	P	Pn	05 09 25.9 -2.0
Z23A	Rita Site, Whi baz=20,SNR=16	19.77 331	⇑P	Pn	05 09 27.5 -1.2
220A	Playas Peak, P baz=20,SNR=12	19.90 324	⇓P	Pn	05 09 28.9 -1.4
Y24A	Capitan baz=20,SNR=16	19.96 333	P	Pn	05 09 29.6 -1.4
121A	Cookes Peak, D baz=20,SNR=23	19.96 326	⇑P	Pn	05 09 29.6 -1.5
W27A	Bowe Ranch, En baz=20,SNR=10	20.06 340	P	P	05 09 29.3 -0.6
Z22A	Elephant Butte baz=20,SNR=10	20.11 329	P	P	05 09 30.8 +0.3
Y23A	Lovelace Mesa, baz=20,SNR=19	20.24 332	P	P	05 09 32.3 +0.4
219A	White Tail Can baz=20,SNR=12	20.39 322	P	P	05 09 34.0 +0.4
318A	Bisbee baz=20,SNR=7.8	20.43 320	P	P	05 09 34.7 +0.7
120A	U Bar Ranch, L baz=20,SNR=12	20.44 325	⇑P	P	05 09 34.9 +0.9
Z21A	St. Cloud Mine baz=21,SNR=16	20.51 328	P	P	05 09 35.6 +0.8
Y22A	Socorro baz=21,SNR=28	20.67 330	P	P	05 09 37.1 +0.6
BNM	Barren Site 18nm,0.9s	20.68 331	*e*P	P	05 09 36.9 +0.2
W25A	X Bar L Ranch, baz=21,SNR=22	20.69 337	P	P	05 09 37.2 +0.5
LPM	Los Pinos Moun	20.82 331	*e*P	P	05 09 38.8 +0.6
218A	Dragoon baz=21,SNR=5.5	20.84 321	⇑P	P	05 09 39.1 +0.7
Z20A	Nine Sixteen R baz=21,SNR=12	20.84 326	P	P	05 09 39.1 +0.8
X23A	Hourglass Bar baz=21,SNR=25	20.85 333	P	P	05 09 39.1 +0.7
LENM	Lemitar	20.86 331	*e*P	P	05 09 38.9 +0.4
V26A	Tequesquite Ra baz=21,SNR=18	20.97 339	P	P	05 09 39.9 +0.2
119A	Ashpeak Ranch, baz=21,SNR=7.2	20.98 324	P	P	05 09 41.0 +1.1
W24A	Lazy 6 Ranch, baz=21,SNR=13	21.06 335	⇓P	P	05 09 41.1 +0.5
Y21A	Point of Rocks baz=21,SNR=15	21.07 329	⇑P	P	05 09 42.0 +1.1
LAZ	Ladron 9.0nm,1.2s,mb4.0	21.13 331	*e*P	P	05 09 41.4 -0.1
217A	Green Valley baz=21,SNR=16	21.18 319	P	P	05 09 42.2 +0.2
118A	Homack Ranch, baz=21	21.27 322	⇑P	P	05 09 43.4 +0.4
ANMO	Albuquerque 5.4nm,0.9s,mb3.9,baz=154,slow=13,SNR=21	21.28 333	P	P	05 09 42.0 -1.0
ANMO	Albuquerque 4.8nm,0.8s,mb3.9	21.28 333	*e*P	P	05 09 42.7 -0.3
V25A	Rancho No Teng baz=21,SNR=57	21.30 338	P	P	05 09 43.8 +0.5
W23A	Werner Place, baz=21,SNR=8.6	21.32 334	P	P	05 09 44.2 +0.7
Y20A	Horse Springs, baz=21,SNR=17	21.35 328	P	P	05 09 45.0 +1.2
V24A	Rampart Ranch, baz=22,SNR=26	21.45 336	⇓P	P	05 09 45.7 +0.8
X21A	Alamocita Cree baz=22,SNR=20	21.48 329	P	P	05 09 46.1 +1.0
U26A	Atchley Ranch, baz=22,SNR=17	21.50 340	⇓P	P	05 09 45.7 +0.3
TUC	Tucson 18nm,1.1s,mb4.4	21.52 320	*e*P	P	05 09 45.8 +0.1
TKL	Tuckaleechee C 0.9nm,0.4s,mb3.6,baz=196,slow=7.4,SNR=3.8	21.60 25	P	P	05 09 45.0 -1.5
U25A	Circle Dot Ran baz=22,SNR=24	21.73 339	P	P	05 09 48.4 +0.5
V23A	Ortiz Mt. (NFS baz=22,SNR=28	21.84 334	P	P	05 09 50.4 +1.4
Y19A	Nutrioso baz=22,SNR=7.1	21.84 326	P	P	05 09 50.3 +1.2
CCM	Cathedral Cave 5.8nm,0.8s,mb4.1	21.86 8	*e*P	P	05 09 47.0 -2.1
X20A	Quemado baz=22,SNR=18	21.91 328	P	P	05 09 51.0 +1.3
Z17A	San Carlos Hig baz=22,SNR=5.9	22.04 323	⇑P	P	05 09 51.9 +0.7
U24A	Moreno Valley baz=22,SNR=7.4	22.06 337	⇓P	P	05 09 52.4 +1.1
Y18A	Canyon Day Jun baz=22,SNR=7.6	22.14 324	⇓P	P	05 09 52.1 -0.1
X19A	St. Johns baz=22,SNR=8.3	22.22 327	P	P	05 09 54.1 +1.0
V22A	San Miguel Ran baz=22,SNR=22	22.29 333	⇑P	P	05 09 54.0 +0.2
U23A	El Rito baz=22,SNR=38	22.34 335	P	P	05 09 55.0 +0.7
W20A	Ramah baz=22,SNR=24	22.37 329	⇑P	P	05 09 55.8 +1.1
T25A	Trinidad baz=22,SNR=16	22.40 339	⇑P	P	05 09 56.1 +1.2
Y17A	Roosevelt baz=23,SNR=6.1	22.54 323	⇑P	P	05 09 57.8 +1.3
T24A	Torres, Weston baz=23,SNR=22	22.56 338	P	P	05 09 57.7 +1.0
Z16A	Peralta Trail, baz=23,SNR=5.9	22.63 321	P	P	05 09 58.0 +0.5
X18A	Snowflake baz=23,SNR=11	22.65 326	⇑P	P	05 09 58.2 +0.5
U22A	Llaves baz=23,SNR=10.0	22.66 334	P	P	05 09 58.2 +0.5
OTAV	Otavalo	22.71 133	*e*P	P	05 10 00.9 +2.5
	4.3nm,0.9s,mb3.9				
KSU1	Kansas State U	22.73 356	*e*P	P	05 09 57.5 -0.9
CBKS	Cedar Bluff baz=23,SNR=6.3	22.81 350	P	P	05 09 59.0 -0.2
CBKS	Cedar Bluff 42nm,0.9s,mb4.9	22.81 350	*e*P	P	05 09 58.6 -0.6
S25A	Robets Cordova baz=23,SNR=24	22.88 340	⇑P	P	05 10 00.4 +0.4
T23A	Casias Ranch, baz=23,SNR=21	22.90 336	⇑P	P	05 10 00.5 +0.3
V20A	Brimhall baz=23,SNR=7.4	22.90 330	P	P	05 10 00.7 +0.4
U21A	Nageezi baz=23,SNR=27	23.05 333	P	P	05 10 02.4 +0.6
ROSC	El Rosal 21nm,0.9s,mb4.6,baz=137,slow=3.4,SNR=14	23.09 117	P	P	05 10 02.2 -0.3
ROSC	El Rosal	23.09 117	*e*P	P	05 10 03.3 +0.8
S24A	Houchin Ranch, baz=23,SNR=16	23.13 339	⇓P	P	05 10 03.5 +0.9
T22A	Edith baz=23,SNR=36	23.22 335	P	P	05 10 04.2 +0.7
R25A	Fountain Ranch baz=23,SNR=12	23.28 341	P	P	05 10 04.9 +0.9
SDCO	Great Sand Dun baz=23,SNR=39	23.32 338	P	P	05 10 04.7 +0.2
SDCO	Great Sand Dun 19nm,0.9s,mb4.5	23.32 338	*e*P	P	05 10 04.6 +0.1
U20A	Newcomb baz=24,SNR=18	23.39 331	P	P	05 10 05.1 0.0
X16A	Lo Mia Camp, P baz=24,SNR=14	23.40 323	⇑P	P	05 10 05.6 +0.3
T21A	Navajo Lake baz=24,SNR=8.0	23.46 334	⇓P	P	05 10 06.3 +0.6
S23A	Nye Farm, Mont baz=24,SNR=14	23.47 337	⇑P	P	05 10 06.2 +0.4
V18A	Ganado baz=24,SNR=7.3	23.55 328	⇑P	P	05 10 06.8 +0.2
Y15A	Casa Rosa Ranc baz=24,SNR=9.3	23.60 321	⇑P	P	05 10 07.7 +0.7
R24A	Sanders Place, baz=24,SNR=20	23.62 339	⇑P	P	05 10 07.6 +0.4
U19A	Dine' College, baz=24,SNR=16	23.65 330	⇑P	P	05 10 07.5 0.0
S22A	4UR Ranch, Cre baz=24,SNR=7.3	23.82 336	⇑P	P	05 10 09.2 +0.2
X15A	Humboldt baz=24,SNR=9.0	23.91 322	⇑P	P	05 10 09.8 -0.1
Z13A	Yuma Proving G baz=24,SNR=5.0	23.92 318	⇑P	P	05 10 09.4 -0.6
V17A	Tonalea, Kykot baz=24,SNR=16	23.93 326	⇑P	P	05 10 09.8 -0.2
W16A	Flagstaff baz=24,SNR=9.1	23.94 324	⇑P	P	05 10 10.5 +0.3
Q25A	Bedland, Calha baz=24,SNR=9.5	23.97 342	P	P	05 10 10.6 +0.2
Y14A	Wickenburg baz=24	23.99 320	⇑P	P	05 10 10.6 -0.1
T19A	Beclabito baz=24,SNR=8.4	24.00 331	⇑P	P	05 10 10.1 -0.6
S21A	Coal Bank Pass baz=24,SNR=13	24.14 334	P	P	05 10 11.9 0.0
R22A	Saguache, Gunn baz=24,SNR=9.2	24.21 337	⇓P	P	05 10 13.6 +1.0
X14A	Yava baz=24	24.29 321	⇓P	P	05 10 13.6 +0.3
Q24A	Divide baz=24,SNR=5.2	24.30 340	P	P	05 10 14.6 +1.2
W15A	Williams baz=24	24.42 323	⇑P	P	05 10 14.9 +0.4
Q23A	Hartsel baz=24,SNR=16	24.48 339	⇑P	P	05 10 16.0 +1.0
P25A	Willow Gulch B baz=24,SNR=9.4	24.50 342	P	P	05 10 16.1 +1.0
U16A	Tuba City baz=25,SNR=15	24.50 327	⇓P	P	05 10 15.4 +0.1
S20A	Disappointment baz=25,SNR=8.5	24.52 333	⇓P	P	05 10 16.0 +0.6
GLA	Glamis 16nm,1.1s,mb4.5	24.59 316	*e*P	P	05 10 16.1 0.0
T18A	Mexican Hat baz=25,SNR=18	24.64 330	P	P	05 10 16.5 -0.1
R21A	Cimarron baz=25,SNR=7.5	24.64 335	⇑P	P	05 10 16.9 +0.4
SDV	Santo Domingo 5.9nm,0.9s,mb4.1	24.69 105	*e*P	P	05 10 14.4 -2.8
S19A	Harvey Farm, M baz=25,SNR=13	24.80 332	⇓P	P	05 10 19.1 +1.2
Q22A	Crested Butte, baz=25,SNR=7.8	24.83 337	⇑P	P	05 10 18.4 +0.2
V15A	Kaibab Nationa baz=25,SNR=6.7	24.83 325	⇑P	P	05 10 18.7 +0.5
R20A	Redvale baz=25,SNR=14	24.83 334	⇑P	P	05 10 18.8 +0.5
PV01	Paradox Valley 2μm,1.3s	24.87 333	*e*P	P	05 10 18.8 +0.2
W14A	Seligman baz=25,SNR=7.7	24.91 322	⇑P	P	05 10 19.1 +0.1
X13A	Yucca baz=25	24.94 320	⇓P	P	05 10 19.0 -0.2
SMCO	Snowmass 17nm,1.0s,mb4.5	25.13 337	*e*P	P	05 10 21.4 +0.5
S18A	Hurst Farm, Bl baz=25	25.15 331	⇑P	P	05 10 20.8 -0.3
ISCO	Idaho Springs 10nm,1.4s,mb4.2	25.21 340	*e*P	P	05 10 21.9 +0.3
DVTC	Desert V Tower baz=25	25.22 314	⇓P	P	05 10 22.0 +0.2
V14A	Boquillas Ranc baz=25	25.22 323	⇓P	P	05 10 22.1 +0.3
PV04	Paradox Valley	25.23 333	*e*P	P	05 10 22.1 +0.3
R19A	Curley Farm, L baz=25	25.30 333	⇓P	P	05 10 22.4 -0.1
OGNE	Ogallala 34nm,0.9s,mb4.9	25.31 347	*e*P	P	05 10 21.3 -1.2
U15A	North Rim baz=25,SNR=5.7	25.34 325	⇓P	P	05 10 23.2 +0.3
BC3	Big Chuckawall baz=25,SNR=5.6	25.37 317	⇓P	P	05 10 23.1 -0.1
P22A	Eagle baz=26,SNR=9.0	25.42 338	⇑P	P	05 10 25.4 +1.8
O23A	Lake Granby, G baz=26,SNR=13	25.68 340	⇓P	P	05 10 28.3 +2.4
U14A	Mt Trumbull baz=26	25.82 324	⇓P	P	05 10 27.6 +0.3
T15A	Red Dirt Ranch baz=26	25.82 326	⇓P	P	05 10 27.4 +0.2
Q19A	Hogan Spring (baz=26	25.85 333	⇓P	P	05 10 27.4 -0.1
S16A	Wepponer Ranch, baz=26	25.95 328	⇓P	P	05 10 27.9 -0.5
P20A	De Beque baz=26	25.95 335	⇓P	P	05 10 28.8 +0.4
R17A	Hanksville Air baz=26	26.07 331	⇑P	P	05 10 28.9 -0.5
V12A	Nelson baz=26,SNR=5.0	26.32 321	P	P	05 10 31.6 -0.2
PHWY	Pilot Hill 3.5nm,0.9s,mb3.9	26.53 342	*e*P	P	05 10 33.0 -0.5
CCUT	Cedar City 3.0nm,1.0s,mb3.8	26.74 326	*e*P	P	05 10 35.9 +0.4
JFWS	Jewell Farm 16nm,0.6s,mb4.7	26.77 7	*e*P	P	05 10 34.3 -1.4
ECSD	EROS Data Cent 7.2nm,0.8s,mb4.2	27.35 357	*e*P	P	05 10 39.7 -1.2
SJG	San Juan comp=Z,104nm,20.2s,baz=269,slow=33	27.40 82	LR	LR	05 20 08.7
MPMC	Manual Prospec baz=28	28.17 319	⇑P	P	05 10 48.1 -0.2
R11A	Troy Canyon, C baz=29	28.54 324	⇑P	P	05 10 51.8 +0.2
S10A	Tonopah Range, baz=29	28.83 322	⇓P	P	05 10 54.5 +0.4
Q11A	Duckwater baz=29	28.93 325	⇑P	P	05 10 55.5 +0.5
PDAR	Pinedale Array 0.8nm,1.1s,mb3.4,baz=110,slow=7.9,SNR=3.0	29.21 337	P	P	05 10 55.9 -1.6
K18A	Toltan Ranch, baz=29	29.28 337	⇓P	P	05 10 58.5 +0.4
L14A	Malta baz=30,SNR=7.7	30.11 332	P	P	05 11 05.6 +0.1
J17A	Brown Place, J baz=30	30.16 337	⇓P	P	05 11 06.0 +0.1
NVAR	Mina Array Bea 5.2nm,0.8s,mb4.3,baz=138,slow=9.2,SNR=37	30.17 321	P	P	05 11 06.7 +0.7
NVAR	Mina Array Bea	30.17 321	P	P	05 11 06.7 +0.7
REDW	Red Top Meadow 4.9nm,0.9s,mb4.2	30.21 336	*e*P	P	05 11 06.5 +0.2
SNOW	Snow King Moun	30.26 337	*e*P	P	05 11 06.8 0.0
	10nm,1.0s,mb4.5				
LOHW	Long Hollow 15nm,1.7s,mb4.5	30.33 337	*e*P	P	05 11 07.4 +0.1
TPAW	Teton Pass 14nm,1.6s,mb4.5	30.36 336	*e*P	P	05 11 07.9 +0.3
H18A	Shoshone NF, C baz=31,SNR=7.0	30.91 339	P	P	05 11 12.4 -0.1
EYMN	Ely 6.4nm,0.6s,mb4.6	31.63 4	*e*P	P	05 11 16.6 -2.2
HLID	Hailey baz=32,SNR=6.5	31.85 332	⇑P	P	05 11 20.6 -0.2
HLID	Hailey 3.3nm,1.0s,mb4.1	31.85 332	*e*P	P	05 11 20.9 +0.1
HLID			*e*pP	pP	05 11 33.0 -2.5
AGMN	Agassiz Nation 25nm,0.8s,mb5.1	31.88 359	*e*P	P	05 11 19.4 -1.5
GCMT	Greycliff 1.1nm,0.7s,mb3.8	31.89 340	*e*P	P	05 11 20.6 -0.5
F18A	Big Timber baz=32	32.01 340	⇓P	P	05 11 21.7 -0.5
E20A	Meyer Farm, Mu baz=32,SNR=5.3	32.06 343	⇓P	P	05 11 22.5 -0.1
E19A	Rath Farm, Rou baz=32	32.22 342	⇑P	P	05 11 23.2 -0.7
F17A	Fitzpatrick Pl baz=32,SNR=5.5	32.33 339	P	P	05 11 25.2 +0.3
G15A	Dillon baz=32,SNR=7.5	32.36 336	P	P	05 11 26.1 +0.8
C23A	Lambert baz=33	32.52 347	⇑P	P	05 11 26.4 -0.2
DLMT	Dillon 5.2nm,0.9s,mb4.5	32.57 336	*e*P	P	05 11 27.7 +0.7
D20A	Manuel Ranch, baz=33	32.60 343	⇑P	P	05 11 27.0 -0.3
E18A	Harlowton baz=33	32.66 341	⇓P	P	05 11 27.7 -0.1
H12A	Diamond D Ranc baz=33,SNR=7.0	32.83 333	P	P	05 11 29.6 +0.2
D19A	Cripps Ranch, baz=33,SNR=6.8	32.88 342	⇑P	P	05 11 29.3 -0.4
LRM	Limekiln Ridge	32.90 337	*e*P	P	05 11 30.2 +0.3
WVOR	Wild Horse Val 5.8nm,1.1s,mb4.4	33.06 327	*e*P	P	05 11 31.3 -0.1
E16A	East Helena baz=33	33.22 339	⇑P	P	05 11 32.5 -0.2
D17A	Six Diamond Ra baz=34,SNR=8.3	33.43 340	P	P	05 11 34.2 -0.3
G12A	Big Creek, Yel baz=34	33.49 333	⇑P	P	05 11 34.4 -0.7
J08A	Circle Bar Ran baz=34,SNR=6.6	33.64 328	P	P	05 11 36.4 0.0
C17A	Wharram Farm, baz=34,SNR=7.6	33.88 340	⇑P	P	05 11 38.1 -0.3
EGMT	Eagleton baz=34	33.91 342	⇑P	P	05 11 38.4 -0.3
F12A	Elk City baz=34,SNR=9.0	33.96 334	⇓P	P	05 11 38.6 -0.6
B19A	Brinkman Farms baz=34	34.07 343	⇑P	P	05 11 40.1 0.0
E13A	Victor baz=34	34.08 336	⇓P	P	05 11 39.5 -0.8
MSO	Missoula 9.5nm,1.8s,mb4.4	34.31 336	*e*P	P	05 11 41.8 -0.3
A19A	Klindworth Far baz=34	34.44 344	⇓P	P	05 11 43.1 -0.2
D13A	Huson baz=35	34.73 336	⇑P	P	05 11 44.8 -0.9
F10A	Beach Ranch, E baz=35,SNR=8.5	34.99 332	⇓P	P	05 11 46.9 -1.2
D12A	Red Ives Fores baz=35	35.05 335	⇑P	P	05 11 47.5 -1.0
H04A	Detroit Lake baz=36	36.48 326	⇓P	P	05 12 00.4 -0.4
ETW	Entiat	37.62 331	*e*P	P	05 12 10.2 -0.2
LON	Longmire 6.1nm,0.9s,mb4.3	37.71 329	*e*P	P	05 12 11.2 0.0
LPAZ	La Paz 1.9nm,0.6s,mb3.9,baz=316,slow=3.4,SNR=12	41.74 140	P	P	05 12 46.7 +1.6
SIV	San Ignacio 10nm,0.7s,mb4.8,baz=303,slow=8.4,SNR=6.0	46.25 132	P	P	05 13 17.6 -3.6
YKA	Yellowknife Ar 2.4nm,0.8s,mb4.3,baz=156,slow=7.3,SNR=5.1	48.16 348	P	P	05 13 32.4 -3.1
CFAA	Coronel Fontan 0.1nm,0.3s,mb3.2,baz=14,slow=13,SNR=3.8	54.05 152	P	P	05 14 19.7 -0.4
CFAA	Coronel Fontan	54.05 152	P	P	05 14 19.7 -0.4
CPUP	Villa Florida 0.9nm,0.6s,mb4.0,baz=307,slow=7.6,SNR=4.4	55.90 139	P	P	05 14 33.3 -0.2
BDFB	Brasilia 9.5nm,0.8s,mb4.9,baz=273,slow=8.5,SNR=17	56.04 122	P	P	05 14 31.8 -2.9
INK	Inuvik	57.45 344	*e*P	P	05 14 42.7 -1.2
ILAR	Eielson Array 2.7nm,1.0s,mb4.2,baz=145,slow=3.9,SNR=17	59.64 337	P	P	05 14 57.8 -1.4
ESDC	Sonseca Array 0.4nm,0.5s,mb3.6,baz=294,slow=6.8,SNR=4.8	80.38 52	P	P	05 17 04.4 -2.4
NOA	NORSAR Array B 0.9nm,0.7s,mb3.9,baz=296,slow=5.1,SNR=3.6	83.37 28	P	P	05 17 20.3 -1.8
ARCES	ARCESS Array B 0.7nm,0.7s,mb3.9,baz=289,slow=3.7,SNR=9.1	84.75 18	P	P	05 17 29.0 +0.1

IDC ***10*** *05:06:04.0±0.6, 7.74S×107.94E, h0km, mb4.4/15, mb1 4.5/15, mb1mx4.4/21, mbtmp4.4/15, MS3.7/2, Ms1 3.8/2, ms1mx3.1/23, Error ellipse: s-maj=28.7km s-min=14.0km az=49.0*

DJA ***10*** *05:06:12, 8.17S×107.96E, h25km, MLv5.0/27*

NEIC ***10*** *05:06:15.8±3.0, 7.69S×108.07E, h94km±27km, mb4.4/4, Error ellipse: s-maj=17.0km s-min=7.6km az=52.0*

NEIC Felt [III] at Pangandaran and [II] at Cilacap.

ISC 10 05:06:14.7±0.6, 7.98S±0.07×108.00E±0.04, h91km±5km, n69, σ1.38/71, mb4.4/18, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.46	336	P	Pn	05 06 24.5	-4.7
CLJI	Cilicap	1.04	76	P	Pn	05 06 32.7	-2.2
LEM	Lembang	1.20	342	P	Pn	05 06 35.5	-1.4
LEM				S	Sn	05 06 55.1	+1.6
TGJI	Tegal	1.56	45	S	Sn	05 07 04.0	+2.5
BJII	Banjamegara	1.81	69	P	Pn	05 06 42.8	-1.7
BJII				S	Sn	05 07 08.5	+1.3
DBJI	Dramaga	1.88	319	P	Pn	05 06 44.1	-1.3
DBJI				S	Sn	05 07 10.8	+2.0
YOGI	Yogyakarta	2.28	86	P	Pn	05 06 48.7	-2.0
YOGI				S	Sn	05 07 15.6	-2.6
UGM	Wanagama	2.50	89	P	Pn	05 06 52.0	-1.6
UGM				S	Sn	05 07 21.5	-1.9
SMRI	Semarang	2.59	69	P	Pn	05 06 55.0	+0.2
SMRI				S	Sn	05 07 28.6	+3.1
SBJI	Serang	2.62	315	P	Pn	05 06 55.0	-0.2
CGJI	Cibinong	2.66	300	P	Pn	05 06 53.1	-2.6
RBSI	Rajabasa	3.08	313	P	Pn	05 07 02.7	+1.3
PCJI	Pacitan	3.15	94	P	Pn	05 07 01.5	-0.9
XMIS	Christmas Isla	3.40	223	P	Pn	05 06 59.7	-6.0
SJI	Sawahan	3.74	87	P	Pn	05 07 10.7	+0.4
BLSI	Bandar Lampung	3.77	313	P	Pn	05 07 20.7	+10
PWJI	Pagerwojo	3.77	91	P	Pn	05 07 09.6	-1.1
KASI	Kota Agung	4.25	305	P	Pn	05 07 16.8	-0.4
KLI	Kotabumi	4.39	315	P	Pn	05 07 28.3	+9.1
KRKI	Karangkates	4.41	93	P	Pn	05 07 21.4	+2.0
KLSI		4.61	315	P	Pn	05 07 23.2	+1.1
LWLI	Liwa	4.90	307	P	Pn	05 07 29.3	+3.3
MDSI	Maura Dua 0.4nm1μm109nm,0.8s	5.14	312	P	Pn	05 07 29.1	-0.3
TPI	Tanjungpandan 0.2nm532nm51nm,0.9s	5.20	356	P	Pn	05 07 30.0	-0.1
GMJI	Gumukmas 0.8nm3μm94nm,0.6s	5.40	94	P	Pn	05 07 33.5	+0.7
KMMI	Kalianget 0.5nm75nm,1.0s	5.99	82	P	Pn	05 07 40.3	-0.5
PPBI	Pangkal Pinang 0.3nm102nm,0.8s	6.07	342	P	Pn	05 07 42.7	+0.7
JAGI	Jajag, Banyuwa 1.0nm3μm118nm,0.6s	6.11	95	P	Pn	05 07 43.2	+0.7
KHKI	Kahang-Kahang	7.54	93	P	Pn	05 08 06.3	+4.3
MTNI	Mataram 2.0nm107nm,0.5s	8.11	95	P	Pn	05 08 10.6	+0.8
BMNI	Bima 895nm32nm,0.8s	10.60	94	P	Pn	05 08 43.2	-0.5
BKSI	Bulukumba	12.33	78	P	Pn	05 09 12.9	+5.8
NLAI	Namlea	19.58	77	P	Pn	05 10 39.9	+2.0
FITZ	Fitzroy Crossi 5.6nm,0.6s,baz=291,slow=8.0,SNR=22	19.89	122	P	Pn	05 10 40.5	-1.1
FITZ	Fitzroy Crossi 14nm,0.8s	19.89	122	*e*P	Pn	05 10 40.7	-0.9
FITZ				*e*S	S	05 14 08.5	-10

MEEK	**Meekatharra**	**21.12 153**	*eP*	**P**	**05 10 58.7**	**+6.5**
MEEK			*eS*	**S**	**05 14 35.9**	**-6.3**
KAKA	**Kakadu**	**24.49 103**	*eP*	**P**	**05 11 25.1**	**-0.6**
16nm,0.6s,mb4.5						
KAKA	**Kakadu**	**24.49 103**	*eP*	**P**	**05 11 25.9**	**+0.1**
45nm,0.6s,mb5.0						
CMAR	**Chiang Mai Arr**	**27.74 341**	P	**P**	**05 11 53.7**	**-1.2**
1.0nm,0.4s,mb3.7,baz=169,slow=11,SNR=3.6						
CMAR			PcP	PcP	05 15 11.6	+1.9
1.9nm,0.5s,baz=197,slow=3.1,SNR=6.8						
CMAR			LR	LR	05 23 19.0	
comp=Z,112nm,20.5s,baz=163,slow=38						
WRA	**Warramunga Arr**	**28.14 118**	P	**P**	**05 11 59.8**	**+1.3**
1.2nm,0.4s,mb3.8,baz=290,slow=12,SNR=16						
WB2	**Warramunga Arr**	**28.15 118**	*eP*	**P**	**05 12 00.7**	**+2.1**
ASAR	**Alice Springs**	**29.32 125**	P	**P**	**05 12 11.2**	**+2.2**
0.6nm,0.7s,mb3.4,baz=301,slow=9.1,SNR=3.5						
STKA	**Stephens Creek**	**39.25 132**	P	**P**	**05 13 35.4**	**+0.8**
4.6nm,0.5s,mb4.6,baz=310,slow=8.1,SNR=22						
STKA			LR	LR	05 29 42.6	
comp=Z,158nm,20.8s,baz=24,slow=36						
STKA	**Stephens Creek**	**39.25 132**	*eP*	**P**	**05 13 36.4**	**+1.8**
4.9nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**39.25 132**	*eP*	**P**	**05 13 36.4**	**+1.8**
1.5nm,0.6s,mb4.0						
CMSA	**Cobar Meteorol**	**42.19 129**	*eP*	**P**	**05 14 01.4**	**+2.7**
SONM	**Songino Array**	**55.58 359**	P	**P**	**05 15 40.5**	**-0.3**
2.4nm,0.5s,mb4.5,baz=176,slow=8.3,SNR=16						
SONM			PcP	PcP	05 16 40.6	+1.1
4.4nm,0.5s,baz=174,slow=3.6,SNR=16						
KSH	**Kashi**	**55.79 330**	*eP*	**P**	**05 15 40.7**	**-1.8**
KSH			pmax	pmax		
comp=Z,31nm,2.0s,mb5.0						
MK31	**Makanchi Array**	**59.14 340**	*eP*	**P**	**05 16 04.6**	**-1.2**
MKAR	**Makanchi Array**	**59.14 340**	P	**P**	**05 16 04.5**	**-1.3**
comp=Z,8.0nm,0.5s,mb5.0,baz=151,slow=7.5,SNR=67						
MKAR			PcP	PcP	05 16 54.6	+1.1
comp=Z,1.2nm,0.7s,baz=120,slow=5.7,SNR=2.5						
MKAR	**Makanchi Array**	**59.14 340**	P	**P**	**05 16 04.5**	**-1.3**
MKAR			PcP	PcP	05 16 54.6	+1.1
KURK	**Kurchatov**	**63.75 340**	*eP*	**P**	**05 16 36.2**	**-0.6**
comp=Z,4.6nm,0.6s,mb4.5						
ZALV	**Zalesovo Beam**	**64.72 345**	P	**P**	**05 16 41.7**	**-1.4**
comp=Z,2.2nm,0.4s,mb4.4,baz=147,slow=5.6,SNR=9.8						
ZALV			PcP	PcP	05 17 15.4	-0.6
comp=Z,1.4nm,0.4s,baz=167,slow=4.6,SNR=4.1						
ABKAR	**Akbulak array**	**70.75 329**	*eP*	**P**	**05 17 20.7**	**-0.4**
comp=Z,12nm,0.4s,mb5.1						
KMBO	**Kilima Mbogo**	**70.78 272**	P	**P**	**05 17 23.2**	**+1.1**
comp=Z,0.6nm,0.4s,mb3.8,baz=180,slow=24,SNR=4.4						
AKTK	**Aktyubinsk**	**72.46 329**	P	**P**	**05 17 31.5**	**+0.1**
AKTO	**Aktyubinsk**	**72.46 329**	P	**P**	**05 17 31.5**	**+0.1**
comp=Z,3.2nm,0.3s,mb4.6,baz=99,slow=5.7,SNR=10						
BOSA	**Boshof**	**79.88 242**	P	**P**	**05 18 16.4**	**+2.4**
comp=Z,1.7nm,0.5s,mb4.1,baz=59,slow=5.9,SNR=5.9						
BR131	**Keskin Array S**	**83.21 312**	*eP*	**P**	**05 18 31.8**	**+0.5**
comp=Z,2.8nm,0.7s,mb4.2						
BRTR	**Keskin Array B**	**83.21 312**	P	**P**	**05 18 32.0**	**+0.7**
comp=Z,3.1nm,0.7s,mb4.2,baz=131,slow=7.0,SNR=17						
AKASG	**Malin Array Be**	**89.07 321**	P	**P**	**05 18 59.9**	**+0.1**
comp=Z,1.6nm,0.5s,mb4.3,baz=88,slow=4.5,SNR=6.0						
FINES	**FINESS Array B**	**93.10 332**	P	**P**	**05 19 16.9**	**-1.3**
comp=Z,2.2nm,0.6s,mb4.7,baz=100,slow=7.9,SNR=5.5						
ARCES	**ARCESS Array B**	**94.79 340**	P	**P**	**05 19 24.6**	**-1.2**
comp=Z,0.5nm,0.5s,mb4.2,baz=109,slow=4.5,SNR=7.6						
TORD	**Torodi Ar. Bea**	**107.58 281**	PKiKP	PKiKP	05 24 32.6	+0.4
comp=Z,0.3nm,0.7s,baz=49,slow=1.5,SNR=5.9						
YKA	**Yellowknife Ar**	**117.42 21**	PKP	PKPdf	05 24 48.9	-0.6
comp=Z,0.4nm,0.4s,baz=313,slow=22,SNR=5.8						
PDAR	**Pinedale Array**	**132.18 37**	PKP	PKPdf	05 25 19.8	+1.4
comp=Z,0.4nm,0.7s,baz=328,slow=3.2,SNR=4.2						
TXAR	**Lajitas Array**	**143.44 50**	PKP	PKPdf	05 25 39.0	-0.4
comp=Z,0.9nm,0.5s,baz=260,slow=0.6,SNR=27						
BDFB	**Brasilia**	**146.61 225**	PKPbc	PKPbc	05 25 48.3	+1.4
comp=Z,1.6nm,0.4s,baz=320,slow=7.9,SNR=4.3						
TKL	**Tuckaleechee C**	**150.41 20**	PKPbc	PKPbc	05 25 57.6	+1.4
comp=Z,8.7nm,0.5s,baz=136,slow=3.9,SNR=22						

*IDC **10** 05:43:54.3±1.3,5°.84S×130°.62E, h0km, mb4.2/3, mb1 4.3/6, mb1mx4.0/16, mbtmp4.2/6, ML4.1/3, Error ellipse: s-maj=77.4km s-min=20.1km az=74.0*
*ISCJB **10** 05:44:09.2±1.6, 6°.30S±0°.07×130°.14E±0°.10, h152km±18km, mb4.0/3, Error ellipse: s-maj=17.1km s-min=10.8km az=157.8*
*NEIC **10** 05:44:09.3±2.0, 6°.25S×130°.16E, h131km±22km, Error ellipse: s-maj=24.2km s-min=11.2km az=223.0*
ISC 10 05:44:10.1±2.0, 6°.4S±0°.1×130°.1E±0°.1, h140km±23km, n11, σ0s85/14, mb4.0/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.74**	**160**	*ePn*	**Pn**	**05 45 46.5**	**-0.1**
KAPI	**Kappang**	**10.37**	**277**	Pn	**Pn**	**05 46 35.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**12.46**	**200**	Pn	**Pn**	**05 47 03.6**	**+0.8**
0.8nm,0.3s,baz=38,slow=8.6,SNR=49							
FITZ				Sn	**Sn**	**05 49 19.7**	**-0.8**
0.9nm,0.3s,baz=118,slow=15,SNR=5.2							
WRA	**Warramunga Arr**	**14.13**	**163**	Pn	**Pn**	**05 47 22.3**	**-1.9**
0.6nm,0.3s,baz=344,slow=13,SNR=27							
WRA				Sn	**Sn**	**05 49 51.3**	**-9.3**
1.9nm,0.3s,baz=346,slow=24,SNR=12							
WB2	**Warramunga Arr**	**14.13**	**163**	*eP*	**Pn**	**05 47 25.8**	**+1.6**
COEN	**Coen**	**14.93**	**121**	*eP*	**Pn**	**05 47 33.9**	**-0.3**
ASAR	**Alice Springs**	**17.61**	**168**	P	**Pn**	**05 48 08.0**	**+1.1**
1.1nm,0.3s,baz=350,slow=10,SNR=57							
ASAR				S	**S**	**05 51 15.8**	**-5.8**
0.2nm,0.3s,baz=351,slow=28,SNR=4.2							
STKA	**Stephens Creek**	**27.58**	**159**	P	**P**	**05 49 44.1**	**-0.1**
1.1nm,0.3s,mb4.0,baz=337,slow=9.9,SNR=7.0							
SONM	**Songino Array**	**57.85**	**341**	P	**P**	**05 53 46.3**	**-0.7**
0.3nm,0.3s,mb3.5,baz=163,slow=6.0,SNR=3.4							
MK31	**Makanchi Array**	**67.73**	**327**	*eP*	**P**	**05 54 52.7**	**+0.2**
MKAR	**Makanchi Array**	**67.73**	**327**	P	**P**	**05 54 52.6**	**+0.1**
2.8nm,0.4s,mb4.4,baz=117,slow=6.9,SNR=59							

*NEIC **10** 05:46:54.9, 35°.55S×70°.88W, h143km, MD3.3(GUC), After GUC.*
GUC 10 05:46:54.9±0.8, 35°.55S×70°.88W, h143km±7km, MD3.3, ML3.6, 9C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.64**	**283**	⇑*iP*	Pn	05 47 15.9	-0.3
TALC				*i* S	Sn	05 47 32.1	-0.2
TALC	**Talca**	**0.64**	**283**	⇑*iP*	Pn	05 47 15.9	-0.3
TALC				*i* S	Sn	05 47 32.1	-0.2
TALC				AML	AML	05 47 34.6	
comp=E,2μm,0.4s							
CCHI	**Chillan**	**1.43**	**222**	*eP*	Pn	05 47 23.6	+0.5
CCHI				*eS*	Sn	05 47 45.3	+0.5
CCHI	**Chillan**	**1.43**	**222**	*eP*	Pn	05 47 23.6	+0.5
CCHI				*eS*	Sn	05 47 45.3	+0.5
CHCH	**Chadas Angostu**	**1.62**	**7**	⇑*iP*	Pn	05 47 25.9	+0.7
CHCH				*i* S	Sn	05 47 49.3	+0.9
CHCH	**Chadas Angostu**	**1.62**	**7**	⇑*iP*	Pn	05 47 25.9	+0.7
CHCH				*i* S	Sn	05 47 49.3	+0.9
LNV	**Longovilo**	**1.65**	**344**	*eP*	Pn	05 47 26.0	+0.5
LNV				*i* S	Sn	05 47 49.3	+0.4
LNV	**Longovilo**	**1.65**	**344**	*eP*	Pn	05 47 26.0	+0.5
LNV				*i* S	Sn	05 47 49.3	+0.4
LMEL	**Las Melosas**	**1.78**	**18**	⇑*iP*	Pn	05 47 27.4	+0.3
LMEL				*i* S	Sn	05 47 52.7	+1.0
LMEL	**Las Melosas**	**1.78**	**18**	⇑*iP*	Pn	05 47 27.4	+0.3
LMEL				*i* S	Sn	05 47 52.7	+1.0
LMEL				AML	AML	05 47 58.1	
comp=N,445nm,0.2s							
TACH	**Talagante**	**1.89**	**358**	⇓*iP*	Pn	05 47 28.5	+0.2
TACH				*i* S	Sn	05 47 54.2	+0.3
TACH	**Talagante**	**1.89**	**358**	⇓*iP*	Pn	05 47 28.5	+0.2
TACH				*i* S	Sn	05 47 54.2	+0.3
PCH	**Pirque**	**1.94**	**9**	⇑*iP*	Pn	05 47 29.2	+0.3
PCH				*i* S	Sn	05 47 55.9	+0.9
PCH	**Pirque**	**1.94**	**9**	⇑*iP*	Pn	05 47 29.2	+0.3
PCH				*i* S	Sn	05 47 55.9	+0.9
ANTU	**Antumapu**	**1.98**	**6**	*eP*	Pn	05 47 30.1	+0.7
ANTU				*i* S	Sn	05 47 56.5	+0.7
ANTU	**Antumapu**	**1.98**	**6**	*eP*	Pn	05 47 30.1	+0.7
ANTU				*i* S	Sn	05 47 56.5	+0.7
ANTU				AML	AML	05 48 03.3	
comp=E,249nm,0.4s							
FCH	**Farellones**	**2.27**	**12**	*eP*	Pn	05 47 28.4	-4.4
FCH				*i* S	Sn	05 47 57.4	-4.4
FCH				AML	AML	05 47 59.9	
comp=N,262nm,0.4s							
PEL	**Peldehue**	**2.40**	**4**	⇑*iP*	Pn	05 47 34.7	+0.2
PEL				*i* S	Sn	05 48 05.5	+0.6
PEL				AML	AML	05 48 07.9	
comp=E,318nm,0.6s							
ROCH	**El Roble**	**2.57**	**357**	*eP*	Pn	05 47 37.4	+0.8

*IDC **10** 05:58:29.8±0.9, 0°.14S×125°.32E, h0km, mb4.2/7, mb1 4.2/8, mb1mx4.0/20, mbtmp4.1/8, ML3.8/1, Error ellipse: s-maj=75.7km s-min=16.0km az=73.0*
*NEIC **10** 05:58:31.1±0.5, 0°.08S×125°.42E, h10km, mb4.3/1, Error ellipse: s-maj=15.0km s-min=7.3km az=64.0*
*DJA **10** 05:58:35, 0°.05S×125°.67E, h12km, MLv4.3/9*
ISC 10 05:58:32.5±1.1, 0°.11S±0°.04×125°.44E±0°.05, h18km±8km, n25, σ0s90/29, mb4.2/9, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.60**	**295**	P	**Pg**	**05 59 04.7**	**+1.3**
MNI	**Manado**	**1.65**	**339**	P	**Pg**	**05 59 03.5**	**-0.8**
MNI				S	**Sg**	**05 59 25.4**	**-0.4**
TNTI	**Ternate**	**2.12**	**66**	P	**Pn**	**05 59 06.9**	**-0.1**
TNTI				S	**Sn**	**05 59 33.2**	**+0.3**
LBMI	**Labuha**	**2.13**	**104**	P	**Pn**	**05 59 06.9**	**-0.3**
LBMI				S	**Sn**	**05 59 31.9**	**-1.4**
LUWI	**Luwuk**	**2.82**	**251**	P	**Pg**	**05 59 27.9**	**+1.3**
LUWI				S	**Sg**	**06 00 01.3**	**-2.0**
NLAI	**Namlea**	**3.53**	**152**	P	**Pn**	**05 59 27.8**	**+1.4**
MRSI	**Marisa**	**3.54**	**279**	P	**Pn**	**05 59 32.9**	**+6.3**
SGSI	**Sangihe**	**3.77**	**1**	P	**Pn**	**05 59 33.0**	**+3.2**
TTSI	**Tana Toraja**	**6.33**	**242**	P	**Pn**	**06 00 11.0**	**+6.1**
0.2nm2μm39nm,0.7s							
SPSI	**Sidrap Palu**	**6.84**	**236**	P	**Pn**	**06 00 19.0**	**+7.1**
KAPI	**Kappang**	**7.48**	**229**	Pn	**Pn**	**06 00 20.3**	**-0.5**
KAKA	**Kakadu**	**14.32**	**151**	*ePn*	**Pn**	**06 01 54.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**17.88**	**179**	P	**Pn**	**06 02 41.7**	**+1.3**
0.3nm,0.3s,baz=5.4,slow=7.2,SNR=11							
WRA	**Warramunga Arr**	**21.56**	**157**	P	**P**	**06 03 19.9**	**-1.2**
3.9nm,0.5s,mb4.1,baz=334,slow=11,SNR=30							
WB2	**Warramunga Arr**	**21.56**	**157**	*eP*	**P**	**06 03 20.4**	**-0.8**
COEN	**Coen**	**22.31**	**129**	P	**P**	**06 03 29.8**	**+0.6**
ASAR	**Alice Springs**	**24.82**	**161**	P	**P**	**06 03 54.5**	**+0.7**
1.6nm,0.5s,mb3.8,baz=346,slow=7.0,SNR=33							
STKA	**Stephens Creek**	**35.10**	**156**	P	**P**	**06 05 25.1**	**+0.3**
3.3nm,0.5s,mb4.6,baz=346,slow=6.4,SNR=7.3							
KSRS	**Korea Array**	**37.44**	**3**	P	**P**	**06 05 45.2**	**+0.4**
0.8nm,0.5s,mb3.8,baz=185,slow=10.0,SNR=5.1							
SONM	**Songino Array**	**50.54**	**343**	P	**P**	**06 07 30.5**	**+0.7**
1.4nm,0.7s,mb4.0,baz=161,slow=8.3,SNR=6.7							
MK31	**Makanchi Array**	**60.00**	**327**	*eP*	**P**	**06 08 37.7**	**-0.3**
MKAR	**Makanchi Array**	**60.00**	**327**	P	**P**	**06 08 37.5**	**-0.5**
2.7nm,0.4s,mb4.6,baz=124,slow=7.9,SNR=46							
KURK	**Kurchatov**	**64.30**	**329**	*eP*	**P**	**06 09 06.3**	**-0.5**
5.9nm,0.8s,mb4.7							
ABKAR	**Akbulak array**	**74.31**	**322**	*eP**	**P**	**06 10 08.6**	**-0.2**
2.6nm,0.9s,mb4.2							
QSPA	**South Pole Qui**	**89.83**	**180**	P	**P**	**06 11 29.7**	**+0.1**
0.8nm,0.7s,mb4.2,baz=243,slow=5.8,SNR=6.1							

*IDC **10** 06:39:48.4±3.9, 10°.88N×88°.60W, h0km, mb3.3/2, mb1 3.8/3, mb1mx3.5/21, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=120.2km s-min=63.0km az=48.0*
*ISCJB **10** 06:40:10.4±0.6, 12°.84N±0°.08×88°.75W±0°.06, h71km±10km, mb3.3/2, Error ellipse: s-maj=16.0km s-min=4.2km az=31.4*
*CASC **10** 06:40:11.0±1.7, 12°.85N×88°.76W, h59km±31km, MD3.9, ML3.6*
ISC 10 06:40:11.5±0.6, 12°.85N±0°.08×88°.74W±0°.05, h63km±11km, n30, σ0s90/39, mb3.3/2, 2C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.74**	**38**	*eP*	**Pn**	**06 40 26.5**	**+0.2**
VSM				⇑*eP*		06 40 26.6	
SNVI	**San Vicente**	**0.77**	**353**	*eP*	**Pn**	**06 40 26.3**	**-0.4**
SNVI				*eS*	**Sn**	**06 40 38.2**	**+0.4**
BLLM	**Bellamira**	**0.77**	**40**	⇑*eP*	**Pn**	**06 40 26.8**	**+0.1**
BLLM				*eS*	**Sn**	**06 40 38.4**	**+0.5**
LFRS	**El Faro**	**0.83**	**338**	*eP*	**Pn**	**06 40 26.5**	**-1.0**
LBRS	**Las Brisas**	**0.93**	**342**	*eP*	**Pn**	**06 40 28.4**	**-0.3**
LBRS				*eS*	**Sn**	**06 40 41.5**	**0.0**
SNET	**Serv Nac Est T**	**0.96**	**330**	*eP*	**Pn**	**06 40 28.1**	**-1.0**
SNET				*eS*	**Sn**	**06 40 41.9**	**-0.3**
SNET				AML	AML	06 40 45.0	
comp=Z,2μm,0.2s							
CNCH	**Conchagua**	**0.98**	**64**	*eP*	**Pn**	**06 40 29.1**	**-0.3**
CNCH				*eS*	**Sn**	**06 40 43.7**	**+1.0**
BOQS	**Boqueron**	**1.02**	**329**	*eP*	**Pn**	**06 40 29.5**	**-0.5**
BOQS				*eS*	**Sn**	**06 40 44.3**	**+0.7**
CAHU	**Cacacuatique**	**1.05**	**29**	*eP*	**Pn**	**06 40 31.2**	**+0.9**
SBLS	**San Blas**	**1.30**	**319**	*eP*	**Pn**	**06 40 33.4**	**-0.2**
SBLS				*eS*	**Sn**	**06 40 50.9**	**+0.7**
SNJE	**San Jose**	**1.32**	**320**	*eP*	**Pn**	**06 40 33.4**	**-0.3**
RTR	**El Retiro**	**1.36**	**320**	*eP*	**Pn**	**06 40 34.2**	**-0.1**
RTR				*eS*	**Sn**	**06 40 51.9**	**+0.3**
RBDL	**Robledal**	**1.56**	**324**	*eP*	**Pn**	**06 40 36.4**	**-0.6**
MTO2	**Montecristo 2**	**1.66**	**339**	*eP*	**Pn**	**06 40 38.4**	**0.0**
TELN	**Telica**	**1.88**	**97**	*eP*	**Pn**	**06 40 40.9**	**-0.4**
CNGN	**Cerro Negro**	**2.03**	**100**	*eP*	**Pn**	**06 40 42.1**	**-1.2**
CNGN				*eS*	**Sn**	**06 41 07.5**	**-0.1**
CNGN				AML	AML	06 41 20.7	
comp=N,366nm,0.2s							
MOMN	**Momotombo**	**2.19**	**101**	*eP*	**Pn**	**06 40 45.0**	**-0.6**
COPN	**Copaltepe**	**2.20**	**107**	*eP*	**Pn**	**06 40 44.5**	**-1.2**
XAVN	**Gruta Xavier**	**2.46**	**106**	*eP*	**Pn**	**06 40 48.3**	**-1.0**
TISN	**Laguna Tiscapa**	**2.52**	**106**	*eP*	**Pn**	**06 40 49.1**	**-0.9**
CRUN	**El Crucero**	**2.54**	**110**	*eP*	**Pn**	**06 40 50.9**	**+0.6**
BOAB	**BOACO BROADBAN**	**3.03**	**97**	*eP*	**Pn**	**06 40 55.4**	**-1.6**
JCR	**Jicaral**	**4.64**	**130**	*eP*	**Pn**	**06 41 18.8**	**-0.3**
CGA2	**Cerro Gallo 2**	**5.05**	**123**	*eP*	**Pn**	**06 41 26.4**	**+1.8**
PRS1	**Puriscal**	**5.20**	**123**	*eP*	**Pn**	**06 41 29.2**	**+2.5**
URSC	**Urasca**	**5.72**	**121**	*eP*	**Pn**	**06 41 37.0**	**+3.2**
BUS	**Buena Vista**	**5.88**	**123**	*eP*	**Pn**	**06 41 38.1**	**+1.9**
CMIG	**Matias Romero**	**7.28**	**306**	Pn	**Pn**	**06 41 55.8**	**+0.6**
comp=N,0.2nm,0.3s,baz=151,slow=13,SNR=3.1							
TXAR	**Lajitas Array**	**21.48**	**322**	P	**P**	**06 44 56.4**	**+1.5**
comp=N,0.3nm,0.6s,mb2.8,baz=139,slow=11,SNR=4.8							
YKA	**Yellowknife Ar**	**52.90**	**345**	P	**P**	**06 49 19.9**	**-0.9**
comp=N,0.8nm,0.7s,mb3.7,baz=152,slow=7.2,SNR=7.3							

*NEIC **10** 07:35:34.7, 16°.87N×100°.16W, h5km, MD3.5(MEX), After MEX.*
MEX 10 07:35:34.7±0.8, 16°.87N×100°.15W, h3km±5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.21**	**328**	*eP*	Pg	07 35 38.4	-0.4
CAIG				*i* S	Sg	07 35 42.1	+0.7
CAIG	**El Cayaco**	**0.21**	**328**	*eP*	Pg	07 35 38.4	-0.4
CAIG				*i* S	Sg	07 35 42.1	+0.7
ACX	**Acapulco**	**0.28**	**91**	*i P*	Pg	07 35 38.6	-1.5
ACX				*i* S	Sg	07 35 42.7	-1.1
ACX	**Acapulco**	**0.28**	**91**	*i P*	Pg	07 35 38.6	-1.5
ACX				*i* S	Sg	07 35 42.7	-1.1
MEIG	**Mezcala**	**1.16**	**26**	*eP*	Pg	07 35 53.4	-3.7
MEIG				*i* S	Sg	07 36 09.3	-2.9
ZIIG	**Zihuatanejo**	**1.45**	**300**	*i P*	Pn	07 35 58.8	-3.1
ZIIG				*i* S	Sb	07 36 16.8	-4.5
ZIIG	**Zihuatanejo**	**1.45**	**300**	*i P*	Pn	07 35 58.8	-3.1
ZIIG				*i* S	Sb	07 36 16.8	-4.5
PLIG	**Platanillo**	**1.63**	**22**	*eP*	Pn	07 36 00.8	-3.6
PLIG				*i* S	Sn	07 36 21.6	-4.3
PLIG	**Platanillo**	**1.63**	**22**	*eP*	Pn	07 36 00.8	-3.6
PLIG				*i* S	Sn	07 36 21.6	-4.3
PNIG	**Pinotepa**	**2.00**	**104**	*eP*	Pn	07 36 06.5	-2.9
PNIG				*i* S	Sn	07 36 30.7	-4.3
PNIG	**Pinotepa**	**2.00**	**104**	*eP*	Pn	07 36 06.5	-2.9
PNIG				*i* S	Sn	07 36 30.7	-4.3

*IDC **10** 07:47:33.6±2.4, 2°.23N×96°.18E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/21, mbtmp3.9/7, ML4.0/1, Error ellipse: s-maj=98.0km s-min=20.5km az=58.0*
*DJA **10** 07:47:35, 2°.42N×95°.98E, h9km, MLv4.3/5*
*NEIC **10** 07:47:38.9±0.6, 2°.28N×96°.23E, h35km, Error ellipse: s-maj=13.0km s-min=7.8km az=224.0*
*ISCJB **10** 07:47:39.2±3.3, 2°.3N±0°.1×96°.3E±0°.2, h55km±25km, mb3.9/6, Error ellipse: s-maj=38.0km s-min=11.7km az=153.7*
ISC 10 07:47:40.1±2.9, 2°.32N±0°.10×96°.2E±0°.2, h45km±24km, n20, σ0s83/24, mb3.9/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.34**	**46**	P	**Pn**	**07 48 00.4**	**-2.0**
TPTI				S	**Sn**	**07 48 19.6**	**+0.6**
TSI	**Tuntungan**	**2.62**	**63**	P	**Pn**	**07 48 21.2**	**+1.2**
TSI				S	**Sn**	**07 48 56.5**	**+5.9**
MNSI	**Mandailing Nat**	**3.69**	**114**	P	**Pn**	**07 48 35.6**	**+1.0**
MNSI				S	**Sn**	**07 49 24.2**	**+7.4**
IPM	**Ipoh**	**5.26**	**66**	*ePn*	**Pn**	**07 48 55.9**	**-0.3**
26nm,0.5s							
IPM	**Ipoh**	**5.26**	**66**	P	**Pn**	**07 48 56.2**	**0.0**
0.2nm47nm,0.7s							
KULM	**Kulim**	**5.32**	**56**	*ePn*	**Pn**	**07 48 56.1**	**-0.9**
42nm,0.8s							
KULM	**Kulim**	**5.32**	**56**	P	**Pn**	**07 48 56.7**	**-0.3**
0.2nm52nm,0.9s							
MYKOM	**Kota Tinggi**	**7.64**	**94**	P	**Pn**	**07 49 30.1**	**+1.1**
KSM	**Kuching**	**14.11**	**93**	Pn	**Pn**	**07 50 56.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**16.26**	**9**	Pn	**Pn**	**07 51 25.1**	**-0.4**
0.2nm,0.3s,baz=197,slow=11,SNR=7.7							
CMAR				Sn	**Sn**	**07 54 16.8**	**-8.2**
baz=201,slow=27,SNR=4.7							
WRA	**Warramunga Arr**	**43.46**	**122**	P	**P**	**07 55 39.2**	**+0.1**
0.3nm,0.5s,mb3.3,baz=301,slow=9.0,SNR=8.0							
WRA	**Warramunga Arr**	**43.46**	**122**	P	**P**	**07 55 39.2**	**+0.1**
WB2	**Warramunga Arr**	**43.47**	**122**	*eP*	**P**	**07 55 39.4**	**+0.2**
ASAR	**Alice Springs**	**44.85**	**127**	P	**P**	**07 55 49.0**	**-1.3**
0.4nm,0.8s,mb3.3,baz=299,slow=7.6,SNR=5.2							
MK31	**Makanchi Array**	**45.93**	**347**	*eP*	**P**	**07 55 58.7**	**+0.2**
MKAR	**Makanchi Array**	**45.93**	**347**	P	**P**	**07 55 59.0**	**+0.6**
3.2nm,0.7s,mb4.4,baz=162,slow=8.2,SNR=34							
SONM	**Songino Array**	**46.19**	**9**	P	**P**	**07 56 00.4**	**0.0**
1.0nm,0.4s,mb4.1,baz=184,slow=8.5,SNR=5.0							
ZAA0	**Zalesovo Array**	**52.31**	**352**	*eP*	**P**	**07 56 47.1**	**0.0**
ZALV	**Zalesovo Beam**	**52.31**	**352**	P	**P**	**07 56 47.6**	**+0.5**
2.7nm,0.4s,mb4.5,baz=177,slow=5.9,SNR=8.3							
BVAR	**Borovoye Array**	**54.88**	**341**	P	**P**	**07 57 06.0**	**0.0**
0.6nm,0.5s,mb3.9,baz=163,slow=11,SNR=5.6							

*IDC **10** 09:39:57.6±5.5, 35°.60N×67°.93E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/24, mbtmp3.8/6, ML3.5/2, Error ellipse: s-maj=160.4km s-min=25.4km az=102.0*
*ISCJB **10** 09:40:16.6±0.7, 36°.13N±0°.03×69°.45E±0°.08, h131km±8km, Error ellipse: s-maj=11.1km s-min=4.9km az=167.7*
*NEIC **10** 09:40:16.4±0.8, 36°.09N×69°.17E, h119km±9km, mb4.7/6, Error ellipse: s-maj=18.5km s-min=8.6km az=102.0*
*NNC **10** 09:40:23.1±1.4, 37°.05N×69°.55E, h0km, mb4.2, mpv4.1, Error ellipse: s-maj=12.5km s-min=10.2km az=59.0*
ISC 10 09:40:17.1±0.7, 36°.11N±0°.03×69°.36E±0°.08, h129km±8km, n42, σ1s18/52, 3C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.59**	**189**	*ePn*	**Pn**	**09 40 45.1**	**-1.0**
CEP	**Cherat**	**3.10**	**137**	⇓P	**Pn**	**09 41 05.4**	**+0.5**
CEP				S	**Sn**	**09 41 44.0**	**+2.2**
THW	**Thamme Wali**	**3.85**	**149**	P	**Pn**	**09 41 15.2**	**+0.3**
CHCP	**Chirah Chowk**	**4.04**	**126**	P	**Pn**	**09 41 17.8**	**+0.5

GUMO S Sn 09 41 01.3 +1.1
1μm,0.3s,baz=341,slow=23,SNR=73
WRA Warramunga Arr 34.98 197 P P 09 47 20.1 -0.3
0.4nm,0.5s,baz=22,slow=9.5,SNR=10
WRA PcP PcP 09 49 50.8 -0.1
0.2nm,0.6s,baz=15,slow=3.4,SNR=5.2
ASAR Alice Springs 38.64 196 P P 09 47 51.6 +0.3
0.2nm,0.5s,baz=18,slow=12,SNR=5.6
ASAR PcP PcP 09 50 01.4 -0.4
0.3nm,0.9s,baz=32,slow=1.8,SNR=4.2
MKAR Makanchi Array 61.42 316 P P 09 50 43.1 -0.3
2.0nm,0.5s,baz=97,slow=8.5,SNR=2.8

NIED ***10*** *10:03:00,35.00N×137.50E,h38km,Mw3.8 Best double couple: M0:5.27000×10^14 NP1:φ1=86.00000°,δ88.00000°, λ-152.00000°. NP2:φ2=355.00000°,δ62.00000°, λ-3.00000°.*
IDC ***10*** *10:03:13.9±1.8,34.88N×137.30E,h0km,mb3.4/2, mb1 3.5/3,mb1mx3.3/24,mbtmp3.6/3,ML3.7/1,Error ellipse: s-maj=38.9km s-min=26.0km az=30.0*
ISCJB ***10*** *10:03:18.2±0.4,34.92N±0.03×137.48E±0.03,h41km±7km, mb3.2/2,Error ellipse: s-maj=5.8km s-min=4.3km az=151.6*
JMA ***10*** *10:03:18.3,34.99N×137.48E,h38km,M3.7 Broadband fault plane solution: P waves. NP1:φ1=352.00000°, δ60.00000°,λ2.00000°. NP2:φ2=261.00000°,δ88.00000°, λ150.00000°. Principal axes: T Plg22.0000°, Azm212.0000°; N Plg60.0000°, Azm77.0000°; P Plg19.0000°, Azm310.0000°;*
JMA Felt II J1.
NEIC ***10*** *10:03:18.3,34.99N×137.48E,h38km,MG3.7(JMA),After JMA.*

ISC 10 10:03:18.7±0.5,34.93N±0.03×137.48E±0.04,h32km±4km, n17,σ0°76/30,mb3.2/2,3C-3D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMMJ	**Hamamatsu 2**	**0.21**	**111**	⇓P	**Pb**	**10 03 25.4**	**+0.2**
HMMJ				S	**Sb**	**10 03 30.5**	**+0.8**
JYZW	**Yoshizawa**	**0.22**	**73**	P	**Pb**	**10 03 24.9**	**-0.4**
JYZW				S	**Sb**	**10 03 29.8**	**0.0**
SHZ3	**Shizuoka 3**	**0.62**	**77**	P	**Pb**	**10 03 30.2**	**-0.9**
SHZ3				S	**Sb**	**10 03 39.6**	**+0.1**
TK04	**Tokai 4**	**0.64**	**149**	⇓P	**Pb**	**10 03 31.8**	**+0.4**
JIE	**Ise**	**0.83**	**230**	⇑P	**Pn**	**10 03 33.9**	**-0.3**
JIE				eS	**Sn**	**10 03 46.2**	**+0.9**
TSUJ	**Tsu 2**	**0.90**	**256**	P	**Pn**	**10 03 34.5**	**-0.6**
TSUJ				eS	**Sn**	**10 03 47.1**	**+0.2**
JGM	**Miyama**	**0.99**	**321**	⇓P	**Pn**	**10 03 35.5**	**-0.8**
JGM				eS	**Sn**	**10 03 48.3**	**-0.8**
JYN	**Shimob**	**1.04**	**57**	⇑P	**Pn**	**10 03 36.8**	**-0.2**
JYN				eS	**Sn**	**10 03 51.8**	**+1.4**
JIZS	**Izushimoda**	**1.17**	**100**	P	**Pn**	**10 03 37.6**	**-1.2**
JIZS				eS	**Sn**	**10 03 52.8**	**-0.9**
JKN2	**Miekihoku**	**1.21**	**235**	⇑P	**Pn**	**10 03 38.9**	**-0.4**
MJAR	**Matsushiro Arr**	**1.71**	**20**	Pn	**Pn**	**10 03 46.4**	**+0.2**
	98nm,0.3s,baz=207,slow=15,SNR=710						
MJAR				Sn	**Sn**	**10 04 07.2**	**+0.2**
	141nm,0.3s,baz=32,slow=20,SNR=26						
MAJO	**Matsushiro**	**1.71**	**20**	ePn	**Pn**	**10 03 45.6**	**-0.6**
MAJO				eSn	**Sn**	**10 04 07.5**	**+0.5**
MAT	**Matsushiro**	**1.71**	**20**	P	**Pn**	**10 03 46.4**	**+0.1**
MAT				S	**Sn**	**10 04 08.6**	**+1.6**
JHJ	**Hachijo jima 2**	**2.63**	**133**	Pn	**Pn**	**10 03 59.0**	**0.0**
	28nm,0.3s,baz=252,slow=20,SNR=4.6						
JHJ				Sn	**Sn**	**10 04 30.1**	**+0.3**
	24nm,0.3s,baz=41,slow=20,SNR=2.7						
JNU	**Nakatsue**	**5.77**	**254**	ePn	**Pn**	**10 04 42.2**	**+0.2**
	5.6nm,0.8s						
JNU				eSn	**Sn**	**10 05 49.9**	**+2.8**
SONM	**Songino Array**	**26.45**	**309**	P	**P**	**10 08 52.5**	**-0.1**
	0.4nm,0.6s,mb3.2,baz=124,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**42.57**	**304**	P	**P**	**10 11 10.1**	**-1.3**
	0.3nm,0.5s,mb3.3,baz=77,slow=8.0,SNR=4.9						

ISCJB ***10*** *10:15:21.0±0.5,7.48S±0.05×30.49E±0.10,h10km, mb4.2/10,MS3.5/3,Error ellipse: s-maj=14.8km s-min=6.1km az=16.9*
IDC ***10*** *10:15:22.0±0.9,7.45S×30.50E,h0km,mb4.1/7,mb1 4.2/9, mb1mx4.0/18,mbtmp4.2/9,ML2.9/1,MS3.7/6,Ms1 3.7/6, ms1mx3.3/42,Error ellipse: s-maj=32.3km s-min=19.9km az=108.0*
NEIC ***10*** *10:15:23.0±0.5,7.46S×30.45E,h10km,mb4.5/1,Error ellipse: s-maj=15.9km s-min=8.5km az=109.0*

ISC 10 10:15:23.0±0.5,7.47S±0.05×30.48E±0.09,h10km,n31, σ1°24/29,mb4.2/10,MS3.5/3,1D,Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**6.83**	**2**	*e*Pn	**Pn**	**10 17 02.4**	**-0.9**
LSZ	**Lusaka**	**8.08**	**196**	*e*Pn	**Pn**	**10 17 21.6**	**+1.1**
	35nm,0.4s						
LSZ				Sn	**Sn**	**10 18 53.6**	**+1.7**
KMBO	**Kilima Mbogo**	**9.24**	**47**	Pn	**Pn**	**10 17 36.4**	**0.0**
	5.2nm,0.3s,baz=359,slow=24,SNR=40						
KMBO				Sn	**Sn**	**10 19 13.6**	**-6.9**
	11nm,0.3s,baz=174,slow=23,SNR=5.7						
KMBO				Lg		10 20 08.1	
	19nm,0.3s,baz=124,slow=19,SNR=5.3						
KMBO				LR	LR	10 21 18.7	
	comp=Z,394nm,19.0s,baz=92,slow=39						
MSNA	**Messina**	**14.79**	**182**	*e*P	**Pn**	**10 18 50.4**	**-2.0**
MSNA				AMB	AMB	10 18 59.5	
	comp=Z,33nm,3.7s						
TSUM	**Tsumeb**	**17.11**	**226**	P	**Pn**	**10 19 21.7**	**-0.7**
	comp=Z,2.5nm,0.3s,baz=25,slow=12,SNR=14						
TSUM				S	**Sn**	**10 22 21.7**	**-11**
	comp=Z,2.2nm,0.3s,baz=283,slow=17,SNR=3.6						
TSUM				Lg		10 24 31.5	
	baz=280,slow=21,SNR=3.1						
TSUM				LR	LR	10 26 15.2	
	comp=Z,482nm,18.3s,baz=325,slow=38						
LBTB	**Lobatse**	**18.06**	**194**	P	**Pn**	**10 19 32.0**	**-2.2**
	comp=Z,2.5nm,0.3s,baz=26,slow=13,SNR=16						
LBTB				Lg		10 24 46.9	
	comp=Z,1.6nm,0.3s,baz=121,slow=19,SNR=6.5						
LBTB				LR	LR	10 26 53.7	
	comp=Z,183nm,20.9s,baz=186,slow=38						
SLR	**Silverton**	**18.28**	**186**	*e*P	**Pn**	**10 19 36.9**	**0.0**
SLR				AMB	AMB	10 19 37.1	
	comp=Z,61nm,1.3s						
KSR	**Koster**	**18.60**	**190**	*e*P	**Pn**	**10 19 42.0**	**+1.3**
KSR				AMB	AMB	10 19 43.2	
	comp=Z,29nm,3.6s						
ERPM	**east rand prop**	**18.89**	**186**	*e*P	**Pn**	**10 19 42.7**	**-1.5**
ERPM				AMB	AMB	10 19 54.0	
	comp=Z,38nm,4.5s						
PRYS	**Parys**	**19.57**	**188**	*e*P	**Pn**	**10 19 53.4**	**+0.9**
PRYS				AMB	AMB	10 20 18.3	
	comp=Z,52nm,5.3s						
OPO	**Ambohidratompo**	**19.64**	**126**	P	**Pn**	**10 19 56.7**	**+3.3**
	comp=Z,0.3nm,0.3s,baz=308,slow=4.9,SNR=3.9						
POGA	**Pongola**	**19.82**	**177**	*e*P	**Pn**	**10 19 55.7**	**+0.3**
POGA				AMB	AMB	10 20 30.2	
	comp=Z,56nm,3.9s						
ABPO	**Ambohimpanom**	**19.92**	**127**	P	**Pn**	**10 19 55.5**	**-1.1**
	comp=Z,23nm,0.8s						
SWZ	**Schweizer**	**20.20**	**193**	*e*P	**P**	**10 19 57.4**	**-0.7**
SWZ				AMB	AMB	10 20 10.0	
	comp=Z,54nm,3.8s						
BOSA	**Boshof**	**21.60**	**193**	P	**P**	**10 20 14.1**	**+1.0**
	comp=Z,8.0nm,0.7s,mb4.2,baz=22,slow=9.8,SNR=12						
BOSA				Lg	LR	10 26 39.5	
	comp=Z,24nm,0.7s,baz=279,slow=19,SNR=2.4						
BOSA				LR	LR	10 28 50.1	
	comp=Z,226nm,19.1s,MS3.6,baz=246,slow=37						
ATD	**Arta Tunnel**	**22.53**	**33**	LR	LR	10 28 04.8	
	comp=Z,74nm,20.4s,MS3.1,baz=241,slow=34						
UPI	**Upington**	**22.54**	**202**	*e*P	**P**	**10 20 22.5**	**-0.7**
UPI				AMB	AMB	10 20 25.8	
	comp=Z,33nm,2.8s,mb4.3						
PKA	**Prieska**	**23.25**	**197**	*e*P	**P**	**10 20 31.5**	**+0.9**
PKA				AMB	AMB	10 20 44.3	
	comp=Z,21nm,2.9s,mb4.1						
HVD	**Gariep Dam**	**23.48**	**191**	*e*P	**P**	**10 20 31.0**	**-2.1**
HVD				AMB	AMB	10 20 59.3	
	comp=Z,62nm,3.9s						
CVNA	**Calvinia**	**25.90**	**201**	*e*P	**P**	**10 20 52.6**	**-2.6**
CVNA				AMB	AMB	10 20 56.3	
	comp=Z,64nm,1.8s,mb4.8						
SUR	**Sutherland**	**26.37**	**199**	LR	LR	10 31 49.3	
	comp=Z,293nm,18.8s,MS3.9,baz=148,slow=37						
DBIC	**Dimbokro**	**37.94**	**291**	P	**P**	**10 22 41.9**	**+0.8**
	comp=Z,3.2nm,1.0s,mb4.0,baz=121,slow=11,SNR=2.2						
BRTR	**Keskin Array B**	**47.05**	**3**	P	**P**	**10 23 56.0**	**+1.3**
	comp=Z,1.7nm,0.7s,mb4.1,baz=177,slow=7.8,SNR=4.9						
SYO	**Syowa Base**	**61.75**	**176**	⇓*e*P	**P**	**10 25 42.6**	**+1.3**
MAW	**Mawson**	**63.89**	**167**	P	**P**	**10 25 56.8**	**+1.2**
	comp=Z,3.1nm,0.7s,mb4.5,baz=318,slow=11,SNR=9.3						
MKAR	**Makanchi Array**	**70.89**	**35**	P	**P**	**10 26 41.1**	**+0.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=239,slow=5.5,SNR=4.5						
MKAR				pP	pP	10 26 48.6	+5.1
	comp=Z,1.5nm,0.6s,baz=234,slow=7.4,SNR=7.2						
ZALV	**Zalesovo Beam**	**76.26**	**30**	P	**P**	**10 27 11.0**	**-0.7**
	comp=Z,0.7nm,0.4s,mb4.0,baz=235,slow=5.1,SNR=3.4						
ARCES	**ARCESS Array B**	**76.91**	**358**	pP	pP	10 27 24.2	+5.8
	comp=Z,0.5nm,0.5s,baz=164,slow=4.8,SNR=2.1						
SONM	**Songino Array**	**86.15**	**41**	pP	pP	10 28 14.4	+6.6
	comp=Z,1.0nm,0.7s,baz=228,slow=5.2,SNR=4.0						
ASAR	**Alice Springs**	**99.18**	**115**	P	**P**	**10 29 05.4**	**-0.1**
	comp=Z,0.2nm,0.7s,mb3.8,baz=256,slow=3.7,SNR=3.4						
WRA	**Warramunga Arr**	**100.35**	**112**	P	Pdif	10 29 10.8	+0.8
	comp=Z,1.0nm,1.2s,baz=262,slow=2.6,SNR=4.4						

ISCJB ***10*** *10:15:49.0±0.7,37.06N±0.04×30.11E±0.05,h12km±8km, Error ellipse: s-maj=7.4km s-min=7.1km az=156.7*
ISK ***10*** *10:15:48.3,37.02N×30.09E,h23km,MD2.7*
CSEM ***10*** *10:15:49.1±0.2,37.04N×30.09E,h15km,MD3.1,Error ellipse: s-maj=6.2km s-min=5.3km az=152.0*
DDA ***10*** *10:15:51.8,37.19N×29.86E,h7km±6km,Md3.1*

ISC 10 10:15:49.2±0.7,37.05N±0.05×30.11E±0.05,h18km±7km, n16,σ0°80/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELL	**Elmali**	**0.34**	**208**	PG	**Pg**	**10 15 55.5**	**-0.8**
ELL				*e*SG	**Sg**	**10 16 01.3**	**+0.2**
ELL	**Elmali**	**0.34**	**208**	*i* Pg	**Pg**	**10 15 55.5**	**-0.8**
ELL				*e*Sg	**Sg**	**10 16 01.3**	**+0.2**
ANTB	**Antalya**	**0.46**	**108**	*e*PG	**Pg**	**10 15 58.7**	**+0.2**
ANTB	**Antalya**	**0.46**	**108**	*e*Pg	**Pg**	**10 15 58.7**	**+0.2**
GOLH	**Golhisar**	**0.48**	**294**	*i* P	**Pg**	**10 15 57.7**	**-1.2**
GOLH				*i* S	**Sg**	**10 16 06.4**	**+1.1**
GOLH	**Golhisar**	**0.48**	**294**	*i* P	**Pg**	**10 15 57.7**	**-1.1**
GOLH				*i* S	**Sg**	**10 16 06.4**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.50**	**283**	*e*PG	**Pg**	**10 15 59.0**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.50**	**283**	*e*Pg	**Pg**	**10 15 59.0**	**-0.2**
BCK	**Bucak**	**0.56**	**43**	*e*PG	**Pg**	**10 16 00.6**	**+0.2**
BCK	**Bucak**	**0.56**	**43**	*e*Pg	**Pg**	**10 16 00.6**	**+0.2**
SUTC	**Sutluce-Ispart**	**0.83**	**59**	*e*PG	**Pg**	**10 16 05.3**	**-0.2**
SUTC	**Sutluce-Ispart**	**0.83**	**59**	*e*Pg	**Pg**	**10 16 05.3**	**-0.1**
AKAS	**Kas**	**0.91**	**207**	*e*P	**Pb**	**10 16 06.7**	**+0.3**
AKAS				*i* S	**Sb**	**10 16 24.4**	**+6.4**
AKAS	**Kas**	**0.91**	**207**	*e*P	**Pb**	**10 16 06.7**	**+0.3**
KHAL	**Karahalli**	**1.41**	**340**	*i* P	**Pn**	**10 16 15.6**	**+1.6**
KHAL				*i* S	**Sn**	**10 16 31.1**	**-1.1**
KHAL	**Karahalli**	**1.41**	**340**	*i* P	**Pn**	**10 16 15.6**	**+1.6**
KHAL				*i* S	**Sn**	**10 16 31.0**	**-1.2**

IDC 10 10:18:36.3±7.6,15.77S×173.38W,h55km±103km, mb3.3/3,mb1 3.5/4,mb1mx3.3/20,mbtmp3.3/4,ML1.1/1, Error ellipse: s-maj=90.8km s-min=55.5km az=123.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.41**	**40**	P	Pn	10 19 13.9	+0.6
	2.4nm,0.3s,baz=224,slow=19,SNR=11						
AFI				S	Sn	10 19 42.4	+0.7
	11nm,0.3s,baz=225,slow=12,SNR=10						
STKA	**Stephens Creek**	**43.88**	**240**	P	P	10 26 36.1	-1.4
	1.0nm,0.7s,baz=90,slow=8.1,SNR=2.8						
WRA	**Warramunga Arr**	**49.78**	**257**	P	P	10 27 24.3	+0.5
	0.2nm,0.4s,baz=93,slow=6.4,SNR=5.4						
ASAR	**Alice Springs**	**50.02**	**252**	P	P	10 27 25.9	+0.3
	0.8nm,0.6s,baz=91,slow=8.2,SNR=18						

NNC 10 10:21:27.0±0.5,49.19N×76.20E,h0km,mb3.5,mpv3.1, 14C-5D,Error ellipse: s-maj=5.1km s-min=4.7km az=133.0,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.19**	**45**	⇑Pn	Pn	10 22 04.8	+0.2
	5.2nm,0.5s						
KURK				⇑Sn	Sn	10 22 33.4	+1.0
	15nm,0.5s						
MK31	**Makanchi Array**	**4.74**	**118**	⇓Pn	Pn	10 22 42.8	+3.2
	0.7nm,0.5s,baz=300,slow=12,SNR=17						
MK31				⇑Pg	Pg	10 22 53.7	-4.0
	4.4nm,0.8s,baz=304,slow=13,SNR=19						
MK31				⇑Sn	Sn	10 23 41.4	+6.2
	4.5nm,0.6s,baz=301,slow=28						
MK31				⇑Lg		10 23 56.1	
	8.0nm,0.7s,baz=310,slow=26						
VOSK	**Vostochnaya**	**4.84**	**319**	⇓Pn	Pn	10 22 40.1	-0.9
	0.6nm,0.5s						
VOSK				⇑Sn	Sn	10 23 39.3	+1.6
	3.0nm,0.6s						
VOSK				⇑Lg		10 24 00.6	
	11nm,1.1s						
BRVK	**Borovoye**	**5.38**	**318**	⇑Sn	Sn	10 23 51.9	+1.0
	8.1nm,0.6s						
BRVK				⇓Lg		10 24 17.9	
	7.6nm,0.5s						
ZRNK	**Zerenda**	**5.90**	**312**	⇓Pn	Pn	10 22 54.9	-0.6
	3.4nm,0.9s						
ZRNK				⇑Sn	Sn	10 24 05.2	+1.5
	2.7nm,0.7s						
ZRNK				⇓Lg		10 24 33.5	
	6.0nm,0.9s						
TKM2	**Tokmak 2**	**6.28**	**184**	⇑Pn	Pn	10 23 01.1	+0.4
	1.6nm,0.5s						
TKM2				⇑Lg		10 24 46.3	
	7.9nm,0.7s						
KK31	**Karatay Array**	**7.25**	**215**	⇑Pn	Pn	10 23 17.5	+3.4
	1.6nm,0.5s						
KK31				⇑Sn	Sn	10 24 42.9	+5.9
	0.9nm,0.5s						
KK31				⇑Lg		10 25 13.3	
	1.7nm,0.5s						

ISCJB ***10*** *10:36:29.8±0.9,59.0S±0.2×150.6W±0.2,h10km,mb4.0/9, MS4.0/4,Error ellipse: s-maj=25.4km s-min=17.2km az=9.4*
IDC ***10*** *10:36:30.1±1.0,59.07S×150.40W,h0km,mb3.9/6, mb1 4.0/6,mb1mx3.9/13,mbtmp3.9/6,MS4.1/4,Ms1 4.1/4, ms1mx3.6/32,Error ellipse: s-maj=45.2km s-min=21.3km az=10.0*
NEIC ***10*** *10:36:31.7±0.9,59.02S×150.61W,h10km,mb4.2/2,Error ellipse: s-maj=25.8km s-min=17.9km az=9.0*

ISC 10 10:36:31.9±0.9,59.0S±0.2×150.6W±0.2,h10km,n19, σ0°93/11,mb4.0/9,MS4.0/4,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**23.49**	**201**	*e*P	**P**	**10 41 41.6**	**+0.1**
	19nm,1.5s,mb4.3						
URZ	**Urewera**	**29.30**	**301**	LR	LR	10 51 38.8	
	comp=Z,274nm,20.5s,MS3.9,baz=323,slow=31						
QSPA	**South Pole Qui**	**31.11**	**180**	P	**P**	**10 42 49.5**	**-0.2**
	3.2nm,0.9s,mb4.1,baz=49,slow=4.0,SNR=8.4						
QSPA				LR	LR	10 52 48.4	
	comp=Z,282nm,18.5s,MS4.0,baz=82,slow=32						
QSPA	**South Pole Qui**	**31.11**	**180**	P	**P**	**10 42 49.5**	**-0.2**
QSPA				LR	LR	10 52 48.4	
TBI	**Tubuai**	**35.66**	**2**	*e*LR	LR	10 53 09.4	
	439nm,29.2s						
TBI				*e*T		11 21 39.5	
	24nm,0.4s						
RKT	**Rikitea**	**37.58**	**24**	*e*LR	LR	10 54 20.1	
	228nm,28.2s						
RKT				*e*T		11 24 11.3	
	1.7nm,0.2s						
PMSA	**Palmer Station**	**38.13**	**136**	P	**P**	**10 43 52.6**	**+2.0**
	58nm,1.6s,mb5.1						
RAR	**Rarotonga**	**38.35**	**346**	LR	LR	10 54 47.3	
	comp=Z,360nm,21.7s,MS4.2,baz=79,slow=29						
CASY	**Casey**	**41.35**	**217**	P	**P**	**10 44 16.1**	**-1.2**
	3.8nm,1.2s,mb3.9						
PPT	**Papeete**	**41.41**	**2**	*e*S	**S**	**10 50 45.1**	**+12**
	43nm,22.8s						
PPT				*e*LR	LR	10 56 00.2	
	430nm,25.2s,baz=184						
PPT	**Papeete**	**41.41**	**2**	LR	LR	10 57 04.5	
	comp=Z,293nm,19.2s,MS4.2,baz=149,slow=30						
DZM	**Mont Dzumac**	**47.86**	**302**	*e*LR	LR	10 58 24.3	
	162nm,26.9s						
TAOE	**Nuku Hiva Isla**	**50.70**	**13**	*e*LR	LR	11 00 15.8	
	223nm,26.3s						
STKA	**Stephens Creek**	**51.96**	**270**	P	**P**	**10 45 42.0**	**+1.2**
	0.5nm,0.7s,mb3.6,baz=142,slow=12,SNR=2.4						
ASAR	**Alice Springs**	**62.58**	**269**	P	**P**	**10 46 55.5**	**-0.5**
	0.5nm,0.7s,mb3.8,baz=136,slow=6.1,SNR=10						
WRA	**Warramunga Arr**	**65.43**	**272**	P	**P**	**10 47 14.9**	**+0.2**
	0.4nm,0.9s,mb3.5,baz=149,slow=5.6,SNR=3.4						
CPUP	**Villa Florida**	**69.46**	**107**	P	**P**	**10 47 39.4**	**-0.8**
	0.4nm,0.4s,mb3.8,baz=28,slow=8.6,SNR=5.0						
LPAZ	**La Paz**	**72.34**	**92**	P	**P**	**10 47 57.1**	**-0.6**
	1.2nm,0.3s,mb4.2,baz=288,slow=3.2,SNR=3.6						
MKAR	**Makanchi Array**	**146.73**	**272**	PKPbc	PKPbc	10 56 14.3	+1.4
	0.5nm,0.7s,baz=113,slow=4.3,SNR=6.6						

KISR ***10*** *10:44:02.7±0.3,32.29N×47.07E,h34km,ML2.9*
ISCJB ***10*** *10:44:06.7±1.8,32.33N±0.04×47.43E±0.04,h4km±11km, Error ellipse: s-maj=6.9km s-min=5.4km az=39.5*
TEH ***10*** *10:44:09.3,32.33N×47.42E,h11km*

ISC 10 10:44:07.2±2.2,32.33N±0.04×47.41E±0.04,h0km±14km, n12,σ1°04/20,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.84**	**3**	*e*Pn	**Pn**	**10 44 41.2**	**+1.2**
IKOM				*e*		10 44 48.4	
	comp=Z,3μm,0.2s						
IGHG	**Ghaleghazi**	**2.12**	**341**	*e*Pn	**Pn**	**10 44 40.3**	**-3.5**
IGHG				*e*Sn	**Sn**	**10 45 10.7**	**-0.1**
IGHG				*e*		10 45 38.0	
	comp=Z,2μm,0.3s						
IVIS	**Veis**	**2.24**	**348**	*e*Pn	**Pn**	**10 44 46.7**	**+1.2**
IVIS				*e*Sn	**Sn**	**10 45 14.2**	**+0.3**
IVIS				*e*		10 45 21.5	
	comp=Z,938nm,0.3s						
MIB	**Mutribah**	**2.52**	**181**	*e*P	**Pn**	**10 44 48.2**	**-1.1**
MIB				*e*S	**Sn**	**10 45 22.3**	**+1.6**
MIB				AML	AML	10 45 25.2	
	comp=Z,54nm,0.6s						
ILIN	**Lien**	**2.61**	**352**	*e*Pn	**Pn**	**10 44 50.7**	**+0.1**
ILIN				*e*Sn	**Sn**	**10 45 22.5**	**-0.5**
ILIN				*e*		10 45 35.8	
	comp=Z,519nm,0.2s						
BHD	**Baghdad**	**2.72**	**291**	*ex*	**Pn**	**10 44 50.0**	**-2.1**
BHD				*ex*	**Sn**	**10 45 26.0**	**+0.4**
IPIR	**Pirpir**	**2.96**	**82**	*e*Pn	**Pn**	**10 44 57.0**	**+1.6**
IPIR				*e*Sn	**Sn**	**10 45 31.3**	**-0.4**
IPIR				*e*		10 45 46.7	
	comp=Z,660nm,0.3s						
NAY	**Al-Naaiem**	**3.07**	**183**	*e*P	**Pn**	**10 44 56.0**	**-1.0**
IKLH	**Kolahrood**	**3.65**	**73**	*e*Pn	**Pn**	**10 45 04.8**	**0.0**
IKLH				*e*Sn	**Sn**	**10 45 46.5**	**-2.0**
IKLH				*e*		10 46 10.7	
	comp=Z,483nm,0.3s						
IGAR	**Gharneh**	**3.92**	**88**	*e*	**Sn**	**10 45 55.8**	**+0.5**
	comp=Z,344nm,0.1s						
IGAR				*e*Pn	**Pn**	**10 45 08.7**	**+0.1**
IZEF	**Zefreh**	**4.19**	**81**	*e*Pn	**Pn**	**10 45 12.1**	**-0.2**
IVRN	**Varamin**	**4.48**	**52**	*e*Pn	**Pn**	**10 45 16.8**	**+0.6**
IVRN				*e*		10 46 47.4	
	comp=Z,216nm,0.2s						

WEL 10 10:52:50.6±0.3,37.46S×177.19E,h5km,ML3.6/9,Error ellipse: s-maj=2.5km s-min=1.8km az=0.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.07**	**179**	PG	Pg	10 52 52.6	+0.5
WIZ				SG	Sg	10 52 54.2	+0.9
OPRZ	**Ohinepanea**	**0.63**	**232**	P*	Pb	10 53 02.3	-1.9
OPRZ				S*	Sg	10 53 09.8	-1.1
TGRZ	**Tauranga**	**0.78**	**250**	P*	Pb	10 53 06.0	-0.7
TGRZ				S*	Sb	10 53 16.6	-1.0
URZ	**Urewera**	**0.80**	**184**	P*	Pb	10 53 03.8	-3.2
LIRZ	**Lichensteins R**	**0.84**	**229**	P*	Pb	10 53 06.8	-0.8
MXZ	**Matakaoa Point**	**0.90**	**97**	P*	Pb	10 53 07.2	-1.4
MWZ	**Matawai**	**0.91**	**163**	P*	Pb	10 53 06.0	-2.9
KARZ	**Kaharoa**	**0.93**	**233**	P*	Pb	10 53 08.1	-1.2
PUZ	**Puketiti**	**1.04**	**126**	P*	Pb	10 53 10.1	-1.1
PRRZ	**Plateau Road**	**1.21**	**211**	P*	Pb	10 53 11.9	-2.1
CNGZ	**Carnagh Statio**	**1.30**	**142**	P*	Pb	10 53 15.0	-0.5
KUZ	**Kuaotunu**	**1.37**	**301**	PN	Pn	10 53 14.8	-1.6
RAHZ	**Arahi**	**1.46**	**183**	PN	Pn	10 53 16.3	-1.3
PRGZ	**Paritu Road**	**1.56**	**160**	PN	Pn	10 53 18.7	-0.3
KNZ	**Kokohu**	**1.60**	**166**	PN	Pn	10 53 18.5	-1.1
MKAZ	**Moumakai**	**1.65**	**282**	PN	Pn	10 53 18.8	-1.4
MHGZ	**Mahia Peninsul**	**1.78**	**162**	PN	Pn	10 53 20.7	-1.3
BKZ	**Black Stump Fm**	**1.79**	**198**	P*	Pb	10 53 19.7	-4.2

IDC 10 10:54:11.1±2.4,17.22S×69.60W,h128km±22km, mb3.8/13,mb1 4.0/15,mb1mx3.9/21,mbtmp3.9/15,Error ellipse: s-maj=19.8km s-min=12.1km az=61.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.69**	**57**	P	Pn	10 54 47.1	+5.9
	183nm,0.3s,baz=255,slow=6.8,SNR=4349						
LPAZ		

Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**2.34**	**74**	*e*Pg	Pg	11 00 44.2	+0.1
KSP				*e*Sg	Sg	11 01 17.0	+2.5
MOA	**Molln**	**2.61**	**157**	⇑*i*Sn	Sn	11 01 16.5	+1.7
MOA				⇑*i*Sg	Sg	11 01 25.1	+2.1
	9.0nm,0.5s						
CONA	**Conrad Observa**	**3.10**	**137**	⇓*i*Pn	Pn	11 00 49.3	-0.1
CONA				⇑*i*Pg	Pg	11 00 58.4	-0.2
CONA				⇑*i*Sg	Sg	11 01 40.2	+1.3
	9.3nm,0.5s						

BGS ***10*** *11:00:21.8±1.6,25°.20N×56°.35E,h12km,mb5.8,MS5.8*
BJI ***10*** *11:00:29.0,27°.02N×55°.19E,h12km,mB6.3/55,mb5.8/66, Ms6.3/77,Ms7 6.1/71*
ISCJB ***10*** *11:00:32.7±0.1,26°.77N±0°.01×55°.82E±0°.01,h12km, mb6.0/433,MS5.9/275,Error ellipse: s-maj=1.8km s-min=1.4km az=12.7*
NEIC ***10*** *11:00:34.1±0.1,26°.74N×55°.83E,h12km,mb6.1/201, ME5.8,MS6.0/190,MW6.0,MW5.8,MN6.0(TEH),Error ellipse: s-maj=3.1km s-min=2.3km az=198.0 Broadband fault plane solution: P waves. NP1:*ϕ_s*45.00000°, δ70.00000°,λ90.00000°. NP2:*ϕ_s*225.00000°,δ20.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm315.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm135.0000°; Moment Tensor Solution. s115 Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*5.58;* $M_{\theta\theta}$*-2.94;* $M_{\phi\phi}$*-2.63;* $M_{r\theta}$*-1.84;* $M_{\theta\phi}$*-4.70;* $M_{\phi r}$*1.20; Best double couple:* M_0*7.10000×*10^{17} *NP1:*ϕ_s*248.00000°, δ52.00000°,λ122.00000°. NP2:*ϕ_s*23.00000°,δ48.00000°, λ56.00000°. Principal axes: T 6.5800, Plg65.0000°, Azm221.0000°; N 0.9400, Plg24.0000°, Azm47.0000°; P -7.5100, Plg2.0000°, Azm316.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Seven people killed and at least 30 injured in the Bandar 'Abbas area. Fifteen people injured on Jazireh-ye Qeshm. Many villages damaged in Hormozgan. Felt [IV] at Ajman and Ra's al Khaymah; [III] at Abu Dhabi, Dubai and Sharjah, United Arab Emirates. Also felt at Al 'Ayn and Al Fujayrah. Felt [II] at Doha, Qatar.
IGIL ***10*** *11:00:34.6,26°.83N×55°.83E,h15km,mb5.7*
PDA ***10*** *11:00:34.7,26°.82N×55°.83E,h15km,mb6.1*
THR ***10*** *11:00:35.1±0.6,26°.94N×55°.72E,h7km±4km,mb6.2,ML5.8*
CSEM ***10*** *11:00:35.0±0.1,26°.80N×55°.87E,h16km,mb6.1/99,Ms5.9, Mw6.1,Error ellipse: s-maj=2.9km s-min=2.2km az=5.0*
SFS ***10*** *11:00:35.0,26°.86N×55°.80E,h15km,ML6.1*
TEH ***10*** *11:00:35.3,27°.00N×55°.83E,h10km*
MOS ***10*** *11:00:36.0±0.9,26°.87N×55°.80E,h33km,mb6.1/110, MS5.9/94,Error ellipse: s-maj=5.7km s-min=2.6km az=125.6*
SGS ***10*** *11:00:36.5,26°.91N×55°.64E,h0km*
IDC ***10*** *11:00:36.9±1.6,26°.88N×55°.90E,h27km±10km,mb5.4/50, mb1 5.4/54,mb1mx5.4/54,mbtmp5.4/54,ML5.2/3,MS5.8/28, Ms1 5.8/28,ms1mx5.6/35,Error ellipse: s-maj=8.0km s-min=7.3km az=129.0*
GCMT ***10*** *11:00:38.4±0.1,26°.65N×55°.72E,h12km,MW6.1,Moment Tensor Solution. s99,c196; s81,c108; Moment tensor: Scale* 10^{18}*Nm;* M_{rr}*1.34±.01;* $M_{\theta\theta}$*-1.35±.01;* $M_{\phi\phi}$*0.01±.01;* $M_{r\theta}$*0.72±.04;* $M_{\theta\phi}$*-0.91±.01;* $M_{\phi r}$*0.19±.04; Best double couple:* M_0*1.70000×*10^{18} *NP1:*ϕ_s*234.00000°,δ33.00000°, λ76.00000°. NP2:*ϕ_s*71.00000°,δ58.00000°,λ99.00000°. Principal axes: T 1.5200, Plg75.0000°, Azm7.0000°; N 0.4400, Plg8.0000°, Azm246.0000°; P -1.9600, Plg12.0000°, Azm154.0000°; Data Used: II IU CN IC G. Surface waves: sta=102, comp=247, per= 50.*
OMAN ***10*** *11:00:38.1±2.6,26°.94N×56°.08E,h36km±999km Error ellipse: s-maj=84.1km s-min=11.9km az=356.0*
DJA ***10*** *11:00:42,26°.97N×55°.79E,h67km,Mw6.5/20*
SZGRF ***10*** *11:00:57.4,28°.04N×53°.20E,h33km,mb5.8,MS5.7, Southern Iran*

ISC 10 11:00:34.5±0.1,26°.77N±0°.01×55°.83E±0°.01,h12km, (h16km±.9km:pP-P),n2692,σ1§11/2646,mb6.0/433, MS5.9/275,301C-90D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.69**	**26**	*e*Pg	**Pg**	**11 00 46.0**	**-2.0**
BNDS	**Bandar-Abbas**	**0.69**	**26**	*e*Pg	**Pg**	**11 00 46.8**	**-1.2**
BNDS				*e*Sg	**Sg**	**11 00 56.4**	**-0.7**
BNDS	**Bandar-Abbas**	**0.69**	**26**	*e*Pg	**Pg**	**11 00 46.8**	**-1.2**
BNDS				*e*Sg	**Sg**	**11 00 56.4**	**-0.7**
IBND	**Bandar-abas**	**0.92**	**43**	⇑*e*Pg	**Pg**	**11 00 51.0**	**-1.3**
IBND				*e*Pg	**Pg**	**11 00 51.1**	**-1.2**
IBND				*e*Sg	**Sg**	**11 01 02.4**	**-2.0**
IBND				*e*Sg	**Sg**	**11 01 03.2**	**-1.2**
IBND				*e*		11 01 20.0	
	comp=Z,6967μm,0.2s						
IBND	**Bandar-abas**	**0.92**	**43**	*e*Pg	**Pg**	**11 00 51.1**	**-1.2**
IBND				*e*Sg	**Sg**	**11 01 03.2**	**-1.2**
BANOM	**Banah**	**0.94**	**154**	P	**Pg**	**11 00 55.6**	**+2.9**
	SNR=1000						
BANOM	**Banah**	**0.94**	**154**	⇑P	**Pg**	**11 00 55.6**	**+2.9**
	SNR=9757						
NAZ	**Nazwa, Dubai**	**1.78**	**185**	Pn	**Pg**	**11 01 10.0**	**+1.3**
	SNR=680						
NAZ	**Nazwa, Dubai**	**1.78**	**185**	⇓P	**Pg**	**11 01 10.0**	**+1.2**
	SNR=680						
HATD	**Hatta, Dubai**	**1.96**	**172**	Pn	**Pg**	**11 01 11.0**	**-1.1**
	SNR=1000						
HATD	**Hatta, Dubai**	**1.96**	**172**	⇓P	**Pg**	**11 01 11.0**	**-1.0**
	SNR=8187						
ASHO	**Ashiyiah**	**2.09**	**174**	P	**Pg**	**11 01 13.2**	**-1.4**
	SNR=1000						
ASHO	**Ashiyiah**	**2.09**	**174**	⇑P	**Pg**	**11 01 13.2**	**-1.4**
	SNR=3416						
ASUD	**Al Ashush, Dub**	**2.19**	**192**	P	**Pg**	**11 01 15.0**	**-1.4**
	SNR=1000						
ASUD	**Al Ashush, Dub**	**2.19**	**192**	⇑P	**Pg**	**11 01 15.0**	**-1.4**
	SNR=1681						
KRBR	**Kerman**	**3.30**	**14**	*e*Pn	**Pn**	**11 01 27.0**	**+1.0**
KRBR				*e*Sg	**Sn**	**11 02 10.0**	**+4.8**
KRBR	**Kerman**	**3.30**	**14**	*e*Pn	**Pn**	**11 01 27.9**	**+1.9**
KRBR				Sn	**Sn**	**11 02 05.8**	**+0.7**
KRBR				AML	AML	11 02 21.8	
	comp=N,24μm,0.5s						
KRBR				AML	AML	11 02 31.4	
	comp=E,25μm,0.6s						
KRBR	**Kerman**	**3.30**	**14**	*e*Pn	**Pn**	**11 01 27.0**	**+1.0**
KRBR				*e*Sg	**Sn**	**11 02 10.0**	**+4.8**
ARQ	**Araqi**	**3.48**	**170**	P	**Pn**	**11 01 31.2**	**+2.8**
	SNR=336						
ARQ	**Araqi**	**3.48**	**170**	⇓P	**Pn**	**11 01 31.2**	**+2.8**
	SNR=336						
ISRV	**Sarvestan**	**3.54**	**318**	Pn	**Pn**	**11 01 31.9**	**+2.6**
ISRV				Sn	**Sn**	**11 02 11.7**	**+0.6**
ISRV	**Sarvestan**	**3.54**	**318**	*e*Pn	**Pn**	**11 01 32.0**	**+2.7**
ISRV				*e*		11 03 00.7	
	comp=Z,81μm,0.6s						
ISRV	**Sarvestan**	**3.54**	**318**	*e*Pn	**Pn**	**11 01 32.0**	**+2.7**
ISRV				Sn	**Sn**	**11 02 11.7**	**+0.6**
IPAR	**Pars**	**3.92**	**322**	Pn	**Pn**	**11 01 36.7**	**+2.2**
IPAR				Sn	**Sn**	**11 02 20.2**	**-0.3**
IPAR	**Pars**	**3.92**	**322**	*e*Pn	**Pn**	**11 01 37.1**	**+2.6**
IPAR				*e*		11 02 27.5	
	comp=Z,64μm,0.4s						
IPAR	**Pars**	**3.92**	**322**	*e*Pn	**Pn**	**11 01 37.1**	**+2.6**
IPAR				Sn	**Sn**	**11 02 20.2**	**-0.3**
SHI	**Shiraz**	**4.09**	**315**	*e*Pn	**Pn**	**11 01 40.3**	**+3.4**
SHI				*e*		11 03 48.7	
	comp=Z,83μm,0.5s						
SHI	**Shiraz**	**4.09**	**315**	*e*Pn	**Pn**	**11 01 40.3**	**+3.4**
BSY	**Bisya**	**4.20**	**162**	⇑P	**Pn**	**11 01 41.6**	**+3.3**
	SNR=414						
SMDO	**Samad**	**4.21**	**151**	P	**Pn**	**11 01 41.1**	**+2.6**
	SNR=792						
SMDO	**Samad**	**4.21**	**151**	⇓P	**Pn**	**11 01 41.1**	**+2.6**
	SNR=792						
BSYO	**Bisya**	**4.22**	**162**	P	**Pn**	**11 01 41.6**	**+2.9**
	SNR=414						
IMEH	**Mehriz**	**4.72**	**347**	Pn	**Pn**	**11 01 47.5**	**+1.9**
IMEH	**Mehriz**	**4.72**	**347**	*e*Pn	**Pn**	**11 01 47.5**	**+1.9**
IMEH				*e*		11 03 20.6	
	comp=Z,61μm,0.9s						
IMEH	**Mehriz**	**4.72**	**347**	*e*Pn	**Pn**	**11 01 47.5**	**+1.9**
IBAF	**Bafgh**	**4.81**	**357**	Pn	**Pn**	**11 01 47.7**	**+1.0**
IBAF	**Bafgh**	**4.81**	**357**	*e*Pn	**Pn**	**11 01 48.0**	**+1.3**
IBAF				*e*		11 03 21.1	
	comp=N,82μm,0.7s						
IBAF	**Bafgh**	**4.81**	**357**	*e*Pn	**Pn**	**11 01 48.0**	**+1.3**
JMDO	**Jabal Madar**	**4.84**	**154**	P	**Pn**	**11 01 49.5**	**+2.2**
	SNR=854						
JMDO	**Jabal Madar**	**4.84**	**154**	⇑P	**Pn**	**11 01 49.5**	**+2.2**
	SNR=854						
WBK	**Wadi Bani Khal**	**5.03**	**145**	⇑P	**Pn**	**11 01 51.3**	**+1.5**
	SNR=1010						
ZHSF	**Zahedan**	**5.20**	**56**	*e*Pn	**Pn**	**11 01 55.0**	**+2.9**
ZHSF	**Zahedan**	**5.20**	**56**	*e*Pn	**Pn**	**11 01 55.8**	**+3.7**
ZHSF	**Zahedan**	**5.20**	**56**	*e*Pn	**Pn**	**11 01 55.0**	**+2.9**
BTHS		**5.26**	**240**	P	**Pn**	**11 01 53.6**	**+0.6**
BTHS		**5.26**	**240**	P	**Pn**	**11 01 53.6**	**+0.6**
ISAD	**Sadrabad**	**5.46**	**340**	Pn	**Pn**	**11 01 59.3**	**+3.7**
ISAD				Sn	**Sn**	**11 02 55.3**	**-3.0**
ISAD	**Sadrabad**	**5.46**	**340**	*e*Pn	**Pn**	**11 01 59.4**	**+3.8**
ISAD				*e*		11 03 10.2	
	comp=Z,22μm,0.4s						
ISAD	**Sadrabad**	**5.46**	**340**	*e*Pn	**Pn**	**11 01 59.4**	**+3.8**
ISAD				Sn	**Sn**	**11 02 55.3**	**-3.0**
ICHK	**Chekchek**	**5.59**	**348**	Pn	**Pn**	**11 01 59.0**	**+1.5**
ICHK				Sn	**Sn**	**11 02 56.3**	**-5.4**
ICHK	**Chekchek**	**5.59**	**348**	*e*Pn	**Pn**	**11 01 59.1**	**+1.6**
ICHK				*e*		11 04 18.3	
	comp=Z,6μm,0.7s						
ICHK	**Chekchek**	**5.59**	**348**	*e*Pn	**Pn**	**11 01 59.1**	**+1.6**
ICHK				Sn	**Sn**	**11 02 56.3**	**-5.4**
BOQSS		**5.86**	**263**	P	**Pn**	**11 02 02.3**	**+1.1**
IKOO	**Kooshah**	**6.27**	**25**	*e*Pn	**Pn**	**11 02 07.8**	**+1.0**
IKOO				*e*		11 04 28.3	
	comp=Z,75μm,0.8s						
IGAR	**Gharneh**	**6.51**	**330**	*e*Pn	**Pn**	**11 02 11.9**	**+1.8**
IGAR				*e*		11 03 35.4	
	comp=Z,48μm,0.4s						
NASN	**Na'in**	**6.56**	**337**	*e*Pn	**Pn**	**11 02 12.0**	**+1.3**
NASN	**Na'in**	**6.56**	**337**	*e*Pn	**Pn**	**11 02 11.9**	**+1.2**
NASN	**Na'in**	**6.56**	**337**	*e*Pn	**Pn**	**11 02 11.9**	**+1.2**
ITEG	**Tejag**	**6.61**	**22**	*e*Pn	**Pn**	**11 02 12.0**	**+0.6**
ITEG				*e*		11 04 30.3	
	comp=Z,95μm,1.0s						
ITEG	**Tejag**	**6.61**	**22**	*e*Pn	**Pn**	**11 02 12.0**	**+0.6**
IZEF	**Zefreh**	**6.82**	**334**	Pn	**Pn**	**11 02 14.7**	**+0.4**
IZEF				Sn	**Sn**	**11 03 27.6**	**-4.3**
IZEF	**Zefreh**	**6.82**	**334**	*e*Pn	**Pn**	**11 02 14.8**	**+0.5**
IZEF				*e*		11 02 20.2	
	comp=Z,22μm,0.3s						
IZEF	**Zefreh**	**6.82**	**334**	Pn	**Pn**	**11 02 14.7**	**+0.4**
IZEF				Sn	**Sn**	**11 03 27.6**	**-4.3**
IDAH	**Dahanechah**	**6.90**	**30**	*e*Pn	**Pn**	**11 02 16.3**	**+0.8**
IDAH				*e*		11 04 60.0	
	comp=Z,54μm,0.9s						
IDAH	**Dahanechah**	**6.90**	**30**	*e*Pn	**Pn**	**11 02 16.3**	**+0.8**
HRDDS		**6.94**	**238**	S	**Sn**	**11 03 35.2**	**+0.4**
HRDDS		**6.94**	**238**	P	**Pn**	**11 02 16.0**	**0.0**
IMON	**Monand**	**7.21**	**27**	*e*Pn	**Pn**	**11 02 20.5**	**+0.8**
IMON				*e*		11 04 51.7	
	comp=Z,52μm,0.6s						
IMON	**Monand**	**7.21**	**27**	*e*Pn	**Pn**	**11 02 20.5**	**+0.8**
QRN	**Al-Qurain**	**7.28**	**287**	*e*P	**Pn**	**11 02 21.7**	**+1.0**
QRN				AML	AML	11 03 43.8	
	comp=Z,1μm,0.3s						
IPIR	**Pirpir**	**7.29**	**325**	Pn	**Pn**	**11 02 22.0**	**+1.2**
IPIR	**Pirpir**	**7.29**	**325**	*e*Pn	**Pn**	**11 02 22.0**	**+1.2**
IPIR				*e*		11 03 53.6	
	comp=Z,60μm,0.4s						
IPIR	**Pirpir**	**7.29**	**325**	*e*Pn	**Pn**	**11 02 22.0**	**+1.2**
IKLH	**Kolahrood**	**7.49**	**332**	Pn	**Pn**	**11 02 24.4**	**+0.8**
IKLH	**Kolahrood**	**7.49**	**332**	*e*Pn	**Pn**	**11 02 24.4**	**+0.8**
IKLH				*e*		11 02 36.3	
	comp=Z,19μm,0.2s						
IKLH	**Kolahrood**	**7.49**	**332**	*e*Pn	**Pn**	**11 02 24.4**	**+0.8**
KBD	**Kabd**	**7.58**	**290**	*e*P	**Pn**	**11 02 25.7**	**+0.8**
KBD				AML	AML	11 03 51.4	
	comp=Z,1μm,0.4s						
KBD	**Kabd**	**7.58**	**290**	*e*P	**Pn**	**11 02 25.7**	**+0.8**
UMR	**Umm Al-Rimmam**	**7.68**	**293**	*e*P	**Pn**	**11 02 27.4**	**+1.2**
UMR				AML	AML	11 03 52.9	
	comp=Z,2μm,0.5s						
UMR	**Umm Al-Rimmam**	**7.68**	**293**	*e*P	**Pn**	**11 02 27.4**	**+1.2**
NAY	**Al-Naaiem**	**7.98**	**290**	*e*P	**Pn**	**11 02 31.6**	**+1.2**
NAY				AML	AML	11 04 00.3	
	comp=Z,1μm,0.9s						
NAY	**Al-Naaiem**	**7.98**	**290**	*e*P	**Pn**	**11 02 31.6**	**+1.2**
MIB	**Mutribah**	**8.07**	**294**	*e*P	**Pn**	**11 02 32.9**	**+1.3**
MIB				AML	AML	11 04 03.5	
	comp=Z,5μm,0.9s						
MIB	**Mutribah**	**8.07**	**294**	*e*P	**Pn**	**11 02 32.9**	**+1.3**
ISFB	**Sefidab**	**8.16**	**339**	Pn	**Pn**	**11 02 33.5**	**+0.7**
ISFB	**Sefidab**	**8.16**	**339**	*e*Pn	**Pn**	**11 02 33.6**	**+0.8**
ISFB				*e*		11 02 48.4	
	comp=Z,20μm,0.4s						
ISFB	**Sefidab**	**8.16**	**339**	Pn	**Pn**	**11 02 33.5**	**+0.7**
GHVR	**GHOM**	**8.62**	**334**	*e*Pn	**Pn**	**11 02 40.0**	**+1.0**
GHVR	**GHOM**	**8.62**	**334**	*e*Pn	**Pn**	**11 02 40.4**	**+1.4**
GHVR	**GHOM**	**8.62**	**334**	*e*Pn	**Pn**	**11 02 40.4**	**+1.4**
IANJ	**Anjilo**	**8.82**	**350**	Pn	**Pn**	**11 02 43.0**	**+1.2**
IANJ	**Anjilo**	**8.82**	**350**	*e*Pn	**Pn**	**11 02 43.0**	**+1.2**
IANJ				*e*		11 05 55.9	
	comp=Z,57μm,1.2s						
IANJ	**Anjilo**	**8.82**	**350**	*e*Pn	**Pn**	**11 02 43.0**	**+1.2**
IVRN	**Varamin**	**8.92**	**338**	Pn	**Pn**	**11 02 43.8**	**+0.6**
IVRN	**Varamin**	**8.92**	**338**	*e*Pn	**Pn**	**11 02 43.0**	**-0.2**
IVRN				*e*Pn	**Pn**	**11 02 43.8**	**+0.6**
IVRN				*e*		11 03 41.5	
	comp=Z,27μm,0.7s						
IVRN	**Varamin**	**8.92**	**338**	*e*Pn	**Pn**	**11 02 43.8**	**+0.6**
ILAS	**Lasjerd**	**8.93**	**345**	Pn	**Pn**	**11 02 45.5**	**+2.2**
ILAS	**Lasjerd**	**8.93**	**345**	*e*Pn	**Pn**	**11 02 45.5**	**+2.2**
ILAS				*e*		11 06 26.5	
	comp=Z,30μm,0.9s						
ILAS	**Lasjerd**	**8.93**	**345**	*e*Pn	**Pn**	**11 02 45.5**	**+2.2**
ASAO	**Ashtian**	**9.22**	**329**	*e*Pn	**Pn**	**11 02 49.0**	**+1.7**
ASAO	**Ashtian**	**9.22**	**329**	*e*Pn	**Pn**	**11 02 48.5**	**+1.2**
ASAO	**Ashtian**	**9.22**	**329**	*e*Pn	**Pn**	**11 02 48.5**	**+1.2**
IFIR	**Firoozkooh**	**9.22**	**344**	Pn	**Pn**	**11 02 49.0**	**+1.6**
IFIR	**Firoozkooh**	**9.22**	**344**	*e*Pn	**Pn**	**11 02 49.1**	**+1.7**
IFIR				*e*		11 03 07.4	
	comp=Z,5μm,0.2s						
IFIR	**Firoozkooh**	**9.22**	**344**	*e*Pn	**Pn**	**11 02 49.1**	**+1.7**
ISHM	**Shahmirzad**	**9.26**	**347**	Pn	**Pn**	**11 02 49.2**	**+1.3**
ISHM	**Shahmirzad**	**9.26**	**347**	*e*Pn	**Pn**	**11 02 49.3**	**+1.4**
ISHM				*e*		11 02 57.6	
	comp=Z,21μm,0.3s						
ISHM	**Shahmirzad**	**9.26**	**347**	*e*Pn	**Pn**	**11 02 49.3**	**+1.4**
IDMV	**Damavand**	**9.36**	**341**	Pn	**Pn**	**11 02 51.0**	**+1.8**
IDMV	**Damavand**	**9.36**	**341**	*e*Pn	**Pn**	**11 02 51.0**	**+1.8**
IDMV				*e*		11 06 31.9	
	comp=Z,26μm,0.8s						
IDMV	**Damavand**	**9.36**	**341**	*e*Pn	**Pn**	**11 02 51.0**	**+1.8**
DAMV	**Damavand**	**9.43**	**340**	*e*Pn	**Pn**	**11 02 51.0**	**+0.9**
DAMV	**Damavand**	**9.43**	**340**	*e*Pn	**Pn**	**11 02 52.1**	**+1.9**
DAMV	**Damavand**	**9.43**	**340**	*e*Pn	**Pn**	**11 02 52.1**	**+2.0**
IR3	**Iran Long-Peri**	**9.60**	**336**	*e*Pn	**Pn**	**11 02 53.5**	**+1.0**
IALA	**Alasht**	**9.63**	**345**	Pn	**Pn**	**11 02 55.1**	**+2.1**
IALA	**Alasht**	**9.63**	**345**	*e*Pn	**Pn**	**11 02 55.1**	**+2.1**
IALA				*e*		11 06 30.0	
	comp=Z,49μm,0.9s						
IALA	**Alasht**	**9.63**	**345**	*e*Pn	**Pn**	**11 02 55.1**	**+2.1**
IAFJ	**Afjeh**	**9.71**	**340**	*e*Pn	**Pn**	**11 02 56.5**	**+2.4**
IAFJ				*e*		11 03 02.1	
	comp=N,68μm,0.3s						
IMOG	**Moghan**	**9.78**	**17**	Pn	**Pn**	**11 02 56.3**	**+1.4**
IMOG	**Moghan**	**9.78**	**17**	*e*Pn	**Pn**	**11 02 56.3**	**+1.4**
IMOG				*e*		11 06 27.6	
	comp=Z,54μm,1.4s						
IMOG	**Moghan**	**9.78**	**17**	*e*Pn	**Pn**	**11 02 56.3**	**+1.4**
IGLO	**Ghaloghah**	**9.85**	**351**	Pn	**Pn**	**11 02 59.0**	**+3.1**
IGLO	**Ghaloghah**	**9.85**	**351**	*e*Pn	**Pn**	**11 02 59.1**	**+3.2**
IGLO				*e*		11 03 09.7	
	comp=Z,25μm,0.5s						
IGLO	**Ghaloghah**	**9.85**	**351**	*e*Pn	**Pn**	**11 02 59.1**	**+3.2**
IMHD	**Mahdasht**	**9.92**	**335**	Pn	**Pn**	**11 02 58.2**	**+1.3**
IMHD	**Mahdasht**	**9.92**	**335**	*e*Pn	**Pn**	**11 02 58.3**	**+1.4**
IMHD				*e*		11 06 18.7	
	comp=Z,10μm,0.6s						
IMHD	**Mahdasht**	**9.92**	**335**	*e*Pn	**Pn**	**11 02 58.3**	**+1.4**
CHTH	**Charan**	**9.96**	**337**	*e*Pn	**Pn**	**11 02 58.9**	**+1.5**
CHTH	**Charan**	**9.96**	**337**	*e*Pn	**Pn**	**11 02 58.9**	**+1.5**
IRAZ	**Razeghan**	**9.98**	**331**	Pn	**Pn**	**11 02 58.3**	**+0.6**
IRAZ	**Razeghan**	**9.98**	**331**	*e*Pn	**Pn**	**11 02 58.3**	**+0.6**
IRAZ				*e*		11 05 01.6	
	comp=Z,19μm,0.6s						
IRAZ	**Razeghan**	**9.98**	**331**	*e*Pn	**Pn**	**11 02 58.3**	**+0.6**
ISRO	**Mashad**	**10.00**	**17**	*e*Pn	**Pn**	**11 02 59.9**	**+1.9**
IPAY	**Payeh**	**10.02**	**15**	Pn	**Pn**	**11 02 59.1**	**+0.9**
IPAY	**Payeh**	**10.02**	**15**	*e*Pn	**Pn**	**11 02 59.2**	**+1.0**
IPAY				*e*		11 06 45.5	
	comp=Z,74μm,1.5s						
IPAY	**Payeh**	**10.02**	**15**	Pn	**Pn**	**11 02 59.1**	**+0.9**
THKV	**Tehran--Karaj**	**10.05**	**336**	*e*Pn	**Pn**	**11 03 00.4**	**+1.8**
THKV	**Tehran--Karaj**	**10.05**	**336**	*e*Pn	**Pn**	**11 03 00.4**	**+1.8**
IMYA	**Miami**	**10.21**	**20**	Pn	**Pn**	**11 03 02.1**	**+1.3**
IMYA	**Miami**	**10.21**	**20**	*e*Pn	**Pn**	**11 03 02.2**	**+1.4**
IMYA				*e*		11 06 24.2	
	comp=Z,38μm,1.1s						
IMYA	**Miami**	**10.21**	**20**	Pn	**Pn**	**11 03 02.1**	**+1.3**
IKRD	**Kardeh**	**10.23**	**12**	Pn	**Pn**	**11 03 05.6**	**+4.5**
IKRD	**Kardeh**	**10.23**	**12**	*e*Pn	**Pn**	**11 03 05.7**	**+4.6**
IKRD				*e*		11 06 46.1	
	comp=Z,52μm,1.5s						
ASYS		**10.26**	**277**	S	**Sn**	**11 04 49.3**	**-7.4**
ASYS		**10.26**	**277**	P	**Pn**	**11 03 00.1**	**-1.5**
ASYS		**10.26**	**277**	P	**Pn**	**11 03 00.1**	**-1.5**
IKOM	**Komasi**	**10.29**	**318**	Pn	**Pn**	**11 03 03.0**	**+1.0**
IKOM	**Komasi**	**10.29**	**318**	*e*	**Pn**	**11 03 09.2**	**+7.2**
IKOM	comp=Z,46μm,0.2s			*e*Pn	**Pn**	**11 03 03.0**	**+1.0**
ISFR	**Sfrayin**	**10.41**	**10**	Pn	**Pn**	**11 03 05.5**	**+1.9**
ISFR	**Sfrayin**	**10.41**	**10**	*e*Pn	**Pn**	**11 03 05.5**	**+1.9**
ISFR				*e*		11 06 41.9	
	comp=Z,84μm,1.6s						
ISHV	**Shirvan**	**10.85**	**8**	Pn	**Pn**	**11 03 11.9**	**+2.3**
ISHV	**Shirvan**	**10.85**	**8**	*e*Pn	**Pn**	**11 03 11.9**	**+2.3**
ISHV				*e*		11 07 12.9	
	comp=Z,61μm,0.9s						
ISHV	**Shirvan**	**10.85**	**8**	*e*Pn	**Pn**	**11 03 11.9**	**+2.3**
MRVT	**Maraveh tapeh**	**10.86**	**1**	*e*Pn	**Pn**	**11 03 11.7**	**+2.0**
MRVT	**Maraveh tapeh**	**10.86**	**1**	*e*Pn	**Pn**	**11 03 11.7**	**+2.0**
IEMG	**Emamgholi**	**10.88**	**12**	Pn	**Pn**	**11 03 11.4**	**+1.4**
IEMG	**Emamgholi**	**10.88**	**12**	*e*Pn	**Pn**	**11 03 11.5**	**+1.5**
IEMG				*e*		11 07 12.5	
	comp=Z,66μm,1.8s						
IEMG	**Emamgholi**	**10.88**	**12**	Pn	**Pn**	**11 03 11.4**	**+1.4**
IVIS	**Veis**	**10.93**	**317**	Pn	**Pn**	**11 03 10.3**	**-0.4**
IVIS	**Veis**	**10.93**	**317**	*e*Pn	**Pn**	**11 03 10.3**	**-0.4**
IVIS				*e*		11 03 17.5	
	comp=Z,27μm,0.2s						
IVIS	**Veis**	**10.93**	**317**	*e*Pn	**Pn**	**11 03 10.3**	**-0.4**
IGHG	**Ghaleghazi**	**10.97**	**316**	Pn	**Pn**	**11 03 11.5**	**+0.2**
IGHG	**Ghaleghazi**	**10.97**	**316**	*e*Pn	**Pn**	**11 03 11.5**	**+0.2**
IGHG				*e*		11 05 37.9	
	comp=Z,43μm,0.4s						
IGHG	**Ghaleghazi**	**10.97**	**316**	*e*Pn	**Pn**	**11 03 11.5**	**+0.2**
BJRD	**Bojnurd**	**10.98**	**7**	*e*Pn	**Pn**	**11 03 13.4**	**+2.1**
BJRD	**Bojnurd**	**10.98**	**7**	*e*Pn	**Pn**	**11 03 13.4**	**+2.1**
SNGE	**Sanandaj**	**11.03**	**321**	*e*Pn	**Pn**	**11 03 12.1**	**0.0**
SNGE	**Sanandaj**	**11.03**	**321**	*e*Pn	**Pn**	**11 03 13.8**	**+1.7**
ILIN	**Lien**	**11.13**	**319**	Pn	**Pn**	**11 03 12.7**	**-0.8**
ILIN	**Lien**	**11.13**	**319**	*e*Pn	**Pn**	**11 03 12.7**	**-0.8**
ILIN				*e*		11 03 17.8	
	comp=Z,22μm,0.2s						
ILIN	**Lien**	**11.13**	**319**	*e*Pn	**Pn**	**11 03 12.7**	**-0.8**
ABKT	**Ailbek**	**11.29**	**9**	Pn	**Pn**	**11 03 17.6**	**+1.9**
	comp=Z,2μm,1.3s,SNR=85						
IDHR	**Dehrash**	**11.33**	**316**	Pn	**Pn**	**11 03 15.2**	**-1.0**
IDHR	**Dehrash**	**11.33**	**316**	*e*Pn	**Pn**	**11 03 15.3**	**-0.9**
I

ASF pmax pmax
comp=Z,5.0nm,0.3s
ASF smax
comp=N,5.0nm,0.3s
ASF MLR MLR
comp=Z,15µm,19.0s
TRBA At Turbah 17.38 221⇑ *eP* **Pn 11 04 33.9 -3.1**
KARS Kars 17.40 326 *eP* **Pn 11 04 38.8 +1.7**
KARS Kars 17.40 326 *eP* **Pn 11 04 38.8 +1.8**
MTA Mtatsminda 17.44 331 P **Pn 11 04 38.5 +1.0**
MTA S **Sn 11 07 55.6 +4.1**
TBLG Delisi 17.49 331 P **Pn 11 04 39.3 +1.1**
TBLG Delisi 17.49 331 P **Pn 11 04 39.3 +1.1**
TBLG S **Sn 11 08 00.7 +7.9**
TBLG Delisi 17.49 331 P **Pn 11 04 39.3 +1.1**
MAK Makhachkala 17.52 339 *d iP* **Pn 11 04 43.4 +4.8**
MAK *i* 11 07 55.2
MAK MLR MLR
comp=Z,34µm,20.0s
MAK Makhachkala 17.52 339 *i* P **Pn 11 04 43.4 +4.8**
comp=Z,34µm,20.0s
MAK *i* S **Sn 11 07 55.2 +1.7**
HOMI Horasan 17.59 322⇑ *iP* **Pn 11 04 40.5 +1.1**
ROOS tl alroos 17.59 299⇑ *iP* **Pn 11 04 40.2 +0.7**
SALA Sala 17.60 294⇑ *iP* **Pn 11 04 38.9 -0.8**
BINT Bingol 17.63 317 *eP* **Pn 11 04 39.9 0.0**
BINT Bingol 17.63 317 *eP* **Pn 11 04 39.9 -0.1**
EZM Erzurum 17.79 321 *eP* **Pn 11 04 44.6 +2.6**
GOR Gori 17.97 331 P **Pn 11 04 47.1 +3.0**
TOTH TOTAH 18.02 296⇑ *iP* **Pn 11 04 44.9 +0.1**
SVRC Sivrice-ELAZID 18.08 314 *eP* **Pn 11 04 45.8 +0.4**
SVRC Sivrice-ELAZID 18.08 314 *eP* **Pn 11 04 45.8 +0.3**
MARH Ras Al Marh 18.18 298⇑ *iP* **Pn 11 04 47.7 +1.0**
QASN Qassioun 18.19 296⇑ *iP* **Pn 11 04 47.7 +0.8**
TCHB Talchebab 18.22 294⇑ *iP* **Pn 11 04 46.8 -0.4**
ATAB Bozova 18.26 310 *i P* **Pn 11 04 47.2 -0.5**
ATAB Bozova 18.26 310 *i P* **Pn 11 04 47.2 -0.5**
DDEM Demirkent 18.27 324⇑ *iP* **Pn 11 04 48.9 +1.1**
DDEM Demirkent 18.27 324 *i P* **Pn 11 04 48.9 +1.0**
FKH Fakeheh 18.30 299 *eP* **Pn 11 04 48.2 -0.1**
FKH Fakeheh 18.30 299 *eP* **Pn 11 04 48.2 -0.1**
PTK Pertek 18.32 315 *eP* **Pn 11 04 48.1 -0.4**
PTK Pertek 18.32 315 *eP* **Pn 11 04 48.1 -0.4**
KFRA Kufra 18.34 302⇑ *iP* **Pn 11 04 50.3 +1.6**
ELZG Elazig 18.35 314⇑ *iP* **Pn 11 04 49.2 +0.3**
ELZG Elazig 18.35 314 *i P* **Pn 11 04 49.2 +0.3**
KOPT Kop Dagi 18.36 320⇑ *iP* **Pn 11 04 49.8 +0.8**
KOPT Kop Dagi 18.36 320 *i P* **Pn 11 04 49.8 +0.9**
ARTV Artvin 18.39 325 *i P* **Pn 11 04 49.2 -0.1**
ARTV Artvin 18.39 325 *i P* **Pn 11 04 49.2 -0.1**
ARTV *i* S **Sn 11 08 26.0 +11**
BRBR Barbar 18.42 296⇑ *iP* **Pn 11 04 50.0 +0.3**
KSHT Keshet 18.42 294 Pn **Pn 11 04 51.3 +1.6**
KSHT Keshet 18.42 294 Pn **Pn 11 04 51.3 +1.6**
ZFRI Zfri 18.51 287 ⇑Pn **Pn 11 04 52.6 +1.8**
ZFRI Zfri 18.51 287 ⇑Pn **Pn 11 04 52.6 +1.8**
POO Poona 18.53 113 *e*PKP **Pn 11 04 50.3 -0.8**
POO AMb AMB 11 05 06.8
comp=Z,843nm,1.0s
RCY Rachaya 18.54 296 *eP* **Pn 11 04 51.8 +0.6**
RCY Rachaya 18.54 296 *eP* **Pn 11 04 51.8 +0.7**
HRI Mount Hermon 18.56 295 ⇑P **Pn 11 04 52.1 +0.7**
HRI Mount Hermon 18.56 295 P **Pn 11 04 52.1 +0.7**
BHK Bhakra 18.57 71 *ex* **Pn 11 04 48.2 -3.3**
BHK *ex* x 11 05 07.4
KSDI Kefar Szold 18.60 295 ⇑Pn **Pn 11 04 52.2 +0.3**
KSDI Kefar Szold 18.60 295 ⇑Pn **Pn 11 04 52.2 +0.3**
MALT Malatya 18.61 313 *eP* **Pn 11 04 52.6 +0.6**
MALT Malatya 18.61 313⇑ *eP* **Pn 11 04 52.2 +0.2**
MALT pmax pmax
comp=Z,3µm,1.4s
MALT Malatya 18.61 313⇑ *e*Pn **Pn 11 04 52.2 +0.1**
comp=Z,3µm,1.4s
MALT Malatya 18.61 313 P **Pn 11 04 52.1 +0.1**
comp=Z,1µm,1.3s
MALT Malatya 18.61 313 *eP* **Pn 11 04 52.2 +0.2**
comp=Z,3µm,1.4s
MMLI Mount Malkishu 18.62 293 ⇑Pn **Pn 11 04 52.5 +0.4**
MMLI Mount Malkishu 18.62 293 ⇑Pn **Pn 11 04 52.5 +0.4**
MYA Malataya 18.62 313 *eP* **Pn 11 04 52.8 +0.7**
MYA Malataya 18.62 313 *eP* **Pn 11 04 52.8 +0.7**
EIL Elat 18.63 284 P **Pn 11 04 52.5 +0.3**
comp=Z,6.0nm,0.3s,baz=92,slow=2.9,SNR=59
EIL LR LR 11 12 41.9
comp=Z,25µm,18.3s,baz=280,slow=39
EIL Elat 18.63 284 P **Pn 11 04 52.5 +0.2**
BIDA Albida 18.63 301⇑ *iP* **Pn 11 04 52.1 -0.2**
DBOC Borcka 18.64 325⇑ *iP* **Pn 11 04 52.9 +0.5**
DBOC Borcka 18.64 325 *i P* **Pn 11 04 52.9 +0.5**
YTIR Yattir 18.67 289 Pn **Pn 11 04 54.5 +1.7**
YTIR Yattir 18.67 289 Pn **Pn 11 04 54.5 +1.7**
HWQ Hawqa 18.68 298 *eP* **Pn 11 04 53.4 +0.5**
HWQ Hawqa 18.68 298 *eP* **Pn 11 04 53.4 +0.6**
ZEI Tsey 18.70 332 *eP* **Pn 11 04 54.5 +1.5**
ZEI pmax pmax
comp=Z,3µm,1.2s
ZEI pmax pmax
comp=E,4µm,1.0s
ZEI pmax pmax
comp=N,4µm,1.3s
ZEI MLR MLR
comp=Z,9µm,8.0s
ZEI Tsey 18.70 332 *eP* **Pn 11 04 54.5 +1.5**
comp=Z,9µm,8.0s
BCA Borcka 18.74 325 *eP* **Pn 11 04 54.1 +0.6**
BCA Borcka 18.74 325 *eP* **Pn 11 04 54.1 +0.6**
WRDH Warideh 18.74 302⇑ *iP* **Pn 11 04 53.4 -0.2**
MMAI Mount Meron Ar 18.76 294 P **Pn 11 04 54.6 +0.7**
comp=Z,12nm,0.3s,baz=102,slow=16,SNR=80
MMAI S **Sn 11 08 17.7 -6.1**
comp=Z,13nm,0.3s,baz=91,slow=33,SNR=5.4
MMAI LR LR 11 13 54.6
comp=Z,25µm,18.4s,baz=145,slow=42
BHL Bhannes 18.80 297 *eP* **Pn 11 04 54.7 +0.4**
BHL Bhannes 18.80 297 *eP* **Pn 11 04 54.7 +0.4**
KRMI Paran Flat 18.86 285 ⇑Pn **Pn 11 04 55.5 +0.4**
KRMI Paran Flat 18.86 285 ⇑Pn **Pn 11 04 55.5 +0.4**
GAZ Gaziantep 18.86 308 *eP* **Pn 11 04 55.3 +0.2**
GAZ Gaziantep 18.86 308 *eP* **Pn 11 04 55.3 +0.2**
RMNI Mount Ramon 18.87 287 ⇑Pn **Pn 11 04 56.7 +1.5**
RMNI Mount Ramon 18.87 287 ⇑Pn **Pn 11 04 56.7 +1.5**
BTCH Batrach 18.91 304⇑ *iP* **Pn 11 04 55.5 -0.2**
SLNF Slenfeh 18.92 302⇑ *iP* **Pn 11 04 56.1 +0.3**
PZAR Pazar-Rize 18.93 323 *eP* **Pn 11 04 56.7 +0.8**
PZAR Pazar-Rize 18.93 323 *eP* **Pn 11 04 56.7 +0.9**
AKCD Akcadag 18.94 312⇑ *iP* **Pn 11 04 56.7 +0.7**
AKCD Akcadag 18.94 312 *i P* **Pn 11 04 56.7 +0.7**
MATL Matarih 18.94 296 *eP* **Pn 11 04 57.4 +1.4**
MATL Matarih 18.94 296 *eP* **Pn 11 04 57.4 +1.3**
RTMI Retamim 18.99 288 Pn **Pn 11 04 57.1 +0.5**
RTMI Retamim 18.99 288 Pn **Pn 11 04 57.1 +0.5**
DRWC Darouich 19.01 306⇑ *iP* **Pn 11 04 57.0 +0.2**
OFRI 'Ofer 19.02 293 ⇑Pn **Pn 11 04 57.6 +0.6**
OFRI 'Ofer 19.02 293 ⇑Pn **Pn 11 04 57.6 +0.6**
NDI New Delhi 19.03 79 *e*PKP **Pn 11 04 58.0 +0.9**
NDI *ex* x 11 08 23.0
SDNR Sundarnagar 19.05 71 *e*PKP **Pn 11 04 56.5 -0.9**
SDNR *ex* x 11 08 35.5
KEMA Kemaliye 19.11 315⇑ *iP* **Pn 11 04 58.5 +0.5**
KEMA Kemaliye 19.11 315 *i P* **Pn 11 04 58.5 +0.5**
SMLA Simla 19.16 72 *i P* **Pn 11 04 57.8 -0.9**
SMLA *i* x x 11 08 31.0
KELT Kelkit 19.17 318⇑ *iP* **Pn 11 04 57.8 -0.9**
KELT Kelkit 19.17 318 *i P* **Pn 11 04 57.8 -1.0**
YAYL Yayladag 19.18 304⇑ *iP* **Pn 11 04 58.7 -0.1**
YAYL Yayladag 19.18 304 *i P* **Pn 11 04 58.7 -0.2**
KZIT Kziot 19.22 287 P **Pn 11 04 59.4 0.0**
KZIT Kziot 19.22 287 P **Pn 11 04 59.4 0.0**
GUMT Gumushane 19.24 319 *eP* **Pn 11 04 59.6 +0.1**
GUMT Gumushane 19.24 319 *eP* **Pn 11 04 59.7 +0.1**
KMRS Kahramanmaras 19.24 308 *eP* **Pn 11 04 59.7 0.0**
KMRS Kahramanmaras 19.24 308 *eP* **Pn 11 04 59.7 +0.1**
MACK Trabzon 19.39 321⇑ *iP* **Pn 11 05 01.6 +0.2**
MACK Trabzon 19.39 321 *i P* **Pn 11 05 01.6 +0.2**
KAD Karad 19.42 115 *e*PKP **Pn 11 05 00.8 -1.1**
ATD Arta Tunnel 19.48 221 P **Pn 11 05 03.4 +0.8**
comp=Z,6.1nm,0.3s,baz=24,slow=7.1,SNR=77
ATD LR LR 11 14 01.1
comp=Z,59µm,18.0s,baz=41,slow=41
ATD Arta Tunnel 19.48 221 P **Pn 11 05 03.4 +0.8**
ATD LR LR 11 14 01.1
ATD Arta Tunnel 19.48 221 P **Pn 11 05 03.4 +0.8**

ANDN Andirin 19.66 308⇑ *iP* **Pn 11 05 05.0 +0.3**
ANDN Andirin 19.66 308 *i P* **Pn 11 05 05.0 +0.3**
DDI Dehra Dun 19.84 75 *e*PKP **Pn 11 05 05.7 -1.1**
DDI *ex* x 11 09 00.0
CEYT Ceyhan 19.84 306 *eP* **Pn 11 05 07.3 +0.5**
CEYT Ceyhan 19.84 306 *eP* **Pn 11 05 07.3 +0.5**
SUSE Susehri 19.85 317⇑ *iP* **Pn 11 05 06.0 -0.8**
SUSE Susehri 19.85 317 *i P* **Pn 11 05 06.0 -0.8**
YURE YUREGIR 19.85 305⇑ *iP* **Pn 11 05 07.8 +0.9**
YURE YUREGIR 19.85 305 *i P* **Pn 11 05 07.8 +0.9**
BHPL Bhopal 19.88 95 *e*PKP **Pn 11 05 04.4 -3.0**
KRTS Karatas 19.93 304 *eP* **Pn 11 05 08.2 +0.3**
KRTS Karatas 19.93 304 *eP* **Pn 11 05 08.2 +0.3**
SARI SarD1z-Kayseri 19.96 311 *eP* **Pn 11 05 08.3 +0.1**
SARI SarD1z-Kayseri 19.96 311 *eP* **Pn 11 05 08.3 +0.1**
ESPY Espiye-Giresun 19.97 319 *eP* **Pn 11 05 08.1 -0.2**
ESPY Espiye-Giresun 19.97 319 *eP* **Pn 11 05 08.1 -0.2**
KOZT Kozan 19.99 307 *eP* **Pn 11 05 08.7 +0.1**
PINB Pinarbasi 20.16 311⇑ *iP* **P 11 05 10.3 +1.6**
PINB Pinarbasi 20.16 311 *i P* **P 11 05 10.3 +1.7**
KIV Kislovodsk 20.18 332 *c iP* **P 11 05 10.2 +1.4**
KIV *i* 11 05 22.7
KIV *i* S **S 11 08 55.2 +0.2**
KIV pmax pmax
comp=Z,703nm,1.0s
KIV MLR MLR
comp=Z,14µm,18.0s,MS5.4
KIV Kislovodsk 20.18 332 *e*Pn **P 11 05 10.4 +1.6**
comp=Z,5µm,1.1s
KIV LR LR
comp=Z,23µm,21.0s,MS5.5
KIV Kislovodsk 20.18 332 Pn **P 11 05 10.9 +2.1**
comp=Z,19µm,1.5s
KIV Kislovodsk 20.18 332 *e*Pn **P 11 05 10.4 +1.6**
comp=Z,5µm,1.1s
KIV *i* S **S 11 08 55.2 +0.2**
comp=Z,14µm,18.0s
KK31 Karatay Array 20.20 33 P **P 11 05 08.7 -0.4**
KK31 pmax pmax
comp=Z,1µm,1.4s
KK31 Karatay Array 20.20 33 P **P 11 05 08.7 -0.4**
comp=Z,1µm,1.4s
KKAR Karatay Array 20.20 33 *eP* **P 11 05 08.3 -0.8**
KKAR Karatay Array 20.20 33 *eP* **P 11 05 08.3 -0.8**
AKL Akola 20.30 103 *i x* x 11 05 14.8
AKL AMP 11 05 22.5
comp=Z,2µm,1.9s
AKL *i* S **S 11 08 59.1 +1.3**
SCER sogukcermik 20.31 315⇑ *iP* **P 11 05 12.0 +1.7**
SCER sogukcermik 20.31 315 *i P* **P 11 05 12.0 +1.7**
PHNC Paralimni 20.40 299 P **P 11 05 15.3 +4.0**
comp=Z,11nm,1.8s
PHNC Paralimni 20.40 299 P **P 11 05 15.3 +4.0**
SVSK Karacayir 20.43 315 *eP* **P 11 05 13.5 +1.9**
SVSK Karacayir 20.43 315 *eP* **P 11 05 13.5 +1.9**
KARA Karaisali 20.45 306 *eP* **P 11 05 13.5 +1.7**
KARA Karaisali 20.45 306 *eP* **P 11 05 13.5 +1.7**
EREN Erenkoy 20.46 301 *eP* **P 11 05 13.3 +1.3**
EREN Erenkoy 20.46 301 *eP* **P 11 05 13.3 +1.3**
RSDY Resadiye-TOKAT 20.50 316 *eP* **P 11 05 13.9 +1.6**
RSDY Resadiye-TOKAT 20.50 316 *eP* **P 11 05 13.9 +1.6**
GULE Gulek 20.66 306⇑ *iP* **P 11 05 16.1 +2.0**
GULE Gulek 20.66 306 *i P* **P 11 05 16.1 +2.0**
MERS Mersin 20.68 304 *eP* **P 11 05 15.8 +1.4**
MERS Mersin 20.68 304 *eP* **P 11 05 15.8 +1.5**
LATR Latur 20.84 109 *e*PKP **P 11 05 17.6 +1.3**
LFK Lefkose 20.88 299 *eP* **P 11 05 17.9 +1.4**
LFK Lefkose 20.88 299 *eP* **P 11 05 17.9 +1.4**
GOF Gofitskoye 20.94 334⇑ *iP* **P 11 05 19.0 +2.0**
GOF pmax pmax
comp=Z,4µm,1.2s
GOF Gofitskoye 20.94 334 *i P* **P 11 05 19.0 +2.0**
comp=Z,4µm,1.2s
CSS Prodhromos 20.94 298 P **P 11 05 17.9 +0.7**
comp=Z,18nm,1.2s
CSS Prodhromos 20.94 298 *eP* **P 11 05 17.8 +0.6**
CSS Prodhromos 20.94 298 P **P 11 05 17.9 +0.7**
CSS Prodhromos 20.94 298 *eP* **P 11 05 17.8 +0.6**
TOKT Tokat 20.94 315 *eP* **P 11 05 18.7 +1.5**
TOKT Tokat 20.94 315 *eP* **P 11 05 18.7 +1.6**
KSH Kashi 21.06 48 *eP* **P 11 05 11.2 -7.2**
KSH *e*pP 11 05 15.2
KSH *es*P sP 11 05 18.2 -5.2
KSH *e*PP 11 05 30.4
KSH pmax pmax
comp=Z,300nm,1.4s,mb5.4
KSH LR LR
comp=N,96µm,8.8s
KSH LR LR
comp=E,72µm,11.1s
KSH LR LR
comp=Z,97µm,9.9s
IKL Isikli 21.07 302 *eP* **P 11 05 18.9 +0.3**
IKL Isikli 21.07 302 *eP* **P 11 05 18.9 +0.3**
MAMC Mammari 21.09 299 P **P 11 05 20.7 +1.9**
MAMC Mammari 21.09 299 P **P 11 05 20.7 +1.9**
AML Almayashu 21.19 39 P **P 11 05 19.3 -0.5**
SNR=183
AML Almayashu 21.19 39 *eP* **P 11 05 19.2 -0.5**
comp=Z,481nm,0.8s,mb5.9
AML LR LR
comp=Z,24µm,19.0s,MS5.6
AML Almayashu 21.19 39 *eP* **P 11 05 19.2 -0.6**
comp=Z,481nm,0.8s,mb5.9
SZAC Souni-Zanaja 21.23 298 P **P 11 05 22.2 +1.8**
SZAC Souni-Zanaja 21.23 298 P **P 11 05 22.2 +1.8**
AVNT Avonos 21.26 310⇑ *iP* **P 11 05 22.0 +1.4**
AVNT Avonos 21.26 310 *i P* **P 11 05 22.0 +1.4**
SOC Sochi 21.26 326 *c iP* **P 11 05 20.3 -0.3**
SOC *e* 11 05 33.7
SOC *e*PPP 11 05 44.1
SOC *i* S **S 11 09 14.1 -2.5**
SOC *e*SSS 11 09 46.8
SOC pmax pmax
comp=Z,746nm,0.9s,mb6.0
SOC MLR MLR
comp=Z,24µm,11.0s,MS5.8
SOC Sochi 21.26 326 *i P* **P 11 05 20.3 -0.3**
comp=Z,746nm,0.9s,mb6.0
SOC *i* S **S 11 09 14.1 -2.5**
comp=Z,24µm,11.0s
LEF Lefka 21.33 299 *eP* **P 11 05 22.6 +1.2**
LEF Lefka 21.33 299 *eP* **P 11 05 22.6 +1.2**
YOZ Yozgat 21.37 312 *eP* **P 11 05 20.5 -1.3**
YOZ Yozgat 21.37 312 *eP* **P 11 05 20.5 -1.3**
ALFC Alevga 21.57 298 P **P 11 05 24.8 +0.8**
comp=Z,19nm,0.8s
ALFC Alevga 21.57 298 P **P 11 05 24.8 +0.8**
comp=Z,19nm,0.8s
EKS2 Erkin-Say 21.58 38 P **P 11 05 24.0 0.0**
SNR=347
EKS2 Erkin-Say 21.58 38 *eP* **P 11 05 23.9 -0.1**
comp=Z,2µm,1.4s,mb6.4
EKS2 LR LR
comp=Z,29µm,20.0s,MS5.7
EKS2 Erkin-Say 21.58 38 *eP* **P 11 05 23.9 -0.1**
comp=Z,2µm,1.4s,mb6.4
PTH Pithoragarh 21.67 77 *e*PKP **P 11 05 26.5 +1.4**
PTH *ex* x 11 09 28.0
KVT Kavak 21.68 316 *eP* **P 11 05 26.4 +1.2**
KVT Kavak 21.68 316 *eP* **P 11 05 26.4 +1.3**
PPCY Paphos 21.70 298 P **P 11 05 25.4 +0.1**
PPCY Paphos 21.70 298 P **P 11 05 25.4 +0.1**
ERMK Ermenek 21.80 302⇑ *iP* **P 11 05 24.2 -2.2**
DESE Dese 21.80 227 *eP* **P 11 05 29.9 +3.3**
DESE *es* S **S 11 09 35.6 +8.0**
SULT Sultanhani-AKS 21.95 307 *eP* **P 11 05 30.3 +2.3**
SULT Sultanhani-AKS 21.95 307 *eP* **P 11 05 30.3 +2.3**
AAK Ala-Archa 21.96 39 P **P 11 05 27.2 -0.9**
SNR=143
AAK Ala-Archa 21.96 39 P **P 11 05 28.1 0.0**
comp=Z,131nm,0.9s,mb5.4,baz=230,slow=8.8,SNR=74
AAK S **S 11 09 31.8 +1.5**
comp=Z,7.3nm,0.5s,baz=123,slow=13,SNR=4.2
AAK LR LR 11 14 43.8
comp=Z,26µm,19.4s,MS5.7,baz=229,slow=39
AAK Ala-Archa 21.96 39 P **P 11 05 28.1 0.0**
AAK S **S 11 09 31.8 +1.5**
AAK pmax pmax
comp=Z,131nm,0.9s,mb5.4
AAK smax
comp=N,7.0nm,0.5s
AAK MLR MLR
comp=Z,26µm,19.4s,MS5.7
AAK Ala-Archa 21.96 39 P **P 11 05 28.1 0.0**
AAK S **S 11 09 31.8 +1.5**
AAK LR LR 11 14 43.8
AAK Ala-Archa 21.96 39 P **P 11 05 28.1 0.0**
comp=Z,5µm,1.2s,mb6.8
AAK Ala-Archa 21.96 39 P **P 11 05 28.1 0.0**
comp=Z,131nm,0.9s,mb5.4
AAK S **S 11 09 31.8 +1.5**
comp=Z,26µm,19.4s
CDAG Cicekdag 22.00 311⇑ *iP* **P 11 05 28.9 +0.4**
CDAG Cicekdag 22.00 311 *i P* **P 11 05 28.9 +0.4**
KZA Kyzart 22.05 41 P **P 11 05 28.9 -0.1**
SNR=72
KZA Kyzart 22.05 41 *eP* **P 11 05 28.9 -0.1**
comp=Z,2µm,1.1s,mb6.4
KZA *e*S **S 11 09 30.2 -1.9**
KZA Kyzart 22.05 41 *eP* **P 11 05 28.9 -0.1**
comp=Z,2µm,1.1s,mb6.4
KZA *e*S **S 11 09 30.2 -1.8**
CORM Corum 22.10 313 *eP* **P 11 05 30.8 +1.2**
CORM Corum 22.10 313 *eP* **P 11 05 30.8 +1.2**
FRU Bishkek 22.16 39⇑ *iP* **P 11 05 29.0 -1.2**
FRU *e* 11 05 38.0
FRU *e* 11 05 55.0
FRU pmax pmax
comp=Z,2µm,2.1s,mb6.1
FRU MLR MLR
comp=Z,32µm,16.0s,MS5.8
FRU Bishkek 22.16 39 *i P* **P 11 05 29.0 -1.2**
comp=Z,2µm,2.1s,mb6.1
JBP Jabalpur 22.18 94 *e*PKP **P 11 05 31.8 +1.2**
JBP *e*S **S 11 09 34.7 -0.1**
HDMB Hadim 22.23 303 *eP* **P 11 05 32.4 +1.4**
HDMB Hadim 22.23 303 *eP* **P 11 05 32.4 +1.4**
KBK Karagaybulak 22.24 40 P **P 11 05 31.9 +0.8**
SNR=41
KBK Karagaybulak 22.24 40 *eP* **P 11 05 31.4 +0.4**
comp=Z,2µm,1.4s,mb6.3
KBK Karagaybulak 22.24 40 *eP* **P 11 05 31.4 +0.4**
comp=Z,2µm,1.4s,mb6.3
KAMT Kaman 22.32 310 *eP* **P 11 05 33.5 +1.5**
KAMT Kaman 22.32 310 *eP* **P 11 05 33.5 +1.5**
CHMS Chumysh 22.34 39 P **P 11 05 34.1 +1.9**
SNR=82
USP Ospenovka 22.38 38 P **P 11 05 34.5 +2.0**
SNR=58
BR131 Keskin Array S 22.54 311 *eP* **P 11 05 34.5 +0.3**
comp=Z,864nm,1.1s,mb6.1
BR131 *e*S **S 11 09 42.7 +1.1**
BR131 LR LR
comp=Z,24µm,19.0s,MS5.7
BR131 Keskin Array S 22.54 311 *eP* **P 11 05 34.5 +0.2**
comp=Z,864nm,1.1s,mb6.1
BR131 *e*S **S 11 09 42.7 +1.1**
BRTR Keskin Array B 22.54 311 P **P 11 05 34.6 +0.3**
comp=Z,150nm,0.8s,mb5.5,baz=130,slow=13,SNR=135
BRTR S **S 11 09 45.8 +4.1**
comp=Z,28nm,1.1s,baz=133,slow=5.2,SNR=4.1
BRTR ScP ScP 11 13 04.0 -1.4
comp=Z,4.2nm,0.7s,baz=137,slow=6.1,SNR=4.3
BRTR LR LR 11 15 40.3
comp=Z,42µm,19.6s,MS5.9,baz=116,slow=40
BRTR Keskin Array B 22.54 311 P **P 11 05 34.6 +0.3**
comp=Z,42µm,19.6s
BRTR S **S 11 09 45.8 +4.2**
AB31 Akbulak array 22.67 7 P **P 11 05 35.2 -0.4**
AB31 pmax pmax
comp=Z,2µm,1.5s,mb6.2
AB31 Akbulak array 22.67 7 P **P 11 05 35.2 -0.4**
comp=Z,2µm,1.5s,mb6.2
ABKAR Akbulak array 22.67 7 *eP* **P 11 05 34.3 -1.3**
ABKAR Akbulak array 22.67 7 *eP* **P 11 05 34.3 -1.3**
KONT Konya--Tatoy 22.68 305 *eP* **P 11 05 32.6 -3.2**
BYBT Boyabat 22.70 316 *eP* **P 11 05 37.1 +1.1**
BYBT Boyabat 22.70 316 *eP* **P 11 05 37.1 +1.1**
ULHL Ulahol 22.74 42 P **P 11 05 36.5 +0.1**
SNR=114
TKM2 Tokmak 2 22.77 40 P **P 11 05 36.1 -0.6**
SNR=38
TKM2 Tokmak 2 22.77 40 *eP* **P 11 05 36.2 -0.5**
TKM2 pmax pmax
comp=Z,613nm,1.2s,mb5.9
TKM2 MLR MLR
comp=Z,27µm,19.0s,MS5.7
TKM2 Tokmak 2 22.77 40 *eP* **P 11 05 36.2 -0.6**
comp=Z,613nm,1.2s,mb5.9
TKM2 LR LR
comp=Z,27µm,19.0s,MS5.7
TKM2 Tokmak 2 22.77 40 *eP* **P 11 05 36.2 -0.5**
comp=Z,27µm,19.0s
AFSR Af´ar-Bala (A 22.80 309 *eP* **P 11 05 36.3 -0.7**
AFSR Af´ar-Bala (A 22.80 309 *eP* **P 11 05 36.3 -0.8**
TOS Tosya 22.94 314 *eP* **P 11 05 40.4 +1.9**
TOS Tosya 22.94 314 *eP* **P 11 05 40.4 +1.9**
CANT Cankiri 22.98 313 *eP* **P 11 05 39.4 +0.4**
HYB Hyderabad 22.99 109 *i P* **P 11 05 40.0 +0.8**
comp=Z,788nm,1.2s,mb6.0
HYB *es*P sP 11 05 45.0 +0.8
HYB *es*S **S 11 09 56.0 +6.4**
HYB LR LR 11 10 08.0
comp=Z,28nm,14.0s
ELDT Eldivan 23.05 312⇑ *iP* **P 11 05 39.9 +0.1**
ELDT Eldivan 23.05 312 *i P* **P 11 05 39.8 +0.1**
KDHN Kadinhani 23.08 306⇑ *iP* **P 11 05 40.8 +0.8**
KDHN Kadinhani 23.08 306 *i P* **P 11 05 40.8 +0.8**
ILGA Ilgaz 23.15 314⇑ *iP* **P 11 05 40.9 +0.2**
ILGA Ilgaz 23.15 314 *i P* **P 11 05 40.9 +0.2**
LOD Lodumlu 23.21 310 *eP* **P 11 05 40.9 -0.5**
LOD Lodumlu 23.21 310 *eP* **P 11 05 40.9 -0.5**
ANN Anapa 23.28 325 *eP* **P 11 05 40.9 -1.2**
ANN *e*PP 11 05 45.4
ANN *e*PPP 11 06 13.1
ANN *es*S **S 11 09 53.3 -0.6**
ANN *es*SS 11 10 29.1
ANN pmax pmax
comp=Z,3µm,6.4s
ANN pmax pmax
comp=N,2µm,6.5s
ANN pmax pmax
comp=E,1µm,6.5s
ANN pmax pmax
comp=Z,2µm,1.6s,mb6.2
ANN smax
comp=N,18µm,5.5s
ANN smax
comp=E,10µm,5.5s
ANN MLR MLR
comp=N,23µm,17.0s
ANN MLR MLR
comp=Z,21µm,17.0s,MS5.7
ANN Anapa 23.28 325 *eP* **P 11 05 40.9 -1.2**
comp=Z,2µm,1.6s,mb6.2
ANN *es*S **S 11 09 53.3 -0.6**
KIZT Kizilcal 23.40 307 *eP* **P 11 05 44.4 +1.1**
KIZT Kizilcal 23.40 307 *eP* **P 11 05 44.4 +1.1**
BZK Bozkurt 23.45 316 *eP* **P 11 05 43.1 -0.7**
BZK Bozkurt 23.45 316 *eP* **P 11 05 43.1 -0.7**
SUTC Sutluce-Ispart 23.52 303 *eP* **P 11 05 45.2 +0.5**
SUTC Sutluce-Ispart 23.52 303 *eP* **P 11 05 45.2 +0.6**
ANTB Antalya 23.59 302 *eP* **P 11 05 44.6 -0.7**
ANTB Antalya 23.59 302 *eP* **P 11 05 44.6 -0.7**
BALT Daday 23.61 314⇑ *iP* **P 11 05 44.6 -0.8**
BALT Daday 23.61 314 *i P* **P 11 05 44.6 -0.8**
AKTK Aktyubinsk 23.69 3 P **P 11 05 44.9 -1.1**
AKTK S **S 11 09 58.8 -1.6**
AKTK LR LR 11 16 11.9
AKTK Aktyubinsk 23.69 3 P **P 11 05 44.9 -1.1**
comp=Z,74nm,0.6s,mb5.3
AKTK S **S 11 09 58.8 -1.6**
comp=Z,47µm,19.8s
AKTO Aktyubinsk 23.69 3 P **P 11 05 44.9 -1.1**
comp=Z,74nm,0.6s,mb5.3,baz=176,slow=9.5,SNR=95
AKTO S **S 11 09 58.8 -1.6**
comp=Z,13nm,0.8s,baz=90,slow=20,SNR=2.1
AKTO LR LR 11 16 11.9
comp=Z,47µm,19.8s,MS6.0,baz=171,slow=40
AKTO Aktyubinsk 23.69 3 P **P 11 05 44.9 -1.1**
AKTO S **S 11 09 58.8 -1.6**
AKTO pmax pmax
comp=Z,74nm,0.6s,mb5.3
AKTO smax
comp=N,13nm,0.9s
AKTO MLR MLR
comp=Z,47µm,19.8s,MS6.0

AAA	Alma-Ata	23.77	41	*i* P	P	11 05 46.9	0.0
AAA				pmax	pmax		
	comp=Z,13μm,2.2s,mb7.0						
AAA				MLR	MLR		
	comp=Z,49μm,13.0s,MS6.2						
AAA	**Alma-Ata**	**23.77**	**41**	*i* P	**P**	**11 05 46.9**	**0.0**
	comp=Z,49μm,13.0s						
BCK	**Bucak**	**23.82**	**303**	*e*P	**P**	**11 05 43.9**	**-3.5**
SVRH	**Sivrihisar-ESK**	**23.88**	**308**	*e*P	**P**	**11 05 49.0**	**+1.0**
SVRH	**Sivrihisar-ESK**	**23.88**	**308**	*e*P	**P**	**11 05 49.0**	**+1.0**
SAFT	**Safranbolu**	**23.91**	**313**	*e*P	**P**	**11 05 49.2**	**+1.0**
SAFT	**Safranbolu**	**23.91**	**313**	*e*P	**P**	**11 05 49.2**	**+1.0**
AAE	**Adis Abeba**	**23.93**	**226**	*i* P	**P**	**11 05 51.6**	**+3.0**
AAE				*e*S	**S**	**11 10 11.5**	**+6.5**
BOLV	**Bolvadin**	**24.00**	**306**	⇑*i*P	**P**	**11 05 50.2**	**+1.1**
BOLV	**Bolvadin**	**24.00**	**306**	*i* P	**P**	**11 05 50.2**	**+1.1**
ELL	**Elmali**	**24.12**	**301**	*e*P	**P**	**11 05 51.5**	**+1.3**
ELL	**Elmali**	**24.12**	**301**	*e*P	**P**	**11 05 51.5**	**+1.4**
KSL	**Kastellorizon**	**24.20**	**299**	*e*P	**P**	**11 05 51.0**	**+0.1**
AKAS	**Kas**	**24.21**	**299**	⇑*i*P	**P**	**11 05 49.5**	**-1.5**
AKAS	**Kas**	**24.21**	**299**	*i* P	**P**	**11 05 49.5**	**-1.5**
AKAS				*i* S	**S**	**11 10 11.1**	**+1.9**
SHUT	**Suhut-Afyon**	**24.23**	**305**	*e*P	**P**	**11 05 52.7**	**+1.6**
SHUT	**Suhut-Afyon**	**24.23**	**305**	*e*P	**P**	**11 05 52.7**	**+1.6**
GOLH	**Golhisar**	**24.53**	**302**	⇑*i*P	**P**	**11 05 53.9**	**0.0**
GOLH	**Golhisar**	**24.53**	**302**	*i* P	**P**	**11 05 53.9**	**0.0**
MDU	**Mudurnu**	**24.53**	**310**	*e*P	**P**	**11 05 54.0**	**+0.1**
MDU	**Mudurnu**	**24.53**	**310**	*e*P	**P**	**11 05 54.0**	**+0.1**
GLHS	**Glhisar (BURDU**	**24.55**	**301**	*e*P	**P**	**11 05 55.0**	**+0.9**
GLHS	**Glhisar (BURDU**	**24.55**	**301**	*e*P	**P**	**11 05 55.0**	**+0.9**
KOLN	**Koldanda**	**24.68**	**81**	*e*P	**P**	**11 05 56.8**	**+1.4**
	comp=Z,1μm,1.1s,mb6.4						
KDZE	**Karadeniz Ereo**	**24.77**	**312**	*e*P	**P**	**11 05 53.7**	**-2.3**
KDZE	**Karadeniz Ereo**	**24.77**	**312**	*e*P	**P**	**11 05 53.7**	**-2.3**
DANN	**Dangsing**	**24.79**	**80**	*e*P	**P**	**11 05 58.3**	**+1.9**
	comp=Z,3μm,1.1s,mb6.8						
BORA	**Eskisehir**	**24.81**	**308**	⇑*i*P	**P**	**11 05 57.3**	**+0.8**
BORA	**Eskisehir**	**24.81**	**308**	*i* P	**P**	**11 05 57.3**	**+0.9**
BORA				*i* S	**S**	**11 10 19.2**	**+0.4**
KHL	**Karahalli**	**24.90**	**304**	*e*P	**P**	**11 05 55.9**	**-1.4**
KHL	**Karahalli**	**24.90**	**304**	*e*P	**P**	**11 05 55.9**	**-1.4**
KHAL	**Karahalli**	**24.94**	**304**	⇑*i*P	**P**	**11 05 58.4**	**+0.7**
KHAL	**Karahalli**	**24.94**	**304**	*i* P	**P**	**11 05 58.4**	**+0.7**
KHAL				*i* S	**S**	**11 10 25.6**	**+4.6**
GULT	**Gulveren**	**25.00**	**309**	*e*P	**P**	**11 05 59.0**	**+0.8**
GULT	**Gulveren**	**25.00**	**309**	*e*P	**P**	**11 05 59.0**	**+0.9**
DNZL	**Cakiroluk**	**25.06**	**302**	⇑*i*P	**P**	**11 05 58.0**	**-0.7**
DNZL	**Cakiroluk**	**25.06**	**302**	*i* P	**P**	**11 05 58.0**	**-0.7**
GPA	**Golpazari**	**25.08**	**309**	*e*P	**P**	**11 05 59.4**	**+0.5**
GPA	**Golpazari**	**25.08**	**309**	*e*P	**P**	**11 05 59.4**	**+0.5**
DENT	**Denizli**	**25.09**	**303**	*e*P	**P**	**11 05 59.4**	**+0.4**
DENT	**Denizli**	**25.09**	**303**	*e*P	**P**	**11 05 59.4**	**+0.4**
SIM	**Simferopol'**	**25.14**	**322**	*ce*P	**P**	**11 05 59.3**	**-0.1**
SIM				*e*S	**S**	**11 10 22.0**	**-2.0**
SIM				pmax	pmax		
	comp=Z,485nm,1.0s,mb6.0						
SIM				pmax	pmax		
	comp=Z,2μm,11.0s						
SIM				MLR	MLR		
	comp=Z,35μm,21.0s,MS5.8						
SIM	**Simferopol'**	**25.14**	**322**	*e*P	**P**	**11 05 59.3**	**-0.1**
	comp=Z,35μm,21.0s						
SIM				*e*S	**S**	**11 10 22.0**	**-2.0**
TURN	**Turunc**	**25.16**	**300**	⇑*i*P	**P**	**11 06 02.8**	**+3.1**
TURN	**Turunc**	**25.16**	**300**	*i* S	**S**	**11 10 24.6**	**+0.2**
GDZ	**Gediz**	**25.20**	**306**	⇑*i*P	**P**	**11 05 59.3**	**-0.7**
GDZ	**Gediz**	**25.20**	**306**	*i* P	**P**	**11 05 59.3**	**-0.7**
GDZ				*i* S	**S**	**11 10 28.8**	**+3.7**
SPNC	**Sapanca-Adapaz**	**25.25**	**310**	*e*P	**P**	**11 05 59.0**	**-1.5**
SPNC	**Sapanca-Adapaz**	**25.25**	**310**	*e*P	**P**	**11 05 59.0**	**-1.4**
ARG	**Arkhangelos**	**25.36**	**299**	*e*P	**P**	**11 06 01.9**	**+0.4**
ARG	**Arkhangelos**	**25.36**	**299**	*e*P	**P**	**11 06 02.2**	**+0.7**
ARG	**Arkhangelos**	**25.36**	**299**	P	**P**	**11 06 02.0**	**+0.5**
ARG	**Arkhangelos**	**25.36**	**299**	P	**P**	**11 06 01.9**	**+0.4**
CAVI	**Cavuskoy**	**25.37**	**308**	*e*P	**P**	**11 06 02.4**	**+0.9**
CAVI	**Cavuskoy**	**25.37**	**308**	*e*P	**P**	**11 06 02.4**	**+0.9**
YER	**Yerkesik**	**25.48**	**301**	*e*P	**P**	**11 06 03.2**	**+0.7**
YER	**Yerkesik**	**25.48**	**301**	*e*P	**P**	**11 06 03.2**	**+0.7**
ADVT	**Abdulvahap**	**25.54**	**309**	*e*P	**P**	**11 06 03.6**	**+0.6**
ADVT	**Abdulvahap**	**25.54**	**309**	*e*P	**P**	**11 06 03.6**	**+0.6**
GKN	**Gorkha**	**25.58**	**81**	*e*P	**P**	**11 06 04.3**	**+0.7**
	comp=Z,513nm,1.0s,mb6.0						
KULA	**Kula-Manisa**	**25.61**	**304**	*e*P	**P**	**11 06 04.3**	**+0.6**
KULA	**Kula-Manisa**	**25.61**	**304**	*e*P	**P**	**11 06 04.3**	**+0.6**
DEMI	**Demirci**	**25.74**	**305**	⇑*i*P	**P**	**11 06 05.5**	**+0.6**
DEMI	**Demirci**	**25.74**	**305**	*i* P	**P**	**11 06 05.5**	**+0.6**
HRT	**Hereke**	**25.75**	**310**	*e*P	**P**	**11 06 05.7**	**+0.8**
HRT	**Hereke**	**25.75**	**310**	*e*P	**P**	**11 06 05.7**	**+0.8**
SILT	**Sile**	**25.91**	**310**	*e*P	**P**	**11 06 02.7**	**-3.6**
MLSB	**Milas**	**25.91**	**301**	*e*P	**P**	**11 06 07.0**	**+0.6**
MLSB	**Milas**	**25.91**	**301**	*e*P	**P**	**11 06 07.0**	**+0.6**
DAT	**Datca**	**25.91**	**300**	*e*P	**P**	**11 06 06.8**	**+0.3**
DAT	**Datca**	**25.91**	**300**	*e*P	**P**	**11 06 06.8**	**+0.3**
GEMT	**Gemlik**	**25.92**	**308**	*e*P	**P**	**11 06 07.0**	**+0.5**
GEMT	**Gemlik**	**25.92**	**308**	*e*P	**P**	**11 06 07.0**	**+0.5**
AYDN	**Tasoluk**	**25.93**	**302**	⇑*i*P	**P**	**11 06 07.3**	**+0.7**
AYDN	**Tasoluk**	**25.93**	**302**	*i* P	**P**	**11 06 07.3**	**+0.7**
KARP	**Karpathos**	**25.98**	**297**	*e*P	**P**	**11 06 08.2**	**+1.1**
KARP	**Karpathos**	**25.98**	**297**	*e*P	**P**	**11 06 08.2**	**+1.1**
DMN	**Daman**	**26.03**	**81**	*e*P	**P**	**11 06 08.7**	**+1.1**
	comp=Z,1μm,1.3s,mb6.3						
MDNY	**Mudanya-Bursa**	**26.11**	**308**	*e*P	**P**	**11 06 08.0**	**-0.2**
MDNY	**Mudanya-Bursa**	**26.11**	**308**	*e*P	**P**	**11 06 08.0**	**-0.2**
DURS	**Dursunbey**	**26.11**	**306**	⇑*i*P	**P**	**11 06 08.5**	**+0.2**
DURS	**Dursunbey**	**26.11**	**306**	*i* P	**P**	**11 06 08.5**	**+0.2**
KKN	**Kakani**	**26.17**	**81**	*e*P	**P**	**11 06 09.9**	**+1.0**
	comp=Z,836nm,1.3s,mb6.1						
NIS1	**Nisyros Isl.**	**26.20**	**299**	P	**P**	**11 06 09.6**	**+0.6**
NIS1	**Nisyros Isl.**	**26.20**	**299**	P	**P**	**11 06 09.6**	**+0.6**
ARMT	**Armutlu**	**26.20**	**309**	*e*P	**P**	**11 06 09.5**	**+0.4**
ARMT	**Armutlu**	**26.20**	**309**	*e*P	**P**	**11 06 09.5**	**+0.4**
BODT	**Bodrum**	**26.21**	**300**	*e*P	**P**	**11 06 08.9**	**-0.2**
BODT	**Bodrum**	**26.21**	**300**	*e*P	**P**	**11 06 08.9**	**-0.2**
ISK	**Istanbul-Kandi**	**26.27**	**310**	*e*P	**P**	**11 06 07.2**	**-2.4**
ISK	**Istanbul-Kandi**	**26.27**	**310**	*e*P	**P**	**11 06 07.2**	**-2.5**
PKIN	**Phulchoki**	**26.29**	**81**	*e*P	**P**	**11 06 11.6**	**+1.6**
	comp=Z,535nm,1.1s,mb6.0						
PKI	**Pulchoki**	**26.30**	**81**	*e*P	**P**	**11 06 10.9**	**+0.8**
	comp=Z,2μm,1.2s,mb6.4						
AKHS	**Akhisar**	**26.35**	**304**	⇑*i*P	**P**	**11 06 11.1**	**+0.7**
AKHS	**Akhisar**	**26.35**	**304**	*i* P	**P**	**11 06 11.1**	**+0.7**
AKS	**Akhisar**	**26.35**	**304**	*e*P	**P**	**11 06 09.5**	**-0.9**
AKS	**Akhisar**	**26.35**	**304**	*e*P	**P**	**11 06 09.5**	**-0.9**
KLYT	**Kilyos**	**26.36**	**310**	*e*P	**P**	**11 06 06.5**	**-4.0**
GCAM	**G?zelcaml?**	**26.43**	**301**	⇑*i*P	**P**	**11 06 12.2**	**+1.0**
GCAM	**G?zelcaml?**	**26.43**	**301**	*i* P	**P**	**11 06 12.2**	**+1.0**
GCAM				*i* S	**S**	**11 10 44.8**	**+0.2**
KCTX	**Karacabey (Bur**	**26.44**	**308**	*e*P	**P**	**11 06 11.5**	**+0.3**
KCTX	**Karacabey (Bur**	**26.44**	**308**	*e*P	**P**	**11 06 11.5**	**+0.3**
BGKT	**Bogazkoy**	**26.51**	**310**	*e*P	**P**	**11 06 08.8**	**-3.1**
BALB	**Balikesir**	**26.56**	**306**	*e*P	**P**	**11 06 13.2**	**+0.9**
BALB	**Balikesir**	**26.56**	**306**	*e*P	**P**	**11 06 13.2**	**+0.9**
VRHR	**Novokhopersk**	**26.59**	**340**	*e*P	**P**	**11 06 13.1**	**+0.7**
VRHR				pmax	pmax		
	comp=N,80nm,0.7s						
VRHR				pmax	pmax		
	comp=E,90nm,0.7s						
VRHR				pmax	pmax		
	comp=Z,220nm,0.7s,mb5.8						
VRHR	**Novokhopersk**	**26.59**	**340**	*e*P	**P**	**11 06 13.1**	**+0.7**
IZM	**Izmir**	**26.61**	**303**	*e*P	**P**	**11 06 13.9**	**+1.1**
MDRS	**Chennai**	**26.63**	**116**	⇓*i*P	x	11 06 32.2	
MDRS				*i* S	x	11 11 06.5	
ZKR	**Zakros**	**26.65**	**295**	P	**P**	**11 06 14.5**	**+1.3**
ZKR	**Zakros**	**26.65**	**295**	P	**P**	**11 06 14.5**	**+1.3**
GUN	**Gumba**	**26.68**	**81**	*e*P	**P**	**11 06 15.0**	**+1.4**
	comp=Z,3μm,1.4s,mb6.6						
CTKS	**Kestanelik-??a**	**26.72**	**310**	*e*P	**P**	**11 06 11.8**	**-1.9**
CTKS	**Kestanelik-??a**	**26.72**	**310**	*e*P	**P**	**11 06 11.8**	**-1.9**
SMG	**Samos**	**26.74**	**301**	*e*P	**P**	**11 06 14.7**	**+0.8**
SMG	**Samos**	**26.74**	**301**	*e*P	**P**	**11 06 15.0**	**+1.1**
BLCB	**Balcova**	**26.77**	**303**	*e*P	**P**	**11 06 15.5**	**+1.2**
BLCB	**Balcova**	**26.77**	**303**	P	**P**	**11 06 15.5**	**+1.3**
BLCB	**Balcova**	**26.77**	**303**	P	**P**	**11 06 15.5**	**+1.3**
BALY	**Balya**	**26.78**	**306**	⇑*i*P	**P**	**11 06 12.7**	**-1.6**
BALY	**Balya**	**26.78**	**306**	*i* P	**P**	**11 06 12.7**	**-1.6**
BALY				*i* S	**S**	**11 10 54.5**	**+4.4**
BNT	**Bandirma**	**26.79**	**307**	*e*P	**P**	**11 06 13.3**	**-1.1**
EDC	**Edincik**	**26.82**	**307**	*e*P	**P**	**11 06 12.5**	**-2.1**
EDC	**Edincik**	**26.82**	**307**	*e*P	**P**	**11 06 12.5**	**-2.2**
GONE	**Gonen-Balikesi**	**26.84**	**307**	*e*P	**P**	**11 06 13.3**	**-1.6**
GONE	**Gonen-Balikesi**	**26.84**	**307**	*e*P	**P**	**11 06 13.3**	**-1.5**
SLVT	**Silivri**	**26.92**	**309**	*e*P	**P**	**11 06 12.7**	**-2.9**
VIS	**Vishakhapatnam**	**26.95**	**104**	*i* x	x	11 06 18.1	
VIS				*ex*	x	11 06 42.2	
	comp=Z,325nm,1.6s						
VIS				*i* S	**S**	**11 10 53.2**	**+0.2**
TRD	**Trivandrum**	**27.04**	**128**	*ex*	x	11 06 10.9	
XRY	**Khrisi**	**27.04**	**295**	*e*P	**P**	**11 06 17.2**	**+0.5**
XRY	**Khrisi**	**27.04**	**295**	*e*P	**P**	**11 06 18.0**	**+1.3**
URLA	**Izmir**	**27.10**	**303**	⇑*i*P	**P**	**11 06 16.8**	**-0.4**
URLA	**Izmir**	**27.10**	**303**	*i* P	**P**	**11 06 16.8**	**-0.4**
NPS	**Neapolis**	**27.17**	**296**	*e*P	**P**	**11 06 18.9**	**+1.1**
NPS	**Neapolis**	**27.17**	**296**	*e*P	**P**	**11 06 19.4**	**+1.6**
VORD	**Divnogorie**	**27.25**	**337**	*e*P	**P**	**11 06 20.1**	**+1.7**
VORD				pmax	pmax		
	comp=N,430nm,1.0s						
VORD				pmax	pmax		
	comp=E,270nm,1.0s						
VORD				pmax	pmax		
	comp=Z,320nm,1.0s,mb5.8						
VORD	**Divnogorie**	**27.25**	**337**	*e*P	**P**	**11 06 20.1**	**+1.7**
LAST	**Lasithi**	**27.26**	**295**	P	**P**	**11 06 19.9**	**+1.3**
LAST	**Lasithi**	**27.26**	**295**	P	**P**	**11 06 19.9**	**+1.3**
MFT	**Murefte**	**27.40**	**308**	*e*P	**P**	**11 06 21.5**	**+1.7**
MFT	**Murefte**	**27.40**	**308**	*e*P	**P**	**11 06 21.5**	**+1.7**
RKY	**Sarkoy-Tekirda**	**27.43**	**308**	*e*P	**P**	**11 06 20.1**	**-0.1**
RKY	**Sarkoy-Tekirda**	**27.43**	**308**	*e*P	**P**	**11 06 20.1**	**-0.1**
THR1	**Thera Island**	**27.50**	**298**	P	**P**	**11 06 21.0**	**+0.2**
THR1	**Thera Island**	**27.50**	**298**	P	**P**	**11 06 21.0**	**+0.2**
VSR	**Storozhevoye**	**27.50**	**337**	*e*P	**P**	**11 06 20.3**	**-0.3**
VSR				*e*S	**S**	**11 10 57.8**	**-3.4**
VSR				pmax	pmax		
	comp=N,280nm,1.1s						
VSR				pmax	pmax		
	comp=E,200nm,1.1s						
VSR				pmax	pmax		
	comp=Z,310nm,1.1s,mb5.8						
VSR				smax			
	comp=N,15μm,4.7s						
VSR				smax			
	comp=E,19μm,4.7s						
VSR				smax			
	comp=Z,12μm,4.7s						
VSR	**Storozhevoye**	**27.50**	**337**	*e*P	**P**	**11 06 20.3**	**-0.3**
VSR				*e*S	**S**	**11 10 57.8**	**-3.4**
CHOS	**Chios island**	**27.52**	**302**	*e*P	**P**	**11 06 22.5**	**+1.6**
CHOS	**Chios island**	**27.52**	**302**	P	**P**	**11 06 22.0**	**+1.1**
CHOS	**Chios island**	**27.52**	**302**	P	**P**	**11 06 22.0**	**+1.1**
THR2	**Thira island,**	**27.53**	**298**	P	**P**	**11 06 21.1**	**0.0**
THR2	**Thira island,**	**27.53**	**298**	P	**P**	**11 06 21.1**	**0.0**
THR6	**Thira Island,**	**27.54**	**298**	P	**P**	**11 06 21.5**	**+0.3**
THR6	**Thira Island,**	**27.54**	**298**	P	**P**	**11 06 21.5**	**+0.3**
THR3	**Thira Island,**	**27.55**	**298**	P	**P**	**11 06 21.4**	**+0.2**
THR3	**Thira Island,**	**27.55**	**298**	P	**P**	**11 06 21.4**	**+0.2**
APE	**Apeiranthos**	**27.59**	**299**	*e*P	**P**	**11 06 21.5**	**-0.1**
APE	**Apeiranthos**	**27.59**	**299**	P	**P**	**11 06 21.7**	**+0.1**
APE	**Apeiranthos**	**27.59**	**299**	*e*P	**P**	**11 06 21.0**	**-0.6**
APE	**Apeiranthos**	**27.59**	**299**	P	**P**	**11 06 21.9**	**+0.3**
APE	**Apeiranthos**	**27.59**	**299**	⇓*i*P	**P**	**11 06 23.3**	**+1.7**
APE	**Apeiranthos**	**27.59**	**299**	P	**P**	**11 06 21.7**	**+0.1**
THR5	**Thira Island,**	**27.59**	**298**	P	**P**	**11 06 22.1**	**+0.5**
THR5	**Thira Island,**	**27.59**	**298**	P	**P**	**11 06 22.1**	**+0.5**
PRK	**Paraskevi**	**27.61**	**304**	*e*P	**P**	**11 06 22.2**	**+0.5**
PRK	**Paraskevi**	**27.61**	**304**	*e*P	**P**	**11 06 22.7**	**+1.0**
PRK	**Paraskevi**	**27.61**	**304**	P	**P**	**11 06 22.4**	**+0.7**
PRK	**Paraskevi**	**27.61**	**304**	P	**P**	**11 06 22.4**	**+0.7**
LPK	**Lapseki**	**27.62**	**307**	*e*P	**P**	**11 06 20.1**	**-1.8**
LPK	**Lapseki**	**27.62**	**307**	*e*P	**P**	**11 06 20.1**	**-1.7**
EZN	**Ezine**	**27.75**	**305**	*e*P	**P**	**11 06 23.8**	**+0.8**
EZN	**Ezine**	**27.75**	**305**	*e*P	**P**	**11 06 23.8**	**+0.8**
SIVA	**Sivas**	**27.78**	**295**	P	**P**	**11 06 24.1**	**+0.8**
SIVA	**Sivas**	**27.78**	**295**	P	**P**	**11 06 24.1**	**+0.8**
GELI	**Tayfur-Gelibol**	**27.83**	**307**	*e*P	**P**	**11 06 24.3**	**+0.6**
GELI	**Tayfur-Gelibol**	**27.83**	**307**	*e*P	**P**	**11 06 24.3**	**+0.6**
ERIK	**Erikli-Kesan**	**27.90**	**307**	*e*P	**P**	**11 06 25.1**	**+0.8**
ERIK	**Erikli-Kesan**	**27.90**	**307**	*e*P	**P**	**11 06 25.1**	**+0.8**
SIGR	**SIGRI**	**27.90**	**304**	P	**P**	**11 06 25.1**	**+0.7**
SIGR	**SIGRI**	**27.90**	**304**	P	**P**	**11 06 25.1**	**+0.7**
ZRNK	**Zerenda**	**27.94**	**17**	P	**P**	**11 06 23.4**	**-1.1**
ZRNK				pmax	pmax		
	comp=Z,335nm,1.5s,mb5.8						
ZRNK	**Zerenda**	**27.94**	**17**	P	**P**	**11 06 23.4**	**-1.1**
	comp=Z,335nm,1.5s,mb5.8						
PSN	**Preselentsi**	**28.01**	**314**	*e*P	**P**	**11 06 24.7**	**-0.5**
PSN	**Preselentsi**	**28.01**	**314**	*e*P	**P**	**11 06 24.7**	**-0.5**
ODAN	**Odare**	**28.13**	**83**	*e*P	**P**	**11 06 26.9**	**+0.4**
	comp=Z,717nm,1.3s,mb6.1						
EDRB	**Edirne**	**28.18**	**310**	*e*P	**P**	**11 06 24.6**	**-2.2**
EDRB	**Edirne**	**28.18**	**310**	*e*P	**P**	**11 06 24.6**	**-2.2**
ENEZ	**Enez**	**28.18**	**307**	*e*P	**P**	**11 06 26.8**	**0.0**
ENEZ	**Enez**	**28.18**	**307**	*e*P	**P**	**11 06 26.8**	**0.0**
BWNR	**Bhubaneshwar**	**28.18**	**97**	*ex*	**P**	**11 06 29.0**	**+2.0**
LTBQ	**Tobruq**	**28.23**	**288**	*i* P	**P**	**11 06 29.5**	**+2.1**
	SNR=152						
TIRR	**Tirgusor**	**28.24**	**316**	*e*P	**P**	**11 06 26.8**	**-0.5**
TIRR				pmax	pmax		
	comp=Z,265nm,1.2s,mb5.7						
TIRR	**Tirgusor**	**28.24**	**316**	*e*P	**P**	**11 06 26.8**	**-0.5**
	comp=Z,265nm,1.2s,mb5.7						
TIRR	**Tirgusor**	**28.24**	**316**	⇑*i*P	**P**	**11 06 26.9**	**-0.4**
TIRR	**Tirgusor**	**28.24**	**316**	⇑*i*P	**P**	**11 06 26.9**	**-0.4**
VOSK	**Vostochnaya**	**28.30**	**20**	P	**P**	**11 06 26.5**	**-1.2**
VOSK				pmax	pmax		
	comp=Z,282nm,1.0s,mb5.8						
VOSK	**Vostochnaya**	**28.30**	**20**	P	**P**	**11 06 26.5**	**-1.2**
	comp=Z,282nm,1.0s,mb5.8						
ALN	**Alexandroupoli**	**28.31**	**307**	*e*P	**P**	**11 06 27.7**	**-0.3**
ALN	**Alexandroupoli**	**28.31**	**307**	P	**P**	**11 06 27.4**	**-0.6**
ALN	**Alexandroupoli**	**28.31**	**307**	P	**P**	**11 06 27.9**	**-0.1**
VAM	**Vamos**	**28.33**	**295**	*e*P	**P**	**11 06 29.0**	**+0.8**
VAM	**Vamos**	**28.33**	**295**	*e*P	**P**	**11 06 29.1**	**+0.9**
TAPN	**Taplejung**	**28.36**	**82**	*e*P	**P**	**11 06 29.0**	**+0.5**
	comp=Z,517nm,1.3s,mb6.0						
TLCR		**28.36**	**317**	⇑P	**P**	**11 06 32.6**	**+4.3**
TLCR		**28.36**	**317**	⇑*i*P	**P**	**11 06 32.6**	**+4.3**
TLCR		**28.36**	**317**	P	**P**	**11 06 32.6**	**+4.3**
BRVK	**Borovoye**	**28.39**	**18**	*c i*P	**P**	**11 06 27.9**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,288nm,1.2s,mb5.8						
BRVK				MLR	MLR		
	comp=Z,45μm,14.0s,MS6.2						
BRVK	**Borovoye**	**28.39**	**18**	*e*P	**P**	**11 06 28.1**	**-0.4**
	comp=Z,417nm,1.3s,mb5.9						
BRVK				LR	LR		
	comp=Z,40μm,20.0s,MS6.0						
BRVK	**Borovoye**	**28.39**	**18**	P	**P**	**11 06 28.7**	**+0.2**
	comp=Z,1μm,1.2s,mb6.4,SNR=53						
BRVK	**Borovoye**	**28.39**	**18**	*e*P	**P**	**11 06 28.1**	**-0.4**
	comp=Z,417nm,1.3s,mb5.9						
BVAR	**Borovoye Array**	**28.39**	**19**	P	**P**	**11 06 27.9**	**-0.6**
	comp=Z,121nm,0.7s,mb5.6,baz=201,slow=7.9,SNR=134						
BVAR	**Borovoye Array**	**28.39**	**19**	P	**P**	**11 06 27.9**	**-0.6**
BVAR				pmax	pmax		
	comp=Z,121nm,0.7s						
BVAR	**Borovoye Array**	**28.39**	**19**	P	**P**	**11 06 27.9**	**-0.6**
	comp=Z,121nm,0.7s,mb5.6						
JMB	**Yambol**	**28.53**	**311**	P	**P**	**11 06 29.6**	**-0.3**
JMB	**Yambol**	**28.53**	**311**	*e*P	**P**	**11 06 30.4**	**+0.5**
JMB	**Yambol**	**28.53**	**311**	P	**P**	**11 06 29.6**	**-0.3**
KARN	**Karanos**	**28.56**	**295**	P	**P**	**11 06 30.9**	**+0.6**
KARN	**Karanos**	**28.56**	**295**	P	**P**	**11 06 30.9**	**+0.6**
LIA	**Limnos Island**	**28.61**	**305**	*e*P	**P**	**11 06 32.4**	**+1.8**
LIA	**Limnos Island**	**28.61**	**305**	P	**P**	**11 06 31.9**	**+1.3**
LIA	**Limnos Island**	**28.61**	**305**	P	**P**	**11 06 31.9**	**+1.3**
CFR	**Carcaliu**	**28.77**	**317**	⇑P	**P**	**11 06 33.0**	**+1.0**
CFR	**Carcaliu**	**28.77**	**317**	⇑*i*P	**P**	**11 06 33.0**	**+1.0**
CFR	**Carcaliu**	**28.77**	**317**	P	**P**	**11 06 33.0**	**+1.0**
MK31	**Makanchi Array**	**28.90**	**39**	*e*P	**P**	**11 06 32.7**	**-0.5**
MK31	**Makanchi Array**	**28.90**	**39**	*e*P	**P**	**11 06 32.7**	**-0.5**
MKAR	**Makanchi Array**	**28.90**	**39**	P	**P**	**11 06 32.8**	**-0.4**
	comp=Z,18nm,0.5s,mb5.1,baz=225,slow=8.4,SNR=91						
MKAR				S	**S**	**11 11 22.1**	**-1.2**
	comp=Z,5.5nm,0.8s,baz=243,slow=6.3,SNR=1.9						
MKAR				LR	LR	11 19 59.7	
	comp=Z,19μm,19.2s,MS5.7,baz=244,slow=40						
MKAR	**Makanchi Array**	**28.90**	**39**	P	**P**	**11 06 32.8**	**-0.4**
MKAR				S	**S**	**11 11 22.1**	**-1.2**
MKAR				pmax	pmax		
	comp=Z,18nm,0.5s						
MKAR				smax			
	comp=N,6.0nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,19μm,19.2s						
MKAR	**Makanchi Array**	**28.90**	**39**	P	**P**	**11 06 32.8**	**-0.4**
	comp=Z,18nm,0.5s,mb5.1						
MKAR				S	**S**	**11 11 22.1**	**-1.2**
	comp=Z,19μm,19.2s						
AMRR	**Amara**	**28.98**	**315**	P	**P**	**11 06 35.5**	**+1.6**
AMRR	**Amara**	**28.98**	**315**	⇑*i*P	**P**	**11 06 39.1**	**+5.2**
AMRR	**Amara**	**28.98**	**315**	P	**P**	**11 06 35.5**	**+1.6**
KDZ	**Kurdzhali**	**29.02**	**309**	*i* P	**P**	**11 06 34.4**	**+0.1**
KDZ	**Kurdzhali**	**29.02**	**309**	*i* P	**P**	**11 06 34.4**	**+0.1**
DIM	**Dimitrovgrad**	**29.09**	**309**	*e*P	**P**	**11 06 35.2**	**+0.3**
DIM	**Dimitrovgrad**	**29.09**	**309**	*e*P	**P**	**11 06 35.2**	**+0.3**
PTL	**Penteli**	**29.10**	**301**	*e*P	**P**	**11 06 35.5**	**+0.4**
PTL	**Penteli**	**29.10**	**301**	*e*P	**P**	**11 06 35.9**	**+0.8**
VLY	**Voula,Athens**	**29.11**	**300**	*e*P	**P**	**11 06 34.7**	**-0.4**
VLY	**Voula,Athens**	**29.11**	**300**	*e*P	**P**	**11 06 35.6**	**+0.5**
ATHU	**Athens Univers**	**29.14**	**301**	P	**P**	**11 06 37.0**	**+1.6**
ATHU	**Athens Univers**	**29.14**	**301**	P	**P**	**11 06 37.0**	**+1.6**
ATH	**Athens Observa**	**29.20**	**301**	*e*P	**P**	**11 06 36.2**	**+0.3**
ATH	**Athens Observa**	**29.20**	**301**	*e*P	**P**	**11 06 36.7**	**+0.8**
SZH	**Strazhica**	**29.30**	**312**	*i* P	**P**	**11 06 36.5**	**-0.2**
SZH	**Strazhica**	**29.30**	**312**	*i* P	**P**	**11 06 36.5**	**-0.2**
NAIG	**Nisos Aigina**	**29.33**	**300**	*e*P	**P**	**11 06 36.7**	**-0.4**
NAIG	**Nisos Aigina**	**29.33**	**300**	*e*P	**P**	**11 06 37.1**	**0.0**
KIS	**Kishinev**	**29.33**	**321**	*e*P	**P**	**11 06 35.0**	**-2.0**
	comp=Z,1μm,3.0s						
KIS	**Kishinev**	**29.33**	**321**	*i* PP	PP	11 07 33.0	-10

SVE *eS* **S** **11 11 44.8 +0.9**
comp=Z,30μm,16.0s
GUR Goura 30.25 300 *eP* **P** **11 06 45.7 +0.5**
GUR Goura 30.25 300 P **P** **11 06 44.4 -0.8**
GUR Goura 30.25 300 P **P** **11 06 44.4 -0.8**
MLR Muntele Rosu 30.27 316⇓ *iP* **P** **11 06 47.6 +2.3**
MLR Muntele Rosu 30.27 316 P **P** **11 06 46.6 +1.3**
TESR 30.34 318⇑ *iP* **P** **11 06 45.8 -0.1**
TESR 30.34 318⇑ *iP* **P** **11 06 45.8 -0.1**
HORT Hortiatis 30.34 305 P **P** **11 06 46.3 +0.3**
HORT Hortiatis 30.34 305 P **P** **11 06 46.6 +0.6**
HORT Hortiatis 30.34 305 P **P** **11 06 46.3 +0.3**
ITM Ithomi 30.43 298 P **P** **11 06 46.5 -0.4**
ITM Ithomi 30.43 298 *eP* **P** **11 06 45.0 -1.9**
ITM Ithomi 30.43 298 *eP* **P** **11 06 46.8 -0.1**
ITM Ithomi 30.43 298 P **P** **11 06 45.2 -1.7**
ITM Ithomi 30.43 298 P **P** **11 06 46.5 -0.4**
AGG Agios Georgios 30.50 302 *eP* **P** **11 06 47.0 -0.4**
AGG Agios Georgios 30.50 302 P **P** **11 06 46.8 -0.6**
AGG Agios Georgios 30.50 302 P **P** **11 06 46.8 -0.6**
KALE Kalithea 30.50 301 P **P** **11 06 46.6 -0.9**
KALE Kalithea 30.50 301 P **P** **11 06 46.6 -0.9**
PYL PYLOS 30.53 298 *eP* **P** **11 06 47.1 -0.6**
PYL PYLOS 30.53 298 P **P** **11 06 46.8 -0.9**
PYL PYLOS 30.53 298 P **P** **11 06 46.8 -0.9**
TRIZ Trizonia 30.55 301 P **P** **11 06 47.2 -0.7**
TRIZ Trizonia 30.55 301 P **P** **11 06 47.2 -0.7**
PALK Pallekele 30.57 125 *eP* **P** **11 06 51.6 +3.4**
PALK pmax pmax
comp=Z,188nm,1.4s,mb5.7
PALK Pallekele 30.57 125 *eP* **P** **11 06 51.6 +3.4**
comp=Z,188nm,1.4s,mb5.7
LAKA Lakka 30.59 300 P **P** **11 06 48.2 -0.1**
LAKA Lakka 30.59 300 P **P** **11 06 48.2 -0.1**
LIT Litokhoron 30.65 304 *eP* **P** **11 06 48.9 +0.2**
LIT Litokhoron 30.65 304 P **P** **11 06 48.5 -0.2**
LIT Litokhoron 30.65 304 P **P** **11 06 48.5 -0.2**
KNT Kendrikon 30.65 306 P **P** **11 06 49.1 +0.4**
KNT Kendrikon 30.65 306 P **P** **11 06 48.6 -0.1**
EFP Efpalio 30.69 301 *eP* **P** **11 06 49.2 +0.1**
EFP Efpalio 30.69 301 P **P** **11 06 48.5 -0.6**
EFP Efpalio 30.69 301 P **P** **11 06 48.5 -0.6**
UPR University Cam 30.75 300 P **P** **11 06 46.8 -2.9**
UPR University Cam 30.75 300 P **P** **11 06 46.8 -2.9**
VOIR 30.80 315⇑ *iP* **P** **11 06 50.6 +0.6**
VOIR 30.80 315⇑ *iP* **P** **11 06 50.5 +0.5**
VOIR 30.80 315⇑ *iP* **P** **11 06 50.5 +0.5**
WMQ Urumqi 30.82 48 P **P** **11 06 51.0 +0.8**
WMQ PP PP 11 07 54.0 -5.8
WMQ S **S** **11 11 49.0 -4.5**
WMQ SS SS 11 13 34.0 -31
WMQ pmax pmax
comp=Z,260nm,1.0s,mb6.0
WMQ LR LR
comp=N,39μm,15.0s,MS6.3
WMQ LR LR
comp=E,24μm,15.0s,MS6.3
WMQ LR LR
comp=Z,29μm,15.0s,MS6.0
MARJ Al Marj 30.83 289 *i* P **P** **11 06 52.4 +2.0**
comp=Z,1μm,1.6s,mb6.4,SNR=153
DOPR Dopca 30.84 316⇓ *iP* **P** **11 06 50.7 +0.4**
DOPR Dopca 30.84 316⇓ *iP* **P** **11 06 50.7 +0.4**
THL Klokotos Trika 30.86 303 *eP* **P** **11 06 49.9 -0.7**
THL Klokotos Trika 30.86 303 P **P** **11 06 49.1 -1.5**
THL Klokotos Trika 30.86 303 P **P** **11 06 49.1 -1.5**
EVR Evrytania 30.87 302 *eP* **P** **11 06 52.2 +1.5**
EVR Evrytania 30.87 302 *eP* **P** **11 06 50.5 -0.2**
VTS Vitosha 30.89 309⇑ P **P** **11 06 51.4 +0.6**
VTS Vitosha 30.89 309 P **P** **11 06 51.2 +0.4**
VTS Vitosha 30.89 309⇑ *iP* **P** **11 06 51.4 +0.6**
VTS Vitosha 30.89 309 *i* P **P** **11 06 51.1 +0.3**
VTS Vitosha 30.89 309 *i* P **P** **11 06 51.1 +0.3**
VAY Valandovo 30.93 307 P **P** **11 06 51.3 +0.1**
VAY Valandovo 30.93 307 *eP* **P** **11 06 51.0 -0.3**
VAY Valandovo 30.93 307 P **P** **11 06 51.0 -0.2**
GRG Griva 30.95 306 P **P** **11 06 51.6 +0.2**
GRG Griva 30.95 306 P **P** **11 06 51.5 +0.1**
RLS Riolos of Patr 30.95 300 *eP* **P** **11 06 51.7 +0.2**
RLS Riolos of Patr 30.95 300 *eP* **P** **11 06 52.0 +0.6**
CRAR CRAIOVA 31.14 313 P **P** **11 06 54.5 +1.5**
CRAR CRAIOVA 31.14 313 P **P** **11 06 54.5 +1.5**
LSA Lhasa 31.18 76 P **P** **11 06 55.3 +1.8**
LSA S **S** **11 12 01.6 +2.2**
LSA LR LR
comp=E,37μm,17.9s
LSA LR LR
comp=Z,45μm,18.3s,MS6.2
LSA Lhasa 31.18 76 *eP* **P** **11 06 55.8 +2.3**
LSA *eS* **S** **11 11 59.3 -0.1**
LSA pmax pmax
comp=Z,259nm,1.1s,mb6.0
LSA MLR MLR
comp=Z,41μm,19.0s,MS6.1
LSA Lhasa 31.18 76 *eP* **P** **11 06 55.8 +2.2**
comp=Z,259nm,1.1s,mb6.0
LSA *eS* **S** **11 11 59.3 -0.1**
LSA LR LR
comp=Z,41μm,19.0s,MS6.1
LSA Lhasa 31.18 76 *eP* **P** **11 06 55.8 +2.3**
comp=Z,259nm,1.1s,mb6.0
LSA *eS* **S** **11 11 59.3 -0.1**
comp=Z,41μm,19.0s
KZN Kozani 31.23 304 *eP* **P** **11 06 53.7 -0.2**
KZN Kozani 31.23 304 *eP* **P** **11 06 50.0 -3.9**
KZN Kozani 31.23 304 P **P** **11 06 53.7 -0.2**
KZN Kozani 31.23 304 P **P** **11 06 53.7 -0.2**
MSEY Mahe Island 31.26 181 P **P** **11 06 55.6 +1.3**
comp=Z,927nm,1.2s,mb6.5,SNR=5.2
KIEV Kiev 31.35 327 *eP* **P** **11 06 53.8 -0.9**
KIEV pmax pmax
comp=Z,256nm,0.9s,mb6.0
KIEV MLR MLR
comp=Z,11μm,19.0s,MS5.5
KIEV Kiev 31.35 327 *eP* **P** **11 06 53.8 -1.0**
comp=Z,256nm,0.9s,mb6.0
KIEV LR LR
comp=Z,11μm,19.0s,MS5.5
KIEV Kiev 31.35 327 *eP* **P** **11 06 53.8 -0.9**
comp=Z,11μm,19.0s
LJBD Adjabya 31.40 286 *i* P **P** **11 06 57.1 +1.6**
comp=Z,659nm,2.3s,mb6.1,SNR=153
KFL Anninata 31.49 300 P **P** **11 06 55.9 -0.3**
KFL Anninata 31.49 300 P **P** **11 06 55.9 -0.3**
MDB Medias 31.54 316 P **P** **11 06 58.1 +1.6**
OBN Obninsk 31.61 339 *c iP* **P** **11 06 56.6 -0.4**
OBN *i* 11 07 05.8
OBN *i* 11 07 59.6
OBN *i* 11 09 55.1
OBN *i* S **S** **11 11 57.4 -8.2**
OBN pmax pmax
comp=Z,337nm,1.6s,mb5.9
OBN MLR MLR
comp=Z,11μm,16.0s,MS5.6
OBN Obninsk 31.61 339 *eP* **P** **11 06 56.8 -0.2**
comp=Z,524nm,1.0s,mb6.3
OBN LR LR
comp=Z,19μm,22.0s,MS5.7
OBN Obninsk 31.61 339 P **P** **11 06 57.3 +0.3**
comp=Z,3μm,1.4s,mb6.9,SNR=18
OBN Obninsk 31.61 339 *eP* **P** **11 06 56.8 -0.2**
comp=Z,524nm,1.0s,mb6.3
OBN Obninsk 31.61 339 *i* PcP PcP 11 09 55.1 +6.0
comp=Z,11μm,16.0s
OBN *i* S **S** **11 11 57.4 -8.2**
FNA Florina 31.65 305 P **P** **11 06 57.8 +0.3**
FNA Florina 31.65 305 P **P** **11 06 57.6 +0.1**
VLS Valsamata 31.66 300 *eP* **P** **11 06 57.1 -0.5**
VLS Valsamata 31.66 300 P **P** **11 06 57.0 -0.6**
VLS Valsamata 31.66 300 P **P** **11 06 57.0 -0.6**
LKD2 Lefkada island 31.72 301 P **P** **11 06 57.7 -0.5**
LKD2 Lefkada island 31.72 301 P **P** **11 06 57.7 -0.5**
BURAR Bucovina Array 31.74 319⇑ P **P** **11 06 58.4 +0.2**
BURAR Bucovina Array 31.74 319⇑ *iP* **P** **11 06 58.4 +0.2**
BURAR Bucovina Array 31.74 319⇑ *iP* **P** **11 06 58.4 +0.2**
BIA Bitola 31.75 305 P **P** **11 06 58.2 -0.2**
BIA Bitola 31.75 305 *eP* **P** **11 06 59.1 +0.7**
BIA Bitola 31.75 305 P **P** **11 06 58.2 -0.2**
JAN Janina 31.76 303 *eP* **P** **11 06 58.3 -0.2**
JAN Janina 31.76 303 *eP* **P** **11 06 57.9 -0.6**
BUR08 Bucovina Ar. S 31.76 319 *eP* **P** **11 06 58.1 -0.3**
BUR08 *eS* **S** **11 12 04.9 -3.2**
BUR08 Bucovina Ar. S 31.76 319 *eP* **P** **11 06 58.1 -0.3**
BUR08 *eS* **S** **11 12 04.9 -3.2**
NEST Nestorio 31.79 304 P **P** **11 06 58.8 0.0**
NEST Nestorio 31.79 304 P **P** **11 06 58.8 0.0**
MOS Moscow 31.81 340 *eP* **P** **11 06 57.9 -0.8**
MOS *i* 11 07 15.5
MOS *e* 11 08 05.7
MOS *i* PPP 11 08 16.7
MOS *i* S **S** **11 12 07.2 -1.5**
MOS *eSS* SS 11 13 59.7 -25
MOS *eSSS* 11 14 24.3
MOS pmax pmax
comp=Z,2μm,2.4s,mb6.5
MOS pmax pmax
comp=Z,577nm,2.0s,mb6.1
MOS MLR MLR
comp=Z,10μm,18.0s,MS5.6
MOS Moscow 31.81 340 *eP* **P** **11 06 57.9 -0.8**
comp=Z,577nm,2.0s,mb6.1
MOS *i* S **S** **11 12 07.2 -1.5**
KRUS Krusevo 31.90 306 *eP* **P** **11 07 00.1 +0.4**
BARS Barje 31.93 309 P **P** **11 06 59.1 -0.9**
BARS Barje 31.93 309⇑ *iP* **P** **11 07 00.0 0.0**
SKO Skopje 31.94 307 P **P** **11 06 58.6 -1.5**
SKO Skopje 31.94 307 *eP* **P** **11 07 00.5 +0.5**
SKO Skopje 31.94 307 P **P** **11 07 01.1 +1.0**
DJES Djerdap 32.11 313 P **P** **11 07 01.5 -0.1**
IGT Igoumenitsa 32.12 302 P **P** **11 07 00.4 -1.3**
IGT Igoumenitsa 32.12 302 P **P** **11 07 00.4 -1.3**
BOLS Boljevac 32.18 311⇑ *iP* **P** **11 07 02.1 -0.1**
GZR Gura Zlata 32.23 314 P **P** **11 07 02.6 0.0**
GZR Gura Zlata 32.23 314⇑ *iP* **P** **11 07 02.4 -0.2**
GZR Gura Zlata 32.23 314 P **P** **11 07 02.6 0.0**
SHL Shillong 32.31 84⇑ *ix* **P** **11 07 03.0 -0.5**
SHL *i* x x 11 12 08.0
KEK Kerkira 32.56 303 P **P** **11 07 06.8 +1.2**
KEK Kerkira 32.56 303 *eP* **P** **11 07 04.5 -1.1**
KEK Kerkira 32.56 303 *eP* **P** **11 07 03.6 -2.0**
KEK Kerkira 32.56 303 P **P** **11 07 04.5 -1.1**
KEK Kerkira 32.56 303 P **P** **11 07 04.5 -1.1**
BMR Baia Mare 32.78 318⇓ *iP* **P** **11 07 08.3 +0.9**
BMR Baia Mare 32.78 318⇓ *iP* **P** **11 07 08.3 +0.9**
BMR Baia Mare 32.78 318 P **P** **11 07 07.8 +0.4**
SOKR Solikamsk 32.79 1 *c iP* **P** **11 07 07.3 0.0**
SOKR 11 08 20.5
SOKR S **S** **11 12 18.9 -4.9**
SOKR SS SS 11 14 26.3 -19
SOKR pmax pmax
comp=Z,120nm,1.1s,mb5.7
SOKR MLR MLR
comp=Z,24μm,19.0s,MS5.9
SOKR Solikamsk 32.79 1 *i* P **P** **11 07 07.3 0.0**
comp=Z,120nm,1.1s,mb5.7
SOKR S **S** **11 12 18.9 -4.9**
SVIS Svilajnac 32.84 311⇑ *iP* **P** **11 07 07.7 -0.2**
DRGR 32.86 316⇑ *iP* **P** **11 07 08.4 +0.3**
DRGR 32.86 316 P **P** **11 07 07.9 -0.2**
TIR Tirane 32.90 305 P **P** **11 07 08.6 +0.1**
KMBO Kilima Mbogo 33.02 216 P **P** **11 07 12.7 +3.0**
comp=Z,192nm,1.0s,mb6.0,baz=1.1,slow=24,SNR=112
KMBO S **S** **11 12 34.1 +5.8**
comp=Z,3.5nm,0.8s,baz=0.0,slow=20,SNR=1.7
KMBO LR LR 11 20 54.3
comp=Z,18μm,18.3s,MS5.8,baz=41,slow=37
KMBO Kilima Mbogo 33.02 216 P **P** **11 07 12.7 +2.9**
KMBO S **S** **11 12 34.1 +5.9**
KMBO pmax pmax
comp=Z,192nm,1.0s
KMBO smax
comp=N,4.0nm,0.8s
KMBO MLR MLR
comp=Z,18μm,18.3s
KMBO Kilima Mbogo 33.02 216⇑ *iP* **P** **11 07 12.4 +2.7**
comp=Z,259nm,1.0s,mb6.1
KMBO *eS* **S** **11 12 45.9 +18**
KMBO LR LR
comp=Z,18μm,20.0s,MS5.8
GRUS Gruza 33.05 310 P **P** **11 07 10.0 +0.3**
GRUS Gruza 33.05 310 P **P** **11 07 10.0 +0.3**
BZS Buzias 33.07 314⇑ P **P** **11 07 09.9 0.0**
BZS Buzias 33.07 314⇑ *iP* **P** **11 07 09.9 0.0**
BZS Buzias 33.07 314 P **P** **11 07 09.9 0.0**
PVY Plav 33.16 308⇑ *iP* **P** **11 07 10.3 -0.5**
PVY Plav 33.16 308⇑ *iP* **P** **11 07 10.3 -0.4**
PVY Plav 33.16 308⇑ *iP* **P** **11 07 10.3 -0.5**
BEY Berane 33.29 308⇑ *iP* **P** **11 07 10.5 -1.4**
IVA Berane 33.29 308⇑ *iP* **P** **11 07 10.4 -1.5**
IVA Berane 33.29 308⇑ *iP* **P** **11 07 10.5 -1.5**
IVA Berane 33.29 308⇑ *iP* **P** **11 07 10.5 -1.4**
TRUS Trudelj 33.37 311⇑ *iP* **P** **11 07 11.3 -1.3**
ULC Ulcinj 33.50 306⇑ *iP* **P** **11 07 12.6 -1.2**
ULC Ulcinj 33.50 306 P **P** **11 07 13.0 -0.8**
ULC Ulcinj 33.50 306 P **P** **11 07 13.0 -0.8**
LVV L'vov 33.54 322 *eP* **P** **11 07 13.0 -1.0**
LVV *eS* **S** **11 12 30.9 -4.8**
LVV *eSS* SS 11 14 33.9 -27
LVV L'vov 33.54 322 *eP* **P** **11 07 13.0 -1.0**
LVV *eS* **S** **11 12 30.9 -4.8**
TRPA Tarpa 33.57 318⇑ *iP* **P** **11 07 14.3 +0.1**
TRPA Tarpa 33.57 318⇑ *iP* **P** **11 07 14.3 +0.1**
DIVS Divibare 33.61 310 P **P** **11 07 14.2 -0.4**
DIVS Divibare 33.61 310⇑ *iP* **P** **11 07 14.2 -0.4**
PDG Podgorica 33.62 307⇑ *iP* **P** **11 07 13.1 -1.7**
TTG Podgorica 33.62 307⇑ *iP* **P** **11 07 13.0 -1.8**
TTG Podgorica 33.62 307 P **P** **11 07 14.0 -0.8**
TTG Podgorica 33.62 307 P **P** **11 07 14.0 -0.8**
PLE Pljevlja 33.78 309⇑ *iP* **P** **11 07 16.1 -0.1**
PLE Pljevlja 33.78 309 P **P** **11 07 17.0 +0.8**
PLE Pljevlja 33.78 309⇑ *iP* **P** **11 07 16.1 -0.1**
BUM Brajici-Budva 33.84 307⇑ *iP* **P** **11 07 16.0 -0.7**
BUM Brajici-Budva 33.84 307⇑ *iP* **P** **11 07 16.0 -0.7**
LZLA Zalla 33.85 282 *i P* **P** **11 07 18.9 +1.9**
comp=Z,380nm,1.0s,mb6.3,SNR=153
NKY Niksic 33.91 308⇑ *iP* **P** **11 07 16.5 -0.8**
NKY Niksic 33.91 308⇑ *iP* **P** **11 07 16.5 -0.8**
NKY Niksic 33.91 308 *i P* **P** **11 07 16.5 -0.8**
BBLS Lazići 33.94 310 P **P** **11 07 17.8 +0.3**
BBLS Lazići 33.94 310⇑ *iP* **P** **11 07 17.1 -0.4**
UZH Uzhgorod 33.94 319 *eP* **P** **11 07 17.0 -0.5**
UZH *e* 11 07 22.5
UZH *e* 11 08 36.8
UZH *e* 11 09 56.6
UZH *eS* **S** **11 12 37.0 -5.0**
UZH *e* 11 14 49.3
UZH *e* 11 15 11.5
UZH MLR MLR
comp=N,10μm,12.0s,MS6.2
UZH MLR MLR
comp=E,22μm,12.0s,MS6.2
UZH MLR MLR
comp=Z,4μm,12.0s,MS5.4
UZH Uzhgorod 33.94 319 *eP* **P** **11 07 17.0 -0.5**
UZH Uzhgorod 33.94 319 *e*PcP PcP 11 09 56.6 +0.9
UZH *eS* **S** **11 12 37.0 -5.0**
UPM Unac-Piva 34.08 308⇑ *iP* **P** **11 07 17.9 -0.9**
UPM Unac-Piva 34.08 308⇑ *iP* **P** **11 07 18.0 -0.8**
UPM Unac-Piva 34.08 308⇑ *iP* **P** **11 07 18.0 -0.8**
FRGS Fruska Gora 34.09 312 P **P** **11 07 18.9 +0.1**
FRGS Fruska Gora 34.09 312⇑ *iP* **P** **11 07 18.6 -0.2**
KOLS Kolonicke sedl 34.10 319 *eP* **P** **11 07 19.5 +0.7**
comp=Z,443nm,1.0s,mb6.3
KOLS *eS* **S** **11 12 43.1 -1.3**
KOLS LR LR
comp=Z,10μm,23.8s,MS5.5
KOLS Kolonicke sedl 34.10 319 *eP* **P** **11 07 19.5 +0.7**
KOLS *eS* **S** **11 12 43.1 -1.3**
KOLS Kolonicke sedl 34.10 319 *eP* **P** **11 07 19.5 +0.7**
comp=Z,443nm,1.0s,mb6.3
KOLS *eS* **S** **11 12 43.1 -1.3**
HCY Herceg Novi 34.17 307⇑ *iP* **P** **11 07 18.6 -0.9**
HCY Herceg Novi 34.17 307 P **P** **11 07 18.0 -1.5**
HCY Herceg Novi 34.17 307⇑ *iP* **P** **11 07 18.6 -0.9**
KWP Kalwaria Pacla 34.19 321 *eP* **P** **11 07 19.6 0.0**
KWP *eS* **S** **11 12 46.2 +0.4**
KWP *eSS* SS 11 15 07.8 -5.7
KWP LMZ 11 21 18.4
comp=Z,20μm,31.9s
KWP Kalwaria Pacla 34.19 321⇑ *eP* **P** **11 07 19.6 0.0**
KWP *eS* **S** **11 12 46.2 +0.5**
KWP Kalwaria Pacla 34.19 321 *eP* **P** **11 07 19.0 -0.6**
comp=Z,384nm,1.3s,mb6.2
KWP LR LR
comp=Z,17μm,21.0s,MS5.8
KWP Kalwaria Pacla 34.19 321⇓ *iP* **P** **11 07 19.8 +0.2**
KWP Kalwaria Pacla 34.19 321 *eP* **P** **11 07 19.6 0.0**
KWP *eS* **S** **11 12 46.2 +0.5**
BRY Bratogost 34.26 308⇑ *iP* **P** **11 07 19.4 -0.9**
BRY Bratogost 34.26 308 P **P** **11 07 19.0 -1.3**
BRY Bratogost 34.26 308⇑ *iP* **P** **11 07 19.5 -0.8**
IMP Imphal 34.28 85 *e*PKP **P** **11 07 23.0 +2.2**
IMP *ex* x 11 08 34.0
LSRT Sirt 34.43 287 *i P* **P** **11 07 23.8 +1.8**
comp=Z,911nm,1.3s,mb6.5,SNR=153
NVS Novosibirsk 34.45 28⇑ *iP* **P** **11 07 19.9 -1.9**
NVS *e* 11 09 52.5
NVS *i* S **S** **11 12 48.7 -1.0**
NVS pmax pmax
comp=Z,531nm,1.9s,mb6.2
NVS pmax pmax
comp=N,277nm,1.5s
NVS smax
comp=N,113nm,1.6s
NVS Novosibirsk 34.45 28 *i* P **P** **11 07 19.9 -1.9**
comp=N,277nm,1.5s,mb6.0
NVS *i* S **S** **11 12 48.7 -1.0**
comp=N,113nm,1.6s
MICGM Minsk 34.46 331⇑ *iP* **P** **11 07 19.0 -2.9**
MNK Minsk 34.48 331 *c iP* **P** **11 07 19.0 -3.0**
MNK *e* 11 08 38.0
MNK *e*PPP 11 08 52.0
MNK *e* 11 10 00.0
MNK *eS* **S** **11 12 42.0 -8.1**
MNK *eSS* SS 11 14 50.0 -29
MNK *eSSS* 11 15 18.0
MNK pmax pmax
comp=Z,5μm,5.0s
MNK pmax pmax
comp=Z,1μm,1.0s,mb6.8
MNK pmax pmax
comp=E,480nm,2.0s
MNK pmax pmax
comp=Z,5μm,10.0s
MNK smax
comp=N,9μm,7.0s
MNK smax
comp=E,9μm,7.0s
MNK MLR MLR
comp=Z,57μm,22.0s,MS6.3
MNK MLR MLR
comp=E,34μm,20.0s
ZAA0 Zalesovo Array 34.55 30 *eP* **P** **11 07 21.8 -0.9**
ZAA0 *eS* **S** **11 12 46.3 -4.9**
ZAA0 Zalesovo Array 34.55 30 *eP* **P** **11 07 21.8 -0.9**
ZAA0 *eS* **S** **11 12 46.3 -4.9**
ZALV Zalesovo Beam 34.55 30 P **P** **11 07 21.7 -1.0**
comp=E,66nm,0.4s,mb6.0,baz=238,slow=8.5,SNR=189
ZALV S **S** **11 12 43.8 -7.4**
comp=E,3.6nm,0.7s,baz=264,slow=5.2,SNR=2.4
ZALV LR LR 11 22 26.5
comp=E,8μm,18.9s,MS5.5,baz=228,slow=38
ZALV Zalesovo Beam 34.55 30 P **P** **11 07 21.7 -1.0**
ZALV S **S** **11 12 43.8 -7.4**
ZALV pmax pmax
comp=Z,66nm,0.4s,mb5.9
ZALV smax
comp=N,4.0nm,0.7s
ZALV MLR MLR
comp=Z,8μm,18.9s,MS5.5
CRVS Cervenica-Dubn 34.56 319 *eP* **P** **11 07 22.9 +0.1**
comp=Z,174nm,0.8s,mb6.0
CRVS *eS* **S** **11 12 50.6 -0.9**
CRVS LR LR
comp=Z,8μm,28.5s,MS5.3
CRVS Cervenica-Dubn 34.56 319 *eP* **P** **11 07 22.9 +0.1**
CRVS *eS* **S** **11 12 50.6 -0.9**
CRVS Cervenica-Dubn 34.56 319 *eP* **P** **11 07 22.9 +0.1**
comp=Z,174nm,0.8s,mb6.0
CRVS *eS* **S** **11 12 50.6 -0.9**
PE1 Pezze di Greco 34.57 304 *eP* **P** **11 07 22.3 -0.8**
STON Ston 34.85 307 P **P** **11 07 23.1 -2.3**
PKS2 Kecel 34.95 314⇑ *eP* **P** **11 07 25.2 -1.1**
KECS Kecovo 34.95 318 *eP* **P** **11 07 26.6 +0.4**
KECS pmax pmax
comp=Z,128nm,0.9s,mb5.8
KECS Kecovo 34.95 318 *eP* **P** **11 07 26.6 +0.4**
comp=Z,128nm,0.9s,mb5.8
KECS Kecovo 34.95 318 *eP* **P** **11 07 26.6 +0.4**
PSZ Piszkesteto 35.07 317 P **P** **11 07 27.4 +0.1**
PSZ Piszkesteto 35.07 317 *eP* **P** **11 07 27.0 -0.3**
comp=Z,181nm,1.0s,mb6.0
PSZ LR LR
comp=Z,22μm,20.0s,MS5.9
PSZ Piszkesteto 35.07 317⇑ *iP* **P** **11 07 27.1 -0.2**
PSZ Piszkesteto 35.07 317⇑ *eP* **P** **11 07 27.3 0.0**
PSZ Piszkesteto 35.07 317⇑ *eP* **P** **11 07 27.3 0.0**
SG1 Sgolgore (BA) 35.13 304 *eP* **P** **11 07 29.3 +1.4**
ORI Oriolo Calabro 35.16 302 P **P** **11 07 28.9 +0.7**
PKS7 Kunszentmiklos 35.19 315⇑ *eP* **P** **11 07 28.5 +0.2**
NACGM Naroch 35.20 331 *eP* **P** **11 07 25.0 -3.3**
NACGM Naroch 35.20 331 *eP* **P** **11 07 25.5 -2.8**
PKSM Moragy 35.22 313⇑ *iP* **P** **11 07 28.5 -0.1**
PKSM Moragy 35.22 313 P **P** **11 07 28.2 -0.4**
LJFR Jufra 35.32 283 *i P* **P** **11 07 31.4 +1.7**
comp=Z,973nm,1.5s,mb6.5,SNR=153
LJFR *eS* **S** **11 13 05.8 +2.1**
SNR=152
BUD Budapest 35.44 316⇑ *eP* **P** **11 07 30.4 -0.1**
BUD Budapest 35.44 316⇑ *eP* **P** **11 07 30.4 -0.1**
NIE Niedzica 35.46 319 *eP* **P** **11 07 30.8 +0.2**
NIE Niedzica 35.46 319 P **P** **11 07 31.4 +0.8**
NIE Niedzica 35.46 319 *eP* **P** **11 07 30.8 +0.2**
CDT Castel del Mon 35.48 304 *eP* **P** **11 07 30.1 -0.8**
IDID Didziasalis 35.49 331 *eP* **P** **11 07 30.7 -0.1**
IDID AMB AMB 11 07 38.2
comp=Z,134nm,1.5s,mb5.7
IDID Didziasalis 35.49 331 *eP* **P** **11 07 30.7 -0.1**
comp=Z,134nm,1.5s,mb5.7,SNR=27
PRGR Permogore 35.53 352⇓ *iP* **P** **11 07 30.1 -0.9**
PRGR S **S** **11 13 01.4 -4.7**
PRGR pmax pmax
comp=Z,187nm,1.1s,mb5.9
PRGR Permogore 35.53 352 *i P* **P** **11 07 30.1 -0.9**
comp=Z,187nm,1.1s,mb5.9
PKS9 Tamasi 35.59 314⇑ *eP* **P** **11 07 33.2 +1.5**
BLY Banja Luka 35.72 310 P **P** **11 07 35.1 +2.2**
BLY Banja Luka 35.72 310 P **P** **11 07 35.1 +2.2**
IIGN Ignalina 35.74 331 *eP* **P** **11 07 32.9 0.0**
IIGN AMB AMB 11 07 40.5
comp=Z,186nm,1.3s,mb5.9
IIGN Ignalina 35.74 331 *eP* **P** **11 07 32.9 0.0**
comp=Z,186nm,1.3s,mb5.9,SNR=27
LMSR Misrath 35.79 289 *i P* **P** **11 07 35.1 +1.4**
comp=Z,812nm,1.2s,mb6.5,SNR=153
PKSG 35.80 315⇑ *eP* **P** **11 07 33.5 -0.1**
KLMR Klimovskoe 35.84 346 *c iP* **P** **11 07 33.1 -0.6**
KLMR *eS* **S** **11 13 03.0 -7.8**
KLMR pmax pmax
comp=Z,1μm,9.4s
KLMR pmax pmax
comp=Z,2μm,1.6s,mb6.7
KLMR MLR MLR
comp=Z,13μm,17.0s,MS5.8
KLMR Klimovskoe 35.84 346 *i P* **P** **11 07 33.1 -0.6**
comp=Z,2μm,1.6s,mb6.7
MS1 Monte Sant'Ang 35.85 305 *eP* **P** **11 07 33.7 -0.3**
ISAL Salakas 35.92 331 *eP* **P** **11 07 34.5 0.0**
ISAL AMB AMB 11 07 42.1
comp=Z,151nm,1.4s,mb5.7
ISAL Salakas 35.92 331 *eP* **P** **11 07 34.5 0.0**
comp=Z,151nm,1.4s,mb5.7,SNR=27
VYHS Vyhne 35.95 317 *eP* **P** **11 07 34.7 -0.2**
comp=Z,1μm,2.8s,mb6.3
VYHS *eS* **S** **11 13 08.1 -4.9**
VYHS LR LR
comp=Z,12μm,20.4s,MS5.7
VYHS Vyhne 35.95 317 *eP* **P** **11 07 34.6 -0.3**
VYHS *eS* **S** **11 13 08.1 -4.9**
VYHS Vyhne 35.95 317 *eP* **P** **11 07 34.7 -0.2**
comp=Z,1μm,2.8s,mb6.3
VYHS *eS* **S** **11 13 08.1 -4.9**
LIKS Likavka 36.02 318 *eP* **P** **11 07 35.6 +0.2**
LIKS pmax pmax
comp=Z,480nm,0.8s,mb6.5
LIKS Likavka 36.02 318 *eP* **P** **11 07 35.6 +0.2**
comp=Z,480nm,0.8s,mb6.5
LIKS Likavka 36.02 318 *eP* **P** **11 07 35.6 +0.2**

LIKS Likavka 36.02 318 *e*P **P 11 07 35.6 +0.2**
comp=Z,480nm,0.8s,mb6.5
OJC Ojcow 36.12 320 *i* P **P 11 07 36.0 -0.3**
OJC *e*sP sP 11 07 57.0 +16
OJC *e*S **S 11 13 11.1 -4.4**
OJC *e*SS SS 11 15 20.3 -33
OJC L 11 25 44.6
comp=Z,19nm,20.1s
OJC Ojcow 36.12 320⇑*i* P **P 11 07 36.0 -0.3**
OJC *e*S **S 11 13 11.1 -4.4**
OJC MLR MLR
comp=Z,19μm,20.1s,MS5.9
OJC Ojcow 36.12 320 *e*P **P 11 07 36.0 -0.3**
comp=Z,380nm,0.9s,mb6.3
OJC Ojcow 36.12 320 *i* P **P 11 07 36.0 -0.3**
OJC *e*S **S 11 13 11.1 -4.4**
comp=Z,19μm,20.1s
WDD Wield Dalam 36.22 295 P **P 11 07 38.1 +0.8**
WDD Wield Dalam 36.22 295 P **P 11 07 38.1 +0.8**
KOLL Kolacno 36.25 317 *e*P **P 11 07 37.4 0.0**
KOLL Kolacno 36.25 317 *e*P **P 11 07 37.4 0.0**
KOLL Kolacno 36.25 317 *e*P **P 11 07 37.4 0.0**
SUW Suwalki 36.30 327 *e*P **P 11 07 37.0 -0.8**
SUW *e*S **S 11 13 22.8 +4.7**
SUW LMZ 11 21 18.6
comp=Z,22μm,33.3s
SUW Suwalki 36.30 327 *e*P **P 11 07 37.0 -0.7**
SUW *e*S **S 11 13 22.8 +4.7**
SUW Suwalki 36.30 327 *e*P **P 11 07 37.4 -0.4**
comp=Z,552nm,0.9s,mb6.5
SUW Suwalki 36.30 327 *e*P **P 11 07 37.4 -0.3**
comp=Z,552nm,0.9s,mb6.5
SUW *e*S **S 11 13 16.0 -2.1**
SNR=31
MBAR Mbarara 36.40 226*c i*P **P 11 07 40.0 +1.0**
MBAR Mbarara 36.40 226 P **P 11 07 40.1 +1.1**
comp=Z,456nm,0.8s,mb6.5,SNR=19
MBAR Mbarara 36.40 226 *i* P **P 11 07 40.0 +1.0**
VAE Valguarnera 36.41 298 P **P 11 07 42.1 +3.2**
comp=Z,185nm,0.8s,mb6.1,baz=14,slow=2.7,SNR=31
VAE S **S 11 13 22.1 +1.9**
comp=Z,6.7nm,0.5s,baz=80,slow=14,SNR=1.9
VAE Valguarnera 36.41 298 P **P 11 07 42.1 +3.2**
VAE S **S 11 13 22.1 +1.9**
VAE Valguarnera 36.41 298 P **P 11 07 42.1 +3.2**
VAE S **S 11 13 22.1 +1.9**
WAR Warsaw 36.42 324 *e*P **P 11 07 38.7 -0.1**
WAR LMZ 11 23 49.8
comp=Z,21μm,26.9s
WAR Warsaw 36.42 324 *e*P **P 11 07 38.7 -0.1**
comp=Z,21μm,26.9s
SISC Sisak 36.48 311 P **P 11 07 38.7 -0.7**
SISC Sisak 36.48 311 *i* P **P 11 07 38.7 -0.7**
BEHE Becsehely 36.52 313⇑*e*P **P 11 07 40.2 +0.4**
LSHF Shwairf 36.59 285 *i* P **P 11 07 41.7 +1.2**
comp=Z,810nm,1.8s,mb6.3,SNR=154
LUMB Murzuk 36.67 278 *i* P **P 11 07 42.9 +1.6**
comp=Z,682nm,1.2s,mb6.3,SNR=154
JAVC Velka Javorina 36.81 317 P **P 11 07 42.6 +0.5**
KOGS Kog 36.86 313 P **P 11 07 43.0 +0.4**
KOGS Kog 36.86 313 P **P 11 07 43.0 +0.4**
MODS Modra-Piesok 36.87 316 *e*P **P 11 07 42.3 -0.3**
MODS Modra-Piesok 36.87 316 *e*P **P 11 07 42.2 -0.4**
MODS Modra-Piesok 36.87 316 *e*P **P 11 07 42.3 -0.3**
ZST Bratislava 36.91 316 *e*P **P 11 07 42.8 -0.2**
ZST pmax pmax
comp=Z,66nm,0.9s,mb5.5
ZST Bratislava 36.91 316 *e*P **P 11 07 42.8 -0.2**
comp=Z,66nm,0.9s,mb5.5
ZST *e*S **S 11 13 29.9 +2.3**
ZST Bratislava 36.91 316 *e*P **P 11 07 42.8 -0.2**
ZST *e*S **S 11 13 29.9 +2.3**
ZST Bratislava 36.91 316 *e*P **P 11 07 42.8 -0.2**
comp=Z,66nm,0.9s,mb5.5
ZST *e*S **S 11 13 29.9 +2.3**
OKC Ostrava-Krasne 36.91 319 *e*P **P 11 07 42.5 -0.5**
OKC *e*PP PP 11 09 19.4 +12
OKC *e*S **S 11 13 29.8 +2.2**
OKC AMS AMS 11 25 20.0
comp=Z,14μm,15.8s
OKC Ostrava-Krasne 36.91 319 P **P 11 07 42.5 -0.5**
OKC S **S 11 13 29.8 +2.2**
RAC Raciborz 36.99 319 *e*P **P 11 07 42.0 -1.7**
RAC Raciborz 36.99 319 *e*P **P 11 07 42.0 -1.7**
SOP Sopron 37.07 315⇑*e*P **P 11 07 44.0 -0.4**
SOP Sopron 37.07 315⇑*e*P **P 11 07 44.0 -0.4**
MORC Moravsky Berou 37.25 318 *e*P **P 11 07 45.3 -0.6**
MORC pmax pmax
comp=Z,199nm,0.9s,mb5.9
MORC Moravsky Berou 37.25 318 *e*P **P 11 07 45.3 -0.6**
comp=Z,200nm,0.9s,mb6.0
MORC Moravsky Berou 37.25 318⇑*i*P **P 11 07 45.4 -0.5**
MORC Moravsky Berou 37.25 318 *e*P **P 11 07 45.3 -0.6**
comp=Z,199nm,0.9s,mb5.9
BOJS Bojanci 37.25 311 *i* P **P 11 07 46.0 +0.1**
BOJS *i* pP 11 07 50.8 +1.2
BOJS *e*PP PP 11 09 15.5 +4.6
BOJS *e*S **S 11 13 23.8 -9.0**
BOJS Bojanci 37.25 311 *i* P **P 11 07 46.0 +0.1**
BOJS *i* pP 11 07 50.8 +1.2
BOJS *e*PP PP 11 09 15.5 +4.6
BOJS *e*S **S 11 13 23.8 -9.0**
BOJS Bojanci 37.25 311 *i* P **P 11 07 46.0 +0.1**
NVLJ Novalja 37.26 309 P **P 11 07 45.5 -0.6**
NVLJ Novalja 37.26 309 *i* P **P 11 07 45.4 -0.7**
PUL Pulkovo 37.37 339⇑*e*P **P 11 07 48.1 +1.3**
PUL pmax pmax
comp=Z,196nm,0.4s,mb6.3
PUL MLR MLR
comp=Z,9μm,18.0s,MS5.6
PUL Pulkovo 37.37 339 *e*P **P 11 07 46.8 0.0**
SNR=30
GHAR Gharyan 37.42 289 *i* P **P 11 07 48.9 +1.3**
comp=Z,926nm,2.1s,mb6.2,SNR=154
ARSA Arzberg 37.59 314 P **P 11 07 48.5 -0.3**
ARSA Arzberg 37.59 314 *i* P **P 11 07 48.7 -0.1**
comp=Z,132nm,1.2s,mb5.5,SNR=17
ARSA Arzberg 37.59 314 P **P 11 07 48.5 -0.3**
CONA Conrad Observa 37.59 315 *i* P **P 11 07 48.6 -0.2**
comp=Z,110nm,0.9s,mb5.6,SNR=37
CONA Conrad Observa 37.59 315 P **P 11 07 48.6 -0.2**
comp=Z,110nm,0.9s,mb5.6,SNR=37
DGAR Diego Garcia 37.61 152 P **P 11 07 50.1 +0.8**
DGAR pmax pmax
comp=Z,564nm,1.0s,mb6.2
DGAR MLR MLR
comp=Z,35μm,21.0s,MS6.1
DGAR Diego Garcia 37.61 152 P **P 11 07 50.0 +0.8**
comp=Z,564nm,1.0s,mb6.2
DGAR LR LR
comp=Z,35μm,21.0s,MS6.1
DGAR Diego Garcia 37.61 152 P **P 11 07 50.0 +0.7**
comp=Z,564nm,1.0s,mb6.2
VRAC Vranov 37.63 317 P **P 11 07 49.1 -0.1**
comp=Z,121nm,0.9s,mb5.6,baz=109,slow=8.2,SNR=48
VRAC S **S 11 13 32.0 -6.5**
comp=Z,2.4nm,0.4s,baz=137,slow=19,SNR=1.6
VRAC LR LR 11 25 29.0
comp=Z,22μm,20.6s,MS6.0,baz=120,slow=40
VRAC Vranov 37.63 317 ⇑P **P 11 07 49.0 -0.2**
VRAC Vranov 37.63 317⇑*i*P **P 11 07 49.0 -0.2**
VRAC Vranov 37.63 317 P **P 11 07 49.0 -0.2**
VSU Vasula 37.65 335*c i*P **P 11 07 48.3 -0.9**
VSU pmax pmax
comp=Z,148nm,0.8s,mb5.8
VSU MLR MLR
comp=Z,15μm,22.0s,MS5.8
VSU Vasula 37.65 335 P **P 11 07 49.8 +0.6**
VSU Vasula 37.65 335 *e*P **P 11 07 48.8 -0.4**
SNR=30
VSU Vasula 37.65 335 *e*PP PP 11 09 17.5 +2.5
SNR=45
VSU *e*S **S 11 13 36.2 -2.4**
SNR=31
KRUC Moravsky 37.66 317 P **P 11 07 48.9 -0.5**
PERS Pernice 37.66 313 *i* P **P 11 07 49.1 -0.3**
PERS *e*S **S 11 13 29.7 -9.4**
PERS Pernice 37.66 313 *i* P **P 11 07 49.1 -0.3**
PERS *e*S **S 11 13 29.7 -9.4**
PERS Pernice 37.66 313 *i* P **P 11 07 49.1 -0.3**
PERS *e*S **S 11 13 29.7 -9.4**
SOKA Soboth 37.73 313⇑*i*P **P 11 07 49.9 -0.1**
comp=Z,74nm,1.0s,mb5.4
SOKA Soboth 37.73 313 P **P 11 07 49.9 -0.1**
comp=Z,74nm,1.0s,mb5.4
OFFI Offida 37.73 306 P **P 11 07 51.2 +1.1**
OFFI Offida 37.73 306 P **P 11 07 51.2 +1.1**
LJU Ljubljana 37.88 312 *i* P **P 11 07 51.8 +0.5**
LJU *e*S **S 11 13 33.7 -8.8**
LJU Ljubljana 37.88 312 *i* P **P 11 07 51.8 +0.4**
LJU *e*S **S 11 13 33.7 -8.8**
LJU *e*SS SS 11 16 35.0 +6.3
LJU Ljubljana 37.88 312 *i* P **P 11 07 51.8 +0.4**
LJU *e*S **S 11 13 33.7 -8.8**
LJU *e* 11 16 35.0
LJU Ljubljana 37.88 312 *i* P **P 11 07 51.8 +0.5**
LJU *e*S **S 11 13 33.7 -8.8**
LJU *e*SS SS 11 16 35.0 +6.3
OBKA Obir 38.00 312⇑*i*P **P 11 07 52.5 +0.2**
comp=Z,170nm,1.4s,mb5.6,SNR=20
OBKA Obir 38.00 312 P **P 11 07 52.5 +0.2**
comp=Z,170nm,1.4s,mb5.6,SNR=20
JAVS Javornik 38.15 311 *i* P **P 11 07 53.4 -0.2**
JAVS *i* pP 11 07 58.2 +0.9
JAVS *e*S **S 11 13 42.9 -3.7**
JAVS *e*SS SS 11 16 44.6 +10
JAVS Javornik 38.15 311 *i* P **P 11 07 53.4 -0.2**
JAVS *i* pP 11 07 58.2 +0.9
JAVS *e*S **S 11 13 42.9 -3.7**
JAVS *e*SS SS 11 16 37.5 +3.3
JAVS Javornik 38.15 311 *i* P **P 11 07 53.4 -0.2**
DPC Dobruska-Polom 38.20 319 *e*P **P 11 07 53.3 -0.6**
DPC pmax pmax
comp=Z,283nm,1.0s,mb6.0
DPC Dobruska-Polom 38.20 319 *e*P **P 11 07 53.3 -0.6**
comp=Z,283nm,1.0s,mb6.0
DPC Dobruska-Polom 38.20 319 *e*P **P 11 07 53.5 -0.4**
DPC *e*PP PP 11 09 32.8 +12
DPC *e*S **S 11 13 47.1 0.0**
DPC AMS AMS 11 23 30.0
comp=Z,19μm,28.5s
DPC Dobruska-Polom 38.20 319 P **P 11 07 53.5 -0.4**
DPC S **S 11 13 47.1 0.0**
TREC Trest 38.30 317 *e*P **P 11 07 55.2 +0.4**
TREC MLR MLR
comp=Z,17μm,22.9s,MS5.8
TREC Trest 38.30 317 *e*P **P 11 07 55.2 +0.4**
TREC *e*PP PP 11 09 34.6 +12
TREC *e*S **S 11 13 55.4 +6.7**
TREC AMS AMS 11 25 20.0
comp=Z,17μm,22.9s
TREC Trest 38.30 317 *e*P **P 11 07 55.2 +0.4**
comp=Z,17μm,22.9s
VOY Vojsko 38.31 311 *e*P **P 11 07 54.6 -0.3**
VOY *e* pP 11 07 59.4 +0.8
VOY *e* 11 08 49.3
VOY Vojsko 38.31 311 *e*P **P 11 07 54.6 -0.3**
VOY *e* pP 11 07 59.4 +0.8
VOY *e* 11 08 49.3
VOY Vojsko 38.31 311 *e*P **P 11 07 54.6 -0.3**
KSP Ksiaz 38.41 319 *e*P **P 11 07 55.4 -0.3**
KSP *e*S **S 11 13 52.0 +1.7**
KSP LMZ 11 24 10.7
comp=Z,38μm,26.7s
KSP Ksiaz 38.41 319 P **P 11 07 55.5 -0.2**
KSP Ksiaz 38.41 319 P **P 11 07 55.5 -0.2**
KSP *i* pP pP 11 08 00.3 +0.9
UPC Upice 38.44 319 *e*P **P 11 07 55.7 -0.2**
UPC Upice 38.44 319 *e*P **P 11 07 55.7 -0.2**
UPC Upice 38.44 319 *e*P **P 11 07 55.7 -0.2**
MOA Molln 38.59 314 P **P 11 07 56.5 -0.7**
MOA Molln 38.59 314 *i* P **P 11 07 56.9 -0.3**
comp=Z,218nm,0.9s,mb5.9,SNR=51
MOA Molln 38.59 314 P **P 11 07 56.9 -0.3**
comp=Z,218nm,0.9s,mb5.9,SNR=51
GTA Gaotai 38.59 60 ⇑P **P 11 07 58.3 +1.0**
GTA pP pP 11 08 02.9 +1.8
GTA sP sP 11 08 05.4 +2.9
GTA S **S 11 13 56.6 +3.3**
GTA sS sS 11 14 03.5 +4.1
GTA ScS ScS 11 18 09.4 +1.4
GTA pmax pmax
comp=Z,68nm,1.1s,mb5.3
GTA pmax pmax
comp=Z,3μm,4.7s
GTA LR LR
comp=N,30μm,17.3s,MS6.2
GTA LR LR
comp=E,15μm,19.9s,MS6.2
GTA LR LR
comp=Z,18μm,23.7s,MS5.8
ALAS Alassa 38.63 290 *i* P **P 11 07 59.5 +1.7**
comp=Z,559nm,1.5s,mb6.1,SNR=154
ALAS *e*S **S 11 13 56.4 +2.3**
SNR=153
MYKA Terra Mystica 38.64 312⇑*i*P **P 11 07 57.5 -0.1**
comp=Z,88nm,0.7s,mb5.6
MYKA Terra Mystica 38.64 312 P **P 11 07 57.5 -0.1**
comp=Z,88nm,0.7s,mb5.6
SLIT Slitere, Latvi 38.87 332 *e*P **P 11 07 58.7 -0.8**
comp=Z,484nm,0.3s,mb6.7,SNR=29
SLIT *e*S **S 11 13 54.6 -2.5**
SNR=7.0
GKP Gorka Klasztor 38.93 323 *e*P **P 11 07 59.2 -0.8**
GKP *e*S **S 11 13 58.1 0.0**
GKP LMZ 11 25 31.7
comp=Z,16μm,24.8s
GKP Gorka Klasztor 38.93 323 *e*P **P 11 07 59.2 -0.8**
comp=Z,16μm,24.8s
GKP *e*S **S 11 13 58.2 +0.1**
KBA Koelnbreinsper 38.96 313 *i* P **P 11 08 00.3 -0.1**
comp=Z,307nm,1.0s,mb6.0,SNR=28
KBA Koelnbreinsper 38.96 313 P **P 11 08 00.3 0.0**
comp=Z,307nm,1.0s,mb6.0,SNR=28
PRU Pruhonice 39.12 318 *e*P **P 11 08 01.8 +0.1**
PRU *e*PP PP 11 09 43.1 +12
PRU *e*S **S 11 14 08.5 +7.4**
PRU AMS AMS 11 26 00.0
comp=Z,20μm,21.1s
PRU Pruhonice 39.12 318 P **P 11 08 01.5 -0.2**
PRA Prague 39.22 318 P **P 11 08 01.0 -1.5**
PRA PP PP 11 09 43.0 +11
PRA S **S 11 14 10.0 +7.5**
PRA AMS AMS 11 26 30.0
SRPE Suurupi 39.23 335 P **P 11 08 04.8 +2.4**
SRPE Suurupi 39.23 335 P **P 11 08 04.8 +2.4**
GEC2 GERESS Array S 39.26 316 *e*P **P 11 08 02.3 -0.5**
comp=Z,233nm,1.6s,mb5.7
GEC2 GERESS Array S 39.26 316 *e*P **P 11 08 02.3 -0.5**
GEC2 pmax pmax
comp=Z,233nm,1.6s,mb5.7
GEC2 GERESS Array S 39.26 316 *e*P **P 11 08 02.3 -0.5**
comp=Z,233nm,1.6s,mb5.7
GEC2 GERESS Array S 39.26 316 *e*P **P 11 08 02.3 -0.5**
comp=Z,233nm,1.6s,mb5.7
PVCC Panska Ves 39.30 318 *e*P **P 11 08 02.9 -0.3**
PVCC *e*PP PP 11 09 43.3 +10
PVCC *ex* x 11 14 17.0
PVCC AMS AMS 11 26 00.0
comp=Z,12μm,18.9s
PVCC Panska Ves 39.30 318 P **P 11 08 02.9 -0.3**
ABTA Abfaltersbach 39.42 312 *i* P **P 11 08 04.0 -0.1**
comp=Z,294nm,1.0s,mb6.0,SNR=13
ABTA Abfaltersbach 39.42 312 P **P 11 08 04.0 -0.2**
comp=Z,294nm,1.0s,mb6.0,SNR=13
KHC Kasperske Hory 39.42 316 *e*P **P 11 08 03.6 -0.6**
KHC *e* 11 09 44.8
KHC *e*S **S 11 14 10.9 +5.3**
KHC MLR MLR
comp=Z,16μm,33.9s,MS5.6
KHC Kasperske Hory 39.42 316 *e*P **P 11 08 03.6 -0.6**
comp=Z,195nm,0.9s,mb5.8
KHC Kasperske Hory 39.42 316 *e*P **P 11 08 03.6 -0.6**
KHC *e*PP PP 11 09 44.8 +10
KHC *e*S **S 11 14 10.9 +5.3**
KHC AMS AMS 11 23 50.0
comp=Z,16μm,33.9s
KHC Kasperske Hory 39.42 316 *e*P **P 11 08 03.6 -0.6**
KHC *e*S **S 11 14 10.9 +5.3**
comp=Z,16μm,33.9s
JOF Joensuu 39.59 343 *e*p **P 11 08 05.7 +0.3**
comp=Z,11nm,0.3s,mb5.0
JOF Joensuu 39.59 343 P **P 11 08 05.3 -0.1**
FIU Minerbio Fiu 39.63 309 P **P 11 08 07.3 +1.3**
FIU Minerbio Fiu 39.63 309 P **P 11 08 07.3 +1.3**
MEF Metsahovi 39.73 336 P **P 11 08 09.7 +3.1**
MEF Metsahovi 39.73 336 *e*P **P 11 08 06.0 -0.6**
SNR=29
MEF Metsahovi 39.73 336 *e*PP PP 11 09 41.1 +3.3
SNR=44
MEF *e*S **S 11 14 09.6 -0.4**
SNR=30
BRG Berggiesshubel 39.80 319 *e*P **P 11 08 06.6 -0.7**
comp=Z,152nm,1.0s,mb5.7
BRG Berggiesshubel 39.80 319⇑*i*P **P 11 08 06.7 -0.6**
comp=Z,152nm,1.0s,mb5.7
BRG PCP PcP 11 10 11.2 -2.0
comp=Z,113nm,1.5s
BRG SCP ScP 11 14 04.9 +2.7
comp=Z,44nm,1.5s
BRG S **S 11 14 07.0 -4.2**
BRG SS SS 11 17 21.0 +14
BRG
comp=Z,12μm,15.9s
BRG
comp=N,12μm,20.2s
BRG
comp=E,23μm,20.2s
BRG Berggiesshubel 39.80 319⇑*i*P **P 11 08 06.7 -0.6**
BRG 11 10 11.2
BRG S **S 11 14 07.0 -4.2**
BRG pmax pmax
comp=Z,40nm,1.0s,mb5.1
BRG MLR MLR
comp=Z,26μm,15.9s,MS6.2
BRG MLR MLR
comp=N,7μm,20.2s,MS5.7
BRG MLR MLR
comp=E,7μm,20.2s,MS5.7
BRG Berggiesshubel 39.80 319 P **P 11 08 06.5 -0.8**
BRG Berggiesshubel 39.80 319 *i* P **P 11 08 06.7 -0.6**
comp=E,40nm,1.0s,mb5.1
WET Wettzell 39.86 316 *e*P **P 11 08 06.7 -1.2**
comp=Z,165nm,1.2s,mb5.6
WET Wettzell 39.86 316 *e*P **P 11 08 06.7 -1.2**
WET pmax pmax
comp=Z,165nm,1.2s,mb5.6
WET Wettzell 39.86 316 *e*P **P 11 08 06.7 -1.2**
comp=Z,165nm,1.2s,mb5.6
WET Wettzell 39.86 316 *e*P **P 11 08 06.7 -1.2**
comp=Z,165nm,1.2s,mb5.6
RAVA Ravarino 39.91 309 P **P 11 08 10.5 +2.2**
RAVA Ravarino 39.91 309 P **P 11 08 10.5 +2.2**
FINES FINESS Array B 40.02 338 P **P 11 08 08.1 -0.8**
comp=Z,58nm,0.5s,mb5.6,baz=143,slow=9.5,SNR=106
FINES S **S 11 14 11.7 -2.5**
comp=Z,15nm,0.9s,baz=120,slow=18,SNR=3.2
FINES LR LR 11 27 59.6
comp=Z,12μm,18.1s,MS5.8,baz=141,slow=41
FINES FINESS Array B 40.02 338 P **P 11 08 08.1 -0.9**
FINES S **S 11 14 11.7 -2.5**
FINES pmax pmax
comp=Z,58nm,0.5s
FINES smax
comp=N,15nm,0.9s
FINES MLR MLR
comp=Z,12μm,18.1s
FINES FINESS Array B 40.02 338 P **P 11 08 08.1 -0.9**
comp=Z,58nm,0.5s,mb5.6
WTTA Wattenberg 40.13 313 *i* P **P 11 08 09.4 -0.6**
comp=Z,809nm,1.3s,mb6.3,SNR=55
WTTA Wattenberg 40.13 313 P **P 11 08 09.4 -0.7**
comp=Z,809nm,1.3s,mb6.3,SNR=55
FBE Freiberg 40.16 318 *e*P **P 11 08 09.8 -0.5**
comp=Z,114nm,1.0s,mb5.6
WATA Walderalm 40.19 313⇑*i*P **P 11 08 09.7 -0.8**
comp=Z,598nm,1.1s,mb6.2,SNR=23
WATA Walderalm 40.19 313 P **P 11 08 09.7 -0.9**
comp=Z,598nm,1.1s,mb6.2,SNR=23
NOVE Novellara 40.20 309 P **P 11 08 12.0 +1.3**
NOVE Novellara 40.20 309 P **P 11 08 12.0 +1.3**
CHG Chiang Mai 40.37 92 ⇑P **P 11 08 13.3 +0.8**
comp=Z,253nm,1.2s,mb5.8
CHTO Chiang Mai 40.37 92 *e*P **P 11 08 13.3 +0.8**
CHTO pmax pmax
comp=Z,325nm,1.2s,mb5.9
CHTO MLR MLR
comp=Z,7μm,21.0s,MS5.5
CHTO Chiang Mai 40.37 92 *e*P **P 11 08 13.3 +0.8**
comp=Z,325nm,1.2s,mb5.9
CHTO LR LR
comp=Z,7μm,21.0s,MS5.5
CHTO Chiang Mai 40.37 92 *e*P **P 11 08 13.3 +0.8**
comp=Z,7μm,21.0s
KEST Kesra 40.42 294 P **P 11 08 14.6 +1.9**
comp=Z,34nm,0.6s,mb5.2,baz=48,slow=1.5,SNR=72
KEST LR LR 11 27 54.0
comp=Z,5μm,19.4s,MS5.3,baz=267,slow=40
KEST Kesra 40.42 294 *e*P **P 11 08 14.5 +1.8**
KEST *e*ScP ScP 11 14 05.3 +0.4
KEST Kesra 40.42 294 *e*P **P 11 08 14.5 +1.8**
KAF Kangasniemi 40.43 339 *e*P **P 11 08 13.0 +0.6**
KAF pmax pmax
comp=Z,10.0nm,0.3s,mb5.0
KAF Kangasniemi 40.43 339 *e*p **P 11 08 13.0 +0.6**
comp=Z,10.0nm,0.3s,mb5.0
KAF Kangasniemi 40.43 339 *e*P **P 11 08 13.0 +0.6**
comp=Z,10.0nm,0.3s,mb5.0
ROTZ Rotzenmuhle 40.47 316 *e*P **P 11 08 12.6 -0.3**
comp=Z,242nm,1.1s,mb5.8
NKC Novy Kostel 40.48 317 *e*P **P 11 08 12.2 -0.7**
NKC *e* 11 09 56.2
NKC MLR MLR
comp=Z,19μm,19.5s,MS6.0
NKC Novy Kostel 40.48 317 P **P 11 08 12.9 0.0**
NKC Novy Kostel 40.48 317 P **P 11 08 12.9 0.0**
NKC Novy Kostel 40.48 317 *e*P **P 11 08 12.2 -0.7**
NKC *e*PP PP 11 09 56.2 +10
NKC *e*S **S 11 14 31.2 +10**
NKC AMS AMS 11 26 50.0
comp=Z,19μm,19.5s
NKC Novy Kostel 40.48 317 P **P 11 08 12.9 0.0**
CM31 Chiang Mai Arr 40.49 93 *e*P **P 11 08 13.9 +0.4**
comp=Z,91nm,1.0s,mb5.5
CM31 *e*PP PP 11 09 49.4 +2.7
CM31 *e*ScP ScP 11 14 05.4 0.0
CM31 LR LR
comp=Z,7μm,19.0s,MS5.5
CM31 Chiang Mai Arr 40.49 93 *e*P **P 11 08 13.9 +0.4**
comp=Z,91nm,1.0s,mb5.5
CMAR Chiang Mai Arr 40.49 93 P **P 11 08 14.2 +0.7**
comp=Z,15nm,1.0s,baz=294,slow=7.5,SNR=26
CMAR ScP ScP 11 14 07.5 +2.0
comp=Z,4.4nm,0.9s,baz=282,slow=4.1,SNR=4.2
CMAR LR LR 11 28 31.2
comp=Z,8μm,19.5s,baz=286,slow=41
CMAR Chiang Mai Arr 40.49 93 P **P 11 08 14.1 +0.6**
RUE Ruedersdorf 40.49 321 *e*P **P 11 08 12.5 -0.5**
comp=Z,399nm,1.1s,mb6.1
RUE Ruedersdorf 40.49 321 *e*P **P 11 08 12.5 -0.5**
comp=Z,336nm,1.0s,mb6.0
RUE *e*ScP ScP 11 14 04.2 -0.6
RUE Ruedersdorf 40.49 321 *e*P **P 11 08 12.5 -0.5**
MOTA Moosalm 40.50 313‖*i*P **P 11 08 12.1 -1.1**
comp=Z,424nm,1.0s,mb6.1,SNR=45
MOTA Moosalm 40.50 313 P **P 11 08 12.1 -1.1**
comp=Z,424nm,1.0s,mb6.1,SNR=45
CLL Collm 40.51 319 *e*P **P 11 08 12.8 -0.4**
comp=Z,238nm,1.1s,mb5.7
CLL Collm 40.51 319 *e*P **P 11 08 13.0 -0.2**
CLL *e*S **S 11 14 18.0 -3.8**
CLL MLR MLR
comp=Z,15μm,20.3s,MS5.8
CLL Collm 40.51 319 *e*P **P 11 08 13.0 -0.2**
CLL *i* pP 11 08 17.3 +0.4
CLL *e*S **S 11 14 18.0 -3.8**
CLL LR LR
comp=Z,15μm,20.3s,MS5.8
CLL Collm 40.51 319 *e*P **P 11 08 13.0 -0.2**
comp=Z,15μm,20.3s
TANN Tannenbergstha 40.53 317 *e*P **P 11 08 12.4 -0.9**
comp=Z,168nm,1.6s,mb5.4
WERN Wernitzgruen 40.54 317 *e*P **P 11 08 13.0 -0.4**
comp=Z,331nm,1.8s,mb5.7
GUNZ Gunzen 40.59 317 *e*P **P 11 08 13.1 -0.8**
comp=Z,270nm,1.9s,mb5.5
FUR Furstenfeldbru 40.60 314 *e*P **P 11 08 13.0 -1.0**
comp=Z,439nm,1.1s,mb6.0
FUR Furstenfeldbru 40.60 314 *e*P **P 11 08 13.0 -1.0**
FUR pmax pmax
comp=Z,439nm,1.1s,mb6.0
FUR Furstenfeldbru 40.60 314 *e*P **P 11 08 13.0 -1.0**
comp=Z,439nm,1.1s,mb6.0
FUR Furstenfeldbru 40.60 314 *e*P **P 11 08 13.0 -1.0**

comp=Z,439nm,1.1s,mb6.0
WERD Werda 40.63 317 *e*P **P 11 08 13.3 -0.9**
comp=Z,98nm,1.3s,mb5.3
FETA Feichten 40.67 312 *i* P **P 11 08 14.0 -0.6**
comp=Z,571nm,0.9s,mb6.2,SNR=103
FETA Feichten 40.67 312 P **P 11 08 14.0 -0.6**
comp=Z,571nm,0.9s,mb6.2,SNR=103
LGHD Ghdames 40.73 286 *i* P **P 11 08 16.4 +1.1**
comp=Z,657nm,1.9s,mb5.9,SNR=154
PLN Plauen 40.73 317 *e*P **P 11 08 14.4 -0.6**
comp=Z,162nm,1.6s,mb5.4
RETA Reutte 40.76 313⇑*i*P **P 11 08 14.1 -1.2**
comp=Z,147nm,0.8s,mb5.7,SNR=49
RETA Reutte 40.76 313 P **P 11 08 14.1 -1.2**
comp=Z,147nm,0.8s,mb5.7,SNR=49
CHRT Chiangrai 40.78 90 ⇑P **P 11 08 15.0 -0.9**
comp=Z,760nm,1.2s,mb6.2
FUORN Ofenpass-Fuorn 40.89 311 *e*P **P 11 08 16.4 0.0**
comp=Z,480nm,1.4s,mb5.9
FUORN Ofenpass-Fuorn 40.89 311 *e*P **P 11 08 16.4 0.0**
comp=Z,480nm,1.4s,mb5.9
SUF Sumiainen 40.93 340 P **P 11 08 16.8 +0.3**
BDT Bhumibol Dam 40.97 94 P **P 11 08 19.0 +1.6**
comp=Z,96nm,1.1s,mb5.3
BSD Bornholm Skovb 40.99 325⇑*i*P **P 11 08 15.2 -1.9**
BSD *e*S **S 11 14 19.9 -8.9**
BSD pmax pmax
comp=Z,250nm,0.8s,mb5.9
BSD MLR MLR
comp=Z,7μm,14.0s,MS5.7
BSD Bornholm Skovb 40.99 325 P **P 11 08 16.1 -1.0**
BSD Bornholm Skovb 40.99 325⇑*i*P **P 11 08 15.2 -1.9**
comp=Z,248nm,0.8s,mb5.9
BSD *i* 11 10 03.9
BSD *e*S **S 11 14 19.9 -8.9**
BSD
comp=Z,7μm,14.0s
BSD Bornholm Skovb 40.99 325 P **P 11 08 16.1 -1.0**
BERNI Berninapass 41.01 311⇑*i*P **P 11 08 17.5 +0.1**
comp=Z,374nm,1.1s,mb5.9
BERNI Berninapass 41.01 311⇑*i*P **P 11 08 17.5 +0.1**
comp=Z,374nm,1.1s,mb5.9
GRA1 Grafenberg Arr 41.06 316 *e*P **P 11 08 17.4 -0.4**
comp=Z,461nm,1.0s,mb6.1
GRA1 *e*PP PP 11 09 56.3 +3.9
GRA1 *e*S **S 11 14 14.7 -15**
GRA1 LR LR
comp=Z,12μm,20.1s,MS5.8
GRA1 Grafenberg Arr 41.06 316 *e*P **P 11 08 17.4 -0.4**
comp=Z,461nm,1.0s,mb6.1
GRF Grafenberg Arr 41.06 316 *e*P **P 11 08 17.4 -0.4**
comp=Z,461nm,1.0s,mb6.1
GRF *e*PP PP 11 09 56.3 +3.9
GRF *e*S **S 11 14 14.7 -15**
GRF *e*L 11 27 02.6
comp=Z,12μm,20.1s
GRF Grafenberg Arr 41.06 316 *e*P **P 11 08 17.4 -0.4**
GRF *e* 11 09 56.3
GRF pmax pmax
comp=Z,461nm,1.0s,mb6.1
GRF MLR MLR
comp=Z,12μm,20.1s,MS5.8
GRF Grafenberg Arr 41.06 316 *e*P **P 11 08 17.4 -0.4**
GRF *e* 11 09 56.3
GRF pmax pmax
comp=Z,461nm,1.0s,mb6.1
GRF MLR MLR
comp=Z,12μm,20.1s,MS5.8
GRF Grafenberg Arr 41.06 316 *e*P **P 11 08 17.4 -0.4**
comp=Z,461nm,1.0s,mb6.1
GRF *e*PP PP 11 09 56.3 +3.9
GRF *e*S **S 11 14 14.7 -15**
GRF LR LR
comp=Z,12μm,20.1s,MS5.8
GRF Grafenberg Arr 41.06 316 *e*P **P 11 08 17.4 -0.4**
comp=Z,461nm,1.0s,mb6.1
GRF Grafenberg Arr 41.06 316 *e*PP PP 11 09 56.3 +3.9
GRFO Grafenberg 41.06 316 *e*P **P 11 08 17.5 -0.3**
GRFO pmax pmax
comp=Z,291nm,1.0s,mb5.9
GRFO Grafenberg 41.06 316 *e*P **P 11 08 17.5 -0.3**
comp=Z,290nm,1.0s,mb5.9
GRFO Grafenberg 41.06 316 *e*P **P 11 08 17.5 -0.3**
comp=Z,291nm,1.0s,mb5.9
MOX Moxa 41.11 318*ce*P **P 11 08 17.6 -0.6**
comp=Z,132nm,1.3s,mb5.4
MOX *e* 11 08 33.1
comp=Z,285nm,1.8s
MOX *e*PP PP 11 10 04.0 +11
MOX *e*S **S 11 14 35.0 +4.2**
MOX
comp=Z,11μm,19.0s
MOX Moxa 41.11 318 *e*P **P 11 08 17.5 -0.7**
comp=Z,103nm,1.3s,mb5.3
MOX Moxa 41.11 318*ce*P **P 11 08 17.6 -0.6**
MOX *e* 11 08 33.1
MOX *e*S **S 11 14 35.0 +4.2**
MOX pmax pmax
comp=Z,132nm,1.3s,mb5.4
MOX MLR MLR
comp=Z,11μm,19.0s,MS5.7
MOX Moxa 41.11 318 *e*P **P 11 08 17.6 -0.6**
comp=Z,132nm,1.3s,mb5.4
MOX *e*S **S 11 14 35.0 +4.2**
DAVOX Davos/Dischmat 41.18 311 P **P 11 08 18.3 -0.5**
comp=Z,83nm,0.7s,mb5.5,baz=118,slow=7.8,SNR=75
DAVOX S **S 11 14 27.6 -4.4**
comp=Z,40nm,0.8s,baz=309,slow=18,SNR=12
DAVOX Davos/Dischmat 41.18 311⇑*i*P **P 11 08 18.3 -0.5**
comp=Z,418nm,1.0s,mb6.0
DAVOX Davos/Dischmat 41.18 311 P **P 11 08 18.4 -0.4**
DAVOX S **S 11 14 27.6 -4.4**
NEUB Neuenburg 41.20 318 *e*P **P 11 08 18.4 -0.5**
comp=Z,268nm,1.1s,mb5.8
UBR Ueberruh 41.24 313 P **P 11 08 18.5 -0.7**
UBR Ueberruh 41.24 313 P **P 11 08 18.5 -0.7**
RAF Rauma 41.24 336 *e*P **P 11 08 18.3 -0.8**
SNR=29
RAF Rauma 41.24 336 *e*PP PP 11 09 55.8 +1.6
SNR=39
DAVA Damuels 41.29 312 P **P 11 08 18.3 -1.4**
DAVA Damuels 41.29 312 *i* P **P 11 08 18.9 -0.8**
comp=Z,995nm,1.0s,mb6.4,SNR=175
DAVA Damuels 41.29 312 P **P 11 08 18.9 -0.8**
comp=Z,995nm,1.0s,mb6.4,SNR=175
HDH Heidenheim-Cha 41.40 314 P **P 11 08 20.4 -0.1**
HDH Heidenheim-Cha 41.40 314 P **P 11 08 20.4 -0.1**
LIENZ Kamor/St.Gall 41.55 312⇑*i*P **P 11 08 20.7 -1.1**
comp=Z,600nm,1.0s,mb6.2
LIENZ Kamor/St.Gall 41.55 312⇑*i*P **P 11 08 20.7 -1.1**
comp=Z,600nm,1.0s,mb6.2
PLONS Plons/SG 41.57 312⇑*i*P **P 11 08 21.0 -1.0**
comp=Z,1μm,1.5s,mb6.3
MUGIO Muggio 41.58 310⇑*i*P **P 11 08 21.1 -1.0**
comp=Z,231nm,0.9s,mb5.8
MUGIO Muggio 41.58 310⇑*i*P **P 11 08 21.1 -1.0**
comp=Z,231nm,0.9s,mb5.8
RGN Rugen 41.58 324 *e*P **P 11 08 22.0 +0.1**
comp=Z,544nm,1.0s,mb6.1
RGN Rugen 41.58 324 *e*P **P 11 08 21.7 -0.2**
comp=Z,945nm,1.4s,mb6.2
RGN *e*S **S 11 14 36.6 -0.9**
RGN Rugen 41.58 324 *e*P **P 11 08 21.7 -0.2**
comp=Z,945nm,1.4s,mb6.2
RGN *e*S **S 11 14 36.6 -1.0**
LZH Lanzhou 41.65 65 ⇑P **P 11 08 24.1 +1.3**
LZH pP pP 11 08 27.2 +0.6
LZH sP sP 11 08 29.6 +1.5
LZH S **S 11 14 40.0 +0.8**
LZH SS SS 11 17 39.1 -5.3
LZH pmax pmax
comp=Z,98nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,650nm,4.0s
LZH LR LR
comp=N,12μm,12.5s,MS6.3
LZH LR LR
comp=E,24μm,15.2s,MS6.3
LZH LR LR
comp=Z,33μm,18.0s,MS6.2
LLS Linth-Limmern 41.78 311⇑*i*P **P 11 08 22.9 -0.8**
comp=Z,611nm,1.0s,mb6.2
BUCH Bad Urach 41.91 314 P **P 11 08 24.0 -0.8**
BUCH Bad Urach 41.91 314 P **P 11 08 24.0 -0.8**
ABSA Djebel Ababsia 41.93 295 P **P 11 08 26.6 +1.5**
ABSA Djebel Ababsia 41.93 295 P **P 11 08 26.6 +1.5**

CD2 Chengdu 41.93 73⇑*i*P **P 11 08 25.3 +0.1**
CD2 PP PP 11 10 06.1 +3.9
CD2 PcP PcP 11 10 21.1 +0.5
CD2 PcS PcS 11 14 11.4 -0.9
CD2 S **S 11 14 38.2 -5.3**
CD2 ScS ScS 11 18 20.3 -7.9
CD2 pmax pmax
comp=Z,3μm,5.9s
CD2 LR LR
comp=N,24μm,20.2s,MS6.2
CD2 LR LR
comp=E,18μm,17.4s,MS6.2
CD2 LR LR
comp=Z,39μm,19.4s,MS6.3
WEIN Weingarten 41.94 312⇑*i*P **P 11 08 24.2 -0.8**
comp=Z,2μm,1.2s,mb6.5
WEIN Weingarten 41.94 312⇑*i*P **P 11 08 24.2 -0.8**
comp=Z,2μm,1.2s,mb6.5
WILA Wila 41.97 312⇑*i*P **P 11 08 24.5 -0.7**
comp=Z,2μm,1.3s,mb6.5
WILA Wila 41.97 312⇑*i*P **P 11 08 24.5 -0.7**
comp=Z,2μm,1.3s,mb6.5
CMAH Djebel Manchou 41.97 296 P **P 11 08 26.6 +1.2**
CMAH Djebel Manchou 41.97 296 P **P 11 08 26.6 +1.2**
GUT Gutenstein 41.98 313 P **P 11 08 24.3 -1.0**
GUT Gutenstein 41.98 313 P **P 11 08 24.3 -1.0**
SIND Sindeldorf 41.98 315 P **P 11 08 24.3 -1.0**
SIND Sindeldorf 41.98 315 P **P 11 08 24.3 -1.0**
SISB Singen-Schiene 41.99 313 P **P 11 08 24.9 -0.5**
SISB Singen-Schiene 41.99 313 P **P 11 08 24.9 -0.5**
MOY Mondy 42.00 41 *e*P **P 11 08 26.0 +0.6**
MOY pmax pmax
comp=Z,572nm,3.0s
MOY Mondy 42.00 41 *e*P **P 11 08 26.0 +0.6**
comp=Z,572nm,3.0s
KMI Kunming 42.03 81 P **P 11 08 27.3 +1.3**
KMI pP pP 11 08 31.6 +1.8
KMI sP sP 11 08 33.4 +2.1
KMI PP PP 11 10 07.5 +4.2
KMI PcP PcP 11 10 22.9 +1.9
KMI PcS PcS 11 14 15.2 +2.3
KMI S **S 11 14 44.5 -0.5**
KMI pmax pmax
comp=Z,40nm,1.1s,mb5.0
KMI pmax pmax
comp=Z,4μm,4.2s
KMI LR LR
comp=N,11μm,18.4s,MS6.0
KMI LR LR
comp=E,14μm,14.9s,MS6.0
KMI LR LR
comp=Z,16μm,18.7s,MS5.9
MUO Muotathal 42.05 311⇑*i*P **P 11 08 25.1 -0.9**
comp=Z,902nm,2.3s,mb6.0
MUO Muotathal 42.05 311⇑*i*P **P 11 08 25.1 -0.9**
comp=Z,902nm,2.3s,mb6.0
STU Stuttgart 42.09 314 *e*P **P 11 08 24.3 -1.9**
comp=Z,120nm,1.1s,mb5.4
STU Stuttgart 42.09 314 *e*P **P 11 08 26.4 +0.2**
STU pmax pmax
comp=Z,86nm,0.9s,mb5.4
STU Stuttgart 42.09 314 *e*P **P 11 08 26.4 +0.1**
comp=Z,86nm,0.9s,mb5.4
STU Stuttgart 42.09 314 *e*P **P 11 08 26.4 +0.2**
comp=Z,86nm,0.9s,mb5.4
UBBA Unterbreizbach 42.14 317 *e*P **P 11 08 26.2 -0.4**
comp=Z,404nm,1.8s,mb5.8
TRULL Truellikon 42.17 312⇑*i*P **P 11 08 25.8 -1.1**
comp=Z,728nm,1.1s,mb6.2
TRULL Truellikon 42.17 312⇑*i*P **P 11 08 25.8 -1.1**
comp=Z,728nm,1.1s,mb6.2
ZUR Degenried 42.17 312⇑*i*P **P 11 08 26.2 -0.7**
comp=Z,2μm,1.1s,mb6.5
ZUR Degenried 42.17 312⇑*i*P **P 11 08 26.2 -0.7**
comp=Z,2μm,1.1s,mb6.5
SPAK Spaichingen-Ko 42.20 313 *e*P **P 11 08 25.9 -1.2**
SPAK Spaichingen-Ko 42.20 313 *e*P **P 11 08 25.9 -1.2**
CLZ Clausthal 42.23 319 *e*P **P 11 08 27.6 +0.3**
comp=Z,422nm,1.0s,mb6.0
CLZ Clausthal 42.23 319 *e*P **P 11 08 27.6 +0.3**
CLZ pmax pmax
comp=Z,422nm,1.0s,mb6.0
CLZ Clausthal 42.23 319 *e*P **P 11 08 27.6 +0.3**
comp=Z,422nm,1.0s,mb6.0
CLZ Clausthal 42.23 319 *e*P **P 11 08 27.6 +0.3**
comp=Z,422nm,1.0s,mb6.0
VAF Ylistaro 42.28 338 P **P 11 08 29.1 +1.6**
SAOF Saorge 42.31 307 *e*P **P 11 08 27.2 -0.9**
SAOF Saorge 42.31 307 *e*P **P 11 08 27.2 -0.9**
SLE Schleitheim 42.32 313⇑*i*P **P 11 08 26.8 -1.3**
comp=Z,385nm,1.2s,mb5.9
SLE Schleitheim 42.32 313 P **P 11 08 26.6 -1.5**
SLE Schleitheim 42.32 313⇑*i*P **P 11 08 26.8 -1.3**
comp=Z,385nm,1.2s,mb5.9
LBG Lerchenberg 42.32 314 P **P 11 08 26.9 -1.2**
LBG Lerchenberg 42.32 314 P **P 11 08 26.9 -1.2**
HASLI Hasliberg/Brie 42.34 311⇑*i*P **P 11 08 27.0 -1.3**
comp=Z,382nm,1.1s,mb6.0
HASLI Hasliberg/Brie 42.34 311⇑*i*P **P 11 08 27.0 -1.3**
comp=Z,382nm,1.1s,mb6.0
AUTN L'Aution 42.40 307 *e*P **P 11 08 28.4 -0.4**
AUTN L'Aution 42.40 307 *e*P **P 11 08 28.4 -0.4**
REVF Revere 42.41 306 *e*P **P 11 08 28.0 -0.9**
REVF Revere 42.41 306 *e*P **P 11 08 28.0 -0.9**
LUCF Luceram 42.45 307 *e*P **P 11 08 28.5 -0.7**
LUCF Luceram 42.45 307 *e*P **P 11 08 28.5 -0.7**
COP Copenhagen 42.51 325 *i* P **P 11 08 29.4 -0.2**
COP *e*S **S 11 14 49.4 -2.0**
COP pmax pmax
comp=Z,190nm,0.8s,mb5.9
COP MLR MLR
comp=Z,4μm,24.0s,MS5.2
COP Copenhagen 42.51 325 P **P 11 08 31.1 +1.5**
COP Copenhagen 42.51 325 P **P 11 08 31.1 +1.5**
COP Copenhagen 42.51 325 *i* P **P 11 08 29.4 -0.2**
comp=Z,189nm,0.8s,mb5.9
COP *e*S **S 11 14 49.4 -2.0**
COP
comp=Z,4μm,24.0s
COP Copenhagen 42.51 325 *i* P **P 11 08 29.4 -0.2**
comp=Z,190nm,0.8s,mb5.9
COP *e*S **S 11 14 49.4 -2.0**
comp=Z,4μm,24.0s
SULZ Cheisacher 42.52 312⇑*i*P **P 11 08 28.5 -1.2**
comp=Z,788nm,1.8s,mb6.2
SULZ Cheisacher 42.52 312⇑*i*P **P 11 08 28.5 -1.2**
comp=Z,788nm,1.8s,mb6.2
TOUF Mont Tournerai 42.53 307 *e*P **P 11 08 29.6 -0.3**
TOUF Mont Tournerai 42.53 307 *e*P **P 11 08 29.6 -0.3**
CKFL Kef-Lekhel 42.54 296 P **P 11 08 31.3 +1.2**
CKFL Kef-Lekhel 42.54 296 P **P 11 08 31.3 +1.2**
BFO Black Forest 42.55 313 *e*P **P 11 08 28.6 -1.4**
BFO pmax pmax
comp=Z,86nm,0.9s,mb5.5
BFO MLR MLR
comp=Z,12μm,21.0s,MS5.8
BFO Black Forest 42.55 313 *e*P **P 11 08 28.6 -1.3**
comp=Z,86nm,0.9s,mb5.5
BFO LR LR
comp=Z,12μm,21.0s,MS5.8
BFO Black Forest 42.55 313 P **P 11 08 29.6 -0.4**
comp=Z,572nm,0.9s,mb6.3,SNR=9.5
BFO Black Forest 42.55 313 *e*P **P 11 08 28.6 -1.4**
comp=Z,12μm,21.0s
TOD Tromm 42.55 315 *e*P **P 11 08 28.5 -1.4**
TOD Tromm 42.55 315 *e*P **P 11 08 28.5 -1.4**
NST Nakhon Sawan 42.55 96 P **P 11 08 31.0 +0.6**
comp=Z,135nm,1.4s,mb5.5
SWS Schriesheim-Wi 42.58 315 P **P 11 08 29.4 -0.8**
SWS Schriesheim-Wi 42.58 315 P **P 11 08 29.4 -0.8**
MVIF Mont Vial 42.58 307 *e*P **P 11 08 29.8 -0.5**
MVIF Mont Vial 42.58 307 *e*P **P 11 08 29.8 -0.5**
NRDL Niedersach Rie 42.60 320 *e*P **P 11 08 30.9 +0.6**
comp=Z,449nm,1.0s,mb6.2
MSF Maaselka 42.60 344 P **P 11 08 29.1 -1.0**
FELD Feldberg im Sc 42.66 313 *e*P **P 11 08 29.6 -1.3**
FELD Feldberg im Sc 42.66 313 *e*P **P 11 08 29.6 -1.3**
WIMIS Wimmis 42.68 311⇑*i*P **P 11 08 29.7 -1.3**
comp=Z,505nm,1.0s,mb6.2
WIMIS Wimmis 42.68 311⇑*i*P **P 11 08 29.7 -1.3**
comp=Z,505nm,1.0s,mb6.2
DIX Grande Dixence 42.72 310⇑*i*P **P 11 08 30.5 -0.9**
comp=Z,264nm,1.1s,mb5.9
DIX Grande Dixence 42.72 310⇑*i*P **P 11 08 30.5 -0.9**
comp=Z,264nm,1.1s,mb5.9

CASM Ain Smara 42.73 295 P **P 11 08 32.7 +1.1**
CASM Ain Smara 42.73 295 P **P 11 08 32.7 +1.1**
KIZ Kirchzarten 42.74 313 P **P 11 08 30.5 -1.0**
CALN Calern 42.76 306 *e*P **P 11 08 31.2 -0.5**
CALN Calern 42.76 306 *e*P **P 11 08 31.2 -0.5**
BALST Balsthal 42.76 312⇑*i*P **P 11 08 30.8 -0.9**
comp=Z,794nm,0.9s,mb6.5
BALST Balsthal 42.76 312⇑*i*P **P 11 08 30.8 -0.9**
comp=Z,794nm,0.9s,mb6.5
OUL Oulu 42.77 342 P **P 11 08 30.5 -1.0**
CTEI Djebel Teioual 42.80 295 P **P 11 08 33.7 +1.5**
CTEI Djebel Teioual 42.80 295 P **P 11 08 33.7 +1.5**
SENIN Lac Senin/Sane 42.85 310 *e*P **P 11 08 31.1 -1.3**
comp=Z,129nm,0.9s,mb5.7
SENIN Lac Senin/Sane 42.85 310 *e*P **P 11 08 31.1 -1.3**
comp=Z,129nm,0.9s,mb5.7
SURF Saint Ours 42.90 307 *e*P **P 11 08 32.8 -0.1**
SURF Saint Ours 42.90 307 *e*P **P 11 08 32.8 -0.1**
BBS Basel-Blauen 42.91 312 *e*P **P 11 08 31.8 -1.1**
BBS Basel-Blauen 42.91 312 *e*P **P 11 08 31.8 -1.1**
TNS Taunus Mts 42.93 316 *e*P **P 11 08 32.8 -0.2**
comp=Z,695nm,1.6s,mb6.1
TNS Taunus Mts 42.93 316 *e*P **P 11 08 32.8 -0.2**
TNS pmax pmax
comp=Z,695nm,1.6s,mb6.1
TNS Taunus Mts 42.93 316 *e*P **P 11 08 32.8 -0.2**
comp=Z,695nm,1.6s,mb6.1
TNS Taunus Mts 42.93 316 *e*P **P 11 08 32.8 -0.2**
comp=Z,695nm,1.6s,mb6.1
KTD Kalmit 42.93 315 *e*P **P 11 08 32.0 -1.1**
KTD Kalmit 42.93 315 *e*P **P 11 08 32.0 -1.1**
LIBD Limburg 42.98 313 *e*P **P 11 08 32.4 -1.1**
LIBD Limburg 42.98 313 *e*P **P 11 08 32.4 -1.1**
ZAK Zakamensk 43.01 44⇓*i*P **P 11 08 33.4 -0.3**
ZAK *e* 11 18 33.2
ZAK Zakamensk 43.01 44 *i* P **P 11 08 33.4 -0.3**
ZAK *e*ScS ScS 11 18 33.2 -0.9
LANF Langenberg 43.03 314 *e*P **P 11 08 32.2 -1.7**
LANF Langenberg 43.03 314 *e*P **P 11 08 32.2 -1.7**
APA Apatity 43.04 348⇑*i*P **P 11 08 33.5 -0.2**
APA *i* 11 10 12.0
APA *i* S **S 11 14 50.0 -8.9**
APA pmax pmax
comp=Z,2μm,5.6s
APA pmax pmax
comp=Z,860nm,2.0s,mb6.1
APA MLR MLR
comp=Z,23μm,14.0s,MS6.2
APA Apatity 43.04 348 *i* P **P 11 08 33.5 -0.2**
comp=Z,860nm,2.0s,mb6.1
BOURR Bourrignon 43.08 312⇑*i*P **P 11 08 33.6 -0.7**
comp=Z,730nm,1.2s,mb6.3
BOURR Bourrignon 43.08 312⇑*i*P **P 11 08 33.6 -0.7**
comp=Z,730nm,1.2s,mb6.3
LVZ Lovozero 43.10 348*c i*P **P 11 08 33.4 -0.7**
LVZ pmax pmax
comp=Z,148nm,1.7s,mb5.4
LVZ MLR MLR
comp=Z,15μm,21.0s,MS5.9
LVZ Lovozero 43.10 348 PFAKE 11 08 50.0 +16
LVZ LR LR
comp=Z,15μm,20.0s,MS5.9
LVZ Lovozero 43.10 348 P **P 11 08 33.8 -0.3**
comp=Z,864nm,1.3s,mb6.3,SNR=15
LVZ Lovozero 43.10 348 *i* P **P 11 08 33.4 -0.7**
comp=Z,15μm,21.0s
TORNY Torny/Romont 43.15 311⇑*i*P **P 11 08 33.9 -1.0**
comp=Z,733nm,1.2s,mb6.3
TORNY Torny/Romont 43.15 311⇑*i*P **P 11 08 33.9 -1.0**
comp=Z,733nm,1.2s,mb6.3
RSL Roselend 43.20 309 *e*P **P 11 08 34.0 -1.3**
RSL Roselend 43.20 309 *e*P **P 11 08 34.0 -1.3**
DFRA Djebel Bou Aff 43.21 296 P **P 11 08 37.2 +1.7**
DFRA Djebel Bou Aff 43.21 296 P **P 11 08 37.2 +1.7**
MOF Molkenrain 43.23 312 *e*P **P 11 08 34.5 -1.0**
MOF Molkenrain 43.23 312 *e*P **P 11 08 34.5 -1.0**
OG01 Vacheresse 43.26 310 *e*P **P 11 08 34.8 -1.0**
OG01 Vacheresse 43.26 310 *e*P **P 11 08 34.8 -1.0**
ECH Echery 43.29 313 *e*P **P 11 08 34.9 -1.1**
ECH Echery 43.29 313 *e*P **P 11 08 34.8 -1.2**
ECH *e* 11 10 18.8
ECH *e*S **S 11 15 03.0 0.0**
ECH pmax pmax
comp=Z,273nm,1.0s,mb5.9
ECH MLR MLR
comp=Z,10μm,19.0s,MS5.7
ECH Echery 43.29 313 *e*P **P 11 08 34.8 -1.2**
comp=Z,272nm,1.0s,mb5.9
ECH *e*PP PP 11 10 18.8 +2.3
ECH *e*S **S 11 15 03.0 0.0**
ECH LR LR
comp=Z,10μm,19.0s,MS5.7
ECH Echery 43.29 313 *e*P **P 11 08 34.9 -1.1**
ECH Echery 43.29 313 *e*PP PP 11 10 18.8 +2.3
ECH *e*S **S 11 15 03.0 0.0**
LOMF Lomont 43.34 312 *e*P **P 11 08 35.7 -0.7**
LOMF Lomont 43.34 312 *e*P **P 11 08 35.7 -0.7**
ABH Alteburg 43.41 315 *e*P **P 11 08 36.2 -0.7**
ABH Alteburg 43.41 315 *e*P **P 11 08 36.2 -0.7**
GDM Grand'Maison 43.49 308 *e*P **P 11 08 36.0 -1.6**
GDM Grand'Maison 43.49 308 *e*P **P 11 08 36.0 -1.6**
BRANT Les Verrieres 43.51 311⇑*i*P **P 11 08 37.2 -0.5**
comp=Z,540nm,1.0s,mb6.2
BRANT Les Verrieres 43.51 311⇑*i*P **P 11 08 37.2 -0.5**
comp=Z,540nm,1.0s,mb6.2
CKHR Kef el Ahmar 43.53 295 P **P 11 08 39.8 +1.7**
CKHR Kef el Ahmar 43.53 295 P **P 11 08 39.8 +1.7**
GIMEL St. Georges / 43.58 310⇑*i*P **P 11 08 37.6 -0.7**
comp=Z,480nm,1.2s,mb6.1
GIMEL St. Georges / 43.58 310⇑*i*P **P 11 08 37.6 -0.7**
comp=Z,480nm,1.2s,mb6.1
TLY Talaya 43.58 42*c i*P **P 11 08 38.8 +0.5**
TLY pmax pmax
comp=Z,82nm,1.4s,mb5.3
TLY MLR MLR
comp=Z,9μm,14.0s,MS5.8
TLY Talaya 43.58 42 *e*P **P 11 08 36.2 -2.0**
comp=Z,189nm,1.5s,mb5.6
TLY LR LR
comp=Z,12μm,19.0s,MS5.8
TLY Talaya 43.58 42 P **P 11 08 39.4 +1.1**
comp=Z,349nm,1.6s,mb5.8,SNR=42
TLY Talaya 43.58 42 *i* P **P 11 08 38.8 +0.5**
comp=Z,9μm,14.0s
SET Setif 43.61 295 P **P 11 08 40.0 +1.3**
SET Setif 43.61 295 P **P 11 08 40.0 +1.3**
RUP Ruppelstein 43.67 315 *e*P **P 11 08 37.9 -1.1**
RUP Ruppelstein 43.67 315 *e*P **P 11 08 37.9 -1.1**
GRN Grenoble 43.75 308 *e*P **P 11 08 37.8 -1.9**
GRN Grenoble 43.75 308 *e*P **P 11 08 37.8 -1.9**
IBBN Ibbenburen 43.91 319 *e*P **P 11 08 41.2 +0.3**
comp=Z,444nm,1.2s,mb6.1
IBBN Ibbenburen 43.91 319 P **P 11 08 41.6 +0.7**
IBBN Ibbenburen 43.91 319 P **P 11 08 41.6 +0.7**
BUG Bochum--Univer 43.97 317 *e*P **P 11 08 41.6 +0.2**
comp=Z,463nm,1.2s,mb6.1
BUG Bochum--Univer 43.97 317 P **P 11 08 41.6 +0.2**
BUG Bochum--Univer 43.97 317 P **P 11 08 41.6 +0.2**
BUG Bochum--Univer 43.97 317 P **P 11 08 41.6 +0.2**
HFS Hagfors 43.97 331 P **P 11 08 40.4 -0.9**
comp=Z,187nm,1.1s,mb5.7,baz=117,slow=6.3,SNR=42
HFS S **S 11 15 10.3 -2.3**
comp=Z,51nm,1.2s,baz=147,slow=8.9,SNR=4.3
HFS LR LR 11 30 28.5
comp=Z,7μm,20.7s,MS5.6,baz=129,slow=41
HFS Hagfors 43.97 331 P **P 11 08 40.4 -0.9**
HFS S **S 11 15 10.3 -2.4**
HFS pmax pmax
comp=Z,187nm,1.1s
HFS smax
comp=N,51nm,1.3s
HFS MLR MLR
comp=Z,7μm,20.7s
HFS Hagfors 43.97 331 P **P 11 08 40.4 -0.9**
comp=Z,187nm,1.1s,mb5.7
OCF Saint Nazaire 43.98 307 *e*P **P 11 08 40.7 -0.9**
OCF Saint Nazaire 43.98 307 *e*P **P 11 08 40.7 -0.9**
OG26 St.-Nazaire-De 43.98 307 *e*P **P 11 08 40.7 -0.9**
OG26 St.-Nazaire-De 43.98 307 *e*P **P 11 08 40.7 -0.9**
THEF They Montfort 44.06 313 *e*P **P 11 08 40.6 -1.6**
THEF They Montfort 44.06 313 *e*P **P 11 08 40.6 -1.6**
IRK Irkutsk 44.11 41 *e*P **P 11 08 42.0 -0.5**
IRK pmax pmax
comp=Z,365nm,2.2s,mb5.7

IRK	**Irkutsk**	**44.11 41**	*e*P		**P**	**11 08 42.0 -0.5**
	comp=Z,365nm,2.2s,mb5.7					
WLF	**Walferdange**	**44.24 315**	P		**P**	**11 08 43.3 -0.3**
	comp=Z,183nm,1.3s,mb5.7					
WLF	**Walferdange**	**44.24 315**	*e*P		**P**	**11 08 42.9 -0.7**
	comp=Z,277nm,1.0s,mb5.9					
WLF	**Walferdange**	**44.24 315**	*e*P		**P**	**11 08 42.8 -0.8**
WLF			pmax	pmax		
	comp=Z,253nm,1.0s,mb5.9					
WLF			MLR	MLR		
	comp=Z,13μm,22.0s,MS5.8					
WLF	**Walferdange**	**44.24 315**	*e*P		**P**	**11 08 42.8 -0.7**
	comp=Z,253nm,1.0s,mb5.9					
WLF			*e*ScP	ScP		11 14 19.2 -0.7
WLF			LR	LR		
	comp=Z,13μm,22.0s,MS5.8					
WLF	**Walferdange**	**44.24 315**	P		**P**	**11 08 43.2 -0.4**
	comp=Z,183nm,1.3s,mb5.7					
WTSB	**Winterswijk**	**44.39 318**	⇑*i*P		**P**	**11 08 44.9 +0.2**
	comp=Z,356nm,1.4s,mb5.9					
WTSB	**Winterswijk**	**44.39 318**	P		**P**	**11 08 44.9 +0.2**
SGF	**Sodankyl**	**44.43 344**	P		**P**	**11 08 44.8 0.0**
MAHO	**Mahon**	**44.46 301**	*i*P		**P**	**11 08 44.2 -1.3**
MAHO			*i*S		**S**	**11 15 02.8 -18**
SONM	**Songino Array**	**44.46 48**	P		**P**	**11 08 46.0 +0.6**
	comp=Z,88nm,1.0s,mb5.5,baz=255,slow=8.4,SNR=116					
SONM			LR	LR		11 29 23.4
	comp=Z,35μm,18.9s,MS6.3,baz=20,slow=39					
SONM	**Songino Array**	**44.46 48**	P		**P**	**11 08 46.0 +0.6**
SONM			pmax	pmax		
	comp=Z,88nm,1.0s					
SONM			MLR	MLR		
	comp=Z,35μm,19.0s					
SONM	**Songino Array**	**44.46 48**	P		**P**	**11 08 46.0 +0.6**
	comp=Z,35μm,19.0s					
MUD	**Monsted U'grnd**	**44.50 325**	P		**P**	**11 08 48.7 +3.2**
MUD	**Monsted U'grnd**	**44.50 325**	*i*P		**P**	**11 08 47.4 +1.9**
MUD			*i*			11 10 38.2
MUD						
	comp=Z,9μm,14.0s					
MUD	**Monsted U'grnd**	**44.50 325**	*i*P		**P**	**11 08 47.4 +1.9**
MEM	**Membach**	**44.54 316**	P		**P**	**11 08 46.2 +0.3**
	comp=Z,168nm,1.5s,mb5.7					
MEM	**Membach**	**44.54 316**	P		**P**	**11 08 46.2 +0.2**
	comp=Z,168nm,1.5s,mb5.7					
SSB	**Saint Sauveur**	**44.60 308**	*e*P		**P**	**11 08 45.4 -1.1**
SSB	**Saint Sauveur**	**44.60 308**	*e*P		**P**	**11 08 45.2 -1.3**
SSB			*e*			11 10 34.9
SSB			*e*S		**S**	**11 15 19.8 -2.4**
SSB			pmax	pmax		
	comp=Z,150nm,1.0s,mb5.8					
SSB			MLR	MLR		
	comp=Z,7μm,20.0s,MS5.6					
SSB	**Saint Sauveur**	**44.60 308**	*e*P		**P**	**11 08 45.2 -1.3**
	comp=Z,150nm,1.0s,mb5.8					
SSB			*e*			11 10 34.9
SSB			*e*S		**S**	**11 15 19.8 -2.5**
SSB			LR	LR		
	comp=Z,7μm,20.0s,MS5.6					
SSB	**Saint Sauveur**	**44.60 308**	*e*P		**P**	**11 08 45.4 -1.1**
SSB			*e*S		**S**	**11 15 19.8 -2.4**
HGN	**Heimansgroeve**	**44.62 316**	⇑*i*P		**P**	**11 08 46.8 +0.2**
	comp=Z,241nm,1.8s,mb5.7					
HGN	**Heimansgroeve**	**44.62 316**	*i* x		**P**	**11 08 53.1 +6.5**
	comp=Z,406nm,1.3s,mb6.1					
HGN	**Heimansgroeve**	**44.62 316**	*e*PP		PP	11 10 39.3 +8.6
HGN	**Heimansgroeve**	**44.62 316**	*i*S		**S**	**11 15 19.0 -3.4**
HGN	**Heimansgroeve**	**44.62 316**	P		**P**	**11 08 46.7 +0.1**
HGN	**Heimansgroeve**	**44.62 316**	P		**P**	**11 08 46.7 +0.1**
WIT	**Witteveen**	**44.69 319**	*e*P		**P**	**11 08 47.3 +0.1**
	comp=Z,509nm,2.7s,mb5.9					
WIT	**Witteveen**	**44.69 319**	*i* x		**P**	**11 08 53.6 +6.5**
WIT	**Witteveen**	**44.69 319**	*e*P		**P**	**11 08 47.3 +0.1**
	comp=Z,509nm,2.7s,mb5.9					
BEBN	**Eben Emael**	**44.78 316**	P		**P**	**11 08 48.3 +0.4**
BEBN	**Eben Emael**	**44.78 316**	P		**P**	**11 08 48.3 +0.4**
BCLA	**Clavier**	**44.94 316**	P		**P**	**11 08 49.5 +0.3**
	comp=Z,170nm,1.6s,mb5.6					
BCLA	**Clavier**	**44.94 316**	P		**P**	**11 08 49.4 +0.3**
	comp=Z,170nm,1.6s,mb5.6					
OSL	**Oslo**	**45.19 330**	*e*P		**P**	**11 08 49.7 -1.3**
OSL	**Oslo**	**45.19 330**	*e*P		**P**	**11 08 49.7 -1.3**
	SNR=24					
GYA	**Guiyang**	**45.19 78**	P		**P**	**11 08 51.2 -0.3**
GYA			PP	PP		11 10 35.8 -1.4
GYA			ScP	ScP		11 14 25.0 +0.7
GYA			S	S		**11 15 24.5 -6.8**
GYA			pmax	pmax		
	comp=Z,280nm,0.9s,mb6.1					
GYA			pmax	pmax		
	comp=Z,2μm,4.8s					
GYA			LR	LR		
	comp=N,15μm,16.1s,MS6.1					
GYA			LR	LR		
	comp=E,6μm,14.9s,MS6.1					
GYA			LR	LR		
	comp=Z,13μm,16.4s,MS5.9					
COLF	**Collangettes**	**45.22 309**	*e*P		**P**	**11 08 50.5 -1.0**
COLF	**Collangettes**	**45.22 309**	*e*P		**P**	**11 08 50.5 -1.0**
DOU	**Dourbes**	**45.31 315**	P		**P**	**11 08 52.3 +0.2**
	comp=Z,208nm,1.8s,mb5.7					
DOU	**Dourbes**	**45.31 315**	P		**P**	**11 08 52.3 +0.2**
	comp=Z,208nm,1.8s,mb5.7					
PLDF	**La Plantade**	**45.32 309**	*e*P		**P**	**11 08 51.4 -0.9**
PLDF	**La Plantade**	**45.32 309**	*e*P		**P**	**11 08 51.4 -0.9**
NB2	**NORSAR Subarra**	**45.48 331**	P		**P**	**11 08 51.8 -1.5**
	comp=Z,175nm,1.4s,mb5.7,baz=118,slow=8.6					
NB2	**NORSAR Subarra**	**45.48 331**	P		**P**	**11 08 51.8 -1.5**
	comp=Z,175nm,1.4s,mb5.7,baz=118,slow=8.0,SNR=22					
NOA	**NORSAR Array B**	**45.48 331**	P		**P**	**11 08 51.9 -1.4**
	comp=Z,67nm,0.9s,mb5.5,baz=117,slow=7.9,SNR=39					
NOA			S		**S**	**11 15 37.9 +3.4**
	comp=Z,7.9nm,0.9s,baz=123,slow=15,SNR=3.7					
NOA			LR	LR		11 31 33.3
	comp=Z,6μm,19.5s,MS5.5,baz=115,slow=41					
NOA	**NORSAR Array B**	**45.48 331**	P		**P**	**11 08 51.9 -1.4**
NOA			S		**S**	**11 15 37.9 +3.3**
NOA			pmax	pmax		
	comp=Z,67nm,1.0s					
NOA			smax			
	comp=N,8.0nm,0.9s					
NOA			MLR	MLR		
	comp=Z,6μm,19.5s					
NOA	**NORSAR Array B**	**45.48 331**	P		**P**	**11 08 51.9 -1.4**
NOA			S		**S**	**11 15 37.9 +3.3**
NOA			LR	LR		11 31 33.4
NOA	**NORSAR Array B**	**45.48 331**	P		**P**	**11 08 51.9 -1.4**
	comp=Z,67nm,1.0s,mb5.4					
ABA	**Alger-Bouzarea**	**45.48 296**	P		**P**	**11 08 52.0 -1.7**
ABA	**Alger-Bouzarea**	**45.48 296**	P		**P**	**11 08 52.0 -1.7**
NAO01	**NORSAR Array S**	**45.53 331**	*e*P		**P**	**11 08 52.2 -1.5**
	comp=Z,138nm,1.0s,mb5.8					
NAO01			*e*S		**S**	**11 15 37.4 +2.1**
NAO01			LR	LR		
	comp=Z,17μm,19.0s,MS6.0					
NAO01	**NORSAR Array S**	**45.53 331**	*e*P		**P**	**11 08 52.2 -1.5**
	comp=Z,138nm,1.0s,mb5.8					
NAO01			*e*S		**S**	**11 15 37.4 +2.1**
EJON	**La Jonquera**	**45.57 304**	P		**P**	**11 08 54.2 -0.2**
	comp=Z,156nm,1.2s,mb5.8					
EJON	**La Jonquera**	**45.57 304**	P		**P**	**11 08 54.2 -0.1**
	comp=Z,156nm,1.2s,mb5.8					
KONO	**Kongsberg**	**45.57 329**	*e*P		**P**	**11 08 51.3 -2.7**
KONO			*e*S		**S**	**11 15 35.1 -0.8**
KONO			*e*SS	SS		11 19 00.1 +0.4
KONO			AMS	AMS		11 27 09.0
	comp=Z,12μm,30.4s,MS5.7					
KONO	**Kongsberg**	**45.57 329**	*e*P		**P**	**11 08 52.4 -1.7**
KONO			pmax	pmax		
	comp=Z,222nm,1.2s,mb6.0					
KONO			MLR	MLR		
	comp=Z,14μm,20.0s,MS5.9					
KONO	**Kongsberg**	**45.57 329**	*e*P		**P**	**11 08 52.4 -1.7**
	comp=Z,222nm,1.2s,mb6.0					
KONO			LR	LR		
	comp=Z,14μm,20.0s,MS5.9					
KONO	**Kongsberg**	**45.57 329**	*e*P		**P**	**11 08 52.4 -1.7**
	comp=Z,14μm,20.0s					
ETOS	**Mallorca**	**45.58 300**	P		**P**	**11 08 55.2 +0.8**
	comp=Z,529nm,1.1s,mb6.4					
ETOS	**Mallorca**	**45.58 300**	P		**P**	**11 08 55.2 +0.8**
	comp=Z,529nm,1.1s,mb6.4					
EMHD	**Djebel Mahouad**	**45.59 295**	P		**P**	**11 08 55.5 +1.0**
EMHD	**Djebel Mahouad**	**45.59 295**	P		**P**	**11 08 55.5 +1.0**
SNF	**Seneffe**	**45.59 316**	P		**P**	**11 08 54.5 +0.2**
	comp=Z,182nm,1.7s,mb5.7					
SNF	**Seneffe**	**45.59 316**	P		**P**	**11 08 54.5 +0.2**
	comp=Z,182nm,1.7s,mb5.7					
TAM	**Tamanrasset**	**45.62 276**	*e*P		**P**	**11 08 56.0 +1.1**
TAM			pmax	pmax		
	comp=Z,482nm,1.3s,mb6.3					
TAM			MLR	MLR		
	comp=Z,10μm,19.0s,MS5.8					
TAM	**Tamanrasset**	**45.62 276**	*e*P		**P**	**11 08 56.0 +1.1**
	comp=Z,482nm,1.3s,mb6.3					
TAM			LR	LR		
	comp=Z,10μm,19.0s,MS5.8					
TAM	**Tamanrasset**	**45.62 276**	*e*P		**P**	**11 08 56.0 +1.1**
	comp=Z,10μm,19.0s					
AGO	**Saint Agoulin**	**45.67 309**	*e*P		**P**	**11 08 54.4 -0.6**
AGO	**Saint Agoulin**	**45.67 309**	*e*P		**P**	**11 08 54.4 -0.6**
PYM	**Petit Puy Mans**	**45.72 309**	*e*P		**P**	**11 08 54.6 -0.9**
PYM	**Petit Puy Mans**	**45.72 309**	*e*P		**P**	**11 08 54.6 -0.9**
FILF	**Fillols**	**45.82 304**	*e*P		**P**	**11 08 56.7 +0.4**
FILF	**Fillols**	**45.82 304**	*e*P		**P**	**11 08 56.7 +0.4**
OPO	**Ambohidratompo**	**45.85 191**	P		**P**	**11 08 56.6 0.0**
	comp=Z,33nm,0.9s,mb5.3,baz=12,slow=6.8,SNR=28					
OPO	**Ambohidratompo**	**45.85 191**	P		**P**	**11 08 56.6 0.0**
LRDF	**Laroque-de-Fa**	**45.85 305**	*e*P		**P**	**11 08 56.4 -0.1**
LRDF	**Laroque-de-Fa**	**45.85 305**	*e*P		**P**	**11 08 56.4 -0.1**
CFON	**Fontmartina**	**45.89 303**	P		**P**	**11 08 55.5 -1.3**
	comp=Z,106nm,1.2s,mb5.7					
CFON	**Fontmartina**	**45.89 303**	P		**P**	**11 08 55.5 -1.3**
	comp=Z,106nm,1.2s,mb5.7					
XAN	**Xi'an**	**45.93 68**	P		**P**	**11 08 56.9 -0.4**
XAN			sP	sP		11 09 03.8 +1.2
XAN			PP	PP		11 10 42.7 -2.2
XAN			S	S		**11 15 34.4 -7.4**
XAN			pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2					
XAN			pmax	pmax		
	comp=Z,460nm,6.2s					
XAN			LR	LR		
	comp=N,15μm,32.5s,MS5.7					
XAN			LR	LR		
	comp=E,2μm,35.9s,MS5.7					
XAN			LR	LR		
	comp=Z,7μm,16.7s					
VERF	**Verneugheol**	**46.09 309**	*e*P		**P**	**11 08 58.1 -0.2**
VERF	**Verneugheol**	**46.09 309**	*e*P		**P**	**11 08 58.1 -0.2**
CARF	**Carcanieres**	**46.16 305**	*e*P		**P**	**11 08 58.1 -0.9**
CARF	**Carcanieres**	**46.16 305**	*e*P		**P**	**11 08 58.1 -0.9**
SNART	**Snartemo**	**46.18 327**	*e*P		**P**	**11 09 01.3 +2.4**
VALF	**Valcebollere**	**46.22 304**	*e*P		**P**	**11 09 00.1 +0.7**
VALF	**Valcebollere**	**46.22 304**	*e*P		**P**	**11 09 00.1 +0.7**
CLLI	**Llivia**	**46.25 304**	P		**P**	**11 09 00.3 +0.6**
CLLI	**Llivia**	**46.25 304**	P		**P**	**11 09 00.3 +0.6**
ABPO	**Ambohimpanom**	**46.28 191**	*e*P		**P**	**11 09 01.9 +1.9**
ABPO			pmax	pmax		
	comp=Z,81nm,1.1s,mb5.6					
ABPO			MLR	MLR		
	comp=Z,12μm,20.0s,MS5.8					
ABPO	**Ambohimpanom**	**46.28 191**	*e*P		**P**	**11 09 01.9 +1.9**
	comp=Z,81nm,1.1s,mb5.6					
ABPO			LR	LR		
	comp=Z,12μm,20.0s,MS5.8					
ABPO	**Ambohimpanom**	**46.28 191**	P		**P**	**11 09 02.5 +2.5**
	comp=Z,123nm,0.7s,mb6.0,SNR=5.8					
ABPO	**Ambohimpanom**	**46.28 191**	*e*P		**P**	**11 09 01.9 +1.9**
	comp=Z,12μm,20.0s					
ARCES	**ARCESS Array B**	**46.31 346**	P		**P**	**11 08 59.0 -0.6**
	comp=Z,33nm,0.8s,mb5.3,baz=145,slow=9.6,SNR=54					
ARCES			ScP	ScP		11 14 28.4 +0.3
	comp=Z,21nm,0.9s,baz=131,slow=3.7,SNR=4.1					
ARCES	**ARCESS Array B**	**46.31 346**	P		**P**	**11 08 59.1 -0.6**
	comp=Z,33nm,0.8s,mb5.3					
ARE0	**ARCESS Array S**	**46.31 346**	*e*P		**P**	**11 08 59.0 -0.7**
ARE0			*e*S		**S**	**11 15 42.4 -3.8**
ARE0	**ARCESS Array S**	**46.31 346**	*e*P		**P**	**11 08 59.0 -0.7**
KTK1	**Kautokeino**	**46.42 344**	*e*P		**P**	**11 08 57.3 -3.3**
KTK1			AMb	AMB		11 09 07.6
	comp=Z,313nm,2.8s,mb5.7					
KTK1			*e*S		**S**	**11 15 47.7 -0.2**
KTK1			*e*SS	SS		11 19 15.2 +1.8
KTK1	**Kautokeino**	**46.42 344**	*e*P		**P**	**11 08 57.3 -3.3**
	comp=Z,313nm,2.8s,mb5.8					
BTO	**Baotou**	**46.47 58**	*e*P		**P**	**11 09 01.4 0.0**
BTO			pmax	pmax		
	comp=Z,85nm,1.3s,mb5.5					
EMIR	**Miracle**	**46.57 303**	P		**P**	**11 09 02.9 +0.7**
	comp=Z,608nm,1.1s,mb6.4					
EMIR	**Miracle**	**46.57 303**	P		**P**	**11 09 02.9 +0.7**
	comp=Z,608nm,1.1s,mb6.4					
EBNR	**Beni Rached**	**46.73 296**	P		**P**	**11 09 04.5 +1.0**
EBNR	**Beni Rached**	**46.73 296**	P		**P**	**11 09 04.5 +1.0**
EIBI	**Ibiza**	**46.73 299**	P		**P**	**11 09 04.0 +0.5**
	comp=Z,460nm,1.0s,mb6.4					
EIBI	**Ibiza**	**46.73 299**	P		**P**	**11 09 04.0 +0.5**
	comp=Z,460nm,1.0s,mb6.4					
SNG	**Songkhla**	**46.74 106**	⇓P		**P**	**11 09 08.0 +4.1**
	comp=Z,100nm,0.8s,mb5.8					
SALF	**Salau**	**46.84 305**	*e*P		**P**	**11 09 03.6 -0.7**
SALF	**Salau**	**46.84 305**	*e*P		**P**	**11 09 03.6 -0.7**
CSOR	**Sort**	**46.87 304**	P		**P**	**11 09 05.2 +0.7**
	comp=Z,532nm,1.2s,mb6.3					
CSOR	**Sort**	**46.87 304**	P		**P**	**11 09 05.2 +0.7**
	comp=Z,532nm,1.2s,mb6.3					
ECHA	**Ech Chlef**	**46.87 296**	P		**P**	**11 09 05.5 +0.9**
ECHA	**Ech Chlef**	**46.87 296**	P		**P**	**11 09 05.5 +0.9**
EPOB	**Poblet**	**46.90 303**	P		**P**	**11 09 05.3 +0.5**
	comp=Z,498nm,1.4s,mb6.2					
EPOB	**Poblet**	**46.90 303**	P		**P**	**11 09 05.3 +0.5**
	comp=Z,498nm,1.4s,mb6.2					
MLS	**Moulis**	**46.91 305**	*e*P		**P**	**11 09 04.3 -0.6**
MLS	**Moulis**	**46.91 305**	*e*P		**P**	**11 09 04.3 -0.6**
ENH	**Enshi**	**46.91 73**	*e*P		**P**	**11 09 05.6 +0.6**
	comp=Z,384nm,1.2s,mb6.2					
ENH			*e*PP	PP		11 10 59.9 +4.6
ENH			LR	LR		
	comp=Z,15μm,21.0s,MS5.9					
ENH	**Enshi**	**46.91 73**	*e*P		**P**	**11 09 05.6 +0.5**
	comp=Z,384nm,1.2s,mb6.2					
NSS	**Namsos**	**46.95 336**	*e*P		**P**	**11 09 02.3 -2.5**
NSS			AMb	AMB		11 09 09.9
	comp=Z,158nm,1.9s,mb5.6					
NSS			*e*S		**S**	**11 15 54.7 -0.8**
NSS			*e*SS	SS		11 19 24.9 +2.9
NSS			AMS	AMS		11 31 06.8
	comp=Z,16μm,21.0s,MS6.0					
NSS	**Namsos**	**46.95 336**	*e*P		**P**	**11 09 02.3 -2.5**
	comp=Z,158nm,1.9s,mb5.6					
NSS			LR	LR		
	comp=Z,16μm,21.0s,MS6.0					
NSS	**Namsos**	**46.95 336**	*e*P		**P**	**11 09 02.3 -2.5**
	comp=Z,158nm,1.9s,mb5.6,SNR=24					
BLS5	**Blasjo**	**46.95 328**	*e*P		**P**	**11 09 05.0 +0.1**
BLS5			AMb	AMB		11 09 15.2
	comp=Z,73nm,1.3s,mb5.4					
BLS5	**Blasjo**	**46.95 328**	*e*P		**P**	**11 09 05.0 +0.1**
	comp=Z,73nm,1.3s,mb5.5					
BLS5	**Blasjo**	**46.95 328**	*e*P		**P**	**11 09 05.0 +0.1**
	comp=Z,73nm,1.3s,mb5.4,SNR=24					
ETRT	**Tiaret**	**46.99 294**	P		**P**	**11 09 06.6 +1.0**
ETRT	**Tiaret**	**46.99 294**	P		**P**	**11 09 06.6 +1.0**
MOR8	**Moi Rana**	**47.01 338**	*e*P		**P**	**11 09 02.7 -2.5**
MOR8			AMb	AMB		11 09 15.9
	comp=Z,140nm,2.0s,mb5.5					
MOR8	**Moi Rana**	**47.01 338**	*e*P		**P**	**11 09 02.7 -2.5**
	comp=Z,140nm,2.0s,mb5.5					
MOR8	**Moi Rana**	**47.01 338**	*e*P		**P**	**11 09 02.7 -2.6**
	comp=Z,140nm,2.0s,mb5.5,SNR=24					
ODD1	**Odda**	**47.05 329**	*e*P		**P**	**11 09 05.5 -0.2**
ODD1			AMb	AMB		11 09 13.0
	comp=Z,310nm,1.4s,mb6.0					
ODD1	**Odda**	**47.05 329**	*e*P		**P**	**11 09 05.5 -0.2**
	comp=Z,310nm,1.4s,mb6.0					
ODD1	**Odda**	**47.05 329**	*e*P		**P**	**11 09 05.4 -0.3**
	comp=Z,310nm,1.4s,mb6.0,SNR=24					
EANR	**'Ain N'Sour**	**47.10 295**	P		**P**	**11 09 07.0 +0.6**
EANR	**'Ain N'Sour**	**47.10 295**	P		**P**	**11 09 07.0 +0.6**
OJGS	**Djebel Guires**	**47.42 295**	P		**P**	**11 09 08.0 -1.0**
OJGS	**Djebel Guires**	**47.42 295**	P		**P**	**11 09 08.0 -1.0**
FLOS	**Flostrand**	**47.46 338**	*e*P		**P**	**11 09 08.1 -0.7**
FLOS			*e*pP	pP		11 09 11.6 -0.9
ERTA	**Horta de San J**	**47.46 302**	P		**P**	**11 09 09.5 +0.3**
	comp=Z,560nm,1.3s,mb6.3					
ERTA	**Horta de San J**	**47.46 302**	P		**P**	**11 09 09.5 +0.3**
	comp=Z,560nm,1.3s,mb6.3					
OKGL	**Djebel Kef Gue**	**47.46 295**	P		**P**	**11 09 09.5 +0.2**
OKGL	**Djebel Kef Gue**	**47.46 295**	P		**P**	**11 09 09.5 +0.2**
RESF	**Ens**	**47.46 305**	*e*P		**P**	**11 09 09.3 +0.1**
RESF	**Ens**	**47.46 305**	*e*P		**P**	**11 09 09.3 +0.1**
STOK	**Stokkvaagen**	**47.57 338**	*e*P		**P**	**11 09 10.7 +1.0**
STOK	**Stokkvaagen**	**47.57 338**	*e*P		**P**	**11 09 10.6 +1.0**
EBIE	**Bielsa**	**47.61 304**	P		**P**	**11 09 10.3 0.0**
	comp=Z,137nm,1.1s,mb5.9					
EBIE	**Bielsa**	**47.61 304**	P		**P**	**11 09 10.3 0.0**
	comp=Z,137nm,1.1s,mb5.9					
KONS	**Konsvik**	**47.63 338**	*e*P		**P**	**11 09 10.0 -0.1**
HHC	**Hu-ho-hao-te**	**47.64 58**	⇑P		**P**	**11 09 11.6 +1.0**
HHC			pP	pP		11 09 16.2 +1.9
HHC			sP	sP		11 09 18.6 +2.8
HHC			PcP	PcP		11 10 42.6 +2.5
HHC			PP	PP		11 11 02.0 0.0
HHC			ScP	ScP		11 14 34.4 +0.2
HHC			S	S		**11 16 05.9 -0.1**
HHC			ScS	ScS		11 19 01.9 -2.3
HHC			SS	SS		11 19 28.5 -5.5
HHC			pmax	pmax		
	comp=Z,84nm,1.1s,mb5.7					
HHC			pmax	pmax		
	comp=Z,1μm,5.2s					
HHC			LR	LR		
	comp=N,20μm,16.1s,MS6.4					
HHC			LR	LR		
	comp=E,26μm,14.0s,MS6.4					
HHC			LR	LR		
	comp=Z,20μm,15.6s,MS6.2					
RER	**Riviere de l'E**	**47.65 180**	*e*P		**P**	**11 09 11.1 +0.4**
	comp=Z,146nm,0.8s,mb6.1					
RER			LR	LR		
	comp=Z,7μm,22.0s,MS5.6					
RER	**Riviere de l'E**	**47.65 180**	*e*P		**P**	**11 09 11.1 +0.4**
	comp=Z,146nm,0.8s,mb6.1					
LABF	**Labassere**	**47.66 305**	*e*P		**P**	**11 09 10.8 +0.1**
LABF	**Labassere**	**47.66 305**	*e*P		**P**	**11 09 10.8 +0.1**
ELSH	**Elham, Standar**	**47.67 316**	P		**P**	**11 09 09.8 -0.8**
ELSH			AMB	AMB		11 09 17.4
	comp=Z,403nm,1.2s,mb6.3					
ELSH	**Elham, Standar**	**47.67 316**	*e*P		**P**	**11 09 09.8 -0.8**
ELSH			AMB	AMB		11 09 17.4
	comp=Z,403nm,1.2s,mb6.3					
ELSH	**Elham, Standar**	**47.67 316**	*e*P		**P**	**11 09 09.8 -0.8**
VIEF	**Viey**	**47.70 305**	*e*P		**P**	**11 09 10.9 -0.1**
VIEF	**Viey**	**47.70 305**	*e*P		**P**	**11 09 10.9 -0.1**
MOL	**Molde**	**47.73 332**	*e*P		**P**	**11 09 13.1 +2.2**
MOL			*e*SS	SS		11 19 35.8 +1.0
MOL			AMS	AMS		11 31 39.3
	comp=Z,13μm,19.5s,MS5.9					
MOL	**Molde**	**47.73 332**	*e*P		**P**	**11 09 13.1 +2.2**
KULM	**Kulim**	**47.74 108**	P		**P**	**11 09 15.3 +3.7**
KULM	**Kulim**	**47.74 108**	*e*P		**P**	**11 09 13.3 +1.7**
KULM			LR	LR		
	comp=Z,8μm,20.0s,MS5.7					
KULM	**Kulim**	**47.74 108**	P		**P**	**11 09 13.1 +1.5**
	comp=Z,2μmcomp=Z,74nm,1.9s,mb5.4					
OJBR	**Djebel Berber**	**47.75 295**	P		**P**	**11 09 11.0 -0.5**
OJBR	**Djebel Berber**	**47.75 295**	P		**P**	**11 09 11.0 -0.5**
RUND	**Rundenannen**	**47.83 329**	*e*P		**P**	**11 09 10.4 -1.3**
RUND			*e*pP	pP		11 09 14.3 -1.2
RUND	**Rundenannen**	**47.83 329**	*e*P		**P**	**11 09 10.4 -1.3**
BER	**Bergen**	**47.83 329**	*e*P		**P**	**11 09 11.4 -0.3**
BER			*e*S		**S**	**11 16 09.0 +0.8**
BER			*e*SS	SS		11 19 37.0 +0.6
BER			AMS	AMS		11 28 50.7
	comp=Z,11μm,28.5s,MS5.7					
BER	**Bergen**	**47.83 329**	*e*P		**P**	**11 09 11.4 -0.3**
	comp=Z,11μm,28.5s					
BER			*e*S		**S**	**11 16 09.0 +0.8**
	SNR=25					
EGD	**Espegrend**	**47.84 329**	*e*P		**P**	**11 09 14.3 +2.5**
EGD	**Espegrend**	**47.84 329**	*e*P		**P**	**11 09 14.3 +2.5**
AEU	**East Anglia Un**	**47.87 318**	P		**P**	**11 09 11.3 -0.8**
AEU	**East Anglia Un**	**47.87 318**	*e*P		**P**	**11 09 11.3 -0.8**
AEU	**East Anglia Un**	**47.87 318**	*e*P		**P**	**11 09 11.3 -0.8**
ASK	**Askoy**	**47.93 329**	*e*P		**P**	**11 09 11.9 -0.6**
ASK	**Askoy**	**47.93 329**	*e*P		**P**	**11 09 11.4 -1.1**
TRO	**Tromso**	**47.94 344**	*e*P		**P**	**11 09 10.6 -1.8**
TRO			AMb	AMB		11 09 23.8
	comp=Z,282nm,1.1s,mb6.2					
TRO			*e*S		**S**	**11 16 10.6 +1.1**
TRO			*e*SS	SS		11 19 39.4 +1.6
TRO			AMS	AMS		11 33 33.8
	comp=Z,11μm,14.9s,MS6.0					
TRO	**Tromso**	**47.94 344**	P		**P**	**11 09 11.9 -0.5**
TRO			LR	LR		
	comp=Z,11μm,14.9s,MS6.0					
TRO	**Tromso**	**47.94 344**	P		**P**	**11 09 11.9 -0.5**
	comp=Z,11μm,14.9s					
TRO			*e*S		**S**	**11 16 10.6 +1.2**
	SNR=25					
TRO			*e*SS	SS		11 19 39.4 +1.6
	SNR=29					
EBEN	**Beniarda**	**47.97 299**	P		**P**	**11 09 13.8 +0.6**
	comp=Z,184nm,1.2s,mb6.0					
EBEN	**Beniarda**	**47.97 299**	P		**P**	**11 09 13.8 +0.7**
	comp=Z,184nm,1.2s,mb6.0					
REYF	**Montagne du Re**	**48.01 305**	*e*P		**P**	**11 09 13.6 +0.2**
REYF	**Montagne du Re**	**48.01 305**	*e*P		**P**	**11 09 13.6 +0.2**
ESAC	**San Caprasio**	**48.06 303**	P		**P**

EMUR	**La Murta**	**48.82 298**	P	**P**	**11 09 19.4**	**-0.3**
	comp=Z,171nm,0.9s,mb6.1					
EALK	**Alkurruntz**	**48.82 305**	P	**P**	**11 09 19.5**	**-0.2**
	comp=Z,117nm,1.0s,mb5.9					
EALK	**Alkurruntz**	**48.82 305**	P	**P**	**11 09 19.5**	**-0.2**
	comp=Z,117nm,1.0s,mb5.9					
ELIZ	**Elizondo**	**48.84 305**	P	**P**	**11 09 20.0**	**+0.2**
ELIZ			pmax	pmax		
	comp=Z,118nm,1.0s,mb5.9					
ELIZ	**Elizondo**	**48.84 305**	P	**P**	**11 09 20.0**	**+0.2**
	comp=Z,118nm,1.0s,mb5.9					
ELIZ	**Elizondo**	**48.84 305**	P	**P**	**11 09 20.0**	**+0.2**
	comp=Z,118nm,1.0s,mb5.9					
ETOB	**Tobarra**	**49.00 299**	P	**P**	**11 09 20.8**	**-0.3**
	comp=Z,350nm,1.0s,mb6.3					
ETOB	**Tobarra**	**49.00 299**	P	**P**	**11 09 20.8**	**-0.3**
	comp=Z,350nm,1.0s,mb6.3					
WOL	**Wolverton**	**49.16 316**	P	**P**	**11 09 20.9**	**-1.2**
WOL			AMB	AMB	11 09 28.7	
	comp=Z,604nm,1.4s,mb6.5					
WOL			AMS	AMS	11 29 48.1	
	comp=Z,8μm,22.6s					
WOL	**Wolverton**	**49.16 316**	*e*P	**P**	**11 09 20.9**	**-1.2**
WOL			AMB	AMB	11 09 28.7	
	comp=Z,604nm,1.4s,mb6.5					
WOL			AMS	AMS	11 29 48.1	
	comp=Z,8μm,22.6s,MS5.7					
WOL	**Wolverton**	**49.16 316**	*e*P	**P**	**11 09 20.9**	**-1.2**
ETOR	**Torete**	**49.28 302**	P	**P**	**11 09 20.7**	**-2.5**
ETOR			pmax	pmax		
	comp=Z,70nm,0.7s,mb5.8					
ETOR	**Torete**	**49.28 302**	P	**P**	**11 09 20.7**	**-2.5**
	comp=Z,70nm,0.7s,mb5.8					
ETOR	**Torete**	**49.28 302**	P	**P**	**11 09 20.7**	**-2.5**
	comp=Z,70nm,0.7s,mb5.8					
CWF	**Charnwood Fore**	**49.41 318**	P	**P**	**11 09 21.8**	**-2.2**
CWF			AMB	AMB	11 09 27.6	
	comp=Z,227nm,2.7s,mb5.7					
CWF					11 16 21.1	
CWF			AMS	AMS	11 30 34.7	
	comp=Z,9μm,23.8s					
CWF	**Charnwood Fore**	**49.41 318**	*e*P	**P**	**11 09 21.8**	**-2.2**
CWF			AMB	AMB	11 09 27.6	
	comp=Z,227nm,2.7s,mb5.7					
CWF			*e*		11 16 21.1	
CWF			AMS	AMS	11 30 34.7	
	comp=Z,9μm,23.8s,MS5.7					
CWF	**Charnwood Fore**	**49.41 318**	*e*P	**P**	**11 09 21.8**	**-2.2**
JSA	**Saint Aubin**	**49.54 313**	P	**P**	**11 09 22.9**	**-2.2**
JSA			AMB	AMB	11 09 30.0	
	comp=Z,292nm,1.3s,mb6.2					
JSA	**Saint Aubin**	**49.54 313**	*e*P	**P**	**11 09 22.9**	**-2.2**
JSA			AMB	AMB	11 09 30.0	
	comp=Z,292nm,1.3s,mb6.2					
JSA	**Saint Aubin**	**49.54 313**	*e*P	**P**	**11 09 22.9**	**-2.2**
SWN1	**Swindon**	**49.55 316**	P	**P**	**11 09 23.1**	**-1.9**
SWN1			AMB	AMB	11 09 31.7	
	comp=Z,705nm,1.6s,mb6.4					
SWN1					11 16 22.1	
SWN1			AMS	AMS	11 30 11.2	
	comp=Z,8μm,24.9s					
SWN1	**Swindon**	**49.55 316**	*e*P	**P**	**11 09 23.1**	**-1.9**
SWN1			AMB	AMB	11 09 31.7	
	comp=Z,705nm,1.6s,mb6.4					
SWN1			*e*		11 16 22.1	
SWN1			AMS	AMS	11 30 11.2	
	comp=Z,8μm,24.9s,MS5.6					
SWN1	**Swindon**	**49.55 316**	*e*P	**P**	**11 09 23.1**	**-1.9**
ECRI	**Cripan**	**49.56 304**	P	**P**	**11 09 23.9**	**-1.4**
ECRI			pmax	pmax		
	comp=Z,83nm,0.7s,mb5.9					
ECRI	**Cripan**	**49.56 304**	P	**P**	**11 09 23.9**	**-1.4**
	comp=Z,83nm,0.7s,mb5.9					
ECRI	**Cripan**	**49.56 304**	P	**P**	**11 09 23.9**	**-1.4**
	comp=Z,83nm,0.7s,mb5.9					
FRIM	**Kepong**	**49.65 110**	P	**P**	**11 09 29.4**	**+3.1**
CIT	**Chita**	**49.66 43**	*e*P	**P**	**11 09 25.6**	**-0.3**
CIT			*e*		11 09 44.5	
CIT			*e*		11 10 51.4	
CIT			*e*		11 11 27.4	
CIT			*e*		11 16 37.1	
CIT			*e*		11 19 18.4	
CIT			pmax	pmax		
	comp=Z,934nm,3.0s					
CIT	**Chita**	**49.66 43**	*e*P	**P**	**11 09 25.6**	**-0.3**
	comp=Z,934nm,3.0s					
CIT			*e*ScS	ScS	11 19 18.4	+1.0
LSZ	**Lusaka**	**49.68 216**	PFAKE		11 09 40.0	+14
LSZ			LR	LR		
	comp=Z,18μm,19.0s,MS6.1					
EVIA	**Vianos**	**49.75 299**	P	**P**	**11 09 27.3**	**+0.5**
EVIA			pmax	pmax		
	comp=Z,270nm,0.6s,mb6.5					
EVIA	**Vianos**	**49.75 299**	P	**P**	**11 09 27.3**	**+0.5**
	comp=Z,270nm,0.6s,mb6.5					
EVIA	**Vianos**	**49.75 299**	P	**P**	**11 09 27.3**	**+0.5**
	comp=Z,270nm,0.6s,mb6.5					
HPK	**Haverah Park**	**49.79 319**	P	**P**	**11 09 26.1**	**-0.8**
HPK			AMB	AMB	11 09 33.1	
	comp=Z,291nm,2.1s,mb5.9					
HPK					11 16 27.4	
HPK			AMS	AMS	11 33 14.2	
	comp=Z,10μm,19.4s					
HPK	**Haverah Park**	**49.79 319**	*e*P	**P**	**11 09 26.1**	**-0.8**
HPK			AMB	AMB	11 09 33.1	
	comp=Z,291nm,2.1s,mb5.9					
HPK			*e*		11 16 27.4	
HPK			AMS	AMS	11 33 14.2	
	comp=Z,10μm,19.4s,MS5.8					
HPK	**Haverah Park**	**49.79 319**	*e*P	**P**	**11 09 26.1**	**-0.8**
KTGM	**Kuala Trenggan**	**49.83 107**	P	**P**	**11 09 31.2**	**+3.4**
EHUE	**Huescar**	**49.89 298**	P	**P**	**11 09 27.5**	**-0.4**
EHUE			pmax	pmax		
	comp=Z,112nm,0.7s,mb6.0					
EHUE	**Huescar**	**49.89 298**	P	**P**	**11 09 27.5**	**-0.4**
	comp=Z,112nm,0.7s,mb6.0					
EHUE	**Huescar**	**49.89 298**	P	**P**	**11 09 27.5**	**-0.4**
	comp=Z,112nm,0.7s,mb6.0					
STNC	**Stoke**	**50.00 318**	AMS	AMS	11 30 50.5	
	comp=Z,9μm,28.6s,MS5.6					
STNC	**Stoke**	**50.00 318**	AMS	AMS	11 30 50.5	
	comp=Z,9μm,28.6s					
QIZ	**Qiongzhong**	**50.04 87**	P	**P**	**11 09 29.5**	**+0.2**
QIZ			pP	pP	11 09 35.5	+2.4
QIZ			sP	sP	11 09 39.1	+4.5
QIZ			PP	PP	11 11 24.8	+0.4
QIZ			S	**S**	**11 16 36.5**	**-3.9**
QIZ			pmax	pmax		
	comp=Z,66nm,1.9s,mb5.3					
QIZ			pmax	pmax		
	comp=Z,2μm,10.8s					
QIZ			LR	LR		
	comp=N,13μm,23.8s,MS5.9					
QIZ			LR	LR		
	comp=E,2μm,21.4s,MS5.9					
QIZ			LR	LR		
	comp=Z,7μm,22.3s,MS5.6					
QIZ	**Qiongzhong**	**50.04 87**	*e*P	**P**	**11 09 29.4**	**0.0**
	comp=Z,316nm,1.3s,mb6.2					
QIZ			*e*S	**S**	**11 16 41.6**	**+1.2**
QIZ			LR	LR		
	comp=Z,7μm,20.0s,MS5.7					
QIZ	**Qiongzhong**	**50.04 87**	*e*P	**P**	**11 09 29.4**	**+0.1**
	comp=Z,316nm,1.3s,mb6.2					
QIZ			*e*S	**S**	**11 16 41.6**	**+1.2**
HGH	**Gray Hill**	**50.18 316**	P	**P**	**11 09 28.8**	**-1.1**
HGH	**Gray Hill**	**50.18 316**	*e*P	**P**	**11 09 28.8**	**-1.1**
HGH	**Gray Hill**	**50.18 316**	*e*P	**P**	**11 09 28.8**	**-1.1**
EBER	**Berja**	**50.21 297**	P	**P**	**11 09 29.5**	**-0.9**
	comp=Z,490nm,1.2s,mb6.4					
EBER	**Berja**	**50.21 297**	P	**P**	**11 09 29.5**	**-0.9**
	comp=Z,490nm,1.2s,mb6.4					
ELAN	**Lanestosa**	**50.23 305**	P	**P**	**11 09 29.1**	**-1.3**
	comp=Z,280nm,1.0s,mb6.2					
ELAN	**Lanestosa**	**50.23 305**	P	**P**	**11 09 29.1**	**-1.3**
	comp=Z,280nm,1.0s,mb6.2					
EQES	**Quesada**	**50.27 298**	P	**P**	**11 09 29.8**	**-1.0**
	comp=Z,329nm,0.8s,mb6.4					
EQES	**Quesada**	**50.27 298**	P	**P**	**11 09 29.8**	**-1.0**
	comp=Z,329nm,0.8s,mb6.4					
XAL	**Allendale**	**50.28 320**	P	**P**	**11 09 29.8**	**-0.8**
XAL	**Allendale**	**50.28 320**	*e*P	**P**	**11 09 29.8**	**-0.8**
XAL	**Allendale**	**50.28 320**	*e*P	**P**	**11 09 29.8**	**-0.7**
ZAI	**Zaio**	**50.33 294**	*i* P	**P**	**11 09 32.0**	**+0.7**
MCH1	**Michaelchurch**	**50.34 317**	P	**P**	**11 09 29.9**	**-1.2**
MCH1			AMB	AMB	11 09 37.2	
	comp=Z,350nm,1.1s,mb6.3					
MCH1					11 16 44.8	
MCH1			AMS	AMS	11 34 48.8	
	comp=Z,7μm,16.3s					
MCH1	**Michaelchurch**	**50.34 317**	*e*P	**P**	**11 09 29.9**	**-1.2**
MCH1			AMB	AMB	11 09 37.2	
	comp=Z,350nm,1.1s,mb6.3					
MCH1			*e*		11 16 44.8	
MCH1			AMS	AMS	11 34 48.8	
	comp=Z,7μm,16.3s,MS5.8					
MCH1	**Michaelchurch**	**50.34 317**	*e*P	**P**	**11 09 29.9**	**-1.2**
MELI	**Melilla**	**50.44 295**	*i* P	**P**	**11 09 31.6**	**-0.5**
MELI			*i* S	**S**	**11 16 48.4**	**+2.8**
HTR	**Trewern Hill**	**50.52 317**	P	**P**	**11 09 30.8**	**-1.6**
HTR	**Trewern Hill**	**50.52 317**	*e*P	**P**	**11 09 30.8**	**-1.6**
HTR	**Trewern Hill**	**50.52 317**	*e*P	**P**	**11 09 30.8**	**-1.6**
ESY	**Stoneypath**	**50.68 322**	P	**P**	**11 09 32.5**	**-1.1**
ESY	**Stoneypath**	**50.68 322**	*e*P	**P**	**11 09 32.5**	**-1.1**
ESY	**Stoneypath**	**50.68 322**	*e*P	**P**	**11 09 32.5**	**-1.1**
ECOG	**Cogollos-Vega**	**50.71 297**	P	**P**	**11 09 32.5**	**-1.6**
ECOG			pmax	pmax		
	comp=Z,116nm,0.9s,mb5.8					
ECOG	**Cogollos-Vega**	**50.71 297**	P	**P**	**11 09 32.5**	**-1.6**
	comp=Z,116nm,0.9s,mb5.8					
ECOG	**Cogollos-Vega**	**50.71 297**	P	**P**	**11 09 32.5**	**-1.6**
	comp=Z,116nm,0.9s,mb5.8					
KESW	**Keswick, Cumbr**	**50.74 320**	P	**P**	**11 09 32.8**	**-1.3**
KESW			AMB	AMB	11 09 39.2	
	comp=Z,251nm,2.7s,mb5.7					
KESW	**Keswick, Cumbr**	**50.74 320**	*e*P	**P**	**11 09 32.8**	**-1.3**
KESW			AMB	AMB	11 09 39.2	
	comp=Z,251nm,2.7s,mb5.7					
KESW	**Keswick, Cumbr**	**50.74 320**	*e*P	**P**	**11 09 32.8**	**-1.3**
EGUA	**Guajares**	**50.76 297**	P	**P**	**11 09 33.4**	**-1.2**
	comp=Z,3μm,1.2s					
EGUA	**Guajares**	**50.76 297**	P	**P**	**11 09 33.4**	**-1.1**
DYA	**Yadsworthy**	**50.78 315**	P	**P**	**11 09 32.5**	**-1.9**
DYA			AMB	AMB	11 09 38.2	
	comp=Z,272nm,2.7s,mb5.7					
DYA					11 16 31.1	
DYA			AMS	AMS	11 36 09.5	
	comp=Z,7μm,16.9s					
DYA	**Yadsworthy**	**50.78 315**	*e*P	**P**	**11 09 32.5**	**-1.9**
DYA			AMB	AMB	11 09 38.2	
	comp=Z,272nm,2.7s,mb5.7					
DYA			*e*		11 16 31.1	
DYA			AMS	AMS	11 36 09.5	
	comp=Z,7μm,16.9s,MS5.8					
DYA	**Yadsworthy**	**50.78 315**	*e*P	**P**	**11 09 32.5**	**-1.9**
EBAN	**Banos Encina**	**50.80 299**	P	**P**	**11 09 34.6**	**-0.2**
EBAN			pmax	pmax		
	comp=Z,265nm,0.8s,mb6.2					
EBAN	**Banos Encina**	**50.80 299**	P	**P**	**11 09 34.6**	**-0.1**
	comp=Z,265nm,0.8s,mb6.2					
EBAN	**Banos Encina**	**50.80 299**	P	**P**	**11 09 34.6**	**-0.2**
	comp=Z,265nm,0.8s,mb6.2					
ESDC	**Sonseca Array**	**50.80 301**	P	**P**	**11 09 34.5**	**-0.2**
	comp=Z,40nm,0.5s,mb5.6,baz=68,slow=7.3,SNR=57					
ESDC			LR	LR	11 32 47.0	
	comp=Z,5μm,19.9s,MS5.6,baz=140,slow=38					
ESDC	**Sonseca Array**	**50.80 301**	P	**P**	**11 09 33.0**	**-1.8**
	comp=Z,87nm,0.6s,mb5.9					
ESDC	**Sonseca Array**	**50.80 301**	P	**P**	**11 09 33.0**	**-1.8**
	comp=Z,87nm,0.6s,mb5.9					
ESLA	**Sonseca Array**	**50.80 301**	*e*P	**P**	**11 09 34.1**	**-0.6**
	comp=Z,35nm,0.9s,mb5.3					
ESLA			*e*S	**S**	**11 16 47.9**	**-2.5**
ESLA			LR	LR		
	comp=Z,46μm,22.0s,MS6.5					
ESLA	**Sonseca Array**	**50.80 301**	*e*P	**P**	**11 09 34.2**	**-0.6**
	comp=Z,35nm,0.9s,mb5.3					
ESLA			*e*S	**S**	**11 16 47.9**	**-2.6**
LRW	**Lerwick**	**50.84 327**	P	**P**	**11 09 34.6**	**-0.2**
LRW			AMB	AMB	11 09 45.7	
	comp=Z,278nm,1.7s,mb5.9					
LRW					11 16 33.1	
LRW			AMS	AMS	11 37 11.8	
	comp=Z,11μm,19.2s					
LRW	**Lerwick**	**50.84 327**	*e*P	**P**	**11 09 34.6**	**-0.2**
LRW			AMB	AMB	11 09 45.7	
	comp=Z,278nm,1.7s,mb5.9					
LRW			*e*		11 16 33.1	
LRW			AMS	AMS	11 37 11.8	
	comp=Z,11μm,19.2s,MS5.9					
LRW	**Lerwick**	**50.84 327**	*e*P	**P**	**11 09 34.6**	**-0.1**
ECK	**Cauldkaine Hil**	**50.85 321**	P	**P**	**11 09 33.2**	**-1.7**
ECK	**Cauldkaine Hil**	**50.85 321**	*e*P	**P**	**11 09 33.2**	**-1.7**
ECK	**Cauldkaine Hil**	**50.85 321**	*e*P	**P**	**11 09 33.2**	**-1.6**
GUD	**Guadarrama**	**50.88 302**	P	**P**	**11 09 33.9**	**-1.4**
GUD			pmax	pmax		
	comp=Z,114nm,0.8s,mb5.8					
GUD	**Guadarrama**	**50.88 302**	P	**P**	**11 09 33.9**	**-1.4**
	comp=Z,114nm,0.8s,mb5.8					
GUD	**Guadarrama**	**50.88 302**	P	**P**	**11 09 33.9**	**-1.4**
	comp=Z,114nm,0.8s,mb5.8					
EKA	**Eskdalemuir Ar**	**50.89 321**	P	**P**	**11 09 33.9**	**-1.3**
	comp=Z,9.0nm,0.8s,mb4.8,baz=98,slow=7.4,SNR=24					
EKA	**Eskdalemuir Ar**	**50.89 321**	P	**P**	**11 09 33.9**	**-1.3**
EKA			pmax	pmax		
	comp=Z,9.0nm,0.8s					
EKA	**Eskdalemuir Ar**	**50.89 321**	P	**P**	**11 09 33.9**	**-1.3**
	comp=Z,9.0nm,0.8s,mb4.8					
EBL	**Broad Law**	**50.89 321**	P	**P**	**11 09 34.8**	**-0.4**
EBL	**Broad Law**	**50.89 321**	*e*P	**P**	**11 09 34.8**	**-0.4**
EBL	**Broad Law**	**50.89 321**	*e*P	**P**	**11 09 34.8**	**-0.4**
ESK	**Eskdalemuir**	**50.91 321**	P	**P**	**11 09 33.4**	**-2.0**
ESK			AMB	AMB	11 09 39.0	
	comp=Z,127nm,2.6s,mb5.4					
ESK					11 16 41.5	
ESK			AMS	AMS	11 31 19.9	
	comp=Z,9μm,23.9s					
ESK	**Eskdalemuir**	**50.91 321**	*e*P	**P**	**11 09 33.4**	**-2.0**
ESK			AMB	AMB	11 09 39.0	
	comp=Z,127nm,2.6s,mb5.4					
ESK			*e*		11 16 41.5	
ESK			AMS	AMS	11 31 19.9	
	comp=Z,9μm,23.9s,MS5.7					
ESK	**Eskdalemuir**	**50.91 321**	*e*P	**P**	**11 09 36.4**	**+1.1**
ESK			pmax	pmax		
	comp=Z,96nm,1.2s,mb5.6					
ESK			MLR	MLR		
	comp=Z,8μm,19.0s,MS5.7					
ESK	**Eskdalemuir**	**50.91 321**	*e*P	**P**	**11 09 36.4**	**+1.1**
	comp=Z,96nm,1.2s,mb5.6					
ESK			LR	LR		
	comp=Z,8μm,19.0s,MS5.7					
ESK	**Eskdalemuir**	**50.91 321**	*e*P	**P**	**11 09 36.4**	**+1.1**
	comp=Z,8μm,19.0s					
ERON	**Agron**	**50.93 297**	P	**P**	**11 09 34.5**	**-1.3**
	comp=Z,202nm,0.6s,mb6.2					
ERON	**Agron**	**50.93 297**	P	**P**	**11 09 34.5**	**-1.3**
	comp=Z,202nm,0.6s,mb6.2					
WHN	**Wuhan**	**51.00 71**	⇑P	**P**	**11 09 36.9**	**+0.5**
WHN			S	**S**	**11 16 53.4**	**0.0**
WHN			pmax	pmax		
	comp=Z,260nm,1.1s,mb6.1					
WHN			pmax	pmax		
	comp=Z,4μm,8.2s					
WHN			LR	LR		
	comp=N,15μm,15.6s,MS6.4					
WHN			LR	LR		
	comp=E,22μm,14.9s,MS6.4					
WHN			LR	LR		
	comp=Z,40μm,16.7s,MS6.5					
EDI	**Edinburgh**	**51.00 322**	P	**P**	**11 09 34.4**	**-1.6**
EDI			AMB	AMB	11 09 46.9	
	comp=Z,162nm,1.4s,mb5.8					
EDI					11 16 48.3	
EDI			AMS	AMS	11 32 44.1	
	comp=Z,8μm,22.0s					
EDI	**Edinburgh**	**51.00 322**	*e*P	**P**	**11 09 34.4**	**-1.6**
EDI			AMB	AMB	11 09 46.9	
	comp=Z,162nm,1.4s,mb5.8					
EDI			*e*		11 16 48.3	
EDI			AMS	AMS	11 32 44.1	
	comp=Z,8μm,22.0s,MS5.7					
EDI	**Edinburgh**	**51.00 322**	*e*P	**P**	**11 09 34.4**	**-1.6**
PAB	**San Pablo**	**51.11 300**⇑	*e*P	**P**	**11 09 36.9**	**-0.2**
PAB			pmax	pmax		
	comp=Z,309nm,1.1s,mb6.2					
PAB			MLR	MLR		
	comp=Z,7μm,19.0s,MS5.7					
PAB	**San Pablo**	**51.11 300**⇑	*e*P	**P**	**11 09 36.9**	**-0.2**
	comp=Z,310nm,1.1s,mb6.2					
PAB			LR	LR		
	comp=Z,7μm,19.0s,MS5.7					
PAB	**San Pablo**	**51.11 300**	*e*P	**P**	**11 09 36.9**	**-0.2**
	comp=Z,7μm,19.0s					
MME1	**Meikle Cairn**	**51.12 323**	P	**P**	**11 09 35.1**	**-1.8**
MME1	**Meikle Cairn**	**51.12 323**	*e*P	**P**	**11 09 35.1**	**-1.8**
MME1	**Meikle Cairn**	**51.12 323**	*e*P	**P**	**11 09 35.1**	**-1.8**
TOU	**Touzarine**	**51.15 295**	*i* P	**P**	**11 09 38.0**	**+0.5**
HTL	**Hartland**	**51.17 315**	P	**P**	**11 09 35.0**	**-2.4**
HTL			AMB	AMB	11 09 42.4	
	comp=Z,208nm,2.6s,mb5.6					
HTL					11 16 44.1	
HTL			AMS	AMS	11 33 37.8	
	comp=Z,13μm,21.5s					
HTL	**Hartland**	**51.17 315**	*e*P	**P**	**11 09 35.0**	**-2.4**
HTL			AMB	AMB	11 09 42.4	
	comp=Z,208nm,2.6s,mb5.6					
HTL			*e*		11 16 44.1	
HTL			AMS	AMS	11 33 37.8	
	comp=Z,13μm,21.5s,MS5.9					
HTL	**Hartland**	**51.17 315**	*e*P	**P**	**11 09 35.0**	**-2.4**
BJT	**Baijiatuau**	**51.19 59**	*e*P	**P**	**11 09 37.5**	**-0.2**
BJT			*e*		11 10 58.3	
BJT			pmax	pmax		
	comp=Z,245nm,1.1s					
BJT			MLR	MLR		
	comp=Z,18μm,20.0s					
BJT	**Baijiatuau**	**51.19 59**	*e*P	**P**	**11 09 37.5**	**-0.2**
	comp=Z,245nm,1.1s,mb6.0					
BJT			*e*PcP	PcP	11 10 58.3	+5.3
BJT			LR	LR		
	comp=Z,18μm,20.0s,MS6.1					
BJT	**Baijiatuau**	**51.19 59**	*e*P	**P**	**11 09 37.5**	**-0.2**
	comp=Z,245nm,1.1s,mb6.0					
ELOJ	**Sierra Loja**	**51.19 297**	P	**P**	**11 09 36.8**	**-1.0**
ELOJ			pmax	pmax		
	comp=Z,137nm,0.7s,mb6.0					
ELOJ	**Sierra Loja**	**51.19 297**	P	**P**	**11 09 36.8**	**-0.9**
	comp=Z,137nm,0.7s,mb6.0					
ELOJ	**Sierra Loja**	**51.19 297**	P	**P**	**11 09 36.8**	**-1.0**
	comp=Z,137nm,0.7s,mb6.0					
BJI	**Beijing**	**51.19 59**	P	**P**	**11 09 38.0**	**+0.3**
BJI			PP	PP	11 11 37.2	+2.8
BJI			S	**S**	**11 16 57.9**	**+2.0**
BJI			pmax	pmax		
	comp=Z,120nm,1.4s,mb5.6					
BJI			pmax	pmax		
	comp=Z,2μm,4.5s					
BJI			LR	LR		
	comp=N,18μm,30.6s					
BJI			LR	LR		
	comp=E,8μm,23.0s					
BJI			LR	LR		
	comp=Z,15μm,17.0s					
ELUQ	**Luque**	**51.24 298**	P	**P**	**11 09 36.3**	**-1.8**
ELUQ			pmax	pmax		
	comp=Z,139nm,0.6s,mb6.1					
ELUQ	**Luque**	**51.24 298**	P	**P**	**11 09 36.3**	**-1.8**
	comp=Z,139nm,0.6s,mb6.1					
ELUQ	**Luque**	**51.24 298**	P	**P**	**11 09 36.3**	**-1.8**
	comp=Z,139nm,0.6s,mb6.1					
GCD	**Castle Douglas**	**51.26 320**	P	**P**	**11 09 36.8**	**-1.2**
GCD	**Castle Douglas**	**51.26 320**	*e*P	**P**	**11 09 36.8**	**-1.2**
GCD	**Castle Douglas**	**51.26 320**	*e*P	**P**	**11 09 36.8**	**-1.2**
MPAL	**Palemas**	**51.27 295**	*i* P	**P**	**11 09 38.0**	**-0.3**
MCD	**Coleburn Disti**	**51.33 324**	P	**P**	**11 09 37.3**	**-1.2**
MCD	**Coleburn Disti**	**51.33 324**	*e*P	**P**	**11 09 37.3**	**-1.2**
MCD	**Coleburn Disti**	**51.33 324**	*e*P	**P**	**11 09 37.3**	**-1.1**
WLF1	**Llynfaes**	**51.33 318**	P	**P**	**11 09 37.2**	**-1.3**
WLF1			AMB	AMB	11 09 43.4	
	comp=Z,584nm,2.8s,mb6.0					
WLF1					11 16 42.4	
WLF1	**Llynfaes**	**51.33 318**	*e*P	**P**	**11 09 37.2**	**-1.3**
WLF1			AMB	AMB	11 09 43.4	
	comp=Z,584nm,2.8s,mb6.0					
WLF1			*e*		11 16 42.4	
WLF1	**Llynfaes**	**51.33 318**	*e*P	**P**	**11 09 37.2**	**-1.3**
BJO	**Bjornoya**	**51.36 348**	*e*P	**P**	**11 09 36.3**	**-2.2**
BJO			AMb	AMB	11 09 44.3	
	comp=Z,299nm,1.0s,mb6.2					
BJO			*e*S	**S**	**11 16 55.2**	**-2.1**
BJO			*e*SS	SS	11 20 36.6	+4.0
BJO			AMS	AMS	11 32 23.3	
	comp=Z,10μm,13.9s,MS6.0					
BJO	**Bjornoya**	**51.36 348**	*e*P	**P**	**11 09 36.3**	**-2.2**
	comp=Z,299nm,1.0s,mb6.2,SNR=23					
BJO1	**Bjornoya**	**51.40 348**	*e*P	**P**	**11 09 36.3**	**-2.4**
	comp=Z,299nm,1.0s,mb6.2					
BJO1			LR	LR		
	comp=Z,10μm,13.9s,MS6.0					
BJO1	**Bjornoya**	**51.40 348**	*e*P	**P**	**11 09 36.3**	**-2.4**
	comp=Z,299nm,1.0s,mb6.2					
EADA	**Adamuz**	**51.41 299**	P	**P**	**11 09 37.6**	**-1.8**
	comp=Z,718nm,1.4s,mb6.4					
EADA	**Adamuz**	**51.41 299**	P	**P**	**11 09 37.6**	**-1.8**
	comp=Z,718nm,1.4s,mb6.4					
EMAL	**Malaga-Limoner**	**51.46 297**	*i* P	**P**	**11 09 37.8**	**-2.0**
EMAL			*i* S	**S**	**11 16 54.0**	**-5.6**
GIM	**North Isle of**	**51.49 319**	P	**P**	**11 09 39.0**	**-0.7**
GIM	**North Isle of**	**51.49 319**	*e*P	**P**	**11 09 39.0**	**-0.7**
GIM	**North Isle of**	**51.49 319**	*e*P	**P**	**11 09 39.0**	**-0.7**
EARI	**Arriondas**	**51.52 305**	P	**P**	**11 09 37.6**	**-2.6**
	comp=Z,133nm,1.0s,mb5.8					
EARI	**Arriondas**	**51.52 305**	P	**P**	**11 09 37.6**	**-2.6**
	comp=Z,133nm,1.0s,mb5.8					
CCA1	**Carnmenellis**	**51.59 314**	P	**P**	**11 09 38.9**	**-1.7**
CCA1			AMB	AMB	11 09 44.4	
	comp=Z,222nm,2.8s,mb5.6					
CCA1					11 20 34.2	
CCA1			AMS	AMS	11 31 31.0	
	comp=Z,7μm,19.0s					
CCA1	**Carnmenellis**	**51.59 314**	*e*P	**P**	**11 09 38.9**	**-1.7**
CCA1			AMB	AMB	11 09 44.4	
	comp=Z,222nm,2.8s,mb5.6					
CCA1			*e*		11 20 34.2	
CCA1			AMS	AMS	11 31 31.0	
	comp=Z,7μm,19.0s,MS5.7					
CCA1	**Carnmenellis**	**51.59 314**	*e*P	**P**	**11 09 38.9**	**-1.6**
TZK	**Tazeka**	**51.63 294**	*i* P	**P**	**11 09 42.0**	**+0.9**
EAB	**Aberfoyle**	**51.68 322**	P	**P**	**11 09 40.7**	**-0.4**
EAB	**Aberfoyle**	**51.68 322**	*e*P	**P**	**11 09 40.7**	**-0.4**
EAB	**Aberfoyle**	**51.68 322**	*e*P	**P**	**11 09 40.7**	**-0.4**
PGBU	**Glenifferbraes**	**51.70 321**	AMS	AMS	11 21 33.7

MDT S **S** **11 17 11.9 +2.0**
comp=Z,3.0nm,0.9s,baz=205,slow=17,SNR=5.5
MDT Midelt 52.20 292 P **P** **11 09 46.2 +0.9**
MDT S **S** **11 17 11.9 +2.0**
LIJA Lijar 52.22 297 *i* P **P** **11 09 44.5 -0.9**
MYKOM Kota Tinggi 52.29 110 P **P** **11 09 48.3 +2.0**
MYKOM Kota Tinggi 52.29 110 P **P** **11 09 46.5 +0.2**
comp=Z,2μmcomp=Z,106nm,0.9s,mb5.8
EJIF Jimena Fronter 52.33 297 P **P** **11 09 44.3 -1.9**
EJIF pmax pmax
comp=Z,483nm,1.4s,mb6.2
EJIF Jimena Fronter 52.33 297 P **P** **11 09 44.3 -1.9**
comp=Z,482nm,1.4s,mb6.2
EJIF Jimena Fronter 52.33 297 P **P** **11 09 44.3 -1.9**
comp=Z,483nm,1.4s,mb6.2
TGT Taghat 52.35 294 *i* P **P** **11 09 46.0 -0.4**
GMM Mts of Mourne 52.35 319 P **P** **11 09 44.8 -1.3**
GMM Mts of Mourne 52.35 319 *e*P **P** **11 09 44.8 -1.3**
GMM Mts of Mourne 52.35 319 *e*P **P** **11 09 44.8 -1.3**
EPLA Plasencia 52.39 301 P **P** **11 09 43.2 -3.5**
EPLA pmax pmax
comp=Z,264nm,1.1s,mb6.1
EPLA Plasencia 52.39 301 P **P** **11 09 43.2 -3.4**
comp=Z,264nm,1.1s,mb6.1
EPLA Plasencia 52.39 301 P **P** **11 09 43.2 -3.5**
comp=Z,264nm,1.1s,mb6.1
KAC Achnashellach 52.40 323 P **P** **11 09 44.5 -1.9**
KAC Achnashellach 52.40 323 *e*P **P** **11 09 44.5 -1.9**
KAC Achnashellach 52.40 323 *e*P **P** **11 09 44.5 -1.9**
RSC Scourie 52.47 324 P **P** **11 09 45.8 -1.1**
RSC Scourie 52.47 324 *e*P **P** **11 09 45.8 -1.1**
RSC Scourie 52.47 324 *e*P **P** **11 09 45.8 -1.1**
DSB Dublin 52.51 318 *e*P **P** **11 09 46.8 -0.6**
comp=Z,115nm,1.0s,mb5.8
DSB Dublin 52.51 318 *e*P **P** **11 09 46.8 -0.5**
comp=Z,115nm,1.0s,mb5.8
KPL Plockton 52.56 323 P **P** **11 09 46.4 -1.3**
KPL AMB AMB 11 09 51.5
comp=Z,184nm,4.7s
KPL 11 17 04.2
KPL AMS AMS 11 35 44.9
comp=Z,9μm,20.0s
KPL Plockton 52.56 323 *e*P **P** **11 09 46.4 -1.3**
KPL AMB AMB 11 09 51.5
comp=Z,184nm,4.7s
KPL *e* 11 17 04.2
KPL AMS AMS 11 35 44.9
comp=Z,9μm,20.0s,MS5.8
KPL Plockton 52.56 323 *e*P **P** **11 09 46.4 -1.3**
ESPR Espera 52.58 297 P **P** **11 09 47.0 -1.1**
comp=Z,317nm,0.9s,mb6.2
ESPR Espera 52.58 297 P **P** **11 09 47.0 -1.1**
comp=Z,317nm,0.9s,mb6.2
KAR1 Arisaig 52.60 323 P **P** **11 09 47.0 -1.0**
KAR1 Arisaig 52.60 323 *e*P **P** **11 09 47.0 -1.0**
KAR1 Arisaig 52.60 323 *e*P **P** **11 09 47.0 -0.9**
DLF Lyons Farm 52.61 318 *e*P **P** **11 09 47.6 -0.4**
GIBL Gibalbin 52.67 297 *i* P **P** **11 09 49.1 +0.3**
RRR Rubha Reidh 52.72 324 P **P** **11 09 48.4 -0.4**
RRR Rubha Reidh 52.72 324 *e*P **P** **11 09 48.4 -0.4**
RRR Rubha Reidh 52.72 324 *e*P **P** **11 09 48.4 -0.4**
ECAL Calabor 52.73 304 P **P** **11 09 46.8 -2.3**
comp=Z,351nm,1.5s,mb6.1
ECAL Calabor 52.73 304 P **P** **11 09 46.8 -2.3**
comp=Z,351nm,1.5s,mb6.1
PBRG Braganca 52.74 304 *e*P **P** **11 09 49.1 -0.1**
PBRG Braganca 52.74 304 *e*P **P** **11 09 49.1 -0.1**
CNIL Conil 52.81 297 *e*P **P** **11 09 49.4 -0.4**
RSA Sarsar 52.85 295 *i* P **P** **11 09 49.0 -1.1**
HKC Hong Kong Obse 52.87 81 P **P** **11 09 48.0 -2.5**
SFS San Fernando 52.91 297 *e*P **P** **11 09 48.7 -1.9**
SFS pmax pmax
comp=Z,575nm,1.0s,mb6.5
SFS MLR MLR
comp=Z,13μm,20.0s,MS6.0
SFS San Fernando 52.91 297 *e*P **P** **11 09 48.7 -1.9**
comp=Z,575nm,1.0s,mb6.5
SFS LR LR
comp=Z,13μm,20.0s,MS6.0
SFS San Fernando 52.91 297 *e*P **P** **11 09 48.7 -1.9**
comp=Z,13μm,20.0s
SFS *i* S **S** **11 17 16.9 -2.7**
EPON Pontenova 52.94 305 P **P** **11 09 48.2 -2.5**
comp=Z,392nm,1.5s,mb6.1
EPON Pontenova 52.94 305 P **P** **11 09 48.2 -2.5**
comp=Z,392nm,1.5s,mb6.1
ERUA La Rua 53.00 304 P **P** **11 09 50.1 -1.0**
ERUA pmax pmax
comp=Z,180nm,1.3s,mb5.8
ERUA La Rua 53.00 304 P **P** **11 09 50.1 -1.0**
comp=Z,180nm,1.3s,mb5.8
ERUA La Rua 53.00 304 P **P** **11 09 50.1 -1.0**
comp=Z,180nm,1.3s,mb5.8
MVO Moncorvo 53.01 303 A 11 09 58.3
comp=Z,310nm,1.1s
MVO *e*S **S** **11 17 19.9 -0.9**
MVO *i* P 11 17 32.1
MVO *e*LR LR 11 21 49.1
comp=Z,4μm,18.0s
MVO Moncorvo 53.01 303 P **P** **11 09 49.7 -1.5**
MVO Moncorvo 53.01 303 P **P** **11 09 49.7 -1.5**
MVO *e*S **S** **11 17 19.9 -0.9**
EMIN Mina Concepcio 53.11 298 P **P** **11 09 49.7 -2.3**
comp=Z,250nm,1.5s,mb5.9
EMIN Mina Concepcio 53.11 298 P **P** **11 09 49.7 -2.3**
comp=Z,250nm,1.5s,mb5.9
RRH Rhenigidale 53.20 324 P **P** **11 09 51.4 -0.9**
RRH Rhenigidale 53.20 324 *e*P **P** **11 09 51.4 -0.9**
RRH Rhenigidale 53.20 324 *e*P **P** **11 09 51.4 -0.9**
EBAD Badajoz 53.25 300 P **P** **11 09 50.7 -2.4**
comp=Z,157nm,1.0s,mb5.9
EBAD Badajoz 53.25 300 P **P** **11 09 50.7 -2.3**
comp=Z,157nm,1.0s,mb5.9
PBAR Barrancos 53.34 299 *e*P **P** **11 09 53.3 -0.4**
comp=Z,414nm,1.5s,mb6.1
PBAR *e*S **S** **11 17 23.5 -1.9**
PBAR *e*LR LR 11 32 40.9
comp=Z,7μm,16.8s
PBAR Barrancos 53.34 299 *e*P **P** **11 09 53.3 -0.4**
comp=Z,414nm,1.5s,mb6.1
PBAR *e*S **S** **11 17 23.5 -1.9**
HIA Hailar 53.41 47 *e*P **P** **11 09 54.1 +0.1**
HIA *e*S **S** **11 17 21.1 -4.9**
HIA pmax pmax
comp=Z,156nm,0.9s
HIA MLR MLR
comp=Z,23μm,20.0s
HIA Hailar 53.41 47 *e*P **P** **11 09 54.0 0.0**
comp=Z,156nm,0.9s,mb5.9
HIA *e*S **S** **11 17 21.1 -4.8**
HIA LR LR
comp=Z,23μm,20.0s,MS6.2
HIA Hailar 53.41 47 *e*P **P** **11 09 54.0 0.0**
comp=Z,156nm,0.9s,mb5.9
KIB El Ksiba 53.42 292 *i* P **P** **11 09 54.0 -0.4**
PMRV Marv??o 53.46 301 *e*P **P** **11 09 54.1 -0.5**
comp=Z,251nm,2.0s,mb5.8
PMRV *e*S **S** **11 17 25.7 -1.3**
PMRV A 11 35 26.5
comp=Z,5μm,18.0s
PMRV Marv??o 53.46 301 *e*P **P** **11 09 54.1 -0.5**
comp=Z,251nm,2.0s,mb5.8
PMRV *e*S **S** **11 17 25.7 -1.3**
comp=Z,5μm,18.0s
MTE Manteigas 53.47 302 *e*P **P** **11 09 54.6 -0.1**
comp=Z,430nm,1.6s,mb6.1
MTE *e*S **S** **11 17 24.5 -2.6**
MTE A 11 34 15.1
comp=Z,8μm,20.0s
MTE Manteigas 53.47 302 *e*P **P** **11 09 54.9 +0.2**
comp=Z,884nm,1.9s,mb6.4
MTE LR LR
comp=Z,5μm,19.0s,MS5.6
MTE Manteigas 53.47 302 *e*P **P** **11 09 54.6 -0.1**
comp=Z,430nm,1.6s,mb6.1
MTE *e*S **S** **11 17 24.5 -2.6**
comp=Z,8μm,20.0s
PCBR Castelo Branco 53.48 301 *e*P **P** **11 09 54.2 -0.5**
comp=Z,321nm,1.5s,mb6.0
PCBR Castelo Branco 53.48 301 *e*P **P** **11 09 54.2 -0.5**
comp=Z,321nm,1.5s,mb6.0
PVRL Vila Real 53.52 303 *e*P **P** **11 09 55.6 +0.6**
comp=Z,397nm,1.4s,mb6.2
PVRL Vila Real 53.52 303 *e*P **P** **11 09 55.6 +0.6**
comp=Z,397nm,1.4s,mb6.2
PESTR Estremoz 53.68 300 *e*P **P** **11 09 55.9 -0.3**
comp=Z,146nm,1.4s,mb5.7
PESTR *e*S **S** **11 17 30.1 +0.1**
PESTR A 11 34 28.9
comp=Z,7μm,17.2s
PESTR Estremoz 53.68 300 *e*P **P** **11 09 55.9 -0.3**
comp=Z,146nm,1.4s,mb5.7
PESTR *e*S **S** **11 17 30.1 +0.1**
comp=Z,7μm,17.2s
PVIS Viseu 53.71 302 *e*P **P** **11 09 56.6 +0.2**
comp=Z,374nm,1.7s,mb6.0
PVIS Viseu 53.71 302 *e*P **P** **11 09 56.6 +0.2**
comp=Z,374nm,1.7s,mb6.0
PCAB Cabril 53.71 303 *e*P **P** **11 09 56.3 -0.1**
comp=Z,267nm,1.6s,mb5.9
PCAB Cabril 53.71 303 *e*P **P** **11 09 56.3 -0.1**
comp=Z,267nm,1.6s,mb5.9
ELOB Lobios 53.72 304 P **P** **11 09 54.9 -1.5**
comp=Z,429nm,1.8s,mb6.1
ELOB Lobios 53.72 304 P **P** **11 09 54.9 -1.5**
comp=Z,429nm,1.8s,mb6.1
EGRO El Granado 53.77 298 P **P** **11 09 55.4 -1.5**
comp=Z,176nm,1.6s,mb5.7
EGRO El Granado 53.77 298 P **P** **11 09 55.4 -1.5**
comp=Z,176nm,1.6s,mb5.7
RTC Rabat Centre 53.84 294 *i* P **P** **11 09 58.0 +0.6**
PVAQ Vaqueiros 53.98 298 *e*P **P** **11 09 58.0 -0.4**
comp=Z,166nm,1.8s,mb5.7
PVAQ *e*S **S** **11 17 31.0 -3.0**
PVAQ Vaqueiros 53.98 298 *e*P **P** **11 09 58.0 -0.4**
comp=Z,166nm,1.8s,mb5.7
PVAQ *e*S **S** **11 17 31.0 -3.0**
STS Santiago 53.99 305 P **P** **11 09 57.3 -1.1**
STS pmax pmax
comp=Z,338nm,1.1s,mb6.2
STS Santiago 53.99 305 P **P** **11 09 57.3 -1.1**
comp=Z,338nm,1.1s,mb6.2
STS Santiago 53.99 305 P **P** **11 09 57.3 -1.1**
comp=Z,338nm,1.1s,mb6.2
SOFL Sornfelli, Far 54.01 329 AMS AMS 11 35 06.6
comp=Z,10μm,21.9s,MS5.9
SOFL Sornfelli, Far 54.01 329 AMS AMS 11 35 06.6
comp=Z,10μm,21.9s
PBEJ Beja 54.01 299 *e*P **P** **11 09 58.3 -0.3**
comp=Z,211nm,1.9s,mb5.8
PBEJ Beja 54.01 299 *e*P **P** **11 09 58.3 -0.3**
comp=Z,211nm,1.9s,mb5.8
EVO Evora 54.05 300 *e*P **P** **11 09 58.6 -0.3**
comp=Z,278nm,1.7s,mb5.9
EVO Evora 54.05 300 *e*P **P** **11 09 58.6 -0.3**
comp=Z,278nm,1.7s,mb5.9
EVOP Sao Brissos 54.14 300 *e*P **P** **11 09 59.5 -0.1**
EVOP AMb AMB 11 10 08.0
comp=Z,284nm,1.9s,mb5.9
EVOP *e*S **S** **11 17 35.5 -0.7**
EVOP *e*S **S** **11 17 35.6 -0.6**
EVOP Sao Brissos 54.14 300 *e*P **P** **11 09 59.5 -0.1**
EVOP *e*S **S** **11 17 35.5 -0.7**
EVOP Sao Brissos 54.14 300 *e*P **P** **11 09 59.5 -0.1**
EVOP *e*S **S** **11 17 35.5 -0.7**
EZAM Zamans 54.16 304 P **P** **11 09 59.5 -0.2**
EZAM pmax pmax
comp=Z,410nm,1.2s,mb6.2
EZAM Zamans 54.16 304 P **P** **11 09 59.5 -0.2**
comp=Z,410nm,1.2s,mb6.2
EZAM Zamans 54.16 304 P **P** **11 09 59.5 -0.2**
comp=Z,410nm,1.2s,mb6.2
PBDV Barranco-do-Ve 54.17 298 *e*P **P** **11 09 58.9 -0.9**
comp=Z,158nm,1.7s,mb5.7
PBDV *e*S **S** **11 17 31.9 -4.7**
PBDV *e*LR LR 11 32 22.1
comp=Z,3μm,31.5s
PBDV Barranco-do-Ve 54.17 298 *e*P **P** **11 09 58.9 -0.9**
comp=Z,158nm,1.7s,mb5.7
PBDV *e*S **S** **11 17 31.9 -4.7**
PTO Porto 54.20 303 *e*P **P** **11 10 00.6 +0.7**
comp=Z,202nm,1.3s,mb5.9
PTO Porto 54.20 303 *e*P **P** **11 10 00.6 +0.7**
comp=Z,202nm,1.3s,mb5.9
PCVE Castro Verde 54.20 298 *e*P **P** **11 09 59.3 -0.7**
comp=Z,218nm,1.4s,mb5.9
PCVE *e*S **S** **11 17 35.1 -1.9**
PCVE Castro Verde 54.20 298 *e*P **P** **11 09 59.3 -0.7**
comp=Z,218nm,1.4s,mb5.9
PCVE *e*S **S** **11 17 35.1 -1.9**
PTOM Tomar 54.22 301 *e*P **P** **11 10 00.3 +0.1**
comp=Z,429nm,1.1s,mb6.3
PTOM Tomar 54.22 301 *e*P **P** **11 10 00.3 +0.1**
comp=Z,429nm,1.1s,mb6.3
EMAZ Mazaricos 54.30 305 P **P** **11 10 00.4 -0.3**
comp=Z,372nm,1.1s,mb6.2
EMAZ Mazaricos 54.30 305 P **P** **11 10 00.4 -0.2**
comp=Z,372nm,1.1s,mb6.2
MESJ Messejana 54.31 299 *e*P **P** **11 10 00.3 -0.5**
comp=Z,160nm,1.8s,mb5.7
MESJ *e*S **S** **11 17 38.3 -0.2**
MESJ Messejana 54.31 299 *e*P **P** **11 10 00.3 -0.5**
MESJ AMb AMB 11 10 08.8
comp=Z,160nm,1.8s,mb5.7
MESJ *e*S **S** **11 17 38.3 -0.2**
MESJ *e*S **S** **11 17 38.4 -0.1**
MESJ Messejana 54.31 299 *e*P **P** **11 10 00.3 -0.5**
MESJ *e*S **S** **11 17 38.4 -0.1**
MESJ Messejana 54.31 299 *e*P **P** **11 10 00.3 -0.5**
MESJ *e*S **S** **11 17 38.3 -0.2**
NJ2 Nanjing 54.48 68 *e*P **P** **11 10 02.6 +0.5**
NJ2 pP pP 11 10 08.8 +2.8
NJ2 sP sP 11 10 10.2 +2.8
NJ2 PP PP 11 12 07.0 +2.7
NJ2 S **S** **11 17 39.4 -1.5**
NJ2 pmax pmax
comp=Z,120nm,1.0s,mb5.8
NJ2 pmax pmax
comp=Z,2μm,6.3s
NJ2 LR LR
comp=N,9μm,16.1s,MS6.2
NJ2 LR LR
comp=E,13μm,14.4s,MS6.2
NJ2 LR LR
comp=Z,9μm,17.5s,MS5.9
SPITS Spitsbergen Ar 54.50 351 LR LR 11 38 14.9
comp=Z,16μm,18.7s,MS6.1,baz=145,slow=42
MORF Marmelete 54.73 298 *e*P **P** **11 10 03.1 -0.8**
comp=Z,179nm,1.6s,mb5.8
MORF *e*S **S** **11 17 40.6 -3.6**
MORF A 11 36 40.6
comp=Z,4μm,20.0s
MORF Marmelete 54.73 298 *e*P **P** **11 10 03.2 -0.7**
MORF *e*S **S** **11 17 43.3 -0.9**
MORF Marmelete 54.73 298 *e*P **P** **11 10 03.1 -0.8**
comp=Z,179nm,1.6s,mb5.8
MORF *e*S **S** **11 17 40.6 -3.6**
comp=Z,4μm,20.0s
PTEO Sao Teotonio 54.75 298 *e*P **P** **11 10 03.7 -0.3**
comp=Z,230nm,1.8s,mb5.9
PTEO Sao Teotonio 54.75 298 *e*P **P** **11 10 03.7 -0.3**
comp=Z,230nm,1.8s,mb5.9
MSNA Messina 54.85 210 *e*P **P** **11 10 06.6 +1.9**
MSNA AMB AMB 11 10 11.8
comp=Z,267nm,1.0s,mb6.2
PFVI Vila Bisbo 54.89 298 *e*P **P** **11 10 04.8 -0.3**
comp=Z,370nm,2.1s,mb6.0
PFVI *e*S **S** **11 17 44.5 -1.9**
PFVI A 11 36 23.1
comp=Z,4μm,26.4s
PFVI Vila Bisbo 54.89 298 P **P** **11 10 04.9 -0.2**
PFVI Vila Bisbo 54.89 298 *e*P **P** **11 10 04.8 -0.3**
comp=Z,370nm,2.1s,mb6.0
PFVI *e*S **S** **11 17 44.5 -1.9**
comp=Z,4μm,26.4s
LIS Lisbon 54.91 300 *e*P **P** **11 10 05.2 0.0**
comp=Z,386nm,1.7s,mb6.2
LIS *e*S **S** **11 17 45.7 -0.9**
LIS Lisbon 54.91 300 *e*P **P** **11 10 05.2 +0.1**
LIS AMb AMB 11 10 13.9
comp=Z,386nm,1.7s,mb6.2
LIS *e*S **S** **11 17 45.7 -0.9**
LIS *e*S **S** **11 17 45.8 -0.8**
LIS Lisbon 54.91 300 *e*P **P** **11 10 05.2 0.0**
LIS *e*S **S** **11 17 45.8 -0.8**
LIS Lisbon 54.91 300 *e*P **P** **11 10 05.2 0.0**
comp=Z,386nm,1.7s,mb6.2
LIS *e*S **S** **11 17 45.7 -0.9**
PMAFR Mafra 54.98 300 *e*P **P** **11 10 05.7 0.0**
comp=Z,409nm,1.6s,mb6.2
PMAFR A 11 35 06.6
comp=Z,4μm,18.4s
PMAFR Mafra 54.98 300 *e*P **P** **11 10 05.7 0.0**
comp=Z,4μm,18.4s
DL2 Dalian 55.51 60 ⇑P **P** **11 10 09.5 0.0**
DL2 S **S** **11 17 53.3 -1.3**
DL2 pmax pmax
comp=Z,150nm,1.3s,mb5.9
DL2 pmax pmax
comp=Z,1μm,5.5s
DL2 LR LR
comp=N,9μm,24.7s,MS5.8
DL2 LR LR
comp=E,3μm,22.2s,MS5.8
DL2 LR LR
comp=Z,7μm,15.9s
COCO West Island 55.55 129 *e*P **P** **11 10 17.0 +7.0**
COCO MLR MLR
comp=Z,5μm,19.0s,MS5.6
KBS Kingsbay 55.66 351 *e*P **P** **11 10 07.8 -2.2**
KBS AMb AMB 11 10 20.7
comp=Z,213nm,1.0s,mb6.1
KBS *e*S **S** **11 17 56.8 +1.4**
KBS *e*SS SS 11 21 51.1 +11
KBS AMS AMS 11 38 46.5
comp=Z,18μm,17.1s,MS6.2
KBS Kingsbay 55.66 351 *c i*P **P** **11 10 09.3 -0.6**
KBS pmax pmax
comp=Z,289nm,1.7s,mb6.0
KBS Kingsbay 55.66 351 *e*P **P** **11 10 09.6 -0.3**
KBS LR LR
comp=Z,17μm,19.0s,MS6.1
KBS Kingsbay 55.66 351 *e*P **P** **11 10 09.6 -0.3**
KBS *e*S **S** **11 17 56.8 +1.3**
SNR=24
QZH Quanzhou 55.99 77 P **P** **11 10 14.1 +1.0**
QZH S **S** **11 17 59.9 -1.4**
QZH pmax pmax
comp=Z,400nm,1.0s,mb6.4
QZH pmax pmax
comp=Z,5μm,5.0s
QZH LR LR
comp=N,10μm,13.7s,MS6.4
QZH LR LR
comp=E,19μm,15.0s,MS6.4
QZH LR LR
comp=Z,26μm,18.4s,MS6.3
SNY Shenyang 56.58 56 ⇑P **P** **11 10 16.4 -0.7**
SNY S **S** **11 18 05.8 -3.0**
SNY pmax pmax
comp=Z,44nm,1.0s,mb5.4
SNY pmax pmax
comp=Z,2μm,4.7s
SNY LR LR
comp=N,21μm,16.2s,MS6.3
SNY LR LR
comp=E,4μm,16.2s,MS6.3
SNY LR LR
comp=Z,18μm,14.5s,MS6.3
JMIC Jan Mayen 56.62 339 *e*P **P** **11 10 17.7 +0.8**
JMIC AMb AMB 11 10 29.9
comp=Z,190nm,2.7s,mb5.7
JMIC *e*S **S** **11 18 09.5 +1.0**
JMIC AMS AMS 11 33 17.2
comp=Z,6μm,22.1s,MS5.7
JMIC Jan Mayen 56.62 339 P **P** **11 10 16.5 -0.4**
comp=Z,56nm,0.9s,mb5.6,baz=162,slow=20,SNR=2.1
JMIC Jan Mayen 56.62 339 P **P** **11 10 16.5 -0.4**
JMIC *e*S **S** **11 18 09.5 +1.0**
SNR=24
SSE Sheshan 56.63 69 P **P** **11 10 18.0 +0.4**
SSE S **S** **11 18 05.3 -4.4**
SSE pmax pmax
comp=Z,74nm,0.7s,mb5.8
SSE pmax pmax
comp=Z,1μm,5.1s
SSE LR LR
comp=N,14μm,18.5s,MS6.1
SSE LR LR
comp=E,4μm,18.8s,MS6.1
SSE LR LR
comp=Z,11μm,18.9s,MS6.0
CLNS Chul'man 56.64 38 *e*P **P** **11 10 17.4 +0.1**
CLNS *e* 11 11 11.1
CLNS *e* 11 12 24.6
CLNS *e*PPP 11 13 41.7
CLNS *e*S **S** **11 18 11.9 +2.9**
CLNS pmax pmax
comp=Z,183nm,1.2s,mb6.0
CLNS pmax pmax
comp=E,110nm,1.3s
CLNS pmax pmax
comp=N,64nm,1.3s
CLNS pmax pmax
comp=Z,38nm,1.4s,mb5.2
CLNS pmax pmax
comp=N,45nm,1.3s
CLNS pmax pmax
comp=E,35nm,1.3s
CLNS smax
comp=N,1μm,12.3s
CLNS smax
comp=E,788nm,11.3s
CLNS MLR MLR
comp=N,6μm,13.0s,MS6.2
CLNS MLR MLR
comp=Z,15μm,14.0s,MS6.2
CLNS MLR MLR
comp=E,12μm,15.0s,MS6.2
CLNS Chul'man 56.64 38 *e*P **P** **11 10 17.4 +0.1**
comp=E,64nm,1.3s,mb5.5
CLNS Chul'man 56.64 38 *e*PcP PcP 11 11 11.1 -2.4
comp=E,38nm,1.4s
YBT Youssef Ben Ta 56.91 290 *i* P **P** **11 10 20.0 +0.4**
CN2 Changchun 57.69 53 *e*P **P** **11 10 24.1 -0.8**
CN2 *e*S **S** **11 18 12.6 -11**
CN2 pmax pmax
comp=Z,100nm,1.1s,mb5.8
CN2 pmax pmax
comp=Z,1μm,3.0s
CN2 LR LR
comp=N,18μm,15.0s,MS6.3
CN2 LR LR
comp=E,5μm,15.0s,MS6.3
CN2 LR LR
comp=Z,6μm,14.0s,MS5.9
KSM Kuching 57.94 106 P **P** **11 10 28.3 +1.2**
KSM Kuching 57.94 106 *e*P **P** **11 10 26.8 -0.3**
comp=Z,103nm,1.2s,mb5.7
KSM LR LR
comp=Z,7μm,22.0s,MS5.7
KSM Kuching 57.94 106 P **P** **11 10 30.4 +3.3**
comp=Z,2μmcomp=Z,83nm,1.2s,mb5.6
KSM Kuching 57.94 106 *e*P **P** **11 10 26.8 -0.3**
comp=Z,103nm,1.2s,mb5.7
TPUB Ta-pu 58.25 78 *e*P **P** **11 10 30.1 +0.9**
comp=Z,477nm,1.3s,mb6.4
TPUB Ta-pu 58.25 78 *e*P **P** **11 10 30.1 +0.9**
comp=Z,477nm,1.3s,mb6.4
SSLB Suanglung 58.38 77 *e*P **P** **11 10 32.5 +2.4**
YHNB Yeheng 58.49 76 *e*P **P** **11 10 32.3 +1.5**
comp=Z,1μm,1.1s,mb6.9
YHNB LR LR
comp=Z,10μm,19.0s,MS6.0
YHNB Yeheng 58.49 76 *e*P **P** **11 10 32.3 +1.5**
comp=Z,1μm,1.1s,mb6.9
TATO Taipei 58.49 76 *e*P **P** **11 10 33.5 +2.7**
TATO LR LR
comp=Z,6μm,19.0s,MS5.7
SLR Silverton 58.57 209 *e*P **P** **11 10 32.6 +1.4**
SLR AMB AMB 11 10 36.6
comp=Z,279nm,3.1s
POGA Pongola 58.66 205 ⇑*i*P **P** **11 10 32.3 +0.6**
POGA AMB AMB 11 10 35.2
comp=Z,477nm,0.9s,mb6.5
TWG Pinlang 58.78 78 *e*P **P** **11 10 33.4 +0.5**
comp=Z,720nm,1.4s,mb6.5
TWG Pinlang 58.78 78 *e*P **P** **11 10 33.4 +0.5**
comp=Z,720nm,1.4s,mb6.5
YULB Yu-li 58.80 78 *e*P **P** **11 10 32.6 -0.4**
comp=Z,433nm,1.3s,mb6.3
YULB Yu-li 58.80 78 *e*P **P** **11 10 32.6 -0.4**
comp=Z,433nm,1.3s,mb6.3
NACB Ninganchiao 58.83 77 *e*P **P** **11 10 34.8 +1.6**
comp=Z,389nm,1.1s,mb6.3
NACB Ninganchiao 58.83 77 *e*P **P** **11 10 34.8 +1.6**
comp=Z,389nm,1.1s,mb6.3
TSUM Tsumeb 58.87 223 P **P** **11 10 34.4 +1.1**

comp=Z,128nm,1.0s,mb5.9,baz=25,slow=7.3,SNR=45
TSUM Tsumeb 58.87 223 *e*P **P 11 10 34.2 +0.9**
comp=Z,36nm,1.0s,mb5.3
TSUM LR LR
comp=Z,18μm,20.0s,MS6.2
TSUM Tsumeb 58.87 223 *e*P **P 11 10 34.2 +0.9**
comp=Z,36nm,1.0s,mb5.3
SBUM Sibu 59.10 104 P **P 11 10 36.5 +1.3**
SBUM Sibu 59.10 104 P **P 11 10 35.2 0.0**
comp=Z,2μmcomp=Z,70nm,1.6s,mb5.4
ERPM east rand prop 59.12 209⇑*i*P **P 11 10 35.8 +0.8**
ERPM AMB AMB 11 10 38.3
comp=Z,362nm,1.1s,mb6.3
LBTB Lobatse 59.18 212 P **P 11 10 36.7 +1.3**
comp=Z,246nm,0.8s,mb6.3,baz=40,slow=6.7,SNR=112
LBTB Lobatse 59.18 212 P **P 11 10 36.7 +1.3**
LBTB pmax pmax
comp=Z,246nm,0.8s,mb6.3
LBTB Lobatse 59.18 212⇑*i*P **P 11 10 36.6 +1.2**
comp=Z,376nm,1.0s,mb6.4
LBTB LR LR
comp=Z,8μm,19.0s,MS5.9
LBTB Lobatse 59.18 212⇑*i*P **P 11 10 36.6 +1.2**
comp=Z,376nm,1.0s,mb6.4
YAK Yakutsk 59.18 32*c i*P **P 11 10 33.2 -1.8**
YAK *e**PP pP 11 10 45.7 +6.9
YAK *e* 11 11 22.1
YAK *e* 11 12 43.7
YAK *e*S **S 11 18 35.8 -6.3**
YAK *e*S **S 11 18 36.5 -5.6**
YAK *e* 11 20 20.7
YAK *e*SS SS 11 22 30.6 -5.4
YAK pmax pmax
comp=Z,253nm,1.4s,mb6.1
YAK pmax pmax
comp=N,61nm,1.5s
YAK pmax pmax
comp=E,171nm,1.5s
YAK pmax pmax
comp=Z,61nm,1.2s,mb5.5
YAK pmax pmax
comp=N,62nm,1.4s
YAK pmax pmax
comp=E,40nm,1.3s
YAK smax
comp=N,502nm,3.0s
YAK MLR MLR
comp=Z,16μm,12.0s,MS6.4
YAK MLR MLR
comp=N,5μm,12.0s,MS6.2
YAK MLR MLR
comp=E,10μm,11.0s,MS6.2
YAK Yakutsk 59.18 32 *e*P **P 11 10 33.1 -1.9**
comp=E,535nm,1.3s,mb6.4
YAK *e*S **S 11 18 38.9 -3.2**
YAK LR LR
comp=Z,14μm,19.0s,MS6.1
YAK Yakutsk 59.18 32 *i* P **P 11 10 33.2 -1.8**
comp=Z,253nm,1.4s,mb6.1
YAK Yakutsk 59.18 32 *e*PcP PcP 11 11 22.1 -1.3
KSR Koster 59.29 210 *e*P **P 11 10 37.5 +1.4**
KSR AMB AMB 11 10 42.9
comp=Z,91nm,1.0s,mb5.8
KLOF Kloof 59.40 210 *e*P **P 11 10 38.0 +1.1**
KLOF AMB AMB 11 10 43.9
comp=Z,235nm,0.9s,mb6.2
BTM Bintulu 59.49 103 P **P 11 10 39.3 +1.4**
TIXI Tiksi 59.50 21*c i*P **P 11 10 35.7 -1.3**
TIXI *e* 11 12 48.3
TIXI *e*S **S 11 18 43.5 -2.5**
TIXI pmax pmax
comp=Z,318nm,1.4s,mb6.2
TIXI pmax pmax
comp=Z,865nm,7.4s
TIXI pmax pmax
comp=N,44nm,1.5s
TIXI pmax pmax
comp=E,88nm,1.4s
TIXI MLR MLR
comp=N,8μm,11.0s,MS6.2
TIXI MLR MLR
comp=Z,16μm,16.0s,MS6.2
TIXI MLR MLR
comp=E,8μm,16.0s,MS6.2
TIXI Tiksi 59.50 21 *e*P **P 11 10 35.5 -1.5**
comp=E,470nm,1.6s,mb6.3
TIXI LR LR
comp=Z,15μm,21.0s,MS6.1
TIXI Tiksi 59.50 21 *i* P **P 11 10 35.7 -1.3**
comp=Z,44nm,1.5s,mb5.3
TIXI *e*S **S 11 18 43.5 -2.5**
comp=Z,16μm,16.0s
INCN Inchon 59.64 61 *e*P **P 11 10 38.2 -0.5**
INCN LR LR
comp=Z,14μm,19.0s,MS6.1
INCN Inchon 59.64 61 *e*P **P 11 10 38.2 -0.4**
PRYS Parys 60.01 209⇑*i*P **P 11 10 41.5 +0.4**
PRYS AMB AMB 11 10 47.2
comp=Z,191nm,1.1s,mb6.0
EFAM Famara 60.48 290 P **P 11 10 43.8 -0.8**
comp=Z,20nm,1.3s,mb5.0
EFAM Famara 60.48 290 P **P 11 10 43.8 -0.7**
comp=Z,20nm,1.3s,mb5.0
MDJ Mudanjiang 60.52 52 P **P 11 10 43.2 -1.3**
MDJ pP pP 11 10 46.3 -2.1
MDJ PP PP 11 12 56.1 -1.6
MDJ ScP ScP 11 15 29.6 -0.7
MDJ PcS PcS 11 15 30.8 -0.6
MDJ S **S 11 18 57.9 -2.0**
MDJ LR LR
comp=N,11μm,13.7s,MS6.3
MDJ LR LR
comp=E,12μm,15.1s,MS6.3
MDJ LR LR
comp=Z,14μm,17.8s,MS6.2
MDJ Mudanjiang 60.52 52 *e*P **P 11 10 43.2 -1.3**
comp=Z,159nm,1.4s,mb6.0
MDJ *e*PP PP 11 13 02.3 +4.6
MDJ LR LR
comp=Z,11μm,19.0s,MS6.0
MDJ Mudanjiang 60.52 52 *e*P **P 11 10 43.2 -1.3**
comp=Z,159nm,1.4s,mb6.0
DAG Danmarks Havn 60.59 345⇑*i*P **P 11 10 43.8 -0.7**
DAG pmax pmax
comp=Z,48nm,0.8s,mb5.7
DAG MLR MLR
comp=Z,6μm,18.0s,MS5.8
DAG Danmarks Havn 60.59 345⇑*i*P **P 11 10 43.8 -0.7**
comp=Z,477nm,0.8s,mb6.7
DAG
comp=Z,7μm,18.0s
KSRS Korea Array 60.65 60 P **P 11 10 44.7 -0.9**
comp=Z,59nm,0.6s,mb5.9,baz=275,slow=7.2,SNR=63
KSRS PKP2bc 11 40 11.7
comp=Z,4.4nm,1.0s,baz=128,slow=3.0,SNR=8.3
KSRS LR LR 11 41 32.5
comp=Z,11μm,18.3s,MS6.0,baz=278,slow=41
KSRS Korea Array 60.65 60 P **P 11 10 44.7 -0.9**
comp=Z,11μm,18.3s
BORG Borgarnes 60.66 331 P **P 11 10 45.8 +0.7**
comp=Z,19nm,0.7s,mb5.3,baz=174,slow=1.6,SNR=4.9
BORG Borgarnes 60.66 331 *e*P **P 11 10 46.0 +0.9**
BORG pmax pmax
comp=Z,286nm,1.5s
BORG MLR MLR
comp=Z,8μm,21.0s
BORG Borgarnes 60.66 331 *e*P **P 11 10 46.0 +0.9**
comp=Z,286nm,1.5s,mb6.2
BORG LR LR
comp=Z,8μm,21.0s,MS5.8
BORG Borgarnes 60.66 331 *e*P **P 11 10 46.0 +0.9**
comp=Z,8μm,21.0s
DBIC Dimbokro 60.89 262 P **P 11 10 47.3 -0.2**
comp=Z,209nm,0.8s,mb6.3,baz=43,slow=7.7,SNR=56
DBIC S **S 11 19 04.0 -1.5**
comp=Z,9.1nm,0.9s,baz=180,slow=19,SNR=3.6
DBIC LR LR 11 38 15.3
comp=Z,11μm,18.9s,MS6.0,baz=41,slow=37
DBIC Dimbokro 60.89 262 P **P 11 10 47.3 -0.2**
DBIC S **S 11 19 04.0 -1.6**
DBIC pmax pmax
comp=Z,209nm,0.8s
DBIC smax
comp=N,9.0nm,0.9s
DBIC MLR MLR
comp=Z,11μm,19.0s
DBIC Dimbokro 60.89 262 *e*P **P 11 10 47.2 -0.3**
comp=Z,213nm,0.8s,mb6.3
DBIC LR LR
comp=Z,12μm,19.0s,MS6.1
DBIC Dimbokro 60.89 262 *e*P **P 11 10 47.2 -0.3**
comp=Z,213nm,0.8s,mb6.3
DBIC S **S 11 19 04.0 -1.6**
comp=Z,11μm,19.0s
XMIS Christmas Isla 60.90 121 P **P 11 10 53.9 +6.4**
comp=Z,1μm,1.7s,mb6.7
KKM Kota Kinabalu 60.90 98 P **P 11 10 48.2 +0.6**
KKM Kota Kinabalu 60.90 98 *e*P **P 11 10 47.3 -0.2**
comp=Z,191nm,1.3s,mb6.1
KKM LR LR
comp=Z,5μm,21.0s,MS5.6
KKM Kota Kinabalu 60.90 98 P **P 11 10 47.1 -0.5**
comp=Z,4μmcomp=Z,171nm,2.4s,mb5.8
KKM Kota Kinabalu 60.90 98 *e*P **P 11 10 47.3 -0.3**
comp=Z,191nm,1.3s,mb6.1
KIC Kosan Boka 60.93 262 *e*P **P 11 10 47.0 -0.8**
comp=Z,397nm,0.8s,mb6.6
KIC Kosan Boka 60.93 262 *e*P **P 11 10 47.0 -0.8**
comp=Z,397nm,0.8s,mb6.6
SCO Scoresbysund 60.95 338 *i* P **P 11 10 49.4 +2.4**
SCO pmax pmax
comp=Z,52nm,1.0s,mb5.6
SCO MLR MLR
comp=Z,8μm,22.0s,MS5.8
SCO Scoresbysund 60.95 338 *i* P **P 11 10 49.4 +2.4**
comp=Z,52nm,1.0s,mb5.6
SCO
comp=Z,8μm,22.0s
SCO Scoresbysund 60.95 338 *i* P **P 11 10 49.4 +2.4**
comp=Z,8μm,22.0s
TIC Toumodi 61.05 263 *e*P **P 11 10 47.8 -0.8**
comp=Z,699nm,1.2s,mb6.7
TIC Toumodi 61.05 263 *e*P **P 11 10 47.8 -0.8**
TIC pmax pmax
comp=Z,699nm,1.2s,mb6.7
TIC Toumodi 61.05 263 *e*P **P 11 10 47.8 -0.8**
comp=Z,699nm,1.2s,mb6.7
KDM Kudat 61.06 97 P **P 11 10 50.5 +1.8**
SWZ Schweizer 61.14 211⇑*i*P **P 11 10 49.6 +0.8**
SWZ AMB AMB 11 10 52.5
comp=Z,359nm,0.9s,mb6.5
CFTV Fuerteventura 61.15 289 P **P 11 10 48.3 -0.8**
comp=Z,140nm,0.8s,mb6.1
CFTV Fuerteventura 61.15 289 P **P 11 10 48.3 -0.8**
comp=Z,140nm,0.8s,mb6.1
LIC Lamto 61.25 262 *e*P **P 11 10 49.0 -0.9**
comp=Z,613nm,0.8s,mb6.8
LIC Lamto 61.25 262 *e*P **P 11 10 49.0 -0.9**
comp=Z,613nm,0.8s,mb6.8
KLR Kul'dur 61.25 46⇓*i*P **P 11 10 44.2 -5.2**
KLR *e*S **S 11 19 04.5 -4.7**
KLR *e* 11 20 29.5
KLR pmax pmax
comp=E,160nm,1.4s
KLR pmax pmax
comp=Z,380nm,1.4s,mb6.3
KLR pmax pmax
comp=E,1μm,11.0s
KLR pmax pmax
comp=Z,3μm,11.0s
KLR smax
comp=N,1μm,8.5s
KLR smax
comp=E,2μm,8.5s
KLR MLR MLR
comp=E,10μm,13.5s
KLR MLR MLR
comp=Z,6μm,13.5s,MS5.9
PMPS Porto Santo 61.76 295 *e*P **P 11 10 53.1 0.0**
comp=Z,544nm,1.7s,mb6.4
PMPS Porto Santo 61.76 295 *e*P **P 11 10 53.1 0.0**
comp=Z,544nm,1.7s,mb6.4
SDKM Sandakan 61.95 98 P **P 11 10 54.3 -0.4**
PMAR Madeira 62.32 295 *e*P **P 11 10 57.0 +0.1**
comp=Z,1μm,1.6s,mb6.7
PMAR Madeira 62.32 295 *e*P **P 11 10 57.0 +0.1**
comp=Z,1μm,1.6s,mb6.7
FUL Funchal 62.33 295 *e*P **P 11 10 57.2 +0.2**
comp=Z,520nm,1.8s,mb6.4
FUL Funchal 62.33 295 *e*P **P 11 10 57.2 +0.2**
comp=Z,520nm,1.8s,mb6.4
KSD Kokstad 62.34 206⇑*i*P **P 11 10 58.0 +1.2**
KSD AMB AMB 11 10 58.7
comp=Z,670nm,4.8s
BOSA Boshof 62.40 210 P **P 11 10 58.0 +0.7**
comp=Z,176nm,0.8s,mb6.2,baz=33,slow=7.2,SNR=106
BOSA LR LR 11 36 45.0
comp=Z,9μm,21.9s,MS5.9,baz=38,slow=35
BOSA Boshof 62.40 210 *e*P **P 11 10 57.4 +0.1**
BOSA pmax pmax
comp=Z,190nm,0.8s,mb6.3
BOSA MLR MLR
comp=Z,9μm,21.0s,MS5.9
BOSA Boshof 62.40 210 *e*P **P 11 10 57.4 +0.1**
comp=Z,190nm,0.8s,mb6.3
BOSA LR LR
comp=Z,9μm,21.0s,MS5.9
BOSA Boshof 62.40 210 *e*P **P 11 10 57.4 +0.1**
comp=Z,9μm,21.0s
EOSO Osorio 62.49 289 P **P 11 10 57.2 -0.9**
comp=Z,440nm,1.3s,mb6.4
EOSO Osorio 62.49 289 P **P 11 10 57.2 -0.9**
comp=Z,440nm,1.3s,mb6.4
EBAJ Bajamar 63.02 290 P **P 11 11 00.6 -1.0**
comp=Z,340nm,0.9s,mb6.5
EBAJ Bajamar 63.02 290 P **P 11 11 00.6 -1.0**
comp=Z,340nm,0.9s,mb6.5
TSM Tawau 63.17 99 P **P 11 11 03.8 +1.0**
MYLDM Lahad Datu 63.32 98 P **P 11 11 04.9 +1.1**
MYLDM Lahad Datu 63.32 98 P **P 11 11 04.8 +1.0**
comp=Z,3μmcomp=Z,226nm,1.4s,mb6.1
CCAN Las Canadas 63.33 290 P **P 11 11 03.3 -0.4**
comp=Z,86nm,0.8s,mb5.9
CCAN Las Canadas 63.33 290 P **P 11 11 03.3 -0.4**
comp=Z,86nm,0.8s,mb5.9
HABR Khabarovsk 63.53 47*de*P **P 11 11 04.4 -0.3**
HABR *SP sP 11 11 09.7 -0.3
HABR 11 11 39.1
HABR 11 13 21.7
HABR *e*S **S 11 19 37.5 -0.4**
HABR 11 20 56.0
HABR *e*SS SS 11 23 43.6 -1.0
HABR pmax pmax
comp=Z,722nm,3.0s
HABR MLR MLR
comp=Z,8μm,13.0s,MS6.1
HABR Khabarovsk 63.53 47 *e*P **P 11 11 04.4 -0.3**
comp=Z,722nm,3.0s
HABR Khabarovsk 63.53 47 PcP PcP 11 11 39.1 -2.1
HABR *e*S **S 11 19 37.5 -0.4**
HABR ScS ScS 11 20 56.0 -1.9
JOW Kunigami 63.76 72 *e*P **P 11 11 06.4 -0.2**
comp=Z,120nm,1.4s,mb5.7
JOW Kunigami 63.76 72 *e*P **P 11 11 06.4 -0.2**
comp=Z,120nm,1.4s,mb5.7
HVD Gariep Dam 64.00 209⇑*i*P **P 11 11 08.7 +0.8**
HVD AMB AMB 11 11 12.3
comp=Z,288nm,1.1s,mb6.2
JNU Nakatsue 64.07 64 *e*P **P 11 11 08.5 0.0**
comp=Z,39nm,1.0s,mb5.4
JNU *e*S **S 11 19 45.2 +0.1**
JNU Nakatsue 64.07 64 *e*P **P 11 11 08.5 0.0**
comp=Z,39nm,1.0s,mb5.4
JNU *e*S **S 11 19 45.2 +0.1**
UPI Upington 64.09 214⇑*e*P **P 11 11 09.5 +1.0**
UPI AMB AMB 11 11 09.8
comp=Z,170nm,1.5s,mb5.8
PKA Prieska 64.45 212⇑*i*P **P 11 11 11.4 +0.5**
PKA AMB AMB 11 11 12.0
comp=Z,75nm,1.5s,mb5.5
CHIE El Hierro 64.62 290 P **P 11 11 11.7 -0.6**
comp=Z,54nm,0.9s,mb5.6
CHIE El Hierro 64.62 290 P **P 11 11 11.6 -0.6**
comp=Z,54nm,0.9s,mb5.6
SOE Somerset East 65.80 208⇑*i*P **P 11 11 21.1 +1.6**
SOE AMB AMB 11 11 23.6
comp=Z,387nm,0.9s,mb6.4
GRM Grahamstown 65.93 207⇑*i*P **P 11 11 21.5 +1.1**
GRM AMB AMB 11 11 26.7
comp=Z,534nm,0.9s,mb6.6
SUMG Summit 65.98 341 *e*P **P 11 11 20.2 0.0**
comp=Z,330nm,1.0s,mb6.3
SUMG *e*PP PP 11 13 46.5 +1.5
SUMG Summit 65.98 341⇑*i*P **P 11 11 21.0 +0.8**
comp=Z,216nm,1.0s,mb6.1
SUMG Summit 65.98 341 *e*P **P 11 11 20.2 0.0**
comp=Z,330nm,1.0s,mb6.3
SUMG Summit 65.98 341 *e*PP PP 11 13 46.5 +1.4
ALE Alert 67.13 353 P **P 11 11 27.0 -0.5**
comp=Z,980nm,1.5s,mb6.6,SNR=21
KOMG Komaggas 67.17 216⇑*i*P **P 11 11 29.6 +1.2**
KOMG AMB AMB 11 11 38.7
comp=Z,179nm,1.3s,mb5.9
CVNA Calvinia 67.38 213⇑*i*P **P 11 11 30.5 +0.8**
CVNA AMB AMB 11 11 38.4
comp=Z,298nm,3.0s
BART Pico Bartolome 67.41 302 *e*P **P 11 11 29.8 -0.2**
comp=Z,279nm,1.3s,mb6.1
BART Pico Bartolome 67.41 302 *e*P **P 11 11 29.8 -0.2**
comp=Z,279nm,1.3s,mb6.1
PSMN Pico do Norte, 67.56 301 *e*P **P 11 11 30.7 -0.3**
PSMN Pico do Norte, 67.56 301 *e*P **P 11 11 30.7 -0.3**
PSMA Santa Maria 67.61 301 *e*P **P 11 11 31.1 -0.2**
comp=Z,292nm,1.5s,mb6.1
SUR Sutherland 67.62 212 P **P 11 11 32.7 +1.5**
comp=Z,168nm,1.0s,mb6.0,baz=28,slow=4.8,SNR=18
SUR Sutherland 67.62 212 *e*P **P 11 11 32.0 +0.8**
comp=Z,184nm,1.0s,mb6.1
SUR LR LR
comp=Z,6μm,19.0s,MS5.8
SUR Sutherland 67.62 212 P **P 11 11 32.7 +1.5**
comp=Z,1μm,1.1s,mb6.8,SNR=9.8
SUR Sutherland 67.62 212 *e*P **P 11 11 32.0 +0.8**
comp=Z,184nm,1.0s,mb6.1
CMLA Cha da Macela 67.69 302 *e*P **P 11 11 32.4 +0.7**
comp=Z,362nm,1.7s,mb6.1
CMLA Cha da Macela 67.69 302 PFAKE 11 11 40.0 +8.3
CMLA LR LR
comp=Z,4μm,20.0s,MS5.6
CMLA Cha da Macela 67.69 302 *e*P **P 11 11 32.4 +0.7**
comp=Z,362nm,1.7s,mb6.1
PDA Ponta Delgada 67.80 302 *e*P **P 11 11 33.9 +1.5**
PDA Ponta Delgada 67.80 302 *e*P **P 11 11 33.9 +1.5**
BBTS Babate 67.99 276 P **P 11 11 34.0 0.0**
comp=Z,596nm,0.7s,mb6.7,baz=68,slow=0.8,SNR=50
BBTS Babate 67.99 276 P **P 11 11 34.0 0.0**
ADH Angra Heroismo 68.70 303 *e*P **P 11 11 38.6 +0.5**
comp=Z,326nm,1.4s,mb6.1
ADH Angra Heroismo 68.70 303 *e*P **P 11 11 38.6 +0.5**
comp=Z,326nm,1.4s,mb6.1
DAV Davao City (W) 68.78 93 P **P 11 11 39.5 +0.6**
comp=Z,171nm,0.4s,mb6.3,baz=233,slow=5.1,SNR=2.9
DAV Davao City (W) 68.78 93 P **P 11 11 39.5 +0.6**
DAV LR LR
comp=Z,5μm,20.0s,MS5.7
DAV Davao City (W) 68.78 93⇑*e*P **P 11 11 38.0 -0.9**
DAV Davao City (W) 68.78 93 P **P 11 11 39.5 +0.6**
MAJO Matsushiro 68.83 59 *e*P **P 11 11 37.1 -1.8**
MAJO pmax pmax
comp=Z,72nm,1.0s,mb5.6
MAJO MLR MLR
comp=Z,8μm,20.0s,MS5.9
MAJO Matsushiro 68.83 59 *e*P **P 11 11 37.1 -1.8**
comp=Z,72nm,1.0s,mb5.6
MAJO LR LR
comp=Z,8μm,20.0s,MS5.9
MAJO Matsushiro 68.83 59 *e*P **P 11 11 37.1 -1.8**
comp=Z,8μm,20.0s
MAT Matsushiro 68.83 59 P **P 11 11 37.4 -1.5**
MAT S S 11 20 41.0 -1.7
MJAR Matsushiro Arr 68.83 59 P **P 11 11 37.9 -1.0**
comp=Z,22nm,0.9s,mb5.1,baz=281,slow=7.9,SNR=21
MJAR PKPPKP 11 39 54.1
comp=Z,6.3nm,1.1s,baz=161,slow=2.3,SNR=7.3
MJAR LR LR 11 46 06.1
comp=Z,8μm,20.2s,MS5.9,baz=295,slow=40
MJAR Matsushiro Arr 68.83 59 P **P 11 11 37.9 -1.0**
comp=Z,8μm,20.2s
YSS Yuzh-Sakhalins 68.94 47*αe*P **P 11 11 38.0 -1.4**
YSS *e* 11 11 49.0
YSS *e* 11 14 14.0
YSS *e*PPP 11 15 46.0
YSS *e*S S 11 20 38.0 -5.7
YSS *e*PPS 11 21 14.0
YSS *e*SS SS 11 25 04.0 -4.7
YSS pmax pmax
comp=Z,350nm,1.1s,mb6.2
YSS pmax pmax
comp=N,50nm,0.9s
YSS pmax pmax
comp=E,160nm,0.9s
YSS pmax pmax
comp=Z,2μm,5.0s
YSS pmax pmax
comp=E,1μm,4.0s
YSS MLR MLR
comp=Z,11μm,13.0s,MS6.3
YSS MLR MLR
comp=N,9μm,14.0s,MS6.3
YSS MLR MLR
comp=E,8μm,14.0s,MS6.3
YSS Yuzh-Sakhalins 68.94 47 *e*P **P 11 11 38.0 -1.4**
comp=E,323nm,0.9s,mb6.2
YSS LR LR
comp=Z,4μm,19.0s,MS5.7
YSS Yuzh-Sakhalins 68.94 47 *e*P **P 11 11 38.0 -1.4**
comp=Z,2μm,5.0s
CER Ceres 69.15 212 *e*P **P 11 11 41.3 +0.6**
CER AMB AMB 11 11 57.5
comp=Z,77nm,1.7s,mb5.4
PMAN Manadas 69.35 304 *e*P **P 11 11 42.5 +0.4**
comp=Z,427nm,1.1s,mb6.3
PMAN Manadas 69.35 304 *e*P **P 11 11 42.5 +0.4**
comp=Z,427nm,1.1s,mb6.3
KAPI Kappang 69.35 107 *e*P **P 11 11 40.8 -1.7**
comp=Z,538nm,1.5s,mb6.2
KAPI LR LR
comp=Z,5μm,21.0s,MS5.7
KAPI Kappang 69.35 107 P **P 11 11 41.3 -1.2**
comp=Z,1μm,1.3s,mb6.7,SNR=10
KAPI Kappang 69.35 107 *e*P **P 11 11 40.8 -1.7**
comp=Z,538nm,1.5s,mb6.2
SEY Seymchan 69.41 29⇑*i*P **P 11 11 41.7 -0.3**
SEY Seymchan 69.41 29 *i* P **P 11 11 41.7 -0.3**
PID Ribeirinha 69.43 303 *e*P **P 11 11 42.9 +0.3**
PID Ribeirinha 69.43 303 *e*P **P 11 11 42.9 +0.3**
ROSA Rosais 69.43 304 *e*P **P 11 11 43.5 +0.9**
ROSA Rosais 69.43 304 *e*P **P 11 11 43.5 +0.9**
PICO Pico 69.64 304 *e*P **P 11 11 43.8 -0.1**
PICO Pico 69.64 304 *e*P **P 11 11 43.8 -0.1**
ASAJ Asahikawa 69.69 50 P **P 11 11 42.9 -1.2**
comp=Z,38nm,0.8s,mb5.4,baz=284,slow=10,SNR=17
ASAJ Asahikawa 69.69 50 P **P 11 11 42.9 -1.2**
ASAJ pmax pmax
comp=Z,38nm,0.8s
ASAJ Asahikawa 69.69 50 *e*P **P 11 11 43.6 -0.5**
comp=Z,40nm,1.0s,mb5.3
ASAJ *e*PP PP 11 14 19.3 +1.3
ASAJ Asahikawa 69.69 50 *e*P **P 11 11 43.6 -0.5**
comp=Z,40nm,1.0s,mb5.3
ASAJ Asahikawa 69.69 50 *e*PP PP 11 14 19.3 +1.4
HOR Horta 69.78 304 *e*P **P 11 11 43.3 -1.5**
PCED Cedros 69.80 304 *e*P **P 11 11 44.0 -0.9**
CALA Caldeira 69.82 304 *e*P **P 11 11 46.5 +1.5**
CALA Caldeira 69.82 304 *e*P **P 11 11 46.5 +1.5**
ERM Erimo 70.74 52 P **P 11 11 52.0 +1.4**
comp=Z,453nm,1.2s,mb6.3,SNR=8.1
SFJD Kangerlussuaq 71.79 337 PFAKE 11 12 10.0 +14
SFJD LR LR
comp=Z,4μm,19.0s,MS5.7
YUK Yuzh-Kuril'sk 71.94 49 *i* P **P 11 11 48.0 -10**
YUK pmax pmax
comp=E,274nm,1.5s
YUK pmax pmax
comp=Z,503nm,1.5s,mb6.2
YUK MLR MLR
comp=N,4μm,15.0s,MS6.0
YUK MLR MLR
comp=E,5μm,15.0s,MS6.0
YUK MLR MLR
comp=Z,7μm,15.0s,MS6.0
BILL Bilibino 72.68 22*c i*P **P 11 12 01.5 -0.3**
BILL *i* 11 12 18.4
BILL *i* S S 11 21 26.4 -0.1
BILL *e*SS SS 11 26 09.2 +4.1
BILL pmax pmax
comp=Z,148nm,1.6s,mb5.7
BILL MLR MLR
comp=Z,12μm,14.0s,MS6.3
BILL Bilibino 72.68 22 *e*P **P 11 12 01.6 -0.2**

comp=Z,160nm,1.1s,mb5.9
BILL eS S 11 21 23.8 -2.7
BILL LR LR
comp=Z,19µm,21.0s,MS6.3
BILL Bilibino 72.68 22 eP **P 11 12 01.6 -0.2**
comp=Z,160nm,1.1s,mb5.9
BILL Bilibino 72.68 22 i PcP PcP 11 12 18.4 -0.8
BILL i S S 11 21 26.4 -0.1
GIRL Giralia 74.86 125 eP **P 11 12 16.4 +1.2**
comp=Z,3µm,1.1s
CBIJ Chichi jima 75.30 67 P **P 11 12 16.7 -1.2**
comp=Z,36nm,0.7s,mb5.4,baz=119,slow=19,SNR=2.6
PETK Petropavlovsk- 75.72 38 P **P 11 12 18.2 -1.6**
comp=Z,13nm,1.0s,mb4.8,baz=243,slow=4.7,SNR=8.3
PETK Petropavlovsk- 75.72 38 P **P 11 12 18.2 -1.6**
PETK pmax pmax
comp=Z,13nm,1.0s,mb4.8
PETK Petropavlovsk- 75.72 38 P **P 11 12 18.2 -1.6**
comp=Z,13nm,1.0s,mb4.8
SKR Severo-Kuril's 75.87 40 eP **P 11 12 24.0 +3.3**
SKR e 11 22 06.0
PET Petropavlovsk 76.28 37c i P **P 11 12 19.7 -3.3**
PET eS S 11 21 59.1 -8.2
PET ePS 11 22 39.3
PET ePPS 11 22 49.8
PET pmax pmax
comp=Z,900nm,5.1s
PET pmax pmax
comp=Z,2µm,4.5s
PET pmax pmax
comp=Z,72nm,1.5s,mb5.4
PET smax
comp=E,1µm,11.3s
PET smax
comp=E,1µm,18.0s
PET smax
comp=N,1µm,11.3s
PET MLR MLR
comp=Z,7µm,20.0s,MS6.0
PET MLR MLR
comp=Z,8µm,19.0s
PET Petropavlovsk 76.28 37 PFAKE 11 12 30.0 +7.0
PET LR LR
comp=Z,9µm,19.0s,MS6.1
PAF Port-aux-Franc 76.86 170 PFAKE 11 12 40.0 +14
PAF LR LR
comp=Z,11µm,22.0s,MS6.1
RES Resolute Bay 77.02 352 P **P 11 12 26.1 -0.7**
comp=Z,9.3nm,0.9s,mb4.7,baz=28,slow=14,SNR=4.2
RES Resolute Bay 77.02 352 eP **P 11 12 25.9 -0.9**
RES e 11 15 18.0
RES pmax pmax
comp=Z,274nm,1.9s,mb5.9
RES Resolute Bay 77.02 352 eP **P 11 12 25.9 -0.9**
comp=Z,274nm,1.9s,mb5.9
RES ePP PP 11 15 17.9 -1.6
RES Resolute Bay 77.02 352 eP **P 11 12 25.9 -0.9**
comp=Z,274nm,1.9s,mb5.9
RES Resolute Bay 77.02 352 ePP PP 11 15 18.0 -1.5
MBWA Marble Bar 78.09 121 eP **P 11 12 32.7 -0.9**
comp=Z,173nm,1.3s,mb5.8
MBWA LR LR
comp=Z,8µm,19.0s,MS6.0
MBWA Marble Bar 78.09 121 eP **P 11 12 32.7 -0.9**
comp=Z,173nm,1.3s,mb5.8
FRB Frobisher Bay 79.82 338 P **P 11 12 42.0 -0.4**
comp=Z,34nm,0.9s,mb5.3,baz=68,slow=6.3,SNR=6.5
FRB Frobisher Bay 79.82 338 P **P 11 12 42.0 -0.4**
FRB pmax pmax
comp=Z,34nm,0.9s
FRB Frobisher Bay 79.82 338 P **P 11 12 42.0 -0.5**
FRB Frobisher Bay 79.82 338 P **P 11 12 42.0 -0.4**
comp=Z,34nm,0.9s,mb5.3
FITZ Fitzroy Crossi 81.07 115 P **P 11 12 49.8 -0.1**
comp=Z,69nm,0.9s,mb5.6,baz=313,slow=4.8,SNR=39
FITZ Fitzroy Crossi 81.07 115⇑ i P **P 11 12 49.7 -0.2**
comp=Z,199nm,1.2s,mb5.9
FITZ eS S 11 22 55.8 -3.7
FITZ Fitzroy Crossi 81.07 115 P **P 11 12 49.8 -0.1**
comp=Z,6µmcomp=Z,347nm,1.2s,mb6.2
FITZ Fitzroy Crossi 81.07 115 P **P 11 12 49.8 -0.1**
TNA Tin City 82.02 17 eP **P 11 12 53.7 -0.4**
comp=Z,300nm,1.5s,mb6.0
TNA Tin City 82.02 17 eP **P 11 12 53.7 -0.5**
comp=Z,300nm,1.5s,mb6.0
GAMB Gambell 82.34 19 eP **P 11 12 55.3 -0.6**
comp=Z,222nm,1.4s,mb5.9
GAMB Gambell 82.34 19 eP **P 11 12 55.3 -0.6**
comp=Z,222nm,1.4s,mb5.9
KNA Kununurra 82.43 112⇑ i P **P 11 12 56.7 -0.4**
comp=Z,740nm,1.3s,mb6.5
KNA Kununurra 82.43 112 P **P 11 12 56.8 -0.3**
comp=Z,7µmcomp=Z,902nm,1.1s,mb6.6
KLBR Kellerberrin 82.79 131 eP **P 11 12 57.2 -1.4**
comp=Z,168nm,1.2s,mb6.0
GUMO Guam 83.15 78 PFAKE 11 13 10.0 +9.0
GUMO LR LR
comp=Z,3µm,20.0s,MS5.6
NWAO Narrogin (SRO) 83.25 132 P **P 11 13 00.1 -0.9**
comp=Z,51nm,1.0s,mb5.5,baz=300,slow=7.0,SNR=13
NWAO Narrogin (SRO) 83.25 132 eP **P 11 13 00.1 -0.9**
comp=Z,249nm,1.4s,mb6.0
NWAO LR LR
comp=Z,2µm,20.0s,MS5.5
NWAO Narrogin (SRO) 83.25 132 P **P 11 13 00.1 -0.9**
comp=Z,51nm,1.0s,mb5.5
KAKA Kakadu 84.02 107⇑ i P **P 11 13 05.1 -0.3**
comp=Z,731nm,1.5s,mb6.6
KAKA Kakadu 84.02 107 eP **P 11 13 05.1 -0.2**
comp=Z,1µm,1.2s,mb6.9
KAKA Kakadu 84.02 107 P **P 11 13 05.5 +0.1**
INK Inuvik 84.95 3 P **P 11 13 08.7 -0.5**
comp=Z,13nm,0.5s,mb5.3,baz=12,slow=6.7,SNR=24
INK Inuvik 84.95 3 eP **P 11 13 08.5 -0.7**
INK pmax pmax
comp=Z,670nm,1.8s
INK Inuvik 84.95 3 eP **P 11 13 08.5 -0.7**
comp=Z,670nm,1.8s,mb6.5
INK Inuvik 84.95 3 eP **P 11 13 08.5 -0.7**
comp=Z,670nm,1.8s,mb6.5
SCHQ Schefferville 85.05 331 P **P 11 13 09.2 -0.8**
comp=Z,21nm,0.9s,mb5.3,baz=65,slow=5.9,SNR=16
SCHQ LR LR 11 53 52.2
comp=Z,5µm,20.5s,MS5.9,baz=48,slow=38
SCHQ Schefferville 85.05 331 P **P 11 13 09.2 -0.7**
COLA College 86.81 10 eP **P 11 13 17.2 -1.3**
COLA pmax pmax
comp=Z,382nm,1.6s,mb6.4
COLA MLR MLR
comp=Z,8µm,20.0s,MS6.1
COLA College 86.81 10 eP **P 11 13 17.2 -1.3**
comp=Z,382nm,1.6s,mb6.4
COLA LR LR
comp=Z,8µm,20.0s,MS6.1
COLA College 86.81 10 eP **P 11 13 17.2 -1.3**
comp=Z,8µm,20.0s
BPAW Bear Paw Mtn. 87.01 11 eP **P 11 13 19.0 -0.5**
comp=Z,2µm,1.6s
BPAW Bear Paw Mtn. 87.01 11 eP **P 11 13 19.0 -0.4**
comp=Z,2µm,1.6s
ILAR Eielson Array 87.06 10 P **P 11 13 18.3 -1.3**
comp=Z,25nm,0.7s,mb5.6,baz=330,slow=3.8,SNR=134
ILAR PKKPbc PKKPbc 11 31 09.1 -3.9
comp=Z,1.7nm,0.7s,baz=187,slow=1.9,SNR=14
ILAR PKPPKP 11 39 17.1
comp=Z,1.2nm,0.9s,baz=199,slow=2.1,SNR=7.2
ILAR LR LR 11 54 41.6
comp=Z,8µm,20.8s,MS6.1,baz=329,slow=37
ILAR Eielson Array 87.06 10 P **P 11 13 18.3 -1.3**
comp=Z,8µm,20.8s
TTA Tatalina 87.08 14 eP **P 11 13 19.6 -0.2**
TTA Tatalina 87.08 14 eP **P 11 13 19.6 -0.2**
MCK McKinley 87.71 11 eP **P 11 13 21.9 -0.9**
comp=Z,1µm,1.6s,mb6.8
MCK McKinley 87.71 11 eP **P 11 13 21.9 -0.9**
TRF Thorofare Moun 87.73 11 eP **P 11 13 22.2 -0.7**
comp=Z,244nm,1.2s,mb6.3
TRF ePP PP 11 16 47.9 +0.3
TRF Thorofare Moun 87.73 11 eP **P 11 13 22.2 -0.7**
comp=Z,244nm,1.2s,mb6.3
EGAK Eagle 87.80 7 eP **P 11 13 22.7 -0.5**
comp=Z,836nm,1.5s,mb6.8
EGAK LR LR
comp=Z,6µm,20.0s,MS6.0
EGAK Eagle 87.80 7 eP **P 11 13 22.7 -0.5**
comp=Z,836nm,1.5s,mb6.8
PPLA Purkeypile 87.89 12 eP **P 11 13 23.0 -0.7**
comp=Z,245nm,1.2s,mb6.3
PPLA Purkeypile 87.89 12 eP **P 11 13 23.0 -0.7**
comp=Z,245nm,1.2s,mb6.3
DOT Dot Lake 88.52 9 eP **P 11 13 26.1 -0.5**
comp=Z,1µm,1.5s,mb7.0
DOT Dot Lake 88.52 9 eP **P 11 13 26.1 -0.6**
comp=Z,1µm,1.5s,mb7.0
DAWY Dawson 88.68 7 eP **P 11 13 27.0 -0.4**
DAWY Dawson 88.68 7 eP **P 11 13 27.0 -0.4**
SVW2 Sparrevohn 88.80 15 eP **P 11 13 28.6 +0.6**
comp=Z,312nm,1.6s,mb6.4
SVW2 Sparrevohn 88.80 15 eP **P 11 13 28.6 +0.6**
comp=Z,312nm,1.6s,mb6.4
PAX Paxson 88.97 10 eP **P 11 13 28.1 -0.7**
PAX pmax pmax
comp=Z,180nm,1.6s,mb6.2
PAX Paxson 88.97 10 eP **P 11 13 28.1 -0.7**
comp=Z,180nm,1.6s,mb6.2
PAX Paxson 88.97 10 eP **P 11 13 28.1 -0.7**
comp=Z,180nm,1.6s,mb6.2
WRA Warramunga Arr 89.10 113 P **P 11 13 29.8 -0.3**
comp=Z,20nm,0.9s,mb5.5,baz=314,slow=3.9,SNR=58
WRA PKPPKP 11 39 16.4
comp=Z,1.0nm,0.8s,baz=131,slow=2.3,SNR=7.4
WRA LR LR 11 52 36.5
comp=Z,2µm,21.6s,MS5.5,baz=255,slow=35
WRA Warramunga Arr 89.10 113 P **P 11 13 29.8 -0.3**
WRA P'P' 11 39 16.4
WRA LR LR 11 52 36.5
WRA Warramunga Arr 89.10 113 P **P 11 13 29.8 -0.3**
comp=Z,2µm,21.6s
WB2 Warramunga Arr 89.11 113 eP **P 11 13 29.7 -0.4**
WB2 ePP PP 11 17 04.7 +4.2
WB2 Warramunga Arr 89.11 113 eP **P 11 13 29.7 -0.5**
MENT Mentasta 89.25 9 eP **P 11 13 30.0 -0.1**
MENT Mentasta 89.25 9 eP **P 11 13 30.0 -0.1**
SML Sawmill 89.60 11 eP **P 11 13 31.2 -0.6**
SML pmax pmax
comp=Z,71nm,1.4s,mb5.8
SML Sawmill 89.60 11 eP **P 11 13 31.2 -0.6**
comp=Z,70nm,1.4s,mb5.8
SML Sawmill 89.60 11 eP **P 11 13 31.2 -0.6**
comp=Z,71nm,1.4s,mb5.8
FORT Forrest 89.61 125⇑ i P **P 11 13 32.3 0.0**
comp=Z,72nm,0.8s,mb6.0
FORT Forrest 89.61 125 eP **P 11 13 32.1 -0.2**
comp=Z,114nm,0.9s,mb6.2
FORT Forrest 89.61 125 eP **P 11 13 32.1 -0.2**
comp=Z,114nm,0.9s,mb6.2
PMR Palmer 89.66 12 eP **P 11 13 32.3 +0.2**
PMR pmax pmax
comp=Z,298nm,1.6s,mb6.4
PMR Palmer 89.66 12 eP **P 11 13 32.3 +0.2**
comp=Z,298nm,1.6s,mb6.4
PMR Palmer 89.66 12 eP **P 11 13 32.3 +0.2**
comp=Z,298nm,1.6s,mb6.4
RSO Redoubt South 89.99 14 eP **P 11 13 32.8 -0.8**
comp=Z,176nm,1.0s,mb6.3
RSO Redoubt South 89.99 14 eP **P 11 13 32.8 -0.8**
comp=Z,175nm,1.0s,mb6.3
RC01 Rabbit Creek A 90.02 12 eP **P 11 13 32.5 -1.2**
comp=Z,88nm,0.7s,mb6.2
RC01 Rabbit Creek A 90.02 12 eP **P 11 13 32.5 -1.2**
comp=Z,88nm,0.7s,mb6.2
TRIS Tristan da Cun 90.16 228 PFAKE 11 13 50.0 +15
TRIS LR LR
comp=Z,7µm,22.0s,MS6.0
SLKM Skilak Lake 90.46 13 eP **P 11 13 35.2 -0.6**
SLKM Skilak Lake 90.46 13 eP **P 11 13 35.2 -0.6**
ASAR Alice Springs 90.54 116 P **P 11 13 36.3 -0.5**
comp=Z,13nm,0.9s,mb5.3,baz=306,slow=4.6,SNR=41
ASAR S S 11 24 07.5 -25
comp=Z,3.9nm,1.2s,baz=313,slow=5.8,SNR=6.3
ASAR PKPPKP 11 39 13.1
comp=Z,0.6nm,0.8s,baz=129,slow=2.9,SNR=4.8
ASAR Alice Springs 90.54 116 P **P 11 13 36.3 -0.5**
ASAR S S 11 24 07.6 -25
ASAR pmax pmax
comp=Z,13nm,0.9s
ASAR smax
comp=N,4.0nm,1.3s
ASAR Alice Springs 90.54 116 P **P 11 13 36.3 -0.5**
comp=N,13nm,0.9s,mb5.3
YKA Yellowknife Ar 90.72 356 P **P 11 13 36.4 -0.6**
comp=N,6.2nm,0.8s,mb5.0,baz=7.7,slow=5.1,SNR=13
YKA PP PP 11 17 13.3 +2.0
comp=N,8.0nm,1.0s,baz=4.8,slow=7.5,SNR=3.9
YKA LR LR 11 58 16.7
comp=N,316nm,21.5s,MS4.7,baz=180,slow=38
YKA Yellowknife Ar 90.72 356 P **P 11 13 36.4 -0.6**
YKA 11 17 13.3
YKA pmax pmax
comp=Z,6.0nm,0.8s
YKA pmax pmax
comp=Z,8.0nm,1.0s
YKA MLR MLR
comp=Z,316nm,21.5s
YKA Yellowknife Ar 90.72 356 P **P 11 13 36.4 -0.6**
comp=Z,6.0nm,0.8s,mb5.0
YKA Yellowknife Ar 90.72 356 PP PP 11 17 13.4 +2.0
SEW Seward 90.99 12 eP **P 11 13 37.9 -0.4**
comp=Z,391nm,1.5s,mb6.5
SEW Seward 90.99 12 eP **P 11 13 37.9 -0.4**
comp=Z,391nm,1.5s,mb6.5
FCC Fort Churchill 91.19 345 eP **P 11 13 37.1 -2.1**
comp=Z,14nm,1.9s,mb5.0
FCC Fort Churchill 91.19 345 eP **P 11 13 37.1 -2.1**
CHGN Chignik 92.29 18 eP **P 11 13 45.3 +0.9**
comp=Z,0.2nm,1.1s
CHGN Chignik 92.29 18 eP **P 11 13 45.3 +0.9**
comp=Z,0.2nm,1.1s
KDAK Kodiak Island 92.46 15 P **P 11 13 45.1 0.0**
comp=Z,29nm,0.9s,mb5.6,baz=15,slow=1.9,SNR=12
KDAK Kodiak Island 92.46 15ce P **P 11 13 45.5 +0.4**
KDAK Kodiak Island 92.46 15 eP **P 11 13 45.1 0.0**
comp=Z,361nm,1.5s,mb6.5
KDAK LR LR
comp=Z,13µm,22.0s,MS6.3
KDAK Kodiak Island 92.46 15 eP **P 11 13 45.1 0.0**
comp=Z,361nm,1.5s,mb6.5
PKME Peaks-Kenny Pk 92.64 325 PFAKE 11 14 00.0 +14
PKME LR LR
comp=Z,6µm,20.0s,MS6.0
OHAK Old Harbor 92.80 15 eP **P 11 13 46.1 -0.6**
comp=Z,394nm,1.6s,mb6.6
OHAK Old Harbor 92.80 15 eP **P 11 13 46.1 -0.6**
comp=Z,394nm,1.6s,mb6.6
SKAG Skagway 93.60 6 eP **P 11 13 51.7 +1.4**
comp=Z,191nm,1.8s,mb6.2
SKAG Skagway 93.60 6 eP **P 11 13 51.7 +1.4**
comp=Z,191nm,1.8s,mb6.2
RCBR Riachuelo 94.14 266 P **P 11 13 54.7 +1.1**
comp=Z,27nm,1.0s,mb5.6,baz=64,slow=3.2,SNR=6.1
RCBR Riachuelo 94.14 266 eP **P 11 13 54.4 +0.7**
comp=Z,72nm,1.3s,mb5.9
RCBR ePP PP 11 17 41.6 +1.3
RCBR LR LR
comp=Z,7µm,19.0s,MS6.1
RCBR Riachuelo 94.14 266 eP **P 11 13 54.4 +0.7**
comp=Z,72nm,1.3s,mb5.9
RCBR Riachuelo 94.14 266 ePP PP 11 17 41.6 +1.3
MAW Mawson 94.23 177 P **P 11 13 53.8 +1.0**
comp=Z,20nm,0.9s,mb5.5,baz=345,slow=6.2,SNR=17
MAW LR LR 11 50 46.5
comp=Z,6µm,19.9s,MS6.1,baz=348,slow=32
MAW Mawson 94.23 177 eP **P 11 13 53.6 +0.8**
comp=Z,23nm,0.9s,mb5.6
MAW Mawson 94.23 177 P **P 11 13 53.8 +1.0**
comp=Z,20nm,0.9s,mb5.5
LBNH Lisbon 94.70 325 PFAKE 11 14 10.0 +14
LBNH LR LR
comp=Z,5µm,22.0s,MS5.9
DLBC Dease Lake 94.98 3 P **P 11 13 57.1 +0.5**
comp=Z,23nm,1.1s,mb5.5,baz=336,slow=5.8,SNR=11
DLBC Dease Lake 94.98 3 eP **P 11 13 57.0 +0.3**
DLBC Dease Lake 94.98 3 eP **P 11 13 57.0 +0.3**
FRNY Flat Rock 95.11 327 eP **P 11 13 56.8 -0.8**
comp=Z,85nm,1.7s,mb5.9
FRNY Flat Rock 95.11 327 eP **P 11 13 56.8 -0.8**
comp=Z,85nm,1.7s,mb5.9
PMG Port Moresby 95.34 98⇑ eP **P 11 13 58.8 -0.4**
PMG pmax pmax
comp=Z,82nm,2.7s
PMG Port Moresby 95.34 98 PFAKE 11 14 10.0 +11
PMG LR LR
comp=Z,1µm,20.0s,MS5.5
PMG Port Moresby 95.34 98 eP **P 11 13 58.8 -0.4**
comp=Z,82nm,2.7s,mb5.7
LONY Lake Ozonia 95.76 327 eP **P 11 13 60.0 -0.6**
comp=Z,43nm,1.0s,mb5.8
LONY LR LR
comp=Z,5µm,20.0s,MS6.0
LONY Lake Ozonia 95.76 327 eP **P 11 14 00.0 -0.6**
comp=Z,43nm,1.0s,mb5.8
NCB Newcomb 96.05 326 PFAKE 11 14 10.0 +8.1
NCB LR LR
comp=Z,5µm,22.0s,MS6.0
SYO Syowa Base 96.24 186⇓ eP **P 11 14 01.0 -0.9**
BBOO Buckleboo 96.53 123 eP **P 11 14 01.9 -2.2**
comp=Z,19nm,1.3s,mb5.4
BBOO Buckleboo 96.53 123 eP **P 11 14 02.8 -1.3**
comp=Z,70nm,1.1s,mb6.0
BBOO Buckleboo 96.53 123 eP **P 11 14 02.8 -1.3**
comp=Z,70nm,1.1s,mb6.0
FFC Flin Flon 96.62 347ce P **P 11 14 04.5 +0.3**
FFC Flin Flon 96.62 347 eP **P 11 14 01.5 -2.7**
comp=Z,207nm,1.7s,mb6.3
FFC ePP PP 11 18 00.6 +2.9
FFC LR LR
comp=Z,6µm,21.0s,MS6.0
FFC Flin Flon 96.62 347 P **P 11 14 04.4 +0.2**
comp=Z,287nm,1.7s,mb6.4,SNR=5.9
FFC Flin Flon 96.62 347 eP **P 11 14 04.5 +0.3**
WRAK Wrangell Islan 96.85 5 P **P 11 14 05.0 -0.3**
comp=Z,181nm,1.7s,mb6.2
WRAK LR LR
comp=Z,5µm,21.0s,MS6.0
WRAK Wrangell Islan 96.85 5 P **P 11 14 04.9 -0.3**
comp=Z,181nm,1.7s,mb6.2
MIR Mirnyy 97.21 166⇓ i P **P 11 14 12.2 +5.8**
MIR pmax pmax
comp=Z,70nm,1.8s,mb5.8
SADO Sadowa 97.80 329 P **P 11 14 11.1 +1.3**
comp=Z,6.9nm,0.9s,mb5.2,baz=57,slow=4.7,SNR=3.8
SADO Sadowa 97.80 329 P **P 11 14 11.1 +1.3**
BINY Binghamton 98.23 326 PFAKE 11 14 20.0 +8.2
BINY LR LR
comp=Z,7µm,22.0s,MS6.1
BBSR BB Station 98.37 313 PFAKE 11 14 20.0 +7.4
BBSR LR LR
comp=Z,2µm,20.0s,MS5.7
WAKE Wake Island 98.81 63 PFAKE 11 14 30.0 +15
WAKE LR LR
comp=Z,2µm,19.0s,MS5.7
CTA Charters Tower 99.16 108 P **P 11 14 16.2 0.0**
comp=Z,5.0nm,0.8s,mb5.1,baz=350,slow=6.3,SNR=3.1
CTA Charters Tower 99.16 108 eP **P 11 14 15.8 -0.4**
comp=Z,10nm,1.4s,mb5.2
CTA Charters Tower 99.16 108 P **P 11 14 16.2 0.0**
CTA pmax pmax
comp=Z,5.0nm,0.8s
CTA Charters Tower 99.16 108 P **P 11 14 16.2 0.0**
comp=Z,5.0nm,0.8s,mb5.1
CTAO Charters Tower 99.16 108 PFAKE 11 14 30.0 +14
CTAO LR LR
comp=Z,3µm,19.0s,MS5.8
ULM Lac du Bonnet 99.32 342 P **P 11 14 16.7 +0.3**
comp=Z,1.9nm,0.5s,mb4.9,baz=49,slow=3.4,SNR=3.7
ULM LR LR 12 03 54.6
comp=Z,7µm,19.0s,MS6.2,baz=28,slow=38
ULM Lac du Bonnet 99.32 342 P **P 11 14 16.7 +0.2**
EDM Edmonton 99.79 353 eP Pdif 11 14 18.2 -0.4
EDM Edmonton 99.79 353 eP Pdif 11 14 18.2 -0.4
EYMN Ely 100.04 338 ePdif Pdif 11 14 18.6 -1.1
comp=Z,46nm,1.6s
EYMN LR LR
comp=Z,5µm,20.0s,MS6.1
GLMI Grayling 100.13 333 PFAKE 11 14 30.0 +10
GLMI LR LR
comp=Z,6µm,20.0s,MS6.1
ERPA Erie 100.23 328 PFAKE 11 14 30.0 +9.4
ERPA LR LR
comp=Z,5µm,21.0s,MS6.0
STKA Stephens Creek 100.33 120 P Pdif 11 14 22.1 +1.2
comp=Z,3.5nm,0.9s,baz=326,slow=14,SNR=4.3
STKA Stephens Creek 100.33 120 P Pdif 11 14 22.1 +1.1
AGMN Agassiz Nation 101.08 341 PFAKE 11 14 40.0 +16
AGMN LR LR
comp=Z,5µm,20.0s,MS6.0
CASY Casey 101.58 160 PFAKE 11 14 40.0 +13
CASY LR LR
comp=Z,3µm,20.0s,MS5.8
AAM Ann Arbor 101.76 331 PFAKE 11 14 40.0 +13
AAM LR LR
comp=Z,6µm,21.0s,MS6.1
CBN Corbin 101.90 324 PFAKE 11 14 40.0 +12
CBN LR LR
comp=Z,3µm,20.0s,MS5.9
MCWV Mont Chateau 102.06 327 PFAKE 11 14 40.0 +11
MCWV LR LR
comp=Z,5µm,20.0s,MS6.1
MAIT Maitri 102.13 194 eP Pdif 11 14 32.7 +3.7
MAIT e 11 17 36.9
MAIT i 11 18 46.5
DGMT Dagmar 102.99 347 ePdif Pdif 11 14 33.7 +0.9
comp=Z,111nm,1.9s
DGMT LR LR
comp=Z,5µm,20.0s,MS6.0
ACSO Alum Creek Sta 103.11 329 PFAKE 11 14 40.0 +6.6
ACSO LR LR
comp=Z,7µm,21.0s,MS6.2
A15A Johnson Ranch, 103.91 352 ⇑Pdif Pdif 11 14 35.9 -1.0
baz=104
JFWS Jewell Farm 103.95 335 PFAKE 11 14 50.0 +13
JFWS LR LR
comp=Z,8µm,20.0s,MS6.3
WALA Waterton Lakes 103.96 353 ePdif Pdif 11 14 37.1 0.0
comp=Z,1.3nm,1.7s
A14A Double T Ranch 103.99 353 ⇓Pdif Pdif 11 14 35.4 -1.9
baz=104
C22A Vida 104.02 347 ⇓Pdif Pdif 11 14 35.6 -1.8
baz=104
A13A Flathead Natio 104.14 353 ⇑Pdif Pdif 11 14 37.0 -0.9
baz=104
C21A Desert Coulee 104.17 348 ⇑Pdif Pdif 11 14 37.4 -0.7
baz=104
BLA Blacksburg 104.23 325 PFAKE 11 14 50.0 +12
BLA LR LR
comp=Z,6µm,20.0s,MS6.1
CNNC Cliffs of the 104.39 322 PFAKE 11 14 50.0 +11
CNNC LR LR
comp=Z,4µm,20.0s,MS5.9
EGMT Eagleton 104.43 350 PFAKE 11 14 50.0 +11
EGMT LR LR
comp=Z,6µm,19.0s,MS6.1
C20A Veseth Ranch, 104.44 349 ⇓Pdif Pdif 11 14 38.6 -0.7
baz=104
B15A Bradely Ranch, 104.54 352 ⇓Pdif Pdif 11 14 39.7 0.0
baz=104
C16A Fuhringer Ranc 104.94 351 ⇓Pdif Pdif 11 14 41.7 +0.3
baz=104
NEW Newport 105.04 355 ⇑Pdif Pdif 11 14 40.9 -1.0
baz=105
NEW Newport 105.04 355 eP Pdif 11 14 41.9 -0.1
NEW pmax pmax
comp=Z,34nm,1.5s
NEW MLR MLR
comp=Z,6µm,21.0s
NEW Newport 105.04 355 ePdif Pdif 11 14 41.9 -0.1
comp=Z,34nm,1.5s
NEW LR LR
comp=Z,6µm,21.0s,MS6.1
NEW Newport 105.04 355 eP Pdif 11 14 41.9 -0.1
comp=Z,6µm,21.0s
ANWB Willy Bob 105.07 299 PFAKE 11 19 10.0 +13
ANWB LR LR
comp=Z,3µm,21.0s,MS5.9
D20A Manuel Ranch, 105.07 349 ⇑Pdif Pdif 11 14 43.6 +1.6
baz=105
C15A Salmond Ranch, 105.07 352 ⇑Pdif Pdif 11 14 42.9 +0.9
baz=105
LAO LASA Array 105.10 347 ⇓Pdif Pdif 11 14 41.3 -1.0
baz=105
LAO LASA Array 105.10 347 ePdif Pdif 11 14 43.2 +1.0
comp=Z,138nm,2.1s
LAO LR LR
comp=Z,8µm,21.0s,MS6.3
MIDW Midway 105.18 47 PFAKE 11 19 10.0 +13
MIDW LR LR
comp=Z,3µm,20.0s,MS5.8
C14A Swan Lake 105.22 353 ⇓Pdif Pdif 11 14 43.4 +0.7
baz=105
BSMT Bassoo Peak 105.25 353 ePdif Pdif 11 14 46.3 +3.5
comp=Z,30nm,1.9s

JCW	Jim Creek	105.35	358	ePdif	Pdif	11 14 42.5 -0.9
	comp=Z,56nm,1.6s					
C13A	Hot Springs	105.39	353	⇓Pdiff	Pdif	11 14 44.4 +0.8
	baz=105					
C11A	Tepee Creek (N	105.39	354	⇑Pdiff	Pdif	11 14 41.8 -1.7
	baz=105					
D17A	Six Diamond Ra	105.42	351	⇓Pdiff	Pdif	11 14 39.1 -4.6
	baz=105					
ECSD	EROS Data Cent	105.42	340	ePKPdf	PKiKP	11 18 58.0 +0.6
ECSD				LR	LR	
	comp=Z,5μm,20.0s,MS6.0					
C12B	Naegeli Ranch,	105.45	354	⇑Pdiff	Pdif	11 14 39.6 -4.2
	baz=105					
HDIL	Hopedale	105.59	333	PFAKE		11 19 10.0 +12
HDIL				LR	LR	
	comp=Z,7μm,20.0s,MS6.2					
E20A	Meyer Farm, Mu	105.64	349	⇑Pdiff	Pdif	11 14 38.3 -6.3
	baz=105					
SLMT	Seeley Lake	105.70	352	ePdif	Pdif	11 14 45.6 +0.7
	comp=Z,28nm,1.7s					
E19A	Rath Farm, Rou	105.79	349	⇓Pdiff	Pdif	11 14 40.6 -4.7
	baz=105					
BBGH	Gun Hill	105.80	294	PFAKE		11 19 10.0 +11
BBGH				LR	LR	
	comp=Z,3μm,20.0s,MS5.9					
D14A	Greenough	105.86	352	⇓Pdiff	Pdif	11 14 41.3 -4.3
	baz=106					
ETW	Entiat	105.89	357	ePdif	Pdif	11 14 45.7 0.0
	comp=Z,38nm,1.8s					
D13A	Huson	105.96	353	⇑Pdiff	Pdif	11 14 41.3 -4.7
	baz=106					
HRY	Holter Researc	106.02	351	ePdif	Pdif	11 14 44.4 -1.9
OD2	Odessa Site #2	106.02	356	ePdif	Pdif	11 14 44.9 -1.4
	comp=Z,51nm,1.8s					
D12A	Red Ives Fores	106.09	354	⇑Pdiff	Pdif	11 14 40.5 -6.1
	baz=106					
SNAA	Sanae	106.14	196	PKiKP	PKiKP	11 18 57.1 -0.7
	comp=Z,2.5nm,1.1s,baz=52,slow=7.5,SNR=6.5					
MSO	Missoula	106.16	353	ePKPdf	PKiKP	11 18 58.0 -0.7
MSO				LR	LR	
	comp=Z,5μm,21.0s,MS6.0					
NLWA	Neilton Lookou	106.18	360	ePKPdf	PKiKP	11 19 03.0 +4.3
NLWA				LR	LR	
	comp=Z,7μm,20.0s,MS6.2					
FDF	Fort de France	106.22	296	PFAKE		11 19 10.0 +10
FDF				LR	LR	
	comp=Z,2μm,20.0s,MS5.5					
WCI	Wyandotte Cave	106.24	330	PFAKE		11 19 10.0 +11
WCI				LR	LR	
	comp=Z,6μm,21.0s,MS6.1					
HNR	Honiara	106.74	92	PFAKE		11 19 10.0 +9.4
HNR				LR	LR	
	comp=Z,2μm,21.0s,MS5.5					
BOZ	Bozeman (W)	107.03	351	PFAKE		11 19 10.0 +10
BOZ				LR	LR	
	comp=Z,5μm,19.0s,MS6.1					
HAWA	Hanford	107.06	357	ePKPdf	PKiKP	11 19 03.7 +3.3
HAWA				LR	LR	
	comp=Z,4μm,19.0s,MS6.0					
RSSD	Black Hills	107.08	345	PFAKE		11 19 10.0 +10
RSSD				LR	LR	
	comp=Z,9μm,22.0s,MS6.3					
TKL	Tuckaleechee C	107.13	326	Pdiff	Pdif	11 14 51.5 +0.3
	comp=Z,4.0nm,1.0s,baz=27,slow=2.3,SNR=3.5					
TKL	Tuckaleechee C	107.13	326	P	Pdif	11 14 51.5 +0.3
TKL				pmax	pmax	
	comp=Z,4.0nm,1.0s					
TKL	Tuckaleechee C	107.13	326	Pdif	Pdif	11 14 51.5 +0.3
TKL	Tuckaleechee C	107.13	326	P	Pdif	11 14 51.5 +0.3
	comp=Z,4.0nm,1.0s					
NHSC	New Hope	107.24	322	PFAKE		11 19 10.0 +8.9
NHSC				LR	LR	
	comp=Z,3μm,20.0s,MS5.9					
CAN	Canberra	107.35	121	PFAKE		11 19 10.0 +8.9
CAN				LR	LR	
	comp=Z,4μm,20.0s,MS6.0					
DLMT	Dillon	107.44	351	ePdif	Pdif	11 14 56.5 +3.9
	comp=Z,6.3nm,1.2s					
LKWY	Lake	107.90	350	PFAKE		11 19 10.0 +8.0
LKWY				LR	LR	
	comp=Z,10μm,21.0s,MS6.4					
GRGR	Grenville	108.06	294	PFAKE		11 19 10.0 +7.0
GRGR				LR	LR	
	comp=Z,1μm,19.0s,MS5.5					
SJG	San Juan	108.18	302	PFAKE		11 19 10.0 +6.8
SJG				LR	LR	
	comp=Z,3μm,21.0s,MS5.8					
HOOD	Mount Hood Mea	108.22	358	ePKPdf	PKiKP	11 19 03.1 +0.5
FLWY	Flagg Ranch	108.42	350	ePdif	Pdif	11 14 58.8 +1.8
	comp=Z,44nm,1.8s					
CCM	Cathedral Cave	108.51	333	PFAKE		11 19 10.0 +6.7
CCM				LR	LR	
	comp=Z,6μm,20.0s,MS6.2					
IMW	Indian Meadow	108.64	350	ePdif	Pdif	11 15 01.6 +3.6
	comp=Z,19nm,1.8s					
WVT	Waverly	108.67	330	PFAKE		11 19 10.0 +6.3
WVT				LR	LR	
	comp=Z,4μm,20.0s,MS6.0					
GOGA	Godfrey	108.75	325	PFAKE		11 19 20.0 +16
GOGA				LR	LR	
	comp=Z,4μm,19.0s,MS6.0					
LOHW	Long Hollow	108.86	350	ePdif	Pdif	11 14 59.6 +0.7
	comp=Z,23nm,1.8s					
COR	Corvallis	108.99	359	PFAKE		11 19 20.0 +16
COR				LR	LR	
	comp=Z,4μm,21.0s,MS6.0					
TPAW	Teton Pass	109.04	350	ePdif	Pdif	11 14 59.1 -0.6
TPAW				ePKPdf	PKiKP	11 19 03.7 -0.4
REDW	Red Top Meadow	109.15	350	ePdif	Pdif	11 15 05.9 +5.7
HLID	Hailey	109.44	352	PFAKE		11 19 20.0 +15
HLID				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
BW06	Boulder Array	109.51	349	PFAKE		11 19 20.0 +15
BW06				LR	LR	
	comp=Z,8μm,20.0s,MS6.3					
PDAR	Pinedale Array	109.51	349	PKiKP	PKiKP	11 19 04.8 -0.2
	comp=Z,3.2nm,0.7s,baz=99,slow=3.1,SNR=9.3					
PDAR				PKKPbc	PKKPbc	11 30 11.1 +0.7
	comp=Z,1.0nm,0.9s,baz=153,slow=6.1,SNR=5.5					
PDAR				PKKPab	PKKPab	11 30 20.6 -4.2
	comp=Z,2.0nm,0.7s,baz=173,slow=6.3,SNR=9.9					
OGNE	Ogallala	109.56	342	PFAKE		11 19 20.0 +15
OGNE				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
J14A	Carey	109.57	352	⇓PKiKP	PKiKP	11 19 05.6 +0.4
	baz=109					
KSU1	Kansas State U	109.59	338	PFAKE		11 19 20.0 +15
KSU1				LR	LR	
	comp=Z,7μm,20.0s,MS6.2					
GRTK	Grand Turk	109.71	308	PFAKE		11 19 20.0 +14
GRTK				LR	LR	
	comp=Z,4μm,20.0s,MS5.9					
OXF	Oxford	110.72	330	PFAKE		11 19 20.0 +12
OXF				LR	LR	
	comp=Z,7μm,20.0s,MS6.2					
LRAL	Lakeview Retre	110.81	327	PFAKE		11 19 20.0 +12
LRAL				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
CBKS	Cedar Bluff	110.87	340	PFAKE		11 19 20.0 +12
CBKS				LR	LR	
	comp=Z,8μm,20.0s,MS6.3					
WVOR	Wild Horse Val	110.95	356	PFAKE		11 19 20.0 +12
WVOR				LR	LR	
	comp=Z,4μm,19.0s,MS6.1					
HWUT	Hardware Ranch	110.97	350	ePKPdf	PKiKP	11 19 08.1 +0.2
HWUT				LR	LR	
	comp=Z,7μm,22.0s,MS6.2					
SDDR	Presa de Saban	111.45	306	PFAKE		11 19 20.0 +11
SDDR				LR	LR	
	comp=Z,3μm,20.0s,MS5.8					
SPB	Sao Paulo	111.50	254	PFAKE		11 19 20.0 +11
SPB				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
ISCO	Idaho Springs	111.55	345	PFAKE		11 19 20.0 +11
ISCO				LR	LR	
	comp=Z,5μm,19.0s,MS6.2					
MOD	Modoc	111.58	357	PFAKE		11 19 20.0 +11
MOD				LR	LR	
	comp=Z,3μm,20.0s,MS5.8					
DWPF	Disney	111.72	320	PFAKE		11 19 20.0 +10
DWPF				LR	LR	
	comp=Z,5μm,21.0s,MS6.0					
YBH	Yreka Blue Hor	111.83	359	PFAKE		11 19 20.0 +11
YBH				LR	LR	
	comp=Z,5μm,22.0s,MS6.1					
MIAR	Mount Ida	112.48	333	PFAKE		11 19 20.0 +9.1
MIAR				LR	LR	
	comp=Z,6μm,20.0s,MS6.2					
BRAL	Brewton	112.49	326	PFAKE		11 19 20.0 +9.0
BRAL				LR	LR	
	comp=Z,6μm,21.0s,MS6.2					
DUG	Dugway	112.54	351	PFAKE		11 19 20.0 +9.1
DUG				LR	LR	
	comp=Z,4μm,22.0s,MS6.0					
BMN	Battle Mountai	112.83	354	PFAKE		11 19 20.0 +8.6
BMN				LR	LR	
	comp=Z,6μm,21.0s,MS6.2					
WDC	Whiskeytown Da	112.98	359	PFAKE		11 19 20.0 +8.3
WDC				LR	LR	
	comp=Z,5μm,22.0s,MS6.1					
VBMS	Vicksburg	113.15	329	PFAKE		11 19 20.0 +7.7
VBMS				LR	LR	
	comp=Z,7μm,21.0s,MS6.2					
SDCO	Great Sand Dun	113.47	344	ePKPdf	PKiKP	11 19 12.2 -0.6
SDCO				LR	LR	
	comp=Z,5μm,21.0s,MS6.1					
GTBY	Guantanamo Bay	113.54	309	PFAKE		11 19 20.0 +6.7
GTBY				LR	LR	
	comp=Z,3μm,19.0s,MS5.9					
MVU	Marysvale	114.11	350	PFAKE		11 19 30.0 +16
MVU				LR	LR	
	comp=Z,5μm,21.0s,MS6.1					
WCN	Washoe City	114.14	356	ePKIKP	PKiKP	11 19 14.4 +0.4
WMOK	Wichita Mounta	114.27	337	ePKIKP	PKiKP	11 19 12.3 -2.1
WMOK				MLR	MLR	
	comp=Z,5μm,21.0s,MS6.1					
U25A	Circle Dot Ran	114.46	343	⇓PKiKP	PKiKP	11 19 09.9 -4.8
	baz=114					
HOPS	Hopland	114.57	359	PFAKE		11 19 30.0 +15
HOPS				LR	LR	
	comp=Z,6μm,21.0s,MS6.1					
NVAR	Mina Array Bea	114.91	355	PKP	PKiKP	11 19 16.2 +0.7
	comp=Z,5.1nm,0.9s,baz=349,slow=0.6,SNR=8.6					
NVAR				PKKPbc	PKKPbc	11 29 53.4 +1.0
	comp=Z,1.4nm,0.7s,baz=160,slow=2.9,SNR=5.3					
NVAR	Mina Array Bea	114.91	355	PKP	PKiKP	11 19 16.2 +0.7
NVAR				PKKPbc	PKKPbc	11 29 53.4 +1.0
WAKR	Walker	114.92	356	ePKPdf	PKiKP	11 19 15.6 +0.1
AMTX	Amarillo	115.09	340	⇓PKiKP	PKiKP	11 19 14.9 -1.0
	baz=115					
AMTX	Amarillo	115.09	340	ePKPdf	PKiKP	11 19 15.0 -0.9
AMTX				LR	LR	
	comp=Z,7μm,22.0s,MS6.2					
T19A	Beclabito	115.15	347	⇑PKiKP	PKiKP	11 19 14.9 -1.1
	baz=115					
TPH	Tonopah	115.17	354	PFAKE		11 19 30.0 +14
TPH				LR	LR	
	comp=Z,4μm,19.0s,MS6.0					
U21A	Nageezi	115.24	345	⇓PKiKP	PKiKP	11 19 12.0 -4.1
	baz=115					
S10A	Tonopah Range,	115.26	353	⇑PKiKP	PKiKP	11 19 15.1 -1.0
	baz=115					
V24A	Rampart Ranch,	115.33	343	⇓PKiKP	PKiKP	11 19 12.8 -3.5
	baz=115					
NATX	Nacogdoches	115.35	332	ePKPdf	PKPdf	11 19 16.3 -0.2
NATX				LR	LR	
	comp=Z,5μm,20.0s,MS6.2					
MCCM	Marconi Confer	115.41	359	PFAKE		11 19 30.0 +14
MCCM				LR	LR	
	comp=Z,6μm,21.0s,MS6.2					
CMB	Columbia Colle	115.44	357	ePKIKP	PKPdf	11 19 15.5 -1.0
CMB				MLR	MLR	
	comp=Z,4μm,20.0s,MS6.1					
U15A	North Rim	116.15	349	⇓PKiKP	PKiKP	11 19 18.3 +0.3
	baz=116					
U16A	Tuba City	116.23	348	⇓PKiKP	PKiKP	11 19 17.9 -0.1
	baz=116					
U14A	Mt Trumbull	116.30	350	⇑PKiKP	PKiKP	11 19 19.2 +1.0
	baz=116					
ANMO	Albuquerque	116.37	344	PKP	PKPdf	11 19 19.1 +0.7
	comp=Z,1.4nm,0.8s,baz=58,slow=6.7,SNR=4.4					
ANMO	Albuquerque	116.37	344	PKP	PKPdf	11 19 19.1 +0.7
ANMO				LR	LR	
	comp=Z,5μm,20.0s,MS6.2					
MTDJ	Mount Denham	116.37	310	PFAKE		11 19 30.0 +11
MTDJ				LR	LR	
	comp=Z,3μm,21.0s,MS5.9					
V18A	Ganado	116.42	347	⇓PKiKP	PKiKP	11 19 18.5 0.0
	baz=116					
U13A	Pakoon Wash	116.42	351	⇓PKiKP	PKiKP	11 19 17.7 -0.8
	baz=116					
Y27A	Causey	116.47	341	⇓PKiKP	PKiKP	11 19 17.4 -1.3
	baz=116					
SHPR	Sheep Range	116.49	352	ePKPdf	PKPdf	11 19 19.0 +0.4
QSPA	South Pole Qui	116.62	180	PKP	PKPdf	11 19 17.0 -0.4
	comp=Z,27nm,0.9s,baz=282,slow=1.9,SNR=41					
QSPA				PKKPbc	PKKPbc	11 29 44.7 -2.5
	comp=Z,1.7nm,0.6s,baz=53,slow=1.3,SNR=9.5					
QSPA	South Pole Qui	116.62	180	PKP	PKPdf	11 19 17.0 -0.4
QSPA				PKKPbc	PKKPbc	11 29 44.7 -2.5
X23A	Hourglass Bar	116.65	343	⇑PKiKP	PKiKP	11 19 19.4 +0.4
	baz=116					
V17A	Tonalea, Kykot	116.67	348	⇓PKiKP	PKiKP	11 19 18.8 -0.2
	baz=116					
FURC	Furnace Creek,	116.72	353	⇑PKiKP	PKiKP	11 19 19.3 +0.3
	baz=116					
V15A	Kaibab Nationa	116.72	349	⇑PKiKP	PKiKP	11 19 18.7 -0.3
	baz=116					
SAO	San Andreas Ge	116.75	358	PFAKE		11 19 30.0 +11
SAO				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
CWC	Cottonwood Cre	116.87	354	⇑PKiKP	PKiKP	11 19 19.5 +0.2
	baz=116					
Y25A	Mesa, Roswell	116.87	342	⇑PKiKP	PKiKP	11 19 18.0 -1.4
	baz=116					
V13A	Grand Canyon W	116.98	351	⇓PKiKP	PKiKP	11 19 19.1 -0.5
	baz=117,SNR=10					
DAC	Darwin (Calif)	116.98	354	PFAKE		11 19 30.0 +10
DAC				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
Z27A	Tatum	117.01	340	⇑PKiKP	PKiKP	11 19 17.2 -2.5
	baz=117					
LAZ	Ladron	117.06	344	ePKPdf	PKPdf	11 19 19.5 -0.2
V14A	Boquillas Ranc	117.06	350	⇓PKiKP	PKiKP	11 19 20.5 +0.8
	baz=117					
Y24A	Capitan	117.07	343	⇓PKiKP	PKiKP	11 19 16.6 -3.1
	baz=117					
SDV	Santo Domingo	117.15	297	PFAKE		11 19 30.0 +10
SDV				LR	LR	
	comp=Z,970nm,22.0s,MS5.4					
BNM	Barren Site	117.17	344	ePKPdf	PKPdf	11 19 19.9 0.0
MPMC	Manual Prospec	117.19	354	⇓PKiKP	PKiKP	11 19 19.2 -0.7
	baz=117					
Y23A	Lovelace Mesa,	117.23	343	⇓PKiKP	PKiKP	11 19 19.0 -1.0
	baz=117					
Z26A	Caprock	117.28	341	⇑PKiKP	PKiKP	11 19 18.8 -1.4
	baz=117					
DZM	Mont Dzumac	117.34	102	ePP	PP	11 20 33.1 +1.2
	comp=Z,355nm,23.9s					
DZM				eSP	SP	11 30 18.8 +4.0
	comp=Z,2μm,27.6s					
DZM				eSS	SS	11 36 41.2 -1.4
	comp=Z,4μm,35.1s					
DZM				eLR	LR	11 54 58.7
	comp=Z,6μm,39.3s					
DZM	Mont Dzumac	117.34	102	eLR	LR	11 19 25.0
	comp=Z,355nm,23.9s					
HKT	Hockley	117.42	332	ePKIKP	PKPdf	11 19 19.4 -1.1
HKT				MLR	MLR	
	comp=Z,5μm,19.0s,MS6.2					
W14A	Seligman	117.47	350	⇑PKiKP	PKiKP	11 19 21.0 +0.5
	baz=117					
CPRX	Cap Rock	117.47	341	ePKPdf	PKPdf	11 19 20.1 -0.5
Z25A	Roswell	117.48	342	⇑PKiKP	PKiKP	11 19 19.5 -1.1
	baz=117					
Y21A	Point of Rocks	117.56	345	⇓PKiKP	PKiKP	11 19 19.4 -1.4
	baz=117					
X18A	Snowflake	117.56	347	⇓PKiKP	PKiKP	11 19 20.4 -0.3
	baz=117					
Z24A	Sheeppen Canyo	117.62	342	⇓PKiKP	PKiKP	11 19 21.3 +0.5
	baz=117					
Y20A	Horse Springs,	117.82	345	⇓PKiKP	PKiKP	11 19 21.9 +0.7
	baz=117					
GSC	Goldstone	117.87	353	⇑PKiKP	PKiKP	11 19 20.3 -1.0
	baz=118					
GSC	Goldstone	117.87	353	ePKPdf	PKPdf	11 19 20.9 -0.4
LDFC	Landfair	117.89	352	ePKPdf	PKPdf	11 19 19.2 -2.1
Z23A	Rita Site, Whi	117.91	343	⇓PKiKP	PKiKP	11 19 22.2 +0.8
	baz=118					
X17A	Forest Lakes	117.92	348	⇓PKiKP	PKiKP	11 19 22.0 +0.6
	baz=118,SNR=9.3					
X16A	Lo Mia Camp, P	117.96	348	⇓PKiKP	PKiKP	11 19 22.2 +0.7
	baz=118,SNR=8.4					
Y19A	Nutrioso	117.97	346	⇓PKiKP	PKiKP	11 19 20.3 -1.2
	baz=118					
125A	Gardner Draw,	118.05	341	⇑PKiKP	PKiKP	11 19 20.1 -1.6
	baz=118					
Z22A	Elephant Butte	118.10	344	PKiKP	PKiKP	11 19 22.3 +0.5
	baz=118,SNR=11					
X14A	Yava	118.16	349	⇑PKiKP	PKiKP	11 19 20.9 -1.0
	baz=118					
X13A	Yucca	118.19	350	⇑PKiKP	PKiKP	11 19 22.0 +0.1
	baz=118					
Z21A	St. Cloud Mine	118.23	344	PKiKP	PKiKP	11 19 22.7 +0.7
	baz=118,SNR=12					
124A	Stringfield Ra	118.23	342	PKiKP	PKiKP	11 19 22.2 +0.1
	baz=118,SNR=18					
JOHN	Johnston Islan	118.28	51	PFAKE		11 19 30.0 +7.5
JOHN				LR	LR	
	comp=Z,4μm,22.0s,MS6.0					
GDL2	Guadalupe Moun	118.39	341	ePKPdf	PKPdf	11 19 21.4 -0.9
EDW2	Edwards Air Fo	118.41	354	⇓PKiKP	PKiKP	11 19 21.3 -1.0
	baz=118					
226A	Malaga, Loving	118.45	341	⇓PKiKP	PKiKP	11 19 21.4 -1.1
	baz=118					
JCT	Junction City	118.49	336	ePKIKP	PKPdf	11 19 21.9 -0.7
JCT				MLR	MLR	
	comp=Z,5μm,21.0s,MS6.2					
Y16A	Circle Bar Ran	118.49	348	⇑PKiKP	PKiKP	11 19 22.4 -0.1
	baz=118					
123A	Bell Site, Whi	118.51	343	⇓PKiKP	PKiKP	11 19 24.0 +1.4
	baz=118					
PDMCI	Parker Dam,Lak	118.52	351	⇓PKiKP	PKiKP	11 19 23.4 +0.8
	baz=118					
Y17A	Roosevelt	118.55	347	PKiKP	PKiKP	11 19 23.1 +0.5
	baz=118,SNR=11					
Y15A	Casa Rosa Ranc	118.57	349	⇓PKiKP	PKiKP	11 19 22.6 -0.1
	baz=118					
225A	Deer Hill, Car	118.61	341	PKiKP	PKiKP	11 19 22.3 -0.5
	baz=118,SNR=7.6					
Z20A	Nine Sixteen R	118.63	345	⇓PKiKP	PKiKP	11 19 22.3 -0.5
	baz=118,SNR=10					
328A	Wristen Ranch,	118.68	339	⇓PKiKP	PKiKP	11 19 21.6 -1.4
	baz=118					
IRM	Iron Mountain	118.80	351	⇑PKiKP	PKiKP	11 19 24.0 +0.9
	baz=118					
224A	Cornudas Mount	118.84	342	⇓PKiKP	PKiKP	11 19 23.6 +0.4
	baz=118,SNR=12					
Z17A	San Carlos Hig	118.86	347	⇑PKiKP	PKiKP	11 19 23.8 +0.6
	baz=118					
Y13A	Salome	118.95	350	⇑PKiKP	PKiKP	11 19 24.0 +0.5
	baz=119					
121A	Cookes Peak, D	119.00	344	PKiKP	PKiKP	11 19 24.2 +0.6
	baz=119,SNR=15					
Z16A	Peralta Trail,	119.00	348	⇓PKiKP	PKiKP	11 19 24.2 +0.6
	baz=119					
BFSC	Mount Baldy Ra	119.01	354	⇓PKiKP	PKiKP	11 19 24.4 +0.9
	baz=119					
BELC	Belle Mtn. Jos	119.07	352	⇓PKiKP	PKiKP	11 19 21.9 -1.7
	baz=119					
Y12C	Blythe	119.12	351	⇓PKiKP	PKiKP	11 19 22.8 -0.9
	baz=119					
MNTX	Cornudas Mount	119.16	342	⇓PKiKP	PKiKP	11 19 23.9 0.0
	baz=119,SNR=25					
MNTX	Cornudas Mount	119.16	342	ePKPdf	PKPdf	11 19 23.3 -0.5
MNTX				LR	LR	
	comp=Z,4μm,19.0s,MS6.0					
120A	U Bar Ranch, L	119.19	345	PKiKP	PKiKP	11 19 24.5 +0.6
	baz=119,SNR=8.3					
222A	Williams Famil	119.23	343	PKiKP	PKiKP	11 19 24.4 +0.4
	baz=119,SNR=14					
428A	Kincaid Ranch,	119.25	339	PKiKP	PKiKP	11 19 23.8 -0.3
	baz=119,SNR=15					
Z14A	Wintersburg	119.25	349	⇑PKiKP	PKiKP	11 19 24.7 +0.7
	baz=119					
BC3	Big Chuckawall	119.34	352	⇓PKiKP	PKiKP	11 19 23.7 -0.5
	baz=119					
325A	Bean Ranch, Si	119.35	341	⇓PKiKP	PKiKP	11 19 23.9 -0.3
	baz=119,SNR=16					
427A	Hayter Ranch,	119.36	340	PKiKP	PKiKP	11 19 24.2 -0.1
	baz=119,SNR=10					
118A	Homack Ranch,	119.39	346	PKiKP	PKiKP	11 19 25.0 +0.7
	baz=119,SNR=14					
324A	Moseley Ranch,	119.43	342	⇓PKiKP	PKiKP	11 19 24.1 -0.3
	baz=119,SNR=15					
221A	Mesquite Ranch	119.49	344	⇓PKiKP	PKiKP	11 19 24.0 -0.5
	baz=119					
PFO	Pinyon Flat Ob	119.51	353	⇓PKiKP	PKiKP	11 19 25.0 +0.5
	baz=119					
PFO	Pinyon Flat Ob	119.51	353	PFAKE		11 19 40.0 +16
PFO				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
Z13A	Yuma Proving G	119.53	350	⇓PKiKP	PKiKP	11 19 25.3 +0.7
	baz=119					
117A	Oracle	119.62	347	PKiKP	PKiKP	11 19 25.1 +0.3
	baz=119,SNR=14					
426A	McDonald Obser	119.72	340	PKiKP	PKiKP	11 19 24.9 -0.1
	baz=119,SNR=34					
220A	Playas Peak, P	119.78	345	⇓PKiKP	PKiKP	11 19 25.2 +0.1
	baz=119					
528A	Cox Ranch, San	119.80	339	⇑PKiKP	PKiKP	11 19 23.9 -1.3
	baz=120,SNR=12					
116A	Eloy	119.81	348	⇓PKiKP	PKiKP	11 19 24.4 -0.8
	baz=119					
114A	Black Gap (USA	119.84	349	⇓PKiKP	PKiKP	11 19 24.8 -0.4
	baz=120					
GLA	Glamis	119.85	351	⇑PKiKP	PKiKP	11 19 25.0 -0.2
	baz=120					
GLA	Glamis	119.85	351	ePKPdf	PKPdf	11 19 25.4 +0.3
219A	White Tail Can	119.85	345	PKiKP	PKiKP	11 19 25.8 +0.6
	baz=120,SNR=15					
TUC	Tucson	119.88	347	ePKIKP	PKPdf	11 19 25.4 +0.2
TUC				MLR	MLR	
	comp=Z,6μm,22.0s,MS6.2					
425A	Indio Mountain	119.90	341	⇓PKiKP	PKiKP	11 19 24.4 -1.0
	baz=120,SNR=8.2					
527A	Woodward Ranch	120.08	339	⇓PKiKP	PKiKP	11 19 25.3 -0.4
	baz=120,SNR=18					
MONP	Monument Peak	120.21	352	⇓PKiKP	PKiKP	11 19 25.6 -0.3
	baz=120					
526A	Mary Lane Ranc	120.31	340	PKiKP	PKiKP	11 19 26.0 -0.2
	baz=120,SNR=10.0					
216A	Three Points,	120.31	347	⇑PKiKP	PKiKP	11 19 26.3 +0.1
	baz=120					
320A	Kipp Ranch, An	120.32	345	PKiKP	PKiKP	11 19 26.7 +0.5
	baz=120,SNR=11					
SBA	Scott Base	120.36	167	ePKIKP	PKPdf	11 19 24.9 +0.2
SBA				MLR	MLR	
	comp=Z,3μm,22.0s,MS5.9					
KVTX	Kingsville	120.38	333	PFAKE		11 19 40.0 +14
KVTX				LR	LR	
	comp=Z,5μm,21.0s,MS6.2					
217A	Green Valley	120.40	347	⇓PKiKP	PKiKP

CPUP				pmax	pmax			
	comp=Z,7.0nm,0.7s							
CPUP				pmax	pmax			
	comp=Z,19nm,1.1s							
TEIG	**Tepich**	**121.75**	**320**	PFAKE		11 19 40.0	+11	
TEIG				LR	LR			
	comp=Z,3μm,19.0s,MS6.0							
KIP	**Kipapa**	**121.95**	**38**	PFAKE		11 19 40.0	+11	
KIP				LR	LR			
	comp=Z,3μm,20.0s,MS6.0							
ROSC	**El Rosal**	**122.47**	**295**	PKP	PKPdf	11 19 31.4	+0.7	
	comp=Z,12nm,0.5s,baz=82,slow=22,SNR=6.4							
ROSC	**El Rosal**	**122.47**	**295**	*e*PKPdf	PKPdf	11 19 31.4	+0.7	
FUNA	**Funafuti**	**123.52**	**82**	PFAKE		11 19 40.0	+7.4	
FUNA				LR	LR			
	comp=Z,15μm,20.0s,MS6.6							
BCIP	**Isla Barro Col**	**124.09**	**304**	*e*PKPdf	PKPdf	11 19 33.2	-0.6	
BCIP				LR	LR			
	comp=Z,1μm,22.0s,MS5.5							
POHA	**Pohakuloa**	**124.64**	**37**	PFAKE		11 19 50.0	+15	
POHA				LR	LR			
	comp=Z,3μm,22.0s,MS6.0							
RPZ	**Rata Peaks**	**125.79**	**126**	PKP	PKPdf	11 19 34.5	-1.5	
	comp=Z,32nm,1.0s,baz=76,slow=5.8,SNR=6.1							
TGUH	**Tegucigalpa,Un**	**125.85**	**314**	*e*PKPdf	PKPdf	11 19 37.4	+0.3	
TGUH				LR	LR			
	comp=Z,2μm,22.0s,MS5.8							
MSVF	**Nonsavu**	**126.15**	**93**	*e*PKPdf	PKPdf	11 19 38.2	+0.7	
MSVF				LR	LR			
	comp=Z,2μm,20.0s,MS5.8							
PMSA	**Palmer Station**	**126.56**	**208**	PKP	PKPdf	11 19 37.3	+0.5	
	comp=Z,67nm,1.0s,baz=152,slow=1.8,SNR=16							
PMSA	**Palmer Station**	**126.56**	**208**	*e*PKPdf	PKPdf	11 19 37.1	+0.3	
PMSA				LR	LR			
	comp=Z,4μm,19.0s,MS6.2							
APG	**El Apazote**	**127.12**	**318**	PKP	PKPdf	11 19 38.3	-1.1	
	comp=Z,3.3nm,0.5s,baz=318,slow=1.4,SNR=13							
TRQA	**Tornquist**	**127.18**	**241**	*e*PKPdf	PKPdf	11 19 38.9	0.0	
TRQA				LR	LR			
	comp=Z,4μm,20.0s,MS6.0							
LPAZ	**La Paz**	**127.20**	**269**	PKP	PKPdf	11 19 40.5	+1.0	
	comp=Z,17nm,0.7s,baz=46,slow=6.7,SNR=10							
LPAZ				PP	PP	11 21 39.2	+0.4	
	comp=Z,20nm,1.3s,baz=1.5,slow=5.5,SNR=3.8							
LPAZ	**La Paz**	**127.20**	**269**	PKIKP	PKPdf	11 19 40.5	+1.0	
LPAZ						11 21 39.2		
LPAZ				pmax	pmax			
	comp=Z,17nm,0.7s							
LPAZ				pmax	pmax			
	comp=Z,20nm,1.3s							
KHZ	**Kahutara**	**127.51**	**124**	*e*PKPdf	PKPdf	11 19 39.0	-0.3	
CMIG	**Matias Romero**	**127.95**	**324**	PKP	PKPdf	11 19 40.4	-0.6	
	comp=Z,18nm,0.7s,baz=33,slow=2.7,SNR=22							
SNZO	**South Karori**	**128.30**	**123**	PFAKE		11 19 50.0	+9.1	
SNZO				LR	LR			
	comp=Z,2μm,21.0s,MS5.9							
OTAV	**Otavalo**	**128.49**	**294**	*e*PKPdf	PKPdf	11 19 43.6	+1.4	
OTAV				LR	LR			
	comp=Z,2μm,19.0s,MS5.8							
URZ	**Urewera**	**129.92**	**119**	PKP	PKPdf	11 19 43.0	-1.1	
	comp=Z,13nm,0.8s,baz=0.0,slow=3.0,SNR=3.2							
URZ	**Urewera**	**129.92**	**119**	*e*PKPdf	PKPdf	11 19 42.4	-1.7	
USHA	**Ushuaia**	**131.05**	**219**	PKP	PKPdf	11 19 44.4	-1.3	
	comp=Z,13nm,0.9s,baz=264,slow=3.2,SNR=7.5							
USHA				SKPab		11 23 10.3		
	comp=Z,48nm,1.2s,baz=54,slow=2.9,SNR=6.7							
CFAA	**Coronel Fontan**	**131.38**	**250**	PKP	PKPdf	11 19 47.7	+0.7	
	comp=Z,3.2nm,0.7s,baz=60,slow=1.3,SNR=27							
CFAA				SKPab		11 23 12.2		
	comp=Z,4.0nm,1.1s,baz=182,slow=2.7,SNR=8.0							
CFAA	**Coronel Fontan**	**131.38**	**250**	PKP	PKPdf	11 19 47.7	+0.7	
CFAA				SKPab		11 23 12.2		
ATAH	**Atahualpa**	**132.38**	**286**	PKP	PKPdf	11 19 50.1	+0.6	
	comp=Z,11nm,0.9s,baz=165,slow=11,SNR=6.8							
ATAH				SKP		11 23 18.6		
	comp=Z,22nm,0.9s,baz=78,slow=3.0,SNR=6.4							
LCO	**Las Campanas**	**133.03**	**254**	*e*PKPdf	PKPdf	11 19 51.2	+0.9	
LCO				LR	LR			
	comp=Z,4μm,20.0s,MS6.2							
NNA	**Nana**	**133.27**	**279**	PKP	PKPdf	11 19 56.4	+5.3	
	comp=Z,27nm,0.7s,baz=242,slow=5.4,SNR=9.0							
NNA	**Nana**	**133.27**	**279**	*e*PKPdf	PKPdf	11 19 50.6	-0.5	
NNA				LR	LR			
	comp=Z,3μm,20.0s,MS6.0							
AFI	**Afiamalu**	**133.81**	**84**	PFAKE		11 20 00.0	+7.9	
AFI				LR	LR			
	comp=Z,2μm,22.0s,MS5.8							
PLCA	**Paso Flores**	**133.97**	**238**	PKP	PKPdf	11 19 52.7	+1.0	
	comp=Z,7.9nm,0.9s,baz=91,slow=2.7,SNR=7.8							
PLCA				SKPab		11 23 21.3		
	comp=Z,5.5nm,0.9s,baz=96,slow=5.9,SNR=3.3							
PLCA	**Paso Flores**	**133.97**	**238**	*e*PKPdf	PKPdf	11 19 52.2	+0.6	
PLCA				LR	LR			
	comp=Z,4μm,20.0s,MS6.1							
XMAS	**Kiritimati**	**136.98**	**53**	PFAKE		11 20 10.0	+12	
XMAS				LR	LR			
	comp=Z,4μm,22.0s,MS6.1							
PPT	**Papeete**	**154.79**	**74**	*e*SS	SS	11 44 11.8	+1.9	
	comp=Z,723nm,25.0s							
PPT				*e*LR	LR	12 12 09.6		
	comp=Z,6μm,29.2s							
TAOE	**Nuku Hiva Isla**	**156.62**	**43**	*e*LR	LR	12 13 04.0		
	comp=Z,5μm,23.5s							
TAOE	**Nuku Hiva Isla**	**156.62**	**43**	*e*LR	LR	11 21 10.5		
	comp=Z,324nm,25.6s							
TBI	**Tubuai**	**156.85**	**87**	*e*SS	SS	11 44 33.4	+1.0	
	comp=Z,2μm,34.0s							
TBI				*e*LR	LR	12 13 06.9		
	comp=Z,4μm,26.2s							
RPN	**Rapa Nui**	**166.76**	**265**	PFAKE		11 20 50.0	+10	
RPN				LR	LR			
	comp=Z,4μm,20.0s							
RKT	**Rikitea**	**169.54**	**72**	*e*SS	SS	11 46 44.5	+1.0	
	comp=Z,2μm,28.5s							
RKT				*e*LR	LR	12 19 08.1		
	comp=Z,5μm,26.2s							
PTCN	**Pitcairn Islan**	**174.40**	**74**	PFAKE		11 20 50.0	+5.4	
PTCN				LR	LR			
	comp=Z,6μm,22.0s							

BJI 10 11:02:38.4, 32°.19N×104°.50E, h13km, ML3.5/7, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.43**	**207**	⇑*i*Pg	Pg	11 03 01.7	-4.1
CD2				Sg	Sg	11 03 19.6	-4.7
CD2				smax			
	comp=N,2μm,0.9s						
CD2				smax			
	comp=E,1μm,0.6s						
LZH	**Lanzhou**	**3.92**	**352**	Pn	Pn	11 03 41.5	+3.2
LZH				Pg	Pg	11 03 52.7	-0.9
LZH				Sn	Sn	11 04 26.3	+2.1
LZH				Sg	Sg	11 04 43.4	-1.0
LZH				smax			
	comp=N,110nm,0.5s						
LZH				smax			
	comp=E,120nm,0.8s						
XAN	**Xi'an**	**4.14**	**62**	Pn	Pn	11 03 41.4	+0.1
XAN				Pg	Pg	11 03 55.3	-2.5
XAN				Sn	Sn	11 04 24.3	-5.3
XAN				Sg	Sg	11 04 43.2	-8.3
XAN				smax			
	comp=N,84nm,0.6s						
XAN				smax			
	comp=E,33nm,0.6s						
GTA	**Gaotai**	**8.15**	**333**	*e*P	Pn	11 04 24.5	-12
GTA				pP		11 04 28.4	
GTA				sP		11 04 31.1	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						

*ISCJB **10** 11:08:39.9±0.4, 26°.71N±0°.04×55°.82E±0°.04, h10km, mb4.6/34, Error ellipse: s-maj=5.4km s-min=4.4km az=157.3*
*IDC **10** 11:08:39.8±0.5, 26°.79N×55°.86E, h0km, mb4.5/26, mb1 4.6/27, mb1mx4.5/36, mbtmp4.6/27, ML2.0/1, Error ellipse: s-maj=14.2km s-min=13.8km az=79.0*
*TEH **10** 11:08:42.6, 26°.82N×55°.92E, h28km*
*MOS **10** 11:08:43.1±1.0, 26°.74N×55°.82E, h33km, mb5.2/6, Error ellipse: s-maj=12.3km s-min=7.8km az=96.1*

*CSEM **10** 11:08:43.3±0.2, 26°.76N×55°.89E, h20km, mb4.6/9, Error ellipse: s-maj=6.8km s-min=5.7km az=171.0*
*NEIC **10** 11:08:43.8, 26°.93N×55°.73E, h11km, mb5.0/6, ML4.7(THR), MN4.7(TEH), After THR.*
*THR **10** 11:08:43.8±0.3, 26°.93N×55°.73E, h11km±4km, ML4.7*
ISC 10 11:08:41.8±0.4, 26°.72N±0°.04×55°.87E±0°.04, h10km, n143, σ1§09/158, mb4.5/34, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.73**	**22**	*e*Pg	**Pg**	**11 08 55.0**	**-0.9**
BNDS				*e*Sg	**Sg**	**11 09 04.0**	**-1.4**
BNDS	**Bandar-Abbas**	**0.73**	**22**	*e*Pg	**Pg**	**11 08 56.0**	**+0.1**
BNDS				*e*Sg	**Sg**	**11 09 04.8**	**-0.6**
BNDS				AML	AML	11 09 10.5	
	comp=N,35μm,0.8s						
BNDS				AML	AML	11 09 11.1	
	comp=E,30μm,0.5s						
BNDS	**Bandar-Abbas**	**0.73**	**22**	*e*Pg	**Pg**	**11 08 56.0**	**+0.1**
BNDS				*e*Sg	**Sg**	**11 09 04.8**	**-0.6**
IBND	**Bandar-abas**	**0.94**	**40**	*e*Pg	**Pg**	**11 09 00.0**	**+0.1**
IBND				*e*Pg	**Pg**	**11 09 00.1**	**+0.2**
IBND				*e*Sg	**Sg**	**11 09 12.8**	**+0.6**
IBND				*e*Sg	**Sg**	**11 09 12.9**	**+0.7**
IBND				*e*		11 09 22.9	
	comp=Z,1013μm,0.2s						
IBND				*e*		11 09 23.1	
	comp=Z,48μm,0.2s						
IBND	**Bandar-abas**	**0.94**	**40**	*e*Pg	**Pg**	**11 09 00.0**	**+0.1**
IBND				*e*Sg	**Sg**	**11 09 12.8**	**+0.6**
KRBR	**Kerman**	**3.34**	**13**	*e*Pn	**Pn**	**11 09 36.0**	**+1.9**
KRBR	**Kerman**	**3.34**	**13**	*e*Pn	**Pn**	**11 09 36.0**	**+1.9**
KRBR				AML	AML	11 10 29.7	
	comp=N,3μm,0.6s						
KRBR				AML	AML	11 10 40.9	
	comp=E,2μm,0.6s						
KRBR	**Kerman**	**3.34**	**13**	*e*Pn	**Pn**	**11 09 36.0**	**+1.9**
ISRV	**Sarvestan**	**3.60**	**318**	Pn	**Pn**	**11 09 45.1**	**+7.5**
ISRV				Sn	**Sn**	**11 10 18.3**	**-1.9**
ISRV	**Sarvestan**	**3.60**	**318**	*e*Pn	**Pn**	**11 09 39.0**	**+1.4**
ISRV				*e*		11 10 54.1	
	comp=Z,28μm,0.5s						
ISRV	**Sarvestan**	**3.60**	**318**	*e*Pn	**Pn**	**11 09 39.0**	**+1.4**
ISRV				Sn	**Sn**	**11 10 18.3**	**-1.9**
IPAR	**Pars**	**3.98**	**322**	Pn	**Pn**	**11 09 44.2**	**+1.3**
IPAR				Sn	**Sn**	**11 10 27.7**	**-1.9**
IPAR	**Pars**	**3.98**	**322**	*e*Pn	**Pn**	**11 09 44.3**	**+1.4**
IPAR				*e*		11 10 32.5	
	comp=Z,12μm,0.5s						
IPAR	**Pars**	**3.98**	**322**	Pn	**Pn**	**11 09 44.2**	**+1.3**
IPAR				Sn	**Sn**	**11 10 27.7**	**-1.9**
IMEH	**Mehriz**	**4.78**	**347**	Pn	**Pn**	**11 09 55.1**	**+1.2**
IMEH				Sn	**Sn**	**11 10 44.0**	**-5.3**
IMEH	**Mehriz**	**4.78**	**347**	*e*Pn	**Pn**	**11 09 54.7**	**+0.8**
IMEH				*e*		11 09 59.2	
	comp=Z,4μm,0.3s						
IMEH	**Mehriz**	**4.78**	**347**	*e*Pn	**Pn**	**11 09 54.7**	**+0.8**
IMEH				Sn	**Sn**	**11 10 44.0**	**-5.3**
IBAF	**Bafgh**	**4.86**	**357**	Pn	**Pn**	**11 09 55.3**	**+0.3**
IBAF				Sn	**Sn**	**11 10 44.8**	**-6.5**
IBAF	**Bafgh**	**4.86**	**357**	*e*Pn	**Pn**	**11 09 54.9**	**-0.1**
IBAF				*e*		11 09 59.9	
	comp=Z,5μm,0.1s						
IBAF	**Bafgh**	**4.86**	**357**	*e*Pn	**Pn**	**11 09 54.9**	**-0.1**
ZHSF	**Zahedan**	**5.20**	**55**	*e*Pn	**Pn**	**11 10 03.0**	**+3.3**
ZHSF	**Zahedan**	**5.20**	**55**	*e*Pn	**Pn**	**11 10 03.7**	**+4.0**
ZHSF	**Zahedan**	**5.20**	**55**	*e*Pn	**Pn**	**11 10 03.0**	**+3.3**
ISAD	**Sadrabad**	**5.51**	**340**	Pn	**Pn**	**11 10 06.7**	**+2.7**
ISAD				Sn	**Sn**	**11 11 01.7**	**-5.7**
ISAD	**Sadrabad**	**5.51**	**340**	*e*Pn	**Pn**	**11 10 04.8**	**+0.8**
ISAD				*e*		11 11 09.5	
	comp=Z,7μm,0.3s						
ISAD	**Sadrabad**	**5.51**	**340**	*e*Pn	**Pn**	**11 10 04.8**	**+0.8**
ICHK	**Chekchek**	**5.65**	**347**	Pn	**Pn**	**11 10 07.4**	**+1.6**
ICHK	**Chekchek**	**5.65**	**347**	*e*	**Pn**	**11 10 15.3**	**+10**
	comp=Z,3μm,0.3s						
ICHK				*e*Pn	**Pn**	**11 10 06.0**	**+0.2**
IKOO	**Kooshah**	**6.30**	**25**	*e*Pn	**Pn**	**11 10 15.8**	**+1.0**
IKOO				*e*		11 12 04.3	
	comp=N,3μm,0.2s						
IKOO	**Kooshah**	**6.30**	**25**	*e*Pn	**Pn**	**11 10 15.8**	**+1.0**
IGAR	**Gharneh**	**6.57**	**330**	*e*Pn	**Pn**	**11 10 19.3**	**+0.8**
IGAR				*e*		11 10 23.7	
	comp=Z,3μm,0.3s						
NASN	**Na'in**	**6.61**	**337**	*e*Pn	**Pn**	**11 10 20.0**	**+0.9**
NASN	**Na'in**	**6.61**	**337**	*e*Pn	**Pn**	**11 10 20.2**	**+1.1**
NASN	**Na'in**	**6.61**	**337**	*e*Pn	**Pn**	**11 10 20.0**	**+0.9**
ITEG	**Tejag**	**6.64**	**21**	*e*Pn	**Pn**	**11 10 30.8**	**+11**
IZEF	**Zefreh**	**6.88**	**334**	Pn	**Pn**	**11 10 22.6**	**-0.1**
IZEF	**Zefreh**	**6.88**	**334**	*e*Pn	**Pn**	**11 10 22.8**	**+0.1**
IZEF				*e*		11 10 26.9	
	comp=Z,1μm,0.2s						
IZEF	**Zefreh**	**6.88**	**334**	Pn	**Pn**	**11 10 22.6**	**-0.1**
IMON	**Monand**	**7.24**	**26**	*e*Pn	**Pn**	**11 10 27.9**	**+0.2**
IMON				*e*		11 11 05.4	
	comp=Z,797nm,0.2s						
IMON	**Monand**	**7.24**	**26**	*e*Pn	**Pn**	**11 10 27.9**	**+0.2**
IPIR	**Pirpir**	**7.35**	**325**	Pn	**Pn**	**11 10 30.8**	**+1.6**
IPIR	**Pirpir**	**7.35**	**325**	*e*Pn	**Pn**	**11 10 30.3**	**+1.1**
IPIR				*e*		11 11 51.9	
	comp=Z,4μm,0.3s						
IPIR	**Pirpir**	**7.35**	**325**	*e*Pn	**Pn**	**11 10 30.3**	**+1.1**
KBD	**Kabd**	**7.63**	**291**	*e*P	**Pn**	**11 10 33.6**	**+0.6**
KBD	**Kabd**	**7.63**	**291**	*e*P	**Pn**	**11 10 33.6**	**+0.5**
UMR	**Umm Al-Rimmam**	**7.73**	**293**	*e*P	**Pn**	**11 10 34.4**	**0.0**
UMR	**Umm Al-Rimmam**	**7.73**	**293**	*e*P	**Pn**	**11 10 34.4**	**0.0**
NAY	**Al-Naaiem**	**8.03**	**290**	*e*P	**Pn**	**11 10 39.0**	**+0.5**
NAY	**Al-Naaiem**	**8.03**	**290**	*e*P	**Pn**	**11 10 39.0**	**+0.5**
MIB	**Mutribah**	**8.12**	**294**	*e*P	**Pn**	**11 10 39.7**	**-0.1**
MIB				AML	AML	11 12 09.9	
	comp=Z,150nm,0.5s						
MIB	**Mutribah**	**8.12**	**294**	*e*P	**Pn**	**11 10 39.7**	**-0.1**
ASAO	**Ashtian**	**9.28**	**329**	*e*Pn	**Pn**	**11 10 57.0**	**+1.3**
ASAO	**Ashtian**	**9.28**	**329**	*e*Pn	**Pn**	**11 10 57.0**	**+1.4**
ASAO	**Ashtian**	**9.28**	**329**	*e*Pn	**Pn**	**11 10 57.0**	**+1.3**
GNI	**Garni**	**16.28**	**328**	Pn	**Pn**	**11 12 31.2**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=239,slow=19,SNR=2.6						
GNI	**Garni**	**16.28**	**328**	Pn	**Pn**	**11 12 31.2**	**+0.7**
ZEI	**Tsey**	**18.76**	**332**	*e*P	**Pn**	**11 13 03.3**	**+2.0**
ZEI				pmax	pmax		
	comp=Z,129nm,1.5s						
ZEI	**Tsey**	**18.76**	**332**	*e*P	**Pn**	**11 13 03.3**	**+2.0**
	comp=Z,129nm,1.5s						
MMAI	**Mount Meron Ar**	**18.81**	**294**	P	**Pn**	**11 13 03.2**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=113,slow=15,SNR=2.5						
KIV	**Kislovodsk**	**20.23**	**332**	*e*P	**P**	**11 13 16.7**	**-0.3**
KIV				pmax	pmax		
	comp=Z,154nm,1.1s						
KIV	**Kislovodsk**	**20.23**	**332**	*e*P	**P**	**11 13 16.6**	**-0.4**
	comp=Z,154nm,1.1s						
KIV	**Kislovodsk**	**20.23**	**332**	*e*P	**P**	**11 13 16.7**	**-0.3**
	comp=Z,154nm,1.1s						
GOF	**Gofitskoye**	**21.00**	**334**	*e*P	**P**	**11 13 30.9**	**+5.6**
AML	**Almayashu**	**21.21**	**39**	*e*P	**P**	**11 13 27.7**	**+0.1**
AML				pmax	pmax		
	comp=Z,46nm,0.8s,mb4.9						
AML	**Almayashu**	**21.21**	**39**	*e*P	**P**	**11 13 27.7**	**+0.1**
	comp=Z,46nm,0.8s,mb4.9						
AML	**Almayashu**	**21.21**	**39**	*e*P	**P**	**11 13 27.7**	**+0.1**
	comp=Z,46nm,0.8s,mb4.9						
EKS2	**Erkin-Say**	**21.60**	**38**	*e*P	**P**	**11 13 31.7**	**-0.1**
EKS2				pmax	pmax		
	comp=Z,230nm,1.8s,mb5.3						
EKS2	**Erkin-Say**	**21.60**	**38**	*e*P	**P**	**11 13 31.6**	**-0.2**
	comp=Z,230nm,1.8s,mb5.3						
EKS2	**Erkin-Say**	**21.60**	**38**	*e*P	**P**	**11 13 31.7**	**-0.1**
	comp=Z,230nm,1.8s,mb5.3						
AAK	**Ala-Archa**	**21.98**	**39**	P	**P**	**11 13 36.1**	**+0.1**
	comp=Z,20nm,0.7s,mb4.6,baz=221,slow=10,SNR=4.4						
AAK	**Ala-Archa**	**21.98**	**39**	P	**P**	**11 13 36.1**	**+0.1**
AAK	**Ala-Archa**	**21.98**	**39**	P	**P**	**11 13 36.1**	**+0.2**
KZA	**Kyzart**	**22.07**	**41**	*e*P	**P**	**11 13 38.4**	**+1.6**
KZA				pmax	pmax		
	comp=Z,122nm,1.1s,mb5.2						
KZA	**Kyzart**	**22.07**	**41**	*e*P	**P**	**11 13 38.4**	**+1.5**
	comp=Z,122nm,1.1s,mb5.2						
KZA	**Kyzart**	**22.07**	**41**	*e*P	**P**	**11 13 38.4**	**+1.6**
	comp=Z,122nm,1.1s,mb5.2						
BR131	**Keskin Array S**	**22.60**	**311**	*e*P	**P**	**11 13 42.9**	**+0.4**
	comp=Z,22nm,0.8s,mb4.6						
BR131	**Keskin Array S**	**22.60**	**311**	*e*P	**P**	**11 13 42.9**	**+0.4**
	comp=Z,22nm,0.8s,mb4.6						
BRTR	**Keskin Array B**	**22.60**	**311**	P	**P**	**11 13 42.5**	**+0.1**
	comp=Z,18nm,1.0s,mb4.5,baz=140,slow=9.1,SNR=6.7						
BRTR	**Keskin Array B**	**22.60**	**311**	P	**P**	**11 13 42.6**	**+0.1**
ABKAR	**Akbulak array**	**22.72**	**7**	P	**P**	**11 13 42.2**	**-1.5**
	comp=Z,24nm,0.8s,mb4.7						
ABKAR	**Akbulak array**	**22.72**	**7**	P	**P**	**11 13 42.2**	**-1.5**
	comp=Z,24nm,0.8s,mb4.7						
AKTK	**Aktyubinsk**	**23.73**	**3**	P	**P**	**11 13 53.0**	**-1.1**
AKTK	**Aktyubinsk**	**23.73**	**3**	P	**P**	**11 13 53.0**	**-1.1**
AKTO	**Aktyubinsk**	**23.73**	**3**	P	**P**	**11 13 53.0**	**-1.1**
	comp=Z,6.3nm,0.6s,mb4.2,baz=166,slow=7.2,SNR=5.7						
BVAR	**Borovoye Array**	**28.43**	**19**	P	**P**	**11 14 35.7**	**-0.8**
	comp=Z,18nm,0.8s,mb4.8,baz=201,slow=7.8,SNR=8.7						
BVAR	**Borovoye Array**	**28.43**	**19**	P	**P**	**11 14 35.7**	**-0.8**
MKAR	**Makanchi Array**	**28.92**	**39**	P	**P**	**11 14 41.3**	**+0.3**
	comp=Z,2.9nm,0.6s,mb4.2,baz=220,slow=8.4,SNR=6.6						
ZALV	**Zalesovo Beam**	**34.58**	**30**	P	**P**	**11 15 29.6**	**-0.9**
	comp=Z,16nm,0.5s,mb5.2,baz=246,slow=9.1,SNR=9.6						
VRAC	**Vranov**	**37.69**	**317**	P	**P**	**11 15 56.0**	**-1.2**
	comp=Z,3.8nm,0.4s,mb4.5,baz=114,slow=10,SNR=3.5						
VRAC	**Vranov**	**37.69**	**317**	P	**P**	**11 15 56.0**	**-1.3**
JOF	**Joensuu**	**39.65**	**343**	*e*P	**P**	**11 16 12.8**	**-0.7**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
JOF	**Joensuu**	**39.65**	**343**	*e*p	**P**	**11 16 12.8**	**-0.7**
	comp=Z,1.4nm,0.3s,mb4.2						
JOF	**Joensuu**	**39.65**	**343**	*e*P	**P**	**11 16 12.8**	**-0.7**
	comp=Z,1.0nm,0.3s,mb4.0						
BRG	**Berggiesshubel**	**39.86**	**319**	*i*P	**P**	**11 16 14.4**	**-1.0**
	comp=Z,16nm,1.0s,mb4.7						
BRG	**Berggiesshubel**	**39.86**	**319**	*i*P	**P**	**11 16 14.4**	**-1.0**
BRG				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
BRG	**Berggiesshubel**	**39.86**	**319**	*i*P	**P**	**11 16 14.4**	**-1.0**
	comp=Z,14nm,1.0s,mb4.7						
FINES	**FINESS Array B**	**40.07**	**338**	P	**P**	**11 16 15.8**	**-1.3**
	comp=Z,4.8nm,0.6s,mb4.4,baz=124,slow=9.5,SNR=4.3						
FINES	**FINESS Array B**	**40.07**	**338**	P	**P**	**11 16 15.8**	**-1.3**
CHTO	**Chiang Mai**	**40.34**	**92**	*e*P	**P**	**11 16 20.8**	**+1.0**
CHTO	**Chiang Mai**	**40.34**	**92**	*e*P	**P**	**11 16 20.8**	**+1.0**
KAF	**Kangasniemi**	**40.49**	**339**	*e*P	**P**	**11 16 22.0**	**+1.5**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
KAF	**Kangasniemi**	**40.49**	**339**	*e*p	**P**	**11 16 22.0**	**+1.5**
	comp=Z,0.8nm,0.4s,mb3.8						
KAF	**Kangasniemi**	**40.49**	**339**	*e*P	**P**	**11 16 22.0**	**+1.5**
	comp=Z,1.0nm,0.4s,mb3.9						
DAVOX	**Davos/Dischmat**	**41.24**	**311**	P	**P**	**11 16 25.3**	**-1.6**
	comp=Z,12nm,0.8s,mb4.5,baz=126,slow=14,SNR=4.2						
DAVOX	**Davos/Dischmat**	**41.24**	**311**	P	**P**	**11 16 25.3**	**-1.6**
HFS	**Hagfors**	**44.03**	**331**	P	**P**	**11 16 48.1**	**-1.3**
	comp=Z,4.3nm,0.6s,mb4.4,baz=128,slow=9.6,SNR=6.0						
HFS	**Hagfors**	**44.03**	**331**	P	**P**	**11 16 48.1**	**-1.3**
SONM	**Songino Array**	**44.47**	**48**	P	**P**	**11 16 53.4**	**+0.3**
	comp=Z,7.0nm,0.9s,mb4.4,baz=262,slow=7.3,SNR=6.4						
SONM	**Songino Array**	**44.47**	**48**	P	**P**	**11 16 53.4**	**+0.3**
NOA	**NORSAR Array B**	**45.54**	**331**	P	**P**	**11 16 59.1**	**-2.3**
	comp=Z,4.1nm,0.9s,mb4.4,baz=119,slow=8.1,SNR=3.3						
NOA	**NORSAR Array B**	**45.54**	**331**	P	**P**	**11 16 59.1**	**-2.3**
ARCES	**ARCESS Array B**	**46.36**	**346**	P	**P**	**11 17 07.3**	**-0.4**
	comp=Z,6.3nm,0.9s,mb4.5,baz=152,slow=9.1,SNR=5.3						
ARCES	**ARCESS Array B**	**46.36**	**346**	P	**P**	**11 17 07.4**	**-0.4**
ESDC	**Sonseca Array**	**50.85**	**301**	P	**P**	**11 17 42.0**	**-0.8**
	comp=Z,0.7nm,0.4s,mb4.0,baz=76,slow=6.6,SNR=3.7						
ESDC	**Sonseca Array**	**50.85**	**301**	P	**P**	**11 17 42.0**	**-0.8**
MDT	**Midelt**	**52.24**	**292**	P	**P**	**11 17 54.0**	**+0.7**
	comp=Z,9.3nm,1.0s,mb4.7,baz=95,slow=13,SNR=4.1						
MDT	**Midelt**	**52.24**	**292**	P	**P**	**11 17 54.0**	**+0.7**
SPITS	**Spitsbergen Ar**	**54.55**	**351**	P	**P**	**11 18 09.0**	**-0.6**
	comp=Z,1.5nm,0.5s,mb4.3,baz=133,slow=14,SNR=6.8						
SPITS	**Spitsbergen Ar**	**54.55**	**351**	P	**P**	**11 18 09.0**	**-0.6**
LBTB	**Lobatse**	**59.15**	**212**	P	**P**	**11 18 44.0**

JMDO	**Jabal Madar**	4.96 155	P	Pn	11 14 39.8	+1.1
	SNR=7.3					
JMDO	**Jabal Madar**	4.96 155	P	Pn	11 14 39.8	+1.1
	SNR=7.3					
ZHSF	**Zahedan**	5.15 57	*e*Pn	Pn	11 14 45.0	+3.8
ZHSF	**Zahedan**	5.15 57	*e*Pn	Pn	11 14 45.0	+3.8
NASN	**Na'in**	6.43 337	*e*Pn	Pn	11 15 01.0	+2.1
NASN	**Na'in**	6.43 337	*e*Pn	Pn	11 15 01.7	+2.8
NASN	**Na'in**	6.43 337	*e*Pn	Pn	11 15 01.0	+2.1
QRN	**Al-Qurain**	7.22 287	*e*P	Pn	11 15 10.9	+1.2
QRN			*e*S	Sn	11 16 28.8	-3.1
UMR	**Umm Al-Rimmam**	7.61 292	*e*P	Pn	11 15 15.7	+0.7
UMR	**Umm Al-Rimmam**	7.61 292	*e*P	Pn	11 15 15.7	+0.6
NAY	**Al-Naaiem**	7.92 289	*e*P	Pn	11 15 20.7	+1.4
NAY			*e*S	Sn	11 16 46.6	-2.4
NAY			AML	AML	11 16 49.7	
	comp=Z,26nm,0.6s					
NAY	**Al-Naaiem**	7.92 289	*e*P	Pn	11 15 20.7	+1.4
MIB	**Mutribah**	8.00 293	*e*P	Pn	11 15 21.3	+0.9
MIB			*e*S	Sn	11 16 47.1	-3.9
MIB			AML	AML	11 16 47.2	
	comp=Z,22nm,0.6s					
MIB	**Mutribah**	8.00 293	*e*P	Pn	11 15 21.3	+0.9
RBK	**Rabkut**	9.46 189	P	Pn	11 15 41.1	+0.6
	SNR=7.8					
RBK	**Rabkut**	9.46 189	P	Pn	11 15 41.1	+0.6
	SNR=7.8					
GNI	**Garni**	16.10 328	Pn	Pn	11 17 16.3	+5.8
	comp=Z,0.4nm,0.3s,baz=29,slow=19,SNR=1.8					
BRTR	**Keskin Array B**	22.44 310	P	P	11 18 25.1	+2.0
	comp=Z,2.4nm,0.6s,mb3.8,baz=131,slow=13,SNR=3.9					
BRTR	**Keskin Array B**	22.44 310	P	P	11 18 25.1	+2.0
AKTK	**Aktyubinsk**	23.57 4	P	P	11 18 34.1	-0.7
AKTK	**Aktyubinsk**	23.57 4	P	P	11 18 34.2	-0.6
AKTO	**Aktyubinsk**	23.57 4	P	P	11 18 34.1	-0.7
	comp=Z,2.5nm,0.7s,mb3.8,baz=195,slow=11,SNR=4.9					
BVAR	**Borovoye Array**	28.28 19	P	P	11 19 16.9	-0.5
	comp=Z,3.1nm,0.7s,mb4.1,baz=201,slow=7.7,SNR=5.2					
BVAR	**Borovoye Array**	28.28 19	P	P	11 19 16.9	-0.5
MKAR	**Makanchi Array**	28.82 39	P	P	11 19 19.4	-2.9
	comp=Z,0.7nm,0.8s,mb3.4,baz=228,slow=5.0,SNR=2.4					
MKAR	**Makanchi Array**	28.82 39	P	P	11 19 19.4	-2.9
ZALV	**Zalesovo Beam**	34.45 30	P	P	11 20 10.9	-0.9
	comp=Z,2.1nm,0.3s,mb4.5,baz=240,slow=9.4,SNR=5.2					
FINES	**FINESS Array B**	39.90 338	P	P	11 20 56.6	-1.3
	comp=Z,3.6nm,0.8s,mb4.2,baz=119,slow=11,SNR=2.4					
FINES	**FINESS Array B**	39.90 338	P	P	11 20 56.6	-1.2
KEST	**Kesra**	40.35 294	P	P	11 21 03.0	+1.0
	comp=Z,1.1nm,0.7s,mb3.7,baz=68,slow=2.4,SNR=3.7					
KEST	**Kesra**	40.35 294	P	P	11 21 03.0	+1.0
SONM	**Songino Array**	44.40 48	P	P	11 21 35.4	+0.7
	comp=Z,1.0nm,0.6s,mb3.8,baz=251,slow=8.5,SNR=4.6					
SONM	**Songino Array**	44.40 48	P	P	11 21 35.4	+0.6
ARCES	**ARCESS Array B**	46.18 346	P	P	11 21 48.2	-0.4
	comp=Z,1.7nm,1.0s,mb4.0,baz=124,slow=11,SNR=3.3					
ARCES	**ARCESS Array B**	46.18 346	P	P	11 21 48.2	-0.4
MDT	**Midelt**	52.13 292	P	P	11 22 35.0	+0.3
	comp=Z,2.5nm,0.6s,mb4.3,baz=70,slow=10,SNR=4.6					
MDT	**Midelt**	52.13 292	P	P	11 22 35.0	+0.3
KSRS	**Korea Array**	60.61 60	P	P	11 23 33.5	-1.7
	comp=Z,1.4nm,0.6s,mb4.3,baz=275,slow=6.5,SNR=5.8					
DBIC	**Dimbokro**	60.89 262	P	P	11 23 36.4	-1.0
	comp=Z,4.1nm,0.9s,mb4.6,baz=79,slow=9.6,SNR=3.4					
DBIC	**Dimbokro**	60.89 262	P	P	11 23 36.3	-1.1
BOSA	**Boshof**	62.49 210	P	P	11 23 46.9	-1.0
	comp=Z,3.3nm,0.5s,mb4.7,baz=55,slow=4.3,SNR=12					
BOSA	**Boshof**	62.49 210	P	P	11 23 46.8	-1.0
ILAR	**Eielson Array**	86.94 10	P	P	11 26 07.2	-1.8
	comp=Z,0.9nm,0.8s,mb4.1,baz=319,slow=4.8,SNR=7.5					
ILAR	**Eielson Array**	86.94 10	P	P	11 26 07.2	-1.8
WRA	**Warramunga Arr**	89.17 113	P	P	11 26 17.2	-3.2
	comp=Z,0.4nm,0.6s,mb3.9,baz=318,slow=4.0,SNR=4.9					
WRA	**Warramunga Arr**	89.17 113	P	P	11 26 17.2	-3.1
ASAR	**Alice Springs**	90.61 116	P	P	11 26 23.8	-3.3
	comp=Z,0.5nm,0.8s,mb3.9,baz=311,slow=4.0,SNR=2.9					
ASAR	**Alice Springs**	90.61 116	P	P	11 26 23.8	-3.2

*ISCJB **10** 11:16:58.6±0.9, 58°.5S±0°.3×151°.1W±0°.3, h10km, mb4.5/7, MS5.2/6, Error ellipse: s-maj=42.5km s-min=19.4km az=10.6*
*IDC **10** 11:16:58.8±0.8, 58°.56S×151°.12W, h0km, mb4.2/6, mb1 4.4/6, mb1mx4.3/13, mbtmp4.2/6, MS5.2/6, Ms1 5.2/6, ms1mx4.8/18, Error ellipse: s-maj=46.9km s-min=20.3km az=9.0*
ISC 10 11:17:00.6±0.9, 58°.5S±0°.3×151°.1W±0°.3, h10km, n24, σ1§27/10, mb4.5/7, MS5.2/6, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	31.66	180	LR	LR	11 33 16.4	
	comp=Z,3μm,21.4s,MS4.9,baz=256,slow=31						
TBI	**Tubuai**	35.11	3	*e*LQ		11 32 06.1	
	1μm,26.0s						
TBI				*e*LR	LR	11 33 35.6	
	5μm,28.0s,baz=189						
RKT	**Rikitea**	37.16	25	*e*LQ		11 32 56.2	
	2μm,32.8s						
RKT				*e*LR	LR	11 34 42.5	
	2μm,28.0s,baz=189						
RAR	**Rarotonga**	37.75	347	LR	LR	11 35 51.2	
	comp=Z,2μm,19.6s,MS4.9,baz=248,slow=30						
PPT	**Papeete**	40.86	2	*e*S	S	11 31 08.9	+15
	538nm,27.0s						
PPT				*e*LQ		11 34 26.2	
	3μm,29.5s						
PPT				*e*LR	LR	11 36 14.7	
	5μm,25.0s,baz=189						
PPT	**Papeete**	40.86	2	LR	LR	11 37 38.8	
	comp=Z,2μm,20.6s,MS4.9,baz=193,slow=30						
RPN	**Rapa Nui**	42.67	61	LR	LR	11 38 38.4	
	comp=Z,2μm,20.3s,MS4.9,baz=326,slow=30						
AFI	**Afiamalu**	47.12	332	P	P	11 25 32.3	-0.4
	66nm,0.7s,mb5.7,baz=72,slow=3.2,SNR=14						
AFI	**Afiamalu**	47.12	332	P	P	11 25 32.3	-0.4
TAOE	**Nuku Hiva Isla**	50.21	14	*e*LR	LR	11 40 39.5	
	2μm,28.0s,baz=205						
STKA	**Stephens Creek**	51.72	270	P	P	11 26 09.0	+1.3
	2.5nm,0.6s,mb4.3,baz=123,slow=7.0,SNR=4.3						
CTA	**Charters Tower**	58.85	283	P	P	11 26 59.4	+0.1
	5.5nm,0.9s,mb4.6,baz=135,slow=14,SNR=2.2						
CTA	**Charters Tower**	58.85	283	P	P	11 26 59.4	+0.1
ASAR	**Alice Springs**	62.34	269	P	P	11 27 21.2	-1.9
	4.1nm,0.6s,mb4.7,baz=137,slow=6.2,SNR=20						
WRA	**Warramunga Arr**	65.17	272	P	P	11 27 42.3	+0.6
	2.4nm,0.7s,mb4.3,baz=153,slow=5.6,SNR=12						
CPUP	**Villa Florida**	69.85	107	P	P	11 28 09.6	-1.7
	0.5nm,0.4s,mb3.8,baz=218,slow=2.7,SNR=3.7						
LPAZ	**La Paz**	72.60	93	P	P	11 28 29.9	+1.8
	2.1nm,1.0s,mb4.0,baz=177,slow=5.0,SNR=3.9						
BDFB	**Brasilia**	83.48	109	LR	LR	12 03 34.3	
	comp=Z,4μm,20.3s,MS5.8,baz=15,slow=34						
BOSA	**Boshof**	93.19	177	LR	LR	12 06 21.2	
	comp=Z,2μm,20.5s,MS5.7,baz=296,slow=32						
ILAR	**Eielson Array**	122.97	2	PKP	PKPdf	11 35 56.1	+0.8
	0.3nm,0.6s,baz=206,slow=2.3,SNR=4.1						
MDT	**Midelt**	145.87	124	PKP	PKPdf	11 36 37.7	-1.2
	3.4nm,1.0s,baz=155,slow=4.7,SNR=4.2						
MKAR	**Makanchi Array**	146.47	273	PKPbc	PKPbc	11 36 39.1	-1.7
	8.0nm,0.8s,baz=108,slow=4.0,SNR=16						
AAK	**Ala-Archa**	147.73	261	PKPbc	PKPab	11 36 49.5	+2.6
	1.5nm,0.6s,baz=47,slow=2.9,SNR=6.7						
ZALV	**Zalesovo Beam**	149.36	286	PKPbc	PKPbc	11 36 48.0	-0.3
	0.9nm,0.4s,baz=134,slow=4.3,SNR=4.8						

*OMAN **10** 11:20:09.1±99.0, 26°.69N×56°.03E, h12km, Error ellipse: s-maj=163.9km s-min=16.0km az=24.0*
*ISCJB **10** 11:23:10.9±0.8, 26°.51N±0°.08×55°.47E±0°.09, h10km, mb3.6/4, Error ellipse: s-maj=13.2km s-min=9.6km az=42.1*
*IDC **10** 11:23:18.2±15.0, 27°.25N×55°.76E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/24, mbtmp3.8/4, Error ellipse: s-maj=304.0km s-min=39.7km az=179.0*
ISC 10 11:23:12.6±0.8, 26°.43N±0°.08×55°.50E±0°.09, h10km, n9, σ1§08/11, mb3.6/4, 2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	**Banah**	0.88	125	P	Pg	11 23 24.6	-4.9
	SNR=17						
ASUD	**Al Ashush, Dub**	1.80	185	⇓P	Pn	11 23 44.8	+1.1
	SNR=10						
ASHO	**Ashiyiah**	1.81	164	⇓P	Pn	11 23 42.7	-1.1
	SNR=7.8						
NAY	**Al-Naaiem**	7.83	293	*e*P	Pn	11 25 01.0	-5.6
NAY				*e*S	Sn	11 26 35.0	-0.3
NAY				AML	AML	11 26 42.4	
	comp=Z,3.3nm,0.5s						
MIB	**Mutribah**	7.95	297	*e*P	Pn	11 25 04.5	-3.7
MIB				*e*S	Sn	11 26 42.2	+4.0
MIB				AML	AML	11 26 43.1	
	comp=Z,8.5nm,0.6s						
BRTR	**Keskin Array B**	22.54	311	P	P	11 28 16.2	+3.5
	comp=Z,0.9nm,0.7s,mb3.3,baz=121,slow=12,SNR=3.9						
BVAR	**Borovoye Array**	28.81	19	P	P	11 29 10.5	-0.1
	comp=Z,0.8nm,0.5s,mb3.7,baz=213,slow=7.1,SNR=4.2						
MKAR	**Makanchi Array**	29.36	39	P	P	11 29 16.3	+0.7
	comp=Z,0.4nm,0.7s,mb3.2,baz=224,slow=8.1,SNR=3.8						
ZALV	**Zalesovo Beam**	34.99	30	P	P	11 30 04.5	-0.4
	comp=Z,1.3nm,0.4s,mb4.3,baz=235,slow=10.0,SNR=5.5						

*IDC **10** 11:23:35.8±7.9, 19°.24S×177°.44W, h533km±83km, mb3.5/7, mb1 3.6/7, mb1mx3.3/19, mbtmp3.5/7, Error ellipse: s-maj=41.0km s-min=26.1km az=63.0*
*ISCJB **10** 11:23:36.4±1.2, 19°.3S±0°.2×177°.6W±0°.2, h550km, mb4.2/11, Error ellipse: s-maj=28.8km s-min=21.9km az=139.9*
*NEIC **10** 11:23:37.4±1.1, 19°.32S×177°.51W, h549km±18km, mb4.8/3, Error ellipse: s-maj=27.2km s-min=15.1km az=150.0*
ISC 10 11:23:37.5±1.2, 19°.3S±0°.2×177°.6W±0°.2, h550km, n19, σ0§69/19, mb4.2/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAN	**Canberra**	33.55	235	*e*P	P	11 29 32.1	0.0
CTA	**Charters Tower**	34.04	262	P	P	11 29 37.4	+0.8
	1.9nm,0.5s,mb3.9,baz=91,slow=10,SNR=5.5						
CTAO	**Charters Tower**	34.04	262	*e*P	P	11 29 37.1	+0.6
	5.2nm,0.6s,mb4.2						
CMSA	**Cobar Meteorol**	35.21	242	*e*P	P	11 29 46.1	0.0
QLP	**Quilpie**	35.83	251	*e*P	P	11 29 51.3	0.0
TOO	**Toolangi**	36.96	233	*e*P	P	11 30 00.5	0.0
COEN	**Coen**	37.94	272	*e*P	P	11 30 09.4	+0.7
	21nm,0.7s,mb4.8						
STKA	**Stephens Creek**	38.70	243	P	P	11 30 15.6	+0.8
	2.6nm,0.5s,mb4.1,baz=84,slow=9.2,SNR=6.5						
BBOO	**Buckleboo**	43.47	242	*e*P	P	11 30 52.3	-0.2
	8.6nm,0.4s,mb4.6						
BBOO	**Buckleboo**	43.47	242	*e*P	P	11 30 52.3	-0.2
	22nm,0.6s,mb4.9						
WB2	**Warramunga Arr**	45.18	261	*e*P	P	11 31 05.2	-0.7
WRA	**Warramunga Arr**	45.19	261	P	P	11 31 05.5	-0.5
	2.6nm,0.3s,mb4.2,baz=98,slow=7.6,SNR=89						
WRA				PcP	PcP	11 32 34.1	-0.4
	0.7nm,0.5s,baz=100,slow=3.2,SNR=3.8						
ASAR	**Alice Springs**	45.21	255	P	P	11 31 06.0	-0.1
	3.5nm,0.4s,mb4.2,baz=85,slow=8.4,SNR=106						
ASAR				PcP	PcP	11 32 34.2	-0.3
	1.6nm,0.7s,baz=107,slow=4.1,SNR=4.7						
FORT	**Forrest**	50.17	246	*e*P	P	11 31 42.3	-0.7
	14nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	53.61	261	*e*P	P	11 32 07.4	-0.6
	5.5nm,0.5s,mb4.1						
MBWA	**Marble Bar**	58.53	257	*e*P	P	11 32 41.1	-0.8
QSPA	**South Pole Qui**	70.79	180	P	P	11 33 58.6	+0.4
	8.5nm,1.0s,mb4.2,baz=52,slow=1.6,SNR=18						
ILAR	**Eielson Array**	87.03	13	P	P	11 35 23.6	-0.7
	0.3nm,0.4s,mb3.3,baz=224,slow=5.1,SNR=9.6						
CMAR	**Chiang Mai Arr**	90.10	289	P	P	11 35 41.5	+1.9
	1.4nm,1.0s,mb3.7,baz=97,slow=1.6,SNR=4.5						

*IDC **10** 11:26:37.5±3.9, 26°.60N×55°.94E, h0km, mb3.9/6, mb1 4.0/8, mb1mx3.7/28, mbtmp4.0/8, Error ellipse: s-maj=79.0km s-min=25.8km az=168.0*
*ISCJB **10** 11:26:40.1±1.1, 26°.89N±0°.04×55°.75E±0°.05, h5km±9km, mb3.9/7, Error ellipse: s-maj=7.7km s-min=5.7km az=162.5*
*CSEM **10** 11:26:41.4±0.2, 26°.88N×55°.80E, h2km, ML3.4, Error ellipse: s-maj=7.2km s-min=6.3km az=87.0*
*KISR **10** 11:26:42.8±0.8, 26°.85N×55°.21E, h5km±999km, ML4.0*
*NEIC **10** 11:26:44.0, 27°.24N×55°.83E, h1km, ML3.4(THR), After THR.*
*TEH **10** 11:26:46.9, 27°.17N×55°.78E, h8km*
*OMAN **10** 11:26:52.0±99.0, 26°.29N×55°.99E, h30km, Error ellipse: s-maj=27.4km s-min=2.7km az=347.0*
ISC 10 11:26:42.2±1.3, 26°.89N±0°.04×55°.77E±0°.05, h8km±9km, n65, σ1§22/84, mb3.9/7, 1C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	0.62	35	*e*Pg	Pg	11 26 51.0	-3.3
BNDS				*e*Sg	Sg	11 26 56.0	-6.4
BNDS	**Bandar-Abbas**	0.62	35	*e*Pg	Pg	11 26 51.2	-3.1
BNDS				*e*Sg	Sg	11 26 56.3	-6.1
IBND	**Bandar-abas**	0.89	51	*e*Pg	Pg	11 26 57.2	-2.1
IBND				*e*Sg	Sg	11 27 09.8	-1.0
IBND				*e*		11 27 13.8	
	comp=Z,63μm,0.1s						
IBND	**Bandar-abas**	0.89	51	*e*Pg	Pg	11 26 57.2	-2.1
ASHO	**Ashiyiah**	2.21	173	P	Pn	11 27 19.0	-0.2
	SNR=9.9						
ASHO	**Ashiyiah**	2.21	173	⇓P	Pn	11 27 19.0	-0.1
	SNR=9.9						
ASUD	**Al Ashush, Dub**	2.29	190	P	Pn	11 27 21.2	+1.0
	SNR=22						
ASUD	**Al Ashush, Dub**	2.29	190	P	Pn	11 27 21.2	+1.0
	SNR=22						
KRBR	**Kerman**	3.20	16	*e*Pn	Pn	11 27 33.0	+0.2
KRBR	**Kerman**	3.20	16	*e*Pn	Pn	11 27 33.2	+0.4
ISRV	**Sarvestan**	3.42	317	*e*Pn	Pn	11 27 37.2	+1.5
ISRV				*e*Sn	Sn	11 28 15.5	-0.9
ISRV				*e*		11 29 21.2	
	comp=Z,2μm,0.6s						
ISRV	**Sarvestan**	3.42	317	*e*Pn	Pn	11 27 37.2	+1.5
ISRV				*e*Sn	Sn	11 28 15.5	-0.9
ARQ	**Araqi**	3.60	169	P	Pn	11 27 37.3	-1.0
	SNR=15						
ARQ	**Araqi**	3.60	169	P	Pn	11 27 37.3	-1.0
	SNR=15						
IPAR	**Pars**	3.79	321	*e*Pn	Pn	11 27 42.2	+1.3
IPAR				*e*Sn	Sn	11 28 23.1	-2.6
IPAR				*e*		11 28 30.9	
	comp=Z,2μm,0.4s						
IPAR	**Pars**	3.79	321	*e*Pn	Pn	11 27 42.2	+1.3
IPAR				*e*Sn	Sn	11 28 23.1	-2.6
IMEH	**Mehriz**	4.60	348	*e*Pn	Pn	11 27 53.5	+1.5
IMEH				*e*		11 28 03.5	
	comp=Z,558nm,0.1s						
IMEH	**Mehriz**	4.60	348	*e*Pn	Pn	11 27 53.5	+1.5
IBAF	**Bafgh**	4.69	358	*e*Pn	Pn	11 27 53.6	+0.4
IBAF				*e*		11 27 55.3	
	comp=Z,702nm,0.1s						
IBAF				*e*Sn	Sn	11 28 43.3	-4.5
IBAF	**Bafgh**	4.69	358	*e*Pn	Pn	11 27 53.6	+0.4
IBAF				*e*Sn	Sn	11 28 43.3	-4.5
WBK	**Wadi Bani Khal**	5.16	145	⇑P	Pn	11 27 59.1	-0.7
	SNR=8.1						
ZHSF	**Zahedan**	5.18	57	*e*Pn	Pn	11 28 01.0	+1.0
ZHSF	**Zahedan**	5.18	57	*e*Pn	Pn	11 28 01.8	+1.8
ICHK	**Chekchek**	5.47	348	*e*	Pn	11 28 12.6	+8.7
	comp=Z,334nm,0.1s						
ICHK				*e*Pn	Pn	11 28 05.3	+1.4
IKOO	**Kooshah**	6.19	26	*e*Pn	Pn	11 28 14.5	+0.6
IKOO				*e*		11 30 05.8	
	comp=Z,273nm,0.3s						
IKOO	**Kooshah**	6.19	26	*e*Pn	Pn	11 28 14.5	+0.6
IGAR	**Gharneh**	6.38	330	*e*Pn	Pn	11 28 17.9	+1.4
IGAR				*e*		11 28 24.1	
	comp=Z,500nm,0.1s						
NASN	**Na'in**	6.42	337	*e*Pn	Pn	11 28 18.0	+0.9
NASN	**Na'in**	6.42	337	*e*Pn	Pn	11 28 18.2	+1.1
IZEF	**Zefreh**	6.69	334	*e*Pn	Pn	11 28 20.9	+0.2
IZEF				*e*		11 28 23.6	
	comp=Z,236nm,0.2s						
IZEF	**Zefreh**	6.69	334	*e*Pn	Pn	11 28 20.9	+0.2
IPIR	**Pirpir**	7.16	325	*e*Pn	Pn	11 28 28.3	+1.1
IPIR				*e*		11 29 50.1	
	comp=N,648nm,0.2s						
IPIR	**Pirpir**	7.16	325	*e*Pn	Pn	11 28 28.3	+1.1
QRN	**Al-Qurain**	7.19	287	*e*P	Pn	11 28 27.8	+0.2
QRN				*e*S	Sn	11 29 45.4	-4.1
QRN				AML	AML	11 29 49.2	
	comp=Z,32nm,0.3s						
IKLH	**Kolahrood**	7.36	331	*e*Pn	Pn	11 28 30.9	+0.9
IKLH				*e*Sn	Sn	11 29 47.5	-6.2
IKLH	**Kolahrood**	7.36	331	*e*Pn	Pn	11 28 30.9	+0.9
IKLH				*e*Sn	Sn	11 29 47.5	-6.2
UMR	**Umm Al-Rimmam**	7.58	292	*e*P	Pn	11 28 33.0	0.0
UMR				*e*S	Sn	11 29 56.0	-3.1
UMR				AML	AML	11 29 57.1	
	comp=Z,25nm,0.3s						
UMR	**Umm Al-Rimmam**	7.58	292	*e*P	Pn	11 28 33.0	0.0
UMR				*e*S	Sn	11 29 56.0	-3.1
NAY	**Al-Naaiem**	7.89	289	*e*P	Pn	11 28 37.2	0.0
NAY				*e*S	Sn	11 30 03.6	-3.2
NAY				AML	AML	11 30 04.5	
	comp=Z,13nm,0.4s						
NAY	**Al-Naaiem**	7.89	289	*e*P	Pn	11 28 37.2	0.0
NAY				*e*S	Sn	11 30 03.6	-3.1
	comp=Z,16nm,0.3s						
MIB	**Mutribah**	7.97	293	*e*P	Pn	11 28 38.7	+0.3
MIB				*e*S	Sn	11 30 05.8	-3.0
MIB				AML	AML	11 30 08.3	
	comp=Z,16nm,0.3s						
MIB	**Mutribah**	7.97	293	*e*P	Pn	11 28 38.7	+0.3
MIB				*e*S	Sn	11 30 05.8	-3.0
ISFB	**Sefidab**	8.03	339	*e*Pn	Pn	11 28 39.6	+0.4
ISFB	**Sefidab**	8.03	339	*e*Pn	Pn	11 28 39.6	+0.4
IVRN	**Varamin**	8.79	338	*e*Pn	Pn	11 28 50.6	+1.0
IVRN				*e*		11 29 11.1	
	comp=Z,178nm,0.2s						
IVRN	**Varamin**	8.79	338	*e*Pn	Pn	11 28 50.6	+1.0
RBK	**Rabkut**	9.45	189	P	Pn	11 28 59.0	+0.3
	SNR=6.5						
RBK	**Rabkut**	9.45	189	P	Pn	11 28 59.0	+0.3
	SNR=6.5						
GNI	**Garni**	16.09	328	Pn	Pn	11 30 29.5	+0.9
	comp=Z,0.7nm,0.3s,baz=0,slow=3.0,SNR=2.5						
GNI	**Garni**	16.09	328	Pn	Pn	11 30 29.5	+0.8
ASF	**Jabal al Asfar**	17.24	292	P	Pn	11 30 43.8	+0.5
	comp=Z,0.3nm,0.3s,baz=297,slow=2.3,SNR=3.6						
BRTR	**Keskin Array B**	22.42	310	P	P	11 31 40.6	-0.7
	comp=Z,0.9nm,0.8s,mb3.3,baz=128,slow=11,SNR=3.9						
BRTR	**Keskin Array B**	22.42	310	P	P	11 31 40.6	-0.7
AKTK	**Aktyubinsk**	23.57 4	P	P	11 31 54.1	+0.9	
AKTK	**Aktyubinsk**	23.57 4	P	P	11 31 54.1	+0.8	
AKTO	**Aktyubinsk**	23.57 4	P	P	11 31 54.1	+0.8	
	comp=Z,0.9nm,0.3s,mb3.7,baz=157,slow=5.9,SNR=5.1						
BVAR	**Borovoye Array**	28.30 19	P	P	11 32 34.0	-1.9	
	comp=Z,1.9nm,0.7s,mb3.9,baz=211,slow=11,SNR=5.2						
BVAR	**Borovoye Array**	28.30 19	P	P	11 32 34.0	-2.0	
MKAR	**Makanchi Array**	28.85 39	P	P	11 32 39.5	-1.5	
	comp=Z,0.3nm,0.3s,mb3.5,baz=217,slow=5.8,SNR=4.1						
MKAR	**Makanchi Array**	28.85 39	P	P	11 32 39.5	-1.5	
ZALV	**Zalesovo Beam**	34.48 30	P	P	11 33 27.1	-3.3	
	comp=Z,1.4nm,0.3s,mb4.4,baz=244,slow=9.2,SNR=6.3						
CHTO	**Chiang Mai**	40.44 92	*e*P	P	11 34 22.1	+0.8	
	comp=Z,7.3nm,0.6s,mb4.6						
CHTO	**Chiang Mai**	40.44 92	*e*P	P	11 34 22.1	+0.8	
	comp=Z,7.3nm,0.6s,mb4.6						
MDT	**Midelt**	52.10 292	P	P	11 35 51.5	-1.4	
	comp=Z,1.8nm,0.8s,mb4.0,baz=71,slow=6.5,SNR=3.8						
MDT	**Midelt**	52.10 292	P	P	11 35 51.5	-1.4	

*CSEM **10** 11:30:45.7±0.5, 39°.19N×17°.10E, h30km, Error ellipse: s-maj=11.1km s-min=5.4km az=113.0*
ROM 10 11:30:47.8±0.1, 39°.18N×17°.13E, h22km±1km, MI3.1/28, Error ellipse: s-maj=2.5km s-min=2.1km az=139.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LADO	**San Nicola del**	0.15	311	Pg	Pb	11 30 52.2	-0.3
LADO				Sg	Sb	11 30 55.9	+0.2
	5μm,0.7s						
LADO	**San Nicola del**	0.15	311	Pg	Pb	11 30 52.2	-0.3
LADO				Sg	Sb	11 30 55.9	+0.2
	5μm,0.7s						
SERS	**Sersale**	0.37	247	Pg	Pb	11 30 55.8	0.0
SERS				Sg	Sb	11 31 01.2	0.0
SERS	**Sersale**	0.37	247	Pg	Pb	11 30 55.8	0.0
SERS				Sg	Sb	11 31 01.2	0.0
GRI	**Girifalco**	0.66	237	Pg	Pb	11 31 00.8	+0.2
GRI				Sg	Sb	11 31 09.6	+0.3
	791nm,0.6s						
GRI	**Girifalco**	0.66	237	Pg	Pb	11 31 00.8	+0.2
GRI				Sg	Sb	11 31 09.6	+0.3
	791nm,0.6s						
CARO	**Carolei**	0.71	276	Pg	Pb	11 31 02.2	+0.7
	821nm,0.6s						
CARO	**Carolei**	0.71

BULG	Bulgheria - Ca	1.62	304	Pg	Pn	11 31 15.7 +0.6
	219nm,0.9s					
BULG	Bulgheria - Ca	1.62	304	Pg	Pn	11 31 15.7 +0.6
	219nm,0.9s					
MTTG	Motta San Giov	1.63	224	Pg	Pn	11 31 16.1 +0.9
	299nm,1.0s					
MTTG	Motta San Giov	1.63	224	Pg	Pn	11 31 16.1 +0.9
	299nm,1.0s					
PE1	Pezze di Greco	1.64	8	*e*Pn	Pn	11 31 14.1 -1.2
SG1	Sgolgore (BA)	1.69	348	*e*Pn	Pn	11 31 18.3 +2.3
MILZ	Milazzo	1.74	239	Pg	Pn	11 31 16.4 -0.3
	142nm,0.7s					
MILZ	Milazzo	1.74	239	Pg	Pn	11 31 16.4 -0.3
	142nm,0.7s					
AMUR	Altamura	1.77	347	Pg	Pn	11 31 16.6 -0.5
	322nm,0.6s					
AMUR	Altamura	1.77	347	Pg	Pn	11 31 16.6 -0.5
	322nm,0.6s					
CMPR	Campora	1.81	309	Pg	Pn	11 31 17.5 -0.1
	96nm,0.8s					
CMPR	Campora	1.81	309	Pg	Pn	11 31 17.5 -0.1
	96nm,0.8s					
ACER	Acerenza	1.84	331	Pg	Pn	11 31 19.2 +1.1
	593nm,0.6s					
ACER	Acerenza	1.84	331	Pg	Pn	11 31 19.2 +1.1
	593nm,0.6s					
VPL	Vulcano Piano	1.86	245	Pg	Pn	11 31 18.2 -0.2
VPL	Vulcano Piano	1.86	245	Pg	Pn	11 31 18.2 -0.2
MMME	Mongiuffi-Meli	1.93	230	Pg	Pn	11 31 20.3 +1.0
	186nm,1.3s					
MMME	Mongiuffi-Meli	1.93	230	Pg	Pn	11 31 20.3 +1.0
	186nm,1.3s					
BAI	Bari	1.93	354	*e*Pn	Pn	11 31 23.2 +3.9
CDT	Castel del Mon	2.01	341	*e*Pn	Pn	11 31 24.4 +4.0
KEK	Kerkira	2.13	75	*e*P	Pn	11 31 24.4 +2.3
VLS	Valsamata	2.89	109	*e*P	Pn	11 31 25.7 -6.8
JAN	Janina	2.92	80	*e*P	Pn	11 31 39.4 +6.5
RLS	Riolos of Patr	3.58	107	*e*P	Pn	11 31 41.8 -0.2
EVR	Evrytania	3.65	93	*e*P	Pn	11 31 47.7 +4.7
STON	Ston	3.71	6	*e*Pn	Pn	11 31 41.0 -2.7
STON				Sn	Sn	11 32 22.9 -3.9
STON	Ston	3.71	6	*e*Pn	Pn	11 31 41.0 -2.8
STON				Sn	Sn	11 32 22.9 -3.9
THL	Klokotos Trika	3.81	83	*e*P	Pn	11 31 45.4 +0.3
EFP	Efpalio	3.81	100	*e*P	Pn	11 31 43.8 -1.3
AGG	Agios Georgios	4.05	91	*e*P	Pn	11 31 48.8 +0.4
GUR	Goura	4.27	105	*e*P	Pn	11 31 50.0 -1.5
ITM	Ithomi	4.28	116	*e*P	Pn	11 31 50.5 -1.1
PYL	PYLOS	4.30	121	*e*P	Pn	11 31 48.5 -3.4
LKR	Lokris	4.61	95	*e*P	Pn	11 31 55.1 -1.0
BBLS	Lazići	4.98	19	*e*Pn	Pn	11 32 00.3 -0.9
PLG	Polygyros	5.01	74	*e*P	Pn	11 31 55.9 -5.7
BARS	Barje	5.07	43	*e*Pn	Pn	11 32 05.0 +2.5
DID	Didima	5.08	107	*e*P	Pn	11 32 02.0 -0.7
DIVS	Divibare	5.36	23	*e*Pn	Pn	11 32 05.0 -1.4
NVLJ	Novalja	5.63	343	*i*Pn	Pn	11 32 09.6 -0.6
NVLJ				Sn	Sn	11 33 11.8 -2.4
NVLJ	Novalja	5.63	343	*i*Pn	Pn	11 32 09.6 -0.6

BJI ***10*** *11:33:07.4,27˚.12N×55˚.34E,h10km,mB5.5/16,mb4.8/35,Ms5.2/16,Ms7 5.1/15*
IDC ***10*** *11:33:09.4±0.5,26˚.84N×55˚.88E,h0km,mb4.6/30,mb1 4.6/35,mb1mx4.6/38,mbtmp4.6/35,ML4.4/4,Error ellipse: s-maj=12.5km s-min=11.3km az=164.0*
ISCJB ***10*** *11:33:09.6±0.2,26˚.80N±0˚.02×55˚.79E±0˚.02,h10km,mb4.7/131,MS5.0/8,Error ellipse: s-maj=3.4km s-min=2.8km az=168.1*
CSEM ***10*** *11:33:11.4±0.1,26˚.83N×55˚.83E,h10km,mb4.7/90,Error ellipse: s-maj=4.0km s-min=3.6km az=115.0*
THR ***10*** *11:33:12.4±0.3,26˚.92N×55˚.71E,h10km±3km,ML4.3*
NEIC ***10*** *11:33:12.3,26˚.92N×55˚.71E,h10km,mb4.8/43,ML4.3(THR),MN4.5(TEH),After THR.*
TEH ***10*** *11:33:12.1,26˚.91N×55˚.84E,h20km*
MOS ***10*** *11:33:12.4±0.8,26˚.81N×55˚.86E,h33km,mb4.8/59,Error ellipse: s-maj=7.9km s-min=4.3km az=117.0*
SGS ***10*** *11:33:14.9,26˚.85N×55˚.71E,h10km*
OMAN ***10*** *11:33:16.7±18.0,26˚.64N×56˚.07E,h15km,Error ellipse: s-maj=9.9km s-min=2.8km az=35.0*
SZGRF ***10*** *11:33:43.6,28˚.82N×52˚.46E,h33km,mb4.6,Southern Iran*

ISC 10 11:33:11.5±0.2,26˚.82N±0˚.02×55˚.82E±0˚.02,h10km,(h16km±1.0km:pP-P),n509,σ1º03/518,mb4.7/131,MS5.0/8,29C-19D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.66	29	*e*Pg	Pg	11 33 24.0	-0.3
BNDS				*e*Sg	Sg	11 33 33.0	0.0
BNDS	Bandar-Abbas	0.66	29	*e*Pg	Pg	11 33 24.8	+0.5
BNDS				*e*Sg	Sg	11 33 33.9	+0.9
BNDS				AML	AML	11 33 40.9	
	comp=N,13μm,0.6s						
BNDS				AML	AML	11 33 41.2	
	comp=E,14μm,0.5s						
BNDS	Bandar-Abbas	0.66	29	*e*Pg	Pg	11 33 24.8	+0.5
BNDS				*e*Sg	Sg	11 33 33.8	+0.8
IBND	Bandar-abas	0.90	46	*e*Pg	Pg	11 33 28.8	-0.1
IBND				⇑*e*Pg	Pg	11 33 28.9	0.0
IBND				*e*Sg	Sg	11 33 40.7	+0.1
IBND				*e*Sg	Sg	11 33 41.5	+0.9
IBND				*e*		11 33 52.8	
	comp=Z,69μm,0.3s						
IBND				*e*		11 33 53.9	
	comp=Z,6μm,0.2s						
IBND	Bandar-abas	0.90	46	*e*Pg	Pg	11 33 28.8	-0.1
IBND				*e*Sg	Sg	11 33 40.7	+0.1
BANOM	Banah	0.99	154	Pb	Pb	11 33 31.1	+0.3
	SNR=482						
BANOM	Banah	0.99	154	⇑P	Pg	11 33 31.1	+0.5
	SNR=482						
NAZ	Nazwa, Dubai	1.83	184	P	Pn	11 33 45.4	+2.4
	SNR=55						
NAZ	Nazwa, Dubai	1.83	184	P	Pn	11 33 45.4	+2.4
	SNR=55						
NAZ				P		11 33 45.7	
	SNR=12						
HATD	Hatta, Dubai	2.00	172	P	Pn	11 33 47.4	+2.0
	SNR=402						
HATD	Hatta, Dubai	2.00	172	⇑P	Pn	11 33 47.4	+2.0
	SNR=402						
ASHO	Ashiyiah	2.14	174	Pn	Pn	11 33 49.2	+1.9
	SNR=79						
ASHO	Ashiyiah	2.14	174	⇓P	Pn	11 33 49.2	+2.0
	SNR=79						
ASUD	Al Ashush, Dub	2.23	191	Pn	Pn	11 33 51.4	+2.9
	SNR=53						
ASUD	Al Ashush, Dub	2.23	191	P	Pn	11 33 51.4	+3.0
	SNR=53						
KRBR	Kerman	3.26	15	*e*Pn	Pn	11 34 04.0	+1.3
KRBR	Kerman	3.26	15	*e*Pn	Pn	11 34 04.8	+2.1
KRBR				AML	AML	11 35 06.7	
	comp=N,1μm,0.6s						
KRBR				AML	AML	11 35 10.0	
	comp=E,838nm,0.5s						
KRBR	Kerman	3.26	15	*e*Pn	Pn	11 34 04.8	+2.1
HOQ	Hoqain	3.49	157	P	Pn	11 34 05.1	-0.8
	SNR=26						
HOQ	Hoqain	3.49	157	⇓P	Pn	11 34 05.1	-0.8
	SNR=26						
ISRV	Sarvestan	3.50	318	Pn	Pn	11 34 08.1	+2.1
ISRV				Sn	Sn	11 34 47.6	+0.2
ISRV	Sarvestan	3.50	318	*e*Pn	Pn	11 34 08.1	+2.1
ISRV				*e*		11 35 29.5	
	comp=Z,14μm,0.5s						
ISRV	Sarvestan	3.50	318	*e*Pn	Pn	11 34 08.1	+2.1
ISRV				Sn	Sn	11 34 47.6	+0.2
ARQ	Araqi	3.52	169	P	Pn	11 34 07.2	+0.8
	SNR=58						
ARQ	Araqi	3.52	169	P	Pn	11 34 07.2	+0.9
	SNR=58						
IPAR	Pars	3.88	322	Pn	Pn	11 34 14.0	+2.8
IPAR	Pars	3.88	322	*e*Pn	Pn	11 34 13.5	+2.3
IPAR				*e*		11 35 49.9	
	comp=Z,9μm,0.5s						
IPAR	Pars	3.88	322	*e*Pn	Pn	11 34 13.5	+2.3
IMEH	Mehriz	4.68	347	Pn	Pn	11 34 24.5	+2.3
IMEH	Mehriz	4.68	347	*e*Pn	Pn	11 34 24.0	+1.8
IMEH				*e*		11 34 29.4	
	comp=Z,2μm,0.2s						
IMEH	Mehriz	4.68	347	*e*Pn	Pn	11 34 24.0	+1.8
IBAF	Bafgh	4.76	357	Pn	Pn	11 34 24.7	+1.4
IBAF	Bafgh	4.76	357	*e*Pn	Pn	11 34 24.7	+1.4
IBAF				*e*		11 34 30.3	
	comp=Z,2μm,0.2s						
IBAF	Bafgh	4.76	357	*e*Pn	Pn	11 34 24.7	+1.4
JMDO	Jabal Madar	4.89	154	P	Pn	11 34 26.4	+1.2
	SNR=26						
JMDO	Jabal Madar	4.89	154	⇓P	Pn	11 34 26.4	+1.2
	SNR=26						
SLWS		5.08	248	P	Pn	11 34 28.3	+0.6
SLWS		5.08	248	P	Pn	11 34 28.3	+0.6
WBK	Wadi Bani Khal	5.08	145	P	Pn	11 34 28.1	+0.4
	SNR=44						
ZHSF	Zahedan	5.18	56	*e*Pn	Pn	11 34 32.0	+2.8
ZHSF	Zahedan	5.18	56	*e*Pn	Pn	11 34 32.6	+3.5
ZHSF	Zahedan	5.18	56	*e*Pn	Pn	11 34 32.7	+3.5
BTHS		5.27	240	P	Pn	11 34 31.2	+0.8
BTHS		5.27	240	P	Pn	11 34 31.2	+0.8
ISAD	Sadrabad	5.41	340	*e*Pn	Pn	11 34 34.1	+1.9
ISAD				*e*		11 35 52.2	
	comp=Z,4μm,0.3s						
ISAD	Sadrabad	5.41	340	*e*Pn	Pn	11 34 34.1	+1.9
ICHK	Chekchek	5.54	348	Pn	Pn	11 34 35.9	+1.8
ICHK	Chekchek	5.54	348	*e*Pn	Pn	11 34 35.6	+1.5
ICHK				*e*		11 34 43.7	
	comp=Z,3μm,0.3s						
ICHK	Chekchek	5.54	348	*e*Pn	Pn	11 34 35.6	+1.5
BOQSS		5.86	262	P	Pn	11 34 39.0	+0.6
IKOO	Kooshah	6.24	26	*e*Pn	Pn	11 34 44.8	+1.2
IKOO				*e*		11 35 28.4	
	comp=Z,1μm,0.3s						
IKOO	Kooshah	6.24	26	*e*Pn	Pn	11 34 44.8	+1.2
IGAR	Gharneh	6.46	330	*e*Pn	Pn	11 34 48.2	+1.5
IGAR				*e*		11 34 53.7	
	comp=Z,2μm,0.1s						
NASN	Na'in	6.51	337	*e*Pn	Pn	11 34 48.0	+0.7
NASN	Na'in	6.51	337	*e*Pn	Pn	11 34 49.0	+1.6
NASN	Na'in	6.51	337	*e*Pn	Pn	11 34 49.0	+1.7
ITEG	Tejag	6.57	22	*e*Pn	Pn	11 34 49.4	+1.2
ITEG				*e*		11 36 55.0	
	comp=Z,1μm,0.4s						
ITEG	Tejag	6.57	22	*e*Pn	Pn	11 34 49.4	+1.2
IZEF	Zefreh	6.77	334	Pn	Pn	11 34 51.9	+0.9
IZEF	Zefreh	6.77	334	⇓*e*Pn	Pn	11 34 52.0	+1.0
IZEF				*e*		11 34 56.8	
	comp=Z,2μm,0.2s						
IZEF	Zefreh	6.77	334	⇓*e*Pn	Pn	11 34 52.0	+1.0
IDAH	Dahanechah	6.87	30	*e*Pn	Pn	11 34 53.8	+1.5
IDAH				*e*		11 37 24.2	
	comp=Z,878nm,0.5s						
IDAH	Dahanechah	6.87	30	*e*Pn	Pn	11 34 53.8	+1.5
IPIR	Pirpir	7.24	325	Pn	Pn	11 34 59.8	+2.3
IPIR	Pirpir	7.24	325	*e*Pn	Pn	11 34 59.1	+1.6
IPIR				*e*		11 36 26.2	
	comp=Z,2μm,0.2s						
IPIR	Pirpir	7.24	325	*e*Pn	Pn	11 34 59.1	+1.6
QRN	Al-Qurain	7.25	287	*e*P	Pn	11 34 58.8	+1.2
QRN				AML	AML	11 36 18.6	
	comp=Z,51nm,0.3s						
IKLH	Kolahrood	7.45	331	Pn	Pn	11 35 01.8	+1.6
IKLH	Kolahrood	7.45	331	*e*	Pn	11 35 07.6	+7.3
	comp=Z,1μm,0.2s						
IKLH				*e*Pn	Pn	11 35 01.6	+1.4
UMR	Umm Al-Rimmam	7.65	293	*e*P	Pn	11 35 03.9	+0.8
UMR				AML	AML	11 36 29.2	
	comp=Z,76nm,0.3s						
UMR	Umm Al-Rimmam	7.65	293	*e*P	Pn	11 35 03.9	+0.9
NAY	Al-Naaiem	7.95	290	*e*P	Pn	11 35 08.1	+0.8
NAY	Al-Naaiem	7.95	290	*e*P	Pn	11 35 08.1	+0.9
MIB	Mutribah	8.04	294	*e*P	Pn	11 35 09.4	+1.0
MIB				AML	AML	11 36 41.5	
	comp=Z,104nm,0.6s						
MIB	Mutribah	8.04	294	*e*P	Pn	11 35 09.4	+1.0
ASAO	Ashtian	9.18	329	*e*Pn	Pn	11 35 25.0	+1.1
ASAO	Ashtian	9.18	329	*e*Pn	Pn	11 35 25.6	+1.6
ASAO	Ashtian	9.18	329	*e*Pn	Pn	11 35 25.5	+1.6
DAMV	Damavand	9.38	340	*e*Pn	Pn	11 35 28.0	+1.3
DAMV	Damavand	9.38	340	*e*Pn	Pn	11 35 28.7	+2.0
DAMV	Damavand	9.38	340	*e*Pn	Pn	11 35 28.7	+2.0
RBK	Rabkut	9.39	189	P	Pn	11 35 28.4	+1.5
	SNR=9.4						
RBK	Rabkut	9.39	189	⇓P	Pn	11 35 28.4	+1.5
	SNR=9.4						
CHTH	Charan	9.91	337	*e*Pn	Pn	11 35 36.0	+2.0
CHTH	Charan	9.91	337	*e*Pn	Pn	11 35 36.1	+2.1
CHTH	Charan	9.91	337	*e*Pn	Pn	11 35 36.1	+2.1
KBL	Kabul	13.73	53	*e*P	Pn	11 36 27.4	+1.1
KBL	Kabul	13.73	53	*e*Pn	Pn	11 36 27.4	+1.1
GNI	Garni	16.17	328	Pn	Pn	11 37 01.8	+3.0
	comp=Z,0.9nm,0.3s,baz=289,slow=5.0,SNR=8.5						
GNI	Garni	16.17	328	⇑*i*P	Pn	11 37 01.2	+2.4
GNI				pmax	pmax		
	comp=Z,38nm,1.0s						
GNI	Garni	16.17	328	*i*P	Pn	11 37 01.2	+2.4
	comp=Z,38nm,1.0s						
GNI	Garni	16.17	328	Pn	Pn	11 37 01.9	+3.1
ASF	Jabal al Asfar	17.31	292	P	Pn	11 37 13.8	+0.6
	comp=Z,0.8nm,0.3s,baz=322,slow=8.5,SNR=12						
ASF				S	Sn	11 40 13.6	-12
	comp=Z,0.4nm,0.3s,baz=210,slow=15,SNR=3.2						
MAK	Makhachkala	17.47	339	P	Pn	11 37 25.6	+10
MALT	Malatya	18.57	312	*e*P	Pn	11 37 30.0	+1.2
MALT				pmax	pmax		
	comp=Z,47nm,0.9s						
MALT	Malatya	18.57	312	*e*P	Pn	11 37 30.0	+1.2
	comp=Z,47nm,0.9s						
MALT	Malatya	18.57	312	*e*P	Pn	11 37 30.0	+1.2
	comp=Z,47nm,0.9s						
EIL	Elat	18.60	284	P	Pn	11 37 29.7	+0.4
	comp=Z,0.8nm,0.3s,baz=83,slow=5.1,SNR=6.1						
EIL	Elat	18.60	284	P	Pn	11 37 29.7	+0.4
EIL	Elat	18.60	284	P	Pn	11 37 29.7	+0.5
ZEI	Tsey	18.65	332	*e*P	Pn	11 37 30.5	+0.8
ZEI				pmax	pmax		
	comp=Z,69nm,1.3s						
ZEI	Tsey	18.65	332	*e*P	Pn	11 37 30.5	+0.8
	comp=Z,69nm,1.3s						
MMAI	Mount Meron Ar	18.73	294	P	Pn	11 37 31.1	+0.3
	comp=Z,2.3nm,0.3s,baz=105,slow=16,SNR=13						
ATD	Arta Tunnel	19.50	221	P	Pn	11 37 40.0	-0.2
	comp=Z,0.8nm,0.3s,baz=118,slow=21,SNR=5.5						
ATD	Arta Tunnel	19.50	221	P	Pn	11 37 40.0	-0.2
KIV	Kislovodsk	20.13	332	*c i*P	P	11 37 47.2	+1.6
KIV				*e*		11 38 04.5	
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
KIV	Kislovodsk	20.13	332	*e*Pn	P	11 37 47.6	+2.0
	comp=Z,96nm,0.9s						
KKAR	Karatay Array	20.17	33	*e*P	P	11 37 45.3	-0.8
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KKAR	Karatay Array	20.17	33	*e*P	P	11 37 45.3	-0.8
	comp=Z,9.3nm,0.7s						
KKAR	Karatay Array	20.17	33	*e*P	P	11 37 45.3	-0.8
	comp=Z,9.3nm,0.7s						
GOF	Gofitskoye	20.89	334	*e*P	P	11 37 56.3	+2.5
GOF				pmax	pmax		
	comp=Z,90nm,1.0s						
GOF	Gofitskoye	20.89	334	*e*P	P	11 37 56.3	+2.5
	comp=Z,90nm,1.0s						
CSS	Prodhromos	20.91	298	*e*P	P	11 37 53.4	-0.7
	comp=Z,26nm,0.8s						
CSS	Prodhromos	20.91	298	*e*P	P	11 37 53.4	-0.7
	comp=Z,26nm,0.8s						
KSH	Kashi	21.04	48	*e*P	P	11 37 47.8	-7.7
KSH				*ep*P		11 37 51.8	
KSH				*es*P	sP	11 37 54.8	-4.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.3						
KSH				pmax	pmax		
	comp=Z,330nm,4.2s						
KSH				LR	LR		
	comp=N,3μm,12.6s,MS5.1						
KSH				LR	LR		
	comp=E,3μm,11.8s,MS5.1						
AML	Almayashu	21.16	39	P	P	11 37 56.2	-0.6
	SNR=10						
AML	Almayashu	21.16	39	*e*P	P	11 37 56.5	-0.4
	comp=E,35nm,0.6s,mb4.9						
AML	Almayashu	21.16	39	*e*P	P	11 37 56.5	-0.3
	comp=E,35nm,0.6s,mb4.9						
EKS2	Erkin-Say	21.55	38	P	P	11 38 01.4	+0.3
	SNR=25						
EKS2	Erkin-Say	21.55	38	*e*P	P	11 38 00.5	-0.5
	comp=E,27nm,0.8s,mb4.7						
EKS2	Erkin-Say	21.55	38	*e*P	P	11 38 00.5	-0.5
	comp=E,27nm,0.8s,mb4.7						
AAK	Ala-Archa	21.94	39	P	P	11 38 06.0	+0.9
	SNR=8.1						
AAK	Ala-Archa	21.94	39	P	P	11 38 05.9	+0.8
	comp=E,16nm,0.7s,mb4.6,baz=186,slow=8.3,SNR=22						
AAK	Ala-Archa	21.94	39	P	P	11 38 05.9	+0.8
AAK				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.6						
AAK	Ala-Archa	21.94	39	*e*P	P	11 38 05.0	-0.2
	comp=Z,34nm,0.8s,mb4.8						
AAK	Ala-Archa	21.94	39	*e*P	P	11 38 04.9	-0.2
	comp=Z,34nm,0.8s,mb4.8						
KZA	Kyzart	22.03	41	*e*P	P	11 38 06.1	0.0
	comp=Z,36nm,0.9s,mb4.8						
KZA	Kyzart	22.03	41	*e*P	P	11 38 06.1	0.0
	comp=Z,36nm,0.9s,mb4.8						
KBK	Karagaybulak	22.21	40	P	P	11 38 08.2	+0.1
	SNR=6.6						
KBK	Karagaybulak	22.21	40	*e*P	P	11 38 08.4	+0.4
	comp=Z,55nm,1.3s,mb4.8						
KBK	Karagaybulak	22.21	40	*e*P	P	11 38 08.4	+0.3
	comp=Z,55nm,1.3s,mb4.8						
CHMS	Chumysh	22.32	39	P	P	11 38 08.5	-0.7
	SNR=8.5						
USP	Ospenovka	22.35	38	P	P	11 38 11.5	+1.9
	SNR=13						
BR131	Keskin Array S	22.50	310	*e*P	P	11 38 06.4	-4.8
	comp=Z,14nm,0.6s,mb4.5						
BRTR	Keskin Array B	22.50	310	P	P	11 38 11.9	+0.7
	comp=Z,8.8nm,0.7s,mb4.3,baz=128,slow=12,SNR=24						
BRTR	Keskin Array B	22.50	310	P	P	11 38 11.9	+0.7
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRTR	Keskin Array B	22.50	310	P	P	11 38 11.9	+0.7
	comp=Z,9.0nm,0.7s,mb4.3						
ABKAR	Akbulak array	22.63	7	*e*P	P	11 38 11.1	-1.3
	comp=Z,9.4nm,0.6s,mb4.4						
ABKAR	Akbulak array	22.63	7	*e*P	P	11 38 11.1	-1.3
	comp=Z,9.4nm,0.6s,mb4.4						
ULHL	Ulahol	22.72	42	P	P	11 38 17.3	+3.9
	SNR=7.8						
TKM2	Tokmak 2	22.75	40	P	P	11 38 15.3	+1.5
	SNR=10						
TKM2	Tokmak 2	22.75	40	*e*P	P	11 38 13.0	-0.8
TKM2				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.5						
TKM2	Tokmak 2	22.75	40	*e*P	P	11 38 13.0	-0.7
	comp=Z,21nm,1.1s,mb4.5						
TKM2	Tokmak 2	22.75	40	*e*P	P	11 38 13.0	-0.8
	comp=Z,21nm,1.1s,mb4.5						
ANN	Anapa	23.24	325	*e*P	P	11 38 18.9	0.0
ANN				pmax	pmax		
	comp=Z,46nm,1.0s,mb4.9						
ANN	Anapa	23.24	325	*e*P	P	11 38 18.9	0.0
	comp=Z,46nm,1.0s,mb4.9						
AKTK	Aktyubinsk	23.64	4	P	P	11 38 22.4	-0.5
AKTK	Aktyubinsk	23.64	4	P	P	11 38 22.4	-0.6
AKTO	Aktyubinsk	23.64	4	P	P	11 38 22.4	-0.5
	comp=Z,8.0nm,0.6s,mb4.3,baz=178,slow=9.7,SNR=20						
AKTO	Aktyubinsk	23.64	4	P	P	11 38 22.4	-0.6
AKTO				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.3						
KOLN	Koldanda	24.69	81	*e*P	P	11 38 33.4	+0.6
	comp=Z,30nm,0.7s,mb4.9						
DANN	Dangsing	24.80	80	*e*P	P	11 38 35.0	+1.3
	comp=Z,99nm,0.8s,mb5.4						
GKN	Gorkha	25.59	81	*e*P	P	11 38 41.2	+0.2
KKN	Kakani	26.17	81	*e*P	P	11 38 47.1	+0.8
	comp=Z,17nm,0.6s,mb4.7						
PKIN	Phulchoki	26.30	82	*e*P	P	11 38 47.3	-0.1
	comp=Z,18nm,0.7s,mb4.7						
PKI	Pulchoki	26.31	82	*e*P	P	11 38 47.5	0.0
	comp=Z,53nm,1.1s,mb5.0						
VRHR	Novokhopersk	26.54	340	*e*P	P	11 38 49.8	+0.5
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,20nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
VRHR	Novokhopersk	26.54	340	*e*P	P	11 38 49.8	+0.5
GUN	Gumba	26.69	81	*e*P	P	11 38 51.5	+0.5
	comp=Z,63nm,0.9s,mb5.2						
VORD	Divnogorie	27.20	337	*e*P	P	11 38 57.0	+1.7
VORD				pmax	pmax		
	comp=N,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3						
VORD	Divnogorie	27.20	337	*e*P	P	11 38 57.0	+1.7
VSR	Storozhevoye	27.45	337	*e*P	P	11 38 56.4	-1.1
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.6						
VSR				pmax	pmax		
	comp=N,4.0nm,0.3s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.3s						
VSR	Storozhevoye	27.45	337	*e*P	P	11 38 56.4	-1.1
	comp=E,9.0nm,0.5s,mb4.6						
BRVK	Borovoye	28.35	19	*ce*P	P	11 39 04.5	-1.0
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
BRVK	Borovoye	28.35	19	*e*P	P	11 39 04.5	-1.0
	comp=Z,7.0nm,0.6s,mb4.5						
BVAR	Borovoye Array	28.35	19	P	P	11 39 04.9	-0.6
	comp=Z,20nm,0.7s,mb4.8,baz=201,slow=7.9,SNR=36						
BVAR	Borovoye Array	28.35	19	P	P	11 39 04.9	-0.6
BVAR				pmax	pmax		
	comp=Z,20nm,0.7s						
BVAR	Borovoye Array	28.35	19	P	P	11 39

KIEV Kiev 31.30 327 *eP* **P 11 39 30.5 -1.1**
comp=Z,18nm,0.7s,mb5.0
KIEV Kiev 31.30 327 *eP* **P 11 39 30.5 -1.2**
comp=Z,18nm,0.7s,mb5.0
OBN Obninsk 31.57 339*c i*P **P 11 39 33.7 -0.3**
OBN pmax pmax
comp=Z,15nm,0.5s,mb5.1
OBN Obninsk 31.57 339 *i* P **P 11 39 33.7 -0.3**
comp=Z,15nm,0.5s,mb5.1
BURAR Bucovina Array 31.69 319 ⇑P **P 11 39 35.2 0.0**
BURAR Bucovina Array 31.69 319⇑*i*P **P 11 39 35.2 0.0**
BURAR Bucovina Array 31.69 319⇑*i*P **P 11 39 35.2 0.0**
BUR08 Bucovina Ar. S 31.72 319 *eP* **P 11 39 35.3 -0.1**
BUR08 Bucovina Ar. S 31.72 319 *eP* **P 11 39 35.3 -0.1**
SOKR Solikamsk 32.74 1⇑*i*P **P 11 39 45.2 +1.0**
SOKR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
SOKR Solikamsk 32.74 1 *i* P **P 11 39 45.2 +1.0**
comp=Z,10.0nm,0.6s,mb4.9
DRGR 32.82 316 ⇑P **P 11 39 45.3 +0.2**
DRGR 32.82 316⇑*i*P **P 11 39 45.3 +0.2**
DRGR 32.82 316 P **P 11 39 45.3 +0.2**
BZS Buzias 33.03 314 ⇓P **P 11 39 46.7 -0.2**
BZS Buzias 33.03 314⇓*i*P **P 11 39 46.7 -0.2**
BZS Buzias 33.03 314 P **P 11 39 46.7 -0.2**
KMBO Kilima Mbogo 33.05 216 P **P 11 39 48.3 +0.9**
comp=Z,4.0nm,0.7s,mb4.4,baz=359,slow=24,SNR=7.5
KMBO Kilima Mbogo 33.05 216 P **P 11 39 48.3 +1.0**
KMBO pmax pmax
comp=Z,4.0nm,0.7s
KMBO Kilima Mbogo 33.05 216 P **P 11 39 48.3 +1.0**
comp=Z,4.0nm,0.7s,mb4.5
TRPA Tarpa 33.52 318⇓*i*P **P 11 39 51.0 -0.2**
TRPA Tarpa 33.52 318⇓*i*P **P 11 39 51.0 -0.2**
KOLS Kolonicke sedl 34.05 319 *eP* **P 11 39 56.5 +0.7**
KOLS pmax pmax
comp=Z,18nm,0.9s,mb5.0
KOLS Kolonicke sedl 34.05 319 *eP* **P 11 39 56.5 +0.7**
comp=Z,18nm,0.9s,mb5.0
KOLS Kolonicke sedl 34.05 319 *eP* **P 11 39 56.5 +0.7**
KOLS Kolonicke sedl 34.05 319 *eP* **P 11 39 56.5 +0.7**
comp=Z,18nm,0.9s,mb5.0
KWP Kalwaria Pacla 34.14 321 ⇓P **P 11 39 56.7 +0.2**
KWP Kalwaria Pacla 34.14 321 *eP* **P 11 39 56.2 -0.3**
comp=Z,10nm,1.0s,mb4.7
KWP Kalwaria Pacla 34.14 321⇓*i*P **P 11 39 56.7 +0.2**
KWP Kalwaria Pacla 34.14 321 *eP* **P 11 39 56.2 -0.3**
comp=Z,10nm,1.0s,mb4.7
NVS Novosibirsk 34.42 28 *i* P **P 11 39 56.9 -2.0**
NVS pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
NVS pmax pmax
comp=N,6.0nm,0.9s
NVS pmax pmax
comp=E,5.0nm,1.1s
NVS Novosibirsk 34.42 28 *i* P **P 11 39 56.9 -2.0**
NVS pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
NVS pmax pmax
comp=N,6.0nm,0.9s
NVS pmax pmax
comp=E,5.0nm,1.1s
CRVS Cervenica-Dubn 34.51 319 *eP* **P 11 39 59.7 -0.1**
CRVS pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CRVS Cervenica-Dubn 34.51 319 *eP* **P 11 39 59.7 -0.1**
comp=Z,10.0nm,0.8s,mb4.8
CRVS Cervenica-Dubn 34.51 319 *eP* **P 11 39 59.7 -0.1**
CRVS Cervenica-Dubn 34.51 319 *eP* **P 11 39 59.7 -0.1**
comp=Z,10.0nm,0.8s,mb4.8
ZALV Zalesovo Beam 34.52 30 P **P 11 39 58.8 -0.9**
comp=Z,20nm,0.5s,mb5.3,baz=240,slow=9.0,SNR=56
ZALV Zalesovo Beam 34.52 30 P **P 11 39 58.8 -0.9**
ZALV pmax pmax
comp=Z,20nm,0.5s,mb5.3
KECS Kecovo 34.91 318 *eP* **P 11 40 03.3 +0.1**
KECS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KECS Kecovo 34.91 318 *eP* **P 11 40 03.3 +0.1**
comp=Z,8.9nm,0.8s,mb4.8
KECS Kecovo 34.91 318 *eP* **P 11 40 03.3 +0.1**
PSZ Piszkesteto 35.03 317 ⇑P **P 11 40 03.9 -0.4**
PSZ Piszkesteto 35.03 317 *eP* **P 11 40 03.6 -0.6**
comp=Z,6.6nm,0.8s,mb4.6
PSZ Piszkesteto 35.03 317⇑*i*P **P 11 40 03.8 -0.5**
PSZ Piszkesteto 35.03 317 P **P 11 40 03.9 -0.4**
IDID Didziasalis 35.45 331 *eP* **P 11 40 07.5 -0.2**
IDID AMB AMB 11 40 08.6
comp=Z,9.7nm,0.7s,mb4.9
IDID Didziasalis 35.45 331 *eP* **P 11 40 07.5 -0.2**
comp=Z,9.7nm,0.7s,mb4.9,SNR=26
IIGN Ignalina 35.69 331 *eP* **P 11 40 09.8 -0.1**
IIGN AMB AMB 11 40 10.9
comp=Z,13nm,0.7s,mb5.0
IIGN Ignalina 35.69 331 *eP* **P 11 40 09.8 0.0**
comp=Z,13nm,0.7s,mb5.0,SNR=26
KLMR Klimovskoe 35.79 346 *eP* **P 11 40 08.2 -2.4**
KLMR pmax pmax
comp=Z,33nm,1.8s,mb5.0
KLMR Klimovskoe 35.79 346 *eP* **P 11 40 08.2 -2.4**
comp=Z,33nm,1.8s,mb5.0
ISAL Salakas 35.88 331 *eP* **P 11 40 11.2 -0.2**
ISAL AMB AMB 11 40 11.6
comp=Z,7.3nm,1.0s,mb4.6
ISAL Salakas 35.88 331 *eP* **P 11 40 11.2 -0.2**
comp=Z,7.3nm,1.0s,mb4.6,SNR=26
VYHS Vyhne 35.91 317 *eP* **P 11 40 11.5 -0.3**
VYHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
VYHS Vyhne 35.91 317 *eP* **P 11 40 11.5 -0.3**
comp=Z,4.5nm,1.0s,mb4.3
VYHS Vyhne 35.91 317 *eP* **P 11 40 11.5 -0.3**
VYHS Vyhne 35.91 317 *eP* **P 11 40 11.5 -0.3**
comp=Z,4.5nm,1.0s,mb4.3
LIKS Likavka 35.97 318 *eP* **P 11 40 12.4 0.0**
LIKS Likavka 35.97 318 *eP* **P 11 40 12.4 0.0**
LIKS Likavka 35.97 318 *eP* **P 11 40 12.4 0.0**
OJC Ojcow 36.08 320 *eP* **P 11 40 13.0 -0.2**
OJC Ojcow 36.08 320 *eP* **P 11 40 12.6 -0.6**
comp=Z,29nm,0.6s,mb5.4
OJC Ojcow 36.08 320 *eP* **P 11 40 12.6 -0.6**
comp=Z,29nm,0.6s,mb5.4
VAE Valguarnera 36.38 297 P **P 11 40 17.7 +1.7**
comp=Z,33nm,0.9s,mb5.3,baz=290,slow=4.4,SNR=7.2
VAE Valguarnera 36.38 297 P **P 11 40 17.7 +1.7**
VAE Valguarnera 36.38 297 P **P 11 40 17.7 +1.7**
MBAR Mbarara 36.42 226*ceP* **P 11 40 15.7 -0.8**
MBAR Mbarara 36.42 226 *eP* **P 11 40 15.7 -0.8**
OKC Ostrava-Krasne 36.87 319 *eP* **P 11 40 19.1 -0.9**
OKC Ostrava-Krasne 36.87 319 *eP* **P 11 40 19.1 -0.9**
OKC Ostrava-Krasne 36.87 319 *eP* **P 11 40 19.1 -0.9**
MORC Moravsky Berou 37.20 318 *eP* **P 11 40 22.2 -0.6**
comp=Z,13nm,0.7s,mb4.9
MORC Moravsky Berou 37.20 318⇑*i*P **P 11 40 22.2 -0.6**
MORC Moravsky Berou 37.20 318 *eP* **P 11 40 22.2 -0.6**
comp=Z,13nm,0.7s,mb4.9
BOJS Bojanci 37.21 311 *i* P **P 11 40 23.1 +0.2**
BOJS Bojanci 37.21 311 *i* P **P 11 40 23.1 +0.2**
BOJS Bojanci 37.21 311 *i* P **P 11 40 23.1 +0.2**
ARSA Arzberg 37.55 314⇑*i*P **P 11 40 25.6 -0.2**
comp=Z,6.6nm,1.0s,mb4.3
ARSA Arzberg 37.55 314 P **P 11 40 25.6 -0.2**
comp=Z,6.6nm,1.0s,mb4.3
VRAC Vranov 37.59 317 P **P 11 40 24.7 -1.4**
comp=Z,4.1nm,0.2s,mb4.7,baz=160,slow=19,SNR=7.3
VRAC Vranov 37.59 317 P **P 11 40 24.7 -1.4**
VRAC pmax pmax
comp=Z,4.0nm,0.2s
VRAC Vranov 37.59 317 P **P 11 40 24.7 -1.4**
comp=Z,4.0nm,0.2s,mb4.8
PERS Pernice 37.62 313 *i* P **P 11 40 30.0 +3.6**
PERS Pernice 37.62 313 *i* P **P 11 40 30.0 +3.6**
LJU Ljubljana 37.84 311 *i* P **P 11 40 28.3 0.0**
LJU Ljubljana 37.84 311 *i* P **P 11 40 28.2 -0.1**
LJU Ljubljana 37.84 311 *i* P **P 11 40 28.2 -0.1**
JAVS Javornik 38.11 311 *i* P **P 11 40 30.0 -0.6**
JAVS Javornik 38.11 311 *i* P **P 11 40 30.0 -0.6**
JAVS Javornik 38.11 311 *i* P **P 11 40 30.0 -0.6**
DPC Dobruska-Polom 38.15 319 *eP* **P 11 40 29.9 -1.0**
DPC pmax pmax
comp=Z,24nm,1.2s,mb4.8
DPC Dobruska-Polom 38.15 319 *eP* **P 11 40 30.4 -0.5**
DPC Dobruska-Polom 38.15 319 *eP* **P 11 40 29.9 -0.9**
comp=Z,24nm,1.2s,mb4.8
DPC Dobruska-Polom 38.15 319 *eP* **P 11 40 30.4 -0.5**
DPC Dobruska-Polom 38.15 319 *eP* **P 11 40 30.4 -0.5**
TREC Trest 38.26 317 *eP* **P 11 40 32.1 +0.3**
TREC Trest 38.26 317 *eP* **P 11 40 32.1 +0.3**
TREC Trest 38.26 317 *eP* **P 11 40 32.1 +0.3**
KSP Ksiaz 38.37 319 *eP* **P 11 40 31.9 -0.7**
UPC Upice 38.40 319 *eP* **P 11 40 32.5 -0.4**
UPC Upice 38.40 319 *eP* **P 11 40 32.5 -0.4**
UPC Upice 38.40 319 *eP* **P 11 40 32.5 -0.4**
MOA Molln 38.54 314⇑*i*P **P 11 40 33.2 -0.9**
comp=Z,11nm,0.8s,mb4.6
MOA Molln 38.54 314 P **P 11 40 33.2 -1.0**
comp=Z,11nm,0.8s,mb4.6
GTA Gaotai 38.58 60 *eP* **P 11 40 35.4 +0.8**
GTA pP pP 11 40 39.6 +1.9
GTA sP sP 11 40 43.0 +4.1
GTA S **S 11 46 29.9 -0.7**
GTA pmax pmax
comp=Z,13nm,1.2s,mb4.5
GTA pmax pmax
comp=Z,950nm,5.9s
GTA LR LR
comp=N,1μm,13.8s,MS5.1
GTA LR LR
comp=E,2μm,16.4s,MS5.1
GTA LR LR
comp=Z,2μm,14.5s,MS5.1
KBA Koelnbreinsper 38.91 313⇓*i*P **P 11 40 37.0 -0.3**
comp=Z,12nm,0.7s,mb4.7,SNR=7.5
KBA Koelnbreinsper 38.91 313 P **P 11 40 37.0 -0.3**
comp=Z,12nm,0.7s,mb4.7,SNR=7.5
PRU Pruhonice 39.08 318 *eP* **P 11 40 39.7 +1.0**
PRU Pruhonice 39.08 318 *eP* **P 11 40 39.7 +1.0**
PRU Pruhonice 39.08 318 *eP* **P 11 40 39.7 +1.0**
GEC2 GERESS Array S 39.21 316 *eP* **P 11 40 39.0 -0.8**
comp=Z,4.0nm,0.7s,mb4.3
GEC2 GERESS Array S 39.21 316 *eP* **P 11 40 39.0 -0.8**
GEC2 pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
GEC2 GERESS Array S 39.21 316 *eP* **P 11 40 39.0 -0.8**
comp=Z,4.0nm,0.7s,mb4.3
GEC2 GERESS Array S 39.21 316 *eP* **P 11 40 39.0 -0.8**
comp=Z,4.0nm,0.7s,mb4.3
ABTA Abfaltersbach 39.38 312⇑*i*P **P 11 40 40.9 -0.3**
comp=Z,26nm,1.1s,mb4.7,SNR=5.9
ABTA Abfaltersbach 39.38 312 P **P 11 40 40.9 -0.3**
comp=Z,20nm,1.1s,mb4.7,SNR=5.9
KHC Kasperske Hory 39.38 316 *eP* **P 11 40 40.4 -0.8**
KHC pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
KHC Kasperske Hory 39.38 316 *eP* **P 11 40 40.4 -0.8**
comp=Z,10nm,0.7s,mb4.7
KHC Kasperske Hory 39.38 316 *eP* **P 11 40 40.2 -1.0**
KHC Kasperske Hory 39.38 316 *eP* **P 11 40 40.4 -0.8**
comp=Z,10nm,0.7s,mb4.7
RJOB Jochberg 39.46 314 *eP* **P 11 40 40.8 -1.0**
comp=Z,6.0nm,0.7s,mb4.4
JOF Joensuu 39.54 343 *eP* **P 11 40 36.7 -5.6**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.3
JOF Joensuu 39.54 343 *ep* **P 11 40 36.7 -5.6**
comp=Z,1.8nm,0.3s,mb4.3
BRG Berggiesshubel 39.75 319 *eP* **P 11 40 43.5 -0.8**
comp=Z,11nm,0.8s,mb4.6
BRG Berggiesshubel 39.75 319 *i* P **P 11 40 43.5 -0.8**
comp=Z,10nm,0.8s,mb4.6
BRG Berggiesshubel 39.75 319 *i* P **P 11 40 43.5 -0.8**
BRG pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
BRG Berggiesshubel 39.75 319 *i* P **P 11 40 43.5 -0.8**
comp=Z,10.0nm,0.8s,mb4.6
WET Wettzell 39.82 316 *eP* **P 11 40 43.8 -1.0**
comp=Z,7.0nm,0.9s,mb4.4
WET Wettzell 39.82 316 *eP* **P 11 40 43.8 -1.0**
WET pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
WET Wettzell 39.82 316 *eP* **P 11 40 43.8 -1.0**
comp=Z,7.0nm,0.9s,mb4.4
WET Wettzell 39.82 316 *eP* **P 11 40 43.8 -1.0**
comp=Z,7.0nm,0.9s,mb4.4
FINES FINESS Array B 39.97 338 P **P 11 40 45.0 -0.9**
comp=Z,7.6nm,0.5s,mb4.7,baz=144,slow=10,SNR=26
FINES FINESS Array B 39.97 338 P **P 11 40 45.0 -0.9**
FINES pmax pmax
comp=Z,8.0nm,0.5s
FINES FINESS Array B 39.97 338 P **P 11 40 45.0 -0.9**
FINES FINESS Array B 39.97 338 P **P 11 40 45.0 -0.9**
comp=Z,8.0nm,0.5s,mb4.7
WTTA Wattenberg 40.09 313⇑*i*P **P 11 40 46.3 -0.8**
comp=Z,22nm,0.6s,mb5.1,SNR=8.2
WTTA Wattenberg 40.09 313 P **P 11 40 46.3 -0.8**
comp=Z,22nm,0.6s,mb5.1,SNR=8.2
WATA Walderalm 40.14 313⇑*i*P **P 11 40 46.3 -1.2**
comp=Z,16nm,0.6s,mb4.9
WATA Walderalm 40.14 313 P **P 11 40 46.3 -1.3**
comp=Z,16nm,0.6s,mb4.9
KAF Kangasniemi 40.38 339 *eP* **P 11 40 48.2 -1.1**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
KAF Kangasniemi 40.38 339 *ep* **P 11 40 48.2 -1.1**
comp=Z,0.9nm,0.4s,mb3.9
KAF Kangasniemi 40.38 339 *eP* **P 11 40 48.2 -1.1**
comp=Z,1.0nm,0.4s,mb3.9
KEST Kesra 40.39 294 P **P 11 40 49.8 0.0**
comp=Z,3.3nm,0.7s,mb4.2,baz=144,slow=0.8,SNR=13
KEST Kesra 40.39 294 *eP* **P 11 40 51.2 +1.5**
KEST Kesra 40.39 294 *eP* **P 11 40 51.2 +1.4**
ROTZ Rotzenmuhle 40.43 316 *eP* **P 11 40 49.6 -0.3**
comp=Z,8.0nm,0.7s,mb4.6
MOTA Moosalm 40.46 312⇑*i*P **P 11 40 48.7 -1.5**
comp=Z,13nm,0.5s,mb4.9,SNR=8.0
MOTA Moosalm 40.46 312 P **P 11 40 48.7 -1.5**
comp=Z,13nm,0.5s,mb4.9,SNR=8.0
CLL Collm 40.46 319 *eP* **P 11 40 49.8 -0.3**
comp=Z,9.0nm,0.7s,mb4.6
CLL Collm 40.46 319 *i* P **P 11 40 49.6 -0.5**
CLL pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
CLL Collm 40.46 319 *i* P **P 11 40 49.6 -0.5**
comp=Z,9.0nm,0.7s,mb4.6
CLL Collm 40.46 319 *i* P **P 11 40 49.6 -0.5**
comp=Z,9.0nm,0.7s,mb4.6
CLL Collm 40.46 319 *i* P **P 11 40 49.6 -0.5**
comp=Z,9.0nm,0.7s,mb4.6
CMAR Chiang Mai Arr 40.51 93 P **P 11 40 49.8 -1.2**
comp=Z,0.5nm,0.4s,mb3.5,baz=267,slow=6.0,SNR=5.2
CMAR PcP PcP 11 42 50.9 -2.6
comp=Z,1.0nm,0.6s,baz=222,slow=1.9,SNR=5.7
CMAR Chiang Mai Arr 40.51 93 P **P 11 40 49.8 -1.1**
CMAR 11 42 50.9
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 40.51 93 P **P 11 40 49.8 -1.1**
comp=Z,1.0nm,0.4s,mb3.8
CMAR Chiang Mai Arr 40.51 93 PcP PcP 11 42 50.9 -2.6
FUR Furstenfeldbru 40.56 314 *eP* **P 11 40 50.2 -0.8**
comp=Z,26nm,0.4s,mb5.2
FUR Furstenfeldbru 40.56 314 *eP* **P 11 40 50.2 -0.8**
FUR pmax pmax
comp=Z,26nm,0.4s,mb5.2
FUR Furstenfeldbru 40.56 314 *eP* **P 11 40 50.2 -0.8**
comp=Z,26nm,0.4s,mb5.2
FETA Feichten 40.63 312 *i* P **P 11 40 50.9 -0.6**
comp=Z,37nm,1.0s,mb5.0,SNR=12
FETA Feichten 40.63 312 P **P 11 40 50.9 -0.7**
comp=Z,37nm,1.0s,mb5.0,SNR=12
RETA Reutte 40.72 313⇓*i*P **P 11 40 50.9 -1.5**
comp=Z,10nm,0.6s,mb4.6
RETA Reutte 40.72 313 P **P 11 40 50.9 -1.4**
comp=Z,10nm,0.6s,mb4.6
FUORN Ofenpass-Fuorn 40.85 311 *eP* **P 11 40 53.0 -0.4**
comp=Z,8.2nm,0.7s,mb4.5
FUORN Ofenpass-Fuorn 40.85 311 *eP* **P 11 40 53.0 -0.4**
comp=Z,8.2nm,0.7s,mb4.5
GRA1 Grafenberg Arr 41.02 316 *eP* **P 11 40 54.4 -0.3**
comp=Z,22nm,0.8s,mb4.8
GRA1 Grafenberg Arr 41.02 316 *eP* **P 11 40 54.4 -0.3**
comp=Z,22nm,0.8s,mb4.8
GRF Grafenberg Arr 41.02 316 *eP* **P 11 40 54.4 -0.3**
comp=Z,22nm,0.8s,mb4.8
GRF Grafenberg Arr 41.02 316 *eP* **P 11 40 54.4 -0.3**
GRF pmax pmax
comp=Z,22nm,0.8s,mb4.8
GRF Grafenberg Arr 41.02 316 *eP* **P 11 40 54.4 -0.3**
GRF pmax pmax
comp=Z,22nm,0.8s,mb4.8
GRF Grafenberg Arr 41.02 316 *eP* **P 11 40 54.4 -0.3**
comp=Z,22nm,0.8s,mb4.8
GRF Grafenberg Arr 41.02 316 *eP* **P 11 40 54.4 -0.3**
comp=Z,22nm,0.8s,mb4.8
DAVOX Davos/Dischmat 41.14 311 P **P 11 40 55.1 -0.7**
comp=Z,14nm,0.6s,mb4.8,baz=113,slow=6.4,SNR=14
DAVOX Davos/Dischmat 41.14 311 P **P 11 40 55.1 -0.7**
DAVA Damuels 41.25 312 *i* P **P 11 40 55.8 -0.9**
comp=Z,58nm,0.5s,mb5.4,SNR=27
DAVA Damuels 41.25 312 P **P 11 40 55.8 -0.9**
comp=Z,58nm,0.5s,mb5.4,SNR=27
LZH Lanzhou 41.65 65 *eP* **P 11 41 09.0 +8.9**
LZH pP pP 11 41 14.3 +11
LZH sP sP 11 41 15.5 +11
LZH pmax pmax
comp=Z,18nm,1.0s,mb4.7
LZH LR LR
comp=N,2μm,11.1s,MS5.2
LZH LR LR
comp=E,1μm,12.6s,MS5.2
LZH LR LR
comp=Z,1μm,15.8s,MS4.9
KMI Kunming 42.03 81 P **P 11 40 52.5 -11**
KMI pmax pmax
comp=Z,14nm,0.6s,mb4.8
KMI Kunming 42.03 81 P **P 11 41 04.5 +1.1**
KMI pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
UBBA Unterbreizbach 42.10 317 *eP* **P 11 41 03.1 -0.5**
comp=Z,24nm,1.8s,mb4.5
CLZ Clausthal 42.19 319 *eP* **P 11 41 04.6 +0.3**
comp=Z,25nm,0.8s,mb4.9
CLZ Clausthal 42.19 319 *eP* **P 11 41 04.6 +0.3**
CLZ pmax pmax
comp=Z,25nm,0.8s,mb4.9
CLZ Clausthal 42.19 319 *eP* **P 11 41 04.6 +0.3**
comp=Z,25nm,0.8s,mb4.9
CLZ Clausthal 42.19 319 *eP* **P 11 41 04.6 +0.3**
comp=Z,25nm,0.8s,mb4.9
BFO Black Forest 42.51 313 *eP* **P 11 41 06.4 -0.6**
comp=Z,5.0nm,0.8s,mb4.3
BFO Black Forest 42.51 313 *eP* **P 11 41 06.4 -0.6**
BFO pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
BFO Black Forest 42.51 313 *eP* **P 11 41 06.4 -0.6**
comp=Z,5.0nm,0.8s,mb4.3
BFO Black Forest 42.51 313 *eP* **P 11 41 06.4 -0.6**
comp=Z,5.0nm,0.8s,mb4.3
NRDL Niedersach Rie 42.55 320 *eP* **P 11 41 07.9 +0.6**
comp=Z,24nm,1.0s,mb4.9
SENIN Lac Senin/Sane 42.81 310 *eP* **P 11 41 09.0 -0.5**
comp=Z,7.3nm,0.6s,mb4.6
SENIN Lac Senin/Sane 42.81 310 *eP* **P 11 41 09.0 -0.4**
comp=Z,7.3nm,0.6s,mb4.6
TNS Taunus Mts 42.89 316 *eP* **P 11 41 09.7 -0.3**
comp=Z,15nm,0.9s,mb4.7
TNS Taunus Mts 42.89 316 *eP* **P 11 41 09.7 -0.3**
TNS pmax pmax
comp=Z,15nm,0.9s,mb4.7
TNS Taunus Mts 42.89 316 *eP* **P 11 41 09.7 -0.3**
comp=Z,15nm,0.9s,mb4.7
TNS Taunus Mts 42.89 316 *eP* **P 11 41 09.7 -0.3**
comp=Z,15nm,0.9s,mb4.7
APA Apatity 42.99 348⇑*i*P **P 11 41 10.2 -0.4**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.6
APA MLR MLR
comp=Z,2μm,18.0s,MS5.0
APA Apatity 42.99 348 *i* P **P 11 41 10.2 -0.4**
comp=Z,2μm,18.0s
ECH Echery 43.25 313 *eP* **P 11 41 11.1 -1.9**
ECH pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
ECH Echery 43.25 313 *eP* **P 11 41 11.1 -1.8**
comp=Z,9.0nm,0.8s,mb4.5
ECH Echery 43.25 313 *eP* **P 11 41 11.1 -1.9**
comp=Z,9.0nm,0.8s,mb4.5
HFS Hagfors 43.92 331 P **P 11 41 17.4 -0.9**
comp=Z,2.5nm,0.3s,mb4.4,baz=120,slow=9.0,SNR=13
HFS Hagfors 43.92 331 P **P 11 41 17.4 -0.8**
HFS pmax pmax
comp=Z,3.0nm,0.3s
HFS Hagfors 43.92 331 P **P 11 41 17.4 -0.8**
comp=Z,3.0nm,0.3s,mb4.5
SONM Songino Array 44.44 48 P **P 11 41 23.1 +0.5**
comp=Z,6.3nm,0.9s,mb4.3,baz=256,slow=8.5,SNR=12
SONM Songino Array 44.44 48 P **P 11 41 23.1 +0.5**
SONM pmax pmax
comp=Z,6.0nm,0.9s
SONM Songino Array 44.44 48 P **P 11 41 23.1 +0.5**
comp=Z,6.0nm,0.9s,mb4.3
BCLA Clavier 44.89 316 P **P 11 41 26.5 +0.4**
comp=Z,14nm,2.4s,mb4.4
BCLA Clavier 44.89 316 P **P 11 41 26.4 +0.3**
comp=Z,14nm,2.4s,mb4.4
GYA Guiyang 45.20 78 *eP* **P 11 41 31.7 +2.8**
GYA PP PP 11 43 16.4 +1.9
GYA ScP ScP 11 47 02.8 +0.9
GYA S **S 11 48 10.0 +1.1**
GYA SS SS 11 51 24.7 -6.9
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,5.0s
GYA LR LR
comp=N,450nm,16.8s,MS4.6
GYA LR LR
comp=E,410nm,17.0s,MS4.6
GYA LR LR
comp=Z,480nm,17.9s,MS4.5
DOU Dourbes 45.27 315 P **P 11 41 29.4 +0.3**
comp=Z,11nm,2.1s,mb4.3
DOU Dourbes 45.27 315 P **P 11 41 29.4 +0.3**
comp=Z,11nm,2.1s,mb4.3
NB2 NORSAR Subarra 45.44 331 P **P 11 41 28.6 -1.7**
comp=Z,3.8nm,0.9s,mb4.2,baz=118,slow=8.6
NB2 NORSAR Subarra 45.44 331 P **P 11 41 28.6 -1.7**
comp=Z,3.8nm,0.9s,mb4.2,baz=118,slow=8.0,SNR=8.0
NOA NORSAR Array B 45.44 331 P **P 11 41 29.0 -1.3**
comp=Z,2.7nm,0.7s,mb4.2,baz=116,slow=7.6,SNR=6.9
NOA NORSAR Array B 45.44 331 P **P 11 41 29.0 -1.3**
NOA pmax pmax
comp=Z,3.0nm,0.7s
NOA NORSAR Array B 45.44 331 P **P 11 41 29.0 -1.3**
comp=Z,3.0nm,0.7s,mb4.2
TAM Tamanrasset 45.60 276 *eP* **P 11 41 32.4 +0.3**
TAM pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
TAM Tamanrasset 45.60 276 *eP* **P 11 41 32.4 +0.3**
comp=Z,8.3nm,0.9s,mb4.7
TAM Tamanrasset 45.60 276 *eP* **P 11 41 32.4 +0.3**
comp=Z,8.3nm,0.9s,mb4.7
OPO Ambohidratompo 45.89 191 P **P 11 41 35.4 +1.1**
comp=Z,1.6nm,0.7s,mb4.0,baz=32,slow=7.0,SNR=3.8
OPO Ambohidratompo 45.89 191 P **P 11 41 35.4 +1.1**
ARCES ARCESS Array B 46.26 346 P **P 11 41 36.1 -0.5**
comp=Z,2.8nm,0.6s,mb4.3,baz=134,slow=8.7,SNR=16
ARCES ARCESS Array B 46.26 346 P **P 11 41 36.2 -0.5**
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES ARCESS Array B 46.26 346 P **P 11 41 36.2 -0.5**
comp=Z,3.0nm,0.6s,mb4.4
HHC Hu-ho-hao-te 47.63 58 *eP* **P 11 41 48.4 +0.6**
HHC pP pP 11 41 52.9 +1.9
HHC sP sP 11 41 55.5 +3.3
HHC PcP PcP 11 43 19.0 +1.6
HHC PP PP 11 43 39.3 0.0
HHC ScP ScP 11 47 10.5 -1.3
HHC S **S 11 48 42.6 -0.8**
HHC ScS ScS 11 51 39.1 -2.7
HHC SS SS 11 52 04.8 -6.5
HHC pmax pmax
comp=Z,13nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,900nm,8.9s
HHC LR LR
comp=N,1μm,14.7s,MS5.1
HHC LR LR
comp=E,650nm,12.7s,MS5.1
HHC LR LR
comp=Z,1μm,12.2s,MS5.0
ESDC Sonseca Array 50.77 301 P **P 11 42 11.6 -0.3**
comp=Z,4.6nm,0.6s,mb4.6,baz=62,slow=7.4,SNR=11
ESDC Sonseca Array 50.77 301 P **P 11 42 11.6 -0.3**
EKA Eskdalemuir Ar 50.84 321 P **P 11 42 10.9 -1.2**
comp=Z,2.3nm,0.9s,mb4.1,baz=104,slow=7.0,SNR=4.5
EKA Eskdalemuir Ar 50.84 321 P **P 11 42 11.0 -1.2**
EKA pmax pmax
comp=Z,2.0nm,0.9s

EKA	**Eskdalemuir Ar**	**50.84**	**321**	P	**P**	**11 42 11.0**	**-1.2**
	comp=Z,2.0nm,0.9s,mb4.0						
PAB	**San Pablo**	**51.07**	**300**	*e*P	**P**	**11 42 13.7**	**-0.5**
PAB				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
PAB	**San Pablo**	**51.07**	**300**	*e*P	**P**	**11 42 13.7**	**-0.5**
	comp=Z,12nm,0.8s,mb4.9						
PAB	**San Pablo**	**51.07**	**300**	*e*P	**P**	**11 42 13.7**	**-0.5**
	comp=Z,12nm,0.8s,mb4.9						
BJI	**Beijing**	**51.18**	**59**	P	**P**	**11 42 15.4**	**+0.4**
BJI				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
MDT	**Midelt**	**52.16**	**292**	P	**P**	**11 42 23.1**	**+0.7**
	comp=Z,15nm,0.7s,mb5.0,baz=84,slow=9.2,SNR=31						
MDT	**Midelt**	**52.16**	**292**	P	**P**	**11 42 23.1**	**+0.7**
PBRG	**Braganca**	**52.70**	**303**	*e*P	**P**	**11 42 26.2**	**-0.1**
	comp=Z,24nm,2.3s,mb4.7						
PBRG	**Braganca**	**52.70**	**303**	*e*P	**P**	**11 42 26.2**	**-0.1**
	comp=Z,24nm,2.3s,mb4.7						
MVO	**Moncorvo**	**52.97**	**303**	*e*P	**P**	**11 42 28.4**	**+0.1**
	comp=Z,21nm,1.0s,mb5.0						
MVO	**Moncorvo**	**52.97**	**303**	*e*P	**P**	**11 42 28.4**	**+0.1**
	comp=Z,21nm,1.0s,mb5.0						
PBAR	**Barrancos**	**53.31**	**299**	*e*P	**P**	**11 42 29.5**	**-1.3**
	comp=Z,17nm,1.6s,mb4.7						
PBAR	**Barrancos**	**53.31**	**299**	*e*P	**P**	**11 42 29.5**	**-1.3**
	comp=Z,17nm,1.6s,mb4.7						
PMRV	**Marv??o**	**53.43**	**301**	*e*P	**P**	**11 42 31.1**	**-0.6**
	comp=Z,14nm,1.0s,mb4.8						
PMRV	**Marv??o**	**53.43**	**301**	*e*P	**P**	**11 42 31.1**	**-0.6**
	comp=Z,14nm,1.0s,mb4.8						
PCBR	**Castelo Branco**	**53.45**	**301**	*e*P	**P**	**11 42 31.7**	**-0.1**
	comp=Z,15nm,1.1s,mb4.8						
PCBR	**Castelo Branco**	**53.45**	**301**	*e*P	**P**	**11 42 31.7**	**-0.1**
	comp=Z,15nm,1.1s,mb4.8						
PVIS	**Viseu**	**53.67**	**302**	*e*P	**P**	**11 42 33.8**	**+0.4**
	comp=Z,18nm,0.8s,mb5.0						
PVIS	**Viseu**	**53.67**	**302**	*e*P	**P**	**11 42 33.8**	**+0.4**
	comp=Z,18nm,0.8s,mb5.0						
PBEJ	**Beja**	**53.97**	**299**	*e*P	**P**	**11 42 33.8**	**-1.9**
	comp=Z,17nm,2.0s,mb4.6						
PBEJ	**Beja**	**53.97**	**299**	*e*P	**P**	**11 42 33.8**	**-1.9**
	comp=Z,17nm,2.0s,mb4.6						
EVO	**Evora**	**54.02**	**300**	*e*P	**P**	**11 42 35.6**	**-0.4**
	comp=Z,19nm,1.0s,mb5.0						
EVO	**Evora**	**54.02**	**300**	*e*P	**P**	**11 42 35.6**	**-0.4**
	comp=Z,19nm,1.0s,mb5.0						
PBDV	**Barranco-do-Ve**	**54.14**	**298**	*e*P	**P**	**11 42 36.2**	**-0.7**
PBDV	**Barranco-do-Ve**	**54.14**	**298**	*e*P	**P**	**11 42 36.2**	**-0.7**
PCVE	**Castro Verde**	**54.16**	**298**	*e*P	**P**	**11 42 36.4**	**-0.7**
	comp=Z,14nm,1.4s,mb4.7						
PCVE	**Castro Verde**	**54.16**	**298**	*e*P	**P**	**11 42 36.4**	**-0.7**
	comp=Z,14nm,1.4s,mb4.7						
PTOM	**Tomar**	**54.19**	**301**	*e*P	**P**	**11 42 37.5**	**+0.3**
	comp=Z,27nm,1.9s,mb4.8						
PTOM	**Tomar**	**54.19**	**301**	*e*P	**P**	**11 42 37.5**	**+0.3**
	comp=Z,27nm,1.9s,mb4.8						
PFVI	**Vila Bisbo**	**54.86**	**298**	*e*P	**P**	**11 42 41.7**	**-0.5**
	comp=Z,52nm,1.4s,mb5.4						
PFVI	**Vila Bisbo**	**54.86**	**298**	*e*P	**P**	**11 42 41.7**	**-0.5**
	comp=Z,52nm,1.4s,mb5.4						
COCO	**West Island**	**55.59**	**129**	*i* P	**P**	**11 42 46.1**	**-1.5**
COCO	**West Island**	**55.59**	**129**	*i* P	**P**	**11 42 46.1**	**-1.5**
CN2	**Changchun**	**57.67**	**53**	*e*P	**P**	**11 43 01.6**	**-0.6**
CN2				*e*S	**S**	**11 50 59.1**	**-1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				pmax	pmax		
	comp=Z,2μm,10.0s						
CN2				LR	LR		
	comp=N,2μm,18.0s,MS5.5						
CN2				LR	LR		
	comp=E,3μm,18.0s,MS5.5						
CN2				LR	LR		
	comp=Z,3μm,17.0s,MS5.5						
MDJ	**Mudanjiang**	**60.50**	**52**	P	**P**	**11 43 22.0**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,1μm,3.6s						
DAG	**Danmarks Havn**	**60.54**	**345**	*i* P	**P**	**11 43 20.4**	**-1.1**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
DAG	**Danmarks Havn**	**60.54**	**345**	*i* P	**P**	**11 43 20.4**	**-1.1**
	comp=Z,31nm,0.8s,mb5.5						
KSRS	**Korea Array**	**60.64**	**60**	P	**P**	**11 43 21.8**	**-1.1**
	comp=Z,7.7nm,0.6s,mb5.0,baz=279,slow=6.4,SNR=27						
KSRS	**Korea Array**	**60.64**	**60**	P	**P**	**11 43 21.8**	**-1.0**
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.0						
KSRS	**Korea Array**	**60.64**	**60**	P	**P**	**11 43 21.8**	**-1.0**
	comp=Z,8.0nm,0.6s,mb5.0						
DBIC	**Dimbokro**	**60.88**	**262**	P	**P**	**11 43 24.4**	**-0.5**
	comp=Z,5.7nm,0.7s,mb4.8,baz=47,slow=8.9,SNR=9.4						
DBIC	**Dimbokro**	**60.88**	**262**	P	**P**	**11 43 24.4**	**-0.4**
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DBIC	**Dimbokro**	**60.88**	**262**	P	**P**	**11 43 24.4**	**-0.4**
	comp=Z,6.0nm,0.7s,mb4.8						
KIC	**Kosan Boka**	**60.92**	**262**	*e*P	**P**	**11 43 24.4**	**-0.7**
	comp=Z,15nm,0.7s,mb5.2						
KIC	**Kosan Boka**	**60.92**	**262**	*e*P	**P**	**11 43 24.4**	**-0.7**
	comp=Z,15nm,0.7s,mb5.2						
TIC	**Toumodi**	**61.04**	**262**	*e*P	**P**	**11 43 24.9**	**-1.0**
	comp=Z,27nm,1.0s,mb5.3						
TIC	**Toumodi**	**61.04**	**262**	*e*P	**P**	**11 43 24.9**	**-1.0**
TIC				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.3						
TIC	**Toumodi**	**61.04**	**262**	*e*P	**P**	**11 43 24.9**	**-1.0**
	comp=Z,27nm,1.0s,mb5.3						
KLR	**Kul'dur**	**61.23**	**47**	*e*P	**P**	**11 43 21.0**	**-5.6**
LIC	**Lamto**	**61.24**	**262**	*e*P	**P**	**11 43 25.8**	**-1.4**
	comp=Z,31nm,0.8s,mb5.5						
LIC	**Lamto**	**61.24**	**262**	*e*P	**P**	**11 43 25.8**	**-1.4**
	comp=Z,31nm,0.8s,mb5.5						
BOSA	**Boshof**	**62.43**	**210**	P	**P**	**11 43 34.6**	**-0.2**
	comp=Z,11nm,0.7s,mb5.1,baz=39,slow=6.3,SNR=18						
BOSA	**Boshof**	**62.43**	**210**	P	**P**	**11 43 34.7**	**-0.1**
BOSA				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.1						
BOSA	**Boshof**	**62.43**	**210**	P	**P**	**11 43 34.7**	**-0.1**
	comp=Z,11nm,0.7s,mb5.1						
SUMG	**Summit**	**65.93**	**341**	*e*P	**P**	**11 43 57.6**	**+0.3**
	comp=Z,294nm,2.9s,mb5.8						
SUMG	**Summit**	**65.93**	**341**	*i* P	**P**	**11 43 57.2**	**-0.1**
	comp=Z,12nm,1.0s,mb4.9						
SUMG	**Summit**	**65.93**	**341**	*e*P	**P**	**11 43 57.6**	**+0.3**
	comp=Z,294nm,2.9s,mb5.8						
MJAR	**Matsushiro Arr**	**68.82**	**59**	P	**P**	**11 44 20.3**	**+4.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=269,slow=8.7,SNR=5.3						
MJAR	**Matsushiro Arr**	**68.82**	**59**	P	**P**	**11 44 20.3**	**+4.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YSS	**Yuzh-Sakhalins**	**68.92**	**47**	*e*P	**P**	**11 44 14.9**	**-1.8**
YSS	**Yuzh-Sakhalins**	**68.92**	**47**	*e*P	**P**	**11 44 14.9**	**-1.8**
SEY	**Seymchan**	**69.37**	**29**⇑	*e*P	**P**	**11 44 18.5**	**-0.7**
SEY	**Seymchan**	**69.37**	**29**	*e*P	**P**	**11 44 18.5**	**-0.7**
BILL	**Bilibino**	**72.64**	**22**	*e*P	**P**	**11 44 38.2**	**-0.7**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
BILL	**Bilibino**	**72.64**	**22**	*e*P	**P**	**11 44 38.2**	**-0.7**
	comp=Z,3.0nm,1.0s,mb4.2						
IMA2	**Indian Mountai**	**84.70**	**12**	*e*P	**P**	**11 45 41.4**	**-3.9**
SCHQ	**Schefferville**	**85.01**	**331**	P	**P**	**11 45 45.3**	**-1.8**
	comp=Z,3.3nm,0.9s,mb4.5,baz=11,slow=5.2,SNR=2.3						
BPAW	**Bear Paw Mtn.**	**86.97**	**11**	*e*P	**P**	**11 45 55.5**	**-1.1**
	comp=Z,19nm,0.8s,mb5.4						
ILAR	**Eielson Array**	**87.01**	**10**	P	**P**	**11 45 55.4**	**-1.4**
	comp=Z,3.3nm,0.7s,mb4.7,baz=320,slow=4.4,SNR=68						
ILAR				PP	PP	11 49 20.6	+1.5
	comp=Z,0.6nm,0.9s,baz=322,slow=8.5,SNR=5.6						
ILAR	**Eielson Array**	**87.01**	**10**	P	**P**	**11 45 55.4**	**-1.4**
ILAR						11 49 20.6	
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MCK	**McKinley**	**87.67**	**11**	*e*P	**P**	**11 45 59.0**	**-1.0**
MCK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
MCK	**McKinley**	**87.67**	**11**	*e*P	**P**	**11 45 59.0**	**-1.0**
	comp=Z,8.3nm,0.8s,mb5.0						
TRF	**Thorofare Moun**	**87.69**	**11**	*e*P	**P**	**11 45 58.8**	**-1.3**
	comp=Z,6.0nm,0.7s,mb4.9						
TRF				*e*PP	PP	11 49 18.8	-5.9
EGAK	**Eagle**	**87.75**	**7**	*e*P	**P**	**11 45 59.2**	**-1.1**
	comp=Z,8.0nm,0.9s,mb5.0						
WRA	**Warramunga Arr**	**89.13**	**113**	P	**P**	**11 46 06.2**	**-1.4**
	comp=Z,0.6nm,0.4s,mb4.2,baz=313,slow=3.9,SNR=21						
WRA	**Warramunga Arr**	**89.13**	**113**	P	**P**	**11 46 06.2**	**-1.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**89.13**	**113**	P	**P**	**11 46 06.2**	**-1.4**
ASAR	**Alice Springs**	**90.57**	**116**	P	**P**	**11 46 13.0**	**-1.3**
	comp=Z,0.9nm,0.6s,mb4.3,baz=304,slow=4.9,SNR=22						
ASAR	**Alice Springs**	**90.57**	**116**	P	**P**	**11 46 13.0**	**-1.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**90.67**	**356**	P	**P**	**11 46 12.2**	**-1.9**
	comp=Z,1.2nm,0.7s,mb4.3,baz=349,slow=5.0,SNR=3.5						
YKA	**Yellowknife Ar**	**90.67**	**356**	P	**P**	**11 46 12.2**	**-1.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**90.67**	**356**	P	**P**	**11 46 12.2**	**-1.9**
NVAR	**Mina Array Bea**	**114.86**	**355**	PKP	PKiKP	11 51 52.8	+0.1
	comp=Z,0.7nm,0.8s,baz=359,slow=0.9,SNR=5.7						
TXAR	**Lajitas Array**	**120.81**	**339**	PKP	PKPdf	11 52 03.5	-0.9
	comp=Z,0.8nm,0.6s,baz=147,slow=1.1,SNR=9.6						
TXAR	**Lajitas Array**	**120.81**	**339**	PKIKP	PKPdf	11 52 03.6	-0.8
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CPUP	**Villa Florida**	**120.88**	**254**	PKP	PKPdf	11 52 02.9	-1.6
	comp=Z,0.3nm,0.3s,baz=53,slow=5.1,SNR=3.1						
PMSA	**Palmer Station**	**126.59**	**208**	*e*PKPdf	PKPdf	11 52 17.9	+3.6
LPAZ	**La Paz**	**127.18**	**269**	PKP	PKPdf	11 52 16.3	-0.6
	comp=Z,1.1nm,0.7s,baz=37,slow=2.4,SNR=4.6						
LPAZ	**La Paz**	**127.18**	**269**	PKIKP	PKPdf	11 52 16.3	-0.5
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						

MOS ***10*** *11:35:48.8±1.6, 54°.85N×112°.91E, h7km, mb4.2/1, Error ellipse: s-maj=31.2km s-min=20.1km az=125.5*

BYKL 10 11:35:47.7±0.3, 54°.94N×113°.01E, 7C-3D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**1.07**	**267**⇑	*i*PG	Pg	11 36 07.1	-1.1
YLYR				*e*		11 36 20.6	
YLYR				pmax	pmax		
	comp=Z,17nm,1.1s						
YLYR				smax			
	comp=N,452nm,0.5s						
YLYR	**Ulyunkhan**	**1.07**	**267**⇑	*i*Pg	Pg	11 36 07.1	-1.1
YLYR				⇓*i*Pb	Pb	11 36 09.5	+0.5
YLYR				*i* Sg	Sg	11 36 21.6	-0.4
YLYR				*e*Sb	Sb	11 36 24.3	+0.8
YLYR				max			
	comp=N,17nm,0.2s						
YLYR				max			
	comp=N,450nm,0.7s						
YOA	**Uoyan**	**1.40**	**329**	*e*PG	Pg	11 36 14.2	-0.3
YOA				*e*		11 36 33.1	
YOA				pmax	pmax		
	comp=Z,187nm,0.2s						
YOA				smax			
	comp=N,563nm,0.4s						
YOA	**Uoyan**	**1.40**	**329**	Sg	Sg	11 36 31.1	-1.6
YOA				Smax			
	comp=N,558nm,0.8s						
KMO	**Kumora**	**1.40**	**313**	*e*PG	Pg	11 36 12.6	-1.9
KMO				*e*		11 36 32.0	
KMO				pmax	pmax		
	comp=Z,106nm,0.3s						
KMO				smax			
	comp=E,242nm,0.6s						
KMO	**Kumora**	**1.40**	**313**	⇓*i*Pg	Pg	11 36 12.8	-1.7
KMO				*e*Pb	Pb	11 36 14.5	-0.2
KMO				*e*Sg	Sg	11 36 32.6	-0.1
KMO				*e*Sb	Sb	11 36 35.0	+1.9
KMO				max			
	comp=E,106nm,0.3s						
KMO				max			
	comp=E,287nm,0.8s						
NIZ	**Nizh Angarsk**	**2.15**	**294**	*e*PN	Pn	11 36 25.3	+0.6
NIZ				*e*		11 36 27.5	
NIZ				*e*		11 36 55.7	
NIZ				pmax	pmax		
	comp=Z,24nm,0.5s						
NIZ				smax			
	comp=N,167nm,1.0s						
NIZ	**Nizh Angarsk**	**2.15**	**294**	*e*Pg	Pg	11 36 25.7	-3.2
NIZ				*e*Sg	Sg	11 36 53.6	-3.1
NIZ				*e*		11 37 01.2	
NIZ				Pmax			
	comp=N,18nm,0.1s						
NIZ				Smax			
	comp=N,167nm,0.7s						
SYVR	**Suvo**	**2.18**	**235**⇑	*i*Pn	Pn	11 36 24.8	-0.4
SYVR				⇓*i*Pg	Pg	11 36 26.4	-3.1
SYVR				*i* Sg	Sg	11 36 56.2	-1.6
SYVR				*e*		11 36 59.1	
SYVR				Pmax			
	comp=N,37nm,0.3s						
SYVR				Smax			
	comp=N,101nm,0.5s						
CIT	**Chita**	**2.94**	**173**	*e*	Sn	11 37 14.0	+2.4
CIT				*e*Sg	Sg	11 37 18.3	-3.8
CIT				Smax			
	comp=N,414nm,0.2s						
MXMB	**Maximikha**	**3.02**	**238**	*e*	Sn	11 37 14.3	+0.7
MXMB				*e*Sg	Sg	11 37 21.0	-3.7
MXMB				Smax			
	comp=N,145nm,0.8s						
OGRR	**Ongureny**	**3.43**	**250**⇑	*i*Pn	Pn	11 36 42.3	0.0
OGRR				*e*Pg	Pg	11 36 49.4	-4.0
OGRR				*e*PgPg		11 36 52.7	
OGRR				*e*		11 37 15.4	
OGRR				*e*		11 37 26.0	
OGRR				*i* Sg	Sg	11 37 34.3	-3.5
OGRR				max			
	comp=N,7.0nm,0.6s						
OGRR				Smax			
	comp=N,54nm,1.2s						
CRS	**Chara**	**3.55**	**54**	*e*PN	Pn	11 36 51.2	+7.2
CRS				*e*		11 37 38.0	
CRS				pmax	pmax		
	comp=Z,41nm,0.9s						
CRS				smax			
	comp=E,119nm,1.0s						
CRS	**Chara**	**3.55**	**54**	*e*	Pn	11 36 45.5	+1.5
CRS				⇑*i*Pg	Pg	11 36 51.1	-4.6
CRS				*e*		11 37 16.1	
CRS				*i* Sg	Sg	11 37 38.1	-3.6
CRS				Pmax			
	comp=E,20nm,0.8s						
CRS				Smax			
	comp=E,78nm,1.0s						
TUP	**Tupik**	**4.06**	**94**	*e*PN	Pn	11 36 49.8	-1.2
TUP				*e*		11 37 00.0	
TUP				*e*S	Sn	11 37 36.4	-2.8
TUP				*e*		11 37 51.9	
TUP				pmax	pmax		
	comp=Z,13nm,0.3s						
TUP				smax			
	comp=N,160nm,0.6s						
TUP	**Tupik**	**4.06**	**94**	*e*Pn	Pn	11 36 49.3	-1.7
TUP				*e*Pg	Pg	11 36 58.8	-6.7
TUP				*e*		11 37 01.5	
TUP				*e*		11 37 30.8	
TUP				*e*Sg	Sg	11 37 52.5	-5.6
TUP				*e*		11 37 56.1	
TUP				max			
	comp=N,10.0nm,0.3s						
TUP				max			
	comp=N,205nm,1.1s						
ZRHB	**Zarechye**	**4.22**	**238**	*e*Sg	Sg	11 37 58.1	-5.0
ZRHB				Smax			
	comp=N,240nm,1.2s						
KHNR	**Khani**	**4.39**	**60**	*e*Sg	Sg	11 38 04.3	-4.4
UUDB	**Ulan-Yde**	**4.44**	**228**⇑	*i*Pg	Pg	11 37 08.1	-4.6
UUDB				*e*		11 37 12.7	
UUDB				*e*Sg	Sg	11 38 06.3	-3.9
UUDB				Pmax			
	comp=N,30nm,0.7s						
UUDB				Smax			
	comp=N,33nm,0.9s						
TRG	**Tyrgan**	**4.51**	**244**⇑	*i*Pn	Pn	11 36 56.3	-0.8
TRG				*e*Pg	Pg	11 37 08.3	-5.7
TRG				*e*		11 37 56.2	
TRG				*e*Sg	Sg	11 38 06.7	-5.7
TRG				Pmax			
	comp=N,2.0nm,0.9s						
TRG				Smax			
	comp=N,23nm,1.3s						
KAB	**Kabansk**	**4.77**	**235**	*e*Sg	Sg	11 38 15.2	-5.7
KAB				*e*		11 38 18.0	
KAB				*e*		11 38 40.7	
KAB				max			
	comp=N,176nm,0.6s						
HRMR	**Khuramsha**	**4.92**	**230**	*e*Pg	Pg	11 37 16.9	-5.0
HRMR				*e*Sn	Sn	11 37 54.6	-5.7
HRMR				*e*Sg	Sg	11 38 21.8	-3.8
HRMR				*e*		11 38 28.2	
HRMR				Pmax			
	comp=N,14nm,0.6s						
HRMR				max			
	comp=N,128nm,1.2s						
KPC	**Khapcheranga**	**5.26**	**184**	*e*Pn	Pn	11 37 05.4	-2.1
KPC				*e*		11 37 09.0	
KPC				*e*Pg	Pg	11 37 22.1	-6.3
KPC				*e*		11 37 28.2	
KPC				*e*Sg	Sg	11 38 30.2	-6.3
KPC				*e*		11 38 35.7	
KPC				max			
	comp=N,3.0nm,0.3s						
KPC				max			
	comp=N,57nm,0.6s						
LSTR	**Listvyanka**	**5.78**	**241**	*e*	Pb	11 37 27.6	-1.6
LSTR				*e*Sg	Sg	11 38 47.2	-6.0
LSTR				max			
	comp=N,2.0nm,0.2s						
LSTR				Smax			
	comp=N,10.0nm,1.6s						
TLY	**Talaya**	**6.49**	**244**	*e*Sg	Sg	11 39 08.9	-7.2
TLY				Smax			
	comp=N,15nm,0.1s						
ARS	**Arshan**	**7.01**	**249**	*e*	Sb	11 39 16.6	+2.2
ARS				*e*Sg	Sg	11 39 23.2	-9.5
ARS				Smax			
	comp=N,45nm,0.7s						
ZAK	**Zakamensk**	**7.47**	**236**	*e*Sg	Sg	11 39 37.7	-10
ZAK				Smax			
	comp=N,5.0nm,1.0s						
MOY	**Mondy**	**7.91**	**250**	*e*Sg	Sg	11 39 50.6	-11
MOY				Smax			
	comp=N,13nm,1.1s						
ORL	**Orlik**	**8.19**	**258**	*e*Pg	Pg	11 38 14.2	-10
ORL				*e*		11 39 35.3	
ORL				*e*Sg	Sg	11 40 00.3	-10
ORL				Pmax			
	comp=N,1.0nm,1.1s						
ORL				Smax			
	comp=N,25nm,1.5s						

ISCJB ***10*** *11:45:26.4±0.7, 39°.25N±0°.03×17°.37E±0°.05, h10km, Error ellipse: s-maj=5.8km s-min=3.3km az=26.3*

CSEM ***10*** *11:45:27.1±0.5, 39°.22N×17°.38E, h10km, ML3.6/8, Error ellipse: s-maj=9.5km s-min=4.7km az=111.0*

ROM ***10*** *11:45:30.3±0.2, 39°.22N×17°.22E, h21km±2km, Ml2.8/26, Error ellipse: s-maj=3.6km s-min=2.4km az=86.0*

ISC 10 11:45:27.8±0.9, 39°.24N±0°.03×17°.34E±0°.08, h15km±8km, n57, σ1°19/75, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LADO	**San Nicola del**	**0.28**	**279**	Pg	**Pg**	**11 45 35.2**	**+1.4**
LADO				Sg	**Sg**	**11 45 39.7**	**+1.9**
	3μm,0.8s						
LADO	**San Nicola del**	**0.28**	**279**	Pg	**Pg**	**11 45 35.2**	**+1.4**
LADO				Sg	**Sg**	**11 45 39.7**	**+1.9**
	3μm,0.8s						
SERS	**Sersale**	**0.55**	**248**	Pg	**Pg**	**11 45 38.6**	**+0.1**
SERS				Sg	**Sg**	**11 45 46.3**	**+0.5**
	406nm,0.6s						
SERS	**Sersale**	**0.55**	**248**	Pg	**Pg**	**11 45 38.6**	**+0.1**
SERS				Sg	**Sg**	**11 45 46.3**	**+0.5**
	406nm,0.6s						
GRI	**Girifalco**	**0.83**	**240**	Pg	**Pg**	**11 45 45.2**	**+1.3**
	268nm,0.6s						
GRI	**Girifalco**	**0.83**	**240**	Pg	**Pg**	**11 45 45.2**	**+1.3**
	268nm,0.6s						
CARO	**Carolei**	**0.87**	**271**	Pg	**Pg**	**11 45 45.0**	**+0.3**
CARO				Sg	**Sg**	**11 45 55.7**	**-0.4**
	348nm,0.6s						
CARO	**Carolei**	**0.87**	**271**	Pg	**Pg**	**11 45 45.0**	**+0.3**
CARO				Sg	**Sg**	**11 45 55.7**	**-0.4**
	348nm,0.6s						
PLAC	**Placanica**	**1.06**	**222**	Pg	**Pg**	**11 45 48.4**	**+0.2**
PLAC				Sg	**Sg**	**11 46 03.1**	**+1.1**
	314nm,1.2s						
PLAC	**Placanica**	**1.06**	**222**	Pg	**Pg**	**11 45 48.4**	**+0.2**
PLAC				Sg	**Sg**	**11 46 03.1**	**+1.1**
	314nm,1.2s						
ORI	**Oriolo Calabro**	**1.07**	**320**	Pg	**Pg**	**11 45 50.0**	**+1.5**
ORI				Sg	**Sg**	**11 46 02.5**	**0.0**
	581nm,0.4s						
ORI	**Oriolo Calabro**	**1.07**	**320**	Pg	**Pg**	**11 45 50.0**	**+1.5**
ORI				Sg	**Sg**	**11 46 02.5**	**0.0**
	581nm,0.4s						
JOPP	**Joppolo**	**1.30**	**241**	Pg	**Pg**	**11 45 52.4**	**-0.4**
JOPP				Sg	**Sg**	**11 46 09.5**	**-0.2**
	183nm,1.2s						
JOPP	**Joppolo**	**1.30**	**241**	Pg	**Pg**	**11 45 52.4**	**-0.4**
JOPP				Sg	**Sg**	**11 46 09.5**	**-0.2**
	183nm,1.2s						
CRAC	**Craco**	**1.32**	**328**	Pg	**Pg**	**11 45 54.6**	**+1.4**
	853nm,1.0s						
CRAC	**Craco**	**1.32**	**328**	Pg	**Pg**	**11 45 54.6**	**+1.4**
	853nm,1.0s						
SCHR	**S. Chirico Rap**	**1.37**	**315**	Pg	**Pg**	**11 45 54.8**	**+0.7**
SCHR				Sg	**Sg**	**11 46 10.9**	**-1.0**
	131nm,0.8s						
SCHR	**S. Chirico Rap**	**1.37**	**315**	Pg	**Pg**	**11 45 54.8**	**+0.7**
SCHR				Sg	**Sg**	**11 46 10.9**	**-1.0**
	131nm,0.8s						
CUC	**Castrocucco**	**1.40**	**303**	Pg	**Pg**	**11 45 55.3**	**+0.6**
CUC				Sg	**Sg**	**11 46 12.8**	**-0.1**
	240nm,0.9s						
CUC	**Castrocucco**	**1.40**	**303**	Pg	**Pg**	**11 45 55.3**	**+0.6**
CUC				Sg	**Sg**	**11 46 12.8**	**-0.1**
	240nm,0.9s						
LTRZ	**Laterza**	**1.42**	**344**	Pg	**Pg**	**11 45 54.8**	**-0.3**
	230nm,0.7s						
LTRZ	**Laterza**	**1.42**	**344**	Pg	**Pg**	**11 45 54.8**	**-0.3**
	230nm,0.7s						
SIRI	**Monte Sirino -**	**1.48**	**310**

93nm,0.9s
MPAZ Palizzi 1.66 220 Pg Pg 11 45 57.1 -2.5
44nm,0.2s
MPAZ Palizzi 1.66 220 Pg Pg 11 45 57.1 -2.5
44nm,0.2s
SG1 Sgolgore (BA) 1.68 343 *e*Pn **Pn 11 45 58.5 +1.9**
BULG Bulgheria - Ca 1.73 300 Pg **Pg 11 45 58.8 -2.2**
103nm,0.8s
BULG Bulgheria - Ca 1.73 300 Pg **Pg 11 45 58.8 -2.2**
103nm,0.8s
AMUR Altamura 1.76 341 Pg **Pg 11 45 59.9 -1.6**
130nm,0.4s
AMUR Altamura 1.76 341 Pg **Pg 11 45 59.9 -1.6**
130nm,0.4s
CMPR Campora 1.90 305 Pg **Pg 11 46 00.7 -3.6**
41nm,0.6s
CDRU Civita di Ruta 2.00 309 Pg **Pg 11 46 02.3 -3.9**
MRVN Minervino Murg 2.02 335 Pg **Pg 11 46 02.4 -4.1**
73nm,0.5s
STON Ston 3.64 4 *e*Pn **Pn 11 46 22.3 -1.2**
STON Sn **Sn 11 47 05.4 -0.8**
STON Ston 3.64 4 *e*Pn **Pn 11 46 22.3 -1.2**
STON Sn **Sn 11 47 05.3 -0.9**
BBLS Lazići 4.87 18 *e*Pn **Pn 11 46 43.6 +3.1**
DIVS Divibare 5.24 21 *e*Pn **Pn 11 46 46.1 +0.5**

ISCJB ***10*** *11:47:53.2±1.3, 27°.01N±0°.06×55°.64E±0°.08, h15km±20km, Error ellipse: s-maj=13.9km s-min=7.9km az=39.5*
CSEM ***10*** *11:47:53.0±0.5, 26°.85N×55°.80E, h2km, ML3.6, Error ellipse: s-maj=11.6km s-min=6.1km az=157.0*
KISR ***10*** *11:47:54.0±0.5, 27°.23N×55°.31E, h34km±671km, ML4.0*
SGS ***10*** *11:47:55.9, 26°.85N×55°.76E, h15km*
TEH ***10*** *11:47:59.2, 27°.15N×56°.00E, h27km*
ISC 10 11:47:54.2±1.3, 27°.02N±0°.07×55°.70E±0°.08, h4km±15km, n33, σ1s69/55, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.56**	**47**	*e*Pg	**Pg**	**11 48 03.9**	**-1.2**
BNDS				*e*Sg	**Sg**	**11 48 08.7**	**-3.7**
IBND	**Bandar-abas**	**0.86**	**60**	*e*Pg	**Pg**	**11 48 10.0**	**-0.7**
IBND				*e*Sg	**Sg**	**11 48 18.6**	**-3.3**
IBND				*e*		11 48 41.4	
	comp=Z,44μm,0.3s						
IBND	**Bandar-abas**	**0.86**	**60**	*e*Pg	**Pg**	**11 48 10.0**	**-0.7**
IBND				*e*Sg	**Sg**	**11 48 18.6**	**-3.3**
KRBR	**Kerman**	**3.10**	**17**	*e*Pn	**Pn**	**11 48 44.2**	**+0.4**
ISRV	**Sarvestan**	**3.28**	**316**	*e*Pn	**Pn**	**11 48 49.8**	**+3.4**
ISRV				*e*Sn	**Sn**	**11 49 27.6**	**+1.7**
ISRV				*e*		11 50 14.7	
	comp=Z,1μm,0.4s						
ISRV	**Sarvestan**	**3.28**	**316**	*e*Pn	**Pn**	**11 48 49.8**	**+3.4**
ISRV				*e*Sn	**Sn**	**11 49 27.6**	**+1.7**
IPAR	**Pars**	**3.66**	**321**	*e*Pn	**Pn**	**11 48 54.4**	**+2.8**
IPAR				*e*Sn	**Sn**	**11 49 35.9**	**+0.8**
IPAR				*e*		11 49 43.4	
	comp=Z,1μm,0.3s						
IPAR	**Pars**	**3.66**	**321**	*e*Pn	**Pn**	**11 48 54.4**	**+2.8**
IPAR				*e*Sn	**Sn**	**11 49 35.9**	**+0.8**
IMEH	**Mehriz**	**4.46**	**348**	*e*	**Pn**	**11 49 09.4**	**+6.9**
	comp=Z,537nm,0.2s						
IMEH				*e*Pn	**Pn**	**11 49 04.9**	**+2.3**
IMEH				*e*Sn	**Sn**	**11 49 51.4**	**-3.5**
IBAF	**Bafgh**	**4.56**	**359**	*e*	**Pn**	**11 49 06.1**	**+2.1**
	comp=Z,650nm,0.1s						
IBAF				*e*Pn	**Pn**	**11 49 05.5**	**+1.6**
IBAF				*e*Sn	**Sn**	**11 49 52.5**	**-4.8**
ZHSF	**Zahedan**	**5.16**	**59**	*e*Pn	**Pn**	**11 49 12.8**	**+0.5**
BTHS		**5.29**	**237**	P	**Pn**	**11 49 12.3**	**-1.7**
BTHS		**5.29**	**237**	P	**Pn**	**11 49 12.3**	**-1.7**
ICHK	**Chekchek**	**5.33**	**348**	*e*Pn	**Pn**	**11 49 17.2**	**+2.7**
ICHK				*e*		11 49 28.1	
	comp=Z,304nm,0.2s						
ICHK	**Chekchek**	**5.33**	**348**	*e*Pn	**Pn**	**11 49 17.2**	**+2.7**
IGAR	**Gharneh**	**6.24**	**330**	*e*Pn	**Pn**	**11 49 26.8**	**-0.2**
IGAR				*e*		11 49 34.6	
	comp=Z,355nm,0.1s						
IGAR				*e*Sn	**Sn**	**11 50 36.3**	**-2.5**
NASN	**Na'in**	**6.29**	**337**	*e*Pn	**Pn**	**11 49 29.8**	**+2.1**
IZEF	**Zefreh**	**6.55**	**334**	*e*Pn	**Pn**	**11 49 32.6**	**+1.3**
IZEF				*e*		11 49 38.4	
	comp=Z,184nm,0.2s						
IZEF				*e*Sn	**Sn**	**11 50 42.8**	**-3.6**
IZEF	**Zefreh**	**6.55**	**334**	*e*Pn	**Pn**	**11 49 32.6**	**+1.3**
IZEF				*e*Sn	**Sn**	**11 50 42.8**	**-3.6**
HRDDS		**6.97**	**236**	P	**Pn**	**11 49 35.6**	**-1.5**
IPIR	**Pirpir**	**7.02**	**325**	*e*Pn	**Pn**	**11 49 39.9**	**+2.1**
IPIR				*e*Sn	**Sn**	**11 50 55.4**	**-2.7**
IPIR				*e*		11 51 01.5	
	comp=N,537nm,0.2s						
IPIR	**Pirpir**	**7.02**	**325**	*e*Pn	**Pn**	**11 49 39.9**	**+2.1**
IPIR				*e*Sn	**Sn**	**11 50 55.4**	**-2.7**
QRN	**Al-Qurain**	**7.10**	**286**	*e*P	**Pn**	**11 49 39.5**	**+0.6**
QRN				*e*S	**Sn**	**11 50 58.5**	**-1.5**
QRN				AML	AML	11 51 00.2	
	comp=Z,30nm,0.2s						
IKLH	**Kolahrood**	**7.22**	**331**	*e*Pn	**Pn**	**11 49 43.0**	**+2.5**
IKLH				*e*Sn	**Sn**	**11 50 58.7**	**-4.3**
IKLH	**Kolahrood**	**7.22**	**331**	*e*Pn	**Pn**	**11 49 43.0**	**+2.5**
IKLH				*e*Sn	**Sn**	**11 50 58.7**	**-4.3**
UMR	**Umm Al-Rimmam**	**7.48**	**292**	*e*P	**Pn**	**11 49 44.8**	**+0.7**
UMR				*e*S	**Sn**	**11 51 07.7**	**-1.7**
UMR				AML	AML	11 51 08.6	
	comp=Z,33nm,0.3s						
UMR	**Umm Al-Rimmam**	**7.48**	**292**	*e*P	**Pn**	**11 49 44.8**	**+0.7**
NAY	**Al-Naaiem**	**7.79**	**289**	*e*P	**Pn**	**11 49 49.0**	**+0.7**
NAY				*e*S	**Sn**	**11 51 15.3**	**-1.8**
NAY				AML	AML	11 51 16.2	
	comp=Z,20nm,0.6s						
NAY	**Al-Naaiem**	**7.79**	**289**	*e*P	**Pn**	**11 49 49.0**	**+0.6**
MIB	**Mutribah**	**7.87**	**293**	*e*P	**Pn**	**11 49 50.0**	**+0.5**
MIB				*e*S	**Sn**	**11 51 17.3**	**-1.7**
MIB				AML	AML	11 51 17.7	
	comp=Z,16nm,0.6s						
MIB	**Mutribah**	**7.87**	**293**	*e*P	**Pn**	**11 49 50.0**	**+0.6**
ISFB	**Sefidab**	**7.89**	**339**	*e*Pn	**Pn**	**11 49 51.7**	**+2.0**
ISFB	**Sefidab**	**7.89**	**339**	*e*Pn	**Pn**	**11 49 51.7**	**+2.0**

MOS ***10*** *11:47:59.6±1.7, 54°.80N×112°.82E, h11km, mb4.2/1, Error ellipse: s-maj=27.5km s-min=16.4km az=107.7*
BYKL 10 11:47:58.9±0.4, 54°.92N×113°.02E, 4C-6D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**1.07**	**268**	⇓*i*PG	Pg	11 48 18.8	-0.7
YLYR				*e*		11 48 32.2	
YLYR				pmax	pmax		
	comp=Z,35nm,0.2s						
YLYR				smax			
	comp=N,558nm,0.4s						
YLYR	**Ulyunkhan**	**1.07**	**268**	⇑*i*Pg	Pg	11 48 18.6	-0.9
YLYR				*e*Pb	Pb	11 48 19.6	-0.7
YLYR				*i* Sg	Sg	11 48 33.4	0.0
YLYR				*e*Sb	Sb	11 48 35.3	+0.4
YLYR				max			
	comp=N,48nm,0.2s						
YLYR				Smax			
	comp=N,565nm,0.6s						
KMO	**Kumora**	**1.42**	**314**	*e*PG	Pg	11 48 24.3	-1.8
KMO				*e*		11 48 44.1	
KMO				pmax	pmax		
	comp=Z,131nm,0.3s						
KMO				smax			
	comp=E,290nm,0.6s						
KMO	**Kumora**	**1.42**	**314**	⇑*i*Pg	Pg	11 48 24.2	-1.9
KMO				*e*		11 48 26.1	
KMO				*e*Sg	Sg	11 48 44.2	-0.3
KMO				*e*		11 48 47.1	
KMO				max			
	comp=E,132nm,0.4s						
KMO				max			
	comp=E,311nm,0.8s						
YOA	**Uoyan**	**1.42**	**329**	*e*PG	Pg	11 48 25.3	-0.8
YOA				*e*		11 48 44.9	
YOA				pmax	pmax		
	comp=Z,152nm,0.2s						
YOA				smax			
	comp=N,600nm,0.6s						
YOA	**Uoyan**	**1.42**	**329**	*e*Pg	Pg	11 48 24.1	-2.0
YOA				*e*		11 48 27.2	
YOA				*e*Sg	Sg	11 48 43.4	-1.1
YOA				max			
	comp=N,148nm,0.3s						
YOA				Smax			
	comp=N,592nm,0.8s						
NIZ	**Nizh Angarsk**	**2.16**	**295**	*e*PN	Pn	11 48 36.8	+0.7
NIZ				*e*		11 48 39.1	
NIZ				*e*S	Sn	11 49 04.9	+1.3
NIZ				*e*		11 49 07.3	
NIZ				pmax	pmax		
	comp=Z,37nm,0.5s						
NIZ				smax			
	comp=N,147nm,0.7s						
NIZ	**Nizh Angarsk**	**2.16**	**295**	⇓*i*Pg	Pg	11 48 36.6	-3.7
NIZ				*e*		11 48 41.2	
NIZ				*e*Sg	Sg	11 49 06.1	-2.3
NIZ				*e*		11 49 09.8	
NIZ				max			
	comp=N,37nm,0.5s						
NIZ				max			
	comp=N,134nm,0.4s						
SYVR	**Suvo**	**2.18**	**236**	⇓*i*Pn	Pn	11 48 36.5	+0.2
SYVR				⇓*i*Pg	Pg	11 48 38.0	-2.6
SYVR				*i* Sg	Sg	11 49 07.8	-0.9
SYVR				*e*		11 49 10.0	
SYVR				Pmax			
	comp=N,56nm,0.4s						
SYVR				Smax			
	comp=N,102nm,0.5s						
CIT	**Chita**	**2.92**	**174**	*e*Sg	Sg	11 49 30.1	-2.6
CIT				Smax			
	comp=N,511nm,0.2s						
OGRR	**Ongureny**	**3.43**	**250**	⇑*i*Pn	Pn	11 48 53.5	0.0
OGRR				*e*Pg	Pg	11 49 00.1	-4.4
OGRR				*e*		11 49 22.0	
OGRR				*e*Sg	Sg	11 49 45.1	-3.8
OGRR				Pmax			
	comp=N,10.0nm,0.3s						
OGRR				Smax			
	comp=N,58nm,1.0s						
CRS	**Chara**	**3.56**	**54**	*e*PN	Pn	11 49 02.6	+7.3
CRS				pmax	pmax		
	comp=Z,33nm,0.9s						
CRS	**Chara**	**3.56**	**54**	*e*Pn	Pn	11 48 56.6	+1.3
CRS				⇑*i*Pg	Pg	11 49 02.6	-4.4
CRS				*e*		11 49 31.0	
CRS				*i* Sg	Sg	11 49 49.6	-3.5
CRS				Pmax			
	comp=Z,33nm,1.4s						
CRS				Smax			
	comp=Z,120nm,1.0s						
TUP	**Tupik**	**4.06**	**94**	*e*PN	Pn	11 49 01.5	-0.6
TUP				*e*		11 49 11.5	
TUP				*e*S	Sn	11 49 48.1	-2.2
TUP				pmax	pmax		
	comp=Z,11nm,0.3s						
TUP				smax			
	comp=N,204nm,0.6s						
TUP	**Tupik**	**4.06**	**94**	⇓*i*Pn	Pn	11 49 01.7	-0.4
TUP				⇓*i*Pg	Pg	11 49 10.4	-6.2
TUP				*e*PgPg		11 49 13.4	
TUP				*e*Sn	Sn	11 49 47.1	-3.2
TUP				*i* Sg	Sg	11 50 03.9	-5.2
TUP				*e*		11 50 08.6	
TUP				max			
	comp=N,11nm,0.3s						
TUP				max			
	comp=N,242nm,1.1s						
TRG	**Tyrgan**	**4.50**	**244**	*e*Pn	Pn	11 49 08.2	-0.1
TRG				*e*Pg	Pg	11 49 18.3	-6.9
TRG				*e*		11 49 20.5	
TRG				*e*		11 49 54.4	
TRG				*e*Sg	Sg	11 50 17.3	-6.2
TRG				max			
	comp=N,4.0nm,0.4s						
TRG				Smax			
	comp=N,34nm,1.5s						
KAB	**Kabansk**	**4.77**	**236**	*e*Sg	Sg	11 50 27.0	-4.9
KAB				Smax			
	comp=N,175nm,1.0s						
KPC	**Khapcheranga**	**5.24**	**185**	*e*PN	Pn	11 49 18.6	+0.2
KPC				*e*		11 49 34.4	
KPC				*e*		11 50 42.0	
KPC				pmax	pmax		
	comp=Z,5.0nm,0.2s						
KPC				smax			
	comp=E,84nm,0.5s						
KPC	**Khapcheranga**	**5.24**	**185**	*e*Pn	Pn	11 49 17.0	-1.4
KPC				*e*		11 49 18.8	
KPC				*e*Pg	Pg	11 49 33.5	-5.7
KPC				*e*		11 49 39.8	
KPC				*e*Sg	Sg	11 50 41.9	-5.2
KPC				max			
	comp=E,5.0nm,0.2s						
KPC				Smax			
	comp=E,84nm,0.6s						
LSTR	**Listvyanka**	**5.77**	**241**	*e*	Sb	11 50 56.1	+6.1
LSTR				*e*Sg	Sg	11 50 58.0	-6.2
LSTR				Smax			
	comp=E,46nm,1.8s						
IRK	**Irkutsk**	**5.86**	**246**	*e*Sg	Sg	11 50 58.5	-8.5
IRK				Smax			
	comp=E,132nm,0.3s						
TLY	**Talaya**	**6.49**	**244**	*e*Sg	Sg	11 51 19.1	-8.0
TLY				Smax			
	comp=E,14nm,0.1s						
ARS	**Arshan**	**7.01**	**249**	*e*Sg	Sg	11 51 34.6	-9.2
ARS				Smax			
	comp=E,52nm,0.8s						
ZAK	**Zakamensk**	**7.46**	**236**	*e*Sg	Sg	11 51 51.3	-7.1
ZAK				Smax			
	comp=E,6.0nm,1.3s						
MOY	**Mondy**	**7.91**	**251**	*e*	Sb	11 51 52.1	+0.8
MOY				*e*Sg	Sg	11 52 02.7	-10
MOY				Smax			
	comp=E,35nm,1.4s						
ORL	**Orlik**	**8.19**	**258**	*e*	Pb	11 50 15.1	-6.4
ORL				*e*Pg	Pg	11 50 24.8	-11
ORL				*e*		11 51 32.1	
ORL				*e*		11 51 50.3	
ORL				*e*Sg	Sg	11 52 10.6	-11
ORL				Pmax			
	comp=E,2.0nm,1.0s						
ORL				Smax			
	comp=E,29nm,1.3s						

IDC ***10*** *11:55:34.6±0.6, 25°.14N×122°.35E, h16km±3km, mb4.4/20, mb1 4.5/21, mb1mx4.4/28, mbtmp4.4/21, ML3.2/1, Error ellipse: s-maj=17.2km s-min=11.1km az=64.0*
TAP ***10*** *11:55:34.7, 25°.13N×122°.26E, h17km, ML4.6, C*
ISCJB ***10*** *11:55:34.6±0.4, 25°.14N±0°.02×122°.33E±0°.03, h24km±3km, mb4.7/61, MS4.8/4, Error ellipse: s-maj=3.9km s-min=3.0km az=23.6*
MOS ***10*** *11:55:35.8±1.1, 25°.24N×122°.36E, h33km, mb5.0/36, Error ellipse: s-maj=11.8km s-min=6.2km az=124.5*
NEIC ***10*** *11:55:35.1±0.2, 25°.12N×122°.29E, mb4.9/21, Error ellipse: s-maj=5.9km s-min=4.6km az=123.0*
NEIC Recorded [3 TAP] in T'ai-pei and [1 TAP] in I-lan.
BJI ***10*** *11:55:36.9, 25°.24N×122°.17E, h27km, mB4.9/18, mb4.4/33, ML5.0/9, Ms4.9/37, Ms7 4.6/33*
ISC 10 11:55:35.4±0.5, 25°.12N±0°.02×122°.28E±0°.02, h17km±2km, h21km±3.1km: pP-P, n221, σ1s16/257, mb4.7/61, MS4.8/4, 13C-22D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.29**	**248**	⇑*i*P	**Pg**	**11 55 41.0**	**-0.7**
TWB1	baz=242			*e*S	**Sg**	**11 55 45.1**	**-0.8**
	baz=242						
NWF	**Wu-fen Shan**	**0.46**	**264**	⇑*i*P	**Pg**	**11 55 44.2**	**-0.4**
NWF	baz=260			*e*S	**Sg**	**11 55 50.6**	**-0.2**
	baz=260						
ILA	**Ilan**	**0.60**	**234**	P	**Pg**	**11 55 46.8**	**-0.4**
ILA	baz=219			*e*S	**Sg**	**11 55 54.8**	**-0.5**
	baz=219						
TWY	**Chenhua**	**0.64**	**284**	P	**Pg**	**11 55 47.5**	**-0.5**
TWY	baz=282			*e*S	**Sg**	**11 55 57.2**	**+0.7**
	baz=282						
TWC	**Suao**	**0.64**	**218**	P	**Pg**	**11 55 47.1**	**-0.9**
TWC	baz=204			*e*S	**Sg**	**11 55 56.0**	**-0.6**
	baz=204						
TWA	**Mucha**	**0.65**	**258**	⇑*i*P	**Pg**	**11 55 47.9**	**-0.2**
TWA	baz=254			*e*S	**Sg**	**11 55 57.2**	**+0.4**
	baz=254						
TWE	**Neicheng**	**0.68**	**235**	⇓*i*P	**Pb**	**11 55 48.1**	**-0.8**
TWE	baz=221			*e*S	**Sb**	**11 55 56.7**	**-1.3**
	baz=221						
TAP1	**Taipei**	**0.69**	**264**	⇑*i*P	**Pb**	**11 55 49.0**	**0.0**
TAP1	baz=260			*e*S	**Sb**	**11 55 59.4**	**+1.1**
	baz=260						
TATO	**Taipei**	**0.73**	**259**	*e*Pn	**Pn**	**11 55 49.4**	**-1.6**
TATO				*e*Sn	**Sn**	**11 56 00.0**	**-1.7**
TWS1	**Kuangyinshan**	**0.78**	**269**	⇑*i*P	**Pb**	**11 55 50.6**	**+0.1**
TWS1	baz=266			*e*S	**Sb**	**11 56 02.0**	**+1.1**
	baz=266						
ENTT	**Nioudou**	**0.81**	**234**	⇓*i*P	**Pb**	**11 55 50.3**	**-0.7**
ENTT	baz=231			*e*S	**Sb**	**11 56 00.4**	**-1.1**
	baz=231						
ENA	**Nanau**	**0.84**	**216**	⇓P	**Pb**	**11 55 50.8**	**-0.8**
YOJ	**Yonaguni jima**	**0.93**	**134**	*e*P	**Pb**	**11 55 51.1**	**-1.9**
YHNB	**Yeheng**	**0.94**	**242**	*e*Pn	**Pn**	**11 55 52.6**	**-1.1**
YHNB				*e*Sn	**Sn**	**11 56 03.7**	**-3.0**
EHP	**Heping Village**	**0.94**	**212**	*e*P	**Pb**	**11 55 52.8**	**-0.4**
NSK	**Sanguang**	**0.95**	**243**	⇑*i*P	**Pb**	**11 55 52.7**	**-0.6**
NSK	baz=239			S	**Sb**	**11 56 04.4**	**-1.2**
	baz=239						
NCU	**National Centr**	**1.00**	**262**	*e*P	**Pb**	**11 55 53.9**	**-0.4**
NCU	baz=257			*e*S	**Sb**	**11 56 09.2**	**+2.0**
	baz=257						
NNS	**Nan Shan**	**1.07**	**231**	*e*P	**Pb**	**11 55 54.7**	**-0.7**
NNS	baz=228			*e*S	**Sb**	**11 56 08.8**	**-0.2**
	baz=228						
NACB	**Ninganchiao**	**1.13**	**214**	*e*Pn	**Pn**	**11 55 54.9**	**-1.5**
NACB				*e*Sn	**Sn**	**11 56 09.9**	**-1.6**
TWD	**Chiawan**	**1.21**	**211**	*e*P	**Pn**	**11 55 56.8**	**-0.7**
TWD	baz=203			*e*S	**Sb**	**11 56 13.2**	**+0.1**
	baz=203						
HSN	**Hsinchu**	**1.23**	**256**	*e*P	**Pn**	**11 55 56.4**	**-1.4**
NSTT	**Nanjuang**	**1.26**	**248**	⇑P	**Pn**	**11 55 57.5**	**-0.7**
HWA	**Hwalien**	**1.29**	**209**	*e*P	**Pn**	**11 55 58.8**	**+0.2**
TWT	**Tachien**	**1.32**	**230**	*e*P	**Pn**	**11 55 59.2**	**+0.1**
WHF	**Hehuan Shan**	**1.34**	**224**	⇑P	**Pn**	**11 55 59.6**	**+0.3**
WHF	baz=211			*e*S	**Sn**	**11 56 16.4**	**-0.3**
	baz=211						
ESL	**Shilin**	**1.51**	**211**	*e*P	**Pn**	**11 56 01.3**	**-0.4**
NSY	**Sanyi**	**1.55**	**244**	*e*P	**Pn**	**11 56 02.1**	**-0.1**
TWQ1	**Liyutan**	**1.57**	**241**	*e*P	**Pn**	**11 56 02.4**	**-0.1**
TCU	**Taichung**	**1.75**	**237**	*e*P	**Pn**	**11 56 04.9**	**0.0**
SMLT	**Sun Moon Lake**	**1.76**	**226**	*e*P	**Pn**	**11 56 06.8**	**+1.7**
SMLT	baz=215			*e*S	**Sn**	**11 56 28.7**	**+1.6**
	baz=215						
TYC	**Yuchr**	**1.77**	**227**	P	**Pn**	**11 56 06.3**	**+1.0**
TYC	baz=215			*e*S	**Sn**	**11 56 29.7**	**+2.3**
	baz=215						
SSLB	**Suanglung**	**1.79**	**223**	*e*Pn	**Pn**	**11 56 06.7**	**+1.2**
EHY	**Hungye**	**1.83**	**209**	*e*P	**Pn**	**11 56 06.8**	**+0.8**
WNT	**Mingjian**	**1.91**	**230**	*e*P	**Pn**	**11 56 10.4**	**+3.2**
YULB	**Yu-li**	**1.94**	**208**	*e*Pn	**Pn**	**11 56 08.4**	**+0.9**
TWF1	**Yuli**	**1.97**	**207**	*e*P	**Pn**	**11 56 07.3**	**-0.8**
YUS	**Yu-Shan**	**2.02**	**217**	*e*P	**Pn**	**11 56 10.1**	**+1.4**
ALS	**Alishan**	**2.09**	**220**	*e*P	**Pn**	**11 56 11.6**	**+2.0**
CHN5	**Tsauling**	**2.10**	**224**	⇓P	**Pn**	**11 56 11.1**	**+1.3**
WGK	**Gukeng**	**2.12**	**228**	*e*P	**Pn**	**11 56 11.7**	**+1.6**
ELDTW	**Lidau**	**2.24**	**211**	*e*P	**Pn**	**11 56 12.0**	**+0.3**
CHY	**Chiayi**	**2.34**	**227**	*e*P	**Pn**	**11 56 16.8**	**+3.7**
TPUB	**Ta-pu**	**2.35**	**220**	*e*Pn	**Pn**	**11 56 14.6**	**+1.3**
WTP	**Ta-pu**	**2.41**	**220**	*e*P	**Pn**	**11 56 15.9**	**+1.9**
CHN1	**Nanshi**	**2.50**	**220**	⇓P	**Pn**	**11 56 16.8**	**+1.5**
TWG	**Pinlang**	**2.54**	**206**	*e*Pn	**Pn**	**11 56 16.0**	**+0.2**
TWG	**Pinlang**	**2.54**	**206**	*e*P	**Pn**	**11 56 15.8**	**0.0**
SGST	**Jiashian**	**2.55**	**218**	*e*P	**Pn**	**11 56 18.1**	**+2.1**
CHN3	**Shinhua**	**2.68**	**221**	*e*P	**Pn**	**11 56 21.6**	**+3.8**
SCLT	**Jiali**	**2.72**	**225**	*e*P	**Pn**	**11 56 21.1**	**+2.9**
TWM1	**Shoushan**	**2.85**	**217**	*e*P	**Pn**	**11 56 23.3**	**+3.2**
EAST	**Anshuo**	**3.02**	**206**	*e*P	**Pn**	**11 56 24.5**	**+2.1**
SCZT	**Fangliau**	**3.13**	**209**	*e*P	**Pn**	**11 56 26.6**	**+2.7**
TWP	**Hsiaoliuchiu**	**3.27**	**213**	*e*P	**Pn**	**11 56 30.4**	**+4.6**
QZH	**Quanzhou**	**3.35**	**268**	Pn	**Pn**	**11 56 25.0**	**-2.0**
QZH				Sn	**Sn**	**11 57 02.0**	**-4.4**
QZH				smax			
	comp=N,3μm,0.8s						
QZH				smax			
	comp=E,2μm,0.8s						
QZH				LR	LR		
	comp=N,7μm,8.6s						
QZH				LR	LR		
	comp=E,9μm,10.6s						
QZH				LR	LR		
	comp=Z,10μm,11.0s						
TWK1	**Hengchun**	**3.44**	**204**	*e*P	**Pn**	**11 56 29.8**	**+1.6**
KNM	**Kinmen**	**3.57**	**260**	*e*P	**Pn**	**11 56 30.3**	**+0.3**
JOW	**Kunigami**	**5.66**	**71**	*e*Pn	**Pn**	**11 56 59.1**	**+0.4**
SSE	**Sheshan**	**6.03**	**351**	*e*Pn	**Pn**	**11 57 06.5**	**+2.6**
SSE				Sn	**Sn**	**11 58 10.8**	**-1.7**
SSE				smax			
	comp=N,690nm,1.0s						
SSE				smax			
	comp=E,1μm,1.2s						
SSE				LR	LR		
	comp=N,4μm,11.6s						
SSE				LR	LR		
	comp=E,2μm,11.7s						
SSE				LR	LR		
	comp=Z,3μm,11.0s						
NJ2	**Nanjing**	**7.54**	**337**	*e*Pn	**Pn**	**11 57 26.5**	**+2.0**
NJ2				Sn	**Sn**	**11 58 52.9**	**+3.4**
NJ2				smax			
	comp=N,910nm,0.5s						
NJ2				smax			
	comp=E,2μm,1.1s						
NJ2				LR	LR		
	comp=N,2μm,6.3s						
NJ2				LR	LR		
	comp=E,2μm,5.9s						
GZH	**Guangzhou**	**8.41**	**258**	P	**Pn**	**11 57 29.3**	**-7.2**
GZH				S	**Sn**	**11 58 53.5**	**-18**
GZH				LR	LR		
	comp=N,2μm,10.5s						
GZH				LR	LR		
	comp=E,3μm,10.2s						

GZH LR LR
comp=Z,5μm,10.7s
WHN Wuhan 8.86 309 P Pn 11 57 55.8 +13
WHN S **Sn 11 59 19.6 -2.5**
WHN LR LR
comp=N,8μm,9.4s
WHN LR LR
comp=E,9μm,9.5s
WHN LR LR
comp=Z,12μm,9.3s
JNU Nakatsue 10.95 41 *e*Pn **Pn 11 58 13.6 +2.3**
QIZ Qiongzhong 13.02 245 P **Pn 11 58 40.1 +0.4**
QIZ S **Sn 12 01 06.7 +2.5**
QIZ pmax pmax
comp=Z,15nm,1.9s
QIZ LR LR
comp=N,2μm,13.2s
QIZ LR LR
comp=Z,1μm,15.4s
KSRS Korea Array 13.21 20 Pn **Pn 11 58 44.9 +2.7**
comp=Z,1.0nm,0.3s,baz=206,slow=14,SNR=14
KSRS Korea Array 13.21 20 P **Pn 11 58 44.9 +2.8**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
GYA Guiyang 14.13 279 *e*P **Pn 11 59 00.1 +5.2**
BJI Beijing 15.74 342 P **Pn 11 59 16.9 +0.7**
BJI S **Sn 12 02 04.8 -5.4**
BJI LR LR
comp=N,3μm,15.6s
BJI LR LR
comp=E,3μm,17.2s
BJI LR LR
comp=Z,2μm,18.7s
CD2 Chengdu 17.34 294 *e*P **Pn 11 59 36.1 -0.5**
CD2 pP pP 11 59 43.9 +1.1
CD2 sP sP 11 59 48.5 +3.5
CD2 PP 11 59 50.9
CD2 S **Sn 12 02 44.7 -4.5**
CD2 sS sS 12 02 57.1 -8.3
CD2 SS 12 03 06.2
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,120nm,4.2s
CD2 LR LR
comp=N,3μm,11.8s
CD2 LR LR
comp=E,2μm,11.8s
CD2 LR LR
comp=Z,2μm,10.8s
KMI Kunming 17.70 274 P **Pn 11 59 43.9 +2.8**
KMI pP pP 11 59 50.8 +4.0
KMI sP sP 11 59 56.3 +7.3
KMI PP 11 59 58.1
KMI S **Sn 12 02 54.7 -3.3**
KMI sS sS 12 03 10.3 -2.5
KMI SS 12 03 18.8
KMI pmax pmax
comp=Z,10.0nm,1.1s
KMI LR LR
comp=N,2μm,12.7s
KMI LR LR
comp=E,2μm,11.3s
KMI LR LR
comp=Z,1μm,14.8s
MAT Matsushiro 17.77 46 P **Pn 11 59 42.9 +1.0**
MJAR Matsushiro Arr 17.77 46 P **Pn 11 59 41.8 -0.1**
comp=Z,0.1nm,0.3s,baz=241,slow=12,SNR=13
HHC Hu-ho-hao-te 18.06 333 *e*P **Pn 11 59 47.5 +2.1**
HHC pP pP 11 59 55.5 +4.9
HHC sP sP 12 00 00.2 +7.3
HHC PP 12 00 02.9
HHC S **Sn 12 03 05.6 -0.9**
HHC PcP PcP 12 04 19.9 +0.4
HHC pmax pmax
comp=Z,15nm,1.0s
HHC pmax pmax
comp=Z,1μm,6.0s
HHC LR LR
comp=N,3μm,10.4s
HHC LR LR
comp=E,1μm,10.4s
HHC LR LR
comp=Z,2μm,12.0s
CN2 Changchun 18.82 7 *e*P **Pn 11 59 59.6 +4.9**
CN2 *e*S **Sn 12 03 26.2 +1.4**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 LR LR
comp=N,2μm,17.0s
CN2 LR LR
comp=E,3μm,17.0s
CN2 LR LR
comp=Z,3μm,17.0s
LZH Lanzhou 19.24 309 *e*P **Pn 12 00 03.4 +3.6**
LZH pP pP 12 00 12.0 +8.3
LZH sP sP 12 00 16.5 +11
LZH pmax pmax
comp=Z,42nm,1.6s
LZH pmax pmax
comp=Z,230nm,7.6s
LZH LR LR
comp=N,2μm,11.7s
LZH LR LR
comp=E,3μm,10.8s
LZH LR LR
comp=Z,3μm,13.8s
MDJ Mudanjiang 20.34 15 P **P 12 00 11.9 +1.2**
MDJ pP 12 00 20.1
MDJ sP sP 12 00 24.1 +6.3
MDJ S **S 12 03 58.9 +0.9**
MDJ ScP ScP 12 07 57.8 -1.4
MDJ PcS PcS 12 08 01.5 +0.6
MDJ ScS ScS 12 11 40.8 -1.1
MDJ pmax pmax
comp=Z,24nm,1.2s
MDJ pmax pmax
comp=Z,490nm,8.8s
MDJ LR LR
comp=N,2μm,18.8s,MS4.7
MDJ LR LR
comp=E,2μm,16.9s,MS4.7
MDJ LR LR
comp=Z,2μm,17.5s,MS4.4
CHG Chiang Mai 22.52 258 ⇑P **P 12 00 35.7 +1.3**
comp=Z,14nm,1.0s,mb4.3
CHTO Chiang Mai 22.52 258 *e*P **P 12 00 35.9 +1.5**
CHTO pmax pmax
comp=Z,20nm,1.3s,mb4.4
CHTO Chiang Mai 22.52 258 *e*P **P 12 00 35.9 +1.5**
comp=Z,20nm,1.3s,mb4.4
CMAR Chiang Mai Arr 22.64 258 P **P 12 00 37.5 +1.7**
comp=Z,2.7nm,0.8s,mb3.7,baz=60,slow=8.1,SNR=18
CMAR PcP PcP 12 04 28.1 -0.4
comp=Z,1.4nm,0.8s,baz=337,slow=1.3,SNR=6.3
GTA Gaotai 23.66 312 *e*P **P 12 00 46.4 +0.3**
GTA pP 12 00 55.6
GTA sP sP 12 00 59.6 +6.2
GTA S **S 12 04 57.5 -2.4**
GTA sS sS 12 05 03.9 -4.5
GTA SS 12 05 44.7
GTA pmax pmax
comp=Z,11nm,1.9s,mb4.0
GTA pmax pmax
comp=Z,440nm,6.9s
GTA LR LR
comp=N,2μm,13.5s,MS4.8
GTA LR LR
comp=E,2μm,13.3s,MS4.8
GTA LR LR
comp=Z,2μm,10.9s,MS4.9
GUMO Guam 24.16 114 P **P 12 00 50.9 +0.1**
comp=Z,98nm,1.1s,mb5.1,baz=203,slow=4.8,SNR=3.8
GUMO Guam 24.16 114 P **P 12 00 50.9 +0.1**
GUMO pmax pmax
comp=Z,98nm,1.1s,mb5.2
ASAJ Asahikawa 25.16 36 P **P 12 00 58.9 -0.7**
comp=Z,9.4nm,0.8s,mb4.4,baz=52,slow=1.7,SNR=8.3
ASAJ Asahikawa 25.16 36 P **P 12 00 58.9 -0.7**
ASAJ pmax pmax
comp=Z,9.0nm,0.8s
KLR Kul'dur 25.18 15 *e*P **P 12 00 56.2 -3.6**
SONM Songino Array 25.92 335 P **P 12 01 06.6 +0.1**
comp=Z,3.8nm,0.9s,mb3.9,baz=148,slow=9.4,SNR=23
SONM Songino Array 25.92 335 P **P 12 01 06.7 +0.1**
SONM pmax pmax
comp=Z,4.0nm,0.9s
YSS Yuzh-Sakhalins 27.21 32⇓*e*P **P 12 01 21.0 +2.8**
YSS pmax pmax
comp=N,40nm,1.0s
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.1
YSS Yuzh-Sakhalins 27.21 32 *e*P **P 12 01 21.2 +3.0**
comp=Z,115nm,1.3s,mb5.2
SHL Shillong 27.45 278 *e*PKP **P 12 01 21.0 +0.4**
ZAK Zakamensk 29.19 335 *e*P **P 12 01 35.6 -0.2**
WMQ Urumqi 33.75 312 *e*P **P 12 02 18.0 +2.0**
WMQ pP pP 12 02 28.0 +6.7
WMQ sP sP 12 02 32.0 +8.6
WMQ PP PP 12 03 32.0 -0.4
WMQ S **S 12 07 39.0 +0.2**
WMQ SS SS 12 09 45.0 -20
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.9
WMQ LR LR
comp=N,2μm,15.0s,MS4.9
WMQ LR LR
comp=E,890nm,15.0s,MS4.9
WMQ LR LR
comp=Z,790nm,15.0s,MS4.6
MK31 Makanchi Array 38.38 315 *e*P **P 12 02 55.4 -0.2**
MKAR Makanchi Array 38.38 315 P **P 12 02 55.2 -0.4**
comp=Z,9.1nm,1.1s,mb4.4,baz=104,slow=10,SNR=28
MKAR Makanchi Array 38.38 315 P **P 12 02 55.2 -0.4**
MKAR pmax pmax
comp=Z,9.0nm,1.1s
MKAR Makanchi Array 38.38 315 P **P 12 02 55.2 -0.4**
ZALV Zalesovo Beam 40.02 326 P **P 12 03 08.1 -1.1**
comp=Z,8.1nm,1.1s,mb4.4,baz=111,slow=8.1,SNR=19
ZALV Zalesovo Beam 40.02 326 P **P 12 03 08.1 -1.1**
ZALV pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
KNA Kununurra 41.11 170⇑*i*P **P 12 03 17.3 -1.2**
comp=Z,31nm,1.1s,mb4.9
KSH Kashi 41.24 302 *e*P **P 12 03 12.2 -7.3**
KSH *e*pP pP 12 03 22.0 -2.9
KSH *e*sP sP 12 03 26.0 -1.0
KSH *e*PP PP 12 04 49.0 -5.8
KSH *e*PcP PcP 12 05 17.6 -0.7
KSH *e*ScP ScP 12 09 02.7 -4.8
KSH *e*PcS PcS 12 09 06.7 -2.6
KSH *e*S **S 12 09 15.2 -17**
KSH *e*sS sS 12 09 31.6 -10
KSH *e*SS SS 12 12 07.0 -29
KSH pmax pmax
comp=Z,4.0nm,0.3s,mb4.5
KSH pmax pmax
comp=Z,1μm,11.6s
KSH LR LR
comp=N,1μm,11.9s,MS5.1
KSH LR LR
comp=E,1μm,14.4s,MS5.1
KSH LR LR
comp=Z,1μm,16.8s,MS4.9
NVS Novosibirsk 41.27 326 *e*P **P 12 03 17.9 -1.6**
NVS pmax pmax
comp=Z,12nm,2.0s,mb4.2
NVS pmax pmax
comp=E,9.0nm,1.7s
ULHL Ulahol 41.41 306 P **P 12 03 22.5 +1.6**
SNR=11
TKM2 Tokmak 2 41.99 307 P **P 12 03 26.8 +1.2**
SNR=16
TKM2 Tokmak 2 41.99 307 *e*P **P 12 03 26.8 +1.2**
TKM2 pmax pmax
comp=Z,24nm,0.9s,mb4.8
TKM2 Tokmak 2 41.99 307 *e*P **P 12 03 26.8 +1.2**
comp=Z,24nm,0.9s,mb4.8
KURK Kurchatov 42.03 319*de*P **P 12 03 24.9 -0.9**
KURK pmax pmax
comp=Z,27nm,1.7s,mb4.6
KURK Kurchatov 42.03 319 *e*P **P 12 03 25.2 -0.6**
comp=Z,44nm,1.7s,mb4.8
KZA Kyzart 42.11 306 P **P 12 03 29.0 +2.4**
SNR=8.7
KZA Kyzart 42.11 306 *e*P **P 12 03 27.7 +1.1**
comp=Z,31nm,1.3s,mb4.8
KBK Karagaybulak 42.42 306 P **P 12 03 30.5 +1.4**
SNR=5.5
KBK Karagaybulak 42.42 306 *e*P **P 12 03 29.0 -0.1**
comp=Z,15nm,0.9s,mb4.6
CHMS Chumysh 42.62 307 P **P 12 03 31.9 +1.2**
SNR=5.5
FRU Bishkek 42.69 307⇓*i*P **P 12 03 32.0 +0.7**
AAK Ala-Archa 42.75 306 P **P 12 03 32.0 +0.2**
comp=Z,2.6nm,0.8s,mb4.0,baz=108,slow=7.5,SNR=5.4
AAK Ala-Archa 42.75 306 *e*P **P 12 03 32.7 +0.9**
AAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
AAK Ala-Archa 42.75 306 *e*P **P 12 03 32.6 +0.9**
comp=Z,9.2nm,1.0s,mb4.5
SEY Seymchan 42.76 20⇓*e*P **P 12 03 31.3 -0.3**
AML Almayashu 43.27 306 P **P 12 03 38.1 +2.1**
SNR=6.0
EKS2 Erkin-Say 43.27 306 *e*P **P 12 03 36.9 +0.8**
comp=Z,7.8nm,1.1s,mb4.3
COEN Coen 43.86 150 *e*P **P 12 03 40.3 -0.6**
WRA Warramunga Arr 46.30 164 P **P 12 03 59.5 -0.8**
comp=Z,22nm,0.8s,mb5.1,baz=346,slow=8.5,SNR=134
WRA pP pP 12 04 04.3 -1.3
comp=Z,27nm,0.6s,baz=347,slow=8.7,SNR=31
WB2 Warramunga Arr 46.30 164 *e*P **P 12 03 59.5 -0.8**
KBL Kabul 46.68 295 *e*P **P 12 04 03.9 +0.7**
KBL pmax pmax
comp=Z,14nm,1.0s,mb4.8
KBL Kabul 46.68 295 *e*P **P 12 04 03.9 +0.7**
comp=Z,14nm,1.0s,mb4.9
BVAR Borovoye Array 47.60 320 P **P 12 04 10.1 -0.1**
comp=Z,5.5nm,0.9s,mb4.6,baz=110,slow=13,SNR=14
BVAR Borovoye Array 47.60 320 P **P 12 04 10.1 0.0**
BVAR pmax pmax
comp=Z,6.0nm,0.9s
BRVK Borovoye 47.67 320*ce*P **P 12 04 09.9 -0.8**
BRVK pmax pmax
comp=Z,29nm,1.2s,mb5.2
BRVK Borovoye 47.67 320 *e*P **P 12 04 10.2 -0.5**
comp=Z,21nm,1.0s,mb5.1
ASAR Alice Springs 49.78 166 P **P 12 04 26.9 -0.4**
comp=Z,8.5nm,0.9s,mb4.8,baz=344,slow=6.6,SNR=68
ASAR pP pP 12 04 32.1 -0.5
comp=Z,8.6nm,0.8s,baz=346,slow=8.8,SNR=27
ASAR PcP PcP 12 05 46.5 -1.5
comp=Z,3.2nm,1.0s,baz=358,slow=3.3,SNR=6.1
ASAR Alice Springs 49.78 166 P **P 12 04 26.9 -0.3**
ASAR *PP pP 12 04 32.2 -0.4
ASAR 12 05 46.5
ASAR pmax pmax
comp=Z,9.0nm,0.9s
ABKAR Akbulak array 53.51 314 *e*P **P 12 04 54.5 -0.4**
SVE Sverdlovsk 53.89 323⇓*e*P **P 12 04 57.5 0.0**
SVE pmax pmax
comp=Z,20nm,1.1s,mb5.0
AKTK Aktyubinsk 54.81 315 P **P 12 05 03.5 -0.8**
AKTO Aktyubinsk 54.81 315 P **P 12 05 03.5 -0.8**
comp=Z,1.0nm,0.5s,mb4.1,baz=85,slow=6.7,SNR=5.5
AKTO Aktyubinsk 54.81 315 P **P 12 05 03.5 -0.8**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
ARU Arti 54.97 323*d i*P **P 12 05 04.4 -1.0**
ARU 12 07 02.9
ARU S **S 12 12 43.2 -3.2**
ARU SS SS 12 16 22.0 -7.7
ARU pmax pmax
comp=Z,14nm,1.2s,mb4.9
ARU Arti 54.97 323 *e*P **P 12 05 03.6 -1.8**
comp=Z,12nm,1.1s,mb4.8
FORT Forrest 55.85 174 *e*P **P 12 05 11.0 -0.9**
comp=Z,12nm,0.6s,mb5.1
BBOO Buckleboo 59.08 166 *e*P **P 12 05 33.6 -1.1**
comp=Z,10nm,0.7s,mb5.0
BBOO Buckleboo 59.08 166 *e*P **P 12 05 32.9 -1.8**
comp=Z,39nm,0.8s,mb5.5
STKA Stephens Creek 59.60 161 P **P 12 05 37.2 -1.1**
comp=Z,2.4nm,0.9s,mb4.2,baz=333,slow=6.7,SNR=5.0
STKA pP pP 12 05 42.6 -1.2
comp=Z,1.7nm,0.5s,baz=357,slow=6.6,SNR=4.1
CMSA Cobar Meteorol 60.62 157 *e*P **P 12 05 44.8 -0.5**
KLMR Klimovskoe 64.91 328 *e*P **P 12 06 11.4 -2.2**
KLMR pmax pmax
comp=Z,37nm,1.4s,mb5.2
GNI Garni 65.10 304*ce*P **P 12 06 16.7 +1.5**
GNI pmax pmax
comp=Z,20nm,1.2s
VRHR Novokhopersk 65.14 317 *e*P **P 12 06 13.7 -1.5**
VRHR pmax pmax
comp=N,10.0nm,1.2s
VRHR pmax pmax
comp=Z,30nm,1.2s,mb5.2
VRHR pmax pmax
comp=E,10.0nm,0.6s
ZEI Tsey 65.16 307 *e*P **P 12 06 14.5 -1.1**
ZEI pmax pmax
comp=Z,25nm,1.3s,mb5.1
GOF Gofitskoye 65.31 310 *e*P **P 12 06 18.7 +2.2**
KIV Kislovodsk 65.78 309*d i*P **P 12 06 20.0 +0.5**
KIV *e* 12 08 43.7
KIV pmax pmax
comp=Z,48nm,1.2s,mb5.4
TOO Toolangi 66.06 160 *e*P **P 12 06 20.3 -0.9**
LVZ Lovozero 66.11 336⇓*e*P **P 12 06 19.6 -1.7**
LVZ pmax pmax
comp=Z,15nm,1.7s,mb4.8
VOR Voronezh 66.52 318 *e*P **P 12 06 23.0 -1.1**
VOR pmax pmax
comp=Z,750nm,1.6s
VORD Divnogorie 66.61 317 *e*P **P 12 06 23.6 -1.1**
VORD pmax pmax
comp=E,50nm,1.1s
VORD pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
VORD pmax pmax
comp=N,7.0nm,0.6s
VSR Storozhevoye 66.64 317 *e*P **P 12 06 24.3 -0.6**
VSR pmax pmax
comp=E,20nm,1.0s
VSR pmax pmax
comp=Z,20nm,1.0s,mb5.1
VSR pmax pmax
comp=N,3.0nm,0.3s
MOS Moscow 66.68 322 *e*P **P 12 06 22.9 -2.2**
MOS pmax pmax
comp=Z,83nm,1.6s,mb5.5
OBN Obninsk 67.39 322 *e*P **P 12 06 28.8 -0.8**
OBN pmax pmax
comp=Z,30nm,1.2s,mb5.2
ILAR Eielson Array 67.93 28 P **P 12 06 31.3 -1.5**
comp=Z,1.1nm,0.8s,mb3.9,baz=290,slow=8.8,SNR=12
ILAR Eielson Array 67.93 28 P **P 12 06 31.3 -1.5**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
JOF Joensuu 68.39 331 *e*P **P 12 06 35.0 -0.8**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
JOF Joensuu 68.39 331 *ep* **P 12 06 35.0 -0.8**
comp=Z,0.7nm,0.4s,mb4.0
KEV Kevo 68.49 338 *e*P **P 12 06 28.2 -8.1**
KEV Kevo 68.49 338 *ep* **P 12 06 28.2 -8.1**
comp=Z,0.0nm,0.3s
ARCES ARCESS Array B 69.05 338 P **P 12 06 39.3 -0.5**
comp=Z,8.5nm,1.1s,mb4.6,baz=77,slow=5.4,SNR=14
ARCES ARCESS Array B 69.05 338 P **P 12 06 39.3 -0.5**
ARCES pmax pmax
comp=Z,9.0nm,1.1s
ANN Anapa 69.25 311 *e*P **P 12 06 40.4 -1.0**
ANN *e*S S 12 15 42.9 -4.0
ANN pmax pmax
comp=Z,69nm,1.3s,mb5.4
EGAK Eagle 70.30 27 *e*P **P 12 06 47.2 -0.4**
comp=Z,16nm,1.4s,mb4.8
MALT Malatya 70.31 304 *e*P **P 12 06 48.9 +0.8**
MALT pmax pmax
comp=Z,16nm,1.1s,mb4.9
MALT Malatya 70.31 304 *e*P **P 12 06 48.9 +0.8**
comp=Z,16nm,1.1s,mb4.9
FINES FINESS Array B 71.15 330 P **P 12 06 52.4 -0.4**
comp=Z,14nm,1.0s,mb4.8,baz=80,slow=11,SNR=13
FINES pP pP 12 06 57.5 -0.8
comp=Z,2.6nm,0.5s,baz=56,slow=4.0,SNR=2.8
FINES FINESS Array B 71.15 330 P **P 12 06 52.4 -0.4**
FINES *PP pP 12 06 57.5 -0.9
FINES pmax pmax
comp=Z,14nm,1.0s
DAWY Dawson 71.25 27 *e*P **P 12 06 53.3 0.0**
VSU Vasula 71.76 327*de*P **P 12 06 55.5 -1.0**
VSU pmax pmax
comp=Z,36nm,1.0s,mb5.3
INK Inuvik 71.99 22 P **P 12 06 57.2 -0.5**
baz=304,slow=3.3
INK Inuvik 71.99 22 P **P 12 06 57.2 -0.5**
IDID Didziasalis 72.77 323 *e*P **P 12 07 02.7 +0.1**
IDID AMB AMB 12 07 03.4
comp=Z,13nm,1.0s,mb4.8
KIEV Kiev 72.85 318 *e*P **P 12 07 01.7 -1.5**
KIEV pmax pmax
comp=Z,12nm,0.9s,mb4.8
KIEV Kiev 72.85 318 *e*P **P 12 07 01.7 -1.5**
comp=Z,12nm,0.9s,mb4.8
ISAL Salakas 73.01 324 *e*P **P 12 07 04.1 +0.1**
ISAL AMB AMB 12 07 04.9
comp=Z,7.8nm,1.2s,mb4.5
IIGN Ignalina 73.03 324 *e*P **P 12 07 04.3 +0.1**
IIGN AMB AMB 12 07 05.0
comp=Z,6.0nm,1.2s,mb4.4
BR131 Keskin Array S 73.42 306 *e*P **P 12 07 06.5 -0.3**
comp=Z,12nm,1.1s,mb4.7
BRTR Keskin Array B 73.42 306 P **P 12 07 06.8 0.0**
comp=Z,8.7nm,1.0s,mb4.6,baz=104,slow=5.2,SNR=21
BRTR Keskin Array B 73.42 306 *i* P **P 12 07 06.8 0.0**
BRTR pmax pmax
comp=Z,9.0nm,1.0s
TESR 75.89 315⇑*i*P **P 12 07 20.8 -0.2**
VRI Vrincioaia 76.07 314⇓P **P 12 07 22.9 +0.9**
VRI Vrincioaia 76.07 314⇓*i*P **P 12 07 22.9 +0.9**
BUR08 Bucovina Ar. S 76.38 316 *e*P **P 12 07 23.3 -0.4**
BURAR Bucovina Array 76.39 316 ⇓P **P 12 07 23.7 -0.1**
BURAR Bucovina Array 76.39 316⇓*i*P **P 12 07 23.7 -0.1**
MLR Muntele Rosu 76.72 314 ⇓P **P 12 07 24.9 -0.8**
MLR Muntele Rosu 76.72 314⇓*i*P **P 12 07 24.9 -0.8**
KOLS Kolonicke sedl 77.68 318 *e*P **P 12 07 30.7 -0.3**
KOLS Kolonicke sedl 77.68 318 *e*P **P 12 07 30.7 -0.3**
NB2 NORSAR Subarra 77.87 332 P **P 12 07 30.7 -1.1**
comp=Z,21nm,1.0s,mb5.0,baz=57,slow=5.6
NB2 NORSAR Subarra 77.87 332 P P **12 07 30.7 -1.1**
NB2 NORSAR Subarra 77.87 332 P P **12 07 30.7 -1.1**
NOA NORSAR Array B 77.87 332 P **P 12 07 31.1 -0.8**
comp=Z,9.3nm,0.9s,mb4.7,baz=58,slow=5.6,SNR=14
NOA pP pP 12 07 36.5 -0.9
comp=Z,5.1nm,0.8s,baz=57,slow=5.7,SNR=6.5
NOA NORSAR Array B 77.87 332 P **P 12 07 31.1 -0.7**
NOA *PP pP 12 07 36.5 -1.0
NOA pmax pmax
comp=Z,9.0nm,0.9s
CRVS Cervenica-Dubn 78.18 319 *e*P **P 12 07 33.2 -0.6**
CRVS pmax pmax
comp=Z,31nm,2.7s,mb4.8
CRVS Cervenica-Dubn 78.18 319 *e*P **P 12 07 33.2 -0.6**
comp=Z,31nm,2.7s,mb4.8
CRVS Cervenica-Dubn 78.18 319 *e*P **P 12 07 33.1 -0.7**
DRGR 78.28 316 ⇓P **P 12 07 34.4 0.0**
DRGR 78.28 316⇓*i*P **P 12 07 34.4 0.0**
OJC Ojcow 78.60 320 *e*P **P 12 07 36.2 +0.1**
OJC Ojcow 78.60 320 *e*P **P 12 07 36.3 +0.2**
OJC pmax pmax
comp=Z,25nm,1.3s,mb5.0
OJC Ojcow 78.60 320 *e*P **P 12 07 36.3 +0.2**
comp=Z,25nm,1.3s,mb5.0
NIE Niedzica 78.64 319 *e*P **P 12 07 37.1 +0.8**
KECS Kecovo 78.94 318 *e*P **P 12 07 37.8 -0.2**
KECS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
KECS Kecovo 78.94 318 *e*P **P 12 07 37.8 -0.2**
comp=Z,4.2nm,1.3s,mb4.2
KECS Kecovo 78.94 318 *e*P **P 12 07 37.8 -0.2**
VYHS Vyhne 79.92 319 *e*P **P 12 07 43.6 +0.2**
VYHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
VYHS Vyhne 79.92 319 *e*P **P 12 07 43.6 +0.2**
comp=Z,4.9nm,1.0s,mb4.4
VYHS Vyhne 79.92 319 *e*P **P 12 07 43.6 +0.2**
YKA Yellowknife Ar 81.72 23 P **P 12 07 52.4 -0.3**
comp=Z,3.8nm,0.8s,mb4.4,baz=313,slow=5.1,SNR=9.3
YKA Yellowknife Ar 81.72 23 P **P 12 07 52.4 -0.3**
YKA pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 81.91 323 *e*P **P 12 07 54.0 +0.1**
CLL Collm 81.91 323 *e*P **P 12 07 54.0 +0.1**

KMBO	**Kilima Mbogo**	**85.97**	**267**	P	**P**	**12 08 15.2**	**-0.1**
	comp=Z,1.2nm,0.7s,mb4.2,baz=359,slow=24,SNR=4.5						
KMBO	**Kilima Mbogo**	**85.97**	**267**	P	**P**	**12 08 15.2**	**-0.1**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EDM	**Edmonton**	**88.31**	**30**	*e*P	**P**	**12 08 25.8**	**-0.1**
HLID	**Hailey**	**94.13**	**38**	*e*P	**P**	**12 08 53.0**	**-0.2**
	comp=Z,4.0nm,1.3s,mb4.7						
NVAR	**Mina Array Bea**	**95.07**	**43**	P	**P**	**12 08 58.4**	**+0.8**
	comp=Z,0.8nm,0.8s,mb4.2,baz=308,slow=5.1,SNR=6.9						

ISCJB ***10*** *12:00:20.2±1.1,26.°90N±0.°07×56.°08E±0.°08,h10km, Error ellipse: s-maj=12.2km s-min=5.7km az=43.6*
CSEM ***10*** *12:00:21.3±1.5,26.°93N×56.°06E,h2km,ML3.2, Error ellipse: s-maj=73.1km s-min=15.1km az=120.0*
SGS ***10*** *12:00:24.8,26.°94N×55.°94E,h12km*
TEH ***10*** *12:00:26.8,27.°13N×56.°19E,h18km*

ISC 10 12:00:22.1±1.3,26.°97N±0.°06×56.°1E±0.°1,h6km±11km,n13, σ1§36/19,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.44**	**12**	*e*Pg	**Pg**	**12 00 29.8**	**-0.8**
BNDS				*e*Sg	**Sg**	**12 00 36.2**	**-0.1**
IBND	**Bandar-abas**	**0.63**	**41**	*e*Pg	**Pg**	**12 00 35.3**	**+1.0**
IBND				*e*Pg	**Pg**	**12 00 35.6**	**+1.3**
IBND				*e*Sg	**Sg**	**12 00 41.2**	**-1.4**
IBND				*e*		12 00 58.4	
	comp=Z,37μm,0.1s						
IBND				*e*		12 00 58.8	
	comp=Z,46μm,0.1s						
KRBR	**Kerman**	**3.06**	**11**	*e*Pn	**Pn**	**12 01 12.6**	**+1.5**
ISRV	**Sarvestan**	**3.55**	**313**	*e*Pn	**Pn**	**12 01 20.3**	**+2.5**
ISRV				*e*Sn	**Sn**	**12 02 00.3**	**+0.2**
ISRV				*e*		12 02 57.9	
	comp=Z,869nm,0.5s						
IPAR	**Pars**	**3.91**	**318**	*e*Pn	**Pn**	**12 01 25.1**	**+2.4**
IMEH	**Mehriz**	**4.59**	**344**	*e*Pn	**Pn**	**12 01 33.4**	**+1.4**
IMEH				*e*		12 01 37.5	
	comp=Z,262nm,0.2s						
IMEH				*e*Sn	**Sn**	**12 02 21.7**	**-4.0**
IBAF	**Bafgh**	**4.62**	**355**	*e*Pn	**Pn**	**12 01 33.4**	**+0.8**
IBAF				*e*		12 02 13.9	
	comp=Z,201nm,0.3s						
IBAF				*e*Sn	**Sn**	**12 02 23.7**	**-2.9**
BTHS		**5.55**	**239**	P	**Pn**	**12 01 44.1**	**-1.2**
BTHS		**5.55**	**239**	P	**Pn**	**12 01 44.1**	**-1.2**
NASN	**Na'in**	**6.46**	**335**	*e*Pn	**Pn**	**12 01 58.7**	**+0.9**
HRDDS		**7.22**	**238**	P	**Pn**	**12 02 07.3**	**-1.0**
NAY	**Al-Naaiem**	**8.12**	**288**	*e*P	**Pn**	**12 02 19.0**	**-1.6**
MIB	**Mutribah**	**8.19**	**292**	*e*P	**Pn**	**12 02 21.1**	**-0.5**

MOS 10 12:01:34.6±1.3,52.°29N×98.°23E,h11km,mb4.3/1,1C-1D, Error ellipse: s-maj=36.4km s-min=24.2km az=2.6, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.00**	**75**	⇑*i*PG	Pg	12 01 53.6	-0.2
ORL				*e*		12 02 11.5	
ORL				pmax	pmax		
	comp=Z,27nm,0.3s						
ORL				smax			
	comp=N,287nm,0.5s						
ARS	**Arshan**	**2.62**	**97**	*e*PN	Pn	12 02 14.7	-2.0
ARS				*e*		12 02 54.4	
ARS				pmax	pmax		
	comp=Z,34nm,0.3s						
ARS				smax			
	comp=E,509nm,0.5s						
ORY	**Orie**	**3.29**	**327**	⇓*e*PN	Pn	12 02 27.6	+1.6
ORY				*e*		12 02 37.7	
ORY				*e*		12 03 16.1	
ORY						12 03 26.4	
TLY	**Talaya**	**3.41**	**98**	*e*PN	Pn	12 02 29.9	+2.3
TLY				*e*		12 03 16.9	
TLY				pmax	pmax		
	comp=Z,14nm,0.4s						
TLY				smax			
	comp=N,89nm,0.9s						
IRK	**Irkutsk**	**3.71**	**88**	*e*PN	Pn	12 02 37.8	+6.0
IRK				*e*		12 03 26.6	
IRK				pmax	pmax		
	comp=Z,64nm,0.2s						
IRK				smax			
	comp=N,228nm,0.5s						
OGRR	**Ongureny**	**5.82**	**73**	*e*PN	Pn	12 03 01.7	+1.0
OGRR				*e*		12 03 19.8	
OGRR				pmax	pmax		
	comp=Z,4.0nm,0.5s						

DJA 10 12:03:56,1.°03N×122.°36E,h163km,MLv3.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.69**	**217**	P	Pn	12 04 21.0	+1.1
APSI	**Ampana**	**2.06**	**200**	P	Pn	12 04 33.1	+0.5
LUWI	**Luwuk**	**2.10**	**169**	P	Pn	12 04 32.7	-0.4
MNI	**Manado**	**2.51**	**81**	P	Pn	12 04 38.6	+0.7
PCI	**Palu**	**3.17**	**233**	P	Pn	12 04 46.5	+0.4
NBBI	**Negara**	**12.11**	**219**	P	Pn	12 06 43.2	-0.3

ISCJB ***10*** *12:04:36.0±1.6,27.°0N±0.°1×55.°68E±0.°09,h5km±15km, Error ellipse: s-maj=22.3km s-min=10.7km az=154.6*
KISR ***10*** *12:04:37.6±0.7,26.°83N×55.°29E,h4km±999km,ML3.9*
SGS ***10*** *12:04:39.4,26.°94N×55.°73E,h15km*
CSEM ***10*** *12:04:39.3±0.6,27.°19N×55.°77E,h5km,ML3.9, Error ellipse: s-maj=20.5km s-min=4.5km az=172.0*
TEH ***10*** *12:04:48.3,27.°61N×55.°97E,h5km*

ISC 10 12:04:38.5±1.6,27.°1N±0.°1×55.°73E±0.°09,h2km±16km,n17, σ1§37/30,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.48**	**55**	*e*Pg	**Pg**	**12 04 46.9**	**-0.9**
BNDS				*e*Sg	**Sg**	**12 04 52.8**	**-1.3**
IBND	**Bandar-abas**	**0.79**	**66**	*e*Pg	**Pg**	**12 04 53.8**	**0.0**
IBND				*e*Sg	**Sg**	**12 05 04.8**	**+0.7**
IBND				*e*		12 05 17.8	
	comp=Z,37μm,0.2s						
KRBR	**Kerman**	**2.99**	**17**	*e*Pn	**Pn**	**12 05 27.0**	**0.0**
ISRV	**Sarvestan**	**3.22**	**315**	*e*Pn	**Pn**	**12 05 37.6**	**+7.4**
ISRV				*e*Sn	**Sn**	**12 06 14.3**	**+5.2**
IPAR	**Pars**	**3.59**	**320**	*e*Pn	**Pn**	**12 05 38.4**	**+3.2**
IPAR				*e*Sn	**Sn**	**12 06 20.6**	**+2.4**
IPAR				*e*		12 06 30.0	
	comp=Z,592nm,0.3s						
IMEH	**Mehriz**	**4.36**	**347**	*e*Pn	**Pn**	**12 05 49.2**	**+3.4**
IMEH				*e*		12 05 59.0	
	comp=Z,260nm,0.2s						
IMEH				*e*Sn	**Sn**	**12 06 34.5**	**-2.8**
IBAF	**Bafgh**	**4.46**	**358**	*e*Pn	**Pn**	**12 05 49.4**	**+2.3**
IBAF				*e*		12 05 53.1	
	comp=Z,363nm,0.2s						
IBAF				*e*Sn	**Sn**	**12 06 35.0**	**-4.5**
ZHSF	**Zahedan**	**5.09**	**60**	*e*Pn	**Pn**	**12 05 55.6**	**-0.3**
NASN	**Na'in**	**6.20**	**337**	*e*Pn	**Pn**	**12 06 11.7**	**+0.6**
UMR	**Umm Al-Rimmam**	**7.46**	**291**	*e*P	**Pn**	**12 06 29.1**	**+0.6**
UMR				*e*S	**Sn**	**12 07 53.1**	**-0.5**
UMR				AML	AML	12 07 54.9	
	comp=Z,20nm,0.4s						
UMR	**Umm Al-Rimmam**	**7.46**	**291**	*e*P	**Pn**	**12 06 29.1**	**+0.7**
UMR				*e*S	**Sn**	**12 07 53.1**	**-0.6**
	comp=Z,21nm,0.4s						
NAY	**Al-Naaiem**	**7.78**	**288**	*e*P	**Pn**	**12 06 33.5**	**+0.7**
NAY				*e*S	**Sn**	**12 08 00.0**	**-1.5**
NAY				AML	AML	12 08 00.9	
	comp=Z,11nm,0.5s						
NAY	**Al-Naaiem**	**7.78**	**288**	*e*P	**Pn**	**12 06 33.5**	**+0.7**
NAY				*e*S	**Sn**	**12 08 00.0**	**-1.5**
	comp=Z,20nm,0.8s						
MIB	**Mutribah**	**7.85**	**292**	*e*P	**Pn**	**12 06 34.7**	**+0.9**
MIB				*e*S	**Sn**	**12 08 02.4**	**-0.9**
MIB				AML	AML	12 08 04.2	
	comp=Z,20nm,0.8s						
MIB	**Mutribah**	**7.85**	**292**	*e*P	**Pn**	**12 06 34.7**	**+0.9**
MIB				*e*S	**Sn**	**12 08 02.4**	**-0.8**
ASYS		**10.13**	**275**	P	**Pn**	**12 07 02.8**	**-2.3**
ASYS				S	**Sn**	**12 08 53.9**	**-5.5**

IDC 10 12:17:13.8±4.5,28.°02N×138.°74E,h386km±136km, mb2.9/4,mb1 3.1/5,mb1mx2.9/21,mbtmp3.0/5,Error ellipse: s-maj=267.0km s-min=17.9km az=66.0,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.20**	**106**	P	Pn	12 18 18.4	+0.9
	20nm,0.3s,baz=273,slow=22,SNR=20						
CBIJ				S	S	12 19 09.2	+0.1
	21nm,0.3s,baz=310,slow=21,SNR=9.5						
SONM	**Songino Array**	**31.94**	**317**	P	P	12 23 05.6	+0.3
	0.4nm,0.5s,baz=125,slow=8.9,SNR=3.9						
MKAR	**Makanchi Array**	**47.52**	**309**	P	P	12 25 11.5	-0.4
	0.2nm,0.3s,baz=92,slow=7.2,SNR=4.3						
WRA	**Warramunga Arr**	**47.87**	**186**	P	P	12 25 14.8	0.0
	0.8nm,0.3s,baz=3.5,slow=7.8,SNR=35						
ASAR	**Alice Springs**	**51.60**	**186**	P	P	12 25 42.3	-0.1
	0.4nm,0.3s,baz=23,slow=10.0,SNR=9.0						

ISCJB ***10*** *12:25:26.0±1.1,7.°4S±0.°1×125.°4E±0.°1,h444km±16km, mb4.0/3,Error ellipse: s-maj=22.5km s-min=12.0km az=146.3*
NEIC ***10*** *12:25:27.3±0.8,7.°41S×125.°40E,h447km±13km,mb4.2/3, Error ellipse: s-maj=18.9km s-min=9.9km az=47.0*
IDC ***10*** *12:25:28.1±11.0,7.°29S×125.°65E,h458km±168km, mb3.1/1,mb1 3.4/3,mb1mx2.9/16,mbtmp3.2/3,Error ellipse: s-maj=188.7km s-min=67.0km az=65.0*

ISC 10 12:25:27.6±1.1,7.°5S±0.°1×125.°4E±0.°1,h446km±17km,n14, σ0§64/17,mb4.0/3,3C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.10**	**293**	*e*P	**P**	**12 27 02.6**	**-0.2**
KAKA	**Kakadu**	**8.68**	**127**	⇑*i*P	**P**	**12 27 29.7**	**-0.7**
	39nm,0.6s						
KAKA	**Kakadu**	**8.68**	**127**	*e*P	**P**	**12 27 29.7**	**-0.7**
	123nm,0.6s						
KNA	**Kununurra**	**8.86**	**158**	⇑*i*P	**P**	**12 27 32.9**	**+0.6**
	13nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.55**	**179**	⇑*i*P	**P**	**12 27 51.3**	**+0.6**
	10nm,0.3s						
FITZ	**Fitzroy Crossi**	**10.55**	**179**	*e*P	**P**	**12 27 51.3**	**+0.6**
	3.8nm,0.6s						
FITZ				*e*S	**S**	**12 29 47.4**	**-1.3**
MBWA	**Marble Bar**	**14.64**	**201**	*e*P	**P**	**12 28 35.7**	**+0.7**
WRA	**Warramunga Arr**	**15.13**	**146**	P	**P**	**12 28 40.2**	**0.0**
	2.7nm,0.3s,baz=323,slow=11,SNR=209						
WRA				S	**S**	**12 31 19.3**	**-0.2**
	baz=325,slow=20,SNR=6.7						
WRA	**Warramunga Arr**	**15.13**	**146**	P	**P**	**12 28 40.2**	**0.0**
WRA				S	**S**	**12 31 19.3**	**-0.2**
WB2	**Warramunga Arr**	**15.14**	**146**	*e*P	**P**	**12 28 40.3**	**0.0**
ASAR	**Alice Springs**	**18.05**	**154**	P	**P**	**12 29 11.7**	**+0.6**
	0.7nm,0.3s,baz=328,slow=9.0,SNR=29						
FORT	**Forrest**	**23.31**	**174**	*e*P	**P**	**12 30 00.1**	**+0.9**
	4.2nm,0.6s,mb4.0						
NWAO	**Narrogin (SRO)**	**26.41**	**196**	*e*P	**P**	**12 30 26.2**	**-0.5**
	16nm,1.0s,mb4.4						
MKAR	**Makanchi Array**	**66.20**	**329**	P	**P**	**12 35 29.2**	**-0.6**
	0.6nm,0.5s,mb3.5,baz=126,slow=8.0,SNR=11						

SZGRF ***10*** *13:08:11.4,7.°57N×38.°27W,h33km,mb6.6,MS6.5, Central Mid-Atlantic Ridge*
MOS ***10*** *13:08:12.8±1.0,8.°12N×38.°72W,h10km,mb6.3/119, MS6.5/82,Error ellipse: s-maj=11.5km s-min=9.6km az=89.7*
ISCJB ***10*** *13:08:13.2±0.1,8.°13N±0.°02×38.°66W±0.°01,h10km, mb6.2/477,MS6.5/269,Error ellipse: s-maj=3.5km s-min=1.5km az=171.0*
IDC ***10*** *13:08:13.4±0.3,8.°24N×38.°82W,h0km,mb5.6/33, mb1 5.7/34,mb1mx5.7/34,mbtmp5.6/34,ML5.3/1,MS6.4/33, Ms1 6.4/33,ms1mx6.3/35,Error ellipse: s-maj=9.1km s-min=6.2km az=143.0*
SFS ***10*** *13:08:14.0,8.°09N×38.°70W,h10km,ML6.6*
PDA ***10*** *13:08:14.9,8.°09N×38.°75W,h10km,mb6.5*
IGIL ***10*** *13:08:14.8,8.°09N×38.°75W,h10km,mb6.5*
BGS ***10*** *13:08:14.1±2.4,8.°55N×39.°56W,h10km,mb5.9,MS6.5*
CSEM ***10*** *13:08:14.9±0.1,8.°11N×38.°70W,h9km,mb6.4/99,Ms6.4, Mw6.6,Error ellipse: s-maj=4.0km s-min=1.9km az=169.0*
NEIC ***10*** *13:08:14.7±0.1,8.°09N×38.°71W,h9km,mb6.3/288,ME6.9, MS6.5/184,MW6.6,MW6.5,Error ellipse: s-maj=3.8km s-min=1.9km az=168.0 Broadband fault plane solution: P waves. NP1:ϕs178.00000°,δ80.00000°,λ-5.00000°. NP2:ϕs269.00000°,δ85.00000°,λ-170.00000°. Principal axes: T Plg4.0000°, Azm43.0000°; N Plg0.0000°, Azm0.0000°; P Plg11.0000°, Azm134.0000°; Moment Tensor Solution. s127 Moment tensor: Scale 10^18 Nm; Mrr0.03; Mθθ-0.65; Mϕϕ0.62; Mrθ1.35; Mθϕ-6.86; Mϕr-1.40; Best double couple: M0 7.20000×10^18 NP1:ϕs184.00000°, δ79.00000°,λ10.00000°. NP2:ϕs92.00000°,δ80.00000°, λ169.00000°. Principal axes: T 7.3900, Plg14.0000°, Azm47.0000°; N -0.4900, Plg75.0000°, Azm229.0000°; P -6.9000, Plg0.0000°, Azm137.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
GCMT ***10*** *13:08:21.6±0.1,8.°18N×38.°54W,h15km,MW6.6,Moment Tensor Solution. s112,c258; s99,c230; Moment tensor: Scale 10^19Nm; Mrr0.03±.01; Mθθ-0.12±.01; Mϕϕ0.09±.01; Mrθ0.04±.02; Mθϕ-1.01±.01; Mϕr0.26±.02; Best double couple: M0 1.10000×10^19 NP1:ϕs273.00000°,δ76.00000°, λ-179.00000°. NP2:ϕs183.00000°,δ89.00000°, λ-14.00000°. Principal axes: T 1.0300, Plg10.0000°, Azm229.0000°; N 0.0400, Plg76.0000°, Azm1.0000°; P -1.0700, Plg10.0000°, Azm137.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle waves from 109 sta. Surface waves: sta=112, comp=264, per= 50.*
DJA ***10*** *13:08:22.8,8.°16N×37.°67W,h11km,mb6.4/6*

ISC 10 13:08:14.1±0.8,8.°13N±0.°03×38.°68W±0.°01,h3km±4km, h9km±1.7km;pP-P,n2664,σ0§85/2495,mb6.2/477, MS6.5/269,395C-125D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**14.14**	**169**	Pn	**Pn**	**13 11 35.0**	**-0.3**
	14nm,0.3s,baz=347,slow=16,SNR=88						
RCBR				Sn	**Sn**	**13 14 06.1**	**-6.7**
	14nm,0.3s,baz=262,slow=23,SNR=5.9						
RCBR				LR	LR	13 15 46.1	
	comp=Z,92μm,19.7s,baz=345,slow=32						
RCBR	**Riachuelo**	**14.14**	**169**	*e*P	**Pn**	**13 11 35.0**	**-0.3**
	1μm,1.5s						
RCBR				*e*S	**Sn**	**13 14 00.2**	**-13**
RCBR	**Riachuelo**	**14.14**	**169**	*e*P	**Pn**	**13 11 35.0**	**-0.3**
	1μm,1.5s						
SACV	**Santiago Islan**	**16.25**	**64**	Pn	**Pn**	**13 11 57.0**	**-6.5**
	22μm,0.5s						
BBGH	**Gun Hill**	**21.11**	**285**	*e*P	**P**	**13 13 01.6**	**+1.5**
	6μm,1.5s,mb6.7						
BBGH				LR	LR		
	comp=Z,118μm,22.0s,MS6.2						
BBGH	**Gun Hill**	**21.11**	**285**	*e*P	**P**	**13 13 01.6**	**+1.5**
	comp=Z,6μm,1.5s,mb6.7						
BBTS	**Babate**	**22.65**	**71**	P	**P**	**13 13 15.4**	**-1.1**
	comp=Z,668nm,1.0s,mb6.0,baz=213,slow=0.1,SNR=60						
BBTS				S	**S**	**13 17 27.7**	**+1.9**
	comp=Z,14nm,0.5s,baz=62,slow=23,SNR=4.9						
BBTS				LR	LR	13 19 51.9	
	comp=Z,275μm,20.8s,MS6.7,baz=255,slow=31						
BBTS	**Babate**	**22.65**	**71**	P	**P**	**13 13 15.4**	**-1.2**
BBTS				S	**S**	**13 17 27.7**	**+1.9**
GRGR	**Grenville**	**22.96**	**282**	*e*P	**P**	**13 13 19.6**	**-0.3**
	comp=Z,1μm,1.2s,mb6.2						
GRGR				LR	LR		
	comp=Z,41μm,22.0s,MS5.8						
GRGR	**Grenville**	**22.96**	**282**	*e*P	**P**	**13 13 19.6**	**-0.3**
	comp=Z,1μm,1.2s,mb6.2						
FDF	**Fort de France**	**22.97**	**289**	PFAKE		13 13 30.0	+10
FDF				LR	LR		
	comp=Z,30μm,20.0s,MS5.7						
ANWB	**Willy Bob**	**24.41**	**295**	*e*P	**P**	**13 13 32.6**	**-1.4**
	comp=Z,436nm,1.0s,mb5.8						
ANWB				LR	LR		
	comp=Z,21μm,21.0s,MS5.6						
ANWB	**Willy Bob**	**24.41**	**295**	*e*P	**P**	**13 13 32.6**	**-1.4**
	comp=Z,436nm,1.0s,mb5.8						
BDFB	**Brasilia**	**25.36**	**201**	P	**P**	**13 13 42.3**	**-0.3**
	comp=Z,66nm,0.9s,mb5.2,baz=19,slow=14,SNR=26						
BDFB				S	**S**	**13 18 06.0**	**-3.8**
	comp=Z,27nm,1.0s,baz=170,slow=27,SNR=1.7						
BDFB				LR	LR	13 23 23.8	
	comp=Z,113μm,19.3s,MS6.4,baz=15,slow=36						
BDFB	**Brasilia**	**25.36**	**201**	P	**P**	**13 13 42.3**	**-0.3**
BDFB				S	**S**	**13 18 06.0**	**-3.8**
BDFB				pmax	pmax		
	comp=Z,66nm,0.9s						
BDFB				smax			
	comp=N,27nm,1.0s						
BDFB				MLR	MLR		
	comp=Z,113μm,19.3s						
BDFB	**Brasilia**	**25.36**	**201**	P	**P**	**13 13 42.3**	**-0.3**
	comp=Z,66nm,0.9s,mb5.2						
BDFB				S	**S**	**13 18 06.0**	**-3.8**
	comp=Z,13μm,19.3s						
SEUS	**St. Eustatius**	**25.43**	**294**	P	**P**	**13 13 45.0**	**+1.7**
SEUS	**St. Eustatius**	**25.43**	**294**	P	**P**	**13 13 45.0**	**+1.7**
SMRT	**St. Maarten**	**25.69**	**295**	P	**P**	**13 13 46.2**	**+0.5**
SMRT	**St. Maarten**	**25.69**	**295**	P	**P**	**13 13 46.2**	**+0.5**
PCRV	**Puerto La Cruz**	**25.70**	**277**	P	**P**	**13 13 46.9**	**+1.1**
	comp=Z,80nm,1.1s,mb5.2,baz=41,slow=3.5,SNR=26						
PCRV				S	**S**	**13 18 13.0**	**-2.4**
	comp=Z,9.4nm,0.7s,baz=356,slow=16,SNR=2.3						
PCRV				LR	LR	13 23 13.9	
	comp=Z,27μm,21.3s,MS5.8,baz=254,slow=35						
PCRV	**Puerto La Cruz**	**25.70**	**277**	P	**P**	**13 13 46.9**	**+1.1**
PCRV				S	**S**	**13 18 13.0**	**-2.4**
SABA	**Saba**	**25.71**	**294**	P	**P**	**13 13 47.4**	**+1.6**
SABA	**Saba**	**25.71**	**294**	P	**P**	**13 13 47.4**	**+1.6**
CHIE	**El Hierro**	**27.64**	**43**	⇑P	**P**	**13 14 02.2**	**-0.9**
	comp=Z,2μm,1.8s,mb6.5						
CHIE	**El Hierro**	**27.64**	**43**	⇑P	**P**	**13 14 02.2**	**-0.9**
	comp=Z,2μm,1.8s,mb6.5						
EHIG	**Higuera**	**28.29**	**41**	⇑P	**P**	**13 14 08.2**	**-0.6**
	comp=Z,2.1μm,4.5s						
EHIG	**Higuera**	**28.29**	**41**	⇑P	**P**	**13 14 08.2**	**-0.7**
	comp=Z,10μm,4.5s						
SJG	**San Juan**	**28.49**	**293**	P	**P**	**13 14 11.8**	**+0.9**
	comp=Z,75nm,0.4s,mb5.7,baz=311,slow=19,SNR=10						
SJG				S	**S**	**13 18 50.0**	**-9.4**
	comp=Z,5.9nm,0.3s,baz=334,slow=19,SNR=1.9						
SJG				LR	LR	13 23 18.2	
	comp=Z,29μm,20.2s,MS5.9,baz=111,slow=32						
SJG	**San Juan**	**28.49**	**293**	P	**P**	**13 14 11.8**	**+0.9**
SJG				S	**S**	**13 18 50.0**	**-9.4**
SJG				pmax	pmax		
	comp=Z,75nm,0.4s						
SJG				smax			
	comp=N,6.0nm,0.3s						
SJG	**San Juan**	**28.49**	**293**	P	**P**	**13 14 11.8**	**+0.9**
	comp=N,75nm,0.4s,mb5.7						
CCAN	**Las Canadas**	**28.87**	**43**	P	**P**	**13 14 13.4**	**-0.7**
	comp=N,925nm,1.8s,mb6.2						
CCAN	**Las Canadas**	**28.87**	**43**	P	**P**	**13 14 13.4**	**-0.7**
	comp=N,925nm,1.8s,mb6.2						
EBAJ	**Bajamar**	**29.25**	**43**	⇑P	**P**	**13 14 16.9**	**-0.6**
	comp=N,9μm,2.5s,mb7.0						
EBAJ	**Bajamar**	**29.25**	**43**	⇑P	**P**	**13 14 16.9**	**-0.6**
	comp=N,9μm,2.5s,mb7.0						
EOSO	**Osorio**	**29.50**	**45**	⇑P	**P**	**13 14 19.4**	**-0.3**
	comp=N,16μm,2.4s,mb7.3						
EOSO	**Osorio**	**29.50**	**45**	⇑P	**P**	**13 14 19.4**	**-0.3**
	comp=N,10μm,2.4s,mb7.1						
CFTV	**Fuerteventura**	**30.74**	**46**	P	**P**	**13 14 30.9**	**+0.2**
	comp=N,223nm,1.1s,mb5.9						
CFTV	**Fuerteventura**	**30.74**	**46**	P	**P**	**13 14 30.9**	**+0.2**
	comp=N,223nm,1.1s,mb5.9						
PSMN	**Pico do Norte,**	**31.30**	**21**	*e*T		13 46 51.3	
EFAM	**Famara**	**31.55**	**45**	⇑P	**P**	**13 14 37.9**	**0.0**
	comp=N,17μm,2.5s,mb7.4						
EFAM	**Famara**	**31.55**	**45**	⇑P	**P**	**13 14 37.8**	**0.0**
	comp=N,10μm,2.5s,mb7.2						
SDV	**Santo Domingo**	**31.61**	**274**	*e*P	**P**	**13 14 37.7**	**-0.8**
	comp=N,74nm,0.8s,mb5.6						
SDV				LR	LR		
	comp=Z,14μm,21.0s,MS5.6						
SDV	**Santo Domingo**	**31.61**	**274**	*e*P	**P**	**13 14 37.7**	**-0.8**
	comp=Z,74nm,0.8s,mb5.6						
PICO	**Pico**	**31.62**	**15**	*e*P	**P**	**13 14 40.7**	**+2.4**
PICO	**Pico**	**31.62**	**15**	*e*P	**P**	**13 14 40.7**	**+2.4**
CALA	**Caldeira**	**31.63**	**15**	*e*P	**P**	**13 14 41.1**	**+2.8**
CALA	**Caldeira**	**31.63**	**15**	*e*P	**P**	**13 14 41.1**	**+2.8**
PID	**Ribeirinha**	**31.65**	**16**	*e*P	**P**	**13 14 41.0**	**+2.5**
PID	**Ribeirinha**	**31.65**	**16**	*e*P	**P**	**13 14 41.0**	**+2.5**
FUL	**Funchal**	**31.66**	**37**	*e*P	**P**	**13 14 38.4**	**-0.3**
	comp=Z,2μm,2.3s,mb6.4						
FUL	**Funchal**	**31.66**	**37**	*e*P	**P**	**13 14 39.2**	**+0.5**
FUL	**Funchal**	**31.66**	**37**	*e*P	**P**	**13 14 38.4**	**-0.3**
	comp=Z,2μm,2.3s,mb6.4						
PCED	**Cedros**	**31.67**	**15**	*e*P	**P**	**13 14 41.6**	**+2.9**
PCED	**Cedros**	**31.67**	**15**	*e*P	**P**	**13 14 41.5**	**+2.8**
PCED	**Cedros**	**31.67**	**15**	*e*P	**P**	**13 14 41.5**	**+2.8**
PMAR	**Madeira**	**31.72**	**36**	*e*P	**P**	**13 14 39.6**	**+0.4**
	comp=Z,1μm,1.5s,mb6.6						
PMAR	**Madeira**	**31.72**	**36**	*e*P	**P**	**13 14 41.1**	**+1.9**
PMAR	**Madeira**	**31.72**	**36**	*e*P	**P**	**13 14 39.6**	**+0.4**
	comp=Z,1μm,1.5s,mb6.6						
PDA	**Ponta Delgada**	**31.76**	**20**	*e*P	**P**	**13 14 40.4**	**+0.9**
PDA	**Ponta Delgada**	**31.76**	**20**	*e*P	**P**	**13 14 40.4**	**+0.9**
PSET	**Sete Cidades**	**31.81**	**20**	*e*P	**P**	**13 14 40.2**	**+0.3**
	comp=Z,524nm,1.1s,mb6.3						
PSET	**Sete Cidades**	**31.81**	**20**	*e*P	**P**	**13 14 40.2**	**+0.3**
	comp=Z,524nm,1.1s,mb6.3						
CMLA	**Cha da Macela**	**31.82**	**20**	*e*P	**P**	**13 14 41.4**	**+1.4**
	comp=Z,2μm,1.2s,mb6.8						
CMLA	**Cha da Macela**	**31.82**	**20**	*e*P	**P**	**13 14 40.8**	**+0.8**
CMLA				pmax	pmax		
	comp=Z,980nm,1.2s,mb6.5						
CMLA				MLR	MLR		
	comp=Z,118μm,22.0s,MS6.5						
CMLA	**Cha da Macela**	**31.82**	**20**	*e*P	**P**	**13 14 40.8**	**+0.8**
	comp=Z,980nm,1.2s,mb6.5						
C

TIC Toumodi 33.41 90 *eP* **P 13 14 52.7 -1.6**
comp=Z,2µm,1.5s,mb6.8
SDDR Presa de Saban 33.42 292 *eP* **P 13 14 54.2 -0.2**
comp=Z,1µm,1.6s,mb6.6
SDDR LR LR
comp=Z,48µm,22.0s,MS6.2
SDDR Presa de Saban 33.42 292 *eP* **P 13 14 54.2 -0.1**
comp=Z,1µm,1.6s,mb6.6
LIC Lamto 33.44 91 *eP* **P 13 14 52.7 -1.8**
comp=Z,2µm,1.3s,mb7.0
LIC Lamto 33.44 91 *eP* **P 13 14 52.7 -1.8**
comp=Z,2µm,1.3s,mb6.9
DBIC Dimbokro 33.57 90 P **P 13 14 54.9 -0.8**
comp=Z,187nm,0.8s,mb6.1,baz=261,slow=8.7,SNR=158
DBIC S **S 13 20 15.2 -3.8**
comp=Z,27nm,1.0s,baz=291,slow=11,SNR=1.9
DBIC LR LR 13 24 52.6
comp=Z,42µm,21.2s,MS6.1,baz=251,slow=30
DBIC Dimbokro 33.57 90 P **P 13 14 54.9 -0.8**
DBIC S **S 13 20 15.2 -3.8**
DBIC pmax pmax
comp=Z,187nm,0.8s
DBIC smax
comp=N,27nm,1.0s
DBIC Dimbokro 33.57 90 *eP* **P 13 14 54.5 -1.2**
comp=N,812nm,1.1s,mb6.6
DBIC LR LR
comp=Z,45µm,20.0s,MS6.2
DBIC Dimbokro 33.57 90 P **P 13 14 54.9 -0.8**
comp=Z,187nm,0.8s,mb6.1
KIC Kosan Boka 33.71 91 *eP* **P 13 14 55.1 -1.8**
comp=Z,2µm,1.6s,mb6.9
KIC Kosan Boka 33.71 91 *eP* **P 13 14 55.1 -1.8**
comp=Z,2µm,1.6s,mb6.9
GRTK Grand Turk 33.99 297 *eP* **P 13 14 59.2 0.0**
comp=Z,850nm,1.6s,mb6.4
GRTK LR LR
comp=Z,21µm,21.0s,MS5.8
GRTK Grand Turk 33.99 297 *eP* **P 13 14 59.2 0.0**
comp=Z,850nm,1.6s,mb6.4
BBSR BB Station 34.13 319 *eP* **P 13 14 59.2 -1.1**
comp=Z,321nm,1.7s,mb6.0
BBSR LR LR
comp=Z,53µm,20.0s,MS6.3
BBSR BB Station 34.13 319 *eP* **P 13 14 59.2 -1.1**
comp=Z,321nm,1.7s,mb6.0
YBT Youssef Ben Ta 34.86 48 *i* P **P 13 15 07.0 +0.3**
ROSC El Rosal 35.56 267 P **P 13 15 13.7 +0.8**
comp=Z,78nm,0.7s,mb5.8,baz=107,slow=7.6,SNR=62
ROSC S **S 13 20 46.8 -2.9**
comp=Z,5.7nm,0.5s,baz=96,slow=23,SNR=1.8
ROSC LR LR 13 31 37.7
comp=Z,46µm,18.8s,MS6.3,baz=272,slow=40
ROSC El Rosal 35.56 267 P **P 13 15 13.7 +0.7**
ROSC S **S 13 20 46.8 -2.9**
JHA Jbel Lahdid 35.93 45 *i* P **P 13 15 18.0 +2.1**
CIA Chichaoua 36.33 46 *i* P **P 13 15 19.0 -0.3**
GTBY Guantanamo Bay 37.15 292 *eP* **P 13 15 26.2 -0.3**
comp=Z,438nm,1.4s,mb6.1
GTBY LR LR
comp=Z,15µm,22.0s,MS5.8
GTBY Guantanamo Bay 37.15 292 *eP* **P 13 15 26.2 -0.3**
comp=Z,438nm,1.4s,mb6.1
LPAZ La Paz 37.92 230 P **P 13 15 33.9 +0.9**
comp=Z,124nm,1.0s,mb5.6,baz=50,slow=8.1,SNR=130
LPAZ S **S 13 21 26.3 +0.7**
comp=Z,9.8nm,1.1s,baz=50,slow=19,SNR=2.1
LPAZ LR LR 13 30 29.7
comp=Z,53µm,21.9s,MS6.3,baz=38,slow=35
LPAZ P3KPbc 13 45 53.1
comp=Z,3.1nm,0.9s,baz=206,slow=3.9,SNR=6.6
LPAZ La Paz 37.92 230 P **P 13 15 33.9 +0.9**
LPAZ S **S 13 21 26.3 +0.7**
LPAZ pmax pmax
comp=Z,124nm,1.0s
LPAZ smax
comp=N,10.0nm,1.1s
LPAZ MLR MLR
comp=Z,53µm,21.9s
LPAZ La Paz 37.92 230 P **P 13 15 33.9 +0.9**
LPAZ S **S 13 21 26.3 +0.7**
LPAZ LR LR 13 30 29.7
LPAZ *e* 13 45 53.1
LPAZ La Paz 37.92 230 P **P 13 15 33.9 +0.9**
comp=Z,124nm,1.0s,mb5.6
LPAZ S **S 13 21 26.3 +0.7**
comp=Z,53µm,21.9s
AVE Averroes 38.23 45 P **P 13 15 36.4 +1.0**
AVE Averroes 38.23 45 P **P 13 15 36.4 +1.0**
CPUP Villa Florida 38.74 207 P **P 13 15 39.3 -0.5**
comp=Z,6.8nm,0.8s,baz=6.0,slow=8.6,SNR=14
CPUP PP PP 13 17 09.5 +0.9
comp=Z,15nm,0.9s,baz=17,slow=15,SNR=2.5
CPUP S **S 13 21 39.8 +1.9**
comp=Z,3.9nm,0.8s,baz=98,slow=18,SNR=2.0
CPUP LR LR 13 31 46.1
comp=Z,116µm,18.7s,MS6.7,baz=10,slow=36
CPUP Villa Florida 38.74 207 P **P 13 15 39.3 -0.5**
CPUP 13 17 09.5
CPUP S **S 13 21 39.8 +2.0**
CPUP pmax pmax
comp=Z,15nm,0.9s
CPUP smax
comp=N,4.0nm,0.8s
CPUP MLR MLR
comp=Z,116µm,18.7s
CPUP Villa Florida 38.74 207 P **P 13 15 39.3 -0.5**
CPUP Villa Florida 38.74 207 PP PP 13 17 09.5 +0.9
KIB El Ksiba 38.81 47 *i* P **P 13 15 41.0 +0.6**
MTDJ Mount Denham 39.06 289 *eP* **P 13 15 42.2 -0.4**
comp=Z,598nm,1.6s,mb6.1
MTDJ LR LR
comp=Z,25µm,20.0s,MS6.0
MTDJ Mount Denham 39.06 289 *eP* **P 13 15 42.2 -0.4**
comp=Z,598nm,1.6s,mb6.1
PFVI Vila Bisbo 39.59 39 *eP* **P 13 15 46.9 +0.2**
comp=Z,2µm,2.0s,mb6.5
PFVI Vila Bisbo 39.59 39 ⇑P **P 13 15 46.9 +0.2**
PFVI Vila Bisbo 39.59 39 *eP* **P 13 15 46.9 +0.2**
comp=Z,2µm,2.0s,mb6.5
CZD Col de Zad 39.77 47 *i* P **P 13 15 50.0 +1.7**
ZFT Errachidia 39.77 48 *i* P **P 13 15 48.0 -0.4**
MORF Marmelete 39.80 39 *eP* **P 13 15 48.5 -0.1**
comp=Z,2µm,1.8s,mb6.5
MORF Marmelete 39.80 39 *eP* **P 13 15 48.7 +0.1**
MORF *eS* **S 13 21 53.9 +0.3**
MORF Marmelete 39.80 39 *eP* **P 13 15 48.4 -0.2**
MORF Marmelete 39.80 39 *eP* **P 13 15 48.5 -0.1**
comp=Z,2µm,1.8s,mb6.5
MORF *eS* **S 13 21 53.9 +0.3**
PTEO Sao Teotonio 39.91 38 *eP* **P 13 15 49.4 0.0**
comp=Z,2µm,2.2s,mb6.4
PTEO Sao Teotonio 39.91 38 *eP* **P 13 15 52.5 +3.1**
PTEO Sao Teotonio 39.91 38 *eP* **P 13 15 49.4 0.0**
comp=Z,2µm,2.2s,mb6.4
RSA Sarsar 40.20 44 *i* P **P 13 15 52.0 +0.1**
PBDV Barranco-do-Ve 40.21 39 *eP* **P 13 15 52.6 +0.7**
comp=Z,2µm,1.8s,mb6.5
PBDV Barranco-do-Ve 40.21 39 *eP* **P 13 15 52.6 +0.7**
comp=Z,2µm,1.8s,mb6.5
TGT Taghat 40.30 45 *i* P **P 13 15 52.0 -0.7**
PCVE Castro Verde 40.39 39 *eP* **P 13 15 53.9 +0.5**
comp=Z,656nm,2.1s,mb6.0
PCVE Castro Verde 40.39 39 *eP* **P 13 15 53.9 +0.5**
comp=Z,656nm,2.1s,mb6.0
OTAV Otavalo 40.40 261 *eP* **P 13 15 53.2 -0.6**
comp=Z,516nm,1.8s,mb6.0
OTAV LR LR
comp=Z,15µm,22.0s,MS5.8
OTAV Otavalo 40.40 261 *eP* **P 13 15 53.2 -0.6**
comp=Z,516nm,1.8s,mb6.0
MESJ Messejana 40.41 38 *eP* **P 13 15 53.8 +0.3**
comp=Z,1µm,2.4s,mb6.2
MESJ Messejana 40.41 38 *eP* **P 13 15 53.8 +0.2**
MESJ AMb AMB 13 16 01.0
comp=Z,1µm,2.4s,mb6.2
MESJ *e*PP PP 13 17 26.9 +0.4
MESJ *e*S **S 13 22 03.2 +0.6**
MESJ *e*S **S 13 22 03.4 +0.8**
MESJ Messejana 40.41 38 *eP* **P 13 15 53.8 +0.3**
MESJ *e* 13 17 26.9
MESJ *e*S **S 13 22 03.4 +0.8**
MESJ Messejana 40.41 38 *eP* **P 13 15 53.8 +0.3**
LIS Lisbon 40.41 36 *eP* **P 13 15 53.9 +0.3**
comp=Z,3µm,1.6s,mb6.8
LIS Lisbon 40.41 36 *eP* **P 13 15 53.9 +0.3**

LIS AMb AMB 13 16 01.0
comp=Z,3µm,1.6s,mb6.8
LIS *e*PP PP 13 17 27.1 +0.6
LIS *e*S **S 13 22 03.8 +1.1**
LIS *e*S **S 13 22 04.1 +1.5**
LIS Lisbon 40.41 36 *eP* **P 13 15 53.9 +0.3**
LIS *e* 13 17 27.1
LIS *e*S **S 13 22 04.1 +1.4**
LIS Lisbon 40.41 36 *eP* **P 13 15 53.9 +0.3**
comp=Z,3µm,1.6s,mb6.8
PVAQ Vaqueiros 40.44 39 *eP* **P 13 15 53.8 -0.1**
comp=Z,2µm,1.5s,mb6.5
PVAQ Vaqueiros 40.44 39 *eP* **P 13 15 53.8 -0.1**
comp=Z,2µm,1.5s,mb6.5
PLML Palmela 40.45 37 *eP* **P 13 15 56.4 +2.5**
PLML Palmela 40.45 37 *eP* **P 13 15 56.6 +2.7**
PLML Palmela 40.45 37 *eP* **P 13 15 56.4 +2.5**
PMAFR Mafra 40.49 36 *eP* **P 13 15 54.5 +0.3**
comp=Z,2µm,0.9s,mb6.9
PMAFR Mafra 40.49 36 *eP* **P 13 15 54.5 +0.3**
comp=Z,2µm,0.9s,mb6.9
EGRO El Granado 40.67 39 ⇑P **P 13 15 55.9 +0.2**
comp=Z,7µm,2.8s,mb6.8
EGRO El Granado 40.67 39 ⇑P **P 13 15 55.9 +0.1**
comp=Z,7µm,2.8s,mb6.8
BCIP Isla Barro Col 40.69 275 *eP* **P 13 15 55.5 -0.7**
comp=Z,194nm,1.1s,mb5.7
BCIP LR LR
comp=Z,14µm,19.0s,MS5.8
BCIP Isla Barro Col 40.69 275 *eP* **P 13 15 55.5 -0.7**
comp=Z,194nm,1.1s,mb5.7
PBEJ Beja 40.74 38 *eP* **P 13 15 56.0 -0.3**
comp=Z,1µm,1.8s,mb6.3
PBEJ Beja 40.74 38 *eP* **P 13 15 58.9 +2.6**
PBEJ Beja 40.74 38 *eP* **P 13 15 56.0 -0.3**
comp=Z,1µm,1.8s,mb6.3
SFS San Fernando 40.85 41 *eP* **P 13 15 59.0 +1.8**
comp=Z,3µm,1.4s,mb6.7
SFS LR LR
comp=Z,89µm,22.0s,MS6.6
SFS San Fernando 40.85 41 *i* P **P 13 15 57.7 +0.5**
SFS *i* S **S 13 22 11.3 +2.0**
CNIL Conil 40.89 42 *eP* **P 13 15 59.0 +1.4**
TZK Tazeka 40.93 46 *i* P **P 13 15 57.0 -0.9**
EVO Evora 40.97 38 *eP* **P 13 15 58.3 +0.1**
comp=Z,2µm,1.7s,mb6.4
EVO Evora 40.97 38 P **P 13 15 58.5 +0.3**
EVO Evora 40.97 38 *eP* **P 13 15 58.3 +0.1**
comp=Z,2µm,1.7s,mb6.4
ALMR Almeirim 41.04 36 *eP* **P 13 15 59.0 +0.3**
ALMR Almeirim 41.04 36 *eP* **P 13 15 59.0 +0.3**
GIBL Gibalbin 41.22 41 *eP* **P 13 16 02.0 +1.7**
ESPR Espera 41.31 41 ⇑P **P 13 16 01.2 +0.1**
comp=Z,11µm,3.7s
ESPR Espera 41.31 41 ⇑P **P 13 16 01.2 +0.1**
comp=Z,10µm,3.7s
EMIN Mina Concepcio 41.32 40 ⇑P **P 13 16 01.3 +0.2**
comp=Z,7µm,2.8s,mb6.8
EMIN Mina Concepcio 41.32 40 ⇑P **P 13 16 01.3 +0.2**
comp=Z,7µm,2.8s,mb6.8
EJIF Jimena Fronter 41.33 42 ⇑P **P 13 16 02.0 +0.9**
comp=Z,7µm,2.1s,mb6.9
EJIF Jimena Fronter 41.33 42 P **P 13 16 02.0 +0.8**
PBAR Barrancos 41.34 39 *eP* **P 13 16 01.6 +0.3**
comp=Z,2µm,1.5s,mb6.4
PBAR Barrancos 41.34 39 *eP* **P 13 16 01.6 +0.3**
comp=Z,2µm,1.5s,mb6.4
PTOM Tomar 41.44 36 *eP* **P 13 16 02.1 +0.1**
comp=Z,2µm,2.2s,mb6.3
PTOM Tomar 41.44 36 *eP* **P 13 16 02.1 +0.1**
comp=Z,2µm,2.2s,mb6.3
PESTR Estremoz 41.44 38 *eP* **P 13 16 02.4 +0.3**
comp=Z,864nm,1.5s,mb6.2
PESTR Estremoz 41.44 38 *eP* **P 13 16 02.4 +0.3**
comp=Z,864nm,1.5s,mb6.2
LIJA Lijar 41.63 41 *eP* **P 13 16 05.0 +1.3**
TOU Touzarine 41.68 45 *i* P **P 13 16 04.0 -0.1**
MPAL Palemas 41.69 45 *i* P **P 13 16 04.0 -0.2**
EBAD Badajoz 41.72 38 ⇑P **P 13 16 05.0 +0.6**
comp=Z,11µm,4.0s
EBAD Badajoz 41.72 38 ⇑P **P 13 16 05.0 +0.6**
comp=Z,10µm,4.0s
EMIJ Mijas 41.85 42 ⇑P **P 13 16 05.3 -0.2**
comp=Z,7µm,3.0s
EMIJ Mijas 41.85 42 ⇑P **P 13 16 05.3 -0.2**
comp=Z,7µm,3.0s
PMRV Marv??o 41.91 37 *eP* **P 13 16 05.9 0.0**
comp=Z,2µm,1.6s,mb6.5
PMRV Marv??o 41.91 37 *eP* **P 13 16 05.9 0.0**
comp=Z,2µm,1.6s,mb6.5
PCBR Castelo Branco 42.13 36 *eP* **P 13 16 08.4 +0.7**
comp=Z,796nm,1.9s,mb6.0
PCBR Castelo Branco 42.13 36 *eP* **P 13 16 08.4 +0.7**
comp=Z,796nm,1.9s,mb6.0
EMAL Malaga-Limoner 42.19 42 P **P 13 16 09.1 +0.8**
EMAL Malaga-Limoner 42.19 42 *i* P **P 13 16 08.9 +0.6**
EMAL *i* S **S 13 22 30.5 +1.3**
ECAB El Cabril 42.30 40 ⇑P **P 13 16 09.2 +0.1**
comp=Z,9µm,2.8s,mb6.9
ECAB El Cabril 42.30 40 ⇑P **P 13 16 09.2 +0.1**
comp=Z,9µm,2.8s,mb6.9
ATAH Atahualpa 42.40 250 S **S 13 22 27.7 -5.1**
comp=Z,1.7nm,0.4s,baz=110,slow=15,SNR=1.7
ATAH LR LR 13 34 28.9
comp=Z,41µm,21.2s,MS6.3,baz=65,slow=37
MELI Melilla 42.43 45 P **P 13 16 10.2 0.0**
MELI Melilla 42.43 45 P **P 13 16 10.2 0.0**
MTE Manteigas 42.45 36 *eP* **P 13 16 10.3 0.0**
comp=Z,1µm,2.5s,mb6.1
MTE Manteigas 42.45 36 *eP* **P 13 16 10.0 -0.3**
comp=Z,4µm,2.2s,mb6.7
MTE LR LR
comp=Z,124µm,22.0s,MS6.8
MTE Manteigas 42.45 36 *eP* **P 13 16 10.3 0.0**
comp=Z,1µm,2.5s,mb6.1
PVIS Viseu 42.46 35 *eP* **P 13 16 10.3 0.0**
comp=Z,983nm,1.3s,mb6.3
PVIS Viseu 42.46 35 *eP* **P 13 16 10.3 0.0**
comp=Z,983nm,1.3s,mb6.3
ELOJ Sierra Loja 42.59 42 ⇑P **P 13 16 11.6 +0.1**
ELOJ pmax pmax
comp=Z,1µm,1.6s,mb6.4
ELOJ Sierra Loja 42.59 42 ⇑P **P 13 16 11.6 +0.1**
comp=Z,1µm,1.6s,mb6.4
ELOJ Sierra Loja 42.59 42 P **P 13 16 11.6 +0.1**
comp=Z,1µm,1.6s,mb6.4
EALB Alboran 42.69 44 P **P 13 16 12.4 +0.1**
comp=Z,10µm,2.5s,mb7.1
EALB Alboran 42.69 44 P **P 13 16 12.4 0.0**
comp=Z,10µm,2.5s,mb7.1
ELUQ Luque 42.75 41 ⇑P **P 13 16 12.8 0.0**
comp=Z,4µm,1.8s,mb6.8
ELUQ Luque 42.75 41 P **P 13 16 12.8 0.0**
ERON Agron 42.75 42 ⇑P **P 13 16 13.1 +0.3**
comp=Z,3µm,2.3s,mb6.7
ERON Agron 42.75 42 ⇑P **P 13 16 13.1 +0.3**
comp=Z,3µm,2.3s,mb6.7
EGUA Guajares 42.81 43 ⇓P **P 13 16 14.2 +0.9**
EGUA pmax pmax
comp=Z,2µm,1.4s,mb6.6
EGUA Guajares 42.81 43 ⇓P **P 13 16 14.2 +0.9**
comp=Z,2µm,1.4s,mb6.6
EGUA Guajares 42.81 43 P **P 13 16 14.2 +0.9**
comp=Z,2µm,1.4s,mb6.6
NNA Nana 42.88 243 S **S 13 22 36.3 -3.6**
comp=Z,10nm,0.8s,baz=235,slow=12,SNR=2.2
NNA LR LR 13 34 41.5
comp=Z,47µm,18.5s,MS6.4,baz=49,slow=37
NNA Nana 42.88 243 *eP* **P 13 16 12.8 -1.3**
comp=Z,1µm,2.0s,mb6.2
NNA LR LR
comp=Z,49µm,20.0s,MS6.4
NNA Nana 42.88 243 P **P 13 16 14.0 -0.2**
comp=Z,814nm,1.7s,mb6.2,SNR=13
NNA Nana 42.88 243 *eP* **P 13 16 12.8 -1.4**
comp=Z,1µm,2.0s,mb6.2
EADA Adamuz 42.89 40 ⇑P **P 13 16 13.5 -0.5**
comp=Z,6µm,3.9s
EADA Adamuz 42.89 40 ⇑P **P 13 16 13.5 -0.4**
comp=Z,6µm,3.9s
PVRL Vila Real 42.93 35 *eP* **P 13 16 14.5 +0.3**
comp=Z,880nm,1.5s,mb6.3
PVRL Vila Real 42.93 35 *eP* **P 13 16 14.5 +0.3**
comp=Z,880nm,1.5s,mb6.3
EZAM Zamans 42.98 33 ⇓P **P 13 16 14.9 +0.3**
EZAM pmax pmax
comp=Z,836nm,1.3s,mb6.3

EZAM Zamans 42.98 33 ⇓P **P 13 16 14.9 +0.3**
comp=Z,836nm,1.3s,mb6.3
EZAM Zamans 42.98 33 P **P 13 16 14.9 +0.3**
comp=Z,836nm,1.3s,mb6.3
PCAB Cabril 43.05 34 *eP* **P 13 16 15.1 0.0**
comp=Z,987nm,1.6s,mb6.3
PCAB Cabril 43.05 34 *eP* **P 13 16 17.8 +2.7**
PCAB Cabril 43.05 34 *eP* **P 13 16 15.1 0.0**
comp=Z,987nm,1.6s,mb6.3
ECOG Cogollos-Vega 43.05 42 ⇑P **P 13 16 16.4 +1.2**
ECOG pmax pmax
comp=Z,1µm,1.5s,mb6.5
ECOG Cogollos-Vega 43.05 42 ⇑P **P 13 16 16.4 +1.2**
comp=Z,1µm,1.5s,mb6.5
ECOG Cogollos-Vega 43.05 42 P **P 13 16 16.4 +1.2**
comp=Z,1µm,1.5s,mb6.5
EPLA Plasencia 43.10 37 P **P 13 16 14.9 -0.7**
comp=Z,8µm,2.9s,mb6.9
EPLA Plasencia 43.10 37 P **P 13 16 14.9 -0.7**
ELOB Lobios 43.13 34 ⇑P **P 13 16 15.5 -0.3**
comp=Z,7µm,3.0s
ELOB Lobios 43.13 34 ⇑P **P 13 16 15.5 -0.3**
comp=Z,7µm,3.0s
MVO Moncorvo 43.24 35 *eP* **P 13 16 16.9 +0.2**
comp=Z,785nm,1.3s,mb6.3
MVO Moncorvo 43.24 35 ⇑P **P 13 16 16.7 -0.1**
MVO Moncorvo 43.24 35 *eP* **P 13 16 16.9 +0.2**
comp=Z,785nm,1.3s,mb6.3
EBER Berja 43.30 43 ⇑P **P 13 16 17.7 +0.5**
comp=Z,10µm,3.4s
EBER Berja 43.30 43 ⇑P **P 13 16 17.7 +0.4**
comp=Z,10µm,3.4s
EMAZ Mazaricos 43.38 32 ⇑P **P 13 16 17.2 -0.6**
comp=Z,6µm,3.6s
EMAZ Mazaricos 43.38 32 ⇑P **P 13 16 17.2 -0.6**
comp=Z,6µm,3.6s
EBAN Banos Encina 43.40 41 ⇑P **P 13 16 18.0 -0.1**
EBAN pmax pmax
comp=Z,2µm,1.8s,mb6.5
EBAN Banos Encina 43.40 41 ⇑P **P 13 16 18.0 -0.1**
comp=Z,2µm,1.8s,mb6.5
EBAN Banos Encina 43.40 41 P **P 13 16 18.0 -0.1**
comp=Z,2µm,1.8s,mb6.5
OLHC Oulhaca 43.48 46 P **P 13 16 21.0 +2.3**
STS Santiago 43.56 32 P **P 13 16 18.8 -0.5**
STS pmax pmax
comp=Z,1µm,1.5s,mb6.4
STS Santiago 43.56 32 P **P 13 16 18.8 -0.5**
comp=Z,1µm,1.5s,mb6.4
STS Santiago 43.56 32 P **P 13 16 18.8 -0.5**
comp=Z,1µm,1.5s,mb6.4
ODZI Dziouia 43.63 46 P **P 13 16 21.0 +1.0**
EQES Quesada 43.67 42 ⇑P **P 13 16 20.9 +0.6**
comp=Z,15µm,4.2s
EQES Quesada 43.67 42 ⇑P **P 13 16 20.9 +0.7**
comp=Z,10µm,4.2s
PBRG Braganca 43.83 35 *eP* **P 13 16 21.7 +0.3**
comp=Z,1µm,1.5s,mb6.4
PBRG Braganca 43.83 35 *eP* **P 13 16 21.6 +0.2**
PBRG Braganca 43.83 35 *eP* **P 13 16 21.6 +0.2**
PAB San Pablo 43.84 39 *eP* **P 13 16 21.1 -0.5**
PAB pmax pmax
comp=Z,2µm,2.3s,mb6.5
PAB MLR MLR
comp=Z,155µm,21.0s,MS6.9
PAB San Pablo 43.84 39 *eP* **P 13 16 21.1 -0.5**
comp=Z,2µm,2.3s,mb6.5
PAB LR LR
comp=Z,155µm,21.0s,MS6.9
PAB San Pablo 43.84 39 *eP* **P 13 16 21.1 -0.5**
comp=Z,55µm,21.0s
ECAL Calabor 43.92 35 ⇑P **P 13 16 22.2 0.0**
comp=Z,8µm,3.1s
ECAL Calabor 43.92 35 ⇑P **P 13 16 22.2 0.0**
comp=Z,8µm,3.1s
ERUA La Rua 43.99 34 ⇑P **P 13 16 22.3 -0.4**
ERUA pmax pmax
comp=Z,2µm,1.7s,mb6.5
ERUA La Rua 43.99 34 ⇑P **P 13 16 22.3 -0.4**
comp=Z,2µm,1.7s,mb6.5
ERUA La Rua 43.99 34 P **P 13 16 22.3 -0.4**
comp=Z,2µm,1.7s,mb6.5
EHUE Huescar 43.99 42 ⇑P **P 13 16 22.5 -0.3**
comp=Z,2µm,1.6s,mb6.6
EHUE Huescar 43.99 42 P **P 13 16 22.5 -0.3**
ESDC Sonseca Array 44.16 39 P **P 13 16 24.0 -0.2**
comp=Z,77nm,1.1s,mb5.4,baz=238,slow=8.1,SNR=49
ESDC PP PP 13 18 06.9 -0.1
comp=Z,12nm,1.1s,baz=244,slow=8.4,SNR=1.9
ESDC S **S 13 22 51.4 -6.6**
comp=Z,0.2nm,0.3s,baz=349,slow=37,SNR=2.3
ESDC LR LR 13 31 14.7
comp=Z,116µm,20.7s,MS6.8,baz=240,slow=31
ESDC Sonseca Array 44.16 39 ⇑P **P 13 16 23.7 -0.4**
comp=Z,2µm,3.3s
ESDC Sonseca Array 44.16 39 ⇑P **P 13 16 23.7 -0.4**
comp=Z,2µm,3.3s
ESLA Sonseca Array 44.16 39 *eP* **P 13 16 24.1 0.0**
comp=Z,1µm,2.2s,mb6.2
ESLA LR LR
comp=Z,771µm,20.0s,MS7.6
ESLA Sonseca Array 44.16 39 *eP* **P 13 16 24.1 0.0**
comp=Z,1µm,2.2s,mb6.2
ESBB Sonseca Array 44.16 39 ⇑P **P 13 16 23.9 -0.3**
comp=Z,6µm,3.8s
ESBB Sonseca Array 44.16 39 ⇑P **P 13 16 23.9 -0.2**
comp=Z,6µm,3.8s
EMMW East Machias 44.17 330 *eP* **P 13 16 25.1 +0.9**
comp=Z,1µm,1.6s,mb6.5
EMMW East Machias 44.17 330 *eP* **P 13 16 25.1 +0.9**
comp=Z,1µm,1.6s,mb6.5
USTO Oran 44.33 46 P **P 13 16 30.0 +4.4**
BRYW Bryant College 44.42 325 *eP* **P 13 16 25.7 -0.5**
comp=Z,1µm,1.4s,mb6.5
BRYW Bryant College 44.42 325 *eP* **P 13 16 25.7 -0.5**
comp=Z,1µm,1.4s,mb6.5
ODJA Bouhanifia 44.43 47 P **P 13 16 20.0 -6.4**
EVIA Vianos 44.50 41 ⇑P **P 13 16 27.1 +0.2**
comp=Z,8µm,1.8s,mb7.3
EVIA Vianos 44.50 41 P **P 13 16 27.1 +0.2**
WES Weston 44.60 325 P **P 13 16 28.7 +1.1**
comp=Z,7µm,2.3s,mb7.1
WES Weston 44.60 325 P **P 13 16 28.7 +1.1**
EPON Pontenova 44.61 33 ⇑P **P 13 16 27.2 -0.5**
comp=Z,6µm,3.3s
EPON Pontenova 44.61 33 ⇑P **P 13 16 27.2 -0.5**
comp=Z,6µm,3.3s
GUD Guadarrama 44.62 38 ⇑P **P 13 16 27.9 +0.1**
GUD pmax pmax
comp=Z,5µm,3.2s
GUD Guadarrama 44.62 38 ⇑P **P 13 16 27.9 +0.2**
comp=Z,5µm,3.2s
GUD Guadarrama 44.62 38 P **P 13 16 27.9 +0.1**
comp=Z,5µm,3.2s
TAM Tamanrasset 44.84 66 PFAKE 13 16 40.0 +10
TAM LR LR
comp=Z,94µm,19.0s,MS6.7
YLE Yale 44.86 323 *eP* **P 13 16 31.6 +1.9**
comp=Z,12µm,2.3s,mb7.3
YLE Yale 44.86 323 *eP* **P 13 16 31.6 +1.9**
comp=Z,10µm,2.3s,mb7.2
CNNC Cliffs of the 44.88 313 P **P 13 16 31.5 +1.5**
comp=Z,149nm,1.1s,mb5.7
CNNC LR LR
comp=Z,66µm,20.0s,MS6.6
CNNC Cliffs of the 44.88 313 P **P 13 16 31.5 +1.6**
comp=Z,149nm,1.1s,mb5.7
OJBR Djebel Berber 44.90 47 P **P 13 16 30.0 -0.1**
EMUR La Murta 44.91 43 ⇑P **P 13 16 29.4 -0.8**
comp=Z,4µm,3.3s
EMUR La Murta 44.91 43 ⇑P **P 13 16 29.4 -0.8**
comp=Z,4µm,3.3s
DWPF Disney 44.92 302 *eP* **P 13 16 30.4 0.0**
comp=Z,743nm,1.8s,mb6.2
DWPF LR LR
comp=Z,14µm,19.0s,MS5.9
DWPF Disney 44.92 302 *eP* **P 13 16 30.4 -0.1**
comp=Z,743nm,1.8s,mb6.2
CART Cartagena 44.94 43 *eP* **P 13 16 29.7 -0.8**
comp=Z,982nm,1.4s,mb6.5
CART Cartagena 44.94 43 *eP* **P 13 16 29.7 -0.7**
comp=Z,982nm,1.4s,mb6.5
CART *i* S **S 13 23 08.2 -1.2**
QUA2 Belchertown 45.12 325 *eP* **P 13 16 32.1 +0.3**
comp=Z,695nm,1.4s,mb6.3
QUA2 Belchertown 45.12 325 *eP* **P 13 16 32.1 +0.3**
comp=Z,695nm,1.4s,mb6.3

ETOB Tobarra 45.13 42 ⇑P P 13 16 32.1 +0.1
comp=Z,10µm,4.0s
ETOB Tobarra 45.13 42 ⇑P P 13 16 32.1 +0.2
comp=Z,10µm,4.0s
CPNY Central Park 45.16 322 *eP* **P 13 16 33.6 +1.5**
comp=Z,512nm,1.7s,mb6.1
CPNY Central Park 45.16 322 *eP* **P 13 16 33.6 +1.5**
comp=Z,512nm,1.7s,mb6.1
WVL Waterville 45.17 329 *eP* **P 13 16 31.3 -0.8**
comp=Z,428nm,1.3s,mb6.1
WVL Waterville 45.17 329 *eP* **P 13 16 31.3 -0.8**
comp=Z,428nm,1.3s,mb6.1
PAL Palisades 45.26 322 P **P 13 16 32.7 -0.2**
PAL pmax pmax
comp=Z,224nm,1.3s,mb5.8
PAL Palisades 45.26 322 P **P 13 16 32.7 -0.2**
comp=Z,224nm,1.3s,mb5.8
PAL Palisades 45.26 322 P **P 13 16 32.7 -0.2**
comp=Z,224nm,1.3s,mb5.8
BRNJ Basking Ridge 45.48 321 P **P 13 16 35.4 +0.8**
BRNJ Basking Ridge 45.48 321 P **P 13 16 35.4 +0.8**
PKME Peaks-Kenny Pk 45.48 330 *eP* **P 13 16 34.6 0.0**
comp=Z,260nm,1.3s,mb5.9
PKME LR LR
comp=Z,38µm,21.0s,MS6.3
PKME Peaks-Kenny Pk 45.48 330 *eP* **P 13 16 34.6 +0.1**
comp=Z,260nm,1.3s,mb5.9
ETRT Tiaret 45.51 47 P **P 13 16 36.7 +1.8**
EANR 'Ain N'Sour 45.62 47 P **P 13 16 36.4 +0.6**
EARI Arriondas 45.66 34 ⇑P P 13 16 36.4 +0.3
comp=Z,7µm,3.5s
EARI Arriondas 45.66 34 ⇑P P 13 16 36.4 +0.4
comp=Z,7µm,3.5s
NHSC New Hope 45.67 309 *eP* **P 13 16 37.1 +0.8**
comp=Z,1µm,1.5s,mb6.6
NHSC LR LR
comp=Z,69µm,21.0s,MS6.6
NHSC New Hope 45.67 309 *eP* **P 13 16 37.1 +0.8**
comp=Z,1µm,1.5s,mb6.6
PQI Presque Isle 45.88 332 *eP* **P 13 16 37.4 -0.3**
comp=Z,173nm,1.0s,mb5.9
PQI Presque Isle 45.88 332 *eP* **P 13 16 37.4 -0.3**
comp=Z,173nm,1.0s,mb5.9
ECHA Ech Chlef 45.90 46 P **P 13 16 41.5 +3.4**
CBN Corbin 45.95 317 *eP* **P 13 16 38.8 +0.3**
comp=Z,465nm,1.4s,mb6.2
CBN LR LR
comp=Z,53µm,21.0s,MS6.5
CBN Corbin 45.95 317 *eP* **P 13 16 38.8 +0.4**
comp=Z,465nm,1.4s,mb6.2
HNH Hanover 45.99 326 *eP* **P 13 16 37.6 -1.1**
comp=Z,434nm,1.2s,mb6.3
HNH Hanover 45.99 326 *eP* **P 13 16 37.6 -1.1**
comp=Z,434nm,1.2s,mb6.3
ETOR Torete 46.01 39 ⇑P P 13 16 38.0 -0.9
ETOR pmax pmax
comp=Z,310nm,1.9s,mb5.9
ETOR Torete 46.01 39 ⇑P P 13 16 38.0 -0.9
comp=Z,310nm,1.9s,mb5.9
ETOR Torete 46.01 39 P **P 13 16 38.0 -0.9**
comp=Z,310nm,1.9s,mb5.9
ECHE Chera 46.02 41 ⇑P P 13 16 39.8 +0.8
ECHE pmax pmax
comp=Z,2µm,1.4s,mb6.8
ECHE Chera 46.02 41 ⇑P P 13 16 39.8 +0.8
comp=Z,2µm,1.4s,mb6.8
ECHE Chera 46.02 41 P **P 13 16 39.8 +0.8**
comp=Z,2µm,1.4s,mb6.8
EBEN Beniarda 46.04 43 ⇑P P 13 16 37.9 -1.2
comp=Z,3µm,2.8s,mb6.8
EBEN Beniarda 46.04 43 ⇑P P 13 16 37.9 -1.3
comp=Z,3µm,2.8s,mb6.8
EBNR Beni Rached 46.08 46 P **P 13 16 43.0 +3.5**
LBNH Lisbon 46.15 327 P **P 13 16 40.2 +0.3**
LBNH pmax pmax
comp=Z,2µm,2.2s,mb6.5
LBNH MLR MLR
comp=Z,33µm,19.0s,MS6.3
LBNH Lisbon 46.15 327 P **P 13 16 40.2 +0.4**
comp=Z,2µm,2.2s,mb6.5
LBNH LR LR
comp=Z,33µm,19.0s,MS6.3
LBNH Lisbon 46.15 327 P **P 13 16 40.2 +0.3**
comp=Z,33µm,19.0s
TRY Troy 46.16 324 *eP* **P 13 16 39.7 -0.3**
comp=Z,977nm,1.4s,mb6.5
TRY Troy 46.16 324 *eP* **P 13 16 39.7 -0.3**
comp=Z,977nm,1.4s,mb6.5
COW Cow Castle Cre 46.18 309 *eP* **P 13 16 41.9 +1.6**
COW Cow Castle Cre 46.18 309 *eP* **P 13 16 41.9 +1.6**
SDMD Soldier's Deli 46.22 318 *eP* **P 13 16 40.5 0.0**
comp=Z,1µm,2.0s,mb6.5
SDMD Soldier's Deli 46.22 318 *eP* **P 13 16 40.5 0.0**
comp=Z,1µm,2.0s,mb6.5
ACCN Adirondack Com 46.57 325 P **P 13 16 42.1 -1.0**
comp=Z,1µm,2.5s,mb6.5
ACCN Adirondack Com 46.57 325 P **P 13 16 42.1 -1.1**
comp=Z,1µm,2.5s,mb6.5
ELAN Lanestosa 46.62 35 ⇑P P 13 16 43.7 +0.1
comp=Z,7µm,3.1s
ELAN Lanestosa 46.62 35 ⇑P P 13 16 43.7 +0.1
comp=Z,7µm,3.1s
MDV Middlebury 46.68 326 *eP* **P 13 16 43.7 -0.4**
MDV Middlebury 46.68 326 *eP* **P 13 16 43.7 -0.4**
EMOS Mosqueruela 46.76 40 ⇑P P 13 16 45.8 +1.1
comp=Z,10µm,3.3s
EMOS Mosqueruela 46.76 40 ⇑P P 13 16 45.8 +1.0
comp=Z,10µm,3.3s
ECRI Cripan 46.78 37 ⇑P P 13 16 45.0 +0.1
ECRI pmax pmax
comp=Z,944nm,1.5s,mb6.5
ECRI Cripan 46.78 37 ⇑P P 13 16 45.0 +0.2
comp=Z,944nm,1.5s,mb6.5
ECRI Cripan 46.78 37 P **P 13 16 45.0 +0.1**
comp=Z,944nm,1.5s,mb6.5
MGAN Managua 46.95 279 P **P 13 16 46.6 0.0**
MGAN Managua 46.95 279 P **P 13 16 46.6 0.0**
EMHD Djebel Mahouad 47.07 47 P **P 13 16 47.3 +0.1**
BINY Binghamton 47.22 322 *eP* **P 13 16 48.7 +0.4**
comp=Z,298nm,1.3s,mb6.1
BINY LR LR
comp=Z,14µm,21.0s,MS5.9
BINY Binghamton 47.22 322 *eP* **P 13 16 48.7 +0.4**
comp=Z,298nm,1.3s,mb6.1
NCB Newcomb 47.25 325 *eP* **P 13 16 48.5 0.0**
comp=Z,334nm,1.4s,mb6.1
NCB LR LR
comp=Z,16µm,19.0s,MS6.0
NCB Newcomb 47.25 325 *eP* **P 13 16 48.5 0.0**
comp=Z,334nm,1.4s,mb6.1
EIBI Ibiza 47.26 43 ⇑P P 13 16 48.6 -0.1
comp=Z,6µm,2.9s,mb7.0
EIBI Ibiza 47.26 43 ⇑P P 13 16 48.7 0.0
comp=Z,6µm,2.9s,mb7.0
VWCC Virginia Weste 47.30 314 *eP* **P 13 16 49.1 +0.1**
VWCC Virginia Weste 47.30 314 *eP* **P 13 16 49.1 +0.1**
ABA Alger-Bouzarea 47.39 47 P **P 13 16 52.2 +2.4**
CNGN Cerro Negro 47.39 279 P **P 13 16 49.7 -0.4**
CNGN Cerro Negro 47.39 279 P **P 13 16 49.7 -0.4**
FRNY Flat Rock 47.44 326 *eP* **P 13 16 50.6 +0.6**
comp=Z,396nm,1.4s,mb6.2
FRNY Flat Rock 47.44 326 *eP* **P 13 16 50.6 +0.6**
comp=Z,396nm,1.4s,mb6.2
ESAC San Caprasio 47.51 39 ⇑P P 13 16 50.3 -0.3
comp=Z,9µm,3.3s
ESAC San Caprasio 47.51 39 ⇑P P 13 16 50.3 -0.3
comp=Z,9µm,3.3s
SSPA Standing Stone 47.55 319 *eP* **P 13 16 50.5 -0.4**
comp=Z,647nm,1.8s,mb6.4
SSPA Standing Stone 47.55 319 *eP* **P 13 16 50.5 -0.4**
comp=Z,647nm,1.8s,mb6.4
BLA Blacksburg 47.59 314 *eP* **P 13 16 51.4 +0.1**
BLA pmax pmax
comp=Z,558nm,1.4s,mb6.4
BLA MLR MLR
comp=Z,56µm,20.0s,MS6.5
BLA Blacksburg 47.59 314 *eP* **P 13 16 51.4 +0.1**
comp=Z,558nm,1.4s,mb6.4
BLA LR LR
comp=Z,56µm,20.0s,MS6.5
BLA Blacksburg 47.59 314 *eP* **P 13 16 51.4 +0.1**
comp=Z,56µm,20.0s
ERTA Horta de San J 47.60 40 ⇑P P 13 16 51.7 +0.5
comp=Z,8µm,2.9s,mb7.2
ERTA Horta de San J 47.60 40 ⇑P P 13 16 51.7 +0.4
comp=Z,8µm,2.9s,mb7.2
ELIZ Elizondo 47.69 37 ⇑P P 13 16 52.0 0.0
ELIZ pmax pmax
comp=Z,557nm,1.5s,mb6.4
ELIZ Elizondo 47.69 37 ⇑P P 13 16 52.0 0.0
comp=Z,557nm,1.5s,mb6.4
ELIZ Elizondo 47.69 37 P **P 13 16 52.0 0.0**
comp=Z,557nm,1.5s,mb6.4
EALK Alkurruntz 47.74 37 ⇑P P 13 16 52.2 -0.1
comp=Z,5µm,4.6s
EALK Alkurruntz 47.74 37 ⇑P P 13 16 52.2 -0.1
comp=Z,5µm,4.6s
LONY Lake Ozonia 47.85 326 *eP* **P 13 16 53.6 +0.4**
comp=Z,139nm,1.4s,mb5.8
LONY LR LR
comp=Z,16µm,22.0s,MS5.9
LONY Lake Ozonia 47.85 326 *eP* **P 13 16 53.6 +0.4**
comp=Z,139nm,1.4s,mb5.8
OSSF Osses 47.90 37 *eP* **P 13 16 53.7 +0.1**
OSSF Osses 47.90 37 *eP* **P 13 16 53.7 +0.1**
LARF Larrau 47.94 37 *eP* **P 13 16 52.6 -1.3**
LARF Larrau 47.94 37 *eP* **P 13 16 52.6 -1.3**
TGUH Tegucigalpa,Un 47.98 282 *eP* **P 13 16 54.5 -0.1**
comp=Z,278nm,0.9s,mb6.3
TGUH LR LR
comp=Z,28µm,21.0s,MS6.2
TGUH Tegucigalpa,Un 47.98 282 *eP* **P 13 16 54.5 -0.1**
comp=Z,278nm,0.9s,mb6.3
ORDF Ordiarp 48.07 37 *eP* **P 13 16 54.6 -0.3**
ORDF Ordiarp 48.07 37 *eP* **P 13 16 54.6 -0.3**
LCO Las Campanas 48.12 219 *eP* **P 13 16 53.6 -1.8**
comp=Z,1µm,2.0s,mb6.5
LCO LR LR
comp=Z,74µm,21.0s,MS6.6
LCO Las Campanas 48.12 219 *eP* **P 13 16 53.6 -1.9**
comp=Z,1µm,2.0s,mb6.5
ATE Arette 48.14 37 *eP* **P 13 16 55.9 +0.5**
ATE Arette 48.14 37 *eP* **P 13 16 55.9 +0.5**
MSNY Massena 48.24 326 *eP* **P 13 16 55.2 -1.0**
comp=Z,814nm,1.2s,mb6.6
MSNY Massena 48.24 326 *eP* **P 13 16 55.2 -1.0**
comp=Z,814nm,1.2s,mb6.6
EPOB Poblet 48.28 40 ⇑P P 13 16 56.6 0.0
comp=Z,9µm,4.5s
EPOB Poblet 48.28 40 ⇑P P 13 16 56.6 0.0
comp=Z,9µm,4.5s
REYF Montagne du Re 48.31 37 *eP* **P 13 16 57.7 +0.9**
REYF Montagne du Re 48.31 37 *eP* **P 13 16 57.7 +0.9**
GOGA Godfrey 48.34 308 PFAKE 13 17 10.0 +13
GOGA LR LR
comp=Z,58µm,21.0s,MS6.5
MCWV Mont Chateau 48.34 317 *eP* **P 13 16 55.4 -1.7**
comp=Z,191nm,1.3s,mb6.0
MCWV LR LR
comp=Z,63µm,22.0s,MS6.5
MCWV Mont Chateau 48.34 317 *eP* **P 13 16 55.4 -1.7**
comp=Z,191nm,1.3s,mb6.0
EBIE Bielsa 48.42 38 ⇑P P 13 16 58.3 +0.7
comp=Z,7µm,4.4s
EBIE Bielsa 48.42 38 ⇑P P 13 16 58.3 +0.7
comp=Z,7µm,4.4s
VIEF Viey 48.46 38 *eP* **P 13 16 58.8 +0.9**
VIEF Viey 48.46 38 *eP* **P 13 16 58.8 +0.9**
CFAA Coronel Fontan 48.58 214 S **S 13 23 57.5 -3.9**
comp=Z,0.2nm,0.3s,baz=20,slow=8.9,SNR=2.2
CFAA LR LR 13 39 26.5
comp=Z,4µm,19.1s,MS5.4,baz=45,slow=38
LABF Labassere 48.58 38 *eP* **P 13 16 59.9 +1.0**
LABF Labassere 48.58 38 *eP* **P 13 16 59.9 +1.0**
RESF Ens 48.61 38 *eP* **P 13 17 00.2 +1.1**
RESF Ens 48.61 38 *eP* **P 13 17 00.2 +1.1**
ETOS Mallorca 48.62 43 ⇑P P 13 16 59.0 -0.2
comp=Z,6µm,3.2s
ETOS Mallorca 48.62 43 ⇑P P 13 16 59.0 -0.2
comp=Z,6µm,3.2s
SET Setif 48.86 48 P **P 13 17 02.0 +0.9**
CSOR Sort 48.87 39 ⇑P P 13 17 01.4 +0.4
comp=Z,4µm,1.9s,mb7.2
CSOR Sort 48.87 39 ⇑P P 13 17 01.4 +0.4
comp=Z,4µm,1.9s,mb7.2
EMIR Miracle 48.87 40 ⇑P P 13 17 01.0 0.0
comp=Z,6µm,3.0s
EMIR Miracle 48.87 40 ⇑P P 13 17 01.0 -0.1
comp=Z,6µm,3.0s
CKHR Kef el Ahmar 48.87 49 P **P 13 17 02.9 +1.7**
SALF Salau 49.11 39 *eP* **P 13 17 04.2 +1.3**
SALF Salau 49.11 39 *eP* **P 13 17 04.2 +1.3**
MLS Moulis 49.16 38 *eP* **P 13 17 04.4 +1.1**
MLS Moulis 49.16 38 *eP* **P 13 17 04.4 +1.1**
DFRA Djebel Bou Aff 49.35 48 P **P 13 17 04.1 -0.8**
CFON Fontmartina 49.37 40 ⇑P P 13 17 04.7 -0.2
comp=Z,6µm,3.1s
CFON Fontmartina 49.37 40 ⇑P P 13 17 04.7 -0.2
comp=Z,6µm,3.1s
TEIG Tepich 49.39 290 PFAKE 13 17 20.0 +15
TEIG LR LR
comp=Z,18µm,20.0s,MS6.1
TKL Tuckaleechee C 49.41 311 *eP* **P 13 17 05.1 -0.2**
TKL Tuckaleechee C 49.41 311 *eP* **P 13 17 05.1 -0.2**
VALF Valcebollere 49.43 39 *eP* **P 13 17 06.3 +0.9**
VALF Valcebollere 49.43 39 *eP* **P 13 17 06.3 +0.9**
CLLI Llivia 49.45 39 ⇑P P 13 17 06.1 +0.6
CLLI Llivia 49.45 39 ⇑P P 13 17 06.1 +0.6
VAL Valentia 49.51 23 *eP* **P 13 17 01.6 -4.2**
VAL Valentia 49.51 23 P **P 13 17 04.8 -1.0**
VAL Valentia 49.51 23 P **P 13 17 04.8 -1.0**
ALLY Alegheny Colle 49.53 319 *eP* **P 13 17 05.1 -1.0**
comp=Z,170nm,0.8s,mb6.1
ALLY Alegheny Colle 49.53 319 *eP* **P 13 17 05.1 -1.1**
comp=Z,169nm,0.8s,mb6.1
CTEI Djebel Teioual 49.56 49 P **P 13 17 07.6 +1.1**
BST Brest 49.56 30 *eP* **P 13 17 06.7 +0.4**
BST Brest 49.56 30 *eP* **P 13 17 06.7 +0.4**
CARF Carcanieres 49.65 39 *eP* **P 13 17 08.0 +0.9**
CARF Carcanieres 49.65 39 *eP* **P 13 17 08.0 +0.9**
MAHO Mahon 49.66 43 *i* P **P 13 17 07.0 -0.2**
ERPA Erie 49.67 320 P **P 13 17 05.4 -1.8**
comp=Z,1µm,1.8s,mb6.6
ERPA LR LR
comp=Z,32µm,22.0s,MS6.3
ERPA Erie 49.67 320 P **P 13 17 05.4 -1.8**
comp=Z,1µm,1.8s,mb6.6
CASM Ain Smara 49.70 49 P **P 13 17 08.3 +0.8**
FILF Fillols 49.86 40 *eP* **P 13 17 08.6 0.0**
FILF Fillols 49.86 40 *eP* **P 13 17 08.6 0.0**
CPCT Cooper Cave 49.89 310 *eP* **P 13 17 09.1 +0.1**
CPCT Cooper Cave 49.89 310 *eP* **P 13 17 09.1 +0.1**
CKFL Kef-Lekhel 49.92 49 P **P 13 17 10.1 +0.9**
EJON La Jonquera 50.01 40 ⇑P P 13 17 09.8 0.0
comp=Z,7µm,3.0s
EJON La Jonquera 50.01 40 ⇑P P 13 17 09.8 0.0
comp=Z,7µm,3.0s
SJAF Saint Jean de 50.02 40 *eP* **P 13 17 10.3 +0.4**
SJAF Saint Jean de 50.02 40 *eP* **P 13 17 10.3 +0.4**
LRDF Laroque-de-Fa 50.04 39 *eP* **P 13 17 10.0 0.0**
LRDF Laroque-de-Fa 50.04 39 *eP* **P 13 17 10.0 0.0**
CCA1 Carnmenellis 50.31 27⇑ *eP* **P 13 17 10.2 -1.8**
CCA1 AMB AMB 13 17 15.1
comp=Z,715nm,1.9s,mb6.4
CCA1 *e* 13 24 10.2
CCA1 AMS AMS 13 33 09.0
comp=Z,64µm,18.5s,MS6.7
CCA1 Carnmenellis 50.31 27⇑ *eP* **P 13 17 10.2 -1.7**
ABSA Djebel Ababsia 50.44 49 P **P 13 17 13.8 +0.6**
BRAL Brewton 50.46 304 *eP* **P 13 17 11.3 -2.1**
comp=Z,696nm,1.3s,mb6.5
BRAL LR LR
comp=Z,24µm,20.0s,MS6.2
BRAL Brewton 50.46 304 *eP* **P 13 17 11.3 -2.1**
comp=Z,696nm,1.3s,mb6.5
CMAH Djebel Manchou 50.53 49 P **P 13 17 14.4 +0.6**
ACSO Alum Creek Sta 50.74 316 *eP* **P 13 17 15.2 -0.2**
comp=Z,271nm,1.0s,mb6.1
ACSO LR LR
comp=Z,63µm,22.0s,MS6.6
ACSO Alum Creek Sta 50.74 316 *eP* **P 13 17 15.2 -0.2**
comp=Z,271nm,1.0s,mb6.1
TRQA Tornquist 50.83 204 *eP* **P 13 17 14.8 -1.2**
comp=Z,219nm,1.3s,mb5.9
TRQA LR LR
comp=Z,137µm,19.0s,MS7.0
TRQA Tornquist 50.83 204 *eP* **P 13 17 14.8 -1.2**
comp=Z,219nm,1.3s,mb5.9
SWET Sewanee 50.88 309 *eP* **P 13 17 17.0 +0.4**
comp=Z,1µm,1.8s,mb6.6
SWET Sewanee 50.88 309 *eP* **P 13 17 17.0 +0.5**
comp=Z,1µm,1.8s,mb6.6
LRAL Lakeview Retre 51.00 306 *eP* **P 13 17 17.6 +0.1**
comp=Z,132nm,1.1s,mb5.8
LRAL LR LR
comp=Z,26µm,22.0s,MS6.2
LRAL Lakeview Retre 51.00 306 *eP* **P 13 17 17.6 +0.1**
comp=Z,132nm,1.1s,mb5.8
DYA Yadsworthy 51.08 28 *eP* **P 13 17 15.0 -2.8**
DYA AMB AMB 13 17 20.8
comp=Z,384nm,3.7s
DYA *e* 13 24 05.4
DYA AMS AMS 13 33 42.2
comp=Z,72µm,18.3s,MS6.7
JSA Saint Aubin 51.09 30⇑ *eP* **P 13 17 16.3 -1.5**
JSA AMB AMB 13 17 20.9
comp=Z,547nm,3.7s
JSA Saint Aubin 51.09 30 P **P 13 17 16.9 -0.9**
JSA Saint Aubin 51.09 30 P **P 13 17 16.9 -0.9**
HTL Hartland 51.22 27 *eP* **P 13 17 19.3 +0.5**
HTL AMB AMB 13 17 23.2
comp=Z,316nm,3.4s
HTL *e* 13 24 17.6
HTL AMS AMS 13 33 12.4
comp=Z,49µm,25.3s,MS6.4
HTL Hartland 51.22 27 *eP* **P 13 17 19.3 +0.5**
TRIS Tristan da Cun 51.30 153 PFAKE 13 17 30.0 +10
TRIS LR LR
comp=Z,34µm,20.0s,MS6.4
LMEL Las Melosas 51.35 214⇑ *iP* **P 13 17 19.2 -0.8**
LMEL Las Melosas 51.35 214⇑ *iP* **P 13 17 19.2 -0.8**
VERF Verneugheol 51.52 36 *eP* **P 13 17 21.5 +0.3**
VERF Verneugheol 51.52 36 *eP* **P 13 17 21.5 +0.3**
KEST Kesra 51.66 50 P **P 13 17 22.5 +0.1**
comp=Z,136nm,1.1s,mb5.8,baz=175,slow=4.1,SNR=46
KEST S **S 13 24 43.1 -1.4**
comp=Z,3.0nm,1.1s,baz=190,slow=8.2,SNR=1.8
KEST LR LR 13 39 19.1
comp=Z,51µm,18.9s,MS6.6,baz=218,slow=36
KEST Kesra 51.66 50 *eP* **P 13 17 22.8 +0.5**
KEST Kesra 51.66 50 *eP* **P 13 17 22.8 +0.5**
SCHQ Schefferville 51.71 340 P **P 13 17 22.6 +0.2**
comp=Z,108nm,0.9s,mb5.8,baz=137,slow=6.8,SNR=20
SCHQ S **S 13 24 40.2 -4.3**
comp=Z,2.5nm,0.9s,baz=245,slow=19,SNR=1.4
SCHQ LR LR 13 35 05.3
comp=Z,35µm,22.0s,MS6.3,baz=152,slow=31
SCHQ Schefferville 51.71 340 P **P 13 17 22.5 +0.1**
PYM Petit Puy Mans 51.83 36 *eP* **P 13 17 23.6 +0.1**
PYM Petit Puy Mans 51.83 36 *eP* **P 13 17 23.6 +0.1**
DLF Lyons Farm 52.01 24 *eP* **P 13 17 24.1 -0.6**
DLF Lyons Farm 52.01 24 *eP* **P 13 17 24.1 -0.6**
DSB Dublin 52.04 24 *eP* **P 13 17 25.0 +0.1**
comp=Z,103nm,1.2s,mb5.6
DSB Dublin 52.04 24 *eP* **P 13 17 25.0 +0.2**
comp=Z,103nm,1.2s,mb5.6
AGO Saint Agoulin 52.07 36 *eP* **P 13 17 25.6 +0.4**
AGO Saint Agoulin 52.07 36 *eP* **P 13 17 25.6 +0.4**
COLF Collangettes 52.11 37 *eP* **P 13 17 26.4 +0.8**
COLF Collangettes 52.11 37 *eP* **P 13 17 26.4 +0.8**
AAM Ann Arbor 52.14 318 *eP* **P 13 17 25.9 +0.1**
AAM pmax pmax
comp=Z,207nm,0.7s,mb6.2
AAM MLR MLR
comp=Z,42µm,22.0s,MS6.4
AAM Ann Arbor 52.14 318 *eP* **P 13 17 25.9 0.0**
comp=Z,207nm,0.7s,mb6.2
AAM LR LR
comp=Z,42µm,22.0s,MS6.4
AAM Ann Arbor 52.14 318 *eP* **P 13 17 25.9 +0.1**
comp=Z,42µm,22.0s
WCI Wyandotte Cave 52.25 313 *eP* **P 13 17 25.6 -1.1**
WCI pmax pmax
comp=Z,104nm,0.9s,mb5.8
WCI MLR MLR
comp=Z,48µm,20.0s,MS6.5
WCI Wyandotte Cave 52.25 313 *eP* **P 13 17 25.6 -1.1**
comp=Z,104nm,0.9s,mb5.8
WCI LR LR
comp=Z,48µm,20.0s,MS6.5
WCI Wyandotte Cave 52.25 313 *eP* **P 13 17 25.6 -1.1**
comp=Z,48µm,20.0s
PLDF La Plantade 52.31 36 *eP* **P 13 17 27.2 +0.2**
PLDF La Plantade 52.31 36 *eP* **P 13 17 27.2 +0.2**
HGH Gray Hill 52.42 27⇑ *eP* **P 13 17 26.9 -0.9**
HGH Gray Hill 52.42 27⇑ *eP* **P 13 17 26.9 -0.9**
SSB Saint Sauveur 52.49 38 *eP* **P 13 17 29.0 +0.6**
SSB Saint Sauveur 52.49 38 *eP* **P 13 17 29.0 +0.6**
HTR Trewern Hill 52.52 27⇑ *eP* **P 13 17 26.9 -1.6**
HTR Trewern Hill 52.52 27⇑ *eP* **P 13 17 26.9 -1.6**
MCH1 Michaelchurch 52.58 27⇑ *eP* **P 13 17 29.3 +0.4**
MCH1 AMB AMB 13 17 32.8
comp=Z,584nm,1.8s,mb6.2
MCH1 *e* 13 24 41.8
MCH1 AMS AMS 13 34 29.2
comp=Z,50µm,22.0s,MS6.5
MCH1 Michaelchurch 52.58 27⇑ *eP* **P 13 17 29.3 +0.4**
WVT Waverly 52.65 310 *eP* **P 13 17 28.6 -1.1**
WVT pmax pmax
comp=Z,108nm,0.9s,mb5.8
WVT MLR MLR
comp=Z,44µm,21.0s,MS6.5
WVT Waverly 52.65 310 *eP* **P 13 17 28.6 -1.1**
comp=Z,108nm,0.9s,mb5.8
WVT LR LR
comp=Z,44µm,21.0s,MS6.5
WVT Waverly 52.65 310 *eP* **P 13 17 28.6 -1.1**
comp=Z,44µm,21.0s
CCIG Comitan 52.75 284 *eP* **P 13 17 29.5 -1.2**
CCIG Comitan 52.75 284 *eP* **P 13 17 29.5 -1.3**
BLO Bloomington 52.78 314 *eP* **P 13 17 31.1 +0.5**
BLO pmax pmax
comp=Z,148nm,1.0s,mb5.9
BLO Bloomington 52.78 314 *eP* **P 13 17 31.1 +0.5**
comp=Z,148nm,1.0s,mb5.9
BLO Bloomington 52.78 314 *eP* **P 13 17 31.1 +0.5**
comp=Z,148nm,1.0s,mb5.9
SWN1 Swindon 52.80 28 *eP* **P 13 17 29.8 -0.8**
SWN1 AMB AMB 13 17 34.5
comp=Z,880nm,1.9s,mb6.4
SWN1 *e* 13 24 51.0
SWN1 AMS AMS 13 34 56.6
comp=Z,60µm,19.7s,MS6.6
SWN1 Swindon 52.80 28 *eP* **P 13 17 29.8 -0.8**
WLF1 Llynfaes 52.88 25⇑ *eP* **P 13 17 30.0 -1.1**
WLF1 AMB AMB 13 17 35.1
comp=Z,2µm,3.6s
WLF1 *e* 13 24 57.6
WLF1 AMS AMS 13 34 04.3
comp=Z,152µm,24.4s,MS7.0
WLF1 Llynfaes 52.88 25⇑ *eP* **P 13 17 30.0 -1.1**
WOL Wolverton 52.94 29 P **P 13 17 30.8 -0.8**
WOL AMB AMB 13 17 35.6
comp=Z,1µm,1.9s,mb6.5
WOL *e* 13 24 50.7
WOL AMS AMS 13 35 33.5
comp=Z,64µm,22.1s
WOL Wolverton 52.94 29⇑ *eP* **P 13 17 30.8 -0.8**
WOL AMB AMB 13 17 35.6
comp=Z,1µm,1.9s,mb6.5
WOL *e* 13 24 50.7
WOL AMS AMS 13 35 33.5
comp=Z,64µm,22.1s,MS6.6
WOL Wolverton 52.94 29⇑ *eP* **P 13 17 30.8 -0.8**
VSL Villasalto 53.06 46 P **P 13 17 31.7 -1.0**
comp=Z,1µm,2.1s,mb6.4
VSL Villasalto 53.06 46 P **P 13 17 31.7 -1.0**
comp=Z,1µm,2.1s,mb6.4
USIN University of 53.16 312 *eP* **P 13 17 33.4 -0.1**
comp=Z,428nm,1.4s,mb6.2
USIN University of 53.16 312 *eP* **P 13 17 33.4 -0.1**
comp=Z,428nm,1.4s,mb6.2
CALN Calern 53.20 40 *eP* **P 13 17 33.9 +0.3**
CALN Calern 53.20 40 *eP* **P 13 17 33.9 +0.3**
GRN Grenoble 53.21 38 *eP* **P 13 17 34.5 +0.8**
GRN Grenoble 53.21 38 *eP* **P 13 17 34.5 +0.8**
SCX San Cristobal 53.24 285 *i* P **P 13 17 35.5 +1.1**
SCX San Cristobal 53.24 285 *i* P **P 13 17 35.5 +1.1**
OXF Oxford 53.36 307 *eP* **P 13 17 33.6 -1.4**
OXF pmax pmax
comp=Z,275nm,1.0s,mb6.1
OXF MLR MLR
comp=Z,51µm,22.0s,MS6.5
OXF Oxford 53.36 307 *eP* **P 13 17 33.6 -1.5**
comp=Z,275nm,1.0s,mb6.1
OXF LR LR
comp=Z,51µm,22.0s,MS6.5

OXF Oxford 53.36 307 *eP* **P 13 17 33.6 -1.4**
comp=Z,51µm,22.0s
GDM Grand'Maison 53.41 38 *eP* **P 13 17 35.8 +0.6**
GDM Grand'Maison 53.41 38 *eP* **P 13 17 35.8 +0.6**
MVIF Mont Vial 53.44 40 *eP* **P 13 17 35.4 0.0**
MVIF Mont Vial 53.44 40 *eP* **P 13 17 35.4 0.0**
SURF Saint Ours 53.50 39 *eP* **P 13 17 36.8 +1.0**
SURF Saint Ours 53.50 39 *eP* **P 13 17 36.8 +1.0**
REVF Revere 53.50 40 *eP* **P 13 17 36.3 +0.4**
REVF Revere 53.50 40 *eP* **P 13 17 36.3 +0.4**
UTMT University of 53.51 310 *eP* **P 13 17 35.7 -0.4**
comp=Z,486nm,1.1s,mb6.3
UTMT University of 53.51 310 *eP* **P 13 17 35.7 -0.4**
comp=Z,486nm,1.1s,mb6.3
DGI Dorgali Grotta 53.54 45 P **P 13 17 35.3 -0.9**
DGI Dorgali Grotta 53.54 45 P **P 13 17 35.3 -0.9**
TOUF Mont Tournerai 53.55 40 *eP* **P 13 17 37.1 +0.9**
TOUF Mont Tournerai 53.55 40 *eP* **P 13 17 37.1 +0.9**
LUCF Luceram 53.56 40 *eP* **P 13 17 36.6 +0.3**
LUCF Luceram 53.56 40 *eP* **P 13 17 36.6 +0.3**
GIM North Isle of 53.58 24 *eP* **P 13 17 35.7 -0.5**
GIM North Isle of 53.58 24 *eP* **P 13 17 35.7 -0.5**
VBMS Vicksburg 53.62 304 *eP* **P 13 17 37.8 +0.8**
comp=Z,968nm,1.7s,mb6.5
VBMS LR LR
comp=Z,34µm,19.0s,MS6.4
VBMS Vicksburg 53.62 304 *eP* **P 13 17 37.8 +0.8**
comp=Z,968nm,1.7s,mb6.5
AUTN L'Aution 53.66 40 *eP* **P 13 17 37.4 +0.4**
AUTN L'Aution 53.66 40 *eP* **P 13 17 37.4 +0.4**
STNC Stoke 53.69 26 *eP* **P 13 17 37.9 +0.8**
STNC AMB AMB 13 17 40.9
comp=Z,463nm,1.8s,mb6.1
STNC AMS AMS 13 35 15.3
comp=Z,34µm,19.9s,MS6.4
STNC Stoke 53.69 26 *eP* **P 13 17 37.9 +0.9**
PZZ Stroppo 53.70 40 P **P 13 17 36.9 -0.4**
comp=Z,822nm,1.2s,mb6.5
PZZ Stroppo 53.70 40 P **P 13 17 36.9 -0.4**
comp=Z,822nm,1.2s,mb6.5
HALT Halls 53.73 309 *eP* **P 13 17 38.3 +0.5**
HALT Halls 53.73 309 *eP* **P 13 17 38.3 +0.6**
SAOF Saorge 53.73 40 *eP* **P 13 17 37.6 0.0**
SAOF Saorge 53.73 40 *eP* **P 13 17 37.6 0.0**
OLIL Olney 53.75 313 *eP* **P 13 17 38.6 +0.7**
comp=Z,589nm,1.1s,mb6.4
OLIL Olney 53.75 313 *eP* **P 13 17 38.6 +0.8**
comp=Z,589nm,1.1s,mb6.4
DOI San Damiano 53.78 40 P **P 13 17 37.9 0.0**
comp=Z,2µm,2.0s,mb6.7
DOI San Damiano 53.78 40 P **P 13 17 37.9 0.0**
comp=Z,2µm,2.0s,mb6.7
GLAT Glass 53.81 309 *eP* **P 13 17 38.8 +0.5**
GLAT Glass 53.81 309 *eP* **P 13 17 38.8 +0.5**
CWF Charnwood Fore 53.85 27⇑*eP* **P 13 17 36.2 -2.1**
CWF AMB AMB 13 17 40.7
comp=Z,410nm,1.8s,mb6.1
CWF *e* 13 25 08.7
CWF AMS AMS 13 35 58.4
comp=Z,45µm,21.6s,MS6.5
CWF Charnwood Fore 53.85 27⇑*eP* **P 13 17 36.2 -2.0**
GAL1 Galloway 53.90 24 *eP* **P 13 17 38.9 +0.3**
GAL1 AMB AMB 13 17 42.2
comp=Z,268nm,3.5s
GAL1 *e* 13 24 54.9
GAL1 AMS AMS 13 33 26.9
comp=Z,44µm,30.0s,MS6.3
GAL1 Galloway 53.90 24 P **P 13 17 39.7 +1.2**
GAL1 Galloway 53.90 24 *eP* **P 13 17 38.8 +0.3**
IMI Imperia 53.92 41 P **P 13 17 38.5 -0.4**
IMI Imperia 53.92 41 P **P 13 17 38.5 -0.4**
GLMI Grayling 53.94 321 *eP* **P 13 17 39.7 +0.7**
comp=Z,151nm,0.9s,mb5.9
GLMI Grayling 53.94 321 *eP* **P 13 17 39.7 +0.7**
comp=Z,151nm,0.9s,mb5.9
RSL Roselend 53.97 38 *eP* **P 13 17 39.5 +0.3**
RSL Roselend 53.97 38 *eP* **P 13 17 39.5 +0.3**
ELSH Elham, Standar 53.98 30 P **P 13 17 38.6 -0.6**
ELSH AMB AMB 13 17 43.0
comp=Z,650nm,1.7s,mb6.3
ELSH Elham, Standar 53.98 30 *eP* **P 13 17 38.6 -0.6**
ELSH AMB AMB 13 17 43.0
comp=Z,650nm,1.7s,mb6.3
ELSH Elham, Standar 53.98 30 *eP* **P 13 17 38.6 -0.6**
RSP Reno Superiore 54.10 39 P **P 13 17 39.4 -0.8**
RSP Reno Superiore 54.10 39 P **P 13 17 39.4 -0.8**
LSD Lago del Serru 54.17 39 P **P 13 17 40.9 +0.2**
GIMEL St. Georges / 54.17 37⇑*iP* **P 13 17 41.1 +0.4**
comp=Z,3µm,2.7s,mb6.8
GCD Castle Douglas 54.20 24⇑*eP* **P 13 17 39.6 -1.1**
GCD Castle Douglas 54.20 24⇑*eP* **P 13 17 39.7 -1.1**
SIUC Southern Illin 54.23 311 *eP* **P 13 17 40.3 -1.0**
comp=Z,286nm,0.9s,mb6.2
SIUC Southern Illin 54.23 311 *eP* **P 13 17 40.3 -1.0**
comp=Z,286nm,0.9s,mb6.2
GNAR Gosnell 54.27 309 *eP* **P 13 17 42.0 +0.4**
comp=Z,10µm,1.5s,mb7.5
GNAR Gosnell 54.27 309 *eP* **P 13 17 42.0 +0.3**
comp=Z,10µm,1.5s,mb7.5
OG01 Vacheresse 54.32 37 *eP* **P 13 17 42.6 +0.8**
OG01 Vacheresse 54.32 37 *eP* **P 13 17 42.6 +0.8**
KESW Keswick, Cumbr 54.34 25⇑*eP* **P 13 17 40.7 -1.1**
KESW AMB AMB 13 17 45.6
comp=Z,444nm,3.8s
KESW Keswick, Cumbr 54.34 25⇑*eP* **P 13 17 40.7 -1.1**
QLNO Quiliano 54.40 40 P **P 13 17 40.1 -2.3**
comp=Z,536nm,1.9s,mb6.2
QLNO Quiliano 54.40 40 P **P 13 17 40.1 -2.3**
comp=Z,536nm,1.9s,mb6.2
SALAN Lac Salanfe 54.40 38⇑*iP* **P 13 17 42.7 +0.3**
comp=Z,3µm,3.3s
AIGLE Aigle 54.49 37⇑*iP* **P 13 17 43.1 +0.1**
comp=Z,3µm,2.9s,mb6.7
BRANT Les Verrieres 54.50 37⇑*iP* **P 13 17 43.4 +0.3**
comp=Z,5µm,3.3s
HPK Haverah Park 54.53 26⇑*eP* **P 13 17 41.8 -1.4**
HPK AMB AMB 13 17 47.9
comp=Z,497nm,2.0s,mb6.2
HPK *e* 13 25 07.3
HPK AMS AMS 13 35 41.0
comp=Z,46µm,20.0s,MS6.5
HPK Haverah Park 54.53 26 P **P 13 17 44.0 +0.8**
HPK Haverah Park 54.53 26 P **P 13 17 44.0 +0.8**
GRYON Gryon 54.54 38⇑*iP* **P 13 17 43.6 +0.2**
comp=Z,2µm,2.5s,mb6.8
TRAV Traversella 54.57 39 P **P 13 17 41.1 -2.5**
TRAV Traversella 54.57 39 P **P 13 17 41.1 -2.5**
PCP Piancastagn 54.62 40 P **P 13 17 43.5 -0.5**
comp=Z,1µm,3.4s
PCP Piancastagn 54.62 40 P **P 13 17 43.5 -0.5**
comp=Z,1µm,3.4s
DIX Grande Dixence 54.63 38⇑*iP* **P 13 17 44.9 +0.8**
comp=Z,3µm,2.5s,mb6.8
HBAR Harrisburg 54.65 308 *eP* **P 13 17 45.6 +1.2**
HBAR Harrisburg 54.65 308 *eP* **P 13 17 45.6 +1.2**
PGBU Glenifferbraes 54.68 23 *eP* **P 13 17 43.1 -1.1**
PGBU AMB AMB 13 17 47.8
comp=Z,400nm,1.8s,mb6.2
PGBU *e* 13 25 01.8
PGBU AMS AMS 13 33 47.6
comp=Z,41µm,30.1s,MS6.3
TORNY Torny/Romont 54.70 37⇑*iP* **P 13 17 45.2 +0.6**
comp=Z,5µm,3.3s
SENIN Lac Senin/Sane 54.71 38⇑*iP* **P 13 17 44.9 +0.3**
comp=Z,5µm,3.3s
ECK Cauldkaine Hil 54.76 24⇑*eP* **P 13 17 43.0 -1.8**
ECK Cauldkaine Hil 54.76 24⇑*eP* **P 13 17 43.0 -1.8**
ORO Oropa 54.77 39 P **P 13 17 44.7 -0.4**
ORO Oropa 54.77 39 P **P 13 17 44.7 -0.4**
ESK Eskdalemuir 54.82 24 *eP* **P 13 17 44.1 -1.2**
ESK AMB AMB 13 17 52.8
comp=Z,165nm,2.6s,mb5.6
ESK *e* 13 25 01.4
ESK AMS AMS 13 33 52.8
comp=Z,45µm,28.2s,MS6.4
ESK Eskdalemuir 54.82 24 *iP* **P 13 17 48.0 +2.7**
ESK Eskdalemuir 54.82 24 *eP* **P 13 17 45.3 +0.1**
comp=Z,93nm,1.0s,mb5.8
ESK LR LR
comp=Z,43µm,19.0s,MS6.5
ESK Eskdalemuir 54.82 24 *eP* **P 13 17 45.3 0.0**
comp=Z,93nm,1.0s,mb5.8
EKA Eskdalemuir Ar 54.85 24 P **P 13 17 44.9 -0.6**
comp=Z,30nm,0.9s,mb5.3,baz=224,slow=6.3,SNR=28
EKA Eskdalemuir Ar 54.85 24 P **P 13 17 44.9 -0.6**

EKA pmax pmax
comp=Z,31nm,0.9s
EKA Eskdalemuir Ar 54.85 24 P **P 13 17 44.9 -0.6**
comp=Z,31nm,0.9s,mb5.3
ERC Erice 54.88 49 P **P 13 17 46.7 +0.7**
ERC Erice 54.88 49 P **P 13 17 46.7 +0.7**
THEF They Montfort 54.88 35 *eP* **P 13 17 45.7 -0.1**
THEF They Montfort 54.88 35 *eP* **P 13 17 45.7 -0.1**
XAL Allendale 54.91 25 *eP* **P 13 17 45.7 -0.2**
XAL Allendale 54.91 25 *eP* **P 13 17 45.7 -0.2**
LKBD Leukerbad 54.92 38⇑*iP* **P 13 17 46.5 +0.4**
comp=Z,2µm,1.6s,mb6.9
LOMF Lomont 54.92 36 *eP* **P 13 17 46.3 +0.2**
LOMF Lomont 54.92 36 *eP* **P 13 17 46.3 +0.2**
MMK Mattmark 54.96 38⇑*iP* **P 13 17 47.3 +0.8**
comp=Z,4µm,2.9s,mb7.0
KAR1 Arisaig 55.00 21⇑*eP* **P 13 17 45.2 -1.3**
KAR1 Arisaig 55.00 21⇑*eP* **P 13 17 45.2 -1.3**
EAB Aberfoyle 55.01 23⇑*eP* **P 13 17 46.5 -0.1**
EAB Aberfoyle 55.01 23⇑*eP* **P 13 17 46.5 -0.1**
WIMIS Wimmis 55.05 37⇑*iP* **P 13 17 47.3 +0.2**
comp=Z,3µm,2.8s,mb6.8
EAU Auchinoon 55.10 23⇑*eP* **P 13 17 47.6 +0.2**
EAU Auchinoon 55.10 23⇑*eP* **P 13 17 47.6 +0.3**
DOU Dourbes 55.13 33 P **P 13 17 47.9 +0.3**
comp=Z,305nm,2.0s,mb6.0
BOURR Bourrignon 55.17 36⇑*iP* **P 13 17 47.9 -0.1**
comp=Z,3µm,2.0s,mb7.0
SC2M Scurtabo 55.19 41 P **P 13 17 46.9 -1.3**
comp=Z,2µm,2.9s,mb6.7
SC2M Scurtabo 55.19 41 P **P 13 17 46.9 -1.3**
comp=Z,2µm,2.9s,mb6.7
SNF Seneffe 55.20 32 P **P 13 17 48.1 0.0**
comp=Z,266nm,2.2s,mb5.9
EBL Broad Law 55.21 24⇑*eP* **P 13 17 48.1 0.0**
EBL Broad Law 55.21 24⇑*eP* **P 13 17 48.1 0.0**
FVM French Village 55.22 311 *eP* **P 13 17 48.0 -0.5**
FVM pmax pmax
comp=Z,312nm,1.4s,mb6.2
FVM French Village 55.22 311 *eP* **P 13 17 48.0 -0.5**
comp=Z,312nm,1.4s,mb6.2
FVM French Village 55.22 311 *eP* **P 13 17 48.0 -0.5**
comp=Z,312nm,1.4s,mb6.2
EDI Edinburgh 55.26 23 *eP* **P 13 17 47.7 -0.7**
EDI AMB AMB 13 17 50.9
comp=Z,379nm,3.7s
EDI *e* 13 25 26.2
EDI AMS AMS 13 34 06.8
comp=Z,50µm,25.9s,MS6.5
EDI Edinburgh 55.26 23 *eP* **P 13 17 47.7 -0.8**
HDIL Hopedale 55.27 314 *eP* **P 13 17 48.6 -0.3**
comp=Z,226nm,1.0s,mb6.2
HDIL LR LR
comp=Z,56µm,21.0s,MS6.6
HDIL Hopedale 55.27 314 *eP* **P 13 17 48.6 -0.3**
comp=Z,226nm,1.0s,mb6.2
SLM Saint Louis 55.29 312 *eP* **P 13 17 48.1 -0.9**
SLM pmax pmax
comp=Z,521nm,1.5s,mb6.3
SLM Saint Louis 55.29 312 *eP* **P 13 17 48.1 -0.9**
comp=Z,520nm,1.5s,mb6.3
SLM Saint Louis 55.29 312 *eP* **P 13 17 48.1 -0.9**
comp=Z,521nm,1.5s,mb6.3
BOB Bobbio (Coli) 55.30 40 P **P 13 17 47.1 -1.8**
comp=Z,2µm,2.4s,mb6.7
BOB Bobbio (Coli) 55.30 40 P **P 13 17 47.1 -1.8**
comp=Z,2µm,2.4s,mb6.7
MOF Molkenrain 55.35 36 *eP* **P 13 17 49.1 -0.1**
MOF Molkenrain 55.35 36 *eP* **P 13 17 49.1 -0.1**
KSB Sheil Bridge 55.37 21⇑*eP* **P 13 17 46.9 -2.3**
KSB Sheil Bridge 55.37 21⇑*eP* **P 13 17 46.8 -2.4**
EBH Black Hill 55.37 23⇑*eP* **P 13 17 47.1 -2.1**
EBH Black Hill 55.37 23⇑*eP* **P 13 17 47.1 -2.1**
BBS Basel-Blauen 55.37 37 *eP* **P 13 17 49.0 -0.4**
BBS Basel-Blauen 55.37 37 *eP* **P 13 17 49.0 -0.4**
KPL Plockton 55.38 21 *eP* **P 13 17 48.9 -0.4**
KPL AMB AMB 13 17 52.6
comp=Z,457nm,1.9s,mb6.2
KPL *e* 13 25 11.8
KPL AMS AMS 13 34 11.1
comp=Z,47µm,22.5s,MS6.5
KPL Plockton 55.38 21 P **P 13 17 49.0 -0.3**
KPL Plockton 55.38 21 P **P 13 17 49.0 -0.3**
UCC Uccle 55.41 32 P **P 13 17 50.7 +1.1**
HASLI Hasliberg/Brie 55.41 38⇑*iP* **P 13 17 49.6 -0.1**
comp=Z,4µm,2.6s,mb7.0
BALST Balsthal 55.42 37⇑*iP* **P 13 17 49.6 -0.2**
comp=Z,3µm,1.9s,mb7.0
MAON Monte Argentar 55.43 43 P **P 13 17 47.6 -2.3**
MAON Monte Argentar 55.43 43 P **P 13 17 47.6 -2.3**
FAVR Favara 55.45 50 P **P 13 17 52.6 +2.5**
FAVR Favara 55.45 50 P **P 13 17 52.6 +2.5**
RRH Rhenigidale 55.47 20⇑*eP* **P 13 17 48.8 -1.1**
RRH Rhenigidale 55.47 20⇑*eP* **P 13 17 48.8 -1.1**
USI Ustica 55.54 48 P **P 13 17 50.1 -0.7**
USI Ustica 55.54 48 P **P 13 17 50.1 -0.7**
ECH Echery 55.55 36 *eP* **P 13 17 49.8 -0.9**
ECH Echery 55.55 36 *eP* **P 13 17 49.7 -1.0**
ECH pmax pmax
comp=Z,303nm,1.0s,mb6.3
ECH MLR MLR
comp=Z,49µm,20.0s,MS6.6
ECH Echery 55.55 36 *eP* **P 13 17 49.7 -0.9**
comp=Z,303nm,1.0s,mb6.3
ECH LR LR
comp=Z,49µm,20.0s,MS6.6
ECH Echery 55.55 36 *eP* **P 13 17 49.8 -0.9**
PII Pisa 55.55 42 P **P 13 17 49.9 -0.9**
PII Pisa 55.55 42 P **P 13 17 49.9 -0.9**
MUGIO Muggio 55.56 39⇑*iP* **P 13 17 49.9 -0.9**
comp=Z,2µm,2.4s,mb6.7
FUSIO Fusio 55.58 38⇑*iP* **P 13 17 51.1 +0.2**
comp=Z,3µm,1.9s,mb7.0
KAC Achnashellach 55.63 21⇑*eP* **P 13 17 49.1 -1.9**
KAC Achnashellach 55.63 21⇑*eP* **P 13 17 49.1 -2.0**
BNALP Bannalp 55.63 38⇑*iP* **P 13 17 51.5 +0.2**
comp=Z,4µm,2.7s,mb6.9
BCLA Clavier 55.69 33 P **P 13 17 51.7 +0.1**
comp=Z,342nm,2.1s,mb6.0
RRR Rubha Reidh 55.72 21⇑*eP* **P 13 17 50.6 -1.1**
RRR Rubha Reidh 55.72 21⇑*eP* **P 13 17 50.6 -1.1**
WLF Walferdange 55.74 34 P **P 13 17 52.4 +0.4**
comp=Z,250nm,2.2s,mb5.9
WLF Walferdange 55.74 34 *eP* **P 13 17 51.4 -0.6**
comp=Z,6µm,17.8s
WLF Walferdange 55.74 34 *eP* **P 13 17 51.9 -0.1**
WLF pmax pmax
comp=Z,283nm,1.2s,mb6.2
WLF MLR MLR
comp=Z,101µm,19.0s,MS6.9
WLF Walferdange 55.74 34 *eP* **P 13 17 51.9 -0.1**
comp=Z,283nm,1.2s,mb6.2
WLF LR LR
comp=Z,101µm,19.0s,MS6.9
WLF Walferdange 55.74 34 *eP* **P 13 17 51.9 -0.1**
comp=Z,798nm,19.0s
UALR University of 55.76 307 *eP* **P 13 17 51.8 -0.7**
comp=Z,269nm,1.2s,mb6.2
UALR University of 55.76 307 *eP* **P 13 17 51.8 -0.7**
comp=Z,269nm,1.2s,mb6.2
SULZ Cheisacher 55.76 37⇑*iP* **P 13 17 52.0 -0.2**
comp=Z,3µm,1.9s,mb7.0
ERBM Eremo 55.77 41 P **P 13 17 52.3 0.0**
ERBM Eremo 55.77 41 P **P 13 17 52.3 0.0**
LIBD Limburg 55.77 36 *eP* **P 13 17 52.1 -0.2**
LIBD Limburg 55.77 36 *eP* **P 13 17 52.1 -0.2**
MUO Muotathal 55.80 37⇑*iP* **P 13 17 52.8 +0.3**
comp=Z,4µm,1.9s,mb7.1
CCM Cathedral Cave 55.85 311 *eP* **P 13 17 52.4 -0.7**
CCM pmax pmax
comp=Z,1µm,2.0s,mb6.5
CCM MLR MLR
comp=Z,53µm,21.0s,MS6.6
CCM Cathedral Cave 55.85 311 *eP* **P 13 17 52.4 -0.6**
comp=Z,1µm,2.0s,mb6.5
CCM LR LR
comp=Z,53µm,21.0s,MS6.6
CCM Cathedral Cave 55.85 311 *eP* **P 13 17 52.4 -0.7**
comp=Z,53µm,21.0s
KIZ Kirchzarten 55.86 36 P **P 13 17 53.5 +0.6**
KIZ Kirchzarten 55.86 36 P **P 13 17 53.5 +0.6**
FELD Feldberg im Sc 55.87 36 *eP* **P 13 17 52.4 -0.6**
FELD Feldberg im Sc 55.87 36 *eP* **P 13 17 52.4 -0.6**
TOLF Tolfa 55.88 44 P **P 13 17 52.3 -0.9**
comp=Z,2µm,2.8s,mb6.7

TOLF Tolfa 55.88 44 P **P 13 17 52.3 -0.9**
comp=Z,2µm,2.8s,mb6.7
MDO Dochfour 55.92 22⇑*eP* **P 13 17 51.5 -1.7**
MDO Dochfour 55.92 22⇑*eP* **P 13 17 51.5 -1.7**
GIB Gibilmanna 55.94 49 P **P 13 17 52.9 -0.8**
GIB Gibilmanna 55.94 49 P **P 13 17 52.9 -0.8**
RAFF Raffo Rosso 55.96 50 P **P 13 17 53.6 -0.3**
RAFF Raffo Rosso 55.96 50 P **P 13 17 53.6 -0.3**
ZUR Degenried 55.96 37⇑*iP* **P 13 17 53.8 +0.1**
comp=Z,4µm,2.0s,mb7.1
LLS Linth-Limmern 55.97 38⇑*iP* **P 13 17 53.7 0.0**
comp=Z,3µm,2.6s,mb6.8
FLACH Flaach 56.05 37⇑*iP* **P 13 17 54.1 -0.2**
comp=Z,4µm,2.5s,mb7.0
BEBN Eben Emael 56.10 32 P **P 13 17 54.4 -0.2**
comp=Z,128nm,2.2s,mb5.6
SLE Schleitheim 56.10 37⇑*iP* **P 13 17 54.2 -0.4**
comp=Z,3µm,3.3s
SLE Schleitheim 56.10 37 P **P 13 17 54.9 +0.3**
SLE Schleitheim 56.10 37 P **P 13 17 54.9 +0.3**
SLE Schleitheim 56.10 37 P **P 13 17 54.9 +0.3**
ZCCA Zocca 56.11 41 P **P 13 17 54.6 -0.1**
ZCCA Zocca 56.11 41 P **P 13 17 54.6 -0.1**
FNVD Fontana Vidola 56.13 41 P **P 13 17 54.0 -0.9**
FNVD Fontana Vidola 56.13 41 P **P 13 17 54.0 -0.9**
MEM Membach 56.17 33 P **P 13 17 55.5 +0.5**
comp=Z,312nm,2.0s,mb6.0
WILA Wila 56.18 37⇑*iP* **P 13 17 55.2 0.0**
comp=Z,3µm,1.9s,mb7.0
HMDC Modica 56.20 51 P **P 13 17 53.8 -1.8**
HMDC Modica 56.20 51 P **P 13 17 53.8 -1.8**
HGN Heimansgroeve 56.21 32⇑*iP* **P 13 17 54.6 -0.8**
comp=Z,358nm,1.8s,mb6.1
HGN Heimansgroeve 56.21 32 P **P 13 17 55.6 +0.2**
HGN Heimansgroeve 56.21 32 P **P 13 17 55.6 +0.2**
HGN *i* S **S 13 25 45.8 +0.1**
HVZN Vizzini 56.22 50 P **P 13 17 55.8 +0.1**
HVZN Vizzini 56.22 50 P **P 13 17 55.8 +0.1**
LAV9 Lanuvio 56.22 45 P **P 13 17 58.8 +3.2**
SEI Scarperia 56.23 42 P **P 13 17 55.6 -0.1**
SEI Scarperia 56.23 42 P **P 13 17 55.6 -0.1**
RUP Ruppelstein 56.26 34 *eP* **P 13 17 55.3 -0.4**
RUP Ruppelstein 56.26 34 *eP* **P 13 17 55.3 -0.4**
RDP Rocca di Papa 56.27 45 P **P 13 17 55.0 -0.9**
RDP Rocca di Papa 56.27 45 P **P 13 17 55.0 -0.9**
STEIN Stein am Rhein 56.28 37⇑*iP* **P 13 17 55.7 -0.2**
comp=Z,5µm,2.5s,mb7.1
BFO Black Forest 56.28 36 *eP* **P 13 17 55.6 -0.3**
comp=Z,6µm,5.6s
BFO Black Forest 56.28 36 *eP* **P 13 17 55.6 -0.3**
BFO pmax pmax
comp=Z,6µm,5.6s
BFO Black Forest 56.28 36 P **P 13 17 55.5 -0.4**
comp=Z,2µm,1.0s,mb7.1,SNR=75
BFO Black Forest 56.28 36 *eP* **P 13 17 55.6 -0.3**
comp=Z,6µm,5.6s
MGAB Montegabbione 56.28 43 P **P 13 17 55.1 -0.9**
MGAB Montegabbione 56.28 43 P **P 13 17 55.1 -0.9**
PLONS Plons/SG 56.29 38⇑*iP* **P 13 17 55.7 -0.3**
comp=Z,4µm,2.3s,mb7.0
LANF Langenberg 56.30 35 *eP* **P 13 17 55.4 -0.7**
LANF Langenberg 56.30 35 *eP* **P 13 17 55.4 -0.7**
RSC Scourie 56.31 20⇑*eP* **P 13 17 54.2 -1.8**
RSC Scourie 56.31 20⇑*eP* **P 13 17 54.2 -1.8**
VMG Vicchio 56.32 42 P **P 13 17 56.0 -0.3**
VMG Vicchio 56.32 42 P **P 13 17 56.0 -0.3**
SISB Singen-Schiene 56.34 37 P **P 13 17 57.5 +1.1**
SISB Singen-Schiene 56.34 37 P **P 13 17 57.5 +1.1**
MVH1 Achvaich 56.35 21⇑*eP* **P 13 17 53.6 -2.6**
MVH1 Achvaich 56.35 21⇑*eP* **P 13 17 53.6 -2.6**
RAVA Ravarino 56.37 41 P **P 13 17 58.0 +1.4**
RAVA Ravarino 56.37 41 P **P 13 17 58.0 +1.4**
MTCE Montecelio 56.38 44 P **P 13 17 55.8 -1.0**
MTCE Montecelio 56.38 44 P **P 13 17 55.8 -1.0**
BERNI Berninapass 56.39 39⇑*iP* **P 13 17 56.3 -0.5**
comp=Z,2µm,2.6s,mb6.8
VENT Ventotene 56.42 46 P **P 13 17 55.6 -1.4**
VENT Ventotene 56.42 46 P **P 13 17 55.6 -1.4**
SPAK Spaichingen-Ko 56.44 36 *eP* **P 13 17 56.8 -0.2**
SPAK Spaichingen-Ko 56.44 36 *eP* **P 13 17 56.8 -0.2**
HAVL Avola 56.47 51 P **P 13 17 59.4 +1.9**
HAVL Avola 56.47 51 P **P 13 17 59.4 +1.9**
DAVOX Davos/Dischmat 56.47 38 P **P 13 17 57.5 +0.2**
comp=Z,77nm,0.9s,mb5.7,baz=208,slow=5.0,SNR=31
DAVOX S **S 13 25 42.6 -6.7**
comp=Z,7.0nm,0.4s,baz=176,slow=22,SNR=1.8
DAVOX Davos/Dischmat 56.47 38⇑*iP* **P 13 17 57.2 -0.1**
comp=Z,2µm,2.4s,mb6.8
DAVOX Davos/Dischmat 56.47 38 P **P 13 17 57.5 +0.2**
LIENZ Kamor/St.Gall 56.47 37⇑*iP* **P 13 17 57.2 -0.1**
comp=Z,3µm,2.0s,mb7.0
SSY Sortino 56.48 51 P **P 13 17 56.8 -0.8**
SSY Sortino 56.48 51 P **P 13 17 56.8 -0.8**
MABI Malga Bissina 56.54 39 P **P 13 17 55.9 -1.9**
MABI Malga Bissina 56.54 39 P **P 13 17 55.9 -1.9**
HUIG Huatulco 56.55 283 *eP* **P 13 17 56.3 -2.1**
HUIG Huatulco 56.55 283 *eP* **P 13 17 56.3 -2.1**
FIU Minerbio Fiu 56.56 41 P **P 13 17 58.9 +0.9**
FIU Minerbio Fiu 56.56 41 P **P 13 17 58.9 +0.9**
CDCA Citt' di Caste 56.58 43 P **P 13 17 59.5 +1.4**
CDCA Citt' di Caste 56.58 43 P **P 13 17 59.5 +1.4**
BADI Badiali 56.60 43 P **P 13 17 56.3 -2.0**
BADI Badiali 56.60 43 P **P 13 17 56.3 -2.0**
OPLO Oploo 56.61 32 P **P 13 17 58.6 +0.4**
OPLO Oploo 56.61 32 P **P 13 17 58.6 +0.4**
GUT Gutenstein 56.62 37 P **P 13 17 59.1 +0.8**
GUT Gutenstein 56.62 37 P **P 13 17 59.1 +0.8**
ABH Alteburg 56.62 34 *eP* **P 13 17 58.5 +0.2**
ABH Alteburg 56.62 34 *eP* **P 13 17 58.5 +0.2**
AGST Augusta-Monte 56.63 51 P **P 13 17 58.8 +0.2**
AGST Augusta-Monte 56.63 51 P **P 13 17 58.8 +0.2**
KTD Kalmit 56.63 35 *eP* **P 13 17 58.4 0.0**
KTD Kalmit 56.63 35 *eP* **P 13 17 58.4 0.0**
FUORN Ofenpass-Fuorn 56.63 38⇑*iP* **P 13 17 58.1 -0.4**
comp=Z,2µm,2.1s,mb6.9
MIAR Mount Ida 56.68 306 *eP* **P 13 17 58.3 -0.7**
MIAR pmax pmax
comp=Z,670nm,1.9s,mb6.3
MIAR MLR MLR
comp=Z,39µm,22.0s,MS6.5
MIAR Mount Ida 56.68 306 *eP* **P 13 17 58.3 -0.8**
comp=Z,670nm,1.9s,mb6.3
MIAR LR LR
comp=Z,39µm,22.0s,MS6.5
MIAR Mount Ida 56.68 306 *eP* **P 13 17 58.3 -0.7**
comp=Z,39µm,22.0s
GUAR Guarcino 56.69 45 P **P 13 17 58.5 -0.5**
GUAR Guarcino 56.69 45 P **P 13 17 58.5 -0.5**
DAVA Damuels 56.70 38 P **P 13 17 59.1 +0.1**
DAVA Damuels 56.70 38⇑*iP* **P 13 17 58.5 -0.4**
comp=Z,662nm,1.2s,mb6.5,SNR=127
DAVA Damuels 56.70 38 P **P 13 17 59.1 +0.1**
LBG Lerchenberg 56.72 36 P **P 13 18 01.6 +2.6**
LBG Lerchenberg 56.72 36 P **P 13 18 01.6 +2.6**
NOV Novara 56.79 50 P **P 13 17 57.3 -2.4**
NOV Novara 56.79 50 P **P 13 17 57.3 -2.4**
PLCA Paso Flores 56.79 209 P **P 13 17 58.7 -0.9**
comp=Z,66nm,1.0s,mb5.6,baz=34,slow=8.6,SNR=63
PLCA S **S 13 25 49.4 -4.1**
comp=Z,1.9nm,0.9s,baz=247,slow=19,SNR=2.2
PLCA LR LR 13 44 43.5
comp=Z,64µm,18.2s,MS6.8,baz=44,slow=38
PLCA PKP2bc 13 48 01.9
comp=Z,4.9nm,1.2s,baz=245,slow=5.6,SNR=3.7
PLCA Paso Flores 56.79 209 P **P 13 17 58.7 -0.9**
PLCA S **S 13 25 49.4 -4.1**
PLCA pmax pmax
comp=Z,66nm,1.0s
PLCA smax
comp=N,2.0nm,0.9s
PLCA MLR MLR
comp=Z,64µm,18.2s
PLCA Paso Flores 56.79 209 *eP* **P 13 17 58.4 -1.2**
comp=Z,266nm,1.2s,mb6.2
PLCA LR LR
comp=Z,57µm,20.0s,MS6.7
PLCA Paso Flores 56.79 209 *eP* **P 13 17 58.4 -1.2**
comp=Z,266nm,1.2s,mb6.2
PLCA S **S 13 25 49.4 -4.1**
comp=Z,64µm,18.2s
PIEI Pieia 56.81 43 P **P 13 17 58.8 -1.0**
PIEI Pieia 56.81 43 P **P 13 17 58.8 -1.0**
JFWS Jewell Farm 56.81 317 *eP* **P 13 17 58.1 -1.7**

JFWS pmax pmax
comp=Z,171nm,0.9s,mb6.1
JFWS MLR MLR
comp=Z,54µm,22.0s,MS6.6
JFWS Jewell Farm 56.81 317 *eP* **P 13 17 58.0 -1.8**
comp=Z,171nm,0.9s,mb6.1
JFWS LR LR
comp=Z,54µm,22.0s,MS6.6
JFWS Jewell Farm 56.81 317 *eP* **P 13 17 58.1 -1.7**
comp=Z,54µm,22.0s
CESI CESI - Serrava 56.86 43 P **P 13 17 59.0 -1.1**
CESI CESI - Serrava 56.86 43 P **P 13 17 59.0 -1.1**
BUCH Bad Urach 56.94 36 P **P 13 18 02.1 +1.5**
BUCH Bad Urach 56.94 36 P **P 13 18 02.1 +1.5**
NATX Nacogdoches 56.95 303 *eP* **P 13 18 00.3 -0.6**
comp=Z,588nm,1.3s,mb6.5
NATX LR LR
comp=Z,20µm,19.0s,MS6.2
NATX Nacogdoches 56.95 303 *eP* **P 13 18 00.3 -0.7**
comp=Z,588nm,1.3s,mb6.5
AQU L'Aquila 56.96 44 P **P 13 17 57.9 -3.0**
SNTG Esanatoglia 56.98 43 P **P 13 17 59.6 -1.4**
SNTG Esanatoglia 56.98 43 P **P 13 17 59.6 -1.4**
STU Stuttgart 57.00 36 *eP* **P 13 18 00.6 -0.4**
comp=Z,5µm,17.0s
STU Stuttgart 57.00 36 *eP* **P 13 18 00.5 -0.5**
STU pmax pmax
comp=Z,313nm,1.0s,mb6.3
STU Stuttgart 57.00 36 *eP* **P 13 18 00.5 -0.6**
comp=Z,313nm,1.0s,mb6.3
STU Stuttgart 57.00 36 *eP* **P 13 18 00.4 -0.6**
comp=Z,313nm,1.0s,mb6.3
UBR Ueberruh 57.02 37 P **P 13 18 02.2 +1.0**
UBR Ueberruh 57.02 37 P **P 13 18 02.2 +1.0**
SWS Schriesheim-Wi 57.06 35 P **P 13 18 02.5 +1.0**
SWS Schriesheim-Wi 57.06 35 P **P 13 18 02.5 +1.0**
FETA Feichten 57.10 38⇑ *iP* **P 13 18 01.0 -0.8**
comp=Z,301nm,1.1s,mb6.2,SNR=107
PESA Pesaro 57.17 42 P **P 13 18 03.0 +0.7**
PESA Pesaro 57.17 42 P **P 13 18 03.0 +0.7**
VHO Vista Hermosa 57.17 285 *eP* **P 13 18 00.7 -2.2**
VHO Vista Hermosa 57.17 285 *eP* **P 13 18 00.6 -2.2**
TOD Tromm 57.18 35 *eP* **P 13 18 01.8 -0.5**
TOD Tromm 57.18 35 *eP* **P 13 18 01.8 -0.5**
CTI Castel Tesino 57.25 40 P **P 13 18 02.6 -0.3**
CTI Castel Tesino 57.25 40 P **P 13 18 02.6 -0.3**
BUG Bochum--Univer 57.29 32 *eP* **P 13 18 02.7 -0.3**
comp=Z,5µm,4.0s
BUG Bochum--Univer 57.29 32 P **P 13 18 03.3 +0.3**
BUG Bochum--Univer 57.29 32 P **P 13 18 03.3 +0.3**
TNS Taunus Mts 57.29 34 *eP* **P 13 18 02.7 -0.4**
comp=Z,9µm,4.3s
TNS Taunus Mts 57.29 34 *eP* **P 13 18 02.7 -0.4**
WTSB Winterswijk 57.33 32⇑ *iP* **P 13 18 02.3 -1.0**
comp=Z,532nm,2.0s,mb6.2
WTSB Winterswijk 57.33 32 P **P 13 18 03.6 +0.3**
WTSB Winterswijk 57.33 32 P **P 13 18 03.6 +0.3**
RETA Reutte 57.33 38⇑ *iP* **P 13 18 02.6 -0.7**
comp=Z,473nm,1.2s,mb6.4,SNR=62
MOTA Moosalm 57.47 38⇑ *iP* **P 13 18 03.7 -0.7**
comp=Z,252nm,1.1s,mb6.2,SNR=53
MOTA Moosalm 57.47 38 P **P 13 18 04.7 +0.3**
SOI Samo 57.49 50 P **P 13 18 04.0 -0.7**
SOI Samo 57.49 50 P **P 13 18 04.0 -0.7**
HDH Heidenheim-Cha 57.50 36 P **P 13 18 05.4 +0.8**
HDH Heidenheim-Cha 57.50 36 P **P 13 18 05.4 +0.8**
SIND Sindeldorf 57.51 35 P **P 13 18 05.1 +0.4**
SIND Sindeldorf 57.51 35 P **P 13 18 05.1 +0.4**
HKT Hockley 57.60 300 *eP* **P 13 18 04.4 -1.2**
HKT pmax pmax
comp=Z,1µm,2.1s,mb6.5
HKT MLR MLR
comp=Z,16µm,21.0s,MS6.1
HKT Hockley 57.60 300 *eP* **P 13 18 04.4 -1.3**
comp=Z,1µm,2.1s,mb6.5
HKT LR LR
comp=Z,16µm,21.0s,MS6.1
HKT Hockley 57.60 300 *eP* **P 13 18 04.4 -1.2**
comp=Z,16µm,21.0s
WIT Witteveen 57.73 31⇑ *eP* **P 13 18 05.7 -0.4**
comp=Z,1µm,2.2s,mb6.6
WIT Witteveen 57.73 31 P **P 13 18 06.1 0.0**
WIT Witteveen 57.73 31 P **P 13 18 06.1 0.0**
WATA Walderalm 57.76 38⇓ *iP* **P 13 18 05.4 -1.0**
comp=Z,265nm,1.2s,mb6.2,SNR=29
WATA Walderalm 57.76 38 P **P 13 18 06.7 +0.3**
WTTA Wattenberg 57.76 38⇑ *iP* **P 13 18 05.6 -0.9**
comp=Z,439nm,1.2s,mb6.4,SNR=91
WTTA Wattenberg 57.76 38 P **P 13 18 06.2 -0.2**
BORG Borgarnes 57.84 9 P **P 13 18 08.6 +1.9**
comp=Z,156nm,1.1s,mb6.0,baz=163,slow=4.8,SNR=14
BORG S **S 13 26 18.9 +12**
comp=Z,9.2nm,0.8s,baz=102,slow=6.2,SNR=3.2
BORG Borgarnes 57.84 9 *eP* **P 13 18 08.7 +2.0**
BORG pmax pmax
comp=Z,335nm,1.2s
BORG MLR MLR
comp=Z,25µm,20.0s
BORG Borgarnes 57.84 9 *eP* **P 13 18 08.7 +2.0**
comp=Z,334nm,1.2s,mb6.2
BORG LR LR
comp=Z,25µm,20.0s,MS6.3
BORG Borgarnes 57.84 9 P **P 13 18 10.0 +3.3**
comp=Z,1µm,1.3s,mb6.8,SNR=9.0
BORG Borgarnes 57.84 9 *eP* **P 13 18 08.7 +2.0**
comp=Z,25µm,20.0s
FUR Furstenfeldbru 57.94 37 *eP* **P 13 18 07.3 -0.4**
comp=Z,8µm,8.3s
FUR Furstenfeldbru 57.94 37 *eP* **P 13 18 07.3 -0.4**
FUR pmax pmax
comp=Z,8µm,8.3s
FUR Furstenfeldbru 57.94 37 *eP* **P 13 18 07.3 -0.4**
comp=Z,8µm,8.3s
IBBN Ibbenburen 58.01 32 *eP* **P 13 18 07.7 -0.4**
comp=Z,5µm,4.9s
ABTA Abfaltersbach 58.09 39⇓ *iP* **P 13 18 08.1 -0.6**
comp=Z,476nm,1.3s,mb6.4,SNR=175
UBBA Unterbreizbach 58.45 34 *eP* **P 13 18 10.3 -0.9**
comp=Z,4µm,5.3s
PNIG Pinotepa 58.50 284 *iP* **P 13 18 07.5 -4.7**
MS1 Monte Sant'Ang 58.51 46 *eP* **P 13 18 12.3 +0.5**
CDT Castel del Mon 58.55 47 *eP* **P 13 18 12.9 +0.8**
GRFO Grafenberg 58.60 36 P **P 13 18 12.3 0.0**
GRA1 Grafenberg Arr 58.60 36 *eP* **P 13 18 11.8 -0.5**
comp=Z,6µm,7.4s
GRA1 *e*PP PP 13 20 26.4 +4.5
GRA1 *e*S **S 13 26 16.4 -0.8**
GRA1 LR LR
comp=Z,39µm,19.4s,MS6.5
GRA1 Grafenberg Arr 58.60 36 *eP* **P 13 18 11.8 -0.5**
comp=Z,6µm,7.4s
GRA1 *e*S **S 13 26 16.4 -0.8**
GRF Grafenberg Arr 58.60 36 *eP* **P 13 18 11.8 -0.5**
comp=Z,6µm,7.4s
GRF *e*PP PP 13 20 26.4 +4.5
GRF *e*S **S 13 26 16.4 -0.8**
GRF *e*L 13 41 22.1
comp=Z,39µm,19.4s
GRF Grafenberg Arr 58.60 36 *eP* **P 13 18 11.8 -0.5**
GRF *e* 13 20 26.4
GRF *e*S **S 13 26 16.4 -0.8**
GRF pmax pmax
comp=Z,6µm,7.4s
GRF MLR MLR
comp=Z,39µm,19.4s,MS6.5
GRF Grafenberg Arr 58.60 36 *eP* **P 13 18 11.8 -0.5**
comp=Z,6µm,7.4s
GRF *e*S **S 13 26 16.4 -0.8**
SOFL Sornfelli, Far 58.63 17 AMS AMS 13 37 04.2
comp=Z,33µm,17.6s,MS6.5
SOFL Sornfelli, Far 58.63 17 P **P 13 18 12.9 +0.6**
SOFL Sornfelli, Far 58.63 17 AMS AMS 13 37 04.2
comp=Z,33µm,17.6s
SOFL Sornfelli, Far 58.63 17 P **P 13 18 12.9 +0.6**
VOY Vojsko 58.67 40 *eP* **P 13 18 12.0 -0.8**
VOY Vojsko 58.67 40 *eP* **P 13 18 12.0 -0.8**
VOY Vojsko 58.67 40 P **P 13 18 12.0 -0.8**
RJOB Jochberg 58.68 38 *eP* **P 13 18 11.9 -0.9**
comp=Z,6µm,7.4s
JAVS Javornik 58.73 41 *iP* **P 13 18 12.8 -0.4**
JAVS *i* pP 13 18 15.2 +1.0
JAVS *e*S **S 13 26 20.0 +1.1**
JAVS Javornik 58.73 41 *iP* **P 13 18 12.8 -0.4**
JAVS *i* pP 13 18 15.2 +1.0
JAVS *e*S **S 13 26 20.0 +1.1**
JAVS Javornik 58.73 41 *iP* **P 13 18 12.8 -0.4**
JAVS *e*S **S 13 26 20.0 +1.1**
KBA Koelnbreinsper 58.74 39⇑ *iP* **P 13 18 12.5 -0.8**
comp=Z,422nm,1.4s,mb6.3,SNR=83
KBA Koelnbreinsper 58.74 39 P **P 13 18 12.8 -0.5**
MYKA Terra Mystica 58.75 40⇑ *iP* **P 13 18 13.0 -0.4**
comp=Z,471nm,1.2s,mb6.4
NVLJ Novalja 58.76 42 P **P 13 18 13.3 -0.1**
NVLJ Novalja 58.76 42 *iP* **P 13 18 13.3 -0.2**
SG1 Sgolgore (BA) 58.77 47 *eP* **P 13 18 14.8 +1.2**
CRNS Crni Vrh 58.93 40 *eP* **P 13 18 14.1 -0.5**
WAL1 Walls 58.96 21⇑ *eP* **P 13 18 11.9 -2.6**
WAL1 Walls 58.96 21⇑ *eP* **P 13 18 11.9 -2.6**
BAI Bari 58.99 47 *eP* **P 13 18 17.0 +1.8**
LRW Lerwick 59.02 21 P **P 13 18 16.0 +1.0**
LRW Lerwick 59.02 21 P **P 13 18 16.0 +1.0**
KVTX Kingsville 59.03 297 *eP* **P 13 18 15.9 +0.3**
comp=Z,2µm,1.5s,mb6.8
KVTX LR LR
comp=Z,17µm,21.0s,MS6.2
KVTX Kingsville 59.03 297 *eP* **P 13 18 15.9 +0.2**
comp=Z,2µm,1.5s,mb6.8
LJU Ljubljana 59.08 41 *iP* **P 13 18 15.4 -0.3**
LJU *i* pP 13 18 17.8 +1.1
LJU *e*S **S 13 26 27.2 +3.7**
LJU Ljubljana 59.08 41 *iP* **P 13 18 15.3 -0.3**
LJU *i* pP 13 18 17.8 +1.1
LJU *e*S **S 13 26 27.2 +3.7**
LJU Ljubljana 59.08 41 *iP* **P 13 18 15.4 -0.3**
CLZ Clausthal 59.16 33 *eP* **P 13 18 15.6 -0.5**
comp=Z,5µm,17.6s
CLZ Clausthal 59.16 33 *eP* **P 13 18 15.6 -0.5**
CLZ pmax pmax
comp=Z,5µm,17.6s
CLZ Clausthal 59.16 33 *eP* **P 13 18 15.6 -0.5**
comp=Z,5µm,17.6s
ROTZ Rotzenmuhle 59.21 36 *eP* **P 13 18 16.1 -0.4**
comp=Z,5µm,8.1s
MOX Moxa 59.27 35⇓ *iP* **P 13 18 17.0 +0.1**
comp=Z,844nm,1.8s,mb6.5
MOX *e*S **S 13 26 33.0 +7.2**
MOX
comp=Z,44µm,19.0s
MOX Moxa 59.27 35 *eP* **P 13 18 16.7 -0.2**
comp=Z,5µm,6.9s
MOX Moxa 59.27 35⇓ *iP* **P 13 18 17.0 +0.1**
MOX *e*S **S 13 26 33.0 +7.2**
MOX pmax pmax
comp=Z,844nm,1.8s,mb6.5
MOX MLR MLR
comp=Z,44µm,19.0s,MS6.6
MOX Moxa 59.27 35 *iP* **P 13 18 17.0 +0.1**
comp=Z,844nm,1.8s,mb6.5
MOX *e*S **S 13 26 33.0 +7.2**
comp=Z,44µm,19.0s
OBKA Obir 59.28 40 P **P 13 18 17.0 0.0**
OBKA Obir 59.28 40⇑ *iP* **P 13 18 17.0 0.0**
comp=Z,507nm,1.2s,mb6.4,SNR=54
OBKA Obir 59.28 40 P **P 13 18 17.0 0.0**
PE1 Pezze di Greco 59.30 47 *eP* **P 13 18 18.5 +1.2**
WET Wettzell 59.33 37 *eP* **P 13 18 16.3 -1.0**
comp=Z,4µm,5.9s
WET *e*PP PP 13 20 31.7 +3.4
WET Wettzell 59.33 37 *eP* **P 13 18 16.3 -1.0**
WET *e* 13 20 31.7
WET pmax pmax
comp=Z,4µm,5.9s
WET Wettzell 59.33 37 *eP* **P 13 18 16.3 -1.0**
comp=Z,4µm,5.9s
NRDL Niedersach Rie 59.34 32 *eP* **P 13 18 17.0 -0.3**
comp=Z,6µm,18.4s
SFJD Kangerlussuaq 59.35 355 *eP* **P 13 18 16.7 -0.4**
SFJD pmax pmax
comp=Z,166nm,1.6s,mb5.8
SFJD MLR MLR
comp=Z,7µm,19.0s,MS5.8
SFJD Kangerlussuaq 59.35 355 *eP* **P 13 18 16.6 -0.5**
comp=Z,166nm,1.6s,mb5.8
SFJD LR LR
comp=Z,7µm,19.0s,MS5.8
SFJD Kangerlussuaq 59.35 355 *eP* **P 13 18 16.6 -0.5**
comp=Z,166nm,1.6s,mb5.8
BOJS Bojanci 59.35 41 *iP* **P 13 18 17.2 -0.4**
BOJS *i* pP 13 18 19.6 +1.0
BOJS *e*S **S 13 26 29.5 +2.5**
BOJS Bojanci 59.35 41 *iP* **P 13 18 17.2 -0.4**
BOJS *i* pP 13 18 19.6 +1.0
BOJS *e*S **S 13 26 29.5 +2.5**
BOJS Bojanci 59.35 41 *iP* **P 13 18 17.2 -0.4**
BOJS *e*S **S 13 26 29.5 +2.5**
GUNZ Gunzen 59.55 35 P **P 13 18 19.1 +0.3**
GUNZ Gunzen 59.55 35 P **P 13 18 19.1 +0.3**
NKC Novy Kostel 59.56 35 *eP* **P 13 18 19.4 +0.5**
NKC *e* 13 20 38.0
NKC *e*S **S 13 26 35.1 +5.6**
NKC MLR MLR
comp=Z,68µm,31.2s,MS6.6
NKC Novy Kostel 59.56 35 P **P 13 18 18.6 -0.3**
NKC Novy Kostel 59.56 35 *eP* **P 13 18 19.4 +0.5**
NKC *e*PP PP 13 20 38.0 +7.7
NKC *e*S **S 13 26 35.1 +5.6**
NKC AMS AMS 13 36 20.0
comp=Z,68µm,31.2s
NKC Novy Kostel 59.56 35 P **P 13 18 18.6 -0.3**
EYMN Ely 59.58 322 *eP* **P 13 18 17.3 -1.8**
comp=Z,97nm,1.3s,mb5.7
EYMN LR LR
comp=Z,19µm,22.0s,MS6.2
EYMN Ely 59.58 322 *eP* **P 13 18 17.3 -1.8**
comp=Z,97nm,1.3s,mb5.7
MOA Molln 59.63 39 P **P 13 18 18.4 -1.0**
MOA Molln 59.63 39⇑ *iP* **P 13 18 18.0 -1.4**
comp=Z,392nm,1.2s,mb6.3,SNR=26
MOA Molln 59.63 39 P **P 13 18 18.4 -1.0**
TANN Tannenbergstha 59.65 35 *eP* **P 13 18 19.0 -0.5**
comp=Z,5µm,7.8s
SOKA Soboth 59.65 40⇑ *iP* **P 13 18 19.0 -0.6**
comp=Z,478nm,1.6s,mb6.3
PERS Pernice 59.69 40 *iP* **P 13 18 19.1 -0.7**
PERS *i* pP 13 18 21.6 +0.8
PERS *e*S **S 13 26 34.7 +3.4**
PERS Pernice 59.69 40 *iP* **P 13 18 19.1 -0.7**
PERS *i* pP 13 18 21.6 +0.8
PERS *e*S **S 13 26 34.7 +3.4**
PERS Pernice 59.69 40 *iP* **P 13 18 19.1 -0.8**
GEC2 GERESS Array S 59.69 37 *eP* **P 13 18 18.9 -0.9**
comp=Z,4µm,7.7s
GEC2 *e*PP PP 13 20 35.2 +3.7
GEC2 GERESS Array S 59.69 37 *eP* **P 13 18 18.9 -0.9**
GEC2 *e* 13 20 35.2
GEC2 pmax pmax
comp=Z,4µm,7.7s
GEC2 GERESS Array S 59.69 37 *eP* **P 13 18 18.9 -0.9**
comp=Z,4µm,7.7s
KHC Kasperske Hory 59.74 37 *eP* **P 13 18 19.9 -0.3**
KHC *e* 13 20 36.2
KHC *e*S **S 13 26 36.3 +4.4**
KHC MLR MLR
comp=Z,55µm,25.2s,MS6.6
KHC Kasperske Hory 59.74 37 *eP* **P 13 18 19.4 -0.8**
comp=Z,462nm,1.4s,mb6.3
KHC Kasperske Hory 59.74 37 *eP* **P 13 18 19.9 -0.3**
KHC *e*PP PP 13 20 36.2 +4.3
KHC *e*S **S 13 26 36.3 +4.4**
KHC AMS AMS 13 37 10.0
comp=Z,55µm,25.2s
KHC Kasperske Hory 59.74 37 *eP* **P 13 18 19.9 -0.3**
STON Ston 60.12 45 P **P 13 18 21.5 -1.4**
STON Ston 60.12 45 *iP* **P 13 18 21.4 -1.5**
ACX Acapulco 60.16 285 *iP* **P 13 18 23.4 -0.3**
ACX Acapulco 60.16 285 *iP* **P 13 18 23.4 -0.3**
ARSA Arzberg 60.18 40 P **P 13 18 22.6 -0.6**
ARSA Arzberg 60.18 40⇑ *iP* **P 13 18 21.9 -1.3**
comp=Z,263nm,1.5s,mb6.0,SNR=104
ARSA Arzberg 60.18 40 P **P 13 18 22.6 -0.6**
KSU1 Kansas State U 60.18 311 *eP* **P 13 18 22.1 -1.3**
comp=Z,383nm,1.4s,mb6.2
KSU1 LR LR
comp=Z,42µm,22.0s,MS6.5
KSU1 Kansas State U 60.18 311 *eP* **P 13 18 22.1 -1.3**
comp=Z,383nm,1.4s,mb6.2
KOGS Kog 60.34 41 P **P 13 18 24.8 +0.4**
KOGS Kog 60.34 41 P **P 13 18 24.8 +0.4**
CLL Collm 60.35 35 *eP* **P 13 18 23.6 -0.7**
comp=Z,4µm,6.9s
CLL Collm 60.35 35 *iP* **P 13 18 23.7 -0.6**
CLL *i* 13 18 29.5
CLL *e*S **S 13 26 38.0 -1.7**
CLL MLR MLR
comp=Z,69µm,18.5s,MS6.8
CLL Collm 60.35 35 *iP* **P 13 18 23.7 -0.6**
comp=Z,544nm,1.7s,mb6.3
CLL *i* 13 18 29.5
CLL *e*S **S 13 26 38.0 -1.7**
CLL LR LR
comp=Z,69µm,18.5s,MS6.8
CLL Collm 60.35 35 *iP* **P 13 18 23.7 -0.6**
comp=Z,544nm,1.7s,mb6.3
CLL *i* 13 18 29.5
CLL *i* 13 18 33.4
CLL *e*PP PP 13 20 30.0 -7.3
CLL *e*S **S 13 26 38.0 -1.7**
comp=N,19µm,26.9s
CLL *e*S **S 13 26 38.0 -1.7**
comp=E,25µm,25.8s
CLL *e*SS SS 13 30 36.0 -1.2
CLL *e*SSS 13 33 24.0
CLL Lm 13 42 00.0
comp=N,29µm,18.3s
CLL Lm 13 42 00.0
comp=E,57µm,18.6s
CLL Lm 13 42 00.0
comp=Z,69µm,18.5s
CLL Collm 60.35 35 *iP* **P 13 18 23.7 -0.6**
CLL *e*S **S 13 26 38.0 -1.7**
FBE Freiberg 60.38 35 *eP* **P 13 18 24.2 -0.3**
comp=Z,1µm,2.1s,mb6.7
HCY Herceg Novi 60.55 46⇑ *iP* **P 13 18 25.3 -0.6**
HCY Herceg Novi 60.55 46⇑ *iP* **P 13 18 25.4 -0.5**
HCY Herceg Novi 60.55 46⇑ *iP* **P 13 18 25.4 -0.5**
PRA Prague 60.64 36 P **P 13 18 28.0 +1.7**
PRA PP PP 13 20 48.0 +8.1
PRA S **S 13 26 52.0 +8.6**
PRA AMS AMS 13 37 00.0
CONA Conrad Observa 60.65 39⇑ *iP* **P 13 18 25.5 -1.0**
comp=Z,412nm,1.3s,mb6.4,SNR=138
PRU Pruhonice 60.67 36 *eP* **P 13 18 27.8 +1.3**
PRU *e* 13 20 48.2
PRU *e*S **S 13 26 49.9 +6.1**
PRU MLR MLR
comp=Z,63µm,33.8s,MS6.5
PRU Pruhonice 60.67 36 P **P 13 18 26.9 +0.4**
PRU Pruhonice 60.67 36 *eP* **P 13 18 27.8 +1.3**
PRU *e*PP PP 13 20 48.2 +8.1
PRU *e*S **S 13 26 49.9 +6.1**
PRU AMS AMS 13 36 30.0
comp=Z,63µm,33.8s
PRU Pruhonice 60.67 36 P **P 13 18 26.9 +0.4**
BRG Berggiesshubel 60.70 35 *eP* **P 13 18 26.3 -0.4**
comp=Z,5µm,7.3s
BRG Berggiesshubel 60.70 35⇑ *iP* **P 13 18 26.2 -0.4**
comp=Z,1µm,2.1s,mb6.7
BRG *e* 13 20 44.4
comp=Z,680nm,2.7s
BRG S **S 13 26 53.0 +8.9**
BRG SS SS 13 30 41.0 -1.6
BRG *e* 13 33 28.0
BRG PKPPKP 13 47 46.7
comp=Z,31nm,1.7s
BRG
comp=Z,53µm,17.3s
BRG
comp=N,20µm,18.5s
BRG
comp=E,42µm,18.5s
BRG Berggiesshubel 60.70 35⇑ *iP* **P 13 18 26.2 -0.5**
BRG *e* 13 20 44.4
BRG pmax pmax
comp=Z,715nm,2.7s,mb6.3
BRG Berggiesshubel 60.70 35 *iP* **P 13 18 26.2 -0.5**
BRY Bratogost 60.72 45⇑ *iP* **P 13 18 25.8 -1.2**
BRY Bratogost 60.72 45⇑ *iP* **P 13 18 25.8 -1.2**
BRY Bratogost 60.72 45⇑ *iP* **P 13 18 25.8 -1.2**
KEK Kerkira 60.75 49 P **P 13 18 27.7 +0.4**
KEK Kerkira 60.75 49 *eP* **P 13 18 21.9 -5.4**
KEK Kerkira 60.75 49 P **P 13 18 27.5 +0.2**
KEK Kerkira 60.75 49 P **P 13 18 27.5 +0.2**
BUM Brajici-Budva 60.79 46⇑ *iP* **P 13 18 28.0 +0.5**
BUM Brajici-Budva 60.79 46⇑ *iP* **P 13 18 28.1 +0.5**
BUM Brajici-Budva 60.79 46⇑ *iP* **P 13 18 28.0 +0.5**
PVCC Panska Ves 60.91 36 *eP* **P 13 18 28.7 +0.6**
PVCC *e* 13 20 49.1
PVCC *e*S **S 13 26 52.0 +5.2**
PVCC MLR MLR
comp=Z,45µm,17.8s,MS6.7
PVCC Panska Ves 60.91 36 P **P 13 18 27.7 -0.4**
PVCC Panska Ves 60.91 36 *eP* **P 13 18 28.7 +0.6**
PVCC *e*PP PP 13 20 49.1 +6.8
PVCC *e*S **S 13 26 52.0 +5.2**
PVCC AMS AMS 13 41 50.0
comp=Z,45µm,17.8s
PVCC Panska Ves 60.91 36 P **P 13 18 27.7 -0.4**
WMOK Wichita Mounta 60.91 305 *eP* **P 13 18 26.0 -2.5**
WMOK pmax pmax
comp=Z,102nm,1.1s,mb5.9
WMOK MLR MLR
comp=Z,41µm,21.0s,MS6.6
WMOK Wichita Mounta 60.91 305 *eP* **P 13 18 26.0 -2.5**
comp=Z,102nm,1.1s,mb5.9
WMOK LR LR
comp=Z,41µm,21.0s,MS6.6
WMOK Wichita Mounta 60.91 305 *eP* **P 13 18 26.0 -2.5**
comp=Z,41µm,21.0s
MUD Monsted U'grnd 60.95 28 *iP* **P 13 18 28.0 -0.3**
MUD pmax pmax
comp=Z,80nm,1.1s,mb5.8
MUD MLR MLR
comp=Z,37µm,18.0s,MS6.6
MUD Monsted U'grnd 60.95 28 P **P 13 18 27.9 -0.4**
MUD Monsted U'grnd 60.95 28 *iP* **P 13 18 28.0 -0.3**
comp=Z,80nm,1.1s,mb5.8
MUD
comp=Z,37µm,18.0s
MUD Monsted U'grnd 60.95 28 *iP* **P 13 18 28.1 -0.2**
comp=Z,80nm,1.1s,mb5.8,SNR=21
TREC Trest 60.95 37 *eP* **P 13 18 29.3 +0.9**
TREC *e* 13 20 48.1
TREC *e*S **S 13 26 51.6 +4.2**
TREC MLR MLR
comp=Z,72µm,24.6s,MS6.7
TREC Trest 60.95 37 *eP* **P 13 18 29.3 +0.9**
TREC *e*PP PP 13 20 48.1 +5.5
TREC *e*S **S 13 26 51.6 +4.2**
TREC AMS AMS 13 39 20.0
comp=Z,72µm,24.6s
TREC Trest 60.95 37 *eP* **P 13 18 29.3 +0.9**
ULC Ulcinj 60.95 46⇑ *iP* **P 13 18 28.8 +0.2**
ULC Ulcinj 60.95 46⇑ *iP* **P 13 18 28.8 +0.2**
ULC Ulcinj 60.95 46⇑ *iP* **P 13 18 28.8 +0.2**
VLS Valsamata 60.98 51 P **P 13 18 27.5 -1.4**
SOP Sopron 60.99 39 *eP* **P 13 18 28.1 -0.7**
SOP Sopron 60.99 39 *eP* **P 13 18 28.1 -0.7**
NKY Niksic 61.01 45⇑ *iP* **P 13 18 28.6 -0.4**
NKY Niksic 61.01 45⇑ *iP* **P 13 18 28.7 -0.3**
NKY Niksic 61.01 45⇑ *iP* **P 13 18 28.7 -0.3**
UPM Unac-Piva 61.06 45⇑ *iP* **P 13 18 29.5 +0.1**
UPM Unac-Piva 61.06 45⇑ *iP* **P 13 18 29.6 +0.2**
UPM Unac-Piva 61.06 45⇑ *iP* **P 13 18 29.6 +0.2**
JCT Junction City 61.08 300 P **P 13 18 28.6 -1.1**
baz=61,SNR=29
JCT Junction City 61.08 300 *eP* **P 13 18 28.0 -1.7**
JCT pmax pmax
comp=Z,495nm,1.5s,mb6.4
JCT MLR MLR
comp=Z,8µm,20.0s,MS5.9
JCT Junction City 61.08 300 *eP* **P 13 18 28.0 -1.6**
comp=Z,495nm,1.5s,mb6.4
JCT LR LR
comp=Z,8µm,20.0s,MS5.9
JCT Junction City 61.08 300 *eP* **P 13 18 28.0 -1.7**
comp=Z,8µm,20.0s
PDG Podgorica 61.09 46⇑ *iP* **P 13 18 29.2 -0.3**
TTG Podgorica 61.09 46⇑ *iP* **P 13 18 29.1 -0.4**
TTG Podgorica 61.09 46⇑ *iP* **P 13 18 29.2 -0.3**
TTG Podgorica 61.09 46 *iP* **P 13 18 29.2 -0.3**
IGT Igoumenitsa 61.10 49 P **P 13 18 31.4 +1.7**
KFL Anninata 61.11 51 P **P 13 18 30.1 +0.3**
SNART Snartemo 61.13 26 *eP* **P 13 18 31.3 +1.8**

SNART AMb AMB 13 18 34.2
comp=Z,406nm,2.1s,mb6.2
RUE Ruedersdorf 61.31 34 *eP* **P 13 18 30.8 0.0**
comp=Z,514nm,1.1s,mb6.6
RUE Ruedersdorf 61.31 34 *eP* **P 13 18 30.8 0.0**
comp=Z,514nm,1.1s,mb6.6
KRUC Moravsky 61.41 38 P **P 13 18 31.0 -0.6**
PLE Pljevlja 61.44 45⇑*iP* **P 13 18 33.4 +1.5**
PLE Pljevlja 61.44 45⇑*iP* **P 13 18 33.4 +1.5**
PLE Pljevlja 61.44 45⇑*iP* **P 13 18 33.4 +1.5**
RHK3 Tenkes 61.46 42 *eP* **P 13 18 31.7 -0.3**
ECSD EROS Data Cent 61.46 316 *eP* **P 13 18 31.2 -0.8**
comp=Z,253nm,1.3s,mb6.2
ECSD LR LR
comp=Z,40µm,20.0s,MS6.6
ECSD EROS Data Cent 61.46 316 *eP* **P 13 18 31.2 -0.8**
comp=Z,253nm,1.3s,mb6.2
ZST Bratislava 61.52 39 *eP* **P 13 18 33.4 +1.1**
ZST pmax pmax
comp=Z,110nm,1.1s,mb5.9
ZST Bratislava 61.52 39 *eP* **P 13 18 33.4 +1.1**
comp=Z,110nm,1.1s,mb5.9
ZST *eS* **S 13 26 55.1 +0.4**
ZST Bratislava 61.52 39 *eP* **P 13 18 33.4 +1.1**
ZST *eS* **S 13 26 55.1 +0.4**
ZST Bratislava 61.52 39 *eP* **P 13 18 33.4 +1.1**
comp=Z,110nm,1.1s,mb5.9
ZST *eS* **S 13 26 55.1 +0.4**
PYL PYLOS 61.59 52 P **P 13 18 32.4 -0.7**
BBLS Lazići 61.60 44 P **P 13 18 33.7 +0.7**
BBLS Lazići 61.60 44⇑*iP* **P 13 18 32.9 -0.1**
BER Bergen 61.60 23 *eP* **P 13 18 33.7 +1.1**
BER AMb AMB 13 18 38.1
comp=Z,342nm,2.9s,mb6.0
BER *eS* **S 13 26 55.0 -0.3**
BER AMS AMS 13 40 37.7
comp=Z,33µm,14.1s,MS6.7
BER Bergen 61.60 23 *eP* **P 13 18 33.7 +1.0**
BER pmax pmax
comp=Z,342nm,2.9s,mb6.0
BER MLR MLR
comp=Z,33µm,14.1s,MS6.7
BER Bergen 61.60 23 *eP* **P 13 18 33.7 +1.1**
comp=Z,342nm,2.9s,mb6.0
BER LR LR
comp=Z,33µm,14.1s,MS6.7
BER Bergen 61.60 23 *eP* **P 13 18 33.7 +1.0**
comp=Z,33µm,14.1s
BER *eS* **S 13 26 55.0 -0.3**
SNR=23
VRAC Vranov 61.62 38 P **P 13 18 32.5 -0.5**
comp=Z,135nm,1.0s,mb6.0,baz=248,slow=6.8,SNR=44
VRAC PP PP 13 20 54.4 +5.9
comp=Z,62nm,1.3s,baz=241,slow=10,SNR=3.8
VRAC S **S 13 26 54.4 -1.5**
comp=Z,2.0nm,0.5s,baz=348,slow=17,SNR=1.9
VRAC Vranov 61.62 38 P **P 13 18 32.5 -0.5**
VRAC 13 20 54.4
VRAC S **S 13 26 54.4 -1.5**
VRAC pmax pmax
comp=Z,135nm,1.0s
VRAC pmax pmax
comp=Z,62nm,1.3s
VRAC smax
comp=N,2.0nm,0.5s
VRAC Vranov 61.62 38⇓*iP* **P 13 18 33.5 +0.5**
VRAC Vranov 61.62 38 P **P 13 18 32.5 -0.5**
comp=N,135nm,1.0s,mb6.0
VRAC Vranov 61.62 38 PP PP 13 20 54.4 +5.8
VRAC S **S 13 26 54.4 -1.5**
comp=N,2.0nm,0.5s
PVY Plav 61.64 46⇑*iP* **P 13 18 33.2 -0.1**
PVY Plav 61.64 46⇑*iP* **P 13 18 33.2 0.0**
PVY Plav 61.64 46⇑*iP* **P 13 18 33.2 -0.1**
BEY Berane 61.66 45⇑*iP* **P 13 18 34.5 +1.1**
IVA Berane 61.66 45⇑*iP* **P 13 18 34.4 +1.0**
IVA Berane 61.66 45⇑*iP* **P 13 18 34.5 +1.1**
IVA Berane 61.66 45⇑*iP* **P 13 18 34.5 +1.1**
MODS Modra-Piesok 61.69 39 *eP* **P 13 18 34.0 +0.5**
MODS Modra-Piesok 61.69 39 *eP* **P 13 18 34.0 +0.5**
MODS Modra-Piesok 61.69 39 *eP* **P 13 18 34.0 +0.5**
PKS9 Tamasi 61.70 41 *eP* **P 13 18 34.0 +0.4**
TSUM Tsumeb 61.72 117 *eP* **P 13 18 34.5 +0.3**
comp=N,78nm,1.1s,mb5.8
TSUM LR LR
comp=Z,36µm,20.0s,MS6.5
TSUM Tsumeb 61.72 117 *eP* **P 13 18 34.5 +0.3**
comp=Z,78nm,1.1s,mb5.8
UPC Upice 61.74 36 *eP* **P 13 18 33.8 0.0**
UPC Upice 61.74 36 P **P 13 18 34.0 +0.2**
ITM Ithomi 61.80 52 P **P 13 18 35.4 +1.0**
ITM Ithomi 61.80 52 P **P 13 18 34.5 +0.1**
PKSM Moragy 61.82 42⇓P **P 13 18 35.1 +0.7**
PKSM Moragy 61.82 42⇓*iP* **P 13 18 35.1 +0.7**
PKSM Moragy 61.82 42 P **P 13 18 34.5 +0.1**
NEST Nestorio 61.85 48 P **P 13 18 35.2 +0.5**
EFI East Falkland 61.86 194⇓*eP* **P 13 18 35.7 +1.3**
EFI East Falkland 61.86 194 P **P 13 18 33.7 -0.7**
EFI East Falkland 61.86 194 P **P 13 18 35.8 +1.4**
comp=Z,847nm,1.3s,mb6.7,SNR=5.1
EFI East Falkland 61.86 194 P **P 13 18 33.7 -0.7**
DPC Dobruska-Polom 61.86 37 *eP* **P 13 18 35.0 +0.4**
DPC *e* 13 20 49.9
DPC *eS* **S 13 27 04.6 +5.7**
DPC MLR MLR
comp=Z,58µm,33.0s,MS6.5
DPC Dobruska-Polom 61.86 37 P **P 13 18 34.4 -0.2**
DPC Dobruska-Polom 61.86 37 *eP* **P 13 18 35.0 +0.4**
DPC *ePP* PP 13 20 49.9 -0.8
DPC *eS* **S 13 27 04.6 +5.7**
DPC AMS AMS 13 37 10.0
comp=Z,58µm,33.0s
DPC Dobruska-Polom 61.86 37 P **P 13 18 34.4 -0.2**
DPC *eS* **S 13 27 04.6 +5.7**
comp=Z,58µm,33.0s
RGN Rugen 62.01 31 P **P 13 18 36.1 +0.5**
comp=Z,374nm,1.0s,mb6.5
RGN Rugen 62.01 31 P **P 13 18 36.1 +0.6**
comp=Z,374nm,1.0s,mb6.5
KSP Ksiaz 62.04 36 *eP* **P 13 18 35.5 -0.3**
KSP *eS* **S 13 26 58.5 -2.7**
KSP LMZ 13 43 22.5
comp=Z,42µm,20.3s
KSP Ksiaz 62.04 36 P **P 13 18 35.0 -0.8**
KSP Ksiaz 62.04 36⇑*eP* **P 13 18 35.2 -0.6**
KSP *epP* pP 13 18 37.7 +0.9
KSP Ksiaz 62.04 36 *eS* **S 13 26 58.0 -3.2**
EFP Efpalio 62.04 51 P **P 13 18 36.2 +0.1**
PKSG 62.05 40 *eP* **P 13 18 35.9 0.0**
LAKA Lakka 62.06 51 P **P 13 18 36.4 +0.2**
DIVS Divibare 62.08 44 P **P 13 18 36.2 0.0**
DIVS Divibare 62.08 44 P **P 13 18 36.2 0.0**
JAVC Velka Javorina 62.11 38 P **P 13 18 37.1 +0.8**
COP Copenhagen 62.11 30⇓*iP* **P 13 18 38.4 +2.2**
COP *eS* **S 13 27 08.7 +6.8**
COP pmax pmax
comp=Z,70nm,1.0s,mb5.8
COP MLR MLR
comp=Z,23µm,21.0s,MS6.3
COP Copenhagen 62.11 30 P **P 13 18 35.9 -0.3**
COP Copenhagen 62.11 30⇓*iP* **P 13 18 38.4 +2.2**
comp=Z,70nm,1.0s,mb5.7
COP *eS* **S 13 27 08.7 +6.8**
COP
comp=Z,23µm,21.0s
COP Copenhagen 62.11 30 P **P 13 18 35.9 -0.3**
COP *eS* **S 13 27 08.7 +6.8**
comp=Z,23µm,21.0s
TRIZ Trizonia 62.16 51 P **P 13 18 37.7 +0.9**
FNA Florina 62.18 48 P **P 13 18 36.8 -0.2**
VLX Vlachokerasia 62.19 52 P **P 13 18 38.0 +0.9**
BIA Bitola 62.20 48 P **P 13 18 38.5 +1.4**
BIA Bitola 62.20 48 *eP* **P 13 18 37.4 +0.3**
BIA Bitola 62.20 48 P **P 13 18 37.1 0.0**
KALE Kalithea 62.21 51 P **P 13 18 37.6 +0.4**
KRUS Krusevo 62.23 47 *eP* **P 13 18 36.8 -0.5**
FOO Floro 62.26 22⇑*iP* **P 13 18 35.3 -1.7**
FOO AMb AMB 13 18 39.4
comp=Z,337nm,1.7s,mb6.2
FOO *eS* **S 13 27 02.1 -1.5**
FOO AMS AMS 13 40 36.3
comp=Z,36µm,15.4s,MS6.7
FOO Floro 62.26 22 *eP* **P 13 18 35.5 -1.6**
comp=Z,337nm,1.7s,mb6.2
FOO LR LR
comp=Z,36µm,15.4s,MS6.7
FOO Floro 62.26 22 *eP* **P 13 18 35.5 -1.6**
comp=Z,337nm,1.7s,mb6.2
FOO *eS* **S 13 27 02.1 -1.5**
SNR=22
FRGS Fruska Gora 62.27 43 P **P 13 18 39.2 +1.8**
FRGS Fruska Gora 62.27 43⇑*iP* **P 13 18 37.3 -0.1**
GUR Goura 62.27 51 P **P 13 18 38.0 +0.4**
PKS2 Kecel 62.28 41 *eP* **P 13 18 38.4 +0.9**
KZN Kozani 62.36 49 P **P 13 18 38.0 -0.2**
MORC Moravsky Berou 62.37 37⇑P **P 13 18 38.9 +0.9**
MORC Moravsky Berou 62.37 37 *eP* **P 13 18 37.5 -0.5**
comp=Z,2µm,2.5s,mb6.8
MORC Moravsky Berou 62.37 37⇑*iP* **P 13 18 38.9 +0.9**
MORC Moravsky Berou 62.37 37 *eP* **P 13 18 37.5 -0.5**
comp=Z,2µm,2.5s,mb6.8
THL Klokotos Trika 62.37 50 P **P 13 18 38.3 0.0**
TRUS Trudelj 62.40 44⇑*iP* **P 13 18 37.6 -0.7**
AGMN Agassiz Nation 62.43 321 *eP* **P 13 18 36.4 -2.1**
comp=Z,159nm,1.2s,mb6.0
AGMN LR LR
comp=Z,20µm,22.0s,MS6.2
AGMN Agassiz Nation 62.43 321 *eP* **P 13 18 36.4 -2.1**
comp=Z,159nm,1.2s,mb6.0
PKS7 Kunszentmiklos 62.43 41 *eP* **P 13 18 40.0 +1.5**
KOLL Kolacno 62.46 39 *eP* **P 13 18 39.0 +0.3**
KOLL Kolacno 62.46 39 *eP* **P 13 18 39.0 +0.3**
KOLL Kolacno 62.46 39 *eP* **P 13 18 39.0 +0.3**
BUD Budapest 62.48 40 *eP* **P 13 18 38.8 0.0**
BUD Budapest 62.48 40 *eP* **P 13 18 38.8 0.0**
CBKS Cedar Bluff 62.48 310 P **P 13 18 39.2 +0.1**
baz=62,SNR=25
CBKS Cedar Bluff 62.48 310 *eP* **P 13 18 38.8 -0.2**
CBKS pmax pmax
comp=Z,430nm,1.2s,mb6.5
CBKS MLR MLR
comp=Z,45µm,21.0s,MS6.6
CBKS Cedar Bluff 62.48 310 *eP* **P 13 18 38.8 -0.2**
comp=Z,430nm,1.2s,mb6.5
CBKS LR LR
comp=Z,45µm,21.0s,MS6.6
CBKS Cedar Bluff 62.48 310 *eP* **P 13 18 38.8 -0.2**
comp=Z,45µm,21.0s
AGG Agios Georgios 62.49 50 P **P 13 18 38.9 -0.2**
DSF Desfina 62.52 51 P **P 13 18 38.5 -0.7**
GRUS Gruza 62.52 45 P **P 13 18 40.6 +1.4**
GRUS Gruza 62.52 45⇑*iP* **P 13 18 39.0 -0.1**
SKO Skopje 62.52 47 P **P 13 18 39.6 +0.4**
SKO Skopje 62.52 47 *eP* **P 13 18 40.0 +0.7**
SKO Skopje 62.52 47 P **P 13 18 39.0 -0.2**
BEO Beograd 62.61 43⇓*iP* **P 13 18 39.7 -0.1**
VYHS Vyhne 62.70 39 *eP* **P 13 18 39.6 -0.7**
comp=Z,372nm,1.9s,mb6.2
VYHS *ePP* PP 13 20 57.4 -0.8
VYHS *eS* **S 13 27 11.3 +1.6**
VYHS LR LR
comp=Z,35µm,37.0s,MS6.3
VYHS Vyhne 62.70 39 *eP* **P 13 18 39.5 -0.8**
VYHS *ePP* PP 13 20 57.4 -0.8
VYHS *eS* **S 13 27 11.3 +1.6**
VYHS Vyhne 62.70 39 *eP* **P 13 18 39.6 -0.7**
comp=Z,372nm,1.9s,mb6.2
PENC Penc 62.75 40 *eP* **P 13 18 40.7 +0.1**
OKC Ostrava-Krasne 62.76 38 *eP* **P 13 18 41.8 +1.2**
OKC *e* 13 20 56.9
OKC *eS* **S 13 27 16.5 +6.3**
OKC MLR MLR
comp=Z,49µm,23.9s,MS6.6
OKC Ostrava-Krasne 62.76 38 P **P 13 18 40.3 -0.3**
OKC Ostrava-Krasne 62.76 38 *eP* **P 13 18 41.8 +1.2**
OKC *ePP* PP 13 20 56.9 -1.7
OKC *eS* **S 13 27 16.5 +6.3**
OKC AMS AMS 13 40 40.0
comp=Z,49µm,23.9s
OKC Ostrava-Krasne 62.76 38 P **P 13 18 40.3 -0.3**
LTK Loutraki 62.77 51 P **P 13 18 40.5 -0.5**
LIT Litokhoron 62.85 49 P **P 13 18 41.5 +0.1**
RAC Raciborz 62.87 37 *eP* **P 13 18 42.5 +1.1**
RAC Raciborz 62.87 37 *eP* **P 13 18 42.5 +1.1**
DID Didima 62.88 52 P **P 13 18 40.9 -0.8**
KONO Kongsberg 62.90 25⇑*iP* **P 13 18 40.8 -0.6**
KONO AMb AMB 13 18 44.8
comp=Z,358nm,1.3s,mb6.3
KONO *eS* **S 13 27 10.9 -0.8**
KONO AMS AMS 13 40 00.1
comp=Z,34µm,21.8s,MS6.5
KONO Kongsberg 62.90 25 *eP* **P 13 18 41.4 0.0**
KONO pmax pmax
comp=Z,839nm,1.8s,mb6.6
KONO MLR MLR
comp=Z,45µm,21.0s,MS6.6
KONO Kongsberg 62.90 25 *eP* **P 13 18 41.4 0.0**
comp=Z,839nm,1.8s,mb6.6
KONO LR LR
comp=Z,45µm,21.0s,MS6.6
KONO Kongsberg 62.90 25 *eP* **P 13 18 41.4 0.0**
comp=Z,45µm,21.0s
KONO *eS* **S 13 27 10.9 -0.8**
SNR=22
LKR Lokris 62.93 51 *eP* **P 13 18 40.2 -1.8**
LKR Lokris 62.93 51 P **P 13 18 43.5 +1.5**
ATAL Atalanti 62.95 51 P **P 13 18 41.5 -0.6**
SVIS Svilajnac 62.97 44 P **P 13 18 44.2 +2.1**
GRG Griva 62.98 48 P **P 13 18 42.1 -0.2**
BARS Barje 63.01 46 P **P 13 18 42.1 -0.3**
LIKS Likavka 63.06 39 *eP* **P 13 18 45.2 +2.5**
LIKS pmax pmax
comp=Z,103nm,1.4s,mb5.8
LIKS Likavka 63.06 39 *eP* **P 13 18 45.2 +2.5**
comp=Z,103nm,1.4s,mb5.8
LIKS Likavka 63.06 39 *eP* **P 13 18 45.2 +2.5**
LIKS Likavka 63.06 39 *eP* **P 13 18 45.2 +2.5**
comp=Z,103nm,1.4s,mb5.8
BSD Bornholm Skovb 63.09 31 P **P 13 18 42.1 -0.6**
BSD Bornholm Skovb 63.09 31⇑*iP* **P 13 18 41.3 -1.4**
comp=Z,55nm,1.0s,mb5.6
BSD
comp=Z,37µm,22.0s
BSD Bornholm Skovb 63.09 31 P **P 13 18 42.1 -0.6**
ULM Lac du Bonnet 63.12 323 P **P 13 18 41.9 -1.2**
comp=Z,113nm,0.9s,mb6.0,baz=109,slow=6.4,SNR=22
ULM S **S 13 27 07.2 -7.7**
comp=Z,0.7nm,0.3s,baz=279,slow=11,SNR=1.8
ULM LR LR 13 44 30.5
comp=Z,12µm,18.4s,MS6.1,baz=112,slow=35
ULM Lac du Bonnet 63.12 323 P **P 13 18 41.8 -1.3**
PSZ Piszkesteto 63.18 40⇑P **P 13 18 44.5 +1.0**
PSZ Piszkesteto 63.18 40 *eP* **P 13 18 43.8 +0.3**
comp=Z,260nm,1.0s,mb6.3
PSZ *ePP* PP 13 21 03.2 +0.8
PSZ LR LR
comp=Z,58µm,21.0s,MS6.7
PSZ Piszkesteto 63.18 40⇑*iP* **P 13 18 44.5 +1.0**
PSZ Piszkesteto 63.18 40 *eP* **P 13 18 43.1 -0.4**
PSZ Piszkesteto 63.18 40 *eP* **P 13 18 43.8 +0.3**
comp=Z,260nm,1.0s,mb6.3
VAY Valandovo 63.19 48 P **P 13 18 43.9 +0.2**
SCO Scoresbysund 63.20 6 *iP* **P 13 18 43.5 +0.3**
SCO pmax pmax
comp=Z,78nm,1.1s,mb5.8
SCO MLR MLR
comp=Z,29µm,19.0s,MS6.5
SCO Scoresbysund 63.20 6 *iP* **P 13 18 43.5 +0.3**
comp=Z,29µm,19.0s
SFJM Santa Fe 63.22 289 *iP* **P 13 18 45.7 +1.4**
SFJM Santa Fe 63.22 289 *iP* **P 13 18 45.7 +1.4**
AMTX Amarillo 63.29 305 P **P 13 18 44.1 -0.4**
baz=63,SNR=26
AMTX Amarillo 63.29 305 *eP* **P 13 18 43.0 -1.5**
comp=Z,205nm,1.3s,mb6.1
AMTX LR LR
comp=Z,38µm,22.0s,MS6.5
AMTX Amarillo 63.29 305 *eP* **P 13 18 43.0 -1.5**
comp=Z,205nm,1.3s,mb6.1
BOLS Boljevac 63.37 45⇑*iP* **P 13 18 44.0 -0.8**
KNT Kendrikon 63.39 48 P **P 13 18 45.1 +0.1**
ATHU Athens Univers 63.40 52 P **P 13 18 45.0 -0.1**
HORT Hortiatis 63.41 49 P **P 13 18 44.5 -0.7**
OSL Oslo 63.53 25 *eP* **P 13 18 45.7 +0.1**
OSL Oslo 63.53 25 *eP* **P 13 18 45.7 +0.1**
SNR=20
GKP Gorka Klasztor 63.54 34 *eP* **P 13 18 45.6 -0.1**
GKP *eS* **S 13 27 22.0 +2.0**
GKP LMZ 13 41 15.0
comp=Z,74µm,22.9s
GKP Gorka Klasztor 63.54 34 *eP* **P 13 18 45.6 -0.2**
GKP *eS* **S 13 27 22.0 +2.0**
GKP Gorka Klasztor 63.54 34 *eP* **P 13 18 45.6 -0.2**
GKP *eS* **S 13 27 22.0 +2.0**
428A Kincaid Ranch, 63.57 300 P **P 13 18 45.9 -0.5**
baz=64,SNR=178
528A Cox Ranch, San 63.60 300⇑P **P 13 18 45.6 -1.1**
baz=64,SNR=36
628A Black Gap, Mar 63.62 299⇓P **P 13 18 46.0 -0.7**
baz=64
BZS Buzias 63.62 43 P **P 13 18 46.7 +0.3**
BZS Buzias 63.62 43 P **P 13 18 46.6 +0.2**
PLG Polygyros 63.62 49 P **P 13 18 46.0 -0.6**
SOH Sokhos 63.65 48 P **P 13 18 46.5 -0.3**
AOS Alonnisos 63.70 50 P **P 13 18 46.4 -0.7**
PAIG Paliouri 63.71 49 P **P 13 18 46.4 -0.7**
KECS Kecovo 63.74 40 *eP* **P 13 18 47.9 +0.7**
KECS pmax pmax
comp=Z,95nm,1.7s,mb5.5
KECS Kecovo 63.74 40 *eP* **P 13 18 47.9 +0.7**
comp=Z,95nm,1.7s,mb5.5
KECS *ePP* PP 13 21 07.9 +0.7
KECS Kecovo 63.74 40 *eP* **P 13 18 47.8 +0.6**
KECS *ePP* PP 13 21 07.9 +0.7
328A Wristen Ranch, 63.75 301⇓P **P 13 18 46.4 -1.2**
baz=64,SNR=27
MOL Molde 63.79 22 *eP* **P 13 18 45.5 -1.8**
MOL AMb AMB 13 18 51.9
comp=Z,337nm,2.2s,mb6.0
MOL *eS* **S 13 27 21.7 -1.1**
MOL AMS AMS 13 41 40.8
comp=Z,38µm,22.0s,MS6.5
MOL Molde 63.79 22 *eP* **P 13 18 45.5 -1.8**
comp=Z,337nm,2.2s,mb6.0
MOL LR LR
comp=Z,38µm,22.0s,MS6.5
MOL Molde 63.79 22 *eP* **P 13 18 45.5 -1.7**
comp=Z,337nm,2.2s,mb6.0,SNR=20
MOL *eS* **S 13 27 21.7 -1.0**
SNR=22
OJC Ojcow 63.89 38 *iP* **P 13 18 47.9 -0.2**
OJC *ePcP* PcP 13 19 24.7 +0.9
OJC *ePP* PP 13 21 10.6 +2.1
OJC *eS* **S 13 27 24.3 -0.1**
OJC L 13 44 53.3
comp=Z,26nm,19.9s
OJC Ojcow 63.89 38⇑*iP* **P 13 18 47.9 -0.2**
OJC *e* 13 19 24.7
OJC *e* 13 21 10.6
OJC *eS* **S 13 27 24.3 -0.1**
OJC Ojcow 63.89 38 P **P 13 18 47.8 -0.3**
OJC Ojcow 63.89 38 *iP* **P 13 18 47.9 -0.2**
SRS Serrai 63.89 48 P **P 13 18 48.3 0.0**
NIE Niedzica 63.93 39 *eP* **P 13 18 48.8 +0.4**
NIE *ePcP* PcP 13 19 27.4 +3.4
NIE Niedzica 63.93 39 *eP* **P 13 18 48.8 +0.4**
VTS Vitosha 63.95 46⇑P **P 13 18 50.5 +1.8**
VTS Vitosha 63.95 46 P **P 13 18 48.3 -0.4**
VTS Vitosha 63.95 46⇑*iP* **P 13 18 50.5 +1.8**
VTS Vitosha 63.95 46 *iP* **P 13 18 49.4 +0.7**
VTS Vitosha 63.95 46 P **P 13 18 48.3 -0.4**
DJES Djerdap 63.98 44 P **P 13 18 47.9 -0.9**
DJES Djerdap 63.98 44⇓*iP* **P 13 18 48.5 -0.3**
OUR Ouranopolis 64.02 49 P **P 13 18 48.8 -0.4**
627A Terlingua Ranc 64.05 299 P **P 13 18 48.6 -1.0**
baz=64,SNR=47
MSTX Muleshoe 64.05 304⇑P **P 13 18 48.5 -1.0**
baz=64,SNR=22
NAO01 NORSAR Array S 64.09 24 *eP* **P 13 18 49.4 +0.2**
comp=Z,214nm,1.0s,mb6.1
NAO01 LR LR
comp=Z,41µm,20.0s,MS6.6
NAO01 NORSAR Array S 64.09 24 *eP* **P 13 18 49.4 +0.1**
comp=Z,214nm,1.0s,mb6.1
MMB Musomiste 64.10 48 *iP* **P 13 18 50.0 +0.3**
427A Hayter Ranch, 64.20 300 P **P 13 18 49.9 -0.7**
baz=64,SNR=94
TXAR Lajitas Array 64.28 299 P **P 13 18 50.0 -1.1**
comp=Z,25nm,0.6s,mb5.4,baz=104,slow=6.8,SNR=126
TXAR S **S 13 27 28.6 -1.4**
comp=Z,0.2nm,0.8s,baz=106,slow=42,SNR=1.9
TXAR LR LR 13 45 18.8
comp=Z,9µm,20.7s,MS5.9,baz=80,slow=35
TXAR PKPPKP 13 47 37.0
comp=Z,1.0nm,1.0s,baz=204,slow=2.7,SNR=3.8
TXAR Lajitas Array 64.28 299 P **P 13 18 50.0 -1.1**
TXAR S **S 13 27 28.6 -1.4**
TXAR pmax pmax
comp=Z,25nm,0.6s
TXAR Lajitas Array 64.28 299 P **P 13 18 50.0 -1.1**
comp=Z,25nm,0.6s,mb5.4
TXAR S **S 13 27 28.6 -1.4**
527A Woodward Ranch 64.31 299 P **P 13 18 51.0 -0.3**
baz=64,SNR=92
Z27A Tatum 64.33 303 P **P 13 18 51.2 -0.1**
baz=64,SNR=35
NB2 NORSAR Subarra 64.34 24 P **P 13 18 51.8 +1.0**
comp=Z,3µm,2.5s,mb6.8,baz=237,slow=6.5
NB2 NORSAR Subarra 64.34 24 P **P 13 18 49.0 -1.8**
NB2 NORSAR Subarra 64.34 24 P **P 13 18 51.8 +1.0**
baz=237,slow=6.5,SNR=20
NOA NORSAR Array B 64.34 24 P **P 13 18 51.1 +0.3**
comp=Z,126nm,1.0s,mb5.9,baz=237,slow=6.8,SNR=48
NOA S **S 13 27 42.1 +13**
comp=Z,2.7nm,0.8s,baz=218,slow=24,SNR=5.6
NOA LR LR 13 44 07.2
comp=Z,37µm,18.3s,MS6.6,baz=240,slow=34
NOA NORSAR Array B 64.34 24 P **P 13 18 51.1 +0.3**
comp=Z,126nm,1.0s,mb5.9
NOA S **S 13 27 42.1 +13**
GZR Gura Zlata 64.34 43⇑P **P 13 18 52.4 +1.2**
GZR Gura Zlata 64.34 43 P **P 13 18 51.8 +0.6**
THR5 Thira Island, 64.36 54 P **P 13 18 52.1 +0.6**
Y27A Causey 64.36 304 P **P 13 18 52.0 +0.5**
baz=64,SNR=49
127A Arkansas Junct 64.37 302⇓P **P 13 18 50.6 -1.1**
baz=64,SNR=9.2
THR6 Thira Island, 64.39 54 P **P 13 18 52.4 +0.7**
SUMG Summit 64.39 0 *eP* **P 13 18 50.6 -0.4**
comp=Z,486nm,1.2s,mb6.4
SUMG Summit 64.39 0 *iP* **P 13 18 52.2 +1.2**
comp=Z,214nm,1.0s,mb6.1
NPS Neapolis 64.39 55 *eP* **P 13 18 48.4 -3.4**
THR3 Thira Island, 64.40 54 P **P 13 18 52.5 +0.7**
XRY Khrisi 64.41 55 *eP* **P 13 18 48.6 -3.2**
X27A F and S Farms, 64.41 304 P **P 13 18 51.8 0.0**
baz=64,SNR=15
THR2 Thira island, 64.43 54 P **P 13 18 52.5 +0.5**
THR1 Thera Island 64.44 54 P **P 13 18 52.4 +0.4**
W27A Bowe Ranch, En 64.44 305 P **P 13 18 51.2 -0.8**
baz=64,SNR=34
CRVS Cervenica-Dubn 64.48 39 *eP* **P 13 18 52.1 +0.1**
comp=Z,867nm,2.1s,mb6.4
CRVS *ePP* PP 13 21 17.2 +3.4
CRVS *eS* **S 13 27 31.8 0.0**
CRVS LR LR
comp=Z,27µm,35.4s,MS6.2
CRVS Cervenica-Dubn 64.48 39 *eP* **P 13 18 52.1 +0.1**
comp=Z,867nm,2.1s,mb6.4
CRVS *eS* **S 13 27 31.8 0.0**
KAVA Kavala 64.55 48 P **P 13 18 52.6 0.0**
DEV Deva 64.56 43⇑P **P 13 18 54.3 +1.7**
DEV Deva 64.56 43 P **P 13 18 54.3 +1.7**
APE Apeiranthos 64.61 53 *eP* **P 13 18 49.6 -3.5**
APE Apeiranthos 64.61 53 P **P 13 18 54.7 +1.6**
APE Apeiranthos 64.61 53 P **P 13 18 54.2 +1.1**
APE Apeiranthos 64.61 53 P **P 13 18 54.2 +1.1**
PGB Panagyurishte 64.63 47 *iP* **P 13 18 53.7 +0.6**
OGNE Ogallala 64.66 311 P **P 13 18 53.5 +0.2**
baz=65,SNR=30
OGNE Ogallala 64.66 311 *eP* **P 13 18 51.2 -2.2**
comp=Z,2µm,1.9s,mb6.8
OGNE LR LR
comp=Z,59µm,21.0s,MS6.8
OGNE Ogallala 64.66 311 *eP* **P 13 18 51.2 -2.1**
comp=Z,2µm,1.9s,mb6.8
DRGR 64.67 42⇑P **P 13 18 53.6 +0.3**
DRGR 64.67 42 P **P 13 18 53.2 -0.1**
626A Big Bend Ranch 64.70 299 P **P 13 18 54.1 +0.2**
baz=65,SNR=9.7
526A Mary Lane Ranc 64.71 299 P **P 13 18 53.6 -0.3**
baz=65,SNR=69
426A McDonald Obser 64.72 300⇓P **P 13 18 53.9 0.0**

baz=65
CLNB Carlsbad 64.76 302 eP P 13 18 53.6 -0.6
comp=Z,107nm,1.7s,mb5.6
CLNB Carlsbad 64.76 302 eP P 13 18 53.6 -0.6
comp=Z,107nm,1.7s,mb5.6
CRAR CRAIOVA 64.78 45 P P 13 18 55.7 +1.6
CRAR CRAIOVA 64.78 45 P P 13 18 55.7 +1.6
LIA Limnos Island 64.83 50 P P 13 18 55.0 +0.5
CPRX Cap Rock 64.83 303 eP P 13 18 53.8 -0.9
comp=Z,347nm,1.1s,mb6.3
CPRX Cap Rock 64.83 303 eP P 13 18 53.8 -0.9
comp=Z,347nm,1.1s,mb6.3
RZN Rozhen 64.84 48 iP P 13 18 55.0 +0.5
ZKR Zakros 64.86 55 P P 13 18 54.5 -0.3
HFS Hagfors 64.91 26 P P 13 18 54.7 +0.2
comp=Z,207nm,1.0s,mb6.1,baz=224,slow=6.2,SNR=49
HFS LR LR 13 41 40.3
comp=Z,41μm,21.8s,MS6.6,baz=237,slow=31
HFS Hagfors 64.91 26 P P 13 18 54.7 +0.1
comp=Z,207nm,1.0s,mb6.1
Y26A Elida 64.91 304 P P 13 18 55.2 +0.1
baz=65,SNR=21
126A Clayton Basin, 64.92 302 P P 13 18 55.6 +0.4
baz=65,SNR=24
PLD Plovdiv 64.92 47 P P 13 18 55.0 0.0
226A Malaga, Loving 64.92 302 P P 13 18 54.9 -0.4
baz=65,SNR=39
UZH Uzhgorod 64.93 40 eP P 13 18 55.0 +0.1
UZH e 13 19 02.7
UZH e 13 19 23.3
UZH e 13 22 56.4
UZH eS S 13 27 34.3 -3.0
UZH e 13 27 51.0
UZH Uzhgorod 64.93 40 eP P 13 18 55.0 +0.1
UZH eS S 13 27 34.3 -3.0
TRPA Tarpa 64.94 40 eP P 13 18 54.3 -0.7
Z26A Caprock 64.96 303 P P 13 18 54.6 -0.9
baz=65,SNR=60
X26A CR and CF Fran 64.98 304 P P 13 18 54.9 -0.6
baz=65,SNR=29
KOLS Kolonicke sedl 65.00 40 eP P 13 18 55.6 +0.2
comp=Z,577nm,2.0s,mb6.3
KOLS eS S 13 27 36.1 -2.1
KOLS LR LR
comp=Z,29μm,38.6s,MS6.2
KOLS Kolonicke sedl 65.00 40 eP P 13 18 55.6 +0.2
comp=Z,577nm,2.0s,mb6.3
KOLS eS S 13 27 36.1 -2.1
W26A Owens Ranch, T 65.01 305 P P 13 18 56.1 +0.4
baz=65,SNR=8.3
V26A Tequesquite Ra 65.13 306 P P 13 18 56.6 +0.1
baz=65,SNR=19
GDL2 Guadalupe Moun 65.16 302 eP P 13 18 56.1 -0.7
comp=Z,118nm,1.2s,mb5.8
GDL2 Guadalupe Moun 65.16 302 eP P 13 18 56.1 -0.7
comp=Z,118nm,1.2s,mb5.8
U26A Atchley Ranch, 65.18 306 ⇓P P 13 18 55.2 -1.7
baz=65,SNR=44
CHOS Chios island 65.23 52 P P 13 18 56.7 -0.5
WAR Warsaw 65.30 36 eP P 13 18 58.1 +0.8
WAR LMZ 13 43 06.8
comp=Z,44μm,23.2s
WAR Warsaw 65.30 36 eP P 13 18 58.1 +0.8
KDZ Kurdzhali 65.35 48 eP P 13 18 57.5 -0.3
GADA Gvkgeada 65.43 50 eP P 13 18 58.6 +0.2
BMR Baia Mare 65.43 41 P P 13 18 58.7 +0.5
BMR Baia Mare 65.43 41 P P 13 18 58.6 +0.4
125A Gardner Draw, 65.45 302 P P 13 18 57.6 -1.1
baz=65,SNR=90
KWP Kalwaria Pacla 65.48 39 eP P 13 18 58.6 +0.1
KWP eS S 13 27 49.1 +5.0
KWP LMZ 13 43 21.1
comp=Z,82μm,22.5s
KWP Kalwaria Pacla 65.48 39 ⇑P P 13 18 59.8 +1.3
KWP Kalwaria Pacla 65.48 39 eP P 13 18 59.1 +0.6
comp=Z,581nm,1.0s,mb6.6
KWP LR LR
comp=Z,77μm,20.0s,MS6.9
KWP Kalwaria Pacla 65.48 39 eP P 13 18 58.6 +0.1
DIM Dimitrovgrad 65.51 47 iP P 13 18 59.7 +0.8
225A Deer Hill, Car 65.54 301 P P 13 18 59.1 -0.2
baz=66,SNR=92
PRK Paraskevi 65.54 51 P P 13 18 58.8 -0.4
425A Indio Mountain 65.55 300 P P 13 18 59.6 +0.2
baz=66,SNR=101
Z25A Roswell 65.57 303 P P 13 18 59.2 -0.2
baz=66,SNR=53
325A Bean Ranch, Si 65.59 301 P P 13 18 59.0 -0.6
baz=66,SNR=92
JMIC Jan Mayen 65.59 10 eP P 13 19 01.0 +2.1
JMIC AMb AMB 13 19 08.4
comp=Z,225nm,1.9s,mb5.9
JMIC eS S 13 27 45.1 +0.4
JMIC AMS AMS 13 39 22.5
comp=Z,29μm,28.8s,MS6.3
JMIC Jan Mayen 65.59 10 eP P 13 19 01.0 +2.1
comp=Z,225nm,1.9s,mb5.9
JMIC LR LR
comp=Z,29μm,28.8s,MS6.3
JMIC Jan Mayen 65.59 10 eP P 13 19 01.0 +2.1
comp=Z,225nm,1.9s,mb5.9,SNR=20
JMIC eS S 13 27 45.1 +0.4
SNR=22
W25A X Bar L Ranch, 65.59 305 P P 13 18 59.7 +0.1
baz=66,SNR=24
PVL Pavlikeni 65.61 46 eP P 13 18 57.6 -1.9
FCC Fort Churchill 65.62 332 eP P 13 18 58.5 -0.7
comp=Z,12nm,1.3s,mb4.8
FCC Fort Churchill 65.62 332 eP P 13 18 58.5 -0.7
MDB Medias 65.62 43 P P 13 19 01.0 +1.5
Y25A Mesa, Roswell 65.62 303 P P 13 18 59.6 -0.1
baz=66,SNR=79
ALN Alexandroupoli 65.67 49 P P 13 18 59.2 -0.7
X25A Clemmons Ranch 65.67 304 P P 13 19 01.0 +0.9
baz=66,SNR=26
EZN Ezine 65.69 50 eP P 13 18 59.7 -0.4
U25A Circle Dot Ran 65.71 306 ⇓P P 13 19 00.2 -0.1
baz=66,SNR=64
ENEZ Enez 65.72 49 eP P 13 19 00.0 -0.2
V25A Rancho No Teng 65.80 306 P P 13 19 01.0 +0.1
baz=66,SNR=52
KOMG Komaggas 65.81 128⇑iP P 13 19 02.1 +1.1
KOMG AMB AMB 13 19 12.8
comp=Z,283nm,1.4s,mb6.1
T25A Trinidad 65.82 307 P P 13 19 01.9 +0.9
baz=66,SNR=44
NIS1 Nisyros Isl. 65.84 54 P P 13 19 00.5 -0.6
R25A Fountain Ranch 65.87 308 P P 13 19 01.4 +0.2
baz=66,SNR=19
AYVA Ayvalik 65.88 51 iP P 13 19 01.4 +0.1
GELI Tayfur-Gelibol 65.90 49 eP P 13 19 01.1 -0.3
VOIR 65.90 44 ⇑P P 13 19 02.2 +0.9
VOIR 65.90 44 P P 13 19 01.3 0.0
S25A Robets Cordova 65.91 308 P P 13 19 02.2 +0.7
baz=66,SNR=32
Q25A Bedland, Calha 65.96 309 P P 13 19 02.6 +0.8
baz=66,SNR=26
MNTX Cornudas Mount 65.97 301 P P 13 19 00.7 -1.4
baz=66,SNR=69
MNTX Cornudas Mount 65.97 301 eP P 13 19 00.3 -1.7
comp=Z,76nm,1.0s,mb5.7
MNTX LR LR
comp=Z,11μm,19.0s,MS6.1
MNTX Cornudas Mount 65.97 301 eP P 13 19 00.3 -1.8
comp=Z,76nm,1.0s,mb5.7
ERIK Erikli-Kesan 65.97 49 eP P 13 19 01.9 0.0
BLCB Balcova 66.00 52 P P 13 19 01.9 -0.2
P25A Willow Gulch B 66.00 310 ⇓P P 13 19 03.0 +1.0
baz=66
BODT Bodrum 66.01 53 eP P 13 19 00.5 -1.7
324A Moseley Ranch, 66.03 301 P P 13 19 01.1 -1.3
baz=66,SNR=99
SZH Strazhica 66.05 46 eP P 13 19 02.5 +0.2
LPK Lapseki 66.11 49 eP P 13 19 00.1 -2.7
LPK Lapseki 66.11 49 eP P 13 19 00.1 -2.7
Z24A Sheeppen Canyo 66.12 303 P P 13 19 02.7 -0.3
baz=66,SNR=57
224A Cornudas Mount 66.12 301 P P 13 19 01.9 -1.2
baz=66,SNR=79
124A Stringfield Ra 66.13 302 P P 13 19 02.7 -0.3
baz=66,SNR=53
DAT Datca 66.18 54 eP P 13 19 01.4 -1.9
Y24A Capitan 66.24 303 P P 13 19 03.9 +0.2
baz=66,SNR=87
DOPR Dopca 66.26 43⇑iP P 13 19 04.0 +0.4

X24A Lazy VL Ranch, 66.31 304 ⇑P P 13 19 04.2 +0.1
baz=66,SNR=11
V24A Rampart Ranch, 66.32 305 ⇓P P 13 19 04.2 0.0
baz=66,SNR=30
T24A Torres, Weston 66.32 307 P P 13 19 05.8 +1.6
baz=66,SNR=71
JMB Yambol 66.36 47 P P 13 19 03.9 -0.4
LVV L'vov 66.36 39eP P 13 19 03.7 -0.5
LVV e 13 21 37.9
LVV eS S 13 27 52.3 -2.5
LVV pmax pmax
comp=N,600nm,3.0s
LVV pmax pmax
comp=E,1μm,3.0s
LVV pmax pmax
comp=Z,2μm,3.0s
LVV L'vov 66.36 39 eP P 13 19 03.7 -0.5
LVV eS S 13 27 52.3 -2.5
EDRB Edirne 66.36 48 eP P 13 19 04.4 0.0
W24A Lazy 6 Ranch, 66.36 305 P P 13 19 04.7 +0.2
baz=66,SNR=83
U24A Moreno Valley 66.41 306 P P 13 19 06.3 +1.6
baz=66,SNR=12
MLSB Milas 66.41 53 eP P 13 19 04.3 -0.5
RKY Sarkoy-Tekirda 66.48 49 eP P 13 19 04.6 -0.5
S24A Houchin Ranch, 66.52 307 ⇓P P 13 19 05.3 -0.2
baz=66,SNR=52
R24A Sanders Place, 66.52 308 ⇑P P 13 19 06.5 +1.0
baz=66,SNR=31
MLR Muntele Rosu 66.53 44 ⇓P P 13 19 06.1 +0.7
MLR Muntele Rosu 66.53 44 P P 13 19 05.5 +0.1
BUR08 Bucovina Ar. S 66.53 41 eP P 13 19 05.8 +0.5
BUR08 Bucovina Ar. S 66.53 41 eP P 13 19 05.8 +0.5
BURAR Bucovina Array 66.54 41⇑iP P 13 19 05.5 +0.1
NSS Namsos 66.54 21⇑iP P 13 19 03.4 -1.7
NSS AMb AMB 13 19 09.5
comp=Z,394nm,2.5s,mb6.0
NSS eS S 13 27 56.2 -0.3
NSS AMS AMS 13 39 29.7
comp=Z,21μm,31.3s,MS6.2
NSS Namsos 66.54 21 eP P 13 19 03.5 -1.5
comp=Z,394nm,2.5s,mb6.0
NSS LR LR
comp=Z,21μm,31.3s,MS6.2
NSS Namsos 66.54 21 eP P 13 19 03.5 -1.6
comp=Z,394nm,2.5s,mb6.0
NSS eS S 13 27 56.2 -0.3
SNR=22
AYDN Tasoluk 66.55 53 iP P 13 19 05.5 -0.1
ARG Arkhangelos 66.55 54 P P 13 19 05.2 -0.5
SULR 66.57 45 P P 13 19 05.5 -0.1
SULR 66.57 45 P P 13 19 05.5 -0.1
MFT Murefte 66.57 49 eP P 13 19 05.7 0.0
BALY Balya 66.65 50 iP P 13 19 06.0 -0.3
Q24A Divide 66.66 309 P P 13 19 06.6 +0.2
baz=67,SNR=45
AKS Akhisar 66.67 51 eP P 13 19 03.8 -2.6
AKHS Akhisar 66.67 51 iP P 13 19 06.2 -0.2
RSSD Black Hills 66.75 315 eP P 13 19 06.6 -0.2
RSSD pmax pmax
comp=Z,79nm,1.2s,mb5.6
RSSD MLR MLR
comp=Z,30μm,20.0s,MS6.5
RSSD Black Hills 66.75 315 eP P 13 19 06.6 -0.2
comp=Z,79nm,1.2s,mb5.6
RSSD LR LR
comp=Z,30μm,20.0s,MS6.5
RSSD Black Hills 66.75 315 eP P 13 19 06.6 -0.2
comp=Z,30μm,20.0s
Y23A Lovelace Mesa, 66.75 303 ⇓P P 13 19 06.1 -0.9
baz=67,SNR=68
GONE Gonen-Balikesi 66.75 50 eP P 13 19 06.5 -0.4
SDCO Great Sand Dun 66.76 308 P P 13 19 06.9 -0.1
baz=67,SNR=69
SDCO Great Sand Dun 66.76 308 eP P 13 19 06.7 -0.3
comp=Z,78nm,1.0s,mb5.7
SDCO LR LR
comp=Z,29μm,22.0s,MS6.5
SDCO Great Sand Dun 66.76 308 eP P 13 19 06.7 -0.3
comp=Z,78nm,1.0s,mb5.7
YER Yerkesik 66.79 53 eP P 13 19 07.7 +0.5
TKR Tekirdag 66.80 49 eP P 13 19 06.7 -0.5
M24A Cheyenne 66.82 312 ⇑P P 13 19 07.4 0.0
baz=67,SNR=20
Z23A Rita Site, Whi 66.83 303 ⇑P P 13 19 07.1 -0.5
baz=67,SNR=22
BALB Balikesir 66.84 50 eP P 13 19 06.9 -0.6
X23A Hourglass Bar 66.93 304 ⇓P P 13 19 07.7 -0.4
baz=67
EDC Edincik 66.94 50 eP P 13 19 05.7 -2.4
W23A Werner Place, 66.96 305 P P 13 19 09.2 +0.8
baz=67,SNR=15
CRLT Corlu 66.97 49 eP P 13 19 08.1 -0.2
L24A Wheatland 67.00 312 ⇓P P 13 19 09.0 +0.5
baz=67
V23A Ortiz Mt. (NFS 67.06 305 ⇑P P 13 19 09.6 +0.7
baz=67
PLOR Plostina 67.09 44 ⇑P P 13 19 09.1 +0.2
PLOR Plostina 67.09 44 P P 13 19 09.1 +0.2
T23A Casias Ranch, 67.09 307 P P 13 19 09.9 +0.7
baz=67,SNR=25
SUW Suwalki 67.11 34 eP P 13 19 08.6 -0.3
SUW e 13 19 17.5
SUW eS S 13 28 04.4 +0.7
SUW LMZ 13 45 15.5
comp=Z,60μm,20.4s
SUW Suwalki 67.11 34 eP P 13 19 08.5 -0.4
SUW e 13 19 17.5
SUW eS S 13 28 04.4 +0.7
SUW Suwalki 67.11 34 eP P 13 19 08.8 -0.1
SUW pmax pmax
comp=Z,641nm,0.9s,mb6.7
SUW Suwalki 67.11 34 eP P 13 19 08.8 -0.1
comp=Z,642nm,0.9s,mb6.7
SUW Suwalki 67.11 34 eP P 13 19 08.8 -0.1
comp=Z,641nm,0.9s,mb6.7
SUW eS S 13 28 04.4 +0.7
U23A El Rito 67.13 306 ⇓P P 13 19 10.2 +0.8
baz=67
ISCO Idaho Springs 67.15 310 ⇓P P 13 19 10.2 +0.8
baz=67,SNR=62
ISCO Idaho Springs 67.15 310 eP P 13 19 09.1 -0.3
ISCO pmax pmax
comp=Z,231nm,1.4s,mb6.0
ISCO MLR MLR
comp=Z,45μm,21.0s,MS6.7
ISCO Idaho Springs 67.15 310 eP P 13 19 09.1 -0.3
comp=Z,231nm,1.4s,mb6.0
ISCO LR LR
comp=Z,45μm,21.0s,MS6.7
ISCO Idaho Springs 67.15 310 eP P 13 19 09.1 -0.3
comp=Z,45μm,21.0s
VRI Vrincioaia 67.15 44 ⇑P P 13 19 09.8 +0.5
VRI Vrincioaia 67.15 44 P P 13 19 09.2 -0.1
Q23A Hartsel 67.18 309 ⇑P P 13 19 10.1 +0.4
baz=67
ANMO Albuquerque 67.19 304 LR LR 13 44 54.0
comp=Z,30μm,21.1s,MS6.5,baz=266,slow=33
ANMO PKPPKP 13 47 35.2
comp=Z,0.6nm,0.5s,baz=72,slow=1.9,SNR=4.2
ANMO Albuquerque 67.19 304 eP P 13 19 09.7 -0.1
ANMO pmax pmax
comp=Z,284nm,1.9s
ANMO MLR MLR
comp=Z,30μm,22.0s
ANMO Albuquerque 67.19 304 eP P 13 19 09.7 -0.1
comp=Z,284nm,1.9s,mb6.0
ANMO LR LR
comp=Z,30μm,22.0s,MS6.5
ANMO Albuquerque 67.19 304 eP P 13 19 09.7 -0.1
comp=Z,30μm,22.0s
GRER 67.22 44 P P 13 19 10.9 +1.2
GRER 67.22 44 P P 13 19 10.9 +1.2
TESR 67.23 43 P P 13 19 09.1 -0.7
TESR 67.23 43⇓iP P 13 19 09.9 +0.1
BNM Barren Site 67.25 304 eP P 13 19 09.8 -0.3
comp=Z,63nm,1.2s,mb5.5
BNM Barren Site 67.25 304 eP P 13 19 09.9 -0.3
comp=Z,63nm,1.2s,mb5.5
P23A Jefferson 67.25 309 ⇑P P 13 19 10.7 +0.6
baz=67
PHWY Pilot Hill 67.27 311 eP P 13 19 09.7 -0.4
comp=Z,271nm,1.8s,mb6.0
PHWY Pilot Hill 67.27 311 eP P 13 19 09.7 -0.4
comp=Z,271nm,1.8s,mb6.0
LPM Los Pinos Moun 67.27 304 eP P 13 19 10.0 -0.3

comp=Z,42nm,1.0s,mb5.4
LPM Los Pinos Moun 67.27 304 eP P 13 19 10.0 -0.3
comp=Z,42nm,1.0s,mb5.4
KULA Kula-Manisa 67.28 52 eP P 13 19 10.3 0.0
DURS Dursunbey 67.28 51 iP P 13 19 09.9 -0.4
KCTX Karacabey (Bur 67.30 50 eP P 13 19 09.4 -1.0
AMRR Amara 67.31 45 P P 13 19 11.4 +1.0
AMRR Amara 67.31 45 P P 13 19 11.4 +1.0
SLVT Silivri 67.34 49 eP P 13 19 07.8 -2.7
SLVT Silivri 67.34 49 eP P 13 19 07.8 -2.8
DEMI Demirci 67.39 51 iP P 13 19 10.4 -0.6
CTYL Yal??k??y-??at 67.44 48 eP P 13 19 10.5 -0.7
O23A Lake Granby, G 67.44 310 ⇓P P 13 19 12.7 +1.4
baz=67,SNR=14
Z22A Elephant Butte 67.44 303 ⇑P P 13 19 11.9 +0.5
baz=67,SNR=53
PETR 67.46 44⇓iP P 13 19 12.4 +1.1
DENT Denizli 67.47 53 eP P 13 19 11.7 +0.2
DNZL Cakiroluk 67.47 53 iP P 13 19 11.2 -0.3
M23A Laramie 67.49 311 P P 13 19 12.5 +0.9
baz=68,SNR=16
USHA Ushuaia 67.49 198 PP PP 13 21 43.8 +3.7
comp=Z,19nm,1.1s,baz=345,slow=8.0,SNR=3.0
Y22A Socorro 67.51 303 ⇑P P 13 19 11.2 -0.6
baz=68
LENM Lemitar 67.53 304 eP P 13 19 12.2 +0.2
comp=Z,193nm,1.8s,mb5.8
LENM Lemitar 67.53 304 eP P 13 19 12.2 +0.2
comp=Z,193nm,1.8s,mb5.8
CTKS Kestanelik-??a 67.56 49 eP P 13 19 07.2 -4.8
N23A Red Feather La 67.56 311 P P 13 19 13.0 +0.9
baz=68,SNR=38
L23A Garrett 67.58 312 P P 13 19 12.1 0.0
baz=68,SNR=27
X22A Bernardo 67.60 304 P P 13 19 13.2 +0.8
baz=68,SNR=29
V22A San Miguel Ran 67.66 305 P P 13 19 14.2 +1.5
baz=68,SNR=36
U22A Llaves 67.67 306 P P 13 19 14.2 +1.4
baz=68,SNR=44
LAZ Ladron 67.69 304 eP P 13 19 13.1 +0.1
comp=Z,122nm,1.4s,mb5.7
LAZ Ladron 67.69 304 eP P 13 19 13.1 +0.1
comp=Z,122nm,1.4s,mb5.7
MDNY Mudanya-Bursa 67.71 50 eP P 13 19 12.5 -0.5
ARMT Armutlu 67.72 50 eP P 13 19 12.5 -0.5
PSN Preselentsi 67.73 46 eP P 13 19 12.6 -0.5
AKAS Kas 67.74 54 iP P 13 19 11.8 -1.5
CVD Cernavoda 67.74 45 ⇑P P 13 19 14.7 +1.6
CVD Cernavoda 67.74 45 P P 13 19 14.7 +1.6
BGKT Bogazkoy 67.75 49 eP P 13 19 12.7 -0.5
GLHS Gihisar (BURDU 67.76 53 eP P 13 19 13.1 -0.3
T22A Edith 67.78 307 P P 13 19 14.3 +0.9
baz=68,SNR=115
DGMT Dagmar 67.80 319 P P 13 19 12.8 -0.5
comp=Z,2μm,1.8s,mb6.8
DGMT LR LR
comp=Z,30μm,21.0s,MS6.5
DGMT Dagmar 67.80 319 P P 13 19 12.8 -0.6
comp=Z,2μm,1.8s,mb6.8
S22A 4UR Ranch, Cre 67.81 307 P P 13 19 15.1 +1.5
baz=68,SNR=71
R22A Saguache, Gunn 67.81 308 ⇑P P 13 19 15.0 +1.4
baz=68
STOK Stokkvaagen 67.90 20 eP P 13 19 14.9 +1.3
STOK eS S 13 28 12.6 -0.2
STOK Stokkvaagen 67.90 20 eP P 13 19 14.9 +1.2
O22A Kremmling 67.91 310 P P 13 19 14.7 +0.4
baz=68,SNR=28
KHL Karahalli 67.92 52 eP P 13 19 13.9 -0.5
ISK Istanbul-Kandi 67.94 49 eP P 13 19 12.3 -2.1
GEMT Gemlik 67.95 50 eP P 13 19 13.6 -0.9
KLYT Kilyos 67.96 49 eP P 13 19 14.4 -0.1
CFR Carcaliu 67.98 45 P P 13 19 13.7 -0.9
P22A Eagle 67.99 309 P P 13 19 15.7 +0.9
baz=68,SNR=30
Q22A Crested Butte, 68.01 309 ⇓P P 13 19 15.9 +1.0
baz=68,SNR=8.8
221A Mesquite Ranch 68.03 301 ⇑P P 13 19 15.9 +0.7
baz=68,SNR=25
Z21A St. Cloud Mine 68.04 303 ⇓P P 13 19 15.5 +0.4
baz=68,SNR=36
TIRR Tirgusor 68.04 45 P P 13 19 15.7 +0.7
TIRR Tirgusor 68.04 45 eP P 13 19 15.0 0.0
comp=Z,1μm,1.8s,mb6.5
TIRR Tirgusor 68.04 45 eP P 13 19 15.0 0.0
comp=Z,1μm,1.8s,mb6.5
ELL Elmali 68.04 54 eP P 13 19 15.7 +0.6
121A Cookes Peak, D 68.07 302 P P 13 19 15.6 +0.2
baz=68,SNR=36
Y21A Point of Rocks 68.10 303 ⇑P P 13 19 15.2 -0.3
baz=68,SNR=34
SMCO Snowmass 68.10 309 eP P 13 19 15.6 +0.1
comp=Z,184nm,1.4s,mb5.9
SMCO Snowmass 68.10 309 eP P 13 19 15.6 +0.1
comp=Z,184nm,1.4s,mb5.9
M22A Cedar Creek Ra 68.13 311 ⇑P P 13 19 16.3 +0.7
baz=68
FFC Flin Flon 68.13 326 iP P 13 19 15.3 0.0
FFC Flin Flon 68.13 326 eP P 13 19 14.3 -1.0
comp=Z,234nm,1.0s,mb6.2
FFC LR LR
comp=Z,20μm,19.0s,MS6.4
FFC Flin Flon 68.13 326 P P 13 19 15.1 -0.2
comp=Z,1μm,1.4s,mb6.8,SNR=36
FFC Flin Flon 68.13 326 iP P 13 19 15.3 0.0
W21A San Fidel 68.18 304 ⇓P P 13 19 16.6 +0.6
baz=68,SNR=20
X21A Alamocita Cree 68.23 304 P P 13 19 16.5 +0.1
baz=68,SNR=68
UPI Upington 68.23 125⇑iP P 13 19 16.4 -0.1
UPI AMB AMB 13 19 19.7
comp=Z,366nm,2.0s,mb6.1
V21A Milan 68.24 305 ⇓P P 13 19 16.9 +0.5
baz=68,SNR=13
K22A Casper 68.27 313 ⇓P P 13 19 15.7 -0.7
baz=68,SNR=11
T21A Navajo Lake 68.28 307 ⇓P P 13 19 17.4 +0.8
baz=68
C23A Lambert 68.30 318 ⇑P P 13 19 17.2 +0.7
baz=68
CVNA Calvinia 68.30 128⇑iP P 13 19 17.9 +1.1
CVNA AMB AMB 13 19 20.8
comp=Z,328nm,1.8s,mb6.1
MOR8 Moi Rana 68.30 20 eP P 13 19 16.7 +0.5
MOR8 epP pP 13 19 19.6 +2.4
MOR8 AMb AMB 13 19 19.9
comp=Z,235nm,1.5s,mb6.0
MOR8 Moi Rana 68.30 20 eP P 13 19 16.7 +0.5
comp=Z,235nm,1.5s,mb6.0
MOR8 Moi Rana 68.30 20 eP P 13 19 16.7 +0.5
SNR=19
MOR8 epP pP 13 19 19.6 +2.4
SNR=161
U21A Nageezi 68.32 306 P P 13 19 17.4 +0.5
baz=68,SNR=114
J22A Midwest 68.36 313 ⇓P P 13 19 15.9 -1.1
baz=68,SNR=22
ADVT Abdulvahap 68.36 50 eP P 13 19 16.4 -0.7
HRT Hereke 68.36 49 eP P 13 19 14.7 -2.4
SILT Sile 68.39 49 eP P 13 19 16.5 -0.8
CAVI Cavuskoy 68.41 50 eP P 13 19 16.7 -0.7
R21A Cimarron 68.45 308 ⇑P P 13 19 18.9 +1.2
baz=68,SNR=25
P21A Newcastle 68.51 309 ⇓P P 13 19 18.7 +0.6
baz=68,SNR=26
Q21A Lamborn Mesa, 68.52 308 ⇑P P 13 19 19.2 +1.1
baz=68
S21A Coal Bank Pass 68.56 307 P P 13 19 19.2 +0.9
baz=68,SNR=45
320A Kipp Ranch, An 68.62 300 ⇓P P 13 19 18.8 -0.1
baz=69,SNR=68
RWWY Rawlins 68.62 312 eP P 13 19 18.4 -0.2
comp=Z,187nm,1.4s,mb5.8
RWWY Rawlins 68.62 312 eP P 13 19 18.5 -0.2
comp=Z,187nm,1.4s,mb5.8
ANTB Antalya 68.65 54 eP P 13 19 19.3 +0.3
220A Playas Peak, P 68.66 301 ⇓P P 13 19 19.5 +0.4
baz=69,SNR=42
BCK Bucak 68.66 53 eP P 13 19 18.7 -0.3
Y20A Horse Springs, 68.67 303 ⇓P P 13 19 19.4 +0.3
baz=69,SNR=40
CER Ceres 68.74 130 eP P 13 19 24.8 +5.3
CER AMB AMB 13 19 44.3
comp=Z,56nm,3.3s
C22A Vida 68.75 318 ⇓P P 13 19 19.4 0.0

baz=69
SHUT Suhut-Afyon 68.75 52 *e*P **P 13 19 19.5 0.0**
LAO LASA Array 68.76 317 ⇑P **P 13 19 19.8 +0.3**
baz=69,SNR=17
LAO LASA Array 68.76 317 *e*P **P 13 19 19.6 +0.1**
comp=Z,904nm,1.7s,mb6.4
LAO LR LR
comp=Z,31μm,21.0s,MS6.5
LAO LASA Array 68.76 317 *e*P **P 13 19 19.6 +0.1**
comp=Z,904nm,1.7s,mb6.4
L21A Rawlins 68.78 312 ⇑P **P 13 19 18.7 -1.0**
baz=69,SNR=54
120A U Bar Ranch, L 68.79 302 P **P 13 19 20.4 +0.5**
baz=69,SNR=37
Z20A Nine Sixteen R 68.79 302 ⇓P **P 13 19 20.2 +0.2**
baz=69,SNR=30
KIS Kishinev 68.79 43 *i* P **P 13 19 17.0 -2.6**
comp=Z,3μm,2.4s,mb6.8
KIS Kishinev 68.79 43 *i* PP PP 13 22 16.0 +25
KIS Kishinev 68.79 43α *i*P **P 13 19 17.0 -2.6**
KIS *e*PPP 13 23 33.0
KIS *e*S S 13 28 17.0 -7.1
KIS pmax pmax
comp=Z,3μm,2.4s,mb6.8
KIS pmax pmax
comp=Z,5μm,5.0s
KIS pmax pmax
comp=Z,4μm,16.0s
KIS MLR MLR
comp=E,29μm,17.0s,MS6.6
KIS MLR MLR
comp=Z,35μm,17.0s,MS6.7
KIS MLR MLR
comp=N,7μm,18.0s,MS6.6
KIS MLR MLR
comp=Z,33μm,18.0s
KIS Kishinev 68.79 43 P **P 13 19 19.6 0.0**
KIS Kishinev 68.79 43 P **P 13 19 19.6 0.0**
K21A Alcova 68.80 313 ⇑P **P 13 19 19.4 -0.3**
baz=69,SNR=20
D22A Cohagen 68.82 317 ⇓P **P 13 19 20.6 +0.8**
baz=69
X20A Quemado 68.82 304 ⇓P **P 13 19 20.4 +0.3**
baz=69,SNR=41
SPNC Sapanca-Adapaz 68.83 50 *e*P **P 13 19 19.7 -0.3**
BORA Eskisehir 68.83 50 *i* P **P 13 19 19.5 -0.5**
W20A Ramah 68.88 304 ⇑P **P 13 19 20.7 +0.3**
baz=69,SNR=31
V20A Brimhall 68.91 305 P **P 13 19 21.4 +0.9**
baz=69,SNR=20
GULT Gulveren 68.95 50 *e*P **P 13 19 20.5 -0.3**
H21A Big Horn, Sher 68.96 315 P **P 13 19 19.3 -1.5**
baz=69,SNR=24
SUTC Sutluce-Ispart 68.98 53 *e*P **P 13 19 20.4 -0.6**
U20A Newcomb 69.00 306 ⇓P **P 13 19 20.8 -0.4**
baz=69
I21A Big Trails, Te 69.01 314 ⇓P **P 13 19 19.8 -1.2**
baz=69
S20A Disappointment 69.02 307 ⇑P **P 13 19 22.6 +1.4**
baz=69,SNR=38
J21A Lysite 69.04 313 ⇑P **P 13 19 21.1 -0.2**
baz=69,SNR=20
R20A Redvale 69.08 308 ⇑P **P 13 19 21.6 0.0**
baz=69
BOLV Bolvadin 69.08 52 *i* P **P 13 19 21.5 -0.1**
Q20A Ridgley Place, 69.09 309 ⇑P **P 13 19 22.0 +0.3**
baz=69
G21A Lodge Grass 69.18 315 ⇑P **P 13 19 21.6 -0.5**
baz=69,SNR=23
O20A White River Ci 69.19 310 ⇑P **P 13 19 22.5 +0.3**
baz=69,SNR=31
IIGN Ignalina 69.20 34 *e*P **P 13 19 22.2 +0.3**
IIGN AMB AMB 13 19 26.2
comp=Z,109nm,2.2s,mb5.4
IIGN Ignalina 69.20 34 *e*P **P 13 19 22.2 +0.2**
comp=Z,109nm,2.2s,mb5.4,SNR=19
ISAL Salakas 69.21 33 *e*P **P 13 19 22.4 +0.3**
ISAL AMB AMB 13 19 26.3
comp=Z,90nm,2.1s,mb5.3
ISAL Salakas 69.21 33 *e*P **P 13 19 22.4 +0.4**
comp=Z,90nm,2.1s,mb5.3,SNR=19
PV01 Paradox Valley 69.22 308 *e*P **P 13 19 22.9 +0.4**
comp=Z,9μm,1.2s,mb7.6
PV01 Paradox Valley 69.22 308 *e*P **P 13 19 22.9 +0.4**
comp=Z,9μm,1.2s,mb7.6
P20A De Beque 69.23 309 P **P 13 19 23.2 +0.7**
baz=69,SNR=34
319A Douglas 69.27 300 ⇓P **P 13 19 23.3 +0.4**
baz=69,SNR=28
219A White Tail Can 69.28 301 ⇑P **P 13 19 23.7 +0.7**
baz=69,SNR=27
N20A Spence Gulch, 69.30 311 ⇓P **P 13 19 23.7 +0.8**
baz=69
M20A Sweetwater, Wa 69.32 311 ⇑P **P 13 19 23.7 +0.7**
baz=69,SNR=26
D21A La Casta Ranch 69.35 317 P **P 13 19 23.6 +0.4**
baz=69,SNR=16
Z19A T-Link Ranch, 69.37 302 ⇓P **P 13 19 23.6 +0.1**
baz=69,SNR=10
NACGM Naroch 69.38 34 *e*P **P 13 19 21.0 -2.1**
NACGM Naroch 69.38 34 *e*P **P 13 19 21.0 -2.1**
NACGM *e*S S 13 28 32.0 +1.2
Y19A Nutrioso 69.40 303 ⇓P **P 13 19 24.8 +1.1**
baz=69,SNR=51
T19A Beclabito 69.45 306 ⇑P **P 13 19 25.0 +1.0**
baz=69,SNR=21
DAG Danmarks Havn 69.46 5⇑*i*P **P 13 19 22.1 -1.1**
DAG pmax pmax
comp=Z,74nm,1.1s,mb5.5
X19A St. Johns 69.47 304 ⇓P **P 13 19 24.5 +0.4**
baz=69
IDID Didziasalis 69.47 34 *e*P **P 13 19 23.9 +0.2**
IDID AMB AMB 13 19 27.8
comp=Z,106nm,2.2s,mb5.4
IDID Didziasalis 69.47 34 *e*P **P 13 19 23.9 +0.2**
comp=Z,106nm,2.2s,mb5.4,SNR=19
SUR Sutherland 69.48 129 *e*P **P 13 19 23.7 -0.5**
comp=Z,394nm,1.6s,mb6.1
SUR LR LR
comp=Z,35μm,21.0s,MS6.6
SUR Sutherland 69.48 129 P **P 13 19 24.3 +0.1**
comp=Z,537nm,1.2s,mb6.3,SNR=7.1
SUR Sutherland 69.48 129 *e*P **P 13 19 23.7 -0.5**
comp=Z,394nm,1.6s,mb6.1
MDU Mudurnu 69.49 50 *e*P **P 13 19 22.8 -1.3**
L20A Wamsutter 69.50 312 P **P 13 19 23.9 -0.2**
baz=70,SNR=39
J20A Shoshoni 69.51 313 P **P 13 19 23.5 -0.7**
baz=70,SNR=58
PV04 Paradox Valley 69.51 308 *e*P **P 13 19 25.0 +0.7**
PV04 Paradox Valley 69.51 308 *e*P **P 13 19 25.0 +0.7**
U19A Dine' College, 69.55 306 ⇑P **P 13 19 24.4 -0.2**
baz=70,SNR=48
C21A Desert Coulee 69.56 318 ⇓P **P 13 19 24.2 -0.2**
baz=70,SNR=28
K20A Yellowstone Ra 69.59 312 P **P 13 19 24.2 -0.5**
baz=70,SNR=16
W19A Sanders 69.60 304 ⇑P **P 13 19 25.0 +0.1**
baz=70,SNR=71
SVRH Sivrihisar-ESK 69.60 51 *e*P **P 13 19 24.7 -0.1**
H20A Greybull 69.61 314 ⇓P **P 13 19 24.2 -0.6**
baz=70,SNR=12
ELIM Elim 69.62 131⇑*i*P **P 13 19 23.0 -1.9**
B21A Ellsworth Farm 69.62 319 ⇑P **P 13 19 25.1 +0.3**
baz=70,SNR=23
I20A Worland 69.62 314 P **P 13 19 24.8 0.0**
baz=70,SNR=20
S19A Harvey Farm, M 69.62 307 ⇑P **P 13 19 25.1 +0.1**
baz=70,SNR=33
P19A Cripple Cowboy 69.70 309 ⇑P **P 13 19 25.6 +0.2**
baz=70,SNR=26
MBAR Mbarara 69.72 94*c* *i*P **P 13 19 26.1 +0.1**
MBAR Mbarara 69.72 94 P **P 13 19 27.3 +1.3**
comp=Z,216nm,1.3s,mb5.9,SNR=9.4
MBAR Mbarara 69.72 94 *i* P **P 13 19 26.1 +0.1**
KDZE Karadeniz Ereo 69.76 49 *e*P **P 13 19 23.2 -2.6**
R19A Curley Farm, L 69.78 308 ⇓P **P 13 19 26.3 +0.4**
baz=70,SNR=30
KIEV Kiev 69.79 39 *e*P **P 13 19 24.9 -0.9**
KIEV pmax pmax
comp=Z,218nm,1.2s,mb6.0
KIEV MLR MLR
comp=Z,52μm,21.0s,MS6.8
KIEV Kiev 69.79 39 *e*P **P 13 19 24.9 -0.9**
comp=Z,218nm,1.2s,mb6.0
KIEV LR LR
comp=Z,52μm,21.0s,MS6.8
KIEV Kiev 69.79 39 *e*P **P 13 19 24.9 -0.9**
comp=Z,52μm,21.0s
KIZT Kizilcal 69.82 52 *e*P **P 13 19 25.7 -0.5**
PPCY Paphos 69.84 56 P **P 13 19 23.1 -3.3**
Q19A Hogan Spring (69.84 308 ⇑P **P 13 19 26.3 0.0**
baz=70,SNR=88
MNK Minsk 69.87 35*c* *i*P **P 13 19 24.0 -2.1**
MNK *i* pP 13 19 24.0 -3.1
MNK *e* 13 22 02.0
MNK *e*S S 13 28 34.0 -2.5
MNK *e*PS 13 29 04.0
MNK pmax pmax
comp=Z,9μm,7.0s
MNK pmax pmax
comp=Z,800nm,1.5s,mb6.4
MNK pmax pmax
comp=E,970nm,1.8s
MNK smax
comp=E,18μm,14.0s
MNK smax
comp=N,19μm,10.0s
MNK Minsk 69.87 35 *i* P **P 13 19 24.0 -2.1**
comp=N,800nm,1.5s,mb6.4
MNK *e*S S 13 28 34.0 -2.5
comp=N,19μm,10.0s
318A Bisbee 69.88 300 ⇑P **P 13 19 26.5 -0.1**
baz=70,SNR=22
G20A Bridger 69.88 315 ⇑P **P 13 19 25.7 -0.7**
baz=70,SNR=38
O19A Miners Draw (B 69.88 310 ⇓P **P 13 19 26.6 +0.1**
baz=70,SNR=16
W18A Petrified Fore 69.88 304 ⇓P **P 13 19 27.3 +0.7**
baz=70,SNR=25
MICGM Minsk 69.89 35⇑*i*P **P 13 19 24.0 -2.3**
118A Homack Ranch, 69.92 302 P **P 13 19 27.2 +0.3**
baz=70,SNR=34
F20A Billings 69.92 316 P **P 13 19 27.1 +0.4**
baz=70,SNR=28
218A Dragoon 69.95 301 P **P 13 19 28.4 +1.3**
baz=70,SNR=13
PKA Prieska 69.95 126⇑*i*P **P 13 19 27.5 +0.4**
PKA AMB AMB 13 19 30.2
comp=Z,110nm,1.8s,mb5.5
X18A Snowflake 70.02 304 P **P 13 19 27.9 +0.5**
baz=70,SNR=39
E20A Meyer Farm, Mu 70.03 317 P **P 13 19 27.3 0.0**
baz=70,SNR=62
Y18A Canyon Day Jun 70.04 303 ⇑P **P 13 19 28.3 +0.6**
baz=70,SNR=32
ALFC Alevga 70.07 56 P **P 13 19 24.8 -3.0**
comp=Z,6.2nm,1.3s
ALFC Alevga 70.07 56 P **P 13 19 24.8 -3.0**
comp=Z,6.2nm,1.3s
KONT Konya--Tatoy 70.10 53 *e*P **P 13 19 27.9 0.0**
HDMB Hadim 70.12 54 *e*P **P 13 19 27.4 -0.6**
D20A Manuel Ranch, 70.13 317 P **P 13 19 27.9 0.0**
baz=70,SNR=65
C20A Veseth Ranch, 70.14 318 ⇓P **P 13 19 28.1 +0.1**
baz=70
T18A Mexican Hat 70.16 306 ⇑P **P 13 19 29.0 +0.7**
baz=70,SNR=30
J19A Crowheart 70.19 313 P **P 13 19 28.1 -0.3**
baz=70,SNR=35
I19A Meeteetse 70.26 314 P **P 13 19 28.6 -0.1**
baz=70,SNR=21
L19A Farson 70.27 312 ⇑P **P 13 19 28.9 0.0**
baz=70,SNR=26
R18A Canyonlands Na 70.28 308 P **P 13 19 29.0 0.0**
baz=70,SNR=67
S18A Hurst Farm, Bl 70.30 307 ⇑P **P 13 19 30.2 +1.1**
baz=70,SNR=16
LEF Lefka 70.31 56 *e*P **P 13 19 28.9 -0.3**
H19A Powell 70.34 314 ⇓P **P 13 19 29.2 0.0**
baz=70,SNR=31
VSU Vasula 70.37 30*d* *i*P **P 13 19 30.4 +1.3**
VSU pmax pmax
comp=Z,315nm,1.7s,mb6.0
VSU Vasula 70.37 30 *i* P **P 13 19 30.4 +1.3**
comp=Z,315nm,1.7s,mb6.0
N18A Larsen Ranch, 70.37 311 ⇓P **P 13 19 28.7 -0.8**
baz=70
Z17A San Carlos Hig 70.38 302 ⇓P **P 13 19 30.1 +0.4**
baz=70,SNR=10
E19A Rath Farm, Rou 70.47 316 P **P 13 19 29.4 -0.6**
baz=70,SNR=86
F19A Roth Farm, Mol 70.48 316 P **P 13 19 29.7 -0.4**
baz=70,SNR=31
PDAR Pinedale Array 70.50 312 P **P 13 19 29.6 -0.7**
comp=Z,5.8nm,1.0s,baz=112,slow=6.6,SNR=33
PDAR S S 13 28 40.2 -4.1
comp=Z,0.1nm,0.3s,baz=332,slow=37,SNR=2.6
PDAR LR LR 13 46 32.6
comp=Z,56μm,21.4s,MS6.8,baz=124,slow=33
PDAR PKPPKP 13 47 28.4
comp=Z,1.7nm,1.1s,baz=46,slow=4.3,SNR=6.9
PDAR Pinedale Array 70.50 312 P **P 13 19 29.5 -0.7**
PDAR S S 13 28 40.2 -4.2
BW06 Boulder Array 70.50 312 P **P 13 19 29.7 -0.6**
baz=70,SNR=55
BW06 Boulder Array 70.50 312 *e*P **P 13 19 29.4 -0.8**
comp=Z,1μm,1.5s,mb6.5
BW06 LR LR
comp=Z,67μm,22.0s,MS6.8
BW06 Boulder Array 70.50 312 *e*P **P 13 19 29.5 -0.7**
comp=Z,1μm,1.5s,mb6.5
Q18A Rafter H Ranch 70.53 309 ⇓P **P 13 19 30.5 0.0**
baz=70,SNR=35
O18A Roosevelt 70.55 310 P **P 13 19 31.8 +1.1**
baz=70,SNR=27
117A Oracle 70.56 302 P **P 13 19 31.4 +0.5**
baz=70,SNR=17
MAMC Mammari 70.58 56 P **P 13 19 29.0 -1.9**
MAMC Mammari 70.58 56 P **P 13 19 29.0 -1.9**
TUC Tucson 70.59 301 *e*P **P 13 19 30.5 -0.5**
TUC pmax pmax
comp=Z,95nm,1.4s,mb5.5
TUC MLR MLR
comp=Z,21μm,20.0s,MS6.4
TUC Tucson 70.59 301 *e*P **P 13 19 30.5 -0.5**
comp=Z,95nm,1.4s,mb5.5
TUC LR LR
comp=Z,21μm,20.0s,MS6.4
TUC Tucson 70.59 301 *e*P **P 13 19 30.5 -0.5**
comp=Z,21μm,20.0s
217A Green Valley 70.59 301 P **P 13 19 30.9 -0.1**
baz=71,SNR=21
RLMT Red Lodge 70.60 315 ⇑P **P 13 19 31.4 +0.6**
baz=71,SNR=34
RLMT Red Lodge 70.60 315 *e*P **P 13 19 30.5 -0.4**
comp=Z,274nm,1.3s,mb6.0
RLMT LR LR
comp=Z,21μm,20.0s,MS6.4
RLMT Red Lodge 70.60 315 *e*P **P 13 19 30.5 -0.3**
comp=Z,274nm,1.3s,mb6.0
LOD Lodumlu 70.60 51 *e*P **P 13 19 29.9 -1.1**
D19A Cripps Ranch, 70.64 317 P **P 13 19 30.3 -0.7**
baz=71,SNR=58
CSS Prodhromos 70.66 56 P **P 13 19 28.8 -2.6**
comp=Z,5.4nm,1.2s
CSS Prodhromos 70.66 56 P **P 13 19 28.8 -2.6**
comp=Z,5.4nm,1.2s
W17A Winslow 70.68 304 ⇑P **P 13 19 32.5 +1.0**
baz=71,SNR=12
LBTB Lobatse 70.68 120 *e*P **P 13 19 31.3 -0.4**
LBTB pmax pmax
comp=Z,427nm,1.5s,mb6.2
LBTB MLR MLR
comp=Z,56μm,22.0s,MS6.8
LBTB Lobatse 70.68 120 *e*P **P 13 19 31.3 -0.4**
comp=Z,427nm,1.5s,mb6.2
LBTB LR LR
comp=Z,56μm,22.0s,MS6.8
LBTB Lobatse 70.68 120 *e*P **P 13 19 31.3 -0.4**
comp=Z,56μm,22.0s
SAFT Safranbolu 70.68 49 *e*P **P 13 19 31.2 -0.2**
Y17A Roosevelt 70.71 303 ⇑P **P 13 19 32.0 +0.2**
baz=71,SNR=40
X17A Forest Lakes 70.71 303 ⇓P **P 13 19 32.0 +0.3**
baz=71,SNR=20
M18A Lyman 70.72 311 P **P 13 19 31.6 -0.1**
baz=71,SNR=27
L18A Fontenelle, Gr 70.75 311 P **P 13 19 31.9 +0.1**
baz=71,SNR=19
V17A Tonalea, Kykot 70.78 305 ⇑P **P 13 19 32.2 +0.1**
baz=71,SNR=81
AFSR Af'ar-Bala (A 70.80 51 *e*P **P 13 19 31.1 -1.0**
I18A Diamond G Ranc 70.80 313 P **P 13 19 32.3 +0.2**
baz=71,SNR=16
H18A Shoshone NF, C 70.82 314 ⇓P **P 13 19 31.9 -0.2**
baz=71,SNR=34
G18A Lazy EL Ranch, 70.83 315 P **P 13 19 32.2 0.0**
baz=71,SNR=29
K18A Toltan Ranch, 70.84 312 ⇑P **P 13 19 32.5 +0.2**
baz=71,SNR=42
SRU San Rafael 70.84 308 ⇑P **P 13 19 32.5 +0.1**
baz=71,SNR=51
SRU San Rafael 70.84 308 *e*P **P 13 19 32.0 -0.4**
SRU pmax pmax
comp=Z,78nm,1.1s,mb5.5
SRU San Rafael 70.84 308 *e*P **P 13 19 32.0 -0.4**
comp=Z,78nm,1.1s,mb5.5
SRU San Rafael 70.84 308 *e*P **P 13 19 32.0 -0.4**
comp=Z,78nm,1.1s,mb5.5
A19A Klindworth Far 70.84 319 P **P 13 19 33.0 +0.8**
baz=71,SNR=26
LFK Lefkose 70.84 56 *e*P **P 13 19 32.7 +0.2**
C19A Slack Wire Ran 70.84 318 P **P 13 19 31.8 -0.4**
baz=71,SNR=65
T17A Navajo Res., N 70.89 306 ⇑P **P 13 19 33.8 +1.0**
baz=71,SNR=33
J18A Kendall Valley 70.89 313 ⇓P **P 13 19 32.4 -0.3**
baz=71,SNR=24
B19A Brinkman Farms 70.89 318 P **P 13 19 32.9 +0.4**
baz=71,SNR=21
R17A Hanksville Air 70.92 308 ⇑P **P 13 19 33.2 +0.3**
baz=71,SNR=16
S17A Black Ridge (B 70.93 307 ⇑P **P 13 19 33.7 +0.6**
baz=71,SNR=94
FINES FINESS Array B 70.97 27 P **P 13 19 32.0 -0.8**
comp=Z,88nm,0.9s,mb5.7,baz=252,slow=3.8,SNR=43
FINES S S 13 28 50.7 +1.6
comp=Z,0.6nm,0.3s,baz=320,slow=35,SNR=1.9
FINES LR LR 13 46 51.8
comp=Z,42μm,21.2s,MS6.7,baz=256,slow=33
FINES FINESS Array B 70.97 27 P **P 13 19 32.0 -0.7**
FINES S S 13 28 50.7 +1.5
FINES pmax pmax
comp=Z,88nm,1.0s
FINES smax
comp=N,1.0nm,0.3s
FINES FINESS Array B 70.97 27 P **P 13 19 32.0 -0.8**
FINES S S 13 28 50.7 +1.6
FINES LR LR 13 46 51.8
FINES FINESS Array B 70.97 27 P **P 13 19 32.0 -0.7**
comp=N,88nm,1.0s,mb5.6
FINES S S 13 28 50.7 +1.5
comp=N,1.0nm,0.3s
GCMT Greycliff 70.97 316 *e*P **P 13 19 33.0 -0.1**
comp=N,403nm,1.8s,mb6.0
GCMT Greycliff 70.97 316 *e*P **P 13 19 33.0 -0.1**
comp=N,403nm,1.8s,mb6.0
F18A Big Timber 71.02 316 ⇑P **P 13 19 33.3 -0.1**
baz=71,SNR=58
IKL Isikli 71.03 55 *e*P **P 13 19 33.3 -0.3**
SULT Sultanhani-AKS 71.03 52 *e*P **P 13 19 33.1 -0.5**
P17A Butcher Ranch, 71.04 309 ⇓P **P 13 19 33.7 +0.1**
baz=71,SNR=26
U16A Tuba City 71.09 305 P **P 13 19 34.8 +0.8**
baz=71,SNR=17
O17A Robinson Place 71.10 310 ⇓P **P 13 19 34.3 +0.3**
baz=71,SNR=71
M17A Scullys Gap (B 71.17 311 ⇓P **P 13 19 33.9 -0.5**
baz=71,SNR=37
SWZ Schweizer 71.18 122⇑*i*P **P 13 19 34.5 -0.1**
SWZ AMB AMB 13 19 45.3
comp=Z,318nm,3.5s
PHNC Paralimni 71.23 56 P **P 13 19 34.1 -0.8**
comp=Z,9.9nm,1.6s
PHNC Paralimni 71.23 56 P **P 13 19 34.1 -0.8**
comp=Z,9.9nm,1.6s
BALT Daday 71.24 49 *i* P **P 13 19 33.9 -0.9**
X16A Lo Mia Camp, P 71.24 304 ⇑P **P 13 19 35.3 +0.3**
baz=71,SNR=58
N17A Moffit Pass 71.24 310 P **P 13 19 35.2 +0.4**
baz=71,SNR=27
Y16A Circle Bar Ran 71.25 303 ⇑P **P 13 19 35.5 +0.5**
baz=71,SNR=22
E18A Harlowton 71.25 316 P **P 13 19 34.5 -0.2**
baz=71,SNR=54
BR131 Keskin Array S 71.26 51 *e*P **P 13 19 35.0 +0.1**
comp=Z,284nm,1.2s,mb6.1
BR131 LR LR
comp=Z,22μm,22.0s,MS6.4
BR131 Keskin Array S 71.26 51 *e*P **P 13 19 35.0 +0.1**
comp=Z,284nm,1.2s,mb6.1
BRTR Keskin Array B 71.26 51 P **P 13 19 35.0 +0.1**
comp=Z,36nm,0.9s,mb5.3,baz=256,slow=5.0,SNR=92
BRTR PP PP 13 22 13.1 +0.2
comp=Z,67nm,1.3s,baz=244,slow=8.0,SNR=3.8
BRTR S S 13 28 52.9 -0.4
comp=Z,0.7nm,0.9s,baz=309,slow=7.8,SNR=2.3
BRTR LR LR 13 55 14.4
comp=Z,10μm,18.5s,MS6.1,baz=236,slow=40
BRTR Keskin Array B 71.26 51 *i* P **P 13 19 35.0 +0.1**
BRTR pmax pmax
comp=Z,36nm,0.9s
BRTR Keskin Array B 71.26 51 *i* P **P 13 19 35.0 +0.1**
comp=Z,36nm,0.9s,mb5.3
BRTR Keskin Array B 71.26 51 PP PP 13 22 13.1 +0.2
D18A Linhart Farms, 71.27 317 P **P 13 19 35.0 +0.2**
baz=71,SNR=48
KAMT Kaman 71.28 51 *e*P **P 13 19 35.6 +0.5**
KAF Kangasniemi 71.29 27 *e*P **P 13 19 33.9 -0.8**
KAF Kangasniemi 71.29 27 *e*P **P 13 19 33.9 -0.8**
LKWY Lake 71.33 314 *e*P **P 13 19 35.4 +0.2**
LKWY pmax pmax
comp=Z,654nm,1.7s,mb6.3
LKWY MLR MLR
comp=Z,56μm,21.0s,MS6.8
LKWY Lake 71.33 314 *e*P **P 13 19 35.4 +0.1**
comp=Z,654nm,1.7s,mb6.3
LKWY LR LR
comp=Z,56μm,21.0s,MS6.8
LKWY Lake 71.33 314 *e*P **P 13 19 35.4 +0.2**
comp=Z,56μm,21.0s
W16A Flagstaff 71.35 304 P **P 13 19 36.3 +0.7**
baz=71,SNR=50
EGMT Eagleton 71.36 318 P **P 13 19 34.8 -0.6**
baz=71,SNR=32
EGMT Eagleton 71.36 318 *e*P **P 13 19 34.3 -1.0**
comp=Z,140nm,1.0s,mb5.8
EGMT LR LR
comp=Z,38μm,22.0s,MS6.6
EGMT Eagleton 71.36 318 *e*P **P 13 19 34.3 -1.1**
comp=Z,140nm,1.0s,mb5.8
LOHW Long Hollow 71.36 313 *e*P **P 13 19 34.9 -0.6**
comp=Z,275nm,1.5s,mb6.0
LOHW Long Hollow 71.36 313 *e*P **P 13 19 34.8 -0.7**
comp=Z,275nm,1.5s,mb6.0
I17A Pilgrim Ck. 71.37 314 ⇑P **P 13 19 35.9 +0.3**
baz=71,SNR=27
EREN Erenkoy 71.38 55 *e*P **P 13 19 35.6 -0.1**
116A Eloy 71.38 302 P **P 13 19 36.0 +0.2**
baz=71,SNR=22
TMUT Trail Mountain 71.38 309 *e*P **P 13 19 35.6 -0.1**
comp=Z,788nm,2.1s,mb6.3
TMUT Trail Mountain 71.38 309 *e*P **P 13 19 35.7 0.0**
comp=Z,788nm,2.1s,mb6.3
J17A Brown Place, J 71.41 313 ⇑P **P 13 19 36.8 +1.0**
baz=71,SNR=16
B18A Beardsley Farm 71.43 318 P **P 13 19 36.1 +0.3**
baz=71,SNR=17
H17A Grant Village 71.43 314 ⇑P **P 13 19 37.0 +1.2**
baz=71,SNR=9.5
SNOW Snow King Moun 71.45 313 *e*P **P 13 19 35.6 -0.5**
comp=Z,304nm,1.4s,mb6.0
SNOW Snow King Moun 71.45 313 *e*P **P 13 19 35.6 -0.4**
comp=Z,304nm,1.4s,mb6.0
MOOW Moose Ponds 71.47 313 *e*P **P 13 19 35.4 -0.7**
comp=Z,159nm,1.4s,mb5.8
MOOW Moose Ponds 71.47 313 *e*P **P 13 19 35.4 -0.8**
comp=Z,159nm,1.4s,mb5.8
FLWY Flagg Ranch 71.48 314 *e*P **P 13 19 36.9 +0.7**
comp=Z,2μm,1.8s,mb6.6
FLWY Flagg Ranch 71.48 314 *e*P **P 13 19 36.9 +0.7**
comp=Z,2μm,1.8s,mb6.6
TRO Tromso 71.50 18⇑*i*P **P 13 19 35.0 -0.8**
TRO AMb AMB 13 19 39.2
comp=Z,354nm,2.4s,mb5.9
TRO *e*S S 13 28 54.7 -0.4
TRO AMS AMS 13 42 21.2
comp=Z,21μm,28.7s,MS6.2
TRO Tromso 71.50 18⇑*i*P **P 13 19 35.0 -0.8**
TRO pmax pmax

comp=Z,354nm,2.4s,mb5.9
TRO MLR MLR
comp=Z,21µm,28.7s,MS6.2
TRO Tromso 71.50 18⇑*i*P P 13 19 35.0 -0.8
comp=Z,354nm,2.4s,mb5.9
TRO LR LR
comp=Z,21µm,28.7s,MS6.2
TRO Tromso 71.50 18 *i* P P 13 19 35.0 -0.8
comp=Z,21µm,28.7s
TRO *e*S S 13 28 54.7 -0.4
SNR=20
REDW Red Top Meadow 71.51 313 *e*P P 13 19 35.5 -0.8
comp=Z,518nm,1.5s,mb6.2
REDW Red Top Meadow 71.51 313 *e*P P 13 19 35.5 -0.9
comp=Z,518nm,1.5s,mb6.2
DAU Daniels Canyon 71.52 310 *e*P P 13 19 36.7 +0.2
DAU pmax pmax
comp=Z,771nm,1.7s,mb6.4
DAU Daniels Canyon 71.52 310 *e*P P 13 19 36.7 +0.2
comp=Z,770nm,1.7s,mb6.4
DAU Daniels Canyon 71.52 310 *e*P P 13 19 36.7 +0.2
comp=Z,771nm,1.7s,mb6.4
R16A Teasdale 71.52 308 P **P 13 19 36.8 +0.3**
baz=72,SNR=24
YNR Norris Junctio 71.54 314 *e*P P 13 19 37.5 +1.0
comp=Z,852nm,2.2s,mb6.3
YNR Norris Junctio 71.54 314 *e*P P 13 19 37.5 +1.0
comp=Z,852nm,2.2s,mb6.3
TPAW Teton Pass 71.59 313 *e*P P 13 19 36.7 -0.2
comp=Z,317nm,1.3s,mb6.1
TPAW Teton Pass 71.59 313 *e*P P 13 19 36.7 -0.2
comp=Z,317nm,1.3s,mb6.1
BOSA Boshof 71.60 124 P **P 13 19 37.2 0.0**
comp=Z,102nm,1.1s,mb5.7,baz=289,slow=5.8,SNR=31
BOSA LR LR 13 44 36.5
comp=Z,27µm,21.9s,MS6.5,baz=290,slow=30
BOSA Boshof 71.60 124 *e*P P 13 19 36.9 -0.3
comp=Z,472nm,1.2s,mb6.3
BOSA LR LR
comp=Z,28µm,21.0s,MS6.5
BOSA Boshof 71.60 124 P **P 13 19 37.2 0.0**
comp=Z,102nm,1.1s,mb5.7
YFT Old Faithful 71.62 314 *e*P P 13 19 37.8 +0.8
comp=Z,340nm,1.2s,mb6.2
YFT Old Faithful 71.62 314 *e*P P 13 19 37.8 +0.8
comp=Z,340nm,1.2s,mb6.2
AHID Auburn Hatcher 71.63 312 *e*P P 13 19 37.0 -0.1
comp=Z,406nm,1.5s,mb6.1
AHID LR LR
comp=Z,80µm,22.0s,MS6.9
AHID Auburn Hatcher 71.63 312 *e*P P 13 19 37.0 -0.1
comp=Z,406nm,1.5s,mb6.1
IMW Indian Meadow 71.63 313 *e*P P 13 19 36.8 -0.3
comp=Z,346nm,1.3s,mb6.1
IMW Indian Meadow 71.63 313 *e*P P 13 19 36.8 -0.3
comp=Z,346nm,1.3s,mb6.1
TOS Tosya 71.67 50 *e*P P 13 19 37.4 0.0
F17A Fitzpatrick Pl 71.67 316⇓P P 13 19 37.1 -0.2
baz=72,SNR=38
JLU Jordanelle 71.68 310 *e*P P 13 19 37.2 -0.3
comp=Z,2µm,2.2s,mb6.6
JLU Jordanelle 71.68 310 *e*P P 13 19 37.2 -0.3
comp=Z,2µm,2.2s,mb6.6
N16A Rees Ranch, Co 71.69 310⇓P P 13 19 38.5 +0.9
baz=72,SNR=14
YMR Madison River 71.74 314 *e*P P 13 19 38.5 +0.7
comp=Z,554nm,1.1s,mb6.4
YMR Madison River 71.74 314 *e*P P 13 19 38.5 +0.8
comp=Z,554nm,1.1s,mb6.4
BZK Bozkurt 71.74 49 *e*P P 13 19 36.5 -1.3
MERS Mersin 71.74 54 *e*P P 13 19 36.0 -1.9
P16A Fountain Green 71.76 309⇓P P 13 19 38.2 +0.2
baz=72
MPU Maple Canyon 71.77 309 *e*P P 13 19 38.5 +0.5
comp=Z,304nm,1.8s,mb5.9
MPU Maple Canyon 71.77 309 *e*P P 13 19 38.5 +0.5
comp=Z,304nm,1.8s,mb5.9
DCID1 Drake Creek 71.78 313 *e*P P 13 19 38.0 0.0
comp=Z,579nm,1.4s,mb6.3
DCID1 Drake Creek 71.78 313 *e*P P 13 19 38.0 0.0
comp=Z,579nm,1.4s,mb6.3
L16A Fish Haven 71.80 311⇓P P 13 19 38.1 0.0
baz=72,SNR=18
CDAG Cicekdag 71.81 51 *i* P P 13 19 38.0 -0.3
EIL Elat 71.82 62 P **P 13 19 38.6 +0.1**
comp=Z,62nm,1.0s,mb5.5,baz=318,slow=2.2,SNR=57
EIL S S 13 28 59.4 -0.8
comp=Z,2.1nm,0.9s,baz=282,slow=24,SNR=1.9
EIL LR LR 13 49 60.0
comp=Z,73µm,19.8s,MS7.0,baz=270,slow=35
EIL Elat 71.82 62 P **P 13 19 38.6 +0.1**
EIL S S 13 28 59.4 -0.8
EIL LR LR 13 49 60.0
EIL Elat 71.82 62 P **P 13 19 38.6 +0.1**
EIL S S 13 28 59.4 -0.8
115A Sonoran Desert 71.82 302⇑P P 13 19 38.4 -0.1
baz=72
RRI2 Red Ridge 71.85 313 *e*P P 13 19 37.6 -0.9
comp=Z,673nm,1.6s,mb6.3
RRI2 Red Ridge 71.85 313 *e*P P 13 19 37.6 -0.8
comp=Z,673nm,1.6s,mb6.3
HWUT Hardware Ranch 71.86 311 *e*P P 13 19 38.1 -0.4
comp=Z,303nm,1.1s,mb6.1
HWUT LR LR
comp=Z,53µm,20.0s,MS6.8
HWUT Hardware Ranch 71.86 311 *e*P P 13 19 38.1 -0.4
comp=Z,303nm,1.1s,mb6.1
D17A Six Diamond Ra 71.86 317 P **P 13 19 38.4 0.0**
baz=72,SNR=33
M16A Huntsville 71.88 311 P **P 13 19 38.3 -0.3**
baz=72,SNR=56
E17A Martinsdale 71.88 316 P **P 13 19 38.2 -0.3**
baz=72,SNR=49
X15A Humboldt 71.90 304 P **P 13 19 39.5 +0.6**
baz=72,SNR=55
V15A Kaibab Nationa 71.91 305 P **P 13 19 39.5 +0.6**
baz=72,SNR=46
CTU Camp Tracy 71.92 310 *e*P P 13 19 39.5 +0.6
comp=Z,141nm,1.1s,mb5.8
CTU Camp Tracy 71.92 310 *e*P P 13 19 39.5 +0.6
comp=Z,141nm,1.1s,mb5.8
H16A Russell Place, 71.94 314⇓P P 13 19 39.6 +0.7
baz=72,SNR=41
W15A Williams 71.96 304⇑P P 13 19 40.5 +1.3
baz=72,SNR=15
Y15A Casa Rosa Ranc 71.96 303⇑P P 13 19 39.6 +0.3
baz=72,SNR=26
C17A Wharram Farm, 71.97 317⇓P P 13 19 38.2 -0.8
baz=72,SNR=25
K16A Soda Springs 71.99 312⇓P P 13 19 39.4 +0.1
baz=72,SNR=28
I16A Newdale 72.02 313⇑P P 13 19 39.3 -0.2
baz=72
U15A North Rim 72.04 306 P **P 13 19 40.4 +0.6**
baz=72,SNR=50
J16A Bone 72.05 313⇑P P 13 19 39.7 +0.1
baz=72,SNR=21
CORM Corum 72.06 50 *e*P P 13 19 39.3 -0.4
KSR Koster 72.06 120 *e*P P 13 19 41.7 +1.7
KSR AMB AMB 13 19 50.9
comp=Z,48nm,2.8s,mb4.9
MSU Marysvale 72.08 308 *e*P P 13 19 39.8 -0.1
MSU pmax pmax
comp=Z,244nm,1.6s,mb5.9
MSU Marysvale 72.08 308 *e*P P 13 19 39.8 -0.1
comp=Z,244nm,1.6s,mb5.9
MSU Marysvale 72.08 308 *e*P P 13 19 39.8 -0.1
comp=Z,244nm,1.6s,mb5.9
B17A L&G Farms, Che 72.09 318 P **P 13 19 40.0 +0.2**
baz=72,SNR=25
NLU North Lily Min 72.10 309 *e*P P 13 19 39.9 -0.1
comp=Z,331nm,1.6s,mb6.0
NLU North Lily Min 72.10 309 *e*P P 13 19 39.9 -0.1
comp=Z,331nm,1.6s,mb6.0
MVU Marysvale 72.11 308 PFAKE 13 19 50.0 +10
MVU LR LR
comp=Z,18µm,21.0s,MS6.3
A17A Triple J Farms 72.12 319 P **P 13 19 39.7 -0.2**
baz=72,SNR=28
AVNT Avonos 72.13 52 *i* P P 13 19 39.2 -1.0
SIM Simferopol' 72.13 45*ce*P P 13 19 39.6 -0.5
SIM *e* 13 22 19.6
SIM S S 13 29 04.1 +0.9
SIM pmax pmax
comp=Z,93nm,1.1s,mb5.6
SIM pmax pmax
comp=Z,2µm,13.0s
SIM MLR MLR
comp=Z,25µm,18.0s,MS6.5
SIM Simferopol' 72.13 45 *e*P P 13 19 39.6 -0.5
comp=Z,2µm,13.0s
SIM S S 13 29 04.1 +0.9
comp=Z,25µm,18.0s
KARA Karaisali 72.19 54 *e*P P 13 19 40.3 -0.3
NOQ North Oquirrh 72.19 310 *e*P P 13 19 40.9 +0.4
comp=Z,208nm,1.1s,mb6.0
NOQ North Oquirrh 72.19 310 *e*P P 13 19 40.9 +0.4
comp=Z,208nm,1.1s,mb6.0
CTKT Corum 72.21 50 *i* P P 13 19 39.4 -1.3
P15A Leamington 72.23 309 P **P 13 19 41.7 +0.9**
baz=72,SNR=19
BYBT Boyabat 72.26 49 *e*P P 13 19 41.2 +0.2
Q15A Fillmore 72.27 308 P **P 13 19 42.3 +1.3**
baz=72,SNR=17
MMAI Mount Meron Ar 72.28 58 P **P 13 19 41.8 +0.6**
comp=Z,128nm,1.0s,mb5.8,baz=268,slow=3.3,SNR=34
MMAI PP PP 13 22 23.4 +1.5
comp=Z,104nm,1.2s,baz=316,slow=3.5,SNR=5.0
MMAI S S 13 29 08.7 +3.3
comp=Z,0.5nm,0.3s,baz=280,slow=41,SNR=1.9
MMAI LR LR 13 51 55.5
comp=Z,27µm,20.1s,MS6.5,baz=260,slow=36
214A Organ Pipe Nat 72.30 301⇑P P 13 19 41.7 +0.3
baz=72,SNR=14
BOZ Bozeman (W) 72.32 315 P **P 13 19 40.8 -0.4**
baz=72,SNR=71
BOZ Bozeman (W) 72.32 315 *e*P P 13 19 40.5 -0.7
BOZ pmax pmax
comp=Z,57nm,1.0s,mb5.5
BOZ MLR MLR
comp=Z,19µm,20.0s,MS6.4
BOZ Bozeman (W) 72.32 315 *e*P P 13 19 40.5 -0.7
comp=Z,57nm,1.0s,mb5.5
BOZ LR LR
comp=Z,19µm,20.0s,MS6.4
BOZ Bozeman (W) 72.32 315 *e*P P 13 19 40.5 -0.7
comp=Z,19µm,20.0s
F16A Kennard Place, 72.33 315 P **P 13 19 41.2 -0.1**
baz=72,SNR=25
114A Black Gap (USA 72.38 302 P **P 13 19 42.8 +1.0**
baz=72,SNR=16
G16A Moss Hill, Enn 72.39 315⇑P P 13 19 41.9 +0.2
baz=72
KRTS Karatas 72.41 54 *e*P P 13 19 41.2 -0.7
D16A Dana Ranch, Ca 72.43 317 P **P 13 19 41.4 -0.4**
baz=72,SNR=62
O15A The Old Anders 72.43 310 P **P 13 19 43.4 +1.4**
baz=72,SNR=17
X14A Yava 72.44 304 P **P 13 19 42.6 +0.5**
baz=72,SNR=64
Z14A Wintersburg 72.45 302⇑P P 13 19 42.0 -0.2
baz=72
E16A East Helena 72.45 316⇓P P 13 19 41.9 -0.1
baz=72,SNR=29
SPUT South Promonto 72.49 311 *e*P P 13 19 42.2 -0.1
comp=Z,2µm,2.0s,mb6.6
SPUT South Promonto 72.49 311 *e*P P 13 19 42.2 -0.1
comp=Z,2µm,2.0s,mb6.6
HVD Gariep Dam 72.50 126⇑*i*P P 13 19 43.0 +0.5
HVD AMB AMB 13 19 46.3
comp=Z,484nm,1.7s,mb6.2
PUL Pulkovo 72.50 30⇑*i*P P 13 19 43.3 +1.3
PUL pmax pmax
comp=Z,173nm,0.5s,mb6.2
PUL Pulkovo 72.50 30 *i* P P 13 19 43.3 +1.3
comp=Z,173nm,0.5s,mb6.2
L15A Malad City 72.50 311 P **P 13 19 41.5 -0.9**
baz=72,SNR=72
M15A Larsen Ranch, 72.50 311⇑P P 13 19 41.8 -0.6
baz=72,SNR=31
Y14A Wickenburg 72.52 303⇑P P 13 19 42.2 -0.5
baz=72
BHL Bhannes 72.52 57 *e*P P 13 19 43.0 +0.3
YOZ Yozgat 72.55 51 *e*P P 13 19 43.1 +0.4
HRY Holter Researc 72.58 316 *e*P P 13 19 42.2 -0.6
comp=Z,202nm,1.1s,mb6.0
HRY Holter Researc 72.58 316 *e*P P 13 19 42.2 -0.5
comp=Z,202nm,1.1s,mb6.0
KTK1 Kautokeino 72.61 19⇑*i*P P 13 19 40.9 -1.6
KTK1 AMb AMB 13 19 45.9
comp=Z,373nm,0.7s,mb6.4
KTK1 *e*S S 13 29 02.9 -4.9
KTK1 *e*SS SS 13 33 45.2 -1.4
KTK1 AMS AMS 13 43 57.2
comp=Z,87µm,27.5s,MS6.9
KTK1 Kautokeino 72.61 19⇑*i*P P 13 19 40.9 -1.6
comp=Z,373nm,0.7s,mb6.4
KTK1 LR LR
comp=Z,87µm,27.5s,MS6.9
KTK1 Kautokeino 72.61 19⇑*i*P P 13 19 40.9 -1.6
comp=Z,373nm,0.7s,mb6.4,SNR=18
W14A Seligman 72.63 304 P **P 13 19 44.2 +0.9**
baz=73,SNR=42
RCY Rapaya 72.65 58 *e*P P 13 19 44.2 +0.8
J15A Blackfoot 72.66 313 P **P 13 19 43.2 0.0**
baz=73,SNR=51
V14A Boquillas Ranc 72.66 305⇑P P 13 19 44.0 +0.6
baz=73,SNR=37
K15A Arbon 72.67 312⇓P P 13 19 43.4 0.0
baz=73,SNR=17
DUG Dugway 72.69 309 P **P 13 19 43.6 +0.1**
baz=73,SNR=41
DUG Dugway 72.69 309 *e*P P 13 19 43.3 -0.2
DUG pmax pmax
comp=Z,547nm,1.6s,mb6.2
DUG MLR MLR
comp=Z,39µm,21.0s,MS6.7
DUG Dugway 72.69 309 *e*P P 13 19 43.3 -0.2
comp=Z,547nm,1.6s,mb6.2
DUG LR LR
comp=Z,39µm,21.0s,MS6.7
DUG Dugway 72.69 309 *e*P P 13 19 43.3 -0.2
comp=Z,39µm,21.0s
A16A West Butte Ran 72.70 319⇓P P 13 19 43.3 -0.1
baz=73
CEYT Ceyhan 72.73 54 *e*P P 13 19 42.9 -0.9
I15A Monteview 72.75 313 P **P 13 19 44.2 +0.4**
baz=73,SNR=32
U14A Mt Trumbull 72.76 306⇑P P 13 19 44.5 +0.5
baz=73,SNR=51
HVU Hansel Valley 72.77 311 *e*P P 13 19 43.7 -0.3
HVU pmax pmax
comp=Z,190nm,1.4s,mb5.8
HVU Hansel Valley 72.77 311 *e*P P 13 19 43.7 -0.3
comp=Z,190nm,1.4s,mb5.8
HVU Hansel Valley 72.77 311 *e*P P 13 19 43.7 -0.3
comp=Z,190nm,1.4s,mb5.8
HWQ Hawqa 72.78 57 *e*P P 13 19 44.5 +0.3
PRYS Parys 72.80 121⇑*e*P P 13 19 44.5 +0.1
PRYS AMB AMB 13 19 48.6
comp=Z,221nm,4.7s
KOZT Kozan 72.81 53 *e*P P 13 19 44.0 -0.3
S14A Cedar City 72.81 307 P **P 13 19 44.7 +0.4**
baz=73,SNR=17
KLOF Kloof 72.83 121 *e*P P 13 19 43.0 -1.6
KLOF AMB AMB 13 19 54.4
comp=Z,188nm,1.4s,mb5.8
P14A Drum Mountains 72.84 309 P **P 13 19 44.8 +0.4**
baz=73,SNR=61
G15A Dillon 72.87 315⇓P P 13 19 44.7 +0.2
baz=73,SNR=54
BGU Big Grassy Mou 72.90 310 *e*P P 13 19 44.6 -0.2
comp=Z,176nm,1.1s,mb5.9
BGU Big Grassy Mou 72.90 310 *e*P P 13 19 44.6 -0.2
comp=Z,176nm,1.1s,mb5.9
LRM Limekiln Ridge 72.91 315 *e*P P 13 19 45.1 +0.4
comp=Z,4µm,2.1s,mb7.0
LRM Limekiln Ridge 72.91 315 *e*P P 13 19 45.2 +0.5
comp=Z,4µm,2.1s,mb7.0
H15A Lima 72.92 314⇓P P 13 19 45.7 +0.8
baz=73,SNR=32
F15A Butte 72.94 315⇓P P 13 19 45.4 +0.5
baz=73,SNR=59
CCUT Cedar City 72.96 307 *e*P P 13 19 45.8 +0.6
comp=Z,138nm,1.3s,mb5.7
CCUT Cedar City 72.96 307 *e*P P 13 19 45.8 +0.6
comp=Z,138nm,1.3s,mb5.7
DLMT Dillon 72.96 315 *e*P P 13 19 45.3 +0.2
comp=Z,620nm,1.4s,mb6.3
DLMT Dillon 72.96 315 *e*P P 13 19 45.3 +0.3
comp=Z,620nm,1.4s,mb6.3
Q14A Sevier Lake (B 72.97 308 P **P 13 19 46.6 +1.4**
baz=73,SNR=93
ARUT Antelope Range 73.03 307 *e*P P 13 19 45.8 +0.2
ARUT pmax pmax
comp=Z,161nm,1.3s,mb5.8
ARUT Antelope Range 73.03 307 *e*P P 13 19 45.8 +0.2
comp=Z,161nm,1.3s,mb5.8
ARUT Antelope Range 73.03 307 *e*P P 13 19 45.8 +0.2
comp=Z,161nm,1.3s,mb5.8
Z13A Yuma Proving G 73.04 302 P **P 13 19 46.0 +0.3**
baz=73,SNR=39
MCMT McKenzie Canyo 73.09 314 *e*P P 13 19 46.6 +0.8
comp=Z,40nm,1.1s,mb5.3
MCMT McKenzie Canyo 73.09 314 *e*P P 13 19 46.6 +0.8
comp=Z,40nm,1.1s,mb5.3
E15A Deer Lodge 73.10 316 P **P 13 19 46.0 +0.2**
baz=73,SNR=13
K14A Jones Ranch, D 73.13 312 P **P 13 19 45.5 -0.6**
baz=73,SNR=28
L14A Malta 73.14 311 P **P 13 19 45.5 -0.6**
baz=73,SNR=42
KVT Kavak 73.20 50 *e*P P 13 19 46.2 -0.3
Y13A Salome 73.20 303 P **P 13 19 47.2 +0.6**
baz=73,SNR=38
SLR Silverton 73.21 120⇑*i*P P 13 19 47.2 +0.3
SLR AMB AMB 13 19 50.6
comp=Z,2µm,5.1s
X13A Yucca 73.22 304⇓P P 13 19 46.8 0.0
baz=73,SNR=43
C15A Salmond Ranch, 73.23 317 P **P 13 19 46.2 -0.4**
baz=73,SNR=73
ANDN Andirin 73.23 53 *i* P P 13 19 47.2 +0.4
B15A Bradely Ranch, 73.26 318 P **P 13 19 45.6 -1.1**
baz=73,SNR=58
SOE Somerset East 73.31 128 *e*P P 13 19 48.0 +0.7
SOE AMB AMB 13 20 11.7
comp=Z,352nm,2.0s,mb6.0
S13A Holt Ranch, En 73.35 307⇓P P 13 19 48.1 +0.6
baz=73,SNR=52
ERPM east rand prop 73.36 121 *e*P P 13 19 47.6 -0.1
ERPM AMB AMB 13 19 57.6
comp=Z,219nm,1.4s,mb5.9
T13A Saint George 73.37 306⇓P P 13 19 48.6 +1.0
baz=73,SNR=35
V13A Grand Canyon W 73.39 305⇓P P 13 19 48.3 +0.6
baz=73,SNR=15
U13A Pakoon Wash 73.39 305⇑P P 13 19 48.3 +0.6
baz=73,SNR=32
H14A Leadore 73.44 314⇓P P 13 19 48.6 +0.7
baz=73,SNR=28
J14A Carey 73.44 313⇑P P 13 19 48.1 +0.2
baz=73,SNR=25
I14A Mackay 73.44 313 P **P 13 19 48.4 +0.5**
baz=73,SNR=31
A15A Johnson Ranch, 73.45 319⇑P P 13 19 46.8 -1.0
baz=73,SNR=39
R13A O'Grain Ranch, 73.47 307⇓P P 13 19 49.5 +1.4
baz=73,SNR=23
PDMCI Parker Dam,Lak 73.47 303⇑P P 13 19 48.4 +0.2
baz=73,SNR=22
TOKT Tokat 73.53 50 *e*P P 13 19 48.5 0.0
ASF Jabal al Asfar 73.53 59 P **P 13 19 48.6 0.0**
comp=Z,52nm,1.1s,mb5.4,baz=125,slow=2.2,SNR=54
ASF PP PP 13 22 28.5 -4.0
comp=Z,52nm,1.3s,baz=218,slow=1.8,SNR=3.1
ASF S S 13 29 20.4 +0.7
comp=Z,1.0nm,0.4s,baz=326,slow=2.0,SNR=1.3
ASF LR LR 13 51 00.6
comp=Z,6µm,20.1s,MS5.9,baz=128,slow=35
ASF Jabal al Asfar 73.53 59 P **P 13 19 48.6 -0.1**
ASF 13 22 28.5
ASF S S 13 29 20.4 +0.8
ASF pmax pmax
comp=Z,52nm,1.1s
ASF pmax pmax
comp=Z,52nm,1.3s
ASF smax
comp=N,1.0nm,0.4s
ARCES ARCESS Array B 73.56 19 P **P 13 19 47.9 -0.2**
comp=N,71nm,0.8s,mb5.6,baz=256,slow=4.9,SNR=65
ARCES S S 13 29 16.9 -1.6
comp=N,0.7nm,0.8s,baz=282,slow=18,SNR=2.5
ARCES LR LR 13 47 42.3
comp=N,26µm,20.5s,MS6.5,baz=72,slow=32
ARCES ARCESS Array B 73.56 19 P **P 13 19 47.9 -0.2**
ARCES S S 13 29 16.9 -1.6
ARCES pmax pmax
comp=Z,71nm,0.9s
ARCES smax
comp=N,1.0nm,0.8s
ARCES ARCESS Array B 73.56 19 P **P 13 19 47.9 -0.2**
comp=N,71nm,0.9s,mb5.6
ARCES S S 13 29 16.9 -1.6
comp=N,1.0nm,0.8s
ARE0 ARCESS Array S 73.56 19 *e*P P 13 19 47.5 -0.6
ARE0 ARCESS Array S 73.56 19 *e*P P 13 19 47.5 -0.6
SARI SarD1z-Kayseri 73.56 52 *e*P P 13 19 46.7 -2.0
CHMT Chamberlain Mo 73.57 316 *e*P P 13 19 48.0 -0.6
comp=N,260nm,1.7s,mb5.9
CHMT Chamberlain Mo 73.57 316 *e*P P 13 19 48.0 -0.6
comp=N,260nm,1.7s,mb5.9
RES Resolute Bay 73.64 347 P **P 13 19 48.7 +0.2**
comp=N,117nm,1.1s,mb5.7,baz=93,slow=4.3,SNR=12
RES S S 13 29 18.2 -1.2
comp=N,8.0nm,0.9s,baz=20,slow=2.6,SNR=2.0
RES Resolute Bay 73.64 347 *e*P P 13 19 48.9 +0.4
RES pmax pmax
comp=Z,226nm,1.1s,mb6.0
RES Resolute Bay 73.64 347 *e*P P 13 19 48.9 +0.4
comp=Z,226nm,1.1s,mb6.0
RES Resolute Bay 73.64 347 *e*P P 13 19 48.9 +0.4
comp=Z,226nm,1.1s,mb6.0
KMRS Kahramanmaras 73.67 53 *e*P P 13 19 49.6 +0.2
E14A Clinton 73.69 316⇓P P 13 19 49.2 -0.1
baz=74,SNR=14
B14A Marquette Ranc 73.74 318⇓P P 13 19 48.3 -1.3
baz=74,SNR=9.6
JOF Joensuu 73.75 27 *e*P P 13 19 48.9 -0.4
JOF Joensuu 73.75 27 *e*P P 13 19 48.9 -0.4
MSNA Messina 73.75 116⇑*i*P P 13 19 50.2 +0.1
MSNA AMB AMB 13 19 54.1
comp=Z,318nm,2.0s,mb5.9
D14A Greenough 73.76 317⇓P P 13 19 49.4 -0.3
baz=74,SNR=35
SLMT Seeley Lake 73.77 317 *e*P P 13 19 49.4 -0.3
comp=Z,284nm,1.3s,mb6.0
SLMT Seeley Lake 73.77 317 *e*P P 13 19 49.4 -0.4
comp=Z,284nm,1.3s,mb6.0
Y12C Blythe 73.78 303 P **P 13 19 50.4 +0.3**
baz=74,SNR=32
SVSK Karacayir 73.85 51 *e*P P 13 19 50.6 +0.2
U12A Valley of Fire 73.85 305⇑P P 13 19 50.8 +0.3
baz=74,SNR=21
BJO1 Bjornoya 73.88 14⇑*i*P P 13 19 49.2 -0.8
comp=Z,298nm,1.5s,mb6.0
BJO1 LR LR
comp=Z,13µm,27.5s,MS6.1
BJO1 Bjornoya 73.88 14⇑*i*P P 13 19 49.2 -0.7
comp=Z,298nm,1.5s,mb6.0
A14A Double T Ranch 73.90 319 P **P 13 19 50.1 -0.4**
baz=74,SNR=24
GAZ Gaziantep 73.90 54 *e*P P 13 19 51.4 +0.6
I13A Wildhorse Cree 73.92 313 P **P 13 19 50.7 0.0**
baz=74,SNR=66
J13A Cove Ranch, Pi 73.92 313⇓P P 13 19 50.8 0.0
baz=74,SNR=28
BJO Bjornoya 73.93 14⇑*i*P P 13 19 49.2 -1.0
BJO AMb AMB 13 19 53.1
comp=Z,298nm,1.6s,mb6.0
BJO *e*S S 13 29 23.0 +0.3
BJO AMS AMS 13 42 58.7
comp=Z,13µm,27.5s,MS6.1
BJO Bjornoya 73.93 14⇑*i*P P 13 19 49.2 -1.0
comp=Z,298nm,1.6s,mb6.0,SNR=18
BJO *e*S S 13 29 23.0 +0.3
SNR=20
R12A Pony Springs, 73.97 307 P **P 13 19 51.5 +0.4**
baz=74,SNR=48
C14A Swan Lake 73.99 317⇑P P 13 19 50.6 -0.4
baz=74
GLA Glamis 74.02 302⇓P P 13 19 51.9 +0.4
baz=74,SNR=18
GLA Glamis 74.02 302 *e*P P 13 19 51.3 -0.2
GLA pmax pmax
comp=Z,318nm,1.6s,mb6.0
GLA Glamis 74.02 302 *e*P P 13 19 51.3 -0.2
comp=Z,318nm,1.6s,mb6.0
GLA Glamis 74.02 302 *e*P P 13 19 51.3 -0.2
comp=Z,318nm,1.6s,mb6.0
MSO Missoula 74.03 316⇓P P 13 19 51.3 0.0

baz=74,SNR=21
MSO Missoula 74.03 316 *e*P **P 13 19 50.8 -0.6**
comp=Z,96nm,1.4s,mb5.5
MSO LR LR
comp=Z,26μm,21.0s,MS6.5
MSO Missoula 74.03 316 *e*P **P 13 19 50.8 -0.5**
comp=Z,96nm,1.4s,mb5.5
H13A Challis 74.07 314 P **P 13 19 51.3 -0.2**
baz=74,SNR=28
V12A Nelson 74.09 305 ⇓P **P 13 19 52.0 +0.2**
baz=74,SNR=21
G13A Cobalt 74.09 314 P **P 13 19 51.8 +0.1**
baz=74,SNR=64
HLID Hailey 74.11 313 P **P 13 19 52.0 +0.1**
baz=74,SNR=69
HLID Hailey 74.11 313 *e*P **P 13 19 51.7 -0.1**
comp=Z,262nm,1.5s,mb5.9
HLID LR LR
comp=Z,60μm,21.0s,MS6.9
HLID Hailey 74.11 313 *e*P **P 13 19 51.7 -0.1**
comp=Z,262nm,1.5s,mb5.9
RSDY Resadiye-TOKAT 74.13 50 *e*P **P 13 19 51.7 -0.3**
SWMT Swartz Lake 74.14 317 *e*P **P 13 19 51.2 -0.6**
comp=Z,107nm,1.0s,mb5.7
SWMT Swartz Lake 74.14 317 *e*P **P 13 19 51.2 -0.7**
comp=Z,107nm,1.0s,mb5.7
S12A Delamar Landin 74.14 307 ⇓P **P 13 19 52.5 +0.4**
baz=74,SNR=11
E13A Victor 74.17 316 P **P 13 19 51.7 -0.4**
baz=74,SNR=55
YBMT Yellow Bay 74.18 317 *e*P **P 13 19 52.0 -0.1**
comp=Z,112nm,1.3s,mb5.6
YBMT Yellow Bay 74.18 317 *e*P **P 13 19 52.0 -0.1**
comp=Z,112nm,1.3s,mb5.6
F13A Darby 74.22 315 P **P 13 19 52.3 -0.1**
baz=74,SNR=69
WALA Waterton Lakes 74.23 319 *e*P **P 13 19 51.6 -0.8**
comp=Z,33nm,1.9s,mb4.9
WALA Waterton Lakes 74.23 319 *e*P **P 13 19 51.6 -0.8**
comp=Z,33nm,1.9s,mb4.9
GRM Grahamstown 74.27 128⇑*i*P **P 13 19 53.1 +0.2**
GRM AMB AMB 13 19 55.4
comp=Z,225nm,2.2s,mb5.7
LDFC Landfair 74.28 304 *e*P **P 13 19 53.2 +0.2**
comp=Z,246nm,1.2s,mb6.0
LDFC Landfair 74.28 304 *e*P **P 13 19 53.2 +0.2**
comp=Z,246nm,1.2s,mb6.0
IRM Iron Mountain 74.30 303 P **P 13 19 53.2 +0.1**
baz=74,SNR=48
JTMT Jette 74.35 317 *e*P **P 13 19 51.8 -1.3**
comp=Z,144nm,1.4s,mb5.7
JTMT Jette 74.35 317 *e*P **P 13 19 51.8 -1.3**
comp=Z,144nm,1.4s,mb5.7
SHPR Sheep Range 74.36 306 *e*P **P 13 19 52.7 -0.8**
comp=Z,76nm,1.5s,mb5.4
SHPR Sheep Range 74.36 306 *e*P **P 13 19 52.7 -0.7**
comp=Z,76nm,1.5s,mb5.4
EDM Edmonton 74.36 323 *e*P **P 13 19 52.5 -0.6**
EDM Edmonton 74.36 323 *e*P **P 13 19 52.5 -0.6**
D13A Huson 74.41 317 P **P 13 19 53.3 -0.2**
baz=74,SNR=43
BLMT Blacktail Moun 74.43 318 *e*P **P 13 19 52.8 -0.8**
comp=Z,117nm,1.1s,mb5.7
BLMT Blacktail Moun 74.43 318 *e*P **P 13 19 52.8 -0.8**
comp=Z,117nm,1.1s,mb5.7
ANN Anapa 74.47 46 *e*P **P 13 19 52.4 -1.5**
ANN *e**PP pP 13 19 56.4 +1.5
ANN *e* 13 22 39.3
ANN *e*S S 13 29 27.7 -2.0
ANN *e*SS SS 13 34 19.3 +3.3
ANN pmax pmax
comp=N,150nm,1.7s
ANN pmax pmax
comp=E,139nm,1.7s
ANN pmax pmax
comp=Z,637nm,1.7s,mb6.3
ANN pmax pmax
comp=N,713nm,6.7s
ANN pmax pmax
comp=E,750nm,6.7s
ANN pmax pmax
comp=Z,2μm,6.7s
ANN MLR MLR
comp=N,7μm,19.0s,MS6.7
ANN MLR MLR
comp=E,36μm,19.0s,MS6.7
ANN MLR MLR
comp=Z,18μm,19.0s,MS6.4
ANN Anapa 74.47 46 *e*P **P 13 19 52.4 -1.5**
ANN *e*S S 13 29 27.7 -2.0
H12A Diamond D Ranc 74.49 314 P **P 13 19 54.1 0.0**
baz=74,SNR=77
AKCD Akcadag 74.50 53 *i*P **P 13 19 54.4 +0.2**
B13A Whitefish 74.53 318 ⇓P **P 13 19 54.0 -0.2**
baz=74,SNR=30
C13A Hot Springs 74.54 317 P **P 13 19 53.7 -0.5**
baz=74,SNR=45
A13A Flathead Natio 74.55 318 ⇑P **P 13 19 53.8 -0.4**
baz=74
BC3 Big Chuckawall 74.55 303 ⇑P **P 13 19 54.7 +0.1**
baz=74,SNR=29
V11A Goodsprings 74.56 305 ⇓P **P 13 19 55.4 +0.8**
baz=74,SNR=12
BSMT Bassoo Peak 74.70 317 *e*P **P 13 19 54.6 -0.6**
comp=Z,100nm,1.1s,mb5.7
BSMT Bassoo Peak 74.70 317 *e*P **P 13 19 54.6 -0.6**
comp=Z,100nm,1.1s,mb5.7
GMRC Granite Mounta 74.73 304 P **P 13 19 56.0 +0.4**
baz=75,SNR=37
R11A Troy Canyon, C 74.74 307 P **P 13 19 55.7 +0.1**
baz=75,SNR=74
ATAB Bozova 74.78 53 *i*P **P 13 19 55.4 -0.4**
Q11A Duckwater 74.81 308 P **P 13 19 56.0 0.0**
baz=75,SNR=50
SWSC Sam W. Stewart 74.83 302 ⇓P **P 13 19 54.6 -1.6**
baz=75,SNR=8.6
S11A Rachel 74.85 307 ⇑P **P 13 19 57.2 +1.0**
baz=75,SNR=23
F12A Elk City 74.86 315 ⇓P **P 13 19 55.6 -0.5**
baz=75,SNR=67
G12A Big Creek, Yel 74.87 314 ⇓P **P 13 19 55.7 -0.5**
baz=75
MYA Malataya 74.90 53 *e*P **P 13 19 57.5 +1.0**
MALT Malatya 74.90 53 *e*P **P 13 19 57.2 +0.7**
MALT pmax pmax
comp=Z,301nm,1.3s,mb6.1
MALT MLR MLR
comp=Z,19μm,20.0s,MS6.4
MALT Malatya 74.90 53 *e*P **P 13 19 57.2 +0.6**
comp=Z,301nm,1.3s,mb6.1
MALT LR LR
comp=Z,19μm,20.0s,MS6.4
MALT Malatya 74.90 53 P **P 13 19 57.6 +1.1**
comp=Z,6μmcomp=Z,238nm,1.3s,mb6.0
MALT Malatya 74.90 53 *e*P **P 13 19 56.7 +0.1**
OBN Obninsk 74.94 35*c i*P **P 13 19 55.7 -0.7**
OBN *i* 13 20 10.5
OBN *e* 13 22 43.1
OBN *i*S S 13 29 31.4 -3.2
OBN *i*SS SS 13 34 24.6 +1.9
OBN pmax pmax
comp=Z,731nm,1.6s,mb6.4
OBN Obninsk 74.94 35 *e*P **P 13 19 56.6 +0.2**
comp=Z,1μm,1.8s,mb6.5
OBN LR LR
comp=Z,58μm,21.0s,MS6.8
OBN Obninsk 74.94 35 P **P 13 19 57.2 +0.8**
comp=Z,1μm,1.6s,mb6.6,SNR=34
OBN Obninsk 74.94 35 *e*P **P 13 19 56.7 +0.3**
comp=Z,1μm,1.8s,mb6.5
OBN Obninsk 74.94 35 *i* PcP PcP 13 20 10.5 +0.2
OBN *i*S S 13 29 31.4 -3.2
TUQ Turquoise Moun 74.95 304 ⇓P **P 13 19 57.7 +0.8**
baz=75,SNR=18
KBS Kingsbay 74.98 9 *e*P **P 13 19 56.8 +0.5**
KBS AMb AMB 13 20 01.1
comp=Z,217nm,1.5s,mb5.8
KBS *e*S S 13 29 34.0 -0.3
KBS *e*SS SS 13 34 24.0 +1.6
KBS AMS AMS 13 43 52.9
comp=Z,25μm,27.6s,MS6.4
KBS Kingsbay 74.98 9 *e*P **P 13 19 57.5 +1.3**
KBS pmax pmax
comp=Z,180nm,1.2s,mb5.9
KBS MLR MLR
comp=Z,11μm,21.0s,MS6.1
KBS Kingsbay 74.98 9 *e*P **P 13 19 57.5 +1.3**
comp=Z,180nm,1.2s,mb5.9
KBS LR LR
comp=Z,11μm,21.0s,MS6.1
KBS Kingsbay 74.98 9 *e*P **P 13 19 56.8 +0.6**
comp=Z,217nm,1.5s,mb5.8,SNR=18
KBS *e*S S 13 29 34.0 -0.3
SNR=20
KBS *e*SS SS 13 34 24.0 +1.6
SNR=27
BELC Belle Mtn. Jos 75.00 303 ⇓P **P 13 19 57.7 +0.5**
baz=75,SNR=34
D12A Red Ives Fores 75.02 316 ⇑P **P 13 19 56.2 -0.8**
baz=75
ALE Alert 75.03 357 P **P 13 19 56.6 +0.1**
comp=Z,800nm,1.7s,mb6.4,SNR=20
E12A Beaver Dam Sad 75.12 316 ⇑P **P 13 19 56.3 -1.4**
baz=75
MFID Camas Ranch 75.13 313 ⇑P **P 13 19 57.8 0.0**
baz=75,SNR=29
PMSA Palmer Station 75.14 191 S S 13 29 32.9 -3.3
comp=Z,5.6nm,0.7s,baz=183,slow=23,SNR=2.2
PMSA Palmer Station 75.14 191 *e*P **P 13 19 56.2 -1.1**
comp=Z,99nm,0.8s,mb5.8
PMSA LR LR
comp=Z,13μm,22.0s,MS6.2
PMSA Palmer Station 75.14 191 *e*P **P 13 19 56.2 -1.0**
comp=Z,99nm,0.8s,mb5.8
ESPY Espiye-Giresun 75.21 50 *e*P **P 13 19 58.1 -0.2**
SHOC Shoshone 75.25 305 ⇓P **P 13 19 58.4 -0.2**
baz=75,SNR=20
B12A Libby 75.28 318 ⇑P **P 13 19 59.2 +0.7**
baz=75
HEC Hector,Ludlow 75.28 304 ⇑P **P 13 19 59.0 +0.2**
baz=75,SNR=17
R10A Warm Springs 75.31 307 ⇓P **P 13 19 59.4 +0.5**
baz=75,SNR=27
MONP Monument Peak 75.36 302 ⇑P **P 13 19 59.9 +0.6**
baz=75,SNR=27
A12A Yaak River Ran 75.36 318 P **P 13 19 59.4 +0.4**
baz=75,SNR=18
PFO Pinyon Flat Ob 75.38 303 ⇑P **P 13 19 59.2 -0.2**
baz=75,SNR=19
PFO Pinyon Flat Ob 75.38 303 *e*P **P 13 20 00.1 +0.7**
PFO pmax pmax
comp=Z,435nm,1.9s,mb6.1
PFO MLR MLR
comp=Z,12μm,20.0s,MS6.2
PFO Pinyon Flat Ob 75.38 303 *e*P **P 13 20 00.1 +0.7**
comp=Z,416nm,1.9s,mb6.0
PFO LR LR
comp=Z,11μm,20.0s,MS6.2
PFO Pinyon Flat Ob 75.38 303 P **P 13 20 00.3 +0.9**
comp=Z,378nm,1.5s,mb6.1,SNR=16
PFO Pinyon Flat Ob 75.38 303 *e*P **P 13 20 00.1 +0.7**
comp=Z,12μm,20.0s
Q10A Clear Creek Ra 75.39 308 ⇑P **P 13 19 59.8 +0.4**
baz=75,SNR=6.0
S10A Tonopah Range, 75.53 307 P **P 13 20 00.4 +0.2**
baz=76,SNR=68
BAR Barrett 75.57 302 *e*P **P 13 20 00.3 -0.2**
comp=Z,96nm,1.1s,mb5.6
BAR Barrett 75.57 302 *e*P **P 13 20 00.3 -0.2**
comp=Z,96nm,1.1s,mb5.6
SVRC Sivrice-ELAZID 75.59 53 *e*P **P 13 20 01.5 +1.0**
MOS Moscow 75.62 35*c i*P **P 13 20 01.2 +0.9**
MOS *e* 13 20 14.1
MOS *e* 13 22 50.9
MOS *e*PPP 13 24 34.9
MOS *i*S S 13 29 45.5 +3.4
MOS *i* 13 30 12.5
MOS pmax pmax
comp=Z,3μm,2.5s,mb6.8
MOS pmax pmax
comp=N,250nm,1.8s
MOS pmax pmax
comp=Z,932nm,1.8s,mb6.4
MOS pmax pmax
comp=E,267nm,1.6s
MOS Moscow 75.62 35 *i* P **P 13 20 01.2 +0.9**
comp=E,3μm,2.5s,mb6.8
MOS Moscow 75.62 35 *e*PcP PcP 13 20 14.1 +0.9
MOS *i*S S 13 29 45.5 +3.4
MOS *i*ScS ScS 13 30 12.5 -2.3
EZC Erzincan 75.66 51 *e*P **P 13 20 02.1 +1.2**
KSD Kokstad 75.66 124 *e*P **P 13 20 00.5 -0.5**
KSD AMB AMB 13 20 06.4
comp=Z,978nm,4.7s
PTK Pertek 75.67 52 *e*P **P 13 20 00.6 -0.4**
GSC Goldstone 75.67 304 ⇑P **P 13 20 00.6 -0.5**
baz=76,SNR=26
GSC Goldstone 75.67 304 *e*P **P 13 20 00.2 -0.9**
GSC pmax pmax
comp=Z,108nm,1.4s,mb5.6
GSC Goldstone 75.67 304 *e*P **P 13 20 00.2 -0.8**
comp=Z,108nm,1.4s,mb5.6
GSC Goldstone 75.67 304 *e*P **P 13 20 00.2 -0.9**
comp=Z,108nm,1.4s,mb5.6
C11A Tepee Creek (N 75.68 317 ⇑P **P 13 19 59.8 -1.1**
baz=76
FURC Furnace Creek, 75.72 305 ⇓P **P 13 20 02.3 +0.9**
baz=76,SNR=22
GUMT Gumushane 75.77 50 *e*P **P 13 20 01.0 -0.5**
MURC Murrieta 76.01 303 ⇑P **P 13 20 03.4 +0.4**
baz=76,SNR=8.8
TPH Tonopah 76.03 307 PFAKE 13 20 10.0 +7.0
TPH LR LR
comp=Z,25μm,22.0s,MS6.5
SOC Sochi 76.04 47*c i*P **P 13 20 02.7 -0.3**
SOC *e* 13 22 53.2
SOC *i*S S 13 29 48.0 +0.7
SOC *e* 13 30 19.1
SOC *e*SS SS 13 34 38.0 -2.0
SOC pmax pmax
comp=Z,3μm,3.2s
SOC pmax pmax
comp=Z,507nm,1.0s,mb6.4
SOC MLR MLR
comp=Z,17μm,19.0s,MS6.4
SOC Sochi 76.04 47 *i* P **P 13 20 02.7 -0.3**
comp=Z,507nm,1.0s,mb6.4
SOC *i*S S 13 29 48.0 +0.7
BMN Battle Mountai 76.06 310 *e*P **P 13 20 02.5 -0.7**
BMN pmax pmax
comp=Z,224nm,1.4s,mb5.9
BMN MLR MLR
comp=Z,36μm,21.0s,MS6.7
BMN Battle Mountai 76.06 310 *e*P **P 13 20 02.5 -0.7**
comp=Z,224nm,1.4s,mb5.9
BMN LR LR
comp=Z,36μm,21.0s,MS6.7
BMN Battle Mountai 76.06 310 *e*P **P 13 20 02.5 -0.7**
comp=Z,36μm,21.0s
VSR Storozhevoye 76.10 39 *e*P **P 13 20 03.2 +0.1**
VSR *e**PP pP 13 20 11.1 +6.9
VSR *e* 13 22 55.3
VSR *e*S S 13 29 45.6 -2.0
VSR *e*SS SS 13 34 40.5 +0.1
VSR pmax pmax
comp=E,210nm,1.6s
VSR pmax pmax
comp=Z,380nm,1.6s,mb6.1
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,570nm,2.4s
VSR pmax pmax
comp=Z,810nm,2.4s,mb6.2
VSR pmax pmax
comp=N,90nm,0.8s
VSR smax
comp=N,2μm,5.8s
VSR smax
comp=E,2μm,5.8s
VSR smax
comp=Z,700nm,5.8s
VSR Storozhevoye 76.10 39 *e*P **P 13 20 03.2 +0.1**
comp=Z,10.0nm,0.8s,mb4.8
VSR Storozhevoye 76.10 39 *e*PcP PcP 13 20 11.1 -4.2
VSR *e*S S 13 29 45.6 -2.0
GRAC Grapevine Rang 76.14 306 ⇑P **P 13 20 04.0 +0.4**
baz=76,SNR=35
VORD Divnogorie 76.16 40 *e*P **P 13 20 05.5 +2.0**
VORD *e*S S 13 29 48.8 +0.6
VORD *e*SS SS 13 34 39.4 -1.9
VORD pmax pmax
comp=Z,380nm,1.6s,mb6.1
VORD pmax pmax
comp=N,120nm,0.8s
VORD pmax pmax
comp=E,100nm,0.8s
VORD smax
comp=N,2μm,5.1s
VORD smax
comp=E,2μm,5.1s
VORD smax
comp=Z,490nm,5.1s
VORD Divnogorie 76.16 40 *e*P **P 13 20 05.5 +2.0**
comp=Z,380nm,1.6s,mb6.1
VORD *e*S S 13 29 48.8 +0.6
DIYA Diyarbakir 76.23 53 *i* P **P 13 20 05.3 +1.1**
MPMC Manual Prospec 76.23 305 ⇑P **P 13 20 04.7 +0.5**
baz=76,SNR=40
KMBO Kilima Mbogo 76.24 93 P **P 13 20 06.6 +1.9**
comp=Z,37nm,1.1s,mb5.2,baz=360,slow=24,SNR=50
KMBO S S 13 29 50.0 -0.4
comp=Z,0.5nm,0.3s,baz=2.0,slow=24,SNR=1.7
KMBO LR LR 13 51 31.9
comp=Z,32μm,18.4s,MS6.7,baz=156,slow=34
KMBO Kilima Mbogo 76.24 93 *e*P **P 13 20 06.4 +1.7**
KMBO pmax pmax
comp=Z,1μm,2.3s
KMBO MLR MLR
comp=Z,21μm,22.0s
KMBO Kilima Mbogo 76.24 93 *e*P **P 13 20 06.4 +1.7**
comp=Z,1μm,2.3s,mb6.4
KMBO LR LR
comp=Z,21μm,22.0s,MS6.4
KMBO Kilima Mbogo 76.24 93 *e*P **P 13 20 06.4 +1.7**
comp=Z,21μm,22.0s
KMBO Kilima Mbogo 76.24 93 P **P 13 20 07.4 +2.8**
SNR=99
F10A Beach Ranch, E 76.25 315 ⇓P **P 13 20 05.0 +0.9**
baz=76,SNR=7.8
LVZ Lovozero 76.26 22*c i*P **P 13 20 03.7 0.0**
LVZ pmax pmax
comp=Z,360nm,1.7s,mb6.0
LVZ MLR MLR
comp=Z,26μm,20.0s,MS6.5
LVZ Lovozero 76.26 22 PFAKE 13 20 10.0 +6.3
LVZ LR LR
comp=Z,25μm,19.0s,MS6.5
LVZ Lovozero 76.26 22 P **P 13 20 04.0 +0.3**
comp=Z,1μm,0.9s,mb6.8,SNR=12
LVZ Lovozero 76.26 22 *i* P **P 13 20 03.7 0.0**
comp=Z,26μm,20.0s
NEW Newport 76.29 318 ⇓P **P 13 20 03.4 -0.8**
baz=76
NEW Newport 76.29 318 *e*P **P 13 20 03.3 -1.0**
NEW pmax pmax
comp=Z,155nm,1.3s
NEW MLR MLR
comp=Z,31μm,20.0s
NEW Newport 76.29 318 *e*P **P 13 20 03.2 -1.0**
comp=Z,155nm,1.3s,mb5.8
NEW LR LR
comp=Z,31μm,20.0s,MS6.6
NEW Newport 76.29 318 *e*P **P 13 20 03.3 -1.0**
comp=Z,31μm,20.0s
DAC Darwin (Calif) 76.32 305 PFAKE 13 20 10.0 +5.3
DAC LR LR
comp=Z,25μm,22.0s,MS6.5
YKA Yellowknife Ar 76.34 332 P **P 13 20 02.6 -1.6**
comp=Z,67nm,1.0s,mb5.5,baz=99,slow=5.9,SNR=29
YKA S S 13 29 43.0 -6.8
comp=Z,0.8nm,0.8s,baz=65,slow=10,SNR=2.7
YKA LR LR 13 49 35.3
comp=Z,1μm,21.4s,MS5.2,baz=95,slow=33
YKA Yellowknife Ar 76.34 332 P **P 13 20 02.6 -1.7**
YKA S S 13 29 43.0 -6.8
YKA pmax pmax
comp=Z,67nm,1.0s
YKA smax
comp=N,1.0nm,0.8s
YKA Yellowknife Ar 76.34 332 P **P 13 20 02.6 -1.6**
YKA S S 13 29 43.0 -6.8
YKA LR LR 13 49 35.3
YKA Yellowknife Ar 76.34 332 P **P 13 20 02.6 -1.7**
comp=N,67nm,1.0s,mb5.5
BFSC Mount Baldy Ra 76.38 303 ⇓P **P 13 20 04.8 -0.3**
baz=76,SNR=15
LRMC Laurel Mountai 76.40 304 P **P 13 20 05.8 +0.7**
baz=76,SNR=15
BINT Bingol 76.53 52 *e*P **P 13 20 07.1 +1.3**
POGA Pongola 76.54 121⇑*i*P **P 13 20 07.4 +1.3**
POGA AMB AMB 13 20 17.3
comp=Z,335nm,1.3s,mb6.1
EDW2 Edwards Air Fo 76.65 304 ⇓P **P 13 20 06.6 -0.1**
baz=77,SNR=31
CWC Cottonwood Cre 76.71 305 ⇑P **P 13 20 07.9 +0.9**
baz=77,SNR=12
MWC Mount Wilson 76.71 303 *e*P **P 13 20 06.3 -0.7**
MWC pmax pmax
comp=Z,232nm,1.7s,mb5.8
MWC Mount Wilson 76.71 303 *e*P **P 13 20 06.3 -0.7**
comp=Z,232nm,1.7s,mb5.8
MWC Mount Wilson 76.71 303 *e*P **P 13 20 06.3 -0.7**
comp=Z,232nm,1.7s,mb5.8
RPN Rapa Nui 76.78 240 LR LR 13 51 23.9
comp=Z,10μm,19.1s,MS6.1,baz=260,slow=34
RPN Rapa Nui 76.78 240 PFAKE 13 20 20.0 +13
RPN LR LR
comp=Z,11μm,20.0s,MS6.2
PASC Pasadena Art C 76.82 303 *e*P **P 13 20 06.0 -1.6**
comp=Z,184nm,1.5s,mb5.8
PASC Pasadena Art C 76.82 303 *e*P **P 13 20 06.0 -1.6**
comp=Z,184nm,1.5s,mb5.8
PZAR Pazar-Rize 76.86 50 *e*P **P 13 20 07.2 -0.5**
NVAR Mina Array Bea 76.88 308 P **P 13 20 08.1 +0.2**
comp=Z,21nm,1.0s,mb5.0,baz=96,slow=5.8,SNR=47
NVAR PKKPbc PKKPbc 13 39 25.2 +7.3
comp=Z,1.3nm,1.1s,baz=181,slow=5.9,SNR=4.8
NVAR PKPPKP 13 47 31.2
comp=Z,0.6nm,0.9s,baz=254,slow=4.1,SNR=4.4
NVAR Mina Array Bea 76.88 308 P **P 13 20 08.1 +0.2**
E09A Wood Farm, Sta 76.90 316 P **P 13 20 06.8 -1.0**
baz=77,SNR=34
LNOR Lincton Mounta 76.98 315 *e*P **P 13 20 07.7 -0.6**
LNOR pmax pmax
comp=Z,458nm,2.1s,mb6.0
LNOR Lincton Mounta 76.98 315 *e*P **P 13 20 07.7 -0.5**
comp=Z,458nm,2.1s,mb6.0
LNOR Lincton Mounta 76.98 315 *e*P **P 13 20 07.7 -0.6**
comp=Z,458nm,2.1s,mb6.0
ISA Isabella 77.03 305 P **P 13 20 09.3 +0.5**
baz=77,SNR=46
ISA Isabella 77.03 305 *e*P **P 13 20 08.9 +0.1**
ISA pmax pmax
comp=Z,184nm,1.4s,mb5.8
ISA Isabella 77.03 305 *e*P **P 13 20 08.9 +0.2**
comp=Z,184nm,1.4s,mb5.8
ISA Isabella 77.03 305 *e*P **P 13 20 08.9 +0.1**
comp=Z,184nm,1.4s,mb5.8
J08A Circle Bar Ran 77.06 313 ⇑P **P 13 20 09.7 +1.0**
baz=77,SNR=17
WVOR Wild Horse Val 77.16 312 *e*P **P 13 20 08.7 -0.6**
WVOR pmax pmax
comp=Z,217nm,1.4s,mb5.9
WVOR MLR MLR
comp=Z,40μm,20.0s,MS6.7
WVOR Wild Horse Val 77.16 312 *e*P **P 13 20 08.7 -0.6**
comp=Z,217nm,1.4s,mb5.9
WVOR LR LR
comp=Z,40μm,20.0s,MS6.7
WVOR Wild Horse Val 77.16 312 *e*P **P 13 20 08.7 -0.6**
comp=Z,40μm,20.0s
KLMR Klimovskoe 77.20 29*c i*P **P 13 20 08.9 -0.3**
KLMR *e*S S 13 29 59.7 +0.5
KLMR pmax pmax
comp=Z,761nm,1.4s,mb6.4
KLMR pmax pmax
comp=Z,1μm,9.3s
KLMR Klimovskoe 77.20 29 *i* P **P 13 20 08.9 -0.3**
comp=Z,1μm,9.3s
KLMR *e*S S 13 29 59.7 +0.5
OSI Osito Adit 77.26 304 P **P 13 20 10.0 0.0**
comp=Z,185nm,1.5s,mb5.8
OSI Osito Adit 77.26 304 P **P 13 20 10.0 -0.1**
comp=Z,185nm,1.5s,mb5.8
OD2 Odessa Site #2 77.32 317 *e*P **P 13 20 08.5 -1.6**
comp=Z,425nm,1.4s,mb6.2
OD2 Odessa Site #2 77.32 317 *e*P **P 13 20 08.5 -1.6**
comp=Z,425nm,1.4s,mb6.2
G08A Pilot Rock 77.44 315 ⇓P **P 13 20 09.9 -0.9**

baz=77,SNR=24
DBOC Borcka 77.44 50 *i* P **P 13 20 10.2 -0.8**
D08A Wollman Farm, 77.45 316 ⇑P **P 13 20 10.5 -0.4**
baz=77,SNR=20
DDEM Demirkent 77.50 50 *i* P **P 13 20 11.5 +0.2**
VRHR Novokhopersk 77.64 40 *e*P **P 13 20 13.8 +2.0**
VRHR pmax pmax
comp=N,60nm,1.7s
VRHR pmax pmax
comp=E,300nm,1.7s
VRHR pmax pmax
comp=Z,370nm,1.7s,mb6.0
VRHR Novokhopersk 77.64 40 *e*P **P 13 20 13.8 +2.0**
ARTV Artvin 77.64 50 *i* P **P 13 20 11.4 -0.7**
RCTC Rector, Farmer 77.65 305 ⇓P **P 13 20 12.3 +0.1**
baz=78,SNR=16
PAHR Pah Rah Range 77.72 309 *e*P **P 13 20 11.6 -1.0**
comp=Z,171nm,1.8s,mb5.7
PAHR Pah Rah Range 77.72 309 *e*P **P 13 20 11.6 -0.9**
comp=Z,171nm,1.8s,mb5.7
WAKR Walker 77.77 308 *e*P **P 13 20 13.4 +0.5**
comp=Z,463nm,1.8s,mb6.1
WAKR Walker 77.77 308 *e*P **P 13 20 13.4 +0.6**
comp=Z,463nm,1.8s,mb6.1
HAWA Hanford 77.86 316 *e*P **P 13 20 12.3 -0.9**
comp=Z,755nm,2.2s,mb6.2
HAWA LR LR
comp=Z,24μm,22.0s,MS6.5
HAWA Hanford 77.86 316 *e*P **P 13 20 12.3 -0.9**
comp=Z,755nm,2.2s,mb6.2
RSW Rattlesnake Hi 77.90 316 *e*P **P 13 20 12.8 -0.6**
comp=Z,346nm,1.5s,mb6.1
RSW Rattlesnake Hi 77.90 316 *e*P **P 13 20 12.8 -0.6**
comp=Z,346nm,1.5s,mb6.1
PNT Penticton 77.98 319 P **P 13 20 13.8 0.0**
PNT Penticton 77.98 319 P **P 13 20 13.8 0.0**
WCN Washoe City 78.01 308 ⇓P **P 13 20 15.6 +1.4**
baz=78,SNR=15
WCN Washoe City 78.01 308 *e*P **P 13 20 12.9 -1.3**
WCN pmax pmax
comp=Z,285nm,1.8s,mb5.9
WCN Washoe City 78.01 308 *e*P **P 13 20 12.8 -1.3**
comp=Z,284nm,1.8s,mb5.9
WCN Washoe City 78.01 308 *e*P **P 13 20 12.9 -1.3**
comp=Z,285nm,1.8s,mb5.9
E07A Sunnyside 78.08 316 P **P 13 20 14.6 +0.2**
baz=78,SNR=18
PKM Peak Mountain 78.15 304 ⇓P **P 13 20 16.5 +1.5**
baz=78,SNR=35
KIV Kislovodsk 78.20 47 *c i*P **P 13 20 15.6 +0.5**
KIV *i* 13 20 24.5
KIV *i* 13 23 12.0
KIV *i* S S 13 30 14.8 +4.0
KIV pmax pmax
comp=Z,522nm,1.6s,mb6.2
KIV MLR MLR
comp=Z,13μm,18.0s,MS6.3
KIV Kislovodsk 78.20 47 *e*P **P 13 20 14.5 -0.6**
comp=Z,616nm,1.3s,mb6.4
KIV LR LR
comp=Z,16μm,21.0s,MS6.3
KIV Kislovodsk 78.20 47 P **P 13 20 16.9 +1.8**
comp=Z,2μm,1.1s,mb7.0,SNR=53
KIV Kislovodsk 78.20 47 *i* P **P 13 20 15.6 +0.5**
comp=Z,522nm,1.6s,mb6.2
KIV Kislovodsk 78.20 47 *i* PcP PcP 13 20 24.5 -0.1
KIV Kislovodsk 78.20 47 P **P 13 20 16.5 +1.4**
SNR=82
SMMC Simmler 78.29 304 P **P 13 20 17.0 +1.2**
baz=78,SNR=21
MOD Modoc 78.40 311 *e*P **P 13 20 16.5 +0.3**
comp=Z,206nm,1.2s,mb5.9
MOD LR LR
comp=Z,21μm,21.0s,MS6.5
MOD Modoc 78.40 311 *e*P **P 13 20 16.5 +0.2**
comp=Z,206nm,1.2s,mb5.9
ETW Entiat 78.42 317 *e*P **P 13 20 15.2 -1.1**
comp=Z,252nm,1.7s,mb5.9
ETW Entiat 78.42 317 *e*P **P 13 20 15.2 -1.1**
comp=Z,252nm,1.7s,mb5.9
NLW Nelson Butte 78.43 317 P **P 13 20 15.7 -0.7**
NLW Nelson Butte 78.43 317 P **P 13 20 15.7 -0.6**
GOF Gofitskoye 78.45 46 ⇓*i*P **P 13 20 18.6 +2.1**
GOF *e*S S 13 30 19.8 +6.4
GOF pmax pmax
comp=Z,480nm,1.3s,mb6.3
GOF Gofitskoye 78.45 46 *i* P **P 13 20 18.6 +2.1**
comp=Z,480nm,1.3s,mb6.3
AGRB Hanur-Agry 78.47 51 *e*P **P 13 20 17.3 +0.6**
KARS Kars 78.52 50 *e*P **P 13 20 17.7 +0.8**
CMB Columbia Colle 78.53 307 *e*P **P 13 20 17.0 0.0**
CMB pmax pmax
comp=Z,201nm,1.7s,mb5.8
CMB MLR MLR
comp=Z,23μm,22.0s,MS6.5
CMB Columbia Colle 78.53 307 *e*P **P 13 20 17.0 0.0**
comp=Z,201nm,1.7s,mb5.8
CMB LR LR
comp=Z,23μm,22.0s,MS6.5
CMB Columbia Colle 78.53 307 *e*P **P 13 20 17.0 0.0**
comp=Z,23μm,22.0s
VTHM Trough 78.57 314 P **P 13 20 18.2 +1.1**
VTHM Trough 78.57 314 P **P 13 20 18.2 +1.1**
TBM Table Mountain 78.60 316 P **P 13 20 17.2 0.0**
TBM Table Mountain 78.60 316 P **P 13 20 17.2 -0.1**
G06A Carlson Farm, 78.62 314 P **P 13 20 18.1 +0.7**
baz=79,SNR=27
DIGO Kars 78.75 50 *i* P **P 13 20 17.6 -0.6**
VANB Van 78.80 52 *e*P **P 13 20 19.3 +0.8**
K05A Summer Lake 78.83 312 P **P 13 20 19.4 +0.8**
baz=79,SNR=25
CUKT Cukurca 79.01 54 *e*P **P 13 20 19.0 -0.7**
ZEI Tsey 79.09 48 *e*P **P 13 20 17.8 -2.3**
ZEI *e* 13 23 18.4
ZEI *e*PPP 13 25 05.0
ZEI *e*S S 13 30 20.1 -0.3
ZEI *e*SS SS 13 35 25.7 -0.3
ZEI pmax pmax
comp=Z,440nm,4.7s
ZEI pmax pmax
comp=E,160nm,1.1s
ZEI pmax pmax
comp=Z,536nm,1.9s,mb6.2
ZEI pmax pmax
comp=N,77nm,0.9s
ZEI MLR MLR
comp=Z,11μm,17.0s,MS6.2
ZEI MLR MLR
comp=E,2μm,13.0s,MS5.9
ZEI MLR MLR
comp=N,4μm,17.0s,MS5.9
ZEI Tsey 79.09 48 *e*P **P 13 20 17.8 -2.3**
comp=N,77nm,0.9s,mb5.6
CLDR Caldiran 79.19 52 *e*P **P 13 20 20.8 +0.1**
RPW Rockport 79.22 318 *e*P **P 13 20 20.0 -0.7**
comp=N,74nm,1.4s,mb5.4
RPW Rockport 79.22 318 *e*P **P 13 20 20.0 -0.6**
comp=N,74nm,1.4s,mb5.4
HOOD Mount Hood Mea 79.34 315 *e*P **P 13 20 21.3 0.0**
comp=N,49nm,0.9s,mb5.4
HOOD Mount Hood Mea 79.34 315 *e*P **P 13 20 21.3 -0.1**
comp=N,49nm,0.9s,mb5.4
SAO San Andreas Ge 79.41 306 *e*P **P 13 20 21.9 0.0**
SAO pmax pmax
comp=Z,52nm,1.0s,mb5.4
SAO MLR MLR
comp=Z,22μm,21.0s,MS6.5
SAO San Andreas Ge 79.41 306 *e*P **P 13 20 21.9 -0.1**
comp=Z,52nm,1.0s,mb5.4
SAO LR LR
comp=Z,22μm,21.0s,MS6.5
SAO San Andreas Ge 79.41 306 *e*P **P 13 20 21.9 0.0**
comp=Z,22μm,21.0s
LON Longmire 79.43 316 *e*P **P 13 20 21.0 -0.8**
LON pmax pmax
comp=Z,279nm,2.2s,mb5.8
LON Longmire 79.43 316 *e*P **P 13 20 21.0 -0.9**
comp=Z,279nm,2.2s,mb5.8
LON Longmire 79.43 316 *e*P **P 13 20 21.0 -0.8**
comp=Z,279nm,2.2s,mb5.8
JCW Jim Creek 79.50 317 *e*P **P 13 20 19.4 -2.7**
comp=Z,71nm,1.1s,mb5.5
JCW Jim Creek 79.50 317 *e*P **P 13 20 19.4 -2.8**
comp=Z,71nm,1.1s,mb5.5
A05A Maple Falls 79.60 318 ⇓P **P 13 20 21.9 -0.8**
baz=80,SNR=14
H04A Detroit Lake 79.73 314 P **P 13 20 23.4 0.0**
baz=80,SNR=14
TBLG Delisi 79.74 49 P **P 13 20 23.8 +0.2**
TBLG Delisi 79.74 49 P **P 13 20 23.8 +0.2**
GNI Garni 79.80 51 P **P 13 20 25.1 +1.1**
comp=Z,46nm,0.8s,mb5.5,baz=189,slow=0.8,SNR=43
GNI S S 13 30 29.0 +1.1
comp=Z,2.1nm,0.3s,baz=181,slow=22,SNR=2.1
GNI Garni 79.80 51 *c i*P **P 13 20 24.6 +0.6**
GNI pmax pmax
comp=Z,673nm,1.7s
GNI Garni 79.80 51 *e*P **P 13 20 25.3 +1.3**
comp=Z,529nm,1.3s,mb6.3
GNI LR LR
comp=Z,13μm,21.0s,MS6.2
GNI Garni 79.80 51 *e*P **P 13 20 24.5 +0.5**
GNI Garni 79.80 51 P **P 13 20 25.8 +1.8**
SNR=96
GNW Green Mountain 80.11 317 *e*P **P 13 20 23.7 -1.8**
comp=Z,24nm,1.2s,mb5.0
GNW Green Mountain 80.11 317 *e*P **P 13 20 23.7 -1.8**
comp=Z,24nm,1.2s,mb5.0
WDC Whiskeytown Da 80.12 310 P **P 13 20 23.3 -2.4**
WDC pmax pmax
comp=Z,66nm,1.2s,mb5.4
WDC MLR MLR
comp=Z,19μm,20.0s,MS6.4
WDC Whiskeytown Da 80.12 310 P **P 13 20 23.3 -2.4**
comp=Z,66nm,1.2s,mb5.4
WDC LR LR
comp=Z,19μm,20.0s,MS6.4
WDC Whiskeytown Da 80.12 310 P **P 13 20 23.3 -2.4**
comp=Z,19μm,20.0s
SAC San Andreas 80.15 307 *e*P **P 13 20 26.1 +0.2**
SAC pmax pmax
comp=Z,520nm,1.7s,mb6.2
SAC San Andreas 80.15 307 *e*P **P 13 20 26.1 +0.1**
comp=Z,520nm,1.7s,mb6.2
SAC San Andreas 80.15 307 *e*P **P 13 20 26.1 +0.2**
comp=Z,520nm,1.7s,mb6.2
ATD Arta Tunnel 80.16 80 P **P 13 20 27.8 +1.3**
comp=Z,138nm,1.0s,mb5.8,baz=311,slow=4.2,SNR=45
ATD S S 13 30 39.0 +6.3
comp=Z,2.9nm,0.4s,baz=203,slow=21,SNR=2.1
ATD Arta Tunnel 80.16 80 P **P 13 20 27.8 +1.4**
ATD Arta Tunnel 80.16 80 S S 13 30 39.0 +6.3
PRGR Permogore 80.20 29 ⇓*i*P **P 13 20 26.8 +1.1**
PRGR *i* 13 20 35.1
PRGR *e*S S 13 30 24.1 -7.2
PRGR *e*SSS 13 39 00.4
PRGR pmax pmax
comp=Z,742nm,1.2s,mb6.5
PRGR Permogore 80.20 29 *i* P **P 13 20 26.8 +1.1**
comp=Z,742nm,1.2s,mb6.5
YBH Yreka Blue Hor 80.20 311 LR LR 13 52 39.7
comp=Z,30μm,21.7s,MS6.6,baz=125,slow=33
YBH Yreka Blue Hor 80.20 311 *e*P **P 13 20 24.4 -1.7**
YBH pmax pmax
comp=Z,101nm,1.5s
YBH MLR MLR
comp=Z,26μm,21.0s
YBH Yreka Blue Hor 80.20 311 *e*P **P 13 20 24.4 -1.8**
comp=Z,101nm,1.5s,mb5.5
YBH LR LR
comp=Z,26μm,21.0s,MS6.5
YBH Yreka Blue Hor 80.20 311 *e*P **P 13 20 24.4 -1.7**
comp=Z,26μm,21.0s
MCCM Marconi Confer 80.49 307 *e*P **P 13 20 27.7 -0.1**
comp=Z,104nm,0.9s,mb5.8
MCCM LR LR
comp=Z,18μm,20.0s,MS6.4
MCCM Marconi Confer 80.49 307 *e*P **P 13 20 27.7 0.0**
comp=Z,104nm,0.9s,mb5.8
PGC Sidney 80.51 318 *e*P **P 13 20 26.9 -0.7**
comp=Z,21nm,1.5s,mb4.8
PGC Sidney 80.51 318 *e*P **P 13 20 26.9 -0.7**
comp=Z,21nm,1.5s,mb4.8
COR Corvallis 80.53 314 PFAKE 13 20 40.0 +12
COR LR LR
comp=Z,12μm,20.0s,MS6.2
HOPS Hopland 80.60 308 *e*P **P 13 20 29.6 +1.3**
comp=Z,321nm,1.4s,mb6.1
HOPS LR LR
comp=Z,16μm,19.0s,MS6.4
HOPS Hopland 80.60 308 *e*P **P 13 20 29.6 +1.3**
comp=Z,321nm,1.4s,mb6.1
NLWA Neilton Lookou 80.83 317 *e*P **P 13 20 28.8 -0.6**
comp=Z,156nm,1.2s,mb5.8
NLWA LR LR
comp=Z,28μm,19.0s,MS6.6
NLWA Neilton Lookou 80.83 317 *e*P **P 13 20 28.8 -0.5**
comp=Z,156nm,1.2s,mb5.8
KIPM Iron Peak 80.87 309 *e*P **P 13 20 30.7 +0.9**
comp=Z,218nm,1.1s,mb6.0
KIPM Iron Peak 80.87 309 *e*P **P 13 20 30.7 +0.9**
comp=Z,218nm,1.1s,mb6.0
KCPM Cahto Peak 80.95 309 P **P 13 20 29.1 -1.2**
comp=Z,1μm,2.5s,mb6.4
KCPM Cahto Peak 80.95 309 P **P 13 20 29.0 -1.2**
comp=Z,1μm,2.5s,mb6.4
KHMM Horse Mountain 81.01 310 *e*P **P 13 20 31.1 +0.7**
comp=Z,178nm,1.3s,mb5.8
KHMM Horse Mountain 81.01 310 *e*P **P 13 20 31.1 +0.6**
comp=Z,178nm,1.3s,mb5.8
KRMB Red Mountain 81.11 311 *e*P **P 13 20 31.5 +0.5**
comp=Z,286nm,1.6s,mb6.0
KRMB Red Mountain 81.11 311 *e*P **P 13 20 31.5 +0.5**
comp=Z,286nm,1.6s,mb6.0
TRBA At Turbah 81.21 78 ⇓*e*P **P 13 20 34.1 +2.1**
MAK Makhachkala 81.74 48 *i* P **P 13 20 37.0 +2.7**
MAK *e* pP 13 20 39.9 +4.6
MAK *i* 13 23 42.9
MAK *e*S S 13 30 47.2 -0.9
MAK pmax pmax
comp=N,625nm,1.9s
MAK pmax pmax
comp=Z,2μm,1.9s,mb6.6
MAK pmax pmax
comp=E,169nm,0.9s
MAK pmax pmax
comp=E,347nm,1.6s
MAK pmax pmax
comp=Z,936nm,1.6s,mb6.5
MAK pmax pmax
comp=N,408nm,1.5s
MAK MLR MLR
comp=E,33μm,25.0s,MS6.6
MAK MLR MLR
comp=Z,28μm,21.0s,MS6.6
MAK MLR MLR
comp=N,18μm,26.0s,MS6.6
LBOS 82.23 77 *e*P **P 13 20 39.6 +2.2**
LBOS AMb AMB 13 20 41.5
comp=Z,279nm,1.2s,mb6.0
NAY Al-Naaiem 82.54 62 *e*P **P 13 20 38.8 0.0**
NAY AMb AMB 13 20 44.8
comp=Z,206nm,1.3s,mb6.0
MIB Mutribah 82.58 61 *e*P **P 13 20 39.5 +0.5**
MIB AMb AMB 13 20 49.5
comp=Z,661nm,1.2s,mb6.5
UMR Umm Al-Rimmam 82.93 61 *e*P **P 13 20 40.6 -0.3**
UMR AMb AMB 13 20 47.1
comp=Z,866nm,1.6s,mb6.5
KBD Kabd 82.94 62 *e*P **P 13 20 40.6 -0.3**
KBD AMb AMB 13 20 51.6
comp=Z,488nm,1.4s,mb6.3
QRN Al-Qurain 83.18 62 *e*P **P 13 20 42.1 0.0**
QRN AMb AMB 13 20 47.6
comp=Z,623nm,1.6s,mb6.4
DLBC Dease Lake 83.85 328 *e*P **P 13 20 46.2 +1.3**
DLBC Dease Lake 83.85 328 *e*P **P 13 20 46.2 +1.3**
INK Inuvik 84.30 338 P **P 13 20 47.3 +0.2**
comp=Z,128nm,1.1s,mb6.0,baz=59,slow=5.8,SNR=26
INK Inuvik 84.30 338 P **P 13 20 47.3 +0.3**
INK pmax pmax
comp=Z,129nm,1.1s
INK Inuvik 84.30 338 *e*P **P 13 20 47.0 0.0**
comp=Z,488nm,1.4s,mb6.4
INK Inuvik 84.30 338 *e*P **P 13 20 47.0 0.0**
comp=Z,488nm,1.4s,mb6.4
WRAK Wrangell Islan 85.32 326 P **P 13 20 51.9 -0.6**
comp=Z,286nm,1.7s,mb6.1
WRAK LR LR
comp=Z,12μm,20.0s,MS6.3
WRAK Wrangell Islan 85.32 326 P **P 13 20 51.9 -0.5**
comp=Z,286nm,1.7s,mb6.1
NVL N'lazarevskaya 85.63 165 *e*P **P 13 20 55.1 +1.5**
NVL *e**PP pP 13 21 04.0 +9.4
NVL *e*S S 13 31 21.3 -4.9
NVL *e*PS 13 32 19.2
NVL *e*SP 13 32 20.5
NVL *e*SS SS 13 37 00.7 -1.6
NVL pmax pmax
comp=Z,161nm,1.2s,mb6.1
NVL MLR MLR
comp=Z,9μm,17.0s,MS6.2
NVL N'lazarevskaya 85.63 165 *e*P **P 13 20 55.1 +1.5**
comp=Z,161nm,1.2s,mb6.1
MUKL Al Mukalla 85.81 76 *e*P **P 13 20 57.5 +1.9**
MUKL AMb AMB 13 20 59.1
comp=Z,604nm,1.5s,mb6.6
SOKR Solikamsk 85.83 31 *c i*P **P 13 20 55.2 +0.3**
SOKR S S 13 31 24.5 -4.1
SOKR SS SS 13 37 01.7 -3.3
SOKR pmax pmax
comp=Z,530nm,1.4s,mb6.6
SOKR MLR MLR
comp=Z,25μm,19.0s,MS6.6
SOKR Solikamsk 85.83 31 *i* P **P 13 20 55.2 +0.3**
comp=Z,530nm,1.4s,mb6.6
CRAG Craig 85.89 325 *e*P **P 13 20 55.5 +0.3**
comp=Z,274nm,2.1s,mb6.1
CRAG Craig 85.89 325 *e*P **P 13 20 55.5 +0.3**
comp=Z,274nm,2.1s,mb6.1
SKAG Skagway 86.43 329 *e*P **P 13 20 59.4 +1.5**
comp=Z,1μm,2.4s,mb6.7
SKAG Skagway 86.43 329 *e*P **P 13 20 59.4 +1.5**
comp=Z,1μm,2.4s,mb6.7
SIT Sitka 86.85 327 *e*P **P 13 21 00.9 +1.0**
SIT pmax pmax
comp=Z,508nm,2.5s,mb6.3
SIT Sitka 86.85 327 *e*P **P 13 21 00.9 +1.0**
comp=Z,508nm,2.5s,mb6.3
SIT Sitka 86.85 327 *e*P **P 13 21 00.9 +1.0**
comp=Z,508nm,2.5s,mb6.3
ARU Arti 87.28 33 *d i*P **P 13 21 03.4 +1.3**
ARU 13 24 25.2
ARU S S 13 31 31.2 -12
ARU pmax pmax
comp=Z,422nm,1.7s,mb6.4
ARU pmax pmax
comp=Z,1μm,8.6s
ARU Arti 87.28 33 *e*P **P 13 21 03.0 +1.0**
comp=Z,481nm,1.5s,mb6.5
ARU LR LR
comp=Z,52μm,21.0s,MS6.9
ARU Arti 87.28 33 P **P 13 21 03.9 +1.8**
comp=Z,916nm,1.2s,mb6.9,SNR=44
ARU Arti 87.28 33 *e*P **P 13 21 03.0 +0.9**
comp=Z,481nm,1.5s,mb6.5
DAWY Dawson 87.41 334 *e*P **P 13 21 02.7 +0.2**
DAWY Dawson 87.41 334 *e*P **P 13 21 02.7 +0.2**
EGAK Eagle 87.98 335 *e*P **P 13 21 04.6 -0.6**
comp=Z,401nm,2.1s,mb6.3
EGAK LR LR
comp=Z,20μm,21.0s,MS6.5
EGAK Eagle 87.98 335 *e*P **P 13 21 04.6 -0.7**
comp=Z,401nm,2.1s,mb6.3
AKTK Aktyubinsk 88.05 39 P **P 13 21 06.1 +0.3**
AKTK S S 13 31 39.2 -11
AKTK PKKPbc PKKPbc 13 38 58.9 +6.2
AKTK Aktyubinsk 88.05 39 P **P 13 21 06.1 +0.2**
comp=Z,89nm,0.9s,mb6.0
AKTO Aktyubinsk 88.05 39 P **P 13 21 06.1 +0.3**
comp=Z,89nm,0.9s,mb6.0,baz=284,slow=4.4,SNR=82
AKTO S S 13 31 39.2 -11
comp=Z,0.5nm,0.3s,baz=234,slow=16,SNR=1.8
AKTO PKKPbc PKKPbc 13 38 58.9 +6.2
comp=Z,2.3nm,0.7s,baz=69,slow=2.9,SNR=9.3
AKTO Aktyubinsk 88.05 39 P **P 13 21 06.1 +0.2**
AKTO S S 13 31 39.3 -11
AKTO pmax pmax
comp=Z,89nm,0.9s,mb6.0
AKTO smax
comp=N,1.0nm,0.3s
SVE Sverdlovsk 88.33 33 ⇑*e*P **P 13 21 07.8 +0.7**
SVE *e* 13 24 42.6
SVE *e*S S 13 31 34.0 -19
SVE *e*SS SS 13 37 48.6 +6.9
SVE pmax pmax
comp=Z,359nm,1.8s,mb6.3
SVE pmax pmax
comp=Z,1μm,13.3s
SVE MLR MLR
comp=Z,50μm,18.0s,MS7.0
SVE Sverdlovsk 88.33 33 *e*P **P 13 21 07.8 +0.7**
comp=Z,1μm,13.3s
ABPO Ambohimpanom 88.78 109 *e*P **P 13 21 12.2 +2.3**
ABPO pmax pmax
comp=Z,139nm,1.3s,mb6.1
ABPO MLR MLR
comp=Z,24μm,22.0s,MS6.6
ABPO Ambohimpanom 88.78 109 *e*P **P 13 21 12.2 +2.3**
comp=Z,139nm,1.3s,mb6.1
ABPO LR LR
comp=Z,24μm,22.0s,MS6.6
ABPO Ambohimpanom 88.78 109 *e*P **P 13 21 12.2 +2.3**
comp=Z,24μm,22.0s
ABTO Aybut 89.48 73 P **P 13 21 16.8 +3.5**
SNR=8.3
ABKAR Akbulak array 89.50 40 *e*P **P 13 21 13.6 +0.8**
comp=Z,572nm,1.4s,mb6.7
ABKAR Akbulak array 89.50 40 *e*P **P 13 21 13.6 +0.9**
comp=Z,572nm,1.4s,mb6.7
DOT Dot Lake 89.52 335 *e*P **P 13 21 13.2 +0.7**
comp=Z,166nm,1.2s,mb6.2
DOT Dot Lake 89.52 335 *e*P **P 13 21 13.2 +0.7**
comp=Z,166nm,1.2s,mb6.2
MENT Mentasta 89.58 334 *e*P **P 13 21 13.5 +0.7**
MENT Mentasta 89.58 334 *e*P **P 13 21 13.5 +0.7**
ASUD Al Ashush, Dub 90.28 65 P **P 13 21 19.5 +2.6**
SNR=12
RBK Rabkut 90.32 72 P **P 13 21 20.4 +3.2**
SNR=9.0
ILAR Eielson Array 90.33 336 P **P 13 21 16.2 -0.1**
comp=Z,27nm,1.1s,mb5.5,baz=61,slow=3.7,SNR=35
ILAR PP PP 13 24 53.5 +3.6
comp=Z,12nm,1.1s,baz=70,slow=5.5,SNR=5.7
ILAR S S 13 31 44.1 -27
comp=Z,0.2nm,0.6s,baz=85,slow=20,SNR=3.2
ILAR PKKP PKKPdf 13 38 27.4 -16
comp=Z,0.7nm,0.9s,baz=308,slow=3.0,SNR=4.5
ILAR LR LR 13 58 12.5
comp=Z,21μm,21.1s,MS6.5,baz=74,slow=33
ILAR Eielson Array 90.33 336 P **P 13 21 16.2 -0.1**
comp=Z,27nm,1.1s,mb5.5
PAX Paxson 90.33 334 *e*P **P 13 21 15.7 -0.6**
PAX pmax pmax
comp=Z,43nm,1.0s,mb5.7
PAX Paxson 90.33 334 *e*P **P 13 21 15.7 -0.7**
comp=Z,43nm,1.0s,mb5.7
PAX Paxson 90.33 334 *e*P **P 13 21 15.6 -0.7**
comp=Z,43nm,1.0s,mb5.7
ABKT Ailbek 90.39 52 P **P 13 21 18.3 +1.1**
comp=Z,284nm,1.4s,mb6.4,SNR=25
NAZ Nazwa, Dubai 90.52 65 P **P 13 21 19.3 +1.3**
SNR=28
COLA College 90.68 336 *e*P **P 13 21 17.5 -0.4**
COLA pmax pmax
comp=Z,51nm,1.2s,mb5.7
COLA MLR MLR
comp=Z,15μm,20.0s,MS6.4
COLA College 90.68 336 *e*P **P 13 21 17.5 -0.5**
comp=Z,51nm,1.2s,mb5.7
COLA LR LR
comp=Z,15μm,20.0s,MS6.4
COLA College 90.68 336 *e*P **P 13 21 17.5 -0.4**
comp=Z,15μm,20.0s
ASHO Ashiyiah 90.92 65 P **P 13 21 20.8 +0.8**
SNR=45
BANOM Banah 90.94 64 P **P 13 21 21.3 +1.3**
SNR=11
HATD Hatta, Dubai 90.97 65 P **P 13 21 21.3 +1.2**
SNR=55
ARQ Araqi 91.56 66 P **P 13 21 24.2 +1.3**
SNR=26
TRF Thorofare Moun 92.20 335 *e*P **P 13 21 25.0 0.0**
comp=Z,647nm,2.3s,mb6.5
TRF Thorofare Moun 92.20 335 *e*P **P 13 21 25.0 0.0**
comp=Z,647nm,2.3s,mb6.5
BPAW Bear Paw Mtn. 92.23 336 *e*P **P 13 21 24.2 -0.9**
comp=Z,596nm,2.5s,mb6.5
BPAW Bear Paw Mtn. 92.23 336 *e*P **P 13 21 24.2 -0.9**
comp=Z,596nm,2.5s,mb6.5

HOQ	**Hoqain**	**92.23**	**66**	P	**P**	**13 21 26.2 +0.2**
	SNR=36					
BSY	**Bisya**	**92.27**	**67**	P	**P**	**13 21 26.9 +0.7**
	SNR=55					
PMR	**Palmer**	**92.41**	**333**	*e*P	**P**	**13 21 26.9 +0.9**
PMR				pmax	pmax	
	comp=Z,2.0nm,0.3s,mb4.9					
PMR	**Palmer**	**92.41**	**333**	*e*P	**P**	**13 21 26.9 +0.9**
	comp=Z,2.0nm,0.3s,mb4.9					
PMR	**Palmer**	**92.41**	**333**	*e*P	**P**	**13 21 26.9 +0.9**
	comp=Z,2.0nm,0.3s,mb4.9					
SMDO	**Samad**	**92.99**	**66**	P	**P**	**13 21 30.3 +0.8**
	SNR=79					
JMDO	**Jabal Madar**	**93.16**	**67**	P	**P**	**13 21 30.4 0.0**
	SNR=55					
PPLA	**Purkeypile**	**93.21**	**335**	*e*P	**P**	**13 21 28.8 -0.9**
	comp=Z,330nm,1.7s,mb6.5					
PPLA	**Purkeypile**	**93.21**	**335**	*e*P	**P**	**13 21 28.8 -0.9**
	comp=Z,330nm,1.7s,mb6.5					
SLKM	**Skilak Lake**	**93.32**	**333**	P	**P**	**13 21 29.6 -0.6**
SLKM	**Skilak Lake**	**93.32**	**333**	P	**P**	**13 21 29.6 -0.6**
WBK	**Wadi Bani Khal**	**93.91**	**67**	P	**P**	**13 21 34.9 +1.1**
	SNR=67					
PTCN	**Pitcairn Islan**	**94.67**	**245**	PFAKE		13 21 50.0 +13
PTCN				LR	LR	
	comp=Z,15μm,20.0s,MS6.5					
BRVK	**Borovoye**	**94.72**	**35***c*	*e*P	**P**	**13 21 36.8 0.0**
BRVK				pmax	pmax	
	comp=Z,107nm,1.9s,mb6.0					
BRVK	**Borovoye**	**94.72**	**35**	*e*P	**P**	**13 21 37.5 +0.7**
	comp=Z,70nm,1.3s,mb5.9					
BRVK				LR	LR	
	comp=Z,60μm,19.0s,MS7.1					
BRVK	**Borovoye**	**94.72**	**35**	P	**P**	**13 21 37.6 +0.8**
	comp=Z,214nm,1.4s,mb6.4,SNR=14					
BRVK	**Borovoye**	**94.72**	**35**	*e*P	**P**	**13 21 36.8 0.0**
	comp=Z,107nm,1.9s,mb6.0					
BRVK	**Borovoye**	**94.72**	**35**	P	**P**	**13 21 38.0 +1.2**
	SNR=37					
TTA	**Tatalina**	**94.77**	**336**	*e*P	**P**	**13 21 38.2 +1.4**
TTA	**Tatalina**	**94.77**	**336**	*e*P	**P**	**13 21 38.2 +1.4**
BVAR	**Borovoye Array**	**94.79**	**35**	P	**P**	**13 21 37.5 +0.4**
	comp=Z,12nm,1.1s,mb5.2,baz=273,slow=2.5,SNR=39					
BVAR				PKKPbc	PKKPbc	13 38 38.1 +2.4
	comp=Z,3.4nm,0.8s,baz=104,slow=6.3,SNR=4.0					
BVAR	**Borovoye Array**	**94.79**	**35**	P	**P**	**13 21 37.5 +0.4**
	comp=Z,12nm,1.1s,mb5.2					
KDAK	**Kodiak Island**	**95.53**	**331**	P	**P**	**13 21 41.3 +0.9**
KDAK				pmax	pmax	
	comp=Z,15nm,0.9s,mb5.4					
KDAK				MLR	MLR	
	comp=Z,25μm,19.0s,MS6.7					
KDAK	**Kodiak Island**	**95.53**	**331**	P	**P**	**13 21 41.3 +0.9**
	comp=Z,15nm,0.9s,mb5.4					
KDAK				LR	LR	
	comp=Z,25μm,19.0s,MS6.7					
KDAK	**Kodiak Island**	**95.53**	**331**	P	**P**	**13 21 41.3 +0.9**
	comp=Z,25μm,19.0s					
OHAK	**Old Harbor**	**96.11**	**330**	*e*P	**P**	**13 21 44.3 +1.2**
	comp=Z,242nm,2.3s,mb6.2					
OHAK	**Old Harbor**	**96.11**	**330**	*e*P	**P**	**13 21 44.3 +1.2**
	comp=Z,242nm,2.3s,mb6.2					
RER	**Riviere de l'E**	**96.99**	**110**	PFAKE		13 22 00.0 +12
RER				LR	LR	
	comp=Z,21μm,22.0s,MS6.6					
KKAR	**Karatay Array**	**98.21**	**44**	*e*P	**P**	**13 21 53.7 +0.8**
KKAR				pmax	pmax	
	comp=Z,14nm,1.0s,mb5.5					
KKAR	**Karatay Array**	**98.21**	**44**	*e*P	**P**	**13 21 53.7 +0.8**
	comp=Z,14nm,1.0s,mb5.4					
RKT	**Rikitea**	**98.90**	**248**	*e*PP	PP	13 25 57.3 -0.9
	comp=Z,1μm,27.8s					
RKT				*e*SKSac	SKSac	13 32 32.1 -4.0
	comp=Z,3μm,30.8s					
RKT				*e*S	S	13 33 24.0 -4.1
	comp=Z,6μm,30.5s					
RKT				*e*SP	SP	13 34 50.4 -3.1
	comp=Z,10μm,30.2s					
RKT				*e*SS	SS	13 40 10.7 -4.5
	comp=Z,6μm,32.2s					
RKT				*e*LQ		13 49 51.7
	comp=Z,15μm,32.0s					
RKT				*e*LR	LR	13 54 06.2
	comp=Z,27μm,38.8s					
TIXI	**Tiksi**	**99.97**	**4**	*e*P	Pdif	13 22 01.4 +1.0
TIXI				*e*		13 26 04.7
TIXI				*e*S	S	13 33 31.3 -3.9
TIXI				*e*SS	SS	13 40 25.9 -0.7
TIXI				pmax	pmax	
	comp=Z,34nm,1.4s,mb5.6					
TIXI				pmax	pmax	
	comp=Z,209nm,13.9s					
TIXI	**Tiksi**	**99.97**	**4**	PFAKE		13 22 10.0 +10
TIXI				LR	LR	
	comp=Z,9μm,22.0s,MS6.2					
TIXI	**Tiksi**	**99.97**	**4**	*e*P	Pdif	13 22 01.4 +1.0
	comp=Z,209nm,13.9s					
KURK	**Kurchatov**	**100.39**	**35***c*	*i*P	Pdif	13 22 02.5 +0.2
KURK				pmax	pmax	
	comp=Z,52nm,1.7s					
KURK	**Kurchatov**	**100.39**	**35**	*e*Pdif	Pdif	13 22 02.1 -0.2
	comp=Z,34nm,1.3s					
KURK				LR	LR	
	comp=Z,33μm,19.0s,MS6.9					
KURK	**Kurchatov**	**100.39**	**35**	*i* P	Pdif	13 22 02.5 +0.2
	comp=Z,52nm,1.7s					
KURK	**Kurchatov**	**100.39**	**35**	P	Pdif	13 22 03.6 +1.3
	SNR=25					
EKS2	**Erkin-Say**	**100.61**	**44**	*e*Pdif	Pdif	13 22 05.1 +1.8
	comp=Z,17nm,1.1s					
EKS2				LR	LR	
	comp=Z,21μm,21.0s,MS6.6					
AML	**Almayashu**	**100.75**	**44**	*e*Pdif	Pdif	13 22 05.9 +2.0
	comp=Z,40nm,1.1s					
AML				LR	LR	
	comp=Z,23μm,20.0s,MS6.7					
NVS	**Novosibirsk**	**100.85**	**30**	*e*P	Pdif	13 22 04.2 -0.2
NVS				*e*		13 32 44.6
NVS				pmax	pmax	
	comp=Z,29nm,1.6s					
NVS	**Novosibirsk**	**100.85**	**30**	*e*P	Pdif	13 22 04.2 -0.2
	comp=Z,29nm,1.6s					
FRU	**Bishkek**	**101.12**	**44**	*i* P	Pdif	13 22 08.0 +2.4
FRU				*i*		13 26 16.0
FRU				pmax	pmax	
	comp=Z,550nm,3.0s					
FRU	**Bishkek**	**101.12**	**44**	*i* P	Pdif	13 22 08.0 +2.4
	comp=Z,550nm,3.0s					
UCH	**Uchtor**	**101.28**	**44**	PFAKE		13 22 20.0 +14
UCH				LR	LR	
	comp=Z,50nm,19.0s					
TKM2	**Tokmak 2**	**101.76**	**43**	*e*P	Pdif	13 22 10.0 +1.6
TKM2				pmax	pmax	
	comp=Z,40nm,1.2s					
TKM2				MLR	MLR	
	comp=Z,18μm,19.0s,MS6.6					
TKM2	**Tokmak 2**	**101.76**	**43**	*e*Pdif	Pdif	13 22 10.0 +1.6
	comp=Z,40nm,1.2s					
TKM2				LR	LR	
	comp=Z,18μm,19.0s,MS6.6					
TKM2	**Tokmak 2**	**101.76**	**43**	*e*P	Pdif	13 22 10.0 +1.6
	comp=Z,18μm,19.0s					
KZA	**Kyzart**	**101.84**	**44**	*e*Pdif	Pdif	13 22 11.3 +2.6
	comp=Z,44nm,1.4s					
MAW	**Mawson**	**101.87**	**157**	P	Pdif	13 22 10.4 +1.5
	comp=Z,1.0nm,0.7s,baz=273,slow=12,SNR=1.6					
MAW	**Mawson**	**101.87**	**157**	P	Pdif	13 22 10.4 +1.5
MAW				pmax	pmax	
	comp=Z,1.0nm,0.7s					
MAW	**Mawson**	**101.87**	**157**	P	Pdif	13 22 10.4 +1.5
	comp=Z,1.0nm,0.7s					
BILL	**Bilibino**	**101.98**	**351**	*e*P	Pdif	13 22 10.6 +1.2
BILL				*i*		13 26 22.4
BILL				*i* PS	PS	13 35 25.3 +0.5
BILL				pmax	pmax	
	comp=Z,43nm,2.9s					
BILL	**Bilibino**	**101.98**	**351**	PFAKE		13 22 20.0 +11
BILL				LR	LR	
	comp=Z,17μm,19.0s,MS6.6					
BILL	**Bilibino**	**101.98**	**351**	*e*P	Pdif	13 22 10.6 +1.2
	comp=Z,43nm,2.9s					
ZALV	**Zalesovo Beam**	**102.11**	**30**	P	Pdif	13 22 12.1 +2.1
	comp=Z,0.9nm,0.4s,baz=297,slow=6.5,SNR=10.0					
ZALV				PP	PP	13 26 26.2 +5.1
	comp=Z,12nm,0.9s,baz=304,slow=7.0,SNR=5.6					
ZALV	**Zalesovo Beam**	**102.11**	**30**	P	Pdif	13 22 12.1 +2.1
ZALV						13 26 26.2
ZALV				pmax	pmax	
	comp=Z,1.0nm,0.4s					
ZALV				pmax	pmax	
	comp=Z,12nm,0.9s					
TAOE	**Nuku Hiva Isla**	**102.47**	**263**	*e*PP	PP	13 26 17.5 -8.0
	comp=Z,734nm,26.6s					
TAOE				*e*Sdif	Sdif	13 33 54.9 -1.8
	comp=Z,3μm,30.1s					
TAOE				*e*SP	SP	13 35 32.2 +0.1
	comp=Z,3μm,27.1s					
TAOE				*e*SS	SS	13 40 55.8 -10
	comp=Z,4μm,28.3s					
TAOE				*e*LQ		13 51 21.2
	comp=Z,53μm,31.8s					
TAOE				*e*LR	LR	13 55 34.6
	comp=Z,7μm,26.0s					
NIL	**Nilore**	**103.36**	**53**	PFAKE		13 22 30.0 +14
NIL				LR	LR	
	comp=Z,60nm,22.0s					
MK31	**Makanchi Array**	**104.36**	**37**	*e*P	Pdif	13 22 21.0 +1.0
MK31	**Makanchi Array**	**104.36**	**37**	*e*P	Pdif	13 22 21.0 +1.0
MKAR	**Makanchi Array**	**104.36**	**37**	Pdiff	Pdif	13 22 20.9 +0.9
	comp=Z,3.4nm,1.0s,baz=285,slow=2.4,SNR=20					
MKAR				PKiKP	PKiKP	13 26 30.9 -5.8
	comp=Z,6.9nm,1.0s,baz=315,slow=3.2,SNR=4.3					
MKAR				PKKPbc	PKKPbc	13 38 08.5 +0.1
	comp=Z,4.7nm,1.1s,baz=100,slow=5.0,SNR=8.4					
PAF	**Port-aux-Franc**	**108.42**	**139**	PFAKE		13 26 50.0 +5.9
PAF				LR	LR	
	comp=Z,13μm,19.0s,MS6.5					
SBA	**Scott Base**	**109.06**	**186**	PFAKE		13 26 50.0 +5.4
SBA				LR	LR	
	comp=Z,7μm,19.0s,MS6.3					
WMQ	**Urumqi**	**109.16**	**38**	Pdif	Pdif	13 22 45.0 +3.7
WMQ				PP	PP	13 27 21.0 +7.5
WMQ				S	Sdif	13 34 53.0 +0.6
WMQ				SS	SS	13 42 39.0 +5.0
WMQ				AMB	AMB	
	comp=Z,2μm,9.0s					
WMQ				LR	LR	
	comp=N,36μm,22.0s,MS7.0					
WMQ				LR	LR	
	comp=E,27μm,22.0s,MS7.0					
WMQ				LR	LR	
	comp=Z,38μm,22.0s,MS6.9					
YAK	**Yakutsk**	**109.47**	**6**	PFAKE		13 27 00.0 +14
YAK				LR	LR	
	comp=Z,11μm,21.0s,MS6.4					
DGAR	**Diego Garcia**	**111.84**	**95**	PFAKE		13 27 00.0 +8.4
DGAR				LR	LR	
	comp=Z,9μm,21.0s,MS6.3					
POHA	**Pohakuloa**	**111.96**	**295**	PFAKE		13 27 00.0 +8.3
POHA				LR	LR	
	comp=Z,6μm,21.0s,MS6.2					
TLY	**Talaya**	**112.21**	**24**	*i* PKiKP	PKiKP	13 26 56.1 +4.8
TLY				*e*		13 27 34.8
TLY				*e*		13 37 09.2
TLY				*e*SS	SS	13 43 09.1 -4.9
TLY				pmax	pmax	
	comp=Z,10.0nm,1.2s					
TLY				MLR	MLR	
	comp=Z,20μm,21.0s,MS6.7					
TLY	**Talaya**	**112.21**	**24**	PFAKE		13 27 00.0 +8.8
TLY				LR	LR	
	comp=Z,23μm,22.0s,MS6.7					
TBI	**Tubuai**	**112.22**	**248**	*e*SKSac	SKSac	13 33 31.6 -4.3
	comp=Z,1μm,30.0s					
TBI				*e*Sdif	Sdif	13 35 20.3 +2.3
	comp=Z,3μm,28.5s					
TBI	**Tubuai**	**112.22**	**248**	*e*PS	PS	13 37 06.6 -4.1
	comp=Z,12μm,28.8s					
TBI				*e*SS	SS	13 43 12.1 -5.1
	comp=Z,10μm,33.2s					
TBI				*e*LR	LR	14 00 16.1
	comp=Z,25μm,36.5s					
PPT	**Papeete**	**112.27**	**254**	*e*PP	PP	13 27 30.9 -6.4
	comp=Z,1μm,25.5s					
PPT				*e*SKSac	SKSac	13 33 31.9 -4.4
	comp=Z,2μm,31.5s					
PPT				*e*Sdif	Sdif	13 35 13.5 -4.9
	comp=Z,3μm,28.8s					
PPT	**Papeete**	**112.27**	**254**	*e*PS	PS	13 37 07.2 -4.2
	comp=Z,7μm,28.0s					
PPT				*e*SS	SS	13 43 18.2 0.0
	comp=Z,8μm,28.2s					
PPT				*e*LQ		13 54 19.2
	comp=Z,20μm,29.5s					
PPT				*e*LR	LR	14 00 16.8
	comp=Z,17μm,24.2s					
ZAK	**Zakamensk**	**113.04**	**25**	*e*P	Pdif	13 23 06.3 +7.8
ZAK				pmax	pmax	
	comp=Z,1.0nm,1.8s					
KIP	**Kipapa**	**113.64**	**298**	PFAKE		13 27 00.0 +5.2
KIP				LR	LR	
	comp=Z,4μm,19.0s,MS6.0					
SONM	**Songino Array**	**116.31**	**25**	PKP	PKPdf	13 27 01.5 +2.3
	comp=Z,3.7nm,1.0s,baz=317,slow=2.1,SNR=12					
SONM				PP	PP	13 27 59.5 -4.5
	comp=Z,14nm,1.2s,baz=305,slow=5.2,SNR=6.3					
SONM				PKKPbc	PKKPbc	13 37 31.0 +1.2
	comp=Z,2.7nm,1.1s,baz=157,slow=3.3,SNR=4.9					
SONM	**Songino Array**	**116.31**	**25**	PKIKP	PKPdf	13 27 01.5 +2.3
PET	**Petropavlovsk**	**117.32**	**348**	PFAKE		13 27 10.0 +9.0
PET				LR	LR	
	comp=Z,8μm,20.0s,MS6.3					
XMAS	**Kiritimati**	**118.11**	**277**	PFAKE		13 27 10.0 +6.3
XMAS				LR	LR	
	comp=Z,5μm,19.0s,MS6.1					
CASY	**Casey**	**118.20**	**166**	PKPdf	PKPdf	13 27 05.1 +2.9
CASY				LR	LR	
	comp=Z,21μm,21.0s,MS6.7					
LSA	**Lhasa**	**118.85**	**50**	PKP	PKPdf	13 27 06.2 +1.5
LSA				SS	SS	13 44 42.7 -0.2
LSA				LR	LR	
	comp=E,17μm,45.7s					
LSA				LR	LR	
	comp=Z,23μm,52.1s					
LSA	**Lhasa**	**118.85**	**50**	*e*PKPdf	PKPdf	13 27 07.1 +2.5
LSA				LR	LR	
	comp=Z,13μm,21.0s,MS6.5					
LSA	**Lhasa**	**118.85**	**50**	*e*PKIKP	PKPdf	13 27 07.1 +2.4
GTA	**Gaotai**	**119.05**	**36**	⇑PKP	PKPdf	13 27 06.8 +2.0
GTA				PP	PP	13 28 28.1 +4.5
GTA				PKS		13 30 42.2
GTA				SKKS	SKKSac	13 35 22.9 -2.9
GTA				AMB	AMB	
	comp=Z,2μm,11.4s					
GTA				LR	LR	
	comp=N,12μm,18.5s,MS6.8					
GTA				LR	LR	
	comp=E,18μm,21.3s,MS6.8					
GTA				LR	LR	
	comp=Z,14μm,22.5s,MS6.5					
HIA	**Hailar**	**119.80**	**16**	*e*PKIKP	PKPdf	13 27 07.1 +1.2
HIA				MLR	MLR	
	comp=Z,25μm,20.0s					
HIA	**Hailar**	**119.80**	**16**	*e*PKIKP	PKPdf	13 27 07.1 +1.2
RAR	**Rarotonga**	**121.84**	**250**	PFAKE		13 27 20.0 +9.4
RAR				LR	LR	
	comp=Z,8μm,19.0s,MS6.4					
KLR	**Kul'dur**	**122.28**	**7**	*e*PKIKP	PKPdf	13 27 06.0 -4.7
KLR				*e*		13 27 06.5
KLR				*e*		13 28 42.0
HABR	**Khabarovsk**	**123.38**	**5**	P	Pdif	13 23 42.1 -2.4
HABR						13 28 51.6
HABR				*e*PPP		13 31 29.3
HABR				*e*		13 34 22.7
HABR				*e*PS	PS	13 38 48.3 -1.3
HABR				*e*SS	SS	13 45 39.4 +1.0
HABR				*e*SSS		13 50 12.9
HABR				pmax	pmax	
	comp=N,9.0nm,0.9s					
HABR				pmax	pmax	
	comp=E,34nm,1.9s					
HABR				pmax	pmax	
	comp=Z,43nm,1.9s					
BTO	**Baotou**	**123.58**	**28**	*e*PKP	PKPdf	13 27 13.5 +0.1
LZH	**Lanzhou**	**123.65**	**36**	*e*PKP	PKPdf	13 27 15.5 +1.8
LZH				PP	PP	13 28 56.1 +1.2
LZH				SKKS	SKKSac	13 35 46.0 -10
LZH				SS	SS	13 45 48.3 +5.0
LZH				AMB	AMB	
	comp=Z,2μm,7.6s					
LZH				LR	LR	
	comp=N,17μm,18.0s,MS6.8					
LZH				LR	LR	
	comp=E,12μm,17.8s,MS6.8					
LZH				LR	LR	
	comp=Z,21μm,18.8s,MS6.8					
HHC	**Hu-ho-hao-te**	**124.09**	**27**	*e*PKP	PKPdf	13 27 13.0 -1.4
HHC				PKS		13 30 48.5
HHC				AMB	AMB	
	comp=Z,1μm,10.5s					
HHC				LR	LR	
	comp=N,15μm,22.4s,MS6.8					
HHC				LR	LR	
	comp=E,19μm,22.1s,MS6.8					
HHC				LR	LR	
	comp=Z,34μm,22.2s,MS7.0					
YSS	**Yuzh-Sakhalins**	**125.15**	**359**	*e*PKIKP	PKPdf	13 27 23.8 +7.5
YSS				*e*		13 29 04.0
YSS				*e*PS	PS	13 38 58.0 -7.2
YSS				*e*PPS		13 40 42.0
YSS	**Yuzh-Sakhalins**	**125.15**	**359**	PFAKE		13 27 30.0 +14
YSS				LR	LR	
	comp=Z,3μm,19.0s,MS6.0					
JOHN	**Johnston Islan**	**125.47**	**297**	PFAKE		13 27 30.0 +12
JOHN				LR	LR	
	comp=Z,4μm,20.0s,MS6.1					
MIDW	**Midway**	**126.18**	**314**	PFAKE		13 27 30.0 +11
MIDW				LR	LR	
	comp=Z,12μm,22.0s,MS6.5					
CN2	**Changchun**	**126.35**	**14**	*e*PKP	PKPdf	13 27 19.7 +1.0
CN2				PP	PP	13 29 14.9 +2.6
CN2				SS	SS	13 46 15.6 -0.4
CN2				AMB	AMB	
	comp=Z,600nm,8.0s					
CN2				LR	LR	
	comp=N,12μm,20.0s,MS6.6					
CN2				LR	LR	
	comp=E,5μm,20.0s,MS6.6					
CN2				LR	LR	
	comp=Z,10μm,20.0s,MS6.5					
MDJ	**Mudanjiang**	**126.45**	**10**	PFAKE		13 27 30.0 +11
MDJ				LR	LR	
	comp=Z,9μm,21.0s,MS6.4					
BJI	**Beijing**	**126.73**	**24**	PKP	PKPdf	13 27 20.9 +1.4
BJI				SS	SS	13 46 21.4 +0.1
BJI				AMB	AMB	
	comp=Z,2μm,13.1s					
BJI				LR	LR	
	comp=N,26μm,18.6s,MS7.0					
BJI				LR	LR	
	comp=E,17μm,20.5s,MS7.0					
BJI				LR	LR	
	comp=Z,21μm,21.4s,MS6.8					
BJT	**Baijiatuau**	**126.75**	**24**	*e*PKIKP	PKPdf	13 27 19.6 +0.1
BJT				MLR	MLR	
	comp=Z,31μm,20.0s					
BJT	**Baijiatuau**	**126.75**	**24**	*e*PKIKP	PKPdf	13 27 19.6 +0.1
TIY	**Taiyuan**	**127.01**	**29**	PKP	PKPdf	13 27 21.6 +1.5
TIY				AMB	AMB	
	comp=Z,1μm,5.6s					
TIY				LR	LR	
	comp=N,19μm,17.7s,MS7.0					
TIY				LR	LR	
	comp=E,18μm,18.4s,MS7.0					
TIY				LR	LR	
	comp=Z,36μm,21.2s,MS7.0					
CD2	**Chengdu**	**127.07**	**41**	*e*PKP	PKPdf	13 27 20.4 0.0
CD2				PP	PP	13 29 21.5 +3.5
CD2				PKS		13 30 55.6
CD2				SKS	SKSdf	13 34 27.0 -6.5
CD2				SKKS	SKKSac	13 36 10.5 -7.3
CD2				SS	SS	13 46 25.5 -1.2
CD2				LR	LR	
	comp=N,17μm,22.6s,MS6.8					
CD2				LR	LR	
	comp=E,13μm,21.4s,MS6.8					
CD2				LR	LR	
	comp=Z,24μm,23.8s,MS6.8					
SNY	**Shenyang**	**127.70**	**17**	⇓PKP	PKPdf	13 27 22.6 +1.3
SNY				SKKS	SKKSac	13 36 17.8 -3.4
SNY				AMB	AMB	
	comp=Z,1μm,10.0s					
SNY				LR	LR	
	comp=N,20μm,21.2s,MS7.1					
SNY				LR	LR	
	comp=E,40μm,21.6s,MS7.1					
SNY				LR	LR	
	comp=Z,14μm,19.8s,MS6.6					
ASAJ	**Asahikawa**	**127.99**	**359**	PKP	PKPdf	13 27 21.4 -0.4
	comp=Z,18nm,1.1s,baz=264,slow=11,SNR=3.6					
ASAJ	**Asahikawa**	**127.99**	**359**	*e*PKPdf	PKPdf	13 27 21.0 -0.8
ASAJ	**Asahikawa**	**127.99**	**359**	*e*PKIKP	PKPdf	13 27 21.0 -0.8
XAN	**Xi'an**	**128.02**	**34**	PKP	PKPdf	13 27 22.1 0.0
XAN				SS	SS	13 46 37.9 -0.1
XAN				LR	LR	
	comp=N,10μm,19.3s,MS6.6					
XAN				LR	LR	
	comp=E,6μm,18.1s,MS6.6					
XAN				LR	LR	
	comp=Z,7μm,19.3s,MS6.4					
KMI	**Kunming**	**129.97**	**48**	PKP	PKPdf	13 27 26.2 +0.1
KMI				sPKP		13 27 29.7
KMI				PP	PP	13 29 39.2 +2.0
KMI				PKS		13 31 00.3
KMI				SKKS	SKKSac	13 36 30.3 -5.8
KMI				SS	SS	13 46 58.3 -4.8
KMI				AMB	AMB	
	comp=Z,1μm,5.5s					
KMI				LR	LR	
	comp=N,8μm,19.8s,MS6.7					
KMI				LR	LR	
	comp=E,12μm,18.0s,MS6.7					
KMI				LR	LR	
	comp=Z,17μm,23.4s					
TIA	**Tai'an**	**130.38**	**26**	PKP	PKPdf	13 27 26.6 0.0
TIA				PP	PP	13 29 38.9 -0.1
TIA				LR	LR	
	comp=N,16μm,21.4s,MS6.8					
TIA				LR	LR	
	comp=E,16μm,21.4s,MS6.8					
TIA				LR	LR	
	comp=Z,20μm,20.2s,MS6.8					
CHTO	**Chiang Mai**	**130.38**	**57**	*e*PKIKP	PKPdf	13 27 26.8 -0.2
CHTO				MLR	MLR	
	comp=Z,11μm,20.0s,MS6.5					
CHTO	**Chiang Mai**	**130.38**	**57**	*e*PKIKP	PKPdf	13 27 26.8 -0.2
CHTO	**Chiang Mai**	**130.38**	**57**	P	PKPdf	13 27 28.5 +1.5
	SNR=12					
CM31	**Chiang Mai Arr**	**130.55**	**57**	PFAKE		13 27 40.0 +13
CM31				LR	LR	
	comp=Z,3μm,19.0s,MS6.0					
CMAR	**Chiang Mai Arr**	**130.55**	**57**	PKP	PKPdf	13 27 27.9 +0.6
	comp=Z,27nm,1.0s,baz=284,slow=2.6,SNR=28					
CMAR				PP	PP	13 29 42.1 +0.7
	comp=Z,6.8nm,1.1s,baz=297,slow=8.2,SNR=4.1					
CMAR	**Chiang Mai Arr**	**130.55**	**57**	PKIKP	PKPdf	13 27 27.9 +0.6
CMAR	**Chiang Mai Arr**	**130.55**	**57**	PP	PP	13 29 42.1 +0.7
ENH	**Enshi**	**131.09**	**37**	*e*PKPdf	PKPdf	13 27 27.2 -0.8
ENH				LR	LR	
	comp=Z,12μm,21.0s,MS6.6					
ENH	**Enshi**	**131.09**	**37**	*e*PKIKP	PKPdf	13 27 27.2 -0.9
GYA	**Guiyang**	**131.90**	**43**	Pdif	Pdif	13 24 22.0 -0.4
GYA				PKP	PKPdf	13 27 30.2 +0.5
GYA				PP	PP	13 29 54.6 +5.0
GYA				PKS		13 31 00.1
GYA				SKS	SKSdf	13 34 40.1 -2.4
GYA				SKKS	SKKSac	13 36 45.6 -2.4
GYA				SS	SS	13 47 28.2 +1.7
GYA				AMB	AMB	
	comp=Z,2μm,9.1s					
GYA				LR	LR	
	comp=N,9μm,31.9s,MS6.4					
GYA				LR	LR	
	comp=E,7μm,30.4s,MS6.4					
GYA				LR	LR	
	comp=Z,11μm,34.1s,MS6.3					
INCN	**Inchon**	**132.59**	**16**	PKPdf	PKPdf	13 27 29.0 -1.8
INCN				LR	LR	
	comp=Z,12μm,19.0s,MS6.6					
INCN	**Inchon**	**132.59**	**16**	PKIKP	PKPdf	13 27 29.0 -1.7
KSRS	**Korea Array**	**132.96**	**15**	PKP	PKPdf	13 27 30.9 -0.6
	comp=Z,2.9nm,0.9s,baz=3.7,slow=2.5,SNR=11					
KSRS				PP	PP	13 29 59.4 +4.0
	comp=Z,2.1nm,0.8s,baz=326,slow=5.4,SNR=4.6					
WHN	**Wuhan**	**133.65**	**33**	⇓PKP	PKPdf	13 27 33.9 +1.0
WHN				PP	PP	13 30 03.0 +2.6
WHN				PKS		13 31 01.6
WHN				SKKS	SKKSac

WHN				LR	LR			
	comp=N,51μm,19.1s,MS7.4							
WHN				LR	LR			
	comp=E,39μm,18.3s,MS7.4							
WHN				LR	LR			
	comp=Z,84μm,20.3s,MS7.5							
AFI	**Afiamalu**	**133.66**	**259**	PFAKE		13 27 40.0	+6.7	
AFI				LR	LR			
	comp=Z,4μm,20.0s,MS6.1							
NJ2	**Nanjing**	**134.65**	**27**	*e*PKP	PKPdf	13 27 30.6	-4.1	
NJ2				PP	PP	13 30 07.1	+0.6	
NJ2				PKS		13 31 03.5		
NJ2				AMB	AMB			
	comp=Z,1μm,5.9s							
NJ2				LR	LR			
	comp=N,25μm,20.1s,MS7.0							
NJ2				LR	LR			
	comp=E,16μm,17.9s,MS7.0							
NJ2				LR	LR			
	comp=Z,32μm,19.6s,MS7.0							
MAJO	**Matsushiro**	**135.47**	**4**	PKIKP	PKPdf	13 27 31.3	-4.9	
MAJO				MLR	MLR			
	comp=Z,10μm,19.0s,MS6.6							
MJAR	**Matsushiro Arr**	**135.47**	**4**	PKP	PKPdf	13 27 36.4	+0.2	
	comp=Z,7.5nm,0.9s,baz=322,slow=2.0,SNR=8.5							
MJAR				PP	PP	13 30 15.6	+4.3	
	comp=Z,7.1nm,1.1s,baz=348,slow=4.9,SNR=5.2							
MJAR	**Matsushiro Arr**	**135.47**	**4**	PKIKP	PKPdf	13 27 36.4	+0.2	
MJAR						13 30 15.6		
MJAR				pmax	pmax			
	comp=Z,7.0nm,1.1s							
MJAR	**Matsushiro Arr**	**135.47**	**4**	PKIKP	PKPdf	13 27 36.4	+0.2	
SNZO	**South Karori**	**135.66**	**216**	PFAKE		13 27 50.0	+14	
SNZO				LR	LR			
	comp=Z,9μm,20.0s,MS6.5							
COCO	**West Island**	**136.06**	**99**	PFAKE		13 27 50.0	+12	
COCO				LR	LR			
	comp=Z,11μm,20.0s,MS6.6							
SSE	**Sheshan**	**136.49**	**25**	PKP	PKPdf	13 27 33.9	-4.3	
SSE				PP	PP	13 30 21.0	+2.9	
SSE				SS	SS	13 48 21.3	+0.7	
SSE				AMB	AMB			
	comp=Z,1μm,7.7s							
SSE				LR	LR			
	comp=N,20μm,19.4s,MS6.9							
SSE				LR	LR			
	comp=E,13μm,19.4s,MS6.9							
SSE				LR	LR			
	comp=Z,26μm,19.8s,MS7.0							
KULM	**Kulim**	**137.30**	**73**	P	PKPdf	13 27 41.9	+1.7	
KULM	**Kulim**	**137.30**	**73**	*e*PKPdf	PKPdf	13 27 39.6	-0.6	
KULM				LR	LR			
	comp=Z,14μm,20.0s,MS6.7							
KULM	**Kulim**	**137.30**	**73**	P	PKPdf	13 27 42.8	+2.6	
KULM	**Kulim**	**137.30**	**73**	*e*PKIKP	PKPdf	13 27 39.6	-0.6	
SISI	**Saibi**	**137.40**	**83**	P	PKPdf	13 27 44.5	+4.1	
MNSI	**Mandailing Nat**	**137.46**	**80**	P	PKPdf	13 27 41.1	+0.6	
JNU	**Nakatsue**	**137.79**	**13**	*e*PKPdf	PKPdf	13 27 41.0	+0.4	
JNU	**Nakatsue**	**137.79**	**13**	*e*PKIKP	PKPdf	13 27 41.0	+0.4	
IPM	**Ipoh**	**137.90**	**74**	P	PKPdf	13 27 43.4	+2.1	
IPM	**Ipoh**	**137.90**	**74**	P	PKPdf	13 27 33.2	-8.1	
GZH	**Guangzhou**	**138.63**	**41**	PKP	PKPdf	13 27 44.6	+2.2	
GZH				LR	LR			
	comp=N,13μm,20.0s,MS6.8							
GZH				LR	LR			
	comp=E,6μm,17.1s,MS6.8							
GZH				LR	LR			
	comp=Z,20μm,21.4s,MS6.8							
FRIM	**Kepong**	**138.83**	**76**	P	PKiKP	13 27 45.1	0.0	
QIZ	**Qiongzhong**	**138.88**	**49**	PKP	PKPdf	13 27 40.8	-2.1	
QIZ				PP	PP	13 30 33.1	-0.8	
QIZ				SS	SS	13 48 47.9	-2.7	
QIZ				AMB	AMB			
	comp=Z,2μm,14.5s							
QIZ				LR	LR			
	comp=N,6μm,20.4s							
QIZ				LR	LR			
	comp=Z,12μm,19.4s,MS6.6							
QIZ	**Qiongzhong**	**138.88**	**49**	*e*PKPdf	PKPdf	13 27 45.2	+2.3	
QIZ				LR	LR			
	comp=Z,12μm,20.0s,MS6.6							
KTGM	**Kuala Trenggan**	**139.64**	**72**	P	PKiKP	13 27 46.6	-0.2	
QZH	**Quanzhou**	**140.37**	**33**	PKP	PKPdf	13 27 41.4	-4.1	
QZH				PP	PP	13 30 42.6	+0.2	
QZH				LR	LR			
	comp=N,29μm,18.8s,MS7.2							
QZH				LR	LR			
	comp=E,24μm,18.6s,MS7.2							
QZH				LR	LR			
	comp=Z,54μm,20.0s,MS7.3							
KGM	**Kluang**	**140.79**	**77**	P	PKiKP	13 27 48.8	-0.4	
KSI	**Kapahiang**	**141.24**	**86**	P	PKiKP	13 27 49.8	-0.3	
KSI	**Kapahiang**	**141.24**	**86**	P	PKPdf	13 27 48.7	+1.4	
MYKOM	**Kota Tinggi**	**141.36**	**77**	P	PKiKP	13 27 49.6	-0.7	
MYKOM	**Kota Tinggi**	**141.36**	**77**	P	PKPdf	13 27 50.0	+2.4	
TATO	**Taipei**	**141.84**	**30**	PFAKE		13 28 00.0	+12	
TATO				LR	LR			
	comp=Z,24μm,22.0s,MS6.9							
YHNB	**Yeheng**	**142.04**	**30**	PFAKE		13 28 00.0	+12	
YHNB				LR	LR			
	comp=Z,23μm,21.0s,MS6.9							
FUNA	**Funafuti**	**142.53**	**267**	PFAKE		13 28 00.0	+10	
FUNA				LR	LR			
	comp=Z,19μm,19.0s,MS6.9							
SSLB	**Suanglung**	**142.56**	**32**	*e*PKPpre	PKPdf	13 27 46.6	-2.8	
TPUB	**Ta-pu**	**142.78**	**32**	*e*PKPdf	PKPdf	13 27 52.3	+2.4	
MDSI	**Maura Dua**	**142.92**	**87**	P	PKPdf	13 27 46.7	-3.6	
MSVF	**Nonsavu**	**143.01**	**251**	*e*PKPpre	PKPdf	13 27 49.0	-1.4	
MSVF				LR	LR			
	comp=Z,5μm,22.0s,MS6.2							
JOW	**Kunigami**	**143.02**	**20**	*e*PKPpre	PKPdf	13 27 49.4	-0.7	
WAKE	**Wake Island**	**143.05**	**318**	PFAKE		13 28 00.0	+10	
WAKE				LR	LR			
	comp=Z,9μm,22.0s,MS6.5							
YULB	**Yu-li**	**143.06**	**32**	PKPdf	PKPdf	13 27 50.0	-0.3	
YULB	**Yu-li**	**143.06**	**32**	PKIKP	PKPdf	13 27 50.0	-0.3	
KASI	**Kota Agung**	**143.35**	**88**	P	PKPdf	13 27 50.4	-0.7	
KASI	**Kota Agung**	**143.35**	**88**	P	PKPdf	13 27 46.7	-4.4	
KLSI		**143.49**	**87**	P	PKPdf	13 27 48.3	-3.0	
KLSI		**143.49**	**87**	P	PKPdf	13 27 47.9	-3.4	
KLI	**Kotabumi**	**143.64**	**87**	P	PKiKP	13 27 54.2	-0.8	
KLI	**Kotabumi**	**143.64**	**87**	P	PKiKP	13 27 54.2	-0.8	
BLSI	**Bandar Lampung**	**144.08**	**88**	P	PKPdf	13 27 52.2	-0.2	
BLSI	**Bandar Lampung**	**144.08**	**88**	P	PKPdf	13 27 50.4	-2.0	
PPBI	**Pangkal Pinang**	**144.48**	**82**	P	PKPdf	13 27 52.3	-0.8	
PPBI	**Pangkal Pinang**	**144.48**	**82**	P	PKPdf	13 27 52.3	-0.8	
RBSI	**Rajabasa**	**144.62**	**89**	P	PKPdf	13 27 52.1	-1.2	
RBSI	**Rajabasa**	**144.62**	**89**	P	PKPdf	13 27 50.8	-2.5	
CGJI	**Cibinong**	**144.64**	**90**	P	PKPdf	13 27 51.6	-1.7	
XMIS	**Christmas Isla**	**144.74**	**97**	*e*PKP	PKPdf	13 27 50.9	-2.6	
XMIS	**Christmas Isla**	**144.74**	**97**	P	PKPdf	13 27 52.5	-1.0	
CBIJ	**Chichi jima**	**144.98**	**359**	PKP	PKPdf	13 27 53.0	-0.7	
	comp=Z,173nm,0.9s,baz=72,slow=2.6,SNR=16							
SBJI	**Serang**	**145.03**	**89**	P	PKPdf	13 27 53.9	-0.1	
SBJI	**Serang**	**145.03**	**89**	P	PKPbc	13 27 53.1	-0.3	
SKJI	**Sukabumi**	**145.53**	**91**	P	PKPab	13 27 56.3	+1.1	
SKJI	**Sukabumi**	**145.53**	**91**	P	PKPdf	13 27 55.1	+0.2	
DBJI	**Dramaga**	**145.68**	**90**	P	PKPab	13 27 55.3	-0.5	
DBJI	**Dramaga**	**145.68**	**90**	P	PKPab	13 27 55.3	-0.5	
CBJI	**Citeko**	**145.77**	**89**	P	PKPdf	13 27 56.5	+1.2	
TPI	**Tanjungpandan**	**146.08**	**83**	P	PKPab	13 27 58.1	+0.8	
TPI	**Tanjungpandan**	**146.08**	**83**	P	PKPdf	13 27 56.6	+0.8	
LEM	**Lembang**	**146.56**	**90**	P	PKPab	13 27 57.8	-1.3	
LEM	**Lembang**	**146.56**	**90**	P	PKPdf	13 27 56.9	+0.3	
NWAO	**Narrogin (SRO)**	**146.74**	**141**	PKPbc	PKPbc	13 27 58.1	+0.1	
	baz=244,slow=4.4							
NWAO	**Narrogin (SRO)**	**146.74**	**141**	*e*PKPdf	PKPdf	13 27 57.2	+0.8	
NWAO				LR	LR			
	comp=Z,12μm,21.0s,MS6.6							
NWAO	**Narrogin (SRO)**	**146.74**	**141**	*e*PKIKP	PKPdf	13 27 57.2	+0.8	
CISI	**Cisompet, Garu**	**146.81**	**91**	P	PKPdf	13 27 57.8	+0.8	
TARA	**Tarawa**	**147.11**	**285**	PFAKE		13 28 10.0	+12	
TARA				LR	LR			
	comp=Z,184nm,21.0s							
JCJI	**Jatiwangi**	**147.18**	**89**	P	PKPbc	13 28 00.1	+0.2	
KSM	**Kuching**	**147.64**	**74**	P	PKPbc	13 28 00.6	-0.6	
KSM	**Kuching**	**147.64**	**74**	*e*PKPbc	PKPbc	13 28 00.3	-0.8	
KSM				LR	LR			
	comp=Z,12μm,21.0s,MS6.7							
KSM	**Kuching**	**147.64**	**74**	P	PKPbc	13 28 01.0	-0.2	
KSM	**Kuching**	**147.64**	**74**	*e*PKPbc	PKPbc	13 28 00.3	-0.9	
BJII	**Banjamegara**	**148.67**	**91**	P	PKPbc	13 28 05.1	+1.2	
SBUM	**Sibu**	**149.13**	**71**	P	PKPbc	13 28 03.0	-2.1	
SBUM	**Sibu**	**149.13**	**71**	P	PKPdf	13 28 01.2	+0.3	
STKI	**Sintang**	**149.16**	**76**	P	PKPbc	13 28 03.6	-1.5	
YOGI	**Yogyakarta**	**149.28**	**92**	P	PKPbc	13 28 07.1	+1.7	
SMRI	**Semarang**	**149.38**	**90**	P	PKPab	13 28 08.1	-2.2	
UGM	**Wanagama**	**149.51**	**92**	P	PKPbc	13 28 07.4	+1.4	
PBKI	**Pangkalan Bun**	**150.01**	**81**	P	PKPbc	13 28 08.1	+0.9	
PCJI	**Pacitan**	**150.16**	**92**	P	PKPbc	13 28 08.2	+0.6	
NGJI	**Ngawi**	**150.41**	**91**	P	PKPbc	13 28 09.7	+1.5	
SJI	**Sawahan**	**150.73**	**91**	P	PKPdf	13 28 04.8	+1.4	
PWJI	**Pagerwojo**	**150.78**	**92**	P	PKPbc	13 28 07.9	-1.1	
KKM	**Kota Kinabalu**	**151.28**	**61**	P	PKPbc	13 28 06.5	-3.7	
KKM	**Kota Kinabalu**	**151.28**	**61**	*e*PKPdf	PKPdf	13 28 03.5	-0.8	
KKM				*e*PKPab	PKPab	13 28 18.9	+0.8	
KKM				LR	LR			
	comp=Z,14μm,22.0s,MS6.7							
KKM	**Kota Kinabalu**	**151.28**	**61**	P	PKPbc	13 28 06.6	-3.6	
KKM	**Kota Kinabalu**	**151.28**	**61**	*e*PKIKP	PKPdf	13 28 03.5	-0.8	
KKM	**Kota Kinabalu**	**151.28**	**61**	*e*PKPab	PKPab	13 28 18.9	+0.8	
KRKI	**Karangkates**	**151.43**	**92**	P	PKPab	13 28 14.5	-4.3	
CAN	**Canberra**	**152.03**	**193**	*e*PKIKP	PKiKP	13 28 12.4	+0.7	
CAN				MLR	MLR			
	comp=Z,13μm,19.0s,MS6.8							
CAN	**Canberra**	**152.03**	**193**	*e*PKPbc	PKPbc	13 28 12.4	+1.1	
DZM	**Mont Dzumac**	**152.13**	**237**	*e*PKIKP	PKPdf	13 28 04.7	-0.6	
	comp=Z,985nm,27.4s							
DZM	**Mont Dzumac**	**152.13**	**237**	*e*PP	PP	13 31 49.0	-4.1	
	comp=Z,2μm,27.1s							
DZM				*e*LR	LR	14 18 45.3		
	comp=Z,25μm,31.4s							
PLKI	**Palangkaraya**	**152.13**	**79**	P	PKPbc	13 28 15.1	+2.9	
GMJI	**Gumukmas**	**152.41**	**92**	P	PKPbc	13 28 15.0	+2.2	
KMMI	**Kalianget**	**152.87**	**90**	P	PKPbc	13 28 15.8	+2.0	
JAGI	**Jajag, Banyuwa**	**153.12**	**93**	P	PKPbc	13 28 14.7	+0.3	
BYJI	**Banyuwangi**	**153.31**	**92**	P	PKPbc	13 28 18.1	+3.3	
MYLDM	**Lahad Datu**	**153.68**	**61**	P	PKPbc	13 28 10.6	-5.0	
SRBI	**Singaraja**	**154.16**	**92**	P	PKPbc	13 28 19.5	+2.9	
FORT	**Forrest**	**154.28**	**153**	*e*PKP	PKPdf	13 28 08.2	0.0	
	comp=Z,27nm,1.1s							
FORT	**Forrest**	**154.28**	**153**	*e*PKPdf	PKPdf	13 28 09.0	+0.8	
FORT	**Forrest**	**154.28**	**153**	*e*PKIKP	PKPdf	13 28 09.0	+0.8	
KBKI	**Kotabaru**	**154.53**	**81**	P	PKPbc	13 28 18.8	+1.4	
BBOO	**Buckleboo**	**154.96**	**169**	*e*PKPdf	PKPdf	13 28 08.8	-0.2	
BBOO	**Buckleboo**	**154.96**	**169**	*e*PKIKP	PKPdf	13 28 08.8	-0.3	
MTNI	**Mataram**	**155.12**	**93**	P	PKPdf	13 28 11.7	+1.9	
MBWA	**Marble Bar**	**155.47**	**124**	*e*PKPdf	PKPdf	13 28 09.4	-0.6	
MBWA				LR	LR			
	comp=Z,13μm,19.0s,MS6.8							
MBWA	**Marble Bar**	**155.47**	**124**	*e*PKIKP	PKPdf	13 28 09.4	-0.7	
MBWA	**Marble Bar**	**155.47**	**124**	P	PKPdf	13 28 10.3	+0.2	
	SNR=12							
STKA	**Stephens Creek**	**156.37**	**181**	PKP	PKPdf	13 28 12.3	+1.3	
	comp=Z,37nm,1.1s,baz=168,slow=0.8,SNR=32							
STKA	**Stephens Creek**	**156.37**	**181**	*e*PKPdf	PKPdf	13 28 10.2	-0.8	
STKA	**Stephens Creek**	**156.37**	**181**	*e*PKIKP	PKPdf	13 28 10.2	-0.8	
BMNI	**Bima**	**157.61**	**93**	P	PKPdf	13 28 13.9	+0.9	
TTSI	**Tana Toraja**	**158.02**	**78**	P	PKPdf	13 28 15.7	+2.1	
GUMO	**Guam**	**158.14**	**351**	PFAKE		13 28 20.0	+6.3	
GUMO				LR	LR			
	comp=Z,7μm,20.0s,MS6.5							
SPSI	**Sidrap Palu**	**158.18**	**80**	P	PKPdf	13 28 16.6	+2.8	
DAV	**Davao City (W)**	**158.22**	**47**	PFAKE		13 28 20.0	+6.2	
DAV				LR	LR			
	comp=Z,21μm,22.0s,MS6.9							
KAPI	**Kappang**	**158.35**	**83**	PFAKE		13 28 20.0	+6.0	
KAPI				LR	LR			
	comp=Z,10μm,22.0s,MS6.6							
MRSI	**Marisa**	**158.88**	**67**	P	PKPdf	13 28 17.1	+2.5	
LUWI	**Luwuk**	**160.23**	**70**	P	PKPdf	13 28 19.4	+3.2	
SGSI	**Sangihe**	**160.36**	**54**	P	PKPdf	13 28 17.8	+1.5	
EIDS	**Eidsvold**	**160.49**	**207**	*e*PKPdf	PKPdf	13 28 17.8	+1.7	
EIDS	**Eidsvold**	**160.49**	**207**	*e*PKIKP	PKPdf	13 28 17.8	+1.7	
KDI	**Kendari**	**160.95**	**79**	P	PKPdf	13 28 19.7	+2.7	
BBSI	**Bau Bau**	**161.20**	**83**	P	PKPdf	13 28 21.8	+4.6	
HNR	**Honiara**	**161.54**	**265**	PFAKE		13 28 30.0	+12	
HNR				LR	LR			
	comp=Z,7μm,19.0s							
FITZ	**Fitzroy Crossi**	**161.81**	**125**	PKP	PKPdf	13 28 17.3	-0.4	
	comp=Z,28nm,1.2s,baz=310,slow=2.4,SNR=12							
FITZ				PKPab	PKPab	13 29 12.4	+9.3	
	comp=Z,62nm,1.1s,baz=273,slow=3.2,SNR=7.9							
FITZ				PP	PP	13 32 47.6	+1.1	
	comp=Z,4.7nm,1.1s,baz=183,slow=8.9,SNR=2.6							
FITZ	**Fitzroy Crossi**	**161.81**	**125**	PKIKP	PKPdf	13 28 17.3	-0.4	
ASAR	**Alice Springs**	**162.99**	**156**	PKP	PKPdf	13 28 18.6	-0.1	
	comp=Z,14nm,1.0s,baz=160,slow=0.7,SNR=53							
ASAR				PKPab	PKPab	13 29 09.7	+1.7	
	comp=Z,12nm,0.9s,baz=202,slow=3.7,SNR=9.9							
ASAR	**Alice Springs**	**162.99**	**156**	PKIKP	PKPdf	13 28 18.6	-0.1	
ASAR	**Alice Springs**	**162.99**	**156**	PKPab	PKPab	13 29 09.6	+1.6	
TNTI	**Ternate**	**163.52**	**58**	P	PKPdf	13 28 21.4	+1.8	
LBMI	**Labuha**	**164.35**	**62**	P	PKPdf	13 28 22.3	+2.0	
NLAI	**Namlea**	**165.04**	**72**	P	PKPdf	13 28 22.9	+2.0	
KNA	**Kununurra**	**165.58**	**123**	P	PKPdf	13 28 23.4	+2.2	
WRA	**Warramunga Arr**	**166.45**	**151**	PKP	PKPdf	13 28 21.9	+0.1	
	comp=Z,25nm,1.0s,baz=265,slow=1.0,SNR=40							
WRA				PKPab	PKPab	13 29 25.1	+1.9	
	comp=Z,12nm,0.9s,baz=208,slow=2.8,SNR=8.6							
WRA				PP	PP	13 33 10.1	+0.3	
	comp=Z,8.6nm,1.1s,baz=195,slow=4.0,SNR=5.3							
WRA	**Warramunga Arr**	**166.45**	**151**	PKIKP	PKPdf	13 28 21.9	+0.1	
WRA						13 33 10.1		
WRA				pmax	pmax			
	comp=Z,25nm,1.0s							
WRA				pmax	pmax			
	comp=Z,9.0nm,1.1s							
WRA	**Warramunga Arr**	**166.45**	**151**	PKIKP	PKPdf	13 28 21.9	+0.1	
WRA	**Warramunga Arr**	**166.45**	**151**	PKPab	PKPab	13 29 25.1	+1.8	
WB2	**Warramunga Arr**	**166.45**	**151**	*e*PKPdf	PKPdf	13 28 20.6	-1.3	
WB2	**Warramunga Arr**	**166.45**	**151**	*e*PKIKP	PKPdf	13 28 20.6	-1.2	
CTA	**Charters Tower**	**167.19**	**201**	PKP	PKPdf	13 28 23.2	+0.8	
	comp=Z,22nm,1.1s,baz=11,slow=2.0,SNR=7.3							
CTA	**Charters Tower**	**167.19**	**201**	PKIKP	PKPdf	13 28 23.3	+0.9	
CTA				pmax	pmax			
	comp=Z,22nm,1.1s							
CTA	**Charters Tower**	**167.19**	**201**	PKIKP	PKPdf	13 28 23.2	+0.8	
CTAO	**Charters Tower**	**167.19**	**201**	*e*PKIKP	PKPdf	13 28 24.1	+1.7	
CTAO				MLR	MLR			
	comp=Z,16μm,20.0s							
CTAO	**Charters Tower**	**167.19**	**201**	*e*PKIKP	PKPdf	13 28 24.1	+1.7	
KAKA	**Kakadu**	**170.15**	**118**	*e*PKP	PKPdf	13 28 24.3	-0.2	
	comp=Z,67nm,1.2s							
KAKA	**Kakadu**	**170.15**	**118**	*e*PKPdf	PKPdf	13 28 24.2	-0.2	
TLE	**Tual**	**171.13**	**74**	P	PKPdf	13 28 29.0	+3.9	
BAKI	**Biak**	**171.37**	**37**	P	PKPdf	13 28 27.7	+2.5	
COEN	**Coen**	**173.93**	**197**	*e*PKPdf	PKPdf	13 28 27.0	+0.8	
COEN	**Coen**	**173.93**	**197**	P	PKPdf	13 28 29.0	+2.8	
COEN	**Coen**	**173.93**	**197**	*e*PKIKP	PKPdf	13 28 27.0	+0.8	
PMG	**Port Moresby**	**174.09**	**257**	*e*PKIKP	PKPdf	13 28 25.9	-0.4	
PMG				MLR	MLR			
	comp=Z,16μm,22.0s							
PMG	**Port Moresby**	**174.09**	**257**	P	PKPdf	13 28 29.5	+3.2	
PMG	**Port Moresby**	**174.09**	**257**	*e*PKIKP	PKPdf	13 28 25.9	-0.4	

*ISCJB **10** 13:10:08.3±0.7,27°.06N±0°.06×55°.76E±0°.04, h10km, Error ellipse: s-maj=8.8km s-min=3.9km az=156.1*
*CSEM **10** 13:10:09.6±0.5,27°.03N×55°.79E, h2km, ML3.8, Error ellipse: s-maj=16.8km s-min=7.3km az=151.0*
*KISR **10** 13:10:10.0±0.8,27°.31N×55°.54E, h7km±999km, ML3.8*
*TEH **10** 13:10:11.2,27°.04N×55°.91E, h2km*
*SGS **10** 13:10:12.7,26°.93N×55°.82E, h16km*
ISC 10 13:10:10.1±0.7,27°.04N±0°.06×55°.84E±0°.04,h10km,n20,
σ1§43/31,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.47**	**40**	*e*Pg	**Pg**	**13 10 17.9**	**-1.4**
BNDS				*e*Sg	**Sg**	**13 10 23.6**	**-1.9**
IBND	**Bandar-abas**	**0.75**	**57**	*e*Pg	**Pg**	**13 10 23.4**	**-1.2**
IBND				*e*Pg	**Pg**	**13 10 23.8**	**-0.8**
IBND				*e*Sg	**Sg**	**13 10 32.8**	**-1.6**
IBND				*e*		13 10 42.7	
	comp=Z,28μm,0.1s						
IBND				*e*		13 11 09.0	
	comp=Z,34μm,0.5s						
KRBR	**Kerman**	**3.05**	**15**	*e*Pn	**Pn**	**13 11 00.0**	**+1.7**
ISRV	**Sarvestan**	**3.35**	**315**	*e*Pn	**Pn**	**13 11 04.5**	**+2.0**
IMEH	**Mehriz**	**4.47**	**346**	*e*Pn	**Pn**	**13 11 20.5**	**+2.6**
IMEH				*e*		13 11 28.2	
	comp=Z,214nm,0.2s						
IBAF	**Bafgh**	**4.54**	**357**	*e*Pn	**Pn**	**13 11 20.3**	**+1.4**
IBAF				*e*		13 11 37.2	
	comp=Z,222nm,0.2s						
IBAF				*e*Sn	**Sn**	**13 12 11.6**	**-0.2**
ZHSF	**Zahedan**	**5.05**	**58**	*e*Pn	**Pn**	**13 11 28.1**	**+2.2**
SLWS		**5.18**	**246**	P	**Pn**	**13 11 27.4**	**-0.2**
SLWS		**5.18**	**246**	P	**Pn**	**13 11 27.4**	**-0.2**
BTHS		**5.40**	**238**	P	**Pn**	**13 11 30.2**	**-0.5**
BTHS		**5.40**	**238**	P	**Pn**	**13 11 30.2**	**-0.5**
BTHS				S	**Sn**	**13 12 32.3**	**-0.6**
NASN	**Na'in**	**6.32**	**336**	*e*Pn	**Pn**	**13 11 45.4**	**+2.2**
UMR	**Umm Al-Rimmam**	**7.58**	**291**	*e*P	**Pn**	**13 12 01.5**	**+0.8**
UMR				*e*S	**Sn**	**13 13 25.4**	**-1.3**
UMR				AML	AML	13 13 27.2	
	comp=Z,14nm,0.4s						
UMR	**Umm Al-Rimmam**	**7.58**	**291**	*e*P	**Pn**	**13 12 01.5**	**+0.8**
UMR				*e*S	**Sn**	**13 13 25.4**	**-1.3**
NAY	**Al-Naaiem**	**7.90**	**288**	*e*P	**Pn**	**13 12 06.0**	**+1.0**
NAY				*e*S	**Sn**	**13 13 32.9**	**-1.6**
NAY				AML	AML	13 13 38.4	
	comp=Z,6.8nm,0.5s						
NAY	**Al-Naaiem**	**7.90**	**288**	*e*P	**Pn**	**13 12 06.0**	**+1.0**
NAY				*e*S	**Sn**	**13 13 32.9**	**-1.6**
	comp=Z,7.0nm,0.5s						
MIB	**Mutribah**	**7.97**	**292**	*e*P	**Pn**	**13 12 06.7**	**+0.7**
MIB				*e*S	**Sn**	**13 13 34.2**	**-2.1**
MIB				AML	AML	13 13 36.5	
	comp=Z,13nm,0.5s						
MIB	**Mutribah**	**7.97**	**292**	*e*P	**Pn**	**13 12 06.7**	**+0.7**
MIB				*e*S	**Sn**	**13 13 34.2**	**-2.1**
ASYS		**10.24**	**275**	P	**Pn**	**13 12 36.0**	**-1.1**
ASYS		**10.24**	**275**	P	**Pn**	**13 12 36.0**	**-1.1**

*ISCJB **10** 13:12:28.5±0.7,50°.29N±0°.05×18°.83E±0°.04, h0km, Error ellipse: s-maj=7.7km s-min=3.4km az=7.1*
*CSEM **10** 13:12:29.1±0.2,50°.32N×18°.85E, h2km, ML2.5/5, Error ellipse: s-maj=5.2km s-min=2.0km az=2.0*
*IPEC **10** 13:12:29.9±0.1,50°.22N×18°.88E, h2km±1km, ML1.6/3, Error ellipse: s-maj=2.6km s-min=0.8km az=166.0*
*PRU **10** 13:12:29.9,50°.28N×18°.84E, h0km*
*WAR **10** 13:12:29.8,50°.24N×18°.92E*
ISC 10 13:12:29.5±0.7,50°.29N±0°.05×18°.86E±0°.04,h0km,n17,
σ0§80/28,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.61**	**96**	*e*Pg	**Pg**	**13 12 41.0**	**-0.2**
OJC				*e*Sg	**Sg**	**13 12 49.1**	**0.0**
OJC	**Ojcow**	**0.61**	**96**	*e*Pg	**Pg**	**13 12 41.2**	**0.0**
	baz=270						
OJC				*e*Sg	**Sg**	**13 12 48.6**	**-0.5**
	baz=270						
OKC	**Ostrava-Krasne**	**0.64**	**226**	*e*PG	**Pg**	**13 12 41.9**	**+0.1**
OKC				*e*SG	**Sg**	**13 12 52.3**	**+2.2**
	comp=Z,30nm,1.1s						
OKC	**Ostrava-Krasne**	**0.64**	**226**	*e*Pg	**Pg**	**13 12 41.9**	**+0.1**
	baz=51						
OKC				Sg	**Sg**	**13 12 52.3**	**+2.2**
	comp=Z,30nm,1.1s						
MORC	**Moravsky Berou**	**0.99**	**239**	*e*Pg	**Pg**	**13 12 48.3**	**-0.1**
	baz=62						
MORC				*e*Sg	**Sg**	**13 13 01.3**	**0.0**
	comp=Z,9.6nm,0.3s,baz=62						
NIE	**Niedzica**	**1.28**	**132**	*e*Pg	**Pg**	**13 12 53.9**	**-0.2**
NIE				*e*Sg	**Sg**	**13 13 11.1**	**

FETA	Feichten 0.9nm,0.1s	0.38 212	Pg	Pg	13 23 33.8	+0.3
FETA	 3.7nm,0.1s		Sg	Sg	13 23 39.2	+0.7

ISCJB ***10*** *13:24:48.4±0.3, 47°.43N±0'.02×11°.01E±0'.02, h9km±2km, Error ellipse: s-maj=3.2km s-min=2.4km az=175.1*
ZUR ***10*** *13:24:48.8, 47°.31N×11°.07E, h1km, ML2.4/3*
VIE ***10*** *13:24:49.4±0.2, 47°.34N×11°.02E, h9km±1km, mb2.0/7, ML2.8/10, Error ellipse: s-maj=1.3km s-min=0.9km az=8.0*
5 km NW of Telfs felt 4-5 ems98 at Telfs / TYROL
CSEM ***10*** *13:24:49.1±0.1, 47°.37N×11°.03E, h10km, ML2.8/10, Error ellipse: s-maj=2.5km s-min=2.0km az=169.0*
NEIC ***10*** *13:24:50.9, 47°.39N×11°.06E, h10km, ML2.8(LDG), ML2.7(SZGRF), After SZGRF.*
BGR ***10*** *13:24:50.9±0.3, 47°.39N×11°.06E, h10km, ML2.7/8, Error ellipse: s-maj=5.6km s-min=3.3km az=2.0*
LDG ***10*** *13:24:50.2±0.1, 47°.36N×11°.06E, h2km, Ml2.8/7, Error ellipse: s-maj=2.1km s-min=1.3km az=158.0*

ISC 10 13:24:49.4±0.2, 47.40N±0'.02×11.02E±0'.02, h10km±2km, n88, σ0.97/165, 15C-9D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOTA	**Moosalm** 934nm,0.1s,SNR=732	**0.08**	**130**	⇑*i*Pg	**Pg**	**13 24 51.8**	**+0.1**
MOTA	 1μm,0.1s			⇑*i*Sg	**Sg**	**13 24 53.5**	**+0.2**
MOTA	**Moosalm** 934nm,0.1s,SNR=732	**0.08**	**130**	Pg	**Pg**	**13 24 51.8**	**+0.2**
MOTA	 1μm,0.1s			Sg	**Sg**	**13 24 53.5**	**+0.2**
PART	**Garmisch-Parte**	**0.12**	**33**	⇑*i*Pg	**Pg**	**13 24 52.7**	**+0.4**
PART				⇑*i*Sg	**Sg**	**13 24 55.4**	**+1.1**
PART	**Garmisch-Parte**	**0.12**	**33**	Pg	**Pg**	**13 24 52.7**	**+0.4**
PART				Sg	**Sg**	**13 24 55.4**	**+1.1**
RETA	**Reutte** 26nm,0.1s,SNR=47	**0.20**	**298**	⇑*i*Pg	**Pg**	**13 24 53.9**	**+0.5**
RETA	 242nm,0.1s			⇑*i*Sg	**Sg**	**13 24 57.8**	**+1.5**
RETA	**Reutte** 26nm,0.1s,SNR=47	**0.20**	**298**	Pg	**Pg**	**13 24 53.9**	**+0.4**
RETA	 242nm,0.1s			Sg	**Sg**	**13 24 57.8**	**+1.6**
SQTA	**Sankt Quirin**	**0.22**	**143**	⇓*i*Pg	**Pg**	**13 24 53.7**	**-0.1**
SQTA	**Sankt Quirin**	**0.22**	**143**	Sg	**Sg**	**13 24 56.7**	**-0.2**
SQTA	**Sankt Quirin**	**0.22**	**143**	Pg	**Pg**	**13 24 53.7**	**-0.2**
WATA	**Walderalm** 6.0nm,0.1s,SNR=17	**0.39**	**99**	⇑*e*Pg	**Pg**	**13 24 56.6**	**-0.4**
WATA	 68nm,0.2s			⇓*i*Sg	**Sg**	**13 25 02.5**	**+0.4**
WATA	**Walderalm** 6.0nm,0.1s,SNR=17	**0.39**	**99**	Pg	**Pg**	**13 24 56.6**	**-0.3**
WATA	 68nm,0.2s			Sg	**Sg**	**13 25 02.5**	**+0.4**
FETA	**Feichten** SNR=48	**0.42**	**208**	⇓*i*Pg	**Pg**	**13 24 57.2**	**-0.4**
FETA	 30nm,0.1s			⇑*i*Sg	**Sg**	**13 25 02.4**	**-0.8**
FETA	**Feichten** SNR=48	**0.42**	**208**	Pg	**Pg**	**13 24 57.2**	**-0.4**
FETA	 30nm,0.1s			Sg	**Sg**	**13 25 02.4**	**-0.8**
WTTA	**Wattenberg** SNR=36	**0.44**	**107**	*e*Pg	**Pg**	**13 24 57.9**	**-0.1**
WTTA	 SNR=7.4			*e*Sg	**Sg**	**13 25 04.4**	**+0.5**
WTTA	**Wattenberg** 27nm,0.1s,SNR=32	**0.44**	**107**	⇑*i*Pg	**Pg**	**13 24 57.7**	**-0.3**
WTTA	 86nm,0.2s			⇑*i*Sg	**Sg**	**13 25 04.7**	**+0.8**
WTTA	**Wattenberg** 27nm,0.1s,SNR=32	**0.44**	**107**	Pg	**Pg**	**13 24 57.7**	**-0.3**
WTTA	 SNR=7.4			Sg	**Sg**	**13 25 04.4**	**+0.5**
OBER	**Oberstdorf**	**0.49**	**272**	⇑*i*Pg	**Pg**	**13 24 59.7**	**+0.8**
OBER				⇑*i*Sg	**Sg**	**13 25 07.1**	**+1.7**
OBER	**Oberstdorf**	**0.49**	**272**	Pg	**Pg**	**13 24 59.7**	**+0.8**
OBER				Sg	**Sg**	**13 25 07.1**	**+1.7**
SCE	**Schlegeis**	**0.59**	**127**	⇓*i*Pg	**Pg**	**13 25 00.0**	**-0.8**
SCE				⇓*i*Sg	**Sg**	**13 25 08.6**	**0.0**
SCE	**Schlegeis**	**0.59**	**127**	Pg	**Pg**	**13 25 00.0**	**-0.8**
SCE				Sg	**Sg**	**13 25 08.6**	**0.0**
DAVA	**Damuels** SNR=12	**0.78**	**262**	*e*Pg	**Pg**	**13 25 05.0**	**+0.7**
DAVA	 SNR=8.0			*e*Sg	**Sg**	**13 25 16.4**	**+1.8**
DAVA	**Damuels** 11nm,0.2s,SNR=11	**0.78**	**262**	⇓*e*Pg	**Pg**	**13 25 04.4**	**0.0**
DAVA	**Damuels** 11nm,0.2s,SNR=11	**0.78**	**262**	Pg	**Pg**	**13 25 04.4**	**0.0**
DAVA	 SNR=8.0			Sg	**Sg**	**13 25 16.4**	**+1.9**
FUR	**Furstenfeldbru** SNR=3.6	**0.79**	**13**	*e*Pg	**Pg**	**13 25 05.8**	**+1.2**
FUR	 SNR=2.4			*e*Sg	**Sg**	**13 25 17.2**	**+2.2**
FUR	**Furstenfeldbru**	**0.79**	**13**	*e*Pg	**Pg**	**13 25 05.8**	**+1.2**
FUR				*e*Sg	**Sg**	**13 25 17.2**	**+2.3**
FUR	**Furstenfeldbru** SNR=3.6	**0.79**	**13**	Pg	**Pg**	**13 25 05.8**	**+1.2**
FUR	 SNR=2.4			Sg	**Sg**	**13 25 17.2**	**+2.3**
FUORN	**Ofenpass-Fuorn** 210nm,0.3s	**0.93**	**214**	⇑*i*P*P	**Pg**	**13 25 06.4**	**-0.8**
DAVOX	**Davos/Dischmat** 205nm,0.4s	**0.99**	**232**	*e*P*P	**Pg**	**13 25 08.0**	**-0.4**
PLONS	**Plons/SG** 214nm,0.3s	**1.17**	**253**	*e*P*P	**Pg**	**13 25 12.5**	**+0.7**
NORI	**Noerdlinger Ri**	**1.35**	**349**	⇓*i*Pn	**Pn**	**13 25 16.0**	**+1.7**
NORI				⇓*i*Sn	**Sn**	**13 25 32.4**	**+0.1**
NORI	**Noerdlinger Ri**	**1.35**	**349**	Pn	**Pn**	**13 25 16.0**	**+1.7**
NORI				Sn	**Sn**	**13 25 32.4**	**+0.1**
KBA	**Koelnbreinsper** SNR=9.6	**1.62**	**100**	*e*Pg	**Pg**	**13 25 19.7**	**-0.7**
KBA	 SNR=4.9			*e*Sg	**Sg**	**13 25 43.2**	**+1.8**
KBA	**Koelnbreinsper** SNR=8.0	**1.62**	**100**	⇑*e*Pn	**Pn**	**13 25 19.7**	**+1.8**
KBA				⇓*i*Sn	**Sn**	**13 25 39.8**	**+1.0**
KBA	 18nm,0.2s			⇑*i*Sg	**Sg**	**13 25 42.7**	**+1.3**
KBA	**Koelnbreinsper** SNR=9.6	**1.62**	**100**	Pg	**Pg**	**13 25 19.7**	**-0.7**
KBA				Sn	**Sn**	**13 25 39.8**	**+0.9**
KBA	 18nm,0.2s			Sg	**Sg**	**13 25 42.7**	**+1.3**
BFO	**Black Forest** SNR=7.6	**2.04**	**298**	*e*Pn	**Pn**	**13 25 25.2**	**+1.5**
BFO	 SNR=6.7			*e*Sn	**Sn**	**13 25 50.3**	**+1.1**
BFO	 SNR=2.9			*e*Sg	**Sg**	**13 25 55.1**	**+0.4**
BFO	**Black Forest**	**2.04**	**298**	*e*Pn	**Pn**	**13 25 25.2**	**+1.5**
BFO				*e*Sn	**Sn**	**13 25 50.3**	**+1.2**
BFO				*e*Sg	**Sg**	**13 25 55.1**	**+0.3**
BFO	**Black Forest** SNR=7.6	**2.04**	**298**	Pn	**Pn**	**13 25 25.2**	**+1.5**
BFO	 SNR=6.7			Sn	**Sn**	**13 25 50.3**	**+1.2**
BFO	 SNR=2.9			Sg	**Sg**	**13 25 55.1**	**+0.3**
WET	**Wettzell** SNR=4.0	**2.15**	**35**	*e*Pn	**Pn**	**13 25 25.3**	**+0.1**
WET	 SNR=4.9			*e*Sn	**Sn**	**13 25 52.6**	**+0.7**
WET	 SNR=1.3			*e*Sg	**Sg**	**13 25 57.5**	**-0.9**
WET	**Wettzell**	**2.15**	**35**	*e*Pn	**Pn**	**13 25 25.3**	**+0.1**
WET				*e*Sn	**Sn**	**13 25 52.6**	**+0.7**
WET				*e*Sg	**Sg**	**13 25 57.5**	**-0.9**
WET	**Wettzell** SNR=4.0	**2.15**	**35**	Pn	**Pn**	**13 25 25.3**	**+0.1**
WET	 SNR=4.9			Sn	**Sn**	**13 25 52.6**	**+0.7**
WET	 SNR=1.3			Sg	**Sg**	**13 25 57.5**	**-0.9**
MOA	**Molln** SNR=5.9	**2.25**	**77**	*e*Sg	**Sg**	**13 26 01.0**	**-0.5**
MOA	**Molln** SNR=5.9	**2.25**	**77**	Sg	**Sg**	**13 26 01.0**	**-0.5**
GRA1	**Grafenberg Arr**	**2.30**	**3**	*e*Pg	**Pg**	**13 25 33.5**	**0.0**
GRA1				*e*Sg	**Sg**	**13 26 03.5**	**+0.2**
GRA1	**Grafenberg Arr** SNR=2.4	**2.30**	**3**	Pg	**Pg**	**13 25 33.5**	**0.0**
GRA1	 SNR=2.0			Sg	**Sg**	**13 26 03.5**	**+0.2**
GRF	**Grafenberg Arr** SNR=2.4	**2.30**	**3**	*e*Pg	**Pg**	**13 25 33.5**	**0.0**
GRF	 SNR=2.0			*e*Sg	**Sg**	**13 26 03.5**	**+0.2**
GRF	**Grafenberg Arr**	**2.30**	**3**	*e*Pg	**Pg**	**13 25 33.5**	**0.0**
GRF				*e*Sg	**Sg**	**13 26 03.5**	**+0.2**
GRF	**Grafenberg Arr**	**2.30**	**3**	*e*Pg	**Pg**	**13 25 33.5**	**0.0**
GRF				*e*Sg	**Sg**	**13 26 03.5**	**+0.2**
GEC2	**GERESS Array S** SNR=2.6	**2.31**	**50**	*e*Pg	**Pg**	**13 25 32.8**	**-0.9**
GEC2	 SNR=7.4			*e*Sn	**Sn**	**13 25 55.9**	**-0.1**
GEC2	 SNR=2.2			*e*Sg	**Sg**	**13 26 02.4**	**-1.2**
GEC2	**GERESS Array S**	**2.31**	**50**	*e*Pg	**Pg**	**13 25 32.8**	**-0.9**
GEC2				*e*Sn	**Sn**	**13 25 55.9**	**-0.1**
GEC2				*e*Sg	**Sg**	**13 26 02.4**	**-1.2**
GEC2	**GERESS Array S** SNR=2.6	**2.31**	**50**	Pg	**Pg**	**13 25 32.8**	**-0.9**
GEC2	 SNR=7.4			Sn	**Sn**	**13 25 55.9**	**-0.1**
GEC2	 SNR=2.2			Sg	**Sg**	**13 26 02.4**	**-1.2**
HINF	**Hinteralfeld**	**2.85**	**280**	*e*Pg	**Pg**	**13 25 43.5**	**-0.4**
HINF				*e*Sn	**Sn**	**13 26 07.9**	**-1.3**
HINF				*e*Sg	**Sg**	**13 26 20.0**	**-0.8**
HINF	**Hinteralfeld** 11nm,0.2s	**2.85**	**280**	*e*Pn	**Pn**	**13 25 35.2**	**+0.4**
HINF				*e*Pg	**Pg**	**13 25 43.5**	**-0.4**
HINF				*e*Sn	**Sn**	**13 26 07.9**	**-1.3**
HINF				*e*Sg	**Sg**	**13 26 20.0**	**-0.8**
HINF	**Hinteralfeld**	**2.85**	**280**	*e*Pn	**Pn**	**13 25 35.2**	**+0.4**
HINF	**Hinteralfeld**	**2.85**	**280**	*e*Pg	**Pg**	**13 25 43.5**	**-0.4**
HINF				*e*Sn	**Sn**	**13 26 07.9**	**-1.3**
HINF				*e*Sg	**Sg**	**13 26 20.0**	**-0.8**
TANN	**Tannenbergstha** SNR=1.6	**3.17**	**17**	*e*Pn	**Pn**	**13 25 38.6**	**-0.7**
TANN	 SNR=2.6			*e*Sn	**Sn**	**13 26 16.6**	**-0.5**
TANN	 SNR=2.1			*e*Sg	**Sg**	**13 26 29.5**	**-1.6**
TANN	**Tannenbergstha** SNR=2.1	**3.17**	**17**	Sg	**Sg**	**13 26 29.5**	**-1.6**
TANN	**Tannenbergstha** SNR=1.6	**3.17**	**17**	Pn	**Pn**	**13 25 38.6**	**-0.7**
TANN	 SNR=2.6			Sn	**Sn**	**13 26 16.6**	**-0.5**
HAU	**Haudompre**	**3.21**	**283**	*e*Pg	**Pg**	**13 25 50.1**	**-0.7**
HAU				*e*Sg	**Sg**	**13 26 31.2**	**-1.2**
HAU	**Haudompre** 20nm,0.3s	**3.21**	**283**	*e*Pn	**Pn**	**13 25 40.7**	**+0.9**
HAU				*e*Pg	**Pg**	**13 25 50.1**	**-0.7**
HAU				*e*Sg	**Sg**	**13 26 31.2**	**-1.2**
HAU	**Haudompre**	**3.21**	**283**	*e*Pn	**Pn**	**13 25 40.7**	**+0.9**
HAU	**Haudompre**	**3.21**	**283**	*e*Pg	**Pg**	**13 25 50.1**	**-0.7**
HAU	 9.8nm,0.3s			*e*Sg	**Sg**	**13 26 31.2**	**-1.2**
MOX	**Moxa**	**3.28**	**7**	*e*PG	**Pg**	**13 25 52.2**	**+0.1**
MOX				*e*SN	**Sn**	**13 26 18.3**	**-1.4**
MOX				*e*SG	**Sg**	**13 26 33.7**	**-0.8**
MOX	**Moxa** SNR=1.5	**3.28**	**7**	*e*Pn	**Pn**	**13 25 39.4**	**-1.3**
MOX				*e*Pg	**Pg**	**13 25 52.2**	**+0.1**
MOX				*e*Sn	**Sn**	**13 26 18.7**	**-1.0**
MOX	**Moxa** SNR=3.1	**3.28**	**7**	Pn	**Pn**	**13 25 39.4**	**-1.3**
MOX	**Moxa** SNR=1.5	**3.28**	**7**	Pn	**Pn**	**13 25 39.4**	**-1.3**
TNS	**Taunus Mts** SNR=3.7	**3.30**	**330**	*e*Pn	**Pn**	**13 25 42.0**	**+0.9**
TNS	 SNR=5.6			*e*Sn	**Sn**	**13 26 20.1**	**-0.2**
TNS	**Taunus Mts**	**3.30**	**330**	*e*Pn	**Pn**	**13 25 42.0**	**+1.0**
TNS				*e*Sn	**Sn**	**13 26 20.1**	**-0.2**
TNS	**Taunus Mts** SNR=3.7	**3.30**	**330**	Pn	**Pn**	**13 25 42.0**	**+1.0**
TNS	 SNR=5.6			Sn	**Sn**	**13 26 20.1**	**-0.2**
LPL	**La Plagne**	**3.51**	**239**	*e*Pg	**Pg**	**13 25 55.5**	**-1.0**
LPL	 3.3nm,0.4s			*e*Sg	**Sg**	**13 26 40.8**	**-1.1**
LPL	**La Plagne**	**3.51**	**239**	*e*Pg	**Pg**	**13 25 55.5**	**-1.0**
LPL	 1.6nm,0.4s			*e*Sg	**Sg**	**13 26 40.8**	**-1.1**
BRG	**Berggiesshubel** SNR=1.6	**3.98**	**28**	*e*Sg	**Sg**	**13 26 54.2**	**-2.8**
BRG	**Berggiesshubel** 5.3nm,0.5s	**3.98**	**28**	SG	**Sg**	**13 26 56.2**	**-0.8**
BRG	**Berggiesshubel** SNR=1.6	**3.98**	**28**	Sg	**Sg**	**13 26 54.2**	**-2.8**
MBDF	**Montbardon**	**3.98**	**229**	*e*P	**Pn**	**13 25 53.5**	**+3.1**
MBDF				*e*Sg	**Sg**	**13 26 55.0**	**-2.1**
MBDF	**Montbardon** 3.0nm,0.5s	**3.98**	**229**	*e*P	**Pn**	**13 25 53.5**	**+3.1**
MBDF				*e*Sg	**Sg**	**13 26 55.0**	**-2.1**
SFTF	**Sexfontaines** 1.5nm,0.5s	**4.11**	**284**	*e*Sg	**Sg**	**13 26 59.9**	**-1.3**
SFTF	**Sexfontaines** 8.4nm,0.3s	**4.11**	**284**	*e*Sg	**Sg**	**13 26 59.9**	**-1.3**
SFTF	**Sexfontaines** 4.2nm,0.3s	**4.11**	**284**	*e*Sg	**Sg**	**13 26 59.9**	**-1.3**
CLL	**Collm**	**4.13**	**18**	*e*Sg	**Sg**	**13 27 01.0**	**-0.8**
CLL	**Collm**	**4.13**	**18**	*e*Sg	**Sg**	**13 27 01.0**	**-0.8**
CLL	**Collm**	**4.13**	**18**	Sg	**Sg**	**13 27 01.0**	**-0.8**
CLL	**Collm**	**4.13**	**18**	*e*Sg	**Sg**	**13 27 01.0**	**-0.8**
MEZF	**Maizieres J'vi**	**4.16**	**288**	*e*Pn	**Pn**	**13 25 52.9**	**+0.1**
MEZF	**Maizieres J'vi**	**4.16**	**288**	*e*Pn	**Pn**	**13 25 52.9**	**+0.1**
ORIF	**Oris-en-Rattie**	**4.34**	**237**	*e*Pn	**Pn**	**13 25 55.7**	**+0.3**
ORIF	**Oris-en-Rattie**	**4.34**	**237**	*e*Pn	**Pn**	**13 25 55.7**	**+0.3**
VIVF	**Saint-Julien-l**	**5.09**	**242**	*e*Pn	**Pn**	**13 26 05.1**	**-0.5**
VIVF	**Saint-Julien-l**	**5.09**	**242**	*e*Pn	**Pn**	**13 26 05.1**	**-0.5**
TCF	**Toulx Ste Croi**	**6.14**	**263**	*e*Pn	**Pn**	**13 26 20.6**	**+0.5**
TCF	**Toulx Ste Croi**	**6.14**	**263**	*e*Pn	**Pn**	**13 26 20.6**	**+0.5**

IDC ***10*** *13:29:12.6±5.0, 26°.71N×55°.96E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, Error ellipse: s-maj=96.4km s-min=33.5km az=179.0*
KISR ***10*** *13:29:16.8±0.8, 26°.57N×55°.15E, h3km±999km, ML3.6*
CSEM ***10*** *13:29:16.3±0.2, 26°.95N×55°.92E, h10km, ML3.0, Error ellipse: s-maj=7.6km s-min=5.4km az=102.0*
ISCJB ***10*** *13:29:16.2±0.8, 26°.96N±0'.04×55°.79E±0'.05, h20km±8km, mb3.7/10, Error ellipse: s-maj=7.8km s-min=6.0km az=41.3*
OMAN ***10*** *13:29:18.1, 26°.83N×56°.05E, h8km*
SGS ***10*** *13:29:19.5, 27°.02N×55°.70E, h16km*
NEIC ***10*** *13:29:21.1, 27°.32N×55°.94E, h18km, mb3.6/1, ML3.0(THR), After THR.*
TEH ***10*** *13:29:21.7, 27°.10N×55°.99E, h18km*

ISC 10 13:29:16.5±0.9, 26.93N±0'.04×55.87E±0'.05, h10km±7km, n55, σ1.32/61, mb3.7/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.54**	**29**	*e*Pg	**Pg**	**13 29 26.0**	**-1.1**
BNDS	**Bandar-Abbas**	**0.54**	**29**	*e*Pg	**Pg**	**13 29 26.0**	**-1.1**
IBND	**Bandar-abas**	**0.79**	**49**	*e*Pg	**Pg**	**13 29 32.9**	**+1.1**
IBND				*e*Pg	**Pg**	**13 29 33.3**	**+1.5**
IBND				*e*Sg	**Sg**	**13 29 40.7**	**-1.4**
IBND	 comp=Z,38μm,0.3s			*e*		13 29 57.8	
IBND	 comp=Z,39μm,0.2s			*e*		13 30 01.4	
BANOM	**Banah** SNR=430	**1.07**	**159**	P	**Pg**	**13 29 36.1**	**-1.0**
BANOM	**Banah** SNR=430	**1.07**	**159**	P	**Pg**	**13 29 36.1**	**-1.0**
ASHO	**Ashiyiah** SNR=53	**2.24**	**176**	P	**Pn**	**13 29 54.2**	**+0.5**
ASHO	**Ashiyiah** SNR=53	**2.24**	**176**	P	**Pn**	**13 29 54.2**	**+0.5**
ASUD	**Al Ashush, Dub** SNR=13	**2.34**	**192**	P	**Pn**	**13 29 56.3**	**+1.2**
ASUD	**Al Ashush, Dub** SNR=13	**2.34**	**192**	P	**Pn**	**13 29 56.3**	**+1.2**
KRBR	**Kerman**	**3.14**	**14**	*e*Pn	**Pn**	**13 30 06.0**	**-0.1**
KRBR				*e*Sg	**Sn**	**13 30 47.0**	**+3.3**
KRBR	**Kerman**	**3.14**	**14**	*e*Pn	**Pn**	**13 30 06.0**	**-0.1**
KRBR				*e*Sg	**Sn**	**13 30 47.3**	**+3.6**
ISRV	**Sarvestan**	**3.45**	**316**	*e*Pn	**Pn**	**13 30 13.2**	**+2.8**
ISRV	 comp=Z,668nm,0.2s			*e*		13 31 16.0	
ARQ	**Araqi** SNR=10.0	**3.62**	**171**	P	**Pn**	**13 30 13.1**	**+0.4**
ARQ	**Araqi** SNR=10.0	**3.62**	**171**	P	**Pn**	**13 30 13.1**	**+0.3**
IMEH	**Mehriz**	**4.58**	**346**	*e*Pn	**Pn**	**13 30 28.5**	**+2.6**
IMEH	 comp=Z,302nm,0.2s			*e*		13 30 33.8	
IBAF	**Bafgh**	**4.66**	**357**	*e*Pn	**Pn**	**13 30 28.7**	**+1.8**
IBAF	 comp=Z,298nm,0.1s			*e*		13 30 34.6	
ZHSF	**Zahedan**	**5.08**	**57**	*e*Pn	**Pn**	**13 30 35.0**	**+2.2**
ZHSF	**Zahedan**	**5.08**	**57**	*e*Pn	**Pn**	**13 30 35.2**	**+2.4**
SLWS		**5.17**	**247**	P	**Pn**	**13 30 33.7**	**-0.2**
SLWS		**5.17**	**247**	P	**Pn**	**13 30 33.7**	**-0.2**
BTHS		**5.37**	**239**	P	**Pn**	**13 30 36.3**	**-0.5**
BTHS		**5.37**	**239**	P	**Pn**	**13 30 36.3**	**-0.5**
NASN	**Na'in**	**6.43**	**336**	*e*Pn	**Pn**	**13 30 52.0**	**+0.7**
NASN	**Na'in**	**6.43**	**336**	*e*Pn	**Pn**	**13 30 52.0**	**+0.7**
UMR	**Umm Al-Rimmam**	**7.66**	**292**	*e*P	**Pn**	**13 31 08.7**	**+0.6**
UMR				*e*S	**Sn**	**13 32 32.6**	**-2.3**
UMR				AML	AML	13 32 33.6	
UMR	**Umm Al-Rimmam**	**7.66**	**292**	*e*P	**Pn**	**13 31 08.7**	**+0.6**
NAY	**Al-Naaiem**	**7.97**	**289**	*e*P	**Pn**	**13 31 12.8**	**+0.5**
NAY				*e*S	**Sn**	**13 32 39.2**	**-3.4**
NAY	 comp=Z,7.4nm,0.7s			AML	AML	13 32 43.2	
NAY	**Al-Naaiem**	**7.97**	**289**	*e*P	**Pn**	**13 31 12.9**	**+0.5**
MIB	**Mutribah**	**8.05**	**293**	*e*P	**Pn**	**13 31 13.9**	**+0.4**
MIB	**Mutribah**	**8.05**	**293**	*e*P	**Pn**	**13 31 13.9**	**+0.4**
NIL	**Nilore**	**16.43**	**62**	P	**Pn**	**13 33 05.0**	**-2.2**
AAK	**Ala-Archa**	**21.82**	**39**	P	**P**	**13 34 11.3**	**+2.4**
	comp=Z,0.7nm,0.3s,mb3.5,baz=216,slow=6.4,SNR=3.6						
KZA	**Kyzart**	**21.91**	**41**	P	**P**	**13 34 11.8**	**+1.9**
KZA	**Kyzart**	**21.91**	**41**	P	**P**	**13 34 11.8**	**+1.9**
BRTR	**Keskin Array B**	**22.47**	**310**	P	**P**	**13 34 16.5**	**+0.6**
	comp=Z,0.4nm,0.5s,mb3.1,baz=149,slow=12,SNR=3.0						
BRTR	**Keskin Array B**	**22.47**	**310**	P	**P**	**13 34 16.5**	**+0.7**
ABKAR	**Akbulak array**	**22.52**	**7**	*e*P	**P**	**13 34 15.2**	**-1.0**
	comp=Z,0.9nm,0.4s,mb3.5						
ABKAR	**Akbulak array**	**22.52**	**7**	*e*P	**P**	**13 34 15.2**	**-1.0**
	comp=Z,0.9nm,0.4s,mb3.5						
AKTK	**Aktyubinsk**	**23.53**	**3**	P	**P**	**13 34 26.0**	**-0.9**
AKTK	**Aktyubinsk**	**23.53**	**3**	P	**P**	**13 34 26.0**	**-0.9**
AKTO	**Aktyubinsk**	**23.53**	**3**	P	**P**	**13 34 26.0**	**-0.9**
	comp=Z,1.6nm,0.4s,mb3.8,baz=181,slow=8.3,SNR=5.9						
BVAR	**Borovoye Array**	**28.23**	**19**	P	**P**	**13 35 08.7**	**-0.8**
	comp=Z,1.6nm,0.6s,mb3.8,baz=188,slow=9.0,SNR=8.3						
BVAR	**Borovoye Array**	**28.23**	**19**	P	**P**	**13 35 08.7**	**-0.8**
MK31	**Makanchi Array**	**28.76**	**39**	*e*P	**P**	**13 35 14.1**	**-0.1**
MK31	**Makanchi Array**	**28.76**	**39**	*e*P	**P**	**13 35 14.1**	**-0.2**
MKAR	**Makanchi Array**	**28.76**	**39**	P	**P**	**13 35 14.0**	**-0.2**
	comp=Z,0.2nm,0.5s,mb3.1,baz=233,slow=8.6,SNR=4.2						
MKAR	**Makanchi Array**	**28.76**	**39**	P	**P**	**13 35 14.0**	**-0.2**
MKAR	**Makanchi Array**	**28.76**	**39**	P	**P**	**13 35 14.0**	**-0.3**
ZALV	**Zalesovo Beam**	**34.40**	**30**	P	**P**	**13 36 02.4**	**-1.4**
	comp=Z,1.8nm,0.3s,mb4.5,baz=240,slow=9.0,SNR=6.7						
FINES	**FINESS Array B**	**39.89**	**338**	P	**P**	**13 36 49.1**	**-1.2**
	comp=Z,1.8nm,0.7s,mb3.9,baz=160,slow=9.6,SNR=3.2						
FINES	**FINESS Array B**	**39.89**	**338**	P	**P**	**13 36 49.0**	**-1.2**
ARCES	**ARCESS Array B**	**46.17**	**346**	P	**P**	**13 37 40.6**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=139,slow=7.6,SNR=4.1						
ARCES	**ARCESS Array B**	**46.17**	**346**	P	**P**	**13 37 40.6**	**-0.4**
ILAR	**Eielson Array**	**86.90**	**10**	P	**P**	**13 41 59.5**	**-1.8**
	comp=Z,0.5nm,0.7s,mb3.9,baz=318,slow=4.0,SNR=6.8						
ILAR	**Eielson Array**	**86.90**	**10**	P	**P**	**13 41 59.5**	**-1.7**

ISCJB ***10*** *13:33:33.6±0.3, 47°.47N±0'.02×11°.00E±0'.02, h5km±3km, Error ellipse: s-maj=2.9km s-min=2.1km az=6.6*
CSEM ***10*** *13:33:34.7±0.1, 47°.40N×11°.03E, h10km, ML2.9/8*
BGR ***10*** *13:33:35.9±0.3, 47°.40N×11°.06E, h10km, ML2.6/8, Error ellipse: s-maj=4.4km s-min=3.3km az=14.0*
VIE ***10*** *13:33:35.1±0.1, 47°.34N×11°.02E, h9km±1km, mb2.0/9, ML2.7/12, Error ellipse: s-maj=1.0km s-min=0.7km az=3.0*
5 km NW of Telfs felt 4-5 ems98 at Telfs / TYROL
LDG ***10*** *13:33:35.4±0.1, 47°.34N×11°.02E, h3km, Ml2.9/8, Error ellipse: s-maj=1.8km s-min=1.4km az=175.0*
PRU ***10*** *13:33:35.5, 47°.40N×11°.08E, h0km*
ZUR ***10*** *13:33:35.0, 47°.35N×11°.03E, h10km, ML2.5/3*
NEIC ***10*** *13:33:36.0, 47°.40N×11°.10E, h10km, ML2.9(LDG), ML2.8(STR), ML2.6(SZGRF), After SZGRF.*
STR ***10*** *13:33:39.4±0.6, 47°.39N×10°.72E, h10km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 10 13:33:34.9±0.2, 47.41N±0'.02×11.03E±0'.02, h11km±2km, n99, σ1.02/189, 13C-10D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOTA	**Moosalm** 617nm,0.2s,SNR=869	**0.08**	**140**	*e*Pg	**Pg**	**13 33 37.4**	**+0.1**
MOTA	 713nm,0.1s			⇑*i*Sg	**Sg**	**13 33 39.0**	**-0.1**
MOTA	**Moosalm** 617nm,0.2s,SNR=869	**0.08**	**140**	Pg	**Pg**	**13 33 37.4**	**0.0**
MOTA	 713nm,0.1s			Sg	**Sg**	**13 33 39.0**	**-0.1**
PART	**Garmisch-Parte**	**0.11**	**32**	⇑*i*Pg	**Pg**	**13 33 38.4**	**+0.7**
PART				⇑*i*Sg	**Sg**	**13 33 41.0**	**+1.2**
PART	**Garmisch-Parte**	**0.11**	**32**	Pg	**Pg**	**13

DAVOX	**Davos/Dischmat**	1.00	232	*e*Pg		**Pg**	13 33 53.7	-0.5
	252nm,0.4s							
DAVOX	**Davos/Dischmat**	1.00	232	*e*Pg		**Pg**	13 33 53.7	-0.5
	252nm,0.4s							
PLONS	**Plons/SG**	1.18	253	*e*P*P			13 33 57.8	
	245nm,0.2s							
NORI	**Noerdlinger Ri**	1.34	348	⇓*i*Pn		**Pn**	13 34 01.6	+2.1
NORI				⇓*i*Sn		**Sn**	13 34 18.0	+0.7
NORI	**Noerdlinger Ri**	1.34	348	Pn		**Pn**	13 34 01.6	+2.1
NORI				Sn		**Sn**	13 34 18.0	+0.7
KBA	**Koelnbreinsper**	1.61	101	*e*Pg		**Pg**	13 34 06.0	+0.2
	SNR=7.6							
KBA				*e*Sg		**Sg**	13 34 26.4	-0.3
	SNR=4.6							
KBA	**Koelnbreinsper**	1.61	101	⇓*e*Pn		**Pn**	13 34 04.0	+0.8
	SNR=7.2							
KBA				⇑*i*Pg		**Pg**	13 34 06.0	+0.2
	4.2nm,0.1s							
KBA				⇓*i*Sn		**Sn**	13 34 25.7	+1.8
KBA				⇓*i*Sg		**Sg**	13 34 28.3	+1.7
	14nm,0.2s							
KBA	**Koelnbreinsper**	1.61	101	Pn		**Pn**	13 34 04.0	+0.8
	SNR=7.2							
KBA	**Koelnbreinsper**	1.61	101	Pg		**Pg**	13 34 06.0	+0.2
	4.2nm,0.1s							
KBA				Sn		**Sn**	13 34 25.7	+1.8
KBA				Sg		**Sg**	13 34 26.4	-0.3
	SNR=4.6							
SPAK	**Spaichingen-Ko**	1.67	296	Pg		**Pg**	13 34 07.2	+0.3
SPAK				Sg		**Sg**	13 34 29.0	+0.5
SPAK	**Spaichingen-Ko**	1.67	296	Pg		**Pg**	13 34 07.2	+0.3
SPAK				Sg		**Sg**	13 34 29.0	+0.5
BFO	**Black Forest**	2.04	298	*e*Pg		**Pg**	13 34 14.3	+0.3
	SNR=0.6							
BFO				*e*Sg		**Sg**	13 34 40.4	0.0
	SNR=3.1							
BFO	**Black Forest**	2.04	298	*e*Pg		**Pg**	13 34 14.3	+0.3
BFO				*e*Sg		**Sg**	13 34 40.4	0.0
BFO	**Black Forest**	2.04	298	Pg		**Pg**	13 34 14.3	+0.3
	SNR=0.6							
BFO				Sg		**Sg**	13 34 40.4	0.0
	SNR=3.1							
FELD	**Feldberg im Sc**	2.10	284	Pg		**Pg**	13 34 15.1	0.0
FELD				Sg		**Sg**	13 34 42.3	0.0
FELD	**Feldberg im Sc**	2.10	284	Pg		**Pg**	13 34 15.1	0.0
FELD				Sg		**Sg**	13 34 42.3	0.0
WET	**Wettzell**	2.13	35	*e*Pn		**Pn**	13 34 10.9	+0.5
	SNR=4.4							
WET				*e*Pg		**Pg**	13 34 15.4	-0.3
	SNR=3.1							
WET				*e*Sg		**Sg**	13 34 42.7	-0.8
	SNR=2.1							
WET	**Wettzell**	2.13	35	*e*Pn		**Pn**	13 34 10.9	+0.5
WET				*e*Pg		**Pg**	13 34 15.4	-0.4
WET				*e*Sg		**Sg**	13 34 42.7	-0.7
CADS	**Cadrg**	2.20	121	*i* Pn		**Pn**	13 34 14.9	+3.6
CADS				*i* Sn		**Sn**	13 34 45.1	+6.6
CADS	**Cadrg**	2.20	121	*i* Pn		**Pn**	13 34 14.9	+3.6
CADS				*i* Sn		**Sn**	13 34 45.1	+6.6
CADS	**Cadrg**	2.20	121	*i* Pn		**Pn**	13 34 14.9	+3.6
GRA1	**Grafenberg Arr**	2.29	3	*e*Pg		**Pg**	13 34 18.7	-0.1
GRA1				*e*Sg		**Sg**	13 34 49.6	+1.1
GRA1	**Grafenberg Arr**	2.29	3	Pg		**Pg**	13 34 18.7	-0.1
	SNR=2.5							
GRA1				Sg		**Sg**	13 34 49.6	+1.1
	SNR=2.4							
GRF	**Grafenberg Arr**	2.29	3	*e*Pg		**Pg**	13 34 18.7	-0.1
	SNR=2.5							
GRF				*e*Sg		**Sg**	13 34 49.6	+1.1
	SNR=2.4							
GRF	**Grafenberg Arr**	2.29	3	*e*Pg		**Pg**	13 34 18.7	-0.1
GRF				*e*Sg		**Sg**	13 34 49.6	+1.1
GRF	**Grafenberg Arr**	2.29	3	*e*Pg		**Pg**	13 34 18.7	-0.1
GRF				*e*Sg		**Sg**	13 34 49.6	+1.1
GEC2	**GERESS Array S**	2.30	50	*e*Pg		**Pg**	13 34 17.9	-1.0
	SNR=2.4							
GEC2				*e*Sn		**Sn**	13 34 41.3	+0.5
GEC2				*e*Sg		**Sg**	13 34 48.1	-0.6
	SNR=2.1							
GEC2	**GERESS Array S**	2.30	50	*e*Pg		**Pg**	13 34 17.9	-1.0
GEC2				*e*Sn		**Sn**	13 34 41.3	+0.5
GEC2				*e*Sg		**Sg**	13 34 48.1	-0.6
GEC2	**GERESS Array S**	2.30	50	Pg		**Pg**	13 34 17.9	-1.0
	SNR=2.4							
GEC2				Sn		**Sn**	13 34 41.3	+0.5
GEC2				Sg		**Sg**	13 34 48.1	-0.6
	SNR=2.1							
VOJS	**Vojsko**	2.40	124	*i* Pn		**Pn**	13 34 16.0	+2.0
VOJS				*i* Sn		**Sn**	13 34 48.8	+5.5
VOJS	**Vojsko**	2.40	124	*i* Pn		**Pn**	13 34 16.0	+2.0
VOJS				*i* Sn		**Sn**	13 34 48.8	+5.5
VOJS	**Vojsko**	2.40	124	*i* Pn		**Pn**	13 34 16.0	+2.0
KHC	**Kasperske Hory**	2.42	44	*e*PG		**Pg**	13 34 19.8	-1.5
KHC				*e*SG		**Sg**	13 34 52.2	-0.6
KHC	**Kasperske Hory**	2.42	44	Pg		**Pg**	13 34 19.8	-1.5
KHC				Sg		**Sg**	13 34 52.2	-0.6
OBKA	**Obir**	2.57	109	*e*Sg		**Sg**	13 34 56.5	-1.0
	SNR=3.6							
OBKA	**Obir**	2.57	109	Sg		**Sg**	13 34 56.5	-1.0
	SNR=3.6							
LANF	**Langenberg**	2.67	307	Pg		**Pg**	13 34 27.5	+1.4
LANF				Sg		**Sg**	13 35 01.3	+0.6
LANF	**Langenberg**	2.67	307	Pg		**Pg**	13 34 27.5	+1.4
LANF				Sg		**Sg**	13 35 01.3	+0.6
MOF	**Molkenrain**	2.67	281	Pg		**Pg**	13 34 25.3	-0.8
MOF				Sg		**Sg**	13 35 00.9	+0.2
MOF	**Molkenrain**	2.67	281	Pg		**Pg**	13 34 25.3	-0.8
MOF				Sg		**Sg**	13 35 00.9	+0.2
ECH	**Echery**	2.73	289	Pg		**Pg**	13 34 27.1	-0.1
ECH				Sg		**Sg**	13 35 01.9	-0.7
ECH	**Echery**	2.73	289	Pg		**Pg**	13 34 27.1	-0.1
ECH				Sg		**Sg**	13 35 01.9	-0.7
HINF	**Hinteralfeld**	2.85	280	*e*Pg		**Pg**	13 34 28.5	-1.1
HINF				*e*Sn		**Sn**	13 34 53.4	-1.2
HINF				*e*Sg		**Sg**	13 35 05.5	-1.1
	14nm,0.3s							
HINF	**Hinteralfeld**	2.85	280	*e*Pn		**Pn**	13 34 19.9	-0.4
HINF				*e*Pg		**Pg**	13 34 28.5	-1.1
HINF				*e*Sn		**Sn**	13 34 53.4	-1.2
HINF				*e*Sg		**Sg**	13 35 05.5	-1.1
HINF	**Hinteralfeld**	2.85	280	*e*Pn		**Pn**	13 34 19.9	-0.4
HINF	**Hinteralfeld**	2.85	280	*e*Pg		**Pg**	13 34 28.5	-1.1
HINF				*e*Sn		**Sn**	13 34 53.4	-1.2
HINF				*e*Sg		**Sg**	13 35 05.5	-1.1
	7.1nm,0.3s							
TANN	**Tannenbergstha**	3.16	17	*e*Pg		**Pg**	13 34 35.4	+0.1
	SNR=2.9							
TANN				*e*Sg		**Sg**	13 35 15.1	-1.1
	SNR=2.4							
TANN	**Tannenbergstha**	3.16	17	Pg		**Pg**	13 34 35.4	+0.1
	SNR=2.9							
TANN				Sg		**Sg**	13 35 15.1	-1.1
	SNR=2.4							
HAU	**Haudompre**	3.22	282	*e*Pn		**Pn**	13 34 26.3	+1.0
HAU				*e*Sg		**Sg**	13 35 16.8	-1.4
	19nm,0.3s							
HAU	**Haudompre**	3.22	282	*e*Pn		**Pn**	13 34 26.3	+1.0
HAU				*e*Sg		**Sg**	13 35 16.8	-1.4
	9.4nm,0.3s							
MOX	**Moxa**	3.27	7	(PN)		**Pn**	13 34 24.9	-1.0
MOX				(PG)		**Pg**	13 34 38.3	+0.9
MOX				*e*SN		**Sn**	13 35 03.8	-0.9
MOX				(SG)		**Sg**	13 35 21.3	+1.6
MOX	**Moxa**	3.27	7	*e*Pn		**Pn**	13 34 24.9	-1.0
	SNR=1.4							
MOX				*e*(Pg)		**Pg**	13 34 38.3	+0.9
MOX				*e*Sn		**Sn**	13 35 04.4	-0.3
MOX	**Moxa**	3.27	7	Sn		**Sn**	13 35 04.4	-0.3
TNS	**Taunus Mts**	3.29	330	*e*Pn		**Pn**	13 34 27.5	+1.2
	SNR=3.6							
TNS				*e*Sn		**Sn**	13 35 03.6	-1.9
TNS	**Taunus Mts**	3.29	330	*e*Pn		**Pn**	13 34 27.5	+1.2
TNS				*e*Sn		**Sn**	13 35 03.6	-1.8
TNS	**Taunus Mts**	3.29	330	Pn		**Pn**	13 34 27.5	+1.2
	SNR=3.6							
TNS				Sn		**Sn**	13 35 03.6	-1.8
PRU	**Pruhonice**	3.48	41	*e*SG		**Sg**	13 35 25.3	-1.2
PRU	**Pruhonice**	3.48	41	Sg		**Sg**	13 35 25.3	-1.2
THEF	**They Montfort**	3.50	285	Pn		**Pn**	13 34 29.9	+0.8
THEF				Sg		**Sg**	13 35 26.6	-0.5
THEF	**They Montfort**	3.50	285	Pn		**Pn**	13 34 29.9	+0.8
THEF				Sg		**Sg**	13 35 26.6	-0.5
BRG	**Berggiesshubel**	3.96	28	SG		**Sg**	13 35 41.0	-1.1
	5.2nm,0.6s							
MBDF	**Montbardon**	4.00	229	*e*P		**Pn**	13 34 39.2	+3.2
MBDF				*e*Sg		**Sg**	13 35 39.4	-3.7
	2.5nm,0.5s							
MBDF	**Montbardon**	4.00	229	*e*P		**Pn**	13 34 39.2	+3.2
MBDF				*e*Sg		**Sg**	13 35 39.4	-3.7
	1.2nm,0.5s							
CLL	**Collm**	4.11	18	*i* Pn		**Pn**	13 34 37.0	-0.6
CLL				*e*Sg		**Sg**	13 35 45.0	-1.9
CLL	**Collm**	4.11	18	*i* Pn		**Pn**	13 34 37.0	-0.6
CLL				*e*Sg		**Sg**	13 35 45.0	-1.9
CLL	**Collm**	4.11	18	Pn		**Pn**	13 34 37.0	-0.6
CLL				Sg		**Sg**	13 35 45.0	-1.9
SFTF	**Sexfontaines**	4.12	283	*e*Pn		**Pn**	13 34 37.0	-0.6
SFTF				*e*Sg		**Sg**	13 35 44.8	-2.2
	10nm,0.4s							
SFTF	**Sexfontaines**	4.12	283	*e*Pn		**Pn**	13 34 37.0	-0.6
SFTF				*e*Sg		**Sg**	13 35 44.8	-2.2
	5.1nm,0.4s							
DPC	**Dobruska-Polom**	4.57	48	*e*SG		**Sg**	13 36 01.0	-0.5
DPC	**Dobruska-Polom**	4.57	48	Sg		**Sg**	13 36 01.0	-0.5
VIVF	**Saint-Julien-l**	5.10	242	*e*Pn		**Pn**	13 34 49.9	-1.2
VIVF				*e*Sg		**Sg**	13 36 14.2	-4.4
	2.1nm,0.3s							
VIVF	**Saint-Julien-l**	5.10	242	*e*Pn		**Pn**	13 34 49.9	-1.2
VIVF				*e*Sg		**Sg**	13 36 14.2	-4.4
	1.0nm,0.3s							
TCF	**Toulx Ste Croi**	6.15	263	*e*Pn		**Pn**	13 35 06.3	+0.7
TCF	**Toulx Ste Croi**	6.15	263	*e*Pn		**Pn**	13 35 06.3	+0.7

*ISCJB **10** 13:33:31.4±1.6,26°.8N±0°.1×55°.70E±0°.06,h10km, Error ellipse: s-maj=15.7km s-min=6.4km az=162.1*
*KISR **10** 13:33:33.6±0.8,26°.58N×55°.07E,h3km±999km,ML3.5*
*CSEM **10** 13:33:34.7±1.3,27°.00N×55°.64E,h2km,ML3.1, Error ellipse: s-maj=39.0km s-min=7.9km az=164.0*
*TEH **10** 13:33:38.5,27°.14N×56°.11E,h27km*
ISC 10 13:33:34.5±1.7,26°.9N±0°.1×55°.71E±0°.06,h10km,n16, σ1°34/26,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	0.67	38	*e*Pg	**Pg**	13 33 45.4	-2.1
BNDS				*e*Sg	**Sg**	13 33 55.0	-1.3
IBND	**Bandar-abas**	0.94	52	*e*Pg	**Pg**	13 33 48.3	-4.3
IBND				*e*		13 34 09.5	
	comp=Z,18μm,0.2s						
KRBR	**Kerman**	3.24	16	*e*Pn	**Pn**	13 34 25.7	+0.4
ISRV	**Sarvestan**	3.39	318	*e*Pn	**Pn**	13 34 30.0	+2.5
ISRV				*e*Sn	**Sn**	13 35 09.3	+1.5
IPAR	**Pars**	3.78	322	*e*Sn	**Sn**	13 35 17.3	+0.1
IMEH	**Mehriz**	4.61	348	*e*Pn	**Pn**	13 34 45.4	+1.3
IMEH				*e*Sn	**Sn**	13 35 31.5	-6.2
IMEH				*e*		13 39 17.7	
	comp=Z,194nm,0.2s						
IBAF	**Bafgh**	4.71	359	*e*Pn	**Pn**	13 34 45.6	+0.1
IBAF				*e*		13 34 49.7	
	comp=Z,228nm,0.1s						
IBAF				*e*Sn	**Sn**	13 35 32.6	-7.6
IGAR	**Gharneh**	6.37	331	*e*Pn	**Pn**	13 35 09.6	+1.2
NASN	**Na'in**	6.42	338	*e*Pn	**Pn**	13 35 09.7	+0.6
IPIR	**Pirpir**	7.15	325	*e*Pn	**Pn**	13 35 20.2	+1.2
UMR	**Umm Al-Rimmam**	7.54	293	*e*P	**Pn**	13 35 24.6	+0.2
UMR				*e*S	**Sn**	13 36 47.8	-2.2
UMR				AML	AML	13 36 52.1	
	comp=Z,14nm,0.4s						
UMR	**Umm Al-Rimmam**	7.54	293	*e*P	**Pn**	13 35 24.6	+0.2
UMR				*e*S	**Sn**	13 36 47.8	-2.2
NAY	**Al-Naaiem**	7.84	290	*e*P	**Pn**	13 35 28.7	0.0
NAY				*e*S	**Sn**	13 36 54.4	-3.2
NAY				AML	AML	13 36 55.7	
	comp=Z,3.4nm,0.4s						
NAY	**Al-Naaiem**	7.84	290	*e*P	**Pn**	13 35 28.7	+0.1
NAY				*e*S	**Sn**	13 36 54.4	-3.1
MIB	**Mutribah**	7.93	294	*e*P	**Pn**	13 35 29.7	-0.1
MIB				*e*S	**Sn**	13 36 57.6	-2.1
MIB	**Mutribah**	7.93	294	*e*P	**Pn**	13 35 29.7	-0.1
MIB				*e*S	**Sn**	13 36 57.6	-2.0

*DJA **10** 13:34:47,8°.51S×119°.14E,h113km,MLv3.9/4*
*IDC **10** 13:34:48.7±2.6,8°.17S×118°.12E,h0km,mb3.2/2, mb1 3.6/4,mb1mx3.5/19,mbtmp3.5/4,ML3.3/1,Error ellipse: s-maj=218.2km s-min=26.1km az=53.0*
*ISCJB **10** 13:34:54.3±0.8,8°.04S±0°.07×118°.53E±0°.08,h70km±9km, mb3.2/2,Error ellipse: s-maj=13.1km s-min=11.6km az=16.4*
ISC 10 13:34:55.2±0.8,8°.10S±0°.06×118°.58E±0°.07,h53km±13km, n8,σ0°88/11,mb3.3/2,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	0.46	165	P	**Pn**	13 35 06.6	+0.5
BMNI				S	**Sn**	13 35 18.6	+4.6
KHKI	**Kahang-Kahang**	2.95	265	P	**Pn**	13 35 39.8	+0.3
BKSI	**Bulukumba**	3.15	29	P	**Pn**	13 35 35.8	-6.6
BKSI				S	**Sn**	13 36 18.5	-0.3
JAGI	**Jajag, Banyuwa**	4.39	265	P	**Pn**	13 35 58.5	-0.9
FITZ	**Fitzroy Crossi**	12.09	146	Pn	**Pn**	13 37 45.1	+0.3
	0.1nm,0.3s,baz=348,slow=9.3,SNR=2.7						
FITZ				Sn	**Sn**	13 39 56.7	-1.5
	0.1nm,0.3s,baz=18,slow=20,SNR=4.8						
WRA	**Warramunga Arr**	19.28	129	P	**Pn**	13 39 17.4	+0.3
	0.1nm,0.3s,baz=302,slow=12,SNR=7.4						
ASAR	**Alice Springs**	21.34	138	P	**P**	13 39 41.3	+3.3
	0.5nm,0.7s,mb3.0,baz=309,slow=9.5,SNR=9.5						
MKAR	**Makanchi Array**	63.46	333	P	**P**	13 45 19.6	0.0
	0.4nm,0.6s,mb3.7,baz=120,slow=7.2,SNR=3.8						

*IDC **10** 13:36:50.3±1.4,5°.57S×153°.44E,h0km,mb4.0/12, mb1 4.1/12,mb1mx4.0/19,mbtmp4.0/12,Error ellipse: s-maj=47.1km s-min=17.7km az=115.0*
*ISCJB **10** 13:36:54.5±4.3,5°.6S±0°.1×153°.3E±0°.2,h37km±34km, mb4.0/13,Error ellipse: s-maj=43.5km s-min=20.4km az=19.7*
*NEIC **10** 13:36:58.2±2.8,5°.63S×153°.31E,h58km±22km,mb4.8/1, Error ellipse: s-maj=28.2km s-min=13.6km az=109.0*
ISC 10 13:36:58.3±3.7,5°.6S±0°.1×153°.3E±0°.2,h55km±29km,n19, σ0°58/18,mb4.0/13,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	7.14	238	*e*P	**Pn**	13 38 40.4	+0.2
KAKA	**Kakadu**	21.73	250	*e*P	**P**	13 41 44.1	-1.2
	20nm,0.5s,mb4.8						
WB2	**Warramunga Arr**	23.27	231	*e*P	**P**	13 42 01.0	-0.4
WRA	**Warramunga Arr**	23.28	231	P	**P**	13 42 01.1	-0.3
	1.1nm,0.5s,mb3.6,baz=53,slow=9.8,SNR=18						
ASAR	**Alice Springs**	25.88	224	P	**P**	13 42 26.3	+1.1
	1.1nm,0.9s,mb3.4,baz=56,slow=9.4,SNR=14						
STKA	**Stephens Creek**	26.32	201	P	**P**	13 42 47.1	+0.2
	2.1nm,0.7s,mb3.9,baz=360,slow=6.1,SNR=4.5						
FITZ	**Fitzroy Crossi**	29.70	243	P	**P**	13 42 59.6	+0.3
	1.4nm,0.6s,mb3.9,baz=86,slow=7.1,SNR=12						
PETK	**Petropavlovsk-**	58.62	3	P	**P**	13 46 50.2	+0.6
	2.9nm,0.6s,mb4.5,baz=166,slow=5.9,SNR=11						
PETK	**Petropavlovsk-**	58.62	3	P	**P**	13 46 50.2	+0.6
CMAR	**Chiang Mai Arr**	58.65	295	P	**P**	13 46 50.6	+0.2
	1.1nm,0.7s,mb4.0,baz=116,slow=4.8,SNR=5.4						
SONM	**Songino Array**	67.27	328	P	**P**	13 47 47.6	+0.5
	0.6nm,0.5s,mb3.9,baz=134,slow=6.1,SNR=6.6						
MK31	**Makanchi Array**	81.25	319	*e*P	**P**	13 49 08.9	+0.4
MKAR	**Makanchi Array**	81.25	319	P	**P**	13 49 08.4	-0.1
	0.6nm,0.7s,mb3.6,baz=94,slow=8.3,SNR=5.3						
ZALV	**Zalesovo Beam**	82.09	326	P	**P**	13 49 12.8	0.0
	1.5nm,0.6s,mb4.1,baz=114,slow=5.9,SNR=6.6						
ILAR	**Eielson Array**	82.73	22	P	**P**	13 49 14.7	-1.3
	0.5nm,0.8s,mb3.6,baz=250,slow=4.9,SNR=5.4						
AAK	**Ala-Archa**	85.57	313	P	**P**	13 49 30.8	-0.1
	0.6nm,0.3s,mb4.3,baz=90,slow=3.0,SNR=3.5						
AAK	**Ala-Archa**	85.57	313	P	**P**	13 49 30.8	-0.1
BVAR	**Borovoye Array**	90.18	323	P	**P**	13 49 52.6	0.0
	2.0nm,0.7s,mb4.6,baz=104,slow=6.3,SNR=9.3						
NOA	**NORSAR Array B**	117.84	340	PKP	PKPdf	13 55 36.5	-1.8
	0.6nm,0.7s,baz=118,slow=7.9,SNR=3.2						

*ISCJB **10** 13:39:34.9±1.2,7°.54N±0°.05×82°.76W±0°.03,h14km±7km, mb4.3/17,Error ellipse: s-maj=9.1km s-min=4.7km az=21.7*
*NEIC **10** 13:39:34.7±0.8,7°.39N×82°.76W,h10km,mb4.6/11,Error ellipse: s-maj=16.9km s-min=8.8km az=197.0*
NEIC Felt in Perez Zeledon and the Valle Central, Costa Rica.
*IDC **10** 13:39:35.9±4.8,8°.00N×82°.47W,h0km,mb4.2/9, mb1 4.5/10,mb1mx4.2/21,mbtmp4.2/10,ML4.2/1,Error ellipse: s-maj=132.7km s-min=27.1km az=17.0*
*BJI **10** 13:39:35.7,7°.40N×82°.80W,h20km,Ms4.8/1,Ms7 4.6/1*
*CASC **10** 13:39:35.4±2.5,7°.50N×82°.74W,h14km±10km,MD4.5, ML3.8*
ISC 10 13:39:36.2±1.2,7°.62N±0°.06×82°.70W±0°.04,h7km±6km, n101,σ1°06/104,mb4.3/17,18C-19D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	1.13	336⇑	*e*P	**Pg**	13 39 56.3	-1.6
ACR				*e*S	**Sg**	13 40 20.2	+7.6
TBS2		1.17	2⇑	*e*P	**Pg**	13 39 57.6	-1.1
TBS2				*e*S	**Sg**	13 40 15.6	+1.7
BRU	**Baru**	1.19	7⇓	*i*P	**Pg**	13 39 50.0	-9.1
CTCR	**Cotoan**	1.27	357⇓	*i*P	**Pg**	13 40 00.1	-0.3
BUS	**Buena Vista**	2.19	332⇑	*e*P	**Pn**	13 40 12.8	-0.3
QCR	**Quepos**	2.31	321⇑	*e*P	**Pn**	13 40 12.6	-2.1
URSC	**Urasca**	2.45	334⇑	*e*P	**Pn**	13 40 16.4	-0.2
LAJ	**Bijagual**	2.64	328⇓	*e*P	**Pn**	13 40 18.9	-0.3
PRS1	**Puriscal**	2.84	326⇑	*e*P	**Pn**	13 40 19.9	-2.0
CGA2	**Cerro Gallo 2**	2.95	324	*e*P	**Pn**	13 40 23.0	-0.5
PINA	**Piqa, Costa Ab**	3.07	58	*e*P	**Pn**	13 40 24.9	-0.3
BCIP	**Isla Barro Col**	3.22	61	*e*P	**Pn**	13 40 27.3	+0.1
BCIP	**Isla Barro Col**	3.22	61	*e*P	**Pn**	13 40 27.3	+0.1
JCR	**Jicaral**	3.26	313⇑	*e*P	**Pn**	13 40 25.6	-2.1
UPIG		3.42	66	*e*P	**Pn**	13 40 30.1	+0.1
UPIG				*e*S	**Sn**	13 41 11.8	+1.1
VCR	**Vista de Mar**	3.82	311⇑	*e*P	**Pn**	13 40 33.2	-2.2
MESS	**Mesas**	3.96	322	*i* P	**Pn**	13 40 36.5	-0.9
LIM1	**Limonal**	3.96	321	*i* P	**Pn**	13 40 36.1	-1.4
GPS2	**Hotel Rinc¨‡n**	4.07	320	*i* S	**Sn**	13 41 26.1	-0.7
GPS1	**Guardaparques**	4.08	320	*i* S	**Sn**	13 41 26.6	-0.6
NY14	**Universidad de**	4.11	317	*i* P	**Pn**	13 40 39.2	-0.3
NY14				*i* S	**Sn**	13 41 28.4	+0.6
LAPC	**Finca la Perla**	4.13	319	*i* P	**Pn**	13 40 39.6	-0.2
LAPC				*i* S	**Sn**	13 41 28.1	-0.3
GB1A	**Borinquen Arri**	4.15	320	*i* P	**Pn**	13 40 40.4	+0.5
GBS3	**Finca Las lm¨¡**	4.16	319	*i* S	**Sn**	13 41 28.5	-0.5
CONN	**Concepcion**	4.87	324	*e*P	**Pn**	13 40 49.5	-0.4
XAVN	**Gruta Xavier**	5.75	322	*e*P	**Pn**	13 41 02.3	+0.3
COPN	**Copaltepe**	5.94	320	*e*P	**Pn**	13 41 05.0	+0.4
COPN				*e*S	**Sn**	13 42 08.3	-4.6
MOMN	**Momotombo**	6.08	322	*e*P	**Pn**	13 41 06.9	+0.3
CNGN	**Cerro Negro**	6.25	321	*e*P	**Pn**	13 41 09.1	+0.3
CNGN				*e*S	**Sn**	13 42 20.7	+0.2
CNCH	**Conchagua**	7.56	319	*e*P	**Pn**	13 41 27.4	+0.6
CNCH				*e*S	**Sn**	13 42 48.6	-4.3
BLLM	**Bellamira**	7.95	317	*e*P	**Pn**	13 41 33.6	+1.5
VSM	**San Miguel**	7.96	317	*e*P	**Pn**	13 41 33.5	+1.2
CAHU	**Cacacutique**	8.17	319	*e*P	**Pn**	13 41 36.6	+1.3
OTAV	**Otavalo**	8.47	150	*e*P	**Pn**	13 41 35.7	-3.6
	5.2nm,0.6s						
OTAV	**Otavalo**	8.47	150	*e*P	**Pn**	13 41 35.7	-3.6
SNVI	**San Vicente**	8.48	315	*e*P	**Pn**	13 41 41.1	+1.6
LFRS	**El Faro**	8.64	314	*e*P	**Pn**	13 41 43.4	+1.6
BOQS	**Boqueron**	8.87	314	*e*P	**Pn**	13 41 45.5	+0.5
SBLS	**San Blas**	9.19

ESDC Sonseca Array 76.52 51 P P 13 51 26.6 -0.7
1.9nm,0.8s,mb4.1,baz=270,slow=5.6,SNR=5.7
NOA NORSAR Array B 85.29 29 P P 13 52 12.7 -0.9
1.5nm,0.8s,mb4.2,baz=275,slow=4.8,SNR=3.3
WMQ Urumqi 128.07 9 *e*PKP PKPdf 13 58 43.0 -0.4
HHC Hu-ho-hao-te 130.02 346 *e*PKP PKPdf 13 58 44.1 -3.1
HHC PKS 14 02 19.5
HHC SKS SKSdf 14 05 54.7 -4.7
HHC SKKS SKKSac 14 07 47.0 -10
LZH Lanzhou 136.10 352 *e*PKP PKPdf 13 58 57.5 -1.3
LZH *s*PKP 13 59 06.0
CD2 Chengdu 141.20 351 *e*PKP PKPdf 13 59 03.9 -4.4
KMI Kunming 147.03 351 PKPbc PKPdf 13 59 17.5 -1.1

*ISCJB **10** 13:42:18.5±2.0, 27.°0N±0.°2×55.°62E±0.°05, h10km, Error ellipse: s-maj=25.2km s-min=5.0km az=168.8*
*KISR **10** 13:42:18.6±0.8, 26.°60N×55.°19E, h4km±999km, ML3.8*
*CSEM **10** 13:42:20.7±1.1, 27.°04N×55.°65E, h2km, ML3.8, Error ellipse: s-maj=38.0km s-min=6.5km az=166.0*
*TEH **10** 13:42:24.9, 27.°33N×55.°86E, h8km*
ISC 10 13:42:20.5±2.1, 27.°0N±0.°2×55.°70E±0.°06, h10km, n12, σ1§23/21, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.60**	**44**	*e*Pg		**Pg**		**13 42 31.3**	**-0.9**
BNDS				*e*Sg		**Sg**		**13 42 39.7**	**-0.4**
IBND	**Bandar-abas**	**0.89**	**57**	*e*Pg		**Pg**		**13 42 35.9**	**-1.7**
IBND				*e*Sg		**Sg**		**13 42 44.3**	**-4.9**
IBND				*e*				13 43 25.7	
	comp=Z,11μm,0.2s								
KRBR	**Kerman**	**3.15**	**17**	*e*Pn		**Pn**		**13 43 11.9**	**+1.8**
ISRV	**Sarvestan**	**3.32**	**317**	*e*Pn		**Pn**		**13 43 14.8**	**+2.3**
ISRV				*e*Lg				13 44 03.7	
ISRV				*e*				13 44 42.8	
	comp=Z,510nm,0.5s								
IMEH	**Mehriz**	**4.51**	**348**	*e*Pn		**Pn**		**13 43 32.4**	**+3.5**
IMEH				*e*				13 48 20.6	
	comp=Z,126nm,0.2s								
IBAF	**Bafgh**	**4.61**	**359**	*e*Pn		**Pn**		**13 43 31.1**	**+0.9**
IBAF				*e*				13 43 34.5	
	comp=Z,161nm,0.1s								
IBAF				*e*Sn		**Sn**		**13 44 17.3**	**-6.5**
UMR	**Umm Al-Rimmam**	**7.50**	**292**	*e*P		**Pn**		**13 44 10.2**	**+0.2**
UMR				*e*S		**Sn**		**13 45 34.5**	**-0.5**
UMR				AML		AML		13 45 35.9	
	comp=Z,15nm,0.4s								
UMR	**Umm Al-Rimmam**	**7.50**	**292**	*e*P		**Pn**		**13 44 10.1**	**+0.2**
UMR				*e*S		**Sn**		**13 45 34.5**	**-0.5**
	comp=Z,15nm,0.4s								
NAY	**Al-Naaiem**	**7.81**	**289**	*e*P		**Pn**		**13 44 14.5**	**+0.3**
NAY				*e*S		**Sn**		**13 45 40.9**	**-1.8**
NAY				AML		AML		13 45 43.6	
	comp=Z,6.2nm,0.6s								
NAY	**Al-Naaiem**	**7.81**	**289**	*e*P		**Pn**		**13 44 14.5**	**+0.3**
NAY				*e*S		**Sn**		**13 45 40.9**	**-1.8**
MIB	**Mutribah**	**7.89**	**293**	*e*P		**Pn**		**13 44 15.8**	**+0.6**
MIB				*e*S		**Sn**		**13 45 43.7**	**-0.9**
MIB				AML		AML		13 45 45.0	
	comp=Z,17nm,0.5s								
MIB	**Mutribah**	**7.89**	**293**	*e*P		**Pn**		**13 44 15.8**	**+0.5**
MIB				*e*S		**Sn**		**13 45 43.7**	**-0.9**

CASC 10 13:47:09.7±2.2, 7.°51N×82.°82W, h56km±34km, MD3.8, South of Panama

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**1.19**	**343**	*e*P			Pn	13 47 29.4	-0.8
ACR				*e*S			Sn	13 47 44.8	-0.6
TBS2		**1.29**	**7**	*e*P			Pn	13 47 30.5	-1.0
TBS2				*e*S			Sn	13 47 47.6	-0.1
CTCR	**Cotoan**	**1.38**	**2**	*e*P			Pn	13 47 33.1	+0.3
CTCR				*e*S			Sn	13 47 51.5	+1.5
URSC	**Urasca**	**2.50**	**338**	*e*P			Pn	13 47 49.1	+1.2
LAJ	**Bijagual**	**2.67**	**331**	*e*P			Pn	13 47 52.2	+1.9
PRS1	**Puriscal**	**2.87**	**329**	*e*P			Pn	13 47 53.2	+0.2
CGA2	**Cerro Gallo 2**	**2.98**	**327**	*e*P			Pn	13 47 56.3	+1.8
CGA2				*e*S			Sn	13 48 32.3	+3.3
JCR	**Jicaral**	**3.25**	**316**	*e*P			Pn	13 47 59.2	+1.0

*NOU **10** 13:47:24.4±1.0, 19.°78S×168.°70E, h10km, MD3.1, ML4.1*
*IDC **10** 13:47:25.9±1.0, 19.°87S×168.°64E, h0km, mb4.4/9, mb1 4.5/10, mb1mx4.4/17, mbtmp4.4/10, ML4.0/1, MS3.9/1, Ms1 3.9/1, ms1mx3.3/25, Error ellipse: s-maj=32.5km s-min=21.4km az=145.0*
*ISCJB **10** 13:47:28.9±0.5, 20.°11S±0.°08×168.°57E±0.°08, h33km, mb4.3/10, Error ellipse: s-maj=14.2km s-min=6.6km az=44.5*
*NEIC **10** 13:47:31.2±0.4, 19.°89S×168.°52E, h35km, mb4.3/3, Error ellipse: s-maj=15.4km s-min=10.3km az=164.0*
ISC 10 13:47:28.4±3.6, 20.°10S±0.°08×168.°51E±0.°09, h14km±24km, n37, σ1§25/31, mb4.3/10, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.54**	**216**	*e*P			**Pn**	**13 48 08.2**	**-1.0**
BAYA				*e*S			**Sn**	**13 48 39.0**	**-1.0**
DZM	**Mont Dzumac**	**2.75**	**224**	*e*P			**Pn**	**13 48 09.9**	**-2.2**
DZM				AMP				13 48 50.0	
	comp=Z,2μm,0.6s								
NOUC	**Port Laguerre**	**2.86**	**226**	*e*P			**Pn**	**13 48 12.1**	**-1.5**
NOUC				*e*S			**Sn**	**13 48 48.3**	**+0.4**
NOUC				AMP				13 49 04.8	
	comp=Z,111nm,5.8s								
MSVF	**Nonsavu**	**9.34**	**77**	P			**Pn**	**13 49 43.3**	**+0.7**
	comp=Z,108nm,1.4s								
RMQ	**Roma**	**19.21**	**247**	*e*P			**Pn**	**13 51 56.1**	**+3.1**
	comp=Z,22nm,1.3s								
URZ	**Urewera**	**19.57**	**159**	P			**Pn**	**13 51 59.0**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=3.6,slow=23,SNR=3.9								
URZ				LR			LR	13 57 25.8	
	comp=Z,371nm,21.2s,baz=117,slow=30								
CTA	**Charters Tower**	**20.90**	**266**	P			**P**	**13 52 15.8**	**+5.3**
	comp=Z,5.6nm,0.6s,baz=84,slow=13,SNR=6.4								
CTA	**Charters Tower**	**20.90**	**266**	*e*P			**P**	**13 52 16.0**	**+5.5**
	comp=Z,9.3nm,1.3s								
CTA	**Charters Tower**	**20.90**	**266**	P			**P**	**13 52 15.8**	**+5.3**
CTAO	**Charters Tower**	**20.90**	**266**	P			**P**	**13 52 10.3**	**-0.2**
	comp=Z,16nm,1.1s								
CMSA	**Cobar Meteorol**	**23.43**	**236**	*e*P			**P**	**13 52 38.8**	**+1.4**
STKA	**Stephens Creek**	**26.80**	**239**	P			**P**	**13 53 09.8**	**+1.6**
	comp=Z,2.9nm,1.0s,mb3.8,baz=66,slow=7.9,SNR=4.2								
STKA				PcP			PcP	13 56 31.1	+0.1
	comp=Z,1.5nm,1.1s,baz=251,slow=3.3,SNR=3.2								
STKA	**Stephens Creek**	**26.80**	**239**	*e*P			**P**	**13 53 09.8**	**+1.6**
	comp=Z,3.7nm,0.9s,mb3.9								
STKA	**Stephens Creek**	**26.80**	**239**	*e*P			**P**	**13 53 09.5**	**+1.3**
	comp=Z,3.5nm,1.4s,mb3.7								
STKA				PcP			PcP	13 56 31.1	+0.1
WB2	**Warramunga Arr**	**32.06**	**264**	*e*P			**P**	**13 53 54.8**	**-0.3**
WRA	**Warramunga Arr**	**32.07**	**264**	P			**P**	**13 53 54.9**	**-0.3**
	comp=Z,1.8nm,0.5s,mb4.1,baz=89,slow=8.5,SNR=45								
ASAR	**Alice Springs**	**32.26**	**257**	P			**P**	**13 53 57.2**	**+0.5**
	comp=Z,5.5nm,0.5s,mb4.6,baz=87,slow=9.3,SNR=177								
FITZ	**Fitzroy Crossi**	**40.48**	**265**	P			**P**	**13 55 07.9**	**+0.9**
	comp=Z,7.4nm,0.7s,mb4.5,baz=125,slow=8.5,SNR=20								
FITZ	**Fitzroy Crossi**	**40.48**	**265**	*e*P			**P**	**13 55 07.6**	**+0.6**
	comp=Z,13nm,0.7s,mb4.8								
FITZ	**Fitzroy Crossi**	**40.48**	**265**	*e*P			**P**	**13 55 07.6**	**+0.6**
MBWA	**Marble Bar**	**45.52**	**260**	*e*P			**P**	**13 55 48.1**	**+0.3**
MEEK	**Meekatharra**	**46.03**	**252**	*e*P			**P**	**13 55 52.2**	**+0.4**
SBA	**Scott Base**	**57.80**	**180**	*e*P			**P**	**13 57 19.0**	**+0.2**
	comp=Z,5.1nm,0.9s,mb4.5								
PETK	**Petropavlovsk-**	**73.50**	**353**	P			**P**	**13 58 60.0**	**-0.4**
	comp=Z,7.6nm,0.7s,mb4.7,baz=141,slow=8.2,SNR=13								
NIKO	**Nikolski**	**75.38**	**14**	*e*P			**P**	**13 59 08.6**	**-2.6**
CMAR	**Chiang Mai Arr**	**78.23**	**295**	P			**P**	**13 59 29.6**	**+1.4**
	comp=Z,0.5nm,0.7s,mb3.5,baz=141,slow=3.9,SNR=6.3								
SONM	**Songino Array**	**87.49**	**323**	P			**P**	**14 00 15.9**	**+0.3**
	comp=Z,3.3nm,0.8s,mb4.6,baz=141,slow=4.7,SNR=20								
NVAR	**Mina Array Bea**	**89.89**	**49**	P			**P**	**14 00 25.0**	**-2.0**
	comp=Z,1.3nm,0.8s,mb4.3,baz=248,slow=7.8,SNR=4.3								
ILAR	**Eielson Array**	**91.26**	**18**	P			**P**	**14 00 29.5**	**-3.3**
	comp=Z,0.3nm,0.5s,mb3.9,baz=229,slow=5.4,SNR=8.4								
ARCES	**ARCESS Array B**	**125.72**	**345**	PKP			PKPdf	14 06 28.1	-0.8
	comp=Z,1.0nm,0.7s,baz=80,slow=1.4,SNR=8.5								
CLZ	**Clausthal**	**144.01**	**337**	*e*PKP			PKPdf	14 07 00.5	-2.9
MOX	**Moxa**	**144.47**	**335**	*e*P			PKPdf	14 07 01.7	-2.5
GEC2	**GERESS Array S**	**144.91**	**331**	*e*PKP			PKPdf	14 07 03.5	-1.5
WET	**Wettzell**	**145.07**	**332**	*e*PKP			PKPdf	14 07 04.1	-1.2
GRA1	**Grafenberg Arr**	**145.37**	**334**	*e*PKP			PKPdf	14 07 04.5	-1.3
TNS	**Taunus Mts**	**146.03**	**337**	*e*PKP			PKPdf	14 07 07.3	+0.4
BFO	**Black Forest**	**147.62**	**335**	*e*PKP			PKPbc	14 07 13.5	+1.2

*JMA **10** 13:56:49.6±0.3, 34.°46N×141.°87E, h37km±3km, M3.0*
*ISCJB **10** 13:56:50.5±1.7, 34.°49N±0.°04×141.°78E±0.°05, h14km±11km, mb3.5/6, Error ellipse: s-maj=8.4km s-min=5.2km az=144.0*
*IDC **10** 13:56:51.0±1.0, 34.°48N×141.°69E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.6/26, mbtmp3.6/9, ML3.5/3, Error ellipse: s-maj=24.3km s-min=17.5km az=99.0*
*NEIC **10** 13:56:56.0±0.7, 34.°56N×141.°48E, h35km, Error ellipse: s-maj=14.7km s-min=11.9km az=69.0*
ISC 10 13:56:52.2±1.2, 34.°52N±0.°04×141.°67E±0.°06, h12km±7km, n23, σ1§17/31, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.59**	**283**	P			**Pg**	**13 57 03.8**	**+0.1**
BSO1				S			**Sg**	**13 57 14.5**	**+3.1**
BSO2	**Boso 2**	**0.79**	**287**	S			**Sg**	**13 57 20.7**	**+2.8**
BSO3	**Boso 3**	**1.00**	**287**	P			**Pg**	**13 57 10.3**	**-1.1**
BSO4	**Boso 4**	**1.19**	**293**	P			**Pn**	**13 57 13.9**	**-0.8**
BSO4				S			**Sb**	**13 57 30.6**	**+0.4**
CHOJ	**Chosi**	**1.35**	**331**	P			**Pn**	**13 57 15.2**	**-1.8**
CHOJ				S			**Sb**	**13 57 33.0**	**-1.8**
JIM2	**Oshima 3**	**1.86**	**277**	P			**Pn**	**13 57 24.5**	**+0.6**
JIM2				S			**Sn**	**13 57 45.8**	**-1.5**
JHJ2	**Mitsune**	**2.09**	**228**	S			**Sn**	**13 57 53.2**	**+0.2**
JHJ	**Hachijo jima 2**	**2.10**	**229**	Pn			**Pn**	**13 57 26.4**	**-0.9**
	18nm,0.3s,baz=45,slow=16,SNR=3.8								
JHJ				Sn			**Sn**	**13 57 52.9**	**-0.5**
	57nm,0.3s,baz=94,slow=23,SNR=6.2								
MJAR	**Matsushiro Arr**	**3.47**	**307**	Pn			**Pn**	**13 57 45.1**	**-0.9**
	2.0nm,0.3s,baz=45,slow=8.3,SNR=17								
MJAR				Sn			**Sn**	**13 58 28.6**	**+1.6**
	2.5nm,0.3s,baz=133,slow=21,SNR=6.6								
MAJO	**Matsushiro**	**3.47**	**307**	*e*P			**Pn**	**13 57 46.2**	**+0.1**
MAT	**Matsushiro**	**3.47**	**307**	P			**Pn**	**13 57 46.1**	**0.0**
MAT				S			**Sn**	**13 58 27.6**	**+0.5**
CBIJ	**Chichi jima**	**7.42**	**176**	Pn			**Pn**	**13 58 40.1**	**-0.2**
	5.6nm,0.3s,baz=318,slow=19,SNR=9.2								
CBIJ				Sn			**Sn**	**14 00 03.6**	**-0.7**
	2.3nm,0.3s,baz=280,slow=22,SNR=2.8								
ERM	**Erimo**	**7.57**	**8**	*e*P			**Pn**	**13 58 38.2**	**-4.1**
ASAJ	**Asahikawa**	**9.61**	**4**	Pn			**Pn**	**13 59 05.9**	**-4.4**
	0.8nm,0.3s,baz=238,slow=13,SNR=7.2								
ASAJ	**Asahikawa**	**9.61**	**4**	*e*P			**Pn**	**13 59 06.1**	**-4.2**
JOW	**Kunigami**	**13.84**	**240**	*e*P			**Pn**	**14 00 07.1**	**-1.1**
MKAR	**Makanchi Array**	**45.67**	**304**	P			**P**	**14 05 15.2**	**+2.6**
	0.3nm,0.8s,mb3.3,baz=79,slow=7.6,SNR=2.5								
ILAR	**Eielson Array**	**51.51**	**31**	P			**P**	**14 05 57.4**	**0.0**
	0.4nm,0.8s,mb3.4,baz=256,slow=4.7,SNR=6.0								
FITZ	**Fitzroy Crossi**	**54.51**	**199**	P			**P**	**14 06 20.7**	**+0.7**
	1.2nm,0.8s,mb4.0,baz=27,slow=6.8,SNR=3.0								
WB2	**Warramunga Arr**	**54.61**	**188**	*e*P			**P**	**14 06 21.6**	**+0.9**
WRA	**Warramunga Arr**	**54.61**	**188**	P			**P**	**14 06 20.1**	**-0.6**
	0.4nm,0.4s,mb3.8,baz=3.9,slow=7.7,SNR=17								
ASAR	**Alice Springs**	**58.34**	**188**	P			**P**	**14 06 49.0**	**+1.8**
	0.1nm,0.3s,mb3.3,baz=4.5,slow=5.8,SNR=6.1								
NVAR	**Mina Array Bea**	**76.33**	**53**	P			**P**	**14 08 42.5**	**+1.3**
	0.4nm,0.7s,mb3.4,baz=258,slow=7.4,SNR=3.1								

*ISCJB **10** 13:57:25.1±0.3, 47.°48N±0.°01×11.°05E±0.°02, h0km±3km, Error ellipse: s-maj=2.6km s-min=2.2km az=20.6*
*LDG **10** 13:57:26.8±0.1, 47.°34N×11.°04E, h2km, Ml3.1/7, Error ellipse: s-maj=2.1km s-min=1.5km az=168.0*
*ZUR **10** 13:57:26.3, 47.°35N×11.°03E, h10km, ML2.7/3*
*CSEM **10** 13:57:26.3±0.1, 47.°40N×11.°03E, h10km, ML3.1/9, Error ellipse: s-maj=3.1km s-min=2.7km az=178.0*
*VIE **10** 13:57:26.3±0.1, 47.°35N×11.°02E, h10km±1km, mb2.2/9, ML3.0/12, Error ellipse: s-maj=1.1km s-min=0.7km az=0.0*
6 km NW of Telfs felt 4-5 ems98 at Telfs / TYROL
*NEIC **10** 13:57:27.0, 47.°40N×11.°00E, h10km, ML3.1(LDG), ML2.8(SZGRF), After SZGRF.*
*BGR **10** 13:57:27.5±0.3, 47.°38N×11.°05E, h10km, ML2.8/8, Error ellipse: s-maj=4.4km s-min=3.3km az=15.0*
*STR **10** 13:57:29.8±1.5, 47.°84N×11.°19E, h10km, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 10 13:57:26.5±0.2, 47.°42N±0.°02×11.°03E±0.°02, h9km±2km, n115, σ1§22/215, 19C-10D, Austria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOTA	**Moosalm**	**0.09**	**145**	⇑*i*Pg			**Pg**	**13 57 28.8**	**0.0**
	1μm,0.1s,SNR=114								
MOTA				⇑*i*Sg			**Sg**	**13 57 30.5**	**+0.1**
	1μm,0.1s								
MOTA	**Moosalm**	**0.09**	**145**	Pg			**Pg**	**13 57 28.8**	**0.0**
	1μm,0.1s,SNR=114								
MOTA				Sg			**Sg**	**13 57 30.5**	**+0.1**
	1μm,0.1s								
PART	**Garmisch-Parte**	**0.10**	**34**	⇑*i*Pg			**Pg**	**13 57 29.7**	**+0.8**
PART				⇑*i*Sg			**Sg**	**13 57 32.4**	**+1.7**
PART	**Garmisch-Parte**	**0.10**	**34**	Pg			**Pg**	**13 57 29.7**	**+0.8**
PART				Sg			**Sg**	**13 57 32.4**	**+1.7**
RETA	**Reutte**	**0.20**	**291**	⇑*i*Pg			**Pg**	**13 57 30.9**	**+0.3**
	33nm,0.1s,SNR=146								
RETA				⇑*i*Sg			**Sg**	**13 57 34.8**	**+1.5**
	157nm,0.1s								
RETA	**Reutte**	**0.20**	**291**	Pg			**Pg**	**13 57 30.9**	**+0.3**
	33nm,0.1s,SNR=146								
RETA				Sg			**Sg**	**13 57 34.8**	**+1.5**
	157nm,0.1s								
SQTA	**Sankt Quirin**	**0.23**	**148**	⇓*i*Pg			**Pg**	**13 57 30.7**	**-0.4**
	688nm,0.1s								
SQTA	**Sankt Quirin**	**0.23**	**148**	Pg			**Pg**	**13 57 30.7**	**-0.4**
	688nm,0.1s								
SQTA	**Sankt Quirin**	**0.23**	**148**	Sg			**Sg**	**13 57 33.9**	**-0.3**
	1μm,0.2s								
WATA	**Walderalm**	**0.38**	**102**	⇑*i*Pg			**Pg**	**13 57 33.6**	**-0.3**
	1.8nm,0.1s,SNR=20								
WATA				⇑*i*Sg			**Sg**	**13 57 39.2**	**+0.3**
	90nm,0.1s								
WATA	**Walderalm**	**0.38**	**102**	Pg			**Pg**	**13 57 33.6**	**-0.3**
	1.8nm,0.1s,SNR=20								
WATA				Sg			**Sg**	**13 57 39.2**	**+0.3**
	90nm,0.1s								
WTTA	**Wattenberg**	**0.44**	**110**	*e*Pg			**Pg**	**13 57 34.9**	**-0.1**
	SNR=42								
WTTA				*e*Sg			**Sg**	**13 57 41.6**	**+0.8**
	SNR=3.7								
WTTA	**Wattenberg**	**0.44**	**110**	⇑*i*Pg			**Pg**	**13 57 34.7**	**-0.3**
	43nm,0.1s,SNR=46								
WTTA				⇑*i*Sg			**Sg**	**13 57 41.4**	**+0.6**
	225nm,0.3s								
WTTA	**Wattenberg**	**0.44**	**110**	Pg			**Pg**	**13 57 34.9**	**-0.1**
	SNR=42								
WTTA				Sg			**Sg**	**13 57 41.4**	**+0.6**
	225nm,0.3s								
FETA	**Feichten**	**0.45**	**208**	⇓*i*Pg			**Pg**	**13 57 34.2**	**-1.0**
	13nm,0.1s,SNR=59								
FETA				⇓*i*Sg			**Sg**	**13 57 39.5**	**-1.5**
	50nm,0.1s								
FETA	**Feichten**	**0.45**	**208**	Pg			**Pg**	**13 57 34.2**	**-0.9**
	13nm,0.1s,SNR=59								
FETA				Sg			**Sg**	**13 57 39.5**	**-1.5**
	50nm,0.1s								
OBER	**Oberstdorf**	**0.50**	**269**	⇑*i*Pg			**Pg**	**13 57 36.7**	**+0.5**
OBER				⇑*i*Sg			**Sg**	**13 57 44.2**	**+1.4**
OBER	**Oberstdorf**	**0.50**	**269**	Pg			**Pg**	**13 57 36.7**	**+0.5**
OBER				Sg			**Sg**	**13 57 44.2**	**+1.4**
SCE	**Schlegeis**	**0.60**	**129**	⇓*i*Pg			**Pg**	**13 57 37.0**	**-1.0**
SCE				⇓*i*Sg			**Sg**	**13 57 45.7**	**-0.1**
SCE	**Schlegeis**	**0.60**	**129**	Pg			**Pg**	**13 57 37.0**	**-1.0**
SCE				Sg			**Sg**	**13 57 45.7**	**-0.1**
FUR	**Furstenfeldbru**	**0.77**	**12**	*e*Pg			**Pg**	**13 57 42.8**	**+1.6**
	SNR=5.5								
FUR				*e*Sg			**Sg**	**13 57 54.5**	**+3.2**
	SNR=3.1								
FUR	**Furstenfeldbru**	**0.77**	**12**	*e*Pg			**Pg**	**13 57 42.8**	**+1.5**
FUR				*e*Sg			**Sg**	**13 57 54.5**	**+3.2**
FUR	**Furstenfeldbru**	**0.77**	**12**	Pg			**Pg**	**13 57 42.8**	**+1.5**
	SNR=5.5								
FUR				Sg			**Sg**	**13 57 54.5**	**+3.2**
	SNR=3.1								
DAVA	**Damuels**	**0.79**	**261**	*e*Pg			**Pg**	**13 57 41.8**	**+0.1**
	SNR=13								
DAVA				*e*Sg			**Sg**	**13 57 53.9**	**+1.8**
	SNR=5.8								
DAVA	**Damuels**	**0.79**	**261**	⇑*e*Pg			**Pg**	**13 57 41.8**	**0.0**
	14nm,0.2s,SNR=8.8								
DAVA	**Damuels**	**0.79**	**261**	Pg			**Pg**	**13 57 41.8**	**0.0**
	14nm,0.2s,SNR=8.8								
DAVA				Sg			**Sg**	**13 57 53.9**	**+1.8**
	SNR=5.8								
FUORN	**Ofenpass-Fuorn**	**0.95**	**214**	⇑*i*Pg			**Pg**	**13 57 43.4**	**-1.4**
	281nm,0.3s								
FUORN	**Ofenpass-Fuorn**	**0.95**	**214**	⇑*i*Pg			**Pg**	**13 57 43.4**	**-1.4**
	281nm,0.3s								
DAVOX	**Davos/Dischmat**	**1.01**	**231**	⇑*i*Pg			**Pg**	**13 57 45.1**	**-0.8**
	364nm,0.4s								
DAVOX	**Davos/Dischmat**	**1.01**	**231**	⇑*i*Pg			**Pg**	**13 57 45.1**	**-0.8**
	364nm,0.4s								
PLONS	**Plons/SG**	**1.18**	**253**	*e*P*P				13 57 49.2	
	335nm,0.3s								
ABTA	**Abfaltersbach**	**1.21**	**123**	⇓*e*Pg			**Pg**	**13 57 48.7**	**-1.1**
	2.0nm,0.1s,SNR=6.1								
ABTA				⇓*e*Sg			**Sg**	**13 58 04.7**	**-0.7**
	78nm,0.3s								
ABTA	**Abfaltersbach**	**1.21**	**123**	Pg			**Pg**	**13 57 48.7**	**-1.0**
	2.0nm,0.1s,SNR=6.1								
ABTA				Sg			**Sg**	**13 58 04.7**	**-0.8**
	78nm,0.3s								
NORI	**Noerdlinger Ri**	**1.33**	**348**	⇓*i*Pn			**Pn**	**13 57 53.0**	**+1.8**
NORI				⇓*i*Sn			**Sn**	**13 58 09.4**	**+0.3**
NORI	**Noerdlinger Ri**	**1.33**	**348**	Pn			**Pn**	**13 57 53.0**	**+1.8**
NORI				Sn			**Sn**	**13 58 09.4**	**+0.3**
KBA	**Koelnbreinsper**	**1.61**	**101**	*e*Pn			**Pn**	**13 57 55.8**	**+0.8**
	SNR=18								
KBA				*e*Sg			**Sg**	**13 58 18.7**	**+0.4**
	SNR=5.7								
KBA	**Koelnbreinsper**	**1.61**	**101**	⇑*e*Pn			**Pn**	**13 57 56.0**	**+1.0**
	2.3nm,0.1s,SNR=14								
KBA				⇓*i*Sn			**Sn**	**13 58 16.6**	**+0.7**
KBA				⇑*i*Sg			**Sg**	**13 58 19.9**	**+1.6**
	20nm,0.2s								
KBA	**Koelnbreinsper**	**1.61**	**101**	Pn			**Pn**	**13 57 55.8**	**+0.8**
	SNR=18								
KBA				Sn			**Sn**	**13 58 16.6**	**+0.7**
KBA				Sg			**Sg**	**13 58 18.7**	**+0.4**
	SNR=5.7								
SPAK	**Spaichingen-Ko**	**1.66**	**295**	P			**Pn**	**13 57 58.1**	**+2.3**
SPAK				S			**Sn**	**13 58 20.2**	**+3.0**
BFO	**Black Forest**	**2.04**	**298**	*e*Pn			**Pn**	**13 58 01.9**	**+1.0**
	SNR=13								
BFO				*e*Pg			**Pg**	**13 58 05.6**	**+0.1**
	SNR=8.0								
BFO				*e*Sg			**Sg**	**13 58 31.7**	**-0.2**
	SNR=3.4								
BFO	**Black Forest**	**2.04**	**298**	*e*Pn			**Pn**	**13 58 01.9**	**+1.0**
BFO				*e*Pg			**Pg**	**13 58 05.6**	**+0.1**
BFO				*e*Sg			**Sg**	**13 58 31.7**	**-0.2**
BFO	**Black Forest**	**2.04**	**298**	Pn			**Pn**	**13 58 01.9**	**+1.0**
	SNR=13								
ROBS	**Robic**	**2.07**	**124**	*i* Pn			**Pn**	**13 58 04.4**	**+3.1**
ROBS				*i* Sn			**Sn**	**13 58 31.7**	**+4.6**
ROBS	**Robic**	**2.07**	**124**	*i* Pn			**Pn**	**13 58 04.4**	**+3.1**
ROBS				*i* Sn			**Sn**	**13 58 31.7**	**+4.6**
ROBS	**Robic**	**2.07**	**124**	*i* Pn			**Pn**	**13 58 04.4**	**+3.1**
ROBS				*i* Sn			**Sn**	**13 58 31.7**	**+4.6**
FELD	**Feldberg im Sc**	**2.10**	**284**	P			**Pn**	**13 58 05.8**	**+4.1**
FELD				S			**Sn**	**13 58 33.3**	**+5.4**
WET	**Wettzell**	**2.12**	**35**	*e*Pn			**Pn**	**13 58 02.3**	**+0.2**
	SNR=8.0								
WET				*e*Sg			**S

HAU					*e*Pg		**Pg**	13 58 26.7	-1.4
HAU					*e*Sg		**Sg**	13 59 08.4	-1.4
HAU	**Haudompre**	**3.22**	**282**		*e*Pn		**Pn**	13 58 17.2	+0.1
HAU	**Haudompre**	**3.22**	**282**		*e*Pg		**Pg**	13 58 26.7	-1.4
HAU					*e*Sg		**Sg**	13 59 08.4	-1.4
	13nm,0.3s								
MOX	**Moxa**	**3.25**	**7**		(PN)		**Pn**	13 58 15.8	-1.8
MOX					*e*PG		**Pg**	13 58 29.6	+0.8
MOX					*e*SN		**Sn**	13 58 55.3	-1.1
MOX					(SG)		**Sg**	13 59 11.4	+0.5
MOX	**Moxa**	**3.25**	**7**		*e*Pn		**Pn**	13 58 16.3	-1.3
	SNR=1.6								
MOX					*e*Pg		**Pg**	13 58 29.4	+0.6
	SNR=2.7								
MOX					*e*Sn		**Sn**	13 58 55.5	-0.9
	SNR=3.0								
MOX					*e*Sg		**Sg**	13 59 11.3	+0.4
	SNR=1.8								
MOX	**Moxa**	**3.25**	**7**		Pn		**Pn**	13 58 16.3	-1.3
	SNR=1.6								
TNS	**Taunus Mts**	**3.29**	**330**		*e*Pn		**Pn**	13 58 18.6	+0.6
	SNR=5.1								
TNS					*e*Sn		**Sn**	13 58 55.4	-1.8
	SNR=3.6								
TNS	**Taunus Mts**	**3.29**	**330**		*e*Pn		**Pn**	13 58 18.6	+0.5
TNS					*e*Sn		**Sn**	13 58 55.4	-1.8
TNS	**Taunus Mts**	**3.29**	**330**		Pn		**Pn**	13 58 18.6	+0.5
	SNR=5.1								
TNS					Sn		**Sn**	13 58 55.4	-1.8
	SNR=3.6								
CSNA	**Conrad Observa**	**3.30**	**79**		Pn		**Pn**	13 58 19.7	+1.4
	0.7nm,0.1s								
CSNA					Sg		**Sg**	13 59 11.6	-0.9
	2.9nm,0.1s								
CONA	**Conrad Observa**	**3.30**	**79**		Pn		**Pn**	13 58 19.9	+1.6
	0.5nm,0.1s								
CONA					Sg		**Sg**	13 59 12.2	-0.3
	2.1nm,0.1s								
LPL	**La Plagne**	**3.53**	**239**		*e*P		**Pn**	13 58 23.2	+1.8
LPL	**La Plagne**	**3.53**	**239**		*e*P		**Pn**	13 58 23.2	+1.8
BRG	**Berggiesshubel**	**3.95**	**28**		*e*(P)		**Pn**	13 58 24.1	-3.1
BRG	**Berggiesshubel**	**3.95**	**28**		PG		**Pn**	13 58 24.1	-3.1
BRG					SG		**Sg**	13 59 31.7	-1.6
	6.2nm,0.5s								
MBDF	**Montbardon**	**4.00**	**229**		*e*P		**Pn**	13 58 30.3	+2.4
MBDF					*e*Sg		**Sg**	13 59 30.8	-4.2
	2.3nm,0.5s								
MBDF	**Montbardon**	**4.00**	**229**		*e*P		**Pn**	13 58 30.3	+2.4
MBDF					*e*Sg		**Sg**	13 59 30.8	-4.2
	1.1nm,0.5s								
CLL	**Collm**	**4.10**	**18**		*e*Pn		**Pn**	13 58 28.3	-1.0
	SNR=1.6								
CLL					*e*Sn		**Sn**	13 59 16.0	-1.3
CLL					*i* Sg		**Sg**	13 59 36.0	-2.1
CLL	**Collm**	**4.10**	**18**		*i* Pn		**Pn**	13 58 28.4	-0.9
CLL					*e*Sn		**Sn**	13 59 16.0	-1.3
CLL					*i* Sg		**Sg**	13 59 36.0	-2.1
CLL	**Collm**	**4.10**	**18**		*i* Pn		**Pn**	13 58 28.4	-0.9
CLL					*e*Pg		**Pg**	13 58 48.0	+3.0
CLL					*e*Sn		**Sn**	13 59 16.0	-1.3
CLL					*i* Sg		**Sg**	13 59 36.0	-2.1
	comp=Z,9.0nm,0.7s								
CLL	**Collm**	**4.10**	**18**		*i* Pn		**Pn**	13 58 28.4	-0.9
CLL					Sn		**Sn**	13 59 16.0	-1.3
SFTF	**Sexfontaines**	**4.12**	**283**		*e*Sg		**Sg**	13 59 36.8	-1.8
	comp=Z,13nm,0.4s								
SFTF	**Sexfontaines**	**4.12**	**283**		*e*Sg		**Sg**	13 59 36.8	-1.8
	comp=Z,6.3nm,0.4s								
VRAC	**Vranov**	**4.16**	**61**		*e*Sn		**Sn**	13 59 16.9	-1.9
ORIF	**Oris-en-Rattie**	**4.36**	**237**		*e*Pn		**Pn**	13 58 32.1	-0.8
ORIF	**Oris-en-Rattie**	**4.36**	**237**		*e*Pn		**Pn**	13 58 32.1	-0.8
CLZ	**Clausthal**	**4.45**	**355**		*e*Pg		**Pg**	13 58 53.2	+1.5
	SNR=2.1								
CLZ	**Clausthal**	**4.45**	**355**		*e*Pg		**Pg**	13 58 53.2	+1.5
CLZ	**Clausthal**	**4.45**	**355**		Pg		**Pg**	13 58 53.2	+1.5
	SNR=2.1								
VIVF	**Saint-Julien-l**	**5.11**	**242**		*e*Pn		**Pn**	13 58 42.0	-1.1
VIVF	**Saint-Julien-l**	**5.11**	**242**		*e*Pn		**Pn**	13 58 42.0	-1.1
TCF	**Toulx Ste Croi**	**6.16**	**263**		*e*Pn		**Pn**	13 58 57.1	-0.4
TCF	**Toulx Ste Croi**	**6.16**	**263**		*e*Pn		**Pn**	13 58 57.1	-0.4

*IDC **10** 14:22:10.4±8.6,2°.77N×128°.73E, h220km±97km, mb3.0/7, mb1 3.2/7, mb1mx3.1/19, mbtmp3.0/7, Error ellipse: s-maj=31.3km s-min=15.9km az=75.0*

NEIC 10 14:22:12.8±0.6, 2.78N×128.74E, h250km, mb3.9/1, Error ellipse: s-maj=28.4km s-min=10.2km az=75.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.97**	**188**	P	P	14 26 36.3	-0.9
	1.0nm,0.6s,baz=314,slow=22,SNR=7.7						
FITZ	**Fitzroy Crossi**	**20.97**	**188**	*e*P	P	14 26 36.6	-0.5
WRA	**Warramunga Arr**	**23.24**	**167**	P	P	14 26 59.0	+0.9
	0.3nm,0.3s,baz=337,slow=10,SNR=22						
WB2	**Warramunga Arr**	**23.24**	**167**	*e*P	P	14 26 58.2	0.0
ASAR	**Alice Springs**	**26.76**	**169**	P	P	14 27 29.8	-0.1
	0.3nm,0.3s,baz=353,slow=6.9,SNR=14						
CMAR	**Chiang Mai Arr**	**33.09**	**300**	P	P	14 28 26.1	+0.6
	0.6nm,0.7s,baz=110,slow=7.8,SNR=3.8						
KSRS	**Korea Array**	**34.52**	**359**	P	P	14 28 38.0	+0.4
	0.9nm,0.7s,baz=183,slow=11,SNR=5.1						
MJAR	**Matsushiro Arr**	**34.72**	**13**	P	P	14 28 39.3	+0.1
	0.9nm,0.6s,baz=194,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**59.48**	**325**	P	P	14 31 50.0	+0.3
	0.4nm,0.6s,baz=141,slow=7.3,SNR=3.3						
KURK	**Kurchatov**	**63.62**	**327**	*e*P	P	14 32 16.5	-0.7
	2.0nm,0.8s						

*IDC **10** 14:32:44.0±2.1,26°.85N×55°.78E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.7/25, mbtmp3.8/9, MS4.5/1, Ms1 4.5/1, ms1mx3.7/33, Error ellipse: s-maj=45.4km s-min=29.1km az=19.0*

*CSEM **10** 14:32:46.2±0.2,26°.83N×55°.77E, h5km, mb3.9/2, Error ellipse: s-maj=6.5km s-min=5.0km az=94.0*

*NEIC **10** 14:32:48.4,27°.14N×55°.72E, h4km, mb3.9/2, ML3.4(THR), After THR.*

*SGS **10** 14:32:49.7,26°.91N×55°.61E, h15km*

*OMAN **10** 14:32:49.1±88.0,26°.71N×55°.98E, h8km, Error ellipse: s-maj=21.4km s-min=10.8km az=5.0*

*TEH **10** 14:32:50.1,26°.96N×55°.82E, h16km*

ISC 10 14:32:46.4±0.9, 26°.84N±0°.03×55°.79E±0°.05, h10km±6km, n64, σ1°26/71, mb3.8/10, 2C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.65**	**32**	*e*Pg	**Pg**	14 32 58.0	-1.0
BNDS				*e*Sg	**Sg**	14 33 05.0	-2.6
BNDS	**Bandar-Abbas**	**0.65**	**32**	*e*Pg	**Pg**	14 32 58.4	-0.6
BNDS				*e*Sg	**Sg**	14 33 05.6	-2.0
IBND	**Bandar-abas**	**0.90**	**48**	*e*Sg	**Sg**	14 33 16.1	+0.5
IBND				*e*Pg	**Pg**	14 33 04.2	+0.4
IBND				*e*Pg	**Pg**	14 33 04.7	+0.9
IBND				*e*		14 33 23.7	
	comp=Z,44μm,0.2s						
IBND				*e*		14 33 34.9	
	comp=Z,50μm,0.2s						
BANOM	**Banah**	**1.02**	**153**	P	**Pg**	14 33 05.2	-0.9
	SNR=178						
BANOM	**Banah**	**1.02**	**153**	P	**Pg**	14 33 05.2	-1.0
	SNR=178						
ASHO	**Ashiyiah**	**2.16**	**173**	P	**Pn**	14 33 23.6	+1.0
	SNR=22						
ASHO	**Ashiyiah**	**2.16**	**173**	P	**Pn**	14 33 23.6	+1.0
	SNR=22						
ASUD	**Al Ashush, Dub**	**2.25**	**191**	P	**Pn**	14 33 25.5	+1.8
	SNR=11						
ASUD	**Al Ashush, Dub**	**2.25**	**191**	P	**Pn**	14 33 25.5	+1.8
	SNR=11						
KRBR	**Kerman**	**3.24**	**15**	*e*Pn	**Pn**	14 33 38.0	+0.6
KRBR	**Kerman**	**3.24**	**15**	*e*Pn	**Pn**	14 33 38.9	+1.5
ISRV	**Sarvestan**	**3.46**	**318**	*e*Pn	**Pn**	14 33 42.1	+1.7
ISRV				*e*		14 35 05.0	
	comp=Z,2μm,0.5s						
ISRV	**Sarvestan**	**3.46**	**318**	*e*Pn	**Pn**	14 33 42.1	+1.7
IPAR	**Pars**	**3.84**	**322**	*e*Pn	**Pn**	14 33 47.6	+2.0
IPAR				*e*		14 34 37.3	
	comp=Z,2μm,0.4s						
IPAR	**Pars**	**3.84**	**322**	*e*Pn	**Pn**	14 33 47.6	+2.0
BSY	**Bisya**	**4.28**	**162**	⇑P	**Pn**	14 33 52.2	+0.5
SMDO	**Samad**	**4.29**	**151**	P	**Pn**	14 33 52.4	+0.6
SMDO	**Samad**	**4.29**	**151**	⇑P	**Pn**	14 33 52.4	+0.5
BSYO	**Bisya**	**4.30**	**162**	P	**Pn**	14 33 52.2	+0.2
IMEH	**Mehriz**	**4.64**	**348**	*e*Pn	**Pn**	14 33 58.7	+2.0
IMEH				*e*		14 34 01.9	
	comp=Z,373nm,0.2s						
IMEH	**Mehriz**	**4.64**	**348**	*e*Pn	**Pn**	14 33 58.7	+2.0
IBAF	**Bafgh**	**4.73**	**358**	*e*Pn	**Pn**	14 33 59.2	+1.3
IBAF				*e*		14 34 01.1	
	comp=Z,384nm,0.2s						
IBAF				*e*Sn	**Sn**	14 34 49.4	-3.5
IBAF	**Bafgh**	**4.73**	**358**	*e*Pn	**Pn**	14 33 59.2	+1.3
JMDO	**Jabal Madar**	**4.93**	**154**	P	**Pn**	14 34 01.1	+0.5
JMDO	**Jabal Madar**	**4.93**	**154**	⇓P	**Pn**	14 34 01.1	+0.5
SLWS		**5.06**	**247**	S	**Sn**	14 35 01.0	-0.1
SLWS		**5.06**	**247**	P	**Pn**	14 34 02.2	-0.3
SLWS		**5.06**	**247**	P	**Pn**	14 34 02.2	-0.3
SLWS				S	**Sn**	14 35 01.0	0.0
WBK	**Wadi Bani Khal**	**5.11**	**145**	⇓P	**Pn**	14 34 02.5	-0.7
ZHSF	**Zahedan**	**5.19**	**57**	*e*Pn	**Pn**	14 34 07.0	+2.8
ZHSF	**Zahedan**	**5.19**	**57**	*e*Pn	**Pn**	14 34 07.0	+2.8
BTHS		**5.26**	**239**	P	**Pn**	14 34 04.7	-0.5
BTHS		**5.26**	**239**	P	**Pn**	14 34 04.7	-0.5
BTHS				S	**Sn**	14 35 04.8	-1.2
ICHK	**Chekchek**	**5.51**	**348**	*e*	**Pb**	14 34 20.0	-2.8
	comp=Z,289nm,0.3s						
ICHK				*e*Pn	**Pn**	14 34 09.6	+1.0
IKOO	**Kooshah**	**6.23**	**26**	*e*	**Pn**	14 34 09.9	-8.5
	comp=Z,254nm,0.1s						
NASN	**Na'in**	**6.47**	**337**	*e*Pn	**Pn**	14 34 22.0	+0.2
NASN	**Na'in**	**6.47**	**337**	*e*Pn	**Pn**	14 34 23.0	+1.2
IZEF	**Zefreh**	**6.74**	**334**	*e*Pn	**Pn**	14 34 25.8	+0.4
IZEF				*e*		14 35 32.1	
	comp=Z,245nm,0.1s						
IZEF	**Zefreh**	**6.74**	**334**	*e*Pn	**Pn**	14 34 25.8	+0.4
IKLH	**Kolahrood**	**7.41**	**332**	*e*Pn	**Pn**	14 34 35.7	+1.0
IKLH				*e*		14 34 52.4	
	comp=Z,132nm,0.2s						
IKLH	**Kolahrood**	**7.41**	**332**	*e*Pn	**Pn**	14 34 35.7	+1.0
ASYS		**10.21**	**276**	P	**Pn**	14 35 11.1	-2.1
ASYS		**10.21**	**276**	P	**Pn**	14 35 11.1	-2.1
GNI	**Garni**	**16.14**	**328**	LR	LR	14 44 04.5	
	comp=Z,2μm,18.4s,baz=355,slow=42						
MALT	**Malatya**	**18.54**	**312**	*e*P	**Pn**	14 37 02.9	-0.4
	comp=Z,9.2nm,1.0s						
MALT	**Malatya**	**18.54**	**312**	*e*P	**Pn**	14 37 02.9	-0.4
	comp=Z,9.2nm,1.0s						
KKAR	**Karatay Array**	**20.17**	**33**	*e*P	**P**	14 37 21.9	+0.9
KKAR	**Karatay Array**	**20.17**	**33**	*e*P	**P**	14 37 21.9	+0.9
AML	**Almayashu**	**21.16**	**39**	*e*P	**P**	14 37 29.4	-2.3
	comp=Z,4.8nm,0.9s,mb3.8						
AAK	**Ala-Archa**	**21.93**	**39**	P	**P**	14 37 41.0	+0.9
	comp=Z,0.8nm,0.3s,mb3.6,baz=225,slow=13,SNR=3.2						
AAK	**Ala-Archa**	**21.93**	**39**	P	**P**	14 37 41.0	+0.9
BRTR	**Keskin Array B**	**22.46**	**310**	P	**P**	14 37 46.2	+0.5
	comp=Z,1.1nm,0.8s,mb3.4,baz=126,slow=7.3,SNR=4.5						
BRTR	**Keskin Array B**	**22.46**	**310**	P	**P**	14 37 46.2	+0.5
BVAR	**Borovoye Array**	**28.33**	**19**	P	**P**	14 38 39.4	-0.9
	comp=Z,1.9nm,0.9s,mb3.7,baz=216,slow=7.3,SNR=5.5						
BVAR	**Borovoye Array**	**28.33**	**19**	P	**P**	14 38 39.4	-0.9
ZALV	**Zalesovo Beam**	**34.51**	**30**	P	**P**	14 39 33.0	-1.6
	comp=Z,1.3nm,0.4s,mb4.2,baz=232,slow=7.3,SNR=6.6						
FINES	**FINESS Array B**	**39.94**	**338**	P	**P**	14 40 19.0	-1.6
	comp=Z,7.3nm,1.0s,mb4.3,baz=127,slow=13,SNR=4.4						
SONM	**Songino Array**	**44.45**	**48**	P	**P**	14 40 57.5	-0.1
	comp=Z,0.6nm,1.0s,mb3.3,baz=289,slow=4.5,SNR=3.6						
SONM	**Songino Array**	**44.45**	**48**	P	**P**	14 40 57.5	-0.1
KSRS	**Korea Array**	**60.65**	**60**	P	**P**	14 42 56.2	-1.6
	comp=Z,0.7nm,0.6s,mb4.0,baz=292,slow=5.9,SNR=4.3						
ILAR	**Eielson Array**	**86.99**	**10**	P	**P**	14 45 29.7	-2.0
	comp=Z,0.3nm,0.6s,mb3.7,baz=317,slow=4.3,SNR=6.5						
WRA	**Warramunga Arr**	**89.17**	**113**	P	**P**	14 45 42.5	-0.2
	comp=Z,0.2nm,0.7s,mb3.5,baz=308,slow=4.7,SNR=3.3						
WRA	**Warramunga Arr**	**89.17**	**113**	P	**P**	14 45 42.5	-0.2
WRA	**Warramunga Arr**	**89.17**	**113**	P	**P**	14 45 42.5	-0.2

*ISCJB **10** 14:50:50.7±0.5, 36°.47N±0°.03×71°.47E±0°.06, h103km±8km, mb3.7/4, Error ellipse: s-maj=8.0km s-min=4.9km az=179.7*

*IDC **10** 14:50:51.5±7.1, 36°.44N×71°.41E, h84km±60km, mb3.5/4, mb1 3.6/9, mb1mx3.3/26, mbtmp3.5/9, ML3.7/5, Error ellipse: s-maj=52.3km s-min=25.4km az=36.0*

*NEIC **10** 14:50:52.4±1.1, 36°.54N×71°.23E, h93km±11km, mb3.9/1, Error ellipse: s-maj=16.9km s-min=11.0km az=125.0*

ISC 10 14:50:51.8±0.4, 36°.43N±0°.03×71°.48E±0°.06, h101km±8km, n39, σ1°18/48, mb3.7/4, 3C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.62**	**172**	⇑P	**Pn**	14 51 34.8	+2.3
CEP				S	**Sn**	14 52 09.0	+5.2
KBL	**Kabul**	**2.74**	**227**	*e*Pn	**Pn**	14 51 34.0	-0.1
KBL				*e*S	**Sn**	14 52 06.0	-0.6
CHCP	**Chirah Chowk**	**3.12**	**152**	P	**Pn**	14 51 42.7	+3.5
THW	**Thamme Wali**	**3.63**	**177**	P	**Pn**	14 51 47.6	+1.6
KSH	**Kashi**	**4.70**	**48**	Pn	**Pn**	14 51 59.1	-1.3
KSH				Sn	**Sn**	14 52 41.1	-13
KSH				smax			
	comp=N,77nm,0.5s						
KSH				smax			
	comp=E,61nm,0.4s						
AML	**Almayashu**	**5.95**	**16**	P	**Pn**	14 52 18.2	+0.8
	SNR=57						
AML	**Almayashu**	**5.95**	**16**	*e*Pn	**Pn**	14 52 18.1	+0.7
	comp=E,31nm,0.4s						
AML				*e*S	**Sn**	14 53 22.6	-1.4
KZA	**Kyzart**	**6.36**	**26**	P	**Pn**	14 52 24.4	+1.5
	SNR=9.3						
KZA	**Kyzart**	**6.36**	**26**	*e*P	**Pn**	14 52 24.3	+1.4
	comp=E,3.7nm,0.4s						
EKS2	**Erkin-Say**	**6.48**	**15**	P	**Pn**	14 52 25.3	+0.8
	SNR=21						
EKS2	**Erkin-Say**	**6.48**	**15**	*e*P	**Pn**	14 52 25.2	+0.8
	comp=E,11nm,0.4s						
EKS2				*e*S	**Sn**	14 53 36.9	+0.1
AAK	**Ala-Archa**	**6.62**	**20**	P	**Pn**	14 52 27.8	+1.4
	SNR=8.9						
AAK	**Ala-Archa**	**6.62**	**20**	P	**Pn**	14 52 27.8	+1.3
	comp=E,0.1nm,0.3s,baz=173,slow=4.3,SNR=37						
AAK				S	**Sn**	14 53 40.8	+0.4
	comp=E,0.0nm,0.3s,baz=135,slow=21,SNR=4.6						
SDNR	**Sundarnagar**	**6.70**	**136**	*e*PKP	**Sn**	14 53 41.5	-1.0
KK31	**Karatay Array**	**6.71**	**354**	⇑Pn	**Pn**	14 52 26.3	-1.4
	comp=E,17nm,0.4s,baz=180,slow=13,SNR=197						
KK31				⇑Sn	**Sn**	14 53 33.2	-9.4
	comp=E,10nm,0.7s,baz=172,slow=21,SNR=5.5						
KKAR	**Karatay Array**	**6.71**	**354**	*e*P	**Pn**	14 52 26.3	-1.4
	comp=E,34nm,0.4s						
KKAR				*e*S	**Sn**	14 53 35.9	-6.7
USP	**Osponovka**	**7.22**	**18**	P	**Pn**	14 52 35.5	+0.9
	SNR=8.7						
TKM2	**Tokmak 2**	**7.22**	**25**	P	**Pn**	14 52 36.0	+1.4
	SNR=5.0						
DANN	**Dangsing**	**13.12**	**124**	*e*P	**Pn**	14 53 53.0	-1.2
	comp=E,8.9nm,0.4s						
MKAR	**Makanchi Array**	**13.13**	**35**	P	**Pn**	14 53 55.1	+1.0
	comp=E,0.1nm,0.3s,baz=213,slow=13,SNR=2.9						
MK31	**Makanchi Array**	**13.13**	**35**	*e*P	**Pn**	14 53 54.6	+0.4
MK31				*e*		14 54 01.6	
KOLN	**Koldanda**	**13.41**	**127**	*e*P	**Pn**	14 53 57.6	-0.3
	comp=E,6.3nm,0.4s						
GKN	**Gorkha**	**13.94**	**123**	*e*P	**Pn**	14 54 04.4	-0.4
	comp=E,12nm,0.4s						
DMN	**Daman**	**14.51**	**123**	*e*P	**Pn**	14 54 11.3	-0.9
	comp=E,6.9nm,0.4s						
KKN	**Kakani**	**14.51**	**122**	*e*P	**Pn**	14 54 11.4	-0.8
	comp=E,8.3nm,0.4s						
PKI	**Pulchoki**	**14.74**	**123**	*e*P	**Pn**	14 54 14.4	-0.7
AB31	**Akbulak array**	**15.34**	**330**	P	**Pn**	14 54 21.4	-1.1
AB31				S	**S**	14 57 00.5	-21
ABKAR	**Akbulak array**	**15.34**	**330**	*e*P	**Pn**	14 54 18.2	-4.3
	comp=E,2.7nm,0.3s						
ODAN	**Odare**	**16.55**	**121**	*e*P	**Pn**	14 54 36.7	-1.0
	comp=E,5.3nm,0.4s						
BVAR	**Borovoye Array**	**16.62**	**358**	P	**Pn**	14 54 37.5	-0.9
	comp=E,0.3nm,0.3s,baz=159,slow=13,SNR=5.3						
AKTK	**Aktyubinsk**	**17.04**	**329**	P	**Pn**	14 54 41.8	-1.8
AKTO	**Aktyubinsk**	**17.04**	**329**	P	**Pn**	14 54 41.8	-1.8
	comp=E,0.8nm,0.3s,baz=133,slow=15,SNR=9.2						
ZALV	**Zalesovo Beam**	**19.82**	**24**	P	**P**	14 55 14.5	+0.3
	comp=E,0.5nm,0.3s,baz=225,slow=11,SNR=7.6						
FINES	**FINESS Array B**	**37.76**	**326**	P	**P**	14 57 58.8	+1.2
	comp=E,2.4nm,0.9s,mb4.0,baz=123,slow=7.0,SNR=3.6						
ARCES	**ARCESS Array B**	**41.36**	**337**	P	**P**	14 58 29.3	+2.0
	comp=E,0.6nm,0.4s,mb3.8,baz=99,slow=7.5,SNR=8.8						
ARCES	**ARCESS Array B**	**41.36**	**337**	P	**P**	14 58 29.3	+2.0
NB2	**NORSAR Subarra**	**44.67**	**323**	P	**P**	14 58 54.8	+0.7
	comp=Z,0.5nm,0.3s,mb3.7,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.67**	**323**	P	**P**	14 58 54.4	+0.3
	comp=Z,0.6nm,0.5s,mb3.6,baz=97,slow=7.2,SNR=4.2						
WRA	**Warramunga Arr**	**81.62**	**122**	P	**P**	15 03 00.6	+1.9
	comp=Z,0.4nm,1.0s,mb3.2,baz=326,slow=4.8,SNR=2.9						

*BJI **10** 14:51:25.7, 10°.90S×163°.00E, h10km, mb4.6/10*

*IDC **10** 14:51:31.4±4.2, 11°.03S×163°.11E, h45km±35km, mb4.1/13, mb1 4.2/15, mb1mx4.1/20, mbtmp4.1/15, ML4.4/2, MS4.1/1, Ms1 4.1/1, ms1mx3.9/25, Error ellipse: s-maj=29.5km s-min=17.3km az=109.0*

*ISCJB **10** 14:51:33.2±2.7, 11°.02S±0°.08×163°.0E±0°.1, h73km±22km, mb4.3/22, Error ellipse: s-maj=21.1km s-min=11.8km az=21.5*

*NEIC **10** 14:51:34.2±2.6, 10°.92S×162°.98E, h68km±21km, mb4.8/6, Error ellipse: s-maj=22.1km s-min=11.1km az=121.0*

ISC 10 14:51:34.4±2.5, 11°.00S±0°.08×163°.0E±0°.1, h71km±20km, n36, σ0°94/36, mb4.3/22, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.37**	**297**	P	**Pn**	14 52 23.5	-1.2
	98nm,0.3s,baz=149,slow=4.4,SNR=49						
HNR				S	**Sn**	14 53 04.1	+0.7
	135nm,0.3s,baz=49,slow=20,SNR=8.7						
HNR				LR	LR	14 53 41.7	
	comp=Z,3μm,21.1s,baz=253,slow=37						
HNR	**Honiara**	**3.37**	**297**	*e*P	**Pn**	14 52 23.6	-1.0
HNR				*e*S	**Sn**	14 53 05.2	+1.7
HNR				LR	LR	14 53 41.7	
CTA	**Charters Tower**	**18.46**	**239**	P	**Pn**	14 55 45.8	+0.3
	0.3nm,0.3s,baz=66,slow=13,SNR=3.8						
CTAO	**Charters Tower**	**18.46**	**239**	*e*P	**Pn**	14 55 46.8	+1.3
	13nm,0.8s						
MTSU	**Mount Surprise**	**19.39**	**246**	*e*P	**Pn**	14 55 57.0	+0.3
	34nm,0.8s						
COEN	**Coen**	**19.56**	**259**	*e*P	**Pn**	14 55 59.0	+0.4
CMSA	**Cobar Meteorol**	**25.95**	**215**	*e*P	**P**	14 57 00.8	+0.5
STKA	**Stephens Creek**	**28.66**	**220**	P	**P**	14 57 25.0	+0.4
	2.8nm,0.8s,mb3.9,baz=52,slow=12,SNR=7.3						
STKA				PcP	PcP	15 00 34.3	+0.4
	0.5nm,0.4s,baz=76,slow=4.6,SNR=3.1						
STKA	**Stephens Creek**	**28.66**	**220**	*e*P	**P**	14 57 24.9	+0.3
	3.1nm,0.8s,mb4.0						
WB2	**Warramunga Arr**	**28.95**	**249**	*e*P	**P**	14 57 26.3	-1.0
WRA	**Warramunga Arr**	**28.96**	**249**	P	**P**	14 57 26.5	-0.9
	1.6nm,0.6s,mb3.9,baz=78,slow=9.2,SNR=30						
WRA				PcP	PcP	15 00 35.3	+0.4
	0.2nm,0.6s,baz=78,slow=2.5,SNR=7.1						
KAKA	**Kakadu**	**29.93**	**264**	*e*P	**P**	14 57 34.1	-2.0
ASAR	**Alice Springs**	**30.40**	**242**	P	**P**	14 57 39.3	-0.9
	3.8nm,0.8s,mb4.1,baz=68,slow=9.9,SNR=44						
ASAR				PcP	PcP	15 00 38.8	+0.2
	0.6nm,0.6s,baz=83,slow=2.0,SNR=5.0						
KNA	**Kununurra**	**33.59**	**258**	*e*P	**P**	14 58 07.4	-0.8
	4.1nm,0.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**36.77**	**255**	⇑*i*P	**P**	14 58 34.3	-1.2
	14nm,0.6s,mb5.1						
KSRS	**Korea Array**	**58.34**	**328**	P	**P**	15 01 23.2	+0.9
	0.7nm,0.6s,mb3.9,baz=140,slow=7.8,SNR=5.1						
CASY	**Casey**	**65.45**	**201**	*e*P	**P**	15 02 10.1	+0.5
	18nm,0.5s,mb5.1						
CMAR	**Chiang Mai Arr**	**69.61**	**294**	P	**P**	15 02 37.0	+0.3
	1.3nm,0.8s,mb3.8,baz=100,

comp=N,0.6nm,0.3s,baz=303,slow=22,SNR=3.4
CPUP Villa Florida 11.11 112 P **Pn 15 06 03.4 +1.5**
comp=N,0.4nm,0.3s,baz=280,slow=13,SNR=6.3
CPUP Villa Florida 11.11 112 *e*P **Pn 15 06 03.5 +1.6**
NNA Nana 12.98 322 LR LR 15 11 41.1
comp=N,1μm,18.9s,baz=224,slow=38
TRQA Tornquist 16.56 161 *e*P **Pn 15 07 11.2 -2.1**
comp=N,26nm,0.9s
TRQA *e* 15 07 15.8
PLCA Paso Flores 18.22 184 P **Pn 15 07 32.9 -0.8**
comp=N,0.5nm,0.3s,baz=5.2,slow=13,SNR=15
PLCA Paso Flores 18.22 184 *e*P **Pn 15 07 33.6 0.0**
SPB Sao Paulo 19.69 97 *e*P **Pn 15 07 49.9 -1.3**
comp=N,20nm,0.7s
BDFB Brasilia 20.78 74 P **P 15 08 00.1 -0.9**
comp=N,13nm,0.6s,baz=254,slow=13,SNR=18
RCBR Riachuelo 35.82 67 P **P 15 10 18.4 0.0**
comp=N,15nm,0.8s,mb5.0,baz=233,slow=9.7,SNR=8.4
TXAR Lajitas Array 61.52 325 P **P 15 13 36.0 +0.9**
comp=N,0.2nm,0.7s,mb3.2,baz=104,slow=3.8,SNR=3.4
TXAR pP pP 15 13 59.6 +5.1
comp=N,0.3nm,0.8s,baz=161,slow=6.4,SNR=2.7
QSPA South Pole Qui 67.68 180 *e*P **P 15 14 15.5 +1.0**
comp=N,11nm,1.2s,mb4.5
DBIC Dimbokro 68.92 73 P **P 15 14 24.9 +1.6**
comp=N,1.5nm,0.4s,mb4.2,baz=182,slow=9.2,SNR=3.1
DBIC Dimbokro 68.92 73 P **P 15 14 24.9 +1.6**
SYO Syowa Base 75.52 159⇑ *e*P **P 15 15 00.6 -1.1**
NVAR Mina Array Bea 76.35 322 P **P 15 15 10.5 +3.6**
comp=N,0.1nm,0.4s,mb2.9,baz=161,slow=8.5,SNR=2.9
NVAR pP pP 15 15 30.8 +3.8
comp=N,0.3nm,0.5s,baz=132,slow=5.0,SNR=3.4
MAW Mawson 83.33 163 P **P 15 15 43.9 -0.3**
comp=N,2.5nm,0.5s,mb4.3,baz=224,slow=7.4,SNR=8.4
ASAR Alice Springs 129.06 207 PKP PKPdf 15 22 25.1 -0.8
comp=N,0.4nm,0.7s,baz=145,slow=1.6,SNR=6.6
ASAR pPKP pPKPdf 15 22 51.8 +4.4
comp=N,0.5nm,0.9s,baz=128,slow=1.5,SNR=2.0
WB2 Warramunga Arr 132.13 210 *e*PKPdf PKPdf 15 22 31.3 -0.4
WRA Warramunga Arr 132.13 210 PKP PKPdf 15 22 31.1 -0.6
comp=N,0.5nm,0.5s,baz=154,slow=1.7,SNR=13
WRA pPKP pPKPdf 15 22 57.7 +4.4
comp=N,0.3nm,0.6s,baz=150,slow=1.8,SNR=1.9
WRA Warramunga Arr 132.13 210 PKP PKPdf 15 22 31.1 -0.6
WRA pPKP pPKPdf 15 22 57.6 +4.4
ZALV Zalesovo Beam 142.82 26 PKP PKPdf 15 22 51.5 +1.3
comp=N,0.6nm,0.5s,baz=299,slow=6.5,SNR=2.4
ZALV pPKP pPKPdf 15 23 16.1 +4.3
comp=N,0.4nm,0.4s,baz=336,slow=3.3,SNR=2.7
ZALV Zalesovo Beam 142.82 26 PKP PKPdf 15 22 51.5 +1.3
ZALV pPKP pPKPdf 15 23 16.1 +4.3
MKAR Makanchi Array 146.38 37 PKPbc PKPbc 15 22 58.1 +0.1
comp=N,0.9nm,0.9s,baz=322,slow=3.7,SNR=5.4
MKAR pPKPbc pPKPbc 15 23 21.5 +2.2
comp=N,1.0nm,0.6s,baz=318,slow=3.3,SNR=6.2
MKAR Makanchi Array 146.38 37 PKPbc PKPbc 15 22 58.1 +0.1
MKAR pPKPbc pPKPbc 15 23 21.5 +2.2

IDC 10 15:16:41.1±47.0, 16°.56S×177°.05W, h0km, mb4.4/3, mb1 4.6/3, mb1mx3.9/17, mbtmp4.4/3, Error ellipse: s-maj=869.5km s-min=151.4km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.42**	**240**	P	P	15 24 21.4	+0.2
	3.1nm,0.7s,baz=79,slow=10,SNR=9.8						
WRA	**Warramunga Arr**	**46.16**	**258**	P	P	15 25 07.7	-0.2
	0.8nm,0.4s,baz=94,slow=74,SNR=64						
ASAR	**Alice Springs**	**46.41**	**253**	P	P	15 25 09.7	-0.2
	6.7nm,0.4s,baz=88,slow=8.5,SNR=178						

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*BJI **10** 15:31:00.6, 30°.44N×69°.33E, h30km, mB5.1/11, mb4.4/23, Ms4.4/12, Ms7 4.2/12*
*IDC **10** 15:31:02.5±0.9, 30°.47N×70°.00E, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.9/28, mbtmp3.9/16, ML3.6/2, MS3.9/1, Ms1 3.9/1, ms1mx3.0/39, Error ellipse: s-maj=23.8km s-min=15.5km az=45.0*
*ISCJB **10** 15:31:03.4±1.2, 30°.52N±0°.04×70°.01E±0°.05, h19km±8km, mb4.1/29, MS4.0/3, Error ellipse: s-maj=8.8km s-min=4.6km az=39.9*
*MOS **10** 15:31:07.4±1.6, 30°.72N×70°.14E, h33km, mb4.2/21, Error ellipse: s-maj=12.5km s-min=6.5km az=88.0*
*NEIC **10** 15:31:08.5±0.7, 30°.65N×70°.02E, h35km, mb4.2/5, Error ellipse: s-maj=11.7km s-min=9.8km az=63.0*
ISC 10 15:31:03.1±1.5, 30°.48N±0°.04×69°.95E±0°.04, h5km±10km, h35km±.9km: pP-P, n102, σ1°35/114, mb4.1/29, MS4.0/3, 5C-4D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**2.77**	**33**	P	**Pn**	**15 31 50.3**	**+2.1**
CEP	**Cherat**	**3.73**	**26**	P	**Pn**	**15 32 03.8**	**+2.4**
CEP				S	**Sn**	**15 32 48.0**	**+2.3**
KBL	**Kabul**	**4.12**	**350**	*e*P	**Pn**	**15 32 09.2**	**+2.4**
CHCP	**Chirah Chowk**	**4.24**	**41**	P	**Pn**	**15 32 10.4**	**+2.0**
DLH	**Dalhousie**	**5.54**	**67**	*ex*	**Pb**	**15 32 38.0**	**-2.3**
DLH				*ex*	x	15 34 14.0	
BHK	**Bhakra**	**5.64**	**79**	*e*PKP	**Pn**	**15 32 28.8**	**+1.2**
BHK				*ex*	x	15 34 05.2	
KHET	**Khetri**	**5.65**	**114**	*ex*	**Pn**	**15 32 27.3**	**-0.6**
KHET				*e*S	**Sn**	**15 33 34.8**	**+1.7**
AJM	**Ajmer**	**5.74**	**133**	*e*PKP	**Pn**	**15 32 29.6**	**+0.5**
AJM				*ex*	x	15 34 02.9	
AJM				AML	AML	15 34 19.7	
	comp=N,346nm,0.7s						
AJM				AML	AML	15 34 19.7	
	comp=E,476nm,0.9s						
KKR	**Kurukshetra**	**5.97**	**93**	*e*PKP	**Pn**	**15 32 34.1**	**+1.9**
SDNR	**Sundarnagar**	**6.12**	**79**	*e*PKP	**Pn**	**15 32 36.5**	**+2.3**
SDNR				*ex*	x	15 33 45.5	
SMLA	**Simla**	**6.25**	**82**	*i* P	**Pn**	**15 32 37.2**	**+1.2**
SMLA				*i* S	**Sn**	**15 33 47.5**	**-0.3**
SMLA				⇓		15 33 56.1	
	comp=N,3μm,0.5s						
SMLA				⇓		15 33 58.0	
	comp=E,4μm,0.7s						
AYAN	**Aya Nagar**	**6.57**	**106**	*e*PKP	**Pn**	**15 32 43.0**	**+2.5**
NDI	**New Delhi**	**6.58**	**104**	*e*PKP	**Pn**	**15 32 42.0**	**+1.4**
NDI				*ex*	x	15 34 27.0	
SONA	**Sohna**	**6.61**	**108**	*ex*	**Pn**	**15 32 40.5**	**-0.5**
SONA				*e*S	**Sn**	**15 33 57.8**	**+1.0**
SONA				AML	AML	15 34 45.7	
	comp=N,237nm,0.2s						
SONA				AML	AML	15 34 50.6	
	comp=E,238nm,0.7s						
BHJ	**Bhuj**	**7.20**	**182**	*e*PKP	**Pn**	**15 32 48.3**	**-0.8**
BHJ				*e*S	**Sn**	**15 34 06.3**	**-4.9**
KLP	**Kalpa**	**7.21**	**79**	*e*PKP	**Pn**	**15 32 51.2**	**+2.0**
KLP				*ex*	x	15 34 18.0	
JOSI	**Joshimath**	**8.29**	**87**	*e*PKP	**Pn**	**15 33 05.8**	**+1.7**
JOSI				*e*S	**Sn**	**15 34 35.5**	**-2.7**
PTH	**Pithoragarh**	**8.95**	**93**	*ex*	x	15 33 26.2	
BHPL	**Bhopal**	**9.82**	**135**	*e*PKP	**Pn**	**15 33 26.4**	**+1.3**
BHPL				*e*S	**Sn**	**15 35 11.6**	**-4.2**
KSH	**Kashi**	**10.28**	**27**	*e*P	**Pn**	**15 33 27.6**	**-3.7**
KSH				*e*pP		15 33 34.6	
KSH				*e*sP		15 33 39.5	
KSH				*e*S	**Sn**	**15 35 14.3**	**-13**
KSH				pmax	pmax		
	comp=Z,490nm,5.1s						
KSH				LR	LR		
	comp=N,960nm,11.6s						
KSH				LR	LR		
	comp=E,960nm,6.0s						
KSH				LR	LR		
	comp=Z,2μm,20.0s						
AML	**Almayashu**	**12.02**	**14**	*e*Pn	**Pn**	**15 33 54.9**	**-0.2**
	comp=Z,28nm,0.6s						
AML				*e*S	**Sn**	**15 36 04.2**	**-5.2**
DANN	**Dangsing**	**12.23**	**97**	*e*P	**Pn**	**15 33 56.4**	**-1.6**
	comp=Z,120nm,0.8s						
KOLN	**Koldanda**	**12.24**	**99**	*e*P	**Pn**	**15 33 57.2**	**-1.0**
	comp=Z,18nm,0.4s						
KZA	**Kyzart**	**12.34**	**19**	*e*Pn	**Pn**	**15 33 58.0**	**-1.4**
	comp=Z,25nm,0.9s						
EKS2	**Erkin-Say**	**12.54**	**13**	*e*P	**Pn**	**15 34 01.1**	**-1.2**
	comp=Z,9.4nm,0.8s						
KKAR	**Karatay Array**	**12.61**	**2**	*e*P	**Pn**	**15 34 01.9**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,12nm,0.7s						
KKAR	**Karatay Array**	**12.61**	**2**	*e*P	**Pn**	**15 34 01.9**	**-1.3**
	comp=Z,12nm,0.7s						
AAK	**Ala-Archa**	**12.67**	**15**	Pn	**Pn**	**15 34 03.5**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=152,slow=4.9,SNR=15						
AAK				LR	LR	15 40 03.6	
	comp=Z,566nm,19.8s,baz=268,slow=43						
AAK	**Ala-Archa**	**12.67**	**15**	P	**Pn**	**15 34 03.5**	**-0.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,567nm,19.8s						
AAK	**Ala-Archa**	**12.67**	**15**	Pn	**Pn**	**15 34 03.5**	**-0.5**
AAK				LR	LR	15 40 03.6	
FRU	**Bishkek**	**12.89**	**16**	*e*P	**Pn**	**15 34 08.0**	**+1.1**
FRU				pmax	pmax		
	comp=N,60nm,2.0s						
GKN	**Gorkha**	**13.06**	**97**	*e*P	**Pn**	**15 34 07.1**	**-2.3**
	comp=N,46nm,0.5s						
GKN				*e*S	**Sn**	**15 36 28.5**	**-6.7**
TKM2	**Tokmak 2**	**13.22**	**18**	*e*P	**Pn**	**15 34 10.3**	**-1.1**
TKM2				pmax	pmax		
	comp=Z,15nm,1.0s						
TKM2	**Tokmak 2**	**13.22**	**18**	*e*P	**Pn**	**15 34 10.3**	**-1.1**
	comp=Z,15nm,1.0s						
DMN	**Daman**	**13.57**	**98**	*e*P	**Pn**	**15 34 15.1**	**-1.2**
KKN	**Kakani**	**13.67**	**97**	*e*P	**Pn**	**15 34 15.3**	**-2.4**
	comp=Z,28nm,0.5s						
PKI	**Pulchoki**	**13.84**	**98**	*e*P	**Pn**	**15 34 18.3**	**-1.7**
PKI				*e*S	**Sn**	**15 36 48.4**	**-5.7**
GUN	**Gumba**	**14.15**	**96**	*e*P	**Pn**	**15 34 21.3**	**-3.0**
	comp=Z,105nm,0.4s						
HYB	**Hyderabad**	**15.19**	**147**	*i* P	**Pn**	**15 34 43.0**	**+4.6**
ODAN	**Odare**	**15.73**	**99**	*e*P	**Pn**	**15 34 45.4**	**-0.1**
	comp=Z,30nm,0.6s						
TAPN	**Taplejung**	**15.87**	**97**	*e*P	**Pn**	**15 34 45.0**	**-2.2**
	comp=Z,61nm,0.8s						
LSA	**Lhasa**	**18.37**	**87**	P	**Pn**	**15 35 22.2**	**+3.5**
LSA	**Lhasa**	**18.37**	**87**	P	**Pn**	**15 35 22.4**	**+3.7**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LSA	**Lhasa**	**18.37**	**87**	P	**Pn**	**15 35 22.4**	**+3.7**
	comp=Z,8.3nm,0.8s						
MK31	**Makanchi Array**	**18.89**	**27**	*e*P	**Pn**	**15 35 23.5**	**-1.4**
MKAR	**Makanchi Array**	**18.89**	**27**	P	**Pn**	**15 35 24.5**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=202,slow=12,SNR=13						
WMQ	**Urumqi**	**19.38**	**42**	*e*P	sP	15 35 41.4	+10
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
WMQ	**Urumqi**	**19.38**	**42**	*e*P	**Pn**	**15 35 30.0**	**-0.8**
WMQ				pP	pP	15 35 38.0	+7.0
WMQ				sP	sP	15 35 43.0	+11
WMQ				PP		15 35 47.0	
WMQ				S	**Sn**	**15 38 57.0**	**-11**
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s						
WMQ				LR	LR		
	comp=N,390nm,10.0s						
WMQ				LR	LR		
	comp=E,370nm,10.0s						
WMQ				LR	LR		
	comp=Z,300nm,10.0s						
SHL	**Shillong**	**19.97**	**99**	*e*PKP	**Pn**	**15 35 38.0**	**0.0**
ABKAR	**Akbulak array**	**20.23**	**341**	*e*P	**P**	**15 35 38.1**	**-0.9**
	comp=Z,4.7nm,0.7s						
KURK	**Kurchatov**	**21.23**	**15**	*c i*P	**P**	**15 35 49.2**	**-0.6**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
KURK	**Kurchatov**	**21.23**	**15**	*e*P	**P**	**15 35 48.7**	**-1.1**
	comp=Z,9.8nm,0.9s,mb4.1						
AKTK	**Aktyubinsk**	**21.85**	**339**	P	**P**	**15 35 56.0**	**-0.5**
AKTO	**Aktyubinsk**	**21.85**	**339**	P	**P**	**15 35 56.0**	**-0.5**
	comp=Z,2.9nm,0.6s,mb3.9,baz=150,slow=11,SNR=12						
AKTO	**Aktyubinsk**	**21.85**	**339**	P	**P**	**15 35 56.0**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
BVAR	**Borovoye Array**	**22.53**	**1**	P	**P**	**15 36 03.4**	**-0.3**
	comp=Z,5.9nm,0.8s,mb4.1,baz=171,slow=8.9,SNR=17						
BVAR	**Borovoye Array**	**22.53**	**1**	P	**P**	**15 36 03.4**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**22.57**	**1⇑**	*e*P	**P**	**15 36 03.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
BRVK	**Borovoye**	**22.57**	**1**	*e*P	**P**	**15 36 03.7**	**-0.3**
	comp=Z,18nm,1.0s,mb4.4						
GNI	**Garni**	**22.65**	**302**	P	**P**	**15 36 06.5**	**+1.4**
	comp=Z,3.3nm,0.4s,mb4.2,baz=150,slow=20,SNR=3.1						
GNI	**Garni**	**22.65**	**302**	*de*P	**P**	**15 36 07.1**	**+1.9**
GNI				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV	**Kislovodsk**	**25.40**	**310**	*e*P	**P**	**15 36 36.3**	**+4.8**
KIV				*e*		15 37 07.5	
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.0						
ZALV	**Zalesovo Beam**	**25.81**	**20**	P	**P**	**15 36 35.2**	**+0.2**
	comp=Z,7.1nm,0.8s,mb4.3,baz=216,slow=4.8,SNR=30						
ZALV	**Zalesovo Beam**	**25.81**	**20**	P	**P**	**15 36 35.2**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
ZALV	**Zalesovo Beam**	**25.81**	**20**	P	**P**	**15 36 35.2**	**+0.2**
GTA	**Gaotai**	**25.96**	**62**	*e*P	**P**	**15 36 38.7**	**+2.1**
GTA				pP	pP	15 36 47.7	+10
GTA				sP	sP	15 36 52.2	+14
GTA				S	**S**	**15 41 05.5**	**-2.1**
GTA				sS	sS	15 41 19.3	+9.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
GTA				pmax	pmax		
	comp=Z,340nm,7.1s						
GTA				LR	LR		
	comp=N,320nm,19.0s,MS4.0						
GTA				LR	LR		
	comp=E,260nm,17.1s,MS4.0						
GTA				LR	LR		
	comp=Z,330nm,15.9s,MS4.0						
NVS	**Novosibirsk**	**26.15**	**18**	*e*P	**P**	**15 36 38.2**	**+0.1**
NVS				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb3.9						
NVS				pmax	pmax		
	comp=N,5.0nm,1.5s						
ARU	**Arti**	**27.15**	**346**	*d i*P	**P**	**15 36 46.1**	**-1.1**
ARU				S	**S**	**15 41 19.6**	**-6.4**
ARU				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.3						
ARU	**Arti**	**27.15**	**346**	P	**P**	**15 36 47.8**	**+0.7**
	comp=Z,15nm,1.3s,mb4.4						
CMAR	**Chiang Mai Arr**	**28.89**	**108**	P	**P**	**15 37 03.8**	**+0.7**
	comp=Z,1.1nm,0.7s,mb3.7,baz=295,slow=9.9,SNR=9.2						
CMAR	**Chiang Mai Arr**	**28.89**	**108**	P	**P**	**15 37 03.8**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CD2	**Chengdu**	**29.02**	**80**	*e*P	**P**	**15 37 03.8**	**-0.3**
CD2				pP	pP	15 37 13.3	+7.8
CD2				sP	sP	15 37 17.3	+11
CD2				PP	PP	15 37 57.2	-12
CD2				S	**S**	**15 41 49.8**	**-6.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				pmax	pmax		
	comp=Z,20nm,5.2s						
CD2				LR	LR		
	comp=N,140nm,12.3s						
CD2				LR	LR		
	comp=Z,110nm,14.6s,MS3.6						
KMI	**Kunming**	**29.43**	**92**	P	**P**	**15 37 08.7**	**+0.9**
KMI				pP	pP	15 37 19.1	+10
KMI				sP	sP	15 37 22.5	+13
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
BRTR	**Keskin Array B**	**30.93**	**297**	P	**P**	**15 37 20.9**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.7,baz=128,slow=12,SNR=4.3						
BRTR	**Keskin Array B**	**30.93**	**297**	*ce*P	**P**	**15 37 24.8**	**+3.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**30.93**	**297**	P	**P**	**15 37 20.9**	**0.0**
ZAK	**Zakamensk**	**31.85**	**42**	*e*P	**P**	**15 37 33.1**	**+4.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.8						
GYA	**Guiyang**	**32.44**	**88**	*e*P	**P**	**15 37 34.6**	**+0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
SONM	**Songino Array**	**32.77**	**48**	P	**P**	**15 37 38.1**	**+1.1**
	comp=Z,1.8nm,0.9s,mb4.0,baz=244,slow=6.4,SNR=4.1						
SONM	**Songino Array**	**32.77**	**48**	P	**P**	**15 37 38.1**	**+1.0**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	**Obninsk**	**34.18**	**326**	*e*P	**P**	**15 37 49.0**	**-0.2**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
HHC	**Hu-ho-hao-te**	**35.07**	**61**	*e*P	**P**	**15 37 56.7**	**-0.4**
HHC				pP	pP	15 38 06.4	+7.9
HHC				sP	sP	15 38 10.4	+11
HHC				PP	PP	15 39 14.3	-2.2
HHC				PcP	PcP	15 40 30.4	+1.5
HHC				S	**S**	**15 43 24.2**	**-5.9**
HHC				ScP	ScP	15 44 11.5	-3.7
HHC				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,240nm,7.3s						
HHC				LR	LR		
	comp=N,310nm,13.8s,MS4.4						
HHC				LR	LR		
	comp=E,330nm,13.2s,MS4.4						
HHC				LR	LR		
	comp=Z,280nm,15.7s,MS4.1						
VSU	**Vasula**	**40.53**	**326⇑**	*e*P	**P**	**15 38 43.9**	**+0.9**
VSU				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.7						
FINES	**FINESS Array B**	**42.13**	**330**	P	**P**	**15 38 55.4**	**-0.7**
	comp=Z,2.0nm,0.7s,mb3.8,baz=135,slow=12,SNR=2.5						
FINES	**FINESS Array B**	**42.13**	**330**	P	**P**	**15 38 55.4**	**-0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**46.43**	**340**	P	**P**	**15 39 30.2**	**-0.2**
	comp=Z,2.5nm,0.8s,mb4.2,baz=121,slow=6.6,SNR=7.4						
ARCES	**ARCESS Array B**	**46.43**	**340**	P	**P**	**15 39 30.2**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSRS	**Korea Array**	**47.94**	**65**	P	**P**	**15 39 42.8**	**+0.1**
	comp=Z,1.6nm,0.7s,mb4.2,baz=265,slow=8.4,SNR=4.4						
KSRS	**Korea Array**	**47.94**	**65**	P	**P**	**15 39 42.8**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
MDJ	**Mudanjiang**	**48.33**	**56**	P	**P**	**15 39 39.6**	**-6.0**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,230nm,20.9s						
NOA	**NORSAR Array B**	**48.78**	**326**	P	**P**	**15 39 50.8**	**+2.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=103,slow=8.2,SNR=2.9						
NOA	**NORSAR Array B**	**48.78**	**326**	P	**P**	**15 39 50.8**	**+2.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YAK	**Yakutsk**	**49.44**	**32**	*e*P	**P**	**15 39 54.9**	**+1.0**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
SEY	**Seymchan**	**59.95**	**32⇑**	*e*P	**P**	**15 41 07.6**	**-2.5**
WRA	**Warramunga Arr**	**79.64**	**120**	P	**P**	**15 43 10.8**	**-1.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=321,slow=5.2,SNR=14						
WRA	**Warramunga Arr**	**79.64**	**120**	P	**P**	**15 43 10.8**	**-1.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**80.81**	**15**	P	**P**	**15 43 17.0**	**-0.5**
	comp=Z,1.1nm,1.2s,mb3.7,baz=311,slow=3.5,SNR=4.0						
ILAR	**Eielson Array**	**80.81**	**15**	P	**P**	**15 43 17.0**	**-0.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ASAR	**Alice Springs**	**81.60**	**124**	P	**P**	**15 43 21.4**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.5,baz=310,slow=5.5,SNR=12						
ASAR	**Alice Springs**	**81.60**	**124**	P	**P**	**15 43 21.5**	**-0.8**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PLCA	**Paso Flores**	**146.54**	**241**	PKPbc	PKPbc	15 50 47.6	+2.0
	comp=Z,1.1nm,0.8s,baz=216,slow=1.9,SNR=2.9						
PLCA	**Paso Flores**	**146.54**	**241**	PKP2	PKPbc	15 50 47.6	+2.0
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

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*ISK **10** 15:36:44.4, 37°.14N×37°.06E, h3km, MD2.9*
*ISCJB **10** 15:36:45.3±1.0, 37°.05N±0°.06×37°.15E±0°.05, h10km, Error ellipse: s-maj=9.6km s-min=5.4km az=161.3*
*CSEM **10** 15:36:45.1±0.5, 37°.06N×37°.11E, h2km, MD2.8, Error ellipse: s-maj=12.1km s-min=6.9km az=160.0*
*DDA **10** 15:36:46.2, 37°.12N×37°.17E, h7km±7km, Md2.8*
ISC 10 15:36:45.3±1.0, 37°.05N±0°.07×37°.16E±0°.05, h10km, n17, σ1°34/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.13**	**20**	*e*PG	**Pg**	**15 36 47.5**	**-1.0**
GAZ				*e*SG	**Sg**	**15 36 49.9**	**-0.7**
GAZ	**Gaziantep**	**0.13**	**20**	*e*Pg	**Pg**	**15 36 47.5**	**-1.0**
GAZ				*e*Sg	**Sg**	**15 36 49.9**	**-0.7**
GZT	**Gaziantep**	**0.45**	**46**	*i* P	**Pg**	**15 36 51.8**	**-2.3**
GZT				*i* S	**Sg**	**15 37 00.7**	**+0.6**
KMRS	**Kahramanmaras**	**0.50**	**336**	*e*PG	**Pg**	**15 36 53.0**	**-2.1**
KMRS	**Kahramanmaras**	**0.50**	**336**	*e*Pg	**Pg**	**15 36 53.0**	**-2.1**
ANDN	**Andirin**	**0.84**	**310**	*e*P	**Pg**	**15 37 02.5**	**+1.0**
ANDN				*i* S	**Sg**	**15 37 14.7**	**+2.3**
ANDN	**Andirin**	**0.84**	**310**	*e*P	**Pg**	**15 37 02.5**	**+1.0**
ANDN				*i* S	**Sg**	**15 37 14.7**	**+2.3**
ATAB	**Bozova**	**1.00**	**65**	*e*P	**Pg**	**15 37 05.0**	**+0.4**
ATAB				*i* S	**Sg**	**15 37 18.0**	**+0.3**
ATAB	**Bozova**	**1.00**	**65**	*e*P	**Pg**	**15 37 05.0**	**+0.4**
ATAB				*i* S	**Sg**	**15 37 18.0**	**+0.3**
KOZT	**Kozan**	**1.15**	**293**	*e*PG	**Pg**	**15 37 05.2**	**-2.1**
HTY	**Hatay**	**1.23**	**222**	*e*PN	**Pn**	**15 37 09.3**	**+0.7**
HTY	**Hatay**	**1.23**	**222**	*e*Pn	**Pn**	**15 37 09.3**	**+0.7**
AKCD	**Akcadag**	**1.39**	**26**	*i* P	**Pn**	**15 37 11.7**	**+1.0**
AKCD				*i* S	**Sn**	**15 37 30.3**	**+1.1**
AKCD	**Akcadag**	**1.39**	**26**	*i* P	**Pn**	**15 37 11.7**	**+0.9**
AKCD				*i* S	**Sn**	**15 37 30.3**	**+1.1**
MALT	**Malatya**	**1.62**	**38**	*e*PN	**Pn**	**15 37 14.8**	**+0.8**
MALT	**Malatya**	**1.62**	**38**	*e*Pn	**Pn**	**15 37 14.8**	**+0.9**
SARI	**SarD1z-Kayseri**	**1.67**	**348**	*e*PN	**Pn**	**15 37 11.2**	**-3.5**

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*ISCJB **10** 15:48:37.9±2.8, 27°.0N±0°.2×55°.7E±0°.3, h10km, Error ellipse: s-maj=44.7km s-min=5.7km az=135.5*
*KISR **10** 15:48:37.6±0.7, 27°.38N×55°.56E, h34km±999km

σ1§33/19, mb3.6/4, 1D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.46**	**84**	Pg	**Pg**	**15 50 50.4**	**+1.3**
KMI				Sg	**Sg**	**15 51 33.4**	**-0.6**
KMI				smax			
	comp=N,170nnm,0.9s						
KMI				smax			
	comp=E,92nnm,0.9s						
CHRT	**Chiangrai**	**4.95**	**171**	PN	**Pn**	**15 51 00.0**	**+2.7**
CHRT	**Chiangrai**	**4.95**	**171**	PG	**Pg**	**15 51 17.0**	**-0.7**
CHG	**Chiang Mai**	**5.94**	**180**	⇓P	**Pg**	**15 51 36.1**	**-0.5**
	comp=E,42nnm,0.7s						
CHTO	**Chiang Mai**	**5.94**	**180**	*e*Pn	**Pn**	**15 51 12.2**	**+1.3**
	comp=E,22nnm,0.7s						
CHTO				*e*Pg	**Pg**	**15 51 33.0**	**-3.7**
CHTO				*e*Sg	**Sg**	**15 52 52.1**	**-1.5**
CMAR	**Chiang Mai Arr**	**6.29**	**180**	Pn	**Pn**	**15 51 17.9**	**+2.1**
	comp=E,0.3nnm,0.3s,baz=354,slow=13,SNR=8.4						
CMAR				Pg	**Pg**	**15 51 41.7**	**-1.7**
	comp=E,3.1nm,0.3s,baz=351,slow=17,SNR=50						
CMAR				Lg		15 53 06.8	
	comp=E,1.4nm,0.3s,baz=358,slow=31,SNR=6.2						
CD2	**Chengdu**	**7.44**	**34**	*e*Pn	**Pn**	**15 51 36.1**	**+4.6**
CD2				Sn	**Sn**	**15 53 05.9**	**+10**
CD2				Sg	**Sg**	**15 53 40.5**	**-1.3**
CD2				smax			
	comp=N,20nm,1.4s						
CD2				smax			
	comp=E,20nm,1.4s						
BDT	**Bhumibol Dam**	**7.50**	**180**	P	**Pg**	**15 52 05.5**	**-1.0**
	comp=E,16nm,0.8s						
MK31	**Makanchi Array**	**25.69**	**333**	*e*P	**P**	**15 55 12.6**	**-0.4**
MKAR	**Makanchi Array**	**25.69**	**333**	P	**P**	**15 55 12.7**	**-0.3**
	comp=E,1.7nm,0.7s,mb3.7,baz=134,slow=10,SNR=10						
ZALV	**Zalesovo Beam**	**30.99**	**344**	P	**P**	**15 55 59.7**	**-0.6**
	comp=E,0.6nm,0.6s,mb3.6,baz=128,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**56.23**	**139**	P	**P**	**15 59 24.1**	**+0.7**
	comp=E,0.8nm,0.8s,mb3.8,baz=328,slow=7.4,SNR=6.3						
ASAR	**Alice Springs**	**58.89**	**142**	P	**P**	**15 59 44.9**	**+2.7**
	comp=E,0.5nm,1.0s,mb3.5,baz=332,slow=7.6,SNR=3.4						

*IDC **10** 15:51:29.9±1.2, 30°.28N×69°.53E, h0km, mb4.0/13, mb1 4.1/14, mb1mx3.9/26, mbtmp4.0/14, ML4.0/1, MS3.7/2, Ms1 3.7/2, ms1mx3.1/39, Error ellipse: s-maj=32.4km s-min=17.0km az=51.0*
*ISCJB **10** 15:51:32.9±0.5, 30°.39N±0°.04×69°.85E±0°.04, h33km, mb4.0/21, Error ellipse: s-maj=7.2km s-min=4.2km az=39.1*
*MOS **10** 15:51:33.8±1.4, 30°.57N×69°.65E, h33km, mb4.2/19, Error ellipse: s-maj=14.6km s-min=7.7km az=82.0*
*NEIC **10** 15:51:34.8±6.7, 30°.36N×69°.62E, h31km±45km, mb4.0/3, Error ellipse: s-maj=27.2km s-min=11.3km az=219.0*
*BJI **10** 15:51:36.4, 30°.76N×70°.15E, h10km, mB4.7/5, mb4.2/12, Ms4.2/1*

ISC 10 15:51:34.9±0.5, 30°.39N±0°.04×69°.80E±0°.04, h35km, n81, σ1§54/87, mb4.0/21, 5C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**2.92**	**34**	⇑P	**Pn**	**15 52 19.1**	**+0.3**
CEP	**Cherat**	**3.87**	**27**	⇑P	**Pn**	**15 52 32.6**	**+0.8**
KBL	**Kabul**	**4.19**	**351**	*e*P	**Pn**	**15 52 38.2**	**+2.0**
CHCP	**Chirah Chowk**	**4.39**	**41**	P	**Pn**	**15 52 39.2**	**+0.1**
KHET	**Khetri**	**5.74**	**112**	*ex*	x	15 53 05.2	
KHET				*e*S	**Sn**	**15 54 04.1**	**+2.0**
KHET				AML	AML	15 54 41.1	
	comp=E,97nm,0.6s						
KHET				AML	AML	15 54 41.4	
	comp=N,126nm,0.4s						
AJM	**Ajmer**	**5.78**	**131**	*ex*	x	15 52 52.8	
AJM				*e*S	**Sn**	**15 54 03.7**	**+0.5**
AJM				AML	AML	15 54 43.8	
	comp=N,307nm,0.5s						
AJM				AML	AML	15 54 45.7	
	comp=E,278nm,0.5s						
BHK	**Bhakra**	**5.78**	**78**	*ex*	**Pn**	**15 52 55.8**	**-2.3**
BHK				*e*S	**Sn**	**15 54 04.0**	**+0.8**
SDNR	**Sundarnagar**	**6.26**	**78**	*ex*	**Pn**	**15 53 04.9**	**+0.2**
SDNR				*e*S	**Sn**	**15 54 16.5**	**+1.4**
SMLA	**Simla**	**6.39**	**81**	*i* x	**Pn**	**15 53 05.9**	**-0.5**
SMLA				*i* S	**Sn**	**15 54 18.2**	**+0.1**
SMLA				⇓		15 54 22.2	
	comp=E,2μm,0.4s						
SMLA						15 54 22.2	
	comp=N,2μm,0.5s						
SONA	**Sohna**	**6.71**	**107**	*e*PKP	**Pn**	**15 53 11.3**	**+0.4**
SONA				*ex*	x	15 54 50.2	
SONA				AML	AML	15 55 22.9	
	comp=E,177nm,0.5s						
SONA				AML	AML	15 55 23.3	
	comp=N,94nm,0.6s						
BHJ	**Bhuj**	**7.11**	**181**	*e*PKP	**Pn**	**15 53 14.6**	**-1.7**
DDI	**Dehra Dun**	**7.14**	**88**	*e*PKP	**Pn**	**15 53 19.5**	**+2.7**
DDI				*ex*	x	15 55 24.0	
KLP	**Kalpa**	**7.35**	**79**	*e*PKP	**Pn**	**15 53 21.5**	**+1.8**
KLP				*ex*	x	15 54 44.9	
KLP				AML	AML	15 55 41.0	
	comp=E,504nm,0.6s						
KLP				AML	AML	15 55 45.8	
	comp=N,366nm,0.5s						
JOSI	**Joshimath**	**8.43**	**86**	*ex*	**Pn**	**15 53 33.7**	**-0.8**
JOSI				*ex*	x	15 55 13.4	
PTH	**Pithoragarh**	**9.08**	**93**	*ex*	x	15 54 02.0	
BHPL	**Bhopal**	**9.85**	**134**	*ex*	**Pn**	**15 53 50.5**	**-3.5**
BHPL				*e*S	**Sn**	**15 55 40.5**	**-2.9**
BHPL				AML	AML	15 56 60.0	
	comp=N,65nm,0.6s						
BHPL				AML	AML	15 56 60.0	
	comp=E,64nm,0.6s						
KSH	**Kashi**	**10.42**	**27**	P	**Pn**	**15 53 57.5**	**-4.2**
KSH				smax			
	comp=N,50nm,0.6s						
KSH				smax			
	comp=E,29nm,0.5s						
AML	**Almayashu**	**12.13**	**14**	*e*P	**Pn**	**15 54 23.2**	**-1.9**
	comp=E,29nm,0.5s						
AML				*e*S	**Sn**	**15 56 34.5**	**-4.6**
DANN	**Dangsing**	**12.35**	**96**	*e*P	**Pn**	**15 54 26.1**	**-2.1**
	comp=E,62nm,0.6s						
KOLN	**Koldanda**	**12.35**	**99**	*e*P	**Pn**	**15 54 26.6**	**-1.6**
	comp=E,26nm,0.4s						
KZA	**Kyzart**	**12.46**	**19**	*e*P	**Pn**	**15 54 27.6**	**-2.0**
	comp=E,14nm,0.8s						
KKAR	**Karatay Array**	**12.70**	**2**	*e*P	**Pn**	**15 54 30.4**	**-2.5**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KKAR	**Karatay Array**	**12.70**	**2**	*e*P	**Pn**	**15 54 30.4**	**-2.5**
	comp=Z,4.7nm,0.3s						
AAK	**Ala-Archa**	**12.79**	**16**	Pn	**Pn**	**15 54 32.7**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=166,slow=5.8,SNR=21						
AAK				Sn	**Sn**	**15 56 57.3**	**+2.2**
	comp=Z,0.0nm,0.3s,baz=338,slow=20,SNR=4.6						
AAK				LR	LR	16 00 49.3	
	comp=Z,353nm,21.5s,baz=26,slow=43						
AAK	**Ala-Archa**	**12.79**	**16**	P	**Pn**	**15 54 32.7**	**-1.4**
AAK						15 56 57.3	
AAK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,353nm,21.5s						
FRU	**Bishkek**	**13.01**	**16**	*e*P	**Pn**	**15 54 35.0**	**-2.1**
FRU				pmax	pmax		
	comp=Z,20nm,1.8s						
FRU				pmax	pmax		
	comp=N,60nm,1.9s						
GKN	**Gorkha**	**13.18**	**97**	*e*P	**Pn**	**15 54 36.9**	**-2.7**
	comp=N,32nm,0.4s						
DMN	**Daman**	**13.68**	**98**	*e*P	**Pn**	**15 54 44.1**	**-2.3**
KKN	**Kakani**	**13.79**	**97**	*e*P	**Pn**	**15 54 45.2**	**-2.6**
	comp=N,34nm,0.5s						
PKI	**Pulchoki**	**13.95**	**98**	*e*P	**Pn**	**15 54 47.3**	**-2.8**
GUN	**Gumba**	**14.27**	**96**	*e*P	**Pn**	**15 54 50.7**	**-3.7**
	comp=N,126nm,0.5s						
HYB	**Hyderabad**	**15.18**	**146**	*i* P	**Pn**	**15 55 10.0**	**+3.3**
HYB				*e*S	**S**	**15 58 12.0**	**+2.2**
ODAN	**Odare**	**15.85**	**98**	*e*P	**Pn**	**15 55 13.2**	**-2.1**
TAPN	**Taplejung**	**15.98**	**96**	*e*P	**Pn**	**15 55 14.0**	**-3.0**
	comp=N,13nm,0.4s						
LSA	**Lhasa**	**18.50**	**87**	P	**Pn**	**15 55 49.6**	**+1.2**
LSA	**Lhasa**	**18.50**	**87**	P	**Pn**	**15 55 50.5**	**+2.1**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LSA	**Lhasa**	**18.50**	**87**	P	**Pn**	**15 55 50.5**	**+2.0**
	comp=Z,5.4nm,0.7s						
MKAR	**Makanchi Array**	**19.03**	**27**	P	**Pn**	**15 55 53.9**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=208,slow=12,SNR=11						
MKAR				LR	LR	16 04 56.9	
	comp=Z,258nm,19.4s,baz=27,slow=42						
WMQ	**Urumqi**	**19.53**	**42**	*e*P	**Pn**	**15 56 00.6**	**0.0**
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
ABKAR	**Akbulak array**	**20.27**	**341**	*e*P	**P**	**15 56 07.7**	**+0.4**
	comp=Z,2.5nm,0.5s						
KURK	**Kurchatov**	**21.36**	**16**	*ce*P	**P**	**15 56 18.0**	**-0.9**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb3.8						
AKTK	**Aktyubinsk**	**21.89**	**340**	P	**P**	**15 56 23.9**	**-0.7**
AKTO	**Aktyubinsk**	**21.89**	**340**	P	**P**	**15 56 23.9**	**-0.7**
	comp=Z,3.1nm,0.7s,mb3.9,baz=149,slow=12,SNR=6.8						
AKTO	**Aktyubinsk**	**21.89**	**340**	P	**P**	**15 56 23.9**	**-0.7**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
BVAR	**Borovoye Array**	**22.62**	**1**	P	**P**	**15 56 32.2**	**-0.2**
	comp=Z,2.6nm,0.4s,mb4.0,baz=157,slow=8.0,SNR=22						
BVAR	**Borovoye Array**	**22.62**	**1**	P	**P**	**15 56 32.2**	**-0.2**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BRVK	**Borovoye**	**22.66**	**1**	*e*P	**P**	**15 56 32.4**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.5						
BRVK	**Borovoye**	**22.66**	**1**	*e*P	**P**	**15 56 32.4**	**-0.4**
	comp=Z,25nm,1.3s,mb4.5						
KIV	**Kislovodsk**	**25.36**	**310**	*e*P	**P**	**15 56 55.2**	**-3.3**
KIV				*i*		15 57 29.6	
KIV				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.3						
ZAA0	**Zalesovo Array**	**25.94**	**21**	*e*P	**P**	**15 57 04.8**	**+1.2**
ZALV	**Zalesovo Beam**	**25.94**	**21**	P	**P**	**15 57 04.2**	**+0.6**
	comp=Z,5.5nm,0.3s,mb4.5,baz=216,slow=9.7,SNR=32						
ZALV	**Zalesovo Beam**	**25.94**	**21**	P	**P**	**15 57 04.2**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.5						
GTA	**Gaotai**	**26.12**	**62**	*e*P	**P**	**15 57 08.5**	**+3.0**
GTA				pP	pP	15 57 12.8	-2.6
GTA				sP	sP	15 57 15.9	-3.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
NVS	**Novosibirsk**	**26.27**	**18**	*e*P	**P**	**15 57 07.5**	**+0.9**
NVS				pmax	pmax		
	comp=Z,14nm,2.0s,mb4.2						
NVS				pmax	pmax		
	comp=N,5.0nm,1.6s						
ARU	**Arti**	**27.21**	**346**	*c i*P	**P**	**15 57 15.1**	**0.0**
ARU				*e*		15 58 01.0	
ARU				S	**S**	**16 01 57.5**	**+6.1**
ARU				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.3						
CMAR	**Chiang Mai Arr**	**28.99**	**107**	P	**P**	**15 57 33.5**	**+2.2**
	comp=Z,0.7nm,0.7s,mb3.5,baz=297,slow=9.5,SNR=5.8						
CMAR	**Chiang Mai Arr**	**28.99**	**107**	P	**P**	**15 57 33.5**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAK	**Zakamensk**	**32.00**	**42**	*e*P	**P**	**15 57 57.3**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.8						
SONM	**Songino Array**	**32.93**	**48**	P	**P**	**15 58 08.7**	**+2.9**
	comp=Z,3.0nm,1.0s,mb4.2,baz=236,slow=6.9,SNR=11						
SONM	**Songino Array**	**32.93**	**48**	P	**P**	**15 58 08.7**	**+2.9**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**42.14**	**330**	P	**P**	**15 59 23.8**	**+0.3**
	comp=Z,3.0nm,0.8s,mb4.0,baz=123,slow=10,SNR=4.6						
FINES	**FINESS Array B**	**42.14**	**330**	P	**P**	**15 59 23.8**	**+0.3**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMBO	**Kilima Mbogo**	**44.07**	**231**	*ce*P	**P**	**15 59 31.3**	**-8.4**
ARCES	**ARCESS Array B**	**46.47**	**340**	P	**P**	**15 59 59.1**	**+1.1**
	comp=Z,1.0nm,0.5s,mb4.0,baz=117,slow=7.5,SNR=11						
ARCES	**ARCESS Array B**	**46.47**	**340**	P	**P**	**15 59 59.1**	**+1.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	**Korea Array**	**48.10**	**65**	P	**P**	**16 00 14.0**	**+2.9**
	comp=Z,3.5nm,1.0s,mb4.3,baz=276,slow=6.4,SNR=9.7						
KSRS	**Korea Array**	**48.10**	**65**	P	**P**	**16 00 14.0**	**+2.9**
KSRS				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
NOA	**NORSAR Array B**	**48.78**	**326**	P	**P**	**16 00 16.9**	**+0.8**
	comp=Z,0.6nm,0.6s,mb3.8,baz=103,slow=7.8,SNR=2.3						
NOA	**NORSAR Array B**	**48.78**	**326**	P	**P**	**16 00 16.9**	**+0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**56.33**	**64**	P	**P**	**16 01 16.4**	**+4.0**
	comp=Z,0.5nm,0.3s,mb4.0,baz=276,slow=11,SNR=5.1						
MJAR	**Matsushiro Arr**	**56.33**	**64**	P	**P**	**16 01 16.4**	**+4.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SEY	**Seymchan**	**60.10**	**32**	⇓*e*P	**P**	**16 01 37.5**	**-0.7**
SUMG	**Summit**	**66.52**	**342**	*i* P	**P**	**16 02 23.2**	**+2.6**
	comp=Z,4.3nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**79.70**	**120**	P	**P**	**16 03 39.6**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.8,baz=321,slow=5.2,SNR=12						
WRA	**Warramunga Arr**	**79.70**	**120**	P	**P**	**16 03 39.7**	**+0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WB2	**Warramunga Arr**	**79.71**	**120**	P	**P**	**16 03 40.0**	**+0.7**
ILAR	**Eielson Array**	**80.92**	**15**	P	**P**	**16 03 46.2**	**+1.1**
	comp=Z,0.9nm,1.0s,mb3.6,baz=283,slow=5.5,SNR=4.8						
ILAR	**Eielson Array**	**80.92**	**15**	P	**P**	**16 03 46.2**	**+1.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ASAR	**Alice Springs**	**81.66**	**124**	P	**P**	**16 03 50.2**	**+0.6**
	comp=Z,0.7nm,0.8s,mb3.6,baz=308,slow=5.4,SNR=8.7						
ASAR	**Alice Springs**	**81.66**	**124**	P	**P**	**16 03 50.3**	**+0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ATAH	**Atahualpa**	**142.26**	**301**	PKP	PKiKP	16 11 07.1	-0.2
	comp=Z,7.6nm,0.8s,baz=166,slow=9.2,SNR=3.0						

IDC 10 15:53:01.0±29.0, 15°.76S×173°.99W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/18, mbtmp4.0/4, Error ellipse: s-maj=570.4km s-min=157.2km az=84.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.36**	**240**	P	P	16 01 05.4	+0.2
	0.9nm,0.4s,baz=97,slow=12,SNR=5.4						
WRA	**Warramunga Arr**	**49.21**	**257**	P	P	16 01 50.8	-0.6
	0.7nm,0.5s,baz=93,slow=6.8,SNR=28						
ASAR	**Alice Springs**	**49.46**	**252**	P	P	16 01 52.8	-0.5
	5.4nm,0.6s,baz=88,slow=8.1,SNR=142						
FITZ	**Fitzroy Crossi**	**57.58**	**258**	P	P	16 02 54.0	+1.0
	1.0nm,1.0s,baz=74,slow=7.4,SNR=3.2						

DJA 10 16:04:28, 9°.20S×117°.97E, h128km, MLv4.2/9, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.97**	**47**	P	Pn	16 04 51.4	+0.9
MTNI	**Mataram**	**1.86**	**287**	P	Pn	16 05 02.6	+2.4
MTNI				S	Sn	16 05 27.3	+2.4
WSI	**Waingapu**	**2.34**	**102**	P	Pn	16 05 07.1	+1.0
WSI				S	Sn	16 05 37.0	+1.6
KHKI	**Kahang-Kahang**	**2.48**	**289**	P	Pn	16 05 09.3	+1.4
KHKI				S	Sn	16 05 39.6	+1.1
SRBI	**Singaraja**	**2.94**	**292**	P	Pn	16 05 15.5	+1.7
JAGI	**Jajag, Banyuwa**	**3.84**	**281**	P	Pn	16 05 26.3	+0.7
JAGI				S	Sn	16 06 11.1	+0.8
MMRI	**Maumere**	**4.25**	**83**	P	Pn	16 05 31.7	+0.6
BKSI	**Bulukumba**	**4.41**	**29**	P	Pn	16 05 33.4	+0.2
GMJI	**Gumukmas**	**4.57**	**281**	P	Pn	16 05 35.9	+0.6

*NDI **10** 16:05:21.7±2.6, 30°.82N×84°.06E, h10km, ML4.2, mb4.4(NEIC)*
*DMN **10** 16:05:22.0±0.8, 31°.36N×83°.08E, h10km, Ml4.6/3, Error ellipse: s-maj=18.5km s-min=11.0km az=120.0*
*BJI **10** 16:05:24.8, 30°.67N×83°.26E, h11km, mB4.8/27, mb4.5/37, Ms4.5/36, Ms7 4.2/35*
*IDC **10** 16:05:25.5±0.6, 30°.64N×83°.47E, h0km, mb4.2/17, mb1 4.3/20, mb1mx4.3/26, mbtmp4.2/20, ML3.5/3, MS4.1/10, Ms1 4.1/10, ms1mx3.8/35, Error ellipse: s-maj=18.6km s-min=13.7km az=32.0*
*ISCJB **10** 16:05:26.8±0.2, 30°.81N±0°.03×83°.37E±0°.03, h10km, mb4.3/47, MS4.2/16, Error ellipse: s-maj=3.7km s-min=3.1km az=25.7*
*NEIC **10** 16:05:27.3±0.5, 30°.69N×83°.39E, h10km, mb4.4/5, Error ellipse: s-maj=11.9km s-min=7.6km az=223.0*
*MOS **10** 16:05:29.3±1.1, 30°.77N×83°.48E, h33km, mb4.7/32, Error ellipse: s-maj=11.3km s-min=5.5km az=114.1*

ISC 10 16:05:28.4±0.2, 30°.82N±0°.03×83°.42E±0°.03, h10km, n147, σ1§17/162, mb4.3/47, MS4.2/16, 17C-6D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.48**	**173**	*e*Pn	**Pn**	**16 06 08.5**	**-0.3**
DANN				*e*Sn	**Sn**	**16 06 41.9**	**+2.7**
	1μm,0.6s						
GKN	**Gorkha**	**3.00**	**159**	*e*Pn	**Pn**	**16 06 16.1**	**+0.1**
GKN				*e*Sn	**Sn**	**16 06 56.6**	**+4.6**
	700nm,0.7s						
KOLN	**Koldanda**	**3.05**	**177**	*e*Pn	**Pn**	**16 06 16.5**	**-0.1**
KOLN				*e*Sn	**Sn**	**16 06 56.9**	**+3.8**
	548nm,0.5s						
PTH	**Pithoragarh**	**3.05**	**246**	*e*PKP	**Pn**	**16 06 18.5**	**+1.9**
PTH				*ex*	x	16 07 03.4	
JOSI	**Joshimath**	**3.34**	**266**	*e*PKP	**Pn**	**16 06 21.3**	**+0.7**
JOSI				*ex*	x	16 07 12.0	
JOSI				AML	AML	16 07 15.0	
	comp=E,648nm,0.7s						
JOSI				AML	AML	16 07 15.1	
	comp=N,1μm,0.9s						
KKN	**Kakani**	**3.43**	**151**	*e*Pn	**Pn**	**16 06 21.5**	**-0.4**
DMN	**Daman**	**3.52**	**155**	*e*Pn	**Pn**	**16 06 23.5**	**+0.3**
GUN	**Gumba**	**3.61**	**143**	*e*Pn	**Pn**	**16 06 24.6**	**+0.3**
PKIN	**Phulchoki**	**3.67**	**151**	*e*Pn	**Pn**	**16 06 25.3**	**+0.2**
PKI	**Pulchoki**	**3.68**	**151**	*e*Pn	**Pn**	**16 06 25.2**	**-0.1**
KLP	**Kalpa**	**4.49**	**280**	*e*PKP	**Pn**	**16 06 38.5**	**+2.1**
KLP				*e*S	**Sn**	**16 07 32.2**	**+3.5**
DDI	**Dehra Dun**	**4.65**	**265**	*e*PKP	**Pn**	**16 06 38.0**	**-0.7**
DDI				*ex*	x	16 08 52.0	
TAPN	**Taplejung**	**5.10**	**132**	*e*Pn	**Pn**	**16 06 45.1**	**+0.2**
ODAN	**Odare**	**5.26**	**138**	*e*Pn	**Pn**	**16 06 46.6**	**-0.5**
SMLA	**Simla**	**5.38**	**275**	*i* P	**Pn**	**16 06 48.6**	**-0.1**
BISR	**Bishrakh**	**5.67**	**248**	*e*PKP	**Pn**	**16 06 53.1**	**+0.5**
NDI	**New Delhi**	**5.80**	**250**	*e*PKP	**Pn**	**16 06 55.0**	**+0.5**
NDI				*e*PKP		16 06 55.0	
NDI				*e*S	**Sn**	**16 08 00.0**	**-1.0**
AYAN	**Aya Nagar**	**5.95**	**249**	*e*PKP	**Pn**	**16 06 56.5**	**-0.1**
LSA	**Lhasa**	**6.78**	**98**	P	**Pn**	**16 07 10.8**	**+2.9**
LSA				LR	LR		
	comp=E,4μm,11.6s						
LSA				LR	LR		
	comp=Z,5μm,10.0s						
LSA	**Lhasa**	**6.78**	**98**	*e*P	**Pn**	**16 07 09.6**	**+1.7**
LSA				pmax	pmax		
	comp=Z,53nm,0.9s						
LSA	**Lhasa**	**6.78**	**98**	*e*P	**Pn**	**16 07 09.6**	**+1.7**
	comp=Z,53nm,0.9s						
KHET	**Khetri**	**7.18**	**249**	*e*PKP	**Pn**	**16 07 14.5**	**+1.0**
AJM	**Ajmer**	**8.84**	**243**	*e*PKP	**Pn**	**16 07 34.7**	**-1.5**
AJM				*ex*	x	16 09 14.0	
CHCP	**Chirah Chowk**	**9.05**	**291**	P	**Pn**	**16 07 40.6**	**+1.5**
BHPL	**Bhopal**	**9.25**	**217**	*e*PKP	**Pn**	**16 07 38.2**	**-3.6**
BHPL				*e*S	**Sn**	**16 09 19.3**	**-6.7**
CAL	**Calcutta**	**9.34**	**151**	*ex*	x	16 08 00.7	
CAL				*ex*	x	16 10 16.1	
CEP	**Cherat**	**10.19**	**290**	P	**Pn**	**16 07 54.5**	**-0.2**
CEP				S	**Sn**	**16 09 43.0**	**-6.0**
KSH	**Kashi**	**10.60**	**327**	*e*P	**Pn**	**16 07 59.2**	**-1.0**
KSH				*ep*P		16 08 02.4	
KSH				*es*P		16 08 05.3	
KSH				*e*PP		16 08 07.6	
KSH				*e*S	**Sn**	**16 09 56.0**	**-2.9**
KSH				*e*SS		16 10 10.1	
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KSH				LR	LR		
	comp=N,2μm,5.5s						
KSH				LR	LR		
	comp=E,2μm,5.4s						
KSH				LR	LR		
	comp=Z,2μm,8.3s						
KBL	**Kabul**	**12.67**	**291**	*e*P	**Pn**	**16 08 26.6**	**-2.0**
KBL				pmax	pmax		
	comp=Z,26nm,0.8s						
KBL	**Kabul**	**12.67**	**291**	*e*P	**Pn**	**16 08 26.6**	**-1.9**
	comp=Z,26nm,0.8s						
KZA	**Kyzart**	**13.01**	**332**	*e*P	**Pn**	**16 08 34.9**	**+1.7**
	comp=Z,13nm,0.8s						
WMQ	**Urumqi**	**13.41**	**13**	*e*P	**Pn**	**16 08 40.0**	**+1.3**
WMQ				sP		16 08 47.0	
WMQ				PP		16 08 51.0	
WMQ				S	**Sn**	**16 11 12.0**	**+4.3**
WMQ				sS		16 11 18.0	
WMQ				SS		16 11 28.0	
WMQ				pmax	pmax		
	comp=Z,27nm,0.8s						
WMQ				LR	LR		
	comp=N,480nm,10.0s						
WMQ				LR	LR		
	comp=E,250nm,10.0s						
WMQ				LR	LR		
	comp=Z,300nm,10.0s						
TKM2	**Tokmak 2**	**13.59**	**335**	*e*P	**Pn**	**16 08 42.8**	**+1.6**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TKM2	**Tokmak 2**	**13.59**	**335**	*e*P	**Pn**	**16 08 42.8**	**+1.6**
	comp=Z,5.9nm,0.8s						
AAK	**Ala-Archa**	**13.78**	**331**	Pn	**Pn**	**16 08 46.1**	**+2.4**
	comp=Z,0.0nm,0.3s,baz=185,slow=9.0,SNR=8.2						
AAK				Sn	**Sn**	**16 11 21.5**	**+4.8**
	comp=Z,0.0nm,0.3s,baz=0.0,slow=19,SNR=3.6						
AAK				LR	LR	16

LZH Lanzhou 17.82 67 *e*P Pn **16 09 38.0 +1.5**
LZH pP pP 16 09 41.5 +1.5
LZH sP sP 16 09 43.0 +1.7
LZH *e*S **Sn 16 12 58.0 +2.8**
LZH sS sS 16 13 01.0 -5.5
LZH SS 16 13 19.0
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.0s
LZH LR LR
comp=N,2μm,14.0s
LZH LR LR
comp=E,2μm,13.0s
LZH LR LR
comp=Z,2μm,12.4s
KMI Kunming 17.98 104 P Pn **16 09 37.0 -1.4**
KMI pP pP 16 09 38.2 -3.6
KMI PP 16 09 49.3
KMI S **Sn 16 12 58.4 -0.6**
KMI sS sS 16 13 06.2 -3.6
KMI pmax pmax
comp=Z,9.0nm,0.7s
KMI LR LR
comp=N,610nm,12.3s
KMI LR LR
comp=E,1μm,14.3s
KMI LR LR
comp=Z,2μm,15.9s
CMAR Chiang Mai Arr 18.70 128 P Pn **16 09 44.9 -2.4**
comp=Z,0.2nm,0.3s,baz=305,slow=12,SNR=18
CMAR LR LR 16 18 02.7
comp=Z,235nm,19.4s,baz=122,slow=41
KURK Kurchatov 20.19 351 ⇓*i*P **P 16 10 02.0 -1.1**
KURK pmax pmax
comp=Z,52nm,1.3s
KURK Kurchatov 20.19 351 *e*P **P 16 10 02.8 -0.3**
comp=Z,40nm,1.1s
GYA Guiyang 20.85 96 *e*P **P 16 10 10.9 +0.5**
GYA PP 16 10 35.2
GYA S **S 16 14 06.3 +3.3**
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,110nm,4.6s
GYA LR LR
comp=N,370nm,7.5s
GYA LR LR
comp=E,480nm,9.3s
GYA LR LR
comp=Z,550nm,10.2s,MS4.2
ZAA0 Zalesovo Array 23.13 2 *e*P **P 16 10 33.7 -0.8**
ZALV Zalesovo Beam 23.13 2 P **P 16 10 34.6 +0.1**
comp=Z,4.3nm,0.5s,mb4.1,baz=186,slow=9.8,SNR=24
ZALV Zalesovo Beam 23.13 2 P **P 16 10 34.6 +0.1**
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.1
BTO Baotou 23.62 58 *e*P **P 16 10 36.8 -2.9**
VOSK Vostochnaya 23.70 341 P **P 16 10 39.9 -0.4**
VOSK pmax pmax
comp=Z,13nm,0.8s,mb4.4
NVS Novosibirsk 24.01 360 *e*P **P 16 10 41.0 -2.1**
NVS *e*S **S 16 14 56.3 -3.5**
NVS pmax pmax
comp=Z,26nm,2.5s,mb4.2
NVS pmax pmax
comp=N,20nm,2.4s
NVS smax
comp=N,20nm,2.4s
NVS smax
comp=E,12nm,2.3s
BVAR Borovoye Array 24.14 341 P **P 16 10 43.8 -0.5**
comp=E,4.3nm,0.8s,mb4.0,baz=147,slow=9.8,SNR=12
BVAR Borovoye Array 24.14 341 P **P 16 10 43.8 -0.5**
BVAR pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 24.20 340 *ce*P **P 16 10 44.6 -0.2**
BRVK pmax pmax
comp=Z,11nm,1.6s,mb4.0
BRVK Borovoye 24.20 340 P **P 16 10 44.6 -0.2**
comp=Z,3.6nm,0.6s,mb4.0
SONM Songino Array 24.44 39 P **P 16 10 48.6 +1.5**
comp=Z,6.3nm,0.8s,mb4.1,baz=230,slow=9.3,SNR=29
SONM Songino Array 24.44 39 P **P 16 10 48.6 +1.5**
SONM pmax pmax
comp=Z,6.0nm,0.8s
ZRNK Zerenda 24.49 339 *i*P **P 16 10 47.2 -0.3**
ZRNK pmax pmax
comp=Z,15nm,1.0s,mb4.4
ZAK Zakamensk 24.54 32 *e*P **P 16 10 42.8 -5.2**
ZAK pmax pmax
comp=Z,4.0nm,1.2s,mb3.8
HHC Hu-ho-hao-te 24.82 58 *e*P **P 16 10 50.5 -0.1**
HHC pP 16 10 54.7
HHC sP sP 16 10 57.5 +2.6
HHC PP 16 11 27.9
HHC PcP PcP 16 14 25.7 -1.1
HHC S **S 16 15 12.0 -1.2**
HHC sS sS 16 15 18.0 -0.3
HHC SS 16 16 09.7
HHC ScP ScP 16 18 04.2 -1.6
HHC pmax pmax
comp=Z,13nm,1.1s,mb4.4
HHC pmax pmax
comp=Z,170nm,7.0s
HHC LR LR
comp=N,340nm,10.4s,MS4.2
HHC LR LR
comp=E,300nm,10.8s,MS4.2
HHC LR LR
comp=Z,430nm,13.9s,MS4.1
AB31 Akbulak array 25.56 323 *ce*P **P 16 10 56.8 -0.5**
AB31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.2
ABKAR Akbulak array 25.56 323 *e*P **P 16 10 56.5 -0.7**
comp=Z,5.5nm,0.6s,mb4.3
TLY Talaya 25.64 30 *e*P **P 16 10 59.0 +1.1**
TLY pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
WHN Wuhan 26.56 83 *e*P 16 11 44.8
QIZ Qiongzhong 26.61 110 P **P 16 11 04.6 -2.5**
QIZ S **S 16 15 41.7 -0.3**
QIZ LR LR
comp=N,420nm,19.2s
QIZ LR LR
comp=Z,450nm,15.2s,MS4.1
AKTK Aktyubinsk 27.26 323 P **P 16 11 12.4 -0.2**
AKTK LR LR 16 23 13.7
AKTO Aktyubinsk 27.26 323 P **P 16 11 12.4 -0.2**
comp=Z,3.8nm,0.9s,mb3.9,baz=131,slow=10,SNR=12
AKTO LR LR 16 23 13.7
comp=Z,522nm,20.3s,MS4.1,baz=291,slow=39
AKTO Aktyubinsk 27.26 323 P **P 16 11 12.4 -0.2**
AKTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
AKTO MLR MLR
comp=Z,522nm,20.3s,MS4.1
BJI Beijing 28.10 62 P **P 16 11 20.3 0.0**
BJI pmax pmax
comp=Z,11nm,1.3s,mb4.3
BJI pmax pmax
comp=Z,120nm,4.5s
BJI LR LR
comp=N,930nm,17.8s,MS4.4
BJI LR LR
comp=E,320nm,19.7s,MS4.4
BJI LR LR
comp=Z,310nm,22.8s,MS3.8
SVE Sverdlovsk 30.47 335 *e*P **P 16 11 41.6 +0.5**
SVE pmax pmax
comp=Z,13nm,1.1s,mb4.6
ARU Arti 30.96 333 *d*i P **P 16 11 45.7 +0.3**
ARU S **S 16 16 42.0 -7.6**
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
ZEI Tsey 33.53 302 *e*P **P 16 12 09.9 +1.8**
ZEI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SOKR Solikamsk 33.87 336 *c*i P **P 16 12 11.9 +1.0**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
KIV Kislovodsk 34.57 304 *c*i P **P 16 12 19.3 +2.1**
KIV pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KIV MLR MLR
comp=Z,400nm,20.0s,MS4.2

VRHR Novokhopersk 36.86 316 *e*P **P 16 12 37.2 +0.5**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
KSRS Korea Array 37.16 67 P **P 16 12 38.6 -0.8**
comp=Z,3.8nm,0.6s,mb4.4,baz=274,slow=9.0,SNR=16
KSRS LR LR 16 29 23.1
comp=Z,406nm,18.6s,MS4.2,baz=235,slow=39
KSRS Korea Array 37.16 67 P **P 16 12 38.6 -0.8**
KSRS pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
KSRS MLR MLR
comp=Z,406nm,18.6s,MS4.2
VSR Storozhevoye 38.38 315 *e*P **P 16 12 49.6 0.0**
VSR pmax pmax
comp=E,6.0nm,0.8s
VSR pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR MLR MLR
comp=N,550nm,23.0s,MS4.4
VSR MLR MLR
comp=E,330nm,23.0s,MS4.4
VSR MLR MLR
comp=Z,580nm,23.0s,MS4.3
MDJ Mudanjiang 38.52 56 P **P 16 12 50.2 -0.7**
MDJ pP pP 16 12 53.3 -0.7
MDJ sP sP 16 12 54.7 -0.5
MDJ PP PP 16 14 18.7 -0.2
MDJ S **S 16 18 47.5 +1.0**
MDJ pmax pmax
comp=Z,8.0nm,2.1s,mb4.1
MDJ LR LR
comp=N,250nm,32.6s
MDJ LR LR
comp=E,140nm,52.7s
MDJ LR LR
comp=Z,240nm,30.1s,MS3.8
PRGR Permogore 39.41 333 *e*P **P 16 12 56.9 -1.2**
PRGR pmax pmax
comp=Z,17nm,0.9s,mb4.8
KLR Kul'dur 40.54 49 *e*P **P 16 13 02.6 -5.0**
OBN Obninsk 40.95 320 *e*P **P 16 13 10.6 -0.3**
OBN *i* 16 14 43.5
OBN pmax pmax
comp=Z,18nm,1.2s,mb4.6
OBN MLR MLR
comp=Z,300nm,20.0s,MS4.2
BRTR Keskin Array B 41.15 297 P **P 16 13 13.7 +0.9**
comp=Z,1.3nm,0.8s,mb3.6,baz=116,slow=8.4,SNR=5.0
BRTR Keskin Array B 41.15 297 *ce*P **P 16 13 14.6 +1.8**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
KLMR Klimovskoe 41.58 329 *e*P **P 16 13 15.5 -0.5**
KLMR pmax pmax
comp=Z,19nm,1.2s,mb4.6
EIL Elat 41.63 281 P **P 16 13 19.1 +2.3**
comp=Z,5.9nm,0.9s,mb4.2,baz=58,slow=4.3,SNR=6.1
YAK Yakutsk 43.11 30 *e*P **P 16 13 27.6 -0.9**
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.7
AKASG Malin Array Be 44.48 313 LR LR 16 35 35.9
comp=Z,354nm,20.3s,MS4.3,baz=90,slow=41
MJAR Matsushiro Arr 45.44 67 P **P 16 13 47.6 +0.2**
comp=Z,1.5nm,0.6s,mb4.0,baz=309,slow=14,SNR=6.9
MJAR LR LR 16 34 19.9
comp=Z,165nm,19.3s,MS4.0,baz=75,slow=38
MJAR Matsushiro Arr 45.44 67 P **P 16 13 47.6 +0.1**
MJAR pmax pmax
comp=Z,2.0nm,0.6s
MJAR MLR MLR
comp=Z,165nm,19.3s
JOF Joensuu 45.96 330 *e*P **P 16 13 49.8 -1.4**
JOF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
JOF Joensuu 45.96 330 *e*p **P 16 13 49.8 -1.4**
comp=Z,8.6nm,0.7s,mb4.8
VRI Vrincioaia 45.99 306 ⇑P **P 16 13 52.2 +0.5**
VRI Vrincioaia 45.99 306 ⇑*i*P **P 16 13 52.2 +0.5**
PLOR Plostina 46.04 306 ⇓P **P 16 13 52.9 +0.8**
PLOR Plostina 46.04 306 ⇓*i*P **P 16 13 52.9 +0.8**
MLR Muntele Rosu 46.55 305 ⇑P **P 16 13 56.9 +0.8**
MLR Muntele Rosu 46.55 305 ⇑*i*P **P 16 13 56.9 +0.8**
LVZ Lovozero 46.65 337 ⇑*e*P **P 16 13 56.0 -0.5**
LVZ pmax pmax
comp=Z,29nm,2.5s,mb4.8
BURAR Bucovina Array 46.99 308 ⇓P **P 16 14 00.1 +0.6**
BURAR Bucovina Array 46.99 308 ⇓*i*P **P 16 14 00.1 +0.6**
JHJ Hachijo jima 2 47.38 72 LR LR 16 34 05.2
comp=Z,304nm,21.2s,MS4.2,baz=93,slow=36
FINES FINESS Array B 47.92 327 P **P 16 14 06.1 -0.5**
comp=Z,4.6nm,0.7s,mb4.6,baz=107,slow=10,SNR=8.5
FINES FINESS Array B 47.92 327 P **P 16 14 06.1 -0.4**
FINES pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 47.92 327 P **P 16 14 06.1 -0.5**
KAF Kangasniemi 47.97 328 *e*P **P 16 14 06.6 -0.3**
KAF Kangasniemi 47.97 328 *e*p **P 16 14 06.6 -0.3**
comp=Z,0.4nm,0.3s,mb3.9
KWP Kalwaria Pacla 48.63 311 ⇑P **P 16 14 11.0 -1.2**
KWP Kalwaria Pacla 48.63 311 ⇑*i*P **P 16 14 11.0 -1.2**
DRGR 48.73 307 ⇑P **P 16 14 12.8 -0.2**
DRGR 48.73 307 ⇑*i*P **P 16 14 12.8 -0.2**
VTS Vitosha 48.75 302 ⇑P **P 16 14 13.2 0.0**
VTS Vitosha 48.75 302 ⇑*i*P **P 16 14 13.2 0.0**
KEV Kevo 49.94 338 *e*P **P 16 14 20.3 -1.6**
KEV Kevo 49.94 338 *e*p **P 16 14 20.3 -1.6**
comp=Z,0.4nm,0.4s,mb3.8
ARCES ARCESS Array B 50.36 337 P **P 16 14 24.1 -1.0**
comp=Z,3.1nm,0.6s,mb4.5,baz=98,slow=6.7,SNR=18
ARCES ARCESS Array B 50.36 337 P **P 16 14 24.2 -0.9**
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARE0 ARCESS Array S 50.36 337 *e*P **P 16 14 23.4 -1.7**
CBIJ Chichi jima 51.05 79 LR LR 16 39 04.7
comp=Z,144nm,18.3s,MS4.0,baz=95,slow=40
KMBO Kilima Mbogo 54.15 243 P **P 16 14 53.6 -0.4**
comp=Z,3.8nm,1.0s,mb4.3,baz=0.9,slow=24,SNR=6.6
KMBO Kilima Mbogo 54.15 243 P **P 16 14 53.7 -0.3**
KMBO pmax pmax
comp=Z,4.0nm,1.0s
NB2 NORSAR Subarra 55.02 326 P **P 16 14 57.6 -2.1**
comp=Z,6.2nm,0.9s,mb4.6,baz=88,slow=7.4
NOA NORSAR Array B 55.02 326 P **P 16 14 57.4 -2.3**
comp=Z,4.2nm,0.8s,mb4.5,baz=88,slow=7.2,SNR=9.6
NOA LR LR 16 40 09.2
comp=Z,144nm,18.7s,MS4.1,baz=305,slow=38
NOA NORSAR Array B 55.02 326 P **P 16 14 57.4 -2.3**
NOA pmax pmax
comp=Z,4.0nm,0.8s
NOA MLR MLR
comp=Z,144nm,18.7s
BILL Bilibino 59.16 26 *c*i P **P 16 15 29.8 +0.9**
BILL pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.3
KEST Kesra 60.76 296 P **P 16 15 40.0 -0.5**
comp=Z,2.8nm,0.8s,mb4.4,baz=5.4,slow=5.2,SNR=12
KEST Kesra 60.76 296 P **P 16 15 40.0 -0.5**
ESDC Sonseca Array 69.24 304 P **P 16 16 35.4 -0.1**
comp=Z,0.3nm,0.3s,mb3.7,baz=63,slow=6.0,SNR=3.9
SUMG Summit 69.56 344 *e*P **P 16 16 36.6 -0.3**
comp=Z,20nm,0.9s,mb5.0
SUMG Summit 69.56 344 *i*P **P 16 16 38.3 +1.4**
comp=Z,16nm,0.8s,mb5.0
WRA Warramunga Arr 70.28 129 P **P 16 16 39.0 -3.1**
comp=Z,2.4nm,0.5s,mb4.4,baz=325,slow=6.3,SNR=50
WRA Warramunga Arr 70.28 129 P **P 16 16 39.0 -3.1**
WRA pmax pmax
comp=Z,2.0nm,0.5s
WRA Warramunga Arr 70.28 129 P **P 16 16 39.0 -3.2**
ASAR Alice Springs 72.64 132 P **P 16 16 53.8 -2.5**
comp=Z,0.9nm,0.8s,mb3.8,baz=312,slow=4.8,SNR=8.7
ASAR Alice Springs 72.64 132 P **P 16 16 53.8 -2.5**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ILAR Eielson Array 76.99 20 P **P 16 17 19.9 -1.0**
comp=Z,2.8nm,0.9s,mb4.2,baz=303,slow=4.7,SNR=23
ILAR Eielson Array 76.99 20 P **P 16 17 20.0 -0.9**
ILAR pmax pmax
comp=Z,3.0nm,0.9s

DBIC Dimbokro 85.15 275 P **P 16 18 05.3 0.0**
comp=Z,4.4nm,0.8s,mb4.7,baz=43,slow=9.4,SNR=5.3
DBIC Dimbokro 85.15 275 P **P 16 18 05.3 0.0**
DBIC pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 85.89 8 P **P 16 18 08.7 +0.6**
comp=Z,1.2nm,0.7s,mb4.3,baz=340,slow=4.7,SNR=5.3
YKA Yellowknife Ar 85.89 8 P **P 16 18 08.7 +0.6**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 85.89 8 P **P 16 18 08.7 +0.6**

ISCJB ***10*** *16:11:58.4±0.9,20°.24S±0°.03×69°.21W±0°.03,h8km±5km, mb5.5/248,MS5.3/193,Error ellipse: s-maj=5.0km s-min=3.9km az=43.7*
MOS ***10*** *16:12:02.9±1.1,20°.05S×69°.24W,h33km,mb5.7/86, MS5.2/45,Error ellipse: s-maj=11.1km s-min=5.9km az=114.5*
IDC ***10*** *16:12:03.7±0.4,20°.33S×69°.36W,h35km±2km,mb5.0/18, mb1 5.2/22,mb1mx5.1/23,mbtmp5.0/22,ML5.1/4,MS5.2/20, Ms1 5.2/20,ms1mx5.2/22,Error ellipse: s-maj=15.2km s-min=10.3km az=73.0*
GUC ***10*** *16:12:03.3±0.4,20°.45S×69°.49W,h34km±3km,ML6.0*
BJI ***10*** *16:12:03.5,19°.81S×69°.12W,h33km,mB5.5/27,Ms5.7/32, Ms7 5.6/35*
NEIC ***10*** *16:12:04.0±0.1,20°.26S×69°.22W,mb5.6/214,MS5.3/172, Error ellipse: s-maj=5.4km s-min=3.5km az=46.0*
NEIC Felt [VI] at Alto Hospicio, Camina, Colchane, Cuya, Huara, Iquique, Pisagua and Pozo Almonte; [IV] at Arica; [III] at Calama, Mejillones and Tocopilla; [II] at Antofagasta, Maria Elena and Putre.
GCMT ***10*** *16:12:11.6±0.2,20°.41S×69°.56W,h36km,MW5.7, Moment Tensor Solution. s69,c98; s20,c22; Moment tensor: Scale 1017Nm; Mrr3.28±.16; Mθθ-5.65±.10; Mφφ2.37±.12; Mrθ1.53±.11; Mrφ-1.83±.08; Mθφ1.21±.15; Best double couple: M0:5.30000×1017 NP1:φs289.00000°, δ44.00000°,λ138.00000°. NP2:φs52.00000°,δ62.00000°, λ54.00000°. Principal axes: T 4.1200, Plg57.0000°, Azm273.0000°; N 2.2400, Plg31.0000°, Azm70.0000°; P -6.3700, Plg10.0000°, Azm167.0000°; Data Used: II IU IC G CN. Surface waves: sta= 98, comp=176, per= 50.*
ISC 10 16:11:59.3±0.9,20°.31S±0°.03×69°.18W±0°.03,h4km±5km, h39km±.9km:pP-P,n1022,σ0s78/791,mb5.5/248,MS5.3/193, 33C-45D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.67**	**272**	⇑*i*P	**Pg**	**16 12 12.4**	**+0.3**
HMBC				*i* S	**Sg**	**16 12 19.0**	**-1.8**
HMBC				AML	AML	16 12 24.4	
comp=E,1250μm,0.8s							
PSGC	**Pisagua**	**1.13**	**308**	⇓*i*P	**Pg**	**16 12 21.6**	**+0.5**
PSGC				*i* S	**Sg**	**16 12 35.8**	**+0.1**
PSGC				AML	AML	16 12 37.2	
comp=N,760μm,0.5s							
MNMC	**Miæe Miæ**	**1.23**	**341**	⇓*i*P	**Pg**	**16 12 26.5**	**+3.6**
MNMC				*i* S	**Sg**	**16 12 44.2**	**+5.3**
MNMC				AML	AML	16 12 48.6	
comp=N,849μm,0.6s							
MACH	**Maria Elena**	**1.96**	**196**	⇓*i*P	**Pn**	**16 12 33.7**	**+0.4**
MACH				*i* S	**Sn**	**16 12 56.6**	**-1.7**
TOCH	**Tocopilla**	**2.02**	**208**	*e*P	**Pn**	**16 12 33.2**	**-1.0**
TOCH				*i* S	**Sn**	**16 12 56.2**	**-3.7**
TOCH				AML	AML	16 12 57.4	
comp=E,136μm,0.3s							
MECH	**Mejillones**	**3.02**	**203**	*e*P	**Pn**	**16 12 47.6**	**-0.4**
MECH				AML	AML	16 13 35.1	
comp=E,79μm,0.7s							
LPAZ	**La Paz**	**4.12**	**14**	Pn	**Pn**	**16 13 12.3**	**+9.3**
comp=E,43nm,0.3s,baz=217,slow=7.6,SNR=393							
LPAZ				Pg	**Pg**	**16 13 20.9**	**+2.7**
comp=E,98nm,0.3s,baz=193,slow=9.8,SNR=25							
LPAZ				LR	LR	16 15 04.2	
comp=E,34μm,21.0s,baz=302,slow=43							
LPAZ	**La Paz**	**4.12**	**14**	P	**Pn**	**16 13 12.3**	**+9.3**
LPAZ				pmax	pmax		
comp=Z,43nm,0.3s							
LPAZ				pmax	pmax		
comp=Z,98nm,0.3s							
LPAZ				MLR	MLR		
comp=Z,34μm,21.0s							
LPAZ	**La Paz**	**4.12**	**14**	*e*P	**Pn**	**16 13 12.6**	**+10**
LCO	**Las Campanas**	**8.78**	**189**	*e*P	**Pn**	**16 14 02.3**	**-4.8**
comp=Z,553nm,0.5s							
SIV	**San Ignacio**	**8.82**	**62**	Pn	**Pn**	**16 14 13.0**	**+5.4**
comp=Z,43nm,0.3s,baz=258,slow=11,SNR=665							
NNA	**Nana**	**11.07**	**317**	Pn	**Pn**	**16 14 38.1**	**-0.4**
comp=Z,8.9nm,0.3s,baz=160,slow=9.5,SNR=10							
NNA				Sn	**Sn**	**16 16 36.8**	**-6.1**
comp=Z,12nm,0.3s,baz=252,slow=20,SNR=2.9							
NNA				LR	LR	16 19 09.1	
comp=Z,13μm,18.0s,baz=167,slow=39							
NNA	**Nana**	**11.07**	**317**	*i* P	**Pn**	**16 14 39.5**	**+1.0**
NNA	**Nana**	**11.07**	**317**	*e*P	**Pn**	**16 14 37.8**	**-0.7**
comp=Z,146nm,0.7s							
NNA	**Nana**	**11.07**	**317**	Pn	**Pn**	**16 14 38.6**	**+0.1**
comp=Z,538nm,0.5s,SNR=6.1							
CFAA	**Coronel Fontan**	**11.29**	**176**	Pn	**Pn**	**16 14 38.7**	**-2.7**
comp=Z,1.5nm,0.3s,baz=346,slow=13,SNR=150							
CFAA				Sn	**Sn**	**16 16 39.4**	**-8.7**
comp=Z,1.1nm,0.3s,baz=211,slow=19,SNR=2.8							
CFAA				LR	LR	16 18 33.0	
comp=Z,826nm,18.1s,baz=338,slow=34							
CFAA	**Coronel Fontan**	**11.29**	**176**	Pn	**Pn**	**16 14 38.7**	**-2.7**
CFAA				Sn	**Sn**	**16 16 39.4**	**-8.7**
CFAA				LR	LR	16 18 33.0	
CPUP	**Villa Florida**	**12.43**	**121**	Pn	**Pn**	**16 15 00.6**	**+3.6**
comp=Z,4.8nm,0.3s,baz=278,slow=12,SNR=40							
CPUP				LR	LR	16 21 12.4	
comp=Z,9μm,20.9s,baz=286,slow=44							
CPUP	**Villa Florida**	**12.43**	**121**	P	**Pn**	**16 15 00.6**	**+3.6**
CPUP				pmax	pmax		
comp=Z,5.0nm,0.3s							
CPUP				MLR	MLR		
comp=Z,9μm,20.9s							
ATAH	**Atahualpa**	**15.85**	**324**	Pn	**Pn**	**16 15 43.3**	**-0.1**
comp=Z,0.7nm,0.3s,baz=168,slow=4.5,SNR=3.4							
LPA	**La Plata**	**17.61**	**148**	*ce*P	**Pn**	**16 16 15.0**	**+9.3**
LPA				S	Sn	16 19 46.0	+24
LPA				PCP	PcP	16 20 44.0	-1.2
LPA				PKIKP	PKiKP	16 28 36.0	-1.3
TRQA	**Tornquist**	**18.76**	**162**	*e*P	**Pn**	**16 16 18.2**	**-1.5**
comp=Z,183nm,0.8s							
PLCA	**Paso Flores**	**20.40**	**183**	P	**P**	**16 16 36.6**	**-0.5**
comp=Z,130nm,0.9s,baz=3.9,slow=12,SNR=142							
PLCA	**Paso Flores**	**20.40**	**183**	*e*P	**P**	**16 16 37.5**	**+0.3**
PLCA				pmax	pmax		
comp=Z,150nm,0.9s							
PLCA				MLR	MLR		
comp=Z,15μm,21.0s							
PLCA	**Paso Flores**	**20.40**	**183**	*e*P	**P**	**16 16 37.5**	**+0.3**
comp=Z,150nm,0.9s							
PLCA				LR	LR		
comp=Z,15μm,21.0s,MS5.3							
SPB	**Sao Paulo**	**20.43**	**103**	*e*P	**P**	**16 16 37.4**	**-0.3**
comp=Z,123nm,0.9s							
SPB				LR	LR		
comp=Z,10μm,20.0s,MS5.2							
BDFB	**Brasilia**	**20.65**	**80**	P	**P**	**16 16 42.8**	**+2.6**
comp=Z,51nm,0.8s,baz=262,slow=11,SNR=21							
BDFB				LR	LR	16 26 12.2	
comp=Z,11μm,20.4s,MS5.2,baz=136,slow=41							
BDFB	**Brasilia**	**20.65**	**80**	P	**P**	**16 16 42.8**	**+2.6**
BDFB				pmax	pmax		
comp=Z,51nm,0.8s							
BDFB				MLR	MLR		
comp=Z,11μm,20.4s							
OTAV	**Otavalo**	**22.34**	**335**	*e*P	**P**	**16 17 00.8**	**+2.5**
comp=Z,150nm,1.1s,mb5.3							
OTAV				LR	LR		
comp=Z,15μm,22.0s,MS5.4							
CAM4	**Nova Friburgo**	**24.86**	**100**	⇓*i*P	**P**	**16 17 23.8**	**+0.6**
CAM4				*i*		16 17 26.6	
CAM4				*i*		16 17 32.7	
CAM4				*i*		16 17 36.0	
CAM4				*i*		16 17 38.1	
CAM4				*i*		16 17 52.3	
CAM4				*i*		16 18 02.9	
CAM4				*i*		16 18 12.2	
CAM4				*i*		16 18 22.0	

CAM4 *i* 16 19 23.1
ROSC El Rosal 25.51 348 P **P** **16 17 30.6 +1.6**
comp=Z,38nm,0.5s,mb5.2,baz=98,slow=12,SNR=4.4
ROSC LR LR 16 28 46.8
comp=Z,11μm,18.7s,MS5.4,baz=192,slow=39
ROSC El Rosal 25.51 348 *e*P **P** **16 17 29.4 +0.4**
SDV Santo Domingo 29.04 357 *e*P **P** **16 18 00.1 -0.7**
SDV LR LR
comp=Z,7μm,21.0s,MS5.2
PCRV Puerto La Cruz 30.62 9 P **P** **16 18 15.4 +0.7**
comp=Z,19nm,0.5s,mb5.2,baz=248,slow=3.5,SNR=13
BCIP Isla Barro Col 31.11 339 P **P** **16 18 18.8 -0.2**
comp=Z,70nm,0.8s,mb5.5
BCIP LR LR
comp=Z,6μm,21.0s,MS5.2
EFI East Falkland 32.50 167*c i*P **P** **16 18 31.1 +0.2**
EFI East Falkland 32.50 167 P **P** **16 18 31.7 +0.8**
comp=Z,967nm,0.9s,mb6.6,SNR=8.0
GRGR Grenville 33.07 14 *e*P **P** **16 18 35.8 -0.4**
GRGR LR LR
comp=Z,242nm,0.8s,mb6.2
comp=Z,10μm,21.0s,MS5.5
JTS JuntasAbangare 34.14 332 PFAKE 16 19 00.0 +14
JTS LR LR
comp=Z,6μm,22.0s,MS5.3
USHA Ushuaia 34.48 179 P **P** **16 18 47.4 -0.7**
comp=Z,38nm,0.8s,mb5.4,baz=346,slow=4.7,SNR=20
USHA LR LR 16 33 22.6
comp=Z,6μm,20.6s,MS5.3,baz=347,slow=37
USHA Ushuaia 34.48 179 P **P** **16 18 47.4 -0.7**
USHA LR LR 16 33 22.6
BBGH Gun Hill 34.56 17 PFAKE 16 19 00.0 +11
BBGH LR LR
comp=Z,11μm,21.0s,MS5.6
RCBR Riachuelo 35.36 71 P **P** **16 18 58.0 +1.7**
comp=Z,38nm,0.9s,mb5.3
RCBR LR LR
comp=Z,7μm,21.0s,MS5.4
FDF Fort de France 35.70 13 *e*P **P** **16 18 57.3 -1.8**
FDF pmax pmax
comp=Z,107nm,0.4s,mb6.1
FDF MLR MLR
comp=Z,9μm,21.0s,MS5.5
FDF Fort de France 35.70 13 *e*P **P** **16 18 57.3 -1.8**
comp=Z,107nm,0.4s,mb6.1
FDF LR LR
comp=Z,9μm,21.0s,MS5.5
RPN Rapa Nui 37.27 252 PFAKE 16 19 20.0 +7.5
RPN LR LR
comp=Z,4μm,20.0s,MS5.2
ICM Isla Caja Muer 38.05 4 *e*P **P** **16 19 18.4 -0.6**
CRPR Cabo Rojo, PR 38.13 3 *e*P **P** **16 19 18.8 -0.9**
comp=Z,87nm,1.0s,mb5.4
OBIP Obispado Ponce 38.19 4 *e*P **P** **16 19 18.2 -2.0**
comp=Z,168nm,0.7s,mb5.9
CELP Cerrillos 38.23 4 *e*P **P** **16 19 19.1 -1.4**
SJG San Juan 38.29 5 P **P** **16 19 19.5 -1.5**
comp=Z,121nm,0.8s,mb5.7,baz=235,slow=3.0,SNR=45
SJG San Juan 38.29 5 P **P** **16 19 19.5 -1.6**
SJG pmax pmax
comp=Z,121nm,0.8s
SJG San Juan 38.29 5 *e*P **P** **16 19 19.1 -2.0**
comp=Z,170nm,0.9s,mb5.8
SJG LR LR
comp=Z,3μm,21.0s,MS5.0
LSP Las Mesas 38.30 3 *e*P **P** **16 19 19.9 -1.2**
LRS Lares 38.42 4 *e*P **P** **16 19 20.7 -1.5**
ANWB Willy Bob 38.43 11 *e*P **P** **16 19 18.6 -3.6**
comp=Z,214nm,0.9s,mb5.9
ANWB LR LR
comp=Z,5μm,21.0s,MS5.3
TGUH Tegucigalpa,Un 38.50 331 *e*P **P** **16 19 23.8 +0.9**
comp=Z,180nm,1.1s,mb5.7
TGUH LR LR
comp=Z,4μm,21.0s,MS5.2
AGPR Aguadilla, PR 38.58 3 *e*P **P** **16 19 23.3 -0.3**
comp=Z,113nm,0.8s,mb5.7
STVI Saint Thomas 38.64 6 *e*P **P** **16 19 22.0 -2.0**
comp=Z,33nm,0.6s,mb5.2
SDDR Presa de Saban 39.10 357 P **P** **16 19 26.9 -1.0**
comp=Z,91nm,0.9s,mb5.5
SDDR LR LR
comp=Z,10μm,20.0s,MS5.6
MTDJ Mount Denham 39.16 347 *e*P **P** **16 19 28.0 -0.3**
comp=Z,171nm,0.9s,mb5.8
MTDJ LR LR
comp=Z,5μm,19.0s,MS5.3
GTBY Guantanamo Bay 40.40 351 *e*P **P** **16 19 39.8 +1.1**
comp=Z,88nm,0.9s,mb5.5
GTBY *e* 16 19 48.6
GTBY LR LR
comp=Z,4μm,20.0s,MS5.3
GRTK Grand Turk 41.60 357 PFAKE 16 20 00.0 +11
GRTK LR LR
comp=Z,9μm,21.0s,MS5.6
CCIG Comitan 42.78 327 *i*P **P** **16 19 58.3 +0.1**
TEIG Tepich 44.41 334 PFAKE 16 20 20.0 +8.7
TEIG LR LR
comp=Z,5μm,21.0s,MS5.4
HUIG Huatulco 44.55 322 *i*P **P** **16 20 12.5 -0.1**
PMSA Palmer Station 44.58 177 P **P** **16 20 12.3 +0.2**
comp=Z,34nm,0.9s,mb5.2,baz=6.3,slow=7.3,SNR=6.9
PMSA pP pP 16 20 23.0 +10
comp=Z,33nm,0.7s,baz=349,slow=6.5,SNR=6.4
PMSA Palmer Station 44.58 177 *e*P **P** **16 20 11.8 -0.4**
comp=Z,28nm,0.8s,mb5.2
PMSA *e* 16 20 22.8
PMSA LR LR
comp=Z,4μm,19.0s,MS5.3
VHO Vista Hermosa 45.95 322 *i*P **P** **16 20 25.2 +1.6**
PNIG Pinotepa 46.24 320 *i*P **P** **16 20 24.2 -1.8**
DWPF Disney 49.57 346 PFAKE 16 21 00.0 +8.4
DWPF LR LR
comp=Z,5μm,19.0s,MS5.6
SFJM Santa Fe 52.36 319 *i*P **P** **16 21 11.0 -1.7**
BBSR BB Station 52.55 5 *e*P **P** **16 21 12.7 -1.2**
comp=Z,47nm,0.8s,mb5.5
BBSR *e* 16 21 23.8
BBSR LR LR
comp=Z,1μm,21.0s,MS5.0
BRAL Brewton 53.83 341 PFAKE 16 21 40.0 +17
BRAL LR LR
comp=Z,2μm,19.0s,MS5.2
NHSC New Hope 54.14 349 *e*P **P** **16 21 25.6 0.0**
comp=Z,545nm,0.9s,mb6.5
NHSC *e* 16 21 37.0
NHSC LR LR
comp=Z,3μm,22.0s,MS5.3
COW Cow Castle Cre 54.51 348 *e*P **P** **16 21 27.6 -0.7**
COW *e* 16 21 39.8
KVTX Kingsville 55.09 329 *e*P **P** **16 21 34.9 +2.2**
comp=Z,66nm,0.6s,mb5.8
KVTX LR LR
comp=Z,2μm,21.0s,MS5.2
GOGA Godfrey 55.13 345 *e*P **P** **16 21 31.4 -1.4**
GOGA *e* 16 21 41.9
GOGA pmax pmax
comp=Z,26nm,0.8s,mb5.3
GOGA MLR MLR
comp=Z,3μm,20.0s,MS5.4
GOGA Godfrey 55.13 345 *e*P **P** **16 21 31.4 -1.4**
comp=Z,26nm,0.8s,mb5.3
GOGA *e* 16 21 41.9
GOGA LR LR
comp=Z,3μm,20.0s,MS5.4
JSC Jenkinsville 55.49 348 *e*P **P** **16 21 34.9 -0.5**
LRAL Lakeview Retre 55.70 342 *e*P **P** **16 21 34.3 -2.6**
comp=Z,75nm,1.4s,mb5.5
LRAL LR LR
comp=Z,2μm,21.0s,MS5.2
CNNC Cliffs of the 55.85 351 PFAKE 16 21 50.0 +12
CNNC LR LR
comp=Z,2μm,21.0s,MS5.2
PTCN Pitcairn Islan 56.01 253 PFAKE 16 21 50.0 +11
PTCN LR LR
comp=Z,4μm,21.0s,MS5.5
VBMS Vicksburg 56.08 338 *e*P **P** **16 21 38.3 -1.3**
comp=Z,19nm,0.6s,mb5.3
VBMS LR LR
comp=Z,2μm,22.0s,MS5.2
HKT Hockley 56.17 332 *e*P **P** **16 21 39.7 -0.7**
HKT pmax pmax
comp=Z,110nm,1.4s,mb5.7
HKT MLR MLR
comp=Z,1μm,22.0s,MS4.9
HKT Hockley 56.17 332 *e*P **P** **16 21 39.7 -0.7**
comp=Z,110nm,1.4s,mb5.7
HKT LR LR
comp=Z,1μm,22.0s,MS4.9
NATX Nacogdoches 57.24 334 *e*P **P** **16 21 47.7 -0.3**
comp=Z,231nm,1.2s,mb6.1
NATX LR LR
comp=Z,2μm,22.0s,MS5.2
CPCT Cooper Cave 57.33 345 *e*P **P** **16 21 46.1 -2.3**
TKL Tuckaleechee C 57.35 346 LR LR 16 47 08.2
comp=Z,2μm,19.9s,MS5.2,baz=163,slow=37
TKL Tuckaleechee C 57.35 346 *e*P **P** **16 21 45.7 -2.9**
SWET Sewanee 57.46 344 *e*P **P** **16 21 47.9 -1.5**
OXF Oxford 57.81 340 *e*P **P** **16 21 50.3 -1.6**
OXF pmax pmax
comp=Z,241nm,1.2s,mb6.1
OXF MLR MLR
comp=Z,2μm,21.0s,MS5.1
OXF Oxford 57.81 340 *e*P **P** **16 21 50.2 -1.6**
comp=Z,241nm,1.2s,mb6.1
OXF LR LR
comp=Z,2μm,21.0s,MS5.1
BLA Blacksburg 58.18 349 *e*P **P** **16 21 54.1 -0.3**
BLA *e* 16 22 05.5
BLA pmax pmax
comp=Z,69nm,0.8s,mb5.7
BLA MLR MLR
comp=Z,2μm,21.0s,MS5.2
BLA Blacksburg 58.18 349 *e*P **P** **16 21 54.1 -0.3**
comp=Z,69nm,0.8s,mb5.7
BLA *e* 16 22 05.5
BLA LR LR
comp=Z,2μm,21.0s,MS5.2
JCT Junction City 58.45 329 P **P** **16 21 55.6 -0.9**
baz=59,SNR=18
JCT Junction City 58.45 329 *e*P **P** **16 21 55.4 -1.1**
JCT pmax pmax
comp=Z,44nm,0.8s,mb5.5
JCT MLR MLR
comp=Z,688nm,20.0s,MS4.8
JCT Junction City 58.45 329 *e*P **P** **16 21 55.4 -1.1**
comp=Z,44nm,0.8s,mb5.5
JCT LR LR
comp=Z,688nm,20.0s,MS4.8
CBN Corbin 58.70 352 PFAKE 16 22 10.0 +12
CBN LR LR
comp=Z,3μm,21.0s,MS5.5
WVT Waverly 58.84 342 *e*P **P** **16 21 56.7 -2.3**
WVT *e* 16 22 08.0
WVT pmax pmax
comp=Z,70nm,0.8s,mb5.7
WVT MLR MLR
comp=Z,2μm,20.0s,MS5.3
WVT Waverly 58.84 342 *e*P **P** **16 21 56.7 -2.4**
comp=Z,70nm,0.8s,mb5.7
WVT *e* 16 22 08.0
WVT LR LR
comp=Z,2μm,20.0s,MS5.3
UALR University of 59.03 338 *e*P **P** **16 21 58.9 -1.5**
comp=Z,64nm,1.0s,mb5.6
HALT Halls 59.08 341 *e*P **P** **16 21 58.9 -1.9**
HBAR Harrisburg 59.17 340 *e*P **P** **16 22 00.4 -0.9**
628A Black Gap, Mar 59.21 326 P **P** **16 22 01.6 -0.1**
baz=59,SNR=95
MIAR Mount Ida 59.28 337 *e*P **P** **16 22 00.9 -1.2**
MIAR *e* 16 22 12.0
MIAR pmax pmax
comp=Z,108nm,1.1s,mb5.8
MIAR MLR MLR
comp=Z,2μm,20.0s,MS5.3
MIAR Mount Ida 59.28 337 *e*P **P** **16 22 00.9 -1.2**
comp=Z,108nm,1.1s,mb5.8
MIAR *e* 16 22 12.0
MIAR LR LR
comp=Z,2μm,20.0s,MS5.3
GNAR Gosnell 59.34 340 *e*P **P** **16 22 01.3 -1.2**
comp=Z,1μm,1.1s,mb6.9
GLAT Glass 59.40 341 P **P** **16 22 01.5 -1.4**
GLAT *e* 16 22 12.6
627A Terlingua Ranc 59.45 325 P **P** **16 22 02.9 -0.6**
baz=60,SNR=46
TXAR Lajitas Array 59.51 325 P **P** **16 22 02.9 -0.9**
comp=Z,10nm,0.8s,mb4.9,baz=145,slow=8.1,SNR=74
TXAR LR LR 16 46 12.1
comp=Z,2μm,21.3s,MS5.2,baz=235,slow=34
TXAR PKPPKP 16 51 35.7
comp=Z,0.4nm,0.7s,baz=258,slow=3.7,SNR=4.7
TXAR Lajitas Array 59.51 325 P **P** **16 22 02.9 -0.9**
TXAR LR LR 16 46 12.1
TXAR P'P' 16 51 35.7
528A Cox Ranch, San 59.70 326 P **P** **16 22 04.3 -0.8**
baz=60,SNR=53
SDMD Soldier's Deli 59.83 353 *e*P **P** **16 22 05.6 -0.3**
comp=Z,45nm,0.9s,mb5.5
PARMO Parma 59.90 341 P **P** **16 22 06.0 -0.4**
626A Big Bend Ranch 59.93 325 P **P** **16 22 06.6 -0.2**
baz=60,SNR=67
428A Kincaid Ranch, 60.09 327 P **P** **16 22 07.1 -0.8**
baz=60,SNR=43
527A Woodward Ranch 60.12 326 P **P** **16 22 07.3 -0.7**
baz=60,SNR=70
526A Mary Lane Ranc 60.31 325 P **P** **16 22 09.0 -0.3**
baz=60,SNR=71
WCI Wyandotte Cave 60.40 345 *e*P **P** **16 22 07.0 -2.8**
WCI pmax pmax
comp=Z,77nm,0.9s,mb5.7
WCI MLR MLR
comp=Z,3μm,19.0s,MS5.4
WCI Wyandotte Cave 60.40 345 *e*P **P** **16 22 07.0 -2.8**
comp=Z,77nm,0.9s,mb5.7
WCI LR LR
comp=Z,3μm,19.0s,MS5.4
MCWV Mont Chateau 60.48 351 *e*P **P** **16 22 10.1 -0.1**
comp=Z,132nm,0.8s,mb6.0
MCWV LR LR
comp=Z,3μm,20.0s,MS5.5
USIN University of 60.51 343 *e*P **P** **16 22 08.7 -1.9**
comp=Z,179nm,1.3s,mb6.0
427A Hayter Ranch, 60.56 326 P **P** **16 22 10.2 -0.9**
baz=61,SNR=32
328A Wristen Ranch, 60.68 327 P **P** **16 22 11.0 -0.9**
baz=61,SNR=44
SIUC Southern Illin 60.71 342 *e*P **P** **16 22 10.5 -1.5**
comp=Z,197nm,1.0s,mb6.2
RKT Rikitea 60.73 254 *e*S **S** **16 30 34.8 +4.5**
comp=Z,2μm,26.5s
RKT *e*LR LR 16 40 14.7
comp=Z,5μm,29.0s,baz=111
426A McDonald Obser 60.75 326 P **P** **16 22 11.8 -0.5**
baz=61,SNR=66
BRNJ Basking Ridge 60.88 355 P **P** **16 22 12.1 -0.9**
SSPA Standing Stone 61.16 352 *e*P **P** **16 22 14.7 -0.3**
comp=Z,48nm,0.8s,mb5.7
SSPA *e* 16 22 26.2
326A Caldwell Ranch 61.23 326 P **P** **16 22 15.0 -0.6**
baz=61,SNR=66
FVM French Village 61.32 341 *e*P **P** **16 22 14.6 -1.5**
FVM pmax pmax
comp=Z,196nm,1.1s,mb6.2
FVM French Village 61.32 341 *e*P **P** **16 22 14.6 -1.5**
comp=Z,196nm,1.1s,mb6.2
OLIL Olney 61.35 343 *e*P **P** **16 22 13.8 -2.5**
comp=Z,79nm,0.9s,mb5.8
OLIL *e* 16 22 25.7
BLO Bloomington 61.35 345 *e*P **P** **16 22 13.9 -2.3**
BLO pmax pmax
comp=Z,64nm,0.6s,mb5.9
BLO Bloomington 61.35 345 *e*P **P** **16 22 13.9 -2.3**
comp=Z,64nm,0.6s,mb5.9
425A Indio Mountain 61.35 325 P **P** **16 22 15.8 -0.6**
baz=62,SNR=96
YLE Yale 61.40 357 *e*P **P** **16 22 16.3 -0.3**
comp=Z,177nm,1.0s,mb6.2
WMOK Wichita Mounta 61.55 332 *e*P **P** **16 22 14.9 -2.8**
WMOK pmax pmax
comp=Z,19nm,0.8s,mb5.3
WMOK MLR MLR
comp=Z,1μm,20.0s,MS5.0
WMOK Wichita Mounta 61.55 332 *e*P **P** **16 22 14.9 -2.7**
comp=Z,19nm,0.8s,mb5.3
WMOK LR LR
comp=Z,1μm,20.0s,MS5.0
ACSO Alum Creek Sta 61.58 348 *e*P **P** **16 22 16.2 -1.6**
comp=Z,81nm,0.8s,mb5.9
ACSO LR LR
comp=Z,2μm,19.0s,MS5.3
CCM Cathedral Cave 61.65 340 *e*P **P** **16 22 16.7 -1.5**
CCM pmax pmax
comp=Z,97nm,1.1s,mb5.8
CCM MLR MLR
comp=Z,1μm,19.0s,MS5.0
CCM Cathedral Cave 61.65 340 *e*P **P** **16 22 16.7 -1.5**
comp=Z,98nm,1.1s,mb5.8
CCM LR LR
comp=Z,1μm,19.0s,MS5.0
325A Bean Ranch, Si 61.80 325 P **P** **16 22 18.8 -0.7**
baz=62,SNR=148
226A Malaga, Loving 61.89 327 P **P** **16 22 20.0 0.0**
baz=62,SNR=63
CLNB Carlsbad 61.93 327 *e*P **P** **16 22 20.1 -0.3**
comp=Z,29nm,1.2s,mb5.3
BRYW Bryant College 61.94 358 *e*P **P** **16 22 19.6 -0.6**
comp=Z,224nm,0.9s,mb6.3
127A Arkansas Junct 62.00 328 P **P** **16 22 19.9 -0.9**
baz=62,SNR=11
324A Moseley Ranch, 62.13 325 P **P** **16 22 20.3 -1.3**
baz=62,SNR=93
GDL2 Guadalupe Moun 62.13 326 *e*P **P** **16 22 21.1 -0.5**
comp=Z,50nm,1.1s,mb5.6
MNTX Cornudas Mount 62.27 325 P **P** **16 22 21.0 -1.6**
baz=62,SNR=80
MNTX Cornudas Mount 62.27 325 *e*P **P** **16 22 20.7 -1.9**
comp=Z,69nm,1.2s,mb5.7
MNTX LR LR
comp=Z,1μm,21.0s,MS5.1
225A Deer Hill, Car 62.30 326 P **P** **16 22 22.2 -0.6**
baz=62,SNR=48
126A Clayton Basin, 62.31 327 P **P** **16 22 22.4 -0.4**
baz=62,SNR=20
QUA2 Belchertown 62.34 357 *e*P **P** **16 22 22.2 -0.6**
comp=Z,72nm,1.1s,mb5.7
WES Weston 62.40 358 P **P** **16 22 22.4 -0.8**
WES pmax pmax
comp=Z,199nm,1.3s,mb6.1
WES Weston 62.40 358 P **P** **16 22 22.4 -0.8**
comp=Z,199nm,1.3s,mb6.1
Z27A Tatum 62.44 328 ⇑P **P** **16 22 22.3 -1.3**
baz=63
ALLY Alegheny Colle 62.47 351 *e*P **P** **16 22 23.4 -0.3**
comp=Z,230nm,0.8s,mb6.4
ALLY *e* 16 22 34.7
BINY Binghamton 62.51 354 *e*P **P** **16 22 23.9 0.0**
comp=Z,95nm,0.8s,mb6.0
BINY LR LR
comp=Z,4μm,22.0s,MS5.6
CPRX Cap Rock 62.54 327 *e*P **P** **16 22 23.4 -0.9**
comp=Z,41nm,0.7s,mb5.7
224A Cornudas Mount 62.64 325 P **P** **16 22 24.0 -1.1**
baz=63,SNR=80
125A Gardner Draw, 62.65 327 P **P** **16 22 23.8 -1.3**
baz=63,SNR=25
MSTX Muleshoe 62.75 329 ⇓P **P** **16 22 24.8 -0.9**
baz=63,SNR=69
Z26A Caprock 62.78 327 P **P** **16 22 25.1 -0.9**
baz=63,SNR=47
TRY Troy 62.85 356 *e*P **P** **16 22 26.2 0.0**
comp=Z,109nm,0.8s,mb6.0
Y27A Causey 62.87 328 P **P** **16 22 25.3 -1.3**
baz=63,SNR=39
ERPA Erie 62.91 351 *e*P **P** **16 22 26.1 -0.5**
comp=Z,261nm,0.8s,mb6.4
ERPA *e* 16 22 37.5
ERPA LR LR
comp=Z,3μm,21.0s,MS5.5
AMTX Amarillo 62.97 330 ⇑P **P** **16 22 26.0 -1.2**
baz=63,SNR=8.8
AMTX Amarillo 62.97 330 *e*P **P** **16 22 25.4 -1.8**
comp=Z,37nm,0.8s,mb5.6
AMTX LR LR
comp=Z,956nm,22.0s,MS4.9
124A Stringfield Ra 63.09 326 P **P** **16 22 27.5 -0.6**
baz=63,SNR=59
Z25A Roswell 63.17 327 P **P** **16 22 27.6 -1.0**
baz=63,SNR=27
Y26A Elida 63.23 328 P **P** **16 22 28.0 -1.0**
baz=63,SNR=8.5
HDIL Hopedale 63.38 343 *e*P **P** **16 22 27.9 -1.9**
comp=Z,76nm,0.6s,mb6.0
HDIL LR LR
comp=Z,2μm,20.0s,MS5.2
X27A F and S Farms, 63.45 329 P **P** **16 22 29.7 -0.7**
baz=64,SNR=6.9
ACCN Adirondack Com 63.51 356 *e*P **P** **16 22 30.2 -0.3**
comp=Z,27nm,0.8s,mb5.3
Z24A Sheeppen Canyo 63.54 326 P **P** **16 22 30.4 -0.7**
baz=64,SNR=33
AAM Ann Arbor 63.71 348 PFAKE 16 22 40.0 +8.1
AAM LR LR
comp=Z,2μm,20.0s,MS5.3
X26A CR and CF Fran 63.72 328 P **P** **16 22 31.4 -0.8**
baz=64,SNR=25
320A Kipp Ranch, An 63.73 323 P **P** **16 22 32.3 -0.1**
baz=64,SNR=28
HNH Hanover 63.76 357 P **P** **16 22 29.2 -3.0**
comp=Z,324nm,1.5s,mb6.1
W27A Bowe Ranch, En 63.77 329 P **P** **16 22 31.5 -1.0**
baz=64,SNR=18
221A Mesquite Ranch 63.82 324 ⇑P **P** **16 22 33.2 +0.3**
baz=64,SNR=7.8
122A Conniff Cattle 63.92 325 P **P** **16 22 34.0 +0.5**
baz=64,SNR=9.1
Z23A Rita Site, Whi 63.94 326 P **P** **16 22 33.5 -0.1**
baz=64,SNR=24
Y24A Capitan 64.04 327 ⇓P **P** **16 22 34.4 +0.1**
baz=64,SNR=18
MDV Middlebury 64.09 357 *e*P **P** **16 22 34.1 -0.2**
comp=Z,5μm,0.6s
NCB Newcomb 64.12 356 *e*P **P** **16 22 34.2 -0.4**
comp=Z,74nm,1.0s,mb5.7
NCB *e* 16 22 45.3
NCB LR LR
comp=Z,2μm,22.0s,MS5.3
W26A Owens Ranch, T 64.13 329 ⇓P **P** **16 22 34.6 -0.3**
baz=64,SNR=13
220A Playas Peak, P 64.16 323 P **P** **16 22 35.2 +0.1**
baz=64,SNR=48
319A Douglas 64.19 322 P **P** **16 22 35.6 +0.3**
baz=64,SNR=21
121A Cookes Peak, D 64.22 324 P **P** **16 22 36.0 +0.5**
baz=64,SNR=23
LBNH Lisbon 64.28 358 *e*P **P** **16 22 35.9 +0.3**
LBNH pmax pmax
comp=Z,41nm,0.8s,mb5.5
LBNH MLR MLR
comp=Z,2μm,22.0s,MS5.2
LBNH Lisbon 64.28 358 *e*P **P** **16 22 35.9 +0.3**
comp=Z,41nm,0.8s,mb5.5
LBNH LR LR
comp=Z,2μm,22.0s,MS5.2
Z22A Elephant Butte 64.32 325 P **P** **16 22 36.4 +0.2**
baz=64,SNR=96
Y23A Lovelace Mesa, 64.37 326 P **P** **16 22 36.0 -0.5**
baz=65,SNR=28
KSU1 Kansas State U 64.43 337 *e*P **P** **16 22 35.0 -1.8**
comp=Z,42nm,0.8s,mb5.5
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.2
X24A Lazy VL Ranch, 64.54 327 P **P** **16 22 37.1 -0.5**
baz=65,SNR=10
WVL Waterville 64.55 360 *e*P **P** **16 22 36.4 -1.0**
WVL *e* 16 22 47.4
W25A X Bar L Ranch, 64.58 328 P **P** **16 22 37.0 -0.8**
baz=65,SNR=29
219A White Tail Can 64.64 323 P **P** **16 22 38.4 +0.1**
baz=65,SNR=48
318A Bisbee 64.65 322 P **P** **16 22 38.4 +0.1**
baz=65,SNR=66
120A U Bar Ranch, L 64.70 324 P **P** **16 22 39.0 +0.4**
baz=65,SNR=36
V26A Tequesquite Ra 64.71 329 P **P** **16 22 38.0 -0.6**
baz=65,SNR=18
Z21A St. Cloud Mine 64.74 325 P **P** **16 22 39.5 +0.5**
baz=65,SNR=53
LONY Lake Ozonia 64.80 356 *e*P **P** **16 22 38.5 -0.5**
comp=Z,60nm,0.8s,mb5.7
LONY LR LR
comp=Z,3μm,22.0s,MS5.5
BNM Barren Site 64.83 326 *e*P **P** **16 22 39.3 -0.2**
comp=Z,78nm,1.3s,mb5.6
Y22A Socorro 64.85 326 ⇑P **P** **16 22 39.9 +0.3**
baz=65
FRNY Flat Rock 64.95 357 *e*P **P** **16 22 39.6 -0.3**
comp=Z,58nm,0.9s,mb5.6
LPM Los Pinos Moun 64.96 326 *e*P **P** **16 22 40.3 0.0**
comp=Z,53nm,1.0s,mb5.5
LENM Lemitar 65.03 326 *e*P **P** **16 22 40.4 -0.4**

comp=Z,18nm,0.9s,mb5.1
W24A Lazy 6 Ranch, 65.04 328 P **P** **16 22 40.1 -0.7**
baz=65,SNR=18
218A Dragoon 65.07 322 P **P** **16 22 41.3 +0.2**
baz=65,SNR=37
Z20A Nine Sixteen R 65.10 324 P **P** **16 22 41.5 +0.3**
baz=65,SNR=65
V25A Rancho No Teng 65.15 329 P **P** **16 22 41.0 -0.5**
baz=65,SNR=60
U26A Atchley Ranch, 65.17 330 P **P** **16 22 41.2 -0.5**
baz=65,SNR=41
MSNY Massena 65.19 356 *e*P **P** **16 22 41.1 -0.5**
comp=Z,878nm,0.8s,mb6.8
PKME Peaks-Kenny Pk 65.25 360 *e*P **P** **16 22 41.7 -0.3**
comp=Z,21nm,0.6s,mb5.3
PKME LR LR
comp=Z,2μm,22.0s,MS5.3
Y21A Point of Rocks 65.28 325 P **P** **16 22 43.2 +0.8**
baz=66,SNR=68
X22A Bernardo 65.31 326 P **P** **16 22 44.0 +1.4**
baz=66,SNR=16
ANMO Albuquerque 65.37 327 LR LR 16 49 41.9
comp=Z,1μm,21.9s,MS5.1,baz=33,slow=35
ANMO Albuquerque 65.37 327 *e*P **P** **16 22 42.6 -0.4**
ANMO pmax pmax
comp=Z,97nm,1.5s
ANMO MLR MLR
comp=Z,1μm,20.0s
ANMO Albuquerque 65.37 327 *e*P **P** **16 22 42.6 -0.4**
comp=Z,97nm,1.5s,mb5.6
ANMO LR LR
comp=Z,1μm,20.0s,MS5.1
217A Green Valley 65.37 322 P **P** **16 22 43.2 +0.1**
baz=66,SNR=27
W23A Werner Place, 65.38 327 P **P** **16 22 43.3 +0.3**
baz=66,SNR=13
V24A Rampart Ranch, 65.38 328 P **P** **16 22 42.5 -0.5**
baz=66,SNR=32
SADO Sadowa 65.39 352 LR LR 16 52 17.7
comp=Z,5μm,21.0s,MS5.7,baz=183,slow=37
CBKS Cedar Bluff 65.41 334 *e*P **P** **16 22 42.1 -1.0**
CBKS *e* 16 22 53.4
CBKS pmax pmax
comp=Z,77nm,1.0s,mb5.7
CBKS MLR MLR
comp=Z,1μm,20.0s,MS5.1
CBKS Cedar Bluff 65.41 334 *e*P **P** **16 22 42.1 -1.0**
comp=Z,77nm,1.0s,mb5.7
CBKS *e* 16 22 53.4
CBKS LR LR
comp=Z,1μm,20.0s,MS5.1
U25A Circle Dot Ran 65.50 329 P **P** **16 22 43.4 -0.3**
baz=66,SNR=52
118A Homack Ranch, 65.52 323 P **P** **16 22 44.1 +0.1**
baz=66,SNR=25
Y20A Horse Springs, 65.58 325 P **P** **16 22 44.9 +0.5**
baz=66,SNR=47
Z19A T-Link Ranch, 65.61 324 P **P** **16 22 45.0 +0.4**
baz=66,SNR=15
X21A Alamocita Cree 65.67 326 P **P** **16 22 45.6 +0.6**
baz=66,SNR=57
W22A Albuquerque 65.67 327 P **P** **16 22 46.0 +1.1**
baz=66,SNR=6.9
TUC Tucson 65.74 322 *e*P **P** **16 22 45.0 -0.5**
TUC pmax pmax
comp=Z,81nm,1.4s,mb5.6
TUC MLR MLR
comp=Z,3μm,20.0s,MS5.4
TUC Tucson 65.74 322 *e*P **P** **16 22 45.0 -0.4**
comp=Z,81nm,1.4s,mb5.6
TUC LR LR
comp=Z,3μm,20.0s,MS5.4
JFWS Jewell Farm 65.83 343 *e*P **P** **16 22 44.1 -1.7**
JFWS pmax pmax
comp=Z,75nm,0.9s,mb5.7
JFWS MLR MLR
comp=Z,2μm,21.0s,MS5.3
JFWS Jewell Farm 65.83 343 *e*P **P** **16 22 44.1 -1.7**
comp=Z,75nm,0.9s,mb5.7
JFWS LR LR
comp=Z,2μm,21.0s,MS5.3
V23A Ortiz Mt. (NFS 65.85 328 P **P** **16 22 46.5 +0.4**
baz=66,SNR=27
117A Oracle 65.91 322 P **P** **16 22 46.6 +0.1**
baz=66,SNR=40
216A Three Points, 65.91 321 P **P** **16 22 46.8 +0.2**
baz=66,SNR=31
T25A Trinidad 66.09 330 P **P** **16 22 47.6 +0.1**
baz=66,SNR=20
Y19A Nutrioso 66.10 324 P **P** **16 22 48.6 +0.9**
baz=66,SNR=102
W21A San Fidel 66.11 326 P **P** **16 22 48.2 +0.5**
baz=66,SNR=16
X20A Quemado 66.13 325 P **P** **16 22 48.4 +0.5**
baz=66,SNR=60
T24A Torres, Weston 66.34 329 P **P** **16 22 50.0 +0.8**
baz=66,SNR=13
V22A San Miguel Ran 66.35 327 ⇑P **P** **16 22 49.7 +0.5**
baz=66
Y18A Canyon Day Jun 66.39 324 P **P** **16 22 49.9 +0.3**
baz=67,SNR=17
116A Eloy 66.46 321 P **P** **16 22 50.8 +0.7**
baz=67,SNR=10
X19A St. Johns 66.47 324 ⇓P **P** **16 22 50.5 +0.4**
baz=67
S25A Robets Cordova 66.52 330 P **P** **16 22 50.2 -0.1**
baz=67,SNR=25
W20A Ramah 66.57 326 P **P** **16 22 51.1 +0.4**
baz=67,SNR=45
V21A Milan 66.64 327 ⇓P **P** **16 22 51.6 +0.4**
baz=67,SNR=20
U22A Llaves 66.68 328 P **P** **16 22 51.9 +0.5**
baz=67,SNR=21
214A Organ Pipe Nat 66.69 320 P **P** **16 22 52.1 +0.6**
baz=67,SNR=21
Y17A Roosevelt 66.79 323 P **P** **16 22 52.7 +0.5**
baz=67,SNR=72
T23A Casias Ranch, 66.79 329 ⇓P **P** **16 22 52.7 +0.7**
baz=67
R25A Fountain Ranch 66.84 330 ⇓P **P** **16 22 50.5 -1.9**
baz=67,SNR=10
Z16A Peralta Trail, 66.86 322 P **P** **16 22 53.1 +0.5**
baz=67,SNR=10
115A Sonoran Desert 66.87 321 ⇓P **P** **16 22 53.2 +0.6**
baz=67
S24A Houchin Ranch, 66.87 329 P **P** **16 22 53.0 +0.5**
baz=67,SNR=39
X18A Snowflake 66.91 324 P **P** **16 22 53.0 +0.1**
baz=67,SNR=18
W19A Sanders 67.03 325 P **P** **16 22 54.2 +0.6**
baz=67,SNR=7.5
V20A Brimhall 67.06 326 P **P** **16 22 54.1 +0.3**
baz=67,SNR=15
SDCO Great Sand Dun 67.09 329 P **P** **16 22 54.2 +0.2**
baz=67,SNR=107
SDCO Great Sand Dun 67.09 329 *e*P **P** **16 22 53.8 -0.2**
comp=Z,64nm,1.0s,mb5.6
SDCO LR LR
comp=Z,2μm,19.0s,MS5.3
U21A Nageezi 67.13 327 P **P** **16 22 54.5 +0.2**
baz=67,SNR=22
T22A Edith 67.20 328 P **P** **16 22 55.1 +0.5**
baz=67,SNR=29
W18A Petrified Fore 67.23 325 ⇓P **P** **16 22 54.7 -0.2**
baz=67,SNR=18
X17A Forest Lakes 67.24 323 P **P** **16 22 56.0 +1.0**
baz=67,SNR=13
Y16A Circle Bar Ran 67.28 323 P **P** **16 22 56.0 +0.7**
baz=68,SNR=33
114A Black Gap (USA 67.29 321 P **P** **16 22 55.8 +0.5**
baz=68,SNR=17
R24A Sanders Place, 67.30 330 P **P** **16 22 55.5 +0.3**
baz=68,SNR=24
V19A Window Rock 67.31 326 P **P** **16 22 55.9 +0.5**
baz=68,SNR=27
Q25A Bedland, Calha 67.45 331 P **P** **16 22 56.3 +0.1**
baz=68,SNR=6.7
T21A Navajo Lake 67.50 327 P **P** **16 22 57.0 +0.4**
baz=68,SNR=14
U20A Newcomb 67.53 326 P **P** **16 22 57.0 +0.2**
baz=68,SNR=23
X16A Lo Mia Camp, P 67.66 323 P **P** **16 22 58.2 +0.6**
baz=68,SNR=38
S22A 4UR Ranch, Cre 67.74 328 P **P** **16 22 58.2 +0.2**
baz=68,SNR=26
V18A Ganado 67.78 325 P **P** **16 22 58.4 0.0**
baz=68,SNR=16
Y15A Casa Rosa Ranc 67.83 322 ⇓P **P** **16 22 58.9 +0.2**
baz=68,SNR=32
113A Mohawk Valley, 67.83 320 ⇓P **P** **16 22 59.0 +0.2**
baz=68
U19A Dine' College, 67.83 326 P **P** **16 22 58.2 -0.4**
baz=68,SNR=7.3
P25A Willow Gulch B 67.90 331 P **P** **16 22 59.3 +0.3**
baz=68,SNR=20
Q24A Divide 67.90 330 P **P** **16 22 59.2 +0.1**
baz=68,SNR=39
MAIT Maitri 68.00 159 *e*P **P** **16 22 59.8 +0.5**
NVL N'lazarevskaya 68.03 159 ⇓*i*P **P** **16 22 59.7 +0.2**
NVL *e**PP pP 16 23 11.9 +11
NVL *e* 16 23 25.1
NVL *i* S S 16 31 52.4 -6.8
NVL *e* 16 32 56.8
NVL *e*SS SS 16 36 25.4 +4.6
NVL pmax pmax
comp=Z,66nm,0.9s,mb5.7
NVL MLR MLR
comp=Z,1μm,18.0s,MS5.2
Z13A Yuma Proving G 68.07 321 P **P** **16 23 00.9 +0.7**
baz=68,SNR=12
R22A Saguache, Gunn 68.08 329 ⇑P **P** **16 23 01.0 +0.8**
baz=68
T19A Beclabito 68.14 326 P **P** **16 23 00.5 -0.1**
baz=68,SNR=42
S21A Coal Bank Pass 68.15 328 P **P** **16 23 00.9 +0.2**
baz=68,SNR=31
OGNE Ogallala 68.16 334 P **P** **16 23 00.7 0.0**
baz=68,SNR=7.7
OGNE Ogallala 68.16 334 *e*P **P** **16 22 59.9 -0.7**
comp=Z,46nm,0.8s,mb5.6
OGNE LR LR
comp=Z,875nm,20.0s,MS5.0
X15A Humboldt 68.16 323 P **P** **16 23 01.4 +0.6**
baz=68,SNR=31
Q23A Hartsel 68.17 330 P **P** **16 23 01.0 +0.2**
baz=68,SNR=10
V17A Tonalea, Kykot 68.18 324 P **P** **16 23 01.5 +0.6**
baz=68,SNR=83
W16A Flagstaff 68.20 323 P **P** **16 23 02.0 +1.0**
baz=68,SNR=39
Y14A Wickenburg 68.21 322 P **P** **16 23 01.3 +0.2**
baz=68,SNR=15
LIC Lamto 68.30 74 *e*P **P** **16 23 01.8 -0.4**
comp=Z,171nm,1.0s,mb6.0
O25A Wiggins 68.36 332 P **P** **16 23 02.6 +0.7**
baz=69,SNR=5.8
TIC Toumodi 68.48 74 *e*P **P** **16 23 03.0 -0.3**
comp=Z,477nm,1.5s,mb6.3
TIC Toumodi 68.48 74 *e*P **P** **16 23 03.0 -0.3**
TIC pmax pmax
comp=Z,477nm,1.5s,mb6.3
ECSD EROS Data Cent 68.52 339 *e*P **P** **16 23 01.2 -1.6**
comp=Z,58nm,1.2s,mb5.4
ECSD LR LR
comp=Z,1μm,20.0s,MS5.2
X14A Yava 68.52 322 P **P** **16 23 03.6 +0.6**
baz=69,SNR=26
COWI Conover 68.52 345 *e*P **P** **16 23 01.5 -1.2**
comp=Z,49nm,1.0s,mb5.4
COWI LR LR
comp=Z,2μm,20.0s,MS5.3
S20A Disappointment 68.57 327 P **P** **16 23 04.0 +0.7**
baz=69,SNR=65
R21A Cimarron 68.58 328 P **P** **16 23 03.7 +0.4**
baz=69,SNR=30
Y13A Salome 68.60 321 P **P** **16 23 04.0 +0.5**
baz=69,SNR=13
KIC Kosan Boka 68.62 74 *e*P **P** **16 23 03.9 -0.2**
comp=Z,190nm,0.7s,mb6.1
DBIC Dimbokro 68.64 74 P **P** **16 23 04.1 -0.2**
comp=Z,45nm,0.8s,mb5.4,baz=218,slow=6.1,SNR=46
DBIC pP pP 16 23 15.8 +10
comp=Z,77nm,0.7s,baz=216,slow=7.6,SNR=14
DBIC LR LR 16 53 26.6
comp=Z,3μm,18.6s,MS5.5,baz=226,slow=36
DBIC Dimbokro 68.64 74 *e*P **P** **16 23 04.0 -0.3**
DBIC pmax pmax
comp=Z,99nm,0.8s
DBIC MLR MLR
comp=Z,3μm,20.0s
DBIC Dimbokro 68.64 74 *e*P **P** **16 23 04.0 -0.3**
comp=Z,99nm,0.8s,mb5.8
DBIC LR LR
comp=Z,3μm,20.0s,MS5.5
Q22A Crested Butte, 68.65 329 ⇓P **P** **16 23 04.9 +1.1**
baz=69,SNR=8.1
GLA Glamis 68.67 320 P **P** **16 23 04.3 +0.4**
baz=69,SNR=12
GLA Glamis 68.67 320 *e*P **P** **16 23 03.9 -0.1**
GLA pmax pmax
comp=Z,120nm,1.4s,mb5.6
GLA Glamis 68.67 320 *e*P **P** **16 23 03.9 -0.1**
comp=Z,120nm,1.4s,mb5.6
W15A Williams 68.67 323 P **P** **16 23 05.1 +1.1**
baz=69,SNR=24
U16A Tuba City 68.75 325 P **P** **16 23 04.5 +0.1**
baz=69,SNR=28
ISCO Idaho Springs 68.79 331 ⇑P **P** **16 23 04.7 +0.1**
baz=69,SNR=23
ISCO Idaho Springs 68.79 331 *e*P **P** **16 23 04.4 -0.2**
ISCO pmax pmax
comp=Z,58nm,1.2s,mb5.4
ISCO MLR MLR
comp=Z,2μm,21.0s,MS5.3
ISCO Idaho Springs 68.79 331 *e*P **P** **16 23 04.4 -0.2**
comp=Z,58nm,1.2s,mb5.4
ISCO LR LR
comp=Z,2μm,21.0s,MS5.3
CHIE El Hierro 68.81 48 P **P** **16 23 04.8 -0.2**
comp=Z,36nm,0.9s,mb5.3
T18A Mexican Hat 68.82 326 P **P** **16 23 04.7 -0.1**
baz=69,SNR=93
U17A Shonto 68.83 325 ⇓P **P** **16 23 05.6 +0.6**
baz=69
R20A Redvale 68.85 328 ⇓P **P** **16 23 05.1 +0.1**
baz=69,SNR=50
S19A Harvey Farm, M 68.90 327 P **P** **16 23 05.5 +0.2**
baz=69,SNR=47
PV01 Paradox Valley 68.91 328 *e*P **P** **16 23 05.3 -0.1**
comp=Z,6μm,1.2s
SMCO Snowmass 68.93 329 *e*P **P** **16 23 06.2 +0.7**
comp=Z,64nm,1.0s,mb5.5
Q21A Lamborn Mesa, 68.95 329 P **P** **16 23 06.0 +0.3**
baz=69,SNR=5.3
Y12C Blythe 68.97 321 P **P** **16 23 06.4 +0.5**
baz=69,SNR=9.5
V15A Kaibab Nationa 69.08 324 P **P** **16 23 07.5 +1.0**
baz=69,SNR=54
X13A Yucca 69.15 322 ⇓P **P** **16 23 07.4 +0.4**
baz=69
P22A Eagle 69.16 330 ⇓P **P** **16 23 07.5 +0.6**
baz=69,SNR=9.6
W14A Seligman 69.16 323 P **P** **16 23 07.9 +0.9**
baz=69,SNR=28
DVTC Desert V Tower 69.18 319 P **P** **16 23 08.3 +1.1**
baz=69,SNR=13
SWSC Sam W. Stewart 69.18 319 ⇓P **P** **16 23 07.8 +0.6**
baz=69,SNR=5.2
TAOE Nuku Hiva Isla 69.19 268 *e*LR LR 16 43 48.1
comp=Z,1μm,27.5s
T17A Navajo Res., N 69.20 325 P **P** **16 23 08.0 +0.7**
baz=69,SNR=109
O23A Lake Granby, G 69.26 331 P **P** **16 23 08.0 +0.5**
baz=70,SNR=29
PV04 Paradox Valley 69.27 328 *e*P **P** **16 23 06.9 -0.8**
S18A Hurst Farm, Bl 69.30 326 P **P** **16 23 08.3 +0.5**
baz=70,SNR=140
R19A Curley Farm, L 69.38 327 P **P** **16 23 08.4 +0.1**
baz=70,SNR=19
P21A Newcastle 69.43 329 P **P** **16 23 09.3 +0.7**
baz=70,SNR=14
BC3 Big Chuckawall 69.46 320 P **P** **16 23 09.5 +0.6**
baz=70,SNR=21
V14A Boquillas Ranc 69.47 323 P **P** **16 23 10.0 +1.0**
baz=70,SNR=93
O22A Kremmling 69.51 330 P **P** **16 23 09.0 -0.1**
baz=70,SNR=49
MONP Monument Peak 69.53 319 P **P** **16 23 10.1 +0.7**
baz=70,SNR=12
BAR Barrett 69.55 318 *e*P **P** **16 23 09.4 -0.1**
comp=Z,56nm,0.9s,mb5.5
BAR *e* 16 23 20.7
T16A Glen Canyon Da 69.57 325 P **P** **16 23 10.4 +0.9**
baz=70,SNR=26
U15A North Rim 69.59 324 P **P** **16 23 10.7 +1.0**
baz=70,SNR=88
IRM Iron Mountain 69.63 321 P **P** **16 23 10.4 +0.5**
baz=70,SNR=44
S17A Black Ridge (B 69.68 326 P **P** **16 23 11.2 +1.0**
baz=70,SNR=16
R18A Canyonlands Na 69.77 327 P **P** **16 23 10.7 0.0**
baz=70,SNR=19
M24A Cheyenne 69.78 332 P **P** **16 23 11.6 +0.9**
baz=70,SNR=21
N23A Red Feather La 69.81 331 ⇓P **P** **16 23 11.1 +0.1**
baz=70,SNR=23
Q19A Hogan Spring (69.88 328 P **P** **16 23 11.7 +0.3**
baz=70,SNR=47
PHWY Pilot Hill 69.92 332 *e*P **P** **16 23 11.2 -0.4**
comp=Z,56nm,1.1s,mb5.4
N22A Wattenberg Ran 69.97 331 ⇑P **P** **16 23 12.2 +0.3**
baz=70,SNR=22
O21A Pagoda 69.98 330 ⇑P **P** **16 23 13.3 +1.3**
baz=70,SNR=11
BELC Belle Mtn. Jos 70.03 320 P **P** **16 23 12.8 +0.3**
baz=70,SNR=23
PFO Pinyon Flat Ob 70.04 319 P **P** **16 23 13.1 +0.6**
baz=70,SNR=18
PFO Pinyon Flat Ob 70.04 319 *e*P **P** **16 23 12.7 +0.2**
PFO *e* 16 23 24.0
PFO pmax pmax
comp=Z,52nm,1.0s,mb5.4
PFO MLR MLR
comp=Z,1μm,21.0s,MS5.1
PFO Pinyon Flat Ob 70.04 319 *e*P **P** **16 23 12.7 +0.2**
comp=Z,52nm,1.0s,mb5.4
PFO *e* 16 23 24.0
PFO LR LR
comp=Z,1μm,21.0s,MS5.1
PFO Pinyon Flat Ob 70.04 319 P **P** **16 23 13.5 +1.0**
comp=Z,248nm,1.0s,mb6.1,SNR=11
CCAN Las Canadas 70.06 48 P **P** **16 23 13.9 +1.2**
comp=Z,23nm,0.8s,mb5.2
T15A Red Dirt Ranch 70.07 324 ⇑P **P** **16 23 13.5 +0.9**
baz=70,SNR=26
U14A Mt Trumbull 70.08 323 P **P** **16 23 13.8 +1.1**
baz=70,SNR=68
V13A Grand Canyon W 70.13 323 P **P** **16 23 13.7 +0.7**
baz=70,SNR=26
S16A Weppner Ranch, 70.17 325 P **P** **16 23 13.6 +0.4**
baz=70,SNR=42
M23A Laramie 70.17 332 P **P** **16 23 13.4 +0.2**
baz=70,SNR=28
R17A Hanksville Air 70.22 326 P **P** **16 23 13.9 +0.4**
baz=70,SNR=45
LDFC Landfair 70.24 321 *e*P **P** **16 23 14.3 +0.6**
comp=Z,111nm,0.9s,mb5.8
LDFC *e* 16 23 26.0
P19A Cripple Cowboy 70.26 328 P **P** **16 23 14.1 +0.4**
baz=70,SNR=42
O20A White River Ci 70.29 329 ⇑P **P** **16 23 14.1 +0.2**
baz=70,SNR=20
GMRC Granite Mounta 70.36 321 P **P** **16 23 15.1 +0.7**
baz=70,SNR=49
Q18A Rafter H Ranch 70.43 327 P **P** **16 23 15.1 +0.3**
baz=71,SNR=24
N21A Black Mountain 70.44 330 P **P** **16 23 15.4 +0.7**
baz=71,SNR=9.5
T14A Hurricane 70.49 324 P **P** **16 23 16.2 +1.0**
baz=71,SNR=34
M22A Cedar Creek Ra 70.52 331 P **P** **16 23 15.9 +0.7**
baz=71,SNR=13
U13A Pakoon Wash 70.52 323 P **P** **16 23 16.0 +0.6**
baz=71,SNR=26
R16A Teasdale 70.52 326 P **P** **16 23 15.9 +0.6**
baz=71,SNR=20
V12A Nelson 70.54 322 P **P** **16 23 16.1 +0.5**
baz=71,SNR=14
SRU San Rafael 70.64 327 P **P** **16 23 16.3 +0.3**
baz=71,SNR=67
SRU San Rafael 70.64 327 *e*P **P** **16 23 15.6 -0.4**
SRU *e* 16 23 27.4
SRU pmax pmax
comp=Z,76nm,0.8s,mb5.7
SRU San Rafael 70.64 327 *e*P **P** **16 23 15.6 -0.4**
comp=Z,76nm,0.8s,mb5.7
SRU *e* 16 23 27.4
L23A Garrett 70.69 332 P **P** **16 23 16.1 -0.1**
baz=71,SNR=12
EOSO Osorio 70.71 49 P **P** **16 23 18.8 +2.1**
comp=Z,92nm,1.2s,mb5.6
HEC Hector,Ludlow 70.79 320 ⇑P **P** **16 23 17.6 +0.6**
baz=71,SNR=28
EYMN Ely 70.83 344 *e*P **P** **16 23 15.2 -1.8**
comp=Z,97nm,1.4s,mb5.5
EYMN LR LR
comp=Z,2μm,20.0s,MS5.4
Q16A Castle Valley 70.83 326 P **P** **16 23 17.6 +0.4**
baz=71,SNR=49
N20A Spence Gulch, 70.84 330 ⇓P **P** **16 23 17.2 -0.1**
baz=71
O19A Miners Draw (B 70.84 329 P **P** **16 23 17.5 +0.2**
baz=71,SNR=29
U12A Valley of Fire 70.86 323 P **P** **16 23 18.1 +0.7**
baz=71,SNR=30
CMLA Cha da Macela 70.86 35 PFAKE 16 23 30.0 +13
CMLA LR LR
comp=Z,1μm,19.0s,MS5.2
R15A Junction 70.89 325 P **P** **16 23 18.4 +0.8**
baz=71,SNR=19
T13A Saint George 70.92 323 P **P** **16 23 18.7 +0.9**
baz=71,SNR=26
SCI San Clemente I 70.92 318 ⇑P **P** **16 23 18.8 +0.9**
baz=71,SNR=5.9
V11A Goodsprings 70.96 322 P **P** **16 23 18.6 +0.6**
baz=71,SNR=17
TUQ Turquoise Moun 70.97 321 P **P** **16 23 18.7 +0.5**
baz=71,SNR=26
CCUT Cedar City 71.00 324 *e*P **P** **16 23 19.1 +0.9**
comp=Z,118nm,1.0s,mb5.8
P17A Butcher Ranch, 71.02 327 P **P** **16 23 18.6 +0.3**
baz=71,SNR=34
RWWY Rawlins 71.02 331 *e*P **P** **16 23 17.9 -0.4**
comp=Z,48nm,1.0s,mb5.4
RWWY *e* 16 23 29.5
M21A Separation Pea 71.03 331 P **P** **16 23 18.6 +0.3**
baz=71,SNR=9.3
S14A Cedar City 71.04 324 P **P** **16 23 19.6 +1.1**
baz=71,SNR=7.9
MSU Marysvale 71.06 326 *e*P **P** **16 23 19.2 +0.6**
MSU *e* 16 23 30.2
MSU pmax pmax
comp=Z,65nm,0.8s,mb5.6
MSU Marysvale 71.06 326 *e*P **P** **16 23 19.2 +0.6**
comp=Z,65nm,0.8s,mb5.6
MSU *e* 16 23 30.2
MVU Marysvale 71.07 326 PFAKE 16 23 30.0 +11
MVU LR LR
comp=Z,2μm,20.0s,MS5.4
TMUT Trail Mountain 71.13 327 *e*P **P** **16 23 19.3 +0.3**
comp=Z,59nm,0.9s,mb5.5
BFSC Mount Baldy Ra 71.20 319 P **P** **16 23 20.0 +0.4**
baz=71,SNR=22
ARUT Antelope Range 71.21 324 *e*P **P** **16 23 20.4 +0.9**
ARUT *e* 16 23 31.7
ARUT pmax pmax
comp=Z,101nm,0.8s,mb5.8
ARUT Antelope Range 71.21 324 *e*P **P** **16 23 20.4 +0.8**
comp=Z,101nm,0.8s,mb5.8
ARUT *e* 16 23 31.7
O18A Roosevelt 71.25 328 P **P** **16 23 20.4 +0.6**
baz=71,SNR=8.7
S13A Holt Ranch, En 71.29 324 P **P** **16 23 21.2 +1.2**
baz=72,SNR=67
L21A Rawlins 71.31 331 P **P** **16 23 19.9 -0.1**
baz=72,SNR=33
M20A Sweetwater, Wa 71.32 330 P **P** **16 23 20.2 +0.1**
baz=72,SNR=24
N19A John Jarvie Ra 71.33 329 P **P** **16 23 20.5 +0.3**
baz=72,SNR=12
GSC Goldstone 71.40 320 P **P** **16 23 21.4 +0.7**
baz=72,SNR=19
GSC Goldstone 71.40 320 *e*P **P** **16 23 21.2 +0.5**
GSC *e* 16 23 32.6
GSC pmax pmax
comp=Z,38nm,0.9s,mb5.3
GSC Goldstone 71.40 320 *e*P **P** **16 23 21.2 +0.5**
comp=Z,38nm,0.9s,mb5.3
GSC *e* 16 23 32.6
MWC Mount Wilson 71.44 319 *e*P **P** **16 23 21.0 0.0**
MWC pmax pmax
comp=Z,73nm,1.0s,mb5.6
MWC Mount Wilson 71.44 319 *e*P **P** **16 23 21.0 0.0**

comp=Z,73nm,1.0s,mb5.6
K22A Casper 71.48 332 P P 16 23 20.9 -0.1
baz=72,SNR=13
PASC Pasadena Art C 71.48 319 eP P 16 23 21.3 0.0
comp=Z,56nm,1.0s,mb5.4
PASC e 16 23 32.7
SHOC Shoshone 71.50 321 ⇓P P 16 23 22.0 +0.7
baz=72,SNR=8.5
Q15A Fillmore 71.52 326 P P 16 23 22.2 +0.8
baz=72,SNR=14
O17A Robinson Place 71.56 328 P P 16 23 22.4 +0.8
baz=72,SNR=60
RSSD Black Hills 71.61 334 eP P 16 23 21.7 -0.1
RSSD e 16 23 33.4
RSSD pmax pmax
comp=Z,35nm,1.0s,mb5.2
RSSD MLR MLR
comp=Z,1µm,22.0s,MS5.2
RSSD Black Hills 71.61 334 eP P 16 23 21.7 -0.2
comp=Z,35nm,1.0s,mb5.2
RSSD e 16 23 33.4
RSSD LR LR
comp=Z,1µm,22.0s,MS5.2
N18A Larsen Ranch, 71.63 329 ⇑P P 16 23 22.2 +0.2
baz=72
R13A O'Grain Ranch, 71.78 324 P P 16 23 24.2 +1.2
baz=72,SNR=51
K21A Alcova 71.79 331 P P 16 23 23.1 +0.2
baz=72,SNR=82
M19A Rock Springs 71.79 329 P P 16 23 23.2 +0.3
baz=72,SNR=5.1
L20A Wamsutter 71.80 330 P P 16 23 23.2 +0.3
baz=72,SNR=19
T11A Corn Creek, Al 71.81 323 ⇑P P 16 23 24.1 +0.9
baz=72
EDW2 Edwards Air Fo 71.83 319 P P 16 23 23.4 +0.1
baz=72,SNR=30
S12A Delamar Landin 71.86 323 P P 16 23 24.6 +1.1
baz=72,SNR=17
U10A Ash Meadows, A 71.88 322 P P 16 23 24.5 +0.8
baz=72,SNR=15
MPU Maple Canyon 71.89 327 eP P 16 23 23.7 +0.2
comp=Z,94nm,1.1s,mb5.6
P15A Leamington 71.89 326 P P 16 23 24.5 +0.9
baz=72,SNR=11
DAU Daniels Canyon 71.99 327 eP P 16 23 24.7 +0.5
DAU pmax pmax
comp=Z,58nm,0.9s,mb5.5
DAU Daniels Canyon 71.99 327 eP P 16 23 24.7 +0.5
comp=Z,58nm,0.9s,mb5.5
Q14A Sevier Lake (B 71.99 325 P P 16 23 25.2 +1.0
baz=72,SNR=90
LRMC Laurel Mountai 72.05 320 P P 16 23 25.1 +0.4
baz=72,SNR=18
NLU North Lily Min 72.07 327 eP P 16 23 25.0 +0.3
comp=Z,61nm,1.0s,mb5.5
J22A Midwest 72.07 332 P P 16 23 24.3 -0.3
baz=72,SNR=30
OSI Osito Adit 72.11 319 eP P 16 23 24.3 -0.7
comp=Z,44nm,0.8s,mb5.4
M18A Lyman 72.17 329 P P 16 23 24.9 -0.3
baz=72,SNR=17
N17A Moffit Pass 72.18 328 P P 16 23 26.1 +0.8
baz=72,SNR=120
FURC Furnace Creek, 72.23 321 P P 16 23 26.4 +0.7
baz=72,SNR=37
JLU Jordanelle 72.23 327 eP P 16 23 25.8 +0.2
comp=Z,60nm,0.9s,mb5.5
JLU e 16 23 37.4
R12A Pony Springs, 72.24 324 P P 16 23 26.9 +1.1
baz=72,SNR=67
BSC Santa Cruz Isl 72.27 318 P P 16 23 26.6 +0.6
baz=72,SNR=6.8
K20A Yellowstone Ra 72.31 331 P P 16 23 25.7 -0.3
baz=72,SNR=26
P14A Drum Mountains 72.32 326 P P 16 23 27.2 +1.0
baz=72,SNR=139
MPMC Manual Prospec 72.32 321 P P 16 23 26.6 +0.3
baz=72,SNR=30
L19A Farson 72.34 330 P P 16 23 26.5 +0.2
baz=72,SNR=37
AGMN Agassiz Nation 72.35 342 eP P 16 23 23.6 -2.5
comp=Z,55nm,1.0s,mb5.4
AGMN LR LR
comp=Z,2µm,19.0s,MS5.4
S11A Rachel 72.40 323 P P 16 23 28.0 +1.3
baz=73,SNR=12
N16A Rees Ranch, Co 72.44 328 P P 16 23 27.6 +0.7
baz=73,SNR=16
J21A Lysite 72.44 332 P P 16 23 26.9 0.0
baz=73,SNR=30
CTU Camp Tracy 72.45 327 eP P 16 23 26.9 0.0
comp=Z,50nm,1.0s,mb5.4
M17A Scullys Gap (B 72.50 329 P P 16 23 27.3 +0.1
baz=73,SNR=26
O15A The Old Anders 72.51 327 P P 16 23 28.2 +0.9
baz=73,SNR=12
DAC Darwin (Calif) 72.53 321 PFAKE 16 23 40.0 +12
DAC LR LR
comp=Z,2µm,20.0s,MS5.3
L18A Fontenelle, Gr 72.53 329 P P 16 23 27.6 +0.2
baz=73,SNR=37
NOQ North Oquirrh 72.61 327 eP P 16 23 27.8 0.0
comp=Z,51nm,0.9s,mb5.5
DUG Dugway 72.63 326 P P 16 23 28.5 +0.5
baz=73,SNR=56
DUG Dugway 72.63 326 eP P 16 23 28.2 +0.2
DUG pmax pmax
comp=Z,85nm,1.0s,mb5.6
DUG MLR MLR
comp=Z,2µm,19.0s,MS5.3
DUG Dugway 72.63 326 eP P 16 23 28.2 +0.2
comp=Z,85nm,1.0s,mb5.6
DUG LR LR
comp=Z,2µm,19.0s,MS5.3
ISA Isabella 72.65 320 P P 16 23 28.7 +0.5
baz=73,SNR=54
ISA Isabella 72.65 320 eP P 16 23 28.3 +0.1
ISA e 16 23 40.1
ISA pmax pmax
comp=Z,62nm,0.8s,mb5.6
ISA Isabella 72.65 320 eP P 16 23 28.3 +0.1
comp=Z,62nm,0.8s,mb5.6
ISA e 16 23 40.1
K19A Absolon Red Bu 72.67 331 P P 16 23 27.7 -0.4
baz=73,SNR=30
J20A Shoshoni 72.73 331 P P 16 23 28.7 +0.2
baz=73,SNR=23
I21A Big Trails, Te 72.74 332 ⇑P P 16 23 28.1 -0.4
baz=73
R11A Troy Canyon, C 72.80 323 P P 16 23 29.8 +0.8
baz=73,SNR=77
M16A Huntsville 72.85 328 P P 16 23 29.3 0.0
baz=73,SNR=11
BW06 Boulder Array 72.95 330 P P 16 23 29.3 -0.5
baz=73,SNR=37
BW06 Boulder Array 72.95 330 PFAKE 16 23 40.0 +10
BW06 LR LR
comp=Z,1µm,20.0s,MS5.2
PDAR Pinedale Array 72.95 330 P P 16 23 29.2 -0.7
comp=Z,13nm,0.7s,mb5.0,baz=147,slow=8.3,SNR=26
PDAR LR LR 16 57 33.8
comp=Z,1µm,19.7s,MS5.1,baz=135,slow=38
PKM Peak Mountain 72.97 318 P P 16 23 30.8 +0.7
baz=73,SNR=25
N15A Stansbury Isla 72.99 327 P P 16 23 30.1 0.0
baz=73,SNR=9.0
HWUT Hardware Ranch 73.04 328 eP P 16 23 30.1 -0.3
comp=Z,66nm,0.8s,mb5.6
HWUT LR LR
comp=Z,2µm,22.0s,MS5.3
L17A Cokeville 73.07 329 P P 16 23 30.2 -0.4
baz=73,SNR=19
S10A Tonopah Range, 73.07 323 P P 16 23 31.4 +0.7
baz=73,SNR=59
K18A Toltan Ranch, 73.08 330 P P 16 23 31.0 +0.4
baz=73,SNR=30
J19A Crowheart 73.11 331 P P 16 23 30.8 0.0
baz=73,SNR=15
VES Vestal, Richgr 73.14 319 ⇓P P 16 23 31.3 +0.2
baz=73,SNR=9.8
R10A Warm Springs 73.16 323 P P 16 23 32.5 +1.3
baz=73,SNR=74
Q11A Duckwater 73.19 324 P P 16 23 32.0 +0.7
baz=73,SNR=82
I20A Worland 73.22 332 P P 16 23 31.2 -0.2
baz=73,SNR=14
SPUT South Promonto 73.26 327 eP P 16 23 31.8 0.0
comp=Z,118nm,1.1s,mb5.7
SPUT e 16 23 43.1
BGU Big Grassy Mou 73.27 327 eP P 16 23 31.6 -0.2
comp=Z,67nm,1.0s,mb5.5
L16A Fish Haven 73.28 328 ⇓P P 16 23 32.1 +0.3
baz=74,SNR=24
H21A Big Horn, Sher 73.28 333 P P 16 23 31.1 -0.7
baz=74,SNR=14
SMMC Simmler 73.35 319 P P 16 23 33.2 +0.8
baz=74,SNR=23
M15A Larsen Ranch, 73.37 327 P P 16 23 32.8 +0.4
baz=74,SNR=28
J18A Kendall Valley 73.51 330 P P 16 23 33.5 +0.3
baz=74,SNR=8.0
TPH Tonopah 73.54 322 PFAKE 16 23 40.0 +6.6
TPH LR LR
comp=Z,1µm,20.0s,MS5.2
K17A Gardner Place, 73.59 329 P P 16 23 33.7 +0.1
baz=74,SNR=12
H20A Greybull 73.59 332 P P 16 23 33.4 -0.2
baz=74,SNR=12
TBI Tubuai 73.65 251 eS S 16 33 10.2 +4.1
comp=Z,1µm,26.8s
TBI eLR LR 16 46 14.4
comp=Z,2µm,28.5s,baz=105
I19A Meeteetse 73.68 331 P P 16 23 34.2 +0.1
baz=74,SNR=28
AHID Auburn Hatcher 73.68 329 eP P 16 23 33.9 -0.3
comp=Z,68nm,0.9s,mb5.6
AHID LR LR
comp=Z,2µm,22.0s,MS5.4
L15A Malad City 73.74 328 P P 16 23 34.4 -0.1
baz=74,SNR=86
HVU Hansel Valley 73.77 328 eP P 16 23 34.5 -0.2
HVU pmax pmax
comp=Z,52nm,0.9s,mb5.5
HVU Hansel Valley 73.77 328 eP P 16 23 34.5 -0.2
comp=Z,52nm,0.9s,mb5.5
I18A Diamond G Ranc 73.79 331 P P 16 23 35.2 +0.4
baz=74,SNR=14
G21A Lodge Grass 73.83 333 P P 16 23 34.8 -0.2
baz=74,SNR=15
J17A Brown Place, J 73.95 330 P P 16 23 35.9 +0.2
baz=74,SNR=22
K16A Soda Springs 73.97 329 P P 16 23 36.1 +0.3
baz=74,SNR=56
REDW Red Top Meadow 74.02 330 eP P 16 23 36.0 -0.1
comp=Z,108nm,1.2s,mb5.7
SNOW Snow King Moun 74.05 330 eP P 16 23 36.2 -0.1
comp=Z,48nm,0.9s,mb5.4
LOHW Long Hollow 74.09 330 eP P 16 23 36.5 -0.1
comp=Z,62nm,1.2s,mb5.4
ULM Lac du Bonnet 74.11 343 P P 16 23 35.0 -1.4
comp=Z,18nm,0.6s,mb5.2,baz=155,slow=6.3,SNR=20
ULM LR LR 17 00 25.1
comp=Z,2µm,18.4s,MS5.4,baz=151,slow=39
ULM Lac du Bonnet 74.11 343 eP P 16 23 34.9 -1.6
comp=Z,42nm,1.0s,mb5.3
ULM LR LR
comp=Z,2µm,19.0s,MS5.5
TPAW Teton Pass 74.16 330 eP P 16 23 36.8 -0.1
comp=Z,107nm,1.1s,mb5.7
H19A Powell 74.17 332 P P 16 23 36.9 -0.1
baz=74,SNR=13
L14A Malta 74.19 327 P P 16 23 37.1 -0.1
baz=74,SNR=54
RRI2 Red Ridge 74.23 329 eP P 16 23 37.5 +0.2
comp=Z,126nm,1.0s,mb5.8
G20A Bridger 74.26 332 P P 16 23 36.9 -0.6
baz=74,SNR=24
MOOW Moose Ponds 74.26 330 eP P 16 23 37.3 -0.3
comp=Z,37nm,1.1s,mb5.2
I17A Pilgrim Ck. 74.31 330 ⇑P P 16 23 38.5 +0.7
baz=74,SNR=12
J16A Bone 74.31 329 P P 16 23 38.6 +0.8
baz=74,SNR=5.7
K15A Arbon 74.32 328 P P 16 23 38.0 +0.1
baz=74,SNR=24
DCID1 Drake Creek 74.35 330 P P 16 23 37.0 -1.1
comp=Z,99nm,0.9s,mb5.7
NVAR Mina Array Bea 74.40 322 P P 16 23 38.8 +0.3
comp=Z,15nm,0.8s,mb5.0,baz=150,slow=6.0,SNR=78
NVAR pP pP 16 23 49.9 +10
comp=Z,21nm,0.8s,baz=161,slow=6.4,SNR=14
IMW Indian Meadow 74.47 330 eP P 16 23 38.9 +0.1
comp=Z,87nm,1.1s,mb5.6
IMW e 16 23 50.4
H18A Shoshone NF, C 74.48 331 P P 16 23 38.7 -0.1
baz=75,SNR=94
FLWY Flagg Ranch 74.50 330 eP P 16 23 39.4 +0.5
comp=Z,104nm,0.9s,mb5.8
K14A Jones Ranch, D 74.54 328 P P 16 23 39.1 0.0
baz=75,SNR=9.4
LAO LASA Array 74.60 335 eP P 16 23 39.1 -0.3
comp=Z,72nm,1.0s,mb5.6
LAO e 16 23 50.7
LAO LR LR
comp=Z,1µm,22.0s,MS5.2
RLMT Red Lodge 74.65 332 P P 16 23 40.0 +0.3
baz=75,SNR=38
RLMT Red Lodge 74.65 332 eP P 16 23 39.7 0.0
comp=Z,40nm,0.7s,mb5.5
RLMT e 16 23 51.5
RLMT LR LR
comp=Z,1µm,21.0s,MS5.2
H17A Grant Village 74.68 331 ⇓P P 16 23 41.3 +1.4
baz=75,SNR=6.4
F20A Billings 74.69 333 ⇓P P 16 23 39.9 -0.1
baz=75
I16A Newdale 74.71 330 P P 16 23 41.1 +0.9
baz=75,SNR=6.9
LKWY Lake 74.73 331 eP P 16 23 42.1 +1.9
LKWY pmax pmax
comp=Z,55nm,0.8s,mb5.5
LKWY MLR MLR
comp=Z,2µm,20.0s,MS5.5
LKWY Lake 74.73 331 eP P 16 23 42.1 +1.8
comp=Z,55nm,0.8s,mb5.5
LKWY LR LR
comp=Z,2µm,20.0s,MS5.5
J15A Blackfoot 74.81 329 P P 16 23 41.2 +0.5
baz=75,SNR=47
E21A Keefer Ranch, 74.83 334 P P 16 23 40.7 -0.1
baz=75,SNR=21
YFT Old Faithful 74.84 330 eP P 16 23 41.8 +0.9
comp=Z,37nm,0.6s,mb5.5
SCHQ Schefferville 74.86 1 P P 16 23 40.4 -0.4
comp=Z,33nm,0.8s,mb5.3,baz=160,slow=3.6,SNR=19
SCHQ LR LR 17 00 03.2
comp=Z,1µm,18.7s,MS5.3,baz=18,slow=38
SCHQ Schefferville 74.86 1 eP P 16 23 39.7 -1.0
comp=Z,53nm,1.0s,mb5.4
SCHQ LR LR
comp=Z,2µm,20.0s,MS5.3
G18A Lazy EL Ranch, 74.93 332 P P 16 23 41.4 0.0
baz=75,SNR=45
D22A Cohagen 74.96 335 ⇓P P 16 23 41.8 +0.3
baz=75
YNR Norris Junctio 74.97 331 eP P 16 23 42.8 +1.2
comp=Z,44nm,0.9s,mb5.4
YMR Madison River 75.07 331 eP P 16 23 43.5 +1.4
comp=Z,123nm,1.1s,mb5.8
F19A Roth Farm, Mol 75.08 332 ⇓P P 16 23 41.8 -0.5
baz=75,SNR=41
C23A Lambert 75.10 336 ⇓P P 16 23 42.3 0.0
baz=75
WAKR Walker 75.11 321 eP P 16 23 42.6 0.0
comp=Z,32nm,1.1s,mb5.2
BMN Battle Mountai 75.16 324 eP P 16 23 42.9 +0.1
BMN pmax pmax
comp=Z,13nm,0.8s,mb4.9
BMN MLR MLR
comp=Z,2µm,22.0s,MS5.2
BMN Battle Mountai 75.16 324 eP P 16 23 42.9 +0.1
comp=Z,13nm,0.8s,mb4.9
BMN LR LR
comp=Z,2µm,22.0s,MS5.2
SAO San Andreas Ge 75.19 319 eP P 16 23 42.9 -0.2
SAO pmax pmax
comp=Z,44nm,1.1s,mb5.3
SAO MLR MLR
comp=Z,1µm,19.0s,MS5.2
SAO San Andreas Ge 75.19 319 eP P 16 23 42.9 -0.2
comp=Z,44nm,1.1s,mb5.3
SAO LR LR
comp=Z,1µm,19.0s,MS5.2
D21A La Casta Ranch 75.22 334 P P 16 23 43.3 +0.3
baz=75,SNR=16
H16A Russell Place, 75.22 330 P P 16 23 43.7 +0.6
baz=75,SNR=22
E20A Meyer Farm, Mu 75.24 333 P P 16 23 43.3 +0.2
baz=75,SNR=16
DGMT Dagmar 75.28 337 P P 16 23 43.6 +0.3
baz=76,SNR=15
DGMT Dagmar 75.28 337 eP P 16 23 43.3 -0.1
comp=Z,50nm,0.8s,mb5.5
DGMT LR LR
comp=Z,1µm,19.0s,MS5.2
J14A Carey 75.28 328 P P 16 23 44.2 +0.8
baz=76,SNR=47
GCMT Greycliff 75.34 332 eP P 16 23 43.6 -0.2
comp=Z,78nm,1.1s,mb5.5
GCMT e 16 23 55.3
PPT Papeete 75.35 256 eS S 16 33 28.9 +3.5
comp=Z,2µm,24.8s
PPT eSS SS 16 38 20.5 +5.2
comp=Z,580nm,24.0s
PPT eLQ 16 43 50.8
comp=Z,826nm,24.2s
PPT eLR LR 16 47 02.0
comp=Z,2µm,25.5s,baz=114
PPT Papeete 75.35 256 LR LR 16 48 52.2
comp=Z,550nm,20.8s,MS4.8,baz=102,slow=29
CMB Columbia Colle 75.36 320 eP P 16 23 43.8 -0.3
CMB pmax pmax
comp=Z,55nm,1.3s,mb5.3
CMB MLR MLR
comp=Z,885nm,20.0s,MS5.1
CMB Columbia Colle 75.36 320 eP P 16 23 43.8 -0.3
comp=Z,55nm,1.3s,mb5.3
CMB LR LR
comp=Z,885nm,20.0s,MS5.1
F18A Big Timber 75.45 332 P P 16 23 44.2 -0.1
baz=76,SNR=104
G17A Pierce Place, 75.46 331 P P 16 23 45.2 +0.7
baz=76,SNR=11
E19A Rath Farm, Rou 75.48 333 P P 16 23 44.6 +0.1
baz=76,SNR=103
J13A Cove Ranch, Pi 75.66 328 P P 16 23 46.6 +1.0
baz=76,SNR=13
I14A Mackay 75.69 329 P P 16 23 46.7 +0.9
baz=76,SNR=41
D20A Manuel Ranch, 75.71 334 P P 16 23 45.6 -0.2
baz=76,SNR=34
H15A Lima 75.81 330 P P 16 23 47.4 +0.9
baz=76,SNR=17
WCN Washoe City 75.83 322 eP P 16 23 47.3 +0.6
WCN pmax pmax
comp=Z,45nm,1.5s,mb5.2
WCN Washoe City 75.83 322 eP P 16 23 47.3 +0.6
comp=Z,45nm,1.5s,mb5.2
C21A Desert Coulee 75.87 335 P P 16 23 46.5 -0.3
baz=76,SNR=28
F17A Fitzpatrick Pl 75.87 332 P P 16 23 47.2 +0.4
baz=76,SNR=35
G16A Moss Hill, Enn 75.88 330 P P 16 23 47.1 +0.3
baz=76,SNR=16
PAHR Pah Rah Range 75.88 322 eP P 16 23 47.4 +0.4
comp=Z,110nm,0.8s,mb5.8
PAHR e 16 23 58.8
HLID Hailey 75.90 328 P P 16 23 47.8 +0.7
baz=76,SNR=75
HLID Hailey 75.90 328 eP P 16 23 47.5 +0.4
comp=Z,86nm,1.0s,mb5.6
HLID LR LR
comp=Z,1µm,22.0s,MS5.2
I13A Wildhorse Cree 76.01 328 P P 16 23 48.5 +0.9
baz=76,SNR=60
E18A Harlowton 76.05 332 P P 16 23 48.0 +0.2
baz=76,SNR=29
MCMT McKenzie Canyo 76.07 330 eP P 16 23 48.6 +0.6
comp=Z,40nm,1.1s,mb5.3
MCMT e 16 24 00.1
D19A Cripps Ranch, 76.08 333 P P 16 23 47.7 -0.3
baz=76,SNR=34
BOZ Bozeman (W) 76.11 331 P P 16 23 48.1 0.0
baz=76,SNR=14
BOZ Bozeman (W) 76.11 331 eP P 16 23 47.5 -0.7
BOZ pmax pmax
comp=Z,38nm,1.2s,mb5.2
BOZ MLR MLR
comp=Z,927nm,20.0s,MS5.1
BOZ Bozeman (W) 76.11 331 eP P 16 23 47.5 -0.7
comp=Z,38nm,1.2s,mb5.2
BOZ LR LR
comp=Z,927nm,20.0s,MS5.1
C20A Veseth Ranch, 76.15 334 ⇓P P 16 23 46.0 -2.3
baz=76,SNR=16
G15A Dillon 76.15 330 P P 16 23 48.7 +0.3
baz=76,SNR=35
H14A Leadore 76.16 329 P P 16 23 49.2 +0.7
baz=76,SNR=30
F16A Kennard Place, 76.22 331 P P 16 23 48.8 0.0
baz=76,SNR=15
B21A Ellsworth Farm 76.32 335 P P 16 23 49.4 +0.1
baz=76,SNR=21
DLMT Dillon 76.35 330 eP P 16 23 49.6 +0.1
comp=Z,74nm,1.1s,mb5.5
E17A Martinsdale 76.39 332 P P 16 23 50.0 +0.3
baz=77,SNR=48
I12A Atlanta 76.43 328 P P 16 23 50.6 +0.6
baz=77,SNR=67
D18A Linhart Farms, 76.50 333 P P 16 23 50.4 +0.1
baz=77,SNR=22
MFID Camas Ranch 76.51 327 P P 16 23 51.0 +0.5
baz=77,SNR=40
H13A Challis 76.55 329 P P 16 23 51.4 +0.7
baz=77,SNR=75
C19A Slack Wire Ran 76.60 334 P P 16 23 50.8 -0.1
baz=77,SNR=30
LRM Limekiln Ridge 76.62 330 eP P 16 23 51.2 +0.1
comp=Z,168nm,1.0s,mb5.9
F15A Butte 76.66 330 P P 16 23 52.1 +0.8
baz=77,SNR=9.1
H12A Diamond D Ranc 76.84 328 P P 16 23 52.8 +0.5
baz=77,SNR=47
D17A Six Diamond Ra 76.84 332 P P 16 23 52.4 +0.1
baz=77,SNR=59
G13A Cobalt 76.93 329 P P 16 23 53.6 +0.8
baz=77,SNR=123
MCCM Marconi Confer 76.94 319 PFAKE 16 24 00.0 +6.9
MCCM LR LR
comp=Z,1µm,20.0s,MS5.2
SBA Scott Base 76.95 190 eP P 16 23 52.8 +0.2
SBA pmax pmax
comp=Z,44nm,1.1s,mb5.3
SBA MLR MLR
comp=Z,2µm,19.0s,MS5.3
SBA Scott Base 76.95 190 eP P 16 23 52.8 +0.2
comp=Z,44nm,1.1s,mb5.3
SBA LR LR
comp=Z,2µm,19.0s,MS5.3
HRY Holter Researc 77.01 331 eP P 16 23 53.5 +0.2
comp=Z,30nm,0.8s,mb5.3
F14A Wisdom 77.05 330 P P 16 23 54.3 +0.8
baz=77,SNR=27
EGMT Eagleton 77.12 333 P P 16 23 53.4 -0.4
baz=77,SNR=23
EGMT Eagleton 77.12 333 eP P 16 23 52.8 -1.0
comp=Z,83nm,1.1s,mb5.6
EGMT LR LR
comp=Z,1µm,21.0s,MS5.2
B19A Brinkman Farms 77.12 334 P P 16 23 53.6 -0.2
baz=77,SNR=31
D16A Dana Ranch, Ca 77.13 332 P P 16 23 54.4 +0.5
baz=77,SNR=63
E15A Deer Lodge 77.16 331 P P 16 23 54.5 +0.3
baz=77,SNR=28
C17A Wharram Farm, 77.25 333 ⇑P P 16 23 54.4 -0.1
baz=77,SNR=5.4
WVOR Wild Horse Val 77.31 325 eP P 16 23 54.3 -0.7
WVOR pmax pmax
comp=Z,38nm,1.3s,mb5.2
WVOR MLR MLR
comp=Z,1µm,21.0s,MS5.2
WVOR Wild Horse Val 77.31 325 eP P 16 23 54.2 -0.7
comp=Z,38nm,1.3s,mb5.2
WVOR LR LR
comp=Z,1µm,21.0s,MS5.2
A19A Klindworth Far 77.41 335 P P 16 23 55.5 +0.1
baz=78,SNR=11
B18A Beardsley Farm 77.42 334 P P 16 23 55.5 0.0
baz=78,SNR=12
F13A Darby 77.48 329 P P 16 23 56.2 +0.3
baz=78,SNR=100
G12A Big Creek, Yel 77.48 328 ⇑P P 16 23 55.8 -0.1

baz=78
E14A Clinton 77.55 330 P P 16 23 57.0 +0.7
baz=78,SNR=32
D15A Lincoln 77.57 331 ⇑P P 16 23 56.6 +0.2
baz=78
HOPS Hopland 77.59 320 PFAKE 16 24 10.0 +13
HOPS LR LR
comp=Z,1µm,20.0s,MS5.3
SYO Syowa Base 77.70 160 ⇓*i*P **P 16 23 55.2 -1.7**
SYO Syowa Base 77.70 160 ⇓*i*pP pP 16 24 06.6 +8.4
LBCM Butte Creek Ri 77.76 322 P **P 16 23 57.1 -0.4**
B17A L&G Farms, Che 77.77 333 P **P 16 23 57.0 -0.4**
baz=78,SNR=9.5
C16A Fuhringer Ranc 77.80 332 P **P 16 23 57.6 -0.1**
baz=78,SNR=30
CHMT Chamberlain Mo 77.81 331 *e*P **P 16 23 57.6 -0.1**
comp=Z,28nm,1.3s,mb5.0
J08A Circle Bar Ran 77.85 326 P **P 16 23 58.6 +0.6**
baz=78,SNR=5.5
A18A Metzger Ranch, 77.86 334 P **P 16 23 57.3 -0.6**
baz=78,SNR=20
MOD Modoc 77.86 324 *e*P **P 16 23 57.9 -0.2**
comp=Z,13nm,0.8s,mb4.9
MOD LR LR
comp=Z,762nm,21.0s,MS5.0
E13A Victor 77.89 330 P **P 16 23 58.7 +0.5**
baz=78,SNR=33
F12A Elk City 77.90 329 P **P 16 23 58.4 +0.1**
baz=78,SNR=32
D14A Greenough 78.05 331 P **P 16 23 59.3 +0.2**
baz=78,SNR=15
MSO Missoula 78.06 330 P **P 16 23 59.8 +0.7**
baz=78,SNR=13
MSO Missoula 78.06 330 *e*P **P 16 23 59.5 +0.3**
comp=Z,30nm,1.1s,mb5.1
MSO LR LR
comp=Z,1µm,22.0s,MS5.2
C15A Salmond Ranch, 78.16 332 P **P 16 24 00.1 +0.5**
baz=78,SNR=84
SLMT Seeley Lake 78.16 331 *e*P **P 16 23 59.6 -0.1**
comp=Z,34nm,0.9s,mb5.3
A17A Triple J Farms 78.23 333 P **P 16 23 59.7 -0.3**
baz=78,SNR=54
WDC Whiskeytown Da 78.28 321 *e*P **P 16 23 58.7 -1.8**
WDC *e* 16 24 08.5
WDC pmax pmax
comp=Z,31nm,0.8s,mb5.3
WDC MLR MLR
comp=Z,959nm,20.0s,MS5.1
WDC Whiskeytown Da 78.28 321 *e*P **P 16 23 58.7 -1.8**
comp=Z,31nm,0.8s,mb5.3
WDC *e* 16 24 08.5
WDC LR LR
comp=Z,959nm,20.0s,MS5.1
KCPM Cahto Peak 78.33 320 *e*P **P 16 24 01.8 +1.0**
comp=Z,50nm,1.5s,mb5.2
D13A Huson 78.50 330 P **P 16 24 01.9 +0.3**
baz=79,SNR=53
E12A Beaver Dam Sad 78.53 329 P **P 16 24 01.6 -0.1**
baz=79,SNR=22
B15A Bradely Ranch, 78.55 332 P **P 16 24 01.3 -0.5**
baz=79,SNR=38
SWMT Swartz Lake 78.59 331 *e*P **P 16 24 01.9 -0.1**
comp=Z,32nm,1.1s,mb5.2
A16A West Butte Ran 78.61 333 ⇓P **P 16 24 01.9 -0.2**
baz=79
C14A Swan Lake 78.67 331 P **P 16 24 02.8 +0.4**
baz=79,SNR=31
K05A Summer Lake 78.74 324 P **P 16 24 03.7 +0.8**
baz=79,SNR=20
CVNA Calvinia 78.81 119 *e*P **P 16 24 04.3 +0.5**
CVNA AMB AMB 16 24 18.6
comp=Z,144nm,1.6s,mb5.7
YBMT Yellow Bay 78.86 331 *e*P **P 16 24 03.7 +0.2**
comp=Z,28nm,0.9s,mb5.2
YBMT *e* 16 24 15.1
D12A Red Ives Fores 78.89 330 ⇓P **P 16 24 03.6 -0.1**
baz=79
I07A Izee 78.89 326 P **P 16 24 04.2 +0.4**
baz=79,SNR=39
JTMT Jette 78.90 331 *e*P **P 16 24 03.7 0.0**
comp=Z,18nm,0.8s,mb5.0
C13A Hot Springs 78.98 331 P **P 16 24 04.5 +0.3**
baz=79,SNR=30
F10A Beach Ranch, E 79.03 328 P **P 16 24 04.7 +0.2**
baz=79,SNR=14
YBH Yreka Blue Hor 79.12 322 *e*P **P 16 24 03.8 -1.3**
YBH *e* 16 24 15.0
YBH pmax pmax
comp=Z,18nm,0.8s
YBH MLR MLR
comp=Z,969nm,22.0s
YBH Yreka Blue Hor 79.12 322 *e*P **P 16 24 03.8 -1.2**
comp=Z,18nm,0.8s,mb5.0
YBH *e* 16 24 15.0
YBH LR LR
comp=Z,969nm,22.0s,MS5.1
A15A Johnson Ranch, 79.12 332 P **P 16 24 04.1 -0.8**
baz=79,SNR=18
BLMT Blacktail Moun 79.13 331 *e*P **P 16 24 04.7 -0.3**
comp=Z,72nm,1.1s,mb5.5
KHMM Horse Mountain 79.17 321 *e*P **P 16 24 05.3 -0.1**
comp=Z,34nm,1.1s,mb5.2
KHMM *e* 16 24 16.9
BSMT Bassoo Peak 79.21 331 *e*P **P 16 24 05.6 +0.2**
comp=Z,24nm,0.8s,mb5.2
SUR Sutherland 79.40 121 PFAKE 16 24 20.0 +13
SUR LR LR
comp=Z,2µm,21.0s,MS5.5
A14A Double T Ranch 79.42 332 P **P 16 24 06.1 -0.4**
baz=80,SNR=21
C12B Naegeli Ranch, 79.42 330 P **P 16 24 07.0 +0.5**
baz=80,SNR=8.1
G08A Pilot Rock 79.43 327 P **P 16 24 06.9 +0.2**
baz=80,SNR=22
B13A Whitefish 79.44 331 P **P 16 24 06.7 0.0**
baz=80,SNR=25
LNOR Lincton Mounta 79.48 328 *e*P **P 16 24 06.0 -1.0**
LNOR pmax pmax
comp=Z,24nm,1.0s,mb5.1
LNOR Lincton Mounta 79.48 328 *e*P **P 16 24 06.0 -1.0**
comp=Z,24nm,1.0s,mb5.1
KRMB Red Mountain 79.68 321 *e*P **P 16 24 07.9 -0.2**
comp=Z,58nm,1.1s,mb5.4
KRMB *e* 16 24 19.7
WALA Waterton Lakes 79.70 332 *e*P **P 16 24 07.7 -0.3**
comp=Z,2.0nm,1.0s,mb4.0
VIPM Ingram Point 79.77 325 P **P 16 24 08.9 +0.4**
FFC Flin Flon 79.82 341 *i*P **P 16 24 08.0 -0.6**
FFC Flin Flon 79.82 341 PFAKE 16 24 20.0 +11
FFC LR LR
comp=Z,2µm,20.0s,MS5.3
FFC Flin Flon 79.82 341 P **P 16 24 07.7 -0.9**
comp=Z,109nm,1.3s,mb5.6,SNR=6.8
A13A Flathead Natio 79.83 332 ⇑P **P 16 24 09.1 +0.3**
baz=80
E09A Wood Farm, Sta 79.86 328 P **P 16 24 08.6 -0.4**
baz=80,SNR=27
C11A Tepee Creek (N 79.88 330 P **P 16 24 09.1 0.0**
baz=80,SNR=61
G06A Carlson Farm, 80.26 326 P **P 16 24 11.9 +0.7**
baz=80,SNR=16
A12A Yaak River Ran 80.39 331 P **P 16 24 12.1 +0.3**
baz=81,SNR=36
HAWA Hanford 80.47 327 *e*P **P 16 24 12.2 -0.1**
comp=Z,67nm,0.8s,mb5.6
HAWA *e* 16 24 23.8
HAWA LR LR
comp=Z,3µm,20.0s,MS5.6
RSW Rattlesnake Hi 80.50 327 *e*P **P 16 24 12.6 +0.2**
comp=Z,89nm,0.8s,mb5.8
RSW *e* 16 24 24.3
PFVI Vila Bisbo 80.58 45 *e*S S 16 34 35.9 +15
PFVI *e*LR LR 16 49 32.9
comp=Z,1µm,22.0s
NEW Newport 80.59 330 *e*P **P 16 24 11.9 -1.0**
NEW pmax pmax
comp=Z,18nm,0.6s
NEW MLR MLR
comp=Z,870nm,20.0s
NEW Newport 80.59 330 *e*P **P 16 24 11.8 -1.0**
comp=Z,18nm,0.6s,mb5.2
NEW LR LR
comp=Z,870nm,20.0s,MS5.1
BROR Big Rock Looko 80.60 324 P **P 16 24 12.5 -0.5**
D08A Wollman Farm, 80.62 328 P **P 16 24 13.1 0.0**
baz=81,SNR=13

TSUM Tsumeb 80.63 107 *e*P **P 16 24 14.5 +0.7**
comp=Z,22nm,1.0s,mb5.0
TSUM LR LR
comp=Z,1µm,20.0s,MS5.3
H04A Detroit Lake 80.73 325 ⇓P **P 16 24 13.2 -0.5**
baz=81,SNR=19
OD2 Odessa Site #2 80.75 328 P **P 16 24 13.8 +0.1**
VFP Flag Point 80.75 326 P **P 16 24 14.2 +0.3**
KEBM Edson Butte 80.77 322 *e*P **P 16 24 14.1 +0.1**
comp=Z,143nm,1.3s,mb5.7
MORF Marmelete 80.79 45 *e*P **P 16 24 15.1 +0.9**
comp=Z,74nm,1.1s,mb5.5
MORF *e*S S 16 34 29.9 +6.8
MORF *e*LR LR 16 52 01.0
comp=Z,1µm,18.0s
C09A Chrisman Ranch 80.82 329 P **P 16 24 14.2 +0.1**
baz=81,SNR=24
DPW Davenport 80.83 329 P **P 16 24 14.3 +0.1**
HOOD Mount Hood Mea 80.86 325 P **P 16 24 14.3 -0.1**
comp=Z,98nm,0.9s,mb5.7
PTEO Sao Teotonio 80.88 44 *e*P **P 16 24 16.3 +1.6**
comp=Z,97nm,1.4s,mb5.5
UPI Upington 80.98 117 *e*P **P 16 24 16.0 +0.4**
UPI AMB AMB 16 24 29.9
comp=Z,108nm,1.3s,mb5.6
G04A Mulino 81.22 325 P **P 16 24 16.6 +0.3**
baz=81,SNR=6.6
PBDV Barranco-do-Ve 81.23 45 *e*P **P 16 24 17.5 +0.9**
comp=Z,78nm,1.7s,mb5.4
PBDV *e*S S 16 34 37.5 +10
PBDV *e*LR LR 16 51 47.2
comp=Z,1µm,22.0s
COR Corvallis 81.27 324 *e*P **P 16 24 16.7 +0.1**
COR *e* 16 24 28.2
COR pmax pmax
comp=Z,105nm,0.8s,mb5.8
COR MLR MLR
comp=Z,1µm,21.0s,MS5.3
COR Corvallis 81.27 324 *e*P **P 16 24 16.7 +0.1**
comp=Z,105nm,0.8s,mb5.8
COR *e* 16 24 28.2
COR LR LR
comp=Z,1µm,21.0s,MS5.3
PMAFR Mafra 81.31 43 *e*S S 16 34 34.2 +5.8
PMAFR *e*LR LR 16 50 04.4
comp=Z,2µm,20.0s
MPOR Mary's Peak 81.36 324 P **P 16 24 17.5 +0.4**
PCVE Castro Verde 81.38 45 *e*P **P 16 24 17.9 +0.6**
comp=Z,38nm,1.0s,mb5.3
PCVE *e*S S 16 34 35.8 +6.6
FCC Fort Churchill 81.42 347 *e*P **P 16 24 16.2 -0.8**
comp=Z,2.2nm,1.1s,mb4.0
PVAQ Vaqueiros 81.46 45 *e*P **P 16 24 18.6 +0.8**
comp=Z,29nm,1.8s,mb4.9
PVAQ *e*S S 16 34 49.3 +19
PVAQ *e*LQ 16 46 59.6
PVAQ *e*LR LR 16 51 20.2
comp=Z,1µm,24.0s
F04A Amboy 81.66 326 ⇑P **P 16 24 18.5 -0.2**
baz=82,SNR=16
EGRO El Granado 81.69 45 P **P 16 24 19.2 +0.2**
comp=Z,64nm,1.1s,mb5.5
ETW Entiat 81.69 328 P **P 16 24 18.9 +0.1**
PBEJ Beja 81.71 44 *e*P **P 16 24 19.9 +0.8**
comp=Z,31nm,1.8s,mb4.9
WPW White Pass 81.71 327 P **P 16 24 18.4 -0.5**
B08A Colville Reser 81.72 329 ⇑P **P 16 24 18.4 -0.5**
baz=82
PKA Prieska 81.82 119 *e*P **P 16 24 20.4 +0.4**
PKA AMB AMB 16 24 40.3
comp=Z,25nm,3.1s
LON Longmire 81.88 326 *e*P **P 16 24 18.8 -1.0**
LON pmax pmax
comp=Z,16nm,0.7s,mb5.1
LON Longmire 81.88 326 *e*P **P 16 24 18.8 -1.0**
comp=Z,16nm,0.7s,mb5.1
EVO Evora 81.89 44 *e*P **P 16 24 21.6 +1.5**
comp=Z,33nm,1.4s,mb5.1
HEBO Mount Hebo 81.92 324 *e*P **P 16 24 20.0 -0.1**
SFS San Fernando 81.97 46 PFAKE 16 24 30.0 +9.5
SFS LR LR
comp=Z,2µm,20.0s,MS5.4
D05A Enumclaw 82.26 327 P **P 16 24 21.4 -0.3**
baz=82,SNR=8.3
PBAR Barrancos 82.33 45 *e*P **P 16 24 22.8 +0.4**
comp=Z,32nm,1.3s,mb5.1
PBAR *e*S S 16 34 44.3 +5.3
PBAR *e*LQ 16 47 08.3
PBAR *e*LR LR 16 49 29.3
comp=Z,2µm,18.0s
PESTR Estremoz 82.35 44 *e*S S 16 34 29.8 -9.4
PESTR *e*LR LR 16 49 10.4
comp=Z,772nm,20.0s
EMIN Mina Concepcio 82.36 45 P **P 16 24 22.4 -0.2**
comp=Z,70nm,1.0s,mb5.5
ESPR Espera 82.42 46 P **P 16 24 23.1 +0.2**
comp=Z,38nm,1.0s,mb5.3
EJIF Jimena Fronter 82.47 47 P **P 16 24 24.0 +0.9**
EJIF pmax pmax
comp=Z,31nm,0.8s,mb5.3
EJIF Jimena Fronter 82.47 47 P **P 16 24 24.0 +0.9**
comp=Z,31nm,0.8s,mb5.3
EDM Edmonton 82.58 335 *e*P **P 16 24 21.4 -1.9**
EDM *e* 16 24 33.0
EBAD Badajoz 82.67 44 P **P 16 24 24.3 +0.2**
comp=Z,33nm,1.0s,mb5.3
PMRV Marv??o 82.79 43 *e*P **P 16 24 25.1 +0.4**
comp=Z,28nm,1.2s,mb5.2
PMRV *e*S S 16 34 54.7 +11
PMRV *e*LQ 16 46 41.8
PMRV *e*LR LR 16 50 20.2
comp=Z,1µm,20.0s
RPW Rockport 82.85 328 *e*P **P 16 24 23.7 -1.1**
comp=Z,46nm,0.8s,mb5.6
RPW *e* 16 24 34.9
B06A Marblemount 82.88 328 P **P 16 24 24.2 -0.8**
baz=83,SNR=16
JCW Jim Creek 82.89 328 P **P 16 24 24.0 -1.1**
GNW Green Mountain 82.94 327 *e*P **P 16 24 23.8 -1.5**
comp=Z,12nm,0.7s,mb5.0
GNW *e* 16 24 35.6
PCBR Castelo Branco 82.96 43 *e*P **P 16 24 26.1 +0.5**
comp=Z,35nm,1.4s,mb5.2
EMIJ Mijas 83.00 47 P **P 16 24 26.0 +0.1**
comp=Z,22nm,0.7s,mb5.3
SOE Somerset East 83.10 122 *e*P **P 16 24 27.1 +0.4**
SOE AMB AMB 16 24 40.9
comp=Z,128nm,1.1s,mb5.9
PVIS Viseu 83.19 42 *e*P **P 16 24 27.5 +0.7**
comp=Z,55nm,1.5s,mb5.4
MTE Manteigas 83.23 43 *e*P **P 16 24 26.9 -0.1**
comp=Z,58nm,1.2s,mb5.5
MTE *e*S S 16 34 57.5 +9.4
MTE *e*LQ 16 48 03.9
MTE *e*LR LR 16 50 32.4
comp=Z,3µm,20.0s
MTE Manteigas 83.23 43 *e*P **P 16 24 27.1 +0.1**
comp=Z,36nm,1.0s,mb5.4
MTE LR LR
comp=Z,3µm,20.0s,MS5.7
NLWA Neilton Lookou 83.37 326 *e*P **P 16 24 27.1 -0.4**
comp=Z,32nm,0.9s,mb5.3
NLWA *e* 16 24 38.6
NLWA LR LR
comp=Z,2µm,22.0s,MS5.5
A05A Maple Falls 83.50 328 P **P 16 24 27.6 -0.5**
baz=84,SNR=9.7
PCAB Cabril 83.66 41 *e*P **P 16 24 29.3 +0.1**
comp=Z,65nm,1.1s,mb5.7
ELOB Lobios 83.73 41 P **P 16 24 28.7 -0.8**
comp=Z,51nm,1.6s,mb5.4
ELOJ Sierra Loja 83.73 47 P **P 16 24 30.0 +0.4**
ELOJ pmax pmax
comp=Z,156nm,1.5s,mb5.9
ELOJ Sierra Loja 83.73 47 P **P 16 24 30.0 +0.4**
comp=Z,156nm,1.5s,mb5.9
HVD Gariep Dam 83.75 120 *e*P **P 16 24 30.9 +0.8**
HVD AMB AMB 16 24 44.4
comp=Z,95nm,1.2s,mb5.8
FRB Frobisher Bay 83.77 0 LR LR 17 05 30.1
comp=Z,893nm,19.1s,MS5.2,baz=180,slow=38
ELUQ Luque 83.86 46 P **P 16 24 31.1 +0.8**
ELUQ pmax pmax
comp=Z,149nm,1.5s,mb5.9
ELUQ Luque 83.86 46 P **P 16 24 31.1 +0.7**
comp=Z,149nm,1.5s,mb5.9

ERON Agron 83.90 47 P **P 16 24 30.7 +0.2**
comp=Z,9.8nm,0.6s,mb5.1
PGC Sidney 83.96 327 *e*P **P 16 24 30.2 -0.3**
comp=Z,3.8nm,0.8s,mb4.6
PGC *e* 16 24 41.3
EADA Adamuz 83.97 46 P **P 16 24 29.8 -1.0**
comp=Z,43nm,1.2s,mb5.5
MVO Moncorvo 83.98 42 *e*P **P 16 24 31.1 +0.3**
comp=Z,87nm,1.3s,mb5.7
MVO *e*LQ 16 48 21.7
MVO *e*LR LR 16 53 09.5
comp=Z,2µm,20.0s
MVO Moncorvo 83.98 42 P **P 16 24 31.0 +0.1**
EPLA Plasencia 83.99 43 P **P 16 24 29.4 -1.5**
EPLA pmax pmax
comp=Z,77nm,1.1s,mb5.8
EPLA Plasencia 83.99 43 P **P 16 24 29.4 -1.5**
comp=Z,77nm,1.1s,mb5.7
STS Santiago 84.00 40 P **P 16 24 32.2 +1.3**
STS pmax pmax
comp=Z,27nm,1.1s,mb5.3
STS Santiago 84.00 40 P **P 16 24 32.2 +1.3**
comp=Z,27nm,1.1s,mb5.3
ECOG Cogollos-Vega 84.20 47 P **P 16 24 32.3 +0.3**
ECOG pmax pmax
comp=Z,19nm,0.8s,mb5.3
ECOG Cogollos-Vega 84.20 47 P **P 16 24 32.3 +0.3**
comp=Z,19nm,0.8s,mb5.3
BOSA Boshof 84.23 118 P **P 16 24 32.5 0.0**
comp=Z,18nm,0.9s,mb5.2,baz=230,slow=5.2,SNR=15
BOSA pP pP 16 24 45.3 +11
comp=Z,42nm,1.0s,baz=255,slow=6.4,SNR=9.3
BOSA LR LR 16 59 08.4
comp=Z,3µm,20.1s,MS5.7,baz=246,slow=34
BOSA Boshof 84.23 118 P **P 16 24 32.5 -0.1**
BOSA *PP pP 16 24 45.3 +11
BOSA pmax pmax
comp=Z,18nm,0.9s,mb5.2
BOSA MLR MLR
comp=Z,3µm,20.1s,MS5.7
BOSA Boshof 84.23 118 *e*P **P 16 24 32.5 0.0**
comp=Z,112nm,1.4s,mb5.8
BOSA LR LR
comp=Z,3µm,20.0s,MS5.7
EBER Berja 84.47 48 P **P 16 24 32.2 -1.3**
comp=Z,56nm,1.0s,mb5.7
EBAN Banos Encina 84.50 46 P **P 16 24 33.8 +0.2**
EBAN pmax pmax
comp=Z,93nm,1.2s,mb5.8
EBAN Banos Encina 84.50 46 P **P 16 24 33.8 +0.3**
comp=Z,93nm,1.2s,mb5.8
TAM Tamanrasset 84.51 63 PFAKE 16 24 50.0 +16
TAM LR LR
comp=Z,3µm,20.0s,MS5.7
PBRG Braganca 84.51 42 *e*P **P 16 24 34.0 +0.5**
ERUA La Rua 84.59 41 P **P 16 24 33.9 0.0**
ERUA pmax pmax
comp=Z,54nm,1.0s,mb5.6
ERUA La Rua 84.59 41 P **P 16 24 33.9 0.0**
comp=Z,54nm,1.0s,mb5.6
ECAL Calabor 84.59 42 P **P 16 24 32.0 -1.9**
comp=Z,79nm,1.0s,mb5.8
SWZ Schweizer 84.78 117 *e*P **P 16 24 34.3 -1.1**
SWZ AMB AMB 16 24 48.2
comp=Z,55nm,4.1s
EQES Quesada 84.80 47 P **P 16 24 33.8 -1.3**
comp=Z,65nm,1.0s,mb5.7
PAB San Pablo 84.84 45 *e*P **P 16 24 34.8 -0.4**
PAB pmax pmax
comp=Z,35nm,0.9s,mb5.5
PAB MLR MLR
comp=Z,1µm,20.0s,MS5.3
PAB San Pablo 84.84 45 *e*P **P 16 24 34.8 -0.5**
comp=Z,35nm,0.9s,mb5.5
PAB LR LR
comp=Z,1µm,20.0s,MS5.3
EHUE Huescar 85.14 47 P **P 16 24 35.8 -1.0**
EHUE pmax pmax
comp=Z,30nm,0.9s,mb5.4
EHUE Huescar 85.14 47 P **P 16 24 35.8 -0.9**
comp=Z,30nm,0.9s,mb5.4
ESDC Sonseca Array 85.16 45 P **P 16 24 37.1 +0.3**
comp=Z,15nm,1.0s,mb5.1,baz=249,slow=5.1,SNR=23
ESDC pP pP 16 24 48.9 +11
comp=Z,16nm,0.9s,baz=246,slow=5.3,SNR=8.9
ESDC LR LR 17 04 21.6
comp=Z,876nm,18.4s,MS5.2,baz=225,slow=37
ESDC Sonseca Array 85.16 45 P **P 16 24 36.5 -0.3**
comp=Z,33nm,1.0s,mb5.4
ESLA Sonseca Array 85.16 45 *e*P **P 16 24 36.5 -0.3**
comp=Z,17nm,1.3s,mb5.0
ESLA LR LR
comp=Z,7µm,20.0s,MS6.0
GUD Guadarrama 85.54 44 P **P 16 24 38.6 -0.1**
GUD pmax pmax
comp=Z,32nm,1.5s,mb5.3
GUD Guadarrama 85.54 44 P **P 16 24 38.6 -0.1**
comp=Z,32nm,1.5s,mb5.3
MAW Mawson 85.54 163 P **P 16 24 38.1 -0.3**
comp=Z,18nm,0.9s,mb5.3,baz=222,slow=6.5,SNR=25
MAW pP pP 16 24 49.6 +10
comp=Z,18nm,0.7s,baz=233,slow=6.2,SNR=10.0
MAW LR LR 17 03 29.6
comp=Z,2µm,18.3s,MS5.5,baz=234,slow=36
MAW Mawson 85.54 163 *e*P **P 16 24 38.0 -0.4**
comp=Z,12nm,0.8s,mb5.2
MAW *e*pP pP 16 24 49.0 +9.3
MAW Mawson 85.54 163 P **P 16 24 38.1 -0.3**
MAW *PP pP 16 24 49.6 +10
MAW pmax pmax
comp=Z,18nm,0.9s
MAW MLR MLR
comp=Z,2µm,18.3s
EVIA Vianos 85.61 46 P **P 16 24 39.3 +0.2**
EVIA pmax pmax
comp=Z,30nm,0.8s,mb5.6
EVIA Vianos 85.61 46 P **P 16 24 39.3 +0.1**
comp=Z,30nm,0.8s,mb5.6
LBTB Lobatse 85.75 115 *e*P **P 16 24 40.8 +0.6**
LBTB pmax pmax
comp=Z,93nm,1.3s,mb5.8
LBTB MLR MLR
comp=Z,2µm,20.0s,MS5.6
LBTB Lobatse 85.75 115 *e*P **P 16 24 40.8 +0.5**
comp=Z,94nm,1.3s,mb5.9
LBTB LR LR
comp=Z,2µm,20.0s,MS5.6
ETOB Tobarra 86.26 47 P **P 16 24 40.9 -1.4**
comp=Z,43nm,1.3s,mb5.5
PRYS Parys 86.56 117 *e*P **P 16 24 45.1 +0.8**
PRYS AMB AMB 16 24 51.6
comp=Z,48nm,3.8s
ETOR Torete 87.00 44 P **P 16 24 48.5 +2.6**
ETOR pmax pmax
comp=Z,17nm,0.9s,mb5.3
ETOR Torete 87.00 44 P **P 16 24 48.5 +2.6**
comp=Z,17nm,0.9s,mb5.3
ECHE Chera 87.12 46 P **P 16 24 48.7 +2.2**
ECHE pmax pmax
comp=Z,15nm,0.8s,mb5.3
ECHE Chera 87.12 46 P **P 16 24 48.7 +2.2**
comp=Z,15nm,0.8s,mb5.3
ELAN Lanestosa 87.34 42 P **P 16 24 46.8 -0.7**
comp=Z,49nm,1.0s,mb5.7
ERPM east rand prop 87.51 117 *e*P **P 16 24 49.3 +0.4**
ERPM AMB AMB 16 24 59.9
comp=Z,39nm,4.4s
SFJD Kangerlussuaq 88.14 7 PFAKE 16 25 00.0 +9.3
SFJD LR LR
comp=Z,2µm,22.0s,MS5.4
ERTA Horta de San J 88.65 45 P **P 16 24 53.7 -0.1**
comp=Z,67nm,1.1s,mb5.9
EBIE Bielsa 89.35 44 P **P 16 24 56.9 -0.1**
comp=Z,22nm,1.3s,mb5.3
YKA Yellowknife Ar 89.98 341 P **P 16 24 58.6 -0.9**
comp=Z,38nm,0.8s,mb5.8,baz=135,slow=4.5,SNR=103
YKA pP pP 16 25 10.1 +9.3
comp=Z,44nm,0.8s,baz=135,slow=4.2,SNR=21
MSNA Messina 90.49 114 *e*P **P 16 25 04.1 +1.1**
MSNA AMB AMB 16 25 17.9
comp=Z,49nm,1.6s,mb5.6
DRV Dumont d'Urvil 90.57 191 S SP 16 36 54.0 -10
DRV L 16 49 00.0
DRV R 16 58 00.0
BORG Borgarnes 92.37 19 PFAKE 16 25 20.0 +9.4
BORG LR LR
comp=Z,1µm,19.0s,MS5.4

KEST Kesra 92.79 53 P **P** **16 25 13.3 +0.1**
comp=Z,3.0nm,0.8s,mb4.8,baz=194,slow=2.4,SNR=8.4
KEST LR LR 17 07 33.9
comp=Z,790nm,21.0s,MS5.1,baz=15,slow=36
KEST Kesra 92.79 53 *e*P **P** **16 25 12.8 -0.4**
WRAK Wrangell Islan 92.94 330 PFAKE 16 25 20.0 +6.6
WRAK LR LR
comp=Z,1μm,21.0s,MS5.4
DLBC Dease Lake 93.03 333 *e*P **P** **16 25 13.2 -0.6**
DLBC *e* 16 25 24.8
SSB Saint Sauveur 93.36 43 PFAKE 16 25 30.0 +14
SSB LR LR
comp=Z,2μm,20.0s,MS5.6
POHA Pohakuloa 93.42 290 PFAKE 16 25 30.0 +14
POHA LR LR
comp=Z,2μm,21.0s,MS5.5
CASY Casey 93.68 180 *e*P **P** **16 25 16.5 -0.3**
CASY *ep*P *p*P 16 25 28.1 +10
CASY Casey 93.68 180 *e*P **P** **16 25 16.3 -0.6**
comp=Z,38nm,0.8s,mb5.9
CASY LR LR
comp=Z,3μm,22.0s,MS5.7
ESK Eskdalemuir 93.70 32 PFAKE 16 25 30.0 +13
ESK LR LR
comp=Z,1μm,20.0s,MS5.3
SNZO South Karori 94.84 223 PFAKE 16 25 30.0 +7.3
SNZO LR LR
comp=Z,2μm,22.0s,MS5.5
SUMG Summit 94.92 9 *e*P **P** **16 25 22.5 +0.3**
comp=Z,29nm,1.1s,mb5.6
SUMG Summit 94.92 9 *i* P **P** **16 25 22.3 +0.1**
comp=Z,17nm,1.1s,mb5.4
DOU Dourbes 95.45 38 P **P** **16 25 24.2 -0.9**
BCLA Clavier 96.00 38 P **P** **16 25 26.6 -0.9**
comp=Z,17nm,2.6s,mb5.0
WLF Walferdange 96.19 39 P **P** **16 25 27.6 -0.8**
comp=Z,12nm,1.7s,mb5.1
WLF Walferdange 96.19 39 PFAKE 16 25 40.0 +12
WLF LR LR
comp=Z,2μm,22.0s,MS5.6
ECH Echery 96.21 41 PFAKE 16 25 40.0 +11
ECH LR LR
comp=Z,799nm,20.0s,MS5.2
MEM Membach 96.49 38 P **P** **16 25 29.3 -0.5**
AFI Afiamalu 96.69 253 PFAKE 16 25 40.0 +8.4
AFI LR LR
comp=Z,2μm,20.0s,MS5.5
BFO Black Forest 96.97 41 PFAKE 16 25 40.0 +8.0
BFO LR LR
comp=Z,585nm,19.0s,MS5.1
MBAR Mbarara 99.09 94 PFAKE 16 25 50.0 +7.5
MBAR LR LR
comp=Z,758nm,22.0s,MS5.2
VOJS Vojsko 99.70 45 *i* P Pdif 16 25 56.2 +12
VOJS *i* PP PP 16 29 54.7 +5.8
VOJS Vojsko 99.70 45 *i* P Pdif 16 25 56.2 +12
VOJS *i* PP PP 16 29 54.7 +5.8
JAVS Javornik 99.77 45 *i* P Pdif 16 25 55.9 +11
JAVS *i* PP PP 16 29 50.4 +1.0
JAVS Javornik 99.77 45 *i* P Pdif 16 25 55.9 +11
JAVS *i* PP PP 16 29 50.4 +1.0
BOJS Bojanci 100.44 45 *i* P Pdif 16 26 01.2 +14
BOJS Bojanci 100.44 45 *i* P Pdif 16 26 01.2 +14
EGAK Eagle 100.79 335 PFAKE 16 26 00.0 +11
EGAK LR LR
comp=Z,1μm,21.0s,MS5.4
CLL Collm 100.86 39 *e*Pdif Pdif 16 26 00.0 +10
CLL *e* 16 26 16.0
CLL Collm 100.86 39 *ep*Pdif Pdif 16 26 00.0 +10
CLL *e* 16 26 16.0
CLL *es*PP 16 30 13.0
CLL Lm 17 08 00.0
comp=N,300nm,21.1s
CLL Lm 17 08 00.0
comp=E,1μm,22.0s
BRG Berggiesshubel 101.28 40 *e*(P) PKiKP 16 30 08.9 -6.9
comp=E,4.8nm,1.2s
BRG
comp=Z,2μm,21.3s
BRG
comp=N,367nm,22.3s
BRG
comp=E,1μm,22.3s
KONO Kongsberg 101.79 31 PFAKE 16 26 00.0 +6.3
KONO LR LR
comp=Z,2μm,20.0s,MS5.6
ILAR Eielson Array 103.06 335 Pdiff Pdif 16 25 55.6 -3.7
comp=Z,0.5nm,0.9s,baz=159,slow=2.7,SNR=3.8
ILAR PP PP 16 30 11.5 -2.2
comp=Z,1.5nm,0.9s,baz=140,slow=5.6,SNR=5.3
ILAR PKKP PKKPbc 16 42 06.1 +8.5
comp=Z,0.7nm,1.0s,baz=329,slow=3.2,SNR=4.5
ILAR Eielson Array 103.06 335 P Pdif 16 25 55.7 -3.6
ILAR 16 30 11.5
ILAR pmax pmax
comp=Z,1.0nm,0.9s
ILAR pmax pmax
comp=Z,2.0nm,0.9s
COLA College 103.49 334 PFAKE 16 26 10.0 +8.8
COLA LR LR
comp=Z,919nm,19.0s,MS5.3
KDAK Kodiak Island 103.50 327 PFAKE 16 26 10.0 +8.7
KDAK LR LR
comp=Z,754nm,19.0s,MS5.2
MSVF Nonsavu 103.99 245 PFAKE 16 26 20.0 +17
MSVF LR LR
comp=Z,1μm,21.0s,MS5.4
PSZ Piszkesteto 104.18 44 PFAKE 16 26 20.0 +16
PSZ LR LR
comp=Z,891nm,20.0s,MS5.3
KMBO Kilima Mbogo 104.99 97 PFAKE 16 30 40.0 +16
KMBO LR LR
comp=Z,2μm,20.0s,MS5.6
DRGR 105.78 46⇑ *i*P PKiKP 16 30 24.4 +0.3
KWP Kalwaria Pacla 106.39 43 PFAKE 16 30 40.0 +15
KWP LR LR
comp=Z,1μm,22.0s,MS5.4
ABPO Ambohimpanom 106.45 118 PFAKE 16 30 40.0 +14
ABPO LR LR
comp=Z,2μm,22.0s,MS5.6
FUNA Funafuti 106.94 254 PFAKE 16 30 40.0 +13
FUNA LR LR
comp=Z,6μm,21.0s,MS6.1
VOIR 107.08 47‖ *i*P PP 16 30 44.3 +0.3
MLR Muntele Rosu 107.71 47‖ *i*P PP 16 30 43.8 -4.8
KBS Kingsbay 108.09 12 PFAKE 16 30 40.0 +12
KBS LR LR
comp=Z,635nm,20.0s,MS5.2
VRI Vrincioaia 108.32 47‖ *i*P PP 16 30 39.0 -14
ISAL Salakas 109.46 37 *e*P PP 16 31 01.3 +0.2
ISAL AMB AMB 16 31 11.7
comp=Z,4.2nm,1.0s
IIGN Ignalina 109.49 37 *e*P PP 16 31 01.1 -0.1
IIGN AMB AMB 16 31 13.6
comp=Z,3.5nm,1.9s
IDID Didziasalis 109.78 37 *e*P PP 16 31 03.1 -0.3
IDID AMB AMB 16 31 13.9
comp=Z,4.7nm,1.3s
ARCES ARCESS Array B 110.48 22 PKKPab PKKPab 16 41 41.5 0.0
comp=Z,3.3nm,0.9s,baz=97,slow=2.3,SNR=6.0
KIEV Kiev 110.69 42 PFAKE 16 30 40.0 +6.8
KIEV LR LR
comp=Z,932nm,20.0s,MS5.4
AKASG Malin Array Be 110.70 42 PKiKP PKiKP 16 30 31.6 -1.7
comp=Z,0.4nm,0.3s,baz=296,slow=1.9,SNR=3.0
AKASG pPKiKP 16 30 43.1
comp=Z,1.1nm,0.5s,baz=268,slow=2.7,SNR=2.9
AKASG Malin Array Be 110.70 42 *i* PKIKP PKiKP 16 30 31.6 -1.6
AKASG *i* 16 30 43.1
AKASG pmax pmax
comp=Z,1.0nm,0.5s
DZM Mont Dzumac 111.27 235 *e*LR LR 17 03 48.6
comp=Z,1μm,28.4s
CSS Prodhromos 111.33 59 PFAKE 16 30 50.0 +15
CSS LR LR
comp=Z,934nm,22.0s,MS5.3
BR131 Keskin Array S 112.34 54 PFAKE 16 30 50.0 +13
BR131 LR LR
comp=Z,722nm,22.0s,MS5.2
BRTR Keskin Array B 112.34 54 PKiKP PKiKP 16 30 35.9 -0.9
comp=Z,2.0nm,0.8s,baz=182,slow=1.8,SNR=6.6
BRTR pPKiKP 16 30 47.7
comp=Z,2.6nm,0.8s,baz=191,slow=1.9,SNR=5.4
BRTR PP PP 16 31 21.8 -0.6
comp=Z,3.9nm,1.0s,baz=242,slow=7.9,SNR=3.8

BRTR Keskin Array B 112.34 54 *c i*PKIKP PKiKP 16 30 36.2 -0.5
BRTR pmax pmax
comp=Z,2.0nm,0.8s
LVZ Lovozero 113.84 24 PFAKE 16 30 50.0 +11
LVZ LR LR
comp=Z,575nm,22.0s,MS5.1
CAN Canberra 113.88 214 PFAKE 16 30 50.0 +10
CAN LR LR
comp=Z,744nm,19.0s,MS5.3
OBN Obninsk 115.39 38 PFAKE 16 30 50.0 +8.0
OBN LR LR
comp=Z,1μm,19.0s,MS5.5
ANN Anapa 115.68 49 *i* PKIKP PKPdf 16 30 35.5 -7.4
ANN pmax pmax
comp=Z,160nm,1.8s
ANN MLR MLR
comp=N,599nm,22.0s,MS5.3
ANN MLR MLR
comp=E,458nm,22.0s,MS5.3
ANN MLR MLR
comp=Z,534nm,22.0s,MS5.1
MALT Malatya 115.87 56⇑PKIKP PKPdf 16 30 43.7 +0.2
MALT Malatya 115.87 56 *e*PKPdf PKPdf 16 30 43.4 -0.1
MALT LR LR
comp=Z,800nm,20.0s,MS5.3
MALT Malatya 115.87 56⇑ *i*P PKPdf 16 30 43.7 +0.2
TARA Tarawa 116.56 261 PFAKE 16 31 00.0 +14
TARA LR LR
comp=Z,185nm,22.0s,MS4.7
KLMR Klimovskoe 116.62 31 *e*PKIKP PKPdf 16 30 43.4 -0.8
KLMR pmax pmax
comp=Z,28nm,1.5s
VSR Storozhevoye 117.00 42 *e*PKIKP PKPdf 16 30 43.9 -1.4
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,6.0nm,0.6s
VSR pmax pmax
comp=Z,9.0nm,0.6s
KIV Kislovodsk 119.41 50 *i* PKIKP PKPdf 16 30 49.7 -0.4
KIV *i* 16 30 59.4
KIV pmax pmax
comp=Z,19nm,1.2s
KIV Kislovodsk 119.41 50 PKPdf PKPdf 16 30 49.5 -0.6
KIV LR LR
comp=Z,682nm,22.0s,MS5.2
PRGR Permogore 119.42 30‖ *i*PKIKP PKPdf 16 30 48.3 -1.3
PRGR *e* 16 31 00.1
PRGR pmax pmax
comp=Z,21nm,1.0s
GOF Gofitskoye 119.66 49 *e*PKIKP PKPdf 16 31 01.2 +11
ZEI Tsey 120.29 52 *i* PKIKP PKPdf 16 30 50.8 -1.1
ZEI pmax pmax
comp=Z,12nm,0.8s
STKA Stephens Creek 120.32 210 PKP PKPdf 16 30 51.2 -1.2
comp=Z,2.7nm,0.9s,baz=46,slow=4.6,SNR=5.2
STKA PKKPbc PKKPbc 16 40 58.2 -1.4
comp=Z,1.4nm,0.9s,baz=318,slow=9.8,SNR=3.7
STKA Stephens Creek 120.32 210 *e*PKP PKPdf 16 30 51.2 -1.2
comp=Z,3.4nm,0.9s
STKA Stephens Creek 120.32 210 PKP PKPdf 16 30 51.2 -1.2
STKA PKKPbc PKKPbc 16 40 58.2 -1.4
GNI Garni 120.88 55⇑ *i*PKIKP PKPdf 16 30 53.2 +0.1
GNI pmax pmax
comp=Z,13nm,0.8s
GNI Garni 120.88 55 *e*PKPdf PKPdf 16 30 52.9 -0.2
GNI LR LR
comp=Z,394nm,20.0s,MS5.0
BILL Bilibino 121.32 339 *i* PKIKP PKPdf 16 30 52.3 -0.8
BILL *i* 16 31 03.7
BILL *i* 16 32 23.0
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL Bilibino 121.32 339 PFAKE 16 31 00.0 +6.9
BILL LR LR
comp=Z,1μm,22.0s,MS5.5
QLP Quilpie 123.23 216 *e*PKP PKPdf 16 30 57.3 -0.8
SOKR Solikamsk 125.28 30 *e*PKIKP PKPdf 16 30 58.3 -2.6
SOKR pmax pmax
comp=Z,20nm,1.0s
FORT Forrest 126.58 199 *e*PKP PKPdf 16 31 02.4 -2.0
comp=Z,22nm,0.8s
FORT Forrest 126.58 199 *e*PKPdf PKPdf 16 31 03.0 -1.5
NWAO Narrogin (SRO) 126.72 187 PFAKE 16 31 20.0 +15
NWAO LR LR
comp=Z,1μm,22.0s,MS5.5
CTA Charters Tower 126.94 223 PKP PKPdf 16 31 03.7 -1.7
comp=Z,6.0nm,0.8s,baz=108,slow=3.2,SNR=4.2
CTA Charters Tower 126.94 223 PKIKP PKPdf 16 31 03.7 -1.7
CTA pmax pmax
comp=Z,6.0nm,0.8s
CTA Charters Tower 126.94 223 PKP PKPdf 16 31 03.7 -1.7
CTAO Charters Tower 126.94 223 PFAKE 16 31 20.0 +15
CTAO LR LR
comp=Z,997nm,21.0s,MS5.5
ARU Arti 127.30 34 *e*PKIKP PKPdf 16 31 04.5 -0.4
ARU *e* 16 31 15.7
ARU MLR MLR
comp=Z,1μm,21.0s,MS5.6
ARU Arti 127.30 34 *e*PKPdf PKPdf 16 31 04.5 -0.4
ARU *ep*PKPdf pPKPdf 16 31 15.7 +9.5
ARU LR LR
comp=Z,1μm,21.0s,MS5.6
TIXI Tiksi 127.58 353 PFAKE 16 31 20.0 +15
TIXI LR LR
comp=Z,867nm,21.0s,MS5.4
WAKE Wake Island 127.67 279 PFAKE 16 31 20.0 +13
WAKE LR LR
comp=Z,526nm,19.0s,MS5.2
SVE Sverdlovsk 128.21 33 *i* PKIKP PKPdf 16 31 05.3 -1.3
SVE pmax pmax
comp=Z,18nm,1.0s
SVE MLR MLR
comp=Z,1μm,20.0s,MS5.6
SEY Seymchan 128.91 337⇑ *i*PKIKP PKPdf 16 31 07.5 -0.2
AKTK Aktyubinsk 128.91 41 PKP PKPdf 16 31 07.6 -0.6
AKTK PP PP 16 33 20.2 +4.9
AKTO Aktyubinsk 128.91 41 PKP PKPdf 16 31 07.6 -0.6
comp=Z,9.9nm,0.9s,baz=351,slow=2.8,SNR=15
AKTO PP PP 16 33 20.2 +4.9
comp=Z,2.6nm,0.8s,baz=282,slow=11,SNR=3.9
AKTO Aktyubinsk 128.91 41 PKIKP PKPdf 16 31 07.6 -0.5
AKTO 16 33 20.2
AKTO pmax pmax
comp=Z,10.0nm,0.9s
AKTO pmax pmax
comp=Z,3.0nm,0.8s
MTSU Mount Surprise 129.62 223 *e*PKP PKPdf 16 31 09.5 -1.0
comp=Z,31nm,0.8s
ASAR Alice Springs 130.84 208 PKhKP PKPpre 16 30 52.8
comp=Z,0.5nm,0.9s,baz=131,slow=1.6,SNR=3.6
ASAR PKP PKPdf 16 31 10.8 -2.0
comp=Z,10.0nm,1.0s,baz=140,slow=1.5,SNR=20
ASAR pPKP pPKPdf 16 31 22.4 +8.3
comp=Z,11nm,0.9s,baz=144,slow=1.8,SNR=16
ASAR PKKP 16 41 11.3
comp=Z,0.3nm,0.7s,baz=346,slow=1.5,SNR=4.8
ASAR Alice Springs 130.84 208 PKHKP PKPpre 16 30 52.8
ASAR 16 31 10.8
ASAR 16 31 22.4
ASAR pmax pmax
comp=Z,1.0nm,0.9s
ASAR pmax pmax
comp=Z,10.0nm,1.0s
PET Petropavlovsk 130.96 324 *e*PKIKP PKPdf 16 31 10.8 -1.1
PET *i* 16 31 22.5
PET *e*SS SS 16 50 56.7 -2.9
PET MLR MLR
comp=Z,400nm,17.0s,MS5.2
PET Petropavlovsk 130.96 324 PFAKE 16 31 20.0 +8.1
PET LR LR
comp=Z,754nm,22.0s,MS5.3
PETK Petropavlovsk- 131.46 324 PKP PKPdf 16 31 12.1 -0.7
comp=Z,16nm,0.9s,baz=93,slow=5.8,SNR=9.9
PETK Petropavlovsk- 131.46 324 PKIKP PKPdf 16 31 12.1 -0.8
PETK pmax pmax
comp=Z,16nm,0.9s
DGAR Diego Garcia 133.28 122 PFAKE 16 31 30.0 +12
DGAR LR LR
comp=Z,882nm,22.0s,MS5.4
PMG Port Moresby 133.63 234 PFAKE 16 31 30.0 +12
PMG LR LR
comp=Z,868nm,20.0s,MS5.5
WB2 Warramunga Arr 133.84 211 *e*PKPdf PKPdf 16 31 17.1 -1.4
WRA Warramunga Arr 133.85 211 PKhKP PKPpre 16 31 03.0

comp=Z,0.8nm,1.0s,baz=148,slow=3.2,SNR=4.5
WRA PKP PKPdf 16 31 16.8 -1.7
comp=Z,5.1nm,0.8s,baz=146,slow=1.8,SNR=31
WRA pPKP pPKPdf 16 31 28.2 +8.3
comp=Z,10.0nm,0.8s,baz=156,slow=1.8,SNR=15
WRA SKPab 16 34 43.8
comp=Z,7.8nm,1.1s,baz=153,slow=3.4,SNR=7.4
WRA Warramunga Arr 133.85 211 PKP PKPpre 16 31 03.0
WRA PKP PKPdf 16 31 16.8 -1.7
WRA pPKP pPKPdf 16 31 28.2 +8.3
WRA SKPab 16 34 43.8
BRVK Borovoye 134.88 34‖ *e*PKIKP PKPdf 16 31 19.9 +0.6
BRVK Borovoye 134.88 34 *e*PKPdf PKPdf 16 31 19.5 +0.1
BRVK LR LR
comp=Z,1μm,20.0s,MS5.7
BVAR Borovoye Array 134.95 34 PKP PKPdf 16 31 19.4 -0.1
comp=Z,10nm,0.8s,baz=270,slow=2.8,SNR=37
BVAR pPKP pPKPdf 16 31 30.5 +10
comp=Z,14nm,0.8s,baz=264,slow=3.1,SNR=15
BVAR Borovoye Array 134.95 34 PKIKP PKPdf 16 31 19.4 -0.1
BVAR 16 31 30.5
BVAR pmax pmax
comp=Z,11nm,0.9s
YAK Yakutsk 136.30 347 *i* PKIKP PKPdf 16 31 20.9 -0.8
YAK *e* 16 34 00.6
YAK *e*PS PS 16 44 24.9 -2.0
YAK *e*SSS 16 57 09.2
YAK pmax pmax
comp=Z,32nm,1.0s
YAK pmax pmax
comp=Z,12nm,0.8s
YAK pmax pmax
comp=N,76nm,3.0s
YAK pmax pmax
comp=E,60nm,3.3s
YAK Yakutsk 136.30 347 PKPdf PKPdf 16 31 20.8 -0.9
YAK LR LR
comp=Z,731nm,20.0s,MS5.4
MBWA Marble Bar 137.88 192 *e*PKP PKPdf 16 31 23.7 -2.3
MBWA Marble Bar 137.88 192 *e*PKPdf PKPdf 16 31 24.6 -1.4
MBWA LR LR
comp=Z,746nm,19.0s,MS5.5
FITZ Fitzroy Crossi 139.16 202 *e*PKP PKPpre 16 31 16.6
comp=Z,12nm,0.9s
FITZ Fitzroy Crossi 139.16 202 *e*PKPpre PKPpre 16 31 16.5
KKAR Karatay Array 139.38 47 PKIKP PKPdf 16 31 27.8 -0.2
NVS Novosibirsk 139.69 24 *e*PKIKP PKPdf 16 31 26.3 -1.9
NVS pmax pmax
comp=Z,12nm,0.8s
NVS pmax pmax
comp=E,3.0nm,0.8s
KURK Kurchatov 140.46 32 *e*PKIKP PKPdf 16 31 28.8 -0.9
KURK MLR MLR
comp=Z,675nm,22.0s,MS5.3
KBL Kabul 140.58 60 PKIKP PKPdf 16 31 30.3 -0.1
ZAA0 Zalesovo Array 140.98 24 *e*PKPpre PKPpre 16 31 26.1
ZALV Zalesovo Beam 140.98 24 PKhKP PKPpre 16 31 22.5
comp=Z,6.7nm,0.7s,baz=314,slow=4.2,SNR=11
ZALV PKP PKPdf 16 31 29.4 -1.1
comp=Z,40nm,0.9s,baz=313,slow=2.3,SNR=46
ZALV pPKP pPKPdf 16 31 41.2 +9.3
comp=Z,29nm,0.6s,baz=297,slow=2.3,SNR=12
ZALV Zalesovo Beam 140.98 24 PKHKP PKPpre 16 31 22.5
ZALV 16 31 29.4
ZALV 16 31 41.2
ZALV pmax pmax
comp=Z,7.0nm,0.7s
ZALV pmax pmax
comp=Z,40nm,0.9s
EKS2 Erkin-Say 141.77 46 *e*PKPdf PKPdf 16 31 33.1 +0.8
EKS2 LR LR
comp=Z,823nm,20.0s,MS5.5
AML Almayashu 141.93 47 *e*PKPpre PKPpre 16 31 29.9
AML LR LR
comp=Z,698nm,20.0s,MS5.4
CLNS Chul'man 142.05 347 *e*PKIKP PKPdf 16 31 30.2 -2.2
CLNS pmax pmax
comp=Z,22nm,1.0s
CLNS pmax pmax
comp=N,10.0nm,1.1s
CLNS pmax pmax
comp=E,7.0nm,1.1s
FRU Bishkek 142.26 45‖ *e*PKIKP PKPdf 16 31 32.0 -1.2
FRU *i* 16 31 44.0
FRU *i* 16 34 46.0
FRU pmax pmax
comp=Z,40nm,1.8s
UCH Uchtor 142.44 46 PFAKE 16 31 50.0 +16
UCH LR LR
comp=Z,52nm,20.0s,MS4.3
YSS Yuzh-Sakhalins 142.84 323 *e*PKHKP PKPpre 16 31 25.0
YSS *e*SS SS 16 53 22.0 +0.9
YSS Yuzh-Sakhalins 142.84 323 *e*PKPdf PKPdf 16 31 32.7 -1.4
YSS LR LR
comp=Z,234nm,19.0s,MS5.0
TKM2 Tokmak 2 142.87 45 *e*PKIKP PKPdf 16 31 31.2 -3.1
TKM2 MLR MLR
comp=Z,1μm,21.0s,MS5.6
NIL Nilore 144.18 60 PFAKE 16 31 50.0 +13
NIL LR LR
comp=Z,89nm,20.0s,MS4.5
ASAJ Asahikawa 144.49 319 PKP PKPdf 16 31 35.0 -2.1
comp=Z,34nm,0.8s,baz=305,slow=5.3,SNR=16
ASAJ pPKP pPKPdf 16 31 47.4 +8.9
comp=Z,37nm,0.7s,baz=204,slow=3.8,SNR=8.6
ASAJ Asahikawa 144.49 319 PKIKP PKPdf 16 31 35.0 -2.1
ASAJ 16 31 47.4
ASAJ pmax pmax
comp=Z,34nm,0.8s
ASAJ Asahikawa 144.49 319 *e*PKPdf PKPdf 16 31 35.2 -1.8
MK31 Makanchi Array 144.81 35 *e*PKIKP PKPdf 16 31 36.2 -1.3
MKAR Makanchi Array 144.81 35 PKP PKPdf 16 31 36.3 -1.2
comp=Z,28nm,0.7s,baz=336,slow=2.7,SNR=161
MKAR pPKP pPKPdf 16 31 47.8 +8.9
comp=Z,38nm,0.7s,baz=325,slow=4.5,SNR=13
MKAR Makanchi Array 144.81 35 PKIKP PKPdf 16 31 36.3 -1.2
MKAR 16 31 47.8
MKAR pmax pmax
comp=Z,28nm,0.7s
COCO West Island 144.90 156 PFAKE 16 31 50.0 +11
COCO LR LR
comp=Z,958nm,19.0s,MS5.6
POO Poona 145.13 86 *e*PKP PKPbc 16 31 38.4 -0.1
KAD Karad 145.23 89 *e*PKP PKPbc 16 31 38.7 -0.1
TRD Trivandrum 145.25 105 *e*PKP PKPbc 16 31 39.0 +0.1
HABR Khabarovsk 145.80 331 *ce*PKP2 PKPab 16 31 38.6 -1.4
HABR *e* 16 34 58.8
HABR *e* 16 38 44.5
HABR SS SS 16 53 49.9 -4.6
HABR SSS 16 59 21.8
HABR pmax pmax
comp=Z,466nm,2.0s
HABR pmax pmax
comp=N,101nm,1.5s
HABR pmax pmax
comp=E,104nm,1.5s
AJM Ajmer 146.31 73 *e*PKP PKPdf 16 31 39.1 -1.7
KLR Kul'dur 146.64 335 *e*PKHKP PKPpre 16 31 35.8
KLR *e* 16 35 03.5
KLR pmax pmax
comp=Z,130nm,1.8s
GUMO Guam 146.80 264 *e*PKIKP PKPdf 16 31 40.4 -1.5
GUMO MLR MLR
comp=Z,395nm,19.0s,MS5.2
KHET Khetri 147.22 69 *e*PKP PKPdf 16 31 42.0 -0.2
BHK Bhakra 147.25 63 *ex* x 16 31 51.8
LATR Latur 147.65 87 *e*PKP PKPdf 16 31 39.2 -4.0
IRK Irkutsk 147.72 8 *e*PKP2 PKPab 16 31 43.2 -4.1
IRK pmax pmax
comp=Z,133nm,1.9s
MOY Mondy 147.77 11 *e*PKP2 PKPab 16 31 43.4 -4.1
MOY pmax pmax
comp=Z,138nm,2.5s
KKR Kurukshetra 147.85 66 *e*PKP PKPdf 16 31 41.7 -1.5
PALK Pallekele 148.08 110 *e*PKHKP PKPpre 16 31 42.6
PALK *e* 16 31 47.0
TLY Talaya 148.19 8 *e*PKP2 PKPab 16 31 45.3 -3.9
TLY *e*SS SS 16 54 09.5 -11
TLY pmax pmax
comp=Z,44nm,1.0s
TLY MLR MLR
comp=Z,428nm,22.0s,MS5.2
TLY Talaya 148.19 8 *e*PKPbc PKPbc 16 31 46.1 -0.2
TLY LR LR
comp=Z,514nm,20.0s,MS5.3

CIT	**Chita**	**148.27**	**357**	*e*PKIKP	PKPdf	16 31 44.0	+0.8
CIT				*e*		16 31 59.7	
CIT				*e*		16 35 13.0	
CIT				*e*		16 38 38.1	
CIT				pmax	pmax		
comp=Z,137nm,2.0s							
SONA	**Sohna**	**148.32**	**69**	*e*PKP	PKPdf	16 31 43.7	-0.3
AYAN	**Aya Nagar**	**148.33**	**68**	*e*PKP	PKPdf	16 31 41.4	-2.6
AYAN				AMb	AMB	16 31 46.4	
comp=Z,13nm,0.4s							
BISR	**Bishrakh**	**148.59**	**68**	*e*PKP	PKPdf	16 31 43.4	-1.1
KLP	**Kalpa**	**148.75**	**62**	*e*PKP	PKPdf	16 31 42.8	-1.9
DDI	**Dehra Dun**	**148.84**	**65**	*ex*	PKPdf	16 31 44.0	-0.8
BHPL	**Bhopal**	**148.89**	**78**	*e*PKP	PKPdf	16 31 42.8	-2.4
HYB	**Hyderabad**	**149.35**	**90**	*i* PKP	PKPdf	16 31 48.0	+2.0
ZAK	**Zakamensk**	**149.40**	**10**	*e*PKIKP	PKPdf	16 31 45.2	+0.1
ZAK				pmax	pmax		
comp=Z,22nm,1.2s							
WMQ	**Urumqi**	**149.63**	**34**	PKPbc	PKPbc	16 31 45.0	-5.3
WMQ				PP	PP	16 35 26.0	+3.2
WMQ				SKS	SKSdf	16 38 48.0	-6.5
WMQ				SKKS	SKKSac	16 42 11.0	-4.3
WMQ				AMB	AMB		
comp=Z,320nm,10.0s							
WMQ				LR	LR		
comp=N,950nm,26.0s,MS5.6							
WMQ				LR	LR		
comp=E,880nm,26.0s,MS5.6							
WMQ				LR	LR		
comp=Z,1μm,26.0s,MS5.5							
HIA	**Hailar**	**150.23**	**348**	*e*PKP2	PKPab	16 31 50.5	-7.1
HIA				MLR	MLR		
comp=Z,1μm,21.0s							
PTH	**Pithoragarh**	**150.83**	**66**	*ex*	x	16 31 54.5	
MJAR	**Matsushiro Arr**	**151.12**	**310**	PKP	PKPdf	16 31 47.6	-0.7
comp=Z,4.1nm,0.8s,baz=155,slow=0.2,SNR=11							
MJAR				PKPbc	PKPbc	16 31 52.8	-1.3
comp=Z,51nm,0.8s,baz=117,slow=1.0,SNR=29							
MJAR				pPKPbc	pPKPbc	16 32 04.4	+9.0
comp=Z,15nm,0.7s,baz=107,slow=0.9,SNR=21							
MJAR	**Matsushiro Arr**	**151.12**	**310**	PKIKP	PKPdf	16 31 47.6	-0.7
MJAR						16 31 52.8	
MJAR						16 32 04.4	
MJAR				pmax	pmax		
comp=Z,4.0nm,0.9s							
MAJO	**Matsushiro**	**151.13**	**310**	*e*PKIKP	PKPdf	16 31 47.5	-0.8
MAJO				*e*		16 31 52.9	
MAJO				MLR	MLR		
comp=Z,1μm,22.0s,MS5.6							
MAT	**Matsushiro**	**151.13**	**310**	PKP	PKPdf	16 31 47.2	-1.1
MDJ	**Mudanjiang**	**151.18**	**332**	PKPbc	PKPbc	16 31 46.6	-7.4
MDJ				pPKP	pPKPdf	16 31 57.3	+7.9
MDJ				sPKP		16 32 01.3	
MDJ				PP	PP	16 35 29.5	-2.1
MDJ				SKS	SKSdf	16 38 51.4	-5.1
MDJ				LR	LR		
comp=N,660nm,27.8s,MS5.4							
MDJ				LR	LR		
comp=E,370nm,23.1s,MS5.4							
MDJ				LR	LR		
comp=Z,1μm,23.1s,MS5.6							
MDJ	**Mudanjiang**	**151.18**	**332**	*e*PKPdf	PKPdf	16 31 47.4	-0.6
MDJ				LR	LR		
comp=Z,856nm,21.0s,MS5.5							
SONM	**Songino Array**	**152.30**	**6**	PKP	PKPdf	16 31 49.6	-0.1
comp=Z,10nm,0.9s,baz=313,slow=0.6,SNR=41							
SONM				PKPbc	PKPbc	16 31 55.9	-0.5
comp=Z,19nm,0.8s,baz=324,slow=1.4,SNR=28							
SONM				PKPab	PKPab	16 32 07.0	+0.8
comp=Z,34nm,0.8s,baz=329,slow=2.4,SNR=16							
KAPI	**Kappang**	**153.35**	**200**	PFAKE		16 32 00.0	+7.7
KAPI				LR	LR		
comp=Z,989nm,22.0s,MS5.6							
CN2	**Changchun**	**153.58**	**336**	*e*PKPbc	PKPbc	16 31 50.8	-8.6
CN2				PP	PP	16 35 46.1	+1.1
CN2				SS	SS	16 55 16.6	-4.4
CN2				AMB	AMB		
comp=Z,200nm,7.0s							
CN2				LR	LR		
comp=N,700nm,25.0s,MS5.4							
CN2				LR	LR		
comp=E,300nm,25.0s,MS5.4							
CN2				LR	LR		
comp=Z,800nm,24.0s,MS5.5							
SNY	**Shenyang**	**155.98**	**336**	⇓PKP	PKPdf	16 31 57.3	+2.3
SNY				LR	LR		
comp=N,450nm,17.1s,MS5.6							
SNY				LR	LR		
comp=E,660nm,16.7s,MS5.6							
SNY				LR	LR		
comp=Z,920nm,23.0s							
KSRS	**Korea Array**	**157.34**	**323**	PKP	PKPdf	16 31 56.2	-0.7
comp=Z,12nm,0.9s,baz=79,slow=0.8,SNR=45							
KSRS				pPKP	pPKPdf	16 32 07.0	+8.7
comp=Z,18nm,0.9s,baz=40,slow=1.1,SNR=16							
KSRS				PKPab	PKPab	16 32 26.6	-1.4
comp=Z,12nm,1.1s,baz=60,slow=4.5,SNR=8.2							
KSRS				pPKPab	pPKPab	16 32 38.7	+9.3
comp=Z,10nm,0.8s,baz=50,slow=4.0,SNR=3.4							
KSRS	**Korea Array**	**157.34**	**323**	PKIKP	PKPdf	16 31 56.3	-0.6
KSRS						16 32 07.0	
KSRS				pmax	pmax		
comp=Z,12nm,0.9s							
INCN	**Inchon**	**158.04**	**325**	PFAKE		16 32 10.0	+12
INCN				LR	LR		
comp=Z,537nm,20.0s,MS5.4							
GTA	**Gaotai**	**158.73**	**24**	*e*PKP	PKPdf	16 31 58.5	-0.1
GTA				pPKP	pPKPdf	16 32 09.0	+9.1
GTA				sPKP		16 32 13.3	
GTA				PKS		16 35 31.4	
GTA				PP	PP	16 36 12.1	-1.6
GTA				SKS	SKSdf	16 38 58.0	-7.1
GTA				SKKS	SKKSac	16 43 01.4	-2.9
GTA				SS	SS	16 56 11.4	-5.1
GTA				AMB	AMB		
comp=Z,340nm,9.2s							
GTA				LR	LR		
comp=N,470nm,21.6s,MS5.4							
GTA				LR	LR		
comp=E,390nm,20.6s,MS5.4							
GTA				LR	LR		
comp=Z,880nm,26.1s							
DL2	**Dalian**	**159.25**	**336**	PKP	PKPdf	16 32 00.8	+1.6
DL2				AMB	AMB		
comp=Z,160nm,9.7s							
DL2				LR	LR		
comp=N,250nm,21.3s,MS5.2							
DL2				LR	LR		
comp=E,230nm,21.4s,MS5.2							
DL2				LR	LR		
comp=Z,350nm,29.3s							
HHC	**Hu-ho-hao-te**	**159.51**	**358**	*e*PKP	PKPdf	16 31 58.8	-0.6
HHC				pPKP	pPKPdf	16 32 09.6	+8.8
HHC				sPKP		16 32 13.2	
HHC				PKS		16 35 31.3	
HHC				PP	PP	16 36 21.2	+3.7
HHC				SKS	SKSdf	16 38 58.9	-6.8
HHC				SKKS	SKKSac	16 43 04.2	-4.0
HHC				AMB	AMB		
comp=Z,390nm,8.8s							
HHC				LR	LR		
comp=N,970nm,22.1s,MS5.7							
HHC				LR	LR		
comp=E,550nm,21.1s,MS5.7							
HHC				LR	LR		
comp=Z,2μm,21.1s,MS5.9							
BJI	**Beijing**	**159.80**	**348**	PKP	PKPdf	16 31 59.1	-0.7
BJI				PP	PP	16 36 20.0	+0.8
BJI				AMB	AMB		
comp=Z,250nm,11.1s							
BJI				LR	LR		
comp=N,520nm,23.8s,MS5.5							
BJI				LR	LR		
comp=E,610nm,23.8s,MS5.5							
BJI				LR	LR		
comp=Z,1μm,26.8s,MS5.6							
BJT	**Baijiatuau**	**159.82**	**348**	*e*PKIKP	PKPdf	16 31 59.2	-0.6
BJT				MLR	MLR		
comp=Z,689nm,20.0s							
LSA	**Lhasa**	**159.89**	**58**	PKP	PKPdf	16 32 00.2	0.0
LSA	**Lhasa**	**159.89**	**58**	*e*PKPdf	PKPdf	16 32 00.5	+0.2
LSA				LR	LR		
comp=Z,1μm,21.0s,MS5.7							
DAV	**Davao City (W)**	**160.56**	**229**	PFAKE		16 32 10.0	+8.6
DAV				LR	LR		
comp=Z,579nm,21.0s							
KSM	**Kuching**	**161.28**	**178**	PFAKE		16 32 10.0	+7.8
KSM				LR	LR		
comp=Z,779nm,19.0s							
SHL	**Shillong**	**161.79**	**70**	*e*PKP	PKPdf	16 32 01.0	-1.4
KULM	**Kulim**	**162.10**	**145**	PFAKE		16 32 10.0	+6.9
KULM				LR	LR		
comp=Z,1μm,20.0s							
JOW	**Kunigami**	**162.74**	**295**	*e*PKPdf	PKPdf	16 32 03.4	+0.1
LZH	**Lanzhou**	**163.13**	**20**	*e*PKP	PKPdf	16 32 03.5	+0.1
LZH				pPKP	pPKPdf	16 32 14.5	+10
LZH				sPKP		16 32 20.5	
LZH				PKPab	PKPab	16 32 52.5	-0.7
LZH				PP	PP	16 36 38.0	+0.8
LZH				AMB	AMB		
comp=Z,310nm,5.1s							
LZH				LR	LR		
comp=N,880nm,17.9s							
LZH				LR	LR		
comp=E,380nm,16.6s							
LZH				LR	LR		
comp=Z,1μm,20.4s							
TIA	**Tai'an**	**163.22**	**342**	*e*PKP	PKPdf	16 32 03.3	-0.2
KKM	**Kota Kinabalu**	**164.89**	**201**	PFAKE		16 32 20.0	+14
KKM				LR	LR		
comp=Z,713nm,22.0s							
SSE	**Sheshan**	**165.77**	**321**	PKP	PKPdf	16 32 06.5	+0.6
SSE				PP	PP	16 36 54.7	+3.0
SSE				AMB	AMB		
comp=Z,330nm,9.5s							
SSE				LR	LR		
comp=N,530nm,30.2s							
SSE				LR	LR		
comp=E,420nm,30.4s							
SSE				LR	LR		
comp=Z,750nm,22.8s							
XAN	**Xi'an**	**166.22**	**7**	PKP	PKPdf	16 32 05.6	-0.6
XAN				LR	LR		
comp=N,450nm,32.1s							
XAN				LR	LR		
comp=E,180nm,26.7s							
XAN				LR	LR		
comp=Z,7μm,19.3s							
NJ2	**Nanjing**	**166.27**	**330**	*e*PKP	PKPdf	16 32 05.8	-0.5
CD2	**Chengdu**	**167.67**	**30**	*e*PKP	PKPdf	16 32 07.0	-0.4
CD2				pPKP	pPKPdf	16 32 17.8	+9.1
CD2				sPKP		16 32 23.0	
CD2				PKPab	PKPab	16 33 15.0	+1.6
CD2				SKS	SKSdf	16 39 05.6	-6.6
CD2				SKKS	SKKSac	16 43 45.5	-4.7
CD2				AMB	AMB		
comp=Z,600nm,12.0s							
CD2				LR	LR		
comp=N,1μm,32.0s							
CD2				LR	LR		
comp=E,760nm,30.0s							
CD2				LR	LR		
comp=Z,550nm,31.0s							
CMAR	**Chiang Mai Arr**	**168.64**	**97**	PKP	PKPdf	16 32 07.2	-1.2
comp=Z,5.9nm,1.0s,baz=289,slow=2.3,SNR=23							
CMAR				pPKP	pPKPdf	16 32 19.1	+9.4
comp=Z,5.8nm,0.9s,baz=293,slow=2.2,SNR=8.4							
CMAR				PKPab	PKPab	16 33 17.9	-0.4
comp=Z,3.3nm,0.9s,baz=252,slow=6.3,SNR=9.2							
CMAR				pPKPab	pPKPab	16 33 29.6	+10
comp=Z,5.6nm,0.7s,baz=261,slow=5.8,SNR=7.0							
CMAR				PP	PP	16 37 07.8	0.0
comp=Z,2.1nm,0.9s,baz=249,slow=5.2,SNR=4.7							
CMAR	**Chiang Mai Arr**	**168.64**	**97**	PKIKP	PKPdf	16 32 07.2	-1.2
CMAR						16 32 19.2	
CMAR						16 33 17.9	
CMAR						16 37 07.8	
CMAR				pmax	pmax		
comp=Z,6.0nm,1.0s							
CHTO	**Chiang Mai**	**168.70**	**96**	*e*PKIKP	PKPdf	16 32 07.0	-1.4
CHTO				MLR	MLR		
comp=Z,638nm,20.0s							
WHN	**Wuhan**	**169.32**	**343**	PKP	PKPdf	16 32 07.2	-1.3
WHN				pPKP	pPKPdf	16 32 20.0	+10
WHN				PKPab	PKPab	16 33 18.5	-2.1
WHN				PP	PP	16 37 07.3	-1.8
WHN				LR	LR		
comp=Z,2μm,27.0s							
YHNB	**Yeheng**	**169.32**	**296**	PFAKE		16 32 20.0	+11
YHNB				LR	LR		
comp=Z,860nm,21.0s							
ENH	**Enshi**	**170.00**	**7**	*e*PKPdf	PKPdf	16 32 07.3	-1.6
ENH				LR	LR		
comp=Z,729nm,20.0s							
KMI	**Kunming**	**171.13**	**56**	PKP	PKPdf	16 32 08.9	-0.7
KMI				pPKP	pPKPdf	16 32 22.1	+11
KMI				sPKP		16 32 24.4	
KMI				PKPab	PKPab	16 33 29.3	+0.2
KMI				PKS		16 35 38.6	
KMI				PP	PP	16 37 18.2	-1.4
KMI				SKKS	SKKSac	16 44 01.2	-6.5
KMI				SS	SS	16 58 16.1	-10
KMI				AMB	AMB		
comp=Z,290nm,9.0s							
KMI				LR	LR		
comp=N,680nm,19.9s							
KMI				LR	LR		
comp=E,530nm,22.5s							
KMI				LR	LR		
comp=Z,1μm,25.2s							
GYA	**Guiyang**	**172.78**	**31**	PKP	PKPdf	16 32 09.1	-1.3
GYA				pPKP	pPKPdf	16 32 20.0	+8.3
GYA				sPKP		16 32 25.9	
GYA				PKPab	PKPab	16 33 36.9	+0.8
GYA				PKS		16 35 40.9	
GYA				SKS	SKSdf	16 39 12.0	-2.7
GYA				SKKS	SKKSac	16 44 09.0	-6.3
GYA				SS	SS	16 58 34.8	-5.2
GYA				AMB	AMB		
comp=Z,300nm,8.8s							
GYA				LR	LR		
comp=N,430nm,26.7s							
GYA				LR	LR		
comp=E,540nm,23.9s							
GYA				LR	LR		
comp=Z,870nm,22.4s							
QIZ	**Qiongzhong**	**178.43**	**144**	PKP	PKPdf	16 32 11.5	-0.5
QIZ				PP	PP	16 37 59.4	+5.4
QIZ				SS	SS	16 59 27.6	-6.8
QIZ				AMB	AMB		
comp=Z,570nm,8.8s							
QIZ				LR	LR		
comp=N,480nm,24.1s							
QIZ				LR	LR		
comp=Z,830nm,22.7s							
QIZ	**Qiongzhong**	**178.43**	**144**	PFAKE		16 32 20.0	+8.0
QIZ				LR	LR		
comp=Z,751nm,20.0s							

*CSEM **10** 16:18:52.8, 46°.23N×6°.97E, h-1km, ML1.1, Suspected Mining explosion. After ZUR*

ZUR 10 16:18:52.8, 46°.23N×6°.97E, h-1km±2km, ML1.1/5, 4C, Suspected Mining explosion., Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALAN	**Lac Salanfe**	**0.09**	**179**	⇑*i*Pg		16 18 54.9	
178nm,0.6s							
SALAN				*e*Sg		16 18 56.4	
178nm,0.6s							
SALAN	**Lac Salanfe**	**0.09**	**179**	⇑*i*Pg		16 18 54.9	
178nm,0.6s							
SALAN				*e*Sg		16 18 56.4	
178nm,0.6s							
GRYON	**Gryon**	**0.10**	**79**	*e*Pg		16 18 55.0	
49nm,0.5s							
GRYON				*e*Sg		16 18 56.8	
49nm,0.5s							
GRYON	**Gryon**	**0.10**	**79**	*e*Pg		16 18 55.0	
49nm,0.5s							
GRYON				*e*Sg		16 18 56.8	
49nm,0.5s							
AIGLE	**Aigle**	**0.11**	**354**	*e*Pg		16 18 55.3	
16nm,0.2s							
AIGLE	**Aigle**	**0.11**	**354**	*e*Pg		16 18 55.3	
16nm,0.2s							
EMV	**Vieux Emosson**	**0.18**	**196**	⇑*i*Pg		16 18 56.7	
228nm,0.5s							
EMV				*e*Sg		16 18 59.4	
228nm,0.5s							
EMV	**Vieux Emosson**	**0.18**	**196**	⇑*i*Pg		16 18 56.7	
228nm,0.5s							
EMV				*e*Sg		16 18 59.4	
228nm,0.5s							
SENIN	**Lac Senin/Sane**	**0.26**	**60**	*e*Pg		16 18 58.4	
45nm,0.3s							
SENIN				*e*Sg		16 19 02.5	
45nm,0.3s							
SENIN	**Lac Senin/Sane**	**0.26**	**60**	*e*Pg		16 18 58.4	
45nm,0.3s							
SENIN				*e*Sg		16 19 02.5	
45nm,0.3s							

*IDC **10** 16:25:34.3±2.6, 30°.29N×50°.35E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/25, mbtmp3.9/8, ML3.0/1, Error ellipse: s-maj=56.9km s-min=31.3km az=125.0*
*THR **10** 16:25:35.5±0.4, 30°.17N×50°.32E, h15km, ML3.6*
*NEIC **10** 16:25:35.5, 30°.17N×50°.32E, h15km, mb4.1/5, ML3.6(THR), After THR.*
*ISCJB **10** 16:25:35.6±0.3, 30°.25N±0°.03×50°.33E±0°.03, h10km, mb4.2/14, Error ellipse: s-maj=4.1km s-min=3.6km az=139.4*
*TEH **10** 16:25:38.8, 30°.17N×50°.32E, h24km*
*CSEM **10** 16:25:38.8±0.2, 30°.27N×50°.36E, h20km, mb4.5/6, Error ellipse: s-maj=6.0km s-min=4.4km az=147.0*
*SGS **10** 16:25:39.8, 30°.26N×50°.40E, h12km*

ISC 10 16:25:37.5±0.3, 30°.27N±0°.03×50°.36E±0°.03, h10km, n123, σ1§23/149, mb4.2/14, 2C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPAR	**Pars**	**2.37**	**100**	*e*Pn		**16 26 16.5**	**+0.1**
IPAR				*e*		16 27 00.6	
comp=Z,5μm,0.4s							
IPAR	**Pars**	**2.37**	**100**	*e*Pn		**16 26 16.5**	**+0.1**
UMR	**Umm Al-Rimmam**	**2.41**	**253**	*e*P		**16 26 18.5**	**+1.6**
UMR				AML	AML	16 26 51.8	
comp=Z,241nm,0.5s							
UMR	**Umm Al-Rimmam**	**2.41**	**253**	*e*P		**16 26 18.5**	**+1.6**
IPIR	**Pirpir**	**2.45**	**11**	*e*Pn		**16 26 19.9**	**+2.3**
IPIR				*e*Sn		**16 26 49.1**	**+1.5**
IPIR				*e*		16 27 00.1	
comp=Z,5μm,0.3s							
IPIR	**Pirpir**	**2.45**	**11**	*e*Pn		**16 26 19.9**	**+2.3**
IPIR				*e*Sn		**16 26 49.1**	**+1.5**
ISRV	**Sarvestan**	**2.55**	**110**	*e*Pn		**16 26 18.9**	**0.0**
ISRV				*e*Sn		**16 26 48.5**	**-1.5**
ISRV				*e*		16 27 23.0	
comp=Z,7μm,0.5s							
ISRV	**Sarvestan**	**2.55**	**110**	*e*Pn		**16 26 18.9**	**0.0**
ISRV				*e*Sn		**16 26 48.5**	**-1.5**
KBD	**Kabd**	**2.56**	**246**	*e*P		**16 26 20.7**	**+1.6**
KBD				AML	AML	16 26 56.6	
comp=Z,115nm,0.4s							
KBD	**Kabd**	**2.56**	**246**	*e*P		**16 26 20.7**	**+1.6**
IGAR	**Gharneh**	**2.57**	**34**	*e*Pn		**16 26 20.3**	**+1.1**
IGAR				*e*Sn		**16 26 51.5**	**+1.0**
IGAR				*e*		16 27 02.5	
comp=Z,3μm,0.2s							
QRN	**Al-Qurain**	**2.62**	**235**	*e*P		**16 26 21.2**	**+1.4**
RDF	**Al-Radifah**	**2.79**	**242**	*e*P		**16 26 24.3**	**+2.1**
RDF	**Al-Radifah**	**2.79**	**242**	*e*P		**16 26 24.3**	**+2.1**
NAY	**Al-Naaiem**	**2.90**	**250**	*e*P		**16 26 25.6**	**+1.9**
NAY				AML	AML	16 27 10.0	
comp=Z,64nm,0.4s							
NAY	**Al-Naaiem**	**2.90**	**250**	*e*P		**16 26 25.6**	**+1.9**
KFJS		**2.96**	**226**	P		**16 26 25.1**	**+0.5**
KFJS		**2.96**	**226**	P		**16 26 25.1**	**+0.5**
IZEF	**Zefreh**	**3.11**	**32**	*e*Pn		**16 26 27.8**	**+1.2**
IZEF				*e*		16 26 42.4	
comp=Z,2μm,0.2s							
IZEF				*e*Sn		**16 27 04.4**	**+0.5**
IZEF	**Zefreh**	**3.11**	**32**	*e*Pn		**16 26 27.8**	**+1.2**
IZEF				*e*Sn		**16 27 04.4**	**+0.5**
IKLH	**Kolahrood**	**3.21**	**18**	*e*Pn		**16 26 29.3**	**+1.3**
IKLH				*e*		16 26 44.2	
comp=Z,2μm,0.2s							
IKLH				*e*Sn		**16 27 06.8**	**+0.4**
IKLH	**Kolahrood**	**3.21**	**18**	*e*Pn		**16 26 29.3**	**+1.3**
IKLH				*e*Sn		**16 27 06.8**	**+0.4**
NASN	**Na'in**	**3.28**	**39**	*e*Pn		**16 26 29.0**	**+0.1**
NASN	**Na'in**	**3.28**	**39**	*e*Pn		**16 26 29.9**	**+1.0**
NASN	**Na'in**	**3.28**	**39**	*e*Pn		**16 26 29.0**	**+0.1**
ISAD	**Sadrabad**	**3.29**	**59**	*e*Pn		**16 26 30.4**	**+1.3**
ISAD				*e*Sn		**16 27 08.7**	**+0.4**
ISAD				*e*		16 27 28.2	
comp=Z,3μm,0.3s							
ISAD	**Sadrabad**	**3.29**	**59**	*e*Pn		**16 26 30.4**	**+1.3**
ISAD				*e*Sn		**16 27 08.7**	**+0.4**
IMEH	**Mehriz**	**3.82**	**72**	*e*Pn		**16 26 37.2**	**+0.8**
IMEH				*e*		16 26 54.4	
comp=Z,814nm,0.4s							
IMEH				*e*Sn		**16 27 19.9**	**-1.5**
IMEH	**Mehriz**	**3.82**	**72**	*e*Pn		**16 26 37.2**	**+0.8**
IMEH				*e*Sn		**16 27 19.9**	**-1.5**
GHVR	**GHOM**	**4.27**	**10**	*e*Pn		**16 26 43.0**	**+0.4**
GHVR	**GHOM**	**4.27**	**10**	*e*Pn		**16 26 43.7**	**+1.1**
GHVR				AML	AML	16 28 08.0	
comp=N,56nm,0.7s							
GHVR	**GHOM**	**4.27**	**10**	*e*Pn		**16 26 43.0**	**+0.4**
ASAO	**Ashtian**	**4.28**	**356**	*e*Pn		**16 26 43.0**	**+0.3**
ASAO	**Ashtian**	**4.28**	**356**	*e*Pn		**16 26 43.8**	**+1.2**
ASAO				AML	AML	16 28 08.5	
comp=E,56nm,0.6s							
ASAO	**Ashtian**	**4.28**	**356**	*e*Pn		**16 26 43.0**	**+0.3**
ISFB	**Sefidab**	**4.37**	**21**	*e*Pn		**16 26 44.0**	**0.0**
ISFB				*e*		16 26 47.8	
comp=Z,746nm,0.2s							
ISFB	**Sefidab**	**4.37**	**21**	*e*Pn		**16 26 44.0**	**0.0**
BOQSS		**4.47**	**191**	P		**16 26 45.9**	**+0.6**
IKOM	**Komasi**	**4.58**	**329**	*e*Pn		**16 26 48.5**	**+1.6**
IKOM				*e*Sn		**16 27 38.4**	**-1.8**
IKOM				*e*		16 28 35.2	
comp=Z,776nm,0.3s							
IKOM	**Komasi**	**4.58**	**329**	*e*Pn		**16 26 48.5**	**+1.6**
IKOM				*e*Sn		**16 27 38.4**	**-1.8**
IBAF	**Bafgh**	**4.66**	**72**	*e*Pn		**16 26 48.1**	**+0.1**
IBAF				*e*Sn		**16 27 39.3**	**-2.8**
IBAF				*e*		16 28 11.4	
comp=Z,382nm,0.3s							
IBAF	**Bafgh**	**4.66**	**72**	*e*Pn		**16 26 48.1**	**+0.1**
IBAF				*e*Sn		**16 27 39.3**	**-2.8**
IVRN	**Varamin**	**4.85**	**13**	*e*Pn		**16 26 50.9**	**+0.3**
IVRN				*e*		16 27 16.4	
comp=Z,479nm,0.2s							
IVRN	**Varamin**	**4.85**	**13**	*e*Pn		**16 26 50.9**	**+0.3**
IRAZ	**Razeghan**	**5.14**	**356**	*e*Pn		**16 26 54.8**	**+0.3**
IRAZ				*e*		16 28 52.2	
comp=Z,491nm,0.4s							
IRAZ	**Razeghan**	**5.14**	**356**	*e*Pn		**16 26 54.8**	**+0.3**
IGHG	**Ghaleghazi**	**5.17**	**323**	*e*Pn		**16 26 55.3**	**+0.4**
IGHG				*e*		16 28 24.9	
comp=Z,811nm,0.2s							
IGHG	**Ghaleghazi**	**5.17**	**323**	*e*Pn		**16 26 55.3**	**+0.4**
IVIS	**Veis**	**5.18**	**326**	*e*Pn		**16 26 55.3**	**+0.2**
IVIS				*e*Sn		**16 27 51.3**	**-3.6**
IVIS	**Veis**	**5.18**	**326**	*e*Pn		**16 26 55.3**	**+0.2**
IVIS				*e*Sn		**16 27 51.3**	**-3.6**
IR3	**Iran Long-Peri**	**5.22**	**6**	*e*Pn		**16 26 55.6**	**-0.1**
IMHD	**Mahdasht**	**5.41**	**3**	*e*Pn		**16 26 58.3**	**+0.1**
IMHD				*e*		16 27 29.4	
comp=Z,349nm,0.3s							
IMHD	**Mahdasht**	**5.41**	**3**	*e*Pn		**16 26 58.3**	**+0.1**
SNGE	**Sanandaj**	**5.44**	**333**	*e*Pn		**16 26 59.0**	**+0.4**
SNGE	**Sanandaj**	**5.44**	**333**	*e*Pn		**16 26 59.3**	**+0.7**
SNGE	**Sanandaj**	**5.44**	**333**	*e*Pn		**16 26 59.0**	**+0.4**
ILIN	**Lien**	**5.45**	**329**	*e*Pn		**16 26 59.3**	**+0.5**
ILIN				*e*		16 28 03.9	
comp=Z,592nm,0.2s							
ILIN	**Lien**	**5.45**	**329**	*e*Pn		**16 26 59.3**	**+0.5**
IDMV	**Damavand**	**5

IDHR	**Dehrash**	**5.55**	**324**	*e*Pn	**Pn**	**16 26 59.7**	**-0.4**
IDHR				*e*Sn	**Sn**	**16 28 00.0**	**-4.0**
IDHR				*e*		16 28 06.1	
	comp=Z,1μm,0.2s						
IDHR	**Dehrash**	**5.55**	**324**	*e*Pn	**Pn**	**16 26 59.7**	**-0.4**
IDHR				*e*Sn	**Sn**	**16 28 00.0**	**-4.0**
KRBR	**Kerman**	**5.55**	**91**	*e*Pn	**Pn**	**16 27 00.0**	**-0.2**
KRBR	**Kerman**	**5.55**	**91**	*e*Pn	**Pn**	**16 27 00.6**	**+0.5**
KRBR	**Kerman**	**5.55**	**91**	*e*Pn	**Pn**	**16 27 00.0**	**-0.2**
IFIR	**Firoozkooh**	**5.72**	**20**	*e*	**Pn**	**16 27 12.1**	**+10**
	comp=Z,741nm,0.1s						
IFIR				*e*Pn	**Pn**	**16 27 03.0**	**+0.5**
ASYS		**5.95**	**244**	P	**Pn**	**16 27 04.4**	**-1.3**
ASYS		**5.95**	**244**	P	**Pn**	**16 27 04.4**	**-1.3**
IANJ	**Anjilo**	**5.99**	**29**	*e*	**Pn**	**16 27 09.0**	**+2.9**
	comp=Z,336nm,0.2s						
IANJ				*e*Pn	**Pn**	**16 27 06.0**	**-0.1**
ISHM	**Shahmirzad**	**6.05**	**23**	*e*	**Pn**	**16 27 15.1**	**+8.1**
	comp=Z,494nm,0.2s						
ISHM				*e*Pn	**Pn**	**16 27 07.3**	**+0.3**
BTHS		**6.21**	**176**	P	**Pn**	**16 27 08.6**	**-0.7**
BTHS		**6.21**	**176**	P	**Pn**	**16 27 08.6**	**-0.7**
IGLO	**Ghaloghah**	**6.86**	**24**	*e*Pn	**Pn**	**16 27 14.0**	**-4.1**
IGLO				*e*		16 27 22.8	
	comp=Z,660nm,0.2s						
IGLO	**Ghaloghah**	**6.86**	**24**	*e*Pn	**Pn**	**16 27 14.0**	**-4.1**
HRDDS		**7.36**	**186**	P	**Pn**	**16 27 24.2**	**-0.7**
IKOO	**Kooshah**	**7.70**	**72**	*e*Pn	**Pn**	**16 27 31.0**	**+1.3**
IKOO	**Kooshah**	**7.70**	**72**	*e*Pn	**Pn**	**16 27 31.0**	**+1.3**
BRTR	**Keskin Array B**	**16.61**	**309**	Pn	**Pn**	**16 29 28.9**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=124,slow=11,SNR=7.9						
BRTR	**Keskin Array B**	**16.61**	**309**	Pn	**Pn**	**16 29 29.0**	**-1.5**
ABKAR	**Akbulak array**	**20.31**	**18**	*e*P	**P**	**16 30 11.8**	**-1.7**
	comp=Z,14nm,1.1s						
ABKAR	**Akbulak array**	**20.31**	**18**	*e*P	**P**	**16 30 11.8**	**-1.7**
	comp=Z,14nm,1.1s						
KKAR	**Karatay Array**	**20.56**	**46**	*e*P	**P**	**16 30 15.8**	**-0.4**
	comp=Z,4.7nm,0.6s						
KKAR	**Karatay Array**	**20.56**	**46**	*e*P	**P**	**16 30 15.8**	**-0.4**
	comp=Z,4.7nm,0.6s						
AKTK	**Aktyubinsk**	**20.95**	**14**	P	**P**	**16 30 18.8**	**-1.6**
AKTK	**Aktyubinsk**	**20.95**	**14**	P	**P**	**16 30 18.8**	**-1.6**
AKTO	**Aktyubinsk**	**20.95**	**14**	P	**P**	**16 30 18.8**	**-1.6**
	comp=Z,1.3nm,0.5s,baz=193,slow=11,SNR=5.4						
AML	**Almayashu**	**22.17**	**51**	*e*P	**P**	**16 30 33.5**	**-0.1**
	comp=Z,10nm,0.6s,mb4.4						
AML	**Almayashu**	**22.17**	**51**	*e*P	**P**	**16 30 33.5**	**0.0**
	comp=Z,10nm,0.6s,mb4.4						
EKS2	**Erkin-Say**	**22.45**	**50**	*e*P	**P**	**16 30 36.3**	**-0.2**
	comp=Z,6.2nm,1.0s,mb4.0						
EKS2	**Erkin-Say**	**22.45**	**50**	*e*P	**P**	**16 30 36.3**	**-0.2**
	comp=Z,6.2nm,1.0s,mb4.0						
KZA	**Kyzart**	**23.20**	**53**	*e*P	**P**	**16 30 46.0**	**+1.5**
	comp=Z,4.2nm,1.0s,mb3.8						
KZA	**Kyzart**	**23.20**	**53**	*e*P	**P**	**16 30 46.0**	**+1.4**
	comp=Z,4.2nm,1.0s,mb3.8						
PLOR	**Plostina**	**24.17**	**317**	⇓*i*P	**P**	**16 30 54.0**	**+0.2**
PLOR	**Plostina**	**24.17**	**317**	⇓*i*P	**P**	**16 30 54.0**	**+0.2**
AKASG	**Malin Array Be**	**25.82**	**328**	P	**P**	**16 31 07.0**	**-1.7**
	comp=Z,0.8nm,0.3s,mb3.7,baz=131,slow=8.0,SNR=5.8						
AKASG	**Malin Array Be**	**25.82**	**328**	P	**P**	**16 31 07.0**	**-1.7**
AKASG	**Malin Array Be**	**25.82**	**328**	P	**P**	**16 31 07.0**	**-1.7**
BURAR	**Bucovina Array**	**25.95**	**319**	⇑*i*P	**P**	**16 31 09.9**	**-0.1**
BURAR	**Bucovina Array**	**25.95**	**319**	⇑*i*P	**P**	**16 31 09.9**	**-0.1**
JOF	**Joensuu**	**34.90**	**345**	*e*p	**P**	**16 32 25.7**	**-3.2**
	comp=Z,0.3nm,0.3s,mb3.7						
FINES	**FINESS Array B**	**35.04**	**340**	P	**P**	**16 32 27.5**	**-2.6**
	comp=Z,1.3nm,0.4s,mb4.2,baz=151,slow=8.7,SNR=7.5						
FINES	**FINESS Array B**	**35.04**	**340**	P	**P**	**16 32 27.5**	**-2.6**
FINES	**FINESS Array B**	**35.04**	**340**	P	**P**	**16 32 27.5**	**-2.6**
KAF	**Kangasniemi**	**35.50**	**341**	*e*p	**P**	**16 32 33.1**	**-1.0**
	comp=Z,0.5nm,0.3s,mb3.9						
KAF	**Kangasniemi**	**35.50**	**341**	*e*P	**P**	**16 32 33.1**	**-1.0**
	comp=Z,0.5nm,0.3s,mb3.9						
NOA	**NORSAR Array B**	**40.12**	**332**	P	**P**	**16 33 11.2**	**-2.0**
	comp=Z,2.5nm,1.2s,mb3.8,baz=124,slow=8.3,SNR=2.7						
NOA	**NORSAR Array B**	**40.12**	**332**	P	**P**	**16 33 11.1**	**-2.0**
ARCES	**ARCESS Array B**	**41.79**	**347**	P	**P**	**16 33 25.3**	**-1.4**
	comp=Z,1.6nm,0.9s,mb3.6,baz=141,slow=8.8,SNR=3.1						
ARCES	**ARCESS Array B**	**41.79**	**347**	P	**P**	**16 33 25.3**	**-1.5**
DBIC	**Dimbokro**	**56.76**	**257**	P	**P**	**16 35 20.4**	**-1.6**
	comp=Z,2.3nm,0.5s,mb4.4,baz=47,slow=10,SNR=3.3						
DBIC	**Dimbokro**	**56.76**	**257**	P	**P**	**16 35 20.4**	**-1.6**
DBIC	**Dimbokro**	**56.76**	**257**	P	**P**	**16 35 20.4**	**-1.6**
KIC	**Kosan Boka**	**56.83**	**257**	*e*P	**P**	**16 35 20.5**	**-2.0**
	comp=Z,29nm,1.4s,mb5.1						
KIC	**Kosan Boka**	**56.83**	**257**	*e*P	**P**	**16 35 20.5**	**-2.0**
	comp=Z,29nm,1.4s,mb5.1						
KIC	**Kosan Boka**	**56.83**	**257**	*e*P	**P**	**16 35 20.5**	**-2.0**
	comp=Z,29nm,1.4s,mb5.1						
TIC	**Toumodi**	**56.91**	**257**	*e*P	**P**	**16 35 25.1**	**+2.0**
	comp=Z,5.0nm,0.2s,mb5.1						
TIC	**Toumodi**	**56.91**	**257**	*e*P	**P**	**16 35 25.1**	**+2.0**
	comp=Z,5.0nm,0.2s,mb5.2						
LIC	**Lamto**	**57.14**	**257**	*e*P	**P**	**16 35 24.0**	**-0.7**
	comp=Z,51nm,1.5s,mb5.3						
LIC	**Lamto**	**57.14**	**257**	*e*P	**P**	**16 35 24.0**	**-0.7**
	comp=Z,51nm,1.5s,mb5.3						
LIC	**Lamto**	**57.14**	**257**	*e*P	**P**	**16 35 24.0**	**-0.7**
	comp=Z,51nm,1.5s,mb5.3						
ILAR	**Eielson Array**	**84.32**	**7**	P	**P**	**16 38 07.6**	**-1.7**
	comp=Z,0.3nm,0.8s,mb3.5,baz=343,slow=2.8,SNR=3.1						

ISCJB ***10*** *16:28:15.3±0.9, 20°.67S±0°.05×69°.51W±0°.10, h35km±12km, mb3.7/3, Error ellipse: s-maj=15.4km s-min=7.9km az=164.8*
IDC ***10*** *16:28:18.6±2.7, 20°.75S×69°.51W, h45km±28km, mb3.5/3, mb1 3.9/7, mb1mx3.7/18, mbtmp3.6/7, ML3.8/4, Error ellipse: s-maj=47.1km s-min=22.8km az=94.0*
GUC ***10*** *16:28:18.0±0.4, 20°.46S×69°.52W, h37km±3km, ML4.3*
NEIC ***10*** *16:28:19.1±1.1, 20°.73S×69°.42W, h50km±11km, mb3.4/2, Error ellipse: s-maj=21.0km s-min=8.2km az=100.0*

ISC 10 16:28:17.4±1.1, 20°.56S±0°.05×69°.5W±0°.1, h31km±8km, n23, σ19°04/24, mb3.7/3, 1C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberston**	**0.45**	**309**	⇓*i*P	**Pb**	**16 28 27.0**	**-0.1**
HMBC				*i* S	**Sb**	**16 28 33.7**	**0.0**
HMBC				AML	AML	16 28 34.5	
	comp=N,24μm,0.3s						
PSGC	**Pisagua**	**1.12**	**329**	⇓*i*P	**Pn**	**16 28 36.4**	**-0.5**
PSGC				*i* S	**Sn**	**16 28 50.3**	**-0.9**
PSGC				AML	AML	16 28 51.4	
	comp=N,27μm,0.4s						
MNMC	**Miæe Miæ**	**1.43**	**357**	⇓*i*P	**Pn**	**16 28 41.5**	**+0.3**
MNMC				*i* S	**Sn**	**16 28 59.3**	**+0.4**
MNMC				AML	AML	16 29 01.8	
	comp=N,29μm,0.8s						
MACH	**Maria Elena**	**1.64**	**188**	⇑*i*P	**Pn**	**16 28 47.9**	**+3.8**
MACH				*i* S	**Sn**	**16 29 10.6**	**+6.5**
TOCH	**Tocopilla**	**1.65**	**203**	*e*P	**Pn**	**16 28 47.5**	**+3.2**
TOCH				*i* S	**Sn**	**16 29 10.0**	**+5.6**
TOCH				AML	AML	16 29 13.3	
	comp=N,4μm,0.5s						
LPAZ	**La Paz**	**4.45**	**17**	P	**Pn**	**16 29 27.6**	**+4.8**
	comp=N,1.6nm,0.3s,baz=204,slow=9.5,SNR=32						
LPAZ	**La Paz**	**4.45**	**17**	*e*P	**Pn**	**16 29 27.1**	**+4.3**
LPAZ				P		16 29 27.6	
LCO	**Las Campanas**	**8.48**	**187**	P	**Pn**	**16 30 17.6**	**-0.4**
SIV	**San Ignacio**	**9.22**	**62**	P	**Pn**	**16 30 28.7**	**+0.4**
	comp=N,2.0nm,0.3s,baz=262,slow=10,SNR=25						
CFAA	**Coronel Fontan**	**11.05**	**174**	P	**Pn**	**16 30 52.7**	**-0.7**
	comp=N,0.2nm,0.3s,baz=354,slow=16,SNR=13						
CFAA	**Coronel Fontan**	**11.05**	**174**	P	**Pn**	**16 30 52.7**	**-0.7**
TRQA	**Tornquist**	**18.62**	**161**	*e*P	**Pn**	**16 32 31.0**	**-1.7**
	comp=N,2.1nm,0.7s						
PLCA	**Paso Flores**	**20.12**	**182**	P	**P**	**16 32 45.8**	**-3.0**
	comp=N,0.1nm,0.3s,baz=357,slow=11,SNR=3.5						
PLCA	**Paso Flores**	**20.12**	**182**	*e*P	**P**	**16 32 45.7**	**-3.0**
	comp=N,0.8nm,0.4s						
TXAR	**Lajitas Array**	**59.54**	**325**	P	**P**	**16 38 17.7**	**-0.3**
	comp=N,0.3nm,0.6s,mb3.5,baz=171,slow=6.4,SNR=5.0						
TXAR	**Lajitas Array**	**59.54**	**325**	P	**P**	**16 38 17.7**	**-0.3**
NVAR	**Mina Array Bea**	**74.41**	**322**	P	**P**	**16 39 53.7**	**+1.4**
	comp=N,0.2nm,0.6s,mb3.2,baz=178,slow=7.1,SNR=4.1						
NVAR	**Mina Array Bea**	**74.41**	**322**	P	**P**	**16 39 53.7**	**+1.3**
YKA	**Yellowknife Ar**	**90.12**	**341**	P	**P**	**16 41 13.9**	**0.0**
	comp=N,1.0nm,0.7s,mb4.2,baz=131,slow=4.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**141.34**	**24**	PKP	PKPdf	16 47 45.5	+0.7
	comp=N,0.3nm,0.3s,baz=309,slow=4.6,SNR=2.5						
MK31	**Makanchi Array**	**145.20**	**35**	*e*PKP	PKPbc	16 47 51.1	-0.4
MKAR	**Makanchi Array**	**145.20**	**35**	PKPbc	PKPbc	16 47 51.1	-0.4
	comp=N,0.5nm,0.5s,baz=330,slow=2.9,SNR=6.9						
MKAR				pPKPbc	pPKPbc	16 48 02.1	+0.4
	comp=N,0.4nm,0.5s,baz=330,slow=3.1,SNR=3.7						
SONM	**Songino Array**	**152.59**	**6**	PKPbc	PKPbc	16 48 10.5	-0.2
	comp=N,0.3nm,0.5s,baz=7.7,slow=0.8,SNR=3.7						

ISCJB ***10*** *16:35:17.8±0.4, 43°.09N±0°.04×144°.77E±0°.04, h86km±2km, mb3.9/15, Error ellipse: s-maj=6.9km s-min=4.8km az=148.5*
SKHL ***10*** *16:35:17.9±1.3, 43°.00N×144°.60E, h82km±4km, mb5.5/1, msha5.7/2*
JMA ***10*** *16:35:18.7±0.1, 43°.09N×144°.78E, h77km±1km, M4.0*
JMA Felt I J1.
MOS ***10*** *16:35:19.6±1.2, 43°.15N×144°.57E, h103km, mb4.0/10, Error ellipse: s-maj=18.2km s-min=11.3km az=109.2*
IDC ***10*** *16:35:20.2±2.2, 43°.11N×144°.68E, h93km±17km, mb3.5/10, mb1 3.7/11, mb1mx3.5/22, mbtmp3.5/11, Error ellipse: s-maj=22.0km s-min=16.3km az=82.0*
NEIC ***10*** *16:35:20.2±0.8, 43°.10N×144°.69E, h92km±6km, mb4.4/2, Error ellipse: s-maj=11.6km s-min=7.0km az=94.0*

ISC 10 16:35:18.9±0.4, 43°.09N±0°.04×144°.77E±0°.04, h79km±3km, n52, σ0°78/68, mb3.9/15, 8C-2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAK	**Akkeshi**	**0.10**	**209**	⇓P	**Pn**	**16 35 29.8**	**-0.5**
JAK				*e*S	**Sn**	**16 35 38.2**	**-0.4**
JNK	**Nakash**	**0.50**	**356**	⇑P	**Pn**	**16 35 31.7**	**-0.8**
JNK				*e*S	**Sn**	**16 35 41.4**	**-1.2**
JOB	**Onbets**	**0.71**	**255**	⇑P	**Pn**	**16 35 34.6**	**+0.1**
JOB				*e*S	**Sn**	**16 35 46.0**	**-0.2**
JAR	**Ashorobuto**	**0.76**	**286**	⇑P	**Pn**	**16 35 35.0**	**-0.1**
JAR				*e*S	**Sn**	**16 35 46.5**	**-0.6**
NEM2	**Nemuro 2**	**0.77**	**69**	⇓P	**Pn**	**16 35 34.5**	**-0.7**
NEM2				*e*S	**Sn**	**16 35 46.1**	**-1.2**
JRA	**Rausu**	**0.89**	**17**	⇑P	**Pn**	**16 35 36.5**	**-0.1**
JRA				*e*S	**Sn**	**16 35 50.2**	**+0.5**
JTKR	**Abashiri--Toko**	**1.08**	**325**	⇑P	**Pn**	**16 35 39.1**	**+0.3**
JTKR				*e*S	**Sn**	**16 35 54.0**	**+0.2**
JCH	**Churui**	**1.14**	**246**	⇑P	**Pn**	**16 35 39.5**	**0.0**
JCH				*e*S	**Sn**	**16 35 54.5**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**1.24**	**40**	⇑*i*P	**Pn**	**16 35 41.0**	**+0.2**
YUK				AMB	AMB	16 35 43.5	
	760nm,0.2s						
YUK				*i* S	**Sn**	**16 35 57.4**	**+0.2**
YUK				A		16 35 58.0	
	5μm,0.5s						
YUK				A		16 35 58.0	
	4μm,0.5s						
JMP	**Maruseppu**	**1.37**	**312**	⇑P	**Pn**	**16 35 42.8**	**+0.3**
JMP				*e*S	**Sn**	**16 36 00.4**	**+0.1**
JFR	**Furan**	**1.59**	**273**	P	**Pn**	**16 35 45.7**	**+0.4**
JFR				*e*S	**Sn**	**16 36 05.4**	**+0.1**
ERM	**Erimo**	**1.60**	**228**	*e*PN	**Pn**	**16 35 47.0**	**+1.5**
JEM	**Erimo**	**1.60**	**228**	P	**Pn**	**16 35 46.7**	**+1.2**
ASAJ	**Asahikawa**	**1.88**	**304**	P	**Pn**	**16 35 50.3**	**+1.2**
	35nm,0.3s,baz=143,slow=9.7,SNR=318						
ASAJ				S	**Sn**	**16 36 13.1**	**+0.9**
	25nm,0.3s,baz=251,slow=32,SNR=5.6						
ASAJ	**Asahikawa**	**1.88**	**304**	PN	**Pn**	**16 35 50.3**	**+1.2**
ASAJ				S	**Sn**	**16 36 13.1**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,35nm,0.3s						
ASAJ				smax			
	comp=N,25nm,0.3s						
ASAJ	**Asahikawa**	**1.88**	**304**	*e*Pn	**Pn**	**16 35 50.2**	**+1.0**
KUR	**Kuril'sk**	**3.10**	**45**	*e*P	**Pn**	**16 36 06.5**	**+1.0**
KUR				*e*S	**Sn**	**16 36 44.0**	**+2.6**
YSS	**Yuzh-Sakhalins**	**4.12**	**340**	*e*PN	**Pn**	**16 36 20.0**	**+0.6**
YSS				*e*S	**Sn**	**16 37 06.5**	**+0.2**
YSS				smax			
	comp=E,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**4.12**	**340**	*e*P	**Pn**	**16 36 20.5**	**+1.1**
YSS	**Yuzh-Sakhalins**	**4.12**	**340**	*e*P	**Pn**	**16 36 20.0**	**+0.6**
YSS				*e*S	**Sn**	**16 37 06.5**	**+0.2**
YSS				A		16 37 08.0	
	comp=E,30nm,0.8s						
YSS				AMS	AMS	16 43 40.0	
	comp=E,800nm,21.0s						
YSS				AMS	AMS	16 43 40.0	
	comp=E,600nm,20.0s						
YSS				AMS	AMS	16 43 40.0	
	comp=E,600nm,21.0s						
MJAR	**Matsushiro Arr**	**8.26**	**220**	P	**Pn**	**16 37 16.5**	**+0.7**
	comp=E,0.3nm,0.3s,baz=30,slow=13,SNR=3.4						
KLR	**Kul'dur**	**10.91**	**309**	*e*PN	**Pn**	**16 37 50.6**	**-1.4**
SONM	**Songino Array**	**27.13**	**293**	P	**P**	**16 40 54.6**	**+0.3**
	comp=E,1.9nm,0.7s,mb3.7,baz=88,slow=8.0,SNR=10.0						
SONM	**Songino Array**	**27.13**	**293**	P	**P**	**16 40 54.6**	**+0.3**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LZH	**Lanzhou**	**32.05**	**271**	*e*P	**P**	**16 41 32.5**	**-5.5**
LZH				pP	pP	16 41 37.0	-19
LZH				sP	sP	16 41 40.0	-26
LZH				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.6						
ZALV	**Zalesovo Beam**	**40.01**	**307**	P	**P**	**16 42 44.2**	**-1.5**
	comp=Z,1.0nm,0.7s,mb3.7,baz=90,slow=9.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**40.01**	**307**	P	**P**	**16 42 44.2**	**-1.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
ILAR	**Eielson Array**	**43.05**	**36**	P	**P**	**16 43 10.9**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.6,baz=273,slow=9.5,SNR=6.9						
ILAR	**Eielson Array**	**43.05**	**36**	P	**P**	**16 43 10.9**	**+0.6**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**43.35**	**297**	*e*P	**P**	**16 43 12.6**	**-0.4**
MKAR	**Makanchi Array**	**43.35**	**297**	P	**P**	**16 43 12.9**	**-0.1**
	comp=Z,1.3nm,0.5s,mb4.0,baz=80,slow=10.0,SNR=18						
MKAR	**Makanchi Array**	**43.35**	**297**	P	**P**	**16 43 12.9**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**44.46**	**304**	*e*P	**P**	**16 43 21.5**	**-0.3**
KKAR	**Karatay Array**	**52.48**	**297**	*e*P	**P**	**16 44 23.2**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KKAR	**Karatay Array**	**52.48**	**297**	*e*P	**P**	**16 44 23.2**	**-0.3**
	comp=Z,3.4nm,0.8s,mb4.4						
ABKAR	**Akbulak array**	**56.12**	**308**	*e*P	**P**	**16 44 49.5**	**-0.3**
	comp=Z,3.0nm,0.7s,mb4.4						
ARCES	**ARCESS Array B**	**59.25**	**339**	P	**P**	**16 45 11.7**	**+0.2**
	comp=Z,0.9nm,0.8s,mb3.9,baz=41,slow=8.0,SNR=4.2						
ARCES	**ARCESS Array B**	**59.25**	**339**	P	**P**	**16 45 11.7**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
JOF	**Joensuu**	**61.85**	**332**	*e*P	**P**	**16 45 26.1**	**-3.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
JOF	**Joensuu**	**61.85**	**332**	*e*p	**P**	**16 45 26.1**	**-3.1**
	comp=Z,0.6nm,0.3s,mb4.1						
WRA	**Warramunga Arr**	**63.45**	**191**	P	**P**	**16 45 40.0**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=7,9,slow=6.8,SNR=6.7						
WRA	**Warramunga Arr**	**63.45**	**191**	P	**P**	**16 45 40.0**	**-0.3**
KAF	**Kangasniemi**	**64.11**	**333**	*e*P	**P**	**16 45 36.2**	**-8.0**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
KAF	**Kangasniemi**	**64.11**	**333**	*e*p	**P**	**16 45 36.2**	**-8.0**
	comp=Z,0.5nm,0.4s,mb3.7						
FINES	**FINESS Array B**	**64.66**	**332**	P	**P**	**16 45 47.0**	**-0.8**
	comp=Z,1.1nm,0.4s,mb4.0,baz=46,slow=8.4,SNR=12						
FINES	**FINESS Array B**	**64.66**	**332**	P	**P**	**16 45 47.0**	**-0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**67.17**	**191**	P	**P**	**16 46 04.6**	**+0.3**
	comp=Z,0.6nm,0.8s,mb3.5,baz=20,slow=7.3,SNR=4.2						
ASAR	**Alice Springs**	**67.17**	**191**	*e*P	**P**	**16 46 05.4**	**+1.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**69.58**	**338**	P	**P**	**16 46 18.3**	**-0.6**
	comp=Z,1.5nm,0.8s,mb3.9,baz=36,slow=6.1,SNR=3.9						
NOA	**NORSAR Array B**	**69.58**	**338**	P	**P**	**16 46 18.3**	**-0.6**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**69.58**	**338**	P	**P**	**16 46 18.3**	**-0.6**
PDAR	**Pinedale Array**	**71.66**	**48**	P	**P**	**16 46 31.9**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.3,baz=325,slow=5.5,SNR=3.0						

CSEM ***10*** *16:46:40.6±0.2, 42°.67N×13°.29E, h27km±3km, MD2.3/4, Error ellipse: s-maj=3.7km s-min=2.7km az=56.0*

ROM 10 16:46:41.4±0.1, 42°.66N×13°.28E, h10km, Md2.3/4, Ml2.3/2, Error ellipse: s-maj=2.3km s-min=1.6km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TERO	**Teramo**	**0.24**	**99**	Pg	Pg	16 46 46.4	+0.1
TERO				Sg	Sg	16 46 50.5	+0.9
TERO	**Teramo**	**0.24**	**99**	Pg	Pg	16 46 46.4	+0.1
TERO				Sg	Sg	16 46 50.5	+0.9
AQU	**L'Aquila**	**0.32**	**164**	Pg	Pg	16 46 48.6	+0.9
AQU				Sg	Sg	16 46 52.9	+0.9
AQU	**L'Aquila**	**0.32**	**164**	Pg	Pg	16 46 48.6	+0.9
AQU				Sg	Sg	16 46 52.9	+0.9
FDMO	**Fiordimonte**	**0.40**	**339**	Pg	Pg	16 46 49.0	-0.3
FDMO				Sg	Sg	16 46 55.2	+0.5
FDMO	**Fiordimonte**	**0.40**	**339**	Pg	Pg	16 46 49.0	-0.3
FDMO				Sg	Sg	16 46 55.2	+0.5
OFFI	**Offida**	**0.41**	**47**	Pg	Pg	16 46 49.7	+0.3
OFFI				Sg	Sg	16 46 57.3	+2.5
OFFI	**Offida**	**0.41**	**47**	Pg	Pg	16 46 49.7	+0.3
CESI	**CESI - Serrava**	**0.44**	**321**	Pg	Pg	16 46 49.9	-0.2
CESI				Sg	Sg	16 46 57.0	+1.1
CESI	**CESI - Serrava**	**0.44**	**321**	Pg	Pg	16 46 49.9	-0.2
CESI				Sg	Sg	16 46 57.0	+1.1
CESX	**Cesi**	**0.52**	**265**	Pg	Pg	16 46 51.6	+0.1
CESX				Sg	Sg	16 47 00.4	+2.1
	176nm,0.4s						
CESX	**Cesi**	**0.52**	**265**	Pg	Pg	16 46 51.6	+0.1
CESX				Sg	Sg	16 47 00.4	+2.1
	176nm,0.4s						
ASSB	**Assisi San Ben**	**0.60**	**310**	Pg	Pg	16 46 52.6	-0.4
ASSB				Sg	Sg	16 47 01.8	+1.0
ASSB	**Assisi San Ben**	**0.60**	**310**	Pg	Pg	16 46 52.6	-0.4
ASSB				Sg	Sg	16 47 01.8	+1.0
CING	**Cingoli**	**0.72**	**355**	Pg	Pg	16 46 54.9	-0.4
CING				Sg	Sg	16 47 05.6	+0.9
	96nm,0.2s						
CING	**Cingoli**	**0.72**	**355**	Pg	Pg	16 46 54.9	-0.4
CING				Sg	Sg	16 47 05.6	+0.9
	96nm,0.2s						
CERT	**Cerreto**	**0.74**	**197**	Pg	Pg	16 46 56.3	+0.6
CERT				Sg	Sg	16 47 07.3	+1.8
CERT	**Cerreto**	**0.74**	**197**	Pg	Pg	16 46 56.3	+0.6
CERT				Sg	Sg	16 47 07.3	+1.8
MURB	**Monte Urbino**	**0.82**	**318**	Pg	Pg	16 46 56.8	-0.4
MURB				Sg	Sg	16 47 09.2	+1.3
MURB	**Monte Urbino**	**0.82**	**318**	Pg	Pg	16 46 56.8	-0.4
MURB				Sg	Sg	16 47 09.2	+1.3
LPEL	**Lama dei Pelig**	**0.91**	**132**	Pg	Pg	16 46 58.5	-0.3
LPEL				Sg	Sg	16 47 11.1	+0.5
LPEL	**Lama dei Pelig**	**0.91**	**132**	Pg	Pg	16 46 58.5	-0.3
LPEL				Sg	Sg	16 47 11.1	+0.5
AOI	**Ancona**	**0.92**	**15**	Pg	Pg	16 47 00.0	+0.9
AOI				Sg	Sg	16 47 12.9	+1.8
AOI	**Ancona**	**0.92**	**15**	Pg	Pg	16 47 00.0	+0.9
AOI				Sg	Sg	16 47 12.9	+1.8
CAFI	**Castiglion Fio**	**1.17**	**305**	Pg	Pg	16 47 03.5	-0.4
CAFI				Sg	Sg	16 47 18.5	-0.7
CAFI	**Castiglion Fio**	**1.17**	**305**	Pg	Pg	16 47 03.5	-0.4
CAFI				Sg	Sg	16 47 18.5	-0.7
NVLJ	**Novalja**	**2.23**	**31**	*e*Pn	Pn	16 47 14.6	-3.7
NVLJ				Sn

SNR=47
ASHO Ashiyiah 2.28 175 P **Pn 17 07 38.0 +0.4**
SNR=47
ASUD Al Ashush, Dub 2.38 192 P **Pn 17 07 40.2 +1.3**
SNR=38
KRBR Kerman 3.11 15 *e*Pn **Pn 17 07 51.0 +1.9**
KRBR Kerman 3.11 15 *e*Pn **Pn 17 07 51.0 +1.9**
ARQ Araqi 3.66 170 P **Pn 17 07 56.0 -0.6**
SNR=15
ARQ Araqi 3.66 170 P **Pn 17 07 56.0 -0.6**
SNR=15
ARQ Araqi 3.66 170 P **Pn 17 07 57.5 +0.9**
SNR=6.4
SMDO Samad 4.37 152 P **Pn 17 08 07.4 +1.1**
SNR=7.7
SMDO Samad 4.37 152 P **Pn 17 08 07.8 +1.4**
SNR=12
ZHSF Zahedan 5.08 58 *e*Pn **Pn 17 08 18.9 +2.8**
NASN Na'in 6.39 336 *e*Pn **Pn 17 08 36.8 +2.7**
RBK Rabkut 9.54 190 P **Pn 17 09 17.7 +0.4**
SNR=7.6
RBK Rabkut 9.54 190 P **Pn 17 09 17.0 -0.4**
SNR=6.9
ABTO Aybut 9.85 194 P **Pn 17 09 19.9 -1.8**
SNR=8.0
GNI Garni 16.07 328 Sn **Sn 17 13 47.6 +3.8**
0.5nm,0.3s,baz=180,slow=20,SNR=2.2
EIL Elat 18.60 283 P **Pn 17 11 16.8 -0.8**
0.1nm,0.3s,baz=74,slow=12,SNR=3.3
EIL Elat 18.60 283 P **Pn 17 11 16.8 -0.8**
AAK Ala-Archa 21.80 39 P **P 17 11 53.8 +1.8**
1.2nm,0.5s,mb3.6,baz=201,slow=8.6,SNR=5.3
AAK Ala-Archa 21.80 39 P **P 17 11 53.8 +1.8**
BRTR Keskin Array B 22.43 310 P **P 17 11 59.2 +0.5**
0.6nm,0.6s,mb3.2,baz=126,slow=12,SNR=3.6
BRTR Keskin Array B 22.43 310 P **P 17 11 59.2 +0.4**
ABKAR Akbulak array 22.48 7 *e*P **P 17 11 58.9 -0.3**
1.2nm,0.6s,mb3.5
ABKAR Akbulak array 22.48 7 *e*P **P 17 11 58.9 -0.3**
1.2nm,0.6s,mb3.5
AKTK Aktyubinsk 23.50 3 P **P 17 12 09.9 0.0**
AKTK Aktyubinsk 23.50 3 P **P 17 12 09.9 0.0**
AKTO Aktyubinsk 23.50 3 P **P 17 12 09.9 0.0**
1.9nm,0.6s,mb3.7,baz=179,slow=10,SNR=7.6
BVAR Borovoye Array 28.20 19 P **P 17 12 52.1 -0.4**
2.3nm,0.6s,mb4.0,baz=198,slow=9.2,SNR=13
BVAR Borovoye Array 28.20 19 P **P 17 12 52.1 -0.3**
MKAR Makanchi Array 28.74 40 P **P 17 12 57.3 0.0**
0.3nm,0.4s,mb3.3,baz=234,slow=7.2,SNR=5.9
MKAR Makanchi Array 28.74 40 P **P 17 12 57.3 0.0**
AKASG Malin Array Be 31.20 327 LR LR 17 25 53.7
comp=Z,285nm,20.3s,MS3.9,baz=35,slow=36
ZALV Zalesovo Beam 34.38 30 P **P 17 13 46.4 -0.4**
2.1nm,0.3s,mb4.5,baz=243,slow=9.4,SNR=12
FINES FINESS Array B 39.85 338 P **P 17 14 32.5 -0.7**
1.6nm,0.5s,mb4.0,baz=146,slow=14,SNR=8.3
FINES FINESS Array B 39.85 338 P **P 17 14 32.5 -0.7**
FINES FINESS Array B 39.85 338 P **P 17 14 32.5 -0.6**
SONM Songino Array 44.32 48 P **P 17 15 10.6 +0.8**
0.3nm,0.4s,mb3.4,baz=218,slow=6.8,SNR=4.5
SONM Songino Array 44.32 48 P **P 17 15 10.6 +0.7**
ARCES ARCESS Array B 46.13 346 P **P 17 15 24.2 +0.4**
0.6nm,0.6s,mb3.7,baz=134,slow=5.2,SNR=4.5
ARCES ARCESS Array B 46.13 346 P **P 17 15 24.2 +0.3**
ESDC Sonseca Array 50.72 300 P **P 17 15 59.0 -0.8**
0.2nm,0.3s,mb3.5,baz=92,slow=6.0,SNR=3.0
ESDC Sonseca Array 50.72 300 P **P 17 15 59.0 -0.8**
KSRS Korea Array 60.54 60 P **P 17 17 09.3 -1.1**
0.8nm,0.7s,mb4.0,baz=282,slow=6.2,SNR=3.8
ILAR Eielson Array 86.87 10 P **P 17 19 43.0 -1.3**
0.5nm,0.7s,mb3.9,baz=312,slow=4.2,SNR=5.1
ILAR Eielson Array 86.87 10 P **P 17 19 43.0 -1.3**
WRA Warramunga Arr 89.16 113 P **P 17 19 54.0 -1.9**
0.3nm,0.8s,mb3.7,baz=306,slow=4.4,SNR=3.1
WRA Warramunga Arr 89.16 113 P **P 17 19 54.0 -1.9**
ASAR Alice Springs 90.60 116 P **P 17 20 00.7 -1.9**
0.1nm,0.7s,mb3.3,baz=304,slow=4.8,SNR=3.6
ASAR Alice Springs 90.60 116 P **P 17 20 00.7 -1.9**
RCBR Riachuelo 94.17 266 LR LR 18 02 57.3
comp=Z,117nm,18.3s,MS4.4,baz=138,slow=36

IDC 10 17:46:00.5±2.3, 17°.96S×69°.47W, h124km±22km, mb1 3.5/4, mb1mx3.2/19, mbtmp3.5/4, Error ellipse: s-maj=30.2km s-min=27.5km az=136.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.10**	**38**	P	Pn	17 46 37.4	+2.0
	31nm,0.3s,baz=223,slow=7.6,SNR=556						
LPAZ				S	Sn	17 47 03.4	+1.3
	2.0nm,0.3s,baz=184,slow=20,SNR=3.9						
SIV	**San Ignacio**	**8.27**	**78**	P	Pn	17 47 56.3	-1.4
	1.8nm,0.3s,baz=271,slow=12,SNR=24						
SIV				S	Sn	17 49 25.0	-4.4
	baz=258,slow=16,SNR=3.9						
NNA	**Nana**	**9.27**	**309**	P	Pn	17 48 10.4	-0.8
	2.9nm,0.3s,baz=141,slow=13,SNR=3.8						
CFAA	**Coronel Fontan**	**13.63**	**176**	P	Pn	17 49 08.8	+0.1
	0.1nm,0.3s,baz=3.1,slow=16,SNR=6.9						
WRA	**Warramunga Arr**	**135.67**	**213**	PKP	PKPdf	18 05 06.6	-0.5
	0.3nm,0.9s,baz=138,slow=1.6,SNR=6.0						
SONM	**Songino Array**	**150.01**	**6**	PKPbc	PKPbc	18 05 36.5	+0.1
	0.2nm,0.4s,baz=352,slow=2.9,SNR=2.8						

*OMAN **10** 18:20:26.9±13.0, 27°.28N×55°.98E, h10km, Error ellipse: s-maj=8.4km s-min=3.5km az=337.0*
*IDC **10** 18:20:28.8±0.6, 26°.82N×55°.97E, h0km, mb4.0/21, mb1 4.1/25, mb1mx4.0/33, mbtmp4.0/25, ML4.0/4, MS3.6/3, Ms1 3.6/3, ms1mx2.9/36, Error ellipse: s-maj=15.5km s-min=13.7km az=16.0*
*TEH **10** 18:20:29.5, 26°.73N×55°.82E, h23km*
*ISCJB **10** 18:20:29.6±0.2, 26°.83N±0°.02×55°.80E±0°.03, h10km, mb4.0/28, MS3.7/2, Error ellipse: s-maj=3.6km s-min=3.1km az=176.8*
*BJI **10** 18:20:29.1, 27°.10N×55°.80E, h8km, mb4.4/5, Ms4.3/1, Ms7 4.0/1*
*CSEM **10** 18:20:31.3±0.1, 26°.82N×55°.86E, h10km, mb4.0/19, Error ellipse: s-maj=5.4km s-min=4.2km az=77.0*
*MOS **10** 18:20:32.2±1.2, 26°.85N×55°.89E, h33km, mb4.2/16, Error ellipse: s-maj=13.9km s-min=8.3km az=112.0*
*SGS **10** 18:20:33.8, 26°.79N×55°.73E, h10km*
*THR **10** 18:20:34.2±0.6, 27°.11N×55°.78E, h8km±8km, ML3.9*
*NEIC **10** 18:20:34.1, 27°.11N×55°.77E, h8km, mb4.0/9, ML3.9(THR), MN4.2(TEH), After THR.*

ISC 10 18:20:31.4±0.2, 26°.82N±0°.02×55°.83E±0°.03, h10km, n215, σ1§22/231, mb4.0/28, MS3.7/2, 2C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.66**	**28**	*e*Pg	**Pg**	18 20 43.0	**-1.2**
BNDS	**Bandar-Abbas**	**0.66**	**28**	*e*Pg	**Pg**	18 20 43.4	**-0.7**
BNDS				*e*Sg	**Sg**	18 20 50.0	**-2.8**
BNDS				AML	AML	18 20 59.8	
	comp=N,7μm,0.7s						
BNDS	**Bandar-Abbas**	**0.66**	**28**	*e*Pg	**Pg**	18 20 43.4	**-0.8**
IBND	**Bandar-abas**	**0.89**	**45**	⇑*e*Pg	**Pg**	18 20 48.9	**+0.2**
IBND				*e*Pg	**Pg**	18 20 49.0	**+0.3**
IBND				*e*Sg	**Sg**	18 21 02.6	**+2.3**
IBND				*e*Sg	**Sg**	18 21 04.0	**+3.7**
IBND				*e*		18 21 15.7	
	comp=Z,16μm,0.2s						
IBND				*e*		18 21 19.3	
	comp=Z,46μm,0.4s						
IBND	**Bandar-abas**	**0.89**	**45**	*e*Pg	**Pg**	18 20 49.0	**+0.3**
IBND				*e*Sg	**Sg**	18 21 02.6	**+2.3**
BANOM	**Banah**	**0.98**	**154**	P	**Pg**	18 20 50.5	**+0.1**
	SNR=911						
BANOM				S	**Sg**	18 21 05.4	**+2.2**
BANOM	**Banah**	**0.98**	**154**	P	**Pg**	18 20 50.5	**+0.1**
	SNR=911						
BANOM				⇓S	**Sg**	18 21 05.4	**+2.3**
NAZ	**Nazwa, Dubai**	**1.82**	**185**	P	**Pn**	18 21 04.9	**+2.0**
	SNR=39						
NAZ	**Nazwa, Dubai**	**1.82**	**185**	P	**Pn**	18 21 04.9	**+2.1**
	SNR=39						
NAZ				⇓S	**Sn**	18 21 35.5	**+9.5**
ASHO	**Ashiyiah**	**2.13**	**174**	P	**Pn**	18 21 08.7	**+1.6**
	SNR=196						
ASHO	**Ashiyiah**	**2.13**	**174**	P	**Pn**	18 21 08.7	**+1.6**
	SNR=196						

KRBR Kerman 3.26 14 *e*Pn **Pn 18 21 24.0 +1.4**
KRBR Kerman 3.26 14 *e*Pn **Pn 18 21 24.5 +1.8**
KRBR AML AML 18 22 09.3
comp=N,382nm,0.6s
KRBR AML AML 18 22 29.7
comp=E,352nm,0.7s
KRBR Kerman 3.26 14 *e*Pn **Pn 18 21 24.0 +1.4**
HOQ Hoqain 3.49 157 P **Pn 18 21 24.5 -1.3**
SNR=16
HOQ Hoqain 3.49 157 ⇑P **Pn 18 21 24.5 -1.3**
SNR=16
ISRV Sarvestan 3.51 317 Pn **Pn 18 21 27.4 +1.4**
ISRV Sn **Sn 18 22 07.1 -0.5**
ISRV Sarvestan 3.51 317 *e*Pn **Pn 18 21 26.9 +0.9**
ISRV *e* 18 22 46.9
comp=Z,4μm,0.4s
ISRV Sarvestan 3.51 317 *e*Pn **Pn 18 21 26.9 +0.9**
ISRV Sn **Sn 18 22 07.1 -0.5**
ARQ Araqi 3.52 170 P **Pn 18 21 26.8 +0.6**
SNR=50
ARQ Araqi 3.52 170 P **Pn 18 21 26.8 +0.6**
SNR=50
IPAR Pars 3.89 322 Pn **Pn 18 21 32.3 +1.1**
IPAR Pars 3.89 322 *e*Pn **Pn 18 21 32.3 +1.1**
IPAR *e* 18 22 21.4
comp=Z,4μm,0.4s
IPAR Pars 3.89 322 *e*Pn **Pn 18 21 32.3 +1.1**
BSY Bisya 4.24 163 P **Pn 18 21 37.0 +0.9**
SNR=51
SMDO Samad 4.25 151 P **Pn 18 21 36.5 +0.3**
SNR=65
SMDO Samad 4.25 151 P **Pn 18 21 36.5 +0.3**
SNR=65
BSYO Bisya 4.26 162 P **Pn 18 21 37.0 +0.6**
SNR=51
IMEH Mehriz 4.68 347 Pn **Pn 18 21 43.6 +1.4**
IMEH Mehriz 4.68 347 *e*Pn **Pn 18 21 43.7 +1.5**
IMEH *e* 18 21 47.8
comp=Z,3μm,0.3s
IMEH Mehriz 4.68 347 *e*Pn **Pn 18 21 43.7 +1.5**
IBAF Bafgh 4.76 357 Pn **Pn 18 21 43.9 +0.6**
IBAF Bafgh 4.76 357 *e*Pn **Pn 18 21 42.6 -0.7**
IBAF Bafgh 4.76 357 *e*Pn **Pn 18 21 42.6 -0.7**
JMDO Jabal Madar 4.88 154 P **Pn 18 21 45.9 +0.9**
SNR=9.4
JMDO Jabal Madar 4.88 154 P **Pn 18 21 45.9 +0.9**
SNR=9.4
WBK Wadi Bani Khal 5.07 145 P **Pn 18 21 47.4 -0.1**
SNR=46
SLWS 5.09 248 P **Pn 18 21 47.7 -0.1**
SLWS 5.09 248 P **Pn 18 21 47.7 0.0**
ZHSF Zahedan 5.18 56 *e*Pn **Pn 18 21 52.5 +3.6**
ZHSF Zahedan 5.18 56 *e*Pn **Pn 18 21 52.5 +3.5**
BTHS 5.28 240 P **Pn 18 21 49.9 -0.5**
BTHS 5.28 240 P **Pn 18 21 49.9 -0.5**
BTHS S **Sn 18 22 49.7 -1.7**
ISAD Sadrabad 5.41 340 Pn **Sn 18 21 54.5 +2.3**
ISAD Sn **Sn 18 22 51.8 -2.8**
ISAD Sadrabad 5.41 340 *e*Pn **Pn 18 21 53.4 +1.2**
ISAD *e* 18 23 01.6
comp=Z,1μm,0.1s
ISAD Sadrabad 5.41 340 *e*Pn **Pn 18 21 53.4 +1.2**
ISAD Sn **Sn 18 22 51.8 -2.8**
ICHK Chekchek 5.55 347 Pn **Pn 18 21 55.8 +1.7**
ICHK Chekchek 5.55 347 *e*Pn **Pn 18 21 55.4 +1.3**
ICHK *e* 18 22 00.1
comp=Z,2μm,0.3s
ICHK Chekchek 5.55 347 *e*Pn **Pn 18 21 55.4 +1.3**
BOQSS 5.87 262 P **Pn 18 21 58.6 +0.2**
IKOO Kooshah 6.24 26 *e*Pn **Pn 18 22 05.2 +1.7**
IKOO *e* 18 24 13.5
comp=Z,424nm,0.3s
IKOO Kooshah 6.24 26 *e*Pn **Pn 18 22 05.2 +1.7**
IGAR Gharneh 6.47 330 *e* **Pn 18 22 12.6 +5.9**
comp=Z,1μm,0.1s
IGAR *e*Pn **Pn 18 22 07.7 +0.9**
NASN Na'in 6.51 337 *e*Pn **Pn 18 22 08.7 +1.4**
NASN AML AML 18 23 28.0
comp=E,32nm,0.6s
NASN Na'in 6.51 337 *e*Pn **Pn 18 22 08.7 +1.4**
IZEF Zefreh 6.78 334 Pn **Pn 18 22 11.0 0.0**
IZEF Sn **Sn 18 23 24.0 -4.2**
IZEF Zefreh 6.78 334 *e*Pn **Pn 18 22 11.1 +0.1**
IZEF *e* 18 22 15.4
comp=Z,618nm,0.2s
IZEF Zefreh 6.78 334 *e*Pn **Pn 18 22 11.1 +0.1**
IDAH Dahanechah 6.87 30 *e*Pn **Pn 18 22 13.2 +1.0**
IDAH *e* 18 24 37.9
comp=Z,346nm,0.4s
IDAH Dahanechah 6.87 30 *e*Pn **Pn 18 22 13.2 +1.0**
HRDDS 6.96 238 P **Pn 18 22 12.3 -1.1**
KFJS 7.14 283 P **Pn 18 22 15.2 -0.7**
IPIR Pirpir 7.25 325 Pn **Pn 18 22 18.6 +1.1**
IPIR Pirpir 7.25 325 *e*Pn **Pn 18 22 18.2 +0.7**
IPIR *e* 18 23 40.6
comp=Z,1μm,0.3s
IPIR Pirpir 7.25 325 *e*Pn **Pn 18 22 18.2 +0.7**
IKLH Kolahrood 7.45 331 Pn **Pn 18 22 20.7 +0.5**
IKLH Sn **Sn 18 23 39.1 -5.8**
IKLH Kolahrood 7.45 331 *e*Pn **Pn 18 22 20.9 +0.7**
IKLH *e* 18 22 25.4
comp=Z,878nm,0.2s
IKLH Kolahrood 7.45 331 *e*Pn **Pn 18 22 20.9 +0.7**
KBD Kabd 7.57 290 *e*P **Pn 18 22 22.1 +0.3**
KBD Kabd 7.57 290 *e*P **Pn 18 22 22.1 +0.3**
RDF Al-Radifah 7.62 288 *e*P **Pn 18 22 22.8 +0.2**
RDF AML AML 18 23 46.3
comp=Z,34nm,0.4s
RDF Al-Radifah 7.62 288 *e*P **Pn 18 22 22.8 +0.2**
UMR Umm Al-Rimmam 7.66 293 *e*P **Pn 18 22 23.2 +0.1**
UMR AML AML 18 23 47.4
comp=Z,50nm,0.4s
UMR Umm Al-Rimmam 7.66 293 *e*P **Pn 18 22 23.2 +0.1**
NAY Al-Naaiem 7.97 290 *e*P **Pn 18 22 27.7 +0.4**
NAY AML AML 18 23 53.8
comp=Z,18nm,0.5s
NAY Al-Naaiem 7.97 290 *e*P **Pn 18 22 27.7 +0.4**
MIB Mutribah 8.05 294 *e*P **Pn 18 22 28.5 +0.1**
MIB AML AML 18 23 57.2
comp=Z,40nm,0.5s
MIB Mutribah 8.05 294 *e*P **Pn 18 22 28.5 0.0**
ISFB Sefidab 8.12 338 Pn **Pn 18 22 30.6 +1.2**
ISFB Sefidab 8.12 338 *e*Pn **Pn 18 22 30.1 +0.7**
ISFB *e* 18 22 34.2
comp=Z,382nm,0.3s
ISFB Sefidab 8.12 338 *e*Pn **Pn 18 22 30.1 +0.7**
IANJ Anjilo 8.78 350 Pn **Pn 18 22 40.0 +1.6**
IANJ Anjilo 8.78 350 *e*Pn **Pn 18 22 39.3 +0.9**
IANJ *e* 18 22 43.9
comp=Z,342nm,0.3s
IANJ Anjilo 8.78 350 *e*Pn **Pn 18 22 39.3 +0.9**
IVRN Varamin 8.88 338 *e*Pn **Pn 18 22 40.3 +0.5**
IVRN Varamin 8.88 338 *e*Pn **Pn 18 22 40.3 +0.5**
ILAS Lasjerd 8.89 345 Pn **Pn 18 22 41.9 +2.0**
ILAS Lasjerd 8.89 345 *e*Pn **Pn 18 22 41.9 +2.0**
ILAS *e* 18 22 50.9
comp=Z,192nm,0.2s
ILAS Lasjerd 8.89 345 *e*Pn **Pn 18 22 41.9 +2.0**
IFIR Firoozkooh 9.18 344 Pn **Pn 18 22 44.9 +0.9**
IFIR Firoozkooh 9.18 344 *e*Pn **Pn 18 22 44.6 +0.6**
IFIR *e* 18 22 49.6
comp=Z,186nm,0.2s
IFIR Firoozkooh 9.18 344 *e*Pn **Pn 18 22 44.6 +0.6**
ISHM Shahmirzad 9.22 347 Pn **Pn 18 22 45.4 +0.9**
ISHM Shahmirzad 9.22 347 *e*Pn **Pn 18 22 45.3 +0.8**
ISHM *e* 18 22 51.5
comp=Z,656nm,0.2s
ISHM Shahmirzad 9.22 347 *e*Pn **Pn 18 22 45.3 +0.8**
IDMV Damavand 9.32 341 Pn **Pn 18 22 47.2 +1.4**
IDMV Damavand 9.32 341 *e*Pn **Pn 18 22 46.4 +0.6**
IDMV *e* 18 22 51.5
comp=Z,262nm,0.3s
IDMV Damavand 9.32 341 *e*Pn **Pn 18 22 46.4 +0.6**
IAFJ Afjeh 9.67 340 Pn **Pn 18 22 52.5 +1.8**
IAFJ Afjeh 9.67 340 *e*Pn **Pn 18 22 51.2 +0.5**
IAFJ *e* 18 22 58.2
comp=N,2μm,0.2s
IAFJ Afjeh 9.67 340 *e*Pn **Pn 18 22 51.2 +0.5**
IGLO Ghaloghah 9.81 351 Pn **Pn 18 22 48.1 -4.4**
IGLO Ghaloghah 9.81 351 *e*Pn **Pn 18 22 48.1 -4.4**
IGLO *e* 18 22 52.2
comp=Z,391nm,0.3s
IGLO Ghaloghah 9.81 351 *e*Pn **Pn 18 22 48.1 -4.4**

IRAZ Razeghan 9.94 331 Pn **Pn 18 22 53.9 -0.4**
IRAZ Razeghan 9.94 331 *e*Pn **Pn 18 22 53.9 -0.4**
IRAZ *e* 18 23 11.9
comp=Z,286nm,0.2s
IRAZ Razeghan 9.94 331 *e*Pn **Pn 18 22 53.9 -0.4**
IAKL Akhelmad 10.07 14 Pn **Pn 18 22 59.6 +3.5**
IAKL Akhelmad 10.07 14 *e*Pn **Pn 18 22 56.6 +0.5**
IAKL *e* 18 23 03.3
comp=Z,58nm,0.3s
IKRD Kardeh 10.19 12 Pn **Pn 18 23 01.1 +3.4**
IKRD Kardeh 10.19 12 *e*Pn **Pn 18 23 01.2 +3.5**
ISFR Sfrayin 10.37 10 Pn **Pn 18 23 06.1 +5.8**
ISFR Sfrayin 10.37 10 *e*Pn **Pn 18 23 02.8 +2.5**
ISFR *e* 18 23 45.1
comp=Z,78nm,0.3s
KBL Kabul 13.72 53 *e*P **Pn 18 23 54.7 +8.6**
KBL pmax pmax
comp=Z,7.0nm,0.8s
KBL Kabul 13.72 53 *e*P **Pn 18 23 54.7 +8.6**
comp=Z,6.7nm,0.8s
GNI Garni 16.18 328 Pn **Pn 18 24 23.4 +4.6**
comp=Z,1.0nm,0.3s,baz=137,slow=6.5,SNR=5.4
GNI Garni 16.18 328 P **Pn 18 24 23.5 +4.6**
ASF Jabal al Asfar 17.32 292 P **Pn 18 24 35.5 +2.1**
comp=Z,0.4nm,0.3s,baz=136,slow=5.2,SNR=2.7
ASF S **Sn 18 27 37.2 -8.9**
comp=Z,0.2nm,0.3s,baz=187,slow=19,SNR=3.1
ASF LR LR 18 32 58.0
comp=Z,94nm,19.0s,baz=171,slow=43
TBLG Delisi 17.45 331 P **Pn 18 24 32.5 -2.4**
MALT Malatya 18.58 312 *e*P **Pn 18 24 48.1 -0.8**
MALT pmax pmax
comp=Z,7.0nm,0.7s
MALT Malatya 18.58 312 *e*P **Pn 18 24 48.1 -0.7**
comp=Z,7.2nm,0.7s
MALT Malatya 18.58 312 *e*P **Pn 18 24 48.1 -0.8**
comp=Z,7.0nm,0.7s
EIL Elat 18.61 284 P **Pn 18 24 51.0 +1.7**
comp=Z,0.3nm,0.3s,baz=121,slow=5.9,SNR=3.5
EIL S **Sn 18 28 13.6 -3.9**
comp=Z,0.2nm,0.3s,baz=232,slow=19,SNR=2.1
EIL Elat 18.61 284 P **Pn 18 24 51.0 +1.7**
ZEI Tsey 18.66 332 *e*P **Pn 18 24 52.1 +2.4**
ZEI pmax pmax
comp=Z,13nm,0.7s
MMAI Mount Meron Ar 18.74 294 P **Pn 18 24 51.8 +1.0**
comp=Z,1.0nm,0.3s,baz=99,slow=16,SNR=7.6
ATD Arta Tunnel 19.51 221 P **Pn 18 24 59.7 -0.4**
comp=Z,0.7nm,0.3s,baz=318,slow=9.7,SNR=3.0
ATD Arta Tunnel 19.51 221 P **Pn 18 24 59.7 -0.4**
ATD Arta Tunnel 19.51 221 P **Pn 18 24 59.7 -0.5**
KIV Kislovodsk 20.14 332 *e*P **P 18 25 06.5 +0.9**
KIV pmax pmax
comp=Z,18nm,1.3s
KIV Kislovodsk 20.14 332 *e*P **P 18 25 06.2 +0.7**
comp=Z,19nm,0.8s
KIV Kislovodsk 20.14 332 *e*P **P 18 25 06.2 +0.6**
comp=Z,19nm,0.8s
KKAR Karatay Array 20.17 33 *e*P **P 18 25 05.0 -1.0**
KKAR pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 20.17 33 *e*P **P 18 25 05.0 -0.9**
comp=Z,2.0nm,0.6s
KKAR Karatay Array 20.17 33 *e*P **P 18 25 05.0 -1.0**
comp=Z,2.0nm,0.6s
GOF Gofitskoye 20.90 334 *e*P pP 18 25 24.8 +8.1
AML Almayashu 21.16 39 *e*P **P 18 25 15.8 -0.9**
comp=Z,6.9nm,0.7s,mb4.1
AML Almayashu 21.16 39 *e*P **P 18 25 15.8 -0.9**
comp=Z,6.8nm,0.7s,mb4.1
EKS2 Erkin-Say 21.55 38 *e*P **P 18 25 20.2 -0.7**
comp=Z,5.4nm,0.8s,mb4.0
EKS2 Erkin-Say 21.55 38 *e*P **P 18 25 20.2 -0.7**
comp=Z,5.4nm,0.8s,mb4.0
KZA Kyzart 22.02 41 *e*P **P 18 25 25.2 -0.7**
comp=Z,26nm,1.2s,mb4.5
KZA Kyzart 22.02 41 *e*P **P 18 25 25.2 -0.8**
comp=Z,26nm,1.2s,mb4.5
BR131 Keskin Array S 22.51 310 *e*P **P 18 25 31.8 +0.6**
comp=Z,2.7nm,0.5s,mb3.9
BR131 Keskin Array S 22.51 310 *e*P **P 18 25 31.8 +0.6**
comp=Z,2.7nm,0.5s,mb3.9
BRTR Keskin Array B 22.51 310 P **P 18 25 31.7 +0.5**
comp=Z,2.5nm,0.7s,mb3.8,baz=127,slow=13,SNR=11
BRTR Keskin Array B 22.51 310 P **P 18 25 31.7 +0.5**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 22.51 310 P **P 18 25 31.7 +0.5**
comp=Z,3.0nm,0.7s,mb3.8
ABKAR Akbulak array 22.63 7 *e*P **P 18 25 30.7 -1.7**
comp=Z,4.2nm,0.7s,mb4.0
ABKAR Akbulak array 22.63 7 *e*P **P 18 25 30.7 -1.6**
comp=Z,4.2nm,0.7s,mb4.0
AKTK Aktyubinsk 23.64 3 P **P 18 25 42.0 -0.8**
AKTK LR LR 18 37 14.4
AKTK Aktyubinsk 23.64 3 P **P 18 25 42.0 -0.9**
AKTO Aktyubinsk 23.64 3 P **P 18 25 42.0 -0.8**
comp=Z,1.7nm,0.5s,mb3.8,baz=177,slow=12,SNR=9.4
AKTO LR LR 18 37 14.4
comp=Z,74nm,18.0s,MS3.2,baz=326,slow=43
AKTO Aktyubinsk 23.64 3 P **P 18 25 42.1 -0.8**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb3.8
AKTO MLR MLR
comp=Z,74nm,18.0s,MS3.2
BVAR Borovoye Array 28.35 19 P **P 18 26 24.4 -1.0**
comp=Z,3.4nm,0.8s,mb4.0,baz=200,slow=7.9,SNR=12
BVAR Borovoye Array 28.35 19 P **P 18 26 24.4 -1.0**
BVAR pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 28.35 19 P **P 18 26 24.4 -1.0**
comp=Z,3.0nm,0.9s,mb3.9
MKAR Makanchi Array 28.87 39 P **P 18 26 29.8 -0.4**
comp=Z,0.6nm,0.6s,mb3.5,baz=210,slow=7.5,SNR=6.5
MKAR Makanchi Array 28.87 39 P **P 18 26 29.8 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 28.87 39 P **P 18 26 29.8 -0.4**
MKAR Makanchi Array 28.87 39 P **P 18 26 29.8 -0.3**
comp=Z,1.0nm,0.6s,mb3.7
ZAA0 Zalesovo Array 34.51 30 *e*P **P 18 27 18.3 -1.3**
ZAA0 Zalesovo Array 34.51 30 *e*P **P 18 27 18.3 -1.3**
ZALV Zalesovo Beam 34.51 30 P **P 18 27 18.0 -1.6**
comp=Z,2.6nm,0.5s,mb4.4,baz=246,slow=10,SNR=13
ZALV Zalesovo Beam 34.51 30 P **P 18 27 18.0 -1.6**
ZALV pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
GTA Gaotai 38.57 60 *e*P **P 18 27 54.6 +0.2**
GTA pP pP 18 27 58.9 +1.4
GTA sP sP 18 28 01.9 +3.1
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
KHC Kasperske Hory 39.39 316 *e*P **P 18 28 00.1 -1.1**
KHC pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KHC Kasperske Hory 39.39 316 *e*P **P 18 28 00.1 -1.1**
comp=Z,1.6nm,0.6s,mb3.9
KHC Kasperske Hory 39.39 316 *e*P **P 18 28 00.0 -1.2**
KHC Kasperske Hory 39.39 316 *e*P **P 18 28 00.1 -1.1**
comp=Z,2.0nm,0.6s,mb4.0
FINES FINESS Array B 39.98 338 P **P 18 28 04.5 -1.4**
comp=Z,2.1nm,0.4s,mb4.2,baz=149,slow=9.3,SNR=14
FINES FINESS Array B 39.98 338 P **P 18 28 04.5 -1.4**
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 39.98 338 P **P 18 28 04.5 -1.4**
comp=Z,2.0nm,0.4s,mb4.2
KEST Kesra 40.40 294 P **P 18 28 10.4 +0.7**
comp=Z,1.0nm,0.9s,mb3.6,baz=166,slow=5.5,SNR=3.5
KEST Kesra 40.40 294 P **P 18 28 10.4 +0.6**
CMAR Chiang Mai Arr 40.50 93 P **P 18 28 11.5 +0.8**
comp=Z,0.4nm,0.5s,mb3.4,baz=287,slow=10,SNR=3.9
CMAR Chiang Mai Arr 40.50 93 P **P 18 28 11.6 +0.8**
DAVOX Davos/Dischmat 41.15 311 P **P 18 28 14.9 -0.9**
comp=Z,3.2nm,0.4s,mb4.3,baz=142,slow=11,SNR=11
DAVOX Davos/Dischmat 41.15 311 P **P 18 28 14.9 -0.9**
HFS Hagfors 43.93 331 P **P 18 28 36.8 -1.4**
comp=Z,0.9nm,0.3s,mb3.9,baz=133,slow=10,SNR=10
HFS Hagfors 43.93 331 P **P 18 28 36.8 -1.4**
HFS pmax pmax
comp=Z,1.0nm,0.3s
HFS Hagfors 43.93 331 P **P 18 28 36.8 -1.4**
comp=Z,1.0nm,0.3s,mb4.0
SONM Songino Array 44.44 48 P **P 18 28 40.0 -2.4**
comp=Z,1.0nm,0.9s,mb3.5,baz=278,slow=8.8,SNR=6.4
SONM Songino Array 44.44 48 P **P 18 28 40.0 -2.4**

SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM Songino Array 44.44 48 P P 18 28 40.0 -2.4
comp=Z,1.0nm,0.9s,mb3.5
NB2 NORSAR Subarra 45.45 331 P P 18 28 48.3 -2.0
comp=Z,0.3nm,0.4s,mb3.5,baz=118,slow=8.6
NB2 NORSAR Subarra 45.45 331 P P 18 28 48.3 -2.0
comp=Z,0.3nm,0.4s,mb3.5,baz=118,slow=8.0,SNR=4.8
NOA NORSAR Array B 45.45 331 P P 18 28 48.5 -1.7
comp=Z,1.2nm,0.8s,mb3.8,baz=116,slow=7.9,SNR=5.0
NOA NORSAR Array B 45.45 331 P P 18 28 48.6 -1.7
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA NORSAR Array B 45.45 331 P P 18 28 48.6 -1.7
comp=Z,1.0nm,0.8s,mb3.7
ARCES ARCESS Array B 46.26 346 P P 18 28 55.6 -1.0
comp=Z,0.6nm,0.4s,mb3.9,baz=137,slow=8.1,SNR=11
ARCES ARCESS Array B 46.26 346 P P 18 28 55.7 -0.9
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 46.26 346 P P 18 28 55.7 -0.9
comp=Z,1.0nm,0.4s,mb4.1
ESDC Sonseca Array 50.78 301 P P 18 29 30.8 -1.1
comp=Z,0.6nm,0.4s,mb3.9,baz=74,slow=7.2,SNR=6.6
ESDC Sonseca Array 50.78 301 P P 18 29 30.8 -1.0
EKA Eskdalemuir Ar 50.85 321 P P 18 29 30.3 -1.8
comp=Z,0.5nm,0.5s,mb3.8,baz=108,slow=9.2,SNR=3.3
EKA Eskdalemuir Ar 50.85 321 P P 18 29 30.4 -1.7
SPITS Spitsbergen Ar 54.46 351 P P 18 29 58.0 -0.5
SPITS pmax pmax
comp=Z,2.0nm,0.6s
SPITS Spitsbergen Ar 54.46 351 P P 18 29 58.0 -0.5
comp=Z,2.0nm,0.6s,mb4.2
KSRS Korea Array 60.63 60 P P 18 30 41.1 -1.6
comp=Z,1.3nm,0.6s,mb4.3,baz=277,slow=6.7,SNR=11
KSRS Korea Array 60.63 60 P P 18 30 41.1 -1.6
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
KSRS Korea Array 60.63 60 P P 18 30 41.1 -1.6
comp=Z,1.0nm,0.6s,mb4.1
BOSA Boshof 62.44 210 P P 18 30 54.0 -0.7
comp=Z,4.1nm,0.7s,mb4.7,baz=21,slow=8.9,SNR=17
BOSA Boshof 62.44 210 P P 18 30 54.1 -0.7
BOSA pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
BOSA Boshof 62.44 210 P P 18 30 54.0 -0.8
PETK Petropavlovsk- 75.69 38 LR LR 19 08 40.0
comp=Z,135nm,21.5s,MS4.2,baz=39,slow=38
FITZ Fitzroy Crossi 81.09 115 P P 18 32 45.9 -1.4
comp=Z,0.8nm,0.7s,mb3.8,baz=99,slow=18,SNR=7.7
FITZ Fitzroy Crossi 81.09 115 P P 18 32 45.9 -1.4
ILAR Eielson Array 87.02 10 P P 18 33 14.8 -1.9
comp=Z,0.5nm,0.7s,mb3.9,baz=322,slow=4.5,SNR=6.4
ILAR Eielson Array 87.02 10 P P 18 33 14.9 -1.8
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR Eielson Array 87.02 10 P P 18 33 14.9 -1.8
comp=Z,1.0nm,0.7s,mb4.2
WRA Warramunga Arr 89.12 113 P P 18 33 25.9 -1.5
comp=Z,0.4nm,0.6s,mb3.9,baz=314,slow=4.1,SNR=11
WRA Warramunga Arr 89.12 113 P P 18 33 25.9 -1.6
ASAR Alice Springs 90.56 116 P P 18 33 32.5 -1.6
comp=Z,0.3nm,0.5s,mb3.9,baz=308,slow=4.9,SNR=16
ASAR Alice Springs 90.56 116 P P 18 33 32.5 -1.6

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*ISCJB **10** 18:26:32.9±0.5,26°.79N±0°.04×55°.92E±0°.04,h10km, mb3.8/18,Error ellipse: s-maj=6.8km s-min=4.7km az=140.6*
*IDC **10** 18:26:33.0±0.8,26°.89N×55°.94E,h0km,mb3.8/15, mb1 3.9/19,mb1mx3.8/31,mbtmp3.8/19,ML3.9/4,Error ellipse: s-maj=17.9km s-min=16.5km az=157.0*
*CSEM **10** 18:26:35.0±0.5,26°.66N×55°.99E,h20km,ML3.6,Error ellipse: s-maj=14.2km s-min=7.2km az=151.0*
*SGS **10** 18:26:38.5,26°.92N×55°.69E,h6km*
*THR **10** 18:26:38.7±0.3,27°.27N×55°.85E,h3km,ML3.6*
*NEIC **10** 18:26:38.8,27°.28N×55°.85E,h2km,mb3.9/1,ML3.6(THR), After THR.*
*TEH **10** 18:26:43.4,27°.06N×55°.51E,h18km*

ISC 10 18:26:34.6±0.5,26°.77N±0°.04×55°.97E±0°.04,h10km,n96, σ1§22/112,mb3.8/18,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.66**	**16**	*e*Pg	**Pg**	**18 26 45.3**	**-2.0**
BNDS				*e*Sg	**Sg**	**18 26 50.1**	**-5.8**
BNDS				AML	AML	18 27 02.1	
	comp=N,6μm,0.3s						
BNDS				AML	AML	18 27 05.0	
	comp=E,8μm,0.3s						
IBND	**Bandar-abas**	**0.85**	**37**	*e*Pg	**Pg**	**18 26 50.8**	**-0.2**
IBND				*e*		18 27 31.9	
	comp=Z,10μm,0.2s						
IBND	**Bandar-abas**	**0.85**	**37**	*e*Pg	**Pg**	**18 26 50.8**	**-0.2**
KRBR	**Kerman**	**3.28**	**12**	*e*Pn	**Pn**	**18 27 27.1**	**+1.1**
KRBR				AML	AML	18 28 22.8	
	comp=E,231nm,0.9s						
KRBR				AML	AML	18 28 27.3	
	comp=N,255nm,0.6s						
ISRV	**Sarvestan**	**3.62**	**317**	*e*Pn	**Pn**	**18 27 31.6**	**+0.8**
ISRV				*e*		18 28 53.3	
	comp=Z,2μm,0.4s						
ISRV	**Sarvestan**	**3.62**	**317**	*e*Pn	**Pn**	**18 27 31.6**	**+0.8**
IPAR	**Pars**	**4.00**	**321**	*e*Pn	**Pn**	**18 27 37.5**	**+1.6**
IPAR				*e*Sn	**Sn**	**18 28 16.2**	**-6.7**
IPAR				*e*		18 28 25.7	
	comp=Z,1μm,0.4s						
IPAR	**Pars**	**4.00**	**321**	*e*Pn	**Pn**	**18 27 37.5**	**+1.6**
IPAR				*e*Sn	**Sn**	**18 28 16.2**	**-6.7**
IMEH	**Mehriz**	**4.76**	**346**	*e*Pn	**Pn**	**18 27 48.1**	**+1.8**
IMEH				*e*Sn	**Sn**	**18 28 37.6**	**-3.9**
IMEH				*e*		18 28 46.2	
	comp=Z,690nm,0.2s						
IMEH	**Mehriz**	**4.76**	**346**	*e*Pn	**Pn**	**18 27 48.1**	**+1.8**
IMEH				*e*Sn	**Sn**	**18 28 37.6**	**-3.9**
IBAF	**Bafgh**	**4.82**	**356**	*e*Pn	**Pn**	**18 27 48.0**	**+0.8**
IBAF				*e*		18 27 51.9	
	comp=Z,711nm,0.3s						
IBAF				*e*Sn	**Sn**	**18 28 40.3**	**-2.8**
IBAF	**Bafgh**	**4.82**	**356**	*e*Pn	**Pn**	**18 27 48.0**	**+0.8**
IBAF				*e*Sn	**Sn**	**18 28 40.3**	**-2.8**
ZHSF	**Zahedan**	**5.10**	**55**	*e*Pn	**Pn**	**18 27 56.0**	**+4.9**
SLWS		**5.18**	**249**	P	**Pn**	**18 27 53.1**	**+0.9**
SLWS		**5.18**	**249**	P	**Pn**	**18 27 53.1**	**+0.9**
BTHS		**5.36**	**241**	P	**Pn**	**18 27 55.1**	**+0.4**
BTHS		**5.36**	**241**	P	**Pn**	**18 27 55.1**	**+0.4**
ISAD	**Sadrabad**	**5.50**	**339**	*e*Pn	**Pn**	**18 27 59.0**	**+2.4**
ISAD				*e*		18 28 06.6	
	comp=Z,633nm,0.2s						
ISAD				*e*Sn	**Sn**	**18 28 54.4**	**-5.5**
ISAD	**Sadrabad**	**5.50**	**339**	*e*Pn	**Pn**	**18 27 59.0**	**+2.4**
ISAD				*e*Sn	**Sn**	**18 28 54.4**	**-5.5**
ICHK	**Chekchek**	**5.62**	**346**	*e*Pn	**Pn**	**18 28 00.0**	**+1.7**
ICHK				*e*		18 28 06.5	
	comp=Z,503nm,0.2s						
ICHK	**Chekchek**	**5.62**	**346**	*e*Pn	**Pn**	**18 28 00.0**	**+1.7**
BOQSS		**5.98**	**263**	P	**Pn**	**18 28 03.5**	**+0.3**
IKOO	**Kooshah**	**6.23**	**24**	*e*	**Pg**	**18 28 36.5**	**+2.7**
	comp=Z,210nm,0.2s						
IKOO				*e*Pn	**Pn**	**18 28 08.8**	**+2.3**
IGAR	**Gharneh**	**6.57**	**330**	*e*Pn	**Pn**	**18 28 12.5**	**+1.2**
IGAR				*e*		18 28 20.1	
	comp=Z,537nm,0.1s						
NASN	**Na'in**	**6.61**	**336**	*e*Pn	**Pn**	**18 28 12.4**	**+0.6**
NASN				AML	AML	18 29 28.2	
	comp=N,16nm,0.6s						
NASN				AML	AML	18 29 28.2	
	comp=E,18nm,0.5s						
IDAH	**Dahanechah**	**6.85**	**29**	*e*Pn	**Pn**	**18 28 18.0**	**+2.9**
IDAH				*e*		18 30 24.6	
	comp=Z,137nm,0.3s						
IDAH	**Dahanechah**	**6.85**	**29**	*e*Pn	**Pn**	**18 28 18.0**	**+2.9**
IZEF	**Zefreh**	**6.88**	**334**	*e*Pn	**Pn**	**18 28 15.2**	**-0.2**
IZEF				*e*		18 28 19.0	
	comp=Z,206nm,0.2s						
IZEF				*e*Sn	**Sn**	**18 29 26.6**	**-7.1**
IZEF	**Zefreh**	**6.88**	**334**	*e*Pn	**Pn**	**18 28 15.2**	**-0.2**
IZEF				*e*Sn	**Sn**	**18 29 26.6**	**-7.1**
KFJS		**7.27**	**283**	P	**Pn**	**18 28 20.2**	**-0.6**
KFJS		**7.27**	**283**	P	**Pn**	**18 28 20.2**	**-0.6**
IPIR	**Pirpir**	**7.36**	**324**	*e*Pn	**Pn**	**18 28 23.0**	**+0.9**
IPIR				*e*		18 29 44.9	
	comp=Z,628nm,0.3s						
IPIR	**Pirpir**	**7.36**	**324**	*e*Pn	**Pn**	**18 28 23.0**	**+0.9**
IKLH	**Kolahrood**	**7.55**	**331**	*e*Pn	**Pn**	**18 28 25.8**	**+1.0**
IKLH				*e*		18 28 43.1	
	comp=Z,201nm,0.1s						
IKLH				*e*Sn	**Sn**	**18 29 41.4**	**-9.1**
IKLH	**Kolahrood**	**7.55**	**331**	*e*Pn	**Pn**	**18 28 25.8**	**+1.0**
IKLH				*e*Sn	**Sn**	**18 29 41.4**	**-9.1**
RDF	**Al-Radifah**	**7.75**	**288**	*e*P	**Pn**	**18 28 27.6**	**+0.1**
RDF				AML	AML	18 29 50.9	
	comp=Z,20nm,0.4s						
RDF	**Al-Radifah**	**7.75**	**288**	*e*P	**Pn**	**18 28 27.6**	**+0.1**
UMR	**Umm Al-Rimmam**	**7.79**	**293**	*e*P	**Pn**	**18 28 27.4**	**-0.7**
UMR	**Umm Al-Rimmam**	**7.79**	**293**	*e*P	**Pn**	**18 28 27.4**	**-0.6**
NAY	**Al-Naaiem**	**8.10**	**290**	*e*P	**Pn**	**18 28 32.0**	**-0.2**
NAY				AML	AML	18 29 59.4	
	comp=Z,19nm,0.7s						
NAY	**Al-Naaiem**	**8.10**	**290**	*e*P	**Pn**	**18 28 32.0**	**-0.2**
MIB	**Mutribah**	**8.19**	**294**	*e*P	**Pn**	**18 28 33.3**	**-0.1**
MIB				*e*S	**Sn**	**18 30 00.1**	**-5.8**
MIB				AML	AML	18 30 01.6	
	comp=Z,17nm,0.6s						
MIB	**Mutribah**	**8.19**	**294**	*e*P	**Pn**	**18 28 33.3**	**-0.1**
ISFB	**Sefidab**	**8.21**	**338**	*e*Pn	**Pn**	**18 28 34.6**	**+0.8**
ISFB				*e*		18 28 38.9	
	comp=Z,152nm,0.2s						
ISFB	**Sefidab**	**8.21**	**338**	*e*Pn	**Pn**	**18 28 34.6**	**+0.8**
IANJ	**Anjilo**	**8.85**	**349**	*e*Pn	**Pn**	**18 28 44.4**	**+1.9**
IANJ	**Anjilo**	**8.85**	**349**	*e*Pn	**Pn**	**18 28 44.4**	**+1.9**
ISHM	**Shahmirzad**	**9.30**	**346**	*e*Pn	**Pn**	**18 28 50.9**	**+2.2**
ISHM				*e*		18 28 55.6	
	comp=Z,273nm,0.2s						
ISHM	**Shahmirzad**	**9.30**	**346**	*e*Pn	**Pn**	**18 28 50.9**	**+2.2**
IDMV	**Damavand**	**9.40**	**340**	*e*Pn	**Pn**	**18 28 52.1**	**+2.0**
IDMV				*e*		18 28 55.7	
	comp=Z,78nm,0.2s						
IDMV	**Damavand**	**9.40**	**340**	*e*Pn	**Pn**	**18 28 52.1**	**+2.0**
IRAZ	**Razeghan**	**10.04**	**330**	*e*Pn	**Pn**	**18 28 54.8**	**-4.1**
IRAZ				*e*		18 29 01.6	
	comp=Z,108nm,0.2s						
IRAZ	**Razeghan**	**10.04**	**330**	*e*Pn	**Pn**	**18 28 54.8**	**-4.1**
ASYS		**10.38**	**277**	P	**Pn**	**18 29 01.6**	**-2.0**
ASYS		**10.38**	**277**	P	**Pn**	**18 29 01.6**	**-2.0**
ASF	**Jabal al Asfar**	**17.45**	**292**	P	**Pn**	**18 30 38.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=139,slow=20,SNR=1.9						
ASF				S	**Sn**	**18 33 39.8**	**-13**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=2.1						
EIL	**Elat**	**18.74**	**284**	P	**Pn**	**18 30 53.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=121,slow=12,SNR=2.8						
EIL	**Elat**	**18.74**	**284**	P	**Pn**	**18 30 53.9**	**-0.1**
EIL	**Elat**	**18.74**	**284**	P	**Pn**	**18 30 53.9**	**-0.1**
MMAI	**Mount Meron Ar**	**18.87**	**294**	P	**Pn**	**18 30 54.8**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=95,slow=15,SNR=2.5						
ATD	**Arta Tunnel**	**19.55**	**222**	P	**Pn**	**18 31 04.2**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=75,slow=9.7,SNR=5.3						
KKAR	**Karatay Array**	**20.14**	**32**	*e*P	**P**	**18 31 08.6**	**-0.3**
KKAR	**Karatay Array**	**20.14**	**32**	*e*P	**P**	**18 31 08.6**	**-0.2**
EKS2	**Erkin-Say**	**21.51**	**38**	*e*P	**P**	**18 31 23.9**	**+0.3**
	comp=Z,3.2nm,0.6s,mb3.9						
EKS2	**Erkin-Say**	**21.51**	**38**	*e*P	**P**	**18 31 23.9**	**+0.3**
	comp=Z,3.2nm,0.6s,mb3.9						
BRTR	**Keskin Array B**	**22.64**	**310**	P	**P**	**18 31 35.6**	**0.0**
	comp=Z,1.5nm,1.0s,mb3.4,baz=102,slow=10,SNR=3.9						
BRTR	**Keskin Array B**	**22.64**	**310**	P	**P**	**18 31 35.6**	**0.0**
ABKAR	**Akbulak array**	**22.66**	**7**	*e*P	**P**	**18 31 34.5**	**-1.4**
ABKAR	**Akbulak array**	**22.66**	**7**	*e*P	**P**	**18 31 34.5**	**-1.3**
AKTK	**Aktyubinsk**	**23.68**	**3**	P	**P**	**18 31 45.9**	**-0.5**
AKTK	**Aktyubinsk**	**23.68**	**3**	P	**P**	**18 31 45.9**	**-0.5**
AKTO	**Aktyubinsk**	**23.68**	**3**	P	**P**	**18 31 45.9**	**-0.5**
	comp=Z,1.6nm,0.6s,mb3.6,baz=174,slow=8.8,SNR=8.6						
BVAR	**Borovoye Array**	**28.35**	**18**	P	**P**	**18 32 28.3**	**-0.3**
	comp=Z,1.8nm,0.5s,mb3.9,baz=201,slow=9.0,SNR=13						
BVAR	**Borovoye Array**	**28.35**	**18**	P	**P**	**18 32 28.3**	**-0.3**
MKAR	**Makanchi Array**	**28.83**	**39**	P	**P**	**18 32 32.7**	**-0.2**
	comp=Z,0.4nm,0.7s,mb3.2,baz=224,slow=8.1,SNR=3.3						
MKAR	**Makanchi Array**	**28.83**	**39**	P	**P**	**18 32 32.7**	**-0.2**
ZALV	**Zalesovo Beam**	**34.49**	**30**	P	**P**	**18 33 21.9**	**-0.7**
	comp=Z,1.3nm,0.3s,mb4.4,baz=240,slow=9.5,SNR=10.0						
JOF	**Joensuu**	**39.63**	**343**	*e*p	**P**	**18 34 04.6**	**-1.5**
	comp=Z,0.4nm,0.3s,mb3.6						
JOF	**Joensuu**	**39.63**	**343**	*e*P	**P**	**18 34 04.6**	**-1.5**
	comp=Z,0.4nm,0.3s,mb3.6						
FINES	**FINESS Array B**	**40.06**	**338**	P	**P**	**18 34 08.5**	**-1.2**
	comp=Z,1.5nm,0.5s,mb4.0,baz=144,slow=11,SNR=7.6						
FINES	**FINESS Array B**	**40.06**	**338**	P	**P**	**18 34 08.5**	**-1.2**
KAF	**Kangasniemi**	**40.48**	**339**	*e*p	**P**	**18 34 11.8**	**-1.4**
	comp=Z,0.3nm,0.4s,mb3.4						
KAF	**Kangasniemi**	**40.48**	**339**	*e*P	**P**	**18 34 11.8**	**-1.4**
	comp=Z,0.3nm,0.4s,mb3.4						
HFS	**Hagfors**	**44.03**	**331**	P	**P**	**18 34 40.3**	**-1.8**
	comp=Z,1.9nm,0.8s,mb3.9,baz=129,slow=11,SNR=4.3						
HFS	**Hagfors**	**44.03**	**331**	P	**P**	**18 34 40.3**	**-1.9**
SONM	**Songino Array**	**44.38**	**48**	P	**P**	**18 34 45.2**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.4,baz=258,slow=7.4,SNR=4.2						
SONM	**Songino Array**	**44.38**	**48**	P	**P**	**18 34 45.2**	**+0.1**
ARCES	**ARCESS Array B**	**46.34**	**346**	P	**P**	**18 34 58.7**	**-1.7**
	comp=Z,1.4nm,0.9s,mb3.9,baz=143,slow=7.9,SNR=3.2						
ARCES	**ARCESS Array B**	**46.34**	**346**	P	**P**	**18 34 58.7**	**-1.7**
EKA	**Eskdalemuir Ar**	**50.97**	**321**	P	**P**	**18 35 34.6**	**-1.5**
	comp=Z,1.6nm,0.9s,mb3.9,baz=101,slow=6.6,SNR=2.8						
EKA	**Eskdalemuir Ar**	**50.97**	**321**	P	**P**	**18 35 34.6**	**-1.5**
KSRS	**Korea Array**	**60.55**	**60**	P	**P**	**18 36 45.1**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.9,baz=292,slow=6.4,SNR=3.7						
BOSA	**Boshof**	**62.46**	**210**	P	**P**	**18 36 58.8**	**+0.7**
	comp=Z,3.8nm,0.9s,mb4.5,baz=29,slow=6.4,SNR=7.4						
ILAR	**Eielson Array**	**87.04**	**10**	P	**P**	**18 39 17.9**	**-2.1**
	comp=Z,0.2nm,0.5s,mb3.6,baz=327,slow=5.8,SNR=3.6						
WRA	**Warramunga Arr**	**88.99**	**113**	P	**P**	**18 39 30.6**	**+0.6**
	comp=Z,0.7nm,0.9s,mb4.0,baz=311,slow=4.2,SNR=2.6						
ASAR	**Alice Springs**	**90.43**	**116**	P	**P**	**18 39 36.8**	**+0.1**
	comp=Z,0.2nm,0.6s,mb3.6,baz=304,slow=5.3,SNR=2.8						

IDC 10 18:30:15.7±2.5,3°.85S×100°.21E,h0km,mb3.6/7, mb1 3.8/7,mb1mx3.7/19,mbtmp3.7/7,Error ellipse: s-maj=105.5km s-min=18.9km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.20**	**357**	P	P	18 35 13.8	0.0
	0.9nm,0.8s,baz=185,slow=8.8,SNR=7.2						
WRA	**Warramunga Arr**	**36.91**	**118**	P	P	18 37 26.3	-0.2
	0.4nm,0.5s,baz=305,slow=8.8,SNR=14						
ASAR	**Alice Springs**	**38.02**	**124**	P	P	18 37 35.7	-0.3
	0.6nm,0.4s,baz=299,slow=7.8,SNR=5.9						
SONM	**Songino Array**	**51.75**	**5**	P	P	18 39 24.8	-0.1
	1.1nm,0.8s,baz=186,slow=10,SNR=8.1						
MKAR	**Makanchi Array**	**52.85**	**345**	P	P	18 39 33.3	+0.3
	0.5nm,0.5s,baz=156,slow=9.4,SNR=9.8						
ZALV	**Zalesovo Beam**	**59.01**	**349**	P	P	18 40 16.8	-0.3
	0.5nm,0.3s,baz=157,slow=4.2,SNR=4.4						
BVAR	**Borovoye Array**	**61.98**	**340**	P	P	18 40 37.0	-0.4
	0.4nm,0.6s,baz=153,slow=9.7,SNR=2.9						
TXAR	**Lajitas Array**	**146.01**	**39**	PKPbc	PKPbc	18 49 58.8	+0.6
	1.1nm,0.7s,baz=302,slow=0.5,SNR=10						

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*ISCJB **10** 18:30:46.4±2.2,25°.9S±0°.1×180°.0E±0°.2,h462km±37km, mb3.9/9,Error ellipse: s-maj=27.5km s-min=13.4km az=20.3*
*IDC **10** 18:30:46.4±3.2,25°.89S×179°.95E,h441km±39km,mb3.5/7, mb1 3.7/10,mb1mx3.5/20,mbtmp3.6/10,Error ellipse: s-maj=26.9km s-min=20.8km az=115.0*
*NEIC **10** 18:30:46.6±1.2,25°.92S×179°.97W,h450km±22km,mb4.4/1, Error ellipse: s-maj=22.1km s-min=11.8km az=120.0*

ISC 10 18:30:47.5±1.6,25°.9S±0°.1×179°.9W±0°.2,h464km±32km, n19,σ0§64/20,mb3.9/9,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.55**	**191**	P	**P**	**18 33 31.1**	**-0.8**
	3.0nm,0.3s,baz=54,slow=4.2,SNR=9.2						
URZ				S	**S**	**18 35 48.1**	**+0.4**
	0.8nm,0.3s,baz=151,slow=19,SNR=3.8						
AFI	**Afiamalu**	**14.20**	**34**	P	**P**	**18 33 49.5**	**-0.4**
	3.1nm,0.3s,baz=193,slow=18,SNR=3.3						
RPZ	**Rata Peaks**	**19.20**	**200**	P	**P**	**18 34 40.8**	**+0.2**
	1.9nm,0.3s,baz=347,slow=2.3,SNR=12						
EIDS	**Eidsvold**	**26.11**	**265**	*e*P	**P**	**18 35 43.5**	**+0.5**
RMQ	**Roma**	**28.06**	**262**	*e*P	**P**	**18 36 01.2**	**+1.1**
	9.0nm,0.7s,mb4.3						
CTA	**Charters Tower**	**31.60**	**274**	P	**P**	**18 36 31.4**	**+0.5**
	6.4nm,0.4s,mb4.4,baz=100,slow=13						
CTA	**Charters Tower**	**31.60**	**274**	*e*P	**P**	**18 36 31.5**	**+0.5**
	5.5nm,0.4s,mb4.3						
CTAO	**Charters Tower**	**31.60**	**274**	*e*P	**P**	**18 36 31.5**	**+0.5**
	9.3nm,0.6s,mb4.4						
QLP	**Quilpie**	**32.08**	**261**	*e*P	**P**	**18 36 34.8**	**-0.2**
STKA	**Stephens Creek**	**34.07**	**251**	P	**P**	**18 36 51.9**	**0.0**
	0.8nm,0.3s,mb3.6,baz=103,slow=11,SNR=8.5						
ASAR	**Alice Springs**	**41.80**	**263**	P	**P**	**18 37 55.1**	**-0.3**
	3.8nm,0.4s,mb4.1,baz=91,slow=8.0,SNR=132						
ASAR				S	**S**	**18 43 36.6**	**-1.9**
	0.9nm,0.9s,baz=103,slow=16,SNR=7.3						
WRA	**Warramunga Arr**	**42.37**	**268**	P	**P**	**18 37 59.0**	**-0.9**
	4.2nm,0.3s,mb4.3,baz=102,slow=7.7,SNR=101						
WRA	**Warramunga Arr**	**42.37**	**268**	P	**P**	**18 37 59.0**	**-0.9**
KNA	**Kununurra**	**48.74**	**271**	*e*P	**P**	**18 38 48.9**	**0.0**
	4.9nm,0.6s,mb4.0						
FITZ	**Fitzroy Crossi**	**50.76**	**267**	P	**P**	**18 39 03.3**	**-0.6**
	2.4nm,0.5s,mb3.8,baz=122,slow=8.7,SNR=20						
FITZ	**Fitzroy Crossi**	**50.76**	**267**	*e*P	**P**	**18 39 04.1**	**+0.3**
	4.8nm,0.6s,mb4.0						
MJAR	**Matsushiro Arr**	**73.60**	**326**	P	**P**	**18 41 32.5**	**+0.1**
	0.5nm,0.6s,mb3.2,baz=170,slow=8.7,SNR=3.3						
KSRS	**Korea Array**	**79.83**	**320**	P	**P**	**18 42 07.6**	**+0.9**
	0.4nm,0.5s,mb3.2,baz=137,slow=6.2,SNR=4.3						
BRTR	**Keskin Array B**	**148.81**	**305**	PKPbc	PKPbc	18 49 43.0	+1.1
	0.2nm,0.5s,baz=90,slow=2.7,SNR=2.4						

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*IDC **10** 18:37:58.5±4.1,34°.68N×26°.09E,h0km,mb3.7/5, mb1 3.6/8,mb1mx3.5/26,mbtmp3.6/8,ML3.9/2,Error ellipse: s-maj=76.3km s-min=31.2km az=47.0*
*ATH **10** 18:38:03.7,34°.94N×26°.28E,h20km±1km,MD3.4/12*
*CSEM **10** 18:38:03.6±0.2,34°.93N×26°.46E,h19km,MD3.4,Error ellipse: s-maj=7.1km s-min=5.5km az=76.0*
*HLW **10** 18:38:06.8,34°.75N×26°.63E,h33km±48km,Md3.3,Ml3.1*

ISC 10 18:38:02.4±1.0,34°.89N±0°.03×26°.41E±0°.05,h7km±8km, n65,σ1§21/74,mb3.6/5,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.28**	**325**	*e*PB	**Pg**	**18 38 08.4**	**+0.5**
ZKR				*e*SB	**Sg**	**18 38 12.4**	**+0.8**
ZKR	**Zakros**	**0.28**	**325**	*e*Pb	**Pg**	**18 38 08.4**	**+0.5**
ZKR				*e*Sb	**Sg**	**18 38 12.4**	**+0.8**
NPS	**Neapolis**	**0.75**	**300**	*e*PN	**Pn**	**18 38 16.3**	**-3.1**
LAST	**Lasithi**	**0.81**	**290**	*e*PN	**Pn**	**18 38 17.1**	**-3.1**
KARP	**Karpathos**	**0.90**	**43**	*e*PN	**Pb**	**18 38 20.4**	**0.0**
KARP				*e*SN	**Sn**	**18 38 35.2**	**+0.5**
KARP	**Karpathos**	**0.90**	**43**	*e*Pb	**Pb**	**18 38 20.4**	**0.0**
SIVA	**Sivas**	**1.32**	**276**	*e*PN	**Pn**	**18 38 26.4**	**-0.8**
SIVA	**Sivas**	**1.32**	**276**	*e*PN	**Pn**	**18 38 26.4**	**-0.8**
VAM	**Vamos**	**1.88**	**287**	*e*PN	**Pn**	**18 38 35.9**	**+0.9**
VAM	**Vamos**	**1.88**	**287**	*e*PN	**Pn**	**18 38 35.9**	**+0.9**
ARG	**Arkhangelos**	**1.93**	**46**	*e*PN	**Pn**	**18 38 38.5**	**+2.9**
KARN	**Karanos**	**2.11**	**285**	*e*PN	**Pn**	**18 38 39.3**	**+1.3**
KARN	**Karanos**	**2.11**	**285**	*e*Pn	**Pn**	**18 38 39.3**	**+1.3**
APE	**Apeiranthos**	**2.29**	**342**	*e*PB	**Pb**	**18 38 41.5**	**-2.6**
APE	**Apeiranthos**	**2.29**	**342**	*e*PB	**Pb**	**18 38 41.0**	**-3.1**
BDRM	**Kayabasi**	**2.33**	**21**	*i* P	**Pn**	**18 38 43.4**	**+2.3**
BDRM	**Kayabasi**	**2.33**	**21**	*i* P	**Pn**	**18 38 43.4**	**+2.3**
TURN	**Turunc**	**2.67**	**41**	*i* P	**Pn**	**18 38 43.8**	**-1.9**
TURN	**Turunc**	**2.67**	**41**	*i* P	**Pn**	**18 38 43.8**	**-1.9**
TURN				*i* S	**Sn**	**18 39 12.1**	**-6.1**
SMG	**Samos**	**2.84**	**7**	*e*Pn	**Pn**	**18 38 45.9**	**-2.2**
AKAS	**Kas**	**2.93**	**62**	*i* P	**Pn**	**18 38 48.2**	**-1.2**
AYDN	**Tasoluk**	**3.01**	**23**	*i* P	**Pn**	**18 38 49.9**	**-0.6**
AYDN	**Tasoluk**	**3.01**	**23**	*i* P	**Pn**	**18 38 49.9**	**-0.6**
KYTH	**Kithira**	**3.08**	**298**	*e*PN	**Pn**	**18 38 52.1**	**+0.7**
KYTH	**Kithira**	**3.08**	**298**	*e*Pn	**Pn**	**18 38 52.1**	**+0.7**
VLI	**Veliai**	**3.36**	**304**	*e*PN	**Pn**	**18 38 56.3**	**+1.0**
**V

SJCH	San Jose de Ma	0.24	210	eP	Pn	18 40 18.1	+0.3
SJCH				eS	Sn	18 40 30.6	0.0
LACH	Col Las Americ	0.27	265	eP	Pn	18 40 17.9	0.0
LACH				eS	Sn	18 40 30.6	-0.1
FSR	Penalolen	0.27	259	eP	Pn	18 40 17.8	0.0
FSR				iS	Sn	18 40 31.0	+0.2
FSR	Penalolen	0.27	259	eP	Pn	18 40 17.8	0.0
FSR				iS	Sn	18 40 31.0	+0.2
CLCH	Cerro Calan	0.28	277	eP	Pn	18 40 18.0	+0.1
CLCH				eS	Sn	18 40 30.9	+0.1
CLCH				AML	AML	18 40 33.7	
	comp=E,9μm,0.6s						
PCH	Pirque	0.32	233	⇑iP	Pn	18 40 18.1	+0.1
PCH				S	Sn	18 40 30.9	-0.2
PCH	Pirque	0.32	233	⇑iP	Pn	18 40 18.1	+0.1
PCH				iS	Sn	18 40 30.9	-0.2
SAN	Santiago	0.38	266	⇑iP	Pn	18 40 18.3	0.0
SAN				iS	Sn	18 40 31.2	-0.4
SAN	Santiago	0.38	266	⇑iP	Pn	18 40 18.3	0.0
SAN				iS	Sn	18 40 31.2	-0.4
ANTU	Antumapu	0.38	249	eP	Pn	18 40 18.3	-0.1
ANTU				iS	Sn	18 40 31.4	-0.1
ANTU	Antumapu	0.38	249	eP	Pn	18 40 18.3	-0.1
ANTU				iS	Sn	18 40 31.4	-0.1
ANTU				AML	AML	18 40 32.0	
	comp=E,3μm,0.4s						
LMEL	Las Melosas	0.42	180	⇓iP	Pn	18 40 18.5	0.0
LMEL				iS	Sn	18 40 31.9	-0.1
LMEL	Las Melosas	0.42	180	⇓iP	Pn	18 40 18.5	0.0
LMEL				iS	Sn	18 40 31.9	-0.1
PEL	Peldehue	0.49	305	eP	Pn	18 40 18.9	0.0
PEL				iS	Sn	18 40 32.6	0.0
PEL				AML	AML	18 40 34.1	
	comp=E,35μm,0.5s						
TACH	Talagante	0.65	250	⇑iP	Pn	18 40 19.8	-0.2
TACH	Talagante	0.65	250	⇑iP	Pn	18 40 19.8	-0.2
CACH	El Canelo	0.76	205	P	Pn	18 40 20.8	0.0
CACH	El Canelo	0.76	205	eP	Pn	18 40 20.8	0.0
JACH	Jahuel	0.81	336	P	Pn	18 40 21.6	+0.4
JACH				iS	Sn	18 40 37.0	+0.2
JACH	Jahuel	0.81	336	eP	Pn	18 40 21.6	+0.4
JACH				iS	Sn	18 40 37.0	+0.2
ROCH	El Roble	0.81	304	⇑iP	Pn	18 40 21.6	+0.3
ROCH				iS	Sn	18 40 37.0	+0.2
LNV	Longovilo	1.13	242	P	Pn	18 40 23.5	-0.8
LNV	Longovilo	1.13	242	eP	Pn	18 40 23.5	-0.8
IHA	Instituto Hidr	1.27	288	eP	Pn	18 40 26.0	+0.3
IHA	Instituto Hidr	1.27	288	eP	Pn	18 40 26.0	+0.3
CHNG	Los Chungos	1.89	324	⇑iP	Pn	18 40 29.8	-3.1
CHNG				iS	Sn	18 40 52.9	-4.6
CMCH	Combarbala	2.35	343	⇓iP	Pn	18 40 38.6	-0.1
CMCH				S	Sn	18 41 07.0	-0.8
CMCH	Combarbala	2.35	343	⇓iP	Pn	18 40 38.6	-0.1
CMCH				iS	Sn	18 41 07.0	-0.8
CMCH				AML	AML	18 41 09.4	
	comp=N,3μm,0.3s						
OVCH	Ovalle	2.94	343	eP	Pn	18 40 46.5	+0.2
OVCH	Ovalle	2.94	343	eP	Pn	18 40 46.5	+0.2
LCO	Las Campanas	4.42	354	eP	Pn	18 41 05.5	-0.5
LCO				eS	Sn	18 41 54.9	-1.8
PLCA	Paso Flores	7.30	182	P	Pn	18 41 43.6	-1.0
	comp=N,0.2nm,0.3s,baz=0.1,slow=14,SNR=6.0						
TRQA	Tornquist	8.12	127	eP	Pn	18 41 54.5	-1.3
	comp=N,7.9nm,0.6s						
LPAZ	La Paz	17.17	7	P	Pn	18 43 55.2	+2.1
	comp=N,0.3nm,0.3s,baz=188,slow=7.3,SNR=5.1						
LPAZ	La Paz	17.17	7	P	Pn	18 43 55.2	+2.0
TXAR	Lajitas Array	70.00	329	P	P	18 51 01.0	+2.0
	comp=N,0.4nm,0.5s,baz=159,slow=8.2,SNR=7.0						
TXAR	Lajitas Array	70.00	329	P	P	18 51 01.0	+2.0
WRA	Warramunga Arr	121.99	207	PKP	PKPdf	18 58 41.5	+0.4
	comp=N,0.2nm,0.5s,baz=159,slow=1.7,SNR=9.7						
BVAR	Borovoye Array	145.82	43	PKPbc	PKPbc	18 59 26.7	+1.7
	comp=N,0.7nm,0.7s,baz=318,slow=1.9,SNR=4.9						
ZALV	Zalesovo Beam	152.92	33	PKPbc	PKPbc	18 59 44.1	+1.3
	comp=N,0.8nm,0.4s,baz=289,slow=4.4,SNR=5.1						
HHC	Hu-ho-hao-te	172.46	350	ePKP	PKPdf	18 59 54.6	-0.3
HHC				pPKP	pPKPdf	19 00 21.5	-6.6
HHC				sPKP		19 00 32.2	
HHC				PKS		19 03 25.9	
HHC				PP	PP	19 04 51.4	-20
HHC				SKS	SKSdf	19 06 47.0	+0.3
HHC				SKKS	SKKSac	19 11 26.2	-20
HHC				AMB	AMB		
	comp=Z,360nm,10.6s						
HHC				LR	LR		
	comp=N,430nm,21.6s						
HHC				LR	LR		
	comp=E,530nm,22.9s						
HHC				LR	LR		
	comp=Z,390nm,20.9s						

IDC 10 18:45:19.0±10.0, 6°.63S×125°.18E, h542km±84km, mb2.9/1, mb1 2.8/4, mb1mx2.5/19, mbtmp2.6/4, Error ellipse: s-maj=143.3km s-min=93.8km az=123.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.41	178	P	P	18 47 50.9	-0.5
	0.1nm,0.3s,baz=0.0,slow=8.1,SNR=4.5						
FITZ				S	S	18 49 56.8	+0.1
	0.0nm,0.3s,baz=101,slow=19,SNR=2.8						
WRA	Warramunga Arr	15.94	147	P	P	18 48 38.5	+0.3
	0.3nm,0.3s,baz=325,slow=11,SNR=24						
ASAR	Alice Springs	18.90	155	P	P	18 49 06.4	+1.0
	0.2nm,0.3s,baz=343,slow=15,SNR=19						
STKA	Stephens Creek	29.42	151	P	P	18 50 38.0	-0.9
	1.7nm,0.8s,baz=339,slow=11,SNR=5.5						

IDC 10 18:49:03.1±6.1, 3°.26S×101°.10E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.2/19, mbtmp3.3/3, Error ellipse: s-maj=227.1km s-min=28.4km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.41	120	P	P	18 56 09.7	0.0
	0.3nm,0.8s,baz=302,slow=8.6,SNR=6.1						
ASAR	Alice Springs	37.63	126	P	P	18 56 19.9	-0.2
	0.7nm,1.1s,baz=300,slow=7.8,SNR=16						
SONM	Songino Array	51.09	5	P	P	18 58 07.2	-0.2
	0.4nm,0.8s,baz=176,slow=4.3,SNR=3.1						
TXAR	Lajitas Array	145.00	40	PKPbc	PKPbc	19 08 42.4	0.0
	0.4nm,0.7s,baz=321,slow=1.2,SNR=5.4						

ATH 10 18:51:36.7, 38°.13N×21°.55E, h19km±1km, MD3.0/10
CSEM 10 18:51:36.9±0.2, 38°.15N×21°.53E, h20km, MD3.0, Error ellipse: s-maj=6.2km s-min=4.3km az=152.0
THE 10 18:51:36.9, 38°.11N×21°.58E, h28km±1km, ML2.1/5, Error ellipse: s-maj=2.1km s-min=0.7km az=10.0
ISCJB 10 18:51:37.2±0.4, 38°.12N±0°.04×21°.56E±0°.03, h19km±4km, Error ellipse: s-maj=6.7km s-min=3.7km az=167.3

ISC 10 18:51:37.2±0.4, 38°.13N±0°.04×21°.55E±0°.03, h18km±3km, n41, σ0s88/61, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.10	225	ePB	Pg	18 51 40.4	-0.5
RLS				eSB	Sg	18 51 43.2	-0.1
RLS	Riolos of Patr	0.10	225	ePb	Pg	18 51 40.4	-0.5
RLS				eSb	Sg	18 51 43.2	-0.1
UPR	University Cam	0.24	49	ePB	Pg	18 51 42.0	-0.8
UPR	University Cam	0.24	49	ePb	Pg	18 51 42.0	-0.8
LAKA	Lakka	0.35	71	P	Pg	18 51 44.3	-0.4
LAKA				S	Sg	18 51 50.0	+0.2
LAKA	Lakka	0.35	71	P	Pg	18 51 44.3	-0.4
LAKA				S	Sg	18 51 50.0	+0.2
EFP	Efpalio	0.41	43	ePB	Pg	18 51 45.2	-0.5
EFP				eSB	Sb	18 51 51.7	-0.1
EFP	Efpalio	0.41	43	P	Pg	18 51 45.2	-0.5
EFP				S	Sg	18 51 52.5	+1.1
EFP	Efpalio	0.41	43	P	Pg	18 51 45.2	-0.5
EFP				eSb	Sb	18 51 51.7	-0.1
EFP				S	Sg	18 51 52.5	+1.1
TRIZ	Trizonia	0.47	60	P	Pg	18 51 46.3	-0.5
TRIZ				S	Sg	18 51 54.3	+1.0
TRIZ	Trizonia	0.47	60	P	Pg	18 51 46.3	-0.5
TRIZ				S	Sg	18 51 54.3	+1.0
KALE	Kalithea	0.53	60	P	Pg	18 51 47.1	-0.8
KALE				S	Sg	18 51 55.9	+0.8
KALE	Kalithea	0.53	60	P	Pg	18 51 47.1	-0.8
KALE				S	Sg	18 51 55.9	+0.8
KFL	Anninata	0.60	269	P	Pg	18 51 48.4	-0.8
KFL				S	Sg	18 51 59.1	+1.8
KFL	Anninata	0.60	269	P	Pg	18 51 48.4	-0.8
KFL				S	Sg	18 51 59.1	+1.8
GUR	Goura	0.65	107	ePB	Pb	18 51 49.0	-1.0
GUR				eSN	Sb	18 51 59.1	+0.3
GUR	Goura	0.65	107	P	Pb	18 51 48.9	-1.1
GUR				S	Sb	18 51 59.0	+0.2
GUR	Goura	0.65	107	P	Pb	18 51 48.9	-1.1
GUR				S	Sb	18 51 59.0	+0.2
VLS	Valsamata	0.76	274	ePB	Pb	18 51 50.6	-1.3
VLS				eSN	Sn	18 52 03.2	-0.8
VLS	Valsamata	0.76	274	P	Pb	18 51 50.7	-1.2
VLS				S	Sb	18 52 03.1	+1.2
VLS	Valsamata	0.76	274	P	Pb	18 51 50.7	-1.2
VLS				eSn	Sn	18 52 03.2	-0.8
EVR	Evrytania	0.81	14	ePN	Pn	18 51 52.1	-1.7
EVR	Evrytania	0.81	14	ePn	Pn	18 51 52.1	-1.7
DSF	Desfina	0.82	69	P	Pb	18 51 51.7	-1.2
DSF	Desfina	0.82	69	P	Pb	18 51 51.7	-1.2
ITM	Ithomi	0.99	162	ePN	Pn	18 51 55.8	-0.4
ITM	Ithomi	0.99	162	ePn	Pn	18 51 55.8	-0.4
VLX	Vlachokerasia	1.00	139	ePN	Pn	18 51 56.5	+0.2
VLX	Vlachokerasia	1.00	139	ePn	Pn	18 51 56.5	+0.2
AGG	Agios Georgios	1.08	34	ePN	Pn	18 51 57.8	+0.3
AGG	Agios Georgios	1.08	34	ePn	Pn	18 51 57.8	+0.3
LTK	Loutraki	1.12	95	ePN	Pn	18 51 58.3	+0.3
LTK	Loutraki	1.12	95	ePn	Pn	18 51 58.3	+0.3
PYL	PYLOS	1.24	173	ePN	Pn	18 52 00.6	+1.0
PYL	PYLOS	1.24	173	ePn	Pn	18 52 00.6	+1.0
LKR	Lokris	1.25	65	ePN	Pn	18 51 59.9	+0.1
LKR	Lokris	1.25	65	ePn	Pn	18 51 59.9	+0.1
DID	Didima	1.47	114	ePN	Pn	18 52 04.2	+1.4
DID	Didima	1.47	114	ePn	Pn	18 52 04.2	+1.4
THL	Klokotos Trika	1.48	14	ePN	Pn	18 52 04.1	+1.2
THL	Klokotos Trika	1.48	14	ePn	Pn	18 52 04.1	+1.2

ISCJB 10 19:03:14.1±1.2, 26°.90N±0°.04×55°.85E±0°.06, h8km±8km, mb3.7/6, Error ellipse: s-maj=8.4km s-min=6.6km az=164.3
CSEM 10 19:03:14.7±0.2, 26°.93N×55°.87E, h2km, ML3.4, Error ellipse: s-maj=7.4km s-min=6.4km az=87.0
IDC 10 19:03:14.4±2.0, 27°.00N×55°.84E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/23, mbtmp3.8/5, Error ellipse: s-maj=47.3km s-min=30.6km az=27.0
NEIC 10 19:03:15.4, 27°.04N×55°.91E, h3km, mb3.5/1, ML3.4(THR), After THR.
KISR 10 19:03:15.2±1.0, 26°.27N×55°.11E, h6km±999km, ML4.0
OMAN 10 19:03:16.3±99.0, 26°.86N×56°.14E, h10km, Error ellipse: s-maj=51.0km s-min=19.6km az=38.0
TEH 10 19:03:17.2, 26°.88N×55°.93E, h12km

ISC 10 19:03:15.2±1.1, 26°.86N±0°.04×55°.87E±0°.05, h4km±8km, n39, σ1s12/47, mb3.7/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.60	27	ePg	Pg	19 03 24.0	-2.7
BNDS	Bandar-Abbas	0.60	27	ePg	Pg	19 03 24.4	-2.3
BNDS				eSg	Sg	19 03 30.7	-3.9
IBND	Bandar-abas	0.84	46	ePg	Pg	19 03 30.9	-0.4
IBND				eSg	Sg	19 03 42.5	+0.3
IBND				e		19 03 59.9	
	comp=Z,31μm,0.2s						
BANOM	Banah	1.01	157	P	Pg	19 03 34.5	-0.1
	SNR=176						
BANOM	Banah	1.01	157	P	Pg	19 03 34.5	-0.1
	SNR=176						
ASUD	Al Ashush, Dub	2.28	192	P	Pn	19 03 54.9	+1.3
	SNR=19						
ASUD	Al Ashush, Dub	2.28	192	P	Pn	19 03 54.9	+1.4
	SNR=19						
KRBR	Kerman	3.21	14	ePn	Pn	19 04 06.0	-0.3
KRBR	Kerman	3.21	14	ePn	Pn	19 04 06.0	-0.3
ISRV	Sarvestan	3.49	317	ePn	Pn	19 04 12.3	+2.0
ARQ	Araqi	3.56	170	P	Pn	19 04 11.3	+0.1
	SNR=10						
ARQ	Araqi	3.56	170	P	Pn	19 04 11.3	+0.1
	SNR=10						
IPAR	Pars	3.87	321	ePn	Pn	19 04 16.8	+1.4
IMEH	Mehriz	4.64	347	ePn	Pn	19 04 26.9	+0.8
IMEH				e		19 04 34.3	
	comp=Z,344nm,0.3s						
IBAF	Bafgh	4.72	357	ePn	Pn	19 04 27.3	+0.2
IBAF				e		19 05 26.2	
	comp=N,246nm,0.2s						
ZHSF	Zahedan	5.12	57	ePn	Pn	19 04 33.6	+0.9
ISAD	Sadrabad	5.38	340	ePn	Pn	19 04 37.5	+1.3
ISAD				e		19 05 43.3	
	comp=Z,245nm,0.2s						
ICHK	Chekchek	5.51	347	ePn	Pn	19 04 38.6	+0.6
ICHK				e		19 04 44.0	
	comp=Z,285nm,0.2s						
NASN	Na'in	6.48	337	ePn	Pn	19 04 52.3	+0.9
IZEF	Zefreh	6.75	334	e	Sn	19 06 13.9	+1.6
	comp=N,96nm,0.3s						
IPIR	Pirpir	7.23	324	ePn	Pn	19 05 02.4	+0.7
IPIR				e		19 06 33.0	
	comp=Z,246nm,0.3s						
IKLH	Kolahrood	7.43	331	e	Pn	19 05 10.3	+6.0
	comp=Z,82nm,0.2s						
IKLH				ePn	Pn	19 05 04.2	-0.1
UMR	Umm Al-Rimmam	7.67	292	eP	Pn	19 05 08.2	+0.4
UMR				eS	Sn	19 06 32.6	-2.5
UMR				AML	AML	19 06 34.0	
	comp=Z,29nm,0.4s						
UMR	Umm Al-Rimmam	7.67	292	eP	Pn	19 05 08.1	+0.4
UMR				eS	Sn	19 06 32.6	-2.5
	comp=Z,29nm,0.4s						
NAY	Al-Naaiem	7.98	289	eP	Pn	19 05 11.4	-0.6
NAY				eS	Sn	19 06 38.7	-4.0
NAY				AML	AML	19 06 42.7	
	comp=Z,14nm,0.6s						
NAY	Al-Naaiem	7.98	289	eP	Pn	19 05 11.4	-0.5
MIB	Mutribah	8.06	293	eP	Pn	19 05 13.1	+0.1
MIB				eS	Sn	19 06 41.8	-2.9
MIB	Mutribah	8.06	293	eP	Pn	19 05 13.1	0.0
MIB				eS	Sn	19 06 41.8	-2.9
BRTR	Keskin Array B	22.50	310	P	P	19 08 14.7	-1.0
	comp=Z,0.3nm,0.4s,mb3.1,baz=117,slow=14,SNR=2.4						
BRTR	Keskin Array B	22.50	310	P	P	19 08 14.7	-1.0
ABKAR	Abkulak array	22.58	7	eP	P	19 08 15.6	-0.7
	comp=Z,1.3nm,0.6s,mb3.5						
ABKAR	Abkulak array	22.58	7	eP	P	19 08 15.6	-0.8
	comp=Z,1.3nm,0.6s,mb3.5						
TAPN	Taplejung	28.31	82	eP	P	19 09 09.3	-0.7
	comp=Z,31nm,0.4s						
MKAR	Makanchi Array	28.81	39	P	P	19 09 13.5	-0.7
	comp=Z,0.3nm,0.2s,mb3.6,baz=223,slow=8.3,SNR=3.3						
ZALV	Zalesovo Beam	34.46	30	P	P	19 10 02.6	-1.1
	comp=Z,1.3nm,0.4s,mb4.3,baz=231,slow=10,SNR=7.4						
FINES	FINESS Array B	39.94	338	P	P	19 10 48.9	-1.4
	comp=Z,3.6nm,0.9s,mb4.1,baz=147,slow=11,SNR=4.6						
FINES	FINESS Array B	39.94	338	P	P	19 10 48.9	-1.3
WRA	Warramunga Arr	89.11	113	P	P	19 16 12.4	+0.3
	comp=Z,0.4nm,1.0s,mb3.7,baz=311,slow=4.0,SNR=3.1						
WRA	Warramunga Arr	89.11	113	P	P	19 16 12.4	+0.3

IDC 10 19:07:08.2±0.9, 26°.59N×96°.76E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/24, mbtmp3.7/8, Error ellipse: s-maj=34.6km s-min=17.1km az=57.0
BJI 10 19:07:15.7, 27°.18N×96°.42E, h17km, mb4.1/5, ML3.5/3
NEIC 10 19:07:16.1±1.1, 26°.66N×96°.77E, h61km±12km, mb4.2/1, Error ellipse: s-maj=15.3km s-min=7.2km az=56.0

ISC 10 19:07:11.3±3.5, 26°.72N±0°.08×96°.82E±0°.06, h16km±23km, n24, σ1s18/25, mb3.8/9, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	4.58	257	ePN	Pn	19 08 22.0	+2.1
SHL				eSN	Sn	19 09 14.0	+1.1
LSA	Lhasa	5.81	302	Pn	Pn	19 08 37.5	+0.6
LSA	Lhasa	5.81	302	eP	Pn	19 08 39.7	+2.9
	11nm,0.6s						
ODAN	Odare	8.43	273	eP	Pn	19 09 12.6	-0.2
	27nm,0.4s						
CMAR	Chiang Mai Arr	8.46	166	Pn	Pn	19 09 15.7	+2.5
	0.2nm,0.3s,baz=338,slow=12,SNR=7.4						
CMAR				Lg		19 11 36.3	
	0.1nm,0.3s,baz=348,slow=26,SNR=3.2						
GUN	Gumba	9.80	279	eP	Pn	19 09 32.0	+0.4
	34nm,0.4s						
PKI	Pulchoki	10.20	277	eP	Pn	19 09 37.0	0.0
	17nm,0.4s						
PKIN	Phulchoki	10.21	277	eP	Pn	19 09 37.4	+0.2
	19nm,0.5s						
KKN	Kakani	10.32	279	eP	Pn	19 09 38.4	-0.3
	26nm,0.3s						
DMN	Daman	10.47	277	eP	Pn	19 09 40.3	-0.4
	14nm,0.5s						
GKN	Gorkha	10.90	279	eP	Pn	19 09 45.3	-1.4
	17nm,0.3s						
DANN	Dangsing	11.70	281	eP	Pn	19 09 55.5	-2.1
	30nm,0.5s						
KOLN	Koldanda	11.81	278	eP	Pn	19 09 56.8	-2.3
	7.5nm,0.3s						
SONM	Songino Array	22.38	17	P	P	19 12 10.9	+2.3
	0.5nm,0.7s,mb3.0,baz=206,slow=11,SNR=4.6						
MK31	Makanchi Array	23.09	334	eP	P	19 12 17.0	+0.7
MKAR	Makanchi Array	23.09	334	P	P	19 12 17.0	+0.6
	1.4nm,0.6s,mb3.6,baz=138,slow=9.7,SNR=9.3						
KBL	Kabul	25.08	295	eP	P	19 12 35.7	+0.5
	5.0nm,0.6s,mb4.2						
MJAR	Matsushiro Arr	36.34	64	P	P	19 14 14.0	-0.5
	1.7nm,0.7s,mb4.1,baz=267,slow=9.8,SNR=6.7						
FITZ	Fitzroy Crossi	52.62	145	P	P	19 16 23.5	-1.1
	0.5nm,0.5s,mb3.7,baz=311,slow=9.3,SNR=3.6						
BRTR	Keskin Array B	53.42	301	P	P	19 16 29.8	-0.7
	0.8nm,0.7s,mb3.8,baz=98,slow=8.9,SNR=4.3						
WRA	Warramunga Arr	58.96	138	P	P	19 17 09.3	-0.9
	1.1nm,0.5s,mb4.2,baz=327,slow=7.5,SNR=32						
WRA	Warramunga Arr	58.96	138	P	P	19 17 09.3	-0.9
ASAR	Alice Springs	61.60	141	P	P	19 17 27.6	-0.6
	0.6nm,0.5s,mb4.0,baz=325,slow=6.6,SNR=23						
NOA	NORSAR Array B	64.91	328	P	P	19 17 49.5	-0.2
	1.2nm,0.8s,mb4.0,baz=91,slow=5.3,SNR=3.2						

IDC 10 19:10:35.9±1.1, 31°.54N×104°.03E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.3/23, mbtmp3.3/5, ML3.0/1, Error ellipse: s-maj=90.4km s-min=20.0km az=60.0
ISCJB 10 19:10:36.3±1.2, 31°.62N±0°.09×104°.3E±0°.1, h15km±10km, mb3.2/4, Error ellipse: s-maj=21.1km s-min=9.8km az=39.5
BJI 10 19:10:41.5, 31°.60N×103°.99E, h14km, ML3.0/8

ISC 10 19:10:38.5±1.2, 31°.61N±0°.08×104°.2E±0°.1, h15km±10km, n8, σ0s90/10, mb3.2/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.78	208	Pg	Pg	19 10 53.3	-0.4
CD2				Sg	Sg	19 11 04.4	+0.3
CD2				smax			
	comp=N,390nm,0.5s						
CD2				smax			
	comp=E,410nm,0.3s						
XAN	Xi'an	4.67	57	Pg	Pg	19 12 08.1	+0.2
XAN				Sg	Sg	19 13 03.3	-5.1
XAN				smax			
	comp=N,27nm,0.8s						
XAN				smax			
	comp=E,13nm,1.0s						
CMAR	Chiang Mai Arr	13.92	201	Pn	Pn	19 14 02.2	+7.0
	comp=E,0.2nm,0.3s,baz=7.5,slow=9.3,SNR=4.1						
SONM	Songino Array	16.30	5	Pn	Pn	19 14 29.2	+2.6
	comp=E,0.1nm,0.3s,baz=187,slow=9.9,SNR=3.1						
MKAR	Makanchi Array	22.65	318	P	P	19 15 38.7	-0.1
	comp=E,0.2nm,0.5s,mb2.8,baz=124,slow=12,SNR=2.9						
ZALV	Zalesovo Beam	26.30	334	P	P	19 16 11.9	-1.3
	comp=E,0.3nm,0.3s,mb3.2,baz=137,slow=5.3,SNR=3.0						
WRA	Warramunga Arr	58.85	146	P	P	19 20 36.5	-0.1
	comp=E,0.2nm,0.5s,mb3.5,baz=341,slow=7.8,SNR=12						
ASAR	Alice Springs	61.89	149	P	P	19 20 57.5	+0.2
	comp=E,0.2nm,0.8s,mb3.3,baz=348,slow=6.9,SNR=3.1						

ISCJB 10 19:11:51.4±0.5, 24°.81N±0°.03×121°.71E±0°.03, h77km±3km, Error ellipse: s-maj=5.4km s-min=3.3km az=152.8
TAP 10 19:11:51.6, 24°.78N×121°.69E, h73km, ML3.6, B
JMA 10 19:11:51.5±0.2, 25°.33N×121°.98E, h32km, M2.8

ISC 10 19:11:51.8±0.6, 24°.82N±0°.03×121°.71E±0°.03, h76km±4km, n47, σ0s59/88, 4C-12D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	Ilan	0.07	147	iP	Pn	19 12 03.0	+0.4
	baz=105						
ILA				iS	Sn	19 12 10.9	+0.2
	baz=105						
TWE	Neicheng	0.11	201	⇓iP	Pn	19 12 02.8	0.0
	baz=185						
TWE				iS	Sn	19 12 10.6	-0.2
	baz=185						
TWA	Mucha	0.20	324	⇓iP	Pn	19 12 03.0	0.0
	baz=336						
TWA				S	Sn	19 12 11.1	-0.2
	baz=336						
ENTT	Nioudou	0.22	216	⇓iP	Pn	19 12 03.1	-0.1
	baz=223						
ENTT				iS	Sn	19 12 11.0	-0.5
	baz=223						
TWC	Suao	0.24	149	P	Pn	19 12 03.5	+0.2
	baz=139						
TWC				S	Sn	19 12 12.3	+0.6
	baz=139						
NWF	Wu-fen Shan	0.26	15	⇓iP	Pn	19 12 03.6	+0.3
	baz=8.0						
NWF				S	Sn	19 12 12.0	+0.2
	baz=8.0						
TAP1	Taipei	0.28	322	⇓iP	Pn	19 12 03.2	-0.2
	baz=327						
TAP1				S	Sn	19 12 11.6	-0.4
	baz=327						
TWB1	Santiao Chiao	0.32	53	⇓iP	Pn	19 12 04.1	+0.4
	baz=47						
TWB1				iS	Sn	19 12 13.2	+0.7
	baz=47						
NSK	Sanguang	0.35	246	⇓iP	Pn	19 12 03.6	-0.3
	baz=250						
NSK				S	Sn	19 12 11.8	-1.1
	baz=250						
TWS1	Kuangyinshan	0.39	317	⇓iP	Pn	19 12 04.3	+0.2
	baz=312						

baz=194
NSY Sanyi 0.95 245 P Pn 19 12 10.2 +0.2
baz=246
NSY eS Sn 19 12 23.1 -0.5
baz=246
TWQ1 Liyutan 0.97 241 ⇓iP Pn 19 12 10.1 -0.1
baz=250
TWQ1 S Sn 19 12 23.8 -0.3
baz=250
ESL Shilin 1.03 194 P Pn 19 12 09.1 -1.9
baz=186
TCU Taichung 1.16 235 eP Pn 19 12 12.6 +0.1
baz=235
TCU eS Sn 19 12 28.2 +0.2
baz=235
SMLT Sun Moon Lake 1.19 219 ⇑iP Pn 19 12 13.2 +0.3
baz=225
SMLT eS Sn 19 12 28.7 -0.1
baz=225
TYC Yuchr 1.20 221 ⇑iP Pn 19 12 13.2 +0.1
baz=228
TYC eS Sn 19 12 29.1 +0.1
baz=228
YOJ Yonaguni jima 1.24 107 P Pn 19 12 13.6 +0.1
YOJ eS Sn 19 12 29.6 -0.2
WNT Mingjian 1.32 225 eP Pn 19 12 14.9 +0.3
baz=233
WNT eS Sn 19 12 32.0 +0.1
baz=233
EHY Hungye 1.35 195 eP Pn 19 12 12.8 -2.3
baz=188
YUS Yu-Shan 1.50 208 P Pn 19 12 17.6 +0.8
baz=218
YUS eS Sn 19 12 37.3 +1.5
baz=218
TWF1 Yuli 1.51 195 eP Pn 19 12 14.6 -2.4
baz=190
CHN5 Tsauling 1.54 218 ⇑iP Pn 19 12 17.5 +0.1
baz=218
CHN5 eS Sn 19 12 37.2 +0.4
baz=218
WGK Gukeng 1.54 223 P Pn 19 12 17.8 +0.3
baz=223
WGK eS Sn 19 12 37.3 +0.4
baz=223
ALS Alishan 1.54 213 P Pn 19 12 18.1 +0.6
baz=212
ALS eS Sn 19 12 37.2 +0.3
baz=212
ELDTW Lidau 1.74 201 P Pn 19 12 19.5 -0.6
baz=194
ELDTW eS Sn 19 12 42.3 +0.6
baz=194
CHY Chiayi 1.76 222 eP Pn 19 12 20.6 +0.1
baz=230
CHY eS Sn 19 12 42.2 +0.1
baz=230
WSF Szhu 1.80 229 eP Pn 19 12 21.1 +0.3
baz=229
WSF eS Sn 19 12 42.5 -0.5
baz=229
WTP Ta-pu 1.86 213 eP Pn 19 12 21.8 +0.1
baz=212
WTP eS Sn 19 12 44.4 0.0
baz=212
STYT Tauyuan 1.87 208 eP Pn 19 12 22.1 +0.4
baz=217
STYT eS Sn 19 12 44.6 +0.1
baz=217
IRIF Iriomote-Funau 1.90 104 P Pn 19 12 22.2 0.0
IRIF eS Sn 19 12 45.3 -0.1
CHN1 Nanshi 1.95 214 eP Pn 19 12 22.9 0.0
baz=213
CHN1 eS Sn 19 12 46.2 -0.4
baz=213
SGST Jiashian 2.01 211 eP Pn 19 12 24.1 +0.4
baz=210
SGST eS Sn 19 12 48.5 +0.4
baz=210
TWG Pinlang 2.07 196 P Pn 19 12 25.2 +0.6
baz=186
CHN3 Shinhua 2.13 216 eS Sn 19 12 51.1 +0.3
baz=215
JKRS Kuro-shima 2.17 105 P Pn 19 12 26.4 +0.5
JKRS eS Sn 19 12 52.0 +0.1
JIJ Ishigaki jima 2.26 101 P Pn 19 12 27.1 +0.1
JIJ eS Sn 19 12 53.3 -0.7
PNG Penghu 2.33 238 eP Pn 19 12 27.2 -0.8
baz=237

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*IDC **10** 19:20:23.4±3.1, 4°.91S×102°.07E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/19, mbtmp3.8/8, MS3.7/1, Ms1 3.7/1, ms1mx2.7/21, Error ellipse: s-maj=132.6km s-min=16.6km az=56.0*
*ISCJB **10** 20:26:24.4±3.8, 5°.1S±0°.1×101°.8E±0°.1, h44km±20km, mb3.8/8, Error ellipse: s-maj=24.4km s-min=13.5km az=144.0*
*DJA **10** 19:20:29, 2°.40S×103°.44E, h14km, MLv4.0/5*
ISC 10 19:20:26.4±3.8, 5°.08S±0°.09×101°.81E±0°.07, h27km±28km, n16, σ0°.64/15, mb3.8/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.34**	**58**	P	**Sn**	**19 21 06.6**	**+0.1**
KSI	**Kapahiang**	**1.62**	**29**	P	**Pn**	**19 20 53.2**	**0.0**
LWLI	**Liwa**	**2.24**	**89**	P	**Pn**	**19 21 10.6**	**+8.8**
MDSI	**Maura Dua**	**2.43**	**76**	P	**Pn**	**19 21 04.8**	**+0.4**
MDSI				S	**Sn**	**19 21 33.1**	**-0.2**
KASI	**Kota Agung**	**2.71**	**100**	P	**Pn**	**19 21 08.4**	**+0.2**
KLSI		**2.93**	**83**	P	**Pn**	**19 21 11.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**23.56**	**353**	P	**P**	**19 25 33.5**	**-1.5**
	0.4nm,0.5s,mb3.1,baz=183,slow=6.9,SNR=4.1						
FITZ	**Fitzroy Crossi**	**26.64**	**121**	P	**P**	**19 26 02.6**	**-0.5**
	2.0nm,0.8s,mb3.7,baz=235,slow=6.0,SNR=6.1						
NWAO	**Narrogin (SRO)**	**31.22**	**154**	LR	LR	19 38 25.9	
	comp=Z,129nm,18.2s,baz=298,slow=35						
WRA	**Warramunga Arr**	**34.92**	**118**	P	**P**	**19 27 15.3**	**-0.9**
	0.2nm,0.4s,mb3.4,baz=298,slow=10,SNR=7.0						
ASAR	**Alice Springs**	**36.02**	**124**	P	**P**	**19 27 25.5**	**-0.1**
	0.7nm,0.4s,mb3.9,baz=298,slow=7.5,SNR=29						
STKA	**Stephens Creek**	**45.78**	**131**	P	**P**	**19 28 47.0**	**+1.1**
	0.6nm,0.4s,mb3.9,baz=299,slow=10,SNR=4.4						
SONM	**Songino Array**	**52.84**	**4**	P	**P**	**19 29 40.5**	**+1.0**
	1.2nm,0.7s,mb3.9,baz=182,slow=9.4,SNR=11						
MKAR	**Makanchi Array**	**54.47**	**344**	P	**P**	**19 29 51.9**	**+0.4**
	0.9nm,0.6s,mb3.9,baz=164,slow=9.1,SNR=9.0						
ZALV	**Zalesovo Beam**	**60.51**	**349**	P	**P**	**19 30 34.1**	**+0.1**
	0.8nm,0.3s,mb4.4,baz=154,slow=3.7,SNR=6.0						
TXAR	**Lajitas Array**	**145.90**	**42**	PKPbc	PKPbc	19 40 04.3	+0.1
	0.3nm,0.8s,baz=308,slow=3.3,SNR=2.7						

IDC 10 19:25:39.5±3.4, 28°.28N×82°.67E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/22, mbtmp3.4/5, ML3.8/1, Error ellipse: s-maj=114.8km s-min=25.7km az=76.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.48**	**359**	P	Pn	19 29 57.2	+0.3
	0.3nm,0.3s,baz=175,slow=9.9,SNR=12						
ZALV	**Zalesovo Beam**	**25.69**	**3**	P	P	19 31 10.8	-0.3
	0.8nm,0.4s,baz=188,slow=9.6,SNR=4.5						
SONM	**Songino Array**	**26.84**	**37**	P	P	19 31 22.0	+0.5
	0.4nm,0.6s,baz=242,slow=9.3,SNR=3.2						
WRA	**Warramunga Arr**	**69.22**	**128**	P	P	19 36 48.6	+0.2
	0.2nm,0.7s,baz=321,slow=6.4,SNR=7.3						
ASAR	**Alice Springs**	**71.45**	**131**	P	P	19 37 02.0	0.0
	0.1nm,0.3s,baz=314,slow=5.9,SNR=2.4						

VIE 10 19:30:18.9±0.5, 47°.34N×11°.02E, h8km±4km, mb0.5/1, ML1.5/4, 4C-3D, Error ellipse: s-maj=2.7km s-min=1.6km az=58.0 6 km NW of Telfs, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOTA	**Moosalm**	**0.06**	**89**	⇑iPg	Pg	19 30 21.1	+0.4
	20nm,0.1s						
MOTA				⇑iSg	Sg	19 30 22.8	+0.8
	57nm,0.1s						
MOTA	**Moosalm**	**0.06**	**89**	Pg	Pg	19 30 21.1	+0.4
	20nm,0.1s						
MOTA				Sg	Sg	19 30 22.8	+0.8
	57nm,0.1s						
SQTA	**Sankt Quirin**	**0.18**	**133**	⇓iPg	Pg	19 30 23.0	+0.4
SQTA	**Sankt Quirin**	**0.18**	**133**	Pg	Pg	19 30 23.0	+0.4
RETA	**Reutte**	**0.22**	**310**	⇑iPg	Pg	19 30 23.2	-0.2
	1.2nm,0.1s						
RETA				⇑iSg	Sg	19 30 27.2	+0.7
	14nm,0.1s						
RETA	**Reutte**	**0.22**	**310**	Pg	Pg	19 30 23.2	-0.2
	1.2nm,0.1s						
RETA				Sg	Sg	19 30 27.2	+0.7
	14nm,0.1s						
FETA	**Feichten**	**0.38**	**211**	⇓iPg	Pg	19 30 26.5	+0.2
	0.5nm,0.1s						
FETA				⇓iSg	Sg	19 30 32.0	+0.7
	1.9nm,0.2s						
FETA	**Feichten**	**0.38**	**211**	Pg	Pg	19 30 26.5	+0.2
	0.5nm,0.1s						
FETA				Sg	Sg	19 30 32.0	+0.7
	1.9nm,0.2s						

IDC 10 19:36:05.3±9.4, 11°.49N×92°.69E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.2/20, mbtmp3.3/3, Error ellipse: s-maj=508.5km s-min=29.9km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.27**	**348**	P	P	19 43 10.4	0.0
	0.3nm,0.5s,baz=163,slow=8.5,SNR=5.2						
WRA	**Warramunga Arr**	**51.54**	**127**	P	P	19 45 12.8	-0.6
	0.2nm,0.7s,baz=307,slow=8.2,SNR=5.2						
ASAR	**Alice Springs**	**53.34**	**131**	P	P	19 45 27.4	+0.7
	0.2nm,0.8s,baz=301,slow=7.2,SNR=2.7						

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*NEIC **10** 20:26:42.2±2.9, 0°.03S×123°.29E, h86km±29km, mb4.6/4, Error ellipse: s-maj=28.0km s-min=10.1km az=57.0*
*IDC **10** 20:26:43.8±2.9, 0°.02N×123°.38E, h102km±26km, mb3.5/11, mb1 3.7/12, mb1mx3.6/21, mbtmp3.5/12, Error ellipse: s-maj=35.3km s-min=12.2km az=67.0*
*ISCJB **10** 20:26:44.3±0.3, 0°.24S±0°.04×123°.07E±0°.04, h125km±4km, mb4.2/20, Error ellipse: s-maj=6.7km s-min=5.9km az=165.8*
*DJA **10** 20:26:46, 0°.30S×123°.12E, h101km, MLv4.7/8*
ISC 10 20:26:45.4±0.3, 0°.25S±0°.04×123°.07E±0°.04, h119km±4km, n37, σ0°.93/42, mb4.2/20, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.84**	**201**	P	**Pn**	**20 27 04.4**	**-1.4**
LUWI				S	**Sn**	**20 27 19.8**	**-1.4**
KMSI	**Cibinong**	**1.23**	**48**	P	**Pn**	**20 27 09.9**	**+0.2**
KMSI				S	**Sn**	**20 27 28.1**	**0.0**
APSI	**Ampana**	**1.56**	**245**	P	**Pn**	**20 27 13.0**	**-0.5**
MNI	**Manado**	**2.44**	**46**	P	**Pn**	**20 27 24.4**	**-0.1**
MNI				S	**Sn**	**20 27 55.2**	**+0.7**
TOLI	**Toli-Toli**	**2.65**	**301**	P	**Pn**	**20 27 26.3**	**-0.8**
TOLI				S	**Sn**	**20 28 00.7**	**+1.5**
TTSI	**Tana Toraja**	**4.27**	**229**	P	**Pn**	**20 27 50.1**	**+1.5**
TNTI	**Ternate**	**4.42**	**77**	P	**Pn**	**20 27 50.6**	**0.0**
TNTI				S	**Sn**	**20 28 41.8**	**+0.6**
SPSI	**Sidrap Palu**	**4.95**	**222**	P	**Pn**	**20 27 58.5**	**+0.8**
NLAI	**Namlea**	**5.00**	**126**	P	**Pn**	**20 27 59.9**	**+1.4**
NLAI				S	**Sn**	**20 28 53.9**	**-1.4**
KAPI	**Kappang**	**5.77**	**215**	eP	**Pn**	**20 28 08.7**	**-0.2**
	46nm,0.5s						
BKSI	**Bulukumba**	**5.83**	**210**	P	Px	20 28 24.2	
FITZ	**Fitzroy Crossi**	**17.92**	**172**	P	**Pn**	**20 30 47.8**	**+0.7**
	0.3nm,0.3s,baz=3.9,slow=5.0,SNR=14						
WRA	**Warramunga Arr**	**22.47**	**151**	P	**P**	**20 31 35.3**	**+0.2**
	1.0nm,0.7s,mb3.3,baz=332,slow=10,SNR=18						
WRA				ScP	ScP	20 38 54.2	+2.2
	0.4nm,0.6s,baz=324,slow=2.6,SNR=14						
WRA	**Warramunga Arr**	**22.47**	**151**	P	**P**	**20 31 35.3**	**+0.2**
WRA				ScP	ScP	20 38 54.2	+2.2
ASAR	**Alice Springs**	**25.54**	**156**	P	**P**	**20 32 04.6**	**+1.4**
	0.6nm,0.5s,mb3.3,baz=342,slow=15,SNR=14						
ASAR				PcP	PcP	20 35 32.1	+0.4
	0.8nm,0.5s,baz=349,slow=2.1,SNR=12						
CMAR	**Chiang Mai Arr**	**30.13**	**309**	P	**P**	**20 32 45.5**	**+1.3**
	2.4nm,0.7s,mb3.9,baz=134,slow=7.1,SNR=21						
CHTO	**Chiang Mai**	**30.33**	**310**	eP	**P**	**20 32 46.6**	**+0.6**
	6.7nm,1.0s,mb4.2						
ENH	**Enshi**	**32.99**	**338**	eP	**P**	**20 33 09.9**	**+0.8**
	11nm,0.5s,mb4.9						
STKA	**Stephens Creek**	**36.01**	**153**	P	**P**	**20 33 36.4**	**+1.2**
	0.5nm,0.4s,mb3.8,baz=312,slow=9.3,SNR=4.1						
STKA				PcP	PcP	20 35 59.3	0.0
	1.4nm,0.6s,baz=335,slow=2.6,SNR=4.4						
MJAR	**Matsushiro Arr**	**39.21**	**19**	P	**P**	**20 33 59.0**	**-3.1**
	2.2nm,1.1s,mb3.9,baz=191,slow=10.0,SNR=3.6						
LSA	**Lhasa**	**42.58**	**317**	eP	**P**	**20 34 31.2**	**+1.4**
	4.9nm,0.6s,mb4.4						
ODAN	**Odare**	**43.64**	**311**	eP	**P**	**20 34 38.2**	**-0.2**
GUN	**Gumba**	**45.33**	**311**	eP	**P**	**20 34 52.2**	**+0.3**
	17nm,0.4s,mb5.2						
PKI	**Pulchoki**	**45.51**	**311**	eP	**P**	**20 34 52.9**	**-0.4**
PKIN	**Phulchoki**	**45.52**	**311**	eP	**P**	**20 34 53.1**	**-0.3**
PKIN	**Phulchoki**	**45.52**	**311**	eP	**P**	**20 34 53.7**	**+0.3**
	3.0nm,0.3s,mb4.5						
DMN	**Daman**	**45.76**	**310**	eP	**P**	**20 34 54.9**	**-0.3**
GKN	**Gorkha**	**46.32**	**311**	eP	**P**	**20 34 59.2**	**-0.4**
	9.6nm,0.5s,mb4.8						
KOLN	**Koldanda**	**47.00**	**310**	eP	**P**	**20 35 05.0**	**+0.1**
	9.9nm,0.5s,mb4.8						
DANN	**Dangsing**	**47.16**	**310**	eP	**P**	**20 35 05.6**	**-0.6**
	9.6nm,0.4s,mb4.9						
SONM	**Songino Array**	**50.04**	**345**	P	**P**	**20 35 27.3**	**-0.6**
	2.6nm,0.7s,mb4.3,baz=161,slow=8.9,SNR=26						
MKAR	**Makanchi Array**	**58.86**	**328**	P	**P**	**20 36 31.2**	**-0.5**
	2.1nm,0.7s,mb4.3,baz=106,slow=8.9,SNR=5.3						
KBL	**Kabul**	**61.15**	**310**	eP	**P**	**20 36 46.9**	**-0.7**
	3.1nm,0.6s,mb4.5						
ZALV	**Zalesovo Beam**	**62.57**	**336**	P	**P**	**20 36 55.7**	**-0.9**
	0.4nm,0.4s,mb3.7,baz=126,slow=3.7,SNR=4.2						
BVAR	**Borovoye Array**	**68.73**	**329**	P	**P**	**20 37 35.8**	**-0.5**
	0.5nm,0.7s,mb3.5,baz=133,slow=11,SNR=3.5						
ILAR	**Eielson Array**	**90.25**	**25**	P	**P**	**20 39 31.4**	**-1.0**
	0.1nm,0.7s,mb3.0,baz=270,slow=1.8,SNR=2.7						
ARCES	**ARCESS Array B**	**92.89**	**340**	P	**P**	**20 39 42.6**	**-1.9**
	0.8nm,0.9s,mb4.1,baz=93,slow=9.3,SNR=4.0						

MAN 10 20:47:06, 9°.38N×125°.75E, h17km, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.43**	**198**	eP	Pg	20 47 16.4	+1.6
BUTP				eS	Sg	20 47 25.6	+5.0
SCPH	**Surigao**	**0.48**	**327**	⇑eP	Pg	20 47 16.6	+0.9
MSLP	**Maasin**	**1.16**	**310**	eP	Pn	20 47 27.0	-0.4
MSLP				eS	Sb	20 47 39.0	-3.3
BUKP	**Musuan**	**1.64**	**205**	eP	Pn	20 47 36.3	+2.2

IDC 10 20:51:14.3±8.7, 17°.07S×175°.14W, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.5/17, mbtmp3.3/3, Error ellipse: s-maj=381.0km s-min=39.0km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.85**	**258**	P	P	20 59 54.0	-0.2
	0.1nm,0.4s,baz=95,slow=7.2,SNR=3.5						
ASAR	**Alice Springs**	**48.02**	**253**	P	P	20 59 55.6	+0.1
	0.4nm,0.5s,baz=88,slow=8.0,SNR=12						
ILAR	**Eielson Array**	**84.41**	**12**	P	P	21 03 48.2	+0.1
	0.3nm,0.5s,baz=223,slow=5.8,SNR=4.2						

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*IDC **10** 20:52:09.8±1.2, 32°.17N×105°.35E, h0km, mb3.5/4, mb1 3.5/6, mb1mx3.4/23, mbtmp3.3/6, ML3.5/1, Error ellipse: s-maj=61.7km s-min=20.6km az=63.0*
*ISCJB **10** 20:52:10.3±1.5, 32°.01N±0°.06×104°.88E±0°.09, h4km±12km, mb3.4/4, Error ellipse: s-maj=13.3km s-min=8.6km az=20.5*
*BJI **10** 20:52:18.6, 31°.91N×104°.36E, h12km, ML3.2/10*
ISC 10 20:52:12.6±1.7, 31°.97N±0°.06×104°.81E±0°.09, h10km±13km, n9, σ0°.83/13, mb3.4/4, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.39**	**221**	⇑iPg	**Pn**	**20 52 38.6**	**+0.6**
CD2				Sg	**Sn**	**20 52 56.6**	**+0.2**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,970nm,0.7s						
XAN	**Xi'an**	**4.03**	**58**	Pn	**Pg**	**20 53 29.1**	**-0.6**
XAN				Sn	**Sg**	**20 54 22.6**	**+0.7**
XAN				smax			
	comp=N,45nm,0.6s						
XAN				smax			
	comp=E,27nm,0.7s						
LZH	**Lanzhou**	**4.18**	**349**	Pg	**Pg**	**20 53 32.8**	**0.0**
LZH				Sn	**Sn**	**20 54 06.8**	**+1.3**
LZH				Sg	**Sg**	**20 54 20.9**	**-6.1**
LZH				smax			
	comp=N,65nm,0.7s						
LZH				smax			
	comp=E,70nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.46**	**203**	Pn	**Pn**	**20 55 41.9**	**+4.5**
	comp=E,0.1nm,0.3s,baz=10,slow=9.2,SNR=3.4						
SONM	**Songino Array**	**15.89**	**4**	Pn	**Pn**	**20 55 52.1**	**-4.2**
	baz=181,slow=13,SNR=2.4						
MKAR	**Makanchi Array**	**22.74**	**317**	P	**P**	**20 57 14.4**	**-0.4**
	comp=E,0.6nm,0.9s,mb3.0,baz=120,slow=11,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.22**	**333**	P	**P**	**20 57 47.1**	**-0.3**
	comp=E,0.5nm,0.3s,mb3.5,baz=134,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**58.86**	**147**	P	**P**	**21 02 11.8**	**+0.1**
	comp=E,0.4nm,0.6s,mb3.6,baz=339,slow=7.5,SNR=4.8						
ASAR	**Alice Springs**	**61.92**	**150**	P	**P**	**21 02 29.2**	**-3.3**
	comp=E,0.1nm,0.4s,mb3.3,baz=334,slow=6.9,SNR=2.6						

IDC 10 20:57:20.7±2.1, 6°.80S×129°.56E, h0km, mb3.6/1, mb1 3.4/4, mb1mx3.3/17, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=78.6km s-min=28.3km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.86**	**198**	Pn	Pn	21 00 12.9	+1.6
	0.1nm,0.3s,baz=29,slow=16,SNR=8.9						
FITZ				Sn	Sn	21 02 16.1	-8.3
	0.1nm,0.3s,baz=355,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**13.86**	**161**	Pn	Pn	21 00 36.7	-1.8
	0.2nm,0.3s,baz=338,slow=14,SNR=14						
WRA				Sn	Sn	21 02 59.1	-14
	0.2nm,0.3s,baz=336,slow=22,SNR=6.3						
ASAR	**Alice Springs**	**17.28**	**166**	P	Pn	21 01 23.6	+0.1
	0.1nm,0.3s,baz=345,slow=10,SNR=5.1						
MKAR	**Makanchi Array**	**67.83**	**327**	P	P	21 08 20.7	+0.1
	0.2nm,0.4s,baz=117,slow=7.4,SNR=6.2						

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*CSEM **10** 21:09:45.6, 38°.77N×30°.12W, h10km, ML3.0, After PDA*
PDA 10 21:09:45.6±0.9, 38°.77N×30°.12W, h10km, MD3.5, ML3.0, Error ellipse: s-maj=21.2km s-min=8.4km az=12.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.12**	**97**	eS	Sb	21 10 15.4	-6.3
PCED				A		21 10 16.8	
	142nm,0.3s						
PCED	**Cedros**	**1.12**	**97**	eS	Sb	21 10 15.4	-6.3
CALA	**Caldeira**	**1.13**	**99**	eP	Pb	21 10 03.3	-3.9
CALA				eS	Sb	21 10 15.4	-6.5
CALA	**Caldeira**	**1.13**	**99**	eP	Pb	21 10 03.3	-3.9
CALA				eS	Sb	21 10 15.4	-6.5
HOR	**Horta**	**1.19**	**101**	eS	Sb	21 10 17.4	-6.3
HOR	**Horta**	**1.19**	**101**	eS	Sb	21 10 17.4	-6.3
PCAN	**Candelaria**	**1.32**	**103**	eP	Pn	21 10 05.2	-4.8
PCAN				eS	Sb	21 10 20.0	-7.3
PCAN				A		21 10 23.3	
	113nm,0.2s						
PCAN	**Candelaria**	**1.32**	**103**	eP	Pn	21 10 05.2	-4.8
PCAN				eS	Sb	21 10 20.0	-7.3
PICO	**Pico**	**1.35**	**101**	eS	Sb	21 10 21.5	-6.9
PICO	**Pico**	**1.35**	**101**	eS	Sb	21 10 21.5	-6.9
ROSA	**Rosais**	**1.47**	**91**	eP	Pn	21 10 07.2	-4.9
ROSA				eS	Sn	21 10 23.9	-7.5
ROSA	**Rosais**	**1.47**	**91**	eP	Pn	21 10 07.2	-4.9
ROSA				eS	Sn	21 10 23.9	-7.5
PMAN	**Manadas**	**1.60**	**94**	eS	Sn	21 10 27.0	-7.5
PMAN				A		21 10 28.0	
	38nm,0.3s						
PMAN	**Manadas**	**1.60**	**94**	eS	Sn	21 10 27.0	-7.5

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*NIED **10** 21:42:00, 44°.00N×147°.20E, h65km, Mw3.9 Best double couple: M0 7.01000×10^14 NP1:φ0=267.00000°, δ82.00000°, λ102.00000°. NP2:φ0=32.00000°, δ14.00000°, λ35.00000°.*
JMA 10 21:42:02.2±0.3, 44°.01N×147°.23E, h63km, M3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.26**	**240**	P	Pn	21 42 24.1	+0.4
NEM2				eS	Sn	21 42 39.9	+0.2
JRA	**Rausu**	**1.52**	**268**	P	Pn	21 42 27.5	+0.3
JRA				eS	Sn	21 42 46.7	+0.6
JNK	**Nakash**	**1.87**	**258**	P	Pn	21 42 32.3	+0.4
JNK				eS	Sn	21 42 54.7	+0.3
JAK	**Akkeshi**	**2.10**	**242**	P	Pn	21 42 35.3	+0.2
JTKR	**Abashiri--Toko**	**2.40**	**270**	P	Pn	21 42 39.1	0.0
JAR	**Ashorobuto**	**2.61**	**255**	P	Pn	21 42 43.2	+1.2
JAR				eS	Sn	21 43 13.8	+1.3
JOB	**Onbets**	**2.71**	**247**	P	Pn	21 42 44.3	+1.0
JOB				eS	Sn	21 43 16.1	+1.2
JMP	**Maruseppu**	**2.79**	**271**	P	Pn	21 42 44.8	+0.4
JCH	**Churui**	**3.15**	**245**	P	Pn	21 42 49.7	+0.4
JKK2	**Kamakawa 2**	**3.24**	**269**	P	Pn	21 42 52.0	+1.5
ASAJ	**Asahikawa**	**3.34**	**273**	P	Pn	21 42 53.3	+1.4
JWK2	**Keihoku**	**4.02**	**291**	P	Pn	21 43 02.3	+1.1

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*IDC **10** 21:59:52.0±1.6, 50°.87N×169°.48W, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/26, mbtmp3.4/6, ML3.5/1, Error ellipse: s-maj=44.9km s-min=29.8km az=170.0*
*ISCJB **10** 21:59:52.6±0.9, 51°.12N±0°.08×169°.64W±0°.10, h10km, mb3.5/5, Error ellipse: s-maj=12.9km s-min=7.5km az=153.7*
*NEIC **10** 21:59:56.6, 51°.17N×169°.73W, h10km, ML3.0(AEIC), After AEIC.*
ISC 10 21:59:54.6±1.0, 51°.17N±0°.09×169°.67W±0°.10, h10km, n11, σ0°.94/14, mb3.5/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**1.88**	**15**	P	**Pn**	**22 00 26.8**	**+0.1**
NIKO				S	**Sn**	**22 00 49.9**	**-0.5**
ATKA	**Atka Island**	**3.00**	**292**	P	**Pn**	**22 00 42.6**	**+0.4**
ATKA				S	**Sn**	**22 01 17.0**	**-1.2**
UNV	**Unalaska Valle**	**3.31**	**35**	P	**Pn**	**22 00 46.9**	**+0.5**
UNV				S	**Sn**	**22 01 25.4**	**-0.4**
KDAK	**Kodiak Island**	**11.92**	**50**	Pn	**Pn**	**22 02 43.9**	**-0.6**
	0.6nm,0.3s,baz=215,slow=7.6,SNR=3.8						
ILAR	**Eielson Array**	**18.06**	**32**	P	**Pn**	**22 04 06.3**	**+1.0**
	0.1nm,0.3s,baz=230,slow=9.7,SNR=4.8						
ILAR	**Eielson Array**	**18.06**	**32**	P	**Pn**	**22 04 06.3**	**+1.0**
PDAR	**Pinedale Array**	**40.83**	**78**	P	**P**	**22 07 35.1**	**-0.9**
	0.6nm,0.7s,mb3.3,baz=295,slow=8.0,SNR=5.3						
SONM	**Songino Array**	**51.76**	**301**	P	**P**	**22 09 03.8**	**+1.8**
	0.3nm,0.8s,mb3.3,baz=69,slow=7.9,SNR=2.2						
MKAR	**Makanchi Array**	**64.50**	**314**	P	**P**	**22 10 32.1**	**+1.0**
	0.3nm,0.8s,mb3.4,baz=57,slow=5.5,SNR=2.6						
NOA	**NORSAR Array B**	**68.14**	**360**	P	**P**	**22 10 54.7**	**+0.5**
	0.7nm,0.8s,mb3.7,baz=1.0,slow=6.6,SNR=2.4						
ASAR	**Alice Springs**	**89.47**	**230**	P	**P**	**22 12 49.9**	**-1.7**
	0.4nm,0.6s,mb3.9,baz=38,slow=4.7,SNR=3.3						

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*IDC **10** 22:23:16.1±2.7, 9°.04N×93°.16E, h0km, mb3.2/3, mb1 3.5/4, mb1mx3.3/21, mbtmp3.3/4, ML4.3/1, MS3.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**8.30**	**116**	*e*Pn	**Pn**	**22 25 18.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**10.91**	**30**	Pn	**Pn**	**22 25 54.6**	**+0.1**
	0.6nm,0.3s,baz=223,slow=15,SNR=4.6						
PALK	**Pallekele**	**12.47**	**263**	*e*Pn	**Pn**	**22 26 15.9**	**+0.1**
LSA	**Lhasa**	**20.64**	**355**	*e*P	**P**	**22 27 57.9**	**+0.1**
	2.5nm,0.3s						
HHC	**Hu-ho-hao-te**	**35.64**	**24**	*e*P	**P**	**22 30 17.5**	**+1.4**
HHC				pP	pP	22 30 27.2	+6.2
HHC				sP	sP	22 30 31.2	+8.3
HHC				PP	PP	22 31 38.9	+1.8
HHC				PcP	PcP	22 32 44.7	+0.2
HHC				S	**S**	**22 35 52.3**	**+0.5**
HHC				sS	sS	22 36 08.4	+8.5
HHC				ScP	ScP	22 36 27.4	-2.7
HHC				SS	SS	22 38 14.3	-13
HHC				ScS	ScS	22 40 31.2	-3.6
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,78nm,5.0s						
HHC				LR	LR		
	comp=N,570nm,16.2s,MS4.5						
HHC				LR	LR		
	comp=E,460nm,16.6s,MS4.5						
HHC				LR	LR		
	comp=Z,420nm,15.9s,MS4.3						
UCH	**Uchtor**	**36.91**	**337**	P	**P**	**22 30 26.8**	**-0.2**
	comp=Z,1.1nm,0.4s,mb4.0						
TKM2	**Tokmak 2**	**37.10**	**338**	*e*P	**P**	**22 30 28.5**	**0.0**
	comp=Z,1.2nm,0.4s,mb4.1						
AML	**Almayashu**	**37.16**	**336**	*e*P	**P**	**22 30 30.5**	**+1.5**
	comp=Z,2.8nm,0.6s,mb4.3						
AAK	**Ala-Archa**	**37.27**	**337**	LR	LR	22 46 43.7	
	comp=Z,43nm,19.8s,MS3.2,baz=20,slow=38						
AAK	**Ala-Archa**	**37.27**	**337**	P	**P**	**22 30 29.7**	**-0.2**
EKS2	**Erkin-Say**	**37.57**	**336**	*e*P	**P**	**22 30 32.6**	**+0.1**
	comp=Z,1.1nm,0.4s,mb3.9						
MK31	**Makanchi Array**	**38.76**	**348**	*e*P	**P**	**22 30 40.7**	**-1.8**
MKAR	**Makanchi Array**	**38.76**	**348**	P	**P**	**22 30 42.7**	**+0.3**
	comp=Z,0.4nm,0.7s,mb3.3,baz=169,slow=8.7,SNR=5.3						
MKAR				LR	LR	22 51 23.9	
	comp=Z,41nm,19.0s,MS3.3,baz=167,slow=44						
MKAR	**Makanchi Array**	**38.76**	**348**	P	**P**	**22 30 42.7**	**+0.3**
MKAR				LR	LR	22 51 23.9	
SONM	**Songino Array**	**40.26**	**14**	P	**P**	**22 30 54.2**	**-0.8**
	comp=Z,0.3nm,0.6s,mb3.2,baz=193,slow=5.6,SNR=3.8						
MDJ	**Mudanjiang**	**47.40**	**35**	P	**P**	**22 31 51.3**	**-1.2**
WRA	**Warramunga Arr**	**49.71**	**126**	P	**P**	**22 32 10.4**	**-0.1**
	comp=Z,0.2nm,0.9s,mb3.2,baz=306,slow=8.5,SNR=2.8						

DJA 10 22:25:44,4°.67S×101°.78E,h64km,MLv3.6/5,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.21**	**75**	P	Pn	22 26 05.6	+0.6
MNAI				S	Sn	22 26 20.3	-0.3
KSI	**Kapahiang**	**1.30**	**39**	P	Pn	22 26 08.0	+1.9
KSI				S	Sn	22 26 23.9	+1.3
LWLI	**Liwa**	**2.30**	**99**	P	Pn	22 26 21.4	+1.8
MDSI	**Maura Dua**	**2.40**	**86**	P	Pn	22 26 19.8	-1.1
MDSI				S	Sn	22 26 52.3	+3.1
KLSI		**2.94**	**91**	P	Pn	22 26 28.2	-0.1

WEL 10 22:27:04.3±0.4,43°.27S×176°.27E,h33km,ML3.6/9,Error ellipse: s-maj=3.2km s-min=2.9km az=90.0,Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLWZ	**Palliser**	**1.86**	**336**	PN	Pn	22 27 33.4	-0.3
TRWZ	**Traveller**	**1.92**	**347**	PN	Pn	22 27 34.4	-0.2
TRWZ				SN	Sn	22 27 56.8	-0.8
MSWZ	**Moikau Station**	**2.00**	**337**	PN	Pn	22 27 35.2	-0.5
MSWZ				SN	Sn	22 27 57.4	-2.2
TMWZ	**Te Maipa**	**2.18**	**352**	PN	Pn	22 27 37.7	-0.5
MTW	**Mount Morrison**	**2.19**	**345**	PN	Pn	22 27 37.7	-0.5
SNZO	**South Karori**	**2.28**	**329**	PN	Pn	22 27 38.7	-0.9
SNZO				SN	Sn	22 28 04.2	-2.2
CAW	**Cannon Point**	**2.34**	**337**	PN	Pn	22 27 40.0	-0.3
HOWZ	**Holdsworth Sta**	**2.44**	**346**	PN	Pn	22 27 41.1	-0.6
TIWZ	**Tintock**	**2.51**	**353**	PN	Pn	22 27 42.1	-0.6
TCW	**Tory Channel**	**2.53**	**324**	PN	Pn	22 27 42.4	-0.7
TCW				SN	Sn	22 28 10.8	-1.9
OGWZ	**Otaki Gorge**	**2.58**	**341**	PN	Pn	22 27 43.4	-0.3
BFZ	**Birch Farm**	**2.59**	**360**	PN	Pn	22 27 42.9	-0.9
KIW	**Kapiti Island**	**2.61**	**337**	PN	Pn	22 27 44.1	0.0
MRZ	**Mangatainoka R**	**2.66**	**349**	PN	Pn	22 27 44.1	-0.6
MRZ				SN	Sn	22 28 12.1	-3.7
MQZ	**McQueen's Vall**	**2.67**	**259**	PN	Pn	22 27 43.3	-1.6
MQZ				SN	Sn	22 28 12.4	-3.7
POWZ	**Post Office Ro**	**2.90**	**352**	PN	Pn	22 27 48.0	-0.1
THZ	**Tophouse**	**2.91**	**300**	PN	Pn	22 27 47.6	-0.6
DVHZ	**Dannevirke**	**2.97**	**358**	PN	Pn	22 27 48.1	-0.9
LTZ	**Lake Taylor**	**2.98**	**278**	PN	Pn	22 27 48.8	-0.4
PRHZ	**Porangahau**	**3.01**	**5**	PN	Pn	22 27 48.4	-1.2
DUWZ	**D'Urville Isla**	**3.02**	**324**	PN	Pn	22 27 50.1	+0.3
WPHZ	**Waipukurau**	**3.20**	**2**	PN	Pn	22 27 51.4	-0.9
TSZ	**Takapari Road**	**3.21**	**356**	PN	Pn	22 27 51.9	-0.5
PNHZ	**Pukenui**	**3.35**	**359**	PN	Pn	22 27 53.5	-0.9
WAZ	**Wanganui**	**3.64**	**344**	PN	Pn	22 27 59.8	+1.5
QRZ	**Quartz Range**	**3.71**	**310**	PN	Pn	22 27 58.7	-0.5
QRZ				SN	Sn	22 28 41.3	-0.4
BHHZ	**Black Hill Sta**	**3.78**	**358**	PN	Pn	22 28 00.0	-0.2
FWVZ	**Far West T-bar**	**4.05**	**352**	PN	Pn	22 28 04.1	+0.2
BKZ	**Black Stump Fm**	**4.10**	**2**	PN	Pn	22 28 03.6	-1.0
OTVZ	**Oturere**	**4.13**	**353**	PN	Pn	22 28 05.1	+0.1
ODZ	**Otahua Downs**	**4.42**	**244**	PN	Pn	22 28 07.2	-1.8
LBZ	**Lake Benmore**	**4.54**	**254**	PN	Pn	22 28 09.4	-1.3
EAZ	**Earnscleugh**	**5.37**	**246**	PN	Pn	22 28 20.8	-1.3
TUZ	**Tuapeka**	**5.45**	**238**	PN	Pn	22 28 21.4	-1.7

IDC ***10*** *22:34:22.1±2.1,28°.69N×113°.08W,h0km,mb3.9/5, mb1 4.0/9,mb1mx3.8/27,mbtmp3.7/9,ML4.1/3,MS3.5/11, Ms1 3.5/11,ms1mx3.3/33,Error ellipse: s-maj=33.0km s-min=13.8km az=35.0*

ISCJB ***10*** *22:34:24.9±0.8,28°.65N±0°.07×112°.72W±0°.06,h10km, mb4.1/8,MS3.5/10,Error ellipse: s-maj=10.3km s-min=6.3km az=29.5*

NEIC ***10*** *22:34:26.0±1.2,28°.59N×112°.84W,h10km,mb4.1/13, Error ellipse: s-maj=16.0km s-min=7.0km az=211.0*

ISC 10 22:34:26.0±0.8,28°.57N±0°.07×112°.81W±0°.06,h10km,n62,σ1§30/67,mb4.1/8,MS3.5/10,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUC	**Tucson**	**4.12**	**25**	*e*Pn	**Pn**	**22 35 23.7**	**-5.3**
TUC				*e*Pg	**Pg**	**22 35 41.5**	**-3.5**
TUC				*e*Sg	**Sg**	**22 36 30.9**	**-7.4**
GLA	**Glamis**	**4.80**	**339**	*e*Pn	**Pn**	**22 35 29.8**	**-8.5**
GLA				*e*Sn	**Sn**	**22 36 38.5**	**+4.5**
BAR	**Barrett**	**5.28**	**322**	*e*Pn	**Pn**	**22 35 45.2**	**+0.2**
	38nm,0.6s						
BAR				*e*Sn	**Sn**	**22 36 53.4**	**+7.5**
PFO	**Pinyon Flat Ob**	**5.92**	**329**	*e*Pn	**Pn**	**22 35 53.8**	**0.0**
LDFC	**Landfair**	**6.78**	**344**	*e*Pn	**Pn**	**22 36 04.4**	**-1.2**
MNTX	**Cornudas Mount**	**7.15**	**62**	*e*Pn	**Pn**	**22 36 10.3**	**-0.3**
	8.4nm,0.8s						
MNTX				Sn	**Sn**	**22 37 27.3**	**-4.6**
LENM	**Lemitar**	**7.48**	**40**	*e*Pn	**Pn**	**22 36 13.2**	**-2.0**
LENM				*e*S	**Sg**	**22 38 19.4**	**-6.8**
LAZ	**Ladron**	**7.57**	**38**	*e*Pn	**Pn**	**22 36 14.3**	**-2.0**
	8.1nm,1.0s						
LAZ				*e*Sg	**Sg**	**22 38 22.1**	**-6.7**
BNM	**Barren Site**	**7.67**	**42**	*e*Pn	**Pn**	**22 36 16.8**	**-1.1**
	16nm,1.0s						
BNM				*e*Sn	**Sn**	**22 37 43.5**	**-1.2**
BNM				*e*Sg	**Sg**	**22 38 25.2**	**-7.0**
LPM	**Los Pinos Moun**	**7.78**	**41**	*e*Pn	**Pn**	**22 36 20.7**	**+1.4**
LPM				*e*Sn	**Sn**	**22 37 51.5**	**+4.0**
TXAR	**Lajitas Array**	**8.04**	**82**	Pn	**Pn**	**22 36 24.2**	**+1.3**
	2.4nm,0.3s,baz=254,slow=13,SNR=107						
TXAR				Lg		22 38 44.1	
	0.5nm,0.3s,baz=257,slow=31,SNR=3.3						
TXAR				LR	LR	22 39 59.8	
	comp=Z,400nm,19.1s,baz=355,slow=41						
GDL2	**Guadalupe Moun**	**8.14**	**62**	*e*Pn	**Pn**	**22 36 25.3**	**+1.1**
ANMO	**Albuquerque**	**8.35**	**39**	Pn	**Pn**	**22 36 24.9**	**-2.2**
	0.5nm,0.3s,baz=223,slow=14,SNR=8.5						
ANMO				Lg		22 38 44.6	
	0.7nm,0.3s,baz=301,slow=17,SNR=6.8						
ANMO	**Albuquerque**	**8.35**	**39**	*e*Pn	**Pn**	**22 36 24.8**	**-2.3**
CCUT	**Cedar City**	**8.97**	**357**	*e*Pn	**Pn**	**22 36 30.5**	**-5.1**
	18nm,0.8s						
CCUT				Sn	**Sn**	**22 38 17.7**	**+1.0**
ARUT	**Antelope Range**	**9.21**	**357**	*e*Pn	**Pn**	**22 36 34.8**	**-4.2**
	23nm,0.6s						
ARUT				*e*Sn	**Sn**	**22 38 27.6**	**+4.9**
MSU	**Marysvale**	**9.93**	**3**	*e*Pn	**Pn**	**22 36 48.8**	**0.0**
PV01	**Paradox Valley**	**10.18**	**19**	*e*Pn	**Pn**	**22 36 52.9**	**+0.7**
	131nm,0.7s						
NVAR	**Mina Array Bea**	**10.85**	**336**	Pn	**Pn**	**22 36 56.7**	**-4.7**
	baz=160,slow=14,SNR=3.1						
NVAR				Lg		22 39 59.9	
	0.1nm,0.3s,baz=161,slow=35,SNR=1.7						
NVAR	**Mina Array Bea**	**10.85**	**336**	Pn	**Pn**	**22 36 56.7**	**-4.7**
NVAR				Lg		22 39 59.9	
WAKR	**Walker**	**11.35**	**333**	Pn	**Pn**	**22 37 04.7**	**-3.5**
	16nm,1.3s						
DUG	**Dugway**	**11.60**	**360**	*e*Pn	**Pn**	**22 37 17.0**	**+5.4**
SMCO	**Snowmass**	**11.64**	**23**	*e*Pn	**Pn**	**22 37 13.8**	**+1.7**
HWUT	**Hardware Ranch**	**13.05**	**4**	*e*Pn	**Pn**	**22 37 33.6**	**+2.2**
WMOK	**Wichita Mounta**	**13.43**	**59**	*e*Pn	**Pn**	**22 37 37.7**	**+1.0**
BW06	**Boulder Array**	**14.41**	**10**	*e*Pn	**Pn**	**22 37 57.5**	**+7.5**
PDAR	**Pinedale Array**	**14.41**	**10**	Pn	**Pn**	**22 37 50.0**	**0.0**
	0.1nm,0.3s,baz=181,slow=12,SNR=5.2						
PDAR				Lg		22 41 54.8	
	0.1nm,0.3s,baz=189,slow=28,SNR=2.6						
MOD	**Modoc**	**14.64**	**337**	*e*Pn	**Pn**	**22 37 52.2**	**-0.9**
HLID	**Hailey**	**15.02**	**355**	*e*Pn	**Pn**	**22 37 57.7**	**-0.6**
IMW	**Indian Meadow**	**15.37**	**5**	*e*Pn	**Pn**	**22 38 03.1**	**+0.2**
	6.4nm,1.0s						
YBH	**Yreka Blue Hor**	**15.42**	**331**	LR	LR	22 43 41.6	
	comp=Z,260nm,19.3s,baz=152,slow=37						
MCMT	**McKenzie Canyo**	**16.23**	**360**	*e*Pn	**Pn**	**22 38 15.6**	**+1.6**
	2.3nm,1.0s						
RLMT	**Red Lodge**	**16.76**	**9**	*e*Pn	**Pn**	**22 38 21.0**	**+0.2**
	13nm,1.5s						
KSU1	**Kansas State U**	**17.05**	**48**	*e*Pn	**Pn**	**22 38 26.0**	**+1.6**
	22nm,0.7s						
BOZ	**Bozeman (W)**	**17.07**	**3**	*e*Pn	**Pn**	**22 38 25.0**	**+0.3**
MIAR	**Mount Ida**	**17.43**	**65**	Pn	**Pn**	**22 38 30.5**	**+1.2**
	5.9nm,0.9s						
CHMT	**Chamberlain Mo**	**18.32**	**359**	*e*Pn	**Pn**	**22 38 41.7**	**+1.6**
SLMT	**Seeley Lake**	**18.65**	**359**	*e*Pn	**Pn**	**22 38 46.1**	**+1.9**
BSMT	**Bassoo Peak**	**19.32**	**356**	*e*P	**Pn**	**22 38 53.3**	**+1.1**
OD2	**Odessa Site #2**	**19.35**	**348**	*e*P	**Pn**	**22 38 51.9**	**-0.8**
EGMT	**Eagleton**	**19.57**	**6**	*e*P	**Pn**	**22 38 55.1**	**-0.1**
	16nm,1.3s						
ECSD	**EROS Data Cent**	**19.95**	**36**	*e*Pn	**Pn**	**22 38 57.3**	**-2.4**
	4.5nm,0.8s						
CMIG	**Matias Romero**	**20.05**	**121**	P	**P**	**22 38 59.1**	**-0.3**
	1.8nm,0.9s,baz=273,slow=17,SNR=1.8						
CMIG				LR	LR	22 47 16.8	
	comp=Z,192nm,18.9s,MS3.5,baz=213,slow=38						
CCM	**Cathedral Cave**	**20.32**	**57**	*e*P	**P**	**22 39 02.3**	**+0.2**
	12nm,1.1s						
WVT	**Waverly**	**22.37**	**64**	*e*P	**P**	**22 39 25.2**	**+0.9**
	9.5nm,1.1s,mb4.1						
HDIL	**Hopedale**	**22.68**	**52**	*e*P	**P**	**22 39 27.1**	**-0.5**
	18nm,0.7s,mb4.6						
JFWS	**Jewell Farm**	**23.15**	**46**	*e*P	**P**	**22 39 33.3**	**+0.9**
	11nm,0.8s,mb4.3						
AGMN	**Agassiz Nation**	**23.66**	**29**	*e*P	**P**	**22 39 41.0**	**+3.4**
	9.2nm,1.0s,mb4.2						
CPCT	**Cooper Cave**	**24.89**	**67**	*e*P	**P**	**22 39 48.2**	**-0.9**
ULM	**Lac du Bonnet**	**25.18**	**26**	P	**P**	**22 39 48.0**	**-3.5**
	2.7nm,1.1s,mb3.7,baz=220,slow=18,SNR=2.4						
ULM	**Lac du Bonnet**	**25.18**	**26**	*e*P	**P**	**22 39 50.3**	**-1.2**
	4.8nm,1.0s,mb4.0						
TKL	**Tuckaleechee C**	**25.53**	**67**	P	**P**	**22 39 55.5**	**+0.7**
	7.2nm,0.8s,mb4.2,baz=246,slow=9.7,SNR=6.7						
TKL				LR	LR	22 49 52.5	
	comp=Z,129nm,19.5s,MS3.5,baz=81,slow=36						
TKL	**Tuckaleechee C**	**25.53**	**67**	*e*P	**P**	**22 39 56.5**	**+1.8**
BBB	**Bella Bella**	**26.21**	**338**	LR	LR	22 49 57.4	
	comp=Z,142nm,19.6s,MS3.5,baz=355,slow=36						
SADO	**Sadowa**	**31.20**	**50**	P	**P**	**22 40 43.4**	**-1.9**
	2.1nm,0.6s,mb4.2,baz=269,slow=9.0,SNR=3.8						
SADO				LR	LR	22 53 53.0	
	comp=Z,90nm,20.5s,MS3.4,baz=230,slow=37						
DLBC	**Dease Lake**	**32.17**	**343**	LR	LR	22 53 34.8	
	comp=Z,192nm,18.6s,MS3.8,baz=147,slow=36						
YKA	**Yellowknife Ar**	**33.95**	**359**	LR	LR	22 57 19.3	
	comp=Z,8.2nm,18.4s,MS2.5,baz=185,slow=41						
INK	**Inuvik**	**41.63**	**349**	LR	LR	23 00 23.7	
	comp=Z,102nm,18.1s,MS3.7,baz=60,slow=38						
ILAR	**Eielson Array**	**42.10**	**339**	P	**P**	**22 42 15.2**	**-2.6**
	0.3nm,0.6s,mb3.1,baz=141,slow=6.7,SNR=2.7						
ROSC	**El Rosal**	**43.43**	**116**	LR	LR	22 59 41.4	
	comp=Z,59nm,20.9s,MS3.5,baz=31,slow=35						
SJG	**San Juan**	**43.85**	**93**	LR	LR	23 03 09.3	
	comp=Z,63nm,18.8s,MS3.5,baz=73,slow=39						
HHC	**Hu-ho-hao-te**	**99.62**	**327**	*e*P	**P**	**22 48 08.5**	**-1.3**
HHC				pP	pP	22 48 13.3	+0.1
HHC				sP	sP	22 48 15.6	+1.2
HHC				PP	PP	22 52 14.0	+1.1
HHC				SKS		22 58 45.3	
HHC				S	S	22 59 36.4	-6.8
HHC				sS	sS	22 59 43.6	-5.1
HHC				SS	SS	23 06 29.3	-3.0
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,5.2s						
HHC				LR	LR		
	comp=N,220nm,18.1s,MS4.8						
HHC				LR	LR		
	comp=E,130nm,17.2s,MS4.8						
HHC				LR	LR		
	comp=Z,130nm,19.2s,MS4.5						

ISCJB ***10*** *22:46:52.5±0.5,26°.75N±0°.04×55°.88E±0°.04,h10km, mb4.0/22,Error ellipse: s-maj=6.4km s-min=4.8km az=169.9*

IDC ***10*** *22:46:52.8±0.7,26°.84N×55°.93E,h0km,mb4.0/17, mb1 4.0/20,mb1mx4.0/30,mbtmp3.9/20,ML3.8/3,Error ellipse: s-maj=17.9km s-min=15.1km az=141.0*

MOS ***10*** *22:46:56.0±1.1,26°.82N×55°.89E,h33km,mb4.1/15,Error ellipse: s-maj=12.1km s-min=9.0km az=94.6*

KISR ***10*** *22:46:56.4±0.5,27°.20N×55°.39E,h2km±898km,ML4.0*

TEH ***10*** *22:46:58.4,26°.87N×55°.97E,h22km*

NEIC ***10*** *22:46:58.4±0.2,26°.86N×55°.92E,h40km,mb4.0/18,Error ellipse: s-maj=7.1km s-min=5.6km az=3.0*

ISC 10 22:46:54.6±0.5,26°.79N±0°.04×55°.93E±0°.04,h10km,n142,σ1§11/169,mb4.0/22,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.85**	**40**	*e*Pg	**Pg**	**22 47 12.5**	**+1.5**
IBND				*e*Sg	**Sg**	**22 47 23.0**	**+0.9**
IBND				*e*		22 47 48.3	
	comp=Z,76μm,0.3s						
IBND	**Bandar-abas**	**0.85**	**40**	*e*Pg	**Pg**	**22 47 12.5**	**+1.5**
ISRV	**Sarvestan**	**3.58**	**317**	Pn	**Pn**	**22 47 52.4**	**+2.2**
ISRV				Sn	**Sn**	**22 48 32.0**	**-0.6**
ISRV	**Sarvestan**	**3.58**	**317**	*e*Pn	**Pn**	**22 47 52.5**	**+2.3**
ISRV				*e*Sn	**Sn**	**22 48 32.1**	**-0.5**
ISRV				*e*		22 49 24.7	
	comp=Z,2μm,0.4s						
ISRV	**Sarvestan**	**3.58**	**317**	*e*Pn	**Pn**	**22 47 52.5**	**+2.3**
ISRV				*e*Sn	**Sn**	**22 48 32.1**	**-0.5**
IPAR	**Pars**	**3.96**	**321**	Pn	**Pn**	**22 47 54.7**	**-0.6**
IPAR	**Pars**	**3.96**	**321**	*e*Pn	**Pn**	**22 47 54.8**	**-0.5**
IPAR				*e*		22 48 44.9	
	comp=Z,1μm,0.3s						
IPAR	**Pars**	**3.96**	**321**	*e*Pn	**Pn**	**22 47 54.8**	**-0.5**
IMEH	**Mehriz**	**4.72**	**346**	*e*	**Pn**	**22 48 14.1**	**+8.2**
	comp=Z,890nm,0.2s						
IMEH				*e*Pn	**Pn**	**22 48 07.9**	**+2.0**
IBAF	**Bafgh**	**4.79**	**356**	Pn	**Pn**	**22 48 08.0**	**+1.2**
IBAF				Sn	**Sn**	**22 48 59.2**	**-3.2**
IBAF	**Bafgh**	**4.79**	**356**	*e*	**Pb**	**22 48 17.1**	**-1.5**
	comp=Z,630nm,0.2s						
IBAF				*e*Pn	**Pn**	**22 48 08.0**	**+1.2**
IBAF				*e*Sn	**Sn**	**22 48 59.2**	**-3.2**
ISAD	**Sadrabad**	**5.47**	**340**	Pn	**Pn**	**22 48 18.7**	**+2.7**
ISAD				Sn	**Sn**	**22 49 16.6**	**-2.4**
ISAD	**Sadrabad**	**5.47**	**340**	*e*Pn	**Pn**	**22 48 18.8**	**+2.8**
ISAD				*e*Sn	**Sn**	**22 49 16.6**	**-2.4**
ISAD				*e*		22 49 30.8	
	comp=Z,594nm,0.2s						
ISAD	**Sadrabad**	**5.47**	**340**	*e*Pn	**Pn**	**22 48 18.8**	**+2.8**
ISAD				*e*Sn	**Sn**	**22 49 16.6**	**-2.4**
ICHK	**Chekchek**	**5.59**	**347**	Pn	**Pn**	**22 48 19.6**	**+1.8**
ICHK				Sn	**Sn**	**22 49 17.6**	**-4.5**
ICHK	**Chekchek**	**5.59**	**347**	*e*Pn	**Pn**	**22 48 19.7**	**+1.9**
ICHK				*e*		22 48 25.3	
	comp=Z,452nm,0.1s						
ICHK				*e*Sn	**Sn**	**22 49 17.7**	**-4.4**
ICHK	**Chekchek**	**5.59**	**347**	*e*Pn	**Pn**	**22 48 19.7**	**+1.9**
ICHK				*e*Sn	**Sn**	**22 49 17.7**	**-4.4**
IGAR	**Gharneh**	**6.54**	**330**	*e*Pn	**Pn**	**22 48 32.0**	**+1.3**
IGAR				*e*		22 48 44.3	
	comp=Z,694nm,0.1s						
IZEF	**Zefreh**	**6.84**	**334**	Pn	**Pn**	**22 48 35.5**	**+0.6**
IZEF				Sn	**Sn**	**22 49 48.6**	**-4.2**
IZEF	**Zefreh**	**6.84**	**334**	*e*Pn	**Pn**	**22 48 35.5**	**+0.6**
IZEF				*e*		22 48 38.7	
	comp=Z,286nm,0.2s						
IZEF				*e*Sn	**Sn**	**22 49 48.6**	**-4.2**
IZEF	**Zefreh**	**6.84**	**334**	*e*Pn	**Pn**	**22 48 35.5**	**+0.6**
IZEF				*e*Sn	**Sn**	**22 49 48.6**	**-4.2**
IDAH	**Dahanechah**	**6.84**	**29**	*e*Pn	**Pn**	**22 48 30.0**	**-5.0**
IDAH				*e*		22 49 17.5	
	comp=Z,127nm,0.2s						
IDAH	**Dahanechah**	**6.84**	**29**	*e*Pn	**Pn**	**22 48 30.0**	**-5.0**
IPIR	**Pirpir**	**7.32**	**324**	Pn	**Pn**	**22 48 42.7**	**+1.1**
IPIR	**Pirpir**	**7.32**	**324**	*e*Pn	**Pn**	**22 48 42.8**	**+1.2**
IPIR				*e*		22 50 05.1	
	comp=Z,812nm,0.2s						
IPIR	**Pirpir**	**7.32**	**324**	*e*Pn	**Pn**	**22 48 42.8**	**+1.2**
QRN	**Al-Qurain**	**7.36**	**287**	*e*P	**Pn**	**22 48 42.2**	**+0.1**
IKLH	**Kolahrood**	**7.52**	**331**	Pn	**Pn**	**22 48 44.9**	**+0.7**
IKLH	**Kolahrood**	**7.52**	**331**	*e*Pn	**Pn**	**22 48 45.0**	**+0.8**
IKLH				*e*		22 50 13.5	
	comp=Z,241nm,0.2s						
IKLH	**Kolahrood**	**7.52**	**331**	*e*Pn	**Pn**	**22 48 45.0**	**+0.8**
KBD	**Kabd**	**7.66**	**290**	*e*P	**Pn**	**22 48 46.4**	**+0.2**
KBD	**Kabd**	**7.66**	**290**	*e*P	**Pn**	**22 48 46.4**	**+0.2**
UMR	**Umm Al-Rimmam**	**7.75**	**293**	*e*P	**Pn**	**22 48 47.3**	**-0.2**
UMR				*e*S	**Sn**	**22 50 11.0**	**-4.3**
UMR				AML	AML	22 50 13.1	
	comp=Z,37nm,0.3s						
UMR	**Umm Al-Rimmam**	**7.75**	**293**	*e*P	**Pn**	**22 48 47.3**	**-0.1**
UMR				*e*S	**Sn**	**22 50 11.0**	**-4.3**
NAY	**Al-Naaiem**	**8.06**	**290**	*e*P	**Pn**	**22 48 51.9**	**+0.3**
NAY				*e*S	**Sn**	**22 50 18.5**	**-4.3**
NAY				AML	AML	22 50 21.3	
	comp=Z,9.4nm,0.3s						
NAY	**Al-Naaiem**	**8.06**	**290**	*e*P	**Pn**	**22 48 51.9**	**+0.3**
NAY				*e*S	**Sn**	**22 50 18.5**	**-4.3**
MIB	**Mutribah**	**8.14**	**294**	*e*P	**Pn**	**22 48 53.0**	**+0.1**
MIB				*e*S	**Sn**	**22 50 20.2**	**-4.8**
MIB				AML	AML	22 50 22.9	
	comp=Z,20nm,0.5s						
MIB	**Mutribah**	**8.14**	**294**	*e*P	**Pn**	**22 48 53.0**	**+0.2**
MIB				*e*S	**Sn**	**22 50 20.2**	**-4.7**
ISFB	**Sefidab**	**8.18**	**338**	Pn	**Pn**	**22 48 53.2**	**-0.1**
ISFB				Sn	**Sn**	**22 50 20.0**	**-5.7**
ISFB	**Sefidab**	**8.18**	**338**	*e*Pn	**Pn**	**22 48 53.2**	**-0.1**
ISFB				*e*		22 48 59.6	
	comp=Z,173nm,0.1s						
ISFB				*e*Sn	**Sn**	**22 50 20.0**	**-5.7**
ISFB	**Sefidab**	**8.18**	**338**	*e*Pn	**Pn**	**22 48 53.2**	**-0.1**
ISFB				*e*Sn	**Sn**	**22 50 20.0**	**-5.7**
IANJ	**Anjilo**	**8.82**	**349**	Pn	**Pn**	**22 49 03.7**	**+1.6**
IANJ	**Anjilo**	**8.82**	**349**	*e*	**Pn**	**22 49 10.4**	**+8.3**
	comp=Z,87nm,0.2s						
IANJ				*e*Pn	**Pn**	**22 49 03.7**	**+1.6**
IFIR	**Firoozkooh**	**9.23**	**344**	Pn	**Pn**	**22 49 08.7**	**+1.0**
IFIR	**Firoozkooh**	**9.23**	**344**	*e*Pn	**Pn**	**22 49 08.7**	**+1.0**
IFIR	**Firoozkooh**	**9.23**	**344**	*e*Pn	**Pn

AKTO pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
BVAR Borovoye Array 28.34 19 P P 22 52 48.1 -0.3
comp=Z,4.1nm,0.7s,mb4.2,baz=190,slow=7.5,SNR=20
BVAR Borovoye Array 28.34 19 P P 22 52 48.1 -0.4
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR Borovoye Array 28.34 19 P P 22 52 48.1 -0.4
comp=Z,4.0nm,0.7s,mb4.2
MKAR Makanchi Array 28.83 39 P P 22 52 53.5 +0.5
comp=Z,0.5nm,0.4s,mb3.6,baz=220,slow=8.3,SNR=13
MKAR Makanchi Array 28.83 39 P P 22 52 53.5 +0.6
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 28.83 39 P P 22 52 53.5 +0.6
comp=Z,1.0nm,0.4s,mb3.9
ZAA0 Zalesovo Array 34.49 30 *eP* **P 22 53 41.8 -0.7**
ZAA0 Zalesovo Array 34.49 30 *eP* **P 22 53 41.8 -0.7**
ZALV Zalesovo Beam 34.49 30 P P 22 53 41.9 -0.6
comp=Z,5.0nm,0.4s,mb4.8,baz=243,slow=9.0,SNR=26
ZALV Zalesovo Beam 34.49 30 P P 22 53 41.9 -0.6
ZALV pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
KHC Kasperske Hory 39.47 316 *eP* **P 22 54 24.0 -0.9**
KHC Kasperske Hory 39.47 316 *eP* **P 22 54 24.0 -0.9**
KHC Kasperske Hory 39.47 316 *eP* **P 22 54 24.0 -0.9**
JOF Joensuu 39.60 343 *eP* **P 22 54 24.7 -1.1**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
JOF Joensuu 39.60 343 *eP* **P 22 54 24.7 -1.1**
comp=Z,0.5nm,0.3s,mb3.7
FINES FINESS Array B 40.03 338 P P 22 54 28.2 -1.2
comp=Z,2.7nm,0.6s,mb4.1,baz=143,slow=11,SNR=11
FINES FINESS Array B 40.03 338 P P 22 54 28.2 -1.2
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 40.03 338 P P 22 54 28.2 -1.2
comp=Z,3.0nm,0.6s,mb4.2
CHTO Chiang Mai 40.29 92 P P 22 54 32.6 +0.5
CHTO Chiang Mai 40.29 92 P P 22 54 32.6 +0.5
KAF Kangasniemi 40.44 339 *eP* **P 22 54 29.0 -3.8**
KEST Kesra 40.49 294 *eP* **P 22 54 34.6 +1.0**
KEST Kesra 40.49 294 *eP* **P 22 54 34.6 +1.0**
SONM Songino Array 44.39 48 P P 22 55 04.8 -0.3
comp=Z,1.1nm,0.8s,mb3.6,baz=261,slow=7.7,SNR=8.4
SONM Songino Array 44.39 48 P P 22 55 04.8 -0.4
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 44.39 48 P P 22 55 04.8 -0.4
comp=Z,1.0nm,0.8s,mb3.6
NB2 NORSAR Subarra 45.51 331 P P 22 55 12.4 -1.5
comp=Z,0.2nm,0.4s,mb3.4,baz=118,slow=8.6
NB2 NORSAR Subarra 45.51 331 P P 22 55 12.4 -1.5
comp=Z,0.2nm,0.4s,mb3.4,baz=118,slow=8.0,SNR=3.2
NOA NORSAR Array B 45.51 331 P P 22 55 12.6 -1.3
comp=Z,0.8nm,0.9s,mb3.7,baz=119,slow=6.9,SNR=3.0
NOA NORSAR Array B 45.51 331 P P 22 55 12.6 -1.3
NOA pmax pmax
comp=Z,1.0nm,0.9s
NOA NORSAR Array B 45.51 331 P P 22 55 12.6 -1.3
comp=Z,1.0nm,0.9s,mb3.8
KEV Kevo 46.16 347 *eP* **P 22 55 13.8 -5.1**
ARCES ARCESS Array B 46.31 346 P P 22 55 19.6 -0.5
comp=Z,0.4nm,0.4s,mb3.7,baz=131,slow=8.3,SNR=8.4
ARCES ARCESS Array B 46.31 346 P P 22 55 19.6 -0.5
ESDC Sonseca Array 50.86 301 P P 22 55 54.8 -0.8
comp=Z,0.3nm,0.4s,mb3.6,baz=76,slow=7.0,SNR=6.8
ESDC Sonseca Array 50.86 301 P P 22 55 54.8 -0.8
LBTB Lobatse 59.24 212 P P 22 56 57.0 +0.8
comp=Z,1.7nm,0.5s,mb4.4,baz=32,slow=8.1,SNR=9.2
LBTB Lobatse 59.24 212 P P 22 56 57.0 +0.8
LBTB pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
LBTB Lobatse 59.24 212 P P 22 56 57.0 +0.8
comp=Z,2.0nm,0.5s,mb4.4
KSRS Korea Array 60.57 60 P P 22 57 04.9 -0.4
comp=Z,1.5nm,0.5s,mb4.3,baz=279,slow=6.3,SNR=7.5
KSRS Korea Array 60.57 60 P P 22 57 04.9 -0.5
KSRS pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
KSRS Korea Array 60.57 60 P P 22 57 04.9 -0.5
comp=Z,2.0nm,0.5s,mb4.5
BOSA Boshof 62.46 210 P P 22 57 18.0 -0.1
comp=Z,8.8nm,1.1s,mb4.8,baz=19,slow=7.7,SNR=7.1
BOSA Boshof 62.46 210 P P 22 57 18.0 -0.1
BOSA pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
BOSA Boshof 62.46 210 P P 22 57 18.0 -0.1
comp=Z,9.0nm,1.1s,mb4.8
ILAR Eielson Array 87.02 10 P P 22 59 38.6 -1.2
comp=Z,0.7nm,0.6s,mb4.0,baz=325,slow=4.5,SNR=6.8
ILAR Eielson Array 87.02 10 P P 22 59 38.6 -1.3
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ILAR Eielson Array 87.02 10 P P 22 59 38.6 -1.3
comp=Z,1.0nm,0.6s,mb4.2
WRA Warramunga Arr 89.03 113 P P 22 59 49.2 -1.0
comp=Z,0.2nm,0.4s,mb3.8,baz=305,slow=5.7,SNR=4.4
WRA Warramunga Arr 89.03 113 P P 22 59 49.2 -1.0
ASAR Alice Springs 90.47 116 P P 22 59 57.5 +0.7
comp=Z,0.2nm,0.6s,mb3.6,baz=298,slow=4.1,SNR=2.6
ASAR Alice Springs 90.47 116 P P 22 59 57.5 +0.7

WEL 10 23:09:31.9±0.5, 38°.31S×175°.83E, h174km±4km, ML3.6/7, Error ellipse: s-maj=3.5km s-min=3.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FWVZ	**Far West T-bar**	**0.97**	**193**	PN	Pn	23 09 59.3	+0.6
BKZ	**Black Stump Fm**	**1.01**	**149**	PN	Pn	23 09 59.2	+0.2
BKZ				SN	Sn	23 10 19.8	-0.2
URZ	**Urewera**	**1.01**	**88**	PN	Pn	23 09 58.8	-0.3
URZ				SN	Sn	23 10 19.5	-0.4
URZ				SN	Sn	23 10 19.7	-0.2
WNVZ	**Wahianoa**	**1.04**	**190**	PN	Pn	23 09 59.7	+0.5
MOVZ	**Moawhango**	**1.10**	**183**	PN	Pn	23 09 59.7	-0.1
BHHZ	**Black Hill Sta**	**1.20**	**171**	PN	Pn	23 10 00.5	-0.1
MCHZ	**McNeill Hill**	**1.33**	**149**	PN	Pn	23 10 02.5	+0.8
WAZ	**Wanganui**	**1.59**	**204**	PN	Pn	23 10 03.8	-0.4
KNZ	**Kokohu**	**1.61**	**117**	PN	Pn	23 10 04.5	0.0
PNHZ	**Pukenui**	**1.63**	**170**	PN	Pn	23 10 04.2	-0.4
CKHZ	**Cape Kidnapper**	**1.67**	**145**	PN	Pn	23 10 05.3	+0.3
CKHZ				SN	Sn	23 10 30.3	-0.3
KAHZ	**Kahuranaki**	**1.70**	**152**	PN	Pn	23 10 05.6	+0.3
PRGZ	**Paritu Road**	**1.73**	**112**	SN	Sn	23 10 32.8	+1.2
TSZ	**Takapari Road**	**1.76**	**177**	PN	Pn	23 10 05.3	-0.6
WPHZ	**Waipukurau**	**1.82**	**165**	PN	Pn	23 10 06.2	-0.4
WPHZ				SN	Sn	23 10 32.0	-1.5
MHGZ	**Mahia Peninsul**	**1.84**	**118**	PN	Pn	23 10 06.8	+0.1
PXZ	**Pawanui**	**1.90**	**155**	PN	Pn	23 10 07.1	-0.4
DVHZ	**Dannevirke**	**2.01**	**173**	PN	Pn	23 10 07.5	-1.1
DVHZ				SN	Sn	23 10 34.7	-2.4
PRHZ	**Porangahau**	**2.06**	**162**	PN	Pn	23 10 08.4	-0.8
POWZ	**Post Office Ro**	**2.09**	**181**	PN	Pn	23 10 08.2	-1.3
MRZ	**Mangatainoka R**	**2.36**	**185**	PN	Pn	23 10 10.8	-1.8
BFZ	**Birch Farm**	**2.40**	**172**	PN	Pn	23 10 11.3	-1.7
TIWZ	**Tintock**	**2.47**	**179**	PN	Pn	23 10 12.1	-1.7
OGWZ	**Otaki Gorge**	**2.56**	**191**	PN	Pn	23 10 13.1	-1.8
HOWZ	**Holdsworth Sta**	**2.60**	**185**	PN	Pn	23 10 13.2	-2.2
KIW	**Kapiti Island**	**2.65**	**195**	PN	Pn	23 10 13.7	-2.3
TMWZ	**Te Maipa**	**2.80**	**179**	PN	Pn	23 10 15.6	-2.2
CAW	**Cannon Point**	**2.86**	**192**	PN	Pn	23 10 16.1	-2.5
MTW	**Mount Morrison**	**2.86**	**185**	PN	Pn	23 10 15.8	-2.7
DUWZ	**D'Urville Isla**	**2.90**	**210**	PN	Pn	23 10 16.4	-2.6
PAWZ	**Paruwai Farm**	**3.09**	**186**	PN	Pn	23 10 18.4	-2.9
PAWZ				SN	Sn	23 10 55.2	-4.6
TRWZ	**Traveller**	**3.09**	**182**	PN	Pn	23 10 18.6	-2.8
SNZO	**South Karori**	**3.12**	**196**	PN	Pn	23 10 18.8	-2.9
MSWZ	**Moikau Station**	**3.14**	**188**	PN	Pn	23 10 19.0	-2.9
TCW	**Tory Channel**	**3.14**	**202**	PN	Pn	23 10 19.2	-2.7
BHW	**Baring Head**	**3.19**	**193**	PN	Pn	23 10 19.5	-3.0
PLWZ	**Palliser**	**3.29**	**187**	PN	Pn	23 10 20.6	-3.2
TUWZ	**Tuamarina**	**3.44**	**204**	PN	Pn	23 10 22.4	-3.2
NNZ	**Nelson**	**3.47**	**212**	PN	Pn	23 10 22.5	-3.5
QRZ	**Quartz Range**	**3.58**	**224**	PN	Pn	23 10 23.5	-4.0
BSWZ	**Blackbirch Sta**	**3.72**	**203**	PN	Pn	23 10 26.0	-3.2
THZ	**Tophouse**	**4.12**	**212**	PN	Pn	23 10 30.4	-3.8
KHZ	**Kahutara**	**4.46**	**202**	PN	Pn	23 10 35.1	-3.6
LTZ	**Lake Taylor**	**5.23**	**210**	PN	Pn	23 10 44.0	-4.6
MQZ	**McQueen's Vall**	**5.91**	**203**	PN	Pn	23 10 51.9	-5.6

IDC 10 23:23:46.0±4.3, 26°.09S×71°.86E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/18, mbtmp3.7/5, MS3.7/1, Ms1 3.7/1, ms1mx3.0/28, Error ellipse: s-maj=124.7km s-min=33.0km az=52.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**41.58**	**261**	LR	LR	23 44 58.8	
	comp=Z,95nm,18.7s,baz=169,slow=31						
CMAR	**Chiang Mai Arr**	**51.52**	**34**	P	P	23 32 53.5	-0.1
	0.7nm,0.3s,baz=230,slow=7.0,SNR=5.0						
ASAR	**Alice Springs**	**55.87**	**102**	P	P	23 33 25.8	+0.1
	0.2nm,0.4s,baz=254,slow=6.4,SNR=3.4						
WRA	**Warramunga Arr**	**57.37**	**98**	P	P	23 33 36.4	-0.1
	0.5nm,0.8s,baz=252,slow=7.0,SNR=8.3						
MKAR	**Makanchi Array**	**73.15**	**7**	P	P	23 35 18.2	+0.1
	0.4nm,0.8s,baz=179,slow=5.9,SNR=4.3						
ZALV	**Zalesovo Beam**	**80.49**	**8**	P	P	23 35 59.7	+0.2
	0.4nm,0.4s,baz=189,slow=3.6,SNR=2.2						

*IDC **10** 23:38:25.8±2.6, 38°.44N×141°.50E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.4/22, mbtmp3.4/5, ML2.3/1, Error ellipse: s-maj=65.0km s-min=27.3km az=70.0*
*NEIC **10** 23:38:30.1±1.1, 38°.61N×141°.80E, h38km±12km, mb3.9/1, Error ellipse: s-maj=12.4km s-min=9.8km az=129.0*
*ISCJB **10** 23:38:50.9±0.5, 37°.71N±0°.04×139°.57E±0°.06, h178km±3km, mb3.3/4, Error ellipse: s-maj=8.5km s-min=6.4km az=20.3*
*JMA **10** 23:38:52.4±0.2, 37°.71N×139°.56E, h172km±2km, M2.9*
ISC 10 23:38:52.0±0.5, 37°.71N±0°.04×139°.58E±0°.06, h174km±3km, n26, σ0°.74/41, mb3.3/4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNS	**Sasagawa**	**0.23**	**298**	P	**Pn**	**23 39 15.4**	**+0.2**
JNS				*eS*	**Sn**	**23 39 32.7**	**-0.4**
JFY	**Yanaizu**	**0.32**	**162**	P	**Pn**	**23 39 16.0**	**+0.5**
JFY				*eS*	**Sn**	**23 39 33.8**	**+0.3**
JFT	**Otama**	**0.63**	**107**	P	**Pn**	**23 39 17.4**	**+0.7**
JFT				*eS*	**Sn**	**23 39 36.4**	**+0.7**
JYS	**Shiratake**	**0.64**	**37**	P	**Pn**	**23 39 17.8**	**+1.1**
JYS				*eS*	**Sn**	**23 39 35.8**	**-0.1**
JHK	**Hiroka**	**0.64**	**224**	P	**Pn**	**23 39 17.2**	**+0.4**
JHK				*eS*	**Sn**	**23 39 35.9**	**+0.1**
JAW	**Awa shima**	**0.79**	**341**	P	**Pn**	**23 39 17.8**	**+0.2**
JAW				*eS*	**Sn**	**23 39 37.1**	**-0.4**
JYA	**Atsumi**	**0.89**	**7**	P	**Pn**	**23 39 18.7**	**+0.4**
JYA				*eS*	**Sn**	**23 39 38.4**	**-0.2**
JMM	**Marumori**	**0.97**	**80**	P	**Pn**	**23 39 19.4**	**+0.5**
JMM				*eS*	**Sn**	**23 39 39.3**	**-0.3**
JFK	**Kawauchi**	**1.09**	**108**	P	**Pn**	**23 39 19.9**	**+0.1**
JSD	**Sado**	**1.09**	**288**	P	**Pn**	**23 39 19.6**	**-0.2**
JSD				*eS*	**Sn**	**23 39 39.9**	**-1.3**
JAG	**Ashikaga**	**1.29**	**185**	P	**Pn**	**23 39 21.9**	**+0.4**
JHO	**Hitachi**	**1.35**	**144**	P	**Pn**	**23 39 21.9**	**-0.2**
JHO				*eS*	**Sn**	**23 39 44.1**	**-1.1**
JYK	**Kaneyama**	**1.35**	**27**	P	**Pn**	**23 39 22.5**	**+0.5**
JYK				*eS*	**Sn**	**23 39 45.1**	**-0.2**
JYT	**Yasato**	**1.56**	**161**	P	**Pn**	**23 39 23.5**	**-0.6**
JYT				*eS*	**Sn**	**23 39 46.9**	**-1.9**
MJAR	**Matsushiro Arr**	**1.60**	**224**	Pn	**Pn**	**23 39 18.6**	**-5.9**
	0.3nm,0.3s,baz=48,slow=9.7,SNR=2.7						
MJAR				Sn	**Sn**	**23 39 50.3**	**+0.9**
	0.9nm,0.3s,baz=48,slow=9.8,SNR=5.3						
MAJO	**Matsushiro**	**1.60**	**224**	*eP*	**Pn**	**23 39 22.8**	**-1.7**
MAT	**Matsushiro**	**1.60**	**224**	P	**Pn**	**23 39 25.0**	**+0.5**
MAT				S	**Sn**	**23 39 50.3**	**+0.9**
JMK	**Ichinoseki**	**1.79**	**46**	P	**Pn**	**23 39 26.8**	**+0.4**
JRG	**Rokugo**	**1.88**	**26**	P	**Pn**	**23 39 27.7**	**+0.4**
JRG				*eS*	**Sn**	**23 39 54.1**	**-0.5**
MDJ	**Mudanjiang**	**10.21**	**316**	*ePn*	**Pn**	**23 41 03.4**	**-11**
INCN	**Inchon**	**10.28**	**273**	Pn	**Pn**	**23 41 18.4**	**+3.2**
SONM	**Songino Array**	**26.19**	**303**	P	**P**	**23 44 09.3**	**-1.0**
	0.5nm,0.7s,mb3.2,baz=112,slow=9.5,SNR=3.5						
ZALV	**Zalesovo Beam**	**40.38**	**312**	P	**P**	**23 46 11.6**	**-0.9**
	0.3nm,0.5s,mb3.2,baz=90,slow=7.2,SNR=2.5						
MKAR	**Makanchi Array**	**42.52**	**301**	P	**P**	**23 46 29.9**	**-0.1**
	0.4nm,0.6s,mb3.3,baz=81,slow=9.1,SNR=6.1						
WB2	**Warramunga Arr**	**57.55**	**186**	P	**P**	**23 48 24.0**	**+0.7**
WRA	**Warramunga Arr**	**57.55**	**186**	P	**P**	**23 48 23.3**	**0.0**
	0.3nm,0.5s,mb3.3,baz=3.1,slow=7.5,SNR=6.9						

*IDC **10** 23:40:03.2±0.7, 22°.09S×175°.63W, h0km, mb4.2/11, mb1 4.5/13, mb1mx4.3/21, mbtmp4.3/13, ML3.5/2, Error ellipse: s-maj=28.7km s-min=16.3km az=141.0*
*ISCJB **10** 23:40:06.9±0.4, 22°.18S±0°.07×175°.71W±0°.08, h33km, mb4.4/21, Error ellipse: s-maj=11.9km s-min=8.8km az=42.7*
*NEIC **10** 23:40:06.8±2.5, 22°.10S×175°.66W, h23km±17km, mb4.5/13, Error ellipse: s-maj=10.1km s-min=6.8km az=137.0*
ISC 10 23:40:08.8±0.4, 22°.18S±0°.07×175°.67W±0°.08, h35km, n59, σ0°.76/44, mb4.4/21, 2C-2D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.38**	**306**	*ePn*	**Pn**	**23 42 03.1**	**+9.0**
AFI	**Afiamalu**	**9.02**	**25**	Pn	**Pn**	**23 42 11.7**	**-5.0**
AFI				Sn	**Sn**	**23 43 41.8**	**-15**
	5.6nm,0.3s,baz=180,slow=20,SNR=3.7						
AFI	**Afiamalu**	**9.02**	**25**	*ePn*	**Pn**	**23 42 12.3**	**-4.4**
AFI				*eSn*	**Sn**	**23 43 40.4**	**-17**
RAR	**Rarotonga**	**14.81**	**89**	Pn	**Pn**	**23 43 27.4**	**-8.4**
	4.1nm,0.3s,baz=165,slow=6.8,SNR=6.9						
RAR				Sn	Sn	23 45 52.6	-26
	2.9nm,0.3s,baz=336,slow=12,SNR=3.9						
RAR	**Rarotonga**	**14.81**	**89**	*ePn*	**Pn**	**23 43 36.1**	**+0.3**
URZ	**Urewera**	**17.18**	**200**	P	**Pn**	**23 44 05.6**	**-0.5**
	1.1nm,0.3s,baz=96,slow=4.9,SNR=2.7						
URZ				S	**S**	**23 47 06.7**	**-18**
	0.7nm,0.3s,baz=18,slow=16,SNR=3.1						
SNZO	**South Karori**	**20.73**	**201**	P	**P**	**23 44 46.0**	**-0.2**
	4.0nm,0.4s						
RPZ	**Rata Peaks**	**24.13**	**204**	P	**P**	**23 45 20.9**	**-0.5**
	7.7nm,0.8s,mb4.2,baz=66,slow=15,SNR=3.3						
HNR	**Honiara**	**26.61**	**295**	*eP*	**P**	**23 45 43.7**	**-0.5**
EIDS	**Eidsvold**	**30.55**	**257**	*eP*	**P**	**23 46 20.5**	**+1.4**
	1.7nm,0.5s,mb4.1						
CTA	**Charters Tower**	**35.52**	**266**	P	**P**	**23 47 03.1**	**+0.5**
	6.5nm,0.6s,mb4.8,baz=82,slow=12,SNR=7.3						
CTAO	**Charters Tower**	**35.52**	**266**	*eP*	**P**	**23 47 02.6**	**0.0**
	5.5nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**39.06**	**246**	P	**P**	**23 47 33.0**	**+0.5**
	1.5nm,0.6s,mb3.9,baz=49,slow=7.6,SNR=7.7						
STKA	**Stephens Creek**	**39.06**	**246**	*eP*	**P**	**23 47 32.5**	**0.0**
	0.3nm,0.5s,mb3.3						
ASAR	**Alice Springs**	**46.27**	**258**	P	**P**	**23 48 31.3**	**+0.2**
	1.5nm,0.6s,mb4.1,baz=100,slow=7.8,SNR=17						
WB2	**Warramunga Arr**	**46.53**	**263**	*eP*	**P**	**23 48 32.8**	**-0.4**
WRA	**Warramunga Arr**	**46.54**	**263**	P	**P**	**23 48 32.6**	**-0.6**
	2.3nm,0.7s,mb4.2,baz=101,slow=8.3,SNR=25						
WRA	**Warramunga Arr**	**46.54**	**263**	P	**P**	**23 48 32.6**	**-0.6**
MIDW	**Midway**	**50.13**	**358**	P	**P**	**23 49 02.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**54.97**	**263**	*eP*	**P**	**23 49 36.9**	**+0.1**
	1.5nm,0.6s,mb4.2						
SBA	**Scott Base**	**56.36**	**184**	*eP*	**P**	**23 49 48.7**	**+2.8**
	3.0nm,0.6s,mb4.5						
MBWA	**Marble Bar**	**59.61**	**258**	*eP*	**P**	**23 50 09.8**	**+0.1**
	2.4nm,0.5s,mb4.5						
CASY	**Casey**	**63.39**	**206**	*eP*	**P**	**23 50 35.1**	**+0.7**
	3.7nm,0.7s,mb4.6						
CASY				*ePcP*	PcP	23 51 11.8	+0.8
QSPA	**South Pole Qui**	**67.90**	**180**	*eP*	**P**	**23 51 02.1**	**-1.2**
	8.3nm,0.7s,mb4.9						
MAJO	**Matsushiro**	**72.85**	**323**	P	**P**	**23 51 34.0**	**0.0**
KSM	**Kuching**	**75.79**	**278**	P	**P**	**23 51 50.8**	**-0.9**
TATO	**Taipei**	**76.92**	**304**	P	**P**	**23 51 57.0**	**-0.8**
ISA	**Isabella**	**78.99**	**44**	P	**P**	**23 52 09.1**	**0.0**
CMB	**Columbia Colle**	**79.25**	**41**	*eP*	**P**	**23 52 10.2**	**-0.3**
	1.6nm,0.6s,mb4.1						
MAW	**Mawson**	**80.72**	**199**	P	**P**	**23 52 18.6**	**+0.6**
	6.5nm,0.6s,mb4.7,baz=125,slow=8.6,SNR=24						
MAW	**Mawson**	**80.72**	**199**	*eP*	**P**	**23 52 18.1**	**0.0**
	1.2nm,0.6s,mb4.0						
NVAR	**Mina Array Bea**	**80.78**	**42**	P	**P**	**23 52 19.0**	**+0.3**
	1.8nm,1.0s,mb4.0,baz=224,slow=9.5,SNR=9.4						
GAMB	**Gambell**	**85.73**	**2**	P	**P**	**23 52 43.5**	**-0.2**
TXAR	**Lajitas Array**	**86.15**	**56**	P	**P**	**23 52 46.8**	**+0.2**
	1.1nm,0.9s,mb4.1,baz=212,slow=6.8,SNR=7.6						
PLCA	**Paso Flores**	**86.55**	**133**	P	**P**	**23 52 48.6**	**+0.2**
	2.6nm,0.9s,mb4.5,baz=200,slow=7.9,SNR=4.8						
PLCA	**Paso Flores**	**86.55**	**133**	*eP*	**P**	**23 52 48.2**	**-0.2**
	2.8nm,0.9s,mb4.5						
ANMO	**Albuquerque**	**86.78**	**50**	*eP*	**P**	**23 52 49.2**	**-0.3**
	7.3nm,1.3s,mb4.8						
TRF	**Thorofare Moun**	**87.65**	**11**	*eP*	**P**	**23 52 51.6**	**-1.5**
	9.9nm,0.8s,mb5.1						
PDAR	**Pinedale Array**	**88.72**	**42**	P	**P**	**23 52 59.0**	**+0.4**
	0.8nm,1.0s,mb4.0,baz=192,slow=2.5,SNR=4.0						
ILAR	**Eielson Array**	**89.48**	**12**	P	**P**	**23 53 01.1**	**-0.5**
	0.2nm,0.4s,mb3.8,baz=216,slow=5.4,SNR=8.9						
HHC	**Hu-ho-hao-te**	**92.08**	**314**	*eP*	**P**	**23 53 15.7**	**+1.4**
HHC				pP	pP	23 53 23.8	-1.7
HHC				sP	sP	23 53 26.9	-2.6
HHC				PP	PP	23 56 58.0	+3.2
HHC				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
HHC				pmax	pmax		
	comp=Z,340nm,5.5s						
HHC				LR	LR		
	comp=N,320nm,18.6s						
HHC				LR	LR		
	comp=E,430nm,18.2s						
HHC				LR	LR		
	comp=Z,390nm,18.1s						
MK31	**Makanchi Array**	**113.93**	**313**	*e*PKiKP	PKiKP	23 58 43.0	-0.9
MKAR	**Makanchi Array**	**113.93**	**313**	PKiKP	PKiKP	23 58 43.0	-0.9
	comp=Z,0.3nm,0.6s,baz=79,slow=0.5,SNR=4.9						
KURK	**Kurchatov**	**116.70**	**317**	*e*PKPdf	PKPdf	23 58 49.6	+0.5
TBG	**Guadaloupe-3**	**117.72**	**83**	*eP*	PKPdf	23 58 51.5	-0.6
UCH	**Uchtor**	**118.99**	**307**	*e*PKPdf	PKPdf	23 58 53.0	-0.8
EKS2	**Erkin-Say**	**119.57**	**307**	*e*PKPdf	PKPdf	23 58 54.2	-0.7
AML	**Almayashu**	**119.59**	**307**	*e*PKPdf	PKPdf	23 58 54.4	-0.6
BRVK	**Borovoye**	**121.82**	**320**	*e*PKPdf	PKPdf	23 58 58.4	-0.4
ARU	**Arti**	**127.81**	**325**	*e*PKPdf	PKPdf	23 59 09.2	-1.1
ARCES	**ARCESS Array B**	**130.95**	**350**	PKP	PKPdf	23 59 15.0	-0.9
	comp=Z,1.6nm,1.0s,baz=36,slow=2.3,SNR=4.1						
FINES	**FINESS Array B**	**137.98**	**345**	PKhKP	PKPpre	23 59 23.6	
	comp=Z,0.9nm,0.9s,baz=48,slow=2.1,SNR=2.7						
FINES				PKP	PKPdf	23 59 29.1	-0.1
	comp=Z,3.9nm,1.1s,baz=66,slow=1.7,SNR=3.7						
AKASG	**Malin Array Be**	**145.52**	**332**	PKPbc	PKPbc	23 59 42.0	-1.1
	comp=Z,3.0nm,0.4s,baz=40,slow=4.2,SNR=7.6						
KWP	**Kalwaria Pacla**	**149.00**	**337**⇑	*iP*	PKPbc	23 59 53.2	+0.3
BRTR	**Keskin Array B**	**149.57**	**312**	PKPbc	PKPbc	23 59 54.5	-0.2
	comp=Z,2.2nm,0.7s,baz=62,slow=1.7,SNR=9.9						
BURAR	**Bucovina Array**	**149.58**	**332**⇓	*iP*	PKPbc	23 59 56.0	+1.6
VRI	**Vrincioaia**	**150.15**	**328**⇓	*iP*	PKPbc	23 59 56.3	+0.4
BRG	**Berggiesshubel**	**150.39**	**348**	*eP*	PKPbc	23 59 56.5	+0.2
	comp=Z,4.3nm,1.0s						
BRG				*e*		00 00 07.8	
	comp=Z,8.0nm,1.2s						
MLR	**Muntele Rosu**	**150.80**	**328**⇑	*iP*	PKPbc	23 59 58.4	+0.9

*NEIC **10** 23:42:43.1, 18°.38N×68°.92W, h129km, MD3.7(RSPR), After RSPR.*
RSPR 10 23:42:43.1, 18°.38N×68°.92W, h129km±3km, MD3.7/5, 7C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMN1	**Samana, DR**	**0.87**	**337**⇓	*eP*	Pn	23 43 04.5	-0.3
SMN1				*eS*	Sn	23 43 21.0	-0.2
AGPR	**Aguadilla, PR**	**1.71**	**87**⇑	*eP*	Pn	23 43 13.5	-0.1
AGPR				*eS*	Sn	23 43 36.9	0.0
LSP	**Las Mesas**	**1.75**	**96**⇑	*eP*	Pn	23 43 14.1	0.0
LSP				*eS*	Sn	23 43 37.9	+0.3
CRPR	**Cabo Rojo, PR**	**1.76**	**102**⇑	*eP*	Pn	23 43 13.7	-0.4
CRPR				*eS*	Sn	23 43 34.9	-2.9
LRS	**Lares**	**1.97**	**92**⇑	*eP*	Pn	23 43 16.7	+0.1
LRS				*eS*	Sn	23 43 42.5	+0.1
AOPR	**Arecibo Observ**	**2.05**	**91**⇑	*eP*	Pn	23 43 17.9	+0.2
AOPR				*eS*	Sn	23 43 44.6	+0.5
CELP	**Cerrillos**	**2.24**	**97**⇑	*eP*	Pn	23 43 19.0	-1.0
CELP				*eS*	Sn	23 43 47.1	-1.2
HUMP	**Col San Antoni**	**2.92**	**94**⇑	*eP*	Pn	23 43 28.4	-0.3

*SZGRF **10** 23:59:30.4, 0°.53N×128°.38E, h100km, Halmahera, Indonesia*
*BJI **10** 23:59:57.5, 1°.52N×127°.69E, h94km, mB6.8/52, mb6.3/66*
*ISCJB **11** 00:00:00.9±0.1, 1°.89N±0°.01×127°.47E±0°.02, h95km, mb6.3/206, Error ellipse: s-maj=2.4km s-min=1.9km az=0.1*
*MOS **11** 00:00:02.9±0.9, 1°.90N×127°.40E, h115km, mb6.3/51, MS7.3/4, Error ellipse:

KCP *i* S **Sn** **00 02 30.5 +3.8**
MRSI Marisa 5.68 256 P **Pn** **00 01 25.9 +1.3**
BUKP Musuan 6.41 338 *e*P **Pn** **00 01 36.5 +2.0**
TOLI Toli-Toli 6.69 264 P **Pn** **00 01 39.0 +0.6**
BNDI Bandanaira 6.82 159 P **Pn** **00 01 44.8 +4.6**
PAGZ Pagadian 7.17 326 *e*P **Pn** **00 01 45.1 +0.1**
BUTP Butuan 7.27 346 *e*P **Pn** **00 01 49.4 +3.1**
ZMPH Zamboanga City 7.36 313 ⇓*i*P **Pn** **00 01 47.4 -0.1**
ZMPH *i* S **Sn** **00 02 57.9 -12**
KDI Kendari 7.55 220 P **Pn** **00 01 50.1 0.0**
84nm4μm,0.9s
IPIL Ipil 7.61 321 *e*P **Pn** **00 01 51.7 +0.7**
SCPH Surigao 8.08 346⇓*e*P **Pn** **00 01 58.7 +1.4**
SNPH Sibulan 8.51 331⇓*e*P **Pn** **00 02 05.2 +2.0**
MSLP Maasin 8.59 343 *e*P **Pn** **00 02 06.3 +2.1**
BBSI Bau Bau 8.80 214 P **Pn** **00 02 09.5 +2.4**
66nm4μm,1.1s
BBSI Bau Bau 8.80 214 P **Sn** **00 03 51.6 +7.1**
LLP Lapu-Lapu 9.06 338⇓*e*P **Pn** **00 02 10.7 0.0**
LLP *e*S **Sn** **00 03 48.9 -2.0**
TTSI Tana Toraja 9.06 237 P **Pn** **00 02 11.0 +0.3**
TLE Tual 9.15 145 P **Pn** **00 02 17.2 +5.3**
TLE Tual 9.15 145 P **Pn** **00 02 17.2 +5.3**
TLE Tual 9.15 145 P **Pn** **00 02 16.4 +4.5**
7μm,1.4s
BAKI Biak 9.18 109 P **Pn** **00 02 18.3 +6.0**
BAKI Biak 9.18 109 P **Pn** **00 02 18.5 +6.2**
BAKI Biak 9.18 109 P **Pn** **00 02 18.5 +6.2**
MYLDM Lahad Datu 9.51 290 P **Pn** **00 02 18.9 +2.1**
OCLP Ormoc 9.53 343 *e*P **Pn** **00 02 20.7 +3.6**
PLP Palo 9.54 345⇓*e*P **Pn** **00 02 17.3 +0.2**
SPSI Sidrap Palu 9.63 233 P **Pn** **00 02 19.4 +1.0**
SPSI Sidrap Palu 9.63 233 P **Sn** **00 04 07.9 +3.1**
BNSI Bone 9.63 230 P **Pn** **00 02 19.1 +0.6**
10μm,1.0s
BNSI Bone 9.63 230 P **Sn** **00 04 06.0 +1.1**
TSM Tawau 9.85 284 P **Pn** **00 02 22.6 +1.2**
GUIM Jordan 9.93 331 *e*P **Pn** **00 02 23.2 +0.7**
BKSI Bulukumba 10.24 226 P **Pn** **00 02 28.6 +1.9**
4μm,0.7s
BKSI Bulukumba 10.24 226 P **Sn** **00 04 18.6 -1.0**
KAPI Kappang 10.30 228⇑*e*Pn **Pn** **00 02 26.8 -0.7**
KAPI *e*Sn **Sn** **00 04 12.2 -9.0**
KAPI Kappang 10.30 228 Pn **Pn** **00 02 28.2 +0.7**
26μm,0.9s
KAPI Kappang 10.30 228 P **Pn** **00 02 29.6 +2.1**
2μm,0.8s
KAPI Kappang 10.30 228 P **Pn** **00 02 29.0 +1.5**
SNR=178
SDKM Sandakan 10.89 290 P **Pn** **00 02 38.1 +2.6**
CNP Catarman 10.91 345 *e*P **Pn** **00 02 37.9 +2.1**
CUYO Cuyo Island 10.96 325 *e*P **Pn** **00 02 36.8 +0.4**
MMRI Maumere 11.67 206 P **Pn** **00 02 47.6 +1.5**
MMRI Maumere 11.67 206 P **Pn** **00 02 48.1 +2.0**
3μm,1.6s
KDM Kudat 11.70 296 P **Pn** **00 02 48.6 +2.0**
OTRP Odiongan 11.71 333 *e*P **Pn** **00 02 48.0 +1.3**
BATP Bataraza 11.80 306 *e*P **Pn** **00 02 48.0 +0.1**
KKM Kota Kinabalu 11.94 291 P **Pn** **00 02 50.4 +0.7**
KKM Kota Kinabalu 11.94 291 ⇓*i*Pn **Pn** **00 02 49.8 +0.1**
KKM *e*Sn **Sn** **00 04 58.6 -2.5**
KKM Kota Kinabalu 11.94 291 P **Pn** **00 02 50.5 +0.8**
4μm,1.1s
ENPP El Nido 12.21 320 *e*P **Pn** **00 02 53.7 +0.4**
AUQP San Andres 12.30 338 *e*P **Pn** **00 02 57.7 +3.2**
BUSP Coron 12.36 325 *e*P **Pn** **00 02 55.3 +0.1**
KBKI Kotabaru 12.40 245 P **Pn** **00 02 56.4 +0.6**
4μm,1.0s
BOAC Boac 12.76 335 *e*P **Pn** **00 03 03.1 +2.5**
LQP Lukban 13.48 335 *e*P **Pn** **00 03 12.2 +2.2**
WSI Waingapu 13.51 212 P **Pn** **00 03 13.1 +2.7**
8μm,1.8s
TGY Tagaytay City 13.74 332 P **Pn** **00 03 14.6 +1.2**
57nm,0.3s,baz=176,slow=5.2,SNR=12
TGY Tagaytay City 13.74 332 P **Pn** **00 03 14.6 +1.2**
LUBP Lubang 13.76 329 *e*P **Pn** **00 03 14.7 +1.0**
POLP Polillo Island 13.87 337 *e*P **Pn** **00 03 15.6 +0.5**
BTM Bintulu 14.41 275 P **Pn** **00 03 23.9 +1.8**
BALP Baler 14.93 338 *e*P **Pn** **00 03 30.5 +1.7**
SBUM Sibu 15.23 272 P **Pn** **00 03 32.9 +0.4**
SBUM Sibu 15.23 272 P **Pn** **00 03 34.5 +2.0**
9μm,1.4s
KAKA Kakadu 15.33 161⇑*i*P **Pn** **00 03 32.3 -1.5**
KAKA Kakadu 15.33 161 *e*Pn **Pn** **00 03 32.5 -1.2**
39nm,0.5s
KAKA *e*Sn **Sn** **00 06 22.8 -0.4**
KAKA Kakadu 15.33 161 P **Pn** **00 03 32.3 -1.5**
KHKI Kahang-Kahang 15.59 229 P **Pn** **00 03 39.5 +2.4**
KHKI Kahang-Kahang 15.59 229 P **Pn** **00 03 39.6 +2.5**
5μm,1.1s
SCZP Santa Cruz 15.67 332 *e*P **Pn** **00 03 38.9 +0.8**
SRBI Singaraja 15.72 231 P **Pn** **00 03 41.6 +2.9**
4μm,1.2s
PALP Palanan 15.87 342⇓*e*P **Pn** **00 03 40.4 -0.1**
PALP *e*S pP 00 03 58.7 -1.8
PALP Palanan 15.87 342 *e*P **Pn** **00 03 44.8 +4.2**
BCPH Baguio City Da 15.91 335⇓*e*P **Pn** **00 03 38.2 -2.8**
CAUP Cauayan 15.95 340 *e*P **Pn** **00 03 42.1 +0.6**
IGBI Denpasar 16.23 229 P **Pn** **00 03 48.3 +3.2**
4μm,1.0s
PBKI Pangkalan Bun 16.42 254 P **Pn** **00 03 47.3 -0.1**
CVP Callao Caves 16.66 341⇑*e*P **Pn** **00 03 50.8 +0.5**
ABRA Dolores 17.00 338 *e*P **Pn** **00 03 54.3 -0.2**
APYP Conner 17.00 339 *e*P **Pn** **00 03 55.0 +0.4**
SGCP Mt. Cagua 17.09 342 *e*P **Pn** **00 03 56.8 +1.1**
KSM Kuching 17.14 269 P **Pn** **00 03 56.8 +0.6**
KSM Kuching 17.14 269 ⇓*i*Pn **Pn** **00 03 56.6 +0.4**
3μm,1.0s
KSM *e*Sn **Sn** **00 07 05.3 -1.5**
KSM Kuching 17.14 269 P **Pn** **00 03 56.3 +0.1**
5μm,1.1s
GMJI Gumukmas 17.23 234 P **Pn** **00 03 59.7 +2.4**
4μm,1.1s
SIPP Brgy, Tapao 17.35 337⇓*i*P **Pn** **00 03 59.8 +1.0**
SIPP *e*S pP 00 04 07.7 -9.3
KNA Kununurra 17.57 176 P **Pn** **00 04 00.9 -0.6**
KRKI Karangkates 17.98 236 P **Pn** **00 04 09.0 +2.6**
NGJI Ngawi 18.41 240 P **Pn** **00 04 12.4 +0.8**
5μm,1.1s
PWJI Pagerwojo 18.45 238 P **Pn** **00 04 12.4 +0.3**
4μm,1.0s
PCJI Pacitan 19.07 238 P **Pn** **00 04 19.4 0.0**
SMRI Semarang 19.15 242 P **Pn** **00 04 19.7 -0.7**
SMRI Semarang 19.15 242 P **Pn** **00 04 19.7 -0.7**
4μm,1.1s
UGM Wanagama 19.49 240 *e*Pn **Pn** **00 04 24.2 -0.1**
4μm,1.0s
UGM Wanagama 19.49 240 P **Pn** **00 04 23.8 -0.5**
4μm,1.3s
YOGI Yogyakarta 19.64 240 P **Pn** **00 04 25.5 -0.6**
BJII Banjamegara 19.93 242 P **Pn** **00 04 28.5 -1.0**
9μm,1.5s
FITZ Fitzroy Crossi 19.94 185 P **Pn** **00 04 26.2 -3.4**
63nm,0.3s,baz=17,slow=8.8,SNR=805
FITZ S **S** **00 08 00.6 -5.6**
7.1nm,0.3s,baz=218,slow=20,SNR=3.3
FITZ LR LR 00 13 11.1
comp=Z,13μm,19.7s,baz=20,slow=39
FITZ Fitzroy Crossi 19.94 185⇑*i*P **Pn** **00 04 26.1 -3.5**
6μm,1.8s
FITZ *e*S **S** **00 07 59.9 -6.3**
FITZ Fitzroy Crossi 19.94 185⇑*i*P **Pn** **00 04 26.3 -3.3**
604nm,1.2s
FITZ *e*S **S** **00 08 01.1 -5.1**
FITZ Fitzroy Crossi 19.94 185 P **Pn** **00 04 26.3 -3.3**
5μm,1.8s
TPI Tanjungpandan 20.32 257 P **P** **00 04 31.0 -0.2**
3μm,1.3s
CLJI Cilicap 20.71 242 P **P** **00 04 36.8 +1.4**
GUMO Guam 20.79 55 P **P** **00 04 35.4 -0.8**
358nm,0.6s,baz=207,slow=4.9,SNR=31
GUMO ScP ScP 00 12 07.7 -2.2
153nm,0.9s,baz=201,slow=4.5,SNR=8.9
GUMO Guam 20.79 55⇑*i*P **P** **00 04 35.9 -0.4**
444nm,0.7s
GUMO *e*S **S** **00 08 22.9 -0.1**
GUMO Guam 20.79 55⇑*i*P **P** **00 04 35.9 -0.3**
GUMO *e*S **S** **00 08 22.9 -0.1**
GUMO pmax pmax
comp=Z,444nm,0.7s
GUMO Guam 20.79 55 P **P** **00 04 36.5 +0.3**
comp=Z,1μm,1.6s
JCJI Jatiwangi 20.88 246 P **P** **00 04 39.4 +2.2**

LEM Lembang 21.60 246 P **P** **00 04 45.4 +0.5**
comp=Z,4μm,0.9s,mb6.8
PPBI Pangkal Pinang 21.68 259 P **P** **00 04 45.0 -0.8**
TWG Pinlang 21.71 344⇓*i*P **P** **00 04 43.8 -2.2**
TWG *e*S **S** **00 08 38.9 -1.8**
CISI Cisompet, Garu 21.72 244 P **P** **00 04 45.6 -0.6**
comp=Z,4μm,0.9s,mb6.7
COEN Coen 22.16 136⇑*i*P **P** **00 04 48.6 -2.1**
COEN *e*S **S** **00 08 50.3 +1.6**
COEN Coen 22.16 136 P **P** **00 04 49.7 -1.1**
comp=Z,4μm,0.9s,mb6.8
CBJI Citeko 22.16 248 P **P** **00 04 50.8 0.0**
YULB Yu-li 22.19 345⇓*e*P **P** **00 04 48.8 -2.3**
TNG Tangerang 22.26 249 P **P** **00 04 52.2 +0.3**
comp=Z,4μm,1.6s,mb6.5
TNG Tangerang 22.26 249 P **P** **00 04 52.5 +0.6**
TPUB Ta-pu 22.29 343⇓*i*P **P** **00 04 50.5 -1.6**
TPUB *e*S **S** **00 08 51.9 +1.1**
DBJI Dramaga 22.30 248 P **P** **00 04 52.5 +0.2**
PMG Port Moresby 22.62 120⇑*i*P **P** **00 04 54.3 -1.4**
comp=Z,339nm,0.8s,mb5.7
PMG *e*S **S** **00 08 55.1 -1.3**
PMG Port Moresby 22.62 120⇑*i*P **P** **00 04 54.3 -1.4**
PMG *e*S **S** **00 08 55.1 -1.2**
PMG pmax pmax
comp=Z,339nm,0.8s
PMG Port Moresby 22.62 120 P **P** **00 04 55.2 -0.5**
comp=Z,801nm,2.2s,mb5.7
SKJI Sukabumi 22.64 247 P **P** **00 04 57.2 +1.2**
comp=Z,3μm,0.9s,mb6.7
SBJI Serang 22.72 249 P **P** **00 04 57.5 +0.7**
WRA Warramunga Arr 22.72 163 P **P** **00 04 55.7 -1.0**
comp=Z,3μm,0.7s,mb6.7,baz=338,slow=10,SNR=3926
WRA S **S** **00 08 53.8 -4.1**
comp=Z,117nm,0.9s,baz=339,slow=17,SNR=3.6
WRA ScP ScP 00 12 12.3 -2.3
comp=Z,45nm,0.9s,baz=339,slow=3.0,SNR=5.2
WRA P3KPbc 00 38 34.0
comp=Z,1.7nm,0.8s,baz=165,slow=4.6,SNR=4.9
WRA Warramunga Arr 22.72 163 P **P** **00 04 55.7 -1.0**
WRA S **S** **00 08 53.8 -4.1**
WRA ScP ScP 00 12 12.3 -2.3
WRA Warramunga Arr 22.72 163 P **P** **00 04 55.7 -1.0**
WRA S **S** **00 08 53.8 -4.1**
WB2 Warramunga Arr 22.73 163⇑*i*P **P** **00 04 56.1 -0.6**
WB2 *e*S **S** **00 08 59.2 +1.3**
NACB Ninganchiao 22.87 346⇓*i*P **P** **00 04 56.1 -1.9**
comp=Z,484nm,0.6s,mb6.0
NACB *e*S **S** **00 08 57.8 -2.4**
RBSI Rajabasa 23.00 250 P **P** **00 04 59.7 +0.3**
comp=Z,3μm,1.2s,mb6.5
CGJI Cibinong 23.30 249 P **P** **00 05 01.2 -1.0**
comp=Z,3μm,1.1s,mb6.6
BLSI Bandar Lampung 23.32 252 P **P** **00 05 03.2 +0.8**
comp=Z,3μm,1.5s,mb6.5
YHNB Yeheng 23.40 346⇓*i*P **P** **00 05 02.3 -0.6**
comp=Z,2μm,0.6s,mb6.6
YHNB *e*PcP PcP 00 08 43.2 -3.6
YHNB *e*S **S** **00 09 12.7 +3.9**
KLI Kotabumi 23.55 253 P **P** **00 05 04.7 +0.3**
comp=Z,4μm,1.2s,mb6.6
MYKOM Kota Tinggi 23.59 270 P **P** **00 05 05.0 +0.2**
MYKOM Kota Tinggi 23.59 270 P **P** **00 05 04.7 -0.1**
comp=Z,2μm,1.2s,mb6.3
KLSI 23.62 254 P **P** **00 05 04.7 -0.4**
comp=Z,6μm,1.2s,mb6.8
HKC Hong Kong Obse 24.05 329⇓*i*P **P** **00 05 08.0 -0.9**
MDSI Maura Dua 24.10 255 P **P** **00 05 08.8 -0.7**
comp=Z,3μm,1.4s,mb6.3
KGM Kluang 24.11 271 P **P** **00 05 11.4 +1.7**
MBWA Marble Bar 24.12 198⇑*i*P **P** **00 05 09.1 -0.4**
comp=Z,16nm,0.5s
MBWA *e*S **S** **00 09 21.5 +1.1**
MBWA Marble Bar 24.12 198 P **P** **00 05 08.7 -0.8**
comp=Z,4μm,1.5s,mb6.5
MBWA Marble Bar 24.12 198 P **P** **00 05 09.3 -0.2**
SNR=382
QIZ Qiongzhong 24.24 316 P **P** **00 05 10.6 -0.1**
QIZ sP sP 00 05 39.0 -4.6
QIZ S **S** **00 09 15.9 -6.6**
QIZ sS sS 00 09 46.3 -14
QIZ pmax pmax
comp=Z,940nm,1.2s,mb6.0
QIZ pmax pmax
comp=Z,33μm,6.8s
QIZ LR LR
comp=N,86μm,21.1s
QIZ LR LR
comp=E,39μm,19.7s
QIZ LR LR
comp=Z,46μm,21.1s
QIZ Qiongzhong 24.24 316 P **P** **00 05 10.6 -0.1**
QIZ sP sP 00 05 39.0 -4.6
QIZ S **S** **00 09 15.9 -6.6**
QIZ pmax pmax
comp=Z,940nm,1.2s,mb6.0
QIZ pmax pmax
comp=Z,33μm,6.8s
QIZ LR LR
comp=N,86μm,21.1s
QIZ LR LR
comp=E,39μm,19.7s
QIZ LR LR
comp=Z,46μm,21.1s
QIZ Qiongzhong 24.24 316⇓*i*P **P** **00 05 10.3 -0.3**
comp=Z,656nm,0.9s,mb6.0
QIZ *e*S **S** **00 09 23.1 +0.6**
QIZ *e*ScP ScP 00 12 16.3 -2.5
LWLI Liwa 24.35 254 P **P** **00 05 12.9 +1.1**
comp=Z,6μm,1.1s,mb6.9
QZH Quanzhou 24.46 340⇓*i*P **P** **00 05 12.3 -0.3**
QZH pP 00 05 33.5
QZH S **S** **00 09 23.4 -2.5**
QZH pmax pmax
comp=Z,4μm,0.7s,mb6.8
QZH pmax pmax
comp=Z,70μm,6.8s
QZH LR LR
comp=N,28μm,14.3s
QZH LR LR
comp=E,16μm,6.4s
QZH LR LR
comp=Z,84μm,20.5s
QZH Quanzhou 24.46 340⇓*i*P **P** **00 05 12.3 -0.3**
QZH pP 00 05 33.5
QZH S **S** **00 09 23.4 -2.5**
QZH pmax pmax
comp=Z,4μm,0.7s,mb6.8
QZH LR LR
comp=N,28μm,14.3s
QZH LR LR
comp=E,16μm,6.4s
QZH LR LR
comp=Z,84μm,20.5s
KTGM Kuala Trenggan 24.50 279 P **P** **00 05 13.6 +0.5**
JOW Kunigami 24.82 2⇓*i*P **P** **00 05 16.6 +0.8**
comp=Z,1μm,1.1s,mb6.3
JOW *e* 00 05 39.5
JOW *e*S **S** **00 09 33.0 +1.5**
JOW *e*ScP ScP 00 12 19.1 -1.1
XMIS Christmas Isla 24.93 240 *e*P **P** **00 05 16.8 -0.2**
XMIS *e*S **S** **00 09 31.1 -2.5**
XMIS *e* 00 12 18.2
XMIS Christmas Isla 24.93 240 P **P** **00 05 17.4 +0.4**
GZH Guangzhou 25.12 328 P **P** **00 05 21.7 +3.0**
GZH S **S** **00 09 39.9 +3.4**
GZH LR LR
comp=N,25μm,14.9s
GZH LR LR
comp=E,32μm,18.0s
RGRI Rengat 25.21 265 P **P** **00 05 20.4 +0.8**
comp=E,2μm,1.4s,mb6.3
MNAI Manna 25.25 256 P **P** **00 05 20.8 +0.8**
comp=E,6μm,1.2s,mb6.9
KSI Kapahiang 25.44 258 P **P** **00 05 22.6 +0.9**
comp=E,3μm,1.3s,mb6.5
UBT Ubonrachathani 25.80 302 P **P** **00 05 25.9 +1.0**
comp=E,500nm,1.0s,mb5.9
FRIM Kepong 25.83 274 P **P** **00 05 25.8 +0.5**
ASAR Alice Springs 26.16 166 P **P** **00 05 27.7 -0.4**
comp=E,737nm,0.6s,mb6.3,baz=346,slow=6.7,SNR=6785
ASAR PcP PcP 00 08 53.0 0.0
comp=E,105nm,0.6s,baz=355,slow=2.2,SNR=8.3
ASAR S **S** **00 09 51.3 -1.6**
comp=E,82nm,0.9s,baz=346,slow=16,SNR=4.7

ASAR ScP ScP 00 12 21.4 -2.7
comp=E,100nm,1.0s,baz=348,slow=2.9,SNR=7.8
ASAR P3KPbc 00 38 17.6
comp=E,4.7nm,0.7s,baz=161,slow=4.2,SNR=10
ASAR Alice Springs 26.16 166 P **P** **00 05 27.7 -0.4**
ASAR PcP PcP 00 08 53.0 0.0
ASAR S **S** **00 09 51.3 -1.6**
ASAR ScP ScP 00 12 21.4 -2.7
ASAR *e* 00 38 17.6
ASAR Alice Springs 26.16 166 P **P** **00 05 27.7 -0.4**
ASAR 00 08 53.1
ASAR S **S** **00 09 51.3 -1.6**
SDSI Sungai Dareh 26.17 264 P **P** **00 05 29.5 +1.2**
comp=E,964nm,1.7s,mb6.0
KRJI Kerinci 26.28 261 P **P** **00 05 30.4 +1.1**
comp=E,5μm,1.3s,mb6.7
BKNI Bangkinang 26.45 267 P **P** **00 05 31.4 +0.6**
comp=E,3μm,1.3s,mb6.5
IPM Ipoh 26.50 276 P **P** **00 05 30.9 -0.4**
IPM Ipoh 26.50 276⇓*i*P **P** **00 05 30.6 -0.7**
comp=E,534nm,0.9s,mb6.1
IPM *e*PcP PcP 00 08 54.0 0.0
IPM *e*S **S** **00 09 55.8 -2.8**
IPM *e*ScP ScP 00 12 23.8 -1.6
IPM Ipoh 26.50 276 P **P** **00 05 30.9 -0.4**
comp=E,917nm,1.9s,mb6.0
KULM Kulim 26.95 278 P **P** **00 05 36.5 +1.1**
KULM Kulim 26.95 278 P **P** **00 05 35.8 +0.5**
comp=E,513nm,1.4s,mb5.8
PDSI Padang 27.12 264 P **P** **00 05 36.6 -0.3**
comp=E,764nm,0.8s,mb6.3
PPI Padang Panjang 27.15 265 P **P** **00 05 37.0 -0.1**
comp=E,424nm,1.0s,mb5.9
SNG Songkhla 27.25 282 P **P** **00 05 37.0 -1.0**
comp=E,880nm,1.0s,mb6.2
MNSI Mandailing Nat 27.88 268 P **P** **00 05 42.4 -1.2**
comp=E,691nm,1.4s,mb6.0
SISI Saibi 28.53 264 P **P** **00 05 48.2 -1.2**
comp=E,496nm,1.2s,mb6.0
CTA Charters Tower 28.59 141 P **P** **00 05 49.8 0.0**
comp=E,214nm,0.6s,mb5.9,baz=311,slow=9.4,SNR=90
CTA pP pP 00 06 14.7 +3.1
comp=E,95nm,0.8s,baz=321,slow=14,SNR=1.9
CTA ScP ScP 00 12 31.4 -0.1
comp=E,70nm,0.8s,baz=334,slow=6.6,SNR=4.2
CTA Charters Tower 28.59 141⇑*i*P **P** **00 05 50.6 +0.8**
comp=E,406nm,1.1s,mb6.0
CTA *e* 00 12 32.6
CTA Charters Tower 28.59 141 P **P** **00 05 49.8 0.0**
CTA *PP pP 00 06 14.7 +3.1
CTAO Charters Tower 28.59 141 P **P** **00 05 50.7 +0.9**
comp=E,738nm,1.3s,mb6.1
CBIJ Chichi jima 28.77 28 P **P** **00 05 50.6 -0.8**
comp=E,732nm,0.7s,mb6.4,baz=221,slow=3.6,SNR=44
CBIJ pP pP 00 06 17.1 +3.9
comp=E,710nm,0.6s,baz=146,slow=14,SNR=3.6
CBIJ PKiKP PKiKP 00 16 32.2 -1.7
comp=E,108nm,0.9s,baz=332,slow=20,SNR=4.6
TSI Tuntungan 28.89 274 P **P** **00 05 53.5 +0.9**
SSE Sheshan 29.65 349 P **P** **00 06 00.1 +1.0**
SSE pP pP 00 06 26.9 +5.9
SSE sP sP 00 06 41.2 +8.9
SSE S **S** **00 10 46.1 -1.5**
SSE sS sS 00 11 33.4 +7.8
SSE ScP ScP 00 12 32.4 -2.3
SSE pmax pmax
comp=Z,290nm,0.8s,mb6.0
SSE pmax pmax
comp=Z,13μm,8.6s
SSE LR LR
comp=N,21μm,13.3s
SSE LR LR
comp=E,23μm,13.2s
SSE LR LR
comp=Z,29μm,14.1s
SSE Sheshan 29.65 349 P **P** **00 06 00.1 +1.0**
SSE S **S** **00 10 46.1 -1.5**
SSE ScP ScP 00 12 32.4 -2.3
SSE pmax pmax
comp=Z,290nm,0.8s,mb6.0
SSE pmax pmax
comp=Z,13μm,8.6s
SSE LR LR
comp=N,21μm,13.3s
SSE LR LR
comp=E,23μm,13.2s
SSE LR LR
comp=Z,29μm,14.1s
NST Nakhon Sawan 30.21 299 P **P** **00 06 04.1 -0.1**
TPTI 30.27 273 P **P** **00 06 03.6 -1.2**
comp=Z,8μmcomp=Z,237nm,1.6s,mb5.6
NJ2 Nanjing 31.08 346 *e*P **P** **00 06 13.1 +1.4**
NJ2 pP pP 00 06 35.0 +1.4
NJ2 sP sP 00 06 46.8 +1.9
NJ2 PP PP 00 07 19.2 -4.5
NJ2 S **S** **00 10 58.0 -12**
NJ2 sS sS 00 11 36.0 -12
NJ2 pmax pmax
comp=Z,400nm,1.4s,mb6.0
NJ2 AMB AMB
comp=Z,10μm,7.1s
NJ2 LR LR
comp=N,26μm,23.9s
NJ2 LR LR
comp=E,20μm,24.2s
NJ2 LR LR
comp=Z,35μm,29.7s
NJ2 Nanjing 31.08 346 *e*P **P** **00 06 13.1 +1.4**
NJ2 pP pP 00 06 35.0 +1.4
NJ2 sP sP 00 06 46.8 +1.9
NJ2 PP PP 00 07 19.2 -4.5
NJ2 pmax pmax
comp=Z,400nm,1.4s,mb6.0
NJ2 pmax pmax
comp=Z,10μm,7.1s
NJ2 LR LR
comp=N,26μm,23.9s
NJ2 LR LR
comp=E,20μm,24.2s
NJ2 LR LR
comp=Z,35μm,29.7s
WHN Wuhan 31.09 338 ⇑P **P** **00 06 13.7 +1.9**
WHN sP sP 00 06 40.8 -4.2
WHN S **S** **00 11 14.0 +3.8**
WHN LR LR
comp=N,35μm,13.0s
WHN LR LR
comp=E,34μm,18.0s
WHN LR LR
comp=Z,88μm,17.4s
JNU Nakatsue 31.24 6⇓*i*P **P** **00 06 12.6 -0.4**
JNU *e*pP pP 00 06 30.9 -4.1
JNU *e*sP sP 00 06 40.9 -5.4
JNU *e*S **S** **00 11 12.4 0.0**
JNU *e*ScP ScP 00 12 39.8 -0.1
GYA Guiyang 31.55 323⇑*i*P **P** **00 06 16.8 +0.9**
GYA pP pP 00 06 40.2 +2.3
GYA sP sP 00 06 53.0 +3.8
GYA PP PP 00 07 25.4 -3.6
GYA S **S** **00 11 13.9 -3.7**
GYA sS sS 00 11 58.5 +2.9
GYA ScP ScP 00 12 41.4 +0.3
GYA PcS PcS 00 12 52.0 +0.8
GYA SS 00 13 14.0
GYA pmax pmax
comp=Z,250nm,0.9s,mb5.9
GYA pmax pmax
comp=Z,9μm,12.6s
GYA LR LR
comp=N,15μm,22.1s
GYA LR LR
comp=E,20μm,20.3s
GYA LR LR
comp=Z,30μm,22.1s
BDT Bhumibol Dam 31.85 300 ⇑P **P** **00 06 19.0 +0.4**
comp=Z,142nm,1.0s,mb5.7
CHRT Chiangrai 32.41 305 ⇓P **P** **00 06 23.0 -0.6**
comp=Z,4μm,0.7s,mb7.3
CM31 Chiang Mai Arr 32.44 302⇓*e*P **P** **00 06 24.0 +0.2**
comp=Z,249nm,0.9s,mb5.9
CM31 *e*pP pP 00 06 44.4 -1.4
CM31 *e*sP sP 00 06 59.0 +2.0
CM31 *e*PcP PcP 00 09 10.1 +1.0
CM31 *e*S **S** **00 11 31.2 -0.3**
CM31 *e*ScP ScP 00 12 43.0 -1.3

CMAR	**Chiang Mai Arr**	**32.44 302**	P	**P**	**00 06 24.2**	**+0.5**
	comp=Z,185nm,0.8s,mb5.8,baz=120,slow=7.1,SNR=298					
CMAR			PcP	PcP	00 09 10.5	+1.4
	comp=Z,36nm,0.8s,baz=159,slow=1.8,SNR=4.4					
CMAR			ScP	ScP	00 12 43.9	-0.4
	comp=Z,63nm,1.0s,baz=146,slow=2.0,SNR=14					
CMAR			PKiKP	PKiKP	00 16 36.4	-0.2
	comp=Z,4.4nm,0.6s,baz=233,slow=0.9,SNR=7.3					
CMAR			LR	LR	00 18 48.4	
	comp=Z,32μm,21.8s,baz=317,slow=35					
CMAR			P3KP		00 39 07.0	
	comp=Z,0.8nm,0.3s,baz=204,slow=3.1,SNR=4.5					
CMAR	**Chiang Mai Arr**	**32.44 302**	P	**P**	**00 06 24.2**	**+0.5**
CMAR			PcP	PcP	00 09 10.5	+1.4
CMAR			ScP	ScP	00 12 43.9	-0.4
CMAR	**Chiang Mai Arr**	**32.44 302**	P	**P**	**00 06 24.3**	**+0.5**
CMAR					00 09 10.5	
FORT	**Forrest**	**32.49 179**	⇑*iP*	**P**	**00 06 23.2**	**-0.9**
	comp=Z,2μm,0.6s,mb7.0					
CHG	**Chiang Mai**	**32.60 303**	⇓P	**P**	**00 06 25.6**	**+0.4**
	comp=Z,518nm,0.8s,mb6.4					
CHTO	**Chiang Mai**	**32.60 303**	⇓*iP*	**P**	**00 06 25.5**	**+0.3**
CHTO			pP	pP	00 06 47.3	+0.1
CHTO			*e*sP	sP	00 06 56.3	-2.2
CHTO			*e*PP	PP	00 07 36.5	-4.2
CHTO			PcP	PcP	00 09 10.4	+0.9
CHTO			*e*S	**S**	**00 11 33.1**	**-0.9**
CHTO			*e*ScP	ScP	00 12 39.2	-5.6
CHTO	**Chiang Mai**	**32.60 303**	⇓*iP*	**P**	**00 06 25.5**	**+0.3**
CHTO			*PP	pP	00 06 47.3	+0.1
CHTO			*e*		00 07 36.6	
CHTO					00 09 10.4	
CHTO			*e*S	**S**	**00 11 33.1**	**-0.9**
CHTO	**Chiang Mai**	**32.60 303**	P	**P**	**00 06 25.6**	**+0.4**
	comp=Z,598nm,1.8s,mb6.1					
CHTO	**Chiang Mai**	**32.60 303**	P	**P**	**00 06 25.9**	**+0.7**
	SNR=120					
ENH	**Enshi**	**32.97 331**	⇓*iP*	**P**	**00 06 28.8**	**+0.5**
	comp=Z,121nm,1.0s,mb5.7					
ENH			*e*pP	pP	00 06 47.4	-3.0
ENH			*e*sP	sP	00 06 57.8	-3.9
ENH			*e*PP	PP	00 07 44.5	-0.2
ENH			*e*PcP	PcP	00 09 11.0	+0.6
ENH			*e*S	**S**	**00 11 39.0**	**-0.6**
ENH			*e*ScP	ScP	00 12 44.3	-1.6
KMI	**Kunming**	**33.19 316**	⇓P	**P**	**00 06 31.8**	**+1.5**
KMI			pP	pP	00 06 53.3	+1.0
KMI			sP	sP	00 07 04.8	+1.2
KMI			PP	PP	00 07 46.3	-0.9
KMI			PcP	PcP	00 09 12.8	+1.7
KMI			S	**S**	**00 11 44.5**	**+1.5**
KMI			sS	sS	00 12 20.4	-0.9
KMI			ScP	ScP	00 12 47.6	+0.8
KMI			PcS	PcS	00 12 57.5	+0.7
KMI			SS	SS	00 13 53.2	-17
KMI			ScS	ScS	00 16 46.8	-0.8
KMI			pmax	pmax		
	comp=Z,240nm,1.1s,mb5.9					
KMI			pmax	pmax		
	comp=Z,10μm,4.4s					
KMI			LR	LR		
	comp=N,55μm,19.6s					
KMI			LR	LR		
	comp=E,45μm,18.4s					
KMI			LR	LR		
	comp=Z,45μm,20.7s					
COCO	**West Island**	**33.47 245**	*e*P	**P**	**00 06 33.5**	**+0.7**
COCO			*e*PP	PP	00 07 50.2	-0.2
COCO			*e*PcP	PcP	00 09 12.1	+0.1
COCO			*e*S	**S**	**00 11 45.3**	**-2.4**
COCO	**West Island**	**33.47 245**	*e*P	**P**	**00 06 33.5**	**+0.6**
COCO			*e*		00 07 50.3	
COCO			*e*		00 09 12.1	
COCO			*e*S	**S**	**00 11 45.3**	**-2.4**
COCO	**West Island**	**33.47 245**	P	**P**	**00 06 33.5**	**+0.6**
	comp=Z,1μm,1.2s,mb6.5					
COCO	**West Island**	**33.47 245**	P	**P**	**00 06 34.7**	**+1.9**
	SNR=8.7					
HNR	**Honiara**	**34.27 110**	P	**P**	**00 06 39.2**	**-0.6**
	comp=Z,241nm,0.7s,mb6.1,baz=297,slow=8.9,SNR=7.0					
HNR			pP	pP	00 07 05.6	+3.7
	comp=Z,130nm,0.4s,baz=205,slow=6.9,SNR=3.0					
HNR	**Honiara**	**34.27 110**	⇑*e*P	**P**	**00 06 38.3**	**-1.5**
HNR			*e*		00 07 08.0	
HNR			*e*PP	PP	00 08 00.2	+0.9
HNR			*e*PcP	PcP	00 09 16.1	+1.7
HNR			*e*ScP	ScP	00 12 51.2	+0.4
HNR	**Honiara**	**34.27 110**	⇑*e*P	**P**	**00 06 38.3**	**-1.5**
HNR			*e*		00 07 08.0	
HNR			*e*		00 08 00.2	
HNR			*e*		00 09 16.1	
KLBR	**Kellerberrin**	**34.54 195**	⇑*iP*	**P**	**00 06 41.2**	**-0.7**
	comp=Z,643nm,0.4s,mb6.8					
KLBR			*e*		00 09 14.5	
KLBR			*e*S	**S**	**00 12 01.0**	**-2.8**
KSRS	**Korea Array**	**35.40 1**	P	**P**	**00 06 49.5**	**+0.4**
	comp=Z,130nm,0.8s,mb5.8,baz=178,slow=8.8,SNR=34					
KSRS			pP	pP	00 07 12.4	+1.0
	comp=Z,401nm,1.1s,baz=180,slow=9.5,SNR=8.3					
KSRS			PcP	PcP	00 09 18.0	+0.9
	comp=Z,25nm,0.6s,baz=195,slow=2.3,SNR=5.5					
KSRS			ScP	ScP	00 12 52.8	-1.6
	comp=Z,64nm,1.0s,baz=183,slow=3.6,SNR=14					
KSRS	**Korea Array**	**35.40 1**	P	**P**	**00 06 49.5**	**+0.4**
KSRS			*PP	pP	00 07 12.4	+1.0
KSRS					00 09 18.0	
KSRS			pmax	pmax		
	comp=Z,130nm,0.8s,mb5.8					
INCN	**Inchon**	**35.43 359**	⇓*iP*	**P**	**00 06 49.4**	**0.0**
INCN			*e*pP	pP	00 07 10.8	-0.9
INCN			*e*PP	PP	00 08 15.3	+3.5
INCN			*e*PcP	PcP	00 09 17.6	+0.4
INCN			*e*S	**S**	**00 12 18.0**	**+0.8**
INCN	**Inchon**	**35.43 359**	P	**P**	**00 06 50.4**	**+1.0**
	SNR=26					
TIA	**Tai'an**	**35.47 346**	P	**P**	**00 06 49.9**	**+0.1**
TIA			S	**S**	**00 12 18.4**	**+0.6**
TIA			pmax	pmax		
	comp=Z,370nm,0.6s,mb6.4					
TIA			pmax	pmax		
	comp=Z,10μm,8.3s					
TIA			LR	LR		
	comp=N,30μm,31.5s					
TIA			LR	LR		
	comp=E,35μm,24.9s					
TIA			LR	LR		
	comp=Z,35μm,27.4s					
EIDS	**Eidsvold**	**35.47 141**	⇑*iP*	**P**	**00 06 49.7**	**-0.3**
EIDS			*e*pP	pP	00 07 12.5	+0.3
EIDS			*e*sP	sP	00 07 23.0	-0.4
EIDS			*e*PP	PP	00 08 14.2	+1.8
EIDS			*e*PcP	PcP	00 09 18.0	+0.4
EIDS			*e*S	**S**	**00 12 19.1**	**+0.9**
EIDS			*e*ScP	ScP	00 12 56.7	+1.8
PBA	**Port Blair**	**35.76 287**	*ex*	PP	00 08 10.3	-5.4
PBA			*ex*	x	00 09 05.9	
MJAR	**Matsushiro Arr**	**35.89 15**	P	**P**	**00 06 52.3**	**-1.1**
	comp=Z,275nm,0.6s,mb6.4,baz=192,slow=9.0,SNR=368					
MJAR			ScP	ScP	00 12 54.2	-2.0
	comp=Z,56nm,1.1s,baz=212,slow=4.7,SNR=7.4					
MJAR	**Matsushiro Arr**	**35.89 15**	P	**P**	**00 06 52.3**	**-1.1**
MAJO	**Matsushiro**	**35.89 15**	⇓*iP*	**P**	**00 06 52.2**	**-1.2**
MAJO			*e*pP	pP	00 07 15.7	0.0
MAJO			PP	PP	00 08 15.9	-1.0
MAJO	**Matsushiro**	**35.89 15**	⇓*iP*	**P**	**00 06 52.2**	**-1.2**
MAJO			*e*PP	pP	00 07 15.7	0.0
MAJO					00 08 15.9	
MAT	**Matsushiro**	**35.89 15**	P	**P**	**00 06 52.2**	**-1.2**
MAT			S	**S**	**00 12 20.9**	**-3.4**
NWAO	**Narrogin (SRO)**	**35.95 195**	LR	LR	00 21 16.5	
	comp=Z,8μm,18.8s,baz=23,slow=35					
NWAO	**Narrogin (SRO)**	**35.95 195**	⇑*iP*	**P**	**00 06 53.4**	**-0.5**
NWAO			*e*pP	pP	00 07 16.6	+0.4
NWAO			*e*sP	sP	00 07 26.3	-1.0
NWAO			*e*PP	PP	00 08 17.0	-0.5
NWAO			*e*PcP	PcP	00 09 17.3	-1.5
NWAO			*e*S	**S**	**00 12 22.6**	**-2.7**
NWAO			*e*ScP	ScP	00 12 58.1	+1.7
NWAO	**Narrogin (SRO)**	**35.95 195**	⇑*iP*	**P**	**00 06 53.4**	**-0.5**
NWAO			*e*PP	pP	00 07 16.6	+0.4
NWAO			*e*		00 08 17.0	
NWAO			*e*		00 09 17.3	
NWAO			*e*S	**S**	**00 12 22.6**	**-2.6**
NWAO	**Narrogin (SRO)**	**35.95 195**	P	**P**	**00 06 53.9**	**0.0**
	SNR=32					
STKA	**Stephens Creek**	**36.16 159**	P	**P**	**00 06 55.8**	**0.0**
	comp=Z,4μm,0.9s,mb7.3,baz=334,slow=8.3,SNR=2438					
STKA			LR	LR	00 22 47.8	
	comp=Z,27μm,19.1s,baz=65,slow=38					
STKA	**Stephens Creek**	**36.16 159**	⇑*iP*	**P**	**00 06 55.8**	**0.0**
	comp=Z,3μm,0.9s,mb7.2					
STKA			*e*S	**S**	**00 12 24.9**	**-3.7**
STKA	**Stephens Creek**	**36.16 159**	⇑*iP*	**P**	**00 06 55.9**	**+0.1**
STKA			*e*pP	pP	00 07 17.5	-0.6
STKA			*e*sP	sP	00 07 29.0	-0.3
STKA			*e*PP	PP	00 08 19.7	-0.3
STKA			*e*S	**S**	**00 12 29.2**	**+0.6**
STKA			*e*ScP	ScP	00 12 58.6	+1.3
XAN	**Xi'an**	**36.37 334**	P	**P**	**00 06 58.0**	**+0.4**
XAN			pP	pP	00 07 20.5	+0.7
XAN			sP	sP	00 07 30.5	-0.6
XAN			PP	PP	00 08 24.4	+2.2
XAN			PcP	PcP	00 09 25.3	+5.2
XAN			S	**S**	**00 12 30.0**	**-1.8**
XAN			SS	SS	00 15 01.6	-10
XAN			ScS	ScS	00 17 01.8	-2.6
XAN			pmax	pmax		
	comp=Z,500nm,0.9s,mb6.4					
XAN			pmax	pmax		
	comp=Z,3μm,13.5s					
XAN			LR	LR		
	comp=N,28μm,48.6s					
XAN			LR	LR		
	comp=E,13μm,38.8s					
XAN			LR	LR		
	comp=Z,13μm,38.0s					
XAN	**Xi'an**	**36.37 334**	P	**P**	**00 06 58.0**	**+0.4**
XAN			pP	pP	00 07 20.5	+0.7
XAN			sP	sP	00 07 30.5	-0.6
XAN			PP	PP	00 08 24.4	+2.2
XAN			S	**S**	**00 12 30.0**	**-1.8**
XAN			ScS	ScS	00 17 01.8	-2.6
XAN			pmax	pmax		
	comp=Z,500nm,0.9s,mb6.4					
XAN			pmax	pmax		
	comp=Z,3μm,13.5s					
XAN			LR	LR		
	comp=N,28μm,48.6s					
XAN			LR	LR		
	comp=E,13μm,38.8s					
XAN			LR	LR		
	comp=Z,13μm,38.0s					
CD2	**Chengdu**	**36.55 325**	⇓*iP*	**P**	**00 06 59.5**	**+0.4**
CD2			pP	pP	00 07 22.0	+0.6
CD2			sP	sP	00 07 33.6	+1.0
CD2			PP	PP	00 08 27.5	+3.3
CD2			PcP	PcP	00 09 20.5	-0.2
CD2			S	**S**	**00 12 35.5**	**+1.0**
CD2			PcS	PcS	00 13 07.0	-1.7
CD2			sS	sS	00 13 14.8	+1.7
CD2			SS	SS	00 15 09.0	-7.0
CD2			ScS	ScS	00 17 02.5	-3.0
CD2			pmax	pmax		
	comp=Z,600nm,1.0s,mb6.5					
CD2			pmax	pmax		
	comp=Z,14μm,6.0s					
CD2			LR	LR		
	comp=N,51μm,20.4s					
CD2			LR	LR		
	comp=E,30μm,22.8s					
CD2			LR	LR		
	comp=Z,44μm,25.2s					
DL2	**Dalian**	**37.23 352**	⇓*iP*	**P**	**00 07 05.2**	**+0.5**
DL2			pP	pP	00 07 27.9	+0.8
DL2			PP	PP	00 08 35.0	+3.5
DL2			PcP	PcP	00 09 21.4	-1.2
DL2			S	**S**	**00 12 44.9**	**+0.3**
DL2			ScP	ScP	00 12 58.5	-2.6
DL2			PcS	PcS	00 13 08.8	-2.2
DL2			sS	sS	00 13 27.2	+4.0
DL2			ScS	ScS	00 17 07.6	-1.4
DL2			pmax	pmax		
	comp=Z,280nm,0.8s,mb6.2					
DL2			pmax	pmax		
	comp=Z,2μm,7.6s					
DL2			LR	LR		
	comp=N,6μm,16.1s					
DL2			LR	LR		
	comp=E,26μm,18.7s					
DL2			LR	LR		
	comp=Z,16μm,19.6s					
TIY	**Taiyuan**	**38.23 341**	*e*P	**P**	**00 07 14.3**	**+1.1**
TIY			pP	pP	00 07 36.3	+0.7
TIY			PP	PP	00 08 46.4	+3.8
TIY			S	**S**	**00 12 59.8**	**0.0**
TIY			sS	sS	00 13 38.3	-0.3
TIY			pmax	pmax		
	comp=Z,510nm,0.7s,mb6.5					
TIY			pmax	pmax		
	comp=Z,9μm,5.8s					
TIY			LR	LR		
	comp=N,11μm,9.8s					
TIY			LR	LR		
	comp=E,5μm,8.6s					
TIY			LR	LR		
	comp=Z,31μm,27.9s					
BJT	**Baijiatuau**	**39.31 346**	⇓*iP*	**P**	**00 07 22.5**	**+0.3**
BJT			*e*pP	pP	00 07 44.2	-0.6
BJT			*e*sP	sP	00 07 51.9	-4.0
BJT			PP	PP	00 08 54.4	0.0
BJT			*e*PcP	PcP	00 09 30.5	+1.4
BJT			*e*S	**S**	**00 13 17.9**	**+1.9**
BJT	**Baijiatuau**	**39.31 346**	⇓*iP*	**P**	**00 07 22.5**	**+0.3**
BJT			*e**SP	sP	00 07 51.9	-4.0
BJT					00 08 54.4	
BJT			*e*		00 09 30.5	
BJT			*e*S	**S**	**00 13 17.9**	**+1.8**
BJI	**Beijing**	**39.33 346**	P	**P**	**00 07 22.9**	**+0.5**
BJI			pP	pP	00 07 44.5	-0.4
BJI			sP	sP	00 07 55.5	-0.5
BJI			PP	PP	00 08 53.6	-0.9
BJI			ScP	ScP	00 13 06.6	-2.5
BJI			S	**S**	**00 13 13.7**	**-2.6**
BJI			PcS	PcS	00 13 17.3	-1.7
BJI			sS	sS	00 13 55.5	+0.3
BJI			SS	SS	00 16 10.0	-4.0
BJI			ScS	ScS	00 17 23.5	+2.4
BJI			pmax	pmax		
	comp=Z,2.0nm,0.7s					
BJI			pmax	pmax		
	comp=Z,7μm,5.6s					
BJI			LR	LR		
	comp=N,11μm,17.6s					
BJI			LR	LR		
	comp=E,14μm,14.2s					
BJI			LR	LR		
	comp=Z,20μm,37.9s					
BJI	**Beijing**	**39.33 346**	P	**P**	**00 07 22.9**	**+0.5**
BJI			pP	pP	00 07 44.5	-0.4
BJI			sP	sP	00 07 55.5	-0.5
BJI			PP	PP	00 08 53.6	-0.9
BJI			ScP	ScP	00 13 06.6	-2.5
BJI			S	**S**	**00 13 13.7**	**-2.6**
BJI			PcS	PcS	00 13 17.3	-1.7
BJI			sS	sS	00 13 55.5	+0.3
BJI			SS	SS	00 16 10.0	-4.0
BJI			pmax	pmax		
	comp=Z,7μm,5.6s					
BJI			LR	LR		
	comp=N,11μm,17.6s					
BJI			LR	LR		
	comp=E,14μm,14.2s					
BJI			LR	LR		
	comp=Z,20μm,37.9s					
ARMA	**Armidale**	**39.54 146**	⇑*iP*	**P**	**00 07 25.0**	**+0.7**
ARMA	**Armidale**	**39.54 146**	⇑*iP*	**P**	**00 07 24.9**	**+0.7**
	comp=Z,964nm,0.8s,mb6.7					
ARMA			*e*	pP	00 07 49.9	+3.1
ARMA			*e*PP	PP	00 08 58.2	+1.2
ARMA			*e*PcP	PcP	00 09 31.4	+1.3
ARMA			*e*ScP	ScP	00 13 11.2	+1.1
IMP	**Imphal**	**39.55 308**	*e*PKP	**P**	**00 07 23.0**	**-1.4**
IMP			*ex*	x	00 13 08.0	
SNY	**Shenyang**	**39.91 355**	⇓P	**P**	**00 07 27.4**	**+0.3**
SNY			pP	pP	00 07 56.2	+6.5
SNY			S	**S**	**00 13 14.4**	**-11**
SNY			sS	sS	00 13 53.4	-10
SNY			pmax	pmax		
	comp=Z,2μm,2.4s,mb6.5					
SNY			pmax	pmax		
	comp=Z,4μm,4.9s					
SNY			LR	LR		
	comp=E,32μm,16.5s					
SNY			LR	LR		
	comp=Z,23μm,35.8s					
LZH	**Lanzhou**	**40.45 330**	⇓P	**P**	**00 07 33.7**	**+2.1**
LZH			pP	pP	00 07 56.1	+1.8
LZH			sP	sP	00 08 07.0	+1.6
LZH			S	**S**	**00 13 34.0**	**+0.9**
LZH			sS	sS	00 14 14.0	+1.9
LZH			SS	SS	00 16 34.0	-2.2
LZH			pmax	pmax		
	comp=Z,2μm,1.0s,mb6.9					
LZH			pmax	pmax		
	comp=Z,18μm,5.6s					
LZH			LR	LR		
	comp=N,23μm,14.4s					
LZH			LR	LR		
	comp=E,18μm,11.6s					
LZH			LR	LR		
	comp=Z,46μm,16.1s					
KWAJ	**Kwajalein Atol**	**40.55 79**	⇑*e*P	**P**	**00 07 32.5**	**-0.3**
	comp=Z,268nm,1.2s,mb6.0					
KWAJ			*e*pP	pP	00 07 55.5	0.0
KWAJ			*e*PP	PP	00 09 09.5	+1.4
KWAJ			*e*ScP	ScP	00 13 15.8	+1.4
KWAJ			*e*S	**S**	**00 13 38.3**	**+3.1**
VLA	**Vladivostok**	**41.24 5**	⇓*iP*	**P**	**00 07 36.9**	**-1.2**
VLA			*i **PP	pP	00 08 03.8	+3.0
VLA			*i*		00 09 15.2	
VLA			*e*		00 09 32.8	
VLA			*i* S	**S**	**00 13 43.0**	**-1.7**
VLA			pmax	pmax		
	comp=Z,768nm,1.5s,mb6.3					
AGT	**Agartala**	**41.28 305**	*ex*	**P**	**00 07 34.0**	**-4.7**
HHC	**Hu-ho-hao-te**	**41.36 342**	⇓*iP*	**P**	**00 07 40.2**	**+1.1**
HHC			pP	pP	00 08 05.6	+3.8
HHC			sP	sP	00 08 18.7	+5.8
HHC			PP	PP	00 09 21.4	+4.9
HHC			PcP	PcP	00 09 35.6	-0.1
HHC			ScP	ScP	00 13 14.2	-2.8
HHC			S	**S**	**00 13 47.5**	**+1.0**
HHC			sS	sS	00 14 32.8	+7.2
HHC			SS	SS	00 16 51.6	-2.6
HHC			ScS	ScS	00 17 29.2	-4.0
HHC			pmax	pmax		
	comp=Z,13nm,1.1s					
HHC			pmax	pmax		
	comp=Z,430nm,6.8s					
HHC			LR	LR		
	comp=N,29μm,17.2s					
HHC			LR	LR		
	comp=E,49μm,14.7s					
HHC			LR	LR		
	comp=Z,30μm,15.5s					
HHC	**Hu-ho-hao-te**	**41.36 342**	⇓*iP*	**P**	**00 07 40.2**	**+1.1**
HHC			pP	pP	00 08 05.6	+3.8
HHC			PP	PP	00 09 21.4	+4.9
HHC			PcP	PcP	00 09 35.6	-0.1
HHC			ScP	ScP	00 13 14.2	-2.8
HHC			S	**S**	**00 13 47.5**	**+1.0**
HHC			SS	SS	00 16 51.6	-2.6
HHC			ScS	ScS	00 17 29.2	-4.0
HHC			LR	LR		
	comp=N,29μm,17.2s					
HHC			LR	LR		
	comp=E,49μm,14.7s					
HHC			LR	LR		
	comp=Z,30μm,15.5s					
BTO	**Baotou**	**41.65 340**	*e*P	**P**	**00 07 41.8**	**+0.4**
CN2	**Changchun**	**41.77 358**	*e*P	**P**	**00 07 41.8**	**-0.6**
CN2			*e*pP	pP	00 08 03.8	-1.3
CN2			*e*sP	sP	00 08 16.1	-0.1
CN2			*e*S	**S**	**00 13 42.8**	**-10**
CN2			*e*SS	SS	00 16 54.7	-7.5
CN2			pmax	pmax		
	comp=Z,10.0nm,1.3s					
CN2			pmax	pmax		
	comp=Z,300nm,6.0s					
CN2			LR	LR		
	comp=N,29μm,13.0s					
CN2			LR	LR		
	comp=E,57μm,13.0s					
CN2			LR	LR		
	comp=Z,52μm,18.0s					
CN2	**Changchun**	**41.77 358**	*e*P	**P**	**00 07 41.8**	**-0.6**
CN2			*e*pP	pP	00 08 03.8	-1.3
CN2			*e*sP	sP	00 08 16.1	-0.1
CN2			LR	LR		
	comp=N,29μm,13.0s					
CN2			LR	LR		
	comp=E,57μm,13.0s					
CN2			LR	LR		
	comp=Z,52μm,18.0s					
RIV	**Riverview**	**41.96 150**	*e*P	**P**	**00 07 45.2**	**+1.1**
RIV			*e*		00 09 26.1	
WAKE	**Wake Island**	**42.07 63**	⇑*e*P	**P**	**00 07 45.4**	**+0.1**
	comp=Z,519nm,1.3s,mb6.1					
WAKE			*e*pP	pP	00 08 08.2	+0.2
WAKE			*e*sP	sP	00 08 17.7	-1.4
WAKE			*e*PP	PP	00 09 26.8	+2.2
WAKE			*e*ScP	ScP	00 13 21.6	+1.3
WAKE			*e*S	**S**	**00 13 58.8**	**+1.2**
CAN	**Canberra**	**42.15 153**	⇑*iP*	**P**	**00 07 46.5**	**+0.8**
	comp=Z,3μm,1.3s,mb6.8					
CAN			*e*pP	pP	00 08 10.0	+1.6
CAN			*e*sP	sP	00 08 20.8	+1.3
CAN			*e*PP	PP	00 09 25.5	+0.4
CAN			*e*PcP	PcP	00 09 42.6	+4.2
CAN			*e*ScP	ScP	00 13 18.1	-2.2
CAN	**Canberra**	**42.15 153**	⇑*iP*	**P**	**00 07 46.5**	**+0.9**
CAN			*e**PP	pP	00 08 10.0	+1.6
CAN			*e*		00 09 25.5	
CAN			*e*		00 09 42.6	
CAN			pmax	pmax		
	comp=Z,3μm,1.3s,mb6.8					
CNB	**Canberra Magne**	**42.31 153**	*e*P	**P**	**00 07 47.5**	**+0.6**
MDJ	**Mudanjiang**	**42.59 2**	P	**P**	**00 07 49.7**	**+0.7**
MDJ			pP	pP	00 08 12.9	+1.1
MDJ			sP	sP	00 08 21.4	-1.5
MDJ			PP	PP	00 09 29.5	-0.2
MDJ			S	**S**	**00 14 04.9**	**+0.4**
MDJ			sS	sS	00 14 43.4	-0.4
MDJ			ScS	ScS	00 17 41.9	+1.4
MDJ			pmax	pmax		
	comp=Z,750nm,0.9s,mb6.4					
MDJ			pmax	pmax		
	comp=Z,2μm,6.1s					
MDJ			LR	LR		
	comp=N,14μm,21.9s					
MDJ			LR	LR		
	comp=E,21μm,15.6s					
MDJ			LR	LR		
	comp=Z,22μm,31.2s					
MDJ	**Mudanjiang**	**42.59 2**	⇓*iP*	**P**	**00 07 49.6**	**+0.6**
MDJ			*e*pP	pP	00 08 11.2	-0.6
MDJ			sP	sP	00 08 20.9	-2.0
TOO	**Toolangi**	**42.67 159**	⇑*iP*	**P**	**00 07 51.0**	**+1.2**
TOO			*e*		00 09 30.2	
TOO			*e*S	S	00 14 52.6	+47
CAL	**Calcutta**	**43.16 302**	*e*PKP	**P**	**00 07 55.8**	**+1.8**
CAL			*e*S	**S**	**00 14 15.2**	**+1.6**
ASAJ	**Asahikawa**	**44.15 16**	P	**P**	**00 08 01.6**	**0.0**
	comp=Z,192nm,0.7s,mb5.9,baz=231,slow=13,SNR=61					
ASAJ	**Asahikawa**	**44.15 16**	⇓*iP*	**P**	**00 08 02.3**	**+0.7**
ASAJ			*e*pP	pP	00 08 24.2	-0.3
ASAJ			*e*sP	sP	00 08 35.3	-0.2
ASAJ			*e*PP	PP	00 09 48.6	+2.3
ASAJ	**Asahikawa**	**44.15 16**	P	**P**	**00 08 01.6**	**+0.1**
ASAJ			pmax	pmax		
	comp=Z,192nm,0.7s					
LSA	**Lhasa**	**44.19 312**	P	**P**	**00 08 04.3**	**+2.1**
LSA			pP	pP	00 08 20.8	-4.3
LSA			sP	sP	00 08 25.9	-10
LSA			PP	PP	00 09 52.1	+5.0
LSA			S	**S**	**00 14 18.0**	**-10**
LSA			sS	sS	00 15 17.8	+10
LSA			SS	SS	00 18 29.5	+40
LSA			pmax	pmax		

comp=Z,660nm,0.9s,mb6.4
LSA pmax pmax
comp=Z,11μm,14.0s
LSA LR LR
comp=N,8μm,29.0s
LSA LR LR
comp=E,13μm,23.0s
LSA LR LR
comp=Z,17μm,23.0s
LSA Lhasa 44.19 312 P **P** **00 08 04.3 +2.1**
LSA pP pP 00 08 20.8 -4.3
LSA PP PP 00 09 52.1 +5.0
LSA pmax pmax
comp=Z,660nm,0.9s,mb6.4
LSA pmax pmax
comp=Z,11μm,14.0s
LSA LR LR
comp=N,8μm,29.0s
LSA LR LR
comp=E,13μm,23.0s
LSA LR LR
comp=Z,17μm,23.0s
LSA Lhasa 44.19 312⇓ *i* P **P** **00 08 04.2 +2.0**
LSA *e*pP pP 00 08 27.9 +2.7
LSA *e*sP sP 00 08 37.5 +1.3
LSA *e*ScP ScP 00 13 28.7 0.0
LSA *e*S **S** **00 14 30.1 +1.7**
LSA Lhasa 44.19 312⇓ *i* P **P** **00 08 04.2 +2.0**
LSA *e**PP pP 00 08 27.9 +2.8
LSA *e*S **S** **00 14 30.1 +1.7**
NOUC Port Laguerre 44.80 124 *e*P **P** **00 08 06.9 -0.2**
DZM Mont Dzumac 44.90 124 *e*P **P** **00 08 09.0 +1.1**
comp=Z,2μm,1.4s,mb6.6
GTA Gaotai 45.04 329 ⇓P **P** **00 08 10.0 +1.3**
GTA pP pP 00 08 32.8 +1.1
GTA sP sP 00 08 44.5 +1.8
GTA S **S** **00 14 41.0 +0.7**
GTA sS sS 00 15 21.6 +1.8
GTA ScS ScS 00 17 54.7 -1.5
GTA pmax pmax
comp=Z,680nm,0.9s,mb6.4
GTA pmax pmax
comp=Z,11μm,5.2s
GTA LR LR
comp=N,12μm,23.2s
GTA LR LR
comp=E,22μm,23.2s
GTA LR LR
comp=Z,27μm,23.7s
YUK Yuzh-Kuril'sk 45.04 19⇓ *i* P **P** **00 08 03.0 -5.7**
YUK *i* *PP pP 00 08 28.0 -3.6
YUK *i* 00 09 56.0
YUK pmax pmax
comp=Z,2μm,1.4s,mb6.7
YUK pmax pmax
comp=N,670nm,1.4s
YUK pmax pmax
comp=E,1μm,1.4s
YUK pmax pmax
comp=Z,2μm,1.4s,mb6.6
BAYA Yate Dam 45.30 124 *e*P **P** **00 08 15.4 +4.3**
TAPN Taplejung 45.69 307 *e*P **P** **00 08 14.9 +0.8**
comp=Z,960nm,0.8s,mb6.5
ODAN Odare 45.73 307 *e*P **P** **00 08 15.2 +0.8**
comp=Z,2μm,0.8s,mb6.8
VIS Vishakhapatnam 46.07 293 *e*PKP **P** **00 08 17.1 -0.1**
VIS AMb AMB 00 08 19.8
comp=Z,292nm,0.8s,mb6.1
YSS Yuzh-Sakhalins 46.83 14⇓ *e*P **P** **00 08 22.7 0.0**
YSS *e*pP pP 00 08 45.1 -0.7
YSS *e*PcP PcP 00 09 53.7 -0.5
YSS *e*ScP ScP 00 13 38.0 -1.2
YSS *e*S **S** **00 14 54.9 -11**
YSS Yuzh-Sakhalins 46.83 14κ *e*P **P** **00 08 23.0 +0.4**
YSS *e**PP pP 00 08 52.0 +6.2
YSS *e* 00 09 55.0
YSS *e*PPP 00 11 07.0
YSS *i* S **S** **00 15 04.0 -1.7**
YSS *e* 00 18 05.0
YSS pmax pmax
comp=Z,250nm,0.8s,mb6.0
YSS smax
comp=E,11μm,14.0s
HABR Khabarovsk 46.87 7 *i* P **P** **00 08 23.9 +1.0**
HABR *e**PP pP 00 08 49.3 +3.2
HABR *e**SP sP 00 09 03.0 +5.9
HABR *e* 00 09 52.5
HABR *e* 00 10 13.1
HABR *e*PPP 00 11 00.5
HABR *e*S **S** **00 15 07.2 +0.9**
HABR *e**SS sS 00 15 51.9 +5.9
HABR *e* 00 18 03.4
HABR *e*SSS 00 19 50.1
HABR pmax pmax
comp=Z,2μm,1.4s,mb6.5
HABR pmax pmax
comp=N,274nm,1.4s
HABR pmax pmax
comp=Z,1μm,1.6s,mb6.3
HABR pmax pmax
comp=E,433nm,1.6s
HABR MLR MLR
comp=N,138μm,13.0s
HABR MLR MLR
comp=E,153μm,12.0s
HABR MLR MLR
comp=Z,144μm,13.0s
PALK Pallekele 46.88 278⇓ *i* P **P** **00 08 23.0 -0.6**
PALK *e*pP pP 00 08 46.3 -0.5
PALK *e*PcP PcP 00 09 56.4 +1.2
PALK *e*PP PP 00 10 16.3 +1.2
PALK *e*ScP ScP 00 13 37.5 -2.7
PALK *e*S **S** **00 15 05.2 -2.3**
PALK Pallekele 46.88 278⇓ *i* P **P** **00 08 23.0 -0.6**
PALK *e**PP pP 00 08 46.3 -0.4
PALK *e* 00 09 56.4
PALK *e* 00 10 16.3
PALK *e*S **S** **00 15 05.2 -2.3**
PALK Pallekele 46.88 278 P **P** **00 08 23.6 0.0**
comp=Z,5μmcomp=Z,143nm,1.4s,mb5.5
PALK Pallekele 46.88 278 P **P** **00 08 24.5 +0.9**
SNR=12
KLR Kul'dur 47.31 4⇑ *i* P **P** **00 08 22.2 -4.1**
KLR *e*S **S** **00 15 05.0 -7.5**
KLR pmax pmax
comp=N,100nm,1.6s
KLR pmax pmax
comp=E,80nm,1.6s
KLR pmax pmax
comp=Z,700nm,1.6s,mb6.1
KLR pmax pmax
comp=Z,3μm,11.0s
GUN Gumba 47.39 307 *e*P **P** **00 08 28.1 +0.7**
comp=Z,2μm,0.7s,mb6.8
MOO Moorlands 47.60 160 *e*P **P** **00 08 29.2 +0.5**
MOO *e* 00 10 22.4
PKI Pulchoki 47.62 306 *e*P **P** **00 08 29.5 +0.3**
comp=Z,1μm,1.0s,mb6.7
PKIN Phulchoki 47.63 306 *e*P **P** **00 08 30.2 +0.9**
comp=Z,664nm,0.8s,mb6.5
HIA Hailar 47.66 353⇓ *i* P **P** **00 08 29.1 0.0**
HIA *e*pP pP 00 08 52.4 +0.1
HIA PcP PcP 00 09 58.2 +1.1
HIA *e*PP PP 00 10 22.0 +0.4
HIA *e*ScP ScP 00 13 38.8 -3.9
HIA *e*S **S** **00 15 19.1 +1.6**
HIA Hailar 47.66 353⇓ *i* P **P** **00 08 29.1 0.0**
HIA *e**PP pP 00 08 52.4 +0.1
HIA 00 09 58.2
HIA *e* 00 10 22.0
HIA *e*S **S** **00 15 19.1 +1.6**
DMN Daman 47.88 306 *e*P **P** **00 08 31.8 +0.6**
comp=Z,2μm,0.9s,mb7.0
MDRS Chennai 48.01 286⇓ *i* P x 00 08 47.2
MDRS *i* S x 00 15 35.7
GKN Gorkha 48.42 307 *e*P **P** **00 08 35.4 0.0**
comp=Z,2μm,0.9s,mb6.8
KOLN Koldanda 49.16 306 *e*P **P** **00 08 41.8 +0.8**
comp=Z,1μm,0.7s,mb7.0
SONM Songino Array 49.26 341 P **P** **00 08 42.1 +0.7**
comp=Z,175nm,0.6s,mb6.1,baz=155,slow=8.7,SNR=551
SONM pP pP 00 09 08.4 +3.7
comp=Z,112nm,0.7s,baz=159,slow=9.8,SNR=4.5
SONM ScP ScP 00 13 47.7 -1.8
comp=Z,42nm,1.0s,baz=167,slow=3.4,SNR=4.4
SONM Songino Array 49.26 341 P **P** **00 08 42.1 +0.7**
SONM *PP pP 00 09 08.4 +3.7
DANN Dangsing 49.27 307 *e*P **P** **00 08 42.5 +0.7**
comp=Z,2μm,0.8s,mb7.1
ALBI Allahabad 49.73 302 *e*PKP **P** **00 08 43.0 -2.4**
HYB Hyderabad 50.42 291⇓ *i* P **P** **00 08 51.0 +0.3**
comp=Z,420nm,1.0s,mb6.3
HYB *e*pP pP 00 09 13.5 -0.6
HYB *e*PcP PcP 00 10 05.0 -2.8
HYB *e*S **S** **00 15 58.0 +0.8**
JBP Jabalpur 50.61 299 *ex* **P** **00 08 53.9 +1.9**
JBP *ex* x 00 15 56.0
TRD Trivandrum 50.67 279 *e*PKP **P** **00 08 52.1 -0.5**
TRD AMb AMB 00 08 57.4
comp=Z,837nm,1.2s,mb6.7
TRD *e*S **S** **00 16 01.7 +1.0**
CIT Chita 51.30 349 *e*P **P** **00 08 57.9 +1.2**
CIT *e* 00 09 27.4
CIT *e*S **S** **00 16 11.2 +3.0**
CIT *e* 00 18 31.2
ZAK Zakamensk 52.49 341 *e*P **P** **00 09 05.7 +0.2**
ZAK pmax pmax
comp=Z,143nm,1.2s,mb5.9
LATR Latur 52.49 292 *e*PKP **P** **00 09 05.0 -1.1**
AKL Akola 52.59 295⇑ *i* P **P** **00 09 07.3 +0.4**
AKL AMP 00 09 09.2
comp=Z,2μm,0.8s
AKL *i* x x 00 16 22.8
PTH Pithoragarh 52.60 306 *e*PKP **P** **00 09 07.0 +0.3**
PTH *ex* x 00 14 02.0
FUNA Funafuti 52.61 102 *e*P **P** **00 09 08.1 +0.9**
FUNA *e*sP sP 00 09 39.6 -1.9
MNGI Mangalore 53.22 285 *i* x x 00 09 50.1
TLY Talaya 53.49 342⇓ *i* P **P** **00 09 13.5 +0.6**
TLY *e*pP pP 00 09 36.4 -0.1
TLY *e*sP sP 00 09 47.6 +0.3
TLY PcP PcP 00 10 19.1 +0.5
TLY *e*ScP ScP 00 14 02.2 -5.5
TLY *e*S **S** **00 16 37.5 -0.6**
TLY Talaya 53.49 342 *d* *i* P **P** **00 09 13.3 +0.4**
TLY *e* pP 00 09 36.0 -0.5
TLY *e*S **S** **00 16 38.9 +0.8**
TLY *e*S **S** **00 16 38.9 +0.8**
TLY *e* 00 18 48.3
TLY pmax pmax
comp=Z,117nm,0.9s,mb5.9
TLY Talaya 53.49 342 P **P** **00 09 13.8 +0.9**
comp=Z,843nm,0.9s,mb6.8,SNR=54
JOSI Joshimath 53.51 307 *e*PKP **P** **00 09 14.3 +0.9**
MSVF Nonsavu 53.51 114⇑ *e*P **P** **00 09 15.4 +1.8**
MSVF *e*pP pP 00 09 37.6 +0.4
MSVF *e*sP sP 00 09 48.8 +0.7
MSVF PcP PcP 00 10 17.2 -2.2
MSVF *e*ScP ScP 00 14 07.0 -1.5
MSVF *e*S **S** **00 16 35.9 -3.5**
IRK Irkutsk 53.79 343 *e*P **P** **00 09 14.9 -0.1**
IRK *e* pP 00 09 39.1 +0.4
IRK *e*S **S** **00 16 43.9 +1.8**
IRK pmax pmax
comp=Z,434nm,1.8s,mb6.2
HMDM Hanimaadhoo 54.30 277 P **P** **00 09 19.9 +0.4**
comp=Z,513nm,1.6s,mb6.3
SKR Severo-Kuril's 54.33 22⇑ *i* P **P** **00 09 19.5 +0.5**
SKR *e* 00 10 16.0
SKR *e*S **S** **00 16 46.0 -3.5**
SKR *e* 00 18 56.0
SKR *e*SS SS 00 20 24.0 -9.0
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.1
SKR pmax pmax
comp=N,3μm,4.0s
SKR pmax pmax
comp=E,4μm,4.0s
SKR pmax pmax
comp=Z,7μm,4.0s
SKR smax
comp=N,5μm,10.0s
SKR smax
comp=E,21μm,10.0s
MOY Mondy 54.35 340 *e*P **P** **00 09 19.8 +0.7**
MOY *e* 00 09 48.7
MOY pmax pmax
comp=Z,803nm,1.8s,mb6.5
KAD Karad 54.50 290 *e*PKP **P** **00 09 20.1 -0.7**
KAD AMb AMB 00 09 22.7
comp=Z,293nm,0.7s,mb6.4
DDI Dehra Dun 54.62 306⇓ *i* P **P** **00 09 21.0 -0.6**
DDI *ex* x 00 16 36.0
WMQ Urumqi 54.64 325⇓ *i* P **P** **00 09 23.0 +1.6**
WMQ pP pP 00 09 47.0 +1.9
WMQ sP sP 00 09 58.0 +2.1
WMQ PP PP 00 11 28.0 +3.1
WMQ ScP ScP 00 14 13.0 +0.1
WMQ S **S** **00 16 54.0 +0.2**
WMQ sS sS 00 17 35.0 +0.5
WMQ ScS ScS 00 18 59.0 -2.3
WMQ SS SS 00 20 37.0 -1.1
WMQ pmax pmax
comp=Z,800nm,1.0s,mb6.7
WMQ pmax pmax
comp=Z,12μm,5.0s
WMQ LR LR
comp=N,47μm,16.0s
WMQ LR LR
comp=E,27μm,16.0s
WMQ LR LR
comp=Z,37μm,16.0s
SONA Sohna 54.70 304 *e*PKP **P** **00 09 21.5 -0.7**
AYAN Aya Nagar 54.74 304 *e*PKP **P** **00 09 21.9 -0.5**
AYAN AMb AMB 00 09 28.4
comp=Z,750nm,0.9s,mb6.7
CLNS Chul'man 54.82 358 *d* *i* P **P** **00 09 23.4 +0.9**
CLNS *e* pP 00 09 51.1 +4.9
CLNS *i* S **S** **00 16 54.2 -1.7**
CLNS pmax pmax
comp=Z,324nm,0.8s,mb6.4
CLNS pmax pmax
comp=E,136nm,0.8s
CLNS pmax pmax
comp=N,277nm,0.8s
CLNS smax
comp=E,7μm,12.1s
CLNS smax
comp=N,4μm,12.9s
CLNS MLR MLR
comp=E,151μm,14.0s
CLNS MLR MLR
comp=N,266μm,16.0s
CLNS MLR MLR
comp=Z,225μm,15.0s
KLP Kalpa 54.92 308 *e*PKP **P** **00 09 24.8 +1.1**
KLP AMb AMB 00 09 29.8
comp=Z,860nm,0.9s,mb6.8
POO Poona 55.03 291 *e*PKP **P** **00 09 24.2 -0.5**
POO AMb AMB 00 09 26.2
comp=Z,640nm,0.9s,mb6.7
SMLA Simla 55.63 307 *i* P **P** **00 09 28.9 +0.1**
SMLA AML AML 00 09 30.9
comp=Z,9μm,0.7s
SMLA *i* S **S** **00 17 09.3 +1.7**
DGAR Diego Garcia 55.64 260 *e*P **P** **00 09 29.1 -0.1**
comp=Z,2μm,1.4s,mb6.9
DGAR Diego Garcia 55.64 260 *c* *i* P **P** **00 09 29.5 +0.4**
SDNR Sundarnagar 55.92 307 *e*PKP **P** **00 09 32.1 +1.2**
SDNR *ex* x 00 16 09.5
AJM Ajmer 56.22 301 *e*PKP **P** **00 09 32.9 -0.1**
AJM AMb AMB 00 09 36.9
comp=Z,436nm,1.1s,mb6.4
BHK Bhakra 56.33 307 *ex* **P** **00 09 31.0 -2.8**
BHK *ex* x 00 10 04.6
OUZ Omahuta 56.76 135 *e*P **P** **00 09 38.8 +2.1**
comp=Z,256nm,1.5s,mb6.0
OUZ *e*pP pP 00 10 00.6 0.0
OUZ *e*sP sP 00 10 11.2 -0.2
OUZ *e*PcP PcP 00 10 31.5 -0.1
PETK Petropavlovsk- 56.87 21 P **P** **00 09 37.8 +0.7**
comp=Z,173nm,0.9s,mb6.1,baz=198,slow=3.2,SNR=61
PETK pP pP 00 10 03.2 +2.2
comp=Z,192nm,0.9s,baz=188,slow=2.2,SNR=6.5
PETK Petropavlovsk- 56.87 21 P **P** **00 09 37.8 +0.7**
PETK *PP pP 00 10 03.2 +2.2
DLH Dalhousie 57.09 308 *e*PKP **P** **00 09 40.0 +0.8**
DLH *e*S **S** **00 17 26.0 -0.9**
PET Petropavlovsk 57.15 22 *e*P **P** **00 09 40.0 +0.9**
PET Petropavlovsk 57.15 22κ *i* P **P** **00 09 39.8 +0.7**
PET *e**PP pP 00 10 04.0 +1.0
PET *e*S **S** **00 17 25.4 -1.5**
PET pmax pmax
comp=Z,2μm,8.7s
PET pmax pmax
comp=Z,494nm,1.5s,mb6.3
PET pmax pmax
comp=Z,1μm,9.6s
PET smax
comp=E,13μm,10.7s
PET smax
comp=E,15μm,21.6s
MIDW Midway 58.74 58 *e*P **P** **00 09 51.5 +0.8**
comp=E,272nm,1.1s,mb6.2
MIDW *e*pP pP 00 10 14.5 -0.2
MIDW *e*sP sP 00 10 24.2 -1.3
MIDW *e*PP PP 00 12 02.0 +0.3
MK31 Makanchi Array 59.47 326⇓ *i* P **P** **00 09 56.0 +0.6**
MK31 *e*pP pP 00 10 18.7 -0.8
MK31 *e*PP PP 00 12 07.8 0.0
MK31 *e*ScP ScP 00 14 34.3 +0.1
MK31 *e*S **S** **00 17 57.5 +0.2**
MK31 Makanchi Array 59.47 326⇓ *i* P **P** **00 09 56.0 +0.6**
MK31 *e* 00 12 07.8
MK31 *e*S **S** **00 17 57.5 +0.3**
MKAR Makanchi Array 59.47 326 P **P** **00 09 54.2 -1.2**
comp=E,730nm,0.7s,mb6.8,baz=119,slow=8.0,SNR=1494
MKAR pP pP 00 10 22.2 +2.8
comp=E,318nm,0.7s,baz=122,slow=9.1,SNR=4.6
MKAR ScP ScP 00 14 33.6 -0.6
comp=E,32nm,0.9s,baz=103,slow=5.8,SNR=4.3
MKAR S **S** **00 17 56.5 -0.8**
comp=E,3.9nm,0.9s,baz=270,slow=27,SNR=3.6
MKAR Makanchi Array 59.47 326 *e*P **P** **00 09 56.0 +0.6**
MKAR pP pP 00 10 22.2 +2.8
MKAR ScP ScP 00 14 33.6 -0.6
MKAR S **S** **00 17 56.5 -0.8**
MKAR Makanchi Array 59.47 326 P **P** **00 09 54.2 -1.2**
MKAR *PP pP 00 10 22.2 +2.7
MKAR S **S** **00 17 56.5 -0.7**
MKAR pmax pmax
comp=Z,730nm,0.7s
MKAR smax
comp=N,4.0nm,0.9s
BHJ Bhuj 59.82 296 *e*PKP **P** **00 09 58.0 -0.2**
KSH Kashi 59.85 316 *e*P **P** **00 10 00.1 +1.9**
KSH *e*pP pP 00 10 24.2 +2.0
KSH *e*sP sP 00 10 35.3 +2.3
KSH *e*PcP PcP 00 10 46.6 +2.8
KSH *e*PP PP 00 12 14.2 +2.9
KSH *e*ScP ScP 00 14 37.0 +0.9
KSH *e*PcS PcS 00 14 47.3 +1.3
KSH *e*S **S** **00 17 59.6 -2.8**
KSH *e*sS sS 00 18 41.3 -2.4
KSH *e*ScS ScS 00 19 37.1 -2.5
KSH *e*SS SS 00 21 57.5 -2.8
KSH pmax pmax
comp=Z,88nm,0.5s,mb6.0
KSH pmax pmax
comp=Z,4μm,3.2s
KSH LR LR
comp=N,12μm,7.3s
KSH LR LR
comp=E,11μm,9.6s
KSH LR LR
comp=Z,46μm,21.5s
KSH Kashi 59.85 316 *e*P **P** **00 10 00.1 +1.9**
KSH *e*pP pP 00 10 24.2 +2.0
KSH *e*sP sP 00 10 35.3 +2.3
KSH *e*PcP PcP 00 10 46.6 +2.8
KSH *e*PP PP 00 12 14.2 +2.9
KSH *e*ScP ScP 00 14 37.0 +0.9
KSH *e*PcS PcS 00 14 47.3 +1.3
KSH *e*S **S** **00 17 59.6 -2.8**
KSH *e*ScS ScS 00 19 37.1 -2.5
KSH pmax pmax
comp=Z,88nm,0.5s,mb6.0
KSH pmax pmax
comp=Z,4μm,3.2s
KSH LR LR
comp=N,12μm,7.3s
KSH LR LR
comp=E,11μm,9.6s
KSH LR LR
comp=Z,46μm,21.5s
RPZ Rata Peaks 59.85 145⇑ *e*P **P** **00 09 57.6 -0.4**
comp=Z,415nm,0.9s,mb6.5
RPZ *e*pP pP 00 10 22.0 -0.2
RPZ *e*sP sP 00 10 32.8 -0.1
YAK Yakutsk 60.02 1 *e*P **P** **00 09 59.0 +0.1**
YAK Yakutsk 60.02 1 *d* *i* P **P** **00 09 58.7 -0.2**
YAK *e**PP pP 00 10 22.6 -0.4
YAK *e* 00 10 46.9
YAK *e* 00 12 11.7
YAK *e*S **S** **00 17 56.6 -7.2**
YAK *e**SS sS 00 18 32.5 -13
YAK *i* 00 19 35.9
YAK pmax pmax
comp=Z,599nm,0.9s,mb6.6
YAK pmax pmax
comp=N,233nm,1.1s
YAK pmax pmax
comp=E,28nm,0.9s
YAK pmax pmax
comp=Z,425nm,1.4s,mb6.3
YAK pmax pmax
comp=N,173nm,1.3s
YAK pmax pmax
comp=E,67nm,1.4s
YAK smax
comp=E,9μm,6.2s
YAK smax
comp=N,8μm,6.9s
ODZ Otahua Downs 60.43 146 *e*P **P** **00 10 01.8 -0.2**
comp=N,397nm,0.8s,mb6.5
KHZ Kahutara 60.58 142⇓ *e*P **P** **00 10 02.3 -0.7**
KHZ *e*pP pP 00 10 26.5 -0.7
KHZ *e*sP sP 00 10 39.0 +1.1
KHZ *e*PcP PcP 00 10 48.3 +1.7
KHZ PP PP 00 12 18.4 +0.6
SNZO South Karori 60.69 141⇑ *e*P **P** **00 10 02.7 -1.2**
SNZO *e*pP pP 00 10 27.1 -0.9
SNZO *e*sP sP 00 10 38.3 -0.4
SNZO *e*PcP PcP 00 10 48.0 +1.0
SNZO *e*PP PP 00 12 20.0 +1.3
URZ Urewera 60.72 137⇑ *e*P **P** **00 10 03.3 -0.8**
URZ *e*pP pP 00 10 29.2 +1.0
URZ *e*PcP PcP 00 10 46.7 -0.5
URZ *e*PP PP 00 12 21.0 +2.0
URZ *e*ScP ScP 00 14 35.7 -4.2
URZ *e*S **S** **00 18 15.5 +2.0**
ULHL Ulahol 60.87 319 P **P** **00 10 06.3 +1.3**
SNR=23
AAA Alma-Ata 60.88 320 *e*P **P** **00 10 05.3 +0.2**
AAA *e*S **S** **00 18 10.9 -4.5**
AAA pmax pmax
comp=Z,9μm,6.8s
AAA smax
comp=E,30μm,14.7s
KZA Kyzart 61.45 318 P **P** **00 10 11.0 +2.0**
SNR=99
KZA Kyzart 61.45 318⇓ *i* P **P** **00 10 10.8 +1.9**
KZA *e*pP pP 00 10 32.2 -1.0
KZA *e*sP sP 00 10 43.0 -0.9
KZA *e*ScP ScP 00 14 43.9 +0.8
KZA *e*S **S** **00 18 24.2 +1.5**
TKM2 Tokmak 2 61.59 319 P **P** **00 10 10.9 +1.0**
SNR=526
TKM2 Tokmak 2 61.59 319⇓ *i* P **P** **00 10 10.8 +0.8**
TKM2 *e*pP pP 00 10 31.9 -2.2
TKM2 *e*sP sP 00 10 43.6 -1.3
TKM2 *e*PP PP 00 12 27.6 +0.9
TKM2 *e*ScP ScP 00 14 42.6 -1.1
TKM2 *e*S **S** **00 18 23.6 -0.9**
TKM2 Tokmak 2 61.59 319⇓ *i* P **P** **00 10 10.8 +0.9**
TKM2 *e**SP sP 00 10 43.6 -1.3
TKM2 *e* 00 12 27.6
TKM2 *e*S **S** **00 18 23.6 -0.9**
KBK Karagaybulak 61.91 318 P **P** **00 10 13.2 +1.1**
SNR=94
KBK Karagaybulak 61.91 318 *e*P **P** **00 10 13.1 +1.1**

comp=E,459nm,1.0s,mb6.5
MCQ Macquarie Isla 61.94 160 *e*P **P 00 10 12.8 +0.9**
MCQ *e*pP pP 00 10 35.2 -1.0
MCQ *e*sP sP 00 10 46.0 -0.9
MCQ *e*PP PP 00 12 28.2 -1.3
MCQ Macquarie Isla 61.94 160 *e*P **P 00 10 12.8 +0.8**
MCQ *e**SP sP 00 10 46.0 -0.9
MCQ *e* 00 12 28.2
CHMS Chumysh 62.19 319 P **P 00 10 14.3 +0.4**
SNR=6.4
AAK Ala-Archa 62.20 318 P **P 00 10 15.1 +1.1**
SNR=137
AAK Ala-Archa 62.20 318 P **P 00 10 15.0 +1.1**
comp=E,106nm,0.6s,mb6.1,baz=111,slow=5.3,SNR=143
AAK pP pP 00 10 42.9 +4.6
comp=E,54nm,0.7s,baz=87,slow=14,SNR=1.7
AAK Ala-Archa 62.20 318⇓*i*P **P 00 10 14.9 +0.9**
comp=E,342nm,1.0s,mb6.3
AAK *e*pP pP 00 10 37.0 -1.2
AAK *e*sP sP 00 10 48.4 -0.5
AAK *e*PcP PcP 00 10 53.7 +0.5
AAK *e*ScP ScP 00 14 43.0 -3.5
AAK *e*S **S 00 18 29.3 -2.8**
AAK Ala-Archa 62.20 318⇓*i*P **P 00 10 14.9 +0.9**
AAK *e* 00 10 53.7
AAK *e*S **S 00 18 29.3 -2.8**
AAK pmax pmax
comp=Z,342nm,1.0s,mb6.3
AAK Ala-Archa 62.20 318 P **P 00 10 15.6 +1.6**
comp=Z,2μm,0.9s,mb7.2,SNR=99
FRU Bishkek 62.20 318⇓*i*P **P 00 10 14.0 0.0**
FRU *e* 00 10 58.0
FRU *i* S **S 00 18 26.0 -6.2**
FRU pmax pmax
comp=Z,1μm,2.2s,mb6.5
FRU MLR MLR
comp=Z,28μm,21.0s
AFI Afiamalu 62.22 107 *e*P **P 00 10 15.2 +0.5**
AFI Afiamalu 62.22 107 *e*P **P 00 10 15.2 +0.5**
USP Ospenovka 62.47 319 P **P 00 10 16.4 +0.6**
SNR=796
AML Almayashu 62.52 317 P **P 00 10 17.7 +1.6**
SNR=27
AML Almayashu 62.52 317⇓*i*P **P 00 10 17.5 +1.3**
comp=Z,903nm,0.8s,mb6.8
AML *e*pP pP 00 10 39.0 -1.4
AML *e*sP sP 00 10 50.2 -1.0
AML *e*PcP PcP 00 10 55.9 +1.4
AML *e*PP PP 00 12 34.3 -0.6
AML *e*ScP ScP 00 14 46.2 -1.7
AML *e*S **S 00 18 38.2 +2.0**
ZAA0 Zalesovo Array 62.54 333⇓*i*P **P 00 10 15.1 -1.0**
ZAA0 *e*pP pP 00 10 37.7 -2.6
ZAA0 *e*sP sP 00 10 49.8 -1.2
ZAA0 *e*PcP PcP 00 10 55.4 +1.1
ZAA0 *e*PP PP 00 12 30.3 -4.5
ZAA0 *e*S **S 00 18 35.0 -1.0**
ZALV Zalesovo Beam 62.54 333 P **P 00 10 15.2 -0.9**
comp=Z,168nm,0.7s,mb6.1,baz=112,slow=6.2,SNR=226
ZALV pP pP 00 10 43.6 +3.3
comp=Z,430nm,0.9s,baz=116,slow=6.8,SNR=10
ZALV S **S 00 18 32.2 -3.8**
comp=Z,7.3nm,1.0s,baz=119,slow=12,SNR=2.9
ZALV PKP2bc 00 39 23.9
comp=Z,13nm,1.0s,baz=313,slow=3.9,SNR=5.0
ZALV Zalesovo Beam 62.54 333 P **P 00 10 15.2 -0.9**
ZALV pP pP 00 10 43.6 +3.3
ZALV S **S 00 18 32.2 -3.8**
ZALV ⇑*e* 00 39 23.9
ZALV Zalesovo Beam 62.54 333 P **P 00 10 15.2 -0.9**
ZALV *PP pP 00 10 43.6 +3.3
ZALV S **S 00 18 32.2 -3.8**
EKS2 Erkin-Say 62.69 318 P **P 00 10 18.4 +1.1**
SNR=528
EKS2 Erkin-Say 62.69 318⇓*i*P **P 00 10 18.3 +1.0**
comp=Z,600nm,0.8s,mb6.6
EKS2 *e*pP pP 00 10 40.1 -1.4
EKS2 *e*sP sP 00 10 51.0 -1.2
EKS2 *e*PP PP 00 12 36.1 -0.1
EKS2 *e*ScP ScP 00 14 49.3 +0.7
EKS2 *e*S **S 00 18 38.0 -0.3**
KBL Kabul 63.21 308⇓*i*P **P 00 10 21.0 +0.1**
KBL *e*pP pP 00 10 44.9 -0.2
KBL *e*sP sP 00 10 54.6 -1.3
KBL *e*PP PP 00 12 41.9 +0.8
KBL *e*ScP ScP 00 14 47.6 -3.5
KBL *e*S **S 00 18 36.0 -9.1**
KBL Kabul 63.21 308⇓*i*P **P 00 10 21.0 +0.1**
KBL *e**PP pP 00 10 44.9 -0.3
KBL *e**SP sP 00 10 54.6 -1.3
KBL *e* 00 12 41.9
KBL *e*S **S 00 18 36.0 -9.1**
FX1 Attu Island--F 63.33 29 *e*P **P 00 10 22.7 +1.4**
FX1 Attu Island--F 63.33 29 *e*P **P 00 10 22.7 +1.4**
JOHN Johnston Islan 63.66 72⇑*e*P **P 00 10 26.0 +1.9**
JOHN *e*pP pP 00 10 49.0 +0.5
JOHN *e*PcP PcP 00 11 00.8 +1.1
JOHN *e*PP PP 00 12 45.5 +0.2
SEY Seymchan 63.66 12*d i*P **P 00 10 24.5 +1.2**
KURK Kurchatov 63.67 328⇓*i*P **P 00 10 23.5 -0.1**
KURK *e*pP pP 00 10 45.8 -2.1
KURK *e*sP sP 00 10 55.8 -2.8
KURK *e*PP PP 00 12 44.4 -0.4
KURK *e*S **S 00 18 44.7 -5.5**
KURK Kurchatov 63.67 328⇓*i*P **P 00 10 23.5 -0.1**
KURK *e**SP sP 00 10 55.8 -2.8
KURK *e* 00 12 44.4
KURK *e*S **S 00 18 44.7 -5.5**
KURK Kurchatov 63.67 328 P **P 00 10 23.9 +0.3**
SNR=658
SMY Shemya 63.69 30 *e*P **P 00 10 25.2 +1.5**
comp=Z,1μm,1.4s,mb6.6
SMY Shemya 63.69 30 *e*P **P 00 10 25.2 +1.5**
SMY pmax pmax
comp=Z,1μm,1.4s,mb6.6
NVS Novosibirsk 63.83 333⇓*i*P **P 00 10 22.7 -1.8**
NVS *e**PP pP 00 10 46.2 -2.7
NVS *i* S **S 00 18 46.0 -6.0**
NVS *e*PS 00 19 10.3
NVS pmax pmax
comp=N,138nm,1.2s
NVS pmax pmax
comp=E,205nm,1.2s
NVS pmax pmax
comp=Z,282nm,1.2s,mb6.0
NVS smax
comp=N,174nm,2.6s
NVS smax
comp=E,232nm,2.6s
KK31 Karatay Array 65.06 317 P **P 00 10 32.7 -0.1**
KK31 pmax pmax
comp=Z,614nm,1.0s,mb6.4
KKAR Karatay Array 65.06 317⇓*i*P **P 00 10 32.8 -0.1**
KKAR *e*pP pP 00 10 57.2 0.0
KKAR *e*PcP PcP 00 11 06.0 +1.1
KKAR *e*PP PP 00 12 57.2 0.0
KKAR *e*S S 00 19 06.3 -1.3
KKAR Karatay Array 65.06 317⇓*i*P **P 00 10 32.8 0.0**
KKAR *e**PP pP 00 10 57.2 0.0
KKAR *e* 00 11 06.0
KKAR *e* 00 12 57.2
KKAR *e*S S 00 19 06.3 -1.4
AMKA Amchitka 65.64 33 *e*P **P 00 10 37.7 +1.3**
comp=Z,153nm,0.9s,mb5.8
VOSK Vostochnaya 68.79 327 P **P 00 10 55.3 -1.0**
VOSK pmax pmax
comp=Z,403nm,0.9s,mb6.2
CASY Casey 69.09 187⇑*i*P **P 00 10 57.6 -0.2**
CASY *i* S S 00 19 53.4 -1.7
CASY Casey 69.09 187⇑*i*P **P 00 10 57.6 -0.2**
comp=Z,570nm,1.2s,mb6.3
CASY *e*PP PP 00 13 25.5 -6.1
BVAR Borovoye Array 69.25 327 P **P 00 10 58.8 -0.3**
comp=Z,398nm,0.8s,mb6.3,baz=129,slow=8.8,SNR=625
BVAR pP pP 00 11 27.9 +4.2
comp=Z,169nm,0.7s,baz=123,slow=5.5,SNR=3.0
BVAR Borovoye Array 69.25 327 P **P 00 10 58.8 -0.3**
BVAR *PP pP 00 11 27.9 +4.2
BRVK Borovoye 69.32 327⇓*i*P **P 00 10 59.2 -0.3**
BRVK *e*pP pP 00 11 21.5 -2.7
BRVK *e*sP sP 00 11 32.8 -2.0
BRVK *e*PP PP 00 13 36.0 +2.1
BRVK *e*S S 00 19 54.0 -4.4
BRVK Borovoye 69.32 327⇓*i*P **P 00 10 59.2 -0.3**
BRVK *e**PP pP 00 11 21.5 -2.7
BRVK *e**SP sP 00 11 32.8 -2.0
BRVK *e* 00 13 36.0
BRVK *e*S S 00 19 54.0 -4.4
BRVK Borovoye 69.32 327 P **P 00 10 59.6 +0.1**
SNR=331
WBK Wadi Bani Khal 69.43 293 P **P 00 11 01.0 +0.1**
SNR=44
ATKA Atka Island 69.61 34 *e*P **P 00 11 02.1 +0.8**
comp=Z,801nm,1.0s,mb6.5
TIXI Tiksi 69.67 0⇓*i*P **P 00 10 59.9 -1.4**
TIXI *e*pP pP 00 11 24.5 -1.5
TIXI *e*sP sP 00 11 35.8 -0.8
TIXI *e*PP PP 00 13 36.4 -0.1
TIXI *e*S S 00 19 52.7 -9.1
TIXI Tiksi 69.67 0*d i*P **P 00 11 00.0 -1.3**
TIXI *e* pP 00 11 24.5 -1.5
TIXI *e*S S 00 19 58.2 -3.6
TIXI *e* 00 20 33.9
TIXI pmax pmax
comp=Z,256nm,1.4s,mb5.9
JMDO Jabal Madar 70.20 293 P **P 00 11 05.4 -0.2**
SNR=78
SMDO Samad 70.33 294 P **P 00 11 06.1 -0.2**
SNR=59
PAF Port-aux-Franc 70.79 216 *e*P **P 00 11 08.0 -0.6**
comp=Z,2μm,1.5s,mb6.7
PAF Port-aux-Franc 70.79 216 *e*P **P 00 11 08.0 -0.6**
PAF pmax pmax
comp=Z,2μm,1.5s,mb6.7
HOQ Hoqain 71.06 294 P **P 00 11 10.6 -0.2**
SNR=52
BSY Bisya 71.07 293 P **P 00 11 10.9 0.0**
SNR=116
BILL Bilibino 71.14 14⇓*i*P **P 00 11 09.9 -0.4**
comp=Z,141nm,1.0s,mb5.8
BILL PcP PcP 00 11 30.7 +0.8
BILL *e*pP pP 00 11 35.0 -0.1
BILL *e*sP sP 00 11 46.0 +0.3
BILL *e*PP PP 00 13 55.1 +5.8
BILL *e*S S 00 20 16.3 -2.8
BILL Bilibino 71.14 14κ *i*P **P 00 11 10.0 -0.4**
BILL *i* *PP pP 00 11 34.4 -0.7
BILL *e* 00 13 48.0
BILL *i* S S 00 20 17.5 -1.6
BILL *e*SS SS 00 24 54.0 -0.5
BILL pmax pmax
comp=Z,199nm,1.6s,mb5.7
BILL pmax pmax
comp=Z,1μm,3.3s
BILL MLR MLR
comp=Z,263μm,20.0s
ARQ Araqi 71.75 294 P **P 00 11 14.8 -0.2**
SNR=134
MRIV Mauritius Mete 71.92 248⇑*e*P **P 00 11 15.8 -0.1**
MRIV *e*PcP PcP 00 11 33.8 -0.4
MRIV *e*pP pP 00 11 39.8 -1.0
MRIV *e*sP sP 00 11 49.9 -1.4
BANOM Banah 72.24 297 P **P 00 11 18.2 +0.4**
SNR=18
HATD Hatta, Dubai 72.27 295 P **P 00 11 18.1 +0.1**
SNR=67
ASHO Ashiyiah 72.32 295 P **P 00 11 18.4 +0.1**
SNR=57
MIR Mirnyy 72.55 194⇑*i*P **P 00 11 18.8 0.0**
MIR *i* 00 11 38.0
MIR *e* 00 14 05.0
MIR *e*S S 00 20 34.0 -1.2
MIR *e*PS 00 21 18.0
MIR *e*SSS 00 28 24.0
MIR pmax pmax
comp=Z,2μm,1.8s,mb6.7
MIR pmax pmax
comp=E,3μm,10.0s
MIR pmax pmax
comp=Z,11μm,10.0s
MIR pmax pmax
comp=N,4μm,13.0s
MIR smax
comp=E,6μm,15.0s
MIR smax
comp=N,2μm,12.0s
ABKT Ailbek 72.60 309 P **P 00 11 20.6 +0.9**
comp=N,3μm,0.8s,mb7.1
VAN Vannovskaya 72.61 309 *e*P **P 00 11 20.8 +1.0**
VAN *e*S S 00 20 32.1 -5.0
NAZ Nazwa, Dubai 72.71 295 P **P 00 11 20.0 -0.6**
SNR=42
NIKO Nikolski 72.91 35⇑*i*P **P 00 11 21.6 +0.4**
comp=N,256nm,0.9s,mb6.0
NIKO PcP PcP 00 11 38.4 +0.6
NIKO *e*pP pP 00 11 46.0 -0.1
NIKO *e*sP sP 00 11 57.2 +0.5
ASUD Al Ashush, Dub 72.97 295 P **P 00 11 22.9 +0.7**
SNR=44
RBK Rabkut 73.45 288 P **P 00 11 25.1 -0.1**
SNR=22
RER Riviere de l'E 73.67 247 *e*P **P 00 11 26.1 -0.2**
comp=N,219nm,0.9s,mb5.9
SPIA Saint Paul Isl 73.72 30 *e*P **P 00 11 27.7 +1.9**
comp=N,1μm,1.4s,mb6.4
AB31 Abkulak array 74.02 321 *i* P **P 00 11 27.1 -0.7**
AB31 pmax pmax
comp=Z,171nm,0.6s,mb6.0
ABKAR Akbulak array 74.02 321⇓*i*P **P 00 11 27.2 -0.6**
ABKAR *e*pP pP 00 11 49.8 -2.9
ABKAR PP PP 00 14 13.6 -0.6
ABTO Aybut 74.31 287 P **P 00 11 29.6 -0.5**
SNR=31
UNV Unalaska Valle 74.53 34 *e*P **P 00 11 31.5 +0.8**
UNV *e*PcP PcP 00 11 46.1 +1.5
UNV *e*pP pP 00 11 55.3 -0.3
UNV *e*sP sP 00 12 06.6 +0.4
UNV *e*PP PP 00 14 23.5 +5.1
RAR Rarotonga 74.67 112 *e*P **P 00 11 33.8 +1.6**
comp=Z,1μm,2.0s,mb6.3
RAR Rarotonga 74.67 112 *e*P **P 00 11 33.8 +1.6**
RAR pmax pmax
comp=Z,1μm,2.0s
KIP Kipapa 74.92 68 *e*P **P 00 11 35.4 +1.8**
KIP Kipapa 74.92 68*ce*P **P 00 11 35.1 +1.5**
HON Honolulu 74.93 69⇑*i*P **P 00 11 35.4 +1.7**
HON *e*PcP PcP 00 11 48.6 +1.5
HON *e*pP pP 00 12 00.1 +1.5
HON Honolulu 74.93 69⇑*i*P **P 00 11 35.4 +1.8**
HON *e* 00 11 48.6
HON *e**PP pP 00 12 00.2 +1.6
AKUT Akutan 75.03 34 *e*P **P 00 11 34.5 +1.0**
comp=Z,1μm,1.6s,mb6.4
XMAS Kiritimati 75.06 86⇑*e*P **P 00 11 35.8 +1.3**
XMAS *e*PcP PcP 00 11 50.6 +2.7
XMAS *e*pP pP 00 12 01.0 +1.4
AKTK Aktyubinsk 75.54 322 P **P 00 11 36.0 -0.5**
AKTK S S 00 21 05.6 -3.8
AKTO Aktyubinsk 75.54 322 P **P 00 11 36.0 -0.5**
comp=Z,343nm,0.8s,mb6.2,baz=100,slow=7.2,SNR=434
AKTO S S 00 21 05.6 -3.8
comp=Z,7.2nm,0.9s,baz=319,slow=17,SNR=9.2
AKTO Aktyubinsk 75.54 322 P **P 00 11 36.1 -0.4**
AKTO S S 00 21 05.6 -3.8
GAMB Gambell 75.78 24 *e*P **P 00 11 39.0 +1.4**
comp=Z,565nm,1.3s,mb6.1
GAMB *e*sP sP 00 12 10.9 -2.3
SVE Sverdlovsk 75.89 329⇑*e*P **P 00 11 38.0 -0.4**
SVE *e* 00 12 12.0
SVE *e*PPP 00 16 19.9
SVE *e*S S 00 21 08.4 -4.7
SVE pmax pmax
comp=Z,459nm,0.8s,mb6.3
ARU Arti 76.87 328⇓*i*P **P 00 11 42.5 -1.4**
ARU *e*pP pP 00 12 08.4 -0.7
ARU *e*PP PP 00 14 36.1 -2.0
ARU *e*S S 00 21 17.1 -6.6
ARU Arti 76.87 328*d i*P **P 00 11 42.6 -1.3**
ARU 00 11 50.8
ARU *e**PP pP 00 12 13.9 +4.9
ARU PPP 00 16 22.8
ARU *e*S S 00 21 19.4 -4.3
ARU 00 21 45.3
ARU *SS sS 00 22 11.0 +4.3
ARU SSS 00 29 37.7
ARU pmax pmax
comp=Z,312nm,0.7s,mb6.2
ARU Arti 76.87 328 P **P 00 11 42.4 -1.5**
comp=Z,3μm,0.7s,mb7.0
KHU Kahuku 77.05 71⇑*e*P **P 00 11 47.0 +1.3**
KHU *e*PcP PcP 00 11 58.8 +2.5
KHU *e*pP pP 00 12 11.3 +0.5
KHU *e*sP sP 00 12 22.2 +0.9
KHU Kahuku 77.05 71⇑*e*P **P 00 11 47.0 +1.3**
KHU *e* 00 11 58.8
KHU *e**PP pP 00 12 11.3 +0.5
POHA Pohakuloa 77.15 70 *e*P **P 00 11 48.1 +1.8**
PUH Pauahi 77.43 71 *e*P **P 00 11 49.8 +2.0**
PUH *e*pP pP 00 12 13.2 +0.2
STCH Steam Cracks 77.51 71⇑*e*P **P 00 11 49.7 +1.4**
STCH *e*pP pP 00 12 14.0 +0.6
STCH *e*sP sP 00 12 24.7 +0.7
TNA Tin City 78.00 23 *e*P **P 00 11 51.2 +1.1**
comp=Z,130nm,1.2s,mb5.5
TNA *e*PcP PcP 00 12 00.6 +1.1
TNA *e*pP pP 00 12 15.4 +0.2
MUKL Al Mukalla 78.31 284⇑*e*P **P 00 11 53.1 +0.3**
SDPT Sand Point 78.31 34 *e*P **P 00 11 52.4 +0.4**
SDPT *e*PcP PcP 00 12 00.8 -0.2
SDPT *e*pP pP 00 12 17.2 +0.1
SDPT *e*sP sP 00 12 27.4 -0.2
SOKR Solikamsk 78.66 331⇑*i*P **P 00 11 52.9 -0.9**
SOKR pmax pmax
comp=Z,390nm,1.3s,mb6.1
CHGN Chignik 79.66 33 *e*P **P 00 11 59.4 0.0**
QRN Al-Qurain 79.91 299 *e*P **P 00 12 00.1 -1.2**
QRN AMb AMB 00 12 09.7
comp=Z,669nm,0.9s,mb6.5
KBD Kabd 80.13 299 *e*P **P 00 12 01.2 -1.3**
KBD AMb AMB 00 12 08.8
comp=Z,256nm,1.6s,mb5.8
UMR Umm Al-Rimmam 80.14 300 *e*P **P 00 12 01.5 -1.1**
UMR AMb AMB 00 12 05.5
comp=Z,447nm,1.0s,mb6.2
RDF Al-Radifah 80.25 299 *e*P **P 00 12 01.9 -1.2**
RDF AMb AMB 00 12 06.1
comp=Z,388nm,1.4s,mb6.0
MIB Mutribah 80.48 300 *e*P **P 00 12 03.2 -1.1**
MIB AMb AMB 00 12 07.3
comp=Z,398nm,0.7s,mb6.3
NAY Al-Naaiem 80.53 299 *e*P **P 00 12 03.2 -1.4**
NAY AMb AMB 00 12 07.5
comp=Z,384nm,0.8s,mb6.3
MAK Makhachkala 81.35 313 *e*P **P 00 12 07.9 -0.8**
MAK *e**SP sP 00 12 45.6 +1.1
MAK *i* 00 15 13.8
MAK *e*PPP 00 17 11.6
MAK *e*S S 00 22 09.7 -2.2
MAK *e**SS sS 00 22 57.4 +2.1
MAK pmax pmax
comp=Z,224nm,0.9s,mb6.0
MAK pmax pmax
comp=N,304nm,2.0s
MAK pmax pmax
comp=E,721nm,2.1s
MAK pmax pmax
comp=Z,2μm,3.0s
MAK smax
comp=E,30μm,9.3s
MAK smax
comp=N,8μm,7.1s
MAK MLR MLR
comp=N,21μm,18.0s
MAK MLR MLR
comp=Z,21μm,18.0s
MAK MLR MLR
comp=E,24μm,17.0s
ABPO Ambohimpanom 81.37 251⇑*e*P **P 00 12 09.3 +0.1**
ABPO *e*pP pP 00 12 33.6 -1.0
ABPO *e*sP sP 00 12 45.3 +0.2
ABPO Ambohimpanom 81.37 251⇑*e*P **P 00 12 09.4 +0.1**
BDHA Al Bayda' 81.67 284⇓*e*P **P 00 12 11.6 +0.7**
BDHA AMb AMB 00 12 14.0
comp=Z,566nm,1.1s,mb6.3
LBOS 81.98 284⇓*e*P **P 00 12 13.2 +0.7**
LBOS AMb AMB 00 12 15.9
comp=Z,1μm,1.1s,mb6.7
SVW2 Sparrevohn 82.06 29 *e*P **P 00 12 13.6 +1.6**
comp=Z,502nm,1.8s,mb6.0
TTA Tatalina 82.21 27 *e*P **P 00 12 13.9 +1.1**
TTA Tatalina 82.21 27 *e*P **P 00 12 13.9 +1.1**
MAW Mawson 82.29 200 P **P 00 12 13.1 0.0**
comp=Z,364nm,1.0s,mb6.2,baz=73,slow=5.6,SNR=266
MAW LR LR 00 46 58.6
comp=Z,4μm,21.4s,baz=202,slow=34
MAW Mawson 82.29 200⇑*i*P **P 00 12 13.0 0.0**
comp=Z,391nm,1.0s,mb6.2
MAW *i* S S 00 22 16.7 -3.8
MAW Mawson 82.29 200⇑*i*P **P 00 12 12.9 -0.1**
MAW *e*pP pP 00 12 40.7 +2.3
MAW *e*sP sP 00 12 49.2 +0.3
MAW *e*PP PP 00 15 21.8 -1.0
MAW Mawson 82.29 200⇑*i*P **P 00 12 13.0 0.0**
MAW *e**PP pP 00 12 40.7 +2.3
MAW *e* 00 15 21.8
SBA Scott Base 82.42 172⇑*i*P **P 00 12 14.3 +0.6**
SBA *e*pP pP 00 12 39.4 +0.4
SBA *e*sP sP 00 12 48.8 -0.7
SBA *e*PP PP 00 15 22.3 -1.5
SBA *e*S S 00 22 24.6 +3.0
SBA Scott Base 82.42 172⇑*i*P **P 00 12 14.3 +0.7**
SBA *e**PP pP 00 12 39.4 +0.4
SBA *e* 00 15 22.3
SBA *e*S S 00 22 24.6 +3.0
OHAK Old Harbor 82.61 33 *e*P **P 00 12 16.0 +1.1**
comp=Z,297nm,1.0s,mb6.1
DGRG David-gareji 82.81 311 P **P 00 12 16.3 -0.1**
KDAK Kodiak Island 83.06 32 P **P 00 12 18.6 +1.3**
comp=Z,150nm,0.6s,mb6.0,baz=257,slow=3.2,SNR=89
KDAK Kodiak Island 83.06 32⇑*e*P **P 00 12 19.2 +2.0**
KDAK *e*pP pP 00 12 42.9 +0.2
KDAK *e*sP sP 00 12 53.1 0.0
KDAK Kodiak Island 83.06 32⇑*e*P **P 00 12 19.3 +2.0**
KDAK *e**SP sP 00 12 53.1 0.0
TRBA At Turbah 83.08 283⇓*e*P **P 00 12 18.9 +0.6**
GNI Garni 83.21 310⇓*i*P **P 00 12 18.9 +0.4**
comp=Z,511nm,1.0s,mb6.3
GNI *e*PcP PcP 00 12 23.6 +0.9
GNI *e*pP pP 00 12 41.7 -2.1
GNI *e*PP PP 00 15 32.4 +1.4
GNI *e*S S 00 22 30.4 -0.6
GNI Garni 83.21 310⇓*i*P **P 00 12 18.9 +0.5**
GNI *e* 00 15 32.4
GNI *e*S S 00 22 30.4 -0.5
GNI pmax pmax
comp=Z,511nm,1.0s
GNI Garni 83.21 310 P **P 00 12 19.4 +1.0**
SNR=27
MTA Mtatsminda 83.26 312 P **P 00 12 18.6 -0.1**
TBLG Delisi 83.30 312 P **P 00 12 18.9 0.0**
TBLG Delisi 83.30 312 P **P 00 12 19.0 +0.1**
RSO Redoubt South 83.33 29 *e*P **P 00 12 19.2 +0.6**
RSO *e*pP pP 00 12 44.6 +0.6
GOR Gori 83.79 312 P **P 00 12 22.0 +0.7**
PAE Paea 83.87 108 *e*P **P 00 12 25.3 +3.0**
comp=Z,45nm,1.2s,mb5.2
PAE Paea 83.87 108 *e*P **P 00 12 25.3 +3.0**
PAE pmax pmax
comp=Z,45nm,1.2s,mb5.2
HAKT HAKKARI 83.89 307 *i* P **P 00 12 20.6 -1.4**
PPLA Purkeypile 83.93 27⇑*i*P **P 00 12 23.2 +1.5**
PPLA *e*pP pP 00 12 46.8 -0.3
PPLA *e*sP sP 00 12 58.6 +1.0
PPLA *e*PP PP 00 15 37.6 +1.3
ZEI Tsey 83.98 313 *e*P **P 00 12 22.6 +0.3**
ZEI *e*S S 00 22 31.3 -7.3
ZEI pmax pmax
comp=Z,386nm,5.3s
ZEI pmax pmax
comp=Z,198nm,0.7s,mb6.0
ZEI pmax pmax
comp=N,294nm,0.8s
ZEI pmax pmax
comp=E,443nm,0.7s
DYDN Diyadin 83.99 309 *i* P **P 00 12 23.2 +0.8**
TIAR Tiarei 84.09 108 *e*P **P 00 12 26.5 +3.1**
comp=E,91nm,0.7s,mb5.7
TVAN Van 84.16 308 *i* P **P 00 12 22.8 -0.5**
DIGO Kars 84.27 310 *i* P **P 00 12 23.5 -0.3**
TBI Tubuai 84.40 114 *e*P **P 00 12 28.6 +3.7**

comp=E,711nm,1.2s,mb6.4
PRGR Permogore 84.45 332⇓ *i*P **P 00 12 23.1 -1.2**
PRGR *e**PP pP 00 12 53.9 +4.1
PRGR *e* 00 15 40.8
PRGR *e*S S 00 22 35.1 -7.4
PRGR *i* *SS sS 00 23 31.2 +4.9
PRGR pmax pmax
comp=Z,184nm,0.9s,mb5.9
SLKM Skilak Lake 84.58 30⇑ *e*P **P 00 12 25.3 +0.3**
SLKM *e*pP pP 00 12 51.1 +0.6
SLKM Skilak Lake 84.58 30⇑ *e*P **P 00 12 25.3 +0.3**
SLKM *e**PP pP 00 12 51.1 +0.6
BPAW Bear Paw Mtn. 84.62 26⇑ *i*P **P 00 12 26.0 +0.9**
BPAW *e*pP pP 00 12 50.4 -0.2
BPAW *e*sP sP 00 13 02.4 +1.4
BPAW *e*PP PP 00 15 42.8 +0.9
TRF Thorofare Moun 84.86 27⇑ *i*P **P 00 12 26.7 +0.4**
TRF *e*pP pP 00 12 51.4 -0.4
TRF *e*sP sP 00 13 02.7 +0.5
RC01 Rabbit Creek A 84.88 29⇑ *e*P **P 00 12 26.9 +0.5**
RC01 *e*pP pP 00 12 49.3 -2.6
RC01 *e*sP sP 00 13 01.2 -1.1
KIV Kislovodsk 84.92 314⇑ *i*P **P 00 12 26.6 -0.4**
KIV *e*pP pP 00 12 49.8 -2.8
KIV *e*sP sP 00 13 02.5 -0.5
KIV *e*S S 00 22 40.0 -7.9
KIV Kislovodsk 84.92 314⇑ *i*P **P 00 12 26.6 -0.4**
KIV *e*S S 00 22 40.0 -7.9
KIV Kislovodsk 84.92 314 P **P 00 12 26.0 -1.0**
comp=Z,700nm,0.8s,mb6.6,SNR=21
KIV Kislovodsk 84.92 314 P **P 00 12 27.0 0.0**
SNR=16
SEW Seward 84.93 30 *e*P **P 00 12 27.4 +0.7**
PMR Palmer 85.21 28 *e*P **P 00 12 28.4 +0.3**
comp=Z,778nm,1.6s,mb6.4
PMR Palmer 85.21 28 *e*P **P 00 12 28.4 +0.3**
PMR pmax pmax
comp=Z,778nm,1.6s,mb6.4
PMOR Pomariorio Ree 85.33 105 *e*P **P 00 12 32.4 +2.8**
comp=Z,765nm,1.5s,mb6.4
HOMI Horasan 85.38 310 *i*P **P 00 12 30.1 +0.7**
ARTV Artvin 85.39 311 *i*P **P 00 12 29.0 -0.5**
MCK McKinley 85.48 26⇑ *i*P **P 00 12 29.6 +0.2**
MCK *e*pP pP 00 12 53.9 -1.1
MCK *e*sP sP 00 13 07.4 +2.1
MCK *e*PP PP 00 15 51.1 +2.1
MCK McKinley 85.48 26⇑ *i*P **P 00 12 29.6 +0.2**
MCK *e**SP sP 00 13 07.4 +2.0
MCK *e* 00 15 51.1
DDEM Demirkent 85.52 311 *i*P **P 00 12 30.5 +0.5**
DBOC Borcka 85.59 311 *i*P **P 00 12 30.8 +0.3**
SML Sawmill 85.61 28⇑ *i*P **P 00 12 30.8 +0.8**
SML *e*pP pP 00 12 55.2 -0.4
SML *e*sP sP 00 13 06.5 +0.5
SML *e*S S 00 22 50.4 -3.6
SML Sawmill 85.61 28⇑ *i*P **P 00 12 30.8 +0.7**
SML *e*S S 00 22 50.4 -3.5
ERZM Erzurum 85.79 310 *i*P **P 00 12 31.3 -0.1**
BEST Besiri 85.83 308 *i*P **P 00 12 31.6 -0.1**
VRHR Novokhopersk 85.91 321 *e*P **P 00 12 30.4 -1.4**
VRHR *e**PP pP 00 13 01.2 +3.8
VRHR *e*S S 00 22 44.9 -12
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,80nm,0.6s
VRHR pmax pmax
comp=Z,420nm,0.6s,mb6.5
VRHR smax
comp=N,340nm,1.5s
VRHR smax
comp=E,740nm,1.5s
VRHR smax
comp=Z,20nm,0.8s
BNGL BINGOL 85.94 309 *i*P **P 00 12 32.3 +0.1**
COLA College 86.04 25⇑ *e*P **P 00 12 31.8 -0.4**
comp=Z,45nm,0.9s,mb5.4
COLA *e*pP pP 00 12 55.4 -2.3
COLA *e*sP sP 00 13 09.3 +1.1
COLA *e*PP PP 00 15 56.7 +3.3
COLA *e*S S 00 22 49.9 -8.2
COLA College 86.04 25⇑ *e*P **P 00 12 31.8 -0.4**
COLA *e**SP sP 00 13 09.3 +1.2
COLA *e* 00 15 56.7
COLA *e*S S 00 22 49.9 -8.2
COLA pmax pmax
comp=Z,45nm,0.9s,mb5.4
MARD Mardin 86.21 307 *i*P **P 00 12 32.7 -0.9**
ILAR Eielson Array 86.45 25 P **P 00 12 33.0 -1.1**
comp=Z,14nm,0.9s,baz=212,slow=4.9,SNR=125
ILAR pP pP 00 13 03.5 +3.8
comp=Z,37nm,1.0s,baz=268,slow=5.2,SNR=4.5
ILAR PP PP 00 15 54.6 -2.1
comp=Z,44nm,1.2s,baz=266,slow=5.5,SNR=6.3
ILAR S SKSac 00 22 45.1 -6.4
comp=Z,1.6nm,0.8s,baz=258,slow=3.6,SNR=2.9
ILAR PKPPKP 00 38 39.9
comp=Z,8.4nm,1.2s,baz=88,slow=1.1,SNR=6.9
ILAR Eielson Array 86.45 25 P **P 00 12 33.1 -1.1**
ILAR *PP pP 00 13 03.5 +3.8
ILAR 00 15 54.6
ILAR S S 00 22 45.2 -17
KOPT Kop Dagi 86.46 310 *i*P **P 00 12 35.8 +1.0**
DIYA Diyarbakir 86.74 308 *i*P **P 00 12 36.5 +0.3**
PAX Paxson 87.00 27⇑ *i*P **P 00 12 37.9 +1.0**
PAX *e*pP pP 00 13 02.0 -0.4
PAX *e*sP sP 00 13 13.1 +0.2
PAX PP PP 00 16 00.6 -0.5
PAX Paxson 87.00 27⇑ *i*P **P 00 12 37.9 +1.0**
PAX *e**SP sP 00 13 13.1 +0.2
PAX 00 16 00.6
MACK Trabzon 87.02 311 *i*P **P 00 12 35.9 -1.6**
SOC Sochi 87.06 313 *d*P **P 00 12 36.5 -1.1**
SOC *e**SP sP 00 13 21.6 +8.0
SOC *e* 00 16 01.6
SOC *i*S SKSac 00 22 51.4 -4.8
SOC pmax pmax
comp=Z,105nm,0.6s,mb5.9
KLMR Klimovskoe 87.35 331 *d*P **P 00 12 37.0 -1.6**
KLMR *i**PP pP 00 13 09.1 +4.9
KLMR 00 16 03.9
KLMR *e*S SKSac 00 22 51.5 -5.7
KLMR pmax pmax
comp=Z,163nm,1.0s,mb5.9
KLMR pmax pmax
comp=Z,3μm,10.4s
VORD Divnogorie 87.38 321 *e*P **P 00 12 37.5 -1.5**
VORD *e**PP pP 00 13 10.7 +6.1
VORD *e*PPP 00 17 58.5
VORD *e*S SKSac 00 22 52.9 -4.9
VORD pmax pmax
comp=N,70nm,0.9s
VORD pmax pmax
comp=E,380nm,0.9s
VORD pmax pmax
comp=Z,400nm,0.9s,mb6.3
VORD pmax pmax
comp=N,70nm,0.8s
VORD pmax pmax
comp=E,270nm,0.8s
VORD pmax pmax
comp=Z,300nm,0.8s,mb6.3
VORD smax
comp=N,3μm,5.4s
VORD smax
comp=E,7μm,5.4s
VORD smax
comp=Z,2μm,5.4s
KELT Kelkit 87.41 310 *i*P **P 00 12 38.8 -0.6**
VSR Storozhevoye 87.46 321 *e*P **P 00 12 37.7 -1.6**
VSR *e**PP pP 00 13 08.6 +3.6
VSR *e* 00 16 01.6
VSR *e*PPP 00 17 58.9
VSR *e*S SKSac 00 22 53.3 -5.0
VSR *e*SS SS 00 28 55.3 -4.1
VSR pmax pmax
comp=N,50nm,0.9s
VSR pmax pmax
comp=E,210nm,0.9s
VSR pmax pmax
comp=Z,430nm,0.9s,mb6.4
VSR pmax pmax
comp=N,50nm,0.8s
VSR pmax pmax
comp=E,140nm,0.8s
VSR pmax pmax
comp=Z,360nm,0.8s,mb6.3
VSR pmax pmax
comp=N,460nm,3.8s
VSR pmax pmax
comp=Z,2μm,3.8s
VSR pmax pmax
comp=E,120nm,0.8s
VSR smax
comp=N,1μm,3.8s
VSR smax
comp=E,2μm,3.8s
VSR smax
comp=Z,640nm,3.8s
DESE Dese 87.49 281 *e*P **P 00 12 42.4 +2.1**
DESE *i*S S 00 22 59.4 -15
ELZG Elazig 87.63 308 *i*P **P 00 12 41.1 +0.7**
DOT Dot Lake 87.65 27⇑ *e*P **P 00 12 40.7 +0.7**
DOT *e*pP pP 00 13 04.8 -0.8
DOT *e*sP sP 00 13 15.7 -0.3
DOT *e*PP PP 00 16 08.2 +1.8
MENT Mentasta 87.80 27 *e*P **P 00 12 40.8 +0.1**
MALT Malatya 88.07 308 Pn **P 00 12 42.2 -0.4**
MALT Malatya 88.07 308 P **P 00 12 42.2 -0.4**
MALT Malatya 88.07 308⇓ *i*P **P 00 12 42.8 +0.2**
MALT Malatya 88.07 308 P **P 00 12 42.6 0.0**
comp=Z,6μmcomp=Z,187nm,0.9s,mb6.1
ATAB Bozova 88.19 307 *i*P **P 00 12 42.0 -1.1**
SUSE Susehri 88.22 310 *i*P **P 00 12 39.9 -3.3**
MOS Moscow 88.35 326 *e*P **P 00 12 40.7 -2.8**
MOS *e**PP pP 00 13 10.5 +1.3
MOS *i* 00 13 19.2
MOS *i* 00 16 14.9
MOS *i*S SKSac 00 22 58.5 -5.0
MOS *i* 00 23 14.9
MOS *i*SS SS 00 29 05.0 -7.1
MOS pmax pmax
comp=Z,300nm,1.0s,mb6.3
MOS pmax pmax
comp=Z,173nm,0.8s,mb6.1
AAE Adis Abeba 88.41 279 *e*P **P 00 12 46.5 +1.8**
AAE *e*S S 00 23 08.6 -14
AKCD Akcadag 88.47 308 *i*P **P 00 12 44.6 +0.1**
ANN Anapa 88.69 315 *e*P **P 00 12 43.6 -1.7**
ANN *i**PP pP 00 13 15.3 +4.3
ANN *i*S SKSac 00 23 01.0 -5.0
ANN pmax pmax
comp=N,316nm,8.1s
ANN pmax pmax
comp=E,358nm,8.1s
ANN pmax pmax
comp=Z,1μm,8.1s
ANN pmax pmax
comp=N,134nm,1.1s
ANN pmax pmax
comp=E,117nm,1.1s
ANN pmax pmax
comp=Z,387nm,1.1s,mb6.3
ANN smax
comp=E,22μm,12.3s
ANN smax
comp=Z,3μm,12.3s
GZT Gaziantep 88.77 307 *i*P **P 00 12 45.1 -0.8**
EGAK Eagle 88.90 25 *e*P **P 00 12 45.9 0.0**
EGAK *e*PP PP 00 16 13.5 -2.8
OBN Obninsk 88.97 325⇓ *e*P **P 00 12 44.3 -2.1**
OBN *e*pP pP 00 13 09.9 -2.2
OBN *e*PP PP 00 16 17.2 0.0
OBN *e*S S 00 23 19.7 -6.8
OBN Obninsk 88.97 325κ *i*P **P 00 12 44.6 -1.8**
OBN *i**PP pP 00 13 13.0 +0.9
OBN *e* 00 16 19.0
OBN *i*PPP 00 18 23.1
OBN *i* 00 23 02.7
OBN *i* 00 23 18.6
OBN *i*SP SP 00 24 26.8 -3.8
OBN *i*PS PS 00 24 39.8 -3.5
OBN pmax pmax
comp=Z,100nm,0.7s,mb6.0
OBN pmax pmax
comp=Z,223nm,0.8s,mb6.2
OBN Obninsk 88.97 325 P **P 00 12 45.5 -0.9**
comp=Z,2μm,0.8s,mb7.1,SNR=10
SCER sogukcermik 89.05 310 *i*P **P 00 12 47.2 +0.1**
PINB Pinarbasi 89.65 308 *i*P **P 00 12 49.4 -0.6**
DAWY Dawson 89.71 26⇑ *e*P **P 00 12 50.4 +0.8**
DAWY *e*pP pP 00 13 14.3 -1.0
DAWY *e*PP PP 00 16 26.8 +4.0
DAWY *e*S S 00 23 36.8 +3.9
FKH Fakeheh 89.81 304 *e*P **P 00 12 51.0 +0.1**
APA Apatity 89.82 337⇓ *i*P **P 00 12 48.0 -2.1**
APA *i**PP pP 00 13 15.0 -0.8
APA *i* 00 16 25.0
APA *i* 00 23 06.0
APA *i*S S 00 23 28.0 -5.9
APA pmax pmax
comp=Z,86nm,1.4s,mb5.7
APA pmax pmax
comp=Z,2μm,14.0s
APA MLR MLR
comp=Z,190μm,23.0s
YAYL Yayladag 89.99 306 *i*P **P 00 12 50.5 -1.1**
HWQ Hawqa 90.19 304 *e*P **P 00 12 52.2 -0.4**
KMBO Kilima Mbogo 90.23 269 P **P 00 12 53.8 +0.6**
comp=Z,70nm,0.9s,mb5.8,baz=0.1,slow=24,SNR=102
KMBO Kilima Mbogo 90.23 269⇓ *e*P **P 00 12 53.8 +0.6**
KMBO *e*PcP PcP 00 12 54.8 +0.4
KMBO *e*PP PP 00 16 25.1 -3.3
KMBO *e*S S 00 23 39.8 0.0
KMBO Kilima Mbogo 90.23 269⇓ *e*P **P 00 12 53.8 +0.6**
KMBO *e* 00 16 25.1
KMBO *e*S S 00 23 39.8 0.0
KMBO Kilima Mbogo 90.23 269 *e*P **P 00 12 52.8 -0.4**
KMBO Kilima Mbogo 90.23 269 P **P 00 12 54.1 +0.9**
SNR=84
RCY Rachaya 90.32 303 *e*P **P 00 12 53.0 -0.2**
YURE YUREGIR 90.34 307 *i*P **P 00 12 54.1 +0.9**
KSHT Keshet 90.36 303 Pn **P 00 12 54.0 +0.6**
HRI Mount Hermon 90.41 303 Pn **P 00 12 54.1 +0.5**
HRI Mount Hermon 90.41 303 P **P 00 12 54.1 +0.5**
BHL Bhannes 90.45 304 *e*P **P 00 12 53.3 -0.5**
KSDI Kefar Szold 90.48 303 Pn **P 00 12 53.5 -0.5**
BOYT Boyabat 90.68 311 *i*P **P 00 12 52.5 -2.2**
MMLI Mount Malkishu 90.71 302 Pn **P 00 12 54.7 -0.4**
DSI Dead Sea 90.79 301 Pn **P 00 12 55.2 -0.2**
CTKT Corum 90.81 310 *i*P **P 00 12 54.2 -1.1**
AVNT Avonos 90.86 309 *i*P **P 00 12 54.4 -1.2**
SYO Syowa Base 90.98 201⇓ *i*P **P 00 12 53.8 -1.6**
GULE Gulek 91.00 307 *i*P **P 00 12 56.2 -0.1**
ZFRI Zfri 91.01 300 Pn **P 00 12 56.1 -0.4**
SIM Simferopol' 91.04 315 *de*P **P 00 12 59.3 +3.0**
SIM *e* 00 16 36.0
SIM *e*S SKSac 00 23 17.0 -2.6
SIM pmax pmax
comp=Z,3μm,15.0s
OFRI 'Ofer 91.07 303 Pn **P 00 12 55.9 -0.8**
JOF Joensuu 91.14 333 *e*P **P 00 12 54.1 -2.2**
JOF pmax pmax
comp=Z,7.0nm,0.3s,mb5.3
JOF Joensuu 91.14 333 *e*p **P 00 12 54.1 -2.2**
comp=Z,6.7nm,0.3s,mb5.2
PRNI Paran 91.17 300 Pn **P 00 12 56.8 -0.4**
PRNI Paran 91.17 300 P **P 00 12 56.8 -0.4**
CDAG Cicekdag 91.18 310 *i*P **P 00 12 54.7 -2.4**
RMNI Mount Ramon 91.36 301 Pn **P 00 12 58.5 +0.4**
RTMI Retamim 91.40 301 Pn **P 00 12 57.1 -1.2**
KRMI Paran Flat 91.42 300 Pn **P 00 12 57.3 -1.1**
ILGA Ilgaz 91.59 311 *i*P **P 00 12 57.9 -1.1**
INK Inuvik 91.60 22 P **P 00 12 57.2 -1.2**
comp=Z,27nm,0.7s,mb5.6,baz=283,slow=4.8,SNR=33
INK Inuvik 91.60 22⇑ *e*P **P 00 12 58.5 +0.1**
INK *e*pP pP 00 13 22.0 -2.2
INK *e*sP sP 00 13 35.0 +0.5
INK Inuvik 91.60 22⇑ *e*P **P 00 12 58.5 +0.1**
KZIT Kziot 91.66 301 Pn **P 00 12 58.7 -0.8**
BR131 Keskin Array S 91.74 310 *e*P **P 00 12 57.9 -1.8**
comp=Z,30nm,0.8s,mb5.6
BR131 *e*pP pP 00 13 24.5 -0.9
BR131 *e*sP sP 00 13 34.5 -1.2
BRTR Keskin Array B 91.74 310 P **P 00 12 58.0 -1.7**
comp=Z,28nm,0.8s,mb5.6,baz=121,slow=4.3,SNR=66
BRTR pP pP 00 13 29.3 +3.9
comp=Z,42nm,0.9s,baz=102,slow=5.2,SNR=5.6
BRTR PP PP 00 16 38.5 -1.1
comp=Z,9.8nm,0.8s,baz=110,slow=8.4,SNR=3.6
BRTR PKKP PKKPbc 00 30 18.9 -0.3
comp=Z,1.8nm,0.7s,baz=225,slow=1.5,SNR=6.1
BRTR Keskin Array B 91.74 310 P **P 00 12 58.0 -1.7**
BRTR *PP pP 00 13 29.3 +3.9
BRTR 00 16 38.5
QSPA South Pole Qui 91.81 180 S SKSac 00 23 19.0 -3.6
comp=Z,8.9nm,1.1s,baz=12,slow=24,SNR=11
QSPA PKKPbc PKKPbc 00 30 16.5 -4.2
comp=Z,7.0nm,0.7s,baz=72,slow=0.6,SNR=9.6
QSPA South Pole Qui 91.81 180⇑ *i*P **P 00 12 59.2 +0.1**
comp=Z,2μm,1.8s,mb7.0
QSPA *e*pP pP 00 13 24.1 -0.8
QSPA *e*PP PP 00 16 37.7 -1.4
BALT Daday 91.81 311 *i*P **P 00 12 57.7 -2.2**
ELDT Eldivan 91.85 310 *i*P **P 00 12 60.0 -0.2**
KEV Kevo 91.86 340 *e*P **P 00 12 56.9 -2.6**
KEV Kevo 91.86 340 *ep* **P 00 12 56.9 -2.6**
comp=Z,3.8nm,0.4s
PUL Pulkovo 91.98 330⇓ *e*P **P 00 12 59.2 -1.1**
PUL pmax pmax
comp=Z,174nm,0.7s,mb6.4
SKAG Skagway 92.07 30 *e*P **P 00 13 01.8 +1.1**
comp=Z,136nm,0.7s,mb6.3
CSS Prodhromos 92.31 305 P **P 00 13 01.3 -1.1**
comp=Z,2.4nm,1.1s
CSS Prodhromos 92.31 305 Pn **P 00 13 01.2 -1.2**
SIT Sitka 92.37 33 *e*P **P 00 13 04.1 +2.0**
comp=Z,250nm,1.2s,mb6.3
SIT Sitka 92.37 33 *e*P **P 00 13 04.1 +2.0**
SIT pmax pmax
comp=Z,250nm,1.2s,mb6.3
MAMC Mammari 92.39 305 P **P 00 13 02.8 0.0**
ARCES ARCESS Array B 92.41 340 P **P 00 13 00.7 -1.5**
comp=Z,70nm,0.6s,mb6.0,baz=86,slow=5.6,SNR=211
ARCES PKiKP PKiKP 00 17 50.0 -0.5
comp=Z,8.4nm,0.8s,baz=69,slow=1.1,SNR=8.4
ARCES S S SKSac 00 23 23.1 -3.3
comp=Z,10nm,1.1s,baz=145,slow=7.4,SNR=3.6
ARCES PKKPbc PKKPbc 00 30 14.6 -4.1
comp=Z,3.7nm,0.5s,baz=261,slow=2.7,SNR=14
ARCES ARCESS Array B 92.41 340 P **P 00 13 00.7 -1.4**
SPITS Spitsbergen Ar 92.41 349 P **P 00 13 00.9 -1.1**
comp=Z,103nm,0.7s,mb6.2,baz=90,slow=7.8,SNR=101
SPITS Spitsbergen Ar 92.41 349 P **P 00 13 00.9 -1.1**
ARE0 ARCESS Array S 92.41 340⇓ *e*P **P 00 13 00.2 -1.9**
ARE0 *e*pP pP 00 13 25.2 -2.6
ARE0 sP sP 00 13 36.6 -1.6
ARE0 *e*PP PP 00 16 41.0 -2.9
ARE0 S S 00 23 52.5 -4.8
ERMK Ermenek 92.53 307 *i*P **P 00 12 58.2 -5.2**
SGKT Sivrigoynuk 92.89 311 *i*P **P 00 13 03.3 -1.6**
ALFC Alevga 92.89 305 P **P 00 13 04.2 -0.9**
comp=Z,3.8nm,0.8s
KBS Kingsbay 92.93 350 *e*P **P 00 13 03.4 -1.0**
KBS Kingsbay 92.93 350⇓ *e*P **P 00 13 03.1 -1.2**
KBS *e*pP pP 00 13 29.6 -0.6
KBS *e*sP sP 00 13 40.0 -0.5
KBS *e*PP PP 00 16 45.3 -2.5
KBS *e*S SKSac 00 23 32.0 +3.0
KBS Kingsbay 92.93 350⇓ *e*P **P 00 13 03.2 -1.2**
KBS *e**PP pP 00 13 29.6 -0.5
KBS *e* 00 16 45.3
KBS *e*S SKSac 00 23 32.0 +3.0
KDHN Kadinhani 93.01 309 *i*P **P 00 13 03.4 -2.2**
BJO Bjornoya 93.02 345 *e*P **P 00 13 03.1 -1.7**
BJO *e*PP PP 00 16 47.7 -0.9
BJO *e*SKS 00 23 28.6
BJO AMS AMS 01 00 35.4
comp=Z,277μm,16.0s
PPCY Paphos 93.12 305 P **P 00 13 04.8 -1.4**
KTK1 Kautokeino 93.32 340 *e*P **P 00 13 04.5 -1.8**
KTK1 AMS AMS 01 01 34.3
comp=Z,365μm,18.9s
KTK1 Kautokeino 93.32 340 *e*P **P 00 13 11.5 +5.2**
KAF Kangasniemi 93.55 332 *e*P **P 00 13 05.7 -1.8**
KAF pmax pmax
comp=Z,11nm,0.3s,mb5.7
KAF Kangasniemi 93.55 332 *ep* **P 00 13 05.7 -1.8**
comp=Z,11nm,0.3s,mb5.7
HENT Hendek 93.74 311 *i*P **P 00 13 06.5 -2.3**
KIEV Kiev 93.78 321⇓ *e*P **P 00 13 06.2 -2.6**
KIEV *e*pP pP 00 13 33.7 -0.8
KIEV *e*sP sP 00 13 44.5 -0.4
KIEV *e*PP PP 00 16 56.2 +1.0
KIEV S SKSac 00 23 29.0 -5.6
KIEV Kiev 93.78 321⇓ *e*P **P 00 13 06.2 -2.6**
KIEV *e**PP pP 00 13 33.7 -0.8
KIEV *e**SP sP 00 13 44.5 -0.4
KIEV *e* 00 16 56.2
KIEV S SKSac 00 23 29.0 -5.6
FINES FINESS Array B 93.78 332 P **P 00 13 06.9 -1.7**
comp=Z,24nm,0.8s,mb5.6,baz=66,slow=4.9,SNR=47
FINES pP pP 00 13 38.4 +4.1
comp=Z,23nm,0.7s,baz=95,slow=9.6,SNR=2.5
FINES S SKSac 00 23 29.4 -4.8
comp=Z,7.6nm,1.0s,baz=85,slow=17,SNR=4.5
FINES PKKPbc PKKPbc 00 30 15.3 +0.5
comp=Z,2.0nm,0.7s,baz=270,slow=3.4,SNR=5.5
FINES FINESS Array B 93.78 332 P **P 00 13 06.9 -1.7**
FINES pP pP 00 13 38.4 +4.1
FINES S SKSac 00 23 29.4 -4.8
FINES PKKPbc PKKPbc 00 30 15.3 +0.5
FINES FINESS Array B 93.78 332 P **P 00 13 06.9 -1.7**
FINES *PP pP 00 13 38.4 +4.1
FINES S SKSac 00 23 29.4 -4.8
CRAG Craig 93.81 34 *e*P **P 00 13 10.8 +2.0**
comp=Z,242nm,1.5s,mb6.3
BOLV Bolvadin 93.90 309 *i*P **P 00 13 08.3 -1.4**
ESKT Eskisehir 93.90 310 *i*P **P 00 13 07.0 -2.6**
VSU Vasula 94.00 329 *de*P **P 00 13 08.2 -1.4**
VSU pmax pmax
comp=Z,41nm,1.0s,mb5.7
MICGM Minsk 94.03 325⇑ *i*P **P 00 13 08.0 -1.9**
MNK Minsk 94.06 325⇑ *i*P **P 00 13 08.0 -2.0**
MNK *e* 00 16 52.0
MNK *e*PPP 00 19 00.0
MNK *e* 00 23 26.0
MNK *e*S S 00 24 06.0 -6.4
MNK *e*PS SP 00 25 22.0 -4.9
MNK *e*PPS 00 26 04.0
MNK *e*SS SS 00 30 28.0 -6.3
MNK *e*SSS 00 34 08.0
MNK smax
comp=E,19μm,10.0s
WRAK Wrangell Islan 94.08 33 *e*P **P 00 13 11.1 +1.1**
comp=E,94nm,0.8s,mb6.2
WRAK *e*pP pP 00 13 35.9 0.0
BORA Eskisehir 94.17 310 *i*P **P 00 13 09.0 -1.9**
KIS Kishinev 94.52 317 *e*P **P 00 13 10.0 -2.3**
comp=E,200nm,2.0s,mb6.2
KIS *e*pP pP 00 13 43.0 +4.9
KIS Kishinev 94.52 317 *i*PP PP 00 17 04.0 +2.9
comp=E,4μm,7.0s
KIS Kishinev 94.52 317 *e*P **P 00 13 10.0 -2.3**
KIS *e**PP pP 00 13 43.0 +4.9
KIS *i* 00 13 48.0
KIS *i* 00 17 04.0
KIS *e*PPP 00 19 12.0
KIS *i* 00 23 34.0
KIS *e*S S 00 24 11.0 -5.7
KIS *e*PS SP 00 25 28.0 -4.4
KIS *e*SS SS 00 30 32.0 -9.2
KIS pmax pmax
comp=Z,170nm,2.0s,mb6.1
KIS pmax pmax
comp=Z,1μm,10.0s
KIS pmax pmax
comp=Z,1μm,18.0s
DIB Dawson Inlet, 94.53 36 P **P 00 13 09.8 -2.4**
SNR=10.0
IDID Didziasalis 94.55 326 *e*P **P 00 13 11.6 -0.6**
IDID AMB AMB 00 13 55.2
comp=Z,36nm,1.1s,mb5.7
NACGM Naroch 94.60 325 *e*P **P 00 13 08.0 -4.5**
TRO Tromso 94.62 341 *e*P **P 00 13 09.7 -2.6**
TRO *e*SS SS 00 30 43.6 +2.2
TRO AMS AMS 01 03 56.9
comp=Z,207μm,14.5s
TLCR 94.76 315 ⇓P **P 00 13 12.1 -1.3**

TLCR		**94.76**	**315**	⇓*i*P	**P**	**00 13 12.1**	**-1.3**
IIGN	**Ignalina**	**94.83**	**326**	*e*P	**P**	**00 13 12.7**	**-0.8**
IIGN				AMB	AMB	00 13 49.6	
	comp=Z,20nm,0.8s,mb5.6						
ISAL	**Salakas**	**94.85**	**326**	*e*P	**P**	**00 13 12.9**	**-0.7**
ISAL				AMB	AMB	00 13 49.6	
	comp=Z,19nm,1.0s,mb5.5						
DLBC	**Dease Lake**	**94.94**	**31**	*e*P	**P**	**00 13 15.0**	**+1.0**
DLBC				*e*pP	pP	00 13 40.0	+0.3
DLBC				*e*sP	sP	00 13 49.3	-0.8
DLBC				*e*PP	PP	00 17 04.0	0.0
GDZ	**Gediz**	**95.01**	**309**	*i* P	**P**	**00 13 11.2**	**-3.5**
BUY	**Buyukada**	**95.08**	**311**	*i* P	**P**	**00 13 13.5**	**-1.5**
KHAL	**Karahalli**	**95.08**	**309**	*i* P	**P**	**00 13 13.5**	**-1.6**
TIRR	**Tirgusor**	**95.14**	**315**	*e*P	**P**	**00 13 11.7**	**-3.5**
TIRR				*e*PP	PP	00 17 05.3	-0.6
TIRR	**Tirgusor**	**95.14**	**315**	*e*P	**P**	**00 13 11.7**	**-3.5**
TIRR				*e*		00 17 05.3	
TIRR	**Tirgusor**	**95.14**	**315**	⇓*i*P	**P**	**00 13 12.5**	**-2.7**
GOLH	**Golhisar**	**95.15**	**307**	*i* P	**P**	**00 13 12.3**	**-3.1**
AKAS	**Kas**	**95.22**	**306**	*i* P	**P**	**00 13 11.3**	**-4.4**
CFR	**Carcaliu**	**95.23**	**316**	P	**P**	**00 13 15.1**	**-0.5**
CFR	**Carcaliu**	**95.23**	**316**	P	**P**	**00 13 15.2**	**-0.4**
CFR	**Carcaliu**	**95.23**	**316**	⇑*i*P	**P**	**00 13 14.3**	**-1.3**
IAS	**Iasi**	**95.34**	**318**	P	**P**	**00 13 15.2**	**-0.8**
IAS	**Iasi**	**95.34**	**318**	⇓*i*P	**P**	**00 13 14.3**	**-1.7**
DNZL	**Cakiroluk**	**95.50**	**308**	*i* P	**P**	**00 13 15.4**	**-1.6**
DEMI	**Demirci**	**95.60**	**309**	*i* P	**P**	**00 13 15.2**	**-2.2**
GHRR		**95.61**	**316**	⇓*i*P	**P**	**00 13 17.1**	**-0.2**
PETR		**95.79**	**316**	⇓*i*P	**P**	**00 13 18.6**	**+0.5**
TURN	**Turunc**	**95.95**	**307**	*i* P	**P**	**00 13 18.1**	**-0.9**
GRER		**96.02**	**316**	P	**P**	**00 13 19.7**	**+0.5**
GRER		**96.02**	**316**	⇓*i*P	**P**	**00 13 19.6**	**+0.4**
POGA	**Pongola**	**96.05**	**243**	*e*P	**P**	**00 13 19.4**	**-0.4**
TESR		**96.06**	**317**	⇑*i*P	**P**	**00 13 18.4**	**-1.0**
PGOR	**Pogoanele**	**96.08**	**315**	⇓*i*P	**P**	**00 13 19.7**	**+0.2**
VRI	**Vrincioaia**	**96.11**	**316**	P	**P**	**00 13 19.0**	**-0.6**
VRI	**Vrincioaia**	**96.11**	**316**	P	**P**	**00 13 19.1**	**-0.5**
VRI	**Vrincioaia**	**96.11**	**316**	⇑*i*P	**P**	**00 13 18.7**	**-0.9**
PLOR	**Plostina**	**96.17**	**316**	⇓P	**P**	**00 13 18.8**	**-1.0**
PLOR	**Plostina**	**96.17**	**316**	⇓*i*P	**P**	**00 13 18.8**	**-1.0**
AKHS	**Akhisar**	**96.32**	**309**	*i* P	**P**	**00 13 18.5**	**-2.2**
BALY	**Balya**	**96.36**	**310**	*i* P	**P**	**00 13 18.9**	**-2.0**
ISR	**Istrita**	**96.36**	**316**	⇑P	**P**	**00 13 19.7**	**-1.0**
ISR	**Istrita**	**96.36**	**316**	⇑*i*P	**P**	**00 13 19.7**	**-1.0**
AYDN	**Tasoluk**	**96.43**	**308**	*i* P	**P**	**00 13 20.1**	**-1.1**
STEI	**Steigen**	**96.46**	**339**	*e*P	**P**	**00 13 19.0**	**-1.7**
STEI				AMb	AMB	00 13 23.7	
	comp=Z,56nm,1.1s,mb5.9						
SART	**Tekirdag**	**96.56**	**311**	*i* P	**P**	**00 13 19.1**	**-2.6**
SULR		**96.63**	**315**	P	**P**	**00 13 21.4**	**-0.6**
MLR	**Muntele Rosu**	**96.72**	**316**	⇓P	**P**	**00 13 22.0**	**-0.3**
MLR	**Muntele Rosu**	**96.72**	**316**	⇓*i*P	**P**	**00 13 22.0**	**-0.3**
MBAR	**Mbarara**	**96.72**	**270**	⇑*e*P	**P**	**00 13 22.0**	**-1.1**
KDAG	**Bornova**	**96.81**	**309**	*i* P	**P**	**00 13 19.9**	**-3.0**
SUW	**Suwalki**	**96.83**	**325**	*e*P	**P**	**00 13 20.7**	**-2.0**
SUW				*e*PP	PP	00 17 19.5	+0.8
SUW				*e*SKSac	SKSac	00 23 49.1	-1.6
SUW	**Suwalki**	**96.83**	**325**	⇓*e*P	**P**	**00 13 20.5**	**-2.1**
SUW				*e*pP	pP	00 13 44.7	-3.8
SUW				sP	sP	00 13 57.1	-1.7
SUW				*e*PP	PP	00 17 18.2	-0.5
SUW	**Suwalki**	**96.83**	**325**	*e*P	**P**	**00 13 20.7**	**-1.9**
SUW				*e*		00 17 19.5	
SUW				*e*		00 23 49.1	
BURAR	**Bucovina Array**	**96.84**	**318**	P	**P**	**00 13 22.6**	**-0.3**
BURAR	**Bucovina Array**	**96.84**	**318**	P	**P**	**00 13 22.7**	**-0.2**
BURAR	**Bucovina Array**	**96.84**	**318**	⇓*i*P	**P**	**00 13 22.0**	**-0.9**
BDRM	**Kayabasi**	**96.85**	**307**	*i* P	**P**	**00 13 21.9**	**-1.2**
BUR08	**Bucovina Ar. S**	**96.85**	**318**	⇓*e*P	**P**	**00 13 21.9**	**-1.0**
BUR08				*e*pP	pP	00 13 48.4	-0.3
BUR08				sP	sP	00 13 59.2	+0.1
BUR08				*e*PP	PP	00 17 20.3	+1.2
GCAM	**G?zelcaml?**	**96.93**	**308**	*i* P	**P**	**00 13 20.5**	**-3.0**
LOF	**Lofoten**	**96.97**	**340**	*e*P	**P**	**00 13 22.2**	**-0.8**
DOPR	**Dopca**	**97.02**	**317**	⇑*i*P	**P**	**00 13 22.9**	**-0.8**
AYVA	**Ayvalik**	**97.13**	**310**	*i* P	**P**	**00 13 22.6**	**-1.7**
LVV	**L'vov**	**97.20**	**321**	*e*P	**P**	**00 13 22.9**	**-1.5**
LVV				*e*	pP	00 13 50.9	+0.7
LVV				*e*		00 17 26.9	
LVV				*e*		00 23 51.1	
LVV				*e*S	S	00 24 32.1	-7.6
LVV				MLR	MLR		
	comp=Z,12µm,20.0s						
URLA	**Izmir**	**97.34**	**309**	*i* P	**P**	**00 13 21.7**	**-3.6**
VOIR		**97.34**	**316**	P	**P**	**00 13 24.7**	**-0.5**
VOIR		**97.34**	**316**	⇑P	**P**	**00 13 24.0**	**-1.2**
VOIR		**97.34**	**316**	⇑*i*P	**P**	**00 13 24.0**	**-1.2**
MOR8	**Moi Rana**	**97.40**	**338**	*e*P	**P**	**00 13 21.9**	**-3.0**
MOR8				AMb	AMB	00 13 23.0	
	comp=Z,28nm,0.9s,mb5.7						
MOR8	**Moi Rana**	**97.40**	**338**	*e*P	**P**	**00 13 21.9**	**-3.0**
	comp=Z,28nm,0.9s,mb5.7						
PVL	**Pavlikeni**	**97.53**	**314**	*e*P	**P**	**00 13 26.0**	**-0.1**
BOZC	**Bozcaada**	**97.54**	**310**	*i* P	**P**	**00 13 25.5**	**-0.7**
MSNA	**Messina**	**97.58**	**248**	*e*P	**P**	**00 13 24.6**	**-2.1**
MSNA				AMS	AMS	01 42 38.3	
	comp=Z,39µm,18.8s						
KDZ	**Kurdzhali**	**97.73**	**312**	*e*P	**P**	**00 13 26.0**	**-1.0**
FLOS	**Flostrand**	**97.74**	**338**	*e*P	**P**	**00 13 24.5**	**-1.9**
KSD	**Kokstad**	**97.87**	**240**	*e*P	**P**	**00 13 27.6**	**-0.3**
BMR	**Baia Mare**	**97.97**	**319**	P	**P**	**00 13 28.2**	**+0.3**
BMR	**Baia Mare**	**97.97**	**319**	P	**P**	**00 13 28.3**	**+0.4**
BMR	**Baia Mare**	**97.97**	**319**	⇑*i*P	**P**	**00 13 27.5**	**-0.4**
KWP	**Kalwaria Pacla**	**98.08**	**321**	*e*P	**P**	**00 13 27.1**	**-1.3**
KWP				*e*PP	PP	00 17 34.5	+6.1
KWP				*e*SKSac	SKSac	00 23 55.6	-1.7
KWP	**Kalwaria Pacla**	**98.08**	**321**	⇓*e*P	**P**	**00 13 26.9**	**-1.5**
	comp=Z,71nm,0.9s,mb6.2						
KWP				*e*PP	PP	00 17 28.2	-0.2
KWP	**Kalwaria Pacla**	**98.08**	**321**	*e*P	**P**	**00 13 27.1**	**-1.3**
KWP				*e*		00 17 34.5	
KWP				*e*		00 23 55.6	
KWP	**Kalwaria Pacla**	**98.08**	**321**	⇓*i*P	**P**	**00 13 27.1**	**-1.3**
LIA	**Limnos Island**	**98.19**	**311**	P	**P**	**00 13 29.4**	**+0.3**
CRAR	**CRAIOVA**	**98.42**	**315**	P	**P**	**00 13 30.4**	**+0.4**
KOLS	**Kolonicke sedl**	**98.51**	**320**	*e*P	**P**	**00 13 30.1**	**-0.2**
	comp=Z,28nm,1.2s,mb5.7						
KOLS				*e*		00 29 51.4	
KOLS	**Kolonicke sedl**	**98.51**	**320**	*e*P	**P**	**00 13 30.1**	**-0.2**
KOLS				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.7						
KOLS	**Kolonicke sedl**	**98.51**	**320**	PDIF	**P**	**00 13 30.1**	**-0.2**
KOLS				*e*		00 29 51.4	
KAVA	**Kavala**	**98.51**	**312**	P	**P**	**00 13 29.0**	**-1.5**
TRPA	**Tarpa**	**98.51**	**319**	⇓*i*P	**P**	**00 13 28.9**	**-1.4**
WAR	**Warsaw**	**98.51**	**323**	*e*P	**P**	**00 13 30.1**	**-0.1**
WAR				*e*PP	PP	00 17 23.5	-8.1
WAR				*e*SKSac	SKSac	00 23 56.1	-3.3
WAR	**Warsaw**	**98.51**	**323**	*e*P	**P**	**00 13 30.1**	**-0.1**
WAR				*e*		00 23 56.1	
UZH	**Uzhgorod**	**98.56**	**320**	*e*P	**P**	**00 13 30.5**	**0.0**
UZH				*e*		00 17 34.0	
UZH				*e*PPP		00 19 36.7	
UZH				*e*		00 23 52.0	
UZH				*e*S	S	00 24 44.0	-7.4
DRGR		**98.68**	**318**	P	**P**	**00 13 30.4**	**-0.7**
DRGR		**98.68**	**318**	P	**P**	**00 13 30.5**	**-0.6**
DRGR		**98.68**	**318**	⇓*i*P	**P**	**00 13 30.0**	**-1.1**
GZR	**Gura Zlata**	**98.92**	**316**	P	**P**	**00 13 32.2**	**-0.1**
GZR	**Gura Zlata**	**98.92**	**316**	P	**P**	**00 13 32.3**	**0.0**
GZR	**Gura Zlata**	**98.92**	**316**	⇓*i*P	**P**	**00 13 32.0**	**-0.3**
MMB	**Musomiste**	**98.98**	**312**	*i* P	**P**	**00 13 30.5**	**-2.1**
OUR	**Ouranopolis**	**99.02**	**311**	P	**P**	**00 13 30.3**	**-2.5**
CRVS	**Cervenica-Dubn**	**99.03**	**320**	*e*P	**P**	**00 13 32.5**	**-0.2**
	comp=Z,34nm,0.8s,mb5.9						
CRVS				*e*		00 29 44.1	
CRVS				*e*		00 30 00.8	
CRVS	**Cervenica-Dubn**	**99.03**	**320**	*e*P	**P**	**00 13 32.5**	**-0.2**
CRVS				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.9						
CRVS	**Cervenica-Dubn**	**99.03**	**320**	PDIF	**P**	**00 13 32.5**	**-0.2**
CRVS				*e*		00 29 44.1	
CRVS				*e*		00 30 00.8	
SLR	**Silverton**	**99.07**	**244**	*e*P	**P**	**00 13 34.0**	**+0.6**
SLR				AMS	AMS	01 44 58.1	
	comp=Z,47µm,18.2s						
ERPM	**east rand prop**	**99.08**	**244**	*e*P	**P**	**00 13 30.4**	**-3.0**
ERPM				AMS	AMS	01 45 12.6	
	comp=Z,29µm,12.9s						
DAG	**Danmarks Havn**	**99.16**	**353**	⇑*i*P	**P**	**00 13 32.0**	**-0.7**
DAG				pmax	pmax		
	comp=Z,52nm,0.6s,mb6.2						
DAG	**Danmarks Havn**	**99.16**	**353**	*i* P	**P**	**00 13 30.7**	**-2.0**
DAG	**Danmarks Havn**	**99.16**	**353**	⇑*i*P	**P**	**00 13 32.0**	**-0.7**
	comp=Z,524nm,0.6s,mb7.2						
SRS	**Serrai**	**99.17**	**312**	P	**P**	**00 13 30.3**	**-3.2**
VTS	**Vitosha**	**99.18**	**314**	*e*P	**P**	**00 13 32.0**	**-1.4**
DJES	**Djerdap**	**99.25**	**316**	P	**P**	**00 13 33.9**	**+0.2**
PAIG	**Paliouri**	**99.32**	**311**	P	**P**	**00 13 32.4**	**-1.8**
SOH	**Sokhos**	**99.40**	**312**	P	Pdif	00 13 32.6	-1.6
PLG	**Polygyros**	**99.42**	**311**	P	Pdif	00 13 31.3	-2.9
LSZ	**Lusaka**	**99.42**	**255**	⇑*e*P	Pdif	00 13 35.2	+0.9
	comp=Z,130nm,1.5s						
LSZ				*e*PP	PP	00 17 39.0	-0.8
LSZ	**Lusaka**	**99.42**	**255**	⇑*e*P	Pdif	00 13 35.2	+0.9
LSZ				*e*		00 17 39.0	
LSZ				pmax	pmax		
	comp=Z,130nm,1.5s,mb6.2						
RES	**Resolute Bay**	**99.48**	**10**	*e*Pdif	Pdif	00 13 34.4	-0.2
RES				*e*PP	PP	00 17 43.0	+4.6
RES	**Resolute Bay**	**99.48**	**10**	*e*P	Pdif	00 13 34.4	-0.1
RES				*e*		00 17 43.0	
NIE	**Niedzica**	**99.64**	**321**	*e*Pdiff	Pdif	00 13 35.1	-0.1
NIE	**Niedzica**	**99.64**	**321**	*e*P	Pdif	00 13 35.1	-0.1
KLOF	**Kloof**	**99.65**	**244**	*e*P	Pdif	00 13 36.1	+0.8
KLOF				AMS	AMS	01 45 22.9	
	comp=Z,25µm,18.9s						
BZS	**Buzias**	**99.67**	**317**	P	Pdif	00 13 35.1	-0.3
BZS	**Buzias**	**99.67**	**317**	P	Pdif	00 13 35.2	-0.2
BZS	**Buzias**	**99.67**	**317**	⇓*i*P	Pdif	00 13 33.9	-1.5
KNT	**Kendrikon**	**99.68**	**312**	P	Pdif	00 13 33.4	-2.0
KECS	**Kecovo**	**99.76**	**320**	*e*P	Pdif	00 13 35.6	-0.2
	comp=Z,9.6nm,0.8s						
KECS	**Kecovo**	**99.76**	**320**	*e*P	Pdif	00 13 35.6	-0.2
KECS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.5						
KECS	**Kecovo**	**99.76**	**320**	PDIF	Pdif	00 13 35.6	-0.2
OJC	**Ojcow**	**99.76**	**322**	*e*Pdiff	Pdif	00 13 35.3	-0.5
OJC				*e*PP	PP	00 17 41.2	0.0
OJC				*e*SKSac	SKSac	00 24 02.6	-3.1
OJC	**Ojcow**	**99.76**	**322**	*e*P	Pdif	00 13 34.9	-0.9
OJC	**Ojcow**	**99.76**	**322**	*e*Pdif	Pdif	00 13 35.7	0.0
	comp=Z,185nm,2.0s						
OJC	**Ojcow**	**99.76**	**322**	*e*P	Pdif	00 13 35.3	-0.5
OJC				*e*		00 17 41.2	
OJC				*e*		00 24 02.6	
PRYS	**Parys**	**99.85**	**243**	*e*P	Pdif	00 13 35.1	-1.1
PRYS				AMS	AMS	01 36 27.4	
	comp=Z,30µm,19.6s						
VAY	**Valandovo**	**99.89**	**312**	P	Pdif	00 13 34.2	-2.1
VAY	**Valandovo**	**99.89**	**312**	P	Pdif	00 13 34.2	-2.1
VAY	**Valandovo**	**99.89**	**312**	P	Pdif	00 13 33.4	-2.9
VAY	**Valandovo**	**99.89**	**312**	*e*P	Pdif	00 13 34.0	-2.3
HFA0	**Hagfors New Ar**	**99.97**	**332**	P	Pdif	00 13 34.0	-2.7
NVL	**N'lazarevskaya**	**100.02**	**198**	*e*P	Pdif	00 13 35.8	-1.1
NVL				*e*S	SKSac	00 23 56.9	-9.2
NVL				*e*SSS		00 31 55.6	
NVL				pmax	pmax		
	comp=Z,97nm,1.3s						
ATAL	**Atalanti**	**100.05**	**310**	P	Pdif	00 13 34.8	-2.2
MAIT	**Maitri**	**100.05**	**198**	*e*P	Pdif	00 13 37.7	+0.7
GRG	**Griva**	**100.09**	**312**	P	Pdif	00 13 35.4	-1.8
BARS	**Barje**	**100.14**	**314**	P	Pdif	00 13 37.9	+0.5
GRM	**Grahamstown**	**100.18**	**237**	*e*P	Pdif	00 13 35.5	-2.0
GRM				AMS	AMS	01 49 27.9	
	comp=Z,57µm,17.9s						
LIT	**Litokhoron**	**100.19**	**311**	P	Pdif	00 13 35.6	-2.0
PSZ	**Piszkesteto**	**100.28**	**319**	*e*Pdif	Pdif	00 13 36.6	-1.5
PSZ				*e*PP	PP	00 17 42.3	-2.9
PSZ	**Piszkesteto**	**100.28**	**319**	*e*P	Pdif	00 13 38.3	+0.2
PSZ	**Piszkesteto**	**100.28**	**319**	⇓*i*P	Pdif	00 13 36.2	-1.9
PSZ	**Piszkesteto**	**100.28**	**319**	⇑*e*P	Pdif	00 13 37.8	-0.3
KSR	**Koster**	**100.32**	**244**	*e*P	PKiKP	00 18 04.3	-1.4
KSR				AMS	AMS	01 49 35.0	
	comp=Z,16µm,26.8s						
GKP	**Gorka Klasztor**	**100.44**	**325**	*e*P	Pdif	00 13 37.8	-0.9
GKP				*e*PP	PP	00 17 46.4	+0.1
GKP				*e*SKSac	SKSac	00 24 06.4	-2.4
GKP				*e*SP	SP	00 26 31.3	-4.9
GKP	**Gorka Klasztor**	**100.44**	**325**	*e*P	Pdif	00 13 37.8	-1.0
GKP				*e*		00 17 46.3	
GKP				*e*		00 24 06.4	
GKP				*e*SP	SP	00 26 31.3	-4.9
SKO	**Skopje**	**100.59**	**313**	*e*P	Pdif	00 13 37.1	-2.3
KZN	**Kozani**	**100.69**	**311**	P	Pdif	00 13 37.3	-2.6
GUR	**Goura**	**100.71**	**309**	P	Pdif	00 13 37.8	-2.2
NB2	**NORSAR Subarra**	**100.75**	**334**	P	Pdif	00 13 37.8	-2.3
	comp=Z,29nm,0.8s,baz=67,slow=4.6						
NB2	**NORSAR Subarra**	**100.75**	**334**	P	Pdif	00 13 37.8	-2.3
NOA	**NORSAR Array B**	**100.75**	**334**	P	Pdif	00 13 38.1	-2.0
	comp=Z,26nm,0.8s,baz=67,slow=4.6,SNR=44						
NOA				pP		00 14 09.7	
	comp=Z,21nm,0.8s,baz=67,slow=4.8,SNR=4.6						
NOA				PP	PP	00 17 48.5	+0.3
	comp=Z,9.1nm,0.8s,baz=69,slow=7.6,SNR=3.3						
NOA				PKKPbc	PKKPbc	00 29 53.2	-2.5
	comp=Z,4.4nm,1.1s,baz=69,slow=2.8,SNR=5.5						
NOA	**NORSAR Array B**	**100.75**	**334**	P	Pdif	00 13 38.1	-2.0
NOA						00 17 48.5	
VLX	**Vlachokerasia**	**100.79**	**308**	P	Pdif	00 13 38.9	-1.4
VYHS	**Vyhne**	**100.82**	**320**	*e*P	Pdif	00 13 40.3	-0.2
	comp=Z,58nm,2.9s						
VYHS				*e*		00 17 53.4	
VYHS				*e*		00 29 53.7	
VYHS	**Vyhne**	**100.82**	**320**	*e*P	Pdif	00 13 40.3	-0.2
VYHS				*e*		00 17 53.4	
VYHS				pmax	pmax		
	comp=Z,58nm,2.9s						
VYHS	**Vyhne**	**100.82**	**320**	PDIF	Pdif	00 13 40.3	-0.2
VYHS				*e*		00 17 53.4	
VYHS				*e*		00 29 53.7	
TRIZ	**Trizonia**	**100.84**	**309**	P	Pdif	00 13 38.4	-2.1
KRUS	**Krusevo**	**100.86**	**313**	*e*P	Pdif	00 13 38.3	-2.3
YKA	**Yellowknife Ar**	**100.87**	**25**	P	Pdif	00 13 40.1	-0.6
	comp=Z,5.9nm,0.6s,baz=297,slow=4.2,SNR=22						
YKA				PP	PP	00 17 49.9	+0.9
	comp=Z,8.6nm,1.0s,baz=304,slow=5.8,SNR=4.6						
YKA				PKiKP	PKiKP	00 18 06.2	+0.6
	comp=Z,4.6nm,0.6s,baz=292,slow=1.7,SNR=17						
YKA				PKKPbc	PKKPbc	00 29 52.1	-3.3
	comp=Z,11nm,0.7s,baz=115,slow=2.8,SNR=28						
YKA	**Yellowknife Ar**	**100.87**	**25**	P	Pdif	00 13 40.1	-0.6
YKA				PP	PP	00 17 49.9	+0.8
YKA	**Yellowknife Ar**	**100.87**	**25**	P	Pdif	00 13 40.1	-0.6
YKA						00 17 49.9	
BIA	**Bitola**	**100.87**	**312**	*e*P	Pdif	00 13 38.4	-2.3
OKC	**Ostrava-Krasne**	**100.89**	**322**	*e*P	Pdif	00 13 40.5	-0.3
OKC				*e*		00 24 11.7	
OKC	**Ostrava-Krasne**	**100.89**	**322**	*e*PDIFF	Pdif	00 13 40.5	-0.3
OKC				*e*pP		00 14 06.2	
OKC				*e*x	x	00 17 24.0	
OKC				*e*SKS		00 24 11.7	
LAKA	**Lakka**	**100.94**	**309**	P	Pdif	00 13 40.0	-1.0
EFP	**Efpalio**	**100.96**	**310**	P	Pdif	00 13 39.6	-1.5
BUD	**Budapest**	**100.97**	**319**	⇑*e*P	Pdif	00 13 40.8	-0.3
NAO01	**NORSAR Array S**	**100.97**	**334**	*e*Pdif	Pdif	00 13 38.9	-2.2
	comp=Z,34nm,0.9s						
NAO01				*e*PP	PP	00 17 50.4	+0.4
SOE	**Somerset East**	**101.02**	**237**	*e*P	Pdif	00 13 42.0	+0.7
SOE				AMS	AMS	01 49 24.2	
	comp=Z,26µm,19.3s						
KOLL	**Kolacno**	**101.08**	**320**	*e*P	Pdif	00 13 43.3	+1.7
KOLL				*e*		00 29 51.2	
KOLL	**Kolacno**	**101.08**	**320**	*e*P	Pdif	00 13 43.3	+1.7
KOLL	**Kolacno**	**101.08**	**320**	PDIF	Pdif	00 13 43.3	+1.7
KOLL				*e*		00 29 51.2	
PGC	**Sidney**	**101.09**	**40**	*e*Pdif	Pdif	00 13 42.1	+0.5
PGC				*e*PP	PP	00 17 50.0	-1.3
BSD	**Bornholm Skovb**	**101.14**	**327**	*e*P	Pdif	00 13 42.0	+0.1
BSD				pmax	pmax		
	comp=Z,32nm,0.9s						
BSD	**Bornholm Skovb**	**101.14**	**327**	*i* P	Pdif	00 13 42.0	+0.1
	comp=Z,32nm,0.9s						
NLWA	**Neilton Lookou**	**101.16**	**41**	*e*Pdif	Pdif	00 13 42.8	+0.8
NLWA				*e*PP	PP	00 17 51.7	-0.2
HVD	**Gariep Dam**	**101.25**	**239**	*e*P	Pdif	00 13 40.3	-2.0
HVD				AMS	AMS	01 34 43.2	
	comp=Z,29µm,21.0s						
MORC	**Moravsky Berou**	**101.28**	**322**	*e*Pdif	Pdif	00 13 42.5	0.0
MORC				*e*PP	PP	00 17 52.7	0.0
MORC	**Moravsky Berou**	**101.28**	**322**	*e*P	Pdif	00 13 42.6	+0.1
MORC				*e*		00 17 52.7	
MORC	**Moravsky Berou**	**101.28**	**322**	⇓*i*P	Pdif	00 13 42.8	+0.3
OSL	**Oslo**	**101.42**	**333**	*e*P	Pdif	00 13 42.6	-0.5
LBTB	**Lobatse**	**101.53**	**245**	*e*Pdif	Pdif	00 13 44.6	+1.0
LBTB				*e*PP	PP	00 17 54.7	-0.8
LBTB	**Lobatse**	**101.53**	**245**	*e*P	Pdif	00 13 44.6	+1.0
LBTB				*e*		00 17 54.7	
PKSM	**Moragy**	**101.55**	**318**	⇑P	Pdif	00 13 42.3	-1.4
PKSM	**Moragy**	**101.55**	**318**	⇑*i*P	Pdif	00 13 42.3	-1.4
BOSA	**Boshof**	**101.60**	**241**	P	Pdif	00 13 44.6	+0.7
	comp=Z,63nm,1.2s,baz=112,slow=3.9,SNR=13						
BOSA				PP		00 18 00.4	+4.4
	comp=Z,15nm,1.0s,baz=92,slow=8.8,SNR=4.4						
BOSA				PKKPbc	PKKPbc	00 29 51.6	-0.5
	comp=Z,6.2nm,0.8s,baz=268,slow=5.5,SNR=5.7						
BOSA	**Boshof**	**101.60**	**241**	*e*Pdif	Pdif	00 13 45.5	+1.6
BOSA				*e*PP	PP	00 17 55.3	-0.6
BOSA	**Boshof**	**101.60**	**241**	P	Pdif	00 13 44.6	+0.7
BOSA						00 18 00.4	
BOSA				pmax	pmax		
	comp=Z,63nm,1.3s						
BOSA				pmax	pmax		
	comp=Z,15nm,1.0s						
BBLS	**Lazići**	**101.61**	**315**	P	Pdif	00 13 47.3	+3.3
MOL	**Molde**	**101.64**	**336**	AMS	AMS	01 06 50.1	
	comp=Z,204µm,20.3s						
SWZ	**Schweizer**	**101.64**	**243**	*e*P	Pdif	00 13 42.4	-1.7
SWZ				AMS	AMS	01 35 44.2	
	comp=Z,37µm,21.1s						
KSP	**Ksiaz**	**101.73**	**323**	*e*P	Pdif	00 13 44.6	+0.1
KSP				*e*PP	PP	00 17 56.6	+0.6
KSP				*e*SKSac	SKSac	00 24 14.1	-1.1
KSP				*e*SP	SP	00 26 44.9	-5.2
GNW	**Green Mountain**	**101.80**	**41**	*e*Pdif	Pdif	00 13 46.1	+1.3
GNW				*e*PP	PP	00 17 56.4	-0.2
JMIC	**Jan Mayen**	**101.80**	**347**	*e*SKS	SKSac	00 24 13.8	-1.0
JMIC				*e*		00 40 22.9	
DPC	**Dobruska-Polom**	**101.87**	**322**	*e*P	Pdif	00 13 45.3	+0.2
DPC				*e*		00 24 16.3	
DPC	**Dobruska-Polom**	**101.87**	**322**	*e*PDIFF	Pdif	00 13 45.3	+0.2
DPC				*e*sP		00 14 19.1	
DPC				*e*x	x	00 17 43.7	
DPC				*e*SKS		00 24 16.3	
DPC				*e*x	x	00 30 16.8	
UPC	**Upice**	**102.01**	**323**	*e*P	Pdif	00 13 46.1	+0.4
UPC				*e*		00 24 16.7	
UPC	**Upice**	**102.01**	**323**	*e*PDIFF	Pdif	00 13 46.1	+0.4
UPC				*e*pP		00 14 14.2	
UPC				*e*PP	PP	00 17 50.6	-7.5
UPC				*e*SKS		00 24 16.7	
UPC				*e*x	x	00 30 16.4	
VRAC	**Vranov**	**102.01**	**321**	P	Pdif	00 13 46.6	+0.8
VRAC	**Vranov**	**102.01**	**321**	⇓*i*P	Pdif	00 13 45.2	-0.6
ZST	**Bratislava**	**102.02**	**320**	*e*P	Pdif	00 13 46.2	+0.4
ZST				*e*		00 18 02.1	
ZST	**Bratislava**	**102.02**	**320**	*e*P	Pdif	00 13 46.2

CLL				*e*PPS		00 28 24.0	
CLL				*e*PKKPbc	PKKPbc	00 29 46.0	-1.2
CLL				*i* pPKKPbc		00 30 07.2	
	comp=Z,44nm,1.7s						
BLS5	**Blasjo**	**103.59**	**333**	*e*P	Pdif	00 13 54.8	+2.0
BER	**Bergen**	**103.62**	**334**	*e*PP	PP	00 18 08.9	-0.9
BER				*e*		00 32 07.4	
BER				AMS	AMS	01 09 04.4	
	comp=Z,243µm,17.1s						
MUD	**Monsted U'grnd**	**103.63**	**330**	*e*P	Pdif	00 13 53.9	+1.0
MUD				pmax	pmax		
	comp=Z,13nm,1.0s						
MUD	**Monsted U'grnd**	**103.63**	**330**	*i* P	Pdif	00 13 53.9	+1.0
	comp=Z,13nm,1.0s						
MUD				*e*		00 14 20.9	
PKA	**Prieska**	**103.69**	**240**	*e*P	Pdif	00 13 52.6	-0.6
PKA				AMS	AMS	01 48 07.2	
	comp=Z,11µm,18.8s						
B08A	**Colville Reser**	**103.80**	**39**	P	Pdif	00 13 55.1	+1.4
	baz=104						
SOKA	**Soboth**	**103.81**	**319**	⇑*i*Pdiff	Pdif	00 13 53.6	-0.1
	comp=Z,9.6nm,1.5s						
MOA	**Molln**	**103.94**	**320**	P	Pdif	00 13 55.2	+0.9
MOA	**Molln**	**103.94**	**320**	⇑*i*Pdiff	Pdif	00 13 54.8	+0.4
	comp=Z,13nm,1.0s						
KHC	**Kasperske Hory**	**103.94**	**322**	*e*Pdif	Pdif	00 13 54.1	-0.2
KHC				*e*PP	PP	00 18 09.3	-3.2
KHC	**Kasperske Hory**	**103.94**	**322**	*e*P	Pdif	00 13 54.4	+0.1
KHC				*e*		00 18 11.0	
KHC				*e*		00 24 23.2	
KHC	**Kasperske Hory**	**103.94**	**322**	*e*PDIFF	Pdif	00 13 54.4	+0.1
KHC				*es*P		00 14 26.8	
KHC				*e*PP	PP	00 18 11.0	-1.6
KHC				*e*SKS		00 24 23.2	
KHC				*ex*	x	00 30 06.6	
GEC2	**GERESS Array S**	**103.96**	**321**	*e*Pdiff	Pdif	00 13 53.6	-0.8
GEC2				*e*PP	PP	00 18 10.0	-2.7
GEC2	**GERESS Array S**	**103.96**	**321**	*e*Pdif	Pdif	00 13 53.6	-0.8
GEC2				*e*PP	PP	00 18 10.0	-2.7
GEC2	**GERESS Array S**	**103.96**	**321**	*e*P	Pdif	00 13 53.6	-0.8
GEC2				*e*		00 18 10.0	
BOJS	**Bojanci**	**104.02**	**318**	*e*Pdif	Pdif	00 13 54.6	-0.1
BOJS				*e*		00 14 29.5	
BOJS				*e*SKSac	SKSac	00 24 23.4	-2.7
BOJS	**Bojanci**	**104.02**	**318**	*e*Pdiff	Pdif	00 13 54.6	-0.1
BOJS				*e*		00 14 29.5	
BOJS				*e*SKSac	SKSac	00 24 23.4	-2.7
OBKA	**Obir**	**104.18**	**319**	⇑*i*Pdiff	Pdif	00 13 55.1	-0.3
	comp=Z,6.5nm,1.0s						
TANN	**Tannenbergstha**	**104.18**	**323**	*e*Pdiff	Pdif	00 13 55.0	-0.4
TANN				*e*PP	PP	00 18 11.8	-2.5
NKC	**Novy Kostel**	**104.25**	**323**	*e*P	Pdif	00 13 56.2	+0.5
NKC				*e*		00 24 29.0	
NKC	**Novy Kostel**	**104.25**	**323**	*e*PDIFF	Pdif	00 13 56.2	+0.5
NKC				*es*P		00 14 29.5	
NKC				*e*PP	PP	00 18 05.5	-9.3
NKC				*e*SKS		00 24 29.0	
RSW	**Rattlesnake Hi**	**104.26**	**41**	*e*Pdif	Pdif	00 13 57.9	+2.2
RSW				*e*PKiKP	PKiKP	00 18 12.7	+0.4
RSW				*e*PKKPbc	PKKPbc	00 29 46.5	+1.6
RSW				*e*PKKPab	PKKPab	00 30 03.4	+0.1
HAWA	**Hanford**	**104.30**	**41**	*e*Pdif	Pdif	00 13 57.4	+1.5
LJU	**Ljubljana**	**104.34**	**319**	*e*Pdif	Pdif	00 13 56.0	-0.1
LJU				*e*		00 14 31.0	
LJU				*e*		00 17 16.4	
LJU				*e*PP	PP	00 18 14.3	-1.3
LJU				*e*		00 20 28.7	
LJU				*e*		00 22 18.1	
LJU				*e*SKSac	SKSac	00 24 24.1	-3.4
LJU				*e*		00 27 16.1	
LJU				*e*		00 28 13.5	
LJU	**Ljubljana**	**104.34**	**319**	*e*P	Pdif	00 13 56.0	-0.1
LJU				*e*		00 18 14.3	
LJU				*e*		00 20 28.7	
LJU				*e*		00 27 16.1	
LJU				*e*		00 28 13.5	
LJU	**Ljubljana**	**104.34**	**319**	*e*Pdiff	Pdif	00 13 56.0	-0.1
LJU				*e*		00 14 31.0	
LJU				*e*		00 17 16.4	
LJU				*e*PP	PP	00 18 14.3	-1.3
LJU				*e*		00 20 28.7	
LJU				*e*		00 22 18.1	
LJU				*e*SKSac	SKSac	00 24 24.1	-3.4
LJU				*e*		00 27 16.1	
LJU				*e*		00 28 13.5	
WET	**Wettzell**	**104.37**	**322**	*e*Pdiff	Pdif	00 13 55.9	-0.3
WET				*e*PP	PP	00 18 13.2	-2.5
WET	**Wettzell**	**104.37**	**322**	*e*Pdif	Pdif	00 13 55.9	-0.3
WET				*e*PP	PP	00 18 13.2	-2.5
WET	**Wettzell**	**104.37**	**322**	*e*P	Pdif	00 13 55.9	-0.3
WET				*e*		00 18 13.2	
K05A	**Summer Lake**	**104.46**	**45**	P	Pdif	00 13 58.8	+2.2
	baz=104						
OD2	**Odessa Site #2**	**104.51**	**40**	*e*Pdif	Pdif	00 13 57.7	+0.8
OD2				PKiKP	PKiKP	00 18 13.2	+0.5
OD2				*e*PKKPab	PKKPab	00 30 02.5	+0.3
ROTZ	**Rotzenmuhle**	**104.56**	**323**	*e*Pdiff	Pdif	00 13 56.9	-0.2
ROTZ				*e*PP	PP	00 18 14.9	-2.2
MOX	**Moxa**	**104.60**	**324**	*e*PDIFF	Pdif	00 13 56.8	-0.5
MOX				*e*		00 14 30.9	
MOX				*e*PP	PP	00 18 14.8	-2.6
MOX	**Moxa**	**104.60**	**324**	*e*Pdiff	Pdif	00 13 56.7	-0.6
MOX				*e*PP	PP	00 18 14.8	-2.6
MOX	**Moxa**	**104.60**	**324**	*e*P	Pdif	00 13 56.8	-0.5
MOX				*e*		00 18 14.8	
MYKA	**Terra Mystica**	**104.73**	**319**	P	PP	00 18 22.4	+3.9
	comp=Z,25nm,1.1s						
NRDL	**Niedersach Rie**	**104.76**	**326**	*e*Pdiff	Pdif	00 13 57.2	-0.8
NRDL				*e*PP	PP	00 18 16.3	-2.2
VOY	**Vojsko**	**104.76**	**319**	*e*Pdiff	Pdif	00 13 58.8	+0.8
VOY				*e*		00 14 33.2	
KBA	**Koelnbreinsper**	**104.78**	**320**	P	PP	00 18 22.6	+3.7
	comp=Z,32nm,1.1s						
CLZ	**Clausthal**	**104.87**	**325**	*e*Pdiff	Pdif	00 13 58.0	-0.4
CLZ				*e*PP	PP	00 18 17.1	-2.2
CLZ	**Clausthal**	**104.87**	**325**	*e*Pdif	Pdif	00 13 58.0	-0.4
CLZ				*e*PP	PP	00 18 17.1	-2.2
CLZ	**Clausthal**	**104.87**	**325**	*e*P	Pdif	00 13 58.0	-0.4
CLZ				*e*		00 18 17.1	
RJOB	**Jochberg**	**104.91**	**321**	*e*Pdiff	Pdif	00 13 58.0	-0.6
RJOB				*e*PP	PP	00 18 17.3	-2.5
SCO	**Scoresbysund**	**104.97**	**350**	*e*P	Pdif	00 13 59.7	+0.8
SCO				pmax	pmax		
	comp=Z,11nm,0.8s						
SCO	**Scoresbysund**	**104.97**	**350**	*i* P	Pdif	00 13 59.7	+0.8
	comp=Z,11nm,0.8s						
SCO	**Scoresbysund**	**104.97**	**350**	*i* P		00 18 38.7	
G08A	**Pilot Rock**	**105.02**	**42**	P	Pdif	00 14 00.7	+1.6
	baz=105						
I07A	**Izee**	**105.03**	**43**	P	Pdif	00 14 01.1	+1.9
	baz=105						
MOD	**Modoc**	**105.11**	**46**	*e*Pdif	Pdif	00 14 01.8	+2.3
SUMG	**Summit**	**105.12**	**356**	*e*Pdif	Pdif	00 13 58.3	-1.3
SUMG	**Summit**	**105.12**	**356**	*i* P	Pdif	00 13 59.4	-0.2
	comp=Z,6.8nm,1.0s						
SUMG	**Summit**	**105.12**	**356**	*i* P		00 18 44.5	
	comp=Z,30nm,1.0s						
UPI	**Upington**	**105.14**	**241**	*e*P	PKiKP	00 18 13.8	-0.7
E09A	**Wood Farm, Sta**	**105.16**	**41**	⇓P	Pdif	00 13 59.1	-0.6
	baz=105						
GRA1	**Grafenberg Arr**	**105.19**	**323**	*e*Pdif	Pdif	00 13 59.5	-0.4
GRA1				*e*PP	PP	00 18 19.3	-2.4
GRF	**Grafenberg Arr**	**105.19**	**323**	*e*Pdiff	Pdif	00 13 59.5	-0.4
GRF				*e*PP	PP	00 18 19.3	-2.4
GRF	**Grafenberg Arr**	**105.19**	**323**	*e*Pdif	Pdif	00 13 59.5	-0.4
GRF				*e*PP	PP	00 18 19.3	-2.4
GRF	**Grafenberg Arr**	**105.19**	**323**	*e*P	Pdif	00 13 59.5	-0.4
GRF				*e*		00 18 19.3	
GRF	**Grafenberg Arr**	**105.19**	**323**	*e*P	Pdif	00 13 59.5	-0.4
GRF				*e*		00 18 19.3	
GRFO	**Grafenberg**	**105.19**	**323**	*e*Pdif	Pdif	00 13 59.6	-0.3
GRFO				*e*PP	PP	00 18 23.3	+1.5
GRFO	**Grafenberg**	**105.19**	**323**	*e*P	Pdif	00 13 59.6	-0.3
GRFO				*e*		00 18 23.3	
NEW	**Newport**	**105.22**	**39**	⇑P	Pdif	00 14 00.7	+0.7
	baz=105						
NEW	**Newport**	**105.22**	**39**	*e*Pdif	Pdif	00 14 01.7	+1.7
NEW	**Newport**	**105.22**	**39**	*e*P	Pdif	00 14 01.7	+1.7
ABTA	**Abfaltersbach**	**105.43**	**320**	⇑*i*Pdiff	Pdif	00 14 00.1	-0.9
	comp=Z,4.6nm,0.8s						
ABTA	**Abfaltersbach**	**105.43**	**320**	P	PP	00 18 26.5	+2.8
	comp=Z,19nm,1.0s						
ABTA						16 04 59.6	
	comp=Z,26nm,1.2s						
UBBA	**Unterbreizbach**	**105.48**	**324**	*e*Pdiff	Pdif	00 14 00.6	-0.6
UBBA				*e*PP	PP	00 18 20.9	-3.0
EDM	**Edmonton**	**105.49**	**33**	*e*Pdif	Pdif	00 14 02.0	+0.8
EDM				*e*PKiKP	PKiKP	00 18 14.0	-0.3
EDM				PP	PP	00 18 24.7	+0.9
EDM				*e*PKKPdf	PKKPdf	00 29 52.8	+1.3
EDM				*e*PKKPab	PKKPab	00 29 58.4	+0.6
EDM	**Edmonton**	**105.49**	**33**	*e*P	Pdif	00 14 02.0	+0.8
EDM						00 18 24.7	
FUR	**Furstenfeldbru**	**105.71**	**321**	*e*Pdiff	Pdif	00 14 01.5	-0.7
FUR				*e*PP	PP	00 18 22.9	-2.8
FUR	**Furstenfeldbru**	**105.71**	**321**	*e*Pdif	Pdif	00 14 01.5	-0.7
FUR				*e*PP	PP	00 18 22.9	-2.8
FUR	**Furstenfeldbru**	**105.71**	**321**	*e*P	Pdif	00 14 01.5	-0.7
FUR				*e*		00 18 22.9	
WTTA	**Wattenberg**	**105.81**	**320**	P	PP	00 18 28.6	+2.1
	comp=Z,114nm,1.8s						
MOTA	**Moosalm**	**106.12**	**321**	⇓*i*Pdiff	Pdif	00 14 01.8	-2.2
	comp=Z,6.3nm,0.8s						
CMB	**Columbia Colle**	**106.12**	**50**	*e*Pdif	Pdif	00 14 05.9	+1.9
CMB	**Columbia Colle**	**106.12**	**50**	*e*P	Pdif	00 14 05.9	+1.9
WVOR	**Wild Horse Val**	**106.14**	**45**	Pdif	Pdif	00 14 05.7	+1.6
	comp=Z,18nm,1.3s						
WVOR				*e*PKiKP	PKiKP	00 18 17.4	+1.6
WVOR				*e*PP	PP	00 18 31.1	+2.0
WVOR				*e*PKKPbc	PKKPbc	00 29 39.6	+0.5
WVOR				*e*PKKPab	PKKPab	00 29 55.2	+0.2
WVOR	**Wild Horse Val**	**106.14**	**45**	P	Pdif	00 14 05.7	+1.6
WVOR				*e*		00 18 31.1	
WVOR				pmax	pmax		
	comp=Z,17nm,1.3s						
IBBN	**Ibbenburen**	**106.15**	**326**	*e*Pdiff	Pdif	00 14 03.5	-0.6
IBBN				*e*PP	PP	00 18 26.4	-2.3
CER	**Ceres**	**106.17**	**236**	*e*P	SKSdf	00 25 17.1	-2.4
WCN	**Washoe City**	**106.25**	**48**	*e*Pdif	Pdif	00 14 06.6	+2.0
WCN				PKiKP	PKiKP	00 18 18.9	+2.7
WCN				*e*PP	PP	00 18 31.9	+1.9
WCN	**Washoe City**	**106.25**	**48**	*e*P	Pdif	00 14 06.6	+2.0
WCN				*e*		00 18 31.9	
RETA	**Reutte**	**106.28**	**321**	P	PP	00 18 32.8	+2.9
	comp=Z,74nm,0.9s						
PAHR	**Pah Rah Range**	**106.41**	**48**	*e*PKiKP	PKiKP	00 18 17.5	+1.1
PAHR				*e*PP	PP	00 18 30.4	-0.8
PAHR				*e*PKKPbc	PKKPbc	00 29 38.5	+0.4
PAHR				*e*PKKPab	PKKPab	00 29 54.1	+0.4
FETA	**Feichten**	**106.47**	**320**	⇑*i*Pdiff	Pdif	00 14 05.8	+0.2
	comp=Z,8.6nm,0.9s						
FETA	**Feichten**	**106.47**	**320**	P	PP	00 18 33.7	+2.4
	comp=Z,61nm,1.3s						
WIT	**Witteveen**	**106.53**	**327**	*e*Pdif	Pdif	00 14 15.0	+9.2
WIT	**Witteveen**	**106.53**	**327**	*e*PP	PKiKP	00 18 19.9	+3.6
WIT	**Witteveen**	**106.53**	**327**	*e*ScSP	SP	00 27 40.6	+0.6
TNS	**Taunus Mts**	**106.63**	**324**	*e*Pdiff	Pdif	00 14 06.1	-0.2
TNS				*e*PP	PP	00 18 29.7	-2.6
TNS	**Taunus Mts**	**106.63**	**324**	*e*Pdif	Pdif	00 14 06.1	-0.2
TNS				*e*PP	PP	00 18 29.7	-2.6
TNS	**Taunus Mts**	**106.63**	**324**	*e*P	Pdif	00 14 06.1	-0.2
TNS				*e*		00 18 29.7	
A13A	**Flathead Natio**	**106.63**	**37**	⇑P	Pdif	00 14 08.0	+1.7
	baz=107						
WAKR	**Walker**	**106.71**	**49**	*e*Pdif	Pdif	00 14 08.0	+1.4
WAKR				*e*PKiKP	PKiKP	00 18 18.5	+1.4
WAKR				*e*PKKPbc	PKKPbc	00 29 38.0	+0.8
WAKR				*e*PKKPab	PKKPab	00 29 53.6	+1.2
STU	**Stuttgart**	**106.77**	**323**	*e*Pdiff	Pdif	00 14 06.2	-0.7
STU				*e*PP	PP	00 18 30.5	-2.9
D12A	**Red Ives Fores**	**106.77**	**39**	⇑P	Pdif	00 14 07.6	+0.7
	baz=107						
BUG	**Bochum--Univer**	**106.80**	**326**	*e*Pdiff	Pdif	00 14 06.5	-0.5
BUG				*e*PP	PP	00 18 30.7	-2.8
B13A	**Whitefish**	**106.82**	**38**	⇑P	Pdif	00 14 09.3	+2.1
	baz=107						
BSMT	**Bassoo Peak**	**106.82**	**39**	*e*Pdif	Pdif	00 14 09.7	+2.5
BSMT				*e*PKiKP	PKiKP	00 18 15.7	-1.2
BSMT				*e*PP	PP	00 18 34.3	+0.4
BSMT				*e*PKKPab	PKKPab	00 29 51.3	-0.6
WTSB	**Winterswijk**	**106.83**	**326**	*e*Pdif	Pdif	00 14 18.5	+11
WTSB	**Winterswijk**	**106.83**	**326**	*e*PP	PP	00 18 25.9	-7.9
WTSB	**Winterswijk**	**106.83**	**326**	*es*ScSP	SP	00 27 40.6	-2.5
WALA	**Waterton Lakes**	**106.89**	**37**	*e*Pdif	Pdif	00 14 10.1	+2.7
WALA				*e*PKiKP	PKiKP	00 18 17.6	+0.6
WALA				*e*PKKPbc	PKKPbc	00 29 36.2	-0.8
WALA				*e*PKKPab	PKKPab	00 29 50.7	-0.9
DAVA	**Damuels**	**106.91**	**321**	P	PP	00 18 36.9	+2.4
	comp=Z,56nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**106.92**	**320**	*e*Pdif	Pdif	00 14 10.3	+2.7
C13A	**Hot Springs**	**107.02**	**39**	⇓P	Pdif	00 14 07.6	-0.5
	baz=107						
JTMT	**Jette**	**107.18**	**38**	*e*Pdif	Pdif	00 14 11.2	+2.5
JTMT				*e*PKiKP	PKiKP	00 18 20.8	+3.2
JTMT				*e*PKKPbc	PKKPbc	00 29 34.3	-1.8
JTMT				*e*PKKPab	PKKPab	00 29 49.4	-0.9
A14A	**Double T Ranch**	**107.22**	**37**	⇑P	Pdif	00 14 11.2	+2.3
	baz=107						
YBMT	**Yellow Bay**	**107.30**	**38**	*e*Pdif	Pdif	00 14 10.2	+0.9
	comp=Z,9.2nm,1.4s						
YBMT				*e*PKiKP	PKiKP	00 18 18.0	+0.1
YBMT				*e*PKKPbc	PKKPbc	00 29 33.7	-1.9
YBMT				*e*PKKPab	PKKPab	00 29 48.8	-0.9
F12A	**Elk City**	**107.31**	**41**	⇑P	Pdif	00 14 11.4	+2.1
	baz=107						
SWMT	**Swartz Lake**	**107.45**	**39**	*e*Pdif	Pdif	00 14 11.5	+1.6
SWMT				*e*PKiKP	PKiKP	00 18 18.0	-0.1
SWMT				*e*PP	PP	00 18 39.2	+0.8
SWMT				*e*PKKPbc	PKKPbc	00 29 33.7	-1.5
SWMT				*e*PKKPab	PKKPab	00 29 48.3	-0.8
BFO	**Black Forest**	**107.47**	**322**	*e*Pdiff	Pdif	00 14 09.4	-0.6
BFO				*e*PP	PP	00 18 35.5	-3.0
BFO	**Black Forest**	**107.47**	**322**	*e*Pdif	Pdif	00 14 09.4	-0.6
BFO				*e*PKiKP	PKiKP	00 18 19.0	+0.8
BFO				*e*PP	PP	00 18 35.5	-3.0
BFO				*e*PP	PP	00 18 42.0	+3.5
BFO	**Black Forest**	**107.47**	**322**	*e*P	Pdif	00 14 09.4	-0.6
BFO				*e*		00 18 42.0	
B14A	**Marquette Ranc**	**107.56**	**38**	⇓P	Pdif	00 14 12.8	+2.4
	baz=108						
NVAR	**Mina Array Bea**	**107.59**	**49**	Pdiff	Pdif	00 14 12.9	+2.4
	comp=Z,4.0nm,0.9s,baz=266,slow=4.9,SNR=24						
NVAR				PKiKP	PKiKP	00 18 20.4	+1.8
	comp=Z,5.0nm,0.7s,baz=255,slow=1.8,SNR=7.2						
NVAR				PP	PP	00 18 40.3	+0.5
	comp=Z,6.2nm,0.8s,baz=266,slow=3.6,SNR=5.1						
NVAR				PKKPbc	PKKPbc	00 29 34.8	+0.3
	comp=Z,10.0nm,0.8s,baz=140,slow=3.9,SNR=20						
NVAR				PKKP	PKKPbc	00 29 47.8	+13
	comp=Z,10nm,0.8s,baz=146,slow=4.5,SNR=11						
A15A	**Johnson Ranch,**	**107.63**	**37**	⇑P	Pdif	00 14 12.7	+2.0
	baz=108						
MSO	**Missoula**	**107.75**	**39**	*e*PKiKP	PKiKP	00 18 19.1	+0.4
MSO				*e*PP	PP	00 18 42.0	+1.4
MSO				*e*PKKPbc	PKKPbc	00 29 33.4	-0.8
MSO				*e*PKKPab	PKKPab	00 29 47.4	-0.4
HGN	**Heimansgroeve**	**107.85**	**325**	*e*Pdif	Pdif	00 14 22.0	+10
HGN	**Heimansgroeve**	**107.85**	**325**	*e*PP	PP	00 18 30.1	-11
HGN	**Heimansgroeve**	**107.85**	**325**	*es*ScSP	SP	00 27 50.2	-3.4
SLMT	**Seeley Lake**	**107.87**	**39**	*e*Pdif	Pdif	00 14 12.4	+0.6
SLMT				*e*PKiKP	PKiKP	00 18 20.3	+1.4
SLMT				*e*PP	PP	00 18 43.0	+1.5
SLMT				*e*PKKPbc	PKKPbc	00 29 34.5	+0.7
SLMT				*e*PKKPab	PKKPab	00 29 47.0	-0.3
B15A	**Bradely Ranch,**	**108.01**	**37**	⇑P	Pdif	00 14 13.7	+1.3
	baz=108						
I12A	**Atlanta**	**108.10**	**43**	PKiKP	PKiKP	00 18 21.0	+1.5
	baz=108						
CHMT	**Chamberlain Mo**	**108.15**	**39**	*e*PKiKP	PKiKP	00 18 20.6	+1.1
CHMT				*e*PKKPbc	PKKPbc	00 29 34.3	+1.3
C15A	**Salmond Ranch,**	**108.20**	**38**	⇑P	Pdif	00 14 14.8	+1.5
	baz=108						
WLF	**Walferdange**	**108.21**	**324**	*e*Pdiff	Pdif	00 14 13.4	+0.1
WLF				*e*PP	PP	00 18 41.1	-2.8
ISA	**Isabella**	**108.25**	**52**	⇑P	Pdif	00 14 16.8	+3.3
	baz=108						
ISA	**Isabella**	**108.25**	**52**	*e*Pdif	Pdif	00 14 17.6	+4.2
ISA	**Isabella**	**108.25**	**52**	*e*P	Pdif	00 14 17.6	+4.1
A16A	**West Butte Ran**	**108.32**	**37**	⇓P	Pdif	00 14 16.1	+2.3
	baz=108						
H13A	**Challis**	**108.41**	**42**	⇑P	Pdif	00 14 16.6	+2.4
	baz=108						
B16A	**M & M Farms, S**	**108.48**	**37**	⇓P	Pdif	00 14 15.8	+1.2
	baz=108						
HLID	**Hailey**	**108.67**	**43**	⇑P	Pdif	00 14 16.4	+1.0
	baz=109						
HLID				PKiKP	PKiKP	00 18 20.5	-0.1
	baz=109						
HLID	**Hailey**	**108.67**	**43**	*e*Pdif	Pdif	00 14 16.1	+0.7
HLID				*e*PKiKP	PKiKP	00 18 25.1	+4.6
HLID				*e*PP	PP	00 18 49.7	+2.2
HLID				*e*PKKPbc	PKKPbc	00 29 30.7	-0.5
HLID				*e*PKKPab	PKKPab	00 29 43.9	+0.2
C16A	**Fuhringer Ranc**	**108.72**	**38**	⇓P	Pdif	00 14 18.0	+2.4
	baz=109						
E15A	**Deer Lodge**	**108.73**	**39**	⇓P	Pdif	00 14 18.0	+2.4
	baz=109						
I13A	**Wildhorse Cree**	**108.74**	**42**	⇓P	Pdif	00 14 16.8	+1.1
	baz=109						
I13A				PKiKP	PKiKP	00 18 21.6	+0.9
	baz=109						
EDW2	**Edwards Air Fo**	**108.84**	**52**	⇓P	Pdif	00 14 18.8	+2.6
	baz=109						
EDW2				PKiKP	PKiKP	00 18 21.4	+0.3
	baz=109						
A17A	**Triple J Farms**	**108.86**	**36**	PKiKP	PKiKP	00 18 20.0	-0.7
	baz=109						
J13A	**Cove Ranch, Pi**	**108.90**	**43**	⇑P	Pdif	00 14 18.4	+2.1
	baz=109						
J13A				PKiKP	PKiKP	00 18 22.1	+1.1
	baz=109						
MPMC	**Manual Prospec**	**108.90**	**51**	⇓P	Pdif	00 14 18.6	+2.2
	baz=109						
SENIN	**Lac Senin/Sane**	**108.91**	**321**	*e*PP	PP	00 18 53.6	+4.6
MWC	**Mount Wilson**	**108.97**	**53**	*e*PKiKP	PKiKP	00 18 24.8	+3.4
H14A	**Leadore**	**108.98**	**41**	⇑P	Pdif	00 14 19.0	+2.3
	baz=109						
S10A	**Tonopah Range,**	**109.02**	**49**	⇑P	Pdif	00 14 18.5	+1.5
	baz=109						
F15A	**Butte**	**109.06**	**40**	⇓P	Pdif	00 14 18.5	+1.4
	baz=109						
B17A	**L&G Farms, Che**	**109.08**	**37**	⇓P	Pdif	00 14 19.3	+2.1
	baz=109						
LRM	**Limekiln Ridge**	**109.10**	**40**	*e*Pdif	Pdif	00 14 19.1	+1.8
LRM				*e*PKiKP	PKiKP	00 18 19.2	-2.1
DLMT	**Dillon**	**109.19**	**40**	*e*PKiKP	PKiKP	00 18 22.9	+1.4
DLMT				*e*PP	PP	00 18 53.8	+2.6
DLMT				*e*PKKPbc	PKKPbc	00 29 28.9	-0.7
DLMT				*e*PKKPab	PKKPab	00 29 41.3	0.0
MCMT	**McKenzie Canyo**	**109.23**	**41**	*e*Pdif	Pdif	00 14 19.7	+1.8
MCMT				*e*PKiKP	PKiKP	00 18 26.6	+5.0
MCMT				*e*PP	PP	00 18 52.3	+0.8
MCMT				*e*PKKPbc	PKKPbc	00 29 29.9	+0.5
MCMT				*e*PKKPab	PKKPab	00 29 41.2	0.0
G15A	**Dillon**	**109.34**	**40**	⇑P	Pdif	00 14 18.5	+0.2
	baz=109						
TSUM	**Tsumeb**	**109.37**	**250**	PKKP	PKKPdf	00 29 44.8	+0.9
	comp=Z,8.6nm,1.0s,baz=319,slow=6.4,SNR=5.0						
A18A	**Metzger Ranch,**	**109.37**	**36**	⇓P	Pdif	00 14 20.3	+1.9
	baz=109						
J14A	**Carey**	**109.37**	**43**	⇑P	Pdif	00 14 21.5	+3.0
	baz=109						
C17A	**Wharram Farm,**	**109.39**	**38**	⇑P	Pdif	00 14 21.7	+3.1
	baz=109						
C17A				PKiKP	PKiKP	00 18 19.9	-1.9
	baz=109						
Q11A	**Duckwater**	**109.43**	**48**	PKiKP	PKiKP	00 18 21.7	-0.4
	baz=109						
H15A	**Lima**	**109.45**	**41**	PKiKP	PKiKP	00 18 22.7	+0.7
	baz=109						
R11A	**Troy Canyon, C**	**109.64**	**48**	⇓P	Pdif	00 14 22.0	+2.3
	baz=110						
R11A				PKiKP	PKiKP	00 18 21.6	-1.0
	baz=110						
D17A	**Six Diamond Ra**	**109.65**	**38**	⇓P	Pdif	00 14 21.6	+2.0
	baz=110						
D17A				⇓PKiKP	PKiKP	00 18 18.8	-3.5
	baz=110						
GSC	**Goldstone**	**109.65**	**51**	⇓P	Pdif	00 14 23.1	+3.4
	baz=110						
GSC	**Goldstone**	**109.65**	**51**	*e*Pdif	Pdif	00 14 21.9	+2.2
GSC				*e*P

RRI2 eP PP 00 19 03.7 +0.6
RRI2 ePKKPbc PKKPbc 00 29 24.4 +0.1
RRI2 ePKKPab PKKPab 00 29 33.9 -0.2
IMW Indian Meadow 110.86 41 ePdif Pdif 00 14 27.9 +2.8
IMW ePKiKP PKiKP 00 18 26.7 +2.1
IMW PP PP 00 19 04.2 +0.9
IMW ePKKPbc PKKPbc 00 29 24.2 0.0
IMW ePKKPab PKKPab 00 29 34.4 +0.4
SPUT South Promonto 110.86 44 ePKiKP PKiKP 00 18 26.1 +1.4
SPUT eP PP 00 19 04.6 +1.2
SPUT ePKKPbc PKKPbc 00 29 24.6 +0.5
SPUT ePKKPab PKKPab 00 29 34.2 +0.3
GCMT Greycliff 110.88 39 ePKiKP PKiKP 00 18 26.2 +1.5
GCMT eP PP 00 19 04.6 +1.3
GCMT ePKKPbc PKKPbc 00 29 24.9 +0.7
GCMT ePKKPab PKKPab 00 29 34.5 +0.7
FLWY Flagg Ranch 110.94 41 ePKKPbc PKKPbc 00 29 23.6 -0.3
FLWY ePKKPab PKKPab 00 29 33.7 +0.1
N15A Stansbury Isla 110.97 45 PKiKP PKiKP 00 18 25.4 +0.4
baz=111
DVTC Desert V Tower 110.98 54 PKiKP PKiKP 00 18 25.5 +0.2
baz=111
C20A Veseth Ranch, 111.02 37 ⇓P Pdif 00 14 28.1 +2.3
C20A PKiKP PKiKP 00 18 24.9 0.0
baz=111
DUG Dugway 111.02 45 ⇑P Pdif 00 14 27.3 +1.5
baz=111
DUG Dugway 111.02 45 ePKiKP PKiKP 00 18 25.6 +0.5
DUG Dugway 111.02 45 ePKIKP PKiKP 00 18 25.6 +0.5
TPAW Teton Pass 111.02 42 ePKKPbc PKKPbc 00 29 23.1 -0.5
TPAW ePKKPab PKKPab 00 29 32.9 -0.3
V12A Nelson 111.04 51 PKiKP PKiKP 00 18 24.6 -0.7
baz=111
MOOW Moose Ponds 111.05 41 ePKKPbc PKKPbc 00 29 22.8 -0.8
P14A Drum Mountains 111.06 46 ⇑P Pdif 00 14 28.7 +2.7
baz=111
P14A PKiKP PKiKP 00 18 24.8 -0.4
baz=111
Q14A Sevier Lake (B 111.13 47 ⇑P Pdif 00 14 29.4 +3.1
baz=111
REDW Red Top Meadow 111.14 42 ePKiKP PKiKP 00 18 26.3 +1.1
REDW eP PP 00 19 06.5 +1.3
REDW eSKPdf SKPdf 00 21 53.5 +1.5
REDW ePKKPab PKKPab 00 29 32.6 -0.1
SNOW Snow King Moun 111.17 42 ePKiKP PKiKP 00 18 26.0 +0.7
SNOW eP PP 00 19 05.9 +0.4
SNOW ePKKPab PKKPab 00 29 32.0 -0.6
S13A Holt Ranch, En 111.18 48 PKiKP PKiKP 00 18 24.5 -1.0
baz=111
LOHW Long Hollow 111.20 41 ePdif Pdif 00 14 31.9 +5.2
LOHW ePKiKP PKiKP 00 18 26.5 +1.2
LOHW eP PP 00 19 07.0 +1.3
BC3 Big Chuckawall 111.21 53 ⇑P Pdif 00 14 30.4 +3.8
baz=111
BC3 PKiKP PKiKP 00 18 26.5 +0.8
baz=111
D20A Manuel Ranch, 111.23 37 ⇑P Pdif 00 14 29.5 +2.8
baz=111
L16A Fish Haven 111.29 43 PKiKP PKiKP 00 18 25.4 -0.1
baz=111
IRM Iron Mountain 111.30 52 ⇑P Pdif 00 14 28.5 +1.5
baz=111
IRM PKiKP PKiKP 00 18 25.1 -0.7
baz=111
T13A Saint George 111.34 49 ⇓P Pdif 00 14 27.7 +0.5
baz=111
NOQ North Oquirrh 111.34 45 ePKiKP PKiKP 00 18 26.7 +1.1
NOQ eP PP 00 19 07.6 +0.8
NOQ eSKPdf SKPdf 00 21 54.4 +1.9
KEST Kesra 111.35 310 PKiKP PKiKP 00 18 26.1 +0.2
comp=Z,2.7nm,0.7s,baz=129,slow=0.9,SNR=12
KEST PKKPbc PKKPbc 00 29 21.4 -0.9
comp=Z,4.4nm,0.6s,baz=129,slow=4.8,SNR=18
KEST Kesra 111.35 310 ePKiKP PKiKP 00 18 26.2 +0.4
KEST eP PP 00 19 08.2 +1.1
HWUT Hardware Ranch 111.36 44 ePdif Pdif 00 14 31.2 +3.9
HWUT ePKiKP PKiKP 00 18 26.0 +0.3
HWUT eP PP 00 19 07.9 +0.9
HWUT ePKKPbc PKKPbc 00 29 21.9 -0.6
HWUT ePKKPab PKKPab 00 29 30.5 -1.2
CCUT Cedar City 111.57 48 ePKiKP PKiKP 00 18 28.9 +2.6
CTU Camp Tracy 111.59 45 ePKiKP PKiKP 00 18 28.0 +1.8
CTU ePKKPbc PKKPbc 00 29 21.7 0.0
CTU ePKKPab PKKPab 00 29 30.9 +0.1
NLU North Lily Min 111.64 45 ePKiKP PKiKP 00 18 27.3 +1.0
NLU eP PP 00 19 12.2 +3.2
NLU eSKPdf SKPdf 00 21 56.3 +3.2
NLU ePKKPbc PKKPbc 00 29 21.8 +0.2
NLU ePKKPab PKKPab 00 29 30.9 +0.4
S14A Cedar City 111.64 48 PKiKP PKiKP 00 18 26.3 0.0
baz=112
V13A Grand Canyon W 111.67 50 PKiKP PKiKP 00 18 27.3 +0.9
baz=112
N16A Rees Ranch, Co 111.73 44 PKiKP PKiKP 00 18 27.6 +1.2
baz=112
F20A Billings 111.82 38 PKiKP PKiKP 00 18 26.4 0.0
baz=112
K18A Toltan Ranch, 111.98 42 PKiKP PKiKP 00 18 27.5 +0.7
baz=112
M17A Scullys Gap (B 112.03 44 PKiKP PKiKP 00 18 26.2 -0.7
baz=112
DAU Daniels Canyon 112.04 45 ePKiKP PKiKP 00 18 27.4 +0.4
DAU eP PP 00 19 13.3 +1.5
DAU ePKKPbc PKKPbc 00 29 20.6 +0.4
DAU ePKKPab PKKPab 00 29 29.0 +0.3
DAU Daniels Canyon 112.04 45 ePKIKP PKiKP 00 18 27.4 +0.4
DAU e 00 19 13.3
N17A Moffit Pass 112.13 44 PKiKP PKiKP 00 18 27.8 +0.6
baz=112
E21A Keefer Ranch, 112.13 37 PKiKP PKiKP 00 18 28.3 +1.3
baz=112
BW06 Boulder Array 112.25 42 PKiKP PKiKP 00 18 28.2 +0.8
baz=112
BW06 Boulder Array 112.25 42 ePKiKP PKiKP 00 18 29.3 +2.0
BW06 ePKKPbc PKKPbc 00 29 16.6 -3.0
PDAR Pinedale Array 112.25 42 Pdiff Pdif 00 14 32.1 +0.9
comp=Z,0.4nm,0.3s,baz=270,slow=1.8,SNR=4.9
PDAR PKiKP PKiKP 00 18 28.5 +1.2
comp=Z,4.1nm,0.6s,baz=165,slow=3.7,SNR=14
PDAR PKKPbc PKKPbc 00 29 18.4 -1.2
comp=Z,21nm,0.8s,baz=120,slow=5.0,SNR=28
C22A Vida 112.25 36 PKiKP PKiKP 00 18 26.6 -0.6
baz=112
L18A Fontenelle, Gr 112.28 43 PKiKP PKiKP 00 18 28.4 +0.9
baz=112
J19A Crowheart 112.37 41 ⇓P Pdif 00 14 35.9 +4.1
baz=112
J19A PKiKP PKiKP 00 18 27.4 -0.2
baz=112
D22A Cohagen 112.37 36 PKiKP PKiKP 00 18 28.4 +0.9
baz=112
V14A Boquillas Ranc 112.41 50 PKiKP PKiKP 00 18 29.2 +1.4
baz=112
T15A Red Dirt Ranch 112.48 48 PKiKP PKiKP 00 18 28.6 +0.7
baz=112
O17A Robinson Place 112.49 45 PKiKP PKiKP 00 18 28.6 +0.8
baz=112
TMUT Trail Mountain 112.51 46 ePKiKP PKiKP 00 18 28.4 +0.4
CMAH Djebel Manchou 112.52 311 P PKiKP 00 18 25.0 -3.0
W14A Seligman 112.57 51 PKiKP PKiKP 00 18 29.4 +1.2
baz=112
LAO LASA Array 112.58 37 PKiKP PKiKP 00 18 29.0 +1.2
baz=112
LAO LASA Array 112.58 37 ePKiKP PKiKP 00 18 28.7 +0.8
LAO ePKKPbc PKKPbc 00 29 18.2 -0.5
LAO ePKKPab PKKPab 00 29 26.3 0.0
ABSA Djebel Ababsia 112.59 311 P PKiKP 00 18 25.0 -3.2
C23A Lambert 112.63 35 PKiKP PKiKP 00 18 28.8 +0.9
baz=112
L19A Farson 112.67 42 PKiKP PKiKP 00 18 28.2 +0.1
baz=113
G21A Lodge Grass 112.67 39 PKiKP PKiKP 00 18 28.1 0.0
baz=113
I20A Worland 112.67 40 PKiKP PKiKP 00 18 27.8 -0.3
baz=113
K19A Absolon Red Bu 112.70 42 PKiKP PKiKP 00 18 27.9 -0.3
baz=113
U15A North Rim 112.76 49 PKiKP PKiKP 00 18 29.9 +1.4
baz=113
P17A Butcher Ranch, 112.77 46 PKiKP PKiKP 00 18 29.0 +0.6
baz=113
S16A Weppner Ranch, 112.81 48 PKiKP PKiKP 00 18 29.6 +1.0
baz=113
DGMT Dagmar 112.85 34 ePKiKP PKiKP 00 18 29.3 +1.0

DGMT eP PP 00 19 17.2 -0.1
DGMT eSKPdf SKPdf 00 21 56.0 +0.8
CAEH 'Ain El Ouahch 112.89 311 P PKiKP 00 18 30.7 +2.0
J20A Shoshoni 112.97 41 PKiKP PKiKP 00 18 28.8 +0.1
baz=113
X14A Yava 112.97 51 PKiKP PKiKP 00 18 29.4 +0.5
baz=113
H21A Big Horn, Sher 113.06 39 PKiKP PKiKP 00 18 29.7 +0.9
baz=113
V15A Kaibab Nationa 113.06 50 PKiKP PKiKP 00 18 30.5 +1.4
baz=113
P18A Preston Nutter 113.06 45 PKiKP PKiKP 00 18 29.3 +0.3
baz=113
SRU San Rafael 113.07 46 ePKiKP PKiKP 00 18 29.7 +0.7
SRU eP PP 00 19 21.7 +2.5
SRU San Rafael 113.07 46 ePKIKP PKiKP 00 18 29.7 +0.7
SRU e 00 19 21.7
K20A Yellowstone Ra 113.11 42 PKiKP PKiKP 00 18 29.6 +0.7
baz=113
CKFL Kef-Lekhel 113.12 311 P PKiKP 00 18 31.8 +2.6
R17A Hanksville Air 113.20 47 PKiKP PKiKP 00 18 30.1 +0.8
baz=113
I21A Big Trails, Te 113.28 40 PKiKP PKiKP 00 18 29.0 -0.3
baz=113
N19A John Jarvie Ra 113.30 44 PKiKP PKiKP 00 18 29.7 +0.3
baz=113
CASM Ain Smara 113.34 311 P PKiKP 00 18 28.7 -0.9
Q18A Rafter H Ranch 113.35 46 PKiKP PKiKP 00 18 28.9 -0.7
baz=113
EJON La Jonquera 113.43 318 PKP PKiKP 00 18 30.5 +0.9
S17A Black Ridge (B 113.43 47 PKiKP PKiKP 00 18 30.6 +0.8
baz=113
X15A Humboldt 113.47 51 PKiKP PKiKP 00 18 30.4 +0.5
baz=113
CTEI Djebel Teioual 113.48 311 P PKiKP 00 18 32.2 +2.3
114A Black Gap (USA 113.53 53 PKiKP PKiKP 00 18 30.2 +0.1
baz=114
Y15A Casa Rosa Ranc 113.58 52 PKiKP PKiKP 00 18 28.5 -1.7
baz=114
O19A Miners Draw (B 113.58 44 PKiKP PKiKP 00 18 30.3 +0.3
baz=114
T17A Navajo Res., N 113.67 48 PKiKP PKiKP 00 18 31.3 +1.1
baz=114
DFRA Djebel Bou Aff 113.70 311 P PKiKP 00 18 31.6 +1.3
M20A Sweetwater, Wa 113.72 43 PKiKP PKiKP 00 18 31.1 +0.9
baz=114
U16A Tuba City 113.74 49 PKiKP PKiKP 00 18 31.3 +0.9
baz=114
K21A Alcova 113.84 41 PKiKP PKiKP 00 18 30.6 +0.2
baz=114
U17A Shonto 113.92 48 PKiKP PKiKP 00 18 30.8 +0.1
baz=114
N20A Spence Gulch, 113.95 43 PKiKP PKiKP 00 18 31.1 +0.5
baz=114
P19A Cripple Cowboy 113.96 45 PKiKP PKiKP 00 18 30.6 -0.1
baz=114
J22A Midwest 113.98 40 PKiKP PKiKP 00 18 30.0 -0.6
baz=114
S18A Hurst Farm, Bl 114.00 47 PKiKP PKiKP 00 18 31.8 +1.0
baz=114
CLLI Llivia 114.02 319 PKP PKiKP 00 18 32.6 +1.8
Q19A Hogan Spring (114.03 46 PKiKP PKiKP 00 18 31.4 +0.6
baz=114
CFON Fontmartina 114.03 318 PKP PKiKP 00 18 32.1 +1.3
X16A Lo Mia Camp, P 114.11 51 PKiKP PKiKP 00 18 32.2 +1.0
baz=114
SET Setif 114.19 311 P PKiKP 00 18 34.0 +2.7
M21A Separation Pea 114.22 42 PKiKP PKiKP 00 18 30.9 -0.2
baz=114
O20A White River Ci 114.26 44 PKiKP PKiKP 00 18 31.4 +0.2
baz=114
RWWY Rawlins 114.29 42 ePKiKP PKiKP 00 18 31.6 +0.3
T18A Mexican Hat 114.31 48 PKiKP PKiKP 00 18 32.4 +0.9
baz=114
K22A Casper 114.31 41 PKiKP PKiKP 00 18 31.4 +0.1
baz=114
N21A Black Mountain 114.49 43 PKiKP PKiKP 00 18 31.6 -0.1
baz=114
PV04 Paradox Valley 114.52 46 ePKiKP PKiKP 00 18 31.8 0.0
PV04 ePP PP 00 19 30.5 +1.0
PV04 eSKPdf SKPdf 00 21 59.9 +1.2
EMIR Miracle 114.57 318 PKP PKiKP 00 18 31.4 -0.5
CSOR Sort 114.62 319 PKP PKiKP 00 18 31.2 -0.7
ETOS Mallorca 114.64 316 PKP PKiKP 00 18 32.7 +0.7
Q20A Ridgley Place, 114.72 45 PKiKP PKiKP 00 18 33.3 +1.1
baz=115
V18A Ganado 114.80 49 PKiKP PKiKP 00 18 33.6 +1.2
baz=115
Y17A Roosevelt 114.83 51 PKiKP PKiKP 00 18 32.4 -0.1
baz=115
PV01 Paradox Valley 114.86 46 ePKiKP PKiKP 00 18 33.8 +1.3
PV01 ePP PP 00 19 32.6 +0.7
R20A Redvale 114.98 46 PKiKP PKiKP 00 18 34.1 +1.4
baz=115
EBIE Bielsa 115.12 320 PKP PKiKP 00 18 35.1 +2.3
EPOB Poblet 115.13 318 PKP PKiKP 00 18 34.4 +1.5
S20A Disappointment 115.14 46 PKiKP PKiKP 00 18 32.7 -0.3
baz=115
RSSD Black Hills 115.19 39 ePKPdf PKPdf 00 18 32.6 -0.3
RSSD ePKKPbc PKKPbc 00 29 07.2 -2.5
RSSD Black Hills 115.19 39 ePKIKP PKPdf 00 18 32.6 -0.3
RSSD e 00 29 07.2
N22A Wattenberg Ran 115.20 43 PKiKP PKiKP 00 18 33.1 0.0
baz=115
117A Oracle 115.30 53 PKiKP PKiKP 00 18 34.0 +0.6
baz=115
TUC Tucson 115.35 53 ePKPdf PKPdf 00 18 33.9 +0.3
TUC epPKPdf 00 19 00.2
TUC Tucson 115.35 53 ePKIKP PKPdf 00 18 33.9 +0.3
TUC e 00 19 00.3
Y18A Canyon Day Jun 115.43 51 PKiKP PKiKP 00 18 34.3 +0.6
baz=115
V19A Window Rock 115.47 49 PKiKP PKiKP 00 18 35.5 +1.8
baz=115
N23A Red Feather La 115.50 42 PKiKP PKiKP 00 18 33.4 -0.3
baz=115
217A Green Valley 115.51 53 PKiKP PKiKP 00 18 34.9 +1.0
baz=116
VAL Valentia 115.59 332 ⇑iP PP 00 19 39.3 +3.0
S21A Coal Bank Pass 115.62 46 PKiKP PKiKP 00 18 34.5 +0.5
baz=116
Q22A Crested Butte, 115.74 45 PKiKP PKiKP 00 18 35.1 +1.0
baz=116
X19A St. Johns 115.77 50 PKiKP PKiKP 00 18 35.8 +1.4
baz=116
ERTA Horta de San J 115.81 318 PKP PKPdf 00 18 35.5 +1.3
O23A Lake Granby, G 115.83 43 PKiKP PKiKP 00 18 34.6 +0.3
baz=116
118A Homack Ranch, 115.89 52 PKiKP PKiKP 00 18 35.0 +0.4
baz=116
EALK Alkurruntz 115.92 321 PKP PKPdf 00 18 36.8 +2.4
Y19A Nutrioso 115.97 51 PKiKP PKiKP 00 18 35.9 +1.1
baz=116
ESAC San Caprasio 115.98 319 PKP PKPdf 00 18 36.3 +1.7
EMHD Djebel Mahouad 116.01 312 P PKPdf 00 18 33.5 -1.3
T21A Navajo Lake 116.08 47 PKiKP PKiKP 00 18 35.8 +0.9
baz=116
W20A Ramah 116.11 49 PKiKP PKiKP 00 18 35.7 +0.7
baz=116
R22A Saguache, Gunn 116.12 45 PKiKP PKiKP 00 18 36.3 +1.4
baz=116
ULM Lac du Bonnet 116.21 29 PKP PKPdf 00 18 34.1 -0.6
comp=Z,22nm,0.7s,baz=312,slow=2.9,SNR=21
ULM SKP 00 22 00.5
comp=Z,10nm,0.9s,baz=331,slow=4.8,SNR=3.7
ULM PKKPbc PKKPbc 00 29 04.5 -1.9
comp=Z,44nm,0.8s,baz=120,slow=3.9,SNR=13
ULM Lac du Bonnet 116.21 29 ePKPdf PKPdf 00 18 34.1 -0.6
ULM epPKPdf pPKPdf 00 19 00.5 -1.1
ULM PP PP 00 19 40.2 -0.5
ULM eSKPdf SKPdf 00 22 00.4 -1.2
U21A Nageezi 116.22 48 PKiKP PKiKP 00 18 36.2 +1.0
baz=116
ISCO Idaho Springs 116.22 43 PKiKP PKiKP 00 18 35.6 +0.5
baz=116
ISCO Idaho Springs 116.22 43 ePKPdf PKPdf 00 18 35.9 +0.8
ISCO epPKPdf pPKPdf 00 19 04.7 +2.8
ISCO eP PP 00 19 42.4 +1.0
ISCO Idaho Springs 116.22 43 ePKIKP PKPdf 00 18 35.9 +0.8
ISCO e 00 19 04.7
ISCO e 00 19 42.4
S22A 4UR Ranch, Cre 116.27 46 PKiKP PKiKP 00 18 35.6 +0.4
baz=116
318A Bisbee 116.28 53 PKiKP PKiKP 00 18 35.4 -0.1
baz=116
X20A Quemado 116.33 50 PKiKP PKiKP 00 18 35.7 +0.3
baz=116
Q23A Hartsel 116.47 44 PKiKP PKiKP 00 18 36.4 +0.8
baz=116
V21A Milan 116.48 48 PKiKP PKiKP 00 18 37.0 +1.3
baz=116
T22A Edith 116.53 47 PKiKP PKiKP 00 18 37.1 +1.3
baz=116
EMOS Mosqueruela 116.63 318 PKP PKPdf 00 18 38.2 +2.4
Y20A Horse Springs, 116.66 50 PKiKP PKiKP 00 18 37.5 +1.4
baz=117
219A White Tail Can 116.67 53 PKiKP PKiKP 00 18 37.0 +0.8
baz=117
Z20A Nine Sixteen R 116.80 51 PKiKP PKiKP 00 18 37.2 +0.8
baz=117
U22A Llaves 116.83 47 PKiKP PKiKP 00 18 37.5 +1.2
baz=117
319A Douglas 116.88 53 PKiKP PKiKP 00 18 37.5 +0.9
baz=117
X21A Alamocita Cree 116.91 50 PKiKP PKiKP 00 18 37.4 +0.8
baz=117
120A U Bar Ranch, L 116.97 52 PKiKP PKiKP 00 18 37.8 +1.1
baz=117
V22A San Miguel Ran 116.98 48 PKiKP PKiKP 00 18 37.9 +1.3
baz=117
EBNR Beni Rached 117.03 313 P PKPdf 00 18 35.0 -1.7
ELAN Lanestosa 117.11 322 PKP PKPdf 00 18 36.7 0.0
T23A Casias Ranch, 117.15 46 PKiKP PKiKP 00 18 37.8 +0.9
baz=117
Y21A Point of Rocks 117.17 50 PKiKP PKiKP 00 18 37.9 +0.8
baz=117
ECHA Ech Chlef 117.20 313 P PKPdf 00 18 37.0 -0.1
SDCO Great Sand Dun 117.22 45 PKiKP PKiKP 00 18 38.4 +1.3
baz=117
SDCO Great Sand Dun 117.22 45 ePKPdf PKPdf 00 18 37.8 +0.7
EBEN Beniarda 117.23 316 PKP PKPdf 00 18 40.1 +3.0
ECHE Chera 117.33 317 PKP PKPdf 00 18 38.9 +1.7
ECHE Chera 117.33 317 PKIKP PKPdf 00 18 38.9 +1.7
U23A El Rito 117.34 47 PKiKP PKiKP 00 18 39.0 +1.7
baz=117
P25A Willow Gulch B 117.35 43 PKiKP PKiKP 00 18 38.0 +0.8
baz=117
LAZ Ladron 117.42 49 ePKPdf PKPdf 00 18 38.6 +1.1
LAZ epPKPdf pPKPdf 00 19 03.8 -0.6
LAZ eSKPdf SKPdf 00 22 04.2 -0.2
Z21A St. Cloud Mine 117.44 51 PKiKP PKiKP 00 18 38.7 +1.1
baz=117
ETOR Torete 117.47 319 PKP PKPdf 00 18 36.6 -0.8
ETOR Torete 117.47 319 PKIKP PKPdf 00 18 36.6 -0.8
AGMN Agassiz Nation 117.47 31 ePKPdf PKPdf 00 18 36.0 -1.2
AGMN epPKPdf pPKPdf 00 19 03.8 -0.2
AGMN esPKPdf 00 19 13.1
AGMN eP PP 00 19 50.5 +0.9
S24A Houchin Ranch, 117.47 45 PKiKP PKiKP 00 18 38.6 +1.0
baz=117
X22A Bernardo 117.48 49 PKiKP PKiKP 00 18 39.0 +1.4
baz=117
EANR 'Ain N'Sour 117.48 313 P PKPdf 00 18 40.0 +2.4
320A Kipp Ranch, An 117.49 53 PKiKP PKiKP 00 18 39.2 +1.5
baz=118
ETRT Tiaret 117.57 312 P PKPdf 00 18 42.0 +4.2
Q25A Bedland, Calha 117.57 44 PKiKP PKiKP 00 18 38.3 +0.6
baz=118
V23A Ortiz Mt. (NFS 117.59 48 PKiKP PKiKP 00 18 39.5 +1.7
baz=118
ANMO Albuquerque 117.71 49 ePKPdf PKPdf 00 18 39.0 +0.9
ANMO ePKKPab PKKPab 00 29 04.0 +0.3
ANMO Albuquerque 117.71 49 ePKIKP PKPdf 00 18 39.0 +0.9
Y22A Socorro 117.74 50 PKiKP PKiKP 00 18 39.1 +0.9
baz=118
W23A Werner Place, 117.86 48 PKiKP PKiKP 00 18 39.2 +0.8
baz=118
R25A Fountain Ranch 117.90 44 PKiKP PKiKP 00 18 38.7 +0.3
baz=118
BNM Barren Site 117.91 49 ePKPdf PKPdf 00 18 39.2 +0.7
BNM eP PP 00 19 50.4 -2.9
BNM eSKPdf SKPdf 00 22 05.9 +0.6
Z22A Elephant Butte 118.00 51 PKiKP PKiKP 00 18 39.6 +0.9
baz=118
S25A Robets Cordova 118.02 45 PKiKP PKiKP 00 18 38.6 0.0
baz=118
OGNE Ogallala 118.07 41 ePKPdf PKPdf 00 18 39.6 +1.0
OGNE eP PP 00 19 55.2 +1.1
EARI Arriondas 118.17 322 PKP PKPdf 00 18 39.3 +0.6
ETOB Tobarra 118.17 316 PKP PKPdf 00 18 40.0 +1.2
122A Conniff Cattle 118.19 51 PKiKP PKiKP 00 18 40.7 +1.6
baz=118
V24A Stampart Ranch, 118.27 47 PKiKP PKiKP 00 18 40.0 +0.8
baz=118
T25A Trinidad 118.27 46 PKiKP PKiKP 00 18 40.0 +0.8
baz=118
CART Cartagena 118.28 315 ePKPdf PKPdf 00 18 39.7 +0.6
CART eP PP 00 19 54.7 -1.0
EMUR La Murta 118.33 315 PKP PKPdf 00 18 39.0 -0.1
222A Williams Famil 118.34 52 PKiKP PKiKP 00 18 39.7 +0.3
baz=118
TAM Tamanrasset 118.37 297 ePKPdf PKPdf 00 18 40.1 +0.4
TAM epPKPdf pPKPdf 00 19 06.1 -0.4
TAM eP PP 00 19 59.7 +2.7
TAM eP PKKPbc 00 28 59.5 +1.7
TAM Tamanrasset 118.37 297 ePKIKP PKPdf 00 18 40.1 +0.4
TAM e 00 19 06.1
TAM e 00 19 59.7
W24A Lazy 6 Ranch, 118.39 48 PKiKP PKiKP 00 18 40.2 +0.8
baz=118
Y23A Lovelace Mesa, 118.43 49 PKiKP PKiKP 00 18 39.2 -0.4
baz=118
Z23A Rita Site, Whi 118.56 50 PKiKP PKiKP 00 18 40.3 +0.5
baz=118
U25A Circle Dot Ran 118.60 46 PKiKP PKiKP 00 18 40.5 +0.7
baz=118
V25A Rancho No Teng 118.70 47 PKiKP PKiKP 00 18 39.9 -0.1
baz=119
123A Bell Site, Whi 118.79 51 PKiKP PKiKP 00 18 41.0 +0.7
baz=119
EVIA Vianos 118.83 317 PKP PKPdf 00 18 40.4 +0.3
EVIA Vianos 118.83 317 PKIKP PKPdf 00 18 40.4 +0.3
Y24A Capitan 118.90 49 PKiKP PKiKP 00 18 41.2 +0.8
baz=119
GUD Guadarrama 118.93 319 PKP PKPdf 00 18 40.8 +0.5
GUD Guadarrama 118.93 319 PKIKP PKPdf 00 18 40.8 +0.6
U26A Atchley Ranch, 119.08 46 PKiKP PKiKP 00 18 40.8 +0.1
baz=119
W25A X Bar L Ranch, 119.08 48 PKiKP PKiKP 00 18 41.1 +0.3
baz=119
Z24A Sheeppen Canyo 119.20 50 PKiKP PKiKP 00 18 41.9 +0.9
baz=119
EHUE Huescar 119.29 316 PKP PKPdf 00 18 42.4 +1.3
EHUE Huescar 119.29 316 PKIKP PKPdf 00 18 42.4 +1.4
ESDC Sonseca Array 119.30 318 PKP PKPdf 00 18 40.2 -0.8
comp=Z,6.0nm,0.8s,baz=23,slow=2.0,SNR=17
ESDC PP PP 00 19 59.4 -3.2
comp=Z,5.3nm,0.8s,baz=50,slow=8.4,SNR=4.4
ESDC PKKPbc PKKPbc 00 28 48.8 -6.2
comp=Z,1.0nm,0.6s,baz=244,slow=3.6,SNR=5.1
ESDC Sonseca Array 119.30 318 PKP PKPdf 00 18 40.8 -0.2
ESLA Sonseca Array 119.30 318 ePKPdf PKPdf 00 18 41.3 +0.3
ESLA epPKPdf pPKPdf 00 19 06.3 -1.6
ESLA eP PP 00 20 05.6 +3.0
V26A Tequesquite Ra 119.32 47 PKiKP PKiKP 00 18 41.4 +0.2
baz=119
EPON Pontenova 119.32 323 PKP PKPdf 00 18 40.0 -0.9
124A Stringfield Ra 119.39 51 PKiKP PKiKP 00 18 42.0 +0.6
baz=119
Y25A Mesa, Roswell 119.47 49 PKiKP PKiKP 00 18 42.1 +0.6
baz=119
224A Cornudas Mount 119.58 51 PKiKP PKiKP 00 18 42.5 +0.7
baz=120
PAB San Pablo 119.62 318 ePKPdf PKPdf 00 18 41.7 +0.1
PAB San Pablo 119.62 318 ePKIKP PKPdf 00 18 41.7 +0.1
EQES Quesada 119.63 316 PKP PKPdf 00 18 43.1 +1.4
W26A Owens Ranch, T 119.65 47 PKiKP PKiKP 00 18 42.6 +0.7
baz=120
Z25A Roswell 119.72 50 PKiKP PKiKP 00 18 42.9 +0.8
baz=120
MNTX Cornudas Mount 119.84 52 PKiKP PKiKP 00 18 43.0 +0.7
baz=120
MNTX Cornudas Mount 119.84 52 ePKPdf PKPdf 00 18 42.9 +0.6
MNTX epPKPdf pPKPdf 00 19 08.3 -0.8
MNTX eSKPdf SKPdf 00 22 10.2 +1.0
ERUA La Rua 119.86 323 PKP PKPdf 00 18 42.4 +0.4
ERUA La Rua 119.86 323 PKIKP PKPdf 00 18 42.4 +0.4
X26A CR and CF Fran 119.86 48 PKiKP PKiKP 00 18 42.6 +0.3
baz=120
ECAL Calabor 119.86 322 PKP PKPdf 00 18 41.9 -0.1
324A Moseley Ranch, 119.87 52 PKiKP PKiKP 00 18 42.8 +0.4

	baz=120							
EBER	Berja	119.94	315		PKP	PKPdf	00 18 42.2	-0.1
PBRG	Braganca	119.94	322		ePKPdf	PKPdf	00 18 42.0	-0.2
PBRG	Braganca	119.94	322		ePP	PP	00 20 10.1	+3.2
EBAN	Banos Encina	119.94	317		PKP	PKPdf	00 18 42.1	-0.2
EBAN	Banos Encina	119.94	317		PKIKP	PKPdf	00 18 42.1	-0.2
125A	Gardner Draw, baz=120	120.02	50		PKiKP	PKiKP	00 18 42.8	+0.1
225A	Deer Hill, Car baz=120	120.11	51		PKiKP	PKiKP	00 18 43.7	+0.8
Y26A	Elida baz=120	120.12	49		PKiKP	PKiKP	00 18 43.5	+0.7
W27A	Bowe Ranch, En baz=120	120.18	47		PKiKP	PKiKP	00 18 43.3	+0.4
ECOG	Cogollos-Vega	120.23	316		PKP	PKPdf	00 18 41.6	-1.2
ECOG	Cogollos-Vega	120.23	316		PKIKP	PKPdf	00 18 41.6	-1.2
Z26A	Caprock baz=120	120.28	49		PKiKP	PKiKP	00 18 42.5	-0.6
325A	Bean Ranch, Si baz=120	120.30	52		PKiKP	PKiKP	00 18 43.6	+0.3
STS	Santiago	120.41	324		PKP	PKPdf	00 18 43.3	+0.3
STS	Santiago	120.41	324		PKIKP	PKPdf	00 18 43.3	+0.3
EGUA	Guajares	120.44	315		PKP	PKPdf	00 18 43.2	-0.1
EGUA	Guajares	120.44	315		PKIKP	PKPdf	00 18 43.2	-0.1
CPRX	Cap Rock	120.47	50		ePKPdf	PKPdf	00 18 43.8	+0.4
CPRX					epPKPdf	pPKPdf	00 19 10.1	-0.2
CPRX					ePP	PP	00 20 11.7	+0.8
MVO	Moncorvo	120.48	321		ePKPdf	PKPdf	00 18 43.8	+0.6
MVO	Moncorvo	120.48	321		ePP	PP	00 20 12.7	+2.1
MVO	Moncorvo	120.48	321		PKP	PKPdf	00 18 44.0	+0.8
EADA	Adamuz	120.48	317		PKP	PKPdf	00 18 43.5	+0.2
EPLA	Plasencia	120.48	320		PKP	PKPdf	00 18 42.4	-0.8
EPLA	Plasencia	120.48	320		PKIKP	PKPdf	00 18 42.4	-0.8
EALB	Alboran	120.49	314		PKP	PKPdf	00 18 44.6	+1.2
126A	Clayton Basin, baz=120	120.51	50		PKiKP	PKiKP	00 18 43.7	+0.1
425A	Indio Mountain baz=120	120.52	52		PKiKP	PKiKP	00 18 44.3	+0.6
ERON	Agron	120.52	316		PKP	PKPdf	00 18 44.2	+0.7
ELUQ	Luque	120.57	316		PKP	PKPdf	00 18 43.7	+0.2
ELUQ	Luque	120.57	316		PKIKP	PKPdf	00 18 43.7	+0.2
EMAZ	Mazaricos	120.63	324		PKP	PKPdf	00 18 42.9	-0.5
Y27A	Causey baz=121	120.63	48		PKiKP	PKiKP	00 18 44.1	+0.2
CBKS	Cedar Bluff	120.68	42		ePKPdf	PKPdf	00 18 43.9	+0.2
CBKS					ePP	PP	00 20 10.6	-1.5
CBKS	Cedar Bluff	120.68	42		ePKIKP	PKPdf	00 18 43.9	+0.2
CBKS					e		00 20 10.6	
226A	Malaga, Loving baz=121	120.69	51		PKiKP	PKiKP	00 18 44.2	+0.2
ELOJ	Sierra Loja	120.70	316		PKP	PKPdf	00 18 43.0	-0.7
ELOJ	Sierra Loja	120.70	316		PKIKP	PKPdf	00 18 43.0	-0.8
ELOB	Lobios	120.72	322		PKP	PKPdf	00 18 43.8	+0.1
CLNB	Carlsbad	120.78	50		ePKPdf	PKPdf	00 18 44.8	+0.7
CLNB					epPKPdf	pPKPdf	00 19 11.7	+0.8
CLNB					ePKKPbc	PKKPbc	00 28 48.9	-0.4
PCAB	Cabril	120.79	322		ePKPdf	PKPdf	00 18 44.2	+0.4
PCAB	Cabril	120.79	322		ePP	PP	00 20 17.3	+4.7
Z27A	Tatum baz=121	120.84	49		PKiKP	PKiKP	00 18 44.3	+0.1
PVRL	Vila Real	120.84	322		ePKPdf	PKPdf	00 18 44.4	+0.5
PVRL	Vila Real	120.84	322		ePP	PP	00 20 13.3	+0.2
MSTX	Muleshoe baz=121	120.88	48		PKiKP	PKiKP	00 18 44.3	-0.1
326A	Caldwell Ranch baz=121	121.09	51		PKiKP	PKiKP	00 18 44.5	-0.3
MTE	Manteigas	121.23	321		ePKPdf	PKPdf	00 18 45.0	+0.3
MTE	Manteigas	121.23	321		ePP	PP	00 20 15.8	+0.1
MTE	Manteigas	121.23	321		ePKPdf	PKPdf	00 18 44.8	+0.2
MTE					epPKPdf	pPKPdf	00 19 12.0	+0.5
MTE					esPKPdf		00 19 21.8	
MTE					ePP	PP	00 20 16.3	+0.6
PVIS	Viseu	121.28	321		ePKPdf	PKPdf	00 18 44.9	+0.1
PVIS	Viseu	121.28	321		ePP	PP	00 20 17.3	+1.3
426A	McDonald Obser baz=121	121.32	52		PKiKP	PKiKP	00 18 45.4	+0.1
EMIJ	Mijas	121.42	316		PKP	PKPdf	00 18 45.2	0.0
PTO	Porto	121.47	322		ePKPdf	PKPdf	00 18 45.5	+0.4
PCBR	Castelo Branco	121.50	320		ePKPdf	PKPdf	00 18 45.4	+0.2
PCBR	Castelo Branco	121.50	320		ePP	PP	00 20 19.2	+1.6
526A	Mary Lane Ranc baz=122	121.51	53		PKiKP	PKiKP	00 18 45.6	0.0
626A	Big Bend Ranch baz=122	121.67	53		PKiKP	PKiKP	00 18 46.1	+0.1
PMRV	Marv??o	121.68	320		ePKPdf	PKPdf	00 18 45.9	+0.3
PMRV	Marv??o	121.68	320		ePP	PP	00 20 15.1	-3.7
427A	Hayter Ranch, baz=122	121.74	52		PKiKP	PKiKP	00 18 46.3	+0.2
EBAD	Badajoz	121.80	319		PKP	PKPdf	00 18 46.7	+0.9
527A	Woodward Ranch baz=122	121.86	52		PKiKP	PKiKP	00 18 46.9	+0.5
EJIF	Jimena Fronter	121.96	316		PKP	PKPdf	00 18 46.3	+0.1
EJIF	Jimena Fronter	121.96	316		PKIKP	PKPdf	00 18 46.3	+0.1
328A	Wristen Ranch, baz=122	121.98	51		PKiKP	PKiKP	00 18 46.8	+0.2
ESPR	Espera	122.02	317		PKP	PKPdf	00 18 46.5	+0.2
EMIN	Mina Concepcio	122.10	318		PKP	PKPdf	00 18 46.7	+0.3
PESTR	Estremoz	122.12	319		ePKPdf	PKPdf	00 18 46.5	+0.1
PESTR	Estremoz	122.12	319		ePP	PP	00 20 11.5	-10
PBAR	Barrancos	122.13	318		ePKPdf	PKPdf	00 18 46.8	+0.3
PBAR	Barrancos	122.13	318		ePP	PP	00 20 20.9	-1.0
TXAR	Lajitas Array	122.14	53		PKP	PKPdf	00 18 46.2	-0.5
	comp=Z,15nm,0.7s,baz=240,slow=1.0,SNR=69							
TXAR					PKKPbc	PKKPbc	00 28 45.6	+1.5
	comp=Z,15nm,0.9s,baz=120,slow=5.4,SNR=27							
TXAR	Lajitas Array	122.14	53		PKIKP	PKPdf	00 18 46.3	-0.4
PTOM	Tomar	122.22	321		ePKPdf	PKPdf	00 18 46.8	+0.2
PTOM	Tomar	122.22	321		ePP	PP	00 20 24.0	+1.5
SCHQ	Schefferville	122.26	10		PKP	PKPdf	00 18 46.2	0.0
	comp=Z,28nm,0.7s,baz=9.5,slow=3.1,SNR=24							
SCHQ					PKKPbc	PKKPbc	00 28 41.4	-3.1
	comp=Z,9.6nm,0.7s,baz=179,slow=5.2,SNR=9.4							
627A	Terlingua Ranc baz=122	122.31	53		PKiKP	PKiKP	00 18 47.4	+0.2
COWI	Conover	122.34	29		ePKPdf	PKPdf	00 18 46.5	-0.1
COWI					epPKPdf	pPKPdf	00 19 12.1	-1.4
COWI					esPKPdf		00 19 22.1	
COWI					ePP	PP	00 20 22.9	+0.1
COWI					eSKPdf	SKPdf	00 22 15.6	+2.1
428A	Kincaid Ranch, baz=122	122.35	51		PKiKP	PKiKP	00 18 47.8	+0.5
528A	Cox Ranch, San baz=122	122.50	52		PKiKP	PKiKP	00 18 47.7	0.0
EVO	Evora	122.58	319		ePKPdf	PKPdf	00 18 47.8	+0.5
628A	Black Gap, Mar baz=123	122.70	53		PKiKP	PKiKP	00 18 47.8	-0.3
PBEJ	Beja	122.76	319		ePKPdf	PKPdf	00 18 48.1	+0.4
PBEJ	Beja	122.76	319		ePP	PP	00 20 20.8	-5.4
EGRO	El Granado	122.77	318		PKP	PKPdf	00 18 48.0	+0.2
PVAQ	Vaqueiros	123.00	318		ePKPdf	PKPdf	00 18 49.1	+0.9
PVAQ	Vaqueiros	123.00	318		ePP	PP	00 20 24.2	-3.6
PCVE	Castro Verde	123.09	318		ePKPdf	PKPdf	00 18 49.0	+0.7
PCVE	Castro Verde	123.09	318		ePP	PP	00 20 31.0	+2.6
MESJ	Messejana	123.09	319		eP	PKPdf	00 18 48.7	+0.4
MESJ					eSS	SS	00 37 07.2	+1.7
MESJ	Messejana	123.09	319		eP	PKPdf	00 18 48.7	+0.3
MESJ					eSS	SS	00 37 07.2	+1.7
MESJ					eSS	SS	00 37 07.2	+1.7
MESJ					AMS	AMS	01 24 51.1	
	comp=Z,103μm,18.9s							
MESJ	Messejana	123.09	319		ePKIKP	PKPdf	00 18 48.7	+0.4
MESJ					eSS	SS	00 37 07.2	+1.7
MDT	Midelt	123.11	312		PKKPbc	PKKPbc	00 28 38.8	-1.7
	comp=Z,6.2nm,0.7s,baz=211,slow=6.6,SNR=7.4							
PLML	Palmela	123.14	320		ePKPdf	PKPdf	00 18 51.5	+3.1
PMAFR	Mafra	123.16	320		ePKPdf	PKPdf	00 18 50.4	+2.0
PMAFR	Mafra	123.16	320		ePP	PP	00 20 29.9	+1.1
LIS	Lisbon	123.21	320		ePP	PP	00 20 28.9	-0.3
LIS					eSS	SS	00 37 07.8	+1.0
LIS	Lisbon	123.21	320		ePP	PP	00 20 28.9	-0.3
LIS					eSS	SS	00 37 07.8	+1.0
LIS					eSS	SS	00 37 07.8	+1.0
LIS					AMS	AMS	01 23 30.5	
	comp=Z,166μm,17.7s							
PBDV	Barranco-do-Ve	123.23	318		ePKPdf	PKPdf	00 18 50.3	+1.7
PBDV	Barranco-do-Ve	123.23	318		ePP	PP	00 20 23.9	-5.5
WMOK	Wichita Mounta	123.43	45⇑		ePKPdf	PKPdf	00 18 48.7	-0.3
WMOK					ePP	PP	00 20 30.2	-0.6
WMOK	Wichita Mounta	123.43	45⇑		ePKIKP	PKPdf	00 18 48.7	-0.4
WMOK					e		00 20 30.2	
PTEO	Sao Teotonio	123.59	319		ePKPdf	PKPdf	00 18 50.1	+0.8
MORF	Marmelete	123.67	318		ePKPdf	PKPdf	00 18 50.4	+0.9
MORF	Marmelete	123.67	318		ePKIKP	PKPdf	00 18 49.0	-0.5
MORF					eSS	SS	00 37 14.3	+1.5
PFVI	Vila Bisbo	123.89	318		ePKPdf	PKPdf	00 18 50.6	+0.7
PFVI	Vila Bisbo	123.89	318		ePP	PP	00 20 25.4	-8.4
PFVI	Vila Bisbo	123.89	318		PKP	PKPdf	00 18 48.5	-1.4
JFWS	Jewell Farm	123.97	33		ePKPdf	PKPdf	00 18 48.8	-1.1
JFWS					epPKPdf	pPKPdf	00 19 17.7	+1.0
JFWS					esPKPdf		00 19 26.5	
JFWS					ePP	PP	00 20 32.9	-1.1
JFWS	Jewell Farm	123.97	33		ePKIKP	PKPdf	00 18 48.8	-1.1
JFWS					e		00 19 17.7	
JFWS					e		00 20 32.9	
JCT	Junction City baz=125	124.69	50		PKiKP	PKiKP	00 18 51.4	-0.6
JCT	Junction City	124.69	50		ePKPdf	PKPdf	00 18 51.8	+0.2
JCT					epPKPdf	pPKPdf	00 19 17.7	-0.7
JCT					ePP	PP	00 20 41.0	+1.5
JCT					eSKPdf	SKPdf	00 22 20.0	+1.5
JCT	Junction City	124.69	50		ePKIKP	PKPdf	00 18 51.8	+0.2
JCT					e		00 20 41.1	
SFJM	Santa Fe	125.79	63		i P	PKPdf	00 18 54.8	+0.8
HDIL	Hopedale	126.09	34		ePKPdf	PKPdf	00 18 53.8	-0.2
HDIL					epPKPdf	pPKPdf	00 19 20.6	-0.3
HDIL					ePP	PP	00 20 49.7	+1.5
CCM	Cathedral Cave	126.57	38		ePKPdf	PKPdf	00 18 54.9	-0.1
CCM					epPKPdf	pPKPdf	00 19 20.9	-0.9
CCM					esPKPdf		00 19 31.1	
CCM					ePP	PP	00 20 52.3	+0.8
CCM	Cathedral Cave	126.57	38		ePKIKP	PKPdf	00 18 54.9	-0.1
CCM					e		00 20 52.3	
FVM	French Village	127.11	37		ePKPdf	PKPdf	00 18 55.7	-0.3
FVM					epPKPdf	pPKPdf	00 19 21.9	-0.9
FVM					ePP	PP	00 20 55.8	+0.7
FVM	French Village	127.11	37		ePKIKP	PKPdf	00 18 55.7	-0.3
FVM					e		00 19 21.9	
FVM					e		00 20 55.8	
KVTX	Kingsville	127.50	53		ePKPdf	PKPdf	00 18 59.0	+2.0
AAM	Ann Arbor	127.80	29		ePKPdf	PKPdf	00 18 57.6	+0.4
AAM	Ann Arbor	127.80	29		ePKIKP	PKPdf	00 18 57.6	+0.4
UALR	University of	127.85	42		ePKPdf	PKPdf	00 18 57.9	+0.3
NATX	Nacogdoches	127.92	46		ePKPdf	PKPdf	00 18 58.0	+0.2
HKT	Hockley	127.97	49		ePKPdf	PKPdf	00 18 58.6	+0.7
HKT	Hockley	127.97	49		ePKIKP	PKPdf	00 18 58.6	+0.7
OLIL	Olney	128.00	35		ePKPdf	PKPdf	00 18 58.3	+0.6
SIUC	Southern Illin	128.02	37		ePKPdf	PKPdf	00 18 57.6	-0.1
ZIIG	Zihuatanejo	128.07	66		i P	PKPdf	00 18 55.9	-2.4
BLO	Bloomington	128.59	34		ePKPdf	PKPdf	00 18 59.0	+0.2
BLO					epPKPdf	pPKPdf	00 19 23.1	-2.5
BLO					ePP	PP	00 21 03.1	-1.6
BLO	Bloomington	128.59	34		ePKIKP	PKPdf	00 18 59.0	+0.2
BLO					e		00 21 03.1	
GNAR	Gosnell	128.64	39		ePKPdf	PKPdf	00 18 59.5	+0.5
GNAR					epPKPdf	pPKPdf	00 19 24.7	-1.2
HALT	Halls	129.10	39		ePKPdf	PKPdf	00 19 00.2	+0.3
MSNY	Massena	129.27	20		ePKPdf	PKPdf	00 19 00.2	+0.3
MSNY					epPKPdf	pPKPdf	00 19 26.0	-0.7
ACSO	Alum Creek Sta	129.70	30		ePKPdf	PKPdf	00 19 00.6	-0.3
WVT	Waverly	129.89	38		ePKPdf	PKPdf	00 19 01.9	+0.6
WVT					epPKPdf	pPKPdf	00 19 28.6	+0.4
WVT	Waverly	129.89	38		ePKIKP	PKPdf	00 19 01.9	+0.5
WVT					e		00 19 28.6	
OXF	Oxford	129.94	40		ePKPdf	PKPdf	00 19 00.9	-0.6
OXF	Oxford	129.94	40		ePKIKP	PKPdf	00 19 00.9	-0.6
ALLY	Alegheny Colle	129.96	27		ePKPdf	PKPdf	00 19 01.8	+0.4
EFI	East Falkland	130.17	176		ePKPdf	PKPdf	00 19 02.4	+0.9
EFI	East Falkland	130.17	176		ePKIKP	PKPdf	00 19 02.4	+1.0
NCB	Newcomb	130.39	20		ePKPdf	PKPdf	00 19 03.3	+1.2
MDV	Middlebury	130.72	20		ePKPdf	PKPdf	00 19 02.2	-0.6
PKME	Peaks-Kenny Pk	130.75	16		ePKPdf	PKPdf	00 19 04.2	+1.5
LBNH	Lisbon	130.92	18		ePKPdf	PKPdf	00 19 03.4	+0.3
LBNH					eSKPbc	SKPbc	00 22 16.6	-2.1
LBNH	Lisbon	130.92	18		ePKIKP	PKPdf	00 19 03.4	+0.3
PMPS	Porto Santo	131.25	319		ePKPdf	PKPdf	00 19 06.3	+2.2
PMPS					i P		00 22 18.7	
WVL	Waterville	131.30	16		ePKPdf	PKPdf	00 19 02.9	-0.9
WVL					epPKPdf	pPKPdf	00 19 30.5	-0.1
WVL					esPKPdf		00 19 39.9	
WVL					eSKPbc	SKPbc	00 22 17.3	-2.8
PNIG	Pinotepa	131.48	66		eP	PKPdf	00 19 04.8	-0.1
EFAM	Famara	131.57	313		PKP	PKPdf	00 19 04.0	-0.7
KIC	Kosan Boka	131.57	280		ePKIKP	PKPdf	00 19 05.5	+0.3
	comp=Z,165nm,0.7s							
DBIC	Dimbokro	131.64	281		PKhKP	PKPpre	00 19 01.1	
	comp=Z,17nm,0.7s,baz=75,slow=2.8,SNR=7.4							
DBIC					PKP	PKPdf	00 19 06.0	+0.7
	comp=Z,46nm,0.6s,baz=85,slow=3.1,SNR=41							
DBIC					SKPbc	SKPbc	00 22 20.6	-1.7
	comp=Z,262nm,0.9s,baz=67,slow=3.8,SNR=31							
DBIC	Dimbokro	131.64	281		ePKPdf	PKPdf	00 19 05.2	-0.1
DBIC					PKP	PKPdf	00 19 06.0	+0.7
DBIC					SKPbc	SKPbc	00 22 20.6	-1.7
DBIC	Dimbokro	131.64	281		ePKIKP	PKPdf	00 19 05.2	-0.1
FFD	Franklin Falls	131.70	19		ePKPdf	PKPdf	00 19 05.0	+0.5
EMMW	East Machias	131.74	14		ePKPdf	PKPdf	00 19 04.2	-0.4
SSPA	Standing Stone	131.78	26		ePKPdf	PKPdf	00 19 04.6	-0.2
SSPA					epPKPdf	pPKPdf	00 19 31.9	+0.2
SSPA					esPKPdf		00 19 40.8	
SSPA					PP	PP	00 21 28.6	+3.5
SSPA					eSKP		00 22 17.5	
TIC	Toumodi	131.80	281		ePKIKP	PKPdf	00 19 05.8	+0.2
	comp=Z,719nm,1.6s							
TIC	Toumodi	131.80	281		ePKIKP	PKPdf	00 19 05.8	+0.2
PMAR	Madeira	131.84	319		ePKPdf	PKPdf	00 19 07.5	+2.3
PMAR					i P		00 22 20.7	
LIC	Lamto	131.87	280		ePKIKP	PKPdf	00 19 05.9	+0.2
	comp=Z,503nm,1.2s							
FUL	Funchal	131.89	319		ePKPdf	PKPdf	00 19 07.4	+2.1
FUL					i P		00 22 20.4	
LVIG	Laguna Verde	131.90	61		i P	PKPdf	00 19 02.8	-3.0
CFTV	Fuerteventura	132.36	312		PKP	PKPdf	00 19 06.8	+0.5
LRAL	Lakeview Retre	132.42	40		ePKPdf	PKPdf	00 19 06.0	-0.3
LRAL					epPKPdf	pPKPdf	00 19 32.2	-0.9
LRAL					esPKPdf		00 19 41.9	
LRAL					eSKPbc	SKPbc	00 22 22.4	-2.2
QUA2	Belchertown	132.53	20		ePKPdf	PKPdf	00 19 07.2	+1.0
QUA2					epPKPdf	pPKPdf	00 19 31.8	-1.2
QUA2					ePP	PP	00 21 29.2	-0.5
QUA2					eSKPbc	SKPbc	00 22 24.8	+0.2
TKL	Tuckaleechee C	132.62	35		ePKPdf	PKPdf	00 19 05.8	-0.7
TKL	Tuckaleechee C	132.62	35		ePKIKP	PKPdf	00 19 05.8	-0.8
BRYW	Bryant College	133.12	19		ePKPdf	PKPdf	00 19 07.0	-0.4
COYC	Coyhaique	133.23	161⇑		eP	PKPdf	00 19 05.7	-1.7
CPNY	Central Park	133.25	22		ePKPdf	PKPdf	00 19 08.0	+0.4
BLA	Blacksburg	133.29	31		ePKPdf	PKPdf	00 19 07.3	-0.5
BLA	Blacksburg	133.29	31		ePKIKP	PKPdf	00 19 07.3	-0.5
HUIG	Huatulco	133.52	66		i P	PKPdf	00 19 06.9	-1.9
EOSO	Osorio	133.63	313		PKP	PKPdf	00 19 10.4	+1.8
EBAJ	Bajamar	133.95	314		PKP	PKPdf	00 19 08.5	-0.8
CCAN	Las Canadas	134.32	314		PKP	PKPdf	00 19 12.3	+2.4
GOGA	Godfrey	134.37	37		ePKPdf	PKPdf	00 19 10.2	+0.2
GOGA					epPKPdf	pPKPdf	00 19 35.9	-0.8
GOGA					eSKP		00 22 29.1	
GOGA	Godfrey	134.37	37		ePKIKP	PKPdf	00 19 10.2	+0.3
EHIG	Higuera	134.98	315		PKP	PKPdf	00 19 11.6	+0.4
JSC	Jenkinsville	135.03	34		ePKPdf	PKPdf	00 19 11.0	-0.2
JSC	Jenkinsville	135.03	34		ePKIKP	PKPdf	00 19 11.0	-0.1
CHIE	El Hierro	135.58	314		PKP	PKPdf	00 19 14.7	+2.4
COW	Cow Castle Cre	136.01	35		ePKPdf	PKPdf	00 19 13.7	+0.7
CCIG	Comitan	136.94	64		eP	PKPdf	00 19 10.7	-4.4
PLCA	Paso Flores	138.04	159		PKhKP	PKPpre	00 19 05.7	
	comp=Z,12nm,0.8s,baz=184,slow=4.2,SNR=14							
PLCA					PKP	PKPdf	00 19 18.4	+1.9
	comp=Z,42nm,0.6s,baz=300,slow=0.9,SNR=33							
PLCA					SKPbc	SKPbc	00 22 40.4	-1.6
	comp=Z,27nm,0.9s,baz=173,slow=4.3,SNR=5.6							
PLCA	Paso Flores	138.04	159		PKHKP	PKPpre	00 19 05.7	
PLCA							00 19 18.4	
BBTS	Babate	140.73	296		SKPbc	SKPbc	00 22 46.8	-3.3
	comp=Z,147nm,0.9s,baz=37,slow=0.6,SNR=12							
CCHI	Chillan	141.03	155		eP	PKPdf	00 19 16.6	-5.4
TGUH	Tegucigalpa,Un	142.12	64		ePKPdf	PKPdf	00 19 21.9	-2.7
TRQA	Tornquist	142.98	168		ePKPdf	PKPdf	00 19 21.3	-4.2
BBSR	BB Station	144.04	18		ePKPdf	PKPdf	00 19 25.9	-1.6
LMEL	Las Melosas	144.17	154⇑		eP	PKPdf	00 19 24.4	-3.3
JTS	JuntasAbangare	145.56	69		ePKPdf	PKPdf	00 19 31.2	+0.6
JTS	JuntasAbangare	145.56	69		ePKP2	PKPab	00 19 31.2	-0.1
CMCH	Combarbala	146.05	151⇓		eP	PKPdf	00 19 31.4	+0.4
CFAA	Coronel Fontan	146.94	155		PKPbc	PKPbc	00 19 33.2	-1.3
	comp=Z,22nm,0.7s,baz=220,slow=2.7,SNR=128							
CFAA	Coronel Fontan	146.94	155		PKPbc	PKPbc	00 19 33.2	-1.3
TLL	Tololo Astrono	146.97	150		eP	PKPdf	00 19 32.9	+0.3
TLL	Tololo Astrono	146.97	150		ePKP2	PKPdf	00 19 32.9	+0.3
MBJ	Montego Bay	147.96	50		i P	PKiKP	00 19 44.0	+4.5
LCO	Las Campanas	147.96	149		ePKPdf	PKPdf	00 19 35.3	+1.0
LCO					ePKPbc	PKPbc	00 19 38.1	+0.6
MTDJ	Mount Denham	148.31	50		ePKPdf	PKPdf	00 19 36.6	+1.5
MTDJ					ePKPbc	PKPbc	00 19 40.9	+2.3
MCJ	Malvern	148.37	50⇓		iP	PKiKP	00 19 39.3	-1.1
BBJ	Bamboo Saint A	148.42	49		i P	PKiKP	00 19 41.1	+0.7
BNJ	Bonny Gate	148.70	49⇑		iP	PKiKP	00 19 40.5	-0.5
STH	Stony Hill	148.95	49⇓		iP	PKiKP	00 19 40.8	-0.7
GWJ	Greenwich	149.01	49⇓		iP	PKiKP	00 19 41.3	-0.4
GTBY	Guantanamo Bay	149.02	45		ePKPdf	PKPdf	00 19 38.1	+1.9
HOJ	Hope	149.04	49⇑		iP	PKiKP	00 19 40.8	-0.9
CMJ	Castle Mountai	149.24	49⇑		iP	PKiKP	00 19 42.8	+0.6
YHJ	Yallahs	149.30	49⇑		iP	PKiKP	00 19 44.5	+2.2
GRTK	Grand Turk	150.49	37		ePKPdf	PKPdf	00 19 40.3	+1.7
GRTK					ePKPbc	PKPbc	00 19 45.0	+1.0
BCIP	Isla Barro Col	150.68	68		ePKPdf	PKPdf	00 19 38.5	-0.5
BCIP					ePKPbc	PKPbc	00 19 44.8	+0.2
SDDR	Presa de Saban	152.26	41		ePKPdf	PKPdf	00 19 42.4	+1.1
SDDR					ePKPbc	PKPbc	00 19 48.4	+0.3
ATAH	Atahualpa	153.73	102		PKP	PKPdf	00 19 44.5	+0.9
	comp=Z,73nm,1.1s,baz=330,slow=1.1,SNR=24							
NNA	Nana	153.91	114		PKP	PKPdf	00 19 44.0	+0.2
	comp=Z,55nm,1.0s,baz=310,slow=2.8,SNR=9.5							
NNA					PKPbc	PKPbc	00 19 52.7	+0.9
	comp=Z,102nm,1.1s,baz=277,slow=5.3,SNR=12							
NNA					PKPab	PKPab	00 20 07.0	+1.7
	comp=Z,67nm,0.8s,baz=256,slow=2.8,SNR=4.0							
NNA	Nana	153.91	114		ePKPdf	PKPdf	00 19 44.4	+0.6
NNA					ePKPbc	PKPbc	00 19 52.4	+0.6
OTAV	Otavalo	154.02	86		ePKPdf	PKPdf	00 19 44.8	+0.7
OTAV					ePKPbc	PKPbc	00 19 54.6	+2.4
AGPR	Aguadilla, PR	155.21	35		ePKPdf	PKPdf	00 19 45.9	+0.4
AGPR					ePKPab	PKPab	00 20 10.9	+0.3
CPUP	Villa Florida	155.27	170		PKP	PKPdf	00 19 45.4	0.0
	comp=Z,46nm,1.1s,baz=125,slow=0.2,SNR=29							
CPUP					PKPbc	PKPdf	00 19 55.2	+10
	comp=Z,46nm,0.6s,baz=120,slow=1.3,SNR=43							
CPUP					PKPab	PKPab	00 20 11.3	+0.7
	comp=Z,63nm,0.7s,baz=170,slow=4.3,SNR=11							

double couple: $M_0$1.90000×10^{19} NP1:ϕ_s23.00000°, δ76.00000°, λ83.00000°. NP2:ϕ_s230.00000°, δ16.00000°, λ116.00000°. Principal axes: T 1.5700, Plg58.0000°, Azm283.0000°; N 0.4600, Plg6.0000°, Azm25.0000°; P -2.0300, Plg30.0000°, Azm119.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.

NEIC *Felt [IV] at Sapporo. Felt at Hakodate and Otofuke. Also felt [IV] at Misawa, Honshu. Recorded [5L JMA] in southern Hokkaido. Recorded [3 JMA] in Aomori and Iwate; [2 JMA] in Akita, Miyagi and Yamagata; [1 JMA] in Fukushima, Gumma, Ibaraki and Tochigi, Honshu. A small tsunami was recorded at Hanasaki, Hokkaido.*

ISCJB **11** *00:20:50.9±0.1, 41°.90N×0°.02×143°.86E±0°.01, h37km, mb6.0/389, MS7.1/258 Error ellipse: s-maj=2.3km s-min=1.5km az=159.7*

JMA **11** *00:20:51.3±0.2, 41°.78N×144°.15E, h31km±3km, M7.1*

MOS **11** *00:20:51.0±1.2, 41°.93N×143°.81E, h42km, mb6.4/91, MS7.2/73, Error ellipse: s-maj=6.5km s-min=4.2km az=103.4 Broadband fault plane solution: P waves. $M_0$5.10000×10^{19} NP1:ϕ_s235.00000°, δ7.00000°, λ100.00000°. NP2:ϕ_s45.00000°, δ84.00000°, λ89.00000°. Principal axes: T Plg51.0000°, Azm314.0000°; N Plg1.0000°, Azm45.0000°; P Plg39.0000°, Azm136.0000°;*

MOS *Fault plane solution: P-wave C122, D22 . Felt (II) at Yuzhno-Kuril'sk.*

DJA **11** *00:20:53, 42°.02N×143°.60E, h16km, Mw7.1/61*

SZGRF **11** *00:20:54.5, 42°.87N×144°.73E, h33km, mb6.5, MS7.8, Hokkaido, Japan, region*

GCMT **11** *00:20:56.1±0.1, 41°.79N×144°.11E, h20km, MW6.8, Moment Tensor Solution. s87,c165; s99,c202; Moment tensor: Scale 10^{19}Nm; M_{rr}0.79±.01; $M_{\theta\theta}$-0.33±.01; $M_{\phi\phi}$-0.47±.01; $M_{r\theta}$0.70±.02; $M_{\theta\phi}$-0.48; $M_{\phi r}$1.41±.02; Best double couple: $M_0$1.80000×10^{19} NP1:ϕ_s235.00000°, δ15.00000°, λ116.00000°. NP2:ϕ_s28.00000°, δ76.00000°, λ83.00000°. Principal axes: T 1.7600, Plg58.0000°, Azm289.0000°; N 0.0400, Plg7.0000°, Azm30.0000°; P -1.8000, Plg31.0000°, Azm124.0000°; Data Used: II IU IC G CN. LP body wave period 50 sec. Mantle waves from 104 sta. Surface waves: sta= 93, comp=192, per= 50.*

ISC 11 00:20:52.9±0.1,**41°.94N**±0°.02×**143°.83E**±0°.01,**h39**km, **h39**km±1.9km;**pP-P,n1965,**σ**15**14/1941,**mb6.0**/389, **MS7.1**/258,**478C-235D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.50**	**279**	P	**Pn**	**00 21 03.4**	**-0.2**
JEM	**Erimo**	**0.50**	**279**	P	**Pn**	**00 21 06.1**	**+2.5**
JCH	**Churui**	**0.76**	**333**	⇑P	**Pn**	**00 21 06.8**	**-0.3**
JCH	**Churui**	**0.76**	**333**	P	**Pn**	**00 21 08.9**	**+1.8**
JCH				*e*S	**Sn**	**00 21 24.2**	**+6.9**
JNBK	**Urakawa-nobuka**	**0.87**	**293**	⇑P	**Pn**	**00 21 09.4**	**+0.8**
JNBK	**Urakawa-nobuka**	**0.87**	**293**	P	**Pn**	**00 21 11.4**	**+2.8**
JOB	**Onbets**	**0.96**	**0**	P	**Pn**	**00 21 08.8**	**-1.1**
JOB				*e*S	**Sn**	**00 21 22.6**	**+0.3**
JOB	**Onbets**	**0.96**	**0**	P	**Pn**	**00 21 12.1**	**+2.2**
JAK	**Akkeshi**	**1.23**	**31**	P	**Pn**	**00 21 10.4**	**-3.2**
JAK	**Akkeshi**	**1.23**	**31**	P	**Pn**	**00 21 13.3**	**-0.3**
JAR	**Ashorobuto**	**1.35**	**358**	⇑P	**Pn**	**00 21 13.7**	**-1.6**
JAR	**Ashorobuto**	**1.35**	**358**	P	**Pn**	**00 21 16.8**	**+1.5**
JBT2	**Biratori 2**	**1.37**	**308**	P	**Pn**	**00 21 15.0**	**-0.5**
JBT2	**Biratori 2**	**1.37**	**308**	P	**Pn**	**00 21 17.7**	**+2.2**
JEW	**Eniwo**	**1.98**	**298**	⇑P	**Pn**	**00 21 25.4**	**+1.6**
JTKR	**Abashiri--Toko**	**2.03**	**2**	⇑P	**Pn**	**00 21 23.2**	**-1.3**
JKB	**Kayabe**	**2.09**	**269**	⇑P	**Pn**	**00 21 24.8**	**-0.5**
JKK2	**Kamakawa 2**	**2.09**	**338**	⇑P	**Pn**	**00 21 25.1**	**-0.2**
JMP	**Maruseppu**	**2.09**	**351**	⇑P	**Pn**	**00 21 24.3**	**-1.1**
JOT	**Ohata**	**2.15**	**256**	⇑P	**Pn**	**00 21 25.3**	**-1.0**
JANG	**Nango**	**2.34**	**229**	P	**Pn**	**00 21 24.8**	**-4.1**
ASAJ	**Asahikawa**	**2.35**	**338**	Pn	**Pn**	**00 21 28.4**	**-0.5**
	69nm,0.3s,baz=191,slow=15,SNR=91						
ASAJ				Sn	**Sn**	**00 21 53.5**	**-3.1**
	2μm,0.3s,baz=209,slow=16,SNR=15						
ASAJ	**Asahikawa**	**2.35**	**338**	⇑*e*Pn	**Pn**	**00 21 29.1**	**+0.1**
ASAJ				Sn	**Sn**	**00 21 56.1**	**-0.6**
ASAJ	**Asahikawa**	**2.35**	**338**	P	**Pn**	**00 21 28.5**	**-0.5**
ASAJ						00 21 53.6	
ASAJ				pmax	pmax		
	comp=Z,69nm,0.3s						
ASAJ	**Asahikawa**	**2.35**	**338**	⇑P	**Pn**	**00 21 29.1**	**+0.1**
JTM	**Tenmabayashi**	**2.38**	**242**	⇑P	**Pn**	**00 21 27.3**	**-2.0**
JTH	**Tanohata**	**2.49**	**217**	⇑P	**Pn**	**00 21 25.4**	**-5.5**
YUK	**Yuzh-Kuril'sk**	**2.57**	**35**	⇓*i*P	**Pn**	**00 21 27.7**	**-4.3**
YUK				*i* S	**Sn**	**00 22 02.7**	**+0.7**
YUK				pmax	pmax		
	comp=N,2μm,0.4s						
YUK				pmax	pmax		
	comp=Z,6μm,0.4s						
YUK				pmax	pmax		
	comp=E,2μm,0.2s						
YUK				pmax	pmax		
	comp=Z,3μm,0.5s						
YUK				MLR	MLR		
	comp=N,939μm,14.5s						
YUK				MLR	MLR		
	comp=E,1775μm,14.5s						
YUK				MLR	MLR		
	comp=Z,1520μm,14.5s						
JSI2	**Shiura 2**	**2.71**	**252**	⇑P	**Pn**	**00 21 33.0**	**-0.9**
JKZ	**Kuzumaki**	**2.72**	**225**	⇑P	**Pn**	**00 21 29.9**	**-4.1**
MIYJ	**Miyakonagasawa**	**2.81**	**213**	P	**Pn**	**00 21 29.8**	**-5.5**
JAH	**Hinai**	**2.98**	**235**	⇑P	**Pn**	**00 21 35.0**	**-2.6**
JOM	**Ohasama**	**3.13**	**219**	⇑P	**Pn**	**00 21 35.2**	**-4.5**
JIW	**Iwasaki**	**3.18**	**246**	⇑P	**Pn**	**00 21 38.7**	**-1.6**
OFUJ	**Ofunato**	**3.30**	**211**	⇑P	**Pn**	**00 21 36.6**	**-5.4**
JRG	**Rokugo**	**3.52**	**225**	P	**Pn**	**00 21 41.3**	**-3.7**
JMK	**Ichinoseki**	**3.59**	**215**	P	**Pn**	**00 21 41.0**	**-5.0**
JIO	**Ouri**	**3.97**	**209**	⇑P	**Pn**	**00 21 45.2**	**-6.0**
JYK	**Kaneyama**	**4.02**	**222**	P	**Pn**	**00 21 47.7**	**-4.1**
JOU	**Okura**	**4.32**	**215**	⇑P	**Pn**	**00 21 51.1**	**-4.9**
KUR	**Kuril'sk**	**4.41**	**40**	*e*P	**Pn**	**00 21 53.0**	**-4.2**
KUR				*e*S	**Sn**	**00 22 40.0**	**-7.3**
KUR				pmax	pmax		
	comp=N,110μm,7.0s						
KUR				pmax	pmax		
	comp=Z,189μm,7.0s						
KUR				pmax	pmax		
	comp=N,4μm,0.8s						
KUR				pmax	pmax		
	comp=E,3μm,0.8s						
KUR				pmax	pmax		
	comp=Z,9μm,0.8s						
KUR				smax			
	comp=N,299μm,11.0s						
KUR				smax			
	comp=E,403μm,11.0s						
KUR				MLR	MLR		
	comp=N,810μm,14.0s						
KUR				MLR	MLR		
	comp=E,864μm,14.0s						
KUR				MLR	MLR		
	comp=Z,608μm,14.0s						
JYA	**Atsumi**	**4.59**	**225**	P	**Pn**	**00 21 56.0**	**-3.8**
JYS	**Shirataka**	**4.70**	**219**	P	**Pn**	**00 21 57.0**	**-4.3**
YSS	**Yuzh-Sakhalins**	**5.07**	**352**	⇑*e*Pn	**Pn**	**00 22 06.3**	**0.0**
YSS				*e*Sn	**Sn**	**00 22 57.5**	**-6.0**
YSS	**Yuzh-Sakhalins**	**5.07**	**352**	*αe*P	**Pn**	**00 22 07.0**	**+0.7**
YSS				*i* S	**Sn**	**00 23 02.0**	**-1.5**
YSS				pmax	pmax		
	comp=N,104μm,10.0s						
YSS				pmax	pmax		
	comp=Z,115μm,10.0s						
YSS				smax			
	comp=N,4μm,1.0s						
YSS				MLR	MLR		
	comp=E,1569μm,15.0s						
YSS				MLR	MLR		
	comp=Z,2900μm,15.0s						
YSS				MLR	MLR		
	comp=N,1950μm,13.0s						
JFT	**Otama**	**5.17**	**212**	⇓P	**Pn**	**00 22 02.8**	**-4.9**
JFY	**Yanaizu**	**5.53**	**216**	P	**Pn**	**00 22 08.3**	**-4.4**
JSD	**Sado**	**5.79**	**229**	⇑P	**Pn**	**00 22 12.9**	**-3.3**
JHK	**Hiroka**	**5.98**	**220**	P	**Pn**	**00 22 14.8**	**-4.0**
MAJO	**Matsushiro**	**6.93**	**221**	⇑*i*Pn	**Pn**	**00 22 31.8**	**-0.1**
MAJO				*e*Sn	**Sn**	**00 23 45.2**	**-4.2**
MAJO	**Matsushiro**	**6.93**	**221**	⇑*i*P	**Pn**	**00 22 31.8**	**-0.1**
MAJO				*e*		00 23 45.2	
MAT	**Matsushiro**	**6.93**	**221**	P	**Pn**	**00 22 27.8**	**-4.1**
MAT				*e*S	**Sn**	**00 23 52.7**	**+3.2**
MJAR	**Matsushiro Arr**	**6.93**	**221**	Pn	**Pn**	**00 22 28.1**	**-3.8**
	comp=N,10nm,0.3s,baz=28,slow=13,SNR=59						
MJAR	**Matsushiro Arr**	**6.93**	**221**	Pn	**Pn**	**00 22 28.1**	**-3.8**
MJAR	**Matsushiro Arr**	**6.93**	**221**	P	**Pn**	**00 22 28.1**	**-3.8**
JNG	**Nsakai**	**7.09**	**221**	P	**Pn**	**00 22 30.1**	**-4.0**
JFM	**Mihama**	**8.86**	**226**	P	**Pn**	**00 22 56.1**	**-2.2**
VLA	**Vladivostok**	**8.89**	**282**	⇑*i*P	**Pn**	**00 23 00.3**	**+1.6**
VLA				*e*S	**Sn**	**00 24 42.6**	**+5.1**
VLA				pmax	pmax		
	comp=Z,998nm,1.0s						
HABR	**Khabarovsk**	**9.00**	**320**	*c i*P	**Pn**	**00 23 03.3**	**+3.2**
HABR				*e*		00 24 44.0	
HABR				pmax	pmax		
	comp=Z,7μm,4.7s						
HABR				pmax	pmax		
	comp=N,1μm,2.3s						
HABR				pmax	pmax		
	comp=E,2μm,2.3s						
HABR				MLR	MLR		
	comp=E,908μm,14.0s						
HABR				MLR	MLR		
	comp=N,1017μm,17.0s						
HABR				MLR	MLR		
	comp=Z,956μm,16.0s						
JHJ	**Hachijo jima 2**	**9.37**	**201**	Pn	**Pn**	**00 23 00.8**	**-4.6**
	comp=Z,128nm,0.3s,baz=257,slow=19,SNR=9.9						
JHJ				Sn	**Sn**	**00 24 37.7**	**-12**
	comp=Z,274nm,0.3s,baz=127,slow=20,SNR=5.5						
MDJ	**Mudanjiang**	**10.72**	**289**	P	**Pn**	**00 23 24.9**	**+1.2**
MDJ				S	**Sn**	**00 25 25.1**	**+2.8**
MDJ				PcP	PcP	00 29 24.1	+0.6
MDJ				ScP	ScP	00 32 54.7	+1.9
MDJ				PcS	PcS	00 32 57.2	+0.2
MDJ				ScS	ScS	00 36 30.5	+2.8
MDJ				pmax	pmax		
	comp=Z,420nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,106μm,7.7s						
MDJ				LR	LR		
	comp=N,325μm,13.2s						
MDJ				LR	LR		
	comp=E,1284μm,17.6s						
MDJ				LR	LR		
	comp=Z,1867μm,16.5s						
MDJ	**Mudanjiang**	**10.72**	**289**	⇑*i*Pn	**Pn**	**00 23 25.6**	**+1.9**
	comp=Z,32nm,0.4s						
MDJ				Sn	**Sn**	**00 25 23.0**	**+0.7**
KLR	**Kul'dur**	**11.16**	**315**	⇓*i*P	**Pn**	**00 23 27.7**	**-2.0**
KLR				pmax	pmax		
	comp=N,10μm,4.0s						
KLR				pmax	pmax		
	comp=E,12μm,4.0s						
KLR				pmax	pmax		
	comp=Z,24μm,4.0s						
JHT	**Toyohira**	**11.53**	**235**	P	**Pn**	**00 23 33.0**	**-1.9**
SKR	**Severo-Kuril's**	**12.18**	**40**	*e*P	**Pn**	**00 23 39.5**	**-4.1**
SKR				*i* S	**Sn**	**00 25 55.0**	**-2.9**
SKR				pmax	pmax		
	comp=N,280nm,0.7s						
SKR				pmax	pmax		
	comp=Z,300nm,0.7s						
SKR				pmax	pmax		
	comp=E,150nm,0.5s						
SKR				pmax	pmax		
	comp=Z,4μm,4.0s						
SKR				smax			
	comp=N,820nm,0.9s						
SKR				smax			
	comp=E,90nm,0.5s						
SKR				smax			
	comp=N,204μm,20.0s						
SKR				smax			
	comp=E,88μm,10.0s						
SKR				MLR	MLR		
	comp=N,232μm,16.0s						
SKR				MLR	MLR		
	comp=E,188μm,16.0s						
SKR				MLR	MLR		
	comp=Z,543μm,16.0s						
KSRS	**Korea Array**	**13.04**	**255**	Pn	**Pn**	**00 23 53.9**	**-1.6**
	comp=Z,1.4nm,0.3s,baz=70,slow=13,SNR=70						
KSRS				Sn	**Sn**	**00 26 28.9**	**+10**
	comp=Z,9.7nm,0.3s,baz=67,slow=24,SNR=7.4						
KSRS				LR	LR	00 29 10.5	
	comp=Z,847μm,18.3s,baz=68,slow=39						
KSRS	**Korea Array**	**13.04**	**255**	P	**Pn**	**00 23 53.9**	**-1.6**
KSRS						00 26 28.9	
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				smax			
	comp=N,10.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,847μm,18.3s						
JNU	**Nakatsue**	**13.52**	**234**	⇑*e*Pn	**Pn**	**00 23 57.3**	**-4.7**
JNU				Sn	**Sn**	**00 26 36.3**	**+5.4**
CN2	**Changchun**	**13.61**	**284**	*e*P	**Pn**	**00 24 02.4**	**-0.8**
CN2				*e*pP		00 24 10.7	
CN2				*e*sP		00 24 18.1	
CN2				*e*S	**Sn**	**00 26 31.4**	**-1.6**
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
INCN	**Inchon**	**13.96**	**257**	⇑*e*Pn	**Pn**	**00 24 07.9**	**-0.2**
INCN				Sn	Sn	00 27 07.4	+26
PETK	**Petropavlovsk-**	**14.55**	**35**	Pn	**Pn**	**00 24 14.8**	**-1.2**
	comp=Z,3.8nm,0.3s,baz=191,slow=11,SNR=31						
PETK	**Petropavlovsk-**	**14.55**	**35**	Pn	**Pn**	**00 24 14.8**	**-1.2**
PETK	**Petropavlovsk-**	**14.55**	**35**	P	**Pn**	**00 24 14.8**	**-1.2**
CBIJ	**Chichi jima**	**14.87**	**186**	Pn	**Pn**	**00 24 13.2**	**-7.1**
	comp=Z,33nm,0.3s,baz=268,slow=8.4,SNR=26						
CBIJ				Sn	**Sn**	**00 26 44.6**	**-19**
	comp=Z,62nm,0.3s,baz=300,slow=20,SNR=5.4						
CBIJ				LR	LR	00 29 52.1	
	comp=Z,150μm,21.3s,baz=353,slow=37						
PET	**Petropavlovsk**	**14.91**	**37**	⇓*e*Pn	**Pn**	**00 24 19.7**	**-1.0**
PET				Sn	**Sn**	**00 27 06.1**	**+1.5**
PET	**Petropavlovsk**	**14.91**	**37**	*e*P	**Pn**	**00 24 18.4**	**-2.3**
PET				*e*S	**Sn**	**00 27 00.8**	**-3.7**
PET				pmax	pmax		
	comp=Z,6μm,14.6s						
PET				pmax	pmax		
	comp=Z,6μm,8.3s						
PET				pmax	pmax		
	comp=Z,237nm,1.1s						
PET				MLR	MLR		
	comp=Z,189μm,15.0s						
PET				MLR	MLR		
	comp=Z,202μm,15.0s						
SNY	**Shenyang**	**15.09**	**276**	⇑P	**Pn**	**00 24 24.3**	**+1.2**
SNY				S	**S**	**00 27 12.3**	**-13**
SNY				pmax	pmax		
	comp=Z,410nm,1.5s						
SNY				LR	LR		
	comp=E,825μm,16.1s						
SNY				LR	LR		
	comp=Z,905μm,16.7s						
DL2	**Dalian**	**17.17**	**267**	⇑*i*P	**Pn**	**00 24 47.6**	**-2.1**
DL2				S	**S**	**00 27 57.0**	**-11**
DL2				pmax	pmax		
	comp=Z,760nm,1.2s						
DL2				pmax	pmax		
	comp=Z,57μm,9.8s						
DL2				LR	LR		
	comp=N,163μm,15.6s						
DL2				LR	LR		
	comp=E,209μm,16.8s						
DL2				LR	LR		
	comp=Z,283μm,16.5s						
HIA	**Hailar**	**18.32**	**302**	⇑*i*Pn	**Pn**	**00 25 02.6**	**-1.2**
	comp=Z,1μm,0.9s						
HIA				Sn	**Sn**	**00 28 23.8**	**-3.5**
HIA	**Hailar**	**18.32**	**302**	⇑*i*P	**Pn**	**00 25 02.7**	**-1.1**
HIA						00 28 23.8	
HIA				pmax	pmax		
	comp=Z,1μm,0.9s						
CLNS	**Chul'man**	**19.24**	**327**	*c i*P	**Pn**	**00 25 12.6**	**-2.2**
CLNS				*e*		00 28 49.6	
CLNS				pmax	pmax		
	comp=Z,661nm,1.1s						
CLNS				pmax	pmax		
	comp=N,370nm,1.0s						
CLNS				pmax	pmax		
	comp=E,408nm,1.0s						
CLNS				smax			
	comp=E,68μm,16.5s						
CLNS				smax			
	comp=N,10μm,11.4s						
CLNS				MLR	MLR		
	comp=Z,207μm,14.0s						
CLNS				MLR	MLR		
	comp=E,73μm,12.0s						
CLNS				MLR	MLR		
	comp=N,200μm,13.0s						
JOW	**Kunigami**	**19.75**	**225**	⇑*e*P	**Pn**	**00 25 16.8**	**-4.2**
	comp=N,338nm,1.3s						
JOW				*e*S	**S**	**00 29 01.2**	**+1.4**
BJI	**Beijing**	**20.93**	**274**	P	**P**	**00 25 28.5**	**-3.6**
BJI				pP		00 25 36.8	
BJI				sP	sP	00 25 41.7	-5.1
BJI				S	**S**	**00 29 21.3**	**-1.8**
BJI				sS	sS	00 29 34.2	-4.7
BJI				pmax	pmax		
	comp=Z,540nm,2.2s						
BJI				LR	LR		
	comp=N,199μm,14.3s,MS7.5						
BJI				LR	LR		
	comp=E,1458μm,15.4s,MS7.5						
BJI				LR	LR		
	comp=Z,707μm,16.6s,MS7.1						
BJT	**Baijiatuau**	**20.94**	**274**	⇑*i*P	**P**	**00 25 29.8**	**-2.4**
	comp=Z,32nm,0.4s						
BJT				*e*S	**S**	**00 29 21.2**	**-2.1**
BJT				LR	LR		
	comp=Z,794μm,20.0s,MS7.1						
BJT	**Baijiatuau**	**20.94**	**274**	⇑*i*P	**P**	**00 25 29.8**	**-2.4**
BJT				*e*S	**S**	**00 29 21.2**	**-2.1**
BJT				MLR	MLR		
	comp=Z,794μm,20.0s						
SSE	**Sheshan**	**21.11**	**246**	⇑P	**P**	**00 25 32.4**	**-1.7**
SSE				sP	sP	00 25 44.4	-4.5
SSE				S	**S**	**00 29 23.7**	**-3.1**
SSE				sS	sS	00 29 36.2	-6.4
SSE				pmax	pmax		
	comp=Z,130nm,1.1s,mb5.2						
SSE				pmax	pmax		
	comp=Z,38μm,11.7s						
SSE				LR	LR		
	comp=N,533μm,17.5s,MS7.0						
SSE				LR	LR		
	comp=E,242μm,17.6s,MS7.0						
SSE				LR	LR		
	comp=Z,265μm,22.7s						
TIA	**Tai'an**	**21.46**	**263**	P	**P**	**00 25 34.2**	**-3.6**
TIA				pmax	pmax		
	comp=Z,270nm,0.9s,mb5.6						
TIA				pmax	pmax		
	comp=Z,43μm,5.4s						
TIA				LR	LR		
	comp=N,206μm,16.7s,MS7.0						
TIA				LR	LR		
	comp=E,431μm,16.7s,MS7.0						
TIA				LR	LR		
	comp=Z,527μm,16.1s,MS7.0						
SEY	**Seymchan**	**21.62**	**11**	⇑*i*P	**P**	**00 25 35.6**	**-3.7**
YAK	**Yakutsk**	**21.83**	**342**	⇑*e*P	**P**	**00 25 37.6**	**-3.9**
	comp=Z,1μm,0.8s,mb6.4						
YAK				*e*S	**S**	**00 29 35.5**	**-4.8**
YAK				LR	LR		
	comp=Z,487μm,20.0s,MS6.9						
YAK	**Yakutsk**	**21.83**	**342**	*c i*P	**P**	**00 25 38.7**	**-2.8**
YAK				*e*		00 25 56.8	
YAK				*e*S	**S**	**00 29 30.9**	**-9.4**
YAK				*e*		00 29 41.4	
YAK				*e**SS	sS	00 29 45.9	-10
YAK				*e*		00 36 54.4	
YAK				pmax	pmax		
	comp=Z,1μm,1.0s,mb6.3						
YAK				pmax	pmax		
	comp=N,258nm,1.0s						
YAK				pmax	pmax		
	comp=E,118nm,1.0s						
YAK				smax			
	comp=N,38μm,3.9s						
YAK				smax			
	comp=E,29μm,3.8s						
YAK				MLR	MLR		
	comp=Z,775μm,17.0s,MS7.2						
YAK				MLR	MLR		
	comp=E,358μm,16.0s,MS7.1						
YAK				MLR	MLR		
	comp=N,427μm,15.0s,MS7.1						
NJ2	**Nanjing**	**22.19**	**252**	*e*P	**P**	**00 25 42.7**	**-2.9**
NJ2				pP		00 25 57.1	
NJ2				PP		00 26 11.5	
NJ2				pmax	pmax		
	comp=Z,130nm,0.8s,mb5.4						
NJ2				pmax	pmax		
	comp=Z,34μm,10.6s						
NJ2				LR	LR		
	comp=N,792μm,15.2s						
NJ2				LR	LR		
	comp=E,630μm,13.9s						
NJ2				LR	LR		
	comp=Z,1068μm,14.9s						
FX1	**Attu Island--F**	**22.51**	**51**	*e*P	**P**	**00 25 47.1**	**-1.8**
FX1	**Attu Island--F**	**22.51**	**51**	*e*P	**P**	**00 25 47.1**	**-1.7**
CIT	**Chita**	**22.83**	**307**	*e*P	**P**	**00 25 51.8**	**-0.4**
CIT				*e*		00 26 14.5	
CIT				*e*		00 29 58.9	
CIT				pmax	pmax		
	comp=Z,10μm,2.2s,mb6.9						
SMY	**Shemya**	**23.01**	**52**	⇑*e*P	**P**	**00 25 55.0**	**+0.9**
SMY				*e*PcP	PcP	00 29 42.3	-0.2
SMY				*e*S	**S**	**00 30 03.2**	**+1.5**
SMY	**Shemya**	**23.01**	**52**	⇑*e*P	**P**	**00 25 55.1**	**+1.0**
SMY				*e*		00 29 42.3	
SMY				*e*S	**S**	**00 30 03.3**	**+1.6**
HHC	**Hu-ho-hao-te**	**24.16**	**278**	⇑*i*P	**P**	**00 26 04.4**	**-0.8**
HHC				pP		00 26 13.8	
HHC				sP	sP	00 26 17.7	-2.9
HHC				PP		00 26 39.0	
HHC				PcP	PcP	00 29 48.3	+3.1
HHC				S	**S**	**00 30 16.5**	**-4.0**
HHC				sS	sS	00 30 31.6	-6.7
HHC				SS		00 31 07.7	
HHC				ScP	ScP	00 33 21.9	+1.4
HHC				pmax	pmax		
	comp=Z,190nm,1.7s,mb5.2						
HHC				pmax	pmax		
	comp=Z,7μm,5.2s						
HHC				LR	LR		
	comp=N,158μm,14.7s,MS7.0						
HHC				LR	LR		
	comp=E,418μm,17.1s,MS7.0						
HHC				LR	LR		
	comp=Z,665μm,16.7s,MS7.2						
TIY	**Taiyuan**	**24.40**	**271**	*e*P	**P**	**00 26 07.0**	**-0.5**
TIY				sP	sP	00 26 20.5	-2.4
TIY				PP		00 26 43.1	
TIY				S	**S**	**00 30 24.0**	**-0.5**
TIY				pmax	pmax		
	comp=Z,41μm,12.1s						
TIY				LR	LR		
	comp=N,339μm,16.7s,MS7.2						
TIY				LR	LR		
	comp=E,513μm,16.5s,MS7.2						
TIY				LR	LR		
	comp=Z,659μm,16.5s,MS7.2						
TATO	**Taipei**	**25.06**	**235**	⇑*i*P	**P**	**00 26 12.0**	**-1.6**
	comp=Z,1μm,1.2s,mb6.4						
TATO				*e*S	**S**	**00 30 34.8**	**-0.4**
TATO				LR	LR		
	comp=Z,586μm,19.0s,MS7.1						
BTO	**Baotou**	**25.35**	**278**	*e*P	**P**	**00 26 15.8**	**-0.3**
YHNB	**Yeheng**	**25.35**	**234**	⇑*e*P	**P**	**00 26 13.6**	**-2.6**
	comp=Z,1μm,1.3s,mb6.2						
YHNB				*e*S	**S**	**00 30 41.6**	**+1.7**
YHNB				LR	LR		
	comp=Z,735μm,19.0s,MS7.2						
NACB	**Ninganchiao**	**25.59**	**233**	⇑*e*P	**P**	**00 26 16.4**	**-2.0**
	comp=Z,275nm,1.1s,mb5.7						
NACB				*e*S	**S**	**00 30 43.1**	**-0.6**
AMKA	**Amchitka**	**25.89**	**56**	*e*P	**P**	**00 26 22.2**	**+1.4**
	comp=Z,409nm,1.1s,mb5.9						
AMKA				S	**S**	**00 30 50.8**	**+2.9**
WHN	**Wuhan**	**26.23**	**254**	⇑P	**P**	**00 26 22.6**	**-1.5**
WHN				S	**S**	**00 30 56.7**	**+3.0**
WHN				LR	LR		
	comp=N,1220μm,15.6s,MS7.6						
WHN				LR	LR		

comp=E,979µm,16.6s,MS7.6
WHN LR LR
comp=Z,1489µm,15.9s,MS7.6
SSLB Suanglung 26.27 234⇑ eP P 00 26 22.4 -2.1
comp=Z,218nm,1.0s,mb5.6
SSLB eS S 00 30 54.1 -0.2
YULB Yu-li 26.36 232⇓ eP P 00 26 25.0 -0.3
comp=Z,186nm,1.1s,mb5.5
YULB S S 00 30 55.5 -0.3
TPUB Ta-pu 26.83 233⇑ eP P 00 26 28.0 -1.5
comp=Z,843nm,1.6s,mb6.0
TPUB PcP PcP 00 29 46.9 -4.6
TPUB eS S 00 31 03.4 +0.2
QZH Quanzhou 26.89 239⇑ iP P 00 26 28.9 -1.2
QZH PP 00 27 11.8
QZH S S 00 31 01.2 -2.9
QZH pmax pmax
comp=Z,410nm,1.2s,mb5.8
QZH pmax pmax
comp=Z,73µm,9.3s
QZH LR LR
comp=N,599µm,18.1s,MS7.4
QZH LR LR
comp=E,788µm,18.5s,MS7.4
QZH LR LR
comp=Z,795µm,20.3s,MS7.3
TWG Pinlang 26.93 232⇑ eP P 00 26 28.9 -1.5
comp=Z,380nm,1.0s,mb5.9
TWG PcP PcP 00 29 46.0 -5.7
TWG eS S 00 31 05.8 +0.9
SONM Songino Array 26.97 295 P P 00 26 30.2 -0.4
comp=Z,214nm,1.0s,mb5.6,baz=91,slow=5.1,SNR=67
SONM LR LR 00 38 20.8
comp=Z,934µm,18.8s,baz=80,slow=39
SONM Songino Array 26.97 295 P P 00 26 30.2 -0.4
SONM LR LR 00 38 20.8
SONM Songino Array 26.97 295 P P 00 26 30.2 -0.5
GUMO Guam 28.26 178 P P 00 26 41.9 -0.5
comp=Z,49nm,0.3s,mb5.6,baz=37,slow=20,SNR=4.2
GUMO Guam 28.26 178 eP P 00 26 43.3 +0.9
comp=Z,665nm,1.4s,mb6.1
GUMO PP PP 00 27 45.9 -0.8
GUMO ePcP PcP 00 29 52.8 -2.2
GUMO eS S 00 31 26.8 +0.9
GUMO LR LR
comp=Z,125µm,20.0s,MS6.5
GUMO Guam 28.26 178 eP P 00 26 43.3 +0.9
GUMO 00 27 45.9
GUMO e 00 29 52.8
GUMO eS S 00 31 26.8 +0.9
GUMO pmax pmax
comp=Z,665nm,1.4s,mb6.1
GUMO MLR MLR
comp=Z,125µm,20.0s,MS6.5
XAN Xi'an 28.47 265 P P 00 26 42.8 -1.4
XAN pP pP 00 26 51.9 -3.0
XAN sP sP 00 26 56.2 -3.4
XAN PP PP 00 27 32.7 -16
XAN S S 00 31 27.2 -1.7
XAN SS SS 00 32 47.9 -42
XAN LR LR
comp=N,179µm,16.5s,MS6.8
XAN LR LR
comp=E,127µm,15.7s,MS6.8
XAN LR LR
comp=Z,105µm,15.3s,MS6.5
IRK Irkutsk 28.50 305 eP P 00 26 45.0 +0.8
IRK eS S 00 31 35.3 +6.2
IRK pmax pmax
comp=Z,3µm,3.8s
BILL Bilibino 28.80 17⇑ eP P 00 26 44.0 -2.7
comp=Z,255nm,1.3s,mb5.8
BILL PP PP 00 27 43.9 -8.0
BILL eS S 00 31 32.3 -1.1
BILL LR LR
comp=Z,258µm,19.0s,MS6.9
BILL Bilibino 28.80 17⇓ iP P 00 26 45.6 -1.1
BILL e 00 27 06.7
BILL e 00 27 43.6
BILL e 00 29 56.1
BILL eS S 00 31 33.3 -0.1
BILL eSS SS 00 33 01.7 -34
BILL pmax pmax
comp=Z,4µm,6.9s
BILL pmax pmax
comp=Z,156nm,1.2s,mb5.6
BILL MLR MLR
comp=Z,311µm,20.0s,MS6.9
TLY Talaya 28.84 304⇑ iP P 00 26 48.1 +0.8
comp=Z,709nm,1.0s,mb6.3
TLY ePP PP 00 27 50.8 -1.9
TLY eS S 00 31 33.3 -1.2
TLY LR LR
comp=Z,712µm,20.0s,MS7.3
TLY Talaya 28.84 304c iP P 00 26 48.6 +1.3
TLY e 00 27 47.7
TLY eS S 00 31 40.2 +5.7
TLY pmax pmax
comp=Z,550nm,0.9s,mb6.3
TLY MLR MLR
comp=Z,608µm,20.0s,MS7.2
TLY Talaya 28.84 304 P P 00 26 48.7 +1.4
comp=Z,4µm,0.9s,mb7.1,SNR=77
ZAK Zakamensk 29.02 301⇑ iP P 00 26 49.6 +0.8
ZAK pmax pmax
comp=Z,234nm,1.3s,mb5.8
WAKE Wake Island 29.76 132 PFAKE 00 27 10.0 +14
WAKE LR LR
comp=Z,148µm,21.0s,MS6.6
ENH Enshi 29.90 258⇑ iP P 00 26 56.5 -0.4
comp=Z,2.0nm,0.7s
ENH ePP PP 00 28 03.3 -1.4
ENH S S 00 31 51.3 -0.1
ENH LR LR
comp=Z,530µm,19.0s
MOY Mondy 30.49 303 eP P 00 27 03.6 +1.7
MOY pmax pmax
comp=Z,6µm,3.1s
TIXI Tiksi 30.69 351⇑ eP P 00 27 00.4 -3.0
comp=Z,79nm,1.0s,mb5.5
TIXI ePP PP 00 28 12.2 -0.8
TIXI eS S 00 32 03.9 +0.7
TIXI LR LR
comp=Z,360µm,19.0s,MS7.0
TIXI Tiksi 30.69 351 eP P 00 26 59.8 -3.7
TIXI eS S 00 31 58.5 -4.6
TIXI pmax pmax
comp=Z,560nm,1.0s,mb6.3
TIXI MLR MLR
comp=Z,425µm,16.0s,MS7.2
TIXI MLR MLR
comp=N,211µm,19.0s,MS6.8
TIXI MLR MLR
comp=E,41µm,17.0s,MS6.8
LZH Lanzhou 31.40 273 eP P 00 27 10.5 +0.4
LZH pP pP 00 27 20.0 -0.9
LZH sP sP 00 27 25.5 -0.1
LZH S S 00 32 13.5 -1.4
LZH sS sS 00 32 30.0 -2.9
LZH pmax pmax
comp=Z,2µm,1.0s
LZH pmax pmax
comp=Z,14µm,5.1s
LZH LR LR
comp=N,472µm,14.9s
LZH LR LR
comp=E,548µm,15.2s
LZH LR LR
comp=Z,667µm,16.0s
GZH Guangzhou 31.61 243 P P 00 27 04.6 -7.4
GZH S S 00 32 11.3 -7.0
GZH LR LR
comp=N,400µm,22.7s,MS7.1
GZH LR LR
comp=E,259µm,21.0s,MS7.1
GZH LR LR
comp=Z,552µm,20.4s,MS7.2
SPIA Saint Paul Isl 32.74 46 eP P 00 27 25.4 +3.8
comp=Z,3µm,2.1s,mb6.8
GTA Gaotai 33.20 281 ⇑P **P 00 27 25.3 -0.5**
GTA pP pP 00 27 34.6 -2.1
GTA sP sP 00 27 38.8 -2.6
GTA S S 00 32 42.6 -0.3
GTA sS sS 00 32 57.3 -3.6
GTA SS SS 00 34 44.9 -22
GTA pmax pmax
comp=Z,380nm,2.0s,mb6.0
GTA pmax pmax
comp=Z,40µm,6.6s
GTA LR LR
comp=N,353µm,18.5s,MS7.5
GTA LR LR
comp=E,709µm,18.0s,MS7.5
GTA LR LR
comp=Z,901µm,17.6s,MS7.5
NIKO Nikolski 33.26 54 eP P 00 27 26.6 +0.4
NIKO ePP PP 00 28 42.5 +0.8
GAMB Gambell 33.58 34 P P 00 27 29.1 +0.3
CD2 Chengdu 33.79 264 P P 00 27 29.8 -1.2
CD2 pP pP 00 27 39.5 -2.4
CD2 sP sP 00 27 43.3 -3.3
CD2 PP PP 00 28 42.7 -5.2
CD2 PcP PcP 00 30 09.8 +0.2
CD2 S S 00 32 49.0 -3.2
CD2 sS sS 00 33 05.0 -5.2
CD2 PcS PcS 00 33 54.5 -1.1
CD2 SS SS 00 34 54.3 -25
CD2 ScS ScS 00 37 50.5 -2.2
CD2 pmax pmax
comp=Z,510nm,1.3s,mb6.3
CD2 pmax pmax
comp=Z,37µm,12.0s
CD2 LR LR
comp=N,380µm,16.8s
CD2 LR LR
comp=E,422µm,13.2s
CD2 LR LR
comp=Z,419µm,14.4s
TGY Tagaytay City 34.10 222 P P 00 27 33.8 0.0
comp=Z,195nm,0.5s,mb6.3,baz=97,slow=6.1,SNR=4.5
TGY Tagaytay City 34.10 222 P P 00 27 33.8 0.0
TGY Tagaytay City 34.10 222 P P 00 27 33.8 0.0
GYA Guiyang 34.10 255⇓ iP P 00 27 31.7 -2.1
GYA pP pP 00 27 42.8 -1.8
GYA sP sP 00 27 50.0 +0.7
GYA PP PP 00 28 48.5 -2.8
GYA S S 00 32 49.4 -7.6
GYA sS sS 00 33 11.2 -3.9
GYA ScP ScP 00 33 52.8 +0.6
GYA SS SS 00 35 02.6 -23
GYA pmax pmax
comp=Z,250nm,1.0s,mb6.1
GYA pmax pmax
comp=Z,31µm,13.5s
GYA LR LR
comp=N,320µm,19.3s,MS7.3
GYA LR LR
comp=E,433µm,19.0s,MS7.3
GYA LR LR
comp=Z,622µm,19.4s,MS7.3
MIDW Midway 34.28 101⇓ eP P 00 27 33.5 -1.8
comp=Z,262nm,1.1s,mb6.1
MIDW ePP PP 00 28 54.4 +1.1
MIDW eS S 00 33 03.0 +3.1
MIDW LR LR
comp=Z,95µm,21.0s,MS6.5
PLP Palo 34.82 214⇓ eP P 00 27 40.6 +0.6
TNA Tin City 35.69 32⇑ eP P 00 27 46.9 -0.1
comp=Z,743nm,1.6s,mb6.4
TNA ePP PP 00 29 08.8 +0.5
QIZ Qiongzhong 36.77 242 P P 00 27 57.2 +0.5
QIZ pP pP 00 28 05.7 -2.0
QIZ sP sP 00 28 09.4 -2.9
QIZ PP PP 00 29 21.9 +1.0
QIZ S S 00 33 39.0 +0.9
QIZ sS sS 00 33 53.3 -2.9
QIZ pmax pmax
comp=Z,19µm,9.8s
QIZ LR LR
comp=N,194µm,20.2s,MS7.0
QIZ LR LR
comp=E,156µm,20.6s,MS7.0
QIZ LR LR
comp=Z,210µm,24.1s,MS6.8
QIZ Qiongzhong 36.77 242⇑ eP P 00 27 57.6 +0.9
comp=Z,234nm,1.3s,mb5.8
QIZ eS S 00 33 37.6 -0.5
QIZ LR LR
comp=Z,190µm,20.0s,MS6.9
KMI Kunming 37.73 257 ⇑P **P 00 28 03.6 -1.3**
KMI pP pP 00 28 15.5 -0.3
KMI sP sP 00 28 19.6 -0.9
KMI PP PP 00 29 33.9 +2.5
KMI PcP PcP 00 30 23.6 +2.3
KMI S S 00 33 51.8 -0.8
KMI sS sS 00 34 07.0 -3.8
KMI SS SS 00 36 24.2 -15
KMI pmax pmax
comp=Z,470nm,2.0s,mb5.9
KMI pmax pmax
comp=Z,40µm,5.3s
KMI LR LR
comp=N,316µm,15.5s,MS7.3
KMI LR LR
comp=E,291µm,18.7s,MS7.3
KMI LR LR
comp=Z,432µm,14.8s,MS7.4
DAV Davao City (W) 38.31 210 P P 00 28 10.6 +0.8
comp=Z,157nm,0.4s,mb6.1,baz=21,slow=7.4,SNR=9.0
DAV LR LR 00 44 49.1
comp=Z,101µm,18.1s,MS6.7,baz=148,slow=38
DAV Davao City (W) 38.31 210 eP P 00 28 08.9 -0.9
DAV eS S 00 34 01.7 +0.2
DAV LR LR 00 44 49.1
CTBH Cotabato--PC H 38.69 212 eP P 00 28 14.8 +1.9
ZAA0 Zalesovo Array 40.17 308⇑ iP P 00 28 23.1 -1.8
ZAA0 ePP PP 00 29 56.4 -1.1
ZAA0 eS S 00 34 28.1 -0.6
ZALV Zalesovo Beam 40.17 308 P P 00 28 23.8 -1.1
comp=Z,140nm,0.7s,mb5.8,baz=86,slow=7.6,SNR=94
ZALV S S 00 34 29.1 +0.5
comp=Z,7.4nm,0.8s,baz=235,slow=10.0,SNR=2.5
ZALV LR LR 00 46 21.2
comp=Z,230µm,19.3s,MS7.0,baz=80,slow=38
ZALV Zalesovo Beam 40.17 308 P P 00 28 23.8 -1.1
ZALV S S 00 34 29.1 +0.5
ZALV LR LR 00 46 21.2
ZALV Zalesovo Beam 40.17 308 P P 00 28 23.8 -1.1
ZALV S S 00 34 29.1 +0.4
TTA Tatalina 40.37 38 eP P 00 28 24.2 -2.2
TTA Tatalina 40.37 38 eP P 00 28 24.2 -2.2
WMQ Urumqi 40.50 292 P P 00 28 28.0 +0.2
WMQ pP pP 00 28 38.0 -0.8
WMQ sP sP 00 28 42.0 -1.5
WMQ PP PP 00 30 05.0 +3.6
WMQ S S 00 34 33.0 -0.9
WMQ sS sS 00 34 50.0 -2.2
WMQ SS SS 00 37 28.0 -6.1
WMQ pmax pmax
comp=Z,490nm,1.0s,mb6.1
WMQ pmax pmax
comp=Z,34µm,4.0s
WMQ LR LR
comp=N,260µm,15.0s,MS7.6
WMQ LR LR
comp=E,610µm,15.0s,MS7.6
WMQ LR LR
comp=Z,755µm,15.0s,MS7.7
NVS Novosibirsk 40.97 310⇑ iP P 00 28 32.2 +0.7
NVS eS S 00 34 41.8 +1.2
NVS pmax pmax
comp=Z,4µm,3.1s
NVS pmax pmax
comp=E,1µm,2.9s
NVS smax
comp=E,549nm,2.3s
SGSI Sangihe 41.46 208 P P 00 28 42.7 +6.7
comp=E,574nm,1.2s,mb6.1
RSO Redoubt South 41.94 42 eP P 00 28 38.0 -1.4
RSO ePP PP 00 30 15.2 -1.5
RSO eS S 00 34 57.2 +2.3
OHAK Old Harbor 41.95 46⇓ eP P 00 28 36.1 -3.4
OHAK e 00 28 50.3
OHAK ePP PP 00 30 17.8 +0.9
PPLA Purkeypile 42.12 38⇑ eP P 00 28 41.6 +0.8
PPLA eS S 00 35 00.1 +2.7
KDAK Kodiak Island 42.27 46 P P 00 28 38.2 -3.8
comp=E,62nm,0.5s,mb5.5,baz=341,slow=2.5,SNR=28
KDAK Kodiak Island 42.27 46 eP P 00 28 42.4 +0.4
KDAK PP PP 00 30 22.9 +2.8
KDAK ePcP PcP 00 30 35.2 0.0
KDAK eS S 00 35 02.0 +2.3
KDAK LR LR
comp=Z,118µm,20.0s,MS6.8
KDAK Kodiak Island 42.27 46 eP P 00 28 42.4 +0.3
KDAK 00 30 22.9
KDAK e 00 30 35.2
KDAK eS S 00 35 02.0 +2.3
KDAK MLR MLR
comp=Z,118µm,20.0s,MS6.8
BPAW Bear Paw Mtn. 42.63 36⇑ eP P 00 28 45.4 +0.5
comp=Z,824nm,1.6s,mb6.2
BPAW eS S 00 35 07.4 +2.5
TRF Thorofare Moun 42.96 37⇑ eP P 00 28 48.1 +0.4
TRF ePP PP 00 30 28.3 +0.7
TRF ePcP PcP 00 30 43.2 +5.7
TRF eS S 00 35 12.1 +2.3
MYLDM Lahad Datu 43.00 219 P P 00 28 50.5 +2.0
MYLDM Lahad Datu 43.00 219 P P 00 28 50.8 +2.3
comp=Z,432nm,2.1s,mb5.8
SLKM Skilak Lake 43.19 41 eP P 00 28 50.3 +0.8
SLKM Skilak Lake 43.19 41 eP P 00 28 50.3 +0.8
MK31 Makanchi Array 43.27 298⇑ eP P 00 28 49.2 -1.1
MK31 ePP PP 00 30 30.1 -1.0
MK31 eScP ScP 00 34 25.4 -1.5
MK31 S S 00 35 13.8 -1.0
MK31 Makanchi Array 43.27 298⇑ eP P 00 28 49.2 -1.2
MK31 e 00 30 30.1
MK31 S S 00 35 13.8 -0.9
MKAR Makanchi Array 43.27 298 P P 00 28 49.3 -1.0
comp=Z,155nm,0.9s,mb5.7,baz=77,slow=7.7,SNR=84
MKAR S S 00 35 14.6 -0.1
comp=Z,5.7nm,1.0s,baz=37,slow=7.4,SNR=3.0
MKAR LR LR 00 48 05.2
comp=Z,296µm,18.3s,MS7.2,baz=290,slow=38
MKAR Makanchi Array 43.27 298 P P 00 28 49.3 -1.0
MKAR S S 00 35 14.6 -0.1
MKAR LR LR 00 48 05.2
MKAR Makanchi Array 43.27 298 P P 00 28 49.3 -1.1
MKAR S S 00 35 14.6 -0.1
KKM Kota Kinabalu 43.35 222 P P 00 28 53.1 +1.7
KKM Kota Kinabalu 43.35 222⇑ eP P 00 28 51.0 -0.3
comp=Z,454nm,1.4s,mb6.0
KKM eS S 00 35 16.9 +0.4
KKM LR LR
comp=Z,119µm,20.0s,MS6.8
KKM Kota Kinabalu 43.35 222 P P 00 28 52.9 +1.5
comp=Z,220nm,4.0s
RC01 Rabbit Creek A 43.37 40 eP P 00 28 49.1 -1.9
RC01 eS S 00 35 17.9 +2.0
BAKI Biak 43.50 191 P P 00 28 54.2 +1.7
comp=Z,302nm,1.1s,mb5.9
MCK McKinley 43.55 37⇑ eP P 00 28 52.5 +0.1
comp=Z,624nm,1.4s,mb6.2
MCK eS S 00 35 19.6 +1.2
MCK McKinley 43.55 37⇑ eP P 00 28 52.5 +0.1
MCK eS S 00 35 19.6 +1.2
MCK pmax pmax
comp=Z,625nm,1.4s,mb6.2
TNTI Ternate 43.59 204 P P 00 28 54.4 +1.2
TNTI Ternate 43.59 204 P P 00 28 54.0 +0.8
comp=Z,398nm,1.8s,mb5.8
PMR Palmer 43.62 40⇑ eP P 00 28 52.1 -0.9
PMR PP PP 00 30 35.2 +0.6
PMR Palmer 43.62 40⇑ eP P 00 28 52.1 -0.9
PMR 00 30 35.2
MNI Manado 43.79 208 P P 00 28 59.8 +5.0
MNI Manado 43.79 208 P P 00 28 59.8 +5.0
MNI Manado 43.79 208 P P 00 29 00.0 +5.2
comp=Z,378nm,1.1s,mb6.0
LSA Lhasa 43.80 271 P P 00 28 55.5 +0.7
LSA pP pP 00 29 10.0 +4.1
LSA S S 00 35 18.7 -4.1
LSA sS sS 00 35 36.0 -5.2
LSA pmax pmax
comp=Z,60nm,1.0s,mb5.3
LSA pmax pmax
comp=Z,31µm,9.0s
LSA LR LR
comp=N,100µm,15.0s,MS7.3
LSA LR LR
comp=E,300µm,17.0s,MS7.3
LSA LR LR
comp=Z,400µm,17.0s,MS7.4
LSA Lhasa 43.80 271⇑ eP P 00 28 55.3 +0.5
comp=Z,824nm,1.3s,mb6.3
LSA eS S 00 35 23.3 +0.4
LSA LR LR
comp=Z,412µm,19.0s,MS7.4
LSA Lhasa 43.80 271⇑ eP P 00 28 55.3 +0.5
LSA eS S 00 35 23.3 +0.5
LSA pmax pmax
comp=Z,824nm,1.3s,mb6.3
LSA MLR MLR
comp=Z,412µm,19.0s,MS7.4
COLA College 43.96 35⇑ eP P 00 28 55.5 -0.1
comp=Z,678nm,1.1s,mb6.3
COLA ePP PP 00 30 38.6 +0.4
COLA eS S 00 35 25.6 +1.2
COLA LR LR
comp=Z,109µm,20.0s,MS6.8
COLA College 43.96 35⇑ eP P 00 28 55.5 -0.2
COLA e 00 30 38.6
COLA eS S 00 35 25.6 +1.2
COLA pmax pmax
comp=Z,678nm,1.1s,mb6.3
COLA MLR MLR
comp=Z,109µm,20.0s,MS6.8
SML Sawmill 43.98 39 eP P 00 28 53.4 -2.4
comp=Z,27nm,0.4s,mb5.3
SML Sawmill 43.98 39 eP P 00 28 53.4 -2.4
TSM Tawau 44.07 219 P P 00 28 59.2 +2.1
ILAR Eielson Array 44.38 35 P P 00 28 56.6 -2.4
comp=Z,111nm,0.9s,mb5.6,baz=264,slow=5.4,SNR=60
ILAR S S 00 35 28.7 -1.8
comp=Z,0.6nm,0.9s,baz=65,slow=36,SNR=3.1
ILAR Eielson Array 44.38 35 P P 00 28 56.6 -2.4
ILAR S S 00 35 28.6 -1.8
ILAR Eielson Array 44.38 35 P P 00 28 56.6 -2.4
ILAR S S 00 35 28.7 -1.8
IMP Imphal 44.40 264 ePKP P 00 29 00.0 +0.3
IMP ex x 00 35 40.0
CHTO Chiang Mai 44.42 253 eP P 00 28 58.8 -1.2
CHTO ePP PP 00 30 40.5 -3.5
CHTO S S 00 35 31.8 -0.4
CHTO LR LR
comp=Z,225µm,20.0s,MS7.1
CHTO Chiang Mai 44.42 253 eP P 00 28 58.8 -1.1
CHTO e 00 30 40.5
CHTO S S 00 35 31.8 -0.3
CHTO MLR MLR
comp=Z,225µm,20.0s,MS7.1
CHTO Chiang Mai 44.42 253 P P 00 28 58.7 -1.2
comp=Z,272nm,2.6s,mb5.5
KURK Kurchatov 44.53 305⇑ iP P 00 28 59.4 -1.1
KURK ePP PP 00 30 43.2 -1.3
KURK eS S 00 35 33.0 0.0
KURK LR LR
comp=Z,183µm,19.0s,MS7.0
KURK Kurchatov 44.53 305⇑ iP P 00 28 59.4 -1.0
KURK e 00 30 43.2
KURK eS S 00 35 33.0 0.0
KURK MLR MLR
comp=Z,183µm,19.0s,MS7.0
CM31 Chiang Mai Arr 44.66 252 eP P 00 29 00.6 -1.3
comp=Z,48nm,0.7s,mb5.4
CM31 PP PP 00 30 46.3 -0.2
CM31 eScP ScP 00 34 38.1 +5.1
CM31 eS S 00 35 37.8 +2.3
CM31 LR LR
comp=Z,144µm,19.0s,MS6.9
CMAR Chiang Mai Arr 44.66 252 P P 00 29 00.8 -1.0
comp=Z,35nm,0.8s,mb5.2,baz=45,slow=6.9,SNR=44
CMAR S S 00 35 36.1 +0.6
comp=Z,8.8nm,1.0s,baz=18,slow=3.9,SNR=4.1
CMAR LR LR 00 49 18.0
comp=Z,175µm,18.6s,MS7.0,baz=56,slow=38
CMAR Chiang Mai Arr 44.66 252 P P 00 29 00.8 -1.0
CMAR S S 00 35 36.1 +0.6
CMAR LR LR 00 49 18.0
CMAR Chiang Mai Arr 44.66 252 P P 00 29 00.9 -0.9
CMAR S S 00 35 36.1 +0.6
LBMI Labuha 44.88 203 P P 00 29 06.6 +3.0

comp=Z,331nm,0.9s,mb6.1
KMSI Cibinong 44.90 209 P **P 00 29 11.0 +7.3**
comp=Z,836nm,0.9s,mb6.5
PAX Paxson 45.17 37⇑ *e*P **P 00 29 05.9 +0.5**
comp=Z,66nm,0.8s,mb5.5
PAX *e*PcP PcP 00 30 44.6 -0.5
PAX *e*S **S 00 35 42.8 +0.8**
PAX Paxson 45.17 37⇑ *e*P **P 00 29 05.9 +0.5**
PAX *e* 00 30 44.6
PAX *e*S **S 00 35 42.8 +0.8**
SHL Shillong 45.48 266 *ex* x 00 29 27.0
comp=Z,16nm,0.6s
SHL *i* S **S 00 35 49.0 +1.7**
DOT Dot Lake 45.72 36⇑ *e*P **P 00 29 09.3 -0.4**
comp=Z,236nm,1.3s,mb6.0
DOT *e*PcP PcP 00 30 48.0 +1.1
MRSI Marisa 45.75 211 P **P 00 29 08.0 -2.5**
MENT Mentasta 45.97 37 *e*P **P 00 29 12.2 +0.5**
EGAK Eagle 46.82 35⇑ *i*P **P 00 29 18.1 -0.2**
comp=Z,418nm,1.3s,mb6.2
EGAK *e*S **S 00 36 07.3 +1.7**
EGAK LR LR
comp=Z,86μm,20.0s,MS6.7
LUWI Luwuk 46.83 210 P **P 00 29 18.2 -0.8**
comp=Z,244nm,1.9s,mb5.8
AGT Agartala 46.91 264 *ex* x 00 29 14.0
AGT *ex* x 00 30 46.0
JOHN Johnston Islan 47.05 108 *e*P **P 00 29 20.9 +0.2**
JOHN *e*S **S 00 36 11.5 +1.4**
JOHN LR LR
comp=Z,158μm,22.0s,MS6.9
NLAI Namlea 47.47 203 P **P 00 29 25.5 +1.6**
comp=Z,7μmcomp=Z,130nm,2.1s,mb5.5
TAPN Taplejung 47.60 271 *e*P **P 00 29 24.8 -0.1**
comp=Z,2μm,1.2s,mb7.0
DAWY Dawson 47.70 35⇑ *i*P **P 00 29 25.7 +0.5**
BNDI Bandanaira 47.95 199 P **P 00 29 30.9 +3.3**
comp=Z,653nm,1.3s,mb6.5
AAA Alma-Ata 48.03 295 *e*P **P 00 29 30.7 +2.7**
AAA *e*S **S 00 36 27.2 +3.9**
AAA pmax pmax
comp=Z,43μm,13.3s
AAA smax
comp=E,51μm,21.3s
AAA MLR MLR
comp=Z,714μm,19.0s,MS7.7
ODAN Odare 48.11 270 *e*P **P 00 29 28.1 -0.7**
comp=Z,2μm,1.3s,mb7.0
TLE Tual 48.42 195 P **P 00 29 35.0 +3.7**
TLE Tual 48.42 195 P **P 00 29 35.0 +3.7**
TLE Tual 48.42 195 P **P 00 29 35.0 +3.7**
comp=Z,728nm,1.5s,mb6.5
SBUM Sibu 48.46 224 P **P 00 29 30.9 -0.8**
comp=Z,115nm,3.1s
GUN Gumba 48.67 273 *e*P **P 00 29 32.8 -0.3**
comp=Z,972nm,0.5s,mb7.1
PNL Peninsula 48.67 41 *e*P **P 00 29 33.6 +0.9**
comp=Z,300nm,1.2s,mb6.2
BVAR Borovoye Array 48.77 310 P **P 00 29 32.7 -0.9**
comp=Z,66nm,0.5s,mb6.0,baz=74,slow=9.2,SNR=84
BVAR S **S 00 36 34.1 +0.6**
comp=Z,11nm,1.0s,baz=82,slow=12,SNR=2.4
BVAR LR LR 00 51 39.1
comp=Z,3μm,19.4s,baz=200,slow=38
BVAR Borovoye Array 48.77 310 P **P 00 29 32.7 -0.9**
BVAR S **S 00 36 34.1 +0.6**
BVAR LR LR 00 51 39.1
BVAR Borovoye Array 48.77 310 P **P 00 29 32.7 -0.8**
BVAR S **S 00 36 34.1 +0.6**
BRVK Borovoye 48.82 310⇑ *i*P **P 00 29 34.4 +0.5**
comp=Z,2μm,1.7s,mb6.8
BRVK *e*PP PP 00 31 24.8 -2.3
BRVK *e*S **S 00 36 31.2 -3.0**
BRVK LR LR
comp=Z,284μm,21.0s,MS7.2
BRVK Borovoye 48.82 310⇑ *i*P **P 00 29 34.4 +0.5**
BRVK *e* 00 31 24.8
BRVK *e*S **S 00 36 31.2 -3.0**
BRVK pmax pmax
comp=Z,2μm,1.7s,mb6.8
BRVK MLR MLR
comp=Z,284μm,21.0s,MS7.2
ULHL Ulahol 48.91 294 P **P 00 29 37.1 +2.3**
SNR=28
TKM2 Tokmak 2 49.08 295 P **P 00 29 35.6 -0.4**
SNR=118
TKM2 Tokmak 2 49.08 295⇑ *e*P **P 00 29 35.6 -0.4**
comp=Z,472nm,1.7s,mb6.2
TKM2 *e*PP PP 00 31 29.3 -0.3
TKM2 *e*S **S 00 36 37.8 -0.3**
TKM2 LR LR
comp=Z,549μm,19.0s,MS7.6
TKM2 Tokmak 2 49.08 295⇑ *e*P **P 00 29 35.7 -0.4**
TKM2 *e* 00 31 29.3
TKM2 *e*S **S 00 36 37.8 -0.3**
TKM2 pmax pmax
comp=Z,472nm,1.7s,mb6.2
TKM2 MLR MLR
comp=Z,549μm,19.0s,MS7.6
INK Inuvik 49.19 29 P **P 00 29 35.0 -1.6**
comp=Z,115nm,0.5s,mb6.2,baz=304,slow=7.5,SNR=50
INK Inuvik 49.19 29 P **P 00 29 35.0 -1.6**
INK Inuvik 49.19 29 P **P 00 29 35.0 -1.5**
PKI Pulchoki 49.20 273 *e*P **P 00 29 36.3 -0.9**
comp=Z,1μm,1.2s,mb6.9
PKIN Phulchoki 49.21 273 *e*P **P 00 29 36.1 -1.2**
comp=Z,836nm,0.9s,mb6.8
DMN Daman 49.41 273 *e*P **P 00 29 38.2 -0.6**
comp=Z,2μm,1.3s,mb7.1
GKN Gorkha 49.54 274 *e*P **P 00 29 38.7 -1.1**
comp=Z,3μm,1.3s,mb7.1
KDI Kendari 49.59 208 P **P 00 29 41.0 +0.8**
comp=Z,177nm,1.6s,mb5.8
CHMS Chumysh 49.61 296 P **P 00 29 41.6 +1.4**
SNR=40
KBK Karagaybulak 49.62 295 P **P 00 29 39.8 -0.4**
SNR=121
KZA Kyzart 49.65 295 P **P 00 29 40.9 +0.4**
SNR=25
KZA Kyzart 49.65 295⇑ *i*P **P 00 29 41.6 +1.2**
comp=Z,540nm,1.1s,mb6.5
KZA *e*PcP PcP 00 31 01.7 +0.4
KZA *e*PP PP 00 31 37.7 +2.8
KZA *e*ScP ScP 00 34 59.5 +5.8
KZA *e*S **S 00 36 50.5 +4.3**
USP Ospenovka 49.67 296 P **P 00 29 39.7 -0.9**
SNR=52
FRU Bishkek 49.77 296⇑ *i*P **P 00 29 42.0 +0.6**
FRU *i* 00 31 40.0
FRU *e*S **S 00 36 52.0 +4.2**
FRU *e* 00 37 00.0
FRU pmax pmax
comp=Z,24μm,7.0s
FRU pmax pmax
comp=Z,2μm,2.1s,mb6.8
FRU MLR MLR
comp=Z,590μm,18.0s,MS7.6
TTSI Tana Toraja 49.80 212 P **P 00 29 42.5 +0.6**
comp=Z,58nm,1.6s,mb5.4
CAL Calcutta 49.87 265 *e*PKP **P 00 29 43.6 +1.3**
CAL *ex* x 00 36 55.5
AAK Ala-Archa 49.93 296 P **P 00 29 41.8 -0.9**
SNR=34
AAK Ala-Archa 49.93 296 P **P 00 29 41.7 -0.9**
comp=Z,19nm,0.4s,mb5.5,baz=110,slow=4.8,SNR=35
AAK LR LR 00 53 17.8
comp=Z,798μm,18.1s,MS7.8,baz=73,slow=39
AAK Ala-Archa 49.93 296 P **P 00 29 41.7 -0.9**
AAK LR LR 00 53 17.8
AAK Ala-Archa 49.93 296 P **P 00 29 41.7 -0.9**
AAK Ala-Archa 49.93 296 P **P 00 29 41.8 -0.8**
comp=Z,818nm,1.2s,mb6.6,SNR=24
DANN Dangsing 50.01 274 *e*P **P 00 29 43.0 -0.4**
comp=Z,2μm,0.9s
KSH Kashi 50.24 291 *e*P **P 00 29 47.6 +2.6**
KSH *e*pP pP 00 29 57.5 +1.2
KSH *e*sP sP 00 30 01.4 +0.6
KSH *e*PcP PcP 00 31 07.5 +3.9
KSH *e*PP PP 00 31 43.5 +3.2
KSH *e*ScP ScP 00 34 59.2 +3.0
KSH *e*PcS PcS 00 35 03.5 +2.8
KSH *e*S **S 00 36 55.0 +0.5**
KSH *e*ScS ScS 00 39 33.2 +0.4
KSH pmax pmax
comp=Z,18nm,0.8s,mb5.2
KSH pmax pmax
comp=Z,14μm,5.5s
KSH LR LR
comp=N,74μm,17.6s
KSH LR LR
comp=E,31μm,10.7s
KSH LR LR
comp=Z,80μm,21.6s,MS6.7
KSM Kuching 50.30 226⇑ *i*P **P 00 29 46.2 +0.6**
comp=Z,348nm,1.1s,mb6.3
KSM *e*PP PP 00 31 39.8 -1.6
KSM *e*ScP ScP 00 35 03.8 +7.0
KSM *e*S **S 00 36 56.3 +0.6**
KSM LR LR
comp=Z,47μm,19.0s,MS6.5
KSM Kuching 50.30 226 P **P 00 29 45.3 -0.4**
comp=Z,191nm,1.4s,mb6.0
EKS2 Erkin-Say 50.40 296 P **P 00 29 45.4 -0.8**
SNR=39
EKS2 Erkin-Say 50.40 296⇑ *i*P **P 00 29 45.2 -0.9**
comp=Z,181nm,0.9s,mb6.1
EKS2 *e*PcP PcP 00 31 04.4 +0.3
EKS2 *e*PP PP 00 31 40.4 -1.3
EKS2 *e*ScP ScP 00 35 02.7 +5.8
EKS2 *e*S **S 00 37 01.4 +4.7**
EKS2 LR LR
comp=Z,546μm,19.0s,MS7.6
KOLN Koldanda 50.44 274 *e*P **P 00 29 46.0 -0.6**
comp=Z,1μm,0.8s,mb6.9
SPSI Sidrap Palu 50.66 212 P **P 00 29 49.6 +1.2**
comp=Z,102nm,1.5s,mb5.5
AML Almayashu 50.68 295 P **P 00 29 48.2 0.0**
SNR=44
AML Almayashu 50.68 295⇑ *i*P **P 00 29 48.1 -0.2**
comp=Z,372nm,1.2s,mb6.2
AML PcP PcP 00 31 06.0 +0.9
AML *e*PP PP 00 31 47.8 +3.5
AML *e*ScP ScP 00 35 03.7 +5.7
AML *e*S **S 00 37 09.3 +8.8**
AML LR LR
comp=Z,649μm,19.0s,MS7.7
SKAG Skagway 50.72 41 P **P 00 29 48.8 +0.5**
comp=Z,452nm,1.3s,mb6.2
STKI Sintang 50.87 224 P **P 00 29 52.2 +2.2**
comp=Z,189nm,1.7s,mb5.7
BNSI Bone 50.93 211 P **P 00 29 51.2 +0.8**
comp=Z,225nm,1.2s,mb6.0
BBSI Bau Bau 51.03 208 P **P 00 29 53.8 +2.7**
comp=Z,278nm,1.1s,mb6.1
PMG Port Moresby 51.19 176 *e*P **P 00 29 52.4 +0.1**
comp=Z,287nm,1.9s,mb5.9
PMG *e*S **S 00 37 04.8 -3.0**
PMG LR LR
comp=Z,48μm,22.0s,MS6.5
PMG Port Moresby 51.19 176 *e*P **P 00 29 52.4 +0.2**
PMG *e*S **S 00 37 04.8 -3.0**
PMG pmax pmax
comp=Z,287nm,1.9s
PMG MLR MLR
comp=Z,48μm,22.0s
PMG Port Moresby 51.19 176 P **P 00 29 56.5 +4.3**
comp=Z,7μmcomp=Z,94nm,2.1s,mb5.3
SIT Sitka 51.50 44⇓ *e*P **P 00 29 56.2 +2.0**
comp=Z,378nm,1.3s,mb6.2
SIT Sitka 51.50 44⇓ *e*P **P 00 29 56.2 +2.0**
SIT pmax pmax
comp=Z,378nm,1.3s,mb6.2
KBKI Kotabaru 51.56 216 P **P 00 29 58.3 +3.2**
comp=Z,8μmcomp=Z,125nm,2.9s,mb5.3
KAPI Kappang 51.63 211⇑ *e*P **P 00 29 53.1 -2.5**
comp=Z,246nm,1.4s,mb5.9
KAPI *e*PcP PcP 00 31 08.3 -0.6
KAPI *e*PP PP 00 31 52.4 -1.1
KAPI *e*S **S 00 37 12.5 -1.5**
KAPI LR LR
comp=Z,55μm,20.0s,MS6.6
KAPI Kappang 51.63 211 P **P 00 29 55.6 0.0**
comp=Z,1μm,1.7s,mb6.5,SNR=9.3
BKSI Bulukumba 51.77 211 P **P 00 29 57.4 +0.8**
comp=Z,6μmcomp=Z,86nm,0.7s,mb5.8
PTH Pithoragarh 52.00 278 *e*PKP **P 00 29 57.5 -0.8**
PTH *ex* x 00 37 24.0
KK31 Karatay Array 52.39 298 *i* P **P 00 29 59.3 -1.7**
KK31 pmax pmax
comp=Z,325nm,1.0s,mb6.2
KKAR Karatay Array 52.39 298 *e*P **P 00 29 59.6 -1.5**
comp=Z,239nm,0.8s,mb6.2
KKAR *e*PP PP 00 31 57.4 -2.3
KKAR Karatay Array 52.39 298 *e*P **P 00 29 59.6 -1.4**
KKAR *e* 00 31 57.4
KKAR pmax pmax
comp=Z,239nm,0.8s,mb6.2
KIP Kipapa 52.52 94 *e*P **P 00 30 02.5 +0.2**
KIP *e*PcP PcP 00 31 11.8 -0.6
KIP *e*S **S 00 37 28.8 +2.6**
KIP LR LR
comp=Z,138μm,22.0s,MS7.0
KIP Kipapa 52.52 94 *e*P **P 00 30 02.5 +0.3**
KIP *e* 00 31 11.8
KIP *e*S **S 00 37 28.8 +2.5**
KIP MLR MLR
comp=Z,138μm,22.0s,MS7.0
SVE Sverdlovsk 52.78 317⇑ *e*P **P 00 30 03.3 -0.4**
SVE *e* 00 31 58.0
SVE *e*S **S 00 37 32.1 +3.1**
SVE pmax pmax
comp=Z,861nm,1.0s,mb6.6
SVE pmax pmax
comp=Z,28μm,17.8s
SVE MLR MLR
comp=Z,237μm,17.0s,MS7.3
KULM Kulim 52.93 239 P **P 00 30 06.9 +1.5**
KULM Kulim 52.93 239⇑ *i*P **P 00 30 05.7 +0.3**
comp=Z,414nm,1.3s,mb6.2
KULM PcP PcP 00 31 15.8 +1.8
KULM *e*PP PP 00 32 04.6 -0.6
KULM *e*S **S 00 37 34.2 +2.2**
KULM LR LR
comp=Z,101μm,19.0s,MS6.9
KULM Kulim 52.93 239 P **P 00 30 06.7 +1.3**
comp=Z,230nm,1.1s,mb6.0
BWNR Bhubaneshwar 53.09 265 *ex* x 00 30 01.0
PBKI Pangkalan Bun 53.15 222 P **P 00 30 09.2 +2.3**
comp=Z,400nm,0.8s,mb6.4
DDI Dehra Dun 53.19 280 *e*PKP **P 00 30 06.0 -1.1**
DDI *ex* x 00 37 26.0
HNR Honiara 53.22 160 LR LR 00 49 37.6
comp=Z,93μm,21.9s,MS6.8,baz=318,slow=32
HNR Honiara 53.22 160 PFAKE 00 30 20.0 +13
HNR LR LR
comp=Z,93μm,22.0s,MS6.8
WRAK Wrangell Islan 53.26 44⇑ *e*P **P 00 30 09.7 +2.4**
comp=Z,290nm,1.4s,mb6.0
WRAK *e*PcP PcP 00 31 13.8 -0.8
WRAK *e*ScP ScP 00 35 11.4 +2.4
WRAK *e*S **S 00 37 38.9 +3.4**
WRAK LR LR
comp=Z,96μm,20.0s,MS6.8
IPM Ipoh 53.32 238 P **P 00 30 09.4 +1.2**
comp=Z,148nm,2.3s,mb5.5
SDNR Sundarnagar 53.37 282 *e*PKP **P 00 30 07.5 -0.9**
SDNR *e*S **S 00 37 40.5 +2.9**
SMLA Simla 53.42 281 *i* P **P 00 30 06.7 -2.1**
SMLA AMb AMB 00 30 13.8
comp=Z,3μm,0.5s
SMLA *i* S **S 00 37 39.4 +1.1**
DLH Dalhousie 53.56 283 *ex* **P 00 30 12.0 +2.2**
DLH *ex* x 00 38 08.0
SOKR Solikamsk 53.64 321 *c i*P **P 00 30 09.6 -0.4**
SOKR S **S 00 37 42.3 +1.7**
SOKR pmax pmax
comp=Z,570nm,1.2s,mb6.4
SOKR MLR MLR
comp=Z,214μm,18.0s,MS7.2
DLBC Dease Lake 53.65 41⇑ *e*P **P 00 30 10.0 -0.1**
DLBC *e*PcP PcP 00 31 12.7 -3.3
DLBC PP PP 00 32 10.8 0.0
MYKOM Kota Tinggi 53.69 233 P **P 00 30 12.8 +1.9**
MYKOM Kota Tinggi 53.69 233 P **P 00 30 12.7 +1.8**
comp=Z,162nm,2.2s,mb5.6
BHK Bhakra 53.81 282 *ex* **P 00 30 07.6 -4.1**
BHK *ex* x 00 30 44.0
KGM Kluang 53.83 234 P **P 00 30 11.7 -0.2**
ARU Arti 53.99 317⇑ *i*P **P 00 30 12.1 -0.5**
ARU *e*PP PP 00 32 11.2 -2.6
ARU *e*ScP ScP 00 35 11.8 -0.3
ARU *e*S **S 00 37 44.5 -0.9**
ARU LR LR
comp=Z,325μm,19.0s,MS7.4
ARU Arti 53.99 317 *c i*P **P 00 30 11.2 -1.4**
ARU *e* 00 31 13.8
ARU *e* 00 32 11.2
ARU *e*PPP 00 33 23.0
ARU *e*S **S 00 37 46.0 +0.6**
ARU 00 39 56.9
ARU SS SS 00 41 27.1 +0.7
ARU SSS 00 43 22.3
ARU pmax pmax
comp=Z,333nm,1.0s,mb6.2
ARU pmax pmax
comp=Z,16μm,10.9s
ARU MLR MLR
comp=Z,319μm,18.0s,MS7.4
ARU Arti 53.99 317 P **P 00 30 11.8 -0.8**
comp=Z,3μm,1.0s,SNR=75
MMRI Maumere 54.08 207 P **P 00 30 13.4 -0.3**
comp=Z,498nm,1.8s,mb6.1
VIB Van Inlet 54.41 47 P **P 00 30 15.2 -0.5**
DIB Dawson Inlet, 54.47 47 P **P 00 30 18.5 +2.4**
SNR=23
NDI New Delhi 54.68 279 *ex* **P 00 30 20.0 +2.0**
ALE Alert 55.10 4 P **P 00 30 21.2 +0.9**
comp=Z,480nm,1.0s,mb6.5,SNR=15
BMNI Bima 55.26 211 P **P 00 30 23.3 +1.0**
comp=Z,5μmcomp=Z,114nm,2.4s,mb5.5
TPI Tanjungpandan 55.27 226 P **P 00 30 23.6 +1.3**
comp=Z,198nm,1.7s,mb5.9
POHA Pohakuloa 55.37 94⇓ *e*P **P 00 30 24.1 +1.0**
comp=Z,231nm,1.3s,mb6.0
POHA *e*PcP PcP 00 31 24.1 +0.9
POHA *e*ScP ScP 00 35 19.5 +0.7
POHA *e*S **S 00 38 07.2 +2.3**
POHA LR LR
comp=Z,173μm,22.0s,MS7.1
KAKA Kakadu 55.38 194 *e*P **P 00 30 19.1 -4.0**
comp=Z,213nm,0.9s,mb6.2
KAKA Kakadu 55.38 194 *e*P **P 00 30 19.9 -3.1**
comp=Z,1μm,1.2s,mb6.8
KAKA *e*PcP PcP 00 31 19.3 -3.8
KAKA *e*PP PP 00 32 26.2 -1.1
KAKA Kakadu 55.38 194 P **P 00 30 26.4 +3.3**
comp=Z,2μmcomp=Z,306nm,1.2s,mb6.2
PPBI Pangkal Pinang 55.60 228 P **P 00 30 26.1 +1.4**
comp=Z,9μmcomp=Z,214nm,1.4s,mb6.0
COEN Coen 55.62 181 *e*P **P 00 30 24.5 -0.3**
comp=Z,4μm,1.6s,mb7.1
COEN *e*PcP PcP 00 31 24.1 0.0
COEN Coen 55.62 181 P **P 00 30 27.7 +2.9**
comp=Z,425nm,2.3s,mb6.1
JBP Jabalpur 55.73 272 *e*PKP **P 00 30 26.5 +0.9**
JBP *e*S **S 00 38 10.6 +1.1**
KMMI Kalianget 55.88 217 P **P 00 30 31.7 +5.0**
comp=Z,178nm,1.6s,mb5.9
KBS Kingsbay 56.15 350⇑ *i*P **P 00 30 28.0 +0.1**
KBS *e*PcP PcP 00 31 26.0 +0.7
KBS PP PP 00 32 32.7 -0.1
KBS *e*S **S 00 38 14.0 +0.2**
KBS LR LR
comp=Z,128μm,21.0s,MS7.0
KBS Kingsbay 56.15 350⇑ *i*P **P 00 30 28.0 +0.1**
KBS *e* 00 31 26.0
KBS 00 32 32.7
KBS *e*S **S 00 38 14.0 +0.2**
KBS MLR MLR
comp=Z,128μm,21.0s,MS7.0
SRBI Singaraja 56.26 215 P **P 00 30 30.2 +0.8**
comp=Z,481nm,1.7s,mb6.3
AB31 Akbulak array 56.28 308 P **P 00 30 28.4 -0.8**
AB31 pmax pmax
comp=Z,28nm,0.3s,mb5.8
ABKAR Akbulak array 56.28 308⇑ *e*P **P 00 30 28.1 -1.2**
comp=Z,19nm,0.9s,mb5.1
ABKAR PcP PcP 00 31 25.4 -0.9
ABKAR *e*PP PP 00 32 35.0 +0.6
ABKAR *e*S **S 00 38 18.3 +2.1**
RGRI Rengat 56.30 233 P **P 00 30 32.6 +2.8**
comp=Z,529nm,1.2s,mb6.4
KHKI Kahang-Kahang 56.34 214 P **P 00 30 29.6 -0.4**
comp=Z,509nm,1.7s,mb6.3
MTNI Mataram 56.35 213 P **P 00 30 31.6 +1.5**
comp=Z,61nm,0.9s,mb5.6
VIS Vishakhapatnam 56.52 264 *e*PKP **P 00 30 30.7 -0.6**
VIS *i* P 00 30 33.4
VIS *ex* x 00 30 39.1
comp=Z,743nm,1.6s
VIS *i* x x 00 38 25.1
BKNI Bangkinang 56.55 235 P **P 00 30 30.8 -0.7**
comp=Z,768nm,1.3s,mb6.6
TPTI 56.70 240 P **P 00 30 35.0 +2.3**
comp=Z,57nm,1.2s,mb5.5
BYJI Banyuwangi 56.74 216 P **P 00 30 41.5 +8.7**
comp=Z,600nm,1.8s,mb6.3
HSP Hornsund 57.04 348 *e*P **P 00 30 36.0 +1.8**
MNSI Mandalling Nat 57.07 236 P **P 00 30 37.2 +1.9**
comp=Z,9μmcomp=Z,88nm,0.8s,mb5.8
GMJI Gumukmas 57.19 217 P **P 00 30 38.5 +2.5**
comp=Z,7μmcomp=Z,155nm,2.8s,mb5.5
NGJI Ngawi 57.30 219 P **P 00 30 39.5 +2.7**
comp=Z,239nm,1.4s,mb6.0
SDSI Sungai Dareh 57.31 233 P **P 00 30 40.2 +3.3**
comp=Z,505nm,1.1s,mb6.5
RES Resolute Bay 57.38 16 P **P 00 30 36.2 -0.5**
comp=Z,159nm,0.6s,mb6.2,baz=309,slow=7.2,SNR=57
RES Resolute Bay 57.38 16 P **P 00 30 36.2 -0.5**
RES Resolute Bay 57.38 16 P **P 00 30 36.2 -0.5**
SJI Sawahan 57.48 219 P **P 00 30 39.2 +1.1**
comp=Z,246nm,2.1s,mb5.9
KBL Kabul 57.49 289⇑ *i*P **P 00 30 37.5 -0.6**
comp=Z,198nm,0.9s,mb6.1
KBL *e*PcP PcP 00 31 31.2 -0.1
KBL *e*PP PP 00 32 47.0 +1.5
KBL *e*S **S 00 38 35.7 +3.1**
KBL Kabul 57.49 289⇑ *i*P **P 00 30 37.5 -0.5**
KBL *e* 00 31 31.2
KBL *e* 00 32 47.0
KBL *e*S **S 00 38 35.7 +3.1**
KBL pmax pmax
comp=Z,198nm,0.9s,mb6.1
SMRI Semarang 57.51 220 P **P 00 30 40.4 +2.1**
comp=Z,490nm,2.6s,mb6.1
KRKI Karangkates 57.54 218 P **P 00 30 39.1 +0.6**
comp=Z,519nm,1.5s,mb6.3
PPI Padang Panjang 57.55 235 P **P 00 30 39.3 +0.7**
comp=Z,97nm,2.6s,mb5.4
BHPL Bhopal 57.59 273 *e*PKP **P 00 30 37.7 -1.2**
BHPL AMb AMB 00 30 46.0
comp=Z,1μm,1.8s,mb6.6
PRGR Permogore 57.71 326⇓ *i*P **P 00 30 35.9 -3.2**
PRGR *e**PP pP 00 30 46.0 -4.6
PRGR *e**SP sP 00 30 50.1 -5.0
PRGR *e* 00 31 29.0
PRGR *e*S **S 00 38 32.6 -2.1**
PRGR *e**SS sS 00 38 49.7 -3.9
PRGR *e* 00 40 22.6
PRGR pmax pmax
comp=Z,370nm,1.0s,mb6.4
PWJI Pagerwojo 57.72 218 P **P 00 30 40.0 +0.3**
comp=Z,342nm,1.0s,mb6.3
AJM Ajmer 57.80 278 *e*PKP **P 00 30 39.1 -1.1**
AJM AMb AMB 00 30 46.2
comp=Z,904nm,1.3s,mb6.6
PDSI Padang 57.87 234 P **P 00 30 42.0 +1.1**
comp=Z,219nm,1.2s,mb6.0
BJII Banjamegara 58.11 221 P **P 00 30 42.7 +0.2**
comp=Z,306nm,2.0s,mb6.0
KRJI Kerinci 58.21 232 P **P 00 30 48.1 +4.8**
comp=Z,941nm,1.6s,mb6.6
UGM Wanagama 58.22 220 P **P 00 30 44.7 +1.4**
comp=Z,446nm,1.2s,mb6.4
YOGI Yogyakarta 58.25 220 P **P 00 30 45.0 +1.5**
comp=Z,1μm,1.3s,mb6.7
KLSI 58.47 228 P **P 00 30 45.9 +0.9**
comp=Z,517nm,1.8s,mb6.3
KLI Kotabumi 58.54 227 P **P 00 30 48.9 +3.4**
comp=Z,392nm,1.0s,mb6.4
MDSI Maura Dua 58.60 228 P **P 00 30 46.8 +0.8**
comp=Z,276nm,1.5s,mb6.1
YKA Yellowknife Ar 58.65 32 P **P 00 30 46.3 +0.7**
comp=Z,57nm,1.0s,mb5.6,baz=307,slow=7.0,SNR=55
YKA LR LR 00 59 59.4

comp=Z,4μm,19.5s,baz=150,slow=40
YKA PKP2bc 01 00 37.1
comp=Z,3.4nm,1.1s,baz=109,slow=2.3,SNR=3.8
YKA Yellowknife Ar 58.65 32 P **P 00 30 46.4 +0.7**
YKA LR LR 00 59 59.4
YKA ⇑*e* 01 00 37.1
YKA Yellowknife Ar 58.65 32 P **P 00 30 46.4 +0.7**
LEM Lembang 58.73 223 P **P 00 30 48.5 +1.7**
comp=Z,419nm,2.0s,mb6.1
KSI Kapahiang 58.81 230 P **P 00 30 48.8 +1.4**
comp=Z,311nm,1.1s,mb6.2
DBJI Dramaga 58.94 224 P **P 00 30 52.0 +3.7**
APA Apatity 59.00 335⇓*i*P **P 00 30 47.0 -1.1**
APA *i* 00 32 55.0
APA *i* PPP 00 34 25.0
APA *i* S **S 00 38 46.0 -5.4**
APA pmax pmax
comp=Z,220nm,1.2s,mb6.1
APA pmax pmax
comp=Z,24μm,19.0s
APA MLR MLR
comp=Z,190μm,15.0s,MS7.3
SISI Saibi 59.03 235 P **P 00 30 51.6 +2.6**
comp=Z,315nm,1.2s,mb6.2
KNA Kununurra 59.06 197 P **P 00 30 51.6 +2.6**
comp=Z,5μmcomp=Z,515nm,1.2s,mb6.4
LWLI Liwa 59.11 228 P **P 00 30 52.5 +3.0**
comp=Z,260nm,0.7s,mb6.4
MNAI Manna 59.19 229 P **P 00 30 56.4 +6.4**
comp=Z,474nm,1.7s,mb6.3
CISI Cisompet, Garu 59.25 223 P **P 00 30 55.9 +5.5**
comp=Z,131nm,1.4s,mb5.8
KEV Kevo 59.53 339 *e*P **P 00 30 52.0 +0.3**
KEV Kevo 59.53 339 *e*p **P 00 30 52.0 +0.3**
comp=Z,14nm,0.3s,mb5.5
FUNA Funafuti 59.76 138 *e*P **P 00 30 53.9 0.0**
FUNA LR LR
comp=Z,138μm,20.0s,MS7.1
ARCES ARCESS Array B 60.08 339 P **P 00 30 54.9 -0.6**
comp=Z,28nm,0.4s,mb5.6,baz=52,slow=8.1,SNR=73
ARCES S **S 00 39 09.2 +4.0**
comp=Z,4.8nm,1.0s,baz=312,slow=13,SNR=3.4
ARCES PKPPKP 01 00 21.1
comp=Z,6.8nm,1.2s,baz=66,slow=4.1,SNR=4.2
ARCES ARCESS Array B 60.08 339 P **P 00 30 54.9 -0.6**
ARCES S **S 00 39 09.2 +4.0**
ARCES P'P' 01 00 21.1
ARCES ARCESS Array B 60.08 339 P **P 00 30 54.9 -0.5**
ARCES S **S 00 39 09.2 +4.0**
ARE0 ARCESS Array S 60.08 339⇑*i*P **P 00 30 55.2 -0.2**
ARE0 *e*PcP PcP 00 31 41.2 +0.3
ARE0 *e*PP PP 00 33 06.7 -0.9
HYB Hyderabad 60.26 267 *i* P **P 00 30 56.5 -1.0**
comp=Z,200nm,1.0s,mb6.1
HYB *e*S **S 00 39 12.0 +3.1**
KLMR Klimovskoe 60.63 327*c i*P **P 00 31 00.6 +1.2**
KLMR *e*S **S 00 39 15.1 +2.5**
KLMR pmax pmax
comp=Z,701nm,1.6s,mb6.5
KLMR pmax pmax
comp=Z,6μm,6.8s
KLMR MLR MLR
comp=Z,264μm,19.0s,MS7.4
KTK1 Kautokeino 61.03 339⇑*i*P **P 00 31 02.1 +0.1**
KTK1 AMb AMB 00 31 05.9
comp=Z,874nm,1.9s,mb6.6
KTK1 Kautokeino 61.03 339⇑*i*P **P 00 31 02.1 +0.1**
comp=Z,874nm,1.9s,mb6.6
DAG Danmarks Havn 61.04 355⇑*i*P **P 00 31 01.7 -0.2**
DAG *e*S **S 00 39 18.2 +0.8**
DAG pmax pmax
comp=Z,110nm,0.9s,mb6.0
DAG Danmarks Havn 61.04 355⇑*i*P **P 00 31 01.7 -0.2**
comp=Z,1μm,0.9s,mb7.0
DAG *e*S **S 00 39 18.2 +0.8**
LATR Latur 61.13 269 *e*PKP **P 00 31 03.9 +0.5**
PGC Sidney 61.65 49⇑*e*P **P 00 31 07.5 +1.1**
comp=Z,0.3nm,0.4s
PGC *e*PcP PcP 00 31 48.0 +0.4
TRO Tromso 61.69 341 *e*P **P 00 31 07.9 +1.5**
TRO LR LR
comp=Z,207μm,14.5s,MS7.4
TRO Tromso 61.69 341 *e*P **P 00 31 07.9 +1.5**
TRO MLR MLR
comp=Z,207μm,14.5s,MS7.4
CTA Charters Tower 61.76 177 P **P 00 31 06.5 -0.8**
comp=Z,12nm,0.7s,mb5.1,baz=358,slow=8.0,SNR=7.7
CTA Charters Tower 61.76 177 *e*P **P 00 31 05.5 -1.8**
comp=Z,17nm,0.8s,mb5.2
CTA *e*S **S 00 39 24.7 -2.8**
CTA Charters Tower 61.76 177 P **P 00 31 06.5 -0.8**
CTA Charters Tower 61.76 177 P **P 00 31 06.5 -0.8**
CTAO Charters Tower 61.76 177 *e*P **P 00 31 06.5 -0.9**
comp=Z,303nm,1.6s,mb6.2
CTAO *e*PcP PcP 00 31 48.2 0.0
CTAO *e*PP PP 00 33 23.6 -0.3
CTAO *e*S **S 00 39 27.8 +0.3**
CTAO LR LR
comp=Z,36μm,21.0s,MS6.5
CTAO Charters Tower 61.76 177 *e*P **P 00 31 06.5 -0.8**
CTAO *e* 00 31 48.2
CTAO *e* 00 33 23.6
CTAO *e*S **S 00 39 27.8 +0.3**
CTAO pmax pmax
comp=Z,303nm,1.6s,mb6.2
CTAO MLR MLR
comp=Z,36μm,21.0s,MS6.5
CTAO Charters Tower 61.76 177 P **P 00 31 12.5 +5.2**
comp=Z,52nm,2.8s,mb5.2
MDRS Chennai 61.77 262⇑*i*P x 00 31 24.2
MDRS *i* S x 00 39 49.2
FITZ Fitzroy Crossi 62.06 200 P **P 00 31 08.2 -1.3**
comp=Z,30nm,1.1s,mb5.4,baz=17,slow=7.5,SNR=27
FITZ PKP2bc 01 00 23.3
comp=Z,3.3nm,0.9s,baz=268,slow=1.5,SNR=4.8
FITZ Fitzroy Crossi 62.06 200 *e*P **P 00 31 07.6 -1.8**
comp=Z,168nm,2.0s,mb5.8
FITZ *e*S **S 00 39 29.1 -2.4**
FITZ Fitzroy Crossi 62.06 200 P **P 00 31 08.2 -1.3**
FITZ ⇑*e* 01 00 23.3
FITZ Fitzroy Crossi 62.06 200 P sP 00 31 22.0 -3.5
NLWA Neilton Lookou 62.08 50 *e*P **P 00 31 10.3 +0.9**
comp=Z,319nm,1.3s,mb6.3
NLWA *e*PcP PcP 00 31 49.8 +0.4
NLWA *e*S **S 00 39 33.8 +2.5**
NLWA LR LR
comp=Z,65μm,22.0s,MS6.8
WB2 Warramunga Arr 62.19 190 *e*P **P 00 31 09.3 -0.9**
WB2 *e*PcP PcP 00 31 49.7 -0.4
WRA Warramunga Arr 62.19 190 P **P 00 31 07.9 -2.4**
comp=Z,43nm,1.0s,mb5.5,baz=9.4,slow=7.1,SNR=46
WRA LR LR 00 58 56.7
comp=Z,28μm,18.8s,MS6.5,baz=5.0,slow=37
WRA PKP2bc 01 00 23.6
comp=Z,6.4nm,1.1s,baz=192,slow=2.1,SNR=7.9
WRA Warramunga Arr 62.19 190 P **P 00 31 07.9 -2.4**
WRA LR LR 00 58 56.7
WRA ⇑*e* 01 00 23.6
WRA Warramunga Arr 62.19 190 P **P 00 31 07.9 -2.4**
JOF Joensuu 62.53 332 *e*P **P 00 31 11.8 -0.3**
JOF pmax pmax
comp=Z,29nm,0.4s,mb5.8
JOF Joensuu 62.53 332 *e*p **P 00 31 11.8 -0.3**
comp=Z,29nm,0.4s,mb5.8
GNW Green Mountain 62.59 50 *e*P **P 00 31 13.0 +0.3**
comp=Z,5.4nm,0.3s,mb5.2
JCW Jim Creek 62.75 49 *e*P **P 00 31 13.7 -0.1**
comp=Z,21nm,0.6s,mb5.5
JCW PcP PcP 00 31 53.2 +1.1
XMIS Christmas Isla 62.84 223 P **P 00 31 16.6 +1.9**
comp=Z,1μm,1.6s,mb6.8
RPW Rockport 62.84 48 *e*P **P 00 31 14.9 +0.5**
comp=Z,21nm,0.6s,mb5.5
POO Poona 63.08 271 *e*PKP **P 00 31 15.2 -1.2**
VAN Vannovskaya 63.14 298 *e*P **P 00 31 17.5 +0.9**
VAN *e*S **S 00 39 49.7 +4.8**
ABKT Ailbek 63.14 298 P **P 00 31 15.8 -0.8**
comp=Z,1μm,0.9s,mb7.1,SNR=19
D05A Enumclaw 63.27 50 ⇑P **P 00 31 17.1 -0.2**
baz=63
BHJ Bhuj 63.35 278 *e*PKP **P 00 31 17.2 -1.0**
KAD Karad 63.59 270 *e*PKP **P 00 31 18.7 -1.1**
F04A Amboy 63.72 51 ⇓P **P 00 31 19.4 -0.9**
baz=64,SNR=9.2
COR Corvallis 63.95 53⇑*e*P **P 00 31 23.2 +1.3**
comp=Z,827nm,1.8s,mb6.5
COR *e*PcP PcP 00 31 55.9 -1.2
COR *e*PP PP 00 33 44.5 +2.1
COR *e*S **S 00 39 56.7 +1.9**
COR LR LR
comp=Z,44μm,20.0s,MS6.6
COR Corvallis 63.95 53⇑*e*P **P 00 31 23.2 +1.4**
COR *e* 00 31 55.9
COR *e* 00 33 44.5
COR *e*S **S 00 39 56.7 +1.9**
COR pmax pmax
comp=Z,827nm,1.8s,mb6.5
COR MLR MLR
comp=Z,44μm,20.0s,MS6.6
ETW Entiat 63.97 49 *e*P **P 00 31 22.1 +0.2**
comp=Z,339nm,0.7s,mb6.5
B08A Colville Reser 64.10 47 ⇓P **P 00 31 22.8 +0.1**
baz=64,SNR=14
LOF Lofoten 64.11 341 *e*P **P 00 31 22.7 +0.2**
KEBM Edson Butte 64.29 55 *e*P **P 00 31 25.2 +1.1**
comp=Z,552nm,1.3s,mb6.4
KEBM *e*PcP PcP 00 31 59.2 +0.7
EDM Edmonton 64.38 41⇑*e*P **P 00 31 24.5 0.0**
EDM *e*PcP PcP 00 31 59.4 +0.8
EDM Edmonton 64.38 41⇑*e*P **P 00 31 24.5 0.0**
EDM *e* 00 31 59.4
MOS Moscow 64.44 323α*i*P **P 00 31 24.5 -0.3**
MOS *e* 00 31 59.1
MOS *e* 00 33 44.8
MOS *e*PPP 00 35 19.2
MOS *i* S **S 00 40 02.7 +2.2**
MOS *i* 00 41 16.3
MOS *i* SS SS 00 44 17.4 +7.2
MOS *e*SSS 00 46 55.4
MOS pmax pmax
comp=Z,15μm,5.5s
MOS pmax pmax
comp=Z,969nm,1.8s,mb6.5
MOS MLR MLR
comp=Z,296μm,19.0s,MS7.5
MOS MLR MLR
comp=E,260μm,17.0s
HOOD Mount Hood Mea 64.51 51⇑*e*P **P 00 31 26.9 +1.4**
comp=E,236nm,0.9s,mb6.2
HOOD *e*PcP PcP 00 32 00.2 +0.9
H04A Detroit Lake 64.56 52 ⇑P **P 00 31 23.8 -2.0**
baz=64,SNR=12
KBO Bosley Butte 64.73 55 *e*P **P 00 31 28.7 +1.7**
comp=E,47nm,0.3s,mb6.0
KAF Kangasniemi 64.81 333 *e*P **P 00 31 27.0 -0.2**
KAF Kangasniemi 64.81 333 *e*p **P 00 31 27.0 -0.2**
comp=E,24nm,0.4s,mb5.6
E07A Sunnyside 64.83 49 ⇑P **P 00 31 26.6 -0.9**
baz=65,SNR=16
PUL Pulkovo 64.93 329⇑*e*P **P 00 31 27.2 -0.8**
PUL pmax pmax
comp=Z,1μm,1.2s,mb6.7
PUL MLR MLR
comp=Z,258μm,21.0s,MS7.4
OD2 Odessa Site #2 64.99 48 *e*P **P 00 31 28.7 +0.1**
comp=Z,26nm,0.6s,mb5.4
C09A Chrisman Ranch 65.00 47 ⇓P **P 00 31 27.1 -1.5**
baz=65,SNR=20
D08A Wollman Farm, 65.07 48 ⇑P **P 00 31 28.2 -0.9**
baz=65
RSW Rattlesnake Hi 65.08 49 *e*P **P 00 31 30.3 +1.2**
comp=Z,562nm,1.4s,mb6.4
HAWA Hanford 65.11 49 *e*P **P 00 31 29.5 +0.2**
comp=Z,370nm,1.4s,mb6.2
HAWA *e*PcP PcP 00 32 02.5 +0.7
HAWA *e*S S 00 40 11.8 +2.8
HAWA LR LR
comp=Z,41μm,22.0s,MS6.6
G06A Carlson Farm, 65.14 51 P **P 00 31 30.5 +0.9**
baz=65,SNR=10
HUMO Hull Mountain 65.28 54 *e*P **P 00 31 31.9 +1.4**
comp=Z,93nm,1.1s,mb5.7
HUMO *e*PcP PcP 00 32 02.0 -0.6
HUMO *e*PP PP 00 33 55.3 +1.3
HUMO *e*S S 00 40 13.0 +1.8
HUMO LR LR
comp=Z,50μm,22.0s,MS6.7
OBN Obninsk 65.30 323 PFAKE 00 31 40.0 +10
OBN LR LR
comp=Z,310μm,19.0s,MS7.5
OBN Obninsk 65.30 323κ*i*P **P 00 31 29.2 -1.2**
OBN *i* *SP sP 00 31 42.4 -4.2
OBN *i* 00 32 06.7
OBN *i* 00 34 03.1
OBN *e*PPP 00 35 37.8
OBN *i* S S 00 40 11.4 +0.3
OBN *i* PS 00 40 29.3
OBN *i* PPS 00 40 41.3
OBN *i* 00 41 21.2
OBN *i* SS SS 00 44 26.0 +2.4
OBN pmax pmax
comp=Z,11μm,4.4s
OBN pmax pmax
comp=Z,1μm,2.6s,mb6.5
OBN MLR MLR
comp=Z,297μm,20.0s,MS7.5
OBN Obninsk 65.30 323 P **P 00 31 29.1 -1.3**
comp=Z,2μm,1.5s,mb6.9,SNR=19
VRHR Novokhopersk 65.33 317 *e*P **P 00 31 29.2 -1.5**
VRHR *e*S S 00 40 12.4 +0.8
VRHR pmax pmax
comp=N,60nm,0.8s
VRHR pmax pmax
comp=E,120nm,0.8s
VRHR pmax pmax
comp=Z,160nm,0.8s,mb6.1
VRHR smax
comp=N,790nm,1.8s
VRHR smax
comp=E,1μm,1.8s
VRHR smax
comp=Z,250nm,1.8s
FINES FINESS Array B 65.35 332 P **P 00 31 28.3 -2.3**
comp=Z,121nm,0.7s,mb6.1,baz=38,slow=5.0,SNR=91
FINES S S 00 40 21.0 +10
comp=Z,14nm,1.1s,baz=0.0,slow=12,SNR=4.7
FINES LR LR 01 03 08.9
comp=Z,514μm,20.1s,MS7.7,baz=49,slow=39
FINES FINESS Array B 65.35 332 P **P 00 31 28.3 -2.3**
FINES S S 00 40 21.0 +10
FINES LR LR 01 03 08.9
FINES FINESS Array B 65.35 332 P **P 00 31 28.3 -2.4**
NEW Newport 65.36 47 ⇓P **P 00 31 30.7 -0.2**
baz=65,SNR=17
NEW Newport 65.36 47⇑*e*P **P 00 31 32.1 +1.1**
comp=Z,327nm,1.3s,mb6.2
NEW *e*PcP PcP 00 32 03.7 +0.9
NEW *e*PP PP 00 33 56.9 +2.4
NEW *e*S S 00 40 13.6 +1.6
NEW LR LR
comp=Z,63μm,19.0s,MS6.8
NEW Newport 65.36 47⇑*e*P **P 00 31 32.1 +1.2**
NEW *e* 00 32 03.7
NEW *e* 00 33 56.9
NEW *e*S S 00 40 13.6 +1.6
NEW pmax pmax
comp=Z,327nm,1.3s
NEW MLR MLR
comp=Z,63μm,19.0s
MOR8 Moi Rana 65.41 340 *e*P **P 00 31 28.3 -2.7**
KONS Konsvik 65.49 340 *e*P **P 00 31 32.3 +0.8**
A12A Yaak River Ran 65.75 45 ⇑P **P 00 31 34.2 +0.8**
baz=66
XMAS Kiritimati 65.75 110 *e*P **P 00 31 34.3 +0.3**
comp=Z,224nm,1.1s,mb6.1
XMAS *e*S S 00 40 19.9 +2.2
XMAS LR LR
comp=Z,204μm,21.0s,MS7.3
SUMG Summit 65.77 1⇑*e*P **P 00 31 33.7 +0.4**
comp=Z,516nm,1.6s,mb6.3
SUMG *e*PcP PcP 00 32 04.7 +0.6
SUMG Summit 65.77 1⇑*i*P **P 00 31 34.4 +1.2**
comp=Z,406nm,0.8s,mb6.5
SUMG *i* S S 00 40 19.6 +3.2
E09A Wood Farm, Sta 65.82 49 ⇓P **P 00 31 32.3 -1.6**
baz=66,SNR=22
ASAR Alice Springs 65.92 190 P **P 00 31 33.5 -1.2**
comp=Z,18nm,1.0s,mb5.1,baz=11,slow=5.4,SNR=37
ASAR PKPPKP 01 00 08.0
comp=Z,7.7nm,1.3s,baz=164,slow=2.5,SNR=8.7
ASAR PKP2bc 01 00 15.2
comp=Z,12nm,1.2s,baz=178,slow=2.7,SNR=14
ASAR Alice Springs 65.92 190 P **P 00 31 33.5 -1.2**
ASAR P'P' 01 00 08.0
ASAR ⇑*e* 01 00 15.2
ASAR Alice Springs 65.92 190 P **P 00 31 33.5 -1.2**
YBH Yreka Blue Hor 65.93 55⇓*e*P **P 00 31 35.5 +0.7**
comp=Z,170nm,1.3s,mb5.9
YBH *e*PcP PcP 00 32 05.6 +0.3
YBH *e*PP PP 00 34 00.9 +1.2
YBH *e*S S 00 40 21.7 +2.5
YBH LR LR
comp=Z,34μm,19.0s,MS6.6
YBH Yreka Blue Hor 65.93 55⇓*e*P **P 00 31 35.5 +0.8**
YBH *e* 00 32 05.6
YBH *e* 00 34 01.0
YBH *e*S S 00 40 21.7 +2.5
YBH pmax pmax
comp=Z,170nm,1.3s
YBH MLR MLR
comp=Z,34μm,19.0s
C11A Tepee Creek (N 66.08 47 ⇑P **P 00 31 33.1 -2.5**
baz=66
G08A Pilot Rock 66.08 50 ⇓P **P 00 31 34.6 -1.0**
baz=66
A13A Flathead Natio 66.40 45 ⇓P **P 00 31 38.3 +0.7**
baz=66
K05A Summer Lake 66.45 53 ⇓P **P 00 31 36.6 -1.5**
baz=66,SNR=14
I07A Izee 66.47 51 ⇑P **P 00 31 37.3 -0.9**
baz=66
VSR Storozhevoye 66.49 318 *e*P **P 00 31 36.8 -1.4**
VSR *e* 00 34 02.4
VSR *e*PPP 00 35 40.5
VSR *e*S S 00 40 26.8 +1.1
VSR *e*SS SS 00 44 45.1 +3.0
VSR pmax pmax
comp=E,2μm,2.8s
VSR pmax pmax
comp=Z,6μm,2.8s
VSR pmax pmax
comp=N,780nm,1.4s
VSR pmax pmax
comp=Z,490nm,1.7s,mb6.3
VSR pmax pmax
comp=N,140nm,0.9s
VSR pmax pmax
comp=E,150nm,0.9s
VSR pmax pmax
comp=N,2μm,5.2s
VSR pmax pmax
comp=Z,5μm,5.2s
VSR pmax pmax
comp=E,230nm,0.9s
VSR smax
comp=N,6μm,3.4s
VSR smax
comp=E,6μm,3.4s
VSR smax
comp=Z,650nm,3.4s
VSR MLR MLR
comp=N,143μm,19.0s,MS7.3
VSR MLR MLR
comp=E,94μm,19.0s,MS7.3
VSR MLR MLR
comp=Z,163μm,19.0s,MS7.3
KIPM Iron Peak 66.57 57 *e*P **P 00 31 39.9 +1.0**
comp=Z,14nm,0.5s,mb5.2
C12B Naegeli Ranch, 66.58 46 ⇑P **P 00 31 39.8 +1.0**
baz=66,SNR=23
KCPM Cahto Peak 66.58 57 *e*P **P 00 31 40.7 +1.8**
comp=Z,158nm,0.5s,mb6.3
KCPM *e*PcP PcP 00 32 09.6 +1.5
VORD Divnogorie 66.58 318 *e*P **P 00 31 37.5 -1.2**
VORD *e* 00 34 02.5
VORD *e*S S 00 40 28.1 +1.3
VORD pmax pmax
comp=N,2μm,3.2s
VORD pmax pmax
comp=E,2μm,3.2s
VORD pmax pmax
comp=Z,6μm,3.2s
VORD pmax pmax
comp=N,180nm,1.1s
VORD pmax pmax
comp=E,180nm,1.1s
VORD pmax pmax
comp=Z,270nm,1.1s,mb6.2
VORD pmax pmax
comp=N,3μm,5.1s
VORD pmax pmax
comp=E,3μm,5.1s
VORD pmax pmax
comp=Z,5μm,5.1s
VORD smax
comp=N,7μm,3.0s
VORD smax
comp=E,4μm,3.0s
VORD smax
comp=Z,460nm,3.0s
VORD MLR MLR
comp=N,74μm,18.0s,MS7.1
VORD MLR MLR
comp=E,67μm,18.0s,MS7.1
VORD MLR MLR
comp=Z,125μm,18.0s,MS7.2
WALA Waterton Lakes 66.59 44⇑*e*P **P 00 31 40.2 +1.3**
MBWA Marble Bar 66.62 205 *e*P **P 00 31 39.3 0.0**
comp=Z,296nm,1.4s,mb6.1
MBWA *e*S S 00 40 27.1 -0.7
MBWA LR LR
comp=Z,32μm,21.0s,MS6.5
MBWA Marble Bar 66.62 205 P **P 00 31 43.1 +3.8**
comp=Z,170nm,1.4s,mb5.9
F10A Beach Ranch, E 66.65 49 ⇓P **P 00 31 39.4 +0.1**
baz=66
WDC Whiskeytown Da 66.70 56⇓*e*P **P 00 31 40.4 +0.6**
comp=Z,139nm,1.1s,mb5.9
WDC *e*PcP PcP 00 32 09.4 +0.8
WDC *e*PP PP 00 34 07.4 +0.8
WDC *e*S S 00 40 29.6 +1.0
WDC LR LR
comp=Z,32μm,21.0s,MS6.5
WDC Whiskeytown Da 66.70 56⇓*e*P **P 00 31 40.4 +0.7**
WDC *e* 00 32 09.4
WDC *e* 00 34 07.4
WDC *e*S S 00 40 29.6 +1.0
WDC pmax pmax
comp=Z,139nm,1.1s,mb5.9
WDC MLR MLR
comp=Z,32μm,21.0s,MS6.5
B13A Whitefish 66.71 45 ⇑P **P 00 31 37.6 -2.0**
baz=66,SNR=24
BSMT Bassoo Peak 66.86 46 *e*P **P 00 31 39.1 -1.5**
A14A Double T Ranch 66.90 44 ⇓P **P 00 31 39.3 -1.5**
baz=67,SNR=12
MAK Makhachkala 66.93 308 *e*P **P 00 31 42.9 +1.8**
MAK *i* 00 32 08.2
MAK *e* 00 34 08.4
MAK *e*S S 00 40 34.7 +3.4
MAK *e*SS SS 00 44 49.6 +0.2
MAK pmax pmax
comp=Z,15μm,4.4s
MAK pmax pmax
comp=Z,723nm,1.9s,mb6.4
MAK pmax pmax
comp=N,268nm,1.5s
MAK pmax pmax
comp=E,396nm,1.5s
MAK smax
comp=N,11μm,5.1s
MAK smax
comp=E,14μm,5.1s
MAK MLR MLR
comp=E,209μm,14.0s
MAK MLR MLR
comp=Z,232μm,17.0s,MS7.5
BLMT Blacktail Moun 66.99 46 *e*P **P 00 31 42.1 +0.7**
comp=Z,357nm,1.4s,mb6.2
BLMT PcP PcP 00 32 12.0 +2.4
D12A Red Ives Fores 67.04 47 ⇓P **P 00 31 41.6 -0.2**
baz=67
DZM Mont Dzumac 67.04 157 *e*S S 00 40 52.8 +20
comp=Z,186μm,27.1s
DZM *e*SS SS 00 44 56.4 +3.7
comp=Z,32μm,26.4s

DZM *e*LQ 00 48 49.0
comp=Z,161μm,28.8s
DZM *e*LR LR 00 51 59.6
comp=Z,104μm,21.9s
C13A Hot Springs 67.08 46 ⇑P **P 00 31 42.4 +0.4**
baz=67,SNR=12
VSU Vasula 67.18 329⇑*e*P **P 00 31 41.6 -0.8**
TRD Trivandrum 67.18 261 *e*PKP **P 00 31 41.8 -1.3**
JTMT Jette 67.19 46 *e*P **P 00 31 43.6 +0.9**
A15A Johnson Ranch, 67.25 44 ⇑P **P 00 31 40.6 -2.5**
baz=67,SNR=14
YBMT Yellow Bay 67.27 46 *e*P **P 00 31 44.4 +1.2**
comp=Z,140nm,1.2s,mb5.9
MSVF Nonsavu 67.27 144 PFAKE 00 32 00.0 +17
MSVF LR LR
comp=Z,93μm,21.0s,MS7.0
MOD Modoc 67.29 54 *e*P **P 00 31 44.3 +0.9**
comp=Z,367nm,1.9s,mb6.1
MOD *e*PcP PcP 00 32 11.4 +0.4
MOD *e*S S 00 40 37.9 +2.2
MOD LR LR
comp=Z,23μm,19.0s,MS6.4
HOPS Hopland 67.31 58 *e*P **P 00 31 44.5 +0.9**
comp=Z,294nm,1.5s,mb6.1
HOPS *e*PcP PcP 00 32 10.0 -1.1
HOPS *e*S S 00 40 38.4 +2.4
HOPS LR LR
comp=Z,40μm,21.0s,MS6.6
E12A Beaver Dam Sad 67.31 47 ⇑P **P 00 31 41.8 -1.6**
baz=67
EIDS Eidsvold 67.31 173 *e*P **P 00 31 43.2 -0.3**
comp=Z,70nm,1.0s,mb5.7
EIDS *e*PcP PcP 00 32 11.5 +0.5
B14A Marquette Ranc 67.35 45 ⇓P **P 00 31 44.4 +0.7**
baz=67,SNR=23
SCO Scoresbysund 67.41 355⇑*i*P **P 00 31 44.4 +0.7**
SCO pmax pmax
comp=Z,99nm,1.1s,mb5.8
SCO Scoresbysund 67.41 355⇑*i*P **P 00 31 44.4 +0.7**
comp=Z,99nm,1.1s,mb5.8
C14A Swan Lake 67.47 46 ⇑P **P 00 31 44.2 -0.2**
baz=67
SWMT Swartz Lake 67.49 46 *e*P **P 00 31 45.0 +0.5**
comp=Z,357nm,1.4s,mb6.2
D13A Huson 67.50 46 ⇑P **P 00 31 44.6 0.0**
baz=67,SNR=20
B15A Bradely Ranch, 67.75 45 ⇓P **P 00 31 44.5 -1.7**
baz=68,SNR=26
A16A West Butte Ran 67.86 44 ⇓P **P 00 31 46.1 -0.8**
baz=68,SNR=11
F12A Elk City 67.88 48 ⇑P **P 00 31 45.8 -1.2**
baz=68,SNR=18
SLMT Seeley Lake 67.93 46 *e*P **P 00 31 48.0 +0.7**
comp=Z,47nm,0.4s,mb5.9
MCCM Marconi Confer 67.93 58 PFAKE 00 32 00.0 +12
MCCM LR LR
comp=Z,38μm,21.0s,MS6.6
MSO Missoula 67.94 46 ⇑P **P 00 31 46.3 -1.1**
baz=68,SNR=25
MSO Missoula 67.94 46⇑*e*P **P 00 31 48.6 +1.2**
comp=Z,45nm,1.1s,mb5.4
MSO LR LR
comp=Z,26μm,22.0s,MS6.4
WVOR Wild Horse Val 67.96 52 *e*P **P 00 31 48.5 +0.8**
WVOR *e*PcP PcP 00 32 13.6 -0.2
WVOR *e*PP PP 00 34 19.0 +1.6
WVOR *e*S S 00 40 46.4 +2.7
WVOR LR LR
comp=Z,40μm,21.0s,MS6.6
WVOR Wild Horse Val 67.96 52 *e*P **P 00 31 48.5 +0.8**
WVOR *e* 00 32 13.6
WVOR *e* 00 34 19.0
WVOR *e*S S 00 40 46.4 +2.7
WVOR MLR MLR
comp=Z,40μm,21.0s,MS6.6
D14A Greenough 68.02 46 ⇓P **P 00 31 48.0 +0.1**
baz=68,SNR=22
E13A Victor 68.05 47 ⇓P **P 00 31 48.4 +0.3**
baz=68,SNR=12
C15A Salmond Ranch, 68.07 45 ⇑P **P 00 31 47.9 -0.3**
baz=68,SNR=21
B16A M & M Farms, S 68.14 44 ⇓P **P 00 31 48.3 -0.4**
baz=68,SNR=24
CHMT Chamberlain Mo 68.26 46 *e*P **P 00 31 50.6 +1.2**
A17A Triple J Farms 68.32 43 ⇓P **P 00 31 50.6 +0.8**
baz=68,SNR=12
F13A Darby 68.37 47 ⇓P **P 00 31 50.6 +0.4**
baz=68,SNR=6.5
E14A Clinton 68.44 47 ⇑P **P 00 31 51.9 +1.3**
baz=68
C16A Fuhringer Ranc 68.50 45 ⇓P **P 00 31 51.9 +1.0**
baz=68,SNR=26
FFC Flin Flon 68.59 35 PFAKE 00 32 00.0 +8.6
FFC LR LR
comp=Z,84μm,22.0s,MS6.9
FFC Flin Flon 68.59 35 *i*P **P 00 31 52.5 +1.1**
B17A L&G Farms, Che 68.68 44 ⇑P **P 00 31 51.4 -0.6**
baz=68,SNR=21
A18A Metzger Ranch, 68.77 43 ⇓P **P 00 31 52.3 -0.3**
baz=69,SNR=16
H12A Diamond D Ranc 68.85 49 ⇓P **P 00 31 53.4 +0.2**
baz=69,SNR=9.2
G13A Cobalt 68.86 48 ⇓P **P 00 31 52.0 -1.2**
baz=69
F14A Wisdom 68.88 47 ⇑P **P 00 31 54.0 +0.7**
baz=69
E15A Deer Lodge 68.89 46 ⇑P **P 00 31 51.9 -1.5**
baz=69,SNR=26
AFI Afiamalu 68.99 133 LR LR 01 00 55.2
comp=Z,44μm,18.3s,MS6.7,baz=321,slow=35
AFI Afiamalu 68.99 133 PFAKE 00 32 10.0 +16
AFI LR LR
comp=Z,45μm,20.0s,MS6.7
MFID Camas Ranch 69.00 50 ⇑P **P 00 31 54.5 +0.4**
baz=69,SNR=9.6
COCO West Island 69.03 230 PFAKE 00 32 10.0 +15
COCO LR LR
comp=Z,36μm,19.0s,MS6.6
COCO West Island 69.03 230 *i*P **P 00 31 56.5 +1.9**
D16A Dana Ranch, Ca 69.09 45 ⇑P **P 00 31 54.1 -0.5**
baz=69,SNR=11
DGRG David-gareji 69.10 307 P **P 00 31 54.4 -0.4**
KIV Kislovodsk 69.12 311 PFAKE 00 32 10.0 +15
KIV LR LR
comp=Z,183μm,20.0s,MS7.3
KIV Kislovodsk 69.12 311α*i*P **P 00 31 54.4 -0.4**
KIV *i* *PP pP 00 32 04.1 -2.4
KIV *i* *SP sP 00 32 09.4 -1.6
KIV *i* 00 34 32.2
KIV *i*S S 00 41 03.0 +5.6
KIV *i* 00 41 20.5
KIV *i*SS SS 00 45 23.3 +0.2
KIV *i*SSS 00 48 31.5
KIV pmax pmax
comp=Z,8μm,3.0s
KIV pmax pmax
comp=Z,853nm,1.0s,mb6.6
KIV Kislovodsk 69.12 311 P **P 00 31 55.7 +0.9**
comp=Z,4μm,0.9s,SNR=28
C17A Wharram Farm, 69.12 44 ⇑P **P 00 31 55.1 +0.3**
baz=69,SNR=23
B18A Beardsley Farm 69.14 43 ⇓P **P 00 31 54.9 0.0**
baz=69,SNR=19
HRY Holter Researc 69.15 46 *e*P **P 00 31 55.6 +0.6**
comp=Z,280nm,0.6s,mb6.4
HRY *e*PcP PcP 00 32 18.6 0.0
ZEI Tsey 69.16 309 *e*P **P 00 31 54.2 -0.9**
ZEI *e* 00 34 29.5
ZEI *e*S S 00 41 00.0 +2.1
ZEI *e*SS SS 00 45 24.0 +0.2
ZEI pmax pmax
comp=Z,248nm,1.1s,mb6.0
ZEI pmax pmax
comp=N,166nm,0.9s
ZEI pmax pmax
comp=Z,3μm,7.0s
ZEI pmax pmax
comp=E,352nm,1.0s
ZEI smax
comp=E,477nm,5.0s
ZEI smax
comp=N,727nm,5.7s
I12A Atlanta 69.16 50 ⇓P **P 00 31 54.1 -1.0**
baz=69,SNR=16
H13A Challis 69.17 48 ⇑P **P 00 31 54.8 -0.4**
baz=69,SNR=28

WCN Washoe City 69.18 56 ⇓P **P 00 31 53.8 -1.5**
baz=69,SNR=6.8
MTA Mtatsminda 69.30 308 P **P 00 31 57.0 +1.0**
TBLG Delisi 69.31 308 P **P 00 31 55.7 -0.3**
TBLG Delisi 69.31 308 P **P 00 31 55.7 -0.4**
A19A Klindworth Far 69.32 42 P **P 00 31 57.4 +1.4**
baz=69,SNR=11
E16A East Helena 69.34 46 ⇓P **P 00 31 55.1 -1.1**
baz=69,SNR=15
F15A Butte 69.34 47 ⇓P **P 00 31 54.7 -1.5**
baz=69,SNR=31
IDID Didziasalis 69.38 327 *e*P **P 00 31 55.9 -0.4**
IDID AMB AMB 00 31 59.4
comp=Z,133nm,2.0s,mb5.5
EGMT Eagleton 69.39 43 ⇓P **P 00 31 54.3 -2.2**
baz=69,SNR=18
EGMT Eagleton 69.39 43⇑*e*P **P 00 31 56.4 -0.1**
comp=Z,322nm,1.2s,mb6.1
EGMT *e*PP PP 00 34 29.7 +0.1
EGMT *e*S S 00 41 02.1 +1.7
EGMT LR LR
comp=Z,76μm,20.0s,MS6.9
ISAL Salakas 69.45 328 *e*P **P 00 31 56.4 -0.3**
ISAL AMB AMB 00 32 00.1
comp=Z,150nm,1.7s,mb5.6
D17A Six Diamond Ra 69.47 45 ⇑P **P 00 31 57.7 +0.7**
baz=69,SNR=11
MICGM Minsk 69.48 326 *e*P **P 00 31 53.0 -3.9**
MNK Minsk 69.50 326 *e*P **P 00 31 53.0 -4.0**
MNK *e* 00 34 32.0
MNK *e*S S 00 41 00.0 -1.6
MNK *e*PS 00 41 32.0
MNK pmax pmax
comp=Z,130nm,1.0s,mb5.8
MNK pmax pmax
comp=Z,47μm,9.0s
MNK smax
comp=E,33μm,12.0s
GOR Gori 69.52 308 P **P 00 31 57.7 +0.3**
B19A Brinkman Farms 69.53 43 ⇑P **P 00 31 57.5 +0.2**
baz=69,SNR=18
CMB Columbia Colle 69.56 57⇓*e*P **P 00 31 58.2 +0.5**
comp=E,237nm,1.4s,mb5.9
CMB *e*PP PP 00 34 32.0 +0.6
CMB *e*S S 00 41 04.3 +1.5
CMB LR LR
comp=Z,41μm,22.0s,MS6.6
CMB Columbia Colle 69.56 57⇓*e*P **P 00 31 58.2 +0.5**
CMB *e* 00 34 32.0
CMB *e*S S 00 41 04.3 +1.5
CMB pmax pmax
comp=Z,237nm,1.4s,mb5.9
CMB MLR MLR
comp=Z,41μm,22.0s,MS6.6
IIGN Ignalina 69.56 327 *e*P **P 00 31 57.0 -0.3**
IIGN AMB AMB 00 32 00.7
comp=Z,157nm,1.9s,mb5.6
DLMT Dillon 69.59 47 *e*P **P 00 31 58.3 +0.6**
DLMT *e*PcP PcP 00 32 20.9 +0.3
H14A Leadore 69.64 48 ⇑P **P 00 31 58.9 +0.9**
baz=70
NACGM Naroch 69.66 327 *e*P **P 00 31 53.0 -5.0**
I13A Wildhorse Cree 69.66 49 ⇓P **P 00 31 59.6 +1.4**
baz=70
SAO San Andreas Ge 69.67 59 *e*P **P 00 31 58.7 +0.4**
comp=Z,260nm,1.7s,mb5.9
SAO *e*PP PP 00 34 33.6 +1.3
SAO *e*S S 00 41 05.6 +1.5
SAO LR LR
comp=Z,37μm,22.0s,MS6.6
SAO San Andreas Ge 69.67 59 *e*P **P 00 31 58.7 +0.3**
SAO *e* 00 34 33.6
SAO *e*S S 00 41 05.6 +1.5
SAO pmax pmax
comp=Z,260nm,1.7s,mb5.9
SAO MLR MLR
comp=Z,37μm,22.0s,MS6.6
HLID Hailey 69.71 49 ⇑P **P 00 31 59.3 +0.8**
baz=70,SNR=12
HLID Hailey 69.71 49⇑*e*P **P 00 32 00.3 +1.8**
comp=Z,57nm,1.0s,mb5.5
HLID *e*S S 00 41 06.5 +2.2
HLID LR LR
comp=Z,39μm,20.0s,MS6.7
G15A Dillon 69.77 47 ⇓P **P 00 31 56.2 -2.6**
baz=70,SNR=32
MCMT McKenzie Canyo 69.79 48 *e*P **P 00 31 59.9 +1.0**
E17A Martinsdale 69.82 45 ⇑P **P 00 31 58.6 -0.5**
baz=70,SNR=18
F16A Kennard Place, 69.85 46 ⇑P **P 00 31 59.7 +0.4**
baz=70,SNR=16
D18A Linhart Farms, 69.90 44 ⇓P **P 00 32 00.8 +1.2**
baz=70,SNR=14
BOZ Bozeman (W) 69.93 46 ⇓P **P 00 31 58.8 -1.0**
baz=70,SNR=32
BOZ Bozeman (W) 69.93 46 *e*P **P 00 32 00.3 +0.5**
comp=Z,218nm,1.2s,mb6.0
BOZ PP PP 00 34 34.1 -0.2
BOZ LR LR
comp=Z,58μm,21.0s,MS6.8
BOZ Bozeman (W) 69.93 46 *e*P **P 00 32 00.3 +0.5**
BOZ 00 34 34.1
BOZ pmax pmax
comp=Z,218nm,1.2s,mb6.0
BOZ MLR MLR
comp=Z,58μm,21.0s,MS6.8
C19A Slack Wire Ran 69.94 43 ⇑P **P 00 32 01.1 +1.2**
baz=70,SNR=28
J13A Cove Ranch, Pi 69.95 49 ⇑P **P 00 31 59.4 -0.5**
baz=70,SNR=11
I14A Mackay 70.02 49 ⇑P **P 00 32 01.9 +1.5**
baz=70,SNR=21
BMN Battle Mountai 70.03 53 PFAKE 00 32 10.0 +9.5
BMN LR LR
comp=Z,38μm,20.0s,MS6.6
G16A Moss Hill, Enn 70.11 47 ⇑P **P 00 32 01.0 +0.1**
baz=70,SNR=23
E18A Harlowton 70.25 45 ⇑P **P 00 32 03.3 +1.5**
baz=70,SNR=7.2
GNI Garni 70.28 306 *e*P **P 00 32 02.3 +0.2**
comp=Z,494nm,1.1s,mb6.3
GNI *e*PcP PcP 00 32 23.8 +0.2
GNI *e*S S 00 41 11.5 +0.3
GNI LR LR
comp=Z,97μm,19.0s,MS7.1
GNI Garni 70.28 306 *e*P **P 00 32 02.3 +0.2**
GNI *e* 00 32 23.8
GNI *e*S S 00 41 11.5 +0.3
GNI pmax pmax
comp=Z,494nm,1.1s
GNI MLR MLR
comp=Z,97μm,19.0s
F17A Fitzpatrick Pl 70.29 46 ⇑P **P 00 32 02.4 +0.4**
baz=70,SNR=14
J14A Carey 70.37 49 ⇓P **P 00 32 01.9 -0.6**
baz=70,SNR=14
HFA0 Hagfors New Ar 70.38 336 P **P 00 32 02.0 -0.3**
NB2 NORSAR Subarra 70.38 338 P **P 00 32 00.7 -1.6**
comp=Z,840nm,1.7s,mb6.4,baz=35,slow=6.2
NB2 NORSAR Subarra 70.38 338 P **P 00 32 00.7 -1.6**
baz=35,slow=6.2
NB2 NORSAR Subarra 70.38 338 P **P 00 32 00.7 -1.6**
NB2 NORSAR Subarra 70.38 338 P **P 00 32 00.7 -1.6**
NOA NORSAR Array B 70.38 338 P **P 00 32 00.4 -1.8**
comp=Z,62nm,0.9s,mb5.5,baz=35,slow=6.1,SNR=75
NOA LR LR 01 07 14.8
comp=Z,202μm,19.3s,MS7.4,baz=30,slow=40
NOA NORSAR Array B 70.38 338 P **P 00 32 00.4 -1.8**
NOA LR LR 01 07 14.8
NOA NORSAR Array B 70.38 338 P **P 00 32 00.4 -1.9**
C20A Veseth Ranch, 70.49 43 ⇓P **P 00 32 03.8 +0.6**
baz=70,SNR=23
B21A Ellsworth Farm 70.51 42 ⇑P **P 00 32 04.0 +0.7**
baz=70,SNR=18
NVAR Mina Array Bea 70.61 56 P **P 00 32 01.6 -2.6**
comp=Z,21nm,0.7s,mb5.2,baz=286,slow=6.6,SNR=20
NVAR PKPPKP 01 00 01.3
comp=Z,0.5nm,0.5s,baz=132,slow=4.2,SNR=3.8
NVAR Mina Array Bea 70.61 56 P **P 00 32 01.6 -2.6**
NVAR P'P' 01 00 01.3
G17A Pierce Place, 70.62 46 ⇑P **P 00 32 04.2 +0.2**
baz=70,SNR=19
NAO01 NORSAR Array S 70.63 338⇑*i*P **P 00 32 04.0 +0.2**
comp=Z,128nm,1.0s,mb5.8
NAO01 *e*PcP PcP 00 32 24.4 -0.2
NAO01 S S 00 41 15.0 +0.5

NAO01 LR LR
comp=Z,198μm,19.0s,MS7.4
H16A Russell Place, 70.75 47 ⇑P **P 00 32 05.2 +0.4**
baz=71,SNR=11
F18A Big Timber 70.79 45 ⇓P **P 00 32 05.5 +0.5**
baz=71,SNR=15
D20A Manuel Ranch, 70.83 43 ⇓P **P 00 32 05.7 +0.4**
baz=71,SNR=16
SFJD Kangerlussuaq 70.83 6⇑*e*P **P 00 32 05.0 +0.1**
comp=Z,76nm,1.4s,mb5.4
SFJD *e*PP PP 00 34 41.4 -0.1
SFJD *e*S S 00 41 17.8 +1.1
SFJD LR LR
comp=Z,84μm,20.0s,MS7.0
SFJD Kangerlussuaq 70.83 6⇑*e*P **P 00 32 05.0 +0.1**
SFJD *e* 00 34 41.4
SFJD *e*S S 00 41 17.8 +1.1
SFJD MLR MLR
comp=Z,84μm,20.0s,MS7.0
C21A Desert Coulee 70.87 42 ⇑P **P 00 32 06.3 +0.8**
baz=71,SNR=8.7
E19A Rath Farm, Rou 70.91 44 ⇓P **P 00 32 07.0 +1.2**
baz=71,SNR=16
YMR Madison River 70.92 47 *e*P **P 00 32 08.0 +2.1**
comp=Z,224nm,1.2s,mb6.0
YMR *e*PcP PcP 00 32 27.2 +1.0
YMR *e*PP PP 00 34 44.3 +1.4
J15A Blackfoot 70.93 49 ⇑P **P 00 32 07.3 +1.4**
baz=71,SNR=11
DIGO Kars 70.93 307 *i*P **P 00 32 07.5 +1.4**
SOC Sochi 71.02 312*c i*P **P 00 32 07.3 +0.8**
SOC *i* *SP sP 00 32 18.1 -4.6
SOC *i* 00 32 27.4
SOC *i* 00 34 40.2
SOC *e*PPP 00 36 24.4
SOC *i*S S 00 41 19.6 0.0
SOC *e**SS sS 00 41 39.7 +0.6
SOC pmax pmax
comp=Z,341nm,1.4s,mb6.1
SOC pmax pmax
comp=Z,13μm,5.4s
YNR Norris Junctio 71.05 47 *e*P **P 00 32 09.1 +2.4**
comp=Z,364nm,1.4s,mb6.1
YNR *e*PcP PcP 00 32 28.1 +1.3
YNR *e*PP PP 00 34 44.6 +0.7
K14A Jones Ranch, D 71.06 50 ⇓P **P 00 32 07.7 +1.0**
baz=71,SNR=11
HMDM Hanimaadhoo 71.12 262 P **P 00 32 12.2 +4.7**
comp=Z,576nm,2.7s,mb6.0
YFT Old Faithful 71.13 47 *e*P **P 00 32 09.9 +2.8**
comp=Z,266nm,1.1s,mb6.1
I16A Newdale 71.15 48 ⇓P **P 00 32 08.9 +1.6**
baz=71,SNR=24
E20A Meyer Farm, Mu 71.22 44 ⇓P **P 00 32 09.2 +1.5**
baz=71,SNR=12
F19A Roth Farm, Mol 71.23 45 ⇓P **P 00 32 08.4 +0.7**
baz=71,SNR=17
DYDN Diyadin 71.29 307⇑*i*P **P 00 32 10.4 +2.2**
ARTV Artvin 71.30 309 *i*P **P 00 32 08.5 +0.3**
LKWY Lake 71.30 47⇑*e*P **P 00 32 09.9 +1.8**
comp=Z,199nm,1.1s,mb6.0
LKWY *e*PP PP 00 34 48.3 +2.2
LKWY *e*S S 00 41 26.1 +3.3
LKWY LR LR
comp=Z,89μm,19.0s,MS7.0
LKWY Lake 71.30 47⇑*e*P **P 00 32 09.9 +1.8**
LKWY *e* 00 34 48.3
LKWY *e*S S 00 41 26.1 +3.3
LKWY pmax pmax
comp=Z,199nm,1.1s,mb6.0
LKWY MLR MLR
comp=Z,89μm,19.0s,MS7.0
H17A Grant Village 71.31 47 ⇓P **P 00 32 11.2 +3.0**
baz=71,SNR=16
K15A Arbon 71.33 49 ⇓P **P 00 32 08.5 0.0**
baz=71,SNR=8.1
DBOC Borcka 71.34 309⇑*i*P **P 00 32 09.8 +1.3**
L14A Malta 71.35 50 ⇑P **P 00 32 08.2 -0.3**
baz=71,SNR=14
OSL Oslo 71.42 337 *e*P **P 00 32 09.6 +1.0**
D21A La Casta Ranch 71.43 43 ⇓P **P 00 32 09.4 +0.5**
baz=71,SNR=9.1
IMW Indian Meadow 71.44 47⇑*e*P **P 00 32 10.1 +1.1**
comp=Z,114nm,0.8s,mb5.8
IMW *e*PcP PcP 00 32 28.5 +0.1
J16A Bone 71.47 48 ⇑P **P 00 32 10.4 +1.2**
baz=71,SNR=24
ANN Anapa 71.48 314*c i*P **P 00 32 08.6 -0.6**
ANN *i*S S 00 41 27.4 +2.5
ANN pmax pmax
comp=E,103nm,2.2s
ANN pmax pmax
comp=Z,576nm,2.2s,mb6.1
ANN pmax pmax
comp=N,4μm,7.1s
ANN pmax pmax
comp=E,3μm,7.1s
ANN pmax pmax
comp=Z,12μm,7.1s
ANN smax
comp=N,14μm,12.2s
ANN smax
comp=E,19μm,12.2s
ANN smax
comp=Z,9μm,12.2s
TPH Tonopah 71.50 55 PFAKE 00 32 20.0 +10
TPH LR LR
comp=Z,32μm,19.0s,MS6.6
Q10A Clear Creek Ra 71.53 54 ⇑P **P 00 32 09.5 -0.2**
baz=71
RLMT Red Lodge 71.54 46 ⇓P **P 00 32 10.9 +1.3**
baz=71,SNR=15
RLMT Red Lodge 71.54 46 *e*P **P 00 32 10.9 +1.3**
comp=Z,444nm,1.6s,mb6.1
RLMT *e*PP PP 00 34 49.0 +0.9
RLMT *e*S S 00 41 26.8 +1.2
RLMT LR LR
comp=Z,54μm,20.0s,MS6.8
AKASG Malin Array Be 71.56 322 LR LR 01 07 20.4
comp=Z,255μm,18.3s,MS7.5,baz=40,slow=39
KIEV Kiev 71.57 322⇑*i*P **P 00 32 09.4 -0.3**
comp=Z,419nm,1.7s,mb6.1
KIEV *e*PP PP 00 34 44.8 -3.4
KIEV *e*S S 00 41 24.0 -1.7
KIEV LR LR
comp=Z,240μm,20.0s,MS7.5
KIEV Kiev 71.57 322⇑*i*P **P 00 32 09.4 -0.3**
KIEV *e* 00 34 44.8
KIEV *e*S S 00 41 24.0 -1.7
KIEV pmax pmax
comp=Z,419nm,1.7s,mb6.1
KIEV MLR MLR
comp=Z,240μm,20.0s,MS7.5
DDEM Demirkent 71.58 309 *i*P **P 00 32 11.8 +1.8**
H18A Shoshone NF, C 71.62 46 ⇓P **P 00 32 11.2 +1.1**
baz=71,SNR=9.9
I17A Pilgrim Ck. 71.62 47 ⇑P **P 00 32 10.0 -0.1**
baz=71,SNR=17
MOOW Moose Ponds 71.64 47 *e*P **P 00 32 11.3 +1.1**
F20A Billings 71.68 44 ⇑P **P 00 32 10.5 0.0**
baz=72,SNR=6.5
TPAW Teton Pass 71.69 48 *e*P **P 00 32 12.8 +2.2**
VES Vestal, Richgr 71.74 58 ⇑P **P 00 32 09.8 -1.2**
baz=72,SNR=5.5
SUW Suwalki 71.75 328 *e*P **P 00 32 10.1 -0.7**
comp=Z,8μm,3.7s
SUW *i*S S 00 41 29.3 +1.6
SUW *e*SS SS 00 46 00.9 -2.1
SUW LMZ 01 06 47.0
comp=Z,180μm,20.4s
SUW Suwalki 71.75 328⇑*e*P **P 00 32 10.1 -0.6**
SUW *i*S S 00 41 29.3 +1.5
SUW *e*SS SS 00 46 00.9 -2.1
SUW pmax pmax
comp=Z,8μm,3.7s
SUW MLR MLR
comp=Z,180μm,20.4s,MS7.3
K16A Soda Springs 71.77 49 ⇑P **P 00 32 10.9 -0.1**
baz=72,SNR=3.4
LOHW Long Hollow 71.81 47 *e*P **P 00 32 11.7 +0.5**
comp=Z,132nm,1.3s,mb5.7
LOHW *e*S PcP 00 32 30.8 +0.8
C23A Lambert 71.84 41 ⇓P **P 00 32 11.7 +0.3**
baz=72
L15A Malad City 71.86 50 ⇑P **P 00 32 10.8 -0.7**
baz=72,SNR=8.8

PKM	Peak Mountain	71.86	59	⇓P	P	00 32 12.5	+0.7
	baz=72,SNR=16						
DGMT	Dagmar	71.87	40	⇑P	P	00 32 11.4	-0.1
	baz=72,SNR=10						
DGMT	Dagmar	71.87	40	eP	P	00 32 11.6	0.0
	comp=Z,381nm,1.2s,mb6.2						
DGMT				ePP	PP	00 34 50.5	-0.4
DGMT				eS	S	00 41 29.8	+0.5
DGMT				LR	LR		
	comp=Z,125µm,22.0s,MS7.1						
J17A	Brown Place, J	71.91	48	⇑P	P	00 32 12.2	+0.3
	baz=72						
Q11A	Duckwater	71.97	54	⇓P	P	00 32 10.3	-2.0
	baz=72						
KONO	Kongsberg	71.98	338	⇑eP	P	00 32 12.2	+0.2
	comp=Z,399nm,1.7s,mb6.1						
KONO				PP	PP	00 34 51.1	-0.3
KONO				eS	S	00 41 29.9	-0.3
KONO				LR	LR		
	comp=Z,283µm,19.0s,MS7.6						
KONO	Kongsberg	71.98	338	⇑eP	P	00 32 12.2	+0.2
KONO						00 34 51.1	
KONO				eS	S	00 41 29.9	-0.3
KONO				pmax	pmax		
	comp=Z,399nm,1.7s,mb6.1						
KONO				MLR	MLR		
	comp=Z,283µm,19.0s,MS7.6						
S10A	Tonopah Range,	71.98	55	⇑P	P	00 32 12.2	-0.2
	baz=72,SNR=9.2						
H19A	Powell	71.99	46	⇑P	P	00 32 12.4	+0.1
	baz=72,SNR=6.0						
G20A	Bridger	72.03	45	⇑P	P	00 32 13.2	+0.6
	baz=72,SNR=7.2						
HOMI	Horasan	72.04	308	⇑iP	P	00 32 14.8	+2.1
LAO	LASA Array	72.08	43	⇑P	P	00 32 14.2	+1.4
	baz=72						
LAO	LASA Array	72.08	43	eP	P	00 32 13.5	+0.7
	comp=Z,400nm,1.4s,mb6.2						
LAO				ePP	PP	00 34 53.3	+0.7
LAO				eS	S	00 41 34.0	+2.3
LAO				LR	LR		
	comp=Z,82µm,21.0s,MS7.0						
SUE	Sulen	72.08	340	eP	P	00 32 14.0	+1.4
AHID	Auburn Hatcher	72.08	48	PFAKE		00 32 30.0	+17
AHID				LR	LR		
	comp=Z,63µm,22.0s,MS6.8						
GRAC	Grapevine Rang	72.08	56	⇓P	P	00 32 12.8	-0.2
	baz=72						
TVAN	Van	72.11	306	iP	P	00 32 16.0	+2.9
M15A	Larsen Ranch,	72.17	50	⇑P	P	00 32 15.0	+1.5
	baz=72,SNR=14						
I18A	Diamond G Ranc	72.18	47	⇓P	P	00 32 14.4	+0.9
	baz=72						
BGU	Big Grassy Mou	72.18	51	eP	P	00 32 17.2	+3.7
	comp=Z,2µm,0.7s,mb7.1						
F21A	Absaloka Mine,	72.20	44	⇑P	P	00 32 14.0	+0.4
	baz=72,SNR=9.9						
ISA	Isabella	72.24	58	⇓P	P	00 32 13.0	-1.0
	baz=72,SNR=9.3						
R11A	Troy Canyon, C	72.32	54	⇓P	P	00 32 12.5	-1.9
	baz=72,SNR=12						
ARVC	Arvin	72.35	59	⇓P	P	00 32 13.6	-1.1
	baz=72,SNR=7.5						
ARMA	Armidale	72.36	173	eP	P	00 32 14.3	-0.2
ARMA				eS	S	00 41 31.8	-3.2
L16A	Fish Haven	72.39	49	⇓P	P	00 32 15.5	+0.7
	baz=72,SNR=12						
J18A	Kendall Valley	72.39	47	⇓P	P	00 32 14.1	-0.7
	baz=72						
DAC	Darwin (Calif)	72.40	57	PFAKE		00 32 30.0	+15
DAC				LR	LR		
	comp=Z,40µm,22.0s,MS6.7						
I19A	Meeteetse	72.40	46	⇓P	P	00 32 16.5	+1.7
	baz=72,SNR=9.3						
ERZM	Erzurum	72.44	308	iP	P	00 32 13.3	-1.8
ASK	Askoy	72.47	340	eP	P	00 32 15.1	+0.2
RUND	Rundenannen	72.48	340	eP	P	00 32 15.6	+0.6
N15A	Stansbury Isla	72.50	51	⇑P	P	00 32 13.8	-1.6
	baz=72,SNR=14						
BER	Bergen	72.52	340	⇑iP	P	00 32 15.5	+0.3
BER				LR	LR		
	comp=Z,243µm,17.1s,MS7.5						
BER	Bergen	72.52	340	⇑iP	P	00 32 15.5	+0.3
BER				MLR	MLR		
	comp=Z,243µm,17.1s,MS7.5						
HAKT	HAKKARI	72.54	305	⇑iP	P	00 32 15.5	-0.3
G21A	Lodge Grass	72.56	44	⇓P	P	00 32 13.5	-2.2
	baz=72,SNR=8.8						
HWUT	Hardware Ranch	72.58	50	eP	P	00 32 17.1	+1.2
HWUT				ePP	PP	00 34 58.0	+0.9
HWUT				eS	S	00 41 40.1	+2.5
HWUT				LR	LR		
	comp=Z,52µm,20.0s,MS6.8						
MPMC	Manual Prospec	72.61	57	⇑P	P	00 32 13.9	-2.3
	baz=72,SNR=26						
H20A	Greybull	72.64	45	⇓P	P	00 32 15.2	-1.0
	baz=72						
L17A	Cokeville	72.65	49	⇑P	P	00 32 15.6	-0.7
	baz=72						
S11A	Rachel	72.67	55	⇓P	P	00 32 14.8	-1.7
	baz=72,SNR=11						
MACK	Trabzon	72.70	310	⇑iP	P	00 32 18.1	+1.5
M16A	Huntsville	72.73	50	⇑P	P	00 32 14.7	-2.2
	baz=73,SNR=9.8						
FURC	Furnace Creek,	72.74	56	⇑P	P	00 32 14.8	-2.1
	baz=73,SNR=13						
K18A	Toltan Ranch,	72.76	48	⇓P	P	00 32 15.8	-1.2
	baz=73						
DUG	Dugway	72.78	51	⇑P	P	00 32 14.8	-2.3
	baz=73,SNR=14						
DUG	Dugway	72.78	51	eP	P	00 32 17.7	+0.6
DUG				LR	LR		
	comp=Z,37µm,21.0s,MS6.6						
DUG	Dugway	72.78	51	eP	P	00 32 17.7	+0.6
DUG				MLR	MLR		
	comp=Z,37µm,21.0s,MS6.6						
LRMC	Laurel Mountai	72.85	58	P	P	00 32 17.9	+0.3
	baz=73,SNR=6.4						
KOPT	Kop Dagi	72.88	309	⇑iP	P	00 32 20.0	+2.3
J19A	Crowheart	72.88	47	⇑P	P	00 32 16.3	-1.4
	baz=73,SNR=18						
O15A	The Old Anders	72.93	51	⇑P	P	00 32 19.2	+1.2
	baz=73						
I20A	Worland	72.93	46	⇑P	P	00 32 17.1	-0.8
	baz=73,SNR=17						
BW06	Boulder Array	72.94	48	⇑P	P	00 32 17.7	-0.3
	baz=73,SNR=12						
BW06	Boulder Array	72.94	48	eP	P	00 32 18.1	0.0
	comp=Z,92nm,1.0s,mb5.7						
BW06				eS	S	00 41 43.9	+2.2
BW06				LR	LR		
	comp=Z,50µm,22.0s,MS6.8						
PDAR	Pinedale Array	72.94	48	P	P	00 32 17.9	-0.2
	comp=Z,11nm,0.5s,mb5.1,baz=300,slow=0.7,SNR=17						
PDAR	Pinedale Array	72.94	48	P	P	00 32 17.9	-0.2
BORG	Borgarnes	73.01	353	P	P	00 32 14.7	-3.4
	comp=Z,17nm,1.0s,baz=50,slow=7.9,SNR=2.4						
BORG	Borgarnes	73.01	353	eP	P	00 32 17.8	-0.3
	comp=Z,530nm,1.6s,mb6.2						
BORG				ePcP	PcP	00 32 35.0	+0.2
BORG				eS	S	00 41 42.5	+0.7
BORG				LR	LR		
	comp=Z,53µm,19.0s,MS6.8						
BORG	Borgarnes	73.01	353	eP	P	00 32 17.8	-0.3
BORG				e		00 32 35.0	
BORG				eS	S	00 41 42.5	+0.7
BORG				pmax	pmax		
	comp=Z,530nm,1.6s						
BORG				MLR	MLR		
	comp=Z,53µm,19.0s						
BORG	Borgarnes	73.01	353	P	P	00 32 21.0	+2.9
	comp=Z,662nm,1.3s,mb6.4,SNR=5.3						
P14A	Drum Mountains	73.03	52	⇑P	P	00 32 17.2	-1.4
	baz=73						
EDW2	Edwards Air Fo	73.04	58	⇑P	P	00 32 16.6	-2.2
	baz=73,SNR=12						
H21A	Big Horn, Sher	73.05	45	⇓P	P	00 32 18.8	+0.2
	baz=73,SNR=12						
N16A	Rees Ranch, Co	73.12	50	⇑P	P	00 32 19.3	+0.1
	baz=73						
M17A	Scullys Gap (B	73.18	49	⇓P	P	00 32 19.9	+0.5
	baz=73,SNR=7.3						
BNGL	BINGOL	73.19	307	⇑iP	P	00 32 20.7	+1.2
DECC	Green Verdugo	73.22	59	⇓P	P	00 32 20.0	+0.1
	baz=73						
L18A	Fontenelle, Gr	73.23	48	⇓P	P	00 32 20.0	+0.3
	baz=73,SNR=10.0						
S12A	Delamar Landin	73.24	54	⇑P	P	00 32 20.3	+0.4
	baz=73,SNR=14						
T11A	Corn Creek, Al	73.25	55	⇓P	P	00 32 20.1	+0.1
	baz=73						
K19A	Absolon Red Bu	73.29	47	⇑P	P	00 32 19.8	-0.3
	baz=73						
Q14A	Sevier Lake (B	73.29	52	⇓P	P	00 32 20.5	+0.3
	baz=73,SNR=18						
JLU	Jordanelle	73.30	50	eP	P	00 32 21.0	+0.8
J20A	Shoshoni	73.35	46	⇓P	P	00 32 20.2	-0.2
	baz=73						
N17A	Moffit Pass	73.43	50	⇓P	P	00 32 19.3	-1.7
	baz=73,SNR=12						
SHOC	Shoshone	73.46	57	⇓P	P	00 32 21.4	+0.2
	baz=73						
I21A	Big Trails, Te	73.47	46	⇓P	P	00 32 21.0	-0.1
	baz=73,SNR=20						
STKA	Stephens Creek	73.48	182	P	P	00 32 20.0	-1.1
	comp=Z,7.0nm,0.7s,mb4.7,baz=355,slow=9.0,SNR=8.0						
STKA	Stephens Creek	73.48	182	eP	P	00 32 20.8	-0.3
	comp=Z,27nm,0.9s,mb5.2						
STKA				eS	S	00 41 43.5	-4.2
STKA	Stephens Creek	73.48	182	P	P	00 32 20.0	-1.1
L19A	Farson	73.49	48	⇓P	P	00 32 22.0	+0.7
	baz=73						
P15A	Leamington	73.50	51	⇑P	P	00 32 21.3	-0.1
	baz=73,SNR=12						
KELT	Kelkit	73.51	309	iP	P	00 32 22.0	+0.5
GSC	Goldstone	73.52	57	⇓P	P	00 32 21.3	-0.3
	baz=73,SNR=7.0						
DAU	Daniels Canyon	73.54	50	eP	P	00 32 22.6	+1.0
DAU	Daniels Canyon	73.54	50	eP	P	00 32 22.6	+1.0
M18A	Lyman	73.54	49	⇓P	P	00 32 21.5	-0.1
	baz=73,SNR=8.3						
GRSN	GIRESUNGRSN	73.57	310	iP	P	00 32 18.5	-3.3
BFSC	Mount Baldy Ra	73.66	59	⇑P	P	00 32 21.8	-0.6
	baz=74,SNR=28						
K20A	Yellowstone Ra	73.68	47	⇓P	P	00 32 20.8	-1.6
	baz=74						
U11A	Corn Creek	73.68	56	⇑P	P	00 32 22.6	+0.1
	baz=74						
SOFL	Sornfelli, Far	73.69	346	P	P	00 32 22.3	+0.2
SOFL				AMB	AMB	00 32 23.8	
	comp=Z,779nm,3.7s						
SOFL	Sornfelli, Far	73.69	346	⇑eP	P	00 32 22.3	+0.2
SOFL				AMB	AMB	00 32 23.8	
	comp=Z,779nm,3.7s						
J21A	Lysite	73.70	46	⇑P	P	00 32 23.3	+0.8
	baz=74,SNR=14						
SHPR	Sheep Range	73.77	55	eP	P	00 32 23.8	+0.8
BEST	Besiri	73.80	306	iP	P	00 32 23.4	+0.2
FORT	Forrest	73.81	194	eP	P	00 32 17.4	-5.6
	comp=Z,101nm,0.8s,mb5.8						
FORT				eS	S	00 41 49.3	-2.1
FORT	Forrest	73.81	194	eP	P	00 32 22.8	-0.2
	comp=Z,307nm,1.3s,mb6.1						
FORT				ePP	PP	00 35 08.5	+0.1
Q15A	Fillmore	73.82	52	⇑P	P	00 32 21.9	-1.4
	baz=74,SNR=11						
P16A	Fountain Green	73.84	51	⇓P	P	00 32 22.6	-0.8
	baz=74						
S13A	Holt Ranch, En	73.86	54	⇓P	P	00 32 23.9	+0.4
	baz=74,SNR=17						
WAR	Warsaw	73.94	327	eP	P	00 32 25.0	+1.3
	comp=Z,15µm,4.1s						
WAR				eS	S	00 41 55.7	+3.0
WAR				LMZ		01 08 06.7	
	comp=Z,198µm,20.6s						
WAR	Warsaw	73.94	327	⇑eP	P	00 32 25.0	+1.3
WAR				eS	S	00 41 55.7	+3.0
WAR				MLR	MLR		
	comp=Z,198µm,20.6s,MS7.4						
O17A	Robinson Place	73.98	50	⇓P	P	00 32 25.3	+1.1
	baz=74,SNR=11						
TUQ	Turquoise Moun	73.98	57	⇓P	P	00 32 24.1	-0.1
	baz=74,SNR=14						
BSD	Bornholm Skovb	73.99	332	⇑iP	P	00 32 24.2	+0.2
BSD				i		00 35 06.1	
BSD				iS	S	00 41 53.0	-0.2
BSD				pmax	pmax		
	comp=Z,260nm,0.9s,mb6.2						
BSD	Bornholm Skovb	73.99	332	⇑iP	P	00 32 24.2	+0.2
	comp=Z,256nm,0.9s,mb6.2						
BSD				i		00 35 06.1	
BSD				iS	S	00 41 53.0	-0.2
N18A	Larsen Ranch,	74.07	49	⇑P	P	00 32 23.8	-0.8
	baz=74						
SUSE	Susehri	74.08	310	iP	P	00 32 24.4	-0.4
L20A	Wamsutter	74.12	48	⇑P	P	00 32 25.7	+0.8
	baz=74,SNR=11						
HEC	Hector,Ludlow	74.12	57	⇓P	P	00 32 25.5	+0.4
	baz=74,SNR=7.7						
S14A	Cedar City	74.16	53	⇓P	P	00 32 25.3	0.0
	baz=74						
J22A	Midwest	74.17	45	⇓P	P	00 32 25.3	0.0
	baz=74,SNR=22						
CCUT	Cedar City	74.18	54	eP	P	00 32 26.2	+0.8
CCUT				ePcP	PcP	00 32 41.3	+1.0
U12A	Valley of Fire	74.19	55	⇓P	P	00 32 26.3	+0.8
	baz=74						
T13A	Saint George	74.20	54	⇑P	P	00 32 24.6	-0.9
	baz=74,SNR=26						
MVU	Marysvale	74.24	52	PFAKE		00 32 40.0	+14
MVU				LR	LR		
	comp=Z,55µm,20.0s,MS6.8						
MSU	Marysvale	74.25	52	eP	P	00 32 26.5	+0.6
MSU	Marysvale	74.25	52	eP	P	00 32 26.5	+0.7
K21A	Alcova	74.29	46	⇓P	P	00 32 23.6	-2.3
	baz=74,SNR=11						
WAL1	Walls	74.29	343	P	P	00 32 26.5	+0.9
WAL1	Walls	74.29	343	⇑eP	P	00 32 26.5	+0.9
LRW	Lerwick	74.30	343	P	P	00 32 26.0	+0.3
LRW				AMB	AMB	00 32 27.9	
	comp=Z,464nm,4.2s						
LRW				AMS	AMS	01 09 43.4	
	comp=Z,70µm,19.0s						
LRW	Lerwick	74.30	343	eP	P	00 32 26.0	+0.3
LRW				AMB	AMB	00 32 27.9	
	comp=Z,464nm,4.2s						
LRW				AMS	AMS	01 09 43.4	
	comp=Z,70µm,19.0s,MS7.0						
TMUT	Trail Mountain	74.31	51	eP	P	00 32 27.3	+1.2
	comp=Z,28nm,0.6s,mb5.4						
O18A	Roosevelt	74.35	50	⇓P	P	00 32 27.0	+0.6
	baz=74,SNR=8.7						
MURC	Murrieta	74.36	59	⇑P	P	00 32 26.9	+0.4
	baz=74						
KIS	Kishinev	74.36	320	iP	P	00 32 25.0	-1.3
	comp=Z,5µm,3.3s						
KIS	Kishinev	74.36	320	iPcP	PcP	00 32 38.0	-2.9
KIS	Kishinev	74.36	320	iPP	PP	00 35 12.0	-0.1
KIS	Kishinev	74.36	320	ePS	SKSac	00 42 30.0	-0.9
KIS				eSS	SS	00 46 40.0	-3.1
KIS				eSSS		00 50 34.0	
KIS				LRM		01 10 06.0	
	comp=Z,152µm,16.0s						
KIS	Kishinev	74.36	320α	iP	P	00 32 25.0	-1.3
KIS				i	pP	00 32 38.0	-0.1
KIS				i		00 35 12.0	
KIS				eS	S	00 41 57.0	-0.6
KIS				ePS	SKSac	00 42 30.0	-0.9
KIS				eSS	SS	00 46 40.0	-3.1
KIS				pmax	pmax		
	comp=Z,5.0nm,3.3s						
KIS				pmax	pmax		
	comp=N,2µm,3.2s						
KIS				pmax	pmax		
	comp=E,2µm,3.0s						
KIS				pmax	pmax		
	comp=Z,15µm,10.0s						
KIS				pmax	pmax		
	comp=Z,20µm,18.0s						
KIS				MLR	MLR		
	comp=Z,247µm,16.0s,MS7.6						
KIS				MLR	MLR		
	comp=E,86µm,14.0s						
KIS				MLR	MLR		
	comp=Z,152µm,16.0s						
KIS	Kishinev	74.36	320	⇑iP	P	00 32 27.6	+1.3
COP	Copenhagen	74.37	334	⇑iP	P	00 32 27.0	+0.8
COP				iS	S	00 41 59.5	+2.1
COP				pmax	pmax		
	comp=Z,140nm,0.9s,mb5.9						
COP	Copenhagen	74.37	334	⇑iP	P	00 32 27.0	+0.8
	comp=Z,136nm,0.9s,mb5.9						
COP				iS	S	00 41 59.5	+2.1
N19A	John Jarvie Ra	74.40	49	⇑P	P	00 32 27.4	+0.8
	baz=74,SNR=8.0						
ULM	Lac du Bonnet	74.40	35	P	P	00 32 26.1	-0.3
	comp=Z,15nm,0.7s,baz=318,slow=6.8,SNR=9.5						
ULM				LR	LR	01 09 55.2	
	comp=Z,60µm,20.0s,MS6.9,baz=326,slow=40						
ULM	Lac du Bonnet	74.40	35	P	P	00 32 26.1	-0.3
ULM				LR	LR	01 09 55.2	
P17A	Butcher Ranch,	74.46	51	⇓P	P	00 32 25.9	-1.1
	baz=74,SNR=13						
V12A	Nelson	74.46	56	⇓P	P	00 32 25.8	-1.3
	baz=74,SNR=16						
DIYA	Diyarbakir	74.47	307	⇑iP	P	00 32 28.7	+1.6
MARD	Mardin	74.48	306	⇑iP	P	00 32 27.2	+0.1
LVV	L'vov	74.50	324	⇓iP	P	00 32 27.3	+0.2
LVV				e	pP	00 32 40.7	+1.9
LVV				e		00 35 15.1	
LVV				eS	S	00 41 58.1	-1.0
LVV				pmax	pmax		
	comp=N,2µm,6.0s						
LVV				pmax	pmax		
	comp=E,2µm,6.0s						
LVV				pmax	pmax		
	comp=Z,6µm,6.0s						
LVV				MLR	MLR		
	comp=Z,275µm,20.0s,MS7.5						
LVV				MLR	MLR		
	comp=N,168µm,21.0s,MS7.5						
LVV				MLR	MLR		
	comp=E,195µm,19.0s,MS7.5						
M20A	Sweetwater, Wa	74.55	48	⇑P	P	00 32 25.7	-1.8
	baz=74,SNR=7.8						
U13A	Pakoon Wash	74.56	55	⇓P	P	00 32 26.1	-1.6
	baz=74,SNR=18						
GMRC	Granite Mounta	74.57	57	⇓P	P	00 32 25.3	-2.4
	baz=74,SNR=8.1						
Q16A	Castle Valley	74.58	51	⇑P	P	00 32 26.5	-1.2
	baz=74						
GKP	Gorka Klasztor	74.62	330	eP	P	00 32 27.3	-0.4
	comp=E,11µm,3.9s						
GKP				iS	S	00 42 02.5	+2.2
GKP				LMZ		01 08 33.1	
	comp=E,501µm,19.9s						
GKP	Gorka Klasztor	74.62	330	⇑eP	P	00 32 27.3	-0.3
GKP				iS	S	00 42 02.5	+2.3
P18A	Preston Nutter	74.64	50	⇓P	P	00 32 25.9	-2.1
	baz=74						
T14A	Hurricane	74.67	54	⇑P	P	00 32 27.2	-1.1
	baz=74						
K22A	Casper	74.67	46	⇑P	P	00 32 28.1	0.0
	baz=74,SNR=10						
L21A	Rawlins	74.68	47	⇓P	P	00 32 29.6	+1.4
	baz=74,SNR=11						
W12A	Cal Nev Ari	74.72	56	⇑P	P	00 32 28.5	-0.2
	baz=75						
ELZG	Elazig	74.76	308	⇑iP	P	00 32 30.9	+2.2
MUD	Monsted U'grnd	74.77	336	⇑iP	P	00 32 29.2	+0.7
MUD				iS	S	00 42 04.6	+2.8
MUD				pmax	pmax		
	comp=Z,68nm,0.9s,mb5.6						
MUD	Monsted U'grnd	74.77	336	⇑iP	P	00 32 29.2	+0.7
	comp=Z,68nm,0.9s,mb5.6						
MUD				iS	S	00 42 04.6	+2.8
R16A	Teasdale	74.81	52	⇓P	P	00 32 29.6	+0.5
	baz=75,SNR=19						
IAS	Iasi	74.82	321	⇑P	P	00 32 28.8	-0.1
IAS	Iasi	74.82	321	⇑iP	P	00 32 28.8	-0.1
SRU	San Rafael	74.83	51	⇓P	P	00 32 27.7	-1.4
	baz=75,SNR=34						
PFO	Pinyon Flat Ob	74.83	58	⇓P	P	00 32 26.5	-2.7
	baz=75,SNR=10						
PFO	Pinyon Flat Ob	74.83	58	PFAKE		00 32 40.0	+11
PFO				LR	LR		
	comp=Z,62µm,22.0s,MS6.9						
O19A	Miners Draw (B	74.83	49	⇑P	P	00 32 28.3	-0.8
	baz=75						
BELC	Belle Mtn. Jos	74.86	58	⇓P	P	00 32 28.7	-0.7
	baz=75						
109C	Camp Elliot, M	74.88	59	⇑P	P	00 32 29.8	+0.3
	baz=75						
V13A	Grand Canyon W	74.91	55	⇑P	P	00 32 28.5	-1.2
	baz=75,SNR=20						
M21A	Separation Pea	74.92	47	⇑P	P	00 32 29.5	-0.2
	baz=75,SNR=11						
SCER	sogukcermik	74.92	310	⇑iP	P	00 32 31.2	+1.5
N20A	Spence Gulch,	74.95	48	⇑P	P	00 32 30.6	+0.8
	baz=75						
RSSD	Black Hills	74.96	44	PFAKE		00 32 40.0	+10
RSSD				LR	LR		
	comp=Z,70µm,22.0s,MS6.9						
RGN	Rugen	75.00	333	eP	P	00 32 29.5	-0.3
	comp=Z,218nm,0.7s,mb6.2						
U14A	Mt Trumbull	75.03	54	⇑P	P	00 32 31.1	+0.7
	baz=75,SNR=22						
BOYT	Boyabat	75.11	313	iP	P	00 32 31.0	+0.3
T15A	Red Dirt Ranch	75.12	54	⇓P	P	00 32 29.1	-1.8
	baz=75,SNR=10						
S16A	Weppner Ranch,	75.12	53	⇓P	P	00 32 29.5	-1.3
	baz=75,SNR=18						
R17A	Hanksville Air	75.18	52	⇓P	P	00 32 31.6	+0.4
	baz=75,SNR=11						
MALT	Malatya	75.21	308	Pn	P	00 32 30.9	-0.5
MALT				LR	LR		
	comp=Z,123µm,20.0s,MS7.2						
MALT	Malatya	75.21	308	⇓P	P	00 32 32.0	+0.6
MALT	Malatya	75.21	308	⇓iP	P	00 32 32.0	+0.6
MALT	Malatya	75.21	308	P	P	00 32 35.6	+4.2
	comp=Z,310nm,3.2s						
KWP	Kalwaria Pacla	75.22	325	eP	P	00 32 32.6	+1.5
	comp=Z,9µm,2.8s						
KWP				iS	S	00 42 10.5	+3.5
KWP				LMZ		01 09 08.8	
	comp=Z,400µm,19.9s						
KWP	Kalwaria Pacla	75.22	325	PFAKE		00 32 40.0	+8.8
KWP				LR	LR		
	comp=Z,416µm,19.0s,MS7.8						
KWP	Kalwaria Pacla	75.22	325	⇑eP	P	00 32 32.6	+1.4
KWP				iS	S	00 42 10.5	+3.5
KWP				pmax	pmax		
	comp=Z,9µm,2.8s						
KWP				MLR	MLR		
	comp=Z,400µm,19.9s,MS7.7						
KWP	Kalwaria Pacla	75.22	325	⇑iP	P	00 32 32.2	+1.0
KWP	Kalwaria Pacla	75.22	325	⇓iP		00 42 16.8	
IRM	Iron Mountain	75.29	57	⇓P	P	00 32 31.9	0.0
	baz=75,SNR=8.0						
MONP	Monument Peak	75.31	59	⇓P	P	00 32 31.1	-1.0
	baz=75						
P19A	Cripple Cowboy	75.36	50	⇓P	P	00 32 32.2	0.0
	baz=75,SNR=10.0						
N21A	Black Mountain	75.42	48	⇑P	P	00 32 31.6	-0.9
	baz=75						
BC3	Big Chuckawall	75.43	58	⇑P	P	00 32 30.6	-2.1
	baz=75,SNR=18						
O20A	White River Ci	75.44	49	⇑P	P	00 32 31.1	-1.5
	baz=75,SNR=16						
L23A	Garrett	75.48	46	⇓P	P	00 32 32.1	-0.7
	baz=75,SNR=11						
M22A	Cedar Creek Ra	75.48	47	⇓P	P	00 32 34.1	+1.2
	baz=75,SNR=7.2						
AKCD	Akcadag	75.52	309	⇑iP	P	00 32 35.4	+2.3
U15A	North Rim	75.56	54	⇑P	P	00 32 32.6	-0.8
	baz=75,

GHRR		75.71	320	⇑*i*P	P	00 32 34.6 +0.5
CTKT	Corum	75.72	312	*i*P	P	00 32 32.3 -1.9
TESR		75.75	321	⇓*i*P	P	00 32 34.4 +0.1
P20A	De Beque	75.78	49	⇑P	P	00 32 34.2 -0.4
	baz=76					
PDMCI	Parker Dam,Lak	75.83	57	⇓P	P	00 32 34.7 -0.2
	baz=76					
X13A	Yucca	75.83	56	⇓P	P	00 32 30.9 -4.1
	baz=76					
ATAB	Bozova	75.85	308	*i*P	P	00 32 35.9 +0.8
BALT	Daday	75.86	313	*i*P	P	00 32 33.7 -1.3
AGMN	Agassiz Nation	75.86	36	*e*P	P	00 32 33.9 -1.0
	comp=Z,104nm,1.1s,mb5.7					
AGMN				*e*S	S	00 42 16.8 +2.5
AGMN				LR	LR	
	comp=Z,91μm,22.0s,MS7.0					
W14A	Seligman	75.89	55	⇓P	P	00 32 34.2 -1.0
	baz=76,SNR=22					
M23A	Laramie	75.92	47	⇑P	P	00 32 33.0 -2.3
	baz=76,SNR=6.9					
KOLS	Kolonicke sedl	75.93	325	*e*P	P	00 32 34.1 -1.2
	comp=Z,2μm,3.2s					
KOLS				*e*PP	PP	00 35 25.2 -0.1
KOLS				*e*S	S	00 42 15.7 +0.8
KOLS				LR	LR	
	comp=Z,255μm,19.0s,MS7.5					
KOLS	Kolonicke sedl	75.93	325	*e*P	P	00 32 34.1 -1.2
KOLS				*e*		00 35 25.2
KOLS				*e*S	S	00 42 15.7 +0.8
KOLS				pmax	pmax	
	comp=Z,2μm,3.2s					
KOLS				MLR	MLR	
	comp=Z,255μm,19.0s,MS7.5					
KOLS	Kolonicke sedl	75.93	325	*e*P	P	00 32 34.1 -1.2
KOLS				*e*PP	PP	00 35 25.2 -0.1
KOLS				*e*S	S	00 42 15.7 +0.8
Y12C	Blythe	75.95	57	⇑P	P	00 32 33.8 -1.9
	baz=76,SNR=9.6					
N22A	Wattenberg Ran	75.97	47	⇑P	P	00 32 33.9 -1.8
	baz=76,SNR=7.2					
OJC	Ojcow	75.99	327	*i*P	P	00 32 36.7 +1.1
OJC				*e*PcP	PcP	00 32 49.0 +1.2
OJC				*e*PP	PP	00 35 26.1 +0.4
OJC				*e*S	S	00 42 17.3 +1.8
OJC				L		01 09 53.0
	comp=Z,251nm,18.6s					
OJC	Ojcow	75.99	327	P	P	00 32 34.9 -0.7
OJC	Ojcow	75.99	327	*e*P	P	00 32 36.7 +1.1
OJC				*e*	pP	00 32 49.0 +1.6
OJC				*e*		00 35 26.1
OJC				*e*S	S	00 42 17.3 +1.8
CFR	Carcaliu	76.00	319	P	P	00 32 37.8 +2.1
CFR	Carcaliu	76.00	319	P	P	00 32 37.9 +2.2
CFR	Carcaliu	76.00	319	⇓*i*P	P	00 32 37.0 +1.3
ILGA	Ilgaz	76.02	313	⇑*i*P	P	00 32 37.7 +1.8
V15A	Kaibab Nationa	76.04	54	⇑P	P	00 32 35.3 -0.9
	baz=76,SNR=14					
PETR		76.04	320	⇑*i*P	P	00 32 37.5 +1.5
S18A	Hurst Farm, Bl	76.08	52	⇓P	P	00 32 34.9 -1.5
	baz=76					
PINB	Pinarbasi	76.14	310	⇑*i*P	P	00 32 36.3 -0.3
UZH	Uzhgorod	76.15	324	*e*P	P	00 32 38.3 +1.8
UZH				*e*		00 32 54.3
UZH				*e*		00 35 36.0
UZH				*e*S	S	00 42 19.7 +2.3
UZH				*e*		00 42 52.9
UZH				*e*PS		00 43 10.1
UZH				*e*SS	SS	00 47 15.9 +5.8
UZH				MLR	MLR	
	comp=N,190μm,16.0s,MS7.6					
UZH				MLR	MLR	
	comp=E,152μm,16.0s,MS7.6					
UZH				MLR	MLR	
	comp=Z,143μm,16.0s,MS7.4					
VRI	Vrincioaia	76.18	320	P	P	00 32 39.6 +2.8
VRI	Vrincioaia	76.18	320	P	P	00 32 39.7 +2.9
VRI	Vrincioaia	76.18	320	⇑*i*P	P	00 32 38.1 +1.3
VRI	Vrincioaia	76.18	320	⇓*i*P	sS	00 42 36.1 -1.3
N23A	Red Feather La	76.19	47	⇓P	P	00 32 36.7 -0.2
	baz=76,SNR=8.0					
Q20A	Ridgley Place,	76.21	50	⇓P	P	00 32 36.8 -0.2
	baz=76,SNR=9.7					
GLA	Glamis	76.22	58	⇓P	P	00 32 37.2 0.0
	baz=76,SNR=9.1					
PLOR	Plostina	76.23	320	P	P	00 32 39.9 +2.9
PLOR	Plostina	76.23	320	⇑*i*P	P	00 32 37.7 +0.7
CRVS	Cervenica-Dubn	76.30	325	*e*P	P	00 32 36.8 -0.6
	comp=Z,2μm,3.0s					
CRVS				*e*PP	PP	00 35 28.1 -0.3
CRVS				*e*S	S	00 42 22.3 +3.3
CRVS				LR	LR	
	comp=Z,190μm,19.2s,MS7.4					
CRVS	Cervenica-Dubn	76.30	325	*e*P	P	00 32 36.8 -0.6
CRVS				*e*		00 35 28.1
CRVS				*e*S	S	00 42 22.3 +3.3
CRVS				pmax	pmax	
	comp=Z,2μm,3.0s					
CRVS				MLR	MLR	
	comp=Z,190μm,19.2s,MS7.4					
CRVS	Cervenica-Dubn	76.30	325	*e*P	P	00 32 36.8 -0.6
CRVS				*e*PP	PP	00 35 28.1 -0.3
CRVS				*e*S	S	00 42 22.3 +3.3
BMR	Baia Mare	76.34	323	P	P	00 32 40.4 +2.8
BMR	Baia Mare	76.34	323	P	P	00 32 40.5 +2.9
BMR	Baia Mare	76.34	323	⇓*i*P	P	00 32 39.5 +1.9
GZT	Gaziantep	76.36	308	*i*P	P	00 32 37.7 -0.3
O22A	Kremmling	76.37	48	⇑P	P	00 32 38.0 +0.1
	baz=76,SNR=7.5					
TIRR	Tirgusor	76.38	318	P	P	00 32 40.0 +2.1
TIRR	Tirgusor	76.38	318	⇑P	P	00 32 38.0 +0.1
TIRR	Tirgusor	76.38	318	⇑*i*P	P	00 32 38.0 +0.1
NIE	Niedzica	76.39	326	*e*P	P	00 32 37.2 -0.7
NIE	Niedzica	76.39	326	P	P	00 32 38.1 +0.2
NIE	Niedzica	76.39	326	*e*P	P	00 32 37.2 -0.7
M24A	Cheyenne	76.40	46	⇑P	P	00 32 38.3 +0.2
	baz=76,SNR=18					
W15A	Williams	76.41	55	⇓P	P	00 32 37.9 -0.4
	baz=76,SNR=18					
GRER		76.42	320	⇓*i*P	P	00 32 38.9 +0.8
TRPA	Tarpa	76.42	324	⇓*i*P	P	00 32 38.9 +0.8
U17A	Shonto	76.42	53	⇓P	P	00 32 38.4 +0.1
	baz=76					
U16A	Tuba City	76.45	54	⇓P	P	00 32 37.6 -0.9
	baz=76,SNR=14					
X14A	Yava	76.50	56	⇓P	P	00 32 37.7 -1.1
	baz=76,SNR=21					
RUE	Ruedersdorf	76.51	331	*e*P	P	00 32 38.1 -0.4
	comp=Z,1μm,1.8s,mb6.5					
T18A	Mexican Hat	76.53	52	⇓P	P	00 32 36.9 -2.0
	baz=76					
S19A	Harvey Farm, M	76.55	51	⇓P	P	00 32 37.4 -1.6
	baz=76,SNR=15					
ELDT	Eldivan	76.56	313	⇑*i*P	P	00 32 40.4 +1.4
P22A	Eagle	76.64	49	⇓P	P	00 32 39.3 -0.2
	baz=76,SNR=11					
CDAG	Cicekdag	76.64	312	⇑*i*P	P	00 32 40.4 +0.9
CVD	Cernavoda	76.67	318	⇑P	P	00 32 40.0 +0.4
CVD	Cernavoda	76.67	318	⇑*i*P	P	00 32 40.0 +0.4
O23A	Lake Granby, G	76.68	48	⇑P	P	00 32 38.5 -1.2
	baz=76,SNR=14					
R20A	Redvale	76.69	50	⇑P	P	00 32 40.6 +0.8
	baz=76,SNR=15					
DOPR	Dopca	76.74	321	⇓*i*P	P	00 32 41.1 +1.2
RAC	Raciborz	76.74	327	*e*P	P	00 32 38.8 -1.1
PGOR	Pogoanele	76.75	319	⇑*i*P	P	00 32 40.7 +0.7
Y14A	Wickenburg	76.78	56	P	P	00 32 40.7 +0.3
	baz=77,SNR=12					
RSC	Scourie	76.79	344	P	P	00 32 40.4 +0.5
RSC	Scourie	76.79	344	*e*P	P	00 32 40.4 +0.5
AMRR	Amara	76.80	319	⇑*i*P	P	00 32 40.0 -0.3
ISR	Istrita	76.81	320	⇑P	P	00 32 41.5 +1.1
ISR	Istrita	76.81	320	⇑*i*P	P	00 32 41.5 +1.1
N24A	Carr	76.82	47	⇓P	P	00 32 41.2 +0.8
	baz=77					
MLR	Muntele Rosu	76.83	320	P	P	00 32 40.6 +0.2
MLR	Muntele Rosu	76.83	320	⇓P	P	00 32 41.0 +0.6
MLR	Muntele Rosu	76.83	320	P	P	00 32 43.3 +2.9
MLR	Muntele Rosu	76.83	320	⇓*i*P	P	00 32 41.0 +0.6
MLR	Muntele Rosu	76.83	320	⇑*i*P	sS	00 42 41.4 -3.2
Z13A	Yuma Proving G	76.86	57	P	P	00 32 40.5 -0.3
	baz=77,SNR=22					
X15A	Humboldt	76.89	55	⇑P	P	00 32 41.3 +0.3
	baz=77,SNR=20					
KSP	Ksiaz	76.89	329	*e*P	P	00 32 41.0 +0.3
	comp=Z,13μm,3.8s					
KSP				*i*S	S	00 42 28.1 +2.7
KSP				LMZ		01 09 43.7
	comp=Z,461μm,21.2s					
KSP	Ksiaz	76.89	329	P	P	00 32 40.7 0.0
KSP	Ksiaz	76.89	329	P	P	00 32 40.7 0.0
W16A	Flagstaff	76.91	55	⇑P	P	00 32 39.8 -1.3
	baz=77,SNR=12					
S20A	Disappointment	76.94	51	⇑P	P	00 32 41.8 +0.6
	baz=77,SNR=9.1					
AVNT	Avonos	76.95	311	*i*P	P	00 32 40.7 -0.6
OKC	Ostrava-Krasne	76.96	327	P	P	00 32 41.5 +0.4
OKC	Ostrava-Krasne	76.96	327	*e*P	P	00 32 40.8 -0.3
OKC				*e*		00 37 27.6
OKC				*e*S	S	00 42 30.6 +4.4
OKC				MLR	MLR	
	comp=Z,186μm,16.0s,MS7.5					
OKC	Ostrava-Krasne	76.96	327	*e*P	P	00 32 40.8 -0.3
OKC				*e*x	x	00 35 50.2
OKC				*e*x	x	00 37 27.6
OKC				*e*S	S	00 42 30.6 +4.4
OKC				*e*x	x	00 47 58.4
OKC				AMS	AMS	01 11 00.0
	comp=Z,186μm,16.0s					
MVH1	Achvaich	76.97	343	P	P	00 32 41.2 +0.2
MVH1	Achvaich	76.97	343	*e*P	P	00 32 41.2 +0.2
BR131	Keskin Array S	76.98	312	*e*P	P	00 32 40.7 -0.7
	comp=Z,521nm,1.7s,mb6.2					
BR131				*e*PP	PP	00 35 32.5 -1.9
BR131				*e*S	S	00 42 27.8 +1.0
BR131				LR	LR	
	comp=Z,60μm,20.0s,MS6.9					
BRTR	Keskin Array B	76.98	312	P	P	00 32 40.8 -0.6
	comp=Z,42nm,0.9s,mb5.3,baz=83,slow=3.2,SNR=34					
BRTR				PP	PP	00 35 38.5 +4.1
	comp=Z,37nm,0.9s,baz=66,slow=4.5,SNR=5.3					
BRTR				S	S	00 42 33.5 +6.8
	comp=Z,1.2nm,1.0s,baz=59,slow=12,SNR=2.5					
BRTR				LR	LR	01 14 49.3
	comp=Z,74μm,18.4s,MS7.0,baz=208,slow=42					
BRTR	Keskin Array B	76.98	312	P	P	00 32 40.8 -0.6
BRTR				PP	PP	00 35 38.5 +4.1
BRTR				S	S	00 42 33.5 +6.8
BRTR				LR	LR	01 14 49.3
BRTR	Keskin Array B	76.98	312	P	P	00 32 40.8 -0.6
BRTR						00 35 38.5
BRTR				S	S	00 42 33.6 +6.8
V17A	Tonalea, Kykot	77.00	54	⇓P	P	00 32 40.4 -1.2
	baz=77,SNR=22					
CAN	Canberra	77.03	176	*e*P	P	00 32 43.4 +2.0
	comp=Z,149nm,1.4s,mb5.7					
CAN				LR	LR	
	comp=Z,36μm,19.0s,MS6.7					
CAN	Canberra	77.03	176	*e*P	P	00 32 43.4 +2.0
CAN				pmax	pmax	
	comp=Z,149nm,1.4s,mb5.7					
CAN				MLR	MLR	
	comp=Z,36μm,19.0s,MS6.7					
R21A	Cimarron	77.04	50	⇑P	P	00 32 41.4 -0.4
	baz=77,SNR=10					
KECS	Kecovo	77.04	325	*e*P	P	00 32 41.0 -0.6
	comp=Z,51nm,1.6s,mb5.2					
KECS	Kecovo	77.04	325	*e*P	P	00 32 41.0 -0.6
KECS	Kecovo	77.04	325	*e*P	P	00 32 41.0 -0.6
CNB	Canberra Magne	77.05	175	*e*P	P	00 32 39.7 -1.8
CNB				*e*S	S	00 42 24.2 -2.9
Q22A	Crested Butte,	77.06	49	⇑P	P	00 32 42.1 +0.3
	baz=77,SNR=9.2					
MCD	Coleburn Disti	77.08	343	P	P	00 32 42.8 +1.2
MCD	Coleburn Disti	77.08	343	*e*P	P	00 32 42.8 +1.2
113A	Mohawk Valley,	77.08	58	⇑P	P	00 32 41.5 -0.5
	baz=77					
ISCO	Idaho Springs	77.13	48	⇑P	P	00 32 41.1 -1.2
	baz=77,SNR=11					
ISCO	Idaho Springs	77.13	48	*e*P	P	00 32 43.5 +1.3
ISCO				*e*PP	PP	00 35 35.0 -0.7
ISCO				*e*S	S	00 42 29.1 +0.6
ISCO				LR	LR	
	comp=Z,66μm,22.0s,MS6.9					
ISCO	Idaho Springs	77.13	48	*e*P	P	00 32 43.5 +1.2
ISCO				*e*		00 35 35.0
ISCO				*e*S	S	00 42 29.1 +0.7
ISCO				MLR	MLR	
	comp=Z,66μm,22.0s,MS6.9					
LIKS	Likavka	77.18	326	*e*P	P	00 32 44.6 +2.3
	comp=Z,126nm,1.3s,mb5.7					
LIKS	Likavka	77.18	326	*e*P	P	00 32 44.6 +2.3
LIKS				pmax	pmax	
	comp=Z,126nm,1.3s,mb5.7					
LIKS	Likavka	77.18	326	*e*P	P	00 32 44.6 +2.3
Y15A	Casa Rosa Ranc	77.18	56	⇓P	P	00 32 42.3 -0.3
	baz=77,SNR=13					
Z14A	Wintersburg	77.20	57	⇑P	P	00 32 41.6 -1.1
	baz=77					
O24A	Longmont	77.20	47	⇑P	P	00 32 41.8 -0.9
	baz=77,SNR=9.5					
T19A	Beclabito	77.24	52	⇓P	P	00 32 42.2 -0.7
	baz=77,SNR=10					
MORC	Moravsky Berou	77.25	328	P	P	00 32 42.4 -0.3
MORC	Moravsky Berou	77.25	328	P	P	00 32 42.4 -0.3
MORC	Moravsky Berou	77.25	328	⇑P	P	00 32 43.1 +0.4
MORC	Moravsky Berou	77.25	328	⇑*i*P	P	00 32 43.1 +0.4
MORC	Moravsky Berou	77.25	328	⇑*i*P	sS	00 42 45.5 -3.5
MME1	Meikle Cairn	77.25	342	P	P	00 32 43.5 +0.9
MME1	Meikle Cairn	77.25	342	⇑*e*P	P	00 32 43.5 +0.9
UPC	Upice	77.27	329	P	P	00 32 42.1 -0.7
UPC	Upice	77.27	329	*e*P	P	00 32 42.4 -0.4
UPC	Upice	77.27	329	*e*P	P	00 32 42.4 -0.4
DPC	Dobruska-Polom	77.27	329	P	P	00 32 42.8 0.0
DPC	Dobruska-Polom	77.27	329	*e*P	P	00 32 42.7 -0.1
DPC				*e*		00 35 39.6
DPC				*e*S	S	00 42 34.1 +4.5
DPC				MLR	MLR	
	comp=Z,212μm,16.5s,MS7.5					
DPC	Dobruska-Polom	77.27	329	*e*P	P	00 32 42.7 -0.1
DPC				*e*PP	PP	00 35 39.6 +3.1
DPC				*e*x	x	00 37 34.2
DPC				*e*S	S	00 42 34.1 +4.5
DPC				*e*x	x	00 48 32.6
DPC				AMS	AMS	01 10 50.0
	comp=Z,212μm,16.5s					
SULR		77.28	320	P	P	00 32 44.8 +1.8
SULR		77.28	320	⇑*i*P	P	00 32 42.7 -0.3
VOIR		77.29	321	P	P	00 32 46.0 +3.0
VOIR		77.29	321	⇓P	P	00 32 43.1 +0.1
VOIR		77.29	321	⇓*i*P	P	00 32 43.0 0.0
P23A	Jefferson	77.31	48	⇑P	P	00 32 41.7 -1.5
	baz=77					
DRGR		77.36	323	P	P	00 32 43.0 -0.4
DRGR		77.36	323	⇑P	P	00 32 43.8 +0.4
DRGR		77.36	323	⇑*i*P	P	00 32 43.8 +0.4
RRR	Rubha Reidh	77.37	344	P	P	00 32 43.0 -0.3
RRR	Rubha Reidh	77.37	344	⇑*e*P	P	00 32 43.0 -0.3
S21A	Coal Bank Pass	77.38	51	⇑P	P	00 32 43.1 -0.6
	baz=77,SNR=12					
X16A	Lo Mia Camp, P	77.42	55	⇑P	P	00 32 43.0 -1.0
	baz=77,SNR=24					
MDO	Dochfour	77.45	343	P	P	00 32 44.2 +0.6
MDO	Dochfour	77.45	343	*e*P	P	00 32 44.2 +0.6
V18A	Ganado	77.46	53	⇑P	P	00 32 43.0 -1.2
	baz=77,SNR=14					
RRH	Rhenigidale	77.49	344	P	P	00 32 44.8 +0.8
RRH	Rhenigidale	77.49	344	*e*P	P	00 32 44.8 +0.8
U19A	Dine' College,	77.50	52	⇓P	P	00 32 42.0 -2.4
	baz=77,SNR=19					
KAC	Achnashellach	77.60	344	P	P	00 32 43.9 -0.7
KAC	Achnashellach	77.60	344	*e*P	P	00 32 43.9 -0.7
Q23A	Hartsel	77.64	49	⇓P	P	00 32 44.3 -0.8
	baz=77					
114A	Black Gap (USA	77.64	57	⇑P	P	00 32 43.9 -1.3
	baz=78,SNR=13					
HENT	Hendek	77.70	314	*i*P	P	00 32 45.5 +0.1
VYHS	Vyhne	77.72	326	*e*P	P	00 32 44.5 -0.9
	comp=Z,1μm,2.9s,mb6.4					
VYHS				*e*PP	PP	00 35 41.7 +1.4
VYHS				*e*S	S	00 42 36.9 +2.4
VYHS				LR	LR	
	comp=Z,101μm,20.7s,MS7.1					
VYHS	Vyhne	77.72	326	*e*P	P	00 32 44.5 -0.9
VYHS				*e*		00 35 41.7
VYHS				*e*S	S	00 42 36.9 +2.4
VYHS				pmax	pmax	
	comp=Z,1μm,2.9s,mb6.4					
VYHS				MLR	MLR	
	comp=Z,101μm,20.7s,MS7.1					
VYHS	Vyhne	77.72	326	*e*P	P	00 32 44.5 -0.9
VYHS				*e*PP	PP	00 35 41.7 +1.4
VYHS				*e*S	S	00 42 36.9 +2.4
PSZ	Piszkesteto	77.73	325	P	P	00 32 45.5 +0.1
PSZ				LR	LR	
	comp=Z,396μm,20.0s,MS7.7					
PSZ	Piszkesteto	77.73	325	⇓P	P	00 32 45.8 +0.4
PSZ	Piszkesteto	77.73	325	⇓*i*P	P	00 32 45.8 +0.4
O25A	Wiggins	77.73	47	⇑P	P	00 32 46.5 +0.9
	baz=78,SNR=9.7					
CLL	Collm	77.75	331	*e*P	P	00 32 43.5 -2.0
	comp=Z,454nm,1.5s,mb6.2					
CLL	Collm	77.75	331	*e*P	P	00 32 44.0 -1.5
	comp=Z,293nm,1.1s,mb6.1					
CLL				*e*S	S	00 42 38.0 +3.3
CLL				LR	LR	
	comp=Z,447μm,20.1s,MS7.8					
CLL	Collm	77.75	331	*i*P	P	00 32 49.5 +4.0
CLL	Collm	77.75	331	*e*P	P	00 32 44.0 -1.5
CLL				*i*		00 32 49.5
CLL				*e*S	S	00 42 38.0 +3.3
CLL				pmax	pmax	
	comp=Z,354nm,1.1s,mb6.2					
CLL	Collm	77.75	331	*e*P	P	00 32 44.0 -1.5
	comp=Z,293nm,1.1s,mb6.1					
CLL				*i*P(2)		00 32 46.8
	comp=Z,142nm,0.9s					
CLL				*e*Plp		00 32 48.0
	comp=Z,16μm,21.4s					
CLL				*i*		00 32 49.5
	comp=Z,293nm,1.1s					
CLL				*i*sP	sP	00 32 58.3 -3.5
CLL				*e*PPk		00 35 33.0
CLL				*e*PPlp		00 35 44.0
	comp=Z,7μm,22.3s					
CLL				*e*PPP		00 37 36.0
CLL				*e*S	S	00 42 38.0 +3.3
	comp=N,12μm,23.6s					
CLL				*e*S	S	00 42 38.0 +3.3
	comp=E,34μm,23.7s					
CLL				*i*ScS	ScS	00 43 04.3 +3.2
CLL				*e*PS		00 43 21.0
CLL				*e*PPS		00 43 37.0
CLL				*e*(SS)		00 48 24.0
CLL				*e*(SSS)		00 51 48.0
CLL				Lm		01 10 00.0
	comp=N,318μm,19.7s					
CLL				Lm		01 10 00.0
	comp=E,168μm,19.9s					
CLL				Lm		01 10 00.0
	comp=Z,447μm,20.1s					
BRG	Berggiesshubel	77.76	330	*e*P	P	00 32 43.9 -1.6
	comp=Z,3μm,3.2s					
BRG	Berggiesshubel	77.76	330	*i*P	P	00 32 44.2 -1.4
	comp=Z,80nm,1.3s,mb5.5					
BRG				*e*		00 32 48.6
	comp=Z,220nm,1.5s					
BRG				*e*		00 32 59.9
	comp=Z,349nm,1.5s					
BRG				*e*		00 33 12.8
	comp=Z,205nm,1.5s					
BRG				*e*		00 33 42.5
	comp=Z,758nm,2.1s					
BRG				PP	PP	00 35 46.3 +5.7
	comp=Z,118nm,1.4s					
BRG				S	S	00 42 39.0 +4.2
BRG				SS	SS	00 48 39.0 +65
BRG						
	comp=Z,362μm,17.0s					
BRG						
	comp=N,321μm,18.9s					
BRG						
	comp=E,142μm,18.9s					
BRG	Berggiesshubel	77.76	330	*i*P	P	00 32 44.2 -1.3
BRG				*e*		00 32 59.9
BRG						00 35 46.3
BRG				S	S	00 42 39.0 +4.2
BRG				pmax	pmax	
	comp=Z,44nm,1.3s,mb5.2					
BRG				pmax	pmax	
	comp=Z,454nm,1.4s,mb6.2					
BRG				MLR	MLR	
	comp=Z,70μm,17.0s,MS7.1					
BRG				MLR	MLR	
	comp=N,217μm,18.9s,MS7.6					
BRG				MLR	MLR	
	comp=E,192μm,18.9s,MS7.6					
Y16A	Circle Bar Ran	77.76	55	⇓P	P	00 32 45.3 -0.5
	baz=78,SNR=16					
NRDL	Niedersach Rie	77.78	333	*e*P	P	00 32 44.0 -1.6
	comp=Z,3μm,3.0s					
PVCC	Panska Ves	77.80	330	P	P	00 32 45.4 -0.4
PVCC	Panska Ves	77.80	330	*e*P	P	00 32 45.1 -0.7
PVCC				*e*		00 35 43.3
PVCC				*e*S	S	00 42 40.1 +4.8
PVCC				MLR	MLR	
	comp=Z,276μm,21.1s,MS7.5					
PVCC	Panska Ves	77.80	330	*e*P	P	00 32 45.1 -0.7
PVCC				*e*PP	PP	00 35 43.3 +2.4
PVCC				*e*x	x	00 37 40.8
PVCC				*e*S	S	00 42 40.1 +4.8
PVCC				*e*x	x	00 48 38.7
PVCC				AMS	AMS	01 09 40.0
	comp=Z,276μm,21.1s					
KPL	Plockton	77.82	344	P	P	00 32 45.8 +0.1
KPL				AMB	AMB	00 32 48.0
	comp=Z,552nm,3.9s					
KPL				AMS	AMS	01 12 42.0
	comp=Z,54μm,18.9s					
KPL	Plockton	77.82	344	⇑*e*P	P	00 32 45.8 +0.1
KPL				AMB	AMB	00 32 48.0
	comp=Z,552nm,3.9s					
KPL				AMS	AMS	01 12 42.0
	comp=Z,54μm,18.9s,MS6.9					
KOLL	Kolacno	77.84	326	*e*P	P	00 32 45.9 -0.1
KOLL	Kolacno	77.84	326	*e*P	P	00 32 45.9 -0.1
KOLL	Kolacno	77.84	326	*e*P	P	00 32 45.9 -0.1
U20A	Newcomb	77.84	52	⇓P	P	00 32 44.8 -1.5
	baz=78					
YURE	YUREGIR	77.85	309	*i*P	P	00 32 44.0 -2.4
X17A	Forest Lakes	77.86	55	⇓P	P	00 32 45.3 -1.1
	baz=78,SNR=13					
S22A	4UR Ranch, Cre	77.88	50	⇓P	P	00 32 46.5 0.0
	baz=78,SNR=11					
KSB	Sheil Bridge	77.89	343	P	P	00 32 46.6 +0.5
KSB	Sheil Bridge	77.89	343	⇑*e*P	P	00 32 46.6 +0.5
JAVC	Velka Javorina	77.92	327	P	P	00 32 47.3 +0.8
JAVC	Velka Javorina	77.92	327	P	P	00 32 47.3 +0.8
Q24A	Divide	77.97	48	⇑P	P	00 32 47.1 +0.2
	baz=78,SNR=10					
V19A	Window Rock	77.98	53	⇓P	P	00 32 48.5 +1.4
	baz=78,SNR=15					
T21A	Navajo Lake	77.99	51	⇓P	P	00 32 47.4 +0.3
	baz=78,SNR=7.0					
VRAC	Vranov	78.00	328	P	P	00 32 46.8 -0.1
VRAC	Vranov	78.00	328	⇑P	P	00 32 47.4 +0.5
VRAC	Vranov	78.00	328	⇑*i*P	P	00 32 47.4 +0.5
EYMN	Ely	78.02	34	*e*P	P	00 32 47.1 +0.1
	comp=Z,206nm,1.2s,mb5.9					
EYMN				*e*PP	PP	00 35 43.1 +0.3
EYMN				*e*S	S	00 42 41.6 +3.9
EYMN				LR	LR	
	comp=Z,76μm,20.0s,MS7.0					
GULE	Gulek	78.03

KAR1 **Arisaig** 78.25 344⇑ *e*P P 00 32 48.9 +0.8
PRU **Pruhonice** 78.25 329 P P 00 32 48.3 0.0
PRU **Pruhonice** 78.25 329 *e*P P 00 32 48.1 -0.2
PRU *e*S S 00 42 44.7 +4.6
PRU MLR MLR
comp=Z,198μm,16.1s,MS7.5
PRU **Pruhonice** 78.25 329 *e*P P 00 32 48.1 -0.2
PRU *e*x x 00 35 58.6
PRU *e*x x 00 37 46.8
PRU *e*S S 00 42 44.7 +4.6
PRU *e*x x 00 48 48.7
PRU AMS AMS 01 11 50.0
comp=Z,198μm,16.1s
X18A **Snowflake** 78.25 54 ⇓P P 00 32 45.2 -3.3
baz=78
OGNE **Ogallala** 78.25 45 ⇓P P 00 32 48.6 +0.1
baz=78,SNR=11
OGNE **Ogallala** 78.25 45 *e*P P 00 32 49.3 +0.8
comp=Z,385nm,1.1s,mb6.2
OGNE *e*PP PP 00 35 48.6 +3.6
OGNE *e*S S 00 42 41.6 +1.1
OGNE LR LR
comp=Z,62μm,20.0s,MS6.9
V20A **Brimhall** 78.27 52 ⇓P P 00 32 47.9 -0.7
baz=78,SNR=7.8
KRUC **Moravsky** 78.27 328 P P 00 32 48.0 -0.4
KRUC **Moravsky** 78.27 328 P P 00 32 48.0 -0.4
Y17A **Roosevelt** 78.27 55 ⇓P P 00 32 45.9 -2.9
baz=78,SNR=15
U21A **Nageezi** 78.31 51 ⇑P P 00 32 47.1 -1.8
baz=78,SNR=8.5
T22A **Edith** 78.34 50 ⇑P P 00 32 47.2 -1.8
baz=78,SNR=7.8
EBH **Black Hill** 78.35 342 P P 00 32 49.0 +0.2
EBH **Black Hill** 78.35 342 *e*P P 00 32 49.0 +0.2
GZR **Gura Zlata** 78.38 322 P P 00 32 51.0 +1.9
GZR **Gura Zlata** 78.38 322 P P 00 32 51.4 +2.3
GZR **Gura Zlata** 78.38 322 ⇓*i*P P 00 32 50.5 +1.4
NWAO **Narrogin (SRO)** 78.41 203 P P 00 32 47.4 -1.8
comp=Z,74nm,1.1s,mb5.5,baz=23,slow=6.3,SNR=9.1
NWAO **Narrogin (SRO)** 78.41 203 P P 00 32 47.4 -1.8
NWAO **Narrogin (SRO)** 78.41 203 P P 00 32 47.4 -1.8
TREC **Trest** 78.44 328 *e*P P 00 32 49.0 -0.4
TREC *e* 00 35 55.2
TREC *e* 00 37 42.5
TREC *e*S S 00 42 47.2 +5.0
TREC MLR MLR
comp=Z,238μm,22.0s,MS7.5
TREC **Trest** 78.44 328 *e*P P 00 32 49.0 -0.4
TREC *e*PP PP 00 35 55.2 +8.9
TREC *e*x x 00 37 42.5
TREC *e*S S 00 42 47.2 +5.0
TREC *e*x x 00 48 43.6
TREC AMS AMS 01 10 00.0
comp=Z,238μm,22.0s
ESY **Stoneypath** 78.44 341 P P 00 32 49.3 +0.1
ESY **Stoneypath** 78.44 341 *e*P P 00 32 49.3 +0.1
MODS **Modra-Piesok** 78.46 327 *e*P P 00 32 51.7 +2.2
MODS **Modra-Piesok** 78.46 327 *e*P P 00 32 51.7 +2.2
MODS **Modra-Piesok** 78.46 327 *e*P P 00 32 51.7 +2.2
116A **Eloy** 78.51 57 ⇑P P 00 32 50.5 +0.4
baz=78,SNR=14
Q25A **Bedland, Calha** 78.51 48 ⇓P P 00 32 49.2 -0.8
baz=78,SNR=17
R24A **Sanders Place,** 78.51 49 ⇓P P 00 32 46.1 -3.8
baz=78,SNR=10
EDI **Edinburgh** 78.57 342 P P 00 32 49.0 -1.0
EDI AMB AMB 00 32 50.9
comp=Z,371nm,5.1s
EDI AMS AMS 01 13 47.1
EDI **Edinburgh** 78.57 342⇑ *e*P P 00 32 49.0 -1.0
EDI AMB AMB 00 32 50.9
comp=Z,371nm,5.1s
EDI AMS AMS 01 13 47.1
comp=Z,102μm,16.5s,MS7.2
EAB **Aberfoyle** 78.59 342 P P 00 32 49.3 -0.7
EAB **Aberfoyle** 78.59 342⇑ *e*P P 00 32 49.3 -0.7
BORA **Eskisehir** 78.61 314⇑ *i*P P 00 32 51.5 +1.0
BUY **Buyukada** 78.62 315⇑ *i*P P 00 32 51.4 +0.9
WIT **Witteveen** 78.63 335⇑ *i*P P 00 32 51.9 +1.6
comp=Z,3μm,3.3s
WIT **Witteveen** 78.63 335 *i* x sP 00 33 05.0 -1.7
comp=Z,2μm,2.5s
SDCO **Great Sand Dun** 78.63 49 ⇑P P 00 32 50.4 -0.2
baz=78
SDCO **Great Sand Dun** 78.63 49 PFAKE 00 33 00.0 +9.4
SDCO LR LR
comp=Z,38μm,21.0s,MS6.7
ESKT **Eskisehir** 78.65 313 *i* P P 00 32 48.0 -2.7
KDHN **Kadinhani** 78.67 312 *i* P P 00 32 51.2 +0.4
ZST **Bratislava** 78.67 327 *e*P P 00 32 51.4 +0.7
comp=Z,41nm,1.2s,mb5.2
ZST *e*S S 00 42 50.0 +5.3
ZST **Bratislava** 78.67 327 *e*P P 00 32 51.4 +0.7
ZST *e*S S 00 42 50.0 +5.3
ZST **Bratislava** 78.67 327 *e*P P 00 32 51.4 +0.7
ZST *e*S S 00 42 50.0 +5.3
EBL **Broad Law** 78.68 342 P P 00 32 51.2 +0.7
EBL **Broad Law** 78.68 342 *e*P P 00 32 51.2 +0.7
TANN **Tannenbergstha** 78.68 331 *e*P P 00 32 49.3 -1.3
comp=Z,3μm,3.5s
EAU **Auchinoon** 78.70 342 P P 00 32 50.8 +0.1
EAU **Auchinoon** 78.70 342 *e*P P 00 32 50.8 +0.1
W20A **Ramah** 78.71 53 ⇑P P 00 32 51.5 +0.4
baz=78,SNR=12
Y18A **Canyon Day Jun** 78.71 55 ⇑P P 00 32 51.7 +0.6
baz=79,SNR=12
CRAR **CRAIOVA** 78.71 321 P P 00 32 53.5 +2.6
IBBN **Ibbenburen** 78.72 334 *e*P P 00 32 48.9 -1.9
comp=Z,539nm,1.5s,mb6.3
X19A **St. Johns** 78.72 54 P P 00 32 50.0 -1.2
baz=79,SNR=29
BZS **Buzias** 78.74 323 P P 00 32 50.3 -0.8
BZS **Buzias** 78.74 323 ⇓P P 00 32 50.8 -0.3
BZS **Buzias** 78.74 323 ⇓*i*P P 00 32 50.8 -0.3
V21A **Milan** 78.75 52 ⇓P P 00 32 50.7 -0.6
baz=79,SNR=8.1
Z17A **San Carlos Hig** 78.77 55 ⇓P P 00 32 52.8 +1.4
baz=79,SNR=10
MOX **Moxa** 78.79 331*c e*P P 00 32 49.6 -1.7
comp=Z,570nm,1.9s,mb6.2
MOX *e*S S 00 42 49.0 +3.1
MOX **Moxa** 78.79 331 *e*P P 00 32 49.8 -1.5
comp=Z,3μm,3.0s
MOX **Moxa** 78.79 331*c e*P P 00 32 49.6 -1.7
MOX *e*S S 00 42 49.0 +3.1
PVL **Pavlikeni** 78.81 319 *e*P P 00 32 53.0 +1.5
U22A **Llaves** 78.81 51 ⇑P P 00 32 52.5 +0.9
baz=79,SNR=13
WERN **Wernitzgruen** 78.81 331 P P 00 32 50.7 -0.7
TIM **Timisoara** 78.83 323 P P 00 32 54.4 +2.8
TIM **Timisoara** 78.83 323 P P 00 32 54.4 +2.8
NKC **Novy Kostel** 78.83 331 *e*P P 00 32 50.6 -0.9
NKC *e* 00 35 52.9
NKC *e* 00 37 45.1
NKC *e*S S 00 42 49.0 +2.6
NKC MLR MLR
comp=Z,368μm,19.4s,MS7.7
NKC **Novy Kostel** 78.83 331 *e*P P 00 32 50.6 -0.9
NKC *e*PP PP 00 35 52.9 +3.4
NKC *e*x x 00 37 45.1
NKC *e*S S 00 42 49.0 +2.6
NKC *e*x x 00 48 39.5
NKC AMS AMS 01 10 50.0
comp=Z,368μm,19.4s
S24A **Houchin Ranch,** 78.87 49 ⇓P P 00 32 52.8 +0.9
baz=79,SNR=6.5
ECSD **EROS Data Cent** 78.94 40⇓ *e*P P 00 32 46.1 -6.0
comp=Z,352nm,1.3s,mb6.1
ECSD *e*PP PP 00 35 50.8 +0.2
ECSD *e*S S 00 42 49.8 +2.1
ECSD LR LR
comp=Z,70μm,19.0s,MS7.0
PGBU **Glenifferbraes** 78.97 342 P P 00 32 51.8 -0.4
PGBU AMB AMB 00 32 56.5
comp=Z,725nm,3.0s
PGBU AMS AMS 01 12 34.6
comp=Z,54μm,22.1s
PGBU **Glenifferbraes** 78.97 342⇑ *e*P P 00 32 51.8 -0.4
PGBU AMB AMB 00 32 56.5
comp=Z,725nm,3.0s
PGBU AMS AMS 01 12 34.6
comp=Z,54μm,22.1s,MS6.8
R25A **Fountain Ranch** 79.03 48 ⇑P P 00 32 51.3 -1.5
baz=79,SNR=8.5
216A **Three Points,** 79.04 57 ⇑P P 00 32 53.5 +0.5
baz=79,SNR=5.6
DJES **Djerdap** 79.06 322 P P 00 32 55.6 +2.8
Y19A **Nutrioso** 79.06 54 ⇓P P 00 32 53.7 +0.7
baz=79
117A **Oracle** 79.10 56 ⇑P P 00 32 53.0 -0.3
baz=79,SNR=15
V22A **San Miguel Ran** 79.10 51 ⇑P P 00 32 53.0 -0.3
baz=79
X20A **Quemado** 79.11 53 ⇑P P 00 32 52.1 -1.2
baz=79,SNR=9.8
ULDT **Uludag** 79.12 315 *i* P P 00 32 51.4 -1.8
ESK **Eskdalemuir** 79.13 342 P P 00 32 52.6 -0.4
ESK AMB AMB 00 32 54.1
comp=Z,380nm,5.5s
ESK AMS AMS 01 14 03.8
ESK **Eskdalemuir** 79.13 342⇑ *e*P P 00 32 52.6 -0.4
ESK AMB AMB 00 32 54.1
comp=Z,380nm,5.5s
ESK AMS AMS 01 14 03.8
comp=Z,112μm,17.6s,MS7.2
ESK **Eskdalemuir** 79.13 342 PFAKE 00 33 00.0 +7.0
ESK LR LR
comp=Z,131μm,19.0s,MS7.3
ESK **Eskdalemuir** 79.13 342 *i* P P 00 32 55.2 +2.2
TOO **Toolangi** 79.15 179 *e*P P 00 32 53.5 +0.4
TOO *e*S S 00 42 49.6 0.0
FKH **Fakeheh** 79.16 306 *e*P P 00 32 53.2 -0.4
BOLV **Bolvadin** 79.17 313 *i* P P 00 32 54.3 +0.8
UBBA **Unterbreizbach** 79.22 332 *e*P P 00 32 51.8 -1.8
comp=Z,887nm,2.4s,mb6.3
U23A **El Rito** 79.23 51 ⇓P P 00 32 53.5 -0.4
baz=79,SNR=15
ECK **Cauldkaine Hil** 79.24 341 P P 00 32 52.9 -0.7
ECK **Cauldkaine Hil** 79.24 341 *e*P P 00 32 52.9 -0.7
TUC **Tucson** 79.25 56 *e*P P 00 32 53.9 -0.2
comp=Z,145nm,1.4s,mb5.7
TUC *e*S S 00 42 53.7 +2.3
TUC LR LR
comp=Z,36μm,20.0s,MS6.7
TUC **Tucson** 79.25 56 *e*P P 00 32 53.9 -0.2
TUC *e*S S 00 42 53.7 +2.3
TUC pmax pmax
comp=Z,145nm,1.4s,mb5.7
TUC MLR MLR
comp=Z,36μm,20.0s,MS6.7
ROTZ **Rotzenmuhle** 79.30 330 *e*P P 00 32 52.9 -1.2
comp=Z,4μm,3.1s
XAL **Allendale** 79.31 341 P P 00 32 55.1 +1.1
XAL **Allendale** 79.31 341⇑ *e*P P 00 32 55.1 +1.1
KHC **Kasperske Hory** 79.31 329 *e*P P 00 32 53.2 -0.9
comp=Z,118nm,2.4s,mb5.4
KHC **Kasperske Hory** 79.31 329 *e*P P 00 32 53.6 -0.5
KHC *e* 00 35 56.5
KHC *e* 00 37 45.3
KHC *e*S S 00 42 54.7 +3.2
KHC MLR MLR
comp=Z,299μm,20.5s,MS7.6
KHC **Kasperske Hory** 79.31 329 *e*P P 00 32 53.6 -0.5
KHC *e*PP PP 00 35 56.5 +3.0
KHC *e*x x 00 37 45.3
KHC *e*S S 00 42 54.7 +3.2
KHC *e*x x 00 48 37.6
KHC AMS AMS 01 10 30.0
comp=Z,299μm,20.5s
WTSB **Winterswijk** 79.32 335⇑ *i*P P 00 32 53.8 -0.3
comp=Z,559nm,4.1s
WTSB **Winterswijk** 79.32 335 *i* x sP 00 33 07.2 -3.2
comp=Z,447nm,2.5s
T24A **Torres, Weston** 79.36 49 ⇓P P 00 32 55.8 +1.2
baz=79,SNR=7.5
ALT **Altintas** 79.39 314 *i* P P 00 32 50.3 -4.4
CONA **Conrad Observa** 79.39 327⇓ *i*P P 00 32 54.7 +0.1
comp=Z,166nm,1.3s,mb5.8,SNR=48
HWQ **Hawqa** 79.42 307 *e*P P 00 32 56.2 +1.2
GEC2 **GERESS Array S** 79.50 329 *e*P P 00 32 53.8 -1.3
comp=Z,2μm,3.1s
GEC2 **GERESS Array S** 79.50 329 *e*P P 00 32 53.8 -1.3
GEC2 pmax pmax
comp=Z,2μm,3.1s
WET **Wettzell** 79.57 330 *e*P P 00 32 54.4 -1.1
comp=Z,353nm,1.5s,mb6.1
WET **Wettzell** 79.57 330 *e*P P 00 32 54.4 -1.1
WET pmax pmax
comp=Z,353nm,1.5s,mb6.1
217A **Green Valley** 79.59 57 ⇓P P 00 32 56.0 0.0
baz=79
PKSM **Moragy** 79.59 325 P P 00 32 55.2 -0.5
PKSM **Moragy** 79.59 325 ⇑P P 00 32 56.0 +0.3
PKSM **Moragy** 79.59 325 ⇑*i*P P 00 32 56.0 +0.3
X21A **Alamocita Cree** 79.61 53 ⇓P P 00 32 55.0 -1.0
baz=79,SNR=8.2
BUG **Bochum--Univer** 79.61 334 *e*P P 00 32 53.8 -1.9
comp=Z,529nm,1.7s,mb6.2
Y20A **Horse Springs,** 79.62 54 ⇑P P 00 32 55.6 -0.5
baz=80,SNR=11
V23A **Ortiz Mt. (NFS** 79.64 51 ⇓P P 00 32 56.0 -0.2
baz=80,SNR=8.3
T25A **Trinidad** 79.67 49 ⇑P P 00 32 57.8 +1.5
baz=80,SNR=9.8
U24A **Moreno Valley** 79.70 50 ⇓P P 00 32 58.6 +2.2
baz=80,SNR=6.2
GDZ **Gediz** 79.70 314 *i* P P 00 32 56.6 +0.2
GCD **Castle Douglas** 79.72 342 P P 00 32 55.3 -1.0
GCD **Castle Douglas** 79.72 342 *e*P P 00 32 55.3 -1.0
GRA1 **Grafenberg Arr** 79.73 331 *e*P P 00 32 55.0 -1.4
comp=Z,840nm,1.5s,mb6.5
GRA1 *e*PP PP 00 35 56.0 -0.9
GRA1 *e*S S 00 42 59.4 +3.5
GRA1 LR LR
comp=Z,419μm,19.8s,MS7.8
GRF **Grafenberg Arr** 79.73 331 *e*P P 00 32 55.0 -1.4
comp=Z,840nm,1.5s,mb6.5
GRF *e*PP PP 00 35 56.0 -0.9
GRF *e*S S 00 42 59.4 +3.5
GRF *e*L 01 11 51.1
comp=Z,419μm,19.8s
GRF **Grafenberg Arr** 79.73 331 *e*P P 00 32 55.0 -1.4
GRF *e* 00 35 56.0
GRF *e*S S 00 42 59.4 +3.5
GRF pmax pmax
comp=Z,840nm,1.5s,mb6.5
GRF MLR MLR
comp=Z,419μm,19.8s,MS7.8
GRF **Grafenberg Arr** 79.73 331 *e*P P 00 32 55.0 -1.4
GRF *e* 00 35 56.0
GRF *e*S S 00 42 59.4 +3.5
GRF pmax pmax
comp=Z,840nm,1.5s,mb6.5
GRF MLR MLR
comp=Z,419μm,19.8s,MS7.8
GRFO **Grafenberg** 79.73 331⇑ *i*P P 00 32 56.2 -0.2
comp=Z,298nm,1.0s,mb6.2
GRFO *e*PP PP 00 35 57.1 +0.2
GRFO *e*S S 00 42 57.2 +1.3
GRFO **Grafenberg** 79.73 331⇑ *i*P P 00 32 56.2 -0.2
GRFO *e* 00 35 57.1
GRFO *e*S S 00 42 57.2 +1.3
GRFO pmax pmax
comp=Z,298nm,1.0s,mb6.2
SART **Tekirdag** 79.75 316⇑ *i*P P 00 32 56.8 +0.1
KESW **Keswick, Cumbr** 79.77 341 P P 00 32 57.3 +0.8
KESW AMB AMB 00 32 59.0
comp=Z,556nm,3.6s
KESW **Keswick, Cumbr** 79.77 341⇑ *e*P P 00 32 57.3 +0.8
KESW AMB AMB 00 32 59.0
comp=Z,556nm,3.6s
119A **Ashpeak Ranch,** 79.85 55 ⇓P P 00 32 57.8 +0.4
baz=80
BHL **Bhannes** 79.85 307 *e*P P 00 32 58.4 +1.1
BEO **Beograd** 79.88 323 P P 00 33 00.0 +2.7
BEO **Beograd** 79.88 323 P P 00 33 00.0 +2.7
GAL1 **Galloway** 79.89 342 P P 00 32 57.3 +0.1
GAL1 AMB AMB 00 32 59.2
comp=Z,392nm,5.8s
GAL1 AMS AMS 01 15 32.1
comp=Z,72μm,17.9s
GAL1 **Galloway** 79.89 342⇑ *e*P P 00 32 57.3 +0.1
GAL1 AMB AMB 00 32 59.2
comp=Z,392nm,5.8s
GAL1 AMS AMS 01 15 32.1
comp=Z,72μm,17.9s,MS7.1
FRGS **Fruska Gora** 79.91 323 P P 00 32 59.4 +2.0
KDZ **Kurdzhali** 79.93 318 *e*P P 00 32 59.0 +1.4
218A **Dragoon** 79.94 56 ⇓P P 00 32 58.3 +0.4
baz=80
XDE **Dent Fell** 79.94 341 P P 00 32 56.5 -0.9
XDE **Dent Fell** 79.94 341 *e*P P 00 32 56.5 -0.9
Y21A **Point of Rocks** 79.98 53 ⇓P P 00 32 56.9 -1.1
baz=80,SNR=8.5
HPK **Haverah Park** 79.98 340 P P 00 32 56.8 -0.8
HPK AMB AMB 00 32 60.0
comp=Z,431nm,3.9s
HPK AMS AMS 01 13 53.7
HPK **Haverah Park** 79.98 340⇑ *e*P P 00 32 56.8 -0.8
HPK AMB AMB 00 32 60.0
comp=Z,431nm,3.9s
HPK AMS AMS 01 13 53.7
comp=Z,160μm,18.8s,MS7.4
X22A **Bernardo** 80.02 52 ⇓P P 00 32 57.5 -0.7
baz=80
RCY **Rachaya** 80.03 306 *e*P P 00 32 57.9 -0.4
ANMO **Albuquerque** 80.04 52 *e*P P 00 32 58.9 +0.6
ANMO *e*S S 00 43 01.5 +1.8
ANMO LR LR
comp=Z,41μm,21.0s,MS6.8
ANMO **Albuquerque** 80.04 52 *e*P P 00 32 58.9 +0.6
ANMO *e*S S 00 43 01.5 +1.8
ANMO MLR MLR
comp=Z,41μm,21.0s
Z20A **Nine Sixteen R** 80.04 54 ⇑P P 00 32 57.7 -0.7
baz=80,SNR=14
ARSA **Arzberg** 80.07 327 P P 00 33 00.6 +2.3
ARSA **Arzberg** 80.07 327⇑ *i*P P 00 32 57.4 -0.9
comp=Z,137nm,1.4s,mb5.7,SNR=24
W23A **Werner Place,** 80.07 51 ⇑P P 00 32 58.3 -0.2
baz=80,SNR=8.9
MOA **Molln** 80.09 328 P P 00 33 00.7 +2.3
MOA **Molln** 80.09 328⇓ *i*P P 00 32 59.0 +0.7
comp=Z,150nm,1.3s,mb5.8,SNR=13
SCHQ **Schefferville** 80.11 17 P P 00 32 58.5 +0.1
comp=Z,32nm,0.7s,mb5.3,baz=360,slow=5.6,SNR=12
SCHQ LR LR 01 12 27.5
comp=Z,39μm,18.5s,MS6.8,baz=336,slow=39
SCHQ **Schefferville** 80.11 17 P P 00 32 58.5 +0.1
SCHQ LR LR 01 12 27.5
DEMI **Demirci** 80.14 314 *i* P P 00 32 59.5 +0.6
ALN **Alexandroupoli** 80.17 317 P P 00 33 00.0 +1.0
V24A **Rampart Ranch,** 80.18 50 P P 00 32 58.9 -0.2
baz=80,SNR=12
U25A **Circle Dot Ran** 80.20 49 ⇑P P 00 32 59.7 +0.5
baz=80,SNR=6.6
BALY **Balya** 80.21 315⇑ *i*P P 00 32 59.5 +0.3
KHAL **Karahalli** 80.21 313⇑ *i*P P 00 32 57.1 -2.1
HRI **Mount Hermon** 80.25 306 Pn P 00 32 59.7 +0.2
HRI **Mount Hermon** 80.25 306 P P 00 32 59.7 +0.2
TNS **Taunus Mts** 80.26 333 *e*P P 00 32 57.7 -1.5
comp=Z,534nm,1.6s,mb6.2
TNS **Taunus Mts** 80.26 333 *e*P P 00 32 57.7 -1.5
TNS pmax pmax
comp=Z,534nm,1.6s,mb6.2
VTS **Vitosha** 80.31 320 *e*P P 00 32 58.0 -1.6
318A **Bisbee** 80.33 56 ⇑P P 00 32 58.9 -1.1
baz=80
KSDI **Kefar Szold** 80.34 306 Pn P 00 32 59.7 -0.3
219A **White Tail Can** 80.40 56 ⇓P P 00 32 59.2 -1.2
baz=80,SNR=14
MAMC **Mammari** 80.40 309 P P 00 33 01.5 +1.2
120A **U Bar Ranch, L** 80.41 55 ⇑P P 00 33 00.9 +0.5
baz=80
AEU **East Anglia Un** 80.42 338 P P 00 32 59.3 -0.7
AEU **East Anglia Un** 80.42 338 *e*P P 00 32 59.3 -0.7
KOGS **Kog** 80.42 326 *i* P P 00 33 00.3 +0.1
KOGS *e*S S 00 43 05.8 +2.5
KOGS **Kog** 80.42 326 *i* P P 00 33 00.3 +0.1
KOGS *e*S S 00 43 05.8 +2.5
Y22A **Socorro** 80.45 53 ⇓P P 00 32 59.7 -0.9
baz=80,SNR=10
Z21A **St. Cloud Mine** 80.46 54 ⇑P P 00 32 59.6 -1.1
baz=80,SNR=9.5
W24A **Lazy 6 Ranch,** 80.47 51 ⇓P P 00 32 59.1 -1.5
baz=80,SNR=7.8
COWI **Conover** 80.47 34⇑ *e*P P 00 32 59.3 -1.1
comp=Z,386nm,1.7s,mb6.1
COWI *e*PP PP 00 36 05.1 +1.9
COWI *e*S S 00 43 05.6 +1.8
COWI LR LR
comp=Z,35μm,20.0s,MS6.7
V25A **Rancho No Teng** 80.48 50 ⇓P P 00 32 59.2 -1.5
baz=80,SNR=6.2
GRUS **Gruza** 80.48 322 P P 00 33 00.2 -0.4
CSS **Prodhromos** 80.49 309 P P 00 33 02.1 +1.3
comp=Z,13nm,2.2s
CSS **Prodhromos** 80.49 309 P P 00 33 02.1 +1.3
CSS LR LR
comp=Z,121μm,22.0s,MS7.2
CSS **Prodhromos** 80.49 309 P P 00 33 01.5 +0.7
U26A **Atchley Ranch,** 80.58 49 ⇑P P 00 33 01.1 -0.2
baz=80,SNR=6.3
SIND **Sindeldorf** 80.59 332 P P 00 33 00.2 -0.8
MMAI **Mount Meron Ar** 80.62 306 LR LR 01 11 30.3
comp=Z,117μm,21.4s,MS7.2,baz=10.0,slow=38
HGN **Heimansgroeve** 80.63 334⇑ *i*P P 00 33 00.5 -0.7
comp=Z,462nm,3.3s
HGN **Heimansgroeve** 80.63 334 *i* x sP 00 33 13.7 -3.8
comp=Z,391nm,2.9s
DIVS **Divibare** 80.65 323 P P 00 33 02.4 +0.9
TOD **Tromm** 80.66 332 *e*P P 00 33 00.5 -0.9
TOD **Tromm** 80.66 332 *e*P P 00 33 00.5 -0.9
BEBN **Eben Emael** 80.68 335 P P 00 33 00.2 -1.3
comp=Z,66nm,1.4s,mb5.4
SOKA **Soboth** 80.73 327⇑ *i*P P 00 33 00.9 -0.9
comp=Z,284nm,1.0s,mb6.1
MEM **Membach** 80.74 334 P P 00 33 00.3 -1.5
comp=Z,101nm,1.6s,mb5.5
AKHS **Akhisar** 80.74 315 *i* P P 00 33 01.8 -0.3
RJOB **Jochberg** 80.75 329 *e*P P 00 33 01.0 -0.9
comp=Z,582nm,1.9s,mb6.2
GMM **Mts of Mourne** 80.75 343 P P 00 33 00.7 -1.1
GMM **Mts of Mourne** 80.75 343⇑ *e*P P 00 33 00.7 -1.1
ALFC **Alevga** 80.77 309 P P 00 33 02.9 +0.6
comp=Z,3.4nm,1.1s
BARS **Barje** 80.80 321 P P 00 33 03.3 +1.0
MMB **Musomiste** 80.81 319 *i* P P 00 33 02.0 -0.4
319A **Douglas** 80.82 56 ⇓P P 00 33 01.6 -1.0
baz=81
ABH **Alteburg** 80.85 333 *e*P P 00 33 01.5 -0.9
KAVA **Kavala** 80.87 318 P P 00 33 03.9 +1.2
X24A **Lazy VL Ranch,** 80.91 51 ⇑P P 00 33 02.0 -1.1
baz=81,SNR=13
STNC **Stoke** 80.91 340 P P 00 33 01.4 -1.3
STNC AMB AMB 00 33 07.1
comp=Z,486nm,5.6s
STNC AMS AMS 01 14 31.7
STNC **Stoke** 80.91 340 *e*P P 00 33 01.4 -1.3
STNC AMB AMB 00 33 07.1
comp=Z,486nm,5.6s
STNC AMS AMS 01 14 31.7
comp=Z,141μm,19.2s,MS7.3
220A **Playas Peak, P** 80.92 55 ⇓P P 00 33 03.0 -0.1
baz=81,SNR=13
Z22A **Elephant Butte** 80.92 53 ⇑P P 00 33 03.0 -0.2
baz=81
DNZL **Cakiroluk** 80.95 313 *i* P P 00 33 04.2 +1.1
BOZC **Bozcaada** 80.95 316⇑ *i*P P 00 33 04.8 +1.7
FUR **Furstenfeldbru** 80.97 330 *e*P P 00 33 01.6 -1.5
comp=Z,613nm,1.5s,mb6.3
FUR **Furstenfeldbru** 80.97 330 *e*P P 00 33 01.6 -1.5
FUR pmax pmax
comp=Z,613nm,1.5s,mb6.3
V26A **Tequesquite Ra** 80.98 50 ⇓P P 00 33 04.0 +0.6
baz=81
Y23A **Lovelace Mesa,** 80.99 52 ⇑P P 00 33 02.4 -1.0
baz=81,SNR=6.6
GOLH **Golhisar** 81.00 313⇑ *i*P P 00 33 03.0 -0.5
CWF **Charnwood Fore** 81.00 339 P P 00 33 02.1 -1.0
CWF AMB AMB 00 33 06.2
comp=Z,352nm,5.9s
CWF 00 43 08.8
CWF AMS AMS 01 14 44.2
CWF **Charnwood Fore** 81.00 339⇑ *e*P P 00 33 02.1 -1.0
CWF AMB AMB 00 33 06.2
comp=Z,352nm,5.9s
CWF *e* 00 43 08.8
CWF AMS AMS 01 14 44.2
comp=Z,121μm,18.1s,MS7.3
MMLI **Mount Malkishu** 81.01 306 Pn P 00 33 02.8 -0.8
W25A **X Bar L Ranch,** 81.01 50 ⇓P P 00 33 04.1 +0.5
baz=81,SNR=13

CBKS **Cedar Bluff** 81.02 45 ⇑P P 00 33 03.5 0.0
baz=81,SNR=7.0
CBKS **Cedar Bluff** 81.02 45 eP P 00 33 03.5 -0.1
comp=Z,248nm,1.3s,mb6.0
CBKS ePP PP 00 36 08.1 +0.1
CBKS eS S 00 43 06.9 -2.9
CBKS LR LR
comp=Z,39µm,20.0s,MS6.8
CBKS **Cedar Bluff** 81.02 45 eP P 00 33 03.5 0.0
CBKS e 00 36 08.1
CBKS eS S 00 43 06.9 -2.9
CBKS pmax pmax
comp=Z,248nm,1.3s,mb6.0
CBKS MLR MLR
comp=Z,39µm,20.0s,MS6.8
AYVA **Ayvalik** 81.02 316 i P P 00 33 03.1 -0.4
HDH **Heidenheim-Cha** 81.02 331 P P 00 33 02.9 -0.4
OBKA **Obir** 81.06 327⇓iP P 00 33 03.7 +0.1
comp=Z,90nm,1.4s,mb5.5,SNR=19
HMDT **Nahal Hemdat** 81.08 305 Pn P 00 33 03.5 -0.4
KBA **Koelnbreinsper** 81.08 328 P P 00 33 03.4 -0.3
KBA **Koelnbreinsper** 81.08 328 P P 00 33 03.4 -0.3
KBA **Koelnbreinsper** 81.08 328⇑iP P 00 33 03.8 +0.1
comp=Z,284nm,1.1s,mb6.1,SNR=65
BBLS **Lazići** 81.10 323 P P 00 33 03.5 -0.3
UCC **Uccle** 81.10 335 P P 00 33 03.1 -0.6
PPCY **Paphos** 81.11 309 P P 00 33 02.9 -1.2
BCLA **Clavier** 81.13 335 P P 00 33 02.0 -1.9
GCIS **Gornji Cirnik** 81.14 326 eP P 00 33 04.6 +0.5
GCIS **Gornji Cirnik** 81.14 326 eP P 00 33 04.6 +0.5
OFRI **'Ofer** 81.15 306 Pn P 00 33 03.4 -0.9
KTD **Kalmit** 81.15 332 eP P 00 33 04.8 +0.8
KTD **Kalmit** 81.15 332 eP P 00 33 04.8 +0.8
SISC **Sisak** 81.15 326 P P 00 33 04.2 +0.1
RUP **Ruppelstein** 81.17 333 eP P 00 33 02.9 -1.2
RUP **Ruppelstein** 81.17 333 eP P 00 33 02.9 -1.2
STU **Stuttgart** 81.22 332 eP P 00 33 02.8 -1.6
comp=Z,308nm,1.4s,mb6.0
SRS **Serrai** 81.24 319 P P 00 33 05.7 +1.1
WLF1 **Llynfaes** 81.27 341 P P 00 33 04.4 -0.2
WLF1 AMB AMB 00 33 06.2
comp=Z,1µm,5.6s
WLF1 **Llynfaes** 81.27 341⇑eP P 00 33 04.4 -0.2
WLF1 AMB AMB 00 33 06.2
comp=Z,1µm,5.6s
PRK **Paraskevi** 81.28 316 P P 00 33 05.7 +0.8
320A **Kipp Ranch, An** 81.31 56 ⇑P P 00 33 05.8 +0.6
baz=81
DGAR **Diego Garcia** 81.32 252 PFAKE 00 33 20.0 +15
DGAR LR LR
comp=Z,56µm,19.0s,MS6.9
MYKA **Terra Mystica** 81.33 328⇑iP P 00 33 03.3 -1.7
comp=Z,144nm,1.3s,mb5.8
LIA **Limnos Island** 81.36 317 P P 00 33 06.6 +1.3
Y24A **Capitan** 81.36 52 ⇑P P 00 33 06.5 +1.1
baz=81
SNF **Seneffe** 81.37 335 P P 00 33 03.9 -1.2
comp=Z,206nm,2.5s,mb5.6
KDAG **Bornova** 81.38 315 i P P 00 33 03.4 -2.1
BUCH **Bad Urach** 81.44 331 P P 00 33 04.9 -0.7
LJU **Ljubljana** 81.45 327 eP P 00 33 04.8 -0.8
LJU ePP PP 00 36 12.6 +1.3
LJU eS S 00 43 14.7 +0.6
LJU **Ljubljana** 81.45 327 eP P 00 33 04.9 -0.8
LJU e 00 36 12.6
LJU eS S 00 43 14.7 +0.7
LJU **Ljubljana** 81.45 327 eP P 00 33 04.8 -0.8
LJU ePP PP 00 36 12.6 +1.3
LJU eS S 00 43 14.7 +0.6
LBG **Lerchenberg** 81.46 332 P P 00 33 05.0 -0.7
W26A **Owens Ranch, T** 81.50 50 ⇓P P 00 33 07.1 +0.9
baz=81
WLF **Walferdange** 81.50 334 P P 00 33 06.2 +0.3
comp=Z,218nm,2.5s,mb5.6
WLF **Walferdange** 81.50 334 eP P 00 33 04.5 -1.4
comp=Z,681nm,2.1s,mb6.2
WLF **Walferdange** 81.50 334⇑eP P 00 33 06.2 +0.3
comp=Z,800nm,1.9s,mb6.3
WLF ePP PP 00 36 11.0 -0.6
WLF eS S 00 43 15.0 +0.5
WLF LR LR
comp=Z,305µm,19.0s,MS7.7
WLF **Walferdange** 81.50 334⇓eP P 00 33 06.2 +0.3
WLF e 00 36 11.0
WLF eS S 00 43 15.0 +0.5
WLF pmax pmax
comp=Z,800nm,1.9s,mb6.3
WLF MLR MLR
comp=Z,305µm,19.0s,MS7.7
BLCB **Balcova** 81.52 315 P P 00 33 06.9 +0.7
PLE **Pljevlja** 81.52 323⇑iP P 00 33 06.2 +0.1
PLE **Pljevlja** 81.52 323⇑iP P 00 33 06.3 +0.2
PLE **Pljevlja** 81.52 323⇑iP P 00 33 06.3 +0.2
SIGR **SIGRI** 81.52 316 P P 00 33 06.7 +0.5
LANF **Langenberg** 81.53 332 eP P 00 33 05.1 -1.0
LANF **Langenberg** 81.53 332 eP P 00 33 05.1 -1.0
LANF **Langenberg** 81.53 332 eP P 00 33 05.1 -1.0
KNT **Kendrikon** 81.54 319 P P 00 33 07.5 +1.2
WATA **Walderalm** 81.55 329 P P 00 33 05.5 -0.7
WATA **Walderalm** 81.55 329 P P 00 33 05.5 -0.7
WATA **Walderalm** 81.55 329⇓iP P 00 33 05.1 -1.1
comp=Z,242nm,1.1s,mb6.0,SNR=76
SOH **Sokhos** 81.58 319 P P 00 33 07.4 +0.9
VAY **Valandovo** 81.58 319 P P 00 33 05.8 -0.7
VAY **Valandovo** 81.58 319 P P 00 33 05.8 -0.7
VAY **Valandovo** 81.58 319 P P 00 33 07.2 +0.7
WTTA **Wattenberg** 81.59 329 P P 00 33 05.8 -0.6
WTTA **Wattenberg** 81.59 329 P P 00 33 05.8 -0.6
WTTA **Wattenberg** 81.59 329⇓iP P 00 33 05.5 -0.9
comp=Z,283nm,1.4s,mb6.0,SNR=37
BOJS **Bojanci** 81.59 326 eP P 00 33 06.2 -0.2
BOJS eS S 00 43 16.2 +0.7
BOJS **Bojanci** 81.59 326 eP P 00 33 06.2 -0.2
BOJS eS S 00 43 16.2 +0.7
AYDN **Tasoluk** 81.60 314⇑iP P 00 33 06.3 -0.3
CADS **Cadrg** 81.62 328 eP P 00 33 06.2 -0.4
CADS **Cadrg** 81.62 328 eP P 00 33 06.2 -0.4
RAR **Rarotonga** 81.62 128 PFAKE 00 33 20.0 +13
RAR LR LR
comp=Z,47µm,19.0s,MS6.9
SKO **Skopje** 81.62 320 P P 00 33 08.9 +2.2
SKO **Skopje** 81.62 320 eP P 00 33 06.6 -0.1
OUR **Ouranopolis** 81.63 318 P P 00 33 07.2 +0.4
DOU **Dourbes** 81.64 335 P P 00 33 05.7 -0.9
comp=Z,112nm,2.5s,mb5.3
IVA **Berane** 81.65 322⇑iP P 00 33 05.7 -1.1
IVA **Berane** 81.65 322⇑iP P 00 33 05.8 -1.0
ABTA **Abfaltersbach** 81.68 329⇑iP P 00 33 06.0 -0.9
comp=Z,114nm,1.4s,mb5.6,SNR=19
AKAS **Kas** 81.70 312⇑iP P 00 33 05.6 -1.6
VOY **Vojsko** 81.72 327 eP P 00 33 05.3 -1.8
VOY e 00 33 07.5
MOTA **Moosalm** 81.72 330 P P 00 33 06.3 -0.8
MOTA **Moosalm** 81.72 330 P P 00 33 06.3 -0.8
MOTA **Moosalm** 81.72 330⇑iP P 00 33 06.2 -0.9
comp=Z,224nm,0.9s,mb6.1,SNR=74
RETA **Reutte** 81.73 330 i P P 00 33 06.4 -0.7
comp=Z,340nm,1.2s,mb6.2,SNR=59
ELSH **Elham, Standar** 81.75 337 P P 00 33 04.5 -2.7
ELSH **Elham, Standar** 81.75 337⇑eP P 00 33 04.5 -2.7
DLF **Lyons Farm** 81.76 343 eP P 00 33 07.6 +0.4
URLA **Izmir** 81.77 315⇑iP P 00 33 06.7 -0.9
TURN **Turunc** 81.78 313 i P P 00 33 09.9 +2.2
Y25A **Mesa, Roswell** 81.80 51 ⇓P P 00 33 08.5 +0.8
baz=82
UBR **Ueberruh** 81.81 330 P P 00 33 09.2 +1.6
Z24A **Sheeppen Canyo** 81.82 52 ⇓P P 00 33 08.2 +0.3
baz=82,SNR=9.5
PVY **Plav** 81.83 322⇑iP P 00 33 07.2 -0.5
PVY **Plav** 81.83 322⇑iP P 00 33 07.2 -0.5
MZDA **Masada** 81.83 305 Pn P 00 33 07.1 -0.9
UPM **Unac-Piva** 81.84 323 eP P 00 33 07.7 -0.1
UPM **Unac-Piva** 81.84 323 eP P 00 33 07.7 -0.1
GUT **Gutenstein** 81.84 331 P P 00 33 07.1 -0.6
X26A **CR and CF Fran** 81.86 50 ⇓P P 00 33 08.8 +0.7
baz=82,SNR=9.2
PLG **Polygyros** 81.87 318 P P 00 33 08.8 +0.8
HORT **Hortiatis** 81.87 319 P P 00 33 08.6 +0.6
BFO **Black Forest** 81.90 332 eP P 00 33 06.3 -1.7
comp=Z,460nm,1.6s,mb6.2
BFO **Black Forest** 81.90 332 eP P 00 33 06.3 -1.7
BFO pmax pmax
comp=Z,460nm,1.6s,mb6.2

THE **Thessaloniki** 81.91 319 P P 00 33 08.4 +0.2
W27A **Bowe Ranch, En** 81.92 50 ⇑P P 00 33 07.7 -0.7
baz=82,SNR=12
GCAM **G?zelcaml?** 81.92 314 i P P 00 33 08.6 +0.3
SPAK **Spaichingen-Ko** 81.94 331 eP P 00 33 07.4 -0.8
GRG **Griva** 81.94 319 P P 00 33 09.4 +1.0
SCIA **State Center** 81.94 39 PFAKE 00 33 20.0 +12
SCIA LR LR
comp=Z,61µm,20.0s,MS7.0
CHOS **Chios island** 82.03 315 P P 00 33 09.8 +0.9
PAIG **Paliouri** 82.09 318 P P 00 33 09.8 +0.6
HTR **Trewern Hill** 82.10 340 P P 00 33 08.1 -0.9
HTR **Trewern Hill** 82.10 340⇑eP P 00 33 08.1 -0.9
NKY **Niksic** 82.11 322⇑iP P 00 33 09.0 -0.2
NKY **Niksic** 82.11 322⇑iP P 00 33 09.1 -0.1
NKY **Niksic** 82.11 322⇑iP P 00 33 09.1 -0.1
MCH1 **Michaelchurch** 82.11 340 P P 00 33 09.7 +0.6
MCH1 AMB AMB 00 33 11.4
comp=Z,487nm,5.5s
MCH1 00 43 15.8
MCH1 AMS AMS 01 14 48.0
MCH1 **Michaelchurch** 82.11 340⇑eP P 00 33 09.7 +0.6
MCH1 AMB AMB 00 33 11.4
comp=Z,487nm,5.5s
MCH1 e 00 43 15.8
MCH1 AMS AMS 01 14 48.0
comp=Z,131µm,20.1s,MS7.3
FETA **Feichten** 82.13 330 i P P 00 33 08.5 -0.7
comp=Z,106nm,1.0s,mb5.7,SNR=20
KRUS **Krusevo** 82.18 320 eP P 00 33 08.5 -1.1
X27A **F and S Farms,** 82.20 50 ⇑P P 00 33 10.5 +0.7
baz=82,SNR=9.5
124A **Stringfield Ra** 82.21 53 ⇑P P 00 33 10.3 +0.3
baz=82
SISB **Singen-Schiene** 82.22 331 P P 00 33 09.2 -0.5
DAVA **Damuels** 82.23 330 P P 00 33 09.0 -0.7
DAVA **Damuels** 82.23 330⇓iP P 00 33 09.1 -0.7
comp=Z,220nm,1.1s,mb6.0,SNR=20
Z25A **Roswell** 82.24 52 ⇑P P 00 33 09.9 -0.2
baz=82,SNR=7.8
SWN1 **Swindon** 82.24 339 P P 00 33 09.0 -0.7
SWN1 AMB AMB 00 33 13.8
comp=Z,839nm,3.5s
SWN1 AMS AMS 01 14 54.8
SWN1 **Swindon** 82.24 339 eP P 00 33 09.0 -0.7
SWN1 AMB AMB 00 33 13.8
comp=Z,839nm,3.5s
SWN1 AMS AMS 01 14 54.8
comp=Z,125µm,19.2s,MS7.3
BRY **Bratogost** 82.24 323⇑iP P 00 33 09.8 -0.1
BRY **Bratogost** 82.24 323⇑iP P 00 33 09.8 -0.1
BRY **Bratogost** 82.24 323⇑iP P 00 33 09.9 0.0
WOL **Wolverton** 82.27 339 P P 00 33 08.0 -1.8
WOL AMB AMB 00 33 11.7
comp=Z,483nm,5.5s
WOL AMS AMS 01 14 24.5
WOL **Wolverton** 82.27 339⇑eP P 00 33 08.0 -1.8
WOL AMB AMB 00 33 11.7
comp=Z,483nm,5.5s
WOL AMS AMS 01 14 24.5
comp=Z,124µm,19.8s,MS7.3
BDRM **Kayabasi** 82.27 314 i P P 00 33 08.8 -1.4
TTG **Podgorica** 82.29 322⇑iP P 00 33 08.4 -1.7
TTG **Podgorica** 82.29 322⇑iP P 00 33 08.5 -1.7
TTG **Podgorica** 82.29 322⇑iP P 00 33 08.5 -1.6
Y26A **Elida** 82.30 51 ⇑P P 00 33 09.1 -1.3
baz=82,SNR=12
LIBD **Limburg** 82.31 332 eP P 00 33 08.0 -2.2
LIBD **Limburg** 82.31 332 eP P 00 33 08.0 -2.2
KIZ **Kirchzarten** 82.37 332 P P 00 33 09.5 -1.0
KIZ **Kirchzarten** 82.37 332 P P 00 33 09.5 -1.0
HGH **Gray Hill** 82.39 340 P P 00 33 10.4 -0.1
HGH **Gray Hill** 82.39 340⇑eP P 00 33 10.4 -0.1
FELD **Feldberg im Sc** 82.41 332 eP P 00 33 09.6 -1.1
ECH **Echery** 82.41 332 eP P 00 33 09.5 -1.2
ECH **Echery** 82.41 332⇑iP P 00 33 10.5 -0.2
comp=Z,462nm,1.7s,mb6.1
ECH ePP PP 00 36 21.0 +1.9
ECH eS S 00 43 24.1 +0.3
ECH LR LR
comp=Z,151µm,19.0s,MS7.4
ECH **Echery** 82.41 332⇑iP P 00 33 10.5 -0.2
ECH e 00 36 21.0
ECH eS S 00 43 24.1 +0.3
ECH pmax pmax
comp=Z,463nm,1.7s,mb6.1
ECH MLR MLR
comp=Z,151µm,19.0s,MS7.4
BIA **Bitola** 82.41 320 eP P 00 33 09.8 -1.1
RTMI **Retamim** 82.42 305 Pn P 00 33 10.1 -1.0
KSU1 **Kansas State U** 82.42 43 PFAKE 00 33 20.0 +9.1
KSU1 LR LR
comp=Z,103µm,22.0s,MS7.2
ZFRI **Zfri** 82.47 304 Pn P 00 33 10.7 -0.6
JFWS **Jewell Farm** 82.52 37 eP P 00 33 11.6 +0.2
comp=Z,119nm,1.2s,mb5.8
JFWS ePP PP 00 36 19.8 -0.4
JFWS eS S 00 43 25.2 +0.1
JFWS LR LR
comp=Z,112µm,21.0s,MS7.2
JFWS **Jewell Farm** 82.52 37 eP P 00 33 11.6 +0.2
JFWS e 00 36 19.8
JFWS eS S 00 43 25.2 0.0
JFWS pmax pmax
comp=Z,119nm,1.2s,mb5.8
JFWS MLR MLR
comp=Z,112µm,21.0s,MS7.2
ARG **Arkhangelos** 82.53 313 P P 00 33 12.2 +0.7
BUM **Brajici-Budva** 82.55 322⇑iP P 00 33 11.4 -0.1
BUM **Brajici-Budva** 82.55 322⇑iP P 00 33 11.4 -0.1
LIT **Litokhoron** 82.55 319 P P 00 33 12.0 +0.4
AOS **Alonnisos** 82.57 317 P P 00 33 12.2 +0.5
FNA **Florina** 82.57 320 P P 00 33 12.2 +0.5
224A **Cornudas Mount** 82.61 53 ⇓P P 00 33 12.1 0.0
baz=82
HCY **Herceg Novi** 82.62 322⇑iP P 00 33 10.9 -1.0
HCY **Herceg Novi** 82.62 322⇑iP P 00 33 11.0 -0.9
HCY **Herceg Novi** 82.62 322⇑iP P 00 33 11.0 -0.9
STON **Ston** 82.64 323 P P 00 33 09.5 -2.5
ULC **Ulcinj** 82.66 322⇑iP P 00 33 11.5 -0.6
ULC **Ulcinj** 82.66 322⇑iP P 00 33 11.6 -0.5
ULC **Ulcinj** 82.66 322⇑iP P 00 33 11.6 -0.5
Z26A **Caprock** 82.68 51 ⇓P P 00 33 12.4 0.0
baz=82,SNR=18
KZIT **Kziot** 82.70 305 Pn P 00 33 11.7 -0.8
Y27A **Causey** 82.71 51 ⇓P P 00 33 11.4 -1.1
baz=82,SNR=9.7
125A **Gardner Draw,** 82.72 52 ⇓P P 00 33 12.6 +0.1
baz=82,SNR=13
PRNI **Paran** 82.72 304 Pn P 00 33 12.1 -0.5
PRNI **Paran** 82.72 304 P P 00 33 12.1 -0.5
MOF **Molkenrain** 82.73 332 eP P 00 33 12.0 -0.4
MOF **Molkenrain** 82.73 332 eP P 00 33 12.0 -0.4
MOF **Molkenrain** 82.73 332 eP P 00 33 12.0 -0.4
KZN **Kozani** 82.75 319 P P 00 33 12.9 +0.3
THEF **They Montfort** 82.80 333 eP P 00 33 11.5 -1.2
THEF **They Montfort** 82.80 333 eP P 00 33 11.5 -1.2
THEF **They Montfort** 82.80 333 eP P 00 33 11.5 -1.2
AMTX **Amarillo** 82.83 49 ⇑P P 00 33 13.8 +0.7
baz=83,SNR=10.0
AMTX **Amarillo** 82.83 49⇑eP P 00 33 14.9 +1.8
comp=Z,684nm,1.8s,mb6.4
AMTX ePP PP 00 36 23.4 +0.3
AMTX eS S 00 43 30.9 +2.3
AMTX LR LR
comp=Z,42µm,19.0s,MS6.8
MSTX **Muleshoe** 82.87 50 ⇓P P 00 33 12.2 -1.2
baz=83
BBS **Basel-Blauen** 82.93 332 eP P 00 33 12.7 -0.7
BBS **Basel-Blauen** 82.93 332 eP P 00 33 12.7 -0.7
MNTX **Cornudas Mount** 82.97 53 ⇓P P 00 33 11.7 -2.2
baz=83,SNR=16
MNTX **Cornudas Mount** 82.97 53 eP P 00 33 14.4 +0.5
comp=Z,198nm,1.5s,mb5.9
MNTX eS S 00 43 32.4 +2.3
MNTX LR LR
comp=Z,33µm,22.0s,MS6.7
225A **Deer Hill, Car** 83.01 53 ⇑P P 00 33 14.1 0.0
baz=83,SNR=9.7
NEST **Nestorio** 83.01 320 P P 00 33 14.8 +0.8
MABI **Malga Bissina** 83.02 329 P P 00 33 14.7 +0.8
KRMI **Paran Flat** 83.06 304 Pn P 00 33 13.7 -0.7
324A **Moseley Ranch,** 83.09 54 ⇑P P 00 33 13.0 -1.5

baz=83
Z27A **Tatum** 83.09 51 ⇓P P 00 33 13.1 -1.4
baz=83
HEX **Exmoor** 83.17 340 P P 00 33 15.9 +1.3
HEX **Exmoor** 83.17 340⇑eP P 00 33 15.9 +1.3
THL **Klokotos Trika** 83.20 319 P P 00 33 14.7 -0.2
EIL **Elat** 83.23 304 LR LR 01 17 09.2
comp=Z,110µm,18.1s,MS7.3,baz=192,slow=41
LOMF **Lomont** 83.27 332 eP P 00 33 14.3 -0.8
LOMF **Lomont** 83.27 332 eP P 00 33 14.3 -0.8
LOMF **Lomont** 83.27 332 eP P 00 33 14.3 -0.8
APE **Apeiranthos** 83.29 315 P P 00 33 16.2 +0.7
APE **Apeiranthos** 83.29 315 ⇑P P 00 33 14.7 -0.8
APE **Apeiranthos** 83.29 315⇑iP P 00 33 14.7 -0.8
GLMI **Grayling** 83.36 32 PFAKE 00 33 30.0 +14
GLMI LR LR
comp=Z,21µm,19.0s,MS6.5
ATAL **Atalanti** 83.36 317 P P 00 33 15.7 -0.1
HTL **Hartland** 83.40 340 P P 00 33 15.2 -0.5
HTL AMB AMB 00 33 18.1
comp=Z,517nm,4.0s
HTL AMS AMS 01 15 56.8
HTL **Hartland** 83.40 340⇑eP P 00 33 15.2 -0.5
HTL AMB AMB 00 33 18.1
comp=Z,517nm,4.0s
HTL AMS AMS 01 15 56.8
comp=Z,128µm,18.6s,MS7.3
LKR **Lokris** 83.41 317 P P 00 33 15.9 -0.1
AGG **Agios Georgios** 83.46 318 P P 00 33 16.3 0.0
AGG **Agios Georgios** 83.46 318 P P 00 33 16.3 0.0
AGG **Agios Georgios** 83.46 318 P P 00 33 16.3 0.0
226A **Malaga, Loving** 83.47 52 ⇓P P 00 33 16.5 +0.1
baz=83,SNR=12
ATHU **Athens Univers** 83.53 316 P P 00 33 17.5 +0.8
DYA **Yadsworthy** 83.78 340 P P 00 33 15.5 -2.2
DYA AMB AMB 00 33 18.5
comp=Z,509nm,4.0s
DYA AMS AMS 01 16 37.8
DYA **Yadsworthy** 83.78 340 eP P 00 33 15.5 -2.2
DYA AMB AMB 00 33 18.5
comp=Z,509nm,4.0s
DYA AMS AMS 01 16 37.8
comp=Z,152µm,17.9s,MS7.4
VAL **Valentia** 83.83 344⇑iS S 00 43 40.0 +2.0
DSF **Desfina** 83.83 318 P P 00 33 17.5 -0.7
AOI **Ancona** 83.87 326 P P 00 33 19.4 +1.1
LTK **Loutraki** 83.90 317 P P 00 33 17.8 -0.8
MUKL **Al Mukalla** 83.97 284⇑eP P 00 33 18.2 -1.0
RSM **Repubblica di** 84.03 327 P P 00 33 20.8 +1.7
RSM **Repubblica di** 84.03 327 P P 00 33 20.8 +1.7
KALE **Kalithea** 84.04 318 P P 00 33 19.2 -0.1
IGT **Igoumenitsa** 84.05 320 P P 00 33 19.8 +0.5
326A **Caldwell Ranch** 84.08 53 ⇓P P 00 33 18.5 -1.0
baz=84,SNR=14
TRIZ **Trizonia** 84.09 318 P P 00 33 19.3 -0.2
EFP **Efpalio** 84.13 318 P P 00 33 20.2 +0.5
DID **Didima** 84.16 317 P P 00 33 18.5 -1.4
KEK **Kerkira** 84.16 320 P P 00 33 20.3 +0.4
CING **Cingoli** 84.18 326 P P 00 33 19.8 -0.1
LAKA **Lakka** 84.23 318 P P 00 33 20.4 +0.1
GUR **Goura** 84.29 317 P P 00 33 20.3 -0.2
ORO **Oropa** 84.33 331 P P 00 33 19.2 -1.4
ORO **Oropa** 84.33 331 P P 00 33 19.2 -1.4
CCA1 **Carnmenellis** 84.33 341 P P 00 33 19.2 -1.4
CCA1 AMB AMB 00 33 21.4
comp=Z,534nm,3.9s
CCA1 **Carnmenellis** 84.33 341⇑eP P 00 33 19.2 -1.4
CCA1 AMB AMB 00 33 21.4
comp=Z,534nm,3.9s
OFFI **Offida** 84.33 326 P P 00 33 21.7 +1.0
SEI **Scarperia** 84.36 328 P P 00 33 21.1 +0.3
VMG **Vicchio** 84.37 328 P P 00 33 20.9 +0.1
ZKR **Zakros** 84.39 313 P P 00 33 21.8 +0.7
JSA **Saint Aubin** 84.45 338 P P 00 33 19.4 -1.8
JSA AMB AMB 00 33 22.1
comp=Z,476nm,3.9s
JSA **Saint Aubin** 84.45 338 eP P 00 33 19.4 -1.8
JSA AMB AMB 00 33 22.1
comp=Z,476nm,3.9s
BADI **Badiali** 84.46 327 P P 00 33 21.2 -0.1
FDMO **Fiordimonte** 84.50 326 P P 00 33 21.0 -0.5
MURB **Monte Urbino** 84.55 327 P P 00 33 22.6 +0.8
WMOK **Wichita Mounta** 84.55 47⇑eP P 00 33 22.0 +0.1
comp=Z,145nm,1.3s,mb6.0
WMOK ePP PP 00 36 37.7 +0.6
WMOK eS S 00 43 47.7 +1.8
WMOK LR LR
comp=Z,49µm,20.0s,MS6.9
WMOK **Wichita Mounta** 84.55 47⇑eP P 00 33 22.0 +0.1
WMOK e 00 36 37.7
WMOK eS S 00 43 47.7 +1.8
WMOK pmax pmax
comp=Z,145nm,1.3s,mb6.0
WMOK MLR MLR
comp=Z,49µm,20.0s,MS6.9
CESI **CESI - Serrava** 84.60 326 P P 00 33 23.3 +1.3
FG2 **Serracapriola** 84.62 324 P P 00 33 23.9 +1.7
TERO **Teramo** 84.62 326 P P 00 33 21.5 -0.7
BDI **Bagni Di Lucca** 84.66 328 P P 00 33 22.3 0.0
BDI **Bagni Di Lucca** 84.66 328 P P 00 33 22.3 0.0
VLC **Villacollemand** 84.66 328 P P 00 33 23.1 +0.8
VLX **Vlachokerasia** 84.70 317 P P 00 33 22.0 -0.6
328A **Wristen Ranch,** 84.72 52 ⇓P P 00 33 21.5 -1.4
baz=85,SNR=20
LAST **Lasithi** 84.75 314 P P 00 33 23.6 +0.7
427A **Hayter Ranch,** 84.75 53 P P 00 33 23.4 +0.4
baz=85,SNR=15
HDIL **Hopedale** 84.83 38 eP P 00 33 23.5 +0.2
comp=Z,335nm,1.1s,mb6.4
HDIL ePP PP 00 36 27.3 -12
HDIL eS S 00 43 50.0 +1.6
HDIL LR LR
comp=Z,87µm,22.0s,MS7.1
CSNT **Castellina Chi** 84.88 327 P P 00 33 24.3 +0.9
526A **Mary Lane Ranc** 84.91 54 P P 00 33 24.7 +0.9
baz=85,SNR=12
KFL **Anninata** 84.93 318 P P 00 33 22.5 -1.3
AQU **L'Aquila** 84.93 325 P P 00 33 23.2 -0.5
AQU **L'Aquila** 84.93 325 P P 00 33 23.2 -0.5
PII **Pisa** 84.97 328 P P 00 33 23.3 -0.6
PII **Pisa** 84.97 328 P P 00 33 23.3 -0.6
VLS **Valsamata** 84.97 319 P P 00 33 24.0 0.0
FG5 **Orsara di Pugl** 85.00 324 P P 00 33 23.4 -0.7
FG5 **Orsara di Pugl** 85.00 324 P P 00 33 23.4 -0.7
RSP **Reno Superiore** 85.00 331 P P 00 33 23.8 -0.2
RSP **Reno Superiore** 85.00 331 P P 00 33 23.8 -0.2
ITM **Ithomi** 85.08 317 P P 00 33 24.1 -0.4
FIAM **Fiamignano** 85.12 326 P P 00 33 25.3 +0.6
RNI2 **Rionero Sannit** 85.14 325 P P 00 33 25.3 +0.5
MIDA **Miranda** 85.15 325 P P 00 33 24.4 -0.4
LPIG **La Paz** 85.18 62 i P P 00 33 31.1 +5.8
SIVA **Sivas** 85.22 314 P P 00 33 25.9 +0.6
PPT **Papeete** 85.24 119 eS S 00 43 54.9 +1.9
comp=Z,88µm,27.5s
PPT eSS SS 00 49 36.0 +7.7
comp=Z,27µm,24.5s
PPT eLR LR 01 00 32.3
comp=Z,152µm,24.5s
PPT **Papeete** 85.24 119 LR LR 01 06 38.8
comp=Z,41µm,19.9s,MS6.8,baz=301,slow=32
PPT **Papeete** 85.24 119 PFAKE 00 33 40.0 +15
PPT LR LR
comp=Z,3µm,19.0s,MS5.7
626A **Big Bend Ranch** 85.25 54 ⇑P P 00 33 24.5 -1.0
baz=85,SNR=9.8
428A **Kincaid Ranch,** 85.27 52 ⇓P P 00 33 26.5 +0.9
baz=85,SNR=15
QLNO **Quiliano** 85.31 330 P P 00 33 23.8 -1.7
MRLC **Muro Lucano** 85.33 323 P P 00 33 26.0 +0.3
GDM **Grand'Maison** 85.37 331 eP P 00 33 25.8 0.0
GDM **Grand'Maison** 85.37 331 eP P 00 33 25.8 0.0
LATE **Laterza** 85.38 327 P P 00 33 26.2 +0.2
PYL **PYLOS** 85.39 317 P P 00 33 25.6 -0.5
KARN **Karanos** 85.41 315 P P 00 33 25.6 -0.6
CERT **Cerreto** 85.44 326 P P 00 33 27.7 +1.4
CSSN **Cassano Irpino** 85.45 324 P P 00 33 27.4 +1.1
GRN **Grenoble** 85.47 332 eP P 00 33 25.7 -0.6
GRN **Grenoble** 85.47 332 eP P 00 33 25.7 -0.6
GRN **Grenoble** 85.47 332 eP P 00 33 25.7 -0.6
RFI **Roccamonfina** 85.55 325 P P 00 33 25.9 -0.9
DOI **San Damiano** 85.56 330 P P 00 33 25.4 -1.4
DOI **San Damiano** 85.56 330 P P 00 33 25.4 -1.4
PLDF **La Plantade** 85.56 333 eP P 00 33 25.8 -1.0

PLDF La Plantade 85.56 333 *e*P **P 00 33 25.8 -1.0**
PLDF La Plantade 85.56 333 *e*P **P 00 33 25.8 -1.0**
SGO Sicignano 85.57 323 P **P 00 33 26.8 -0.1**
SGO Sicignano 85.57 323 P **P 00 33 26.8 -0.1**
528A Cox Ranch, San 85.62 53 ⇓P **P 00 33 26.8 -0.5**
baz=86,SNR=13
TAOE Nuku Hiva Isla 85.63 106 *e*S S 00 43 58.3 +1.3
comp=Z,46μm,25.9s
TAOE *e*LR LR 01 00 44.5
comp=Z,195μm,22.7s,baz=316
AGO Saint Agoulin 85.65 334 *e*P **P 00 33 26.1 -1.1**
AGO Saint Agoulin 85.65 334 *e*P **P 00 33 26.1 -1.1**
TXAR Lajitas Array 85.69 54 P **P 00 33 26.1 -1.7**
comp=Z,16nm,0.7s,mb5.3,baz=297,slow=2.6,SNR=21
TXAR PKKPbc PKKPbc 00 51 26.6 -1.3
comp=Z,1.0nm,1.0s,baz=146,slow=2.4,SNR=3.6
TXAR PKPPKP 00 59 41.0
comp=Z,1.6nm,1.1s,baz=167,slow=7.7,SNR=4.0
TXAR Lajitas Array 85.69 54 P **P 00 33 26.1 -1.7**
TXAR PKKPbc PKKPbc 00 51 26.6 -1.3
TXAR P'P' 00 59 41.0
TXAR Lajitas Array 85.69 54 P **P 00 33 26.1 -1.6**
MA9 Marino 85.72 326 P **P 00 33 27.8 +0.1**
SURF Saint Ours 85.74 331 *e*P **P 00 33 26.9 -0.8**
SURF Saint Ours 85.74 331 *e*P **P 00 33 26.9 -0.8**
TOLF Tolfa 85.76 326 P **P 00 33 27.8 0.0**
627A Terlingua Ranc 85.77 54 ⇑P **P 00 33 27.8 -0.4**
baz=86,SNR=10
LAV9 Lanuvio 85.78 326 P **P 00 33 27.8 -0.2**
CUC Castrocucco 85.80 323 P **P 00 33 29.0 +0.9**
MAON Monte Argentar 85.81 327 P **P 00 33 28.0 -0.1**
IMI Imperia 85.83 330 P **P 00 33 27.4 -0.7**
AAM Ann Arbor 85.84 33 *e*P **P 00 33 28.7 +0.5**
comp=Z,223nm,1.3s,mb6.2
AAM *e*PP PP 00 36 47.2 0.0
AAM *e*S S 00 43 59.8 +1.3
AAM LR LR
comp=Z,50μm,22.0s,MS6.9
AAM Ann Arbor 85.84 33 *e*P **P 00 33 28.7 +0.4**
AAM *e* 00 36 47.2
AAM *e*S S 00 43 59.8 +1.4
AAM pmax pmax
comp=Z,223nm,1.3s,mb6.2
AAM MLR MLR
comp=Z,50μm,22.0s,MS6.9
SSB Saint Sauveur 85.85 332⇑ *i*P **P 00 33 28.8 +0.5**
comp=Z,218nm,1.4s,mb6.2
SSB *e*PP PP 00 36 46.9 -0.3
SSB *e*S S 00 43 59.4 +1.0
SSB LR LR
comp=Z,133μm,19.0s,MS7.4
SSB Saint Sauveur 85.85 332⇑ *i*P **P 00 33 28.8 +0.6**
SSB *e* 00 36 46.9
SSB *e*S S 00 43 59.4 +1.0
SSB pmax pmax
comp=Z,218nm,1.4s,mb6.2
SSB MLR MLR
comp=Z,133μm,19.0s,MS7.4
SAOF Saorge 85.89 330 *e*P **P 00 33 25.6 -2.9**
SAOF Saorge 85.89 330 *e*P **P 00 33 25.6 -2.9**
SAOF Saorge 85.89 330 *e*P **P 00 33 25.6 -2.9**
CCM Cathedral Cave 85.90 40 PFAKE 00 33 40.0 +11
CCM LR LR
comp=Z,61μm,19.0s,MS7.0
AUTN L'Aution 85.93 330 *e*P **P 00 33 26.9 -1.7**
AUTN L'Aution 85.93 330 *e*P **P 00 33 26.9 -1.7**
AUTN L'Aution 85.93 330 *e*P **P 00 33 26.9 -1.7**
PYM Petit Puy Mans 85.96 334 *e*P **P 00 33 27.9 -0.9**
PYM Petit Puy Mans 85.96 334 *e*P **P 00 33 27.9 -0.9**
PYM Petit Puy Mans 85.96 334 *e*P **P 00 33 27.9 -0.9**
TOUF Mont Tournerai 85.98 330 *e*P **P 00 33 28.2 -0.7**
TOUF Mont Tournerai 85.98 330 *e*P **P 00 33 28.2 -0.7**
TOUF Mont Tournerai 85.98 330 *e*P **P 00 33 28.2 -0.7**
LUCF Luceram 86.05 330 *e*P **P 00 33 28.2 -1.0**
LUCF Luceram 86.05 330 *e*P **P 00 33 28.2 -1.0**
MVIF Mont Vial 86.12 330 *e*P **P 00 33 28.0 -1.6**
MVIF Mont Vial 86.12 330 *e*P **P 00 33 28.0 -1.6**
MVIF Mont Vial 86.12 330 *e*P **P 00 33 28.0 -1.6**
VENT Ventotene 86.20 325 P **P 00 33 30.3 +0.2**
CALN Calern 86.34 330 *e*P **P 00 33 30.1 -0.6**
CALN Calern 86.34 330 *e*P **P 00 33 30.1 -0.6**
CALN Calern 86.34 330 *e*P **P 00 33 30.1 -0.6**
GRI Girifalco 86.46 322 P **P 00 33 30.3 -1.1**
GRI Girifalco 86.46 322 P **P 00 33 30.3 -1.1**
OLIL Olney 86.84 38 *e*P **P 00 33 33.3 +0.1**
comp=Z,397nm,1.5s,mb6.4
OLIL *e*PP PP 00 36 55.8 +0.3
LBOS 87.10 286⇑ *e*P **P 00 33 34.2 -0.6**
LBOS AMb AMB 00 33 35.6
comp=Z,2μm,2.1s,mb7.0
JCT Junction City 87.14 51 ⇑P **P 00 33 34.4 -0.4**
baz=87,SNR=8.2
JCT Junction City 87.14 51⇑ *i*P **P 00 33 35.1 +0.3**
comp=Z,476nm,1.7s,mb6.5
JCT *e*PP PP 00 36 58.6 +0.5
JCT *e*S S 00 44 13.2 +1.8
JCT LR LR
comp=Z,44μm,21.0s,MS6.8
JCT Junction City 87.14 51⇑ *i*P **P 00 33 35.1 +0.3**
JCT *e* 00 36 58.7
JCT *e*S S 00 44 13.2 +1.8
JCT pmax pmax
comp=Z,476nm,1.7s,mb6.5
JCT MLR MLR
comp=Z,44μm,21.0s,MS6.8
SIUC Southern Illin 87.14 39 *e*P **P 00 33 34.5 -0.2**
comp=Z,417nm,1.0s,mb6.6
LONY Lake Ozonia 87.21 26 *e*P **P 00 33 34.7 -0.2**
comp=Z,188nm,1.7s,mb6.0
LONY *e*S S 00 44 13.4 +1.8
LONY LR LR
comp=Z,83μm,21.0s,MS7.1
SOI Samo 87.23 321 P **P 00 33 35.4 +0.2**
SOI Samo 87.23 321 P **P 00 33 35.4 +0.2**
SCLL Scilla 87.25 322 P **P 00 33 36.1 +0.9**
PQI Presque Isle 87.34 21 *e*P **P 00 33 35.5 0.0**
comp=Z,650nm,0.7s,mb7.0
SLNA Salina 87.40 322 P **P 00 33 35.4 -0.6**
SNZO South Karori 87.45 157 PFAKE 00 33 50.0 +14
SNZO LR LR
comp=Z,75μm,21.0s,MS7.1
ERPA Erie 87.46 31 *e*P **P 00 33 36.6 +0.4**
comp=Z,156nm,1.1s,mb6.2
ERPA LR LR
comp=Z,47μm,20.0s,MS6.9
MTTG Motta San Giov 87.46 322 P **P 00 33 36.1 -0.1**
MIAR Mount Ida 87.47 44⇑ *e*P **P 00 33 37.3 +0.9**
comp=Z,420nm,1.5s,mb6.5
MIAR *e*PP PP 00 37 02.2 +1.5
MIAR *e*S S 00 44 16.2 +1.7
MIAR LR LR
comp=Z,93μm,22.0s,MS7.2
MIAR Mount Ida 87.47 44⇑ *e*P **P 00 33 37.3 +0.9**
MIAR *e* 00 37 02.2
MIAR *e*S S 00 44 16.2 +1.7
MIAR pmax pmax
comp=Z,420nm,1.5s,mb6.5
MIAR MLR MLR
comp=Z,93μm,22.0s,MS7.2
ALLY Alegheny Colle 87.80 31 *e*P **P 00 33 38.5 +0.7**
comp=Z,6μm,1.2s
ACSO Alum Creek Sta 87.85 34 *e*P **P 00 33 38.7 +0.6**
comp=Z,212nm,1.1s,mb6.3
ACSO *e*PP PP 00 37 03.6 +0.1
ACSO *e*S S 00 44 18.5 +0.6
ACSO LR LR
comp=Z,64μm,22.0s,MS7.0
NCB Newcomb 87.91 26 *e*P **P 00 33 38.7 +0.4**
comp=Z,217nm,1.6s,mb6.1
NCB LR LR
comp=Z,91μm,22.0s,MS7.1
UALR University of 87.93 43 *e*P **P 00 33 38.8 +0.2**
comp=Z,452nm,1.9s,mb6.4
MNO Monte Soro 87.98 322 P **P 00 33 38.6 -0.1**
MNO Monte Soro 87.98 322 P **P 00 33 38.6 -0.1**
USI Ustica 88.03 324 P **P 00 33 39.1 +0.2**
WCI Wyandotte Cave 88.08 37 *e*P **P 00 33 39.2 0.0**
comp=Z,188nm,1.3s,mb6.2
WCI LR LR
comp=Z,68μm,21.0s,MS7.0
WCI Wyandotte Cave 88.08 37 *e*P **P 00 33 39.2 0.0**
WCI pmax pmax
comp=Z,188nm,1.3s,mb6.2
WCI MLR MLR
comp=Z,68μm,21.0s,MS7.0
DGI Dorgali Grotta 88.20 327 P **P 00 33 40.2 +0.4**
PKME Peaks-Kenny Pk 88.27 23 *e*P **P 00 33 40.6 +0.7**
comp=Z,143nm,1.2s,mb6.1
PKME *e*PP PP 00 37 06.7 0.0
PKME *e*S S 00 44 23.4 +1.6
PKME LR LR
comp=Z,95μm,22.0s,MS7.2
AGST Augusta-Monte 88.28 321 P **P 00 33 40.8 +0.6**
TRBA At Turbah 88.34 286⇑ *e*P **P 00 33 40.1 -0.7**
LBNH Lisbon 88.41 25 *e*P **P 00 33 40.7 +0.1**
comp=Z,130nm,1.4s,mb6.0
LBNH *e*PP PP 00 37 08.2 +0.5
LBNH *e*S S 00 44 23.6 +0.5
LBNH LR LR
comp=Z,49μm,19.0s,MS6.9
LBNH Lisbon 88.41 25 *e*P **P 00 33 40.7 +0.1**
LBNH *e* 00 37 08.3
LBNH *e*S S 00 44 23.6 +0.5
LBNH pmax pmax
comp=Z,130nm,1.4s,mb6.0
LBNH MLR MLR
comp=Z,49μm,19.0s,MS6.9
HAVL Avola 88.57 321 P **P 00 33 41.6 +0.1**
HMDC Modica 88.73 322 P **P 00 33 42.2 -0.1**
WVL Waterville 88.80 23 *e*P **P 00 33 42.4 -0.1**
comp=Z,260nm,0.6s,mb6.7
BINY Binghamton 88.87 28 *e*P **P 00 33 47.4 +4.5**
comp=Z,150nm,1.3s,mb6.2
BINY LR LR
comp=Z,59μm,19.0s,MS7.0
EJON La Jonquera 88.91 332 P **P 00 33 45.1 +2.1**
comp=Z,41nm,1.0s,mb5.7
FILF Fillols 88.93 332 *e*P **P 00 33 44.4 +1.3**
FILF Fillols 88.93 332 *e*P **P 00 33 44.4 +1.3**
NATX Nacogdoches 89.05 47 *e*P **P 00 33 44.2 +0.3**
comp=Z,627nm,1.8s,mb6.6
NATX *e*PP PP 00 37 13.6 +0.2
NATX *e*S S 00 44 31.4 +1.9
NATX LR LR
comp=Z,50μm,22.0s,MS6.9
MLS Moulis 89.07 334 *e*P **P 00 33 42.8 -1.0**
MLS Moulis 89.07 334 *e*P **P 00 33 42.8 -1.0**
WVT Waverly 89.07 39 *e*P **P 00 33 44.9 +0.9**
comp=Z,203nm,1.5s,mb6.2
WVT *e*PP PP 00 37 13.7 +0.3
WVT *e*S S 00 44 31.5 +1.9
WVT LR LR
comp=Z,61μm,20.0s,MS7.0
WVT Waverly 89.07 39 *e*P **P 00 33 44.9 +1.0**
WVT *e* 00 37 13.7
WVT *e*S S 00 44 31.5 +1.9
WVT pmax pmax
comp=Z,203nm,1.5s,mb6.2
WVT MLR MLR
comp=Z,61μm,20.0s,MS7.0
CLLI Llivia 89.20 333 P **P 00 33 46.7 +2.4**
SALF Salau 89.21 333 *e*P **P 00 33 45.7 +1.2**
SALF Salau 89.21 333 *e*P **P 00 33 45.7 +1.2**
LABF Labassere 89.32 334 *e*P **P 00 33 45.5 +0.5**
LABF Labassere 89.32 334 *e*P **P 00 33 45.5 +0.5**
RESF Ens 89.45 334 *e*P **P 00 33 46.2 +0.6**
RESF Ens 89.45 334 *e*P **P 00 33 46.2 +0.6**
REYF Montagne du Re 89.45 335 *e*P **P 00 33 46.7 +1.1**
REYF Montagne du Re 89.45 335 *e*P **P 00 33 46.7 +1.1**
ORDF Ordiarp 89.50 335 *e*P **P 00 33 46.6 +0.8**
ORDF Ordiarp 89.50 335 *e*P **P 00 33 46.6 +0.8**
TBI Tubuai 89.50 122 *e*S S 00 44 36.3 +2.6
comp=Z,62μm,27.2s
TBI *e*LR LR 01 02 31.2
comp=Z,99μm,23.2s
SSPA Standing Stone 89.53 30 *e*P **P 00 33 45.8 -0.2**
comp=Z,150nm,1.1s,mb6.2
OSSF Osses 89.56 335 *e*P **P 00 33 46.3 +0.2**
OSSF Osses 89.56 335 *e*P **P 00 33 46.3 +0.2**
CSOR Sort 89.58 333 P **P 00 33 48.5 +2.4**
comp=Z,62nm,1.1s,mb5.8
OXF Oxford 89.61 41 PFAKE 00 34 00.0 +14
OXF LR LR
comp=Z,69μm,19.0s,MS7.1
MCWV Mont Chateau 89.62 32 *e*P **P 00 33 47.0 +0.6**
comp=Z,212nm,1.1s,mb6.4
MCWV *e*S S 00 44 34.4 -0.2
MCWV LR LR
comp=Z,87μm,20.0s,MS7.2
EBIE Bielsa 89.62 334 P **P 00 33 48.9 +2.5**
comp=Z,42nm,1.1s,mb5.7
EALK Alkurruntz 89.67 335 P **P 00 33 49.2 +2.6**
comp=Z,76nm,1.1s,mb5.9
CFON Fontmartina 89.67 332 P **P 00 33 48.2 +1.5**
comp=Z,36nm,0.9s,mb5.7
ELIZ Elizondo 89.73 335 P **P 00 33 48.6 +1.7**
comp=Z,65nm,1.0s,mb5.9
ELIZ Elizondo 89.73 335 P **P 00 33 48.6 +1.8**
ELIZ pmax pmax
comp=Z,65nm,1.0s,mb5.9
HKT Hockley 89.79 49 PFAKE 00 34 00.0 +13
HKT LR LR
comp=Z,57μm,19.0s,MS7.0
EMIR Miracle 89.85 333 P **P 00 33 49.4 +2.0**
comp=Z,6μm,4.1s
QUA2 Belchertown 90.03 26 *e*P **P 00 33 49.1 +0.8**
comp=Z,571nm,0.6s,mb7.1
ELAN Lanestosa 90.24 337 P **P 00 33 51.0 +1.7**
comp=Z,104nm,1.0s,mb6.1
ATD Arta Tunnel 90.40 286 LR LR 01 21 04.4
comp=Z,140μm,18.4s,MS7.4,baz=23,slow=40
KVTX Kingsville 90.43 51 PFAKE 00 34 00.0 +10
KVTX LR LR
comp=Z,34μm,20.0s,MS6.8
EPOB Poblet 90.50 333 P **P 00 33 52.4 +1.9**
comp=Z,71nm,1.0s,mb6.0
PAL Palisades 90.65 28 *e*P **P 00 33 51.6 +0.4**
comp=Z,131nm,0.6s,mb6.4
PAL Palisades 90.65 28 *e*P **P 00 33 51.6 +0.4**
PAL pmax pmax
comp=Z,131nm,0.6s,mb6.4
EARI Arriondas 90.69 338 P **P 00 33 52.5 +1.2**
comp=Z,120nm,1.2s,mb6.1
ESAC San Caprasio 90.69 334 P **P 00 33 54.0 +2.7**
comp=Z,110nm,0.8s,mb6.2
BRNJ Basking Ridge 90.70 28 *e*P **P 00 33 51.5 0.0**
comp=Z,381nm,0.9s,mb6.7
CPNY Central Park 90.82 28 *e*P **P 00 33 52.2 +0.2**
comp=Z,345nm,0.8s,mb6.7
VBMS Vicksburg 90.88 44 *e*P **P 00 33 53.1 +0.7**
comp=Z,395nm,1.4s,mb6.5
VBMS LR LR
comp=Z,56μm,19.0s,MS7.0
ERTA Horta de San J 91.11 333 P **P 00 33 55.2 +1.8**
comp=Z,100nm,1.1s,mb6.1
EPON Pontenova 91.19 339 P **P 00 33 54.6 +1.0**
comp=Z,2μm,4.4s
ETOS Mallorca 91.30 331 P **P 00 33 56.1 +1.8**
comp=Z,81nm,1.0s,mb6.0
TKL Tuckaleechee C 91.33 37 P **P 00 33 54.1 -0.4**
comp=Z,45nm,1.0s,mb5.7,baz=61,slow=0.5,SNR=18
TKL Tuckaleechee C 91.33 37 *e*P **P 00 33 55.2 +0.8**
TKL *e*PP PP 00 37 31.5 +0.2
TKL Tuckaleechee C 91.33 37 P **P 00 33 54.1 -0.4**
TKL pmax pmax
comp=Z,45nm,1.0s,mb5.8
BLA Blacksburg 91.47 34 *e*P **P 00 33 54.9 -0.2**
comp=Z,130nm,1.0s,mb6.2
BLA LR LR
comp=Z,37μm,19.0s,MS6.8
BLA Blacksburg 91.47 34 *e*P **P 00 33 54.9 -0.2**
BLA pmax pmax
comp=Z,130nm,1.0s,mb6.2
BLA MLR MLR
comp=Z,37μm,19.0s,MS6.8
CBN Corbin 91.84 31 PFAKE 00 34 10.0 +13
CBN LR LR
comp=Z,60μm,20.0s,MS7.0
EMOS Mosqueruela 91.91 334 P **P 00 33 58.9 +1.9**
comp=Z,63nm,1.1s,mb5.9
STS Santiago 91.97 340 P **P 00 33 57.9 +0.6**
comp=Z,8.3nm,1.0s
STS Santiago 91.97 340 P **P 00 33 57.9 +0.6**
LRAL Lakeview Retre 91.98 41 PFAKE 00 34 10.0 +12
LRAL LR LR
comp=Z,64μm,22.0s,MS7.0
EMAZ Mazaricos 92.02 340 P **P 00 33 59.1 +1.6**
comp=Z,1μm,4.5s
ETOR Torete 92.02 335 P **P 00 33 58.6 +1.1**
comp=Z,39nm,4.8s
ETOR Torete 92.02 335 P **P 00 33 58.6 +1.1**
ERUA La Rua 92.06 339 P **P 00 33 58.5 +0.8**
comp=Z,66nm,1.2s,mb5.8
ERUA La Rua 92.06 339 P **P 00 33 58.5 +0.8**
ERUA pmax pmax
comp=Z,66nm,1.2s,mb5.8
KEST Kesra 92.19 324 P **P 00 33 57.5 -0.9**
comp=Z,19nm,1.0s,mb5.4,baz=326,slow=3.2,SNR=14
KEST LR LR 01 20 45.7
comp=Z,128μm,20.3s,MS7.4,baz=327,slow=39
KEST Kesra 92.19 324⇑ *e*P **P 00 33 58.8 +0.4**
KEST *e*PP PP 00 37 37.7 -0.3
ECAL Calabor 92.37 338 P **P 00 34 01.5 +2.3**
comp=Z,30nm,1.1s,mb5.5
SFJM Santa Fe 92.47 60 *i* P **P 00 33 52.8 -7.2**
EIBI Ibiza 92.48 332 P **P 00 34 01.0 +1.3**
comp=Z,3μm,4.1s
PBRG Braganca 92.50 338 *e*P **P 00 33 59.1 -0.6**
comp=Z,80nm,1.3s,mb5.9
PBRG Braganca 92.50 338 *e*PP PP 00 37 36.9 -3.3
EZAM Zamans 92.69 340 P **P 00 34 02.1 +1.5**
comp=Z,14μm,7.2s
EZAM Zamans 92.69 340 P **P 00 34 02.1 +1.5**
ECHE Chera 92.77 334 P **P 00 34 01.8 +0.8**
comp=Z,46nm,1.2s,mb5.8
ECHE Chera 92.77 334 P **P 00 34 01.8 +0.8**
ECHE pmax pmax
comp=Z,47nm,1.2s,mb5.8
ELOB Lobios 92.80 339 P **P 00 34 03.1 +2.0**
comp=Z,41nm,1.0s,mb5.8
GUD Guadarrama 92.83 336 P **P 00 34 02.9 +1.6**
comp=Z,4μm,6.7s
GUD Guadarrama 92.83 336 P **P 00 34 02.9 +1.6**
PCAB Cabril 92.93 339 *e*P **P 00 34 02.5 +0.8**
comp=Z,108nm,1.4s,mb6.1
PCAB Cabril 92.93 339 *e*PP PP 00 37 45.5 +1.9
DESE Dese 92.98 288 *e*P **P 00 34 03.8 +1.4**
DESE *e*S SKSac 00 44 04.9 -29
MVO Moncorvo 93.17 338 *e*P **P 00 34 02.5 -0.4**
comp=Z,104nm,1.3s,mb6.1
MVO Moncorvo 93.17 338 *e*PP PP 00 37 46.2 +0.7
MVO *e*SKS 00 44 35.9
MVO *e*LQ 01 06 35.2
MVO *e*LR LR 01 15 42.7
comp=Z,217μm,20.0s
MVO Moncorvo 93.17 338 P **P 00 34 05.2 +2.3**
PVRL Vila Real 93.26 339 *e*P **P 00 34 05.2 +2.0**
comp=Z,124nm,1.5s,mb6.1
PVRL Vila Real 93.26 339 *e*PP PP 00 37 44.6 -1.5
EBEN Beniarda 93.32 333 P **P 00 34 04.6 +1.0**
comp=Z,23nm,1.1s,mb5.5
GOGA Godfrey 93.34 38 *e*P **P 00 34 04.0 +0.2**
comp=Z,159nm,1.7s,mb6.2
GOGA *e*PP PP 00 37 47.5 +0.4
GOGA LR LR
comp=Z,56μm,21.0s,MS7.0
GOGA Godfrey 93.34 38 *e*P **P 00 34 04.0 +0.2**
GOGA *e* 00 37 47.5
GOGA pmax pmax
comp=Z,159nm,1.7s,mb6.2
GOGA MLR MLR
comp=Z,56μm,21.0s,MS7.0
BRAL Brewton 93.60 42 PFAKE 00 34 20.0 +15
BRAL LR LR
comp=Z,55μm,19.0s,MS7.0
ESDC Sonseca Array 93.66 336 P **P 00 34 05.1 0.0**
comp=Z,11nm,0.8s,mb5.3,baz=16,slow=4.6,SNR=16
ESDC LR LR 01 22 30.2
comp=Z,164μm,18.8s,MS7.5,baz=15,slow=40
ESDC Sonseca Array 93.66 336 P **P 00 34 06.4 +1.2**
comp=Z,30nm,1.1s,mb5.6
ESLA Sonseca Array 93.66 336⇑ *e*P **P 00 34 05.5 +0.4**
comp=Z,73nm,1.6s,mb5.9
ESLA *e*PP PP 00 37 49.0 -0.4
ESLA LR LR
comp=Z,1053μm,19.0s
ETOB Tobarra 93.82 334 P **P 00 34 07.7 +1.8**
comp=Z,42nm,1.1s,mb5.8
PVIS Viseu 93.83 339 *e*P **P 00 34 06.7 +0.8**
comp=Z,111nm,1.5s,mb6.1
PAB San Pablo 93.89 336⇑ *e*P **P 00 34 06.3 +0.1**
comp=Z,95nm,1.4s,mb6.0
PAB *e*PP PP 00 37 49.6 -1.5
PAB LR LR
comp=Z,202μm,19.0s,MS7.6
PAB San Pablo 93.89 336⇑ *e*P **P 00 34 06.4 +0.2**
PAB *e* 00 37 49.6
PAB pmax pmax
comp=Z,95nm,1.4s,mb6.0
PAB MLR MLR
comp=Z,202μm,19.0s,MS7.6
EPLA Plasencia 93.93 337 P **P 00 34 07.3 +0.9**
comp=Z,2μm,6.3s
EPLA Plasencia 93.93 337 P **P 00 34 07.3 +0.9**
EPLA pmax pmax
comp=Z,2μm,6.3s
MTE Manteigas 94.03 338 *e*P **P 00 34 05.7 -1.1**
comp=Z,108nm,1.5s,mb6.1
MTE Manteigas 94.03 338 *e*PP PP 00 37 51.0 -1.2
MTE *e*SKS 00 44 40.1
MTE *e*LQ 01 12 01.3
MTE *e*LR LR 01 16 03.5
comp=Z,210μm,20.0s
MTE Manteigas 94.03 338 PFAKE 00 34 20.0 +13
MTE LR LR
comp=Z,206μm,20.0s,MS7.6
EVIA Vianos 94.14 334 P **P 00 34 09.0 +1.6**
comp=Z,84nm,1.0s,mb6.1
EVIA Vianos 94.14 334 P **P 00 34 09.0 +1.6**
EVIA pmax pmax
comp=Z,84nm,1.0s,mb6.1
CNNC Cliffs of the 94.21 33 PFAKE 00 34 20.0 +12
CNNC LR LR
comp=Z,71μm,22.0s,MS7.1
EMHD Djebel Mahouad 94.39 329 P **P 00 34 11.5 +2.9**
EMUR La Murta 94.44 333 P **P 00 34 10.9 +2.2**
comp=Z,36nm,1.1s,mb5.7
PCBR Castelo Branco 94.53 338 *e*P **P 00 34 08.6 -0.5**
comp=Z,53nm,1.6s,mb5.7
PCBR Castelo Branco 94.53 338 *e*PP PP 00 37 58.3 +2.2
EBNR Beni Rached 94.85 330 P **P 00 34 12.5 +1.9**
PMRV Marv??o 94.89 338 *e*P **P 00 34 10.2 -0.6**
comp=Z,43nm,1.4s,mb5.7
PMRV Marv??o 94.89 338 *e*PP PP 00 37 58.4 -0.5
PMRV *e*SKS 00 44 46.3
PMRV *e*LQ 01 08 06.7
PMRV *e*LR LR 01 13 29.5
comp=Z,93μm,22.0s
EHUE Huescar 94.92 334 P **P 00 34 12.7 +1.8**
comp=Z,1μm,3.9s
EHUE Huescar 94.92 334 P **P 00 34 12.7 +1.8**
EHUE pmax pmax
comp=Z,1μm,3.9s
EBAN Banos Encina 94.98 335 P **P 00 34 12.6 +1.4**
comp=Z,22nm,0.9s,mb5.6
EBAN Banos Encina 94.98 335 P **P 00 34 12.6 +1.4**
EBAN pmax pmax
comp=Z,22nm,0.9s,mb5.6
PTOM Tomar 94.99 339 *e*P **P 00 34 12.4 +1.2**
comp=Z,76nm,1.6s,mb5.9
PTOM Tomar 94.99 339 *e*PP PP 00 37 56.7 -3.0
ECHA Ech Chlef 95.03 330 P **P 00 34 13.2 +1.7**
NHSC New Hope 95.07 36 PFAKE 00 34 20.0 +8.3
NHSC LR LR
comp=Z,105μm,22.0s,MS7.3
EQES Quesada 95.08 334 P **P 00 34 13.5 +1.8**
comp=Z,32nm,1.1s,mb5.7
EADA Adamuz 95.23 335 P **P 00 34 14.5 +2.1**
comp=Z,17nm,1.0s,mb5.4
EANR 'Ain N'Sour 95.31 330 P **P 00 34 14.0 +1.2**
EBAD Badajoz 95.41 338 P **P 00 34 15.0 +1.8**
comp=Z,21nm,1.1s,mb5.5
PESTR Estremoz 95.47 338 *e*P **P 00 34 12.7 -0.7**
comp=Z,40nm,1.3s,mb5.7
PESTR Estremoz 95.47 338 *e*PP PP 00 38 03.4 0.0
PESTR *e*SKS 00 44 48.4
PESTR *e*LQ 01 10 31.0
PESTR *e*LR LR 01 17 49.7
comp=Z,95μm,20.0s
ECAB El Cabril 95.57 336 P **P 00 34 14.4 +0.5**
comp=Z,3μm,7.2s
ZIIG Zihuatanejo 95.58 61 *i* P **P 00 34 14.2 -0.1**
ELUQ Luque 95.69 335 P **P 00 34 16.2 +1.8**
comp=Z,790nm,3.8s
ELUQ Luque 95.69 335 P **P 00 34 16.2 +1.7**
ELUQ pmax pmax

comp=Z,790nm,3.8s
ECOG Cogollos-Vega 95.72 334 P **P 00 34 16.5 +1.8**
comp=Z,12nm,0.8s,mb5.4
ECOG Cogollos-Vega 95.72 334 P **P 00 34 16.5 +1.9**
ECOG pmax pmax
comp=Z,12nm,0.8s,mb5.4
ETRT Tiaret 95.73 330 P **P 00 34 19.0 +4.3**
PMAFR Mafra 95.85 339 *e*P **P 00 34 14.0 -1.2**
comp=Z,103nm,1.6s,mb6.0
PMAFR Mafra 95.85 339 *e*PP PP 00 38 08.4 +2.1
PMAFR *e*SKS 00 44 49.0
PMAFR *e*LQ 01 11 53.9
PMAFR *e*LR LR 01 16 57.7
comp=Z,123μm,20.0s
EBER Berja 95.85 334 P **P 00 34 16.3 +1.1**
comp=Z,7.0nm,0.7s,mb5.2
EVO Evora 95.90 338 *e*P **P 00 34 14.5 -0.9**
comp=Z,39nm,2.5s,mb5.4
EVO Evora 95.90 338 *e*PP PP 00 38 02.7 -4.0
PBAR Barrancos 95.96 337 *e*P **P 00 34 15.4 -0.3**
comp=Z,63nm,1.7s,mb5.8
PBAR Barrancos 95.96 337 *e*PP PP 00 37 58.1 -9.1
PBAR *e*SKS 00 44 49.0
PBAR *e*LQ 01 08 40.4
PBAR *e*LR LR 01 15 50.6
comp=Z,262μm,20.0s
ELOJ Sierra Loja 96.03 335 P **P 00 34 16.8 +0.8**
comp=Z,38nm,1.1s,mb5.7
ELOJ Sierra Loja 96.03 335 P **P 00 34 16.8 +0.8**
ELOJ pmax pmax
comp=Z,39nm,1.1s,mb5.8
LIS Lisbon 96.03 339 *e*PP PP 00 38 08.9 +1.1
LIS *e*S SKSac 00 44 51.5 +2.1
LIS *e*SS SS 00 52 04.4 +3.1
LIS A 01 23 28.3
comp=Z,169μm,17.8s
LIS Lisbon 96.03 339 *e*P **P 00 34 16.0 -0.1**
LIS *e*PP PP 00 38 08.9 +1.1
LIS *e*S SKSac 00 44 51.5 +2.1
LIS *e*S SKSac 00 44 51.5 +2.1
LIS *e*SS SS 00 52 04.4 +3.1
LIS AMS AMS 01 23 28.3
comp=Z,169μm,17.8s,MS7.6
LIS Lisbon 96.03 339 *e*P **P 00 34 16.0 0.0**
LIS *e* 00 38 08.9
ERON Agron 96.04 334 P **P 00 34 16.5 +0.5**
comp=Z,73nm,2.0s,mb5.8
EGUA Guajares 96.13 334 P **P 00 34 17.0 +0.5**
comp=Z,897nm,4.5s
EGUA Guajares 96.13 334 P **P 00 34 17.0 +0.5**
EGUA pmax pmax
comp=Z,897nm,4.5s
EMIN Mina Concepcio 96.23 337 P **P 00 34 18.1 +1.2**
comp=Z,13nm,1.0s,mb5.3
PBEJ Beja 96.33 338 *e*P **P 00 34 18.4 +1.0**
comp=Z,77nm,1.9s,mb5.8
PBEJ Beja 96.33 338 *e*PP PP 00 38 05.9 -4.2
MESJ Messejana 96.60 338 *e*P **P 00 34 18.5 -0.1**
MESJ *e*PP PP 00 38 12.7 +0.5
MESJ *e*S SKSac 00 44 52.7 +0.3
MESJ *e*S SKSac 00 44 52.7 +0.3
MESJ *e*SS SS 00 52 12.2 +2.8
MESJ AMS AMS 01 24 53.9
comp=Z,101μm,22.4s,MS7.2
MESJ Messejana 96.60 338 *e*P **P 00 34 18.5 -0.1**
MESJ *e* 00 38 12.7
MESJ *e*S SKSac 00 44 52.7 +0.3
MESJ *e*SS SS 00 52 12.2 +2.8
EGRO El Granado 96.68 337 P **P 00 34 20.9 +2.0**
comp=Z,36nm,1.2s,mb5.7
PCVE Castro Verde 96.75 338 *e*P **P 00 34 19.0 -0.3**
comp=Z,49nm,1.5s,mb5.7
PCVE Castro Verde 96.75 338 *e*PP PP 00 38 15.5 +2.2
PCVE *e*SKS 00 44 56.5
PCVE *e*LQ 01 12 27.9
PCVE *e*LR LR 01 18 01.9
comp=Z,157μm,18.0s
EMIJ Mijas 96.76 335 P **P 00 34 19.5 +0.2**
comp=Z,13nm,0.9s,mb5.4
EALB Alboran 96.77 333 P **P 00 34 20.3 +0.9**
comp=Z,3μm,6.5s
ESPR Espera 96.82 336 P **P 00 34 21.4 +1.8**
comp=Z,16nm,1.1s,mb5.4
PVAQ Vaqueiros 96.87 338 *e*P **P 00 34 20.1 +0.3**
comp=Z,42nm,1.3s,mb5.7
PVAQ Vaqueiros 96.87 338 *e*PP PP 00 38 16.7 +2.5
PVAQ *e*SKS 00 44 55.4
PVAQ *e*LQ 01 10 58.4
PVAQ *e*LR LR 01 17 24.1
comp=Z,245μm,18.0s
PTEO Sao Teotonio 97.02 338 *e*P **P 00 34 21.5 +1.0**
comp=Z,124nm,1.6s,mb6.1
PBDV Barranco-do-Ve 97.08 338 *e*P **P 00 34 21.3 +0.5**
comp=Z,40nm,1.5s,mb5.6
PBDV Barranco-do-Ve 97.08 338 *e*PP PP 00 38 14.6 -1.3
PBDV *e*SKS 00 44 58.1
PBDV *e*LQ 01 08 52.3
PBDV *e*LR LR 01 19 08.8
comp=Z,193μm,18.0s
EJIF Jimena Fronter 97.08 335 P **P 00 34 22.8 +2.0**
comp=Z,700nm,4.6s
EJIF Jimena Fronter 97.08 335 P **P 00 34 22.8 +2.0**
EJIF pmax pmax
comp=Z,700nm,4.6s
MORF Marmelete 97.22 338 *e*P **P 00 34 21.7 +0.3**
comp=Z,56nm,1.5s,mb5.8
MORF Marmelete 97.22 338 *e*PP PP 00 38 19.4 +2.4
MORF *e*SKS 00 44 57.6
MORF *e*LR LR 01 11 03.5
comp=Z,89μm,20.0s
MORF *e*LR LR 01 14 08.6
comp=Z,89μm,20.0s
MORF Marmelete 97.22 338 *e*P **P 00 34 21.4 0.0**
MORF *e* 00 38 18.1
MORF *e*S SKSac 00 44 58.0 +2.4
MORF *e*SS SS 00 52 19.7 +1.6
PFVI Vila Bisbo 97.43 338 *e*P **P 00 34 22.7 +0.3**
comp=Z,69nm,1.8s,mb5.8
PFVI Vila Bisbo 97.43 338 *e*PP PP 00 38 19.4 +0.8
PFVI *e*SKS 00 44 52.2
PFVI *e*LQ 01 14 35.6
PFVI *e*LR LR 01 18 27.1
comp=Z,125μm,20.0s
PNIG Pinotepa 98.62 59 *i* P **P 00 34 36.2 +8.1**
DWPF Disney 98.73 39 PFAKE 00 34 40.0 +12
DWPF LR LR
comp=Z,88μm,22.0s,MS7.2
RKT Rikitea 98.91 113 *e*PP PP 00 38 29.4 -2.1
comp=Z,5μm,31.8s
RKT *e*SKSac SKSac 00 45 06.1 +2.0
comp=Z,29μm,27.5s
RKT *e*SP SP 00 47 26.7 +4.1
comp=Z,29μm,36.2s
RKT *e*SS SS 00 52 48.4 +3.6
comp=Z,29μm,26.5s
RKT *e*LR LR 01 06 59.9
comp=Z,97μm,23.5s
VHO Vista Hermosa 99.00 57 *i* P **P 00 34 36.4 +6.6**
CMLA Cha da Macela 100.08 351 PFAKE 00 34 50.0 +16
CMLA LR LR
comp=Z,25μm,19.0s,MS6.7
MDT Midelt 100.15 333 P Pdif 00 34 34.2 -0.4
comp=Z,6.2nm,1.1s,baz=62,slow=5.1,SNR=4.7
MDT Midelt 100.15 333 P Pdif 00 34 34.2 -0.4
BBSR BB Station 101.53 24 PFAKE 00 34 50.0 +9.3
BBSR LR LR
comp=Z,31μm,22.0s,MS6.8
TEIG Tepich 101.62 49 PFAKE 00 34 50.0 +8.9
TEIG LR LR
comp=Z,32μm,22.0s,MS6.8
RER Riviere de l'E 102.45 253 PFAKE 00 35 00.0 +15
RER LR LR
comp=Z,24μm,21.0s,MS6.7
KMBO Kilima Mbogo 103.05 280 Pdiff Pdif 00 34 47.0 -0.4
comp=Z,9.6nm,1.1s,baz=180,slow=24,SNR=16
KMBO Kilima Mbogo 103.05 280 Pdif Pdif 00 34 47.0 -0.4
KMBO Kilima Mbogo 103.05 280 P Pdif 00 34 47.1 -0.3
PTCN Pitcairn Islan 103.55 111 PFAKE 00 35 00.0 +10
PTCN LR LR
comp=Z,53μm,22.0s,MS7.0
PMAR Madeira 103.62 343 *e*PP PP 00 39 07.1 +1.7
FUL Funchal 103.70 343 *e*PP PP 00 39 09.3 +3.3
TAM Tamanrasset 104.93 321 PFAKE 00 35 10.0 +14
TAM LR LR
comp=Z,61μm,20.0s,MS7.1

TGUH Tegucigalpa,Un 107.09 52 PFAKE 00 39 30.0 +15
TGUH LR LR
comp=Z,30μm,21.0s,MS6.8
ABPO Ambohimpanom 107.27 260 PFAKE 00 39 30.0 +15
ABPO LR LR
comp=Z,32μm,19.0s,MS6.9
MBAR Mbarara 107.43 285 PFAKE 00 39 30.0 +14
MBAR LR LR
comp=Z,596nm,19.0s
GTBY Guantanamo Bay 108.69 39 PFAKE 00 39 30.0 +12
GTBY LR LR
comp=Z,51μm,19.0s,MS7.1
MTDJ Mount Denham 108.98 42 PFAKE 00 39 30.0 +12
MTDJ LR LR
comp=Z,48μm,21.0s,MS7.0
GRTK Grand Turk 109.06 34 PFAKE 00 39 30.0 +11
GRTK LR LR
comp=Z,82μm,22.0s,MS7.3
CASY Casey 110.89 194 PFAKE 00 39 30.0 +10
CASY LR LR
comp=Z,15μm,20.0s,MS6.6
SDDR Presa de Saban 111.24 36 PFAKE 00 39 30.0 +7.3
SDDR LR LR
comp=Z,54μm,20.0s,MS7.1
JTS JuntasAbangare 111.45 53 PFAKE 00 39 40.0 +17
JTS LR LR
comp=Z,33μm,21.0s,MS6.9
PAF Port-aux-Franc 111.48 222 PFAKE 00 39 30.0 +7.9
PAF LR LR
comp=Z,18μm,19.0s,MS6.7
SJG San Juan 114.14 31 PFAKE 00 39 40.0 +12
SJG LR LR
comp=Z,29μm,20.0s,MS6.9
BCIP Isla Barro Col 115.31 49 PFAKE 00 39 40.0 +9.4
BCIP LR LR
comp=Z,18μm,21.0s,MS6.7
ANWB Willy Bob 116.14 27 PFAKE 00 39 40.0 +7.9
ANWB LR LR
comp=Z,30μm,22.0s,MS6.9
LSZ Lusaka 119.07 275 *e*PKPdf PKPdf 00 39 38.1 +0.4
LSZ *e*PP PP 00 40 57.4 -0.6
LSZ *e*PKKP PKKPdf 00 50 19.9 -0.5
LSZ LR LR
comp=Z,106μm,20.0s,MS7.5
LSZ Lusaka 119.07 275 *e*PKIKP PKPdf 00 39 38.1 +0.4
LSZ *e* 00 40 57.4
LSZ MLR MLR
comp=Z,106μm,20.0s,MS7.5
FDF Fort de France 119.08 28 PFAKE 00 39 50.0 +12
FDF LR LR
comp=Z,36μm,20.0s,MS7.0
RPN Rapa Nui 119.64 101 PFAKE 00 39 50.0 +11
RPN LR LR
comp=Z,35μm,22.0s,MS7.0
SBA Scott Base 120.35 175 PFAKE 00 39 50.0 +12
SBA LR LR
comp=Z,18μm,22.0s,MS6.7
SDV Santo Domingo 120.38 40 *e*PKPdf PKPdf 00 39 41.1 +0.7
SDV LR LR
comp=Z,17μm,22.0s,MS6.6
BBGH Gun Hill 121.11 27 PFAKE 00 39 50.0 +8.2
BBGH LR LR
comp=Z,56μm,22.0s,MS7.2
GRGR Grenville 121.31 29 PFAKE 00 39 50.0 +7.8
GRGR LR LR
comp=Z,28μm,22.0s,MS6.9
ROSC El Rosal 121.91 46 PKP PKPdf 00 39 45.2 +1.8
comp=Z,3.5nm,0.6s,baz=119,slow=17,SNR=3.9
ROSC El Rosal 121.91 46 PKP PKPdf 00 39 45.2 +1.8
OTAV Otavalo 123.32 54 PFAKE 00 40 00.0 +14
OTAV LR LR
comp=Z,16μm,19.0s,MS6.7
DBIC Dimbokro 123.80 322 PKP PKPdf 00 39 46.9 0.0
comp=Z,20nm,0.9s,baz=52,slow=2.4,SNR=14
DBIC PP PP 00 41 31.5 +2.3
comp=Z,52nm,1.0s,baz=14,slow=8.1,SNR=7.5
DBIC Dimbokro 123.80 322 PKP PKPdf 00 39 46.9 -0.1
DBIC PP PP 00 41 31.5 +2.3
DBIC Dimbokro 123.80 322 PKIKP PKPdf 00 39 46.9 -0.1
DBIC 00 41 31.5
TIC Toumodi 123.90 322 *e*PKIKP PKPdf 00 39 47.4 +0.2
comp=Z,83nm,1.0s
TIC Toumodi 123.90 322 *e*PKPdf PKPdf 00 39 47.4 +0.2
TIC Toumodi 123.90 322 *e*PKIKP PKPdf 00 39 47.4 +0.2
KIC Kosan Boka 124.02 321 *e*PKIKP PKPdf 00 39 47.7 +0.3
comp=Z,46nm,1.0s
KIC Kosan Boka 124.02 321 *e*PKPdf PKPdf 00 39 47.7 +0.3
LIC Lamto 124.27 322 *e*PKIKP PKPdf 00 39 48.1 +0.2
comp=Z,81nm,1.0s
LIC Lamto 124.27 322 *e*PKPdf PKPdf 00 39 48.1 +0.2
MAW Mawson 124.76 207 PKP PKPdf 00 39 46.9 -0.1
comp=Z,5.9nm,0.8s,baz=294,slow=2.8,SNR=7.3
MAW Mawson 124.76 207 *e*P PKPdf 00 39 48.2 +1.2
comp=Z,7.8nm,0.6s
MAW Mawson 124.76 207 PKP PKPdf 00 39 46.9 -0.1
MAW Mawson 124.76 207 PKIKP PKPdf 00 39 46.9 -0.1
LBTB Lobatse 126.88 268 *e*PKPdf PKPdf 00 39 52.6 +0.2
LBTB *e*PP PP 00 41 49.2 -1.6
LBTB LR LR
comp=Z,66μm,19.0s,MS7.3
LBTB Lobatse 126.88 268 *e*PKIKP PKPdf 00 39 52.6 +0.1
LBTB *e* 00 41 49.2
LBTB MLR MLR
comp=Z,66μm,19.0s,MS7.3
ATAH Atahualpa 129.08 59 PKP PKPdf 00 39 58.2 +1.2
comp=Z,15nm,1.1s,baz=342,slow=4.4,SNR=5.7
BOSA Boshof 129.12 264 PKP PKPdf 00 39 56.6 0.0
comp=Z,8.5nm,0.9s,baz=91,slow=3.5,SNR=7.0
BOSA Boshof 129.12 264 PKP PKPdf 00 39 56.6 0.0
BOSA *e*PKPdf PKPdf 00 39 56.9 +0.3
BOSA *e*PP PP 00 42 04.8 -0.7
BOSA LR LR
comp=Z,31μm,20.0s,MS7.0
BOSA Boshof 129.12 264 PKIKP PKPdf 00 39 56.6 0.0
BOSA *e* 00 42 04.8
BOSA MLR MLR
comp=Z,31μm,20.0s,MS7.0
TSUM Tsumeb 129.38 280 PFAKE 00 40 10.0 +13
TSUM LR LR
comp=Z,52μm,21.0s,MS7.2
QSPA South Pole Qui 131.68 180 *e*PKPdf PKPdf 00 40 00.2 +0.2
QSPA LR LR
comp=Z,31μm,22.0s,MS7.0
SYO Syowa Base 133.41 209‖ *e*P PKPdf 00 40 03.0 -0.5
NNA Nana 133.72 62 PFAKE 00 40 20.0 +14
NNA LR LR
comp=Z,26μm,19.0s,MS7.0
SUR Sutherland 134.33 263 PFAKE 00 40 20.0 +14
SUR LR LR
comp=Z,52μm,22.0s,MS7.2
LPAZ La Paz 142.51 57 PKP PKPdf 00 40 19.5 -2.3
comp=Z,4.3nm,0.8s,baz=343,slow=1.9,SNR=8.5
LPAZ La Paz 142.51 57 PKP PKPdf 00 40 19.5 -2.3
LPAZ *e*PKPdf PKPdf 00 40 22.5 +0.7
LPAZ La Paz 142.51 57 PKIKP PKPdf 00 40 19.5 -2.3
NVL N'lazarevskaya 142.53 204 *e*PKIKP PKPdf 00 40 15.9 -4.3
NVL *e* 00 47 21.3
NVL MLR MLR
comp=Z,26μm,21.0s,MS7.0
RCBR Riachuelo 144.04 360 PKP PKPdf 00 40 23.1 -1.5
comp=Z,99nm,1.2s,baz=344,slow=4.7,SNR=10.0
RCBR Riachuelo 144.04 360 PKP PKPdf 00 40 23.1 -1.5
RCBR LR LR
comp=Z,38μm,21.0s,MS7.2
SIV San Ignacio 146.43 47 PKPbc PKPbc 00 40 29.6 -0.3
comp=Z,95nm,1.0s,baz=319,slow=2.3,SNR=57
SIV San Ignacio 146.43 47 PKPbc PKPbc 00 40 29.6 -0.3
LCO Las Campanas 149.28 76 *e*PKPdf PKPdf 00 40 34.3 +1.3
LCO LR LR
comp=Z,39μm,20.0s,MS7.2
TLL Tololo Astrono 149.83 78 *e*P PKPdf 00 40 30.9 -2.9
TLL Tololo Astrono 149.83 78 *e*PKIKP PKPdf 00 40 30.9 -2.9
TLL Tololo Astrono 149.83 78 *e*P PKPdf 00 40 30.9 -2.9
ROCH El Roble 151.09 83 *e*P PKPdf 00 40 37.2 +1.5
PEL Peldehue 151.42 83 *e*P PKPdf 00 40 34.8 -1.4
CLCH Cerro Calan 151.64 84 *e*P PKPbc 00 40 42.9 0.0
FCH Farellones 151.79 83 *e*P PKPbc 00 40 40.5 -2.6
CCHI Chillan 151.84 91 *e*P PKPbc 00 40 43.2 +0.1
CCHI Chillan 151.84 91 *e*P PKPbc 00 40 43.2 +0.1
BDFB Brasilia 151.87 25 PKPbc PKPbc 00 40 43.7 -0.1
comp=Z,38nm,1.0s,baz=321,slow=1.1,SNR=4.6
BDFB Brasilia 151.87 25 PKPbc PKPbc 00 40 43.7 -0.1
BDFB Brasilia 151.87 25 PKIKP PKPbc 00 40 43.7 -0.1
LMEL Las Melosas 152.10 84 *e*P PKPbc 00 40 44.4 +0.6

LMEL Las Melosas 152.10 84 *e*P PKPbc 00 40 44.4 +0.6
PMSA Palmer Station 152.16 155 *e*PKPdf PKPdf 00 40 36.8 +0.5
PMSA LR LR
comp=Z,40μm,21.0s,MS7.2
CFAA Coronel Fontan 152.47 78 PKPbc PKPbc 00 40 44.3 -0.4
comp=Z,1.0nm,0.8s,baz=288,slow=2.2,SNR=3.6
CFAA Coronel Fontan 152.47 78 PKPbc PKPbc 00 40 44.3 -0.4
PLCA Paso Flores 154.26 99 PKP PKPdf 00 40 39.9 -0.2
comp=Z,3.1nm,1.0s,baz=256,slow=4.3,SNR=3.2
PLCA PKPbc PKPbc 00 40 48.7 +0.4
comp=Z,5.2nm,0.9s,baz=279,slow=4.7,SNR=8.9
PLCA Paso Flores 154.26 99 PKP PKPdf 00 40 39.9 -0.2
PLCA *e*PKPdf PKPdf 00 40 40.3 +0.3
PLCA PKPbc PKPbc 00 40 48.7 +0.4
PLCA LR LR
comp=Z,34μm,21.0s,MS7.1
PLCA Paso Flores 154.26 99 PKIKP PKPdf 00 40 39.9 -0.2
PLCA *e* 00 40 40.3
PLCA 00 40 48.7
PLCA MLR MLR
comp=Z,34μm,21.0s
USHA Ushuaia 155.25 132 PKPbc PKPdf 00 40 51.0 +10
comp=Z,11nm,1.0s,baz=102,slow=1.4,SNR=3.7
USHA Ushuaia 155.25 132 PKPbc PKPdf 00 40 51.0 +10
CPUP Villa Florida 156.66 55 PKP PKPdf 00 40 43.2 -0.6
comp=Z,5.4nm,1.1s,baz=343,slow=7.4,SNR=4.0
CPUP Villa Florida 156.66 55 PKP PKPdf 00 40 43.2 -0.6
CPUP LR LR
comp=Z,4μm,20.0s,MS6.3
CPUP Villa Florida 156.66 55 PKIKP PKPdf 00 40 43.2 -0.6
CPUP MLR MLR
comp=Z,4μm,20.0s
SPB Sao Paulo 159.43 31 *e*PKPdf PKPdf 00 40 47.5 +0.3
SPB LR LR
comp=Z,36μm,21.0s,MS7.2
TRQA Tornquist 159.88 87 PFAKE 00 41 00.0 +13
TRQA LR LR
comp=Z,33μm,19.0s,MS7.2
TRIS Tristan da Cun 160.98 277 PFAKE 00 41 00.0 +11
TRIS LR LR
comp=Z,45μm,20.0s

IDC ***11*** *00:32:44.7±4.2, 41°.75N×144°.11E, h16km±25km, mb4.9/24, mb1 5.0/29, mb1mx5.0/30, mbtmp4.9/29, ML4.3/5, Error ellipse: s-maj=13.4km s-min=11.2km az=114.0*
ISCJB ***11*** *00:32:45.6±0.8, 41°.72N±0°.02×143°.99E±0°.03, h29km±5km, mb5.3/218, MS5.4/4, Error ellipse: s-maj=4.2km s-min=2.9km az=152.8*
JMA ***11*** *00:32:46.0±0.2, 41°.76N×144°.22E, h28km±3km, M5.7*
JMA Felt II J1.
BJI ***11*** *00:32:47.3, 41°.79N×143°.91E, h36km, mB5.1/4, mb5.5/38, Ms5.6/6, Ms7 5.2/6*
MOS ***11*** *00:32:47.8±1.1, 41°.79N×143°.90E, h43km, mb5.6/71, Error ellipse: s-maj=7.2km s-min=4.6km az=106.5*
NEIC ***11*** *00:32:48.4±0.7, 41°.75N×143°.88E, h35km±6km, mb5.3/132, Error ellipse: s-maj=5.5km s-min=3.8km az=165.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido. Also recorded [1 JMA] in Aomori and Iwate.
SZGRF ***11*** *00:32:56.1, 43°.19N×144°.03E, h33km, mb5.5, Hokkaido, Japan, region*
ISC 11 00:32:47.9±0.8, 41°.78N±0°.02×143°.98E±0°.03, h32km±5km, h35km±1.4km:pP-P, n626, σ0°.98/628, mb5.3/218, MS5.4/4, 93C-84D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.66**	**292**	Pn	**Pn**	**00 33 02.0**	**+1.0**
	156μm,0.7s						
JEM	**Erimo**	**0.66**	**292**	⇑P	**Pb**	**00 33 02.0**	**+1.0**
JEM				*e*S	**Sb**	**00 33 12.7**	**+2.8**
JCH	**Churui**	**0.95**	**332**	⇑P	**Pn**	**00 33 04.9**	**-0.2**
JNBK	**Urakawa-nobuka**	**1.04**	**299**	⇑P	**Pn**	**00 33 07.7**	**+1.4**
JOB	**Onbets**	**1.13**	**355**	⇑P	**Pn**	**00 33 06.6**	**-0.9**
JOB				*e*S	**Sn**	**00 33 21.6**	**-0.4**
JAK	**Akkeshi**	**1.33**	**23**	P	**Pn**	**00 33 08.2**	**-2.1**
JAK				*e*S	**Sn**	**00 33 24.5**	**-2.4**
JAR	**Ashorobuto**	**1.53**	**354**	⇑P	**Pn**	**00 33 11.6**	**-1.4**
JOT	**Ohata**	**2.23**	**261**	⇑P	**Pn**	**00 33 23.6**	**+0.9**
JNB	**Noboribetsu**	**2.29**	**289**	⇑P	**Pn**	**00 33 24.5**	**+1.0**
JTM	**Tenmabayashi**	**2.41**	**247**	⇑P	**Pn**	**00 33 25.6**	**+0.6**
ASAJ	**Asahikawa**	**2.55**	**337**	Pn	**Pn**	**00 33 27.1**	**0.0**
	27nm,0.3s,baz=205,slow=14,SNR=56						
ASAJ	**Asahikawa**	**2.55**	**337**	*e*Pn	**Pn**	**00 33 26.9**	**-0.1**
ASAJ				Sn	**Sn**	**00 33 57.1**	**+0.1**
ASAJ	**Asahikawa**	**2.55**	**337**	P	**Pn**	**00 33 27.1**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,27nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.65**	**31**	‖ *i*P	**Pn**	**00 33 25.9**	**-2.5**
YUK				*i* S	**Sn**	**00 33 58.3**	**-1.1**
YUK				pmax	pmax		
	comp=N,470nm,0.5s						
YUK				pmax	pmax		
	comp=E,420nm,0.5s						
YUK				pmax	pmax		
	comp=Z,2μm,0.5s						
YUK				smax			
	comp=N,3μm,0.4s						
YUK				smax			
	comp=E,9μm,0.8s						
YUK				smax			
	comp=N,3μm,0.4s						
YUK				smax			
	comp=E,13μm,0.9s						
JSI2	**Shiura 2**	**2.78**	**256**	⇑P	**Pn**	**00 33 31.3**	**+1.2**
JAH	**Hinai**	**2.99**	**239**	⇑P	**Pn**	**00 33 33.2**	**+0.2**
JOM	**Ohasama**	**3.08**	**223**	⇑P	**Pn**	**00 33 33.5**	**-0.8**
JMK	**Ichinoseki**	**3.52**	**218**	⇑P	**Pn**	**00 33 39.1**	**-1.3**
JIO	**Ouri**	**3.88**	**212**	⇑P	**Pn**	**00 33 43.3**	**-2.0**
KUR	**Kuril'sk**	**4.47**	**38**	*e*P	**Pn**	**00 33 50.0**	**-3.3**
KUR				*e*S	**Sn**	**00 34 41.0**	**-3.2**
KUR				pmax	pmax		
	comp=N,710nm,0.9s						
KUR				pmax	pmax		
	comp=E,1μm,0.9s						
KUR				pmax	pmax		
	comp=Z,3μm,0.9s						
KUR				smax			
	comp=N,2μm,0.5s						
KUR				smax			
	comp=E,1μm,0.5s						
YSS	**Yuzh-Sakhalins**	**5.25**	**351**	*e*Pn	**Pn**	**00 34 04.5**	**+0.4**
YSS	**Yuzh-Sakhalins**	**5.25**	**351**	*e*P	**Pn**	**00 34 05.0**	**+0.9**
YSS				*e*S	**Sn**	**00 34 58.5**	**-5.0**
YSS				pmax	pmax		
	comp=Z,90nm,1.0s						
YSS				smax			
	comp=N,280nm,1.0s						
JFY	**Yanaizu**	**5.47**	**218**	P	**Pn**	**00 34 06.8**	**-0.4**
JSD	**Sado**	**5.77**	**232**	⇑P	**Pn**	**00 34 11.0**	**-0.2**
JHK	**Hiroka**	**5.93**	**222**	P	**Pn**	**00 34 12.8**	**-0.7**
JAG	**Ashikaga**	**6.40**	**215**	P	**Pn**	**00 34 18.3**	**-1.6**
MAJO	**Matsushiro**	**6.88**	**223**	*e*Pn	**Pn**	**00 34 26.3**	**-0.3**
MAJO				*e*Sn	**Sn**	**00 35 42.1**	**-1.7**
MAJO	**Matsushiro**	**6.88**	**223**	*e*P	**Pn**	**00 34 26.3**	**-0.3**
MAJO				*e*		00 35 42.1	
MAT	**Matsushiro**	**6.88**	**223**	P	**Pn**	**00 34 26.1**	**-0.5**
MAT				*e*S	**Sn**	**00 35 56.6**	**+13**
MJAR	**Matsushiro Arr**	**6.88**	**222**	Pn	**Pn**	**00 34 26.2**	**-0.4**
	comp=N,13nm,0.3s,baz=27,slow=13,SNR=74						
MJAR	**Matsushiro Arr**	**6.88**	**222**	P	**Pn**	**00 34 26.2**	**-0.4**
JNG	**Nsakai**	**7.04**	**222**	P	**Pn**	**00 34 28.9**	**+0.1**
JGN	**Niukaw**	**7.59**	**225**	P	**Pn**	**00 34 36.4**	**+0.1**
VLA	**Vladivostok**	**9.04**	**283**	‖ *i*P	**Pn**	**00 34 59.1**	**+3.0**
VLA				S	**Sn**	**00 36 42.2**	**+5.5**
VLA				pmax	pmax		
	comp=Z,272nm,0.9s						
HABR	**Khabarovsk**	**9.20**	**320**	P	**Pn**	**00 34 55.6**	**-2.6**
HABR						00 36 38.2	
HABR				MLR	MLR		
	comp=Z,39μm,14.0s						
JKY	**Yasaka**	**9.26**	**231**	P	**Pn**	**00 35 00.2**	**+1.1**
JHJ	**Hachijo jima 2**	**9.26**	**202**	Pn	**Pn**	**00 34 57.7**	**-1.5**
	comp=Z,28nm,0.3s,baz=66,slow=20,SNR=2.5						
JHJ				Sn	**Sn**	**00 36 33.2**	**-9.0**
	comp=Z,88nm,0.3s,baz=54,slow=23,SNR=7.2						
MDJ	**Mudanjiang**	**10.88**	**290**	P	**Pn**	**00 35 25.5**	**+4.2**
MDJ				pmax	pmax		
	comp=Z,120nm,1.0s						
MDJ	**Mudanjiang**	**10.88**	**290**	*e*Pn	**Pn**	**00 35 20.5**	**-0.8**
	comp=Z,104nm,1.0s						
KSRS	**Korea Array**	**13.11**	**256**	Pn	**Pn**	**00 35 52.7**	**+0.9**

comp=Z,0.6nm,0.3s,baz=68,slow=13,SNR=33
KSRS Sn **Sn** **00 38 26.9 +11**
comp=Z,0.6nm,0.3s,baz=67,slow=24,SNR=4.1
KSRS Korea Array 13.11 256 P **Pn** **00 35 52.7 +0.9**
KSRS 00 38 27.0
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS smax
comp=N,1.0nm,0.3s
JNU Nakatsue 13.51 234 *e*Pn **Pn** **00 35 55.9 -1.4**
CN2 Changchun 13.76 285 *e*P **Pn** **00 36 01.6 +0.9**
CN2 *es*P 00 36 17.0
CN2 pmax pmax
comp=Z,90nm,1.2s
CN2 LR LR
comp=Z,1μm,13.0s
PETK Petropavlovsk- 14.62 35 Pn **Pn** **00 36 09.0 -3.3**
comp=Z,0.9nm,0.3s,baz=184,slow=7.3,SNR=6.9
PETK Petropavlovsk- 14.62 35 Pn **Pn** **00 36 09.0 -3.3**
PETK Petropavlovsk- 14.62 35 P **Pn** **00 36 09.0 -3.3**
CBIJ Chichi jima 14.72 186 Sn **Sn** **00 38 41.5 -14**
comp=Z,36nm,0.3s,baz=221,slow=22,SNR=5.0
PET Petropavlovsk 14.98 36 *e*Pn **Pn** **00 36 24.0 +6.9**
comp=Z,106nm,1.2s
PET Petropavlovsk 14.98 36 *e*P **Pn** **00 36 21.0 +3.9**
PET pmax pmax
comp=Z,86nm,1.2s
DL2 Dalian 17.27 268 P **Pn** **00 36 46.6 +0.1**
DL2 pmax pmax
comp=Z,100nm,0.8s
HIA Hailar 18.51 302 *e*P **Pn** **00 36 59.1 -2.5**
comp=Z,271nm,0.9s
HIA Hailar 18.51 302 *e*P **Pn** **00 36 59.1 -2.6**
HIA pmax pmax
comp=Z,271nm,0.9s
BJI Beijing 21.05 275 P **P** **00 37 28.4 -0.7**
BJI pmax pmax
comp=Z,100nm,0.9s,mb5.2
BJT Baijiatuau 21.06 275 *e*P **P** **00 37 27.6 -1.6**
comp=Z,77nm,0.8s,mb5.1
BJT Baijiatuau 21.06 275 *e*P **P** **00 37 27.6 -1.6**
BJT pmax pmax
comp=Z,77nm,0.8s
TIA Tai'an 21.55 264 P **P** **00 37 33.2 -1.3**
TIA pmax pmax
comp=Z,110nm,0.9s,mb5.3
SEY Seymchan 21.77 10*c*eP **P** **00 37 32.8 -3.8**
YAK Yakutsk 22.02 342 *e*P **P** **00 37 34.6 -4.6**
comp=Z,291nm,0.8s,mb5.8
YAK Yakutsk 22.02 342 *e*P **P** **00 37 34.5 -4.8**
YAK *e*S **S** **00 41 37.1 -3.2**
YAK pmax pmax
comp=Z,328nm,1.0s,mb5.7
YAK pmax pmax
comp=E,24nm,0.7s
YAK pmax pmax
comp=N,145nm,1.1s
YAK pmax pmax
comp=Z,192nm,0.9s,mb5.5
YAK smax
comp=E,680nm,1.5s
YAK smax
comp=N,699nm,1.6s
YAK MLR MLR
comp=Z,57μm,21.0s,MS6.0
YAK MLR MLR
comp=N,30μm,14.0s
YAK MLR MLR
comp=E,47μm,15.0s
NJ2 Nanjing 22.24 252 *e*P **P** **00 37 42.4 +0.5**
NJ2 pmax pmax
comp=Z,50nm,0.6s,mb5.1
FX1 Attu Island--F 22.53 50 *e*P **P** **00 37 44.9 +0.2**
FX1 Attu Island--F 22.53 50 *e*P **P** **00 37 44.9 +0.1**
HHC Hu-ho-hao-te 24.29 279 *e*P **P** **00 38 01.6 -0.6**
HHC pP 00 38 10.9
HHC sP sP 00 38 14.9 -0.3
HHC PP 00 38 37.0
HHC PcP PcP 00 41 43.3 +1.8
HHC S **S** **00 42 15.6 -3.5**
HHC sS sS 00 42 30.3 -3.8
HHC SS 00 43 07.7
HHC ScP ScP 00 45 18.2 +0.6
HHC pmax pmax
comp=Z,31nm,1.1s,mb4.7
HHC LR LR
comp=N,1μm,14.1s,MS5.0
HHC LR LR
comp=E,3μm,13.0s,MS5.0
HHC LR LR
comp=Z,4μm,14.2s,MS5.0
SONM Songino Array 27.15 296 P **P** **00 38 28.5 +0.4**
comp=Z,92nm,1.0s,mb5.2,baz=85,slow=7.3,SNR=30
SONM Songino Array 27.15 296 P **P** **00 38 28.5 +0.5**
BILL Bilibino 28.92 17⇑*e*P **P** **00 38 38.8 -4.8**
BILL *e* 00 39 33.1
BILL *e* 00 41 52.3
BILL *i* S **S** **00 43 31.6 -0.2**
BILL *e*SS SS 00 44 54.9 -40
BILL pmax pmax
comp=Z,14nm,0.9s,mb4.7
TLY Talaya 29.03 304 *e*P **P** **00 38 46.1 +1.3**
comp=Z,123nm,0.9s,mb5.6
TLY Talaya 29.03 304 *e*P **P** **00 38 45.6 +0.8**
TLY pmax pmax
comp=Z,116nm,0.9s,mb5.6
ZAK Zakamensk 29.20 301 *e*P **P** **00 38 48.4 +2.1**
ZAK pmax pmax
comp=Z,45nm,1.1s,mb5.1
LZH Lanzhou 31.52 273 ⇑P **P** **00 39 09.6 +2.6**
LZH pP pP 00 39 20.0 +3.8
LZH sP sP 00 39 25.5 +5.4
LZH pmax pmax
comp=Z,98nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,59nm,5.6s
GTA Gaotai 33.35 281 *e*P **P** **00 39 26.2 +3.3**
GTA pP pP 00 39 35.3 +3.1
GTA sP sP 00 39 39.4 +3.4
GTA pmax pmax
comp=Z,72nm,1.0s,mb5.6
CD2 Chengdu 33.89 265 *e*P **P** **00 39 27.8 +0.1**
CD2 pmax pmax
comp=Z,90nm,1.0s,mb5.7
GYA Guiyang 34.17 255⇓*i*P **P** **00 39 30.8 +0.6**
GYA pP pP 00 39 39.6 +0.2
GYA sP sP 00 39 46.8 +3.5
GYA PP PP 00 40 45.2 -2.6
GYA S **S** **00 44 54.3 -0.2**
GYA sS sS 00 45 09.8 +0.1
GYA ScP ScP 00 45 49.0 -0.2
GYA SS SS 00 47 01.9 -21
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,190nm,4.5s
GYA LR LR
comp=N,7μm,17.3s,MS5.5
GYA LR LR
comp=E,6μm,18.0s,MS5.5
GYA LR LR
comp=Z,4μm,17.4s,MS5.2
KMI Kunming 37.80 257 P **P** **00 40 03.4 +2.1**
KMI pP pP 00 40 12.5 +1.8
KMI sP sP 00 40 17.4 +2.9
KMI PP PP 00 41 31.0 +3.1
KMI S **S** **00 45 49.6 -0.6**
KMI SS SS 00 48 23.2 -14
KMI pmax pmax
comp=Z,52nm,0.9s,mb5.3
ZAA0 Zalesovo Array 40.36 308 *e*P **P** **00 40 22.4 +0.1**
ZALV Zalesovo Beam 40.36 308 P **P** **00 40 22.4 0.0**
comp=Z,55nm,0.8s,mb5.3,baz=90,slow=7.0,SNR=47
ZALV PcP PcP 00 42 24.5 -0.6
comp=Z,19nm,0.9s,baz=107,slow=3.9,SNR=4.5
ZALV ScP ScP 00 46 12.5 +0.7
comp=Z,1.6nm,0.8s,baz=60,slow=5.7,SNR=3.0
ZALV Zalesovo Beam 40.36 308 P **P** **00 40 22.4 +0.1**
ZALV 00 42 24.5
TTA Tatalina 40.43 38 *e*P **P** **00 40 30.5 +7.7**
TTA Tatalina 40.43 38 *e*P **P** **00 40 30.5 +7.7**
WMQ Urumqi 40.67 293 *e*P **P** **00 40 24.0 -1.1**
WMQ sP sP 00 40 38.0 -0.3
WMQ PP PP 00 42 01.0 +2.1
WMQ S **S** **00 46 30.0 -2.9**
WMQ SS SS 00 49 25.0 -8.6
WMQ pmax pmax
comp=Z,24nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,89nm,4.0s
WMQ LR LR
comp=N,4μm,15.0s,MS5.5
WMQ LR LR
comp=E,3μm,15.0s,MS5.5
WMQ LR LR
comp=Z,4μm,15.0s,MS5.3
NVS Novosibirsk 41.16 310 *e*P **P** **00 40 29.0 +0.1**
OHAK Old Harbor 41.98 46 *e*P **P** **00 40 41.0 +5.3**
comp=Z,52nm,1.0s,mb5.1
RSO Redoubt South 41.99 41 *e*P **P** **00 40 35.7 0.0**
PPLA Purkeypile 42.18 38 *e*P **P** **00 40 37.6 +0.5**
comp=Z,281nm,1.6s,mb5.7
KDAK Kodiak Island 42.30 45 *e*P **P** **00 40 37.2 -1.0**
comp=Z,295nm,2.1s,mb5.5
KDAK Kodiak Island 42.30 45 *e*P **P** **00 40 37.2 -1.0**
KDAK pmax pmax
comp=Z,295nm,2.1s,mb5.5
BPAW Bear Paw Mtn. 42.70 36 *e*P **P** **00 40 43.2 +1.8**
comp=Z,106nm,1.7s,mb5.3
SLKM Skilak Lake 43.24 41 *e*P **P** **00 40 45.7 -0.1**
SLKM Skilak Lake 43.24 41 *e*P **P** **00 40 45.7 -0.1**
RC01 Rabbit Creek A 43.43 40 *e*P **P** **00 40 53.4 +6.1**
comp=Z,47nm,1.0s,mb5.2
MK31 Makanchi Array 43.45 298 *e*P **P** **00 40 47.4 -0.2**
MK31 Makanchi Array 43.45 298 *e*P **P** **00 40 47.4 -0.3**
MKAR Makanchi Array 43.45 298 P **P** **00 40 47.6 -0.1**
comp=Z,41nm,0.9s,mb5.2,baz=80,slow=7.3,SNR=30
MKAR Makanchi Array 43.45 298 P **P** **00 40 47.6 -0.1**
MCK McKinley 43.62 36 *e*P **P** **00 40 49.7 +0.9**
comp=Z,87nm,1.4s,mb5.3
MCK McKinley 43.62 36 *e*P **P** **00 40 49.7 +0.9**
MCK pmax pmax
comp=Z,87nm,1.4s,mb5.3
LSA Lhasa 43.91 272 *e*P **P** **00 40 53.4 +1.8**
LSA Lhasa 43.91 272 *e*P **P** **00 40 53.4 +1.8**
SML Sawmill 44.03 39 *e*P **P** **00 40 52.8 +0.6**
comp=Z,40nm,1.2s,mb5.0
SML Sawmill 44.03 39 *e*P **P** **00 40 52.8 +0.6**
SML pmax pmax
comp=Z,40nm,1.2s,mb5.0
COLA College 44.03 35 *e*P **P** **00 40 53.8 +1.6**
comp=Z,45nm,0.9s,mb5.2
COLA College 44.03 35 *e*P **P** **00 40 53.8 +1.7**
COLA pmax pmax
comp=Z,45nm,0.9s,mb5.2
ILAR Eielson Array 44.45 35 P **P** **00 40 54.4 -1.1**
comp=Z,23nm,0.9s,mb4.9,baz=258,slow=5.3,SNR=48
ILAR Eielson Array 44.45 35 P **P** **00 40 54.4 -1.1**
CHTO Chiang Mai 44.48 253 *e*P **P** **00 40 56.8 +0.5**
comp=Z,41nm,0.8s,mb5.2
CHTO Chiang Mai 44.48 253 *e*P **P** **00 40 56.8 +0.5**
CHTO pmax pmax
comp=Z,41nm,0.8s,mb5.2
CM31 Chiang Mai Arr 44.72 253 *e*P **P** **00 40 58.1 -0.1**
comp=Z,15nm,0.7s,mb4.9
CMAR Chiang Mai Arr 44.72 253 P **P** **00 40 58.9 +0.7**
comp=Z,19nm,0.8s,mb5.0,baz=43,slow=7.2,SNR=45
CMAR Chiang Mai Arr 44.72 253 P **P** **00 40 58.9 +0.7**
KURK Kurchatov 44.72 305 *e*P **P** **00 40 57.6 -0.2**
comp=Z,58nm,0.6s,mb5.6
KURK Kurchatov 44.72 305 *e*P **P** **00 40 57.6 -0.2**
KURK pmax pmax
comp=Z,58nm,0.6s,mb5.6
PAX Paxson 45.24 37 *e*P **P** **00 41 03.9 +2.1**
comp=Z,63nm,1.6s,mb5.2
PAX *e*PcP PcP 00 42 41.4 +0.1
PAX Paxson 45.24 37 *e*P **P** **00 41 03.9 +2.2**
PAX *e* 00 42 41.4
PAX pmax pmax
comp=Z,63nm,1.6s,mb5.2
DOT Dot Lake 45.79 36 *e*P **P** **00 41 06.2 +0.1**
comp=Z,57nm,0.7s,mb5.6
MENT Mentasta 46.03 37 P **P** **00 41 08.1 +0.1**
EGAK Eagle 46.89 35 *e*P **P** **00 41 14.4 -0.3**
comp=Z,200nm,1.8s,mb5.8
JOHN Johnston Islan 46.90 108 P **P** **00 41 14.6 -0.8**
comp=Z,191nm,0.9s,mb6.0
TAPN Taplejung 47.72 271 *e*P **P** **00 41 22.8 +1.1**
comp=Z,198nm,0.8s,mb6.2
DAWY Dawson 47.77 35 *e*P **P** **00 41 22.8 +1.2**
ODAN Odare 48.23 271 *e*P **P** **00 41 26.3 +0.7**
comp=Z,172nm,1.0s,mb6.0
GUN Gumba 48.79 273 *e*P **P** **00 41 30.7 +0.8**
comp=Z,617nm,0.7s
BVAR Borovoye Array 48.96 310 P **P** **00 41 30.8 -0.1**
comp=Z,24nm,0.5s,mb5.5,baz=68,slow=8.8,SNR=61
BVAR PcP PcP 00 42 55.3 +0.7
comp=Z,2.3nm,0.6s,baz=127,slow=3.8,SNR=3.8
BVAR Borovoye Array 48.96 310 P **P** **00 41 30.8 -0.1**
BVAR 00 42 55.3
BRVK Borovoye 49.01 310 *e*P **P** **00 41 31.6 +0.3**
comp=Z,101nm,1.3s,mb5.7
BRVK Borovoye 49.01 310⇓*e*P **P** **00 41 32.3 +1.0**
BRVK pmax pmax
comp=Z,84nm,1.2s,mb5.7
BRVK Borovoye 49.01 310 P **P** **00 41 31.9 +0.6**
comp=Z,302nm,1.4s,mb6.1,SNR=8.1
TKM2 Tokmak 2 49.25 296 *e*P **P** **00 41 33.9 +0.6**
comp=Z,86nm,0.8s,mb5.8
TKM2 Tokmak 2 49.25 296 *e*P **P** **00 41 33.9 +0.6**
TKM2 pmax pmax
comp=Z,86nm,0.8s,mb5.8
INK Inuvik 49.27 29 *e*P **P** **00 41 32.2 -0.9**
comp=Z,70nm,1.0s,mb5.6
INK Inuvik 49.27 29 *e*P **P** **00 41 32.3 -0.8**
INK pmax pmax
comp=Z,70nm,1.0s
PKI Pulchoki 49.32 273 *e*P **P** **00 41 34.5 +0.5**
comp=Z,167nm,1.0s,mb6.0
PKIN Phulchoki 49.33 273 *e*P **P** **00 41 35.0 +0.9**
comp=Z,145nm,0.7s,mb6.1
DMN Daman 49.53 273 *e*P **P** **00 41 36.3 +0.7**
comp=Z,178nm,0.8s,mb6.2
GKN Gorkha 49.67 274 *e*P **P** **00 41 37.0 +0.3**
comp=Z,134nm,0.9s,mb6.0
KBK Karagaybulak 49.79 296 *e*P **P** **00 41 37.2 -0.2**
comp=Z,94nm,0.9s,mb5.8
KZA Kyzart 49.82 295 *e*P **P** **00 41 37.0 -0.7**
comp=Z,52nm,1.0s,mb5.5
AAK Ala-Archa 50.11 296 P **P** **00 41 40.2 +0.4**
comp=Z,9.9nm,0.8s,mb4.9,baz=109,slow=3.7,SNR=8.2
AAK Ala-Archa 50.11 296 P **P** **00 41 40.2 +0.4**
DANN Dangsing 50.13 275 *e*P **P** **00 41 41.2 +1.0**
comp=Z,756nm,0.8s
KSH Kashi 50.41 291 *e*P **P** **00 41 50.3 +8.2**
KSH *e*pP pP 00 42 00.2 +8.5
KSH *es*P sP 00 42 04.1 +8.6
KSH *e*PcP PcP 00 43 06.3 +6.1
KSH *e*PP PP 00 43 47.6 +10
KSH *e*ScP ScP 00 46 58.6 +4.9
KSH *e*PcS PcS 00 47 02.4 +5.1
KSH *e*S **S** **00 49 03.8 +11**
KSH *es*S sS 00 49 20.3 +11
KSH *e*ScS ScS 00 51 35.1 +4.5
KSH pmax pmax
comp=Z,34μm,12.2s
KOLN Koldanda 50.56 274 *e*P **P** **00 41 44.1 +0.6**
comp=Z,150nm,0.8s,mb6.0
EKS2 Erkin-Say 50.58 296 *e*P **P** **00 41 43.0 -0.4**
comp=Z,18nm,0.8s,mb5.1
EKS2 *e*PcP PcP 00 43 00.2 -0.5
AML Almayashu 50.85 295 *e*P **P** **00 41 45.4 -0.1**
comp=Z,45nm,1.0s,mb5.3
KKAR Karatay Array 52.57 298 *e*P **P** **00 41 57.8 -0.5**
KKAR Karatay Array 52.57 298 *e*P **P** **00 41 57.8 -0.5**
SVE Sverdlovsk 52.98 317⇑*e*P **P** **00 42 01.2 +0.1**
SVE pmax pmax
comp=Z,120nm,0.9s,mb5.8
SMLA Simla 53.56 282 *i* P **P** **00 42 04.5 -1.2**
DLBC Dease Lake 53.70 41 *e*P **P** **00 42 08.7 +2.3**
SOKR Solikamsk 53.84 321*d*iP **P** **00 42 07.6 +0.2**
SOKR pmax pmax
comp=Z,90nm,0.9s,mb5.7
ARU Arti 54.19 317 *e*P **P** **00 42 09.7 -0.3**
comp=Z,96nm,0.9s,mb5.7
ARU Arti 54.19 317*d*iP **P** **00 42 10.1 +0.2**
ARU 00 44 09.4
ARU S **S** **00 49 46.6 +2.0**
ARU SS SS 00 53 26.9 +0.9
ARU pmax pmax
comp=Z,114nm,1.0s,mb5.8
ARU Arti 54.19 317 P **P** **00 42 09.0 -0.9**
comp=Z,639nm,0.8s,mb6.6,SNR=8.5
NDI New Delhi 54.81 279 *ex* x 00 39 20.0
KAKA Kakadu 55.25 194 *e*P **P** **00 42 17.0 -1.0**
comp=Z,56nm,0.6s,mb5.8
ALE Alert 55.26 4 P **P** **00 42 16.6 -0.8**
comp=Z,132nm,1.2s,mb5.8,SNR=6.4
KBS Kingsbay 56.33 350 *e*P **P** **00 42 24.6 -0.5**
comp=Z,41nm,1.2s,mb5.3
KBS Kingsbay 56.33 350⇓*e*P **P** **00 42 24.5 -0.6**
KBS pmax pmax
comp=Z,25nm,0.9s,mb5.2
ABKAR Akbulak array 56.47 309 *e*P **P** **00 42 26.3 -0.2**
VIS Vishakhapatnam 56.62 264 *e*PKP **P** **00 42 27.2 -0.7**
RES Resolute Bay 57.51 16 P **P** **00 42 31.8 -1.7**
comp=Z,86nm,0.9s,mb5.8,baz=309,slow=5.5,SNR=16
RES Resolute Bay 57.51 16 *e*P **P** **00 42 32.2 -1.3**
comp=Z,128nm,1.0s,mb5.9
RES Resolute Bay 57.51 16 *e*P **P** **00 42 32.2 -1.3**
RES pmax pmax
comp=Z,128nm,1.0s,mb5.9
KBL Kabul 57.65 289 *e*P **P** **00 42 35.5 +0.5**
comp=Z,31nm,0.8s,mb5.4
KBL Kabul 57.65 289 *e*P **P** **00 42 35.5 +0.5**
KBL pmax pmax
comp=Z,31nm,0.8s,mb5.4
BHPL Bhopal 57.71 273 *e*PKP **P** **00 42 36.1 +0.5**
BHPL AMb AMB 00 42 36.9
comp=Z,83nm,1.1s,mb5.7
PRGR Permogore 57.91 326⇑*i*P **P** **00 42 36.0 -0.4**
PRGR pmax pmax
comp=Z,113nm,0.9s,mb5.9
AJM Ajmer 57.93 278 *e*PKP **P** **00 42 36.5 -0.6**
AJM AMb AMB 00 42 40.0
comp=Z,97nm,1.2s,mb5.7
YKA Yellowknife Ar 58.73 32 P **P** **00 42 41.3 -0.8**
comp=Z,4.6nm,0.9s,mb4.5,baz=300,slow=7.2,SNR=8.6
YKA Yellowknife Ar 58.73 32 P **P** **00 42 41.3 -0.8**
APA Apatity 59.20 335⇑*i*P **P** **00 42 44.2 -1.1**
APA *i* 00 43 03.4
APA pmax pmax
comp=Z,43nm,1.2s,mb5.3
KEV Kevo 59.73 339 *e*P **P** **00 42 47.0 -1.9**
KEV Kevo 59.73 339 *e*p **P** **00 42 47.0 -1.9**
comp=Z,2.1nm,0.3s,mb4.7
ARCES ARCESS Array B 60.27 339 P **P** **00 42 51.6 -1.1**
comp=Z,28nm,1.1s,mb5.2,baz=52,slow=6.1,SNR=28
ARCES ARCESS Array B 60.27 339 P **P** **00 42 51.6 -1.1**
ARE0 ARCESS Array S 60.27 339 *e*P **P** **00 42 52.4 -0.3**
HYB Hyderabad 60.37 267 *i* P **P** **00 42 53.5 -0.6**
KLMR Klimovskoe 60.84 327 *e*P **P** **00 42 55.7 -0.9**
KLMR pmax pmax
comp=Z,91nm,1.0s,mb5.9
DAG Danmarks Havn 61.22 356 *i* P **P** **00 42 56.7 -2.3**
DAG pmax pmax
comp=Z,18nm,0.9s,mb5.2
DAG Danmarks Havn 61.22 356 *i* P **P** **00 42 56.7 -2.3**
comp=Z,180nm,0.9s,mb6.2
KTK1 Kautokeino 61.22 339 *e*P **P** **00 42 58.5 -0.7**
TRO Tromso 61.88 341 *e*P **P** **00 43 02.4 -1.2**
TRO *e*pP pP 00 43 14.2 +0.8
TRO Tromso 61.88 341 *e*P **P** **00 43 02.4 -1.2**
FITZ Fitzroy Crossi 61.94 200 P **P** **00 43 03.4 -1.2**
comp=Z,7.2nm,0.8s,mb4.8,baz=28,slow=7.4,SNR=10
WRA Warramunga Arr 62.05 190 P **P** **00 43 03.3 -1.9**
comp=Z,9.5nm,0.7s,mb5.0,baz=8.1,slow=6.6,SNR=35
WRA PKPPKP 01 12 22.2
comp=Z,0.8nm,0.9s,baz=198,slow=2.0,SNR=6.1
WRA Warramunga Arr 62.05 190 P **P** **00 43 03.3 -1.9**
NLWA Neilton Lookou 62.10 50 *e*P **P** **00 43 10.2 +4.8**
comp=Z,20nm,1.0s,mb5.2
JOF Joensuu 62.73 332 *e*P **P** **00 43 07.4 -2.0**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
JOF Joensuu 62.73 332 *e*p **P** **00 43 07.4 -2.0**
comp=Z,4.3nm,0.4s,mb4.9
JCW Jim Creek 62.77 49 *e*P **P** **00 43 10.1 +0.2**
RPW Rockport 62.87 48 *e*P **P** **00 43 10.6 +0.1**
POO Poona 63.20 271 *e*PKP **P** **00 43 12.9 -0.2**
POO AMb AMB 00 43 14.9
comp=Z,58nm,0.8s,mb5.8
ABKT Ailbek 63.32 298 P **P** **00 43 15.2 +1.5**
comp=Z,258nm,1.1s,mb6.3,SNR=6.7
KAD Karad 63.70 270 *e*PKP **P** **00 43 15.6 -0.8**
ETW Entiat 63.99 49 P **P** **00 43 17.6 -0.4**
EDM Edmonton 64.43 41 *e*P **P** **00 43 21.0 +0.3**
EDM Edmonton 64.43 41 *e*P **P** **00 43 21.0 +0.3**
HOOD Mount Hood Mea 64.52 51 *e*P **P** **00 43 24.2 +2.7**
comp=Z,26nm,0.9s,mb5.3
H04A Detroit Lake 64.57 52⇓P **P** **00 43 21.4 -0.4**
baz=64
VFP Flag Point 64.63 51 P **P** **00 43 24.1 +1.9**
E07A Sunnyside 64.86 49⇓P **P** **00 43 22.2 -1.4**
baz=65
IRO Indian Ridge 64.91 53 P **P** **00 43 27.2 +3.1**
KAF Kangasniemi 65.01 333 *e*P **P** **00 43 21.4 -3.0**
KAF Kangasniemi 65.01 333 *e*p **P** **00 43 21.4 -3.0**
comp=Z,2.6nm,0.4s,mb4.6
OD2 Odessa Site #2 65.02 48 *e*P **P** **00 43 23.8 -0.8**
C09A Chrisman Ranch 65.03 47⇑P **P** **00 43 23.4 -1.3**
baz=65
RSW Rattlesnake Hi 65.10 49 *e*P **P** **00 43 26.3 +1.1**
comp=Z,15nm,0.7s,mb5.1
HAWA Hanford 65.13 49 *e*P **P** **00 43 26.3 +0.9**
comp=Z,13nm,1.0s,mb4.9
PUL Pulkovo 65.13 329⇑*i*P **P** **00 43 24.3 -0.9**
PUL pmax pmax
comp=Z,81nm,0.5s,mb6.0
G06A Carlson Farm, 65.16 51⇑P **P** **00 43 24.7 -0.9**
baz=65
NEW Newport 65.39 47 *e*P **P** **00 43 27.1 +0.1**
comp=Z,63nm,1.7s,mb5.4
NEW Newport 65.39 47 *e*P **P** **00 43 27.1 +0.1**
NEW pmax pmax
comp=Z,63nm,1.7s
OBN Obninsk 65.50 323 *e*P **P** **00 43 26.8 -0.8**
comp=Z,118nm,1.3s,mb5.8
OBN Obninsk 65.50 323*ke*P **P** **00 43 27.7 0.0**
OBN *e* 00 43 43.0
OBN 00 43 59.0
OBN *e* 00 53 09.9
OBN pmax pmax
comp=Z,94nm,1.2s,mb5.7
FINES FINESS Array B 65.55 332 P **P** **00 43 26.9 -1.0**
comp=Z,49nm,0.8s,mb5.6,baz=53,slow=6.1,SNR=68
FINES FINESS Array B 65.55 332 P **P** **00 43 26.9 -1.0**
MOR8 Moi Rana 65.61 340 *e*P **P** **00 43 25.6 -2.6**
MOR8 AMb AMB 00 43 30.4
comp=Z,51nm,1.0s,mb5.5
MOR8 *e*pP pP 00 43 37.5 -0.5
MOR8 Moi Rana 65.61 340 *e*P **P** **00 43 25.6 -2.6**
comp=Z,51nm,1.0s,mb5.5
ASAR Alice Springs 65.77 190 P **P** **00 43 28.8 -0.9**
comp=Z,5.4nm,0.7s,mb4.7,baz=1.4,slow=5.3,SNR=26
ASAR PKPPKP 01 12 11.7
comp=Z,0.8nm,0.9s,baz=156,slow=2.6,SNR=5.1
ASAR Alice Springs 65.77 190 P **P** **00 43 28.8 -0.9**
E09A Wood Farm, Sta 65.84 49⇓P **P** **00 43 28.9 -1.1**
baz=66
YBH Yreka Blue Hor 65.93 55 *e*P **P** **00 43 32.8 +2.1**
comp=Z,45nm,1.6s,mb5.2
YBH Yreka Blue Hor 65.93 55 *e*P **P** **00 43 32.8 +2.1**
YBH pmax pmax
comp=Z,45nm,1.6s
SUMG Summit 65.94 1 *e*P **P** **00 43 29.4 -0.8**
comp=Z,96nm,1.0s,mb5.8
SUMG Summit 65.94 1 *i* P **P** **00 43 30.2 0.0**
C11A Tepee Creek (N 66.11 47⇓P **P** **00 43 30.0 -1.7**
baz=66
LNOR Lincton Mounta 66.14 49 *e*P **P** **00 43 32.1 +0.2**
comp=Z,11nm,0.8s,mb4.9
LNOR Lincton Mounta 66.14 49 *e*P **P** **00 43 32.1 +0.2**
LNOR pmax pmax
comp=Z,11nm,0.8s,mb4.9
VSR Storozhevoye 66.69 319 *e*P **P** **00 43 34.0 -1.4**
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,30nm,0.8s
VSR pmax pmax
comp=Z,40nm,0.8s,mb5.5
WDC Whiskeytown Da 66.70 56 *e*P **P** **00 43 37.3 +1.6**
comp=Z,15nm,1.0s,mb5.0
WDC Whiskeytown Da 66.70 56 *e*P **P** **00 43 37.3 +1.7**
WDC pmax pmax
comp=Z,15nm,1.0s,mb5.0

VORD Divnogorie 66.78 318 *eP* **P 00 43 34.4 -1.5**
VORD pmax pmax
comp=E,10.0nm,1.1s
VORD pmax pmax
comp=Z,50nm,1.1s,mb5.5
VORD pmax pmax
comp=N,9.0nm,0.6s
BSMT Bassoo Peak 66.89 46 *eP* **P 00 43 38.5 +1.8**
LTIM Timbered Crate 67.00 55 P **P 00 43 39.4 +1.8**
BLMT Blacktail Moun 67.03 46 *eP* **P 00 43 37.8 +0.2**
EIDS Eidsvold 67.13 173 *eP* **P 00 43 38.8 +0.5**
comp=N,14nm,0.8s,mb5.0
JTMT Jette 67.23 46 *eP* **P 00 43 40.1 +1.3**
MOD Modoc 67.30 54 *eP* **P 00 43 41.5 +2.1**
comp=N,32nm,1.8s,mb5.0
YBMT Yellow Bay 67.30 46 *eP* **P 00 43 39.6 +0.3**
comp=N,10nm,0.9s,mb4.8
YBMT PP PP 00 46 08.7 +1.3
VSU Vasula 67.38 330⇑*eP* **P 00 43 38.3 -1.3**
VSU pmax pmax
comp=Z,62nm,1.0s,mb5.6
B14A Marquette Ranc 67.39 45 ⇓P **P 00 43 39.1 -0.7**
baz=67,SNR=5.1
C14A Swan Lake 67.50 46 ⇓P **P 00 43 39.6 -1.0**
baz=67
SWMT Swartz Lake 67.53 46 *eP* **P 00 43 41.3 +0.6**
SCO Scoresbysund 67.59 355 *i P* **P 00 43 40.6 -0.2**
SCO pmax pmax
comp=Z,29nm,1.0s,mb5.3
SCO Scoresbysund 67.59 355 *i P* **P 00 43 40.6 -0.2**
comp=Z,29nm,1.0s,mb5.3
SCO
comp=Z,56µm,23.0s
SLMT Seeley Lake 67.96 46 *eP* **P 00 43 44.1 +0.6**
WVOR Wild Horse Val 67.97 52 *eP* **P 00 43 44.6 +0.9**
comp=Z,13nm,0.9s,mb5.0
WVOR Wild Horse Val 67.97 52 *eP* **P 00 43 44.6 +0.9**
WVOR pmax pmax
comp=Z,13nm,0.9s,mb5.0
D14A Greenough 68.05 46 ⇓P **P 00 43 43.2 -0.8**
baz=68
B16A M & M Farms, S 68.18 44 ⇑P **P 00 43 44.1 -0.7**
baz=68,SNR=6.1
CHMT Chamberlain Mo 68.29 46 P **P 00 43 55.5 +10**
C16A Fuhringer Ranc 68.54 45 ⇓P **P 00 43 46.5 -0.6**
baz=68
FFC Flin Flon 68.66 35 *i P* **P 00 43 48.2 +0.5**
A18A Metzger Ranch, 68.81 43 ⇓P **P 00 43 48.3 -0.5**
baz=69
H12A Diamond D Ranc 68.87 49 ⇓P **P 00 43 48.6 -0.7**
baz=69
E15A Deer Lodge 68.93 46 ⇑P **P 00 43 47.6 -2.0**
baz=69
C17A Wharram Farm, 69.16 44 ⇓P **P 00 43 49.9 -1.1**
baz=69
PAHR Pah Rah Range 69.17 55 *eP* **P 00 43 52.7 +1.5**
comp=Z,23nm,1.2s,mb5.0
HRY Holter Researc 69.18 46 *eP* **P 00 43 52.5 +1.4**
I12A Atlanta 69.18 50 ⇑P **P 00 43 50.0 -1.2**
baz=69
KIV Kislovodsk 69.31 311 *eP* **P 00 43 52.3 +0.4**
comp=Z,179nm,1.0s,mb6.0
KIV Kislovodsk 69.31 311⇓*eP* **P 00 43 53.2 +1.2**
KIV *e* 00 44 09.0
KIV 00 44 16.0
KIV *i* 00 46 33.1
KIV SS SS 00 57 26.0 +3.5
KIV pmax pmax
comp=Z,178nm,1.0s,mb6.0
KIV Kislovodsk 69.31 311 P **P 00 43 53.2 +1.2**
comp=Z,1µm,0.9s,SNR=23
ZEI Tsey 69.35 309 *eP* **P 00 43 50.9 -1.3**
ZEI pmax pmax
comp=Z,59nm,0.9s,mb5.5
F15A Butte 69.37 47 ⇓P **P 00 43 52.1 -0.2**
baz=69
LRM Limekiln Ridge 69.41 47 *eP* **P 00 43 53.2 +0.7**
EGMT Eagleton 69.44 43 ⇑P **P 00 43 51.3 -1.4**
baz=69
EGMT Eagleton 69.44 43 *eP* **P 00 43 52.7 +0.1**
comp=Z,24nm,0.8s,mb5.2
CMB Columbia Colle 69.56 57 *eP* **P 00 43 54.1 +0.5**
comp=Z,32nm,1.6s,mb5.0
CMB Columbia Colle 69.56 57 *eP* **P 00 43 54.1 +0.5**
CMB pmax pmax
comp=Z,32nm,1.6s,mb5.0
IDID Didziasalis 69.58 327 *eP* **P 00 43 52.9 -0.5**
IDID AMB AMB 00 43 55.2
comp=Z,19nm,1.2s,mb4.9
DLMT Dillon 69.62 47 *eP* **P 00 43 54.1 +0.2**
comp=Z,264nm,2.5s,mb5.7
ISAL Salakas 69.65 328 *eP* **P 00 43 53.5 -0.4**
ISAL AMB AMB 00 43 55.8
comp=Z,21nm,1.2s,mb5.0
HLID Hailey 69.73 49 *eP* **P 00 43 57.0 +2.5**
comp=Z,89nm,2.4s,mb5.3
IIGN Ignalina 69.77 327 *eP* **P 00 43 54.1 -0.4**
IIGN AMB AMB 00 43 56.4
comp=Z,20nm,1.1s,mb5.0
G15A Dillon 69.80 47 ⇓P **P 00 43 54.4 -0.6**
baz=70
MCMT McKenzie Canyo 69.82 48 *eP* **P 00 43 56.1 +1.0**
comp=Z,2.0nm,1.0s
E17A Martinsdale 69.86 45 ⇓P **P 00 43 53.9 -1.3**
baz=70
BOZ Bozeman (W) 69.97 46 ⇑P **P 00 43 55.5 -0.4**
baz=70
BOZ Bozeman (W) 69.97 46 *eP* **P 00 43 56.3 +0.3**
comp=Z,20nm,0.6s,mb5.2
BOZ Bozeman (W) 69.97 46 *eP* **P 00 43 56.3 +0.3**
BOZ pmax pmax
comp=Z,20nm,0.6s,mb5.2
C19A Slack Wire Ran 69.98 43 ⇓P **P 00 43 55.8 -0.2**
baz=70
BMN Battle Mountai 70.04 53 *eP* **P 00 44 01.5 +5.0**
comp=Z,39nm,1.6s,mb5.1
BMN Battle Mountai 70.04 53 *eP* **P 00 44 01.5 +5.0**
BMN pmax pmax
comp=Z,39nm,1.6s,mb5.1
GNI Garni 70.47 307⇓*eP* **P 00 44 01.6 +2.4**
GNI pmax pmax
comp=Z,75nm,2.5s
C20A Veseth Ranch, 70.53 43 ⇑P **P 00 43 58.8 -0.6**
baz=70
NB2 NORSAR Subarra 70.57 338 P **P 00 43 57.9 -1.5**
comp=Z,42nm,1.0s,mb5.3,baz=35,slow=6.2
NB2 NORSAR Subarra 70.57 338 P **P 00 43 57.9 -1.5**
NOA NORSAR Array B 70.57 338 P **P 00 43 58.2 -1.2**
comp=Z,27nm,0.9s,mb5.2,baz=36,slow=6.1,SNR=41
NOA NORSAR Array B 70.57 338 P **P 00 43 58.2 -1.2**
NOA NORSAR Array B 70.57 338 P **P 00 43 58.2 -1.2**
QLMT Earthquake Lak 70.59 47 *eP* **P 00 44 00.8 +1.0**
comp=Z,2.0nm,0.7s,mb4.2
NVAR Mina Array Bea 70.61 56 P **P 00 43 59.6 -0.5**
comp=Z,5.6nm,0.8s,mb4.6,baz=296,slow=6.5,SNR=23
F18A Big Timber 70.83 45 ⇑P **P 00 44 01.0 -0.2**
baz=71
GCMT Greycliff 70.92 45 *eP* **P 00 44 02.2 +0.4**
comp=Z,7.1nm,0.7s,mb4.7
SFJD Kangerlussuaq 70.99 6 *eP* **P 00 44 01.5 -0.3**
comp=Z,39nm,2.0s,mb5.0
SFJD Kangerlussuaq 70.99 6 *eP* **P 00 44 01.5 -0.3**
SFJD pmax pmax
comp=Z,39nm,2.0s,mb5.0
F19A Roth Farm, Mol 71.27 45 ⇑P **P 00 44 03.5 -0.3**
baz=71
IMW Indian Meadow 71.47 47 *eP* **P 00 44 07.1 +1.9**
comp=Z,17nm,0.8s,mb5.0
RRI2 Red Ridge 71.61 48 *eP* **P 00 44 07.9 +1.9**
comp=Z,131nm,2.1s,mb5.5
OSL Oslo 71.62 337 *eP* **P 00 44 06.0 +0.3**
MOOW Moose Ponds 71.67 47 *eP* **P 00 44 08.1 +1.8**
comp=Z,16nm,1.1s,mb4.9
ANN Anapa 71.67 314 *eP* **P 00 44 05.2 -1.2**
ANN pmax pmax
comp=Z,174nm,2.0s,mb5.6
TPAW Teton Pass 71.72 48 *eP* **P 00 44 08.6 +1.9**
comp=Z,20nm,0.9s,mb5.0
KIEV Kiev 71.77 323 *eP* **P 00 44 05.9 -1.0**
comp=Z,41nm,0.9s,mb5.4
KIEV Kiev 71.77 323 *eP* **P 00 44 05.9 -0.9**
KIEV pmax pmax
comp=Z,41nm,0.9s,mb5.4
HVU Hansel Valley 71.80 50 *eP* **P 00 44 10.4 +3.2**
comp=Z,16nm,1.0s,mb4.9
HVU Hansel Valley 71.80 50 *eP* **P 00 44 10.4 +3.2**
HVU pmax pmax
comp=Z,16nm,1.0s,mb4.9
LOHW Long Hollow 71.83 47 *eP* **P 00 44 08.8 +1.4**
comp=Z,77nm,2.3s,mb5.2
DGMT Dagmar 71.92 41 *eP* **P 00 44 06.9 -0.9**
comp=Z,25nm,0.6s,mb5.3
Q11A Duckwater 71.97 54 ⇑P **P 00 44 08.3 0.0**
baz=72
S10A Tonopah Range, 71.98 55 ⇑P **P 00 44 08.5 +0.1**
baz=72
BGU Big Grassy Mou 72.20 51 *eP* **P 00 44 10.7 +1.1**
comp=Z,7.9nm,1.0s,mb4.6
R11A Troy Canyon, C 72.33 54 ⇓P **P 00 44 09.9 -0.5**
baz=72,SNR=6.8
HWUT Hardware Ranch 72.60 50 *eP* **P 00 44 14.6 +2.7**
comp=Z,47nm,1.6s,mb5.2
DUG Dugway 72.80 51 ⇑P **P 00 44 13.1 0.0**
baz=73,SNR=9.5
DUG Dugway 72.80 51 *eP* **P 00 44 14.1 +0.9**
comp=Z,13nm,0.9s,mb4.9
DUG Dugway 72.80 51 *eP* **P 00 44 14.1 +0.9**
DUG pmax pmax
comp=Z,13nm,0.9s,mb4.9
NOQ North Oquirrh 72.90 51 *eP* **P 00 44 16.3 +2.5**
comp=Z,135nm,1.7s,mb5.6
J19A Crowheart 72.92 47 ⇑P **P 00 44 12.6 -1.2**
baz=73
BW06 Boulder Array 72.97 48 ⇑P **P 00 44 13.7 -0.5**
baz=73
BW06 Boulder Array 72.97 48 *eP* **P 00 44 13.8 -0.3**
comp=Z,30nm,1.6s,mb5.0
PDAR Pinedale Array 72.97 48 P **P 00 44 13.8 -0.4**
comp=Z,3.0nm,0.7s,mb4.4,baz=277,slow=2.6,SNR=14
P14A Drum Mountains 73.04 52 ⇓P **P 00 44 14.7 +0.1**
baz=73,SNR=11
T11A Corn Creek, Al 73.26 55 ⇑P **P 00 44 15.6 -0.4**
baz=73
Q14A Sevier Lake (B 73.31 53 ⇓P **P 00 44 15.8 -0.4**
baz=73,SNR=6.9
STKA Stephens Creek 73.32 182 P **P 00 44 14.7 -1.4**
comp=Z,3.0nm,0.8s,mb4.3,baz=337,slow=7.3,SNR=7.0
JLU Jordanelle 73.32 50 *eP* **P 00 44 24.1 +7.8**
comp=Z,44nm,1.8s,mb5.1
NLU North Lily Min 73.38 51 *eP* **P 00 44 18.3 +1.7**
comp=Z,14nm,1.0s,mb4.8
N17A Moffit Pass 73.45 50 ⇓P **P 00 44 17.2 +0.2**
baz=73
I21A Big Trails, Te 73.50 46 ⇓P **P 00 44 16.4 -0.9**
baz=73
P15A Leamington 73.52 52 ⇑P **P 00 44 17.4 0.0**
baz=73,SNR=6.0
DAU Daniels Canyon 73.56 50 *eP* **P 00 44 18.6 +1.0**
comp=Z,11nm,0.9s,mb4.8
DAU Daniels Canyon 73.56 50 *eP* **P 00 44 18.6 +0.9**
DAU pmax pmax
comp=Z,11nm,0.9s,mb4.8
MPU Maple Canyon 73.60 51 *eP* **P 00 44 19.5 +1.6**
comp=Z,17nm,1.0s,mb4.9
FORT Forrest 73.67 194 *eP* **P 00 44 18.2 +0.1**
comp=Z,34nm,0.7s,mb5.4
SHPR Sheep Range 73.77 56 *eP* **P 00 44 20.8 +1.9**
comp=Z,6.9nm,0.9s,mb4.6
Q15A Fillmore 73.83 52 ⇑P **P 00 44 19.5 +0.2**
baz=74,SNR=5.5
S13A Holt Ranch, En 73.87 54 ⇑P **P 00 44 19.5 0.0**
baz=74,SNR=7.6
ARUT Antelope Range 73.99 54 *eP* **P 00 44 21.3 +1.1**
comp=Z,6.6nm,0.7s,mb4.7
ARUT Antelope Range 73.99 54 *eP* **P 00 44 21.3 +1.1**
ARUT pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
O17A Robinson Place 74.00 50 ⇓P **P 00 44 19.7 -0.6**
baz=74
CCUT Cedar City 74.19 54 *eP* **P 00 44 22.9 +1.5**
comp=Z,36nm,1.6s,mb5.0
BSD Bornholm Skovb 74.19 332 *eP* **P 00 44 20.2 -0.9**
BSD pmax pmax
comp=Z,48nm,0.9s,mb5.4
BSD Bornholm Skovb 74.19 332 *i P* **P 00 44 20.0 -1.1**
BSD Bornholm Skovb 74.19 332 *i P* **P 00 44 20.2 -0.9**
comp=Z,48nm,0.9s,mb5.4
BSD
comp=Z,301µm,20.0s
J22A Midwest 74.21 46 ⇓P **P 00 44 20.9 -0.5**
baz=74
MSU Marysvale 74.27 52 *eP* **P 00 44 23.4 +1.6**
comp=Z,37nm,1.6s,mb5.1
MSU Marysvale 74.27 52 *eP* **P 00 44 23.4 +1.6**
MSU pmax pmax
comp=Z,37nm,1.6s,mb5.1
ULM Lac du Bonnet 74.47 35 P **P 00 44 21.5 -1.3**
comp=Z,7.3nm,0.8s,mb4.6,baz=303,slow=3.0,SNR=5.8
P17A Butcher Ranch, 74.48 51 ⇑P **P 00 44 22.7 -0.3**
baz=74,SNR=7.0
KIS Kishinev 74.56 320 ⇓*P* **P 00 44 24.2 +0.8**
KIS Kishinev 74.56 320⇓*i P* **P 00 44 24.2 +0.8**
COP Copenhagen 74.57 334 *i P* **P 00 44 23.2 -0.1**
COP pmax pmax
comp=Z,35nm,0.9s,mb5.3
COP Copenhagen 74.57 334 *i P* **P 00 44 23.2 -0.1**
comp=Z,35nm,0.9s,mb5.3
COP
comp=Z,135µm,19.0s
R16A Teasdale 74.83 52 ⇓P **P 00 44 25.1 0.0**
baz=75,SNR=13
SRU San Rafael 74.84 51 ⇓P **P 00 44 25.0 -0.2**
baz=75,SNR=12
SRU San Rafael 74.84 51 *eP* **P 00 44 25.8 +0.6**
comp=Z,32nm,0.9s,mb5.2
SRU San Rafael 74.84 51 *eP* **P 00 44 25.8 +0.6**
SRU pmax pmax
comp=Z,32nm,0.9s,mb5.2
MUD Monsted U'grnd 74.97 336 *i P* **P 00 44 25.2 -0.3**
MUD pmax pmax
comp=Z,22nm,1.0s,mb5.0
MUD Monsted U'grnd 74.97 336 *i P* **P 00 44 25.2 -0.3**
comp=Z,22nm,1.0s,mb5.0
MUD
comp=Z,193µm,17.0s
RSSD Black Hills 75.00 44 *eP* **P 00 44 25.5 -0.5**
comp=Z,7.8nm,0.8s,mb4.7
RSSD Black Hills 75.00 44 *eP* **P 00 44 25.5 -0.5**
RSSD pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
IAS Iasi 75.02 321 ⇓P **P 00 44 26.7 +0.7**
IAS Iasi 75.02 321⇓*i P* **P 00 44 26.7 +0.7**
U14A Mt Trumbull 75.04 54 ⇑P **P 00 44 26.7 +0.4**
baz=75,SNR=5.3
S16A Weppner Ranch, 75.13 53 ⇓P **P 00 44 27.1 +0.2**
baz=75,SNR=7.8
MIB Mutribah 75.34 297 *eP* **P 00 44 27.0 -1.2**
MIB AMb AMb 00 44 29.6
comp=Z,90nm,0.9s,mb5.7
MALT Malatya 75.40 308 *eP* **P 00 44 28.9 +0.5**
comp=Z,38nm,1.0s,mb5.3
MALT Malatya 75.40 308 ⇑P **P 00 44 29.5 +1.1**
MALT Malatya 75.40 308⇑*i P* **P 00 44 29.5 +1.1**
KWP Kalwaria Pacla 75.42 325 *eP* **P 00 44 28.1 -0.1**
comp=Z,67nm,1.0s,mb5.5
KWP Kalwaria Pacla 75.42 325 ⇓P **P 00 44 28.6 +0.3**
KWP Kalwaria Pacla 75.42 325⇓*i P* **P 00 44 28.6 +0.3**
U15A North Rim 75.57 54 ⇑P **P 00 44 29.1 -0.3**
baz=75,SNR=9.7
V14A Boquillas Ranc 75.60 55 ⇑P **P 00 44 28.2 -1.4**
baz=75,SNR=12
QRN Al-Qurain 75.63 296 *eP* **P 00 44 29.1 -0.8**
QRN AMb AMb 00 44 31.0
comp=Z,137nm,1.1s,mb5.8
S17A Black Ridge (B 75.66 52 ⇑P **P 00 44 29.5 -0.4**
baz=76,SNR=7.9
NAY Al-Naaiem 75.76 296 *eP* **P 00 44 29.4 -1.2**
NAY AMb AMb 00 44 31.9
comp=Z,39nm,1.5s,mb5.1
RDF Al-Radifah 75.76 296 *eP* **P 00 44 29.9 -0.8**
RDF AMb AMb 00 44 32.3
comp=Z,114nm,1.1s,mb5.7
BURAR Bucovina Array 75.81 322 ⇓P **P 00 44 30.3 -0.2**
BURAR Bucovina Array 75.81 322⇓*i P* **P 00 44 30.3 -0.2**
X13A Yucca 75.83 56 ⇑P **P 00 44 29.2 -1.7**
baz=76,SNR=6.0
TLCR 75.86 319 ⇓*P* **P 00 44 29.8 -1.1**
TLCR 75.86 319⇓*i P* **P 00 44 29.8 -1.1**
W14A Seligman 75.89 55 ⇑P **P 00 44 31.4 +0.1**
baz=76,SNR=11
GHRR 75.91 320⇑*i P* **P 00 44 31.1 -0.1**
TESR 75.95 321⇑*i P* **P 00 44 30.9 -0.5**
S18A Hurst Farm, Bl 76.10 52 ⇑P **P 00 44 32.2 -0.2**
baz=76,SNR=7.5
KOLS Kolonicke sedl 76.13 325 *eP* **P 00 44 33.0 +0.6**
comp=Z,21nm,1.1s,mb5.0
KOLS Kolonicke sedl 76.13 325 *eP* **P 00 44 33.0 +0.6**
KOLS pmax pmax
comp=Z,21nm,1.1s,mb5.0
KOLS Kolonicke sedl 76.13 325 *eP* **P 00 44 33.0 +0.6**
OJC Ojcow 76.19 327 *eP* **P 00 44 33.1 +0.4**
OJC Ojcow 76.19 327 *eP* **P 00 44 32.6 -0.1**
comp=Z,56nm,1.0s,mb5.5
OJC Ojcow 76.19 327 *eP* **P 00 44 33.1 +0.4**
CFR Carcaliu 76.20 319 ⇑P **P 00 44 32.4 -0.4**
CFR Carcaliu 76.20 319⇑*i P* **P 00 44 32.4 -0.4**
PHWY Pilot Hill 76.21 47 *eP* **P 00 44 33.2 +0.3**
comp=Z,19nm,1.5s,mb4.8
PETR 76.24 320⇑*i P* **P 00 44 33.9 +0.8**
PV04 Paradox Valley 76.26 51 *eP* **P 00 44 34.9 +1.6**
VRI Vrincioaia 76.38 320 ⇑P **P 00 44 35.1 +1.3**
VRI Vrincioaia 76.38 320⇑*i P* **P 00 44 35.1 +1.3**
O22A Kremmling 76.39 48 ⇓P **P 00 44 33.6 -0.5**
baz=76
PLOR Plostina 76.43 320 ⇓P **P 00 44 35.3 +1.2**
PLOR Plostina 76.43 320⇓*i P* **P 00 44 35.3 +1.2**
U17A Shonto 76.43 53 ⇑P **P 00 44 34.5 +0.2**
baz=76
U16A Tuba City 76.46 54 ⇓P **P 00 44 33.9 -0.5**
baz=76,SNR=13
CRVS Cervenica-Dubn 76.50 325 *eP* **P 00 44 35.0 +0.5**
comp=Z,178nm,2.6s,mb5.5
CRVS Cervenica-Dubn 76.50 325 *eP* **P 00 44 35.0 +0.5**
CRVS pmax pmax
comp=Z,178nm,2.6s,mb5.5
CRVS Cervenica-Dubn 76.50 325 *eP* **P 00 44 35.0 +0.5**
BMR Baia Mare 76.54 323 ⇓P **P 00 44 36.5 +1.8**
BMR Baia Mare 76.54 323⇓*i P* **P 00 44 36.5 +1.8**
T18A Mexican Hat 76.54 52 ⇑P **P 00 44 34.4 -0.5**
baz=76,SNR=7.7
S19A Harvey Farm, M 76.56 51 ⇓P **P 00 44 35.0 0.0**
baz=76,SNR=8.6
TIRR Tirgusor 76.58 318 ⇓P **P 00 44 35.7 +0.7**
TIRR Tirgusor 76.58 318⇓*i P* **P 00 44 35.7 +0.7**
TRPA Tarpa 76.62 324⇓*i P* **P 00 44 35.2 0.0**
PV01 Paradox Valley 76.63 51 *eP* **P 00 44 36.6 +1.3**
comp=Z,2µm,1.2s
R20A Redvale 76.70 50 ⇑P **P 00 44 35.6 -0.2**
baz=76
SMCO Snowmass 76.83 49 *eP* **P 00 44 37.5 +1.0**
comp=Z,73nm,2.1s,mb5.2
Z13A Yuma Proving G 76.86 57 ⇓P **P 00 44 35.3 -1.5**
baz=77,SNR=6.1
X15A Humboldt 76.89 55 ⇑P **P 00 44 36.7 -0.2**
baz=77,SNR=6.9
DOPR Dopca 76.94 321⇑*i P* **P 00 44 38.5 +1.5**
PGOR Pogoanele 76.95 319⇓*i P* **P 00 44 38.0 +0.9**
V17A Tonalea, Kykot 77.01 54 ⇑P **P 00 44 38.0 +0.4**
baz=77,SNR=12
ISR Istrita 77.02 320 ⇓P **P 00 44 37.3 -0.1**
ISR Istrita 77.02 320⇓*i P* **P 00 44 37.3 -0.1**
MLR Muntele Rosu 77.03 320 ⇓P **P 00 44 37.7 +0.2**
MLR Muntele Rosu 77.03 320⇓*i P* **P 00 44 37.7 +0.2**
OKC Ostrava-Krasne 77.16 327 *eP* **P 00 44 38.7 +0.6**
OKC Ostrava-Krasne 77.16 327 *eP* **P 00 44 38.7 +0.6**
ISCO Idaho Springs 77.16 48 *eP* **P 00 44 39.7 +1.3**
comp=Z,14nm,1.0s,mb4.8
ISCO Idaho Springs 77.16 48 *eP* **P 00 44 39.7 +1.3**
ISCO pmax pmax
comp=Z,14nm,1.0s,mb4.8
BR131 Keskin Array S 77.17 312 *eP* **P 00 44 38.6 +0.2**
comp=Z,9.2nm,0.9s,mb4.7
BR131 *e*PP PP 00 47 32.3 +0.4
BRTR Keskin Array B 77.17 312 P **P 00 44 38.3 -0.1**
comp=Z,11nm,0.9s,mb4.8,baz=61,slow=3.5,SNR=20
BRTR PP PP 00 47 34.9 +3.0
comp=Z,8.9nm,1.0s,baz=66,slow=6.0,SNR=6.2
BRTR Keskin Array B 77.17 312 P **P 00 44 38.3 -0.1**
BRTR 00 47 34.9
KECS Kecovo 77.24 325 *eP* **P 00 44 39.7 +1.1**
comp=Z,3.9nm,1.1s,mb4.2
KECS Kecovo 77.24 325 *eP* **P 00 44 39.7 +1.1**
KECS Kecovo 77.24 325 *eP* **P 00 44 39.7 +1.1**
LIKS Likavka 77.38 326 *eP* **P 00 44 40.4 +1.0**
comp=Z,40nm,1.1s,mb5.3
LIKS Likavka 77.38 326 *eP* **P 00 44 40.4 +1.0**
LIKS pmax pmax
comp=Z,40nm,1.1s,mb5.3
LIKS Likavka 77.38 326 *eP* **P 00 44 40.4 +1.0**
S21A Coal Bank Pass 77.40 51 ⇑P **P 00 44 41.5 +1.7**
baz=77,SNR=7.8
X16A Lo Mia Camp, P 77.42 55 ⇑P **P 00 44 39.4 -0.5**
baz=77,SNR=10
MORC Moravsky Berou 77.45 328 *eP* **P 00 44 39.8 0.0**
comp=Z,47nm,1.0s,mb5.4
MORC Moravsky Berou 77.45 328 ⇑P **P 00 44 39.9 +0.1**
MORC Moravsky Berou 77.45 328⇑*i P* **P 00 44 39.9 +0.1**
V18A Ganado 77.47 53 ⇑P **P 00 44 40.4 +0.2**
baz=77,SNR=6.6
UPC Upice 77.47 329 *eP* **P 00 44 40.0 +0.1**
UPC Upice 77.47 329 *eP* **P 00 44 40.0 +0.1**
DPC Dobruska-Polom 77.47 329 *eP* **P 00 44 40.5 +0.6**
comp=Z,172nm,1.8s,mb5.7
DPC Dobruska-Polom 77.47 329 *eP* **P 00 44 40.5 +0.6**
DPC pmax pmax
comp=Z,172nm,1.8s,mb5.7
DPC Dobruska-Polom 77.47 329 *eP* **P 00 44 39.7 -0.2**
VOIR 77.49 321 ⇓P **P 00 44 40.7 +0.6**
VOIR 77.49 321⇓*i P* **P 00 44 40.7 +0.6**
DRGR 77.56 323 ⇑P **P 00 44 40.1 -0.3**
DRGR 77.56 323⇑*i P* **P 00 44 40.1 -0.3**
R22A Saguache, Gunn 77.61 50 ⇓P **P 00 44 41.7 +0.8**
baz=77
X17A Forest Lakes 77.87 55 ⇓P **P 00 44 42.9 +0.5**
baz=78,SNR=7.8
VYHS Vyhne 77.93 326 *eP* **P 00 44 43.5 +1.0**
comp=Z,13nm,1.0s,mb4.8
VYHS Vyhne 77.93 326 *eP* **P 00 44 43.5 +1.0**
VYHS pmax pmax
comp=Z,13nm,1.0s,mb4.8
VYHS Vyhne 77.93 326 *eP* **P 00 44 43.5 +1.0**
PSZ Piszkesteto 77.93 325 *eP* **P 00 44 42.9 +0.5**
comp=Z,415nm,2.6s,mb5.9
PSZ Piszkesteto 77.93 325 ⇓P **P 00 44 42.7 +0.2**
PSZ Piszkesteto 77.93 325⇓*i P* **P 00 44 42.7 +0.2**
CLL Collm 77.95 331 *eP* **P 00 44 41.9 -0.6**
comp=Z,65nm,0.9s,mb5.6
CLL Collm 77.95 331 *i P* **P 00 44 41.8 -0.7**
comp=Z,71nm,1.0s,mb5.5
CLL *e* pP 00 44 53.0 +0.5
CLL *i* 00 44 58.8
CLL Collm 77.95 331 *i P* **P 00 44 41.8 -0.7**
CLL *e* pP 00 44 53.0 +0.5
CLL *i* 00 44 58.8
CLL pmax pmax
comp=Z,293nm,1.0s,mb6.2
CLL Collm 77.95 331 *i P* **P 00 44 41.8 -0.7**
comp=Z,71nm,1.0s,mb5.5
CLL *e*pP pP 00 44 53.0 +0.5
CLL *i* sP sP 00 44 58.8 +2.6
BRG Berggiesshubel 77.96 330 *eP* **P 00 44 42.3 -0.3**
comp=Z,29nm,1.1s,mb5.1
BRG Berggiesshubel 77.96 330 *i P* **P 00 44 42.8 +0.2**
comp=Z,29nm,1.1s,mb5.1
BRG *i* pP 00 44 51.9 -0.7
comp=Z,15nm,1.0s
BRG Berggiesshubel 77.96 330 *i P* **P 00 44 42.8 +0.2**
BRG *i* pP 00 44 51.9 -0.7
BRG pmax pmax
comp=Z,85nm,1.1s,mb5.6
NRDL Niedersach Rie 77.98 333 *eP* **P 00 44 42.2 -0.5**
comp=Z,36nm,0.9s,mb5.3
PVCC Panska Ves 78.00 330 *eP* **P 00 44 42.9 +0.1**
PVCC Panska Ves 78.00 330 *eP* **P 00 44 42.9 +0.1**
KOLL Kolacno 78.04 326 *eP* **P 00 44 44.6 +1.5**
KOLL Kolacno 78.04 326 *eP* **P 00 44 44.6 +1.5**
KOLL Kolacno 78.04 326 *eP* **P 00 44 44.6 +1.5**
VRAC Vranov 78.20 328 ⇑P **P 00 44 44.3 +0.4**
VRAC Vranov 78.20 328⇑*i P* **P 00 44 44.3 +0.4**
W19A Sanders 78.20 53 ⇓P **P 00 44 44.6 +0.4**
baz=78,SNR=7.0
OGNE Ogallala 78.29 45 *eP* **P 00 44 44.8 +0.1**
comp=Z,42nm,0.8s,mb5.4
U21A Nageezi 78.33 51 ⇑P **P 00 44 45.1 +0.2**
baz=78
CLZ Clausthal 78.44 333 *eP* **P 00 44 45.3 +0.1**
comp=Z,73nm,1.1s,mb5.5
CLZ Clausthal 78.44 333 *eP* **P 00 44 45.3 +0.1**

CLZ pmax pmax
comp=Z,73nm,1.1s,mb5.5
PRU Pruhonice 78.45 329 *eP* **P 00 44 45.7 +0.4**
PRU Pruhonice 78.45 329 *eP* **P 00 44 45.7 +0.4**
GZR Gura Zlata 78.59 322 ⇑*P* **P 00 44 45.9 -0.3**
GZR Gura Zlata 78.59 322 ⇑*iP* **P 00 44 45.9 -0.3**
TREC Trest 78.64 328 *eP* **P 00 44 46.3 -0.1**
TREC Trest 78.64 328 *eP* **P 00 44 46.3 -0.1**
SDCO Great Sand Dun 78.65 49 *eP* **P 00 44 50.9 +4.2**
comp=Z,46nm,2.1s,mb5.0
MODS Modra-Piesok 78.66 327 *eP* **P 00 44 48.5 +2.0**
MODS Modra-Piesok 78.66 327 *eP* **P 00 44 48.5 +2.0**
MODS Modra-Piesok 78.66 327 *eP* **P 00 44 48.5 +2.0**
Y18A Canyon Day Jun 78.72 55 ⇑P **P 00 44 45.8 -1.3**
baz=79,SNR=5.9
X19A St. Johns 78.72 54 ⇓P **P 00 44 46.7 -0.4**
baz=79,SNR=13
ZST Bratislava 78.88 327 *eP* **P 00 44 48.7 +1.0**
comp=Z,9.5nm,0.8s,mb4.8
ZST Bratislava 78.88 327 *eP* **P 00 44 48.7 +1.0**
ZST pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ZST Bratislava 78.88 327 *eP* **P 00 44 48.7 +1.0**
TANN Tannenbergstha 78.88 331 *eP* **P 00 44 47.2 -0.5**
comp=Z,135nm,2.2s,mb5.5
IBBN Ibbenburen 78.92 334 *eP* **P 00 44 47.4 -0.4**
comp=Z,98nm,1.1s,mb5.7
BZS Buzias 78.94 323 ⇓*P* **P 00 44 47.3 -0.8**
BZS Buzias 78.94 323 ⇓*iP* **P 00 44 47.3 -0.8**
ECSD EROS Data Cent 78.99 40 *eP* **P 00 44 47.4 -1.1**
comp=Z,24nm,1.0s,mb5.1
MOX Moxa 78.99 331 *eP* **P 00 44 47.7 -0.6**
comp=Z,125nm,2.2s,mb5.5
MOX Moxa 78.99 331 *eP* **P 00 44 48.0 -0.3**
comp=Z,24nm,0.9s,mb5.1
MOX Moxa 78.99 331 *eP* **P 00 44 47.7 -0.6**
MOX pmax pmax
comp=Z,570nm,2.2s,mb6.1
NKC Novy Kostel 79.03 331 *eP* **P 00 44 49.2 +0.7**
NKC Novy Kostel 79.03 331 *eP* **P 00 44 49.2 +0.7**
V22A San Miguel Ran 79.12 51 ⇑P **P 00 44 49.3 +0.1**
baz=79
X20A Quemado 79.12 53 ⇓P **P 00 44 48.9 -0.4**
baz=79,SNR=7.8
TUC Tucson 79.25 56 *eP* **P 00 44 51.7 +1.7**
comp=Z,9.6nm,1.2s,mb4.6
TUC Tucson 79.25 56 *eP* **P 00 44 51.7 +1.7**
TUC pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
U23A El Rito 79.25 51 ⇑P **P 00 44 50.0 +0.1**
baz=79,SNR=11
ESK Eskdalemuir 79.33 342 *iP* **P 00 44 51.4 +1.4**
ROTZ Rotzenmuhle 79.50 331 *eP* **P 00 44 51.4 +0.3**
comp=Z,39nm,1.0s,mb5.3
KHC Kasperske Hory 79.51 329 *eP* **P 00 44 51.0 -0.1**
comp=Z,42nm,1.0s,mb5.3
KHC Kasperske Hory 79.51 329 *eP* **P 00 44 51.0 -0.2**
KHC Kasperske Hory 79.51 329 *eP* **P 00 44 51.0 -0.2**
Y20A Horse Springs, 79.63 54 ⇓P **P 00 44 52.6 +0.5**
baz=80,SNR=7.5
T25A Trinidad 79.70 49 ⇑P **P 00 44 52.6 +0.2**
baz=80
GEC2 GERESS Array S 79.70 329 *eP* **P 00 44 52.1 -0.1**
comp=Z,38nm,1.2s,mb5.2
GEC2 GERESS Array S 79.70 329 *eP* **P 00 44 52.1 -0.1**
GEC2 pmax pmax
comp=Z,38nm,1.2s,mb5.2
WET Wettzell 79.77 330 *eP* **P 00 44 52.8 +0.2**
comp=Z,63nm,1.1s,mb5.5
WET Wettzell 79.77 330 *eP* **P 00 44 52.8 +0.2**
WET pmax pmax
comp=Z,63nm,1.1s,mb5.5
PKSM Moragy 79.80 325 ⇓*P* **P 00 44 52.5 -0.3**
PKSM Moragy 79.80 325 ⇓*iP* **P 00 44 52.5 -0.3**
BUG Bochum--Univer 79.81 334 *eP* **P 00 44 52.1 -0.7**
comp=Z,66nm,1.1s,mb5.5
GRA1 Grafenberg Arr 79.93 331 *eP* **P 00 44 53.7 +0.3**
comp=Z,121nm,1.1s,mb5.7
GRF Grafenberg Arr 79.93 331 *eP* **P 00 44 53.7 +0.3**
comp=Z,121nm,1.1s,mb5.7
GRF Grafenberg Arr 79.93 331 *eP* **P 00 44 53.7 +0.3**
GRF pmax pmax
comp=Z,121nm,1.1s,mb5.7
GRF Grafenberg Arr 79.93 331 *eP* **P 00 44 53.7 +0.3**
GRF pmax pmax
comp=Z,121nm,1.1s,mb5.7
GRFO Grafenberg 79.93 331 *eP* **P 00 44 53.4 0.0**
comp=Z,68nm,1.0s,mb5.5
GRFO Grafenberg 79.93 331 *eP* **P 00 44 53.4 0.0**
GRFO pmax pmax
comp=Z,68nm,1.0s,mb5.5
LAZ Ladron 80.03 53 *eP* **P 00 44 55.2 +0.9**
comp=Z,6.8nm,1.1s,mb4.5
Z20A Nine Sixteen R 80.05 54 ⇑P **P 00 44 54.9 +0.5**
baz=80,SNR=6.8
ANMO Albuquerque 80.05 52 *eP* **P 00 44 55.8 +1.4**
comp=Z,146nm,2.7s,mb5.4
ANMO Albuquerque 80.05 52 *eP* **P 00 44 55.8 +1.4**
ANMO pmax pmax
comp=Z,146nm,2.7s
SCHQ Schefferville 80.23 18 P **P 00 44 54.1 -0.9**
comp=Z,12nm,0.9s,mb4.8,baz=356,slow=7.5,SNR=5.9
219A White Tail Can 80.40 56 ⇓P **P 00 44 56.6 +0.2**
baz=80,SNR=6.0
TNS Taunus Mts 80.46 333 *eP* **P 00 44 56.1 -0.2**
comp=Z,54nm,1.2s,mb5.3
TNS Taunus Mts 80.46 333 *eP* **P 00 44 56.1 -0.2**
TNS pmax pmax
comp=Z,54nm,1.2s,mb5.3
Z21A St. Cloud Mine 80.47 54 ⇓P **P 00 44 56.7 +0.1**
baz=80,SNR=8.8
W24A Lazy 6 Ranch, 80.48 51 ⇓P **P 00 44 57.0 +0.3**
baz=80,SNR=6.3
BNM Barren Site 80.51 52 *eP* **P 00 44 57.7 +0.8**
comp=Z,6.7nm,0.7s,mb4.7
CSS Prodhromos 80.68 309 *eP* **P 00 44 57.8 +0.1**
comp=Z,452nm,2.6s,mb5.9
SOKA Soboth 80.93 327 ⇑*iP* **P 00 44 58.8 -0.1**
comp=Z,50nm,0.9s,mb5.4
RJOB Jochberg 80.95 329 *eP* **P 00 44 59.3 +0.3**
comp=Z,53nm,1.0s,mb5.4
Y23A Lovelace Mesa, 81.00 52 ⇑P **P 00 44 59.6 +0.1**
baz=81,SNR=8.2
W25A X Bar L Ranch, 81.03 50 ⇓P **P 00 44 59.6 0.0**
baz=81,SNR=8.2
FUR Furstenfeldbru 81.17 330 *eP* **P 00 45 00.2 +0.1**
comp=Z,76nm,0.9s,mb5.6
FUR Furstenfeldbru 81.17 330 *eP* **P 00 45 00.2 +0.1**
FUR pmax pmax
comp=Z,76nm,0.9s,mb5.6
BCLA Clavier 81.33 335 P **P 00 45 00.2 -0.7**
comp=Z,14nm,1.0s,mb4.9
X25A Clemmons Ranch 81.40 51 ⇑P **P 00 45 01.5 -0.1**
baz=81,SNR=5.5
STU Stuttgart 81.42 332 *eP* **P 00 45 01.2 -0.2**
comp=Z,56nm,1.0s,mb5.5
STU Stuttgart 81.42 332 *eP* **P 00 45 01.4 0.0**
comp=Z,49nm,0.9s,mb5.4
STU Stuttgart 81.42 332 *eP* **P 00 45 01.4 0.0**
STU pmax pmax
comp=Z,49nm,0.9s,mb5.4
SNF Seneffe 81.57 335 P **P 00 45 02.3 +0.1**
WLF Walferdange 81.70 334 P **P 00 45 03.3 +0.4**
comp=Z,16nm,1.1s,mb4.9
WLF Walferdange 81.70 334 *eP* **P 00 45 03.4 +0.5**
comp=Z,42nm,1.2s,mb5.2
WLF Walferdange 81.70 334 *eP* **P 00 45 03.1 +0.2**
comp=Z,27nm,1.0s,mb5.1
WLF Walferdange 81.70 334 *eP* **P 00 45 03.1 +0.2**
WLF pmax pmax
comp=Z,27nm,1.0s,mb5.1
WATA Walderalm 81.75 330 ⇓*iP* **P 00 45 04.0 +0.8**
comp=Z,54nm,1.1s,mb5.4
WTTA Wattenberg 81.79 329 ⇑*iP* **P 00 45 03.5 +0.1**
comp=Z,49nm,1.0s,mb5.4
DOU Dourbes 81.83 335 P **P 00 45 03.2 -0.4**
X26A CR and CF Fran 81.88 51 ⇑P **P 00 45 03.9 -0.2**
baz=82
ABTA Abfaltersbach 81.88 329 *iP* **P 00 45 04.2 +0.3**
comp=Z,23nm,1.1s,mb5.0,SNR=9.2
MOTA Moosalm 81.92 330 *iP* **P 00 45 04.2 +0.1**
comp=Z,83nm,0.9s,mb5.7,SNR=22
RETA Reutte 81.93 330 *iP* **P 00 45 04.2 +0.1**
comp=Z,52nm,1.0s,mb5.4,SNR=11
W27A Bowe Ranch, En 81.94 50 ⇑P **P 00 45 04.8 +0.4**
baz=82,SNR=7.1

DLF Lyons Farm 81.95 343 *eP* **P 00 45 03.6 -0.5**
BFO Black Forest 82.11 332 *eP* **P 00 45 04.5 -0.5**
comp=Z,34nm,1.2s,mb5.2
BFO Black Forest 82.11 332 *eP* **P 00 45 04.5 -0.5**
BFO pmax pmax
comp=Z,34nm,1.2s,mb5.2
FETA Feichten 82.33 330 ⇑*iP* **P 00 45 06.8 +0.6**
comp=Z,38nm,0.9s,mb5.3,SNR=14
DAVA Damuels 82.43 330 ⇑*iP* **P 00 45 06.5 -0.3**
comp=Z,50nm,1.0s,mb5.4,SNR=12
KSU1 Kansas State U 82.47 43 *eP* **P 00 45 06.4 -0.8**
comp=Z,19nm,0.8s,mb5.1
Z26A Caprock 82.69 52 ⇓P **P 00 45 08.0 -0.3**
baz=82,SNR=9.0
125A Gardner Draw, 82.73 52 ⇑P **P 00 45 08.8 +0.2**
baz=83,SNR=5.8
FUORN Ofenpass-Fuorn 82.84 330 *eP* **P 00 45 09.5 +0.5**
comp=Z,66nm,1.0s,mb5.6
AMTX Amarillo 82.85 49 *eP* **P 00 45 09.8 +0.7**
comp=Z,11nm,0.7s,mb5.0
CPRX Cap Rock 82.93 52 *eP* **P 00 45 10.3 +0.6**
comp=Z,7.6nm,0.7s,mb4.8
Z27A Tatum 83.11 51 ⇓P **P 00 45 09.9 -0.6**
baz=83
GDL2 Guadalupe Moun 83.23 53 *eP* **P 00 45 12.3 +1.1**
326A Caldwell Ranch 84.09 53 ⇓P **P 00 45 14.9 -0.7**
baz=84
WMOK Wichita Mounta 84.58 47 *eP* **P 00 45 18.1 +0.1**
comp=Z,16nm,1.1s,mb5.1
WMOK Wichita Mounta 84.58 47 *eP* **P 00 45 18.1 +0.1**
WMOK pmax pmax
comp=Z,18nm,1.1s,mb5.1
328A Wristen Ranch, 84.73 52 ⇑P **P 00 45 18.4 -0.5**
baz=85,SNR=7.0
427A Hayter Ranch, 84.77 53 ⇑P **P 00 45 18.7 -0.3**
baz=85
HDIL Hopedale 84.89 38 *eP* **P 00 45 19.2 -0.3**
comp=Z,32nm,0.8s,mb5.5
526A Mary Lane Ranc 84.92 54 P **P 00 45 19.7 -0.1**
baz=85,SNR=6.2
527A Woodward Ranch 85.14 53 ⇑P **P 00 45 20.3 -0.7**
baz=85
TXAR Lajitas Array 85.69 54 P **P 00 45 23.3 -0.4**
comp=Z,9.9nm,0.7s,mb5.1,baz=296,slow=3.5,SNR=43
TXAR Lajitas Array 85.69 54 P **P 00 45 23.3 -0.4**
CCM Cathedral Cave 85.95 41 *eP* **P 00 45 22.9 -1.9**
comp=Z,104nm,1.9s,mb5.7
CCM Cathedral Cave 85.95 41 *eP* **P 00 45 22.9 -1.9**
CCM pmax pmax
comp=Z,104nm,1.9s,mb5.7
FVM French Village 86.40 40 *eP* **P 00 45 26.2 -0.9**
comp=Z,43nm,1.5s,mb5.5
FVM French Village 86.40 40 *eP* **P 00 45 26.2 -0.9**
FVM pmax pmax
comp=Z,43nm,1.5s,mb5.5
SIUC Southern Illin 87.20 39 *eP* **P 00 45 30.4 -0.6**
comp=Z,69nm,1.0s,mb5.8
MIAR Mount Ida 87.52 44 *eP* **P 00 45 32.3 -0.2**
comp=Z,82nm,1.7s,mb5.7
MIAR Mount Ida 87.52 44 *eP* **P 00 45 32.3 -0.2**
MIAR pmax pmax
comp=Z,82nm,1.7s,mb5.7
ACSO Alum Creek Sta 87.93 34 *eP* **P 00 45 34.0 -0.4**
comp=Z,27nm,0.9s,mb5.5
WCI Wyandotte Cave 88.14 37 *eP* **P 00 45 34.2 -1.3**
comp=Z,10.0nm,0.7s,mb5.2
WCI Wyandotte Cave 88.14 37 *eP* **P 00 45 34.2 -1.2**
WCI pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
SSPA Standing Stone 89.62 31 *eP* **P 00 45 41.8 -0.6**
comp=Z,103nm,1.8s,mb5.9
QUA2 Belchertown 90.14 26 *eP* **P 00 45 43.8 -0.9**
SDMD Soldier's Deli 91.08 30 *eP* **P 00 45 49.1 -0.1**
KEST Kesra 92.39 325 P **P 00 45 53.8 -1.6**
comp=Z,3.4nm,0.9s,mb4.7,baz=319,slow=7.7,SNR=7.3
KEST Kesra 92.39 325 *eP* **P 00 45 54.6 -0.7**
ESDC Sonseca Array 93.86 336 P **P 00 46 00.9 -1.1**
comp=Z,1.7nm,0.8s,mb4.5,baz=16,slow=4.8,SNR=6.2
KMBO Kilima Mbogo 103.19 280 Pdiff Pdif 00 46 44.5 +0.5
comp=Z,0.5nm,0.6s,baz=0.3,slow=24,SNR=5.1
KMBO Kilima Mbogo 103.19 280 P Pdif 00 46 44.6 +0.6
MAW Mawson 124.66 207 PKP PKPdf 00 51 43.0 +0.1
comp=Z,2.8nm,0.8s,baz=311,slow=8.0,SNR=5.0
MAW Mawson 124.66 207 PKIKP PKPdf 00 51 43.0 +0.1
ATAH Atahualpa 129.07 59 PKP PKPdf 00 51 53.7 +0.7
comp=Z,6.3nm,0.8s,baz=348,slow=4.2,SNR=3.9
BOSA Boshof 129.22 264 PKP PKPdf 00 51 54.0 +1.1
comp=Z,4.0nm,0.9s,baz=101,slow=7.5,SNR=3.4
BOSA Boshof 129.22 264 PKIKP PKPdf 00 51 54.0 +1.2
LPAZ La Paz 142.51 57 PKP PKPdf 00 52 16.9 -0.9
comp=Z,3.0nm,0.9s,baz=45,slow=2.9,SNR=3.0
LPAZ La Paz 142.51 57 PKIKP PKPdf 00 52 16.9 -0.9
SIV San Ignacio 146.46 47 PKPbc PKPbc 00 52 25.1 -0.9
comp=Z,13nm,0.8s,baz=325,slow=3.2,SNR=24
BDFB Brasilia 151.97 25 PKPbc PKPbc 00 52 38.3 -1.7
comp=Z,4.8nm,0.8s,baz=308,slow=8.7,SNR=5.9
BDFB PKPab PKPab 00 52 48.7 -0.6
comp=Z,8.8nm,0.9s,baz=354,slow=5.6,SNR=6.7
BDFB Brasilia 151.97 25 PKIKP PKPdf 00 52 38.3 +4.8
BDFB 00 52 48.7
CFAA Coronel Fontan 152.39 79 PKPbc PKPbc 00 52 39.2 -1.3
comp=Z,0.6nm,0.9s,baz=314,slow=2.7,SNR=4.8
CFAA PKPab PKPab 00 52 49.4 -1.4
comp=Z,0.5nm,0.5s,baz=303,slow=4.0,SNR=6.0
PLCA Paso Flores 154.12 99 PKPbc PKPbc 00 52 43.3 -0.7
comp=Z,2.7nm,1.1s,baz=116,slow=3.0,SNR=3.0
PLCA Paso Flores 154.12 99 PKIKP PKPbc 00 52 43.3 -0.7
CPUP Villa Florida 156.66 55 PKPab PKPab 00 53 09.2 +0.2
comp=Z,0.6nm,0.5s,baz=252,slow=3.2,SNR=3.9
CPUP Villa Florida 156.66 55 PKP2 PKPab 00 53 09.2 +0.1

*IDC **11** 00:44:55.2±8.0,2°.58N×127°.02E,h0km,mb4.2/4, mb1 4.5/4,mb1mx3.8/19,mbtmp4.3/4,Error ellipse: s-maj=131.2km s-min=98.0km az=136.0*

NEIC 11 00:45:00.0±0.7,2°.57N×127°.01E,h35km,mb3.9/4,Error ellipse: s-maj=29.7km s-min=9.8km az=64.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.58 184**		P	P	00 49 36.9	+0.9
	2.0nm,0.6s,baz=16,slow=8.8,SNR=9.0						
FITZ	**Fitzroy Crossi**	**20.58 184**		*eP*	P	00 49 36.9	+0.8
	2.6nm,0.7s						
WRA	**Warramunga Arr**	**23.50 162**		P	P	00 50 06.5	-0.5
	5.9nm,0.3s,baz=340,slow=10,SNR=56						
WB2	**Warramunga Arr**	**23.50 162**		*eP*	P	00 50 06.4	-0.6
MBWA	**Marble Bar**	**24.63 196**		*eP*	P	00 50 17.0	-0.4
	3.1nm,0.9s						
ASAR	**Alice Springs**	**26.93 166**		P	P	00 50 38.3	+0.2
	2.0nm,0.5s,baz=352,slow=7.6,SNR=26						
CTAO	**Charters Tower**	**29.39 141**		*eP*	P	00 51 00.8	+0.6
STKA	**Stephens Creek**	**36.95 159**		P	P	00 52 06.4	+0.5
	4.8nm,0.5s,baz=335,slow=8.1,SNR=16						
STKA	**Stephens Creek**	**36.95 159**		*eP*	P	00 52 05.9	0.0
	0.9nm,0.5s						
MK31	**Makanchi Array**	**58.66 326**		*eP*	P	00 54 54.5	+0.6
UCH	**Uchtor**	**61.22 318**		P	P	00 55 10.9	-0.6
KBL	**Kabul**	**62.45 308**		P	P	00 55 21.0	+1.0
CASY	**Casey**	**69.70 187**		*eP*	P	00 56 06.2	+0.3
	0.7nm,0.6s						
MAW	**Mawson**	**82.77 200**		*eP*	P	00 57 19.9	-0.1

ISC 11 00:49:09.9±0.9,43°.03N±0°.07×74°.98E±0°.05,h16km±7km, n11,σ0°.64/12,2C-2D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	**Chumysh**	**0.17 259**		P	**Pg**	**00 49 14.7**	**+0.5**
	SNR=69						
KBK	**Karagaybulak**	**0.38 184**		P	**Pg**	**00 49 17.6**	**0.0**
	SNR=27						
USP	**Ospenovka**	**0.42 304**		P	**Pg**	**00 49 19.2**	**+0.7**
	SNR=64						
TKM2	**Tokmak 2**	**0.46 104**		⇓P	**Pg**	**00 49 19.0**	**-0.2**
	4.2nm,0.2s						
TKM2				⇑S	**Sg**	**00 49 25.4**	**0.0**
	18nm,0.2s						
TKM2	**Tokmak 2**	**0.46 104**		P	**Pg**	**00 49 19.1**	**-0.1**
	SNR=8.6						
AAK	**Ala-Archa**	**0.54 222**		P	**Sg**	**00 49 27.8**	**0.0**
	SNR=5.9						
EKS2	**Erkin-Say**	**0.96 248**		P	**Pb**	**00 49 28.1**	**-0.1**
	SNR=19						
KZA	**Kyzart**	**0.97 168**		P	**Pb**	**00 49 28.2**	**-0.1**
	SNR=20						
ULHL	**Ulahol**	**1.22 130**		P	**Pn**	**00 49 32.1**	**-0.1**
	SNR=25						
AML	**Almayashu**	**1.31 227**		P	**Pn**	**00 49 34.4**	**+0.9**
	SNR=6.0						
KK31	**Karatay Array**	**3.28 273**		⇓Pg	**Pg**	**00 50 10.9**	**-1.8**
	1.5nm,0.7s,baz=85,slow=15,SNR=12						
KK31				⇑Lg		00 50 54.8	
	1.1nm,0.4s,baz=85,slow=27,SNR=3.0						

*IDC **11** 01:08:05.4±0.5,41°.67N×144°.15E,h0km,mb4.6/24, mb1 4.7/28,mb1mx4.7/32,mbtmp4.6/28,ML4.1/4,Error ellipse: s-maj=14.7km s-min=12.4km az=134.0*
*ISCJB **11** 01:08:08.2±0.8,41°.66N±0°.03×144°.13E±0°.04,h29km±5km, mb4.9/104,MS5.5/9,Error ellipse: s-maj=5.4km s-min=3.5km az=36.7*
*JMA **11** 01:08:08.7±0.2,41°.72N×144°.25E,h27km±3km,M5.0*
JMA Felt II J1.
*BJI **11** 01:08:08.9,41°.76N×143°.95E,h27km,mB5.1/9,mb5.1/49, Ms5.5/28,Ms7 5.3/28*
*NEIC **11** 01:08:10.1±1.3,41°.68N×144°.08E,h30km±8km,mb5.0/41, Error ellipse: s-maj=7.6km s-min=4.8km az=145.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido. Also recorded [1 JMA] in Aomori and Iwate.
*MOS **11** 01:08:17.8±0.8,42°.96N×143°.66E,h45km,mb5.2/33,Error ellipse: s-maj=12.2km s-min=6.3km az=112.7*
*SZGRF **11** 01:08:29.1,44°.60N×142°.61E,h33km,mb5.2,Hokkaido, Japan, region*

ISC 11 01:08:10.1±0.7,41°.72N±0°.03×144°.09E±0°.04,h28km±5km, h36km±1.0km:pP-P,n291,σ0°.98/300,mb4.9/104,MS5.5/9, 39C-12D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.75 293**		*e*Pg	**Pb**	**01 08 25.7**	**+1.0**
ERM	**Erimo**	**0.75 293**		Pn	**Pn**	**01 08 25.1**	**+0.2**
	83μm,0.7s						
JEM	**Erimo**	**0.76 293**		⇑P	**Pb**	**01 08 25.5**	**+0.8**
JCH	**Churui**	**1.04 329**		P	**Pn**	**01 08 28.5**	**-0.3**
JNBK	**Urakawa-nobuka**	**1.14 300**		⇑P	**Pn**	**01 08 31.2**	**+1.0**
JOB	**Onbets**	**1.19 351**		⇑P	**Pn**	**01 08 30.3**	**-0.7**
JAK	**Akkeshi**	**1.35 19**		⇑P	**Pn**	**01 08 31.2**	**-1.9**
JAR	**Ashorobuto**	**1.59 352**		⇑P	**Pn**	**01 08 35.2**	**-1.2**
JAR				*e*S	**Sn**	**01 08 55.0**	**-1.0**
JKB	**Kayabe**	**2.29 275**		⇑P	**Pn**	**01 08 46.5**	**+0.5**
JOT	**Ohata**	**2.31 263**		⇑P	**Pn**	**01 08 47.0**	**+0.8**
JKK2	**Kamakawa 2**	**2.36 336**		P	**Pn**	**01 08 46.9**	**-0.1**
JANG	**Nango**	**2.37 236**		⇑P	**Pn**	**01 08 46.1**	**-1.0**
JNB	**Noboribetsu**	**2.39 289**		⇑P	**Pn**	**01 08 48.0**	**+0.6**
JTH	**Tanohata**	**2.46 224**		⇑P	**Pn**	**01 08 46.7**	**-1.6**
JTM	**Tenmabayashi**	**2.46 249**		⇑P	**Pn**	**01 08 48.8**	**+0.4**
ASAJ	**Asahikawa**	**2.63 336**		Pn	**Pn**	**01 08 50.9**	**+0.2**
	37nm,0.3s,baz=198,slow=13,SNR=58						
ASAJ				Sn	**Sn**	**01 09 25.1**	**+3.4**
	163nm,0.3s,baz=185,slow=12,SNR=14						
YUK	**Yuzh-Kuril'sk**	**2.65 29**		⇓*i*PN	**Pn**	**01 08 49.5**	**-1.5**
YUK				pmax	pmax		
	comp=Z,600nm,0.5s						
YUK				pmax	pmax		
	comp=N,150nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=E,270nm,0.1s						
JKZ	**Kuzumaki**	**2.72 231**		⇑P	**Pn**	**01 08 51.2**	**-0.7**
JSR	**Shiriuchi**	**2.76 267**		⇑P	**Pn**	**01 08 53.1**	**+0.7**
JSI2	**Shiura 2**	**2.85 258**		⇑P	**Pn**	**01 08 54.5**	**+0.9**
JAH	**Hinai**	**3.03 241**		⇑P	**Pn**	**01 08 56.4**	**+0.2**
JOM	**Ohasama**	**3.10 224**		⇑P	**Pn**	**01 08 56.5**	**-0.6**
OFUJ	**Ofunato**	**3.22 216**		⇑P	**Pn**	**01 08 57.7**	**-1.1**
JIO	**Ouri**	**3.88 214**		⇑P	**Pn**	**01 09 06.1**	**-1.8**
JYK	**Kaneyama**	**4.00 227**		⇑P	**Pn**	**01 09 08.9**	**-0.6**
JOU	**Okura**	**4.26 219**		⇑P	**Pn**	**01 09 11.9**	**-1.2**
KUR	**Kuril'sk**	**4.46 37**		*e*PN	**Pn**	**01 09 13.5**	**-2.3**
KUR				pmax	pmax		
	comp=N,300nm,0.8s						
KUR				pmax	pmax		
	comp=E,190nm,0.8s						
KUR				pmax	pmax		
	comp=Z,860nm,0.8s						
YSS	**Yuzh-Sakhalins**	**5.32 350**		*e*Pn	**Pn**	**01 09 27.7**	**+0.1**
YSS	**Yuzh-Sakhalins**	**5.32 350**		*e*PN	**Pn**	**01 09 27.9**	**+0.3**
JSD	**Sado**	**5.80 233**		⇑P	**Pn**	**01 09 34.2**	**-0.1**
JIZZ	**Izumozaki**	**5.90 227**		P	**Pn**	**01 09 36.4**	**+0.8**
JHK	**Hiroka**	**5.95 223**		P	**Pn**	**01 09 35.8**	**-0.5**
JAG	**Ashikaga**	**6.40 216**		P	**Pn**	**01 09 41.2**	**-1.3**
JHG	**Hegura jima**	**6.74 237**		P	**Pn**	**01 09 47.9**	**+0.7**
MAJO	**Matsushiro**	**6.90 223**		*e*Pn	**Pn**	**01 09 49.3**	**-0.1**
MAT	**Matsushiro**	**6.90 223**		P	**Pn**	**01 09 49.0**	**-0.4**
MAT				*e*S	**Sn**	**01 11 12.6**	**+5.6**
MAT	**Matsushiro**	**6.90 223**		P	**Pn**	**01 09 49.4**	**0.0**
MJAR	**Matsushiro Arr**	**6.90 223**		Pn	**Pn**	**01 09 49.3**	**-0.1**
	comp=Z,7.5nm,0.3s,baz=28,slow=13,SNR=54						
JNG	**Nsakai**	**7.06 223**		P	**Pn**	**01 09 51.5**	**-0.1**
JGN	**Niukaw**	**7.61 226**		P	**Pn**	**01 09 59.6**	**+0.4**
JNY	**Yasuok**	**8.01 220**		P	**Pn**	**01 10 04.9**	**+0.3**
JGF	**Kuroka**	**8.07 223**		P	**Pn**	**01 10 06.3**	**+0.9**
JYZW	**Yoshizawa**	**8.37 219**		P	**Pn**	**01 10 09.1**	**-0.4**
JFM	**Mihama**	**8.86 228**		P	**Pn**	**01 10 17.3**	**+1.1**
JEG	**Eigenji**	**8.93 225**		P	**Pn**	**01 10 18.6**	**+1.4**
JHJ	**Hachijo jima 2**	**9.24 203**		Sn	**Sn**	**01 11 55.1**	**-9.4**
	comp=Z,92nm,0.3s,baz=228,slow=23,SNR=5.2						
HABR	**Khabarovsk**	**9.29 320**		*e*PN	**Pn**	**01 10 29.5**	**+7.4**
HABR				MLR	MLR		
	comp=Z,10μm,17.0s						
JWT	**Wachi**	**9.36 229**		P	**Pn**	**01 10 23.6**	**+0.5**
JAJ2	**Tsuna**	**10.28 228**		P	**Pn**	**01 10 35.2**	**-0.5**
MDJ	**Mudanjiang**	**10.98 290**		P	**Pn**	**01 10 46.2**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,53nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,16μm,12.7s						
MDJ	**Mudanjiang**	**10.98 290**		*e*Pn	**Pn**	**01 10 47.1**	**+1.9**
	comp=Z,81nm,0.9s						
KLR	**Kul'dur**	**11.45 315**		*e*PN	**Pn**	**01 10 46.8**	**-4.9**
JHIK	**Hikimi**	**11.96 237**		P	**Pn**	**01 11 00.4**	**+1.7**
SKR	**Severo-Kuril's**	**12.22 39**		*e*PN	**Pn**	**01 10 56.5**	**-5.7**
SKR				*e*		01 13 12.5	
KSRS	**Korea Array**	**13.18 256**		Pn	**Pn**	**01 11 16.4**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=68,slow=13,SNR=30						
JNU	**Nakatsue**	**13.55 235**		*e*Pn	**Pn**	**01 11 18.5**	**-1.9**
	comp=Z,3.1nm,0.7s						
CN2	**Changchun**	**13.85 285**		*e*P	**Pn**	**01 11 24.2**	**-0.3**
CN2				*e*pP		01 11 32.9	
CN2				*e*S	**Sn**	**01 13 56.0**	**-1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,16μm,15.0s						
CN2				LR	LR		
	comp=E,15μm,15.0s						
CN2				LR	LR		
	comp=Z,15μm,20.0s						
PETK	**Petropavlovsk-**	**14.62 34**		Pn	**Pn**	**01 11 32.7**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=206,slow=9.5,SNR=5.0						
CBIJ	**Chichi jima**	**14.68 187**		Pn	**Pn**	**01 11 30.4**	**-5.3**
	comp=Z,5.8nm,0.3s,baz=263,slow=19,SNR=5.6						
CBIJ				Sn	**Sn**	**01 14 02.6**	**-15**
	comp=Z,10nm,0.3s,baz=52,slow=19,SNR=4.7						
DL2	**Dalian**	**17.35 268**		P	**Pn**	**01 12 09.6**	**-0.6**
DL2				pmax	pmax		
	comp=Z,40nm,0.8s						
HIA	**Hailar**	**18.61 302**		*e*Pn	**Pn**	**01 12 23.2**	**-2.2**
	comp=Z,93nm,0.8s						
HIA	**Hailar**	**18.61 302**		*e*P	**Pn**	**01 12 23.2**	**-2.3**
HIA				pmax	pmax		
	comp=Z,93nm,0.8s						
CLNS	**Chul'man**	**19.53

comp=Z,54nm,0.8s
TIA Tai'an 21.63 264 P **P** **01 12 55.1 -2.9**
TIA pmax pmax
comp=Z,40nm,0.9s,mb4.8
SEY Seymchan 21.80 10*c*eP **P** **01 12 56.1 -3.5**
YAK Yakutsk 22.10 342 *e*P **P** **01 12 57.2 -5.6**
YAK *e* 01 24 16.8
YAK pmax pmax
comp=Z,103nm,0.8s,mb5.3
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=N,40nm,1.1s
NJ2 Nanjing 22.30 253 *e*P **P** **01 13 07.2 +1.9**
NJ2 pmax pmax
comp=Z,260nm,1.0s,mb5.6
CIT Chita 23.11 307 *e*P **P** **01 13 10.6 -3.0**
CIT *e* 01 13 30.4
CIT *e* 01 13 40.2
CIT *e* 01 17 46.7
CIT pmax pmax
comp=Z,256nm,1.4s,mb5.5
HHC Hu-ho-hao-te 24.38 279 *e*P **P** **01 13 25.4 -0.4**
HHC pP 01 13 34.8
HHC sP sP 01 13 38.8 +1.4
HHC PP 01 14 00.8
HHC PcP PcP 01 17 07.4 +2.9
HHC S **S** **01 17 39.9 -3.7**
HHC sS sS 01 17 53.7 -3.3
HHC SS 01 18 32.0
HHC ScP ScP 01 20 41.5 +0.5
HHC pmax pmax
comp=Z,48nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,1μm,5.6s
HHC LR LR
comp=N,2μm,13.1s,MS4.8
HHC LR LR
comp=E,1μm,12.9s,MS4.8
HHC LR LR
comp=Z,2μm,13.3s,MS4.7
SSLB Suanglung 26.30 234 *e*P **P** **01 13 42.4 -0.8**
WHN Wuhan 26.36 255 P **P** **01 13 43.3 -0.5**
SONM Songino Array 27.25 296 P **P** **01 13 51.5 -0.2**
comp=Z,33nm,1.0s,mb4.8,baz=93,slow=8.3,SNR=61
BILL Bilibino 28.95 17⇓*e*P **P** **01 14 09.0 +2.4**
BILL *e* 01 14 26.3
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
TLY Talaya 29.13 304 *e*P **P** **01 14 09.0 +0.6**
comp=Z,75nm,0.9s,mb5.4
TLY *e* 01 14 30.4
TLY Talaya 29.13 304 *e*P **P** **01 14 08.4 +0.1**
TLY pmax pmax
comp=Z,39nm,0.8s,mb5.2
TLY Talaya 29.13 304 P **P** **01 14 09.6 +1.3**
comp=Z,323nm,0.7s,mb6.2,SNR=6.8
ZAK Zakamensk 29.30 301 *e*P **P** **01 14 09.5 -0.4**
ZAK pmax pmax
comp=Z,27nm,1.0s,mb4.9
ENH Enshi 30.05 259 *e*P **P** **01 14 16.3 -0.4**
comp=Z,38nm,0.9s,mb5.1
ENH *e* 01 14 37.9
MOY Mondy 30.77 304 *e*P **P** **01 14 23.7 +0.8**
MOY pmax pmax
comp=Z,84nm,1.5s,mb5.3
LZH Lanzhou 31.61 273 *e*P **P** **01 14 32.1 +1.6**
LZH pP pP 01 14 42.0 +3.3
LZH sP sP 01 14 45.6 +3.5
LZH pmax pmax
comp=Z,28nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,140nm,5.0s
LZH LR LR
comp=N,14μm,14.3s,MS5.9
LZH LR LR
comp=E,11μm,14.3s,MS5.9
LZH LR LR
comp=Z,10μm,14.4s,MS5.6
GTA Gaotai 33.44 281 *e*P **P** **01 14 47.0 +0.6**
GTA pP pP 01 14 56.1 +1.4
GTA sP sP 01 15 00.8 +2.7
GTA S **S** **01 20 04.6 -1.4**
GTA sS sS 01 20 19.5 -0.1
GTA pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
GTA LR LR
comp=N,13μm,18.5s,MS5.8
GTA LR LR
comp=E,9μm,15.9s,MS5.8
GTA LR LR
comp=Z,11μm,16.1s,MS5.7
CD2 Chengdu 33.96 265 *e*P **P** **01 14 51.2 +0.1**
CD2 pP pP 01 15 00.9 +1.5
CD2 sP sP 01 15 04.8 +2.0
CD2 PP PP 01 16 05.0 -3.1
CD2 S **S** **01 20 11.8 -2.5**
CD2 sS sS 01 20 27.8 -0.2
CD2 SS SS 01 22 18.6 -23
CD2 pmax pmax
comp=Z,40nm,0.8s,mb5.4
CD2 pmax pmax
comp=Z,100nm,4.8s
CD2 LR LR
comp=E,14μm,16.7s
CD2 LR LR
comp=Z,16μm,15.5s,MS5.8
GYA Guiyang 34.23 256⇑*i*P **P** **01 14 53.0 -0.5**
GYA pP pP 01 15 04.5 +2.8
GYA sP sP 01 15 10.4 +5.2
GYA PP PP 01 16 09.8 -1.4
GYA PcP PcP 01 17 30.6 +0.9
GYA S **S** **01 20 16.8 -1.7**
GYA ScP ScP 01 21 12.3 -0.3
GYA SS SS 01 22 24.6 -23
GYA pmax pmax
comp=Z,30nm,0.8s,mb5.3
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,960nm,17.8s,MS4.7
GYA LR LR
comp=E,650nm,18.4s,MS4.7
GYA LR LR
comp=Z,780nm,17.9s,MS4.5
KMI Kunming 37.87 257 P **P** **01 15 25.2 +0.6**
KMI pP pP 01 15 35.6 +2.6
KMI sP sP 01 15 40.4 +4.0
KMI PP PP 01 16 55.1 +3.8
KMI S **S** **01 21 14.9 +0.6**
KMI pmax pmax
comp=Z,21nm,0.8s,mb4.9
KMI LR LR
comp=N,9μm,14.9s,MS5.9
KMI LR LR
comp=E,12μm,18.2s,MS5.9
KMI LR LR
comp=Z,11μm,15.8s,MS5.8
ZALV Zalesovo Beam 40.46 308 P **P** **01 15 45.2 -0.6**
comp=Z,21nm,0.6s,mb5.0,baz=87,slow=7.6,SNR=61
WMQ Urumqi 40.77 293 P **P** **01 15 49.0 +0.4**
WMQ pP pP 01 15 59.0 +2.0
WMQ sP sP 01 16 03.0 +2.6
WMQ PP PP 01 17 27.0 +4.4
WMQ S **S** **01 21 56.0 -1.3**
WMQ SS SS 01 24 51.0 -7.4
WMQ pmax pmax
comp=Z,54nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,140nm,4.0s
WMQ LR LR
comp=N,2μm,15.0s,MS5.2
WMQ LR LR
comp=E,2μm,15.0s,MS5.2
WMQ LR LR
comp=Z,2μm,15.0s,MS5.0
NVS Novosibirsk 41.26 310 *e*P **P** **01 15 50.1 -2.4**
NVS *e* 01 16 11.3
NVS pmax pmax
comp=Z,21nm,1.7s,mb4.5
NVS pmax pmax
comp=E,17nm,1.8s
KDAK Kodiak Island 42.28 45 P **P** **01 16 00.2 -0.5**
comp=E,6.2nm,0.5s,mb4.5,baz=286,slow=6.2,SNR=8.4
KDAK Kodiak Island 42.28 45 P **P** **01 16 00.2 -0.5**
KDAK Kodiak Island 42.28 45 P **P** **01 16 00.2 -0.6**
BPAW Bear Paw Mtn. 42.69 36 *e*P **P** **01 16 04.5 +0.4**
comp=E,13nm,1.0s,mb4.6
TRF Thorofare Moun 43.02 37 *e*P **P** **01 16 07.8 +1.1**
comp=E,119nm,2.3s,mb5.2
MK31 Makanchi Array 43.55 298 *e*P **P** **01 16 10.9 -0.3**
MK31 Makanchi Array 43.55 298 *e*P **P** **01 16 10.9 -0.3**
MKAR Makanchi Array 43.55 298 P **P** **01 16 10.9 -0.3**
comp=E,17nm,0.8s,mb4.8,baz=79,slow=9.0,SNR=79
MCK McKinley 43.61 36 *e*P **P** **01 16 14.3 +2.8**
comp=E,15nm,0.8s,mb4.8
MCK McKinley 43.61 36 *e*P **P** **01 16 14.3 +2.8**
MCK pmax pmax
comp=Z,15nm,0.8s,mb4.8
LSA Lhasa 44.00 272 *e*P **P** **01 16 17.1 +2.1**
comp=Z,37nm,0.9s,mb5.1
LSA *e* 01 16 37.6
LSA Lhasa 44.00 272 *e*P **P** **01 16 17.1 +2.1**
LSA *e* 01 16 37.7
LSA pmax pmax
comp=Z,37nm,0.9s,mb5.1
COLA College 44.03 35 *e*P **P** **01 16 15.7 +0.8**
comp=Z,20nm,0.8s,mb4.9
COLA College 44.03 35 *e*P **P** **01 16 15.7 +0.9**
COLA pmax pmax
comp=Z,20nm,0.8s,mb4.9
ILAR Eielson Array 44.45 35 P **P** **01 16 17.4 -0.8**
comp=Z,3.7nm,0.7s,mb4.2,baz=260,slow=5.9,SNR=46
CHTO Chiang Mai 44.55 253 *e*P **P** **01 16 18.3 -1.2**
CHTO Chiang Mai 44.55 253 *e*P **P** **01 16 18.3 -1.2**
CM31 Chiang Mai Arr 44.78 253 *e*P **P** **01 16 22.1 +0.7**
CMAR Chiang Mai Arr 44.78 253 P **P** **01 16 22.2 +0.8**
comp=Z,8.6nm,0.7s,mb4.7,baz=44,slow=7.0,SNR=31
KURK Kurchatov 44.81 305 *e*P **P** **01 16 20.4 -0.9**
comp=Z,75nm,0.9s,mb5.5
KURK Kurchatov 44.81 305⇑*i*P **P** **01 16 20.8 -0.5**
KURK pmax pmax
comp=Z,20nm,0.9s,mb5.0
EGAK Eagle 46.89 34 *e*P **P** **01 16 36.9 -0.5**
comp=Z,74nm,1.6s,mb5.4
DAWY Dawson 47.76 35 *e*P **P** **01 16 45.2 +0.9**
TAPN Taplejung 47.80 271 *e*P **P** **01 16 46.3 +1.2**
comp=Z,96nm,1.0s,mb5.8
ODAN Odare 48.31 271 *e*P **P** **01 16 49.8 +0.8**
GUN Gumba 48.87 273 *e*P **P** **01 16 54.2 +0.9**
BVAR Borovoye Array 49.06 310 P **P** **01 16 54.2 -0.1**
comp=Z,8.9nm,0.4s,mb5.2,baz=76,slow=8.6,SNR=70
BRVK Borovoye 49.11 310 *e*P **P** **01 16 55.0 +0.3**
comp=Z,9.5nm,0.8s,mb4.9
BRVK Borovoye 49.11 310 *e*P **P** **01 16 55.0 +0.2**
BRVK pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
INK Inuvik 49.28 29 P **P** **01 16 55.4 -0.5**
comp=Z,15nm,0.7s,mb5.1,baz=300,slow=6.9,SNR=38
INK Inuvik 49.28 29 *e*P **P** **01 16 55.5 -0.4**
comp=Z,36nm,0.8s,mb5.5
INK *e* pP 01 17 05.5 +1.1
PKI Pulchoki 49.41 273 *e*P **P** **01 16 57.8 +0.4**
DMN Daman 49.61 273 *e*P **P** **01 16 59.7 +0.7**
comp=Z,128nm,0.8s,mb6.0
GKN Gorkha 49.75 274 *e*P **P** **01 17 00.4 +0.4**
DANN Dangsing 50.22 275 *e*P **P** **01 17 04.5 +0.9**
comp=Z,348nm,0.8s
KOLN Koldanda 50.65 274 *e*P **P** **01 17 07.2 +0.3**
comp=Z,121nm,0.7s,mb5.9
SVE Sverdlovsk 53.07 317⇓*e*P **P** **01 17 24.1 -0.4**
SVE pmax pmax
comp=Z,47nm,0.9s,mb5.4
DLBC Dease Lake 53.69 41 P **P** **01 17 29.5 +0.5**
comp=Z,1.9nm,0.7s,mb4.1,baz=297,slow=9.0,SNR=3.3
DLBC Dease Lake 53.69 41 P **P** **01 17 29.5 +0.5**
SOKR Solikamsk 53.94 321⇓*i*P **P** **01 17 30.6 -0.2**
SOKR pmax pmax
comp=Z,30nm,0.8s,mb5.3
ARU Arti 54.29 317*c i*P **P** **01 17 32.7 -0.7**
ARU S **S** **01 25 09.5 +0.5**
ARU pmax pmax
comp=Z,40nm,1.0s,mb5.3
ARU Arti 54.29 317 P **P** **01 17 32.6 -0.8**
comp=Z,214nm,0.8s,mb6.1,SNR=14
KAKA Kakadu 55.22 194 *e*P **P** **01 17 39.2 -1.3**
comp=Z,25nm,0.6s,mb5.4
KBS Kingsbay 56.40 350*c i*P **P** **01 17 48.5 +0.2**
KBS pmax pmax
comp=Z,54nm,2.5s,mb5.1
RES Resolute Bay 57.54 16 *e*P **P** **01 17 55.7 -0.7**
comp=Z,62nm,0.8s,mb5.7
RES Resolute Bay 57.54 16 *e*P **P** **01 17 55.7 -0.7**
RES pmax pmax
comp=Z,62nm,0.8s,mb5.7
KBL Kabul 57.75 289 *e*P **P** **01 17 58.0 -0.5**
comp=Z,20nm,0.8s,mb5.2
KBL Kabul 57.75 289 *e*P **P** **01 17 58.0 -0.5**
KBL pmax pmax
comp=Z,20nm,0.8s,mb5.2
YKA Yellowknife Ar 58.73 32 P **P** **01 18 05.5 +0.7**
comp=Z,1.2nm,0.6s,mb4.1,baz=302,slow=6.8,SNR=5.7
KEV Kevo 59.81 339 *e*p **P** **01 18 11.1 -1.1**
comp=Z,1.7nm,0.3s,mb4.5
ARCES ARCESS Array B 60.35 339 P **P** **01 18 16.0 +0.1**
comp=Z,4.8nm,0.9s,mb4.5,baz=46,slow=6.0,SNR=19
ARCES ARCESS Array B 60.35 339 P **P** **01 18 16.0 +0.1**
HYB Hyderabad 60.45 267 *i* P **P** **01 18 17.0 -0.4**
KLMR Klimovskoe 60.92 327 *e*P **P** **01 18 18.0 -2.0**
KLMR pmax pmax
comp=Z,22nm,0.9s,mb5.3
DAG Danmarks Havn 61.28 356 *i* P **P** **01 18 20.4 -1.8**
DAG pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
DAG Danmarks Havn 61.28 356 *i* P **P** **01 18 20.4 -1.8**
comp=Z,89nm,0.9s,mb5.9
WRA Warramunga Arr 62.01 190 P **P** **01 18 26.1 -1.6**
comp=Z,6.9nm,0.8s,mb4.8,baz=9.4,slow=7.3,SNR=36
JOF Joensuu 62.81 332 *e*p **P** **01 18 31.3 -1.4**
comp=Z,3.1nm,0.3s,mb4.9
MOS Moscow 64.73 323 *e*P sP 01 19 01.8 +4.3
MOS pmax pmax
comp=Z,99nm,1.4s,mb5.7
OD2 Odessa Site #2 64.99 48 *e*P **P** **01 18 47.5 +0.2**
comp=Z,7.0nm,0.7s,mb4.8
KAF Kangasniemi 65.10 333 *e*p **P** **01 18 46.0 -1.7**
comp=Z,1.3nm,0.3s,mb4.4
OBN Obninsk 65.59 323⇑*e*P **P** **01 18 50.1 -0.9**
OBN pmax pmax
comp=Z,37nm,1.7s,mb5.1
OBN MLR MLR
comp=Z,5μm,15.0s,MS5.8
VRHR Novokhopersk 65.62 317 *e*P **P** **01 18 48.2 -3.1**
VRHR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VRHR pmax pmax
comp=N,6.0nm,0.4s
VRHR pmax pmax
comp=E,9.0nm,0.4s
FINES FINESS Array B 65.64 332 P **P** **01 18 50.2 -1.0**
comp=E,21nm,0.7s,mb5.3,baz=50,slow=7.0,SNR=71
FINES FINESS Array B 65.64 332 P **P** **01 18 50.2 -1.0**
ASAR Alice Springs 65.74 190 P **P** **01 18 51.5 -0.7**
comp=E,2.0nm,0.8s,mb4.2,baz=12,slow=6.5,SNR=20
SUMG Summit 65.99 1 *i* P **P** **01 18 53.4 +0.1**
comp=E,39nm,0.7s,mb5.5
VSR Storozhevoye 66.78 319 *e*P **P** **01 18 57.7 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.5s
BSMT Bassoo Peak 66.87 46 *e*P **P** **01 19 01.5 +2.2**
comp=E,2.7nm,0.7s,mb4.4
BLMT Blacktail Moun 67.00 46 *e*P **P** **01 19 02.3 +2.1**
comp=E,10nm,0.9s,mb4.8
JTMT Jette 67.20 46 *e*P **P** **01 19 01.5 +0.1**
VSU Vasula 67.47 330⇓*e*P **P** **01 19 01.9 -1.0**
VSU pmax pmax
comp=Z,23nm,0.8s,mb5.3
PAHR Pah Rah Range 69.13 55 *e*P **P** **01 19 12.8 -0.9**
comp=Z,11nm,1.1s,mb4.7
LRM Limekiln Ridge 69.38 47 *e*P **P** **01 19 15.1 0.0**
DGRG David-gareji 69.39 307 P **P** **01 19 14.9 -0.4**
KIV Kislovodsk 69.41 311⇓*i*P **P** **01 19 16.6 +1.3**
KIV pmax pmax
comp=Z,65nm,1.0s,mb5.5
KIV MLR MLR
comp=Z,6μm,17.0s,MS5.9
KIV Kislovodsk 69.41 311 P **P** **01 19 16.7 +1.4**
comp=Z,390nm,0.8s,SNR=7.7
EGMT Eagleton 69.42 44 *e*P **P** **01 19 14.2 -1.1**
comp=Z,9.7nm,0.7s,mb4.8
ZEI Tsey 69.45 309 *e*P **P** **01 19 14.6 -1.0**
ZEI pmax pmax
comp=Z,21nm,0.9s,mb5.1
MTA Mtatsminda 69.59 308 P **P** **01 19 17.2 +0.8**
TBLG Delisi 69.60 308 P **P** **01 19 17.5 +1.0**
TBLG Delisi 69.60 308 P **P** **01 19 17.5 +1.0**
MCMT McKenzie Canyo 69.79 48 P **P** **01 19 21.4 +3.7**
comp=Z,0.8nm,0.9s
GOR Gori 69.81 309 P **P** **01 19 18.3 +0.4**
WAKR Walker 69.83 56 *e*P **P** **01 19 19.3 +1.3**
comp=Z,29nm,1.8s,mb4.9
BOZ Bozeman (W) 69.94 46 *e*P **P** **01 19 18.9 +0.3**
comp=Z,8.4nm,0.8s,mb4.7
BOZ Bozeman (W) 69.94 46 *e*P **P** **01 19 18.9 +0.3**
BOZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
NACGM Naroch 69.95 327 *e* **P** **01 19 16.0 -2.4**
GNI Garni 70.57 307 P **P** **01 19 23.9 +1.4**
comp=Z,1.2nm,0.3s,mb4.2,baz=246,slow=19,SNR=2.2
GNI Garni 70.57 307⇑*e*P **P** **01 19 24.1 +1.6**
GNI pmax pmax
comp=Z,20nm,1.6s
NVAR Mina Array Bea 70.58 56 P **P** **01 19 24.2 +1.6**
comp=Z,2.0nm,0.7s,mb4.2,baz=284,slow=6.6,SNR=6.4
NOA NORSAR Array B 70.65 338 P **P** **01 19 21.8 -0.8**
comp=Z,7.1nm,0.8s,mb4.6,baz=36,slow=6.1,SNR=22
GCMT Greycliff 70.90 45 *e*P **P** **01 19 25.1 +0.7**
comp=Z,3.3nm,0.7s,mb4.4
MOOW Moose Ponds 71.64 47 *e*P **P** **01 19 30.4 +1.5**
comp=Z,5.8nm,0.9s,mb4.5
TPAW Teton Pass 71.70 48 *e*P **P** **01 19 29.5 +0.2**
comp=Z,1.9nm,1.0s,mb4.0
PDAR Pinedale Array 72.94 48 P **P** **01 19 36.5 -0.3**
comp=Z,1.5nm,0.6s,mb4.1,baz=295,slow=3.1,SNR=9.1
STKA Stephens Creek 73.27 182 P **P** **01 19 38.1 -0.4**
comp=Z,1.1nm,0.6s,mb4.0,baz=299,slow=4.3,SNR=3.3
CCUT Cedar City 74.15 54 *e*P **P** **01 19 45.8 +1.9**
comp=Z,24nm,1.7s,mb4.8
BSD Bornholm Skovb 74.28 332 *e*P **P** **01 19 44.0 -0.3**
BSD pmax pmax
comp=Z,26nm,0.9s,mb5.2
BSD Bornholm Skovb 74.28 332 *i* P **P** **01 19 44.0 -0.3**
comp=Z,26nm,0.9s,mb5.2
COP Copenhagen 74.65 334 *e*P **P** **01 19 45.8 -0.7**
COP pmax pmax
comp=Z,16nm,0.8s,mb5.0
COP Copenhagen 74.65 334 *i* P **P** **01 19 45.8 -0.7**
comp=Z,16nm,0.8s,mb5.0
SRU San Rafael 74.81 51 *e*P **P** **01 19 48.2 +0.5**
comp=Z,15nm,0.9s,mb4.9
SRU San Rafael 74.81 51 *e*P **P** **01 19 48.2 +0.5**
SRU pmax pmax
comp=Z,15nm,0.9s,mb4.9
GKP Gorka Klasztor 74.90 330 *e*P **P** **01 19 47.9 -0.1**
GKP *e* 01 20 09.6
GKP Gorka Klasztor 74.90 330 *e*P **P** **01 19 47.9 -0.1**
GKP *e* 01 20 09.6
MUD Monsted U'grnd 75.05 336 *i* P **P** **01 19 48.3 -0.5**
comp=Z,13nm,0.9s,mb4.9
KWP Kalwaria Pacla 75.51 325 *e*P **P** **01 19 52.3 +0.8**
KWP *e* 01 20 14.0
KWP Kalwaria Pacla 75.51 325 *e*P **P** **01 19 52.3 +0.8**
KWP *e* 01 20 14.0
KWP Kalwaria Pacla 75.51 325⇑*i*P **P** **01 19 52.1 +0.6**
BURAR Bucovina Array 75.90 322 ⇓P **P** **01 19 54.1 +0.3**
BURAR Bucovina Array 75.90 322⇓*i*P **P** **01 19 54.1 +0.3**
TLCR 75.95 319 ⇓P **P** **01 19 54.3 +0.1**
TLCR 75.95 319⇓*i*P **P** **01 19 54.3 +0.1**
TESR 76.04 321⇑*i*P **P** **01 19 54.8 +0.1**
KOLS Kolonicke sedl 76.22 325 *e*P **P** **01 19 57.0 +1.4**
comp=Z,9.9nm,1.2s,mb4.6
KOLS Kolonicke sedl 76.22 325 *e*P **P** **01 19 57.0 +1.4**
KOLS pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KOLS Kolonicke sedl 76.22 325 *e*P **P** **01 19 57.0 +1.4**
OJC Ojcow 76.28 327 *e*P **P** **01 19 56.2 +0.3**
OJC Ojcow 76.28 327 *e*P **P** **01 19 56.1 +0.1**
comp=Z,43nm,1.0s,mb5.3
OJC Ojcow 76.28 327 *e*P **P** **01 19 56.2 +0.3**
UZH Uzhgorod 76.44 325 *e*P **P** **01 19 58.9 +2.0**
UZH *e* 01 20 17.9
VRI Vrincioaia 76.47 320⇑P **P** **01 19 58.6 +1.5**
VRI Vrincioaia 76.47 320⇑*i*P **P** **01 19 58.5 +1.4**
CRVS Cervenica-Dubn 76.59 325 *e*P **P** **01 19 57.7 0.0**
comp=Z,4.9nm,0.9s,mb4.4
CRVS Cervenica-Dubn 76.59 325 *e*P **P** **01 19 57.7 0.0**
CRVS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CRVS Cervenica-Dubn 76.59 325 *e*P **P** **01 19 57.7 0.0**
PV01 Paradox Valley 76.60 51 *e*P **P** **01 19 59.0 +1.0**
comp=Z,702nm,1.1s
NIE Niedzica 76.68 326 *e*P **P** **01 19 58.9 +0.7**
NIE Niedzica 76.68 326 *e*P **P** **01 19 58.9 +0.7**
TRPA Tarpa 76.71 324⇑*i*P **P** **01 19 59.1 +0.7**
KSP Ksiaz 77.18 329 *e*P **P** **01 20 01.5 +0.5**
KSP *e* 01 20 23.1
OKC Ostrava-Krasne 77.25 327 *e*P **P** **01 20 01.8 +0.4**
OKC Ostrava-Krasne 77.25 327 *e*P **P** **01 20 01.8 +0.4**
BR131 Keskin Array S 77.27 312 *e*P **P** **01 20 01.4 -0.3**
comp=Z,4.3nm,0.6s,mb4.6
BRTR Keskin Array B 77.27 312 P **P** **01 20 02.0 +0.3**
comp=Z,3.0nm,0.7s,mb4.3,baz=65,slow=4.0,SNR=6.0
UPC Upice 77.56 329 *e*P **P** **01 20 03.4 +0.3**
UPC Upice 77.56 329 *e*P **P** **01 20 03.4 +0.3**
DPC Dobruska-Polom 77.56 329 *e*P **P** **01 20 03.7 +0.5**
DPC Dobruska-Polom 77.56 329 *e*P **P** **01 20 03.7 +0.5**
VOIR 77.59 321 ⇑P **P** **01 20 04.6 +1.2**
VOIR 77.59 321⇑*i*P **P** **01 20 04.6 +1.2**
VYHS Vyhne 78.02 326 *e*P **P** **01 20 06.1 +0.4**
comp=Z,7.1nm,1.1s,mb4.5
VYHS Vyhne 78.02 326 *e*P **P** **01 20 06.1 +0.4**
VYHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
VYHS Vyhne 78.02 326 *e*P **P** **01 20 06.1 +0.4**
CLL Collm 78.03 331 *e*P **P** **01 20 05.3 -0.5**
comp=Z,15nm,0.9s,mb4.9
CLL Collm 78.03 331⇑*i*P **P** **01 20 05.0 -0.8**
comp=Z,27nm,0.9s,mb5.2
CLL *e* 01 20 21.0
CLL Collm 78.03 331⇑*i*P **P** **01 20 05.0 -0.8**
comp=Z,27nm,0.9s,mb5.2
BRG Berggiesshubel 78.04 330 *e*P **P** **01 20 05.6 -0.2**
BRG Berggiesshubel 78.04 330 *i* P **P** **01 20 05.5 -0.3**
comp=Z,8.3nm,0.9s,mb4.6
BRG Berggiesshubel 78.04 330 *i* P **P** **01 20 05.5 -0.3**
BRG pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BRG pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
PVCC Panska Ves 78.09 330 *e*P **P** **01 20 06.3 +0.2**
PVCC Panska Ves 78.09 330 *e*P **P** **01 20 06.3 +0.2**
KOLL Kolacno 78.13 327 *e*P **P** **01 20 06.8 +0.5**
KOLL Kolacno 78.13 327 *e*P **P** **01 20 06.8 +0.5**
KOLL Kolacno 78.13 327 *e*P **P** **01 20 06.8 +0.5**
VRAC Vranov 78.28 328⇑P **P** **01 20 08.0 +0.8**
VRAC Vranov 78.28 328⇑*i*P **P** **01 20 08.0 +0.8**
CLZ Clausthal 78.52 333 *e*P **P** **01 20 08.6 +0.2**
comp=Z,19nm,0.8s,mb5.1
CLZ Clausthal 78.52 333 *e*P **P** **01 20 08.6 +0.2**
comp=Z,19nm,0.8s,mb5.1
PRU Pruhonice 78.54 329 *e*P **P** **01 20 09.3 +0.7**
PRU Pruhonice 78.54 329 *e*P **P** **01 20 09.3 +0.7**
TREC Trest 78.73 329 *e*P **P** **01 20 09.7 0.0**
TREC Trest 78.73 329 *e*P **P** **01 20 09.7 0.0**
IBBN Ibbenburen 79.00 334 *e*P **P** **01 20 10.8 -0.3**
BZS Buzias 79.04 323 ⇓P **P** **01 20 10.8 -0.6**
BZS Buzias 79.04 323⇓*i*P **P** **01 20 10.8 -0.6**
MOX Moxa 79.08 331 *e*P **P** **01 20 11.2 -0.3**
NKC Novy Kostel 79.12 331 *e*P **P** **01 20 11.5 -0.3**
NKC Novy Kostel 79.12 331 *e*P **P** **01 20 11.5 -0.3**
UBBA Unterbreizbach 79.50 332 *e*P **P** **01 20 13.7 -0.2**
ROTZ Rotzenmuhle 79.59 331 *e*P **P** **01 20 14.3 0.0**
KHC Kasperske Hory 79.60 329 *e*P **P** **01 20 14.6 +0.2**
KHC Kasperske Hory 79.60 329 *e*P **P** **01 20 14.6 +0.2**
GEC2 GERESS Array S 79.79 329 *e*P **P** **01 20 15.3 -0.1**
comp=Z,7.0nm,0.7s,mb4.7
GEC2 GERESS Array S 79.79 329 *e*P **P** **01 20 15.3 -0.1**
comp=Z,7.0nm,0.7s,mb4.7
WET Wettzell 79.85 330 *e*P **P** **01 20 16.1 +0.3**
WET Wettzell 79.85 330 *e*P **P** **01 20 16.1 +0.3**
BUG Bochum--Univer 79.90 334 *e*P **P** **01 20 15.8 -0.2**

LAZ	Ladron	80.00	53	eP	P	01 20 16.1	-0.7
	comp=Z,2.4nm,1.0s,mb4.1						
GRF	Grafenberg Arr	80.01	331	eP	P	01 20 16.9	+0.3
	comp=Z,25nm,0.8s,mb5.2						
GRF	Grafenberg Arr	80.01	331	eP	P	01 20 16.9	+0.3
	comp=Z,25nm,0.8s,mb5.2						
GRF	Grafenberg Arr	80.01	331	eP	P	01 20 16.9	+0.3
GRF				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
SCHQ	Schefferville	80.26	18	P	P	01 20 19.9	+2.0
	comp=Z,2.6nm,0.7s,mb4.2,baz=333,slow=9.0,SNR=3.7						
TNS	Taunus Mts	80.54	333	eP	P	01 20 18.9	-0.6
TNS	Taunus Mts	80.54	333	eP	P	01 20 18.9	-0.6
MMAI	Mount Meron Ar	80.91	306	P	P	01 20 22.8	+1.0
	comp=Z,12nm,0.8s,mb4.9,baz=27,slow=7.5,SNR=10						
RJOB	Jochberg	81.04	329	eP	P	01 20 23.0	+0.8
	comp=Z,16nm,0.9s,mb5.0						
FUR	Furstenfeldbru	81.26	330	eP	P	01 20 23.8	+0.4
FUR	Furstenfeldbru	81.26	330	eP	P	01 20 23.8	+0.4
STU	Stuttgart	81.51	332	eP	P	01 20 25.1	+0.4
	comp=Z,22nm,0.8s,mb5.1						
FUORN	Ofenpass-Fuorn	82.93	330	eP	P	01 20 33.0	+0.8
	comp=Z,38nm,0.9s,mb5.4						
TXAR	Lajitas Array	85.66	54	P	P	01 20 46.1	-0.2
	comp=Z,4.1nm,0.7s,mb4.8,baz=294,slow=3.4,SNR=39						
CCM	Cathedral Cave	85.94	41	P	P	01 20 46.2	-1.4
	comp=Z,35nm,1.6s,mb5.3						
SIUC	Southern Illin	87.18	40	eP	P	01 20 53.0	-0.7
	comp=Z,23nm,0.8s,mb5.5						
MIAR	Mount Ida	87.49	44	eP	P	01 20 54.2	-1.0
MIAR	Mount Ida	87.49	44	eP	P	01 20 54.2	-1.0
ATD	Arta Tunnel	90.65	286	P	P	01 21 11.1	+0.7
	comp=Z,1.3nm,0.2s,mb4.8,baz=276,slow=23,SNR=3.8						
ATD	Arta Tunnel	90.65	286	P	P	01 21 11.1	+0.7
BDFB	Brasilia	151.99	25	PKPbc	PKPbc	01 28 01.1	-1.7
	comp=Z,3.0nm,0.8s,baz=168,slow=4.7,SNR=4.7						
BDFB	Brasilia	151.99	25	PKIKP	PKPbc	01 28 01.1	-1.7

*IDC **11** 01:08:26.5±0.5,41°.64N×144°.17E,h0km,mb4.9/22, mb1 5.0/26,mb1mx4.9/30,mbtmp4.8/26,ML4.5/4,Error ellipse: s-maj=15.8km s-min=13.5km az=133.0*
*ISCJB **11** 01:08:30.1±0.4,41°.63N±0°.07×144°.16E±0°.09,h33km, mb5.0/41,Error ellipse: s-maj=11.6km s-min=8.1km az=41.7*
*SZGRF **11** 01:08:38.9,43°.03N×144°.76E,h33km,mb5.3,Hokkaido, Japan, region*

ISC 11 01:08:28.5±3.7,41°.69N±0°.07×144°.18E±0°.10,h10km±22km, n95,σ0°78/88,mb5.0/41,1C-1D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	2.69	335	Pn	Pn	01 09 11.6	-0.3
	102nm,0.3s,baz=143,slow=16,SNR=11						
ASAJ				Sn	Sn	01 09 41.3	-3.1
	109nm,0.3s,baz=109,slow=28,SNR=8.7						
MJAR	Matsushiro Arr	6.93	224	Pn	Pn	01 10 10.0	0.0
	12nm,0.3s,baz=28,slow=13,SNR=11						
MJAR	Matsushiro Arr	6.93	224	PN	Pn	01 10 10.0	0.0
MJAR				pmax	pmax		
	comp=Z,12nm,0.3s						
JHJ	Hachijo jima 2	9.24	204	Sn	Sn	01 12 17.0	-8.9
	comp=Z,97nm,0.3s,baz=77,slow=23,SNR=4.3						
KSRS	Korea Array	13.23	257	Pn	Pn	01 11 36.9	+0.4
	comp=Z,1.0nm,0.3s,baz=70,slow=13,SNR=13						
KSRS	Korea Array	13.23	257	PN	Pn	01 11 36.9	+0.5
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	14.61	34	Pn	Pn	01 11 55.0	0.0
	comp=Z,0.6nm,0.3s,baz=202,slow=11,SNR=4.6						
CBIJ	Chichi jima	14.65	187	Sn	Sn	01 14 24.6	-14
	comp=Z,16nm,0.3s,baz=53,slow=20,SNR=5.5						
SONM	Songino Array	27.32	296	P	P	01 14 12.9	-0.4
	comp=Z,12nm,0.9s,mb4.4,baz=89,slow=7.9,SNR=5.6						
LZH	Lanzhou	31.68	273	eP	P	01 14 53.5	+1.4
LZH				pP	pP	01 14 58.9	+3.9
LZH				sP	sP	01 14 59.9	+3.7
LZH				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.4						
LZH				pmax	pmax		
	comp=Z,340nm,5.5s						
KMI	Kunming	37.93	257	P	P	01 15 46.6	+0.4
KMI				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.1						
ZALV	Zalesovo Beam	40.53	308	P	P	01 16 07.3	-0.2
	comp=Z,24nm,0.5s,mb5.1,baz=79,slow=7.9,SNR=15						
MKAR	Makanchi Array	43.62	299	P	P	01 16 31.5	-1.3
	comp=Z,26nm,0.8s,mb5.0,baz=80,slow=8.8,SNR=9.4						
ILAR	Eielson Array	44.43	35	P	P	01 16 39.5	+0.4
	comp=Z,9.5nm,0.9s,mb4.5,baz=261,slow=6.0,SNR=10						
CMAR	Chiang Mai Arr	44.84	253	P	P	01 16 42.6	-0.3
	comp=Z,12nm,0.7s,mb4.8,baz=41,slow=7.3,SNR=14						
BVAR	Borovoye Array	49.13	310	P	P	01 17 15.7	-0.3
	comp=Z,16nm,0.5s,mb5.3,baz=53,slow=9.8,SNR=5.5						
INK	Inuvik	49.27	29	P	P	01 17 17.4	+0.4
	comp=Z,41nm,0.9s,mb5.5,baz=294,slow=3.7,SNR=13						
YKA	Yellowknife Ar	58.72	32	P	P	01 18 25.4	-0.6
	comp=Z,2.8nm,0.6s,mb4.5,baz=304,slow=6.9,SNR=3.8						
KEV	Kevo	59.86	339	ep	P	01 18 33.4	-0.4
	comp=Z,3.3nm,0.3s,mb4.8						
ARCES	ARCESS Array B	60.40	339	P	P	01 18 37.1	-0.4
	comp=Z,9.1nm,0.8s,mb4.9,baz=39,slow=7.8,SNR=9.0						
DAG	Danmarks Havn	61.31	356	i pP	P	01 18 42.4	-1.2
DAG	Danmarks Havn	61.31	356	i *PP	P	01 18 42.4	-1.2
WRA	Warramunga Arr	61.99	190	P	P	01 18 48.2	-0.6
	comp=Z,5.5nm,0.8s,mb4.7,baz=7.5,slow=6.8,SNR=8.3						
WRA	Warramunga Arr	61.99	190	P	P	01 18 48.2	-0.6
WRA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JOF	Joensuu	62.88	332	ep	P	01 18 53.1	-1.1
	comp=Z,3.9nm,0.4s,mb4.9						
KAF	Kangasniemi	65.16	333	ep	P	01 19 05.0	-4.2
	comp=Z,2.0nm,0.4s,mb4.5						
OBN	Obninsk	65.66	323	e	P	01 19 22.4	+10
ASAR	Alice Springs	65.72	190	P	P	01 19 12.4	-0.8
	comp=Z,2.5nm,0.6s,mb4.4,baz=4.4,slow=4.8,SNR=8.6						
ASAR	Alice Springs	65.72	190	P	P	01 19 12.4	-0.8
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SUMG	Summit	66.02	1	i pP	P	01 19 15.4	+0.7
VSR	Storozhevoye	66.85	319	e	P	01 19 19.8	-0.5
KIV	Kislovodsk	69.48	311	i	P	01 19 38.4	+1.4
ZEI	Tsey	69.52	309	e	P	01 19 34.6	-2.6
NVAR	Mina Array Bea	70.54	56	P	P	01 19 44.8	+1.2
	comp=Z,4.7nm,0.8s,mb4.5,baz=288,slow=6.4,SNR=6.8						
GNI	Garni	70.64	307	P	P	01 19 45.4	+1.3
	comp=Z,12nm,0.8s,mb4.9,baz=278,slow=11,SNR=4.3						
NOA	NORSAR Array B	70.71	338	P	P	01 19 44.3	+0.1
	comp=Z,5.8nm,0.5s,mb4.7,baz=35,slow=6.1,SNR=6.4						
PDAR	Pinedale Array	72.91	48	P	P	01 19 57.8	0.0
	comp=Z,2.7nm,0.5s,mb4.5,baz=274,slow=4.0,SNR=5.3						
STKA	Stephens Creek	73.24	182	P	P	01 19 58.3	-1.3
	comp=Z,1.8nm,0.7s,mb4.1,baz=7.7,slow=6.9,SNR=3.9						
BSD	Bornholm Skovb	74.34	332	i pP	P	01 20 05.5	-0.4
BSD	Bornholm Skovb	74.34	332	i *PP	P	01 20 05.5	-0.4
ULM	Lac du Bonnet	74.45	35	P	P	01 20 05.4	-1.3
	comp=Z,4.0nm,0.8s,mb4.4,baz=330,slow=4.7,SNR=5.6						
ULM	Lac du Bonnet	74.45	35	P	P	01 20 05.4	-1.3
COP	Copenhagen	74.71	334	i pP	P	01 20 08.0	-0.1
COP	Copenhagen	74.71	334	i *PP	P	01 20 08.0	-0.1
LVV	L'vov	74.86	325	eP	P	01 20 06.1	-2.9
LVV				e	pP	01 20 08.7	-3.5
OKC	Ostrava-Krasne	77.31	328	ex	P	01 20 23.2	+0.2
OKC	Ostrava-Krasne	77.31	328	e*PP	P	01 20 23.2	+0.2
BR131	Keskin Array S	77.34	312	e	P	01 20 23.9	+0.5
BRTR	Keskin Array B	77.34	312	P	P	01 20 21.9	-1.4
	comp=Z,6.7nm,0.7s,mb4.7,baz=101,slow=2.8,SNR=9.4						
UPC	Upice	77.62	329	e*PP	P	01 20 25.0	+0.3
UPC	Upice	77.62	329	ex	P	01 20 25.0	+0.3
DPC	Dobruska-Polom	77.62	329	e*PP	P	01 20 25.3	+0.6
DPC	Dobruska-Polom	77.62	329	ex	P	01 20 25.3	+0.6
DRGR		77.71	323	⇑i*P	P	01 20 25.8	+0.5
CLL	Collm	78.09	331	eP	P	01 20 27.3	0.0
	comp=Z,48nm,0.9s,mb5.4						
CLL	Collm	78.09	331	⇓iP	P	01 20 27.1	-0.2
	comp=Z,48nm,0.9s,mb5.4						
CLL				e		01 20 37.0	
BRG	Berggiesshubel	78.11	330	eP	P	01 20 27.6	+0.2
	comp=Z,14nm,1.0s,mb4.8						
BRG	Berggiesshubel	78.11	330	*PP	P	01 20 27.4	0.0
BRG	Berggiesshubel	78.11	330	pP	P	01 20 27.4	-0.1
	comp=Z,13nm,0.9s,mb4.8						
PVCC	Panska Ves	78.15	330	ex	P	01 20 28.0	+0.3
PVCC	Panska Ves	78.15	330	e*PP	P	01 20 28.0	+0.3
CLZ	Clausthal	78.58	333	eP	P	01 20 30.4	+0.4
	comp=Z,52nm,1.0s,mb5.4						
PRU	Pruhonice	78.60	330	ex	P	01 20 31.0	+0.8
PRU	Pruhonice	78.60	330	e*PP	P	01 20 31.0	+0.8
TREC	Trest	78.79	329	e*PP	P	01 20 31.1	-0.1
TREC	Trest	78.79	329	ex	P	01 20 31.1	-0.1
IBBN	Ibbenburen	79.06	334	eP	P	01 20 32.6	0.0
	comp=Z,41nm,0.8s,mb5.4						
MOX	Moxa	79.14	331	eP	P	01 20 33.0	-0.1
	comp=Z,28nm,1.2s,mb5.1						
MOX	Moxa	79.14	331	eP	P	01 20 33.2	+0.1
	comp=Z,36nm,1.3s,mb5.1						
NKC	Novy Kostel	79.18	331	e*PP	P	01 20 33.8	+0.5
NKC	Novy Kostel	79.18	331	ex	P	01 20 33.8	+0.5
UBBA	Unterbreizbach	79.56	332	eP	P	01 20 35.1	-0.3
	comp=Z,14nm,1.1s,mb4.8						
ROTZ	Rotzenmuhle	79.65	331	eP	P	01 20 36.5	+0.6
	comp=Z,26nm,1.0s,mb5.1						
KHC	Kasperske Hory	79.66	330	ex	P	01 20 36.3	+0.3
KHC	Kasperske Hory	79.66	330	e*PP	P	01 20 36.3	+0.3
GEC2	GERESS Array S	79.85	329	eP	P	01 20 37.1	+0.1
	comp=Z,10.0nm,0.9s,mb4.8						
WET	Wettzell	79.92	330	eP	P	01 20 37.8	+0.4
	comp=Z,32nm,1.0s,mb5.2						
BUG	Bochum--Univer	79.95	334	eP	P	01 20 37.2	-0.3
	comp=Z,40nm,1.0s,mb5.3						
GRA1	Grafenberg Arr	80.07	331	eP	P	01 20 38.8	+0.6
GRF	Grafenberg Arr	80.07	331	eP	P	01 20 38.8	+0.6
	comp=Z,71nm,1.0s,mb5.5						
TNS	Taunus Mts	80.60	333	eP	P	01 20 41.0	0.0
	comp=Z,50nm,1.4s,mb5.2						
MMAI	Mount Meron Ar	80.98	306	P	P	01 20 44.5	+1.1
	comp=Z,21nm,0.9s,mb5.1,baz=47,slow=6.1,SNR=9.0						
RJOB	Jochberg	81.10	329	eP	P	01 20 44.5	+0.7
	comp=Z,28nm,0.9s,mb5.2						
FUR	Furstenfeldbru	81.32	330	eP	P	01 20 45.5	+0.6
	comp=Z,70nm,0.8s,mb5.6						
STU	Stuttgart	81.57	332	eP	P	01 20 46.3	+0.1
	comp=Z,36nm,0.9s,mb5.3						
TXAR	Lajitas Array	85.62	54	P	P	01 21 07.9	+0.5
	comp=Z,5.6nm,0.8s,mb4.9,baz=291,slow=3.4,SNR=10						
ATD	Arta Tunnel	90.72	286	P	P	01 21 32.0	0.0
	comp=Z,12nm,0.9s,mb5.2,baz=225,slow=1.4,SNR=6.2						
DBIC	Dimbokro	124.16	322	PKP	PKPdf	01 27 25.6	-2.2
	comp=Z,2.0nm,0.6s,baz=146,slow=17,SNR=4.3						
DBIC	Dimbokro	124.16	322	PKP	PKPdf	01 27 25.6	-2.2
LBTB	Lobatse	127.14	268	PKP	PKPdf	01 27 32.8	-0.3
	comp=Z,6.2nm,1.0s,baz=268,slow=2.9,SNR=3.9						
LBTB	Lobatse	127.14	268	PKP	PKPdf	01 27 32.8	-0.3
BDFB	Brasilia	151.99	26	PKPbc	PKPbc	01 28 25.1	+0.9
	comp=Z,3.0nm,0.8s,baz=238,slow=11,SNR=4.1						
PLCA	Paso Flores	153.96	100	PKPbc	PKPbc	01 28 26.4	-1.5
	comp=Z,1.2nm,0.7s,baz=323,slow=5.1,SNR=3.8						
PLCA	Paso Flores	153.96	100	PKPbc	PKPbc	01 28 26.4	-1.5
PLCA	Paso Flores	153.96	100	PKP2	PKPbc	01 28 26.4	-1.4

*ISCJB **11** 01:08:46.7±0.7,37°.36N±0°.05×71°.23E±0°.09, h103km±10km,mb3.7/3,Error ellipse: s-maj=13.8km s-min=6.0km az=28.3*
*NEIC **11** 01:08:46.9±0.8,37°.12N×71°.57E,h106km±7km,mb4.4/5, Error ellipse: s-maj=15.7km s-min=7.6km az=129.0*
*NNC **11** 01:08:49.5±9.0,37°.49N×70°.98E,h112km±205km,mb3.1, mpv3.9,Error ellipse: s-maj=76.7km s-min=50.8km az=4.0*
*IDC **11** 01:08:51.0±8.0,37°.43N×71°.60E,h125km±51km,mb3.4/3, mb1 3.6/8,mb1mx3.4/26,mbtmp3.5/8,Error ellipse: s-maj=69.4km s-min=39.6km az=173.0*

ISC 11 01:08:48.0±0.7,37°.34N±0°.05×71°.23E±0°.09,h101km±9km, n33,σ1°07/42,mb3.7/3,3C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.31	213	ePn	Pn	01 09 36.8	-1.1
KBL				eS	Sn	01 10 16.3	-0.1
KSH	Kashi	4.31	58	Pn	Pn	01 09 46.3	-5.1
KSH				Sn	Sn	01 10 26.3	-14
KSH				smax			
	comp=N,150nm,0.7s						
KSH				smax			
	comp=E,170nm,1.0s						
AML	Almayashu	5.15	21	P	Pn	01 10 03.7	+1.0
	SNR=49						
AML	Almayashu	5.15	21	ePn	Pn	01 10 03.5	+0.8
	comp=E,57nm,0.4s						
AML				eS	Sn	01 11 00.1	-0.6
KZA	Kyzart	5.66	32	ePn	Pn	01 10 10.1	+0.5
EKS2	Erkin-Say	5.66	19	P	Pn	01 10 10.8	+1.1
	SNR=14						
EKS2	Erkin-Say	5.66	19	ePn	Pn	01 10 11.0	+1.4
	comp=E,13nm,0.6s						
EKS2				eS	Sn	01 11 12.6	-0.7
KK31	Karatay Array	5.78	355	⇑P	Pn	01 10 12.1	+0.8
	comp=E,2.2nm,0.3s,baz=180,slow=13,SNR=135						
KK31				⇑S	Sn	01 11 14.6	-1.6
	comp=E,6.9nm,0.5s,baz=180,slow=20,SNR=8.5						
KKAR	Karatay Array	5.78	355	ePn	Pn	01 10 12.2	+0.9
	comp=E,7.5nm,0.3s						
KKAR				eS	Sn	01 11 15.7	-0.5
AAK	Ala-Archa	5.85	24	P	Pn	01 10 13.2	+1.0
	SNR=14						
AAK	Ala-Archa	5.85	24	P	Pn	01 10 13.3	+1.2
	comp=E,0.1nm,0.3s,baz=167,slow=6.1,SNR=30						
AAK				S	Sn	01 11 17.3	-0.6
	comp=E,0.0nm,0.3s,baz=347,slow=19,SNR=12						
AAK	Ala-Archa	5.85	24	ePn	Pn	01 10 13.1	+0.9
AAK				S	Sn	01 11 17.3	-0.6
ULHL	Ulahol	6.24	37	P	Pn	01 10 17.9	+0.5
	SNR=7.1						
CHMS	Chumysh	6.26	24	P	Pn	01 10 18.2	+0.5
	SNR=12						
USP	Ospenovka	6.43	22	P	Pn	01 10 20.1	+0.1
	SNR=9.9						
TKM2	Tokmak 2	6.50	30	⇓P	Pn	01 10 21.1	+0.1
	comp=E,8.4nm,0.5s						
TKM2				⇑S	Sn	01 11 34.7	+1.1
	comp=E,4.6nm,0.6s						
TKM2	Tokmak 2	6.50	30	P	Pn	01 10 21.6	+0.6
	SNR=12						
TKM2	Tokmak 2	6.50	30	ePn	Pn	01 10 21.4	+0.3
	comp=E,12nm,0.6s						
MK31	Makanchi Array	12.51	37	ePn	Pn	01 11 40.3	-1.9
MKAR	Makanchi Array	12.51	37	P	Pn	01 11 40.9	-1.4
	comp=E,0.5nm,0.3s,baz=226,slow=15,SNR=15						
AB31	Akbulak array	14.45	329	P	Pn	01 12 05.9	-1.6
	comp=E,0.2nm,0.3s,baz=133,slow=14,SNR=19						
ABKAR	Akbulak array	14.45	329	ePn	Pn	01 12 05.8	-1.7
	comp=E,0.8nm,0.3s						
BVAR	Borovoye Array	15.70	358	P	Pn	01 12 24.4	+1.2
	comp=E,0.4nm,0.3s,baz=172,slow=12,SNR=6.1						
AKTK	Aktyubinsk	16.15	328	P	Pn	01 12 32.2	+3.3
AKTO	Aktyubinsk	16.15	328	P	Pn	01 12 32.2	+3.3
	comp=E,0.4nm,0.3s,baz=132,slow=13,SNR=5.5						
ZAA0	Zalesovo Array	19.08	25	eP	P	01 13 01.4	-0.9
ZALV	Zalesovo Beam	19.08	25	P	P	01 13 01.4	-0.9
	comp=E,1.2nm,0.3s,baz=225,slow=11,SNR=19						
ARCES	ARCESS Array B	40.44	337	P	P	01 16 17.1	+1.1
	comp=E,0.7nm,0.5s,mb3.7,baz=115,slow=8.7,SNR=9.6						
NB2	NORSAR Subarra	43.82	322	P	P	01 16 43.9	+0.3
	comp=Z,0.5nm,0.4s,mb3.6,baz=95,slow=7.9						
NOA	NORSAR Array B	43.82	322	P	P	01 16 44.2	+0.7
	comp=Z,0.6nm,0.5s,mb3.6,baz=96,slow=7.7,SNR=4.4						
NOA	NORSAR Array B	43.82	322	P	P	01 16 44.2	+0.7
YKA	Yellowknife Ar	80.40	3	P	P	01 20 47.7	-0.2
	comp=Z,1.1nm,0.6s,mb3.8,baz=352,slow=5.4,SNR=4.3						
YKA	Yellowknife Ar	80.40	3	P	P	01 20 47.7	-0.2

*OMAN **11** 01:11:14.8±99.0,28°.85N×56°.37E,h10km,Error ellipse: s-maj=285.1km s-min=15.1km az=356.0*
*BJI **11** 01:11:34.8,27°.15N×55°.16E,h8km,mB5.0/4,mb4.8/31, Ms5.2/7,Ms7 4.9/6*
*ISCJB **11** 01:11:38.5±0.2,26°.80N±0°.03×55°.75E±0°.02,h10km, mb4.8/121,MS5.2/6,Error ellipse: s-maj=3.7km s-min=2.7km az=179.9*
*IDC **11** 01:11:38.5±0.5,26°.84N×55°.87E,h0km,mb4.5/22, mb1 4.7/26,mb1mx4.6/34,mbtmp4.6/26,ML4.2/3,Error ellipse: s-maj=14.9km s-min=11.9km az=140.0*
*THR **11** 01:11:39.5±0.7,26°.76N×55°.75E,h14km±13km,ML4.3*
*TEH **11** 01:11:41.0,27°.02N×55°.75E,h10km*
*CSEM **11** 01:11:41.6±0.1,26°.82N×55°.81E,h20km,mb4.9/91,Error ellipse: s-maj=3.4km s-min=3.1km az=151.0*
*MOS **11** 01:11:41.9±0.7,26°.87N×55°.80E,h33km,mb5.1/40,Error ellipse: s-maj=8.7km s-min=4.4km az=126.3*
*NEIC **11** 01:11:43.0,27°.01N×55°.76E,h14km,mb4.9/67, ML4.3(THR),MN4.5(TEH),After THR.*
*SZGRF **11** 01:12:16.9,28°.97N×51°.77E,h33km,mb4.9,Southern Iran*

ISC 11 01:11:40.4±0.2,26°.80N±0°.02×55°.78E±0°.02,h10km, (h13km±1.4km:pP-P),n620,σ0°95/631,mb4.8/121,MS5.2/6, 22C-18D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.69	30	ePg	Pg	01 11 53.4	-0.5
BNDS				eSg	Sg	01 12 01.3	-1.6
BNDS	Bandar-Abbas	0.69	30	ePg	Pg	01 11 53.5	-0.3
BNDS				eSg	Sg	01 12 03.9	+1.0
BNDS				AML	AML	01 12 05.5	
	comp=N,12μm,0.6s						
BNDS	Bandar-Abbas	0.69	30	ePg	Pg	01 11 53.3	-0.5
BNDS				eSg	Sg	01 12 03.9	+1.0
IBND	Bandar-abas	0.94	46	ePg	Pg	01 11 57.6	-0.9
IBND				ePg	Pg	01 11 57.9	-0.6
IBND				eSg	Sg	01 12 09.1	-1.6
IBND				eSg	Sg	01 12 09.4	-1.3
IBND				eSg	Sg	01 12 09.8	-0.9
IBND				e		01 12 23.2	
	comp=Z,55μm,0.2s						
IBND				e		01 12 44.1	
	comp=Z,35μm,0.4s						
IBND	Bandar-abas	0.94	46	ePg	Pg	01 11 57.9	-0.6
IBND				eSg	Sg	01 12 09.8	-0.9
BANOM	Banah	0.99	152	P	Pg	01 11 59.8	+0.4
	SNR=1000						
BANOM	Banah	0.99	152	P	Pg	01 11 59.8	+0.4
	SNR=1650						
BANOM				P		01 11 60.0	
	SNR=1402						
NAZ	Nazwa, Dubai	1.81	183	P	Pn	01 12 15.0	+3.5
	SNR=11						
NAZ	Nazwa, Dubai	1.81	183	P	Pn	01 12 15.0	+3.5
	SNR=11						
HATD	Hatta, Dubai	1.99	171	P	Pn	01 12 16.1	+2.0
	SNR=419						
HATD	Hatta, Dubai	1.99	171	P	Pn	01 12 16.1	+2.1
	SNR=419						
ASHO	Ashiyiah	2.12	173	P	Pn	01 12 18.3	+2.4
	SNR=295						
ASHO	Ashiyiah	2.12	173	P	Pn	01 12 18.3	+2.4
	SNR=295						
ASHO				P		01 12 18.4	
	SNR=221						
ASUD	Al Ashush, Dub	2.20	191	P	Pn	01 12 20.5	+3.5
	SNR=150						
ASUD	Al Ashush, Dub	2.20	191	P	Pn	01 12 20.5	+3.5
	SNR=150						
KRBR	Kerman	3.29	15	ePn	Pn	01 12 33.8	+1.9
KRBR				eSg	Sg	01 13 19.6	-6.4
KRBR	Kerman	3.29	15	ePn	Pn	01 12 34.0	+2.0
KRBR				eSg	Sg	01 13 23.6	-2.4
KRBR				AML	AML	01 13 28.2	
	comp=N,826nm,0.8s						
KRBR				AML	AML	01 13 34.7	
	comp=E,789nm,0.6s						
KRBR	Kerman	3.29	15	ePn	Pn	01 12 34.0	+2.1
ISRV	Sarvestan	3.49	318	Pn	Pn	01 12 37.0	+2.4
ISRV				Lg		01 13 26.0	
ISRV	Sarvestan	3.49	318	ePn	Pn	01 12 36.0	+1.4
ISRV				e		01 14 07.7	
	comp=Z,10μm,0.6s						
ISRV	Sarvestan	3.49	318	ePn	Pn	01 12 36.0	+1.4
HOQ	Hoqain	3.49	156	P	Pn	01 12 34.4	-0.3
	SNR=13						
HOQ	Hoqain	3.49	156	P	Pn	01 12 34.1	-0.7
	SNR=32						
HOQ				P		01 12 34.4	
	SNR=13						
ARQ	Araqi	3.51	169	P	Pn	01 12 36.9	+1.9
	SNR=93						
ARQ	Araqi	3.51	169	P	Pn	01 12 36.9	+1.9
	SNR=93						
IPAR	Pars	3.87	322	Pn	Pn	01 12 41.7	+1.8
IPAR	Pars	3.87	322	⇓ePn	Pn	01 12 41.6	+1.7
IPAR				e		01 13 30.8	
	comp=Z,11μm,0.4s						
IPAR	Pars	3.87	322	⇓ePn	Pn	01 12 41.6	+1.7
IMEH	Mehriz	4.69	348	Pn	Pn	01 12 53.2	+2.1
IMEH	Mehriz	4.69	348	⇓ePn	Pn	01 12 52.8	+1.7
IMEH				e		01 12 57.4	
	comp=Z,2μm,0.1s						
IMEH	Mehriz	4.69	348	⇓ePn	Pn	01 12 52.8	+1.7
IBAF	Bafgh	4.78	358	Pn	Pn	01 12 53.5	+1.1
IBAF	Bafgh	4.78	358	ePn	Pn	01 12 53.6	+1.2
IBAF				e		01 12 58.0	
	comp=Z,4μm,0.2s						
IBAF	Bafgh	4.78	358	ePn	Pn	01 12 53.6

ILAS	**Lasjerd**	**8.89 345**	Pn		**Pn**	**01 13 51.0 +2.1**
ILAS	**Lasjerd**	**8.89 345**	*e*Pn		**Pn**	**01 13 49.4 +0.5**
ILAS			*e*			01 14 01.0
comp=Z,397nm,0.2s						
ILAS	**Lasjerd**	**8.89 345**	*e*Pn		**Pn**	**01 13 49.4 +0.5**
ASAO	**Ashtian**	**9.17 329**	*e*Pn		**Pn**	**01 13 54.0 +1.3**
ASAO	**Ashtian**	**9.17 329**	*e*Pn		**Pn**	**01 13 54.0 +1.3**
IFIR	**Firoozkooh**	**9.19 344**	Pn		**Pn**	**01 13 54.1 +1.2**
IFIR	**Firoozkooh**	**9.19 344**	*e*Pn		**Pn**	**01 13 53.6 +0.7**
IFIR			*e*			01 13 59.8
comp=Z,425nm,0.1s						
IFIR	**Firoozkooh**	**9.19 344**	*e*Pn		**Pn**	**01 13 53.6 +0.7**
ISHM	**Shahmirzad**	**9.23 347**	Pn		**Pn**	**01 13 54.5 +1.0**
ISHM	**Shahmirzad**	**9.23 347**	*e*Pn		**Pn**	**01 13 53.8 +0.3**
ISHM			*e*			01 13 59.4
comp=Z,1μm,0.3s						
ISHM	**Shahmirzad**	**9.23 347**	*e*Pn		**Pn**	**01 13 53.8 +0.3**
DAMV	**Damavand**	**9.38 341**	*e*Pn		**Pn**	**01 13 57.6 +2.0**
DAMV	**Damavand**	**9.38 341**	*e*Pn		**Pn**	**01 13 57.6 +1.9**
IKIA	**Kiasar**	**9.55 350**	Pn		**Pn**	**01 13 59.7 +1.8**
IKIA	**Kiasar**	**9.55 350**	*e*Pn		**Pn**	**01 13 58.3 +0.4**
IKIA			*e*			01 14 08.5
comp=Z,342nm,0.4s						
IKIA	**Kiasar**	**9.55 350**	*e*Pn		**Pn**	**01 13 58.3 +0.4**
IGLO	**Ghaloghah**	**9.81 351**	Pn		**Pn**	**01 14 04.1 +2.6**
IGLO	**Ghaloghah**	**9.81 351**	*e*		Px	01 14 14.3
comp=Z,1μm,0.4s						
IGLO			*e*Pn		**Pn**	**01 14 04.2 +2.7**
IPRN	**Peran**	**9.86 344**	*e*Pn		**Pn**	**01 14 04.0 +1.9**
IPRN	**Peran**	**9.86 344**	*e*Pn		**Pn**	**01 14 04.0 +1.9**
IMHD	**Mahdasht**	**9.88 335**	Pn		**Pn**	**01 13 58.4 -4.0**
IMHD	**Mahdasht**	**9.88 335**	*e*Pn		**Pn**	**01 14 02.5 +0.1**
IMHD	**Mahdasht**	**9.88 335**	*e*Pn		**Pn**	**01 14 02.5 +0.1**
CHTH	**Charan**	**9.91 338**	*e*Pn		**Pn**	**01 14 04.2 +1.4**
CHTH	**Charan**	**9.91 338**	*e*Pn		**Pn**	**01 14 04.2 +1.4**
IRAZ	**Razeghan**	**9.93 331**	Pn		**Pn**	**01 14 03.5 +0.4**
IRAZ	**Razeghan**	**9.93 331**	*e*		**Pn**	**01 14 11.9 +8.7**
comp=Z,504nm,0.2s						
IRAZ			⇑*e*Pn		**Pn**	**01 14 03.4 +0.3**
IVIS	**Veis**	**10.88 317**	Pn		**Pn**	**01 14 14.7 -1.4**
IVIS	**Veis**	**10.88 317**	*e*Pn		**Pn**	**01 14 15.7 -0.4**
IVIS			*e*			01 14 20.4
comp=Z,2μm,0.2s						
IVIS	**Veis**	**10.88 317**	*e*Pn		**Pn**	**01 14 15.7 -0.4**
IGHG	**Ghaleghazi**	**10.92 316**	Pn		**Pn**	**01 14 16.5 -0.1**
IGHG	**Ghaleghazi**	**10.92 316**	*e*Pn		**Pn**	**01 14 16.6 0.0**
IGHG			*e*			01 16 27.8
comp=Z,2μm,0.3s						
IGHG	**Ghaleghazi**	**10.92 316**	*e*Pn		**Pn**	**01 14 16.6 0.0**
ILIN	**Lien**	**11.08 319**	Pn		**Pn**	**01 14 17.7 -1.1**
ILIN	**Lien**	**11.08 319**	*e*Pn		**Pn**	**01 14 18.5 -0.3**
ILIN			*e*			01 14 19.7
comp=Z,2μm,0.2s						
ILIN	**Lien**	**11.08 319**	*e*Pn		**Pn**	**01 14 18.5 -0.3**
IDHR	**Dehrash**	**11.27 317**	Pn		**Pn**	**01 14 19.4 -2.1**
IDHR	**Dehrash**	**11.27 317**	*e*Pn		**Pn**	**01 14 20.9 -0.6**
IDHR			*e*			01 14 24.4
comp=Z,2μm,0.2s						
IDHR	**Dehrash**	**11.27 317**	*e*Pn		**Pn**	**01 14 20.9 -0.6**
KBL	**Kabul**	**13.77 53**	*e*Pn		**Pn**	**01 14 57.9 +2.2**
comp=Z,19nm,0.9s						
KBL	**Kabul**	**13.77 53**	*e*P		**Pn**	**01 14 57.9 +2.2**
KBL			pmax		pmax	
comp=Z,19nm,0.9s						
KBL	**Kabul**	**13.77 53**	*e*P		**Pn**	**01 14 57.9 +2.2**
comp=Z,19nm,0.9s						
GNI	**Garni**	**16.17 328**	Pn		**Pn**	**01 15 30.2 +2.6**
comp=Z,1.0nm,0.3s,baz=298,slow=2.2,SNR=16						
GNI	**Garni**	**16.17 328**	*e*Pn		**Pn**	**01 15 29.7 +2.1**
comp=Z,62nm,1.0s						
GNI			*e*S		**Sn**	**01 18 45.4 +18**
GNI	**Garni**	**16.17 328**	*e*P		**Pn**	**01 15 29.7 +2.1**
GNI			pmax		pmax	
comp=Z,62nm,1.0s						
GNI	**Garni**	**16.17 328**	*e*P		**Pn**	**01 15 29.7 +2.1**
comp=Z,62nm,1.0s						
ASF	**Jabal al Asfar**	**17.28 293**	P		**Pn**	**01 15 41.7 -0.1**
comp=Z,0.7nm,0.3s,baz=332,slow=7.6,SNR=15						
ASF	**Jabal al Asfar**	**17.28 293**	P		**Pn**	**01 15 41.7 -0.1**
KHET	**Khetri**	**17.83 81**	*e*PKP		**Pn**	**01 15 49.9 +1.3**
KHET			AMb		AMB	01 15 51.0
comp=Z,13nm,0.7s						
MALT	**Malatya**	**18.56 313**	*e*P		**Pn**	**01 15 57.9 +0.4**
comp=Z,90nm,1.1s						
MALT			*e*Pn		**Pn**	**01 15 58.0 +0.5**
MALT	**Malatya**	**18.56 313**	*e*P		**Pn**	**01 15 57.9 +0.4**
MALT			pmax		pmax	
comp=Z,90nm,1.1s						
MALT	**Malatya**	**18.56 313**	*e*Pn		**Pn**	**01 15 58.0 +0.5**
EIL	**Elat**	**18.57 284**	P		**Pn**	**01 15 58.2 +0.6**
comp=Z,0.4nm,0.3s,baz=79,slow=4.3,SNR=10						
EIL	**Elat**	**18.57 284**	P		**Pn**	**01 15 58.2 +0.5**
POO	**Poona**	**18.58 113**	*e*PKP		**Pn**	**01 15 57.8 -0.2**
ZEI	**Tsey**	**18.65 332**	*e*P		**Pn**	**01 15 59.5 +0.9**
ZEI			pmax		pmax	
comp=Z,77nm,1.4s						
ZEI	**Tsey**	**18.65 332**	*e*P		**Pn**	**01 15 59.5 +0.9**
comp=Z,77nm,1.4s						
MMAI	**Mount Meron Ar**	**18.70 294**	P		**Pn**	**01 15 59.2 -0.1**
comp=Z,1.3nm,0.3s,baz=96,slow=15,SNR=30						
SONA	**Sohna**	**18.95 81**	*e*PKP		**Pn**	**01 16 01.5 -0.8**
SONA			AMb		AMB	01 16 06.7
comp=Z,13nm,0.3s						
AYAN	**Aya Nagar**	**18.99 80**	*e*PKP		**Pn**	**01 16 02.6 -0.2**
KAD	**Karad**	**19.48 115**	*e*PKP		**Pn**	**01 16 10.1 +1.3**
DDI	**Dehra Dun**	**19.88 75**	*ex*		**Pn**	**01 16 12.0 -1.4**
BHPL	**Bhopal**	**19.93 96**	*ex*		**Pn**	**01 16 08.6 -5.6**
KIV	**Kislovodsk**	**20.13 332**	*e*P		**P**	**01 16 16.1 +1.7**
comp=Z,78nm,0.8s						
KIV	**Kislovodsk**	**20.13 332**	*e*P		**P**	**01 16 16.5 +2.1**
KIV			*e*			01 16 25.1
KIV			*e*			01 16 38.7
KIV			pmax		pmax	
comp=Z,124nm,1.1s						
KIV			MLR		MLR	
comp=Z,23μm,18.0s,MS5.6						
KIV	**Kislovodsk**	**20.13 332**	*e*P		**P**	**01 16 16.5 +2.1**
comp=Z,124nm,1.1s						
KLP	**Kalpa**	**20.18 71**	*e*PKP		**P**	**01 16 16.4 +1.3**
KLP			AMb		AMB	01 16 24.2
comp=Z,40nm,0.8s						
KKAR	**Karatay Array**	**20.21 33**	*e*P		**P**	**01 16 13.8 -1.5**
KKAR	**Karatay Array**	**20.21 33**	*e*P		**P**	**01 16 13.8 -1.5**
KKAR	**Karatay Array**	**20.21 33**	*e*P		**P**	**01 16 13.8 -1.5**
CSS	**Prodhromos**	**20.88 298**	*e*P		**P**	**01 16 23.4 +0.7**
comp=Z,26nm,0.8s						
CSS	**Prodhromos**	**20.88 298**	*e*P		**P**	**01 16 23.4 +0.7**
comp=Z,26nm,0.8s						
LATR	**Latur**	**20.90 109**	*e*PKP		**P**	**01 16 22.4 -0.6**
KSH	**Kashi**	**21.08 48**	*e*P		**P**	**01 16 17.6 -7.2**
KSH			*ep*P			01 16 27.5
KSH			*es*P		sP	01 16 31.4 +2.5
KSH			pmax		pmax	
comp=Z,5.0nm,0.5s,mb4.1						
KSH			pmax		pmax	
comp=Z,24μm,14.4s						
KSH			LR		LR	
comp=N,5μm,15.0s,MS5.2						
KSH			LR		LR	
comp=E,5μm,11.4s,MS5.2						
JOSI	**Joshimath**	**21.19 74**	*e*PKP		**P**	**01 16 27.8 +1.8**
JOSI			AMb		AMB	01 16 33.2
comp=Z,310nm,1.0s,mb5.6						
AML	**Almayashu**	**21.20 39**	P		**P**	**01 16 25.3 -0.7**
SNR=21						
AML	**Almayashu**	**21.20 39**	*e*P		**P**	**01 16 25.2 -0.8**
comp=Z,27nm,0.8s,mb4.6						
AML	**Almayashu**	**21.20 39**	*e*P		**P**	**01 16 25.2 -0.8**
comp=Z,27nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**21.59 38**	P		**P**	**01 16 30.4 +0.1**
SNR=22						
EKS2	**Erkin-Say**	**21.59 38**	*e*P		**P**	**01 16 30.2 0.0**
comp=Z,22nm,0.9s,mb4.6						
EKS2	**Erkin-Say**	**21.59 38**	*e*P		**P**	**01 16 30.2 -0.1**
comp=Z,22nm,0.9s,mb4.6						
AAK	**Ala-Archa**	**21.98 39**	P		**P**	**01 16 34.3 -0.1**
SNR=13						
AAK	**Ala-Archa**	**21.98 39**	P		**P**	**01 16 34.9 +0.5**
comp=Z,7.7nm,0.6s,mb4.3,baz=191,slow=7.0,SNR=18						
AAK	**Ala-Archa**	**21.98 39**	*e*P		**P**	**01 16 34.1 -0.3**
AAK	**Ala-Archa**	**21.98 39**	*e*P		**P**	**01 16 34.1 -0.3**
AAK	**Ala-Archa**	**21.98 39**	*e*P		**P**	**01 16 34.1 -0.3**
KZA	**Kyzart**	**22.07 41**	P		**P**	**01 16 38.7 +3.3**
SNR=16						
KZA	**Kyzart**	**22.07 41**	*e*P		**P**	**01 16 35.8 +0.5**
comp=Z,55nm,1.1s,mb4.9						
KZA	**Kyzart**	**22.07 41**	*e*P		**P**	**01 16 35.8 +0.5**
comp=Z,55nm,1.1s,mb4.9						
KBK	**Karagaybulak**	**22.25 40**	P		**P**	**01 16 37.6 +0.3**
SNR=9.5						
KBK	**Karagaybulak**	**22.25 40**	*e*P		**P**	**01 16 37.7 +0.4**
comp=Z,57nm,0.8s,mb5.0						
KBK	**Karagaybulak**	**22.25 40**	*e*P		**P**	**01 16 37.7 +0.4**
comp=Z,57nm,0.8s,mb5.0						
CHMS	**Chumysh**	**22.36 39**	P		**P**	**01 16 40.4 +1.9**
SNR=6.7						
USP	**Ospenovka**	**22.39 38**	P		**P**	**01 16 40.6 +1.8**
SNR=13						
BRTR	**Keskin Array B**	**22.48 311**	P		**P**	**01 16 40.2 +0.4**
comp=Z,20nm,1.0s,mb4.5,baz=128,slow=13,SNR=49						
BRTR	**Keskin Array B**	**22.48 311**	P		**P**	**01 16 40.3 +0.5**
BRTR	**Keskin Array B**	**22.48 311**	P		**P**	**01 16 40.3 +0.5**
BR131	**Keskin Array S**	**22.48 311**	*e*P		**P**	**01 16 40.0 +0.2**
comp=Z,7.3nm,0.5s,mb4.4						
BR131	**Keskin Array S**	**22.48 311**	*e*P		**P**	**01 16 40.0 +0.2**
comp=Z,7.2nm,0.5s,mb4.4						
ABKAR	**Akbulak array**	**22.65 7**	*e*P		**P**	**01 16 40.1 -1.4**
comp=Z,2.3nm,0.4s,mb4.0						
ABKAR	**Akbulak array**	**22.65 7**	*e*P		**P**	**01 16 40.1 -1.4**
comp=Z,2.3nm,0.4s,mb4.0						
TKM2	**Tokmak 2**	**22.79 40**	P		**P**	**01 16 42.6 -0.4**
SNR=9.8						
TKM2	**Tokmak 2**	**22.79 40**	*e*P		**P**	**01 16 42.5 -0.5**
comp=Z,58nm,0.8s,mb5.1						
TKM2	**Tokmak 2**	**22.79 40**	*e*P		**P**	**01 16 42.6 -0.4**
TKM2			pmax		pmax	
comp=Z,58nm,0.8s,mb5.1						
TKM2	**Tokmak 2**	**22.79 40**	*e*P		**P**	**01 16 42.6 -0.4**
comp=Z,58nm,0.8s,mb5.1						
ANN	**Anapa**	**23.23 325**	*e*P		**P**	**01 16 48.2 +0.5**
ANN			pmax		pmax	
comp=Z,38nm,1.2s,mb4.7						
ANN	**Anapa**	**23.23 325**	*e*P		**P**	**01 16 48.2 +0.5**
comp=Z,38nm,1.2s,mb4.7						
AKTK	**Aktyubinsk**	**23.66 4**	P		**P**	**01 16 51.4 -0.6**
AKTK	**Aktyubinsk**	**23.66 4**	P		**P**	**01 16 51.4 -0.6**
AKTO	**Aktyubinsk**	**23.66 4**	P		**P**	**01 16 51.4 -0.6**
comp=Z,6.5nm,0.6s,mb4.3,baz=176,slow=9.5,SNR=19						
AKTO	**Aktyubinsk**	**23.66 4**	P		**P**	**01 16 51.4 -0.6**
SIM	**Simferopol'**	**25.09 322**	*e*P		**P**	**01 17 04.3 -0.8**
SIM			pmax		pmax	
comp=Z,47nm,1.0s,mb5.0						
SIM	**Simferopol'**	**25.09 322**	*e*P		**P**	**01 17 04.3 -0.8**
comp=Z,47nm,1.0s,mb5.0						
VIS	**Vishakhapatnam**	**27.00 104**	*e*PKP		**P**	**01 17 21.8 -0.9**
BVAR	**Borovoye Array**	**28.38 19**	P		**P**	**01 17 33.9 -0.7**
comp=Z,6.8nm,0.7s,mb4.4,baz=207,slow=6.2,SNR=3.6						
BVAR	**Borovoye Array**	**28.38 19**	P		**P**	**01 17 33.9 -0.7**
BVAR	**Borovoye Array**	**28.38 19**	P		**P**	**01 17 33.9 -0.7**
VRI	**Vrincioaia**	**29.91 317**	⇓*i*P		**P**	**01 17 48.9 +0.6**
VRI	**Vrincioaia**	**29.91 317**	⇓*i*P		**P**	**01 17 48.9 +0.6**
VRI	**Vrincioaia**	**29.91 317**	P		**P**	**01 17 48.9 +0.6**
PLOR	**Plostina**	**29.95 317**	⇓P		**P**	**01 17 49.9 +1.2**
PLOR	**Plostina**	**29.95 317**	⇓*i*P		**P**	**01 17 49.9 +1.2**
PLOR	**Plostina**	**29.95 317**	P		**P**	**01 17 49.9 +1.2**
MLR	**Muntele Rosu**	**30.21 316**	⇓P		**P**	**01 17 52.2 +1.2**
MLR	**Muntele Rosu**	**30.21 316**	⇓*i*P		**P**	**01 17 52.2 +1.2**
MLR	**Muntele Rosu**	**30.21 316**	P		**P**	**01 17 52.2 +1.2**
TESR		**30.28 318**	⇑*i*P		**P**	**01 17 51.4 -0.2**
TESR		**30.28 318**	⇑*i*P		**P**	**01 17 51.4 -0.2**
VOIR		**30.75 315**	⇑P		**P**	**01 17 56.3 +0.6**
VOIR		**30.75 315**	⇑*i*P		**P**	**01 17 56.3 +0.6**
VOIR		**30.75 315**	P		**P**	**01 17 56.3 +0.6**
WMQ	**Urumqi**	**30.84 48**	*e*P		**P**	**01 17 57.0 +0.4**
WMQ			sP		sP	01 18 04.0 +3.1
WMQ			PP		PP	01 18 58.0 -8.1
WMQ			S		**S**	**01 22 59.0 -1.2**
WMQ			SS		SS	01 24 41.0 -31
WMQ			pmax		pmax	
comp=Z,45nm,0.8s,mb5.3						
WMQ			pmax		pmax	
comp=Z,140nm,3.0s						
WMQ			LR		LR	
comp=N,1μm,14.0s,MS4.9						
WMQ			LR		LR	
comp=E,1μm,14.0s,MS4.9						
WMQ			LR		LR	
comp=Z,2μm,14.0s,MS4.9						
KIEV	**Kiev**	**31.30 327**	*e*P		**P**	**01 17 59.6 -0.9**
comp=Z,25nm,0.8s,mb5.1						
KIEV	**Kiev**	**31.30 327**	*e*P		**P**	**01 17 59.6 -0.8**
KIEV			pmax		pmax	
comp=Z,25nm,0.8s,mb5.1						
KIEV	**Kiev**	**31.30 327**	*e*P		**P**	**01 17 59.6 -0.8**
comp=Z,25nm,0.8s,mb5.1						
OBN	**Obninsk**	**31.57 339**	*e*P		**P**	**01 18 02.8 0.0**
comp=Z,13nm,0.5s,mb5.0						
OBN	**Obninsk**	**31.57 339**	⇓*e*P		**P**	**01 18 02.8 0.0**
OBN			*i*			01 19 12.1
OBN			S		**S**	**01 23 17.0 +5.7**
OBN			pmax		pmax	
comp=Z,42nm,1.4s,mb5.1						
OBN			MLR		MLR	
comp=Z,12μm,16.0s,MS5.7						
OBN	**Obninsk**	**31.57 339**	*e*P		**P**	**01 18 02.8 0.0**
comp=Z,42nm,1.4s,mb5.1						
BURAR	**Bucovina Array**	**31.68 319**	⇑P		**P**	**01 18 04.3 +0.4**
BURAR	**Bucovina Array**	**31.68 319**	⇑*i*P		**P**	**01 18 04.3 +0.4**
BURAR	**Bucovina Array**	**31.68 319**	⇑*i*P		**P**	**01 18 04.3 +0.4**
BARS	**Barje**	**31.88 309**	⇑*i*P		**P**	**01 18 05.4 -0.3**
BOLS	**Boljevac**	**32.13 311**	⇑*i*P		**P**	**01 18 07.4 -0.5**
GZR	**Gura Zlata**	**32.18 314**	⇓*i*P		**P**	**01 18 07.8 -0.5**
GZR	**Gura Zlata**	**32.18 314**	⇓*i*P		**P**	**01 18 07.8 -0.5**
DRGR		**32.81 316**	⇑⇑P		**P**	**01 18 14.2 +0.4**
DRGR		**32.81 316**	⇑*i*P		**P**	**01 18 14.2 +0.4**
DRGR		**32.81 316**	P		**P**	**01 18 14.2 +0.4**
KMBO	**Kilima Mbogo**	**33.01 216**	P		**P**	**01 18 18.4 +2.6**
comp=Z,5.7nm,0.8s,mb4.5,baz=179,slow=24,SNR=21						
KMBO	**Kilima Mbogo**	**33.01 216**	*e*P		**P**	**01 18 18.6 +2.7**
comp=Z,6.8nm,0.9s,mb4.6						
KMBO	**Kilima Mbogo**	**33.01 216**	*e*P		**P**	**01 18 18.6 +2.7**
KMBO			pmax		pmax	
comp=Z,7.0nm,0.9s						
KMBO	**Kilima Mbogo**	**33.01 216**	*e*P		**P**	**01 18 18.6 +2.7**
comp=Z,7.0nm,0.9s,mb4.6						
BZS	**Buzias**	**33.01 314**	⇑P		**P**	**01 18 15.8 +0.2**
BZS	**Buzias**	**33.01 314**	⇑*i*P		**P**	**01 18 15.8 +0.2**
BZS	**Buzias**	**33.01 314**	P		**P**	**01 18 15.8 +0.2**
TRPA	**Tarpa**	**33.51 318**	⇓*i*P		**P**	**01 18 20.1 +0.2**
TRPA	**Tarpa**	**33.51 318**	⇓*i*P		**P**	**01 18 20.1 +0.2**
DIVS	**Divibare**	**33.55 310**	*e*P		**P**	**01 18 19.8 -0.5**
BBLS	**Lazići**	**33.88 310**	⇑*i*P		**P**	**01 18 22.7 -0.5**
FRGS	**Fruska Gora**	**34.03 312**	⇑*i*P		**P**	**01 18 24.4 -0.1**
KOLS	**Kolonicke sedl**	**34.04 319**	*e*P		**P**	**01 18 25.4 +0.9**
comp=Z,31nm,1.0s,mb5.2						
KOLS	**Kolonicke sedl**	**34.04 319**	*e*P		**P**	**01 18 25.4 +0.9**
KOLS			pmax		pmax	
comp=Z,31nm,1.0s,mb5.2						
KOLS	**Kolonicke sedl**	**34.04 319**	*e*P		**P**	**01 18 25.3 +0.8**
KOLS	**Kolonicke sedl**	**34.04 319**	*e*P		**P**	**01 18 25.4 +0.9**
comp=Z,31nm,1.0s,mb5.2						
KWP	**Kalwaria Pacla**	**34.13 321**	*e*P		**P**	**01 18 25.2 -0.1**
KWP	**Kalwaria Pacla**	**34.13 321**	*e*P		**P**	**01 18 25.3 0.0**
comp=Z,18nm,1.0s,mb5.0						
KWP	**Kalwaria Pacla**	**34.13 321**	*e*P		**P**	**01 18 25.3 0.0**
KWP			pmax		pmax	
comp=Z,18nm,1.0s,mb5.0						
KWP	**Kalwaria Pacla**	**34.13 321**	⇑*i*P		**P**	**01 18 25.3 0.0**
KWP	**Kalwaria Pacla**	**34.13 321**	*e*P		**P**	**01 18 25.2 -0.1**
CRVS	**Cervenica-Dubn**	**34.50 319**	*e*P		**P**	**01 18 28.7 +0.2**
comp=Z,12nm,1.0s,mb4.8						
CRVS	**Cervenica-Dubn**	**34.50 319**	*e*P		**P**	**01 18 28.7 +0.2**
CRVS			pmax		pmax	
comp=Z,13nm,1.0s,mb4.8						
CRVS	**Cervenica-Dubn**	**34.50 319**	*e*P		**P**	**01 18 28.7 +0.2**
CRVS	**Cervenica-Dubn**	**34.50 319**	*e*P		**P**	**01 18 28.7 +0.2**
comp=Z,13nm,1.0s,mb4.8						
ZALV	**Zalesovo Beam**	**34.55 30**	P		**P**	**01 18 27.7 -1.1**
comp=Z,13nm,0.5s,mb5.1,baz=235,slow=9.0,SNR=16						
ZALV	**Zalesovo Beam**	**34.55 30**	P		**P**	**01 18 27.7 -1.2**
STON	**Ston**	**34.79 307**	P		**P**	**01 18 28.3 -2.8**
STON	**Ston**	**34.79 307**	*i*P		**P**	**01 18 28.2 -2.9**
KECS	**Kecovo**	**34.90 318**	*e*P		**P**	**01 18 32.3 +0.4**
comp=Z,11nm,0.9s,mb4.8						
KECS	**Kecovo**	**34.90 318**	*e*P		**P**	**01 18 32.3 +0.4**
KECS			pmax		pmax	
comp=Z,11nm,0.9s,mb4.8						
KECS	**Kecovo**	**34.90 318**	*e*P		**P**	**01 18 32.2 +0.3**
PSZ	**Piszkesteto**	**35.02 317**	*e*P		**P**	**01 18 32.9 0.0**
comp=Z,7.7nm,0.8s,mb4.7						
PSZ	**Piszkesteto**	**35.02 317**	*e*P		**P**	**01 18 32.9 -0.1**
PSZ			pmax		pmax	
comp=Z,8.0nm,0.8s,mb4.7						
PSZ	**Piszkesteto**	**35.02 317**	*e*P		**P**	**01 18 32.9 -0.1**
comp=Z,8.0nm,0.8s,mb4.7						
PRGR	**Permogore**	**35.49 352**	⇓*i*P		Px	01 18 20.3
PRGR			pmax		pmax	
comp=Z,62nm,0.9s,mb5.5						
VYHS	**Vyhne**	**35.90 317**	*e*P		**P**	**01 18 40.4 -0.1**
comp=Z,4.2nm,1.0s,mb4.3						
VYHS	**Vyhne**	**35.90 317**	*e*P		**P**	**01 18 40.4 -0.1**
VYHS			pmax		pmax	
comp=Z,4.0nm,1.0s,mb4.3						
VYHS	**Vyhne**	**35.90 317**	*e*P		**P**	**01 18 40.4 -0.1**
VYHS	**Vyhne**	**35.90 317**	*e*P		**P**	**01 18 40.4 -0.1**
comp=Z,4.0nm,1.0s,mb4.3						
LIKS	**Likavka**	**35.96 318**	*e*P		**P**	**01 18 40.8 -0.3**
comp=Z,32nm,0.8s,mb5.3						
LIKS	**Likavka**	**35.96 318**	*e*P		**P**	**01 18 40.8 -0.3**
LIKS			pmax		pmax	
comp=Z,32nm,0.8s,mb5.3						
LIKS	**Likavka**	**35.96 318**	*e*P		**P**	**01 18 40.8 -0.3**
LIKS	**Likavka**	**35.96 318**	*e*P		**P**	**01 18 40.8 -0.3**
comp=Z,32nm,0.8s,mb5.3						
OJC	**Ojcow**	**36.07 320**	*e*P		**P**	**01 18 41.8 -0.2**
OJC	**Ojcow**	**36.07 320**	*e*P		**P**	**01 18 41.7 -0.2**
comp=Z,52nm,1.1s,mb5.4						
OJC	**Ojcow**	**36.07 320**	*e*P		**P**	**01 18 41.8 -0.2**
OJC	**Ojcow**	**36.07 320**	*e*P		**P**	**01 18 41.8 -0.2**
KOLL	**Kolacno**	**36.20 317**	*e*P		**P**	**01 18 43.0 -0.1**
KOLL	**Kolacno**	**36.20 317**	*e*P		**P**	**01 18 43.0 -0.1**
KOLL	**Kolacno**	**36.20 317**	*e*P		**P**	**01 18 43.0 -0.1**
KOLL	**Kolacno**	**36.20 317**	*e*P		**P**	**01 18 43.0 -0.1**
SUW	**Suwalki**	**36.25 327**	*e*P		**P**	**01 18 42.8 -0.6**
SUW	**Suwalki**	**36.25 327**	*e*P		**P**	**01 18 42.8 -0.7**
SUW	**Suwalki**	**36.25 327**	*e*P		**P**	**01 18 42.8 -0.7**
KOGS	**Kog**	**36.80 313**	*i*P		**P**	**01 18 48.1 -0.2**
KOGS	**Kog**	**36.80 313**	*i*P		**P**	**01 18 48.1 -0.2**
KOGS	**Kog**	**36.80 313**	P		**P**	**01 18 48.1 -0.2**
MODS	**Modra-Piesok**	**36.81 316**	*e*P		**P**	**01 18 48.4 +0.1**
MODS	**Modra-Piesok**	**36.81 316**	*e*P		**P**	**01 18 48.4 +0.1**
MODS	**Modra-Piesok**	**36.81 316**	*e*P		**P**	**01 18 48.4 +0.1**
MODS	**Modra-Piesok**	**36.81 316**	*e*P		**P**	**01 18 48.4 +0.1**
ZST	**Bratislava**	**36.85 316**	*e*P		**P**	**01 18 48.0 -0.7**
comp=Z,6.4nm,0.8s,mb4.5						
ZST	**Bratislava**	**36.85 316**	*e*P		**P**	**01 18 48.0 -0.7**
ZST			pmax		pmax	
comp=Z,6.0nm,0.8s,mb4.5						
ZST	**Bratislava**	**36.85 316**	*e*P		**P**	**01 18 48.0 -0.7**
ZST	**Bratislava**	**36.85 316**	*e*P		**P**	**01 18 48.0 -0.7**
comp=Z,6.0nm,0.8s,mb4.5						
OKC	**Ostrava-Krasne**	**36.86 319**	*e*P		**P**	**01 18 48.3 -0.4**
OKC	**Ostrava-Krasne**	**36.86 319**	*e*P		**P**	**01 18 48.3 -0.4**
OKC	**Ostrava-Krasne**	**36.86 319**	*e*P		**P**	**01 18 48.3 -0.4**
BOJS	**Bojanci**	**37.19 311**	*i*P		**P**	**01 18 51.6 -0.1**
BOJS	**Bojanci**	**37.19 311**	*i*P		**P**	**01 18 51.6 -0.1**
BOJS	**Bojanci**	**37.19 311**	*i*P		**P**	**01 18 51.6 0.0**
MORC	**Moravsky Berou**	**37.19 318**	*e*P		**P**	**01 18 51.3 -0.3**
MORC	**Moravsky Berou**	**37.19 318**	*e*P		**P**	**01 18 51.3 -0.3**
MORC	**Moravsky Berou**	**37.19 318**	*e*P		**P**	**01 18 51.1 -0.5**
CONA	**Conrad Observa**	**37.54 315**	*i*P		**P**	**01 18 54.0 -0.5**
comp=Z,6.2nm,0.9s,mb4.3,SNR=6.3						
CONA	**

CLL pmax pmax
comp=Z,71nm,1.4s,mb5.2
CLL Collm 40.45 319 *i* P **P 01 19 18.4 -0.5**
comp=Z,29nm,1.4s,mb4.8
CLL *e*pP pP 01 19 22.0 0.0
CLL Collm 40.45 319 *i* P **P 01 19 18.4 -0.5**
comp=Z,71nm,1.4s,mb5.2
TANN Tannenbergstha 40.47 317 *e*P **P 01 19 18.0 -1.1**
CMAR Chiang Mai Arr 40.54 93 P **P 01 19 20.1 0.0**
comp=Z,0.7nm,0.3s,mb3.7,baz=279,slow=8.5,SNR=4.4
CMAR PcP PcP 01 21 21.4 -1.1
comp=Z,0.8nm,0.3s,baz=290,slow=5.4,SNR=5.4
CMAR Chiang Mai Arr 40.54 93 P **P 01 19 20.1 0.0**
CMAR 01 21 21.4
CMAR Chiang Mai Arr 40.54 93 P **P 01 19 20.1 0.0**
CMAR Chiang Mai Arr 40.54 93 PcP PcP 01 21 21.4 -1.1
FETA Feichten 40.61 312 *i* P **P 01 19 19.6 -0.7**
comp=Z,28nm,0.6s,mb5.0,SNR=41
FETA Feichten 40.61 312 P **P 01 19 19.6 -0.7**
comp=Z,28nm,0.6s,mb5.0,SNR=41
RETA Reutte 40.70 313 *i* P **P 01 19 19.8 -1.2**
comp=Z,13nm,0.6s,mb4.7,SNR=7.0
RETA Reutte 40.70 313 P **P 01 19 19.8 -1.2**
comp=Z,13nm,0.6s,mb4.7,SNR=7.0
FUORN Ofenpass-Fuorn 40.83 311 *e*P **P 01 19 22.3 +0.2**
comp=Z,14nm,0.8s,mb4.7
FUORN Ofenpass-Fuorn 40.83 311 *e*P **P 01 19 22.3 +0.2**
comp=Z,14nm,0.8s,mb4.7
GRA1 Grafenberg Arr 41.01 316 *e*P **P 01 19 23.0 -0.5**
comp=Z,34nm,0.8s,mb5.0
GRA1 Grafenberg Arr 41.01 316 *e*P **P 01 19 23.0 -0.5**
comp=Z,34nm,0.8s,mb5.0
GRF Grafenberg Arr 41.01 316 *e*P **P 01 19 23.0 -0.5**
comp=Z,34nm,0.8s,mb5.0
GRF Grafenberg Arr 41.01 316 *e*P **P 01 19 23.0 -0.5**
comp=Z,34nm,0.8s,mb5.0
GRF pmax pmax
comp=Z,34nm,0.8s,mb5.0
GRF Grafenberg Arr 41.01 316 *e*P **P 01 19 23.0 -0.5**
GRF pmax pmax
comp=Z,34nm,0.8s,mb5.0
GRF Grafenberg Arr 41.01 316 *e*P **P 01 19 23.0 -0.5**
comp=Z,34nm,0.8s,mb5.0
GRFO Grafenberg 41.01 316 *e*P **P 01 19 23.2 -0.3**
comp=Z,26nm,0.9s,mb4.9
GRFO Grafenberg 41.01 316 *e*P **P 01 19 23.2 -0.3**
GRFO pmax pmax
comp=Z,26nm,0.9s,mb4.9
GRFO Grafenberg 41.01 316 *e*P **P 01 19 23.2 -0.3**
comp=Z,26nm,0.9s,mb4.9
MOX Moxa 41.06 318 *e*(P) **P 01 19 23.5 -0.4**
comp=Z,7.0nm,1.2s,mb4.2
MOX Moxa 41.06 318 *e*P **P 01 19 23.5 -0.4**
MOX pmax pmax
comp=Z,125nm,1.2s,mb5.4
MOX Moxa 41.06 318 *e*P **P 01 19 23.5 -0.4**
comp=Z,125nm,1.2s,mb5.4
DAVA Damuels 41.24 312 *i* P **P 01 19 24.7 -0.7**
comp=Z,73nm,0.5s,mb5.6,SNR=30
DAVA Damuels 41.24 312 P **P 01 19 24.7 -0.7**
comp=Z,73nm,0.5s,mb5.6,SNR=30
LZH Lanzhou 41.69 65 *e*P **P 01 19 30.7 +1.4**
LZH pP pP 01 19 34.5 +2.1
LZH sP sP 01 19 36.6 +3.0
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.5
CD2 Chengdu 41.98 73 *e*P **P 01 19 32.4 +0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
KMI Kunming 42.07 81 P **P 01 19 33.4 +0.8**
KMI pP pP 01 19 35.8 +0.1
KMI S **S 01 25 49.3 -2.8**
KMI pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
UBBA Unterbreizbach 42.09 317 *e*P **P 01 19 32.2 -0.1**
CLZ Clausthal 42.18 319 *e*P **P 01 19 33.4 +0.3**
comp=Z,37nm,0.9s,mb5.0
CLZ Clausthal 42.18 319 *e*P **P 01 19 33.4 +0.3**
comp=Z,37nm,0.9s,mb5.0
CLZ Clausthal 42.18 319 *e*P **P 01 19 33.4 +0.3**
CLZ pmax pmax
comp=Z,37nm,0.9s,mb5.0
CLZ Clausthal 42.18 319 *e*P **P 01 19 33.4 +0.3**
comp=Z,37nm,0.9s,mb5.0
BFO Black Forest 42.49 313 *e*P **P 01 19 35.4 -0.3**
BFO Black Forest 42.49 313 *e*P **P 01 19 35.4 -0.3**
BFO Black Forest 42.49 313 *e*P **P 01 19 35.4 -0.3**
BFO Black Forest 42.49 313 *e*P **P 01 19 35.4 -0.3**
NRDL Niedersach Rie 42.54 320 *e*P **P 01 19 36.4 +0.4**
SENIN Lac Senin/Sane 42.79 310 *e*P **P 01 19 36.9 -1.2**
comp=Z,8.5nm,0.8s,mb4.5
SENIN Lac Senin/Sane 42.79 310 *e*P **P 01 19 36.9 -1.2**
comp=Z,8.5nm,0.8s,mb4.5
TNS Taunus Mts 42.88 316 *e*P **P 01 19 38.7 0.0**
comp=Z,65nm,1.7s,mb5.1
TNS Taunus Mts 42.88 316 *e*P **P 01 19 38.7 0.0**
comp=Z,65nm,1.7s,mb5.1
TNS Taunus Mts 42.88 316 *e*P **P 01 19 38.7 0.0**
TNS pmax pmax
comp=Z,65nm,1.7s,mb5.1
TNS Taunus Mts 42.88 316 *e*P **P 01 19 38.7 0.0**
comp=Z,65nm,1.7s,mb5.1
ECH Echery 43.23 313 *e*P **P 01 19 40.8 -0.9**
comp=Z,22nm,1.0s,mb4.8
ECH Echery 43.23 313 *e*P **P 01 19 40.8 -0.9**
ECH pmax pmax
comp=Z,22nm,1.0s,mb4.8
ECH Echery 43.23 313 *e*P **P 01 19 40.8 -0.9**
comp=Z,22nm,1.0s,mb4.8
IBBN Ibbenburen 43.86 319 *e*P **P 01 19 47.3 +0.6**
BUG Bochum--Univer 43.91 317 *e*P **P 01 19 47.3 +0.2**
WLF Walferdange 44.18 315 P **P 01 19 48.9 -0.5**
comp=Z,18nm,1.6s,mb4.5
WLF Walferdange 44.18 315 *e*P **P 01 19 49.0 -0.3**
WLF Walferdange 44.18 315 P **P 01 19 48.8 -0.5**
comp=Z,18nm,1.6s,mb4.5
MEM Membach 44.48 316 P **P 01 19 52.3 +0.6**
MEM Membach 44.48 316 P **P 01 19 52.2 +0.5**
SONM Songino Array 44.48 48 P **P 01 19 52.2 +0.4**
comp=Z,5.1nm,1.0s,mb4.2,baz=255,slow=8.8,SNR=11
SONM Songino Array 44.48 48 P **P 01 19 52.2 +0.5**
SONM Songino Array 44.48 48 P **P 01 19 52.2 +0.5**
BCLA Clavier 44.88 316 P **P 01 19 55.3 +0.4**
comp=Z,16nm,1.3s,mb4.7
BCLA Clavier 44.88 316 P **P 01 19 55.2 +0.3**
comp=Z,16nm,1.3s,mb4.7
GYA Guiyang 45.24 78 P **P 01 19 57.8 -0.3**
GYA PP PP 01 21 43.4 -0.4
GYA ScP ScP 01 25 29.8 -1.1
GYA S **S 01 26 36.7 -1.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,110nm,5.2s
GYA LR LR
comp=N,560nm,18.8s,MS4.6
GYA LR LR
comp=E,450nm,19.4s,MS4.6
GYA LR LR
comp=Z,580nm,17.9s,MS4.6
DOU Dourbes 45.26 315 P **P 01 19 57.8 -0.1**
comp=Z,15nm,1.1s,mb4.7
DOU Dourbes 45.26 315 P **P 01 19 57.7 -0.2**
comp=Z,15nm,1.1s,mb4.7
NB2 NORSAR Subarra 45.44 331 P **P 01 19 57.6 -1.5**
comp=Z,2.8nm,0.5s,mb4.3,baz=117,slow=7.9
NB2 NORSAR Subarra 45.44 331 P **P 01 19 57.6 -1.5**
comp=Z,2.8nm,0.5s,mb4.3,baz=117,slow=7.8,SNR=8.7
ETOS Mallorca 45.52 300 P **P 01 20 02.2 +2.1**
ETOS Mallorca 45.52 300 P **P 01 20 02.2 +2.1**
SNF Seneffe 45.54 316 P **P 01 20 00.5 +0.4**
comp=Z,12nm,1.4s,mb4.6
SNF Seneffe 45.54 316 P **P 01 20 00.4 +0.3**
comp=Z,12nm,1.4s,mb4.6
TAM Tamanrasset 45.56 276 *e*P **P 01 20 01.7 +1.1**
comp=Z,3.2nm,0.7s,mb4.4
TAM Tamanrasset 45.56 276 *e*P **P 01 20 01.7 +1.0**
TAM pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TAM Tamanrasset 45.56 276 *e*P **P 01 20 01.7 +1.0**
comp=Z,3.0nm,0.7s,mb4.3
KEV Kevo 46.12 347 *e*P **P 01 20 03.3 -1.1**
KEV pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
KEV Kevo 46.12 347 *ep* **P 01 20 03.3 -1.1**
comp=Z,3.2nm,0.3s,mb4.7
KEV Kevo 46.12 347 *e*P **P 01 20 03.3 -1.1**
comp=Z,3.0nm,0.3s,mb4.7
CLLI Llivia 46.19 304 P **P 01 20 05.7 +0.3**
CLLI Llivia 46.19 304 P **P 01 20 05.7 +0.3**
ARCES ARCESS Array B 46.27 346 P **P 01 20 04.8 -0.7**
comp=Z,1.6nm,0.4s,mb4.3,baz=138,slow=8.1,SNR=14
ARCES PcP PcP 01 21 40.3 -0.6
comp=Z,2.5nm,0.8s,baz=159,slow=2.7,SNR=5.2
ARCES ARCESS Array B 46.27 346 P **P 01 20 04.8 -0.7**
ARCES PcP PcP 01 21 40.3 -0.6
ARCES ARCESS Array B 46.27 346 P **P 01 20 04.8 -0.8**
ARCES 01 21 40.3
ARCES ARCESS Array B 46.27 346 P **P 01 20 04.8 -0.8**
ARCES ARCESS Array B 46.27 346 PcP PcP 01 21 40.3 -0.5
ARE0 ARCESS Array S 46.27 346 P **P 01 20 05.4 -0.2**
ARE0 ARCESS Array S 46.27 346 P **P 01 20 05.4 -0.2**
EMIR Miracle 46.51 303 P **P 01 20 07.2 -0.7**
EMIR Miracle 46.51 303 P **P 01 20 07.2 -0.7**
EIBI Ibiza 46.67 299 P **P 01 20 09.2 0.0**
comp=Z,318nm,3.6s
EIBI Ibiza 46.67 299 P **P 01 20 09.2 0.0**
comp=Z,318nm,3.6s
CSOR Sort 46.81 304 P **P 01 20 09.5 -0.8**
comp=Z,29nm,1.0s,mb5.2
CSOR Sort 46.81 304 P **P 01 20 09.5 -0.7**
comp=Z,29nm,1.0s,mb5.2
EPOB Poblet 46.84 303 P **P 01 20 10.7 +0.2**
comp=Z,17nm,0.9s,mb5.0
EPOB Poblet 46.84 303 P **P 01 20 10.7 +0.2**
comp=Z,17nm,0.9s,mb5.0
ERTA Horta de San J 47.40 302 P **P 01 20 15.4 +0.5**
comp=Z,18nm,0.9s,mb5.0
ERTA Horta de San J 47.40 302 P **P 01 20 15.4 +0.5**
comp=Z,18nm,0.9s,mb5.0
EBIE Bielsa 47.55 304 P **P 01 20 15.6 -0.4**
comp=Z,10nm,1.1s,mb4.8
EBIE Bielsa 47.55 304 P **P 01 20 15.6 -0.4**
comp=Z,10nm,1.1s,mb4.8
HHC Hu-ho-hao-te 47.67 58 *e*P **P 01 20 17.2 +0.2**
HHC pP pP 01 20 21.8 +1.7
HHC sP sP 01 20 24.2 +2.9
HHC PcP PcP 01 21 47.8 +1.4
HHC PP PP 01 22 07.6 -0.9
HHC ScP ScP 01 25 40.1 -0.7
HHC S **S 01 27 11.7 -1.1**
HHC sS sS 01 27 19.2 +1.2
HHC ScS ScS 01 30 07.8 -3.1
HHC SS SS 01 30 33.7 -7.1
HHC pmax pmax
comp=Z,13nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,430nm,8.6s
HHC LR LR
comp=N,1μm,17.7s,MS5.0
HHC LR LR
comp=E,890nm,17.7s,MS5.0
HHC LR LR
comp=Z,1μm,16.7s,MS4.9
EBEN Beniarda 47.91 299 P **P 01 20 18.8 -0.1**
comp=Z,4.7nm,0.7s,mb4.6
EBEN Beniarda 47.91 299 P **P 01 20 18.8 0.0**
comp=Z,4.7nm,0.7s,mb4.6
ESAC San Caprasio 48.00 303 P **P 01 20 19.4 -0.2**
comp=Z,26nm,0.6s,mb5.4
ESAC San Caprasio 48.00 303 P **P 01 20 19.4 -0.1**
comp=Z,26nm,0.6s,mb5.4
EMOS Mosqueruela 48.03 301 P **P 01 20 20.4 +0.6**
comp=Z,2μm,8.4s
EMOS Mosqueruela 48.03 301 P **P 01 20 20.4 +0.6**
comp=Z,2μm,8.4s
ECHE Chera 48.44 300 P **P 01 20 23.5 +0.6**
comp=Z,14nm,0.9s,mb5.0
ECHE Chera 48.44 300 P **P 01 20 23.5 +0.6**
ECHE pmax pmax
comp=Z,14nm,0.9s,mb5.0
ECHE Chera 48.44 300 P **P 01 20 23.5 +0.6**
comp=Z,14nm,0.9s,mb5.0
EMUR La Murta 48.76 298 P **P 01 20 25.4 -0.1**
comp=Z,4.4nm,3.7s
EMUR La Murta 48.76 298 P **P 01 20 25.4 -0.1**
comp=Z,4.4nm,3.7s
ETOB Tobarra 48.95 299 P **P 01 20 27.5 +0.6**
comp=Z,13nm,0.9s,mb5.0
ETOB Tobarra 48.95 299 P **P 01 20 27.5 +0.7**
comp=Z,13nm,0.9s,mb5.0
ETOR Torete 49.22 302 P **P 01 20 28.9 0.0**
comp=Z,2.5nm,2.8s,mb3.8
ETOR Torete 49.22 302 P **P 01 20 28.9 0.0**
ETOR pmax pmax
comp=Z,3.0nm,2.8s,mb3.8
ETOR Torete 49.22 302 P **P 01 20 28.9 0.0**
comp=Z,3.0nm,2.8s,mb3.8
EVIA Vianos 49.69 299 P **P 01 20 33.0 +0.5**
comp=Z,23nm,0.6s,mb5.4
EVIA Vianos 49.69 299 P **P 01 20 33.0 +0.4**
EVIA pmax pmax
comp=Z,23nm,0.6s,mb5.4
EVIA Vianos 49.69 299 P **P 01 20 33.0 +0.4**
comp=Z,23nm,0.6s,mb5.4
EHUE Huescar 49.83 298 P **P 01 20 33.6 -0.1**
comp=Z,24nm,1.7s,mb5.0
EHUE Huescar 49.83 298 P **P 01 20 33.6 0.0**
EHUE pmax pmax
comp=Z,24nm,1.7s,mb5.0
EHUE Huescar 49.83 298 P **P 01 20 33.6 0.0**
comp=Z,24nm,1.7s,mb5.0
EBER Berja 50.16 297 P **P 01 20 36.7 +0.6**
comp=Z,19nm,0.7s,mb5.2
EBER Berja 50.16 297 P **P 01 20 36.7 +0.6**
comp=Z,19nm,0.7s,mb5.2
ELAN Lanestosa 50.17 305 P **P 01 20 33.6 -2.6**
comp=Z,16nm,0.8s,mb5.1
ELAN Lanestosa 50.17 305 P **P 01 20 33.6 -2.5**
comp=Z,16nm,0.8s,mb5.1
EQES Quesada 50.21 298 P **P 01 20 36.3 -0.2**
comp=Z,15nm,0.9s,mb5.0
EQES Quesada 50.21 298 P **P 01 20 36.3 -0.2**
comp=Z,15nm,0.9s,mb5.0
ECOG Cogollos-Vega 50.65 297 P **P 01 20 40.2 +0.4**
comp=Z,7.2nm,0.6s,mb4.8
ECOG Cogollos-Vega 50.65 297 P **P 01 20 40.2 +0.3**
ECOG pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
ECOG Cogollos-Vega 50.65 297 P **P 01 20 40.2 +0.3**
comp=Z,7.0nm,0.6s,mb4.8
EGUA Guajares 50.70 297 P **P 01 20 39.8 -0.4**
comp=Z,42nm,2.1s,mb5.0
EGUA Guajares 50.70 297 P **P 01 20 39.8 -0.4**
EGUA pmax pmax
comp=Z,42nm,2.1s,mb5.0
EGUA Guajares 50.70 297 P **P 01 20 39.8 -0.4**
comp=Z,42nm,2.1s,mb5.0
EBAN Banos Encina 50.74 299 P **P 01 20 40.4 -0.1**
comp=Z,15nm,0.7s,mb5.0
EBAN Banos Encina 50.74 299 P **P 01 20 40.4 -0.1**
EBAN pmax pmax
comp=Z,15nm,0.7s,mb5.0
EBAN Banos Encina 50.74 299 P **P 01 20 40.4 -0.1**
comp=Z,15nm,0.7s,mb5.0
ESDC Sonseca Array 50.74 301 P **P 01 20 40.1 -0.4**
comp=Z,5.4nm,0.6s,mb4.6,baz=65,slow=7.6,SNR=24
ESDC Sonseca Array 50.74 301 P **P 01 20 40.1 -0.4**
comp=Z,3.7nm,0.6s,mb4.5
ESDC Sonseca Array 50.74 301 P **P 01 20 40.1 -0.4**
comp=Z,3.7nm,0.6s,mb4.5
ESLA Sonseca Array 50.74 301 *e*P **P 01 20 40.4 -0.1**
comp=Z,0.9nm,0.7s,mb3.8
ESLA Sonseca Array 50.74 301 *e*P **P 01 20 40.4 -0.1**
comp=Z,0.9nm,0.7s,mb3.8
GUD Guadarrama 50.82 302 P **P 01 20 40.8 -0.3**
comp=Z,44nm,5.3s
GUD Guadarrama 50.82 302 P **P 01 20 40.8 -0.3**
GUD pmax pmax
comp=Z,44nm,5.3s
GUD Guadarrama 50.82 302 P **P 01 20 40.8 -0.3**
comp=Z,44nm,5.3s
ERON Agron 50.87 297 P **P 01 20 40.6 -0.9**
comp=Z,222nm,3.0s
ERON Agron 50.87 297 P **P 01 20 40.6 -0.9**
comp=Z,222nm,3.0s
ELOJ Sierra Loja 51.13 297 P **P 01 20 42.4 -1.1**
comp=Z,13nm,0.8s,mb4.9
ELOJ Sierra Loja 51.13 297 P **P 01 20 42.4 -1.1**
ELOJ pmax pmax
comp=Z,13nm,0.8s,mb4.9
ELOJ Sierra Loja 51.13 297 P **P 01 20 42.4 -1.1**
comp=Z,13nm,0.8s,mb4.9
ELUQ Luque 51.18 298 P **P 01 20 42.8 -1.0**
comp=Z,410nm,3.6s
ELUQ Luque 51.18 298 P **P 01 20 42.8 -1.0**
ELUQ pmax pmax
comp=Z,410nm,3.6s
ELUQ Luque 51.18 298 P **P 01 20 42.8 -1.0**
comp=Z,410nm,3.6s
EADA Adamuz 51.36 299 P **P 01 20 44.7 -0.4**
comp=Z,20nm,1.0s,mb5.0
EADA Adamuz 51.36 299 P **P 01 20 44.7 -0.5**
comp=Z,20nm,1.0s,mb5.0
EMIJ Mijas 51.70 297 P **P 01 20 47.2 -0.5**
comp=Z,22nm,1.0s,mb5.0
EMIJ Mijas 51.70 297 P **P 01 20 47.2 -0.5**
comp=Z,22nm,1.0s,mb5.0
ECAB El Cabril 52.03 299 P **P 01 20 49.4 -0.7**
comp=Z,11nm,3.8s
ECAB El Cabril 52.03 299 P **P 01 20 49.4 -0.8**
comp=Z,11nm,3.8s
EPLA Plasencia 52.33 301 P **P 01 20 51.1 -1.3**
comp=Z,20nm,2.7s,mb4.6
EPLA Plasencia 52.33 301 P **P 01 20 51.1 -1.3**
EPLA pmax pmax
comp=Z,20nm,2.7s,mb4.6
EPLA Plasencia 52.33 301 P **P 01 20 51.1 -1.3**
comp=Z,20nm,2.7s,mb4.6
ESPR Espera 52.52 297 P **P 01 20 52.6 -1.2**
comp=Z,13nm,0.8s,mb4.9
ESPR Espera 52.52 297 P **P 01 20 52.7 -1.2**
comp=Z,13nm,0.8s,mb4.9
MVO Moncorvo 52.95 303 *e*P **P 01 20 57.1 +0.1**
MVO Moncorvo 52.95 303 *e*P **P 01 20 57.1 +0.1**
EBAD Badajoz 53.19 300 P **P 01 20 57.8 -1.0**
comp=Z,5.1nm,0.7s,mb4.6
EBAD Badajoz 53.19 300 P **P 01 20 57.8 -1.0**
comp=Z,5.1nm,0.7s,mb4.6
PBAR Barrancos 53.28 299 *e*P **P 01 20 59.1 -0.4**
PBAR Barrancos 53.28 299 *e*P **P 01 20 59.1 -0.4**
PMRV Marv??o 53.41 301 *e*P **P 01 20 59.9 -0.4**
comp=Z,18nm,1.5s,mb4.8
PMRV Marv??o 53.41 301 *e*P **P 01 20 59.9 -0.4**
comp=Z,18nm,1.5s,mb4.8
MTE Manteigas 53.42 302 *e*P **P 01 21 01.7 +1.3**
MTE Manteigas 53.42 302 *e*P **P 01 21 01.7 +1.3**
PCBR Castelo Branco 53.42 301 *e*P **P 01 21 01.3 +0.8**
comp=Z,27nm,2.5s,mb4.7
PCBR Castelo Branco 53.42 301 *e*P **P 01 21 01.3 +0.8**
comp=Z,27nm,2.5s,mb4.7
PVRL Vila Real 53.46 303 *e*P **P 01 21 00.9 +0.2**
comp=Z,30nm,1.9s,mb4.9
PVRL Vila Real 53.46 303 *e*P **P 01 21 00.9 +0.2**
comp=Z,30nm,1.9s,mb4.9
PESTR Estremoz 53.62 300 *e*P **P 01 21 01.3 -0.7**
PESTR Estremoz 53.62 300 *e*P **P 01 21 01.3 -0.7**
PVIS Viseu 53.65 302 *e*P **P 01 21 02.6 +0.5**
PVIS Viseu 53.65 302 *e*P **P 01 21 02.6 +0.5**
ELOB Lobios 53.66 304 P **P 01 20 58.5 -3.7**
comp=Z,5.5nm,0.7s,mb4.6
PBEJ Beja 53.95 299 *e*P **P 01 21 04.0 -0.4**
PBEJ Beja 53.95 299 *e*P **P 01 21 04.0 -0.4**
EVO Evora 54.00 300 *e*P **P 01 21 04.4 -0.3**
EVO Evora 54.00 300 *e*P **P 01 21 04.4 -0.3**
PTOM Tomar 54.17 301 *e*P **P 01 21 06.3 +0.4**
PTOM Tomar 54.17 301 *e*P **P 01 21 06.3 +0.4**
NJ2 Nanjing 54.52 68 *e*P **P 01 21 09.4 +0.8**
NJ2 pmax pmax
comp=Z,60nm,0.9s,mb5.6
CN2 Changchun 57.72 53 *e*P **P 01 21 30.4 -0.9**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
TSUM Tsumeb 58.85 223 P **P 01 21 39.0 -0.4**
comp=Z,8.3nm,1.0s,mb4.8,baz=337,slow=6.6,SNR=6.4
TSUM Tsumeb 58.85 223 P **P 01 21 39.0 -0.4**
LBTB Lobatse 59.17 212 P **P 01 21 42.0 +0.5**
comp=Z,11nm,0.7s,mb5.0,baz=32,slow=7.1,SNR=18
LBTB Lobatse 59.17 212 *e*P **P 01 21 42.5 +1.0**
comp=Z,16nm,1.0s,mb5.0
LBTB Lobatse 59.17 212 *e*P **P 01 21 42.5 +1.0**
LBTB pmax pmax
comp=Z,16nm,1.0s,mb5.0
LBTB Lobatse 59.17 212 *e*P **P 01 21 42.5 +1.0**
comp=Z,16nm,1.0s,mb5.0
MDJ Mudanjiang 60.54 52 P **P 01 21 49.7 -1.1**
MDJ pmax pmax
comp=Z,7.0nm,1.4s,mb4.6
DAG Danmarks Havn 60.55 345 *e*P **P 01 21 49.6 -0.8**
DAG pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
DAG Danmarks Havn 60.55 345 *i* P **P 01 21 49.6 -0.8**
comp=Z,29nm,0.8s,mb5.5
KSRS Korea Array 60.69 60 P **P 01 21 50.6 -1.3**
comp=Z,5.7nm,0.7s,mb4.8,baz=276,slow=6.7,SNR=22
KSRS Korea Array 60.69 60 P **P 01 21 50.7 -1.3**
KSRS pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
KSRS Korea Array 60.69 60 P **P 01 21 50.7 -1.3**
comp=Z,6.0nm,0.7s,mb4.8
DBIC Dimbokro 60.85 262 P **P 01 21 53.1 -0.2**
comp=Z,7.8nm,0.7s,mb5.0,baz=39,slow=9.9,SNR=12
DBIC Dimbokro 60.85 262 *e*P **P 01 21 52.9 -0.5**
comp=Z,11nm,0.9s,mb5.0
DBIC Dimbokro 60.85 262 P **P 01 21 53.2 -0.2**
DBIC pmax pmax
comp=Z,8.0nm,0.7s
DBIC Dimbokro 60.85 262 P **P 01 21 53.2 -0.2**
comp=Z,8.0nm,0.7s,mb5.0
KIC Kosan Boka 60.88 262 *e*P **P 01 21 53.2 -0.4**
comp=Z,20nm,0.7s,mb5.3
KIC Kosan Boka 60.88 262 *e*P **P 01 21 53.2 -0.4**
comp=Z,20nm,0.7s,mb5.4
TIC Toumodi 61.00 262 *e*P **P 01 21 53.9 -0.5**
comp=Z,32nm,1.0s,mb5.4
TIC Toumodi 61.00 262 *e*P **P 01 21 53.9 -0.5**
TIC pmax pmax
comp=Z,32nm,1.0s,mb5.4
TIC Toumodi 61.00 262 *e*P **P 01 21 53.9 -0.5**
comp=Z,32nm,1.0s,mb5.4
LIC Lamto 61.20 262 *e*P **P 01 21 54.8 -1.0**
comp=Z,58nm,1.1s,mb5.6
LIC Lamto 61.20 262 *e*P **P 01 21 54.8 -1.0**
comp=Z,58nm,1.1s,mb5.6
KLR Kul'dur 61.27 46 *e*P **P 01 21 51.2 -4.5**
BOSA Boshof 62.40 210 P **P 01 22 03.8 +0.4**
comp=Z,8.0nm,0.7s,mb5.0,baz=51,slow=4.9,SNR=18
BOSA Boshof 62.40 210 P **P 01 22 03.8 +0.4**
BOSA Boshof 62.40 210 P **P 01 22 03.8 +0.4**
SUMG Summit 65.94 341 *e*P **P 01 22 25.5 -0.6**
SUMG Summit 65.94 341 *i* P **P 01 22 27.0 +0.8**
comp=Z,13nm,0.9s,mb5.0
BILL Bilibino 72.67 22 P **P 01 23 08.0 +0.1**
BILL *e* 01 25 45.8
BILL *e*SS SS 01 37 15.2 +3.9
BILL pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
BILL Bilibino 72.67 22 P **P 01 23 08.0 +0.1**
comp=Z,3.0nm,1.1s,mb4.1
INK Inuvik 84.93 3 P **P 01 24 13.4 -1.8**
comp=Z,4.6nm,1.0s,mb4.6,baz=31,slow=7.9,SNR=5.3
INK Inuvik 84.93 3 P **P 01 24 13.1 -2.1**
comp=Z,6.9nm,1.2s,mb4.7
INK Inuvik 84.93 3 P **P 01 24 13.1 -2.2**
INK pmax pmax
comp=Z,7.0nm,1.2s
INK Inuvik 84.93 3 P **P 01 24 13.1 -2.2**
comp=Z,7.0nm,1.2s,mb4.7
ILAR Eielson Array 87.04 10 P **P 01 24 24.2 -1.5**
comp=Z,2.5nm,0.6s,mb4.6,baz=320,slow=4.5,SNR=32
ILAR Eielson Array 87.04 10 P **P 01 24 24.3 -1.4**
ILAR Eielson Array 87.04 10 P **P 01 24 24.3 -1.4**
MCK McKinley 87.69 11 *e*P **P 01 24 27.9 -1.0**
comp=Z,8.2nm,0.9s,mb5.0
MCK McKinley 87.69 11 *e*P **P 01 24 27.9 -1.0**
MCK pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
MCK McKinley 87.69 11 *e*P **P 01 24 27.9 -1.0**
comp=Z,8.0nm,0.9s,mb5.0
EGAK Eagle 87.78 7 *e*P **P 01 24 28.7 -0.6**
comp=Z,17nm,1.3s,mb5.1
EGAK Eagle 87.78 7 *e*P **P 01 24 28.7 -0.6**
comp=Z,17nm,1.3s,mb5.1
DAWY Dawson 88.66 7 *e*P **P 01 24 33.0 -0.5**
DAWY Dawson 88.66 7 *e*P **P 01 24 33.0 -0.5**
WRA Warramunga Arr 89.16 113 P **P 01 24 35.3 -1.3**
comp=Z,0.8nm,0.6s,mb4.2,baz=311,slow=4.2,SNR=5.7
WRA Warramunga Arr 89.16 113 P **P 01 24 35.3 -1.3**

WRA	Warramunga Arr	89.16	113	P	P	01 24 35.3	-1.3
ASAR	Alice Springs	90.60	116	P	P	01 24 42.5	-0.7
comp=Z,1.0nm,0.6s,mb4.3,baz=308,slow=4.7,SNR=9.5							
ASAR	Alice Springs	90.60	116	P	P	01 24 42.5	-0.7
ASAR	Alice Springs	90.60	116	P	P	01 24 42.5	-0.7
YKA	Yellowknife Ar	90.69	356	P	P	01 24 42.4	-0.6
comp=Z,1.8nm,0.9s,mb4.4,baz=1.6,slow=4.6,SNR=4.8							
YKA	Yellowknife Ar	90.69	356	P	P	01 24 42.4	-0.6
YKA	Yellowknife Ar	90.69	356	P	P	01 24 42.4	-0.6
KDAK	Kodiak Island	92.45	15	P	P	01 24 50.0	-1.2
comp=Z,7.3nm,0.9s,mb5.0,baz=45,slow=2.9,SNR=2.3							
KDAK	Kodiak Island	92.45	15	P	P	01 24 50.1	-1.2
KDAK	Kodiak Island	92.45	15	P	P	01 24 50.1	-1.2
PDAR	Pinedale Array	109.47	349	PKiKP	PKiKP	01 30 10.0	-1.2
comp=Z,0.3nm,0.6s,baz=56,slow=3.8,SNR=2.9							
NVAR	Mina Array Bea	114.88	355	PKP	PKiKP	01 30 22.2	+0.6
comp=Z,0.8nm,0.7s,baz=2.5,slow=1.7,SNR=6.2							
NVAR	Mina Array Bea	114.88	355	PKP	PKiKP	01 30 22.2	+0.6
TXAR	Lajitas Array	120.81	339	PKP	PKPdf	01 30 32.3	-1.0
comp=Z,0.9nm,0.7s,baz=124,slow=1.8,SNR=12							
TXAR	Lajitas Array	120.81	339	PKIKP	PKPdf	01 30 32.3	-1.0
BCIP	Isla Barro Col	124.04	304	PKPdf	PKPdf	01 30 38.9	-1.0
LPAZ	La Paz	127.14	269	PKP	PKPdf	01 30 46.1	+0.5
comp=Z,1.1nm,0.8s,baz=288,slow=3.2,SNR=4.4							
LPAZ	La Paz	127.14	269	PKIKP	PKPdf	01 30 46.1	+0.5

*ISCJB **11** 01:14:23.4±3.1, 12°.87N±0°.09×48°.67E±0°.05, h15km±21km, mb4.1/11, Error ellipse: s-maj=15.4km s-min=7.7km az=179.5*
*IDC **11** 01:14:23.1±1.0, 12°.81N×48°.78E, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.0/24, mbtmp4.0/12, ML3.4/1, Error ellipse: s-maj=29.9km s-min=21.7km az=12.0*
*NEIC **11** 01:14:24.4±0.5, 12°.78N×48°.72E, h10km, Error ellipse: s-maj=16.2km s-min=10.5km az=166.0*
*CSEM **11** 01:14:24.5±0.2, 12°.81N×48°.63E, h10km, ML3.6, Error ellipse: s-maj=10.7km s-min=5.5km az=174.0*
*DHMR **11** 01:14:25.3±1.3, 13°.15N×48°.42E, h10km, ML3.6*

ISC 11 01:14:24.9±3.8, 12°.92N±0°.09×48°.67E±0°.05, h12km±25km, n36, σ0°77/31, mb4.1/11, 1C-2D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.59	13	*i* S	Sn	01 15 12.0	-1.3
MUKL				AML	AML	01 15 16.7	
comp=N,1μm,0.5s							
BDHA	Al Bayda'	3.19	290	⇓*i* P	Pn	01 15 15.4	+0.5
BDHA				AML	AML	01 15 21.5	
comp=Z,299nm,0.7s							
BDHA				*i* S	Sn	01 15 52.6	-0.3
BDHA	Al Bayda'	3.19	290	⇓*i* P	Pn	01 15 15.4	+0.5
comp=Z,150nm,0.7s							
BDHA				*i* S	Sn	01 15 52.7	-0.2
LBOS		3.46	286	⇑*i* P	Pn	01 15 18.5	0.0
LBOS				*i* S	Sn	01 15 59.4	0.0
TRBA	At Turbah	4.45	275	*i* P	Pn	01 15 31.0	-1.1
ATD	Arta Tunnel	5.85	257	Pn	Pn	01 15 50.9	-0.7
comp=Z,1.0nm,0.3s,baz=74,slow=19,SNR=6.8							
ATD	Arta Tunnel	5.85	257	Pn	Pn	01 15 50.8	-0.7
BVAR	Borovoye Array	43.60	19	P	P	01 22 29.7	+0.9
comp=Z,0.7nm,0.6s,mb3.6,baz=197,slow=8.8,SNR=2.6							
BVAR				PcP	PcP	01 24 17.0	+0.9
comp=Z,1.2nm,0.8s,baz=237,slow=4.5,SNR=4.0							
BVAR	Borovoye Array	43.60	19	P	P	01 22 29.7	+0.9
BVAR				PcP	PcP	01 24 17.1	+0.9
BVAR	Borovoye Array	43.60	19	P	P	01 22 29.7	+0.9
BVAR	Borovoye Array	43.60	19	PcP	PcP	01 24 17.0	+0.8
MKAR	Makanchi Array	44.01	33	P	P	01 22 32.6	+0.5
comp=Z,0.8nm,0.7s,mb3.5,baz=238,slow=8.3,SNR=3.3							
MKAR	Makanchi Array	44.01	33	P	P	01 22 32.7	+0.5
CMAR	Chiang Mai Arr	48.60	77	P	P	01 23 08.3	-0.4
comp=Z,4.1nm,0.9s,mb4.5,baz=275,slow=8.6,SNR=14							
CMAR	Chiang Mai Arr	48.60	77	P	P	01 23 08.4	-0.3
ZALV	Zalesovo Beam	49.87	27	P	P	01 23 18.3	+0.4
comp=Z,0.7nm,0.4s,mb4.0,baz=255,slow=4.3,SNR=2.3							
FINES	FINESS Array B	51.14	346	P	P	01 23 28.6	+1.2
comp=Z,5.0nm,0.9s,mb4.4,baz=144,slow=12,SNR=3.3							
FINES	FINESS Array B	51.14	346	P	P	01 23 28.6	+1.2
ESDC	Sonseca Array	53.27	310	P	P	01 23 45.3	+1.7
comp=Z,1.0nm,0.7s,mb3.8,baz=109,slow=8.9,SNR=4.2							
ESDC	Sonseca Array	53.27	310	P	P	01 23 45.3	+1.7
HFS	Hagfors	53.69	339	P	P	01 23 46.9	+0.6
comp=Z,2.2nm,0.7s,mb4.2,baz=139,slow=13,SNR=3.2							
HFS	Hagfors	53.69	339	P	P	01 23 46.9	+0.6
SONM	Songino Array	59.01	42	P	P	01 24 24.0	-0.5
comp=Z,0.8nm,0.8s,mb3.8,baz=243,slow=5.8,SNR=4.1							
SONM	Songino Array	59.01	42	P	P	01 24 24.0	-0.5
KSRS	Korea Array	73.79	55	P	P	01 25 58.6	-0.8
comp=Z,0.5nm,0.4s,mb3.8,baz=279,slow=8.1,SNR=2.8							
WRA	Warramunga Arr	90.35	110	P	P	01 27 25.9	-0.6
comp=Z,3.5nm,0.7s,mb4.8,baz=297,slow=3.7,SNR=21							
WRA	Warramunga Arr	90.35	110	P	P	01 27 25.9	-0.6
ASAR	Alice Springs	90.83	114	P	P	01 27 28.6	-0.1
comp=Z,1.4nm,1.0s,mb4.2,baz=288,slow=4.9,SNR=5.3							
ASAR	Alice Springs	90.83	114	P	P	01 27 28.6	-0.1
PDAR	Pinedale Array	121.10	341	PKP	PKPdf	01 33 18.0	+0.2
comp=Z,0.4nm,0.9s,baz=46,slow=2.6,SNR=2.6							
PDAR	Pinedale Array	121.10	341	PKP	PKPdf	01 33 18.0	+0.2
PDAR	Pinedale Array	121.10	341	PKIKP	PKPdf	01 33 18.0	+0.2
NVAR	Mina Array Bea	127.49	347	PKP	PKPdf	01 33 31.9	+1.6
comp=Z,1.1nm,0.8s,baz=126,slow=0.4,SNR=6.8							
NVAR	Mina Array Bea	127.49	347	PKIKP	PKPdf	01 33 31.9	+1.7
TXAR	Lajitas Array	130.22	328	PKP	PKPdf	01 33 36.6	+0.9
comp=Z,0.5nm,0.9s,baz=57,slow=3.3,SNR=3.4							
TXAR	Lajitas Array	130.22	328	PKIKP	PKPdf	01 33 36.6	+0.9

*IDC **11** 01:24:45.4±0.8, 41°.71N×144°.19E, h0km, mb4.0/19, mb1 4.1/23, mb1mx4.0/32, mbtmp4.0/23, ML3.7/4, Error ellipse: s-maj=19.8km s-min=15.9km az=115.0*
*BJI **11** 01:24:46.7, 41°.91N×144°.39E, h24km, mB5.2/1, mb4.7/10, Ms5.1/2, Ms7 5.0/3*
*ISCJB **11** 01:24:47.8±1.6, 41°.67N±0°.04×144°.33E±0°.09, h31km±11km, mb4.2/30, Error ellipse: s-maj=11.5km s-min=5.7km az=24.2*
*MOS **11** 01:24:47.6±1.1, 41°.66N×144°.26E, h30km, mb4.4/12, Error ellipse: s-maj=12.0km s-min=8.2km az=100.4*
*NEIC **11** 01:24:49.2±1.3, 41°.71N×144°.27E, h26km±8km, mb4.5/3, Error ellipse: s-maj=11.5km s-min=6.6km az=127.0*
NEIC Recorded [1 JMA] in southeastern Hokkaido.
*JMA **11** 01:24:49.1±0.2, 41°.72N×144°.27E, h26km±3km, M4.3*

ISC 11 01:24:49.3±1.3, 41°.76N±0°.04×144°.28E±0°.09, h25km±8km, n82, σ0°80/87, mb4.2/30, 4C-1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	0.88	287	*e*Pg	Pb	01 25 06.2	+0.4
ERM	Erimo	0.88	287	*e*P	Pb	01 25 06.3	+0.4
JEM	Erimo	0.88	287	P	Pb	01 25 06.1	+0.2
JCH	Churui	1.09	322	P	Pn	01 25 09.0	0.0
JOB	Onbets	1.19	344	P	Pn	01 25 10.7	+0.4
JNBK	Urakawa-nobuka	1.25	295	P	Pn	01 25 11.9	+0.7
JAK	Akkeshi	1.27	14	P	Pn	01 25 11.3	-0.2
JAK				*e*S	Sn	01 25 27.4	-0.4
JAR	Ashorobuto	1.58	346	P	Pn	01 25 15.3	-0.4
JAR				*e*S	Sn	01 25 34.9	-0.5
YUK	Yuzh-Kuril'sk	2.55	27	*e*P	Pn	01 25 17.0	-12
YUK				*i* S	Sn	01 26 03.7	+4.4
YUK				pmax	pmax		
comp=N,30nm,0.2s							
YUK				pmax	pmax		
comp=E,20nm,0.2s							
YUK				pmax	pmax		
comp=Z,170nm,0.2s							
YUK				smax			
comp=N,540nm,0.4s							
YUK				smax			
comp=E,740nm,0.4s							
YUK				smax			
comp=N,870nm,0.8s							
YUK				smax			
comp=E,730nm,0.8s							
ASAJ	Asahikawa	2.66	333	Pn	Pn	01 25 31.4	+0.9
comp=E,8.1nm,0.3s,baz=203,slow=15,SNR=14							
ASAJ	Asahikawa	2.66	333	*e*Pn	Pn	01 25 31.1	+0.5
ASAJ	Asahikawa	2.66	333	P	Pn	01 25 31.5	+0.9
ASAJ				pmax	pmax		
comp=Z,8.0nm,0.3s							
MAJO	Matsushiro	7.03	224	*e*Pn	Pn	01 26 30.0	-0.6
comp=Z,8.1nm,0.5s							
MAJO	Matsushiro	7.03	224	*e*P	Pn	01 26 30.0	-0.6
MAJO				pmax	pmax		
comp=Z,8.0nm,0.5s							
MAT	Matsushiro	7.03	224	P	Pn	01 26 29.8	-0.8
MAT				S	Sn	01 27 51.5	+1.8
MJAR	Matsushiro Arr	7.03	224	Pn	Pn	01 26 29.4	-1.2
comp=Z,1.1nm,0.3s,baz=28,slow=13,SNR=16							
MJAR	Matsushiro Arr	7.03	224	P	Pn	01 26 29.4	-1.2
KSRS	Korea Array	13.32	257	Pn	Pn	01 27 55.9	-0.9
comp=Z,0.2nm,0.3s,baz=74,slow=14,SNR=5.8							
KSRS	Korea Array	13.32	257	P	Pn	01 27 55.9	-0.9
PETK	Petropavlovsk-	14.51	34	Pn	Pn	01 28 12.2	-0.6
comp=Z,0.5nm,0.3s,baz=256,slow=12,SNR=4.6							
PETK	Petropavlovsk-	14.51	34	P	Pn	01 28 12.3	-0.5
SEY	Seymchan	21.74	10	⇓*e*P	P	01 29 38.3	-0.2
HHC	Hu-ho-hao-te	24.52	279	*e*P	P	01 30 07.2	+0.6
HHC				pmax	pmax		
comp=Z,10.0nm,1.1s,mb4.3							
HHC				pmax	pmax		
comp=Z,440nm,5.3s							
SONM	Songino Array	27.36	296	P	P	01 30 32.2	0.0
comp=Z,5.1nm,1.0s,mb4.0,baz=87,slow=7.4,SNR=21							
SONM	Songino Array	27.36	296	P	P	01 30 32.2	0.0
TLY	Talaya	29.23	304	*e*P	P	01 30 37.0	-12
TLY				pmax	pmax		
comp=Z,26nm,0.8s,mb5.0							
ZAA0	Zalesovo Array	40.55	308	*e*P	P	01 32 25.9	-0.3
ZALV	Zalesovo Beam	40.55	308	P	P	01 32 26.1	-0.2
comp=Z,3.0nm,0.5s,mb4.2,baz=90,slow=8.9,SNR=11							
ZALV	Zalesovo Beam	40.55	308	P	P	01 32 26.1	-0.1
MK31	Makanchi Array	43.66	299	*e*P	P	01 32 51.6	-0.1
MK31	Makanchi Array	43.66	299	*e*P	P	01 32 51.6	-0.1
MKAR	Makanchi Array	43.66	299	P	P	01 32 51.3	-0.4
comp=Z,1.7nm,0.5s,mb4.0,baz=77,slow=9.8,SNR=13							
MKAR	Makanchi Array	43.66	299	P	P	01 32 51.3	-0.4
ILAR	Eielson Array	44.33	35	P	P	01 32 57.9	+1.0
comp=Z,1.4nm,0.8s,mb3.7,baz=274,slow=7.4,SNR=13							
ILAR	Eielson Array	44.33	35	P	P	01 32 57.9	+1.0
KURK	Kurchatov	44.91	305	⇑*e*P	P	01 33 01.4	-0.3
comp=Z,3.8nm,0.8s,mb4.3							
KURK	Kurchatov	44.91	305	⇑*e*P	P	01 33 01.3	-0.4
KURK				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.3							
CMAR	Chiang Mai Arr	44.93	253	P	P	01 33 01.9	-0.3
comp=Z,0.6nm,0.3s,mb3.9,baz=42,slow=7.2,SNR=5.3							
CMAR	Chiang Mai Arr	44.93	253	P	P	01 33 01.9	-0.3
BVAR	Borovoye Array	49.14	310	P	P	01 33 34.6	0.0
comp=Z,2.3nm,0.6s,mb4.4,baz=71,slow=8.4,SNR=15							
BVAR	Borovoye Array	49.14	310	P	P	01 33 34.6	-0.1
INK	Inuvik	49.18	29	P	P	01 33 35.9	+1.2
comp=Z,1.7nm,0.5s,mb4.3,baz=301,slow=5.9,SNR=10							
INK	Inuvik	49.18	29	*e*P	P	01 33 35.4	+0.7
INK	Inuvik	49.18	29	*e*P	P	01 33 35.4	+0.7
BRVK	Borovoye	49.19	310	⇑*e*P	P	01 33 34.8	-0.2
BRVK				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.4							
SVE	Sverdlovsk	53.15	317	⇑*e*P	P	01 34 05.0	+0.4
SVE				pmax	pmax		
comp=Z,12nm,0.9s,mb4.8							
ARU	Arti	54.36	317	*e*P	P	01 34 13.5	0.0
comp=Z,4.2nm,0.7s,mb4.5							
ARU	Arti	54.36	317	*c i*P	P	01 34 13.2	-0.3
ARU						01 36 14.7	
ARU				S	S	01 41 48.6	-1.2
ARU				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.5							
SPITS	Spitsbergen Ar	56.33	349	P	P	01 34 27.3	-0.1
comp=Z,1.5nm,0.6s,mb4.2,baz=346,slow=4.0,SNR=4.1							
SPITS	Spitsbergen Ar	56.33	349	P	P	01 34 27.3	-0.1
SPITS				pmax	pmax		
comp=Z,2.0nm,0.6s							
ABKAR	Akbulak array	56.66	309	*e*P	P	01 34 30.2	0.0
comp=Z,3.0nm,0.6s,mb4.5							
AKTO	Aktyubinsk	57.23	311	P	P	01 34 33.0	-1.2
comp=Z,1.2nm,0.6s,mb4.1,baz=75,slow=12,SNR=4.5							
AKTO	Aktyubinsk	57.23	311	P	P	01 34 33.0	-1.2
AKTO				pmax	pmax		
comp=Z,1.0nm,0.6s,mb4.0							
KEV	Kevo	59.82	339	*e*P	P	01 34 52.4	+0.4
KEV				pmax	pmax		
comp=Z,1.0nm,0.4s,mb4.2							
ARCES	ARCESS Array B	60.37	339	P	P	01 34 56.1	+0.4
comp=Z,0.4nm,0.5s,mb3.7,baz=37,slow=6.7,SNR=7.3							
ARCES	ARCESS Array B	60.37	339	P	P	01 34 56.1	+0.4
WRA	Warramunga Arr	62.08	191	P	P	01 35 06.5	-1.3
comp=Z,1.1nm,0.8s,mb4.1,baz=11,slow=7.1,SNR=7.6							
WRA	Warramunga Arr	62.08	191	P	P	01 35 06.5	-1.3
WRA				pmax	pmax		
comp=Z,1.0nm,0.8s							
JOF	Joensuu	62.85	332	*e*P	P	01 35 10.5	-2.0
OBN	Obninsk	65.65	323	P	P	01 35 34.0	+3.0
OBN				*e*	pP	01 35 41.3	+2.4
OBN				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.3							
FINES	FINESS Array B	65.67	332	P	P	01 35 30.7	-0.3
comp=Z,5.6nm,0.8s,mb4.7,baz=52,slow=5.6,SNR=19							
FINES	FINESS Array B	65.67	332	P	P	01 35 30.7	-0.3
FINES				pmax	pmax		
comp=Z,6.0nm,0.8s							
ASAR	Alice Springs	65.80	190	P	P	01 35 32.5	+0.2
comp=Z,0.4nm,0.8s,mb3.5,baz=8.9,slow=6.6,SNR=4.3							
ASAR	Alice Springs	65.80	190	P	P	01 35 32.5	+0.3
KIV	Kislovodsk	69.49	311	P	P	01 35 57.0	+1.5
KIV				*e*	pP	01 36 05.6	+2.2
KIV				*e*		01 36 21.2	
KIV				*e*		01 38 30.1	
KIV				pmax	pmax		
comp=Z,12nm,1.2s,mb4.7							
NB2	NORSAR Subarra	70.67	338	P	P	01 36 02.1	-0.3
comp=Z,0.8nm,0.5s,mb3.9,baz=34,slow=6.5							
NOA	NORSAR Array B	70.67	338	P	P	01 36 02.6	+0.2
comp=Z,1.0nm,0.6s,mb3.9,baz=37,slow=6.2,SNR=7.1							
NOA	NORSAR Array B	70.67	338	P	P	01 36 02.6	+0.2
NOA				pmax	pmax		
comp=Z,1.0nm,0.6s							
AKASG	Malin Array Be	71.91	323	P	P	01 36 09.2	-0.9
comp=Z,1.4nm,0.5s,mb4.1,baz=45,slow=5.4,SNR=8.9							
AKASG	Malin Array Be	71.91	323	P	P	01 36 09.2	-0.8
AKASG				pmax	pmax		
comp=Z,1.0nm,0.5s							
BRTR	Keskin Array B	77.35	312	P	P	01 36 42.1	+0.3
comp=Z,0.5nm,0.7s,mb3.6,baz=48,slow=5.7,SNR=3.2							
BRTR	Keskin Array B	77.35	312	P	P	01 36 42.1	+0.3
BRTR				pmax	pmax		
comp=Z,1.0nm,0.7s							
CLL	Collm	78.07	331	*i* P	P	01 36 45.3	-0.3
CLL				pmax	pmax		
comp=Z,48nm,0.9s,mb5.4							
PRU	Pruhonice	78.58	330	*e*P	P	01 36 50.3	+1.9
PRU	Pruhonice	78.58	330	*e*P	P	01 36 50.3	+1.9
EKA	Eskdalemuir Ar	79.38	342	P	P	01 36 51.8	-1.0
comp=Z,2.3nm,0.8s,mb4.2,baz=22,slow=4.0,SNR=3.8							
EKA	Eskdalemuir Ar	79.38	342	P	P	01 36 51.8	-1.0
EKA				pmax	pmax		
comp=Z,2.0nm,0.8s							
KHC	Kasperske Hory	79.64	330	*e*P	P	01 36 55.1	+0.8
KHC	Kasperske Hory	79.64	330	*e*P	P	01 36 55.1	+0.8
MMAI	Mount Meron Ar	81.00	306	P	P	01 37 02.5	+0.6
comp=Z,1.6nm,0.7s,mb4.1,baz=44,slow=9.0,SNR=3.8							
TXAR	Lajitas Array	85.52	54	P	P	01 37 26.2	+0.9
comp=Z,0.3nm,0.7s,mb3.7,baz=296,slow=2.4,SNR=4.7							
TXAR	Lajitas Array	85.52	54	P	P	01 37 26.2	+0.9

IDC 11 01:30:20.2±1.8, 2°.06N×127°.73E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/18, mbtmp3.9/5, Error ellipse: s-maj=95.6km s-min=23.9km az=68.0, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.14	186	P	P	01 34 55.3	-0.7
0.9nm,0.5s,baz=31,slow=9.2,SNR=7.4							
WRA	Warramunga Arr	22.81	164	P	P	01 35 25.4	+0.7
3.6nm,0.5s,baz=344,slow=11,SNR=26							
ASAR	Alice Springs	26.27	167	P	P	01 35 56.8	-0.6
0.9nm,0.5s,baz=350,slow=7.4,SNR=12							
STKA	Stephens Creek	36.23	160	P	P	01 37 25.3	+0.3
2.5nm,0.4s,baz=343,slow=9.0,SNR=7.8							
MKAR	Makanchi Array	59.49	325	P	P	01 40 25.4	+0.2
0.6nm,0.6s,baz=112,slow=8.0,SNR=5.1							

*IDC **11** 01:31:54.2±1.3, 41°.62N×144°.18E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.5/23, mbtmp3.5/7, ML3.0/1, Error ellipse: s-maj=33.8km s-min=25.6km az=79.0*

*ISCJB **11** 01:31:58.5±1.6, 41°.72N±0°.10×144°.3E±0°.1, h46km±12km, mb3.5/6, Error ellipse: s-maj=19.5km s-min=14.4km az=35.5*
*JMA **11** 01:31:58.3±0.2, 41°.70N×144°.27E, h26km±3km, M3.5*
*NEIC **11** 01:31:59.6±1.7, 41°.65N×144°.16E, h35km, MG3.5(JMA), Error ellipse: s-maj=32.0km s-min=18.1km az=173.0*

ISC 11 01:31:58.8±3.0, 41°.72N±0°.07×144°.3E±0°.1, h30km±23km, n15, σ0°50/17, mb3.5/6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	0.89	289	*e*Pg	Pn	01 32 14.8	-0.3
JEM	Erimo	0.89	290	P	Pn	01 32 15.2	0.0
JCH	Churui	1.12	323	P	Pn	01 32 18.0	-0.4
JCH				*e*S	Sn	01 32 32.9	+0.1
JOB	Onbets	1.22	344	P	Pn	01 32 19.7	-0.1
JNBK	Urakawa-nobuka	1.27	297	P	Pn	01 32 21.1	+0.7
JAK	Akkeshi	1.31	14	P	Pn	01 32 20.6	-0.3
JAR	Ashorobuto	1.62	347	P	Pn	01 32 24.6	-0.6
JAR				*e*S	Sn	01 32 44.7	-0.3
ASAJ	Asahikawa	2.69	333	Pn	Pn	01 32 40.7	+0.7
1.6nm,0.3s,baz=169,slow=19,SNR=5.3							
ASAJ	Asahikawa	2.69	333	*e*Pn	Pn	01 32 40.8	+0.8
SONM	Songino Array	27.37	296	P	P	01 37 41.1	0.0
0.3nm,0.4s,mb3.2,baz=92,slow=10,SNR=4.5							
MKAR	Makanchi Array	43.67	299	P	P	01 40 00.4	-0.1
0.3nm,0.5s,mb3.3,baz=68,slow=12,SNR=3.1							
ILAR	Eielson Array	44.37	35	P	P	01 40 07.0	+1.2
0.2nm,0.7s,mb3.0,baz=262,slow=6.1,SNR=3.3							
BVAR	Borovoye Array	49.17	310	P	P	01 40 43.9	+0.3
0.6nm,0.4s,mb4.0,baz=82,slow=8.7,SNR=4.6							
WRA	Warramunga Arr	62.04	191	P	P	01 42 15.8	-0.5
0.3nm,0.9s,mb3.4,baz=7.9,slow=6.8,SNR=3.7							
FINES	FINESS Array B	65.70	332	P	P	01 42 39.3	-0.6
2.7nm,1.0s,mb4.2,baz=50,slow=7.6,SNR=4.6							

*CSEM **11** 01:40:36.8±0.1, 39°.84N×41°.62E, h2km, MD3.2, Error ellipse: s-maj=4.8km s-min=3.2km az=179.0*
*ISK **11** 01:40:36.7, 39°.77N×41°.57E, h5km, MD3.0*
*ISCJB **11** 01:40:37.9±0.8, 39°.81N±0°.04×41°.58E±0°.04, h7km±7km, Error ellipse: s-maj=7.0km s-min=4.8km az=156.5*
*DDA **11** 01:40:37.0±0.7, 39°.80N×41°.56E, h11km±3km, Md3.2*

ISC 11 01:40:37.8±0.7, 39°.81N±0°.04×41°.59E±0°.04, h2km±8km, n24, σ1°11/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERZM	Erzurum	0.20	300	*i* P	Pg	01 40 40.8	-0.9
ERZM				*i* S	Sg	01 40 44.8	+0.4
ERZM	Erzurum	0.20	300	*i* P	Pg	01 40 40.8	-0.9
ERZM				*i* S	Sg	01 40 44.8	+0.4
EZM	Erzurum	0.20	299	*e*PG	Pg	01 40 41.7	-0.1
HOMI	Horasan	0.34	45	*i* P	Pg	01 40 43.7	-0.6
HOMI				*i* S	Sg	01 40 50.9	+2.1
KOPT	Kop Dagi	0.87	285	*i* P	Pg	01 40 53.8	-0.7
KOPT				*i* S	Sg	01 41 07.6	+1.8
KOPT	Kop Dagi	0.87	285	*i* P	Pg	01 40 53.8	-0.7
KOPT				*i* S	Sg	01 41 07.6	+1.8
BNGL	BINGOL	0.92	202	*i* P	Pg	01 40 54.3	-1.2
BNGL				*i* S	Sg	01 41 08.1	+0.8
DDEM	Demirkent	1.09	6	*i* P	Pg	01 40 57.3	-1.5
DDEM				*i* S	Sg	01 41 13.0	0.0
DDEM	Demirkent	1.09	6	*i* P	Pg	01 40 57.3	-1.5
DDEM				*i* S	Sg	01 41 13.0	0.0
AGRB	Hanur-Agry	1.10	102	*e*PN	Pn	01 40 59.3	-1.0
AGRB				*e*SN	Sn	01 41 15.3	-0.7
AGRB	Hanur-Agry	1.10	102	*e*Pn	Pn	01 40 59.3	-1.0
AGRB				*e*Sn	Sn	01 41 15.3	-0.7
BINT	Bingol	1.26	223	*e*PN	Pn	01 41 01.0	-1.4
BINT	Bingol	1.26	223	*e*Pn	Pn	01 41 01.0	-1.5
EZC	Erzincan	1.73	269	*e*PN	Pn	01 41 08.6	-0.3
EZC	Erzincan	1.73	269	*e*Pn	Pn	01 41 08.6	-0.3
GUMT	Gumushane	1.75	293	*e*PN	Pn	01 41 09.3	+0.2
GUMT	Gumushane	1.75	293	*e*Pn	Pn	01 41 09.3	+0.2
CLDR	Caldiran	1.92	109	*e*PN	Pn	01 41 11.8	+0.3
CLDR	Caldiran	1.92	109	*e*Pn	Pn	01 41 11.8	+0.4
BEST	Besiri	1.93	188	*i* P	Pn	01 41 14.1	+2.5
BEST				*i* S	Sn	01 41 40.4	+4.0
PTK	Pertek	1.94	243	*e*PN	Pn	01 41 11.4	-0.3
PTK	Pertek	1.94	243	*e*P

LAKA	**Lakka**	**0.53**	**50**	P	**Pg**	**01 52 43.1**	**-0.5**
LAKA				S	**Sg**	**01 52 51.0**	**+0.4**
KFL	**Anninata**	**0.57**	**291**	P	**Pg**	**01 52 44.5**	**0.0**
KFL	**Anninata**	**0.57**	**291**	P	**Pg**	**01 52 44.5**	**0.0**
EFP	**Efpalio**	**0.62**	**34**	*e*PN	**Pn**	**01 52 44.7**	**-3.2**
EFP				*e*SN	**Sg**	**01 52 53.7**	**-0.1**
EFP	**Efpalio**	**0.62**	**34**	P	**Pg**	**01 52 44.8**	**-0.7**
EFP				S	**Sg**	**01 52 53.5**	**-0.3**
EFP	**Efpalio**	**0.62**	**34**	P	**Pg**	**01 52 44.8**	**-0.7**
EFP				S	**Sg**	**01 52 53.5**	**-0.3**
TRIZ	**Trizonia**	**0.66**	**46**	P	**Pg**	**01 52 45.4**	**-0.9**
TRIZ				S	**Sg**	**01 52 55.1**	**+0.1**
TRIZ	**Trizonia**	**0.66**	**46**	P	**Pg**	**01 52 45.4**	**-0.9**
TRIZ				S	**Sg**	**01 52 55.1**	**+0.1**
GUR	**Goura**	**0.69**	**87**	*e*PB	**Pb**	**01 52 45.8**	**-1.5**
GUR				*e*SN	**Sg**	**01 52 55.8**	**-0.2**
GUR	**Goura**	**0.69**	**87**	P	**Pg**	**01 52 46.1**	**-0.7**
GUR				S	**Sg**	**01 52 56.7**	**+0.7**
GUR	**Goura**	**0.69**	**87**	*e*Pb	**Pb**	**01 52 45.8**	**-1.5**
GUR	**Goura**	**0.69**	**87**	P	**Pg**	**01 52 46.1**	**-0.7**
GUR				*e*Sn	**Sg**	**01 52 55.8**	**-0.2**
GUR				S	**Sg**	**01 52 56.7**	**+0.7**
KALE	**Kalithea**	**0.72**	**47**	P	**Pg**	**01 52 46.2**	**-1.1**
KALE				S	**Sg**	**01 52 56.7**	**-0.1**
KALE	**Kalithea**	**0.72**	**47**	P	**Pg**	**01 52 46.2**	**-1.1**
KALE				S	**Sg**	**01 52 56.7**	**-0.1**
VLS	**Valsamata**	**0.74**	**292**	*e*PB	**Pb**	**01 52 47.0**	**-1.1**
VLS				*e*SN	**Sg**	**01 52 59.0**	**+1.5**
VLS	**Valsamata**	**0.74**	**292**	P	**Pg**	**01 52 47.1**	**-0.6**
VLS	**Valsamata**	**0.74**	**292**	P	**Pg**	**01 52 47.1**	**-0.6**
VLS				*e*Sn	**Sg**	**01 52 59.0**	**+1.5**
ITM	**Ithomi**	**0.81**	**153**	*e*PN	**Pn**	**01 52 49.4**	**-1.1**
ITM	**Ithomi**	**0.81**	**153**	P	**Pg**	**01 52 49.0**	**-0.1**
ITM	**Ithomi**	**0.81**	**153**	P	**Pg**	**01 52 49.0**	**-0.1**
ITM	**Ithomi**	**0.81**	**153**	*e*Pn	**Pn**	**01 52 49.4**	**-1.1**
VLX	**Vlachokerasia**	**0.90**	**126**	*e*PN	**Pn**	**01 52 51.6**	**-0.1**
VLX				*e*SN	**Sn**	**01 53 04.3**	**-0.3**
VLX	**Vlachokerasia**	**0.90**	**126**	*e*Pn	**Pn**	**01 52 51.6**	**-0.1**
VLX				*e*Sn	**Sn**	**01 53 04.3**	**-0.3**
PYL	**PYLOS**	**1.03**	**168**	*e*PN	**Pn**	**01 52 54.2**	**+0.7**
PYL	**PYLOS**	**1.03**	**168**	P	**Pb**	**01 52 52.6**	**-0.5**
PYL	**PYLOS**	**1.03**	**168**	P	**Pb**	**01 52 52.6**	**-0.5**
PYL	**PYLOS**	**1.03**	**168**	*e*Pn	**Pn**	**01 52 54.2**	**+0.7**
EVR	**Evrytania**	**1.04**	**15**	*e*PN	**Pn**	**01 52 52.7**	**-1.0**
EVR				*e*SN	**Sn**	**01 53 07.5**	**-0.7**
EVR	**Evrytania**	**1.04**	**15**	*e*Pn	**Pn**	**01 52 52.7**	**-1.0**
EVR				*e*Sn	**Sn**	**01 53 07.5**	**-0.7**
LTK	**Loutraki**	**1.19**	**84**	*e*PB	**Pb**	**01 52 54.9**	**-0.9**
LTK	**Loutraki**	**1.19**	**84**	*e*Pb	**Pb**	**01 52 54.9**	**-0.9**
AGG	**Agios Georgios**	**1.30**	**31**	*e*PN	**Pn**	**01 52 58.0**	**+0.7**
AGG				*e*SN	**Sn**	**01 53 15.0**	**+0.4**
AGG	**Agios Georgios**	**1.30**	**31**	*e*Pn	**Pn**	**01 52 58.0**	**+0.7**
AGG				*e*Sn	**Sn**	**01 53 15.0**	**+0.4**
LKR	**Lokris**	**1.42**	**58**	*e*PN	**Pn**	**01 52 58.8**	**0.0**
LKR				*e*SN	**Sn**	**01 53 19.1**	**+1.7**
LKR	**Lokris**	**1.42**	**58**	*e*Pn	**Pn**	**01 52 58.8**	**0.0**
DID	**Didima**	**1.46**	**105**	*e*PN	**Pn**	**01 53 00.8**	**+1.4**
DID				*e*SN	**Sn**	**01 53 20.2**	**+1.8**
DID	**Didima**	**1.46**	**105**	*e*Pn	**Pn**	**01 53 00.8**	**+1.4**
VLI	**Veliai**	**1.67**	**135**	*e*PN	**Pn**	**01 53 04.5**	**+2.2**

*IDC **11** 02:12:52.9±6.7, 34°.99N×24°.23E, h0km, mb3.8/6, mb1 3.7/7, mb1mx3.6/26, mbtmp3.7/7, ML2.6/1, Error ellipse: s-maj=126.7km s-min=37.8km az=26.0*
*ISCJB **11** 02:12:55.9±0.9, 35°.10N±0°.08×24°.44E±0°.05, h15km±5km, mb3.7/6, Error ellipse: s-maj=13.9km s-min=3.5km az=22.3*
*ATH **11** 02:12:55.7, 35°.10N×24°.44E, h19km, MD3.7/22*
*THE **11** 02:12:55.1, 35°.01N×24°.38E, h14km±1km, Error ellipse: s-maj=2.7km s-min=0.4km az=202.0*
*CSEM **11** 02:12:56.1±0.4, 35°.07N×24°.42E, h5km, MD3.7, Error ellipse: s-maj=10.6km s-min=2.5km az=20.0*
ISC 11 02:12:55.9±1.2, 35°.02N±0°.09×24°.41E±0°.05, h10km±4km, n74, σ0°86/88, mb3.7/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.33**	**90**	*e*PB	**Pg**	**02 13 02.4**	**0.0**
SIVA				*e*SB	**Sg**	**02 13 07.7**	**+0.9**
SIVA	**Sivas**	**0.33**	**90**	P	**Pg**	**02 13 02.3**	**-0.1**
SIVA				S	**Sg**	**02 13 07.7**	**+0.9**
SIVA	**Sivas**	**0.33**	**90**	*e*Pb	**Pg**	**02 13 02.4**	**0.0**
SIVA				S	**Sg**	**02 13 07.7**	**+0.9**
VAM	**Vamos**	**0.42**	**336**	*e*PB	**Pg**	**02 13 03.3**	**-0.9**
VAM				*e*SB	**Sg**	**02 13 09.6**	**-0.2**
VAM	**Vamos**	**0.42**	**336**	*e*Pb	**Pg**	**02 13 03.3**	**-0.9**
VAM				*e*Sb	**Sg**	**02 13 09.6**	**-0.2**
KARN	**Karanos**	**0.56**	**314**	*e*PN	**Pg**	**02 13 05.8**	**-0.8**
KARN				*e*SN	**Sg**	**02 13 14.1**	**+0.2**
KARN	**Karanos**	**0.56**	**314**	P	**Pg**	**02 13 05.8**	**-0.8**
KARN				S	**Sg**	**02 13 13.9**	**0.0**
KARN	**Karanos**	**0.56**	**314**	P	**Pg**	**02 13 05.8**	**-0.8**
KARN				S	**Sg**	**02 13 13.9**	**0.0**
LAST	**Lasithi**	**0.89**	**80**	*e*PB	**Pg**	**02 13 11.7**	**-1.3**
LAST				*e*SN	**Sn**	**02 13 24.1**	**-3.3**
LAST	**Lasithi**	**0.89**	**80**	P	**Pg**	**02 13 11.7**	**-1.3**
LAST				S	**Sg**	**02 13 25.1**	**+0.5**
LAST	**Lasithi**	**0.89**	**80**	P	**Pg**	**02 13 11.7**	**-1.3**
LAST				*e*Sn	**Sn**	**02 13 24.1**	**-3.3**
LAST				S	**Sg**	**02 13 25.1**	**+0.5**
NPS	**Neapolis**	**1.02**	**76**	*e*PN	**Pn**	**02 13 14.1**	**-2.1**
ZKR	**Zakros**	**1.49**	**86**	*e*PN	**Pn**	**02 13 23.4**	**+0.7**
ZKR	**Zakros**	**1.49**	**86**	*e*Pn	**Pn**	**02 13 23.4**	**+0.7**
KYTH	**Kithira**	**1.68**	**319**	*e*PN	**Pn**	**02 13 25.8**	**+0.4**
KYTH	**Kithira**	**1.68**	**319**	*e*Pn	**Pn**	**02 13 25.8**	**+0.4**
VLI	**Veliai**	**2.08**	**325**	*e*PB	**Pb**	**02 13 29.9**	**-3.7**
VLI				*e*SN	**Sn**	**02 13 56.6**	**-0.1**
APE	**Apeiranthos**	**2.24**	**24**	*e*PB	**Pb**	**02 13 31.9**	**-4.5**
KARP	**Karpathos**	**2.31**	**76**	*e*PN	**Pn**	**02 13 35.2**	**+1.1**
KARP	**Karpathos**	**2.31**	**76**	*e*Pn	**Pn**	**02 13 35.2**	**+1.1**
DID	**Didima**	**2.66**	**339**	*e*PN	**Pn**	**02 13 38.4**	**-0.4**
DID	**Didima**	**2.66**	**339**	*e*Pn	**Pn**	**02 13 38.4**	**-0.4**
NAIG	**Nisos Aigina**	**2.83**	**345**	*e*PB	**Pb**	**02 13 42.2**	**-4.4**
PYL	**PYLOS**	**2.86**	**312**	*e*PN	**Pn**	**02 13 41.7**	**+0.1**
PYL	**PYLOS**	**2.86**	**312**	*e*Pn	**Pn**	**02 13 41.7**	**+0.1**
VLX	**Vlachokerasia**	**2.86**	**326**	*e*PB	**Pb**	**02 13 42.6**	**-4.5**
VLY	**Voula,Athens**	**2.87**	**350**	*e*PB	**Pb**	**02 13 42.8**	**-4.4**
ITM	**Ithomi**	**2.95**	**318**	*e*PN	**Pn**	**02 13 43.4**	**+0.6**
ITM	**Ithomi**	**2.95**	**318**	*e*Pn	**Pn**	**02 13 43.4**	**+0.6**
PTL	**Penteli**	**3.06**	**352**	*e*PN	**Pn**	**02 13 44.1**	**-0.2**
PTL	**Penteli**	**3.06**	**352**	*e*Pn	**Pn**	**02 13 44.1**	**-0.2**
LTK	**Loutraki**	**3.22**	**339**	*e*PN	**Pn**	**02 13 47.6**	**+1.1**
LTK	**Loutraki**	**3.22**	**339**	*e*Pn	**Pn**	**02 13 47.6**	**+1.1**
ARG	**Arkhangelos**	**3.26**	**67**	*e*PN	**Pn**	**02 13 47.6**	**+0.6**
ARG	**Arkhangelos**	**3.26**	**67**	*e*Pn	**Pn**	**02 13 47.6**	**+0.6**
SMG	**Samos**	**3.33**	**35**	*e*PN	**Pn**	**02 13 48.0**	**0.0**
SMG	**Samos**	**3.33**	**35**	*e*Pn	**Pn**	**02 13 48.0**	**0.0**
GUR	**Goura**	**3.35**	**331**	*e*PN	**Pn**	**02 13 48.9**	**+0.5**
GUR	**Goura**	**3.35**	**331**	*e*Pn	**Pn**	**02 13 48.9**	**+0.5**
CHOS	**Chios island**	**3.61**	**21**	*e*PN	**Pn**	**02 13 51.4**	**-0.5**
CHOS	**Chios island**	**3.61**	**21**	*e*Pn	**Pn**	**02 13 51.4**	**-0.5**
LKR	**Lokris**	**3.80**	**343**	*e*PN	**Pn**	**02 13 54.3**	**-0.2**
LKR	**Lokris**	**3.80**	**343**	*e*Pn	**Pn**	**02 13 54.3**	**-0.2**
RLS	**Riolos of Patr**	**3.85**	**323**	*e*PN	**Pn**	**02 13 55.5**	**+0.3**
RLS	**Riolos of Patr**	**3.85**	**323**	*e*Pn	**Pn**	**02 13 55.5**	**+0.3**
TURN	**Turunc**	**3.88**	**60**	*i* P	**Pn**	**02 13 51.5**	**-4.0**
TURN	**Turunc**	**3.88**	**60**	*i* P	**Pn**	**02 13 51.5**	**-4.0**
EFP	**Efpalio**	**3.95**	**330**	*e*PN	**Pn**	**02 13 56.8**	**+0.2**
EFP	**Efpalio**	**3.95**	**330**	*e*Pn	**Pn**	**02 13 56.8**	**+0.2**
AGG	**Agios Georgios**	**4.33**	**338**	*e*PN	**Pn**	**02 14 02.4**	**+0.6**
AGG	**Agios Georgios**	**4.33**	**338**	*e*Pn	**Pn**	**02 14 02.4**	**+0.6**
VLS	**Valsamata**	**4.40**	**317**	*e*PN	**Pn**	**02 14 03.2**	**+0.4**
VLS	**Valsamata**	**4.40**	**317**	*e*Pn	**Pn**	**02 14 03.2**	**+0.4**
AKAS	**Kas**	**4.40**	**73**	*i* P	**Pn**	**02 14 02.4**	**-0.4**
AKAS	**Kas**	**4.40**	**73**	*i* P	**Pn**	**02 14 02.3**	**-0.5**
AKAS				*i* S	**Sn**	**02 14 53.9**	**-0.3**
EVR	**Evrytania**	**4.41**	**333**	*e*PN	**Pn**	**02 14 04.1**	**+1.2**
EVR	**Evrytania**	**4.41**	**333**	*e*Pn	**Pn**	**02 14 04.1**	**+1.2**
GOLH	**Golhisar**	**4.72**	**61**	*i* P	**Pn**	**02 14 08.2**	**+1.0**
GOLH	**Golhisar**	**4.72**	**61**	*i* P	**Pn**	**02 14 08.2**	**+1.0**
KHAL	**Karahalli**	**5.28**	**49**	*i* P	**Pn**	**02 14 16.3**	**+1.5**
KHAL	**Karahalli**	**5.28**	**49**	*i* P	**Pn**	**02 14 16.3**	**+1.5**
PLG	**Polygyros**	**5.40**	**352**	*e*PN	**Pn**	**02 14 16.3**	**-0.2**
PLG	**Polygyros**	**5.40**	**352**	*e*Pn	**Pn**	**02 14 16.3**	**-0.2**
JAN	**Janina**	**5.43**	**330**	*e*PN	**Pn**	**02 14 17.4**	**+0.5**
JAN	**Janina**	**5.43**	**330**	*e*Pn	**Pn**	**02 14 17.4**	**+0.5**
SOH	**Sokhos**	**5.85**	**352**	*e*PN	**Pn**	**02 14 23.7**	**+1.0**
SOH	**Sokhos**	**5.85**	**352**	*e*Pn	**Pn**	**02 14 23.7**	**+1.0**
BRTR	**Keskin Array B**	**8.72**	**55**	Pn	**Pn**	**02 15 02.2**	**+0.1**
	0.1nm,0.3s,baz=279,slow=13,SNR=5.0						
HFS	**Hagfors**	**26.08**	**348**	P	**P**	**02 18 28.3**	**-1.1**
	1.2nm,0.7s,mb3.5,baz=134,slow=10,SNR=3.4						
FINES	**FINESS Array B**	**26.47**	**2**	P	**P**	**02 18 31.4**	**-1.4**
	2.2nm,0.8s,mb3.8,baz=150,slow=6.4,SNR=4.9						
ARCES	**ARCESS Array B**	**34.58**	**1**	P	**P**	**02 19 43.0**	**-1.4**
	0.7nm,0.7s,mb3.7,baz=173,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**44.37**	**56**	P	**P**	**02 21 05.5**	**-0.9**
	0.3nm,0.3s,mb3.5,baz=269,slow=7.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**45.55**	**46**	P	**P**	**02 21 16.1**	**+0.5**
	1.0nm,0.4s,mb4.1,baz=282,slow=7.2,SNR=3.8						
SONM	**Songino Array**	**60.05**	**50**	P	**P**	**02 23 02.3**	**-0.6**
	0.3nm,0.4s,mb3.6,baz=242,slow=3.1,SNR=2.9						

*TEH **11** 02:16:04.6, 26°.58N×55°.69E, h10km*
*BJI **11** 02:16:06.1, 27°.07N×55°.23E, h20km, mB5.6/16, mb5.1/46, Ms5.2/26, Ms7 5.1/25*
*ISCJB **11** 02:16:07.8±0.1, 26°.85N±0°.02×55°.79E±0°.02, h10km, mb5.1/225, MS5.0/11, Error ellipse: s-maj=2.6km s-min=2.0km az=12.9*
*NEIC **11** 02:16:09.9, 26°.93N×55°.64E, h8km, mb5.2/92, ML4.8(THR), MN4.9(TEH), After THR.*
*CSEM **11** 02:16:09.3±0.1, 26°.84N×55°.83E, h10km, mb5.2/99, Error ellipse: s-maj=3.1km s-min=2.9km az=152.0*
*MOS **11** 02:16:10.9±0.8, 26°.89N×55°.81E, h33km, mb5.2/70, MS5.0/4, Error ellipse: s-maj=5.8km s-min=3.0km az=126.3*
*IDC **11** 02:16:10.7±2.4, 26°.88N×55°.85E, h19km±14km, mb4.7/29, mb1 4.7/34, mb1mx4.7/37, mbtmp4.7/34, ML4.5/4, Error ellipse: s-maj=12.2km s-min=10.2km az=167.0*
*THR **11** 02:16:10.6±0.3, 26°.97N×55°.66E, h8km±4km, ML4.8*
*SGS **11** 02:16:13.5, 26°.87N×55°.65E, h14km*
*OMAN **11** 02:16:14.6±99.0, 26°.60N×56°.05E, h10km, Error ellipse: s-maj=27.2km s-min=11.4km az=8.0*
*DJA **11** 02:16:18, 26°.94N×55°.80E, h74km, mb5.2/15*
*SZGRF **11** 02:16:23.8, 27°.18N×53°.88E, h33km, mb5.0, Southern Iran*
ISC 11 02:16:09.6±0.1, 26°.82N±0°.02×55°.80E±0°.02, h10km, (h15km±2.2km:pP-P), n1352, σ1°.03/1348, mb5.1/225, MS5.0/11, 77C-28D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.67**	**30**	*e*Pg	**Pg**	**02 16 23.0**	**+0.5**
BNDS				*e*Sg	**Sg**	**02 16 32.8**	**+1.5**
BNDS	**Bandar-Abbas**	**0.67**	**30**	*e*Pg	**Pg**	**02 16 23.0**	**+0.5**
BNDS				*e*Sg	**Sg**	**02 16 32.0**	**+0.7**
BNDS				AML	AML	02 16 48.6	
	comp=N,38μm,0.5s						
BNDS				AML	AML	02 16 48.7	
	comp=E,48μm,0.3s						
BNDS	**Bandar-Abbas**	**0.67**	**30**	*e*Pg	**Pg**	**02 16 23.0**	**+0.5**
BNDS				*e*Sg	**Sg**	**02 16 32.0**	**+0.7**
IBND	**Bandar-abas**	**0.91**	**46**	*e*Pg	**Pg**	**02 16 27.5**	**+0.3**
IBND				*e*Pg	**Pg**	**02 16 28.1**	**+0.9**
IBND				*e*Sg	**Sg**	**02 16 43.5**	**+4.4**
IBND				*e*Sg	**Sg**	**02 16 44.3**	**+5.2**
IBND				*e*		02 16 49.5	
	comp=Z,1222μm,0.3s						
IBND				*e*		02 17 08.8	
	comp=Z,1147μm,0.3s						
IBND	**Bandar-abas**	**0.91**	**46**	*e*Pg	**Pg**	**02 16 27.5**	**+0.3**
IBND				*e*Sg	**Sg**	**02 16 44.3**	**+5.2**
BANOM	**Banah**	**1.00**	**153**	P	**Pg**	**02 16 28.7**	**-0.1**
	SNR=1000						
BANOM	**Banah**	**1.00**	**153**	P	**Pg**	**02 16 28.1**	**-0.8**
	SNR=3164						
BANOM				P		02 16 28.7	
	SNR=1023						
NAZ	**Nazwa, Dubai**	**1.83**	**184**	P	**Pn**	**02 16 43.4**	**+2.3**
	SNR=106						
NAZ	**Nazwa, Dubai**	**1.83**	**184**	P	**Pn**	**02 16 43.4**	**+2.3**
	SNR=106						
NAZ				P		02 16 44.0	
	SNR=19						
HATD	**Hatta, Dubai**	**2.01**	**171**	P	**Pn**	**02 16 45.2**	**+1.6**
	SNR=558						
HATD	**Hatta, Dubai**	**2.01**	**171**	P	**Pn**	**02 16 45.2**	**+1.6**
	SNR=558						
HATD				P		02 16 46.4	
	SNR=40						
ASHO	**Ashiyiah**	**2.14**	**174**	P	**Pn**	**02 16 47.3**	**+1.9**
	SNR=362						
ASHO	**Ashiyiah**	**2.14**	**174**	P	**Pn**	**02 16 47.3**	**+1.9**
	SNR=234						
ASHO				P		02 16 47.3	
	SNR=362						
ASUD	**Al Ashush, Dub**	**2.23**	**191**	P	**Pn**	**02 16 49.3**	**+2.8**
	SNR=122						
ASUD	**Al Ashush, Dub**	**2.23**	**191**	P	**Pn**	**02 16 49.3**	**+2.8**
	SNR=122						
ASUD				P		02 16 49.5	
	SNR=71						
KRBR	**Kerman**	**3.26**	**15**	*e*Pn	**Pn**	**02 17 02.5**	**+1.7**
KRBR	**Kerman**	**3.26**	**15**	*e*Pn	**Pn**	**02 17 02.9**	**+2.0**
KRBR				AML	AML	02 18 05.0	
	comp=N,2μm,0.6s						
KRBR				AML	AML	02 18 05.5	
	comp=E,3μm,0.6s						
KRBR	**Kerman**	**3.26**	**15**	*e*Pn	**Pn**	**02 17 02.5**	**+1.7**
ISRV	**Sarvestan**	**3.48**	**318**	Pn	**Pn**	**02 17 05.8**	**+1.9**
ISRV	**Sarvestan**	**3.48**	**318**	*e*Pn	**Pn**	**02 17 05.1**	**+1.2**
ISRV	**Sarvestan**	**3.48**	**318**	*e*Pn	**Pn**	**02 17 05.1**	**+1.2**
HOQ	**Hoqain**	**3.50**	**157**	P	**Pn**	**02 17 03.0**	**-1.1**
	SNR=20						
HOQ	**Hoqain**	**3.50**	**157**	P	**Pn**	**02 17 03.0**	**-1.1**
	SNR=20						
ARQ	**Araqi**	**3.53**	**169**	P	**Pn**	**02 17 05.7**	**+1.2**
	SNR=56						
ARQ	**Araqi**	**3.53**	**169**	P	**Pn**	**02 17 05.7**	**+1.2**
	SNR=56						
ARQ				P		02 17 06.3	
	SNR=90						
IPAR	**Pars**	**3.87**	**322**	Pn	**Pn**	**02 17 11.3**	**+2.2**
IPAR				Sn	**Sn**	**02 17 50.0**	**-4.6**
IPAR	**Pars**	**3.87**	**322**	*e*Pn	**Pn**	**02 17 11.4**	**+2.3**
IPAR				*e*		02 18 48.4	
	comp=Z,12μm,0.5s						
IPAR	**Pars**	**3.87**	**322**	*e*Pn	**Pn**	**02 17 11.4**	**+2.3**
BSY	**Bisya**	**4.25**	**162**	P	**Pn**	**02 17 15.9**	**+1.5**
	SNR=83						
BSY				P		02 17 16.1	
	SNR=21						
SMDO	**Samad**	**4.26**	**151**	P	**Pn**	**02 17 15.5**	**+0.9**
	SNR=135						
SMDO	**Samad**	**4.26**	**151**	P	**Pn**	**02 17 15.5**	**+0.9**
	SNR=135						
SMDO				P		02 17 15.9	
	SNR=46						
BSYO	**Bisya**	**4.28**	**162**	P	**Pn**	**02 17 15.9**	**+1.1**
	SNR=83						
IMEH	**Mehriz**	**4.67**	**347**	Pn	**Pn**	**02 17 22.4**	**+2.2**
IMEH	**Mehriz**	**4.67**	**347**	*e*Pn	**Pn**	**02 17 21.8**	**+1.6**
IMEH				*e*		02 19 06.2	
	comp=Z,18μm,0.6s						
IMEH	**Mehriz**	**4.67**	**347**	*e*Pn	**Pn**	**02 17 21.8**	**+1.6**
IBAF	**Bafgh**	**4.76**	**358**	Pn	**Pn**	**02 17 22.7**	**+1.3**
IBAF				Sn	**Sn**	**02 18 13.2**	**-3.4**
IBAF	**Bafgh**	**4.76**	**358**	*e*Pn	**Pn**	**02 17 22.7**	**+1.3**
IBAF				*e*		02 19 26.2	
	comp=Z,7μm,0.5s						
IBAF	**Bafgh**	**4.76**	**358**	*e*Pn	**Pn**	**02 17 22.7**	**+1.3**
JMDO	**Jabal Madar**	**4.90**	**154**	P	**Pn**	**02 17 24.6**	**+1.2**
	SNR=59						
JMDO	**Jabal Madar**	**4.90**	**154**	P	**Pn**	**02 17 24.6**	**+1.2**
	SNR=59						
JMDO				P		02 17 25.4	
	SNR=29						
SLWS		**5.06**	**248**	P	**Pn**	**02 17 26.5**	**+0.9**
SLWS		**5.06**	**248**	P	**Pn**	**02 17 26.5**	**+0.9**
WBK	**Wadi Bani Khal**	**5.09**	**145**	P	**Pn**	**02 17 26.4**	**+0.5**
	SNR=91						
WBK				P		02 17 26.6	
	SNR=58						
ZHSF	**Zahedan**	**5.20**	**57**	*e*Pn	**Pn**	**02 17 31.3**	**+3.8**
ZHSF	**Zahedan**	**5.20**	**57**	*e*Pn	**Pn**	**02 17 31.4**	**+3.9**
BTHS		**5.26**	**239**	P	**Pn**	**02 17 28.4**	**+0.1**
BTHS		**5.26**	**239**	P	**Pn**	**02 17 28.4**	**+0.1**
ISAD	**Sadrabad**	**5.40**	**341**	Pn	**Pn**	**02 17 32.9**	**+2.7**
ISAD				Sn	**Sn**	**02 18 28.8**	**-3.6**
ISAD	**Sadrabad**	**5.40**	**341**	*e*Pn	**Pn**	**02 17 32.9**	**+2.7**
ISAD				*e*		02 19 34.5	
	comp=Z,21μm,0.8s						
ISAD	**Sadrabad**	**5.40**	**341**	*e*Pn	**Pn**	**02 17 32.9**	**+2.7**
ICHK	**Chekchek**	**5.54**	**348**	Pn	**Pn**	**02 17 33.3**	**+1.2**
ICHK				Sn	**Sn**	**02 18 31.4**	**-4.5**
ICHK	**Chekchek**	**5.54**	**348**	*e*Pn	**Pn**	**02 17 33.7**	**+1.6**
ICHK				*e*		02 18 46.3	
	comp=Z,4μm,0.3s						
ICHK	**Chekchek**	**5.54**	**348**	*e*Pn	**Pn**	**02 17 33.7**	**+1.6**
BOQSS		**5.84**	**262**	P	**Pn**	**02 17 36.9**	**+0.7**
IKOO	**Kooshah**	**6.24**	**26**	*e*Pn	**Pn**	**02 17 43.1**	**+1.3**
IKOO				*e*		02 19 59.0	
	comp=Z,23μm,1.0s						
IKOO	**Kooshah**	**6.24**	**26**	*e*Pn	**Pn**	**02 17 43.1**	**+1.3**
IGAR	**Gharneh**	**6.45**	**330**	*e*Pn	**Pn**	**02 17 45.3**	**+0.6**
IGAR				*e*		02 17 56.8	
	comp=Z,2μm,0.1s						
NASN	**Na'in**	**6.50**	**337**	*e*Pn	**Pn**	**02 17 46.4**	**+1.1**
NASN	**Na'in**	**6.50**	**337**	*e*Pn	**Pn**	**02 17 46.7**	**+1.4**
NASN	**Na'in**	**6.50**	**337**	*e*Pn	**Pn**	**02 17 46.4**	**+1.1**
IZEF	**Zefreh**	**6.76**	**334**	Pn	**Pn**	**02 17 49.1**	**+0.2**
IZEF	**Zefreh**	**6.76**	**334**	*e*Pn	**Pn**	**02 17 49.4**	**+0.5**
IZEF				*e*		02 20 42.0	
	comp=Z,5μm,1.2s						
IZEF	**Zefreh**	**6.76**	**334**	*e*Pn	**Pn**	**02 17 49.4**	**+0.5**
IDAH	**Dahanechah**	**6.88**	**30**	*e*Pn	**Pn**	**02 17 52.4**	**+1.9**
IDAH				*e*		02 20 10.6	
	comp=Z,6μm,0.6s						
IDAH	**Dahanechah**	**6.88**	**30**	*e*Pn	**Pn**	**02 17 52.4**	**+1.9**
HRDDS		**6.94**	**237**	P	**Pn**	**02 17 53.0**	**+1.6**
KFJS		**7.11**	**283**	P	**Pn**	**02 17 53.9**	**+0.2**
KFJS		**7.11**	**283**	P	**Pn**	**02 17 53.9**	**+0.2**
IMON	**Monand**	**7.18**	**27**	*e*Pn	**Pn**	**02 17 56.4**	**+1.7**
IMON				*e*		02 20 15.3	
	comp=Z,2μm,0.6s						
IMON	**Monand**	**7.18**	**27**	*e*Pn	**Pn**	**02 17 56.4**	**+1.7**
IPIR	**Pirpir**	**7.23**	**325**	Pn	**Pn**	**02 17 56.1**	**+0.7**
IPIR	**Pirpir**	**7.23**	**325**	*e*Pn	**Pn**	**02 17 56.2**	**+0.8**
IPIR				*e*		02 18 01.5	
	comp=Z,3μm,0.1s						
IPIR	**Pirpir**	**7.23**	**325**	*e*Pn	**Pn**	**02 17 56.2**	**+0.8**
QRN	**Al-Qurain**	**7.24**	**287**	*e*Pn	**Pn**	**02 17 56.1**	**+0.6**
QRN				AML	AML	02 19 20.1	
	comp=Z,322nm,0.5s						
IKLH	**Kolahrood**	**7.44**	**332**	Pn	**Pn**	**02 17 58.3**	**+0.1**
IKLH	**Kolahrood**	**7.44**	**332**	*e*Pn	**Pn**	**02 17 58.4**	**+0.2**
IKLH				*e*		02 18 09.1	
	comp=Z,1μm,0.1s						
IKLH	**Kolahrood**	**7.44**	**332**	*e*Pn	**Pn**	**02 17 58.4**	**+0.2**
KBD	**Kabd**	**7.54**	**290**	*e*P	**Pn**	**02 18 00.5**	**+0.9**
KBD				AML	AML	02 19 24.2	
	comp=Z,127nm,0.3s						
KBD	**Kabd**	**7.54**	**290**	*e*P	**Pn**	**02 18 00.5**	**+0.9**
UMR	**Umm Al-Rimmam**	**7.63**	**293**	*e*P	**Pn**	**02 18 01.6**	**+0.7**
UMR				AML	AML	02 19 29.4	
	comp=Z,268nm,0.3s						
UMR	**Umm Al-Rimmam**	**7.63**	**293**	*e*P	**Pn**	**02 18 01.6**	**+0.7**
NAY	**Al-Naaiem**	**7.94**	**290**	*e*P	**Pn**	**02 18 05.8**	**+0.8**
NAY				AML	AML	02 19 35.0	
	comp=Z,87nm,0.7s						
**NAY

comp=N,2μm,0.2s
IVIS Veis 10.87 317 *e*Pn Pn 02 18 44.8 -0.5
IGHG Ghaleghazi 10.92 316 Pn Pn 02 18 44.8 -1.1
IGHG Ghaleghazi 10.92 316 *e*Pn Pn 02 18 44.8 -1.1
IGHG *e* 02 18 47.9
comp=Z,3μm,0.1s
IGHG Ghaleghazi 10.92 316 *e*Pn Pn 02 18 44.8 -1.1
ILIN Lien 11.08 319 Pn Pn 02 18 47.0 -1.1
ILIN Lien 11.08 319 *e*Pn Pn 02 18 47.1 -1.0
ILIN *e* 02 18 49.1
comp=Z,3μm,0.1s
ILIN Lien 11.08 319 *e*Pn Pn 02 18 47.1 -1.0
ABKT Ailbek 11.25 9 Pn Pn 02 18 52.2 +1.8
comp=Z,200nm,1.4s,SNR=12
IDHR Dehrash 11.27 316 Pn Pn 02 18 47.8 -3.0
IDHR Dehrash 11.27 316 *e*Pn Pn 02 18 48.3 -2.5
IDHR *e* 02 18 56.5
comp=Z,4μm,0.1s
IDHR Dehrash 11.27 316 *e*Pn Pn 02 18 48.3 -2.5
IHRS Heris 13.63 329 Pn Pn 02 19 22.0 -0.9
IHRS Heris 13.63 329 *e*Pn Pn 02 19 22.0 -0.9
IHRS *e* 02 20 10.2
comp=Z,754nm,0.6s
IAZR Azarshahr 13.64 325 *e*Pn Pn 02 19 23.1 +0.1
IAZR Azarshahr 13.64 325 *e*Pn Pn 02 19 23.1 +0.1
GRMI Germi 13.67 333 *e*Pn Pn 02 19 25.4 +1.8
GRMI Germi 13.67 333 *e*Pn Pn 02 19 25.4 +1.9
KBL Kabul 13.74 53 *e*Pn Pn 02 19 26.6 +2.0
KBL Kabul 13.74 53 *e*P Pn 02 19 26.6 +2.1
ITBZ Tabriz 13.98 327 *e*Pn Pn 02 19 26.9 -0.9
ITBZ Tabriz 13.98 327 *e*Pn Pn 02 19 26.9 -0.9
ISHB Shabestar 14.28 326 *e*Pn Pn 02 19 31.5 -0.4
ISHB *e* 02 20 28.3
comp=Z,354nm,0.4s
IMRD Marand 14.57 327 *e*Pn Pn 02 19 35.4 -0.4
IMRD Marand 14.57 327 *e*Pn Pn 02 19 35.4 -0.4
HAKT HAKKARI 14.80 319 *i*P Pn 02 19 34.1 -4.8
TVAN Van 15.64 321 *i*P Pn 02 19 48.6 -1.4
GNI Garni 16.16 328 Pn Pn 02 19 58.8 +2.0
comp=Z,1.4nm,0.3s,baz=103,slow=2.6,SNR=24
GNI Garni 16.16 328 *e*Pn Pn 02 19 57.5 +0.7
GNI Garni 16.16 328⇑ *e*P Pn 02 19 56.4 -0.4
GNI pmax pmax
comp=Z,231nm,1.7s
GNI Garni 16.16 328 *e*Pn Pn 02 19 57.5 +0.7
DYDN Diyadin 16.22 324 *i*P Pn 02 19 59.5 +2.0
DYDN Diyadin 16.22 324 *i*P Pn 02 19 59.5 +2.0
LBOS 16.23 220 *e*P Pn 02 19 54.0 -3.8
MARD Mardin 16.46 313 *i*P Pn 02 19 55.4 -5.2
BEST Besiri 16.49 316 *i*P Pn 02 19 58.1 -2.9
AJM Ajmer 16.85 87 *e*PKP Pn 02 20 04.0 -1.7
AJM *ex* x 02 23 04.0
DGRG David-gareji 16.93 332 P Pn 02 20 08.3 +1.7
BNGL BINGOL 17.23 318 *i*P Pn 02 20 12.4 +2.1
ASF Jabal al Asfar 17.29 292 P Pn 02 20 10.1 -1.0
comp=Z,1.8nm,0.3s,baz=296,slow=2.9,SNR=16
ASF Jabal al Asfar 17.29 292 P Pn 02 20 10.1 -1.1
MTA Mtatsminda 17.38 331 P Pn 02 20 13.1 +1.0
TRBA At Turbah 17.39 221 *e*P Pn 02 20 10.6 -2.0
TBLG Delisi 17.43 331 P Pn 02 20 14.4 +1.5
TBLG Delisi 17.43 331 P Pn 02 20 14.4 +1.6
TBLG Delisi 17.43 331 P Pn 02 20 14.4 +1.5
MAK Makhachkala 17.46 339 *e*P Pn 02 20 18.0 +4.8
HOMI Horasan 17.53 322 *i*P Pn 02 20 15.5 +1.4
ERZM Erzurum 17.73 321 *i*P Pn 02 20 17.5 +0.9
ERZM Erzurum 17.73 321 *i*P Pn 02 20 17.5 +0.9
KHET Khetri 17.81 81 *e*PKP Pn 02 20 15.0 -2.6
KHET AMb AMB 02 20 22.4
comp=Z,98nm,1.4s
GOR Gori 17.91 331 P Pn 02 20 21.2 +2.4
ATAB Bozova 18.20 310 *i*P Pn 02 20 22.0 -0.4
ATAB Bozova 18.20 310 *i*P Pn 02 20 22.0 -0.4
DDEM Demirkent 18.22 324 *i*P Pn 02 20 24.9 +2.4
DDEM Demirkent 18.22 324 *i*P Pn 02 20 24.9 +2.4
ELZG Elazig 18.30 314 *i*P Pn 02 20 24.6 +1.0
ELZG Elazig 18.30 314 *i*P Pn 02 20 24.6 +1.1
ARTV Artvin 18.34 325 *i*P Pn 02 20 24.6 +0.6
ARTV Artvin 18.34 325 *i*P Pn 02 20 24.6 +0.6
RCY Rachaya 18.49 296 *e*P Pn 02 20 26.5 +0.6
RCY Rachaya 18.49 296 *e*P Pn 02 20 26.5 +0.6
KSDI Kefar Szold 18.55 295 P Pn 02 20 26.8 +0.1
KSDI Kefar Szold 18.55 295 P Pn 02 20 26.8 +0.1
MALT Malatya 18.56 312 *e*P Pn 02 20 26.6 -0.1
comp=Z,115nm,1.2s
MALT Malatya 18.56 312 *e*P Pn 02 20 26.6 -0.1
MALT pmax pmax
comp=Z,115nm,1.2s
MALT Malatya 18.56 312 P Pn 02 20 27.6 +0.9
comp=Z,2μmcomp=Z,177nm,1.3s
MALT Malatya 18.56 312 *e*P Pn 02 20 26.6 -0.1
comp=Z,115nm,1.2s
MMLI Mount Malkishu 18.57 292 P Pn 02 20 27.7 +0.8
MMLI Mount Malkishu 18.57 292 P Pn 02 20 27.7 +0.8
BHK Bhakra 18.58 71 *ex* x 02 20 03.0
EIL Elat 18.58 284 P Pn 02 20 27.1 0.0
comp=Z,0.5nm,0.3s,baz=79,slow=4.7,SNR=27
EIL Elat 18.58 284 P Pn 02 20 27.1 0.0
HWQ Hawqa 18.63 298 *e*P Pn 02 20 27.8 +0.2
HWQ Hawqa 18.63 298 *e*P Pn 02 20 27.8 +0.2
ZEI Tsey 18.64 332 *e*P Pn 02 20 25.9 -1.8
ZEI pmax pmax
comp=Z,138nm,1.4s
ZEI Tsey 18.64 332 *e*P Pn 02 20 25.9 -1.8
comp=Z,138nm,1.4s
GZT Gaziantep 18.65 309 *i*P Pn 02 20 26.0 -1.9
MMAI Mount Meron Ar 18.71 294 P Pn 02 20 27.7 -1.0
comp=Z,2.5nm,0.3s,baz=98,slow=16,SNR=66
BHL Bhannes 18.75 297 *e*P Pn 02 20 29.5 +0.4
BHL Bhannes 18.75 297 *e*P Pn 02 20 29.5 +0.4
KKR Kurukshetra 18.76 75 *e*PKP Pn 02 20 27.9 -1.4
BHGR Bahadurgarh 18.80 79 *ex* x 02 19 12.5
AKCD Akcadag 18.88 312 *i*P Pn 02 20 31.5 +0.8
AKCD Akcadag 18.88 312 *i*P Pn 02 20 31.5 +0.8
SONA Sohna 18.93 81 *e*PKP Pn 02 20 30.2 -1.2
SONA AMb AMB 02 20 34.3
comp=Z,73nm,0.9s
AYAN Aya Nagar 18.97 80 *e*PKP Pn 02 20 29.1 -2.7
AYAN AMb AMB 02 20 35.1
comp=Z,104nm,1.4s
NDI New Delhi 19.05 79 *ex* x 02 21 30.0
SDNR Sundarnagar 19.06 71 *e*PKP Pn 02 20 31.5 -1.4
YAYL Yayladag 19.12 304 *i*P Pn 02 20 33.4 -0.2
YAYL Yayladag 19.12 304 *i*P Pn 02 20 33.4 -0.2
KZIT Kziot 19.18 287 P Pn 02 20 35.0 +0.7
KZIT Kziot 19.18 287 P Pn 02 20 35.0 +0.7
COBT Iskenderun 19.21 305 *i*P Pn 02 20 34.2 -0.4
COBT Iskenderun 19.21 305 *i*P Pn 02 20 34.2 -0.4
ATD Arta Tunnel 19.49 221 P Pn 02 20 39.0 +0.9
comp=Z,2.1nm,0.3s,baz=28,slow=24,SNR=15
ATD Arta Tunnel 19.49 221 P Pn 02 20 39.0 +0.9
SUSE Susehri 19.79 317 *i*P Pn 02 20 42.4 +0.9
SUSE Susehri 19.79 317 *i*P Pn 02 20 42.4 +0.9
DDI Dehra Dun 19.85 75 *e*PKP Pn 02 20 40.0 -2.4
DDI *ex* x 02 24 42.0
PINB Pinarbasi 20.10 311 *i*P P 02 20 45.5 +2.0
PINB Pinarbasi 20.10 311 *i*P P 02 20 45.5 +2.1
KIV Kislovodsk 20.12 332 *e*P P 02 20 44.8 +1.2
comp=Z,228nm,1.3s
KIV Kislovodsk 20.12 332α *i*P P 02 20 45.0 +1.4
KIV 02 21 02.4
KIV 02 24 59.0
KIV pmax pmax
comp=Z,270nm,1.2s
KIV Kislovodsk 20.12 332 Pn P 02 20 45.7 +2.1
comp=Z,1μm,1.2s,SNR=31
KIV Kislovodsk 20.12 332 *e*P P 02 20 44.8 +1.2
comp=Z,228nm,1.3s
KIV Kislovodsk 20.12 332 PcP PcP 02 24 59.0 +0.5
KLP Kalpa 20.15 71 *e*PKP P 02 20 43.5 -0.6
KLP AMb AMB 02 20 49.6
comp=Z,196nm,0.8s
KK31 Karatay Array 20.18 33 *i*P P 02 20 43.4 -0.9
KK31 pmax pmax
comp=Z,96nm,1.1s
KK31 Karatay Array 20.18 33 *i*P P 02 20 43.4 -0.9
comp=Z,96nm,1.1s
KKAR Karatay Array 20.18 33 *e*P P 02 20 43.4 -0.8
comp=Z,58nm,0.9s
KKAR Karatay Array 20.18 33 *e*P P 02 20 43.4 -0.9
KKAR pmax pmax
comp=Z,57nm,0.9s
KKAR Karatay Array 20.18 33 *e*P P 02 20 43.4 -0.9
comp=Z,57nm,0.9s

SCER sogukcermik 20.26 315 *i*P P 02 20 46.6 +1.5
SCER sogukcermik 20.26 315 *i*P P 02 20 46.6 +1.5
GULE Gulek 20.61 306 *i*P P 02 20 50.9 +2.0
GULE Gulek 20.61 306 *i*P P 02 20 50.9 +2.0
CSS Prodhromos 20.89 298 P P 02 20 52.8 +0.8
comp=Z,2.0nm,1.1s
CSS Prodhromos 20.89 298 P P 02 20 52.8 +0.8
comp=Z,2.0nm,1.1s
MAMC Mammari 21.04 299 P P 02 20 55.2 +1.6
MAMC Mammari 21.04 299 P P 02 20 55.2 +1.6
KSH Kashi 21.05 48 *e*P P 02 20 46.5 -7.2
KSH *e*PP 02 21 05.7
KSH *e*S S 02 24 25.3 -23
KSH pmax pmax
comp=Z,51nm,1.0s,mb4.8
KSH LR LR
comp=N,3μm,11.2s,MS5.1
KSH LR LR
comp=E,4μm,13.8s,MS5.1
KSH LR LR
comp=Z,5μm,13.1s,MS5.1
JOSI Joshimath 21.16 74 *e*PKP P 02 20 53.9 -1.1
JOSI AMb AMB 02 21 00.8
comp=Z,781nm,2.0s,mb5.7
AML Almayashu 21.17 39 P P 02 20 54.5 -0.5
SNR=53
AML Almayashu 21.17 39 *e*P P 02 20 54.4 -0.6
comp=Z,78nm,0.8s,mb5.1
AML Almayashu 21.17 39 *e*P P 02 20 54.4 -0.6
comp=Z,78nm,0.8s,mb5.1
SOC Sochi 21.21 326 *e*P P 02 20 54.1 -1.3
SOC *e* 02 21 09.9
SOC *e* 02 21 20.0
SOC pmax pmax
comp=Z,110nm,1.1s,mb5.1
SOC Sochi 21.21 326 *e*P P 02 20 54.1 -1.3
comp=Z,110nm,1.1s,mb5.1
AVNT Avonos 21.21 309 *i*P P 02 20 56.6 +1.2
AVNT Avonos 21.21 309 *i*P P 02 20 56.7 +1.3
ALFC Alevga 21.52 298 P P 02 20 59.4 +0.6
comp=Z,1.1nm,0.7s
ALFC Alevga 21.52 298 P P 02 20 59.4 +0.6
comp=Z,1.1nm,0.7s
EKS2 Erkin-Say 21.56 38 P P 02 20 58.9 -0.3
SNR=71
EKS2 Erkin-Say 21.56 38 *e*P P 02 20 58.9 -0.3
comp=Z,117nm,1.0s,mb5.3
EKS2 Erkin-Say 21.56 38 *e*P P 02 20 58.9 -0.3
comp=Z,117nm,1.0s,mb5.3
PPCY Paphos 21.65 298 P P 02 21 00.8 +0.6
PPCY Paphos 21.65 298 P P 02 21 00.8 +0.6
ERMK Ermenek 21.74 302 *i*P P 02 20 58.7 -2.5
CDAG Cicekdag 21.94 311 *i*P P 02 21 03.5 +0.2
CDAG Cicekdag 21.94 311 *i*P P 02 21 03.5 +0.2
AAK Ala-Archa 21.95 39 P P 02 21 03.5 +0.2
SNR=41
AAK Ala-Archa 21.95 39 P P 02 21 03.8 +0.5
comp=Z,34nm,0.8s,mb4.8,baz=218,slow=6.5,SNR=50
AAK Ala-Archa 21.95 39 *e*P P 02 21 03.3 0.0
comp=Z,121nm,1.2s,mb5.2
AAK Ala-Archa 21.95 39 *e*P P 02 21 03.3 0.0
AAK pmax pmax
comp=Z,121nm,1.2s,mb5.2
AAK Ala-Archa 21.95 39 P P 02 21 03.7 +0.4
comp=Z,507nm,1.0s,mb5.9,SNR=35
AAK Ala-Archa 21.95 39 *e*P P 02 21 03.3 0.0
comp=Z,121nm,1.2s,mb5.2
KZA Kyzart 22.04 41 P P 02 21 05.6 +1.3
SNR=28
KZA Kyzart 22.04 41 *e*P P 02 21 04.0 -0.3
comp=Z,168nm,1.0s,mb5.4
KZA Kyzart 22.04 41 *e*P P 02 21 04.0 -0.3
comp=Z,168nm,1.0s,mb5.4
FRU Bishkek 22.14 39 *e*P P 02 21 04.0 -1.4
FRU pmax pmax
comp=Z,200nm,2.0s,mb5.2
FRU Bishkek 22.14 39 *e*P P 02 21 04.0 -1.4
comp=Z,200nm,2.0s,mb5.2
CTKT Corum 22.17 314 *i*P P 02 21 06.5 +0.8
CTKT Corum 22.17 314 *i*P P 02 21 06.5 +0.8
KBK Karagaybulak 22.22 40 P P 02 21 09.3 +3.1
SNR=9.2
CHMS Chumysh 22.33 39 P P 02 21 09.7 +2.3
SNR=18
USP Ospenovka 22.36 38 P P 02 21 09.5 +1.7
SNR=38
BR131 Keskin Array S 22.49 310 *e*P P 02 21 08.5 -0.6
comp=Z,54nm,1.1s,mb4.9
BR131 Keskin Array S 22.49 310 *e*P P 02 21 08.5 -0.6
comp=Z,54nm,1.1s,mb4.9
BRTR Keskin Array B 22.49 310 P P 02 21 09.8 +0.7
comp=Z,30nm,0.9s,mb4.7,baz=126,slow=12,SNR=55
BRTR PcP PcP 02 25 01.5 -1.7
comp=Z,2.5nm,0.7s,baz=134,slow=6.2,SNR=6.0
BRTR ScP ScP 02 28 40.4 -0.5
comp=Z,1.4nm,0.8s,baz=140,slow=4.4,SNR=5.4
BRTR Keskin Array B 22.49 310 P P 02 21 09.9 +0.8
BRTR 02 25 01.5
BRTR Keskin Array B 22.49 310 P P 02 21 09.9 +0.8
BRTR Keskin Array B 22.49 310 PcP PcP 02 25 01.5 -1.7
AB31 Akbulak array 22.63 7 *i*P P 02 21 09.0 -1.5
AB31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.2
AB31 Akbulak array 22.63 7 *i*P P 02 21 09.0 -1.5
comp=Z,4.0nm,0.4s,mb4.2
ULHL Ulahol 22.73 42 P P 02 21 12.2 +0.6
SNR=34
TKM2 Tokmak 2 22.76 40 P P 02 21 11.2 -0.8
SNR=33
TKM2 Tokmak 2 22.76 40 *e*P P 02 21 10.9 -1.1
comp=Z,53nm,1.1s,mb4.9
TKM2 Tokmak 2 22.76 40 *e*P P 02 21 10.9 -1.0
TKM2 pmax pmax
comp=Z,53nm,1.1s,mb4.9
TKM2 Tokmak 2 22.76 40 *e*P P 02 21 10.9 -1.0
comp=Z,53nm,1.1s,mb4.9
KDHN Kadinhani 23.03 306 *i*P P 02 21 17.2 +2.3
KDHN Kadinhani 23.03 306 *i*P P 02 21 17.2 +2.3
HYB Hyderabad 23.03 109 *i*P P 02 21 17.0 +1.9
ILGA Ilgaz 23.09 314 *i*P P 02 21 17.0 +1.5
ILGA Ilgaz 23.09 314 *i*P P 02 21 17.0 +1.5
ANN Anapa 23.23 325 *e*P P 02 21 16.3 -0.6
ANN *e*S S 02 25 29.2 +0.6
ANN pmax pmax
comp=Z,59nm,1.0s,mb5.0
ANN Anapa 23.23 325 *e*P P 02 21 16.3 -0.6
comp=Z,59nm,1.0s,mb5.0
ANN *e*S S 02 25 29.2 +0.6
BALT Daday 23.55 314 *i*P P 02 21 19.1 -1.3
BALT Daday 23.55 314 *i*P P 02 21 19.1 -1.2
AKTK Aktyubinsk 23.64 4 P P 02 21 20.8 -0.2
AKTK Aktyubinsk 23.64 4 P P 02 21 20.8 -0.2
AKTO Aktyubinsk 23.64 4 P P 02 21 20.8 -0.2
comp=Z,16nm,0.7s,mb4.5,baz=187,slow=9.4,SNR=63
AKTO Aktyubinsk 23.64 4 P P 02 21 20.8 -0.2
SGKT Sivrigoynuk 23.95 311 *i*P P 02 21 23.2 -0.8
SGKT Sivrigoynuk 23.95 311 *i*P P 02 21 23.2 -0.8
AKAS Kas 24.16 299 *i*P P 02 21 26.3 +0.4
AKAS Kas 24.16 299 *i*P P 02 21 26.3 +0.4
ESKT Eskisehir 24.33 308 *i*P P 02 21 27.1 -0.4
SEYT Eskypehyr 24.33 308 *i*P P 02 21 27.1 -0.4
GOLH Golhisar 24.48 302 *i*P P 02 21 28.6 -0.2
GOLH Golhisar 24.48 302 *i*P P 02 21 28.6 -0.2
KOLN Koldanda 24.71 81 *e*P P 02 21 33.0 +2.0
comp=Z,98nm,1.1s,mb5.3
DANN Dangsing 24.81 80 *e*P P 02 21 33.7 +1.7
comp=Z,281nm,0.9s,mb5.8
KHAL Karahalli 24.89 304 *i*P P 02 21 32.3 -0.3
KHAL Karahalli 24.89 304 *i*P P 02 21 32.3 -0.3
SIM Simferopol' 25.09 322 *e*P P 02 21 33.9 -0.4
SIM pmax pmax
comp=Z,48nm,1.0s,mb5.0
SIM Simferopol' 25.09 322 *e*P P 02 21 33.9 -0.4
comp=Z,48nm,1.0s,mb5.0
TURN Turunc 25.11 300 *i*P P 02 21 37.0 +2.5
ARG Arkhangelos 25.31 299 P P 02 21 38.1 +1.7
ARG Arkhangelos 25.31 299 P P 02 21 38.1 +1.7
ARG Arkhangelos 25.31 299 P P 02 21 38.1 +1.7
GKN Gorkha 25.61 81 *e*P P 02 21 39.9 +0.7
comp=Z,229nm,1.4s,mb5.5
DEMI Demirci 25.69 305 *i*P P 02 21 40.3 +0.5
DEMI Demirci 25.69 305 *i*P P 02 21 40.3 +0.5
ULDT Uludag 25.79 308 *i*P P 02 21 40.0 -0.7
ULDT Uludag 25.79 308 *i*P P 02 21 40.0 -0.7
DMN Daman 26.05 82 *e*P P 02 21 43.9 +0.7

BDRM Kayabasi 26.05 300 *i*P P 02 21 42.1 -1.0
BDRM Kayabasi 26.05 300 *i*P P 02 21 42.1 -1.0
PKIN Phulchoki 26.31 82 *e*P P 02 21 46.5 +0.9
comp=Z,54nm,0.9s,mb5.1
PKI Pulchoki 26.32 82 *e*P P 02 21 46.3 +0.6
comp=Z,171nm,1.4s,mb5.4
VRHR Novokhopersk 26.54 340 *e*P P 02 21 47.4 +0.1
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb4.7
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR Novokhopersk 26.54 340 *e*P P 02 21 47.4 +0.1
comp=E,10.0nm,0.4s,mb4.7
KDAG Bornova 26.56 303 *i*P P 02 21 47.9 +0.1
KDAG Bornova 26.56 303 *i*P P 02 21 47.8 +0.1
GUN Gumba 26.71 81 *e*P P 02 21 49.9 +0.7
comp=E,116nm,0.8s,mb5.4
VORD Divnogorie 27.20 337 *e*P P 02 21 52.0 -1.3
VORD pmax pmax
comp=Z,9.0nm,0.8s,mb4.3
VORD pmax pmax
comp=N,3.0nm,0.4s
VORD pmax pmax
comp=E,20nm,0.8s
VORD Divnogorie 27.20 337 *e*P P 02 21 52.0 -1.3
comp=E,3.0nm,0.4s,mb4.2
VSR Storozhevoye 27.45 337 *e*P P 02 21 54.8 -0.7
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s,mb4.7
VSR MLR MLR
comp=N,1μm,18.0s,MS4.6
VSR MLR MLR
comp=E,540nm,18.0s,MS4.6
VSR MLR MLR
comp=Z,3μm,18.0s,MS4.9
VSR Storozhevoye 27.45 337 *e*P P 02 21 54.8 -0.7
ALN Alexandroupoli 28.26 307 P P 02 22 03.4 +0.5
ALN Alexandroupoli 28.26 307 P P 02 22 03.4 +0.5
ALN Alexandroupoli 28.26 307 P P 02 22 03.4 +0.5
VOSK Vostochnaya 28.26 20 P P 02 22 01.8 -1.0
VOSK pmax pmax
comp=Z,32nm,1.0s,mb4.9
VOSK Vostochnaya 28.26 20 P P 02 22 01.8 -1.0
comp=Z,32nm,1.0s,mb4.9
BRVK Borovoye 28.35 19 *e*P P 02 22 02.8 -0.8
comp=Z,18nm,0.8s,mb4.8
BRVK Borovoye 28.35 19 *c i*P P 02 22 02.7 -0.9
BRVK pmax pmax
comp=Z,54nm,1.7s,mb4.9
BRVK Borovoye 28.35 19 P P 02 22 03.8 +0.2
comp=Z,156nm,1.2s,mb5.5,SNR=14
BRVK Borovoye 28.35 19 *i*P P 02 22 02.7 -0.9
comp=Z,54nm,1.7s,mb4.9
BVAR Borovoye Array 28.35 19 P P 02 22 03.0 -0.6
comp=Z,34nm,0.8s,mb5.0,baz=201,slow=7.9,SNR=137
BVAR PcP PcP 02 25 16.1 0.0
comp=Z,2.6nm,0.6s,baz=205,slow=2.9,SNR=6.1
BVAR Borovoye Array 28.35 19 P P 02 22 03.0 -0.6
BVAR 02 25 16.1
BVAR Borovoye Array 28.35 19 P P 02 22 03.0 -0.6
BVAR Borovoye Array 28.35 19 PcP PcP 02 25 16.1 0.0
TAPN Taplejung 28.38 82 *e*P P 02 22 04.1 -0.1
MK31 Makanchi Array 28.89 39 *e*P P 02 22 07.7 -0.7
MK31 Makanchi Array 28.89 39 *i*P P 02 22 07.9 -0.5
MK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
MK31 Makanchi Array 28.89 39 *e*P P 02 22 07.7 -0.7
MKAR Makanchi Array 28.89 39 P P 02 22 08.0 -0.4
comp=Z,5.7nm,0.8s,mb4.4,baz=224,slow=8.5,SNR=39
MKAR Makanchi Array 28.89 39 P P 02 22 08.0 -0.4
KIS Kishinev 29.28 321 *e*P P 02 22 10.5 -1.4
KIS *e* 02 22 23.0
KIS *e* 02 23 09.0
KIS *e* 02 23 19.0
KIS Kishinev 29.28 321 *e*P P 02 22 10.5 -1.4
KURK Kurchatov 29.54 30 *e*P P 02 22 13.7 -0.4
comp=Z,10nm,0.7s,mb4.7
KURK Kurchatov 29.54 30⇑ *i*P P 02 22 13.6 -0.5
KURK pmax pmax
comp=Z,39nm,1.7s,mb4.9
KURK Kurchatov 29.54 30 *i*P P 02 22 13.6 -0.5
comp=Z,39nm,1.7s,mb4.9
SULR 29.64 315⇓ *i*P P 02 22 16.7 +1.5
SULR 29.64 315⇓ *i*P P 02 22 16.7 +1.5
ARU Arti 29.66 3 *e*P P 02 22 14.4 -0.7
comp=Z,5.0nm,0.8s,mb4.3
ARU Arti 29.66 3 *d i*P P 02 22 14.7 -0.4
ARU *e* 02 23 10.3
ARU S S 02 27 11.5 +1.0
ARU SS SS 02 28 43.5 -33
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.5
ARU Arti 29.66 3 *e*P P 02 22 14.4 -0.7
comp=Z,5.0nm,0.8s,mb4.3
ARU S S 02 27 11.5 +1.0
VRI Vrincioaia 29.91 317 P P 02 22 18.7 +1.2
VRI Vrincioaia 29.91 317 ⇑P P 02 22 18.0 +0.5
VRI Vrincioaia 29.91 317 ⇑ *i*P P 02 22 18.0 +0.5
VRI Vrincioaia 29.91 317 P P 02 22 18.0 +0.5
PLOR Plostina 29.95 317 ⇓P P 02 22 18.7 +0.8
PLOR Plostina 29.95 317 ⇓ *i*P P 02 22 18.7 +0.8
PLOR Plostina 29.95 317 P P 02 22 18.7 +0.8
PLG Polygyros 29.97 305 P P 02 22 18.9 +0.8
PLG Polygyros 29.97 305 P P 02 22 18.9 +0.8
SRS Serrai 30.08 307 P P 02 22 19.3 +0.2
SRS Serrai 30.08 307 P P 02 22 19.3 +0.2
SRS Serrai 30.08 307 P P 02 22 19.7 +0.6
SRS Serrai 30.08 307 P P 02 22 19.3 +0.2
SOH Sokhos 30.16 306 P P 02 22 20.5 +0.6
SOH Sokhos 30.16 306 P P 02 22 20.5 +0.6
SOH Sokhos 30.16 306 P P 02 22 20.5 +0.6
SOH Sokhos 30.16 306 P P 02 22 20.5 +0.6
GUR Goura 30.20 300 P P 02 22 20.3 +0.1
GUR Goura 30.20 300 P P 02 22 20.3 +0.1
MLR Muntele Rosu 30.21 316 P P 02 22 22.6 +2.4
MLR Muntele Rosu 30.21 316 ⇑P P 02 22 23.1 +2.9
MLR Muntele Rosu 30.21 316 ⇑ *i*P P 02 22 23.0 +2.8
MLR Muntele Rosu 30.21 316 P P 02 22 22.6 +2.4
TESR 30.28 318 ⇓ *i*P P 02 22 20.6 -0.2
TESR 30.28 318 ⇓ *i*P P 02 22 20.6 -0.2
HORT Hortiatis 30.28 305 P P 02 22 21.6 +0.7
HORT Hortiatis 30.28 305 P P 02 22 21.6 +0.7
THE Thessaloniki 30.39 305 P P 02 22 22.4 +0.5
THE Thessaloniki 30.39 305 P P 02 22 22.4 +0.5
THE Thessaloniki 30.39 305 P P 02 22 22.4 +0.5
AGG Agios Georgios 30.45 302 P P 02 22 22.2 -0.2
AGG Agios Georgios 30.45 302 P P 02 22 22.2 -0.2
AGG Agios Georgios 30.45 302 P P 02 22 22.2 -0.2
KALE Kalithea 30.45 301 P P 02 22 22.4 0.0
KALE Kalithea 30.45 301 P P 02 22 22.4 0.0
KNT Kendrikon 30.60 306 P P 02 22 24.2 +0.5
KNT Kendrikon 30.60 306 P P 02 22 24.2 +0.5
KNT Kendrikon 30.60 306 P P 02 22 23.7 0.0
KNT Kendrikon 30.60 306 P P 02 22 23.7 0.0
VOIR 30.75 315 P P 02 22 25.6 +0.7
VOIR 30.75 315 P P 02 22 25.6 +0.7
VOIR 30.75 315 ⇓ *i*P P 02 22 25.6 +0.7
VOIR 30.75 315 P P 02 22 25.6 +0.7
DOPR Dopca 30.78 316 ⇑P P 02 22 25.5 +0.3
DOPR Dopca 30.78 316 ⇑ *i*P P 02 22 25.5 +0.3
VAY Valandovo 30.88 306 P P 02 22 26.8 +0.6
VAY Valandovo 30.88 306 P P 02 22 26.8 +0.6
VAY Valandovo 30.88 306 *e*P P 02 22 25.3 -0.9
VAY Valandovo 30.88 306 P P 02 22 26.8 +0.6
GRG Griva 30.89 306 P P 02 22 26.4 +0.1
GRG Griva 30.89 306 P P 02 22 26.4 +0.1
GRG Griva 30.89 306 P P 02 22 26.6 +0.3
GRG Griva 30.89 306 P P 02 22 26.4 +0.1
LSA Lhasa 31.20 76 P P 02 22 30.9 +1.8
LSA Lhasa 31.20 76 *e*P P 02 22 31.0 +1.9
comp=Z,25nm,1.3s,mb4.9
LSA Lhasa 31.20 76 *e*P P 02 22 31.0 +1.9
LSA pmax pmax
comp=Z,25nm,1.3s,mb4.9
KFL Anninata 31.44 300 P P 02 22 30.8 -0.3
KFL Anninata 31.44 300 P P 02 22 30.8 -0.3
MDB Medias 31.48 316 P P 02 22 32.9 +1.5

MDB	**Medias**	**31.48 316**	P	**P**	**02 22 32.9**	**+1.5**
MDB	**Medias**	**31.48 316**	P	**P**	**02 22 32.9**	**+1.5**
OBN	**Obninsk**	**31.56 339**	*e*P	**P**	**02 22 31.4**	**-0.5**
	comp=Z,28nm,1.0s,mb5.0					
OBN			*e*PcP	PcP	02 25 23.6	-0.8
OBN	**Obninsk**	**31.56 339**	*oe*P	**P**	**02 22 31.5**	**-0.5**
OBN			*e*		02 22 40.3	
OBN					02 23 36.0	
OBN			*e*		02 25 24.3	
OBN			pmax	pmax		
	comp=Z,68nm,1.7s,mb5.2					
OBN			MLR	MLR		
	comp=Z,2μm,17.0s,MS4.9					
OBN	**Obninsk**	**31.56 339**	*e*P	**P**	**02 22 31.5**	**-0.5**
	comp=Z,68nm,1.7s,mb5.2					
FNA	**Florina**	**31.59 305**	P	**P**	**02 22 32.5**	**0.0**
FNA	**Florina**	**31.59 305**	P	**P**	**02 22 32.5**	**0.0**
FNA	**Florina**	**31.59 305**	P	**P**	**02 22 33.2**	**+0.7**
FNA	**Florina**	**31.59 305**	P	**P**	**02 22 32.5**	**0.0**
BURAR	**Bucovina Array**	**31.68 319**	P	**P**	**02 22 33.3**	**+0.2**
BURAR	**Bucovina Array**	**31.68 319** ⇑P		**P**	**02 22 33.1**	**0.0**
BURAR	**Bucovina Array**	**31.68 319** ⇑P		**P**	**02 22 33.1**	**0.0**
BURAR	**Bucovina Array**	**31.68 319** ⇑*i*P		**P**	**02 22 33.1**	**0.0**
BIA	**Bitola**	**31.70 305**	P	**P**	**02 22 34.8**	**+1.4**
BIA	**Bitola**	**31.70 305**	*e*P	**P**	**02 22 32.4**	**-1.0**
BIA	**Bitola**	**31.70 305**	P	**P**	**02 22 34.8**	**+1.4**
NEST	**Nestorio**	**31.74 304**	P	**P**	**02 22 33.8**	**0.0**
NEST	**Nestorio**	**31.74 304**	P	**P**	**02 22 33.8**	**0.0**
MOS	**Moscow**	**31.75 340**	*e*P	**P**	**02 22 33.2**	**-0.5**
MOS			*e*		02 22 50.1	
MOS			*e*		02 23 46.8	
MOS			pmax	pmax		
	comp=Z,67nm,1.0s,mb5.4					
MOS	**Moscow**	**31.75 340**	*e*P	**P**	**02 22 33.2**	**-0.5**
	comp=Z,67nm,1.0s,mb5.4					
KRUS	**Krusevo**	**31.85 306**	*e*P	**P**	**02 22 34.3**	**-0.4**
BARS	**Barje**	**31.88 309**	P	**P**	**02 22 34.6**	**-0.4**
BARS	**Barje**	**31.88 309**	P	**P**	**02 22 34.6**	**-0.4**
SKO	**Skopje**	**31.88 307**	*e*P	**P**	**02 22 35.2**	**+0.2**
DJES	**Djerdap**	**32.06 312**	P	**P**	**02 22 37.0**	**+0.5**
BOLS	**Boljevac**	**32.13 311** ⇑*i*P		**P**	**02 22 36.5**	**-0.6**
GZR	**Gura Zlata**	**32.18 314**	P	**P**	**02 22 37.9**	**+0.4**
GZR	**Gura Zlata**	**32.18 314** ⇓*i*P		**P**	**02 22 37.2**	**-0.3**
GZR	**Gura Zlata**	**32.18 314** ⇓*i*P		**P**	**02 22 37.2**	**-0.3**
SHL	**Shillong**	**32.34 84**	*ex*	x	02 22 35.0	
BMR	**Baia Mare**	**32.73 318**	P	**P**	**02 22 43.1**	**+0.8**
BMR	**Baia Mare**	**32.73 318** ⇓P		**P**	**02 22 43.0**	**+0.7**
BMR	**Baia Mare**	**32.73 318** ⇓*i*P		**P**	**02 22 43.0**	**+0.7**
BMR	**Baia Mare**	**32.73 318**	P	**P**	**02 22 43.0**	**+0.7**
SOKR	**Solikamsk**	**32.74 1** ⇓*i*P		**P**	**02 22 43.1**	**+0.8**
SOKR			pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8					
SOKR	**Solikamsk**	**32.74 1** *i*P		**P**	**02 22 43.1**	**+0.8**
	comp=Z,10.0nm,0.7s,mb4.8					
SVIS	**Svilajnac**	**32.78 311**	*e*P	**P**	**02 22 42.8**	**0.0**
DRGR		**32.81 316**	P	**P**	**02 22 43.2**	**+0.2**
DRGR		**32.81 316** ⇑P		**P**	**02 22 43.6**	**+0.6**
DRGR		**32.81 316** ⇑*i*P		**P**	**02 22 43.6**	**+0.6**
DRGR		**32.81 316**	P	**P**	**02 22 43.2**	**+0.2**
TIR	**Tirane**	**32.84 305**	P	**P**	**02 22 45.5**	**+2.1**
TIR	**Tirane**	**32.84 305**	P	**P**	**02 22 45.5**	**+2.1**
TIR	**Tirane**	**32.84 305**	P	**P**	**02 22 45.5**	**+2.1**
GRUS	**Gruza**	**32.99 310**	*e*P	**P**	**02 22 42.5**	**-2.2**
BZS	**Buzias**	**33.01 314**	P	**P**	**02 22 45.0**	**+0.1**
BZS	**Buzias**	**33.01 314**	P	**P**	**02 22 45.0**	**+0.1**
BZS	**Buzias**	**33.01 314** ⇓*i*P		**P**	**02 22 45.0**	**+0.1**
BZS	**Buzias**	**33.01 314**	P	**P**	**02 22 45.0**	**+0.1**
KMBO	**Kilima Mbogo**	**33.04 216**	P	**P**	**02 22 47.5**	**+2.1**
	comp=Z,14nm,1.1s,mb4.8,baz=179,slow=24,SNR=17					
KMBO	**Kilima Mbogo**	**33.04 216**	*e*P	**P**	**02 22 46.3**	**+1.0**
	comp=Z,9.6nm,1.0s,mb4.7					
KMBO	**Kilima Mbogo**	**33.04 216**	*e*P	**P**	**02 22 46.3**	**+1.0**
KMBO			pmax	pmax		
	comp=Z,10.0nm,1.0s					
KMBO	**Kilima Mbogo**	**33.04 216**	*e*P	**P**	**02 22 46.3**	**+1.0**
	comp=Z,10.0nm,1.0s,mb4.7					
TRUS	**Trudelj**	**33.31 311**	*e*P	**P**	**02 22 46.3**	**-1.2**
ULC	**Ulcinj**	**33.45 306**	P	**P**	**02 22 48.0**	**-0.7**
ULC	**Ulcinj**	**33.45 306**	P	**P**	**02 22 48.0**	**-0.7**
ULC	**Ulcinj**	**33.45 306**	P	**P**	**02 22 48.0**	**-0.7**
TRPA	**Tarpa**	**33.51 318** ⇑*i*P		**P**	**02 22 49.3**	**+0.1**
TRPA	**Tarpa**	**33.51 318** ⇑*i*P		**P**	**02 22 49.3**	**+0.1**
DIVS	**Divibare**	**33.55 310** ⇑*i*P		**P**	**02 22 48.9**	**-0.7**
TTG	**Podgorica**	**33.56 307**	P	**P**	**02 22 49.0**	**-0.7**
TTG	**Podgorica**	**33.56 307**	P	**P**	**02 22 49.0**	**-0.7**
TTG	**Podgorica**	**33.56 307**	P	**P**	**02 22 49.0**	**-0.7**
BUM	**Brajici-Budva**	**33.79 307**	P	**P**	**02 22 51.0**	**-0.7**
BUM	**Brajici-Budva**	**33.79 307**	P	**P**	**02 22 51.0**	**-0.7**
BBLS	**Lazići**	**33.88 310**	P	**P**	**02 22 52.5**	**+0.1**
BBLS	**Lazići**	**33.88 310** ⇑*i*P		**P**	**02 22 52.1**	**-0.3**
UZH	**Uzhgorod**	**33.89 319** ⇓*i*P		**P**	**02 22 51.7**	**-0.7**
UZH			*e*		02 23 05.9	
UZH	**Uzhgorod**	**33.89 319** *i*P		**P**	**02 22 51.7**	**-0.7**
FRGS	**Fruska Gora**	**34.03 312** ⇑*i*P		**P**	**02 22 53.5**	**-0.2**
KOLS	**Kolonicke sedl**	**34.04 319** *e*P		**P**	**02 22 54.5**	**+0.7**
	comp=Z,81nm,1.2s,mb5.5					
KOLS	**Kolonicke sedl**	**34.04 319** *e*P		**P**	**02 22 54.5**	**+0.7**
KOLS			pmax	pmax		
	comp=Z,81nm,1.2s,mb5.5					
KOLS	**Kolonicke sedl**	**34.04 319** *e*P		**P**	**02 22 54.5**	**+0.7**
KOLS	**Kolonicke sedl**	**34.04 319** *e*P		**P**	**02 22 54.5**	**+0.7**
	comp=Z,81nm,1.2s,mb5.5					
KWP	**Kalwaria Pacla**	**34.13 321** *e*P		**P**	**02 22 54.4**	**-0.2**
KWP	**Kalwaria Pacla**	**34.13 321** *e*P		**P**	**02 22 53.9**	**-0.6**
	comp=Z,28nm,1.0s,mb5.2					
KWP	**Kalwaria Pacla**	**34.13 321** ⇑P		**P**	**02 22 54.5**	**0.0**
KWP	**Kalwaria Pacla**	**34.13 321** ⇑*i*P		**P**	**02 22 54.5**	**0.0**
KWP	**Kalwaria Pacla**	**34.13 321** *e*P		**P**	**02 22 53.9**	**-0.6**
	comp=Z,28nm,1.0s,mb5.2					
BRY	**Bratogost**	**34.20 308**	P	**P**	**02 22 54.0**	**-1.2**
BRY	**Bratogost**	**34.20 308**	P	**P**	**02 22 54.0**	**-1.2**
BRY	**Bratogost**	**34.20 308**	P	**P**	**02 22 54.0**	**-1.2**
MICGM	**Minsk**	**34.40 331** ⇓*e*P		**P**	**02 22 54.0**	**-2.8**
MNK	**Minsk**	**34.42 331** ⇓*e*P		**P**	**02 22 54.0**	**-3.0**
NVS	**Novosibirsk**	**34.43 28** *e*P		**P**	**02 22 55.3**	**-1.7**
NVS			*e*S	**S**	**02 28 22.5**	**-2.4**
NVS			pmax	pmax		
	comp=Z,79nm,2.0s,mb5.3					
NVS			pmax	pmax		
	comp=N,35nm,1.7s					
NVS			smax			
	comp=N,12nm,1.6s					
NVS	**Novosibirsk**	**34.43 28** *e*P		**P**	**02 22 55.3**	**-1.7**
	comp=N,35nm,1.7s,mb5.0					
NVS			*e*S	**S**	**02 28 22.5**	**-2.4**
	comp=N,12nm,1.6s					
CRVS	**Cervenica-Dubn**	**34.50 319** *e*P		**P**	**02 22 57.8**	**+0.1**
	comp=N,26nm,1.1s,mb5.1					
CRVS	**Cervenica-Dubn**	**34.50 319** *e*P		**P**	**02 22 57.8**	**+0.1**
CRVS			pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1					
CRVS	**Cervenica-Dubn**	**34.50 319** *e*P		**P**	**02 22 57.8**	**+0.1**
CRVS	**Cervenica-Dubn**	**34.50 319** *e*P		**P**	**02 22 57.8**	**+0.1**
	comp=Z,26nm,1.1s,mb5.1					
ZALV	**Zalesovo Beam**	**34.52 30** P		**P**	**02 22 56.8**	**-1.1**
	comp=Z,36nm,0.6s,mb5.5,baz=240,slow=9.0,SNR=116					
ZALV	**Zalesovo Beam**	**34.52 30** P		**P**	**02 22 56.8**	**-1.1**
STON	**Ston**	**34.79 307** P		**P**	**02 22 57.2**	**-3.1**
KECS	**Kecovo**	**34.90 318** *e*P		**P**	**02 23 01.3**	**+0.1**
	comp=Z,27nm,1.1s,mb5.1					
KECS	**Kecovo**	**34.90 318** *e*P		**P**	**02 23 01.3**	**+0.1**
KECS			pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1					
KECS	**Kecovo**	**34.90 318** *e*P		**P**	**02 23 01.3**	**+0.1**
PKS2	**Kecel**	**34.90 314** ⇓*e*P		**P**	**02 23 01.8**	**+0.6**
GRI	**Girifalco**	**34.94 300** P		**P**	**02 23 02.4**	**+0.7**
GRI	**Girifalco**	**34.94 300** P		**P**	**02 23 02.4**	**+0.7**
GRI	**Girifalco**	**34.94 300** P		**P**	**02 23 02.4**	**+0.7**
PSZ	**Piszkesteto**	**35.02 317** *e*P		**P**	**02 23 01.8**	**-0.4**
	comp=Z,24nm,1.1s,mb5.0					
PSZ	**Piszkesteto**	**35.02 317** ⇓P		**P**	**02 23 02.8**	**+0.6**
PSZ	**Piszkesteto**	**35.02 317** ⇓*i*P		**P**	**02 23 02.8**	**+0.6**
PSZ	**Piszkesteto**	**35.02 317** ⇑*e*P		**P**	**02 23 02.0**	**-0.2**
PSZ	**Piszkesteto**	**35.02 317** *e*P		**P**	**02 23 01.8**	**-0.4**
	comp=Z,24nm,1.1s,mb5.0					
ORI	**Oriolo Calabro**	**35.11 302** P		**P**	**02 23 03.7**	**+0.6**
ORI	**Oriolo Calabro**	**35.11 302** P		**P**	**02 23 03.7**	**+0.6**
ORI	**Oriolo Calabro**	**35.11 302** P		**P**	**02 23 03.7**	**+0.6**
SOI	**Samo**	**35.12 299** P		**P**	**02 23 04.6**	**+1.3**
SOI	**Samo**	**35.12 299** P		**P**	**02 23 04.6**	**+1.3**
SOI	**Samo**	**35.12 299** P		**P**	**02 23 04.6**	**+1.3**
PKSM	**Moragy**	**35.16 313** P		**P**	**02 23 03.2**	**-0.3**
PKSM	**Moragy**	**35.16 313** ⇓P		**P**	**02 23 03.6**	**+0.1**
PKSM	**Moragy**	**35.16 313** ⇓*i*P		**P**	**02 23 03.6**	**+0.1**
PKSM	**Moragy**	**35.16 313** P		**P**	**02 23 03.2**	**-0.3**
RHK3	**Tenkes**	**35.31 313** ⇓*e*P		**P**	**02 23 04.5**	**-0.3**
PENC	**Penc**	**35.34 316** ⇓*e*P		**P**	**02 23 05.4**	**+0.4**
BUD	**Budapest**	**35.39 315** ⇑*e*P		**P**	**02 23 05.2**	**-0.2**
BUD	**Budapest**	**35.39 315** ⇑*e*P		**P**	**02 23 05.2**	**-0.2**
NIE	**Niedzica**	**35.41 319** *e*P		**P**	**02 23 05.6**	**0.0**
NIE	**Niedzica**	**35.41 319** P		**P**	**02 23 06.3**	**+0.7**
NIE	**Niedzica**	**35.41 319** *e*P		**P**	**02 23 05.6**	**0.0**
NIE	**Niedzica**	**35.41 319** *e*P		**P**	**02 23 05.6**	**0.0**
SCLL	**Scilla**	**35.41 299** P		**P**	**02 23 06.9**	**+1.1**
SCLL	**Scilla**	**35.41 299** P		**P**	**02 23 06.9**	**+1.1**
IDID	**Didziasalis**	**35.44 331** *e*P		**P**	**02 23 05.5**	**-0.2**
IDID			AMB	AMB	02 23 06.0	
	comp=Z,15nm,1.2s,mb4.8					
IDID	**Didziasalis**	**35.44 331** *e*P		**P**	**02 23 05.6**	**-0.1**
	comp=Z,15nm,1.2s,mb4.8,SNR=27					
PRGR	**Permogore**	**35.48 352** *e*P		**P**	**02 23 01.9**	**-4.1**
PRGR			*e*S	**S**	**02 28 31.3**	**-10**
PRGR			pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0					
PKS9	**Tamasi**	**35.53 314** ⇓*e*P		**P**	**02 23 06.9**	**+0.2**
ACER	**Acerenza**	**35.62 303** P		**P**	**02 23 08.5**	**+1.0**
ACER	**Acerenza**	**35.62 303** P		**P**	**02 23 08.5**	**+1.0**
IIGN	**Ignalina**	**35.68 331** *e*P		**P**	**02 23 07.8**	**-0.1**
IIGN			AMB	AMB	02 23 08.3	
	comp=Z,27nm,1.2s,mb5.0					
IIGN	**Ignalina**	**35.68 331** *e*P		**P**	**02 23 07.8**	**0.0**
	comp=Z,27nm,1.2s,mb5.0,SNR=27					
PKSG		**35.75 315** ⇓*e*P		**P**	**02 23 08.7**	**+0.2**
KLMR	**Klimovskoe**	**35.78 346** *e*P		**P**	**02 23 06.7**	**-1.9**
KLMR			pmax	pmax		
	comp=Z,78nm,1.4s,mb5.5					
KLMR	**Klimovskoe**	**35.78 346** *e*P		**P**	**02 23 06.7**	**-1.9**
	comp=Z,78nm,1.4s,mb5.5					
ISAL	**Salakas**	**35.87 331** *e*P		**P**	**02 23 09.3**	**-0.1**
ISAL			AMB	AMB	02 23 09.8	
	comp=Z,18nm,1.3s,mb4.9					
ISAL	**Salakas**	**35.87 331** *e*P		**P**	**02 23 09.3**	**-0.1**
	comp=Z,18nm,1.3s,mb4.9,SNR=27					
VYHS	**Vyhne**	**35.90 317** *e*P		**P**	**02 23 09.3**	**-0.5**
	comp=Z,15nm,1.3s,mb4.8					
VYHS	**Vyhne**	**35.90 317** *e*P		**P**	**02 23 09.3**	**-0.5**
VYHS			pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8					
VYHS	**Vyhne**	**35.90 317** *e*P		**P**	**02 23 09.3**	**-0.5**
VYHS	**Vyhne**	**35.90 317** *e*P		**P**	**02 23 09.3**	**-0.5**
	comp=Z,15nm,1.3s,mb4.8					
MRLC	**Muro Lucano**	**35.95 303** P		**P**	**02 23 11.1**	**+0.7**
MRLC	**Muro Lucano**	**35.95 303** P		**P**	**02 23 11.1**	**+0.7**
LIKS	**Likavka**	**35.96 318** *e*P		**P**	**02 23 10.7**	**+0.4**
	comp=Z,62nm,0.9s,mb5.5					
LIKS	**Likavka**	**35.96 318** *e*P		**P**	**02 23 10.7**	**+0.4**
LIKS			pmax	pmax		
	comp=Z,62nm,0.9s,mb5.5					
LIKS	**Likavka**	**35.96 318** *e*P		**P**	**02 23 10.7**	**+0.4**
LIKS	**Likavka**	**35.96 318** *e*P		**P**	**02 23 10.7**	**+0.4**
	comp=Z,62nm,0.9s,mb5.5					
RGNG	**Rignano Grg**	**36.05 305** P		**P**	**02 23 11.9**	**+0.7**
RGNG	**Rignano Grg**	**36.05 305** P		**P**	**02 23 11.9**	**+0.7**
SGO	**Sicignano**	**36.05 303** P		**P**	**02 23 12.2**	**+1.0**
SGO	**Sicignano**	**36.05 303** P		**P**	**02 23 12.2**	**+1.0**
SGO	**Sicignano**	**36.05 303** P		**P**	**02 23 12.2**	**+1.0**
OJC	**Ojcow**	**36.06 320** *e*P		**P**	**02 23 10.8**	**-0.4**
OJC	**Ojcow**	**36.06 320** P		**P**	**02 23 10.5**	**-0.7**
OJC	**Ojcow**	**36.06 320** *e*P		**P**	**02 23 10.8**	**-0.4**
OJC	**Ojcow**	**36.06 320** P		**P**	**02 23 10.5**	**-0.7**
HVZN	**Vizzini**	**36.09 297** P		**P**	**02 23 13.1**	**+1.5**
HVZN	**Vizzini**	**36.09 297** P		**P**	**02 23 13.1**	**+1.5**
SLNA	**Salina**	**36.14 299** P		**P**	**02 23 12.5**	**+0.5**
SLNA	**Salina**	**36.14 299** P		**P**	**02 23 12.5**	**+0.5**
KOLL	**Kolacno**	**36.20 317** *e*P		**P**	**02 23 12.0**	**-0.3**
KOLL	**Kolacno**	**36.20 317** *e*P		**P**	**02 23 12.0**	**-0.3**
KOLL	**Kolacno**	**36.20 317** *e*P		**P**	**02 23 12.0**	**-0.3**
KOLL	**Kolacno**	**36.20 317** *e*P		**P**	**02 23 12.0**	**-0.3**
SUW	**Suwalki**	**36.24 327** *e*P		**P**	**02 23 11.6**	**-1.0**
SUW	**Suwalki**	**36.24 327** P		**P**	**02 23 11.9**	**-0.8**
SUW	**Suwalki**	**36.24 327** *e*P		**P**	**02 23 11.6**	**-1.1**
SUW	**Suwalki**	**36.24 327** *e*P		**P**	**02 23 11.6**	**-1.1**
CSSN	**Cassano Irpino**	**36.32 303** P		**P**	**02 23 15.7**	**+2.2**
CSSN	**Cassano Irpino**	**36.32 303** P		**P**	**02 23 15.7**	**+2.2**
RAFF	**Raffo Rosso**	**36.38 297** P		**P**	**02 23 15.8**	**+1.7**
RAFF	**Raffo Rosso**	**36.38 297** P		**P**	**02 23 15.8**	**+1.7**
FG2	**Serracapriola**	**36.39 305** P		**P**	**02 23 15.1**	**+1.0**
FG2	**Serracapriola**	**36.39 305** P		**P**	**02 23 15.1**	**+1.0**
MRB1	**Monte Rocchett**	**36.40 304** P		**P**	**02 23 15.5**	**+1.3**
MRB1	**Monte Rocchett**	**36.40 304** P		**P**	**02 23 15.5**	**+1.3**
BEHE	**Becsehely**	**36.47 313** ⇑*e*P		**P**	**02 23 14.8**	**+0.1**
CIGN	**Sant'Elia a Pi**	**36.55 305** P		**P**	**02 23 16.7**	**+1.3**
CIGN	**Sant'Elia a Pi**	**36.55 305** P		**P**	**02 23 16.7**	**+1.3**
GIB	**Gibilmanna**	**36.71 298** P		**P**	**02 23 17.9**	**+1.0**
GIB	**Gibilmanna**	**36.71 298** P		**P**	**02 23 17.9**	**+1.0**
GIB	**Gibilmanna**	**36.71 298** P		**P**	**02 23 17.9**	**+1.0**
JAVC	**Velka Javorina**	**36.75 317** P		**P**	**02 23 17.8**	**+0.7**
JAVC	**Velka Javorina**	**36.75 317** P		**P**	**02 23 17.8**	**+0.7**
JAVC	**Velka Javorina**	**36.75 317** P		**P**	**02 23 17.8**	**+0.7**
KOGS	**Kog**	**36.81 313** *i*P		**P**	**02 23 17.3**	**-0.3**
KOGS	**Kog**	**36.81 313** *i*P		**P**	**02 23 17.3**	**-0.3**
KOGS	**Kog**	**36.81 313** P		**P**	**02 23 17.3**	**-0.3**
MODS	**Modra-Piesok**	**36.81 316** *e*P		**P**	**02 23 17.8**	**+0.2**
MODS	**Modra-Piesok**	**36.81 316** *e*P		**P**	**02 23 17.8**	**+0.2**
MODS	**Modra-Piesok**	**36.81 316** *e*P		**P**	**02 23 17.8**	**+0.2**
MODS	**Modra-Piesok**	**36.81 316** *e*P		**P**	**02 23 17.8**	**+0.2**
ZST	**Bratislava**	**36.85 316** *e*P		**P**	**02 23 18.3**	**+0.3**
	comp=Z,10nm,1.1s,mb4.6					
ZST	**Bratislava**	**36.85 316** *e*P		**P**	**02 23 18.3**	**+0.3**
ZST			pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6					
ZST	**Bratislava**	**36.85 316** *e*P		**P**	**02 23 18.3**	**+0.3**
ZST	**Bratislava**	**36.85 316** *e*P		**P**	**02 23 18.3**	**+0.3**
	comp=Z,10.0nm,1.1s,mb4.6					
OKC	**Ostrava-Krasne**	**36.86 319** P		**P**	**02 23 17.6**	**-0.4**
OKC	**Ostrava-Krasne**	**36.86 319** *e*P		**P**	**02 23 17.5**	**-0.5**
OKC	**Ostrava-Krasne**	**36.86 319** *e*P		**P**	**02 23 17.5**	**-0.5**
OKC	**Ostrava-Krasne**	**36.86 319** *e*P		**P**	**02 23 17.5**	**-0.5**
SOP	**Sopron**	**37.01 315** P		**P**	**02 23 19.1**	**-0.2**
SOP	**Sopron**	**37.01 315** P		**P**	**02 23 19.1**	**-0.2**
SOP	**Sopron**	**37.01 315** ⇑*e*P		**P**	**02 23 19.0**	**-0.3**
SOP	**Sopron**	**37.01 315** ⇑*e*P		**P**	**02 23 19.0**	**-0.3**
RNI2	**Rionero Sannit**	**37.11 304** P		**P**	**02 23 21.3**	**+1.1**
RNI2	**Rionero Sannit**	**37.11 304** P		**P**	**02 23 21.3**	**+1.1**
RFI	**Roccamonfina**	**37.16 304** P		**P**	**02 23 21.5**	**+0.8**
RFI	**Roccamonfina**	**37.16 304** P		**P**	**02 23 21.5**	**+0.8**
MORC	**Moravsky Berou**	**37.19 318** *e*P		**P**	**02 23 20.1**	**-0.7**
	comp=Z,36nm,1.1s,mb5.1					
MORC	**Moravsky Berou**	**37.19 318** ⇑P		**P**	**02 23 20.2**	**-0.6**
MORC	**Moravsky Berou**	**37.19 318** ⇑*i*P		**P**	**02 23 20.2**	**-0.6**
MORC	**Moravsky Berou**	**37.19 318** *e*P		**P**	**02 23 20.1**	**-0.7**
	comp=Z,36nm,1.1s,mb5.1					
BOJS	**Bojanci**	**37.19 311** *i*P		**P**	**02 23 20.8**	**-0.1**
BOJS	**Bojanci**	**37.19 311** *i*P		**P**	**02 23 20.8**	**-0.1**
BOJS	**Bojanci**	**37.19 311** *i*P		**P**	**02 23 20.8**	**-0.1**
LEGS	**Legarje**	**37.27 312** *e*P		**P**	**02 23 21.4**	**-0.2**
LEGS	**Legarje**	**37.27 312** *e*P		**P**	**02 23 21.4**	**-0.2**
LEGS	**Legarje**	**37.27 312** *e*P		**P**	**02 23 21.4**	**-0.2**
INTR	**Introdacqua**	**37.35 305** P		**P**	**02 23 23.1**	**+0.9**
INTR	**Introdacqua**	**37.35 305** P		**P**	**02 23 23.1**	**+0.9**
SDI	**San Donato**	**37.36 304** P		**P**	**02 23 22.3**	**-0.1**
SDI	**San Donato**	**37.36 304** P		**P**	**02 23 22.3**	**-0.1**
SDI	**San Donato**	**37.36 304** P		**P**	**02 23 22.3**	**-0.1**
USI	**Ustica**	**37.44 299** P		**P**	**02 23 24.3**	**+1.2**
USI	**Ustica**	**37.44 299** P		**P**	**02 23 24.3**	**+1.2**
ARSA	**Arzberg**	**37.53 314** P		**P**	**02 23 24.7**	**+1.0**
ARSA	**Arzberg**	**37.53 314** ⇑*i*P		**P**	**02 23 23.6**	**-0.2**
	comp=Z,18nm,1.1s,mb4.7					
ARSA	**Arzberg**	**37.53 314** P		**P**	**02 23 23.6**	**-0.1**
	comp=Z,18nm,1.1s,mb4.7					
CONA	**Conrad Observa**	**37.54 315** *i*P		**P**	**02 23 23.4**	**-0.4**
	comp=Z,21nm,1.2s,mb4.8,SNR=12					
CONA	**Conrad Observa**	**37.54 315** P		**P**	**02 23 23.4**	**-0.4**
	comp=Z,21nm,1.2s,mb4.8,SNR=12					
VRAC	**Vranov**	**37.58 317** P		**P**	**02 23 23.8**	**-0.2**
	comp=Z,24nm,0.9s,mb4.9,baz=107,slow=8.3,SNR=35					
VRAC	**Vranov**	**37.58 317** ⇓P		**P**	**02 23 24.2**	**+0.1**
VRAC	**Vranov**	**37.58 317** ⇓*i*P		**P**	**02 23 24.2**	**+0.1**
VRAC	**Vranov**	**37.58 317** *e*P		**P**	**02 23 23.6**	**-0.5**
SOKA	**Soboth**	**37.68 313** ⇑*i*P		**P**	**02 23 24.5**	**-0.5**
	comp=Z,13nm,1.0s,mb4.6					
SOKA	**Soboth**	**37.68 313** P		**P**	**02 23 24.5**	**-0.5**
	comp=Z,13nm,1.0s,mb4.6					
TERO	**Teramo**	**37.68 306** P		**P**	**02 23 26.8**	**+1.8**
TERO	**Teramo**	**37.68 306** P		**P**	**02 23 26.8**	**+1.8**
OFFI	**Offida**	**37.68 306** P		**P**	**02 23 26.6**	**+1.6**
OFFI	**Offida**	**37.68 306** P		**P**	**02 23 26.6**	**+1.6**
CEY	**Cerknica**	**37.81 311** P		**P**	**02 23 26.0**	**-0.1**
CEY	**Cerknica**	**37.81 311** P		**P**	**02 23 26.0**	**-0.1**
LJU	**Ljubljana**	**37.83 311** *e*P		**P**	**02 23 26.2**	**0.0**
LJU	**Ljubljana**	**37.83 311** *e*P		**P**	**02 23 26.3**	**0.0**
LJU	**Ljubljana**	**37.83 311** *e*P		**P**	**02 23 26.2**	**0.0**
LJU	**Ljubljana**	**37.83 311** *e*P		**P**	**02 23 26.2**	**-0.1**
OBKA	**Obir**	**37.95 312** P		**P**	**02 23 27.1**	**-0.2**
OBKA	**Obir**	**37.95 312** *i*pP		**P**	**02 23 27.1**	**-0.1**
	comp=Z,24nm,1.4s,mb4.7,SNR=6.7					
OBKA	**Obir**	**37.95 312** P		**P**	**02 23 27.1**	**-0.2**
	comp=Z,24nm,1.4s,mb4.7,SNR=6.7					
NRCA	**Norcia**	**38.07 306** P		**P**	**02 23 28.7**	**+0.3**
NRCA	**Norcia**	**38.07 306** P		**P**	**02 23 28.7**	**+0.3**
CING	**Cingoli**	**38.12 307** P		**P**	**02 23 29.3**	**+0.6**
CING	**Cingoli**	**38.12 307** P		**P**	**02 23 29.3**	**+0.6**
FDMO	**Fiordimonte**	**38.13 306** P		**P**	**02 23 29.1**	**+0.2**
FDMO	**Fiordimonte**	**38.13 306** P		**P**	**02 23 29.1**	**+0.2**
DPC	**Dobruska-Polom**	**38.14 319** P		**P**	**02 23 28.0**	**-0.8**
DPC	**Dobruska-Polom**	**38.14 319** *e*P		**P**	**02 23 28.3**	**-0.5**
DPC	**Dobruska-Polom**	**38.14 319** *e*P		**P**	**02 23 28.3**	**-0.5**
DPC	**Dobruska-Polom**	**38.14 319** P		**P**	**02 23 28.0**	**-0.8**
MA9	**Marino**	**38.22 304** P		**P**	**02 23 29.9**	**+0.3**
MA9	**Marino**	**38.22 304** P		**P**	**02 23 29.9**	**+0.3**
TREC	**Trest**	**38.25 317** *e*P		**P**	**02 23 29.6**	**-0.1**
TREC	**Trest**	**38.25 317** *e*P		**P**	**02 23 29.6**	**-0.1**
TREC	**Trest**	**38.25 317** *e*P		**P**	**02 23 29.6**	**-0.1**
CESI	**CESI - Serrava**	**38.26 306** P		**P**	**02 23 30.7**	**+0.8**
CESI	**CESI - Serrava**	**38.26 306** P		**P**	**02 23 30.7**	**+0.8**
SNTG	**Esanatoglia**	**38.28 307** P		**P**	**02 23 30.3**	**+0.2**
SNTG	**Esanato

ERBM Eremo 40.29 308 P **P** **02 23 47.7 +0.8**
ERBM Eremo 40.29 308 P **P** **02 23 47.7 +0.8**
KEST Kesra 40.37 294 P **P** **02 23 49.4 +1.6**
comp=Z,10.0nm,1.0s,mb4.5,baz=14,slow=1.1,SNR=23
KAF Kangasniemi 40.38 339 *eP* **P** **02 23 46.1 -1.2**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.3
KAF Kangasniemi 40.38 339 *ep* **P** **02 23 46.1 -1.2**
comp=Z,1.7nm,0.4s,mb4.1
KAF Kangasniemi 40.38 339 *ep* **P** **02 23 46.1 -1.2**
comp=Z,1.6nm,0.3s,mb4.2
KAF Kangasniemi 40.38 339 *eP* **P** **02 23 46.1 -1.2**
comp=Z,2.0nm,0.3s,mb4.3
CHG Chiang Mai 40.41 92 ⇑P **P** **02 23 48.5 +0.3**
comp=Z,24nm,1.0s,mb4.9
CHTO Chiang Mai 40.41 92 *eP* **P** **02 23 48.5 +0.4**
comp=Z,27nm,1.3s,mb4.8
CHTO Chiang Mai 40.41 92 *eP* **P** **02 23 48.5 +0.3**
CHTO pmax pmax
comp=Z,27nm,1.3s,mb4.8
CHTO Chiang Mai 40.41 92 P **P** **02 23 48.9 +0.7**
comp=Z,27nm,1.8s,mb4.7
CHTO Chiang Mai 40.41 92 *eP* **P** **02 23 48.5 +0.3**
comp=Z,27nm,1.3s,mb4.8
ROTZ Rotzenmuhle 40.42 316 *eP* **P** **02 23 47.4 -0.5**
comp=Z,37nm,1.1s,mb5.0
NKC Novy Kostel 40.42 317 *eP* **P** **02 23 47.7 -0.2**
NKC Novy Kostel 40.42 317 *eP* **P** **02 23 47.7 -0.2**
NKC Novy Kostel 40.42 317 *eP* **P** **02 23 47.7 -0.2**
MOTA Moosalm 40.45 312 P **P** **02 23 46.9 -1.2**
MOTA Moosalm 40.45 312 P **P** **02 23 46.9 -1.2**
MOTA Moosalm 40.45 312 ⇑*iP* **P** **02 23 46.8 -1.3**
comp=Z,70nm,1.1s,mb5.3,SNR=28
MOTA Moosalm 40.45 312 P **P** **02 23 46.8 -1.3**
comp=Z,70nm,1.1s,mb5.3,SNR=28
CLL Collm 40.45 319 *eP* **P** **02 23 47.6 -0.5**
comp=Z,52nm,1.2s,mb5.1
CLL Collm 40.45 319 ⇑*iP* **P** **02 23 47.5 -0.6**
comp=Z,52nm,1.2s,mb5.1
CLL Collm 40.45 319 ⇑*iP* **P** **02 23 47.5 -0.6**
CLL pmax pmax
comp=Z,4.0nm,1.2s,mb4.0
CLL Collm 40.45 319 ⇑*iP* **P** **02 23 47.5 -0.6**
comp=Z,52nm,1.2s,mb5.1
CLL *e*(PP) 02 25 30.0
CLL Collm 40.45 319 *i* P **P** **02 23 47.5 -0.6**
comp=Z,4.0nm,1.2s,mb4.0
TANN Tannenbergstha 40.47 317 *eP* **P** **02 23 47.4 -0.9**
comp=Z,41nm,2.2s,mb4.8
CMAR Chiang Mai Arr 40.52 93 P **P** **02 23 49.3 +0.1**
comp=Z,2.0nm,0.7s,mb3.9,baz=297,slow=7.0,SNR=16
CMAR PcP PcP 02 25 51.0 -0.7
comp=Z,4.4nm,1.0s,baz=287,slow=5.6,SNR=6.4
CMAR Chiang Mai Arr 40.52 93 P **P** **02 23 49.3 +0.1**
CMAR 02 25 51.0
CMAR Chiang Mai Arr 40.52 93 P **P** **02 23 49.3 +0.1**
CMAR Chiang Mai Arr 40.52 93 PcP PcP 02 25 51.0 -0.7
MABI Malga Bissina 40.54 310 P **P** **02 23 49.1 +0.1**
MABI Malga Bissina 40.54 310 P **P** **02 23 49.1 +0.1**
FUR Furstenfeldbru 40.54 314 *eP* **P** **02 23 47.7 -1.2**
comp=Z,80nm,1.3s,mb5.2
FUR Furstenfeldbru 40.54 314 *eP* **P** **02 23 47.7 -1.2**
FUR pmax pmax
comp=Z,80nm,1.3s,mb5.2
FUR Furstenfeldbru 40.54 314 *eP* **P** **02 23 47.7 -1.2**
comp=Z,80nm,1.3s,mb5.2
FETA Feichten 40.62 312 *i* P **P** **02 23 48.8 -0.7**
comp=Z,103nm,1.0s,mb5.4,SNR=63
FETA Feichten 40.62 312 P **P** **02 23 48.8 -0.7**
comp=Z,103nm,1.0s,mb5.4,SNR=63
RETA Reutte 40.70 313 *i* P **P** **02 23 49.0 -1.3**
comp=Z,25nm,1.3s,mb4.7,SNR=11
RETA Reutte 40.70 313 P **P** **02 23 49.0 -1.3**
comp=Z,25nm,1.3s,mb4.7,SNR=11
BDT Bhumibol Dam 41.00 94 P **P** **02 23 53.0 -0.1**
GRA1 Grafenberg Arr 41.01 316 *eP* **P** **02 23 52.1 -0.6**
comp=Z,84nm,1.2s,mb5.2
GRA1 Grafenberg Arr 41.01 316 *eP* **P** **02 23 52.1 -0.6**
comp=Z,84nm,1.2s,mb5.2
GRF Grafenberg Arr 41.01 316 *eP* **P** **02 23 52.1 -0.6**
comp=Z,84nm,1.2s,mb5.2
GRF Grafenberg Arr 41.01 316 *eP* **P** **02 23 52.1 -0.6**
GRF pmax pmax
comp=Z,84nm,1.2s,mb5.2
GRF Grafenberg Arr 41.01 316 *eP* **P** **02 23 52.1 -0.6**
GRF pmax pmax
comp=Z,84nm,1.2s,mb5.2
GRF Grafenberg Arr 41.01 316 *eP* **P** **02 23 52.1 -0.6**
comp=Z,84nm,1.2s,mb5.2
BOB Bobbio (Coli) 41.03 308 P **P** **02 23 53.2 +0.2**
BOB Bobbio (Coli) 41.03 308 P **P** **02 23 53.2 +0.2**
BOB Bobbio (Coli) 41.03 308 P **P** **02 23 53.2 +0.2**
MOX Moxa 41.05 317 *eP* **P** **02 23 52.7 -0.4**
comp=Z,27nm,1.5s,mb4.7
MOX Moxa 41.05 317 *eP* **P** **02 23 52.5 -0.6**
comp=Z,21nm,1.3s,mb4.6
MOX Moxa 41.05 317 *eP* **P** **02 23 52.7 -0.4**
MOX pmax pmax
comp=Z,28nm,1.5s,mb4.7
MOX Moxa 41.05 317 *eP* **P** **02 23 52.7 -0.4**
comp=Z,28nm,1.5s,mb4.7
DAVOX Davos/Dischmat 41.13 311 P **P** **02 23 53.2 -0.6**
comp=Z,26nm,0.8s,mb4.9,baz=109,slow=6.0,SNR=34
DAVOX Davos/Dischmat 41.13 311 ⇑*iP* **P** **02 23 53.1 -0.7**
comp=Z,66nm,1.1s,mb5.2
DAVOX Davos/Dischmat 41.13 311 P **P** **02 23 53.2 -0.6**
DAVOX Davos/Dischmat 41.13 311 P **P** **02 23 53.2 -0.6**
DAVOX Davos/Dischmat 41.13 311 P **P** **02 23 53.2 -0.6**
UBR Ueberruh 41.18 313 P **P** **02 23 53.0 -1.2**
UBR Ueberruh 41.18 313 P **P** **02 23 53.0 -1.2**
RAF Rauma 41.19 336 *eP* **P** **02 23 52.2 -1.8**
DAVA Damuels 41.24 312 P **P** **02 23 53.6 -1.1**
DAVA Damuels 41.24 312 *i* P **P** **02 23 53.7 -1.0**
comp=Z,204nm,1.2s,mb5.6,SNR=90
DAVA Damuels 41.24 312 P **P** **02 23 53.6 -1.1**
HDH Heidenheim-Cha 41.34 314 P **P** **02 23 54.8 -0.7**
HDH Heidenheim-Cha 41.34 314 P **P** **02 23 54.8 -0.7**
PLONS Plons/SG 41.52 312 ⇑*iP* **P** **02 23 55.8 -1.2**
comp=Z,182nm,1.2s,mb5.6
MUGIO Muggio 41.52 310 ⇑*iP* **P** **02 23 55.5 -1.5**
comp=Z,33nm,0.6s,mb5.1
MUGIO Muggio 41.52 310 ⇑*iP* **P** **02 23 55.5 -1.5**
comp=Z,33nm,0.6s,mb5.1
LZH Lanzhou 41.66 65 *eP* **P** **02 23 59.3 +1.0**
LZH pP pP 02 24 03.0 +1.6
LZH sP sP 02 24 05.2 +2.5
LZH pmax pmax
comp=Z,58nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,410nm,6.2s
LLS Linth-Limmern 41.73 311 ⇑*iP* **P** **02 23 57.7 -1.0**
comp=Z,90nm,0.9s,mb5.4
LLS Linth-Limmern 41.73 311 ⇑*iP* **P** **02 23 57.7 -1.0**
comp=Z,90nm,0.9s,mb5.4
ABSA Djebel Ababsia 41.88 295 P **P** **02 24 02.1 +2.0**
ABSA Djebel Ababsia 41.88 295 P **P** **02 24 02.1 +2.0**
WEIN Weingarten 41.89 312 ⇑*iP* **P** **02 23 59.0 -1.0**
comp=Z,197nm,0.9s,mb5.7
WEIN Weingarten 41.89 312 ⇑*iP* **P** **02 23 59.0 -1.0**
comp=Z,197nm,0.9s,mb5.7
WILA Wila 41.91 312 ⇑*iP* **P** **02 23 59.3 -0.9**
comp=Z,247nm,1.1s,mb5.8
WILA Wila 41.91 312 ⇑*iP* **P** **02 23 59.3 -0.9**
comp=Z,247nm,1.1s,mb5.8
CMAH Djebel Manchou 41.92 296 P **P** **02 24 01.9 +1.5**
CMAH Djebel Manchou 41.92 296 P **P** **02 24 01.9 +1.5**
GUT Gutenstein 41.92 313 P **P** **02 24 00.0 -0.3**
GUT Gutenstein 41.92 313 P **P** **02 24 00.0 -0.3**
SIND Sindeldorf 41.92 315 P **P** **02 23 59.4 -0.8**
SIND Sindeldorf 41.92 315 P **P** **02 23 59.4 -0.8**
SISB Singen-Schiene 41.94 312 P **P** **02 23 59.6 -0.8**
SISB Singen-Schiene 41.94 312 P **P** **02 23 59.6 -0.8**
CD2 Chengdu 41.95 73 *eP* **P** **02 24 00.8 0.0**
CD2 pP pP 02 24 05.6 +1.7
CD2 sP sP 02 24 07.8 +2.7
CD2 PP PP 02 25 41.5 +3.8
CD2 S **S** **02 30 19.1 -0.3**
CD2 SS SS 02 33 20.4 -5.6
CD2 pmax pmax
comp=Z,40nm,1.0s,mb5.0
CD2 pmax pmax
comp=Z,100nm,5.2s
CD2 LR LR
comp=N,2μm,17.8s
CD2 LR LR
comp=Z,3μm,16.7s,MS5.2
MOY Mondy 41.99 41 *eP* **P** **02 24 01.6 +0.9**
MOY pmax pmax
comp=Z,58nm,1.9s,mb4.9
MOY Mondy 41.99 41 *eP* **P** **02 24 01.6 +0.9**
comp=Z,58nm,1.9s,mb4.9
MUO Muotathal 42.00 311 ⇑*iP* **P** **02 23 59.8 -1.1**
comp=Z,97nm,1.5s,mb5.2
MUO Muotathal 42.00 311 ⇑*iP* **P** **02 23 59.8 -1.1**
comp=Z,97nm,1.5s,mb5.2
KMI Kunming 42.05 81 P **P** **02 24 02.5 +0.9**
KMI pP pP 02 24 06.2 +1.4
KMI S **S** **02 30 16.0 -5.0**
KMI pmax pmax
comp=Z,19nm,1.1s,mb4.6
KMI LR LR
comp=N,1μm,18.3s,MS4.9
KMI LR LR
comp=E,1μm,16.1s,MS4.9
KMI LR LR
comp=Z,1μm,22.9s
UBBA Unterbreizbach 42.09 317 *eP* **P** **02 24 00.9 -0.7**
comp=Z,53nm,1.8s,mb4.9
ZUR Degenried 42.12 312 ⇑*iP* **P** **02 24 00.9 -1.0**
comp=Z,308nm,1.2s,mb5.8
ZUR Degenried 42.12 312 ⇑*iP* **P** **02 24 00.9 -1.0**
comp=Z,308nm,1.2s,mb5.8
SPAK Spaichingen-Ko 42.15 313 *eP* **P** **02 24 00.7 -1.4**
SPAK Spaichingen-Ko 42.15 313 *eP* **P** **02 24 00.7 -1.4**
CLZ Clausthal 42.18 319 *eP* **P** **02 24 02.3 0.0**
comp=Z,88nm,1.2s,mb5.3
CLZ Clausthal 42.18 319 *eP* **P** **02 24 02.3 0.0**
CLZ pmax pmax
comp=Z,88nm,1.2s,mb5.3
CLZ Clausthal 42.18 319 *eP* **P** **02 24 02.3 0.0**
comp=Z,88nm,1.2s,mb5.3
SAOF Saorge 42.25 307 *eP* **P** **02 24 02.4 -0.6**
SAOF Saorge 42.25 307 *eP* **P** **02 24 02.4 -0.6**
SAOF Saorge 42.25 307 *eP* **P** **02 24 02.4 -0.6**
SLE Schleitheim 42.26 312 ⇑*iP* **P** **02 24 01.7 -1.4**
comp=Z,56nm,1.2s,mb5.1
SLE Schleitheim 42.26 312 ⇑*iP* **P** **02 24 01.7 -1.4**
comp=Z,56nm,1.2s,mb5.1
LBG Lerchenberg 42.27 314 P **P** **02 24 02.5 -0.6**
LBG Lerchenberg 42.27 314 P **P** **02 24 02.5 -0.6**
HASLI Hasliberg/Brie 42.28 311 ⇑*iP* **P** **02 24 01.6 -1.7**
comp=Z,42nm,0.8s,mb5.2
HASLI Hasliberg/Brie 42.28 311 ⇑*iP* **P** **02 24 01.6 -1.7**
comp=Z,42nm,0.8s,mb5.2
AUTN L'Aution 42.35 307 *eP* **P** **02 24 03.2 -0.6**
AUTN L'Aution 42.35 307 *eP* **P** **02 24 03.2 -0.6**
AUTN L'Aution 42.35 307 *eP* **P** **02 24 03.2 -0.6**
CAEH 'Ain El Ouahch 42.38 296 P **P** **02 24 04.5 +0.3**
CAEH 'Ain El Ouahch 42.38 296 P **P** **02 24 04.5 +0.3**
LUCF Luceram 42.39 307 *eP* **P** **02 24 03.6 -0.6**
LUCF Luceram 42.39 307 *eP* **P** **02 24 03.6 -0.6**
TOUF Mont Tournerai 42.48 307 *eP* **P** **02 24 04.5 -0.4**
TOUF Mont Tournerai 42.48 307 *eP* **P** **02 24 04.5 -0.4**
TOUF Mont Tournerai 42.48 307 *eP* **P** **02 24 04.5 -0.4**
CKFL Kef-Lekhel 42.49 296 P **P** **02 24 06.0 +0.9**
CKFL Kef-Lekhel 42.49 296 P **P** **02 24 06.0 +0.9**
TOD Tromm 42.49 315 *eP* **P** **02 24 03.9 -1.0**
TOD Tromm 42.49 315 *eP* **P** **02 24 03.9 -1.0**
TOD Tromm 42.49 315 *eP* **P** **02 24 03.9 -1.0**
SWS Schriesheim-Wi 42.53 315 P **P** **02 24 05.3 +0.1**
SWS Schriesheim-Wi 42.53 315 P **P** **02 24 05.3 +0.1**
MVIF Mont Vial 42.53 307 *eP* **P** **02 24 04.5 -0.8**
MVIF Mont Vial 42.53 307 *eP* **P** **02 24 04.5 -0.8**
MVIF Mont Vial 42.53 307 *eP* **P** **02 24 04.5 -0.8**
NRDL Niedersach Rie 42.54 320 *eP* **P** **02 24 05.5 +0.2**
comp=Z,80nm,1.2s,mb5.3
FELD Feldberg im Sc 42.61 313 *eP* **P** **02 24 04.6 -1.3**
FELD Feldberg im Sc 42.61 313 *eP* **P** **02 24 04.6 -1.3**
WIMIS Wimmis 42.62 311 ⇑*iP* **P** **02 24 04.4 -1.6**
comp=Z,73nm,1.0s,mb5.3
WIMIS Wimmis 42.62 311 ⇑*iP* **P** **02 24 04.4 -1.6**
comp=Z,73nm,1.0s,mb5.3
DIX Grande Dixence 42.67 310 ⇑*iP* **P** **02 24 05.3 -1.1**
comp=Z,54nm,1.2s,mb5.2
DIX Grande Dixence 42.67 310 ⇑*iP* **P** **02 24 05.3 -1.1**
comp=Z,54nm,1.2s,mb5.2
CASM Ain Smara 42.68 295 P **P** **02 24 07.2 +0.6**
CASM Ain Smara 42.68 295 P **P** **02 24 07.2 +0.6**
KIZ Kirchzarten 42.68 313 P **P** **02 24 06.3 -0.2**
KIZ Kirchzarten 42.68 313 P **P** **02 24 06.3 -0.2**
KIZ Kirchzarten 42.68 313 P **P** **02 24 06.3 -0.2**
BALST Balsthal 42.70 312 ⇑*iP* **P** **02 24 05.6 -1.1**
comp=Z,172nm,1.0s,mb5.7
BALST Balsthal 42.70 312 ⇑*iP* **P** **02 24 05.6 -1.1**
comp=Z,172nm,1.0s,mb5.7
CTEI Djebel Teioual 42.75 295 P **P** **02 24 08.6 +1.4**
CTEI Djebel Teioual 42.75 295 P **P** **02 24 08.6 +1.4**
BBS Basel-Blauen 42.85 312 *eP* **P** **02 24 06.6 -1.3**
BBS Basel-Blauen 42.85 312 *eP* **P** **02 24 06.6 -1.3**
BBS Basel-Blauen 42.85 312 *eP* **P** **02 24 06.6 -1.3**
TNS Taunus Mts 42.87 316 *eP* **P** **02 24 07.2 -0.8**
comp=Z,83nm,1.3s,mb5.3
TNS Taunus Mts 42.87 316 *eP* **P** **02 24 07.2 -0.8**
TNS pmax pmax
comp=Z,83nm,1.3s,mb5.3
TNS Taunus Mts 42.87 316 *eP* **P** **02 24 07.2 -0.8**
comp=Z,83nm,1.3s,mb5.3
KTD Kalmit 42.88 315 P **P** **02 24 07.9 -0.1**
KTD Kalmit 42.88 315 P **P** **02 24 07.9 -0.1**
KTD Kalmit 42.88 315 P **P** **02 24 07.9 -0.1**
LIBD Limburg 42.93 313 *eP* **P** **02 24 07.3 -1.2**
LIBD Limburg 42.93 313 *eP* **P** **02 24 07.3 -1.2**
LIBD Limburg 42.93 313 *eP* **P** **02 24 07.3 -1.2**
LANF Langenberg 42.98 314 *eP* **P** **02 24 07.0 -1.9**
LANF Langenberg 42.98 314 *eP* **P** **02 24 07.0 -1.9**
LANF Langenberg 42.98 314 *eP* **P** **02 24 07.0 -1.9**
APA Apatity 42.99 348 ⇑*iP* **P** **02 24 09.0 +0.3**
APA *i* 02 24 26.4
APA pmax pmax
comp=Z,29nm,1.2s,mb4.9
APA MLR MLR
comp=Z,2μm,20.0s,MS5.1
APA Apatity 42.99 348 *i* P **P** **02 24 09.0 +0.3**
comp=Z,29nm,1.2s,mb4.9
ZAK Zakamensk 43.00 44 *eP* **P** **02 24 02.4 -6.6**
ZAK *e* 02 25 49.0
ZAK pmax pmax
comp=Z,7.0nm,1.8s,mb4.1
DFRA Djebel Bou Aff 43.16 296 P **P** **02 24 11.5 +1.0**
DFRA Djebel Bou Aff 43.16 296 P **P** **02 24 11.5 +1.0**
MOF Molkenrain 43.18 312 *eP* **P** **02 24 09.4 -1.1**
MOF Molkenrain 43.18 312 *eP* **P** **02 24 09.4 -1.1**
MOF Molkenrain 43.18 312 *eP* **P** **02 24 09.4 -1.1**
ECH Echery 43.23 313 *eP* **P** **02 24 09.4 -1.5**
ECH Echery 43.23 313 *eP* **P** **02 24 09.6 -1.4**
comp=Z,31nm,1.0s,mb5.0
ECH Echery 43.23 313 *eP* **P** **02 24 09.6 -1.3**
ECH pmax pmax
comp=Z,31nm,1.0s,mb5.0
ECH Echery 43.23 313 *eP* **P** **02 24 09.4 -1.5**
LOMF Lomont 43.29 312 *eP* **P** **02 24 10.3 -1.1**
LOMF Lomont 43.29 312 *eP* **P** **02 24 10.3 -1.1**
LOMF Lomont 43.29 312 *eP* **P** **02 24 10.3 -1.1**
SET Setif 43.56 295 P **P** **02 24 15.0 +1.2**
SET Setif 43.56 295 P **P** **02 24 15.0 +1.2**
TLY Talaya 43.57 42 *eP* **P** **02 24 13.8 +0.2**
comp=Z,66nm,2.1s,mb5.0
TLY Talaya 43.57 42 *eP* **P** **02 24 12.9 -0.7**
TLY pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
TLY Talaya 43.57 42 *eP* **P** **02 24 12.9 -0.7**
comp=Z,8.0nm,0.9s,mb4.5
RUP Ruppelstein 43.62 315 *eP* **P** **02 24 11.0 -3.0**
RUP Ruppelstein 43.62 315 *eP* **P** **02 24 11.0 -3.0**
BUG Bochum--Univer 43.91 317 *eP* **P** **02 24 16.0 -0.3**
comp=Z,83nm,1.3s,mb5.3
HFS Hagfors 43.92 331 P **P** **02 24 15.2 -1.1**
comp=Z,3.8nm,0.3s,mb4.7,baz=127,slow=8.8,SNR=66
HFS Hagfors 43.92 331 P **P** **02 24 15.2 -1.0**
HFS Hagfors 43.92 331 P **P** **02 24 15.2 -1.0**
HFA0 Hagfors New Ar 43.92 331 P **P** **02 24 14.0 -2.3**
HFA0 Hagfors New Ar 43.92 331 P **P** **02 24 14.0 -2.3**
THEF They Montfort 44.00 313 *eP* **P** **02 24 15.6 -1.5**
THEF They Montfort 44.00 313 *eP* **P** **02 24 15.6 -1.5**
THEF They Montfort 44.00 313 *eP* **P** **02 24 15.6 -1.5**
WLF Walferdange 44.18 315 P **P** **02 24 17.0 -1.5**
comp=Z,31nm,1.4s,mb4.8
WLF Walferdange 44.18 315 *eP* **P** **02 24 17.7 -0.9**
comp=Z,57nm,1.2s,mb5.2
WLF Walferdange 44.18 315 P **P** **02 24 17.0 -1.6**
comp=Z,31nm,1.4s,mb4.8
WTSB Winterswijk 44.33 318 ⇑*iP* **P** **02 24 19.9 +0.2**
comp=Z,68nm,1.5s,mb5.2
WTSB Winterswijk 44.33 318 ⇑*iP* **P** **02 24 19.9 +0.2**
comp=Z,68nm,1.5s,mb5.2
SONM Songino Array 44.45 48 P **P** **02 24 21.1 +0.3**
comp=Z,14nm,0.9s,mb4.7,baz=253,slow=8.9,SNR=72
SONM Songino Array 44.45 48 P **P** **02 24 21.1 +0.3**
SONM Songino Array 44.45 48 P **P** **02 24 21.1 +0.3**
MEM Membach 44.48 316 P **P** **02 24 21.1 +0.2**
comp=Z,30nm,1.7s,mb4.7
MEM Membach 44.48 316 P **P** **02 24 21.0 +0.1**
comp=Z,30nm,1.7s,mb4.7
SSB Saint Sauveur 44.55 308 *eP* **P** **02 24 19.9 -1.6**
SSB Saint Sauveur 44.55 308 *eP* **P** **02 24 19.5 -2.0**
comp=Z,26nm,1.0s,mb5.0
SSB Saint Sauveur 44.55 308 *eP* **P** **02 24 19.5 -2.0**
SSB pmax pmax
comp=Z,26nm,1.0s,mb5.0
SSB Saint Sauveur 44.55 308 *eP* **P** **02 24 19.5 -2.0**
comp=Z,26nm,1.0s,mb5.0
HGN Heimansgroeve 44.56 316 ⇑*iP* **P** **02 24 21.7 +0.1**
comp=Z,7.6nm,0.2s,mb5.1
HGN Heimansgroeve 44.56 316 ⇑*iP* **P** **02 24 21.7 +0.1**
comp=Z,7.6nm,0.2s,mb5.1
BEBN Eben Emael 44.73 316 P **P** **02 24 23.1 +0.2**
comp=Z,16nm,1.4s,mb4.6
BEBN Eben Emael 44.73 316 P **P** **02 24 23.0 +0.1**
comp=Z,16nm,1.4s,mb4.6
BCLA Clavier 44.88 316 P **P** **02 24 22.6 -1.5**
comp=Z,35nm,1.5s,mb5.0
BCLA Clavier 44.88 316 P **P** **02 24 22.6 -1.5**
comp=Z,35nm,1.5s,mb5.0
OSL Oslo 45.13 330 *eP* **P** **02 24 25.2 -0.8**
OSL Oslo 45.13 330 *eP* **P** **02 24 25.2 -0.8**
SNR=26
GYA Guiyang 45.21 78 P **P** **02 24 27.9 +0.8**
GYA PP PP 02 26 14.5 +1.7
GYA ScP ScP 02 30 00.8 +0.8
GYA S **S** **02 31 11.2 +4.0**
GYA SS SS 02 34 20.6 -9.3
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,140nm,5.2s
GYA LR LR
comp=N,960nm,17.8s,MS4.8
GYA LR LR
comp=E,650nm,18.4s,MS4.8
GYA LR LR
comp=Z,880nm,16.9s,MS4.8
DOU Dourbes 45.26 315 P **P** **02 24 27.0 -0.1**
comp=Z,40nm,1.5s,mb5.0
DOU Dourbes 45.26 315 P **P** **02 24 26.9 -0.2**
comp=Z,40nm,1.5s,mb5.0
PLDF La Plantade 45.27 309 *eP* **P** **02 24 26.2 -1.1**
PLDF La Plantade 45.27 309 *eP* **P** **02 24 26.2 -1.1**
PLDF La Plantade 45.27 309 *eP* **P** **02 24 26.2 -1.1**
NB2 NORSAR Subarra 45.43 331 P **P** **02 24 26.3 -2.0**
comp=Z,45nm,1.4s,mb5.1,baz=118,slow=7.9
NB2 NORSAR Subarra 45.43 331 P **P** **02 24 26.3 -2.0**
NB2 NORSAR Subarra 45.43 331 P **P** **02 24 26.3 -2.0**
NOA NORSAR Array B 45.43 331 P **P** **02 24 26.8 -1.5**
comp=Z,10nm,1.0s,mb4.6,baz=120,slow=7.4,SNR=17
NOA NORSAR Array B 45.43 331 P **P** **02 24 26.8 -1.5**
NOA NORSAR Array B 45.43 331 P **P** **02 24 26.8 -1.5**
NAO01 NORSAR Array S 45.48 331 *eP* **P** **02 24 27.4 -1.3**
comp=Z,1.8nm,0.3s,mb4.4
NAO01 NORSAR Array S 45.48 331 *eP* **P** **02 24 27.4 -1.3**
comp=Z,1.8nm,0.3s,mb4.4
EJON La Jonquera 45.52 304 P **P** **02 24 30.6 +1.2**
comp=Z,417nm,5.4s
EJON La Jonquera 45.52 304 P **P** **02 24 30.5 +1.2**
comp=Z,417nm,5.4s
ETOS Mallorca 45.52 300 P **P** **02 24 30.2 +0.8**
comp=Z,40nm,0.9s,mb5.3
ETOS Mallorca 45.52 300 P **P** **02 24 30.2 +0.8**
comp=Z,40nm,0.9s,mb5.3
SNF Seneffe 45.53 316 P **P** **02 24 27.6 -1.8**
comp=Z,40nm,1.5s,mb5.1
SNF Seneffe 45.53 316 P **P** **02 24 27.5 -1.8**
comp=Z,40nm,1.5s,mb5.1
EMHD Djebel Mahouad 45.54 295 P **P** **02 24 31.0 +1.4**
EMHD Djebel Mahouad 45.54 295 P **P** **02 24 31.0 +1.4**
TAM Tamanrasset 45.58 276 *eP* **P** **02 24 30.6 +0.5**
comp=Z,18nm,0.6s,mb5.2
TAM Tamanrasset 45.58 276 *eP* **P** **02 24 30.6 +0.5**
TAM pmax pmax
comp=Z,18nm,0.6s,mb5.2
TAM Tamanrasset 45.58 276 *eP* **P** **02 24 30.6 +0.5**
comp=Z,18nm,0.6s,mb5.2
AGO Saint Agoulin 45.62 309 *eP* **P** **02 24 29.2 -0.8**
AGO Saint Agoulin 45.62 309 *eP* **P** **02 24 29.2 -0.8**
PYM Petit Puy Mans 45.67 309 *eP* **P** **02 24 29.6 -0.9**
PYM Petit Puy Mans 45.67 309 *eP* **P** **02 24 29.6 -0.9**
PYM Petit Puy Mans 45.67 309 *eP* **P** **02 24 29.6 -0.9**
CFON Fontmartina 45.83 303 P **P** **02 24 32.8 +1.0**
comp=Z,501nm,4.1s
CFON Fontmartina 45.83 303 P **P** **02 24 32.8 +1.0**
comp=Z,501nm,4.1s
XAN Xi'an 45.94 68 P **P** **02 24 32.2 -0.6**
XAN pP pP 02 24 41.7 +5.7
XAN pmax pmax
comp=Z,7.0nm,1.5s,mb4.4
VERF Verneugheol 46.03 309 *eP* **P** **02 24 32.6 -0.7**
VERF Verneugheol 46.03 309 *eP* **P** **02 24 32.6 -0.7**
KEV Kevo 46.11 347 *eP* **P** **02 24 32.9 -0.7**
KEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
KEV Kevo 46.11 347 *ep* **P** **02 24 32.9 -0.7**
comp=Z,3.3nm,0.4s,mb4.6
KEV Kevo 46.11 347 *ep* **P** **02 24 32.4 -1.2**
comp=Z,3.3nm,0.4s,mb4.6
KEV Kevo 46.11 347 *eP* **P** **02 24 32.4 -1.2**
comp=Z,3.3nm,0.4s,mb4.6
VALF Valcebollere 46.16 304 *eP* **P** **02 24 34.6 +0.2**
VALF Valcebollere 46.16 304 *eP* **P** **02 24 34.6 +0.2**
CLLI Llivia 46.20 304 P **P** **02 24 35.4 +0.7**
CLLI Llivia 46.20 304 P **P** **02 24 35.4 +0.7**
ARCES ARCESS Array B 46.25 346 P **P** **02 24 34.4 -0.3**
comp=Z,1.5nm,0.4s,mb4.3,baz=143,slow=8.6,SNR=26
ARCES PcP PcP 02 26 08.9 -1.1
comp=Z,5.9nm,0.9s,baz=159,slow=3.6,SNR=3.9
ARCES ScP ScP 02 30 02.5 -1.0
comp=Z,1.5nm,0.8s,baz=133,slow=5.3,SNR=3.6
ARCES ARCESS Array B 46.25 346 P **P** **02 24 34.4 -0.3**
ARCES 02 26 09.0
ARCES ARCESS Array B 46.25 346 P **P** **02 24 34.3 -0.4**
ARCES ARCESS Array B 46.25 346 PcP PcP 02 26 08.9 -1.1
KTK1 Kautokeino 46.37 344 *eP* **P** **02 24 34.9 -0.7**
KTK1 *ep*P pP 02 24 37.6 -1.2
KTK1 Kautokeino 46.37 344 *eP* **P** **02 24 34.7 -0.9**
KTK1 Kautokeino 46.37 344 *eP* **P** **02 24 34.7 -0.9**
KTK1 *ep*P pP 02 24 37.6 -1.2
SNR=155
EMIR Miracle 46.52 303 P **P** **02 24 37.4 +0.2**
comp=Z,496nm,4.2s
EMIR Miracle 46.52 303 P **P** **02 24 37.4 +0.2**
comp=Z,496nm,4.2s
EBNR Beni Rached 46.68 296 P **P** **02 24 40.0 +1.5**
EBNR Beni Rached 46.68 296 P **P** **02 24 40.0 +1.5**
EIBI Ibiza 46.68 299 P **P** **02 24 39.1 +0.6**
comp=Z,47nm,1.0s,mb5.4
EIBI Ibiza 46.68 299 P **P** **02 24 39.1 +0.6**
comp=Z,47nm,1.0s,mb5.4
CSOR Sort 46.82 304 P **P** **02 24 39.9 +0.3**
comp=Z,40nm,0.9s,mb5.3
CSOR Sort 46.82 304 P **P** **02 24 39.9 +0.4**
comp=Z,40nm,0.9s,mb5.3
ECHA Ech Chlef 46.82 295 P **P** **02 24 42.1 +2.4**
EPOB Poblet 46.85 303 P **P** **02 24 40.1 +0.3**
comp=Z,36nm,1.0s,mb5.3
EPOB Poblet 46.85 303 P **P** **02 24 40.1 +0.3**
comp=Z,36nm,1.0s,mb5.3
MLS Moulis 46.86 305 *eP* **P** **02 24 38.9 -1.0**
MLS Moulis 46.86 305 *eP* **P** **02 24 38.9 -1.0**
ENH Enshi 46.93 73 *eP* **P** **02 24 41.2 +0.6**
comp=Z,51nm,1.4s,mb5.3
ENH Enshi 46.93 73 *eP* **P** **02 24 41.2 +0.6**
comp=Z,51nm,1.4s,mb5.3
ETRT Tiaret 46.94 294 P **P** **02 24 47.0 +6.4**
EANR 'Ain N'Sour 47.05 295 P **P** **02 24 45.0 +3.5**
ERTA Horta de San J 47.41 302 P **P** **02 24 44.7 +0.5**
comp=Z,41nm,1.0s,mb5.3
ERTA Horta de San J 47.41 302 P **P** **02 24 44.7 +0.5**

comp=Z,41nm,1.0s,mb5.3
EBIE Bielsa 47.55 304 P **P 02 24 45.8 +0.5**
comp=Z,16nm,1.1s,mb5.0
EBIE Bielsa 47.55 304 P **P 02 24 45.8 +0.5**
comp=Z,16nm,1.1s,mb5.0
HHC Hu-ho-hao-te 47.64 58 *e*P **P 02 24 46.0 0.0**
HHC pP pP 02 24 50.6 +1.5
HHC sP sP 02 24 53.0 +2.6
HHC PcP PcP 02 26 17.0 +1.5
HHC PP PP 02 26 36.3 -1.2
HHC ScP ScP 02 30 08.2 -1.7
HHC S **S 02 31 41.0 -0.7**
HHC ScS ScS 02 34 36.7 -3.2
HHC SS SS 02 35 02.8 -6.8
HHC pmax pmax
comp=Z,13nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,460nm,5.3s
HHC LR LR
comp=N,2µm,15.2s,MS5.3
HHC LR LR
comp=E,2µm,16.0s,MS5.3
HHC LR LR
comp=Z,1µm,15.7s,MS5.0
TRO Tromso 47.88 344 *e*P **P 02 24 46.8 -0.6**
TRO AMB AMB 02 24 47.8
comp=Z,30nm,1.5s,mb5.1
TRO Tromso 47.88 344 *e*P **P 02 24 46.8 -0.6**
TRO Tromso 47.88 344 *e*P **P 02 24 46.8 -0.6**
comp=Z,30nm,1.5s,mb5.1,SNR=25
EBEN Beniarda 47.91 299 P **P 02 24 48.1 0.0**
comp=Z,85nm,2.7s,mb5.3
EBEN Beniarda 47.91 299 P **P 02 24 48.1 -0.1**
comp=Z,85nm,2.7s,mb5.3
ESAC San Caprasio 48.01 303 P **P 02 24 48.5 -0.3**
comp=Z,32nm,0.6s,mb5.5
ESAC San Caprasio 48.01 303 P **P 02 24 48.5 -0.3**
comp=Z,32nm,0.6s,mb5.5
EMOS Mosqueruela 48.04 301 P **P 02 24 49.0 -0.1**
comp=Z,40nm,1.0s,mb5.4
EMOS Mosqueruela 48.04 301 P **P 02 24 49.0 -0.1**
comp=Z,40nm,1.0s,mb5.4
LARF Larrau 48.39 305 *e*P **P 02 24 49.6 -2.1**
LARF Larrau 48.39 305 *e*P **P 02 24 49.6 -2.1**
ECHE Chera 48.45 300 P **P 02 24 53.0 +0.8**
comp=Z,33nm,1.0s,mb5.3
ECHE Chera 48.45 300 P **P 02 24 53.0 +0.7**
ECHE pmax pmax
comp=Z,33nm,1.0s,mb5.3
ECHE Chera 48.45 300 P **P 02 24 53.0 +0.7**
comp=Z,33nm,1.0s,mb5.3
EALK Alkurruntz 48.77 305 P **P 02 24 53.9 -0.8**
comp=Z,235nm,4.0s
EALK Alkurruntz 48.77 305 P **P 02 24 53.9 -0.8**
comp=Z,235nm,4.0s
EMUR La Murta 48.77 298 P **P 02 24 54.4 -0.4**
comp=Z,12nm,0.8s,mb5.0
EMUR La Murta 48.77 298 P **P 02 24 54.4 -0.4**
comp=Z,12nm,0.8s,mb5.0
ELIZ Elizondo 48.78 305 P **P 02 24 54.5 -0.3**
comp=Z,44nm,1.2s,mb5.4
ELIZ Elizondo 48.78 305 P **P 02 24 54.5 -0.3**
ELIZ pmax pmax
comp=Z,44nm,1.2s,mb5.4
ELIZ Elizondo 48.78 305 P **P 02 24 54.5 -0.3**
comp=Z,44nm,1.2s,mb5.4
ETOB Tobarra 48.95 299 P **P 02 24 56.2 0.0**
comp=Z,30nm,1.0s,mb5.3
ETOB Tobarra 48.95 299 P **P 02 24 56.2 0.0**
comp=Z,30nm,1.0s,mb5.3
ETOR Torete 49.23 302 P **P 02 24 57.0 -1.2**
ETOR Torete 49.23 302 P **P 02 24 57.1 -1.1**
ETOR Torete 49.23 302 P **P 02 24 57.0 -1.2**
CIT Chita 49.65 43 *e*P **P 02 25 01.0 -0.3**
CIT *e* 02 25 12.3
CIT *e* 02 26 29.3
CIT Chita 49.65 43 *e*P **P 02 25 01.0 -0.3**
EVIA Vianos 49.70 299 P **P 02 25 01.5 -0.3**
comp=Z,38nm,0.7s,mb5.5
EVIA Vianos 49.70 299 P **P 02 25 01.5 -0.4**
EVIA pmax pmax
comp=Z,38nm,0.7s,mb5.5
EVIA Vianos 49.70 299 P **P 02 25 01.5 -0.4**
comp=Z,38nm,0.7s,mb5.5
EHUE Huescar 49.84 298 P **P 02 25 02.8 -0.1**
comp=Z,34nm,1.1s,mb5.3
EHUE Huescar 49.84 298 P **P 02 25 02.8 -0.1**
EHUE pmax pmax
comp=Z,34nm,1.1s,mb5.3
EHUE Huescar 49.84 298 P **P 02 25 02.8 -0.1**
comp=Z,34nm,1.1s,mb5.3
QIZ Qiongzhong 50.07 87 P **P 02 25 04.4 -0.5**
QIZ pmax pmax
comp=Z,26nm,1.7s,mb5.0
EBER Berja 50.16 297 P **P 02 25 05.9 +0.4**
comp=Z,40nm,0.9s,mb5.4
EBER Berja 50.16 297 P **P 02 25 05.9 +0.5**
comp=Z,40nm,0.9s,mb5.4
ELAN Lanestosa 50.18 305 P **P 02 25 05.3 -0.2**
comp=Z,28nm,0.8s,mb5.3
ELAN Lanestosa 50.18 305 P **P 02 25 05.3 -0.1**
comp=Z,28nm,0.8s,mb5.3
EQES Quesada 50.22 298 P **P 02 25 05.6 -0.2**
comp=Z,29nm,0.8s,mb5.4
EQES Quesada 50.22 298 P **P 02 25 05.6 -0.2**
comp=Z,29nm,0.8s,mb5.4
ECOG Cogollos-Vega 50.66 297 P **P 02 25 08.1 -1.1**
comp=Z,13nm,0.7s,mb5.0
ECOG Cogollos-Vega 50.66 297 P **P 02 25 08.1 -1.1**
ECOG pmax pmax
comp=Z,13nm,0.7s,mb5.0
ECOG Cogollos-Vega 50.66 297 P **P 02 25 08.1 -1.1**
comp=Z,13nm,0.7s,mb5.0
EGUA Guajares 50.71 297 P **P 02 25 09.1 -0.5**
comp=Z,3µm,3.6s
EGUA Guajares 50.71 297 P **P 02 25 09.1 -0.5**
EGUA pmax pmax
comp=Z,3µm,3.6s
EGUA Guajares 50.71 297 P **P 02 25 09.1 -0.5**
comp=Z,3µm,3.6s
EBAN Banos Encina 50.74 299 P **P 02 25 09.7 -0.1**
comp=Z,40nm,0.8s,mb5.4
EBAN Banos Encina 50.74 299 P **P 02 25 09.7 -0.1**
EBAN pmax pmax
comp=Z,40nm,0.8s,mb5.4
EBAN Banos Encina 50.74 299 P **P 02 25 09.7 -0.1**
comp=Z,40nm,0.8s,mb5.4
ESDC Sonseca Array 50.75 301 P **P 02 25 09.3 -0.5**
comp=Z,9.4nm,0.7s,mb4.8,baz=68,slow=7.5,SNR=40
ESDC Sonseca Array 50.75 301 P **P 02 25 09.3 -0.5**
comp=Z,11nm,0.8s,mb4.8
ESDC Sonseca Array 50.75 301 P **P 02 25 09.3 -0.5**
comp=Z,11nm,0.8s,mb4.8
ESLA Sonseca Array 50.75 301 *e*P **P 02 25 09.0 -0.8**
comp=Z,9.1nm,1.1s,mb4.6
ESLA Sonseca Array 50.75 301 *e*P **P 02 25 09.0 -0.8**
comp=Z,9.1nm,1.1s,mb4.6
GUD Guadarrama 50.83 302 P **P 02 25 10.3 0.0**
comp=Z,816nm,7.7s
GUD Guadarrama 50.83 302 P **P 02 25 10.4 0.0**
GUD pmax pmax
comp=Z,817nm,7.7s
GUD Guadarrama 50.83 302 P **P 02 25 10.4 0.0**
comp=Z,817nm,7.7s
EKA Eskdalemuir Ar 50.83 321 P **P 02 25 09.2 -0.9**
comp=Z,1.8nm,0.3s,mb4.4,baz=99,slow=7.5,SNR=13
EKA Eskdalemuir Ar 50.83 321 P **P 02 25 09.3 -0.9**
EKA Eskdalemuir Ar 50.83 321 P **P 02 25 09.2 -1.0**
ERON Agron 50.88 297 P **P 02 25 10.1 -0.8**
comp=Z,32nm,1.2s,mb5.1
ERON Agron 50.88 297 P **P 02 25 10.1 -0.7**
comp=Z,32nm,1.2s,mb5.1
WHN Wuhan 51.01 71 P **P 02 25 12.0 +0.1**
ELOJ Sierra Loja 51.14 297 P **P 02 25 12.2 -0.6**
comp=Z,13nm,0.7s,mb5.0
ELOJ Sierra Loja 51.14 297 P **P 02 25 12.2 -0.6**
ELOJ pmax pmax
comp=Z,13nm,0.7s,mb5.0
ELOJ Sierra Loja 51.14 297 P **P 02 25 12.2 -0.6**
comp=Z,13nm,0.7s,mb5.0
ELUQ Luque 51.19 298 P **P 02 25 12.5 -0.6**
comp=Z,756nm,3.1s
ELUQ Luque 51.19 298 P **P 02 25 12.5 -0.6**
ELUQ pmax pmax
comp=Z,756nm,3.1s
ELUQ Luque 51.19 298 P **P 02 25 12.5 -0.6**
comp=Z,756nm,3.1s
BJI Beijing 51.20 59 P **P 02 25 13.5 +0.3**
BJI pmax pmax
comp=Z,29nm,1.1s,mb5.1
EADA Adamuz 51.37 299 P **P 02 25 13.6 -0.9**
comp=Z,34nm,0.9s,mb5.3
EADA Adamuz 51.37 299 P **P 02 25 13.6 -0.9**
comp=Z,34nm,0.9s,mb5.3
EARI Arriondas 51.47 305 P **P 02 25 14.5 -0.7**
comp=Z,26nm,1.1s,mb5.1
EARI Arriondas 51.47 305 P **P 02 25 14.5 -0.7**
comp=Z,26nm,1.1s,mb5.1
EMIJ Mijas 51.71 297 P **P 02 25 15.9 -1.1**
comp=Z,29nm,0.8s,mb5.3
EMIJ Mijas 51.71 297 P **P 02 25 15.9 -1.1**
comp=Z,29nm,0.8s,mb5.3
ECAB El Cabril 52.03 299 P **P 02 25 18.6 -0.9**
comp=Z,201nm,4.7s
ECAB El Cabril 52.03 299 P **P 02 25 18.6 -0.9**
comp=Z,201nm,4.7s
ZFT Errachidia 52.07 291 *i* P **P 02 25 20.0 +0.2**
MDT Midelt 52.15 292 P **P 02 25 20.9 +0.5**
comp=Z,36nm,1.0s,mb5.2,baz=88,slow=9.3,SNR=42
MDT Midelt 52.15 292 P **P 02 25 20.9 +0.5**
RGRI Rengat 52.27 113 P Px 02 25 35.5
EJIF Jimena Fronter 52.28 297 P **P 02 25 20.0 -1.3**
comp=Z,14nm,2.2s,mb4.5
EJIF Jimena Fronter 52.28 297 P **P 02 25 20.0 -1.3**
EJIF pmax pmax
comp=Z,14nm,2.2s,mb4.5
EJIF Jimena Fronter 52.28 297 P **P 02 25 20.0 -1.3**
comp=Z,14nm,2.2s,mb4.5
EPLA Plasencia 52.34 301 P **P 02 25 20.2 -1.5**
comp=Z,183nm,3.0s
EPLA Plasencia 52.34 301 P **P 02 25 20.2 -1.5**
EPLA pmax pmax
comp=Z,183nm,3.0s
EPLA Plasencia 52.34 301 P **P 02 25 20.2 -1.5**
comp=Z,183nm,3.0s
CZD Col de Zad 52.47 292 *i* P **P 02 25 25.0 +2.2**
ESPR Espera 52.53 297 P **P 02 25 21.6 -1.5**
comp=Z,19nm,0.7s,mb5.1
ESPR Espera 52.53 297 P **P 02 25 21.6 -1.6**
comp=Z,19nm,0.7s,mb5.1
ECAL Calabor 52.68 304 P **P 02 25 23.5 -0.7**
comp=Z,26nm,1.0s,mb5.1
ECAL Calabor 52.68 304 P **P 02 25 23.5 -0.7**
comp=Z,26nm,1.0s,mb5.1
PBRG Braganca 52.69 303 *e*P **P 02 25 24.2 -0.1**
comp=Z,52nm,2.1s,mb5.1
PBRG Braganca 52.69 303 *e*P **P 02 25 24.2 -0.1**
comp=Z,52nm,2.1s,mb5.1
RSA Sarsar 52.80 295 *i* P **P 02 25 25.0 -0.2**
EPON Pontenova 52.88 305 P **P 02 25 24.8 -0.9**
comp=Z,353nm,4.2s
EPON Pontenova 52.88 305 P **P 02 25 24.8 -0.9**
comp=Z,353nm,4.2s
ERUA La Rua 52.94 304 P **P 02 25 25.6 -0.5**
comp=Z,43nm,1.7s,mb5.1
ERUA La Rua 52.94 304 P **P 02 25 25.6 -0.5**
ERUA pmax pmax
comp=Z,43nm,1.7s,mb5.1
ERUA La Rua 52.94 304 P **P 02 25 25.6 -0.5**
comp=Z,43nm,1.7s,mb5.1
MVO Moncorvo 52.96 303 *e*P **P 02 25 26.2 -0.1**
comp=Z,59nm,1.0s,mb5.5
MVO Moncorvo 52.96 303 P **P 02 25 25.8 -0.5**
MVO Moncorvo 52.96 303 P **P 02 25 25.8 -0.5**
EMIN Mina Concepcio 53.06 298 P **P 02 25 25.9 -1.1**
comp=Z,6.9nm,0.8s,mb4.6
EMIN Mina Concepcio 53.06 298 P **P 02 25 25.9 -1.1**
comp=Z,6.9nm,0.8s,mb4.6
EBAD Badajoz 53.20 300 P **P 02 25 27.2 -0.9**
comp=Z,11nm,1.0s,mb4.8
EBAD Badajoz 53.20 300 P **P 02 25 27.2 -0.9**
comp=Z,11nm,1.0s,mb4.8
PBAR Barrancos 53.29 299 *e*P **P 02 25 27.8 -1.0**
comp=Z,69nm,1.8s,mb5.3
PBAR Barrancos 53.29 299 *e*P **P 02 25 27.8 -1.0**
comp=Z,69nm,1.8s,mb5.3
KIB El Ksiba 53.37 292 *i* P **P 02 25 30.0 +0.5**
HIA Hailar 53.40 47 P **P 02 25 29.4 0.0**
comp=Z,14nm,0.8s,mb5.0
HIA Hailar 53.40 47 P **P 02 25 29.4 0.0**
HIA pmax pmax
comp=Z,14nm,0.8s
HIA Hailar 53.40 47 P **P 02 25 29.4 0.0**
comp=Z,14nm,0.8s,mb4.9
PMRV Marv??o 53.41 301 *e*P **P 02 25 29.1 -0.5**
comp=Z,54nm,1.6s,mb5.2
PMRV Marv??o 53.41 301 *e*P **P 02 25 29.1 -0.5**
comp=Z,54nm,1.6s,mb5.2
MTE Manteigas 53.42 302 *e*P **P 02 25 30.3 +0.6**
comp=Z,84nm,1.9s,mb5.3
MTE Manteigas 53.42 302 *e*P **P 02 25 30.3 +0.6**
comp=Z,84nm,1.9s,mb5.3
PCBR Castelo Branco 53.43 301 *e*P **P 02 25 30.0 +0.2**
comp=Z,71nm,1.4s,mb5.4
PCBR Castelo Branco 53.43 301 *e*P **P 02 25 30.0 +0.2**
comp=Z,71nm,1.4s,mb5.4
PVRL Vila Real 53.47 303 *e*P **P 02 25 30.1 +0.1**
comp=Z,58nm,1.5s,mb5.3
PVRL Vila Real 53.47 303 *e*P **P 02 25 30.1 +0.1**
comp=Z,58nm,1.5s,mb5.3
PESTR Estremoz 53.63 300 *e*P **P 02 25 30.5 -0.8**
comp=Z,27nm,1.1s,mb5.1
PESTR Estremoz 53.63 300 *e*P **P 02 25 30.5 -0.8**
comp=Z,27nm,1.1s,mb5.1
PVIS Viseu 53.66 302 *e*P **P 02 25 32.0 +0.6**
comp=Z,86nm,1.6s,mb5.4
PVIS Viseu 53.66 302 *e*P **P 02 25 32.0 +0.6**
comp=Z,86nm,1.6s,mb5.4
PCAB Cabril 53.66 303 *e*P **P 02 25 32.3 +0.9**
comp=Z,70nm,1.6s,mb5.3
PCAB Cabril 53.66 303 *e*P **P 02 25 32.3 +0.9**
comp=Z,70nm,1.6s,mb5.3
ELOB Lobios 53.67 304 P **P 02 25 30.8 -0.7**
comp=Z,13nm,0.7s,mb5.0
ELOB Lobios 53.67 304 P **P 02 25 30.8 -0.7**
comp=Z,13nm,0.7s,mb5.0
EGRO El Granado 53.73 298 P **P 02 25 31.0 -1.0**
comp=Z,197nm,4.1s
EGRO El Granado 53.73 298 P **P 02 25 31.0 -1.0**
comp=Z,197nm,4.1s
STS Santiago 53.94 305 P **P 02 25 33.1 -0.4**
comp=Z,44nm,0.9s,mb5.4
STS Santiago 53.94 305 P **P 02 25 33.1 -0.4**
STS pmax pmax
comp=Z,44nm,0.9s,mb5.4
STS Santiago 53.94 305 P **P 02 25 33.1 -0.4**
comp=Z,44nm,0.9s,mb5.4
PBEJ Beja 53.96 299 *e*P **P 02 25 33.3 -0.4**
comp=Z,51nm,1.7s,mb5.2
PBEJ Beja 53.96 299 *e*P **P 02 25 33.3 -0.4**
comp=Z,51nm,1.7s,mb5.2
EVO Evora 54.00 300 *e*P **P 02 25 33.3 -0.7**
comp=Z,75nm,1.8s,mb5.3
EVO Evora 54.00 300 *e*P **P 02 25 33.3 -0.7**
comp=Z,75nm,1.8s,mb5.3
EZAM Zamans 54.11 304 P **P 02 25 34.1 -0.6**
comp=Z,366nm,3.0s
EZAM Zamans 54.11 304 P **P 02 25 34.2 -0.5**
EZAM pmax pmax
comp=Z,366nm,3.0s
EZAM Zamans 54.11 304 P **P 02 25 34.2 -0.5**
comp=Z,366nm,3.0s
PBDV Barranco-do-Ve 54.12 298 *e*P **P 02 25 34.7 -0.2**
comp=Z,39nm,1.3s,mb5.2
PBDV Barranco-do-Ve 54.12 298 *e*P **P 02 25 34.7 -0.2**
comp=Z,39nm,1.3s,mb5.2
PCVE Castro Verde 54.15 298 *e*P **P 02 25 34.4 -0.7**
PCVE Castro Verde 54.15 298 *e*P **P 02 25 34.4 -0.7**
PTOM Tomar 54.17 301 *e*P **P 02 25 35.1 -0.1**
comp=Z,86nm,1.6s,mb5.4
PTOM Tomar 54.17 301 *e*P **P 02 25 35.1 -0.1**
comp=Z,86nm,1.6s,mb5.4
EMAZ Mazaricos 54.25 305 P **P 02 25 35.1 -0.6**
comp=Z,43nm,0.9s,mb5.4
EMAZ Mazaricos 54.25 305 P **P 02 25 35.1 -0.6**
comp=Z,43nm,0.9s,mb5.4
NJ2 Nanjing 54.49 68 *e*P **P 02 25 39.2 +1.6**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
PFVI Vila Bisbo 54.84 298 *e*P **P 02 25 39.8 -0.3**
comp=Z,91nm,1.4s,mb5.6
PFVI Vila Bisbo 54.84 298 P **P 02 25 39.4 -0.8**
PFVI Vila Bisbo 54.84 298 P **P 02 25 39.4 -0.7**
PMAFR Mafra 54.93 300 *e*P **P 02 25 41.5 +0.8**
comp=Z,96nm,1.6s,mb5.6
PMAFR Mafra 54.93 300 *e*P **P 02 25 41.5 +0.8**
comp=Z,96nm,1.6s,mb5.6
KBS Kingsbay 55.61 351 *e*P **P 02 25 44.5 -0.5**
comp=Z,8.1nm,1.1s,mb4.7,SNR=24
CLNS Chul'man 56.62 38 *e*P **P 02 25 44.1 -8.4**
CLNS pmax pmax
comp=Z,22nm,0.8s,mb5.2
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS pmax pmax
comp=N,8.0nm,1.2s
CN2 Changchun 57.69 53 *e*P **P 02 25 59.8 -0.5**
CN2 *es*P sP 02 26 05.7 +1.0
CN2 *e*S **S 02 33 55.0 -3.9**
CN2 pmax pmax
comp=Z,50nm,1.0s,mb5.5
CN2 pmax pmax
comp=Z,200nm,3.0s
YHNB Yeheng 58.51 76 *e*P **P 02 26 08.1 +1.7**
comp=Z,117nm,1.2s,mb5.8
YAK Yakutsk 59.16 32 *e*P **P 02 26 07.2 -3.0**
YAK pmax pmax
comp=Z,26nm,1.3s,mb5.1
YAK pmax pmax
comp=N,5.0nm,1.5s
YAK pmax pmax
comp=E,13nm,1.4s
YAK Yakutsk 59.16 32 *e*P **P 02 26 07.2 -3.0**
comp=E,5.0nm,1.5s,mb4.3
LBTB Lobatse 59.20 212 *e*P **P 02 26 11.4 +0.4**
comp=E,19nm,0.9s,mb5.1
LBTB Lobatse 59.20 212 *e*P **P 02 26 11.4 +0.4**
LBTB pmax pmax
comp=Z,19nm,0.9s,mb5.1
LBTB Lobatse 59.20 212 *e*P **P 02 26 11.4 +0.4**
comp=Z,19nm,0.9s,mb5.1
DAG Danmarks Havn 60.54 345 *i* P **P 02 26 18.6 -1.0**
DAG pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
DAG Danmarks Havn 60.54 345 *i* P **P 02 26 18.6 -1.0**
comp=Z,61nm,0.9s,mb5.7
KSRS Korea Array 60.66 60 P **P 02 26 19.9 -1.1**
comp=Z,7.2nm,0.7s,mb4.9,baz=277,slow=6.8,SNR=44
KSRS Korea Array 60.66 60 P **P 02 26 19.9 -1.1**
KSRS pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
KSRS Korea Array 60.66 60 P **P 02 26 19.9 -1.1**
comp=Z,7.0nm,0.7s,mb4.9
DBIC Dimbokro 60.87 262 P **P 02 26 22.4 -0.4**
comp=Z,8.0nm,0.6s,mb5.0,baz=44,slow=9.0,SNR=12
DBIC Dimbokro 60.87 262 *e*P **P 02 26 22.0 -0.8**
comp=Z,11nm,0.8s,mb5.0
DBIC Dimbokro 60.87 262 P **P 02 26 22.4 -0.4**
DBIC pmax pmax
comp=Z,8.0nm,0.6s
DBIC Dimbokro 60.87 262 *e*P **P 02 26 22.0 -0.8**
comp=Z,11nm,0.8s,mb5.0
KIC Kosan Boka 60.91 262 *e*P **P 02 26 22.2 -0.8**
comp=Z,37nm,0.9s,mb5.5
KIC Kosan Boka 60.91 262 *e*P **P 02 26 22.2 -0.8**
comp=Z,37nm,0.9s,mb5.5
TIC Toumodi 61.02 262 *e*P **P 02 26 23.1 -0.7**
comp=Z,104nm,1.4s,mb5.8
TIC Toumodi 61.02 262 *e*P **P 02 26 23.1 -0.7**
TIC pmax pmax
comp=Z,104nm,1.4s,mb5.8
TIC Toumodi 61.02 262 *e*P **P 02 26 23.1 -0.7**
comp=Z,104nm,1.4s,mb5.8
LIC Lamto 61.22 262 *e*P **P 02 26 24.4 -0.8**
comp=Z,51nm,0.9s,mb5.7
LIC Lamto 61.22 262 *e*P **P 02 26 24.4 -0.8**
comp=Z,51nm,0.9s,mb5.7
KLR Kul'dur 61.24 47 *e*P **P 02 26 18.8 -6.0**
KLR pmax pmax
comp=E,20nm,1.4s
KLR pmax pmax
comp=Z,50nm,1.4s,mb5.5
BOSA Boshof 62.42 210 P **P 02 26 32.8 -0.1**
comp=Z,13nm,0.8s,mb5.1,baz=36,slow=5.1,SNR=30
BOSA Boshof 62.42 210 *e*P **P 02 26 32.7 -0.2**
comp=Z,17nm,0.9s,mb5.2
BOSA Boshof 62.42 210 P **P 02 26 32.8 -0.1**
BOSA pmax pmax
comp=Z,13nm,0.8s,mb5.1
BOSA Boshof 62.42 210 *e*P **P 02 26 32.7 -0.2**
comp=Z,17nm,0.9s,mb5.2
MYLDM Lahad Datu 63.36 98 P **P 02 26 40.2 +0.7**
comp=Z,37nm,1.5s,mb5.3
HABR Khabarovsk 63.52 47 *e*P **P 02 26 37.6 -2.4**
HABR *e**SP sP 02 26 44.2 -0.3
HABR *e* 02 28 57.0
HABR *e*S **S 02 35 09.8 -3.6**
HABR *e* 02 36 29.7
HABR SS SS 02 39 17.3 -2.8
HABR pmax pmax
comp=E,110nm,2.1s
HABR pmax pmax
comp=N,14nm,0.7s
HABR pmax pmax
comp=Z,79nm,1.4s,mb5.5
HABR MLR MLR
comp=Z,1µm,17.0s,MS5.2
HABR Khabarovsk 63.52 47 *e*P **P 02 26 37.6 -2.4**
comp=Z,79nm,1.4s,mb5.5
HABR *e*S **S 02 35 09.8 -3.6**
SUMG Summit 65.92 341 *e*P **P 02 26 55.5 +0.2**
comp=Z,42nm,1.0s,mb5.4
SUMG Summit 65.92 341 *i* P **P 02 26 55.8 +0.5**
comp=Z,27nm,1.0s,mb5.2
SUMG Summit 65.92 341 *e*P **P 02 26 55.5 +0.2**
comp=Z,42nm,1.0s,mb5.4
ALE Alert 67.08 353 P **P 02 27 02.6 0.0**
comp=Z,85nm,1.0s,mb5.7,SNR=5.4
BBTS Babate 67.95 276 P **P 02 27 08.7 -0.5**
comp=Z,40nm,0.8s,mb5.5,baz=104,slow=2.7,SNR=11
BBTS Babate 67.95 276 P **P 02 27 08.6 -0.6**
MJAR Matsushiro Arr 68.83 59 P **P 02 27 12.2 -2.2**
comp=Z,1.0nm,0.3s,mb4.2,baz=284,slow=9.9,SNR=8.0
MJAR Matsushiro Arr 68.83 59 P **P 02 27 12.2 -2.2**
MJAR Matsushiro Arr 68.83 59 P **P 02 27 12.2 -2.2**
YSS Yuzh-Sakhalins 68.94 47 *e*P **P 02 27 13.7 -1.1**
comp=Z,42nm,1.1s,mb5.3
YSS Yuzh-Sakhalins 68.94 47 *e*P **P 02 27 13.0 -1.8**
YSS *e* 02 27 44.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 68.94 47 *e*P **P 02 27 13.0 -1.8**
comp=Z,30nm,1.0s,mb5.2
SEY Seymchan 69.38 29 *e*P **P 02 27 16.5 -0.8**
SEY Seymchan 69.38 29 *e*P **P 02 27 16.5 -0.8**
KAPI Kappang 69.39 107 P **P 02 27 17.7 -0.5**
comp=Z,18nm,1.5s,mb4.8
KDI Kendari 71.33 105 P **P 02 27 30.1 +0.1**
comp=Z,30nm,1.4s,mb5.0
BILL Bilibino 72.65 22 *ce*P **P 02 27 36.8 -0.2**
BILL *i* 02 27 45.9
BILL *e*S S 02 37 01.3 -0.5
BILL *e*SS SS 02 41 42.4 +2.2
BILL pmax pmax
comp=Z,32nm,1.7s,mb5.0
BILL MLR MLR
comp=Z,2µm,18.0s,MS5.3
BILL Bilibino 72.65 22 *e*P **P 02 27 36.8 -0.2**
comp=Z,32nm,1.7s,mb5.0
BILL *e*S S 02 37 01.3 -0.5
LBMI Labuha 74.00 99 P **P 02 27 45.5 -0.5**
comp=Z,53nm,1.3s,mb5.3
NLAI Namlea 74.88 102 P **P 02 27 51.4 +0.4**
comp=Z,1µmcomp=Z,25nm,1.0s,mb5.1
FITZ Fitzroy Crossi 81.12 115 P **P 02 28 25.9 +0.3**
comp=Z,33nm,1.4s,mb5.1
BAKI Biak 81.89 95 P **P 02 28 29.7 -0.1**
comp=Z,100nm,0.6s,mb5.9
KNA Kununurra 82.47 112 P **P 02 28 33.0 +0.3**
INK Inuvik 84.91 3 *e*P **P 02 28 43.6 -0.7**
comp=Z,22nm,1.2s,mb5.2
INK Inuvik 84.91 3 *e*P **P 02 28 43.7 -0.7**
INK pmax pmax
comp=Z,22nm,1.2s
INK Inuvik 84.91 3 *e*P **P 02 28 43.7 -0.7**
comp=Z,22nm,1.2s,mb5.2
COLA College 86.77 10 *e*P **P 02 28 52.8 -0.9**
comp=Z,9.7nm,0.9s,mb5.0
COLA College 86.77 10 *e*P **P 02 28 52.8 -0.9**
COLA pmax pmax
comp=Z,10.0nm,0.9s,mb5.0

COLA	**College**	**86.77**	**10**	*e*P	**P**	**02 28 52.8**	**-0.9**
	comp=Z,10.0nm,0.9s,mb5.0						
ILAR	**Eielson Array**	**87.02**	**10**	P	**P**	**02 28 53.3**	**-1.6**
	comp=Z,3.8nm,0.8s,mb4.7,baz=330,slow=3.9,SNR=45						
ILAR				PP	PP	02 32 18.3	+1.1
	comp=Z,1.1nm,1.0s,baz=344,slow=4.9,SNR=4.3						
ILAR				PKKPbc	PKKPbc	02 46 46.0	-2.5
	comp=Z,0.4nm,0.8s,baz=185,slow=2.0,SNR=4.9						
ILAR	**Eielson Array**	**87.02**	**10**	P	**P**	**02 28 53.3**	**-1.6**
ILAR						02 32 18.3	
ILAR	**Eielson Array**	**87.02**	**10**	P	**P**	**02 28 53.3**	**-1.6**
ILAR	**Eielson Array**	**87.02**	**10**	PP	PP	02 32 18.3	+1.1
MCK	**McKinley**	**87.67**	**11**	*e*P	**P**	**02 28 57.4**	**-0.7**
	comp=Z,46nm,1.2s,mb5.6						
MCK	**McKinley**	**87.67**	**11**	*e*P	**P**	**02 28 57.4**	**-0.6**
MCK				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.6						
MCK	**McKinley**	**87.67**	**11**	*e*P	**P**	**02 28 57.4**	**-0.6**
	comp=Z,46nm,1.2s,mb5.6						
DAWY	**Dawson**	**88.64**	**7**	*e*P	**P**	**02 29 02.2**	**-0.4**
DAWY	**Dawson**	**88.64**	**7**	*e*P	**P**	**02 29 02.2**	**-0.4**
WRA	**Warramunga Arr**	**89.15**	**113**	P	**P**	**02 29 05.0**	**-0.8**
	comp=Z,5.6nm,1.2s,mb4.8,baz=311,slow=4.1,SNR=22						
WRA				PKKPbc	PKKPbc	02 46 42.8	-0.1
	comp=Z,0.7nm,1.0s,baz=116,slow=2.7,SNR=6.5						
WRA	**Warramunga Arr**	**89.15**	**113**	P	**P**	**02 29 05.0**	**-0.8**
WRA	**Warramunga Arr**	**89.15**	**113**	P	**P**	**02 29 05.0**	**-0.8**
ASAR	**Alice Springs**	**90.59**	**116**	P	**P**	**02 29 11.4**	**-1.0**
	comp=Z,2.4nm,0.8s,mb4.6,baz=300,slow=4.5,SNR=19						
ASAR	**Alice Springs**	**90.59**	**116**	P	**P**	**02 29 11.4**	**-1.0**
ASAR	**Alice Springs**	**90.59**	**116**	P	**P**	**02 29 11.4**	**-1.0**
YKA	**Yellowknife Ar**	**90.67**	**356**	P	**P**	**02 29 11.4**	**-0.7**
	comp=Z,3.2nm,0.9s,mb4.7,baz=5.4,slow=6.1,SNR=7.1						
YKA	**Yellowknife Ar**	**90.67**	**356**	P	**P**	**02 29 11.4**	**-0.7**
YKA	**Yellowknife Ar**	**90.67**	**356**	P	**P**	**02 29 11.4**	**-0.8**
YKA	**Yellowknife Ar**	**90.67**	**356**	P	**P**	**02 29 11.4**	**-0.8**
MAW	**Mawson**	**94.28**	**177**	P	**P**	**02 29 28.6**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.5,baz=332,slow=6.6,SNR=4.8						
MAW	**Mawson**	**94.28**	**177**	P	**P**	**02 29 28.6**	**+0.2**
MAW	**Mawson**	**94.28**	**177**	P	**P**	**02 29 28.6**	**+0.2**
PDAR	**Pinedale Array**	**109.46**	**349**	PKiKP	PKiKP	02 34 40.5	+0.1
	comp=Z,0.8nm,0.6s,baz=65,slow=1.9,SNR=7.9						
PDAR				PKKPbc	PKKPab	02 45 55.9	-4.5
	comp=Z,0.7nm,0.8s,baz=194,slow=4.1,SNR=5.7						
NVAR	**Mina Array Bea**	**114.86**	**355**	PKP	PKiKP	02 34 51.3	+0.5
	comp=Z,2.1nm,0.8s,baz=44,slow=0.9,SNR=16						
ANMO	**Albuquerque**	**116.31**	**344**	PKKPbc	PKKPbc	02 45 27.2	+4.3
	comp=Z,0.5nm,0.4s,baz=146,slow=2.1,SNR=3.7						
SIV	**San Ignacio**	**120.75**	**267**	PKP	PKPdf	02 35 00.6	-2.0
	comp=Z,1.8nm,0.9s,baz=90,slow=2.6,SNR=8.1						
TXAR	**Lajitas Array**	**120.80**	**339**	PKP	PKPdf	02 35 00.8	-1.7
	comp=Z,1.8nm,0.7s,baz=144,slow=1.3,SNR=22						
TXAR	**Lajitas Array**	**120.80**	**339**	PKP	PKPdf	02 35 00.8	-1.7
TXAR	**Lajitas Array**	**120.80**	**339**	PKIKP	PKPdf	02 35 00.8	-1.7
CPUP	**Villa Florida**	**120.86**	**254**	PKP	PKPdf	02 35 01.1	-1.4
	comp=Z,0.9nm,0.5s,baz=3.7,slow=2.9,SNR=5.2						
CPUP	**Villa Florida**	**120.86**	**254**	PKIKP	PKPdf	02 35 01.2	-1.4
LPAZ	**La Paz**	**127.17**	**269**	PKP	PKPdf	02 35 14.9	+0.1
	comp=Z,2.1nm,0.9s,baz=47,slow=4.8,SNR=8.2						
LPAZ	**La Paz**	**127.17**	**269**	PKIKP	PKPdf	02 35 15.0	+0.1
CMIG	**Matias Romero**	**127.89**	**324**	PKP	PKPdf	02 35 15.2	-1.2
	comp=Z,4.4nm,0.7s,baz=351,slow=4.2,SNR=10						
CFAA	**Coronel Fontan**	**131.36**	**250**	PKP	PKPdf	02 35 22.9	+0.4
	comp=Z,0.9nm,1.1s,baz=90,slow=1.5,SNR=7.4						
CFAA				SKPbc	SKPbc	02 38 45.5	-2.1
	comp=Z,0.4nm,0.7s,baz=63,slow=3.0,SNR=4.5						
CFAA	**Coronel Fontan**	**131.36**	**250**	PKP	PKPdf	02 35 22.9	+0.4
CFAA				SKPbc	SKPbc	02 38 45.5	-2.1
ATAH	**Atahualpa**	**132.34**	**286**	SKPbc		02 38 53.6	
	comp=Z,5.2nm,0.7s,baz=63,slow=5.7,SNR=4.2						
PLCA	**Paso Flores**	**133.96**	**238**	PKP	PKPdf	02 35 24.4	-2.7
	comp=Z,4.4nm,1.1s,baz=112,slow=5.4,SNR=3.0						
PLCA	**Paso Flores**	**133.96**	**238**	PKP	PKPdf	02 35 24.4	-2.7
PLCA	**Paso Flores**	**133.96**	**238**	PKIKP	PKPdf	02 35 24.4	-2.7

ISCJB ***11*** *02:25:59.8±0.6, 38°.89N±0°.03×27°.94E±0°.03, h1km±6km, Error ellipse: s-maj=5.0km s-min=4.0km az=151.6*
CSEM ***11*** *02:25:59.8, 38°.88N×27°.93E, h6km, MD2.9, After DDA*
DDA ***11*** *02:25:59.8, 38°.88N×27°.93E, h6km±2km, Md2.9*
ISK ***11*** *02:25:59.7, 38°.90N×27°.90E, h7km, MD2.9*
ISC 11 02:26:00.3±0.4, 38°.89N±0°.03×27°.93E±0°.03, h6km±5km, n25, σ0°72/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.09**	**265**	*i* P	**Pg**	**02 26 01.7**	**-0.7**
AKHS				*i* S	**Sg**	**02 26 03.0**	**-0.7**
AKHS	**Akhisar**	**0.09**	**265**	*i* P	**Pg**	**02 26 01.7**	**-0.6**
AKHS				*i* S	**Sg**	**02 26 03.0**	**-0.7**
AKS	**Akhisar**	**0.09**	**265**	*e*PG	**Pg**	**02 26 01.7**	**-0.7**
AKS				*e*SG	**Sg**	**02 26 03.3**	**-0.4**
DEMI	**Demirci**	**0.63**	**75**	*i* P	**Pg**	**02 26 12.7**	**+0.3**
DEMI				*i* S	**Sg**	**02 26 21.2**	**+0.6**
DEMI	**Demirci**	**0.63**	**75**	*i* P	**Pg**	**02 26 12.7**	**+0.3**
DEMI				*i* S	**Sg**	**02 26 21.2**	**+0.6**
IZM	**Izmir**	**0.72**	**227**	*e*PG	**Pg**	**02 26 14.0**	**-0.1**
IZM				*e*SG	**Sg**	**02 26 24.1**	**+0.7**
IZM	**Izmir**	**0.72**	**227**	*e*Sg	**Sg**	**02 26 24.1**	**+0.7**
BALB	**Balikesir**	**0.75**	**357**	*e*PG	**Pg**	**02 26 14.5**	**-0.3**
BLCB	**Balcova**	**0.86**	**235**	*e*PG	**Pg**	**02 26 16.4**	**-0.4**
BALY	**Balya**	**0.89**	**344**	*i* P	**Pg**	**02 26 17.3**	**0.0**
BALY				*i* S	**Sg**	**02 26 30.3**	**+1.4**
BALY	**Balya**	**0.89**	**344**	*i* P	**Pg**	**02 26 17.3**	**0.0**
BALY				*i* S	**Sg**	**02 26 30.3**	**+1.5**
AYVA	**Ayvalik**	**1.05**	**294**	*i* P	**Pg**	**02 26 20.7**	**+0.2**
AYVA				*i* S	**Sg**	**02 26 36.6**	**+2.4**
AYVA	**Ayvalik**	**1.05**	**294**	*i* P	**Pg**	**02 26 20.7**	**+0.2**
AYVA				*i* S	**Sg**	**02 26 36.6**	**+2.4**
GONE	**Gonen-Balikesi**	**1.17**	**351**	*e*PN	**Pn**	**02 26 22.5**	**-0.8**
GDZ	**Gediz**	**1.22**	**80**	*i* P	**Pg**	**02 26 22.7**	**-1.1**
GDZ				*i* S	**Sg**	**02 26 39.8**	**+0.2**
GDZ	**Gediz**	**1.22**	**80**	*i* P	**Pg**	**02 26 22.7**	**-1.0**
GDZ				*i* S	**Sg**	**02 26 39.8**	**+0.2**
AYDN	**Tasoluk**	**1.23**	**182**	*i* P	**Pg**	**02 26 23.7**	**0.0**
AYDN				*i* S	**Sg**	**02 26 40.4**	**+0.7**
AYDN	**Tasoluk**	**1.23**	**182**	*i* P	**Pg**	**02 26 23.7**	**-0.1**
AYDN				*i* S	**Sg**	**02 26 40.4**	**+0.8**
KHAL	**Karahalli**	**1.32**	**112**	*i* P	**Pn**	**02 26 26.1**	**+0.8**
KHAL	**Karahalli**	**1.32**	**112**	*i* P	**Pn**	**02 26 26.1**	**+0.7**
KCTX	**Karacabey (Bur**	**1.42**	**13**	*e*PN	**Pn**	**02 26 26.2**	**-0.4**
EDC	**Edincik**	**1.46**	**358**	*e*PN	**Pn**	**02 26 26.5**	**-0.7**
BNT	**Bandirma**	**1.47**	**360**	*e*PN	**Pn**	**02 26 27.2**	**-0.1**
EZN	**Ezine**	**1.56**	**307**	*e*PN	**Pn**	**02 26 28.4**	**-0.2**
MLSB	**Milas**	**1.59**	**184**	*e*PN	**Pn**	**02 26 29.0**	**0.0**

IDC ***11*** *02:53:43.9±0.5, 32°.37N×105°.22E, h0km, mb4.5/24, mb1 4.6/27, mb1mx4.6/32, mbtmp4.5/27, ML4.2/3, MS4.7/1, Ms1 4.9/1, ms1mx3.5/31, Error ellipse: s-maj=18.1km s-min=11.8km az=48.0*
ISCJB ***11*** *02:53:44.2±0.8, 32°.36N±0°.02×105°.18E±0°.03, h10km±5km, mb4.8/92, MS5.1/3, Error ellipse: s-maj=3.9km s-min=3.1km az=155.3*
NEIC ***11*** *02:53:45.6±0.2, 32°.38N×105°.27E, h10km, mb4.9/32, Error ellipse: s-maj=6.3km s-min=4.2km az=63.0*
BJI ***11*** *02:53:45.0, 32°.35N×105°.19E, h12km, mB5.1/14, mb4.5/28, ML4.7/22, Ms4.7/35, Ms7 4.6/29*
MOS ***11*** *02:53:47.5±1.2, 32°.34N×105°.26E, h35km, mb5.0/35, Error ellipse: s-maj=8.6km s-min=4.7km az=118.8*
SZGRF ***11*** *02:53:51.0, 31°.80N×104°.18E, h33km, mb5.1, Sichuan, China*
DJA ***11*** *02:53:56, 32°.19N×105°.15E, h85km, mb5.1/17*
ISC 11 02:53:45.7±0.7, 32°.39N±0°.02×105°.18E±0°.03, h7km±4km, h11km±.5km: pP-P, n284, σ1°17/304, mb4.8/92, MS5.1/3, 21C-19D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.91**	**220**	Pn	**Pn**	**02 54 19.7**	**+1.0**
CD2				Pg	**Pg**	**02 54 22.2**	**-0.1**
CD2				Sn	**Sn**	**02 54 45.2**	**+2.2**
CD2				Sg	**Sg**	**02 54 47.4**	**+0.4**
CD2				smax			
	comp=N,65μm,0.6s						
CD2				smax			
	comp=E,40μm,0.6s						
XAN	**Xi'an**	**3.54**	**61**	Pn	**Pn**	**02 54 41.1**	**-0.1**
XAN				Pg	**Pg**	**02 54 52.7**	**-0.9**
XAN				Sn	**Sn**	**02 55 20.7**	**-2.6**
XAN				Sg	**Sg**	**02 55 33.4**	**-6.1**
XAN				smax			
	comp=N,2μm,0.8s						
XAN				smax			
	comp=E,980nm,0.8s						
XAN				LR	LR		
	comp=N,3μm,8.0s						
XAN				LR	LR		
	comp=E,1μm,10.9s						
XAN				LR	LR		
	comp=Z,1μm,6.8s						
LZH	**Lanzhou**	**3.85**	**344**	Pn	**Pn**	**02 54 47.0**	**+1.6**
LZH				Pg	**Pg**	**02 54 58.1**	**-1.4**
LZH				Sn	**Sn**	**02 55 32.4**	**+1.5**
LZH				Sg	**Sg**	**02 55 45.6**	**-3.8**
LZH				smax			
	comp=N,3μm,0.7s						
LZH				smax			
	comp=E,2μm,0.7s						
LZH				LR	LR		
	comp=N,5μm,6.4s						
LZH				LR	LR		
	comp=E,7μm,4.5s						
LZH				LR	LR		
	comp=Z,6μm,6.0s						
ENH	**Enshi**	**4.25**	**119**	*e*Pn	**Pn**	**02 54 53.4**	**+2.5**
ENH				*e*S	Sn	02 56 01.2	+21
GYA	**Guiyang**	**6.05**	**167**	Pn	**Pn**	**02 55 15.8**	**+0.2**
GYA				Sn	**Sn**	**02 56 24.4**	**-0.8**
GYA				Sg	**Sg**	**02 56 52.0**	**-8.0**
GYA				smax			
	comp=N,860nm,0.8s						
GYA				smax			
	comp=E,710nm,0.7s						
GYA				LR	LR		
	comp=N,1μm,8.3s						
GYA				LR	LR		
	comp=E,1μm,5.2s						
GYA				LR	LR		
	comp=Z,1μm,7.4s						
KMI	**Kunming**	**7.55**	**197**	Pn	**Pn**	**02 55 36.6**	**+0.4**
KMI				Sn	**Sn**	**02 57 02.0**	**-0.1**
KMI				Sg	**Sg**	**02 57 48.1**	**0.0**
KMI				smax			
	comp=N,100nm,1.4s						
KMI				smax			
	comp=E,91nm,1.2s						
KMI				LR	LR		
	comp=N,1μm,7.8s						
KMI				LR	LR		
	comp=E,1μm,8.2s						
WHN	**Wuhan**	**8.05**	**101**	⇑P	**Pn**	**02 55 44.5**	**+1.4**
WHN				S	**Sn**	**02 57 10.1**	**-4.2**
WHN				LR	LR		
	comp=N,9μm,6.8s						
WHN				LR	LR		
	comp=E,5μm,9.7s						
GTA	**Gaotai**	**8.25**	**330**	*e*P	**Pn**	**02 55 46.1**	**+0.3**
GTA				pP		02 55 50.2	
GTA				sP		02 55 53.8	
GTA				S	**Sn**	**02 57 19.0**	**-0.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,480nm,5.9s						
GTA				LR	LR		
	comp=N,2μm,9.7s						
GTA				LR	LR		
	comp=E,2μm,11.6s						
GTA				LR	LR		
	comp=Z,2μm,10.0s						
HHC	**Hu-ho-hao-te**	**9.88**	**29**	*e*P	**Pn**	**02 56 14.1**	**+6.0**
HHC				pP		02 56 17.3	
HHC				PP		02 56 22.4	
HHC				S	**Sn**	**02 58 07.4**	**+8.1**
HHC				sS		02 58 13.0	
HHC				SS		02 58 20.9	
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,570nm,6.7s						
HHC				LR	LR		
	comp=N,16μm,7.1s						
HHC				LR	LR		
	comp=E,10μm,8.6s						
HHC				LR	LR		
	comp=Z,16μm,8.0s						
TIA	**Tai'an**	**10.59**	**66**	P	**Pn**	**02 56 18.3**	**+0.4**
NJ2	**Nanjing**	**11.59**	**88**	*e*P	**Pn**	**02 56 39.9**	**+8.3**
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s						
BJT	**Baijiatuau**	**11.69**	**46**	*e*Pn	**Pn**	**02 56 35.5**	**+2.6**
BJT	**Baijiatuau**	**11.69**	**46**	*e*P	**Pn**	**02 56 35.5**	**+2.6**
BJI	**Beijing**	**11.71**	**46**	P	**Pn**	**02 56 37.5**	**+4.4**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJI				LR	LR		
	comp=N,1μm,13.2s						
BJI				LR	LR		
	comp=E,2μm,16.2s						
BJI				LR	LR		
	comp=Z,1μm,25.4s						
GZH	**Guangzhou**	**11.75**	**140**	P	**Pn**	**02 56 29.7**	**-4.1**
GZH				S	**Sn**	**02 58 44.4**	**-0.8**
GZH				smax			
	comp=N,120nm,1.0s						
GZH				smax			
	comp=E,160nm,1.0s						
LSA	**Lhasa**	**12.33**	**261**	P	**Pn**	**02 56 34.5**	**-7.2**
LSA	**Lhasa**	**12.33**	**261**	*e*Pn	**Pn**	**02 56 44.4**	**+2.7**
	comp=E,28nm,1.0s						
LSA	**Lhasa**	**12.33**	**261**	*e*P	**Pn**	**02 56 44.4**	**+2.7**
LSA				pmax	pmax		
	comp=Z,28nm,1.0s						
SHL	**Shillong**	**13.47**	**243**	*e*PKP	**Pn**	**02 56 55.0**	**-2.4**
SHL				*e*S	Sx	03 01 02.0	
QZH	**Quanzhou**	**13.91**	**119**	P	**Pn**	**02 57 04.4**	**+1.1**
QZH				*e*S	**Sn**	**02 59 39.0**	**+0.9**
QZH				LR	LR		
	comp=N,2μm,5.9s						
QZH				LR	LR		
	comp=E,3μm,10.8s						
QZH				LR	LR		
	comp=Z,4μm,8.7s						
QIZ	**Qiongzhong**	**13.95**	**161**	P	**Pn**	**02 57 06.3**	**+2.4**
QIZ				S	**Sn**	**02 59 41.3**	**+2.2**
QIZ				pmax	pmax		
	comp=Z,18nm,1.1s						
QIZ				LR	LR		
	comp=N,1μm,9.6s						
QIZ				LR	LR		
	comp=Z,3μm,12.8s						
QIZ	**Qiongzhong**	**13.95**	**161**	*e*Pn	**Pn**	**02 57 01.9**	**-2.0**
CHG	**Chiang Mai**	**14.63**	**204**	⇓P	**Pn**	**02 57 13.5**	**+0.2**
	comp=Z,20nm,0.8s						
CHTO	**Chiang Mai**	**14.63**	**204**	*e*Pn	**Pn**	**02 57 12.9**	**-0.3**
	comp=Z,13nm,0.7s						
CHTO	**Chiang Mai**	**14.63**	**204**	*e*P	**Pn**	**02 57 13.0**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,13nm,0.7s						
CHTO	**Chiang Mai**	**14.63**	**204**	P	**Pn**	**02 57 15.3**	**+2.0**
	comp=Z,24nm,0.8s						
CM31	**Chiang Mai Arr**	**14.96**	**204**	*e*Pn	**Pn**	**02 57 18.0**	**+0.2**
CM31				*e*		02 57 25.0	
CMAR	**Chiang Mai Arr**	**14.96**	**204**	Pn	**Pn**	**02 57 17.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=14,slow=12,SNR=40						
CMAR				LR	LR	03 03 40.6	
	comp=Z,3μm,18.2s,baz=220,slow=40						
CMAR	**Chiang Mai Arr**	**14.96**	**204**	P	**Pn**	**02 57 17.9**	**+0.1**
SONM	**Songino Array**	**15.46**	**3**	Pn	**Pn**	**02 57 24.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=182,slow=14,SNR=26						
SONM	**Songino Array**	**15.46**	**3**	P	**Pn**	**02 57 24.0**	**-0.1**
TAPN	**Taplejung**	**15.96**	**256**	*e*P	**Pn**	**02 57 30.9**	**+0.1**
BDT	**Bhumibol Dam**	**16.08**	**202**	P	**Pn**	**02 57 33.5**	**+1.1**
	comp=Z,22nm,0.8s						
SSLB	**Suanglung**	**16.33**	**118**	*e*Pn	**Pn**	**02 57 36.1**	**+0.5**
	comp=Z,44nm,1.1s						
ODAN	**Odare**	**16.41**	**255**	*e*P	**Pn**	**02 57 37.3**	**+0.7**
	comp=Z,106nm,0.9s						
GUN	**Gumba**	**17.27**	**260**	*e*P	**Pn**	**02 57 46.7**	**-0.8**
	comp=Z,145nm,1.0s						
PKI	**Pulchoki**	**17.78**	**259**	*e*P	**Pn**	**02 57 51.9**	**-1.9**
	comp=Z,212nm,1.3s						
PKIN	**Phulchoki**	**17.79**	**260**	*e*P	**Pn**	**02 57 52.4**	**-1.5**
	comp=Z,42nm,0.6s						
WMQ	**Urumqi**	**17.84**	**315**	*e*P	**Pn**	**02 58 05.0**	**+11**
WMQ	**Urumqi**	**17.84**	**315**	*e*P	**Pn**	**02 57 54.0**	**-0.4**
WMQ				sP	sP	02 58 01.0	+3.2
WMQ				PP		02 58 09.0	
WMQ				S	**Sn**	**03 01 09.0**	**-4.4**
WMQ				SS		03 01 32.0	
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				LR	LR		
	comp=N,1μm,10.0s						
WMQ				LR	LR		
	comp=E,1μm,10.0s						
WMQ				LR	LR		
	comp=Z,2μm,10.0s						
DMN	**Daman**	**18.02**	**260**	*e*P	**Pn**	**02 57 55.2**	**-1.6**
	comp=Z,93nm,0.9s						
ZAK	**Zakamensk**	**18.03**	**356**	*e*P	**Pn**	**02 57 58.5**	**+1.8**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GKN	**Gorkha**	**18.28**	**262**	*e*P	**Pn**	**02 57 58.2**	**-1.8**
	comp=Z,138nm,1.0s						
DANN	**Dangsing**	**18.91**	**263**	*e*P	**Pn**	**02 58 05.2**	**-2.4**
	comp=Z,61nm,0.7s						
KOLN	**Koldanda**	**19.23**	**262**	*e*P	**Pn**	**02 58 09.1**	**-2.3**
	comp=Z,148nm,0.8s						
KSRS	**Korea Array**	**19.31**	**69**	P	**Pn**	**02 58 11.8**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=255,slow=10,SNR=19						
KSRS	**Korea Array**	**19.31**	**69**	P	**Pn**	**02 58 11.8**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TLY	**Talaya**	**19.31**	**357**	*e*P	**Pn**	**02 58 16.8**	**+4.6**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MOY	**Mondy**	**19.51**	**352**	*e*P	**Pn**	**02 58 15.6**	**+1.0**
CN2	**Changchun**	**19.55**	**49**	*e*P	**Pn**	**02 58 17.3**	**+2.1**
CN2				*es*P	sP	02 58 21.8	+5.2
CN2				*e*S	**Sn**	**03 01 52.0**	**-2.7**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
IRK	**Irkutsk**	**19.85**	**358**	*e*P	**Pn**	**02 58 18.8**	**+0.1**
IRK				pmax	pmax		
	comp=Z,90nm,1.3s						
HIA	**Hailar**	**20.08**	**29**	*e*P	**P**	**02 58 20.6**	**+0.9**
	comp=Z,12nm,0.7s						
HIA	**Hailar**	**20.08**	**29**	*e*P	**P**	**02 58 20.6**	**+0.9**
HIA				pmax	pmax		
	comp=Z,12nm,0.7s						
MDJ	**Mudanjiang**	**22.58**	**50**	P	**P**	**02 58 48.4**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
MK31	**Makanchi Array**	**22.65**	**316**	*e*P	**P**	**02 58 47.4**	**+0.1**
MK31	**Makanchi Array**	**22.65**	**316**	*e*P	**P**	**02 58 47.4**	**+0.1**
MKAR	**Makanchi Array**	**22.65**	**316**	P	**P**	**02 58 47.4**	**+0.1**
	comp=Z,16nm,0.8s,mb4.5,baz=112,slow=12,SNR=45						
MKAR	**Makanchi Array**	**22.65**	**316**	P	**P**	**02 58 47.4**	**+0.1**
MKAR	**Makanchi Array**	**22.65**	**316**	P	**P**	**02 58 47.4**	**+0.1**
ORY	**Orie**	**23.70**	**345**	⇓*i*P	**P**	**02 58 57.0**	**-1.1**
ORY				*e*		03 02 42.0	
ORY				*e*S	**S**	**03 03 12.7**	**-0.4**
NDI	**New Delhi**	**24.34**	**269**	*e*PKP	**P**	**02 59 03.0**	**-1.2**
KSH	**Kashi**	**24.62**	**295**	*e*P	**P**	**02 59 10.0**	**+3.3**
KSH				*ep*P		02 59 14.2	
KSH				*es*P	sP	02 59 17.0	+7.5
KSH				*e*PP		02 59 46.2	
KSH				*e*PcP	PcP	03 02 47.4	+3.1
KSH				*e*S	**S**	**03 03 28.0**	**-0.2**
KSH				*es*S	sS	03 03 36.2	+4.7
KSH				*e*SS		03 04 26.5	
KSH				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.9						
KSH				pmax	pmax		
	comp=Z,800nm,8.6s						
KSH				LR	LR		
	comp=N,3μm,17.4s,MS5.1						
KSH				LR	LR		
	comp=E,4μm,16.2s,MS5.1						
KSH				LR	LR		
	comp=Z,6μm,17.4s,MS5.2						
ULHL	**Ulahol**	**24.93**	**302**	P	**P**	**02 59 10.6**	**+1.2**
	SNR=19						
TKM2	**Tokmak 2**	**25.55**	**303**	P	**P**	**02 59 16.4**	**+1.3**
	SNR=26						
TKM2	**Tokmak 2**	**25.55**	**303**	*e*P	**P**	**02 59 15.8**	**+0.7**
	comp=Z,21nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**25.55**	**303**	*e*P	**P**	**02 59 15.9**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.7						
KZA	**Kyzart**	**25.61**	**301**	P	**P**	**02 59 17.6**	**+2.0**
	SNR=22						
KBK	**Karagaybulak**	**25.95**	**302**	P	**P**	**02 59 20.5**	**+1.7**
	SNR=11						
KBK	**Karagaybulak**	**25.95**	**302**	*e*P	**P**	**02 59 20.4**	**+1.7**
	comp=Z,40nm,1.0s,mb4.9						
ZAA0	**Zalesovo Array**	**25.99**	**332**	*e*P	**P**	**02 59 18.5**	**-0.5**
ZALV	**Zalesovo Beam**	**25.99**	**332**	P	**P**	**02 59 18.5**	**-0.5**
	comp=Z,15nm,0.7s,mb4.6,baz=136,slow=10.0,SNR=22						
ZALV	**Zalesovo Beam**	**25.99**	**332**	P	**P**	**02 59 18.5**	**-0.5**
KLR	**Kul'dur**	**26.02**	**42**	*e*P	**P**	**02 59 16.8**	**-2.5**
AAK	**Ala-Archa**	**26.27**	**302**	P	**P**	**02 59 22.7**	**+1.1**
	comp=Z,4.6nm,0.7s,mb4.1,baz=121,slow=6.0,SNR=8.8						
AAK	**Ala-Archa**	**26.27**	**302**	*e*P	**P**	**02 59 22.4**	**+0.8**
	comp=Z,9.8nm,0.9s,mb4.3						
AAK	**Ala-Archa**	**26.27**	**302**	*e*P	**P**	**02 59 22.4**	**+0.7**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
USP	**Ospenovka**	**26.42**	**303**	P	**P**	**02 59 23.6**	**+0.6**
	SNR=10						
AML	**Almayashu**	**26.75**	**300**	P	**P**	**02 59 27.6**	**+1.6**
	SNR=24						
AML	**Almayashu**	**26.75**	**300**	*e*P	**P**	**02 59 27.4**	**+1.4**
	comp=Z,27nm,0.8s,mb4.8					

AKTK **Aktyubinsk** 38.95 312 P P 03 01 12.0 -0.2
AKTO **Aktyubinsk** 38.95 312 P P 03 01 12.0 -0.2
comp=Z,5.1nm,0.8s,mb4.3,baz=93,slow=8.1,SNR=17
AKTO **Aktyubinsk** 38.95 312 P P 03 01 12.0 -0.2
SVE **Sverdlovsk** 39.03 322 *e*P P 03 01 13.5 +0.7
SVE pmax pmax
comp=Z,29nm,0.9s,mb5.0
LBMI **Labuha** 39.04 143 P P 03 01 17.4 +4.1
KAPI **Kappang** 39.69 157 *e*P P 03 01 17.3 -1.5
comp=Z,54nm,1.3s,mb5.1
ARU **Arti** 39.99 321 *e*P P 03 01 20.6 -0.2
comp=Z,38nm,1.2s,mb5.0
ARU **Arti** 39.99 321 *d i*P P 03 01 21.0 +0.1
ARU S S 03 07 27.7 +1.2
ARU SS SS 03 10 19.3 -3.8
ARU pmax pmax
comp=Z,37nm,1.2s,mb5.0
NLAI **Namlea** 41.09 145 P P 03 01 31.4 +1.1
comp=Z,33nm,0.8s,mb5.0
SEY **Seymchan** 42.52 30⇑*e*P P 03 01 41.9 +0.3
PETK **Petropavlovsk-** 42.63 45 P P 03 01 42.9 +0.3
comp=Z,3.7nm,0.8s,mb4.2,baz=224,slow=4.1,SNR=3.9
PETK **Petropavlovsk-** 42.63 45 P P 03 01 42.9 +0.3
PETK **Petropavlovsk-** 42.63 45 P P 03 01 42.9 +0.3
BMNI **Bima** 42.69 160 P P 03 01 43.5 +0.1
comp=Z,56nm,0.9s,mb5.3
MMRI **Maumere** 43.92 155 P P 03 01 52.5 -0.9
comp=Z,130nm,0.9s,mb5.6
PRGR **Permogore** 47.69 326 *e*P P 03 02 21.3 -1.3
PRGR pmax pmax
comp=Z,20nm,1.1s,mb5.1
GNI **Garni** 48.52 297 P P 03 02 30.4 +1.0
comp=Z,11nm,0.8s,mb4.9,baz=343,slow=15,SNR=4.9
GNI **Garni** 48.52 297 P P 03 02 33.5 +4.1
comp=Z,15nm,1.0s,mb5.0
GNI **Garni** 48.52 297⇑*e*P P 03 02 30.5 +1.1
GNI pmax pmax
comp=Z,15nm,1.2s
ZEI **Tsey** 48.70 301 *e*P P 03 02 32.9 +2.2
ZEI pmax pmax
comp=Z,11nm,1.0s,mb4.8
VRHR **Novokhopersk** 49.36 312 *e*P P 03 02 37.7 +2.1
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.4
KIV **Kislovodsk** 49.39 302 *e*P P 03 02 37.0 +1.1
comp=Z,30nm,1.3s,mb5.2
KIV **Kislovodsk** 49.39 302 P P 03 02 37.0 +1.0
KIV pmax pmax
comp=Z,50nm,1.7s,mb5.3
BILL **Bilibino** 49.63 26⇓*e*P P 03 02 38.8 +1.4
BILL *e* 03 04 36.1
BILL pmax pmax
comp=Z,12nm,1.7s,mb4.7
BILL MLR MLR
comp=Z,2μm,21.0s,MS5.0
KLMR **Klimovskoe** 50.54 325 *e*P P 03 02 43.3 -1.2
KLMR pmax pmax
comp=Z,33nm,1.3s,mb5.1
VORD **Divnogorie** 50.84 312 *e*P P 03 02 48.7 +1.8
VORD pmax pmax
comp=N,3.0nm,0.4s
VORD pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
VORD pmax pmax
comp=E,20nm,0.8s
VSR **Storozhevoye** 50.89 312 *e*P P 03 02 46.7 -0.6
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MOS **Moscow** 51.51 318 *e*P P 03 02 48.6 -3.3
KAKA **Kakadu** 51.88 145 *e*P P 03 02 53.3 -1.7
comp=Z,5.0nm,0.5s,mb4.7
KAKA **Kakadu** 51.88 145 *e*P P 03 02 53.0 -2.0
comp=Z,15nm,0.5s,mb5.2
KAKA **Kakadu** 51.88 145 P P 03 02 54.1 -0.9
comp=Z,139nmcomp=Z,17nm,0.9s,mb5.0
OBN **Obninsk** 52.15 317⇑*e*P P 03 02 55.7 -0.9
OBN pmax pmax
comp=Z,20nm,1.3s,mb4.9
KNA **Kununurra** 52.93 151 P P 03 03 02.2 -0.6
comp=Z,911nmcomp=Z,115nm,0.9s,mb5.8
ANN **Anapa** 52.95 304 *e*P P 03 03 06.4 +3.6
ANN pmax pmax
comp=Z,144nm,2.0s,mb5.6
LVZ **Lovozero** 53.12 334*ce*P P 03 03 05.7 +2.1
LVZ pmax pmax
comp=Z,11nm,0.8s,mb4.8
APA **Apatity** 53.57 333⇑*e*P P 03 03 07.0 +0.1
APA MLR MLR
comp=Z,2μm,18.0s,MS5.1
MALT **Malatya** 53.71 296 ⇓P P 03 03 12.6 +4.2
MALT **Malatya** 53.71 296 ⇓*i*P P 03 03 12.6 +4.2
MALT **Malatya** 53.71 296 P P 03 03 10.2 +1.8
comp=Z,12nm,1.0s,mb4.7
FITZ **Fitzroy Crossi** 53.89 156 *e*P P 03 03 08.7 -1.1
comp=Z,13nm,1.0s,mb4.8
FITZ **Fitzroy Crossi** 53.89 156 P P 03 03 09.5 -0.3
comp=Z,37nm,1.1s,mb5.2
MBWA **Marble Bar** 55.03 163 *e*P P 03 03 17.3 -0.8
ARCES **ARCESS Array B** 56.47 335 P P 03 03 27.2 -0.7
comp=Z,11nm,0.7s,mb5.0,baz=64,slow=8.4,SNR=19
ARCES **ARCESS Array B** 56.47 335 P P 03 03 27.2 -0.7
BR131 **Keskin Array S** 56.91 299 *e*P P 03 03 31.2 -0.3
comp=Z,5.6nm,0.8s,mb4.7
BRTR **Keskin Array B** 56.91 299 P P 03 03 30.9 -0.6
comp=Z,6.0nm,0.8s,mb4.7,baz=98,slow=7.0,SNR=17
BRTR **Keskin Array B** 56.91 299*ce*P P 03 03 34.2 +2.7
BRTR pmax pmax
comp=Z,6.0nm,0.8s
FINES **FINESS Array B** 57.02 326 P P 03 03 31.2 -0.7
comp=Z,8.2nm,0.8s,mb4.8,baz=91,slow=7.8,SNR=8.9
FINES **FINESS Array B** 57.02 326 P P 03 03 31.2 -0.7
VSU **Vasula** 57.14 322⇑*e*P P 03 03 32.0 -0.8
VSU pmax pmax
comp=Z,62nm,1.2s,mb5.5
AKASG **Malin Array Be** 57.18 313 P P 03 03 31.2 -2.0
comp=Z,8.9nm,0.7s,mb4.9,baz=67,slow=6.8,SNR=12
AKASG **Malin Array Be** 57.18 313 P P 03 03 31.2 -2.0
KIEV **Kiev** 57.19 313 *e*P P 03 03 31.8 -1.5
comp=Z,9.6nm,0.9s,mb4.8
KIEV **Kiev** 57.19 313 *e*P P 03 03 31.8 -1.5
KIEV pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
IDID **Didziasalis** 57.70 319 *e*P P 03 03 36.5 -0.3
IDID AMB AMB 03 03 40.4
comp=Z,9.7nm,0.8s,mb4.9
PMG **Port Moresby** 57.72 129*de*P P 03 03 40.2 +2.8
PMG pmax pmax
comp=Z,21nm,1.2s
IIGN **Ignalina** 57.98 319 *e*P P 03 03 38.5 -0.3
IIGN AMB AMB 03 03 42.5
comp=Z,11nm,0.9s,mb4.9
ISAL **Salakas** 57.99 319 *e*P P 03 03 38.4 -0.4
ISAL AMB AMB 03 03 42.5
comp=Z,8.7nm,0.8s,mb4.8
COEN **Coen** 58.70 136 *e*P P 03 03 42.9 -1.3
COEN **Coen** 58.70 136 P P 03 03 44.2 0.0
comp=Z,59nm,1.0s,mb5.6
WRA **Warramunga Arr** 59.05 148 P P 03 03 45.8 -0.7
comp=Z,21nm,0.7s,mb5.3,baz=341,slow=7.5,SNR=161
WRA **Warramunga Arr** 59.05 148 P P 03 03 45.8 -0.8
WB2 **Warramunga Arr** 59.05 148 *e*P P 03 03 45.9 -0.7
SUW **Suwalki** 60.01 318 *e*P P 03 03 55.1 +2.3
SUW **Suwalki** 60.01 318 *e*P P 03 03 55.1 +2.2
VRI **Vrincioaia** 60.02 308 ⇓P P 03 03 53.3 +0.2
VRI **Vrincioaia** 60.02 308 ⇓*i*P P 03 03 53.3 +0.2
MEEK **Meekatharra** 60.08 166 *e*P P 03 03 52.8 -0.7
PLOR **Plostina** 60.08 308 ⇓P P 03 03 57.3 +3.8
PLOR **Plostina** 60.08 308 ⇓*i*P P 03 03 57.3 +3.8
BURAR **Bucovina Array** 60.51 310 ⇑P P 03 03 59.2 +2.8
BURAR **Bucovina Array** 60.51 310 ⇑*i*P P 03 03 59.2 +2.8
BUR08 **Bucovina Ar. S** 60.51 310 *e*P P 03 03 56.4 -0.1
LVV **L'vov** 60.63 313 *e*P P 03 03 56.3 -0.9
VOIR 61.27 308 ⇓P P 03 04 05.4 +3.8
VOIR 61.27 308 ⇓*i*P P 03 04 05.4 +3.8
KWP **Kalwaria Pacla** 61.51 313 *e*P P 03 04 03.1 -0.1
KWP **Kalwaria Pacla** 61.51 313 *e*P P 03 04 02.9 -0.2
comp=Z,51nm,1.0s,mb5.6
KWP **Kalwaria Pacla** 61.51 313 ⇓P P 03 04 03.3 +0.2
KWP **Kalwaria Pacla** 61.51 313 ⇓*i*P P 03 04 03.3 +0.2
KOLS **Kolonicke sedl** 61.99 312 *e*P P 03 04 06.5 +0.1
comp=Z,6.1nm,1.1s,mb4.6
KOLS *e*PP pP 03 04 09.1 +0.6
KOLS **Kolonicke sedl** 61.99 312 *e*P P 03 04 06.5 +0.1
KOLS pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
KOLS **Kolonicke sedl** 61.99 312 *e*P P 03 04 06.5 +0.1
KOLS *e*pP pP 03 04 09.1 +0.6
UZH **Uzhgorod** 62.07 312 *e*P P 03 04 06.5 -0.5
ASAR **Alice Springs** 62.13 150 P P 03 04 07.0 -0.5
comp=Z,7.9nm,0.8s,mb4.9,baz=335,slow=6.3,SNR=75
ASAR **Alice Springs** 62.13 150 P P 03 04 07.1 -0.4
DRGR 62.39 310 ⇑P P 03 04 12.2 +3.1
DRGR 62.39 310 ⇑*i*P P 03 04 12.2 +3.1
CRVS **Cervenica-Dubn** 62.51 312 *e*pP pP 03 04 12.6 +0.6
NIE **Niedzica** 63.05 313 *e*P P 03 04 14.1 +0.6
NIE **Niedzica** 63.05 313 *e*P P 03 04 14.1 +0.6
OJC **Ojcow** 63.11 314 *e*P P 03 04 13.8 -0.1
OJC **Ojcow** 63.11 314 *e*P P 03 04 13.8 -0.1
KECS **Kecovo** 63.26 312 *e*pP pP 03 04 18.5 +1.5
BZS **Buzias** 63.49 309 ⇑P P 03 04 19.4 +2.9
BZS **Buzias** 63.49 309 ⇑*i*P P 03 04 19.4 +2.9
NB2 **NORSAR Subarra** 64.07 327 P P 03 04 18.3 -1.7
comp=Z,8.2nm,0.7s,mb4.9,baz=70,slow=6.5
NOA **NORSAR Array B** 64.07 327 P P 03 04 18.6 -1.4
comp=Z,6.7nm,0.7s,mb4.8,baz=70,slow=6.6,SNR=19
NOA **NORSAR Array B** 64.07 327 P P 03 04 18.6 -1.4
NOA **NORSAR Array B** 64.07 327 P P 03 04 18.6 -1.4
OKC **Ostrava-Krasne** 64.24 314 *e*P P 03 04 21.2 -0.1
OKC **Ostrava-Krasne** 64.24 314 *e*P P 03 04 21.2 -0.1
OKC *e*pP pP 03 04 24.4 +0.9
VYHS **Vyhne** 64.28 313 *e*P P 03 04 21.6 0.0
comp=Z,4.9nm,1.2s,mb4.4
VYHS *e*PP pP 03 04 24.8 +1.0
VYHS **Vyhne** 64.28 313 *e*P P 03 04 21.6 0.0
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
VYHS **Vyhne** 64.28 313 *e*P P 03 04 21.6 0.0
VYHS *e*pP pP 03 04 24.8 +1.0
KOLL **Kolacno** 64.52 313 *e*P P 03 04 22.8 -0.4
KOLL *e*PP pP 03 04 26.7 +1.4
KOLL **Kolacno** 64.52 313 *e*P P 03 04 22.8 -0.4
KOLL **Kolacno** 64.52 313 *e*P P 03 04 22.8 -0.4
KOLL *e*pP pP 03 04 26.7 +1.4
MORC **Moravsky Berou** 64.63 314 *e*P P 03 04 23.7 -0.2
comp=Z,11nm,0.9s,mb4.9
MORC **Moravsky Berou** 64.63 314 ⇓P P 03 04 27.3 +3.4
MORC **Moravsky Berou** 64.63 314 ⇓*i*P P 03 04 27.3 +3.4
DPC **Dobruska-Polom** 65.16 315 *e*P P 03 04 27.5 +0.2
DPC **Dobruska-Polom** 65.16 315 *e*P P 03 04 27.5 +0.2
DPC *e*pP pP 03 04 30.7 +1.3
PKSM **Moragy** 65.22 310 ⇓P P 03 04 30.5 +2.7
PKSM **Moragy** 65.22 310 ⇓*i*P P 03 04 30.5 +2.7
UPC **Upice** 65.28 315 *e*P P 03 04 28.2 +0.1
UPC **Upice** 65.28 315 *e*P P 03 04 28.2 +0.1
UPC *e*pP pP 03 04 31.7 +1.4
CTA **Charters Tower** 65.33 137 P P 03 04 27.0 -1.7
comp=Z,6.3nm,0.9s,mb4.7,baz=314,slow=9.7,SNR=3.2
CTA **Charters Tower** 65.33 137 P P 03 04 27.0 -1.7
CTA **Charters Tower** 65.33 137 P P 03 04 27.0 -1.7
VRAC **Vranov** 65.37 314 ⇑P P 03 04 32.1 +3.4
VRAC **Vranov** 65.37 314 ⇑*i*P P 03 04 32.1 +3.4
PVCC **Panska Ves** 66.13 316 *e*P P 03 04 33.3 -0.3
PVCC **Panska Ves** 66.13 316 *e*P P 03 04 33.3 -0.3
PVCC *e*pP pP 03 04 36.8 +1.1
PRU **Pruhonice** 66.35 315 *e*P P 03 04 35.7 +0.7
PRU **Pruhonice** 66.35 315 *e*P P 03 04 35.7 +0.7
PRU *e*pP pP 03 04 38.7 +1.5
BRG **Berggiesshubel** 66.37 316 *e*P P 03 04 34.0 -1.1
comp=Z,10.0nm,0.9s,mb4.8
BRG **Berggiesshubel** 66.37 316 *i* P P 03 04 37.9 +2.8
comp=Z,10nm,0.9s,mb4.9
BRG **Berggiesshubel** 66.37 316 *i* P P 03 04 37.9 +2.8
BRG pmax pmax
comp=Z,21nm,0.9s,mb5.2
FORT **Forrest** 66.46 159 *e*P P 03 04 32.8 -3.0
comp=Z,8.3nm,0.7s,mb4.9
CLL **Collm** 66.75 317 *e*P P 03 04 36.2 -1.3
comp=Z,9.0nm,1.2s,mb4.7
CLL **Collm** 66.75 317 *e*P P 03 04 37.0 -0.5
comp=Z,6.0nm,1.2s,mb4.5
CLL *i* pP 03 04 39.8 +0.1
CLL **Collm** 66.75 317 *e*P P 03 04 37.0 -0.5
CLL pmax pmax
comp=Z,52nm,1.2s,mb5.4
CLL **Collm** 66.75 317 *e*P P 03 04 37.0 -0.5
comp=Z,6.0nm,1.2s,mb4.5
CLL *i* pP pP 03 04 39.8 +0.1
KHC **Kasperske Hory** 67.27 315 *e*P P 03 04 40.7 -0.2
KHC **Kasperske Hory** 67.27 315 *e*P P 03 04 40.7 -0.2
KHC *e*pP pP 03 04 43.7 +0.7
GEC2 **GERESS Array S** 67.31 314 *e*P P 03 04 40.4 -0.7
comp=Z,10.0nm,1.0s,mb4.8
GEC2 **GERESS Array S** 67.31 314 *e*P P 03 04 40.4 -0.7
GEC2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SOKA **Soboth** 67.35 312⇑*i*P P 03 04 40.8 -0.7
comp=Z,9.0nm,1.0s,mb4.8
TANN **Tannenbergstha** 67.42 316 *e*P P 03 04 40.9 -0.9
comp=Z,16nm,1.5s,mb4.8
NKC **Novy Kostel** 67.50 316 *e*P P 03 04 41.6 -0.7
NKC **Novy Kostel** 67.50 316 *e*P P 03 04 41.6 -0.7
NKC *e*pP pP 03 04 45.3 +0.8
WET **Wettzell** 67.68 315 *e*P P 03 04 42.9 -0.6
comp=Z,13nm,1.6s,mb4.7
WET **Wettzell** 67.68 315 *e*P P 03 04 42.9 -0.6
WET pmax pmax
comp=Z,13nm,1.6s,mb4.7
MOX **Moxa** 67.81 317 *e*P P 03 04 46.8 +2.5
comp=Z,11nm,1.4s,mb4.7
MOX **Moxa** 67.81 317 *e*P P 03 04 43.4 -0.9
comp=Z,11nm,1.2s,mb4.8
MOX **Moxa** 67.81 317 *e*P P 03 04 46.8 +2.5
MOX pmax pmax
comp=Z,27nm,1.4s,mb5.1
ROTZ **Rotzenmuhle** 67.83 316 *e*P P 03 04 44.1 -0.3
comp=Z,12nm,0.9s,mb4.9
NRDL **Niedersach Rie** 67.91 319 *e*P P 03 04 45.5 +0.6
comp=Z,15nm,1.0s,mb5.0
CLZ **Clausthal** 68.03 318 *e*P P 03 04 45.0 -0.7
comp=Z,21nm,0.9s,mb5.2
CLZ **Clausthal** 68.03 318 *e*P P 03 04 45.0 -0.7
CLZ pmax pmax
comp=Z,21nm,0.9s,mb5.2
ILAR **Eielson Array** 68.29 26 P P 03 04 45.1 -1.9
comp=Z,1.4nm,1.1s,mb3.9,baz=278,slow=5.7,SNR=8.2
ILAR **Eielson Array** 68.29 26 P P 03 04 45.2 -1.8
GRA1 **Grafenberg Arr** 68.44 316 *e*P P 03 04 47.8 -0.5
comp=Z,18nm,0.9s,mb5.1
GRF **Grafenberg Arr** 68.44 316 *e*P P 03 04 47.8 -0.5
comp=Z,18nm,0.9s,mb5.1
GRF **Grafenberg Arr** 68.44 316 *e*P P 03 04 47.8 -0.5
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.1
GRF **Grafenberg Arr** 68.44 316 *e*P P 03 04 47.8 -0.5
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.1
FUR **Furstenfeldbru** 69.06 314 *e*P P 03 04 51.9 -0.2
comp=Z,40nm,1.1s,mb5.3
FUR **Furstenfeldbru** 69.06 314 *e*P P 03 04 51.9 -0.2
FUR pmax pmax
comp=Z,40nm,1.1s,mb5.3
WTTA **Wattenberg** 69.22 313⇑*i*pP pP 03 04 53.4 -1.9
comp=Z,9.5nm,1.0s
KDAK **Kodiak Island** 69.26 34 P P 03 04 53.5 +0.2
comp=Z,12nm,1.0s,mb4.8,baz=250,slow=6.9,SNR=4.9
KDAK **Kodiak Island** 69.26 34 P P 03 04 53.5 +0.2
KDAK **Kodiak Island** 69.26 34*ce*P P 03 04 56.5 +3.3
QLP **Quilpie** 69.45 143 *e*P P 03 04 54.3 -0.4
MOTA **Moosalm** 69.52 314⇑*i*P P 03 04 54.9 -0.1
comp=Z,9.2nm,1.1s,mb4.6
FETA **Feichten** 69.89 313⇑*i*P P 03 04 57.0 -0.3
comp=Z,14nm,1.1s,mb4.8
INK **Inuvik** 70.64 20 P P 03 05 00.9 -0.7
comp=Z,1.2nm,0.5s,mb4.1,baz=320,slow=2.9,SNR=3.7
INK **Inuvik** 70.64 20 P P 03 05 00.9 -0.6
BFO **Black Forest** 70.75 315 *e*P P 03 05 01.3 -1.2
comp=Z,8.0nm,1.0s,mb4.6
BFO **Black Forest** 70.75 315 *e*P P 03 05 01.3 -1.2
BFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
WLF **Walferdange** 71.40 317 *e*P P 03 05 06.1 -0.4
comp=Z,26nm,1.0s,mb5.1
KMBO **Kilima Mbogo** 72.09 257 P P 03 05 10.9 -0.3
comp=Z,0.9nm,0.6s,mb3.9,baz=0,slow=20,SNR=3.4
KMBO **Kilima Mbogo** 72.09 257 P P 03 05 10.9 -0.3
STKA **Stephens Creek** 72.60 148 P P 03 05 12.1 -1.6
comp=Z,8.1nm,0.7s,mb4.8,baz=333,slow=6.6,SNR=12
STKA **Stephens Creek** 72.60 148 *e*P P 03 05 12.7 -1.0
comp=Z,4.5nm,0.9s,mb4.4
STKA **Stephens Creek** 72.60 148 P P 03 05 12.1 -1.6
CMSA **Cobar Meteorol** 74.23 145 *e*P P 03 05 23.2 -0.2
KEST **Kesra** 76.11 304 P P 03 05 35.5 +1.0
comp=Z,1.3nm,0.8s,mb3.9,baz=341,slow=4.3,SNR=5.7
YKA **Yellowknife Ar** 80.20 18 P P 03 05 55.6 -0.9
comp=Z,2.3nm,0.7s,mb4.2,baz=326,slow=5.0,SNR=9.5
YKA **Yellowknife Ar** 80.20 18 P P 03 05 55.6 -0.9
ESDC **Sonseca Array** 82.83 313 P P 03 06 10.3 -0.6
comp=Z,1.7nm,0.8s,mb4.1,baz=47,slow=5.6,SNR=5.5
SCHQ **Schefferville** 92.86 355 P P 03 06 57.5 -1.5
comp=Z,8.7nm,1.0s,mb5.1,baz=76,slow=4.2,SNR=3.9
OTAV **Otavalo** 147.37 7 *e*PKPdf PKPdf 03 13 28.2 -0.4
OTAV *e*PKPbc PKPbc 03 13 31.2 +0.3

JMA 11 03:13:04.9±0.1, 37°.73N×138°.84E, h10km±2km, M2.1, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZZ	**Izumozaki**	**0.22**	**208**	P	Pg	03 13 10.2	+0.7
JIZZ				S	Sg	03 13 14.9	+2.3
JNS	**Sasagawa**	**0.39**	**77**	P	Pg	03 13 12.9	+0.4
JNS				S	Sg	03 13 18.7	+1.0
JHK	**Hiroka**	**0.50**	**164**	P	Pg	03 13 14.0	-0.6
JHK				S	Sg	03 13 20.6	-0.6
JSD	**Sado**	**0.55**	**304**	P	Pg	03 13 15.4	-0.2
JSD				*e*S	Sg	03 13 23.1	+0.2
JFY	**Yanaizu**	**0.76**	**115**	P	Pg	03 13 19.0	-0.5
JFY				*e*S	Sg	03 13 29.0	-0.4
JAW	**Awa shima**	**0.79**	**24**	P	Pg	03 13 20.0	-0.2
MAT	**Matsushiro**	**1.29**	**203**	P	Pn	03 13 27.7	-1.2
MAT				S	Sb	03 13 44.4	-1.4

BJI ***11*** *03:13:58.0, 36°.53N×141°.36E, h39km, mB5.3/15, mb4.9/50, Ms4.8/26, Ms7 4.7/26*

SZGRF ***11*** *03:13:58.6, 36°.80N×141°.34E, h44km, mb4.9, Near east coast of eastern Honshu, Japan*

NIED ***11*** *03:14:00, 36°.50N×141°.10E, h35km, Mw4.6 Best double couple: M0=9.92000×10^15 NP1:φ=33.00000°, δ=76.00000°, λ=92.00000°. NP2:φ=203.00000°, δ=14.00000°, λ=81.00000°.*

ISCJB ***11*** *03:14:00.4±0.2, 36°.46N±0°.02×141°.12E±0°.03, h42km, mb4.8/142, MS4.8/9, Error ellipse: s-maj=3.5km s-min=2.8km az=158.8*

JMA ***11*** *03:14:00.9±0.1, 36°.45N×141°.11E, h47km±2km, M4.6 Broadband fault plane solution: P waves. NP1: φ=200.00000°, δ=18.00000°, λ=95.00000°. NP2:φ=15.00000°, δ=72.00000°, λ=88.00000°. Principal axes: T Plg=63.0000°, Azm=282.0000°; N Plg=2.0000°, Azm=15.0000°; P Plg=27.0000°, Azm=106.0000°;*

JMA Felt II J1.

IDC ***11*** *03:14:01.2±2.5, 36°.43N×141°.07E, h37km±21km, mb4.4/28, mb1 4.6/32, mb1mx4.5/34, mbtmp4.5/32, ML4.8/4 Error ellipse: s-maj=12.5km s-min=11.0km az=110.0*

MOS ***11*** *03:14:01.0±0.8, 36°.78N×140°.97E, h33km, mb5.1/51, MS4.8/4, Error ellipse: s-maj=7.8km s-min=4.7km az=107.3*

NEIC ***11*** *03:14:01.7±0.6, 36°.47N×141°.08E, h38km±5km, mb4.9/63, MW4.6(NIED), Error ellipse: s-maj=5.5km s-min=3.6km az=151.0*

NEIC Recorded [2 JMA] in Chiba, Fukushima, Ibaraki and Tochigi; [1 JMA] in Gumma, Miyagi and Saitama.

ISC 11 03:14:02.3±0.2, 36°.48N±0°.02×141°.08E±0°.03, h44km, h44km±.8km: pP-P, n386, σ0=86/410, mb4.8/142, MS4.8/9, 43C-40D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.43**	**287**	⇓P	**Pn**	**03 14 11.4**	**-1.0**
JHO				S	**Sn**	**03 14 18.8**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.66**	**340**	⇓P	**Pn**	**03 14 14.2**	**-1.1**
ONAJ				*e*S	**Sn**	**03 14 23.7**	**-0.9**
JYT	**Yasato**	**0.76**	**251**	⇓P	**Pn**	**03 14 15.5**	**-1.2**
JYT				*e*S	**Sn**	**03 14 24.9**	**-2.1**
JFK	**Kawauchi**	**0.90**	**349**	⇓P	**Pn**	**03 14 17.3**	**-1.2**
JFT	**Otama**	**1.19**	**330**	⇓P	**Pn**	**03 14 23.0**	**+0.4**
JFT				*e*S	**Sn**	**03 14 38.5**	**+0.9**
JAG	**Ashikaga**	**1.31**	**268**	⇓P	**Pn**	**03 14 23.6**	**-0.6**
JMM	**Marumori**	**1.40**	**351**	⇓P	**Pn**	**03 14 24.5**	**-0.9**
JMM				*e*S	**Sn**	**03 14 42.3**	**-0.3**
JFY	**Yanaizu**	**1.44**	**310**	⇓P	**Pn**	**03 14 26.1**	**+0.2**
JKT	**Katashina**	**1.50**	**281**	⇓P	**Pn**	**03 14 27.1**	**+0.3**
MJAR	**Matsushiro Arr**	**2.31**	**272**	Pn	**Pn**	**03 14 38.1**	**+0.2**
	348nm,0.3s,baz=50,slow=9.2,SNR=903						
MJAR				Sn	**Sn**	**03 15 08.5**	**+3.3**
	54nm,0.3s,baz=128,slow=22,SNR=6.5						
MJAR	**Matsushiro Arr**	**2.31**	**272**	P	**Pn**	**03 14 38.1**	**+0.2**
MJAR						03 15 08.5	
MAJO	**Matsushiro**	**2.32**	**272**	*e*Pn	**Pn**	**03 14 39.0**	**+1.0**
MAJO	**Matsushiro**	**2.32**	**272**	*e*P	**Pn**	**03 14 39.0**	**+1.0**
MAT	**Matsushiro**	**2.32**	**272**	P	**Pn**	**03 14 38.7**	**+0.7**
MAT				S	**Sn**	**03 15 06.2**	**+1.0**
JHJ	**Hachijo jima 2**	**3.52**	**198**	Pn	**Pn**	**03 14 53.4**	**-1.1**
	140nm,0.3s,baz=262,slow=14,SNR=16						
JHJ				Sn	**Sn**	**03 15 34.1**	**-0.9**
	370nm,0.3s,baz=259,slow=23,SNR=9.3						
ERM	**Erimo**	**5.75**	**16**	*e*Pn	**Pn**	**03 15 23.4**	**-1.7**
	73nm,0.4s						
ERM				*e*S	**Sn**	**03 16 28.7**	**-1.1**
ERM	**Erimo**	**5.75**	**16**	*e*P	**Pn**	**03 15 23.4**	**-1.7**
ERM				*e*S	**Sn**	**03 16 28.7**	**-1.1**
ERM				pmax	pmax		
	comp=Z,73nm,0.4s						
ASAJ	**Asahikawa**	**7.71**	**8**	Pn	**Pn**	**03 15 50.0**	**-1.9**
	comp=Z,12nm,0.3s,baz=215,slow=11,SNR=41						
ASAJ				Sn	**Sn**	**03 17 18.4**	**+0.4**
	comp=Z,18nm,0.3s,baz=144,slow=33,SNR=6.9						
ASAJ	**Asahikawa**	**7.71**	**8**	*e*Pn	**Pn**	**03 15 50.0**	**-2.0**
ASAJ				*e*S	**Sn**	**03 17 18.7**	**+0.8**
ASAJ	**Asahikawa**	**7.71**	**8**	P	**Pn**	**03 15 50.1**	**-1.9**
ASAJ						03 17 18.4	
ASAJ				pmax	pmax		
	comp=Z,13nm,0.3s						
ASAJ				smax			
	comp=N,18nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**8.38**	**24**	⇓*i*P	**Pn**	**03 16 01.2**	**+0.1**
YUK				*i* S	**Sn**	**03 17 25.5**	**-8.8**
YUK				pmax	pmax		
	comp=Z,280nm,0.5s						
YUK				pmax	pmax		
	comp=N,80nm,0.2s						
YUK				pmax	pmax		
	comp=E,80nm,0.2s						
YUK				pmax	pmax		
	comp=Z,120nm,0.4s						
YUK				smax			
	comp=N,950nm,0.5s						
YUK				smax			
	comp=E,710nm,0.5s						
YUK				smax			
	comp=N,760nm,0.5s						
YUK				smax			
	comp=E,450nm,0.5s						
JNU	**Nakatsue**	**9.04**	**251**	*e*Pn	**Pn**	**03 16 12.5**	**+2.3**
CBIJ	**Chichi jima**	**9.41**	**174**	Pn	**Pn**	**03 16 11.2**	**-4.0**
	comp=E,53nm,0.3s,baz=22,slow=6.9,SNR=34						
CBIJ				Sn	**Sn**	**03 17 48.0**	**-12**
	comp=E,51nm,0.3s,baz=285,slow=23,SNR=6.0						
KUR	**Kuril'sk**	**10.13**	**28**	P	**Pn**	**03 16 24.0**	**-1.1**
KUR				*e*S	**Sn**	**03 18 10.4**	**-7.0**
KUR				pmax	pmax		
	comp=Z,90nm,0.7s						
KUR				smax			
	comp=N,140nm,0.8s						
KUR				smax			
	comp=E,240nm,0.8s						
YSS	**Yuzh-Sakhalins**	**10.54**	**6**	*e*Pn	**Pn**	**03 16 28.6**	**-2.0**
YSS	**Yuzh-Sakhalins**	**10.54**	**6**	⇑*i*P	**Pn**	**03 16 28.0**	**-2.6**
YSS				*e*S	**Sn**	**03 18 23.2**	**-4.0**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
YSS				smax			

comp=N,70nm,1.1s
KSRS Korea Array 10.57 279 Pn Pn 03 16 34.7 +3.5
comp=N,1.7nm,0.3s,baz=95,slow=14,SNR=44
KSRS Korea Array 10.57 279 P Pn 03 16 34.7 +3.5
KSRS pmax pmax
comp=Z,2.0nm,0.3s
MDJ Mudanjiang 11.92 316 P Pn 03 16 54.9 +5.3
MDJ pmax pmax
comp=Z,22nm,0.9s
MDJ pmax pmax
comp=Z,300nm,7.6s
MDJ Mudanjiang 11.92 316 *e*Pn **Pn 03 16 53.4 +3.8**
comp=Z,17nm,0.7s
HABR Khabarovsk 12.78 342 P Pn 03 16 58.3 -2.9
HABR *e*S **Sn 03 19 15.9 -6.0**
HABR MLR MLR
comp=Z,1μm,17.0s
CN2 Changchun 14.00 306 *e*P **Pn 03 17 19.9 +1.9**
CN2 *es*P 03 17 35.1
CN2 *e*S **Sn 03 19 52.6 +0.7**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 LR LR
comp=N,2μm,20.0s
CN2 LR LR
comp=E,2μm,20.0s
CN2 LR LR
comp=Z,3μm,20.0s
KLR Kul'dur 14.45 335 *e*P **Pn 03 17 17.6 -6.3**
JOW Kunigami 14.53 232 *e*Pn **Pn 03 17 28.4 +3.2**
DL2 Dalian 15.59 285 P Pn 03 17 42.3 +3.3
DL2 pmax pmax
comp=Z,20nm,0.8s
NJ2 Nanjing 18.89 263 *e*P **Pn 03 18 27.2 +7.3**
NJ2 pmax pmax
comp=Z,30nm,0.6s
BJI Beijing 19.86 288 P Pn 03 18 28.6 -2.9
BJI pmax pmax
comp=Z,30nm,0.6s
BJT Baijiatuau 19.86 288 *e*P **Pn 03 18 28.9 -2.7**
comp=Z,24nm,0.6s
BJT Baijiatuau 19.86 288 *e*P **Pn 03 18 28.9 -2.6**
BJT pmax pmax
comp=Z,24nm,0.6s
HIA Hailar 20.11 316 *e*P **P 03 18 31.5 -0.7**
comp=Z,9.0nm,0.5s
HIA Hailar 20.11 316 *e*P **P 03 18 31.5 -0.7**
HIA pmax pmax
comp=Z,9.0nm,0.5s
PETK Petropavlovsk- 20.30 30 P P 03 18 34.3 +0.1
comp=Z,7.0nm,0.8s,baz=207,slow=6.3,SNR=6.3
PETK PcP PcP 03 22 46.5 +0.4
comp=Z,2.0nm,0.5s,baz=288,slow=1.4,SNR=3.8
PETK Petropavlovsk- 20.30 30 P P 03 18 34.3 +0.1
PETK 03 22 46.5
SSLB Suanglung 21.47 239 *e*P **P 03 18 45.3 -1.8**
WHN Wuhan 23.02 263 P P 03 19 03.0 -0.6
CLNS Chul'man 23.08 337 *e*P **P 03 19 01.2 -2.7**
CLNS *e**PP 03 19 07.7
CLNS *e* 03 19 18.3
CLNS *e*S **S 03 23 06.6 -4.9**
CLNS pmax pmax
comp=Z,60nm,1.2s,mb4.9
CLNS pmax pmax
comp=N,42nm,1.3s
CLNS pmax pmax
comp=E,20nm,1.1s
CLNS pmax pmax
comp=Z,14nm,0.7s,mb4.5
CLNS pmax pmax
comp=E,15nm,0.8s
CLNS pmax pmax
comp=N,13nm,1.0s
CLNS smax
comp=N,354nm,14.0s
CLNS smax
comp=E,119nm,10.8s
CLNS MLR MLR
comp=Z,3μm,22.0s,MS4.7
CLNS MLR MLR
comp=E,2μm,20.0s,MS4.5
CLNS MLR MLR
comp=N,996nm,19.0s,MS4.5
HHC Hu-ho-hao-te 23.40 290 *e*P **P 03 19 06.6 -0.7**
HHC pP 03 19 18.1
HHC sP sP 03 19 23.7 0.0
HHC PP 03 19 38.5
HHC PcP PcP 03 22 54.9 +2.4
HHC S **S 03 23 13.1 -3.9**
HHC sS sS 03 23 30.4 -6.0
HHC SS 03 23 59.0
HHC pmax pmax
comp=Z,38nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,1μm,6.1s
HHC LR LR
comp=N,3μm,10.8s,MS5.2
HHC LR LR
comp=E,4μm,12.4s,MS5.2
HHC LR LR
comp=Z,3μm,12.2s,MS5.0
XAN Xi'an 26.31 274 P P 03 19 33.2 -0.7
XAN pP pP 03 19 42.0 -3.5
XAN pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
YAK Yakutsk 26.55 348 *e*P **P 03 19 34.6 -1.1**
YAK *e**PP pP 03 19 42.7 -4.7
YAK *e* 03 20 12.8
YAK *e* 03 22 55.8
YAK *e*S **S 03 24 08.1 +1.3**
YAK *e**SS sS 03 24 28.6 +2.2
YAK *e*SSS 03 25 31.9
YAK pmax pmax
comp=Z,74nm,1.0s,mb5.2
YAK pmax pmax
comp=N,56nm,1.4s
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=Z,26nm,1.0s,mb4.7
YAK pmax pmax
comp=E,20nm,1.0s
YAK smax
comp=N,136nm,3.8s
YAK smax
comp=E,126nm,4.6s
YAK MLR MLR
comp=Z,2μm,22.0s,MS4.5
YAK MLR MLR
comp=N,932nm,21.0s,MS4.6
YAK MLR MLR
comp=E,1μm,21.0s,MS4.6
ENH Enshi 27.02 266 *e*P **P 03 19 39.3 -1.1**
comp=E,35nm,0.6s,mb5.1
SEY Seymchan 27.38 11⇑ *e*P **P 03 19 43.7 +0.5**
SONM Songino Array 27.88 305 P **P 03 19 47.7 -0.1**
comp=E,13nm,0.6s,mb4.7,baz=107,slow=9.1,SNR=65
SONM PcP PcP 03 23 01.7 -0.9
comp=E,0.6nm,0.6s,baz=132,slow=3.0,SNR=3.8
SONM Songino Array 27.88 305 P **P 03 19 47.7 -0.1**
SONM 03 23 01.7
LZH Lanzhou 29.90 280 *e*P **P 03 20 06.1 +0.2**
LZH pP pP 03 20 18.5 +0.9
LZH sP sP 03 20 22.5 -0.4
LZH pmax pmax
comp=Z,22nm,1.0s,mb4.8
ZAK Zakamensk 30.41 309 *e*P **P 03 20 09.2 -1.0**
ZAK *e* 03 23 08.5
ZAK pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
TLY Talaya 30.49 312 *e*P **P 03 20 11.7 +0.8**
comp=Z,13nm,0.8s,mb4.7
TLY Talaya 30.49 312 *e*P **P 03 20 11.1 +0.2**
TLY *e* 03 20 26.3
TLY pmax pmax
comp=Z,13nm,0.8s,mb4.7
GYA Guiyang 30.87 261 P P 03 20 17.8 +3.3
GYA pP pP 03 20 28.9 +2.6
GYA sP sP 03 20 35.3 +3.8
GYA PP PP 03 21 20.0 -4.7
GYA PcP PcP 03 23 13.4 +2.8
GYA S **S 03 25 16.7 +1.2**
GYA sS sS 03 25 36.8 +1.7
GYA ScP ScP 03 26 51.2 +1.5
GYA SS SS 03 27 01.0 -27
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=N,560nm,18.8s,MS4.3
GYA LR LR
comp=E,450nm,19.4s,MS4.3
GYA LR LR
comp=Z,580nm,17.9s,MS4.3
CD2 Chengdu 31.41 271 *e*P **P 03 20 18.6 -0.7**
CD2 pP pP 03 20 30.5 -0.5
CD2 sP sP 03 20 35.8 -0.5
CD2 PP PP 03 21 22.4 -8.3
CD2 S **S 03 25 20.4 -3.5**
CD2 sS sS 03 25 40.6 -3.0
CD2 pmax pmax
comp=Z,40nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,60nm,5.2s
CD2 LR LR
comp=N,2μm,19.0s
CD2 LR LR
comp=Z,2μm,19.0s,MS4.8
QIZ Qiongzhong 32.46 246 P **P 03 20 30.4 +1.8**
QIZ pmax pmax
comp=Z,19nm,1.4s,mb4.7
GTA Gaotai 32.47 288 *e*P **P 03 20 28.5 0.0**
GTA PcP PcP 03 23 15.7 +1.0
GTA pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
KMI Kunming 34.62 262 P **P 03 20 51.9 +4.6**
KMI pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BILL Bilibino 34.63 16⇑ *e*P **P 03 20 47.1 +0.2**
BILL *e**PP pP 03 20 58.4 -0.3
BILL *e*S **S 03 26 10.9 -2.1**
BILL pmax pmax
comp=Z,12nm,1.0s,mb4.8
BILL MLR MLR
comp=Z,4μm,20.0s,MS5.1
TIXI Tiksi 35.80 353 *e*P **P 03 20 58.2 +1.2**
TIXI pmax pmax
comp=Z,22nm,1.1s,mb5.0
WMQ Urumqi 40.85 297 P **P 03 21 41.0 +1.3**
WMQ pP pP 03 21 53.0 +1.2
WMQ sP sP 03 21 59.0 +2.1
WMQ PP PP 03 23 19.0 +4.6
WMQ S **S 03 27 48.0 +0.1**
WMQ SS SS 03 30 45.0 -5.1
WMQ pmax pmax
comp=Z,56nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,140nm,4.0s
WMQ LR LR
comp=N,1μm,15.0s,MS5.0
WMQ LR LR
comp=E,1μm,15.0s,MS5.0
WMQ LR LR
comp=Z,1μm,15.0s,MS4.9
CHTO Chiang Mai 40.90 256 *e*P **P 03 21 40.4 0.0**
comp=Z,2.8nm,0.6s,mb4.1
CHTO Chiang Mai 40.90 256 *e*P **P 03 21 40.4 0.0**
CHTO pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
CMAR Chiang Mai Arr 41.10 256 P **P 03 21 41.7 -0.3**
comp=Z,3.7nm,0.8s,mb4.1,baz=48,slow=6.1,SNR=14
CMAR Chiang Mai Arr 41.10 256 P **P 03 21 41.7 -0.4**
LSA Lhasa 42.00 276 *e*P **P 03 21 48.9 -0.4**
LSA Lhasa 42.00 276 *e*P **P 03 21 50.6 +1.3**
comp=Z,10nm,1.2s,mb4.3
LSA Lhasa 42.00 276 *e*P **P 03 21 50.6 +1.3**
LSA pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
ZAA0 Zalesovo Array 42.09 313 *e*P **P 03 21 49.3 -0.4**
ZALV Zalesovo Beam 42.09 313 P **P 03 21 49.3 -0.5**
comp=Z,31nm,0.5s,mb5.2,baz=93,slow=7.1,SNR=108
ZALV PcP PcP 03 23 43.3 -0.4
comp=Z,4.8nm,0.5s,baz=127,slow=3.7,SNR=4.8
ZALV Zalesovo Beam 42.09 313 P **P 03 21 49.3 -0.4**
ZALV 03 23 43.3
NVS Novosibirsk 43.03 314 *e*P **P 03 21 55.7 -1.6**
NVS pmax pmax
comp=Z,21nm,1.2s,mb4.7
NVS pmax pmax
comp=E,11nm,1.3s
MK31 Makanchi Array 44.19 303 *e*P **P 03 22 06.7 -0.1**
MK31 Makanchi Array 44.19 303 *e*P **P 03 22 06.7 -0.1**
MKAR Makanchi Array 44.19 303 P **P 03 22 06.3 -0.5**
comp=E,8.0nm,0.7s,mb4.6,baz=87,slow=10,SNR=44
MKAR Makanchi Array 44.19 303 P **P 03 22 06.3 -0.5**
MKAR Makanchi Array 44.19 303 P **P 03 22 06.3 -0.5**
TAPN Taplejung 45.72 274 *e*P **P 03 22 19.8 +0.6**
comp=E,30nm,0.5s,mb5.5
KAPI Kappang 45.85 210 *e*P **P 03 22 19.6 -0.7**
comp=E,19nm,0.7s,mb5.1
KURK Kurchatov 46.06 308 *e*P **P 03 22 21.3 -0.3**
comp=E,64nm,0.7s,mb5.7
KURK Kurchatov 46.06 308 *c i*P **P 03 22 21.2 -0.4**
KURK pmax pmax
comp=Z,65nm,0.7s,mb5.7
ODAN Odare 46.18 274 *e*P **P 03 22 22.1 -0.8**
comp=Z,27nm,0.6s,mb5.3
GUN Gumba 46.95 276 *e*P **P 03 22 29.6 +0.8**
comp=Z,72nm,0.7s,mb5.7
PKI Pulchoki 47.47 276 *e*P **P 03 22 33.1 +0.2**
comp=Z,59nm,0.9s,mb5.5
KKN Kakani 47.48 276 *e*P **P 03 22 33.5 +0.5**
comp=Z,75nm,0.9s,mb5.6
RSO Redoubt South 47.50 38 P **P 03 22 33.7 +1.0**
KDAK Kodiak Island 47.69 42 P **P 03 22 33.1 -1.1**
comp=Z,8.2nm,0.8s,mb4.8,baz=320,slow=5.5,SNR=4.7
KDAK Kodiak Island 47.69 42 *i* P **P 03 22 34.2 0.0**
DMN Daman 47.69 276 *e*P **P 03 22 35.0 +0.3**
GKN Gorkha 47.90 277 *e*P **P 03 22 36.7 +0.4**
comp=Z,87nm,0.7s,mb5.9
DANN Dangsing 48.46 278 *e*P **P 03 22 41.4 +0.8**
comp=Z,96nm,0.7s,mb6.0
IPM Ipoh 48.63 239 *e*P **P 03 22 41.2 -0.8**
comp=Z,36nm,0.9s,mb5.4
KOLN Koldanda 48.83 277 *e*P **P 03 22 43.9 +0.5**
comp=Z,13nm,0.4s,mb5.3
ULHL Ulahol 49.39 298 P **P 03 22 48.4 +0.9**
SNR=7.8
KAKA Kakadu 49.60 191 *e*P **P 03 22 48.5 -0.8**
comp=Z,14nm,0.6s,mb5.2
KAKA Kakadu 49.60 191 *e*P **P 03 22 48.4 -0.9**
comp=Z,52nm,0.6s,mb5.7
TKM2 Tokmak 2 49.66 299 P **P 03 22 50.8 +1.3**
SNR=45
TKM2 Tokmak 2 49.66 299 *e*P **P 03 22 50.7 +1.2**
comp=Z,24nm,0.6s,mb5.4
TKM2 Tokmak 2 49.66 299 *e*P **P 03 22 50.7 +1.2**
TKM2 pmax pmax
comp=Z,24nm,0.6s,mb5.4
COLA College 49.69 32 *e*P **P 03 22 50.1 +0.7**
comp=Z,7.1nm,0.8s,mb4.8
COLA College 49.69 32 *e*P **P 03 22 50.1 +0.7**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
ILAR Eielson Array 50.10 32 P **P 03 22 52.6 0.0**
comp=Z,8.5nm,0.7s,mb4.9,baz=270,slow=6.3,SNR=120
ILAR Eielson Array 50.10 32 P **P 03 22 52.6 0.0**
KZA Kyzart 50.14 298 P **P 03 22 55.4 +2.2**
SNR=6.7
KZA Kyzart 50.14 298 *e*P **P 03 22 55.2 +1.9**
comp=Z,16nm,0.6s,mb5.2
KBK Karagaybulak 50.19 299 P **P 03 22 54.7 +1.1**
SNR=5.8
KBK Karagaybulak 50.19 299 *e*P **P 03 22 54.7 +1.1**
comp=Z,38nm,0.7s,mb5.5
USP Ospenovka 50.34 299 P **P 03 22 55.2 +0.5**
SNR=17
KSH Kashi 50.39 294 *e*P **P 03 22 59.5 +4.4**
KSH *e*PcP PcP 03 24 10.7 -2.4
KSH *e*PP PP 03 24 59.9 +9.1
KSH *e*S **S 03 30 09.1 +3.9**
KSH *e*SS SS 03 33 45.8 +6.7
KSH pmax pmax
comp=Z,30nm,0.7s,mb5.4
KSH LR LR
comp=N,730nm,13.2s,MS5.0
KSH LR LR
comp=E,550nm,12.8s,MS5.0
KSH LR LR
comp=Z,1μm,13.4s,MS5.1
VOSK Vostochnaya 50.45 312 P **P 03 22 54.9 -0.5**
VOSK pmax pmax
comp=Z,34nm,0.7s,mb5.5
AAK Ala-Archa 50.52 299 P **P 03 22 58.0 +1.9**
SNR=6.7
AAK Ala-Archa 50.52 299 P **P 03 22 56.1 +0.1**
comp=Z,8.2nm,0.6s,mb4.8,baz=115,slow=5.1,SNR=18
AAK Ala-Archa 50.52 299 *e*P **P 03 22 56.5 +0.4**
comp=Z,6.0nm,0.6s,mb4.7
AAK Ala-Archa 50.52 299 *e*P **P 03 22 56.5 +0.4**
AAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
BVAR Borovoye Array 50.75 313 P **P 03 22 57.5 -0.1**
comp=Z,15nm,0.9s,mb4.9,baz=74,slow=7.9,SNR=29
BVAR PcP PcP 03 24 14.0 -0.1
comp=Z,5.3nm,0.7s,baz=79,slow=2.2,SNR=5.2
BVAR Borovoye Array 50.75 313 P **P 03 22 57.5 -0.1**
BVAR 03 24 14.0
BRVK Borovoye 50.80 313 *e*P **P 03 22 58.2 +0.1**
comp=Z,22nm,0.8s,mb5.1
BRVK Borovoye 50.80 313 *c i*P **P 03 22 58.0 0.0**
BRVK pmax pmax
comp=Z,21nm,0.7s,mb5.2
EKS2 Erkin-Say 51.02 299 P **P 03 23 00.5 +0.6**
SNR=13
EKS2 Erkin-Say 51.02 299 *e*P **P 03 23 00.4 +0.6**
comp=Z,11nm,0.7s,mb4.9
AML Almayashu 51.23 298 P **P 03 23 03.2 +1.7**
SNR=8.3
AML Almayashu 51.23 298 *e*P **P 03 23 02.7 +1.3**
comp=Z,39nm,0.8s,mb5.4
ZRNK Zerenda 51.58 313 P **P 03 23 03.8 -0.1**
ZRNK pmax pmax
comp=Z,25nm,0.8s,mb5.2
EGAK Eagle 52.55 32 *e*P **P 03 23 11.4 +0.6**
comp=Z,121nm,2.8s,mb5.3
KK31 Karatay Array 53.17 300 *i* P **P 03 23 15.8 0.0**
KK31 pmax pmax
comp=Z,25nm,0.8s,mb5.2
KKAR Karatay Array 53.17 300 *e*P **P 03 23 15.9 +0.1**
comp=Z,18nm,0.8s,mb5.0
KKAR Karatay Array 53.17 300 *e*P **P 03 23 15.9 +0.1**
KKAR pmax pmax
comp=Z,18nm,0.8s,mb5.0
INK Inuvik 55.00 27 P **P 03 23 29.4 +0.7**
comp=Z,9.5nm,0.8s,mb4.9,baz=292,slow=6.5,SNR=16
INK Inuvik 55.00 27 *e*P **P 03 23 29.3 +0.6**
comp=Z,10.0nm,0.8s,mb4.9
INK Inuvik 55.00 27 *e*P **P 03 23 29.3 +0.6**
INK pmax pmax
comp=Z,10.0nm,0.8s
SVE Sverdlovsk 55.38 319 *e*P **P 03 23 32.1 +0.4**
SVE pmax pmax
comp=Z,25nm,0.6s,mb5.4
FITZ Fitzroy Crossi 56.22 198 *e*P **P 03 23 37.6 -0.4**
comp=Z,12nm,1.0s,mb4.9
WB2 Warramunga Arr 56.48 188 *e*P **P 03 23 38.5 -1.3**
WRA Warramunga Arr 56.48 188 P **P 03 23 38.5 -1.3**
comp=Z,7.0nm,0.6s,mb4.9,baz=5.0,slow=7.5,SNR=138
WRA Warramunga Arr 56.48 188 P **P 03 23 38.6 -1.2**
ARU Arti 56.60 319 *e*P **P 03 23 40.2 -0.2**
comp=Z,51nm,1.1s,mb5.5
ARU Arti 56.60 319 *c i*P **P 03 23 40.2 -0.2**
ARU 03 25 43.9
ARU S **S 03 31 29.1 +0.2**
ARU SS SS 03 35 15.8 -0.5
ARU pmax pmax
comp=Z,53nm,1.2s,mb5.5
KBL Kabul 57.37 291 *e*P **P 03 23 46.2 +0.1**
comp=Z,24nm,1.3s,mb5.1
KBL Kabul 57.37 291 *e*P **P 03 23 46.2 0.0**
KBL pmax pmax
comp=Z,24nm,1.3s,mb5.1
AB31 Akbulak array 58.09 310 *e*P **P 03 23 50.4 -0.6**
AB31 pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
ABKAR Akbulak array 58.09 310 *e*P **P 03 23 50.7 -0.3**
comp=Z,7.7nm,0.4s,mb5.1
AKTK Aktyubinsk 58.85 312 P **P 03 23 56.0 -0.3**
AKTK PcP PcP 03 24 44.1 -1.2
AKTO Aktyubinsk 58.85 312 P **P 03 23 56.0 -0.3**
comp=Z,5.2nm,0.6s,mb4.7,baz=72,slow=5.8,SNR=21
AKTO PcP PcP 03 24 44.1 -1.2
comp=Z,4.5nm,0.7s,baz=82,slow=8.3,SNR=5.4
AKTO Aktyubinsk 58.85 312 P **P 03 23 56.0 -0.2**
AKTO 03 24 44.2
ASAR Alice Springs 60.21 188 P **P 03 24 04.8 -1.1**
comp=Z,3.5nm,0.7s,mb4.5,baz=12,slow=5.6,SNR=38
ASAR Alice Springs 60.21 188 P **P 03 24 04.8 -1.0**
MBWA Marble Bar 60.78 203 *e*P **P 03 24 08.8 -1.0**
MBWA Marble Bar 60.78 203 *e*P **P 03 24 08.5 -1.2**
comp=Z,6.7nm,0.6s,mb5.0
PRGR Permogore 61.08 327 *e*P **P 03 24 10.1 -1.3**
PRGR pmax pmax
comp=Z,10.0nm,0.4s,mb5.3
BBB Bella Bella 62.64 44 P **P 03 24 21.1 -0.9**
comp=Z,8.2nm,0.9s,mb4.8,baz=337,slow=5.2,SNR=4.5
APA Apatity 63.08 336⇑ *i*P **P 03 24 25.2 +0.5**
APA pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
APA MLR MLR
comp=Z,800nm,16.0s,MS5.0
KEV Kevo 63.86 339 *e*P **P 03 24 29.1 -0.7**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KLMR Klimovskoe 64.08 328 *e*P **P 03 24 30.0 -1.4**
KLMR pmax pmax
comp=Z,24nm,1.4s,mb5.0
ARCES ARCESS Array B 64.42 339 P **P 03 24 33.4 -0.1**
comp=Z,4.4nm,0.5s,mb4.7,baz=66,slow=8.4,SNR=46
ARCES ARCESS Array B 64.42 339 P **P 03 24 33.4 -0.1**
ARCES ARCESS Array B 64.42 339 P **P 03 24 33.4 -0.1**
ARE0 ARCESS Array S 64.42 339 *e*P **P 03 24 33.2 -0.2**
YKA Yellowknife Ar 64.42 30 P **P 03 24 33.5 0.0**
comp=Z,3.1nm,0.7s,mb4.4,baz=302,slow=6.7,SNR=11
YKA Yellowknife Ar 64.42 30 P **P 03 24 33.5 0.0**
YKA Yellowknife Ar 64.42 30 P **P 03 24 33.5 -0.1**
JOF Joensuu 66.32 332 *e*P **P 03 24 44.7 -1.2**
JOF pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
CMSA Cobar Meteorol 67.80 176 *e*P **P 03 24 55.5 0.0**
STKA Stephens Creek 68.00 180 P **P 03 24 56.5 -0.3**
comp=Z,6.2nm,0.8s,mb4.7,baz=347,slow=6.6,SNR=13
STKA Stephens Creek 68.00 180 *e*P **P 03 24 56.2 -0.6**
comp=Z,4.6nm,0.9s,mb4.5
STKA Stephens Creek 68.00 180 P **P 03 24 56.5 -0.3**
FORT Forrest 68.02 192 *e*P **P 03 24 56.4 -0.5**
comp=Z,24nm,0.6s,mb5.4
OBN Obninsk 68.38 323 P **P 03 24 57.0 -2.0**
OBN *PP pP 03 25 11.0 -0.8
OBN 03 25 24.0
OBN pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KAF Kangasniemi 68.67 333 *e*P **P 03 24 59.7 -1.1**
KAF pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
BBOO Buckleboo 69.09 185 *e*P **P 03 25 03.1 -0.5**
VSR Storozhevoye 69.17 319 *e*P **P 03 25 03.3 -0.7**
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
FINES FINESS Array B 69.18 332 P **P 03 25 03.8 -0.1**
comp=Z,14nm,0.7s,mb5.0,baz=76,slow=8.0,SNR=30
FINES PP PP 03 27 35.2 -1.3
comp=Z,2.9nm,0.9s,baz=57,slow=7.0,SNR=4.0
FINES FINESS Array B 69.18 332 P **P 03 25 03.8 -0.1**
FINES 03 27 35.2
VORD Divnogorie 69.24 319 *e*P **P 03 25 03.6 -0.8**
VORD pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
VORD pmax pmax
comp=N,5.0nm,0.4s
VORD pmax pmax
comp=E,7.0nm,0.7s
ETW Entiat 69.24 46 *e*P **P 03 25 05.0 +0.5**
YNG Young 70.75 174 *e*P **P 03 25 13.8 +0.1**
comp=E,1.3nm,0.5s,mb4.1
VSU Vasula 70.79 330 *c i*P **P 03 25 13.5 -0.3**
VSU pmax pmax
comp=Z,32nm,1.0s,mb5.2
YBH Yreka Blue Hor 70.89 52 P **P 03 25 15.3 +0.6**
comp=Z,0.6nm,0.3s,mb3.9,baz=200,slow=15,SNR=2.6
YBH Yreka Blue Hor 70.89 52 P **P 03 25 15.3 +0.5**

KIV **Kislovodsk** 71.07 311κ *i*P P 03 25 16.5 +0.7
KIV *e* 03 25 23.4
KIV *e**PP pP 03 25 30.5 +1.9
KIV *e**SP sP 03 25 37.8 +4.2
KIV 03 27 56.0
KIV pmax pmax
comp=Z,16nm,1.0s,mb4.9
SUMG Summit 71.23 360 *e*P P 03 25 17.5 +1.2
comp=Z,19nm,1.0s,mb5.0
JTMT Jette 72.58 43 *e*P P 03 25 25.7 +0.9
E12A Beaver Dam Sad 72.62 45 ⇑P P 03 25 24.5 -0.5
baz=72
IDID Didziasalis 72.79 327 *e*P P 03 25 25.9 0.0
IDID AMB AMB 03 25 26.7
comp=Z,5.7nm,0.9s,mb4.5
SWMT Swartz Lake 72.87 43 *e*P P 03 25 25.5 -1.1
ISAL Salakas 72.90 327 *e*P P 03 25 26.5 -0.1
ISAL AMB AMB 03 25 28.4
comp=Z,12nm,1.0s,mb4.8
IIGN Ignalina 73.00 327 *e*P P 03 25 27.1 0.0
IIGN AMB AMB 03 25 28.9
comp=Z,5.7nm,1.1s,mb4.4
B15A Bradely Ranch, 73.19 42 ⇓P P 03 25 27.5 -0.9
baz=73,SNR=5.8
SLMT Seeley Lake 73.31 43 *e*P P 03 25 29.5 +0.4
SLMT *e* pP 03 25 42.0 0.0
C15A Salmond Ranch, 73.48 42 ⇑P P 03 25 29.6 -0.5
baz=73,SNR=6.9
C16A Fuhringer Ranc 73.93 42 ⇓P P 03 25 31.9 -0.9
baz=74
B17A L&G Farms, Che 74.14 41 ⇓P P 03 25 33.9 0.0
baz=74,SNR=5.8
A18A Metzger Ranch, 74.26 40 ⇑P P 03 25 33.8 -0.9
baz=74,SNR=5.4
FFC Flin Flon 74.31 32 *e*P P 03 25 35.1 +0.3
comp=Z,11nm,0.9s,mb4.8
FFC Flin Flon 74.31 32 *i*P P 03 25 35.2 +0.4
I12A Atlanta 74.38 47 ⇑P P 03 25 35.6 +0.1
baz=74
HRY Holter Researc 74.54 43 *e*P P 03 25 37.1 +0.8
AKASG Malin Array Be 74.57 322 P P 03 25 35.8 -0.6
comp=Z,9.7nm,0.7s,mb4.9,baz=48,slow=6.1,SNR=35
AKASG Malin Array Be 74.57 322*c*eP P 03 25 35.7 -0.7
AKASG pmax pmax
comp=Z,10.0nm,0.6s
KIEV Kiev 74.58 322 *e*P P 03 25 36.0 -0.5
comp=Z,13nm,0.8s,mb4.9
KIEV Kiev 74.58 322 *e*P P 03 25 36.0 -0.5
KIEV pmax pmax
comp=Z,13nm,0.8s,mb4.9
NOA NORSAR Array B 74.59 337 P P 03 25 36.2 -0.1
comp=Z,9.5nm,0.7s,mb4.8,baz=39,slow=5.8,SNR=37
NOA NORSAR Array B 74.59 337 P P 03 25 36.2 -0.1
NOA NORSAR Array B 74.59 337 P P 03 25 36.2 -0.1
B18A Beardsley Farm 74.62 41 ⇓P P 03 25 36.4 -0.4
baz=74,SNR=9.0
LRM Limekiln Ridge 74.73 44 *e*P P 03 25 38.1 +0.7
EGMT Eagleton 74.86 41 ⇑P P 03 25 37.8 -0.4
baz=75
EGMT Eagleton 74.86 41 *e*P P 03 25 38.6 +0.4
comp=Z,44nm,1.9s,mb5.1
DLMT Dillon 74.92 44 *e*P P 03 25 39.4 +0.9
comp=Z,7.4nm,0.6s,mb4.8
DLMT *e* pP 03 25 52.4 +0.9
HLID Hailey 74.94 47 *e*P P 03 25 39.8 +1.0
comp=Z,7.2nm,1.4s,mb4.4
HLID *e*pP pP 03 25 51.9 +0.2
G15A Dillon 75.10 45 ⇓P P 03 25 39.5 0.0
baz=75,SNR=6.2
SUW Suwalki 75.21 327 *e*P P 03 25 39.6 -0.4
F16A Kennard Place, 75.21 44 ⇓P P 03 25 39.7 -0.5
baz=75,SNR=7.9
BOZ Bozeman (W) 75.29 44 ⇑P P 03 25 40.1 -0.5
baz=75,SNR=6.8
BOZ Bozeman (W) 75.29 44 *e*P P 03 25 41.5 +0.9
comp=Z,3.3nm,0.8s,mb4.3
BOZ Bozeman (W) 75.29 44 *e*P P 03 25 41.6 +0.9
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
C19A Slack Wire Ran 75.41 41 ⇓P P 03 25 40.6 -0.7
baz=75,SNR=8.5
NVAR Mina Array Bea 75.53 53 P P 03 25 43.5 +1.3
comp=Z,2.4nm,0.7s,mb4.2,baz=293,slow=5.6,SNR=21
NVAR Mina Array Bea 75.53 53 P P 03 25 43.5 +1.3
F18A Big Timber 76.19 43 ⇓P P 03 25 45.1 -0.7
baz=76,SNR=6.1
D20A Manuel Ranch, 76.30 41 ⇑P P 03 25 45.8 -0.6
baz=76,SNR=6.2
E19A Rath Farm, Rou 76.35 42 ⇑P P 03 25 46.9 +0.2
baz=76,SNR=9.6
E20A Meyer Farm, Mu 76.67 42 ⇓P P 03 25 48.8 +0.3
baz=76,SNR=7.3
IMW Indian Meadow 76.75 45 *e*P P 03 25 51.1 +2.1
comp=Z,6.1nm,1.0s,mb4.5
S10A Tonopah Range, 76.92 52 ⇓P P 03 25 49.7 -0.4
baz=77
RLMT Red Lodge 76.93 43 *e*P P 03 25 51.0 +1.0
comp=Z,31nm,1.9s,mb4.9
R11A Troy Canyon, C 77.31 52 ⇑P P 03 25 52.1 -0.1
baz=77,SNR=6.2
HWUT Hardware Ranch 77.80 47 *e*P P 03 25 55.6 +0.6
comp=Z,16nm,1.6s,mb4.7
DUG Dugway 77.92 49 ⇑P P 03 25 55.6 -0.1
baz=78,SNR=5.2
DUG Dugway 77.92 49 *e*P P 03 25 56.5 +0.8
comp=Z,7.2nm,1.1s,mb4.5
DUG Dugway 77.92 49 *e*P P 03 25 56.5 +0.9
DUG pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
P14A Drum Mountains 78.13 49 ⇑P P 03 25 56.7 -0.2
baz=78,SNR=7.0
J19A Crowheart 78.22 45 ⇑P P 03 25 57.6 +0.4
baz=78,SNR=5.1
PDAR Pinedale Array 78.24 45 P P 03 25 57.7 +0.3
comp=Z,1.8nm,0.6s,mb4.2,baz=286,slow=1.9,SNR=26
Q14A Sevier Lake (B 78.37 50 ⇑P P 03 25 58.2 +0.1
baz=78,SNR=12
KWP Kalwaria Pacla 78.42 324 *e*P P 03 25 58.8 +0.6
KWP Kalwaria Pacla 78.42 324 *e*P P 03 25 58.6 +0.4
comp=Z,39nm,1.0s,mb5.3
KWP Kalwaria Pacla 78.42 324 ⇓P P 03 25 59.1 +0.9
KWP Kalwaria Pacla 78.42 324 ⇓*i*P P 03 25 59.1 +0.9
BUR08 Bucovina Ar. S 78.57 322 *e*P P 03 25 59.4 +0.4
BURAR Bucovina Array 78.58 322 ⇑P P 03 25 59.3 +0.2
BURAR Bucovina Array 78.58 322 ⇑*i*P P 03 25 59.3 +0.2
SHPR Sheep Range 78.68 53 *e*P P 03 26 00.9 +1.0
comp=Z,2.1nm,1.0s,mb4.0
DAU Daniels Canyon 78.72 48 *e*P P 03 26 01.6 +1.6
comp=Z,3.8nm,0.8s,mb4.4
DAU Daniels Canyon 78.72 48 *e*P P 03 26 01.6 +1.5
DAU pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
S13A Holt Ranch, En 78.86 51 ⇓P P 03 26 00.6 -0.3
baz=79
VRI Vrincioaia 78.97 320 ⇑P P 03 26 02.9 +1.6
VRI Vrincioaia 78.97 320 ⇑*i*P P 03 26 02.9 +1.6
BR131 Keskin Array S 79.02 311 *e*P P 03 26 01.9 +0.2
comp=Z,4.0nm,0.8s,mb4.4
BRTR Keskin Array B 79.02 311 P P 03 26 02.0 +0.3
comp=Z,4.6nm,0.9s,mb4.4,baz=119,slow=3.8,SNR=14
BRTR Keskin Array B 79.02 311*c*eP P 03 26 02.0 +0.3
BRTR pmax pmax
comp=Z,5.0nm,0.9s
KOLS Kolonicke sedl 79.11 324 *e*P P 03 26 02.1 +0.1
comp=Z,9.4nm,1.5s,mb4.5
KOLS Kolonicke sedl 79.11 324 *e*P P 03 26 02.1 +0.1
KOLS pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
KOLS Kolonicke sedl 79.11 324 *e*P P 03 26 02.1 +0.1
CCUT Cedar City 79.19 51 *e*P P 03 26 04.2 +1.5
comp=Z,6.0nm,1.2s,mb4.4
UZH Uzhgorod 79.31 324 *e*P P 03 25 56.5 -6.6
UZH *e* pP 03 26 08.9 -7.2
MSU Marysvale 79.34 50 *e*P P 03 26 05.0 +1.5
MSU Marysvale 79.34 50 *e*P P 03 26 05.0 +1.5
OJC Ojcow 79.35 326 *e*P P 03 26 03.5 +0.2
OJC Ojcow 79.35 326 *e*P P 03 26 03.5 +0.2
CRVS Cervenica-Dubn 79.52 324 *e*P P 03 26 04.7 +0.5
comp=Z,2.8nm,0.8s,mb4.2
CRVS Cervenica-Dubn 79.52 324 *e*P P 03 26 04.7 +0.5
CRVS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CRVS Cervenica-Dubn 79.52 324 *e*P P 03 26 04.7 +0.5
TRPA Tarpa 79.54 323 ⇓*i*P P 03 26 05.3 +0.9
J22A Midwest 79.56 43 ⇓P P 03 26 04.1 -0.5
baz=79,SNR=6.7

NIE Niedzica 79.68 325 *e*P P 03 26 05.9 +0.8
NIE Niedzica 79.68 325⇑*e*P P 03 26 05.9 +0.8
P18A Preston Nutter 79.82 48 ⇓P P 03 26 05.8 -0.3
baz=80
R16A Teasdale 79.91 50 ⇓P P 03 26 06.6 +0.1
baz=80,SNR=7.0
SRU San Rafael 79.98 49 ⇓P P 03 26 06.3 -0.6
baz=80,SNR=10
SRU San Rafael 79.98 49 *e*P P 03 26 07.8 +0.8
comp=Z,7.3nm,0.7s,mb4.7
SRU San Rafael 79.98 49 *e*P P 03 26 07.8 +0.9
SRU pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ULM Lac du Bonnet 80.11 33 P P 03 26 07.0 -0.5
comp=Z,3.1nm,0.8s,mb4.3,baz=320,slow=4.5,SNR=4.9
ULM Lac du Bonnet 80.11 33 P P 03 26 07.0 -0.5
OKC Ostrava-Krasne 80.36 327 *e*P P 03 26 09.2 +0.4
OKC *e**PP pP 03 26 21.6 -0.2
OKC Ostrava-Krasne 80.36 327 *e*P P 03 26 09.2 +0.4
OKC *e*pP pP 03 26 21.6 -0.2
DRGR 80.39 322 ⇓P P 03 26 09.4 +0.4
DRGR 80.39 322⇓*i*P P 03 26 09.4 +0.4
RSSD Black Hills 80.42 41 *e*P P 03 26 09.2 0.0
comp=Z,27nm,2.1s,mb4.8
RSSD Black Hills 80.42 41 *e*P P 03 26 09.2 0.0
RSSD pmax pmax
comp=Z,27nm,2.1s,mb4.8
V14A Boquillas Ranc 80.53 53 ⇓P P 03 26 09.8 -0.2
baz=80,SNR=5.4
P19A Cripple Cowboy 80.57 47 ⇓P P 03 26 09.8 -0.3
baz=80,SNR=8.1
MORC Moravsky Berou 80.67 327 *e*P P 03 26 10.2 -0.3
comp=Z,9.3nm,1.1s,mb4.6
MORC *e* pP 03 26 23.2 -0.2
MORC Moravsky Berou 80.67 327 *e*P P 03 26 10.2 -0.3
MORC *e* pP 03 26 23.3 -0.2
MORC pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MORC Moravsky Berou 80.67 327⇓*i*P P 03 26 10.4 -0.1
S17A Black Ridge (B 80.73 50 ⇓P P 03 26 10.5 -0.5
baz=80,SNR=5.1
DPC Dobruska-Polom 80.78 328 *e*P P 03 26 11.6 +0.6
DPC *e**PP pP 03 26 24.1 0.0
DPC Dobruska-Polom 80.78 328 *e*P P 03 26 11.6 +0.6
DPC *e*pP pP 03 26 24.1 0.0
UPC Upice 80.80 328 *e*P P 03 26 11.7 +0.6
UPC *e**PP pP 03 26 21.5 -2.6
UPC Upice 80.80 328 *e*P P 03 26 11.7 +0.6
UPC *e*pP pP 03 26 21.5 -2.6
PSZ Piszkesteto 80.95 324 *e*P P 03 26 12.5 +0.5
comp=Z,18nm,1.2s,mb4.9
PSZ Piszkesteto 80.95 324 ⇓P P 03 26 12.8 +0.8
PSZ Piszkesteto 80.95 324⇓*i*P P 03 26 12.8 +0.8
VYHS Vyhne 81.03 325 *e*P P 03 26 12.9 +0.5
comp=Z,3.2nm,0.9s,mb4.2
VYHS Vyhne 81.03 325 *e*P P 03 26 12.9 +0.5
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
VYHS Vyhne 81.03 325 *e*P P 03 26 12.9 +0.5
KOLL Kolacno 81.16 326 *e*P P 03 26 13.5 +0.4
KOLL Kolacno 81.16 326 *e*P P 03 26 13.5 +0.4
KOLL Kolacno 81.16 326 *e*P P 03 26 13.5 +0.4
GZR Gura Zlata 81.33 321 ⇑P P 03 26 14.5 +0.5
GZR Gura Zlata 81.33 321⇑*i*P P 03 26 14.5 +0.5
BRG Berggiesshubel 81.39 329 *e*P P 03 26 14.1 -0.2
comp=Z,9.0nm,0.9s,mb4.7
BRG *e*pP pP 03 26 26.4 -0.9
BRG Berggiesshubel 81.39 329 *i*P P 03 26 14.3 0.0
comp=Z,9.0nm,0.9s,mb4.7
BRG pP pP 03 26 26.2 -1.1
comp=Z,8.2nm,1.1s
BRG Berggiesshubel 81.39 329 *i*P P 03 26 14.3 0.0
BRG *PP pP 03 26 26.2 -1.1
BRG pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BRG pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
PVCC Panska Ves 81.39 329 *e*P P 03 26 15.0 +0.7
PVCC *e**PP pP 03 26 26.9 -0.4
PVCC Panska Ves 81.39 329 *e*P P 03 26 15.0 +0.7
PVCC *e*pP pP 03 26 26.9 -0.4
PV04 Paradox Valley 81.41 48 *e*P P 03 26 15.1 +0.5
PV04 *e*pP pP 03 26 28.2 +0.6
VRAC Vranov 81.44 327 ⇑P P 03 26 15.1 +0.6
VRAC Vranov 81.44 327⇑*i*P P 03 26 15.1 +0.6
CLL Collm 81.44 330 *e*P P 03 26 14.3 -0.2
comp=Z,16nm,1.0s,mb4.9
CLL *e*pP pP 03 26 26.8 -0.7
CLL Collm 81.44 330⇑*i*P P 03 26 14.1 -0.4
comp=Z,16nm,1.0s,mb4.9
CLL *i*pP pP 03 26 26.0 -1.5
CLL Collm 81.44 330⇑*i*P P 03 26 14.1 -0.4
CLL *i**PP pP 03 26 26.0 -1.5
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CLL Collm 81.44 330⇑*i*P P 03 26 14.1 -0.4
comp=Z,16nm,1.0s,mb4.9
CLL *i*pP pP 03 26 26.0 -1.5
T18A Mexican Hat 81.62 50 ⇑P P 03 26 15.1 -0.6
baz=81
NRDL Niedersach Rie 81.64 332 *e*P P 03 26 15.3 -0.3
comp=Z,10.0nm,1.0s,mb4.7
O22A Kremmling 81.65 46 ⇑P P 03 26 15.6 -0.2
baz=81
PV01 Paradox Valley 81.78 48 *e*P P 03 26 17.4 +0.9
comp=Z,747nm,1.2s
PRU Pruhonice 81.81 328 *e*P P 03 26 17.2 +0.7
PRU *e**PP pP 03 26 30.0 +0.5
PRU Pruhonice 81.81 328 *e*P P 03 26 17.2 +0.7
PRU *e*pP pP 03 26 30.0 +0.5
R20A Redvale 81.86 48 ⇓P P 03 26 16.7 -0.3
baz=82,SNR=6.6
P22A Eagle 81.90 46 ⇑P P 03 26 17.5 +0.4
baz=82,SNR=6.2
TREC Trest 81.93 327 *e*P P 03 26 17.7 +0.6
TREC *e**PP pP 03 26 29.9 -0.3
TREC Trest 81.93 327 *e*P P 03 26 17.7 +0.6
TREC *e*pP pP 03 26 29.9 -0.3
V17A Tonalea, Kykot 82.01 51 ⇑P P 03 26 18.4 +0.6
baz=82,SNR=7.3
CLZ Clausthal 82.06 332 *e*P P 03 26 17.9 +0.1
comp=Z,11nm,1.0s,mb4.7
CLZ *e*pP pP 03 26 30.7 -0.1
CLZ Clausthal 82.06 332 *e*P P 03 26 17.9 +0.1
CLZ *e**PP pP 03 26 30.7 -0.1
CLZ pmax pmax
comp=Z,11nm,1.0s,mb4.7
TANN Tannenbergstha 82.35 330 *e*P P 03 26 19.3 0.0
comp=Z,4.0nm,0.9s,mb4.3
TANN *e*pP pP 03 26 32.2 -0.2
ISCO Idaho Springs 82.43 46 *e*P P 03 26 21.3 +1.3
comp=Z,12nm,1.6s,mb4.6
ISCO Idaho Springs 82.43 46 *e*P P 03 26 21.3 +1.4
ISCO pmax pmax
comp=Z,12nm,1.6s,mb4.6
NKC Novy Kostel 82.49 330 *e*P P 03 26 20.2 +0.1
NKC *e**PP pP 03 26 33.2 +0.1
NKC Novy Kostel 82.49 330 *e*P P 03 26 20.2 +0.1
NKC *e*pP pP 03 26 33.2 +0.1
MOX Moxa 82.51 330 *e*P P 03 26 19.9 -0.2
MOX Moxa 82.51 330 *e*P P 03 26 20.1 0.0
comp=Z,8.0nm,1.2s,mb4.6
MOX *e*pP pP 03 26 33.2 0.0
MOX Moxa 82.51 330 *e*P P 03 26 19.9 -0.2
CONA Conrad Observa 82.79 326⇑*i*P P 03 26 22.6 +0.9
comp=Z,7.9nm,1.1s,mb4.7
KHC Kasperske Hory 82.87 328 *e*P P 03 26 22.2 +0.1
comp=Z,11nm,0.9s,mb4.9
KHC Kasperske Hory 82.87 328 *e*P P 03 26 22.4 +0.3
KHC *e**PP pP 03 26 34.7 -0.4
KHC Kasperske Hory 82.87 328 *e*P P 03 26 22.4 +0.3
KHC *e*pP pP 03 26 34.7 -0.4
ROTZ Rotzenmuhle 82.95 329 *e*P P 03 26 22.9 +0.4
comp=Z,7.0nm,0.8s,mb4.7
ROTZ *e*pP pP 03 26 36.0 +0.5
UBBA Unterbreizbach 83.01 331 *e*P P 03 26 23.7 +1.0
comp=Z,3.0nm,0.6s,mb4.5
GEC2 GERESS Array S 83.04 328 *e*P P 03 26 22.7 -0.2
comp=Z,7.0nm,1.0s,mb4.7
GEC2 *e*pP pP 03 26 35.6 -0.4
GEC2 GERESS Array S 83.04 328 *e*P P 03 26 22.7 -0.2
GEC2 *e**PP pP 03 26 35.6 -0.4
GEC2 pmax pmax
comp=Z,7.0nm,1.0s,mb4.7

WET Wettzell 83.16 329 *e*P P 03 26 23.7 +0.2
comp=Z,7.0nm,1.0s,mb4.7
WET *e*pP pP 03 26 36.4 -0.2
WET Wettzell 83.16 329 *e*P P 03 26 23.7 +0.2
WET *e**PP pP 03 26 36.4 -0.2
WET pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
GRA1 Grafenberg Arr 83.41 330 *e*P P 03 26 25.3 +0.5
comp=Z,23nm,0.9s,mb5.2
GRA1 *e*pP pP 03 26 37.8 -0.1
GRF Grafenberg Arr 83.41 330 *e*P P 03 26 25.3 +0.5
comp=Z,23nm,0.9s,mb5.2
GRF *e*pP pP 03 26 37.8 -0.1
GRF Grafenberg Arr 83.41 330 *e*P P 03 26 25.3 +0.5
GRF *e**PP pP 03 26 37.8 -0.1
GRF pmax pmax
comp=Z,23nm,0.9s,mb5.2
GRF Grafenberg Arr 83.41 330 *e*P P 03 26 25.3 +0.5
GRF *e**PP pP 03 26 37.8 -0.1
GRF pmax pmax
comp=Z,23nm,0.9s,mb5.2
GRFO Grafenberg 83.42 330 *e*P P 03 26 25.0 +0.1
comp=Z,5.7nm,0.6s,mb4.8
GRFO Grafenberg 83.42 330 *e*P P 03 26 25.0 +0.2
GRFO pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
X19A St. Johns 83.72 52 ⇓P P 03 26 27.2 +0.5
baz=84,SNR=5.0
SDCO Great Sand Dun 83.86 47 *e*P P 03 26 28.7 +1.4
comp=Z,3.1nm,1.0s,mb4.4
GROS Grobnik 84.05 326 *e*P P 03 26 27.7 -0.4
GROS Grobnik 84.05 326 *e*P P 03 26 27.7 -0.4
SOKA Soboth 84.10 326⇑*i*P P 03 26 28.5 +0.1
comp=Z,14nm,1.2s,mb4.9
RJOB Jochberg 84.28 328 *e*P P 03 26 29.6 +0.3
comp=Z,8.0nm,1.0s,mb4.8
RJOB *e*pP pP 03 26 42.2 -0.2
VAY Valandovo 84.28 318 *e*P P 03 26 28.5 -1.0
ECSD EROS Data Cent 84.51 38 *e*P P 03 26 30.4 -0.1
comp=Z,4.7nm,0.8s,mb4.7
FUR Furstenfeldbru 84.59 329 *e*P P 03 26 31.1 +0.3
comp=Z,19nm,1.0s,mb5.2
FUR *e*pP pP 03 26 44.0 +0.1
FUR Furstenfeldbru 84.59 329 *e*P P 03 26 31.1 +0.3
FUR *e**PP pP 03 26 44.0 +0.1
FUR pmax pmax
comp=Z,19nm,1.0s,mb5.2
LJU Ljubljana 84.81 326 *i*P P 03 26 31.2 -0.8
LJU Ljubljana 84.81 326 *i*P P 03 26 31.2 -0.8
LJU Ljubljana 84.81 326 *i*P P 03 26 31.2 -0.8
BOJS Bojanci 84.89 325 *i*P P 03 26 32.0 -0.4
BOJS Bojanci 84.89 325 *i*P P 03 26 32.0 -0.4
KRUS Krusevo 84.95 319 *e*P P 03 26 31.9 -0.9
STU Stuttgart 84.95 330 *e*P P 03 26 32.7 0.0
comp=Z,20nm,0.8s,mb5.3
STU *e*pP pP 03 26 45.6 -0.2
JAVS Javornik 85.14 326 *e*P P 03 26 32.6 -1.1
ANMO Albuquerque 85.14 50 *e*P P 03 26 35.2 +1.3
comp=Z,4.1nm,1.0s,mb4.5
ANMO Albuquerque 85.14 50 *e*P P 03 26 35.2 +1.3
ANMO pmax pmax
comp=Z,4.0nm,1.0s
RETA Reutte 85.33 329⇑*i*P P 03 26 34.5 -0.1
comp=Z,7.5nm,0.8s,mb4.9
BFO Black Forest 85.65 331 *e*P P 03 26 36.0 -0.2
comp=Z,17nm,1.0s,mb5.2
BFO *e*pP pP 03 26 48.5 -0.8
BFO Black Forest 85.65 331 *e*P P 03 26 36.0 -0.2
comp=Z,14nm,0.8s,mb5.2
BFO *e*pP pP 03 26 48.5 -0.8
BFO *e* pP 03 26 48.7 -0.6
BFO Black Forest 85.65 331 *e*P P 03 26 36.0 -0.2
BFO *e**PP pP 03 26 48.5 -0.8
BFO *e* pP 03 26 48.7 -0.6
BFO pmax pmax
comp=Z,14nm,0.8s,mb5.2
DAVA Damuels 85.86 329⇑*i*P P 03 26 36.6 -0.6
comp=Z,10nm,0.8s,mb5.1
SCHQ Schefferville 85.94 16 P P 03 26 37.1 -0.4
comp=Z,4.1nm,0.6s,mb4.8,baz=339,slow=6.8,SNR=7.5
FUORN Ofenpass-Fuorn 86.23 328 *e*P P 03 26 39.5 +0.5
comp=Z,12nm,1.0s,mb5.1
TXAR Lajitas Array 90.67 52 P P 03 27 00.7 +0.2
comp=Z,1.7nm,0.8s,mb4.4,baz=294,slow=3.4,SNR=16
TXAR Lajitas Array 90.67 52 P P 03 27 00.7 +0.2
KEST Kesra 95.30 322 P P 03 27 21.1 -0.6
comp=Z,0.9nm,0.8s,mb4.2,baz=301,slow=9.0,SNR=4.1
LPAZ La Paz 147.20 60 PKPbc PKPbc 03 33 41.4 +0.2
comp=Z,4.3nm,0.7s,baz=0.3,slow=2.9,SNR=24
LPAZ La Paz 147.20 60 *e*PKPdf PKPdf 03 33 37.8 -1.1
LPAZ PKPbc PKPbc 03 33 41.4 +0.2
LPAZ *e*PKPbc PKPbc 03 33 41.6 +0.5
LPAZ La Paz 147.20 60 *e*PKHKP PKPpre 03 33 37.8
LPAZ 03 33 41.4
LPAZ *e* 03 33 41.6

JMA 11 03:38:03.8±0.2,41°.86N×144°.04E,h45km±4km,M3.5,
Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.68**	**284**	P	Pn	03 38 16.9	-0.1
JEM				*e*S	Sn	03 38 26.0	-0.5
JCH	**Churui**	**0.91**	**326**	P	Pn	03 38 20.2	+0.1
JCH				*e*S	Sn	03 38 33.5	+1.4
JNBK	**Urakawa-nobuka**	**1.05**	**294**	P	Pn	03 38 23.1	+1.1
JOB	**Onbets**	**1.05**	**352**	P	Pn	03 38 23.2	+1.1
JAK	**Akkeshi**	**1.23**	**23**	P	Pn	03 38 24.7	+0.1
JAR	**Ashorobuto**	**1.45**	**352**	P	Pn	03 38 27.5	0.0
JAR				*e*S	Sn	03 38 45.0	-0.3
JFR	**Furan**	**1.69**	**321**	P	Pn	03 38 31.3	+0.5
JFR				*e*S	Sn	03 38 52.1	+1.0
JNK	**Nakash**	**1.79**	**16**	P	Pn	03 38 32.0	-0.3
JNK				*e*S	Sn	03 38 53.5	-0.3

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*ISCJB **11** 03:41:33.0±1.8, 19°.68S±0°.10×68°.8W±0°.2,h143km±19km, mb3.8/5, Error ellipse: s-maj=25.5km s-min=13.3km az=156.8*
*IDC **11** 03:41:32.6±1.9, 19°.66S×68°.90W,h127km±13km,mb3.5/5, mb1 3.8/8,mb1mx3.6/18,mbtmp3.6/8,MS2.9/1,Ms1 3.1/1, ms1mx2.9/18,Error ellipse: s-maj=29.2km s-min=20.1km az=60.0*
*NEIC **11** 03:41:33.5±1.3, 19°.66S×68°.80W,h134km±12km,mb4.2/2, Error ellipse: s-maj=16.6km s-min=9.2km az=69.0*
ISC 11 03:41:34.0±1.6,19°.67S±0°.09×68°.8W±0°.1,h137km±18km,
n21,c0°60/14,mb3.8/5,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.41**	**10**	P	**Pn**	**03 42 26.3**	**+0.1**
	8.4nm,0.3s,baz=187,slow=7.6,SNR=319						
LPAZ				LR	LR	03 43 22.0	
	comp=Z,192nm,19.9s,baz=266,slow=32						
LPAZ	**La Paz**	**3.41**	**10**	*e*Pn	**Pn**	**03 42 26.2**	**0.0**
LPAZ				LR	LR	03 43 22.0	
SIV	**San Ignacio**	**8.18**	**65**	P	**Pn**	**03 43 29.0**	**-0.9**
	0.9nm,0.3s,baz=258,slow=13,SNR=33						
LCO	**Las Campanas**	**9.47**	**190**	Pn	**Pn**	**03 43 55.7**	**+8.7**
	21nm,0.7s						
CPUP	**Villa Florida**	**12.44**	**124**	P	**Pn**	**03 44 26.7**	**+0.4**
	0.9nm,0.3s,baz=291,slow=12,SNR=10						
TRQA	**Tornquist**	**19.25**	**164**	*e*P	**P**	**03 45 47.8**	**+0.1**
	12nm,1.0s						
BDFB	**Brasilia**	**20.17**	**82**	P	**P**	**03 45 58.6**	**+0.8**
	2.2nm,0.5s,baz=239,slow=18,SNR=2.0						
PLCA	**Paso Flores**	**21.05**	**184**	P	**P**	**03 46 06.7**	**-0.3**
	2.9nm,1.0s,mb3.6,baz=4.9,slow=14,SNR=3.2						
PLCA	**Paso Flores**	**21.05**	**184**	P	**P**	**03 46 06.7**	**-0.3**
OTAV	**Otavalo**	**21.94**	**333**	*e*P	**P**	**03 46 17.8**	**+1.1**
	12nm,1.3s,mb4.2						
PDAR	**Pinedale Array**	**72.60**	**330**	P	**P**	**03 52 45.5**	**-0.7**
	0.2nm,0.3s,mb3.3,baz=101,slow=4.7,SNR=4.7						
PDAR	**Pinedale Array**	**72.60**	**330**	P	**P**	**03 52 45.5**	**-0.7**
NVAR	**Mina Array Bea**	**74.14**	**322**	P	**P**	**03 52 55.0**	**-0.4**
	0.6nm,0.7s,mb3.4,baz=151,slow=6.1,SNR=5.5						
YKA	**Yellowknife Ar**	**89.51**	**341**	P	**P**	**03 54 15.0**	**-0.1**
	3.9nm,0.8s,mb4.4,baz=134,slow=4.7,SNR=19						
ASAR	**Alice Springs**	**131.59**	**208**	PKP	PKPdf	04 00 31.4	+0.2
	0.4nm,0.5s,baz=129,slow=1.9,SNR=5.9						
ASAR				SKPbc	SKPbc	04 03 45.0	+0.8
	0.5nm,0.9s,baz=242,slow=2.9,SNR=3.2						
ASAR				SKP		04 03 53.1	

0.3nm,0.6s,baz=219,slow=2.2,SNR=5.4
WRA Warramunga Arr 134.59 211 PKP PKPdf 04 00 37.0 +0.1
0.7nm,0.7s,baz=157,slow=1.8,SNR=13
WRA SKPbc SKPbc 04 03 52.8 -1.6
0.2nm,0.6s,baz=237,slow=2.2,SNR=4.9
WRA SKP 04 04 00.7
0.7nm,0.7s,baz=234,slow=2.6,SNR=7.3
ZALV Zalesovo Beam 140.24 24 PKP PKPdf 04 00 46.6 +0.4
0.4nm,0.3s,baz=86,slow=2.0,SNR=2.9
MKAR Makanchi Array 144.06 35 PKP PKPdf 04 00 52.6 -0.6
0.6nm,0.8s,baz=270,slow=1.9,SNR=5.5
MJAR Matsushiro Arr 151.01 311 PKPbc PKPbc 04 01 08.8 -2.2
1.9nm,0.8s,baz=176,slow=1.6,SNR=5.9
MJAR Matsushiro Arr 151.01 311 PKPbc PKPbc 04 01 08.8 -2.2
SONM Songino Array 151.63 7 PKPbc PKPbc 04 01 13.2 +1.2
2.3nm,0.7s,baz=291,slow=1.0,SNR=10

NIED ***11*** *04:00:00, 41°.70N×144°.30E, h8km, Mw4.8 Best double couple: M0=2.10000×10^16 NP1:φ=201.00000°, δ=80.00000°, λ=67.00000°. NP2:φ=88.00000°, δ=25.00000°, λ=156.00000°.*
IDC ***11*** *04:00:54.7±0.5, 41°.76N×144°.32E, h0km, mb4.4/19, mb1 4.5/24, mb1mx4.5/28, mbtmp4.4/24, ML3.8/5, MS4.0/2, Ms1 4.0/2, ms1mx3.6/33, Error ellipse: s-maj=15.8km s-min=12.3km az=128.0*
MOS ***11*** *04:00:57.7±1.0, 41°.69N×144°.17E, h28km, mb5.2/53, Error ellipse: s-maj=8.1km s-min=4.9km az=107.9*
JMA ***11*** *04:00:58.6±0.2, 41°.74N×144°.32E, h28km±3km, M4.8*
JMA Felt I J1.
ISCJB ***11*** *04:00:58.3±1.0, 41°.77N±0°.03×144°.18E±0°.04, h28km±7km, mb4.8/143, MS4.8/13, Error ellipse: s-maj=5.7km s-min=3.7km az=139.1*
NEIC ***11*** *04:00:59.6±1.9, 41°.79N×144°.13E, h24km±13km, mb4.9/71, MW4.8(NIED), Error ellipse: s-maj=7.1km s-min=4.7km az=153.0*
NEIC Recorded [1 JMA] in southeastern Hokkaido.
BJI ***11*** *04:00:59.4, 41°.91N×144°.02E, h31km, mB5.1/22, mb4.9/54, Ms4.7/33, Ms7 4.5/33*
SZGRF ***11*** *04:01:04.0, 43°.21N×144°.32E, h33km, mb5.0, Hokkaido, Japan, region*
ISC 11 04:01:00.6±0.8, 41°.87N±0°.03×144°.16E±0°.04, h30km±5km, h34km±2.0km:pP-P, n340, σ1§04/356, mb4.8/143, MS4.8/13, 35C-20D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.77**	**282**	*e*Pn	**Pn**	**04 01 16.2**	**+0.8**
ERM	**Erimo**	**0.77**	**282**	*e*P	**Pb**	**04 01 16.2**	**+0.8**
JEM	**Erimo**	**0.77**	**282**	⇑P	**Pb**	**04 01 16.1**	**+0.7**
JCH	**Churui**	**0.96**	**322**	⇑P	**Pn**	**04 01 18.7**	**+0.7**
JCH				*e*S	**Sb**	**04 01 33.0**	**+2.1**
JOB	**Onbets**	**1.07**	**347**	⇑P	**Pn**	**04 01 19.6**	**+0.1**
JOB				*e*S	**Sn**	**04 01 35.7**	**+2.3**
JNBK	**Urakawa-nobuka**	**1.13**	**292**	P	**Pn**	**04 01 21.9**	**+1.5**
JAK	**Akkeshi**	**1.20**	**19**	⇑P	**Pn**	**04 01 20.2**	**-1.1**
JAK				*e*S	**Sn**	**04 01 36.0**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**2.50**	**29**	⇑*i*P	**Pn**	**04 01 38.7**	**-0.6**
YUK				*i* S	**Sn**	**04 02 06.8**	**-2.0**
YUK				pmax	pmax		
	comp=Z,660nm,0.7s						
YUK				pmax	pmax		
	comp=N,230nm,0.5s						
YUK				pmax	pmax		
	comp=E,170nm,0.5s						
YUK				pmax	pmax		
	comp=Z,750nm,0.5s						
YUK				smax			
	comp=N,3μm,0.6s						
YUK				smax			
	comp=E,4μm,0.6s						
YUK				MLR	MLR		
	comp=N,4μm,15.0s						
YUK				MLR	MLR		
	comp=E,6μm,15.0s						
YUK				MLR	MLR		
	comp=Z,4μm,15.0s						
ASAJ	**Asahikawa**	**2.53**	**333**	Pn	**Pn**	**04 01 40.5**	**+0.9**
	comp=Z,5.2nm,0.3s,baz=192,slow=14,SNR=34						
ASAJ				Sn	**Sn**	**04 02 10.3**	**+1.0**
	comp=Z,63nm,0.3s,baz=32,slow=27,SNR=7.2						
ASAJ				LR	LR	04 03 03.1	
	comp=Z,4μm,20.8s,baz=19,slow=48						
ASAJ	**Asahikawa**	**2.53**	**333**	*e*Pn	**Pn**	**04 01 40.5**	**+0.9**
ASAJ	**Asahikawa**	**2.53**	**333**	P	**Pn**	**04 01 40.5**	**+0.9**
ASAJ						04 02 10.4	
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,63nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,4μm,20.8s						
KUR	**Kuril'sk**	**4.31**	**37**	*e*P	**Pn**	**04 02 03.3**	**-0.8**
KUR				*e*S	**Sn**	**04 02 50.2**	**-3.1**
KUR				pmax	pmax		
	comp=N,320nm,0.8s						
KUR				pmax	pmax		
	comp=E,220nm,0.8s						
KUR				pmax	pmax		
	comp=Z,720nm,0.8s						
KUR				smax			
	comp=N,8μm,2.5s						
KUR				smax			
	comp=E,4μm,2.5s						
KUR				smax			
	comp=N,360nm,0.5s						
KUR				smax			
	comp=E,650nm,0.5s						
KUR				MLR	MLR		
	comp=N,4μm,12.0s						
KUR				MLR	MLR		
	comp=E,3μm,12.0s						
KUR				MLR	MLR		
	comp=Z,5μm,12.0s						
YSS	**Yuzh-Sakhalins**	**5.19**	**349**	*e*Pn	**Pn**	**04 02 16.7**	**+0.6**
YSS	**Yuzh-Sakhalins**	**5.19**	**349**	⇑*i*P	**Pn**	**04 02 20.1**	**+3.9**
YSS				*e*S	**Sn**	**04 03 22.0**	**+7.1**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				smax			
	comp=N,70nm,0.8s						
YSS				MLR	MLR		
	comp=Z,2μm,13.0s						
YSS				MLR	MLR		
	comp=N,2μm,14.0s						
MAJO	**Matsushiro**	**7.04**	**223**	*e*Pn	**Pn**	**04 02 40.4**	**-1.3**
MAJO	**Matsushiro**	**7.04**	**223**	*e*P	**Pn**	**04 02 40.4**	**-1.3**
MAT	**Matsushiro**	**7.04**	**223**	P	**Pn**	**04 02 40.1**	**-1.6**
MAT				S	**Sn**	**04 04 01.9**	**+1.2**
MJAR	**Matsushiro Arr**	**7.04**	**223**	Pn	**Pn**	**04 02 39.9**	**-1.8**
	comp=N,3.7nm,0.3s,baz=28,slow=12,SNR=38						
MJAR				Sn	**Sn**	**04 04 02.6**	**+1.9**
	baz=24,slow=21,SNR=3.1						
MJAR	**Matsushiro Arr**	**7.04**	**223**	P	**Pn**	**04 02 39.9**	**-1.8**
MJAR						04 04 02.6	
HABR	**Khabarovsk**	**9.22**	**319**	P	**Pn**	**04 03 08.2**	**-3.3**
HABR				*e*		04 04 50.4	
HABR				MLR	MLR		
	comp=Z,1μm,16.0s						
JHJ	**Hachijo jima 2**	**9.40**	**203**	Sn	**Sn**	**04 04 46.7**	**-12**
	comp=Z,61nm,0.3s,baz=269,slow=23,SNR=5.9						
MDJ	**Mudanjiang**	**10.98**	**289**	P	**Pn**	**04 03 37.7**	**+2.1**
MDJ				pmax	pmax		
	comp=Z,21nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,160nm,5.5s						
KLR	**Kul'dur**	**11.39**	**314**	*e*P	**Pn**	**04 03 38.9**	**-2.3**
KLR				MLR	MLR		
	comp=E,2μm,17.0s						
KLR				MLR	MLR		
	comp=Z,2μm,17.0s						
SKR	**Severo-Kuril's**	**12.08**	**39**	*e*P	**Pn**	**04 03 49.0**	**-1.5**
KSRS	**Korea Array**	**13.26**	**256**	Pn	**Pn**	**04 04 06.5**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=71,slow=12,SNR=27						
KSRS	**Korea Array**	**13.26**	**256**	P	**Pn**	**04 04 06.5**	**-0.3**
CN2	**Changchun**	**13.87**	**284**	*e*P	**Pn**	**04 04 14.8**	**-0.3**
CN2				*e*pP		04 04 23.8	
CN2				*e*S	**Sn**	**04 06 45.8**	**-2.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=N,2μm,16.0s						
CN2				LR	LR		
	comp=E,800nm,16.0s						
CN2				LR	LR		
	comp=Z,2μm,16.0s						
PETK	**Petropavlovsk-**	**14.47**	**34**	Pn	**Pn**	**04 04 20.7**	**-2.5**
	comp=Z,0.5nm,0.3s,baz=184,slow=11,SNR=5.8						
PETK	**Petropavlovsk-**	**14.47**	**34**	P	**Pn**	**04 04 20.7**	**-2.5**
CBIJ	**Chichi jima**	**14.82**	**187**	Pn	**Pn**	**04 04 22.7**	**-5.4**
	comp=Z,3.2nm,0.3s,baz=302,slow=19,SNR=3.5						
CBIJ				Sn	**Sn**	**04 06 54.0**	**-17**
	comp=Z,7.9nm,0.3s,baz=58,slow=23,SNR=6.7						
CBIJ				LR	LR	04 08 42.0	
	comp=Z,629nm,21.9s,baz=270,slow=32						
SNY	**Shenyang**	**15.35**	**277**	⇑P	**Pn**	**04 04 34.1**	**-0.8**
SNY				pmax	pmax		
	comp=Z,11nm,0.4s						
DL2	**Dalian**	**17.41**	**268**	P	**Pn**	**04 05 00.6**	**-0.7**
DL2				pmax	pmax		
	comp=Z,30nm,0.8s						
CLNS	**Chul'man**	**19.44**	**327**	*e*P	**Pn**	**04 05 23.1**	**-2.7**
CLNS				pmax	pmax		
	comp=Z,62nm,0.8s						
CLNS				pmax	pmax		
	comp=N,31nm,0.7s						
CLNS				pmax	pmax		
	comp=E,15nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,51nm,0.7s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.6s						
CLNS				pmax	pmax		
	comp=N,45nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,513nm,16.0s						
CLNS				MLR	MLR		
	comp=N,483nm,22.0s						
CLNS				MLR	MLR		
	comp=E,669nm,19.0s						
BJI	**Beijing**	**21.18**	**274**	P	**P**	**04 05 41.3**	**-2.2**
BJI				S	**S**	**04 09 36.1**	**-1.3**
BJI				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.6						
BJI				pmax	pmax		
	comp=Z,140nm,4.6s						
BJI				LR	LR		
	comp=N,750nm,14.7s,MS4.6						
BJI				LR	LR		
	comp=E,2μm,15.3s,MS4.6						
BJI				LR	LR		
	comp=Z,760nm,17.2s,MS4.2						
SEY	**Seymchan**	**21.66**	**10**	⇑*i*P	**P**	**04 05 45.6**	**-2.7**
TIA	**Tai'an**	**21.70**	**264**	P	**P**	**04 05 45.9**	**-3.2**
TIA				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.8						
YAK	**Yakutsk**	**21.98**	**342**	*e*P	**P**	**04 05 47.6**	**-4.2**
	comp=Z,100nm,0.9s,mb5.2						
YAK	**Yakutsk**	**21.98**	**342**	*d i*P	**P**	**04 05 47.5**	**-4.3**
YAK				*e**PP		04 06 02.6	
YAK				*e*S	**S**	**04 09 44.0**	**-8.6**
YAK				*e*		04 09 51.9	
YAK				*e*		04 17 02.9	
YAK				pmax	pmax		
	comp=N,28nm,1.0s						
YAK				pmax	pmax		
	comp=Z,104nm,1.0s,mb5.2						
YAK				pmax	pmax		
	comp=E,15nm,1.2s						
YAK				smax			
	comp=N,342nm,1.7s						
YAK				smax			
	comp=E,223nm,1.6s						
NJ2	**Nanjing**	**22.40**	**252**	*e*P	**P**	**04 05 58.1**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
CIT	**Chita**	**23.08**	**307**	*e*P	**P**	**04 06 04.3**	**+0.8**
CIT				*e*		04 06 11.8	
CIT				pmax	pmax		
	comp=Z,185nm,1.6s,mb5.3						
HHC	**Hu-ho-hao-te**	**24.42**	**279**	*e*P	**P**	**04 06 15.0**	**-1.4**
HHC				pP		04 06 24.3	
HHC				sP	sP	04 06 28.3	-0.2
HHC				PP		04 06 50.1	
HHC				PcP	PcP	04 09 56.2	+1.4
HHC				S	**S**	**04 10 29.0**	**-5.3**
HHC				sS	sS	04 10 43.6	-4.8
HHC				SS		04 11 21.2	
HHC				ScP	ScP	04 13 31.2	0.0
HHC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.3						
HHC				pmax	pmax		
	comp=Z,960nm,6.4s						
HHC				LR	LR		
	comp=N,9μm,13.9s,MS5.5						
HHC				LR	LR		
	comp=E,6μm,14.1s,MS5.5						
HHC				LR	LR		
	comp=Z,9μm,12.8s,MS5.5						
YHNB	**Yeheng**	**25.51**	**235**	*e*P	**P**	**04 06 27.0**	**+0.5**
	comp=Z,38nm,0.4s,mb5.3						
NACB	**Ninganchiao**	**25.75**	**234**	*e*P	**P**	**04 06 29.1**	**+0.5**
	comp=Z,87nm,0.3s,mb5.8						
WHN	**Wuhan**	**26.45**	**254**	P	**P**	**04 06 34.0**	**-0.9**
SONM	**Songino Array**	**27.23**	**296**	P	**P**	**04 06 41.7**	**-0.2**
	comp=Z,32nm,1.0s,mb4.8,baz=91,slow=6.4,SNR=75						
SONM	**Songino Array**	**27.23**	**296**	P	**P**	**04 06 41.7**	**-0.1**
XAN	**Xi'an**	**28.71**	**266**	P	**P**	**04 06 54.5**	**-0.7**
XAN				pP	pP	04 07 00.1	-3.7
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
IRK	**Irkutsk**	**28.75**	**305**	*e*P	**P**	**04 06 55.2**	**-0.1**
IRK				*e*		04 07 05.9	
IRK				pmax	pmax		
	comp=Z,53nm,1.9s,mb5.0						
BILL	**Bilibino**	**28.79**	**17**	*e*P	**P**	**04 06 56.3**	**+0.8**
BILL				*e*		04 07 46.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
BILL				MLR	MLR		
	comp=Z,1μm,17.0s,MS4.5						
TLY	**Talaya**	**29.09**	**304**	*e*P	**P**	**04 06 58.8**	**+0.4**
	comp=Z,33nm,1.0s,mb5.0						
TLY	**Talaya**	**29.09**	**304**	*e*P	**P**	**04 06 58.1**	**-0.3**
TLY				*e*		04 07 08.9	
TLY				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
ZAK	**Zakamensk**	**29.27**	**301**	*e*P	**P**	**04 06 58.7**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
MOY	**Mondy**	**30.74**	**304**	*e*P	**P**	**04 07 12.8**	**-0.1**
LZH	**Lanzhou**	**31.66**	**273**	*e*P	**P**	**04 07 22.8**	**+1.6**
LZH				pP	pP	04 07 34.2	+4.4
LZH				sP	sP	04 07 38.0	+4.6
LZH				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,230nm,7.1s						
LZH				LR	LR		
	comp=N,740nm,14.2s,MS4.7						
LZH				LR	LR		
	comp=E,980nm,16.7s,MS4.7						
LZH				LR	LR		
	comp=Z,760nm,14.2s,MS4.5						
GTA	**Gaotai**	**33.47**	**281**	*e*P	**P**	**04 07 37.3**	**+0.3**
GTA				pP	pP	04 07 41.6	-4.0
GTA				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
CD2	**Chengdu**	**34.03**	**265**	⇑*i*P	**P**	**04 07 41.9**	**-0.1**
CD2				pP	pP	04 07 51.6	+0.9
CD2				sP	sP	04 07 55.5	+1.3
CD2				PP	PP	04 08 55.3	-3.9
CD2				S	**S**	**04 13 02.5**	**-3.0**
CD2				sS	sS	04 13 18.5	-1.3
CD2				SS	SS	04 15 09.3	-24
CD2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
CD2				pmax	pmax		
	comp=Z,80nm,4.2s						
CD2				LR	LR		
	comp=N,660nm,16.6s,MS4.7						
CD2				LR	LR		
	comp=E,780nm,15.2s,MS4.7						
CD2				LR	LR		
	comp=Z,600nm,14.2s,MS4.5						
GYA	**Guiyang**	**34.32**	**255**	P	**P**	**04 07 45.6**	**+1.1**
GYA				pP	pP	04 07 55.8	+2.6
GYA				sP	sP	04 08 01.2	+4.4
GYA				PP	PP	04 09 01.4	-1.1
GYA				PcP	PcP	04 10 22.3	+2.1
GYA				S	**S**	**04 13 08.6**	**-1.5**
GYA				sS	sS	04 13 24.5	+0.1
GYA				ScP	ScP	04 14 03.9	+0.9
GYA				SS	SS	04 15 17.8	-21
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,130nm,5.9s						
GYA				LR	LR		
	comp=N,660nm,17.8s,MS4.5						
GYA				LR	LR		
	comp=E,550nm,18.4s,MS4.5						
GYA				LR	LR		
	comp=Z,880nm,16.9s,MS4.6						
KMI	**Kunming**	**37.96**	**257**	P	**P**	**04 08 16.0**	**+0.4**
KMI				pP	pP	04 08 24.5	+0.1
KMI				sP	sP	04 08 29.1	+1.1
KMI				S	**S**	**04 14 01.3**	**-4.4**
KMI				SS	SS	04 16 39.6	-13
KMI				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.9						
KMI				pmax	pmax		
	comp=Z,130nm,4.5s						
KMI				LR	LR		
	comp=N,540nm,15.1s,MS4.6						
KMI				LR	LR		
	comp=E,440nm,16.4s,MS4.6						
KMI				LR	LR		
	comp=Z,590nm,15.1s,MS4.5						
TTA	**Tatalina**	**40.27**	**38**	*e*P	**P**	**04 08 34.4**	**-0.1**
TTA	**Tatalina**	**40.27**	**38**	*e*P	**P**	**04 08 34.4**	**-0.1**
ZAA0	**Zalesovo Array**	**40.41**	**308**	*e*P	**P**	**04 08 35.6**	**-0.2**
ZALV	**Zalesovo Beam**	**40.41**	**308**	P	**P**	**04 08 35.4**	**-0.4**
	comp=Z,14nm,0.6s,mb4.9,baz=88,slow=8.0,SNR=46						
ZALV				PcP	PcP	04 10 37.8	-0.5
	comp=Z,4.6nm,0.8s,baz=96,slow=3.0,SNR=3.8						
ZALV	**Zalesovo Beam**	**40.41**	**308**	P	**P**	**04 08 35.4**	**-0.4**
ZALV						04 10 37.8	
WMQ	**Urumqi**	**40.76**	**292**	P	**P**	**04 08 39.0**	**+0.2**
WMQ				pP	pP	04 08 49.0	+1.4
WMQ				sP	sP	04 08 53.0	+1.8
WMQ				PP	PP	04 10 16.0	+3.1
WMQ				S	**S**	**04 14 45.0**	**-2.5**
WMQ				sS	sS	04 15 03.0	+1.1
WMQ				SS	SS	04 17 42.0	-6.6
WMQ				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.9						
WMQ				pmax	pmax		
	comp=Z,98nm,4.0s						
WMQ				LR	LR		
	comp=N,500nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=E,660nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,600nm,15.0s,MS4.6						
NVS	**Novosibirsk**	**41.21**	**310**	*e*P	**P**	**04 08 40.3**	**-2.1**
NVS				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.5						
NVS				pmax	pmax		
	comp=E,14nm,1.3s						
PPLA	**Purkeypile**	**42.02**	**38**	*e*P	**P**	**04 08 49.8**	**+0.9**
	comp=E,42nm,1.4s,mb4.9						
KDAK	**Kodiak Island**	**42.14**	**45**	P	**P**	**04 08 49.5**	**-0.4**
	comp=E,5.6nm,0.7s,mb4.3,baz=231,slow=6.5,SNR=5.7						
KDAK	**Kodiak Island**	**42.14**	**45**	P	**P**	**04 08 49.6**	**-0.3**
BPAW	**Bear Paw Mtn.**	**42.55**	**36**	*e*P	**P**	**04 08 53.2**	**+0.1**
	comp=E,4.8nm,0.7s,mb4.3						
TRF	**Thorofare Moun**	**42.87**	**37**	*e*P	**P**	**04 08 55.1**	**-0.7**
	comp=E,170nm,2.9s,mb5.3						
MCK	**McKinley**	**43.46**	**37**	*e*P	**P**	**04 08 59.8**	**-0.7**
	comp=E,14nm,0.9s,mb4.7						
MCK	**McKinley**	**43.46**	**37**	*e*P	**P**	**04 08 59.8**	**-0.8**
MCK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
MK31	**Makanchi Array**	**43.53**	**298**	*e*P	**P**	**04 09 01.1**	**-0.2**
MK31	**Makanchi Array**	**43.53**	**298**	*e*P	**P**	**04 09 01.1**	**-0.2**
MKAR	**Makanchi Array**	**43.53**	**298**	P	**P**	**04 09 00.9**	**-0.4**
	comp=Z,12nm,0.9s,mb4.7,baz=80,slow=9.0,SNR=76						
MKAR	**Makanchi Array**	**43.53**	**298**	P	**P**	**04 09 00.9**	**-0.4**
SML	**Sawmill**	**43.88**	**39**	*e*P	**P**	**04 09 07.0**	**+3.1**
	comp=Z,4.4nm,0.8s,mb4.2						
SML	**Sawmill**	**43.88**	**39**	*e*P	**P**	**04 09 07.0**	**+3.1**
SML				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
COLA	**College**	**43.88**	**35**	*e*P	**P**	**04 09 05.3**	**+1.4**
	comp=Z,15nm,0.9s,mb4.7						
COLA	**College**	**43.88**	**35**	*e*P	**P**	**04 09 05.3**	**+1.4**
COLA				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
LSA	**Lhasa**	**44.05**	**272**	*e*P	**P**	**04 09 06.1**	**+0.4**
ILAR	**Eielson Array**	**44.30**	**35**	P	**P**	**04 09 06.1**	**-1.2**
	comp=Z,3.3nm,0.8s,mb4.1,baz=261,slow=6.3,SNR=34						
ILAR	**Eielson Array**	**44.30**	**35**	P	**P**	**04 09 06.1**	**-1.2**
CHTO	**Chiang Mai**	**44.64**	**253**	*e*P	**P**	**04 09 07.1**	**-3.4**
	comp=Z,17nm,0.8s,mb4.9						
CHTO	**Chiang Mai**	**44.64**	**253**	*e*P	**P**	**04 09 07.1**	**-3.5**
CHTO				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9						
KURK	**Kurchatov**	**44.78**	**305**	*e*P	**P**	**04 09 11.1**	**-0.2**
	comp=Z,30nm,0.8s,mb5.2						
KURK	**Kurchatov**	**44.78**	**305**	*c i*P	**P**	**04 09 10.6**	**-0.7**
KURK				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.1						
CMAR	**Chiang Mai Arr**	**44.88**	**253**	P	**P**	**04 09 12.7**	**+0.2**
	comp=Z,4.7nm,0.7s,mb4.4,baz=47,slow=5.7,SNR=10						
CMAR	**Chiang Mai Arr**	**44.88**	**253**	P	**P**	**04 09 12.7**	**+0.3**
DOT	**Dot Lake**	**45.63**	**36**	*e*P	**P**	**04 09 20.3**	**+2.4**
	comp=Z,230nm,2.2s,mb5.7						
EGAK	**Eagle**	**46.74**	**35**	*e*P	**P**	**04 09 25.6**	**-0.9**
	comp=Z,11nm,1.0s,mb4.7						
TAPN	**Taplejung**	**47.86**	**271**	*e*P	**P**	**04 09 36.6**	**+0.8**
	comp=Z,60nm,1.0s,mb5.6						
ODAN	**Odare**	**48.36**	**271**	*e*P	**P**	**04 09 40.8**	**+1.1**
VOSK	**Vostochnaya**	**48.76**	**309**	P	**P**	**04 09 41.3**	**-1.1**
VOSK				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
GUN	**Gumba**	**48.92**	**273**	*e*P	**P**	**04 09 44.6**	**+0.6**
	comp=Z,139nm,0.9s,mb6.0						
BRVK	**Borovoye**	**49.06**	**310**	*e*P	**P**	**04 09 44.6**	**-0.1**
	comp=Z,18nm,0.8s,mb5.2						
BRVK	**Borovoye**	**49.06**	**310**	*c e*P	**P**	**04 09 44.4**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.2						
INK	**Inuvik**	**49.13**	**29**	*e*P	**P**	**04 09 44.7**	**-0.3**
	comp=Z,22nm,0.7s,mb5.3						
INK				*e*		04 09 56.3	
INK	**Inuvik**	**49.13**	**29**	*e*P	**P**	**04 09 44.7**	**-0.3**
INK				*e*		04 09 56.3	
INK				pmax	pmax		
	comp=Z,22nm,0.7s						
TKM2	**Tokmak 2**	**49.34**	**296**	P	**P**	**04 09 47.2**	**+0.2**
	SNR=38						
TKM2	**Tokmak 2**	**49.34**	**296**	*e*P	**P**	**04 09 47.4**	**+0.4**
	comp=Z,31nm,0.8s,mb5.4						
TKM2	**Tokmak 2**	**49.34**	**296**	*e*P	**P**	**04 09 47.4**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.4						
KKN	**Kakani**	**49.43**	**273**	*e*P	**P**	**04 09 48.4**	**+0.5**
	comp=Z,57nm,0.8s,mb5.6						
PKI	**Pulchoki**	**49.45**	**273**	*e*P	**P**	**04 09 48.4**	**+0.3**
DMN	**Daman**	**49.66**	**273**	*e*P	**P**	**04 09 49.8**	**+0.2**
	comp=Z,49nm,0.9s,mb5.5						
GKN	**Gorkha**	**49.80**	**274**	*e*P	**P**	**04 09 50.8**	**+0.1**
ZRNK	**Zerenda**	**49.83**	**310**	P	**P**	**04 09 50.4**	**-0.1**
ZRNK				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
KBK	**Karagaybulak**	**49.88**	**296**	P	**P**	**04 09 51.6**	**+0.5**
	SNR=13						
KBK	**Karagaybulak**	**49.88**	**296**	*e*P	**P**	**04 09 51.6**	**+0.5**
	comp=Z,35nm,0.9s,mb5.4						
KZA	**Kyzart**	**49.91**	**295**	P	**P**	**04 09 53.1**	**+1.8**
	SNR=8.0						
KZA	**Kyzart**	**49.91**	**295**	*e*P	**P**	**04 09 52.8**	**+1.5**
	comp=Z,21nm,0.9s,mb5.2						
USP	**Ospenovka**	**49.93**	**296**	P	**P**	**04 09 51.5**	**0.0**
	SNR=11	

DANN	Dangsing	50.27	275	eP	P	04 09 54.1	-0.1
	comp=Z,108nm,0.8s,mb5.9						
KSH	Kashi	50.50	291	eP	P	04 09 59.5	+3.6
KSH				epP	pP	04 10 09.4	+4.6
KSH				esP	sP	04 10 13.3	+4.9
KSH				ePcP	PcP	04 11 17.8	+4.2
KSH				ePP	PP	04 11 56.0	+4.5
KSH				eScP	ScP	04 15 09.7	+2.3
KSH				ePcS	PcS	04 15 13.9	+3.1
KSH				eS	S	04 17 08.5	+0.7
KSH				esS	sS	04 17 25.8	+3.2
KSH				eScS	ScS	04 19 44.8	+0.2
KSH				eSS	SS	04 20 40.2	-1.5
KSH				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
KSH				pmax	pmax		
	comp=Z,820nm,13.3s						
KSH				LR	LR		
	comp=N,810nm,16.2s,MS5.0						
KSH				LR	LR		
	comp=E,560nm,13.3s,MS5.0						
KSH				LR	LR		
	comp=Z,1μm,20.9s						
EKS2	Erkin-Say	50.66	296	P	P	04 09 57.1	+0.1
	SNR=13						
EKS2	Erkin-Say	50.66	296	eP	P	04 09 57.0	-0.1
	comp=Z,5.9nm,0.6s,mb4.7						
KOLN	Koldanda	50.70	274	eP	P	04 09 57.7	+0.2
	comp=Z,23nm,0.9s,mb5.1						
AML	Almayashu	50.94	295	P	P	04 09 59.9	+0.7
	SNR=13						
AML	Almayashu	50.94	295	eP	P	04 10 00.0	+0.9
	comp=Z,15nm,0.9s,mb4.9						
KK31	Karatay Array	52.65	298	iP	P	04 10 11.2	-0.7
KK31				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
KKAR	Karatay Array	52.65	298	eP	P	04 10 11.6	-0.3
	comp=Z,15nm,0.7s,mb5.0						
KKAR	Karatay Array	52.65	298	eP	P	04 10 11.6	-0.3
KKAR				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
SVE	Sverdlovsk	53.01	317⇑	iP	P	04 10 14.9	+0.6
SVE				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.4						
SOKR	Solikamsk	53.86	321⇑	iP	P	04 10 20.4	-0.1
SOKR				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.2						
ARU	Arti	54.22	317	eP	P	04 10 23.0	-0.1
	comp=Z,41nm,1.0s,mb5.3						
ARU	Arti	54.22	317	dP	P	04 10 22.8	-0.4
ARU						04 11 22.6	
ARU				S	S	04 17 59.8	+1.6
ARU				SS	SS	04 21 41.6	+2.0
ARU				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.4						
KAKA	Kakadu	55.37	194	eP	P	04 10 32.3	+0.5
	comp=Z,24nm,0.6s,mb5.4						
KBS	Kingsbay	56.27	350	deP	P	04 10 37.9	+0.2
KBS				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.0						
AB31	Akbulak array	56.53	309	P	P	04 10 39.3	-0.6
AB31				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
ABKAR	Akbulak array	56.53	309	eP	P	04 10 39.7	-0.2
	comp=Z,8.0nm,0.5s,mb5.0						
RES	Resolute Bay	57.39	16	eP	P	04 10 45.2	-0.5
RES	Resolute Bay	57.39	16	eP	P	04 10 45.2	-0.4
KBL	Kabul	57.75	289	eP	P	04 10 47.8	-1.0
	comp=Z,12nm,0.8s,mb5.0						
KBL	Kabul	57.75	289	eP	P	04 10 47.8	-1.0
KBL				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
PRGR	Permogore	57.91	326⇑	iP	P	04 10 47.3	-2.2
PRGR				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.4						
YKA	Yellowknife Ar	58.58	32	P	P	04 10 51.4	-2.7
	comp=Z,1.3nm,0.8s,mb4.0,baz=298,slow=5.7,SNR=3.6						
YKA	Yellowknife Ar	58.58	32	P	P	04 10 51.4	-2.7
APA	Apatity	59.18	335⇑	iP	P	04 10 57.4	-0.8
APA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
APA				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.7						
KEV	Kevo	59.69	339	eP	P	04 11 00.0	-1.7
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ARCES	ARCESS Array B	60.24	339	P	P	04 11 05.0	-0.4
	comp=Z,3.3nm,0.8s,mb4.4,baz=46,slow=6.9,SNR=11						
ARCES	ARCESS Array B	60.24	339	P	P	04 11 05.1	-0.4
KLMR	Klimovskoe	60.84	327	eP	P	04 11 07.9	-1.8
KLMR				pmax	pmax		
	comp=Z,49nm,1.6s,mb5.4						
DAG	Danmarks Havn	61.14	356	iP	P	04 11 10.4	-1.1
DAG				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
FITZ	Fitzroy Crossi	62.08	200	P	P	04 11 16.8	-1.7
	comp=Z,2.0nm,0.9s,mb4.2,baz=28,slow=7.3,SNR=4.0						
WRA	Warramunga Arr	62.16	190	P	P	04 11 16.4	-2.6
	comp=Z,2.5nm,0.8s,mb4.4,baz=8.0,slow=6.8,SNR=20						
WRA	Warramunga Arr	62.16	190	P	P	04 11 16.4	-2.6
JOF	Joensuu	62.72	332	eP	P	04 11 18.3	-4.0
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
JOF	Joensuu	62.72	332	ep	P	04 11 18.3	-4.0
	comp=Z,1.3nm,0.4s,mb4.4						
ETW	Entiat	63.83	49	eP	P	04 11 31.8	+1.8
OD2	Odessa Site #2	64.86	48	eP	P	04 11 39.7	+3.0
KAF	Kangasniemi	65.00	333	eP	P	04 11 30.2	-7.1
KAF	Kangasniemi	65.00	333	ep	P	04 11 30.2	-7.1
NEW	Newport	65.23	47	eP	P	04 11 41.4	+2.4
	comp=Z,6.0nm,0.9s,mb4.6						
NEW	Newport	65.23	47	eP	P	04 11 41.4	+2.4
NEW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN	Obninsk	65.52	323⇑	eP	P	04 11 40.1	-0.7
OBN				e	pP	04 11 49.7	-0.3
OBN						04 12 12.0	
OBN				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.1						
OBN				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.8						
FINES	FINESS Array B	65.54	332	P	P	04 11 39.7	-1.1
	comp=Z,18nm,0.8s,mb5.2,baz=54,slow=7.8,SNR=35						
FINES	FINESS Array B	65.54	332	P	P	04 11 39.7	-1.1
VRHR	Novokhopersk	65.56	317	eP	P	04 11 39.6	-1.5
VRHR				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
VRHR				pmax	pmax		
	comp=N,5.0nm,0.3s						
VRHR				pmax	pmax		
	comp=E,9.0nm,0.6s						
SUMG	Summit	65.85	1	eP	P	04 11 43.1	+0.4
	comp=E,36nm,0.9s,mb5.4						
SUMG	Summit	65.85	1⇑	iP	P	04 11 43.0	+0.3
	comp=E,31nm,0.8s,mb5.4						
ASAR	Alice Springs	65.89	190	P	P	04 11 41.5	-1.9
	comp=E,1.1nm,0.7s,mb4.0,baz=0.7,slow=5.0,SNR=15						
ASAR	Alice Springs	65.89	190	P	P	04 11 41.5	-1.9
WALA	Waterton Lakes	66.47	45	eP	P	04 11 52.4	+5.4
	comp=E,0.2nm,0.9s						
VSR	Storozhevoye	66.71	319	eP	P	04 11 48.0	-0.5
VSR				pmax	pmax		
	comp=N,8.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
BSMT	Bassoo Peak	66.73	46	eP	P	04 11 49.0	+0.3
VORD	Divnogorie	66.81	318	eP	P	04 11 48.9	-0.2
VORD				pmax	pmax		
	comp=N,30nm,0.3s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.3s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb5.3						
BLMT	Blacktail Moun	66.86	46	eP	P	04 11 50.4	+0.8
JTMT	Jette	67.07	46	eP	P	04 11 52.1	+1.3
SWMT	Swartz Lake	67.36	46	eP	P	04 11 53.3	+0.5
SCO	Scoresbysund	67.51	355	eP	P	04 11 55.7	+2.4
SCO				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
SCO	Scoresbysund	67.51	355	iP	P	04 11 55.7	+2.4
	comp=Z,21nm,1.0s,mb5.1						
SLMT	Seeley Lake	67.80	46	eP	P	04 11 57.8	+2.3
MSO	Missoula	67.81	47	eP	P	04 11 59.5	+3.9
	comp=Z,3.6nm,0.9s,mb4.4						
CHMT	Chamberlain Mo	68.13	46	eP	P	04 12 01.6	+4.0
GOF	Gofitskoye	68.48	312	eP	P	04 11 53.8	-6.0
FFC	Flin Flon	68.51	35	eP	P	04 11 59.4	-0.4
FFC	Flin Flon	68.51	35	eP	P	04 11 59.4	-0.4
HRY	Holter Researc	69.02	46	eP	P	04 12 05.4	+2.2
LRM	Limekiln Ridge	69.25	47	eP	P	04 12 05.0	+0.5
KIV	Kislovodsk	69.36	311	eP	P	04 12 06.0	+0.7
	comp=Z,29nm,0.8s,mb5.3						
KIV	Kislovodsk	69.36	311к	iP	P	04 12 06.7	+1.4
KIV				e		04 12 12.2	
KIV				e		04 12 33.7	
KIV						04 14 39.0	
KIV				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
KIV				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.8						
ZEI	Tsey	69.40	309	eP	P	04 12 04.2	-1.4
ZEI				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
DLMT	Dillon	69.46	47	eP	P	04 12 06.0	+0.1
	comp=Z,6.5nm,0.9s,mb4.6						
HLID	Hailey	69.57	49	eP	P	04 12 09.0	+2.4
	comp=Z,44nm,2.8s,mb4.9						
BOZ	Bozeman (W)	69.80	46	eP	P	04 12 08.2	+0.2
	comp=Z,5.6nm,0.8s,mb4.5						
BOZ	Bozeman (W)	69.80	46	eP	P	04 12 08.2	+0.2
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
NVAR	Mina Array Bea	70.45	56	P	P	04 12 12.6	+0.5
	comp=Z,2.0nm,0.7s,mb4.2,baz=290,slow=5.3,SNR=12						
GNI	Garni	70.53	307	eP	P	04 12 13.6	+1.0
	comp=Z,7.0nm,0.8s,mb4.6						
GNI	Garni	70.53	307	ceP	P	04 12 13.8	+1.2
GNI				pmax	pmax		
	comp=Z,15nm,1.2s						
NB2	NORSAR Subarra	70.54	338	P	P	04 12 11.6	-0.6
	comp=Z,14nm,1.0s,mb4.9,baz=34,slow=6.5						
NOA	NORSAR Array B	70.54	338	P	P	04 12 11.4	-0.8
	comp=Z,7.9nm,0.8s,mb4.7,baz=35,slow=6.1,SNR=21						
NOA	NORSAR Array B	70.54	338	P	P	04 12 11.4	-0.8
GCMT	Greycliff	70.76	45	eP	P	04 12 13.7	-0.1
	comp=Z,3.7nm,0.8s,mb4.4						
IMW	Indian Meadow	71.30	48	eP	P	04 12 18.6	+1.4
	comp=Z,5.4nm,0.8s,mb4.5						
RRI2	Red Ridge	71.45	48	eP	P	04 12 19.2	+1.2
	comp=Z,7.2nm,1.0s,mb4.6						
MOOW	Moose Ponds	71.51	48	eP	P	04 12 18.2	-0.2
	comp=Z,4.8nm,0.9s,mb4.4						
KIEV	Kiev	71.78	323	eP	P	04 12 19.1	-0.8
	comp=Z,11nm,0.8s,mb4.8						
KIEV	Kiev	71.78	323	eP	P	04 12 19.1	-0.8
KIEV				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
DUG	Dugway	72.63	51	eP	P	04 12 26.4	+1.2
	comp=Z,6.4nm,1.0s,mb4.5						
DUG	Dugway	72.63	51	eP	P	04 12 26.4	+1.2
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BW06	Boulder Array	72.80	48	eP	P	04 12 30.9	+4.8
	comp=Z,29nm,2.3s,mb4.8						
PDAR	Pinedale Array	72.81	48	P	P	04 12 25.3	-0.9
	comp=Z,1.8nm,0.8s,mb4.1,baz=314,slow=2.2,SNR=11						
NLU	North Lily Min	73.22	51	eP	P	04 12 33.8	+5.1
	comp=Z,4.4nm,0.9s,mb4.4						
FORT	Forrest	73.79	194	eP	P	04 12 41.3	+9.4
CCUT	Cedar City	74.02	54	eP	P	04 12 38.9	+5.5
	comp=Z,5.3nm,1.2s,mb4.3						
TMUT	Trail Mountain	74.16	51	eP	P	04 12 38.5	+4.3
	comp=Z,96nm,2.8s,mb5.2						
ULM	Lac du Bonnet	74.32	35	P	P	04 12 32.0	-2.9
	comp=Z,1.1nm,0.6s,mb4.0,baz=270,slow=7.4,SNR=2.3						
LVV	L'vov	74.71	324	eP	P	04 12 36.5	-0.7
RSSD	Black Hills	74.84	44	eP	P	04 12 38.0	-0.1
	comp=Z,4.7nm,1.1s,mb4.3						
RSSD	Black Hills	74.84	44	eP	P	04 12 38.0	-0.1
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
KWP	Kalwaria Pacla	75.42	325	eP	P	04 12 41.7	+0.4
KWP	Kalwaria Pacla	75.42	325	eP	P	04 12 41.7	+0.4
	comp=Z,35nm,1.2s,mb5.2						
KWP	Kalwaria Pacla	75.42	325	⇓P	P	04 12 41.8	+0.5
KWP	Kalwaria Pacla	75.42	325	⇓iP	P	04 12 41.8	+0.5
MALT	Malatya	75.46	309	eP	P	04 12 42.4	+0.6
	comp=Z,14nm,1.1s,mb4.8						
MALT	Malatya	75.46	309	⇑P	P	04 12 43.0	+1.3
MALT	Malatya	75.46	309	⇑iP	P	04 12 43.0	+1.3
BUR08	Bucovina Ar. S	75.81	322	eP	P	04 12 43.8	+0.2
BUR08				e	pP	04 12 54.4	+1.5
BURAR	Bucovina Array	75.82	322	⇓P	P	04 12 43.7	+0.1
BURAR	Bucovina Array	75.82	322	⇓iP	P	04 12 43.7	+0.1
KOLS	Kolonicke sedl	76.14	325	eP	P	04 12 45.9	+0.5
	comp=Z,4.5nm,1.0s,mb4.3						
KOLS	Kolonicke sedl	76.14	325	eP	P	04 12 45.9	+0.5
KOLS				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
KOLS	Kolonicke sedl	76.14	325	eP	P	04 12 45.9	+0.5
OJC	Ojcow	76.19	327	eP	P	04 12 45.9	+0.2
OJC	Ojcow	76.19	327	eP	P	04 12 46.0	+0.3
	comp=Z,19nm,0.9s,mb5.0						
OJC	Ojcow	76.19	327	eP	P	04 12 46.0	+0.3
OJC				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
CRVS	Cervenica-Dubn	76.51	325	eP	P	04 12 47.8	+0.3
	comp=Z,18nm,2.1s,mb4.6						
CRVS	Cervenica-Dubn	76.51	325	eP	P	04 12 47.8	+0.3
CRVS				pmax	pmax		
	comp=Z,18nm,2.1s,mb4.6						
CRVS	Cervenica-Dubn	76.51	325	eP	P	04 12 47.8	+0.3
NIE	Niedzica	76.60	326	eP	P	04 12 48.6	+0.6
NIE	Niedzica	76.60	326	eP	P	04 12 48.6	+0.6
TIRR	Tirgusor	76.61	318	⇓P	P	04 12 48.4	+0.2
TIRR	Tirgusor	76.61	318	⇓iP	P	04 12 48.4	+0.2
TRPA	Tarpa	76.63	324	⇑iP	P	04 12 49.0	+0.8
MLR	Muntele Rosu	77.05	321	⇑P	P	04 12 50.9	+0.2
MLR	Muntele Rosu	77.05	321	⇑iP	P	04 12 50.9	+0.2
KSP	Ksiaz	77.09	329	eP	P	04 12 51.1	+0.4
OKC	Ostrava-Krasne	77.16	328	eP	P	04 12 51.6	+0.4
OKC	Ostrava-Krasne	77.16	328	eP	P	04 12 51.6	+0.4
BRTR	Keskin Array B	77.22	312	P	P	04 12 51.5	-0.2
	comp=Z,3.0nm,0.7s,mb4.3,baz=58,slow=3.3,SNR=12						
BRTR	Keskin Array B	77.22	312	ceP	P	04 12 52.0	+0.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KECS	Kecovo	77.25	325	eP	P	04 12 51.6	-0.1
	comp=Z,2.5nm,1.1s,mb4.1						
KECS	Kecovo	77.25	325	eP	P	04 12 51.6	-0.1
KECS				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
KECS	Kecovo	77.25	325	eP	P	04 12 51.6	-0.1
MORC	Moravsky Berou	77.45	328	eP	P	04 12 52.5	-0.2
	comp=Z,14nm,1.0s,mb4.9						
MORC	Moravsky Berou	77.45	328	⇓P	P	04 12 53.3	+0.5
MORC	Moravsky Berou	77.45	328	⇓iP	P	04 12 53.3	+0.5
UPC	Upice	77.46	329	eP	P	04 12 52.0	-0.9
UPC	Upice	77.46	329	eP	P	04 12 52.0	-0.9
DPC	Dobruska-Polom	77.47	329	eP	P	04 12 53.5	+0.6
DPC	Dobruska-Polom	77.47	329	eP	P	04 12 53.5	+0.6
VOIR		77.51	321	⇓P	P	04 12 54.2	+1.0
VOIR		77.51	321	⇓iP	P	04 12 54.2	+1.0
DRGR		77.57	323	⇑P	P	04 12 53.6	+0.1
DRGR		77.57	323	⇑iP	P	04 12 53.6	+0.1
VYHS	Vyhne	77.93	326	eP	P	04 12 55.9	+0.4
	comp=Z,5.2nm,1.2s,mb4.3						
VYHS	Vyhne	77.93	326	eP	P	04 12 55.9	+0.4
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
VYHS	Vyhne	77.93	326	eP	P	04 12 55.9	+0.4
PSZ	Piszkesteto	77.93	325	eP	P	04 12 55.0	-0.6
	comp=Z,5.3nm,0.9s,mb4.5						
PSZ	Piszkesteto	77.93	325	eP	P	04 12 55.0	-0.6
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
PSZ	Piszkesteto	77.93	325	⇓eP	P	04 12 56.5	+0.9
CLL	Collm	77.94	331	eP	P	04 12 55.0	-0.5
	comp=Z,25nm,1.0s,mb5.1						
CLL	Collm	77.94	331	⇑iP	P	04 12 55.0	-0.5
	comp=Z,25nm,1.0s,mb5.1						
CLL	Collm	77.94	331	⇑iP	P	04 12 55.0	-0.5
CLL				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
CLL	Collm	77.94	331	⇑iP	P	04 12 55.0	-0.5
	comp=Z,25nm,1.0s,mb5.1						
CLL				e		04 13 11.0	
BRG	Berggiesshubel	77.95	330	eP	P	04 12 55.4	-0.2
	comp=Z,9.0nm,0.9s,mb4.7						
BRG	Berggiesshubel	77.95	330	iP	P	04 12 55.4	-0.2
	comp=Z,8.9nm,0.9s,mb4.7						
BRG				pmax	pmax		
	comp=Z,934nm,17.7s						
BRG				MLR	MLR		
	comp=N,402nm,18.4s						
BRG				MLR	MLR		
	comp=E,479nm,18.4s						
BRG	Berggiesshubel	77.95	330	iP	P	04 12 55.4	-0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BRG				MLR	MLR		
	comp=Z,5μm,17.7s,MS5.9						
BRG				MLR	MLR		
	comp=N,559nm,18.4s,MS5.0						
BRG				MLR	MLR		
	comp=E,241nm,18.4s,MS5.0						
PVCC	Panska Ves	78.00	330	eP	P	04 12 56.4	+0.6
PVCC	Panska Ves	78.00	330	eP	P	04 12 56.4	+0.6
KOLL	Kolacno	78.04	327	eP	P	04 12 56.6	+0.5
KOLL	Kolacno	78.04	327	eP	P	04 12 56.6	+0.5
KOLL	Kolacno	78.04	327	eP	P	04 12 56.6	+0.5
VRAC	Vranov	78.19	328	⇓P	P	04 12 57.8	+0.8
VRAC	Vranov	78.19	328	⇓iP	P	04 12 57.8	+0.8
CLZ	Clausthal	78.42	333	eP	P	04 12 58.3	+0.1
	comp=Z,20nm,1.1s,mb5.0						
CLZ	Clausthal	78.42	333	eP	P	04 12 58.3	+0.1
CLZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
PRU	Pruhonice	78.44	330	eP	P	04 12 59.2	+0.9
PRU	Pruhonice	78.44	330	eP	P	04 12 59.2	+0.9
TREC	Trest	78.64	329	eP	P	04 13 00.0	+0.6
TREC	Trest	78.64	329	eP	P	04 13 00.0	+0.6
IBBN	Ibbenburen	78.89	334	eP	P	04 13 00.5	-0.3
	comp=Z,24nm,1.0s,mb5.1						
MOX	Moxa	78.98	331	eP	P	04 13 01.0	-0.3
	comp=Z,11nm,1.1s,mb4.7						
MOX	Moxa	78.98	331	eP	P	04 13 01.1	-0.2
	comp=Z,6.0nm,0.8s,mb4.6						
MOX	Moxa	78.98	331	eP	P	04 13 01.0	-0.3
MOX				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
NKC	Novy Kostel	79.02	331	eP	P	04 13 01.7	+0.2
NKC	Novy Kostel	79.02	331	eP	P	04 13 01.7	+0.2
ROTZ	Rotzenmuhle	79.50	331	eP	P	04 13 04.5	+0.4
	comp=Z,12nm,0.9s,mb4.8						
SOP	Sopron	79.51	327⇑	eP	P	04 13 05.2	+1.0
KHC	Kasperske Hory	79.51	330	eP	P	04 13 04.3	+0.2
	comp=Z,15nm,0.8s,mb5.0						
KHC	Kasperske Hory	79.51	330	eP	P	04 13 04.1	-0.1
KHC				e*PP	pP	04 13 15.9	+2.3
KHC	Kasperske Hory	79.51	330	eP	P	04 13 04.1	-0.1
KHC				epP	pP	04 13 15.9	+2.3
CONA	Conrad Observa	79.59	328	⇓iP	P	04 13 05.2	+0.5
	comp=Z,9.9nm,1.0s,mb4.7						
GEC2	GERESS Array S	79.69	329	eP	P	04 13 05.1	-0.1
	comp=Z,5.0nm,0.9s,mb4.4						
GEC2	GERESS Array S	79.69	329	eP	P	04 13 05.1	-0.1
GEC2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
WET	Wettzell	79.76	330	eP	P	04 13 05.9	+0.4
	comp=Z,15nm,1.1s,mb4.8						
WET	Wettzell	79.76	330	eP	P	04 13 05.9	+0.4
WET				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
ANMO	Albuquerque	79.89	52	eP	P	04 13 06.0	-0.5
	comp=Z,2.4nm,0.9s,mb4.1						
ANMO	Albuquerque	79.89	52	eP	P	04 13 06.0	-0.5
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GRA1	Grafenberg Arr	79.92	331	eP	P	04 13 06.7	+0.3
	comp=Z,35nm,1.0s,mb5.2						
GRF	Grafenberg Arr	79.92	331	eP	P	04 13 06.7	+0.3
	comp=Z,35nm,1.0s,mb5.2						
GRF	Grafenberg Arr	79.92	331	eP	P	04 13 06.7	+0.3
GRF				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
GRF	Grafenberg Arr	79.92	331	eP	P	04 13 06.7	+0.3
GRF				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
GRFO	Grafenberg	79.92	331	eP	P	04 13 07.0	+0.7
	comp=Z,26nm,1.0s,mb5.1						
GRFO	Grafenberg	79.92	331	eP	P	04 13 07.1	+0.7
GRFO				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
TNS	Taunus Mts	80.44	333	eP	P	04 13 09.2	0.0
	comp=Z,18nm,1.2s,mb4.9						
TNS	Taunus Mts	80.44	333	eP	P	04 13 09.2	0.0
TNS				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
GROS	Grobnik	80.92	327	iP	P	04 13 11.7	-0.2
GROS	Grobnik	80.92	327	iP	P	04 13 11.7	-0.2
SOKA	Soboth	80.93	327⇑	iP	P	04 13 11.8	-0.1
	comp=Z,17nm,1.0s,mb4.9						
RJOB	Jochberg	80.95	329	eP	P	04 13 12.5	+0.5
	comp=Z,14nm,1.0s,mb4.8						
FUR	Furstenfeldbru	81.17	330	eP	P	04 13 13.3	+0.2
	comp=Z,26nm,0.9s,mb5.2						
FUR	Furstenfeldbru	81.17	330	eP	P	04 13 13.3	+0.2
FUR				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
KBA	Koelnbreinsper	81.28	328⇑	iP	P	04 13 14.9	+1.2
	comp=Z,12nm,1.0s,mb4.8						
STU	Stuttgart	81.41	332	eP	P	04 13 14.6	+0.2
	comp=Z,19nm,1.0s,mb5.0						
VISS	Visnje	81.72	327	iP	P	04 13 15.5	-0.6
VISS	Visnje	81.72	327	iP	P	04 13 15.5	-0.6
WTTA	Wattenberg	81.78	330⇑	iP	P	04 13 16.9	+0.5
	comp=Z,18nm,1.2s,mb4.9						
MOTA	Moosalm	81.92	330⇑

LBZ	**Lake Benmore**	**2.60**	**73**	PN	Pn	04 28 20.3	-0.4
ODZ	**Otahua Downs**	**2.78**	**88**	PN	Pn	04 28 22.4	-0.9

ISCJB ***11*** *04:41:14.5±1.0, 39.°08N±0.°07×17.°36E±0.°07, h10km, Error ellipse: s-maj=11.5km s-min=4.6km az=146.7*
CSEM ***11*** *04:41:15.1±0.7, 39.°16N×17.°32E, h10km, MD2.6/4, Error ellipse: s-maj=23.3km s-min=8.4km az=142.0*
ROM ***11*** *04:41:16.1±0.3, 39.°09N×17.°30E, h10km, Md2.6/4, Ml1.6/4, Error ellipse: s-maj=5.0km s-min=2.3km az=149.0*
ISC 11 04:41:15.5±1.0, 39.°08N±0.°07×17.°35E±0.°07, h10km, n12, σ0§63/22, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SERS	**Sersale**	**0.52**	**265**	Pg	**Pg**	**04 41 25.0**	**-0.6**
SERS				Sg	**Sg**	**04 41 33.0**	**+0.6**
	15nm,0.6s						
SERS	**Sersale**	**0.52**	**265**	Pg	**Pg**	**04 41 25.0**	**-0.6**
SERS				Sg	**Sg**	**04 41 33.0**	**+0.6**
	15nm,0.6s						
GRI	**Girifalco**	**0.77**	**251**	Pg	**Pg**	**04 41 30.8**	**+0.4**
	27nm,0.4s						
GRI	**Girifalco**	**0.77**	**251**	Pg	**Pg**	**04 41 30.8**	**+0.4**
	27nm,0.4s						
CARO	**Carolei**	**0.90**	**281**	Pg	**Pg**	**04 41 31.8**	**-1.0**
CARO				Sg	**Sg**	**04 41 44.7**	**+0.3**
	43nm,0.6s						
CARO	**Carolei**	**0.90**	**281**	Pg	**Pg**	**04 41 31.8**	**-1.0**
CARO				Sg	**Sg**	**04 41 44.7**	**+0.3**
	43nm,0.6s						
PLAC	**Placanica**	**0.95**	**229**	Pg	**Pg**	**04 41 33.8**	**0.0**
PLAC				Sg	**Sg**	**04 41 46.3**	**+0.1**
	27nm,0.8s						
PLAC	**Placanica**	**0.95**	**229**	Pg	**Pg**	**04 41 33.8**	**0.0**
PLAC				Sg	**Sg**	**04 41 46.3**	**+0.1**
	27nm,0.8s						
SCTE	**Santa Cesarea**	**1.31**	**41**	Pg	**Pg**	**04 41 40.6**	**-0.2**
SCTE				Sg	**Sg**	**04 41 58.5**	**+0.7**
SCTE	**Santa Cesarea**	**1.31**	**41**	Pg	**Pg**	**04 41 40.6**	**-0.2**
SCTE				Sg	**Sg**	**04 41 58.5**	**+0.7**
STON	**Ston**	**3.80**	**4**	*e*Pn	**Pn**	**04 42 10.3**	**-3.8**
STON				Sn	**Sn**	**04 42 51.2**	**-7.5**
STON	**Ston**	**3.80**	**4**	*e*Pn	**Pn**	**04 42 10.2**	**-3.8**
STON				Sn	**Sn**	**04 42 51.1**	**-7.6**

DMN ***11*** *04:52:18.4±0.3, 31.°19N×82.°98E, h2km, Ml4.8/5, Error ellipse: s-maj=7.3km s-min=4.4km az=114.0*
BJI ***11*** *04:52:21.0, 30.°55N×83.°13E, h18km, mB4.5/6, mb4.2/17, Ms4.1/5, Ms7 3.9/5*
ISCJB ***11*** *04:52:22.5±0.3, 30.°88N±0.°03×83.°33E±0.°04, h10km, mb3.9/16, Error ellipse: s-maj=5.5km s-min=3.1km az=154.9*
IDC ***11*** *04:52:22.3±0.7, 30.°79N×83.°53E, h0km, mb4.0/14, mb1 4.1/17, mb1mx4.0/27, mbtmp4.0/17, ML3.7/3, Error ellipse: s-maj=23.0km s-min=14.7km az=41.0*
NDI ***11*** *04:52:23.6±2.2, 30.°79N×83.°44E, h10km, ML3.8, mb3.9(NEIC)*
NEIC ***11*** *04:52:23.6±0.5, 30.°83N×83.°46E, h10km, mb3.9/4, Error ellipse: s-maj=14.5km s-min=7.7km az=51.0*
ISC 11 04:52:24.1±0.3, 30.°86N±0.°03×83.°38E±0.°04, h10km, n58, σ1§16/61, mb3.9/16, 1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.52**	**172**	*e*Pn	**Pn**	**04 53 04.2**	**-0.9**
DANN				*e*Sn	**Sn**	**04 53 37.5**	**+1.6**
	4μm,0.8s						
PYUN	**Piuthan**	**2.77**	**187**	*e*Sn	**Sn**	**04 53 42.2**	**+0.2**
	1μm,0.5s						
PTH	**Pithoragarh**	**3.03**	**245**	*e*PKP	**Pn**	**04 53 13.0**	**+0.9**
PTH				*ex*	x	04 53 55.5	
GKN	**Gorkha**	**3.05**	**159**	*e*Pn	**Pn**	**04 53 11.8**	**-0.6**
GKN				*e*Sn	**Sn**	**04 53 51.0**	**+2.1**
	1μm,0.8s						
KOLN	**Koldanda**	**3.08**	**176**	*e*Pn	**Pn**	**04 53 11.7**	**-1.1**
KOLN				*e*Sn	**Sn**	**04 53 50.2**	**+0.5**
	910nm,0.6s						
JOSI	**Joshimath**	**3.31**	**266**	*e*PKP	**Pn**	**04 53 16.9**	**+1.0**
JOSI				AML	AML	04 53 51.8	
	comp=N,653nm,0.9s						
JOSI				AML	AML	04 53 52.1	
	comp=E,632nm,0.8s						
KKN	**Kakani**	**3.48**	**151**	*e*Pn	**Pn**	**04 53 17.9**	**-0.4**
KKN				*e*Sn	**Sn**	**04 54 02.5**	**+3.0**
	comp=E,649nm,0.9s						
DMN	**Daman**	**3.57**	**155**	*e*Pn	**Pn**	**04 53 19.1**	**-0.4**
GUN	**Gumba**	**3.66**	**143**	*e*Pn	**Pn**	**04 53 20.8**	**+0.1**
PKIN	**Phulchoki**	**3.71**	**151**	*e*Pn	**Pn**	**04 53 21.4**	**-0.1**
PKI	**Pulchoki**	**3.72**	**151**	*e*Pn	**Pn**	**04 53 21.5**	**-0.1**
DDI	**Dehra Dun**	**4.62**	**265**	⇓*i*P	**Pn**	**04 53 35.0**	**+1.0**
DDI				*ex*	x	04 54 31.7	
TAPN	**Taplejung**	**5.15**	**132**	*e*Pn	**Pn**	**04 53 41.5**	**+0.2**
ODAN	**Odare**	**5.31**	**138**	*e*Pn	**Pn**	**04 53 43.4**	**-0.1**
NDI	**New Delhi**	**5.78**	**250**	*e*PKP	**Pn**	**04 53 48.5**	**-1.4**
AYAN	**Aya Nagar**	**5.93**	**248**	*e*PKP	**Pn**	**04 53 51.2**	**-0.8**
AYAN				AML	AML	04 55 40.9	
	comp=Z,50nm,0.8s						
BHK	**Bhakra**	**6.00**	**277**	*e*PKP	**Pn**	**04 53 52.1**	**-0.8**
BHGR	**Bahadurgarh**	**6.00**	**250**	AML	AML	04 54 17.9	
	comp=Z,193nm,0.2s						
LSA	**Lhasa**	**6.82**	**98**	Pn	**Pn**	**04 54 07.1**	**+2.9**
LSA				Sn	**Sn**	**04 55 28.7**	**+6.9**
LSA				LR	LR		
	comp=N,260nm,11.0s						
LSA				LR	LR		
	comp=E,850nm,12.0s						
LSA				LR	LR		
	comp=Z,1μm,12.0s						
KHET	**Khetri**	**7.16**	**249**	*e*PKP	**Pn**	**04 54 07.8**	**-1.1**
KHET				*ex*	x	04 55 30.4	
SHL	**Shillong**	**9.16**	**123**	*e*PKP	**Pn**	**04 54 34.0**	**-2.4**
SHL				*ex*	x	04 56 18.0	
SHL				*ex*	x	04 57 25.0	
KSH	**Kashi**	**10.55**	**327**	*e*P	**Pn**	**04 54 54.8**	**-0.5**
KSH				*ep*P		04 55 01.9	
KSH				*e*PP		04 55 03.6	
KSH				*es*P		04 55 06.7	
KSH				*e*S	**Sn**	**04 56 53.0**	**-0.4**
KSH				*es*S		04 57 04.5	
KSH				*e*SS		04 57 07.1	
KSH				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KSH				pmax	pmax		
	comp=Z,120nm,6.1s						
KSH				LR	LR		
	comp=N,1μm,12.5s						
KSH				LR	LR		
	comp=E,2μm,9.5s						
KSH				LR	LR		
	comp=Z,780nm,8.9s						
KBL	**Kabul**	**12.62**	**291**	*e*Pn	**Pn**	**04 55 23.8**	**+0.2**
	comp=Z,19nm,0.8s						
WMQ	**Urumqi**	**13.38**	**14**	P	**Pn**	**04 55 36.0**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
AML	**Almayashu**	**13.67**	**328**	*e*Pn	**Pn**	**04 55 36.6**	**-1.4**
	comp=Z,3.9nm,0.6s						
AAK	**Ala-Archa**	**13.73**	**331**	Pn	**Pn**	**04 55 40.1**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=170,slow=6.1,SNR=3.1						
EKS2	**Erkin-Say**	**14.06**	**330**	*e*Pn	**Pn**	**04 55 45.2**	**+1.9**
	comp=Z,5.0nm,0.8s						
HYB	**Hyderabad**	**14.08**	**199**	*i* P	**Pn**	**04 55 40.0**	**-3.7**
GTA	**Gaotai**	**15.91**	**53**	*e*P	**Pn**	**04 56 12.5**	**+4.5**
GTA				pP	pP	04 56 16.6	+2.1
GTA				sP	sP	04 56 20.0	+4.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**15.94**	**357**	*e*Pn	**Pn**	**04 56 08.8**	**+0.5**
MKAR	**Makanchi Array**	**15.94**	**357**	Pn	**Pn**	**04 56 07.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=174,slow=13,SNR=14						
KKAR	**Karatay Array**	**15.95**	**324**	*e*Pn	**Pn**	**04 56 07.0**	**-1.5**
	comp=Z,2.7nm,0.5s						
KMI	**Kunming**	**18.02**	**104**	P	**Pn**	**04 56 37.6**	**+2.9**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHTO	**Chiang Mai**	**18.50**	**127**	*e*Pn	**Pn**	**04 56 38.4**	**-2.2**
	comp=Z,5.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**18.75**	**128**	P	**Pn**	**04 56 42.9**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=306,slow=11,SNR=20						
KURK	**Kurchatov**	**20.15**	**351**	*e*P	**P**	**04 56 58.2**	**-0.1**
	comp=Z,23nm,1.3s						
XAN	**Xi'an**	**21.77**	**75**	P	**P**	**04 57 15.2**	**-0.8**
XAN				pP		04 57 22.4	
XAN				sP	sP	04 57 25.6	+5.5
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
XAN				pmax	pmax		
	comp=Z,49nm,6.9s						
ZAA0	**Zalesovo Array**	**23.10**	**2**	*e*P	**P**	**04 57 29.9**	**0.0**
ZALV	**Zalesovo Beam**	**23.10**	**2**	P	**P**	**04 57 29.8**	**-0.1**
	comp=Z,1.2nm,0.4s,mb3.6,baz=185,slow=10,SNR=7.6						
BVAR	**Borovoye Array**	**24.09**	**341**	P	**P**	**04 57 40.3**	**+0.7**
	comp=Z,2.0nm,0.4s,mb3.9,baz=155,slow=9.8,SNR=9.9						
SONM	**Songino Array**	**24.44**	**40**	P	**P**	**04 57 43.4**	**+0.6**
	comp=Z,2.2nm,0.8s,mb3.7,baz=230,slow=8.6,SNR=11						
SONM	**Songino Array**	**24.44**	**40**	P	**P**	**04 57 43.4**	**+0.6**
ABKAR	**Akbulak array**	**25.51**	**323**	*e*P	**P**	**04 57 53.5**	**+0.9**
	comp=Z,3.2nm,0.6s,mb4.0						
AKTK	**Aktyubinsk**	**27.21**	**323**	P	**P**	**04 58 07.8**	**-0.1**
AKTO	**Aktyubinsk**	**27.21**	**323**	P	**P**	**04 58 07.8**	**-0.1**
	comp=Z,0.8nm,0.3s,mb3.7,baz=90,slow=3.0,SNR=3.9						
KSRS	**Korea Array**	**37.17**	**67**	P	**P**	**04 59 35.1**	**-0.2**
	comp=Z,2.9nm,0.7s,mb4.2,baz=277,slow=9.6,SNR=13						
BRTR	**Keskin Array B**	**41.11**	**296**	P	**P**	**05 00 10.3**	**+2.2**
	comp=Z,0.6nm,0.6s,mb3.4,baz=116,slow=6.6,SNR=3.5						
FINES	**FINESS Array B**	**47.87**	**327**	P	**P**	**05 01 01.6**	**-0.2**
	comp=Z,2.6nm,0.8s,mb4.3,baz=95,slow=8.5,SNR=2.9						
ARCES	**ARCESS Array B**	**50.31**	**337**	P	**P**	**05 01 20.4**	**-0.1**
	comp=Z,3.5nm,1.0s,mb4.4,baz=98,slow=9.1,SNR=9.9						
NB2	**NORSAR Subarra**	**54.97**	**326**	P	**P**	**05 01 53.8**	**-1.3**
	comp=Z,3.5nm,1.0s,mb4.3,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**54.97**	**326**	P	**P**	**05 01 54.4**	**-0.7**
	comp=Z,1.0nm,0.7s,mb3.9,baz=88,slow=7.3,SNR=4.0						
KEST	**Kesra**	**60.71**	**296**	P	**P**	**05 02 38.5**	**+2.7**
	comp=Z,1.1nm,1.0s,mb3.9,baz=219,slow=6.2,SNR=3.8						
WRA	**Warramunga Arr**	**70.33**	**129**	P	**P**	**05 03 36.1**	**-2.1**
	comp=Z,1.5nm,0.6s,mb4.1,baz=324,slow=6.3,SNR=9.0						
ASAR	**Alice Springs**	**72.69**	**132**	P	**P**	**05 03 50.2**	**-2.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=311,slow=6.4,SNR=6.2						
ILAR	**Eielson Array**	**76.97**	**20**	P	**P**	**05 04 16.6**	**+0.1**
	comp=Z,0.9nm,0.8s,mb3.7,baz=311,slow=5.4,SNR=6.8						
DBIC	**Dimbokro**	**85.11**	**275**	P	**P**	**05 05 01.3**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.5,baz=131,slow=6.1,SNR=3.5						
CPUP	**Villa Florida**	**145.33**	**267**	PKPbc	PKPbc	05 12 01.8	-0.6
	comp=Z,2.0nm,0.8s,baz=34,slow=4.6,SNR=4.9						
LPAZ	**La Paz**	**150.24**	**293**	PKPbc	PKPbc	05 12 19.1	+3.1
	comp=Z,1.0nm,0.8s,baz=320,slow=3.6,SNR=4.5						

ISCJB ***11*** *04:55:43.8±2.3, 10.°0S±0.°1×160.°8E±0.°1, h13km±12km, mb3.7/5, Error ellipse: s-maj=22.8km s-min=15.4km az=143.5*
IDC ***11*** *04:55:48.7±7.7, 9.°99S×160.°71E, h33km±53km, mb3.6/5, mb1 3.9/6, mb1mx3.8/18, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=41.6km s-min=24.6km az=102.0*
NEIC ***11*** *04:55:49.3±1.4, 9.°89S×160.°62E, h35km, Error ellipse: s-maj=27.8km s-min=17.5km az=116.0*
ISC 11 04:55:46.1±2.4, 10.°0S±0.°1×160.°7E±0.°1, h14km±12km, n9, σ0§61/11, mb3.7/5, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.93**	**304**	Pn	**Pn**	**04 56 05.4**	**+0.6**
	112nm,0.3s,baz=136,slow=5.3,SNR=20						
HNR				Sn	**Sn**	**04 56 17.8**	**-0.2**
	483nm,0.3s,baz=188,slow=17,SNR=9.7						
HNR	**Honiara**	**0.93**	**304**	*e*Pg	**Pg**	**04 56 04.0**	**-0.2**
HNR				Sn	**Sn**	**04 56 17.8**	**-0.2**
CTA	**Charters Tower**	**17.22**	**233**	Pn	**Pn**	**04 59 46.5**	**+0.1**
	0.2nm,0.3s,baz=69,slow=14,SNR=4.0						
WRA	**Warramunga Arr**	**27.32**	**246**	P	**P**	**05 01 29.4**	**-1.3**
	0.7nm,0.6s,mb3.4,baz=74,slow=9.6,SNR=10						
WRA	**Warramunga Arr**	**27.32**	**246**	P	**P**	**05 01 29.4**	**-1.3**
ASAR	**Alice Springs**	**29.00**	**239**	P	**P**	**05 01 46.6**	**+0.9**
	0.3nm,0.6s,mb3.2,baz=68,slow=10,SNR=3.7						
KSRS	**Korea Array**	**56.30**	**329**	P	**P**	**05 05 26.7**	**+0.3**
	1.2nm,0.7s,mb4.0,baz=151,slow=5.6,SNR=4.0						
SONM	**Songino Array**	**74.93**	**325**	P	**P**	**05 07 26.9**	**+0.3**
	0.9nm,0.7s,mb3.8,baz=141,slow=4.8,SNR=2.3						
ILAR	**Eielson Array**	**84.12**	**20**	P	**P**	**05 08 15.8**	**-0.5**
	0.8nm,0.5s,mb4.1,baz=256,slow=5.5,SNR=5.6						

IDC ***11*** *04:56:58.0±0.4, 41.°74N×144.°21E, h0km, mb4.7/29, mb1 4.8/33, mb1mx4.8/36, mbtmp4.7/33, ML4.2/4, MS4.3/5, Ms1 4.3/5, ms1mx3.7/35, Error ellipse: s-maj=13.0km s-min=11.0km az=129.0*
BJI ***11*** *04:57:00.5, 41.°80N×144.°11E, h23km, mB5.0/34, mb5.0/53, Ms4.7/47, Ms7 4.5/46*
ISCJB ***11*** *04:57:00.6±0.8, 41.°69N±0.°03×144.°18E±0.°02, h27km±5km, mb4.9/187, MS4.6/31, Error ellipse: s-maj=4.7km s-min=2.8km az=161.3*
NIED ***11*** *04:57:00, 41.°70N×144.°30E, h20km, Mw4.8 Best double couple: M0 1.62000×10^16 NP1:φ=201.00000°, δ=67.00000°, λ=50.00000°. NP2:φ=86.00000°, δ=45.00000°, λ=147.00000°.*
MOS ***11*** *04:57:01.9±1.0, 41.°78N×144.°14E, h34km, mb5.2/69, MS4.5/17, Error ellipse: s-maj=7.2km s-min=4.6km az=107.3*
JMA ***11*** *04:57:01.7±0.2, 41.°72N×144.°28E, h27km±3km, M4.9*
JMA Felt II J1.
NEIC ***11*** *04:57:02.3±0.9, 41.°72N×144.°16E, h26km±6km, mb5.0/97, MW4.7(NIED), Error ellipse: s-maj=4.4km s-min=3.1km az=155.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido.
SZGRF ***11*** *04:57:16.6, 43.°65N×142.°90E, h33km, mb5.1, Hokkaido, Japan, region*
ISC 11 04:57:02.6±0.8, 41.°75N±0.°03×144.°18E±0.°02, h27km±5km, h32km±1.3km: pP-P, n531, σ0§75/545, mb4.9/187, MS4.6/31, 97C-80D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.81**	**289**	*e*Pg	**Pb**	**04 57 18.8**	**+0.8**
ERM	**Erimo**	**0.81**	**289**	*e*P	**Pb**	**04 57 18.8**	**+0.8**
JEM	**Erimo**	**0.81**	**290**	P	**Pb**	**04 57 18.7**	**+0.7**
JCH	**Churui**	**1.05**	**325**	⇑P	**Pn**	**04 57 21.7**	**+0.1**
JCH				*e*S	**Sn**	**04 57 36.8**	**+1.4**
JOB	**Onbets**	**1.18**	**348**	P	**Pn**	**04 57 23.2**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.19**	**297**	⇑P	**Pn**	**04 57 24.5**	**+1.1**
JAK	**Akkeshi**	**1.30**	**17**	⇑P	**Pn**	**04 57 23.9**	**-1.1**
JAK				*e*S	**Sn**	**04 57 40.4**	**-1.1**
JAR	**Ashorobuto**	**1.57**	**349**	⇑P	**Pn**	**04 57 28.0**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**2.60**	**28**	*e*P	**Pn**	**04 57 41.3**	**-1.5**
YUK				*i* S	**Sn**	**04 58 14.1**	**+0.7**
YUK				pmax	pmax		
	comp=Z,780nm,0.5s						
YUK				pmax	pmax		
	comp=N,610nm,0.5s						
YUK				pmax	pmax		
	comp=E,410nm,0.5s						
YUK				pmax	pmax		
	comp=Z,2μm,0.5s						
YUK				smax			
	comp=N,8μm,0.7s						
YUK				smax			
	comp=E,2μm,0.7s						
YUK				smax			
	comp=N,6μm,0.6s						
YUK				smax			
	comp=E,2μm,0.6s						
YUK				MLR	MLR		
	comp=N,3μm,9.0s						
YUK				MLR	MLR		
	comp=E,1μm,9.0s						
YUK				MLR	MLR		
	comp=Z,1μm,9.0s						
ASAJ	**Asahikawa**	**2.63**	**334**	Pn	**Pn**	**04 57 43.5**	**+0.2**
	comp=Z,64nm,0.3s,baz=192,slow=10,SNR=88						
ASAJ				LR	LR	04 59 07.6	
	comp=Z,5μm,19.6s,baz=172,slow=49						
ASAJ	**Asahikawa**	**2.63**	**334**	*e*Pn	**Pn**	**04 57 43.6**	**+0.3**
ASAJ	**Asahikawa**	**2.63**	**334**	P	**Pn**	**04 57 43.5**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,64nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,5μm,19.6s						
KUR	**Kuril'sk**	**4.39**	**36**	*e*P	**Pn**	**04 58 06.4**	**-1.1**
KUR				*e*S	**Sn**	**04 58 52.5**	**-5.3**
KUR				pmax	pmax		
	comp=N,390nm,0.8s						
KUR				pmax	pmax		
	comp=E,340nm,0.8s						
KUR				pmax	pmax		
	comp=Z,690nm,0.8s						
KUR				smax			
	comp=N,680nm,0.5s						
KUR				smax			
	comp=E,340nm,0.5s						
KUR				smax			
	comp=N,9μm,3.0s						
KUR				smax			
	comp=E,4μm,3.0s						
YSS	**Yuzh-Sakhalins**	**5.30**	**349**	*e*Pn	**Pn**	**04 58 20.4**	**+0.4**
YSS	**Yuzh-Sakhalins**	**5.30**	**349**	⇑*e*P	**Pn**	**04 58 20.0**	**+0.1**
YSS				*e*S	**Sn**	**04 59 18.0**	**-2.1**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				smax			
	comp=E,90nm,0.8s						
YSS				MLR	MLR		
	comp=Z,2μm,13.0s						
YSS				MLR	MLR		
	comp=N,2μm,12.0s						
YSS				MLR	MLR		
	comp=E,2μm,14.0s						
MAJO	**Matsushiro**	**6.97**	**224**	*e*Pn	**Pn**	**04 58 42.8**	**0.0**
MAJO	**Matsushiro**	**6.97**	**224**	*e*P	**Pn**	**04 58 42.8**	**-0.1**
MAT	**Matsushiro**	**6.97**	**224**	P	**Pn**	**04 58 42.7**	**-0.2**
MAT				S	**Sn**	**05 00 00.9**	**-0.3**
MJAR	**Matsushiro Arr**	**6.97**	**224**	Pn	**Pn**	**04 58 42.3**	**-0.5**
	comp=E,5.8nm,0.3s,baz=26,slow=13,SNR=38						
MJAR	**Matsushiro Arr**	**6.97**	**224**	P	**Pn**	**04 58 42.3**	**-0.6**
VLA	**Vladivostok**	**9.19**	**283**	⇓*i*P	**Pn**	**04 59 16.2**	**+2.9**
VLA				S	**Sn**	**05 01 01.2**	**+5.5**
VLA				pmax	pmax		
	comp=Z,120nm,1.0s						
JHJ	**Hachijo jima 2**	**9.30**	**203**	Sn	**Sn**	**05 00 47.5**	**-11**
	comp=Z,42nm,0.3s,baz=268,slow=22,SNR=2.0						
HABR	**Khabarovsk**	**9.31**	**319**	P	**Pn**	**04 59 15.8**	**+0.9**
HABR						05 00 59.3	
HABR				MLR	MLR		
	comp=Z,1μm,19.0s						
MDJ	**Mudanjiang**	**11.03**	**290**	P	**Pn**	**04 59 40.8**	**+2.3**
MDJ				pmax	pmax		
	comp=Z,45nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,85nm,6.0s						
MDJ	**Mudanjiang**	**11.03**	**290**	P	**Pn**	**04 59 39.8**	**+1.3**
MDJ				pmax	pmax		
	comp=Z,45nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,85nm,6.1s						
KLR	**Kul'dur**	**11.48**	**315**	*e*P	**Pn**	**04 59 40.8**	**-3.8**
KLR				MLR	MLR		
	comp=Z,8μm,12.5s						
SKR	**Severo-Kuril's**	**12.16**	**39**	*e*P	**Pn**	**04 59 49.5**	**-4.4**
SKR				pmax	pmax		
	comp=Z,80nm,0.6s						
SKR				MLR	MLR		
	comp=N,1μm,16.0s						
SKR				MLR	MLR		
	comp=E,2μm,16.0s						
SKR				MLR	MLR		
	comp=Z,2μm,16.0s						
KSRS	**Korea Array**	**13.25**	**256**	Pn	**Pn**	**05 00 09.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=69,slow=13,SNR=21						
KSRS				LR	LR	05 05 16.4	
	comp=Z,623nm,19.1s,baz=309,slow=38						
KSRS	**Korea Array**	**13.25**	**256**	P	**Pn**	**05 00 09.1**	**+0.3**
KSRS				MLR	MLR		
	comp=Z,623nm,19.1s						
JNU	**Nakatsue**	**13.62**	**235**	*e*Pn	**Pn**	**05 00 12.5**	**-1.5**
CN2	**Changchun**	**13.91**	**285**	*e*P	**Pn**	**05 00 17.6**	**-0.2**
CN2				*ep*P		05 00 25.5	
CN2				*e*S	**Sn**	**05 02 50.7**	**-0.6**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,2μm,14.0s						
CN2				LR	LR		
	comp=E,500nm,14.0s						
CN2				LR	LR		
	comp=Z,2μm,17.0s						
PETK	**Petropavlovsk-**	**14.56**	**34**	Pn	**Pn**	**05 00 24.0**	**-2.6**
	comp=Z,0.9nm,0.3s,baz=187,slow=9.8,SNR=6.3						
PETK	**Petropavlovsk-**	**14.56**	**34**	P	**Pn**	**05 00 24.0**	**-2.6**
CBIJ	**Chichi jima**	**14.71**	**187**	Pn	**Pn**	**05 00 22.7**	**-6.1**
	comp=Z,9.6nm,0.3s,baz=346,slow=6.1,SNR=11						
CBIJ				Sn	**Sn**	**05 02 54.2**	**-17**
	comp=Z,9.7nm,0.3s,baz=264,slow=23,SNR=2.2						
SNY	**Shenyang**	**15.37**	**277**	⇑P	**Pn**	**05 00 35.1**	**-2.4**
SNY				S	**Sn**	**05 03 31.9**	**+5.1**
SNY				pmax	pmax		
	comp=Z,16nm,1.0s						
SNY				LR	LR		
	comp=E,1μm,15.9s						
SNY				LR	LR		
	comp=Z,1μm,16.3s						
DL2	**Dalian**	**17.42**	**268**	P	**Pn**	**05 01 03.0**	**-0.6**
DL2				*e*S	**Sn**	**05 04 16.0**	**-0.6**
DL2				pmax	pmax		
	comp=Z,20nm,0.7s						
DL2				LR	LR		
	comp=N,300nm,18.0s						
DL2				LR	LR		
	comp=E,250nm,17.3s						
DL2				LR	LR		
	comp=Z,530nm,15.5s						
CLNS	**Chul'man**	**19.54**	**327**	*e*P	**Pn**	**05 01 25.9**	**-3.3**
CLNS				*e*S	**Sn**	**05 04 57.2**	**-10**
CLNS				pmax	pmax		
	comp=Z,65nm,0.8s						
CLNS				pmax	pmax		
	comp=N,37nm,0.7s						
CLNS				pmax	pmax		
	comp=E,14nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,26nm,0.7s						
CLNS				pmax	pmax		
	comp=N,36nm,1.0s						
CLNS				pmax	pmax		
	comp=E,12nm,0.6s						
CLNS				smax			
	comp=E,300nm,14.4s						
CLNS				smax			
	comp=N,54nm,12.8s						
CLNS				MLR	MLR		
	comp=Z,621nm,15.0s						
CLNS				MLR	MLR		
	comp=N,514nm,13.0s						
CLNS				MLR	MLR		
	comp=E,452nm,15.0s						
BJI	**Beijing**	**21.20**	**275**	P	**P**	**05 01 43.9**	**-2.1**
BJI				pP		05 01 52.9	
BJI				sP	sP	05 01 56.7

YAK				pmax	pmax		
	comp=N,37nm,0.9s						
YAK				pmax	pmax		
	comp=E,22nm,0.8s						
YAK				smax			
	comp=N,336nm,2.1s						
YAK				smax			
	comp=E,268nm,1.9s						
YAK				MLR	MLR		
	comp=Z,789nm,20.0s,MS4.1						
YAK				MLR	MLR		
	comp=N,482nm,15.0s,MS4.1						
YAK				MLR	MLR		
	comp=E,419nm,17.0s,MS4.1						
NJ2	**Nanjing**	**22.38**	**253**	*e*P	**P**	**05 01 58.1**	**-0.5**
NJ2				pP		05 02 07.3	
NJ2				sP	sP	05 02 11.4	+2.0
NJ2				PP		05 02 25.8	
NJ2				S	**S**	**05 05 55.0**	**-8.3**
NJ2				sS	sS	05 06 09.0	-6.1
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,420nm,5.7s						
NJ2				LR	LR		
	comp=N,860nm,19.8s,MS4.4						
NJ2				LR	LR		
	comp=E,910nm,16.3s,MS4.4						
NJ2				LR	LR		
	comp=Z,1µm,17.2s,MS4.4						
CIT	**Chita**	**23.15**	**307**	*e*P	**P**	**05 02 02.1**	**-4.5**
CIT				*e*		05 02 14.4	
CIT				pmax	pmax		
	comp=Z,162nm,1.7s,mb5.2						
HHC	**Hu-ho-hao-te**	**24.44**	**279**	*e*P	**P**	**05 02 18.4**	**-0.5**
HHC				pP		05 02 27.7	
HHC				sP	sP	05 02 31.7	+1.6
HHC				PP		05 02 54.3	
HHC				PcP	PcP	05 05 59.0	+1.7
HHC				S	**S**	**05 06 33.3**	**-4.0**
HHC				sS	sS	05 06 49.2	-1.0
HHC				SS		05 07 28.3	
HHC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.3						
HHC				LR	LR		
	comp=N,6µm,12.7s,MS5.5						
HHC				LR	LR		
	comp=E,7µm,13.2s,MS5.5						
HHC				LR	LR		
	comp=Z,8µm,14.5s,MS5.4						
WHN	**Wuhan**	**26.43**	**255**	P	**P**	**05 02 39.3**	**+2.2**
WHN				LR	LR		
	comp=N,3µm,18.2s,MS5.0						
WHN				LR	LR		
	comp=E,2µm,14.2s,MS5.0						
WHN				LR	LR		
	comp=Z,2µm,17.2s,MS4.7						
ULN	**Ulaanbaatar**	**26.85**	**296**	*e*P	**P**	**05 02 40.6**	**-0.1**
	comp=Z,58nm,1.0s,mb5.1						
ULN	**Ulaanbaatar**	**26.85**	**296**	*e*P	**P**	**05 02 40.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.1						
SONM	**Songino Array**	**27.29**	**296**	P	**P**	**05 02 44.2**	**-0.5**
	comp=Z,24nm,0.7s,mb4.8,baz=96,slow=7.8,SNR=69						
SONM				LR	LR	05 14 46.4	
	comp=Z,827nm,19.1s,MS4.3,baz=9.8,slow=39						
SONM	**Songino Array**	**27.29**	**296**	P	**P**	**05 02 44.2**	**-0.5**
XAN	**Xi'an**	**28.72**	**266**	P	**P**	**05 02 58.6**	**+1.1**
XAN				pP	pP	05 03 08.0	+2.6
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
XAN				pmax	pmax		
	comp=Z,49nm,6.3s						
IRK	**Irkutsk**	**28.82**	**305**	*e*P	**P**	**05 02 58.6**	**+0.3**
IRK				pmax	pmax		
	comp=Z,73nm,0.9s,mb5.4						
BILL	**Bilibino**	**28.90**	**17⇑**	*e*P	**P**	**05 02 57.4**	**-1.4**
BILL				*e*S	**S**	**05 07 48.6**	**+1.4**
BILL				*e*SS	SS	05 09 12.2	-38
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
BILL				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.2						
TLY	**Talaya**	**29.17**	**304**	*e*P	**P**	**05 03 01.1**	**-0.2**
	comp=Z,45nm,0.8s,mb5.2						
TLY	**Talaya**	**29.17**	**304**	*e*P	**P**	**05 03 00.5**	**-0.8**
TLY				*e*S	**S**	**05 07 48.2**	**-3.5**
TLY				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.3						
TLY				MLR	MLR		
	comp=Z,510nm,20.0s,MS4.1						
TLY	**Talaya**	**29.17**	**304**	P	**P**	**05 03 01.5**	**+0.2**
	comp=Z,349nm,0.8s,mb6.1,SNR=10						
ZAK	**Zakamensk**	**29.34**	**301**	*e*P	**P**	**05 03 03.6**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
MOY	**Mondy**	**30.82**	**304**	*e*P	**P**	**05 03 16.8**	**+0.9**
MOY				pmax	pmax		
	comp=Z,58nm,1.5s,mb5.2						
TIXI	**Tiksi**	**30.93**	**351**	*e*P	**P**	**05 03 12.3**	**-4.4**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
LZH	**Lanzhou**	**31.67**	**273**	*e*P	**P**	**05 03 24.9**	**+1.3**
LZH				pP	pP	05 03 33.0	+1.5
LZH				sP	sP	05 03 39.0	+4.2
LZH				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.1						
LZH				pmax	pmax		
	comp=Z,200nm,5.0s						
LZH				LR	LR		
	comp=N,920nm,17.3s,MS4.7						
LZH				LR	LR		
	comp=E,1µm,15.1s,MS4.7						
LZH				LR	LR		
	comp=Z,950nm,14.2s,MS4.6						
GTA	**Gaotai**	**33.50**	**281**	*e*P	**P**	**05 03 40.3**	**+0.7**
GTA				pP	pP	05 03 45.0	-2.5
GTA				sP	sP	05 03 48.2	-2.6
GTA				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
GTA				pmax	pmax		
	comp=Z,210nm,5.7s						
GTA				LR	LR		
	comp=N,410nm,20.2s,MS4.6						
GTA				LR	LR		
	comp=E,860nm,15.2s,MS4.6						
GTA				LR	LR		
	comp=Z,1µm,15.7s,MS4.7						
CD2	**Chengdu**	**34.03**	**265**	*e*P	**P**	**05 03 44.4**	**+0.1**
CD2				pP	pP	05 03 54.1	+1.9
CD2				sP	sP	05 03 58.2	+2.7
CD2				PP	PP	05 04 58.7	-2.8
CD2				S	**S**	**05 09 06.4**	**-1.7**
CD2				sS	sS	05 09 22.4	+1.2
CD2				SS	SS	05 11 14.7	-21
CD2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
CD2				pmax	pmax		
	comp=Z,100nm,4.6s						
CD2				LR	LR		
	comp=N,600nm,13.2s,MS4.7						
CD2				LR	LR		
	comp=E,710nm,14.2s,MS4.7						
CD2				LR	LR		
	comp=Z,730nm,14.6s,MS4.5						
TGY	**Tagaytay City**	**34.13**	**223**	LR	LR	05 17 28.7	
	comp=Z,2.7nm,18.4s,baz=266,slow=36						
GYA	**Guiyang**	**34.30**	**256**	P	**P**	**05 03 46.8**	**+0.1**
GYA				pP	pP	05 03 55.0	+0.4
GYA				sP	sP	05 04 01.2	+3.3
GYA				PP	PP	05 05 02.4	-2.2
GYA				PcP	PcP	05 06 23.8	+1.3
GYA				S	**S**	**05 09 11.7**	**-0.7**
GYA				sS	sS	05 09 25.3	-0.1
GYA				ScP	ScP	05 10 05.0	-0.6
GYA				SS	SS	05 11 20.1	-21
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=N,560nm,17.9s,MS4.5						
GYA				LR	LR		
	comp=E,450nm,18.0s,MS4.5						
GYA				LR	LR		
	comp=Z,580nm,16.5s,MS4.4						
FALS	**False Pass**	**36.37**	**51**	*e*P	**P**	**05 04 05.2**	**+1.1**
QIZ	**Qiongzhong**	**36.91**	**243**	P	**P**	**05 04 07.4**	**-1.7**
QIZ				S	**S**	**05 09 49.3**	**-3.2**
QIZ				LR	LR		
	comp=N,430nm,13.2s						
QIZ				LR	LR		
	comp=Z,360nm,14.7s,MS4.3						
KMI	**Kunming**	**37.94**	**257**	P	**P**	**05 04 18.3**	**+0.5**
KMI				pP	pP	05 04 27.3	+1.5
KMI				sP	sP	05 04 31.1	+2.0
KMI				PP	PP	05 05 47.7	+3.0
KMI				S	**S**	**05 10 07.6**	**-0.5**
KMI				sS	sS	05 10 22.1	+0.9
KMI				SS	SS	05 12 42.1	-13
KMI				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
KMI				pmax	pmax		
	comp=Z,290nm,6.9s						
KMI				LR	LR		
	comp=N,540nm,14.1s,MS4.6						
KMI				LR	LR		
	comp=E,470nm,15.6s,MS4.6						
KMI				LR	LR		
	comp=Z,540nm,15.6s,MS4.5						
TTA	**Tatalina**	**40.36**	**38**	*e*P	**P**	**05 04 37.8**	**+0.3**
TTA	**Tatalina**	**40.36**	**38**	*e*P	**P**	**05 04 37.8**	**+0.3**
ZAA0	**Zalesovo Array**	**40.49**	**308**	*e*P	**P**	**05 04 38.5**	**-0.3**
ZALV	**Zalesovo Beam**	**40.49**	**308**	P	**P**	**05 04 38.0**	**-0.8**
	comp=Z,24nm,0.5s,mb5.2,baz=86,slow=7.6,SNR=65						
ZALV				PcP	PcP	05 06 41.0	0.0
	comp=Z,2.7nm,0.6s,baz=72,slow=4.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**40.49**	**308**	P	**P**	**05 04 38.0**	**-0.8**
ZALV						05 06 41.0	
WMQ	**Urumqi**	**40.82**	**293**	P	**P**	**05 04 42.0**	**+0.4**
WMQ				pP	pP	05 04 52.0	+2.4
WMQ				sP	sP	05 04 56.0	+3.1
WMQ				PP	PP	05 06 19.0	+3.2
WMQ				S	**S**	**05 10 48.0**	**-2.8**
WMQ				sS	sS	05 11 06.0	+1.9
WMQ				SS	SS	05 13 47.0	-5.1
WMQ				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,100nm,4.0s						
WMQ				LR	LR		
	comp=N,400nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=E,660nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,720nm,15.0s,MS4.7						
NVS	**Novosibirsk**	**41.29**	**310**	*e*P	**P**	**05 04 43.9**	**-1.5**
NVS				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.5						
NVS				pmax	pmax		
	comp=E,18nm,1.5s						
PPLA	**Purkeypile**	**42.10**	**38**	*e*P	**P**	**05 04 53.3**	**+1.4**
	comp=E,55nm,1.2s,mb5.1						
KDAK	**Kodiak Island**	**42.21**	**45**	P	**P**	**05 04 51.6**	**-1.2**
	comp=E,9.6nm,0.6s,mb4.6,baz=263,slow=6.1,SNR=14						
KDAK	**Kodiak Island**	**42.21**	**45**	*i* P	**P**	**05 04 51.9**	**-0.9**
BPAW	**Bear Paw Mtn.**	**42.63**	**36**	*e*P	**P**	**05 04 56.7**	**+0.5**
	comp=E,18nm,1.2s,mb4.7						
TRF	**Thorofare Moun**	**42.95**	**37**	*e*P	**P**	**05 04 59.2**	**+0.4**
	comp=E,19nm,1.2s,mb4.7						
RC01	**Rabbit Creek A**	**43.35**	**40**	*e*P	**P**	**05 05 01.0**	**-1.0**
	comp=E,19nm,0.7s,mb4.9						
MCK	**McKinley**	**43.55**	**36**	*e*P	**P**	**05 05 03.5**	**-0.1**
	comp=E,13nm,0.8s,mb4.7						
MCK	**McKinley**	**43.55**	**36**	*e*P	**P**	**05 05 03.5**	**-0.1**
MCK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
MK31	**Makanchi Array**	**43.59**	**298**	*e*P	**P**	**05 05 04.0**	**-0.1**
MK31	**Makanchi Array**	**43.59**	**298**	*i* P	**P**	**05 05 04.2**	**0.0**
MK31				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.2						
MKAR	**Makanchi Array**	**43.59**	**298**	P	**P**	**05 05 03.7**	**-0.5**
	comp=Z,11nm,0.5s,mb4.8,baz=78,slow=9.0,SNR=86						
MKAR	**Makanchi Array**	**43.59**	**298**	P	**P**	**05 05 03.7**	**-0.5**
MKAR	**Makanchi Array**	**43.59**	**298**	P	**P**	**05 05 03.7**	**-0.5**
SML	**Sawmill**	**43.96**	**39**	*e*P	**P**	**05 05 07.5**	**+0.6**
	comp=Z,20nm,1.3s,mb4.7						
SML	**Sawmill**	**43.96**	**39**	*e*P	**P**	**05 05 07.5**	**+0.6**
SML				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
COLA	**College**	**43.97**	**35**	*e*P	**P**	**05 05 07.1**	**+0.2**
	comp=Z,28nm,0.9s,mb5.0						
COLA	**College**	**43.97**	**35**	*e*P	**P**	**05 05 07.1**	**+0.1**
COLA				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
ILAR	**Eielson Array**	**44.39**	**35**	P	**P**	**05 05 09.9**	**-0.4**
	comp=Z,2.9nm,0.6s,mb4.2,baz=260,slow=5.7,SNR=38						
ILAR	**Eielson Array**	**44.39**	**35**	P	**P**	**05 05 09.9**	**-0.4**
CHTO	**Chiang Mai**	**44.62**	**253**	*e*P	**P**	**05 05 13.2**	**+0.4**
	comp=Z,10nm,0.7s,mb4.8						
CHTO	**Chiang Mai**	**44.62**	**253**	*e*P	**P**	**05 05 13.2**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
CMAR	**Chiang Mai Arr**	**44.85**	**253**	P	**P**	**05 05 15.2**	**+0.6**
	comp=Z,5.2nm,0.7s,mb4.5,baz=43,slow=7.3,SNR=25						
CMAR				LR	LR	05 24 55.6	
	comp=Z,136nm,18.6s,MS3.9,baz=65,slow=37						
CMAR	**Chiang Mai Arr**	**44.85**	**253**	P	**P**	**05 05 15.2**	**+0.6**
KURK	**Kurchatov**	**44.85**	**305**	*e*P	**P**	**05 05 13.7**	**-0.6**
	comp=Z,38nm,0.5s,mb5.5						
KURK	**Kurchatov**	**44.85**	**305**	*e*P	**P**	**05 05 13.7**	**-0.5**
KURK				pmax	pmax		
	comp=Z,38nm,0.5s,mb5.5						
MENT	**Mentasta**	**45.96**	**37**	*e*P	**P**	**05 05 23.6**	**+0.8**
EGAK	**Eagle**	**46.83**	**35**	*e*P	**P**	**05 05 30.3**	**+0.7**
	comp=Z,20nm,1.0s,mb5.0						
DAWY	**Dawson**	**47.70**	**35**	*e*P	**P**	**05 05 37.5**	**+1.1**
TAPN	**Taplejung**	**47.87**	**271**	*e*P	**P**	**05 05 39.2**	**+1.0**
	comp=Z,61nm,0.8s,mb5.7						
GUN	**Gumba**	**48.94**	**273**	*e*P	**P**	**05 05 47.4**	**+1.0**
	comp=Z,206nm,0.7s						
BVAR	**Borovoye Array**	**49.09**	**310**	P	**P**	**05 05 47.1**	**-0.2**
	comp=Z,19nm,0.5s,mb5.4,baz=73,slow=9.6,SNR=40						
BVAR	**Borovoye Array**	**49.09**	**310**	P	**P**	**05 05 47.1**	**-0.2**
BRVK	**Borovoye**	**49.14**	**310**	*e*P	**P**	**05 05 47.7**	**+0.1**
	comp=Z,68nm,1.3s,mb5.5						
BRVK	**Borovoye**	**49.14**	**310**	*c i*P	**P**	**05 05 47.5**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.3						
INK	**Inuvik**	**49.22**	**29**	P	**P**	**05 05 48.2**	**+0.1**
	comp=Z,10nm,0.5s,mb5.2,baz=305,slow=6.4,SNR=44						
INK	**Inuvik**	**49.22**	**29**	*e*P	**P**	**05 05 48.2**	**+0.2**
	comp=Z,70nm,0.9s,mb5.7						
INK				*e*		05 05 58.6	
INK	**Inuvik**	**49.22**	**29**	*e*P	**P**	**05 05 48.3**	**+0.2**
INK				*e*		05 05 58.6	
INK				pmax	pmax		
	comp=Z,70nm,0.9s						
ULHL	**Ulahol**	**49.23**	**295**	P	**P**	**05 05 48.5**	**+0.1**
	SNR=7.1						
TKM2	**Tokmak 2**	**49.39**	**296**	P	**P**	**05 05 50.3**	**+0.6**
	SNR=33						
TKM2	**Tokmak 2**	**49.39**	**296**	*e*P	**P**	**05 05 50.2**	**+0.5**
	comp=Z,32nm,0.8s,mb5.4						
TKM2	**Tokmak 2**	**49.39**	**296**	*e*P	**P**	**05 05 50.2**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.4						
KKN	**Kakani**	**49.45**	**273**	*e*P	**P**	**05 05 51.0**	**+0.6**
	comp=Z,94nm,0.8s,mb5.9						
PKI	**Pulchoki**	**49.47**	**273**	*e*P	**P**	**05 05 50.9**	**+0.4**
	comp=Z,40nm,0.7s,mb5.6						
DMN	**Daman**	**49.68**	**273**	*e*P	**P**	**05 05 52.9**	**+0.8**
	comp=Z,54nm,0.7s,mb5.7						
GKN	**Gorkha**	**49.82**	**274**	*e*P	**P**	**05 05 53.5**	**+0.3**
	comp=Z,34nm,0.6s,mb5.6						
ZRNK	**Zerenda**	**49.91**	**310**	P	**P**	**05 05 53.3**	**-0.2**
KBK	**Karagaybulak**	**49.94**	**296**	P	**P**	**05 05 54.4**	**+0.5**
	SNR=13						
KZA	**Kyzart**	**49.97**	**295**	P	**P**	**05 05 55.5**	**+1.4**
	SNR=11						
KZA	**Kyzart**	**49.97**	**295**	*e*P	**P**	**05 05 55.2**	**+1.1**
	comp=Z,17nm,0.6s,mb5.3						
USP	**Ospenovka**	**49.99**	**297**	P	**P**	**05 05 54.4**	**+0.1**
	SNR=14						
FRU	**Bishkek**	**50.09**	**296**	*e*P	**P**	**05 05 54.0**	**-1.0**
FRU				*e*		05 07 46.0	
AAK	**Ala-Archa**	**50.25**	**296**	P	**P**	**05 05 56.4**	**+0.1**
	SNR=7.9						
AAK	**Ala-Archa**	**50.25**	**296**	P	**P**	**05 05 56.2**	**0.0**
	comp=Z,5.9nm,0.5s,mb4.9,baz=118,slow=3.7,SNR=13						
AAK	**Ala-Archa**	**50.25**	**296**	*e*P	**P**	**05 05 56.2**	**0.0**
	comp=Z,7.2nm,0.6s,mb4.9						
AAK	**Ala-Archa**	**50.25**	**296**	*e*P	**P**	**05 05 56.3**	**0.0**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
DANN	**Dangsing**	**50.28**	**275**	*e*P	**P**	**05 05 57.8**	**+1.1**
	comp=Z,181nm,0.6s						
KSH	**Kashi**	**50.55**	**292**	*e*P	**P**	**05 06 02.6**	**+4.0**
KSH				*e*pP	pP	05 06 12.5	+5.7
KSH				*e*sP	sP	05 06 16.4	+6.4
KSH				*e*PcP	PcP	05 07 19.4	+3.2
KSH				*e*PP	PP	05 07 57.6	+3.3
KSH				*e*ScP	ScP	05 11 11.5	+1.2
KSH				*e*PcS	PcS	05 11 15.4	+2.0
KSH				*e*S	**S**	**05 13 14.7**	**+3.6**
KSH				*e*sS	sS	05 13 31.4	+6.8
KSH				*e*ScS	ScS	05 15 47.6	0.0
KSH				*e*SS	SS	05 16 47.0	+2.0
KSH				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
KSH				pmax	pmax		
	comp=Z,200nm,4.4s						
KSH				LR	LR		
	comp=N,450nm,16.3s,MS4.7						
KSH				LR	LR		
	comp=E,310nm,11.5s,MS4.7						
KSH				LR	LR		
	comp=Z,510nm,20.7s						
KOLN	**Koldanda**	**50.72**	**274**	*e*P	**P**	**05 06 00.7**	**+0.7**
	comp=Z,39nm,0.6s,mb5.5						
EKS2	**Erkin-Say**	**50.72**	**296**	P	**P**	**05 05 60.0**	**+0.2**
	SNR=17						
EKS2	**Erkin-Say**	**50.72**	**296**	*e*P	**P**	**05 05 59.8**	**0.0**
	comp=Z,7.6nm,0.5s,mb4.9						
EKS2				*e*PcP	PcP	05 07 17.2	+0.5
AML	**Almayashu**	**51.00**	**296**	P	**P**	**05 06 02.4**	**+0.5**
	SNR=14						
AML	**Almayashu**	**51.00**	**296**	*e*P	**P**	**05 06 02.4**	**+0.4**
	comp=Z,4.7nm,0.5s,mb4.7						
KK31	**Karatay Array**	**52.71**	**298**	P	**P**	**05 06 14.2**	**-0.5**
KK31				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
KKAR	**Karatay Array**	**52.71**	**298**	*e*P	**P**	**05 06 14.3**	**-0.4**
	comp=Z,17nm,0.6s,mb5.2						
KKAR				*e*	pP	05 06 23.5	+0.6
KKAR	**Karatay Array**	**52.71**	**298**	*e*P	**P**	**05 06 14.3**	**-0.4**
KKAR				*e*	pP	05 06 23.5	+0.6
KKAR				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2						
SVE	**Sverdlovsk**	**53.10**	**317⇑**	*e*P	**P**	**05 06 17.8**	**+0.5**
SVE				pmax	pmax		
	comp=Z,67nm,0.9s,mb5.6						
SOKR	**Solikamsk**	**53.96**	**321**	*c i*P	**P**	**05 06 23.1**	**-0.5**
SOKR				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.4						
SOKR				MLR	MLR		
	comp=Z,420nm,17.0s,MS4.6						
ARU	**Arti**	**54.31**	**317**	*e*P	**P**	**05 06 25.9**	**-0.2**
	comp=Z,58nm,0.9s,mb5.5						
ARU	**Arti**	**54.31**	**317**	*c i*P	**P**	**05 06 25.8**	**-0.4**
ARU						05 07 25.9	
ARU						05 08 26.2	
ARU				S	**S**	**05 14 03.3**	**+1.3**
ARU				SS	SS	05 17 42.4	-1.2
ARU				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
ARU				MLR	MLR		
	comp=Z,453nm,16.0s,MS4.6						
NDI	**New Delhi**	**54.97**	**279**	*e*PKP	**P**	**05 06 30.0**	**-1.4**
KAKA	**Kakadu**	**55.26**	**194**	*e*P	**P**	**05 06 32.6**	**-0.8**
	comp=Z,14nm,0.6s,mb5.2						
KAKA	**Kakadu**	**55.26**	**194**	*e*P	**P**	**05 06 32.8**	**-0.7**
	comp=Z,32nm,0.6s,mb5.5						
COEN	**Coen**	**55.43**	**181**	*e*P	**P**	**05 06 35.4**	**+0.7**
AB31	**Akbulak array**	**56.60**	**309**	*i* P	**P**	**05 06 42.5**	**-0.3**
AB31				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
ABKAR	**Akbulak array**	**56.60**	**309**	*e*P	**P**	**05 06 42.7**	**-0.1**
	comp=Z,18nm,0.6s,mb5.3						
AKTK	**Aktyubinsk**	**57.18**	**311**	P	**P**	**05 06 46.4**	**-0.4**
AKTO	**Aktyubinsk**	**57.18**	**311**	P	**P**	**05 06 46.4**	**-0.4**
	comp=Z,4.7nm,0.4s,mb4.9,baz=58,slow=14,SNR=20						
AKTO	**Aktyubinsk**	**57.18**	**311**	P	**P**	**05 06 46.4**	**-0.4**
RES	**Resolute Bay**	**57.50**	**16**	P	**P**	**05 06 47.7**	**-1.0**
	comp=Z,32nm,0.6s,mb5.5,baz=310,slow=4.7,SNR=9.9						
RES	**Resolute Bay**	**57.50**	**16**	*e*P	**P**	**05 06 47.9**	**-0.9**
	comp=Z,91nm,0.9s,mb5.8						
RES				*e*		05 06 58.7	
RES	**Resolute Bay**	**57.50**	**16**	*e*P	**P**	**05 06 47.9**	**-0.8**
RES				*e*		05 06 58.7	
RES				pmax	pmax		
	comp=Z,91nm,0.9s,mb5.8						
KBL	**Kabul**	**57.80**	**289**	*e*P	**P**	**05 06 50.7**	**-0.7**
	comp=Z,10nm,0.7s,mb5.0						
KBL	**Kabul**	**57.80**	**289**	*e*P	**P**	**05 06 50.7**	**-0.8**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
PRGR	**Permogore**	**58.01**	**326⇑**	*i*P	**P**	**05 06 51.4**	**-1.1**
PRGR				*e*		05 08 57.8	
PRGR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
YKA	**Yellowknife Ar**	**58.67**	**32**	P	**P**	**05 06 57.6**	**+0.5**
	comp=Z,0.9nm,0.6s,mb4.0,baz=298,slow=6.5,SNR=5.1						
YKA				PcP	PcP	05 07 54.1	+7.3
	comp=Z,2.3nm,0.7s,baz=301,slow=3.6,SNR=5.0						
YKA	**Yellowknife Ar**	**58.67**	**32**	P	**P**	**05 06 57.7**	**+0.6**
YKA						05 07 54.1	
LVZ	**Lovozero**	**58.71**	**335⇑**	*i*P	**P**	**05 06 56.1**	**-1.2**
LVZ				pmax	pmax		
	comp=Z,55nm,2.5s,mb5.1						
APA	**Apatity**	**59.29**	**335⇓**	*i*P	**P**	**05 07 01.0**	**-0.3**
APA				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1						
APA				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
KEV	**Kevo**	**59.80**	**339**	*e*P	**P**	**05 07 03.9**	**-0.9**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
KEV	**Kevo**	**59.80**	**339**	*e*p	**P**	**05 07 03.9**	**-0.9**
	comp=Z,5.1nm,0.4s,mb4.9						
ARCES	**ARCESS Array B**	**60.35**	**339**	P	**P**	**05 07 08.0**	**-0.5**
	comp=Z,3.3nm,0.4s,mb4.7,baz=57,slow=7.3,SNR=58						
ARCES	**ARCESS Array B**	**60.35**	**339**	P	**P**	**05 07 08.0**	**-0.6**
ARE0	**ARCESS Array S**	**60.35**	**339**	*e*P	**P**	**05 07 08.9**	**+0.4**
KLMR	**Klimovskoe**	**60.94**	**327**	*e*P	**P**	**05 07 10.9**	**-1.8**
KLMR				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.3						
DAG	**Danmarks Havn**	**61.26**	**356**	*i* P	**P**	**05 07 13.0**	**-1.7**
DAG				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.0						
DAG	**Danmarks Havn**	**61.26**	**356**	*i* P	**P**	**05 07 13.0**	**-1.7**
	comp=Z,116nm,0.9s,mb6.0						
KTK1	**Kautokeino**	**61.30**	**339**	*e*P	**P**	**05 07 14.8**	**

LOF AMb AMB 05 07 48.6
comp=Z,64nm,2.2s,mb5.3
LOF Lofoten 64.37 342 *eP* **P 05 07 38.4 +2.9**
comp=Z,64nm,2.2s,mb5.3
MOS Moscow 64.75 323 *eP* **P 05 07 47.7 +10**
MOS pmax pmax
comp=Z,40nm,1.0s,mb5.4
OD2 Odessa Site #2 64.93 48 *eP* **P 05 07 39.5 +0.1**
comp=Z,13nm,0.9s,mb5.0
RSW Rattlesnake Hi 65.00 49 *eP* **P 05 07 40.6 +0.7**
KAF Kangasniemi 65.10 333 *eP* **P 05 07 39.4 -0.9**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
KAF Kangasniemi 65.10 333 *ep* **P 05 07 39.4 -0.9**
comp=Z,4.1nm,0.4s,mb4.8
NEW Newport 65.30 47 ⇑P **P 05 07 41.8 0.0**
baz=65,SNR=5.7
OBN Obninsk 65.61 323κ*eP* **P 05 07 43.4 -0.4**
OBN *e**PP pP 05 07 53.0 +0.8
OBN pmax pmax
comp=Z,45nm,1.7s,mb5.2
OBN MLR MLR
comp=Z,400nm,15.0s,MS4.7
FINES FINESS Array B 65.64 332 P **P 05 07 43.0 -0.8**
comp=Z,21nm,0.5s,mb5.4,baz=51,slow=6.3,SNR=70
FINES FINESS Array B 65.64 332 P **P 05 07 43.0 -0.8**
VRHR Novokhopersk 65.65 317 *eP* **P 05 07 42.5 -1.6**
VRHR pmax pmax
comp=N,7.0nm,0.6s
VRHR pmax pmax
comp=E,3.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
MOR8 Moi Rana 65.68 340 *eP* **P 05 07 42.1 -2.0**
MOR8 AMb AMB 05 07 45.2
comp=Z,27nm,1.4s,mb5.1
MOR8 Moi Rana 65.68 340 *eP* **P 05 07 41.7 -2.3**
comp=Z,27nm,1.4s,mb5.1
E09A Wood Farm, Sta 65.75 49 ⇑P **P 05 07 44.1 -0.7**
baz=66,SNR=7.4
ASAR Alice Springs 65.78 190 P **P 05 07 44.3 -0.8**
comp=Z,3.6nm,0.7s,mb4.5,baz=9.3,slow=5.2,SNR=37
ASAR Alice Springs 65.78 190 P **P 05 07 44.3 -0.8**
SUMG Summit 65.96 1 *eP* **P 05 07 46.4 +0.6**
comp=Z,46nm,0.6s,mb5.7
SUMG Summit 65.96 1 *i* P **P 05 07 46.4 +0.7**
comp=Z,43nm,0.7s,mb5.6
C11A Tepee Creek (N 66.02 47 ⇓P **P 05 07 46.3 -0.2**
baz=66,SNR=8.3
K05A Summer Lake 66.35 53 ⇓P **P 05 07 49.2 +0.4**
baz=66,SNR=8.0
WALA Waterton Lakes 66.54 45 *eP* **P 05 07 50.2 +0.3**
comp=Z,0.3nm,0.9s
WDC Whiskeytown Da 66.59 56 *eP* **P 05 07 50.5 +0.1**
comp=Z,6.4nm,1.0s,mb4.6
WDC Whiskeytown Da 66.59 56 *eP* **P 05 07 50.5 +0.2**
WDC pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
B13A Whitefish 66.66 45 ⇓P **P 05 07 50.5 -0.1**
baz=66,SNR=8.7
BSMT Bassoo Peak 66.80 46 *eP* **P 05 07 52.2 +0.7**
comp=Z,9.6nm,1.3s,mb4.7
VSR Storozhevoye 66.81 319 *eP* **P 05 07 50.6 -0.9**
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR MLR MLR
comp=N,210nm,16.0s,MS4.8
VSR MLR MLR
comp=E,380nm,16.0s,MS4.8
VSR MLR MLR
comp=Z,450nm,16.0s,MS4.8
VORD Divnogorie 66.90 318 *eP* **P 05 07 51.7 -0.4**
VORD pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VORD pmax pmax
comp=N,2.0nm,0.2s
VORD pmax pmax
comp=E,6.0nm,0.5s
VORD MLR MLR
comp=N,140nm,16.0s,MS4.6
VORD MLR MLR
comp=E,280nm,16.0s,MS4.6
VORD MLR MLR
comp=Z,370nm,16.0s,MS4.7
BLMT Blacktail Moun 66.94 46 *eP* **P 05 07 51.3 -1.1**
comp=Z,16nm,1.1s,mb5.0
EIDS Eidsvold 67.08 173 *eP* **P 05 07 53.4 0.0**
comp=Z,6.9nm,0.9s,mb4.7
JTMT Jette 67.14 46 *eP* **P 05 07 54.5 +0.8**
comp=Z,5.1nm,0.8s,mb4.6
E12A Beaver Dam Sad 67.24 48 ⇑P **P 05 07 54.3 -0.1**
baz=67,SNR=15
C14A Swan Lake 67.41 46 ⇑P **P 05 07 55.0 -0.4**
baz=67
SWMT Swartz Lake 67.44 46 *eP* **P 05 07 55.8 +0.2**
comp=Z,20nm,1.2s,mb5.0
SWMT *e* 05 08 07.2
D13A Huson 67.44 46 ⇓P **P 05 07 55.3 -0.2**
baz=67,SNR=5.9
VSU Vasula 67.47 330*ceP* **P 05 07 54.9 -0.7**
VSU pmax pmax
comp=Z,30nm,1.1s,mb5.2
B15A Bradely Ranch, 67.71 45 ⇓P **P 05 07 56.8 -0.4**
baz=68,SNR=7.4
F12A Elk City 67.81 48 ⇓P **P 05 07 58.2 +0.2**
baz=68,SNR=7.2
SLMT Seeley Lake 67.87 46 *eP* **P 05 07 58.7 +0.4**
comp=Z,19nm,1.3s,mb5.0
WVOR Wild Horse Val 67.87 52 *eP* **P 05 07 58.3 -0.1**
comp=Z,12nm,1.3s,mb4.8
WVOR Wild Horse Val 67.87 52 *eP* **P 05 07 58.3 -0.1**
WVOR pmax pmax
comp=Z,12nm,1.3s,mb4.8
MSO Missoula 67.88 46 ⇑P **P 05 07 58.0 -0.4**
baz=68,SNR=6.1
MSO Missoula 67.88 46 *eP* **P 05 07 58.5 +0.1**
comp=Z,8.6nm,1.3s,mb4.6
QLP Quilpie 67.99 180 *eP* **P 05 07 58.2 -0.9**
C15A Salmond Ranch, 68.02 45 ⇑P **P 05 07 59.6 +0.4**
baz=68,SNR=8.4
RMQ Roma 68.02 176 *eP* **P 05 07 59.2 -0.1**
comp=Z,12nm,1.0s,mb4.9
A17A Triple J Farms 68.28 43 ⇓P **P 05 08 00.4 -0.4**
baz=68,SNR=6.2
C16A Fuhringer Ranc 68.45 45 ⇑P **P 05 08 01.7 -0.3**
baz=68,SNR=9.6
FFC Flin Flon 68.60 35 *eP* **P 05 08 04.1 +1.4**
comp=Z,15nm,1.0s,mb4.9
FFC Flin Flon 68.60 35 *eP* **P 05 08 04.1 +1.4**
FFC pmax pmax
comp=Z,15nm,1.0s,mb4.9
A18A Metzger Ranch, 68.73 43 ⇑P **P 05 08 03.1 -0.6**
baz=68
E15A Deer Lodge 68.84 46 ⇑P **P 05 08 04.4 +0.1**
baz=69,SNR=5.5
WCN Washoe City 69.08 56 ⇑P **P 05 08 05.8 -0.2**
baz=69,SNR=5.3
WCN Washoe City 69.08 56 *eP* **P 05 08 06.2 +0.2**
comp=Z,15nm,1.4s,mb4.7
WCN Washoe City 69.08 56 *eP* **P 05 08 06.2 +0.2**
WCN pmax pmax
comp=Z,15nm,1.4s,mb4.7
C17A Wharram Farm, 69.08 44 ⇓P **P 05 08 05.1 -0.7**
baz=69
I12A Atlanta 69.08 50 ⇑P **P 05 08 04.5 -1.5**
baz=69,SNR=11
HRY Holter Researc 69.09 46 *eP* **P 05 08 06.5 +0.5**
comp=Z,6.3nm,0.8s,mb4.6
H13A Challis 69.11 49 ⇑P **P 05 08 05.2 -0.9**
baz=69,SNR=6.0
F15A Butte 69.28 47 ⇑P **P 05 08 06.4 -0.7**
baz=69,SNR=7.4
LRM Limekiln Ridge 69.32 47 *eP* **P 05 08 07.8 +0.5**
comp=Z,50nm,0.9s,mb5.4
EGMT Eagleton 69.35 44 *eP* **P 05 08 07.2 -0.4**
comp=Z,22nm,1.2s,mb5.0
KIV Kislovodsk 69.44 311 P **P 05 08 08.9 +0.7**
comp=Z,48nm,0.8s,mb5.5
KIV Kislovodsk 69.44 311κ *iP* **P 05 08 09.6 +1.5**
KIV *i* 05 08 26.0
KIV 05 08 33.0
KIV 05 10 42.0
KIV pmax pmax
comp=Z,72nm,1.0s,mb5.6
KIV MLR MLR
comp=Z,200nm,18.0s,MS4.4
KIV Kislovodsk 69.44 311 P **P 05 08 10.6 +2.5**
comp=Z,418nm,0.9s,SNR=5.7
ZEI Tsey 69.48 309 *eP* **P 05 08 07.1 -1.3**
ZEI *e* pP 05 08 14.5 -2.4
ZEI pmax pmax
comp=Z,16nm,0.8s,mb5.0
DLMT Dillon 69.53 47 *eP* **P 05 08 08.9 +0.3**
comp=Z,14nm,1.2s,mb4.8
HLID Hailey 69.64 49 *eP* **P 05 08 09.2 -0.1**
comp=Z,5.1nm,1.2s,mb4.3
IDID Didziasalis 69.68 327 *eP* **P 05 08 09.1 -0.4**
IDID AMB AMB 05 08 10.9
comp=Z,5.5nm,1.1s,mb4.4
G15A Dillon 69.71 47 ⇓P **P 05 08 09.4 -0.4**
baz=70,SNR=13
ISAL Salakas 69.75 328 *eP* **P 05 08 09.5 -0.3**
ISAL AMB AMB 05 08 10.3
comp=Z,5.9nm,1.0s,mb4.5
E17A Martinsdale 69.77 45 ⇑P **P 05 08 10.0 -0.1**
baz=70,SNR=5.5
F16A Kennard Place, 69.79 46 ⇑P **P 05 08 10.2 -0.1**
baz=70,SNR=7.3
IIGN Ignalina 69.87 327 *eP* **P 05 08 10.3 -0.3**
IIGN AMB AMB 05 08 11.1
comp=Z,7.2nm,0.8s,mb4.7
BOZ Bozeman (W) 69.87 46 ⇓P **P 05 08 10.8 +0.1**
baz=70,SNR=13
BOZ Bozeman (W) 69.87 46 *eP* **P 05 08 11.1 +0.3**
comp=Z,9.8nm,1.0s,mb4.7
BOZ Bozeman (W) 69.87 46 *eP* **P 05 08 11.1 +0.3**
BOZ pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
C19A Slack Wire Ran 69.90 43 ⇓P **P 05 08 11.1 +0.2**
baz=70,SNR=5.7
NVAR Mina Array Bea 70.50 56 P **P 05 08 14.9 +0.1**
comp=Z,4.4nm,0.8s,mb4.4,baz=291,slow=6.5,SNR=26
GNI Garni 70.61 307⇓*eP* **P 05 08 16.9 +1.5**
GNI pmax pmax
comp=Z,13nm,1.2s
NB2 NORSAR Subarra 70.65 338 P **P 05 08 14.5 -0.8**
comp=Z,7.3nm,0.6s,mb4.8,baz=35,slow=6.2
NOA NORSAR Array B 70.65 338 P **P 05 08 14.5 -0.8**
comp=Z,7.5nm,0.6s,mb4.8,baz=36,slow=6.2,SNR=27
NOA NORSAR Array B 70.65 338 P **P 05 08 14.5 -0.8**
F18A Big Timber 70.74 45 ⇓P **P 05 08 16.1 +0.1**
baz=70,SNR=5.9
IMW Indian Meadow 71.37 48 *eP* **P 05 08 20.9 +0.9**
comp=Z,7.6nm,1.0s,mb4.6
RLMT Red Lodge 71.48 46 *eP* **P 05 08 21.7 +1.1**
comp=Z,7.0nm,1.3s,mb4.4
RRI2 Red Ridge 71.52 48 *eP* **P 05 08 22.0 +1.2**
comp=Z,7.5nm,0.9s,mb4.6
MOOW Moose Ponds 71.58 48 *eP* **P 05 08 22.0 +0.8**
comp=Z,13nm,1.4s,mb4.7
TPAW Teton Pass 71.63 48 *eP* **P 05 08 22.6 +1.1**
comp=Z,17nm,1.4s,mb4.8
LOHW Long Hollow 71.74 48 *eP* **P 05 08 23.3 +1.1**
comp=Z,27nm,1.9s,mb4.9
REDW Red Top Meadow 71.77 48 *eP* **P 05 08 22.9 +0.6**
comp=Z,18nm,1.5s,mb4.8
AKASG Malin Array Be 71.87 323 LR LR 05 43 15.2
comp=Z,458nm,18.2s,MS4.8,baz=55,slow=39
S10A Tonopah Range, 71.87 55 ⇑P **P 05 08 22.4 -0.7**
baz=72,SNR=9.0
KIEV Kiev 71.88 323 *eP* **P 05 08 22.1 -0.8**
comp=Z,14nm,0.8s,mb5.0
KIEV Kiev 71.88 323 *eP* **P 05 08 22.1 -0.8**
KIEV pmax pmax
comp=Z,14nm,0.8s,mb4.9
GRAC Grapevine Rang 71.97 56 ⇓P **P 05 08 23.8 +0.2**
baz=72,SNR=7.2
R11A Troy Canyon, C 72.22 54 ⇑P **P 05 08 24.6 -0.5**
baz=72,SNR=12
MPMC Manual Prospec 72.49 57 ⇑P **P 05 08 25.7 -1.1**
baz=72,SNR=7.9
S11A Rachel 72.57 55 ⇑P **P 05 08 26.6 -0.6**
baz=72,SNR=6.4
FURC Furnace Creek, 72.62 57 ⇓P **P 05 08 27.7 +0.1**
baz=72,SNR=13
DUG Dugway 72.70 51 ⇓P **P 05 08 27.0 -1.0**
baz=72,SNR=12
DUG Dugway 72.70 51 *eP* **P 05 08 27.7 -0.2**
comp=Z,13nm,1.1s,mb4.8
DUG Dugway 72.70 51 *eP* **P 05 08 27.7 -0.3**
DUG pmax pmax
comp=Z,13nm,1.1s,mb4.8
J19A Crowheart 72.82 47 ⇓P **P 05 08 28.7 +0.1**
baz=73,SNR=5.7
BW06 Boulder Array 72.87 48 ⇓P **P 05 08 28.3 -0.6**
baz=73,SNR=5.8
PDAR Pinedale Array 72.87 48 P **P 05 08 28.9 -0.1**
comp=Z,2.0nm,0.6s,mb4.2,baz=275,slow=1.9,SNR=23
P14A Drum Mountains 72.94 52 ⇓P **P 05 08 28.6 -0.8**
baz=73,SNR=9.9
CMSA Cobar Meteorol 72.94 179 *eP* **P 05 08 29.3 +0.1**
S12A Delamar Landin 73.14 55 ⇑P **P 05 08 30.2 -0.5**
baz=73,SNR=6.6
T11A Corn Creek, Al 73.15 55 ⇓P **P 05 08 30.6 -0.1**
baz=73,SNR=8.4
Q14A Sevier Lake (B 73.20 53 ⇑P **P 05 08 31.3 +0.4**
baz=73,SNR=13
JLU Jordanelle 73.22 50 *eP* **P 05 08 31.4 +0.3**
comp=Z,11nm,1.3s,mb4.6
NLU North Lily Min 73.28 51 *eP* **P 05 08 31.0 -0.4**
comp=Z,6.2nm,0.9s,mb4.5
STKA Stephens Creek 73.30 182 P **P 05 08 31.0 -0.3**
comp=Z,1.7nm,0.5s,mb4.2,baz=105,slow=2.9,SNR=3.1
N17A Moffit Pass 73.36 50 ⇑P **P 05 08 31.4 -0.4**
baz=73
I21A Big Trails, Te 73.41 46 ⇑P **P 05 08 31.8 -0.3**
baz=73,SNR=8.0
DAU Daniels Canyon 73.46 50 *eP* **P 05 08 33.7 +1.2**
comp=Z,11nm,1.2s,mb4.7
DAU Daniels Canyon 73.46 50 *eP* **P 05 08 33.7 +1.2**
DAU pmax pmax
comp=Z,11nm,1.2s,mb4.7
MPU Maple Canyon 73.50 51 P **P 05 08 33.2 +0.5**
comp=Z,8.1nm,0.9s,mb4.7
SHPR Sheep Range 73.66 56 *eP* **P 05 08 34.6 +0.9**
comp=Z,15nm,1.5s,mb4.7
Q15A Fillmore 73.73 52 ⇓P **P 05 08 34.0 0.0**
baz=74,SNR=7.1
S13A Holt Ranch, En 73.76 54 ⇓P **P 05 08 33.8 -0.5**
baz=74,SNR=12
O17A Robinson Place 73.90 50 ⇑P **P 05 08 33.6 -1.4**
baz=74,SNR=6.0
T13A Saint George 74.09 55 ⇓P **P 05 08 36.0 -0.3**
baz=74,SNR=7.5
MSU Marysvale 74.16 52 *eP* **P 05 08 37.4 +0.8**
comp=Z,23nm,1.7s,mb4.8
MSU Marysvale 74.16 52 *eP* **P 05 08 37.4 +0.8**
MSU pmax pmax
comp=Z,23nm,1.7s,mb4.8
O18A Roosevelt 74.27 50 ⇓P **P 05 08 37.3 +0.1**
baz=74,SNR=8.7
P17A Butcher Ranch, 74.38 51 ⇓P **P 05 08 38.0 +0.2**
baz=74,SNR=12
ULM Lac du Bonnet 74.41 35 P **P 05 08 37.8 0.0**
comp=Z,1.5nm,0.7s,mb4.0,baz=0.0,slow=9.1,SNR=2.7
U13A Pakoon Wash 74.45 55 ⇑P **P 05 08 38.8 +0.5**
baz=74,SNR=9.7
P18A Preston Nutter 74.56 51 ⇑P **P 05 08 39.2 +0.3**
baz=74,SNR=6.5
T14A Hurricane 74.57 54 ⇓P **P 05 08 39.6 +0.6**
baz=74,SNR=7.3
BBOO Buckleboo 74.57 187 *eP* **P 05 08 38.4 -0.3**
comp=Z,6.3nm,1.0s,mb4.5
R16A Teasdale 74.72 52 ⇑P **P 05 08 39.9 0.0**
baz=74,SNR=14
SRU San Rafael 74.74 51 ⇓P **P 05 08 39.9 -0.1**
baz=74,SNR=13
SRU San Rafael 74.74 51 *eP* **P 05 08 40.5 +0.5**
comp=Z,11nm,0.8s,mb4.8
SRU *e* 05 08 51.2
SRU San Rafael 74.74 51 *eP* **P 05 08 40.5 +0.5**
SRU *e* 05 08 51.2
SRU pmax pmax
comp=Z,11nm,0.8s,mb4.8
V13A Grand Canyon W 74.81 55 ⇑P **P 05 08 40.0 -0.4**
baz=75,SNR=7.4
LVV L'vov 74.81 325 *eP* **P 05 08 39.9 -0.3**
LVV *e* 05 08 50.3
RSSD Black Hills 74.92 44 *eP* **P 05 08 40.7 -0.2**
comp=Z,5.0nm,0.9s,mb4.4
RSSD pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
U14A Mt Trumbull 74.93 55 ⇑P **P 05 08 41.4 +0.3**
baz=75,SNR=7.6
S16A Weppner Ranch, 75.03 53 ⇓P **P 05 08 42.0 +0.4**
baz=75,SNR=14
P19A Cripple Cowboy 75.28 50 ⇑P **P 05 08 42.9 -0.2**
baz=75,SNR=8.1
U15A North Rim 75.46 54 ⇓P **P 05 08 44.4 +0.2**
baz=75,SNR=12
V14A Boquillas Ranc 75.49 55 ⇓P **P 05 08 44.6 +0.2**
baz=75,SNR=16
KWP Kalwaria Pacla 75.52 325 *eP* **P 05 08 44.9 +0.7**
KWP Kalwaria Pacla 75.52 325 *eP* **P 05 08 44.9 +0.6**
comp=Z,29nm,0.9s,mb5.2
KWP Kalwaria Pacla 75.52 325 *eP* **P 05 08 44.9 +0.6**
KWP pmax pmax
comp=Z,29nm,0.9s,mb5.2
KWP Kalwaria Pacla 75.52 325⇑*iP* **P 05 08 44.9 +0.6**
MALT Malatya 75.53 309 *eP* **P 05 08 45.9 +1.4**
comp=Z,12nm,1.0s,mb4.8
MALT Malatya 75.53 309 ⇑P **P 05 08 46.0 +1.4**
MALT Malatya 75.53 309⇑*iP* **P 05 08 46.0 +1.4**
S17A Black Ridge (B 75.56 52 ⇓P **P 05 08 45.0 +0.3**
baz=75,SNR=8.2
Q19A Hogan Spring (75.58 51 ⇓P **P 05 08 44.1 -0.7**
baz=75,SNR=8.2
R18A Canyonlands Na 75.59 51 ⇑P **P 05 08 44.4 -0.5**
baz=75,SNR=6.2
X13A Yucca 75.72 56 ⇑P **P 05 08 45.2 -0.5**
baz=76,SNR=7.1
YNG Young 75.78 176 *eP* **P 05 08 45.5 -0.2**
comp=Z,2.8nm,0.6s,mb4.4
W14A Seligman 75.78 55 ⇑P **P 05 08 45.9 -0.1**
baz=76,SNR=13
BUR08 Bucovina Ar. S 75.90 322 *eP* **P 05 08 46.8 +0.3**
BURAR Bucovina Array 75.92 322 ⇑P **P 05 08 46.7 +0.1**
BURAR Bucovina Array 75.92 322⇑*iP* **P 05 08 46.7 +0.1**
V15A Kaibab Nationa 75.94 55 ⇑P **P 05 08 46.4 -0.5**
baz=76,SNR=7.3
S18A Hurst Farm, Bl 76.00 52 ⇓P **P 05 08 46.8 -0.4**
baz=76,SNR=8.6
TESR 76.06 321⇑*iP* **P 05 08 47.7 +0.3**
KOLS Kolonicke sedl 76.24 325 *eP* **P 05 08 48.3 -0.1**
comp=Z,4.4nm,1.0s,mb4.3
KOLS Kolonicke sedl 76.24 325 *eP* **P 05 08 48.3 -0.1**
KOLS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KOLS Kolonicke sedl 76.24 325 *eP* **P 05 08 48.3 -0.1**
OJC Ojcow 76.29 327 *eP* **P 05 08 49.1 +0.5**
OJC Ojcow 76.29 327 *eP* **P 05 08 49.1 +0.5**
U16A Tuba City 76.35 54 ⇑P **P 05 08 49.4 +0.1**
baz=76,SNR=19
X14A Yava 76.39 56 ⇑P **P 05 08 49.6 +0.1**
baz=76,SNR=6.3
T18A Mexican Hat 76.44 52 ⇓P **P 05 08 49.4 -0.4**
baz=76,SNR=8.8
S19A Harvey Farm, M 76.46 51 ⇓P **P 05 08 49.8 -0.1**
baz=76,SNR=14
VRI Vrincioaia 76.49 320 ⇓P **P 05 08 51.2 +1.3**
VRI Vrincioaia 76.49 320⇓*iP* **P 05 08 51.2 +1.3**
PV01 Paradox Valley 76.53 51 *eP* **P 05 08 50.9 +0.6**
comp=Z,304nm,0.8s
PLOR Plostina 76.54 320 ⇓P **P 05 08 50.9 +0.7**
PLOR Plostina 76.54 320⇓*iP* **P 05 08 50.9 +0.7**
P22A Eagle 76.57 49 ⇑P **P 05 08 50.5 +0.1**
baz=76,SNR=6.0
R20A Redvale 76.60 51 ⇑P **P 05 08 50.7 +0.1**
baz=76,SNR=6.7
CRVS Cervenica-Dubn 76.61 325 *eP* **P 05 08 50.8 +0.3**
comp=Z,3.6nm,0.9s,mb4.3
CRVS Cervenica-Dubn 76.61 325 *eP* **P 05 08 50.8 +0.3**
CRVS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
CRVS Cervenica-Dubn 76.61 325 *eP* **P 05 08 50.8 +0.3**
O23A Lake Granby, G 76.61 48 ⇑P **P 05 08 50.8 +0.2**
baz=76,SNR=5.1
TIRR Tirgusor 76.70 318 ⇑P **P 05 08 51.6 +0.6**
TIRR Tirgusor 76.70 318⇑*iP* **P 05 08 51.5 +0.5**
TRPA Tarpa 76.73 324⇓*iP* **P 05 08 51.6 +0.4**
X15A Humboldt 76.78 56 ⇓P **P 05 08 51.6 -0.1**
baz=77,SNR=7.6
S20A Disappointment 76.86 51 ⇓P **P 05 08 51.8 -0.3**
baz=77,SNR=5.9
V17A Tonalea, Kykot 76.91 54 ⇓P **P 05 08 52.9 +0.5**
baz=77,SNR=20
Q22A Crested Butte, 76.99 49 ⇑P **P 05 08 53.0 +0.2**
baz=77,SNR=6.3
ISCO Idaho Springs 77.07 48 *eP* **P 05 08 54.0 +0.7**
comp=Z,8.9nm,1.3s,mb4.5
ISCO Idaho Springs 77.07 48 *eP* **P 05 08 54.0 +0.8**
ISCO pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
MLR Muntele Rosu 77.14 321 ⇑P **P 05 08 54.9 +1.4**
MLR Muntele Rosu 77.14 321⇑*iP* **P 05 08 54.9 +1.4**
T19A Beclabito 77.15 52 ⇑P **P 05 08 52.9 -0.9**
baz=77,SNR=6.2
OKC Ostrava-Krasne 77.26 328 AMS AMS 05 48 20.0
comp=Z,300nm,16.7s
BR131 Keskin Array S 77.30 312 *eP* **P 05 08 55.2 +0.6**
comp=Z,1.2nm,0.5s,mb4.1
BRTR Keskin Array B 77.30 312 P **P 05 08 54.7 +0.1**
comp=Z,3.8nm,0.7s,mb4.4,baz=73,slow=4.2,SNR=14
BRTR PP PP 05 11 51.5 +3.3
comp=Z,4.2nm,1.1s,baz=64,slow=5.6,SNR=5.4
BRTR Keskin Array B 77.30 312*ceP* **P 05 08 54.9 +0.4**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
S21A Coal Bank Pass 77.30 51 ⇑P **P 05 08 55.1 +0.6**
baz=77,SNR=7.8
X16A Lo Mia Camp, P 77.31 55 ⇑P **P 05 08 55.4 +0.7**
baz=77,SNR=7.7
KECS Kecovo 77.35 325 *eP* **P 05 08 55.5 +0.9**
comp=Z,1.5nm,0.8s,mb4.0
KECS Kecovo 77.35 325 *eP* **P 05 08 55.5 +0.9**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 77.35 325 *eP* **P 05 08 55.5 +0.9**
V18A Ganado 77.36 53 ⇓P **P 05 08 55.0 0.0**
baz=77,SNR=10
U19A Dine' College, 77.40 52 ⇓P **P 05 08 55.6 +0.4**
baz=77,SNR=10
MORC Moravsky Berou 77.55 328 *eP* **P 05 08 56.2 +0.5**
comp=Z,11nm,0.8s,mb4.8
MORC Moravsky Berou 77.55 328 *eP* **P 05 08 56.2 +0.5**
MORC pmax pmax
comp=Z,11nm,0.8s,mb4.8
MORC Moravsky Berou 77.55 328⇑*iP* **P 05 08 56.2 +0.5**
UPC Upice 77.57 329 *eP* **P 05 08 55.4 -0.4**
UPC *e**PP pP 05 09 10.8 +6.4
UPC Upice 77.57 329 *eP* **P 05 08 55.4 -0.4**
UPC *ex* x 05 09 10.8
DPC Dobruska-Polom 77.57 329 *eP* **P 05 08 56.8 +0.9**
DPC *e**PP pP 05 09 07.3 +2.9
DPC MLR MLR
comp=Z,300nm,21.6s,MS4.6
DPC Dobruska-Polom 77.57 329 *eP* **P 05 08 56.8 +0.9**
DPC *ep*P pP 05 09 07.3 +2.9
DPC AMS AMS 05 45 50.0
comp=Z,300nm,21.6s
VOIR 77.61 321 ⇓P **P 05 08 57.1 +1.0**
VOIR 77.61 321⇓*iP* **P 05 08 57.1 +1.0**
DRGR 77.67 323 ⇓P **P 05 08 56.9 +0.5**
DRGR 77.67 323⇓*iP* **P 05 08 56.9 +0.5**
U20A Newcomb 77.75 52 ⇓P **P 05 08 56.1 -1.0**
baz=78,SNR=5.5
S22A 4UR Ranch, Cre 77.80 50 ⇑P **P 05 08 58.0 +0.6**
baz=78,SNR=6.7
VYHS Vyhne 78.03 326 *eP* **P 05 08 58.8 +0.4**
comp=Z,2.9nm,0.9s,mb4.2
VYHS Vyhne 78.03 326 *eP* **P 05 08 58.8 +0.4**
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
VYHS Vyhne 78.03 326 *eP* **P 05 08 58.8 +0.4**
PSZ Pískesteto 78.03 325 *eP* **P 05 08 59.2 +0.7**
comp=Z,6.0nm,0.8s,mb4.6
PSZ Piszkesteto 78.03 325 ⇑P **P 05 08 58.5 0.0**
PSZ Piszkesteto 78.03 325⇑*iP* **P 05 08 58.5 0.0**
CLL Collm 78.04 331 *eP* **P 05 08 58.4 0.0**
comp=Z,26nm,0.8s,mb5.2
CLL Collm 78.04 331⇑*iP* **P 05 08 58.3 -0.1**
comp=Z,26nm,0.8s,mb5.2
CLL *i* pP 05 09 08.3 +1.3
CLL LR LR
comp=Z,400nm,20.3s,MS4.7

CLL	Collm	78.04	331⇑	*i*P	P	05 08 58.3 -0.1
CLL				*i*	pP	05 09 08.3 +1.3
CLL				pmax	pmax	
comp=Z,25nm,0.8s,mb5.2						
CLL				MLR	MLR	
comp=Z,400nm,20.3s,MS4.7						
CLL	Collm	78.04	331⇑	*i*P	P	05 08 58.3 -0.1
comp=Z,26nm,0.8s,mb5.2						
CLL				*i* PcP	PcP	05 09 08.3 +0.2
CLL				*e*		05 09 13.0
CLL				LmV		05 46 00.0
comp=Z,400nm,20.3s						
BRG	Berggiesshubel	78.05	330	*e*P	P	05 08 58.5 0.0
comp=Z,8.0nm,0.9s,mb4.7						
BRG	Berggiesshubel	78.05	330⇓	*i*P	P	05 08 58.2 -0.3
comp=Z,8.2nm,0.9s,mb4.7						
BRG				*i*		05 09 15.0
comp=Z,7.0nm,0.9s						
BRG						
comp=Z,616nm,14.8s						
BRG						
comp=N,364nm,19.5s						
BRG						
comp=E,337nm,19.5s						
BRG	Berggiesshubel	78.05	330⇓	*i*P	P	05 08 58.2 -0.3
BRG				*i*		05 09 15.0
BRG				pmax	pmax	
comp=Z,5.0nm,1.0s,mb4.4						
BRG				MLR	MLR	
comp=Z,4μm,14.8s						
BRG				MLR	MLR	
comp=N,369nm,19.5s,MS4.8						
BRG				MLR	MLR	
comp=E,218nm,19.5s,MS4.8						
PVCC	Panska Ves	78.10	330	*e*P	P	05 08 59.4 +0.6
PVCC				MLR	MLR	
comp=Z,500nm,18.1s,MS4.9						
PVCC	Panska Ves	78.10	330	*e*P	P	05 08 59.4 +0.6
PVCC				AMS	AMS	05 46 50.0
comp=Z,500nm,18.1s						
U21A	Nageezi	78.22	52	⇑P	P	05 08 59.6 -0.1
baz=78,SNR=5.4						
VRAC	Vranov	78.30	328	⇓P	P	05 09 00.8 +0.9
VRAC	Vranov	78.30	328	⇓*i*P	P	05 09 00.8 +0.9
NWAO	Narrogin (SRO)	78.34	203	P	P	05 09 01.2 +1.1
comp=Z,8.5nm,0.8s,mb4.7,baz=42,slow=14,SNR=3.2						
NWAO	Narrogin (SRO)	78.34	203	P	P	05 09 01.2 +1.1
NWAO	Narrogin (SRO)	78.34	203	P	P	05 09 01.2 +1.1
CLZ	Clausthal	78.53	333	*e*P	P	05 09 01.6 +0.5
comp=Z,20nm,0.9s,mb5.0						
CLZ	Clausthal	78.53	333	*e*P	P	05 09 01.6 +0.5
CLZ				pmax	pmax	
comp=Z,20nm,0.9s,mb5.0						
PRU	Pruhonice	78.55	330	*e*P	P	05 09 02.5 +1.2
PRU				MLR	MLR	
comp=Z,300nm,12.9s,MS4.8						
PRU	Pruhonice	78.55	330	*e*P	P	05 09 02.5 +1.2
PRU				AMS	AMS	05 48 10.0
comp=Z,300nm,12.9s						
Y18A	Canyon Day Jun	78.61	55	⇓P	P	05 09 02.4 +0.5
baz=78,SNR=7.9						
X19A	St. Johns	78.62	54	⇑P	P	05 09 02.5 +0.5
baz=78,SNR=11						
GZR	Gura Zlata	78.70	322	⇓P	P	05 09 02.4 +0.2
GZR	Gura Zlata	78.70	322	⇓*i*P	P	05 09 02.4 +0.2
TREC	Trest	78.74	329	AMS	AMS	05 46 30.0
comp=Z,400nm,23.1s						
ECSD	EROS Data Cent	78.91	40	*e*P	P	05 09 03.0 -0.4
comp=Z,29nm,1.4s,mb5.0						
ECSD				*e*		05 09 13.5
IBBN	Ibbenburen	79.00	334	*e*P	P	05 09 03.9 +0.2
comp=Z,22nm,0.5s,mb5.3						
V22A	San Miguel Ran	79.02	51	⇑P	P	05 09 04.0 -0.1
baz=79,SNR=5.6						
X20A	Quemado	79.02	53	⇓P	P	05 09 04.5 +0.4
baz=79,SNR=8.6						
MOX	Moxa	79.09	331	*e*P	P	05 09 04.1 -0.1
comp=Z,17nm,1.2s,mb4.8						
MOX	Moxa	79.09	331	*e*P	P	05 09 04.2 0.0
comp=Z,10.0nm,0.9s,mb4.8						
MOX	Moxa	79.09	331	*e*P	P	05 09 04.1 -0.1
MOX				pmax	pmax	
comp=Z,11nm,1.2s,mb4.7						
NKC	Novy Kostel	79.13	331	AMS	AMS	05 47 30.0
comp=Z,600nm,18.8s						
X21A	Alamocita Cree	79.51	53	⇑P	P	05 09 06.6 -0.3
baz=79,SNR=9.3						
Y20A	Horse Springs,	79.53	54	⇑P	P	05 09 07.3 +0.4
baz=79,SNR=10						
ROTZ	Rotzenmuhle	79.60	331	*e*P	P	05 09 07.6 +0.6
comp=Z,8.0nm,1.0s,mb4.6						
T25A	Trinidad	79.60	49	⇓P	P	05 09 06.7 -0.6
baz=79,SNR=6.2						
KHC	Kasperske Hory	79.61	330	*e*P	P	05 09 07.4 +0.3
comp=Z,15nm,0.8s,mb5.0						
KHC	Kasperske Hory	79.61	330	*e*P	P	05 09 07.6 +0.5
KHC				*e**PP	pP	05 09 18.3 +2.6
KHC				MLR	MLR	
comp=Z,400nm,15.9s,MS4.9						
KHC	Kasperske Hory	79.61	330	*e*P	P	05 09 07.6 +0.5
KHC				*e*pP	pP	05 09 18.3 +2.6
KHC				AMS	AMS	05 48 50.0
comp=Z,400nm,15.9s						
CONA	Conrad Observa	79.69	328⇑	*i*P	P	05 09 08.3 +0.8
comp=Z,8.0nm,0.8s,mb4.7						
GEC2	GERESS Array S	79.80	329	*e*P	P	05 09 08.3 +0.2
comp=Z,6.0nm,1.0s,mb4.5						
GEC2	GERESS Array S	79.80	329	*e*P	P	05 09 08.3 +0.2
GEC2				pmax	pmax	
comp=Z,6.0nm,1.0s,mb4.5						
WET	Wettzell	79.86	330	*e*P	P	05 09 09.0 +0.5
comp=Z,14nm,0.9s,mb4.9						
WET	Wettzell	79.86	330	*e*P	P	05 09 09.0 +0.5
WET				pmax	pmax	
comp=Z,14nm,0.9s,mb4.9						
BUG	Bochum--Univer	79.90	334	*e*P	P	05 09 08.7 +0.1
comp=Z,18nm,1.0s,mb5.0						
LAZ	Ladron	79.93	53	*e*P	P	05 09 10.0 +0.9
comp=Z,4.4nm,1.4s,mb4.2						
Z20A	Nine Sixteen R	79.94	55	⇑P	P	05 09 09.8 +0.6
baz=80,SNR=6.0						
ANMO	Albuquerque	79.95	52	*e*P	P	05 09 09.9 +0.7
comp=Z,4.8nm,0.9s,mb4.4						
ANMO	Albuquerque	79.95	52	*e*P	P	05 09 10.0 +0.8
ANMO				pmax	pmax	
comp=Z,5.0nm,0.9s						
GRA1	Grafenberg Arr	80.02	331	*e*P	P	05 09 09.8 +0.5
comp=Z,27nm,0.8s,mb5.2						
GRF	Grafenberg Arr	80.02	331	*e*P	P	05 09 09.8 +0.5
comp=Z,27nm,0.8s,mb5.2						
GRF	Grafenberg Arr	80.02	331	*e*P	P	05 09 09.8 +0.5
GRF				pmax	pmax	
comp=Z,27nm,0.8s,mb5.2						
GRF	Grafenberg Arr	80.02	331	*e*P	P	05 09 09.8 +0.5
GRF				pmax	pmax	
comp=Z,27nm,0.8s,mb5.2						
GRFO	Grafenberg	80.02	331	*e*P	P	05 09 09.6 +0.2
comp=Z,11nm,0.7s,mb4.9						
GRFO	Grafenberg	80.02	331	*e*P	P	05 09 09.6 +0.3
GRFO				pmax	pmax	
comp=Z,11nm,0.7s,mb4.9						
SCHQ	Schefferville	80.21	18	P	P	05 09 10.9 +0.7
comp=Z,4.3nm,0.8s,mb4.5,baz=39,slow=11,SNR=5.5						
219A	White Tail Can	80.30	56	⇑P	P	05 09 11.4 +0.2
baz=80,SNR=5.7						
Z21A	St. Cloud Mine	80.36	54	⇓P	P	05 09 10.7 -0.7
baz=80,SNR=8.2						
W24A	Lazy 6 Ranch,	80.38	51	⇓P	P	05 09 12.5 +0.9
baz=80,SNR=11						
BNM	Barren Site	80.41	53	*e*P	P	05 09 12.4 +0.7
comp=Z,3.4nm,0.7s,mb4.4						
ASF	Jabal al Asfar	80.62	305	P	P	05 09 12.5 -0.4
comp=Z,1.8nm,0.8s,mb4.0,baz=61,slow=1.9,SNR=5.3						
ASF	Jabal al Asfar	80.62	305	P	P	05 09 12.5 -0.4
Y23A	Lovelace Mesa,	80.90	52	⇑P	P	05 09 14.4 +0.1
baz=81,SNR=5.7						
W25A	X Bar L Ranch,	80.93	51	⇑P	P	05 09 14.7 +0.3
baz=81,SNR=7.2						
MMAI	Mount Meron Ar	80.94	306	P	P	05 09 15.3 +0.8
comp=Z,9.3nm,0.8s,mb4.8,baz=37,slow=8.4,SNR=9.6						
GROS	Grobnik	81.02	327	*i* P	P	05 09 14.7 0.0
GROS	Grobnik	81.02	327	*i* P	P	05 09 14.7 0.0
SOKA	Soboth	81.03	327⇑	*i*P	P	05 09 15.3 +0.5
comp=Z,14nm,0.8s,mb4.9						
RJOB	Jochberg	81.05	329	*e*P	P	05 09 15.5 +0.6
comp=Z,14nm,0.8s,mb4.9						
FUR	Furstenfeldbru	81.27	330	*e*P	P	05 09 16.7 +0.7
comp=Z,29nm,0.9s,mb5.2						
FUR	Furstenfeldbru	81.27	330	*e*P	P	05 09 16.7 +0.7
FUR				pmax	pmax	
comp=Z,29nm,0.9s,mb5.2						
KBA	Koelnbreinsper	81.38	328⇓	*i*P	P	05 09 17.5 +0.8
comp=Z,14nm,1.1s,mb4.8						
BCLA	Clavier	81.41	335	P	P	05 09 16.2 -0.5
comp=Z,8.6nm,1.2s,mb4.6						
LEGS	Legarje	81.51	327	*e*P	P	05 09 17.1 -0.3
LEGS	Legarje	81.51	327	*e*P	P	05 09 17.1 -0.3
STU	Stuttgart	81.52	332	*e*P	P	05 09 17.7 +0.4
comp=Z,18nm,0.8s,mb5.0						
CRES	Cresnjev	81.55	327	*i* P	P	05 09 17.2 -0.4
CRES	Cresnjev	81.55	327	*i* P	P	05 09 17.2 -0.4
X26A	CR and CF Fran	81.78	51	⇓P	P	05 09 18.5 -0.5
baz=82,SNR=5.2						
W27A	Bowe Ranch, En	81.84	50	⇑P	P	05 09 18.5 -0.8
baz=82,SNR=5.5						
WTTA	Wattenberg	81.89	330⇑	*i*P	P	05 09 19.9 +0.6
comp=Z,15nm,0.8s,mb5.0						
MOTA	Moosalm	82.02	330⇓	*i*P	P	05 09 20.3 +0.3
comp=Z,26nm,0.8s,mb5.2						
RETA	Reutte	82.03	330⇓	*i*P	P	05 09 20.6 +0.5
comp=Z,13nm,0.9s,mb4.9						
FETA	Feichten	82.43	330⇑	*i*P	P	05 09 22.4 +0.3
comp=Z,12nm,0.9s,mb4.8,SNR=10						
DAVA	Damuels	82.52	331⇓	*i*P	P	05 09 22.9 +0.3
comp=Z,16nm,0.9s,mb5.1						
Z26A	Caprock	82.59	52	⇑P	P	05 09 23.3 +0.1
baz=82,SNR=9.2						
125A	Gardner Draw,	82.62	52	⇓P	P	05 09 23.6 +0.2
baz=82,SNR=5.4						
ECH	Echery	82.70	333	*e*P	P	05 09 23.2 -0.3
comp=Z,10nm,1.0s,mb4.8						
ECH	Echery	82.70	333	*e*P	P	05 09 23.3 -0.3
ECH				pmax	pmax	
comp=Z,10.0nm,1.0s,mb4.8						
MNTX	Cornudas Mount	82.87	54	⇓P	P	05 09 24.4 -0.4
baz=83,SNR=6.3						
Z27A	Tatum	83.00	51	⇓P	P	05 09 25.1 -0.3
baz=83,SNR=9.5						
EIL	Elat	83.56	304	P	P	05 09 26.5 -1.8
comp=Z,2.8nm,0.4s,mb4.7,baz=25,slow=5.1,SNR=6.9						
EIL	Elat	83.56	304	P	P	05 09 26.5 -1.8
425A	Indio Mountain	83.75	54	⇓P	P	05 09 28.9 -0.4
baz=84						
WMOK	Wichita Mounta	84.48	47	*e*P	P	05 09 32.4 -0.6
comp=Z,5.1nm,1.1s,mb4.6						
WMOK	Wichita Mounta	84.48	47	*e*P	P	05 09 32.4 -0.6
WMOK				pmax	pmax	
comp=Z,5.0nm,1.1s,mb4.6						
328A	Wristen Ranch,	84.63	52	⇑P	P	05 09 33.6 -0.2
baz=84,SNR=8.7						
427A	Hayter Ranch,	84.66	53	⇑P	P	05 09 33.4 -0.5
baz=84,SNR=6.0						
526A	Mary Lane Ranc	84.81	54	⇑P	P	05 09 34.2 -0.5
baz=85,SNR=8.3						
527A	Woodward Ranch	85.04	54	⇑P	P	05 09 35.8 -0.1
baz=85,SNR=7.6						
626A	Big Bend Ranch	85.15	54	⇓P	P	05 09 36.2 -0.2
baz=85,SNR=5.6						
528A	Cox Ranch, San	85.52	53	⇓P	P	05 09 38.3 0.0
baz=85,SNR=6.6						
TXAR	Lajitas Array	85.59	54	P	P	05 09 38.6 0.0
comp=Z,4.7nm,0.6s,mb4.9,baz=300,slow=3.5,SNR=76						
TXAR	Lajitas Array	85.59	54	P	P	05 09 38.6 0.0
TXAR	Lajitas Array	85.59	54	P	P	05 09 38.6 0.0
TXAR				pmax	pmax	
comp=Z,5.0nm,0.6s						
627A	Terlingua Ranc	85.67	54	⇑P	P	05 09 38.4 -0.6
baz=86						
CCM	Cathedral Cave	85.87	41	*e*P	P	05 09 39.5 -0.4
comp=Z,12nm,0.8s,mb5.2						
CCM				*e*		05 09 50.1
CCM	Cathedral Cave	85.87	41	*e*P	P	05 09 39.5 -0.4
CCM				*e*		05 09 50.1
CCM				pmax	pmax	
comp=Z,12nm,0.8s,mb5.2						
628A	Black Gap, Mar	85.95	54	⇑P	P	05 09 39.8 -0.6
baz=86						
MIAR	Mount Ida	87.43	44	*e*P	P	05 09 47.6 +0.1
comp=Z,10nm,0.8s,mb5.1						
MIAR				*e*	pP	05 09 57.6 +1.4
MIAR	Mount Ida	87.43	44	*e*P	P	05 09 47.6 +0.1
MIAR				*e*	pP	05 09 57.6 +1.4
MIAR				pmax	pmax	
comp=Z,10.0nm,0.8s,mb5.1						
SSPA	Standing Stone	89.56	31	*e*P	P	05 09 58.5 +0.9
comp=Z,12nm,0.9s,mb5.2						
LPAZ	La Paz	142.40	57	PKhKP	PKPpre	05 16 24.3
comp=Z,0.5nm,0.7s,baz=260,slow=6.1,SNR=2.5						
LPAZ				PKP	PKPdf	05 16 32.8 -0.3
comp=Z,0.8nm,0.7s,baz=10,slow=5.3,SNR=4.8						
LPAZ	La Paz	142.40	57	PKHKP	PKPpre	05 16 24.3
LPAZ						05 16 32.8
BDFB	Brasilia	151.93	26	PKPbc	PKPbc	05 16 56.3 +0.9
comp=Z,1.1nm,0.3s,baz=233,slow=22,SNR=2.2						
BDFB				PKPab	PKPab	05 17 04.2 -0.3
comp=Z,2.9nm,0.6s,baz=258,slow=5.6,SNR=4.9						
BDFB	Brasilia	151.93	26	PKIKP	PKPbc	05 16 56.3 +0.9
BDFB						05 17 04.2
PLCA	Paso Flores	153.97	99	PKPbc	PKPbc	05 16 59.0 -0.1
comp=Z,2.2nm,1.1s,baz=258,slow=6.1,SNR=4.0						
PLCA				PKPab	PKPab	05 17 10.2 -2.4
comp=Z,2.5nm,0.8s,baz=276,slow=4.2,SNR=4.2						
PLCA	Paso Flores	153.97	99	PKIKP	PKPbc	05 16 59.1 0.0
PLCA						05 17 10.3

*IDC **11** 05:03:07.6±1.7, 41°.46N×143°.95E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.8/24, mbtmp3.8/10, ML3.3/1, Error ellipse: s-maj=46.5km s-min=25.3km az=16.0*
*ISCJB **11** 05:03:12.0±0.6, 41°.67N±0°.04×144°.02E±0°.08, h33km, mb3.8/9, Error ellipse: s-maj=8.9km s-min=5.3km az=28.3*
*MOS **11** 05:03:13.3±1.1, 41°.74N×143°.98E, h44km, mb4.2/1, Error ellipse: s-maj=28.5km s-min=14.3km az=83.3*
*JMA **11** 05:03:13.5±0.2, 41°.81N×144°.04E, h34km±4km, M4.0*
*NEIC **11** 05:03:13.5, 41°.81N×144°.04E, h34km, MG4.0(JMA), After JMA.*

ISC 11 05:03:14.3±0.6, 41°.76N±0°.05×143°.95E±0°.08, h35km, n35, σ0°.83/36, mb3.8/9, 1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	Erimo	0.65	293	P	Pn	05 03 26.4	-0.6
JCH	Churui	0.96	333	P	Pn	05 03 30.7	-0.5
JCH				*e*S	Sn	05 03 43.9	+0.3
JNBK	Urakawa-nobuka	1.03	300	P	Pn	05 03 33.1	+0.8
JOB	Onbets	1.14	356	P	Pn	05 03 33.1	-0.7
JAK	Akkeshi	1.35	24	P	Pn	05 03 35.1	-1.5
JAR	Ashorobuto	1.54	355	P	Pn	05 03 38.1	-1.1
JBT2	Biratori 2	1.56	311	P	Pn	05 03 40.9	+1.4
JFR	Furan	1.72	325	P	Pn	05 03 41.6	-0.2
ASAJ	Asahikawa	2.55	337	Pn	Pn	05 03 53.2	0.0
3.4nm,0.3s,baz=166,slow=10.0,SNR=5.4							
ASAJ	Asahikawa	2.55	337	*e*Pn	Pn	05 03 52.9	-0.3
ASAJ	Asahikawa	2.55	337	P	Pn	05 03 53.2	0.0
ASAJ				pmax	pmax		
comp=Z,3.0nm,0.3s							
YUK	Yuzh-Kuril'sk	2.67	31	⇓*i*P	Pn	05 03 53.2	-1.5
YUK				*i* S	Sn	05 04 26.4	+0.6
YUK				pmax	pmax		
comp=Z,270nm,0.8s							
YUK				pmax	pmax		
comp=N,90nm,0.3s							
YUK				pmax	pmax		
comp=Z,190nm,0.3s							
YUK				pmax	pmax		
comp=E,70nm,0.2s							
YUK				smax			
comp=N,600nm,0.6s							
YUK				smax			
comp=E,310nm,0.6s							
YUK				smax			
comp=N,730nm,0.6s							
YUK				smax			
comp=E,250nm,0.6s							
MAJO	Matsushiro	6.86	222	*e*Pn	Pn	05 04 52.8	+0.4
MAJO	Matsushiro	6.86	222	*e*P	Pn	05 04 52.8	+0.4
MAT	Matsushiro	6.86	222	P	Pn	05 04 52.0	-0.4
MAT				*e*S	Sn	05 06 08.2	-1.1
ZALV	Zalesovo Beam	40.35	308	P	P	05 10 48.2	-0.1
comp=E,1.0nm,0.4s,mb3.9,baz=81,slow=8.9,SNR=3.3							
ZALV	Zalesovo Beam	40.35	308	P	P	05 10 48.2	-0.1
ILAR	Eielson Array	44.47	35	P	P	05 11 21.6	+0.1
comp=E,0.9nm,0.8s,mb3.5,baz=279,slow=9.1,SNR=8.6							
ILAR	Eielson Array	44.47	35	P	P	05 11 21.7	+0.1
BVAR	Borovoye Array	48.95	310	P	P	05 11 58.0	+1.2
comp=E,1.3nm,0.4s,mb4.3,baz=82,slow=7.8,SNR=5.4							
BVAR	Borovoye Array	48.95	310	P	P	05 11 58.0	+1.2
INK	Inuvik	49.29	29	P	P	05 11 59.2	0.0
comp=E,0.8nm,0.5s,mb4.0,baz=304,slow=7.3,SNR=5.1							
INK	Inuvik	49.29	29	P	P	05 11 59.2	0.0
INK	Inuvik	49.29	29	P	P	05 11 59.2	0.0
ARCES	ARCESS Array B	60.28	339	P	P	05 13 19.3	+0.6
comp=E,1.8nm,1.0s,mb4.1,baz=50,slow=8.0,SNR=4.0							
ARCES	ARCESS Array B	60.28	339	P	P	05 13 19.3	+0.6
FINES	FINESS Array B	65.55	332	P	P	05 13 53.4	-0.4
comp=E,2.7nm,0.9s,mb4.3,baz=61,slow=11,SNR=3.4							
FINES	FINESS Array B	65.55	332	P	P	05 13 53.4	-0.4
FINES	FINESS Array B	65.55	332	P	P	05 13 53.4	-0.4
NVAR	Mina Array Bea	70.64	56	P	P	05 14 27.8	+1.6
comp=E,0.1nm,0.4s,mb3.1,baz=295,slow=4.9,SNR=1.6							
PDAR	Pinedale Array	72.99	48	P	P	05 14 40.6	+0.4
comp=E,0.2nm,0.6s,mb3.2,baz=284,slow=0.4,SNR=2.7							
TXAR	Lajitas Array	85.72	54	P	P	05 15 50.5	+0.7
comp=E,0.4nm,0.7s,mb3.7,baz=222,slow=1.7,SNR=3.8							
TXAR	Lajitas Array	85.72	54	P	P	05 15 50.5	+0.7
PLCA	Paso Flores	154.13	99	PKPbc	PKPbc	05 23 07.7	-2.3
comp=E,0.8nm,0.4s,baz=270,slow=6.1,SNR=3.8							
PLCA	Paso Flores	154.13	99	PKIKP	PKPbc	05 23 07.7	-2.3

*IDC **11** 05:05:58.3±0.9, 2°.53S×139°.17E, h0km, mb4.1/7, mb1 4.3/8, mb1mx4.1/16, mbtmp4.2/8, ML4.6/1, Error ellipse: s-maj=43.2km s-min=18.9km az=91.0*
*NEIC **11** 05:06:05.0±1.6, 2°.61S×139°.00E, h46km±15km, mb4.3/1, Error ellipse: s-maj=13.8km s-min=10.6km az=141.0*
*ISCJB **11** 05:06:05.2±1.3, 2°.74S±0°.06×139°.06E±0°.08, h66km±13km, mb4.0/7, Error ellipse: s-maj=14.6km s-min=9.3km az=151.3*
*DJA **11** 05:06:11.2°.76S×138°.73E, h73km, mb4.6/5*

ISC 11 05:06:07.3±1.1, 2°.77S±0°.06×138°.99E±0°.08, h66km±11km, n21, σ1°.06/26, mb4.0/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	Biak	3.28	298	P	Pn	05 06 56.3	0.0
BAKI				S	Sn	05 07 35.0	+0.8
PMG	Port Moresby	10.46	129	*e*Pn	Pn	05 08 33.9	-0.6
KAKA	Kakadu	11.81	213	*e*Pn	Pn	05 08 52.5	-0.5
52nm,0.7s							
KAKA				*e*Sn	Sn	05 11 00.8	-2.5
KAKA	Kakadu	11.81	213	P	Pn	05 08 52.1	-0.9
468nm47nm,1.0s							
COEN	Coen	11.86	160	*e*Pn	Pn	05 08 54.1	+0.5
COEN				*e*Sn	Sn	05 10 53.3	-11
COEN	Coen	11.86	160	P	Pn	05 08 57.4	+3.8
45nm,1.7s							
KNA	Kununurra	16.36	217	P	Pn	05 09 52.6	-0.3
772nm80nm,0.8s							
WB2	Warramunga Arr	17.66	195	*e*Pn	Pn	05 10 09.4	+0.6
WB2				*e*Sn	Sn	05 13 12.1	-13
WRA	Warramunga Arr	17.66	195	P	Pn	05 10 09.4	+0.5
2.1nm,0.3s,baz=19,slow=12,SNR=22							
WRA				S	S	05 13 16.8	-12
0.5nm,0.3s,baz=15,slow=22,SNR=6.8							
FITZ	Fitzroy Crossi	20.09	220	P	P	05 10 36.3	+0.7
3.3nm,0.7s,baz=54,slow=11,SNR=7.8							
FITZ				S	S	05 14 14.2	-3.6
6.7nm,0.8s,baz=197,slow=6.9,SNR=6.0							
FITZ	Fitzroy Crossi	20.09	220	P	P	05 10 36.9	+1.3
15nm,1.2s							
ASAR	Alice Springs	21.35	193	P	P	05 10 50.0	+0.8
5.0nm,0.6s,mb4.0,baz=13,slow=10,SNR=32							
ASAR				S	S	05 14 42.9	+0.4
1.3nm,0.8s,baz=7.8,slow=28,SNR=5.0							
MBWA	Marble Bar	26.19	224	*e*P	P	05 11 37.2	+1.3
5.8nm,0.6s,mb4.2							
MBWA	Marble Bar	26.19	224	P	P	05 11 38.2	+2.4
STKA	Stephens Creek	29.05	175	P	P	05 12 02.8	+1.4
2.4nm,0.5s,mb4.1,baz=0.7,slow=5.0,SNR=6.8							
MKAR	Makanchi Array	70.01	322	P	P	05 17 12.1	+0.1
1.2nm,0.6s,mb3.9,baz=114,slow=8.0,SNR=11							
ZALV	Zalesovo Beam	72.13	330	P	P	05 17 23.5	-1.1
0.7nm,0.4s,mb3.8,baz=99,slow=4.8,SNR=3.1							
BVAR	Borovoye Array	79.52	325	P	P	05 18 06.4	-0.4
0.9nm,0.5s,mb3.8,baz=120,slow=8.8,SNR=6.1							
ILAR	Eielson Array	85.77	24	P	P	05 18 37.3	-1.7
1.4nm,0.6s,mb4.0,baz=266,slow=4.5,SNR=26							
DBIC	Dimbokro	143.77	277	PKP	PKPdf	05 25 35.8	-0.3
3.8nm,1.0s,baz=90,slow=3.0,SNR=3.6							
LPAZ	La Paz	147.18	126	PKPbc	PKPbc	05 25 45.0	+1.0
0.8nm,0.7s,baz=150,slow=9.7,SNR=4.9							

*IDC **11** 05:29:45.2±1.1, 41°.56N×144°.58E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/22, mbtmp3.5/7, ML3.1/1, MS3.6/2, Ms1 3.6/2, ms1mx2.6/37, Error ellipse: s-maj=28.9km s-min=25.1km az=59.0*
*ISCJB **11** 05:29:48.9±0.9, 41°.69N±0°.07×144°.42E±0°.10, h33km, mb3.4/6, Error ellipse: s-maj=10.3km s-min=10.1km az=12.4*
*JMA **11** 05:29:48.7±0.2, 41°.70N×144°.35E, h25km±2km, M3.6*
*NEIC **11** 05:29:48.8, 41°.70N×144°.35E, h25km, MG3.6(JMA), After JMA.*

ISC 11 05:29:50.2±0.8, 41°.71N±0°.06×144°.32E±0°.10, h35km, n16, σ1°.22/18, mb3.4/6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	0.92	290	*e*Pn	Pn	05 30 06.5	-0.2
JEM	Erimo	0.92	290	P	Pn	05 30 06.6	-0.1
JCH	Churui	1.15	322	P	Pn	05 30 08.9	-0.9
JCH				*e*S	Sn	05 30 23.4	-0.9
JOB	Onbets	1.25	343	P	Pn	05 30 12.1	+1.0
JNBK	Urakawa-nobuka	1.30	296	P	Pn	05 30 12.0	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK04				⇑S	Sg	05 37 56.6	+2.2
MK09	Makanchi Array	0.48	244	⇑P	Pg	05 37 49.5	+1.1
MK09				⇑S	Sg	05 37 56.7	+2.0
MK08	Makanchi Array	0.48	241	⇑P	Pg	05 37 49.8	+1.4
MK08				⇓S	Sg	05 37 57.1	+2.3

*NIED **11** 05:44:00, 41°.70N×144°.20E, h32km, Mw3.9 Best double couple: $M_0$6.74000×10^{14} NP1:ϕ_s354.00000°, δ86.00000°, λ-24.00000°. NP2:ϕ_s86.00000°, δ66.00000°, λ-175.00000°.*
*IDC **11** 05:44:05.0±2.6, 41°.52N×143°.84E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.7/21, mbtmp3.8/6, ML3.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/33, Error ellipse: s-maj=47.5km s-min=35.9km az=165.0*
*ISCJB **11** 05:44:07.3±1.5, 41°.63N±0°.07×144°.4E±0°.2, h45km±10km, mb3.7/5, Error ellipse: s-maj=20.9km s-min=10.3km az=21.7*
*JMA **11** 05:44:09.1±0.2, 41°.73N×144°.23E, h31km±3km, M3.9*
*NEIC **11** 05:44:09.1, 41°.73N×144°.23E, h31km, MG3.9(JMA), After JMA.*
ISC 11 05:44:09.6±1.6**, 41°.71N**±0°.09×**144°.3E**±0°.2**, h39**km±11km**, n17, σ0s.72**/19**, mb3.7**/5**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	0.89	290	ePg	Pn	05 44 25.6	+0.1
JEM	Erimo	0.89	290	P	Pn	05 44 25.3	-0.2
JCH	Churui	1.12	323	P	Pn	05 44 28.4	-0.4
JOB	Onbets	1.23	345	P	Pn	05 44 30.2	-0.1
JNBK	Urakawa-nobuka	1.27	297	P	Pn	05 44 31.1	+0.4
JAK	Akkeshi	1.32	14	P	Pn	05 44 31.3	-0.2
JAK				eS	Sn	05 44 47.8	0.0
JAR	Ashorobuto	1.62	347	P	Pn	05 44 35.2	-0.5
JAR				eS	Sn	05 44 55.3	0.0
ASAJ	Asahikawa	2.70	333	Pn	Pn	05 44 50.6	+0.2
	3.9nm,0.3s,baz=212,slow=11,SNR=9.9						
ASAJ				Sn	Sn	05 45 25.4	+3.6
	6.2nm,0.3s,baz=347,slow=30,SNR=6.2						
ASAJ	Asahikawa	2.70	333	ePn	Pn	05 44 50.8	+0.4
MAJO	Matsushiro	6.99	224	ePn	Pn	05 45 49.7	+0.3
SONM	Songino Array	27.37	296	P	P	05 49 48.8	-2.1
	0.7nm,0.7s,mb3.3,baz=101,slow=7.5,SNR=3.8						
TGY	Tagaytay City	34.16	223	LR	LR	06 05 05.6	
	comp=Z,20nm,19.3s,baz=214,slow=37						
ZALV	Zalesovo Beam	40.57	308	P	P	05 51 45.5	+0.5
	0.8nm,0.3s,mb3.8,baz=81,slow=9.2,SNR=4.2						
MK31	Makanchi Array	43.67	299	eP	P	05 52 09.8	-0.5
MKAR	Makanchi Array	43.67	299	P	P	05 52 10.9	+0.6
	0.9nm,0.7s,mb3.6,baz=75,slow=9.2,SNR=5.7						
ILAR	Eielson Array	44.38	35	P	P	05 52 19.6	+3.9
	0.6nm,0.9s,mb3.3,baz=272,slow=8.0,SNR=4.1						
FINES	FINESS Array B	65.71	332	P	P	05 54 50.3	+0.6
	2.9nm,0.9s,mb4.3,baz=50,slow=13,SNR=4.2						

*IDC **11** 05:44:11.1±1.9, 4°.87S×153°.28E, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.0/18, mbtmp4.1/8, Error ellipse: s-maj=63.8km s-min=22.6km az=121.0*
*NEIC **11** 05:44:17.2±1.5, 4°.86S×153°.07E, h35km, mb4.5/3, Error ellipse: s-maj=48.8km s-min=14.6km az=122.0*
ISC 11 05:44:18.6±2.8**, 4°.9S**±0°.2×**153°.1E**±0°.3**, h50**km±20km**, n12, σ1s.05**/14**, mb4.1**/10**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.38	233	Pn	Pn	05 46 03.3	-0.6
PMG				eSn	Sn	05 47 27.1	+0.7
KAKA	Kakadu	21.82	248	eP	P	05 49 05.1	-1.8
	8.5nm,0.4s,mb4.5						
WB2	Warramunga Arr	23.58	229	eP	P	05 49 25.5	+0.5
WRA	Warramunga Arr	23.59	229	P	P	05 49 25.4	+0.3
	5.1nm,0.5s,mb4.2,baz=52,slow=10,SNR=72						
WRA				S	S	05 53 34.6	-1.2
	0.2nm,0.6s,baz=42,slow=17,SNR=2.5						
ASAR	Alice Springs	26.26	223	P	P	05 49 51.0	+1.7
	0.9nm,0.5s,mb3.6,baz=57,slow=8.5,SNR=15						
FITZ	Fitzroy Crossi	29.86	242	P	P	05 50 20.5	-1.1
	2.1nm,0.3s,mb4.3,baz=58,slow=5.8,SNR=23						
MBWA	Marble Bar	36.17	240	eP	P	05 51 16.3	-0.3
	9.3nm,1.1s,mb4.6						
CMAR	Chiang Mai Arr	58.21	295	P	P	05 54 08.0	-0.2
	0.9nm,0.4s,mb4.2,baz=116,slow=6.5,SNR=5.9						
MKAR	Makanchi Array	80.62	319	P	P	05 56 27.3	+1.3
	0.2nm,0.5s,mb3.3,baz=89,slow=7.8,SNR=2.5						
ZALV	Zalesovo Beam	81.43	326	P	P	05 56 30.8	+0.6
	1.2nm,0.5s,mb4.1,baz=108,slow=4.7,SNR=3.1						
ILAR	Eielson Array	82.17	22	P	P	05 56 32.0	-1.8
	0.6nm,0.7s,mb3.6,baz=254,slow=5.5,SNR=7.7						
BVAR	Borovoye Array	89.53	323	P	P	05 57 11.4	+0.9
	1.0nm,0.6s,mb4.3,baz=108,slow=3.4,SNR=4.6						

*NEIC **11** 05:57:30.0, 36°.07S×71°.94W, h70km, MG3.5(GUC), After GUC.*
GUC 11 05:57:30.0±0.9**, 36°.07S×71°.94W, h70**km±8km**, ML3.5, 2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	0.55	191	eP	Pn	05 57 43.3	0.0
CCHI				eS	Sn	05 57 53.2	+0.2
CCHI	Chillan	0.55	191	eP	Pn	05 57 43.3	0.0
CCHI				eS	Sn	05 57 53.2	+0.2
CNCO	Chanco	0.58	304	⇓eP	Pn	05 57 43.7	+0.1
CNCO				eS	Sn	05 57 53.7	+0.1
CNCO	Chanco	0.58	304	⇓eP	Pn	05 57 43.7	+0.1
CNCO				eS	Sn	05 57 53.7	+0.1
TALC	Talca	0.71	21	eP	Pn	05 57 42.7	-2.3
TALC				i S	Sn	05 57 54.8	-1.3
TALC	Talca	0.71	21	eP	Pn	05 57 42.7	-2.3
TALC				i S	Sn	05 57 54.8	-1.3
TALC				AML	AML	05 57 56.4	
	comp=E,7μm,0.1s						
LNV	Longovilo	2.15	12	eP	Pn	05 58 03.7	0.0
LNV	Longovilo	2.15	12	eP	Pn	05 58 03.7	0.0
CACH	El Canelo	2.23	30	eP	Pn	05 58 05.8	+1.0
CACH	El Canelo	2.23	30	eP	Pn	05 58 05.8	+1.0
LMEL	Las Melosas	2.63	33	eP	Pn	05 58 11.2	+1.0
LMEL				eS	Sn	05 58 42.3	+1.2
LMEL	Las Melosas	2.63	33	eP	Pn	05 58 11.2	+1.0
LMEL				eS	Sn	05 58 42.3	+1.2
LMEL				AML	AML	05 58 48.5	
	comp=N,113nm,0.0s						
ANTU	Antumapu	2.71	24	eP	Pn	05 58 12.1	+0.8
ANTU				S	Sn	05 58 42.2	-0.9
ANTU	Antumapu	2.71	24	eP	Pn	05 58 12.1	+0.8
ANTU				eS	Sn	05 58 42.2	-0.9
ANTU				AML	AML	05 58 54.0	
	comp=E,153nm,0.7s						
CLCH	Cerro Calan	2.90	24	eP	Pn	05 58 14.5	+0.6
PEL	Peldehue	3.09	20	eP	Pn	05 58 17.4	+0.9
PEL				AML	AML	05 59 10.1	
	comp=E,125nm,0.3s						
ROCH	El Roble	3.18	14	eP	Pn	05 58 17.8	+0.2
ROCH				eS	Sn	05 58 54.7	+0.3
ROCH				AML	AML	05 59 05.1	
	comp=N,118nm,0.6s						

JMA 11 06:06:02.9±0.4**, 31°.33N×140°.32E, h52**km**, M3.9, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	3.36	9	P	Pn	06 06 55.6	+2.7
BSO1				eS	Sn	06 07 32.4	+0.9
BSO2	Boso 2	3.43	6	eS	Sn	06 07 33.6	+0.4
BSO3	Boso 3	3.47	3	eS	Sn	06 07 34.8	+0.7
BSO4	Boso 4	3.65	0	eS	Sn	06 07 39.6	+1.0
CBIJ	Chichi jima	4.52	158	P	Pn	06 07 09.8	+1.0
CBIJ				eS	Sn	06 08 00.3	+0.2
JRY	Ryogami san	4.82	346	P	Pn	06 07 16.2	+3.3
JAG	Ashikaga	5.13	352	P	Pn	06 07 18.1	+0.9
JAG				eS	Sn	06 08 12.7	-2.4
JHO	Hitachi	5.27	2	P	Pn	06 07 19.9	+0.8
JHO				eS	Sn	06 08 12.8	-5.7

IDC 11 06:10:20.1±2.0**, 1°.28N×126°.05E, h0**km**, mb3.2**/3**, mb1 3.5**/4**, mb1mx3.4**/18**, mbtmp3.3**/4**, ML3.2**/1**, Error ellipse: s-maj=116.5km s-min=25.9km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.26	181	P	Pn	06 14 45.4	-1.8
	0.1nm,0.3s,baz=339,slow=14,SNR=3.5						
WRA	Warramunga Arr	22.60	159	P	P	06 15 22.9	+0.4
	0.4nm,0.5s,baz=338,slow=11,SNR=8.5						
ASAR	Alice Springs	25.95	163	P	P	06 15 54.5	+0.2
	0.3nm,0.4s,baz=353,slow=7.5,SNR=6.7						
MKAR	Makanchi Array	59.19	326	P	P	06 20 23.0	+0.1
	0.2nm,0.5s,baz=116,slow=6.8,SNR=3.8						

IDC 11 06:15:02.2±3.4**, 30°.21S×138°.60E, h0**km**, mb1 2.9**/3**, mb1mx2.9**/14**, mbtmp2.7**/3**, ML2.5**/3**, Error ellipse: s-maj=92.3km s-min=14.9km az=45.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.06	124	Pn	Pn	06 15 51.4	-0.5
	0.2nm,0.3s,baz=331,slow=10,SNR=4.4						
STKA				Pg	Pg	06 15 59.7	-1.2
	0.6nm,0.3s,baz=292,slow=15,SNR=9.4						
STKA				Sn	Sn	06 16 30.0	+0.8
	1.9nm,0.3s,baz=349,slow=11,SNR=7.5						
STKA				Lg		06 16 38.0	
	2.0nm,0.3s,baz=203,slow=22,SNR=8.8						
ASAR	Alice Springs	7.75	326	Pn	Pn	06 16 56.6	+0.4
	0.1nm,0.3s,baz=148,slow=14,SNR=4.8						
ASAR				Sn	Sn	06 18 25.7	+1.0
	0.1nm,0.3s,baz=153,slow=19,SNR=4.4						
WRA	Warramunga Arr	10.93	338	Pn	Pn	06 17 40.3	+0.4
	0.1nm,0.3s,baz=153,slow=11,SNR=3.7						
WRA				Sn	Sn	06 19 41.6	-1.3
	0.0nm,0.3s,baz=162,slow=24,SNR=3.6						

IDC 11 06:27:11.5±1.9**, 1°.75N×127°.25E, h0**km**, mb3.7**/4**, mb1 3.8**/5**, mb1mx3.6**/18**, mbtmp3.7**/5**, ML3.5**/1**, Error ellipse: s-maj=105.2km s-min=26.2km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.79	185	P	Pn	06 31 44.9	-0.1
	0.1nm,0.3s,baz=38,slow=11,SNR=6.2						
WRA	Warramunga Arr	22.65	162	P	P	06 32 14.8	+0.4
	1.3nm,0.3s,baz=339,slow=11,SNR=29						
ASAR	Alice Springs	26.08	166	P	P	06 32 46.5	-0.4
	0.5nm,0.5s,baz=352,slow=7.2,SNR=11						
STKA	Stephens Creek	36.10	159	P	P	06 34 14.5	-0.7
	1.6nm,0.6s,baz=336,slow=12,SNR=4.1						
MKAR	Makanchi Array	59.47	326	P	P	06 37 16.6	+0.3
	0.1nm,0.4s,baz=116,slow=8.6,SNR=2.4						

*NEIC **11** 06:31:17.7, 32°.47S×71°.71W, h27km, ML3.4(GUC), After GUC.*
GUC 11 06:31:17.7±0.6**, 32°.47S×71°.71W, h27**km±3km**, MD4.0, ML3.4, 4C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.61	17	⇓iP	Pb	06 31 25.8	-4.0
CHNG				i S	Sb	06 31 34.5	-3.5
ROCH	El Roble	0.78	131	⇓iP	Pb	06 31 32.4	-0.2
ROCH				i S	Sb	06 31 43.4	+0.6
JACH	Jahuel	0.97	103	⇑iP	Pn	06 31 35.4	-0.1
JACH				i S	Sb	06 31 48.4	0.0
JACH	Jahuel	0.97	103	⇑iP	Pn	06 31 35.4	-0.1
JACH				i S	Sb	06 31 48.4	0.0
PEL	Peldehue	1.10	128	⇓eP	Pn	06 31 37.2	-0.1
PEL				i S	Sn	06 31 51.9	+0.3
PEL				AML	AML	06 31 54.3	
	comp=E,2μm,0.3s						
CLCH	Cerro Calan	1.36	133	eP	Pn	06 31 41.3	+0.4
CLCH				eS	Sn	06 31 59.4	+1.4
LACH	Col Las Americ	1.40	135	eP	Pn	06 31 41.9	+0.4
LACH				i S	Sn	06 32 00.2	+1.2
FSR	Penalolen	1.42	136	eP	Pn	06 31 42.4	+0.7
FSR				i S	Sn	06 32 00.8	+1.3
FSR	Penalolen	1.42	136	eP	Pn	06 31 42.4	+0.7
FSR				i S	Sn	06 32 00.8	+1.3
CMCH	Combarbala	1.42	25	⇑eP	Pn	06 31 42.3	+0.5
CMCH				i S	Sn	06 32 01.1	+1.5
CMCH	Combarbala	1.42	25	⇑eP	Pn	06 31 42.3	+0.5
CMCH				i S	Sn	06 32 01.1	+1.5
CMCH				AML	AML	06 32 07.2	
	comp=E,2μm,0.8s						
ANTU	Antumapu	1.43	141	eP	Pn	06 31 42.5	+0.6
ANTU				eS	Sn	06 32 01.2	+1.5
ANTU	Antumapu	1.43	141	eP	Pn	06 31 42.5	+0.6
ANTU				eS	Sn	06 32 01.2	+1.5
ANTU				AML	AML	06 32 06.3	
	comp=E,565nm,0.6s						
FCH	Farellones	1.47	126	⇓iP	Pn	06 31 39.4	-3.0
FCH				i S	Sn	06 31 59.4	-1.4
FCH				AML	AML	06 32 00.4	
	comp=E,558nm,0.1s						
LNV	Longovilo	1.51	170	P	Pn	06 31 42.8	-0.1
LNV	Longovilo	1.51	170	eP	Pn	06 31 42.8	-0.1
PCH	Pirque	1.53	139	eP	Pn	06 31 44.2	+0.9
PCH				i S	Sn	06 32 03.9	+1.7
PCH	Pirque	1.53	139	eP	Pn	06 31 44.2	+0.9
PCH				i S	Sn	06 32 03.9	+1.7
SJCH	San Jose de Ma	1.64	136	eP	Pn	06 31 45.9	+1.2
SJCH	San Jose de Ma	1.64	136	eP	Pn	06 31 45.9	+1.2
LMEL	Las Melosas	1.87	138	eP	Pn	06 31 49.5	+1.6
LMEL				eS	Sn	06 32 14.1	+3.4
LMEL	Las Melosas	1.87	138	eP	Pn	06 31 49.5	+1.6
LMEL				eS	Sn	06 32 14.1	+3.4
CACH	El Canelo	1.89	151	eP	Pn	06 31 50.0	+1.7
CACH	El Canelo	1.89	151	eP	Pn	06 31 50.0	+1.7

*CSEM **11** 06:33:31.9±0.1, 45°.87N×10°.58E, h15km, ML2.6/4, Error ellipse: s-maj=2.9km s-min=2.0km az=85.0*
*ZUR **11** 06:33:32.3, 45°.86N×10°.53E, h9km, ML1.7/3*
*VIE **11** 06:33:35.5±0.9, 46°.05N×10°.48E, h8km, mb1.3/1, ML2.1/2, Error ellipse: s-maj=6.7km s-min=2.6km az=157.0 25 km WSW of Pinzolo*
ROM 11 06:33:31.7±0.3**, 45°.86N×10°.58E, h8**km±2km**, Md1.9**/4**, Ml1.9**/3**, 3D, Error ellipse: s-maj=6.0km s-min=1.8km az=97.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MABI	Malga Bissina	0.20	347	Pg	Pg	06 33 36.9	+1.1
MABI				Sg	Sg	06 33 39.8	+1.2
	268nm,0.1s						
MABI	Malga Bissina	0.20	347	Pg	Pg	06 33 36.9	+1.1
MABI				Sg	Sg	06 33 39.8	+1.2
	268nm,0.1s						
SALO	Salr	0.24	189	Pg	Pg	06 33 37.1	+0.5
SALO				Sg	Sg	06 33 41.6	+1.7
	221nm,0.2s						
SALO	Salr	0.24	189	Pg	Pg	06 33 37.1	+0.5
SALO				Sg	Sg	06 33 41.6	+1.7
	221nm,0.2s						
MDI	Monti di Nese	0.61	263	Pg	Pg	06 33 44.4	+0.9
MDI				Sg	Sg	06 33 52.7	+1.2
MDI	Monti di Nese	0.61	263	Pg	Pg	06 33 44.4	+0.9
MDI				Sg	Sg	06 33 52.7	+1.2
BRMO	Bormio	0.63	347	Pg	Pg	06 33 44.9	+1.0
BRMO				Sg	Sg	06 33 52.8	+0.6
	18nm,0.2s						
BRMO	Bormio	0.63	347	Pg	Pg	06 33 44.9	+1.0
BRMO				Sg	Sg	06 33 52.8	+0.6
	18nm,0.2s						
FUORN	Ofenpass-Fuorn	0.79	344	⇓iPg	Pg	06 33 47.4	+0.5
	40nm,0.4s						
FUORN	Ofenpass-Fuorn	0.79	344	Pg	Pg	06 33 47.5	+0.6
FUORN				Sg	Sg	06 33 58.0	+0.8
FUORN	Ofenpass-Fuorn	0.79	344	Pg	Pg	06 33 47.5	+0.6
FUORN				Sg	Sg	06 33 58.0	+0.8
VDL	Val di Lei	1.00	309	ePg	Pg	06 33 51.3	+0.3
DAVOX	Davos/Dischmat	1.04	332	ePg	Pg	06 33 52.1	+0.4
	28nm,0.4s						
DAVOX	Davos/Dischmat	1.04	332	ePg	Pg	06 33 52.1	+0.4
	28nm,0.4s						
MUGIO	Muggio	1.08	274	ePg	Pg	06 33 52.3	-0.1
	31nm,0.4s						
MUGIO	Muggio	1.08	274	ePg	Pg	06 33 52.3	-0.1
	31nm,0.4s						
FETA	Feichten	1.17	5	⇓iPg	Pg	06 33 54.4	+0.3
FETA				⇓iSg	Sg	06 34 08.2	-1.0
	4.8nm,0.2s						
FETA	Feichten	1.17	5	Pg	Pg	06 33 54.4	+0.3
FETA				Sg	Sg	06 34 08.2	-1.0
	4.8nm,0.2s						

*NIED **11** 06:36:00, 41°.70N×144°.30E, h23km, Mw3.9 Best double couple: $M_0$8.50000×10^{14} NP1:ϕ_s19.00000°, δ75.00000°, λ70.00000°. NP2:ϕ_s254.00000°, δ25.00000°, λ142.00000°.*
*IDC **11** 06:36:48.5±1.2, 41°.50N×143°.64E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/20, mbtmp3.6/7, Error ellipse: s-maj=34.9km s-min=24.6km az=76.0*
*ISCJB **11** 06:36:51.0±1.6, 41°.73N±0°.10×144°.4E±0°.1, h49km±13km, mb3.5/7, Error ellipse: s-maj=20.0km s-min=12.8km az=41.2*
*JMA **11** 06:36:50.5±0.2, 41°.69N×144°.30E, h27km±2km, M3.6*
*NEIC **11** 06:36:50.6, 41°.69N×144°.30E, h27km, MG3.6(JMA), After JMA.*
ISC 11 06:36:51.1±3.4**, 41°.72N**±0°.07×**144°.3E**±0°.1**, h31**km±24km**, n14, σ0s.33**/16**, mb3.5**/7**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	0.93	289	ePg	Pn	06 37 08.2	+0.1
JEM	Erimo	0.93	289	P	Pn	06 37 07.9	-0.1
JCH	Churui	1.15	321	P	Pn	06 37 10.8	-0.3
JCH				eS	Sn	06 37 25.9	+0.1
JOB	Onbets	1.24	343	P	Pn	06 37 12.4	+0.1
JAK	Akkeshi	1.30	12	P	Pn	06 37 12.8	-0.3
JAK				eS	Sn	06 37 29.7	+0.2
JNBK	Urakawa-nobuka	1.31	296	P	Pn	06 37 13.7	+0.5
ASAJ	Asahikawa	2.71	332	ePn	Pn	06 37 32.8	+0.2
SONM	Songino Array	27.42	296	P	P	06 42 33.3	-0.5
	0.6nm,0.4s,mb3.4,baz=91,slow=10,SNR=5.2						
ZALV	Zalesovo Beam	40.60	308	P	P	06 44 27.3	-0.4
	0.7nm,0.4s,mb3.7,baz=79,slow=7.5,SNR=2.5						
MKAR	Makanchi Array	43.71	299	P	P	06 44 53.0	-0.1
	0.3nm,0.4s,mb3.4,baz=83,slow=9.9,SNR=4.1						
ILAR	Eielson Array	44.34	35	P	P	06 45 04.5	+6.6
	0.2nm,0.5s,mb3.1,baz=241,slow=6.2,SNR=5.3						
WRA	Warramunga Arr	62.05	191	P	P	06 47 08.2	-0.3
	0.2nm,0.4s,mb3.6,baz=8.1,slow=6.8,SNR=5.2						
FINES	FINESS Array B	65.72	332	P	P	06 47 32.4	0.0
	0.7nm,0.5s,mb4.0,baz=70,slow=8.0,SNR=3.8						
ASAR	Alice Springs	65.77	190	P	P	06 47 33.8	+0.8
	0.2nm,0.6s,mb3.3,baz=359,slow=4.6,SNR=3.3						

*DDA **11** 07:04:42.1, 36°.93N×28°.01E, h7km±4km, Md2.6*
*CSEM **11** 07:04:42.4±0.4, 37°.02N×28°.39E, h15km, MD2.4, Error ellipse: s-maj=8.1km s-min=6.5km az=37.0*
ISK 11 07:04:43.9, 37°.09N×28°.25E, h17km**, MD2.4, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.06	32	ePG	Pg	07 04 47.1	0.0
YER				eSG	Sg	07 04 49.8	+0.6
YER	Yerkesik	0.06	32	ePg	Pg	07 04 47.1	+0.1
YER				eSg	Sg	07 04 49.8	+0.6
TURN	Turunc	0.36	127	i P	Pg	07 04 47.6	-3.7
TURN				i S	Sg	07 04 50.9	-5.4
TURN	Turunc	0.36	127	i P	Pg	07 04 47.6	-3.7
TURN				i S	Sg	07 04 50.9	-5.4
MLSB	Milas	0.43	299	ePG	Pg	07 04 53.0	+0.4
MLSB				eSG	Sg	07 04 59.6	+1.2
MLSB	Milas	0.43	299	ePg	Pg	07 04 53.0	+0.4
MLSB				eSg	Sg	07 04 59.6	+1.1
BDRM	Kayabasi	0.64	268	i P	Pg	07 04 51.3	-5.2
BDRM				i S	Sg	07 05 05.5	+0.4
AYDN	Tasoluk	0.64	333	i P	Pg	07 04 57.7	+1.2
AYDN				i S	Sg	07 05 07.2	+2.0
AYDN	Tasoluk	0.64	333	i P	Pg	07 04 57.7	+1.1
AYDN				i S	Sg	07 05 07.2	+2.1
DAT	Datca	0.64	236	ePG	Pg	07 04 57.4	+0.8
DAT	Datca	0.64	236	ePg	Pg	07 04 57.4	+0.8
DAT				eSg	Sg	07 05 06.5	+1.4
BODT	Bodrum	0.75	268	ePG	Pg	07 04 58.7	+0.2
BODT	Bodrum	0.75	268	ePg	Pg	07 04 58.7	+0.2

IDC 11 07:07:18.0±1.6**, 1°.99N×127°.53E, h0**km**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.8**/18**, mbtmp3.9**/5**, Error ellipse: s-maj=92.6km s-min=22.0km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.05	185	P	P	07 11 53.8	+0.8
	0.6nm,0.6s,baz=358,slow=5.6,SNR=6.7						
WRA	Warramunga Arr	22.80	163	P	P	07 12 22.6	+0.1
	3.2nm,0.5s,baz=342,slow=11,SNR=37						
ASAR	Alice Springs	26.25	167	P	P	07 12 54.3	-0.8
	1.0nm,0.5s,baz=349,slow=7.3,SNR=25						
STKA	Stephens Creek	36.23	160	P	P	07 14 23.1	+0.2
	0.4nm,0.3s,baz=340,slow=16,SNR=2.9						
MKAR	Makanchi Array	59.43	325	P	P	07 17 22.7	+0.2
	0.9nm,0.4s,baz=120,slow=8.4,SNR=9.0						

BJI 11 07:16:37.9, 43°.81N×86°.65E, h13km**, ML2.8**/6**, 3C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	0.76	89	Pg	Pg	07 16 52.0	-0.6
WMQ				Sg	Sg	07 17 03.8	+1.3
WMQ				smax			
	comp=N,160nm,0.4s						
WMQ				smax			
	comp=E,140nm,0.4s						
MK31	Makanchi Array	4.29	316	Pn	Pn	07 17 43.0	+0.3
	comp=E,0.5nm,0.3s,baz=135,slow=15,SNR=54						
MK31				⇑Pg	Pg	07 17 50.7	-9.2
	comp=E,0.6nm,0.3s,baz=134,slow=17,SNR=4.3						
MK31				⇑Sn	Sn	07 18 33.0	+0.5
	comp=E,0.8nm,0.2s,baz=136,slow=25,SNR=6.4						
MK31				⇑Lg		07 18 44.3	
	comp=E,2.2nm,0.3s,baz=132,slow=25,SNR=7.7						
KURK	Kurchatov	8.80	325	⇓Lg		07 21 09.3	
	comp=E,3.7nm,0.8s						

IDC 11 07:20:19.0±1.3**, 8°.78S×159°.59E, h0**km**, mb3.7**/5**, mb1 4.0**/6**, mb1mx3.8**/18**, mbtmp3.8**/6**, ML3.8**/1**, Error ellipse: s-maj=24.8km s-min=16.8km az=48.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.74	152	Pn	Pg	07 20 37.2	+4.0
	161nm,0.3s,baz=138,slow=6.9,SNR=36						
HNR				Sn	Sg	07 20 49.8	+7.0
	497nm,0.3s,baz=246,slow=22,SNR=11						
CTA	Charters Tower	17.11	227	Pn	Pn	07 24 19.2	-0.6
	0.2nm,0.3s,baz=60,slow=12,SNR=4.9						
WRA	Warramunga Arr	26.82	243	P	P	07 26 00.8	-0.4
	0.5nm,0.5s,baz=73,slow=9.7,SNR=8.7						
STKA	Stephens Creek	28.42	214	P	P	07 26 13.9	-1.6
	1.0nm,0.8s,baz=36,slow=8.7,SNR=2.4						
ASAR	Alice Springs	28.69	236	P	P	07 26 19.8	+1.8
	0.3nm,0.8s,baz=66,slow=11,SNR=2.8						
FITZ	Fitzroy Crossi	34.24	251	P	P	07 27 07.1	+0.2
	0.9nm,0.6s,baz=97,slow=7.3,SNR=6.4						
ILAR	Eielson Array	83.40	20	P	P	07 32 47.6	-0.2
	0.5nm,0.5s,baz=254,slow=5.3,SNR=20						

DJA 11 07:40:05, 8°.30S×108°.31E, h36km**, MLv3.7**/9**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.89	326	P	Pn	07 40 21.2	+0.2
CISI				S	Sn	07 40 32.7	+0.1
CLJI	Cilicap	0.91	50	P	Pn	07 40 22.2	+1.0
CLJI				S	Sn	07 40 35.1	+2.0
LEM	Lembang	1.62	335	P	Pn	07 40 32.5	+1.5
BJII	Banjamegara	1.69	55	P	Pn	07 40 33.1	+1.1
UGM	Wanagama	2.23	80	P	Pn	07 40 40.7	+1.3
UGM				S	Sn	07 41 07.7	+2.0
SMRI	Semarang	2.45	60	P	Pn	07 40 44.9	+2.4
PCJI	Pacitan	2.84	88	P	Pn	07 40 50.0	+2.1

PCJI				S	Sn	07 41 21.4	+0.5
XMIS	**Christmas Isla**	**3.40**	**230**	P	Pn	07 40 55.9	+0.3
PWJI	**Pagerwojo**	**3.47**	**86**	P	Pn	07 40 58.5	+2.0
PWJI				S	Sn	07 41 37.7	+1.3

NEIC ***11*** *07:40:37.8, 33°.20S×72°.06W, h15km, ML2.5(GUC), After GUC.*
GUC ***11*** *07:40:37.8±0.5, 33°.20S×72°.06W, h15km±348km, MD3.6, ML2.5*
ISC 11 07:40:35.9±1.3, 33°.11S±0°.05×72°.11W±0°.08, h15km±6km, n26, σ0°82/50, 8C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCH	**Las Cruces**	**0.58**	**129**	⇑*i*P	**Pg**	**07 40 47.3**	**+0.1**
LCCH				*i* S	**Sg**	**07 40 54.5**	**-0.5**
LCCH	**Las Cruces**	**0.58**	**129**	⇑*i*P	**Pg**	**07 40 47.3**	**+0.1**
LCCH				*i* S	**Sg**	**07 40 54.5**	**-0.5**
ROCH	**El Roble**	**0.94**	**82**	⇓*i*P	**Pb**	**07 40 54.3**	**+0.5**
ROCH				*i* S	**Sb**	**07 41 07.1**	**+1.1**
ROCH				AML	AML	07 41 09.6	
	comp=E,197nm,0.8s						
TACH	**Talagante**	**1.12**	**119**	⇑*i*P	**Pb**	**07 40 56.2**	**-0.8**
TACH				*e*S	**Sb**	**07 41 09.9**	**-1.5**
TACH	**Talagante**	**1.12**	**119**	⇑*i*P	**Pb**	**07 40 56.2**	**-0.8**
TACH				*e*S	**Sb**	**07 41 09.9**	**-1.5**
PEL	**Peldehue**	**1.20**	**92**	⇓*i*P	**Pn**	**07 40 58.4**	**+0.3**
PEL				*i* S	**Sb**	**07 41 13.8**	**+0.2**
PEL				AML	AML	07 41 16.1	
	comp=E,362nm,0.6s						
SAN	**Santiago**	**1.26**	**106**	*e*P	**Pn**	**07 40 58.7**	**-0.2**
SAN	**Santiago**	**1.26**	**106**	*e*P	**Pn**	**07 40 58.7**	**-0.2**
SAN				AML	AML	07 41 17.8	
	comp=N,150nm,0.5s						
ANTU	**Antumapu**	**1.32**	**111**	*e*P	**Pn**	**07 40 59.6**	**-0.1**
ANTU				*i* S	**Sb**	**07 41 16.1**	**-0.9**
ANTU	**Antumapu**	**1.32**	**111**	*e*P	**Pn**	**07 40 59.6**	**-0.1**
ANTU				*i* S	**Sb**	**07 41 16.1**	**-0.9**
ANTU				AML	AML	07 41 19.6	
	comp=N,176nm,0.3s						
CHNG	**Los Chungos**	**1.33**	**23**	*e*P	**Pn**	**07 40 57.1**	**-2.8**
CHNG				*i* S	**Sn**	**07 41 15.0**	**-2.3**
JACH	**Jahuel**	**1.35**	**72**	*e*P	**Pn**	**07 41 01.1**	**+1.0**
JACH				*i* S	**Sn**	**07 41 18.6**	**+0.9**
JACH	**Jahuel**	**1.35**	**72**	*e*P	**Pn**	**07 41 01.1**	**+1.0**
JACH				*i* S	**Sn**	**07 41 18.6**	**+0.9**
CLCH	**Cerro Calan**	**1.35**	**102**	*e*P	**Pn**	**07 41 00.4**	**+0.3**
CLCH				*i* S	**Sn**	**07 41 17.4**	**-0.5**
CLCH				AML	AML	07 41 22.9	
	comp=E,189nm,0.1s						
LACH	**Col Las Americ**	**1.37**	**105**	*e*P	**Pn**	**07 41 00.4**	**0.0**
LACH				*i* S	**Sn**	**07 41 17.6**	**-0.7**
LACH				AML	AML	07 41 26.3	
	comp=N,102nm,0.3s						
PCH	**Pirque**	**1.43**	**111**	*e*P	**Pn**	**07 41 01.6**	**+0.3**
PCH				*i* S	**Sn**	**07 41 19.6**	**-0.2**
PCH	**Pirque**	**1.43**	**111**	*e*P	**Pn**	**07 41 01.6**	**+0.3**
PCH				*i* S	**Sn**	**07 41 19.6**	**-0.2**
CHCH	**Chadas Angostu**	**1.47**	**124**	*e*P	**Pn**	**07 41 01.6**	**-0.2**
CHCH				*i* S	**Sn**	**07 41 19.7**	**-1.0**
CHCH	**Chadas Angostu**	**1.47**	**124**	*e*P	**Pn**	**07 41 01.6**	**-0.2**
CHCH				*i* S	**Sn**	**07 41 19.7**	**-1.0**
FCH	**Farellones**	**1.54**	**98**	*e*P	**Pn**	**07 41 03.0**	**+0.2**
FCH				*i* S	**Sn**	**07 41 22.8**	**+0.3**
FCH				AML	AML	07 41 27.8	
	comp=N,178nm,0.2s						
SJCH	**San Jose de Ma**	**1.56**	**110**	*e*P	**Pn**	**07 41 03.6**	**+0.6**
SJCH				*e*S	**Sn**	**07 41 23.1**	**+0.1**
SJCH	**San Jose de Ma**	**1.56**	**110**	*e*P	**Pn**	**07 41 03.6**	**+0.6**
SJCH				*e*S	**Sn**	**07 41 23.1**	**+0.1**
SJCH				AML	AML	07 41 25.3	
	comp=N,104nm,0.6s						
CACH	**El Canelo**	**1.61**	**129**	⇑*i*P	**Pn**	**07 41 04.7**	**+0.9**
CACH				*i* S	**Sn**	**07 41 25.1**	**+0.8**
CACH	**El Canelo**	**1.61**	**129**	⇑*i*P	**Pn**	**07 41 04.7**	**+0.9**
CACH				*i* S	**Sn**	**07 41 25.1**	**+0.8**
LMEL	**Las Melosas**	**1.75**	**115**	⇑*i*P	**Pn**	**07 41 06.6**	**+0.8**
LMEL				*i* S	**Sn**	**07 41 28.5**	**+0.7**
LMEL	**Las Melosas**	**1.75**	**115**	⇑*i*P	**Pn**	**07 41 06.6**	**+0.8**
LMEL				*i* S	**Sn**	**07 41 28.5**	**+0.7**
LMEL				AML	AML	07 41 30.6	
	comp=N,196nm,0.2s						

IDC 11 07:59:05.5±2.6, 14°.25N×144°.92E, h48km±23km, mb3.5/4, mb1 3.8/4, mb1mx3.4/21, mbtmp3.4/4, Error ellipse: s-maj=112.5km s-min=27.9km az=107.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.66**	**184**	P	Pn	07 59 19.8	+1.1
	902nm,0.3s,baz=95,slow=4.0,SNR=633						
GUMO				S	Sn	07 59 29.9	+1.7
	1μm,0.3s,baz=9.0,slow=20,SNR=26						
WRA	**Warramunga Arr**	**35.54**	**197**	P	P	08 05 57.5	-0.6
	0.3nm,0.5s,baz=21,slow=9.2,SNR=4.4						
WRA				pP	pP	08 06 11.5	+0.6
	0.8nm,0.8s,baz=21,slow=9.6,SNR=6.1						
ILAR	**Eielson Array**	**67.95**	**25**	P	P	08 09 58.5	-0.6
	0.9nm,0.4s,baz=252,slow=5.8,SNR=57						
YKA	**Yellowknife Ar**	**82.25**	**27**	P	P	08 11 21.9	+0.5
	0.5nm,0.5s,baz=286,slow=5.2,SNR=4.2						
PDAR	**Pinedale Array**	**91.46**	**45**	P	P	08 12 06.8	0.0
	0.2nm,0.8s,baz=324,slow=4.5,SNR=2.4						
LPAZ	**La Paz**	**148.07**	**98**	PKPbc	PKPbc	08 18 48.5	+1.8
	0.5nm,0.7s,baz=270,slow=4.0,SNR=2.5						

DDA ***11*** *08:12:54.8, 40°.06N×39°.86E, h18km±1km, Md3.4*
ISCJB ***11*** *08:12:55.4±0.4, 40°.03N±0°.02×39°.88E±0°.02, h3km±4km, Error ellipse: s-maj=3.3km s-min=2.7km az=163.6*
ISK ***11*** *08:12:55.1, 40°.00N×39°.90E, h5km, MD3.5*
CSEM ***11*** *08:12:55.5±0.2, 40°.01N×39°.92E, h2km, MD3.4, Error ellipse: s-maj=4.8km s-min=3.6km az=163.0*
ISC 11 08:12:56.2±0.4, 40°.02N±0°.02×39°.88E±0°.02, h7km±3km, n70, σ1°07/96, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.48**	**90**	*i* P	**Pg**	**08 13 04.6**	**-0.8**
KOPT				*i* S	**Sg**	**08 13 12.4**	**+0.8**
KOPT	**Kop Dagi**	**0.48**	**90**	*i* P	**Pg**	**08 13 04.6**	**-0.8**
KOPT				*i* S	**Sg**	**08 13 12.4**	**+0.7**
EZC	**Erzincan**	**0.48**	**237**	PG	**Pg**	**08 13 05.4**	**-0.1**
EZC				*e*SG	**Sg**	**08 13 12.5**	**+0.7**
EZC	**Erzincan**	**0.48**	**237**	*i* Pg	**Pg**	**08 13 05.4**	**-0.1**
EZC				*e*Sg	**Sg**	**08 13 12.5**	**+0.7**
KELT	**Kelkit**	**0.49**	**285**	*i* P	**Pg**	**08 13 04.9**	**-0.9**
KELT				*i* S	**Sg**	**08 13 11.3**	**-0.8**
KELT	**Kelkit**	**0.49**	**285**	*i* P	**Pg**	**08 13 04.9**	**-0.8**
KELT				*i* S	**Sg**	**08 13 11.3**	**-0.9**
GUMT	**Gumushane**	**0.53**	**326**	PG	**Pg**	**08 13 06.5**	**0.0**
GUMT				*e*SG	**Sg**	**08 13 14.3**	**+0.8**
MACK	**Trabzon**	**0.93**	**355**	*i* P	**Pg**	**08 13 13.5**	**-0.5**
MACK				*i* S	**Sg**	**08 13 26.5**	**+0.5**
MACK	**Trabzon**	**0.93**	**355**	*i* P	**Pg**	**08 13 13.5**	**-0.5**
MACK				*i* S	**Sg**	**08 13 26.5**	**+0.5**
EZM	**Erzurum**	**1.15**	**95**	*e*PN	**Sg**	**08 13 17.1**	**-1.2**
ERZM	**Erzurum**	**1.15**	**95**	*i* P	**Pg**	**08 13 15.7**	**-2.6**
ERZM				*i* S	**Sg**	**08 13 28.4**	**-4.8**
ERZM	**Erzurum**	**1.15**	**95**	*i* P	**Pg**	**08 13 15.7**	**-2.6**
PTK	**Pertek**	**1.19**	**199**	*e*PN	**Pn**	**08 13 16.3**	**-2.9**
PTK				*e*SN	**Sb**	**08 13 34.2**	**-0.4**
PTK	**Pertek**	**1.19**	**199**	*e*Pn	**Pn**	**08 13 16.3**	**-2.9**
PTK				*e*Sn	**Sb**	**08 13 34.2**	**-0.4**
BINT	**Bingol**	**1.24**	**157**	*e*PN	**Pn**	**08 13 18.4**	**-1.5**
BINT	**Bingol**	**1.24**	**157**	*e*Pn	**Pn**	**08 13 18.4**	**-1.5**
SUSE	**Susehri**	**1.30**	**279**	*i* P	**Pn**	**08 13 18.8**	**-2.0**
SUSE				*i* S	**Sg**	**08 13 38.5**	**+0.6**
SUSE	**Susehri**	**1.30**	**279**	*i* P	**Pn**	**08 13 18.8**	**-1.9**
SUSE				*i* S	**Sg**	**08 13 38.5**	**+0.6**
KEMA	**Kemaliye**	**1.30**	**235**	*i* P	**Pn**	**08 13 18.9**	**-1.9**
KEMA				*i* S	**Sg**	**08 13 40.5**	**+2.4**
KEMA	**Kemaliye**	**1.30**	**235**	*i* P	**Pn**	**08 13 18.9**	**-1.9**
KEMA				*i* S	**Sg**	**08 13 40.5**	**+2.4**
PZAR	**Pazar-Rize**	**1.40**	**34**	*e*PN	**Pn**	**08 13 21.4**	**-0.7**
PZAR	**Pazar-Rize**	**1.40**	**34**	*e*Pn	**Pn**	**08 13 21.4**	**-0.7**
BNGL	**BINGOL**	**1.45**	**137**	*i* P	**Pn**	**08 13 20.5**	**-2.4**
BNGL				*i* S	**Sg**	**08 13 43.7**	**+0.8**
GRSN	**GIRESUNGRSN**	**1.52**	**307**	*i* P	**Pn**	**08 13 22.8**	**-1.0**
GRSN				*i* S	**Sn**	**08 13 42.5**	**-1.4**
GRSN	**GIRESUNGRSN**	**1.52**	**307**	*i* P	**Pn**	**08 13 22.8**	**-1.0**
HOMI	**Horasan**	**1.56**	**88**	*i* P	**Pn**	**08 13 24.1**	**-0.3**
HOMI				*i* S	**Sg**	**08 13 48.4**	**+2.0**
ELZG	**Elazig**	**1.67**	**205**	*i* P	**Pn**	**08 13 25.6**	**-0.2**
ELZG				*i* S	**Sg**	**08 13 50.3**	**+0.4**
ELZG	**Elazig**	**1.67**	**205**	*i* P	**Pn**	**08 13 25.6**	**-0.2**
DDEM	**Demirkent**	**1.68**	**58**	*i* P	**Pn**	**08 13 25.0**	**-0.9**
DDEM				*i* S	**Sg**	**08 13 50.0**	**0.0**
DDEM	**Demirkent**	**1.68**	**58**	*i* P	**Pn**	**08 13 25.0**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.70**	**195**	*e*PN	**Pn**	**08 13 25.8**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.70**	**195**	*e*Pn	**Pn**	**08 13 25.8**	**-0.4**
DBOC	**Borcka**	**1.90**	**45**	*i* P	**Pn**	**08 13 29.6**	**+0.5**
DBOC				*i* S	**Sn**	**08 13 54.4**	**+1.2**
DBOC	**Borcka**	**1.90**	**45**	*i* P	**Pn**	**08 13 29.5**	**+0.5**
BCA	**Borcka**	**1.95**	**42**	*e*PN	**Pn**	**08 13 30.3**	**+0.7**
BCA	**Borcka**	**1.95**	**42**	*e*Pn	**Pn**	**08 13 30.3**	**+0.6**
ARTV	**Artvin**	**1.95**	**53**	*i* P	**Pn**	**08 13 29.0**	**-0.7**
ARTV				*i* S	**Sn**	**08 13 55.5**	**+1.1**
ARTV	**Artvin**	**1.95**	**53**	*i* P	**Pn**	**08 13 29.0**	**-0.7**
RSDY	**Resadiye-TOKAT**	**1.99**	**282**	*e*PN	**Pn**	**08 13 31.2**	**+1.0**
RSDY	**Resadiye-TOKAT**	**1.99**	**282**	*e*Pn	**Pn**	**08 13 31.2**	**+1.0**
MYA	**Malataya**	**2.03**	**214**	*e*PN	**Pn**	**08 13 31.2**	**+0.4**
MYA	**Malataya**	**2.03**	**214**	*e*Pn	**Pn**	**08 13 31.2**	**+0.4**
MALT	**Malatya**	**2.04**	**214**	*e*PN	**Pn**	**08 13 31.7**	**+0.7**
MALT	**Malatya**	**2.04**	**214**	*e*Pn	**Pn**	**08 13 31.7**	**+0.7**
SCER	**sogukcermik**	**2.12**	**267**	*i* P	**Pn**	**08 13 33.1**	**+1.1**
SCER				*i* S	**Sn**	**08 14 06.0**	**+7.4**
SCER	**sogukcermik**	**2.12**	**267**	*i* P	**Pn**	**08 13 33.1**	**+1.1**
SVSK	**Karacayir**	**2.21**	**268**	*e*PN	**Pn**	**08 13 33.8**	**+0.4**
SVSK	**Karacayir**	**2.21**	**268**	*e*Pn	**Pn**	**08 13 33.8**	**+0.5**
AKCD	**Akcadag**	**2.30**	**222**	*i* P	**Pb**	**08 13 37.1**	**-0.8**
AKCD				*i* S	**Sg**	**08 14 15.3**	**+5.3**
AKCD	**Akcadag**	**2.30**	**222**	*i* P	**Pb**	**08 13 37.1**	**-0.8**
BEST	**Besiri**	**2.39**	**152**	*i* P	**Pb**	**08 13 39.8**	**+0.3**
AGRB	**Hanur-Agry**	**2.44**	**99**	*e*PN	**Pn**	**08 13 36.7**	**+0.3**
AGRB	**Hanur-Agry**	**2.44**	**99**	*e*Pn	**Pn**	**08 13 36.7**	**+0.2**
TOKT	**Tokat**	**2.57**	**278**	*e*PN	**Pn**	**08 13 38.4**	**+0.2**
TOKT	**Tokat**	**2.57**	**278**	*e*Pn	**Pn**	**08 13 38.4**	**+0.2**
MARD	**Mardin**	**2.79**	**165**	*i* P	**Pb**	**08 13 46.3**	**-0.1**
MARD				*i* S	**Sb**	**08 14 22.6**	**+1.8**
SARI	**SarD1z-Kayseri**	**2.81**	**242**	*e*PN	**Pb**	**08 13 46.5**	**-0.1**
SARI	**SarD1z-Kayseri**	**2.81**	**242**	*e*Pn	**Pb**	**08 13 46.5**	**-0.1**
KVT	**Kavak**	**3.10**	**291**	*e*PN	**Pn**	**08 13 46.9**	**+1.4**
KVT	**Kavak**	**3.10**	**291**	*e*Pn	**Pn**	**08 13 46.9**	**+1.3**
GZT	**Gaziantep**	**3.22**	**215**	*i* P	**Pb**	**08 13 53.2**	**-0.5**
KMRS	**Kahramanmaras**	**3.42**	**224**	*e*PN	**Pn**	**08 13 49.9**	**-0.1**
KMRS	**Kahramanmaras**	**3.42**	**224**	*e*Pn	**Pn**	**08 13 49.9**	**0.0**
YOZ	**Yozgat**	**3.53**	**265**	*e*PN	**Pn**	**08 13 53.3**	**+1.9**
YOZ	**Yozgat**	**3.53**	**265**	*e*Pn	**Pn**	**08 13 53.3**	**+1.9**
CTKT	**Corum**	**3.93**	**280**	*i* P	**Pn**	**08 13 58.2**	**+1.2**
CTKT	**Corum**	**3.93**	**280**	*i* P	**Pn**	**08 13 58.2**	**+1.2**
KOZT	**Kozan**	**4.05**	**233**	*e*PN	**Pn**	**08 13 59.7**	**+1.0**
AVNT	**Avonos**	**4.08**	**254**	*i* P	**Pg**	**08 14 12.8**	**-1.6**
CDAG	**Cicekdag**	**4.26**	**266**	*i* P	**Pb**	**08 14 11.7**	**+0.3**

ISCJB ***11*** *08:33:45.6±0.9, 31°.36N±0°.09×109°.4E±0°.2, h10km, mb3.5/4, Error ellipse: s-maj=20.7km s-min=8.3km az=151.4*
IDC ***11*** *08:33:46.0±1.2, 31°.58N×109°.70E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.6/19, mbtmp3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.2/25, Error ellipse: s-maj=55.0km s-min=24.6km az=66.0*
BJI ***11*** *08:33:48.9, 31°.57N×109°.40E, h14km, ML3.3/6*
ISC 11 08:33:47.7±0.9, 31°.40N±0°.09×109°.3E±0°.1, h10km, n8, σ0°91/11, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**2.65**	**353**	Pn	**Pn**	**08 34 30.7**	**+0.2**
XAN				Pg	**Pg**	**08 34 33.3**	**-5.3**
XAN				Sn	**Sn**	**08 35 02.5**	**-0.2**
XAN				Sg	**Sg**	**08 35 06.5**	**-6.5**
XAN				smax			
	comp=N,250nm,0.8s						
XAN				smax			
	comp=E,100nm,0.7s						
LZH	**Lanzhou**	**6.54**	**317**	Pg	Px	08 36 05.6	
LZH				Sn	**Sb**	**08 36 59.1**	**-0.5**
LZH				Sg	**Sg**	**08 37 17.4**	**-0.1**
LZH				smax			
	comp=N,94nm,1.0s						
LZH				smax			
	comp=E,45nm,0.7s						
LZH				LR	LR		
	comp=N,220nm,5.6s						
LZH				LR	LR		
	comp=E,210nm,4.0s						
LZH				LR	LR		
	comp=Z,260nm,6.4s						
SONM	**Songino Array**	**16.57**	**353**	Pn	**Pn**	**08 37 42.0**	**+2.0**
	baz=171,slow=10,SNR=4.7						
MJAR	**Matsushiro Arr**	**24.44**	**70**	LR	LR	08 49 43.5	
	comp=Z,36nm,18.4s,baz=65,slow=40						
MKAR	**Makanchi Array**	**25.84**	**314**	P	**P**	**08 39 19.9**	**+0.7**
	comp=Z,0.7nm,0.7s,mb3.3,baz=104,slow=10,SNR=5.8						
WRA	**Warramunga Arr**	**56.41**	**151**	P	**P**	**08 43 29.4**	**0.0**
	comp=Z,0.5nm,0.7s,mb3.7,baz=346,slow=7.9,SNR=5.6						
ASAR	**Alice Springs**	**59.60**	**154**	P	**P**	**08 43 51.8**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.6,baz=332,slow=7.0,SNR=10						
ILAR	**Eielson Array**	**67.60**	**27**	P	**P**	**08 44 42.3**	**-1.8**
	comp=Z,0.2nm,0.6s,mb3.3,baz=284,slow=5.5,SNR=3.0						

NEIC ***11*** *08:33:58.0, 39°.41N×33°.07E, h5km, ML4.1(ISK), After ISK.*
DDA ***11*** *08:33:58.2, 39°.43N×33°.06E, h14km±1km, Ml4.0*
ISK ***11*** *08:33:58.3, 39°.40N×33°.07E, h2km, ML4.1*
CSEM ***11*** *08:33:59.6±0.1, 39°.44N×33°.06E, h2km, ML4.1, Error ellipse: s-maj=3.2km s-min=2.5km az=4.0*
ISCJB ***11*** *08:33:59.6±0.2, 39°.44N±0°.02×33°.07E±0°.02, h10km, mb3.7/4, Error ellipse: s-maj=2.4km s-min=2.1km az=177.8*
IDC ***11*** *08:34:00.3±1.5, 39°.48N×33°.16E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/24, mbtmp3.7/6, ML3.7/1, MS3.0/5, Ms1 3.0/5, ms1mx2.7/32, Error ellipse: s-maj=27.1km s-min=10.5km az=157.0*
ISC 11 08:34:00.6±0.2, 39°.44N±0°.02×33°.06E±0°.02, h10km, n167, σ1°16/199, mb3.7/4, 10C-15D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.12**	**25**	⇓*i*P	**Pg**	**08 34 01.8**	**-1.6**
BBAL				*i* S	**Sg**	**08 34 04.2**	**-1.2**
BBAL	**Bala**	**0.12**	**25**	*i* P	**Pg**	**08 34 01.8**	**-1.6**
BBAL				*i* S	**Sg**	**08 34 04.2**	**-1.2**
KAMT	**Kaman**	**0.51**	**97**	PG	**Pg**	**08 34 08.5**	**-2.0**
KAMT	**Kaman**	**0.51**	**97**	*i* Pg	**Pg**	**08 34 08.5**	**-2.0**
BR131	**Keskin Array S**	**0.53**	**57**	*e*Pg	**Pg**	**08 34 09.1**	**-1.8**
BR131				*e*Sg	**Sg**	**08 34 16.1**	**-1.9**
BR131	**Keskin Array S**	**0.53**	**57**	*e*Pg	**Pg**	**08 34 09.1**	**-1.8**
BR131				*e*Sg	**Sg**	**08 34 16.1**	**-1.9**
BRTR	**Keskin Array B**	**0.53**	**57**	Pg	**Pg**	**08 34 08.6**	**-2.4**
	254nm,0.3s,baz=221,slow=18,SNR=3002						
BRTR				Lg		08 34 15.4	
	1μm,0.3s,baz=223,slow=27,SNR=110						
BRTR	**Keskin Array B**	**0.53**	**57**	Pg	**Pg**	**08 34 08.6**	**-2.3**
BRTR				Lg		08 34 15.4	
CDAG	**Cicekdag**	**1.03**	**79**	⇑*i*P	**Pg**	**08 34 18.0**	**-2.5**
CDAG				*i* S	**Sg**	**08 34 32.8**	**-1.0**
CDAG	**Cicekdag**	**1.03**	**79**	*i* P	**Pg**	**08 34 18.0**	**-2.4**
CDAG				*i* S	**Sg**	**08 34 32.8**	**-1.0**
KIZT	**Kizilcal**	**1.07**	**239**	*e*PG	**Pg**	**08 34 19.1**	**-2.1**
KIZT	**Kizilcal**	**1.07**	**239**	*e*Pg	**Pg**	**08 34 19.1**	**-2.1**
ELDT	**Eldivan**	**1.09**	**15**	*i* P	**Pg**	**08 34 19.9**	**-1.6**
ELDT				*i* S	**Sg**	**08 34 34.9**	**-0.8**
ELDT	**Eldivan**	**1.09**	**15**	*i* P	**Pg**	**08 34 19.9**	**-1.6**
ELDT				*i* S	**Sg**	**08 34 34.8**	**-0.9**
KDHN	**Kadinhani**	**1.17**	**219**	*i* P	**Pn**	**08 34 21.1**	**-1.9**
KDHN				*i* S	**Sn**	**08 34 36.6**	**-2.4**
KDHN	**Kadinhani**	**1.17**	**219**	*i* P	**Pn**	**08 34 21.0**	**-2.0**
KDHN				*i* S	**Sn**	**08 34 36.7**	**-2.3**
SVRH	**Sivrihisar-ESK**	**1.19**	**271**	*e*PN	**Pn**	**08 34 21.6**	**-1.7**
SVRH				*e*SN	**Sn**	**08 34 39.7**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.19**	**271**	*e*Pn	**Pn**	**08 34 21.6**	**-1.6**
SVRH				*e*Sn	**Sn**	**08 34 39.7**	**+0.2**
CANT	**Cankiri**	**1.25**	**20**	*e*PN	**Pn**	**08 34 23.4**	**-0.6**
CANT				*e*SN	**Sn**	**08 34 42.3**	**+1.5**
SULT	**Sultanhani-AKS**	**1.29**	**164**	*e*PN	**Pn**	**08 34 23.6**	**-1.0**
SULT	**Sultanhani-AKS**	**1.29**	**164**	*e*Pn	**Pn**	**08 34 23.6**	**-1.0**
SGKT	**Sivrigoynuk**	**1.37**	**326**	⇓*i*P	**Pn**	**08 34 24.6**	**-1.2**
SGKT				*i* S	**Sb**	**08 34 43.6**	**-0.3**
SGKT	**Sivrigoynuk**	**1.37**	**326**	*i* P	**Pn**	**08 34 24.6**	**-1.2**
SGKT				*i* S	**Sb**	**08 34 43.6**	**-0.3**
CORM	**Corum**	**1.42**	**58**	*e*PN	**Pn**	**08 34 25.5**	**-0.9**
CORM	**Corum**	**1.42**	**58**	*e*Pn	**Pn**	**08 34 25.5**	**-0.9**
AVNT	**Avonos**	**1.54**	**115**	⇑*i*P	**Pn**	**08 34 27.2**	**-0.9**
AVNT				*i* S	**Sn**	**08 34 48.5**	**+0.3**
AVNT	**Avonos**	**1.54**	**115**	*i* P	**Pn**	**08 34 27.2**	**-0.9**
AVNT				*i* S	**Sn**	**08 34 48.5**	**+0.3**
KONT	**Konya--Tatoy**	**1.59**	**200**	*e*PN	**Pn**	**08 34 28.7**	**+0.1**
KONT				*e*SN	**Sn**	**08 34 48.8**	**-0.4**
KONT	**Konya--Tatoy**	**1.59**	**200**	*e*Pn	**Pn**	**08 34 28.7**	**0.0**
KONT				*e*Sn	**Sn**	**08 34 48.8**	**-0.4**
ILGA	**Ilgaz**	**1.69**	**17**	*i* P	**Pn**	**08 34 29.8**	**-0.4**
ILGA				*i* S	**Sg**	**08 34 54.2**	**-0.7**
ILGA	**Ilgaz**	**1.69**	**17**	*i* P	**Pn**	**08 34 29.8**	**-0.3**
ILGA				*i* S	**Sg**	**08 34 54.2**	**-0.7**
ESKT	**Eskisehir**	**1.71**	**274**	*i* P	**Pn**	**08 34 28.9**	**-1.5**
SEYT	**Eskypehyr**	**1.71**	**274**	*i* P	**Pn**	**08 34 28.9**	**-1.5**
MDU	**Mudurnu**	**1.75**	**307**	*e*PN	**Pn**	**08 34 31.5**	**+0.5**
MDU	**Mudurnu**	**1.75**	**307**	*e*Pn	**Pn**	**08 34 31.5**	**+0.5**
TOS	**Tosya**	**1.76**	**24**	*e*PN	**Pn**	**08 34 30.7**	**-0.4**
TOS	**Tosya**	**1.76**	**24**	*e*Pn	**Pn**	**08 34 30.7**	**-0.4**
YOZ	**Yozgat**	**1.76**	**83**	*e*PN	**Pn**	**08 34 30.9**	**-0.2**
YOZ	**Yozgat**	**1.76**	**83**	*e*Pn	**Pn**	**08 34 30.9**	**-0.2**
CTKT	**Corum**	**1.78**	**48**	⇑*i*P	**Pn**	**08 34 30.7**	**-0.7**
CTKT				*i* S	**Sn**	**08 34 54.5**	**+0.4**
CTKT	**Corum**	**1.78**	**48**	*i* P	**Pn**	**08 34 30.7**	**-0.7**
CTKT				*i* S	**Sn**	**08 34 54.5**	**+0.5**
BOLV	**Bolvadin**	**1.79**	**247**	⇑*i*P	**Pn**	**08 34 31.3**	**-0.3**
BOLV				*i* S	**Sg**	**08 34 56.6**	**-1.5**
BOLV	**Bolvadin**	**1.79**	**247**	*i* P	**Pn**	**08 34 31.3**	**-0.2**
BOLV				*i* S	**Sg**	**08 34 56.7**	**-1.4**
SAFT	**Safranbolu**	**1.82**	**351**	*e*PN	**Pn**	**08 34 32.2**	**+0.3**
SAFT	**Safranbolu**	**1.82**	**351**	*e*Pn	**Pn**	**08 34 32.2**	**+0.2**
BORA	**Eskisehir**	**2.06**	**283**	⇑*i*P	**Pn**	**08 34 34.4**	**-0.8**
BORA				*i* S	**Sn**	**08 35 01.7**	**+0.8**
BORA	**Eskisehir**	**2.06**	**283**	*i* P	**Pn**	**08 34 34.4**	**-0.8**
BORA				*i* S	**Sn**	**08 35 01.7**	**+0.8**
BALT	**Daday**	**2.11**	**7**	*i* P	**Pn**	**08 34 34.5**	**-1.4**
BALT				*i* S	**Sn**	**08 35 04.0**	**+1.8**
BALT	**Daday**	**2.11**	**7**	*i* P	**Pn**	**08 34 34.5**	**-1.4**
BALT				*i* S	**Sn**	**08 35 04.0**	**+1.8**
SHUT	**Suhut-Afyon**	**2.14**	**247**	*e*PN	**Pn**	**08 34 36.7**	**+0.4**
SHUT	**Suhut-Afyon**	**2.14**	**247**	*e*Pn	**Pn**	**08 34 36.7**	**+0.3**
HENT	**Hendek**	**2.16**	**311**	*i* P	**Pn**	**08 34 35.9**	**-0.7**
HENT	**Hendek**	**2.16**	**311**	*i* P	**Pn**	**08 34 35.9**	**-0.7**
GULT	**Gulveren**	**2.19**	**298**	*e*PN	**Pn**	**08 34 37.1**	**+0.1**
GULT	**Gulveren**	**2.19**	**298**	*e*Pn	**Pn**	**08 34 37.1**	**0.0**
KDZE	**Karadeniz Ereo**	**2.25**	**327**	*e*PN	**Pn**	**08 34 38.0**	**+0

GNI	Garni	9.02	82	LR	LR	08 39 23.7
	comp=Z,42nm,21.5s,baz=299,slow=36					
EIL	Elat	9.87	170	LR	LR	08 42 00.6
	comp=Z,36nm,18.5s,baz=334,slow=49					
BURAR	Bucovina Array	9.96	328	⇓iP	Pn	08 36 24.2 +0.6
BURAR	Bucovina Array	9.96	328	⇓iP	Pn	08 36 24.2 +0.6
DAVOX	Davos/Dischmat	18.41	301	LR	LR	08 46 04.1
	comp=Z,83nm,19.9s,baz=92,slow=39					
AKTK	Aktyubinsk	20.71	50	P	P	08 38 41.5 +0.7
AKTK	Aktyubinsk	20.71	50	P	P	08 38 41.5 +0.7
AKTO	Aktyubinsk	20.71	50	P	P	08 38 41.5 +0.7
	1.3nm,0.6s,baz=233,slow=13,SNR=7.6					
FINES	FINESS Array B	22.45	351	P	P	08 39 00.2 +0.9
	3.3nm,0.6s,mb4.0,baz=160,slow=11,SNR=11					
FINES	FINESS Array B	22.45	351	P	P	08 39 00.2 +0.8
EKA	Eskdalemuir Ar	28.81	316	P	P	08 40 01.0 +2.5
	1.0nm,0.7s,mb3.6,baz=114,slow=10,SNR=3.2					
EKA	Eskdalemuir Ar	28.81	316	P	P	08 40 01.0 +2.5
ARCES	ARCESS Array B	30.43	355	P	P	08 40 12.1 -0.7
	1.7nm,0.9s,mb3.8,baz=153,slow=8.6,SNR=4.0					
ARCES	ARCESS Array B	30.43	355	P	P	08 40 12.1 -0.6
MKAR	Makanchi Array	36.18	62	P	P	08 41 04.9 +1.8
	0.3nm,0.6s,mb3.4,baz=272,slow=8.5,SNR=3.4					
MKAR	Makanchi Array	36.18	62	P	P	08 41 04.9 +1.8

TAP 11 08:47:26.4, 24°.80N×122°.82E, h122km±1km, ML3.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.79	285	eP	Pn	08 47 46.6	-0.1
	baz=283						
TWC	Suao	0.91	258	eP	Pn	08 47 48.2	+0.5
	baz=252						
TWC				eS	Sn	08 48 03.0	-0.9
	baz=252						
NWF	Wu-fen Shan	0.98	286	eP	Pn	08 47 49.3	+0.8
	baz=286						
ENA	Nanau	1.05	250	P	Pn	08 47 49.6	+0.5
	baz=245						
ENA				eS	Sn	08 48 06.0	-0.3
	baz=245						
TWE	Neicheng	1.05	266	eP	Pn	08 47 49.5	+0.3
	baz=261						
TWE				eS	Sn	08 48 06.7	+0.3
	baz=261						
ENTT	Nioudou	1.16	262	P	Pn	08 47 51.0	+0.8
	baz=259						
ENTT				eS	Sn	08 48 09.4	+1.2
	baz=259						
TWD	Chiawan	1.33	238	P	Pn	08 47 51.9	-0.1
	baz=233						
TWD				S	Sn	08 48 10.6	-1.0
	baz=233						
NSK	Sanguang	1.34	265	eP	Pn	08 47 51.6	-0.6
	baz=258						
NSK				S	Sn	08 48 12.2	+0.5
	baz=258						
NNS	Nan Shan	1.37	255	eP	Pn	08 47 53.8	+1.3
	baz=249						
NNS				eS	Sn	08 48 12.4	+0.1
	baz=249						
HWA	Hwalien	1.38	234	eP	Pn	08 47 52.8	+0.1
	baz=233						
WHF	Hehuan Shan	1.56	246	P	Pn	08 47 55.5	+0.8
	baz=245						
WHF				S	Sn	08 48 16.5	+0.2
	baz=245						
TWT	Tachien	1.60	250	eP	Pn	08 47 55.4	+0.2
	baz=245						
TWT				eS	Sn	08 48 17.8	+0.8
	baz=245						
ESL	Shilin	1.60	233	eP	Pn	08 47 55.1	-0.1
	baz=232						
ESL				eS	Sn	08 48 15.6	-1.6
	baz=232						
NSTT	Nanjuang	1.67	265	eP	Pn	08 47 56.5	+0.5
	baz=264						
NSTT				eS	Sn	08 48 18.8	+0.3
	baz=264						
TWQ1	Liyutan	1.92	257	eS	Sn	08 48 24.7	+0.8
	baz=256						
SMLT	Sun Moon Lake	1.98	243	P	Pn	08 48 01.5	+1.7
	baz=239						
SMLT				eS	Sn	08 48 26.6	+1.4
	baz=239						
TYC	Yuchr	2.00	244	eP	Pn	08 48 00.3	+0.3
	baz=243						
TYC				eS	Sn	08 48 26.7	+1.0
	baz=243						
TWF1	Yuli	2.01	224	eP	Pn	08 47 59.7	-0.4
	baz=231						
TWF1				eS	Sn	08 48 24.2	-1.6
	baz=231						
YUS	Yu-Shan	2.15	233	P	Pn	08 48 02.9	+1.0
	baz=230						
YUS				eS	Sn	08 48 29.3	+0.3
	baz=230						
ALS	Alishan	2.25	236	P	Pn	08 48 04.2	+1.1
	baz=231						
ALS				eS	Sn	08 48 33.2	+2.1
	baz=231						
CHN5	Tsauling	2.30	239	eP	Pn	08 48 04.5	+0.8
	baz=231						
CHN5				eS	Sn	08 48 34.2	+1.9
	baz=231						

NEIC ***11*** *08:48:03.2, 16°.50N×94°.05W, h119km, MD3.8(MEX), After MEX.*

MEX 11 08:48:03.3±1.6, 16°.49N×94°.05W, h118km±16km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		0.94	72	eP	Pn	08 48 22.6	-1.9
TGIG				iS	Sn	08 48 38.0	-2.6
CMIG	Matias Romero	0.99	307	eP	Pn	08 48 24.1	-1.0
CMIG				iS	Sn	08 48 40.3	-1.3
CMIG	Matias Romero	0.99	307	eP	Pn	08 48 24.1	-1.0
CMIG				iS	Sn	08 48 40.3	-1.3
PCIG		1.12	134	iP	Pn	08 48 25.4	-1.0
PCIG				iS	Sn	08 48 43.1	-0.8
SCX	San Cristobal	1.38	80	iP	Pn	08 48 26.5	-2.7
SCX				iS	Sn	08 48 47.8	-1.1
SCX	San Cristobal	1.38	80	iP	Pn	08 48 26.5	-2.7
SCX				iS	Sn	08 48 47.8	-1.1
CCIG	Comitan	1.85	96	eP	Pn	08 48 34.2	-0.6
CCIG				iS	Sn	08 48 57.1	-1.7
CCIG	Comitan	1.85	96	eP	Pn	08 48 34.2	-0.6
CCIG				iS	Sn	08 48 57.1	-1.7
HUIG	Huatulco	2.10	250	iP	Pn	08 48 35.1	-2.8
HUIG				iS	Sn	08 49 02.5	-2.0
HUIG	Huatulco	2.10	250	iP	Pn	08 48 35.3	-2.7
HUIG				iS	Sn	08 49 02.5	-2.0
VHO	Vista Hermosa	2.63	283	eP	Pn	08 48 45.1	+0.4
VHO				iS	Sn	08 49 15.3	-1.3
VHO	Vista Hermosa	2.63	283	eP	Pn	08 48 45.1	+0.4
VHO				iS	Sn	08 49 15.3	-1.3
PNIG	Pinotepa	3.91	269	iP	Pn	08 49 00.2	-1.4
PNIG				iS	Sn	08 49 44.9	-1.9
PNIG	Pinotepa	3.91	269	iP	Pn	08 49 00.2	-1.4
PNIG				iS	Sn	08 49 44.9	-1.9

IDC ***11*** *08:49:50.9±1.3, 31°.96N×104°.93E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.5/22, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=44.6km s-min=24.4km az=60.0*
BJI ***11*** *08:49:52.4, 32°.21N×104°.87E, h11km, ML3.4/12*

ISC 11 08:49:51.2±0.6, 32°.27N±0°.07×104°.97E±0°.08, h10km, n9, σ1s25/16, mb3.6/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.71	218	Pn	Pn	08 50 21.3	+0.3
CD2				Pg	Pg	08 50 22.6	-1.4
CD2				Sn	Sn	08 50 43.8	+0.9
CD2				Sg	Sg	08 50 45.6	-0.5
CD2				smax			
	comp=N,2μm,0.5s						
CD2				smax			
	comp=E,1μm,0.5s						
XAN	Xi'an	3.75	61	Pn	Pn	08 50 51.5	+2.3
XAN				Pg	Pg	08 51 02.5	-0.7
XAN				Sn	Sn	08 51 29.9	-3.5
XAN				Sg	Sg	08 51 46.1	-5.7
XAN				smax			
	comp=N,100nm,0.6s						
XAN				smax			
	comp=E,45nm,0.6s						
LZH	Lanzhou	3.92	346	Pg	Pg	08 51 05.6	-0.8
LZH				Sg	Sg	08 51 53.2	-4.0
LZH				smax			
	comp=N,98nm,0.6s						
LZH				smax			
	comp=E,130nm,0.5s						
GTA	Gaotai	8.27	331	eP	Pb	08 52 22.3	+7.9
GTA				pP		08 52 26.4	
GTA				sP		08 52 29.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	15.59	4	Pn	Pn	08 53 35.5	+4.6
	baz=166,slow=13,SNR=3.0						
KSRS	Korea Array	19.51	68	P	Pn	08 54 21.4	+1.5
	comp=Z,0.1nm,0.3s,baz=246,slow=10,SNR=5.2						
MKAR	Makanchi Array	22.62	316	P	P	08 54 55.3	+3.3
	comp=Z,0.3nm,0.5s,mb3.0,baz=119,slow=12,SNR=3.9						
WRA	Warramunga Arr	59.04	147	P	P	08 59 51.2	-0.3
	comp=Z,1.0nm,0.6s,mb4.0,baz=340,slow=7.8,SNR=16						
ASAR	Alice Springs	62.11	150	P	P	09 00 12.1	-0.3
	comp=Z,0.4nm,0.4s,mb3.9,baz=331,slow=6.4,SNR=11						

NIED ***11*** *08:51:00, 41°.60N×144°.30E, h23km, Mw3.7 Best double couple: M0=4.05000×10^14 NP1:φs=16.00000°, δ76.00000°, λ42.00000°. NP2:φs=273.00000°, δ49.00000°, λ161.00000°.*
IDC ***11*** *08:51:00.9±4.8, 41°.71N×144°.69E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=156.2km s-min=29.9km az=67.0*
ISCJB ***11*** *08:51:01.5±2.3, 41°.59N±0°.06×144°.5E±0°.1, h13km±13km, mb3.5/4, Error ellipse: s-maj=16.5km s-min=9.5km az=10.1*
JMA ***11*** *08:51:05.2±0.4, 41°.65N×144°.27E, h29km±3km, M3.5*
NEIC ***11*** *08:51:05.2, 41°.65N×144°.27E, h29km, MG3.5(JMA), After JMA.*

ISC 11 08:51:02.0±2.5, 41°.67N±0°.08×144°.5E±0°.1, h4km±13km, n15, σ0s74/17, mb3.5/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	1.03	290	ePg	Pg	08 51 22.5	+0.8
JEM	Erimo	1.03	290	P	Pg	08 51 22.4	+0.7
JCH	Churui	1.24	320	P	Pg	08 51 25.3	-0.5
JCH				eS	Sg	08 51 41.4	-0.5
JOB	Onbets	1.31	340	P	Pn	08 51 27.1	0.0
JAK	Akkeshi	1.33	8	P	Pn	08 51 27.6	+0.2
JAK				eS	Sg	08 51 44.9	0.0
JNBK	Urakawa-nobuka	1.41	296	P	Pn	08 51 28.2	-0.2
JAR	Ashorobuto	1.70	343	P	Pn	08 51 31.8	-0.7
ASAJ	Asahikawa	2.80	331	Pn	Pn	08 51 47.6	+0.1
	1.9nm,0.3s,baz=177,slow=12,SNR=11						
ASAJ	Asahikawa	2.80	331	ePn	Pn	08 51 47.6	0.0
JNU	Nakatsue	13.75	236	ePn	Pn	08 54 16.2	-1.5
SONM	Songino Array	27.51	296	P	P	08 56 51.1	+1.7
	0.4nm,0.5s,mb3.4,baz=81,slow=9.2,SNR=3.7						
MKAR	Makanchi Array	43.81	299	P	P	08 59 08.1	-0.7
	0.3nm,0.4s,mb3.3,baz=74,slow=6.3,SNR=3.0						
MKAR	Makanchi Array	43.81	299	P	P	08 59 08.1	-0.8
BVAR	Borovoye Array	49.30	310	P	P	08 59 52.6	+0.8
	0.7nm,0.4s,mb4.0,baz=73,slow=6.0,SNR=4.1						
WRA	Warramunga Arr	62.01	191	P	P	09 01 23.4	0.0
	0.2nm,0.6s,mb3.5,baz=8.2,slow=6.8,SNR=3.4						

NIED ***11*** *09:01:00, 37°.40N×141°.30E, h53km, Mw3.6 Best double couple: M0=2.78000×10^14 NP1:φs=274.00000°, δ89.00000°, λ-172.00000°. NP2:φs=184.00000°, δ82.00000°, λ-1.00000°.*
ISCJB ***11*** *09:01:51.8±1.1, 37°.41N±0°.04×141°.42E±0°.08, h33km±29km, Error ellipse: s-maj=11.9km s-min=5.7km az=21.3*
JMA ***11*** *09:01:52.8±0.1, 37°.42N×141°.30E, h47km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs=205.00000°, δ18.00000°, λ22.00000°. NP2:φs=94.00000°, δ83.00000°, λ107.00000°. Principal axes: T Plg49.0000°, Azm22.0000°; N Plg17.0000°, Azm272.0000°; P Plg36.0000°, Azm169.0000°;*
JMA Felt II J1.

ISC 11 09:01:52.0±1.2, 37°.41N±0°.04×141°.42E±0°.08, h33km±5km, n11, σ0s69/22, 3C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.44	264	⇑P	Pb	09 02 02.0	+0.4
JFK				S	Sb	09 02 08.3	+0.1
ONAJ	Iwakimizuishiy	0.58	238	⇑P	Pb	09 02 04.0	+0.1
ONAJ				S	Sb	09 02 11.7	-0.3
JMM	Marumori	0.67	313	⇓P	Pn	09 02 05.0	-0.2
JMM				eS	Sb	09 02 13.7	-0.7
JFT	Otama	0.87	277	⇓P	Pn	09 02 08.1	+0.3
JFT				S	Sn	09 02 18.8	-0.5
JIO	Ouri	1.04	357	⇓P	Pn	09 02 10.6	+0.4
JIO				S	Sn	09 02 23.0	-0.6
JHO	Hitachi	1.05	221	⇑P	Pn	09 02 09.9	-0.4
JHO				S	Sn	09 02 22.1	-1.7
JOU	Okura	1.12	328	⇓P	Pn	09 02 11.3	-0.1
JOU				S	Sn	09 02 25.9	+0.2
JYS	Shirataka	1.34	307	⇓P	Pn	09 02 14.5	+0.1
JYS				S	Sn	09 02 31.1	+0.1
JFY	Yanaizu	1.37	270	P	Pn	09 02 14.8	+0.1
JFY				S	Sn	09 02 31.2	-0.4
JMK	Ichinoseki	1.54	354	P	Pn	09 02 17.4	+0.2
JMK				S	Sn	09 02 36.0	-0.1
MAT	Matsushiro	2.71	252	P	Pn	09 02 34.3	+1.1
MAT				S	Sn	09 03 07.4	+2.5

ISCJB ***11*** *09:08:03.6±0.3, 46°.81N±0°.02×11°.22E±0°.02, h10km, Error ellipse: s-maj=3.2km s-min=2.4km az=11.6*
CSEM ***11*** *09:08:03.9±0.2, 46°.82N×11°.20E, h17km±5km, ML2.6/6, Error ellipse: s-maj=1.7km s-min=1.2km az=175.0*
ZUR ***11*** *09:08:04.1, 46°.83N×11°.19E, h10km, ML1.9/2*
VIE ***11*** *09:08:04.2±0.3, 46°.83N×11°.21E, h7km±4km, mb1.2/3, ML2.6/9, Error ellipse: s-maj=1.3km s-min=0.9km az=119.0 5 km NNW of St.Martin im Passeiertal*
ROM ***11*** *09:08:05.3±0.2, 46°.79N×11°.15E, h10km, Md2.5/6, MI1.8/3, Error ellipse: s-maj=4.5km s-min=1.8km az=178.0*

ISC 11 09:08:04.2±1.0, 46°.82N±0°.03×11°.21E±0°.03, h16km±23km, n38, σ0s33/64, 9C-7D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETA	Feichten	0.39	301	⇓ePg	Pg	09 08 12.0	-0.1
	SNR=26						
FETA				⇑iSg	Sg	09 08 17.3	-0.2
	93nm,0.1s						
FETA	Feichten	0.39	301	Pg	Pg	09 08 12.0	-0.1
	SNR=26						
FETA				Sg	Sg	09 08 17.3	-0.1
	93nm,0.1s						
MOTA	Moosalm	0.53	352	⇓ePg	Pg	09 08 14.8	+0.1
	SNR=17						
MOTA				⇑iSg	Sg	09 08 21.9	+0.1
	56nm,0.2s						
MOTA	Moosalm	0.53	352	Pg	Pg	09 08 14.8	+0.1
	SNR=17						
MOTA				Sg	Sg	09 08 21.9	+0.1
	56nm,0.2s						
WTTA	Wattenberg	0.53	33	⇑ePg	Pg	09 08 14.7	-0.1
	SNR=9.8						
WTTA				⇑iSg	Sg	09 08 21.6	-0.3
	8.2nm,0.1s						
WTTA	Wattenberg	0.53	33	Pg	Pg	09 08 14.7	0.0
	SNR=9.8						
WTTA				Sg	Sg	09 08 21.6	-0.2
	8.2nm,0.1s						
WATA	Walderalm	0.57	26	⇑iPg	Pg	09 08 15.8	+0.3
WATA				⇓iSg	Sg	09 08 22.9	-0.3
	21nm,0.1s						
WATA	Walderalm	0.57	26	Pg	Pg	09 08 15.8	+0.3
WATA				Sg	Sg	09 08 22.9	-0.3
	21nm,0.1s						
BRMO	Bormio	0.67	239	Pg	Pg	09 08 17.0	-0.4
BRMO				Sg	Sg	09 08 26.6	+0.3
	28nm,0.3s						
BRMO	Bormio	0.67	239	Pg	Pg	09 08 17.0	-0.4
BRMO				Sg	Sg	09 08 26.6	+0.3
	28nm,0.3s						
FUORN	Ofenpass-Fuorn	0.68	253	ePg	Pg	09 08 17.4	-0.1
	112nm,0.6s						
FUORN	Ofenpass-Fuorn	0.68	253	Pg	Pg	09 08 17.6	+0.1
FUORN				Sg	Sg	09 08 27.3	+0.7
FUORN	Ofenpass-Fuorn	0.68	253	ePg	Pg	09 08 17.4	-0.1
	112nm,0.6s						
FUORN				Sg	Sg	09 08 27.3	+0.7
AFL	Alpe Faloria	0.73	113	⇓ePg	Pg	09 08 18.6	+0.2
AFL	Alpe Faloria	0.73	113	ePg	Pg	09 08 18.6	+0.2
FAU	Forcella Aurin	0.80	138	⇓ePg	Pg	09 08 19.6	0.0
FAU	Forcella Aurin	0.80	138	ePg	Pg	09 08 19.6	-0.1
MABI	Malga Bissina	0.91	212	Pg	Pg	09 08 21.3	-0.4
MABI				Sg	Sg	09 08 33.1	-0.5
	17nm,0.1s						
MABI	Malga Bissina	0.91	212	Pg	Pg	09 08 21.3	-0.4
MABI				Sg	Sg	09 08 33.1	-0.5
DAVOX	Davos/Dischmat	0.92	268	ePg	Pg	09 08 21.5	-0.4
	51nm,0.3s						
DAVOX	Davos/Dischmat	0.92	268	Pg	Pg	09 08 21.7	-0.2
DAVOX				Sg	Sg	09 08 33.7	-0.3
DAVOX	Davos/Dischmat	0.92	268	Pg	Pg	09 08 21.7	-0.2
DAVOX				Sg	Sg	09 08 33.7	-0.3
CIMO	Cimolais	0.99	121	⇑ePg	Pg	09 08 23.4	0.0
CIMO				eSg	Sg	09 08 36.8	+0.4
CIMO	Cimolais	0.99	121	ePg	Pg	09 08 23.4	+0.1
CIMO				eSg	Sg	09 08 36.8	+0.5
DAVA	Damuels	1.02	298	⇓iPg	Pg	09 08 24.2	+0.2
DAVA				⇓iSg	Sg	09 08 37.9	+0.5
	24nm,0.3s						
DAVA	Damuels	1.02	298	Pg	Pg	09 08 24.2	+0.2
DAVA				Sg	Sg	09 08 37.9	+0.5
	24nm,0.3s						
VARN	Col Varnada, M	1.03	143	⇑ePg	Pg	09 08 23.9	-0.3
VARN				eSg	Sg	09 08 37.9	+0.2
VARN	Col Varnada, M	1.03	143	ePg	Pg	09 08 23.9	-0.3
VARN				eSg	Sg	09 08 37.9	+0.2
CSMI	Casera Mimoias	1.04	107	⇑ePg	Pg	09 08 24.4	+0.1
CSMI				eSg	Sg	09 08 37.7	-0.2
CSMI	Casera Mimoias	1.04	107	ePg	Pg	09 08 24.4	+0.1
CSMI				eSg	Sg	09 08 37.7	-0.2
FVI	Forni Avoltri	1.10	101	Pg	Pg	09 08 25.2	-0.3
FVI	Forni Avoltri	1.10	101	Pg	Pg	09 08 25.2	-0.3
CAE	Caneva	1.18	133	⇑ePg	Pg	09 08 27.2	+0.4
CAE	Caneva	1.18	133	ePg	Pg	09 08 27.2	+0.3
PTCC	Patocco-Chiusa	1.53	105	Pg	Pg	09 08 34.3	+0.6
	7.0nm,0.4s						
PTCC	Patocco-Chiusa	1.53	105	Pg	Pg	09 08 34.3	+0.6
	7.0nm,0.4s						
ACOM	Acomizza, Ital	1.61	99	ePg	Pg	09 08 34.5	-0.6
ACOM				eSg	Sg	09 08 56.1	+0.1
ACOM	Acomizza, Ital	1.61	99	ePg	Pg	09 08 34.5	-0.6
ACOM				eSg	Sg	09 08 56.1	+0.1

NEIC ***11*** *09:13:53.9, 14°.77N×93°.84W, h16km, MD4.0(MEX), After MEX.*

MEX 11 09:13:53.9±1.5, 14°.77N×93°.84W, h16km±150km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.11	33	eP	Pb	09 14 10.1	-4.6
PCIG				iS	Sb	09 14 23.6	-5.4
THIG		1.53	85	iP	Pn	09 14 16.2	-4.4
THIG				iS	Sn	09 14 34.5	-5.7
TGIG		2.12	19	iP	Pn	09 14 26.3	-2.4
TGIG				iS	Sn	09 14 50.7	-4.0
CCIG	Comitan	2.23	47	eP	Pn	09 14 28.7	-1.5
CCIG				iS	Sn	09 14 53.2	-4.2
CCIG	Comitan	2.23	47	eP	Pn	09 14 28.7	-1.5
CCIG				iS	Sn	09 14 53.2	-4.2
SCX	San Cristobal	2.28	31	iS	Sn	09 14 57.8	-0.8
SCX	San Cristobal	2.28	31	iS	Sn	09 14 57.8	-0.8
HUIG	Huatulco	2.40	295	iP	Pn	09 14 29.5	-3.1
HUIG				iS	Sn	09 14 56.5	-5.2
HUIG	Huatulco	2.40	295	iP	Pn	09 14 29.5	-3.1
HUIG				iS	Sn	09 14 56.5	-5.2
CMIG	Matias Romero	2.52	337	eP	Pn	09 14 30.6	-3.6
CMIG				iS	Sn	09 14 60.0	-4.6
CMIG	Matias Romero	2.52	337	eP	Pn	09 14 30.6	-3.6
CMIG				iS	Sn	09 14 60.0	-4.6
VHO	Vista Hermosa	3.60	310	iP	Pn	09 14 47.0	-2.1
VHO				iS	Sn	09 15 27.0	-4.4
VHO	Vista Hermosa	3.60	310	iP	Pn	09 14 47.0	-2.1
VHO				iS	Sn	09 15 27.0	-4.4

IDC ***11*** *09:28:12.7±3.3, 4°.24N×126°.23E, h17km±20km, mb4.3/16, mb1 4.4/16, mb1mx4.3/21, mbtmp4.2/16, MS3.5/3, Ms1 3.5/3, ms1mx2.9/25, Error ellipse: s-maj=32.0km s-min=12.5km az=76.0*
MOS ***11*** *09:28:13.4±1.3, 4°.24N×126°.20E, h33km, mb4.8/10, Error ellipse: s-maj=25.6km s-min=10.1km az=108.2*
NEIC ***11*** *09:28:15.0±0.3, 4°.25N×126°.25E, h35km, mb4.7/5, Error ellipse: s-maj=16.5km s-min=5.7km az=74.0*
MAN ***11*** *09:28:14, 4°.18N×126°.38E, h84km, mb5.0, ML4.0, MS4.1*
BJI ***11*** *09:28:14.4, 4°.30N×126°.30E, h35km, mB4.9/5, mb4.7/5, Ms4.3/1, Ms7 4.1/1*
ISCJB ***11*** *09:28:15.0±0.7, 4°.21N±0°.03×126°.39E±0°.06, h50km±6km, mb4.5/29, MS3.5/3, Error ellipse: s-maj=10.8km s-min=4.1km az=174.9*
DJA ***11*** *09:28:20, 3°.85N×126°.35E, h30km, mb4.8/14*

ISC 11 09:28:16.6±0.6, 4°.20N±0°.03×126°.37E±0°.06, h47km±6km, n98, σ1s20/103, mb4.5/29, MS3.5/3, 7C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	0.98	239	P	Pn	09 28 33.3	-0.7
SGSI				S	Sn	09 28 47.2	+0.4
GSPH	General Santos	2.35	323	⇑eP	Pn	09 28 50.0	-2.7
MATI	Mati	2.73	358	eP	Pn	09 29 01.8	+3.9
MATI				eS	Sn	09 29 26.6	-3.1
DAV	Davao City (W)	2.96	345	Pn	Pn	09 29 06.6	+5.5
	56nm,0.3s,baz=36,slow=1.4,SNR=2.3						
DAV				Sn	Sn	09 29 36.4	+1.1
	122nm,0.3s,baz=262,slow=23,SNR=4.2						
DAV	Davao City (W)	2.96	345	ePn	Pn	09 28 57.8	-3.3
DAV				Sn	Sn	09 29 36.4	+1.1
DMPH	Davao City--Mi	2.99	343	⇑eP	Pn	09 29 01.2	-0.3
DMPH				eS	Sn	09 29 36.3	+0.2
KCP	Kidapawan	3.07	336	⇓eP	Pn	09 29 03.2	+0.6
KCP				iS	Sn	09 29 38.7	+0.7
MNI	Manado	3.14	209	P	Pn	09 29 03.8	+0.3
TNTI	Ternate	3.55	164	P	Pn	09 29 06.3	-2.9
BUKP	Musuan	3.88	340	eP	Pn	09 29 13.5	-0.2
BUKP				eS	Sn	09 29 42.1	-16
KMSI	Cibinong	4.32	214	P	Pn	09 29 19.5	-0.3
PAGZ	Pagadian	4.69	321	eP	Pn	09 29 24.8	0.0
LBMI	Labuha	4.94	167	P	Pn	09 29 29.7	+1.4
MRSI	Marisa	5.77	230	P	Pn	09 29 41.0	+1.3
	0.9nm3μm192nm,0.5s						
LUWI	Luwuk	6.33	215	P	Pn	09 29 45.7	-1.7
	0.9nm2μm275nm,1.3s						
TOLI	Toli-Toli	6.35	241	P	Pn	09 29 54.0	+6.3
	0.8nm179nm,0.8s						
APSI	Ampana	6.93	223	P	Pn	09 29 57.7	+2.1
NLAI	Namlea	7.43	174	P	Pn	09 30 01.1	-1.3
	0.3nm1μm43nm,0.7s						
MYLDM	Lahad Datu	7.90	277	P	Pn	09 30 11.1	+2.1
	0.2nm74nm,1.1s						
KDI	Kendari	8.93	205	P	Pn	09 30

KAKA Kakadu 17.85 160 P Pn 09 32 22.5 +0.8
KNA Kununurra 19.96 173 P Pn 09 32 45.1 -1.9
714nm80nm,0.9s
FITZ Fitzroy Crossi 22.17 182 P P 09 33 08.9 +0.1
21nm,0.7s,mb4.7,baz=9.8,slow=6.2,SNR=48
FITZ Fitzroy Crossi 22.17 182 *e*P P 09 33 08.7 -0.1
31nm,0.6s,mb4.9
FITZ Fitzroy Crossi 22.17 182 P P 09 33 09.1 +0.3
COEN Coen 24.57 138 P P 09 33 35.0 +2.7
WRA Warramunga Arr 25.24 162 P P 09 33 38.1 -0.2
9.1nm,0.6s,mb4.5,baz=341,slow=10,SNR=49
WRA Warramunga Arr 25.24 162 P P 09 33 38.1 -0.2
WB2 Warramunga Arr 25.24 162 *e*P P 09 33 38.0 -0.4
ASAR Alice Springs 28.66 165 P P 09 34 09.2 +0.1
2.3nm,0.6s,mb4.1,baz=350,slow=7.4,SNR=57
ASAR PcP PcP 09 37 19.4 +0.3
1.0nm,0.6s,baz=351,slow=2.3,SNR=5.7
ASAR Alice Springs 28.66 165 P P 09 34 09.2 +0.2
ASAR 09 37 19.4
CMAR Chiang Mai Arr 30.32 300 P P 09 34 24.1 +0.2
0.8nm,0.3s,mb4.0,baz=124,slow=9.0,SNR=5.2
CMAR ScP ScP 09 41 06.7 +4.5
0.4nm,0.3s,baz=142,slow=2.0,SNR=4.3
CMAR Chiang Mai Arr 30.32 300 P P 09 34 24.1 +0.2
MEEK Meekatharra 31.56 193 *e*P P 09 34 34.7 0.0
KSRS Korea Array 33.12 2 P P 09 34 48.5 +0.2
2.1nm,0.4s,mb4.4,baz=181,slow=9.9,SNR=15
KSRS LR LR 09 49 08.3
comp=Z,37nm,18.1s,MS3.1,baz=220,slow=38
FORT Forrest 34.82 177 *e*P P 09 35 03.2 +0.2
12nm,0.5s,mb5.1
BBOO Buckleboo 37.94 167 *e*P P 09 35 30.2 +0.6
2.4nm,0.4s,mb4.3
STKA Stephens Creek 38.69 159 P P 09 35 36.7 +0.7
5.0nm,0.6s,mb4.4,baz=329,slow=9.7,SNR=20
STKA PcP PcP 09 37 47.7 +0.4
3.6nm,0.7s,baz=2.8,slow=3.7,SNR=5.3
STKA Stephens Creek 38.69 159 *e*P P 09 35 36.6 +0.6
8.1nm,0.9s,mb4.5
STKA Stephens Creek 38.69 159 *e*P P 09 35 36.4 +0.4
STKA PcP PcP 09 37 47.7 +0.4
STKA Stephens Creek 38.69 159 *e*P P 09 35 36.4 +0.4
STKA 09 37 47.7
CMSA Cobar Meteorol 40.03 154 *e*P P 09 35 47.4 +0.3
MDJ Mudanjiang 40.35 4 P P 09 35 50.4 +0.8
MDJ pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
MDJ pmax pmax
comp=Z,63nm,5.6s
ARMA Armidale 42.05 147 *e*P P 09 36 05.3 +1.5
HIA Hailar 45.26 354 *e*P P 09 36 29.5 +0.2
HIA Hailar 45.26 354 *e*P P 09 36 29.5 +0.2
SONM Songino Array 46.74 342 P P 09 36 41.0 -0.1
comp=Z,1.0nm,0.7s,mb3.8,baz=155,slow=7.9,SNR=4.8
SONM PcP PcP 09 38 13.9 +0.1
comp=Z,1.0nm,0.8s,baz=151,slow=3.3,SNR=3.4
SONM Songino Array 46.74 342 P P 09 36 41.0 0.0
SONM 09 38 13.9
PETK Petropavlovsk- 55.13 22 P P 09 37 44.5 +0.5
comp=Z,3.0nm,0.7s,mb4.5,baz=173,slow=6.0,SNR=4.9
PETK Petropavlovsk- 55.13 22 P P 09 37 44.5 +0.5
MK31 Makanchi Array 56.97 325 *e*P P 09 37 56.0 -1.2
MK31 Makanchi Array 56.97 325 *e*P P 09 37 56.1 -1.1
MKAR Makanchi Array 56.97 325 P P 09 37 55.8 -1.5
comp=Z,1.2nm,0.4s,mb4.3,baz=116,slow=8.5,SNR=14
MKAR PcP PcP 09 38 52.1 0.0
comp=Z,3.0nm,0.6s,baz=135,slow=3.1,SNR=8.4
MKAR ScP ScP 09 42 49.6 +1.5
comp=Z,2.4nm,0.8s,baz=127,slow=5.3,SNR=14
MKAR Makanchi Array 56.97 325 *ce*P P 09 37 57.0 -0.2
MKAR pmax pmax
comp=Z,1.0nm,0.4s
YAK Yakutsk 57.75 2 *e*P P 09 38 02.1 -0.4
YAK pmax pmax
comp=Z,19nm,0.9s,mb5.1
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.3s
ZALV Zalesovo Beam 60.01 333 P P 09 38 16.8 -1.5
comp=E,1.2nm,0.5s,mb4.2,baz=126,slow=7.5,SNR=4.0
ZALV LR LR 10 08 10.0
comp=E,27nm,18.3s,MS3.4,baz=52,slow=40
ZALV Zalesovo Beam 60.01 333 P P 09 38 16.8 -1.5
KURK Kurchatov 61.15 328 *e*P P 09 38 24.7 -1.4
comp=E,5.3nm,0.6s,mb4.8
KURK Kurchatov 61.15 328 *c i*P P 09 38 24.6 -1.6
KURK pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
SEY Seymchan 61.66 13 *i*P P 09 38 30.7 +1.4
BRVK Borovoye 66.80 327 *c i*P P 09 39 02.8 -0.5
BRVK pmax pmax
comp=Z,9.0nm,1.7s,mb4.5
TIXI Tiksi 67.38 1 *e*P P 09 39 06.3 -0.3
comp=Z,6.4nm,0.6s,mb4.8
TIXI Tiksi 67.38 1 *e*P P 09 39 06.5 -0.1
TIXI pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
BILL Bilibino 69.19 15 *e*P P 09 39 13.5 -4.5
BILL *e* 09 39 44.7
BILL pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
ABKAR Akbulak array 71.56 321 *e*P P 09 39 31.7 -1.1
comp=Z,1.4nm,0.5s,mb4.2
ARU Arti 74.35 328 *d i*P P 09 39 48.1 -1.1
ARU S S 09 49 16.9 -3.0
ARU pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KDAK Kodiak Island 81.69 32 *i*P P 09 40 31.7 +1.9
KIV Kislovodsk 82.55 314 P P 09 40 38.0 +3.3
KIV pmax pmax
comp=Z,12nm,1.2s,mb4.8
BPAW Bear Paw Mtn. 83.02 26 *e*P P 09 40 37.2 +0.6
comp=Z,9.4nm,1.1s,mb4.7
MAW Mawson 84.07 200 P P 09 40 42.9 +0.9
comp=Z,2.0nm,0.8s,mb4.3,baz=77,slow=9.3,SNR=6.3
MAW Mawson 84.07 200 P P 09 40 42.9 +1.0
ILAR Eielson Array 84.83 25 P P 09 40 46.4 +0.5
comp=Z,1.2nm,0.8s,mb4.1,baz=249,slow=5.0,SNR=17
ILAR Eielson Array 84.83 25 P P 09 40 46.4 +0.5
ILAR Eielson Array 84.83 25 P P 09 40 46.4 +0.5
DOT Dot Lake 86.07 27 *e*P P 09 40 51.0 -1.1
OBN Obninsk 86.47 325 P P 09 40 56.0 +1.8
OBN pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
BRTR Keskin Array B 89.44 310 P P 09 41 07.4 -1.4
comp=Z,0.9nm,0.8s,mb4.2,baz=108,slow=6.6,SNR=3.7
BRTR Keskin Array B 89.44 310 *ce*P P 09 41 10.3 +1.5
BRTR pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 89.89 340 P P 09 41 09.6 -0.6
comp=Z,2.7nm,0.6s,mb4.7,baz=86,slow=6.6,SNR=12
ARCES LR LR 10 26 57.3
comp=Z,43nm,19.4s,MS3.9,baz=216,slow=39
ARCES ARCESS Array B 89.89 340 P P 09 41 09.6 -0.6
ARCES LR LR 10 26 57.3
ARCES ARCESS Array B 89.89 340 P P 09 41 09.6 -0.6
FINES FINESS Array B 91.25 332 P P 09 41 15.5 -1.2
comp=Z,0.6nm,0.3s,mb4.4,baz=84,slow=4.3,SNR=3.8
FINES FINESS Array B 91.25 332 P P 09 41 15.5 -1.2
NB2 NORSAR Subarra 98.21 334 P P 09 41 47.0 -1.5
comp=Z,2.3nm,0.7s,mb4.8,baz=65,slow=4.6
NB2 NORSAR Subarra 98.21 334 P P 09 41 47.0 -1.5
NOA NORSAR Array B 98.21 334 P P 09 41 47.2 -1.3
comp=Z,1.8nm,0.7s,mb4.7,baz=67,slow=4.6,SNR=4.6
NOA NORSAR Array B 98.21 334 P P 09 41 47.3 -1.2
VYHS Vyhne 98.37 320 *e*P P 09 41 41.4 -8.1
KOLL Kolacno 98.62 320 *e*P P 09 41 44.9 -5.8
TXAR Lajitas Array 121.59 52 PKP PKPdf 09 47 06.7 +0.9
comp=Z,0.3nm,0.7s,baz=222,slow=1.7,SNR=4.7
TXAR Lajitas Array 121.59 52 PKIKP PKPdf 09 47 06.7 +0.9

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*ISCJB **11** 09:48:33.4±0.8, 39°.41N±0°.04×33°.03E±0°.04, h0km±7km, Error ellipse: s-maj=6.6km s-min=5.1km az=38.9*
*CSEM **11** 09:48:33.6±0.3, 39°.43N×33°.01E, h2km, MD2.7, Error ellipse: s-maj=6.8km s-min=5.7km az=7.0*
*ISK **11** 09:48:33.0, 39°.45N×33°.07E, h2km, MD2.7*
*DDA **11** 09:48:35.4, 39°.50N×33°.16E, h6km±1km, Md2.8*
ISC 11 09:48:33.9±1.0, 39°.42N±0°.05×33°.01E±0°.05, h4km±11km, n24, σ0°80/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Af`ar-Bala (A**	**0.05**	**60**	*e*PG	**Pg**	**09 48 32.9**	**-2.2**
AFSR	**Af`ar-Bala (A**	**0.05**	**60**	*e*Pg	**Pg**	**09 48 32.9**	**-2.2**
BBAL	**Bala**	**0.15**	**35**	*i* P	**Pg**	**09 48 36.8**	**0.0**
BBAL				*i* S	**Sg**	**09 48 38.8**	**0.0**
BBAL	**Bala**	**0.15**	**35**	*i* P	**Pg**	**09 48 36.8**	**0.0**
BBAL				*i* S	**Sg**	**09 48 38.8**	**0.0**
LOD	**Lodumlu**	**0.51**	**338**	*e*PG	**Pg**	**09 48 44.4**	**+0.7**
LOD				*e*SG	**Sg**	**09 48 50.3**	**+0.1**
LOD	**Lodumlu**	**0.51**	**338**	*e*Pg	**Pg**	**09 48 44.4**	**+0.8**
LOD				*e*Sg	**Sg**	**09 48 50.3**	**+0.1**
KAMT	**Kaman**	**0.55**	**95**	*e*PG	**Pg**	**09 48 44.3**	**-0.1**
KAMT				*e*SG	**Sg**	**09 48 51.3**	**-0.2**
KAMT	**Kaman**	**0.55**	**95**	*e*Pg	**Pg**	**09 48 44.3**	**-0.1**
KAMT				*e*Sg	**Sg**	**09 48 51.3**	**-0.1**
KIZT	**Kizilcal**	**1.03**	**239**	*e*PN	**Pn**	**09 48 54.5**	**-0.7**
KIZT	**Kizilcal**	**1.03**	**239**	*e*Pn	**Pn**	**09 48 54.5**	**-0.7**
CDAG	**Cicekdag**	**1.07**	**79**	*i* P	**Pg**	**09 48 53.6**	**-0.8**
CDAG				*i* S	**Sg**	**09 49 08.4**	**+0.1**
CDAG	**Cicekdag**	**1.07**	**79**	*i* P	**Pg**	**09 48 53.7**	**-0.7**
CDAG				*i* S	**Sg**	**09 49 08.4**	**+0.1**
ELDT	**Eldivan**	**1.11**	**16**	*i* P	**Pg**	**09 48 54.8**	**-0.5**
ELDT				*i* S	**Sg**	**09 49 11.0**	**+1.2**
ELDT	**Eldivan**	**1.11**	**16**	*i* P	**Pg**	**09 48 54.8**	**-0.5**
ELDT				*i* S	**Sg**	**09 49 11.0**	**+1.3**
SVRH	**Sivrihisar-ESK**	**1.15**	**272**	*e*PN	**Pn**	**09 48 56.8**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.15**	**272**	*e*Pn	**Pn**	**09 48 56.8**	**0.0**
CORM	**Corum**	**1.46**	**58**	*e*PN	**Pn**	**09 49 00.2**	**-0.8**
CORM	**Corum**	**1.46**	**58**	*e*Pn	**Pn**	**09 49 00.2**	**-0.8**
KONT	**Konya--Tatoy**	**1.56**	**199**	*e*PN	**Pn**	**09 49 03.2**	**+0.8**
KONT	**Konya--Tatoy**	**1.56**	**199**	*e*Pn	**Pn**	**09 49 03.2**	**+0.8**
AVNT	**Avonos**	**1.57**	**114**	*i* P	**Pg**	**09 49 03.8**	**-0.2**
AVNT				*i* S	**Sg**	**09 49 26.0**	**+1.7**
AVNT	**Avonos**	**1.57**	**114**	*i* P	**Pg**	**09 49 03.8**	**-0.2**
AVNT				*i* S	**Sg**	**09 49 26.0**	**+1.7**
YOZ	**Yozgat**	**1.80**	**82**	*e*PN	**Pn**	**09 49 06.0**	**+0.3**
YOZ	**Yozgat**	**1.80**	**82**	*e*Pn	**Pn**	**09 49 06.0**	**+0.3**

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*IDC **11** 09:48:51.4±1.7, 6°.62S×130°.09E, h0km, mb3.7/3, mb1 3.9/6, mb1mx3.7/17, mbtmp3.7/6, ML3.8/3, Error ellipse: s-maj=67.8km s-min=21.6km az=66.0*
*ISCJB **11** 09:49:06.5±3.0, 7°.3S±0°.2×129°.4E±0°.2, h143km±34km, mb3.5/3, Error ellipse: s-maj=29.9km s-min=22.0km az=33.6*
*NEIC **11** 09:49:07.0±2.8, 7°.27S×129°.39E, h133km±30km, Error ellipse: s-maj=27.5km s-min=20.4km az=220.0*
ISC 11 09:49:06.7±2.8, 7°.3S±0°.2×129°.4E±0°.2, h127km±31km, n11, σ1°16/12, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.16**	**151**	*e*Pn	**Pn**	**09 50 37.1**	**+1.7**
KAKA				*e*Sn	**Sn**	**09 51 42.9**	**-1.6**
FITZ	**Fitzroy Crossi**	**11.37**	**199**	Pn	**Pn**	**09 51 45.4**	**+0.1**
0.3nm,0.3s,baz=59,slow=14,SNR=19							
FITZ				Sn	Sx	09 53 42.1	
baz=313,slow=19							
WRA	**Warramunga Arr**	**13.46**	**160**	Pn	**Pn**	**09 52 10.8**	**-1.8**
0.8nm,0.3s,baz=346,slow=13,SNR=47							
WRA				Sn	Sx	09 54 33.8	
1.2nm,0.3s,baz=336,slow=23,SNR=10							
WRA	**Warramunga Arr**	**13.46**	**160**	Pn	**Pn**	**09 52 10.8**	**-1.8**
WRA				Sn	Sx	09 54 33.8	
WB2	**Warramunga Arr**	**13.46**	**160**	*e*Pn	**Pn**	**09 52 13.0**	**+0.3**
COEN	**Coen**	**15.05**	**117**	Pn	**Pn**	**09 52 33.2**	**+0.3**
ASAR	**Alice Springs**	**16.85**	**166**	P	**Pn**	**09 52 56.1**	**+1.0**
0.3nm,0.3s,baz=342,slow=10,SNR=26							
ASAR				S	Sx	09 55 55.7	
0.2nm,0.3s,baz=348,slow=26,SNR=5.5							
STKA	**Stephens Creek**	**26.97**	**157**	P	**P**	**09 54 37.7**	**+1.1**
0.7nm,0.5s,mb3.4,baz=340,slow=12,SNR=1.9							
STKA	**Stephens Creek**	**26.97**	**157**	P	**P**	**09 54 37.7**	**+1.1**
CMAR	**Chiang Mai Arr**	**39.48**	**311**	P	**P**	**09 56 25.3**	**+0.3**
1.1nm,0.8s,mb3.8,baz=146,slow=8.3,SNR=4.9							
MKAR	**Makanchi Array**	**68.15**	**327**	P	**P**	**09 59 51.6**	**-1.6**
0.4nm,0.4s,mb3.6,baz=123,slow=5.3,SNR=3.7							

PRE 11 09:49:29.0±1.2, 21°.19S×33°.43E, h5km, ML3.6, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.37**	**249**	*e*P	Pn	09 50 24.3	+2.0
MSNA				*e*S	Sn	09 51 03.8	+1.2
MSNA				AML	AML	09 51 24.2	
comp=Z,276nm,0.4s							
POGA	**Pongola**	**6.37**	**195**	*e*P	Pn	09 51 03.7	+0.1
POGA				*e*S	Sn	09 52 13.9	-2.8
POGA				AML	AML	09 53 00.1	
comp=Z,44nm,0.6s							
KSR	**Koster**	**7.58**	**231**	*e*P	Pn	09 51 21.4	+1.2
KSR				*e*S	Sn	09 52 43.5	-3.0
KSR				AML	AML	09 53 35.9	
comp=Z,52nm,0.8s							
PRYS	**Parys**	**7.96**	**223**	*e*P	Pn	09 51 26.1	+0.7
PRYS				*e*S	Sn	09 52 51.6	-4.2
PRYS				AML	AML	09 53 41.2	
comp=Z,26nm,0.5s							
SWZ	**Schweizer**	**9.50**	**230**	*e*P	Pn	09 51 47.1	+0.6
SWZ				*e*S	Sn	09 53 28.8	-4.9
SWZ				AML	AML	09 54 41.8	
comp=Z,16nm,0.5s							
PKA	**Prieska**	**12.81**	**227**	*e*P	Pn	09 52 33.7	+1.8
PKA				*e*S	Sn	09 54 47.8	-7.0
PKA				AML	AML	09 56 18.0	
comp=Z,9.7nm,0.6s							
UPI	**Upington**	**13.16**	**235**	*e*P	Pn	09 52 38.1	+1.4
UPI				*e*S	Sn	09 54 56.8	-6.6
UPI				AML	AML	09 56 25.5	
comp=Z,8.1nm,0.7s							

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*MOS **11** 10:03:37.7±1.3, 54°.77N×162°.51E, h12km, mb4.2/7, Error ellipse: s-maj=15.4km s-min=8.0km az=72.9*
*IDC **11** 10:03:37.2±0.7, 55°.01N×161°.92E, h0km, mb4.0/13, mb1 4.3/13, mb1mx4.1/23, mbtmp4.0/13, MS3.4/4, Ms1 3.5/4, ms1mx2.9/34, Error ellipse: s-maj=22.9km s-min=17.0km az=148.0*
*ISCJB **11** 10:03:40.0±0.8, 54°.80N±0°.02×162°.49E±0°.05, h28km±6km, mb3.9/14, MS3.4/4, Error ellipse: s-maj=4.6km s-min=3.5km az=8.6*
*KRSC **11** 10:03:39.3±0.1, 54°.82N×162°.47E, h24km±24km, ML4.6*
*NEIC **11** 10:03:42.6±1.5, 55°.11N×161°.89E, h37km±16km, mb3.6/1, Error ellipse: s-maj=20.6km s-min=10.6km az=160.0*
ISC 11 10:03:40.1±0.8, 54°.82N±0°.02×162°.48E±0°.05, h18km±5km, n76, σ1°05/102, mb3.9/14, MS3.4/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.51**	**239**	*e*P	**Pg**	**10 03 50.0**	**-0.3**
MKZ				*e*S	**Sg**	**10 03 56.9**	**-0.3**
MKZ	**Mys Kozlova**	**0.51**	**239**	PN	**Pg**	**10 03 50.0**	**-0.3**
MKZ				S	**Sg**	**10 03 56.9**	**-0.3**
KBTR	**Krutoberegovo**	**1.40**	**8**	*e*P	**Pn**	**10 04 04.2**	**-0.4**
KBTR				*e*S	**Sn**	**10 04 22.9**	**+0.3**
KBTR	**Krutoberegovo**	**1.40**	**8**	PN	**Pn**	**10 04 04.2**	**-0.4**
KBTR				S	**Sn**	**10 04 22.9**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**1.51**	**319**	*e*P	**Pn**	**10 04 06.1**	**0.0**
BZGR				*e*S	**Sn**	**10 04 26.0**	**+0.7**
ZLN	**Zelenaya**	**1.53**	**322**	*e*P	**Pn**	**10 04 06.6**	**+0.2**
ZLN				*e*S	**Sn**	**10 04 26.9**	**+1.1**
BZMR	**Bezymyannaya**	**1.59**	**315**	*e*P	**Pn**	**10 04 07.1**	**-0.1**
BZMR				*e*S	**Sn**	**10 04 28.2**	**+1.0**
BZWR	**Bezymyannyi-We**	**1.61**	**316**	*e*S	**Sn**	**10 04 25.6**	**-2.1**
KIRR	**Kirishev**	**1.66**	**314**	*e*S	**Sn**	**10 04 27.7**	**-1.3**
KPT	**Kopyto**	**1.72**	**313**	*e*P	**Pn**	**10 04 09.1**	**+0.1**
KPT				*e*S	**Sn**	**10 04 30.2**	**-0.3**
KRSR	**Krestovskiy**	**1.77**	**323**	*e*P	**Pn**	**10 04 09.4**	**-0.3**
KRSR				*e*S	**Sn**	**10 04 31.8**	**+0.1**
KLY	**Klyuchi**	**1.82**	**326**	*e*P	**Pn**	**10 04 09.6**	**-0.7**
KLY				*e*S	**Sn**	**10 04 32.0**	**-0.9**
KLY	**Klyuchi**	**1.82**	**326**	PN	**Pn**	**10 04 09.6**	**-0.7**
KLY				S	**Sn**	**10 04 32.0**	**-0.9**
SMKR	**Semkarok**	**1.85**	**342**	*e*P	**Pn**	**10 04 10.7**	**-0.1**
SMKR				*e*S	**Sn**	**10 04 33.0**	**-0.7**
BDR	**Baidarnaya**	**1.89**	**338**	*e*P	**Pn**	**10 04 12.0**	**+0.7**
BDR				*e*S	**Sn**	**10 04 35.8**	**+1.1**
KOZR	**Kozyr**	**1.93**	**311**	PN	**Pn**	**10 04 12.2**	**+0.4**
KOZR				S	**Sn**	**10 04 36.6**	**+1.1**
KOZ	**Kozyrevsk**	**1.93**	**311**	*e*P	**Pn**	**10 04 12.2**	**+0.3**
KOZ				*e*S	**Sn**	**10 04 36.6**	**+0.9**
KII	**Karymskiy**	**1.94**	**247**	*e*P	**Pn**	**10 04 11.6**	**-0.4**
KII				*e*S	**Sn**	**10 04 35.7**	**-0.1**
SRKR	**Sorokina**	**1.98**	**339**	*e*P	**Pn**	**10 04 13.2**	**+0.6**
SRKR				*e*S	**Sn**	**10 04 38.0**	**+1.2**
BKI	**Bering**	**2.05**	**78**	*e*P	**Pn**	**10 04 13.2**	**-0.3**
BKI				*e*S	**Sn**	**10 04 37.2**	**-1.3**
BKI	**Bering**	**2.05**	**78**	PN	**Pn**	**10 04 13.2**	**-0.3**
BKI				S	**Sn**	**10 04 37.2**	**-1.3**
SRDR	**Sredinnyy**	**2.17**	**315**	*e*P	**Pn**	**10 04 14.7**	**-0.4**
SRDR				*e*S	**Sn**	**10 04 40.2**	**-1.3**
SPN	**Mys Shipunski**	**2.26**	**221**	*e*P	**Pn**	**10 04 16.3**	**0.0**
SPN				*e*S	**Sn**	**10 04 42.5**	**-1.1**
SPN	**Mys Shipunski**	**2.26**	**221**	PN	**Pn**	**10 04 16.3**	**0.0**
SPN				S	**Sn**	**10 04 42.5**	**-1.1**
AVH	**Avacha**	**2.70**	**236**	*e*P	**Pn**	**10 04 23.2**	**+0.7**
AVH				*e*S	**Sn**	**10 04 54.9**	**+0.3**
GNL	**Ganaly**	**2.89**	**249**	*e*P	**Pn**	**10 04 26.1**	**+1.0**
PET	**Petropavlovsk**	**2.89**	**233**	*e*P	**Pn**	**10 04 25.0**	**-0.1**
PET				*e*S	**Sn**	**10 04 57.8**	**-1.5**
PET	**Petropavlovsk**	**2.89**	**233**	*e*Pn	**Pn**	**10 04 24.5**	**-0.6**
PET				*e*Sn	**Sn**	**10 04 56.4**	**-2.9**
PET	**Petropavlovsk**	**2.89**	**233**	*e*PN	**Pn**	**10 04 25.2**	**+0.1**
PET				*e*S	**Sn**	**10 04 59.9**	**+0.6**
PET				pmax	pmax		
comp=Z,139nm,0.3s							
PET				smax			
comp=E,558nm,0.4s							
PET				smax			
comp=N,757nm,0.7s							
PET				MLR	MLR		
comp=Z,500nm,14.0s							
PET				MLR	MLR		
comp=Z,1μm,15.0s							
PETK	**Petropavlovsk-**	**3.30**	**241**	Pn	**Pn**	**10 04 31.0**	**+0.3**
comp=Z,8.7nm,0.3s,baz=84,slow=28,SNR=153							
PETK				Sn	**Sn**	**10 05 12.8**	**+3.3**
comp=Z,10nm,0.3s,baz=82,slow=22,SNR=6.1							
PETK	**Petropavlovsk-**	**3.30**	**241**	Pn	**Pn**	**10 04 31.0**	**+0.3**
PETK				Sn	**Sn**	**10 05 12.8**	**+3.3**
PETK	**Petropavlovsk-**	**3.30**	**241**	PN	**Pn**	**10 04 31.0**	**+0.3**
PETK						10 05 12.8	
GRL	**Gorelyy**	**3.47**	**231**	*e*P	**Pn**	**10 04 34.5**	**+1.5**
GRL				*e*S	**Sn**	**10 05 14.4**	**+0.9**
SKR	**Severo-Kuril's**	**5.67**	**226**	*e*PN	**Pn**	**10 05 05.3**	**+2.1**
SKR				pmax	pmax		
comp=Z,180nm,1.0s							
BILL	**Bilibino**	**13.38**	**6**	*e*PN	**Pn**	**10 06 53.3**	**+4.6**
BILL				pmax	pmax		
comp=Z,3.0nm,1.2s							
YSS	**Yuzh-Sakhalins**	**14.69**	**246**	Pn	**Pn**	**10 07 05.0**	**-1.7**
YSS	**Yuzh-Sakhalins**	**14.69**	**246**	P	**Pn**	**10 07 05.0**	**-1.7**
ASAJ	**Asahikawa**	**16.72**	**238**	Pn	**Pn**	**10 07 33.3**	**+0.2**
comp=Z,0.5nm,0.3s,baz=51,slow=7.9,SNR=5.3							
ASAJ	**Asahikawa**	**16.72**	**238**	*e*Pn	**Pn**	**10 07 32.1**	**-1.0**
comp=Z,3.9nm,0.8s							
ASAJ	**Asahikawa**	**16.72**	**238**	P	**Pn**	**10 07 33.3**	**+0.2**
ASAJ				pmax	pmax		
comp=Z,1.0nm,0.3s							
KLR	**Kul'dur**	**19.62**	**266**	*e*P	**Pn**	**10 08 03.8**	**-4.7**
TIXI	**Tiksi**	**22.15**	**332**	*e*P	**P**	**10 08 36.9**	**+2.6**
TIXI				pmax	pmax		
comp=Z,9.0nm,1.3s,mb4.0							
MAJO	**Matsushiro**	**24.72**	**232**	*e*P	**P**	**10 08 59.5**	**-0.5**
MAJO	**Matsushiro**	**24.72**	**232**	*e*P	**P**	**10 08 59.5**	**-0.5**
MJAR	**Matsushiro Arr**	**24.72**	**232**	P	**P**	**10 08 59.4**	**-0.6**
comp=Z,2.9nm,0.2s,mb4.4,baz=38,slow=13,SNR=9.5							
MJAR	**Matsushiro Arr**	**24.72**	**232**	P	**P**	**10 08 59.4**	**-0.6**
ILAR	**Eielson Array**	**26.60**	**48**	P	**P**	**10 09 17.3**	**+0.6**
comp=Z,0.6nm,0.8s,mb3.2,baz=260,slow=8.4,SNR=9.7							
ILAR				LR	LR	10 20 01.2	
comp=Z,77nm,18.6s,MS3.3,baz=7.6,slow=37							
ILAR	**Eielson Array**	**26.60**	**48**	P	**P**	**10 09 17.3**	**+0.6**
SONM	**Songino Array**	**34.89**	**282**	PcP	PcP	10 13 02.6	+0.2
comp=Z,0.6nm,0.7s,baz=80,slow=2.9,SNR=5.0							
SONM				LR	LR	10 24 34.6	
comp=Z,41nm,19.4s,MS3.2,baz=235,slow=36							
ZALV	**Zalesovo Beam**	**43.04**	**302**	LR	LR	10 31 19.1	
comp=Z,53nm,18.5s,MS3.5,baz=316,slow=39							
MK31	**Makanchi Array**	**48.67**	**296**	*e*P	**P**	**10 12 20.1**	**-2.5**
MK31	**Makanchi Array**	**48.67**	**296**	*e*P	**P**	**10 12 20.1**	**-2.5**
MKAR	**Makanchi Array**	**48.67**	**296**	P	**P**	**10 12 18.9**	**-3.8**
comp=Z,0.9nm,0.7s,mb3.9,baz=54,slow=6.6,SNR=7.7							
MKAR	**Makanchi Array**	**48.67**	**296**	P	**P**	**10 12 18.9**	**-3.7**
BVAR	**Borovoye Array**	**50.42**	**308**	P	**P**	**10 12 32.7**	**-3.1**
comp=Z,0.5nm,0.4s,mb3.9,baz=67,slow=11,SNR=3.0							
BVAR	**Borovoye Array**	**50.42**	**308**	P	**P**	**10 12 32.7**	**-3.1**
NVAR	**Mina Array Bea**	**53.86**	**73**	P	**P**	**10 13 04.1**	**+2.5**
comp=Z,1.3nm,0.6s,mb4.0,baz=308,slow=7.6,SNR=13							
PDAR	**Pinedale Array**	**55.47**	**63**	P	**P**	**10 13 14.8**	**+1.6**
comp=Z,0.5nm,0.6s,mb3.7,baz=341,slow=4.0,SNR=5.3							
AKTO	**Aktyubinsk**	**57.69**	**313**	LR	LR	10 42 42.9	
comp=Z,48nm,18.8s,MS3.6,baz=160,slow=41							
FINES	**FINESS Array B**	**59.08**	**337**	P	**P**	**10 13 37.2**	**-1.2**
comp=Z,0.5nm,0.3s,mb4.0,baz=187,slow=6.6,SNR=3.2							
FINES	**FINESS Array B**	**59.08**	**337**	P	**P**	**10 13 37.2**	**-1.2**
FINES				pmax	pmax		
comp=Z,1.0nm,0.4s							
NB2	**NORSAR Subarra**	**62.26**	**345**	P	**P**	**10 13 58.6**	**-1.5**
comp=Z,0.9nm,0.7s,mb4.0,baz=18,slow=6.9							
NOA	**NORSAR Array B**	**62.26**	**345**	P	**P**	**10 13 58.4**	**-1.7**
comp=Z,1.1nm,0.8s,mb4.1,baz=18,slow=6.7,SNR=4.2							
NOA	**NORSAR Array B**	**62.26**	**345**	P	**P**	**10 13 58.4**	**-1.7**
NOA				pmax	pmax		
comp=Z,1.0nm,0.8s							
BSD	**Bornholm Skovb**	**67.24**	**340**	*i* P	**P**	**10 14 32.0**	**-0.6**
BSD	**Bornholm Skovb**	**67.24**	**340**	*i* P	**P**	**10 14 32.0**	**-0.6**
BSD	**Bornholm Skovb**	**67.24**	**340**	*i* P	**P**	**10 14 32.0**	**-0.6**
SNR=49						

ASAJ Asahikawa 2.65 333 *e*Pn **Pn 10 08 30.0 +1.2**
MAJO Matsushiro 7.00 224 Pn **Pn 10 09 27.9 -0.7**
SONM Songino Array 27.34 296 P **P 10 13 32.0 +1.7**
1.6nm,0.8s,mb3.6,baz=81,slow=9.2,SNR=7.4
ZALV Zalesovo Beam 40.53 308 P **P 10 15 24.4 0.0**
0.9nm,0.3s,mb3.8,baz=82,slow=11,SNR=4.1
MKAR Makanchi Array 43.63 299 P **P 10 15 49.9 +0.1**
0.3nm,0.5s,mb3.3,baz=75,slow=11,SNR=3.5
ILAR Eielson Array 44.36 35 P **P 10 15 55.4 0.0**
0.2nm,0.6s,mb3.0,baz=273,slow=7.1,SNR=3.6
INK Inuvik 49.20 29 P **P 10 16 33.7 +0.5**
0.6nm,0.5s,mb3.9,baz=307,slow=10,SNR=3.5
INK Inuvik 49.20 29 P **P 10 16 33.7 +0.5**
WRA Warramunga Arr 62.06 191 P **P 10 18 05.3 -0.7**
0.2nm,0.8s,mb3.3,baz=7.9,slow=6.9,SNR=5.4
FINES FINESS Array B 65.66 332 P **P 10 18 29.8 +0.5**
1.7nm,0.8s,mb4.2,baz=30,slow=8.7,SNR=3.1
ASAR Alice Springs 65.79 190 P **P 10 18 30.4 0.0**
0.2nm,0.8s,mb3.2,baz=343,slow=5.8,SNR=2.7
TXAR Lajitas Array 85.55 54 P **P 10 20 24.1 +0.4**
0.2nm,0.6s,mb3.5,baz=323,slow=5.8,SNR=3.3

IDC 11 10:25:20.7±3.1, 46°.81N×152°.59E, h97km±27km, mb3.4/4, mb1 3.5/6, mb1mx3.1/23, mbtmp3.3/6, Error ellipse: s-maj=45.4km s-min=20.7km az=104.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**7.11**	**26**	P		Pn	10 27 02.0	0.0
	0.2nm,0.3s,baz=178,slow=11,SNR=4.7							
ASAJ	**Asahikawa**	**7.52**	**253**	P		Pn	10 27 07.7	+0.1
	0.5nm,0.3s,baz=76,slow=12,SNR=4.8							
FINES	**FINESS Array B**	**63.83**	**335**	P		P	10 35 42.3	+0.1
	3.1nm,1.1s,baz=36,slow=10,SNR=4.5							
NOA	**NORSAR Array B**	**68.05**	**341**	P		P	10 36 09.2	0.0
	0.5nm,0.5s,baz=38,slow=4.5,SNR=3.0							
WRA	**Warramunga Arr**	**68.45**	**198**	P		P	10 36 11.4	-0.7
	0.3nm,0.9s,baz=15,slow=6.9,SNR=3.0							
ASAR	**Alice Springs**	**72.15**	**198**	P		P	10 36 35.8	+1.2
	0.2nm,0.6s,baz=7.9,slow=4.8,SNR=4.9							

*ISK **11** 10:27:07.7, 37°.55N×35°.04E, h9km, MD2.6*
*DDA **11** 10:27:08.7, 37°.52N×35°.09E, h7km±4km, Md2.9*
*ISCJB **11** 10:27:09.3±0.7, 37°.50N±0°.05×35°.06E±0°.05, h8km±10km, Error ellipse: s-maj=9.4km s-min=5.8km az=156.9*
*CSEM **11** 10:27:09.1±0.2, 37°.50N×35°.02E, h10km, MD2.6, Error ellipse: s-maj=5.5km s-min=4.8km az=80.0*
ISC 11 10:27:09.6±0.7, 37°.50N±0°.07×35°.05E±0°.05, h11km±10km, n19, σ0°89/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.24**	**179**	*e*PG		**Pg**	**10 27 13.6**	**-0.9**
KARA				*e*SG		**Sg**	**10 27 18.7**	**+0.9**
KARA	**Karaisali**	**0.24**	**179**	*e*Pg		**Pg**	**10 27 13.6**	**-0.9**
KARA				*e*Sg		**Sg**	**10 27 18.7**	**+0.9**
GULE	**Gulek**	**0.30**	**225**	*i* P		**Pg**	**10 27 15.3**	**-0.4**
GULE				*i* S		**Sg**	**10 27 21.3**	**+1.4**
GULE	**Gulek**	**0.30**	**225**	*i* P		**Pg**	**10 27 15.4**	**-0.3**
GULE				*i* S		**Sg**	**10 27 21.3**	**+1.5**
KOZT	**Kozan**	**0.62**	**91**	*e*PG		**Pg**	**10 27 20.4**	**-1.2**
KOZT				*e*SG		**Sg**	**10 27 29.6**	**-0.1**
KOZT	**Kozan**	**0.62**	**91**	*e*Pg		**Pg**	**10 27 20.4**	**-1.2**
KOZT				*e*Sg		**Sg**	**10 27 29.6**	**-0.1**
CEYT	**Ceyhan**	**0.74**	**131**	*e*PG		**Pg**	**10 27 23.5**	**-0.4**
CEYT	**Ceyhan**	**0.74**	**131**	*e*Pg		**Pg**	**10 27 23.5**	**-0.4**
YURE	**YUREGIR**	**0.82**	**145**	*e*P		**Pg**	**10 27 25.8**	**+0.4**
YURE	**YUREGIR**	**0.82**	**145**	*e*P		**Pg**	**10 27 25.8**	**+0.4**
AVNT	**Avonos**	**1.29**	**353**	*i* P		**Pn**	**10 27 33.3**	**-0.2**
AVNT				*i* S		**Sb**	**10 27 50.6**	**+0.2**
AVNT	**Avonos**	**1.29**	**353**	*i* P		**Pn**	**10 27 33.3**	**-0.2**
AVNT				*i* S		**Sb**	**10 27 50.6**	**+0.2**
SULT	**Sultanhani-AKS**	**1.40**	**300**	*e*PN		**Pn**	**10 27 33.8**	**-1.3**
SULT	**Sultanhani-AKS**	**1.40**	**300**	*e*Pn		**Pn**	**10 27 33.8**	**-1.3**
PINB	**Pinarbasi**	**1.59**	**42**	*e*P		**Pn**	**10 27 38.8**	**+1.1**
PINB				*i* S		**Sn**	**10 27 59.6**	**+1.3**
PINB	**Pinarbasi**	**1.59**	**42**	*e*P		**Pn**	**10 27 38.8**	**+1.1**
PINB				*i* S		**Sn**	**10 27 59.6**	**+1.4**
IKL	**Isikli**	**1.67**	**221**	*e*PN		**Pn**	**10 27 37.9**	**-0.8**
IKL	**Isikli**	**1.67**	**221**	*e*Pn		**Pn**	**10 27 37.9**	**-0.8**
SARI	**SarD1z-Kayseri**	**1.75**	**47**	*e*PN		**Pn**	**10 27 34.2**	**-5.7**

*IDC **11** 10:30:19.8±0.8, 31°.29N×103°.81E, h0km, mb4.4/12, mb1 4.5/13, mb1mx4.3/22, mbtmp4.4/13, ML3.4/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/29, Error ellipse: s-maj=30.3km s-min=15.0km az=63.0*
*BJI **11** 10:30:21.8, 31°.22N×103°.87E, h14km, mB4.6/14, mb4.6/20, ML4.3/20, Ms4.3/29, Ms7 4.0/24*
*NEIC **11** 10:30:21.7±0.4, 31°.27N×103°.82E, h10km, mb4.2/13, Error ellipse: s-maj=11.1km s-min=6.6km az=219.0*
NEIC Felt at Leshan.
*MOS **11** 10:30:22.7±0.9, 31°.20N×103°.83E, h33km, mb4.7/8, Error ellipse: s-maj=15.8km s-min=7.9km az=94.8*
ISC 11 10:30:22.8±0.7, 31°.30N±0°.02×103°.85E±0°.04, h15km±4km, n79, σ1°17/95, mb4.3/26, MS3.5/5, 1C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.39**	**191**	⇓*i*Pg		**Pg**	**10 30 30.4**	**-0.4**
CD2				Sg		**Sg**	**10 30 36.5**	**+0.4**
CD2				smax				
	comp=N,31μm,0.7s							
CD2				smax				
	comp=E,24μm,1.0s							
LZH	**Lanzhou**	**4.78**	**360**	Pg		**Pg**	**10 31 52.0**	**-2.4**
LZH				Sg		**Sg**	**10 32 55.1**	**-1.2**
LZH				smax				
	comp=N,1μm,1.0s							
LZH				smax				
	comp=E,360nm,1.1s							
LZH				LR		LR		
	comp=N,2μm,7.4s							
LZH				LR		LR		
	comp=E,3μm,5.5s							
LZH				LR		LR		
	comp=Z,2μm,6.6s							
ENH	**Enshi**	**4.96**	**100**	*e*Pn		**Pn**	**10 31 38.4**	**+1.6**
ENH				*e*Sn		**Sn**	**10 32 37.3**	**+3.4**
XAN	**Xi'an**	**5.08**	**56**	Pn		**Pn**	**10 31 38.9**	**+0.5**
XAN				Sn		**Sn**	**10 32 35.5**	**-1.3**
XAN				Sg		**Sg**	**10 33 02.0**	**-3.9**
XAN				smax				
	comp=N,370nm,0.8s							
XAN				smax				
	comp=E,220nm,1.0s							
GYA	**Guiyang**	**5.42**	**152**	Pn		**Pn**	**10 31 45.0**	**+1.9**
GYA				Pg		**Pg**	**10 32 01.4**	**-5.2**
GYA				Sn		**Sn**	**10 32 51.2**	**+6.1**
GYA				Sg		**Sg**	**10 33 16.7**	**0.0**
GYA				smax				
	comp=N,410nm,0.8s							
GYA				smax				
	comp=E,440nm,0.9s							
KMI	**Kunming**	**6.22**	**189**	Pn		**Pn**	**10 31 54.8**	**+0.6**
KMI				Sn		**Sn**	**10 33 04.4**	**-0.7**
KMI				Sg		**Sg**	**10 33 37.3**	**-5.4**
KMI				smax				
	comp=N,120nm,1.4s							
KMI				smax				
	comp=E,86nm,1.6s							
KMI				LR		LR		
	comp=N,1μm,6.8s							
KMI				LR		LR		
	comp=E,2μm,8.2s							
WHN	**Wuhan**	**9.05**	**92**	⇑P		**Pn**	**10 32 36.0**	**+3.0**
WHN				S		**Sn**	**10 34 11.6**	**-3.1**
WHN				LR		LR		
	comp=N,2μm,6.0s							
WHN				LR		LR		
	comp=E,1μm,5.7s							
WHN				LR		LR		
	comp=Z,1μm,5.7s							
HHC	**Hu-ho-hao-te**	**11.39**	**31**	*e*P		**Pn**	**10 33 09.0**	**+4.0**
HHC				pP			10 33 12.3	
HHC				sP			10 33 15.5	
HHC				PP			10 33 18.6	
HHC				S		**Sn**	**10 35 20.8**	**+8.9**
HHC				sS			10 35 26.7	
HHC				SS			10 35 35.3	
HHC				pmax		pmax		
	comp=Z,25nm,1.1s							
HHC				pmax		pmax		
	comp=Z,370nm,6.4s							
HHC				LR		LR		
	comp=N,750nm,6.6s							
HHC				LR		LR		
	comp=E,900nm,6.6s							
HHC				LR		LR		
	comp=Z,920nm,9.9s							
CHTO	**Chiang Mai**	**13.19**	**201**	Pn		**Pn**	**10 33 21.7**	**-8.1**
CHTO	**Chiang Mai**	**13.19**	**201**	P		**Pn**	**10 33 21.7**	**-8.0**
BJI	**Beijing**	**13.28**	**46**	P		**Pn**	**10 33 33.6**	**+2.8**
BJI				pmax		pmax		
	comp=Z,5.0nm,0.7s							
BJI				LR		LR		
	comp=N,340nm,8.2s							
BJI				LR		LR		
	comp=E,410nm,10.4s							
QIZ	**Qiongzhong**	**13.36**	**155**	P		**Pn**	**10 33 28.7**	**-3.3**
QIZ				S		**Sn**	**10 35 58.4**	**-1.9**
QIZ				LR		LR		
	comp=N,410nm,12.8s							
QIZ				LR		LR		
	comp=Z,640nm,11.2s							
CM31	**Chiang Mai Arr**	**13.53**	**200**	*e*Pn		**Pn**	**10 33 43.9**	**+10**
CMAR	**Chiang Mai Arr**	**13.53**	**200**	Pn		**Pn**	**10 33 40.8**	**+6.5**
	comp=Z,0.8nm,0.3s,baz=6.7,slow=8.8,SNR=15							
CMAR	**Chiang Mai Arr**	**13.53**	**200**	P		**Pn**	**10 33 40.8**	**+6.5**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
SONM	**Songino Array**	**16.63**	**6**	Pn		**Pn**	**10 34 14.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=190,slow=9.0,SNR=11							
SONM				LR		LR	10 41 32.3	
	comp=Z,156nm,19.4s,baz=187,slow=40							
SONM	**Songino Array**	**16.63**	**6**	P		**Pn**	**10 34 14.6**	**-0.7**
ULN	**Ulaanbaatar**	**16.73**	**8**	*e*Pn		**Pn**	**10 34 19.6**	**+3.0**
	comp=Z,4.3nm,0.7s							
ULN	**Ulaanbaatar**	**16.73**	**8**	*e*P		**Pn**	**10 34 19.6**	**+3.0**
ULN				pmax		pmax		
	comp=Z,4.0nm,0.7s							
WMQ	**Urumqi**	**17.86**	**319**	*e*P		**Pn**	**10 34 31.0**	**+0.3**
WMQ				pmax		pmax		
	comp=Z,15nm,1.0s							
ZAK	**Zakamensk**	**19.07**	**359**	*e*P		**Pn**	**10 34 45.5**	**+0.1**
ZAK				pmax		pmax		
	comp=Z,2.0nm,0.8s							
TLY	**Talaya**	**20.37**	**360**	*e*P		**P**	**10 35 00.6**	**+1.9**
	comp=Z,2.3nm,0.6s							
TLY	**Talaya**	**20.37**	**360**	*e*P		**P**	**10 35 00.7**	**+2.0**
TLY				pmax		pmax		
	comp=Z,3.0nm,0.9s							
TLY				MLR		MLR		
	comp=Z,104nm,11.0s,MS3.5							
KSRS	**Korea Array**	**20.77**	**66**	P		**P**	**10 35 04.2**	**+1.0**
	comp=Z,22nm,0.7s,baz=261,slow=10,SNR=136							
KSRS				LR		LR	10 43 38.1	
	comp=Z,50nm,19.1s,MS2.9,baz=245,slow=38							
KSRS	**Korea Array**	**20.77**	**66**	P		**P**	**10 35 04.3**	**+1.0**
KSRS				pmax		pmax		
	comp=Z,22nm,0.7s							
KSRS				MLR		MLR		
	comp=Z,50nm,19.1s,MS2.9							
IRK	**Irkutsk**	**20.93**	**1**	*e*P		**P**	**10 35 06.1**	**+1.3**
IRK				pmax		pmax		
	comp=Z,45nm,1.0s							
CN2	**Changchun**	**21.12**	**48**	*e*P		**P**	**10 35 08.6**	**+1.7**
CN2				*es*P		sP	10 35 14.3	+1.2
CN2				*e*S		**S**	**10 39 01.0**	**-0.4**
CN2				pmax		pmax		
	comp=Z,60nm,1.0s,mb4.9							
CN2				pmax		pmax		
	comp=Z,200nm,3.0s							
MK31	**Makanchi Array**	**22.69**	**319**	*e*P		**P**	**10 35 23.9**	**+0.2**
MK31	**Makanchi Array**	**22.69**	**319**	*e*P		**P**	**10 35 23.9**	**+0.2**
MKAR	**Makanchi Array**	**22.69**	**319**	P		**P**	**10 35 24.0**	**+0.3**
	comp=Z,2.4nm,0.5s,mb3.9,baz=122,slow=12,SNR=23							
MKAR	**Makanchi Array**	**22.69**	**319**	P		**P**	**10 35 24.0**	**+0.3**
KSH	**Kashi**	**24.09**	**298**	*e*P		**P**	**10 35 40.8**	**+3.1**
KSH				*e*pP			10 35 44.9	
KSH				*es*P		sP	10 35 47.8	+3.7
KSH				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb4.4							
KSH				pmax		pmax		
	comp=Z,110nm,6.1s							
KSH				LR		LR		
	comp=N,330nm,13.2s							
KSH				LR		LR		
	comp=E,250nm,6.9s							
KSH				LR		LR		
	comp=Z,160nm,10.7s,MS3.8							
MDJ	**Mudanjiang**	**24.15**	**49**	P		**P**	**10 35 39.9**	**+1.7**
MDJ				pmax		pmax		
	comp=Z,17nm,1.1s,mb4.4							
MDJ				pmax		pmax		
	comp=Z,62nm,5.9s							
ORY	**Orie**	**24.50**	**348**	⇓*i*P		**P**	**10 35 41.6**	**+0.3**
ORY				*e*			10 36 14.0	
ORY				*e*			10 39 15.3	
ORY				*e*S		**S**	**10 40 02.3**	**+1.3**
KZA	**Kyzart**	**25.22**	**303**	*e*P		**P**	**10 35 49.0**	**+1.0**
	comp=Z,10nm,0.8s,mb4.4							
TKM2	**Tokmak 2**	**25.22**	**305**	*e*P		**P**	**10 35 48.9**	**+0.9**
	comp=Z,2.0nm,0.7s,mb3.8							
TKM2	**Tokmak 2**	**25.22**	**305**	*e*P		**P**	**10 35 48.9**	**+0.9**
TKM2				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb3.8							
KBK	**Karagaybulak**	**25.60**	**304**	*e*P		**P**	**10 35 52.6**	**+1.2**
	comp=Z,12nm,1.1s,mb4.3							
EKS2	**Erkin-Say**	**26.43**	**304**	*e*P		**P**	**10 35 57.7**	**-1.3**
	comp=Z,1.4nm,0.6s,mb3.7							
ZAA0	**Zalesovo Array**	**26.45**	**334**	*e*P		**P**	**10 35 59.0**	**-0.1**
ZALV	**Zalesovo Beam**	**26.45**	**334**	P		**P**	**10 35 59.1**	**+0.1**
	comp=Z,5.4nm,0.8s,mb4.2,baz=141,slow=9.0,SNR=12							
ZALV				LR		LR	10 46 39.6	
	comp=Z,76nm,18.4s,MS3.3,baz=120,slow=37							
ZALV	**Zalesovo Beam**	**26.45**	**334**	P		**P**	**10 35 59.1**	**+0.1**
KURK	**Kurchatov**	**26.96**	**323**	*e*P		**P**	**10 36 03.7**	**0.0**
	comp=Z,8.4nm,1.0s,mb4.2							
KURK	**Kurchatov**	**26.96**	**323**	*d*P		**P**	**10 36 03.9**	**+0.3**
KURK				pmax		pmax		
	comp=Z,6.0nm,1.2s,mb4.0							
KLR	**Kul'dur**	**27.59**	**41**	*e*P		**P**	**10 36 09.8**	**+0.5**
KBL	**Kabul**	**29.31**	**286**	*e*P		**P**	**10 36 23.9**	**-0.9**
	comp=Z,2.6nm,0.4s,mb4.3							
KBL	**Kabul**	**29.31**	**286**	*e*P		**P**	**10 36 23.9**	**-0.9**
KBL				pmax		pmax		
	comp=Z,3.0nm,0.4s,mb4.4							
ABKAR	**Akbulak array**	**37.38**	**312**	*e*P		**P**	**10 37 34.4**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.7							
ARU	**Arti**	**40.15**	**322**	*e*P		**P**	**10 37 57.2**	**-0.7**
	comp=Z,5.7nm,1.0s,mb4.3							
ARU	**Arti**	**40.15**	**322**	*d*P		**P**	**10 37 57.4**	**-0.6**
ARU				*e*			10 39 30.0	
ARU				S		**S**	**10 44 04.4**	**+0.6**
ARU				SS		SS	10 47 01.6	+0.2
ARU				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.3							
SEY	**Seymchan**	**44.03**	**30**	*e*P		**P**	**10 38 27.4**	**-2.2**
BILL	**Bilibino**	**51.10**	**25**	*e*P		**P**	**10 39 23.1**	**-1.3**
BILL				*e*			10 41 20.1	
BILL				pmax		pmax		
	comp=Z,8.0nm,1.3s,mb4.5							
BILL				MLR		MLR		
	comp=Z,100nm,20.0s,MS3.8							
ARCES	**ARCESS Array B**	**56.99**	**336**	P		**P**	**10 40 06.6**	**-0.8**
	comp=Z,2.8nm,0.8s,mb4.3,baz=60,slow=7.2,SNR=7.0							
ARCES				PcP		PcP	10 41 00.3	-2.1
	comp=Z,0.9nm,0.6s,baz=86,slow=4.7,SNR=6.4							
ARCES	**ARCESS Array B**	**56.99**	**336**	P		**P**	**10 40 06.6**	**-0.8**
ARCES							10 41 00.3	
FINES	**FINESS Array B**	**57.29**	**326**	P		**P**	**10 40 08.7**	**-0.9**
	comp=Z,2.0nm,0.9s,mb4.2,baz=79,slow=7.2,SNR=4.0							
FINES	**FINESS Array B**	**57.29**	**326**	P		**P**	**10 40 08.7**	**-0.9**
WRA	**Warramunga Arr**	**58.75**	**146**	P		**P**	**10 40 20.0**	**-0.4**
	comp=Z,7.7nm,0.9s,mb4.7,baz=338,slow=7.7,SNR=87							
WRA	**Warramunga Arr**	**58.75**	**146**	P		**P**	**10 40 20.0**	**-0.3**
WB2	**Warramunga Arr**	**58.76**	**146**	*e*P		**P**	**10 40 20.0**	**-0.4**
ASAR	**Alice Springs**	**61.77**	**149**	P		**P**	**10 40 40.3**	**-0.6**
	comp=Z,2.1nm,0.7s,mb4.4,baz=329,slow=6.2,SNR=22							
ASAR	**Alice Springs**	**61.77**	**149**	P		**P**	**10 40 40.3**	**-0.6**
PPLA	**Purkeypile**	**68.60**	**29**	*e*P		**P**	**10 41 24.8**	**0.0**
	comp=Z,4.1nm,0.6s,mb4.5							
COLA	**College**	**69.35**	**26**	*e*P		**P**	**10 41 29.5**	**+0.1**
	comp=Z,9.6nm,0.9s,mb4.7							
COLA	**College**	**69.35**	**26**	*e*P		**P**	**10 41 29.5**	**+0.1**
COLA				pmax		pmax		
	comp=Z,10.0nm,0.9s,mb4.8							
ILAR	**Eielson Array**	**69.76**	**26**	P		**P**	**10 41 30.7**	**-1.3**
	comp=Z,20nm,1.5s,mb4.8,baz=284,slow=4.7,SNR=13							
ILAR	**Eielson Array**	**69.76**	**26**	P		**P**	**10 41 30.7**	**-1.3**
SML	**Sawmill**	**70.70**	**29**	*e*P		**P**	**10 41 37.6**	**-0.2**
	comp=Z,3.3nm,0.9s,mb4.3							
SML	**Sawmill**	**70.70**	**29**	*e*P		**P**	**10 41 37.6**	**-0.2**
SML				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.2							
KDAK	**Kodiak Island**	**70.80**	**33**	P		**P**	**10 41 37.5**	**-0.9**
	comp=Z,1.9nm,0.4s,mb4.4,baz=357,slow=17,SNR=4.0							
KDAK	**Kodiak Island**	**70.80**	**33**	P		**P**	**10 41 37.5**	**-1.0**
INK	**Inuvik**	**72.05**	**19**	P		**P**	**10 41 45.3**	**-0.5**
	comp=Z,5.7nm,0.8s,mb4.5,baz=321,slow=7.3,SNR=12							
INK	**Inuvik**	**72.05**	**19**	P		**P**	**10 41 45.3**	**-0.5**
STKA	**Stephens Creek**	**72.29**	**147**	P		**P**	**10 41 47.4**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.3,baz=328,slow=5.7,SNR=7.5							
STKA	**Stephens Creek**	**72.29**	**147**	P		**P**	**10 41 47.4**	**-0.2**
YKA	**Yellowknife Ar**	**81.58**	**17**	P		**P**	**10 42 39.2**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.2,baz=330,slow=5.3,SNR=9.5							
YKA	**Yellowknife Ar**	**81.58**	**17**	P		**P**	**10 42 39.2**	**-0.4**
YKA	**Yellowknife Ar**	**81.58**	**17**	P		**P**	**10 42 39.2**	**-0.4**
EDM	**Edmonton**	**89.83**	**21**	*e*P		**P**	**10 43 20.0**	**-0.8**
EDM	**Edmonton**	**89.83**	**21**	*e*P		**P**	**10 43 20.0**	**-0.8**

*CSEM **11** 10:47:49.7±0.3, 50°.22N×19°.05E, h1km, ML2.6/4, Error ellipse: s-maj=8.8km s-min=3.8km az=10.0*
*PRU **11** 10:47:50.6, 50°.29N×19°.04E, h0km*
WAR 11 10:47:50.3, 50°.22N×19°.13E, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.43**	**89**	*e*Pg		Pg	10 47 59.0	+0.4
OJC				*e*Sg		Sg	10 48 05.4	+1.2
OJC	**Ojcow**	**0.43**	**89**	*e*Pg		Pg	10 47 59.0	+0.4
OJC				*e*Sg		Sg	10 48 05.4	+1.2
OKC	**Ostrava-Krasne**	**0.74**	**239**	*e*PG		Pg	10 48 04.9	+0.5
OKC				*e*SG		Sg	10 48 15.1	+1.2
	comp=Z,23nm,0.9s							
OKC	**Ostrava-Krasne**	**0.74**	**239**	Pg		Pg	10 48 04.9	+0.5
OKC				Sg		Sg	10 48 15.1	+1.2
	comp=Z,23nm,0.9s							
NIE	**Niedzica**	**1.11**	**136**	*e*Pg		Pg	10 48 12.5	+1.0
NIE				*e*Sg		Sg	10 48 28.5	+2.6
NIE	**Niedzica**	**1.11**	**136**	*e*Pg		Pg	10 48 12.5	+1.0
NIE				*e*Sg		Sg	10 48 28.5	+2.6
MORC	**Moravsky Berou**	**1.11**	**247**	*e*Sg		Sg	10 48 24.7	-1.3
KOLL	**Kolacno**	**1.71**	**196**	*e*		Pn	10 48 23.0	+1.7
KOLL	**Kolacno**	**1.71**	**196**	*e*SN		Sn	10 48 45.5	+1.7
KOLL	**Kolacno**	**1.71**	**196**	*e*Sn		Sn	10 48 45.6	+1.8
VYHS	**Vyhne**	**1.73**	**186**	*e*PN		Pn	10 48 20.8	-0.8
VYHS				*e*SN		Sn	10 48 45.1	+0.6
VYHS	**Vyhne**	**1.73**	**186**	*e*Pn		Pn	10 48 20.8	-0.8
VYHS				*e*Sn		Sn	10 48 45.1	+0.6
DPC	**Dobruska-Polom**	**1.80**	**275**	*e*PG		Pg	10 48 21.6	-3.2
DPC				*e*SG		Sg	10 48 46.8	-1.4
	comp=Z,8.9nm,0.4s							
DPC	**Dobruska-Polom**	**1.80**	**275**	Pg		Pg	10 48 21.6	-3.2
DPC				Sg		Sg	10 48 46.8	-1.4
	comp=Z,8.9nm,0.4s							
VRAC	**Vranov**	**1.88**	**242**	*e*Pn		Pn	10 48 23.6	0.0
VRAC				*e*Sg		Sg	10 48 48.2	-2.4
KSP	**Ksiaz**	**1.91**	**290**	*e*Pg		Pg	10 48 25.6	-1.3
KSP				*e*Sg		Sg	10 48 50.6	-1.1
KSP	**Ksiaz**	**1.91**	**290**	*e*Pg		Pg	10 48 25.6	-1.3
KSP				*e*Sg		Sg	10 48 50.6	-1.1
KECS	**Kecovo**	**1.95**	**152**	*e*PN		Pn	10 48 23.8	-0.8
KECS				*e*SN		Sn	10 48 51.9	+2.1
CRVS	**Cervenica-Dubn**	**2.01**	**130**	*e*PN		Pn	10 48 26.8	+1.4
CRVS				*e*SN		Sn	10 48 54.4	+3.1
CRVS	**Cervenica-Dubn**	**2.01**	**130**	*e*Pn		Pn	10 48 26.8	+1.4
CRVS				*e*Sn		Sn	10 48 54.4	+3.1
KOLS	**Kolonicke sedl**	**2.42**	**121**	*e*		Pg	10 48 40.1	+3.5
PRU	**Pruhonice**	**2.96**	**267**	*e*SG		Sg	10 49 22.3	-3.0
	comp=Z,6.7nm,0.9s							
PRU	**Pruhonice**	**2.96**	**267**	Sg		Sg	10 49 22.3	-3.0
	comp=Z,6.7nm,0.9s							
KHC	**Kasperske Hory**	**3.76**	**255**	*e*SG		Sg	10 49 49.8	-1.3
	comp=Z,3.8nm,0.4s							
KHC	**Kasperske Hory**	**3.76**	**255**	Sg		Sg	10 49 49.8	-1.3
	comp=Z,3.8nm,0.4s							

*NIED **11** 10:53:00, 41°.80N×144°.30E, h23km, Mw3.9 Best double couple: M0:8.62000×10^14 NP1:φ0=22.00000°, δ61.00000°, λ71.00000°. NP2:φ0=237.00000°, δ34.00000°, λ120.00000°.*
*IDC **11** 10:53:18.9±1.1, 41°.71N×144°.33E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/22, mbtmp3.7/10, ML3.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.0/34, Error ellipse: s-maj=26.9km s-min=23.1km az=95.0*
*ISCJB **11** 10:53:22.5±1.1, 41°.70N±0°.06×144°.3E±0°.1, h41km±9km, mb3.7/9, Error ellipse: s-maj=15.3km s-min=9.1km az=27.3*
*JMA **11** 10:53:23.3±0.2, 41°.77N×144°.27E, h33km±3km, M3.9*
*NEIC **11** 10:53:23.4, 41°.77N×144°.27E, h33km, MG3.9(JMA), After JMA.*
ISC 11 10:53:23.6±2.6, 41°.76N±0°.05×144°.3E±0°.1, h31km±19km, n21, σ0°64/23, mb3.7/9, Hokkaido region

| Code | Station Name | Δ° | AZ°

*ISCJB **11** 11:21:45.0±0.2, 46°.56N×0°.02×81°.07W×0°.02, h0km, mb3.7/3, Error ellipse: s-maj=2.3km s-min=2.0km az=135.9*
*IDC **11** 11:21:48.6±0.8, 46°.61N×80°.95W, h0km, mb3.7/2, mb1 4.2/6, mb1mx3.7/27, mbtmp4.1/6, ML3.4/4, Error ellipse: s-maj=12.2km s-min=9.8km az=64.0*
*NEIC **11** 11:21:49.2, 46°.48N×81°.04W, h1km, mb3.6/2, MN3.8(OTT), After OTT.*
NEIC Possible rockburst at a mine near Sudbury. Felt in the Sudbury area.
*OTT **11** 11:21:49.2±0.1, 46°.48N×81°.04W, h1km, MN3.8/29*
OTT Mining related event, Sudbury, Ontario Felt. Mining induced.

ISC 11 11:21:47.3±0.2, 46°.55N±0°.01×81°.02W±0°.02, h0km, n118, σ1§42/210, mb3.7/3, Ontario

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUNO	**Sudbury Onapin**	**0.24**	**294**	Pg	**Pg**	**11 21 53.8**	**+1.8**
SUNO				Sg	**Sg**	**11 21 56.8**	**+1.7**
SUNO	**Sudbury Onapin**	**0.24**	**294**	PG	**Pg**	**11 21 53.8**	**+1.8**
SUNO				SG	**Sg**	**11 21 56.8**	**+1.7**
SUNO				Trac		11 21 57.8	
	comp=Z,5μm,0.2s						
RSPO	**Restoule Provi**	**0.99**	**118**	Pg	**Pg**	**11 22 06.9**	**+0.6**
RSPO				Sg	**Sg**	**11 22 17.7**	**-1.4**
RSPO	**Restoule Provi**	**0.99**	**118**	PG	**Pg**	**11 22 06.9**	**+0.6**
RSPO				SG	**Sg**	**11 22 17.7**	**-1.4**
RSPO				Trac		11 22 22.8	
	comp=Z,208nm,0.1s						
HSMO	**Haileybury Sch**	**1.24**	**48**	Pg	**Pg**	**11 22 12.6**	**+1.5**
HSMO				Sg	**Sg**	**11 22 27.8**	**+0.6**
HSMO	**Haileybury Sch**	**1.24**	**48**	PG	**Pg**	**11 22 12.6**	**+1.5**
HSMO				SG	**Sg**	**11 22 27.8**	**+0.6**
HSMO				Trac		11 22 32.3	
	comp=Z,627nm,0.2s						
KLBO	**Killbear Provi**	**1.31**	**154**	Pg	**Pg**	**11 22 11.9**	**-0.6**
KLBO				Sg	**Sg**	**11 22 28.0**	**-1.6**
KLBO	**Killbear Provi**	**1.31**	**154**	PG	**Pg**	**11 22 11.9**	**-0.6**
KLBO				SG	**Sg**	**11 22 28.0**	**-1.6**
KLBO				Trac		11 22 28.5	
	comp=Z,109nm,0.1s						
EEO	**Eldee**	**1.35**	**85**	Pg	**Pg**	**11 22 13.8**	**+0.7**
EEO				Sg	**Sg**	**11 22 30.3**	**-0.2**
EEO	**Eldee**	**1.35**	**85**	PG	**Pg**	**11 22 13.8**	**+0.7**
EEO				SG	**Sg**	**11 22 30.3**	**-0.2**
EEO				Trac		11 22 35.3	
	comp=Z,743nm,0.2s						
TOBO	**Tobermory, Bru**	**1.37**	**195**	PG	**Pg**	**11 22 12.5**	**-1.0**
TOBO				SG	**Sg**	**11 22 28.7**	**-2.5**
TOBO				Trac		11 22 34.7	
	comp=Z,163nm,0.1s						
BUKO	**Buck Lake**	**1.58**	**134**	Pn	**Pn**	**11 22 16.5**	**0.0**
BUKO	**Buck Lake**	**1.58**	**134**	PN	**Pn**	**11 22 16.5**	**0.0**
BUKO				SN	**Sn**	**11 22 35.8**	**-1.8**
BUKO				Trac		11 22 39.6	
	comp=Z,100nm,0.1s						
BELQ	**Belleterre**	**1.81**	**61**	PN	**Pn**	**11 22 20.6**	**+0.9**
BELQ				SN	**Sn**	**11 22 44.4**	**+1.1**
BELQ				Trac		11 22 48.0	
	comp=Z,167nm,0.2s						
TIMO	**Timmins Ontari**	**1.93**	**354**	Pn	**Pn**	**11 22 23.6**	**+2.2**
TIMO				Sn	**Sn**	**11 22 48.6**	**+2.3**
TIMO	**Timmins Ontari**	**1.93**	**354**	PN	**Pn**	**11 22 23.6**	**+2.2**
TIMO				SN	**Sn**	**11 22 48.6**	**+2.3**
TIMO				Trac		11 22 52.2	
	comp=Z,112nm,0.1s						
BMRO	**Meriville Lake**	**1.96**	**184**	PN	**Pn**	**11 22 22.7**	**+1.0**
BMRO				PN	**Pn**	**11 22 22.8**	**+1.1**
BMRO				SN	**Sn**	**11 22 47.4**	**+0.5**
BMRO				SN	**Sn**	**11 22 47.6**	**+0.7**
BMRO				Trac		11 22 50.7	
	comp=Z,150nm,0.2s						
BMRO				Trac		11 22 51.1	
	167nm,0.1s						
KILO	**Kirkland Lake**	**2.14**	**24**	Pn	**Pn**	**11 22 28.3**	**+4.0**
KILO				Sg	**Sg**	**11 22 56.5**	**+0.5**
KILO	**Kirkland Lake**	**2.14**	**24**	PN	**Pn**	**11 22 28.3**	**+4.0**
KILO				SG	**Sg**	**11 22 56.5**	**+0.5**
KILO				Trac		11 22 58.4	
	comp=Z,169nm,0.2s						
ALGO	**Algonquin Park**	**2.14**	**105**	Pn	**Pn**	**11 22 26.5**	**+2.2**
ALGO				Sn	**Sn**	**11 22 54.6**	**+3.0**
ALGO	**Algonquin Park**	**2.14**	**105**	PN	**Pn**	**11 22 26.5**	**+2.2**
ALGO				SN	**Sn**	**11 22 54.6**	**+3.0**
ALGO				Trac		11 22 58.1	
	comp=Z,392nm,0.1s						
CLWO	**Collingwood**	**2.16**	**166**	Pn	**Pn**	**11 22 25.8**	**+1.4**
CLWO				Sn	**Sn**	**11 22 53.4**	**+1.5**
CLWO	**Collingwood**	**2.16**	**166**	PN	**Pn**	**11 22 25.8**	**+1.4**
CLWO				SN	**Sn**	**11 22 53.4**	**+1.5**
CLWO				Trac		11 22 58.0	
	comp=Z,170nm,0.2s						
SADO	**Sadowa**	**2.21**	**143**	Pn	**Pn**	**11 22 26.6**	**+1.4**
	56nm,0.3s,baz=331,slow=14,SNR=214						
SADO				Sn	**Sn**	**11 22 54.4**	**+1.2**
	95nm,0.3s,baz=67,slow=21,SNR=9.2						
SADO	**Sadowa**	**2.21**	**143**	Pn	**Pn**	**11 22 26.6**	**+1.4**
SADO				Sg	**Sg**	**11 22 54.9**	**-3.4**
SADO	**Sadowa**	**2.21**	**143**	PN	**Pn**	**11 22 26.6**	**+1.4**
SADO				SG	**Sg**	**11 22 54.9**	**-3.4**
SADO				Trac		11 22 57.2	
	comp=Z,139nm,0.2s						
BRCO	**Bruce Peninsul**	**2.32**	**188**	Pn	**Pn**	**11 22 28.7**	**+2.0**
BRCO				Sn	**Sn**	**11 22 58.4**	**+2.5**
BRCO	**Bruce Peninsul**	**2.32**	**188**	PN	**Pn**	**11 22 28.7**	**+2.0**
BRCO				SN	**Sn**	**11 22 58.4**	**+2.5**
BRCO				Trac		11 23 03.5	
	comp=Z,478nm,0.2s						
BWLO	**Walkerton**	**2.43**	**182**	PN	**Pn**	**11 22 29.5**	**+1.3**
BASO	**Ashfield**	**2.57**	**190**	PN	**Pn**	**11 22 30.4**	**+0.3**
BASO				PN	**Pn**	**11 22 30.5**	**+0.3**
BASO				SN	**Sn**	**11 23 05.0**	**+2.9**
BASO				Trac		11 23 11.5	
	comp=Z,224nm,0.3s						
CRLO	**Chalk River**	**2.57**	**100**	PN	**Pn**	**11 22 31.8**	**+1.6**
CRLO				SN	**Sn**	**11 23 04.2**	**+2.0**
CRLO				Trac		11 23 11.6	
	comp=Z,246nm,0.2s						
BANO	**Bancroft**	**2.65**	**124**	PN	**Pn**	**11 22 32.2**	**+1.0**
BANO				SN	**Sn**	**11 23 03.6**	**-0.3**
BANO				Trac		11 23 17.8	
	comp=Z,40nm,0.1s						
PEMO	**Pembroke**	**2.76**	**107**	PN	**Pn**	**11 22 34.7**	**+1.9**
PEMO				SN	**Sn**	**11 23 08.7**	**+1.8**
PEMO				Trac		11 23 16.5	
	comp=Z,106nm,0.2s						
VLDQ	**Val d'Or**	**2.89**	**56**	Pn	**Pn**	**11 22 34.5**	**0.0**
VLDQ				Sn	**Sn**	**11 23 08.3**	**-1.6**
VLDQ				Sg	**Sg**	**11 23 14.0**	**-6.0**
VLDQ	**Val d'Or**	**2.89**	**56**	PN	**Pn**	**11 22 34.5**	**0.0**
VLDQ				SN	**Sn**	**11 23 08.3**	**-1.6**
VLDQ				SG	**Sg**	**11 23 14.0**	**-6.0**
VLDQ				Trac		11 23 17.4	
	comp=Z,194nm,0.3s						
PKRO	**Pickering**	**2.92**	**151**	PN	**Pn**	**11 22 37.8**	**+2.8**
PKRO				SG	**Sg**	**11 23 15.2**	**-6.1**
PKRO				Trac		11 23 22.2	
	comp=Z,460nm,0.2s						
ACTO	**Acton**	**3.01**	**167**	PN	**Pn**	**11 22 37.4**	**+1.1**
ACTO				SN	**Sn**	**11 23 15.0**	**+2.0**
ACTO				Trac		11 23 23.2	
	comp=Z,92nm,0.2s						
GLMI	**Grayling**	**3.05**	**237**	*e*Pn	**Pn**	**11 22 37.5**	**+0.7**
DRWO	**Darlington Wes**	**3.12**	**148**	LG		11 23 21.1	
DRWO				Trac		11 23 32.2	
	comp=Z,160nm,0.2s						
DELO	**Deloro Mine**	**3.13**	**129**	PN	**Pn**	**11 22 36.9**	**-1.0**
DELO				SN	**Sn**	**11 23 13.8**	**-2.2**
DELO				LG		11 23 23.9	
DELO				Trac		11 23 30.6	
	comp=Z,119nm,0.2s						
PLVO	**Plevna**	**3.14**	**117**	PN	**Pn**	**11 22 38.7**	**+0.7**
PLVO				SN	**Sn**	**11 23 16.4**	**+0.2**
PLVO				LG		11 23 24.9	
PLVO				Trac		11 23 31.7	
	comp=Z,96nm,0.2s						
TORO	**Toronto--Lesli**	**3.16**	**157**	PN	**Pn**	**11 22 42.0**	**+3.7**
TORO				SN	**Sn**	**11 23 18.6**	**+1.9**
WLVO	**Wesleyville**	**3.21**	**144**	PG	**Pg**	**11 22 42.9**	**-5.9**
WLVO				LG		11 23 24.1	
WLVO				Trac		11 23 25.5	
	comp=Z,127nm,0.2s						
ELFO	**Elginfield**	**3.36**	**184**	PN	**Pn**	**11 22 40.3**	**-0.6**
ELFO				SN	**Sn**	**11 23 21.3**	**-0.2**
ELFO				LG		11 23 28.5	
ELFO				Trac		11 23 33.1	
	comp=Z,103nm,0.2s						
TYNO	**Tyneside**	**3.55**	**166**	Pn	**Pn**	**11 22 42.5**	**-1.0**
TYNO				Sn	**Sn**	**11 23 27.9**	**+1.8**
TYNO				Lg		11 23 35.5	
TYNO	**Tyneside**	**3.55**	**166**	PN	**Pn**	**11 22 42.4**	**-1.1**
TYNO				SN	**Sn**	**11 23 27.9**	**+1.8**
TYNO				LG		11 23 35.5	
TYNO				Trac		11 23 41.7	
	comp=Z,73nm,0.2s						
GRQ	**Grand Remous**	**3.56**	**87**	Pn	**Pn**	**11 22 45.1**	**+1.3**
GRQ				Sn	**Sn**	**11 23 27.6**	**+1.1**
GRQ				Lg		11 23 38.6	
GRQ	**Grand Remous**	**3.56**	**87**	PN	**Pn**	**11 22 45.1**	**+1.3**
GRQ				SN	**Sn**	**11 23 27.6**	**+1.1**
GRQ				LG		11 23 38.6	
GRQ				Trac		11 23 45.8	
	comp=Z,114nm,0.3s						
MALO	**McAlpine Lake**	**3.58**	**13**	PN	**Pn**	**11 22 45.1**	**+1.0**
MALO				SN	**Sn**	**11 23 28.3**	**+1.3**
MALO				LG		11 23 39.8	
MALO				Trac		11 23 44.1	
	comp=Z,51nm,0.2s						
EFO	**Effingham**	**3.66**	**160**	Pn	**Pn**	**11 22 42.9**	**-2.2**
EFO				Sg	**Sn**	**11 23 20.5**	**-8.4**
EFO	**Effingham**	**3.66**	**160**	PN	**Pn**	**11 22 42.9**	**-2.2**
EFO				SG	**Sn**	**11 23 20.5**	**-8.4**
EFO				Trac		11 23 47.5	
	comp=Z,112nm,0.3s						
OTRO	**Otter Rapids**	**3.66**	**354**	LG		11 23 41.8	
OTRO				Trac		11 23 46.8	
	comp=Z,138nm,0.2s						
MEDO	**Medina**	**3.84**	**151**	SN	**Sn**	**11 23 32.7**	**-0.7**
MEDO				LG		11 23 43.6	
PECO	**Prince Edward**	**3.86**	**131**	PN	**Pn**	**11 22 48.2**	**+0.3**
PECO				SN	**Sn**	**11 23 33.8**	**-0.1**
PECO				LG		11 23 43.3	
PECO				Trac		11 23 51.9	
	comp=Z,100nm,0.3s						
OTT	**Ottawa**	**3.87**	**105**	SN	**Sn**	**11 23 35.7**	**+1.5**
OTT				SG	**Sg**	**11 23 48.9**	**-2.7**
OTT				Trac		11 23 52.0	
	comp=Z,96nm,0.2s						
OTT				Trac		11 23 52.0	
	comp=Z,95nm,0.3s						
MATQ	**Matagami**	**3.93**	**34**	PN	**Pn**	**11 22 50.5**	**+1.7**
MATQ				SN	**Sn**	**11 23 35.1**	**-0.6**
MATQ				LG		11 23 50.1	
MATQ				Trac		11 23 56.1	
	comp=Z,82nm,0.3s						
KGNO	**Kingston**	**3.94**	**124**	SN	**Sn**	**11 23 34.6**	**-1.3**
KGNO				LG		11 23 48.9	
KGNO				Trac		11 23 51.3	
	comp=Z,102nm,0.3s						
PNPO	**Pukaskwa Natio**	**4.11**	**302**	PN	**Pn**	**11 22 51.6**	**+0.3**
PNPO				SN	**Sn**	**11 23 37.5**	**-2.6**
PNPO				LG		11 23 50.7	
PNPO				Trac		11 23 57.7	
	comp=Z,102nm,0.2s						
WBO	**Williamsburg**	**4.31**	**109**	PN	**Pn**	**11 22 54.4**	**+0.4**
WBO				SN	**Sn**	**11 23 41.2**	**-3.7**
WBO				Trac		11 24 04.8	
	comp=Z,126nm,0.3s						
ALFO	**Alfred**	**4.37**	**100**	PN	**Pn**	**11 22 55.8**	**+1.0**
ALFO				SN	**Sn**	**11 23 43.8**	**-2.6**
ALFO				LG		11 24 00.1	
ALFO				Trac		11 24 14.8	
	comp=Z,65nm,0.3s						
TRQ	**Mont Tremblant**	**4.49**	**92**	Pn	**Pn**	**11 22 57.6**	**+1.2**
TRQ				Pg	**Pg**	**11 23 07.0**	**-6.2**
TRQ				Sn	**Sn**	**11 23 48.2**	**-1.0**
TRQ				Lg		11 24 07.2	
TRQ	**Mont Tremblant**	**4.49**	**92**	PN	**Pn**	**11 22 57.6**	**+1.2**
TRQ				PG	**Pg**	**11 23 07.0**	**-6.2**
TRQ				SN	**Sn**	**11 23 48.2**	**-1.0**
TRQ				LG		11 24 07.2	
TRQ				Trac		11 24 12.6	
	comp=Z,109nm,0.4s						
ERPA	**Erie**	**4.49**	**170**	*e*Pg	**Pg**	**11 23 07.1**	**-6.2**
ERPA				*e*Sg	**Sg**	**11 24 05.4**	**-6.0**
LONY	**Lake Ozonia**	**4.91**	**111**	*e*Pn	**Pn**	**11 23 01.6**	**-0.8**
PLIO	**Pelee Island,**	**4.93**	**194**	PN	**Pn**	**11 23 02.4**	**-0.2**
PLIO				SN	**Sn**	**11 23 59.0**	**-1.3**
PLIO				LG		11 24 19.0	
PLIO				Trac		11 24 24.2	
	comp=Z,59nm,0.4s						
ALLY	**Alegheny Colle**	**4.94**	**172**	*e*Pg	**Pg**	**11 23 14.2**	**-7.7**
GTO	**Geraldton**	**5.11**	**311**	PN	**Pn**	**11 23 05.6**	**+0.7**
GTO				SN	**Sn**	**11 24 02.0**	**-2.6**
GTO				LG		11 24 23.8	
GTO				Trac		11 24 30.9	
	comp=Z,74nm,0.3s						
NCB	**Newcomb**	**5.44**	**116**	*e*Pn	**Pn**	**11 23 09.8**	**+0.1**
NCB				*e*Sn	**Sn**	**11 24 11.4**	**-1.5**
FRNY	**Flat Rock**	**5.48**	**106**	*e*Pn	**Pn**	**11 23 10.5**	**+0.4**
NANO	**Nakina Ontario**	**5.49**	**316**	PN	**Pn**	**11 23 11.6**	**+1.3**
NANO				SN	**Sn**	**11 24 12.3**	**-1.8**
NANO				LG		11 24 33.7	
NANO				Trac		11 24 42.1	
	comp=Z,54nm,0.4s						
CHGQ	**Chibougamau**	**5.57**	**50**	PN	**Pn**	**11 23 11.3**	**-0.1**
CHGQ				SN	**Sn**	**11 24 14.2**	**-1.8**
CHGQ				LG		11 24 38.3	
CHGQ				Trac		11 24 47.0	
	comp=Z,67nm,0.3s						
BINY	**Binghamton**	**5.65**	**139**	*e*Pn	**Pn**	**11 23 12.6**	**+0.1**
	13nm,0.3s						
BINY	**Binghamton**	**5.65**	**139**	SN	**Sn**	**11 24 13.0**	**-4.9**
BINY				LG		11 24 37.9	
DPQ	**Saint Jean**	**5.68**	**86**	Pn	**Pn**	**11 23 11.9**	**-1.0**
DPQ				Sn	**Sn**	**11 24 15.6**	**-3.2**
DPQ				Lg		11 24 43.5	
DPQ	**Saint Jean**	**5.68**	**86**	PN	**Pn**	**11 23 11.9**	**-1.0**
DPQ				SN	**Sn**	**11 24 15.6**	**-3.2**
DPQ				LG		11 24 43.5	
DPQ				Trac		11 24 48.7	
	comp=Z,46nm,0.3s						
TBO	**Thunder Bay**	**6.05**	**293**	PN	**Pn**	**11 23 18.3**	**+0.4**
TBO				SN	**Sn**	**11 24 23.8**	**-4.1**
TBO				LG		11 24 51.8	
TBO				Trac		11 25 04.3	
	comp=Z,42nm,0.5s						
ACCN	**Adirondack Com**	**6.10**	**119**	*e*Pn	**Pn**	**11 23 14.9**	**-3.7**
	129nm,0.8s						
MOQ	**Mont Orford**	**6.24**	**98**	LG		11 25 04.6	
MOQ				Trac		11 25 07.5	
	comp=Z,14nm,0.2s						
SSPA	**Standing Stone**	**6.33**	**158**	*e*Pn	**Pn**	**11 23 20.2**	**-1.6**
ACSO	**Alum Creek Sta**	**6.47**	**193**	*e*Pn	**Pn**	**11 23 21.1**	**-2.6**
ACSO				*e*Sg	**Sg**	**11 25 05.6**	**-9.4**
VIMO	**Victor Mine**	**6.52**	**345**	PN	**Pn**	**11 23 24.5**	**+0.1**
VIMO				SN	**Sn**	**11 24 35.6**	**-3.8**
VIMO				LG		11 25 03.4	
VIMO				Trac		11 25 10.5	
	comp=Z,23nm,0.4s						
QCQ	**Quebec**	**6.71**	**84**	LG		11 25 12.5	
QCQ				Trac		11 25 27.1	
	comp=Z,67nm,0.3s						
LBNH	**Lisbon**	**6.80**	**107**	*e*Pn	**Pn**	**11 23 28.6**	**+0.3**
LBNH				*e*Sn	**Sn**	**11 24 45.1**	**-1.3**
WEMQ	**Wemindji, Queb**	**6.81**	**16**	PN	**Pn**	**11 23 28.5**	**+0.2**
WEMQ				SN	**Sn**	**11 24 43.8**	**-2.6**
WEMQ				LG		11 25 18.4	
WEMQ				Trac		11 25 26.6	
	comp=Z,36nm,0.5s						
EYMN	**Ely**	**7.27**	**285**	*e*Pn	**Pn**	**11 23 33.6**	**-1.0**
EYMN				*e*Sn	**Sn**	**11 24 50.1**	**-7.7**
EYMN	**Ely**	**7.27**	**285**	PN	**Pn**	**11 23 33.9**	**-0.8**
EYMN				SN	**Sn**	**11 24 51.5**	**-6.3**
LMQ	**La Malbaie**	**7.38**	**78**	PN	**Pn**	**11 23 33.9**	**-2.3**
LMQ				SN	**Sn**	**11 24 56.9**	**-3.6**
LMQ				LG		11 25 36.3	
LMQ				Trac		11 25 43.5	
	comp=Z,99nm,0.6s						
MVL	**Millersville**	**7.38**	**151**	*e*Pn	**Pn**	**11 23 36.9**	**+0.7**
ATKO	**Atikokan Iron**	**7.50**	**292**	Pn	**Pn**	**11 23 37.5**	**-0.3**
ATKO				Sn	**Sn**	**11 24 58.8**	**-4.6**
ATKO	**Atikokan Iron**	**7.50**	**292**	PN	**Pn**	**11 23 37.5**	**-0.3**
ATKO				SN	**Sn**	**11 24 58.8**	**-4.6**
JFWS	**Jewell Farm**	**7.51**	**244**	*e*Pn	**Pn**	**11 23 39.5**	**+1.5**
JFWS				*e*Sn	**Sn**	**11 24 59.1**	**-4.6**
JFWS	**Jewell Farm**	**7.51**	**244**	PN	**Pn**	**11 23 37.4**	**-0.5**
JFWS				SN	**Sn**	**11 24 58.4**	**-5.3**
JFWS				LG		11 25 39.3	
YLE	**Yale**	**7.83**	**129**	*e*Sn	**Sn**	**11 25 12.1**	**+0.4**
YLE				*e*Sg	**Sg**	**11 25 47.1**	**-12**
PKLO	**Pickle Lake**	**7.88**	**312**	Pn	**Pn**	**11 23 43.8**	**+0.7**
PKLO				Sn	**Sn**	**11 25 07.2**	**-5.7**
PKLO				Lg		11 25 43.8	
PKLO	**Pickle Lake**	**7.88**	**312**	PN	**Pn**	**11 23 43.8**	**+0.7**
PKLO				SN	**Sn**	**11 25 07.2**	**-5.7**
PKLO				LG		11 25 43.8	
PKLO				Trac		11 25 51.9	
	comp=Z,54nm,0.5s						
WES	**Weston**	**8.09**	**117**	*e*Sg	**Sg**	**11 25 58.5**	**-8.4**
BRYW	**Bryant College**	**8.23**	**121**	*e*Sg	**Sg**	**11 25 56.6**	**-15**
SILO	**Sutton Inlier**	**8.32**	**344**	PN	**Pn**	**11 23 48.6**	**-0.4**
SILO				SN	**Sn**	**11 25 18.3**	**-5.4**
SILO				LG		11 26 00.7	
MNQ	**Manicouagan**	**9.05**	**59**	Pn	**Pn**	**11 23 57.3**	**-1.7**
MNQ				Sn	**Sn**	**11 25 33.2**	**-8.3**
MNQ				Lg		11 26 25.2	
MNQ	**Manicouagan**	**9.05**	**59**	PN	**Pn**	**11 23 57.3**	**-1.7**
MNQ				SN	**Sn**	**11 25 33.2**	**-8.3**
MNQ				LG		11 26 25.2	
EPLO	**Experimental L**	**9.06**	**295**	PN	**Pn**	**11 23 57.9**	**-1.3**
EPLO				SN	**Sn**	**11 25 34.2**	**-7.6**
EPLO				LG		11 26 28.2	
EPLO				Trac		11 26 35.2	
	comp=Z,1μm,0.5s						
SCIA	**State Center**	**9.90**	**246**	*e*Pn	**Pn**	**11 24 10.7**	**-0.1**
SCIA				Sn	**Sn**	**11 25 55.4**	**-7.3**
AGMN	**Agassiz Nation**	**10.21**	**285**	*e*Pn	**Pn**	**11 24 12.8**	**-2.3**
AGMN				*e*Sn	**Sn**	**11 26 03.3**	**-6.9**
ULM	**Lac du Bonnet**	**10.55**	**296**	Pn	**Pn**	**11 24 16.4**	**-3.2**
	3.7nm,0.3s,baz=109,slow=12,SNR=34						
ULM				Sn	**Sn**	**11 26 07.1**	**-11**
	1.0nm,0.3s,baz=71,slow=17,SNR=5.8						
ULM				Lg		11 27 08.3	
	2.0nm,0.3s,baz=190,slow=21,SNR=3.1						
ULM	**Lac du Bonnet**	**10.55**	**296**	*e*Pn	**Pn**	**11 24 16.3**	**-3.3**
ULM				*e*Sn	**Sn**	**11 26 06.7**	**-12**
ULM				*e*Lg		11 27 09.7	
ULM	**Lac du Bonnet**	**10.55**	**296**	PN	**Pn**	**11 24 16.4**	**-3.2**
ULM				SN	**Sn**	**11 26 08.7**	**-10**
ULM				LG		11 27 11.2	
ULM				Trac		11 27 36.8	
	comp=Z,55nm,1.2s						
TKL	**Tuckaleechee C**	**11.07**	**192**	Pn	**Pn**	**11 24 28.6**	**+1.8**
	0.4nm,0.3s,baz=30,slow=12,SNR=3.3						
TKL				Lg		11 27 25.3	
	1.7nm,0.3s,baz=106,slow=14,SNR=4.1						
CCM	**Cathedral Cave**	**11.36**	**225**	*e*Pn	**Pn**	**11 24 28.9**	**-1.8**
ECSD	**EROS Data Cent**	**11.37**	**261**	*e*Pn	**Pn**	**11 24 28.3**	**-2.5**
SCHQ	**Schefferville**	**12.22**	**42**	Pn	**Pn**	**11 24 39.5**	**-2.8**
	1.1nm,0.3s,baz=233,slow=11,SNR=13						
SCHQ				Sn	**Sn**	**11 26 47.8**	**-11**
	1.2nm,0.3s,baz=158,slow=19,SNR=6.3						
SCHQ				Lg		11 28 03.0	
	2.1nm,0.3s,baz=310,slow=19,SNR=8.2						
SCHQ	**Schefferville**	**12.22**	**42**	Pn	**Pn**	**11 24 39.5**	**-2.9**
SCHQ				Sn	**Sn**	**11 26 46.5**	**-13**
SCHQ				Lg		11 28 03.2	
SCHQ	**Schefferville**	**12.22**	**42**	PN	**Pn**	**11 24 39.5**	**-2.9**
SCHQ				SN	**Sn**	**11 26 46.5**	**-13**
SCHQ				LG		11 28 03.2	
FFC	**Flin Flon**	**15.57**	**309**	SN	**Sn**	**11 28 04.5**	**-16**
FFC				LG		11 29 40.8	
PDAR	**Pinedale Array**	**20.60**	**270**	P	**P**	**11 26 28.8**	**+1.0**
	1.1nm,0.4s,baz=61,slow=12,SNR=18						
IMW	**Indian Meadow**	**21.18**	**274**	*e*P	**P**	**11 26 35.8**	**+1.7**
	1.7nm,0.7s,mb3.5						
REDW	**Red Top Meadow**	**21.29**	**272**	P	**P**	**11 26 34.1**	**-1.1**
TPAW	**Teton Pass**	**21.32**	**273**	*e*P	**P**	**11 26 36.0**	**+0.4**
	2.6nm,0.8s,mb3.6						
YKA	**Yellowknife Ar**	**24.79**	**322**	P	**P**	**11 27 11.3**	**+0.9**
	1.6nm,0.5s,mb4.0,baz=111,slow=9.8,SNR=7.3						

*BJI **11** 11:25:43.5, 45°.67N×79°.70E, h10km, ML3.7/5*
*IDC **11** 11:25:48.8±1.1, 45°.19N×80°.58E, h0km, mb3.3/1, mb1 3.6/4, mb1mx3.4/24, mbtmp3.5/4, ML3.2/3, Error ellipse: s-maj=26.5km s-min=9.5km az=140.0*
*NNC **11** 11:25:49.9±1.8, 45°.23N×80°.51E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=30.9km s-min=10.8km az=140.0*
*ISCJB **11** 11:25:52.3±0.5, 45°.63N±0°.07×80°.08E±0°.08, h10km, Error ellipse: s-maj=12.0km s-min=4.6km az=144.7*
*NEIC **11** 11:25:53.8±0.5, 45°.61N×80°.18E, h10km, Error ellipse: s-maj=11.2km s-min=5.2km az=141.0*

ISC 11 11:25:53.7±0.5, 45°.59N±0°.06×80°.19E±0°.07, h10km, n20, σ0§94/25, 4C-3D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.89**	**50**	⇓P	**Pn**	**11 26 26.7**	**+0.7**
	10nm,0.2s,baz=217,slow=16,SNR=6.6						
MK31				⇓S	**Sn**	**11 26 51.0**	**+1.2**
	23nm,0.2s,baz=216,slow=24,SNR=15						
MK31	**Makanchi Array**	**1.89**	**50**	*e*Pn	**Pn**	**11 26 26.8**	**+0.8**
MKAR	**Makanchi Array**	**1.89**	**50**	Pn	**Pn**	**11 26 25.9**	**-0.1**
	7.3nm,0.3s,baz=211,slow=15,SNR=70						
MKAR				Sn	**Sn**	**11 26 50.0**	**+0.2**
	51nm,0.3s,baz=215,slow=24,SNR=22						
TKM2	**Tokmak 2**	**4.24**	**233**	⇓Pn	**Pn**	**11 26 57.0**	**-1.3**
	2.7nm,0.4s						
TKM2				⇑Pg	**Pg**	**11 27 07.3**	**-7.6**
	9.7nm,0.5s						
TKM2				⇑Lg		11 28 04.2

MLZ				S*	Sb	11 46 31.5	-0.8
EAZ	**Earnscleugh**	**1.04**	**136**	P*	Pb	11 46 22.0	-1.9
DCZ	**Deep Cove**	**1.27**	**219**	P*	Pb	11 46 26.3	-1.6
DCZ				S*	Sb	11 46 43.4	-0.7
LBZ	**Lake Benmore**	**1.36**	**86**	PN	Pn	11 46 28.7	-0.1
FOZ	**Fox Glacier**	**1.37**	**48**	PN	Pn	11 46 29.4	+0.4
WHZ	**Wether Hill Ro**	**1.42**	**190**	PN	Pn	11 46 29.3	-0.3
TUZ	**Tuapeka**	**1.75**	**147**	PN	Pn	11 46 34.2	+0.1
ODZ	**Otahua Downs**	**1.77**	**109**	PN	Pn	11 46 34.5	+0.1
PYZ	**Puysegur Point**	**2.02**	**213**	PN	Pn	11 46 38.5	+0.6
SYZ	**Scrubby Hill**	**2.13**	**164**	PN	Pn	11 46 39.6	+0.2
RPZ	**Rata Peaks**	**2.14**	**70**	PN	Pn	11 46 39.0	-0.5
APZ	**The Paps**	**2.35**	**185**	PN	Pn	11 46 42.9	+0.5
MQZ	**McQueen's Vall**	**3.24**	**77**	PN	Pn	11 46 53.5	-1.2
LTZ	**Lake Taylor**	**3.36**	**61**	PN	Pn	11 46 54.9	-1.4
DSZ	**Denniston Nort**	**3.76**	**44**	PN	Pn	11 47 01.5	-0.4
THZ	**Tophouse**	**4.34**	**53**	PN	Pn	11 47 09.0	-0.8
QRZ	**Quartz Range**	**4.82**	**42**	PN	Pn	11 47 16.0	-0.4
NNZ	**Nelson**	**4.97**	**51**	PN	Pn	11 47 18.7	+0.3
TCW	**Tory Channel**	**5.49**	**55**	PN	Pn	11 47 27.2	+1.7

*ISCJB **11** 11:53:32.4±0.6, 6°.04S±0°.05×128°.9E±0°.1, h326km±9km, mb3.6/8, Error ellipse: s-maj=19.2km s-min=6.4km az=164.1*
*NEIC **11** 11:53:32.2±1.4, 6°.03S×128°.68E, h302km±17km, mb4.5/2, Error ellipse: s-maj=18.3km s-min=8.6km az=45.0*
*DJA **11** 11:53:33, 6°.04S×128°.89E, h313km, mb4.9/6*
*IDC **11** 11:53:34.6±2.3, 6°.13S×128°.69E, h331km±24km, mb3.5/7, mb1 3.6/10, mb1mx3.5/18, mbtmp3.5/10, Error ellipse: s-maj=29.4km s-min=8.9km az=69.0*

ISC 11 11:53:33.5±0.6, **6°.11S**±0°.05×**128°.7E**±0°.1, **h319**km±9km, **n26**, σ0°**85**/31, **mb3.6**/8, **1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**3.26**	**331**	P	**Pn**	**11 54 34.7**	**+1.5**
LBMI	**Labuha**	**5.56**	**348**	P	**Pn**	**11 54 56.5**	**-1.8**
	0.4nm1μm112nm,0.6s						
KAKA	**Kakadu**	**7.53**	**151**	⇑*i*P	**Pn**	**11 55 20.6**	**-1.1**
	30nm,0.3s						
KAKA	**Kakadu**	**7.53**	**151**	*e*Pn	**Pn**	**11 55 20.8**	**-0.9**
	89nm,0.4s						
KAKA	**Kakadu**	**7.53**	**151**	P	**Pn**	**11 55 20.8**	**-0.9**
	111nm,0.7s						
KNA	**Kununurra**	**9.58**	**180**	*e*P	**Pn**	**11 55 47.1**	**+0.6**
	33nm,0.4s						
KNA				*e*S	**S**	**11 57 34.3**	**-0.8**
KNA	**Kununurra**	**9.58**	**180**	P	**Pn**	**11 55 47.2**	**+0.7**
	2μm210nm,0.7s						
SGSI	**Sangihe**	**10.23**	**342**	P	**Pn**	**11 55 54.5**	**+0.1**
	5μm153nm,0.8s						
FITZ	**Fitzroy Crossi**	**12.29**	**194**	P	**Pn**	**11 56 18.9**	**-0.3**
	0.9nm,0.3s,baz=29,slow=8.9,SNR=26						
FITZ				S	**S**	**11 58 38.2**	**+2.5**
	0.8nm,0.3s,baz=124,slow=23,SNR=5.3						
FITZ	**Fitzroy Crossi**	**12.29**	**194**	*e*P	**Pn**	**11 56 19.0**	**-0.2**
	9.1nm,0.4s						
FITZ				*e*S	**S**	**11 58 34.3**	**-1.4**
FITZ	**Fitzroy Crossi**	**12.29**	**194**	P	**Pn**	**11 56 19.3**	**+0.1**
	22nm,1.9s						
WRA	**Warramunga Arr**	**14.81**	**159**	P	**P**	**11 56 47.9**	**+0.4**
	2.2nm,0.3s,baz=338,slow=11,SNR=132						
WRA				S	**S**	**11 59 23.9**	**-4.6**
	0.5nm,0.3s,baz=342,slow=21,SNR=6.9						
WB2	**Warramunga Arr**	**14.81**	**159**	*e*P	**P**	**11 56 48.0**	**+0.4**
COEN	**Coen**	**16.25**	**120**	*e*P	**P**	**11 57 03.1**	**-0.2**
COEN	**Coen**	**16.25**	**120**	*e*P	**P**	**11 57 03.2**	**-0.1**
	336nm,0.8s						
COEN	**Coen**	**16.25**	**120**	P	**P**	**11 57 02.9**	**-0.4**
ASAR	**Alice Springs**	**18.16**	**165**	P	**P**	**11 57 24.9**	**+1.1**
	1.5nm,0.3s,baz=346,slow=12,SNR=136						
ASAR				S	**S**	**12 00 34.1**	**-0.9**
	0.7nm,0.3s,baz=347,slow=21,SNR=52						
ASAR				ScP	ScP	12 04 46.1	+0.1
	0.1nm,0.3s,baz=3.2,slow=2.1,SNR=5.0						
CTA	**Charters Tower**	**22.00**	**131**	P	**P**	**11 58 03.0**	**+0.9**
	7.8nm,0.8s,mb4.0,baz=310,slow=13,SNR=6.7						
CTAO	**Charters Tower**	**22.00**	**131**	*e*P	**P**	**11 58 03.1**	**+0.9**
STKA	**Stephens Creek**	**28.33**	**156**	P	**P**	**11 58 59.3**	**+0.6**
	1.7nm,0.8s,mb3.4,baz=330,slow=11,SNR=6.5						
CMAR	**Chiang Mai Arr**	**38.17**	**310**	P	**P**	**12 00 23.8**	**+0.5**
	2.5nm,0.6s,mb3.6,baz=140,slow=7.5,SNR=15						
CHTO	**Chiang Mai**	**38.38**	**311**	*e*P	**P**	**12 00 24.5**	**-0.6**
	3.3nm,0.7s,mb3.7						
KSRS	**Korea Array**	**43.34**	**359**	P	**P**	**12 01 04.7**	**-0.2**
	2.0nm,0.5s,mb3.5,baz=176,slow=9.1,SNR=14						
SONM	**Songino Array**	**57.20**	**342**	P	**P**	**12 02 48.0**	**+0.2**
	0.6nm,0.7s,mb3.1,baz=173,slow=13,SNR=4.1						
MKAR	**Makanchi Array**	**66.77**	**327**	P	**P**	**12 03 51.4**	**+0.2**
	1.9nm,0.6s,mb4.0,baz=122,slow=7.8,SNR=14						
ZALV	**Zalesovo Beam**	**70.22**	**334**	P	**P**	**12 04 11.3**	**-0.8**
	1.4nm,0.5s,mb4.0,baz=119,slow=9.2,SNR=4.7						

*ATH **11** 12:29:46.9, 37°.28N×27°.56E, h10km, MD2.9/3*
*ISK **11** 12:29:55.8, 36°.34N×28°.28E, h76km, MD2.8*
*DDA **11** 12:29:56.6, 36°.59N×28°.53E, h7km±7km, Md3.1*
*ISCJB **11** 12:29:57.2±0.8, 36°.40N±0°.04×28°.38E±0°.04, h69km±8km, Error ellipse: s-maj=6.7km s-min=5.5km az=168.1*
*CSEM **11** 12:29:58.0±0.2, 36°.42N×28°.38E, h60km, MD3.1, Error ellipse: s-maj=6.0km s-min=5.3km az=4.0*

ISC 11 12:29:57.9±0.8, **36°.40N**±0°.04×**28°.38E**±0°.04, **h65**km±8km, **n37**, σ0°**91**/57, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.27**	**228**	*e*PB	**Pn**	**12 30 08.8**	**+0.5**
ARG	**Arkhangelos**	**0.27**	**228**	*e*Pn	**Pn**	**12 30 08.8**	**+0.5**
ARG				*e*Sn	**Sn**	**12 30 17.0**	**+1.1**
TURN	**Turunc**	**0.51**	**21**	*i* P	**Pn**	**12 30 09.9**	**-0.5**
TURN				*i* S	**Sn**	**12 30 17.3**	**-2.1**
TURN	**Turunc**	**0.51**	**21**	*i* P	**Pn**	**12 30 09.9**	**-0.4**
TURN				*i* S	**Sn**	**12 30 17.3**	**-2.2**
YER	**Yerkesik**	**0.74**	**354**	*e*PG	**Pn**	**12 30 14.2**	**+1.3**
YER				*e*SG	**Sn**	**12 30 25.0**	**+1.1**
YER	**Yerkesik**	**0.74**	**354**	*e*Pg	**Pn**	**12 30 14.2**	**+1.3**
YER				*e*Sg	**Sn**	**12 30 25.0**	**+1.1**
BDRM	**Kayabasi**	**1.00**	**312**	*i* P	**Pn**	**12 30 16.2**	**+0.1**
BDRM				*i* S	**Sn**	**12 30 29.3**	**-0.4**
BDRM	**Kayabasi**	**1.00**	**312**	*i* P	**Pn**	**12 30 16.2**	**+0.1**
BDRM				*i* S	**Sn**	**12 30 29.3**	**-0.4**
AKAS	**Kas**	**1.01**	**99**	*i* P	**Pn**	**12 30 14.6**	**-1.6**
AKAS				*i* S	**Sn**	**12 30 27.8**	**-2.0**
AKAS	**Kas**	**1.01**	**99**	*i* P	**Pn**	**12 30 14.6**	**-1.6**
AKAS				*i* S	**Sn**	**12 30 27.8**	**-2.0**
MLSB	**Milas**	**1.02**	**332**	*e*PG	**Pn**	**12 30 16.6**	**+0.3**
MLSB	**Milas**	**1.02**	**332**	*e*Pg	**Pn**	**12 30 16.6**	**+0.3**
BODT	**Bodrum**	**1.08**	**308**	*e*PG	**Pn**	**12 30 15.6**	**-1.5**
BODT	**Bodrum**	**1.08**	**308**	*e*Pg	**Pn**	**12 30 15.6**	**-1.6**
GLHS	**Gihisar (BURDU**	**1.18**	**50**	*e*PN	**Pn**	**12 30 18.5**	**+0.1**
GLHS	**Gihisar (BURDU**	**1.18**	**50**	*e*Pn	**Pn**	**12 30 18.5**	**+0.1**
GOLH	**Golhisar**	**1.27**	**48**	*i* P	**Pn**	**12 30 19.6**	**0.0**
GOLH				*i* S	**Sn**	**12 30 36.1**	**+0.3**
GOLH	**Golhisar**	**1.27**	**48**	*i* P	**Pn**	**12 30 19.6**	**+0.1**
GOLH				*i* S	**Sn**	**12 30 36.1**	**+0.3**
ELL	**Elmali**	**1.28**	**74**	*e*PN	**Pn**	**12 30 20.4**	**+0.7**
ELL				*e*SN	**Sn**	**12 30 37.9**	**+1.8**
ELL	**Elmali**	**1.28**	**74**	*e*Pn	**Pn**	**12 30 20.4**	**+0.7**
ELL				*e*Sn	**Sn**	**12 30 37.9**	**+1.7**
KARP	**Karpathos**	**1.30**	**230**	*e*PG	**Pn**	**12 30 20.0**	**0.0**
KARP	**Karpathos**	**1.30**	**230**	*e*Pn	**Pn**	**12 30 20.0**	**0.0**
KARP				*e*Sn	**Sn**	**12 30 36.4**	**-0.2**
AYDN	**Tasoluk**	**1.32**	**343**	*i* P	**Pn**	**12 30 20.9**	**+0.6**
AYDN				*i* S	**Sn**	**12 30 37.0**	**-0.1**
AYDN	**Tasoluk**	**1.32**	**343**	*i* P	**Pn**	**12 30 20.9**	**+0.6**
AYDN				*i* S	**Sn**	**12 30 37.0**	**-0.1**
GCAM	**G?zelcaml?**	**1.59**	**325**	*i* P	**Pn**	**12 30 24.1**	**+0.3**
GCAM				*i* S	**Sn**	**12 30 43.0**	**-0.4**
GCAM	**G?zelcaml?**	**1.59**	**325**	*i* P	**Pn**	**12 30 24.1**	**+0.3**
GCAM				*i* S	**Sn**	**12 30 43.0**	**-0.5**
KULA	**Kula-Manisa**	**2.12**	**6**	*e*PN	**Pn**	**12 30 30.9**	**-0.1**
KULA	**Kula-Manisa**	**2.12**	**6**	*e*Pn	**Pn**	**12 30 30.9**	**-0.2**
KHL	**Karahalli**	**2.13**	**25**	*e*PN	**Pn**	**12 30 32.2**	**+1.1**
KHL	**Karahalli**	**2.13**	**25**	*e*Pn	**Pn**	**12 30 32.2**	**+1.1**
KHAL	**Karahalli**	**2.16**	**24**	*i* P	**Pn**	**12 30 31.0**	**-0.5**
KHAL				*i* S	**Sn**	**12 30 56.3**	**-1.0**
KHAL	**Karahalli**	**2.16**	**24**	*i* P	**Pn**	**12 30 31.0**	**-0.5**
KHAL				*i* S	**Sn**	**12 30 56.3**	**-0.9**
BLCB	**Balcova**	**2.25**	**332**	*e*PN	**Pn**	**12 30 32.5**	**-0.3**
BLCB	**Balcova**	**2.25**	**332**	*e*Pn	**Pn**	**12 30 32.5**	**-0.3**
SUTC	**Sutluce-Ispart**	**2.36**	**62**	*e*PN	**Pn**	**12 30 35.1**	**+0.8**
SUTC	**Sutluce-Ispart**	**2.36**	**62**	*e*Pn	**Pn**	**12 30 35.1**	**+0.8**
NPS	**Neapolis**	**2.52**	**244**	*e*PB	**Pn**	**12 30 30.1**	**-6.3**

IGQ 11 12:35:18.4, 1°.57S×78°.22W, h181km±2km, Mb4.0, Ms3.8, 3C-19D, Error ellipse: s-maj=3.2km s-min=1.7km az=17.3, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULBA	**Ulba**	**0.22**	**304**	⇓P	Pn	12 35 42.9	+0.5
BULB	**Ulba Tungurahu**	**0.23**	**306**	⇓S	Sn	12 36 00.1	-0.8
BULB	**Ulba Tungurahu**	**0.23**	**306**	⇓P	Pn	12 35 43.0	+0.6
BRUN	**Tungurahua Vol**	**0.24**	**309**	⇓P	Pn	12 35 43.0	+0.5
BRUN	**Tungurahua Vol**	**0.24**	**309**	⇓S	Sn	12 36 00.3	-0.6
RETU	**Refugio**	**0.25**	**298**	P	Pn	12 35 43.2	+0.7
RUN5	**Runtun**	**0.25**	**308**	⇓P	Pn	12 35 42.9	+0.4
BMAS	**Trigal station**	**0.26**	**285**	⇓S	Sn	12 36 00.6	-0.4
BMAS	**Trigal station**	**0.26**	**285**	⇓P	Pn	12 35 43.4	+0.8
JUI6	**Juive**	**0.28**	**301**	P	Pn	12 35 43.0	+0.4
PISA	**Pisayambo**	**0.54**	**342**	⇑P	Pn	12 35 43.9	+0.5
MACE	**Macas**	**0.68**	**178**	⇓S	Sn	12 36 02.3	-1.8
MACE	**Macas**	**0.68**	**178**	⇓P	Pn	12 35 45.0	+0.9
TAMB	**Tambo**	**0.88**	**351**	⇓P	Pn	12 35 46.3	+0.9
BTAM	**Cotopaxi Volca**	**0.91**	**349**	⇓P	Pn	12 35 46.9	+1.3
COV1	**Cotopaxi Volc**	**0.91**	**352**	⇓P	Pn	12 35 47.0	+1.4
BREF	**Cotopaxi Volca**	**0.92**	**346**	⇓P	Pn	12 35 47.4	+1.7
BVC2	**Cotopaxi Volca**	**0.93**	**348**	⇓P	Pn	12 35 47.0	+1.3
VC1	**Cotopaxi 1**	**0.94**	**349**	⇓P	Pn	12 35 46.7	+0.9
PITA	**Cotopaxi Volc**	**1.03**	**348**	⇓P	Pn	12 35 47.3	+0.9
ANTI	**Antisana**	**1.12**	**3**	⇓P	Pn	12 35 47.8	+0.7
ANTI	**Antisana**	**1.12**	**3**	⇓S	Sn	12 36 10.7	+1.4
GGP	**Refugio Guagua**	**1.44**	**345**	P	Pn	12 35 50.6	+0.8
TERV	**Terraza Guagua**	**1.44**	**345**	P	Pn	12 35 51.5	+1.6
PINO	**Pino**	**1.46**	**345**	P	Pn	12 35 50.8	+0.8
YANA	**Yana**	**1.48**	**346**	P	Pn	12 35 51.8	+1.5
CHAR	**Charly**	**1.57**	**21**	P	Pn	12 35 52.4	+1.2
CONE	**Cono NE Rev Vo**	**1.60**	**21**	⇑S	Sn	12 36 16.6	-0.5
CONE	**Cono NE Rev Vo**	**1.60**	**21**	⇑P	Pn	12 35 52.0	+0.6
CAYA	**Cayambe**	**1.65**	**8**	P	Pn	12 35 53.4	+1.5
CHIS	**Cerro-Chispas-**	**2.56**	**282**	P	Pn	12 36 02.4	+0.6

*DDA **11** 12:38:35.8, 40°.56N×33°.94E, h7km±3km, Md2.9*
*ISK **11** 12:38:35.3, 40°.56N×33°.95E, h5km, MD2.5*
*ISCJB **11** 12:38:36.2±0.5, 40°.56N±0°.03×33°.96E±0°.03, h6km±6km, Error ellipse: s-maj=5.8km s-min=3.8km az=28.8*
*CSEM **11** 12:38:36.2±0.1, 40°.55N×33°.94E, h5km, MD2.5, Error ellipse: s-maj=1.7km s-min=1.4km az=34.0*

ISC 11 12:38:36.6±0.5, **40°.56N**±0°.03×**33°.94E**±0°.04, **h6**km±6km, **n23**, σ0°**76**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANT	**Cankiri**	**0.25**	**282**	*e*PG	**Pg**	**12 38 41.2**	**-0.3**
CANT				*e*SG	**Sg**	**12 38 46.3**	**+1.4**
ELDT	**Eldivan**	**0.40**	**261**	*i* P	**Pg**	**12 38 43.9**	**-0.5**
ELDT				*i* S	**Sg**	**12 38 49.9**	**+0.3**
ELDT	**Eldivan**	**0.40**	**261**	*i* P	**Pg**	**12 38 43.8**	**-0.5**
ELDT				*i* S	**Sg**	**12 38 49.8**	**+0.3**
TOS	**Tosya**	**0.48**	**7**	*e*PG	**Pg**	**12 38 45.9**	**-0.1**
TOS	**Tosya**	**0.48**	**7**	*e*Pg	**Pg**	**12 38 45.9**	**0.0**
ILGA	**Ilgaz**	**0.53**	**341**	*i* P	**Pg**	**12 38 46.8**	**+0.1**
ILGA				*i* S	**Sg**	**12 38 53.1**	**-0.4**
ILGA	**Ilgaz**	**0.53**	**341**	*i* P	**Pg**	**12 38 46.8**	**+0.1**
ILGA				*i* S	**Sg**	**12 38 53.1**	**-0.5**
CORM	**Corum**	**0.65**	**125**	*e*PG	**Pg**	**12 38 49.0**	**+0.1**
CORM				*e*SG	**Sg**	**12 38 58.6**	**+1.3**
CORM	**Corum**	**0.65**	**125**	*e*Pg	**Pg**	**12 38 49.0**	**0.0**
CORM				*e*Sg	**Sg**	**12 38 58.6**	**+1.2**
CTKT	**Corum**	**0.65**	**84**	*i* P	**Pg**	**12 38 48.9**	**-0.2**
CTKT				*i* S	**Sg**	**12 38 57.9**	**+0.5**
CTKT	**Corum**	**0.65**	**84**	*i* P	**Pg**	**12 38 48.8**	**-0.2**
CTKT				*i* S	**Sg**	**12 38 57.9**	**+0.5**
CDAG	**Cicekdag**	**0.99**	**160**	*i* P	**Pg**	**12 38 54.5**	**-1.0**
CDAG				*i* S	**Sg**	**12 39 08.0**	**-0.3**
CDAG	**Cicekdag**	**0.99**	**160**	*i* P	**Pg**	**12 38 54.5**	**-1.0**
CDAG				*i* S	**Sg**	**12 39 08.0**	**-0.3**
BALT	**Daday**	**1.06**	**337**	*i* P	**Pg**	**12 38 55.9**	**-1.1**
BALT				*i* S	**Sg**	**12 39 11.3**	**+0.5**
BALT	**Daday**	**1.06**	**337**	*i* P	**Pg**	**12 38 55.9**	**-1.1**
BALT				*i* S	**Sg**	**12 39 11.3**	**+0.5**
LOD	**Lodumlu**	**1.12**	**234**	*e*PN	**Pn**	**12 38 57.7**	**-1.1**
LOD	**Lodumlu**	**1.12**	**234**	*e*Pn	**Pn**	**12 38 57.7**	**-1.1**
KAMT	**Kaman**	**1.20**	**189**	*e*PN	**Pn**	**12 38 59.6**	**-0.3**
KAMT	**Kaman**	**1.20**	**189**	*e*Pn	**Pn**	**12 38 59.6**	**-0.2**
YOZ	**Yozgat**	**1.40**	**130**	*e*PN	**Pn**	**12 39 03.2**	**+0.6**
YOZ	**Yozgat**	**1.40**	**130**	*e*Pn	**Pn**	**12 39 03.2**	**+0.7**
SGKT	**Sivrigoynuk**	**1.44**	**271**	*e*P	**Pn**	**12 39 02.3**	**-0.8**
SGKT				*e*S	**Sn**	**12 39 23.9**	**+1.6**
SGKT	**Sivrigoynuk**	**1.44**	**271**	*e*P	**Pn**	**12 39 02.3**	**-0.8**
SGKT				*e*S	**Sn**	**12 39 23.9**	**+1.6**

*DDA **11** 12:39:40.9, 40°.56N×33°.95E, h13km±3km, Md3.0*
*ISCJB **11** 12:39:41.6±0.5, 40°.56N±0°.03×33°.94E±0°.04, h5km±6km, Error ellipse: s-maj=5.6km s-min=3.9km az=39.8*
*ISK **11** 12:39:41.9, 40°.56N×33°.92E, h5km, MD2.7*
*CSEM **11** 12:39:41.8±0.1, 40°.55N×33°.89E, h2km, MD2.7, Error ellipse: s-maj=3.7km s-min=2.8km az=44.0*

ISC 11 12:39:41.8±0.5, **40°.55N**±0°.03×**33°.93E**±0°.04, **h2**km±7km, **n25**, σ0°**82**/41, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANT	**Cankiri**	**0.24**	**282**	*e*PG	**Pg**	**12 39 46.6**	**0.0**
ELDT	**Eldivan**	**0.39**	**261**	*i* P	**Pg**	**12 39 49.0**	**-0.4**
ELDT				*i* S	**Sg**	**12 39 54.9**	**+0.6**
ELDT	**Eldivan**	**0.39**	**261**	*i* P	**Pg**	**12 39 49.0**	**-0.3**
ELDT				*i* S	**Sg**	**12 39 54.9**	**+0.5**
TOS	**Tosya**	**0.49**	**8**	*e*PG	**Pg**	**12 39 51.7**	**+0.6**
TOS	**Tosya**	**0.49**	**8**	*e*Pg	**Pg**	**12 39 51.7**	**+0.5**
ILGA	**Ilgaz**	**0.52**	**342**	*i* P	**Pg**	**12 39 52.0**	**+0.1**
ILGA				*i* S	**Sg**	**12 39 58.7**	**0.0**
ILGA	**Ilgaz**	**0.52**	**342**	*i* P	**Pg**	**12 39 52.0**	**+0.1**
ILGA				*i* S	**Sg**	**12 39 58.7**	**0.0**
CORM	**Corum**	**0.65**	**125**	*e*PG	**Pg**	**12 39 55.4**	**+1.1**
CORM				*e*SG	**Sg**	**12 40 04.5**	**+1.8**
CORM	**Corum**	**0.65**	**125**	*e*Pg	**Pg**	**12 39 55.4**	**+1.1**
CORM				*e*Sg	**Sg**	**12 40 04.6**	**+1.8**
CTKT	**Corum**	**0.66**	**84**	*i* P	**Pg**	**12 39 54.0**	**-0.5**
CTKT				*i* S	**Sg**	**12 40 02.9**	**-0.1**
CTKT	**Corum**	**0.66**	**84**	*i* P	**Pg**	**12 39 54.0**	**-0.4**
CTKT				*i* S	**Sg**	**12 40 02.9**	**-0.1**
CDAG	**Cicekdag**	**0.99**	**160**	*i* P	**Pg**	**12 39 59.6**	**-1.2**
CDAG				*i* S	**Sg**	**12 40 12.8**	**-0.8**
CDAG	**Cicekdag**	**0.99**	**160**	*i* P	**Pg**	**12 39 59.6**	**-1.2**
CDAG				*i* S	**Sg**	**12 40 12.8**	**-0.8**
BALT	**Daday**	**1.06**	**337**	*i* P	**Pg**	**12 40 01.1**	**-1.2**
BALT				*i* S	**Sg**	**12 40 15.8**	**-0.2**
BALT	**Daday**	**1.06**	**337**	*i* P	**Pg**	**12 40 01.1**	**-1.1**
BALT				*i* S	**Sg**	**12 40 15.9**	**-0.1**
LOD	**Lodumlu**	**1.11**	**234**	*e*PN	**Pg**	**12 40 04.1**	**+0.9**
LOD	**Lodumlu**	**1.11**	**234**	*e*Pn	**Pg**	**12 40 04.1**	**+0.9**
KAMT	**Kaman**	**1.20**	**188**	*e*PN	**Pn**	**12 40 04.9**	**-0.7**
KAMT	**Kaman**	**1.20**	**188**	*e*Pn	**Pn**	**12 40 04.9**	**-0.7**
YOZ	**Yozgat**	**1.40**	**130**	*e*PN	**Pn**	**12 40 09.1**	**+0.7**
YOZ	**Yozgat**	**1.40**	**130**	*e*Pn	**Pn**	**12 40 09.1**	**+0.7**
SGKT	**Sivrigoynuk**	**1.43**	**271**	*i* P	**Pn**	**12 40 07.6**	**-1.2**
SGKT				*i* S	**Sn**	**12 40 29.6**	**+1.4**
SGKT	**Sivrigoynuk**	**1.43**	**271**	*i* P	**Pn**	**12 40 07.6**	**-1.2**
SGKT				*i* S	**Sn**	**12 40 29.6**	**+1.4**
AVNT	**Avonos**	**1.91**	**158**	*e*P	**Pb**	**12 40 16.8**	**-0.6**
AVNT				*i* S	**Sb**	**12 40 41.4**	**-0.3**
AVNT	**Avonos**	**1.91**	**158**	*e*P	**Pb**	**12 40 16.8**	**-0.6**
AVNT				*i* S	**Sb**	**12 40 41.4**	**-0.3**

*ISCJB **11** 12:46:12.8±0.6, 40°.57N±0°.03×35°.04E±0°.04, h10km, Error ellipse: s-maj=5.7km s-min=3.6km az=41.4*
*DDA **11** 12:46:12.9, 40°.54N×35°.02E, h2km, Md3.0*
*ISK **11** 12:46:13.0, 40°.50N×35°.03E, h5km, MD2.4*
*CSEM **11** 12:46:13.2±0.3, 40°.57N×34°.98E, h2km, MD3.0, Error ellipse: s-maj=7.6km s-min=4.8km az=56.0*

ISC 11 12:46:13.2±0.8, **40°.58N**±0°.04×**35°.03E**±0°.04, **h1**km±7km, **n16**, σ0°**79**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.19**	**284**	*i* P	**Pg**	**12 46 15.8**	**-1.1**
CTKT				*i* S	**Sg**	**12 46 19.9**	**+0.6**
CTKT	**Corum**	**0.19**	**284**	*i* P	**Pg**	**12 46 15.8**	**-1.1**
CTKT				*i* S	**Sg**	**12 46 19.9**	**+0.6**
CORM	**Corum**	**0.50**	**218**	PG	**Pg**	**12 46 23.2**	**+0.4**
CORM				SG	**Sg**	**12 46 30.8**	**+1.5**
CORM	**Corum**	**0.50**	**218**	*i* Pg	**Pg**	**12 46 22.5**	**-0.3**
CORM				*i* Sg	**Sg**	**12 46 30.4**	**+1.1**
YOZ	**Yozgat**	**0.96**	**167**	*e*PG	**Pg**	**12 46 29.3**	**-2.3**
YOZ	**Yozgat**	**0.96**	**167**	*e*Pg	**Pg**	**12 46 31.0**	**-0.6**
YOZ				*e*Sg	**Sg**	**12 46 44.5**	**+0.4**
CDAG	**Cicekdag**	**1.08**	**208**	*i* P	**Pg**	**12 46 32.9**	**-0.9**
CDAG				*i* S	**Sg**	**12 46 47.7**	**-0.1**
CDAG	**Cicekdag**	**1.08**	**208**	*i* P	**Pg**	**12 46 32.9**	**-0.9**
CDAG				*i* S	**Sg**	**12 46 47.7**	**-0.1**
ILGA	**Ilgaz**	**1.11**	**296**	*i* P	**Pg**	**12 46 33.7**	**-0.7**
ILGA				*i* S	**Sg**	**12 46 49.8**	**+1.1**
ILGA	**Ilgaz**	**1.11**	**296**	*i* P	**Pg**	**12 46 33.7**	**-0.7**
ILGA				*i* S	**Sg**	**12 46 49.8**	**+1.1**
BALT	**Daday**	**1.57**	**308**	*i* P	**Pn**	**12 46 41.4**	**-0.8**
BALT				*i* S	**Sn**	**12 47 03.6**	**+0.5**
BALT	**Daday**	**1.57**	**308**	*i* P	**Pn**	**12 46 41.4**	**-0.8**
BALT				*i* S	**Sn**	**12 47 03.7**	**+0.5**
SVSK	**Karacayir**	**1.64**	**113**	*e*PG	**Pg**	**12 46 44.6**	**0.0**
SVSK	**Karacayir**	**1.64**	**113**	*e*Pn	**Pn**	**12 46 43.8**	**+0.6**
SVSK				*e*Sn	**Sg**	**12 47 06.9**	**+0.9**
AVNT	**Avonos**	**1.80**	**184**	*e*P	**Pb**	**12 46 46.5**	**-0.4**
AVNT				*i* S	**Sn**	**12 47 08.7**	**-0.1**
AVNT	**Avonos**	**1.80**	**184**	*e*P	**Pb**	**12 46 46.5**	**-0.4**
AVNT				*i* S	**Sn**	**12 47 08.7**	**-0.1**

*IDC **11** 12:59:50.7±4.2, 29°.89N×138°.16E, h381km±110km, mb3.0/2, mb1 3.2/4, mb1mx2.8/23, mbtmp3.1/4, Error ellipse: s-maj=228.8km s-min=21.9km az=68.0*
*ISCJB **11** 12:59:51.1±0.8, 30°.3N±0°.1×139°.3E±0°.4, h448km±19km, mb3.1/2, Error ellipse: s-maj=58.6km s-min=8.6km az=165.6*
*JMA **11** 12:59:51.9±0.2, 30°.26N×139°.16E, h431km, M3.1*

ISC 11 12:59:52.4±0.8, **30°.4N**±0°.1×**139°.5E**±0°.4, **h443**km±19km, **n10**, σ1°**24**/16, **mb3.0**/2, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.02**	**144**	P	**P**	**13 01 07.5**	**+0.3**
	4.9nm,0.3s,baz=285,slow=22,SNR=7.3						
CBIJ				S	**S**	**13 02 08.2**	**+0.1**
	12nm,0.3s,baz=305,slow=22,SNR=17						
CBIJ	**Chichi jima**	**4.02**	**144**	P	**P**	**13 01 07.5**	**+0.2**
CBIJ		

BCK	**Bucak**	**0.52 146**	*e*PG	**Pg**	**13 29 20.6**	**+1.5**
BCK	**Bucak**	**0.52 146**	*e*Pg	**Pg**	**13 29 20.6**	**+1.6**
KHL	**Karahalli**	**0.70 308**	*e*PG	**Pg**	**13 29 20.0**	**-2.4**
KHL			*e*SG	**Sg**	**13 29 30.3**	**-1.1**
KHL	**Karahalli**	**0.70 308**	*e*Pg	**Pg**	**13 29 20.0**	**-2.4**
KHL			*e*Sg	**Sg**	**13 29 30.3**	**-1.2**
SUTC	**Sutluce-Ispart**	**0.74 124**	*e*PG	**Pg**	**13 29 22.6**	**-0.7**
SUTC	**Sutluce-Ispart**	**0.74 124**	*e*Pg	**Pg**	**13 29 22.6**	**-0.7**
KHAL	**Karahalli**	**0.75 310**	*i* P	**Pg**	**13 29 22.9**	**-0.4**
KHAL			*i* S	**Sg**	**13 29 34.7**	**+1.7**
KHAL	**Karahalli**	**0.75 310**	*i* P	**Pg**	**13 29 22.9**	**-0.4**
KHAL			*i* S	**Sg**	**13 29 34.7**	**+1.7**
GOLH	**Golhisar**	**0.84 219**	*i* P	**Pg**	**13 29 21.8**	**-3.3**
GOLH			*i* S	**Sg**	**13 29 35.3**	**-0.8**
GOLH	**Golhisar**	**0.84 219**	*i* P	**Pg**	**13 29 21.8**	**-3.4**
GOLH			*i* S	**Sg**	**13 29 35.3**	**-0.8**
GLHS	**Glhisar (BURDU**	**0.94 218**	*e*PN	**Pn**	**13 29 30.3**	**+1.4**
GLHS	**Glhisar (BURDU**	**0.94 218**	*e*Pn	**Pn**	**13 29 30.3**	**+1.4**
DNZL	**Cakiroluk**	**0.96 258**	*i* P	**Pg**	**13 29 28.0**	**+0.7**
DNZL			*i* S	**Sg**	**13 29 40.4**	**+0.6**
DNZL	**Cakiroluk**	**0.96 258**	*i* P	**Pg**	**13 29 28.0**	**+0.7**
DNZL			*i* S	**Sg**	**13 29 40.3**	**+0.6**
BOLV	**Bolvadin**	**1.00 35**	*e*P	**Pg**	**13 29 28.8**	**+0.6**
BOLV			*i* S	**Sg**	**13 29 46.0**	**+4.8**
BOLV	**Bolvadin**	**1.00 35**	*e*P	**Pg**	**13 29 28.8**	**+0.6**
BOLV			*i* S	**Sg**	**13 29 46.0**	**+4.8**
ALT	**Altintas**	**1.16 356**	*e*PG	**Pg**	**13 29 22.5**	**-8.8**
ALT	**Altintas**	**1.16 356**	*e*Pg	**Pg**	**13 29 22.5**	**-8.8**
ELL	**Elmali**	**1.17 192**	*e*PN	**Pn**	**13 29 33.7**	**+1.5**
ELL	**Elmali**	**1.17 192**	*e*Pn	**Pn**	**13 29 33.7**	**+1.6**
GDZ	**Gediz**	**1.32 334**	*e*P	**Pn**	**13 29 35.1**	**+0.9**
GDZ			*i* S	**Sg**	**13 29 55.2**	**+3.6**
GDZ	**Gediz**	**1.32 334**	*e*P	**Pn**	**13 29 35.1**	**+0.9**
GDZ			*i* S	**Sg**	**13 29 55.2**	**+3.6**
KULA	**Kula-Manisa**	**1.38 297**	*e*PN	**Pn**	**13 29 32.6**	**-2.4**
KULA	**Kula-Manisa**	**1.38 297**	*e*Pn	**Pn**	**13 29 32.6**	**-2.4**
HDMB	**Hadim**	**2.03 117**	*e*PN	**Pn**	**13 29 41.4**	**-2.5**
HDMB	**Hadim**	**2.03 117**	*e*Pn	**Pn**	**13 29 41.4**	**-2.5**

*ISK **11** 13:30:49.7, 38°.79N×38°.06E, h6km, MD2.8*
*ISCJB **11** 13:30:52.1±0.7, 38°.73N±0°.03×38°.17E±0°.05, h10km, Error ellipse: s-maj=6.4km s-min=4.4km az=30.3*
*DDA **11** 13:30:52.0, 38°.72N×38°.16E, h7km±2km, Md2.8*
*CSEM **11** 13:30:52.1±0.3, 38°.73N×38°.14E, h2km, MD2.8, Error ellipse: s-maj=5.2km s-min=4.4km az=119.0*
ISC 11 13:30:52.5±0.8,**38°.73N**±0°.04×**38°.15E**±0°.06,**h6**km±17km, **n16**,σ0°**84**/26,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.46**	**152**	*e*PG	**Pg**	**13 31 01.1**	**-0.3**
MYA	**Malataya**	**0.46**	**152**	*e*Pg	**Pg**	**13 31 01.1**	**-0.3**
AKCD	**Akcadag**	**0.47**	**202**	*i* P	**Pg**	**13 31 00.8**	**-0.7**
AKCD				*i* S	**Sg**	**13 31 08.6**	**+0.9**
AKCD	**Akcadag**	**0.47**	**202**	*i* P	**Pg**	**13 31 00.9**	**-0.7**
AKCD				*i* S	**Sg**	**13 31 08.6**	**+0.9**
MALT	**Malatya**	**0.47**	**152**	*e*PG	**Pg**	**13 31 01.1**	**-0.6**
MALT				*e*SG	**Sg**	**13 31 08.9**	**+1.1**
MALT	**Malatya**	**0.47**	**152**	*e*Pg	**Pg**	**13 31 01.1**	**-0.5**
MALT				*e*Sg	**Sg**	**13 31 08.9**	**+1.1**
KEMA	**Kemaliye**	**0.60**	**27**	*i* P	**Pg**	**13 31 03.6**	**-0.5**
KEMA				*i* S	**Sg**	**13 31 13.0**	**+1.1**
KEMA	**Kemaliye**	**0.60**	**27**	*i* P	**Pg**	**13 31 03.6**	**-0.5**
KEMA				*i* S	**Sg**	**13 31 13.0**	**+1.1**
ELZG	**Elazig**	**0.70**	**109**	*i* P	**Pg**	**13 31 05.5**	**-0.5**
ELZG				*i* S	**Sg**	**13 31 15.4**	**+0.4**
ELZG	**Elazig**	**0.70**	**109**	*i* P	**Pg**	**13 31 05.5**	**-0.4**
ELZG				*i* S	**Sg**	**13 31 15.4**	**+0.4**
SVRC	**Sivrice-ELAZID**	**0.98**	**111**	*e*PG	**Pg**	**13 31 10.2**	**-1.0**
SVRC	**Sivrice-ELAZID**	**0.98**	**111**	*e*Pg	**Pg**	**13 31 10.2**	**-1.1**
PTK	**Pertek**	**0.99**	**80**	*e*PG	**Pg**	**13 31 10.0**	**-1.5**
PTK				*e*SG	**Sg**	**13 31 25.3**	**+1.0**
PTK	**Pertek**	**0.99**	**80**	*e*Pg	**Pg**	**13 31 10.0**	**-1.5**
PTK				*e*Sg	**Sg**	**13 31 25.3**	**+1.0**
SARI	**SarD1z-Kayseri**	**1.14**	**268**	*e*PN	**Pn**	**13 31 15.4**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.14**	**268**	*e*Pn	**Pn**	**13 31 15.4**	**+0.5**

*ISK **11** 13:31:50.7, 40°.37N×35°.04E, h5km, MD2.6*
*DDA **11** 13:31:51.3, 40°.44N×34°.90E, h7km±7km, Md2.9*
CSEM 11 13:31:51.1±0.3,**40°.45N**×**35°.00E**,**h2**km,**MD2.9**,**Error ellipse: s-maj=7.9km s-min=5.8km az=55.0**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.23**	**318**	*i* P	Pg	13 31 56.0	+0.4
CTKT				*i* S	Sg	13 32 01.3	+2.6
CTKT	**Corum**	**0.23**	**318**	*i* P	Pg	13 31 56.0	+0.4
CTKT				*i* S	Sg	13 32 01.3	+2.6
CORM	**Corum**	**0.39**	**226**	*e*PG	Pg	13 31 59.0	+0.5
CORM				*e*SG	Sg	13 32 05.6	+2.1
CORM	**Corum**	**0.39**	**226**	*e*Pg	Pg	13 31 59.0	+0.5
CORM				*e*Sg	Sg	13 32 05.6	+2.1
YOZ	**Yozgat**	**0.84**	**163**	*e*PG	Pg	13 32 06.4	-0.8
YOZ				*e*SG	Sg	13 32 18.3	+0.1
YOZ	**Yozgat**	**0.84**	**163**	*e*Pg	Pg	13 32 06.4	-0.9
YOZ				*e*Sg	Sg	13 32 18.3	+0.1
CDAG	**Cicekdag**	**0.95**	**210**	*i* P	Pg	13 32 08.5	-0.8
CDAG				*i* S	Sg	13 32 23.0	+1.4
CDAG	**Cicekdag**	**0.95**	**210**	*i* P	Pg	13 32 08.5	-0.8
CDAG				*i* S	Sg	13 32 23.0	+1.4
ILGA	**Ilgaz**	**1.14**	**302**	*i* P	Pg	13 32 13.4	+0.4
ILGA				*i* S	Sg	13 32 26.2	-1.6
ILGA	**Ilgaz**	**1.14**	**302**	*i* P	Pg	13 32 13.4	+0.4
ILGA				*i* S	Sg	13 32 26.2	-1.6
SVSK	**Karacayir**	**1.62**	**108**	*e*PN	Pn	13 32 21.1	+0.4
SVSK				*e*SN	Sn	13 32 42.7	+0.6
SVSK	**Karacayir**	**1.62**	**108**	*e*Pn	Pn	13 32 21.1	+0.4
SVSK				*e*Sn	Sn	13 32 42.7	+0.5
AVNT	**Avonos**	**1.67**	**184**	*i* P	Pn	13 32 21.8	+0.5
AVNT				*i* S	Sg	13 32 45.5	+0.8
AVNT	**Avonos**	**1.67**	**184**	*i* P	Pn	13 32 21.8	+0.5
AVNT				*i* S	Sg	13 32 45.5	+0.8

*ISCJB **11** 13:36:28.4±0.6, 36°.69N×0°.04×71°.30E±0°.08, h235km±8km, mb3.3/5, Error ellipse: s-maj=11.3km s-min=6.3km az=157.5*
*IDC **11** 13:36:28.0±5.3, 36°.57N×71°.54E, h222km±42km, mb3.1/5, mb1 3.2/9, mb1mx3.0/25, mbtmp3.0/9, Error ellipse: s-maj=54.3km s-min=22.2km az=51.0*
*NEIC **11** 13:36:28.4±0.7, 36°.58N×71°.41E, h226km±7km, mb3.9/5, Error ellipse: s-maj=13.7km s-min=9.0km az=109.0*
*NNC **11** 13:36:33.5±1.3, 37°.06N×71°.17E, h205km±18km, mb2.7, mpv3.8, Error ellipse: s-maj=13.0km s-min=7.5km az=23.0*
ISC 11 13:36:29.3±0.7,**36°.71N**±0°.05×**71°.32E**±0°.08,**h227**km±8km, **n35**,σ1**9**°**05**/40,**mb3.3**/5,**5C-1D**,**Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.85**	**221**	*e*P	**Pn**	**13 37 18.0**	**-0.7**
KSH	**Kashi**	**4.62**	**51**	Pn	**Pn**	**13 37 35.4**	**-4.2**
KSH				Sn	**S**	**13 38 25.2**	**-10**
KSH	comp=N,97nm,0.3s			smax			
KSH	comp=E,64nm,0.2s			smax			
AML	**Almayashu** SNR=39	**5.72**	**18**	P	**Pn**	**13 37 53.7**	**+0.4**
AML	**Almayashu** comp=E,24nm,0.5s	**5.72**	**18**	*e*P	**Pn**	**13 37 53.6**	**+0.4**
KZA	**Kyzart** SNR=5.8	**6.16**	**28**	P	**Pn**	**13 37 59.4**	**+0.4**
EKS2	**Erkin-Say** SNR=6.2	**6.24**	**17**	P	**Pn**	**13 38 00.8**	**+1.0**
EKS2	**Erkin-Say** comp=E,3.7nm,0.5s	**6.24**	**17**	*e*P	**Pn**	**13 38 00.1**	**+0.2**
AAK	**Ala-Archa** SNR=10	**6.40**	**22**	P	**Pn**	**13 38 01.0**	**-1.0**
AAK	**Ala-Archa** comp=E,0.1nm,0.3s,baz=152,slow=6.8,SNR=14	**6.40**	**22**	P	**Pn**	**13 38 02.8**	**+0.8**
AAK	comp=E,0.0nm,0.3s,baz=206,slow=8.1,SNR=5.4			S	**S**	**13 39 14.9**	**-1.0**
KK31	**Karatay Array** comp=E,1.9nm,0.4s,baz=174,slow=12,SNR=33	**6.41**	**355**	⇑P	**Pn**	**13 38 01.7**	**-0.4**
KK31	comp=E,6.6nm,0.3s,baz=181,slow=21,SNR=20			⇑S	**S**	**13 39 11.7**	**-4.5**
KKAR	**Karatay Array**	**6.41**	**355**	*e*P	**Pn**	**13 38 01.6**	**-0.5**
ULHL	**Ulahol** SNR=7.3	**6.71**	**33**	P	**Pn**	**13 38 06.6**	**+0.7**
TKM2	**Tokmak 2** comp=E,7.2nm,0.6s	**7.02**	**27**	⇑P	**Pn**	**13 38 10.7**	**+0.8**
TKM2	comp=E,8.7nm,0.9s			⇑S	**S**	**13 39 28.8**	**-1.5**
TKM2	**Tokmak 2** SNR=15	**7.02**	**27**	P	**Pn**	**13 38 11.0**	**+1.1**
TKM2	**Tokmak 2** comp=E,15nm,0.8s	**7.02**	**27**	*e*P	**Pn**	**13 38 10.9**	**+1.0**
MKAR	**Makanchi Array** comp=E,0.2nm,0.3s,baz=215,slow=12,SNR=3.7	**12.97**	**36**	P	**Pn**	**13 39 25.6**	**+0.3**
DANN	**Dangsing** comp=E,5.9nm,0.4s	**13.39**	**125**	*e*P	**Pn**	**13 39 29.4**	**-1.4**
KOLN	**Koldanda**	**13.68**	**127**	*e*P	**Pn**	**13 39 33.2**	**-1.2**
GKN	**Gorkha** comp=E,9.4nm,0.4s	**14.21**	**124**	*e*P	**Pn**	**13 39 40.4**	**-0.4**
KKN	**Kakani** comp=E,12nm,0.4s	**14.77**	**123**	*e*P	**Pn**	**13 39 48.2**	**+0.5**
DMN	**Daman**	**14.78**	**124**	*e*P	**Pn**	**13 39 48.4**	**+0.7**
PKIN	**Phulchoki** comp=E,12nm,0.6s	**14.99**	**123**	*e*P	**Pn**	**13 39 50.5**	**+0.2**
PKI	**Pulchoki** comp=E,8.4nm,0.6s	**15.00**	**123**	*e*P	**Pn**	**13 39 51.5**	**+1.0**
AB31	**Akbulak array** comp=E,1.2nm,0.6s,baz=116,slow=13,SNR=20	**15.03**	**330**	⇑P	**Pn**	**13 39 51.1**	**+0.6**
AB31	comp=E,1.0nm,0.6s			⇓S	**S**	**13 42 34.6**	**-2.0**
ABKAR	**Akbulak array** comp=E,1.0nm,0.5s	**15.03**	**330**	*e*P	**Pn**	**13 39 51.0**	**+0.5**
GUN	**Gumba** comp=E,7.4nm,0.3s	**15.11**	**121**	*e*P	**Pn**	**13 39 54.2**	**+2.5**
BVAR	**Borovoye Array** comp=E,0.3nm,0.3s,baz=168,slow=15,SNR=3.3	**16.33**	**358**	P	**P**	**13 40 07.0**	**+2.1**
AKTK	**Aktyubinsk**	**16.73**	**329**	P	**P**	**13 40 09.9**	**+0.6**
AKTO	**Aktyubinsk** comp=E,0.5nm,0.3s,baz=155,slow=10,SNR=9.7	**16.73**	**329**	P	**P**	**13 40 09.9**	**+0.6**
ARCES	**ARCESS Array B** comp=E,0.5nm,0.4s,mb3.3,baz=119,slow=9.0,SNR=7.2	**41.05**	**337**	P	**P**	**13 43 50.7**	**+0.5**
ILAR	**Eielson Array** comp=E,0.3nm,0.8s,mb3.0,baz=297,slow=7.1,SNR=4.7	**74.51**	**16**	P	**P**	**13 47 42.5**	**+0.1**
YKA	**Yellowknife Ar** comp=E,0.8nm,0.5s,mb3.6,baz=354,slow=5.5,SNR=4.3	**81.02**	**3**	P	**P**	**13 48 18.4**	**0.0**
WRA	**Warramunga Arr** comp=E,0.2nm,0.4s,mb3.1,baz=325,slow=5.0,SNR=8.1	**81.89**	**122**	P	**P**	**13 48 21.8**	**-1.8**
WRA	**Warramunga Arr**	**81.89**	**122**	P	**P**	**13 48 21.8**	**-1.8**
ASAR	**Alice Springs** comp=E,0.4nm,0.6s,mb3.3,baz=305,slow=4.4,SNR=9.4	**84.17**	**125**	P	**P**	**13 48 32.9**	**-2.2**

NEIC 11 13:52:39.0,52°.25N×168°.16W,h22km,**ML3.6**(PMR), **ML3.0**(AEIC),**After AEIC.,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.84**	**330**	P	Pb	13 52 53.1	-1.8
NIKO				S	Sb	13 53 04.9	-0.8
UNV	**Unalaska Valle**	**1.88**	**31**	P	Pn	13 53 07.7	-2.1
UNV				S	Sn	13 53 30.6	-2.3
AKUT	**Akutan**	**2.37**	**36**	*e*P	Pn	13 53 15.3	-1.2
SDPT	**Sand Point**	**5.51**	**53**	*e*P	Pn	13 53 58.2	-1.4

*ISCJB **11** 13:52:52.6±0.7, 25°.90S±0°.05×131°.00E±0°.06, h10km, Error ellipse: s-maj=8.3km s-min=6.4km az=15.3*
*IDC **11** 13:52:57.4±3.1, 25°.92S×131°.14E, h0km, mb1 3.6/4, mb1mx3.4/15, mbtmp3.4/4, ML3.3/4, Error ellipse: s-maj=26.0km s-min=23.2km az=48.0*
ISC 11 13:52:56.0±0.6,**25°.97S**±0°.04×**130°.98E**±0°.05,**h10**km,**n9**, σ1**9**°**69**/19,**Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 0.3nm,0.3s,baz=226,slow=11,SNR=63	**3.51**	**50**	Pn	**Pn**	**13 53 52.7**	**+2.1**
ASAR	2.0nm,0.3s,baz=230,slow=15,SNR=42			Pg	**Pg**	**13 54 00.4**	**-2.8**
ASAR	3.0nm,0.3s,baz=228,slow=24,SNR=14			Sn	**Sn**	**13 54 33.8**	**+1.6**
ASAR	12nm,0.3s,baz=228,slow=28,SNR=39			Lg		13 54 44.1	
FORT	**Forrest**	**5.44**	**208**	*e*P	**Pn**	**13 54 19.1**	**+1.9**
FORT	8.3nm,0.3s			*e*S	**Sn**	**13 55 19.3**	**-0.5**
WRA	**Warramunga Arr** 0.8nm,0.3s,baz=205,slow=14,SNR=86	**6.75**	**28**	Pn	**Pn**	**13 54 37.6**	**+2.5**
WRA	1.3nm,0.3s,baz=212,slow=25,SNR=8.3			Sn	**Sn**	**13 55 49.6**	**-2.5**
WRA	0.7nm,0.3s,baz=201,slow=27,SNR=3.5			Lg		13 56 24.1	
BBOO	**Buckleboo**	**8.13**	**148**	*e*P	**Pn**	**13 54 56.2**	**+2.1**
BBOO	1.5nm,0.3s			*e*S	**Sn**	**13 56 23.1**	**-2.9**
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=141,slow=14,SNR=11	**9.26**	**327**	Pn	**Pn**	**13 55 11.1**	**+1.4**
FITZ	0.1nm,0.3s,baz=110,slow=6.3,SNR=2.2			Sn	**Sn**	**13 56 53.3**	**-0.7**
STKA	**Stephens Creek** 0.4nm,0.3s,baz=306,slow=18,SNR=7.4	**11.00**	**125**	Pn	**Pn**	**13 55 33.5**	**+0.1**
STKA	0.8nm,0.3s,baz=190,slow=16,SNR=9.2			Sn	**Sn**	**13 57 31.4**	**-5.1**
STKA	**Stephens Creek** 1.5nm,0.3s	**11.00**	**125**	*e*P	**Pn**	**13 55 33.7**	**+0.2**
STKA				*e*S	**Sn**	**13 57 29.0**	**-7.6**
MEEK	**Meekatharra**	**11.12**	**264**	*e*P	**Pn**	**13 55 34.5**	**-0.6**
MEEK				*e*S	**Sn**	**13 57 30.1**	**-9.4**
MBWA	**Marble Bar**	**11.37**	**293**	*e*P	**Pn**	**13 55 37.7**	**-0.9**
MBWA				*e*S	**Sn**	**13 57 37.2**	**-8.6**

*ISK **11** 13:53:41.4, 37°.20N×35°.70E, h23km, MD2.7*
*ISCJB **11** 13:53:42.3±0.5, 37°.20N±0°.03×35°.71E±0°.04, h26km±5km, Error ellipse: s-maj=6.0km s-min=5.0km az=149.7*
*DDA **11** 13:53:42.4, 37°.19N×35°.70E, h24km, Md3.0*
*CSEM **11** 13:53:42.0±0.1, 37°.19N×35°.69E, h24km±1km, MD2.7, Error ellipse: s-maj=3.6km s-min=2.9km az=153.0*
ISC 11 13:53:42.4±0.5,**37°.20N**±0°.03×**35°.71E**±0°.04,**h24**km±5km, **n21**,σ0°**60**/36,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.20**	**171**	*e*PG	**Pb**	**13 53 47.1**	**-0.8**
CEYT				*e*SG	**Sb**	**13 53 51.4**	**-0.2**
CEYT	**Ceyhan**	**0.20**	**171**	*e*Pg	**Pb**	**13 53 47.1**	**-0.8**
CEYT				*e*Sg	**Sb**	**13 53 51.4**	**-0.1**
KOZT	**Kozan**	**0.29**	**19**	*e*PG	**Pb**	**13 53 48.5**	**-0.8**
KOZT				*e*SG	**Sb**	**13 53 54.0**	**+0.1**
YURE	**YUREGIR**	**0.38**	**189**	*i* P	**Pb**	**13 53 50.3**	**-0.3**
YURE				*i* S	**Sb**	**13 53 57.2**	**+1.0**
YURE	**YUREGIR**	**0.38**	**189**	*i* P	**Pb**	**13 53 50.3**	**-0.3**
YURE				*i* S	**Sb**	**13 53 57.2**	**+1.1**
KARA	**Karaisali**	**0.53**	**277**	*e*PG	**Pb**	**13 53 52.6**	**-0.4**
KARA				*e*SG	**Sb**	**13 54 00.5**	**+0.2**
KARA	**Karaisali**	**0.53**	**277**	*e*Pg	**Pb**	**13 53 52.6**	**-0.4**
KARA				*e*Sg	**Sb**	**13 54 00.5**	**+0.3**
ANDN	**Andirin**	**0.63**	**53**	*i* P	**Pb**	**13 53 54.5**	**-0.3**
ANDN				*i* S	**Sb**	**13 54 04.6**	**+1.4**
ANDN	**Andirin**	**0.63**	**53**	*i* P	**Pb**	**13 53 54.5**	**-0.3**
ANDN				*i* S	**Sb**	**13 54 04.6**	**+1.3**
KRTS	**Karatas**	**0.68**	**203**	*e*PG	**Pb**	**13 53 55.1**	**-0.6**
KRTS	**Karatas**	**0.68**	**203**	*e*Pg	**Pb**	**13 53 55.1**	**-0.6**
GULE	**Gulek**	**0.75**	**277**	*i* P	**Pb**	**13 53 56.7**	**0.0**
GULE				*i* S	**Sb**	**13 54 07.4**	**+0.8**
GULE	**Gulek**	**0.75**	**277**	*i* P	**Pb**	**13 53 56.7**	**-0.1**
GULE				*i* S	**Sb**	**13 54 07.4**	**+0.8**
MERS	**Mersin**	**1.01**	**251**	*e*PG	**Pn**	**13 54 00.9**	**-0.2**
MERS				*e*SG	**Sb**	**13 54 14.2**	**+0.3**
MERS	**Mersin**	**1.01**	**251**	*e*Pg	**Pn**	**13 54 00.9**	**-0.2**
MERS				*e*Sg	**Sb**	**13 54 14.3**	**+0.3**
GAZ	**Gaziantep**	**1.20**	**91**	*e*PN	**Pn**	**13 54 03.3**	**-0.4**
GAZ	**Gaziantep**	**1.20**	**91**	*e*Pn	**Pn**	**13 54 03.3**	**-0.4**
YAYL	**Yayladag**	**1.21**	**165**	*i* P	**Pn**	**13 54 04.2**	**+0.4**
YAYL				*i* S	**Sn**	**13 54 20.0**	**+0.5**
YAYL	**Yayladag**	**1.21**	**165**	*i* P	**Pn**	**13 54 04.2**	**+0.3**
YAYL				*i* S	**Sn**	**13 54 20.0**	**+0.5**
IKL	**Isikli**	**1.89**	**240**	*e*PN	**Pn**	**13 54 12.4**	**-0.8**
IKL	**Isikli**	**1.89**	**240**	*e*Pn	**Pn**	**13 54 12.4**	**-0.8**

*NNC **11** 14:10:40.3±4.5, 39°.15N×72°.24E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=36.0km s-min=19.5km az=178.0*
ISC 11 14:10:39.3±2.3,**38°.8N**±0°.1×**72°.0E**±0°.1,**h35**km,**n9**, σ1**9**°**92**/12,**1C-4D**,**Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=103	**3.56**	**21**	P	**Pn**	**14 11 32.0**	**0.0**
EKS2	**Erkin-Say** SNR=18	**4.08**	**19**	P	**Pn**	**14 11 39.6**	**+0.5**
KZA	**Kyzart** SNR=7.7	**4.10**	**36**	P	**Pn**	**14 11 39.4**	**-0.1**
AAK	**Ala-Archa** SNR=6.8	**4.26**	**26**	P	**Pn**	**14 11 41.0**	**-0.7**
KK31	**Karatay Array** 5.6nm,0.3s,baz=160,slow=13,SNR=139	**4.42**	**346**	P	**Pn**	**14 11 45.6**	**+1.7**
KK31	7.5nm,0.3s,baz=159,slow=27,SNR=6.8			⇑S	**Sn**	**14 12 35.5**	**+1.3**
CHMS	**Chumysh** SNR=6.0	**4.67**	**26**	P	**Pn**	**14 11 48.3**	**+0.9**
USP	**Ospenovka** SNR=13	**4.84**	**22**	P	**Pn**	**14 11 49.8**	**+0.2**
TKM2	**Tokmak 2** 3.6nm,0.5s	**4.93**	**33**	⇓P	**Pn**	**14 11 50.6**	**-0.3**
TKM2	9.5nm,0.8s			⇓S	**Sn**	**14 12 45.6**	**-1.1**
AB31	**Akbulak array** 0.6nm,0.4s,baz=138,slow=18,SNR=25	**13.54**	**324**	⇓P	**Pn**	**14 13 47.7**	**-1.0**
AB31	1.5nm,0.8s,baz=13,slow=26,SNR=4.0			⇓S	**Sn**	**14 16 16.5**	**-1.3**

*JMA **11** 14:25:20.6±0.7, 46°.84N×152°.72E, h30km, M4.4*
*ISCJB **11** 14:25:22.1±1.2, 46°.5N±0°.1×152°.7E±0°.1, h57km±11km, mb3.7/8, Error ellipse: s-maj=23.5km s-min=7.0km az=138.9*
*MOS **11** 14:25:22.6±0.5, 46°.51N×152°.77E, h53km, mb3.8/2, Error ellipse: s-maj=21.7km s-min=12.2km az=51.8*
*NEIC **11** 14:25:26.8±1.9, 46°.71N×152°.65E, h80km±16km, Error ellipse: s-maj=24.0km s-min=13.0km az=144.0*
*IDC **11** 14:25:27.3±3.0, 46°.74N×152°.62E, h84km±27km, mb3.4/8, mb1 3.6/10, mb1mx3.5/24, mbtmp3.4/10, Error ellipse: s-maj=26.8km s-min=16.5km az=128.0*
ISC 11 14:25:23.8±1.0,**46°.5N**±0°.1×**152°.8E**±0°.1,**h54**km±10km,**n41**, σ1**9**°**37**/50,**mb3.7**/8,**1D**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.65**	**252**	*e*PN	**Pn**	**14 26 18.0**	**+0.3**
KUR				*e*S	**Sn**	**14 27 02.0**	**+2.6**
KUR	comp=Z,100nm,0.5s			pmax	pmax		
KUR	comp=N,230nm,0.5s			smax			
KUR	comp=E,130nm,0.5s			smax			
SKR	**Severo-Kuril's**	**4.78**	**26**	*e*PN	**Pn**	**14 26 33.5**	**+0.4**
SKR	comp=Z,40nm,0.5s			pmax	pmax		
SKR	comp=N,20nm,0.3s			pmax	pmax		
YUK	**Yuzh-Kuril'sk**	**5.45**	**246**	⇓*i*PN	**Pn**	**14 26 43.3**	**+0.9**
YUK				*i* S	**Sn**	**14 27 45.4**	**+1.6**
YUK	comp=Z,90nm,0.3s			pmax	pmax		
YUK	comp=N,40nm,0.1s			pmax	pmax		
YUK	comp=E,30nm,0.3s			pmax	pmax		
YUK	comp=N,150nm,0.6s			smax			
YUK	comp=E,120nm,0.6s			smax			
NEM2	**Nemuro 2**	**5.88**	**241**	P	**Pn**	**14 26 46.9**	**-1.3**
NEM2				*e*S	**Sn**	**14 27 50.7**	**-3.5**
JRA	**Rausu**	**5.97**	**248**	P	**Pn**	**14 26 51.0**	**+1.5**
JNK	**Nakash**	**6.39**	**246**	P	**Pn**	**14 26 55.7**	**+0.4**
JNK				*e*S	**Sn**	**14 28 06.2**	**-0.7**
JAK	**Akkeshi**	**6.72**	**242**	P	**Pn**	**14 26 58.3**	**-1.4**
JAK				*e*S	**Sn**	**14 28 10.4**	**-4.4**
JTKR	**Abashiri--Toko**	**6.74**	**252**	P	**Pn**	**14 27 01.3**	**+1.2**
YSS	**Yuzh-Sakhalins** comp=E,16nm,0.8s	**6.92**	**278**	*e*P	**Pn**	**14 27 03.5**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.92**	**278**	*e*PN	**Pn**	**14 27 03.0**	**+0.6**
JMP	**Maruseppu**	**7.09**	**253**	P	**Pn**	**14 27 06.6**	**+1.8**
JAR	**Ashorobuto**	**7.14**	**247**	P	**Pn**	**14 27 06.1**	**+0.6**
JAR				*e*S	**Sn**	**14 28 24.8**	**-0.4**
JOB	**Onbets**	**7.30**	**244**	P	**Pn**	**14 27 07.1**	**-0.6**
PETK	**Petropavlovsk-** comp=E,0.3nm,0.3s,baz=183,slow=12,SNR=9.2	**7.38**	**24**	P	**Pn**	**14 27 09.1**	**+0.3**
PETK	**Petropavlovsk-**	**7.38**	**24**	PN	**Pn**	**14 27 09.1**	**+0.3**
ASAJ	**Asahikawa** comp=E,1.1nm,0.3s,baz=83,slow=16,SNR=9.5	**7.56**	**256**	P	**Pn**	**14 27 13.2**	**+2.0**
ASAJ	**Asahikawa** comp=Z,1.0nm,0.3s	**7.56**	**256**	PN	**Pn**	**14 27 13.3**	**+2.1**
ASAJ				pmax	pmax		
JCH	**Churui**	**7.75**	**244**	P	**Pn**	**14 27 12.8**	**-1.0**
JCH				*e*S	**Sn**	**14 28 35.6**	**-4.5**
JNBK	**Urakawa-nobuka**	**8.31**	**243**	P	**Pn**	**14 27 20.1**	**-1.4**
JKB	**Kayabe**	**9.60**	**246**	P	**Pn**	**14 27 36.9**	**-2.2**
JKB				*e*S	**Sn**	**14 29 17.1**	**-8.3**
JYM2	**Yakumo 2**	**9.90**	**249**	P	**Pn**	**14 27 41.6**	**-1.7**
JANG	**Nango**	**10.20**	**237**	P	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.77**	**270**	Pg	**Pg**	**14 31 23.7**	**+0.4**
KSH				Sg	**Sg**	**14 31 46.3**	**+0.1**
KSH	comp=N,310nm,0.5s			smax			
KSH	comp=E,440nm,0.6s			smax			
ULHL	**Ulahol**	**3.11**	**331**	P	**Pn**	**14 31 39.5**	**+1.0**
	SNR=30						
KZA	**Kyzart**	**3.42**	**319**	P	**Pn**	**14 31 42.0**	**-0.7**
	SNR=56						
KZA	**Kyzart**	**3.42**	**319**	*e*P	**Pn**	**14 31 41.4**	**-1.3**
TKM2	**Tokmak 2**	**3.93**	**330**	⇑Pn	**Pn**	**14 31 49.8**	**0.0**
TKM2	comp=E,8.3nm,0.4s			⇑Sn	**Sn**	**14 32 37.4**	**+1.4**
TKM2	comp=E,51nm,0.6s						
TKM2	**Tokmak 2**	**3.93**	**330**	P	**Pn**	**14 31 50.1**	**+0.3**
	SNR=29						
TKM2	**Tokmak 2**	**3.93**	**330**	*e*P	**Pn**	**14 31 49.5**	**-0.4**
TKM2				*e*S	**Sn**	**14 32 37.3**	**+1.3**
KBK	**Karagaybulak**	**4.00**	**322**	P	**Pn**	**14 31 54.5**	**+3.7**
	SNR=32						
AAK	**Ala-Archa**	**4.21**	**319**	P	**Pn**	**14 31 52.8**	**-0.8**
	SNR=12						
AAK	**Ala-Archa**	**4.21**	**319**	*e*P	**Pn**	**14 31 52.6**	**-0.9**
AAK				*e*S	**Sn**	**14 32 43.9**	**+1.3**
AML	**Almayashu**	**4.33**	**308**	P	**Pn**	**14 31 54.0**	**-1.2**
	SNR=158						
AML	**Almayashu**	**4.33**	**308**	*e*P	**Pn**	**14 31 53.8**	**-1.5**
CHMS	**Chumysh**	**4.36**	**324**	P	**Pn**	**14 31 55.8**	**+0.2**
	SNR=6.2						
EKS2	**Erkin-Say**	**4.61**	**314**	P	**Pn**	**14 31 58.5**	**-0.5**
	SNR=59						
EKS2	**Erkin-Say**	**4.61**	**314**	*e*P	**Pn**	**14 31 58.1**	**-1.0**
USP	**Ospenovka**	**4.68**	**324**	P	**Pn**	**14 32 00.1**	**+0.1**
	SNR=6.8						
KK31	**Karatay Array**	**6.83**	**304**	⇑Pn	**Pn**	**14 32 26.9**	**-2.8**
	comp=E,0.7nm,0.5s,baz=0.9,slow=41,SNR=4.7						
KK31				⇑Pg	**Pg**	**14 32 47.0**	**-13**
	comp=E,1.3nm,0.3s,baz=96,slow=13,SNR=4.6						
KK31				⇑Lg		14 34 13.9	
	comp=E,12nm,0.8s,baz=124,slow=27,SNR=4.9						
MK31	**Makanchi Array**	**7.83**	**21**	⇑Pn	**Pn**	**14 32 48.9**	**+5.6**
	comp=E,0.1nm,0.3s,baz=202,slow=13,SNR=9.1						
MK31				⇑Lg		14 35 04.0	
	comp=E,1.9nm,0.6s,baz=206,slow=15,SNR=4.6						
MK31	**Makanchi Array**	**7.83**	**21**	*e*P	**Pn**	**14 32 46.5**	**+3.3**
KBL	**Kabul**	**8.89**	**239**	*e*P	**Pn**	**14 32 59.7**	**+1.8**
	comp=E,8.5nm,0.4s						
AB31	**Akbulak array**	**16.27**	**313**	⇓P	**Pn**	**14 34 35.1**	**-2.7**
	comp=E,0.7nm,0.6s,baz=100,slow=14,SNR=5.6						

ISCJB ***11*** *14:44:46.2±0.6, 37°.85N±0°.04×22°.95E±0°.05, h25km±7km, Error ellipse: s-maj=6.9km s-min=5.8km az=135.6*
ATH ***11*** *14:44:46.3, 37°.85N×22°.93E, h18km±4km, MD2.9/7, ML1.9*
THE ***11*** *14:44:46.5, 37°.84N×22°.91E, h18km, ML1.5/4, Error ellipse: s-maj=0.8km s-min=0.4km az=69.0*
CSEM ***11*** *14:44:46.0±0.1, 37°.85N×22°.94E, h20km, MD2.9, Error ellipse: s-maj=4.1km s-min=3.3km az=28.0*

ISC 11 14:44:46.2±0.6, 37°.85N±0°.04×22°.95E±0°.05, h25km±7km, n21, σ0§48/31, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.17**	**5**	*e*PB	**Pb**	**14 44 51.0**	**-0.5**
LTK	**Loutraki**	**0.17**	**5**	P	**Pb**	**14 44 50.9**	**-0.6**
LTK				S	**Sb**	**14 44 54.7**	**-0.3**
LTK	**Loutraki**	**0.17**	**5**	*e*Pb	**Pb**	**14 44 51.0**	**-0.5**
LTK				S	**Sb**	**14 44 54.7**	**-0.3**
DID	**Didima**	**0.41**	**146**	*e*PB	**Pb**	**14 44 55.0**	**+0.1**
DID	**Didima**	**0.41**	**146**	P	**Pb**	**14 44 55.1**	**+0.2**
DID				S	**Sb**	**14 45 01.7**	**+0.9**
DID	**Didima**	**0.41**	**146**	*e*Pb	**Pb**	**14 44 55.0**	**+0.1**
DID				S	**Sb**	**14 45 01.7**	**+0.9**
NAIG	**Nisos Aigina**	**0.44**	**102**	*e*PB	**Pb**	**14 44 55.2**	**-0.1**
NAIG	**Nisos Aigina**	**0.44**	**102**	*e*Pb	**Pb**	**14 44 55.2**	**-0.1**
GUR	**Goura**	**0.49**	**280**	*e*PB	**Pb**	**14 44 55.7**	**-0.4**
GUR	**Goura**	**0.49**	**280**	P	**Pb**	**14 44 55.7**	**-0.4**
GUR				S	**Sb**	**14 45 03.0**	**+0.1**
GUR	**Goura**	**0.49**	**280**	P	**Pb**	**14 44 55.7**	**-0.4**
GUR				S	**Sb**	**14 45 03.0**	**+0.1**
ATH	**Athens Observa**	**0.62**	**78**	*e*PB	**Pb**	**14 44 58.4**	**+0.1**
ATH	**Athens Observa**	**0.62**	**78**	*e*Pb	**Pb**	**14 44 58.4**	**+0.1**
DSF	**Desfina**	**0.65**	**329**	P	**Pb**	**14 44 59.0**	**+0.1**
DSF				S	**Sb**	**14 45 08.5**	**+0.9**
DSF	**Desfina**	**0.65**	**329**	P	**Pb**	**14 44 59.0**	**+0.1**
DSF				S	**Sb**	**14 45 08.5**	**+0.9**
VLX	**Vlachokerasia**	**0.66**	**224**	P	**Pb**	**14 44 58.4**	**-0.6**
VLX				S	**Sb**	**14 45 07.9**	**+0.1**
VLX	**Vlachokerasia**	**0.66**	**224**	P	**Pb**	**14 44 58.4**	**-0.6**
VLX				S	**Sb**	**14 45 07.9**	**+0.1**
VLY	**Voula,Athens**	**0.67**	**90**	*e*PN	**Pn**	**14 44 59.4**	**-0.7**
VLY	**Voula,Athens**	**0.67**	**90**	*e*Pn	**Pn**	**14 44 59.4**	**-0.7**
LKR	**Lokris**	**0.80**	**3**	*e*PN	**Pn**	**14 45 02.2**	**+0.3**
LKR	**Lokris**	**0.80**	**3**	*e*Pn	**Pn**	**14 45 02.2**	**+0.3**

DDA ***11*** *14:45:30.8, 38°.27N×38°.11E, h7km±2km, Md2.7*
ISK ***11*** *14:45:30.1, 38°.08N×38°.49E, h5km, MD2.9*
ISCJB ***11*** *14:45:31.6±0.7, 38°.33N±0°.04×38°.11E±0°.04, h2km±9km, Error ellipse: s-maj=8.0km s-min=4.8km az=154.6*
CSEM ***11*** *14:45:31.4±0.3, 38°.36N×38°.10E, h0km±3km, MD2.7, Error ellipse: s-maj=7.0km s-min=4.2km az=154.0*

ISC 11 14:45:32.1±0.6, 38°.33N±0°.04×38°.10E±0°.04, h4km±10km, n21, σ0§89/30, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.15**	**257**	⇑*i*P	**Pg**	**14 45 34.3**	**-0.7**
AKCD				*i*S	**Sg**	**14 45 37.1**	**+0.2**
AKCD	**Akcadag**	**0.15**	**257**	*i*P	**Pg**	**14 45 34.3**	**-0.7**
AKCD				*i*S	**Sg**	**14 45 37.1**	**+0.2**
MYA	**Malataya**	**0.25**	**91**	PG	**Pg**	**14 45 36.3**	**-0.6**
MYA	**Malataya**	**0.25**	**91**	*i*Pg	**Pg**	**14 45 36.3**	**-0.6**
MALT	**Malatya**	**0.26**	**93**	*e*PG	**Pg**	**14 45 36.1**	**-0.9**
MALT				*e*SG	**Sg**	**14 45 40.5**	**+0.2**
MALT	**Malatya**	**0.26**	**93**	*e*Pg	**Pg**	**14 45 36.1**	**-0.9**
MALT				*e*Sg	**Sg**	**14 45 40.5**	**+0.2**
ELZG	**Elazig**	**0.71**	**76**	*e*P	**Pg**	**14 45 44.7**	**-1.0**
ELZG				*e*S	**Sg**	**14 45 56.0**	**+1.0**
ELZG	**Elazig**	**0.71**	**76**	*e*P	**Pg**	**14 45 44.7**	**-1.0**
ELZG				*e*S	**Sg**	**14 45 56.0**	**+1.1**
ATAB	**Bozova**	**0.87**	**170**	*e*P	**Pg**	**14 45 49.4**	**+0.6**
ATAB				*e*S	**Sg**	**14 46 00.6**	**+0.5**
ATAB	**Bozova**	**0.87**	**170**	*e*P	**Pg**	**14 45 49.4**	**+0.6**
ATAB				*e*S	**Sg**	**14 46 00.6**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.95**	**87**	*e*PG	**Pg**	**14 45 45.0**	**-5.2**
SVRC	**Sivrice-ELAZID**	**0.95**	**87**	*e*Pg	**Pg**	**14 45 45.0**	**-5.2**
KEMA	**Kemaliye**	**0.99**	**18**	*e*P	**Pg**	**14 45 50.3**	**-0.7**
KEMA				*e*S	**Sg**	**14 46 05.2**	**+1.4**
KEMA	**Kemaliye**	**0.99**	**18**	*e*P	**Pg**	**14 45 50.3**	**-0.7**
PTK	**Pertek**	**1.16**	**60**	*e*PN	**Pn**	**14 45 51.5**	**-3.5**
PTK	**Pertek**	**1.16**	**60**	*e*Pn	**Pn**	**14 45 51.5**	**-3.5**
KMRS	**Kahramanmaras**	**1.26**	**230**	*e*PN	**Pn**	**14 45 57.4**	**+1.0**
KMRS	**Kahramanmaras**	**1.26**	**230**	*e*Pn	**Pn**	**14 45 57.4**	**+1.0**
GAZ	**Gaziantep**	**1.35**	**212**	*e*PN	**Pn**	**14 45 57.1**	**-0.6**
GAZ	**Gaziantep**	**1.35**	**212**	*e*Pn	**Pn**	**14 45 57.1**	**-0.6**
SVSK	**Karacayir**	**1.80**	**332**	*e*PN	**Pn**	**14 46 08.8**	**+4.9**

IDC ***11*** *14:45:50.9±1.0, 22°.92S×170°.36E, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.4/16, mbtmp4.2/11, MS3.9/9, Ms1 3.9/9, ms1mx3.6/24, Error ellipse: s-maj=28.6km s-min=23.5km az=129.0*
NOU ***11*** *14:45:52.9±1.2, 19°.87S×169°.89E, h10km, MD3.1, ML3.6*
ISCJB ***11*** *14:45:54.1±2.3, 22°.90S±0°.08×170°.38E±0°.05, h31km±17km, mb4.4/18, MS4.0/7, Error ellipse: s-maj=13.4km s-min=7.5km az=18.6*
NEIC ***11*** *14:45:56.0±3.8, 22°.88S×170°.39E, h30km±28km, mb5.0/4, Error ellipse: s-maj=14.2km s-min=11.5km az=165.0*

ISC 11 14:45:55.9±2.3, 22°.89S±0°.07×170°.38E±0°.05, h31km±17km, n74, σ1§06/45, mb4.4/18, MS4.0/7, 9C-6D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.31**	**282**	*e*P	**Pn**	**14 46 45.8**	**+0.2**
BAYA				*e*S	**Sn**	**14 47 25.3**	**+1.4**
PLUM	**Mont Dore**	**3.51**	**279**	*e*P	**Pn**	**14 46 48.2**	**-0.1**
NORM	**Noumea**	**3.66**	**280**	*e*P	**Pn**	**14 46 50.1**	**-0.2**
DZM	**Mont Dzumac**	**3.73**	**282**	*e*Pn	**Pn**	**14 46 51.6**	**+0.3**
DZM	81nm,0.2s			*e*Sn	**Sn**	**14 47 34.2**	**0.0**
DZM	116nm,0.2s			*e*LR	LR	14 47 40.6	
DZM	1μm,23.3s			AMP		14 47 43.9	
DZM	**Mont Dzumac**	**3.73**	**282**	*e*P	**Pn**	**14 46 50.6**	**-0.7**
DZM	comp=Z,1μm,3.1s			AMP		14 47 43.9	
NOUC	**Port Laguerre**	**3.85**	**281**	*e*P	**Pn**	**14 46 52.7**	**-0.2**
NOUC				*e*S	**Sn**	**14 47 35.9**	**-1.2**
NOUC	comp=Z,73nm,0.7s			AMP		14 47 40.7	
MSVF	**Nonsavu**	**8.84**	**56**	P	**Pn**	**14 48 00.6**	**-1.0**
	comp=Z,44nm,1.3s						
URZ	**Urewera**	**16.37**	**161**	Pn	**Pn**	**14 49 44.6**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=330,slow=20,SNR=3.9						
URZ				LR	LR	14 54 22.4	
	comp=Z,336nm,21.5s,baz=347,slow=31						
HNR	**Honiara**	**16.70**	**322**	Pn	**Pn**	**14 49 52.9**	**+5.2**
	comp=Z,3.4nm,0.3s,baz=244,slow=4.2,SNR=5.5						
HNR				LR	LR	14 55 36.2	
	comp=Z,232nm,18.2s,baz=187,slow=35						
RPZ	**Rata Peaks**	**20.78**	**179**	P	**P**	**14 50 35.0**	**+0.7**
	comp=Z,20nm,0.8s,baz=172,slow=2.6,SNR=6.3						
CNB	**Canberra Magne**	**22.09**	**231**	*e*P	**P**	**14 50 49.7**	**+1.2**
YNG	**Young**	**22.35**	**235**	*e*P	**P**	**14 50 52.0**	**+0.8**
	comp=Z,7.5nm,0.9s,mb4.1						
CTA	**Charters Tower**	**22.61**	**273**	P	**P**	**14 50 56.4**	**+2.2**
	comp=Z,2.3nm,0.7s,mb3.7,baz=113,slow=15,SNR=2.8						
CTA				LR	LR	14 58 41.2	
	comp=Z,196nm,19.3s,MS3.5,baz=226,slow=34						
CTAO	**Charters Tower**	**22.61**	**273**	*e*P	**P**	**14 50 56.5**	**+2.3**
CMSA	**Cobar Meteorol**	**23.54**	**243**	*e*P	**P**	**14 51 03.2**	**-0.5**
CMSA				*e*pP		14 51 13.7	
QLP	**Quilpie**	**24.01**	**256**	*e*P	**P**	**14 51 08.4**	**+0.3**
QLP				*e*pP		14 51 17.8	
TOO	**Toolangi**	**25.91**	**230**	*e*P	**P**	**14 51 23.2**	**-2.0**
STKA	**Stephens Creek**	**27.02**	**244**	P	**P**	**14 51 35.2**	**0.0**
	comp=Z,3.4nm,0.7s,mb4.0,baz=99,slow=10,SNR=9.1						
STKA				LR	LR	15 02 06.2	
	comp=Z,234nm,18.6s,MS3.8,baz=314,slow=36						
STKA	**Stephens Creek**	**27.02**	**244**	*e*P	**P**	**14 51 35.1**	**-0.1**
	comp=Z,5.5nm,0.9s,mb4.1						
COEN	**Coen**	**27.25**	**284**	*e*P	**P**	**14 51 43.1**	**+5.6**
COEN				*e*		14 51 49.2	
ASAR	**Alice Springs**	**33.46**	**261**	P	**P**	**14 52 31.9**	**-0.4**
	comp=Z,3.8nm,0.7s,mb4.4,baz=87,slow=9.6,SNR=70						
WB2	**Warramunga Arr**	**33.62**	**268**	*e*P	**P**	**14 52 33.2**	**-0.5**
WRA	**Warramunga Arr**	**33.63**	**268**	P	**P**	**14 52 32.7**	**-1.1**
	comp=Z,1.3nm,0.8s,mb3.9,baz=99,slow=8.4,SNR=12						
WRA	**Warramunga Arr**	**33.63**	**268**	P	**P**	**14 52 32.7**	**-1.1**
KAKA	**Kakadu**	**37.41**	**279**	*e*P	**P**	**14 53 09.4**	**+3.0**
	comp=Z,15nm,0.8s,mb4.9						
KAKA	**Kakadu**	**37.41**	**279**	*e*P	**P**	**14 53 05.5**	**-0.9**
	comp=Z,73nm,1.0s,mb5.5						
PPT	**Papeete**	**37.87**	**89**	*e*LR	LR	15 03 29.8	
	comp=Z,107nm,24.0s						
FORT	**Forrest**	**38.39**	**249**	*e*P	**P**	**14 53 11.9**	**-2.6**
	comp=Z,18nm,0.7s,mb4.9						
KNA	**Kunnurra**	**39.80**	**273**	*e*P	**P**	**14 53 30.4**	**+3.9**
	comp=Z,14nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**42.06**	**268**	P	**P**	**14 53 44.0**	**-1.0**
	comp=Z,6.2nm,0.8s,mb4.3,baz=126,slow=7.8,SNR=10						
FITZ				LR	LR	15 11 53.5	
	comp=Z,184nm,18.9s,MS4.0,baz=110,slow=37						
FITZ	**Fitzroy Crossi**	**42.06**	**268**	*e*P	**P**	**14 53 45.3**	**+0.3**
	comp=Z,9.7nm,0.8s,mb4.5						
FITZ				*e*pP	pP	14 53 55.2	+0.9
MBWA	**Marble Bar**	**46.80**	**262**	*e*P	**P**	**14 54 22.7**	**-0.2**
MBWA	**Marble Bar**	**46.80**	**262**	*e*P	**P**	**14 54 22.6**	**-0.3**
	comp=Z,17nm,1.0s,mb4.9						
SBA	**Scott Base**	**55.05**	**181**	*e*P	**P**	**14 55 23.8**	**-0.3**
	comp=Z,18nm,1.0s,mb5.0						
CASY	**Casey**	**57.24**	**205**	*e*P	**P**	**14 55 35.1**	**-4.9**
KSRS	**Korea Array**	**72.10**	**326**	P	**P**	**14 57 18.5**	**+1.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=152,slow=5.5,SNR=3.8						
MAW	**Mawson**	**75.47**	**202**	P	**P**	**14 57 35.0**	**-1.6**
	comp=Z,2.3nm,0.8s,mb4.2,baz=131,slow=11,SNR=3.1						
MAW				LR	LR	15 23 05.4	
	comp=Z,98nm,21.9s,MS4.1,baz=113,slow=30						
MAW	**Mawson**	**75.47**	**202**	*e*P	**P**	**14 57 35.0**	**-1.6**
	comp=Z,5.4nm,0.8s,mb4.5						
CMAR	**Chiang Mai Arr**	**80.97**	**294**	P	**P**	**14 58 07.4**	**-0.4**
	comp=Z,2.0nm,0.9s,mb4.0,baz=134,slow=4.3,SNR=9.9						
CMAR				LR	LR	15 35 26.4	
	comp=Z,53nm,20.4s,MS3.9,baz=235,slow=37						
CHTO	**Chiang Mai**	**81.13**	**295**	*e*P	**P**	**14 58 10.5**	**+1.8**
	comp=Z,5.4nm,1.0s,mb4.4						
NVAR	**Mina Array Bea**	**90.42**	**48**	P	**P**	**14 58 55.1**	**+0.7**
	comp=Z,0.7nm,0.8s,mb4.0,baz=240,slow=6.0,SNR=4.2						
SONM	**Songino Array**	**90.76**	**323**	P	**P**	**14 58 56.8**	**+1.1**
	comp=Z,1.4nm,0.9s,mb4.3,baz=141,slow=5.2,SNR=5.2						
ILAR	**Eielson Array**	**93.39**	**17**	P	**P**	**14 59 06.7**	**-0.8**
	comp=Z,1.4nm,0.9s,mb4.4,baz=233,slow=6.9,SNR=11						
TXAR	**Lajitas Array**	**97.57**	**61**	LR	LR	15 40 25.3	
	comp=Z,66nm,18.1s,MS4.2,baz=40,slow=34						
PDAR	**Pinedale Array**	**98.31**	**47**	LR	LR	15 36 31.3	
	comp=Z,138nm,18.2s,MS4.5,baz=5.1,slow=31						
MALT	**Malatya**	**136.36**	**302**	⇓*i*P	PKiKP	15 05 22.3	+6.0
TIRR	**Tirgusor**	**142.19**	**314**	⇑*i*P	PKiKP	15 05 27.8	-0.3
MLR	**Muntele Rosu**	**143.37**	**317**	⇓*i*P	PKPdf	15 05 26.0	-1.1
VOIR		**143.96**	**317**	⇑*i*P	PKPdf	15 05 19.1	-9.1
CRVS	**Cervenica-Dubn**	**144.26**	**324**	*e*P	PKPdf	15 05 29.1	+0.5
CRVS	**Cervenica-Dubn**	**144.26**	**324**	*e*PKP	PKPdf	15 05 29.1	+0.5
DRGR		**144.72**	**320**	⇑*i*P	PKPdf	15 05 29.9	+0.5
KECS	**Kecovo**	**145.03**	**324**	*e*P	PKPbc	15 05 30.8	+1.5
KECS				*e*		15 05 42.7	
KECS	**Kecovo**	**145.03**	**324**	*e*PKP	PKPdf	15 05 30.8	+0.9
KECS				*e*		15 05 42.7	
GZR	**Gura Zlata**	**145.39**	**318**	⇑*i*P	PKPbc	15 05 31.8	+1.2
PSZ	**Piszkesteto**	**145.69**	**324**	*e*PKP	PKPbc	15 05 32.5	+1.1
VYHS	**Vyhne**	**145.90**	**326**	*e*P	PKPbc	15 05 33.4	+1.3
VYHS				*e*		15 05 42.7	
VYHS	**Vyhne**	**145.90**	**326**	*e*PKP	PKPbc	15 05 33.4	+1.3
VYHS				*e*		15 05 42.7	
DPC	**Dobruska-Polom**	**145.91**	**330**	*e*PKP	PKPbc	15 05 33.5	+1.4
UPC	**Upice**	**145.94**	**330**	*e*PKP	PKiKP	15 05 35.7	+0.1
BZS	**Buzias**	**145.98**	**319**	⇓*i*P	PKPdf	15 05 25.4	-6.2
BUD	**Budapest**	**146.42**	**324**	⇑*e*PKP	PKPdf	15 05 33.0	+0.7
PVCC	**Panska Ves**	**146.57**	**332**	*e*PKP	PKiKP	15 05 36.4	-0.5
BRG	**Berggiesshubel**	**146.59**	**333**	*e*P	PKiKP	15 05 37.0	+0.1
	comp=Z,7.2nm,1.3s						
BRG				*e*		15 05 48.8	
	comp=Z,5.2nm,0.8s						
PRU	**Pruhonice**	**146.98**	**331**	*e*PKP	PKiKP	15 05 37.4	-0.3
PKSM	**Moragy**	**147.38**	**322**	⇓*i*P	PKiKP	15 05 37.8	-0.9
NKC	**Novy Kostel**	**147.70**	**333**	*e*PKP	PKiKP	15 05 38.4	-0.8
KHC	**Kasperske Hory**	**148.03**	**331**	*e*PKPbc	PKPbc	15 05 38.3	+0.2
KHC	**Kasperske Hory**	**148.03**	**331**	*e*PKP	PKiKP	15 05 39.1	-0.8
SOKA	**Soboth**	**149.04**	**326**	⇑*i*PKiKP	PKiKP	15 05 41.3	-0.8
	comp=Z,8.8nm,1.0s						
ABTA	**Abfaltersbach**	**150.25**	**329**	⇓*i*PKPbc	PKPbc	15 05 43.0	-0.7
	comp=Z,11nm,1.2s						
WTTA	**Wattenberg**	**150.29**	**330**	⇓*i*PKiKP	PKiKP	15 05 44.6	-0.1
	comp=Z,22nm,1.1s						
MOTA	**Moosalm**	**150.47**	**331**	⇑*i*PKPbc	PKPbc	15 05 43.6	-0.7
	comp=Z,11nm,0.8s						
FETA	**Feichten**	**150.88**	**331**	⇑*i*PKiKP	PKiKP	15 05 46.2	+0.4
	comp=Z,15nm,1.0s						

ISCJB ***11*** *14:52:25.7±0.3, 32°.72N±0°.02×116°.03W±0°.02, h12km±2km, Error ellipse: s-maj=3.3km s-min=3.1km az=11.1*
NEIC ***11*** *14:52:26.6, 32°.70N×116°.07W, h10km, ML3.5(ECX), ML3.4(PAS), After PAS.*
NEIC Felt at Ocotillo.
ECX ***11*** *14:52:27.0±0.7, 32°.70N×116°.05W, h3km±1km, MD3.4, ML3.5, Fault plane solution: NP1:φ=245.00000°, δ=65.00000°, λ=-90.00000°.*

ISC 11 14:52:25.8±0.3, 32°.72N±0°.02×116°.03W±0°.02, h12km±2km, n46, σ0§77/64, 19C-28D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVTC	**Desert V Tower**	**0.08**	**223**	⇓P	**Pg**	**14 52 28.7**	**+0.2**
	baz=0.0						
DVTC				⇑S	**Sg**	**14 52 30.2**	**-0.2**
	baz=0.0						
DVTC	**Desert V Tower**	**0.08**	**223**	⇓*e*P	**Pg**	**14 52 28.8**	**+0.3**
YUH	**Yuha Desert**	**0.12**	**128**	⇓*e*P	**Pg**	**14 52 29.2**	**+0.4**
YUH	**Yuha Desert**	**0.12**	**128**	⇓*e*P	**Pg**	**14 52 29.2**	**+0.4**
RMX	**La Rumorosa**	**0.12**	**198**	⇓*i*P	**Pg**	**14 52 29.1**	**+0.1**
RMX				*e*S	**Sg**	**14 52 31.0**	**-0.2**
RMX	**La Rumorosa**	**0.12**	**198**	⇓*i*P	**Pg**	**14 52 29.1**	**+0.1**
RMX				*e*S	**Sg**	**14 52 31.0**	**-0.2**
CRR	**Carrizo Plain**	**0.17**	**18**	⇓*e*P	**Pg**	**14 52 30.5**	**+0.7**
CRR	**Carrizo Plain**	**0.17**	**18**	⇓*e*P	**Pg**	**14 52 30.5**	**+0.7**
SGL	**Mount Signal**	**0.27**	**105**	⇑*e*P	**Pg**	**14 52 32.2**	**+0.9**
COK	**Cook Ranch**	**0.29**	**63**	⇑*e*P	**Pg**	**14 52 33.0**	**+1.3**
SWSC	**Sam W. Stewart**	**0.30**	**42**	⇑P	**Pg**	**14 52 32.6**	**+0.8**
	baz=0.3,SNR=1000						
MONP	**Monument Peak**	**0.37**	**297**	⇓P	**Pg**	**14 52 33.5**	**+0.3**
	baz=0.4						
MONP				⇓S	**Sg**	**14 52 38.4**	**+0.3**
	baz=0.4						
BAR	**Barrett**	**0.54**	**266**	*e*Pg	**Pg**	**14 52 36.3**	**0.0**
BAR	**Barrett**	**0.54**	**266**	⇓*e*P	**Pg**	**14 52 36.5**	**+0.1**
CBX	**Cerro Bola**	**0.67**	**233**	⇑*e*P	**Pg**	**14 52 38.9**	**+0.1**
CBX				*e*S	**Sg**	**14 52 47.7**	**0.0**
CBX				⇓*e*		14 52 52.0	
	comp=N,4μm,0.5s						
CPBX	**Cerro Prieto**	**0.69**	**116**	⇓*e*P	**Pg**	**14 52 39.9**	**+0.8**
COA	**Coachella**	**0.78**	**79**	⇑*e*P	**Pg**	**14 52 41.3**	**+0.4**
RDX	**Rancho Dawling**	**0.79**	**174**	⇓*i*P	**Pg**	**14 52 40.6**	**-0.5**
RDX				*e*S	**Sg**	**14 52 50.9**	**-0.7**
RDX				⇑*e*		14 52 52.4	
	comp=E,1μm,0.4s						
109C	**Camp Elliot, M**	**0.92**	**281**	⇑P	**Pg**	**14 52 42.9**	**-0.7**
	baz=0.9						
109C				⇓S	**Sg**	**14 52 54.7**	**-0.8**
	baz=0.9						
PFO	**Pinyon Flat Ob**	**0.95**	**338**	P	**Pg**	**14 52 43.9**	**-0.3**
	baz=1.0,SNR=733						
PFO				⇑S	**Sg**	**14 52 56.7**	**0.0**
	baz=1.0						
PFO	**Pinyon Flat Ob**	**0.95**	**338**	*e*Pg	**Pg**	**14 52 43.6**	**-0.6**
BC3	**Big Chuckawall**	**1.05**	**27**	P	**Pb**	**14 52 45.3**	**-0.6**
	baz=1.1,SNR=239						
BC3				⇑S	**Sb**	**14 53 00.4**	**+0.8**
	baz=1.1						
GLA	**Glamis**	**1.07**	**72**	P	**Pb**	**14 52 45.5**	**-0.7**
	baz=1.1,SNR=135						
GLA				⇓S	**Sb**	**14 52 58.7**	**-1.4**
	baz=1.1						
GLA	**Glamis**	**1.07**	**72**	*e*Pg	**Pg**	**14 52 45.2**	**-1.1**
PBX	**Punta Banda**	**1.14**	**211**	⇓*e*P	**Pb**	**14 52 47.0**	**-0.5**
PBX				*e*S	**Sb**	**14 53 01.8**	**-0.3**
PBX				⇓*e*		14 53 02.9	
	comp=N,971nm,0.6s						
ECNX	**Esteban Cantu**	**1.16**	**204**	⇑*e*P	**Pb**	**14 52 47.4**	**-0.4**
ECNX				⇑*e*P		14 52 44.7	
ECNX				*e*S	**Sb**	**14 52 57.3**	**-5.6**
ECNX				*e*S	**Sb**	**14 53 02.4**	**-0.5**
BELC	**Belle Mtn. Jos**	**1.28**	**1**	P	**Pn**	**14 52 48.7**	**-0.7**
	baz=1.3,SNR=62						
BELC				⇓S	**Sb**	**14 53 04.5**	**-1.6**
	baz=1.3						
MURC	**Murrieta**	**1.31**	**312**	⇑Pb	**Pb**	**14 52 49.9**	**-0.5**
	baz=1.3,SNR=69						
MURC				⇓Sn	**Sn**	**14 53 07.3**	**-0.1**
	baz=1.3						
IRM	**Iron Mountain**	**1.61**	**27**	⇑Pn	**Pn**	**14 52 53.6**	**-0.5**
	baz=1.7,SNR=11						
BBRC	**Big Bear Solar**	**1.71**	**334**	⇓Pn	**Pn**	**14 52

PLG				S	Sg	15 14 20.6	+0.3
PLG	**Polygyros**	**0.42**	**212**	P	Pg	15 14 15.1	+0.2
PLG				S	Sg	15 14 20.6	+0.3
OUR	**Ouranopolis**	**0.44**	**155**	P	Pg	15 14 15.2	+0.1
OUR				S	Sg	15 14 21.6	+0.8
OUR	**Ouranopolis**	**0.44**	**155**	P	Pg	15 14 15.2	+0.1
OUR				S	Sg	15 14 21.6	+0.8
HORT	**Hortiatis**	**0.51**	**255**	P	Pg	15 14 16.3	-0.2
HORT				S	Sg	15 14 23.0	0.0
HORT	**Hortiatis**	**0.51**	**255**	P	Pg	15 14 16.3	-0.2
HORT				S	Sg	15 14 23.0	0.0
THE	**Thessaloniki**	**0.60**	**261**	P	Pg	15 14 17.9	-0.3
THE				S	Sg	15 14 26.3	+0.3
THE	**Thessaloniki**	**0.60**	**261**	P	Pg	15 14 17.9	-0.3
THE				S	Sg	15 14 26.3	+0.3
NVR	**Nevrokopi**	**0.62**	**8**	*e*PN	Pg	15 14 18.4	-0.3
NVR				*e*SN	Sg	15 14 27.1	+0.3
NVR	**Nevrokopi**	**0.62**	**8**	*e*Pn	Pg	15 14 18.4	-0.3
KAVA	**Kavala**	**0.64**	**65**	P	Pg	15 14 19.1	0.0
KAVA				S	Sg	15 14 27.9	+0.5
KAVA	**Kavala**	**0.64**	**65**	P	Pg	15 14 19.1	0.0
KAVA				S	Sg	15 14 27.9	+0.5
KNT	**Kendrikon**	**0.77**	**304**	P	Pg	15 14 20.9	-0.6
KNT				S	Sg	15 14 31.9	+0.4
KNT	**Kendrikon**	**0.77**	**304**	P	Pg	15 14 20.9	-0.6
KNT				S	Sg	15 14 31.9	+0.4
PAIG	**Paliouri**	**0.81**	**183**	P	Pg	15 14 21.8	-0.4
PAIG				S	Sg	15 14 32.8	+0.2
PAIG	**Paliouri**	**0.81**	**183**	P	Pg	15 14 21.8	-0.4
PAIG				S	Sg	15 14 32.8	+0.2
VAY	**Valandovo**	**1.06**	**304**	*e*Pg	Pg	15 14 27.0	-0.2
VAY				*e*Sg	Sg	15 14 39.8	-1.1
VAY	**Valandovo**	**1.06**	**304**	*e*Pg	Pg	15 14 27.0	-0.2
VAY				*e*Sg	Sg	15 14 40.9	0.0
VAY				*e*Lg		15 14 42.2	
	comp=N,52nm,0.4s						
VAY				*e*Lg		15 14 42.5	
	comp=E,113nm,0.8s						
VAY	**Valandovo**	**1.06**	**304**	*e*Pg	Pg	15 14 27.0	-0.2
VAY				*e*Sg	Sg	15 14 39.8	-1.1
LIT	**Litokhoron**	**1.15**	**237**	*e*PN	Pn	15 14 25.6	-4.3
LIA	**Limnos Island**	**1.38**	**127**	P	Pn	15 14 32.0	-1.2
LIA	**Limnos Island**	**1.38**	**127**	P	Pn	15 14 32.0	-1.2
PLD	**Plovdiv**	**1.55**	**27**	*e*Pg	Pg	15 14 36.8	+0.3
PLD				*e*Sg	Sg	15 14 56.7	+0.1
PLD	**Plovdiv**	**1.55**	**27**	*e*Pg	Pg	15 14 36.8	+0.3
PLD				*e*Sg	Sg	15 14 56.7	+0.1
ALN	**Alexandroupoli**	**1.76**	**84**	*e*PN	Pn	15 14 36.3	-2.0
ALN	**Alexandroupoli**	**1.76**	**84**	*e*Pn	Pn	15 14 36.3	-2.0
VTS	**Vitosha**	**1.90**	**348**	⇓*e*Pn	Pn	15 14 41.0	+0.7
VTS				*e*Sn	Sn	15 15 05.1	+0.2
VTS	**Vitosha**	**1.90**	**348**	⇓*e*Pn	Pn	15 14 41.0	+0.7
VTS				*e*Sn	Sn	15 15 05.1	+0.2
BARS	**Barje**	**2.53**	**326**	*e*Pn	Pn	15 14 49.5	+0.5
BARS				*e*Sg	Sg	15 15 27.1	-1.0
BARS	**Barje**	**2.53**	**326**	*e*Pn	Pn	15 14 49.5	+0.5
BARS				*e*Sg	Sg	15 15 27.1	-1.0
ZAPS	**Zavoj**	**2.67**	**342**	*e*Pn	Pn	15 14 51.6	+0.7
ZAPS				*e*Sn	Sn	15 15 24.6	+0.7

ISCJB ***11*** *15:38:19.0±1.0, 19°.8S±0°.1×177°.7W±0°.1, h538km±15km, mb3.8/14, Error ellipse: s-maj=24.2km s-min=11.5km az=145.4*
IDC ***11*** *15:38:20.3±1.6, 19°.74S×177°.73W, h537km±21km, mb3.3/7, mb1 3.7/9, mb1mx3.4/19, mbtmp3.4/9, Error ellipse: s-maj=35.2km s-min=11.7km az=148.0*
NEIC ***11*** *15:38:20.5±1.1, 19°.92S×177°.56W, h550km±13km, mb4.0/8, Error ellipse: s-maj=24.9km s-min=13.4km az=149.0*
ISC 11 15:38:19.6±1.0, 19°.8S±0°.1×177°.6W±0°.1, h534km±14km, n23, σ0§93/26, mb3.8/14, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.59**	**296**	*e*P	**P**	**15 39 49.9**	**+4.8**
AFI	**Afiamalu**	**8.14**	**44**	P	**P**	**15 40 18.7**	**+0.2**
	6.7nm,0.3s,baz=13,slow=16,SNR=11						
AFI				S	**S**	**15 41 54.9**	**-0.8**
	4.3nm,0.3s,baz=82,slow=22,SNR=4.5						
AFI	**Afiamalu**	**8.14**	**44**	*e*P	**P**	**15 40 17.6**	**-0.8**
	131nm,1.2s						
AFI				S	**S**	**15 41 54.9**	**-0.8**
URZ	**Urewera**	**18.91**	**193**	P	**P**	**15 42 05.8**	**-0.6**
	1.4nm,0.3s,baz=9.1,slow=19,SNR=6.9						
EIDS	**Eidsvold**	**29.35**	**253**	P	**P**	**15 43 39.6**	**+0.2**
	7.8nm,1.0s,mb4.3						
ARMA	**Armidale**	**29.66**	**243**	*e*P	**P**	**15 43 42.4**	**+0.3**
CTA	**Charters Tower**	**33.90**	**263**	⇓*i*P	**P**	**15 44 19.2**	**+0.9**
	3.5nm,1.1s,mb3.8						
CTAO	**Charters Tower**	**33.90**	**263**	*e*P	**P**	**15 44 19.1**	**+0.8**
	13nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**38.38**	**243**	P	**P**	**15 44 56.3**	**+1.1**
	4.3nm,0.5s,mb4.2,baz=93,slow=9.1,SNR=18						
STKA	**Stephens Creek**	**38.38**	**243**	⇓*i*P	**P**	**15 44 56.2**	**+1.0**
	3.3nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**38.38**	**243**	*e*P	**P**	**15 44 56.0**	**+0.8**
	1.2nm,0.6s,mb3.6						
ASAR	**Alice Springs**	**45.00**	**256**	P	**P**	**15 45 48.0**	**+0.3**
	7.7nm,0.5s,mb4.5,baz=88,slow=8.3,SNR=346						
ASAR				S	**S**	**15 51 45.4**	**-2.0**
	0.7nm,0.9s,baz=89,slow=15,SNR=5.9						
WB2	**Warramunga Arr**	**45.02**	**261**	*e*P	**P**	**15 45 47.2**	**-0.6**
WRA	**Warramunga Arr**	**45.03**	**261**	P	**P**	**15 45 47.8**	**-0.1**
	2.8nm,0.3s,mb4.3,baz=98,slow=7.7,SNR=135						
FITZ	**Fitzroy Crossi**	**53.45**	**262**	*e*P	**P**	**15 46 50.1**	**0.0**
	6.6nm,0.4s,mb4.3						
MBWA	**Marble Bar**	**58.33**	**257**	*e*P	**P**	**15 47 23.1**	**-0.7**
	6.1nm,0.7s,mb3.9						
QSPA	**South Pole Qui**	**70.23**	**180**	*e*P	**P**	**15 48 39.4**	**+1.1**
	1.3nm,0.7s,mb3.6						
KSM	**Kuching**	**73.66**	**278**	*e*P	**P**	**15 48 59.3**	**-0.1**
	3.8nm,0.7s,mb3.9						
NVAR	**Mina Array Bea**	**80.31**	**43**	P	**P**	**15 49 36.4**	**+1.2**
	0.8nm,0.7s,mb3.1,baz=229,slow=8.8,SNR=6.0						
MAW	**Mawson**	**82.30**	**200**	P	**P**	**15 49 42.4**	**-2.4**
	1.8nm,1.6s,mb3.2						
TXAR	**Lajitas Array**	**86.42**	**57**	P	**P**	**15 50 07.1**	**+1.4**
	0.8nm,0.6s,mb3.5,baz=215,slow=6.9,SNR=11						
ILAR	**Eielson Array**	**87.60**	**13**	P	**P**	**15 50 09.3**	**-1.1**
	0.3nm,0.9s,mb3.0,baz=232,slow=5.6,SNR=3.4						
PDAR	**Pinedale Array**	**88.25**	**43**	P	**P**	**15 50 14.4**	**+0.5**
	0.7nm,0.6s,mb3.6,baz=222,slow=4.0,SNR=5.7						

IDC ***11*** *15:45:08.6±0.9, 31°.57N×103°.97E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.8/24, mbtmp3.8/10, ML3.4/2, Error ellipse: s-maj=36.8km s-min=16.6km az=59.0*
BJI ***11*** *15:45:09.0, 31°.66N×104°.17E, h12km, ML3.6/16*
NEIC ***11*** *15:45:11.3±0.5, 31°.51N×103°.97E, h20km, mb4.0/7, Error ellipse: s-maj=10.2km s-min=7.8km az=71.0*
ISC 11 15:45:09.0±0.7, 31°.63N±0°.03×104°.14E±0°.04, h2km±5km, n29, σ1§12/40, mb4.0/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.79**	**205**	Pg	**Pg**	**15 45 24.4**	**+0.2**
CD2				Sg	**Sg**	**15 45 34.9**	**+0.5**
CD2				smax			
	comp=N,2μm,0.6s						
CD2				smax			
	comp=E,2μm,0.6s						
LZH	**Lanzhou**	**4.45**	**357**	Pg	**Pg**	**15 46 39.0**	**+4.7**
LZH				Sn	**Sn**	**15 47 15.4**	**+5.5**
LZH				Sg	**Sg**	**15 47 32.6**	**+0.6**
LZH				smax			
	comp=N,76nm,1.0s						
LZH				smax			
	comp=E,73nm,0.7s						
LZH				LR	LR		
	comp=N,480nm,6.9s						
LZH				LR	LR		
	comp=E,580nm,7.1s						
LZH				LR	LR		
	comp=Z,470nm,7.8s						
XAN	**Xi'an**	**4.68**	**58**	Pn	**Pn**	**15 46 22.4**	**+1.7**
XAN				Pg	**Pg**	**15 46 36.6**	**-2.2**
XAN				Sn	**Sn**	**15 47 15.4**	**-0.2**
XAN				Sg	**Sg**	**15 47 38.8**	**-0.7**
XAN				smax			
	comp=N,95nm,0.6s						
XAN				smax			
	comp=E,58nm,0.9s						
ENH	**Enshi**	**4.79**	**105**	*e*Pn	**Pn**	**15 46 23.7**	**+1.6**
ENH				*e*Pg	**Pg**	**15 46 39.6**	**-1.1**
ENH				*e*Sn	**Sn**	**15 47 16.0**	**-2.1**
ENH				*e*Sg	**Sg**	**15 47 45.9**	**+3.1**
GYA	**Guiyang**	**5.61**	**156**	Pn	**Pn**	**15 46 34.4**	**+1.0**
GYA				Sn	**Sn**	**15 47 39.6**	**+1.2**
GYA				Sg	**Sg**	**15 48 08.3**	**-0.8**
GYA				smax			
	comp=N,80nm,0.9s						
GYA				smax			
	comp=E,80nm,0.9s						
GTA	**Gaotai**	**8.53**	**337**	*e*P	**Pg**	**15 47 52.9**	**+0.6**
GTA				pP		15 47 58.2	
GTA				sP		15 48 01.5	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.8s						
LSA	**Lhasa**	**11.35**	**264**	*e*Pn	**Pn**	**15 47 48.9**	**-3.4**
CM31	**Chiang Mai Arr**	**13.93**	**201**	P	**Pn**	**15 48 23.8**	**-3.8**
CMAR	**Chiang Mai Arr**	**13.93**	**201**	Pn	**Pn**	**15 48 26.4**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=231,slow=21,SNR=2.6						
SONM	**Songino Array**	**16.27**	**5**	Pn	**Pn**	**15 49 00.1**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=192,slow=11,SNR=5.7						
KSRS	**Korea Array**	**20.41**	**67**	P	**P**	**15 49 48.8**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=256,slow=9.7,SNR=4.8						
HIA	**Hailar**	**21.17**	**29**	P	**P**	**15 49 55.7**	**+0.3**
	comp=Z,3.3nm,0.7s,mb3.8						
MK31	**Makanchi Array**	**22.61**	**318**	*e*P	**P**	**15 50 11.1**	**+0.2**
MKAR	**Makanchi Array**	**22.61**	**318**	P	**P**	**15 50 11.5**	**+0.7**
	comp=Z,2.2nm,0.7s,mb3.7,baz=120,slow=12,SNR=27						
MKAR	**Makanchi Array**	**22.61**	**318**	P	**P**	**15 50 11.5**	**+0.7**
TKM2	**Tokmak 2**	**25.24**	**305**	*e*P	**P**	**15 50 37.6**	**+1.3**
	comp=Z,2.4nm,0.8s,mb3.8						
KZA	**Kyzart**	**25.25**	**303**	*e*P	**P**	**15 50 36.8**	**+0.4**
	comp=Z,7.1nm,0.9s,mb4.2						
AAK	**Ala-Archa**	**25.94**	**303**	P	**P**	**15 50 40.8**	**-1.8**
ZAA0	**Zalesovo Array**	**26.27**	**334**	*e*P	**P**	**15 50 45.2**	**-0.2**
ZALV	**Zalesovo Beam**	**26.27**	**334**	P	**P**	**15 50 45.8**	**+0.3**
	comp=Z,5.1nm,0.7s,mb4.2,baz=132,slow=9.2,SNR=21						
KURK	**Kurchatov**	**26.85**	**323**	*e*P	**P**	**15 50 51.0**	**+0.2**
	comp=Z,3.5nm,1.3s,mb3.7						
BRVK	**Borovoye**	**32.47**	**321**	*e*P	**P**	**15 51 39.4**	**-1.3**
	comp=Z,2.2nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**37.35**	**311**	*e*P	**P**	**15 52 22.4**	**-0.4**
	comp=Z,1.2nm,0.8s,mb3.8						
ARU	**Arti**	**40.04**	**322**	*e*P	**P**	**15 52 45.1**	**-0.2**
	comp=Z,6.4nm,0.8s,mb4.4						
ARCES	**ARCESS Array B**	**56.80**	**336**	P	**P**	**15 54 54.0**	**-0.3**
	comp=Z,1.1nm,0.6s,mb4.0,baz=72,slow=7.8,SNR=8.8						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**15 54 55.8**	**-1.0**
	comp=Z,1.0nm,0.4s,mb4.2,baz=103,slow=7.2,SNR=6.5						
WRA	**Warramunga Arr**	**58.89**	**146**	P	**P**	**15 55 09.7**	**+0.2**
	comp=Z,1.3nm,0.8s,mb4.0,baz=339,slow=7.8,SNR=15						
ASAR	**Alice Springs**	**61.92**	**149**	P	**P**	**15 55 30.5**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.7,baz=331,slow=6.7,SNR=6.9						
NOA	**NORSAR Array B**	**64.24**	**327**	P	**P**	**15 55 43.6**	**-1.6**
	comp=Z,1.1nm,0.8s,mb4.0,baz=86,slow=9.2,SNR=3.5						

NIED ***11*** *16:03:00, 40°.70N×142°.80E, h83km, Mw4.0 Best double couple: M0=1.26000×10^15 NP1:φs325.00000°, δ68.00000°, λ88.00000°. NP2:φs149.00000°, δ22.00000°, λ94.00000°.*
MOS ***11*** *16:03:45.4±1.6, 40°.60N×142°.94E, h33km, mb4.4/3, Error ellipse: s-maj=14.6km s-min=8.5km az=77.9*
ISCJB ***11*** *16:03:48.3±0.5, 40°.71N±0°.03×142°.82E±0°.07, h64km±5km, mb3.8/13, Error ellipse: s-maj=9.5km s-min=3.7km az=29.1*
JMA ***11*** *16:03:49.1±0.1, 40°.71N×142°.79E, h43km, M4.2 Broadband fault plane solution: P waves. NP1: φs176.00000°, δ19.00000°, λ64.00000°. NP2:φs23.00000°, δ73.00000°, λ98.00000°. Principal axes: T Plg61.0000°, Azm305.0000°; N Plg8.0000°, Azm200.0000°; P Plg28.0000°, Azm106.0000°;*
JMA Felt I J1.
IDC ***11*** *16:03:49.4±2.3, 40°.70N×142°.92E, h62km±21km, mb3.4/9, mb1 3.7/12, mb1mx3.5/24, mbtmp3.5/12, MS2.8/1, Ms1 2.8/1, ms1mx1.8/27 Error ellipse: s-maj=23.8km s-min=13.0km az=105.0*
NEIC ***11*** *16:03:49.6±0.8, 40°.69N×142°.93E, h64km±7km, mb4.2/3, Error ellipse: s-maj=14.4km s-min=7.1km az=112.0*
NEIC Recorded [1 JMA] in Aomori. Also recorded [1 JMA] in southwestern Hokkaido.
ISC 11 16:03:49.4±0.5, 40°.72N±0°.03×142°.83E±0°.06, h55km±5km, n55, σ0§95/69, mb3.8/13, 4C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**1.06**	**251**	⇓P	**Pn**	**16 04 07.5**	**-0.4**
JANG				S	**Sn**	**16 04 21.0**	**-0.7**
JTH	**Tanohata**	**1.07**	**224**	⇓P	**Pn**	**16 04 07.6**	**-0.5**
JTH				S	**Sn**	**16 04 21.5**	**-0.5**
ERM	**Erimo**	**1.32**	**11**	*e*Pn	**Pn**	**16 04 11.9**	**+0.4**
ERM				*e*Sn	**Sn**	**16 04 28.4**	**+0.3**
ERM	**Erimo**	**1.32**	**11**	*e*P	**Pn**	**16 04 11.9**	**+0.4**
ERM				*e*		16 04 28.4	
JEM	**Erimo**	**1.32**	**11**	⇑P	**Pn**	**16 04 12.1**	**+0.6**
JEM				*e*S	**Sn**	**16 04 28.7**	**+0.6**
JTM	**Tenmabayashi**	**1.34**	**274**	⇓P	**Pn**	**16 04 11.3**	**-0.4**
JTM				*e*S	**Sn**	**16 04 27.2**	**-1.2**
JOT	**Ohata**	**1.50**	**297**	⇓P	**Pn**	**16 04 13.3**	**-0.6**
JOT				*e*S	**Sn**	**16 04 30.8**	**-1.6**
JNBK	**Urakawa-nobuka**	**1.56**	**358**	⇑P	**Pn**	**16 04 15.4**	**+0.6**
JOM	**Ohasama**	**1.71**	**224**	⇓P	**Pn**	**16 04 17.0**	**+0.2**
JOM				S	**Sn**	**16 04 37.1**	**-0.4**
JKB	**Kayabe**	**1.79**	**311**	⇓P	**Pn**	**16 04 17.3**	**-0.5**
JCH	**Churui**	**1.94**	**12**	⇑P	**Pn**	**16 04 20.4**	**+0.5**
JCH				*e*S	**Sn**	**16 04 43.1**	**0.0**
JMK	**Ichinoseki**	**2.15**	**216**	P	**Pn**	**16 04 23.1**	**+0.3**
JMK				S	**Sn**	**16 04 47.8**	**-0.6**
JEW	**Eniwo**	**2.36**	**335**	P	**Pn**	**16 04 26.0**	**+0.4**
ASAJ	**Asahikawa**	**3.40**	**357**	P	**Pn**	**16 04 40.6**	**+0.7**
	12nm,0.3s,baz=217,slow=9.3,SNR=152						
ASAJ				S	**Sn**	**16 05 19.9**	**+0.9**
	6.6nm,0.3s,baz=270,slow=20,SNR=7.4						
ASAJ	**Asahikawa**	**3.40**	**357**	*e*Pn	**Pn**	**16 04 40.5**	**+0.6**
ASAJ	**Asahikawa**	**3.40**	**357**	P	**Pn**	**16 04 40.6**	**+0.7**
ASAJ				S	**Sn**	**16 05 19.9**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				smax			
	comp=N,7.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.00**	**33**	⇓*i*P	**Pn**	**16 04 48.0**	**-0.2**
YUK				*i* S	**Sn**	**16 05 31.0**	**-2.8**
YUK				pmax	pmax		
	comp=N,70nm,0.6s						
YUK				pmax	pmax		
	comp=Z,140nm,0.6s						
YUK				pmax	pmax		
	comp=E,60nm,0.3s						
YUK				smax			
	comp=N,710nm,0.6s						
YUK				smax			
	comp=E,1μm,0.6s						
YUK				smax			
	comp=N,640nm,0.6s						
YUK				smax			
	comp=E,1μm,0.6s						
MJAR	**Matsushiro Arr**	**5.52**	**222**	P	**Pn**	**16 05 09.9**	**+1.0**
	comp=E,1.2nm,0.3s,baz=34,slow=13,SNR=7.3						
MJAR	**Matsushiro Arr**	**5.52**	**222**	P	**Pn**	**16 05 09.9**	**+1.0**
MAJO	**Matsushiro**	**5.52**	**222**	*e*Pn	**Pn**	**16 05 09.6**	**+0.7**
	comp=E,10nm,0.6s						
MAJO	**Matsushiro**	**5.52**	**222**	*e*P	**Pn**	**16 05 09.6**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAT	**Matsushiro**	**5.52**	**222**	P	**Pn**	**16 05 10.2**	**+1.3**
MAT				S	**Sn**	**16 06 12.7**	**+1.7**
KUR	**Kuril'sk**	**5.83**	**38**	*e*P	**Pn**	**16 05 13.0**	**-0.2**
KUR				*e*S	**Sn**	**16 06 17.0**	**-1.7**
KUR				pmax	pmax		
	comp=Z,70nm,0.6s						
KUR				smax			
	comp=N,170nm,0.7s						
KUR				smax			
	comp=E,170nm,0.7s						
YSS	**Yuzh-Sakhalins**	**6.24**	**360**	*e*Pn	**Pn**	**16 05 19.9**	**+1.2**
	comp=E,16nm,0.9s						
YSS	**Yuzh-Sakhalins**	**6.24**	**360**	⇑*e*P	**Pn**	**16 05 20.0**	**+1.3**
YSS				pmax	pmax		
	comp=N,40nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
KSRS	**Korea Array**	**12.03**	**259**	P	**Pn**	**16 06 39.2**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=62,slow=13,SNR=6.5						
KSRS				LR	LR	16 10 46.0	
	comp=Z,39nm,18.6s,baz=115,slow=34						
KSRS	**Korea Array**	**12.03**	**259**	P	**Pn**	**16 06 39.2**	**+1.2**
KSRS				MLR	MLR		
	comp=Z,39nm,18.6s						
YAK	**Yakutsk**	**22.78**	**344**	P	**P**	**16 08 42.5**	**-4.4**
	comp=Z,6.5nm,0.6s,mb4.2						
YAK	**Yakutsk**	**22.78**	**344**	P	**P**	**16 08 42.5**	**-4.3**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
SONM	**Songino Array**	**26.85**	**298**	P	**P**	**16 09 25.1**	**+0.6**
	comp=Z,0.3nm,0.4s,mb3.1,baz=102,slow=9.2,SNR=5.2						
SONM	**Songino Array**	**26.85**	**298**	P	**P**	**16 09 25.1**	**+0.5**
ZALV	**Zalesovo Beam**	**40.34**	**309**	P	**P**	**16 11 24.0**	**+2.7**
	comp=Z,1.3nm,0.6s,mb3.8,baz=92,slow=8.0,SNR=7.8						
ZALV	**Zalesovo Beam**	**40.34**	**309**	P	**P**	**16 11 24.0**	**+2.7**
ZALV	**Zalesovo Beam**	**40.34**	**309**	P	**P**	**16 11 24.0**	**+2.7**
MK31	**Makanchi Array**	**43.20**	**299**	*e*P	**P**	**16 11 43.1**	**-1.6**
MK31	**Makanchi Array**	**43.20**	**299**	*e*P	**P**	**16 11 43.2**	**-1.5**
MKAR	**Makanchi Array**	**43.20**	**299**	P	**P**	**16 11 44.2**	**-0.5**
	comp=Z,0.4nm,0.3s,mb3.7,baz=84,slow=8.9,SNR=8.9						
MKAR	**Makanchi Array**	**43.20**	**299**	P	**P**	**16 11 44.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**43.57**	**253**	P	**P**	**16 11 47.5**	**-0.6**
	comp=Z,0.5nm,0.8s,mb3.3,baz=39,slow=7.1,SNR=4.1						
CMAR	**Chiang Mai Arr**	**43.57**	**253**	P	**P**	**16 11 47.5**	**-0.6**
KURK	**Kurchatov**	**44.61**	**305**	*e*P	**P**	**16 11 57.1**	**+1.1**
	comp=Z,2.1nm,0.7s,mb4.1						
KURK	**Kurchatov**	**44.61**	**305**	*e*P	**P**	**16 11 57.1**	**+1.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
ILAR	**Eielson Array**	**45.81**	**34**	P	**P**	**16 12 03.7**	**-1.6**
	comp=Z,0.6nm,1.0s,mb3.5,baz=262,slow=5.7,SNR=5.4						
ILAR	**Eielson Array**	**45.81**	**34**	P	**P**	**16 12 03.7**	**-1.6**
TKM2	**Tokmak 2**	**48.93**	**296**	P	**P**	**16 12 30.9**	**+1.0**
	comp=Z,2.2nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**48.93**	**296**	P	**P**	**16 12 30.9**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	**48.98**	**310**	P	**P**	**16 12 30.7**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.8,baz=88,slow=7.5,SNR=2.6						
BVAR	**Borovoye Array**	**48.98**	**310**	P	**P**	**16 12 30.7**	**+0.7**
WRA	**Warramunga Arr**	**60.86**	**189**	P	**P**	**16 13 55.0**	**-1.2**
	comp=Z,1.2nm,0.6s,mb4.2,baz=6.7,slow=7.0,SNR=25						
WRA	**Warramunga Arr**	**60.86**	**189**	P	**P**	**16 13 55.0**	**-1.1**
ASAR	**Alice Springs**	**64.59**	**189**	P	**P**	**16 14 20.3**	**-0.6**
	comp=Z,1.0nm,0.7s,mb3.9,baz=7.8,slow=5.3,SNR=19						
ASAR	**Alice Springs**	**64.59**	**189**	P	**P**	**16 14 20.3**	**-0.6**
FINES	**FINESS Array B**	**66.08**	**332**	P	**P**	**16 14 29.3**	**-0.8**
	comp=Z,1.1nm,0.8s,mb4.0,baz=38,slow=7.0,SNR=3.8						
FINES	**FINESS Array B**	**66.08**	**332**	P	**P**	**16 14 29.3**	**-0.9**
PDAR	**Pinedale Array**	**74.32**	**47**	P	**P**	**16 15 21.1**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.3,baz=236,slow=0.5,SNR=3.6						

IDC ***11*** *16:18:56.9±1.3, 1°.81N×127°.09E, h0km, mb4.2/4, mb1 4.3/5, mb1mx3.8/18, mbtmp4.1/5, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.1/29, Error ellipse: s-maj=52.7km s-min=15.5km az=82.0*
ISCJB ***11*** *16:19:08.8±1.5, 1°.9N±0°.1×127°.41E±0°.08, h130km±9km, mb4.0/4, Error ellipse: s-maj=22.3km s-min=11.4km az=24.3*
DJA ***11*** *16:19:09, 1°.99N×127°.40E, h107km, MLv4.0/4*
ISC 11 16:19:09.7±1.5, 1°.9N±0°.1×127°.43E±0°.09, h122km±10km, n11, σ0§69/13, mb4.1/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.12**	**183**	P	**Pn**	**16 19 32.6**	**-0.6**
TNTI				S	**Sn**	**16 19 51.9**	**+1.0**
MNI	**Manado**	**2.63**	**260**	P	**Pn**	**16 19 50.8**	**-0.5**
MNI				S	**Sn**	**16 20 22.4**	**-0.8**
KMSI	**Cibinong**	**3.69**	**249**	P	**Pn**	**16 20 05.5**	**+0.3**
NLAI	**Namlea**	**5.11**	**184**	P	**Pn**	**16 20 24.2**	**-0.1**
LUWI	**Luwuk**	**5.50**	**238**	S	**Sn**	**16 21 32.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**19.95**	**185**	P	**P**	**16 23 31.4**	**-0.9**
	0.3nm,0.3s,baz=13,slow=12,SNR=11						
FITZ				S	**S**	**16 27 14.6**	**+4.4**
	0.1nm,0.3s,baz=311,slow=20,SNR=3.3						
WRA	**Warramunga Arr**	**22.74**	**163**	P	**P**	**16 24 01.1**	**-0.5**
	4.2nm,0.4s,mb4.1,baz=337,slow=11,SNR=68						
ASAR	**Alice Springs**	**26.18**	**166**	P	**P**	**16 24 32.6**	**-0.2**
	1.9nm,0.4s,mb3.9,baz=345,slow=7.5,SNR=98						
KSRS	**Korea Array**	**35.39**	**1**	LR	LR	16 41 07.2	
	comp=Z,18nm,18.9s,baz=165,slow=38						
STKA	**Stephens Creek**	**36.

8.0nm,0.9s,baz=102,slow=4.1,SNR=24
WRA S S 16 50 58.3 -3.1
1.2nm,0.9s,baz=106,slow=14,SNR=5.5
WRA Warramunga Arr 42.23 267 P P 16 45 18.2 -0.2
WRA ScP ScP 16 50 03.5 +1.4
WRA S S 16 50 58.3 -3.1
FORT Forrest 46.01 250 *eP* P 16 45 46.8 -0.8
19nm,0.5s,mb4.9
KAKA Kakadu 46.21 276 ⇓*iP* P 16 45 48.7 -0.6
14nm,0.3s,mb5.0
KAKA Kakadu 46.21 276 *eP* P 16 45 48.4 -0.9
52nm,0.6s,mb5.2
FITZ Fitzroy Crossi 50.65 266 P P 16 46 22.5 +0.2
14nm,0.6s,mb4.5,baz=129,slow=7.1,SNR=57
FITZ S S 16 53 00.5 +1.7
1.4nm,0.8s,baz=73,slow=19,SNR=3.6
FITZ Fitzroy Crossi 50.65 266 ⇓*iP* P 16 46 22.4 +0.1
21nm,0.6s,mb4.7
SBA Scott Base 53.90 183 *eP* P 16 46 46.9 +2.1
9.8nm,0.9s,mb4.1
MBWA Marble Bar 55.15 260 *eP* P 16 46 53.6 -0.9
11nm,0.8s,mb4.1
CASY Casey 59.62 206 *eP* P 16 47 23.5 -0.7
4.8nm,0.7s,mb3.9
QSPA South Pole Qui 65.71 180 P P 16 48 04.4 +1.1
14nm,0.6s,mb4.7,baz=20,slow=1.3,SNR=179
QSPA South Pole Qui 65.71 180 P P 16 48 04.0 +0.6
41nm,1.1s,mb4.9
KKM Kota Kinabalu 68.90 287 *eP* P 16 48 23.6 -0.5
6.7nm,0.5s,mb4.4
KSM Kuching 72.04 280 *eP* P 16 48 42.0 -0.7
7.2nm,0.6s,mb4.3
MAW Mawson 77.26 200 P P 16 49 11.6 +0.5
5.2nm,0.6s,mb4.2,baz=120,slow=6.0,SNR=14
KSRS Korea Array 78.51 320 P P 16 49 18.4 +0.1
1.3nm,0.7s,mb3.4,baz=148,slow=8.5,SNR=8.8
PMSA Palmer Station 78.53 157 *eP* P 16 49 17.8 -0.2
11nm,0.6s,mb4.4
KULM Kulim 82.37 279 *eP* P 16 49 39.1 +0.2
6.4nm,0.8s,mb4.1
SYO Syowa Base 82.52 193⇓*eP* P 16 49 36.4 -2.2
MONP Monument Peak 83.24 49 ⇓P P 16 49 43.4 +0.6
baz=83
ISA Isabella 83.45 46 ⇓P P 16 49 44.1 +0.3
baz=84
ISA Isabella 83.45 46 *eP* P 16 49 43.0 -0.8
15nm,1.3s,mb4.4
CMB Columbia Colle 83.64 43 *eP* P 16 49 44.1 -0.6
1.4nm,0.5s,mb3.8
BELC Belle Mtn. Jos 84.16 49 ⇑P P 16 49 47.1 -0.3
baz=84
GSC Goldstone 84.35 47 ⇑P P 16 49 48.6 +0.4
baz=84
HEC Hector,Ludlow 84.40 48 ⇑P P 16 49 48.2 -0.3
baz=84
YBH Yreka Blue Hor 84.54 39 P P 16 49 49.3 +0.2
1.9nm,0.7s,mb3.8,baz=142,slow=11,SNR=3.5
NVAR Mina Array Bea 85.19 44 P P 16 49 51.9 -0.4
2.5nm,0.9s,mb3.8,baz=225,slow=8.5,SNR=12
LDFC Landfair 85.37 48 *eP* P 16 49 53.3 +0.1
13nm,0.8s,mb4.5
S10A Tonopah Range, 85.99 45 P P 16 49 56.0 -0.1
baz=86,SNR=13
T11A Corn Creek, A 86.50 46 ⇑P P 16 49 58.6 0.0
baz=87,SNR=7.0
V13A Grand Canyon W 86.56 48 ⇑P P 16 49 58.6 -0.3
baz=87
217A Green Valley 86.62 53 ⇓P P 16 50 00.3 +1.0
baz=87
U13A Pakoon Wash 86.88 48 ⇓P P 16 50 00.3 -0.1
baz=87
TUC Tucson 86.92 53 *eP* P 16 50 00.5 -0.2
7.4nm,0.9s,mb4.3
V14A Boquillas Ranc 87.04 49 ⇑P P 16 50 01.6 +0.4
baz=87
318A Bisbee 87.05 54 ⇑P P 16 50 02.3 +1.0
baz=87
117A Oracle 87.09 52 ⇑P P 16 50 02.0 +0.5
baz=87
218A Dragoon 87.28 53 ⇑P P 16 50 03.5 +1.1
baz=87
X16A Lo Mia Camp, P 87.55 50 ⇑P P 16 50 04.3 +0.7
baz=88
V15A Kaibab Nationa 87.78 49 ⇑P P 16 50 05.6 +1.0
baz=88
I07A Izee 87.84 39 ⇓P P 16 50 05.1 +0.4
baz=88
G06A Carlson Farm, 87.91 38 ⇓P P 16 50 04.3 -0.7
baz=88
U15A North Rim 88.02 48 P P 16 50 06.5 +0.7
baz=88,SNR=8.3
PLCA Paso Flores 88.04 134 P P 16 50 06.2 +0.2
1.0nm,0.5s,mb3.8,baz=245,slow=4.5,SNR=5.1
PLCA Paso Flores 88.04 134 *eP* P 16 50 05.7 -0.2
1.6nm,0.7s,mb3.9
320A Kipp Ranch, An 88.08 54 ⇓P P 16 50 04.8 -1.3
baz=88
Y18A Canyon Day Jun 88.22 52 ⇓P P 16 50 07.5 +0.8
baz=88
V17A Tonalea, Kykot 88.63 50 ⇓P P 16 50 08.9 +0.3
baz=89
Q14A Sevier Lake (B 88.74 46 ⇑P P 16 50 09.1 0.0
baz=89
Y19A Nutrioso 88.86 52 P P 16 50 10.9 +1.2
baz=89,SNR=5.4
G08A Pilot Rock 88.88 38 ⇑P P 16 50 09.4 -0.2
baz=89
MSU Marysvale 89.21 47 *eP* P 16 50 11.4 +0.2
5.8nm,1.3s,mb4.2
Y20A Horse Springs, 89.47 52 ⇓P P 16 50 13.0 +0.5
baz=90
ETW Entiat 89.54 36 *eP* P 16 50 12.1 -0.4
2.7nm,0.7s,mb4.2
CMAR Chiang Mai Arr 89.55 290 P P 16 50 13.8 +0.6
0.6nm,0.8s,mb3.5,baz=137,slow=3.6,SNR=4.8
MFID Camas Ranch 89.61 41 ⇑P P 16 50 12.8 -0.2
baz=90
W20A Ramah 89.99 51 ⇑P P 16 50 16.1 +1.2
baz=90
Y21A Point of Rocks 90.03 52 ⇑P P 16 50 15.9 +0.8
baz=90,SNR=7.1
T18A Mexican Hat 90.05 49 P P 16 50 15.6 +0.4
baz=90,SNR=6.4
X21A Alamocita Cree 90.16 52 ⇑P P 16 50 16.6 +0.8
baz=90
Z22A Elephant Butte 90.17 53 ⇑P P 16 50 14.8 -1.1
baz=90,SNR=6.6
TMUT Trail Mountain 90.27 46 *eP* P 16 50 16.6 +0.5
8.1nm,0.9s,mb4.5
626A Big Bend Ranch 90.54 58 ⇑P P 16 50 17.5 -0.2
baz=91
MNTX Cornudas Mount 90.60 55 ⇑P P 16 50 16.9 -0.9
baz=91
SRU San Rafael 90.62 47 ⇑P P 16 50 17.2 -0.5
baz=91
SRU San Rafael 90.62 47 *eP* P 16 50 16.8 -1.0
8.3nm,1.0s,mb4.6
325A Bean Ranch, Si 90.75 56 ⇑P P 16 50 18.3 -0.2
baz=91
TXAR Lajitas Array 90.80 58 P P 16 50 19.2 +0.3
4.4nm,0.7s,mb4.5,baz=214,slow=6.6,SNR=43
TXAR Lajitas Array 90.80 58 P P 16 50 19.2 +0.3
526A Mary Lane Ranc 90.81 57 ⇓P P 16 50 19.0 +0.1
baz=91
H12A Diamond D Ranc 90.83 41 ⇑P P 16 50 17.8 -0.7
baz=91
O17A Robinson Place 91.05 46 ⇑P P 16 50 20.2 +0.5
baz=91
627A Terlingua Ranc 91.07 58 ⇓P P 16 50 20.1 0.0
baz=91,SNR=6.2
426A McDonald Obser 91.14 57 ⇑P P 16 50 20.0 -0.4
baz=91,SNR=5.1
527A Woodward Ranch 91.22 57 ⇓P P 16 50 20.3 -0.4
baz=91
F12A Elk City 91.27 39 ⇑P P 16 50 19.9 -0.7
baz=91
PV01 Paradox Valley 91.44 48 P P 16 50 20.8 -0.8
628A Black Gap, Mar 91.48 58 ⇓P P 16 50 21.7 -0.2
baz=92,SNR=6.8
Y24A Capitan 91.61 53 ⇑P P 16 50 22.5 0.0
baz=92
427A Hayter Ranch, 91.70 57 ⇓P P 16 50 23.1 +0.2
baz=92
S22A 4UR Ranch, Cre 92.45 49 ⇓P P 16 50 26.0 -0.2
baz=93
ILAR Eielson Array 92.52 14 P P 16 50 24.0 -1.9
0.5nm,0.8s,mb3.6,baz=218,slow=4.7,SNR=5.8
PDAR Pinedale Array 93.13 44 P P 16 50 28.3 -0.9

1.1nm,0.8s,mb4.0,baz=186,slow=2.8,SNR=5.3
SDCO Great Sand Dun 93.38 50 *eP* P 16 50 29.7 -0.7
1.5nm,0.8s,mb4.1
ZALV Zalesovo Beam 112.22 320 PKiKP PKiKP 16 55 45.8 -1.3
0.5nm,0.4s,baz=98,slow=2.0,SNR=2.8
MKAR Makanchi Array 112.36 313 PKiKP PKiKP 16 55 46.1 -1.4
0.3nm,0.4s,baz=105,slow=0.6,SNR=7.5
MKAR PKKPbc PKKPbc 17 06 38.7 -1.2
0.6nm,0.7s,baz=283,slow=3.6,SNR=7.5
MKAR PKKPab PKKPab 17 06 48.2 0.0
0.8nm,0.7s,baz=277,slow=4.0,SNR=7.8
MKAR Makanchi Array 112.36 313 PKPdf PKiKP 16 55 46.1 -1.4
MKAR PKKPbc PKKPbc 17 06 38.7 -1.2
MKAR PKKPab PKKPab 17 06 48.2 0.0
BVAR Borovoye Array 120.69 319 PKP PKPdf 16 56 02.4 -1.0
1.2nm,0.4s,baz=108,slow=3.3,SNR=7.1
AKTK Aktyubinsk 128.53 316 PKP PKPdf 16 56 17.9 -0.6
AKTO Aktyubinsk 128.53 316 PKP PKPdf 16 56 17.9 -0.6
1.0nm,0.5s,baz=130,slow=6.4,SNR=3.8
ARCES ARCESS Array B 132.32 348 PKP PKPdf 16 56 24.0 -1.1
2.5nm,0.7s,baz=79,slow=2.2,SNR=16
ARCES SKPbc SKPbc 16 59 03.6 +0.1
2.8nm,0.8s,baz=35,slow=4.4,SNR=6.0
FINES FINESS Array B 138.84 341 PKhKP PKPpre 16 56 28.9
3.6nm,1.0s,baz=36,slow=7.1,SNR=4.1
FINES PKP PKPdf 16 56 37.3 -0.1
0.9nm,0.4s,baz=42,slow=2.3,SNR=6.3
FINES SKPbc SKPbc 16 59 23.3 -0.3
4.3nm,0.6s,baz=35,slow=3.2,SNR=18
NOA NORSAR Array B 142.52 351 PKhKP PKPpre 16 56 40.0
0.6nm,0.5s,baz=32,slow=2.7,SNR=2.9
NOA SKPbc SKPbc 16 59 33.7 +0.6
1.1nm,0.7s,baz=4.2,slow=3.9,SNR=3.1
BRTR Keskin Array B 147.74 307 PKPbc PKPbc 16 56 56.8 -0.5
1.1nm,0.6s,baz=159,slow=4.3,SNR=6.8
BRTR pPKPbc pPKPbc 16 59 00.9 +3.4
1.4nm,0.8s,baz=93,slow=4.3,SNR=6.2
CLL Collm 151.26 343⇓*iP* PKPbc 16 57 04.8 -0.5
BRG Berggiesshubel 151.38 341 *iP* PKPbc 16 57 05.3 -0.3
7.2nm,0.6s

IDC 11 16:38:28.4±2.3, 1°.88N×127°.47E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/18, mbtmp3.2/3, Error ellipse: s-maj=164.5km s-min=27.9km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.71**	**163**	P	P	16 43 32.7	+0.8
	0.4nm,0.4s,baz=343,slow=11,SNR=15						
ASAR	**Alice Springs**	**26.16**	**167**	P	P	16 44 03.8	-0.8
	0.1nm,0.5s,baz=345,slow=8.2,SNR=7.0						
MKAR	**Makanchi Array**	**59.48**	**326**	P	P	16 48 33.6	+0.3
	0.2nm,0.7s,baz=137,slow=7.1,SNR=3.1						

*BEO **11** 16:39:02.7±0.9, 41°.15N×22°.33E, h2km±2km, ML2.6/6*
*ATH **11** 16:39:02.6, 41°.43N×22°.33E, h16km±6km, MD3.2/7*
*SKO **11** 16:39:03.2, 41°.32N×22°.36E, h15km, M2.4, ML2.8*
*ISCJB **11** 16:39:04.7±0.2, 41°.31N±0°.02×22°.37E±0°.02, h10km, Error ellipse: s-maj=2.2km s-min=2.1km az=161.9*
*CSEM **11** 16:39:04.2±0.1, 41°.30N×22°.37E, h2km, ML2.6/11, Error ellipse: s-maj=3.0km s-min=2.8km az=38.0*
*SOF **11** 16:39:04.3, 41°.37N×22°.40E, h2km, MD2.8*
*THE **11** 16:39:04.2, 41°.30N×22°.36E, h0km±1km, ML2.6/11, Error ellipse: s-maj=1.4km s-min=0.5km az=317.0*
*NEIC **11** 16:39:05.6, 41°.26N×22°.36E, h5km, ML2.8(ATH), After ATH.*
*TIR **11** 16:39:05.7, 41°.33N×22°.15E, h6km, ML3.4*
ISC 11 16:39:05.2±0.2, 41°.29N±0°.02×22°.37E±0°.02, h10km, n105, σ19°33/161, 3C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.15**	**77**	⇓*iPg*	**Pg**	**16 39 06.9**	**-1.7**
VAY				*eSg*	**Sg**	**16 39 09.3**	**-1.6**
VAY	**Valandovo**	**0.15**	**77**	P	**Pg**	**16 39 06.9**	**-1.7**
VAY				S	**Sg**	**16 39 09.6**	**-1.3**
VAY	**Valandovo**	**0.15**	**77**	⇓*iPg*	**Pg**	**16 39 06.9**	**-1.7**
VAY				*eLg*		16 39 09.4	
	comp=E,2μm,0.4s						
VAY				*i Sg*	**Sg**	**16 39 09.4**	**-1.5**
VAY				*eLg*		16 39 09.5	
	comp=N,5μm,0.5s						
VAY	**Valandovo**	**0.15**	**77**	P	**Pg**	**16 39 06.9**	**-1.7**
VAY				*eSg*	**Sg**	**16 39 09.3**	**-1.6**
VAY				S	**Sg**	**16 39 09.6**	**-1.3**
GRG	**Griva**	**0.33**	**176**	P	**Pg**	**16 39 10.8**	**-0.9**
GRG	**Griva**	**0.33**	**176**	P	**Pg**	**16 39 11.2**	**-0.5**
GRG				S	**Sg**	**16 39 16.6**	**+0.4**
GRG	**Griva**	**0.33**	**176**	P	**Pg**	**16 39 10.8**	**-0.9**
GRG				S	**Sg**	**16 39 16.6**	**+0.4**
KNT	**Kendrikon**	**0.41**	**107**	P	**Pg**	**16 39 12.4**	**-0.9**
KNT				S	**Sg**	**16 39 18.7**	**-0.1**
KNT	**Kendrikon**	**0.41**	**107**	P	**Pg**	**16 39 12.4**	**-0.9**
KNT				S	**Sg**	**16 39 18.7**	**-0.1**
KKB	**Krupnik**	**0.79**	**42**	Pg	**Pg**	**16 39 18.7**	**-1.7**
KKB	**Krupnik**	**0.79**	**42**	Pg	**Pg**	**16 39 18.7**	**-1.7**
THE	**Thessaloniki**	**0.79**	**145**	P	**Pg**	**16 39 19.4**	**-1.1**
THE	**Thessaloniki**	**0.79**	**145**	P	**Pg**	**16 39 19.4**	**-1.1**
BIA	**Bitola**	**0.84**	**252**	P	**Pg**	**16 39 19.3**	**-2.0**
BIA				S	**Sg**	**16 39 31.1**	**-1.1**
BIA	**Bitola**	**0.84**	**252**	*iPg*	**Pg**	**16 39 19.4**	**-1.9**
BIA				*i Sg*	**Sg**	**16 39 30.9**	**-1.2**
BIA				*eLg*		16 39 31.1	
	comp=N,100nm,0.2s						
BIA				*eLg*		16 39 31.2	
	comp=E,88nm,0.2s						
BIA	**Bitola**	**0.84**	**252**	P	**Pg**	**16 39 19.3**	**-2.0**
BIA				S	**Sg**	**16 39 31.1**	**-1.1**
KRUS	**Krusevo**	**0.85**	**276**	*iPg*	**Pg**	**16 39 19.1**	**-2.4**
SOH	**Sokhos**	**0.88**	**122**	P	**Pg**	**16 39 20.4**	**-1.6**
SOH	**Sokhos**	**0.88**	**122**	*ePB*	**Pg**	**16 39 20.7**	**-1.3**
SOH	**Sokhos**	**0.88**	**122**	P	**Pg**	**16 39 20.7**	**-1.3**
SOH				S	**Sg**	**16 39 33.6**	**+0.2**
SOH	**Sokhos**	**0.88**	**122**	P	**Pg**	**16 39 20.7**	**-1.3**
SOH				S	**Sg**	**16 39 33.6**	**+0.2**
HORT	**Hortiatis**	**0.88**	**141**	P	**Pg**	**16 39 20.7**	**-1.5**
HORT	**Hortiatis**	**0.88**	**141**	P	**Pg**	**16 39 20.9**	**-1.3**
HORT				S	**Sg**	**16 39 34.6**	**+1.0**
HORT	**Hortiatis**	**0.88**	**141**	P	**Pg**	**16 39 20.9**	**-1.3**
HORT				S	**Sg**	**16 39 34.6**	**+1.0**
FNA	**Florina**	**0.91**	**237**	P	**Pg**	**16 39 21.0**	**-1.6**
FNA	**Florina**	**0.91**	**237**	P	**Pg**	**16 39 21.1**	**-1.5**
FNA				S	**Sg**	**16 39 34.3**	**-0.1**
FNA	**Florina**	**0.91**	**237**	P	**Pg**	**16 39 21.1**	**-1.5**
FNA				S	**Sg**	**16 39 34.3**	**-0.1**
SRS	**Serrai**	**0.94**	**100**	P	**Pg**	**16 39 21.9**	**-1.3**
SRS	**Serrai**	**0.94**	**100**	P	**Pg**	**16 39 21.8**	**-1.4**
SRS				S	**Sg**	**16 39 35.6**	**+0.2**
SRS	**Serrai**	**0.94**	**100**	P	**Pg**	**16 39 21.9**	**-1.3**
SRS				S	**Sg**	**16 39 35.6**	**+0.2**
SKO	**Skopje**	**0.98**	**315**	*ePg*	**Pg**	**16 39 22.7**	**-1.3**
SKO				*eSg*	**Sg**	**16 39 36.5**	**-0.3**
SKO	**Skopje**	**0.98**	**315**	P	**Pg**	**16 39 21.5**	**-2.5**
SKO				S	**Sg**	**16 39 35.3**	**-1.5**
SKO	**Skopje**	**0.98**	**315**	*iPg*	**Pg**	**16 39 22.6**	**-1.4**
SKO				*i Sg*	**Sg**	**16 39 36.5**	**-0.2**
SKO				*eLg*		16 39 36.9	
	comp=N,244nm,0.3s						
SKO				*eLg*		16 39 37.5	
	comp=E,237nm,0.3s						
SKO	**Skopje**	**0.98**	**315**	P	**Pg**	**16 39 21.5**	**-2.5**
SKO	**Skopje**	**0.98**	**315**	*ePg*	**Pg**	**16 39 22.7**	**-1.3**
SKO				S	**Sg**	**16 39 35.3**	**-1.5**
SKO				*eSg*	**Sg**	**16 39 36.5**	**-0.3**
MMB	**Musomiste**	**1.06**	**73**	Pg	**Pg**	**16 39 24.0**	**-1.6**
MMB	**Musomiste**	**1.06**	**73**	Pg	**Pg**	**16 39 24.0**	**-1.6**
KZN	**Kozani**	**1.08**	**205**	P	**Pb**	**16 39 25.2**	**-0.8**
KZN	**Kozani**	**1.08**	**205**	*ePN*	**Pn**	**16 39 24.9**	**-1.5**
KZN				*eSN*	**Sn**	**16 39 43.1**	**+1.7**
KZN	**Kozani**	**1.08**	**205**	P	**Pb**	**16 39 24.7**	**-1.3**
KZN				S	**Sg**	**16 39 41.2**	**+1.2**
KZN	**Kozani**	**1.08**	**205**	P	**Pb**	**16 39 24.7**	**-1.3**
KZN				S	**Sg**	**16 39 41.2**	**+1.2**
KZN				*eSn*	**Sn**	**16 39 43.1**	**+1.7**
NVR	**Nevrokopi**	**1.12**	**86**	P	**Pb**	**16 39 25.1**	**-1.6**
NVR	**Nevrokopi**	**1.12**	**86**	*ePN*	**Pb**	**16 39 25.1**	**-1.6**
NVR				*eSN*	**Sn**	**16 39 40.5**	**-1.9**
NVR	**Nevrokopi**	**1.12**	**86**	*ePn*	**Pb**	**16 39 25.1**	**-1.6**
NVR				*eSn*	**Sn**	**16 39 40.5**	**-1.9**
LIT	**Litokhoron**	**1.19**	**176**	P	**Pb**	**16 39 27.4**	**-0.4**
LIT	**Litokhoron**	**1.19**	**176**	*ePN*	**Pn**	**16 39 27.1**	**-0.7**
LIT	**Litokhoron**	**1.19**	**176**	P	**Pb**	**16 39 26.9**	**-0.9**
LIT				S	**Sb**	**16 39 44.4**	**+1.2**
LIT	**Litokhoron**	**1.19**	**176**	P	**Pb**	**16 39 26.9**	**-0.9**
LIT				S	**Sb**	**16 39 44.4**	**+1.2**
PLG	**Polygyros**	**1.22**	**138**	P	**Pn**	**16 39 25.9**	**-2.4**
PLG	**Polygyros**	**1.22**	**138**	*ePN*	**Pn**	**16 39 28.1**	**-0.2**
PLG	**Polygyros**	**1.22**	**138**	P	**Pn**	**16 39 23.9**	**-4.4**
PLG	**Polygyros**	**1.22**	**138**	P	**Pn**	**16 39 25.9**	**-2.4**
PLG	**Polygyros**	**1.22**	**138**	*ePn*	**Pn**	**16 39 28.1**	**-0.2**
NEST	**Nestorio**	**1.33**	**229**	P	**Pn**	**16 39 29.0**	**-0.8**
NEST	**Nestorio**	**1.33**	**229**	P	**Pn**	**16 39 29.0**	**-0.8**
KBN	**Korca**	**1.37**	**242**	*i PN*	**Pn**	**16 39 30.7**	**+0.3**
KBN				*i SN*	**Sn**	**16 39 48.7**	**+0.2**
KBN	**Korca**	**1.37**	**242**	*i Pn*	**Pn**	**16 39 30.7**	**+0.3**
KBN				*i Sn*	**Sn**	**16 39 48.7**	**+0.1**
VTS	**Vitosha**	**1.45**	**25**	*ePg*	**Pg**	**16 39 32.1**	**-0.8**
VTS				*eSg*	**Sg**	**16 39 53.8**	**+2.1**
VTS	**Vitosha**	**1.45**	**25**	P	**Pn**	**16 39 31.6**	**+0.2**
VTS	**Vitosha**	**1.45**	**25**	P	**Pn**	**16 39 31.0**	**-0.4**
VTS				S	**Sn**	**16 39 51.4**	**+1.0**
VTS	**Vitosha**	**1.45**	**25**	Pg	**Pg**	**16 39 31.9**	**-1.0**
VTS	**Vitosha**	**1.45**	**25**	P	**Pn**	**16 39 31.0**	**-0.4**
VTS	**Vitosha**	**1.45**	**25**	Pg	**Pg**	**16 39 31.9**	**-1.0**
VTS				S	**Sn**	**16 39 51.4**	**+1.0**
VTS				*eSg*	**Sg**	**16 39 53.8**	**+2.1**
OUR	**Ouranopolis**	**1.55**	**127**	P	**Pn**	**16 39 34.6**	**+1.8**
OUR	**Ouranopolis**	**1.55**	**127**	P	**Pn**	**16 39 34.6**	**+1.8**
BARS	**Barje**	**1.58**	**345**	*ePn*	**Pn**	**16 39 31.8**	**-1.5**
BARS				*eSn*	**Sn**	**16 39 54.4**	**+0.6**
BARS	**Barje**	**1.58**	**345**	*ePn*	**Pn**	**16 39 31.8**	**-1.5**
BARS				*eSn*	**Sn**	**16 39 54.4**	**+0.6**
KAVA	**Kavala**	**1.64**	**99**	P	**Pn**	**16 39 33.8**	**-0.3**
KAVA				S	**Sn**	**16 39 57.1**	**+1.9**
KAVA	**Kavala**	**1.64**	**99**	P	**Pn**	**16 39 33.8**	**-0.3**
KAVA				S	**Sn**	**16 39 57.1**	**+1.9**
PAIG	**Paliouri**	**1.68**	**143**	P	**Pn**	**16 39 35.4**	**+0.8**
PAIG	**Paliouri**	**1.68**	**143**	P	**Pn**	**16 39 35.4**	**+0.8**
THL	**Klokotos Trika**	**1.74**	**189**	*ePN*	**Pn**	**16 39 36.0**	**+0.5**
THL	**Klokotos Trika**	**1.74**	**189**	P	**Pn**	**16 39 35.1**	**-0.4**
THL				S	**Sn**	**16 39 59.5**	**+1.8**
THL	**Klokotos Trika**	**1.74**	**189**	P	**Pn**	**16 39 35.1**	**-0.4**
THL	**Klokotos Trika**	**1.74**	**189**	*ePn*	**Pn**	**16 39 36.0**	**+0.5**
THL				S	**Sn**	**16 39 59.5**	**+1.8**
RZN	**Rozhen**	**1.81**	**76**	P	**Pn**	**16 39 38.4**	**+2.1**
RZN	**Rozhen**	**1.81**	**76**	P	**Pn**	**16 39 38.4**	**+2.1**
PGB	**Panagyurishte**	**1.84**	**46**	P	**Pn**	**16 39 37.7**	**+0.9**
PGB	**Panagyurishte**	**1.84**	**46**	P	**Pn**	**16 39 37.7**	**+0.9**
PLD	**Plovdiv**	**1.93**	**64**	*ePn*	**Pn**	**16 39 36.8**	**-1.2**
PLD				*eSg*	**Sg**	**16 40 07.7**	**+0.6**
PLD	**Plovdiv**	**1.93**	**64**	P	**Pn**	**16 39 42.3**	**+4.3**
PLD	**Plovdiv**	**1.93**	**64**	*ePn*	**Pn**	**16 39 36.8**	**-1.2**
PLD	**Plovdiv**	**1.93**	**64**	P	**Pn**	**16 39 42.3**	**+4.3**
PLD				*eSg*	**Sg**	**16 40 07.7**	**+0.6**
ZAPS	**Zavoj**	**2.00**	**5**	*ePn*	**Pn**	**16 39 40.8**	**+1.9**
ZAPS				*eSn*	**Sn**	**16 40 06.0**	**+2.1**
PUK	**Puka**	**2.01**	**293**	*i PN*	**Pn**	**16 39 40.4**	**+1.3**
PUK				*i SN*	**Sn**	**16 40 04.3**	**+0.1**
PUK	**Puka**	**2.01**	**293**	*i Pn*	**Pn**	**16 39 40.3**	**+1.2**
PUK				*i Sn*	**Sn**	**16 40 04.3**	**+0.1**
BCI	**Bajram Curri**	**2.03**	**303**	*i PN*	**Pn**	**16 39 41.5**	**+2.1**
BCI				*i SN*	**Sn**	**16 40 10.5**	**+5.6**
BCI	**Bajram Curri**	**2.03**	**303**	*i Pn*	**Pn**	**16 39 41.5**	**+2.0**
AGG	**Agios Georgios**	**2.26**	**181**	*ePN*	**Pn**	**16 39 44.2**	**+1.6**
AGG	**Agios Georgios**	**2.26**	**181**	P	**Pn**	**16 39 42.7**	**+0.1**
AGG				S	**Sn**	**16 40 12.7**	**+2.2**
AGG	**Agios Georgios**	**2.26**	**181**	P	**Pn**	**16 39 42.7**	**+0.1**
AGG	**Agios Georgios**	**2.26**	**181**	*ePn*	**Pn**	**16 39 44.2**	**+1.6**
AGG				S	**Sn**	**16 40 12.7**	**+2.2**
SRN	**Sarande**	**2.29**	**233**	*i PN*	**Pn**	**16 39 45.7**	**+2.7**
SRN				*i SN*	**Sn**	**16 40 18.2**	**+7.0**
SRN	**Sarande**	**2.29**	**233**	*i Pn*	**Pn**	**16 39 45.7**	**+2.7**
MPEP	**Malo Peshtene**	**2.30**	**26**	P	**Pn**	**16 39 47.7**	**+4.5**
KDZ	**Kurdzhali**	**2.32**	**80**	P	**Pn**	**16 39 45.9**	**+2.6**
KDZ	**Kurdzhali**	**2.32**	**80**	P	**Pn**	**16 39 45.9**	**+2.6**
AOS	**Alonnisos**	**2.41**	**151**	P	**Pn**	**16 39 45.5**	**+0.9**
AOS	**Alonnisos**	**2.41**	**151**	P	**Pn**	**16 39 45.5**	**+0.9**
DIM	**Dimitrovgrad**	**2.49**	**71**	P	**Pn**	**16 39 51.6**	**+5.9**
BOLS	**Boljevac**	**2.56**	**353**	*ePn*	**Pn**	**16 39 47.3**	**+0.6**
BOLS				*eSn*	**Sn**	**16 40 20.1**	**+2.2**
BOLS	**Boljevac**	**2.56**	**353**	*ePn*	**Pn**	**16 39 47.3**	**+0.6**
BOLS				*eSn*	**Sn**	**16 40 20.1**	**+2.2**
SZH	**Strazhica**	**3.30**	**52**	P	**Pg**	**16 40 08.2**	**-0.2**
DIVS	**Divibare**	**3.31**	**329**	*ePn*	**Pn**	**16 39 56.1**	**-0.9**
DIVS	**Divibare**	**3.31**	**329**	*ePn*	**Pn**	**16 39 56.1**	**-0.9**

*IDC **11** 16:42:59.2±1.1, 10°.85S×165°.98E, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.0/21, mbtmp4.1/9, ML4.9/1, MS3.9/2, Ms1 3.9/2, ms1mx3.0/31, Error ellipse: s-maj=27.7km s-min=26.1km az=66.0*
*ISCJB **11** 16:43:03.0±4.4, 10°.9S±0°.2×165°.9E±0°.2, h33km±35km, mb4.0/8, MS3.9/2, Error ellipse: s-maj=35.4km s-min=24.9km az=166.1*
*NEIC **11** 16:43:05.2±2.7, 10°.88S×165°.91E, h40km±22km, mb4.2/1, Error ellipse: s-maj=22.8km s-min=16.1km az=77.0*
ISC 11 16:43:05.4±3.7, 10°.9S±0°.2×165°.9E±0°.2, h40km±30km, n12, σ0°38/11, mb4.0/8, MS3.9/2, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.02**	**283**	Pn	**Pn**	**16 44 32.0**	**0.0**
	27nm,0.3s,baz=77,slow=2.7,SNR=13						
WRA	**Warramunga Arr**	**31.68**	**250**	P	P	**16 49 25.7**	**+0.3**
	1.1nm,0.7s,mb3.8,baz=80,slow=9.1,SNR=6.8						
ASAR	**Alice Springs**	**33.00**	**243**	P	P	**16 49 36.1**	**-0.8**
	0.4nm,0.7s,mb3.5,baz=65,slow=9.3,SNR=4.1						
RPZ	**Rata Peaks**	**33.03**	**173**	P	P	**16 49 37.2**	**+0.3**
	9.2nm,0.8s,mb4.8,baz=41,slow=3.4,SNR=5.7						
FITZ	**Fitzroy Crossi**	**39.57**	**255**	P	P	**16 50 33.2**	**+0.1**
	1.7nm,0.7s,mb3.9,baz=34,slow=7.3,SNR=4.4						
FITZ				LR	LR	17 05 41.1	
	comp=Z,117nm,19.0s,MS3.7,baz=308,slow=34						
NWAO	**Narrogin (SRO)**	**49.68**	**236**	LR	LR	17 12 56.0	
	comp=Z,190nm,21.0s,MS4.1,baz=174,slow=36						
CASY	**Casey**	**66.60**	**201**	P	P	**16 53 51.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**72.17**	**293**	P	P	**16 54 27.0**	**+0.4**
	0.6nm,0.4s,mb3.9,baz=123,slow=3.3,SNR=3.7						
QSPA	**South Pole Qui**	**79.14**	**180**	P	P	**16 55 05.3**	**-0.1**
	2.2nm,1.0s,mb4.0,baz=289,slow=1.5,SNR=7.4						
QSPA	**South Pole Qui**	**79.14**	**180**	*eP*	P	**16 55 04.6**	**-0.8**
	3.1nm,1.0s,mb4.2		

M_R0.00; $M_{\phi R}$0.00; M_V0.00; Best double couple: $M_0$1.00000×10^{17} NP1:ϕ_s176.00000°, δ28.00000°, λ-80.00000°. NP2:ϕ_s345.00000°, δ62.00000°, λ-95.00000°. Principal axes: T 1.0600, Plg17.0000°, Azm79.0000°; N -0.1100, Plg5.0000°, Azm348.0000°; P -0.9500, Plg72.0000°, Azm242.0000°; Data Used: II IU IC G CN.

ISC 11 17:11:34.8±0.2,**19°.75S**±0°.03×**69°.12W**±0°.04,**h108**km, **h108**km±.7km:**pP-P**,**n478**,σ0.**86**/437,**mb5.0**/125,**71C-86D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.77**	**324**	*eP*	**Pn**	**17 11 52.0**	**-1.6**
MNMC				*i* S	**Sn**	**17 12 05.5**	**-2.1**
HMBC	**Humberston**	**0.90**	**234**	⇓*iP*	**Pn**	**17 11 52.8**	**-2.0**
HMBC				*i* S	**Sn**	**17 12 06.8**	**-3.0**
HMBC				AML	AML	17 12 09.1	
	comp=E,215μm,0.6s						
PSGC	**Pisagua**	**0.96**	**279**	⇑*iP*	**Pn**	**17 11 52.6**	**-2.9**
PSGC				*e*S	**Sn**	**17 12 06.5**	**-4.5**
PSGC				AML	AML	17 12 10.0	
	comp=N,60μm,0.5s						
MACH	**Maria Elena**	**2.50**	**194**	⇑*iP*	**Pn**	**17 12 13.9**	**-0.3**
MACH				*i* S	**Sn**	**17 12 42.9**	**-1.6**
TOCH	**Tocopilla**	**2.54**	**203**	*eP*	**Pn**	**17 12 13.9**	**-0.8**
TOCH				*i* S	**Sn**	**17 12 42.6**	**-2.8**
TOCH				AML	AML	17 13 04.4	
	comp=E,11μm,0.4s						
MECH	**Mejillones**	**3.56**	**200**	⇓*iP*	**Pn**	**17 12 27.2**	**-1.1**
MECH				AML	AML	17 13 32.3	
	comp=N,6μm,1.0s						
LPAZ	**La Paz**	**3.57**	**15**	P	**Pn**	**17 12 30.3**	**+1.9**
	comp=N,21nm,0.3s,baz=199,slow=6.8,SNR=463						
LPAZ				LR	LR	17 14 00.4	
	comp=N,3μm,18.3s,baz=231,slow=43						
LPAZ	**La Paz**	**3.57**	**15**	*eP*	**Pn**	**17 12 30.1**	**+1.7**
LCO	**Las Campanas**	**9.33**	**189**	P	**Pn**	**17 13 46.0**	**-0.4**
	comp=N,130nm,0.8s						
NNA	**Nana**	**10.71**	**315**	P	**Pn**	**17 14 02.8**	**-2.5**
	comp=N,3.0nm,0.3s,baz=163,slow=12,SNR=4.5						
NNA				S	**Sn**	**17 15 52.6**	**-11**
	comp=N,4.9nm,0.3s,baz=127,slow=17,SNR=3.0						
NNA	**Nana**	**10.71**	**315**	P	**Pn**	**17 14 03.4**	**-1.8**
	comp=N,49nm,0.8s						
CFAA	**Coronel Fontan**	**11.83**	**176**	P	**Pn**	**17 14 16.9**	**-3.1**
	comp=N,0.2nm,0.3s,baz=338,slow=14,SNR=16						
CFAA				S	**Sn**	**17 16 29.5**	**-0.6**
	comp=N,0.2nm,0.3s,baz=346,slow=17,SNR=2.7						
CFAA				LR	LR	17 19 29.9	
	comp=N,63nm,21.5s,baz=212,slow=40						
CFAA	**Coronel Fontan**	**11.83**	**176**	P	**Pn**	**17 14 16.9**	**-3.1**
CFAA				S	**Sn**	**17 16 29.5**	**-0.6**
CFAA				LR	LR	17 19 29.9	
CPUP	**Villa Florida**	**12.67**	**123**	P	**Pn**	**17 14 31.2**	**0.0**
	comp=N,7.1nm,0.3s,baz=284,slow=12,SNR=60						
CPUP				LR	LR	17 20 41.7	
	comp=N,866nm,18.5s,baz=293,slow=43						
CPUP	**Villa Florida**	**12.67**	**123**	P	**Pn**	**17 14 31.2**	**0.0**
CPUP				LR	LR	17 20 41.7	
ATAH	**Atahualpa**	**15.44**	**323**	P	**Pn**	**17 15 06.4**	**-0.4**
	comp=N,0.6nm,0.3s,baz=140,slow=6.6,SNR=8.0						
TRQA	**Tornquist**	**19.27**	**163**	*eP*	**P**	**17 15 50.8**	**-0.1**
	comp=N,112nm,1.0s						
SPB	**Sao Paulo**	**20.51**	**105**	*eP*	**P**	**17 16 04.6**	**+0.1**
BDFB	**Brasilia**	**20.51**	**82**	P	**P**	**17 16 04.0**	**-0.5**
	comp=N,85nm,0.5s,baz=249,slow=10,SNR=35						
BDFB				LR	LR	17 24 37.4	
	comp=N,308nm,19.7s,baz=245,slow=38						
PLCA	**Paso Flores**	**20.95**	**183**	P	**P**	**17 16 10.2**	**+1.2**
	comp=N,56nm,0.9s,baz=7.7,slow=12,SNR=45						
PLCA				PcP	PcP	17 20 14.1	+1.7
	comp=N,3.9nm,0.8s,baz=9.2,slow=2.0,SNR=4.1						
PLCA	**Paso Flores**	**20.95**	**183**	*eP*	**P**	**17 16 09.7**	**+0.7**
	comp=N,218nm,1.4s						
OTAV	**Otavalo**	**21.87**	**334**	*eP*	**P**	**17 16 19.6**	**+0.5**
	comp=N,38nm,1.0s,mb4.7						
ROSC	**El Rosal**	**24.98**	**348**	LR	LR	17 27 37.3	
	comp=N,558nm,20.2s,baz=206,slow=39						
SDV	**Santo Domingo**	**28.50**	**357**	*eP*	**P**	**17 17 18.4**	**-1.7**
	comp=N,8.6nm,0.6s,mb4.5						
PCRV	**Puerto La Cruz**	**30.06**	**9**	P	**P**	**17 17 33.4**	**-0.6**
	comp=N,10nm,0.5s,mb4.8,baz=208,slow=15,SNR=4.7						
PCRV				LR	LR	17 30 30.0	
	comp=N,708nm,21.0s,baz=7.0,slow=38						
BCIP	**Isla Barro Col**	**30.61**	**339**	*eP*	**P**	**17 17 39.0**	**+0.2**
	comp=N,24nm,0.9s,mb4.9						
GRGR	**Grenville**	**32.52**	**14**	*eP*	**P**	**17 17 52.7**	**-2.9**
	comp=N,68nm,0.7s,mb5.6						
JTS	**JuntasAbangare**	**33.68**	**331**	*eP*	**P**	**17 18 06.5**	**+0.7**
	comp=N,50nm,1.8s,mb5.0						
USHA	**Ushuaia**	**35.02**	**179**	P	**P**	**17 18 18.2**	**+1.3**
	comp=N,7.3nm,0.6s,mb4.7,baz=342,slow=8.3,SNR=6.8						
RCBR	**Riachuelo**	**35.13**	**71**	P	**P**	**17 18 18.3**	**0.0**
	comp=N,86nm,0.7s,mb5.7,baz=239,slow=11,SNR=60						
RCBR				LR	LR	17 33 45.6	
	comp=N,368nm,20.5s,baz=218,slow=38						
RCBR	**Riachuelo**	**35.13**	**71**	*eP*	**P**	**17 18 18.2**	**-0.1**
	comp=N,76nm,0.6s,mb5.7						
ICM	**Isla Caja Muer**	**37.50**	**4**	*eP*	**P**	**17 18 36.3**	**-1.9**
ICM				*ep*P	pP	17 19 02.2	-0.4
RPN	**Rapa Nui**	**37.50**	**251**	LR	LR	17 30 21.7	
	comp=N,432nm,20.7s,baz=300,slow=30						
CRPR	**Cabo Rojo, PR**	**37.57**	**3**	*eP*	**P**	**17 18 38.3**	**-0.6**
	comp=N,5.1nm,0.6s,mb4.5						
CRPR				*ep*P	pP	17 19 01.9	-1.5
OBIP	**Obispado Ponce**	**37.64**	**4**	P	**P**	**17 18 39.2**	**-0.2**
	comp=N,43nm,0.7s,mb5.4						
OBIP				*ep*P	pP	17 19 02.6	-1.3
CELP	**Cerrillos**	**37.67**	**4**	*eP*	**P**	**17 18 38.3**	**-1.5**
CELP				*ep*P	pP	17 19 01.8	-2.4
SJG	**San Juan**	**37.74**	**5**	P	**P**	**17 18 37.5**	**-2.8**
	comp=N,13nm,0.3s,mb5.3,baz=176,slow=0.8,SNR=12						
SJG				pP	pP	17 19 02.4	-2.3
	comp=N,34nm,0.7s,baz=83,slow=0.7,SNR=3.8						
SJG				LR	LR	17 35 06.4	
	comp=N,167nm,18.4s,baz=96,slow=38						
SJG	**San Juan**	**37.74**	**5**	*eP*	**P**	**17 18 37.4**	**-2.9**
	comp=N,30nm,0.8s,mb5.2						
SJG				*ep*P	pP	17 18 57.9	-6.8
LRS	**Lares**	**37.87**	**4**	*eP*	**P**	**17 18 42.0**	**+0.5**
LRS				*ep*P	pP	17 19 03.5	-2.3
TGUH	**Tegucigalpa,Un**	**38.05**	**331**	*eP*	**P**	**17 18 42.4**	**-0.6**
SDDR	**Presa de Saban**	**38.55**	**357**	*eP*	**P**	**17 18 45.9**	**-1.3**
CMIG	**Matias Romero**	**44.51**	**324**	P	**P**	**17 19 34.9**	**-0.9**
	comp=N,12nm,1.0s,mb4.6,baz=126,slow=7.7,SNR=8.0						
CMIG				pP	pP	17 20 01.4	+0.5
	comp=N,7.0nm,0.7s,baz=93,slow=4.7,SNR=4.0						
BBSR	**BB Station**	**52.00**	**5**	*eP*	**P**	**17 20 31.3**	**-1.8**
	comp=N,21nm,0.8s,mb5.2						
BBSR				*ep*P	pP	17 20 57.0	-1.8
GOGA	**Godfrey**	**54.61**	**345**	P	**P**	**17 20 55.7**	**+3.5**
GOGA				*ep*P	pP	17 21 17.0	-1.1
JSC	**Jenkinsville**	**54.96**	**348**	*eP*	**P**	**17 20 53.6**	**-1.1**
JSC				*ep*P	pP	17 21 20.0	-0.6
LRAL	**Lakeview Retre**	**55.20**	**342**	*eP*	**P**	**17 20 54.8**	**-1.7**
	comp=N,17nm,1.0s,mb5.0						
LRAL				*ep*P	pP	17 21 21.0	-1.5
HKT	**Hockley**	**55.71**	**332**	*eP*	**P**	**17 21 00.1**	**-0.1**
	comp=N,65nm,1.7s,mb5.4						
NATX	**Nacogdoches**	**56.77**	**334**	*eP*	**P**	**17 21 07.7**	**-0.1**
CPCT	**Cooper Cave**	**56.81**	**345**	*eP*	**P**	**17 21 06.4**	**-1.5**
CPCT				*ep*P	pP	17 21 34.1	+0.1
SWET	**Sewanee**	**56.95**	**344**	*eP*	**P**	**17 21 07.0**	**-1.8**
SWET				*ep*P	pP	17 21 33.8	-1.2
OXF	**Oxford**	**57.31**	**340**	*eP*	**P**	**17 21 10.4**	**-1.1**
	comp=N,41nm,0.9s,mb5.5						
JCT	**Junction City**	**58.01**	**329**	*eP*	**P**	**17 21 14.6**	**-1.9**
	comp=N,3.5nm,0.3s,mb4.9						
WVT	**Waverly**	**58.33**	**342**	*eP*	**P**	**17 21 16.3**	**-2.3**
	comp=N,10nm,0.7s,mb5.0						
WVT				*ep*P	pP	17 21 43.0	-1.8
628A	**Black Gap, Mar**	**58.79**	**325**	P	**P**	**17 21 21.4**	**-0.5**
	baz=59,SNR=16						
MIAR	**Mount Ida**	**58.80**	**336**	*eP*	**P**	**17 21 19.6**	**-2.2**
	comp=N,47nm,1.4s,mb5.3						
MIAR				*ep*P	pP	17 21 47.0	-1.0
627A	**Terlingua Ranc**	**59.03**	**325**	⇓P	**P**	**17 21 22.5**	**-1.1**
	baz=59,SNR=8.3						
TXAR	**Lajitas Array**	**59.09**	**325**	P	**P**	**17 21 22.8**	**-1.2**
	comp=N,2.4nm,0.8s,mb4.3,baz=146,slow=7.1,SNR=18						
TXAR				pP	pP	17 21 50.5	+0.2
	comp=N,1.7nm,0.6s,baz=148,slow=7.4,SNR=5.4						
528A	**Cox Ranch, San**	**59.27**	**326**	P	**P**	**17 21 24.1**	**-1.2**
	baz=60,SNR=12						
626A	**Big Bend Ranch**	**59.52**	**325**	P	**P**	**17 21 26.4**	**-0.6**
	baz=60,SNR=17						
428A	**Kincaid Ranch,**	**59.67**	**327**	⇑P	**P**	**17 21 27.2**	**-0.7**
	baz=60,SNR=6.5						
527A	**Woodward Ranch**	**59.70**	**325**	⇓P	**P**	**17 21 27.1**	**-1.1**
	baz=60,SNR=8.9						
WCI	**Wyandotte Cave**	**59.89**	**344**	*eP*	**P**	**17 21 27.2**	**-2.1**
	comp=N,47nm,1.4s,mb5.3						
WCI				*ep*P	pP	17 21 53.9	-1.7
526A	**Mary Lane Ranc**	**59.89**	**325**	P	**P**	**17 21 28.6**	**-0.8**
	baz=60,SNR=18						
427A	**Hayter Ranch,**	**60.14**	**326**	P	**P**	**17 21 30.2**	**-1.0**
	baz=60,SNR=10						
SIUC	**Southern Illin**	**60.21**	**342**	*eP*	**P**	**17 21 29.4**	**-2.1**
	comp=N,81nm,1.2s,mb5.6						
SIUC				*ep*P	pP	17 21 56.8	-1.0
328A	**Wristen Ranch,**	**60.25**	**327**	⇑P	**P**	**17 21 31.1**	**-0.8**
	baz=60,SNR=10						
426A	**McDonald Obser**	**60.33**	**325**	P	**P**	**17 21 31.8**	**-0.7**
	baz=60,SNR=11						
SSPA	**Standing Stone**	**60.63**	**352**	*eP*	**P**	**17 21 33.8**	**-0.5**
	comp=N,3.5nm,0.7s,mb4.5						
FVM	**French Village**	**60.82**	**341**	*eP*	**P**	**17 21 34.1**	**-1.6**
	comp=N,45nm,0.9s,mb5.5						
FVM				*ep*P	pP	17 22 01.4	-0.6
RKT	**Rikitea**	**60.94**	**254**	*eS*	**S**	**17 29 49.6**	**+2.7**
RKT				*e*LR	LR	17 39 59.6	
	comp=N,560nm,35.8s						
425A	**Indio Mountain**	**60.94**	**325**	⇓P	**P**	**17 21 34.9**	**-1.7**
	baz=61,SNR=16						
ACSO	**Alum Creek Sta**	**61.05**	**348**	*eP*	**P**	**17 21 35.0**	**-2.2**
ACSO				*ep*P	pP	17 22 01.7	-1.8
325A	**Bean Ranch, Si**	**61.38**	**325**	P	**P**	**17 21 38.6**	**-1.0**
	baz=62,SNR=42						
BRYW	**Bryant College**	**61.40**	**358**	*eP*	**P**	**17 21 38.1**	**-1.3**
	comp=N,38nm,0.7s,mb5.5						
BRYW				*ep*P	pP	17 22 05.1	-0.8
226A	**Malaga, Loving**	**61.46**	**326**	⇓P	**P**	**17 21 39.8**	**-0.3**
	baz=62,SNR=7.3						
CLNB	**Carlsbad**	**61.50**	**327**	*eP*	**P**	**17 21 40.1**	**-0.2**
	comp=N,2.6nm,0.8s,mb4.3						
GDL2	**Guadalupe Moun**	**61.71**	**326**	*eP*	**P**	**17 21 41.4**	**-0.3**
	comp=N,8.7nm,1.1s,mb4.7						
GDL2				*ep*P	pP	17 22 07.6	-0.6
324A	**Moseley Ranch,**	**61.71**	**325**	P	**P**	**17 21 40.1**	**-1.7**
	baz=62,SNR=15						
MNTX	**Cornudas Mount**	**61.86**	**325**	*eP*	**P**	**17 21 40.6**	**-2.1**
	comp=N,22nm,1.4s,mb5.0						
MNTX				*ep*P	pP	17 22 07.5	-1.7
225A	**Deer Hill, Car**	**61.88**	**326**	⇓P	**P**	**17 21 42.2**	**-0.7**
	baz=62,SNR=10.0						
Z27A	**Tatum**	**62.00**	**328**	P	**P**	**17 21 42.2**	**-1.5**
	baz=62,SNR=11						
CPRX	**Cap Rock**	**62.10**	**327**	P	**P**	**17 21 45.0**	**+0.6**
	comp=N,4.2nm,0.7s,mb4.6						
125A	**Gardner Draw,**	**62.22**	**326**	P	**P**	**17 21 43.7**	**-1.5**
	baz=62,SNR=5.6						
224A	**Cornudas Mount**	**62.22**	**325**	P	**P**	**17 21 43.7**	**-1.5**
	baz=62,SNR=17						
MSTX	**Muleshoe**	**62.31**	**329**	⇑P	**P**	**17 21 44.5**	**-1.2**
	baz=62,SNR=17						
TRY	**Troy**	**62.31**	**356**	*eP*	**P**	**17 21 44.2**	**-1.3**
	comp=N,18nm,0.8s,mb5.2						
Z26A	**Caprock**	**62.35**	**327**	⇑P	**P**	**17 21 45.0**	**-1.0**
	baz=63,SNR=9.2						
ERPA	**Erie**	**62.37**	**351**	*eP*	**P**	**17 21 45.2**	**-0.8**
	comp=N,84nm,0.8s,mb5.8						
ERPA				*ep*P	pP	17 22 11.1	-1.4
124A	**Stringfield Ra**	**62.67**	**326**	⇑P	**P**	**17 21 47.6**	**-0.6**
	baz=63,SNR=10						
Z25A	**Roswell**	**62.74**	**327**	⇓P	**P**	**17 21 47.2**	**-1.4**
	baz=63,SNR=5.1						
222A	**Williams Famil**	**63.10**	**324**	⇑P	**P**	**17 21 51.1**	**+0.1**
	baz=63,SNR=7.5						
Z24A	**Sheeppen Canyo**	**63.11**	**326**	P	**P**	**17 21 50.1**	**-0.9**
	baz=63,SNR=12						
Y25A	**Mesa, Roswell**	**63.23**	**327**	P	**P**	**17 21 50.6**	**-1.2**
	baz=63,SNR=8.5						
X26A	**CR and CF Fran**	**63.28**	**328**	P	**P**	**17 21 51.4**	**-0.8**
	baz=64,SNR=5.2						
W27A	**Bowe Ranch, En**	**63.33**	**329**	⇓P	**P**	**17 21 51.2**	**-1.2**
	baz=64,SNR=6.3						
320A	**Kipp Ranch, An**	**63.33**	**323**	⇓P	**P**	**17 21 52.4**	**-0.2**
	baz=64,SNR=7.6						
220A	**Playas Peak, P**	**63.75**	**323**	⇓P	**P**	**17 21 54.1**	**-1.2**
	baz=64,SNR=11						
319A	**Douglas**	**63.79**	**322**	⇓P	**P**	**17 21 55.8**	**+0.2**
	baz=64,SNR=6.0						
121A	**Cookes Peak, D**	**63.81**	**324**	⇓P	**P**	**17 21 55.7**	**0.0**
	baz=64,SNR=7.2						
Z22A	**Elephant Butte**	**63.91**	**325**	P	**P**	**17 21 53.9**	**-2.4**
	baz=64,SNR=20						
KSU1	**Kansas State U**	**63.95**	**336**	*eP*	**P**	**17 21 55.4**	**-1.0**
	comp=N,22nm,0.9s,mb5.0						
W25A	**X Bar L Ranch,**	**64.14**	**328**	⇓P	**P**	**17 21 56.7**	**-1.0**
	baz=64,SNR=10						
219A	**White Tail Can**	**64.24**	**323**	⇓P	**P**	**17 21 58.6**	**+0.1**
	baz=64,SNR=9.0						
LONY	**Lake Ozonia**	**64.25**	**356**	*eP*	**P**	**17 21 57.5**	**-0.8**
	comp=N,32nm,1.2s,mb5.0						
LONY				*ep*P	pP	17 22 23.5	-1.4
318A	**Bisbee**	**64.25**	**322**	P	**P**	**17 21 58.6**	**0.0**
	baz=64,SNR=12						
120A	**U Bar Ranch, L**	**64.29**	**323**	⇓P	**P**	**17 21 59.0**	**+0.2**
	baz=64						
FRNY	**Flat Rock**	**64.40**	**356**	*eP*	**P**	**17 21 58.5**	**-0.8**
	comp=N,43nm,1.5s,mb5.0						
FRNY				*ep*P	pP	17 22 24.5	-1.4
BNM	**Barren Site**	**64.41**	**326**	*eP*	**P**	**17 21 60.0**	**+0.4**
	comp=N,73nm,2.2s,mb5.1						
BNM				*ep*P	pP	17 22 25.3	-0.9
Y22A	**Socorro**	**64.43**	**326**	⇓P	**P**	**17 22 00.4**	**+0.7**
	baz=65						
LPM	**Los Pinos Moun**	**64.54**	**326**	*eP*	**P**	**17 22 00.5**	**+0.1**
	comp=N,13nm,1.0s,mb4.7						
LPM				*ep*P	pP	17 22 26.9	-0.1
Z20A	**Nine Sixteen R**	**64.69**	**324**	⇓P	**P**	**17 22 01.7**	**+0.3**
	baz=65,SNR=9.2						
V25A	**Rancho No Teng**	**64.71**	**329**	⇑P	**P**	**17 22 00.5**	**-0.9**
	baz=65						
U26A	**Atchley Ranch,**	**64.73**	**330**	P	**P**	**17 22 00.8**	**-0.9**
	baz=65,SNR=12						
SADO	**Sadowa**	**64.86**	**352**	P	**P**	**17 22 01.1**	**-1.1**
	comp=N,15nm,0.8s,mb4.8,baz=168,slow=7.2,SNR=7.9						
SADO				pP	pP	17 22 27.2	-1.6
	comp=N,14nm,0.8s,baz=198,slow=6.1,SNR=5.5						
Y21A	**Point of Rocks**	**64.86**	**325**	⇑P	**P**	**17 22 02.7**	**+0.1**
	baz=65,SNR=11						
LAZ	**Ladron**	**64.88**	**326**	*eP*	**P**	**17 22 02.8**	**+0.2**
	comp=N,19nm,1.5s,mb4.7						
LAZ				*ep*P	pP	17 22 28.1	-1.1
ANMO	**Albuquerque**	**64.94**	**327**	P	**P**	**17 22 02.7**	**-0.3**
	comp=N,1.4nm,0.3s,mb4.2,baz=138,slow=9.0,SNR=13						
ANMO				pP	pP	17 22 28.9	-0.8
	comp=N,2.2nm,0.6s,baz=126,slow=7.1,SNR=2.9						
ANMO	**Albuquerque**	**64.94**	**327**	*eP*	**P**	**17 22 03.2**	**+0.2**
	comp=N,60nm,1.8s,mb5.1						
ANMO				*ep*P	pP	17 22 28.2	-1.4
CBKS	**Cedar Bluff**	**64.94**	**334**	*eP*	**P**	**17 22 01.8**	**-1.2**
	comp=N,20nm,0.8s,mb5.0						
CBKS				*ep*P	pP	17 22 29.5	-0.1
V24A	**Rampart Ranch,**	**64.94**	**328**	⇓P	**P**	**17 22 02.6**	**-0.4**
	baz=65,SNR=8.1						
217A	**Green Valley**	**64.98**	**321**	⇑P	**P**	**17 22 03.4**	**0.0**
	baz=65,SNR=8.4						
U25A	**Circle Dot Ran**	**65.05**	**329**	P	**P**	**17 22 03.0**	**-0.7**
	baz=65,SNR=12						
118A	**Homack Ranch,**	**65.12**	**323**	⇓P	**P**	**17 22 03.8**	**-0.5**
	baz=65,SNR=6.6						
Y20A	**Horse Springs,**	**65.17**	**325**	⇓P	**P**	**17 22 04.5**	**0.0**
	baz=65,SNR=8.8						
X21A	**Alamocita Cree**	**65.25**	**325**	⇓P	**P**	**17 22 05.6**	**+0.6**
	baz=66,SNR=8.8						
JFWS	**Jewell Farm**	**65.32**	**343**	*eP*	**P**	**17 22 03.5**	**-1.8**
	comp=N,66nm,1.4s,mb5.3						
TUC	**Tucson**	**65.35**	**322**	*eP*	**P**	**17 22 05.6**	**-0.1**
	comp=N,18nm,1.5s,mb4.7						
117A	**Oracle**	**65.51**	**322**	P	**P**	**17 22 06.8**	**+0.1**
	baz=66,SNR=12						
216A	**Three Points,**	**65.52**	**321**	⇑P	**P**	**17 22 06.9**	**0.0**
	baz=66						
T25A	**Trinidad**	**65.64**	**330**	P	**P**	**17 22 08.1**	**+0.6**
	baz=66,SNR=6.9						
X20A	**Quemado**	**65.71**	**325**	⇑P	**P**	**17 22 08.3**	**+0.4**
	baz=66,SNR=12						
T24A	**Torres, Weston**	**65.90**	**329**	⇓P	**P**	**17 22 09.4**	**+0.3**
	baz=66,SNR=7.3						
V22A	**San Miguel Ran**	**65.92**	**327**	⇑P	**P**	**17 22 09.4**	**+0.1**
	baz=66						
S25A	**Robets Cordova**	**66.07**	**330**	⇓P	**P**	**17 22 10.1**	**-0.1**
	baz=66,SNR=9.9						
U22A	**Llaves**	**66.25**	**327**	⇑P	**P**	**17 22 11.8**	**+0.4**
	baz=66,SNR=6.2						
214A	**Organ Pipe Nat**	**66.30**	**320**	⇓P	**P**	**17 22 12.4**	**+0.5**
	baz=66,SNR=9.7						
Y17A	**Roosevelt**	**66.39**	**323**	⇓P	**P**	**17 22 12.6**	**+0.3**
	baz=67,SNR=11						
S24A	**Houchin Ranch,**	**66.43**	**329**	P	**P**	**17 22 13.2**	**+0.7**
	baz=67,SNR=14						
115A	**Sonoran Desert**	**66.48**	**321**	⇓P	**P**	**17 22 13.4**	**+0.5**
	baz=67,SNR=5.2						
SDCO	**Great Sand Dun**	**66.65**	**329**	*eP*	**P**	**17 22 13.8**	**-0.1**
	comp=N,76nm,1.6s,mb5.3						
SDCO				*ep*P	pP	17 22 40.4	-0.3
T22A	**Edith**	**66.77**	**328**	⇑P	**P**	**17 22 15.1**	**+0.4**
	baz=67,SNR=8.6						
Y16A	**Circle Bar Ran**	**66.88**	**322**	⇓P	**P**	**17 22 15.5**	**0.0**
	baz=67,SNR=8.8						
V19A	**Window Rock**	**66.89**	**325**	⇑P	**P**	**17 22 16.3**	**+0.8**
	baz=67,SNR=5.6						
U20A	**Newcomb**	**67.11**	**326**	⇑P	**P**	**17 22 18.1**	**+1.2**
	baz=67						
X16A	**Lo Mia Camp, P**	**67.25**	**323**	⇓P	**P**	**17 22 18.3**	**+0.5**
	baz=67,SNR=10						
S22A	**4UR Ranch, Cre**	**67.30**	**328**	⇑P	**P**	**17 22 18.0**	**-0.1**
	baz=68,SNR=7.3						
Y15A	**Casa Rosa Ranc**	**67.43**	**322**	⇓P	**P**	**17 22 18.8**	**-0.1**
	baz=68,SNR=8.8						
Q24A	**Divide**	**67.45**	**330**	P	**P**	**17 22 19.4**	**+0.4**
	baz=68,SNR=12						
T19A	**Beclabito**	**67.72**	**326**	⇑P	**P**	**17 22 21.4**	**+0.7**
	baz=68,SNR=9.9						
S21A	**Coal Bank Pass**	**67.72**	**328**	P	**P**	**17 22 21.1**	**+0.5**
	baz=68,SNR=7.1						
X15A	**Humboldt**	**67.76**	**322**	P	**P**	**17 22 21.5**	**+0.5**
	baz=68,SNR=10						
V17A	**Tonalea, Kykot**	**67.77**	**324**	⇑P	**P**	**17 22 21.3**	**+0.2**
	baz=68						
W16A	**Flagstaff**	**67.79**	**323**	⇓P	**P**	**17 22 22.8**	**+1.6**
	baz=68,SNR=9.4						
Y14A	**Wickenburg**	**67.81**	**322**	P	**P**	**17 22 21.6**	**+0.3**
	baz=68,SNR=7.0						
ECSD	**EROS Data Cent**	**68.02**	**339**	*eP*	**P**	**17 22 20.9**	**-1.5**
	comp=N,50nm,1.5s,mb5.1						
ECSD				*ep*P	pP	17 22 49.1	-0.2
LIC	**Lamto**	**68.10**	**75**	*eP*	**P**	**17 22 22.7**	**-0.9**
	comp=N,73nm,0.7s,mb5.6						
X14A	**Yava**	**68.12**	**322**	⇑P	**P**	**17 22 23.5**	**+0.2**
	baz=68,SNR=10						
S20A	**Disappointment**	**68.13**	**327**	⇑P	**P**	**17 22 23.3**	**0.0**
	baz=68,SNR=13						
R21A	**Cimarron**	**68.14**	**328**	⇓P	**P**	**17 22 23.4**	**0.0**
	baz=68,SNR=8.2						
Y13A	**Salome**	**68.21**	**321**	P	**P**	**17 22 24.1**	**+0.3**
	baz=68,SNR=5.7						
W15A	**Williams**	**68.27**	**323**	P	**P**	**17 22 26.3**	**+2.1**
	baz=68,SNR=7.6						
TIC	**Toumodi**	**68.28**	**74**	*eP*	**P**	**17 22 23.9**	**-0.8**
	comp=N,115nm,1.1s,mb5.6						
ISCO	**Idaho Springs**	**68.34**	**330**	⇓P	**P**	**17 22 24.6**	**+0.1**
	baz=68						
ISCO	**Idaho Springs**	**68.34**	**330**	*eP*	**P**	**17 22 24.2**	**-0.3**
	comp=N,44nm,1.6s,mb5.0						
ISCO				*ep*P	pP	17 22 50.6	-0.8
T18A	**Mexican Hat**	**68.39**	**326**	P	**P**	**17 22 24.7**	**-0.2**
	baz=69,SNR=16						
KIC	**Kosan Boka**	**68.41**	**75**	*eP*	**P**	**17 22 24.8**	**-0.8**
	comp=N,105nm,0.7s,mb5.8						
DBIC	**Dimbokro**	**68.43**	**74**	P	**P**	**17 22 24.9**	**-0.8**
	comp=N,24nm,0.4s,mb5.3,baz=221,slow=6.6,SNR=47						
DBIC				pP	pP	17 22 52.8	+0.2
	comp=N,

baz=71,SNR=12
Q16A **Castle Valley** 70.40 326 ⇑P P 17 22 37.7 +0.4
baz=71,SNR=8.7
O19A **Miners Draw (B** 70.41 329 ⇑P P 17 22 37.2 -0.1
baz=71,SNR=8.6
HEC **Hector,Ludlow** 70.41 320 ⇓P P 17 22 37.6 +0.3
baz=71,SNR=17
QSPA **South Pole Qui** 70.43 180 eP P 17 22 38.2 +1.3
comp=N,24nm,0.8s,mb5.1
P18A **Preston Nutter** 70.46 327 ⇑P P 17 22 37.9 +0.3
baz=71,SNR=11
U12A **Valley of Fire** 70.46 322 ⇓P P 17 22 38.2 +0.5
baz=71,SNR=12
R15A **Junction** 70.47 325 ⇑P P 17 22 38.3 +0.6
baz=71
T13A **Saint George** 70.51 323 ⇑P P 17 22 38.7 +0.8
baz=71
RWWY **Rawlins** 70.57 331 eP P 17 22 38.6 +0.4
comp=N,163nm,2.3s,mb5.5
RWWY ePcP PcP 17 22 59.2 +0.5
M21A **Separation Pea** 70.58 331 ⇓P P 17 22 38.4 +0.1
baz=71,SNR=8.1
CCUT **Cedar City** 70.59 324 eP P 17 22 39.4 +1.0
comp=N,56nm,1.3s,mb5.2
CCUT epP pP 17 23 05.7 +0.2
MSU **Marysvale** 70.64 325 eP P 17 22 39.2 +0.5
comp=N,35nm,1.2s,mb5.1
MSU epP pP 17 23 04.9 -0.8
ARUT **Antelope Range** 70.80 324 eP P 17 22 40.4 +0.7
comp=N,51nm,1.2s,mb5.2
ARUT epP pP 17 23 07.5 +0.7
BFSC **Mount Baldy Ra** 70.82 319 ⇑P P 17 22 40.4 +0.5
baz=71,SNR=7.6
L21A **Rawlins** 70.86 331 P P 17 22 39.7 -0.2
baz=71,SNR=14
SHPR **Sheep Range** 70.87 322 eP P 17 22 40.0 -0.1
SHPR epP pP 17 23 07.5 +0.3
M20A **Sweetwater, Wa** 70.87 330 ⇓P P 17 22 40.1 +0.1
baz=71,SNR=6.1
S13A **Holt Ranch, En** 70.88 324 P P 17 22 41.4 +1.1
baz=71,SNR=35
GSC **Goldstone** 71.01 320 ⇓P P 17 22 41.6 +0.6
baz=71,SNR=10
GSC **Goldstone** 71.01 320 eP P 17 22 41.8 +0.8
comp=N,82nm,1.7s,mb5.3
GSC epP pP 17 23 08.1 0.0
MWC **Mount Wilson** 71.06 319 eP P 17 22 41.7 +0.4
comp=N,85nm,1.5s,mb5.3
MWC epP pP 17 23 08.4 0.0
O17A **Robinson Place** 71.13 327 ⇑P P 17 22 42.4 +0.8
baz=71,SNR=7.5
K21A **Alcova** 71.33 331 P P 17 22 43.0 +0.1
baz=72,SNR=25
L20A **Wamsutter** 71.35 330 ⇓P P 17 22 42.9 0.0
baz=72,SNR=7.4
R13A **O'Grain Ranch,** 71.37 324 P P 17 22 44.3 +1.2
baz=72,SNR=12
T11A **Corn Creek, Al** 71.41 323 P P 17 22 44.3 +0.9
baz=72,SNR=25
EDW2 **Edwards Air Fo** 71.45 319 P P 17 22 43.9 +0.2
baz=72,SNR=8.9
U10A **Ash Meadows, A** 71.49 321 ⇓P P 17 22 44.9 +1.0
baz=72,SNR=6.6
DAU **Daniels Canyon** 71.56 327 eP P 17 22 44.5 +0.3
comp=N,76nm,1.7s,mb5.2
Q14A **Sevier Lake (B** 71.57 325 P P 17 22 45.1 +0.8
baz=72,SNR=31
J22A **Midwest** 71.61 332 P P 17 22 44.0 -0.5
baz=72,SNR=17
NLU **North Lily Min** 71.64 326 eP P 17 22 45.5 +0.7
comp=N,35nm,1.5s,mb5.0
NLU epP pP 17 23 11.9 +0.1
LRMC **Laurel Mountai** 71.67 320 P P 17 22 45.4 +0.4
baz=72,SNR=11
N17A **Moffit Pass** 71.74 328 ⇓P P 17 22 45.7 +0.5
baz=72,SNR=20
JLU **Jordanelle** 71.80 327 eP P 17 22 46.3 +0.7
comp=N,38nm,1.3s,mb5.1
FURC **Furnace Creek,** 71.84 321 ⇓P P 17 22 47.5 +1.5
baz=72,SNR=11
AGMN **Agassiz Nation** 71.84 342 eP P 17 22 44.4 -1.4
comp=N,26nm,1.0s,mb5.0
AGMN epP pP 17 23 11.6 -1.3
K20A **Yellowstone Ra** 71.85 331 P P 17 22 45.4 -0.5
baz=72,SNR=10
P14A **Drum Mountains** 71.90 326 P P 17 22 47.1 +0.9
baz=72,SNR=21
L19A **Farson** 71.90 330 ⇓P P 17 22 46.2 0.0
baz=72,SNR=9.7
MPMC **Manual Prospec** 71.94 320 ⇓P P 17 22 46.7 +0.1
baz=72,SNR=12
J21A **Lysite** 71.98 332 ⇓P P 17 22 46.6 -0.1
baz=72,SNR=14
L18A **Fontenelle, Gr** 72.09 329 ⇓P P 17 22 47.7 +0.4
baz=72,SNR=7.5
DUG **Dugway** 72.20 326 eP P 17 22 48.2 +0.1
comp=N,32nm,1.4s,mb5.0
K19A **Absolon Red Bu** 72.22 330 ⇓P P 17 22 48.0 -0.1
baz=72,SNR=8.6
ISA **Isabella** 72.27 320 ⇑P P 17 22 49.1 +0.5
baz=72,SNR=23
ISA **Isabella** 72.27 320 eP P 17 22 48.9 +0.4
comp=N,27nm,1.0s,mb5.0
ISA epP pP 17 23 15.2 -0.5
I21A **Big Trails, Te** 72.28 332 P P 17 22 48.0 -0.5
baz=72,SNR=27
R11A **Troy Canyon, C** 72.39 323 P P 17 22 50.1 +0.9
baz=73,SNR=20
BW06 **Boulder Array** 72.51 330 ⇑P P 17 22 49.6 -0.2
baz=73,SNR=9.6
PDAR **Pinedale Array** 72.51 330 P P 17 22 49.2 -0.6
comp=N,2.8nm,0.9s,mb4.1,baz=144,slow=5.5,SNR=20
PDAR pP pP 17 23 17.4 +0.4
comp=N,2.4nm,0.9s,baz=119,slow=8.6,SNR=4.1
PKM **Peak Mountain** 72.60 318 P P 17 22 51.1 +0.5
baz=73,SNR=16
HWUT **Hardware Ranch** 72.60 328 eP P 17 22 50.8 +0.4
comp=N,13nm,1.0s,mb4.7
L17A **Cokeville** 72.63 329 P P 17 22 50.9 +0.3
baz=73,SNR=5.1
K18A **Toltan Ranch,** 72.64 330 P P 17 22 52.2 +1.7
baz=73,SNR=6.2
J19A **Crowheart** 72.65 331 ⇑P P 17 22 50.3 -0.3
baz=73,SNR=17
S10A **Tonopah Range,** 72.67 322 ⇑P P 17 22 50.8 -0.1
baz=73,SNR=25
R10A **Warm Springs** 72.76 323 P P 17 22 52.6 +1.2
baz=73,SNR=27
I20A **Worland** 72.77 332 ⇓P P 17 22 50.8 -0.5
baz=73,SNR=7.2
Q11A **Duckwater** 72.78 324 P P 17 22 52.1 +0.6
baz=73,SNR=27
H21A **Big Horn, Sher** 72.82 333 ⇑P P 17 22 50.7 -0.9
baz=73,SNR=5.9
L16A **Fish Haven** 72.84 328 ⇑P P 17 22 52.1 +0.3
baz=73
SMMC **Simmler** 72.98 318 P P 17 22 53.7 +0.9
baz=73,SNR=10
J18A **Kendall Valley** 73.06 330 P P 17 22 52.8 -0.3
baz=73,SNR=15
H20A **Greybull** 73.13 332 P P 17 22 52.8 -0.7
baz=73,SNR=6.2
Q10A **Clear Creek Ra** 73.18 323 ⇓P P 17 22 54.6 +0.8
baz=73,SNR=6.8
I19A **Meeteetse** 73.22 331 P P 17 22 53.9 -0.1
baz=73,SNR=12
L15A **Malad City** 73.31 328 P P 17 22 54.3 -0.3
baz=74,SNR=16
HVU **Hansel Valley** 73.34 327 eP P 17 22 54.5 -0.2
comp=N,5.7nm,0.2s,mb5.0
K16A **Soda Springs** 73.53 329 ⇓P P 17 22 56.1 +0.3
baz=74,SNR=13
REDW **Red Top Meadow** 73.57 330 eP P 17 22 56.1 +0.1
comp=N,45nm,1.6s,mb5.0
ULM **Lac du Bonnet** 73.60 342 P P 17 22 54.2 -1.9
comp=N,14nm,0.8s,mb4.8,baz=159,slow=4.8,SNR=13
ULM pP pP 17 23 21.8 -1.5
comp=N,12nm,0.6s,baz=153,slow=5.0,SNR=6.0
ULM LR LR 17 57 40.4
comp=N,120nm,18.7s,baz=193,slow=38
ULM **Lac du Bonnet** 73.60 342 eP P 17 22 54.0 -2.1
comp=N,80nm,1.5s,mb5.2
ULM epP pP 17 23 21.1 -2.2
LOHW **Long Hollow** 73.64 330 eP P 17 22 56.7 +0.2
comp=N,58nm,1.8s,mb5.0
TPAW **Teton Pass** 73.72 330 eP P 17 22 57.1 +0.2
comp=N,25nm,1.3s,mb4.8
L14A **Malta** 73.76 327 P P 17 22 58.4 +1.2
baz=74,SNR=11
RRI2 **Red Ridge** 73.79 329 eP P 17 22 57.2 -0.1
comp=N,50nm,1.2s,mb5.1
RRI2 epP pP 17 23 24.6 0.0
G20A **Bridger** 73.80 332 ⇓P P 17 22 56.4 -0.9
baz=74,SNR=9.8
MOOW **Moose Ponds** 73.81 330 eP P 17 22 58.0 +0.5
comp=N,36nm,1.6s,mb4.8
MOOW epP pP 17 23 24.4 -0.3
TBI **Tubuai** 73.89 251 eS S 17 32 23.7 +1.7
comp=N,261nm,24.2s
TBI eLR LR 17 45 56.4
comp=N,424nm,30.8s
NVAR **Mina Array Bea** 74.00 322 P P 17 22 59.1 +0.4
comp=N,5.5nm,0.7s,mb4.4,baz=151,slow=6.2,SNR=45
NVAR pP pP 17 23 25.4 -0.6
comp=N,6.6nm,0.9s,baz=141,slow=5.9,SNR=6.5
IMW **Indian Meadow** 74.02 330 eP P 17 22 58.8 +0.1
comp=N,53nm,1.5s,mb5.0
H18A **Shoshone NF, C** 74.02 331 P P 17 22 58.5 -0.2
baz=74,SNR=27
FLWY **Flagg Ranch** 74.05 330 eP P 17 22 59.2 +0.3
RLMT **Red Lodge** 74.19 332 ⇑P P 17 22 59.6 0.0
baz=74,SNR=10
RLMT **Red Lodge** 74.19 332 eP P 17 22 59.5 -0.1
comp=N,95nm,1.7s,mb5.2
LKWY **Lake** 74.28 331 eP P 17 23 01.7 +1.6
comp=N,58nm,1.5s,mb5.1
SCHQ **Schefferville** 74.30 1 P P 17 22 59.4 -0.7
comp=N,6.9nm,0.8s,mb4.5,baz=192,slow=7.1,SNR=5.6
SCHQ pP pP 17 23 26.4 -1.0
comp=N,8.5nm,0.8s,baz=183,slow=7.1,SNR=4.0
E21A **Keefer Ranch,** 74.36 334 P P 17 23 00.5 -0.1
baz=75,SNR=13
J15A **Blackfoot** 74.36 329 P P 17 23 01.1 +0.4
baz=75,SNR=10.0
G18A **Lazy EL Ranch,** 74.47 332 P P 17 23 01.2 0.0
baz=75,SNR=18
D22A **Cohagen** 74.48 335 ⇓P P 17 23 01.5 +0.2
baz=75
F19A **Roth Farm, Mol** 74.62 332 P P 17 23 01.9 -0.1
baz=75,SNR=18
YMR **Madison River** 74.62 330 eP P 17 23 04.1 +2.0
comp=N,119nm,1.6s,mb5.4
C23A **Lambert** 74.62 336 ⇓P P 17 23 02.1 0.0
baz=75
WAKR **Walker** 74.72 321 eP P 17 23 03.7 +0.9
comp=N,50nm,1.6s,mb5.0
WAKR epP pP 17 23 30.9 +0.8
D21A **La Casta Ranch** 74.75 334 ⇓P P 17 23 03.2 +0.4
baz=75,SNR=11
H16A **Russell Place,** 74.77 330 P P 17 23 03.9 +0.9
baz=75,SNR=11
E20A **Meyer Farm, Mu** 74.78 333 P P 17 23 03.0 0.0
baz=75,SNR=21
DGMT **Dagmar** 74.80 337 eP P 17 23 03.0 0.0
comp=N,111nm,1.4s,mb5.4
J14A **Carey** 74.84 328 ⇓P P 17 23 03.8 +0.3
baz=75,SNR=14
GCMT **Greycliff** 74.89 332 eP P 17 23 03.4 -0.3
comp=N,38nm,1.3s,mb5.0
CMB **Columbia Colle** 74.98 320 eP P 17 23 04.9 +0.6
comp=N,9.4nm,1.1s,mb4.4
F18A **Big Timber** 75.00 332 P P 17 23 04.3 0.0
baz=75,SNR=29
E19A **Rath Farm, Rou** 75.02 333 P P 17 23 04.4 0.0
baz=75,SNR=35
J13A **Cove Ranch, Pi** 75.23 328 ⇓P P 17 23 06.5 +0.9
baz=75,SNR=6.8
D20A **Manuel Ranch,** 75.24 334 ⇑P P 17 23 06.2 +0.6
baz=75,SNR=7.3
I14A **Mackay** 75.25 329 ⇓P P 17 23 06.3 +0.5
baz=76,SNR=15
F17A **Fitzpatrick Pl** 75.42 331 ⇓P P 17 23 06.9 +0.2
baz=76,SNR=14
WCN **Washoe City** 75.43 322 eP P 17 23 08.3 +1.4
HLID **Hailey** 75.47 328 ⇑P P 17 23 07.5 +0.4
baz=76
HLID **Hailey** 75.47 328 eP P 17 23 07.6 +0.6
comp=N,36nm,1.2s,mb5.0
PAHR **Pah Rah Range** 75.48 322 eP P 17 23 07.9 +0.7
comp=N,52nm,1.1s,mb5.2
PAHR epP pP 17 23 34.4 -0.2
PPT **Papeete** 75.54 256 eP P 17 23 11.3 +3.2
comp=N,111nm,24.2s
PPT eS S 17 32 42.3 +1.7
PPT comp=N,150nm,26.8s eLR LR 17 46 39.3
comp=N,403nm,28.0s
PPT **Papeete** 75.54 256 LR LR 17 47 59.0
comp=N,276nm,18.6s,baz=131,slow=29
PPT **Papeete** 75.54 256 eP P 17 23 11.3 +3.2
PPT eS S 17 32 42.3 +1.7
I13A **Wildhorse Cree** 75.57 328 ⇑P P 17 23 08.5 +0.9
baz=76,SNR=13
E18A **Harlowton** 75.59 332 P P 17 23 07.7 0.0
baz=76,SNR=15
BOZ **Bozeman (W)** 75.66 331 P P 17 23 08.3 +0.2
baz=76,SNR=16
BOZ **Bozeman (W)** 75.66 331 eP P 17 23 08.0 -0.1
comp=N,36nm,1.6s,mb4.8
G15A **Dillon** 75.70 330 P P 17 23 08.7 +0.3
baz=76,SNR=12
H14A **Leadore** 75.72 329 P P 17 23 09.9 +1.5
baz=76,SNR=5.9
DLMT **Dillon** 75.90 330 eP P 17 23 10.3 +0.8
comp=N,45nm,1.5s,mb5.0
DLMT epP pP 17 23 37.5 +0.6
E17A **Martinsdale** 75.93 332 P P 17 23 09.8 +0.2
baz=76,SNR=17
I12A **Atlanta** 76.00 328 ⇓P P 17 23 10.8 +0.8
baz=76,SNR=18
D18A **Linhart Farms,** 76.03 333 ⇑P P 17 23 10.9 +0.8
baz=76,SNR=8.6
MFID **Camas Ranch** 76.08 327 P P 17 23 11.8 +1.3
baz=76,SNR=11
H13A **Challis** 76.11 329 ⇑P P 17 23 11.3 +0.7
baz=76,SNR=27
C19A **Slack Wire Ran** 76.13 333 P P 17 23 10.5 -0.2
baz=76,SNR=17
LRM **Limekiln Ridge** 76.17 330 eP P 17 23 11.9 +0.9
comp=N,313nm,2.1s,mb5.7
F15A **Butte** 76.21 330 ⇓P P 17 23 11.6 +0.4
baz=76,SNR=10.0
E16A **East Helena** 76.35 331 ⇓P P 17 23 12.3 +0.3
baz=77,SNR=6.8
D17A **Six Diamond Ra** 76.38 332 P P 17 23 12.2 0.0
baz=77,SNR=24
H12A **Diamond D Ranc** 76.40 328 ⇓P P 17 23 13.1 +0.8
baz=77,SNR=15
G13A **Cobalt** 76.49 329 P P 17 23 13.3 +0.5
baz=77,SNR=56
HRY **Holter Researc** 76.56 331 eP P 17 23 13.6 +0.5
comp=N,5.8nm,0.8s,mb4.4
F14A **Wisdom** 76.60 330 ⇑P P 17 23 14.4 +1.0
baz=77,SNR=14
B19A **Brinkman Farms** 76.65 334 ⇓P P 17 23 13.0 -0.6
baz=77,SNR=12
EGMT **Eagleton** 76.65 333 P P 17 23 13.4 -0.3
baz=77,SNR=8.6
EGMT **Eagleton** 76.65 333 eP P 17 23 13.2 -0.4
comp=N,20nm,1.0s,mb4.8
D16A **Dana Ranch, Ca** 76.67 332 P P 17 23 14.3 +0.5
baz=77,SNR=30
E15A **Deer Lodge** 76.71 331 ⇑P P 17 23 14.3 +0.3
baz=77,SNR=9.2
C17A **Wharram Farm,** 76.78 333 ⇓P P 17 23 14.2 -0.2
baz=77,SNR=9.5
WVOR **Wild Horse Val** 76.89 325 eP P 17 23 15.5 +0.4
comp=N,15nm,1.7s,mb4.5
A19A **Klindworth Far** 76.94 334 ⇑P P 17 23 15.5 +0.3
baz=77,SNR=6.2
B18A **Beardsley Farm** 76.95 334 P P 17 23 15.3 0.0
baz=77,SNR=6.3
F13A **Darby** 77.04 329 P P 17 23 16.2 +0.4
baz=77,SNR=32
G12A **Big Creek, Yel** 77.05 328 ⇑P P 17 23 16.1 +0.1
baz=77,SNR=12
E14A **Clinton** 77.10 330 ⇑P P 17 23 16.6 +0.4
baz=77,SNR=9.8
D15A **Lincoln** 77.12 331 ⇑P P 17 23 17.1 +0.8
baz=77,SNR=14
CHMT **Chamberlain Mo** 77.36 331 eP P 17 23 18.2 +0.5
comp=N,23nm,1.6s,mb4.7
A18A **Metzger Ranch,** 77.39 334 ⇓P P 17 23 17.3 -0.5
baz=78,SNR=6.9
E13A **Victor** 77.45 330 ⇓P P 17 23 18.7 +0.6
baz=78,SNR=8.3
MOD **Modoc** 77.46 323 eP P 17 23 18.4 +0.1
comp=N,31nm,1.5s,mb4.8
MOD epP pP 17 23 45.6 -0.2
F12A **Elk City** 77.46 329 ⇓P P 17 23 18.5 +0.2
baz=78,SNR=17
D14A **Greenough** 77.60 331 ⇓P P 17 23 19.3 +0.3
baz=78,SNR=9.7
MSO **Missoula** 77.61 330 ⇑P P 17 23 19.3 +0.3
baz=78,SNR=6.7
MSO **Missoula** 77.61 330 eP P 17 23 18.6 -0.4
comp=N,30nm,1.5s,mb4.8
C15A **Salmond Ranch,** 77.71 332 P P 17 23 20.0 +0.4
baz=78,SNR=34
SLMT **Seeley Lake** 77.71 331 eP P 17 23 20.0 +0.4
comp=N,16nm,1.3s,mb4.6
A17A **Triple J Farms** 77.77 333 P P 17 23 19.6 -0.3
baz=78,SNR=18
D13A **Huson** 78.05 330 ⇓P P 17 23 21.3 -0.1
baz=78,SNR=16
B15A **Bradely Ranch,** 78.09 332 P P 17 23 21.2 -0.5
baz=78,SNR=18
E12A **Beaver Dam Sad** 78.09 329 P P 17 23 21.9 +0.2
baz=78,SNR=11
SWMT **Swartz Lake** 78.14 331 eP P 17 23 22.4 +0.4
comp=N,15nm,1.4s,mb4.5
A16A **West Butte Ran** 78.15 333 P P 17 23 21.9 -0.1
baz=78,SNR=23
SYO **Syowa Base** 78.20 160⇑eP P 17 23 21.6 -0.5
SYO **Syowa Base** 78.20 160⇑epP pP 17 23 50.2 +0.6
C14A **Swan Lake** 78.22 331 ⇓P P 17 23 22.8 +0.4
baz=78
K05A **Summer Lake** 78.33 324 ⇑P P 17 23 23.9 +0.8
baz=78,SNR=12
YBMT **Yellow Bay** 78.41 331 eP P 17 23 24.4 +1.0
comp=N,6.4nm,0.9s,mb4.3
B14A **Marquette Ranc** 78.44 332 P P 17 23 24.6 +1.0
baz=79,SNR=9.0
D12A **Red Ives Fores** 78.44 330 ⇓P P 17 23 23.8 +0.1
baz=79
JTMT **Jette** 78.45 331 eP P 17 23 24.4 +0.8
comp=N,6.9nm,1.0s,mb4.3
I07A **Izee** 78.47 325 ⇑P P 17 23 24.2 +0.4
baz=79,SNR=11
C13A **Hot Springs** 78.53 331 ⇑P P 17 23 24.7 +0.6
baz=79,SNR=14
F10A **Beach Ranch, E** 78.59 328 ⇑P P 17 23 24.9 +0.4
baz=79,SNR=7.4
A15A **Johnson Ranch,** 78.66 332 ⇑P P 17 23 23.6 -1.2
baz=79,SNR=12
BLMT **Blacktail Moun** 78.68 331 eP P 17 23 25.8 +0.9
comp=N,32nm,1.4s,mb5.0
YBH **Yreka Blue Hor** 78.72 322 P P 17 23 24.1 -1.2
comp=N,4.6nm,0.9s,mb4.3,baz=107,slow=4.4,SNR=5.9
BSMT **Bassoo Peak** 78.75 331 eP P 17 23 25.9 +0.6
comp=N,48nm,1.6s,mb5.1
A14A **Double T Ranch** 78.96 332 ⇑P P 17 23 26.2 -0.2
baz=79,SNR=10
B13A **Whitefish** 78.99 331 P P 17 23 26.7 +0.1
baz=79,SNR=9.0
G08A **Pilot Rock** 79.00 327 ⇓P P 17 23 26.6 -0.1
baz=79
KTRM **Thompson Ridge** 79.22 322 P P 17 23 28.6 +0.6
WALA **Waterton Lakes** 79.24 332 eP P 17 23 28.0 0.0
comp=N,1.0nm,1.1s
VIPM **Ingram Point** 79.35 325 P P 17 23 29.4 +0.8
A13A **Flathead Natio** 79.37 332 ⇓P P 17 23 28.8 +0.2
baz=80
E09A **Wood Farm, Sta** 79.42 328 P P 17 23 29.4 +0.3
baz=80,SNR=11
C11A **Tepee Creek (N** 79.43 330 P P 17 23 28.9 -0.2
baz=80,SNR=24
G06A **Carlson Farm,** 79.84 326 P P 17 23 32.5 +1.2
baz=80,SNR=7.9
A12A **Yaak River Ran** 79.94 331 ⇓P P 17 23 32.4 +0.7
baz=80
HAWA **Hanford** 80.04 327 eP P 17 23 32.1 -0.2
comp=N,58nm,1.5s,mb5.2
HAWA epP pP 17 23 59.7 -0.3
RSW **Rattlesnake Hi** 80.07 327 eP P 17 23 33.2 +0.7
comp=N,5.9nm,0.4s,mb4.8
RSW epP pP 17 24 00.5 +0.4
D08A **Wollman Farm,** 80.18 328 P P 17 23 34.1 +1.0
baz=80,SNR=6.1
OD2 **Odessa Site #2** 80.31 328 eP P 17 23 33.7 0.0
comp=N,126nm,1.5s,mb5.5
C09A **Chrisman Ranch** 80.38 329 P P 17 23 34.4 +0.3
baz=81,SNR=11
HOOD **Mount Hood Mea** 80.44 325 eP P 17 23 35.2 +0.7
comp=N,39nm,1.2s,mb5.1
HOOD epP pP 17 24 00.8 -1.3
TSUM **Tsumeb** 80.73 107 eP P 17 23 37.8 +1.0
comp=N,3.9nm,0.7s,mb4.3
TSUM epP pP 17 24 05.8 +1.4
F04A **Amboy** 81.24 326 ⇑P P 17 23 38.7 -0.1
baz=81,SNR=6.7
ETW **Entiat** 81.26 328 P P 17 23 39.5 +0.6
B08A **Colville Reser** 81.28 329 P P 17 23 39.1 +0.2
baz=82,SNR=9.1
LON **Longmire** 81.45 326 eP P 17 23 39.8 0.0
comp=N,23nm,1.7s,mb4.7
NLW **Nelson Butte** 81.58 328 P P 17 23 41.0 +0.5
EDM **Edmonton** 82.10 335 eP P 17 23 41.4 -1.7
EDM epP pP 17 24 07.5 -3.3
RPW **Rockport** 82.42 328 eP P 17 23 43.9 -0.9
comp=N,34nm,1.3s,mb5.0
JCW **Jim Creek** 82.46 327 eP P 17 23 44.5 -0.6
comp=N,82nm,1.3s,mb5.4
JCW epP pP 17 24 11.8 -1.0
PCBR **Castelo Branco** 82.52 43 eP P 17 23 47.6 +2.0
comp=N,37nm,1.8s,mb4.9
MTE **Manteigas** 82.79 43 eP P 17 23 47.7 +0.7
comp=N,44nm,1.3s,mb5.1
PGC **Sidney** 83.53 327 eP P 17 23 50.9 +0.3
comp=N,0.6nm,0.9s
MVO **Moncorvo** 83.53 42 eP P 17 23 51.2 +0.4
comp=N,24nm,1.0s,mb5.0
TAM **Tamanrasset** 84.21 63 eP P 17 23 55.1 +0.4
comp=N,6.4nm,0.8s,mb4.5
TAM epP pP 17 24 21.9 -0.7
PAB **San Pablo** 84.41 45 eP P 17 23 55.4 +0.1
comp=N,6.8nm,0.6s,mb4.7
PAB epP pP 17 24 24.1 +1.0
BOSA **Boshof** 84.44 118 P P 17 23 56.4 +0.5
comp=N,7.0nm,0.8s,mb4.5,baz=271,slow=4.8,SNR=8.3
BOSA pP pP 17 24 24.0 +0.3
comp=N,16nm,1.0s,baz=268,slow=4.4,SNR=4.6
BOSA LR LR 17 56 53.8
comp=N,117nm,20.2s,baz=63,slow=32
BOSA **Boshof** 84.44 118 eP P 17 23 55.5 -0.4
comp=N,20nm,1.1s,mb4.9
BOSA epP pP 17 24 23.9 +0.2
ESDC **Sonseca Array** 84.73 45 P P 17 23 56.6 -0.3
comp=N,3.1nm,0.8s,mb4.3,baz=246,slow=6.2,SNR=5.5
ESDC pP pP 17 24 25.0 +0.2
comp=N,3.8nm,0.8s,baz=246,slow=5.1,SNR=4.0
MAW **Mawson** 86.05 163 P P 17 24 04.0 +0.9
comp=N,4.7nm,0.7s,mb4.5,baz=216,slow=5.7,SNR=16
MAW LR LR 18 03 27.4
comp=N,94nm,21.2s,baz=61,slow=36
MAW **Mawson** 86.05 163 eP P 17 24 03.7 +0.6
comp=N,3.6nm,0.6s,mb4.5
MAW **Mawson** 86.05 163 eP P 17 24 03.6 +0.5
comp=N,8.1nm,1.5s,mb4.4
YKA **Yellowknife Ar** 89.48 341 P P 17 24 18.6 -0.6
comp=N,25nm,0.7s,mb5.3,baz=134,slow=4.7,SNR=60
YKA pP pP 17 24 46.1 -1.3
comp=N,11nm,0.7s,baz=134,slow=4.7,SNR=5.1
KEST **Kesra** 92.41 53 P P 17 24 35.2 +1.6
comp=N,0.6nm,0.6s,mb4.0,baz=270,slow=8.1,SNR=1.8
CASY **Casey** 94.23 180 eP P 17 24 41.1 -0.4
CASY **Casey** 94.23 180 eP P 17 24 42.6 +1.1
comp=N,34nm,1.5s,mb5.5
ILAR **Eielson Array** 102.59 335 PP PP 17 29 32.7 -0.8
comp=N,1.6nm,1.2s,baz=108,slow=5.5,SNR=7.0
ARCES **ARCESS Array B** 109.95 22 PKKPbc PKKPbc 17 40 55.6 -2.7
comp=N,0.8nm,0.4s,baz=95,slow=4.2,SNR=15
DZM **Mont Dzumac** 111.63 235 eLR LR 18 03 20.5
comp=N,241nm,30.8s
BRTR **Keskin Array B** 111.97 54 PKiKP PKiKP 17 29 57.5 0.0
comp=N,0.3nm,0.4s,baz=245,slow=3.0,SNR=3.2
BRTR PP PP 17 30 41.7 -1.2
comp=N,1.8nm,0.9s,baz=251,slow=7.5,SNR=7.9
GNI **Garni** 120.51 54 PKP PKPdf 17 30 14.9 +1.0
comp=N,2.9nm,0.5s,baz=318,slow=12,SNR=3.9
STKA **Stephens Creek** 120.83 210 PKP PKPdf 17 30 14.9 +0.1
comp=N,1.9nm,0.5s,baz=138,slow=8.0,SNR=8.7
ABKAR **Akbulak array** 129.99 42 ePKPdf PKPdf 17 30 32.3 +0.6

PETK	Petropavlovsk-	131.04	324	PKP	PKPdf	17 30 34.0	+0.4	
	comp=N,3.6nm,0.8s,baz=63,slow=6.0,SNR=5.9							
PETK	Petropavlovsk-	131.04	324	PKP	PKPdf	17 30 34.0	+0.4	
ASAR	Alice Springs	131.36	209	PKP	PKPdf	17 30 35.0	-0.2	
	comp=N,4.7nm,0.4s,baz=142,slow=2.2,SNR=98							
ASAR				PP	PP	17 32 52.3	-1.0	
	comp=N,4.6nm,1.2s,baz=137,slow=5.2,SNR=7.7							
ASAR				SKPbc	SKPbc	17 33 50.2	-0.4	
	comp=N,2.3nm,0.9s,baz=136,slow=4.3,SNR=9.1							
WRA	Warramunga Arr	134.35	212	PKP	PKPdf	17 30 40.9	0.0	
	comp=N,5.9nm,0.5s,baz=161,slow=1.7,SNR=64							
WRA				PP	PP	17 33 11.4	-1.1	
	comp=N,1.4nm,1.0s,baz=147,slow=4.9,SNR=4.9							
WRA				SKPbc	SKPbc	17 34 00.4	-0.6	
	comp=N,3.4nm,0.9s,baz=144,slow=3.1,SNR=8.1							
BVAR	Borovoye Array	134.46	33	PKP	PKPdf	17 30 40.9	+0.9	
	comp=N,0.7nm,0.6s,baz=270,slow=4.4,SNR=5.8							
FITZ	Fitzroy Crossi	139.69	202	PKhKP	PKPpre	17 30 42.5		
	comp=N,1.3nm,0.4s,baz=197,slow=8.7,SNR=17							
FITZ	Fitzroy Crossi	139.69	202	*e*PKPpre	PKPpre	17 30 42.0		
ZAA0	Zalesovo Array	140.45	24	*e*PKPpre	PKPpre	17 30 45.8		
ZALV	Zalesovo Beam	140.45	24	PKhKP	PKPpre	17 30 45.9		
	comp=N,2.1nm,0.6s,baz=304,slow=3.3,SNR=11							
GUMO	Guam	146.91	265	PKPbc	PKPdf	17 31 03.9	+0.3	
	comp=N,138nm,1.1s,baz=181,slow=5.4,SNR=9.8							
GUMO	Guam	146.91	265	*e*PKPdf	PKPdf	17 31 04.0	+0.5	
BAKI	Biak	147.67	233	P	PKPdf	17 31 08.3	+3.4	
WMQ	Urumqi	149.15	34	PKPbc	PKPdf	17 31 02.0	-4.4	
WMQ				PP	PP	17 34 41.0	-1.5	
WMQ				SKS	SKSdf	17 37 59.0	-5.7	
WMQ				SKKS	SKKSac	17 41 19.0	-4.9	
WMQ				SS	SS	17 53 42.0	-3.7	
WMQ				AMB	AMB			
	comp=Z,130nm,10.0s							
WMQ				LR	LR			
	comp=N,120nm,22.0s							
WMQ				LR	LR			
	comp=E,110nm,22.0s							
WMQ				LR	LR			
	comp=Z,110nm,22.0s							
HYB	Hyderabad	149.29	89	*i* PKP	PKPbc	17 31 12.0	+0.2	
BNDI	Bandanaira	149.48	220	P	PKPdf	17 31 10.5	+2.6	
HIA	Hailar	149.71	348	*e*PKPbc	PKPbc	17 31 11.8	-0.1	
MDJ	Mudanjiang	150.72	332	PKPbc	PKPdf	17 31 09.5	+0.6	
MJAR	Matsushiro Arr	150.81	311	PKPbc	PKPbc	17 31 14.8	-0.1	
	comp=Z,6.3nm,0.5s,baz=76,slow=1.5,SNR=14							
MJAR				pPKPbc	pPKPbc	17 31 43.7	-0.5	
	comp=Z,9.9nm,0.7s,baz=96,slow=1.2,SNR=3.1							
MAJO	Matsushiro	150.81	311	*e*PKPbc	PKPbc	17 31 14.1	-0.8	
MAT	Matsushiro	150.81	311	PKP	PKPbc	17 31 14.4	-0.6	
SONM	Songino Array	151.75	6	PKP	PKPdf	17 31 10.6	+0.3	
	comp=Z,1.4nm,0.7s,baz=326,slow=1.1,SNR=12							
SONM				PKPbc	PKPbc	17 31 17.0	+0.3	
	comp=Z,11nm,0.5s,baz=325,slow=1.8,SNR=76							
SONM				pPKP	pPKPdf	17 31 38.1	-1.6	
	comp=Z,5.5nm,0.6s,baz=342,slow=1.0,SNR=6.1							
SONM				pPKPbc	pPKPbc	17 31 45.4	-0.6	
	comp=Z,9.5nm,0.9s,baz=326,slow=1.9,SNR=5.0							
ULN	Ulaanbaatar	151.78	5	*e*PKPbc	PKPbc	17 31 16.9	+0.1	
NLAI	Namlea	152.15	217	P	PKPbc	17 31 18.3	-0.4	
CN2	Changchun	153.10	336	*e*P	PKPab	17 31 30.6	-1.1	
CN2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
CN2	Changchun	153.10	336	*e*PKPbc	PKPdf	17 31 13.4	+1.0	
TNTI	Ternate	155.18	223	P	PKPdf	17 31 15.3	-1.0	
KSRS	Korea Array	156.94	323	PKP	PKPdf	17 31 18.2	+0.3	
	comp=Z,1.5nm,0.8s,baz=34,slow=1.2,SNR=9.2							
KSRS				pPKP	pPKPdf	17 31 45.7	-1.6	
	comp=Z,4.2nm,1.0s,baz=42,slow=3.1,SNR=7.4							
GTA	Gaotai	158.21	24	*e*PKP	PKPdf	17 31 20.2	+0.8	
GTA				pPKP	pPKPdf	17 31 47.0	-1.9	
GTA				sPKP		17 31 57.9		
GTA				SKS	SKSdf	17 38 15.7	+0.3	
GTA				SS	SS	17 55 25.0	+1.2	
GTA				AMB	AMB			
	comp=Z,110nm,6.6s							
GTA				LR	LR			
	comp=N,140nm,12.1s							
GTA				LR	LR			
	comp=E,170nm,11.4s							
GTA				LR	LR			
	comp=Z,160nm,12.6s							
HHC	Hu-ho-hao-te	158.96	359	*e*PKP	PKPdf	17 31 21.0	+0.7	
HHC				pPKP	pPKPdf	17 31 47.9	-1.9	
HHC				sPKP		17 31 58.5		
HHC				PKS		17 34 53.8		
HHC				PP	PP	17 35 41.1	+4.2	
HHC				SKS	SKSdf	17 38 15.4	-0.6	
HHC				SKKS	SKKSac	17 42 17.8	+1.2	
HHC				SS	SS	17 55 34.2	+3.0	
HHC				AMB	AMB			
	comp=Z,840nm,7.1s							
BJI	Beijing	159.27	348	PKP	PKPdf	17 31 21.7	+1.1	
LSA	Lhasa	159.55	57	*e*PKPdf	PKPdf	17 31 22.2	+0.9	
LZH	Lanzhou	162.59	19	*e*PKP	PKPdf	17 31 26.0	+1.7	
LZH				pPKP	pPKPdf	17 31 55.0	+1.1	
LZH				sPKP		17 32 02.5		
LZH				PKPab	PKPab	17 32 17.0	+4.1	
NJ2	Nanjing	165.81	331	*e*PKP	PKPdf	17 31 28.3	+0.9	
CD2	Chengdu	167.16	29	*e*PKP	PKPdf	17 31 27.6	-0.8	
CD2				pPKP	pPKPdf	17 31 54.5	-3.5	
CD2				sPKP		17 32 05.1		
CD2				PKPab	PKPab	17 32 33.9	+0.7	
CD2				PP	PP	17 36 22.7	+2.0	
CD2				SKKS	SKKSac	17 42 58.6	-0.3	
CD2				SS	SS	17 56 56.7	-0.1	
CD2				AMB	AMB			
	comp=Z,80nm,8.2s							
CD2				LR	LR			
	comp=N,130nm,21.0s							
CD2				LR	LR			
	comp=Z,150nm,18.2s							
CMAR	Chiang Mai Arr	168.64	95	PKP	PKPdf	17 31 29.1	-0.6	
	comp=Z,0.9nm,0.8s,baz=290,slow=2.7,SNR=8.3							
CMAR				PKPab	PKPab	17 32 40.4	0.0	
	comp=Z,1.3nm,0.6s,baz=258,slow=5.9,SNR=9.5							
KMI	Kunming	170.76	53	PKP	PKPdf	17 31 31.9	+1.0	
KMI				sPKP		17 32 11.0		
KMI				PP	PP	17 36 41.3	+1.4	
KMI				SS	SS	17 57 31.5	-3.0	
KMI				AMB	AMB			
	comp=Z,60nm,5.5s							
KMI				LR	LR			
	comp=Z,130nm,26.4s							
GYA	Guiyang	172.28	29	PKP	PKPdf	17 31 30.0	-1.6	
GYA				pPKP	pPKPdf	17 32 01.8	+0.7	
GYA				sPKP		17 32 11.9		
GYA				PKPab	PKPab	17 32 57.3	+1.4	
GYA				PKS		17 35 01.0		
GYA				PP	PP	17 36 47.5	+1.1	
GYA				AMB	AMB			
	comp=Z,120nm,8.0s							

IDC ***11*** *17:27:54.0±0.7,39°.13N×72°.70E,h0km,mb4.2/14, mb1 4.4/19,mb1mx4.3/30,mbtmp4.3/19,ML4.1/5,MS3.3/2, Ms1 3.3/2,ms1mx2.8/34,Error ellipse: s-maj=15.4km s-min=11.4km az=63.0*

NNC ***11*** *17:27:56.4±2.0,39°.30N×72°.52E,h8km±7km,mb4.8, mpv4.7,Error ellipse: s-maj=17.3km s-min=9.4km az=23.0*

MOS ***11*** *17:27:58.5±2.0,39°.26N×72°.86E,h33km,mb4.6/13,Error ellipse: s-maj=9.8km s-min=5.3km az=89.3*

ISCJB ***11*** *17:28:01.6±0.5,39°.28N±0°.03×72°.87E±0°.05,h67km±5km, mb4.2/29,Error ellipse: s-maj=6.5km s-min=5.8km az=175.9*

BJI ***11*** *17:28:01.9,39°.50N×72°.87E,h54km,mB5.0/7,mb4.6/9, ML4.1/5,Ms4.7/3,Ms7 4.5/3*

NEIC ***11*** *17:28:03.0±0.7,39°.31N×72°.80E,h65km±5km,mb4.4/7, Error ellipse: s-maj=7.4km s-min=5.8km az=162.0*

ISC 11 17:28:00.7±0.8,39°.11N±0°.06×72°.81E±0°.06,h51km±6km, n137,σ1$24/143,mb4.2/29,15C-5D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.49	80	⇑*i*P	Pn	17 28 37.9	-0.8
KSH				smax			
	comp=N,2μm,0.8s						
KSH				smax			
	comp=E,4μm,1.0s						
AML	Almayashu	3.09	12	P	Pn	17 28 47.1	+0.2
	SNR=681						
AML	Almayashu	3.09	12	*e*P	Pn	17 28 47.0	0.0
KZA	Kyzart	3.50	31	P	Pn	17 28 53.7	+1.2
	SNR=68						
KZA	Kyzart	3.50	31	*e*P	Pn	17 28 53.2	+0.7
EKS2	Erkin-Say	3.62	11	P	Pn	17 28 55.0	+0.7
	SNR=82						
EKS2	Erkin-Say	3.62	11	*e*P	Pn	17 28 53.9	-0.4
AAK	Ala-Archa	3.75	19	P	Pn	17 28 56.9	+1.0
	SNR=153						
AAK	Ala-Archa	3.75	19	Pn	Pn	17 28 57.1	+1.1
	comp=E,0.7nm,0.3s,baz=166,slow=6.2,SNR=175						
AAK				Sn	Sn	17 29 42.8	+4.1
	comp=E,0.6nm,0.3s,baz=127,slow=22,SNR=17						
AAK				LR	LR	17 30 33.4	
	comp=E,416nm,19.7s,baz=204,slow=42						
AAK	Ala-Archa	3.75	19	*e*P	Pn	17 28 56.7	+0.8
AAK	Ala-Archa	3.75	19	PN	Pn	17 28 57.1	+1.2
AAK						17 29 42.8	
AAK				pmax	pmax		
	comp=Z,35nm,0.3s						
AAK				smax			
	comp=N,28nm,0.3s						
AAK				MLR	MLR		
	comp=Z,416nm,19.7s						
KBK	Karagaybulak	3.90	24	P	Pn	17 28 59.5	+1.5
	SNR=66						
FRU	Bishkek	3.96	20	*e*PN	Pn	17 29 00.0	+1.1
FRU				*e*S	Sn	17 29 48.5	+4.4
FRU				pmax	pmax		
	comp=Z,140nm,1.4s						
FRU				smax			
	comp=E,2μm,1.8s						
CHM	Chimkent	4.03	324	*e*P	Pn	17 29 01.8	+2.0
CHM	Chimkent	4.03	324	*e*PN	Pn	17 29 01.8	+2.0
ULHL	Ulahol	4.08	39	P	Pn	17 29 01.7	+1.2
	SNR=52						
CHMS	Chumysh	4.16	20	P	Pn	17 29 02.2	+0.7
	SNR=78						
USP	Ospenovka	4.35	17	P	Pn	17 29 04.5	+0.4
	SNR=30						
KK31	Karatay Array	4.35	337	⇑Pn	Pn	17 29 02.5	-1.7
	comp=E,53nm,0.4s,baz=154,slow=11,SNR=779						
KK31				⇑Sn	Sn	17 29 54.0	+0.3
	comp=E,316nm,0.7s,baz=163,slow=29,SNR=12						
KK31	Karatay Array	4.35	337	*e*PN	Pn	17 29 03.2	-1.0
KK31				*e*		17 29 54.0	
KK31				pmax	pmax		
	comp=Z,52nm,0.3s						
KK31				smax			
	comp=N,216nm,0.3s						
KKAR	Karatay Array	4.35	337	*e*P	Pn	17 29 02.7	-1.6
KKAR				*e*S	Sn	17 29 46.5	-7.2
KKAR	Karatay Array	4.35	337	*e*PN	Pn	17 29 02.7	-1.5
TKM2	Tokmak 2	4.35	28	⇑Pn	Pn	17 29 03.7	-0.6
	comp=N,71nm,0.7s						
TKM2				⇓Lg		17 30 13.5	
	comp=N,176nm,0.9s						
TKM2	Tokmak 2	4.35	28	P	Pn	17 29 05.4	+1.1
	SNR=9.2						
TKM2	Tokmak 2	4.35	28	*e*P	Pn	17 29 04.9	+0.7
TKM2	Tokmak 2	4.35	28	PN	Pn	17 29 04.8	+0.6
TKM2						17 30 04.8	
TKM2				pmax	pmax		
	comp=Z,57nm,0.7s						
TKM2				smax			
	comp=N,93nm,0.6s						
KNDC	Almaty	5.17	36	⇑Pn	Pn	17 29 14.9	-0.5
	comp=N,136nm,0.8s						
KNDC				⇑Lg		17 30 40.3	
	comp=N,688nm,1.2s						
AAA	Alma-Ata	5.20	36	*e*PN	Px	17 29 31.7	
AAA				pmax	pmax		
	comp=Z,99nm,0.3s						
CEP	Cherat	5.32	188	P	Pn	17 29 23.6	+6.0
CEP				S	Sn	17 30 30.0	+12
CHCP	Chirah Chowk	5.45	176	P	Pn	17 29 25.5	+6.1
KBL	Kabul	5.47	215	*e*P	Pn	17 29 24.0	+4.5
	comp=Z,53nm,0.6s						
KBL	Kabul	5.47	215	*e*PN	Pn	17 29 24.0	+4.4
KBL				pmax	pmax		
	comp=Z,53nm,0.6s						
THW	Thamme Wali	6.36	188	P	Pn	17 29 36.4	+4.6
MK31	Makanchi Array	10.35	39	Pn	Pn	17 30 26.8	+0.4
	comp=Z,4.1nm,0.7s,baz=216,slow=14,SNR=26						
MK31				Lg		17 33 22.8	
	comp=Z,4.9nm,0.6s,baz=233,slow=28,SNR=3.9						
MK31	Makanchi Array	10.35	39	*e*P	Pn	17 30 26.8	+0.4
MK31	Makanchi Array	10.35	39	*e*P	Pn	17 30 26.8	+0.4
MKAR	Makanchi Array	10.35	39	Pn	Pn	17 30 26.9	+0.5
	comp=Z,0.4nm,0.3s,baz=223,slow=14,SNR=19						
MKAR				Lg		17 33 19.7	
	comp=Z,0.3nm,0.3s,baz=226,slow=31,SNR=4.3						
MKAR	Makanchi Array	10.35	39	P	Pn	17 30 26.9	+0.5
KURK	Kurchatov	12.31	18	⇑P	Pn	17 30 49.7	-3.4
	comp=Z,5.7nm,0.9s						
KURK				⇑Lg		17 34 22.5	
	comp=Z,49nm,1.1s						
KURK	Kurchatov	12.31	18	*e*P	Pn	17 30 48.4	-4.6
	comp=Z,6.6nm,0.9s						
KURK	Kurchatov	12.31	18	*e*P	Pn	17 30 49.4	-3.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VOSK	Vostochnaya	13.68	355	⇑P	Pn	17 31 06.3	-5.4
	comp=Z,4.6nm,0.5s						
VOSK				⇑Lg		17 35 02.2	
	comp=Z,34nm,1.5s						
AB31	Akbulak array	13.70	322	⇑P	Pn	17 31 06.6	-5.4
	comp=Z,7.0nm,0.4s,baz=121,slow=14,SNR=7.3						
AB31				⇓S	Sn	17 33 33.5	-8.9
	comp=Z,6.1nm,0.5s,baz=130,slow=24,SNR=5.3						
ABKAR	Akbulak array	13.70	322	*e*P	Pn	17 31 05.1	-6.9
	comp=Z,14nm,0.4s						
BVAR	Borovoye Array	14.02	354	Pn	Pn	17 31 11.7	-4.6
	comp=Z,0.7nm,0.3s,baz=166,slow=14,SNR=24						
BVAR				Sn	Sn	17 33 42.0	-8.3
	comp=Z,0.8nm,0.3s,baz=161,slow=23,SNR=6.3						
BVAR				Lg		17 35 11.1	
	comp=Z,0.2nm,0.3s,baz=184,slow=31,SNR=3.4						
BVAR	Borovoye Array	14.02	354	P	Pn	17 31 11.7	-4.7
BVAR						17 33 42.0	
BRVK	Borovoye	14.06	354	⇑P	Pn	17 31 11.6	-5.3
	comp=Z,23nm,0.6s						
BRVK				⇑Lg		17 35 15.3	
	comp=Z,53nm,1.5s						
BRVK	Borovoye	14.06	354	*e*P	Pn	17 31 11.5	-5.4
	comp=Z,18nm,0.6s						
BRVK	Borovoye	14.06	354	*c i*P	Pn	17 31 12.1	-4.8
DANN	Dangsing	14.06	136	*e*P	Pn	17 31 15.4	-1.7
	comp=Z,46nm,0.4s						
ZRNK	Zerenda	14.09	351	⇓P	Pn	17 31 12.0	-5.4
	comp=Z,12nm,0.7s						
ZRNK				⇑Lg		17 35 15.3	
	comp=Z,19nm,1.0s						
KOLN	Koldanda	14.44	138	*e*P	Pn	17 31 19.8	-2.4
	comp=Z,34nm,0.7s						
GKN	Gorkha	14.81	135	*e*P	Pn	17 31 23.9	-3.1
	comp=Z,58nm,0.5s						
KKN	Kakani	15.34	134	*e*P	Pn	17 31 29.6	-4.2
DMN	Daman	15.38	135	*e*P	Pn	17 31 29.9	-4.5
	comp=Z,16nm,0.3s						
AKTK	Aktyubinsk	15.41	322	Pn	Pn	17 31 29.2	-5.4
AKTK				Sn	Sn	17 34 14.9	-9.2
AKTO	Aktyubinsk	15.41	322	Pn	Pn	17 31 29.2	-5.4
	comp=Z,1.4nm,0.3s,baz=133,slow=14,SNR=22						
AKTO				Sn	Sn	17 34 14.9	-9.2
	comp=Z,0.8nm,0.3s,baz=47,slow=19,SNR=6.2						
AKTO	Aktyubinsk	15.41	322	P	Pn	17 31 29.2	-5.4
AKTO						17 34 14.9	
PKIN	Phulchoki	15.57	134	*e*P	Pn	17 31 32.1	-4.7
PKI	Pulchoki	15.58	134	*e*P	Pn	17 31 32.0	-4.9
	comp=Z,44nm,0.7s						
GUN	Gumba	15.59	132	*e*P	Pn	17 31 32.2	-4.8
ZAA0	Zalesovo Array	16.95	25	*e*P	Pn	17 31 52.5	-1.6
ZALV	Zalesovo Beam	16.95	25	Pn	Pn	17 31 52.7	-1.3
	comp=Z,2.5nm,0.3s,baz=216,slow=12,SNR=26						
ZALV				LR	LR	17 38 37.8	
	comp=Z,86nm,18.4s,baz=243,slow=38						
ZALV	Zalesovo Beam	16.95	25	Pn	Pn	17 31 52.7	-1.3
ZALV				LR	LR	17 38 37.8	
ZALV	Zalesovo Beam	16.95	25	P	Pn	17 31 52.7	-1.3
TAPN	Taplejung	17.09	129	*e*P	Pn	17 31 47.2	-8.7
	comp=Z,20nm,0.6s						
NVS	Novosibirsk	17.24	21	*e*P	Pn	17 31 54.6	-3.0
NVS				*e*		17 34 56.3	
ODAN	Odare	17.26	131	*e*P	Pn	17 31 49.3	-8.8
	comp=Z,41nm,0.6s						
MAK	Makhachkala	19.45	290	*e*P	Pn	17 32 27.3	+2.8
MAK				*e*S	S	17 36 00.8	+0.9
MAK				pmax	pmax		
	comp=Z,144nm,1.3s						
MAK				MLR	MLR		
	comp=Z,307nm,18.0s						
SVE	Sverdlovsk	19.46	340	*e*P	Pn	17 32 21.9	-2.6
SVE				pmax	pmax		
	comp=Z,14nm,1.0s						
ARU	Arti	19.73	336	*e*P	Pn	17 32 24.5	-3.2
	comp=Z,12nm,0.8s						
ARU	Arti	19.73	336	*d i*P	Pn	17 32 24.4	-3.3
ARU				S	S	17 36 00.9	-4.4
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GTA	Gaotai	20.89	81	P	P	17 32 41.2	+2.6
GTA				pmax	pmax		
	comp=Z,31nm,0.9s						
GNI	Garni	21.61	282	P	P	17 32 46.4	+0.1
	comp=Z,3.5nm,0.5s,mb4.0,baz=163,slow=20,SNR=2.2						
GNI	Garni	21.61	282	*e*P	P	17 32 50.6	+4.3
GNI				pmax	pmax		
	comp=Z,68nm,1.3s						
ZEI	Tsey	22.09	289	*e*P	P	17 32 57.0	+5.6
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.3						
KIV	Kislovodsk	22.99	292	*e*P	P	17 33 00.2	-0.8
	comp=Z,18nm,0.8s,mb4.6						
KIV	Kislovodsk	22.99	292	⇓*e*P	pP	17 33 11.3	-1.5
KIV				*e*		17 33 25.1	
KIV				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.4						
ZAK	Zakamensk	24.23	52	*e*P	P	17 33 13.7	+1.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
VRHR	Novokhopersk	24.86	309	*e*P	P	17 33 19.2	+0.9
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
VRHR				pmax	pmax		
	comp=N,3.0nm,0.3s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
SONM	Songino Array	25.72	59	P	P	17 33 27.2	+1.2
	comp=E,6.4nm,0.8s,mb4.2,baz=264,slow=10,SNR=9.9						
SONM	Songino Array	25.72	59	P	P	17 33 27.2	+1.1
ULN	Ulaanbaatar	26.16	59	*e*P	P	17 33 31.1	+1.1
ULN	Ulaanbaatar	26.16	59	*e*P	P	17 33 31.1	+1.0
VSR	Storozhevoye	26.39	308	*e*P	P	17 33 32.1	0.0
VSR				pmax	pmax		
	comp=N,2.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,7.0nm,0.8s						
VSR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
ANN	Anapa	26.77	294	*e*P	pP	17 33 51.8	+3.2
ANN				pmax	pmax		
	comp=Z,57nm,1.3s,mb4.9						
OBN	Obninsk	28.99	316	P	P	17 33 59.0	+3.8
HHC	Hu-ho-hao-te	29.59	74	*e*P	P	17 34 00.3	-0.4
HHC				pP	pP	17 34 15.1	+1.3
HHC				sP	sP	17 34 22.4	+2.6
HHC				PP	PP	17 34 57.6	-10
HHC				PcP	PcP	17 37 05.1	+0.7
HHC				S	S	17 38 49.1	-3.1
HHC				sS	sS	17 39 13.8	-0.5
HHC				SS	SS	17 40 23.9	-35
HHC				ScP	ScP	17 40 41.0	-1.0
HHC				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,190nm,6.1s						
HHC				LR	LR		
	comp=N,230nm,9.8s						
HHC				LR	LR		
	comp=E,620nm,10.2s						
HHC				LR	LR		
	comp=Z,570nm,11.0s						
BR131	Keskin Array S	30.11	284	*e*P	P	17 34 08.2	+2.8
	comp=Z,3.0nm,0.8s,mb4.1						
BRTR	Keskin Array B	30.11	284	P	P	17 34 07.6	+2.3
	comp=Z,2.8nm,0.9s,mb4.0,baz=93,slow=8.4,SNR=10						
BRTR	Keskin Array B	30.11	284	P	P	17 34 07.6	+2.3
CMAR	Chiang Mai Arr	30.61	125	P	P	17 34 10.9	+1.0
	comp=Z,0.7nm,0.5s,mb3.8,baz=314,slow=8.8,SNR=6.1						
CMAR	Chiang Mai Arr	30.61	125	P	P	17 34 10.9	+1.0
PALK	Pallekele	32.48	165	*i* P	pP	17 34 37.6	-1.9
JOF	Joensuu	34.38	328	*e*P	P	17 34 42.3	-0.2
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
FINES	FINESS Array B	36.18	324	P	P	17 34 57.0	-0.9
	comp=Z,2.8nm,0.6s,mb4.4,baz=107,slow=9.7,SNR=16						
FINES	FINESS Array B	36.18	324	P	P	17 34 57.0	-0.9
KEV	Kevo	38.95	337	*e*P	P	17 35 20.0	-1.2
ARCES	ARCESS Array B	39.32	336	P	P	17 35 23.9	-0.4
	comp=Z,2.4nm,0.5s,mb4.2,baz=111,slow=8.7,SNR=44						
ARCES	ARCESS Array B	39.32	336	P	P	17 35 23.9	-0.4
ARE0	ARCESS Array S	39.32	336	*e*P	P	17 35 23.6	-0.7
YAK	Yakutsk	41.02	37	*e*P	P	17 35 36.5	-2.0
YAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.3						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
KHC	Kasperske Hory	42.68	304	*e*P	P	17 35 52.4	+0.2
	comp=E,8.2nm,1.2s,mb4.3						
KHC	Kasperske Hory	42.68	304	*e*P	P	17 35 52.4	+0.2
KHC				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
CLL	Collm	42.72	307	*e*P	P	17 35 52.0	-0.5
CLL				*i*	pP	17 36 01.2	-4.8
CLL	Collm	42.72	307	*e*P	P	17 35 52.0	-0.5
CLL				*i*	pP	17 36 01.2	-4.8
KSRS	Korea Array	42.73	74	P	P	17 35 52.2	-0.6
	comp=Z,0.4nm,0.5s,mb3.4,baz=279,slow=7.0,SNR=3.2						
KSRS	Korea Array	42.73	74	P	P	17 35 52.2	-0.6
TIXI	Tiksi	42.82	23	*e*P	P	17 35 52.3	-0.7
	comp=Z,10nm,0.5s,mb4.8						
TIXI	Tiksi	42.82	23	*e*P	P	17 35 53.0	-0.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
N

*BJI **11** 17:30:47.2,2.″42N×127.″88E,h55km,mB4.9/4,mb4.9/6*
*NEIC **11** 17:30:48.7±3.0, 1.″88N×127.″46E,h88km±30km,mb4.3/4, Error ellipse: s-maj=18.1km s-min=9.8km az=72.0*
*ISCJB **11** 17:30:49.3±1.2,1.″91N±0.″05×127.″5E±0.″1,h110km±11km, mb4.4/20,Error ellipse: s-maj=17.4km s-min=6.5km az=164.4*
*IDC **11** 17:30:52.2±3.0, 1.″83N×127.″40E,h120km±28km,mb4.0/14, mb1 4.2/15,mb1mx4.0/21,mbtmp4.0/15,Error ellipse: s-maj=29.6km s-min=11.1km az=74.0*
ISC 11 17:30:50.4±1.1,1.88N±0.05×127.55E±0.10,h104km±11km, n41,σ0=84/42,mb4.4/20,1C,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**2.75**	**261**	P	**Pn**	**17 31 32.9**	**+0.1**
KMSI	**Cibinong**	**3.80**	**250**	P	**Pn**	**17 31 47.8**	**+0.9**
	211nm,0.7s						
DAV	**Davao City (W)**	**5.51**	**339**	S	**Sn**	**17 33 11.2**	**-1.1**
	25nm,0.3s,baz=248,slow=7.9,SNR=2.3						
MRSI	**Marisa**	**5.78**	**256**	P	**Pn**	**17 32 14.2**	**+0.4**
KAKA	**Kakadu**	**15.29**	**162**	*e*P	**Pn**	**17 34 19.4**	**-1.3**
	8.8nm,0.4s						
KAKA	**Kakadu**	**15.29**	**162**	*e*P	**Pn**	**17 34 19.6**	**-1.1**
	26nm,0.5s						
KNA	**Kununurra**	**17.56**	**176**	*e*P	**Pn**	**17 34 49.0**	**+0.3**
	8.7nm,0.2s						
FITZ	**Fitzroy Crossi**	**19.95**	**185**	P	**P**	**17 35 13.6**	**-0.7**
	1.6nm,0.3s,baz=17,slow=7.6,SNR=48						
FITZ	**Fitzroy Crossi**	**19.95**	**185**	*e*P	**P**	**17 35 13.6**	**-0.7**
	11nm,0.4s						
WRA	**Warramunga Arr**	**22.69**	**163**	P	**P**	**17 35 43.6**	**+0.1**
	25nm,0.4s,mb4.9,baz=338,slow=11,SNR=225						
WRA				S	**S**	**17 39 40.1**	**-3.9**
	0.8nm,0.8s,baz=344,slow=17,SNR=2.5						
WB2	**Warramunga Arr**	**22.69**	**163**	*e*P	**P**	**17 35 43.2**	**-0.3**
MBWA	**Marble Bar**	**24.14**	**198**	*e*P	**P**	**17 35 56.1**	**-0.8**
QIS	**Mount Isa**	**25.24**	**153**	*e*P	**P**	**17 36 08.1**	**+1.2**
ASAR	**Alice Springs**	**26.14**	**167**	P	**P**	**17 36 14.9**	**0.0**
	12nm,0.4s,mb4.7,baz=345,slow=7.5,SNR=434						
ASAR				ScP	ScP	17 43 07.7	-2.7
	0.4nm,0.6s,baz=348,slow=2.8,SNR=4.8						
CMAR	**Chiang Mai Arr**	**32.53**	**302**	P	**P**	**17 37 11.4**	**-0.2**
	1.5nm,0.9s,mb3.8,baz=117,slow=5.5,SNR=7.1						
KSRS	**Korea Array**	**35.40**	**1**	P	**P**	**17 37 37.0**	**+0.8**
	1.8nm,0.7s,mb4.0,baz=176,slow=9.5,SNR=9.9						
BBOO	**Buckleboo**	**35.43**	**168**	⇑*i*P	**P**	**17 37 36.4**	**-0.2**
	18nm,0.4s,mb5.2						
MJAR	**Matsushiro Arr**	**35.87**	**15**	P	**P**	**17 37 39.6**	**-0.7**
	2.9nm,0.3s,mb4.6,baz=198,slow=11,SNR=3.5						
MAT	**Matsushiro**	**35.87**	**15**	P	**P**	**17 37 39.7**	**-0.6**
STKA	**Stephens Creek**	**36.12**	**159**	P	**P**	**17 37 43.4**	**+0.8**
	13nm,0.6s,mb5.1,baz=336,slow=7.9,SNR=43						
STKA	**Stephens Creek**	**36.12**	**159**	*e*P	**P**	**17 37 43.0**	**+0.5**
	12nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**36.12**	**159**	*e*P	**P**	**17 37 42.9**	**+0.4**
LZH	**Lanzhou**	**40.50**	**330**	*e*P	**P**	**17 38 21.0**	**+1.8**
LZH				pP	pP	17 38 34.0	-9.1
LZH				sP	sP	17 38 41.0	-14
LZH				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.1						
LZH				pmax	pmax		
	comp=Z,100nm,4.0s						
ASAJ	**Asahikawa**	**44.12**	**16**	P	**P**	**17 38 49.5**	**+1.1**
	comp=Z,5.3nm,1.1s,mb4.2,baz=196,slow=15,SNR=3.1						
GTA	**Gaotai**	**45.09**	**329**	*e*P	**P**	**17 38 57.6**	**+1.4**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**49.30**	**341**	P	**P**	**17 39 29.5**	**+0.8**
	comp=Z,1.9nm,0.7s,mb4.2,baz=159,slow=8.1,SNR=12						
SONM				PcP	PcP	17 40 50.1	+0.1
	comp=Z,0.7nm,0.7s,baz=144,slow=2.6,SNR=3.7						
MK31	**Makanchi Array**	**59.53**	**326**	*e*P	**P**	**17 40 42.5**	**-0.3**
MKAR	**Makanchi Array**	**59.53**	**326**	P	**P**	**17 40 43.2**	**+0.4**
	comp=Z,9.9nm,0.7s,mb5.0,baz=116,slow=7.9,SNR=85						
MKAR	**Makanchi Array**	**59.53**	**326**	P	**P**	**17 40 43.2**	**+0.3**
AML	**Almayashu**	**62.59**	**317**	*e*P	**P**	**17 41 04.7**	**+1.0**
	comp=Z,292nm,1.2s						
ZALV	**Zalesovo Beam**	**62.59**	**333**	P	**P**	**17 41 02.2**	**-1.3**
	comp=Z,0.8nm,0.6s,mb3.8,baz=134,slow=4.3,SNR=4.1						
KBL	**Kabul**	**63.29**	**308**	*e*P	**P**	**17 41 07.9**	**-0.6**
	comp=Z,3.4nm,0.6s,mb4.5						
KURK	**Kurchatov**	**63.73**	**328**	*e*P	**P**	**17 41 10.5**	**-0.5**
KKAR	**Karatay Array**	**65.14**	**317**	*e*P	**P**	**17 41 20.3**	**-0.1**
	comp=Z,2.0nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**69.31**	**327**	P	**P**	**17 41 46.0**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.1,baz=134,slow=6.7,SNR=12						
BRVK	**Borovoye**	**69.38**	**327**	*e*P	**P**	**17 41 46.6**	**-0.3**
ABKAR	**Akbulak array**	**74.09**	**321**	*e*P	**P**	**17 42 14.2**	**-1.0**
	comp=Z,1.1nm,0.6s,mb3.8						
AKTK	**Aktyubinsk**	**75.61**	**322**	P	**P**	**17 42 23.7**	**-0.2**
AKTO	**Aktyubinsk**	**75.61**	**322**	P	**P**	**17 42 23.7**	**-0.2**
	comp=Z,2.7nm,0.6s,mb4.1,baz=99,slow=8.1,SNR=6.7						
ILAR	**Eielson Array**	**86.41**	**25**	P	**P**	**17 43 22.8**	**+1.9**
	comp=Z,0.3nm,0.7s,mb3.4,baz=243,slow=6.0,SNR=2.7						
ARCES	**ARCESS Array B**	**92.45**	**340**	P	**P**	**17 43 47.9**	**-1.4**
	comp=Z,2.1nm,0.8s,mb4.4,baz=46,slow=7.0,SNR=4.3						

*BJI **11** 17:38:58.7,32.″92N×105.″67E,h12km,mB5.5/21,mb5.3/45, ML5.3/22,Ms5.5/61,Ms7 5.3/52*
*ISCJB **11** 17:38:59.8±0.1,32.″91N±0.″01×105.″57E±0.″02,h12km, mb5.3/259,MS4.7/50,Error ellipse: s-maj=2.3km s-min=1.9km az=149.5*
*IDC **11** 17:38:59.0±0.3,32.″88N×105.″66E,h0km,mb5.1/31, mb1 5.1/34,mb1mx5.1/35,mbtmp5.0/34,ML4.4/3,MS4.6/21, Ms1 4.6/21,ms1mx4.4/33,Error ellipse: s-maj=11.2km s-min=7.5km az=41.0*
*GCMT **11** 17:39:01.6±0.2,32.″98N×105.″65E,h12km,MW5.1, Moment Tensor Solution. s35,c42; s83,c143; Moment tensor: Scale 10^{16}Nm; M_{rr}5.37±.13; $M_{\theta\theta}$0.36±.11; $M_{\phi\phi}$-5.73±.11; $M_{r\theta}$0.47±.42; $M_{\theta\phi}$3.13±.10; $M_{\phi r}$-0.79±.34; Best double couple: $M_0$6.30000×10^{16} NP1:ϕ_s339.00000°, δ41.00000°,λ93.00000°. NP2:ϕ_s155.00000°, δ49.00000°, λ88.00000°. Principal axes: T 5.4400, Plg85.0000°, Azm43.0000°; N 1.6800, Plg2.0000°, Azm157.0000°; P -7.1200, Plg4.0000°, Azm247.0000°; Data Used: II IU G CN IC.*
*NEIC **11** 17:39:01.1±0.1,32.″91N×105.″63E,h10km,mb5.4/142 Error ellipse: s-maj=3.4km s-min=2.5km az=214.0*
*MOS **11** 17:39:02.6±0.9,32.″98N×105.″71E,h33km,mb5.5/73, MS4.8/28,Error ellipse: s-maj=6.1km s-min=3.5km az=117.4*
*SZGRF **11** 17:39:05.4,32.″73N×105.″56E,h33km,mb5.6,MS4.7, Sichuan, China*
*DJA **11** 17:39:07,32.″94N×105.″52E,h51km,mb5.5/54*
*BGS **11** 17:39:33.4±1.8,35.″79N×103.″28E,h10km,mb5.3*
ISC 11 17:39:01.6±0.1,32.93N±0.″01×105.62E±0.″02,h12km,n879, σ0=95/905,mb5.3/259,MS4.7/50,72C-79D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.56**	**219**	Pn	**Pn**	**17 39 42.8**	**-0.1**
CD2				Pg	**Pg**	**17 39 49.4**	**-1.3**
CD2				Sn	**Sn**	**17 40 16.8**	**+2.8**
CD2				Sg	**Sg**	**17 40 21.8**	**-2.1**
CD2				smax			
	comp=N,19μm,0.9s						
CD2				smax			
	comp=E,25μm,0.8s						
XAN	**Xi'an**	**2.97**	**67**	Pn	**Pn**	**17 39 48.5**	**0.0**
XAN				Pg	**Pg**	**17 39 53.1**	**-5.4**
XAN				Sg	**Sg**	**17 40 31.3**	**-5.8**
XAN				smax			
	comp=N,17μm,0.8s						
XAN				smax			
	comp=E,6μm,0.9s						
LZH	**Lanzhou**	**3.47**	**336**	Pn	**Pn**	**17 39 56.5**	**+1.2**
LZH				Pg	**Pg**	**17 40 03.8**	**-4.2**
LZH				Sn	**Sn**	**17 40 39.2**	**+2.9**
LZH				Sg	**Sg**	**17 40 48.6**	**-4.4**
LZH				smax			
	comp=N,19μm,1.0s						
LZH				smax			
	comp=E,27μm,0.9s						
LZH				LR	LR		
	comp=N,41μm,4.8s						
LZH				LR	LR		
	comp=E,38μm,8.1s						
LZH				LR	LR		
	comp=Z,42μm,6.2s						
ENH	**Enshi**	**4.24**	**128**	*e*P	**Pn**	**17 40 05.9**	**0.0**
GYA	**Guiyang**	**6.52**	**172**	⇑*i*Pn	**Pn**	**17 40 36.2**	**-1.1**
GYA				Pg	**Pg**	**17 40 58.2**	**-8.2**
GYA				Sn	**Sn**	**17 41 50.7**	**-0.8**
GYA				Sg	**Sg**	**17 42 21.6**	**-9.2**
GYA				smax			
	comp=N,2μm,0.9s						
GYA				smax			
	comp=E,2μm,0.9s						
GYA				LR	LR		
	comp=N,5μm,4.9s						
GYA				LR	LR		
	comp=E,24μm,5.0s						
GYA				LR	LR		
	comp=Z,6μm,5.0s						
TIY	**Taiyuan**	**7.33**	**48**	Pn	**Pn**	**17 40 47.4**	**-1.0**
TIY				*e*Pg	**Pg**	**17 41 12.7**	**-9.2**
TIY				Sg	**Sg**	**17 42 42.2**	**-15**
TIY				smax			
	comp=N,2μm,0.7s						
TIY				smax			
	comp=E,2μm,0.8s						
WHN	**Wuhan**	**7.81**	**105**	Pn	**Pn**	**17 40 54.0**	**-1.0**
WHN				Sn	**Sn**	**17 42 23.1**	**-0.2**
WHN				LR	LR		
	comp=N,46μm,6.0s						
WHN				LR	LR		
	comp=E,64μm,7.5s						
WHN				LR	LR		
	comp=Z,66μm,8.3s						
GTA	**Gaotai**	**7.99**	**326**	*e*P	**Pn**	**17 40 57.2**	**-0.2**
GTA				pP		17 41 01.7	
GTA				sP		17 41 05.0	
GTA				S	**Sn**	**17 42 29.4**	**+1.8**
GTA				sS		17 42 33.9	
GTA				pmax	pmax		
	comp=Z,220nm,0.9s						
GTA				pmax	pmax		
	comp=Z,220nm,5.0s						
GTA				LR	LR		
	comp=N,7μm,6.9s						
GTA				LR	LR		
	comp=E,7μm,8.3s						
GTA				LR	LR		
	comp=Z,6μm,8.5s						
KMI	**Kunming**	**8.18**	**199**	⇓P	**Pn**	**17 40 59.7**	**-0.4**
KMI				S	**Sn**	**17 42 32.5**	**0.0**
KMI				LR	LR		
	comp=N,19μm,7.3s						
KMI				LR	LR		
	comp=E,21μm,7.3s						
BTO	**Baotou**	**8.43**	**23**	*e*P	**Pn**	**17 41 01.4**	**-2.1**
BTO				S	**Sn**	**17 42 48.9**	**+10**
BTO				LR	LR		
	comp=N,14μm,9.8s						
BTO				LR	LR		
	comp=E,7μm,12.5s						
HHC	**Hu-ho-hao-te**	**9.22**	**29**	⇑P	**Pn**	**17 41 12.9**	**-1.4**
HHC				pP		17 41 16.1	
HHC				sP		17 41 18.9	
HHC				S	**Sn**	**17 42 57.8**	**-0.2**
HHC				pmax	pmax		
	comp=Z,48nm,1.1s						
HHC				pmax	pmax		
	comp=Z,3μm,5.2s						
HHC				LR	LR		
	comp=N,8μm,7.1s						
HHC				LR	LR		
	comp=E,9μm,7.2s						
HHC				LR	LR		
	comp=Z,11μm,6.5s						
TIA	**Tai'an**	**10.04**	**68**	P	**Pn**	**17 41 25.0**	**-0.5**
TIA				pmax	pmax		
	comp=Z,80nm,0.8s						
TIA				LR	LR		
	comp=N,11μm,11.6s						
TIA				LR	LR		
	comp=E,21μm,12.2s						
TIA				LR	LR		
	comp=Z,35μm,12.8s						
BJT	**Baijiatuau**	**11.04**	**47**	*e*P	**Pn**	**17 41 37.8**	**-1.5**
	comp=Z,237nm,1.1s						
BJT	**Baijiatuau**	**11.04**	**47**	*e*P	**Pn**	**17 41 37.8**	**-1.5**
BJT				pmax	pmax		
	comp=Z,237nm,1.1s						
BJI	**Beijing**	**11.06**	**47**	P	**Pn**	**17 41 38.1**	**-1.4**
BJI				pmax	pmax		
	comp=Z,87nm,0.8s						
BJI				pmax	pmax		
	comp=Z,240nm,3.3s						
BJI				LR	LR		
	comp=N,22μm,9.8s						
BJI				LR	LR		
	comp=E,16μm,10.2s						
BJI				LR	LR		
	comp=Z,8μm,15.9s						
NJ2	**Nanjing**	**11.21**	**91**	*e*P	**Pn**	**17 41 40.6**	**-1.0**
NJ2				pP		17 41 46.6	
NJ2				sP		17 41 48.9	
NJ2				S	**Sn**	**17 43 44.0**	**-2.9**
NJ2				pmax	pmax		
	comp=Z,230nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,1μm,3.9s						
NJ2				LR	LR		
	comp=N,9μm,5.5s						
NJ2				LR	LR		
	comp=E,18μm,8.6s						
NJ2				LR	LR		
	comp=Z,20μm,9.8s						
GZH	**Guangzhou**	**11.95**	**143**	P	**Pn**	**17 41 44.4**	**-7.3**
GZH				S	**Sn**	**17 43 53.2**	**-12**
GZH				LR	LR		
	comp=N,11μm,6.0s						
GZH				LR	LR		
	comp=E,16μm,6.0s						
GZH				LR	LR		
	comp=Z,12μm,7.0s						
LSA	**Lhasa**	**12.78**	**259**	P	**Pn**	**17 42 03.0**	**-0.1**
LSA				pP		17 42 11.0	
LSA				pmax	pmax		
	comp=Z,20nm,1.2s						
LSA				LR	LR		
	comp=N,3μm,9.0s						
LSA				LR	LR		
	comp=E,8μm,11.0s						
LSA				LR	LR		
	comp=Z,9μm,9.0s						
LSA	**Lhasa**	**12.78**	**259**	*e*P	**Pn**	**17 42 03.2**	**+0.1**
	comp=Z,31nm,0.7s						
LSA	**Lhasa**	**12.78**	**259**	*e*P	**Pn**	**17 42 03.2**	**+0.1**
LSA				pmax	pmax		
	comp=Z,31nm,0.7s						
SSE	**Sheshan**	**13.34**	**94**	P	**Pn**	**17 42 10.0**	**-0.7**
SSE				pP		17 42 16.9	
SSE				PP		17 42 20.6	
SSE				sP		17 42 22.2	
SSE				S	**Sn**	**17 44 35.9**	**-3.1**
SSE				sS		17 44 47.9	
SSE				pmax	pmax		
	comp=Z,60nm,1.8s						
SSE				pmax	pmax		
	comp=Z,400nm,6.3s						
SSE				LR	LR		
	comp=N,8μm,11.6s						
SSE				LR	LR		
	comp=E,17μm,11.6s						
SSE				LR	LR		
	comp=Z,21μm,12.9s						
QZH	**Quanzhou**	**13.86**	**122**	P	**Pn**	**17 42 24.0**	**+6.1**
QZH				S	**Sn**	**17 44 57.6**	**+5.8**
QZH				LR	LR		
	comp=N,30μm,12.0s						
QZH				LR	LR		
	comp=E,19μm,10.2s						
QZH				LR	LR		
	comp=Z,14μm,13.7s						
CHRT	**Chiangrai**	**14.02**	**203**	P	**Pn**	**17 42 18.0**	**-2.0**
	comp=Z,368nm,1.1s						
SHL	**Shillong**	**14.05**	**242**	⇓*i*P	**Pn**	**17 42 19.0**	**-1.4**
	comp=Z,15nm,1.0s						
SHL				*i*x	x	17 46 33.0	
DL2	**Dalian**	**14.27**	**61**	⇓*i*P	**Pn**	**17 42 24.8**	**+1.4**
DL2				pmax	pmax		
	comp=Z,50nm,1.2s						
DL2				pmax	pmax		
	comp=Z,850nm,6.7s						
DL2				LR	LR		
	comp=N,5μm,15.6s						
DL2				LR	LR		
	comp=E,7μm,14.6s						
DL2				LR	LR		
	comp=Z,10μm,14.9s						
QIZ	**Qiongzhong**	**14.36**	**164**	P	**Pn**	**17 42 21.2**	**-3.4**
QIZ				pP	pP	17 42 24.1	-11
QIZ				sP	sP	17 42 27.4	-9.2
QIZ				S	**Sn**	**17 45 06.8**	**+3.0**
QIZ				pmax	pmax		
	comp=Z,20nm,0.6s						
QIZ				LR	LR		
	comp=N,3μm,7.3s						
QIZ				LR	LR		
	comp=Z,3μm,6.9s						
QIZ	**Qiongzhong**	**14.36**	**164**	*e*P	**Pn**	**17 42 20.7**	**-3.9**
	comp=Z,49nm,0.8s						
SONM	**Songino Array**	**14.90**	**2**	Pn	**Pn**	**17 42 30.8**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=184,slow=14,SNR=82						
SONM				Lg		17 46 46.0	
	comp=Z,0.2nm,0.3s,baz=186,slow=28,SNR=2.8						
SONM	**Songino Array**	**14.90**	**2**	P	**Pn**	**17 42 30.8**	**-1.0**
ULN	**Ulaanbaatar**	**14.96**	**4**	*e*Pn	**Pn**	**17 42 30.8**	**-1.9**
ULN	**Ulaanbaatar**	**14.96**	**4**	*e*P	**Pn**	**17 42 30.8**	**-1.8**
ULN	**Ulaanbaatar**	**14.96**	**4**	P	**Pn**	**17 42 31.1**	**-1.5**
	comp=Z,674nmcomp=Z,61nm,0.9s						
ULN	**Ulaanbaatar**	**14.96**	**4**	P	**Pn**	**17 42 31.2**	**-1.4**
	SNR=30						
CHG	**Chiang Mai**	**15.28**	**205**	PG	**Pn**	**17 42 35.8**	**-1.4**
	comp=Z,120nm,1.3s						
CHTO	**Chiang Mai**	**15.28**	**205**	*e*Pn	**Pn**	**17 42 36.2**	**-0.9**
	comp=Z,90nm,0.8s						
CHTO	**Chiang Mai**	**15.28**	**205**	*e*P	**Pn**	**17 42 36.3**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,90nm,0.8s						
CHTO	**Chiang Mai**	**15.28**	**205**	P	**Pn**	**17 42 36.3**	**-0.9**
	comp=Z,2μmcomp=Z,145nm,0.9s						
CHTO	**Chiang Mai**	**15.28**	**205**	P	**Pn**	**17 42 36.9**	**-0.3**
	SNR=22						
AGT	**Agartala**	**15.51**	**238**	*e*x	x	17 42 31.0	
AGT				*e*x	x	17 43 04.0	
CM31	**Chiang Mai Arr**	**15.61**	**204**	*e*Pn	**Pn**	**17 42 40.7**	**-0.8**
	comp=Z,69nm,0.6s						
CMAR	**Chiang Mai Arr**	**15.61**	**204**	Pn	**Pn**	**17 42 40.7**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=15,slow=11,SNR=64						
CMAR				Lg		17 47 20.5	
	comp=Z,0.1nm,0.3s,baz=38,slow=30,SNR=2.5						
CMAR				PcP	PcP	17 47 42.0	-0.9
	comp=Z,0.1nm,0.3s,baz=351,slow=2.2,SNR=5.2						
CMAR				LR	LR	17 49 24.7	
	comp=Z,4μm,21.1s,baz=17,slow=40						
CMAR				ScP	ScP	17 51 18.2	+1.2
	baz=335,slow=3.2,SNR=5.2						
CMAR	**Chiang Mai Arr**	**15.61**	**204**	P	**Pn**	**17 42 40.7**	**-0.8**
TATO	**Taipei**	**15.98**	**116**	*e*P	**Pn**	**17 42 49.6**	**+3.4**
	comp=Z,299nm,1.2s						
YHNB	**Yeheng**	**16.07**	**117**	*e*P	**Pn**	**17 42 49.2**	**+1.8**
	comp=Z,267nm,1.0s						
SSLB	**Suanglung**	**16.27**	**120**	*e*Pn	**Pn**	**17 42 50.2**	**+0.2**
	comp=Z,476nm,1.2s						
TPUB	**Ta-pu**	**16.34**	**122**	*e*Pn	**Pn**	**17 42 51.9**	**+1.1**
	comp=Z,126nm,0.9s						
TAPN	**Taplejung**	**16.45**	**255**	*e*P	**Pn**	**17 42 50.2**	**-2.1**
	comp=Z,784nm,1.4s						
NACB	**Ninganchiao**	**16.51**	**118**	*e*P	**Pn**	**17 42 55.5**	**+2.5**
	comp=Z,783nm,1.8s						
BDT	**Bhumibol Dam**	**16.72**	**202**	PN	**Pn**	**17 42 55.5**	**-0.2**
	comp=Z,102nm,1.0s						
YULB	**Yu-li**	**16.76**	**121**	*e*P	**Pn**	**17 42 57.2**	**+1.0**
	comp=Z,68nm,0.9s						
ODAN	**Odare**	**16.92**	**254**	*e*P	**Pn**	**17 42 54.8**	**-3.3**
	comp=Z,1μm,1.8s						
TWG	**Pinlang**	**16.96**	**123**	*e*P	**Pn**	**17 42 58.5**	**-0.2**
	comp=Z,189nm,1.1s						
ZAK	**Zakamensk**	**17.52**	**355**	*e*P	**Pn**	**17 43 03.4**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s						
UBT	**Ubonrachathani**	**17.62**	**182**	P	**Pn**	**17 43 09.0**	**+2.1**
WMQ	**Urumqi**	**17.73**	**313**	P	**Pn**	**17 43 07.0**	**-1.1**
WMQ				sP	sP	17 43 14.0	+0.1
WMQ				PP		17 43 22.0	
WMQ				S	**Sn**	**17 46 22.0**	**-3.5**
WMQ				sS	sS	17 46 28.0	-10
WMQ				SS		17 46 46.0	
WMQ				pmax	pmax		
	comp=Z,64nm,0.7s						
WMQ				LR	LR		
	comp=N,5μm,8.0s						
WMQ				LR	LR		
	comp=E,2μm,8.0s						
WMQ				LR	LR		
	comp=Z,2μm,8.0s						
GUN	**Gumba**	**17.74**	**259**	*e*P	**Pn**	**17 43 06.8**	**-1.6**
	comp=Z,444nm,0.9s						
INCN	**Inchon**	**17.76**	**69**	*e*Pn	**Pn**	**17 43 08.5**	**0.0**
	comp=Z,509nm,1.9s						
INCN	**Inchon**	**17.76**	**69**	P	**Pn**	**17 43 09.0**	**+0.4**
	SNR=21						
NST	**Nakhon Sawan**	**17.89**	**197**	P	**Pn**	**17 43 10.2**	**-0.1**
PKI	**Pulchoki**	**18.25**	**258**	*e*P	**Pn**	**17 43 11.9**	**-2.8**
PKIN	**Phulchoki**	**18.26**	**258**	*e*P	**Pn**	**17 43 12.9**	**-1.9**
	comp=Z,200nm,0.8s						
KKN	**Kakani**	**18.28**	**259**	*e*P	**Pn**	**17 43 13.0**	**-2.0**
	comp=Z,166nm,1.0s						
CAL	**Calcutta**	**18.45**	**240**	*e*PKP	**Pn**	**17 43 18.6**	**+1.4**
CAL				*e*x	x	17 46 51.4	
DMN	**Daman**	**18.49**	**259**	*e*P	**Pn**	**17 43 14.8**	**-2.8**
	comp=Z,160nm,0.8s						
GKN	**Gorkha**	**18.73**	**260**	*e*P	**Pn**	**17 43 17.6**	**-3.0**
	comp=Z,260nm,1.0s						
KSRS	**Korea Array**	**18.77**	**70**	P	**Pn**	**17 43 20.4**	**-0.5**
	comp=Z,2.3nm,0.3s,baz=259,slow=11,SNR=153						
KSRS				S	**Sn**	**17 46 52.4**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=257,slow=16,SNR=2.5						
KSRS				Lg		17 48 39.7	
	comp=Z,0.1nm,0.3s,baz=269,slow=32,SNR=3.2						
KSRS				LR	LR	17 51 05.4	
	comp=Z,5μm,19.7s,baz=269,slow=39						
KSRS	**Korea Array**	**18.77**	**70**	P	**Pn**	**17 43 20.4**	**-0.5**
KSRS				S	**Sn**	**17 46 52.4**	**+1.6**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,5μm,19.7s						
TLY	**Talaya**	**18.79**	**356**	*e*Pn	**Pn**	**17 43 21.0**	**-0.1**
	comp=Z,46nm,1.1s						
TLY	**Talaya**	**18.79**	**356**	*e*P	**Pn**	**17 43 20.9**	**-0.2**
TLY				*e*S	**Sn**	**17 46 50.6**	**-0.5**
TLY				pmax	pmax		
	comp=Z,44nm,1.2s						
TLY				MLR	MLR		
	comp=Z,3μm,19.0s						
TLY	**Talaya**	**18.79**	**356**	P	**Pn**	**17 43 21.9**	**+0.8**
	comp=Z,203nm,1.1s,SNR=11						
TLY	**Talaya**	**18.79**	**356**	P	**Pn**	**17 43 21.2**	**+0.2**
	SNR=34						
MOY	**Mondy**	**19.02**	**351**	*e*P	**Pn**	**17 43 23.2**	**-0.7**
MOY				pmax	pmax		
	comp=Z,65nm,2.4s						
IRK	**Irkutsk**	**19.32**	**357**	*e*P	**Pn**	**17 43 27.0**	**-0.5**
IRK				pmax	pmax		
	comp=Z,159nm,1.0s						
DANN	**Dangsing**	**19.34**	**262**	*e*P	**Pn**	**17 43 26.0**	**-2.0**
	comp=Z,300nm,0.9s						
HIA	**Hailar**	**19.43**	**29**	*e*P	**Pn**	**17 43 28.2**	**-0.6**
	comp=Z,258nm,1.4s						
HIA	**Hailar**	**19.43**	**29**	*e*P	**Pn**	**17 43 28.2**	**-0.6**
HIA				pmax	pmax		
	comp=Z,258nm,1.4s						
KOLN	**Koldanda**	**19.67**	**261**	*e*P	**Pn**	**17 43 28.5**	**-3.4**
	comp=Z,126nm,0.7s						
CIT	**Chita**	**19.93**	**14**	*e*P	**

MDJ pmax pmax
comp=Z,69nm,1.1s,mb5.0
MDJ pmax pmax
comp=Z,590nm,3.9s
MDJ LR LR
comp=N,4μm,9.7s
MDJ LR LR
comp=E,3μm,15.9s
MDJ LR LR
comp=Z,5μm,11.5s,MS5.2
MDJ Mudanjiang 21.95 51 *e*P **P 17 43 55.7 +0.8**
comp=Z,141nm,1.3s,mb5.2
PTH Pithoragarh 21.96 268 *e*PKP **P 17 43 55.5 +0.3**
MK31 Makanchi Array 22.52 315 *e*P **P 17 44 00.8 -0.2**
MK31 Makanchi Array 22.52 315 *e*P **P 17 44 00.8 -0.2**
MKAR Makanchi Array 22.52 315 P **P 17 44 00.9 -0.1**
comp=Z,91nm,0.9s,mb5.2,baz=111,slow=12,SNR=104
MKAR PcP PcP 17 47 54.1 -0.5
comp=Z,7.0nm,0.8s,baz=191,slow=2.6,SNR=5.4
MKAR S **S 17 48 10.1 +2.0**
comp=Z,1.5nm,0.8s,baz=112,slow=16,SNR=2.3
MKAR Lg 17 51 08.6
comp=Z,0.7nm,0.7s,baz=130,slow=27,SNR=2.7
MKAR ScP ScP 17 51 32.2 +0.1
comp=Z,3.8nm,1.0s,baz=123,slow=4.5,SNR=4.0
MKAR LR LR 17 52 25.5
comp=Z,988nm,18.6s,MS4.3,baz=120,slow=36
MKAR P3KPbc 18 17 39.9
comp=Z,1.3nm,1.0s,baz=297,slow=5.3,SNR=8.3
MKAR Makanchi Array 22.52 315 P **P 17 44 00.9 -0.1**
MKAR PcP PcP 17 47 54.1 -0.5
MKAR S **S 17 48 10.1 +2.0**
MKAR Lg 17 51 08.6
MKAR ScP ScP 17 51 32.2 +0.1
MKAR LR LR 17 52 25.5
MKAR Makanchi Array 22.52 315 P **P 17 44 00.9 -0.1**
MKAR 17 47 54.2
MKAR S **S 17 48 10.1 +2.0**
VLA Vladivostok 22.98 56‖ *i*P **P 17 44 03.5 -2.4**
VLA *e* 17 44 27.3
VLA *e* 17 47 53.1
VLA *i*S **S 17 48 13.8 -2.2**
VLA pmax pmax
comp=Z,53nm,1.1s,mb4.9
KLP Kalpa 23.17 274 *e*PKP **P 17 44 07.5 -0.6**
KLP AMb AMB 17 44 14.4
comp=Z,174nm,1.1s,mb5.4
ORY Orie 23.27 345κ *i*P **P 17 44 09.5 +0.6**
ORY *i* 17 44 34.7
ORY *e* 17 47 55.3
TGY Tagaytay City 23.37 140 P **P 17 44 09.8 -0.4**
comp=Z,110nm,0.4s,mb5.6,baz=294,slow=20,SNR=3.0
TGY Tagaytay City 23.37 140 P **P 17 44 09.8 -0.4**
DDI Dehra Dun 23.59 271 *e*PKP **P 17 44 11.0 -1.4**
DDI *ex* x 17 45 36.0
SDNR Sundarnagar 24.25 274 *e*PKP **P 17 44 18.5 +0.1**
AAA Alma-Ata 24.70 303 *i*P **P 17 44 23.6 +1.2**
AAA *e*S **S 17 48 43.9 0.0**
AAA pmax pmax
comp=Z,800nm,3.6s
AAA smax
comp=N,1μm,15.2s
AAA MLR MLR
comp=Z,3μm,10.0s,MS5.1
NDI New Delhi 24.72 268 *e*PKP **P 17 44 22.0 -0.8**
NDI *ex* x 17 48 49.0
KSH Kashi 24.73 294 *e*P **P 17 44 26.2 +3.5**
KSH *e*pP 17 44 30.4
KSH *e*sP sP 17 44 33.2 +5.3
KSH *e*PP 17 45 03.7
KSH *e*PcP PcP 17 48 02.1 +2.7
KSH *e*S **S 17 48 47.3 +2.8**
KSH *e*sS sS 17 48 53.9 +3.4
KSH *e*SS 17 49 45.8
KSH pmax pmax
comp=Z,99nm,1.6s,mb5.1
KSH pmax pmax
comp=Z,1μm,3.8s
KSH LR LR
comp=N,7μm,9.5s
KSH LR LR
comp=E,5μm,10.6s
KSH LR LR
comp=Z,7μm,17.6s
BHK Bhakra 24.73 274 *ex* x 17 44 27.5
AYAN Aya Nagar 24.86 267 *e*PKP **P 17 44 23.2 -0.8**
AYAN AMb AMB 17 44 25.4
comp=Z,97nm,1.3s,mb5.2
ULHL Ulahol 24.96 300 P **P 17 44 25.9 +1.1**
SNR=79
SONA Sohna 24.96 267 *e*PKP **P 17 44 25.0 0.0**
SONA AMb AMB 17 44 26.4
comp=Z,88nm,1.6s,mb5.0
VIS Vishakhapatnam 25.13 238 *i*P **P 17 44 25.6 -0.9**
VIS *ex* x 17 44 29.8
comp=Z,81nm,1.0s
VIS *i*x x 17 48 55.5
KLR Kul'dur 25.37 42 *i*P **P 17 44 24.6 -3.8**
KLR *e*S **S 17 48 58.0 +3.5**
KLR pmax pmax
comp=N,120nm,1.8s
KLR pmax pmax
comp=E,500nm,1.8s
KLR pmax pmax
comp=Z,860nm,1.8s,mb6.0
KLR smax
comp=N,2μm,8.0s
KLR smax
comp=E,3μm,8.0s
KLR MLR MLR
comp=Z,800nm,13.0s,MS4.4
KUDL Kundal 25.50 267 *ex* x 17 44 19.9
KUDL AMb AMB 17 44 21.7
comp=Z,73nm,1.1s,mb5.1
TKM2 Tokmak 2 25.57 302 P **P 17 44 31.9 +1.5**
SNR=90
TKM2 Tokmak 2 25.57 302 *e*P **P 17 44 31.7 +1.4**
comp=Z,107nm,1.1s,mb5.3
TKM2 Tokmak 2 25.57 302 *e*P **P 17 44 31.7 +1.4**
TKM2 pmax pmax
comp=Z,107nm,1.1s,mb5.3
KZA Kyzart 25.65 300 P **P 17 44 33.5 +2.4**
SNR=63
KZA Kyzart 25.65 300 *e*P **P 17 44 32.7 +1.6**
comp=Z,211nm,1.2s,mb5.5
ZAA0 Zalesovo Array 25.69 331 *e*P **P 17 44 30.6 -0.6**
ZALV Zalesovo Beam 25.69 331 P **P 17 44 30.8 -0.4**
comp=Z,32nm,0.8s,mb4.9,baz=133,slow=8.4,SNR=74
ZALV S **S 17 49 08.2 +8.7**
comp=Z,1.2nm,0.8s,baz=133,slow=18,SNR=1.9
ZALV Lg 17 52 23.6
comp=Z,0.3nm,0.4s,baz=146,slow=24,SNR=2.3
ZALV LR LR 17 55 17.6
comp=Z,471nm,20.8s,MS4.0,baz=328,slow=38
ZALV Zalesovo Beam 25.69 331 P **P 17 44 30.8 -0.5**
KBK Karagaybulak 25.98 301 P **P 17 44 35.9 +1.8**
SNR=131
KBK Karagaybulak 25.98 301 *e*P **P 17 44 35.7 +1.7**
comp=Z,251nm,0.9s,mb5.8
KHET Khetri 26.09 267 *e*PKP **P 17 44 35.1 -0.1**
KHET AMb AMB 17 44 37.6
comp=Z,164nm,1.3s,mb5.4
CHMS Chumysh 26.20 302 P **P 17 44 37.1 +1.1**
SNR=33
FRU Bishkek 26.26 301 *e*P **P 17 44 36.0 -0.6**
FRU pmax pmax
comp=Z,200nm,2.0s,mb5.3
AAK Ala-Archa 26.31 301 P **P 17 44 38.6 +1.6**
SNR=44
AAK Ala-Archa 26.31 301 P **P 17 44 37.9 +0.9**
comp=Z,31nm,1.0s,mb4.8,baz=95,slow=4.3,SNR=31
AAK PcP PcP 17 48 04.5 +1.6
comp=Z,4.9nm,0.7s,baz=199,slow=2.3,SNR=4.5
AAK LR LR 17 56 12.9
comp=Z,3μm,20.4s,MS4.8,baz=87,slow=39
AAK Ala-Archa 26.31 301 *e*P **P 17 44 38.3 +1.3**
comp=Z,84nm,1.2s,mb5.2
AAK Ala-Archa 26.31 301 P **P 17 44 37.9 +0.9**
AAK 17 48 04.5
AAK pmax pmax
comp=Z,31nm,1.0s,mb4.8
AAK MLR MLR
comp=Z,3μm,20.4s,MS4.8
AAK Ala-Archa 26.31 301 P **P 17 44 38.6 +1.6**
comp=Z,294nm,1.4s,mb5.6,SNR=28

USP Ospenovka 26.43 302 P **P 17 44 39.3 +1.2**
SNR=97
BHPL Bhopal 26.61 256 *e*PKP **P 17 44 39.1 -0.8**
BHPL AMb AMB 17 44 52.1
comp=Z,82nm,1.4s,mb5.1
BHPL *ex* x 17 49 12.8
KURK Kurchatov 26.61 320 *e*P **P 17 44 39.4 -0.2**
comp=Z,75nm,0.9s,mb5.2
KURK Kurchatov 26.61 320 *d i*P **P 17 44 39.9 +0.2**
KURK pmax pmax
comp=Z,120nm,1.2s,mb5.3
KURK MLR MLR
comp=Z,677nm,12.0s,MS4.4
KURK Kurchatov 26.61 320 P **P 17 44 39.3 -0.4**
comp=Z,537nm,0.8s,mb6.1,SNR=97
KURK Kurchatov 26.61 320 P **P 17 44 39.6 0.0**
SNR=58
AML Almayashu 26.80 299 P **P 17 44 42.9 +1.4**
SNR=60
EKS2 Erkin-Say 26.83 300 P **P 17 44 42.5 +0.8**
SNR=25
EKS2 Erkin-Say 26.83 300 *e*P **P 17 44 42.5 +0.7**
comp=Z,28nm,0.9s,mb4.8
MAJO Matsushiro 26.95 73 *e*P **P 17 44 41.5 -1.4**
comp=Z,49nm,1.2s,mb4.9
MAJO Matsushiro 26.95 73 *e*P **P 17 44 41.5 -1.4**
MAJO pmax pmax
comp=Z,49nm,1.2s,mb4.9
MAT Matsushiro 26.95 73 P **P 17 44 40.9 -2.0**
MAT S **S 17 49 13.0 -6.8**
MJAR Matsushiro Arr 26.95 73 P **P 17 44 42.1 -0.8**
comp=Z,17nm,0.6s,mb4.7,baz=273,slow=10.0,SNR=31
MJAR LR LR 17 55 49.6
comp=Z,1μm,19.8s,MS4.5,baz=275,slow=38
MJAR Matsushiro Arr 26.95 73 P **P 17 44 42.1 -0.8**
HABR Khabarovsk 26.96 46 *e*P **P 17 44 40.1 -2.7**
HABR *e**SP sP 17 44 44.6 -3.4
HABR *e* 17 45 21.9
HABR *e* 17 48 01.7
HABR S **S 17 49 17.8 -1.9**
HABR *e*SS 17 50 24.0
HABR *e* 17 55 32.7
HABR MLR MLR
comp=N,3μm,10.0s,MS5.5
HABR MLR MLR
comp=Z,7μm,10.0s,MS5.5
HABR MLR MLR
comp=E,7μm,10.0s,MS5.5
NVS Novosibirsk 26.98 331 *e*P **P 17 44 41.2 -1.7**
NVS *e*S **S 17 49 13.7 -6.1**
NVS pmax pmax
comp=Z,22nm,1.2s,mb4.6
NVS pmax pmax
comp=N,12nm,1.5s
NVS pmax pmax
comp=E,15nm,1.5s
NVS smax
comp=N,12nm,1.8s
NVS smax
comp=E,22nm,1.9s
CLNS Chul'man 27.34 23 *e*P **P 17 44 45.3 -0.8**
CLNS *e**PP pP 17 44 51.0 +1.3
CLNS *e*PPP 17 45 31.1
CLNS *e*S **S 17 49 28.1 +2.7**
CLNS pmax pmax
comp=N,27nm,1.5s
CLNS pmax pmax
comp=E,14nm,1.1s
CLNS pmax pmax
comp=Z,22nm,1.0s,mb4.6
CLNS smax
comp=E,309nm,14.4s
CLNS smax
comp=N,232nm,15.6s
CLNS MLR MLR
comp=Z,5μm,12.0s,MS5.3
CLNS MLR MLR
comp=N,3μm,14.0s,MS5.2
CLNS MLR MLR
comp=E,2μm,11.0s,MS5.2
KTGM Kuala Trenggan 27.56 185 P **P 17 44 49.7 +1.2**
AJM Ajmer 27.60 265 *e*PKP **P 17 44 47.9 -0.9**
AJM AMb AMB 17 44 51.4
comp=Z,89nm,1.4s,mb5.2
AJM *ex* x 17 49 35.1
KULM Kulim 27.89 191 P **P 17 44 52.1 +0.7**
KULM Kulim 27.89 191 *e*P **P 17 44 50.6 -0.8**
comp=Z,10nm,0.7s,mb4.6
KDM Kudat 27.91 156 P **P 17 44 52.5 +0.9**
AKL Akola 28.19 252 *ex* x 17 45 02.9
AKL AMb AMB 17 45 19.9
comp=Z,46nm,1.0s,mb5.1
KKM Kota Kinabalu 28.52 157 P **P 17 44 57.4 +0.4**
KKM Kota Kinabalu 28.52 157 *e*P **P 17 44 56.2 -0.8**
comp=Z,39nm,0.8s,mb5.2
KKM Kota Kinabalu 28.52 157 P **P 17 44 56.8 -0.2**
comp=Z,601nmcomp=Z,53nm,0.8s,mb5.3
JHJ Hachijo jima 2 28.57 80 LR LR 17 57 01.6
comp=Z,2μm,18.1s,MS4.7,baz=308,slow=38
TBP Tagbilaran 28.61 140‖ *e*P **P 17 44 58.3 +0.5**
IPM Ipoh 28.63 190 *e*P **P 17 44 56.2 -1.8**
comp=Z,164nm,1.9s,mb5.4
IPM Ipoh 28.63 190 P **P 17 44 56.5 -1.5**
comp=Z,41nm,1.9s,mb4.8
HYB Hyderabad 28.84 244 *i*P **P 17 45 00.0 +0.1**
HYB *e*S **S 17 49 50.0 +0.2**
SDKM Sandakan 29.22 156 P **P 17 45 04.1 +0.8**
KK31 Karatay Array 29.27 301 *i*P **P 17 45 03.8 +0.3**
KK31 pmax pmax
comp=Z,43nm,1.1s,mb5.1
KKAR Karatay Array 29.27 301 *e*P **P 17 45 03.8 +0.2**
KKAR Karatay Array 29.27 301 *e*P **P 17 45 03.8 +0.3**
FRIM Kepong 29.78 188 P **P 17 45 09.7 +1.5**
LATR Latur 29.79 248 *e*PKP **P 17 45 08.4 +0.1**
LATR AMb AMB 17 45 12.3
comp=Z,76nm,0.7s,mb5.5
MYLDM Lahad Datu 30.11 154 P **P 17 45 13.5 +2.3**
MYLDM Lahad Datu 30.11 154 P **P 17 45 12.9 +1.7**
comp=Z,98nm,0.7s,mb5.7
KBL Kabul 30.36 283 *e*P **P 17 45 13.9 +0.7**
comp=Z,42nm,1.2s,mb5.0
KBL *e*PcP PcP 17 48 14.1 +1.0
KBL Kabul 30.36 283 *e*P **P 17 45 13.9 +0.7**
KBL *e* 17 48 14.1
KBL pmax pmax
comp=Z,42nm,1.2s,mb5.0
BTM Bintulu 30.39 165 P **P 17 45 14.2 +0.6**
TPTI 30.56 197 P **P 17 45 13.0 -2.1**
comp=Z,25nm,0.9s,mb5.0
TSM Tawau 30.71 156 P **P 17 45 17.7 +1.3**
ASAJ Asahikawa 30.77 58 P **P 17 45 16.1 -0.6**
comp=Z,6.1nm,0.8s,mb4.5,baz=264,slow=14,SNR=9.3
ASAJ Asahikawa 30.77 58 P **P 17 45 16.2 -0.5**
KGM Kluang 30.83 184 P **P 17 45 18.1 +0.6**
SBUM Sibu 30.95 167 P **P 17 45 20.2 +1.6**
SBUM Sibu 30.95 167 P **P 17 45 18.4 -0.2**
comp=Z,713nmcomp=Z,52nm,1.5s,mb5.2
MYKOM Kota Tinggi 31.02 183 P **P 17 45 20.2 +1.0**
MYKOM Kota Tinggi 31.02 183 P **P 17 45 19.4 +0.2**
comp=Z,42nm,1.3s,mb5.1
YSS Yuzh-Sakhalins 31.41 53 *e*P **P 17 45 22.5 +0.1**
comp=Z,50nm,1.1s,mb5.3
YSS *e*PcP PcP 17 48 15.8 +0.2
YSS Yuzh-Sakhalins 31.41 53‖ *e*P **P 17 45 21.5 -0.9**
YSS *e* 17 46 32.0
YSS *e* 17 48 16.0
YSS *e*S **S 17 50 22.0 -7.6**
YSS MLR MLR
comp=Z,4μm,17.0s,MS5.2
YSS MLR MLR
comp=N,4μm,18.0s,MS5.4
YSS MLR MLR
comp=E,5μm,15.0s,MS5.4
KSM Kuching 31.60 171 P **P 17 45 25.8 +1.5**
KSM Kuching 31.60 171 *e*P **P 17 45 24.4 +0.1**
comp=E,194nm,2.0s,mb5.6
KSM Kuching 31.60 171 P **P 17 45 24.8 +0.5**
comp=E,39nm,1.0s,mb5.2
DAV Davao City (W) 31.72 140 LR LR 17 59 41.8
comp=E,958nm,18.5s,MS4.5,baz=15,slow=39
CBIJ Chichi jima 32.08 91 LR LR 17 59 48.6
comp=E,663nm,18.3s,MS4.4,baz=92,slow=39
BVAR Borovoye Array 32.20 319 P **P 17 45 28.9 -0.4**
comp=E,16nm,0.7s,mb5.0,baz=116,slow=10,SNR=82
BVAR Borovoye Array 32.20 319 P **P 17 45 28.9 -0.3**

BRVK Borovoye 32.27 319 *e*P **P 17 45 29.9 +0.1**
comp=E,35nm,0.9s,mb5.2
BRVK Borovoye 32.27 319 *d i*P **P 17 45 30.0 +0.1**
BRVK pmax pmax
comp=Z,53nm,1.2s,mb5.2
BRVK MLR MLR
comp=Z,833nm,17.0s,MS4.5
BRVK Borovoye 32.27 319 P **P 17 45 30.9 +1.0**
comp=Z,215nm,1.0s,mb5.9,SNR=23
BRVK Borovoye 32.27 319 P **P 17 45 30.5 +0.6**
SNR=18
MNSI Mandailing Nat 32.47 191 P **P 17 45 29.5 -2.4**
comp=Z,17nm,0.7s,mb5.0
ZRNK Zerenda 32.94 318 P **P 17 45 35.1 -0.6**
ZRNK pmax pmax
comp=Z,40nm,0.7s,mb5.5
YAK Yakutsk 32.94 21 *e*P **P 17 45 35.4 -0.3**
comp=Z,105nm,0.9s,mb5.8
YAK *e*PcP PcP 17 48 18.2 -1.3
YAK Yakutsk 32.94 21 *e*P **P 17 45 35.3 -0.3**
YAK *e**PP pP 17 45 41.9 +2.6
YAK *e* 17 46 41.2
YAK *e* 17 48 18.9
YAK *e*S **S 17 50 51.6 -1.6**
YAK *e*SS SS 17 52 47.4 -27
YAK *e*SSS 17 53 07.8
YAK *e* 17 55 51.3
YAK pmax pmax
comp=Z,44nm,0.8s,mb5.4
YAK pmax pmax
comp=E,11nm,0.9s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,18nm,1.6s
YAK pmax pmax
comp=Z,48nm,2.0s,mb5.1
YAK pmax pmax
comp=N,21nm,1.9s
YAK smax
comp=N,104nm,2.7s
YAK smax
comp=E,63nm,3.2s
YAK MLR MLR
comp=Z,4μm,14.0s,MS5.3
YAK MLR MLR
comp=E,1μm,12.0s,MS5.1
YAK MLR MLR
comp=N,2μm,12.0s,MS5.1
BHJ Bhuj 33.02 262 *e*PKP **P 17 45 36.0 -0.8**
YUK Yuzh-Kuril'sk 33.09 59‖ *i*P **P 17 45 46.0 +8.8**
YUK *i*S **S 17 50 48.2 -7.7**
YUK MLR MLR
comp=N,2μm,19.0s,MS5.0
YUK MLR MLR
comp=E,2μm,19.0s,MS5.0
YUK MLR MLR
comp=Z,2μm,19.0s,MS4.9
STKI Sintang 33.16 169 P **P 17 45 39.7 +1.8**
comp=Z,1μmcomp=Z,49nm,1.2s,mb5.3
SDSI Sungai Dareh 33.91 188 P **P 17 45 45.3 +0.8**
comp=Z,40nm,1.5s,mb5.1
PPBI Pangkal Pinang 34.91 179 P **P 17 45 55.0 +1.9**
comp=Z,848nmcomp=Z,60nm,1.8s,mb5.2
TPI Tanjungpandan 35.55 176 P **P 17 45 59.6 +0.9**
comp=Z,48nm,0.8s,mb5.5
MRSI Marisa 35.76 151 P **P 17 46 01.0 +0.5**
comp=Z,950nmcomp=Z,91nm,0.7s,mb5.8
TRD Trivandrum 35.96 234‖ *ex* x 17 46 11.7
MNI Manado 36.16 146 P **P 17 46 05.0 +1.1**
comp=Z,2μmcomp=Z,110nm,0.8s,mb5.8
KMSI Cibinong 36.53 148 P **P 17 46 07.9 +0.8**
comp=Z,4μmcomp=Z,462nm,1.0s,mb6.3
MDSI Maura Dua 37.24 182 P **P 17 46 13.3 +0.2**
comp=Z,42nm,0.9s,mb5.3
KBKI Kotabaru 37.40 162 P **P 17 46 14.2 -0.2**
comp=Z,766nmcomp=Z,74nm,0.8s,mb5.6
KLSI 37.43 181 P **P 17 46 15.4 +0.7**
comp=Z,115nm,2.0s,mb5.4
AB31 Akbulak array 37.46 310 *e*P **P 17 46 14.5 -0.2**
AB31 pmax pmax
comp=Z,18nm,0.7s,mb5.0
ABKAR Akbulak array 37.46 310 *e*P **P 17 46 14.9 +0.2**
LUWI Luwuk 37.47 151 P **P 17 46 14.4 -0.7**
comp=Z,1μmcomp=Z,122nm,1.4s,mb5.5
TNTI Ternate 37.98 143 P **P 17 46 19.5 +0.1**
comp=Z,2μmcomp=Z,136nm,1.5s,mb5.5
TTSI Tana Toraja 38.23 157 P **P 17 46 21.7 +0.2**
comp=Z,736nmcomp=Z,52nm,1.4s,mb5.1
ABKT Ailbek 38.69 291 P **P 17 46 26.0 +0.8**
comp=Z,256nm,0.9s,mb6.0,SNR=16
SVE Sverdlovsk 38.83 322‖ *e*P **P 17 46 27.2 +1.1**
SVE pmax pmax
comp=Z,82nm,1.0s,mb5.4
SVE MLR MLR
comp=Z,694nm,13.0s,MS4.7
AKTK Aktyubinsk 38.87 311 P **P 17 46 27.0 +0.5**
AKTO Aktyubinsk 38.87 311 P **P 17 46 27.0 +0.5**
comp=Z,10nm,0.6s,mb4.7,baz=93,slow=8.7,SNR=29
AKTO Aktyubinsk 38.87 311 P **P 17 46 27.0 +0.5**
SPSI Sidrap Palu 39.07 157 P **P 17 46 28.9 +0.3**
comp=Z,882nmcomp=Z,54nm,1.5s,mb5.0
DBJI Dramaga 39.28 178 P **P 17 46 32.0 +1.7**
comp=Z,80nm,1.5s,mb5.2
LEM Lembang 39.59 177 P **P 17 46 34.6 +1.8**
comp=Z,68nm,1.6s,mb5.1
ARU Arti 39.81 321 *e*P **P 17 46 34.2 -0.1**
ARU Arti 39.81 321 *d i*P **P 17 46 34.4 +0.1**
ARU *e* 17 48 06.2
ARU *e* 17 48 40.8
ARU S **S 17 52 41.2 +3.1**
ARU pmax pmax
comp=Z,117nm,1.0s,mb5.6
ARU Arti 39.81 321 P **P 17 46 34.8 +0.5**
comp=Z,560nm,0.9s,mb6.3,SNR=36
KAPI Kappang 40.05 158 *e*P **P 17 46 35.2 -1.6**
comp=Z,320nm,1.7s,mb5.8
KAPI Kappang 40.05 158 P **P 17 46 36.0 -0.7**
comp=Z,452nmcomp=Z,46nm,1.2s,mb5.1
KDI Kendari 40.07 153 P **P 17 46 35.6 -1.3**
comp=Z,14nm,1.4s,mb4.5
BJII Banjamegara 40.23 174 P **P 17 46 40.3 +2.1**
comp=Z,117nm,1.6s,mb5.4
BKSI Bulukumba 40.46 157 P **P 17 46 40.0 -0.1**
comp=Z,475nmcomp=Z,45nm,0.8s,mb5.2
NGJI Ngawi 40.46 171 P **P 17 46 44.4 +4.3**
comp=Z,62nm,1.3s,mb5.2
GUMO Guam 40.58 109 P **P 17 46 41.0 -0.1**
comp=Z,51nm,0.6s,mb5.3,baz=322,slow=19,SNR=8.4
GUMO LR LR 18 01 30.7
comp=Z,680nm,21.5s,MS4.5,baz=106,slow=33
GUMO Guam 40.58 109 *e*P **P 17 46 41.5 +0.3**
comp=Z,136nm,1.3s,mb5.4
GUMO Guam 40.58 109 *e*P **P 17 46 41.5 +0.4**
GUMO pmax pmax
comp=Z,136nm,1.3s,mb5.4
GUMO Guam 40.58 109 P **P 17 46 42.2 +1.1**
comp=Z,93nm,1.2s,mb5.3
TIXI Tiksi 40.71 11 *e*P **P 17 46 39.2 -2.4**
comp=Z,34nm,0.7s,mb5.1
TIXI Tiksi 40.71 11 *e*P **P 17 46 40.8 -0.8**
TIXI *e*S **S 17 52 49.8 -1.5**
TIXI pmax pmax
comp=Z,27nm,0.6s,mb5.0
TIXI MLR MLR
comp=Z,4μm,17.0s,MS5.3
SJI Sawahan 40.86 171 P **P 17 46 44.5 +1.1**
comp=Z,116nm,1.9s,mb5.2
PWJI Pagerwojo 41.15 171 P **P 17 46 46.3 +0.5**
comp=Z,52nm,0.8s,mb5.2
NLAI Namlea 41.33 146 P **P 17 46 48.3 +1.0**
comp=Z,1μmcomp=Z,129nm,0.9s,mb5.5
SOKR Solikamsk 41.62 325 *d i*P **P 17 46 49.5 +0.3**
SOKR pmax pmax
comp=Z,90nm,1.1s,mb5.3
SOKR MLR MLR
comp=Z,370nm,21.0s,MS4.2
SRBI Singaraja 41.80 166 P **P 17 46 52.4 +1.3**
comp=Z,1μmcomp=Z,94nm,1.0s,mb5.4
SEY Seymchan 41.87 30‖ *i*P **P 17 46 51.5 +0.3**
PETK Petropavlovsk- 41.99 45 P **P 17 46 51.6 -0.7**
comp=Z,39nm,1.1s,mb5.0,baz=240,slow=4.8,SNR=15
PETK Petropavlovsk- 41.99 45 P **P 17 46 51.7 -0.6**
KHKI Kahang-Kahang 42.16 165 P **P 17 46 54.9 +0.9**
comp=Z,2μmcomp=Z,178nm,1.0s,mb5.6
PET Petropavlovsk 42.55 46 *e*P **P 17 46 55.7 -1.2**
comp=Z,59nm,1.3s,mb5.2

PET Petropavlovsk 42.55 46 *eP* **P 17 46 55.1 -1.8**
PET *eS* **S 17 53 13.8 -5.2**
PET pmax pmax
comp=Z,39nm,1.1s,mb5.0
PET MLR MLR
comp=Z,4μm,14.0s,MS5.4
PET MLR MLR
comp=Z,3μm,15.0s
SMDO Samad 42.83 269 P **P 17 47 00.6 +1.0**
SNR=7.1
BMNI Bima 43.08 161 P **P 17 47 01.1 -0.5**
comp=Z,153nm,0.8s,mb5.8
BSY Bisya 43.68 269 P **P 17 47 07.3 +0.9**
SNR=13
BNDI Bandanaira 43.80 144 P **P 17 47 07.7 +0.3**
ASHO Ashiyiah 43.87 272 P **P 17 47 09.7 +1.8**
SNR=10
MMRI Maumere 44.27 156 P **P 17 47 10.0 -1.1**
comp=Z,2μmcomp=Z,223nm,0.8s,mb6.0
BAKI Biak 44.49 134 P **P 17 47 12.7 -0.3**
comp=Z,2μmcomp=Z,185nm,0.9s,mb5.8
WSI Waingapu 44.62 159 P **P 17 47 09.8 -4.1**
comp=Z,3μmcomp=Z,221nm,1.0s,mb5.9
TLE Tual 46.20 141 P **P 17 47 26.6 +0.1**
comp=Z,127nm,1.1s,mb5.8
PRGR Permogore 47.45 326⇓*iP* **P 17 47 34.5 -1.2**
PRGR *e* 17 49 25.2
PRGR *eS* **S 17 54 31.8 +2.2**
PRGR pmax pmax
comp=Z,49nm,1.1s,mb5.3
RBK Rabkut 48.53 265 P **P 17 47 44.6 0.0**
SNR=6.0
GNI Garni 48.61 297 P **P 17 47 46.4 +1.4**
comp=Z,17nm,1.0s,mb5.0,baz=230,slow=6.0,SNR=8.4
GNI Garni 48.61 297 *eP* **P 17 47 46.5 +1.4**
comp=Z,45nm,1.1s,mb5.4
GNI Garni 48.61 297*d iP* **P 17 47 46.1 +1.1**
GNI pmax pmax
comp=Z,50nm,1.6s
GNI Garni 48.61 297 P **P 17 47 47.2 +2.2**
SNR=9.7
ZEI Tsey 48.74 300 *eP* **P 17 47 45.0 -1.0**
ZEI pmax pmax
comp=Z,25nm,1.0s,mb5.2
BILL Bilibino 48.98 26 *eP* **P 17 47 47.3 -0.2**
comp=Z,14nm,0.5s,mb5.2
BILL Bilibino 48.98 26⇓*iP* **P 17 47 47.3 -0.1**
BILL *e* 17 49 10.1
BILL *eS* **S 17 54 51.9 +0.8**
BILL pmax pmax
comp=Z,59nm,1.7s,mb5.3
BILL MLR MLR
comp=Z,4μm,16.0s,MS5.5
KBD Kabd 49.23 282 *eP* **P 17 47 48.8 -1.2**
VRHR Novokhopersk 49.27 312 *eP* **P 17 47 49.5 -0.5**
VRHR pmax pmax
comp=E,50nm,1.1s
VRHR pmax pmax
comp=Z,70nm,1.1s,mb5.6
VRHR pmax pmax
comp=N,5.0nm,0.5s
MIB Mutribah 49.31 283 *eP* **P 17 47 49.9 -0.8**
KIV Kislovodsk 49.41 302 *eP* **P 17 47 52.5 +1.4**
comp=N,85nm,1.2s,mb5.7
KIV Kislovodsk 49.41 302α*iP* **P 17 47 52.4 +1.3**
KIV *e* 17 49 17.3
KIV 17 49 47.0
KIV *e* 17 50 39.5
KIV pmax pmax
comp=Z,70nm,1.0s,mb5.7
KIV MLR MLR
comp=Z,700nm,16.0s,MS4.8
KIV Kislovodsk 49.41 302 P **P 17 47 52.5 +1.4**
comp=Z,332nm,1.0s,mb6.3,SNR=9.3
KIV Kislovodsk 49.41 302 P **P 17 47 52.6 +1.5**
SNR=9.4
NAY Al-Naaiem 49.58 282 *eP* **P 17 47 51.5 -1.1**
KLMR Klimovskoe 50.31 324*d iP* **P 17 47 57.6 -0.1**
KLMR pmax pmax
comp=Z,214nm,1.4s,mb6.0
KLMR MLR MLR
comp=Z,566nm,13.0s,MS4.8
BHD Baghdad 50.62 288 *ex* x 17 48 06.0
BHD *i* x x 17 49 56.0
BHD *i* x x 17 55 15.0
BHD *i* x x 17 57 50.0
BHD *i* x x 17 58 51.0
VSR Storozhevoye 50.80 312 *eP* **P 17 48 01.3 -0.3**
VSR *eS* **S 17 55 15.1 -2.0**
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=E,70nm,1.0s
VSR pmax pmax
comp=Z,60nm,1.0s,mb5.5
VSR smax
comp=N,60nm,1.8s
VSR smax
comp=E,70nm,1.8s
VSR smax
comp=Z,30nm,1.8s
VSR MLR MLR
comp=N,310nm,18.0s,MS4.6
VSR MLR MLR
comp=E,380nm,18.0s,MS4.6
VSR MLR MLR
comp=Z,590nm,18.0s,MS4.7
FX1 Attu Island--F 51.31 46 *eP* **P 17 48 06.2 +0.8**
FX1 Attu Island--F 51.31 46 *eP* **P 17 48 06.2 +0.8**
MOS Moscow 51.36 318 *eP* **P 17 48 05.0 -0.7**
MOS *e* 17 48 14.0
MOS *eS* **S 17 55 25.2 +0.6**
MOS pmax pmax
comp=Z,163nm,1.1s,mb5.9
OBN Obninsk 52.00 317 *eP* **P 17 48 10.5 0.0**
comp=Z,54nm,1.0s,mb5.4
OBN Obninsk 52.00 317κ*eP* **P 17 48 09.9 -0.6**
OBN *e* 17 48 19.8
OBN *e* 17 50 08.0
OBN *e* 17 51 18.4
OBN pmax pmax
comp=Z,79nm,1.3s,mb5.5
OBN MLR MLR
comp=Z,700nm,21.0s,MS4.7
KAKA Kakadu 52.12 146 *eP* **P 17 48 09.9 -1.9**
comp=Z,52nm,0.7s,mb5.6
KAKA Kakadu 52.12 146 *eP* **P 17 48 09.8 -2.0**
comp=Z,132nm,0.7s,mb6.0
KAKA Kakadu 52.12 146 P **P 17 48 10.5 -1.3**
comp=Z,802nmcomp=Z,118nm,0.7s,mb5.9
LVZ Lovozero 52.80 333*ceP* **P 17 48 15.3 -0.9**
LVZ pmax pmax
comp=Z,13nm,0.8s,mb4.9
ANN Anapa 52.95 304 *eP* **P 17 48 16.4 -1.3**
ANN *eS* **S 17 55 47.9 +1.1**
ANN pmax pmax
comp=Z,82nm,1.1s,mb5.6
ANN MLR MLR
comp=N,243nm,15.0s,MS4.7
ANN MLR MLR
comp=E,432nm,15.0s,MS4.7
ANN MLR MLR
comp=Z,446nm,15.0s,MS4.6
KNA Kununurra 53.23 152 P **P 17 48 19.0 -0.9**
comp=Z,5μmcomp=Z,609nm,0.8s
APA Apatity 53.26 333⇑*iP* **P 17 48 21.0 +1.4**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.8
APA MLR MLR
comp=Z,600nm,12.0s,MS4.9
MALT Malatya 53.80 296 *eP* **P 17 48 25.3 +1.2**
comp=Z,45nm,1.4s,mb5.2
MALT Malatya 53.80 296⇑P **P 17 48 25.0 +0.9**
MALT Malatya 53.80 296⇑*iP* **P 17 48 25.0 +0.9**
MALT Malatya 53.80 296 P **P 17 48 25.1 +1.0**
comp=Z,340nmcomp=Z,23nm,1.2s,mb5.0
JOF Joensuu 54.18 327 *eP* **P 17 48 26.1 -0.3**
JOF pmax pmax
comp=Z,5.0nm,0.3s,mb4.9
JOF Joensuu 54.18 327 *ep* **P 17 48 26.1 -0.3**
comp=Z,4.5nm,0.3s,mb4.9
FITZ Fitzroy Crossi 54.24 156 P **P 17 48 26.4 -0.9**
comp=Z,41nm,0.9s,mb5.3,baz=342,slow=6.5,SNR=51
FITZ Fitzroy Crossi 54.24 156⇑*iP* **P 17 48 26.0 -1.3**
comp=Z,62nm,1.0s,mb5.5
FITZ Fitzroy Crossi 54.24 156 *eP* **P 17 48 25.9 -1.4**
comp=Z,38nm,0.9s,mb5.3
FITZ Fitzroy Crossi 54.24 156 P **P 17 48 27.0 -0.3**
comp=Z,92nm,1.1s,mb5.6
PUL Pulkovo 54.92 323⇓*iP* **P 17 48 33.0 +1.1**
PUL pmax pmax
comp=Z,100nm,0.4s,mb6.2
SIM Simferopol' 55.22 305 *eP* **P 17 48 33.9 -0.4**
SIM *eS* **S 17 56 26.0 +8.6**
SIM pmax pmax
comp=Z,46nm,0.9s,mb5.5
SIM MLR MLR
comp=Z,200nm,13.0s,MS4.4
MBWA Marble Bar 55.45 164 *eP* **P 17 48 34.5 -1.6**
comp=Z,47nm,1.1s,mb5.4
MBWA Marble Bar 55.45 164 P **P 17 48 35.0 -1.1**
comp=Z,47nm,1.5s,mb5.3
KEV Kevo 55.59 336 *eP* **P 17 48 36.5 0.0**
comp=Z,53nm,1.6s,mb5.3
KEV Kevo 55.59 336 *eP* **P 17 48 34.9 -1.7**
KEV Kevo 55.59 336 *ep* **P 17 48 34.9 -1.7**
comp=Z,1.9nm,0.4s,mb4.5
ARCES ARCESS Array B 56.13 335 P **P 17 48 40.0 -0.4**
comp=Z,7.6nm,0.5s,mb5.0,baz=83,slow=8.3,SNR=66
ARCES PcP PcP 17 49 37.8 -0.4
comp=Z,8.1nm,0.9s,baz=88,slow=3.9,SNR=4.7
ARCES ARCESS Array B 56.13 335 P **P 17 48 40.1 -0.3**
ARCES 17 49 37.8
ARE0 ARCESS Array S 56.13 335 *eP* **P 17 48 40.2 -0.2**
KAF Kangasniemi 56.57 326 *eP* **P 17 48 42.2 -1.5**
KAF pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
KAF Kangasniemi 56.57 326 *ep* **P 17 48 42.2 -1.5**
comp=Z,2.8nm,0.3s,mb4.8
FINES FINESS Array B 56.78 326 P **P 17 48 44.7 -0.5**
comp=Z,23nm,0.7s,mb5.3,baz=86,slow=7.8,SNR=47
FINES FINESS Array B 56.78 326 P **P 17 48 44.7 -0.5**
FINES FINESS Array B 56.78 326 P **P 17 48 44.7 -0.4**
ASF Jabal al Asfar 56.94 289 P **P 17 48 47.5 +0.8**
comp=Z,11nm,0.9s,mb4.9,baz=153,slow=2.3,SNR=17
ASF Jabal al Asfar 56.94 289 P **P 17 48 47.5 +0.7**
BR131 Keskin Array S 56.97 299 *eP* **P 17 48 46.3 -0.6**
comp=Z,14nm,0.8s,mb5.1
BRTR Keskin Array B 56.97 299 P **P 17 48 46.4 -0.5**
comp=Z,18nm,0.8s,mb5.1,baz=101,slow=6.4,SNR=53
BRTR Keskin Array B 56.97 299*ceP* **P 17 48 46.7 -0.2**
BRTR pmax pmax
comp=Z,18nm,0.8s
MICGM Minsk 57.06 317⇓*iP* **P 17 48 47.0 -0.3**
MNK Minsk 57.09 317⇓*iP* **P 17 48 47.0 -0.5**
KIEV Kiev 57.10 313 *eP* **P 17 48 46.8 -0.8**
comp=Z,43nm,1.0s,mb5.4
KIEV Kiev 57.10 313 *eP* **P 17 48 46.8 -0.8**
KIEV pmax pmax
comp=Z,43nm,1.0s,mb5.4
IDID Didziasalis 57.54 318 *eP* **P 17 48 50.9 +0.3**
IDID AMB AMB 17 48 53.0
comp=Z,24nm,0.8s,mb5.3
IZAR Zarasai 57.72 319 *eP* **P 17 48 52.1 +0.2**
IZAR AMB AMB 17 48 53.3
comp=Z,18nm,1.2s,mb5.0
PMG Port Moresby 57.78 129 *eP* **P 17 48 52.1 -0.6**
comp=Z,36nm,0.9s,mb5.4
PMG Port Moresby 57.78 129*ceP* **P 17 48 51.8 -1.0**
PMG pmax pmax
comp=Z,43nm,1.0s
PMG Port Moresby 57.78 129 P **P 17 48 52.7 -0.1**
comp=Z,51nm,1.0s,mb5.5
IIGN Ignalina 57.82 318 *eP* **P 17 48 53.0 +0.4**
IIGN AMB AMB 17 48 55.2
comp=Z,30nm,0.8s,mb5.4
ISAL Salakas 57.83 319 *eP* **P 17 48 52.9 +0.3**
ISAL AMB AMB 17 48 55.1
comp=Z,21nm,0.9s,mb5.2
KIS Kishinev 58.27 308 *eP* **P 17 48 55.0 -0.9**
KIS LRM 18 21 12.0
comp=Z,500nm,12.0s
KIS Kishinev 58.27 308 *eP* **P 17 48 55.0 -0.9**
CSS Prodhromos 58.75 294 *eP* **P 17 48 59.4 -0.1**
comp=Z,32nm,0.8s,mb5.4
TLCR 58.78 306⇓P **P 17 48 59.4 -0.1**
TLCR 58.78 306⇓*iP* **P 17 48 59.4 -0.1**
COEN Coen 58.83 136 *eP* **P 17 48 59.1 -1.0**
comp=Z,284nm,0.8s,mb6.3
COEN Coen 58.83 136 P **P 17 48 59.7 -0.4**
comp=Z,183nm,1.1s,mb6.0
IAS Iasi 59.04 309 P **P 17 49 01.9 +0.6**
CFR Carcaliu 59.24 307⇑P **P 17 49 02.6 -0.1**
CFR Carcaliu 59.24 307⇑*iP* **P 17 49 02.6 -0.1**
TIRR Tirgusor 59.27 306 *eP* **P 17 49 03.1 +0.2**
comp=Z,30nm,0.9s,mb5.3
TIRR Tirgusor 59.27 306⇓P **P 17 49 03.6 +0.7**
TIRR Tirgusor 59.27 306⇓*iP* **P 17 49 03.6 +0.7**
WRA Warramunga Arr 59.31 148 P **P 17 49 02.3 -1.1**
comp=Z,38nm,0.7s,mb5.6,baz=342,slow=7.2,SNR=353
WRA S **S 17 57 10.0 -1.7**
comp=Z,1.5nm,0.8s,baz=335,slow=13,SNR=6.8
WRA Warramunga Arr 59.31 148 P **P 17 49 02.3 -1.1**
WRA S **S 17 57 10.0 -1.6**
WB2 Warramunga Arr 59.32 148 *eP* **P 17 49 01.9 -1.5**
PETR 59.69 307⇑*iP* **P 17 49 07.7 +1.9**
SUW Suwalki 59.86 317 *eP* **P 17 49 07.2 +0.4**
comp=Z,84nm,0.9s,mb5.8
SUW Suwalki 59.86 317 *eP* **P 17 49 07.2 +0.4**
SUW pmax pmax
comp=Z,84nm,0.9s,mb5.8
VRI Vrincioaia 59.98 308⇓P **P 17 49 09.0 +1.2**
VRI Vrincioaia 59.98 308⇓*iP* **P 17 49 09.0 +1.2**
PLOR Plostina 60.04 308⇑P **P 17 49 09.3 +1.1**
PLOR Plostina 60.04 308⇑*iP* **P 17 49 09.3 +1.1**
BURAR Bucovina Array 60.44 310⇓P **P 17 49 11.1 +0.2**
BURAR Bucovina Array 60.44 310⇓*iP* **P 17 49 11.1 +0.2**
BUR08 Bucovina Ar. S 60.44 310 *eP* **P 17 49 10.7 -0.2**
LVV L'vov 60.53 313 *eP* **P 17 49 11.3 -0.2**
MLR Muntele Rosu 60.62 307⇑P **P 17 49 13.2 +1.1**
MLR Muntele Rosu 60.62 307⇑*iP* **P 17 49 13.2 +1.1**
SULR 60.66 306⇑*iP* **P 17 49 13.6 +1.1**
DOPR Dopca 60.84 308⇑*iP* **P 17 49 14.1 +0.5**
JMB Yambol 61.16 304 P **P 17 49 16.6 +0.7**
JMB Yambol 61.16 304 P **P 17 49 17.1 +1.2**
VOIR 61.23 308⇓P **P 17 49 17.1 +0.8**
VOIR 61.23 308⇓*iP* **P 17 49 17.1 +0.8**
KWP Kalwaria Pacla 61.41 313 *eP* **P 17 49 17.8 +0.3**
KWP Kalwaria Pacla 61.41 313 *eP* **P 17 49 17.2 -0.2**
comp=Z,248nm,1.1s,mb6.2
KWP Kalwaria Pacla 61.41 313⇑P **P 17 49 17.9 +0.5**
KWP Kalwaria Pacla 61.41 313⇑*iP* **P 17 49 17.9 +0.5**
BMR Baia Mare 61.53 310⇑P **P 17 49 18.9 +0.6**
BMR Baia Mare 61.53 310⇑*iP* **P 17 49 18.9 +0.6**
PVL Pavlikeni 61.77 305 P **P 17 49 21.3 +1.3**
KOLS Kolonicke sedl 61.90 312 *eP* **P 17 49 21.2 +0.4**
comp=Z,18nm,0.9s,mb5.2
KOLS Kolonicke sedl 61.90 312 *eP* **P 17 49 21.2 +0.4**
KOLS pmax pmax
comp=Z,19nm,0.9s,mb5.2
KOLS Kolonicke sedl 61.90 312 *eP* **P 17 49 21.2 +0.4**
UZH Uzhgorod 61.98 312⇓*iP* **P 17 49 21.3 0.0**
UZH *e* 17 50 04.4
UZH *e* 17 51 39.0
UZH *e*PPP 17 53 14.8
UZH *eS* **S 17 57 43.1 -2.2**
UZH *e*PS 17 58 01.8
TRPA Tarpa 61.99 311⇑*iP* **P 17 49 21.7 +0.3**
DIM Dimitrovgrad 62.04 304 P **P 17 49 22.5 +0.7**
ALN Alexandroupoli 62.08 302 P **P 17 49 21.6 -0.5**
KDZ Kurdzhali 62.26 303 P **P 17 49 23.6 +0.3**
DRGR 62.32 310⇓P **P 17 49 24.8 +1.2**
DRGR 62.32 310⇓*iP* **P 17 49 24.8 +1.2**
CRVS Cervenica-Dubn 62.41 312 *eP* **P 17 49 24.7 +0.5**
comp=Z,11nm,1.2s,mb4.9
CRVS Cervenica-Dubn 62.41 312 *eP* **P 17 49 24.7 +0.5**
CRVS pmax pmax
comp=Z,11nm,1.2s,mb4.9
CRVS Cervenica-Dubn 62.41 312 *eP* **P 17 49 24.7 +0.5**
ASAR Alice Springs 62.42 151 P **P 17 49 23.5 -0.9**
comp=Z,20nm,0.7s,mb5.4,baz=338,slow=6.8,SNR=277
ASAR S **S 17 57 52.6 +1.5**
comp=Z,1.0nm,0.9s,baz=330,slow=13,SNR=6.4
ASAR Alice Springs 62.42 151 P **P 17 49 23.5 -0.9**
ASAR S **S 17 57 52.7 +1.5**
PLD Plovdiv 62.59 304 P **P 17 49 25.5 0.0**
RZN Rozhen 62.73 304 P **P 17 49 26.6 +0.1**
GZR Gura Zlata 62.76 308⇑P **P 17 49 26.9 +0.3**
GZR Gura Zlata 62.76 308⇑*iP* **P 17 49 26.9 +0.3**
PGB Panagyurishte 62.81 305 P **P 17 49 27.9 +0.9**
MPEP Malo Peshtene 62.82 306 P **P 17 49 27.2 +0.2**
NIE Niedzica 62.95 313 *eP* **P 17 49 29.0 +1.2**
NIE Niedzica 62.95 313 *eP* **P 17 49 29.0 +1.2**
OJC Ojcow 62.99 314 *eP* **P 17 49 28.1 0.0**
OJC *e*PP PP 17 51 45.9 -0.4
OJC *eS* **S 17 57 58.0 0.0**
OJC L 18 18 41.2
comp=Z,0.6nm,21.0s
OJC Ojcow 62.99 314 *eP* **P 17 49 27.9 -0.2**
comp=Z,77nm,1.0s,mb5.8
OJC Ojcow 62.99 314 *eP* **P 17 49 28.1 0.0**
OJC *e* 17 51 45.9
OJC *eS* **S 17 57 58.0 0.0**
OJC MLR MLR
comp=Z,600nm,21.0s,MS4.7
KECS Kecovo 63.16 312 *eP* **P 17 49 29.8 +0.6**
comp=Z,8.9nm,0.8s,mb5.0
KECS Kecovo 63.16 312 *eP* **P 17 49 29.8 +0.6**
KECS pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
KECS Kecovo 63.16 312 *eP* **P 17 49 29.8 +0.6**
BZS Buzias 63.44 309⇓P **P 17 49 31.3 +0.2**
BZS Buzias 63.44 309⇓*iP* **P 17 49 31.3 +0.2**
GKP Gorka Klasztor 63.46 318 *eP* **P 17 49 30.2 -0.9**
GKP Gorka Klasztor 63.46 318 *eP* **P 17 49 30.2 -0.9**
VTS Vitosha 63.46 305⇓P **P 17 49 31.3 0.0**
VTS Vitosha 63.46 305 P **P 17 49 31.1 -0.2**
VTS Vitosha 63.46 305⇓*iP* **P 17 49 31.3 0.0**
VTS Vitosha 63.46 305 P **P 17 49 31.6 +0.3**
MMB Musomiste 63.46 304 P **P 17 49 30.7 -0.6**
PSZ Piszkesteto 63.73 312 *eP* **P 17 49 33.6 +0.6**
comp=Z,38nm,1.2s,mb5.3
PSZ Piszkesteto 63.73 312⇑P **P 17 49 33.8 +0.8**
PSZ Piszkesteto 63.73 312⇑*iP* **P 17 49 33.8 +0.8**
PSZ Piszkesteto 63.73 312⇑*eP* **P 17 49 33.9 +0.9**
KKB Krupnik 63.81 304 P **P 17 49 33.2 -0.4**
NB2 NORSAR Subarra 63.82 327 P **P 17 49 31.8 -1.5**
comp=Z,27nm,0.8s,mb5.3,baz=68,slow=6.5
NB2 NORSAR Subarra 63.82 327 P **P 17 49 31.8 -1.5**
NOA NORSAR Array B 63.82 327 P **P 17 49 32.2 -1.1**
comp=Z,29nm,1.0s,mb5.3,baz=69,slow=6.6,SNR=28
NOA PKP2bc 18 18 25.5
comp=Z,0.8nm,0.8s,baz=202,slow=4.8,SNR=3.3
NOA NORSAR Array B 63.82 327 P **P 17 49 32.2 -1.1**
NOA ⇑*e* 18 18 25.5
NOA NORSAR Array B 63.82 327 P **P 17 49 32.2 -1.1**
LIKS Likavka 63.82 313 *eP* **P 17 49 34.9 +1.3**
comp=Z,29nm,1.2s,mb5.2
LIKS Likavka 63.82 313 *eP* **P 17 49 34.9 +1.3**
LIKS pmax pmax
comp=Z,29nm,1.2s,mb5.2
LIKS Likavka 63.82 313 *eP* **P 17 49 34.9 +1.3**
APE Apeiranthos 63.86 299⇑P **P 17 49 34.1 +0.1**
APE Apeiranthos 63.86 299⇑*iP* **P 17 49 34.1 +0.1**
BSD Bornholm Skovb 64.09 320 *i P* **P 17 49 34.3 -0.9**
BSD pmax pmax
comp=Z,42nm,0.9s,mb5.5
BSD Bornholm Skovb 64.09 320 *i P* **P 17 49 34.3 -0.9**
comp=Z,42nm,0.9s,mb5.5
PLG Polygyros 64.11 303 P **P 17 49 34.7 -0.9**
PAIG Paliouri 64.11 302 P **P 17 49 35.6 0.0**
OKC Ostrava-Krasne 64.13 314 *eP* **P 17 49 36.2 +0.7**
OKC MLR MLR
comp=Z,500nm,18.0s,MS4.7
OKC Ostrava-Krasne 64.13 314 *eP* **P 17 49 36.2 +0.7**
OKC AMS AMS 18 19 10.0
comp=Z,500nm,18.0s
VYHS Vyhne 64.19 312 *eP* **P 17 49 36.8 +0.8**
comp=Z,28nm,1.1s,mb5.2
VYHS Vyhne 64.19 312 *eP* **P 17 49 36.8 +0.8**
VYHS pmax pmax
comp=Z,28nm,1.1s,mb5.2
VYHS Vyhne 64.19 312 *eP* **P 17 49 36.8 +0.8**
KNT Kendrikon 64.20 304 P **P 17 49 35.6 -0.6**
AOS Alonnisos 64.26 301 P **P 17 49 35.4 -1.2**
VAY Valandovo 64.37 304 *eP* **P 17 49 36.5 -0.8**
KOLL Kolacno 64.43 313 *eP* **P 17 49 38.5 +1.0**
KOLL Kolacno 64.43 313 *eP* **P 17 49 38.5 +1.0**
KOLL Kolacno 64.43 313 *eP* **P 17 49 38.5 +1.0**
BUD Budapest 64.44 311⇓*eP* **P 17 49 33.0 -4.6**
MORC Moravsky Berou 64.51 314 *eP* **P 17 49 38.1 0.0**
comp=Z,36nm,0.8s,mb5.5
MORC Moravsky Berou 64.51 314⇓P **P 17 49 38.5 +0.4**
MORC Moravsky Berou 64.51 314⇓*iP* **P 17 49 38.5 +0.4**
GRG Griva 64.62 304 P **P 17 49 38.3 -0.7**
ALE Alert 64.64 358 P **P 17 49 39.0 +0.6**
comp=Z,103nm,0.8s,mb5.9,SNR=8.7
TTA Tatalina 64.84 30 *eP* **P 17 49 38.6 -1.4**
TTA Tatalina 64.84 30 *eP* **P 17 49 38.6 -1.4**
KSP Ksiaz 64.87 316 *eP* **P 17 49 41.2 +0.9**
SKO Skopje 64.90 305 *eP* **P 17 49 40.6 -0.2**
DPC Dobruska-Polom 65.03 315 *eP* **P 17 49 41.5 +0.1**
comp=Z,64nm,0.9s,mb5.7
DPC Dobruska-Polom 65.03 315 *eP* **P 17 49 42.1 +0.6**
DPC MLR MLR
comp=Z,500nm,17.1s,MS4.8
DPC Dobruska-Polom 65.03 315 *eP* **P 17 49 42.1 +0.6**
DPC AMS AMS 18 19 40.0
comp=Z,500nm,17.1s
PKSM Moragy 65.16 310⇓P **P 17 49 42.1 -0.2**
PKSM Moragy 65.16 310⇓*iP* **P 17 49 42.1 -0.2**
UPC Upice 65.16 315 *eP* **P 17 49 42.8 +0.5**
UPC Upice 65.16 315 *eP* **P 17 49 42.8 +0.5**
KLBR Kellerberrin 65.19 169 *eP* **P 17 49 42.3 -0.3**
comp=Z,61nm,1.2s,mb5.5
COP Copenhagen 65.20 321 *i P* **P 17 49 42.6 +0.2**
COP pmax pmax
comp=Z,58nm,0.8s,mb5.7
COP Copenhagen 65.20 321 *i P* **P 17 49 42.6 +0.2**
comp=Z,58nm,0.8s,mb5.7
MODS Modra-Piesok 65.20 313 *eP* **P 17 49 43.7 +1.1**
MODS Modra-Piesok 65.20 313 *eP* **P 17 49 43.7 +1.1**
MODS Modra-Piesok 65.20 313 *eP* **P 17 49 43.7 +1.1**
VRAC Vranov 65.26 314⇑P **P 17 49 43.1 +0.1**
VRAC Vranov 65.26 314⇑*iP* **P 17 49 43.1 +0.1**
KRUS Krusevo 65.27 304 *eP* **P 17 49 41.4 -1.8**
DAG Danmarks Havn 65.32 348 *eP* **P 17 49 41.6 -1.4**
DAG Danmarks Havn 65.32 348 *i P* **P 17 49 41.6 -1.4**
DAG Danmarks Havn 65.32 348 *i P* PcP 17 50 15.1 0.0
comp=Z,76nm,1.0s
ZST Bratislava 65.37 313 *eP* **P 17 49 44.8 +1.1**
comp=Z,12nm,1.0s,mb4.9
ZST Bratislava 65.37 313 *eP* **P 17 49 44.8 +1.1**
ZST pmax pmax
comp=Z,12nm,1.0s,mb4.9
ZST Bratislava 65.37 313 *eP* **P 17 49 44.8 +1.1**
AGG Agios Georgios 65.43 302 P **P 17 49 42.8 -1.4**
THL Klokotos Trika 65.44 302 P **P 17 49 42.6 -1.7**
CTA Charters Tower 65.48 138 P **P 17 49 43.7 -1.0**
comp=Z,7.3nm,0.6s,mb4.9,baz=316,slow=8.1,SNR=11
CTA LR LR 18 17 53.7
comp=Z,251nm,18.7s,MS4.4,baz=146,slow=36
CTA Charters Tower 65.48 138 *eP* **P 17 49 43.6 -1.0**
comp=Z,11nm,1.4s,mb4.7
CTA Charters Tower 65.48 138 P **P 17 49 43.7 -1.0**
CTA LR LR 18 17 53.7
CTA Charters Tower 65.48 138 P **P 17 49 43.7 -0.9**
CTAO Charters Tower 65.48 138 *eP* **P 17 49 43.3 -1.4**
comp=Z,83nm,1.8s,mb5.5
CTAO Charters Tower 65.48 138 *eP* **P 17 49 43.3 -1.3**
CTAO pmax pmax
comp=Z,83nm,1.8s,mb5.5
RUE Ruedersdorf 65.69 318 *eP* **P 17 49 46.3 +0.6**
comp=Z,50nm,0.9s,mb5.5
NEST Nestorio 65.78 304 P **P 17 49 45.3 -1.2**
KALE Kalithea 65.81 301 P **P 17 49 45.7 -1.0**
SOP Sopron 65.91 312⇓*eP* **P 17 49 47.6 +0.4**
TREC Trest 65.94 314 *eP* **P 17 49 48.1 +0.8**
TREC MLR MLR
comp=Z,800nm,29.8s,MS4.8
TREC Trest 65.94 314 *eP* **P 17 49 48.1 +0.8**
TREC AMS AMS 18 20 10.0
comp=Z,800nm,29.8s
LAKA Lakka 65.99 301 P **P 17 49 45.6 -2.3**
PVCC Panska Ves 66.00 316 *eP* **P 17 49 48.3 +0.6**
PVCC MLR MLR
comp=Z,500nm,8.4s
PVCC Panska Ves 66.00 316 *eP* **P 17 49 48.3 +0.6**
PVCC AMS AMS 18 20 10.0
comp=Z,500nm,8.4s
PRU Pruhonice 66.23 315 *eP* **P 17 49 50.5 +1.3**
PRU MLR MLR
comp=Z,600nm,18.1s,MS4.8

PRU **Pruhonice** 66.23 315 eP P 17 49 50.5 +1.3
PRU AMS AMS 18 20 20.0
comp=Z,600nm,18.1s
BRG **Berggiesshubel** 66.23 316 eP P 17 49 49.3 +0.1
comp=Z,38nm,1.2s,mb5.3
BRG **Berggiesshubel** 66.23 316⇓iP P 17 49 49.4 +0.2
comp=Z,38nm,1.2s,mb5.3
BRG **Berggiesshubel** 66.23 316⇓iP P 17 49 49.3 +0.1
TIR **Tirane** 66.23 305 eP P 17 49 49.5 +0.1
comp=Z,39nm,0.9s,mb5.4
TIR **Tirane** 66.23 305 eP P 17 49 49.5 +0.1
TIR pmax pmax
comp=Z,39nm,0.9s,mb5.4
CONA **Conrad Observa** 66.24 313⇑iP P 17 49 49.3 0.0
comp=Z,35nm,1.1s,mb5.3,SNR=14
BPAW **Bear Paw Mtn.** 66.39 28 eP P 17 49 46.2 -3.8
comp=Z,79nm,1.0s,mb5.7
CHGN **Chignik** 66.39 37 eP P 17 49 49.0 -1.1
NWAO **Narrogin (SRO)** 66.42 169 P P 17 49 49.8 -0.6
comp=Z,32nm,0.8s,mb5.4,baz=342,slow=5.4,SNR=16
NWAO **Narrogin (SRO)** 66.42 169 P P 17 49 49.8 -0.6
PPLA **Purkeypile** 66.45 29 eP P 17 49 50.8 +0.4
comp=Z,379nm,1.5s,mb6.2
MUD **Monsted U'grnd** 66.57 323 iP P 17 49 51.6 +0.3
MUD pmax pmax
comp=Z,64nm,1.0s,mb5.6
MUD **Monsted U'grnd** 66.57 323 iP P 17 49 51.6 +0.3
comp=Z,64nm,1.0s,mb5.6
KOGS **Kog** 66.59 311 eP P 17 49 51.2 -0.4
KOGS **Kog** 66.59 311 eP P 17 49 51.2 -0.4
CLL **Collm** 66.60 317 eP P 17 49 51.4 -0.1
comp=Z,41nm,1.1s,mb5.4
CLL **Collm** 66.60 317⇓iP P 17 49 51.3 -0.2
comp=Z,41nm,1.1s,mb5.4
CLL i 17 49 57.3
CLL LR LR
comp=Z,300nm,20.7s,MS4.5
CLL **Collm** 66.60 317⇓iP P 17 49 51.3 -0.2
CLL i 17 49 57.3
CLL pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
CLL MLR MLR
comp=Z,300nm,20.7s,MS4.5
CLL **Collm** 66.60 317⇓iP P 17 49 51.3 -0.2
comp=Z,41nm,1.1s,mb5.4
CLL i 17 49 57.3
CLL LV 18 27 00.0
comp=Z,300nm,20.7s
PYL **PYLOS** 66.71 300 P P 17 49 49.7 -2.8
ARSA **Arzberg** 66.72 312⇓iP P 17 49 52.3 -0.1
comp=Z,20nm,0.8s,mb5.2,SNR=11
FORT **Forrest** 66.83 159 eP P 17 49 52.3 -0.8
comp=Z,66nm,0.7s,mb5.8
FORT **Forrest** 66.83 159 eP P 17 49 52.8 -0.3
comp=Z,83nm,0.8s,mb5.8
TRF **Thorofare Moun** 66.96 28 eP P 17 49 53.3 -0.3
comp=Z,37nm,1.0s,mb5.4
STON **Ston** 67.09 307 P P 17 49 52.2 -2.6
KHC **Kasperske Hory** 67.15 315 eP P 17 49 55.0 -0.1
comp=Z,56nm,1.7s,mb5.3
KHC **Kasperske Hory** 67.15 315 eP P 17 49 55.0 -0.1
KHC MLR MLR
comp=Z,600nm,16.6s,MS4.9
KHC **Kasperske Hory** 67.15 315 eP P 17 49 55.0 -0.1
KHC AMS AMS 18 21 10.0
comp=Z,600nm,16.6s
GEC2 **GERESS Array S** 67.19 314 eP P 17 49 55.8 +0.4
comp=Z,37nm,1.1s,mb5.3
GEC2 **GERESS Array S** 67.19 314 eP P 17 49 55.8 +0.4
GEC2 pmax pmax
comp=Z,37nm,1.1s,mb5.3
COLA **College** 67.22 26 eP P 17 49 54.7 -0.6
comp=Z,129nm,1.0s,mb5.9
COLA **College** 67.22 26 eP P 17 49 54.7 -0.6
COLA pmax pmax
comp=Z,129nm,1.0s,mb5.9
MOA **Molln** 67.26 313 iP P 17 49 55.9 +0.1
comp=Z,36nm,1.0s,mb5.4,SNR=20
SOKA **Soboth** 67.26 312⇓iP P 17 49 55.4 -0.5
comp=Z,39nm,0.9s,mb5.4
TANN **Tannenbergstha** 67.28 316 eP P 17 49 56.2 +0.3
comp=Z,37nm,1.2s,mb5.3
RSO **Redoubt South** 67.30 32 eP P 17 49 56.3 +0.5
MCK **McKinley** 67.36 28 eP P 17 49 55.3 -0.9
comp=Z,33nm,0.9s,mb5.4
MCK **McKinley** 67.36 28 eP P 17 49 55.3 -0.9
MCK pmax pmax
comp=Z,33nm,0.9s,mb5.4
NKC **Novy Kostel** 67.36 316 eP P 17 49 56.5 +0.1
NKC MLR MLR
comp=Z,600nm,17.6s,MS4.9
NKC **Novy Kostel** 67.36 316 eP P 17 49 56.5 +0.1
NKC AMS AMS 18 21 30.0
comp=Z,600nm,17.6s
WET **Wettzell** 67.56 315 eP P 17 49 58.0 +0.3
comp=Z,21nm,1.0s,mb5.1
WET **Wettzell** 67.56 315 eP P 17 49 58.0 +0.3
WET pmax pmax
comp=Z,21nm,1.0s,mb5.1
BOJS **Bojanci** 67.61 310 eP P 17 49 58.4 +0.3
BOJS **Bojanci** 67.61 310 eP P 17 49 58.4 +0.3
ILAR **Eielson Array** 67.63 26 P P 17 49 56.6 -1.3
comp=Z,43nm,1.1s,mb5.4,baz=284,slow=5.5,SNR=102
ILAR LR LR 18 21 46.4
comp=Z,2µm,18.9s,MS5.3,baz=95,slow=38
ILAR **Eielson Array** 67.63 26 P P 17 49 56.6 -1.3
OBKA **Obir** 67.64 312⇑iP P 17 49 57.9 -0.3
comp=Z,20nm,0.9s,mb5.1,SNR=9.6
MOX **Moxa** 67.67 317 eP P 17 49 58.3 -0.1
comp=Z,39nm,1.3s,mb5.3
MOX
comp=Z,300nm,19.0s
MOX **Moxa** 67.67 317 eP P 17 49 58.6 +0.2
comp=Z,26nm,1.0s,mb5.2
MOX **Moxa** 67.67 317 eP P 17 49 58.3 -0.1
MOX pmax pmax
comp=Z,17nm,1.3s,mb4.9
MOX MLR MLR
comp=Z,39µm,19.0s
ROTZ **Rotzenmuhle** 67.70 316 eP P 17 49 59.3 +0.8
comp=Z,54nm,1.1s,mb5.5
NRDL **Niedersach Rie** 67.74 319 eP P 17 49 59.5 +0.7
comp=Z,78nm,1.1s,mb5.7
LJU **Ljubljana** 67.85 311 eP P 17 49 59.5 -0.1
LJU **Ljubljana** 67.85 311 eP P 17 49 59.5 0.0
LJU **Ljubljana** 67.85 311 eP P 17 49 59.5 -0.1
CLZ **Clausthal** 67.87 318 eP P 17 50 00.2 +0.6
comp=Z,88nm,1.1s,mb5.7
CLZ **Clausthal** 67.87 318 eP P 17 50 00.2 +0.6
CLZ pmax pmax
comp=Z,88nm,1.1s,mb5.7
KBA **Koelnbreinsper** 68.15 313⇓iP P 17 50 01.0 -0.4
comp=Z,38nm,1.0s,mb5.4,SNR=15
KNDS **Knezji Dol** 68.16 311 iP P 17 50 01.6 +0.1
KNDS **Knezji Dol** 68.16 311 iP P 17 50 01.6 +0.1
RJOB **Jochberg** 68.21 313 eP P 17 50 02.3 +0.5
comp=Z,12nm,0.9s,mb4.9
NVLJ **Novalja** 68.25 310 P P 17 50 01.2 -0.9
VOY **Vojsko** 68.25 311 eP P 17 50 01.1 -1.0
VOY e 17 50 07.3
VOY **Vojsko** 68.25 311 eP P 17 50 01.1 -1.0
VOY e 17 50 07.3
CADS **Cadrg** 68.27 312 iP P 17 50 01.4 -0.8
CADS **Cadrg** 68.27 312 iP P 17 50 01.4 -0.8
GRA1 **Grafenberg Arr** 68.31 316 eP P 17 50 03.1 +0.7
comp=Z,76nm,1.0s,mb5.7
GRA1 LR LR
comp=Z,400nm,18.7s,MS4.7
GRF **Grafenberg Arr** 68.31 316 eP P 17 50 03.1 +0.7
comp=Z,76nm,1.0s,mb5.7
GRF eL 18 22 04.9
comp=Z,390nm,18.7s
GRF **Grafenberg Arr** 68.31 316 eP P 17 50 03.1 +0.7
GRF pmax pmax
comp=Z,76nm,1.0s,mb5.7
GRF MLR MLR
comp=Z,400nm,18.7s,MS4.7
GRF **Grafenberg Arr** 68.31 316 eP P 17 50 03.1 +0.7
GRF pmax pmax
comp=Z,76nm,1.0s,mb5.7
GRF MLR MLR
comp=Z,400nm,18.7s,MS4.7
GRFO **Grafenberg** 68.31 316 eP P 17 50 02.5 +0.2
comp=Z,42nm,0.8s,mb5.5
GRFO **Grafenberg** 68.31 316 eP P 17 50 02.6 +0.2
GRFO pmax pmax
comp=Z,42nm,0.8s,mb5.5
RC01 **Rabbit Creek A** 68.31 30 eP P 17 50 01.9 -0.3
comp=Z,38nm,0.7s,mb5.5
PMR **Palmer** 68.32 30 eP P 17 50 01.5 -0.8
comp=Z,221nm,1.4s,mb6.0
PMR **Palmer** 68.32 30 eP P 17 50 01.5 -0.7
PMR pmax pmax
comp=Z,221nm,1.4s,mb6.0
SLKM **Skilak Lake** 68.38 31 eP P 17 50 01.2 -1.5
SLKM **Skilak Lake** 68.38 31 eP P 17 50 01.2 -1.5
UBBA **Unterbreizbach** 68.53 317 eP P 17 50 03.6 -0.1
comp=Z,11nm,0.8s,mb4.8
OHAK **Old Harbor** 68.53 35 eP P 17 50 03.0 -0.6
comp=Z,50nm,0.7s,mb5.5
SML **Sawmill** 68.55 29 eP P 17 50 03.3 -0.3
comp=Z,38nm,1.1s,mb5.2
SML **Sawmill** 68.55 29 eP P 17 50 03.3 -0.3
SML pmax pmax
comp=Z,38nm,1.1s,mb5.2
KDAK **Kodiak Island** 68.61 34 eP P 17 50 03.4 -0.7
comp=Z,183nm,1.4s,mb5.8
KDAK **Kodiak Island** 68.61 34 iP P 17 50 03.2 -0.9
KDAK **Kodiak Island** 68.61 34 P P 17 50 03.0 -1.1
comp=Z,540nm,0.6s,mb6.7,SNR=38
ABTA **Abfaltersbach** 68.81 313⇓iP P 17 50 04.6 -1.0
comp=Z,18nm,0.8s,mb5.0,SNR=7.7
FUR **Furstenfeldbru** 68.94 314 eP P 17 50 07.2 +0.8
comp=Z,121nm,1.2s,mb5.7
FUR **Furstenfeldbru** 68.94 314 eP P 17 50 07.2 +0.8
FUR pmax pmax
comp=Z,121nm,1.2s,mb5.7
IBBN **Ibbenburen** 69.12 319 eP P 17 50 07.7 +0.3
comp=Z,64nm,1.1s,mb5.5
WTTA **Wattenberg** 69.12 313⇓iP P 17 50 06.9 -0.6
comp=Z,54nm,0.9s,mb5.5,SNR=18
WATA **Walderalm** 69.12 313⇑iP P 17 50 07.5 0.0
comp=Z,29nm,0.9s,mb5.2
DOT **Dot Lake** 69.28 27 eP P 17 50 07.2 -0.9
comp=Z,98nm,0.9s,mb5.7
MOTA **Moosalm** 69.41 314⇑iP P 17 50 08.0 -1.3
comp=Z,28nm,0.8s,mb5.3,SNR=19
RETA **Reutte** 69.55 314⇑iP P 17 50 09.6 -0.6
comp=Z,13nm,0.8s,mb4.9
CUC **Castrocucco** 69.60 305 eP P 17 50 10.7 +0.1
comp=Z,20nm,0.8s,mb5.1
TNS **Taunus Mts** 69.68 317 eP P 17 50 11.2 +0.3
comp=Z,52nm,1.2s,mb5.3
TNS **Taunus Mts** 69.68 317 eP P 17 50 11.2 +0.3
TNS pmax pmax
comp=Z,52nm,1.2s,mb5.3
EGAK **Eagle** 69.71 25 eP P 17 50 09.5 -1.3
comp=Z,24nm,1.0s,mb5.1
TOD **Tromm** 69.76 316 eP P 17 50 11.8 +0.4
TOD **Tromm** 69.76 316 eP P 17 50 11.8 +0.4
FETA **Feichten** 69.78 313⇑iP P 17 50 11.3 -0.3
comp=Z,43nm,1.0s,mb5.3,SNR=28
BUG **Bochum--Univer** 69.78 319 eP P 17 50 11.9 +0.4
comp=Z,66nm,1.0s,mb5.5
MENT **Mentasta** 69.79 27 eP P 17 50 11.2 -0.2
STU **Stuttgart** 69.91 316 eP P 17 50 12.5 +0.2
comp=Z,32nm,0.8s,mb5.3
STU **Stuttgart** 69.91 316 eP P 17 50 12.4 +0.1
STU **Stuttgart** 69.91 316 eP P 17 50 12.4 +0.1
INK **Inuvik** 70.01 20 eP P 17 50 11.8 -0.8
comp=Z,58nm,0.9s,mb5.5
INK **Inuvik** 70.01 20 eP P 17 50 11.8 -0.8
INK pmax pmax
comp=Z,58nm,0.9s
AQU **L'Aquila** 70.18 308 eP P 17 50 14.9 +0.8
comp=Z,59nm,0.9s,mb5.5
AQU **L'Aquila** 70.18 308 ⇑P P 17 50 15.3 +1.2
AQU **L'Aquila** 70.18 308⇑iP P 17 50 15.3 +1.2
DAVA **Damuels** 70.18 314⇑iP P 17 50 13.4 -0.6
comp=Z,20nm,1.0s,mb5.0,SNR=5.8
FUORN **Ofenpass-Fuorn** 70.25 313 eP P 17 50 14.7 +0.2
comp=Z,52nm,0.9s,mb5.5
CEL **Celeste** 70.31 303 eP P 17 50 14.5 -0.5
comp=Z,60nm,0.9s,mb5.5
ABH **Alteburg** 70.35 317 eP P 17 50 15.9 +0.9
SPAK **Spaichingen-Ko** 70.46 315 eP P 17 50 16.3 +0.6
BFO **Black Forest** 70.62 315 eP P 17 50 16.5 -0.2
comp=Z,30nm,1.1s,mb5.1
BFO **Black Forest** 70.62 315 eP P 17 50 16.5 -0.2
BFO pmax pmax
comp=Z,30nm,1.1s,mb5.1
BFO **Black Forest** 70.62 315 P P 17 50 16.6 -0.1
comp=Z,130nm,1.0s,mb5.8,SNR=7.3
LANF **Langenberg** 70.62 316 eP P 17 50 17.0 +0.3
LANF **Langenberg** 70.62 316 eP P 17 50 17.0 +0.3
RUP **Ruppelstein** 70.72 317 eP P 17 50 17.6 +0.3
RUP **Ruppelstein** 70.72 317 eP P 17 50 17.6 +0.3
DAWY **Dawson** 70.75 25 eP P 17 50 16.3 -0.9
MEM **Membach** 70.88 318 P P 17 50 18.5 +0.3
comp=Z,10nm,1.5s,mb4.5
TUE **Stuetta** 70.88 313 eP P 17 50 17.6 -0.7
comp=Z,22nm,0.7s,mb5.2
FELD **Feldberg im Sc** 71.03 315 eP P 17 50 19.6 +0.4
WLF **Walferdange** 71.25 317 P P 17 50 21.6 +1.1
comp=Z,70nm,1.1s,mb5.5
WLF **Walferdange** 71.25 317 eP P 17 50 21.4 +0.9
comp=Z,113nm,1.0s,mb5.8
WLF **Walferdange** 71.25 317 eP P 17 50 21.5 +1.0
comp=Z,102nm,1.0s,mb5.7
WLF **Walferdange** 71.25 317 eP P 17 50 21.5 +1.0
WLF pmax pmax
comp=Z,102nm,1.0s,mb5.7
VLC **Villacollemand** 71.31 311 eP P 17 50 21.4 +0.5
comp=Z,62nm,1.2s,mb5.4
BCLA **Clavier** 71.36 318 P P 17 50 21.6 +0.4
comp=Z,24nm,1.5s,mb4.9
ECH **Echery** 71.37 316 eP P 17 50 21.1 -0.1
ECH **Echery** 71.37 316 eP P 17 50 20.6 -0.7
comp=Z,17nm,1.0s,mb4.9
ECH **Echery** 71.37 316 eP P 17 50 20.6 -0.6
ECH pmax pmax
comp=Z,17nm,1.0s,mb4.9
BBS **Basel-Blauen** 71.52 315 eP P 17 50 22.2 0.0
BBS **Basel-Blauen** 71.52 315 eP P 17 50 22.2 0.0
MOF **Molkenrain** 71.56 315 eP P 17 50 22.6 +0.2
MOF **Molkenrain** 71.56 315 eP P 17 50 22.6 +0.2
SNF **Seneffe** 71.89 319 P P 17 50 24.5 +0.2
comp=Z,21nm,1.3s,mb4.9
SUMG **Summit** 71.89 349 eP P 17 50 24.5 +0.5
comp=Z,31nm,0.8s,mb5.3
SUMG **Sumit** 71.89 349 iP P 17 50 24.4 +0.4
comp=Z,30nm,0.9s,mb5.2
DOU **Dourbes** 71.92 318 P P 17 50 24.9 +0.4
comp=Z,16nm,1.3s,mb4.8
MCD **Coleburn Disti** 71.98 328 P P 17 50 24.4 -0.3
MCD **Coleburn Disti** 71.98 328 eP P 17 50 24.4 -0.3
MME1 **Meikle Cairn** 72.00 327 P P 17 50 24.2 -0.6
MME1 **Meikle Cairn** 72.00 327 eP P 17 50 24.2 -0.6
THEF **They Montfort** 72.05 316 eP P 17 50 25.6 +0.3
THEF **They Montfort** 72.05 316 eP P 17 50 25.6 +0.3
SENIN **Lac Senin/Sane** 72.18 314 eP P 17 50 26.2 +0.1
comp=Z,33nm,1.3s,mb5.1
EIDS **Eidsvold** 72.36 137 eP P 17 50 27.6 +0.2
comp=Z,84nm,1.6s,mb5.4
WDD **Wield Dalam** 72.39 302 eP P 17 50 27.4 -0.2
comp=Z,71nm,0.8s,mb5.7
MDO **Dochfour** 72.56 328 P P 17 50 28.2 0.0
MDO **Dochfour** 72.56 328 eP P 17 50 28.2 0.0
KMBO **Kilima Mbogo** 72.58 257 P P 17 50 29.2 +0.2
comp=Z,8.7nm,1.0s,mb4.7,baz=180,slow=24,SNR=19
KMBO LR LR 18 24 19.4
comp=Z,335nm,19.0s,MS4.6,baz=90,slow=38
KMBO **Kilima Mbogo** 72.58 257 eP P 17 50 29.5 +0.5
comp=Z,62nm,1.6s,mb5.3
KMBO **Kilima Mbogo** 72.58 257 eP P 17 50 29.5 +0.5
KMBO pmax pmax
comp=Z,62nm,1.6s
KMBO **Kilima Mbogo** 72.58 257 P P 17 50 30.7 +1.7
SNR=12
ESY **Stoneypath** 72.60 326 P P 17 50 27.5 -1.0
ESY **Stoneypath** 72.60 326 eP P 17 50 27.5 -1.0
EBH **Black Hill** 72.83 326 P P 17 50 29.5 -0.4
EBH **Black Hill** 72.83 326 eP P 17 50 29.5 -0.4
STKA **Stephens Creek** 72.86 148 P P 17 50 29.0 -1.2
comp=Z,15nm,0.7s,mb5.0,baz=341,slow=6.0,SNR=30
STKA **Stephens Creek** 72.86 148 eP P 17 50 28.7 -1.5
comp=Z,12nm,0.7s,mb4.9
STKA **Stephens Creek** 72.86 148 eP P 17 50 29.3 -1.0
comp=Z,3.0nm,0.8s,mb4.3
EBL **Broad Law** 72.88 326 P P 17 50 29.5 -0.6
EBL **Broad Law** 72.88 326 eP P 17 50 29.5 -0.6
KAC **Achnashellach** 72.94 328 P P 17 50 30.8 +0.4
KAC **Achnashellach** 72.94 328 eP P 17 50 30.8 +0.4
EAU **Auchinoon** 73.03 326 P P 17 50 30.4 -0.7
EAU **Auchinoon** 73.03 326 eP P 17 50 30.4 -0.7
SAOF **Saorge** 73.18 312 eP P 17 50 32.6 +0.4
SAOF **Saorge** 73.18 312 eP P 17 50 32.6 +0.4
HPK **Haverah Park** 73.19 324 P P 17 50 31.2 -0.8
HPK AMB AMB 17 50 31.5
comp=Z,110nm,2.3s,mb5.4
HPK **Haverah Park** 73.19 324 eP P 17 50 31.2 -0.8
HPK AMB AMB 17 50 31.5
comp=Z,110nm,2.3s,mb5.4
BNI **Bardonecchia** 73.20 313 eP P 17 50 32.2 0.0
comp=Z,29nm,0.8s,mb5.3
BNI **Bardonecchia** 73.20 313 eP P 17 50 32.2 0.0
BNI pmax pmax
comp=Z,29nm,0.8s,mb5.3
ESK **Eskdalemuir** 73.21 326 P P 17 50 30.9 -1.2
ESK AMB AMB 17 50 34.4
comp=Z,80nm,5.6s
ESK **Eskdalemuir** 73.21 326 eP P 17 50 30.9 -1.2
ESK AMB AMB 17 50 34.4
comp=Z,80nm,5.6s
ESK **Eskdalemuir** 73.21 326 eP P 17 50 32.5 +0.4
comp=Z,100nm,1.6s,mb5.5
ESK **Eskdalemuir** 73.21 326 eP P 17 50 32.5 +0.4
ESK pmax pmax
comp=Z,100nm,1.6s,mb5.5
ECK **Cauldkaine Hil** 73.25 325 P P 17 50 31.8 -0.5
ECK **Cauldkaine Hil** 73.25 325 eP P 17 50 31.8 -0.5
AUTN **L'Aution** 73.26 312 eP P 17 50 33.2 +0.6
AUTN **L'Aution** 73.26 312 eP P 17 50 33.2 +0.6
LUCF **Luceram** 73.36 312 eP P 17 50 33.6 +0.4
TOUF **Mont Tournerai** 73.36 312 eP P 17 50 33.9 +0.7
TOUF **Mont Tournerai** 73.36 312 eP P 17 50 33.9 +0.7
PNL **Peninsula** 73.39 29 eP P 17 50 34.1 +1.0
KAR1 **Arisaig** 73.51 328 P P 17 50 33.5 -0.4
KAR1 **Arisaig** 73.51 328 eP P 17 50 33.5 -0.4
CWF **Charnwood Fore** 73.70 323 P P 17 50 33.4 -1.6
CWF AMB AMB 17 50 34.4
comp=Z,76nm,5.2s
CWF **Charnwood Fore** 73.70 323 eP P 17 50 33.4 -1.6
CWF AMB AMB 17 50 34.4
comp=Z,76nm,5.2s
GCD **Castle Douglas** 73.81 325 P P 17 50 35.1 -0.5
GCD **Castle Douglas** 73.81 325 eP P 17 50 35.1 -0.5
VSL **Villasalto** 74.21 307 eP P 17 50 38.7 +0.4
comp=Z,19nm,1.0s,mb5.0
SSB **Saint Sauveur** 74.39 314 eP P 17 50 38.9 -0.3
comp=Z,7.4nm,0.9s,mb4.6
SSB **Saint Sauveur** 74.39 314 eP P 17 50 38.9 -0.3
SSB pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
PLDF **La Plantade** 74.58 315 eP P 17 50 41.7 +1.4
PLDF **La Plantade** 74.58 315 eP P 17 50 41.7 +1.4
AGO **Saint Agoulin** 74.83 315 eP P 17 50 43.3 +1.5
MCH1 **Michaelchurch** 74.97 323 P P 17 50 41.4 -1.1
MCH1 AMB AMB 17 50 44.0
comp=Z,101nm,3.1s
MCH1 **Michaelchurch** 74.97 323 eP P 17 50 41.4 -1.1
MCH1 AMB AMB 17 50 44.0
comp=Z,101nm,3.1s
HTR **Trewern Hill** 75.06 323 P P 17 50 42.4 -0.6
HTR **Trewern Hill** 75.06 323⇑eP P 17 50 42.4 -0.6
PYM **Petit Puy Mans** 75.06 315 eP P 17 50 43.3 +0.2
PYM **Petit Puy Mans** 75.06 315 eP P 17 50 43.3 +0.2
HGH **Gray Hill** 75.08 322 P P 17 50 43.0 0.0
HGH **Gray Hill** 75.08 322⇑eP P 17 50 43.0 0.0
SKAG **Skagway** 75.13 28 eP P 17 50 43.8 +0.5
comp=Z,96nm,0.6s,mb5.9
DLF **Lyons Farm** 75.97 325 eP P 17 50 47.0 -1.2
ABPO **Ambohimpanom** 76.01 236 eP P 17 50 49.3 +0.5
comp=Z,14nm,1.0s,mb4.9
ABPO **Ambohimpanom** 76.01 236 eP P 17 50 49.3 +0.5
ABPO pmax pmax
comp=Z,14nm,1.0s,mb4.8
KEST **Kesra** 76.12 304 P P 17 50 49.1 -0.3
comp=Z,8.5nm,1.1s,mb4.6,baz=74,slow=7.4,SNR=6.9
KEST LR LR 18 29 51.8
comp=Z,70nm,19.0s,MS4.0,baz=271,slow=40
KEST **Kesra** 76.12 304 eP P 17 50 49.2 -0.2
ARMA **Armidale** 76.59 140 eP P 17 50 52.2 +0.3
CLLI **Llivia** 77.45 313 P P 17 50 56.3 -0.4
CFON **Fontmartina** 77.55 312 P P 17 50 55.1 -2.3
comp=Z,345nm,4.0s
MLS **Moulis** 77.73 313 eP P 17 50 58.5 +0.2
DLBC **Dease Lake** 77.84 26 eP P 17 50 59.6 +1.0
EMIR **Miracle** 78.04 312 P P 17 50 59.4 -0.6
comp=Z,764nm,5.8s
WRAK **Wrangell Islan** 78.35 29 eP P 17 51 01.9 +0.4
comp=Z,47nm,1.1s,mb5.3
ETOS **Mallorca** 78.40 310 P P 17 51 03.0 +0.9
comp=Z,100nm,2.2s,mb5.4
EBIE **Bielsa** 78.46 314 P P 17 51 02.1 -0.2
comp=Z,603nm,4.9s
EPOB **Poblet** 78.63 312 P P 17 51 02.8 -0.5
comp=Z,429nm,5.5s
CRAG **Craig** 78.68 30 eP P 17 51 03.6 +0.3
SFJD **Kangerlussuaq** 78.75 351 eP P 17 51 03.0 -0.5
comp=Z,5.6nm,0.8s,mb4.5
SFJD **Kangerlussuaq** 78.75 351 eP P 17 51 03.1 -0.4
SFJD pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CAN **Canberra** 79.14 145 eP P 17 51 05.5 -0.4
comp=Z,9.7nm,0.6s,mb4.9
CAN **Canberra** 79.14 145 eP P 17 51 05.6 -0.4
CAN pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CNB **Canberra Magne** 79.31 145 eP P 17 51 06.7 -0.2
TOO **Toolangi** 79.38 149 eP P 17 51 06.7 -0.5
YKA **Yellowknife Ar** 79.57 18 P P 17 51 07.4 -0.6
comp=Z,24nm,0.8s,mb5.2,baz=323,slow=5.0,SNR=34
YKA LR LR 18 30 44.3
comp=Z,78nm,19.2s,MS4.1,baz=110,slow=39
YKA **Yellowknife Ar** 79.57 18 P P 17 51 07.4 -0.6
YKA pmax pmax
comp=Z,24nm,0.8s
YKA MLR MLR
comp=Z,78nm,19.2s
DZM **Mont Dzumac** 79.74 125 eLR LR 18 16 02.7
comp=Z,655nm,24.0s
EIBI **Ibiza** 79.76 310 P P 17 51 06.7 -2.8
comp=Z,132nm,2.5s,mb5.4
ECRI **Cripan** 80.11 315 P P 17 51 12.6 +1.3
comp=Z,64nm,2.2s,mb5.2
ECRI **Cripan** 80.11 315 P P 17 51 12.6 +1.2
ECRI pmax pmax
comp=Z,64nm,2.2s,mb5.2
EMOS **Mosqueruela** 80.16 312 P P 17 51 11.3 -0.4
comp=Z,411nm,4.5s
ELAN **Lanestosa** 80.29 316 P P 17 51 12.0 -0.3
comp=Z,498nm,4.4s
ETOB **Tobarra** 81.83 311 P P 17 51 18.7 -1.9
comp=Z,407nm,3.6s
GUD **Guadarrama** 82.27 314 P P 17 51 22.5 -0.4
comp=Z,9.7nm,1.1s,mb4.7
GUD **Guadarrama** 82.27 314 P P 17 51 22.5 -0.4
GUD pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
EVIA **Vianos** 82.44 311 P P 17 51 23.6 -0.2
comp=Z,24nm,1.5s,mb4.9
EVIA **Vianos** 82.44 311 P P 17 51 23.6 -0.2
EVIA pmax pmax
comp=Z,24nm,1.5s,mb4.9
ESDC **Sonseca Array** 82.73 313 P P 17 51 25.5 +0.1
comp=Z,2.1nm,0.7s,mb4.3,baz=42,slow=4.3,SNR=8.9
ESDC LR LR 18 33 59.9
comp=Z,151nm,19.9s,MS4.4,baz=95,slow=40
ESDC **Sonseca Array** 82.73 313 P P 17 51 24.1 -1.2
comp=Z,4.0nm,1.8s,mb4.2
EQES **Quesada** 83.29 311 P P 17 51 27.7 -0.6
comp=Z,170nm,3.1s
STS **Santiago** 83.46 318 P P 17 51 26.0 -3.1
comp=Z,57nm,1.3s,mb5.4
STS **Santiago** 83.46 318 P P 17 51 26.0 -3.1
STS pmax pmax
comp=Z,57nm,1.3s,mb5.4
ELUQ **Luque** 84.19 311 P P 17 51 31.6 -1.3
comp=Z,22nm,2.0s,mb4.9
ELUQ **Luque** 84.19 311 P P 17 51 31.6 -1.3
ELUQ pmax pmax
comp=Z,22nm,2.0s,mb4.9
MSVF **Nonsavu** 85.52 114 eP P 17 51 42.0 +2.3
MSVF **Nonsavu** 85.52 114 P P 17 51 42.9 +3.2
comp=Z,158nm,0.8s,mb6.3,SNR=5.0
TAM **Tamanrasset** 85.85 294 eP P 17 51 42.3 +0.8

comp=Z,5.6nm,1.0s,mb4.8
TAM Tamanrasset 85.85 294 eP P 17 51 42.3 +0.8
TAM pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
FCC Fort Churchill 87.18 10 eP P 17 51 47.5 +0.2
FCC Fort Churchill 87.18 10 eP P 17 51 47.5 +0.2
PGC Sidney 87.73 30 eP P 17 51 51.3 +1.1
LSZ Lusaka 88.00 250 eP P 17 51 51.9 0.0
comp=Z,27nm,1.3s,mb5.3
LSZ Lusaka 88.00 250 eP P 17 51 51.9 0.0
LSZ pmax pmax
comp=Z,27nm,1.3s,mb5.3
OSD Olympics--Snow 88.26 31 P P 17 51 54.2 +1.5
MBW Mount Baker 88.27 29 P P 17 51 53.1 +0.4
NLWA Neilton Lookou 88.52 31 eP P 17 51 55.5 +1.6
RPW Rockport 88.69 29 eP P 17 51 55.0 +0.3
JCW Jim Creek 88.72 30 eP P 17 51 55.8 +0.9
GNW Green Mountain 88.84 30 eP P 17 51 57.3 +1.8
FFC Flin Flon 89.52 16 eP P 17 51 57.5 -1.0
comp=Z,39nm,1.1s,mb5.7
FFC Flin Flon 89.52 16 eP P 17 51 57.5 -1.0
FFC pmax pmax
comp=Z,39nm,1.1s,mb5.7
FFC Flin Flon 89.52 16 P P 17 51 58.6 +0.1
comp=Z,160nm,1.1s,mb6.3,SNR=11
B08A Colville Reser 89.64 28 ⇓P P 17 51 60.0 +0.8
baz=89
ETW Entiat 89.85 29 P P 17 52 00.8 +0.7
LON Longmire 89.91 30 eP P 17 52 01.2 +0.7
LON Longmire 89.91 30 eP P 17 52 01.2 +0.7
WTV Waterville 89.92 29 P P 17 52 00.9 +0.3
TDL Tradedollar La 90.05 31 P P 17 52 02.5 +1.3
TBM Table Mountain 90.08 30 P P 17 52 01.7 +0.5
F04A Amboy 90.28 31 ⇓P P 17 52 02.6 +0.3
baz=90,SNR=6.0
C09A Chrisman Ranch 90.51 28 ⇑P P 17 52 03.7 +0.5
baz=90,SNR=15
NEW Newport 90.58 27 ⇑P P 17 52 04.4 +0.9
baz=90,SNR=8.6
OD2 Odessa Site #2 90.67 28 eP P 17 52 04.7 +0.7
D08A Wollman Farm, 90.86 29 P P 17 52 05.9 +1.0
baz=91,SNR=8.3
E07A Sunnyside 90.88 29 P P 17 52 06.3 +1.4
baz=91,SNR=8.6
A13A Flathead Natio 91.03 25 ⇓P P 17 52 06.0 +0.4
baz=91
HOOD Mount Hood Mea 91.10 31 eP P 17 52 07.2 +1.2
comp=Z,105nm,1.3s,mb6.0
WALA Waterton Lakes 91.10 25 eP P 17 52 06.4 +0.5
comp=Z,0.8nm,1.1s
RSW Rattlesnake Hi 91.12 29 eP P 17 52 07.5 +1.4
HAWA Hanford 91.14 29 eP P 17 52 07.5 +1.2
C11A Tepee Creek (N 91.26 27 ⇑P P 17 52 07.7 +1.0
baz=91,SNR=25
A14A Double T Ranch 91.34 25 P P 17 52 07.6 +0.5
baz=91,SNR=9.5
H04A Detroit Lake 91.36 32 P P 17 52 08.3 +1.0
baz=91,SNR=5.4
B13A Whitefish 91.48 25 ⇑P P 17 52 08.4 +0.7
baz=91,SNR=21
A15A Johnson Ranch, 91.58 24 ⇓P P 17 52 08.5 +0.3
baz=91,SNR=11
G06A Carlson Farm, 91.60 31 ⇑P P 17 52 09.5 +1.1
baz=91,SNR=12
E09A Wood Farm, Sta 91.61 29 ⇑P P 17 52 09.1 +0.7
baz=91,SNR=14
BSMT Bassoo Peak 91.80 26 eP P 17 52 10.8 +1.5
BLMT Blacktail Moun 91.82 26 eP P 17 52 10.1 +0.7
comp=Z,31nm,1.0s,mb5.6
IRO Indian Ridge 91.86 32 P P 17 52 10.7 +1.1
B14A Marquette Ranc 91.91 25 P P 17 52 10.5 +0.7
baz=92,SNR=6.5
A16A West Butte Ran 91.99 24 ⇑P P 17 52 09.8 -0.2
baz=92,SNR=26
C13A Hot Springs 92.02 26 ⇓P P 17 52 10.8 +0.6
baz=92,SNR=23
JTMT Jette 92.07 26 eP P 17 52 11.5 +1.0
comp=Z,17nm,1.3s,mb5.2
YBMT Yellow Bay 92.07 25 eP P 17 52 11.9 +1.4
comp=Z,18nm,1.1s,mb5.3
LNOR Linction Mounta 92.08 29 eP P 17 52 12.1 +1.6
LNOR Lincton Mounta 92.08 29 eP P 17 52 12.1 +1.5
VIPM Ingram Point 92.19 31 P P 17 52 12.3 +1.2
VIPM Ingram Point 92.19 31 P P 17 52 12.3 +1.2
B15A Bradely Ranch, 92.20 24 P P 17 52 11.2 +0.1
baz=92,SNR=17
C14A Swan Lake 92.25 25 ⇓P P 17 52 12.0 +0.7
baz=92
G08A Pilot Rock 92.27 30 ⇓P P 17 52 12.2 +0.8
baz=92,SNR=9.6
A17A Triple J Farms 92.29 23 P P 17 52 11.7 +0.2
baz=92,SNR=21
SCHQ Schefferville 92.35 356 P P 17 52 11.2 -0.5
comp=Z,16nm,1.0s,mb5.3,baz=20,slow=6.5,SNR=7.2
SWMT Swartz Lake 92.37 26 eP P 17 52 12.6 +0.7
comp=Z,23nm,1.4s,mb5.3
B16A M & M Farms, S 92.41 24 ⇓P P 17 52 12.1 0.0
baz=92,SNR=9.6
F10A Beach Ranch, E 92.42 28 ⇓P P 17 52 12.7 +0.5
baz=92,SNR=9.1
A18A Metzger Ranch, 92.59 23 ⇓P P 17 52 12.9 0.0
baz=92,SNR=11
HUMO Hull Mountain 92.63 34 eP P 17 52 13.8 +0.6
comp=Z,97nm,1.9s,mb5.9
C15A Salmond Ranch, 92.65 25 ⇑P P 17 52 13.3 +0.1
baz=92,SNR=14
E12A Beaver Dam Sad 92.70 27 ⇓P P 17 52 13.3 -0.1
baz=92
SLMT Seeley Lake 92.78 25 eP P 17 52 14.2 +0.4
comp=Z,11nm,0.6s,mb5.5
B17A L&G Farms, Che 92.82 23 ⇑P P 17 52 13.0 -0.9
baz=92,SNR=13
D14A Greenough 92.92 26 ⇑P P 17 52 13.6 -0.8
baz=93,SNR=8.1
A19A Klindworth Far 92.93 22 ⇑P P 17 52 14.3 -0.1
baz=93
MSO Missoula 92.97 26 ⇑P P 17 52 14.3 -0.3
baz=93
MSO Missoula 92.97 26 eP P 17 52 14.6 -0.1
comp=Z,6.3nm,0.9s,mb5.0
I07A Izee 93.01 31 ⇓P P 17 52 15.0 +0.1
baz=93,SNR=6.9
CHMT Chamberlain Mo 93.15 26 eP P 17 52 15.5 0.0
comp=Z,4.6nm,0.9s,mb4.9
B19A Brinkman Farms 93.28 22 ⇓P P 17 52 15.4 -0.7
baz=93
F12A Elk City 93.38 27 ⇑P P 17 52 16.0 -0.6
baz=93,SNR=7.0
EGMT Eagleton 93.40 23 eP P 17 52 16.1 -0.5
comp=Z,8.3nm,0.7s,mb5.3
YBH Yreka Blue Hor 93.42 34 LR LR 18 31 43.5
comp=Z,382nm,21.7s,MS4.8,baz=329,slow=34
K05A Summer Lake 93.48 32 ⇑P P 17 52 18.8 +1.7
baz=93
D16A Dana Ranch, Ca 93.66 24 ⇓P P 17 52 17.6 -0.3
baz=93,SNR=7.1
F13A Darby 93.70 27 P P 17 52 17.8 -0.2
baz=93,SNR=6.0
E15A Deer Lodge 93.79 25 ⇓P P 17 52 18.3 -0.1
baz=94,SNR=8.8
HRY Holter Researc 93.83 25 eP P 17 52 19.0 +0.3
comp=Z,12nm,1.0s,mb5.3
D17A Six Diamond Ra 93.85 24 ⇑P P 17 52 18.5 -0.2
baz=94,SNR=9.1
C19A Slack Wire Ran 93.88 23 ⇓P P 17 52 18.1 -0.7
baz=94,SNR=13
E16A East Helena 94.04 25 ⇑P P 17 52 19.5 0.0
baz=94,SNR=7.2
F14A Wisdom 94.04 26 ⇑P P 17 52 19.2 -0.4
baz=94,SNR=10
G13A Cobalt 94.32 27 ⇓P P 17 52 20.6 -0.3
baz=94
LRM Limekiln Ridge 94.37 26 eP P 17 52 21.4 +0.3
comp=Z,43nm,1.2s,mb5.8
E17A Martinsdale 94.39 24 ⇑P P 17 52 20.7 -0.5
baz=94
MOD Modoc 94.40 33 eP P 17 52 22.2 +0.9
LTIM Timbered Crate 94.43 34 P P 17 52 22.4 +1.0
D19A Cripps Ranch, 94.44 23 ⇓P P 17 52 20.5 -0.9
baz=94
H12A Diamond D Ranc 94.54 28 ⇑P P 17 52 21.1 -0.8
baz=94
DGMT Dagmar 94.69 19 eP P 17 52 23.2 +0.7
comp=Z,14nm,0.8s,mb5.4
DLMT Dillon 94.71 26 eP P 17 52 23.3 +0.6
comp=Z,13nm,1.0s,mb5.3
WVOR Wild Horse Val 94.71 31 eP P 17 52 23.5 +0.7
comp=Z,7.2nm,1.0s,mb5.1
WVOR Wild Horse Val 94.71 31 eP P 17 52 23.5 +0.7
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
BOZ Bozeman (W) 94.82 25 ⇑P P 17 52 23.3 +0.1
baz=94
BOZ Bozeman (W) 94.82 25 eP P 17 52 23.2 0.0
comp=Z,5.9nm,1.1s,mb4.9
BOZ Bozeman (W) 94.82 25 eP P 17 52 23.2 0.0
BOZ pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
G15A Dillon 94.92 26 ⇑P P 17 52 23.7 0.0
baz=95,SNR=12
F17A Fitzpatrick Pl 94.94 24 ⇓P P 17 52 24.0 +0.2
baz=95,SNR=11
C23A Lambert 95.01 20 ⇑P P 17 52 24.7 +0.7
baz=95
ULM Lac du Bonnet 95.02 14 P P 17 52 22.7 -1.3
comp=Z,3.8nm,0.8s,mb4.9,baz=3.8,slow=6.6,SNR=4.1
ULM LR LR 18 37 21.3
comp=Z,565nm,20.3s,MS5.0,baz=173,slow=37
I12A Atlanta 95.06 28 ⇑P P 17 52 25.3 +1.0
baz=95
F18A Big Timber 95.26 24 ⇓P P 17 52 25.4 +0.2
baz=95,SNR=9.4
H15A Lima 95.33 26 ⇑P P 17 52 26.7 +1.1
baz=95
I13A Wildhorse Cree 95.36 28 ⇓P P 17 52 26.3 +0.6
baz=95
HLID Hailey 95.54 28 eP P 17 52 27.7 +1.1
comp=Z,20nm,1.5s,mb5.3
F19A Roth Farm, Mol 95.57 23 ⇓P P 17 52 26.8 +0.2
baz=95
H18A Shoshone NF, C 96.35 24 ⇓P P 17 52 28.6 -1.6
baz=96
IMW Indian Meadow 96.58 26 eP P 17 52 32.9 +1.6
comp=Z,5.1nm,1.0s,mb4.9
MOOW Moose Ponds 96.77 26 eP P 17 52 31.9 -0.2
comp=Z,6.6nm,1.3s,mb4.9
URZ Urewera 97.09 131 LR LR 18 31 26.2
comp=Z,188nm,19.4s,MS4.6,baz=314,slow=32
BOSA Boshof 97.70 241 LR LR 18 32 48.0
comp=Z,358nm,21.5s,MS4.8,baz=43,slow=33
PDAR Pinedale Array 98.06 25 P P 17 52 37.6 -0.3
comp=Z,0.9nm,0.6s,mb4.5,baz=33,slow=1.2,SNR=8.5
PDAR LR LR 18 39 06.4
comp=Z,597nm,20.6s,MS5.1,baz=335,slow=37
NVAR Mina Array Bea 98.10 33 P P 17 52 37.9 -0.3
comp=Z,0.8nm,0.5s,mb4.5,baz=308,slow=4.5,SNR=7.2
RSSD Black Hills 98.68 21 eP P 17 52 40.9 +0.2
comp=Z,8.8nm,1.0s,mb5.2
RSSD Black Hills 98.68 21 eP P 17 52 40.9 +0.2
RSSD pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
PPT Papeete 111.55 97 eLR LR 18 30 43.0
comp=Z,517nm,22.8s
TXAR Lajitas Array 112.13 27 PKiKP PKiKP 17 57 36.0 -1.4
comp=Z,0.6nm,0.5s,baz=222,slow=1.2,SNR=7.6
TXAR PKKPbc PKKPbc 18 08 26.7 -1.3
comp=Z,0.5nm,0.6s,baz=163,slow=4.6,SNR=6.3
TXAR Lajitas Array 112.13 27 PKIKP PKiKP 17 57 36.0 -1.3
JCT Junction City 112.50 24 ePKIKP PKiKP 17 57 37.3 -0.7
JCT Junction City 112.50 24 ePKIKP PKiKP 17 57 37.3 -0.7
TBI Tubuai 114.35 103 eLR LR 18 32 01.9
comp=Z,348nm,25.5s
TAOE Nuku Hiva Isla 115.08 84 eLR LR 18 32 22.8
comp=Z,570nm,25.4s
QSPA South Pole Qui 122.70 180 ePKPdf PKPdf 17 57 54.7 -1.2
SDV Santo Domingo 138.26 354 ePKPpre PKPpre 17 58 16.3
SDV ePKPdf PKPdf 17 58 27.3 -0.1
ROSC El Rosal 142.42 360 PKP PKPdf 17 58 32.6 -2.3
comp=Z,11nm,0.5s,baz=31,slow=17,SNR=4.9
OTAV Otavalo 146.78 7 ePKPdf PKPdf 17 58 44.1 +1.6
BDFB Brasilia 150.56 299 PKPbc PKPbc 17 58 53.6 -0.3
comp=Z,6.5nm,0.6s,baz=332,slow=4.0,SNR=7.8
BDFB PKPab PKPab 17 59 01.7 +1.2
comp=Z,7.1nm,0.9s,baz=56,slow=16,SNR=4.0
BDFB Brasilia 150.56 299 PKIKP PKPdf 17 58 53.6 +5.2
BDFB 17 59 01.7
BDFB pmax pmax
comp=Z,7.0nm,0.6s
LPAZ La Paz 162.49 340 PKP PKPdf 17 59 02.9 -0.9
comp=Z,6.9nm,1.1s,baz=5.5,slow=4.4,SNR=15
LPAZ La Paz 162.49 340 ePKPdf PKPdf 17 59 04.6 +0.8
LPAZ La Paz 162.49 340 PKIKP PKPdf 17 59 02.9 -0.9
LPAZ pmax pmax
comp=Z,7.0nm,1.1s
CPUP Villa Florida 163.79 290 PKP PKPdf 17 59 03.9 -1.0
comp=Z,0.9nm,0.5s,baz=26,slow=1.4,SNR=3.5
CPUP PKPab PKPab 17 59 56.7 -0.5
comp=Z,0.3nm,0.3s,baz=24,slow=6.4,SNR=2.8
CPUP Villa Florida 163.79 290 PKIKP PKPdf 17 59 03.9 -0.9
CPUP 17 59 56.7
PLCA Paso Flores 171.63 200 PKP PKPdf 17 59 08.5 -1.4
comp=Z,4.7nm,1.0s,baz=125,slow=1.0,SNR=4.5
PLCA Paso Flores 171.63 200 PKIKP PKPdf 17 59 08.5 -1.4

*ISCJB **11** 18:13:22.0±2.1, 6°.09S±0°.09×147°.5E±0°.1, h50km±18km, mb4.0/8, MS3.6/2, Error ellipse: s-maj=22.5km s-min=15.3km az=12.3*
*IDC **11** 18:13:22.2±3.4, 6°.11S×147°.67E, h39km±23km, mb3.8/7, mb1 4.0/8, mb1mx3.8/16, mbtmp3.8/8, ML4.0/1, MS3.6/2, Ms1 3.7/2, ms1mx3.0/24, Error ellipse: s-maj=48.1km s-min=19.2km az=102.0*
*NEIC **11** 18:13:24.6±1.8, 6°.15S×147°.56E, h60km±17km, mb4.5/1, Error ellipse: s-maj=19.5km s-min=14.2km az=118.0*
ISC 11 18:13:25.8±1.9, 6°.17S±0°.10×147°.4E±0°.1, h65km±17km, n23, σ0§77/23, mb3.9/8, Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 3.23 185 eP Pn 18 14 13.9 -0.2
COEN Coen 8.80 208 eP Pn 18 15 30.3 -0.1
COEN eS Sn 18 17 02.2 -5.9
COEN Coen 8.80 208 eP Pn 18 15 29.6 -0.8
34nm,0.4s
KAKA Kakadu 16.15 245 eP Pn 18 17 09.5 +0.7
9.0nm,0.6s
KAKA Kakadu 16.15 245 eP Pn 18 17 09.8 +1.0
22nm,0.5s
WB2 Warramunga Arr 18.69 222 eP Pn 18 17 38.6 -1.2
WRA Warramunga Arr 18.69 222 P Pn 18 17 39.0 -0.9
0.5nm,0.3s,baz=49,slow=11,SNR=30
WRA ScP ScP 18 25 36.8 +1.7
0.0nm,0.3s,baz=43,slow=2.5,SNR=5.0
QLP Quilpie 20.53 188 eP P 18 17 59.2 +0.3
KNA Kununurra 20.64 241 eP P 18 18 00.8 +0.7
2.1nm,0.2s
ASAR Alice Springs 21.73 215 P P 18 18 12.3 +0.6
2.8nm,0.4s,mb4.0,baz=55,slow=8.6,SNR=167
ASAR S S 18 22 06.7 -2.0
1.1nm,1.0s,baz=33,slow=21,SNR=4.8
ASAR ScP ScP 18 25 45.0 +2.8
0.9nm,0.9s,baz=58,slow=3.3,SNR=6.2
FITZ Fitzroy Crossi 24.35 239 P P 18 18 39.0 +1.2
1.7nm,0.3s,mb3.8,baz=57,slow=8.2,SNR=36
FITZ Fitzroy Crossi 24.35 239 eP P 18 18 38.8 +1.0
6.4nm,0.4s,mb4.3
CMSA Cobar Meteorol 25.29 183 eP P 18 18 47.0 +0.8
STKA Stephens Creek 26.16 191 P P 18 18 53.8 -0.2
4.1nm,0.5s,mb4.2,baz=9.6,slow=8.5,SNR=22
STKA Stephens Creek 26.16 191 eP P 18 18 53.9 -0.1
2.9nm,0.3s,mb4.2
STKA Stephens Creek 26.16 191 eP P 18 18 53.6 -0.4
YNG Young 28.01 178 eP P 18 19 11.4 +0.8
6.7nm,0.9s,mb4.2
CBIJ Chichi jima 33.45 351 LR LR 18 32 32.4
comp=Z,96nm,18.8s,baz=162,slow=34
CMAR Chiang Mai Arr 53.71 298 LR LR 18 46 48.5
comp=Z,59nm,18.2s,baz=27,slow=37
SONM Songino Array 64.76 331 P P 18 23 57.1 -0.2
0.2nm,0.3s,mb3.4,baz=158,slow=0.8,SNR=3.9
MKAR Makanchi Array 77.90 320 P P 18 25 16.8 +0.2
0.3nm,0.5s,mb3.3,baz=96,slow=8.4,SNR=7.7
ZALV Zalesovo Beam 79.38 328 P P 18 25 24.3 -0.3
1.4nm,0.4s,mb4.1,baz=118,slow=6.5,SNR=8.3
ILAR Eielson Array 85.46 23 P P 18 25 55.0 -1.1
0.5nm,0.6s,mb3.6,baz=251,slow=5.2,SNR=6.8

*ISCJB **11** 18:22:28.3±0.4, 33°.68N±0°.02×5°.98W±0°.04, h10km, Error ellipse: s-maj=5.1km s-min=3.0km az=165.9*
*MDD **11** 18:22:31.6±1.0, 33°.60N×5°.84W, h18km±8km, mb3.5/7, Error ellipse: s-maj=8.0km s-min=4.3km az=92.0, PRIMO*
*CSEM **11** 18:22:31.0±0.1, 33°.59N×5°.83W, h20km, MD2.7, Error ellipse: s-maj=4.2km s-min=2.7km az=78.0*
*CNRM **11** 18:22:31.2, 33°.57N×5°.84W, h4km, MD2.7*
*INMG **11** 18:22:34.9±1.2, 33°.75N×5°.83W, h30km±19km, ML2.0, Error ellipse: s-maj=12.4km s-min=7.2km az=121.0*
ISC 11 18:22:29.1±0.4, 33°.65N±0°.02×5°.93W±0°.04, h10km, n54, σ1§42/106, Morocco

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TGT Taghat 0.84 60 P Pg 18 22 46.5 +1.1
TGT S Sg 18 22 58.0 +1.6
TGT Taghat 0.84 60 P Pg 18 22 46.5 +1.1
TGT S Sg 18 22 58.0 +1.6
TGT Taghat 0.84 60 i P Pg 18 22 46.5 +1.1
TGT i S Sg 18 22 58.0 +1.6
CZD Col de Zad 0.96 129 P Pg 18 22 47.0 -0.6
CZD S Sg 18 22 58.5 -1.7
CZD Col de Zad 0.96 129 P Pg 18 22 47.0 -0.6
CZD S Sg 18 22 58.5 -1.7
CZD Col de Zad 0.96 129 i P Pg 18 22 47.0 -0.6
CZD i S Sg 18 22 58.5 -1.7
KIB El Ksiba 1.07 185 P Pg 18 22 50.0 +0.3
KIB S Sg 18 23 02.5 -1.1
KIB El Ksiba 1.07 185 P Pg 18 22 50.0 +0.3
KIB S Sg 18 23 02.5 -1.1
KIB El Ksiba 1.07 185 i P Pg 18 22 50.0 +0.3
KIB i S Sg 18 23 02.5 -1.1
TZK Tazeka 1.52 73 P Pn 18 22 56.0 -0.3
TZK S Sn 18 23 16.0 -0.2
TZK Tazeka 1.52 73 P Pn 18 22 56.0 -0.3
TZK S Sn 18 23 16.0 -0.2
TZK Tazeka 1.52 73 i P Pn 18 22 56.0 -0.3
TZK i S Sn 18 23 16.0 -0.2
TZC Tazercounte 1.56 198 P Pn 18 22 58.0 +1.1
TZC S Sn 18 23 17.0 -0.3
TZC Tazercounte 1.56 198 P Pn 18 22 58.0 +1.1
TZC S Sn 18 23 17.0 -0.3
TZC Tazercounte 1.56 198 eP Pn 18 22 58.0 +1.1
TZC i S Sn 18 23 17.0 -0.3
ZFT Errachidia 2.09 140 P Pn 18 23 04.0 -0.1
ZFT S Sn 18 23 29.0 -1.1
ZFT Errachidia 2.09 140 P Pn 18 23 04.0 -0.1
ZFT S Sn 18 23 29.0 -1.1
ZFT Errachidia 2.09 140 eP Pn 18 23 04.0 -0.1
ZFT i S Sn 18 23 29.0 -1.1
EMIJ Mijas 3.06 18 P Pn 18 23 17.6 0.0
0.1nm,0.1s,SNR=7.9
EMIJ S Sn 18 23 53.0 -1.2
0.2nm,0.2s,SNR=7.9
EMIJ Mijas 3.06 18 P Pn 18 23 17.6 0.0
0.1nm,0.1s,SNR=7.9
EMIJ S Sn 18 23 53.0 -1.2
0.2nm,0.2s,SNR=7.9
PBDV Barranco-do-Ve 3.94 336 ePn Pn 18 23 32.0 +2.4
PBDV eSn Sn 18 24 14.7 -1.2
PBDV Barranco-do-Ve 3.94 336 P Pn 18 23 32.0 +2.4
PBDV S Sn 18 24 14.7 -1.2
PBDV Barranco-do-Ve 3.94 336 P Pn 18 23 32.0 +2.4
PBDV S Sn 18 24 14.7 -1.2
PBDV Barranco-do-Ve 3.94 336 ePn Pn 18 23 32.0 +2.4
PBDV eSn Sn 18 24 14.7 -1.2
PVAQ Vaqueiros 4.02 339 ePn Pn 18 23 33.3 +2.6
PVAQ eSn Sn 18 24 16.3 -1.6
PVAQ A 18 24 20.8
2.9nm,0.8s
PVAQ Vaqueiros 4.02 339 P Pn 18 23 33.3 +2.6
PVAQ S Sn 18 24 16.3 -1.6
2.9nm,0.8s
PVAQ Vaqueiros 4.02 339 P Pn 18 23 33.3 +2.6
PVAQ S Sn 18 24 16.3 -1.6
2.9nm,0.8s
PVAQ Vaqueiros 4.02 339 ePn Pn 18 23 33.3 +2.6
PVAQ eSn Sn 18 24 16.3 -1.6
2.9nm,0.8s
EGRO El Granado 4.08 342 P Pn 18 23 33.9 +2.4
1.6nm,0.1s,SNR=7.9
EGRO S Sn 18 24 17.5 -1.8
0.3nm,0.1s,SNR=7.9
EGRO El Granado 4.08 342 P Pn 18 23 33.9 +2.4
1.6nm,0.1s,SNR=7.9
EGRO S Sn 18 24 17.5 -1.8
0.3nm,0.1s,SNR=7.9
EGRO El Granado 4.08 342 P Pn 18 23 33.0 +1.5
1.6nm,0.1s,SNR=7.9
EMIN Mina Concepcio 4.16 352 P Pn 18 23 33.8 +1.2
0.4nm,0.1s,SNR=6.6
EMIN S Sn 18 24 21.0 -0.2
0.3nm,0.1s,SNR=7.9
EMIN Mina Concepcio 4.16 352 P Pn 18 23 33.8 +1.2
0.4nm,0.1s,SNR=6.6
EMIN S Sn 18 24 21.0 -0.2
0.3nm,0.1s,SNR=7.9
EMIN Mina Concepcio 4.16 352 P Pn 18 23 33.8 +1.2
0.4nm,0.1s,SNR=6.6
EMIN S Sn 18 24 21.0 -0.2
0.3nm,0.1s,SNR=7.9
PCVE Castro Verde 4.33 337 ePn Pn 18 23 37.5 +2.5
PCVE eSn Sn 18 24 23.8 -1.7
PCVE Castro Verde 4.33 337 P Pn 18 23 37.5 +2.5
PCVE S Sn 18 24 23.8 -1.7
PCVE Castro Verde 4.33 337 P Pn 18 23 37.5 +2.5
PCVE S Sn 18 24 23.8 -1.7
PCVE Castro Verde 4.33 337 ePn Pn 18 23 37.5 +2.5
PCVE eSn Sn 18 24 23.8 -1.7
ECAB El Cabril 4.44 5 P Pn 18 23 37.7 +1.3
0.4nm,0.1s,SNR=7.9
ECAB S Sn 18 24 25.1 -3.1
0.3nm,0.1s,SNR=7.9
ECAB El Cabril 4.44 5 P Pn 18 23 37.7 +1.3
0.4nm,0.1s,SNR=7.9
ECAB S Sn 18 24 25.1 -3.1
0.3nm,0.1s,SNR=7.9
ECAB El Cabril 4.44 5 P Pn 18 23 37.7 +1.2
0.4nm,0.1s,SNR=7.9
ECAB S Sn 18 24 25.1 -3.1
0.3nm,0.1s,SNR=7.9
PBAR Barrancos 4.61 349 ePn Pn 18 23 40.7 +1.9
PBAR eSn Sn 18 24 30.2 -2.1
PBAR A 18 24 42.5
1.7nm,0.7s
PBAR Barrancos 4.61 349 P Pn 18 23 40.7 +1.9
PBAR S Sn 18 24 30.2 -2.1
1.7nm,0.7s
PBAR Barrancos 4.61 349 P Pn 18 23 40.7 +1.9
PBAR S Sn 18 24 30.2 -2.1
1.7nm,0.7s
PBAR Barrancos 4.61 349 ePn Pn 18 23 40.7 +1.9
PBAR eSn Sn 18 24 30.2 -2.1
1.7nm,0.7s
EADA Adamuz 4.64 13 P Pn 18 23 40.1 +0.8
0.5nm,0.1s,SNR=7.9
EADA S Sn 18 24 29.1 -4.1
0.5nm,0.1s,SNR=7.9
EADA Adamuz 4.64 13 P Pn 18 23 40.1 +0.8
0.5nm,0.1s,SNR=7.9
EADA S Sn 18 24 29.1 -4.1
0.5nm,0.1s,SNR=7.9
EADA Adamuz 4.64 13 P Pn 18 23 40.4 +1.1
0.5nm,0.1s,SNR=7.9
EADA S Sn 18 24 31.0 -2.2
0.3nm,0.1s,SNR=7.9
EQES Quesada 4.76 28 P Pn 18 23 41.9 +1.1
0.4nm,0.2s,SNR=4.0
EQES S Sn 18 24 30.6 -5.4
0.2nm,0.1s,SNR=4.0
EQES Quesada 4.76 28 P Pn 18 23 41.9 +1.1
0.4nm,0.2s,SNR=4.0
EQES S Sn 18 24 30.6 -5.4
0.2nm,0.1s,SNR=4.0
EQES Quesada 4.76 28 P Pn 18 23 36.7 -4.1
0.4nm,0.2s,SNR=4.0
EBAD Badajoz 5.17 351 P Pn 18 23 47.8 +1.2
0.7nm,0.1s,SNR=7.9
EBAD S Sn 18 24 44.4 -1.8
0.7nm,0.1s,SNR=7.9
EBAD Badajoz 5.17 351 P Pn 18 23 47.8 +1.2
0.7nm,0.1s,SNR=7.9
EBAD S Sn 18 24 44.4 -1.8
0.7nm,0.1s,SNR=7.9
EBAD Badajoz 5.17 351 P Pn 18 23 47.8 +1.3
0.7nm,0.1s,SNR=7.9
EBAD S Sn 18 24 44.9 -1.4
0.5nm,0.1s,SNR=7.9

*IDC **11** 18:35:09.6±2.9, 7°.18S×129°.60E, h122km±27km, mb3.7/8, mb1 4.0/11, mb1mx3.8/19, mbtmp3.8/11, Error ellipse: s-maj=40.9km s-min=15.0km az=60.0*
*NEIC **11** 18:35:10.0±2.5, 7°.26S×129.52E, h129km±26km, mb3.8/1, Error ellipse: s-maj=27.5km s-min=15.1km az=48.0*
*ISCJB **11** 18:35:11.5±0.7, 7°.40S±0°.03×129°.66E±0°.07, h167km±8km, mb4.0/10, Error ellipse: s-maj=11.3km s-min=5.7km az=179.3*
*DJA **11** 18:35:12, 7°.29S×129°.47E, h163km, mb4.8/5*
ISC 11 18:35:11.9±0.7, 7°.37S±0°.04×129°.59E±0°.07, h150km±8km, n39, σ1°28/51, mb4.0/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.85**	**6**	P	**Pn**	**18 36 00.0**	**+2.6**
BNDI	**Bandanaira**	**2.85**	**6**	P	**Pn**	**18 35 59.2**	**+1.8**
TLE	**Tual**	**3.57**	**61**	P	**Pn**	**18 36 07.0**	**+0.4**
TLE	**Tual**	**3.57**	**61**	P	**Pn**	**18 36 07.3**	**+0.7**
TLE				S	**Sn**	**18 36 44.0**	**-5.0**
NLAI	**Namlea**	**4.80**	**329**	P	**Pn**	**18 36 21.3**	**-1.4**
NLAI	**Namlea**	**4.80**	**329**	P	**Pn**	**18 36 23.2**	**+0.5**
KAKA	**Kakadu** 51nm,0.1s	**6.00**	**152**	*e*P	**Pn**	**18 36 39.4**	**+0.7**
KAKA				*e*S	**Sn**	**18 37 43.4**	**-3.2**
KAKA	**Kakadu** 171nm,0.3s	**6.00**	**152**	*e*P	**Pn**	**18 36 39.6**	**+0.9**
KAKA				*e*S	**Sn**	**18 37 42.8**	**-3.7**
KAKA	**Kakadu** 138nm,0.6s	**6.00**	**152**	P	**Pn**	**18 36 40.0**	**+1.3**
KAKA	**Kakadu** 4.2nm138nm,0.6s	**6.00**	**152**	P	**Pn**	**18 36 40.3**	**+1.6**
KNA	**Kununurra** 3μm116nm,0.7s	**8.37**	**185**	P	**Pn**	**18 37 10.8**	**+0.6**
KNA	**Kununurra** 3μm116nm,0.7s	**8.37**	**185**	P	**Pn**	**18 37 11.1**	**+0.9**
KNA	3μm116nm,0.7s			S	**Sn**	**18 38 41.5**	**-1.9**
BAKI	**Biak** 1μm124nm,0.7s	**8.94**	**47**	P	**Pn**	**18 37 17.3**	**-0.6**
BAKI	**Biak** 1μm124nm,0.7s	**8.94**	**47**	P	**Pn**	**18 37 17.8**	**-0.1**
BAKI	1μm124nm,0.7s			S	**Sn**	**18 38 54.2**	**-3.0**
FITZ	**Fitzroy Crossi** 2.3nm,0.3s,baz=36,slow=11,SNR=61	**11.34**	**199**	P	**Pn**	**18 37 48.8**	**-0.8**
FITZ	8.6nm,0.3s,baz=187,slow=22,SNR=9.8			S	**Sn**	**18 39 48.0**	**-7.1**
FITZ	**Fitzroy Crossi** 14nm,0.3s	**11.34**	**199**	*e*P	**Pn**	**18 37 48.3**	**-1.3**
FITZ				*e*S	**Sn**	**18 39 44.1**	**-11**
FITZ	**Fitzroy Crossi** 25nm,0.7s	**11.34**	**199**	P	**Pn**	**18 37 48.6**	**-1.0**
FITZ	**Fitzroy Crossi** 25nm,0.7s	**11.34**	**199**	P	**Pn**	**18 37 49.4**	**-0.2**
WRA	**Warramunga Arr** 2.9nm,0.3s,baz=336,slow=14,SNR=159	**13.32**	**160**	P	**Pn**	**18 38 14.2**	**-1.0**
WRA	6.8nm,0.3s,baz=334,slow=23,SNR=12			S	**Sn**	**18 40 35.8**	**-6.9**
WB2	**Warramunga Arr**	**13.32**	**160**	*e*P	**Pn**	**18 38 14.2**	**-1.0**
WB2				*e*S	**Sn**	**18 40 33.1**	**-10**
COEN	**Coen**	**14.86**	**117**	*e*P	**Pn**	**18 38 36.5**	**+1.8**
COEN				*e*S	**Sn**	**18 41 06.4**	**-13**
COEN	**Coen**	**14.86**	**117**	P	**Pn**	**18 38 35.5**	**+0.8**
COEN	**Coen**	**14.86**	**117**	P	**Pn**	**18 38 36.1**	**+1.4**
QIS	**Mount Isa**	**16.30**	**145**	*e*P	**Pn**	**18 38 54.2**	**+1.8**
MBWA	**Marble Bar**	**16.70**	**214**	*e*P	**Pn**	**18 38 59.0**	**+1.8**
MBWA				*e*S	**S**	**18 41 48.8**	**-14**
ASAR	**Alice Springs** 1.3nm,0.3s,baz=338,slow=11,SNR=118	**16.72**	**166**	P	**Pn**	**18 38 59.0**	**+1.6**
ASAR	0.6nm,0.3s,baz=326,slow=19,SNR=7.9			S	**S**	**18 41 54.8**	**-8.8**
ASAR	0.1nm,0.3s,baz=360,slow=1.4,SNR=4.6			ScP	ScP	18 47 00.8	+2.6
CTA	**Charters Tower** 3.0nm,0.7s,baz=315,slow=11,SNR=3.4	**20.51**	**130**	P	**P**	**18 39 39.1**	**+0.7**
FORT	**Forrest** 16nm,0.4s,mb4.8	**23.33**	**183**	*e*P	**P**	**18 40 10.2**	**+3.5**
BBOO	**Buckleboo** 1.7nm,0.2s,mb4.3	**26.02**	**168**	*e*P	**P**	**18 40 34.4**	**+3.4**
STKA	**Stephens Creek** 4.3nm,0.6s,mb4.2,baz=329,slow=9.2,SNR=13	**26.83**	**157**	P	**P**	**18 40 41.4**	**+3.1**
STKA	**Stephens Creek** 2.4nm,0.4s,mb4.2	**26.83**	**157**	*e*P	**P**	**18 40 41.9**	**+3.6**
CMAR	**Chiang Mai Arr** 2.2nm,0.7s,mb3.9,baz=136,slow=7.0,SNR=18	**39.66**	**311**	P	**P**	**18 42 29.2**	**-0.3**
SONM	**Songino Array** 0.7nm,0.5s,mb3.7,baz=160,slow=6.8,SNR=7.7	**58.66**	**342**	P	**P**	**18 44 53.2**	**-0.2**
MK31	**Makanchi Array**	**68.31**	**327**	*e*P	**P**	**18 45 56.1**	**-0.7**
MKAR	**Makanchi Array** 3.2nm,0.4s,mb4.4,baz=116,slow=8.2,SNR=62	**68.31**	**327**	P	**P**	**18 45 56.8**	**0.0**
ZALV	**Zalesovo Beam** 0.9nm,0.4s,mb3.8,baz=116,slow=5.3,SNR=5.4	**71.73**	**334**	P	**P**	**18 46 16.8**	**-0.7**
BVAR	**Borovoye Array** 0.5nm,0.4s,mb3.5,baz=131,slow=6.5,SNR=6.2	**78.16**	**328**	P	**P**	**18 46 54.3**	**-0.1**
ABKAR	**Akbulak array** 0.9nm,0.5s,mb3.8	**82.55**	**322**	*e*P	**P**	**18 47 17.6**	**-0.3**
ILAR	**Eielson Array** 0.3nm,0.6s,mb3.6,baz=243,slow=4.0,SNR=4.7	**93.85**	**25**	P	**P**	**18 48 11.1**	**-0.8**

*NNC **11** 18:48:53.5±5.6, 36°.79N×70°.25E, h0km, mb3.7, mpv3.7, Error ellipse: s-maj=44.8km s-min=31.6km az=177.0*
ISC 11 18:48:52.6±2.5, 36°.5N±0°.2×70°.3E±0°.1, h35km, n8, σ1°95/11, 1C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=19	**6.23**	**24**	P	**Pn**	**18 50 22.0**	**0.0**
KK31	**Karatay Array** 2.7nm,0.3s,baz=182,slow=13,SNR=45	**6.63**	**1**	⇓P	**Pn**	**18 50 29.6**	**+2.0**
KK31	3.6nm,0.7s,baz=183,slow=22,SNR=4.4			⇓S	**Sn**	**18 51 41.3**	**-0.6**
EKS2	**Erkin-Say** SNR=13	**6.74**	**22**	P	**Pn**	**18 50 29.2**	**+0.2**
KZA	**Kyzart** SNR=6.3	**6.78**	**33**	P	**Pn**	**18 50 28.1**	**-1.4**
AAK	**Ala-Archa** SNR=8.1	**6.95**	**26**	P	**Pn**	**18 50 31.7**	**-0.1**
CHMS	**Chumysh** SNR=6.5	**7.36**	**26**	P	**Pn**	**18 50 37.0**	**-0.5**
TKM2	**Tokmak 2** 2.6nm,0.7s	**7.62**	**31**	⇓P	**Pn**	**18 50 40.4**	**-0.6**
TKM2	2.3nm,0.9s			⇓S	**Sn**	**18 52 09.0**	**+3.0**
AB31	**Akbulak array** 0.1nm,0.3s,baz=166,slow=12,SNR=9.7	**14.86**	**333**	⇑P	**Pn**	**18 52 20.8**	**+0.8**
AB31	0.4nm,0.5s,baz=166,slow=22,SNR=5.2			S	**Sn**	**18 55 02.7**	**-0.7**

DJA 11 19:05:15, 1°.95N×126°.51E, h20km, MLv3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.45**	**144**	P	Pn	19 05 39.7	-0.4
MNI	**Manado**	**1.74**	**253**	P	Pn	19 05 45.3	+1.2
MNI				S	Sn	19 06 06.0	+0.2
KMSI	**Cibinong**	**2.87**	**242**	P	Pn	19 05 59.8	+0.1
KMSI				S	Sn	19 06 36.6	+2.9

MAN 11 19:11:28, 7°.21N×126°.54E, h1km, mb4.6, ML3.5, MS3.4, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.39**	**227**	*e*P	Pg	19 11 36.2	+0.7
MATI				*e*S	Sg	19 11 39.6	-0.9
DMPH	**Davao City--Mi**	**1.03**	**263**	⇑*i*P	Pg	19 11 49.6	+1.7
DMPH				*e*S	Sg	19 12 07.2	+6.0
KCP	**Kidapawan**	**1.45**	**262**	⇓*e*P	Pn	19 11 54.5	-0.9
KCP				*i* S	Sg	19 12 15.9	+1.1
BUKP	**Musuan**	**1.61**	**294**	*e*P	Pn	19 11 57.9	+0.3
BUKP				*e*S	Sn	19 12 19.7	+0.7
BUTP	**Butuan**	**1.97**	**332**	*e*P	Pn	19 12 03.3	+0.8
BUTP				*e*S	Sn	19 12 33.8	+6.0
SCPH	**Surigao**	**2.76**	**338**	*e*P	Pn	19 12 15.8	+2.5
SCPH				*e*S	Sn	19 12 30.4	-17

*NNC **11** 19:11:53.0±3.3, 50°.65N×92°.74E, h1km±17km, mb4.6, mpv4.8, Error ellipse: s-maj=21.9km s-min=15.6km az=63.0*
*BJI **11** 19:11:53.2, 50°.92N×92°.48E, h11km, mB4.6/10, mb4.4/24, ML4.7/4, Ms4.3/12, Ms7 4.1/11*
*IDC **11** 19:11:54.1±0.5, 50°.77N×92°.84E, h0km, mb4.2/19, mb1 4.4/23, mb1mx4.3/33, mbtmp4.2/23, ML3.9/4, MS3.4/5, Ms1 3.4/5, ms1mx3.1/31, Error ellipse: s-maj=12.9km s-min=9.5km az=7.0*
*MOS **11** 19:11:55.6±1.2, 50°.71N×92°.62E, h20km, mb4.6/22, Error ellipse: s-maj=8.5km s-min=5.7km az=130.9*
*NEIC **11** 19:11:56.3±2.4, 50°.77N×92°.70E, h12km±16km, mb4.4/29, Error ellipse: s-maj=7.4km s-min=5.0km az=191.0*
*ISCJB **11** 19:11:56.0±0.9, 50°.79N±0°.03×92°.64E±0°.04, h19km±7km, mb4.5/62, MS3.7/7, Error ellipse: s-maj=5.2km s-min=3.8km az=13.6*
*ASRS **11** 19:12:00.7±1.2, 50°.90N×92°.38E, h15km, Ms3.9/3*
*SZGRF **11** 19:12:07.2, 50°.86N×91°.17E, h33km, mb4.7, Tuva-Buryatia-Mongolia border region*
ISC 11 19:11:56.2±0.9, 50°.80N±0°.03×92°.70E±0°.03, h8km±5km, h12km±8km: pP-P, n193, σ1°21/208, mb4.5/64, MS3.7/7, 12C-9D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERR	**Cheremushki**	**2.20**	**339**	*i* PN	**Pn**	**19 12 35.3**	**+2.3**
CERR				*i*		19 13 05.2	
CERR	**Cheremushki**	**2.20**	**339**	*i* Pn	**Pn**	**19 12 35.3**	**+2.3**
CERR				*i* Pg	**Pg**	**19 12 37.3**	**-1.1**
CERR				*i* Sg	**Sg**	**19 13 05.2**	**-1.7**
AKAR	**Aktash**	**3.28**	**263**	*e*PN	**Pn**	**19 12 49.8**	**+2.1**
AKAR				*e*		19 12 55.6	
AKAR				*e*		19 13 36.2	
AKAR	**Aktash**	**3.28**	**263**	*e*Pn	**Pn**	**19 12 49.8**	**+2.1**
AKAR				*e*Pg	**Pg**	**19 12 55.6**	**-3.3**
AKAR				*e*Sg	**Sg**	**19 13 36.2**	**-5.1**
TASR	**Tashtagol**	**3.58**	**305**	*e*PN	**Pn**	**19 12 54.0**	**+2.1**
TASR				*e*		19 13 05.9	
TASR				*e*		19 13 47.0	
TASR	**Tashtagol**	**3.58**	**305**	*e*Pn	**Pn**	**19 12 54.0**	**+2.1**
TASR				*e*Pg	**Pg**	**19 13 05.9**	**+1.2**
TASR				*e*Sg	**Sg**	**19 13 47.0**	**-4.0**
ORY	**Orie**	**4.45**	**18**	⇓*i*PN	**Pn**	**19 13 05.4**	**+1.5**
ORY				*e*		19 13 21.0	
ORY				*e*		19 13 59.5	
ELT	**Yel'tsovka**	**4.69**	**304**	*e*PN	**Pn**	**19 13 08.6**	**+1.5**
ELT				*e*		19 13 23.0	
ELT				*e*		19 14 20.2	
ELT	**Yel'tsovka**	**4.69**	**304**	*e*Pn	**Pn**	**19 13 08.6**	**+1.5**
ELT				*e*Pg	**Pg**	**19 13 23.0**	**-2.9**
ELT				*e*Sg	**Sg**	**19 14 20.2**	**-6.4**
UKR	**Ust'-Kan**	**5.02**	**275**	*e*PN	**Pn**	**19 13 13.3**	**+1.6**
UKR				*e*		19 13 26.5	
UKR	**Ust'-Kan**	**5.02**	**275**	*e*Pn	**Pn**	**19 13 13.3**	**+1.6**
UKR				*e*Pg	**Pg**	**19 13 26.5**	**-5.8**
UKR				*e*Sg	Sg	19 14 32.2	-5.1
MOY	**Mondy**	**5.28**	**77**	*e*PN	**Pb**	**19 13 29.1**	**+0.5**
MOY				*e*		19 14 38.2	
MOY	comp=Z,266nm,0.4s			pmax	pmax		
MOY	comp=N,4μm,1.6s			smax			
ZAA0	**Zalesovo Array**	**5.76**	**306**	*e*Pn	**Pn**	**19 13 22.1**	**+0.2**
ZALV	**Zalesovo Beam** comp=N,3.8nm,0.3s,baz=126,slow=12,SNR=42	**5.76**	**306**	Pn	**Pn**	**19 13 22.4**	**+0.5**
ZALV	comp=N,6.2nm,0.3s,baz=110,slow=15,SNR=36			Pg	**Pg**	**19 13 39.6**	**-6.9**
ZALV	comp=N,21nm,0.3s,baz=130,slow=27,SNR=6.3			Lg		19 14 53.6	
ZALV	**Zalesovo Beam**	**5.76**	**306**	PN	**Pn**	**19 13 22.4**	**+0.5**
ZALV						19 13 39.6	
ZAK	**Zakamensk**	**6.75**	**89**	*e*PN	**Pn**	**19 13 35.3**	**-0.1**
ZAK				*e*		19 15 21.0	
ZAK	comp=Z,62nm,1.2s			pmax	pmax		
ZAK	comp=N,1μm,1.4s			smax			
TLY	**Talaya**	**6.93**	**78**	P	**Pn**	**19 13 38.6**	**+0.7**
TLY	**Talaya**	**6.93**	**78**	*e*PN	**Pb**	**19 13 58.7**	**+2.0**
TLY				*e*		19 15 29.3	
TLY	comp=Z,78nm,0.8s			pmax	pmax		
TLY	comp=Z,274nm,0.6s			smax			
NVS	**Novosibirsk**	**7.02**	**309**	*e*PN	**Pn**	**19 13 38.0**	**-1.1**
NVS				*e*		19 14 05.2	
NVS				*e*		19 15 00.4	
NVS				*e*		19 15 29.8	
NVS	**Novosibirsk**	**7.02**	**309**	*e*Pn	**Pn**	**19 13 38.0**	**-1.1**
NVS				*e*Pg	Pg	19 14 05.2	-5.2
NVS				*e*Sn	**Sn**	**19 15 00.4**	**+1.4**
NVS				*i* Sg	Sg	19 15 29.8	-11
WMQ	**Urumqi**	**7.77**	**208**	*e*Pn	**Pn**	**19 13 50.3**	**+0.9**
WMQ				Sn	**Sn**	**19 15 14.2**	**-3.3**
WMQ	comp=N,430nm,1.0s			smax			
WMQ	comp=E,470nm,1.0s			smax			
MK31	**Makanchi Array** comp=E,27nm,0.8s	**7.96**	**244**	⇓Pn	**Pn**	**19 13 52.3**	**+0.3**
MK31	comp=E,62nm,0.6s			⇑Pg	Pn	19 14 17.0	+25
MK31	comp=E,130nm,0.8s,baz=50,slow=29,SNR=4.3			⇑Lg		19 16 00.6	
MK31	**Makanchi Array**	**7.96**	**244**	*e*P	**Pn**	**19 13 52.1**	**+0.1**
MK31	**Makanchi Array**	**7.96**	**244**	P	**Pn**	**19 13 52.7**	**+0.7**
MK31	comp=Z,54nm,0.5s			pmax	pmax		
MKAR	**Makanchi Array** comp=Z,2.3nm,0.3s,baz=66,slow=13,SNR=137	**7.96**	**244**	Pn	**Pn**	**19 13 52.7**	**+0.7**
MKAR	comp=Z,5.7nm,0.3s,baz=61,slow=16,SNR=8.5			Pg	Pn	19 14 22.9	+31
MKAR	comp=Z,6.4nm,0.3s,baz=65,slow=24,SNR=3.0			Sn	**Sn**	**19 15 21.8**	**-0.4**
MKAR	comp=Z,9.6nm,0.3s,baz=59,slow=33,SNR=3.6			Lg		19 16 05.4	
MKAR	comp=Z,338nm,20.9s,baz=338,slow=40			LR	LR	19 17 13.9	
MKAR	**Makanchi Array**	**7.96**	**244**	Pn	**Pn**	**19 13 52.7**	**+0.7**
MKAR				Pg	Pn	19 14 22.9	+31
MKAR				Sn	**Sn**	**19 15 21.8**	**-0.4**
MKAR				Lg		19 16 05.4	
MKAR				LR	LR	19 17 13.9	
MKAR	**Makanchi Array**	**7.96**	**244**	P	**Pn**	**19 13 52.7**	**+0.7**
MKAR						19 15 21.8	
KURK	**Kurchatov** comp=Z,31nm,0.9s	**8.93**	**275**	⇓Pn	**Pn**	**19 14 04.5**	**-0.9**
KURK	comp=Z,363nm,0.8s			⇑Lg		19 16 38.2	
KURK	**Kurchatov** comp=Z,21nm,0.6s	**8.93**	**275**	*e*P	**Pn**	**19 14 05.0**	**-0.3**
KURK	**Kurchatov**	**8.93**	**275**	*e*P	**Pn**	**19 14 05.0**	**-0.3**
KURK	comp=Z,21nm,0.6s			pmax	pmax		
KURBB	**Kurchatov Arra** comp=Z,4.1nm,0.6s	**9.00**	**274**	⇓Pn	**Pn**	**19 14 05.0**	**-1.3**
SONM	**Songino Array** comp=Z,0.6nm,0.3s,baz=293,slow=15,SNR=20	**9.42**	**103**	Pn	**Pn**	**19 14 10.6**	**-1.5**
SONM	comp=Z,1.6nm,0.3s,baz=291,slow=18,SNR=21			Pg	Pn	19 14 44.8	+33
SONM	comp=Z,6.8nm,0.3s,baz=293,slow=30,SNR=20			Lg		19 16 50.8	
SONM	comp=Z,88nm,18.1s,baz=296,slow=41			LR	LR	19 18 16.0	
SONM	**Songino Array**	**9.42**	**103**	Pn	**Pn**	**19 14 10.6**	**-1.5**
SONM				Pg	Pn	19 14 44.8	+33
SONM				Lg		19 16 50.8	
SONM				LR	LR	19 18 16.0	
SONM	**Songino Array**	**9.42**	**103**	P	**Pn**	**19 14 10.6**	**-1.5**
GTA	**Gaotai**	**12.44**	**154**	*e*P	**Pn**	**19 14 53.3**	**-0.1**
GTA				pP		19 14 57.5	
GTA				sP		19 15 01.2	
GTA	comp=Z,4.0nm,0.9s			pmax	pmax		
GTA	comp=Z,89nm,5.0s			pmax	pmax		
GTA	comp=N,270nm,11.2s			LR	LR		
GTA	comp=E,830nm,11.9s			LR	LR		
GTA	comp=Z,390nm,9.7s			LR	LR		
VOSK	**Vostochnaya** comp=Z,4.2nm,0.7s	**13.58**	**287**	⇑Pn	**Pn**	**19 15 06.3**	**-2.6**
VOSK	comp=Z,17nm,0.8s			⇓Sn	**Sn**	**19 17 41.3**	**+1.4**
VOSK	comp=Z,159nm,2.4s			⇓Lg		19 19 05.5	
BVAR	**Borovoye Array** comp=Z,0.6nm,0.3s,baz=92,slow=15,SNR=12	**13.94**	**288**	Pn	**Pn**	**19 15 12.0**	**-1.8**
BVAR	comp=Z,0.7nm,0.3s,baz=94,slow=22,SNR=3.2			Sn	**Sn**	**19 17 51.6**	**+3.0**
BVAR	baz=93,slow=25,SNR=2.3			Lg		19 19 23.9	
BVAR	**Borovoye Array**	**13.94**	**288**	P	**Pn**	**19 15 12.0**	**-1.8**
BVAR						19 17 51.6	
BRVK	**Borovoye** comp=Z,6.1nm,0.6s	**14.01**	**288**	*e*P	**Pn**	**19 15 12.9**	**-1.8**
BRVK	**Borovoye**	**14.01**	**288**	*i* P	**Pn**	**19 15 15.1**	**+0.4**
BRVK	comp=Z,5.0nm,0.8s			pmax	pmax		
TKM2	**Tokmak 2** comp=Z,6.0nm,0.7s	**14.09**	**243**	⇑Pn	**Pn**	**19 15 13.6**	**-2.2**
TKM2	comp=Z,112nm,1.4s			⇑Lg		19 19 19.0	
TKM2	**Tokmak 2** comp=Z,4.7nm,0.7s	**14.09**	**243**	*e*P	**Pn**	**19 15 15.0**	**-0.8**
TKM2	**Tokmak 2**	**14.09**	**243**	*e*P	**Pn**	**19 15 15.0**	**-0.9**
TKM2	comp=Z,5.0nm,0.7s			pmax	pmax		
ZRNK	**Zerenda** comp=Z,13nm,0.7s	**14.78**	**288**	⇑Pn	**Pn**	**19 15 23.3**	**-1.9**
ZRNK	comp=Z,20nm,1.1s			⇑Sn	**Sn**	**19 18 09.8**	**+0.8**
ZRNK	comp=Z,103nm,1.2s			⇑Lg		19 19 43.6	
ZRNK	**Zerenda**	**14.78**	**288**	P	**Pn**	**19 15 23.2**	**-2.0**
ZRNK	comp=Z,13nm,0.7s			pmax	pmax		
KZA	**Kyzart** comp=Z,12nm,0.8s	**14.83**	**241**	*e*P	**Pn**	**19 15 25.9**	**-0.1**
EKS2	**Erkin-Say** comp=Z,14nm,0.8s	**15.29**	**245**	*e*P	**Pn**	**19 15 29.2**	**-2.9**
AML	**Almayashu** comp=Z,4.7nm,0.7s	**15.67**	**244**	*e*P	**Pn**	**19 15 36.8**	**-0.3**
LZH	**Lanzhou**	**16.76**	**147**	*e*P	**Pn**	**19 15 54.1**	**+3.0**
LZH				pP	pP	19 15 59.1	+3.5
LZH				sP	sP	19 16 01.3	+4.7
LZH	comp=Z,28nm,1.0s			pmax	pmax		
LZH	comp=Z,100nm,4.3s			pmax	pmax		
LZH	comp=N,490nm,11.0s			LR	LR		
LZH	comp=E,620nm,7.6s			LR	LR		
LZH	comp=Z,540nm,10.6s			LR	LR		
KK31	**Karatay Array** comp=Z,5.4nm,0.7s,baz=56,slow=8.6,SNR=66	**16.95**	**252**	⇑Pn	**Pn**	**19 15 51.5**	**-1.9**
KK31	comp=Z,18nm,0.9s,baz=48,slow=27,SNR=4.0			⇑Lg		19 20 43.3	
KK31	**Karatay Array**	**16.95**	**252**	*i* P	**Pn**	**19 15 50.9**	**-2.6**
KK31	comp=Z,4.0nm,0.5s			pmax	pmax		
KKAR	**Karatay Array** comp=Z,4.9nm,0.6s	**16.95**	**252**	*e*P	**Pn**	**19 15 51.1**	**-2.4**
KKAR	**Karatay Array**	**16.95**	**252**	*e*P	**Pn**	**19 15 51.1**	**-2.4**
KKAR	comp=Z,5.0nm,0.6s			pmax	pmax		
HIA	**Hailar** comp=Z,21nm,1.1s	**17.41**	**85**	*e*P	**Pn**	**19 16 01.1**	**+1.9**
HIA	**Hailar**	**17.41**	**85**	*e*P	**Pn**	**19 16 01.1**	**+1.9**
HIA	comp=Z,21nm,1.1s			pmax	pmax		
BJI	**Beijing**	**19.59**	**114**	P	**Pn**	**19 16 25.8**	**-0.1**
BJI	comp=Z,16nm,0.6s			pmax	pmax		
BJI	comp=N,350nm,12.4s			LR	LR		
BJI	comp=E,310nm,9.9s			LR	LR		
BJI	comp=Z,47nm,9.6s			LR	LR		
BJT	**Baijiatuau** comp=Z,7.2nm,0.5s	**19.60**	**114**	*e*P	**Pn**	**19 16 25.1**	**-0.8**
BJT	**Baijiatuau**	**19.60**	**114**	*e*P	**Pn**	**19 16 25.2**	**-0.8**
BJT	comp=Z,7.0nm,0.5s			pmax	pmax		
SVE	**Sverdlovsk**	**19.74**	**300**	*e*P	**Pn**	**19 16 27.1**	**-0.4**
SVE				*e*S	**Sn**	**19 19 57.3**	**-12**
SVE	comp=Z,17nm,1.0s			pmax	pmax		
SVE	comp=Z,252nm,13.0s			MLR	MLR		
XAN	**Xi'an**	**20.51**	**139**	P	**P**	**19 16 34.1**	**-0.5**
XAN	comp=Z,2.0nm,1.0s			pmax	pmax		
ARU	**Arti** comp=Z,9.9nm,0.8s	**20.87**	**299**	*e*P	**P**	**19 16 37.1**	**-1.1**
ARU	**Arti**	**20.87**	**299**	*d i*P	**P**	**19 16 38.5**	**+0.2**
ARU				*e*		19 16 55.5	
ARU				S	**S**	**19 20 32.7**	**+1.9**
ARU				SS		19 20 54.5	
ARU	comp=Z,14nm,1.2s			pmax	pmax		
AB31	**Akbulak array** comp=Z,2.4nm,0.7s,mb3.7,baz=73,slow=9.5,SNR=25	**21.01**	**279**	⇓P	**P**	**19 16 38.7**	**-1.2**
AB31	comp=Z,13nm,1.4s			⇑Lg		19 23 01.7	
AB31	**Akbulak array**	**21.01**	**279**	*e*P	**P**	**19 16 39.4**	**-0.5**
AB31	comp=Z,3.0nm,0.6s,mb3.8			pmax	pmax		
ABKAR	**Akbulak array** comp=Z,2.5nm,0.6s,mb3.7	**21.01**	**279**	*e*P	**P**	**19 16 39.3**	**-0.6**
LSA	**Lhasa** comp=Z,11nm,0.7s,mb4.3	**21.11**	**184**	*e*P	**P**	**19 16 42.2**	**+1.1**
LSA	**Lhasa**	**21.11**	**184**	*e*P	**P**	**19 16 42.2**	**+1.1**
LSA	comp=Z,11nm,0.7s,mb4.3			pmax	pmax		
AKTK	**Aktyubinsk**	**21.90**	**283**	P	**P**	**19 16 49.7**	**+0.3**
AKTK				Lg		19 23 29.5	
AKTK				LR	LR	19 25 47.6	
AKTO	**Aktyubinsk** comp=Z,3.7nm,0.8s,mb3.9,baz=80,slow=10,SNR=10	**21.90**	**283**	P	**P**	**19 16 49.7**	**+0.3**
AKTO	comp=Z,1.8nm,0.7s,baz=253,slow=22,SNR=3.8			Lg		19 23 29.5	
AKTO	comp=Z,89nm,18.7s,MS3.2,baz=255,slow=38			LR	LR	19 25 47.6	
AKTO	**Aktyubinsk**	**21.90**	**283**	P	**P**	**19 16 49.7**	**+0.3**
YAK	**Yakutsk** comp=Z,20nm,0.8s,mb4.6	**22.99**	**47**	*e*P	**P**	**19 17 00.1**	**-0.8**
YAK	**Yakutsk**	**22.99**	**47**	*e*P	**P**	**19 17 00.2**	**-0.7**
YAK				*e*		19 17 05.6	
YAK	comp=Z,12nm,1.1s,mb4.2			pmax	pmax		
YAK	comp=E,7.0nm,1.4s			pmax	pmax		
YAK	comp=Z,288nm,10.0s,MS4.0			MLR	MLR		
YAK	comp=E,179nm,9.0s			MLR	MLR		
DANN	**Dangsing** comp=E,49nm,0.8s,mb5.0	**23.42**	**200**	*e*P	**P**	**19 17 07.0**	**+1.3**
GUN	**Gumba** comp=E,44nm,0.7s,mb5.0	**23.44**	**195**	*e*P	**P**	**19 17 06.9**	**+1.0**
GKN	**Gorkha** comp=E,91nm,0.8s,mb5.3	**23.58**	**198**	*e*P	**P**	**19 17 08.1**	**+0.8**
KBL	**Kabul** comp=E,4.9nm,0.7s,mb4.0	**23.65**	**236**	*e*P	**P**	**19 17 10.1**	**+2.1**
KBL	**Kabul**	**23.65**	**236**	*e*P	**P**	**19 17 10.1**	**+2.2**
KBL	comp=Z,5.0nm,0.7s,mb4.0			pmax	pmax		
KKN	**Kakani** comp=Z,27nm,0.6s,mb4.8	**23.66**	**197**	*e*P	**P**	**19 17 09.3**	**+1.2**
TAPN	**Taplejung** comp=Z,40nm,0.8s,mb4.9	**23.73**	**191**	*e*P	**P**	**19 17 08.3**	**-0.4**
PKI	**Pulchoki** comp=Z,60nm,0.8s,mb5.1	**23.85**	**196**	*e*P	**P**	**19 17 10.8**	**+1.0**
DMN	**Daman** comp=Z,18nm,0.6s,mb4.6	**23.87**	**197**	*e*P	**P**	**19 17 10.8**	**+0.8**
KOLN	**Koldanda** comp=Z,9.6nm,0.6s,mb4.4	**24.02**	**200**	*e*P	**P**	**19 17 12.4**	**+1.1**
ENH	**Enshi** comp=Z,6.5nm,0.8s,mb4.1	**24.05**	**142**	*e*P	**P**	**19 17 12.0**	**+0

TIXI pmax pmax
comp=Z,12nm,1.1s,mb4.3
TIXI MLR MLR
comp=Z,196nm,9.0s
GYA Guiyang 26.55 151 ‖ *i*P **P 19 17 36.7 +2.3**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
KMI Kunming 26.78 159 P **P 19 17 37.7 +1.3**
KMI pmax pmax
comp=Z,13nm,1.1s,mb4.4
HABR Khabarovsk 27.25 78 P **P 19 17 41.8 +1.3**
HABR *e* 19 20 57.9
HABR *SS sS 19 22 24.6 +0.9
HABR *e*SS 19 23 29.0
HABR *e* 19 28 29.2
HABR pmax pmax
comp=N,21nm,2.9s
HABR pmax pmax
comp=Z,21nm,2.0s,mb4.3
HABR pmax pmax
comp=E,21nm,2.0s
HABR MLR MLR
comp=Z,153nm,14.0s,MS3.7
PRGR Permogore 27.70 311 P **P 19 17 42.0 -2.3**
PRGR pmax pmax
comp=Z,7.0nm,0.4s,mb4.6
KSRS Korea Array 28.29 104 P **P 19 17 49.1 -0.8**
comp=Z,1.3nm,0.6s,mb3.7,baz=312,slow=7.2,SNR=9.7
KSRS LR LR 19 29 54.2
comp=Z,79nm,20.3s,MS3.3,baz=310,slow=38
KSRS Korea Array 28.29 104 P **P 19 17 49.1 -0.8**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.6
KSRS MLR MLR
comp=Z,79nm,20.3s,MS3.3
KLMR Klimovskoe 30.67 310 *e*P **P 19 18 09.1 -1.7**
KLMR pmax pmax
comp=Z,28nm,1.4s,mb4.9
VRHR Novokhopersk 31.65 291 *e*P **P 19 18 18.0 -1.5**
VRHR pmax pmax
comp=N,5.0nm,0.6s
VRHR pmax pmax
comp=E,9.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CMAR Chiang Mai Arr 32.65 169 P **P 19 18 28.3 -0.2**
comp=Z,1.2nm,0.6s,mb4.0,baz=356,slow=10,SNR=7.4
CMAR Chiang Mai Arr 32.65 169 P **P 19 18 28.3 -0.2**
VSR Storozhevoye 33.06 292 *e*P **P 19 18 31.0 -0.9**
VSR pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
VSR pmax pmax
comp=E,1.0nm,0.2s
OBN Obninsk 33.31 300 P **P 19 18 33.0 -0.9**
OBN *e* pP 19 18 36.6 +0.2
OBN 19 19 42.0
OBN pmax pmax
comp=Z,11nm,0.4s,mb5.1
OBN MLR MLR
comp=Z,100nm,16.0s,MS3.6
ARCES ARCESS Array B 35.90 326 P **P 19 18 57.0 +0.7**
comp=Z,2.6nm,0.5s,mb4.4,baz=80,slow=10.0,SNR=5.8
ARCES PcP PcP 19 21 21.7 -1.2
comp=Z,0.9nm,0.5s,baz=101,slow=3.8,SNR=3.9
ARCES ARCESS Array B 35.90 326 P **P 19 18 57.0 +0.8**
ARCES 19 21 21.7
FINES FINESS Array B 36.99 313 P **P 19 19 05.8 +0.2**
comp=Z,2.8nm,0.5s,mb4.3,baz=84,slow=8.5,SNR=12
FINES FINESS Array B 36.99 313 P **P 19 19 05.8 +0.2**
BILL Bilibino 38.41 36 P **P 19 19 19.7 +2.2**
BILL *e* 19 20 43.4
BILL *e*S **S 19 25 11.6 -0.5**
BILL *e*SS SS 19 27 56.9 -2.9
BILL pmax pmax
comp=Z,2.0nm,1.0s,mb3.8
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.1
MALT Malatya 39.77 273 *e*P **P 19 19 31.4 +2.1**
comp=Z,2.1nm,0.9s,mb3.9
MALT Malatya 39.77 273 *e*P **P 19 19 31.4 +2.2**
MALT pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
BR131 Keskin Array S 41.96 278 *e*P **P 19 19 48.1 +0.8**
comp=Z,4.7nm,0.8s,mb4.2
BRTR Keskin Array B 41.96 278 P **P 19 19 48.0 +0.6**
comp=Z,5.4nm,0.8s,mb4.2,baz=79,slow=8.6,SNR=22
BRTR Keskin Array B 41.96 278 *i* P **P 19 19 51.2 +3.9**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BUR08 Bucovina Ar. S 42.81 293 *e*P **P 19 19 54.2 0.0**
HFS Hagfors 43.14 314 P **P 19 19 55.6 -1.0**
comp=Z,5.5nm,0.7s,mb4.4,baz=64,slow=10,SNR=8.5
HFS Hagfors 43.14 314 P **P 19 19 55.6 -1.0**
KOLS Kolonicke sedl 43.85 296 *e*P **P 19 20 02.6 +0.1**
comp=Z,3.2nm,0.9s,mb4.0
KOLS Kolonicke sedl 43.85 296 *e*P **P 19 20 02.6 +0.1**
KOLS pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
KOLS Kolonicke sedl 43.85 296 *e*P **P 19 20 02.6 +0.1**
NB2 NORSAR Subarra 43.87 316 P **P 19 20 01.7 -0.8**
comp=Z,2.2nm,0.5s,mb4.1,baz=63,slow=7.9
NOA NORSAR Array B 43.87 316 P **P 19 20 02.2 -0.3**
comp=Z,1.7nm,0.5s,mb4.1,baz=64,slow=7.6,SNR=12
NOA LR LR 19 40 13.9
comp=Z,70nm,18.1s,MS3.6,baz=60,slow=39
NOA NORSAR Array B 43.87 316 P **P 19 20 02.3 -0.2**
CRVS Cervenica-Dubn 44.33 297 *e*P **P 19 20 08.1 +1.8**
comp=Z,5.0nm,1.6s,mb4.0
CRVS Cervenica-Dubn 44.33 297 *e*P **P 19 20 08.1 +1.8**
CRVS pmax pmax
comp=Z,5.0nm,1.6s,mb4.0
CRVS Cervenica-Dubn 44.33 297 *e*P **P 19 20 08.1 +1.8**
OJC Ojcow 44.59 299 *e*P **P 19 20 08.7 +0.3**
OJC Ojcow 44.59 299 *e*P **P 19 20 08.7 +0.3**
NIE Niedzica 44.71 298 *e*P **P 19 20 10.2 +0.8**
NIE Niedzica 44.71 298 *e*P **P 19 20 10.2 +0.8**
KECS Kecovo 45.09 297 *e*P **P 19 20 13.2 +0.8**
comp=Z,2.5nm,0.6s,mb4.2
KECS Kecovo 45.09 297 *e*P **P 19 20 13.2 +0.8**
KECS pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
KECS Kecovo 45.09 297 *e*P **P 19 20 13.2 +0.8**
VYHS Vyhne 46.02 297 *e*P **P 19 20 20.6 +0.8**
comp=Z,17nm,2.3s,mb4.6
VYHS Vyhne 46.02 297 *e*P **P 19 20 20.6 +0.8**
VYHS pmax pmax
comp=Z,17nm,2.3s,mb4.6
VYHS Vyhne 46.02 297 *e*P **P 19 20 20.6 +0.8**
DPC Dobruska-Polom 46.44 301 *e*P **P 19 20 23.7 +0.7**
DPC *e* pP 19 20 27.3 +1.8
DPC Dobruska-Polom 46.44 301 *e*P **P 19 20 23.7 +0.7**
DPC *e*pP pP 19 20 27.3 +1.8
UPC Upice 46.52 301 *e*P **P 19 20 24.3 +0.6**
UPC *e* pP 19 20 27.9 +1.7
UPC Upice 46.52 301 *e*P **P 19 20 24.3 +0.6**
UPC *e*pP pP 19 20 27.9 +1.7
VRAC Vranov 46.84 299 P **P 19 20 25.9 -0.3**
comp=Z,2.2nm,0.5s,mb4.4,baz=54,slow=9.2,SNR=3.6
VRAC Vranov 46.84 299 P **P 19 20 25.9 -0.3**
BRG Berggiesshubel 47.44 302 *e*P **P 19 20 30.0 -0.9**
comp=Z,3.0nm,1.0s,mb4.2
BRG Berggiesshubel 47.44 302 *e*P **P 19 20 30.7 -0.1**
comp=Z,3.3nm,0.8s,mb4.3
BRG *i* 19 20 44.1
comp=Z,3.8nm,0.8s
BRG Berggiesshubel 47.44 302 *e*P **P 19 20 30.7 -0.2**
BRG *i* 19 20 44.1
BRG pmax pmax
comp=Z,23nm,0.8s,mb5.2
PRU Pruhonice 47.60 301 *e*P **P 19 20 37.1 +5.0**
PRU *e* 19 20 42.6
PRU Pruhonice 47.60 301 *e*pP pP 19 20 37.1 +2.5
PRU *ex* x 19 20 42.6
CLL Collm 47.71 303 *e*P **P 19 20 33.2 +0.3**
comp=Z,13nm,1.0s,mb4.9
CLL Collm 47.71 303 *i* P **P 19 20 33.1 +0.2**
comp=Z,13nm,1.0s,mb4.9
CLL *i* pP 19 20 36.0 +0.5
CLL Collm 47.71 303 *i* P **P 19 20 33.1 +0.2**
CLL *i* pP 19 20 36.0 +0.5
CLL pmax pmax
comp=Z,41nm,1.0s,mb5.4
CLL Collm 47.71 303 *i* P **P 19 20 33.1 +0.2**
comp=Z,13nm,1.0s,mb4.9
CLL *i* pP pP 19 20 36.0 +0.5
comp=Z,11nm,0.8s
TANN Tannenbergstha 48.48 303 *e*P **P 19 20 38.3 -0.6**
comp=Z,3.0nm,0.8s,mb4.4
NRDL Niedersach Rie 48.58 306 *e*P **P 19 20 39.4 -0.2**
comp=Z,7.0nm,1.2s,mb4.6
KHC Kasperske Hory 48.59 301 *e*P **P 19 20 40.6 +0.8**
KHC *e* pP 19 20 44.1 +1.8
KHC Kasperske Hory 48.59 301 *e*P **P 19 20 40.6 +0.8**
KHC *e*pP pP 19 20 44.1 +1.8
GEC2 GERESS Array S 48.68 300 *e*P **P 19 20 39.9 -0.6**
comp=Z,2.0nm,1.1s,mb4.1
GEC2 GERESS Array S 48.68 300 *e*P **P 19 20 39.9 -0.6**
GEC2 pmax pmax
comp=Z,2.0nm,1.1s,mb4.1
MOX Moxa 48.81 303 *e*P **P 19 20 40.9 -0.5**
comp=Z,10.0nm,1.1s,mb4.8
MOX Moxa 48.81 303 *e*P **P 19 20 40.8 -0.6**
comp=Z,5.0nm,0.8s,mb4.6
MOX Moxa 48.81 303 *e*P **P 19 20 40.9 -0.5**
WET Wettzell 48.97 301 *e*P **P 19 20 42.2 -0.5**
comp=Z,4.0nm,0.9s,mb4.5
WET Wettzell 48.97 301 *e*P **P 19 20 42.2 -0.5**
WET pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ROTZ Rotzenmuhle 48.98 302 *e*P **P 19 20 42.6 -0.2**
comp=Z,5.0nm,1.2s,mb4.4
GRA1 Grafenberg Arr 49.55 302 *e*P **P 19 20 47.0 -0.1**
comp=Z,9.0nm,0.7s,mb4.9
GRF Grafenberg Arr 49.55 302 *e*P **P 19 20 47.0 -0.1**
comp=Z,9.0nm,0.7s,mb4.9
GRF Grafenberg Arr 49.55 302 *e*P **P 19 20 47.0 -0.1**
GRF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
GRF Grafenberg Arr 49.55 302 *e*P **P 19 20 47.0 -0.1**
GRF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
IBBN Ibbenburen 49.88 307 *e*P **P 19 20 48.7 -0.9**
comp=Z,14nm,0.6s,mb5.2
TNS Taunus Mts 50.72 304 *e*P **P 19 20 55.6 -0.4**
comp=Z,9.0nm,0.8s,mb4.8
TNS Taunus Mts 50.72 304 *e*P **P 19 20 55.6 -0.4**
TNS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
DAVOX Davos/Dischmat 51.98 300 P **P 19 21 05.0 -0.4**
comp=Z,4.2nm,0.8s,mb4.5,baz=38,slow=6.6,SNR=5.7
DAVOX Davos/Dischmat 51.98 300 P **P 19 21 05.0 -0.5**
BNI Bardonecchia 54.80 300 *e*P **P 19 21 26.2 0.0**
comp=Z,7.9nm,0.8s,mb4.8
BNI Bardonecchia 54.80 300 *e*P **P 19 21 26.2 -0.1**
BNI pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ILAR Eielson Array 55.90 27 P **P 19 21 33.4 -0.5**
comp=Z,1.6nm,0.7s,mb4.2,baz=320,slow=4.6,SNR=23
ILAR Eielson Array 55.90 27 P **P 19 21 33.4 -0.4**
INK Inuvik 56.34 19 P **P 19 21 36.7 -0.2**
comp=Z,2.7nm,0.7s,mb4.4,baz=354,slow=13,SNR=5.9
INK Inuvik 56.34 19 P **P 19 21 36.7 -0.2**
ESDC Sonseca Array 64.24 302 P **P 19 22 31.4 0.0**
comp=Z,1.2nm,0.5s,mb4.2,baz=42,slow=6.2,SNR=7.6
YKA Yellowknife Ar 64.99 14 P **P 19 22 34.6 -1.4**
comp=Z,1.2nm,0.8s,mb4.0,baz=342,slow=6.7,SNR=2.6
YKA Yellowknife Ar 64.99 14 P **P 19 22 34.6 -1.4**
KAKA Kakadu 72.11 139 *e*P **P 19 23 18.2 -2.8**
comp=Z,17nm,0.6s,mb5.2
FFC Flin Flon 74.13 9 *i* P **P 19 23 32.6 +0.1**
FITZ Fitzroy Crossi 74.46 148 P **P 19 23 33.3 -1.5**
comp=Z,4.4nm,0.7s,mb4.5,baz=326,slow=2.7,SNR=16
ULM Lac du Bonnet 79.06 6 P **P 19 23 59.0 -1.4**
comp=Z,2.7nm,0.7s,mb4.3,baz=346,slow=8.3,SNR=5.3
JTMT Jette 79.12 18 *e*P **P 19 24 01.3 +0.4**
comp=Z,9.2nm,1.2s,mb4.6
WRA Warramunga Arr 79.39 141 P **P 19 24 01.1 -1.4**
comp=Z,6.2nm,0.9s,mb4.6,baz=343,slow=6.1,SNR=50
WRA Warramunga Arr 79.39 141 P **P 19 24 01.2 -1.3**
WB2 Warramunga Arr 79.40 141 *e*P **P 19 24 00.7 -1.8**
ASAR Alice Springs 82.57 142 P **P 19 24 17.9 -1.5**
comp=Z,1.4nm,0.7s,mb4.1,baz=339,slow=4.9,SNR=26
ASAR Alice Springs 82.57 142 P **P 19 24 17.9 -1.5**
WVOR Wild Horse Val 83.20 23 *e*P **P 19 24 23.2 +0.6**
comp=Z,4.9nm,1.0s,mb4.5
WVOR Wild Horse Val 83.20 23 *e*P **P 19 24 23.2 +0.5**
WVOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
NVAR Mina Array Bea 87.06 24 P **P 19 24 40.4 -1.7**
comp=Z,0.6nm,0.6s,mb4.0,baz=325,slow=4.4,SNR=4.2
CPUP Villa Florida 146.54 306 PKPbc PKPdf 19 31 35.6 -0.8
comp=Z,0.9nm,0.5s,baz=28,slow=3.1,SNR=4.8
CPUP Villa Florida 146.54 306 PKP2 PKPdf 19 31 35.6 -0.8
PLCA Paso Flores 164.61 304 PKPab PKPab 19 32 55.2 +0.1
comp=Z,3.8nm,1.0s,baz=135,slow=1.4,SNR=2.5
PLCA Paso Flores 164.61 304 PKP2 PKPab 19 32 55.2 +0.1
PLCA pmax pmax
comp=Z,4.0nm,1.0s

ISCJB ***11*** *19:16:23.2±0.4, 67°.18N±0°.02×20°.75E±0°.07, h0km, Error ellipse: s-maj=3.9km s-min=3.4km az=24.7*
CSEM ***11*** *19:16:24.9±0.2, 67°.21N×20°.75E, h2km, ML2.2, Error ellipse: s-maj=5.9km s-min=4.2km az=95.0*
NAO ***11*** *19:16:24.8±1.0, 67°.17N×21°.02E, ML2.0*
IDC ***11*** *19:16:25.1±0.9, 67°.20N×20°.91E, h0km, mb1 3.0/4, mb1mx2.9/26, mbtmp3.0/4, ML2.6/4, Error ellipse: s-maj=18.1km s-min=6.6km az=118.0*
HEL ***11*** *19:16:25.4±0.1, 67°.17N×20°.70E, h1km, ML2.2, ML2.2(BER), ML2.0(NAO)*
BER ***11*** *19:16:26.3±3.3, 67°.21N×20°.67E, h0km, ML2.2, ML2.0(NAO), Suspected explosion*
ISC 11 19:16:24.8±0.4, 67°.19N±0°.02×20°.78E±0°.06, h0km, n58, σ1§05/91, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.98**	**28**	*e*P	**Pg**	**19 16 43.2**	**-0.2**
LANU				*e*S	**Sg**	**19 16 56.6**	**+0.6**
LANU	**Lannavaara**	**0.98**	**28**	P	**Pg**	**19 16 43.2**	**-0.3**
LANU				S	**Sg**	**19 16 56.6**	**+0.5**
HEF	**Hetta**	**1.64**	**41**	*e*P	**Pn**	**19 16 54.9**	**+0.1**
HEF				*e*S	**Sn**	**19 17 16.0**	**-0.5**
HEF	**Hetta**	**1.64**	**41**	P	**Pn**	**19 16 54.9**	**+0.1**
HEF				S	**Sn**	**19 17 16.0**	**-0.5**
KIF	**Kilpisjarvi**	**1.82**	**0**	*e*P	**Pn**	**19 16 58.2**	**+1.0**
KIF				*e*PG	**Pg**	**19 16 59.2**	**-0.4**
KIF				*e*SG	**Sg**	**19 17 23.6**	**+0.5**
KIF	**Kilpisjarvi**	**1.82**	**0**	P	**Pn**	**19 16 58.2**	**+0.9**
KTK1	**Kautokeino**	**2.04**	**26**	*e*P	**Pn**	**19 17 02.2**	**+1.8**
KTK1	**Kautokeino**	**2.04**	**26**	*e*P	**Pn**	**19 17 02.1**	**+1.7**
KTK1				*e*Sg	**Sg**	**19 17 29.4**	**-1.0**
KTK1				AML	AML	19 17 31.0	
comp=Z,91nm,0.6s							
KTK1	**Kautokeino**	**2.04**	**26**	*e*P	**Pn**	**19 17 02.1**	**+1.7**
KTK1				*e*SG	**Sg**	**19 17 29.4**	**-1.0**
KTK1				AML	AML	19 17 31.0	
comp=Z,91nm,0.6s							
KTK1	**Kautokeino**	**2.04**	**26**	P	**Pn**	**19 17 02.0**	**+1.6**
KTK1				*e*Sg	**Sg**	**19 17 29.4**	**-1.0**
comp=Z,91nm,0.6s,SNR=90							
RNF	**Rovaniemi**	**2.15**	**103**	*e*P	**Pn**	**19 17 03.3**	**+1.6**
RNF				*e*SG	**Sg**	**19 17 32.4**	**-1.2**
RNF	**Rovaniemi**	**2.15**	**103**	P	**Pn**	**19 17 03.3**	**+1.6**
RNF				Sg	**Sg**	**19 17 32.3**	**-1.3**
SGF	**Sodankyl**	**2.24**	**81**	*e*PB	**Pb**	**19 17 05.0**	**-1.0**
SGF				*e*S	**Sn**	**19 17 32.7**	**+1.3**
SGF				*e*SG	**Sg**	**19 17 36.0**	**-0.7**
SGF	**Sodankyl**	**2.24**	**81**	Pb	**Pb**	**19 17 05.0**	**-1.1**
SGF				S	**Sn**	**19 17 32.6**	**+1.3**
SGF				Sg	**Sg**	**19 17 35.9**	**-0.8**
TRO	**Tromso**	**2.54**	**345**	*e*Sg	**Sg**	**19 17 44.1**	**-2.4**
TRO				AML	AML	19 17 48.1	
comp=Z,16nm,0.5s							
TRO	**Tromso**	**2.54**	**345**	*e*SG	**Sg**	**19 17 44.1**	**-2.4**
TRO				AML	AML	19 17 48.1	
comp=Z,16nm,0.5s							
TRO	**Tromso**	**2.54**	**345**	Sg	**Sg**	**19 17 44.0**	**-2.4**
comp=Z,16nm,0.5s							
MOR8	**Moi Rana**	**2.72**	**251**	*e*Sg	**Sn**	**19 17 43.4**	**+0.2**
MOR8				AML	AML	19 17 45.0	
comp=Z,18nm,0.5s							
MOR8	**Moi Rana**	**2.72**	**251**	*e*SG	**Sn**	**19 17 43.4**	**+0.2**
MOR8				AML	AML	19 17 45.0	
comp=Z,18nm,0.5s							
MOR8	**Moi Rana**	**2.72**	**251**	Sg	**Sn**	**19 17 43.4**	**+0.1**
comp=Z,18nm,0.5s							
LOF	**Lofoten**	**2.92**	**292**	*e*SG	**Sg**	**19 17 58.1**	**-0.4**
LOF	**Lofoten**	**2.92**	**292**	Sg	**Sg**	**19 17 58.0**	**-0.5**
ARA0	**ARCESS Array S**	**2.93**	**34**	Pn	**Pn**	**19 17 13.3**	**+0.8**
baz=212,slow=16							
ARA0				Sn	**Sn**	**19 17 48.5**	**+0.1**
baz=215,slow=22							
ARA0				Lg		19 17 54.2	
baz=220,slow=28							
ARA0	**ARCESS Array S**	**2.93**	**34**	*e*P	**Pn**	**19 17 13.3**	**+0.8**
ARA0				*e*S	**Sn**	**19 17 48.5**	**+0.1**
ARA0				*e*SB	**Sb**	**19 17 54.2**	**+0.1**
ARA0	**ARCESS Array S**	**2.93**	**34**	P	**Pn**	**19 17 13.3**	**+0.8**
ARA0				S	**Sn**	**19 17 48.5**	**+0.1**
ARA0				Lg		19 17 54.2	
baz=220,slow=24,SNR=50							
ARA0				Sb	**Sb**	**19 17 54.2**	**+0.1**
ARCES	**ARCESS Array B**	**2.93**	**34**	Pn	**Pn**	**19 17 13.3**	**+0.8**
comp=Z,1.2nm,0.3s,baz=221,slow=12,SNR=65							
ARCES				Sn	**Sn**	**19 17 49.5**	**+1.2**
comp=Z,1.6nm,0.3s,baz=209,slow=22,SNR=7.6							
ARCES				Lg		19 17 54.3	
comp=Z,3.2nm,0.3s,baz=216,slow=30,SNR=13							
OUL	**Oulu**	**2.97**	**133**	*e*P	**Pn**	**19 17 13.9**	**+0.9**
OUL	**Oulu**	**2.97**	**133**	P	**Pn**	**19 17 13.8**	**+0.8**
VRF	**Varrio**	**3.44**	**77**	*e*P	**Pn**	**19 17 19.9**	**+0.3**
VRF				*e*SG	**Sg**	**19 18 11.9**	**-3.4**
VRF	**Varrio**	**3.44**	**77**	P	**Pn**	**19 17 19.8**	**+0.2**
VRF				Sg	**Sg**	**19 18 11.9**	**-3.4**
comp=Z,8.8nm,0.4s							
KEV	**Kevo**	**3.45**	**39**	MSG		19 18 18.4	
comp=Z,8.8nm,0.4s							
KU6	**Riekki**	**3.82**	**104**	*e*P	**Pn**	**19 17 24.7**	**0.0**
KU6				*e*S	**Sn**	**19 18 09.5**	**-0.7**
KU6				MSG		19 18 26.9	
comp=Z,5.3nm,0.3s							
KU6	**Riekki**	**3.82**	**104**	P	**Pn**	**19 17 24.7**	**0.0**
KU6				S	**Sn**	**19 18 09.4**	**-0.8**
comp=Z,5.3nm,0.3s							
VAF	**Ylistaro**	**4.25**	**168**	*e*P	**Pn**	**19 17 30.8**	**+0.2**
VAF				MSG		19 18 45.7	
comp=Z,3.0nm,0.4s							
VAF	**Ylistaro**	**4.25**	**168**	P	**Pn**	**19 17 30.7**	**+0.1**
APA0	**Apatity Array**	**4.73**	**79**	Pn	**Pn**	**19 17 35.4**	**-1.8**
baz=270,slow=12							
APA0				Sn	**Sn**	**19 18 31.9**	**-0.7**
baz=268,slow=28							
APA0	**Apatity Array**	**4.73**	**79**	*e*P	**Pn**	**19 17 35.4**	**-1.8**
APA0				*e*S	**Sn**	**19 18 31.9**	**-0.7**
APA0	**Apatity Array**	**4.73**	**79**	P	**Pn**	**19 17 35.4**	**-1.8**
APA0				Sn	**Sn**	**19 18 32.0**	**-0.7**
baz=268,slow=26,SNR=50							
SUF	**Sumiainen**	**5.04**	**151**	MSG		19 19 03.5	
comp=Z,2.0nm,0.3s							
KEF	**Keuruu**	**5.34**	**159**	*e*P	**Pn**	**19 17 46.5**	**+0.9**
KEF	**Keuruu**	**5.34**	**159**	P	**Pn**	**19 17 46.5**	**+0.9**
KAF	**Kangasniemi**	**5.62**	**152**	*e*P	**Pn**	**19 17 51.3**	**+1.8**
KAF	**Kangasniemi**	**5.62**	**152**	P	**Pn**	**19 17 51.3**	**+1.8**
JOF	**Joensuu**	**6.18**	**129**	*e*P	**Pn**	**19 17 58.2**	**+1.1**
JOF				MSG		19 19 10.0	
comp=Z,3.2nm,0.4s							
JOF	**Joensuu**	**6.18**	**129**	P	**Pn**	**19 17 58.2**	**+1.1**
FIA0	**FINESS Array S**	**6.21**	**156**	Pn	**Pn**	**19 17 58.5**	**+0.9**
baz=349,slow=14							
FIA0				Sn	**Sn**	**19 19 05.3**	**-3.8**
baz=344,slow=22							
FIA0				Lg		19 19 39.4	
baz=343,slow=37							
FIA0	**FINESS Array S**	**6.21**	**156**	*e*P	**Pn**	**19 17 58.5**	**+0.9**
FIA0				*e*S	**Sn**	**19 19 05.3**	**-3.8**
FIA0				*e*SG	**Sg**	**19 19 39.4**	**-4.7**
FIA0	**FINESS Array S**	**6.21**	**156**	P	**Pn**	**19 17 58.4**	**+0.8**
FINES	**FINESS Array B**	**6.21**	**156**	Pn	**Pn**	**19 17 58.5**	**+0.9**
comp=Z,0.2nm,0.3s,baz=348,slow=13,SNR=7.8							
FINES				Lg		19 19 40.0	
comp=Z,0.6nm,0.3s,baz=344,slow=28,SNR=8.0							
NB2	**NORSAR Subarra**	**7.45**	**219**	Pn	**Pn**	**19 18 13.7**	**-0.9**
baz=29,slow=14							
NB2	**NORSAR Subarra**	**7.45**	**219**	*e*P	**Pn**	**19 18 13.7**	**-0.9**
NB2	**NORSAR Subarra**	**7.45**	**219**	P	**Pn**	**19 18 13.7**	**-0.9**
NOA	**NORSAR Array B**	**7.45**	**219**	Pn	**Pn**	**19 18 14.5**	**-0.1**
comp=Z,0.1nm,0.3s,baz=28,slow=11,SNR=3.7							
NOA				Sn	**Sn**	**19 19 36.0**	**-3.7**
comp=Z,0.2nm,0.3s,baz=35,slow=19,SNR=2.9							
HFS	**Hagfors**	**7.75**	**207**	Pn	**Pn**	**19 18 16.9**	**-1.7**
baz=18,slow=14							
HFS				Sn	**Sn**	**19 19 42.0**	**-5.0**
baz=27,slow=28							
HFS	**Hagfors**	**7.75**	**207**	Pn	**Pn**	**19 18 17.2**	**-1.5**
comp=Z,0.2nm,0.3s,baz=26,slow=13,SNR=9.7							
HFS				Sn	**Sn**	**19 19 42.9**	**-4.1**
comp=Z,0.2nm,0.3s,baz=28,slow=20,SNR=3.4							
HFS	**Hagfors**	**7.75**	**207**	*e*P	**Pn**	**19 18 16.9**	**-1.7**
HFS				*e*S	**Sn**	**19 19 42.0**	**-5.0**
HFS	**Hagfors**	**7.75**	**207**	P	**Pn**	**19 18 16.9**	**-1.8**

ISCJB ***11*** *19:42:36.8±0.8, 51°.48N±0°.04×16°.03E±0°.04, h0km, Error ellipse: s-maj=6.3km s-min=3.0km az=17.4*
PRU ***11*** *19:42:38.7, 51°.49N×16°.08E, h0km*
CSEM ***11*** *19:42:38.0±0.5, 51°.49N×16°.06E, h2km, ML2.7/4, Error ellipse: s-maj=9.1km s-min=4.6km az=14.0*
WAR ***11*** *19:42:39.1, 51°.51N×16°.03E, ML2.2, Mining Induced*
ISC 11 19:42:38.0±0.8, 51°.50N±0°.04×16°.05E±0°.04, h0km, n22, σ0§69/42, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**167**	*e*Pg	**Pg**	**19 42 51.7**	**+0.8**
KSP				*e*Sg	**Sg**	**19 42 59.6**	**-0.1**
KSP	**Ksiaz**	**0.68**	**167**	*e*Pg	**Pg**	**19 42 51.7**	**+0.8**
KSP				*e*Sg	**Sg**	**19 43 00.5**	**+0.8**
UPC	**Upice**	**0.99**	**181**	*e*PG	**Pg**	**19 42 57.4**	**+0.4**
UPC	**Upice**	**0.99**	**181**	Pg	**Pg**	**19 42 57.4**	**+0.4**
DPC	**Dobruska-Polom**	**1.17**	**171**	*e*PG	**Pg**	**19 43 00.5**	**+0.2**
DPC				*e*SG	**Sg**	**19 43 15.6**	**+0.2**
comp=Z,6.9nm,0.3s							
DPC	**Dobruska-Polom**	**1.17**	**171**	Pg	**Pg**	**19 43 00.5**	**+0.2**
DPC				Sg	**Sg**	**19 43 15.6**	**+0.2**
comp=Z,6.9nm,0.3s							
PVCC	**Panska Ves**	**1.35**	**224**	*e*PG	**Pg**	**19 43 03.8**	**-0.1**
PVCC	**Panska Ves**	**1.35**	**224**	Pg	**Pg**	**19 43 03.8**	**-0.1**
BRG	**Berggiesshubel**	**1.47**	**245**	PG	**Pg**	**19 43 06.0**	**-0.1**
BRG				SG	**Sg**	**19 43 26.0**	**+0.9**
comp=Z,15nm,0.4s							
PRU	**Pruhonice**	**1.79**	**213**	*e*PG	**Pg**	**19 43 12.0**	**-0.3**
PRU				*e*SG	**Sg**	**19 43 35.6**	**+0.1**
comp=Z,8.1nm,0.6s							
PRU	**Pruhonice**	**1.79**	**213**	Pg	**Pg**	**19 43 12.0**	**-0.3**
PRU				Sg	**Sg**	**19 43 35.6**	**+0.1**
comp=Z,8.1nm,0.6s							
CLL	**Collm**	**1.92**	**265**	*i* Pn	**Pn**	**19 43 11.4**	**-0.5**
CLL				*i* Pg	**Pg**	**19 43 14.1**	**-0.7**
CLL				*e*Sg	**Sg**	**19 43 40.0**	**+0.4**
comp=Z,4.0nm,0.5s							
MORC	**Moravsky Berou**	**1.97**	**151**	*e*Pn	**Pn**	**19 43 12.4**	**-0.2**
MORC				*e*Sg	**Sg**	**19 43 40.1**	**-1.1**
OKC	**Ostrava-Krasne**	**2.13**	**140**	*e*PG	**Pg**	**19 43 17.7**	**-1.2**
OKC				*e*SG	**Sg**	**19 43 45.5**	**-1.0**
OKC	**Ostrava-Krasne**	**2.13**	**140**	Pg	**Pg**	**19 43 17.7**	**-1.2**
OKC				Sg	**Sg**	**19 43 45.5**	**-1.0**
VRAC	**Vranov**	**2.22**	**171**	*e*Pn	**Pn**	**19 43 16.5**	**+0.5**
VRAC				*e*Sg	**Sg**	**19 43 49.8**	**+0.5**
NKC	**Novy Kostel**	**2.61**	**242**	*e*PN	**Pn**	**19 43 21.6**	**+0.2**
NKC				*e*PG	**Pg**	**19 43 28.0**	**0.0**
NKC				*e*SG	**Sg**	**19 44 01.9**	**0.0**
comp=Z,6.9nm,0.4s							
NKC	**Novy Kostel**	**2.61**	**242**	Pn	**Pn**	**19 43 21.6**	**+0.2**
OJC	**Ojcow**	**2.70**	**117**	*e*Pg	**Pg**	**19 43 30.4**	**+0.7**
OJC				*e*Sg	**Sg**	**19 44 06.2**	**+1.5**
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	**Pn**	**19 43 24.9**	**

Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.64**	**86**	*e*P	Pn	19 51 18.6	-5.3
CALA				*e*S	Sn	19 51 37.3	-8.0
CALA	**Caldeira**	**1.64**	**86**	*e*P	Pn	19 51 18.6	-5.3
CALA				*e*S	Sn	19 51 37.3	-8.0
PCED	**Cedros**	**1.64**	**85**	*e*S	Sn	19 51 37.6	-7.8
PCED				A		19 51 39.3	
	61nm,0.2s						
PCED	**Cedros**	**1.64**	**85**	*e*S	Sn	19 51 37.6	-7.8
HOR	**Horta**	**1.69**	**88**	*e*S	Sn	19 51 38.7	-8.0
HOR	**Horta**	**1.69**	**88**	*e*S	Sn	19 51 38.7	-8.0
PCAN	**Candelaria**	**1.80**	**90**	*e*P	Pn	19 51 22.1	-4.1
PCAN				*e*S	Sn	19 51 41.8	-7.7
PCAN				A		19 51 42.2	
	44nm,0.3s						
PCAN	**Candelaria**	**1.80**	**90**	*e*P	Pn	19 51 22.1	-4.1
PCAN				*e*S	Sn	19 51 41.8	-7.7
PICO	**Pico**	**1.85**	**89**	*e*P	Pn	19 51 23.4	-3.5
PICO				*e*S	Sn	19 51 44.0	-6.6
PICO	**Pico**	**1.85**	**89**	*e*P	Pn	19 51 23.4	-3.5
PICO				*e*S	Sn	19 51 44.0	-6.6
ROSA	**Rosais**	**2.00**	**83**	*e*S	Sn	19 51 46.7	-7.7
ROSA	**Rosais**	**2.00**	**83**	*e*S	Sn	19 51 46.7	-7.7
PMAN	**Manadas**	**2.12**	**86**	*e*S	Sn	19 51 49.6	-7.6
PMAN				A		19 51 51.0	
	15nm,0.1s						
PMAN	**Manadas**	**2.12**	**86**	*e*S	Sn	19 51 49.6	-7.6

MAN 11 19:54:24,9.̊80N×121.̊89E,h53km,mb4.3,ML3.2,MS3.0,
Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.08**	**40**	*e*P	Pn	19 54 44.5	+1.7
CUYO	**Cuyo Island**	**1.35**	**321**	*e*P	Pn	19 54 48.3	+1.7
CUYO				*e*S	Sn	19 54 53.3	-10
SNPH	**Sibulan**	**1.41**	**109**	*e*P	Pn	19 54 49.0	+1.8
BUSP	**Coron**	**2.75**	**323**	*e*P	Pn	19 55 07.8	+2.1
ENPP	**El Nido**	**2.80**	**300**	*e*P	Pn	19 55 08.4	+2.1

ATH ***11*** *20:14:45.2,41.̊49N×22.̊37E,h15km±4km,MD3.5/7*
BEO ***11*** *20:14:46.9±0.7,41.̊17N×22.̊29E,h0km,ML2.8/6*
SKO ***11*** *20:14:47.5,41.̊32N×22.̊35E,h15km,M2.6,ML3.0*
TIR ***11*** *20:14:47.9,41.̊26N×22.̊33E,h10km,ML3.2*
THE ***11*** *20:14:48.5,41.̊29N×22.̊36E,h0km±1km,ML2.8/11,Error ellipse: s-maj=1.3km s-min=0.5km az=346.0*
SOF ***11*** *20:14:48.4,41.̊38N×22.̊39E,h2km,MD3.5*
CSEM ***11*** *20:14:48.2±0.1,41.̊33N×22.̊36E,h2km,ML2.8/11,Error ellipse: s-maj=2.6km s-min=2.3km az=52.0*
ISCJB ***11*** *20:14:48.2±0.2,41.̊34N±0.̊01×22.̊36E±0.̊02,h10km,Error ellipse: s-maj=2.0km s-min=1.8km az=152.4*
NEIC ***11*** *20:14:51.8,41.̊23N×22.̊58E,h5km,ML2.6(ATH),After ATH.*

ISC 11 20:14:49.1±0.2,41.̊32N±0.̊01×22.̊36E±0.̊02,h10km,n142,
σ1§17/211,10C-4D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.16**	**88**	‖ *i* Pg	**Pg**	**20 14 51.1**	**-1.4**
VAY				*e*Sg	**Sg**	**20 14 53.8**	**-1.1**
VAY	**Valandovo**	**0.16**	**88**	P	**Pg**	**20 14 51.2**	**-1.3**
VAY				S	**Sg**	**20 14 53.8**	**-1.1**
VAY	**Valandovo**	**0.16**	**88**	‖ *i* Pg	**Pg**	**20 14 51.2**	**-1.3**
VAY				*i* Sg	**Sg**	**20 14 53.9**	**-1.0**
VAY				*e*Lg		20 14 54.0	
	comp=N,7μm,0.6s						
VAY				*e*Lg		20 14 54.1	
	comp=E,3μm,0.5s						
VAY	**Valandovo**	**0.16**	**88**	P	**Pg**	**20 14 51.2**	**-1.3**
VAY				S	**Sg**	**20 14 53.8**	**-1.1**
GRG	**Griva**	**0.36**	**175**	P	**Pg**	**20 14 55.5**	**-0.7**
GRG				S	**Sg**	**20 15 00.6**	**-0.3**
GRG	**Griva**	**0.36**	**175**	P	**Pg**	**20 14 55.5**	**-0.7**
GRG				S	**Sg**	**20 15 00.6**	**-0.3**
KNT	**Kendrikon**	**0.43**	**111**	P	**Pg**	**20 14 56.8**	**-0.7**
KNT				S	**Sg**	**20 15 03.1**	**-0.1**
KNT	**Kendrikon**	**0.43**	**111**	P	**Pg**	**20 14 56.8**	**-0.7**
KNT				S	**Sg**	**20 15 03.1**	**-0.1**
KKB	**Krupnik**	**0.77**	**44**	*i* Pg	**Pg**	**20 15 03.0**	**-1.0**
KKB	**Krupnik**	**0.77**	**44**	*i* Pg	**Pg**	**20 15 03.0**	**-1.0**
THE	**Thessaloniki**	**0.82**	**146**	P	**Pg**	**20 15 03.4**	**-1.5**
THE	**Thessaloniki**	**0.82**	**146**	P	**Pg**	**20 15 03.3**	**-1.6**
THE				S	**Sg**	**20 15 15.2**	**-0.4**
THE	**Thessaloniki**	**0.82**	**146**	P	**Pg**	**20 15 03.4**	**-1.5**
THE				S	**Sg**	**20 15 15.2**	**-0.4**
BIA	**Bitola**	**0.84**	**250**	P	**Pg**	**20 15 03.8**	**-1.4**
BIA				S	**Sg**	**20 15 15.3**	**-0.9**
BIA	**Bitola**	**0.84**	**250**	*i* Sg	**Sg**	**20 15 15.3**	**-0.9**
BIA	**Bitola**	**0.84**	**250**	P	**Pg**	**20 15 03.8**	**-1.4**
BIA				S	**Sg**	**20 15 15.3**	**-0.9**
KRUS	**Krusevo**	**0.84**	**274**	*e*Pg	**Pg**	**20 15 03.8**	**-1.5**
SOH	**Sokhos**	**0.90**	**123**	P	**Pg**	**20 15 04.6**	**-1.7**
SOH	**Sokhos**	**0.90**	**123**	*e*PN	**Pg**	**20 15 05.0**	**-1.3**
SOH				*e*SN	**Sg**	**20 15 17.5**	**-0.5**
SOH	**Sokhos**	**0.90**	**123**	P	**Pg**	**20 15 05.0**	**-1.3**
SOH				S	**Sg**	**20 15 18.1**	**+0.1**
SOH	**Sokhos**	**0.90**	**123**	*e*Pn	**Pg**	**20 15 05.0**	**-1.3**
SOH				*e*Sn	**Sg**	**20 15 17.5**	**-0.5**
SOH				S	**Sg**	**20 15 18.1**	**+0.1**
HORT	**Hortiatis**	**0.91**	**142**	P	**Pg**	**20 15 04.9**	**-1.7**
HORT	**Hortiatis**	**0.91**	**142**	P	**Pg**	**20 15 05.2**	**-1.4**
HORT				S	**Sg**	**20 15 19.0**	**+0.6**
HORT	**Hortiatis**	**0.91**	**142**	P	**Pg**	**20 15 05.2**	**-1.4**
HORT				S	**Sg**	**20 15 19.0**	**+0.6**
FNA	**Florina**	**0.92**	**235**	P	**Pg**	**20 15 05.4**	**-1.3**
FNA				S	**Sg**	**20 15 18.3**	**-0.3**
FNA	**Florina**	**0.92**	**235**	P	**Pg**	**20 15 05.4**	**-1.3**
FNA				S	**Sg**	**20 15 18.3**	**-0.3**
SRS	**Serrai**	**0.95**	**102**	P	**Pg**	**20 15 05.8**	**-1.5**
SRS	**Serrai**	**0.95**	**102**	P	**Pg**	**20 15 06.1**	**-1.2**
SRS	**Serrai**	**0.95**	**102**	P	**Pg**	**20 15 06.1**	**-1.2**
SKO	**Skopje**	**0.95**	**314**	*e*Pg	**Pg**	**20 15 05.7**	**-1.7**
SKO				*e*Sg	**Sg**	**20 15 19.8**	**-0.1**
SKO	**Skopje**	**0.95**	**314**	P	**Pg**	**20 15 06.0**	**-1.4**
SKO				S	**Sg**	**20 15 19.9**	**0.0**
SKO	**Skopje**	**0.95**	**314**	*i* Pg	**Pg**	**20 15 06.2**	**-1.2**
SKO				*e*Sg	**Sg**	**20 15 19.9**	**+0.1**
SKO				*e*Lg		20 15 22.0	
	comp=N,486nm,0.3s						
SKO				*e*Lg		20 15 22.1	
	comp=E,391nm,0.3s						
SKO	**Skopje**	**0.95**	**314**	*e*Pg	**Pg**	**20 15 05.7**	**-1.7**
SKO	**Skopje**	**0.95**	**314**	P	**Pg**	**20 15 06.0**	**-1.4**
SKO				*e*Sg	**Sg**	**20 15 19.8**	**-0.1**
MMB	**Musomiste**	**1.06**	**75**	*i* Pg	**Pg**	**20 15 08.4**	**-1.1**
MMB	**Musomiste**	**1.06**	**75**	*i* Pg	**Pg**	**20 15 08.4**	**-1.1**
KZN	**Kozani**	**1.10**	**204**	*e*PB	**Pb**	**20 15 08.4**	**-1.8**
KZN				*e*SN	**Sn**	**20 15 27.2**	**+1.4**
KZN	**Kozani**	**1.10**	**204**	P	**Pb**	**20 15 08.6**	**-1.6**
KZN				S	**Sg**	**20 15 24.8**	**+0.2**
KZN	**Kozani**	**1.10**	**204**	P	**Pb**	**20 15 08.6**	**-1.6**
KZN				S	**Sg**	**20 15 24.8**	**+0.2**
KZN				*e*Sn	**Sn**	**20 15 27.2**	**+1.4**
NVR	**Nevrokopi**	**1.13**	**88**	P	**Pg**	**20 15 09.2**	**-1.6**
NVR	**Nevrokopi**	**1.13**	**88**	P	**Pg**	**20 15 09.2**	**-1.6**
LIT	**Litokhoron**	**1.22**	**175**	P	**Pn**	**20 15 11.3**	**-0.8**
LIT	**Litokhoron**	**1.22**	**175**	*e*PN	**Pn**	**20 15 11.1**	**-1.0**
LIT				*e*SN	**Sn**	**20 15 30.8**	**+2.2**
LIT	**Litokhoron**	**1.22**	**175**	P	**Pn**	**20 15 11.1**	**-1.0**
LIT				S	**Sb**	**20 15 28.6**	**+0.7**
LIT	**Litokhoron**	**1.22**	**175**	P	**Pn**	**20 15 11.3**	**-0.8**
LIT				S	**Sb**	**20 15 28.6**	**+0.7**
LIT				*e*Sn	**Sn**	**20 15 30.8**	**+2.2**
PLG	**Polygyros**	**1.25**	**139**	P	**Pn**	**20 15 12.5**	**-0.1**
PLG	**Polygyros**	**1.25**	**139**	*e*PN	**Pn**	**20 15 11.4**	**-1.2**
PLG				*e*SN	**Sn**	**20 15 29.7**	**+0.3**
PLG	**Polygyros**	**1.25**	**139**	P	**Pn**	**20 15 11.5**	**-1.1**
PLG				S	**Sb**	**20 15 29.9**	**+1.1**
PLG	**Polygyros**	**1.25**	**139**	*e*Pn	**Pn**	**20 15 11.4**	**-1.2**
PLG	**Polygyros**	**1.25**	**139**	P	**Pn**	**20 15 12.5**	**-0.1**
PLG				S	**Sb**	**20 15 29.9**	**+1.1**
NEST	**Nestorio**	**1.34**	**228**	P	**Pn**	**20 15 13.2**	**-0.7**
NEST	**Nestorio**	**1.34**	**228**	P	**Pn**	**20 15 13.2**	**-0.7**
KBN	**Korca**	**1.38**	**240**	*i* PN	**Pn**	**20 15 13.8**	**-0.5**
KBN				*i* SN	**Sn**	**20 15 32.9**	**+0.2**
KBN	**Korca**	**1.38**	**240**	*i* Pn	**Pn**	**20 15 13.8**	**-0.6**
KBN				*i* Sn	**Sn**	**20 15 32.9**	**+0.3**
VTS	**Vitosha**	**1.42**	**26**	*e*Pg	**Pg**	**20 15 16.8**	**+0.4**
VTS				*e*Sg	**Sg**	**20 15 37.1**	**+2.2**
VTS	**Vitosha**	**1.42**	**26**	P	**Pn**	**20 15 16.0**	**+1.0**
VTS	**Vitosha**	**1.42**	**26**	P	**Pn**	**20 15 15.2**	**+0.2**
VTS	**Vitosha**	**1.42**	**26**	‖ *i* P	**Pn**	**20 15 15.3**	**+0.3**
VTS				S	**Sn**	**20 15 34.1**	**+0.4**
VTS	**Vitosha**	**1.42**	**26**	Pg	**Pn**	**20 15 15.3**	**+0.3**
VTS	**Vitosha**	**1.42**	**26**	Pg	**Pn**	**20 15 15.3**	**+0.3**
VTS				S	**Sn**	**20 15 34.1**	**+0.4**
VTS				*e*Sg	**Sg**	**20 15 37.1**	**+2.2**
BARS	**Barje**	**1.56**	**345**	*e*Pg	**Pg**	**20 15 16.2**	**-2.7**
BARS				*e*Sg	**Sg**	**20 15 40.0**	**+0.9**
BARS	**Barje**	**1.56**	**345**	*e*Pg	**Pg**	**20 15 16.2**	**-2.7**
BARS				*e*Sg	**Sg**	**20 15 40.0**	**+0.9**
OUR	**Ouranopolis**	**1.57**	**128**	P	**Pn**	**20 15 17.7**	**+0.7**
OUR	**Ouranopolis**	**1.57**	**128**	P	**Pn**	**20 15 16.7**	**-0.3**
OUR				S	**Sn**	**20 15 39.2**	**+1.8**
OUR	**Ouranopolis**	**1.57**	**128**	P	**Pn**	**20 15 17.7**	**+0.7**
OUR				S	**Sn**	**20 15 39.2**	**+1.8**
KAVA	**Kavala**	**1.66**	**100**	P	**Pn**	**20 15 18.4**	**+0.3**
KAVA				S	**Sn**	**20 15 41.4**	**+2.0**
KAVA	**Kavala**	**1.66**	**100**	P	**Pn**	**20 15 18.4**	**+0.3**
KAVA				S	**Sn**	**20 15 41.4**	**+2.0**
PAIG	**Paliouri**	**1.71**	**144**	P	**Pn**	**20 15 19.5**	**+0.6**
PAIG	**Paliouri**	**1.71**	**144**	P	**Pn**	**20 15 19.3**	**+0.4**
PAIG				S	**Sn**	**20 15 41.5**	**+0.7**
PAIG	**Paliouri**	**1.71**	**144**	P	**Pn**	**20 15 19.3**	**+0.4**
PAIG				S	**Sn**	**20 15 41.5**	**+0.7**
THL	**Klokotos Trika**	**1.77**	**189**	*e*PN	**Pn**	**20 15 19.9**	**+0.2**
THL	**Klokotos Trika**	**1.77**	**189**	P	**Pn**	**20 15 19.9**	**+0.2**
THL				S	**Sn**	**20 15 43.2**	**+1.0**
THL	**Klokotos Trika**	**1.77**	**189**	P	**Pn**	**20 15 19.9**	**+0.2**
THL				S	**Sn**	**20 15 43.2**	**+1.0**
RZN	**Rozhen**	**1.81**	**77**	P	**Pn**	**20 15 22.1**	**+1.9**
RZN	**Rozhen**	**1.81**	**77**	P	**Pn**	**20 15 22.1**	**+1.9**
PGB	**Panagyurishte**	**1.83**	**47**	P	**Pn**	**20 15 22.0**	**+1.5**
PGB	**Panagyurishte**	**1.83**	**47**	P	**Pn**	**20 15 22.0**	**+1.5**
TIR	**Tirane**	**1.88**	**272**	P	**Pn**	**20 15 27.8**	**+6.5**
PLD	**Plovdiv**	**1.92**	**65**	*i* Pn	**Pn**	**20 15 23.6**	**+1.8**
PLD				*e*Sg	**Sg**	**20 15 51.5**	**+0.7**
PLD	**Plovdiv**	**1.92**	**65**	P	**Pn**	**20 15 23.6**	**+1.8**
PLD	**Plovdiv**	**1.92**	**65**	P	**Pn**	**20 15 24.3**	**+2.5**
PLD	**Plovdiv**	**1.92**	**65**	P	**Pn**	**20 15 23.6**	**+1.8**
PLD				*e*Sg	**Sg**	**20 15 51.5**	**+0.7**
ZAPS	**Zavoj**	**1.97**	**6**	*e*Pn	**Pn**	**20 15 25.2**	**+2.7**
ZAPS				*e*Sn	**Sn**	**20 15 51.7**	**+4.5**
PUK	**Puka**	**1.99**	**292**	*i* PN	**Pn**	**20 15 24.9**	**+2.1**
PUK				*i* SN	**Sn**	**20 15 53.1**	**+5.4**
PUK	**Puka**	**1.99**	**292**	*i* Pn	**Pn**	**20 15 24.9**	**+2.2**
BCI	**Bajram Curri**	**2.01**	**302**	*i* PN	**Pn**	**20 15 24.3**	**+1.2**
BCI				*i* SN	**Sn**	**20 15 50.6**	**+2.3**
BCI	**Bajram Curri**	**2.01**	**302**	*i* Pn	**Pn**	**20 15 24.3**	**+1.2**
BCI				*i* Sn	**Sn**	**20 15 50.6**	**+2.3**
JAN	**Janina**	**2.02**	**215**	*e*PB	**Pb**	**20 15 22.5**	**-3.3**
JAN	**Janina**	**2.02**	**215**	*e*Pb	**Pb**	**20 15 22.5**	**-3.3**
NEO	**Neokhori**	**2.11**	**162**	P	**Pn**	**20 15 24.4**	**0.0**
NEO	**Neokhori**	**2.11**	**162**	P	**Pn**	**20 15 24.4**	**0.0**
MPEP	**Malo Peshtene**	**2.28**	**26**	*i* P	**Pg**	**20 15 31.6**	**-1.2**
AGG	**Agios Georgios**	**2.29**	**181**	P	**Pn**	**20 15 28.9**	**+2.0**
AGG	**Agios Georgios**	**2.29**	**181**	*e*PN	**Pn**	**20 15 27.8**	**+0.9**
AGG	**Agios Georgios**	**2.29**	**181**	P	**Pn**	**20 15 26.8**	**-0.1**
AGG				S	**Sn**	**20 15 57.1**	**+2.0**
AGG	**Agios Georgios**	**2.29**	**181**	P	**Pn**	**20 15 26.8**	**-0.1**
AGG	**Agios Georgios**	**2.29**	**181**	*e*Pn	**Pn**	**20 15 27.8**	**+0.9**
AGG				S	**Sn**	**20 15 57.1**	**+2.0**
SRN	**Sarande**	**2.30**	**232**	*i* PN	**Pn**	**20 15 29.2**	**-1.5**
SRN				*i* SN	**Sb**	**20 15 59.4**	**+0.3**
SRN	**Sarande**	**2.30**	**232**	*i* Pn	**Pb**	**20 15 29.2**	**-1.4**
SRN				*i* Sn	**Sb**	**20 15 59.4**	**+0.3**
KDZ	**Kurdzhali**	**2.32**	**81**	*i* P	**Pb**	**20 15 30.2**	**-0.8**
KDZ	**Kurdzhali**	**2.32**	**81**	*i* P	**Pb**	**20 15 30.2**	**-0.8**
IGT	**Igoumenitsa**	**2.36**	**222**	P	**Pb**	**20 15 31.6**	**-0.1**
IGT	**Igoumenitsa**	**2.36**	**222**	P	**Pb**	**20 15 31.6**	**-0.1**
EVR	**Evrytania**	**2.43**	**190**	P	**Pb**	**20 15 33.0**	**+0.1**
EVR	**Evrytania**	**2.43**	**190**	P	**Pb**	**20 15 33.0**	**+0.1**
AOS	**Alonnisos**	**2.44**	**151**	P	**Pn**	**20 15 29.5**	**+0.6**
AOS	**Alonnisos**	**2.44**	**151**	P	**Pn**	**20 15 28.6**	**-0.3**
AOS				S	**Sn**	**20 16 00.3**	**+1.6**
AOS	**Alonnisos**	**2.44**	**151**	P	**Pn**	**20 15 29.5**	**+0.6**
AOS				S	**Sn**	**20 16 00.3**	**+1.6**
DIM	**Dimitrovgrad**	**2.48**	**72**	P	**Pg**	**20 15 35.8**	**-0.9**
KEK	**Kerkira**	**2.53**	**232**	P	**Pb**	**20 15 34.5**	**0.0**
KEK	**Kerkira**	**2.53**	**232**	P	**Pb**	**20 15 34.5**	**0.0**
BOLS	**Boljevac**	**2.53**	**353**	*e*Pn	**Pn**	**20 15 30.2**	**0.0**
BOLS				*e*Sg	**Sg**	**20 16 12.2**	**+1.8**
BOLS	**Boljevac**	**2.53**	**353**	*e*Pn	**Pn**	**20 15 30.2**	**0.0**
BOLS				*e*Sg	**Sg**	**20 16 12.2**	**+1.8**
ALN	**Alexandroupoli**	**2.81**	**97**	*e*PN	**Pn**	**20 15 32.2**	**-1.9**
ALN	**Alexandroupoli**	**2.81**	**97**	P	**Pn**	**20 15 34.0**	**-0.1**
ALN	**Alexandroupoli**	**2.81**	**97**	*e*Pn	**Pn**	**20 15 32.2**	**-1.9**
ALN	**Alexandroupoli**	**2.81**	**97**	P	**Pn**	**20 15 34.0**	**-0.1**
PVL	**Pavlikeni**	**2.91**	**48**	P	**Pb**	**20 15 39.7**	**-1.3**
PVL	**Pavlikeni**	**2.91**	**48**	P	**Pb**	**20 15 39.7**	**-1.3**
TRUS	**Trudelj**	**3.24**	**334**	*e*Pn	**Pn**	**20 15 38.9**	**-1.1**
TRUS	**Trudelj**	**3.24**	**334**	*e*Pn	**Pn**	**20 15 38.9**	**-1.1**
DIVS	**Divibare**	**3.29**	**329**	*e*Pn	**Pn**	**20 15 40.3**	**-0.3**
DIVS	**Divibare**	**3.29**	**329**	P	**Pn**	**20 15 40.2**	**-0.4**
DIVS	**Divibare**	**3.29**	**329**	P	**Pn**	**20 15 40.2**	**-0.4**
SZH	**Strazhica**	**3.29**	**52**	P	**Pg**	**20 15 50.0**	**-2.1**
STON	**Ston**	**3.80**	**296**	*e*Pn	**Pn**	**20 15 47.9**	**+0.2**
STON				Sn	**Sn**	**20 16 33.5**	**+1.1**
STON	**Ston**	**3.80**	**296**	*e*Pn	**Pn**	**20 15 47.8**	**+0.1**
STON				Sn	**Sn**	**20 16 33.5**	**+1.1**
GZR	**Gura Zlata**	**4.09**	**4**	‖ *i* P	**Pn**	**20 15 51.1**	**-0.5**
GZR	**Gura Zlata**	**4.09**	**4**	‖ *i* P	**Pn**	**20 15 51.1**	**-0.5**
BZS	**Buzias**	**4.33**	**353**	‖ *i* P	**Pn**	**20 15 54.3**	**-0.7**
BZS	**Buzias**	**4.33**	**353**	‖ *i* P	**Pn**	**20 15 54.3**	**-0.7**
VOIR		**4.56**	**25**	‖ *i* P	**Pn**	**20 15 58.8**	**+0.7**
VOIR		**4.56**	**25**	‖ *i* P	**Pn**	**20 15 58.8**	**+0.7**
MLR	**Muntele Rosu**	**4.92**	**31**	‖ *i* P	**Pn**	**20 16 04.2**	**+1.1**
MLR	**Muntele Rosu**	**4.92**	**31**	‖ *i* P	**Pn**	**20 16 04.2**	**+1.1**
CUC	**Castrocucco**	**5.15**	**257**	*e*P	**Pn**	**20 16 07.9**	**+1.7**
	comp=E,3.2nm,0.6s						
CUC	**Castrocucco**	**5.15**	**257**	*e*P	**Pn**	**20 16 07.9**	**+1.7**
	comp=E,3.2nm,0.6s						
PKSM	**Moragy**	**5.59**	**332**	‖ *i* P	**Pn**	**20 16 11.8**	**-0.4**
PKSM	**Moragy**	**5.59**	**332**	‖ *i* P	**Pn**	**20 16 11.8**	**-0.4**
NVLJ	**Novalja**	**6.38**	**303**	*e*Pn	**Pn**	**20 16 23.9**	**+0.8**
NVLJ				Sn	**Sn**	**20 17 35.3**	**-0.8**
NVLJ	**Novalja**	**6.38**	**303**	*e*Pn	**Pn**	**20 16 23.9**	**+0.8**
NVLJ				Sn	**Sn**	**20 17 35.2**	**-0.8**
TRPA	**Tarpa**	**6.82**	**1**	‖ *i* P	**Pn**	**20 16 25.6**	**-3.4**

DDA ***11*** *20:38:47.9,37.̊05N×36.̊16E,h7km±5km,Md3.1*
ISCJB ***11*** *20:38:48.3±0.5,37.̊05N±0.̊03×36.̊17E±0.̊04,h2km±9km,Error ellipse: s-maj=5.5km s-min=4.7km az=162.9*
ISK ***11*** *20:38:48.6,37.̊16N×36.̊08E,h5km,MD3.2*
CSEM ***11*** *20:38:49.4±0.2,37.̊12N×36.̊13E,h2km,MD3.2,Error ellipse: s-maj=6.8km s-min=4.5km az=161.0*

ISC 11 20:38:48.8±0.5,37.̊05N±0.̊03×36.̊16E±0.̊04,h3km±9km,
n31,σ1§28/39,1C-1D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.33**	**263**	*e*PG	**Pg**	**20 38 55.7**	**+0.6**
CEYT				*e*SG	**Sg**	**20 39 00.9**	**+1.5**
CEYT	**Ceyhan**	**0.33**	**263**	*e*Pg	**Pg**	**20 38 55.7**	**+0.6**
CEYT				*e*Sg	**Sg**	**20 39 00.9**	**+1.4**
KOZT	**Kozan**	**0.51**	**328**	*e*PG	**Pg**	**20 38 57.2**	**-1.3**
COBT	**Iskenderun**	**0.53**	**172**	*e*P	**Pg**	**20 38 57.1**	**-1.8**
COBT				*e*S	**Sg**	**20 39 04.5**	**-1.4**
COBT	**Iskenderun**	**0.53**	**172**	*e*P	**Pg**	**20 38 57.1**	**-1.9**
COBT				*e*S	**Sg**	**20 39 04.5**	**-1.4**
ANDN	**Andirin**	**0.55**	**15**	‖ *i* P	**Pg**	**20 38 58.5**	**-0.9**
ANDN				*i* S	**Sg**	**20 39 06.5**	**0.0**
ANDN	**Andirin**	**0.55**	**15**	*i* P	**Pg**	**20 38 58.5**	**-0.8**
ANDN				*i* S	**Sg**	**20 39 06.5**	**0.0**
KMRS	**Kahramanmaras**	**0.75**	**52**	*e*PG	**Pg**	**20 39 03.9**	**+0.8**
KMRS	**Kahramanmaras**	**0.75**	**52**	*e*Pg	**Pg**	**20 39 03.9**	**+0.8**
KUZU	**Kuzuini**	**0.78**	**110**	‖ *i* P	**Pg**	**20 39 03.5**	**-0.3**
KUZU				*i* S	**Sg**	**20 39 14.3**	**+0.3**
KUZU	**Kuzuini**	**0.78**	**110**	*i* P	**Pg**	**20 39 03.5**	**-0.3**
KUZU				*i* S	**Sg**	**20 39 14.3**	**+0.4**
KRTS	**Karatas**	**0.79**	**233**	*e*PG	**Pg**	**20 39 05.4**	**+1.5**
KRTS	**Karatas**	**0.79**	**233**	*e*Pg	**Pg**	**20 39 05.4**	**+1.5**
GAZ	**Gaziantep**	**0.85**	**81**	*e*PG	**Pg**	**20 39 06.8**	**+1.7**
GAZ	**Gaziantep**	**0.85**	**81**	*e*Pg	**Pg**	**20 39 06.8**	**+1.8**
KARA	**Karaisali**	**0.91**	**284**	*e*PG	**Pg**	**20 39 05.0**	**-1.2**
KARA	**Karaisali**	**0.91**	**284**	*e*Pg	**Pg**	**20 39 05.0**	**-1.2**
HTY	**Hatay**	**0.93**	**181**	*e*PG	**Pg**	**20 39 09.7**	**+3.2**
HTY	**Hatay**	**0.93**	**181**	*e*Pg	**Pg**	**20 39 09.7**	**+3.2**
MERS	**Mersin**	**1.32**	**263**	*e*PN	**Pn**	**20 39 14.1**	**-0.1**
MERS	**Mersin**	**1.32**	**263**	*e*Pn	**Pn**	**20 39 14.1**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.68**	**14**	*e*PN	**Pn**	**20 39 13.9**	**-5.2**
SARI	**SarD1z-Kayseri**	**1.68**	**14**	*e*Pn	**Pn**	**20 39 13.9**	**-5.2**
IKL	**Isikli**	**2.15**	**249**	*e*PN	**Pb**	**20 39 26.6**	**-1.8**
IKL	**Isikli**	**2.15**	**249**	*e*Pn	**Pb**	**20 39 26.6**	**-1.7**
MALT	**Malatya**	**2.20**	**54**	*e*PN	**Pb**	**20 39 27.4**	**-1.8**
MALT	**Malatya**	**2.20**	**54**	*e*Pn	**Pb**	**20 39 27.4**	**-1.8**
SVRC	**Sivrice-ELAZID**	**2.83**	**61**	*e*PN	**Pn**	**20 39 36.5**	**+1.7**
SVRC	**Sivrice-ELAZID**	**2.83**	**61**	*e*Pn	**Pn**	**20 39 36.5**	**+1.7**
HDMB	**Hadim**	**2.94**	**269**	*e*PN	**Pn**	**20 39 37.3**	**+0.9**
HDMB	**Hadim**	**2.94**	**269**	*e*Pn	**Pn**	**20 39 37.3**	**+0.9**

SZGRF ***11*** *21:03:38.6,22.̊96S×178.̊01W,h33km,South of Fiji Islands*
BJI ***11*** *21:04:40.0,21.̊80S×178.̊90W,h566km,mB4.6/15, mb4.7/28*
ISCJB ***11*** *21:04:41.8±0.6,21.̊85S±0.̊04×178.̊99W±0.̊04, h576km±8km,mb4.8/154,Error ellipse: s-maj=6.3km s-min=4.6km az=151.9*
NEIC ***11*** *21:04:42.1±0.5,21.̊77S×178.̊93W,h566km±5km,mb4.8/89, Error ellipse: s-maj=6.0km s-min=3.9km az=143.0*
MOS ***11*** *21:04:42.4±2.9,21.̊35S×179.̊07W,h546km,mb4.7/20, Error ellipse: s-maj=10.0km s-min=9.0km az=48.6*
BGS ***11*** *21:04:43.4±4.5,21.̊77S×178.̊93W,h566km,mb4.8(NEIC)*
IDC ***11*** *21:04:44.0±0.4,21.̊86S×178.̊95W,h585km±4km,mb4.3/27, mb1 4.4/29,mb1mx4.4/31,mbtmp4.3/29,Error ellipse: s-maj=9.4km s-min=7.4km az=147.0*
GCMT ***11*** *21:04:45.6±0.3,21.̊81S×178.̊84W,h587km±3km,MW5.4, Moment Tensor Solution. s53,c75; Moment tensor: Scale 10^17^Nm; M_{rr}0.28±.04; $M_{\theta\theta}$1.16±.06; $M_{\phi\phi}$-1.43±.05; $M_{r\theta}$0.44±.06; $M_{\theta\phi}$-0.17±.06; $M_{\phi r}$-0.34±.07; Best double couple: M_0=1.40000×10^17^ NP1:ϕ=47.00000°,δ66.00000°, λ170.00000°. NP2:ϕ=141.00000°,δ81.00000°,λ24.00000°. Principal axes: T 1.3700, Plg23.0000°, Azm6.0000°; N 0.1300, Plg64.0000°, Azm160.0000°; P -1.5000, Plg10.0000°, Azm272.0000°; Data Used: II IU IC G CN.*
DJA ***

WRA Warramunga Arr 43.55 264 P **P** **21 11 56.4 -0.5**
comp=Z,149nm,0.8s,mb5.6,baz=98,slow=7.1,SNR=678
WRA PP PP 21 13 53.8 +3.5
comp=Z,22nm,1.3s,baz=98,slow=9.1,SNR=4.8
WRA ScP ScP 21 16 31.6 +3.2
comp=Z,3.8nm,0.9s,baz=93,slow=4.6,SNR=5.2
WRA S **S** **21 17 42.6 -2.3**
comp=Z,8.0nm,0.9s,baz=97,slow=14,SNR=13
WRA Warramunga Arr 43.55 264 P **P** **21 11 56.4 -0.5**
WRA 21 13 53.8
WRA S **S** **21 17 42.7 -2.2**
FORT Forest 47.94 248 ||*i*P **P** **21 12 30.1 0.0**
comp=Z,117nm,1.2s,mb5.3
FORT Forest 47.94 248 *e*P **P** **21 12 29.8 -0.3**
comp=Z,418nm,1.3s,mb5.8
FORT *e*PP PP 21 14 31.3 +1.4
FORT *e*ScP ScP 21 16 48.8 +2.1
FORT *e*S **S** **21 18 44.5 -1.5**
TLE Tual 49.39 282 P **P** **21 12 41.5 +0.4**
comp=Z,251nm,1.0s,mb5.6
KNA Kununurra 49.68 268 P **P** **21 12 43.3 +0.2**
comp=Z,7μmcomp=Z,640nm,0.9s,mb6.1
MIDW Midway 49.84 2 P **P** **21 12 41.9 -2.1**
GUMO Guam 50.03 311 P **P** **21 12 45.7 0.0**
comp=Z,23nm,0.4s,mb4.9,baz=184,slow=6.4,SNR=5.4
GUMO Guam 50.03 311 *e*P **P** **21 12 45.4 -0.2**
comp=Z,18nm,0.4s,mb4.9
GUMO Guam 50.03 311 *e*P **P** **21 12 45.4 -0.2**
GUMO pmax pmax
comp=Z,18nm,0.4s,mb4.8
FITZ Fitzroy Crossi 51.98 264 P **P** **21 13 00.2 +0.4**
comp=Z,46nm,0.9s,mb4.8,baz=110,slow=4.3,SNR=124
FITZ S **S** **21 19 41.8 +1.0**
comp=Z,8.4nm,1.0s,baz=282,slow=21,SNR=6.9
FITZ Fitzroy Crossi 51.98 264 ||*i*P **P** **21 13 00.2 +0.4**
comp=Z,78nm,0.8s,mb5.1
FITZ *e*S **S** **21 19 41.4 +0.6**
FITZ Fitzroy Crossi 51.98 264 P **P** **21 12 59.5 -0.3**
comp=Z,3μmcomp=Z,175nm,1.3s,mb5.2
BNDI Bandanaira 52.42 282 P **P** **21 13 02.7 -0.3**
comp=Z,5μmcomp=Z,398nm,1.1s,mb5.7
NLAI Namlea 55.49 282 P **P** **21 13 24.4 -0.2**
comp=Z,2μmcomp=Z,145nm,1.3s,mb5.2
NLAI Namlea 55.49 282 P **P** **21 13 24.5 -0.1**
comp=Z,2μmcomp=Z,145nm,1.3s,mb5.2
SBA Scott Base 56.43 184 *e*P **P** **21 13 32.9 +2.8**
comp=Z,32nm,1.3s,mb4.4
SBA *e*pP pP 21 15 22.0 +1.3
SBA Scott Base 56.43 184 *e*P **P** **21 13 32.9 +2.9**
SBA *e**PP pP 21 15 22.0 +1.3
SBA pmax pmax
comp=Z,32nm,1.3s,mb4.4
KLBR Kellerberrin 56.67 246 ||*i*P **P** **21 13 32.7 +0.2**
comp=Z,94nm,1.0s,mb5.0
MBWA Marble Bar 56.70 258 *e*P **P** **21 13 32.4 -0.4**
comp=Z,71nm,0.5s,mb5.2
MBWA Marble Bar 56.70 258 P **P** **21 13 32.8 0.0**
comp=Z,151nm,1.2s,mb5.1
NWAO Narrogin (SRO) 56.96 244 P **P** **21 13 35.0 +0.5**
comp=Z,25nm,0.5s,mb4.7,baz=101,slow=6.8,SNR=24
NWAO Narrogin (SRO) 56.96 244 P **P** **21 13 35.0 +0.5**
NWAO Narrogin (SRO) 56.96 244 P **P** **21 13 35.0 +0.6**
TNTI Ternate 56.97 286 P **P** **21 13 34.4 -0.4**
comp=Z,2μmcomp=Z,184nm,1.1s,mb5.2
MMRI Maumere 57.94 273 P **P** **21 13 40.9 -0.4**
comp=Z,2μmcomp=Z,127nm,1.1s,mb5.0
WSI Waingapu 59.39 272 P **P** **21 13 51.2 +0.2**
comp=Z,482nm,1.1s,mb5.6
LUWI Luwuk 60.33 282 P **P** **21 13 57.5 +0.2**
comp=Z,1μmcomp=Z,113nm,1.2s,mb5.0
LUWI Luwuk 60.33 282 P **P** **21 13 57.6 +0.3**
comp=Z,1μmcomp=Z,113nm,1.2s,mb5.0
BKSI Bulukumba 61.08 276 P **P** **21 14 01.8 -0.5**
comp=Z,44nm,1.1s,mb4.6
BMNI Bima 61.26 272 P **P** **21 14 03.2 -0.2**
comp=Z,2μmcomp=Z,259nm,1.2s,mb5.3
DAV Davao City (W) 61.50 292 ||*e*P **P** **21 13 56.0 -8.9**
CBIJ Chichi jima 61.53 320 P **P** **21 14 04.5 -0.4**
comp=Z,15nm,0.4s,mb4.6,baz=281,slow=19,SNR=7.3
KAPI Kappang 61.54 276 P **P** **21 14 04.4 -0.9**
comp=Z,14nm,1.3s,mb4.0
MRSI Marisa 61.72 283 P **P** **21 14 05.6 -0.8**
comp=Z,32nm,1.1s,mb4.5
SPSI Sidrap Palu 61.92 277 P **P** **21 14 06.7 -1.0**
comp=Z,43nm,1.2s,mb4.5
TTSI Tana Toraja 62.23 278 P **P** **21 14 09.0 -0.7**
comp=Z,21nm,1.4s,mb4.2
CASY Casey 62.33 206 *e*P **P** **21 14 10.2 +0.8**
CASY Casey 62.33 206 *e*P **P** **21 14 10.2 +0.8**
comp=Z,16nm,0.9s,mb4.3
CASY *e*pP pP 21 16 02.9 -0.4
TOLI Toli-Toli 63.03 283 P **P** **21 14 16.6 +1.7**
comp=Z,2μmcomp=Z,108nm,0.5s,mb5.4
MTNI Mataram 63.57 271 P **P** **21 14 18.3 0.0**
comp=Z,2μmcomp=Z,89nm,0.5s,mb5.3
KHKI Kahang-Kahang 64.18 271 P **P** **21 14 21.5 -0.7**
comp=Z,69nm,1.0s,mb4.9
IGBI Denpasar 64.46 271 P **P** **21 14 23.8 -0.1**
comp=Z,261nm,0.9s,mb5.6
SRBI Singaraja 64.64 271 P **P** **21 14 25.2 +0.1**
comp=Z,113nm,1.1s,mb5.2
NBBI Negara 65.10 271 P **P** **21 14 27.2 -0.8**
comp=Z,142nm,0.5s,mb5.6
GMJI Gumukmas 66.22 270 P **P** **21 14 34.6 -0.4**
comp=Z,77nm,1.1s,mb5.0
MYLDM Lahad Datu 66.85 286 P **P** **21 14 40.7 +1.9**
MYLDM Lahad Datu 66.85 286 P **P** **21 14 41.0 +2.2**
comp=Z,29nm,1.2s,mb4.6
PWJI Pagerwojo 67.83 270 P **P** **21 14 44.9 0.0**
comp=Z,112nm,1.1s,mb5.2
SJI Sawahan 67.97 270 P **P** **21 14 46.3 +0.6**
comp=Z,88nm,1.0s,mb5.2
QSPA South Pole Qui 68.19 180 P **P** **21 14 47.6 +1.7**
comp=Z,27nm,0.7s,mb4.8,baz=29,slow=1.6,SNR=190
QSPA pP pP 21 16 45.3 +2.6
comp=Z,25nm,1.0s,baz=48,slow=4.0,SNR=9.2
QSPA South Pole Qui 68.19 180 P **P** **21 14 47.6 +1.7**
QSPA pP pP 21 16 45.3 +2.6
PCJI Pacitan 68.36 270 P **P** **21 14 48.2 +0.2**
comp=Z,5μmcomp=Z,340nm,0.6s,mb6.0
UGM Wanagama 69.06 270 P **P** **21 14 52.9 +0.6**
comp=Z,145nm,1.9s,mb5.1
KKM Kota Kinabalu 69.27 286 *e*P **P** **21 14 53.8 +0.3**
comp=Z,14nm,0.4s,mb4.7
KKM *e*pP pP 21 16 50.0 -0.9
KKM PP PP 21 17 33.1 -4.1
KKM Kota Kinabalu 69.27 286 P **P** **21 14 53.7 +0.2**
comp=Z,39nm,1.2s,mb4.7
BJII Banjamegara 70.02 270 P **P** **21 14 58.3 +0.3**
comp=Z,37nm,1.2s,mb4.7
MJAR Matsushiro Arr 70.81 325 P **P** **21 15 01.9 -0.2**
comp=Z,3.9nm,0.4s,mb4.3,baz=167,slow=6.3,SNR=7.8
MJAR Matsushiro Arr 70.81 325 P **P** **21 15 01.9 -0.2**
MAJO Matsushiro 70.81 325 *e*P **P** **21 15 01.4 -0.7**
comp=Z,5.7nm,0.8s,mb4.2
MAJO Matsushiro 70.81 325 *e*P **P** **21 15 01.4 -0.7**
MAJO pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
STKI Sintang 71.11 278 P **P** **21 15 05.5 +1.1**
comp=Z,7μmcomp=Z,46nm,1.1s,mb4.9
SBUM Sibu 71.38 281 P **P** **21 15 07.2 +1.2**
comp=Z,18nm,1.7s,mb4.3
SBUM Sibu 71.38 281 P **P** **21 15 06.5 +0.5**
comp=Z,18nm,1.7s,mb4.3
CISI Cisompet, Garu 71.70 269 P **P** **21 15 07.3 -0.5**
comp=Z,82nm,1.3s,mb5.1
LEM Lembang 72.14 270 P **P** **21 15 11.1 +0.7**
comp=Z,2μmcomp=Z,153nm,1.1s,mb5.4
KSM Kuching 72.74 279 *e*P **P** **21 15 13.9 +0.1**
comp=Z,22nm,0.5s,mb4.9
KSM *e*pP pP 21 17 12.4 -0.4
KSM Kuching 72.74 279 P **P** **21 15 14.1 +0.3**
comp=Z,785nmcomp=Z,59nm,1.1s,mb5.0
KSM Kuching 72.74 279 P **P** **21 15 14.2 +0.4**
comp=Z,783nmcomp=Z,59nm,1.1s,mb5.0
DBJI Dramaga 73.04 270 P **P** **21 15 15.4 -0.2**
comp=Z,86nm,1.5s,mb5.0
YULB Yu-li 73.53 304 *e*P **P** **21 15 17.1 -1.0**
NACB Ninganchiao 73.73 305 *e*P **P** **21 15 19.5 +0.3**
TPUB Ta-pu 74.00 304 *e*P **P** **21 15 19.8 -0.9**
SSLB Suanglung 74.01 304 *e*P **P** **21 15 20.1 -0.7**
comp=Z,20nm,0.5s,mb4.9
ASAJ Asahikawa 74.53 332 P **P** **21 15 24.6 +1.3**
comp=Z,17nm,0.8s,mb4.6,baz=233,slow=7.7,SNR=14
ASAJ Asahikawa 74.53 332 *e*P **P** **21 15 24.2 +0.9**
comp=Z,6.1nm,0.8s,mb4.2
NIKO Nikolski 75.06 6 *e*P **P** **21 15 24.9 -1.1**
comp=Z,66nm,0.6s,mb5.3
MDSI Maura Dua 76.17 271 P **P** **21 15 31.7 -1.4**
comp=Z,33nm,0.8s,mb4.8
YSS Yuzh-Sakhalins 76.74 334 *e*P **P** **21 15 35.5 0.0**
comp=Z,35nm,1.1s,mb4.7
YSS Yuzh-Sakhalins 76.74 334 *e*P **P** **21 15 35.5 +0.1**
YSS pmax pmax
comp=Z,35nm,1.1s,mb4.7
KSRS Korea Array 77.35 319 P **P** **21 15 39.4 +0.5**
comp=Z,2.2nm,0.8s,mb3.6,baz=151,slow=6.8,SNR=9.7
PETK Petropavlovsk- 77.39 346 P **P** **21 15 38.3 -0.5**
comp=Z,20nm,0.8s,mb4.6,baz=123,slow=6.4,SNR=23
PETK Petropavlovsk- 77.39 346 P **P** **21 15 38.3 -0.5**
KSI Kapahiang 77.94 271 P **P** **21 15 42.4 -0.3**
comp=Z,108nm,1.0s,mb5.2
MYKOM Kota Tinggi 78.80 276 P **P** **21 15 48.5 +1.2**
comp=Z,38nm,1.5s,mb4.5
MYKOM Kota Tinggi 78.80 276 P **P** **21 15 47.9 +0.6**
comp=Z,38nm,1.5s,mb4.5
MAW Mawson 79.96 200 P **P** **21 15 53.8 +1.5**
comp=Z,3.7nm,0.7s,mb3.9,baz=127,slow=7.7,SNR=15
MAW pP pP 21 17 57.5 +3.1
comp=Z,7.7nm,1.0s,baz=92,slow=10.0,SNR=7.7
MAW Mawson 79.96 200 *e*P **P** **21 15 53.6 +1.2**
comp=Z,3.1nm,0.6s,mb3.8
MAW Mawson 79.96 200 P **P** **21 15 53.8 +1.4**
SDSI Sungai Dareh 80.02 273 P **P** **21 15 52.3 -1.4**
comp=Z,2μmcomp=Z,14nm,1.3s,mb4.1
NJ2 Nanjing 80.09 310 *e*P **P** **21 15 50.7 -2.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.4
PMSA Palmer Station 80.37 157 *e*P **P** **21 15 55.0 +0.5**
ISA Isabella 80.93 46 *e*P **P** **21 15 57.9 0.0**
comp=Z,8.4nm,0.8s,mb4.2
ISA Isabella 80.93 46 *e*P **P** **21 15 57.9 0.0**
ISA pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
CMB Columbia Colle 81.08 43 *e*P **P** **21 15 58.6 +0.1**
comp=Z,17nm,1.0s,mb4.4
CMB Columbia Colle 81.08 43 *e*P **P** **21 15 58.7 +0.1**
CMB pmax pmax
comp=Z,17nm,1.0s,mb4.4
MDJ Mudanjiang 81.15 326 P **P** **21 15 59.5 +0.7**
MDJ pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
MDJ pmax pmax
comp=Z,57nm,4.7s
MDJ Mudanjiang 81.15 326 *e*P **P** **21 15 58.3 -0.5**
comp=Z,3.0nm,0.4s,mb4.1
HABR Khabarovsk 81.22 331 *e*P **P** **21 15 58.6 -0.4**
HABR *e**PP pP 21 17 55.3 -6.5
HABR *i* 21 21 18.6
HABR *e*S S 21 25 23.4 +1.4
HABR *e*SS SS 21 30 53.6 -1.8
HABR pmax pmax
comp=Z,47nm,1.0s,mb4.9
HABR pmax pmax
comp=E,56nm,0.8s
HABR pmax pmax
comp=N,24nm,1.0s
HABR MLR MLR
comp=Z,80nm,20.0s
WDC Whiskeytown Da 81.30 40 *e*P **P** **21 16 00.0 +0.3**
comp=Z,62nm,1.5s,mb4.8
WDC Whiskeytown Da 81.30 40 *e*P **P** **21 16 00.0 +0.3**
WDC pmax pmax
comp=Z,62nm,1.5s,mb4.8
GSC Goldstone 81.85 47 *e*P **P** **21 16 03.0 +0.3**
comp=Z,4.2nm,0.6s,mb4.2
GSC *e*pP pP 21 18 04.8 -0.8
GSC Goldstone 81.85 47 *e*P **P** **21 16 03.0 +0.4**
GSC *e**PP pP 21 18 04.8 -0.8
GSC pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
YBH Yreka Blue Hor 81.92 39 P **P** **21 16 04.2 +1.3**
comp=Z,17nm,0.8s,mb4.7,baz=236,slow=1.1,SNR=41
YBH Yreka Blue Hor 81.92 39 P **P** **21 16 04.2 +1.4**
WAKR Walker 81.96 43 *e*P **P** **21 16 03.8 +0.7**
comp=Z,16nm,0.6s,mb4.7
LBCM Butte Creek Ri 82.17 40 P **P** **21 16 04.7 +0.5**
WCN Washoe City 82.23 42 *e*P **P** **21 16 04.7 +0.3**
comp=Z,16nm,0.8s,mb4.6
WCN Washoe City 82.23 42 *e*P **P** **21 16 04.7 +0.3**
WCN pmax pmax
comp=Z,16nm,0.8s,mb4.6
HUMO Hull Mountain 82.33 38 *e*P **P** **21 16 05.0 +0.2**
comp=Z,32nm,1.1s,mb4.8
KDAK Kodiak Island 82.37 14 P **P** **21 16 03.9 -0.8**
comp=Z,9.6nm,0.7s,mb4.4,baz=288,slow=2.9,SNR=8.7
KDAK Kodiak Island 82.37 14 *i*P **P** **21 16 04.6 -0.1**
IPM Ipoh 82.44 278 *e*P **P** **21 16 06.2 +0.1**
comp=Z,24nm,0.4s,mb5.1
IPM Ipoh 82.44 278 P **P** **21 16 06.8 +0.7**
IPM Ipoh 82.44 278 P **P** **21 16 06.9 +0.8**
comp=Z,50nm,0.6s,mb5.2
BUOR Burton Butte 82.53 39 P **P** **21 16 07.0 +1.1**
WHN Wuhan 82.56 307 P **P** **21 16 03.5 -2.8**
NVAR Mina Array Bea 82.64 44 P **P** **21 16 06.7 +0.2**
comp=Z,14nm,0.7s,mb4.6,baz=222,slow=8.7,SNR=84
PAHR Pah Rah Range 82.70 42 *e*P **P** **21 16 06.3 -0.5**
comp=Z,37nm,1.1s,mb4.8
HOG Hogback Mounta 82.83 39 P **P** **21 16 08.5 +1.1**
CN2 Changchun 82.86 323 *e*P **P** **21 16 07.9 +0.4**
CN2 *e*pP pP 21 18 12.2 +1.3
CN2 *e*S S 21 25 42.0 +3.4
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.6
LDFC Landfair 82.89 48 *e*P **P** **21 16 07.7 -0.2**
comp=Z,30nm,0.7s,mb4.9
KULM Kulim 83.09 278 *e*P **P** **21 16 10.3 +0.9**
comp=Z,33nm,1.1s,mb4.8
KULM Kulim 83.09 278 P **P** **21 16 11.5 +2.1**
KULM Kulim 83.09 278 P **P** **21 16 10.3 +0.9**
comp=Z,34nm,1.5s,mb4.7
MPOR Mary's Peak 83.20 36 P **P** **21 16 10.3 +1.2**
KLR Kul'dur 83.27 330 *e*P **P** **21 16 05.2 -4.2**
MOD Modoc 83.45 40 *e*P **P** **21 16 10.6 +0.2**
comp=Z,3.2nm,0.6s,mb4.0
SHPR Sheep Range 83.63 47 *e*P **P** **21 16 12.0 +0.5**
comp=Z,20nm,1.5s,mb4.4
BMN Battle Mountai 84.47 42 *e*P **P** **21 16 15.6 +0.1**
comp=Z,8.6nm,0.6s,mb4.5
BMN Battle Mountai 84.47 42 *e*P **P** **21 16 15.6 +0.1**
BMN pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
TUC Tucson 84.53 52 *e*P **P** **21 16 16.1 +0.1**
comp=Z,9.3nm,0.7s,mb4.5
TUC Tucson 84.53 52 *e*P **P** **21 16 16.1 +0.1**
TUC pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
RSO Redoubt South 84.78 13 *e*P **P** **21 16 15.2 -1.4**
VIPM Ingram Point 84.84 38 P **P** **21 16 17.7 +0.5**
VIPM Ingram Point 84.84 38 P **P** **21 16 17.7 +0.5**
NLWA Neilton Lookou 84.88 34 *e*P **P** **21 16 17.0 -0.3**
comp=Z,18nm,1.1s,mb4.6
SYO Syowa Base 85.18 193 ||*i*P **P** **21 16 17.2 -1.4**
SLKM Skilak Lake 85.36 14 *e*P **P** **21 16 18.9 -0.5**
SLKM Skilak Lake 85.36 14 *e*P **P** **21 16 18.9 -0.4**
CCUT Cedar City 85.40 47 *e*P **P** **21 16 20.9 +0.7**
comp=Z,5.8nm,0.8s,mb4.3
TPTI 85.52 275 P **P** **21 16 21.0 -0.3**
GNW Green Mountain 85.53 34 *e*P **P** **21 16 20.7 +0.2**
comp=Z,3.8nm,0.7s,mb4.1
LON Longmire 85.56 35 *e*P **P** **21 16 20.5 -0.2**
comp=Z,10nm,1.1s,mb4.4
LON Longmire 85.56 35 *e*P **P** **21 16 20.5 -0.1**
LON pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
PGC Sidney 85.90 33 *e*P **P** **21 16 22.4 +0.2**
comp=Z,4.5nm,1.5s,mb3.9
RC01 Rabbit Creek A 85.99 14 *e*P **P** **21 16 21.8 -0.5**
comp=Z,47nm,1.2s,mb5.0
ENH Enshi 86.09 305 *e*P **P** **21 16 24.2 +0.7**
comp=Z,6.9nm,0.7s,mb4.4
BJT Baijiatuao 86.25 316 P **P** **21 16 24.4 +0.3**
BJT Baijiatuao 86.25 316 P **P** **21 16 24.4 +0.3**
JCW Jim Creek 86.40 34 *e*P **P** **21 16 24.2 -0.4**
comp=Z,107nm,1.8s,mb5.2
TTA Tatalina 86.46 10 *e*P **P** **21 16 24.2 -0.3**
comp=Z,6.2nm,0.4s,mb4.6
TTA Tatalina 86.46 10 *e*P **P** **21 16 24.2 -0.3**
TTA pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
RSW Rattlesnake Hi 86.56 37 *e*P **P** **21 16 25.9 +0.6**
comp=Z,73nm,1.3s,mb5.2
GYA Guiyang 86.57 300 P **P** **21 16 27.0 +1.1**
GYA pP pP 21 18 28.9 -1.8
GYA sP sP 21 19 24.3 -4.6
GYA PP PP 21 20 01.2 +2.1
GYA SKS 21 25 58.8
GYA S S 21 26 15.5 +0.4
GYA sS sS 21 29 51.4 -6.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
PMR Palmer 86.57 14 *e*P **P** **21 16 23.5 -1.5**
comp=Z,17nm,0.8s,mb4.8
PMR Palmer 86.57 14 *e*P **P** **21 16 23.5 -1.5**
PMR pmax pmax
comp=Z,17nm,0.8s,mb4.8
HAWA Hanford 86.59 37 *e*P **P** **21 16 25.8 +0.3**
comp=Z,52nm,1.3s,mb5.1
SNAA Sanae 86.65 179 P **P** **21 16 24.8 -0.7**
comp=Z,0.6nm,0.5s,baz=181,slow=4.3,SNR=14
SNAA pP pP 21 18 30.1 -0.1
comp=Z,1.1nm,0.8s,baz=135,slow=2.0,SNR=6.6
SNAA Sanae 86.65 179 P **P** **21 16 24.8 -0.7**
ETW Entiat 86.88 35 P **P** **21 16 27.3 +0.4**
SML Sawmill 86.94 14 *e*P **P** **21 16 25.9 -0.9**
comp=Z,3.9nm,0.8s,mb4.2
SML Sawmill 86.94 14 *e*P **P** **21 16 25.9 -0.9**
SML pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
SEY Seymchan 87.52 347 ||*i*P **P** **21 16 29.0 -0.5**
OD2 Odessa Site #2 87.63 36 *e*P **P** **21 16 30.5 +0.1**
comp=Z,37nm,1.0s,mb5.1
TMUT Trail Mountain 87.75 46 *e*P **P** **21 16 31.4 +0.3**
comp=Z,8.4nm,0.6s,mb4.7
HLID Hailey 87.95 41 *e*P **P** **21 16 32.4 +0.5**
comp=Z,43nm,1.5s,mb5.0
HLID *e*pP pP 21 18 36.2 -1.1
TRF Thorofare Moun 87.99 12 *e*P **P** **21 16 30.4 -1.2**
comp=Z,60nm,0.8s,mb5.4
SRU San Rafael 88.12 46 *e*P **P** **21 16 33.4 +0.5**
comp=Z,6.8nm,0.6s,mb4.5
SRU San Rafael 88.12 46 *e*P **P** **21 16 33.4 +0.5**
SRU pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
MNTX Cornudas Mount 88.27 55 *e*P **P** **21 16 34.4 +0.6**
comp=Z,5.5nm,0.6s,mb4.5
MNTX *e*pP pP 21 18 37.8 -1.4
DAU Daniels Canyon 88.29 45 *e*P **P** **21 16 35.0 +1.4**
comp=Z,2.5nm,0.5s,mb4.2
DAU Daniels Canyon 88.29 45 *e*P **P** **21 16 35.0 +1.4**
DAU pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
BPAW Bear Paw Mtn. 88.44 12 *e*P **P** **21 16 31.9 -1.8**
comp=Z,4.4nm,0.7s,mb4.3
MCK McKinley 88.52 13 *e*P **P** **21 16 32.5 -1.6**
comp=Z,25nm,0.9s,mb5.0
MCK McKinley 88.52 13 *e*P **P** **21 16 32.5 -1.6**
MCK pmax pmax
comp=Z,25nm,0.9s,mb5.0
TXAR Lajitas Array 88.55 58 P **P** **21 16 36.3 +1.2**
comp=Z,10nm,0.9s,mb4.7,baz=215,slow=6.1,SNR=72
TXAR pP pP 21 18 43.1 +2.5
comp=Z,2.3nm,1.1s,baz=220,slow=7.5,SNR=5.1
TXAR Lajitas Array 88.55 58 P **P** **21 16 36.3 +1.2**
HWUT Hardware Ranch 88.70 44 *e*P **P** **21 16 35.3 -0.2**
comp=Z,4.4nm,0.7s,mb4.4
PV10 Paradox Valley 88.76 48 *e*P **P** **21 16 36.7 +0.8**
comp=Z,78nm,0.8s,mb5.6
ANMO Albuquerque 88.96 52 P **P** **21 16 37.1 +0.3**
comp=Z,9.6nm,1.0s,mb4.6,baz=227,slow=6.6,SNR=13
ANMO pP pP 21 18 44.0 +1.5
comp=Z,1.3nm,0.7s,baz=273,slow=5.1,SNR=2.8
ANMO Albuquerque 88.96 52 P **P** **21 16 37.2 +0.3**
PLCA Paso Flores 88.96 134 P **P** **21 16 38.2 +1.3**
comp=Z,1.6nm,0.6s,mb4.0,baz=231,slow=6.4,SNR=5.0
PLCA Paso Flores 88.96 134 *e*P **P** **21 16 37.8 +0.8**
PLCA Paso Flores 88.96 134 *e*P **P** **21 16 37.8 +0.9**
PV01 Paradox Valley 88.97 48 P **P** **21 16 36.6 -0.3**
comp=Z,1μm,1.4s
KMI Kunming 89.19 297 P **P** **21 16 40.8 +2.6**
KMI pmax pmax
comp=Z,8.0nm,1.3s,mb4.4
GDL2 Guadalupe Moun 89.27 55 *e*P **P** **21 16 38.3 -0.1**
comp=Z,8.2nm,0.8s,mb4.6
DOT Dot Lake 89.53 15 *e*P **P** **21 16 38.1 -0.6**
comp=Z,22nm,0.7s,mb5.1
AHID Auburn Hatcher 89.59 43 *e*P **P** **21 16 39.5 -0.1**
comp=Z,12nm,0.8s,mb4.8
CLNB Carlsbad 89.67 55 *e*P **P** **21 16 40.8 +0.5**
comp=Z,1.5nm,0.5s,mb4.1
DLBC Dease Lake 89.67 23 P **P** **21 16 39.9 +0.3**
comp=Z,5.8nm,0.8s,mb4.5,baz=214,slow=8.4,SNR=8.9
HHC Hu-ho-hao-te 89.69 315 *e*P **P** **21 16 41.1 +1.0**
HHC S S 21 26 42.7 -0.4
HHC pmax pmax
comp=Z,14nm,1.1s,mb4.7
HHC pmax pmax
comp=Z,130nm,5.4s
CM31 Chiang Mai Arr 89.75 290 *e*P **P** **21 16 42.1 +1.2**
comp=Z,12nm,1.1s,mb4.6
CMAR Chiang Mai Arr 89.75 290 P **P** **21 16 43.0 +2.0**
comp=Z,6.8nm,0.8s,mb4.5,baz=129,slow=3.0,SNR=36
CMAR PP PP 21 20 21.4 -2.8
comp=Z,1.6nm,0.8s,baz=130,slow=5.4,SNR=4.4
CMAR Chiang Mai Arr 89.75 290 P **P** **21 16 43.0 +2.1**
CMAR 21 20 21.4
COLA College 89.75 13 *e*P **P** **21 16 37.6 -2.2**
comp=Z,35nm,1.1s,mb5.1
COLA College 89.75 13 *e*P **P** **21 16 37.6 -2.2**
COLA pmax pmax
comp=Z,35nm,1.1s,mb5.1
RRI2 Red Ridge 89.75 42 *e*P **P** **21 16 41.0 +0.6**
comp=Z,23nm,0.8s,mb5.1
RRI2 *e*pP pP 21 18 45.2 -1.0
ILAR Eielson Array 89.86 13 P **P** **21 16 38.9 -1.5**
comp=Z,6.1nm,0.8s,mb4.5,baz=218,slow=5.3,SNR=46
ILAR Eielson Array 89.86 13 P **P** **21 16 38.9 -1.4**
CHTO Chiang Mai 89.89 290 *e*P **P** **21 16 42.9 +1.4**
comp=Z,6.1nm,0.6s,mb4.6
CHTO Chiang Mai 89.89 290 *e*P **P** **21 16 42.9 +1.4**
CHTO pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
DCID1 Drake Creek 89.96 42 P **P** **21 16 41.3 0.0**
DLMT Dillon 90.01 40 *e*P **P** **21 16 42.0 +0.5**
comp=Z,11nm,1.2s,mb4.5
REDW Red Top Meadow 90.05 43 *e*P **P** **21 16 42.3 +0.5**
comp=Z,27nm,1.1s,mb5.0
TPAW Teton Pass 90.06 42 *e*P **P** **21 16 42.2 +0.4**
comp=Z,9.2nm,0.9s,mb4.6
BSMT Bassoo Peak 90.08 37 *e*P **P** **21 16 41.0 -0.7**
comp=Z,2.1nm,0.6s,mb4.1
BSMT *e*pP pP 21 18 46.5 -1.1
SNOW Snow King Moun 90.16 43 *e*P **P** **21 16 42.4 +0.1**
comp=Z,9.1nm,0.6s,mb4.8
IMW Indian Meadow 90.27 42 *e*P **P** **21 16 42.8 +0.1**
comp=Z,22nm,1.1s,mb4.9
BILL Bilibino 90.32 354 *e*P **P** **21 16 42.1 -0.3**
comp=Z,8.0nm,0.4s,mb4.9
BILL Bilibino 90.32 354 *c i*P **P** **21 16 41.9 -0.5**
BILL *e* 21 18 38.9
BILL *e* 21 20 22.8
BILL *e*SS SS 21 33 07.6 +1.2
BILL pmax pmax
comp=Z,29nm,1.5s,mb4.9
LOHW Long Hollow 90.33 42 *e*P **P** **21 16 42.7 -0.3**
comp=Z,5.6nm,0.6s,mb4.6
SMCO Snowmass 90.56 48 *e*P **P** **21 16 44.6 +0.4**
comp=Z,8.8nm,0.8s,mb4.7
PDAR Pinedale Array 90.58 44 P **P** **21 16 44.0 -0.2**
comp=Z,8.7nm,0.8s,mb4.7,baz=211,slow=3.0,SNR=68
BOZ Bozeman (W) 90.74 40 *e*P **P** **21 16 44.9 +0.1**
comp=Z,4.8nm,0.8s,mb4.5
BOZ *e*pP pP 21 18 50.5 -0.3
BOZ Bozeman (W) 90.74 40 *e*P **P** **21 16 44.9 0.0**
BOZ *e**PP pP 21 18 50.5 -0.3
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CD2 Chengdu 90.80 303 *e*P **P** **21 16 43.5 -2.0**
CD2 pP pP 21 18 54.2 +2.8
CD2 SKS 21 26 18.3
CD2 S S 21 26 49.3 -4.1
CD2 SS SS 21 33 17.1 +2.5
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CD2 pmax pmax
comp=Z,30nm,4.2s
SDCO Great Sand Dun 90.93 49 *e*P **P** **21 16 45.9 0.0**
comp=Z,2.4nm,0.5s,mb4.4
DAWY Dawson 91.03 16 *e*P **P** **21 16 45.3 -0.5**

DAWY *ep*P pP 21 18 51.1 -0.6
EGAK Eagle 91.17 15 *e*P **P 21 16 45.6 -0.7**
comp=Z,5.8nm,0.6s,mb4.7
HRY Holter Researc 91.17 39 *e*P **P 21 16 46.5 -0.3**
comp=Z,3.2nm,0.6s,mb4.4
WALA Waterton Lakes 91.22 37 *e*P **P 21 16 46.7 -0.3**
RLMT Red Lodge 91.92 42 *e*P **P 21 16 50.3 0.0**
comp=Z,1.9nm,0.6s,mb4.3
LZH Lanzhou 92.91 308 *e*P **P 21 16 56.5 +1.4**
LZH pP pP 21 18 57.5 -3.7
LZH sP sP 21 19 49.5 -9.4
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
YAK Yakutsk 93.07 338 *e*P **P 21 16 54.1 -1.1**
comp=Z,18nm,0.8s,mb5.2
YAK Yakutsk 93.07 338 *e*P **P 21 16 53.3 -1.8**
YAK pmax pmax
comp=Z,15nm,0.9s,mb5.0
LAO LASA Array 94.53 41 *e*P **P 21 17 01.3 -0.9**
comp=Z,3.6nm,0.7s,mb4.6
ULN Ulaanbaatar 95.83 319 *e*P **P 21 17 08.4 +0.3**
comp=Z,1.5nm,0.8s,mb4.3
ULN Ulaanbaatar 95.83 319 *e*P **P 21 17 08.4 +0.4**
ULN pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
INK Inuvik 95.84 15 P **P 21 17 06.5 -1.1**
comp=Z,2.6nm,0.9s,mb4.5,baz=185,slow=5.1,SNR=5.1
INK Inuvik 95.84 15 *e*P **P 21 17 06.6 -1.0**
comp=Z,3.0nm,0.6s,mb4.7
INK Inuvik 95.84 15 *e*P **P 21 17 06.6 -1.0**
INK pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 96.22 319 P **P 21 17 09.5 -0.3**
comp=Z,0.8nm,0.8s,mb4.0,baz=106,slow=0.5,SNR=5.5
SONM pP pP 21 19 18.7 +2.5
comp=Z,0.6nm,1.0s,baz=151,slow=3.3,SNR=3.5
SONM Songino Array 96.22 319 P **P 21 17 09.5 -0.3**
ZALV Zalesovo Beam 111.01 321 PKiKP PKiKP 21 22 09.1 -1.9
comp=Z,0.6nm,0.4s,baz=157,slow=2.8,SNR=4.7
ZALV Zalesovo Beam 111.01 321 PKiKP PKiKP 21 22 09.1 -1.8
MK31 Makanchi Array 111.50 313 *e*PKiKP PKiKP 21 22 11.1 -0.9
MK31 Makanchi Array 111.50 313 *e*PKiKP PKiKP 21 22 11.1 -1.0
MKAR Makanchi Array 111.50 313 Pdiff Pdif 21 18 17.9 0.0
comp=Z,0.1nm,0.7s,baz=168,slow=7.4,SNR=2.8
MKAR PKiKP PKiKP 21 22 11.0 -1.1
comp=Z,0.4nm,0.4s,baz=133,slow=0.9,SNR=11
MKAR PP PP 21 23 12.4 +7.4
comp=Z,0.5nm,0.8s,baz=123,slow=4.3,SNR=4.2
MKAR PKKPbc PKKPbc 21 33 07.4 -1.8
comp=Z,0.5nm,0.8s,baz=283,slow=3.9,SNR=4.4
MKAR Makanchi Array 111.50 313 P Pdif 21 18 17.9 0.0
MKAR 21 22 11.0
MKAR 21 23 12.5
SDMD Soldier's Deli 112.66 55 Pdif Pdif 21 18 24.1 +1.1
KURK Kurchatov 114.41 317 *e*PKiKP PKiKP 21 22 15.9 -1.6
KURK Kurchatov 114.41 317 *e*PKiKP PKiKP 21 22 15.9 -1.6
UCH Uchtor 116.39 307 *e*PKPdf PKPdf 21 22 21.3 -0.3
UCH Uchtor 116.39 307 *e*PKIKP PKPdf 21 22 21.3 -0.3
EKS2 Erkin-Say 116.98 308 *e*PKPdf PKPdf 21 22 22.3 -0.4
EKS2 Erkin-Say 116.98 308 *e*PKIKP PKPdf 21 22 22.3 -0.5
AML Almayashu 116.99 307 *e*P PKPdf 21 22 22.6 -0.2
AML Almayashu 116.99 307 *e*PKIKP PKPdf 21 22 22.6 -0.2
KKAR Karatay Array 119.41 308 *e*PKPdf PKPdf 21 22 26.5 -0.9
KKAR Karatay Array 119.41 308 *e*PKIKP PKPdf 21 22 26.5 -0.9
BVAR Borovoye Array 119.56 319 PKP PKPdf 21 22 26.5 -0.9
comp=Z,1.9nm,0.3s,baz=122,slow=2.3,SNR=16
BVAR Borovoye Array 119.56 319 PKIKP PKPdf 21 22 26.5 -0.9
BRVK Borovoye 119.62 320 *e*PKPdf PKPdf 21 22 26.3 -1.2
BRVK Borovoye 119.62 320 ⇓*i*PKIKP PKPdf 21 22 26.9 -0.6
BRVK pmax pmax
comp=Z,5.0nm,1.7s
KBS Kingsbay 122.68 358 ⇓*i*PKIKP PKPdf 21 22 31.6 -1.1
KBS pmax pmax
comp=Z,20nm,1.7s
ARU Arti 125.83 325 *e*PKPdf PKPdf 21 22 38.5 -0.8
ARU Arti 125.83 325 *i* PKIKP PKPdf 21 22 38.8 -0.5
ARU 21 24 37.8
AKTK Aktyubinsk 127.50 317 PKP PKPdf 21 22 42.9 +0.2
AKTK pPKP pPKPdf 21 24 58.9 +1.8
AKTO Aktyubinsk 127.50 317 PKP PKPdf 21 22 42.9 +0.3
comp=Z,2.1nm,0.7s,baz=100,slow=3.9,SNR=7.1
AKTO pPKP pPKPdf 21 24 58.9 +1.8
comp=Z,0.5nm,0.3s,baz=227,slow=15,SNR=2.0
ARCES ARCESS Array B 130.12 349 PKhKP PKPpre 21 22 34.2
comp=Z,0.9nm,0.7s,baz=48,slow=1.8,SNR=4.1
ARCES PKP PKPdf 21 22 46.4 -0.7
comp=Z,5.5nm,0.6s,baz=60,slow=1.0,SNR=26
ARCES SKPbc SKPbc 21 25 18.1 +1.5
comp=Z,8.0nm,0.8s,baz=15,slow=6.3,SNR=18
ARCES ARCESS Array B 130.12 349 PKHKP PKPpre 21 22 34.3
ARCES 21 22 46.4
ARCES 21 25 18.1
JOF Joensuu 134.16 341 *e*PKHKP PKPpre 21 22 45.5
JOF pmax pmax
comp=Z,1.0nm,0.4s
JOF Joensuu 134.16 341 *ep* PKPpre 21 22 45.5
comp=Z,0.9nm,0.4s
KAF Kangasniemi 136.23 343 *e*PKHKP PKPpre 21 22 44.0
KAF pmax pmax
comp=Z,1.0nm,0.3s
KAF Kangasniemi 136.23 343 *ep* PKPpre 21 22 44.0
comp=Z,0.7nm,0.3s
FINES FINESS Array B 136.84 343 PKhKP PKPpre 21 22 46.9
comp=Z,1.7nm,0.7s,baz=188,slow=1.3,SNR=5.7
FINES PKP PKPdf 21 22 58.9 -1.0
comp=Z,3.6nm,0.8s,baz=90,slow=1.9,SNR=10
FINES SKPbc SKPbc 21 25 39.8 +0.9
comp=Z,3.6nm,0.8s,baz=46,slow=5.5,SNR=5.0
FINES FINESS Array B 136.84 343 PKP PKPpre 21 22 46.9
FINES PKP PKPdf 21 22 58.9 -1.0
FINES SKPbc SKPbc 21 25 39.8 +0.9
FINES FINESS Array B 136.84 343 PKHKP PKPpre 21 22 46.9
FINES 21 22 58.9
KMBO Kilima Mbogo 137.91 242 PKP PKPdf 21 23 04.7 +1.3
comp=Z,2.2nm,0.9s,baz=0.1,slow=24,SNR=6.7
KMBO Kilima Mbogo 137.91 242 PKP PKPdf 21 23 04.7 +1.3
KMBO Kilima Mbogo 137.91 242 PKIKP PKPdf 21 23 04.7 +1.3
VSR Storozhevoye 138.40 324 *e*PKIKP PKPdf 21 23 04.5 +1.4
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,5.0nm,0.6s
GNI Garni 138.84 306 *e*PKPdf PKPdf 21 23 04.1 -0.1
GNI Garni 138.84 306 *e*PKIKP PKPdf 21 23 04.1 -0.1
KIV Kislovodsk 139.26 313 *e*PKPdf PKPdf 21 23 05.6 +0.7
NOA NORSAR Array B 140.24 352 PKhKP PKPpre 21 22 59.0
comp=Z,3.4nm,0.6s,baz=16,slow=4.7,SNR=13
NOA PKP PKPdf 21 23 06.5 +0.4
comp=Z,3.1nm,0.8s,baz=14,slow=4.0,SNR=5.4
NOA SKPbc SKPbc 21 25 48.8 +0.5
comp=Z,1.4nm,0.9s,baz=15,slow=5.1,SNR=3.8
NOA NORSAR Array B 140.24 352 PKP PKPpre 21 22 59.0
NOA PKP PKPdf 21 23 06.5 +0.4
NOA SKPbc SKPbc 21 25 48.8 +0.5
NOA NORSAR Array B 140.24 352 PKHKP PKPpre 21 22 59.0
NOA 21 23 06.6
HFS Hagfors 140.76 350 PKhKP PKPpre 21 23 00.5
comp=Z,6.2nm,0.4s,baz=37,slow=3.2,SNR=61
HFS Hagfors 140.76 350 PKHKP PKPpre 21 23 00.5
RSC Scourie 143.30 5 *e*P PKPdf 21 23 08.8 -2.8
RRH Rhenigidale 143.57 7 *e*P PKPdf 21 23 10.1 -2.0
RRR Rubha Reidh 143.73 6 *e*P PKPdf 21 23 10.8 -1.6
KIEV Kiev 143.79 329 *e*PKPbc PKPdf 21 23 10.9 -1.8
KIEV Kiev 143.79 329 *e*PKHKP PKPdf 21 23 10.9 -1.8
SUW Suwalki 143.80 338 *i* PKPc PKPdf 21 23 11.2 -1.4
SUW Suwalki 143.80 338 *e*P PKPdf 21 23 11.3 -1.3
SUW Suwalki 143.80 338 ⇑PKHKP PKPdf 21 23 11.2 -1.4
MVH1 Achvaich 143.81 5 *e*P PKPdf 21 23 11.3 -1.2
MALT Malatya 144.04 306 *e*PKP PKPdf 21 23 14.0 +0.5
MALT Malatya 144.04 306 ⇑PKIKP PKPdf 21 23 14.3 +0.7
MALT Malatya 144.04 306 ⇑*i*P PKPdf 21 23 14.3 +0.7
KAC Achnashellach 144.13 6 *e*P PKPdf 21 23 11.9 -1.2
MCD Coleburn Disti 144.21 4 *e*P PKPdf 21 23 12.0 -1.3
KPL Plockton 144.25 6 *e*P PKPdf 21 23 12.1 -1.2
KPL AMB AMB 21 23 16.8
comp=Z,78nm,2.6s
MDO Dochfour 144.27 5 *e*P PKPdf 21 23 12.0 -1.4
KSB Sheil Bridge 144.41 6 *e*P PKPdf 21 23 12.8 -0.8
SIM Simferopol' 144.46 318 *e*PKIKP PKPdf 21 23 14.2 +0.1
SIM pmax pmax
comp=Z,19nm,1.0s
KAR1 Arisaig 144.65 7 *e*P PKPdf 21 23 13.4 -0.6

EAB Aberfoyle 145.51 5 *e*P PKPdf 21 23 15.8 +0.3
EBH Black Hill 145.52 4 *e*P PKPdf 21 23 16.2 +0.7
ESY Stoneypath 145.91 4 *e*P PKPdf 21 23 17.0 +0.8
EAU Auchinoon 145.93 5 *e*P PKPdf 21 23 17.1 +0.9
EBL Broad Law 146.03 4 *e*P PKPdf 21 23 17.5 +1.1
GKP Gorka Klasztor 146.31 342 *e*PKP PKPdf 21 23 18.8 +1.9
GKP Gorka Klasztor 146.31 342 *e*PKIKP PKPdf 21 23 18.8 +1.9
EKA Eskdalemuir Ar 146.46 4 PKPbc PKPbc 21 23 18.9 -0.7
comp=Z,14nm,0.8s,baz=342,slow=2.4,SNR=26
EKA Eskdalemuir Ar 146.46 4 PKIKP PKPdf 21 23 19.0 +1.9
ESK Eskdalemuir 146.47 4 *e*P PKPdf 21 23 16.1 -1.1
ESK AMB AMB 21 23 25.6
comp=Z,107nm,3.4s
ASF Jabal al Asfar 146.60 296 PKPbc PKPbc 21 23 21.5 +0.7
comp=Z,7.2nm,0.9s,baz=263,slow=1.3,SNR=13
ASF pPKPbc pPKPbc 21 25 35.0 +2.1
comp=Z,1.6nm,0.6s,baz=345,slow=4.5,SNR=2.5
ASF Jabal al Asfar 146.60 296 PKIKP PKPbc 21 23 21.5 +0.7
ECK Cauldkaine Hil 146.61 4 *e*P PKPdf 21 23 19.0 +1.6
LVV L'vov 146.75 333 *e*PKIKP PKPbc 21 23 19.9 -0.7
BR131 Keskin Array S 147.08 310 *e*PKPdf PKPdf 21 23 19.6 +0.9
BR131 *e*PKPbc PKPbc 21 23 21.7 -0.2
BRTR Keskin Array B 147.08 310 PKPbc PKPbc 21 23 21.5 -0.3
comp=Z,7.5nm,0.7s,baz=130,slow=4.3,SNR=38
BRTR Keskin Array B 147.08 310 PKIKP PKPbc 21 23 21.5 -0.3
KESW Keswick, Cumbr 147.20 4 *e*P PKPbc 21 23 20.5 -1.1
KESW AMB AMB 21 23 24.7
comp=Z,80nm,3.1s
KWP Kalwaria Pacla 147.45 334 *e*PKP PKPbc 21 23 21.4 -1.0
KWP Kalwaria Pacla 147.45 334 *e*PKPbc PKPbc 21 23 22.4 0.0
KWP Kalwaria Pacla 147.45 334 ⇑PKIKP PKPbc 21 23 22.5 +0.1
KWP Kalwaria Pacla 147.45 334 ⇑*i*P PKPbc 21 23 22.5 +0.1
TLCR 147.49 322 ⇓PKIKP PKPbc 21 23 22.8 +0.1
TLCR 147.49 322 ⇓*i*P PKPbc 21 23 22.8 +0.1
MMAI Mount Meron Ar 147.70 297 PKPbc PKPbc 21 23 24.6 +0.9
comp=Z,4.2nm,0.3s,baz=76,slow=7.1,SNR=42
MMAI pPKPbc pPKPbc 21 25 37.6 +1.3
comp=Z,3.2nm,0.7s,baz=90,slow=4.2,SNR=4.7
BUR08 Bucovina Ar. S 147.79 329 *e*PKPdf PKPdf 21 23 19.9 +0.3
BUR08 *e*PKPbc PKPbc 21 23 24.0 +0.7
BURAR Bucovina Array 147.81 329 ⇑PKIKP PKPbc 21 23 24.4 +1.0
BURAR Bucovina Array 147.81 329 ⇑*i*P PKPbc 21 23 24.4 +1.0
HPK Haverah Park 147.92 3 *e*P PKPbc 21 23 22.6 -0.8
HPK AMB AMB 21 23 29.2
comp=Z,84nm,5.3s
RUE Ruedersdorf 147.92 345 *e*PKPbc PKPbc 21 23 23.5 0.0
OJC Ojcow 148.11 337 *e*PKPbc PKPbc 21 23 24.0 -0.1
OJC *e*PKPab PKPab 21 23 29.0 -0.2
OJC Ojcow 148.11 337 *e*PKP2 PKPab 21 23 29.0 -0.2
TIRR Tirgusor 148.15 321 ⇑PKHKP PKPbc 21 23 24.8 +0.4
TIRR Tirgusor 148.15 321 ⇑*i*P PKPbc 21 23 24.8 +0.4
KOLS Kolonicke sedl 148.17 333 *e*PKP PKPbc 21 23 24.6 +0.3
KOLS Kolonicke sedl 148.17 333 *e*PKHKP PKPbc 21 23 24.6 +0.3
KOLS Kolonicke sedl 148.17 333 *e*PKP PKPbc 21 23 24.6 +0.3
VRI Vrincioaia 148.22 325 ⇑PKHKP PKPbc 21 23 24.7 +0.2
VRI Vrincioaia 148.22 325 ⇑*i*P PKPbc 21 23 24.7 +0.2
PLOR Plostina 148.27 325 ⇓PKHKP PKPbc 21 23 24.7 +0.1
PLOR Plostina 148.27 325 ⇓*i*P PKPbc 21 23 24.7 +0.1
UZH Uzhgorod 148.39 333 ⇓*i*PKHKP PKPbc 21 23 24.6 -0.2
UZH *e* 21 23 29.4
CRVS Cervenica-Dubn 148.53 334 *e*PKP PKPbc 21 23 25.6 +0.4
CRVS Cervenica-Dubn 148.53 334 *e*PKHKP PKPbc 21 23 25.6 +0.4
CRVS Cervenica-Dubn 148.53 334 *e*PKP PKPbc 21 23 25.6 +0.4
NIE Niedzica 148.57 336 *e*PKP PKPbc 21 23 25.9 +0.6
NIE Niedzica 148.57 336 *e*PKHKP PKPbc 21 23 25.9 +0.6
BMR Baia Mare 148.58 330 PKHKP PKPbc 21 23 25.7 +0.4
EIL Elat 148.59 291 PKPbc PKPbc 21 23 26.3 +0.3
comp=Z,12nm,0.9s,baz=20,slow=2.6,SNR=12
EIL Elat 148.59 291 PKPbc PKPbc 21 23 26.3 +0.3
NRDL Niedersach Rie 148.66 349 *e*PKPbc PKPbc 21 23 25.2 -0.2
TRPA Tarpa 148.67 332 ⇑*i*P PKPbc 21 23 25.4 -0.1
KSP Ksiaz 148.74 341 *e*PKP PKPbc 21 23 25.9 +0.3
DOPR Dopca 148.85 326 ⇓*i*P PKPbc 21 23 27.0 +0.9
MLR Muntele Rosu 148.88 325 ⇑PKHKP PKPbc 21 23 26.0 -0.1
MLR Muntele Rosu 148.88 325 ⇑*i*P PKPbc 21 23 26.0 -0.1
CSS Prodhromos 148.91 302 *e*PKPbc PKPbc 21 23 26.2 -0.4
OKC Ostrava-Krasne 149.01 338 ⇑*e*PKP PKPbc 21 23 26.4 +0.1
OKC *e*PKPAB PKPab 21 23 33.0 +0.1
UPC Upice 149.12 341 *e*PKHKP PKPbc 21 23 26.7 +0.2
UPC *e* 21 23 33.7
UPC Upice 149.12 341 ⇑*e*PKP PKPbc 21 23 26.7 +0.2
UPC *e*PKPAB PKPab 21 23 33.7 +0.4
UPC *ep*PKP pPKPab 21 25 41.9 +0.1
CWF Charnwood Fore 149.15 3 P PKPdf 21 23 24.5 +2.9
CWF Charnwood Fore 149.15 3 AMB AMB 21 23 24.4
comp=Z,48nm,2.9s
CWF *e*P 21 23 24.5
CWF Charnwood Fore 149.15 3 AMB AMB 21 23 24.4
comp=Z,48nm,2.9s
DPC Dobruska-Polom 149.16 341 *e*PKHKP PKPpre 21 23 26.8
DPC *e* 21 23 34.2
DPC Dobruska-Polom 149.16 341 ⇑*e*PKP PKPbc 21 23 26.8 +0.1
DPC *e*PKPAB PKPab 21 23 34.2 +0.7
DPC *ep*PKP pPKPab 21 25 41.3 -0.7
CLL Collm 149.19 345 *e*PKPbc PKPbc 21 23 26.6 -0.1
CLL Collm 149.19 345 ⇑*i*PKP PKPbc 21 23 26.4 -0.3
CLL *i* PKP PKPab 21 23 32.7 -0.9
CLL *ep*PKP pPKPab 21 25 41.0 -1.1
CLL Collm 149.19 345 ⇑*i*PKHKP PKPbc 21 23 26.4 -0.3
CLL *i* 21 23 32.7
CLL Collm 149.19 345 ⇑*i*PKPbc PKPbc 21 23 26.4 -0.3
comp=Z,51nm,1.0s
CLL *i* PKPab PKPab 21 23 32.7 -0.9
comp=Z,18nm,0.9s
CLL *ep*PKPab pPKPab 21 25 41.0 -1.1
CLL *e* 21 25 51.0
IBBN Ibbenburen 149.20 352 *e*PKPbc PKPbc 21 23 26.6 -0.1
CLZ Clausthal 149.24 349 *e*PKPbc PKPbc 21 23 27.1 +0.3
CLZ Clausthal 149.24 349 *e*PKPbc PKPbc 21 23 27.1 +0.3
CLZ Clausthal 149.24 349 *e*PKHKP PKPbc 21 23 27.1 +0.3
KECS Kecovo 149.25 334 *e*PKP PKPbc 21 23 27.7 +0.8
KECS *e* 21 23 34.1
KECS *e* 21 23 43.3
KECS Kecovo 149.25 334 *e*PKHKP PKPbc 21 23 27.7 +0.8
KECS *e* 21 23 34.1
KECS Kecovo 149.25 334 *e*PKP PKPbc 21 23 27.7 +0.8
KECS *e* 21 23 34.1
KECS *e* 21 23 43.3
MORC Moravsky Berou 149.27 339 *e*PKPbc PKPbc 21 23 26.9 -0.1
MORC *e*PKPab PKPab 21 23 33.9 -0.1
MORC Moravsky Berou 149.27 339 ⇑*i*P PKPbc 21 23 27.4 +0.5
BRG Berggiesshubel 149.36 344 *e*PKPbc PKPbc 21 23 27.2 +0.1
BRG Berggiesshubel 149.36 344 ⇑*i*PKP PKPdf 21 23 27.0 +5.0
comp=Z,42nm,1.1s
BRG *e* 21 23 33.7
comp=Z,25nm,1.0s
BRG *ep*PKP pPKPdf 21 25 42.7 +5.9
comp=Z,22nm,1.8s
BRG Berggiesshubel 149.36 344 ⇑*i*PKHKP PKPbc 21 23 27.0 -0.1
BRG *e* 21 23 33.7
BRG pmax pmax
comp=Z,9.0nm,1.1s
BRG pmax pmax
comp=Z,25nm,1.0s
BRG pmax pmax
comp=Z,15nm,1.8s
VOIR 149.39 326 ⇓PKHKP PKPbc 21 23 27.4 0.0
VOIR 149.39 326 ⇓*i*P PKPbc 21 23 27.4 0.0
FBE Freiberg 149.47 345 *e*PKPbc PKPbc 21 23 27.8 +0.4
PVCC Panska Ves 149.51 343 *e*PKHKP PKPbc 21 23 27.8 +0.3
PVCC Panska Ves 149.51 343 ⇑*e*PKP PKPbc 21 23 27.8 +0.3
PVCC *ep*PKP pPKPab 21 25 42.0 -1.4
NEUB Neuenburg 149.56 347 *e*PKPbc PKPbc 21 23 27.6 0.0
DRGR 149.59 330 ⇓PKHKP PKPbc 21 23 27.8 0.0
DRGR 149.59 330 ⇓*i*P PKPbc 21 23 27.8 0.0
HTR Trewern Hill 149.68 5 *e*P PKPbc 21 23 26.8 -1.0
MCH1 Michaelchurch 149.78 5 *e*P PKPbc 21 23 26.5 -1.6
MCH1 AMB AMB 21 23 37.6
comp=Z,77nm,4.7s
VYHS Vyhne 149.89 336 *e*PKP PKPbc 21 23 28.3 -0.1
VYHS *e* 21 23 36.7
VYHS Vyhne 149.89 336 *e*PKHKP PKPbc 21 23 28.3 -0.1
VYHS *e* 21 23 36.7
VYHS Vyhne 149.89 336 *e*PKP PKPbc 21 23 28.3 -0.1
VYHS *e* 21 23 36.7
PSZ Piszkesteto 149.94 334 *e*PKPbc PKPbc 21 23 27.9 -0.7
PSZ Piszkesteto 149.94 334 ⇑PKHKP PKPbc 21 23 28.3 -0.3
PSZ Piszkesteto 149.94 334 ⇑*i*P PKPbc 21 23 28.3 -0.3
PSZ Piszkesteto 149.94 334 ⇑*e*PKP PKPbc 21 23 28.2 -0.4
PRA Prague 149.96 343 ⇑PKP PKPbc 21 23 29.0 +0.4
PRA PKPAB PKPab 21 23 38.0 +1.2

PRA pPKP pPKPab 21 25 44.0 -1.2
KOLL Kolacno 149.98 337 *e*PKP PKPbc 21 23 29.0 +0.3
KOLL Kolacno 149.98 337 *e*PKHKP PKPbc 21 23 29.0 +0.3
KOLL Kolacno 149.98 337 *e*PKP PKPbc 21 23 29.0 +0.3
VRAC Vranov 149.99 339 PKPbc PKPbc 21 23 28.8 +0.1
comp=Z,14nm,1.0s,baz=47,slow=1.0,SNR=14
VRAC PKPab PKPab 21 23 37.4 +0.5
comp=Z,11nm,0.7s,baz=354,slow=2.3,SNR=13
VRAC Vranov 149.99 339 PKHKP PKPbc 21 23 28.8 +0.2
VRAC 21 23 37.4
VRAC Vranov 149.99 339 ⇓*i*P PKPbc 21 23 29.1 +0.5
PRU Pruhonice 150.00 342 *e*PKHKP PKPbc 21 23 29.4 +0.7
PRU *e* 21 23 38.2
PRU Pruhonice 150.00 342 ⇑*e*PKP PKPbc 21 23 29.4 +0.7
PRU *e*PKPAB PKPab 21 23 38.2 +1.2
PRU *ep*PKP pPKPab 21 25 43.6 -1.7
BUG Bochum--Univer 150.11 352 *e*PKPbc PKPbc 21 23 28.5 -0.4
MOX Moxa 150.13 346 *e*PKP PKPbc 21 23 28.7 -0.2
comp=Z,43nm,1.4s
MOX *e* 21 23 36.6
MOX Moxa 150.13 346 *e*PKPbc PKPbc 21 23 28.9 0.0
MOX Moxa 150.13 346 *e*PKP PKPbc 21 23 28.7 -0.2
MOX *e* 21 23 36.6
MOX Moxa 150.13 346 *e*PKHKP PKPbc 21 23 28.7 -0.2
MOX *e* 21 23 36.6
TANN Tannenbergstha 150.15 345 *e*PKPbc PKPbc 21 23 29.1 +0.1
HGH Gray Hill 150.16 5 *e*P PKPbc 21 23 28.1 -0.9
PLN Plauen 150.16 346 *e*PKPbc PKPbc 21 23 29.0 0.0
WERD Werda 150.16 345 *e*PKPbc PKPbc 21 23 29.0 0.0
GUNZ Gunzen 150.23 345 *e*PKPbc PKPbc 21 23 29.4 +0.2
GUNZ *e*PKPab PKPab 21 23 37.5 -0.4
UBBA Unterbreizbach 150.29 349 *e*PKPbc PKPbc 21 23 29.2 -0.1
WERN Wernitzgruen 150.29 345 *e*PKPbc PKPbc 21 23 29.6 +0.3
WERN *e*PKPab PKPab 21 23 38.0 -0.2
NKC Novy Kostel 150.32 345 *e*PKHKP PKPbc 21 23 29.5 +0.1
NKC *e* 21 23 38.2
NKC Novy Kostel 150.32 345 ⇑*e*PKP PKPbc 21 23 29.5 +0.1
NKC *e*PKPAB PKPab 21 23 38.2 -0.1
NKC *ep*PKP pPKPab 21 25 45.7 -0.9
TREC Trest 150.35 341 *e*PKHKP PKPbc 21 23 29.6 +0.1
TREC *e* 21 23 38.5
TREC Trest 150.35 341 ⇑*e*PKP PKPbc 21 23 29.6 +0.1
TREC *e*PKPAB PKPab 21 23 38.5 0.0
MODS Modra-Piesok 150.56 338 *e*PKP PKPbc 21 23 31.0 +1.0
MODS *e* 21 23 40.4
MODS Modra-Piesok 150.56 338 *e*PKIKP PKPbc 21 23 31.0 +1.0
MODS *e* 21 23 40.4
MODS Modra-Piesok 150.56 338 *e*PKP PKPbc 21 23 31.0 +1.0
MODS *e* 21 23 40.4
GZR Gura Zlata 150.57 328 ⇑PKIKP PKPbc 21 23 29.8 -0.3
GZR Gura Zlata 150.57 328 ⇑*i*P PKPbc 21 23 29.8 -0.3
WOL Wolverton 150.58 3 *e*P PKPbc 21 23 28.9 -1.0
WOL AMB AMB 21 23 29.7
comp=Z,157nm,1.1s
BUD Budapest 150.64 335 ⇑*e*PKP PKPbc 21 23 29.9 -0.3
ZST Bratislava 150.77 338 *e*PKP PKPbc 21 23 31.1 +0.6
ZST *e* 21 23 41.0
ZST Bratislava 150.77 338 *e*PKIKP PKPbc 21 23 31.1 +0.6
ZST *e* 21 23 41.0
ZST Bratislava 150.77 338 *e*PKP PKPbc 21 23 31.1 +0.6
ZST *e* 21 23 41.0
ROTZ Rotzenmuhle 150.81 345 *e*PKPbc PKPbc 21 23 30.6 +0.1
BEBN Eben Emael 150.92 354 PKPbc PKPbc 21 23 31.1 +0.4
BEBN PKPab PKPab 21 23 40.5 -0.3
BZS Buzias 150.97 329 ⇑PKIKP PKPbc 21 23 30.7 -0.3
BZS Buzias 150.97 329 ⇑*i*P PKPbc 21 23 30.7 -0.3
KHC Kasperske Hory 151.05 343 *e*PKPdf PKPdf 21 23 24.4 -0.3
KHC *e*PKPbc PKPbc 21 23 31.1 0.0
KHC *e*PKPab PKPab 21 23 41.8 +0.4
KHC Kasperske Hory 151.05 343 *e*PKIKP PKPbc 21 23 31.1 0.0
KHC *e* 21 23 41.9
KHC Kasperske Hory 151.05 343 ⇑*e*PKP PKPbc 21 23 31.1 0.0
KHC *e*PKPAB PKPab 21 23 41.9 +0.5
KHC *ep*PKP pPKPbc 21 25 46.2 +1.5
MEM Membach 151.07 353 PKPbc PKPbc 21 23 31.0 -0.1
GRA1 Grafenberg Arr 151.11 346 *e*PKPab PKPab 21 23 41.4 -0.3
GRF Grafenberg Arr 151.11 346 *e*PKPab PKPab 21 23 41.4 -0.3
GRF Grafenberg Arr 151.11 346 *e*PKP PKPab 21 23 41.4 -0.3
TNS Taunus Mts 151.13 350 *e*PKPbc PKPbc 21 23 31.1 -0.1
TNS *e*PKPab PKPab 21 23 41.0 -0.7
TNS Taunus Mts 151.13 350 *e*PKPbc PKPbc 21 23 31.1 -0.1
TNS *e*PKPab PKPab 21 23 41.0 -0.7
TNS Taunus Mts 151.13 350 *e*PKIKP PKPbc 21 23 31.1 -0.1
TNS *e* 21 23 41.0
WET Wettzell 151.22 344 *e*PKPab PKPab 21 23 41.9 -0.3
WET Wettzell 151.22 344 *e*PKPab PKPab 21 23 41.9 -0.3
GEC2 GERESS Array S 151.27 342 *e*PKPbc PKPbc 21 23 31.6 0.0
GEC2 GERESS Array S 151.27 342 *e*PKPbc PKPbc 21 23 31.6 0.0
GEC2 GERESS Array S 151.27 342 *e*PKIKP PKPbc 21 23 31.6 0.0
SNF Seneffe 151.32 356 PKPbc PKPbc 21 23 31.7 0.0
BCLA Clavier 151.33 354 PKPbc PKPbc 21 23 31.2 -0.5
BCLA PKPab PKPab 21 23 41.8 -0.8
SOP Sopron 151.40 338 ⇑*e*PKP PKPbc 21 23 31.9 0.0
CONA Conrad Observa 151.43 339 ⇑*i*PKiKP PKiKP 21 23 32.2 -0.1
comp=Z,17nm,0.9s
CONA ⇓*i*PKPab PKPab 21 23 44.0 +0.9
comp=Z,12nm,0.7s
DOU Dourbes 151.71 355 PKPbc PKPbc 21 23 32.2 -0.4
DOU PKPab PKPab 21 23 43.5 -0.7
PKSM Moragy 151.83 334 ⇓PKIKP PKPbc 21 23 32.7 -0.2
PKSM Moragy 151.83 334 ⇓*i*P PKPbc 21 23 32.7 -0.2
WLF Walferdange 151.99 353 PKPbc PKPbc 21 23 33.4 +0.2
WLF PKPab PKPab 21 23 45.0 -0.4
WLF Walferdange 151.99 353 *e*PKPbc PKPbc 21 23 33.6 +0.4
WLF *e*PKPab PKPab 21 23 44.7 -0.7
WLF Walferdange 151.99 353 *e*PKPbc PKPbc 21 23 33.0 -0.2
WLF *e*PKPab PKPab 21 23 45.5 +0.2
WLF Walferdange 151.99 353 *e*PKIKP PKPbc 21 23 33.0 -0.2
WLF *e* 21 23 45.5
VTS Vitosha 152.27 323 ⇓PKIKP PKPbc 21 23 31.3 -2.7
VTS Vitosha 152.27 323 ⇓*i*P PKPbc 21 23 31.3 -2.7
STU Stuttgart 152.40 348 *e*PKPbc PKPbc 21 23 34.0 -0.1
FUR Furstenfeldbru 152.53 345 *e*PKPab PKPab 21 23 47.6 -0.1
FUR Furstenfeldbru 152.53 345 *e*PKPab PKPab 21 23 47.6 -0.1
FUR Furstenfeldbru 152.53 345 *e*PKIKP PKPab 21 23 47.6 -0.1
RJOB Jochberg 152.53 343 *e*PKPab PKPab 21 23 48.0 +0.2
KOGS Kog 152.56 337 *e*PKPbc PKPbc 21 23 33.6 -0.9
KOGS *e*PKPab PKPab 21 23 47.5 -0.4
KOGS Kog 152.56 337 *e*PKPbc PKPbc 21 23 33.6 -0.9
KOGS *e*PKPab PKPab 21 23 47.5 -0.4
SOKA Soboth 152.79 339 ⇑*i*PKPdf PKPdf 21 23 27.4 +0.1
comp=Z,2.8nm,1.5s
SOKA ⇓*i*PKPbc PKPbc 21 23 34.5 -0.5
comp=Z,9.8nm,1.2s
SOKA ⇓*i*PKPab PKPab 21 23 48.8 -0.1
comp=Z,12nm,1.1s
WTTA Wattenberg 153.28 344 ⇑*i*PKPdf PKPdf 21 23 27.4 -0.6
comp=Z,8.5nm,1.1s
WTTA ⇓*i*PKiKP PKiKP 21 23 36.1 0.0
comp=Z,15nm,1.0s
WTTA ⇑*i*PKPab PKPab 21 23 50.8 -0.2
comp=Z,29nm,1.2s
MOTA Moosalm 153.34 345 ⇑*i*PKPdf PKPdf 21 23 27.9 -0.1
comp=Z,2.6nm,0.8s
MOTA ⇓*i*PKPbc PKPbc 21 23 35.5 -0.7
comp=Z,5.4nm,0.9s
MOTA ⇓*i*PKPab PKPab 21 23 51.1 -0.1
comp=Z,8.4nm,0.8s
ABTA Abfaltersbach 153.52 342 ⇑*i*PKPdf PKPdf 21 23 27.8 -0.5
comp=Z,5.2nm,0.9s
ABTA ⇓*i*PKPbc PKPbc 21 23 35.9 -0.7
comp=Z,8.2nm,0.8s
ABTA ⇓*i*PKPab PKPab 21 23 51.4 -0.5
comp=Z,8.8nm,0.8s
LJU Ljubljana 153.52 339 *e*PKPdf PKPdf 21 23 28.1 -0.3
LJU *i* PKPbc PKPbc 21 23 36.0 -0.6
LJU *e*PKPab PKPab 21 23 51.3 -0.7
LJU Ljubljana 153.52 339 *e*PKIKP PKPdf 21 23 28.1 -0.3
LJU *i* 21 23 36.0
LJU *e* 21

DAVOX PKPab PKPab 21 23 54.8 +0.1
comp=Z,2.9nm,0.6s,baz=347,slow=6.6,SNR=7.9
DAVOX Davos/Dischmat 154.16 346 PKIKP PKPbc 21 23 38.2 +0.3
DAVOX 21 23 54.8
ESDC Sonseca Array 161.76 12 PKPab PKPab 21 24 27.4 -0.6
comp=Z,2.9nm,0.8s,baz=348,slow=4.2,SNR=9.9
DBIC Dimbokro 163.83 158 PKP PKPdf 21 23 40.3 -1.0
comp=Z,3.3nm,0.7s,baz=214,slow=8.7,SNR=5.0
DBIC Dimbokro 163.83 158 PKIKP PKPdf 21 23 40.3 -1.0
KEST Kesra 164.42 334 PKPab PKPab 21 24 39.9 +0.1
comp=Z,3.6nm,0.9s,baz=286,slow=1.4,SNR=11
MDT Midelt 168.01 24 PKPab PKPab 21 24 54.9 -0.8
comp=Z,1.4nm,0.6s,baz=303,slow=1.8,SNR=4.8

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*ATH **11** 21:12:03.5, 37.°07N×28.°31E, h43km, MD2.9/3*
*DDA **11** 21:12:05.8, 36.°93N×27.°86E, h7km±1km, Md3.0*
*ISK **11** 21:12:05.0, 36.°94N×27.°81E, h5km, MD3.0*
*CSEM **11** 21:12:06.1±0.1, 36.°92N×27.°83E, h2km, MD3.0, Error ellipse: s-maj=2.7km s-min=2.5km az=137.0*
ISC 11 21:12:06.7±0.5,**36.°94N**±0.°03×**27.°82E**±0.°04,**h6**km±6km,
n39,σ0s**76**/52,**3C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.29**	**223**	*e*PG	**Pg**	**21 12 11.8**	**-0.6**
DAT				*e*SG	**Sg**	**21 12 16.8**	**+0.5**
DAT	**Datca**	**0.29**	**223**	*e*Pg	**Pg**	**21 12 11.8**	**-0.6**
DAT				*e*Sg	**Sg**	**21 12 16.8**	**+0.6**
BDRM	**Kayabasi**	**0.33**	**292**	⇑*i*P	**Pg**	**21 12 13.2**	**+0.2**
BDRM				*i* S	**Sg**	**21 12 18.5**	**+1.2**
BDRM	**Kayabasi**	**0.33**	**292**	*i* P	**Pg**	**21 12 13.2**	**+0.1**
BDRM				*i* S	**Sg**	**21 12 18.5**	**+1.1**
MLSB	**Milas**	**0.35**	**354**	*e*PG	**Pg**	**21 12 12.9**	**-0.7**
MLSB	**Milas**	**0.35**	**354**	*e*Pg	**Pg**	**21 12 12.9**	**-0.7**
YER	**Yerkesik**	**0.41**	**63**	*e*PG	**Pg**	**21 12 14.4**	**-0.3**
YER	**Yerkesik**	**0.41**	**63**	*e*Pg	**Pg**	**21 12 14.4**	**-0.3**
BODT	**Bodrum**	**0.43**	**286**	*e*PG	**Pg**	**21 12 14.2**	**-0.8**
BODT	**Bodrum**	**0.43**	**286**	*e*Pg	**Pg**	**21 12 14.2**	**-0.8**
TURN	**Turunc**	**0.63**	**96**	⇑*i*P	**Pg**	**21 12 13.0**	**-5.8**
TURN				*i* S	**Sg**	**21 12 17.9**	**-9.1**
AYDN	**Tasoluk**	**0.72**	**4**	⇑*i*P	**Pg**	**21 12 20.3**	**-0.2**
AYDN				*i* S	**Sg**	**21 12 29.5**	**-0.4**
AYDN	**Tasoluk**	**0.72**	**4**	*i* P	**Pg**	**21 12 20.3**	**-0.2**
AYDN				*i* S	**Sg**	**21 12 29.5**	**-0.3**
ARG	**Arkhangelos**	**0.77**	**161**	*e*P	**Pg**	**21 12 20.5**	**-0.9**
ARG				*e*S	**Sg**	**21 12 33.3**	**+1.9**
ARG	**Arkhangelos**	**0.77**	**161**	*e*P	**Pg**	**21 12 20.5**	**-0.9**
ARG				*e*S	**Sg**	**21 12 33.3**	**+1.9**
GCAM	**G?zelcaml?**	**0.89**	**328**	⇓*i*P	**Pg**	**21 12 23.6**	**-0.2**
GCAM				*i* S	**Sg**	**21 12 36.3**	**+0.9**
GCAM	**G?zelcaml?**	**0.89**	**328**	*i* P	**Pg**	**21 12 23.6**	**-0.2**
GCAM				*i* S	**Sg**	**21 12 36.3**	**+1.0**
SMG	**Samos**	**1.09**	**314**	*e*P	**Pg**	**21 12 27.2**	**-0.5**
SMG	**Samos**	**1.09**	**314**	*e*P	**Pg**	**21 12 27.2**	**-0.5**
DNZL	**Cakiroluk**	**1.23**	**52**	*e*P	**Pg**	**21 12 29.1**	**-1.1**
DNZL				*e*S	**Sg**	**21 12 47.2**	**+1.0**
DNZL	**Cakiroluk**	**1.23**	**52**	*e*P	**Pg**	**21 12 29.1**	**-1.2**
DNZL				*e*S	**Sg**	**21 12 47.2**	**+1.0**
DENT	**Denizli**	**1.26**	**50**	*e*PN	**Pn**	**21 12 30.7**	**-0.2**
DENT	**Denizli**	**1.26**	**50**	*e*Pn	**Pn**	**21 12 30.7**	**-0.1**
GLHS	**Glhisar (BURDU**	**1.36**	**81**	*e*PN	**Pn**	**21 12 32.4**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.36**	**81**	*e*Pn	**Pn**	**21 12 32.4**	**+0.2**
KARP	**Karpathos**	**1.49**	**201**	*e*P	**Pn**	**21 12 32.4**	**-1.7**
KARP	**Karpathos**	**1.49**	**201**	*e*P	**Pn**	**21 12 32.4**	**-1.7**
IZM	**Izmir**	**1.52**	**343**	*e*PN	**Pn**	**21 12 34.5**	**+0.1**
IZM	**Izmir**	**1.52**	**343**	*e*Pn	**Pn**	**21 12 34.5**	**+0.1**
BLCB	**Balcova**	**1.57**	**337**	*e*PN	**Pn**	**21 12 35.2**	**+0.2**
BLCB	**Balcova**	**1.57**	**337**	*e*Pn	**Pn**	**21 12 35.2**	**+0.1**
ELL	**Elmali**	**1.68**	**96**	*e*PN	**Pn**	**21 12 37.0**	**+0.3**
ELL	**Elmali**	**1.68**	**96**	*e*Pn	**Pn**	**21 12 37.0**	**+0.3**
KULA	**Kula-Manisa**	**1.70**	**23**	*e*PN	**Pn**	**21 12 37.3**	**+0.4**
KULA	**Kula-Manisa**	**1.70**	**23**	*e*Pn	**Pn**	**21 12 37.3**	**+0.4**
KHL	**Karahalli**	**1.93**	**44**	*e*PN	**Pn**	**21 12 40.5**	**+0.5**
KHL	**Karahalli**	**1.93**	**44**	*e*Pn	**Pn**	**21 12 40.5**	**+0.5**
AKS	**Akhisar**	**1.93**	**360**	*e*PN	**Pn**	**21 12 40.6**	**+0.5**
AKS	**Akhisar**	**1.93**	**360**	*e*Pn	**Pn**	**21 12 40.6**	**+0.5**

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*ISK **11** 21:12:51.8, 38.°99N×40.°39E, h11km, MD2.7*
*ISCJB **11** 21:12:52.4±0.7, 38.°86N±0.°03×40.°40E±0.°04, h3km±6km, Error ellipse: s-maj=5.2km s-min=4.9km az=173.9*
*DDA **11** 21:12:52.5, 38.°89N×40.°45E, h7km±3km, Md2.9*
*CSEM **11** 21:12:52.5±0.2, 38.°94N×40.°38E, h8km, MD2.7, Error ellipse: s-maj=6.5km s-min=4.7km az=146.0*
ISC 11 21:12:53.0±0.6,**38.°86N**±0.°03×**40.°42E**±0.°04,**h11**km±5km,
n18,σ1s**16**/29,**1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.06**	**79**	PG	**Pg**	**21 12 55.4**	**+0.2**
BINT	**Bingol**	**0.06**	**79**	*i* Pg	**Pg**	**21 12 55.4**	**+0.2**
BNGL	**BINGOL**	**0.58**	**81**	⇑*i*P	**Pg**	**21 13 03.3**	**-1.0**
BNGL				*i* S	**Sg**	**21 13 11.9**	**+0.1**
PTK	**Pertek**	**0.80**	**272**	*e*PG	**Pg**	**21 13 07.2**	**-1.3**
PTK				*e*SG	**Sg**	**21 13 18.6**	**-0.3**
PTK	**Pertek**	**0.80**	**272**	*e*Pg	**Pg**	**21 13 07.2**	**-1.2**
PTK				*e*Sg	**Sg**	**21 13 18.6**	**-0.3**
DIYA	**Diyarbakir**	**0.97**	**194**	*e*P	**Pg**	**21 13 12.2**	**+0.5**
DIYA				*e*S	**Sg**	**21 13 25.9**	**+1.6**
DIYA	**Diyarbakir**	**0.97**	**194**	*e*P	**Pg**	**21 13 12.1**	**+0.5**
DIYA				*e*S	**Sg**	**21 13 25.9**	**+1.7**
SVRC	**Sivrice-ELAZID**	**1.00**	**241**	*e*PG	**Pg**	**21 13 12.2**	**+0.1**
SVRC	**Sivrice-ELAZID**	**1.00**	**241**	*e*Pg	**Pg**	**21 13 12.3**	**+0.2**
BEST	**Besiri**	**1.18**	**145**	*e*P	**Pb**	**21 13 15.3**	**-0.1**
BEST				*e*S	**Sb**	**21 13 31.2**	**+0.6**
EZC	**Erzincan**	**1.21**	**317**	*e*PN	**Pn**	**21 13 13.4**	**-2.4**
EZC	**Erzincan**	**1.21**	**317**	*e*Pn	**Pn**	**21 13 13.4**	**-2.4**
EZM	**Erzurum**	**1.27**	**35**	*e*PN	**Pn**	**21 13 14.8**	**-1.8**
ERZM	**Erzurum**	**1.27**	**35**	*e*P	**Pn**	**21 13 18.3**	**+1.6**
ERZM				*e*S	**Sb**	**21 13 33.9**	**+0.6**
ERZM	**Erzurum**	**1.27**	**35**	*e*P	**Pn**	**21 13 18.3**	**+1.6**
ERZM				*e*S	**Sb**	**21 13 33.9**	**+0.6**
KELT	**Kelkit**	**1.56**	**325**	*e*P	**Pn**	**21 13 21.5**	**+0.9**
KELT				*e*S	**Sn**	**21 13 43.5**	**+2.6**
KELT	**Kelkit**	**1.56**	**325**	*e*P	**Pn**	**21 13 21.5**	**+0.8**
KELT				*e*S	**Sn**	**21 13 43.5**	**+2.6**
MARD	**Mardin**	**1.57**	**169**	*e*P	**Pn**	**21 13 20.6**	**-0.2**
MARD				*e*S	**Sn**	**21 13 39.5**	**-1.5**

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*NEIC **11** 21:17:26.8, 47.°51N×128.°86W, h10km, mb4.5/35, MW4.2(PGC), After PGC.*
*PGC **11** 21:17:26.8±4.3, 47.°51N×128.°86W, h10km, ML3.6/10, Mw4.2, 284km Wsw of Tofino, Bc Off Coast Of Washington*
*BJI **11** 21:17:27.8, 47.°50N×128.°90W, h10km, mB5.1/6, mb4.8/12, Ms4.9/6, Ms7 4.5/6*
*IDC **11** 21:17:28.9±0.9, 47.°63N×128.°78W, h0km, mb4.0/10, mb1 4.3/17, mb1mx4.1/31, mbtmp4.1/17, ML3.6/5, MS3.9/23, Ms1 3.9/23, ms1mx3.8/34, Error ellipse: s-maj=23.7km s-min=10.8km az=58.0*
*ISCJB **11** 21:17:30.0±0.2, 47.°90N±0.°02×128.°51W±0.°03, h10km, mb4.4/30, MS3.9/19, Error ellipse: s-maj=3.8km s-min=2.7km az=43.3*
ISC 11 21:17:31.2±1.1,**47.°94N**±0.°02×**128.°54W**±0.°04,**h6**km±8km,
n163,σ0s**94**/168,**mb4.4**/30,**MS3.9**/19,**2C-12D, Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	**Estevan Point**	**1.96**	**42**	⇓Pn	**Pn**	**21 18 05.2**	**+0.4**
ETB	**Estevan Point**	**1.96**	**42**	⇓Pn	**Pn**	**21 18 05.2**	**+0.4**
EDB	**Eliza Dome**	**2.15**	**25**	⇑Pn	**Pn**	**21 18 07.3**	**-0.2**
EDB	**Eliza Dome**	**2.15**	**25**	⇑Pn	**Pn**	**21 18 07.3**	**-0.2**
OZB	**Mount Ozzard**	**2.27**	**62**	⇓Pn	**Pn**	**21 18 08.2**	**-1.0**
OZB	**Mount Ozzard**	**2.27**	**62**	⇓Pn	**Pn**	**21 18 08.2**	**-1.0**
BPBC	**Brooks Peninsu**	**2.27**	**13**	⇓Pn	**Pn**	**21 18 08.8**	**-0.5**
BPBC	**Brooks Peninsu**	**2.27**	**13**	⇓Pn	**Pn**	**21 18 08.8**	**-0.5**
BMSB	**Bamfield Mari**	**2.44**	**67**	⇓Pn	**Pn**	**21 18 10.2**	**-1.3**
GDR	**Gold River**	**2.48**	**41**	⇓Pn	**Pn**	**21 18 12.7**	**+0.7**
GDR	**Gold River**	**2.48**	**41**	⇓Pn	**Pn**	**21 18 12.7**	**+0.7**
WOSB	**Woss**	**2.57**	**30**	Pn	**Pn**	**21 18 14.3**	**+1.0**
WOSB	**Woss**	**2.57**	**30**	Pn	**Pn**	**21 18 14.3**	**+1.0**
MAYB	**Maynard**	**2.62**	**20**	Pn	**Pn**	**21 18 14.6**	**+0.6**
MAYB	**Maynard**	**2.62**	**20**	Pn	**Pn**	**21 18 14.6**	**+0.6**
HOLB	**Holberg**	**2.71**	**6**	Pn	**Pn**	**21 18 15.3**	**0.0**
HOLB	**Holberg**	**2.71**	**6**	Pn	**Pn**	**21 18 15.3**	**0.0**
MGB	**Mount Grey**	**2.77**	**66**	⇑Pn	**Pn**	**21 18 14.9**	**-1.2**
MGB	**Mount Grey**	**2.77**	**66**	⇑Pn	**Pn**	**21 18 14.9**	**-1.2**
PFB	**Port Renfrew**	**2.81**	**76**	Pn	**Pn**	**21 18 14.6**	**-2.0**
PFB				Sn	**Sn**	**21 18 50.7**	**-0.1**
PFB	**Port Renfrew**	**2.81**	**76**	Pn	**Pn**	**21 18 14.6**	**-2.0**
PFB				⇓Sn	**Sn**	**21 18 50.7**	**-0.1**
PHC	**Port Hardy**	**2.86**	**14**	⇓Pn	**Pn**	**21 18 17.4**	**0.0**
PHC	**Port Hardy**	**2.86**	**14**	⇓Pn	**Pn**	**21 18 17.4**	**0.0**
NLWA	**Neilton Lookou**	**3.21**	**98**	*e*Pn	**Pn**	**21 18 19.6**	**-2.5**
NLWA				Sn	**Sn**	**21 19 01.2**	**+0.7**
PGC	**Sidney**	**3.47**	**76**	*e*Pn	**Pn**	**21 18 24.1**	**-1.6**
PGC				Sn	**Sn**	**21 19 06.6**	**-0.5**
GNW	**Green Mountain**	**3.88**	**93**	*e*Pn	**Pn**	**21 18 29.2**	**-2.0**
GNW				Sn	**Sn**	**21 19 16.7**	**-0.4**
BBB	**Bella Bella**	**4.26**	**4**	Pn	**Pn**	**21 18 37.4**	**+0.9**
60nm,0.3s,baz=17,slow=13,SNR=158							
BBB				Sn	**Sn**	**21 19 31.7**	**+5.3**
baz=156,slow=17,SNR=1.2							
BBB				LR	LR	21 20 10.9	
comp=Z,1μm,19.7s,baz=352,slow=35							
BBB	**Bella Bella**	**4.26**	**4**	Pn	**Pn**	**21 18 37.4**	**+0.9**
BBB				Sn	**Sn**	**21 19 31.7**	**+5.3**
BBB				LR	LR	21 20 10.9	
JCW	**Jim Creek**	**4.44**	**84**	*e*Pn	**Pn**	**21 18 38.1**	**-0.9**
JCW				*e*Sn	**Sn**	**21 19 30.7**	**-0.3**
RPW	**Rockport**	**4.73**	**81**	*e*Pn	**Pn**	**21 18 42.4**	**-0.6**
RPW				Sn	**Sn**	**21 19 38.5**	**+0.5**
RPW				Sn	**Sn**	**21 19 38.5**	**+0.5**
LON	**Longmire**	**4.73**	**102**	*e*Pn	**Pn**	**21 18 41.9**	**-1.1**
LON				*e*Sn	**Sn**	**21 19 38.5**	**+0.4**
COR	**Corvallis**	**4.95**	**131**	*e*Pn	**Pn**	**21 18 44.1**	**-1.8**
COR				Sn	**Sn**	**21 19 39.5**	**-3.9**
HOOD	**Mount Hood Mea**	**5.42**	**116**	*e*Pn	**Pn**	**21 18 51.6**	**-0.9**
HOOD				*e*Sn	**Sn**	**21 19 56.1**	**+1.0**
ETW	**Entiat**	**5.55**	**90**	*e*Pn	**Pn**	**21 18 54.2**	**0.0**
ETW				Sn	**Sn**	**21 19 57.6**	**-0.6**
KEBM	**Edson Butte**	**5.87**	**148**	*e*Pn	**Pn**	**21 18 59.3**	**+0.6**
RSW	**Rattlesnake Hi**	**6.30**	**101**	*e*Pn	**Pn**	**21 19 04.5**	**0.0**
HAWA	**Hanford**	**6.34**	**101**	*e*Pn	**Pn**	**21 19 04.5**	**-0.6**
HAWA				Sn	**Sn**	**21 20 19.7**	**+2.0**
HUMO	**Hull Mountain**	**6.63**	**142**	*e*Pn	**Pn**	**21 19 07.1**	**-2.0**
HUMO				Sn	**Sn**	**21 20 19.8**	**-5.2**
OD2	**Odessa Site #2**	**6.67**	**91**	*e*Pn	**Pn**	**21 19 07.7**	**-1.8**
KRMB	**Red Mountain**	**7.22**	**151**	*e*Pn	**Pn**	**21 19 16.5**	**-0.7**
LNOR	**Lincton Mounta**	**7.33**	**103**	*e*Pn	**Pn**	**21 19 18.2**	**-0.4**
YBH	**Yreka Blue Hor**	**7.46**	**144**	Pn	**Pn**	**21 19 19.4**	**-1.1**
0.7nm,0.3s,baz=356,slow=6.9,SNR=24							
YBH				LR	LR	21 21 57.1	
comp=Z,1μm,18.5s,baz=325,slow=37							
NEW	**Newport**	**7.66**	**83**	*e*Pn	**Pn**	**21 19 22.3**	**-0.8**
KHMM	**Horse Mountain**	**7.86**	**152**	*e*Pn	**Pn**	**21 19 24.2**	**-1.8**
MOD	**Modoc**	**8.40**	**133**	*e*Pn	**Pn**	**21 19 33.8**	**+0.4**
7.9nm,1.0s							
WDC	**Whiskeytown Da**	**8.53**	**147**	*e*Pn	**Pn**	**21 19 35.8**	**+0.7**
KCPM	**Cahto Peak**	**9.00**	**155**	*e*Pn	**Pn**	**21 19 41.1**	**-0.4**
BSMT	**Bassoo Peak**	**9.25**	**85**	*e*Pn	**Pn**	**21 19 44.6**	**-0.3**
JTMT	**Jette**	**9.60**	**86**	*e*Pn	**Pn**	**21 19 49.0**	**-0.7**
WALA	**Waterton Lakes**	**9.78**	**78**	*e*Pn	**Pn**	**21 19 52.9**	**+0.6**
HOPS	**Hopland**	**9.79**	**154**	*e*Pn	**Pn**	**21 19 51.0**	**-1.3**
SWMT	**Swartz Lake**	**9.81**	**87**	*e*Pn	**Pn**	**21 19 53.0**	**+0.3**
MSO	**Missoula**	**9.97**	**91**	*e*Pn	**Pn**	**21 19 54.1**	**-0.8**
SLMT	**Seeley Lake**	**10.20**	**88**	*e*Pn	**Pn**	**21 19 56.9**	**-1.1**
CHMT	**Chamberlain Mo**	**10.42**	**90**	*e*Pn	**Pn**	**21 20 00.4**	**-0.6**
DLBC	**Dease Lake**	**10.55**	**356**	Pn	**Pn**	**21 20 07.7**	**+5.0**
0.3nm,0.3s,baz=180,slow=10.0,SNR=7.8							
DLBC				LR	LR	21 23 58.2	
comp=Z,1μm,20.7s,baz=122,slow=36							
DLBC	**Dease Lake**	**10.55**	**356**	*e*Pn	**Pn**	**21 20 04.0**	**+1.2**
DLBC				LR	LR	21 23 58.2	
PAHR	**Pah Rah Range**	**10.55**	**138**	*e*Pn	**Pn**	**21 20 04.5**	**+1.6**
MCCM	**Marconi Confer**	**10.63**	**155**	Pn	**Pn**	**21 20 04.8**	**+0.9**
WCN	**Washoe City**	**10.72**	**140**	*e*Pn	**Pn**	**21 20 05.8**	**+0.6**
HLID	**Hailey**	**10.80**	**109**	*e*Pn	**Pn**	**21 20 05.9**	**-0.3**
29nm,1.4s							
EDM	**Edmonton**	**11.00**	**56**	Pn	**Pn**	**21 20 09.1**	**+0.2**
BMN	**Battle Mountai**	**11.06**	**129**	*e*Pn	**Pn**	**21 20 10.7**	**+1.0**
LRM	**Limekiln Ridge**	**11.22**	**95**	*e*Pn	**Pn**	**21 20 12.4**	**+0.5**
DLMT	**Dillon**	**11.26**	**97**	*e*Pn	**Pn**	**21 20 13.3**	**+0.7**
WAKR	**Walker**	**11.53**	**142**	*e*Pn	**Pn**	**21 20 17.6**	**+1.4**
CMB	**Columbia Colle**	**11.56**	**146**	*e*Pn	**Pn**	**21 20 18.3**	**+1.7**
BOZ	**Bozeman (W)**	**11.82**	**95**	*e*Pn	**Pn**	**21 20 21.8**	**+1.6**
NVAR	**Mina Array Bea**	**12.08**	**138**	Pn	**Pn**	**21 20 24.1**	**+0.3**
0.3nm,0.3s,baz=313,slow=12,SNR=22							
EGMT	**Eagleton**	**12.59**	**83**	*e*Pn	**Pn**	**21 20 31.9**	**+1.2**
HVU	**Hansel Valley**	**12.76**	**113**	*e*Pn	**Pn**	**21 20 36.1**	**+3.1**
RRI2	**Red Ridge**	**12.89**	**105**	*e*Pn	**Pn**	**21 20 36.5**	**+1.6**
IMW	**Indian Meadow**	**12.90**	**102**	*e*Pn	**Pn**	**21 20 36.7**	**+1.7**
FLWY	**Flagg Ranch**	**12.99**	**101**	*e*Pn	**Pn**	**21 20 37.1**	**+1.0**
9.2nm,0.9s							
TPAW	**Teton Pass**	**13.07**	**103**	*e*Pn	**Pn**	**21 20 38.5**	**+1.2**
22nm,0.9s							
MOOW	**Moose Ponds**	**13.09**	**102**	*e*P	**Pn**	**21 20 38.5**	**+0.9**
13nm,1.0s							
GCMT	**Greycliff**	**13.10**	**92**	*e*Pn	**Pn**	**21 20 38.3**	**+0.7**
6.2nm,0.8s							
BGU	**Big Grassy Mou**	**13.11**	**117**	*e*Pn	**Pn**	**21 20 38.2**	**+0.4**
27nm,1.4s							
LOHW	**Long Hollow**	**13.24**	**102**	*e*Pn	**Pn**	**21 20 40.3**	**+0.7**
6.1nm,0.8s							
HWUT	**Hardware Ranch**	**13.61**	**111**	*e*Pn	**Pn**	**21 20 45.1**	**+0.5**
30nm,1.4s							
DUG	**Dugway**	**13.69**	**119**	*e*Pn	**Pn**	**21 20 46.9**	**+1.2**
14nm,1.3s							
JLU	**Jordanelle**	**14.26**	**115**	*e*P	**Pn**	**21 20 54.1**	**+0.6**
55nm,1.6s							
PDAR	**Pinedale Array**	**14.31**	**104**	Pn	**Pn**	**21 20 56.3**	**+2.2**
baz=304,slow=11,SNR=17							
PDAR				LR	LR	21 26 35.0	
comp=Z,807nm,19.7s,baz=306,slow=38							
ISA	**Isabella**	**14.37**	**145**	*e*Pn	**Pn**	**21 20 55.3**	**+0.3**
16nm,1.4s							
DAU	**Daniels Canyon**	**14.49**	**115**	*e*Pn	**Pn**	**21 20 54.8**	**-1.9**
27nm,1.2s							
ARUT	**Antelope Range**	**14.99**	**127**	*e*Pn	**Pn**	**21 21 02.9**	**-0.6**
146nm,1.3s							
SHPR	**Shep Range**	**15.10**	**134**	*e*Pn	**Pn**	**21 21 05.5**	**+0.6**
32nm,1.7s							
MSU	**Marysvale**	**15.18**	**122**	*e*Pn	**Pn**	**21 21 06.0**	**0.0**
23nm,1.4s							
CCUT	**Cedar City**	**15.21**	**128**	*e*Pn	**Pn**	**21 21 06.2**	**-0.3**
37nm,1.4s							
GSC	**Goldstone**	**15.36**	**141**	*e*Pn	**Pn**	**21 21 08.4**	**+0.1**
16nm,0.9s							
SRU	**San Rafael**	**15.74**	**117**	*e*Pn	**Pn**	**21 21 13.5**	**+0.2**
19nm,1.0s							
MWC	**Mount Wilson**	**15.80**	**146**	*e*Pn	**Pn**	**21 21 14.8**	**+0.7**
28nm,1.0s							
DGMT	**Dagmar**	**16.23**	**79**	*e*Pn	**Pn**	**21 21 20.3**	**+0.7**
41nm,1.0s							
LDFC	**Landfair**	**16.29**	**137**	*e*Pn	**Pn**	**21 21 19.5**	**-0.9**
64nm,1.1s							
RWWY	**Rawlins**	**16.35**	**105**	*e*Pn	**Pn**	**21 21 21.1**	**-0.2**
37nm,1.4s							
YKA	**Yellowknife Ar**	**16.55**	**23**	Pn	**Pn**	**21 21 25.1**	**+1.5**
0.1nm,0.3s,baz=216,slow=11,SNR=7.4							
YKA				LR	LR	21 27 22.1	
comp=Z,36nm,19.4s,baz=125,slow=35							
YKA	**Yellowknife Ar**	**16.55**	**23**	Pn	**Pn**	**21 21 25.1**	**+1.5**
YKA				LR	LR	21 27 22.1	
PFO	**Pinyon Flat Ob**	**16.96**	**143**	*e*Pn	**Pn**	**21 21 28.3**	**-0.7**
9.8nm,1.0s							
PV04	**Paradox Valley**	**17.17**	**117**	*e*Pn	**Pn**	**21 21 32.1**	**+0.5**
DAWY	**Dawson**	**17.22**	**344**	*e*Pn	**Pn**	**21 21 32.5**	**+0.6**
PV01	**Paradox Valley**	**17.54**	**117**	*e*Pn	**Pn**	**21 21 36.2**	**0.0**
5μm,1.3s							
PHWY	**Pilot Hill**	**17.69**	**104**	*e*Pn	**Pn**	**21 21 37.0**	**-1.0**
45nm,1.3s							
BAR	**Barrett**	**17.70**	**145**	*e*Pn	**Pn**	**21 21 38.7**	**+0.6**
17nm,1.2s							
FFC	**Flin Flon**	**17.86**	**58**	*e*Pn	**Pn**	**21 21 40.9**	**+0.9**
180nm,1.4s							
SMCO	**Snowmass**	**17.87**	**111**	*e*Pn	**Pn**	**21 21 41.3**	**+1.0**
17nm,1.2s							
RC01	**Rabbit Creek A**	**17.90**	**325**	*e*Pn	**Pn**	**21 21 40.0**	**-0.5**
GLA	**Glamis**	**18.12**	**140**	*e*Pn	**Pn**	**21 21 43.7**	**+0.3**
EGAK	**Eagle**	**18.20**	**343**	*e*Pn	**Pn**	**21 21 44.4**	**+0.2**
8.7nm,1.1s							
ISCO	**Idaho Springs**	**18.38**	**108**	*e*Pn	**Pn**	**21 21 47.3**	**+0.8**
12nm,1.2s							
ILAR	**Eielson Array**	**19.56**	**336**	P	**Pn**	**21 21 59.6**	**-0.9**
0.1nm,0.3s,baz=149,slow=11,SNR=19							
ILAR				LR	LR	21 28 37.7	
comp=Z,335nm,18.1s,baz=148,slow=34							
SDCO	**Great Sand Dun**	**19.66**	**113**	*e*Pn	**Pn**	**21 22 01.6**	**-0.4**
8.9nm,1.0s							
COLA	**College**	**19.90**	**335**	*e*P	**Pn**	**21 22 03.1**	**-1.5**
OGNE	**Ogallala**	**20.12**	**101**	*e*P	**P**	**21 22 05.3**	**-0.2**
134nm,1.6s							
BPAW	**Bear Paw Mtn.**	**20.29**	**331**	*e*P	**P**	**21 22 07.3**	**0.0**
12nm,1.3s							
INK	**Inuvik**	**20.58**	**355**	P	**P**	**21 22 13.9**	**+3.6**
4.0nm,0.9s,baz=198,slow=7.9,SNR=2.7							
INK				LR	LR	21 30 11.6	
comp=Z,584nm,21.1s,MS3.9,baz=10,slow=36							
INK	**Inuvik**	**20.58**	**355**	*e*P	**P**	**21 22 10.1**	**-0.3**
INK				LR	LR	21 30 11.6	
TUC	**Tucson**	**20.62**	**133**	*e*P	**P**	**21 22 11.1**	**+0.1**
9.9nm,1.0s							
ANMO	**Albuquerque**	**20.95**	**120**	P	**P**	**21 22 14.2**	**-0.4**
10nm,1.0s,baz=322,slow=12,SNR=17							
ANMO				LR	LR	21 29 37.4	
comp=Z,143nm,18.3s,MS3.4,baz=140,slow=35							
SDPT	**Sand Point**	**21.01**	**303**	*e*P	**P**	**21 22 15.5**	**+0.4**
LENM	**Lemitar**	**21.21**	**123**	*e*P	**P**	**21 22 17.9**	**+0.4**
19nm,1.0s,mb4.4							
LPM	**Los Pinos Moun**	**21.30**	**122**	*e*P	**P**	**21 22 19.1**	**+0.7**
42nm,1.5s,mb4.5							
TTA	**Tatalina**	**21.39**	**325**	*e*P	**P**	**21 22 19.1**	**0.0**
46nm,1.4s,mb4.6							
BNM	**Barren Site**	**21.42**	**122**	*e*P	**P**	**21 22 20.0**	**+0.3**
53nm,1.5s,mb4.7							
ULM	**Lac du Bonnet**	**21.42**	**72**	P	**P**	**21 22 20.4**	**+0.8**
22nm,1.0s,mb4.4,baz=286,slow=11,SNR=15							
ULM				LR	LR	21 31 20.7	
comp=Z,396nm,19.9s,MS3.8,baz=174,slow=38							
AGMN	**Agassiz Nation**	**21.74**	**77**	*e*P	**P**	**21 22 23.6**	**+0.6**
84nm,1.7s,mb4.9							
ECSD	**EROS Data Cent**	**22.55**	**89**	*e*P	**P**	**21 22 31.1**	**-0.6**
12nm,1.0s,mb4.3							
CBKS	**Cedar Bluff**	**22.73**	**103**	*e*P	**P**	**21 22 33.6**	**0.0**
69nm,1.5s,mb4.9							
CPRX	**Cap Rock**	**23.82**	**120**	*e*P	**P**	**21 22 44.1**	**-0.7**
5.1nm,0.6s,mb4.1							
AMTX	**Amarillo**	**23.86**	**113**	*e*P	**P**	**21 22 45.0**	**-0.2**
66nm,1.5s,mb4.8							
MNTX	**Cornudas Mount**	**23.94**	**124**	*e*P	**P**	**21 22 44.5**	**-1.4**
36nm,1.6s,mb4.5							
AKUT	**Akutan**	**24.00**	**299**	*e*P	**P**	**21 22 47.0**	**+0.6**
**GDL2

SARI				*e*SG	**Pn**	**21 18 56.6**	**+1.7**
KUZU	**Kuzuini**	**1.14**	**142**	⇑*i*P	**Pg**	**21 18 54.8**	**-0.8**
KUZU				*i* S	**Sg**	**21 19 11.7**	**+1.4**
KUZU	**Kuzuini**	**1.14**	**142**	*i* P	**Pg**	**21 18 54.8**	**-0.8**
KUZU				*i* S	**Sg**	**21 19 11.7**	**+1.4**
COBT	**Iskenderun**	**1.15**	**178**	*e*P	**Pg**	**21 18 53.3**	**-2.4**
COBT				*e*S	**Sg**	**21 19 11.1**	**+0.3**
COBT	**Iskenderun**	**1.15**	**178**	*e*P	**Pg**	**21 18 53.3**	**-2.5**
COBT				*e*S	**Sg**	**21 19 11.1**	**+0.4**
GULE	**Gulek**	**1.19**	**252**	*e*P	**Pb**	**21 18 55.5**	**-0.8**
GULE				*e*S	**Sb**	**21 19 13.2**	**+1.4**
GULE	**Gulek**	**1.19**	**252**	*e*P	**Pb**	**21 18 55.5**	**-0.9**
GULE				*e*S	**Sb**	**21 19 13.2**	**+1.3**
AKCD	**Akcadag**	**1.50**	**65**	*e*P	**Pn**	**21 19 00.9**	**+0.2**
AKCD				*e*S	**Sn**	**21 19 21.2**	**+0.9**
AKCD	**Akcadag**	**1.50**	**65**	*e*P	**Pn**	**21 19 00.9**	**+0.2**
AKCD				*e*S	**Sn**	**21 19 21.2**	**+0.9**
AVNT	**Avonos**	**1.53**	**317**	*e*P	**Pn**	**21 19 01.2**	**+0.1**
AVNT				*e*S	**Sn**	**21 19 21.7**	**+0.7**
AVNT	**Avonos**	**1.53**	**317**	*e*P	**Pn**	**21 19 01.2**	**+0.1**
AVNT				*e*S	**Sn**	**21 19 21.7**	**+0.7**
HTY	**Hatay**	**1.55**	**182**	*e*PN	**Pn**	**21 19 02.0**	**+0.7**
HTY	**Hatay**	**1.55**	**182**	*e*Pn	**Pn**	**21 19 02.0**	**+0.7**
MERS	**Mersin**	**1.56**	**240**	*e*PN	**Pn**	**21 19 01.9**	**+0.5**
MERS	**Mersin**	**1.56**	**240**	*e*Pn	**Pn**	**21 19 01.9**	**+0.5**
ATAB	**Bozova**	**1.68**	**96**	*e*P	**Pn**	**21 19 02.3**	**-0.8**
ATAB				*e*S	**Sn**	**21 19 26.7**	**+2.0**
ATAB	**Bozova**	**1.68**	**96**	*e*P	**Pn**	**21 19 02.3**	**-0.8**
ATAB				*e*S	**Sn**	**21 19 26.7**	**+2.0**
MALT	**Malatya**	**1.88**	**69**	*e*PN	**Pn**	**21 19 05.7**	**-0.1**
MALT	**Malatya**	**1.88**	**69**	*e*Pn	**Pn**	**21 19 05.7**	**-0.1**
MYA	**Malataya**	**1.88**	**69**	*e*PN	**Pn**	**21 19 05.6**	**-0.3**
MYA	**Malataya**	**1.88**	**69**	*e*Pn	**Pn**	**21 19 05.6**	**-0.3**
YOZ	**Yozgat**	**2.08**	**341**	*e*PN	**Pn**	**21 19 07.9**	**-0.8**
YOZ	**Yozgat**	**2.08**	**341**	*e*Pn	**Pn**	**21 19 07.9**	**-0.8**
SULT	**Sultanhani-AKS**	**2.18**	**285**	*e*PN	**Pn**	**21 19 10.1**	**+0.1**
SULT	**Sultanhani-AKS**	**2.18**	**285**	*e*Pn	**Pn**	**21 19 10.1**	**0.0**
SVSK	**Karacayir**	**2.33**	**15**	*e*PN	**Pn**	**21 19 11.5**	**-0.6**
SVSK	**Karacayir**	**2.33**	**15**	*e*Pn	**Pn**	**21 19 11.5**	**-0.6**
IKL	**Isikli**	**2.47**	**235**	*e*PN	**Pn**	**21 19 14.9**	**+1.0**
IKL	**Isikli**	**2.47**	**235**	*e*Pn	**Pn**	**21 19 14.9**	**+1.0**
SVRC	**Sivrice-ELAZID**	**2.56**	**73**	*e*PN	**Pn**	**21 19 15.1**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.56**	**73**	*e*Pn	**Pn**	**21 19 15.1**	**-0.1**
KAMT	**Kaman**	**2.58**	**312**	*e*PN	**Pn**	**21 19 15.5**	**0.0**
KAMT	**Kaman**	**2.58**	**312**	*e*Pn	**Pn**	**21 19 15.5**	**0.0**
CORM	**Corum**	**2.79**	**335**	*e*PN	**Pn**	**21 19 18.1**	**-0.2**
CORM	**Corum**	**2.79**	**335**	*e*Pn	**Pn**	**21 19 18.2**	**-0.1**
PTK	**Pertek**	**2.80**	**63**	*e*PN	**Pn**	**21 19 18.5**	**0.0**
PTK	**Pertek**	**2.80**	**63**	*e*Pn	**Pn**	**21 19 18.5**	**0.0**
AFSR	**Af´ar-Bala (A**	**3.02**	**307**	*e*PN	**Pn**	**21 19 21.8**	**+0.2**
AFSR	**Af´ar-Bala (A**	**3.02**	**307**	*e*Pn	**Pn**	**21 19 21.8**	**+0.2**
HDMB	**Hadim**	**3.04**	**258**	*e*PN	**Pn**	**21 19 22.9**	**+1.1**
HDMB	**Hadim**	**3.04**	**258**	*e*Pn	**Pn**	**21 19 22.9**	**+1.1**

ISCJB ***11*** *21:40:26.7±0.8, 13°.10N±0°.08×48°.50E±0°.05, h10km, mb3.7/5, MS3.5/3, Error ellipse: s-maj=11.7km s-min=6.3km az=162.2*
IDC ***11*** *21:40:26.6±1.6, 12°.73N×48°.62E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/22, mbtmp3.6/6, ML3.7/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/34, Error ellipse: s-maj=50.3km s-min=33.1km az=155.0*
DHMR ***11*** *21:40:27.8±1.2, 13°.33N×48°.30E, h10km, ML3.5*
CSEM ***11*** *21:40:27.8, 13°.33N×48°.30E, h10km, ML3.5, After DHMR*
ISC 11 21:40:28.4±0.8, 13°.19N±0°.08×48°.49E±0°.05, h10km, n14, σ1§20/15, mb3.7/5, MS3.5/3, 1C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.39**	**22**	*i* P	**Pn**	**21 40 53.0**	**-0.8**
MUKL				*i* S	**Sb**	**21 41 11.3**	**-0.9**
MUKL				AML	AML	21 41 18.9	
	comp=E,432nm,0.4s						
BDHA	**Al Bayda'**	**2.95**	**286**	*i* P	**Pn**	**21 41 14.9**	**-0.5**
BDHA				AML	AML	21 41 17.6	
	comp=E,1μm,0.3s						
BDHA				*i* S	**Sn**	**21 41 51.0**	**+0.1**
BDHA	**Al Bayda'**	**2.95**	**286**	*i* P	**Pn**	**21 41 14.9**	**-0.5**
	comp=E,610nm,0.3s						
BDHA				*i* S	**Sn**	**21 41 51.0**	**+0.1**
LBOS		**3.23**	**283**	*i* P	**Pn**	**21 41 19.0**	**-0.2**
LBOS				*i* S	**Sn**	**21 41 58.7**	**+1.0**
TRBA	**At Turbah**	**4.26**	**271**	⇑*i*P	**Pn**	**21 41 32.0**	**-1.5**
TRBA				AML	AML	21 41 43.6	
	comp=Z,49nm,0.4s						
ATD	**Arta Tunnel**	**5.76**	**254**	Pn	**Pn**	**21 41 53.8**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=73,slow=20,SNR=6.4						
ATD				LR	LR	21 43 52.5	
	comp=Z,94nm,20.4s,baz=54,slow=36						
GNI	**Garni**	**27.06**	**354**	LR	LR	21 58 53.6	
	comp=Z,61nm,20.9s,MS3.1,baz=77,slow=40						
MKAR	**Makanchi Array**	**43.88**	**33**	P	**P**	**21 48 37.3**	**+2.3**
	comp=Z,0.2nm,0.5s,mb3.1,baz=226,slow=6.2,SNR=4.8						
BOSA	**Boshof**	**47.24**	**208**	LR	LR	22 08 22.3	
	comp=Z,61nm,18.1s,MS3.6,baz=346,slow=36						
CMAR	**Chiang Mai Arr**	**48.70**	**77**	P	**P**	**21 49 12.9**	**-0.4**
	comp=Z,0.8nm,0.7s,mb3.9,baz=271,slow=9.1,SNR=5.2						
ZALV	**Zalesovo Beam**	**49.71**	**27**	P	**P**	**21 49 22.1**	**+1.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=264,slow=8.5,SNR=3.3						
HFS	**Hagfors**	**53.38**	**339**	LR	LR	22 16 18.7	
	comp=Z,63nm,19.4s,MS3.7,baz=118,slow=40						
SONM	**Songino Array**	**58.92**	**42**	P	**P**	**21 50 30.4**	**+2.6**
	comp=Z,0.4nm,0.6s,mb3.6,baz=251,slow=7.5,SNR=3.6						
WRA	**Warramunga Arr**	**90.60**	**110**	P	**P**	**21 53 30.1**	**-1.5**
	comp=Z,0.5nm,0.8s,mb3.9,baz=301,slow=3.6,SNR=5.7						

DJA 11 21:49:43, 1°.81N×127°.25E, h117km, MLv4.0/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.04**	**174**	P	Pn	21 50 04.2	-1.0
TNTI				S	Sn	21 50 24.1	+2.1
MNI	**Manado**	**2.44**	**261**	P	Pn	21 50 22.5	+0.6
MNI				S	Sn	21 50 52.9	+1.2
KMSI	**Cibinong**	**3.49**	**249**	P	Pn	21 50 35.5	-0.2
KMSI				S	Sn	21 51 17.6	+1.1
NLAI	**Namlea**	**5.02**	**182**	P	Pn	21 50 55.3	-0.9
	0.1nm14nm,0.7s						
LUWI	**Luwuk**	**5.30**	**238**	P	Pn	21 51 01.0	+1.0
LUWI				S	Sn	21 52 00.1	+0.2

ISCJB ***11*** *21:57:26.0±0.7, 33°.09N±0°.04×105°.49E±0°.06, h10km, mb3.6/3, Error ellipse: s-maj=7.6km s-min=5.9km az=1.7*
IDC ***11*** *21:57:25.7±1.7, 33°.33N×106°.31E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/23, mbtmp3.5/4, Error ellipse: s-maj=75.8km s-min=27.8km az=52.0*
BJI ***11*** *21:57:27.5, 33°.11N×105°.54E, h13km, ML3.3/9, Ms3.1/2, Ms7 3.1/2*
ISC 11 21:57:27.8±0.6, 33°.05N±0°.04×105°.53E±0°.06, h10km, n7, σ1§31/15, mb3.6/3, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.61**	**216**	Pn	**Pn**	**21 58 10.8**	**+0.8**
CD2				Pg	**Pg**	**21 58 16.1**	**-1.8**
CD2				Sn	**Sn**	**21 58 43.6**	**+1.8**
CD2				Sg	**Sg**	**21 58 48.6**	**-3.1**
CD2				smax			
	comp=N,350nm,0.7s						
CD2				smax			
	comp=E,190nm,0.8s						
XAN	**Xi'an**	**3.00**	**70**	Pn	**Pn**	**21 58 15.6**	**+0.2**
XAN				Pg	**Pg**	**21 58 20.4**	**-4.9**
XAN				Sn	**Sn**	**21 58 52.1**	**+0.7**
XAN				Sg	**Sg**	**21 58 58.5**	**-5.7**
XAN				smax			
	comp=N,180nm,0.7s						
XAN				smax			
	comp=E,75nm,0.7s						
LZH	**Lanzhou**	**3.33**	**336**	Pg	**Pg**	**21 58 24.1**	**-7.5**
LZH				Sn	**Sn**	**21 58 58.8**	**-0.7**
LZH				Sg	**Sg**	**21 59 14.5**	**-0.2**
LZH				smax			
	comp=N,110nm,0.5s						
LZH				smax			
	comp=E,190nm,0.7s						
LZH				LR	LR		
	comp=N,230nm,4.1s						
LZH				LR	LR		
	comp=E,190nm,6.2s						
LZH				LR	LR		
	comp=Z,250nm,5.4s						
CMAR	**Chiang Mai Arr**	**15.69**	**204**	Pn	**Pn**	**22 01 14.2**	**+5.3**
	comp=Z,0.1nm,0.3s,baz=15,slow=8.2,SNR=10						
MKAR	**Makanchi Array**	**22.39**	**315**	P	**P**	**22 02 28.5**	**+2.4**
	comp=Z,0.3nm,0.5s,mb3.0,baz=109,slow=12,SNR=6.7						
WRA	**Warramunga Arr**	**59.45**	**148**	P	**P**	**22 07 29.6**	**-1.3**
	comp=Z,0.8nm,0.6s,mb3.9,baz=343,slow=7.3,SNR=10						
ASAR	**Alice Springs**	**62.56**	**151**	P	**P**	**22 07 51.3**	**-0.6**
	comp=Z,0.5nm,0.8s,mb3.7,baz=339,slow=7.2,SNR=4.6						

IDC 11 21:58:41.0±5.0, 1°.83S×138°.95E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=201.1km s-min=30.0km az=86.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.55**	**194**	P	Pn	22 02 59.6	0.0
	0.2nm,0.3s,baz=17,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**22.25**	**192**	P	P	22 03 39.8	+0.2
	1.1nm,0.6s,baz=19,slow=9.4,SNR=13						
MKAR	**Makanchi Array**	**69.25**	**322**	P	P	22 09 49.8	-0.1
	0.2nm,0.6s,baz=108,slow=7.9,SNR=3.6						

NIED ***11*** *22:34:00, 42°.40N×144°.80E, h29km, Mw4.9 Best double couple: M0=2.87000×10¹⁶ NP1:φ=264.00000°, δ62.00000°, λ-76.00000°. NP2:φ=55.00000°, δ31.00000°, λ-115.00000°.*
DJA ***11*** *22:34:41, 42°.46N×144°.85E, h10km, mb5.5/39*
IDC ***11*** *22:34:43.5±3.5, 42°.42N×144°.64E, h26km±23km, mb4.8/23, mb1 4.9/28, mb1mx4.9/29, mbtmp4.8/28, ML4.7/5, MS4.4/26, Ms1 4.4/26, ms1mx4.3/41, Error ellipse: s-maj=12.8km s-min=10.6km az=98.0*
SKHL ***11*** *22:34:43.8±0.8, 42°.30N×144°.60E, h40km±9km, mb5.5/7, mbh5.3/1, mbv5.6/3, ms4.7/5, msh5.7/3*
MOS ***11*** *22:34:43.9±0.9, 42°.40N×144°.56E, h41km, mb5.3/82, MS4.6/25, Error ellipse: s-maj=6.0km s-min=4.1km az=101.5*
MOS Felt (II) at Yuzhno-Kuril'sk.
ISCJB ***11*** *22:34:44.0±0.1, 42°.39N±0°.02×144°.56E±0°.02, h41km, mb5.1/244, MS4.6/52, Error ellipse: s-maj=2.5km s-min=1.5km az=152.5*
JMA ***11*** *22:34:44.0, 42°.39N×144°.74E, h42km±1km, M5.2*
JMA Felt III J1.
BJI ***11*** *22:34:44.1, 42°.45N×144°.53E, h42km, mB5.1/30, mb5.2/60, Ms4.5/53, Ms7 4.4/50*
NEIC ***11*** *22:34:45.7±0.3, 42°.42N×144°.55E, h41km±2km, mb5.1/124, MW4.9(NIED), Error ellipse: s-maj=3.3km s-min=2.1km az=154.0*
NEIC Recorded [3 JMA] in southeastern Hokkaido. Also recorded [1 JMA] in Aomori.
GCMT ***11*** *22:34:46.8±0.3, 42°.43N×144°.62E, h33km, MW5.0, Moment Tensor Solution. s41,c59; s75,c119; Moment tensor: Scale 10¹⁶Nm; Mrr=3.81±.19; Mθθ=3.45±.11; Mφφ=0.36±.11; Mrθ=1.87±.12; Mθφ=0.88±.08; Mφr=0.92±.11; Best double couple: M0=4.30000×10¹⁶ NP1:φ=61.00000°, δ35.00000°, λ-116.00000°. NP2:φ=272.00000°, δ59.00000°, λ-72.00000°. Principal axes: T 4.0200, Plg12.0000°, Azm350.0000°; N 0.4900, Plg15.0000°, Azm83.0000°; P -4.5100, Plg71.0000°, Azm222.0000°; Data Used: II G IU CN IC.*
SZGRF ***11*** *22:35:06.3, 45°.40N×141°.27E, h42km, mb5.1, Hokkaido, Japan, region*
ISC 11 22:34:46.1±0.1, 42°.43N±0°.02×144°.55E±0°.02, h43km, h43km±.7km: pP-P, n1032, σ0§74/1039, mb5.1/244, MS4.6/52, 144C-157D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.57**	**11**	⇑P	**Pn**	**22 34 56.3**	**-1.5**
JAK				*e*S	**Sn**	**22 35 05.5**	**-0.7**
JOB	**Onbets**	**0.71**	**312**	⇑P	**Pn**	**22 34 59.8**	**+0.2**
JOB				*e*S	**Sn**	**22 35 11.2**	**+1.8**
JCH	**Churui**	**0.90**	**282**	⇓P	**Pn**	**22 35 02.9**	**+0.7**
JCH				*e*S	**Sn**	**22 35 16.8**	**+2.8**
JAR	**Ashorobuto**	**1.04**	**327**	⇑P	**Pn**	**22 35 03.8**	**-0.3**
JEM	**Erimo**	**1.12**	**249**	⇓P	**Pn**	**22 35 05.4**	**+0.2**
JEM				*e*S	**Sn**	**22 35 21.1**	**+1.7**
ERM	**Erimo**	**1.12**	**248**	⇑*i*P	**Pn**	**22 35 05.7**	**+0.5**
ERM				*e*S	**Sn**	**22 35 18.2**	**-1.1**
ERM	**Erimo**	**1.12**	**248**	⇑*i*PN	**Pn**	**22 35 05.7**	**+0.5**
ERM				*e*S	**Sn**	**22 35 18.3**	**-1.1**
JNK	**Nakash**	**1.16**	**6**	⇑P	**Pn**	**22 35 04.2**	**-1.6**
JNK				*e*S	**Sn**	**22 35 19.7**	**-0.7**
NEM2	**Nemuro 2**	**1.28**	**43**	P	**Pn**	**22 35 05.1**	**-2.3**
NEM2				*e*S	**Sn**	**22 35 20.4**	**-2.9**
JNBK	**Urakawa-nobuka**	**1.34**	**264**	P	**Pn**	**22 35 08.1**	**-0.2**
JRA	**Rausu**	**1.56**	**15**	⇑P	**Pn**	**22 35 10.0**	**-1.3**
JRA				*e*S	**Sn**	**22 35 30.1**	**-0.2**
JTKR	**Abashiri--Toko**	**1.61**	**343**	⇑P	**Pn**	**22 35 12.1**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**1.86**	**30**	⇓*i*PN	**Pn**	**22 35 14.1**	**-1.4**
YUK				*i* S	**Sn**	**22 35 36.2**	**-1.6**
YUK				pmax	pmax		
	comp=Z,2μm,0.4s						
YUK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
YUK				pmax	pmax		
	comp=N,2.0nm,0.5s						
YUK				pmax	pmax		
	comp=E,2.0nm,0.5s						
YUK				smax			
	comp=E,21nm,0.7s						
YUK				smax			
	comp=N,23nm,0.7s						
YUK				smax			
	comp=E,32μm,0.8s						
YUK				smax			
	comp=N,43μm,0.8s						
YUK	**Yuzh-Kuril'sk**	**1.86**	**30**	⇓*i*P	**Pn**	**22 35 14.1**	**-1.4**
YUK				AMB	AMB	22 35 14.1	
	comp=N,14μm,1.0s						
YUK				AMB	AMB	22 35 14.1	
	comp=N,3μm,1.0s						
YUK				AMB	AMB	22 35 14.1	
	comp=N,14μm,1.0s						
YUK				AMB	AMB	22 35 15.2	
	comp=N,5μm,0.5s						
YUK				AMB	AMB	22 35 15.2	
	comp=N,2μm,0.4s						
YUK				AMB	AMB	22 35 15.2	
	comp=N,2μm,0.3s						
YUK				*i* S	**Sn**	**22 35 36.3**	**-1.5**
YUK				A		22 35 36.7	
	comp=N,50μm,1.0s						
YUK				A		22 35 36.7	
	comp=N,120μm,2.0s						
YUK				A		22 35 38.2	
	comp=N,23μm,0.7s						
YUK				A		22 35 38.2	
	comp=N,21μm,0.7s						
ASAJ	**Asahikawa**	**2.21**	**320**	Pn	**Pn**	**22 35 21.0**	**+0.9**
	comp=N,378nm,0.3s,baz=166,slow=14,SNR=393						
ASAJ				Sn	**Sn**	**22 35 46.5**	**+0.3**
	comp=N,240nm,0.3s,baz=17,slow=25,SNR=8.8						
ASAJ				LR	LR	22 36 29.1	
	comp=N,9μm,20.0s,baz=108,slow=47						
ASAJ	**Asahikawa**	**2.21**	**320**	⇑*i*Pn	**Pn**	**22 35 21.6**	**+1.4**
ASAJ				*e*Sn	**Sn**	**22 35 46.0**	**-0.2**
ASAJ	**Asahikawa**	**2.21**	**320**	PN	**Pn**	**22 35 21.0**	**+0.9**
ASAJ						22 35 46.5	
ASAJ				pmax	pmax		
	comp=Z,378nm,0.3s						
ASAJ				smax			
	comp=N,240nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,9μm,20.0s						
ASAJ	**Asahikawa**	**2.21**	**320**	⇑P	**Pn**	**22 35 21.5**	**+1.4**
JKB	**Kayabe**	**2.67**	**259**	⇓P	**Pn**	**22 35 27.4**	**+0.9**
JOT	**Ohata**	**2.82**	**249**	⇓P	**Pn**	**22 35 28.8**	**+0.3**
JANG	**Nango**	**3.07**	**229**	P	**Pn**	**22 35 30.7**	**-1.4**
JTM	**Tennabayashi**	**3.09**	**239**	P	**Pn**	**22 35 32.1**	**-0.1**
JSI2	**Shiura 2**	**3.39**	**247**	⇓P	**Pn**	**22 35 36.7**	**+0.3**
MIYJ	**Miyakonagasawa**	**3.52**	**217**	⇓P	**Pn**	**22 35 36.2**	**-2.0**
KUR	**Kuril'sk**	**3.69**	**39**	*e*PN	**Pn**	**22 35 40.0**	**-0.5**
KUR				*e*S	**Sn**	**22 36 22.1**	**-0.5**
KUR				pmax	pmax		
	comp=N,940nm,0.8s						
KUR				pmax	pmax		
	comp=E,650nm,0.8s						
KUR				pmax	pmax		
	comp=Z,2μm,0.8s						
KUR				pmax	pmax		
	comp=N,3μm,1.4s						
KUR				pmax	pmax		
	comp=E,3μm,1.4s						
KUR				pmax	pmax		
	comp=Z,10μm,1.4s						
KUR				smax			
	comp=N,6μm,1.0s						
KUR				smax			
	comp=E,5μm,1.0s						
KUR				smax			
	comp=N,35μm,2.0s						
KUR				smax			
	comp=E,15μm,2.0s						
KUR	**Kuril'sk**	**3.69**	**39**	*e*P	**Pn**	**22 35 40.0**	**-0.5**
KUR				AMB	AMB	22 36 05.8	
	comp=E,10μm,1.4s						
KUR				AMB	AMB	22 36 05.8	
	comp=E,940nm,0.8s						
KUR				AMB	AMB	22 36 05.8	
	comp=E,650nm,0.8s						
KUR				AMB	AMB	22 36 05.8	
	comp=E,2μm,0.8s						
KUR				AMB	AMB	22 36 05.8	
	comp=E,3μm,1.4s						
KUR				*e*S	**Sn**	**22 36 22.1**	**-0.5**
KUR				A		22 36 39.5	
	comp=E,6μm,1.0s						
KUR				A		22 36 39.5	
	comp=E,5μm,1.0s						
KUR				A		22 36 49.0	
	comp=E,25μm,2.0s						
KUR				A		22 36 49.0	
	comp=E,35μm,2.0s						
KUR				A		22 36 49.0	
	comp=E,15μm,2.0s						
KUR				AMS	AMS	22 37 19.0	
	comp=E,10μm,11.0s						
KUR				AMS	AMS	22 37 19.0	
	comp=E,17μm,11.0s						
KUR				AMS	AMS	22 37 19.0	
	comp=E,13μm,11.0s						
JRG	**Rokugo**	**4.24**	**226**	P	**Pn**	**22 35 47.2**	**-0.9**
YSS	**Yuzh-Sakhalins**	**4.70**	**345**	*e*Pn	**Pn**	**22 35 54.7**	**+0.4**
YSS				Sn	**Sn**	**22 36 40.8**	**-6.7**
YSS	**Yuzh-Sakhalins**	**4.70**	**345**	*e*PN	**Pn**	**22 35 55.0**	**+0.7**
YSS				*i* S	**Sn**	**22 36 49.0**	**+1.5**
YSS				pmax	pmax		
	comp=N,140nm,0.5s						
YSS				pmax	pmax		
	comp=Z,180nm,0.5s						
YSS				pmax	pmax		
	comp=E,120nm,0.9s						
YSS				smax			
	comp=N,560nm,1.0s						
YSS				MLR	MLR		
	comp=Z,6μm,16.0s						
YSS				MLR	MLR		
	comp=N,5μm,14.0s						
YSS				MLR	MLR		
	comp=E,4μm,14.0s						
YSS	**Yuzh-Sakhalins**	**4.70**	**345**	⇑*e*P	**Pn**	**22 35 55.0**	**+0.7**
YSS				⇓*e*P		22 35 55.0	
YSS				AMB	AMB	22 35 56.8	
	comp=E,180nm,0.5s						
YSS				AMB	AMB	22 35 56.8	
	comp=E,140nm,0.5s						
YSS				AMB	AMB	22 35 56.8	
	comp=E,120nm,0.9s						
YSS				*es*P		22 36 08.7	
YSS				*i* S	**Sn**	**22 36 49.0**	**+1.5**
YSS				A		22 36 55.0	
	comp=E,560nm,1.0s						
YSS				*e*LQ		22 37 44.0	
YSS				*e*LR	LR	22 37 51.0	
YSS				AMS	AMS	22 38 13.0	
	comp=E,5μm,14.0s						
YSS				AMS	AMS	22 38 13.0	
	comp=E,4μm,14.0s						
YSS				AMS	AMS	22 38 13.0	
	comp=E,6μm,16.0s						
JOU	**Okura**	**5.03**	**217**	P	**Pn**	**22 35 57.3**	**-1.6**
JAW	**Awa shima**	**5.67**	**227**	P	**Pn**	**22 36 07.3**	**-0.4**
JSD	**Sado**	**6.51**	**230**	⇓P	**Pn**	**22 36 18.6**	**-0.7**
UGL	**Uglegorsk**	**6.87**	**346**	*e*P	**Pn**	**22 36 33.0**	**+8.9**
UGL				AMB	AMB	22 36 35.5	
	comp=E,110nm,0.7s						
UGL				*e*S	**Sn**	**22 37 49.0**	**+8.1**
UGL				A		22 37 56.0	
	comp=E,2μm,4.0s						
UGL				A		22 37 56.0	
	comp=E,2μm,4.0s						
UGL				*e*L		22 38 32.0	
UGL				AMS	AMS	22 39 44.0	
	comp=E,6μm,15.0s						
UGL				AMS	AMS	22 39 44.0	
	comp=E,3μm,15.0s						
JKT	**Katashina**	**6.98**	**218**	P	**Pn**	**22 36 25.1**	**-0.6**
MJAR	**Matsushiro Arr**	**7.66**	**222**	Pn	**Pn**	**22 36 34.3**	**-0.7**
	comp=E,14nm,0.3s,baz=25,slow=12,SNR=108						
MJAR				Sn	**Sn**	**22 38 01.1**	**+0.8**
	comp=E,3.0nm,0.3s,baz=92,slow=16,SNR=2.6						
MJAR				LR	LR	22 40 18.9	
	comp=E,4μm,18.4s,baz=40,slow=44						
MJAR	**Matsushiro Arr**	**7.66**	**222**	PN	**Pn**	**22 36 34.3**	**-0.7**
MAJO	**Matsushiro**	**7.66**	**222**	*e*Pn	**Pn**	**22 36 34.1**	**-0.9**
MAJO				*e*Sn	**Sn**	**22 37 59.1**	**-1.3**
MAJO	**Matsushiro**	**7.66**	**222**	*e*PN	**Pn**	**22 36 34.1**	**-0.9**
MAT	**Matsushiro**	**7.66**	**222**	P	**Pn**	**22 36 33.8**	**-1.2**
MAT				S	**Sn**	**22 38 02.2**	**+1.8**
JGN	**Niukaw**	**8.36**	**224**	P	**Pn**	**22 36 44.0**	**-0.6**
HABR	**Khabarovsk**	**9.00**	**315**	*e*PN	**Pn**	**22 36 53.1**	**-0.2**
HABR				MLR	MLR		
	comp=Z,4μm,18.0s						
JGM	**Miyama**	**9.07**	**225**	P	**Pn**	**22 36 53.2**	**-1.1**
VLA	**Vladivostok**	**9.34**	**279**	⇓*i*PN	**Pn**	**22 37 00.3**	**+2.4**
VLA				*e*S	**Sn**	**22 38 47.5**	**+6.0**
VLA				pmax	pmax		
	comp=Z,150nm,1.3s						
JHJ	**Hachijo jima 2**	**10.03**	**204**	Pn	**Pn**	**22 37 04.0**	**-3.5**
	comp=Z,36nm,0.3s,baz=56,slow=17,SNR=15						
JHJ				Sn	**Sn**	**22 38 48.5**	**-10**
	comp=Z,87nm,0.3s,baz=235,slow=23,SNR=11						
JHJ				LR	LR	22 41 24.6	
	comp=Z,2μm,22.0s,baz=354,slow=40						
JWT	**Wachi**	**10.09**	**228**	P	**Pn**	**22 37 08.1**	**-0.2**
NKL	**Nikolayevsk**	**11.03**	**348**	*i* P	**Pn**	**22 37 22.0**	**+0.9**
NKL				AMB	AMB	22 37 24.0

comp=Z,35nm,0.8s
KLR Kul'dur 11.21 312 *e*PN **Pn 22 37 21.7 -1.9**
KLR *e* 22 39 35.0
KLR pmax pmax
comp=E,68nm,1.2s
KLR pmax pmax
comp=Z,86nm,1.2s
KLR pmax pmax
comp=Z,900nm,9.0s
KLR MLR MLR
comp=Z,7μm,13.0s
SKR Severo-Kuril's 11.46 40 *e*PN **Pn 22 37 27.2 +0.3**
SKR pmax pmax
comp=Z,1μm,2.0s
SKR pmax pmax
comp=Z,230nm,0.9s
SKR MLR MLR
comp=N,1μm,16.0s
SKR MLR MLR
comp=E,2μm,16.0s
SKR MLR MLR
comp=Z,3μm,16.0s
SKR Severo-Kuril's 11.46 40 *e*P **Pn 22 37 27.2 +0.3**
SKR AMB AMB 22 37 32.0
comp=Z,1μm,2.0s
SKR AMB AMB 22 37 34.1
comp=Z,230nm,0.9s
SKR AMS AMS 22 42 16.0
comp=Z,1μm,18.0s
SKR AMS AMS 22 42 16.0
comp=Z,3μm,18.0s
UWA2 Uwa jima 2 13.16 230 P **Pn 22 37 48.3 -2.0**
KSRS Korea Array 13.69 254 Pn **Pn 22 37 57.8 +0.3**
comp=Z,0.8nm,0.3s,baz=69,slow=12,SNR=62
KSRS Sn **Sn 22 40 32.8 +4.8**
comp=Z,0.3nm,0.3s,baz=62,slow=23,SNR=6.5
KSRS PcP PcP 22 43 19.7 -0.1
comp=Z,0.1nm,0.3s,baz=38,slow=0.5,SNR=9.2
KSRS LR LR 22 43 21.5
comp=Z,1μm,18.3s,baz=54,slow=38
KSRS Korea Array 13.69 254 P **Pn 22 37 57.8 +0.4**
KSRS 22 40 32.8
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,1μm,18.3s
PETK Petropavlovsk- 13.84 35 Pn **Pn 22 37 55.8 -3.6**
comp=Z,0.7nm,0.3s,baz=196,slow=13,SNR=8.0
PETK LR LR 22 43 20.8
comp=Z,816nm,18.5s,baz=91,slow=38
PETK Petropavlovsk- 13.84 35 P **Pn 22 37 55.8 -3.6**
CN2 Changchun 14.02 282 *e*P **Pn 22 38 01.0 -1.0**
CN2 *es*P 22 38 16.5
CN2 *e*S **Sn 22 40 36.2 +0.1**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 LR LR
comp=N,2μm,16.0s
CN2 LR LR
comp=E,1μm,16.0s
CN2 LR LR
comp=Z,2μm,17.0s
PET Petropavlovsk 14.20 37 *e*Pn **Pn 22 38 03.6 -0.6**
comp=Z,51nm,1.0s
PET Petropavlovsk 14.20 37 *e*P **Pn 22 38 00.8 -3.4**
PET *e*S **Sn 22 40 38.1 -2.0**
PET pmax pmax
comp=Z,24nm,0.6s
PET MLR MLR
comp=Z,1μm,16.0s
PET MLR MLR
comp=Z,1μm,13.0s
JNU Nakatsue 14.24 234 *e*Pn **Pn 22 38 02.3 -2.7**
INCN Inchon 14.60 256 *e*Pn **Pn 22 38 09.6 -0.1**
CBIJ Chichi jima 15.42 188 Pn **Pn 22 38 14.8 -5.8**
comp=Z,9.7nm,0.3s,baz=308,slow=21,SNR=7.5
CBIJ Sn **Sn 22 40 57.1 -13**
comp=Z,15nm,0.3s,baz=295,slow=20,SNR=5.8
CBIJ LR LR 22 44 29.9
comp=Z,765nm,20.1s,baz=178,slow=38
SNY Shenyang 15.57 275 ⇑P **Pn 22 38 22.2 -0.3**
SNY S **S 22 41 14.0 -14**
SNY pmax pmax
comp=Z,24nm,1.0s
SNY pmax pmax
comp=Z,310nm,4.7s
SNY LR LR
comp=N,560nm,14.5s
SNY LR LR
comp=E,690nm,17.6s
SNY LR LR
comp=Z,830nm,18.0s
ZEA Zeya 16.12 320 *e*P **Pn 22 38 27.8 -1.6**
ZEA AMB AMB 22 38 30.0
comp=Z,83nm,0.8s
ZEA AMB AMB 22 38 30.0
comp=Z,52nm,0.8s
ZEA AMB AMB 22 38 30.0
comp=Z,100nm,0.8s
ZEA AMB AMB 22 38 34.0
comp=Z,200nm,4.0s
ZEA *e*S **S 22 41 28.0 -11**
ZEA A 22 41 32.0
comp=Z,200nm,9.0s
ZEA A 22 41 32.0
comp=Z,300nm,9.0s
DL2 Dalian 17.73 266 P **Pn 22 38 48.5 -1.1**
DL2 *e*S **S 22 42 03.0 -8.7**
DL2 pmax pmax
comp=Z,30nm,0.8s
DL2 LR LR
comp=E,390nm,18.7s
DL2 LR LR
comp=Z,540nm,19.6s
HIA Hailar 18.53 300 *e*P **Pn 22 38 58.6 -0.7**
comp=Z,38nm,0.6s
HIA Hailar 18.53 300 *e*P **Pn 22 38 58.6 -0.7**
HIA pmax pmax
comp=Z,38nm,0.6s
CLNS Chul'man 19.13 326 *e*P **Pn 22 39 05.3 -1.1**
CLNS pmax pmax
comp=Z,18nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,0.9s
CLNS pmax pmax
comp=N,13nm,1.2s
SEY Seymchan 21.05 10 ⇑*i*P **P 22 39 23.8 -2.2**
BJI Beijing 21.43 273 P **P 22 39 28.9 -1.5**
BJI pP 22 39 39.0
BJI sP sP 22 39 43.4 -2.8
BJI S **S 22 43 26.0 +0.3**
BJI pmax pmax
comp=Z,44nm,0.8s,mb4.8
BJI pmax pmax
comp=Z,160nm,3.8s
BJI LR LR
comp=N,560nm,13.9s,MS4.3
BJI LR LR
comp=E,780nm,17.2s,MS4.3
BJI LR LR
comp=Z,580nm,25.0s
BJT Baijiatuau 21.45 273 *e*P **P 22 39 30.3 -0.2**
comp=Z,63nm,0.8s,mb5.0
BJT Baijiatuau 21.45 273 *e*P **P 22 39 30.3 -0.2**
BJT pmax pmax
comp=Z,63nm,0.8s
YAK Yakutsk 21.54 341 *e*P **P 22 39 26.4 -4.9**
comp=Z,88nm,0.8s,mb5.2
YAK Yakutsk 21.54 341 *e*P **P 22 39 26.7 -4.5**
YAK *e* 22 39 42.0
YAK *e*S **S 22 43 18.8 -8.4**
YAK *e*SS sS 22 43 32.6 -12
YAK *e* 22 43 33.6
YAK *e*SSS 22 43 56.9
YAK *e* 22 50 47.0
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK pmax pmax
comp=Z,49nm,0.9s,mb4.9
YAK pmax pmax
comp=N,15nm,1.4s
YAK pmax pmax
comp=Z,109nm,1.0s,mb5.2
YAK pmax pmax
comp=E,100nm,2.2s
YAK pmax pmax
comp=N,138nm,1.8s
YAK smax
comp=E,363nm,1.2s
YAK smax
comp=N,667nm,1.4s
YAK MLR MLR
comp=E,1μm,15.0s,MS4.5
YAK MLR MLR
comp=N,1μm,15.0s,MS4.5
YAK MLR MLR
comp=Z,2μm,15.0s,MS4.6
FX1 Attu Island--F 21.78 51 *e*P **P 22 39 33.7 -0.2**
FX1 Attu Island--F 21.78 51 *e*P **P 22 39 33.7 -0.3**
SSE Sheshan 21.80 246 *e*P **P 22 39 31.6 -2.8**
SSE pP 22 39 39.8
SSE S **S 22 43 30.3 -2.6**
SSE sS sS 22 43 44.1 -5.8
SSE pmax pmax
comp=Z,20nm,0.7s,mb4.7
SSE pmax pmax
comp=Z,61nm,3.5s
SSE LR LR
comp=N,700nm,15.7s,MS4.3
SSE LR LR
comp=E,490nm,15.7s,MS4.3
SSE LR LR
comp=Z,1μm,19.4s,MS4.3
NJ2 Nanjing 22.85 251 *e*P **P 22 39 43.2 -2.3**
NJ2 pP 22 39 52.4
NJ2 sP sP 22 39 56.5 -4.9
NJ2 PP 22 40 12.6
NJ2 pmax pmax
comp=Z,50nm,1.2s,mb4.8
NJ2 pmax pmax
comp=Z,300nm,6.0s
NJ2 LR LR
comp=N,1μm,17.9s,MS4.6
NJ2 LR LR
comp=E,2μm,14.7s,MS4.6
NJ2 LR LR
comp=Z,2μm,19.3s,MS4.5
CIT Chita 22.98 305 *e*P **P 22 39 46.3 -0.3**
CIT *e* 22 40 05.8
CIT *e* 22 40 16.3
CIT *e* 22 43 54.2
CIT pmax pmax
comp=Z,208nm,1.8s,mb5.3
HHC Hu-ho-hao-te 24.62 278 ⇓P **P 22 40 03.3 +1.1**
HHC pP 22 40 14.6
HHC sP sP 22 40 20.4 +1.6
HHC PP 22 40 40.6
HHC PcP PcP 22 43 41.5 +2.6
HHC S **S 22 44 19.3 -1.2**
HHC sS sS 22 44 37.5 -2.1
HHC SS 22 45 17.3
HHC ScP ScP 22 47 15.0 +0.9
HHC pmax pmax
comp=Z,36nm,1.2s,mb4.8
HHC pmax pmax
comp=Z,290nm,5.1s
HHC LR LR
comp=N,510nm,11.0s,MS4.3
HHC LR LR
comp=E,350nm,11.8s,MS4.3
HHC LR LR
comp=Z,440nm,12.5s,MS4.2
TATO Taipei 25.78 235 *e*P **P 22 40 12.6 -0.3**
BTO Baotou 25.82 278 *e*P **P 22 40 12.2 -0.9**
YHNB Yeheng 26.07 235 *e*P **P 22 40 15.5 -0.1**
ULN Ulaanbaatar 26.81 295 *e*P **P 22 40 22.3 +0.3**
comp=Z,34nm,0.9s,mb4.9
ULN PcP PcP 22 43 44.4 +0.6
ULN Ulaanbaatar 26.81 295 *e*P **P 22 40 22.3 +0.3**
ULN 22 43 44.4
ULN pmax pmax
comp=Z,34nm,0.9s,mb4.9
ULN Ulaanbaatar 26.81 295 P **P 22 40 22.0 0.0**
comp=Z,416nmcomp=Z,48nm,1.1s,mb4.9
ULN Ulaanbaatar 26.81 295 P **P 22 40 22.7 +0.7**
SNR=29
WHN Wuhan 26.88 254 P **P 22 40 24.0 +1.2**
WHN S **S 22 45 00.2 +3.7**
WHN LR LR
comp=Z,2μm,15.0s,MS4.7
SSLB Suanglung 26.99 234 *e*P **P 22 40 25.2 +1.4**
YULB Yu-li 27.09 233 *e*P **P 22 40 25.0 +0.3**
SONM Songino Array 27.25 295 P **P 22 40 25.8 -0.2**
comp=Z,80nm,1.0s,mb5.2,baz=83,slow=7.3,SNR=95
SONM PcP PcP 22 43 44.8 0.0
comp=Z,2.9nm,0.8s,baz=133,slow=3.4,SNR=3.9
SONM LR LR 22 52 12.6
comp=Z,607nm,19.1s,MS4.2,baz=192,slow=38
SONM Songino Array 27.25 295 P **P 22 40 25.8 -0.2**
SONM 22 43 44.9
TPUB Ta-pu 27.55 234 *e*P **P 22 40 29.1 +0.2**
comp=Z,70nm,0.8s,mb5.3
TWG Pinlang 27.66 232 *e*P **P 22 40 29.8 0.0**
BILL Bilibino 28.17 17 *e*P **P 22 40 33.6 -0.3**
BILL Bilibino 28.17 17 ⇓*e*P **P 22 40 34.3 +0.4**
BILL *e* pP 22 40 45.0 -0.4
BILL *e* 22 40 49.5
BILL *e* 22 43 43.5
BILL pmax pmax
comp=Z,24nm,2.5s,mb4.4
BILL MLR MLR
comp=Z,1μm,17.0s,MS4.5
IRK Irkutsk 28.67 304 *e*P **P 22 40 38.3 -0.2**
IRK pmax pmax
comp=Z,74nm,1.3s,mb5.3
GUMO Guam 29.74 179 LR LR 22 50 08.2
comp=Z,484nm,21.1s,MS4.1,baz=358,slow=32
TLY Talaya 29.02 303 *e*P **P 22 40 41.7 0.0**
comp=Z,30nm,0.9s,mb5.0
TLY *e*PP PP 22 41 48.2 +0.7
TLY Talaya 29.02 303 *e*P **P 22 40 41.8 +0.1**
TLY *e*S **S 22 45 33.3 +3.5**
TLY pmax pmax
comp=Z,31nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,453nm,17.0s,MS4.2
TLY Talaya 29.02 303 P **P 22 40 42.0 +0.3**
comp=Z,198nm,0.9s,mb5.8,SNR=15
TLY Talaya 29.02 303 P **P 22 40 42.3 +0.6**
SNR=22
XAN Xi'an 29.05 265 P **P 22 40 42.2 +0.1**
XAN pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
XAN LR LR
comp=N,270nm,11.2s
XAN LR LR
comp=E,220nm,23.0s
ZAK Zakamensk 29.23 300 ⇓*i*P **P 22 40 44.1 +0.5**
ZAK *e* 22 43 50.4
ZAK *e* 22 45 30.6
ZAK pmax pmax
comp=Z,27nm,1.2s,mb4.8
ENH Enshi 30.52 258 *e*P **P 22 40 55.4 +0.2**
comp=Z,83nm,0.8s,mb5.6
MOY Mondy 30.67 303 *e*P **P 22 40 56.6 +0.3**
MOY pmax pmax
comp=Z,57nm,2.2s,mb5.0
LZH Lanzhou 31.92 272 ⇓P **P 22 41 08.9 +1.5**
LZH pP pP 22 41 19.0 0.0
LZH sP sP 22 41 22.3 -1.8
LZH *e*S **S 22 46 19.0 +3.5**
LZH sS sS 22 46 31.0 -3.8
LZH SS SS 22 48 06.6 -27
LZH pmax pmax
comp=Z,110nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,320nm,4.0s
LZH LR LR
comp=N,700nm,11.2s,MS4.6
LZH LR LR
comp=E,360nm,15.5s,MS4.6
LZH LR LR
comp=Z,1μm,15.6s,MS4.7
GTA Gaotai 33.65 280 *e*P **P 22 41 22.9 +0.4**
GTA pP pP 22 41 32.1 -2.0
GTA sP sP 22 41 36.4 -2.8
GTA PcP PcP 22 44 03.2 +1.5
GTA S **S 22 46 38.2 -4.0**
GTA PcS PcS 22 47 48.7 +1.2
GTA pmax pmax
comp=Z,12nm,1.0s,mb4.8
GTA pmax pmax
comp=Z,88nm,4.7s
GTA LR LR
comp=N,390nm,14.7s,MS4.4
GTA LR LR
comp=E,380nm,16.6s,MS4.4
GTA LR LR
comp=Z,550nm,16.1s,MS4.4
CD2 Chengdu 34.38 264 P **P 22 41 29.2 +0.3**
CD2 pP pP 22 41 39.4 -1.1
CD2 sP sP 22 41 44.2 -1.4
CD2 PP PP 22 42 45.4 -1.8
CD2 PcP PcP 22 44 04.6 +0.7
CD2 S **S 22 46 54.0 +0.3**
CD2 sS sS 22 47 10.0 -3.1
CD2 PcS PcS 22 47 49.9 -0.5
CD2 SS SS 22 49 05.3 -18
CD2 ScS ScS 22 51 47.2 -1.0
CD2 pmax pmax
comp=Z,90nm,0.6s,mb5.9
CD2 pmax pmax
comp=Z,180nm,5.2s
CD2 LR LR
comp=N,540nm,17.8s,MS4.6
CD2 LR LR
comp=E,730nm,13.1s,MS4.6
CD2 LR LR
comp=Z,450nm,13.1s,MS4.4
GYA Guiyang 34.75 255 ⇓*i*P **P 22 41 32.2 +0.1**
GYA pP pP 22 41 45.0 +1.2
GYA sP sP 22 41 50.4 +1.5
GYA PP PP 22 42 51.2 -0.2
GYA PcP PcP 22 44 06.7 +1.6
GYA S **S 22 47 01.5 +2.0**
GYA sS sS 22 47 18.7 -0.2
GYA ScP ScP 22 47 47.5 +0.7
GYA SS SS 22 49 13.8 -17
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,130nm,5.6s
GYA LR LR
comp=N,860nm,17.5s,MS4.7
GYA LR LR
comp=E,750nm,17.4s,MS4.7
GYA LR LR
comp=Z,980nm,16.8s,MS4.6
QIZ Qiongzhong 37.48 242 P **P 22 41 55.9 +0.4**
QIZ sP sP 22 42 09.7 -2.6
QIZ S **S 22 47 40.8 -0.5**
QIZ pmax pmax
comp=Z,120nm,4.2s
QIZ LR LR
comp=E,330nm,16.1s
QIZ LR LR
comp=Z,700nm,18.2s,MS4.5
KMI Kunming 38.37 257 ⇓P **P 22 42 04.1 +1.1**
KMI pP pP 22 42 16.2 +1.5
KMI sP sP 22 42 20.2 +0.4
KMI PP PP 22 43 35.7 +4.4
KMI S **S 22 47 56.8 +2.1**
KMI sS sS 22 48 14.4 +0.1
KMI SS SS 22 50 35.4 -9.2
KMI pmax pmax
comp=Z,94nm,1.1s,mb5.4
KMI pmax pmax
comp=Z,270nm,3.1s
KMI LR LR
comp=N,400nm,15.1s,MS4.6
KMI LR LR
comp=E,670nm,15.1s,MS4.6
KMI LR LR
comp=Z,570nm,15.1s,MS4.5
TTA Tatalina 39.65 38 *e*P **P 22 42 10.9 -2.4**
TTA Tatalina 39.65 38 *e*P **P 22 42 10.9 -2.3**
ZAA0 Zalesovo Array 40.29 308 *e*P **P 22 42 18.3 -0.4**
ZALV Zalesovo Beam 40.29 308 P **P 22 42 18.2 -0.5**
comp=Z,23nm,0.7s,mb5.0,baz=87,slow=7.9,SNR=106
ZALV PcP PcP 22 44 21.8 +0.2
comp=Z,24nm,0.7s,baz=81,slow=3.0,SNR=14
ZALV ScP ScP 22 48 08.0 +0.8
comp=Z,4.6nm,0.9s,baz=94,slow=4.5,SNR=7.7
ZALV LR LR 23 00 18.1
comp=Z,513nm,18.6s,MS4.4,baz=305,slow=38
ZALV Zalesovo Beam 40.29 308 P **P 22 42 18.2 -0.5**
ZALV 22 44 21.8
WMQ Urumqi 40.81 292 P **P 22 42 24.0 +0.8**
WMQ pP pP 22 42 34.0 -1.0
WMQ sP sP 22 42 38.0 -2.0
WMQ PP PP 22 44 02.0 +4.4
WMQ S **S 22 48 33.0 +1.9**
WMQ sS sS 22 48 49.0 -1.7
WMQ SS SS 22 51 30.0 -3.0
WMQ pmax pmax
comp=Z,41nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,130nm,4.0s
WMQ LR LR
comp=N,430nm,16.0s,MS4.5
WMQ LR LR
comp=E,310nm,15.0s,MS4.5
WMQ LR LR
comp=Z,350nm,15.0s,MS4.3
NVS Novosibirsk 41.07 309 *e*P **P 22 42 22.7 -2.4**
NVS *e*S **S 22 48 33.1 -1.5**
NVS pmax pmax
comp=E,17nm,1.4s
NVS pmax pmax
comp=Z,23nm,1.4s,mb4.6
NVS smax
comp=E,44nm,2.9s
RSO Redoubt South 41.22 42 P **P 22 42 24.8 -1.5**
OHAK Old Harbor 41.22 47 *e*P **P 22 42 24.7 -1.7**
comp=E,56nm,1.2s,mb5.1
PPLA Purkeypile 41.40 38 *e*P **P 22 42 28.1 +0.4**
comp=E,50nm,1.0s,mb5.1
PPLA *e*PcP PcP 22 44 25.1 +0.1
KDAK Kodiak Island 41.54 46 *e*P **P 22 42 27.6 -1.3**
comp=E,32nm,0.8s,mb5.0
KDAK *e*PcP PcP 22 44 30.2 +4.7
KDAK Kodiak Island 41.54 46 *e*P **P 22 42 27.6 -1.3**
KDAK *e* 22 44 30.2
KDAK pmax pmax
comp=Z,32nm,0.8s,mb5.0
BPAW Bear Paw Mtn. 41.92 36 *e*P **P 22 42 31.7 -0.2**
comp=Z,15nm,0.9s,mb4.6
TRF Thorofare Moun 42.24 37 *e*P **P 22 42 35.1 +0.5**
comp=Z,11nm,0.7s,mb4.6
COLD Coldfoot 42.28 32 *e*P **P 22 42 34.9 +0.1**
comp=Z,17nm,1.1s,mb4.6
SLKM Skilak Lake 42.47 42 *e*P **P 22 42 36.2 -0.3**
SLKM Skilak Lake 42.47 42 *e*P **P 22 42 36.2 -0.2**
MCK McKinley 42.84 37 *e*P **P 22 42 38.4 -1.0**
comp=Z,32nm,0.9s,mb5.0
MCK *e*PcP PcP 22 44 30.3 +0.5
MCK McKinley 42.84 37 *e*P **P 22 42 38.4 -1.0**
MCK *e* 22 44 30.3
MCK pmax pmax
comp=Z,32nm,0.9s,mb5.0
PMR Palmer 42.90 40 *e*pP pP 22 42 51.2 -0.6
PMR Palmer 42.90 40 *e*P pP 22 42 51.2 -0.6
COLA College 43.25 35 *e*P **P 22 42 42.3 -0.5**
comp=Z,30nm,0.8s,mb5.1
COLA College 43.25 35 *e*P **P 22 42 42.3 -0.4**
COLA pmax pmax
comp=Z,30nm,0.8s,mb5.1
SML Sawmill 43.25 40 *e*P **P 22 42 42.5 -0.3**
comp=Z,15nm,1.0s,mb4.7
SML Sawmill 43.25 40 *e*P **P 22 42 42.5 -0.3**
SML pmax pmax
comp=Z,15nm,1.0s,mb4.7
MK31 Makanchi Array 43.51 298 *e*P **P 22 42 45.0 -0.1**
MK31 *e*PcP PcP 22 44 32.1 -0.2
MK31 Makanchi Array 43.51 298 *e*P **P 22 42 45.0 -0.1**
MK31 *e* 22 44 32.1
MKAR Makanchi Array 43.51 298 P **P 22 42 44.8 -0.3**
comp=Z,17nm,0.9s,mb4.8,baz=81,slow=9.4,SNR=108
MKAR PcP PcP 22 44 32.7 +0.3
comp=Z,9.5nm,0.9s,baz=62,slow=5.6,SNR=3.9
MKAR ScP ScP 22 48 20.9 +0.7
comp=Z,1.5nm,0.8s,baz=26,slow=3.4,SNR=4.0
MKAR LR LR 23 03 00.7
comp=Z,177nm,20.1s,MS4.0,baz=326,slow=39
MKAR Makanchi Array 43.51 298 P **P 22 42 44.8 -0.3**
MKAR PcP PcP 22 44 32.7 +0.3

MKAR ScP ScP 22 48 20.9 +0.7
MKAR LR LR 23 03 00.7
MKAR Makanchi Array 43.51 298 P **P** **22 42 44.8 -0.3**
MKAR 22 44 32.7
ILAR Eielson Array 43.67 35 P **P** **22 42 45.3 -0.8**
comp=Z,11nm,0.8s,mb4.7,baz=261,slow=5.3,SNR=38
ILAR Eielson Array 43.67 35 P **P** **22 42 45.3 -0.8**
MYLDM Lahad Datu 43.72 219 P **P** **22 42 49.3 +2.2**
comp=Z,37nm,1.1s,mb5.0
CHRT Chiangrai 43.79 253 ⇓P **P** **22 42 48.0 +0.3**
comp=Z,210nm,0.7s,mb6.0
KKM Kota Kinabalu 44.08 223 *e*P **P** **22 42 50.3 +0.3**
KKM Kota Kinabalu 44.08 223 P **P** **22 42 51.5 +1.5**
comp=Z,29nm,1.1s,mb4.9
TNTI Ternate 44.26 205 P **P** **22 42 50.0 -1.4**
comp=Z,65nm,1.0s,mb5.3
LSA Lhasa 44.32 271 P **P** **22 42 53.0 +1.2**
LSA pmax pmax
comp=Z,20nm,1.0s,mb4.8
LSA Lhasa 44.32 271 *e*P **P** **22 42 52.6 +0.8**
comp=Z,23nm,1.0s,mb4.9
LSA *e*PcP PcP 22 44 35.6 +0.2
LSA Lhasa 44.32 271 *e*P **P** **22 42 52.6 +0.8**
LSA *e* 22 44 35.6
LSA pmax pmax
comp=Z,23nm,1.0s,mb4.9
KURK Kurchatov 44.70 304 *e*P **P** **22 42 54.2 -0.3**
comp=Z,223nm,1.9s,mb5.7
KURK *e*PcP PcP 22 44 36.6 +0.3
KURK Kurchatov 44.70 304 *e*P **P** **22 42 54.2 -0.3**
KURK *e* 22 44 36.6
KURK pmax pmax
comp=Z,223nm,1.9s,mb5.7
KURK Kurchatov 44.70 304 P **P** **22 42 54.6 +0.1**
SNR=25
DOT Dot Lake 45.01 37 *e*P **P** **22 42 57.5 +0.7**
comp=Z,42nm,0.8s,mb5.3
CHG Chiang Mai 45.08 253 ⇓P **P** **22 42 58.8 +0.8**
comp=Z,40nm,0.9s,mb5.2
CHTO Chiang Mai 45.08 253 *e*P **P** **22 42 58.5 +0.5**
comp=Z,28nm,0.9s,mb5.1
CHTO *e*PcP PcP 22 44 38.6 +0.5
CHTO Chiang Mai 45.08 253 *e*P **P** **22 42 58.5 +0.5**
CHTO *e* 22 44 38.6
CHTO pmax pmax
comp=Z,28nm,0.9s,mb5.1
MENT Mentasta 45.25 38 *e*P **P** **22 43 00.8 +2.0**
CM31 Chiang Mai Arr 45.32 253 *e*P **P** **22 43 00.6 +0.7**
comp=Z,2.6nm,0.4s,mb4.4
CM31 *e*PcP PcP 22 44 39.7 +0.7
CMAR Chiang Mai Arr 45.32 253 P **P** **22 43 00.9 +1.0**
comp=Z,12nm,0.8s,mb4.8,baz=45,slow=7.1,SNR=65
CMAR PcP PcP 22 44 40.3 +1.3
comp=Z,4.7nm,0.8s,baz=8.2,slow=2.8,SNR=8.0
CMAR LR LR 23 03 31.6
comp=Z,454nm,18.9s,MS4.4,baz=286,slow=38
CMAR Chiang Mai Arr 45.32 253 P **P** **22 43 00.9 +1.0**
CMAR 22 44 40.3
LBMI Labuha 45.55 204 P **P** **22 43 01.5 -0.1**
comp=Z,3μmcomp=Z,54nm,0.9s,mb5.5
SHL Shillong 46.05 266 ⇓*i*P **P** **22 43 06.0 +0.4**
SHL *ex* x 22 50 02.0
EGAK Eagle 46.11 35 *e*P **P** **22 43 04.8 -0.7**
comp=Z,24nm,0.9s,mb5.1
MRSI Marisa 46.45 212 P **P** **22 43 08.1 -0.7**
comp=Z,2μmcomp=Z,183nm,1.1s,mb5.9
DAWY Dawson 46.98 36 *e*P **P** **22 43 12.9 +0.5**
DAWY *e*PcP PcP 22 44 43.9 -0.1
LUWI Luwuk 47.53 210 P **P** **22 43 15.8 -1.4**
comp=Z,57nm,1.4s,mb5.4
NLAI Namlea 48.13 204 P **P** **22 43 22.7 +0.9**
comp=Z,36nm,0.8s,mb5.4
TAPN Taplejung 48.13 271 *e*P **P** **22 43 22.5 +0.7**
comp=Z,57nm,1.0s,mb5.6
INK Inuvik 48.49 29 LR LR 23 05 18.0
comp=Z,562nm,19.7s,MS4.5,baz=296,slow=38
INK Inuvik 48.49 29 *e*P **P** **22 43 23.8 -0.2**
comp=Z,27nm,1.0s,mb5.2
INK Inuvik 48.49 29 *e*P **P** **22 43 23.8 -0.2**
INK pmax pmax
comp=Z,27nm,1.0s
VOSK Vostochnaya 48.63 309 P **P** **22 43 24.7 -0.6**
VOSK pmax pmax
comp=Z,60nm,1.4s,mb5.4
ODAN Odare 48.64 271 *e*P **P** **22 43 26.2 +0.5**
comp=Z,26nm,0.8s,mb5.3
BRVK Borovoye 48.92 310 *e*P **P** **22 43 27.6 +0.1**
comp=Z,42nm,1.1s,mb5.4
BRVK *e*PcP PcP 22 44 50.6 -0.5
BRVK Borovoye 48.92 310 *d i*P **P** **22 43 27.4 -0.1**
BRVK pmax pmax
comp=Z,58nm,1.2s,mb5.5
BRVK Borovoye 48.92 310 P **P** **22 43 28.0 +0.5**
SNR=21
GUN Gumba 49.18 273 *e*P **P** **22 43 30.3 +0.5**
comp=Z,64nm,0.5s,mb5.9
SBUM Sibu 49.19 225 P **P** **22 43 31.1 +1.1**
comp=Z,19nm,1.4s,mb4.9
TKM2 Tokmak 2 49.35 295 P **P** **22 43 31.7 +0.8**
SNR=13
TKM2 Tokmak 2 49.35 295 *e*P **P** **22 43 31.8 +0.8**
comp=Z,22nm,0.9s,mb5.2
TKM2 Tokmak 2 49.35 295 *e*P **P** **22 43 31.8 +0.9**
TKM2 pmax pmax
comp=Z,22nm,0.9s,mb5.2
KKN Kakani 49.69 273 *e*P **P** **22 43 34.1 +0.4**
comp=Z,59nm,1.0s,mb5.6
PKI Pulchoki 49.72 273 *e*P **P** **22 43 34.0 +0.1**
comp=Z,28nm,0.8s,mb5.3
PKIN Phulchoki 49.72 273 *e*P **P** **22 43 34.1 +0.1**
KBK Karagaybulak 49.90 295 P **P** **22 43 36.0 +0.9**
SNR=15
KBK Karagaybulak 49.90 295 *e*P **P** **22 43 36.0 +0.9**
comp=Z,25nm,1.0s,mb5.2
DMN Daman 49.92 273 *e*P **P** **22 43 35.8 +0.3**
comp=Z,41nm,0.9s,mb5.5
KZA Kyzart 49.94 294 *e*P **P** **22 43 37.3 +1.9**
comp=Z,27nm,1.0s,mb5.2
USP Ospenovka 49.94 296 P **P** **22 43 35.6 +0.2**
SNR=9.5
FRU Bishkek 50.04 296 *e*P **P** **22 43 35.0 -1.2**
GKN Gorkha 50.05 274 *e*P **P** **22 43 36.5 +0.1**
comp=Z,79nm,1.1s,mb5.6
AAK Ala-Archa 50.21 295 *e*P **P** **22 43 37.3 -0.1**
comp=Z,7.3nm,0.8s,mb4.8
AAK Ala-Archa 50.21 295 *e*P **P** **22 43 37.3 -0.2**
AAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KDI Kendari 50.28 209 P **P** **22 43 38.1 -0.1**
comp=Z,686nmcomp=Z,67nm,1.1s,mb5.6
UCH Uchtor 50.37 295 *e*P **P** **22 43 39.1 +0.4**
DANN Dangsing 50.51 275 *e*P **P** **22 43 40.8 +0.9**
comp=Z,183nm,0.8s,mb6.1
KSH Kashi 50.57 291 *e*P **P** **22 43 44.0 +3.8**
KSH *ep*P pP 22 43 56.5 +4.2
KSH *es*P sP 22 44 01.8 +4.5
KSH *e*PcP PcP 22 45 00.6 +3.1
KSH *e*PP PP 22 45 41.3 +5.2
KSH *e*ScP ScP 22 48 51.5 +1.6
KSH *e*PcS PcS 22 48 56.6 +1.8
KSH *e*S **S** **22 50 54.7 +3.3**
KSH *es*S sS 22 51 16.4 +4.9
KSH *e*ScS ScS 22 53 27.6 +0.2
KSH *e*SS SS 22 54 27.6 +2.1
KSH pmax pmax
comp=Z,17nm,0.9s,mb5.0
KSH pmax pmax
comp=Z,240nm,2.6s,mb5.7
KSH LR LR
comp=N,990nm,15.6s,MS5.1
KSH LR LR
comp=E,1μm,15.4s,MS5.1
KSH LR LR
comp=Z,910nm,14.7s,MS4.9
EKS2 Erkin-Say 50.67 296 P **P** **22 43 41.2 +0.2**
SNR=6.8
EKS2 Erkin-Say 50.67 296 *e*P **P** **22 43 41.1 +0.1**
comp=Z,8.9nm,1.1s,mb4.6
EKS2 *e*PcP PcP 22 44 58.8 +1.0
KOLN Koldanda 50.94 274 *e*P **P** **22 43 43.5 +0.3**
comp=Z,51nm,0.8s,mb5.5
AML Almayashu 50.96 295 P **P** **22 43 44.5 +1.3**
SNR=10
AML Almayashu 50.96 295 *e*P **P** **22 43 44.4 +1.2**
comp=Z,10nm,0.9s,mb4.8
AML *e*PcP PcP 22 44 60.0 +1.1

KSM Kuching 51.03 226 *e*P **P** **22 43 44.3 +0.4**
comp=Z,49nm,1.1s,mb5.3
KSM Kuching 51.03 226 P **P** **22 43 44.4 +0.5**
comp=Z,745nmcomp=Z,51nm,1.2s,mb5.3
SPSI Sidrap Palu 51.36 212 P **P** **22 43 45.1 -1.3**
comp=Z,21nm,1.4s,mb4.9
STKI Sintang 51.60 224 P **P** **22 43 48.8 +0.6**
comp=Z,68nm,0.8s,mb5.6
BBSI Bau Bau 51.72 208 P **P** **22 43 50.0 +1.0**
comp=Z,63nm,1.1s,mb5.5
KBKI Kotabaru 52.28 217 P **P** **22 43 51.9 -1.3**
comp=Z,4μmcomp=Z,41nm,0.9s,mb5.3
BKSI Bulukumba 52.47 211 P **P** **22 43 54.4 -0.2**
comp=Z,19nm,1.2s,mb4.9
KK31 Karatay Array 52.64 298 *i*P **P** **22 43 54.8 -0.9**
KK31 pmax pmax
comp=Z,14nm,0.9s,mb4.9
KKAR Karatay Array 52.64 298 *e*P **P** **22 43 55.5 -0.2**
KKAR *e*PcP PcP 22 45 05.3 +0.1
KKAR Karatay Array 52.64 298 *e*P **P** **22 43 55.5 -0.2**
KKAR *e* 22 45 05.3
SVE Sverdlovsk 52.79 317 ⇓*e*P **P** **22 43 57.0 +0.4**
SVE pmax pmax
comp=Z,60nm,0.9s,mb5.5
SVE MLR MLR
comp=Z,640nm,18.0s,MS4.7
DLBC Dease Lake 52.93 41 *e*P **P** **22 43 57.5 0.0**
DLBC *e*PcP PcP 22 45 06.4 +0.5
HNR Honiara 53.50 161 P **P** **22 44 02.1 0.0**
comp=Z,94nm,0.7s,mb5.8,baz=186,slow=5.8,SNR=4.2
HNR Honiara 53.50 161 *e*P **P** **22 44 01.9 -0.3**
HNR Honiara 53.50 161 P **P** **22 44 02.1 -0.1**
HNR pmax pmax
comp=Z,94nm,0.7s,mb5.8
SOKR Solikamsk 53.60 321 *d i*P **P** **22 44 01.8 -0.7**
SOKR pmax pmax
comp=Z,20nm,0.8s,mb5.1
SOKR MLR MLR
comp=Z,900nm,20.0s,MS4.8
DDI Dehra Dun 53.63 280 *e*PKP **P** **22 44 03.5 +0.4**
KULM Kulim 53.65 239 *e*P **P** **22 44 04.9 +1.5**
KULM *e*PcP PcP 22 45 07.7 -1.7
KULM Kulim 53.65 239 P **P** **22 44 04.0 +0.6**
comp=Z,52nm,1.0s,mb5.4
ARU Arti 54.00 317 *e*P **P** **22 44 04.6 -0.9**
comp=Z,42nm,0.8s,mb5.4
ARU Arti 54.00 317 *d i*P **P** **22 44 04.8 -0.6**
ARU *e* 22 45 07.8
ARU S **S** **22 51 40.8 +2.8**
ARU SS SS 22 55 16.6 -2.5
ARU pmax pmax
comp=Z,75nm,1.2s,mb5.5
ARU MLR MLR
comp=Z,632nm,21.0s,MS4.7
ARU Arti 54.00 317 P **P** **22 44 05.7 +0.3**
comp=Z,322nm,1.0s,mb6.2,SNR=28
ALE Alert 54.57 4 P **P** **22 44 09.0 -0.3**
comp=Z,56nm,0.8s,mb5.7,SNR=5.7
MMRI Maumere 54.76 207 P **P** **22 44 10.1 -1.3**
comp=Z,118nm,1.6s,mb5.7
NDI New Delhi 55.13 279 *e*PKP **P** **22 44 13.0 -1.1**
KBS Kingsbay 55.76 350 ⇑*i*P **P** **22 44 17.8 -0.1**
KBS pmax pmax
comp=Z,34nm,2.5s,mb4.9
KAKA Kakadu 55.99 194 ⇓*i*P **P** **22 44 19.0 -1.2**
comp=Z,46nm,0.6s,mb5.7
KAKA Kakadu 55.99 194 *e*P **P** **22 44 18.8 -1.4**
comp=Z,120nm,0.6s,mb6.1
KAKA Kakadu 55.99 194 P **P** **22 44 19.0 -1.2**
comp=Z,789nmcomp=Z,107nm,0.7s,mb6.0
COEN Coen 56.12 182 P **P** **22 44 20.8 -0.3**
comp=Z,141nm,1.6s,mb5.7
PPBI Pangkal Pinang 56.33 228 P **P** **22 44 23.0 +0.3**
comp=Z,53nm,1.1s,mb5.5
AB31 Akbulak array 56.40 308 P **P** **22 44 22.5 -0.3**
AB31 pmax pmax
comp=Z,6.0nm,0.3s,mb5.1
ABKAR Akbulak array 56.40 308 *e*P **P** **22 44 22.4 -0.4**
RES Resolute Bay 56.77 16 LR LR 23 13 26.0
comp=Z,238nm,18.6s,MS4.3,baz=258,slow=41
RES Resolute Bay 56.77 16 *e*P **P** **22 44 25.3 +0.2**
RES Resolute Bay 56.77 16 *e*P **P** **22 44 25.3 +0.2**
KHKI Kahang-Kahang 57.05 215 P **P** **22 44 25.9 -1.9**
comp=Z,1μmcomp=Z,120nm,1.2s,mb5.8
BKNI Bangkinang 57.27 235 P **P** **22 44 29.7 +0.3**
comp=Z,1μmcomp=Z,182nm,1.0s,mb6.1
PRGR Permogore 57.60 326 ⇓*i*P **P** **22 44 29.5 -1.6**
PRGR *e* 22 45 23.5
PRGR *e*S **S** **22 52 24.0 -1.7**
PRGR pmax pmax
comp=Z,19nm,0.8s,mb5.2
MNSI Mandailing Nat 57.79 237 P **P** **22 44 33.4 +0.3**
comp=Z,32nm,0.9s,mb5.3
KBL Kabul 57.84 289 *e*P **P** **22 44 32.3 -0.9**
comp=Z,28nm,0.9s,mb5.3
KBL Kabul 57.84 289 *e*P **P** **22 44 32.3 -0.9**
KBL pmax pmax
comp=Z,28nm,0.9s,mb5.3
YKA Yellowknife Ar 57.95 33 P **P** **22 44 32.8 -0.7**
comp=Z,3.7nm,0.7s,mb4.5,baz=302,slow=6.8,SNR=5.9
YKA Yellowknife Ar 57.95 33 P **P** **22 44 32.9 -0.6**
SDSI Sungai Dareh 58.03 234 P **P** **22 44 35.3 +0.5**
comp=Z,7μmcomp=Z,104nm,1.1s,mb5.8
BHPL Bhopal 58.10 273 *e*PKP **P** **22 44 34.7 -0.5**
BHPL AMb AMB 22 44 35.9
comp=Z,51nm,1.0s,mb5.5
SJI Sawahan 58.20 219 P **P** **22 44 35.4 -0.5**
comp=Z,62nm,1.1s,mb5.6
SMRI Semarang 58.23 221 P **P** **22 44 37.0 +0.9**
comp=Z,130nm,0.9s,mb5.9
PWJI Pagerwojo 58.44 219 P **P** **22 44 36.8 -0.7**
comp=Z,82nm,1.0s,mb5.7
APA Apatity 58.78 335 ⇑*i*P **P** **22 44 39.0 -0.3**
APA pmax pmax
comp=Z,25nm,1.2s,mb5.1
APA MLR MLR
comp=Z,300nm,16.0s,MS4.5
KLSI 59.20 228 P **P** **22 44 42.6 -0.2**
comp=Z,75nm,1.4s,mb5.5
KEV Kevo 59.27 339 *e*P **P** **22 44 41.8 -0.9**
comp=Z,18nm,0.9s,mb5.1
KEV Kevo 59.27 339 *e*P **P** **22 44 41.8 -0.8**
KEV pmax pmax
comp=Z,18nm,0.9s,mb5.1
MDSI Maura Dua 59.33 229 P **P** **22 44 43.8 0.0**
comp=Z,39nm,1.2s,mb5.3
LEM Lembang 59.45 224 P **P** **22 44 45.0 +0.4**
comp=Z,90nm,0.8s,mb5.9
KNA Kununurra 59.69 198 P **P** **22 44 45.5 -0.6**
comp=Z,1μmcomp=Z,184nm,0.9s,mb6.1
SISI Saibi 59.76 236 P **P** **22 44 47.7 +1.0**
comp=Z,52nm,1.2s,mb5.4
ARCES ARCESS Array B 59.81 339 P **P** **22 44 45.8 -0.5**
comp=Z,6.5nm,0.8s,mb4.7,baz=41,slow=7.5,SNR=20
ARCES LR LR 23 15 13.5
comp=Z,352nm,18.3s,MS4.5,baz=212,slow=41
ARCES ARCESS Array B 59.81 339 P **P** **22 44 45.8 -0.5**
ARCES pmax pmax
comp=Z,7.0nm,0.8s
ARCES MLR MLR
comp=Z,352nm,18.3s
ARE0 ARCESS Array S 59.81 339 *e*P **P** **22 44 46.2 -0.1**
KLMR Klimovskoe 60.52 327 *e*P **P** **22 44 50.0 -1.3**
KLMR pmax pmax
comp=Z,57nm,1.6s,mb5.5
DAG Danmarks Havn 60.60 356 *i*P **P** **22 44 52.0 +0.3**
DAG pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
DAG Danmarks Havn 60.60 356 *i*P **P** **22 44 52.0 +0.3**
comp=Z,69nm,0.9s,mb5.8
KTK1 Kautokeino 60.76 339 *e*P **P** **22 44 52.2 -0.6**
HYB Hyderabad 60.82 267 *i*P **P** **22 44 54.0 0.0**
TRO Tromso 61.40 341 *e*P **P** **22 44 55.8 -1.4**
TRO AMb AMB 22 45 09.4
comp=Z,37nm,1.2s,mb5.4
TRO Tromso 61.40 341 *e*P **P** **22 44 55.8 -1.4**
comp=Z,37nm,1.3s,mb5.3
TRO Tromso 61.40 341 *e*P **P** **22 44 55.8 -1.4**
TRO pmax pmax
comp=Z,37nm,1.3s,mb5.3
JCW Jim Creek 62.02 49 *e*P **P** **22 45 01.9 +0.2**
JCW *ep*P pP 22 45 13.8 -0.2
RPW Rockport 62.11 49 *e*P **P** **22 45 00.8 -1.4**
CTA Charters Tower 62.23 178 P **P** **22 45 01.7 -1.6**
comp=Z,12nm,1.0s,mb5.0,baz=351,slow=7.0,SNR=5.5
CTA LR LR 23 09 38.9

comp=Z,218nm,20.1s,MS4.3,baz=155,slow=34
CTA Charters Tower 62.23 178 *e*P **P** **22 45 00.8 -2.4**
comp=Z,13nm,1.4s,mb4.9
CTA Charters Tower 62.23 178 P **P** **22 45 01.7 -1.6**
CTA LR LR 23 09 38.9
CTA Charters Tower 62.23 178 P **P** **22 45 01.7 -1.5**
CTA pmax pmax
comp=Z,12nm,1.0s
CTA MLR MLR
comp=Z,218nm,20.1s
CTAO Charters Tower 62.23 178 *e*P **P** **22 45 01.6 -1.6**
comp=Z,37nm,1.4s,mb5.3
CTAO Charters Tower 62.23 178 *e*P **P** **22 45 01.6 -1.6**
CTAO pmax pmax
comp=Z,37nm,1.4s,mb5.3
CTAO Charters Tower 62.23 178 P **P** **22 45 02.5 -0.7**
comp=Z,20nm,1.3s,mb5.1
JOF Joensuu 62.35 332 *e*P **P** **22 45 02.9 -0.8**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
JOF Joensuu 62.35 332 *ep* **P** **22 45 02.9 -0.8**
comp=Z,3.1nm,0.4s,mb4.8
MDRS Chennai 62.37 262 *ex* x 22 44 49.6
FITZ Fitzroy Crossi 62.71 200 ⇓*i*P **P** **22 45 05.9 -0.6**
comp=Z,34nm,1.1s,mb5.4
FITZ Fitzroy Crossi 62.71 200 *e*P **P** **22 45 06.4 -0.1**
comp=Z,50nm,1.4s,mb5.5
FITZ *e*PcP PcP 22 45 43.7 -1.2
FITZ Fitzroy Crossi 62.71 200 P **P** **22 45 06.1 -0.4**
comp=Z,64nm,1.3s,mb5.6
WB2 Warramunga Arr 62.77 191 *e*P **P** **22 45 05.5 -1.4**
WB2 *e*PcP PcP 22 45 44.4 -0.7
WRA Warramunga Arr 62.77 191 P **P** **22 45 05.2 -1.7**
comp=Z,23nm,1.1s,mb5.2,baz=8.8,slow=7.0,SNR=82
WRA LR LR 23 09 48.5
comp=Z,168nm,18.8s,MS4.2,baz=65,slow=34
WRA PKPPKP 23 14 12.7
comp=Z,3.0nm,1.1s,baz=187,slow=2.3,SNR=7.2
WRA Warramunga Arr 62.77 191 P **P** **22 45 05.2 -1.7**
WRA LR LR 23 09 48.5
WRA P'P' 23 14 12.7
WRA Warramunga Arr 62.77 191 P **P** **22 45 05.2 -1.7**
WRA pmax pmax
comp=Z,23nm,1.1s
WRA MLR MLR
comp=Z,168nm,18.8s
WRA pmax pmax
comp=Z,3.0nm,1.1s
WRW Wenatchee Ridg 62.79 49 P **P** **22 45 07.0 +0.2**
TDL Tradedollar La 62.87 51 P **P** **22 45 08.2 +0.8**
ETW Entiat 63.24 49 P **P** **22 45 10.0 +0.2**
B08A Colville Reser 63.37 48 ⇓P **P** **22 45 10.0 -0.7**
baz=63,SNR=6.7
ABKT Ailbek 63.39 298 P **P** **22 45 11.7 +0.7**
comp=Z,137nm,0.7s,mb6.2,SNR=16
NAC Naches 63.45 50 P **P** **22 45 11.7 +0.4**
EBG Ellensburg 63.50 50 P **P** **22 45 12.1 +0.5**
POO Poona 63.61 271 *e*PKP **P** **22 45 12.4 -0.3**
POO AMb AMB 22 45 16.2
comp=Z,49nm,1.5s,mb5.3
EDM Edmonton 63.65 41 *e*P **P** **22 45 12.4 -0.1**
EDM Edmonton 63.65 41 *e*P **P** **22 45 12.4 0.0**
HOOD Mount Hood Mea 63.78 52 *e*P **P** **22 45 14.2 +0.8**
comp=Z,42nm,1.2s,mb5.3
BHJ Bhuj 63.81 278 *e*PKP **P** **22 45 14.5 +0.5**
H04A Detroit Lake 63.83 53 ⇑P **P** **22 45 13.7 -0.1**
baz=64,SNR=7.2
OD2 Odessa Site #2 64.26 49 P **P** **22 45 16.2 -0.4**
D08A Wollman Farm, 64.34 49 ⇓P **P** **22 45 16.5 -0.5**
baz=64,SNR=5.2
RSW Rattlesnake Hi 64.35 50 *e*P **P** **22 45 17.8 +0.6**
MOS Moscow 64.37 323 *e*P **P** **22 45 16.0 -1.1**
MOS *e* pP 22 45 28.8 -0.8
MOS pmax pmax
comp=Z,75nm,1.5s,mb5.5
HAWA Hanford 64.38 50 *e*P **P** **22 45 17.6 +0.3**
comp=Z,21nm,1.3s,mb5.0
KAF Kangasniemi 64.62 333 *e*P **P** **22 45 17.2 -1.5**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KAF Kangasniemi 64.62 333 *ep* **P** **22 45 17.2 -1.5**
comp=Z,2.7nm,0.4s,mb4.6
NEW Newport 64.63 47 ⇓P **P** **22 45 18.4 -0.5**
baz=64,SNR=8.4
NEW Newport 64.63 47 *e*P **P** **22 45 19.0 0.0**
comp=Z,22nm,1.2s,mb5.1
NEW Newport 64.63 47 *e*P **P** **22 45 19.0 +0.1**
NEW pmax pmax
comp=Z,22nm,1.2s
KTRM Thompson Ridge 64.70 56 P **P** **22 45 20.4 +0.9**
VIPM Ingram Point 64.85 52 P **P** **22 45 20.8 +0.4**
VIPM Ingram Point 64.85 52 P **P** **22 45 20.8 +0.4**
KHMM Horse Mountain 65.08 57 *e*P **P** **22 45 22.8 +0.8**
comp=Z,57nm,1.2s,mb5.5
E09A Wood Farm, Sta 65.09 49 P **P** **22 45 22.0 0.0**
baz=65,SNR=16
MOR8 Moi Rana 65.14 340 *e*P **P** **22 45 19.5 -2.4**
MOR8 AMb AMB 22 45 21.4
comp=Z,23nm,1.2s,mb5.1
MOR8 *ep*P pP 22 45 32.0 -2.3
MOR8 Moi Rana 65.14 340 *e*P **P** **22 45 19.5 -2.4**
comp=Z,23nm,1.2s,mb5.1
FINES FINESS Array B 65.17 332 P **P** **22 45 21.4 -0.8**
comp=Z,16nm,0.6s,mb5.2,baz=48,slow=7.0,SNR=109
FINES LR LR 23 17 02.8
comp=Z,624nm,19.1s,MS4.8,baz=50,slow=39
FINES FINESS Array B 65.17 332 P **P** **22 45 21.4 -0.8**
FINES pmax pmax
comp=Z,16nm,0.6s
FINES MLR MLR
comp=Z,624nm,19.2s
YBH Yreka Blue Hor 65.21 55 *e*P **P** **22 45 23.9 +1.0**
comp=Z,22nm,1.2s,mb5.1
YBH Yreka Blue Hor 65.21 55 *e*P **P** **22 45 23.9 +1.1**
YBH pmax pmax
comp=Z,22nm,1.2s
OBN Obninsk 65.23 323 *e*P **P** **22 45 22.3 -0.4**
comp=Z,72nm,1.4s,mb5.5
OBN Obninsk 65.23 323 *de*P **P** **22 45 21.8 -1.0**
OBN *i* *PP pP 22 45 34.4 -0.8
OBN 22 45 53.0
OBN pmax pmax
comp=Z,31nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,400nm,14.0s,MS4.8
SUMG Summit 65.27 1 *e*P **P** **22 45 23.2 +0.5**
comp=Z,27nm,0.8s,mb5.3
SUMG Summit 65.27 1 *i* P **P** **22 45 23.2 +0.4**
comp=Z,26nm,0.9s,mb5.3
VRHR Novokhopersk 65.33 317 *e*P **P** **22 45 22.2 -1.3**
VRHR pmax pmax
comp=N,7.0nm,0.6s
VRHR pmax pmax
comp=E,3.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.3
C11A Tepee Creek (N 65.35 47 ⇑P **P** **22 45 23.5 -0.1**
baz=65
G08A Pilot Rock 65.35 51 ⇓P **P** **22 45 23.6 -0.1**
baz=65,SNR=6.7
LNOR Lincton Mounta 65.39 50 *e*P **P** **22 45 23.8 -0.2**
LNOR Lincton Mounta 65.39 50 *e*P **P** **22 45 23.8 -0.1**
A13A Flathead Natio 65.67 45 ⇓P **P** **22 45 25.4 -0.3**
baz=65
K05A Summer Lake 65.72 54 ⇓P **P** **22 45 26.5 +0.3**
baz=66,SNR=20
I07A Izee 65.75 52 ⇑P **P** **22 45 26.1 -0.1**
baz=66,SNR=5.6
C12B Naegeli Ranch, 65.85 47 ⇑P **P** **22 45 26.6 -0.2**
baz=66
KCPM Cahto Peak 65.86 58 *e*P **P** **22 45 27.6 +0.5**
comp=Z,13nm,1.1s,mb4.9
WALA Waterton Lakes 65.86 45 *e*P **P** **22 45 26.9 -0.1**
comp=Z,0.3nm,0.9s
WALA *e* pP 22 45 39.2 -0.1
WALA *e*PcP PcP 22 45 57.8 +0.2
PALK Pallekele 65.91 257 *e*P **P** **22 45 27.6 -0.1**
PALK Pallekele 65.91 257 *e*P **P** **22 45 27.6 -0.1**
F10A Beach Ranch, E 65.92 49 ⇑P **P** **22 45 27.1 -0.3**
baz=66
WDC Whiskeytown Da 65.98 56 *e*P **P** **22 45 28.2 +0.4**
WDC Whiskeytown Da 65.98 56 *e*P **P** **22 45 28.2 +0.3**
B13A Whitefish 65.98 46 ⇑P **P** **22 45 27.9 +0.1**
baz=66,SNR=20
BSMT Bassoo Peak 66.13 46 *e*P **P** **22 45 29.0 +0.4**
A14A Double T Ranch 66.17 45 P **P** **22 45 28.8 -0.1**

baz=66,SNR=8.9
BLMT Blacktail Moun 66.26 46 *e*P **P 22 45 29.8 +0.3**
C13A Hot Springs 66.35 46 P **P 22 45 30.2 +0.2**
baz=66,SNR=11
JTMT Jette 66.47 46 *e*P **P 22 45 31.1 +0.3**
VSR Storozhevoye 66.48 319 *e*P **P 22 45 30.2 -0.6**
VSR *e* pP 22 45 43.0 -0.3
VSR pmax pmax
comp=N,1.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR MLR MLR
comp=N,440nm,18.0s,MS4.8
VSR MLR MLR
comp=E,190nm,18.0s,MS4.8
VSR MLR MLR
comp=Z,620nm,18.0s,MS4.9
ASAR Alice Springs 66.50 191 P **P 22 45 30.4 -0.7**
comp=Z,18nm,1.0s,mb5.1,baz=9.6,slow=5.3,SNR=90
ASAR PKPPKP 23 14 07.9
comp=Z,0.9nm,0.8s,baz=183,slow=2.7,SNR=5.8
ASAR Alice Springs 66.50 191 P **P 22 45 30.4 -0.7**
ASAR pmax pmax
comp=Z,18nm,1.0s
A15A Johnson Ranch, 66.53 44 ⇓P **P 22 45 29.8 -1.3**
baz=66,SNR=9.0
YBMT Yellow Bay 66.54 46 *e*P **P 22 45 31.4 +0.2**
LBCM Butte Creek Ri 66.56 56 P **P 22 45 31.7 +0.2**
MOD Modoc 66.56 54 *e*P **P 22 45 32.0 +0.5**
comp=Z,12nm,1.2s,mb4.8
VORD Divnogorie 66.57 318 *e*P **P 22 45 30.7 -0.7**
VORD *e* pP 22 45 43.3 -0.6
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD MLR MLR
comp=N,400nm,17.0s,MS4.8
VORD MLR MLR
comp=E,280nm,17.0s,MS4.8
VORD MLR MLR
comp=Z,460nm,17.0s,MS4.8
E12A Beaver Dam Sad 66.58 48 ⇓P **P 22 45 31.4 -0.2**
baz=66
B14A Marquette Ranc 66.62 45 ⇑P **P 22 45 31.9 0.0**
baz=66,SNR=7.3
C14A Swan Lake 66.74 46 ⇓P **P 22 45 32.5 0.0**
baz=66
SWMT Swartz Lake 66.76 46 *e*P **P 22 45 33.1 +0.4**
D13A Huson 66.77 47 P **P 22 45 32.8 0.0**
baz=66,SNR=10
B15A Bradely Ranch, 67.03 45 P **P 22 45 34.1 -0.2**
baz=67,SNR=23
A16A West Butte Ran 67.13 44 ⇑P **P 22 45 34.3 -0.7**
baz=67,SNR=8.1
F12A Elk City 67.15 48 P **P 22 45 35.4 +0.2**
baz=67,SNR=25
SLMT Seeley Lake 67.20 46 *e*P **P 22 45 34.9 -0.6**
MSO Missoula 67.21 47 ⇓P **P 22 45 35.4 -0.2**
baz=67,SNR=11
MSO Missoula 67.21 47 *e*P **P 22 45 35.2 -0.3**
comp=Z,18nm,1.2s,mb5.0
WVOR Wild Horse Val 67.24 53 *e*P **P 22 45 35.4 -0.5**
comp=Z,28nm,1.3s,mb5.1
WVOR Wild Horse Val 67.24 53 *e*P **P 22 45 35.4 -0.4**
WVOR pmax pmax
comp=Z,28nm,1.3s,mb5.1
D14A Greenough 67.29 46 ⇓P **P 22 45 35.7 -0.3**
baz=67,SNR=13
DZM Mont Dzumac 67.29 158 *e*P **P 22 45 39.5 +3.3**
comp=Z,64nm,1.2s,mb5.5
DZM *e*LR LR 23 06 01.4
comp=Z,386nm,23.1s
MBWA Marble Bar 67.30 205 *e*P **P 22 45 35.4 -0.9**
comp=Z,19nm,0.9s,mb5.1
MBWA Marble Bar 67.30 205 P **P 22 45 36.0 -0.3**
comp=Z,30nm,1.0s,mb5.3
C15A Salmond Ranch, 67.34 45 P **P 22 45 37.0 +0.6**
baz=67,SNR=28
B16A M & M Farms, S 67.41 45 ⇑P **P 22 45 36.4 -0.4**
baz=67,SNR=11
G12A Big Creek, Yel 67.50 49 ⇑P **P 22 45 36.9 -0.6**
baz=67
CHMT Chamberlain Mo 67.53 46 *e*P **P 22 45 37.4 -0.2**
CHMT *e* pP 22 45 50.1 0.0
A17A Triple J Farms 67.59 44 P **P 22 45 37.5 -0.4**
baz=67,SNR=17
F13A Darby 67.64 48 ⇓P **P 22 45 37.4 -1.0**
baz=67,SNR=10
EIDS Eidsvold 67.73 174 *e*P **P 22 45 38.9 -0.1**
comp=Z,16nm,0.9s,mb5.1
C16A Fuhringer Ranc 67.77 45 ⇑P **P 22 45 39.0 -0.1**
baz=68,SNR=15
TRD Trivandrum 67.79 261 *e*PKP **P 22 45 39.6 -0.1**
D15A Lincoln 67.84 46 ⇑P **P 22 45 39.3 -0.3**
baz=68,SNR=7.6
FFC Flin Flon 67.88 35 *e*P **P 22 45 39.2 -0.4**
comp=Z,23nm,0.9s,mb5.2
FFC *e* pP 22 45 51.0 -1.1
FFC *e*PcP PcP 22 46 05.5 -0.4
FFC Flin Flon 67.88 35 *e*P **P 22 45 39.2 -0.5**
FFC *e* pP 22 45 51.0 -1.2
FFC *e* 22 46 05.5
FFC pmax pmax
comp=Z,23nm,0.9s,mb5.2
B17A L&G Farms, Che 67.96 44 ⇓P **P 22 45 39.8 -0.5**
baz=68,SNR=11
H12A Diamond D Ranc 68.12 49 P **P 22 45 41.1 -0.2**
baz=68,SNR=14
G13A Cobalt 68.13 48 P **P 22 45 40.9 -0.5**
baz=68,SNR=14
E15A Deer Lodge 68.17 47 ⇑P **P 22 45 41.3 -0.3**
baz=68,SNR=18
MFID Camas Ranch 68.27 51 P **P 22 45 42.5 +0.2**
baz=68,SNR=8.9
D16A Dana Ranch, Ca 68.36 46 ⇓P **P 22 45 42.4 -0.4**
baz=68,SNR=12
C17A Wharram Farm, 68.39 45 ⇑P **P 22 45 42.3 -0.7**
baz=68,SNR=15
B18A Beardsley Farm 68.42 44 ⇑P **P 22 45 42.8 -0.3**
baz=68,SNR=12
HRY Holter Researc 68.42 46 *e*P **P 22 45 43.6 +0.4**
HRY *e* pP 22 45 55.6 0.0
HRY *e*PcP PcP 22 46 08.6 +0.2
I12A Atlanta 68.43 50 P **P 22 45 43.6 +0.3**
baz=68,SNR=20
PAHR Pah Rah Range 68.44 56 *e*P **P 22 45 43.9 +0.4**
comp=Z,43nm,1.1s,mb5.4
PAHR *e*PcP PcP 22 46 09.2 +0.7
H13A Challis 68.45 49 P **P 22 45 43.2 -0.2**
baz=68,SNR=31
WCN Washoe City 68.46 56 ⇓P **P 22 45 43.6 0.0**
baz=68,SNR=8.2
WCN Washoe City 68.46 56 *e*P **P 22 45 43.8 +0.2**
WCN Washoe City 68.46 56 *e*P **P 22 45 43.8 +0.2**
A19A Klindworth Far 68.59 43 ⇓P **P 22 45 44.2 0.0**
baz=68,SNR=12
E16A East Helena 68.61 46 P **P 22 45 44.6 +0.2**
baz=68,SNR=20
F15A Butte 68.61 47 P **P 22 45 44.5 +0.1**
baz=68,SNR=20
LRM Limekiln Ridge 68.65 47 *e*P **P 22 45 44.7 +0.1**
EGMT Eagleton 68.67 44 ⇓P **P 22 45 44.0 -0.7**
baz=68,SNR=18
EGMT Eagleton 68.67 44 *e*P **P 22 45 44.6 -0.1**
comp=Z,30nm,0.9s,mb5.2
D17A Six Diamond Ra 68.74 45 P **P 22 45 45.0 -0.1**
baz=68,SNR=11
B19A Brinkman Farms 68.80 43 P **P 22 45 45.5 0.0**
baz=68,SNR=14
CMB Columbia Colle 68.85 58 *e*P **P 22 45 46.2 +0.3**
CMB Columbia Colle 68.85 58 *e*P **P 22 45 46.2 +0.2**
DLMT Dillon 68.86 47 *e*P **P 22 45 46.5 +0.6**
comp=Z,25nm,0.9s,mb5.1
H14A Leadore 68.91 48 ⇑P **P 22 45 45.2 -1.0**
baz=69,SNR=6.5
I13A Wildhorse Cree 68.93 49 ⇓P **P 22 45 46.2 -0.2**
baz=69,SNR=15
HLID Hailey 68.98 50 ⇓P **P 22 45 46.8 +0.1**
baz=69,SNR=18
HLID Hailey 68.98 50 *e*P **P 22 45 46.3 -0.4**
comp=Z,13nm,1.0s,mb4.8
G15A Dillon 69.04 48 P **P 22 45 47.3 +0.2**
baz=69,SNR=42
E17A Martinsdale 69.09 46 P **P 22 45 47.7 +0.3**
baz=69,SNR=26
F16A Kennard Place, 69.12 47 P **P 22 45 47.7 +0.1**
baz=69,SNR=12
WAKR Walker 69.15 57 *e*P **P 22 45 47.4 -0.5**
D18A Linhart Farms, 69.17 45 ⇑P **P 22 45 48.2 +0.3**
baz=69,SNR=6.7
BOZ Bozeman (W) 69.20 47 ⇓P **P 22 45 48.3 +0.2**
baz=69,SNR=25
BOZ Bozeman (W) 69.20 47 *e*P **P 22 45 48.4 +0.3**
BOZ Bozeman (W) 69.20 47 *e*P **P 22 45 48.4 +0.3**
KIV Kislovodsk 69.20 311 *e*P **P 22 45 48.6 +0.5**
comp=Z,46nm,1.0s,mb5.4
KIV Kislovodsk 69.20 311 α *i*P **P 22 45 49.3 +1.2**
KIV *e**PP pP 22 45 58.7 -1.9
KIV S S 22 54 56.0 +5.2
KIV pmax pmax
comp=Z,48nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,900nm,16.0s,MS5.1
KIV Kislovodsk 69.20 311 P **P 22 45 49.2 +1.1**
comp=Z,265nm,0.8s,mb6.2,SNR=7.6
KIV Kislovodsk 69.20 311 P **P 22 45 49.7 +1.6**
SNR=7.0
C19A Slack Wire Ran 69.22 44 P **P 22 45 48.4 +0.3**
baz=69,SNR=34
J13A Cove Ranch, Pi 69.22 50 ⇑P **P 22 45 48.6 +0.3**
baz=69,SNR=14
DGRG David-gareji 69.23 307 P **P 22 45 50.6 +2.2**
ZEI Tsey 69.26 309 *e*P **P 22 45 45.8 -2.7**
ZEI pmax pmax
comp=Z,24nm,1.3s,mb5.0
I14A Mackay 69.30 49 P **P 22 45 49.5 +0.8**
baz=69,SNR=20
BMN Battle Mountai 69.30 54 *e*P **P 22 45 49.5 +0.7**
BMN Battle Mountai 69.30 54 *e*P **P 22 45 49.5 +0.7**
H15A Lima 69.31 48 ⇓P **P 22 45 48.1 -0.6**
baz=69,SNR=5.5
G16A Moss Hill, Enn 69.38 47 P **P 22 45 49.3 +0.1**
baz=69,SNR=12
MTA Mtatsminda 69.42 308 P **P 22 45 49.6 +0.1**
TBLG Delisi 69.43 308 P **P 22 45 50.2 +0.7**
TBLG Delisi 69.43 308 P **P 22 45 50.2 +0.7**
E18A Harlowton 69.53 45 ⇑P **P 22 45 50.1 +0.1**
baz=69,SNR=11
F17A Fitzpatrick Pl 69.56 46 ⇓P **P 22 45 50.2 0.0**
baz=69,SNR=11
GOR Gori 69.64 309 P **P 22 45 51.7 +0.9**
J14A Carey 69.64 50 ⇑P **P 22 45 51.4 +0.6**
baz=69,SNR=34
D19A Cripps Ranch, 69.67 44 ⇓P **P 22 45 50.9 -0.1**
baz=69
C20A Veseth Ranch, 69.76 43 ⇑P **P 22 45 51.7 +0.2**
baz=70
B21A Ellsworth Farm 69.79 42 ⇑P **P 22 45 51.5 -0.1**
baz=70,SNR=13
QLMT Earthquake Lak 69.83 47 *e*P **P 22 45 51.9 -0.1**
comp=Z,1.0nm,0.3s,mb4.2
G17A Pierce Place, 69.89 47 P **P 22 45 53.0 +0.7**
baz=70,SNR=14
NVAR Mina Array Bea 69.89 56 P **P 22 45 52.4 0.0**
comp=Z,15nm,0.9s,mb4.9,baz=288,slow=6.5,SNR=55
H16A Russell Place, 70.02 47 P **P 22 45 53.6 +0.6**
baz=70,SNR=6.8
F18A Big Timber 70.06 46 P **P 22 45 53.4 +0.1**
baz=70,SNR=23
D20A Manuel Ranch, 70.11 44 ⇓P **P 22 45 53.2 -0.4**
baz=70,SNR=19
NB2 NORSAR Subarra 70.12 338 P **P 22 45 52.4 -1.1**
comp=Z,4.7nm,0.5s,mb4.7,baz=33,slow=6.5
NOA NORSAR Array B 70.12 338 P **P 22 45 52.7 -0.7**
comp=Z,12nm,0.8s,mb4.9,baz=35,slow=6.2,SNR=29
NOA LR LR 23 20 20.5
comp=Z,458nm,21.0s,MS4.7,baz=25,slow=39
NOA NORSAR Array B 70.12 338 P **P 22 45 52.7 -0.7**
NOA LR LR 23 20 20.5
NOA NORSAR Array B 70.12 338 P **P 22 45 52.7 -0.8**
NOA pmax pmax
comp=Z,12nm,0.8s
NOA MLR MLR
comp=Z,458nm,21.0s
C21A Desert Coulee 70.15 43 ⇑P **P 22 45 53.4 -0.4**
baz=70,SNR=10
GCMT Greycliff 70.16 46 *e*P **P 22 45 54.6 +0.6**
comp=Z,20nm,1.0s,mb5.0
GCMT *e* pP 22 46 06.1 -0.4
E19A Rath Farm, Rou 70.18 45 ⇑P **P 22 45 54.2 +0.1**
baz=70,SNR=19
YMR Madison River 70.19 47 *e*P **P 22 45 54.3 +0.2**
comp=Z,16nm,1.0s,mb4.9
J15A Blackfoot 70.20 49 ⇓P **P 22 45 54.6 +0.3**
baz=70,SNR=12
SFJD Kangerlussuaq 70.29 6 *e*P **P 22 45 53.6 -0.7**
comp=Z,63nm,2.6s,mb5.1
SFJD Kangerlussuaq 70.29 6 *e*P **P 22 45 53.7 -0.7**
SFJD pmax pmax
comp=Z,63nm,2.6s,mb5.1
YNR Norris Junctio 70.32 47 *e*P **P 22 45 56.9 +1.9**
comp=Z,27nm,1.3s,mb5.0
K14A Jones Ranch, D 70.33 50 ⇓P **P 22 45 55.4 +0.3**
baz=70,SNR=5.3
MTUM Tungsten Hills 70.40 57 *e*P **P 22 45 56.2 +0.7**
YFT Old Faithful 70.40 47 *e*P **P 22 45 58.0 +2.6**
comp=Z,18nm,0.7s,mb5.1
I16A Newdale 70.42 48 P **P 22 45 56.8 +1.2**
baz=70,SNR=8.4
GNI Garni 70.42 307 *e*P **P 22 45 56.1 +0.5**
comp=Z,40nm,1.4s,mb5.2
GNI Garni 70.42 307 ⇑ *e*P **P 22 45 57.6 +1.9**
GNI pmax pmax
comp=Z,23nm,1.2s
E20A Meyer Farm, Mu 70.50 44 ⇑P **P 22 45 55.8 -0.2**
baz=70,SNR=5.5
F19A Roth Farm, Mol 70.50 45 P **P 22 45 56.1 +0.1**
baz=70,SNR=23
LKWY Lake 70.57 47 *e*P **P 22 45 58.6 +2.1**
comp=Z,16nm,0.9s,mb5.0
LKWY Lake 70.57 47 *e*P **P 22 45 58.6 +2.1**
LKWY pmax pmax
comp=Z,16nm,0.9s,mb5.0
H17A Grant Village 70.58 47 ⇓P **P 22 45 58.1 +1.5**
baz=70,SNR=8.1
K15A Arbon 70.61 50 ⇑P **P 22 45 57.6 +0.8**
baz=70,SNR=6.1
L14A Malta 70.62 51 ⇓P **P 22 45 57.5 +0.6**
baz=70,SNR=12
D21A La Casta Ranch 70.70 43 P **P 22 45 57.2 0.0**
baz=70,SNR=6.4
IMW Indian Meadow 70.71 48 *e*P **P 22 45 58.7 +1.3**
comp=Z,25nm,0.9s,mb5.1
FLWY Flagg Ranch 70.72 48 *e*P **P 22 45 58.5 +1.1**
comp=Z,14nm,0.9s,mb4.9
J16A Bone 70.74 49 P **P 22 45 58.5 +1.0**
baz=70,SNR=19
DCID1 Drake Creek 70.77 48 *e*P **P 22 45 59.0 +1.3**
comp=Z,66nm,1.1s,mb5.5
Q10A Clear Creek Ra 70.81 55 P **P 22 45 58.2 +0.2**
baz=71,SNR=12
RLMT Red Lodge 70.81 46 ⇓P **P 22 45 58.1 +0.2**
baz=71,SNR=7.3
RLMT Red Lodge 70.81 46 *e*P **P 22 45 58.2 +0.3**
RRI2 Red Ridge 70.86 48 *e*P **P 22 45 59.0 +0.8**
comp=Z,43nm,1.0s,mb5.3
H18A Shoshone NF, C 70.89 47 ⇑P **P 22 45 58.5 +0.1**
baz=71,SNR=9.8
I17A Pilgrim Ck. 70.89 48 ⇓P **P 22 45 59.3 +0.9**
baz=71,SNR=9.5
MOOW Moose Ponds 70.91 48 *e*P **P 22 45 59.3 +0.7**
comp=Z,27nm,1.0s,mb5.1
TPAW Teton Pass 70.97 48 *e*P **P 22 46 00.2 +1.3**
comp=Z,39nm,1.1s,mb5.2
VES Vestal, Richgr 71.02 59 ⇓P **P 22 45 58.2 -1.2**
baz=71
K16A Soda Springs 71.04 49 ⇓P **P 22 45 59.9 +0.6**
baz=71,SNR=13
HVU Hansel Valley 71.05 50 *e*P **P 22 46 00.3 +0.8**
comp=Z,18nm,1.0s,mb4.9
HVU Hansel Valley 71.05 50 *e*P **P 22 46 00.3 +0.8**
HVU pmax pmax
comp=Z,18nm,1.0s,mb5.0
D22A Cohagen 71.06 43 ⇑P **P 22 45 59.3 -0.2**
baz=71
LOHW Long Hollow 71.08 48 *e*P **P 22 45 60.0 +0.4**
comp=Z,15nm,1.1s,mb4.8
SNOW Snow King Moun 71.09 48 *e*P **P 22 46 00.5 +0.8**
comp=Z,9.4nm,0.6s,mb4.9
REDW Red Top Meadow 71.10 48 *e*P **P 22 46 00.8 +1.0**
comp=Z,23nm,1.0s,mb5.1
L15A Malad City 71.13 50 ⇓P **P 22 45 59.9 -0.1**
baz=71,SNR=7.3
PKM Peak Mountain 71.15 60 ⇑P **P 22 46 00.5 +0.3**
baz=71,SNR=5.7
J17A Brown Place, J 71.18 48 ⇓P **P 22 46 00.9 +0.7**
baz=71,SNR=7.7
S10A Tonopah Range, 71.26 56 P **P 22 46 00.9 +0.2**
baz=71,SNR=23
G20A Bridger 71.30 45 P **P 22 46 00.2 -0.7**
baz=71,SNR=6.0
GRAC Grapevine Rang 71.36 57 ⇓P **P 22 46 01.6 +0.2**
baz=71,SNR=12
M15A Larsen Ranch, 71.44 51 ⇓P **P 22 46 02.0 +0.1**
baz=71,SNR=6.2
BGU Big Grassy Mou 71.46 51 *e*P **P 22 46 01.6 -0.3**
comp=Z,11nm,1.3s,mb4.6
KIEV Kiev 71.50 323 *e*P **P 22 46 01.6 -0.4**
comp=Z,19nm,0.9s,mb5.0
KIEV Kiev 71.50 323 *e*P **P 22 46 01.6 -0.4**
KIEV pmax pmax
comp=Z,19nm,0.9s,mb5.0
ISA Isabella 71.52 58 P **P 22 46 01.8 -0.6**
baz=71,SNR=5.6
ISA Isabella 71.52 58 *e*P **P 22 46 01.4 -1.0**
comp=Z,18nm,0.8s,mb5.0
ISA *e*pP pP 22 46 16.5 +1.5
ISA Isabella 71.52 58 *e*P **P 22 46 01.4 -1.0**
ISA *e**PP pP 22 46 16.5 +1.5
ISA pmax pmax
comp=Z,18nm,0.8s,mb5.0
R11A Troy Canyon, C 71.60 55 ⇓P **P 22 46 02.6 -0.3**
baz=71,SNR=22
SUW Suwalki 71.63 328 *e*P pP 22 46 14.4 -0.9
SUW Suwalki 71.63 328 *e*pP pP 22 46 13.9 -1.4
SUW Suwalki 71.63 328 *e*P pP 22 46 13.9 -1.4
L16A Fish Haven 71.66 50 ⇑P **P 22 46 03.2 +0.1**
baz=71,SNR=6.4
J18A Kendall Valley 71.66 48 ⇓P **P 22 46 02.9 -0.2**
baz=71,SNR=5.7
I19A Meeteetse 71.67 47 ⇓P **P 22 46 03.6 +0.4**
baz=71,SNR=7.9
N15A Stansbury Isla 71.77 51 ⇓P **P 22 46 04.2 +0.4**
baz=72,SNR=10.0
G21A Lodge Grass 71.83 45 ⇓P **P 22 46 03.1 -1.0**
baz=72,SNR=6.2
HWUT Hardware Ranch 71.85 50 *e*P **P 22 46 04.7 +0.4**
MPMC Manual Prospec 71.89 58 ⇓P **P 22 46 03.7 -0.9**
baz=72,SNR=23
S11A Rachel 71.95 55 ⇑P **P 22 46 04.7 -0.3**
baz=72,SNR=12
WBK Wadi Bani Khal 71.96 284 P **P 22 46 05.8 +0.5**
SNR=8.0
WBK P 22 46 06.7
SNR=12
M16A Huntsville 72.01 50 ⇓P **P 22 46 05.2 -0.1**
baz=72,SNR=5.7
FURC Furnace Creek, 72.02 57 ⇓P **P 22 46 05.5 +0.1**
baz=72,SNR=16
K18A Toltan Ranch, 72.03 48 ⇑P **P 22 46 06.2 +0.9**
baz=72,SNR=5.5
DUG Dugway 72.06 52 P **P 22 46 05.9 +0.4**
baz=72,SNR=16
DUG Dugway 72.06 52 *e*P **P 22 46 05.8 +0.2**
comp=Z,25nm,1.1s,mb5.1
DUG Dugway 72.06 52 *e*P **P 22 46 05.8 +0.3**
DUG pmax pmax
comp=Z,25nm,1.1s,mb5.1
J19A Crowheart 72.16 47 P **P 22 46 06.8 +0.8**
baz=72,SNR=24
I20A Worland 72.20 46 ⇓P **P 22 46 06.8 +0.5**
baz=72,SNR=13
BW06 Boulder Array 72.21 48 P **P 22 46 06.2 -0.2**
baz=72,SNR=20
PDAR Pinedale Array 72.21 48 P **P 22 46 06.2 -0.3**
comp=Z,13nm,0.9s,mb4.8,baz=281,slow=2.4,SNR=51
P14A Drum Mountains 72.30 52 P **P 22 46 07.2 +0.2**
baz=72,SNR=14
H21A Big Horn, Sher 72.32 45 P **P 22 46 07.1 0.0**
baz=72,SNR=11
EDW2 Edwards Air Fo 72.32 59 P **P 22 46 07.2 0.0**
baz=72,SNR=14
SMDO Samad 72.34 285 P **P 22 46 08.0 +0.5**
SNR=5.5
SMDO P 22 46 08.2
SNR=5.7
U10A Ash Meadows, A 72.38 57 ⇓P **P 22 46 07.7 +0.2**
baz=72,SNR=12
M17A Scullys Gap (B 72.45 50 ⇑P **P 22 46 08.0 +0.1**
baz=72,SNR=6.0
L18A Fontenelle, Gr 72.50 49 P **P 22 46 08.8 +0.6**
baz=72,SNR=10
S12A Delamar Landin 72.52 55 P **P 22 46 09.5 +1.1**
baz=72,SNR=7.4
T11A Corn Creek, Al 72.53 55 P **P 22 46 08.4 0.0**
baz=72,SNR=29
HOQ Hoqain 72.53 286 P **P 22 46 09.2 +0.5**
SNR=12
HOQ P 22 46 09.4
SNR=11
K19A Absolon Red Bu 72.56 48 ⇑P **P 22 46 07.7 -0.8**
baz=72,SNR=7.0
Q14A Sevier Lake (B 72.57 53 P **P 22 46 09.1 +0.4**
baz=72,SNR=19
JLU Jordanelle 72.58 51 *e*P **P 22 46 09.5 +0.8**
comp=Z,17nm,1.2s,mb4.8
J20A Shoshoni 72.62 47 P **P 22 46 08.8 0.0**
baz=72,SNR=16
NLU North Lily Min 72.64 52 *e*P **P 22 46 09.8 +0.8**
comp=Z,15nm,1.1s,mb4.8
MWC Mount Wilson 72.70 59 *e*P **P 22 46 10.1 +0.6**
comp=Z,23nm,1.2s,mb5.0
MWC Mount Wilson 72.70 59 *e*P **P 22 46 10.1 +0.6**
MWC pmax pmax
comp=Z,23nm,1.2s,mb5.0
N17A Moffit Pass 72.70 50 ⇓P **P 22 46 09.2 -0.2**
baz=72,SNR=9.6
I21A Big Trails, Te 72.74 46 ⇑P **P 22 46 09.4 -0.1**
baz=72,SNR=27
L19A Farson 72.76 48 ⇑P **P 22 46 09.8 +0.1**
baz=72,SNR=8.1
P15A Leamington 72.77 52 P **P 22 46 10.3 +0.4**
baz=72,SNR=6.6
ARMA Armidale 72.78 174 *e*P **P 22 46 09.2 -0.5**
ARMA Armidale 72.78 174 *e*P **P 22 46 10.3 +0.5**
comp=Z,19nm,1.1s,mb4.9
GSC Goldstone 72.80 58 P **P 22 46 10.0 -0.1**
baz=73,SNR=7.7
GSC Goldstone 72.80 58 *e*P **P 22 46 10.2 +0.1**
comp=Z,22nm,1.3s,mb4.9
GSC Goldstone 72.80 58 *e*P **P 22 46 10.2 +0.2**
GSC pmax pmax
comp=Z,22nm,1.3s,mb4.9
DAU Daniels Canyon 72.81 51 *e*P **P 22 46 11.1 +1.0**
DAU Daniels Canyon 72.81 51 *e*P **P 22 46 11.1 +1.1**
MPU Maple Canyon 72.86 51 *e*P **P 22 46 10.8 +0.5**
comp=Z,8.1nm,0.6s,mb4.8
BFSC Mount Baldy Ra 72.94 59 ⇓P **P 22 46 10.6 -0.3**
baz=73,SNR=7.7
J21A Lysite 72.97 47 ⇓P **P 22 46 10.9 0.0**
baz=73,SNR=5.6
SHPR Sheep Range 73.04 56 *e*P **P 22 46 11.8 +0.3**
S13A Holt Ranch, En 73.14 54 P **P 22 46 12.9 +0.9**
baz=73,SNR=8.2
SIM Simferopol' 73.16 316 *e*P **P 22 46 11.8 -0.2**
SIM *e*S S 22 55 41.0 +4.5
SIM pmax pmax
comp=Z,17nm,1.1s,mb4.9
SIM MLR MLR
comp=Z,300nm,18.0s,MS4.6
O17A Robinson Place 73.25 51 P **P 22 46 12.1 -0.6**
baz=73,SNR=6.1
TUQ Turquoise Moun 73.26 57 P **P 22 46 13.0 +0.2**
baz=73,SNR=19
L20A Wamsutter 73.39 48 ⇓P **P 22 46 13.3 -0.1**
baz=73,SNR=7.9
HEC Hector,Ludlow 73.40 58 ⇓P **P 22 46 13.7 +0.1**
baz=73,SNR=7.9
J22A Midwest 73.44 46 ⇑P **P 22 46 12.9 -0.8**
baz=73,SNR=15
CCUT Cedar City 73.45 54 *e*P **P 22 46 14.7 +0.8**
comp=Z,21nm,1.2s,mb5.0
T13A Saint George 73.47 55 ⇑P **P 22 46 14.8 +0.7**
baz=73,SNR=16
MSU Marysvale 73.53 53 *e*P **P 22 46 15.4 +1.1**
MSU Marysvale 73.53 53 *e*P **P 22 46 15.4 +1.1**

K21A Alcova 73.56 47 ⇓P P 22 46 13.8 -0.6
baz=73,SNR=9.5
TMUT Trail Mountain 73.58 52 *eP* **P 22 46 15.8 +1.2**
comp=Z,17nm,1.1s,mb4.9
O18A Roosevelt 73.62 50 ⇓P P 22 46 15.8 +1.0
baz=73,SNR=5.6
ULM Lac du Bonnet 73.69 36 P **P 22 46 14.0 -1.0**
comp=Z,10nm,0.9s,mb4.8,baz=308,slow=7.1,SNR=8.5
ULM Lac du Bonnet 73.69 36 P **P 22 46 14.0 -1.0**
P17A Butcher Ranch, 73.73 51 ⇑P P 22 46 15.6 +0.1
baz=74,SNR=7.7
V12A Nelson 73.74 56 ⇓P P 22 46 15.3 -0.2
baz=74,SNR=9.2
M20A Sweetwater, Wa 73.82 48 ⇓P P 22 46 16.1 +0.1
baz=74,SNR=7.0
U13A Pakoon Wash 73.83 55 ⇓P P 22 46 16.3 +0.2
baz=74,SNR=28
Q16A Castle Valley 73.85 52 P **P 22 46 17.1 +0.9**
baz=74,SNR=5.4
GMRC Granite Mounta 73.85 58 P **P 22 46 16.3 0.0**
baz=74,SNR=7.8
P18A Preston Nutter 73.91 51 ⇑P P 22 46 16.7 +0.2
baz=74,SNR=10
T14A Hurricane 73.94 54 ⇓P P 22 46 17.2 +0.4
baz=74,SNR=8.1
L21A Rawlins 73.95 48 ⇑P P 22 46 16.5 -0.2
baz=74,SNR=15
STKA Stephens Creek 74.00 183 P **P 22 46 15.8 -1.0**
comp=Z,13nm,0.8s,mb4.9,baz=349,slow=7.3,SNR=19
STKA LR LR 23 15 57.7
comp=Z,219nm,19.8s,MS4.5,baz=24,slow=33
STKA Stephens Creek 74.00 183 *eP* **P 22 46 15.9 -0.9**
comp=Z,12nm,0.9s,mb4.8
STKA Stephens Creek 74.00 183 *eP* **P 22 46 16.0 -0.8**
LDFC Landfair 74.00 57 *eP* **P 22 46 17.3 +0.2**
comp=Z,46nm,1.1s,mb5.3
R16A Teasdale 74.09 53 ⇓P P 22 46 18.6 +1.0
baz=74,SNR=18
SRU San Rafael 74.10 51 P **P 22 46 17.9 +0.3**
baz=74,SNR=7.1
SRU San Rafael 74.10 51 *eP* **P 22 46 18.2 +0.5**
comp=Z,30nm,1.0s,mb5.2
SRU San Rafael 74.10 51 *eP* **P 22 46 18.2 +0.6**
SRU pmax pmax
comp=Z,30nm,1.0s,mb5.2
O19A Miners Draw (B 74.10 50 ⇑P P 22 46 17.4 -0.2
baz=74
PFO Pinyon Flat Ob 74.11 59 ⇓P P 22 46 17.3 -0.5
baz=74,SNR=6.9
PFO Pinyon Flat Ob 74.11 59 *eP* **P 22 46 17.7 -0.1**
comp=Z,15nm,1.0s,mb4.9
PFO Pinyon Flat Ob 74.11 59 *eP* **P 22 46 17.7 -0.1**
PFO pmax pmax
comp=Z,15nm,1.0s,mb4.9
BELC Belle Mtn. Jos 74.15 58 ⇑P P 22 46 17.3 -0.7
baz=74,SNR=6.6
V13A Grand Canyon W 74.19 56 P **P 22 46 18.6 +0.4**
baz=74,SNR=20
M21A Separation Pea 74.20 48 ⇑P P 22 46 17.8 -0.3
baz=74,SNR=13
N20A Spence Gulch, 74.22 49 P **P 22 46 18.7 +0.4**
baz=74,SNR=16
RWWY Rawlins 74.22 48 *eP* **P 22 46 18.4 0.0**
RSSD Black Hills 74.23 44 *eP* **P 22 46 17.8 -0.6**
RSSD Black Hills 74.23 44 *eP* **P 22 46 17.8 -0.5**
U14A Mt Trumbull 74.31 55 ⇓P P 22 46 18.9 0.0
baz=74,SNR=23
T15A Red Dirt Ranch 74.39 54 ⇓P P 22 46 19.6 +0.2
baz=74,SNR=11
S16A Weppner Ranch, 74.39 53 P **P 22 46 20.0 +0.6**
baz=74,SNR=19
FORT Forrest 74.42 195 *eP* **P 22 46 19.2 -0.1**
comp=Z,20nm,0.5s,mb5.3
LVV L'vov 74.42 325 *eP* **P 22 46 19.5 +0.2**
R17A Hanksville Air 74.45 52 ⇑P P 22 46 19.6 -0.1
baz=74,SNR=6.6
MONP Monument Peak 74.60 60 ⇓P P 22 46 20.2 -0.5
baz=74,SNR=5.3
P19A Cripple Cowboy 74.63 50 ⇑P P 22 46 20.5 -0.2
baz=74,SNR=10
N21A Black Mountain 74.69 49 ⇓P P 22 46 20.8 -0.3
baz=74,SNR=11
BC3 Big Chuckawall 74.71 58 ⇑P P 22 46 21.1 -0.2
baz=74,SNR=8.3
L23A Garrett 74.75 47 ⇓P P 22 46 20.6 -0.8
baz=74,SNR=7.2
M22A Cedar Creek Ra 74.75 48 P **P 22 46 21.8 +0.4**
baz=74,SNR=6.3
U15A North Rim 74.84 54 ⇓P P 22 46 22.7 +0.7
baz=75,SNR=17
V14A Boquillas Ranc 74.87 56 P **P 22 46 22.8 +0.6**
baz=75,SNR=39
S17A Black Ridge (B 74.92 53 ⇓P P 22 46 22.3 -0.1
baz=75,SNR=7.5
R18A Canyonlands Na 74.95 52 ⇑P P 22 46 22.3 -0.2
baz=75,SNR=5.9
BHD Baghdad 75.08 301 *ex* x 22 46 23.0
BHD *ex* x 22 46 36.0
BHD *ex* x 22 49 15.0
BHD *ex* x 22 56 28.0
X13A Yucca 75.11 57 P **P 22 46 23.7 +0.1**
baz=75,SNR=18
PDMCI Parker Dam,Lak 75.11 57 ⇑P P 22 46 23.4 -0.2
baz=75,SNR=6.0
KWP Kalwaria Pacla 75.12 325 *eP* **P 22 46 23.7 +0.3**
KWP Kalwaria Pacla 75.12 325 *eP* **P 22 46 23.8 +0.4**
comp=Z,44nm,1.0s,mb5.3
KWP Kalwaria Pacla 75.12 325 ⇓P P 22 46 23.9 +0.5
KWP Kalwaria Pacla 75.12 325 ⇓/P P 22 46 23.9 +0.5
AGMN Agassiz Nation 75.15 37 *eP* **P 22 46 22.5 -1.0**
W14A Seligman 75.16 56 ⇑P P 22 46 24.2 +0.3
baz=75,SNR=21
V15A Kaibab Nationa 75.31 55 ⇓P P 22 46 25.3 +0.6
baz=75,SNR=9.3
MALT Malatya 75.33 309 *eP* **P 22 46 25.8 +1.0**
MALT Malatya 75.33 309 ⇑P P 22 46 26.6 +1.8
MALT Malatya 75.33 309 ⇑/P P 22 46 26.6 +1.8
MALT Malatya 75.33 309 P **P 22 46 26.3 +1.5**
comp=Z,14nm,1.3s,mb4.7
S18A Hurst Farm, Bl 75.36 52 ⇓P P 22 46 24.9 -0.1
baz=75,SNR=14
R19A Curley Farm, L 75.38 51 P **P 22 46 25.1 0.0**
baz=75,SNR=5.3
MIB Mutribah 75.42 297 *eP* **P 22 46 24.6 -0.8**
MIB AMb AMB 22 46 26.4
comp=Z,54nm,1.8s,mb5.2
PHWY Pilot Hill 75.44 47 *eP* **P 22 46 25.5 +0.1**
N23A Red Feather La 75.46 48 P **P 22 46 26.3 +0.8**
baz=75,SNR=10
GLA Glamis 75.50 58 *eP* **P 22 46 26.4 +0.5**
comp=Z,22nm,0.9s,mb5.1
GLA Glamis 75.50 58 *eP* **P 22 46 26.4 +0.5**
GLA pmax pmax
comp=Z,22nm,0.9s,mb5.1
PV04 Paradox Valley 75.52 51 *eP* **P 22 46 26.4 +0.6**
BUR08 Bucovina Ar. S 75.53 323 *eP* **P 22 46 25.6 -0.1**
BURAR Bucovina Array 75.55 322 ⇓P P 22 46 26.3 +0.5
BURAR Bucovina Array 75.55 322 ⇓/P P 22 46 26.3 +0.5
O22A Kremmling 75.64 48 ⇑P P 22 46 26.5 0.0
baz=75,SNR=7.7
M24A Cheyenne 75.67 47 ⇓P P 22 46 26.8 +0.2
baz=75,SNR=9.6
W15A Williams 75.69 55 ⇑P P 22 46 27.8 +1.0
baz=76,SNR=9.4
U16A Tuba City 75.73 54 ⇓P P 22 46 27.7 +0.6
baz=76,SNR=19
X14A Yava 75.78 56 ⇓P P 22 46 28.1 +0.7
baz=76,SNR=14
T18A Mexican Hat 75.80 53 P **P 22 46 26.9 -0.6**
baz=76,SNR=14
S19A Harvey Farm, M 75.82 52 ⇑P P 22 46 27.1 -0.5
baz=76,SNR=18
KOLS Kolonicke sedl 75.84 325 *eP* **P 22 46 27.7 +0.2**
comp=Z,6.7nm,1.1s,mb4.5
KOLS Kolonicke sedl 75.84 325 *eP* **P 22 46 27.7 +0.2**
KOLS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KOLS Kolonicke sedl 75.84 325 *eP* **P 22 46 27.7 +0.2**
NAY Al-Naaiem 75.85 297 *eP* **P 22 46 27.0 -0.9**
NAY AMb AMB 22 46 33.2
comp=Z,18nm,1.0s,mb5.0
RDF Al-Radifah 75.86 296 *eP* **P 22 46 27.2 -0.7**
RDF AMb AMB 22 46 28.5
comp=Z,98nm,1.6s,mb5.5
OJC Ojcow 75.87 327 *eP* **P 22 46 27.3 -0.3**
OJC *ePcP* PcP 22 46 39.7 -0.3
OJC Ojcow 75.87 327 *eP* **P 22 46 27.3 -0.4**
OJC *e* pP 22 46 39.7 -0.6
PV01 Paradox Valley 75.88 51 *eP* **P 22 46 28.6 +0.6**
comp=Z,1µm,1.0s
R20A Redvale 75.96 51 ⇓P P 22 46 28.3 0.0
baz=76,SNR=6.8
Q21A Lamborn Mesa, 75.97 50 ⇓P P 22 46 28.7 +0.3
baz=76,SNR=5.6
Y14A Wickenburg 76.06 57 P **P 22 46 29.2 +0.2**
baz=76,SNR=12
UZH Uzhgorod 76.06 325 *eP* **P 22 46 17.8 -11**
UZH *e* pP 22 46 29.0 -12
UZH *e* 22 46 42.4
SMCO Snowmass 76.08 49 *eP* **P 22 46 29.4 +0.3**
comp=Z,8.7nm,1.0s,mb4.6
VRI Vrincioaia 76.15 320 ⇑P P 22 46 30.5 +1.2
VRI Vrincioaia 76.15 320 ⇑/P P 22 46 30.5 +1.2
X15A Humboldt 76.17 56 P **P 22 46 30.3 +0.7**
baz=76,SNR=25
W16A Flagstaff 76.19 55 ⇑P P 22 46 30.2 +0.5
baz=76,SNR=6.3
PLOR Plostina 76.19 321 ⇑P P 22 46 30.1 +0.5
PLOR Plostina 76.19 321 ⇑/P P 22 46 30.1 +0.5
CRVS Cervenica-Dubn 76.21 325 *eP* **P 22 46 30.1 +0.5**
comp=Z,5.3nm,1.1s,mb4.4
CRVS Cervenica-Dubn 76.21 325 *eP* **P 22 46 30.1 +0.5**
CRVS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
CRVS Cervenica-Dubn 76.21 325 *eP* **P 22 46 30.1 +0.5**
S20A Disappointment 76.21 51 ⇓P P 22 46 29.7 -0.2
baz=76,SNR=12
V17A Tonalea, Kykot 76.28 54 ⇑P P 22 46 30.3 +0.1
baz=76,SNR=52
NIE Niedzica 76.28 326 *eP* **P 22 46 30.9 +0.9**
NIE Niedzica 76.28 326 *eP* **P 22 46 30.9 +0.9**
R21A Cimarron 76.31 50 ⇑P P 22 46 30.6 +0.2
baz=76,SNR=15
Q22A Crested Butte, 76.33 50 ⇑P P 22 46 30.7 +0.3
baz=76,SNR=6.7
TRPA Tarpa 76.34 324 ⇑/P P 22 46 31.3 +1.0
113A Mohawk Valley, 76.36 58 P **P 22 46 30.7 0.0**
baz=76,SNR=5.2
TIRR Tirgusor 76.37 319 ⇓P P 22 46 31.0 +0.4
TIRR Tirgusor 76.37 319 ⇓/P P 22 46 31.0 +0.4
ISCO Idaho Springs 76.40 48 ⇑P P 22 46 31.1 +0.3
baz=76,SNR=9.2
ISCO Idaho Springs 76.40 48 *eP* **P 22 46 31.6 +0.7**
comp=Z,14nm,1.0s,mb4.8
ISCO Idaho Springs 76.40 48 *eP* **P 22 46 31.6 +0.7**
ISCO pmax pmax
comp=Z,14nm,1.0s,mb4.8
Y15A Casa Rosa Ranc 76.46 56 ⇓P P 22 46 31.5 +0.2
baz=76,SNR=15
T19A Bezlabito 76.51 52 ⇓P P 22 46 31.6 0.0
baz=76,SNR=7.5
S21A Coal Bank Pass 76.66 51 P **P 22 46 33.1 +0.8**
baz=76,SNR=17
X16A Lo Mia Camp, P 76.70 56 ⇓P P 22 46 32.6 0.0
baz=76,SNR=27
V18A Ganado 76.73 54 ⇑P P 22 46 33.2 +0.4
baz=76,SNR=10
U19A Dine' College, 76.77 53 ⇑P P 22 46 33.0 0.0
baz=76,SNR=10
MLR Muntele Rosu 76.79 321 ⇑P P 22 46 33.5 +0.5
MLR Muntele Rosu 76.79 321 ⇑/P P 22 46 33.5 +0.5
OKC Ostrava-Krasne 76.83 328 *eP* **P 22 46 33.5 +0.4**
OKC *e*PP* pP 22 46 45.9 +0.1
OKC MLR MLR
comp=Z,600nm,19.9s,MS4.9
OKC Ostrava-Krasne 76.83 328 *eP* **P 22 46 33.5 +0.4**
OKC *epP* pP 22 46 45.9 +0.1
OKC AMS AMS 23 22 40.0
comp=Z,600nm,19.9s
R22A Saguache, Gunn 76.86 50 ⇑P P 22 46 33.7 +0.2
baz=77,SNR=6.6
Q23A Hartsel 76.91 49 P **P 22 46 34.5 +0.8**
baz=77,SNR=7.4
KECS Kecovo 76.94 326 *eP* **P 22 46 34.0 +0.3**
comp=Z,2.1nm,1.1s
KECS Kecovo 76.94 326 *eP* **P 22 46 34.0 +0.3**
KECS pmax pmax
comp=Z,2.0nm,1.1s
KECS Kecovo 76.94 326 *eP* **P 22 46 34.0 +0.3**
Y16A Circle Bar Ran 77.04 56 ⇓P P 22 46 34.6 0.0
baz=77,SNR=10
BR131 Keskin Array S 77.05 312 *eP* **P 22 46 34.6 +0.1**
comp=Z,1.5nm,0.6s,mb4.1
BRTR Keskin Array B 77.05 312 P **P 22 46 34.2 -0.3**
comp=Z,3.1nm,0.7s,mb4.3,baz=77,slow=3.8,SNR=21
BRTR PP PP 22 49 29.8 +2.1
comp=Z,2.2nm,0.9s,baz=50,slow=6.6,SNR=3.8
BRTR LR LR 23 25 14.7
comp=Z,178nm,20.1s,MS4.4,baz=194,slow=39
BRTR Keskin Array B 77.05 312 *eP* **P 22 46 34.9 +0.4**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
MORC Moravsky Berou 77.12 328 *eP* **P 22 46 34.8 +0.1**
MORC Moravsky Berou 77.12 328 ⇓P P 22 46 35.6 +0.9
MORC Moravsky Berou 77.12 328 ⇓/P P 22 46 35.6 +0.9
UPC Upice 77.12 329 *eP* **P 22 46 35.2 +0.5**
UPC *e*PP* pP 22 46 48.1 +0.7
UPC Upice 77.12 329 *eP* **P 22 46 35.2 +0.5**
UPC *epP* pP 22 46 48.1 +0.7
DPC Dobruska-Polom 77.13 329 *eP* **P 22 46 32.9 -1.8**
DPC Dobruska-Polom 77.13 329 *eP* **P 22 46 35.1 +0.3**
DPC *e*PP* pP 22 46 48.2 +0.7
DPC MLR MLR
comp=Z,600nm,22.6s,MS4.9
DPC MLR MLR
comp=E,400nm,15.2s
DPC Dobruska-Polom 77.13 329 *eP* **P 22 46 35.1 +0.3**
DPC *epP* pP 22 46 48.2 +0.7
DPC AMS AMS 23 21 50.0
comp=E,600nm,22.6s
X17A Forest Lakes 77.14 55 ⇑P P 22 46 35.3 +0.1
baz=77,SNR=9.4
S22A 4UR Ranch, Cre 77.15 50 ⇑P P 22 46 35.3 +0.2
baz=77,SNR=12
Q24A Divide 77.25 49 ⇑P P 22 46 35.0 -0.6
baz=77,SNR=9.3
VOIR 77.25 321 ⇑P P 22 46 36.3 +0.8
VOIR 77.25 321 ⇑/P P 22 46 36.3 +0.8
V19A Window Rock 77.26 53 ⇓P P 22 46 35.6 -0.1
baz=77,SNR=7.2
DRGR 77.29 323 ⇑P P 22 46 36.0 +0.3
DRGR 77.29 323 ⇑/P P 22 46 36.0 +0.3
EYMN Ely 77.31 35 *eP* **P 22 46 35.0 -0.8**
115A Sonoran Desert 77.37 57 ⇑P P 22 46 36.7 +0.2
baz=77,SNR=5.3
P25A Willow Gulch B 77.40 48 ⇓P P 22 46 36.2 -0.2
baz=77,SNR=8.6
OGNE Ogallala 77.53 45 ⇓P P 22 46 36.8 -0.4
baz=77,SNR=9.2
OGNE Ogallala 77.53 45 *eP* **P 22 46 37.0 -0.2**
V20A Brimhall 77.54 53 ⇓P P 22 46 37.2 -0.1
baz=77,SNR=9.5
Y17A Roosevelt 77.55 56 ⇓P P 22 46 37.3 -0.1
baz=77,SNR=12
CLL Collm 77.58 331 *eP* **P 22 46 36.6 -0.7**
comp=Z,16nm,0.9s,mb5.0
CLL *epP* pP 22 46 48.6 -1.4
CLL Collm 77.58 331 ⇓/P P 22 46 36.5 -0.8
comp=Z,16nm,1.0s,mb4.9
CLL *i* 22 46 41.9
CLL *i* pP 22 46 48.6 -1.4
CLL *eS* S 22 56 33.0 +7.8
CLL LR LR
comp=Z,500nm,18.1s,MS4.9
CLL Collm 77.58 331 ⇓/P P 22 46 36.5 -0.8
CLL *i* pP 22 46 48.6 -1.4
CLL *eS* S 22 56 33.0 +7.8
CLL pmax pmax
comp=Z,18nm,1.0s,mb5.0
CLL MLR MLR
comp=Z,500nm,18.1s,MS4.9
CLL Collm 77.58 331 ⇓/P P 22 46 36.5 -0.8
comp=Z,16nm,1.0s,mb4.9
CLL *i* 22 46 41.9
CLL *i* pP 22 46 48.6 -1.4
comp=Z,34nm,1.2s
CLL *ePP* PP 22 49 30.0 -1.8
CLL *eS* S 22 56 33.0 +7.8
CLL *e*(SS) 23 02 12.0
CLL *e* 23 06 00.0
CLL Lm 23 24 00.0
comp=N,400nm,19.9s
CLL Lm 23 24 00.0
comp=E,300nm,21.6s
CLL Lm 23 24 00.0
comp=Z,500nm,18.1s
NRDL Niedersach Rie 77.58 333 *eP* **P 22 46 37.1 -0.2**
BRG Berggiesshubel 77.60 330 *eP* **P 22 46 37.0 -0.4**
comp=Z,11nm,1.2s,mb4.7
BRG *e* pP 22 46 49.0 -1.1
comp=Z,18nm,1.2s
BRG
comp=Z,3.8nm,0.9s
BRG Berggiesshubel 77.60 330 *eP* **P 22 46 37.0 -0.4**
BRG *e* pP 22 46 49.0 -1.1
BRG pmax pmax
comp=Z,13nm,1.2s,mb4.7
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
BRG MLR MLR
comp=Z,11µm,19.4s
BRG MLR MLR
comp=Z,441nm,0.9s
T22A Edith 77.61 51 P **P 22 46 38.5 +0.8**
baz=77,SNR=7.3
VYHS Vyhne 77.62 326 *eP* **P 22 46 38.2 +0.7**
comp=Z,9.3nm,1.3s,mb4.5
VYHS Vyhne 77.62 326 *eP* **P 22 46 38.2 +0.7**
VYHS pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
VYHS Vyhne 77.62 326 *eP* **P 22 46 38.2 +0.7**
PSZ Piszkesteto 77.63 325 *eP* **P 22 46 37.5 -0.1**
PSZ Piszkesteto 77.63 325 ⇑P P 22 46 38.5 +0.9
PSZ Piszkesteto 77.63 325 ⇑/P P 22 46 38.5 +0.9
PSZ Piszkesteto 77.63 325 ⇓ *eP* **P 22 46 38.0 +0.4**
PVCC Panska Ves 77.65 330 *eP* **P 22 46 38.1 +0.4**
PVCC *e*PP* pP 22 46 50.1 -0.3
PVCC MLR MLR
comp=Z,600nm,20.0s,MS4.9
PVCC Panska Ves 77.65 330 *eP* **P 22 46 38.1 +0.4**
PVCC *epP* pP 22 46 50.1 -0.3
PVCC AMS AMS 23 23 30.0
comp=Z,600nm,20.0s
KOLL Kolacno 77.73 327 *eP* **P 22 46 38.9 +0.8**
KOLL Kolacno 77.73 327 *eP* **P 22 46 38.9 +0.8**
KOLL Kolacno 77.73 327 *eP* **P 22 46 38.8 +0.7**
Q25A Bedland, Calha 77.78 48 ⇑P P 22 46 38.2 -0.4
baz=78,SNR=10
R24A Sanders Place, 77.78 49 ⇓P P 22 46 38.7 0.0
baz=78,SNR=10
VRAC Vranov 77.86 328 ⇑P P 22 46 39.7 +0.8
VRAC Vranov 77.86 328 ⇑/P P 22 46 39.7 +0.8
SDCO Great Sand Dun 77.90 50 ⇑P P 22 46 39.6 +0.3
baz=78,SNR=8.9
SDCO Great Sand Dun 77.90 50 *eP* **P 22 46 39.2 -0.1**
comp=Z,8.9nm,1.3s,mb4.5
W20A Ramah 77.99 53 ⇑P P 22 46 40.1 +0.2
baz=78,SNR=7.1
Y18A Canyon Day Jun 77.99 55 ⇓P P 22 46 40.6 +0.8
baz=78,SNR=9.5
X19A St. Johns 77.99 54 P **P 22 46 40.7 +0.8**
baz=78,SNR=27
V21A Milan 78.03 52 ⇑P P 22 46 40.5 +0.5
baz=78,SNR=5.9
CLZ Clausthal 78.05 333 *eP* **P 22 46 39.8 0.0**
comp=Z,27nm,1.3s,mb5.0
CLZ Clausthal 78.05 333 *eP* **P 22 46 39.8 0.0**
comp=Z,27nm,1.3s,mb5.0
CLZ Clausthal 78.05 333 *eP* **P 22 46 39.8 0.0**
CLZ pmax pmax
comp=Z,27nm,1.3s,mb5.0
U22A Llaves 78.08 51 ⇓P P 22 46 40.0 -0.3
baz=78,SNR=6.5
PRU Pruhonice 78.10 330 *eP* **P 22 46 41.2 +1.0**
PRU *e*PP* pP 22 46 53.0 +0.1
PRU MLR MLR
comp=Z,700nm,21.2s,MS5.0
PRU Pruhonice 78.10 330 *eP* **P 22 46 41.2 +1.0**
PRU *epP* pP 22 46 53.0 +0.1
PRU AMS AMS 23 24 00.0
comp=Z,700nm,21.2s
S24A Houchin Ranch, 78.14 50 ⇑P P 22 46 41.0 +0.3
baz=78,SNR=5.9
ECSD EROS Data Cent 78.21 40 *eP* **P 22 46 40.3 -0.7**
TREC Trest 78.31 329 AMS AMS 23 22 50.0
comp=Z,800nm,24.5s
GZR Gura Zlata 78.33 322 ⇓P P 22 46 41.5 0.0
GZR Gura Zlata 78.33 322 ⇓/P P 22 46 41.5 0.0
BUD Budapest 78.33 326 ⇓ *eP* **P 22 46 41.9 +0.4**
Y19A Nutrioso 78.34 55 ⇓P P 22 46 42.1 +0.3
baz=78,SNR=9.1
117A Oracle 78.38 56 ⇓P P 22 46 42.2 +0.2
baz=78,SNR=9.2
X20A Quemado 78.39 54 ⇑P P 22 46 42.7 +0.6
baz=78,SNR=24
SZH Strazhica 78.46 319 P **P 22 46 41.9 -0.4**
IBBN Ibbenburen 78.51 335 *eP* **P 22 46 42.2 -0.2**
TANN Tannenbergstha 78.51 331 *eP* **P 22 46 41.9 -0.5**
comp=Z,23nm,1.9s,mb4.8
TANN *epP* pP 22 46 54.0 -1.2
TUC Tucson 78.53 57 *eP* **P 22 46 43.2 +0.4**
TUC Tucson 78.53 57 *eP* **P 22 46 43.3 +0.4**
ZST Bratislava 78.56 327 *eP* **P 22 46 43.9 +1.2**
comp=Z,7.5nm,1.3s,mb4.5
ZST Bratislava 78.56 327 *eP* **P 22 46 43.9 +1.2**
ZST pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
ZST Bratislava 78.56 327 *eP* **P 22 46 43.9 +1.2**
S25A Robets Cordova 78.56 49 ⇓P P 22 46 42.4 -0.6
baz=78,SNR=7.9
MOX Moxa 78.62 332 *eP* **P 22 46 43.0 0.0**
MOX *e* pP 22 46 55.2 -0.6
comp=Z,31nm,1.6s
MOX
comp=Z,400nm,22.0s
MOX Moxa 78.62 332 *eP* **P 22 46 42.7 -0.3**
MOX *epP* pP 22 46 54.6 -1.2
MOX Moxa 78.62 332 *eP* **P 22 46 43.0 0.0**
comp=Z,31nm,1.6s,mb5.0
MOX *e* pP 22 46 55.2 -0.6
MOX LR LR
comp=Z,400nm,22.0s,MS4.7
MOX Moxa 78.62 332 *eP* **P 22 46 43.0 0.0**
MOX *e* pP 22 46 55.2 -0.6
MOX pmax pmax
comp=Z,43nm,1.6s,mb5.1
MOX MLR MLR
comp=Z,31µm,22.0s
T24A Torres, Weston 78.63 50 ⇑P P 22 46 44.2 +0.8
baz=78,SNR=8.5
NKC Novy Kostel 78.67 331 *eP* **P 22 46 43.5 +0.2**
NKC *e*PP* pP 22 46 55.6 -0.4
NKC Novy Kostel 78.67 331 *eP* **P 22 46 43.5 +0.2**
NKC *epP* pP 22 46 55.6 -0.4
BZS Buzias 78.68 323 ⇑P P 22 46 43.3 -0.1
BZS Buzias 78.68 323 ⇑/P P 22 46 43.3 -0.1
118A Homack Ranch, 78.81 56 ⇓P P 22 46 44.1 -0.3
baz=79,SNR=22
217A Green Valley 78.87 57 ⇓P P 22 46 44.4 -0.3
baz=79,SNR=14
X21A Alamocita Cree 78.88 53 ⇓P P 22 46 45.6 +0.8
baz=79,SNR=22
Y20A Horse Springs, 78.90 54 ⇑P P 22 46 45.3 +0.4
baz=79,SNR=24
T25A Trinidad 78.94 49 ⇑P P 22 46 44.6 -0.5
baz=79,SNR=10
NWAO Narrogin (SRO) 79.08 203 *eP* **P 22 46 45.1 -0.5**
NWAO Narrogin (SRO) 79.08 203 *eP* **P 22 46 45.1 -0.4**
119A Ashpeak Ranch, 79.13 55 ⇓P P 22 46 46.4 +0.3
baz=79,SNR=9.4
ROTZ Rotzenmuhle 79.14 331 *eP* **P 22 46 46.0 +0.1**
comp=Z,20nm,1.4s,mb4.8
KHC Kasperske Hory 79.16 330 *eP* **P 22 46 45.5 -0.5**
KHC Kasperske Hory 79.16 330 *eP* **P 22 46 46.4 +0.4**
KHC *e*PP* pP 22 46 58.4 -0.4
KHC MLR MLR
comp=Z,800nm,19.7s,MS5.1
KHC Kasperske Hory 79.16 330 *eP* **P 22 46 46.4 +0.4**
KHC *epP* pP 22 46 58.4 -0.4
KHC AMS AMS 23 24 40.0
comp=Z,800nm,19.7s
SOP Sopron 79.19 327 ⇓ *eP* **P 22 46 46.7 +0.5**
218A Dragoon 79.21 57 ⇓P P 22 46 46.6 -0.1
baz=79,SNR=13
Y21A Point of Rocks 79.25 54 ⇑P P 22 46 47.4 +0.6
baz=79,SNR=12

CONA Conrad Observa 79.27 328 *i* P **P 22 46 47.5 +0.9**
comp=Z,20nm,1.3s,mb4.9,SNR=10
LAZ Ladron 79.29 53 *e*P **P 22 46 48.0 +1.0**
comp=Z,21nm,1.1s,mb5.0
LAZ *e* pP 22 47 01.3 +1.5
ANMO Albuquerque 79.31 52 *e*P **P 22 46 48.0 +0.9**
ANMO Albuquerque 79.31 52 *e*P **P 22 46 48.0 +0.9**
Z20A Nine Sixteen R 79.32 55 ⇑P **P 22 46 47.6 +0.4**
baz=79,SNR=22
W23A Werner Place, 79.34 52 ⇑P **P 22 46 47.8 +0.5**
baz=79,SNR=8.1
GEC2 GERESS Array S 79.35 329 *e*P **P 22 46 46.7 -0.4**
comp=Z,9.0nm,1.3s,mb4.5
GEC2 GERESS Array S 79.35 329 *e*P **P 22 46 46.7 -0.4**
comp=Z,9.0nm,1.3s,mb4.5
GEC2 GERESS Array S 79.35 329 *e*P **P 22 46 46.7 -0.4**
GEC2 pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
WET Wettzell 79.41 330 *e*P **P 22 46 47.6 +0.2**
comp=Z,18nm,1.1s,mb4.9
WET Wettzell 79.41 330 *e*P **P 22 46 47.6 +0.2**
comp=Z,18nm,1.1s,mb4.9
WET Wettzell 79.41 330 *e*P **P 22 46 47.6 +0.2**
WET pmax pmax
comp=Z,18nm,1.1s,mb4.9
MPEP Malo Peshtene 79.44 320 P **P 22 46 47.8 +0.1**
V24A Rampart Ranch, 79.45 51 ⇓P **P 22 46 48.4 +0.5**
baz=79,SNR=10
U25A Circle Dot Ran 79.47 50 ⇓P **P 22 46 47.4 -0.5**
baz=79,SNR=8.0
SCHQ Schefferville 79.48 18 P **P 22 46 47.3 -0.3**
comp=Z,16nm,1.0s,mb4.9,baz=344,slow=6.4,SNR=7.6
GRA1 Grafenberg Arr 79.56 331 *e*P **P 22 46 48.3 +0.1**
comp=Z,56nm,1.6s,mb5.2
GRA1 *e*pP pP 22 47 00.2 -0.7
GRF Grafenberg Arr 79.56 331 *e*P **P 22 46 48.3 +0.1**
comp=Z,56nm,1.6s,mb5.2
GRF *e*pP pP 22 47 00.2 -0.7
GRF Grafenberg Arr 79.56 331 *e*P **P 22 46 48.3 +0.1**
comp=Z,56nm,1.6s,mb5.2
GRF *e*pP pP 22 47 00.2 -0.7
GRF *e**PP pP 22 47 00.2 -0.7
GRF pmax pmax
comp=Z,56nm,1.6s,mb5.2
GRF Grafenberg Arr 79.56 331 *e*P **P 22 46 48.3 +0.1**
GRF *e**PP pP 22 47 00.2 -0.7
GRF pmax pmax
comp=Z,56nm,1.6s,mb5.2
GRFO Grafenberg 79.56 331 *e*P **P 22 46 48.8 +0.6**
GRFO Grafenberg 79.56 331 *e*P **P 22 46 48.8 +0.6**
DIM Dimitrovgrad 79.57 319 P **P 22 46 49.0 +0.6**
318A Bisbee 79.61 57 ⇓P **P 22 46 48.7 -0.1**
baz=79,SNR=17
TOO Toolangi 79.63 179 *e*P **P 22 46 48.8 +0.4**
219A White Tail Can 79.68 56 P **P 22 46 49.7 +0.5**
baz=80,SNR=18
Y22A Socorro 79.72 53 ⇑P **P 22 46 49.8 +0.4**
baz=80,SNR=5.7
Z21A St. Cloud Mine 79.74 54 ⇑P **P 22 46 50.4 +0.9**
baz=80,SNR=12
W24A Lazy 6 Ranch, 79.74 51 P **P 22 46 50.2 +0.8**
baz=80,SNR=17
V25A Rancho No Teng 79.75 51 P **P 22 46 50.0 +0.5**
baz=80,SNR=7.6
BNM Barren Site 79.77 53 *e*P **P 22 46 50.2 +0.5**
comp=Z,14nm,1.0s,mb4.8
U26A Atchley Ranch, 79.85 50 P **P 22 46 49.9 -0.1**
baz=80,SNR=6.4
KDZ Kurdzhali 79.92 318 P **P 22 46 51.3 +1.0**
ARSA Arzberg 79.95 327 P **P 22 46 50.8 +0.5**
comp=Z,11nm,1.2s,mb4.7
TNS Taunus Mts 80.06 333 *e*P **P 22 46 51.2 +0.3**
TNS Taunus Mts 80.06 333 *e*P **P 22 46 51.2 +0.3**
TNS Taunus Mts 80.06 333 *e*P **P 22 46 51.2 +0.3**
319A Douglas 80.10 57 P **P 22 46 51.9 +0.4**
baz=80,SNR=11
220A Playas Peak, P 80.20 56 ⇑P **P 22 46 51.4 -0.5**
baz=80,SNR=13
Z22A Elephant Butte 80.20 54 ⇓P **P 22 46 52.1 +0.1**
baz=80,SNR=17
121A Cookes Peak, D 80.21 55 ⇓P **P 22 46 52.2 +0.2**
baz=80,SNR=14
RZN Rozhen 80.24 319 P **P 22 46 52.4 +0.4**
Y23A Lovelace Mesa, 80.26 53 ⇑P **P 22 46 52.3 0.0**
baz=80,SNR=24
VTS Vitosha 80.28 320 ⇑P **P 22 46 53.0 +0.8**
VTS Vitosha 80.28 320 ⇑*i*P **P 22 46 53.0 +0.8**
VTS Vitosha 80.28 320 P **P 22 46 52.3 +0.1**
W25A X Bar L Ranch, 80.28 51 P **P 22 46 52.5 +0.2**
baz=80,SNR=26
CBKS Cedar Bluff 80.29 46 ⇓P **P 22 46 51.2 -1.2**
baz=80,SNR=5.0
CBKS Cedar Bluff 80.29 46 *e*P **P 22 46 51.4 -0.9**
CBKS Cedar Bluff 80.29 46 *e*P **P 22 46 51.4 -0.9**
TOD Tromm 80.47 333 *e*P **P 22 46 53.4 +0.3**
TOD Tromm 80.47 333 *e*P **P 22 46 53.4 +0.3**
CSS Prodhromos 80.60 309 *e*P **P 22 46 54.0 0.0**
GROS Grobnik 80.60 327 *i*P **P 22 46 53.6 -0.2**
GROS *e*pP pP 22 47 05.9 -0.8
GROS Grobnik 80.60 327 *i*P **P 22 46 53.6 -0.2**
GROS *e*pP pP 22 47 05.9 -0.8
RJOB Jochberg 80.61 329 *e*P **P 22 46 54.1 +0.2**
comp=Z,13nm,0.9s,mb4.9
SOKA Soboth 80.61 327 ⇑*i*P **P 22 46 54.2 +0.2**
comp=Z,26nm,1.1s,mb5.1
Z23A Rita Site, Whi 80.63 53 ⇑P **P 22 46 54.1 -0.2**
baz=80,SNR=6.9
Y24A Capitan 80.63 52 ⇓P **P 22 46 54.3 0.0**
baz=80,SNR=10
MMB Musomiste 80.79 319 P **P 22 46 55.4 +0.4**
FUR Furstenfeldbru 80.81 330 *e*P **P 22 46 55.0 0.0**
comp=Z,15nm,0.8s,mb5.0
FUR *e*pP pP 22 47 07.2 -0.6
FUR Furstenfeldbru 80.81 330 *e*P **P 22 46 55.0 0.0**
comp=Z,15nm,0.8s,mb5.0
FUR *e*pP pP 22 47 07.2 -0.6
FUR Furstenfeldbru 80.81 330 *e*P **P 22 46 55.0 0.0**
FUR *e**PP pP 22 47 07.2 -0.6
FUR pmax pmax
comp=Z,15nm,0.8s,mb5.0
KKB Krupnik 80.89 320 P **P 22 46 55.6 +0.1**
GOLS Golise 80.92 327 *i*P **P 22 46 55.3 -0.2**
GOLS Golise 80.92 327 *i*P **P 22 46 55.3 -0.2**
KBA Koelnbreinsper 80.94 329 ⇑*i*P **P 22 46 56.4 +0.7**
comp=Z,28nm,1.4s,mb5.0,SNR=8.9
RUP Ruppelstein 80.97 334 *e*P **P 22 46 55.7 -0.1**
RUP Ruppelstein 80.97 334 *e*P **P 22 46 55.7 -0.1**
Y25A Mesa, Roswell 81.07 52 ⇑P **P 22 46 56.3 -0.3**
baz=81,SNR=7.6
X26A CR and CF Fran 81.13 51 ⇓P **P 22 46 56.6 -0.3**
baz=81,SNR=11
W27A Bowe Ranch, En 81.19 50 ⇑P **P 22 46 57.2 0.0**
baz=81,SNR=8.9
MYKA Terra Mystica 81.20 328 ⇑*i*P **P 22 46 56.8 -0.3**
comp=Z,9.6nm,1.0s,mb4.7
LJU Ljubljana 81.33 327 *i*P **P 22 46 57.2 -0.6**
LJU Ljubljana 81.33 327 *i*P **P 22 46 57.2 -0.6**
LJU Ljubljana 81.33 327 *i*P **P 22 46 57.2 -0.6**
WATA Walderalm 81.40 330 ⇑*i*P **P 22 46 58.2 +0.1**
comp=Z,4.9nm,0.5s,mb4.7
VISS Visnje 81.40 327 *e*P **P 22 46 57.5 -0.6**
VISS *i* pP pP 22 47 09.8 -1.2
VISS Visnje 81.40 327 *e*P **P 22 46 57.5 -0.6**
VISS *i* pP pP 22 47 09.8 -1.2
WTTA Wattenberg 81.44 330 ⇓*i*P **P 22 46 58.7 +0.4**
comp=Z,22nm,1.2s,mb5.0
DLF Lyons Farm 81.45 343 *e*P **P 22 46 55.0 -3.3**
BOJS Bojanci 81.48 327 *e*P **P 22 46 58.2 -0.4**
BOJS Bojanci 81.48 327 *e*P **P 22 46 58.2 -0.4**
124A Stringfield Ra 81.49 53 ⇑P **P 22 46 59.0 +0.2**
baz=81,SNR=7.9
Z25A Roswell 81.51 52 P **P 22 46 59.6 +0.6**
baz=81,SNR=11
VAY Valandovo 81.56 320 *e*P **P 22 46 58.0 -1.1**
MOTA Moosalm 81.57 330 ⇓*i*P **P 22 46 59.1 +0.2**
comp=Z,26nm,1.0s,mb5.1,SNR=15
Y26A Elida 81.57 51 P **P 22 46 59.4 +0.1**
baz=81,SNR=9.3
RETA Reutte 81.57 330 ⇑*i*P **P 22 46 59.4 +0.3**
comp=Z,25nm,1.3s,mb5.0
SKO Skopje 81.59 321 *e*P **P 22 46 58.5 -0.7**
BFO Black Forest 81.72 332 *e*P **P 22 47 00.7 +0.9**
comp=Z,17nm,1.1s,mb4.9
BFO Black Forest 81.72 332 *e*P **P 22 47 00.7 +0.9**
comp=Z,17nm,1.1s,mb4.9
BFO Black Forest 81.72 332 *e*P **P 22 47 00.7 +0.9**
BFO pmax pmax
comp=Z,17nm,1.1s,mb4.9
SPAK Spaichingen-Ko 81.76 332 *e*P **P 22 47 00.1 +0.1**
PLG Polygyros 81.86 319 P **P 22 47 00.2 -0.5**
224A Cornudas Mount 81.89 54 ⇑P **P 22 47 00.9 -0.1**
baz=82,SNR=12
Z26A Caprock 81.95 52 P **P 22 47 01.1 -0.1**
baz=82,SNR=25
FETA Feichten 81.98 330 *i*P **P 22 47 01.5 +0.4**
comp=Z,14nm,1.0s,mb4.9,SNR=13
Y27A Causey 81.98 51 ⇓P **P 22 47 00.5 -0.9**
baz=82,SNR=8.8
DAVA Damuels 82.06 331 ⇑*i*P **P 22 47 01.4 -0.2**
comp=Z,14nm,1.2s,mb4.8
AMTX Amarillo 82.10 49 P **P 22 47 01.9 -0.2**
baz=82,SNR=7.9
AMTX Amarillo 82.10 49 *e*P **P 22 47 01.8 -0.3**
comp=Z,19nm,1.0s,mb5.0
KRUS Krusevo 82.15 321 *e*P **P 22 47 01.3 -0.9**
CPRX Cap Rock 82.19 52 *e*P **P 22 47 02.5 -0.1**
comp=Z,9.6nm,0.9s,mb4.7
ECH Echery 82.22 333 *e*P **P 22 47 02.0 -0.4**
ECH Echery 82.22 333 *e*P **P 22 47 02.0 -0.4**
comp=Z,18nm,1.4s,mb4.8
ECH Echery 82.22 333 *e*P **P 22 47 02.0 -0.4**
ECH pmax pmax
comp=Z,18nm,1.4s,mb4.8
MNTX Cornudas Mount 82.24 54 ⇓P **P 22 47 02.1 -0.8**
baz=82,SNR=9.1
MNTX Cornudas Mount 82.24 54 *e*P **P 22 47 03.0 +0.2**
comp=Z,17nm,1.4s,mb4.8
225A Deer Hill, Car 82.28 53 ⇑P **P 22 47 03.0 0.0**
baz=82,SNR=7.4
Z27A Tatum 82.36 51 ⇑P **P 22 47 03.0 -0.5**
baz=82,SNR=10
BIA Bitola 82.38 320 *e*P **P 22 47 02.0 -1.4**
GDL2 Guadalupe Moun 82.49 53 *e*P **P 22 47 04.6 +0.5**
DAVOX Davos/Dischmat 82.49 330 LR LR 23 26 41.5
comp=Z,526nm,20.7s,MS4.9,baz=86,slow=38
MOF Molkenrain 82.55 333 *e*P **P 22 47 03.7 -0.4**
MOF Molkenrain 82.55 333 *e*P **P 22 47 03.7 -0.4**
STON Ston 82.57 324 P **P 22 47 00.3 -4.1**
THEF They Montfort 82.60 333 *e*P **P 22 47 04.0 -0.4**
THEF They Montfort 82.60 333 *e*P **P 22 47 04.0 -0.4**
325A Bean Ranch, Si 82.72 54 ⇑P **P 22 47 04.6 -0.8**
baz=82,SNR=5.5
226A Malaga, Loving 82.74 53 ⇑P **P 22 47 05.2 -0.2**
baz=82,SNR=8.6
BBS Basel-Blauen 82.75 332 *e*P **P 22 47 05.1 -0.1**
BBS Basel-Blauen 82.75 332 *e*P **P 22 47 05.1 -0.1**
TUE Stuetta 82.95 331 *e*P **P 22 47 06.5 +0.3**
NEST Nestorio 82.99 320 P **P 22 47 06.3 -0.2**
425A Indio Mountain 83.13 54 ⇓P **P 22 47 07.3 -0.2**
baz=83,SNR=7.0
326A Caldwell Ranch 83.35 53 ⇑P **P 22 47 08.5 -0.1**
baz=83,SNR=5.1
ATAL Atalanti 83.36 318 P **P 22 47 07.2 -1.3**
LKR Lokris 83.41 318 P **P 22 47 07.3 -1.5**
426A McDonald Obser 83.79 54 ⇓P **P 22 47 10.4 -0.4**
baz=84,SNR=7.0
WMOK Wichita Mounta 83.82 48 *e*P **P 22 47 10.3 -0.6**
WMOK Wichita Mounta 83.82 48 *e*P **P 22 47 10.3 -0.6**
328A Wristen Ranch, 84.00 53 ⇑P **P 22 47 11.6 -0.3**
baz=84,SNR=13
427A Hayter Ranch, 84.03 53 ⇑P **P 22 47 11.8 -0.3**
baz=84,SNR=10
KALE Kalithea 84.03 318 P **P 22 47 10.2 -1.8**
HDIL Hopedale 84.11 38 *e*P **P 22 47 11.9 -0.4**
EFP Efpalio 84.12 318 P **P 22 47 11.4 -1.0**
526A Mary Lane Ranc 84.19 54 ⇓P **P 22 47 12.8 -0.1**
baz=84,SNR=12
LAKA Lakka 84.23 318 P **P 22 47 11.8 -1.2**
GUR Goura 84.29 318 P **P 22 47 11.7 -1.6**
527A Woodward Ranch 84.41 54 P **P 22 47 14.3 +0.3**
baz=84,SNR=5.2
VLC Villacollemand 84.52 329 *e*P **P 22 47 14.2 -0.1**
comp=Z,32nm,1.0s,mb5.4
626A Big Bend Ranch 84.53 55 ⇓P **P 22 47 14.3 -0.3**
baz=84,SNR=9.3
428A Kincaid Ranch, 84.54 53 ⇑P **P 22 47 14.8 +0.1**
baz=84,SNR=17
LAST Lasithi 84.80 314 P **P 22 47 15.6 -0.3**
AQU L'Aquila 84.83 326 *e*P **P 22 47 15.5 -0.4**
comp=Z,31nm,1.0s,mb5.4
AQU L'Aquila 84.83 326 ⇑P **P 22 47 17.2 +1.3**
AQU L'Aquila 84.83 326 ⇑*i*P **P 22 47 17.2 +1.3**
528A Cox Ranch, San 84.89 53 ⇓P **P 22 47 16.5 +0.1**
baz=85,SNR=12
TXAR Lajitas Array 84.97 54 P **P 22 47 16.9 +0.1**
comp=Z,11nm,0.8s,mb5.0,baz=295,slow=3.8,SNR=99
TXAR PKKPbc PKKPbc 23 05 25.1 +2.9
comp=Z,0.7nm,0.8s,baz=138,slow=6.0,SNR=6.3
TXAR Lajitas Array 84.97 54 P **P 22 47 16.9 +0.1**
TXAR pmax pmax
comp=Z,11nm,0.8s
TXAR pmax pmax
comp=Z,1.0nm,0.9s
PPT Papeete 85.01 119 *e*S S 22 57 51.3 +8.3
comp=Z,83nm,24.8s
PPT *e*LR LR 23 14 13.2
comp=Z,418nm,23.5s
627A Terlingua Ranc 85.05 54 ⇓P **P 22 47 16.9 -0.4**
baz=85,SNR=6.8
ITM Ithomi 85.08 318 P **P 22 47 16.1 -1.2**
BNI Bardonecchia 85.12 331 *e*P **P 22 47 17.8 +0.5**
BNI Bardonecchia 85.12 331 *e*P **P 22 47 17.8 +0.5**
CCM Cathedral Cave 85.17 41 *e*P **P 22 47 16.5 -1.3**
comp=Z,26nm,1.0s,mb5.3
CCM Cathedral Cave 85.17 41 *e*P **P 22 47 16.5 -1.2**
CCM pmax pmax
comp=Z,26nm,1.0s,mb5.3
TAOE Nuku Hiva Isla 85.25 106 *e*LR LR 23 14 22.6
comp=Z,486nm,25.3s
628A Black Gap, Mar 85.32 54 ⇑P **P 22 47 17.8 -0.8**
baz=85
CUC Castrocucco 85.73 323 *e*P **P 22 47 18.3 -2.1**
comp=Z,5.9nm,1.0s,mb4.8
SAOF Saorge 85.73 330 *e*P **P 22 47 19.9 -0.5**
SAOF Saorge 85.73 330 *e*P **P 22 47 19.9 -0.5**
AUTN L'Aution 85.77 330 *e*P **P 22 47 20.4 -0.2**
AUTN L'Aution 85.77 330 *e*P **P 22 47 20.4 -0.2**
TOUF Mont Tournerai 85.82 331 *e*P **P 22 47 20.6 -0.2**
TOUF Mont Tournerai 85.82 331 *e*P **P 22 47 20.6 -0.2**
LUCF Luceram 85.89 330 *e*P **P 22 47 20.7 -0.5**
REVF Revere 86.01 330 *e*P **P 22 47 21.4 -0.4**
REVF Revere 86.01 330 *e*P **P 22 47 21.4 -0.4**
JCT Junction City 86.41 51 *e*P **P 22 47 23.3 -0.7**
comp=Z,26nm,1.3s,mb5.3
JCT Junction City 86.41 51 *e*P **P 22 47 23.3 -0.7**
JCT pmax pmax
comp=Z,26nm,1.3s,mb5.3
SIUC Southern Illin 86.42 40 *e*P **P 22 47 23.5 -0.4**
comp=Z,50nm,0.9s,mb5.7
MIAR Mount Ida 86.75 45 *e*P **P 22 47 25.4 -0.2**
comp=Z,32nm,1.2s,mb5.4
MIAR Mount Ida 86.75 45 *e*P **P 22 47 25.4 -0.2**
MIAR pmax pmax
comp=Z,32nm,1.2s,mb5.4
HBAR Harrisburg 87.44 42 *e*P **P 22 47 28.5 -0.4**
VAE Valguarnera 88.42 323 LR LR 23 31 12.1
comp=Z,207nm,18.4s,MS4.6,baz=40,slow=38
RPZ Rata Peaks 89.00 161 P **P 22 47 36.7 +0.9**
comp=Z,13nm,0.8s,mb5.3,baz=310,slow=8.1,SNR=5.5
RPZ Rata Peaks 89.00 161 P **P 22 47 36.7 +0.9**
WES Weston 89.60 26 *e*P **P 22 47 38.4 -0.6**
comp=Z,70nm,1.3s,mb5.8
WES Weston 89.60 26 *e*P **P 22 47 38.4 -0.6**
WES pmax pmax
comp=Z,70nm,1.3s,mb5.8
ATD Arta Tunnel 90.78 286 LR LR 23 34 55.9
comp=Z,167nm,18.1s,MS4.5,baz=358,slow=40
KEST Kesra 92.10 325 P **P 22 47 50.4 -0.3**
comp=Z,3.6nm,0.9s,mb4.7,baz=319,slow=7.5,SNR=12
KEST LR LR 23 35 18.9
comp=Z,130nm,19.7s,MS4.4,baz=173,slow=40
KEST Kesra 92.10 325 *e*P **P 22 47 50.4 -0.4**
ESDC Sonseca Array 93.43 336 P **P 22 47 56.2 -0.6**
comp=Z,1.3nm,0.7s,mb4.5,baz=19,slow=5.4,SNR=5.8
ESDC LR LR 23 35 18.5
comp=Z,158nm,18.8s,MS4.5,baz=290,slow=39
ESDC Sonseca Array 93.43 336 P **P 22 47 56.2 -0.6**
ESDC LR LR 23 35 18.5
RKT Rikitea 98.61 113 *e*LR LR 23 20 29.0
comp=Z,304nm,25.5s
MDT Midelt 99.94 334 LR LR 23 39 44.8
comp=Z,190nm,19.8s,MS4.6,baz=305,slow=39
KMBO Kilima Mbogo 103.49 281 Pdiff Pdif 22 48 43.0 +0.9
comp=Z,1.7nm,0.9s,baz=180,slow=24,SNR=4.8
KMBO Kilima Mbogo 103.49 281 P Pdif 22 48 43.0 +0.9
KMBO pmax pmax
comp=Z,2.0nm,0.9s
SDV Santo Domingo 119.65 41 *e*PKPdf PKPdf 22 53 30.5 -1.2
DBIC Dimbokro 123.74 323 PKP PKPdf 22 53 38.7 -0.8
comp=Z,4.5nm,0.6s,baz=78,slow=1.8,SNR=10
DBIC Dimbokro 123.74 323 PKIKP PKPdf 22 53 38.7 -0.8
DBIC pmax pmax
comp=Z,5.0nm,0.6s
TIC Toumodi 123.84 323 *e*PKIKP PKPdf 22 53 38.8 -0.9
comp=Z,4.1nm,0.2s
TIC Toumodi 123.84 323 *e*PKIKP PKPdf 22 53 38.8 -0.9
KIC Kosan Boka 123.96 322 *e*PKIKP PKPdf 22 53 39.0 -1.0
comp=Z,19nm,0.9s
LIC Lamto 124.21 323 *e*PKIKP PKPdf 22 53 39.4 -1.1
comp=Z,43nm,1.0s
MAW Mawson 125.44 208 PKP PKPdf 22 53 41.2 +0.2
comp=Z,4.4nm,0.8s,baz=358,slow=2.2,SNR=12
MAW Mawson 125.44 208 PKIKP PKPdf 22 53 41.2 +0.2
MAW pmax pmax
comp=Z,4.0nm,0.8s
BOSA Boshof 129.70 265 PKP PKPdf 22 53 50.4 0.0
comp=Z,4.4nm,0.9s,baz=142,slow=14,SNR=4.4
BOSA Boshof 129.70 265 PKP PKPdf 22 53 50.4 0.0
BOSA Boshof 129.70 265 PKIKP PKPdf 22 53 50.4 0.0
BOSA pmax pmax
comp=Z,4.0nm,0.9s
QSPA South Pole Qui 132.17 180 *e*PKPdf PKPdf 22 53 53.5 -0.1
LPAZ La Paz 141.79 57 PKhKP PKPpre 22 54 07.1
comp=Z,2.6nm,0.8s,baz=225,slow=1.2,SNR=9.4
LPAZ PKP PKPdf 22 54 14.0 +0.8
comp=Z,1.9nm,0.6s,baz=318,slow=4.6,SNR=6.2
LPAZ La Paz 141.79 57 *e*PKPdf PKPdf 22 54 10.8 -2.4
LPAZ PKP PKPdf 22 54 14.0 +0.8
LPAZ La Paz 141.79 57 *e*PKIKP PKPdf 22 54 10.8 -2.4
NVL N'lazarevskaya 143.20 204 *e*PKIKP PKPdf 22 54 12.0 -2.0
NVL pmax pmax
comp=Z,22nm,1.4s
LCO Las Campanas 148.64 76 *e*PKPbc PKPbc 22 54 28.4 0.0
BDFB Brasilia 151.20 26 PKPbc PKPbc 22 54 34.4 -0.5
comp=Z,26nm,0.8s,baz=278,slow=1.1,SNR=31
BDFB PKPab PKPab 22 54 45.8 +3.0
comp=Z,22nm,1.0s,baz=356,slow=5.0,SNR=7.5
BDFB Brasilia 151.20 26 PKIKP PKPbc 22 54 34.4 -0.5
BDFB 22 54 45.8
BDFB pmax pmax
comp=Z,26nm,0.8s
BDFB pmax pmax
comp=Z,22nm,1.0s
PLCA Paso Flores 153.80 98 PKPbc PKPbc 22 54 40.1 +0.1
comp=Z,4.5nm,0.9s,baz=275,slow=4.4,SNR=6.0
PLCA PKPab PKPab 22 54 53.3 +0.1
comp=Z,7.3nm,1.1s,baz=211,slow=3.8,SNR=5.7
PLCA Paso Flores 153.80 98 PKIKP PKPbc 22 54 40.1 +0.1
PLCA PKPab 22 54 53.3 +0.1
PLCA pmax pmax
comp=Z,5.0nm,0.9s
PLCA pmax pmax
comp=Z,7.0nm,1.1s

MOS ***11*** *22:58:09.6±1.0, 53°.73N×160°.68E, h60km, mb4.1/11, Error ellipse: s-maj=20.6km s-min=8.7km az=68.6*
ISCJB ***11*** *22:58:10.5±0.5, 53°.75N±0°.03×160°.70E±0°.08, h71km±5km, mb3.8/15, Error ellipse: s-maj=8.4km s-min=3.4km az=29.9*
KRSC ***11*** *22:58:10.9±0.6, 53°.76N×160°.77E, h33km±23km, ML4.4*
NEIC ***11*** *22:58:12.8±0.9, 53°.89N×160°.35E, h72km±9km, mb4.1/3, Error ellipse: s-maj=15.0km s-min=8.0km az=146.0*
IDC ***11*** *22:58:14.3±1.8, 53°.92N×160°.34E, h82km±18km, mb3.5/12, mb1 3.8/12, mb1mx3.6/23, mbtmp3.5/12, Error ellipse: s-maj=24.7km s-min=15.4km az=158.0*

ISC 11 22:58:11.6±0.5, 53°.74N±0°.03×160°.68E±0°.08, h63km±5km, n65, σ0°.96/93, mb3.9/15, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.75**	**212**	*e*P	**Pn**	**22 58 24.6**	**-1.9**
SPN				*i* S	**Sn**	**22 58 33.8**	**-3.7**
SPN	**Mys Shipunski**	**0.75**	**212**	PN	**Pn**	**22 58 24.6**	**-1.9**
SPN				S	**Sn**	**22 58 33.8**	**-3.7**
KII	**Karymskiy**	**0.79**	**293**	*e*P	**Pn**	**22 58 25.6**	**-1.4**
MKZ	**Mys Kozlova**	**1.03**	**37**	*e*P	**Pn**	**22 58 28.0**	**-2.0**
MKZ				*i* S	**Sn**	**22 58 39.9**	**-3.9**
MKZ	**Mys Kozlova**	**1.03**	**37**	PN	**Pn**	**22 58 28.0**	**-2.0**
MKZ				S	**Sn**	**22 58 39.9**	**-3.9**
PET	**Petropavlovsk**	**1.41**	**240**	*e*P	**Pn**	**22 58 34.7**	**-0.3**
PET				*i* S	**Sn**	**22 58 52.3**	**-0.3**
PET	**Petropavlovsk**	**1.41**	**240**	*e*Pn	**Pn**	**22 58 34.7**	**-0.3**
PET				*e*Sn	**Sn**	**22 58 53.6**	**+1.0**
PET	**Petropavlovsk**	**1.41**	**240**	⇓*i*PN	**Pn**	**22 58 34.6**	**-0.4**
PET				*e*S	**Sn**	**22 58 52.2**	**-0.4**
PET				pmax	pmax		
PET				pmax	pmax		
PET				smax			
PET				smax			
PET				smax			
GNL	**Ganaly**	**1.62**	**270**	*e*P	**Pn**	**22 58 38.0**	**+0.1**
GNL				*i* S	**Sn**	**22 58 57.6**	**-0.3**
PEA0B	**Petropavlovsk-**	**1.89**	**252**	Pn	**Pn**	**22 58 41.6**	**+0.1**
PETK	**Petropavlovsk-**	**1.89**	**252**	P	**Pn**	**22 58 42.1**	**+0.6**
PETK				S	**Sn**	**22 59 05.7**	**+1.4**
PETK	**Petropavlovsk-**	**1.89**	**252**	PN	**Pn**	**22 58 42.1**	**+0.6**
PETK				S	**Sn**	**22 59 05.7**	**+1.5**
PETK				pmax	pmax		
PETK				smax			
GRL	**Gorelyy**	**1.97**	**234**	*e*P	**Pn**	**22 58 44.1**	**+1.6**
GRL				*i* S	**Sn**	**22 59 07.9**	**+1.8**
BZMR	**Bezymyannaya**	**2.21**	**357**	*e*P	**Pn**	**22 58 46.5**	**+0.7**
BZMR				*i* S	**Sn**	**22 59 12.1**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**2.21**	**0**	*e*P	**Pn**	**22 58 46.6**	**+0.8**
BZGR				*i* S	**Sn**	**22 59 12.7**	**+0.7**
KPT	**Kopyto**	**2.25**	**354**	*e*P	**Pn**	**22 58 46.8**	**+0.4**
KPT				*i* S	**Sn**	**22 59 13.3**	**+0.3**
ZLN	**Zelenaya**	**2.29**	**2**	*e*P	**Pn**	**22 58 46.8**	**-0.1**
ZLN				*i* S	**Sn**	**22 59 13.3**	**-0.6**
KOZ	**Kozyrevsk**	**2.37**	**349**	*e*P	**Pn**	**22 58 48.3**	**+0.3**
KOZ				*i* S	**Sn**	**22 59 16.1**	**+0.2**
KOZR	**Kozyr**	**2.38**	**349**	PN	**Pn**	**22 58 48.3**	**+0.2**
KOZR				S	**Sn**	**22 59 16.1**	**0.0**
KRSR	**Krestovskiy**	**2.48**	**359**	*e*P	**Pn**	**22 58 49.8**	**+0.2**
KRSR				*i* S	**Sn**	**22 59 18.7**	**0.0**
KLY	**Klyuchi**	**2.58**	**360**	*e*P	**Pn**	**22 58 51.2**	**+0.3**
KLY				*i* S	**Sn**	**22 59 20.7**	**-0.4**
KLY	**Klyuchi**	**2.58**	**360**	PN	**Pn**	**22 58 51.2**	**+0.3**
KLY				S	**Sn**	**22 59 20.7**	**-0.4**
SRDR	**Sredinnyy**	**2.64**	**348**	*e*P	**Pn**	**22 58 51.2**	**-0.5**
SRDR				*i* S	**Sn**	**22 59 21.1**	**-1.5**
KBTR	**Krutoberegovo**	**2.77**	**26**	*e*P	**Pn**	**22 58 53.5**	**+0.1**
KBTR				*i* S	**Sn**	**22 59 25.3**	**-0.3**
KBTR	**Krutoberegovo**	**2.77**	**26**	PN	**Pn**	**22 58 53.5**	**+0.1**
KBTR				S	**Sn**	**22 59 25.3**	**-0.3**
BDR	**Baidarnaya**	**2.85**	**6**	*e*P	**Pn**	**22 58 55.3**	**+0.7**
BDR				*i* S	**Sn**	**22 59 27.8**	**+0.1**
SMKR	**Semkarok**	**2.89**	**9**	*e*P	**Pn**	**22 58 55.6**	**+0.6**
SMKR				*i* S	**Sn**	**22 59 28.3**	**-0.2**
SRKR	**Sorokina**	**2.94**	**5**	*e*P	**Pn**	**22 58 57.0**	**+1.3**
SRKR				*i* S	**Sn**	**22 59 30.8**	**+1.1**
BKI	**Bering**	**3.42**	**62**	*e*P	**Pn**	**22 59 01.4**	**-1.0**
BKI				*i* S	**Sn**	**22 59 37.3**	**-4.3**
BKI	**Bering**	**3.42**	**62**	PN	**Pn**	**22 59 01.4**	**-1.0**
BKI				S	**Sn**	**22 59 37.3**	**-4.3**
BILL	**Bilibino**	**14.60**	**8**	*e*P	**Pn**	**23 01 42.5**	**+8.3**
BILL				pmax	pmax		
ASAJ	**Asahikawa**	**15.25**	**238**	*e*Pn	**Pn**	**23 01 43.6**	**+0.7**
ERM	**Erimo**	**16.55**	**232**	*i* P	**Pn**	**23 01 58.1**	**-1.2**
MAJO	**Matsushiro**	**23.22**	**231**	*e*P	**P**	**23 03 11.4**	**-1.6**

comp=Z,4.3nm,0.6s,mb4.1
MAJO Matsushiro 23.22 231 *e*P **P 23 03 11.4 -1.6**
MAJO pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
MJAR Matsushiro Arr 23.22 231 P **P 23 03 12.8 -0.2**
comp=Z,2.3nm,0.4s,mb4.0,baz=202,slow=23,SNR=3.7
MJAR Matsushiro Arr 23.22 231 P **P 23 03 12.8 -0.2**
MJAR Matsushiro Arr 23.22 231 P **P 23 03 12.8 -0.2**
MJAR pmax pmax
comp=Z,2.0nm,0.4s
ILAR Eielson Array 28.12 46 P **P 23 03 57.4 +0.4**
comp=Z,0.8nm,0.8s,mb3.4,baz=266,slow=7.8,SNR=11
ILAR Eielson Array 28.12 46 P **P 23 03 57.4 +0.4**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
INK Inuvik 33.15 38 *e*P **P 23 04 40.9 -0.4**
comp=Z,3.8nm,1.1s,mb4.2
INK Inuvik 33.15 38 *e*P **P 23 04 40.9 -0.4**
INK pmax pmax
comp=Z,4.0nm,1.1s
ULN Ulaanbaatar 33.70 282 *e*P **P 23 04 44.6 -1.6**
comp=Z,1.9nm,1.1s,mb3.9
ULN Ulaanbaatar 33.70 282 *e*P **P 23 04 44.7 -1.6**
ULN pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
SONM Songino Array 34.09 283 P **P 23 04 49.3 -0.4**
comp=Z,0.4nm,0.6s,mb3.5,baz=106,slow=11,SNR=2.8
SONM Songino Array 34.09 283 P **P 23 04 49.3 -0.4**
NACB Ninganchiao 41.52 240 *e*P **P 23 05 52.4 -0.1**
RES Resolute Bay 42.59 22 P **P 23 06 00.4 -0.3**
RES Resolute Bay 42.59 22 P **P 23 06 00.4 -0.3**
MKAR Makanchi Array 48.19 295 P **P 23 06 42.4 -2.9**
comp=Z,0.3nm,0.5s,mb3.6,baz=58,slow=6.8,SNR=7.4
MKAR Makanchi Array 48.19 295 *e*P **P 23 06 43.1 -2.2**
ARCES ARCESS Array B 52.78 342 P **P 23 07 18.8 -0.7**
comp=Z,1.5nm,1.0s,mb3.9,baz=47,slow=8.8,SNR=5.0
ARCES ARCESS Array B 52.78 342 P **P 23 07 18.8 -0.7**
ARCES pmax pmax
comp=Z,2.0nm,1.0s
NVAR Mina Array Bea 55.20 71 P **P 23 07 39.6 +2.1**
comp=Z,0.5nm,0.6s,mb3.7,baz=316,slow=6.1,SNR=3.8
PDAR Pinedale Array 56.91 62 P **P 23 07 51.1 +1.4**
comp=Z,0.7nm,0.5s,mb4.0,baz=356,slow=2.2,SNR=4.8
CMAR Chiang Mai Arr 58.66 258 P **P 23 08 01.8 -0.5**
comp=Z,0.5nm,0.4s,mb3.9,baz=27,slow=6.8,SNR=2.9
CMAR Chiang Mai Arr 58.66 258 P **P 23 08 01.8 -0.4**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 59.67 337 P **P 23 08 07.9 -0.7**
comp=Z,2.9nm,1.0s,mb4.2,baz=28,slow=8.6,SNR=5.0
FINES FINESS Array B 59.67 337 P **P 23 08 07.9 -0.7**
FINES pmax pmax
comp=Z,3.0nm,1.0s
NOA NORSAR Array B 63.02 344 P **P 23 08 30.8 -0.5**
comp=Z,1.2nm,0.9s,mb4.0,baz=23,slow=6.2,SNR=5.6
NOA NORSAR Array B 63.02 344 P **P 23 08 30.8 -0.5**
NOA pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 70.07 68 P **P 23 09 18.7 +2.0**
comp=Z,0.7nm,0.7s,mb3.7,baz=300,slow=5.8,SNR=5.1
TXAR Lajitas Array 70.07 68 P **P 23 09 18.7 +2.0**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 80.49 205 P **P 23 10 17.6 +1.3**
comp=Z,0.8nm,0.8s,mb3.7,baz=11,slow=6.0,SNR=5.5
ASAR Alice Springs 80.49 205 P **P 23 10 17.6 +1.3**
ASAR pmax pmax
comp=Z,1.0nm,0.9s

KRSC 11 22:59:48.3±0.6, 53°.75N×160°.63E, h40km±29km, ML3.8,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.75**	**209**	*e*P	Pn	23 00 02.2	-0.1
SPN				*i* S	Sn	23 00 12.1	-0.4
KII	**Karymskiy**	**0.76**	**293**	*e*P	Pn	23 00 03.0	+0.5
KII				*i* S	Sn	23 00 13.1	+0.4
MKZ	**Mys Kozlova**	**1.03**	**38**	*e*P	Pn	23 00 05.4	-0.9
MKZ				*i* S	Sn	23 00 17.8	-1.7
AVH	**Avacha**	**1.23**	**247**	*e*P	Pn	23 00 10.3	+1.4
AVH				*i* S	Sn	23 00 26.9	+2.6
PET	**Petropavlovsk**	**1.39**	**239**	*e*P	Pn	23 00 11.9	+0.8
PET				*i* S	Sn	23 00 29.6	+1.4
GNL	**Ganaly**	**1.60**	**269**	*e*P	Pn	23 00 14.0	0.0
GNL				*i* S	Sn	23 00 32.2	-1.2
KBTR	**Krutoberegovo**	**2.77**	**26**	*e*P	Pn	23 00 32.2	+2.1
KBTR				*i* S	Sn	23 01 04.9	+2.7

MOS ***11*** *23:05:57.0±1.4, 48°.24N×154°.85E, h27km, mb4.2/12, Error ellipse: s-maj=12.6km s-min=8.6km az=67.4*
ISCJB ***11*** *23:05:59.3±1.2, 48°.27N±0°.08×154°.9E±0°.1, h46km±9km, mb3.9/16, Error ellipse: s-maj=18.0km s-min=7.5km az=43.9*
IDC ***11*** *23:05:59.8±0.7, 48°.31N×154°.94E, h35km±6km, mb3.6/12, mb1 3.8/14, mb1mx3.7/24, mbtmp3.7/14, ML3.9/2, MS2.9/2, Ms1 2.9/2, ms1mx2.7/34, Error ellipse: s-maj=23.4km s-min=15.0km az=134.0*
NEIC ***11*** *23:06:00.6±0.9, 48°.36N×154°.90E, h43km±8km, mb4.3/4, Error ellipse: s-maj=12.6km s-min=6.2km az=140.0*
ISC 11 23:06:01.0±1.0, 48°.26N±0°.08×154°.9E±0°.1, h45km±8km,
h38km±3.3km: pP-P, n68, σ1s13/71, mb3.9/16, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.56**	**18**	*e*PN	**Pn**	**23 06 41.5**	**+1.7**
SKR				*e*S	**Sn**	**23 07 11.9**	**+2.2**
SKR				pmax	pmax		
comp=Z,110nm,0.5s
SKR pmax pmax
comp=N,80nm,0.4s
SKR smax
comp=N,250nm,0.5s
PETK Petropavlovsk- 5.17 19 Pn **Pn 23 07 15.5 -0.3**
comp=N,1.7nm,0.3s,baz=187,slow=12,SNR=18
PETK Sn **Sn 23 08 21.4 +7.3**
baz=184,slow=21,SNR=1.9
PETK LR LR 23 09 41.1
comp=N,121nm,19.1s,baz=163,slow=43
PETK Petropavlovsk- 5.17 19 PN **Pn 23 07 15.5 -0.2**
PETK 23 08 21.4
PETK pmax pmax
comp=Z,2.0nm,0.3s
PETK MLR MLR
comp=Z,121nm,19.1s
PET Petropavlovsk 5.34 25 *e*Pn **Pn 23 07 15.4 -2.6**
PET *e*Sn **Sn 23 08 15.2 -2.9**
PET Petropavlovsk 5.34 25 *e*PN **Pn 23 07 17.4 -0.6**
PET pmax pmax
comp=Z,18nm,0.5s
PET MLR MLR
comp=Z,300nm,13.0s
KUR Kuril'sk 5.70 241 *e*PN **Pn 23 07 23.3 +0.4**
KUR *e*S **Sn 23 08 34.0 +7.0**
KUR pmax pmax
comp=Z,150nm,0.5s
KUR smax
comp=N,180nm,0.9s
KUR smax
comp=E,140nm,0.9s
YSS Yuzh-Sakhalins 8.31 265 *e*Pn **Pn 23 07 57.8 -0.8**
comp=E,23nm,0.4s
YSS Yuzh-Sakhalins 8.31 265 *e*PN **Pn 23 07 57.8 -0.9**
YSS pmax pmax
comp=Z,23nm,0.4s
ASAJ Asahikawa 9.48 249 Pn **Pn 23 08 16.1 +1.4**
comp=Z,2.3nm,0.3s,baz=82,slow=15,SNR=15
ASAJ Asahikawa 9.48 249 *e*Pn **Pn 23 08 15.8 +1.0**
comp=Z,6.5nm,0.6s
ASAJ Asahikawa 9.48 249 PN **Pn 23 08 16.1 +1.4**
ASAJ pmax pmax
comp=Z,2.0nm,0.3s
ERM Erimo 10.37 237 *e*PN **Pn 23 08 24.0 -3.0**
MJAR Matsushiro Arr 16.95 232 LR LR 23 15 18.7
comp=Z,43nm,21.9s,baz=55,slow=33
MAJO Matsushiro 16.95 232 *e*Pn **Pn 23 09 55.2 +0.5**
MAJO Matsushiro 16.95 232 *e*P **Pn 23 09 55.2 +0.5**
MDJ Mudanjiang 17.79 268 *e*Pn **Pn 23 10 05.0 0.0**
BILL Bilibino 20.66 12 *e*P **P 23 10 44.0 +7.6**
BILL pmax pmax
comp=Z,2.0nm,0.6s
KSRS Korea Array 22.41 251 P **P 23 10 55.1 -0.4**
comp=Z,3.4nm,0.5s,mb4.0,baz=49,slow=9.4,SNR=4.8
KSRS Korea Array 22.41 251 P **P 23 10 55.1 -0.4**
KSRS pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
ULN Ulaanbaatar 31.57 288 P **P 23 12 18.2 -0.7**
ULN Ulaanbaatar 31.57 288 P **P 23 12 18.2 -0.6**
SONM Songino Array 32.00 288 P **P 23 12 21.0 -1.6**
comp=Z,0.6nm,0.6s,mb3.6,baz=72,slow=9.6,SNR=4.1
SONM Songino Array 32.00 288 P **P 23 12 21.0 -1.6**
SONM pmax pmax
comp=Z,1.0nm,0.6s
MCK McKinley 33.72 42 P **P 23 12 36.3 -1.1**
MCK McKinley 33.72 42 P **P 23 12 36.3 -1.2**
ILAR Eielson Array 34.62 40 P **P 23 12 43.7 -1.5**
comp=Z,0.4nm,0.9s,mb3.3,baz=230,slow=11,SNR=3.1
ILAR pP pP 23 12 53.3 -4.0
comp=Z,0.4nm,0.7s,baz=251,slow=8.1,SNR=3.6
ILAR Eielson Array 34.62 40 P **P 23 12 43.7 -1.5**
ILAR *PP pP 23 12 53.3 -4.0
NACB Ninganchiao 35.60 239 *e*P **P 23 12 54.3 +0.2**
ZALV Zalesovo Beam 42.72 305 P **P 23 13 52.2 -1.0**
comp=Z,0.6nm,0.5s,mb3.6,baz=57,slow=5.3,SNR=3.7
ZALV Zalesovo Beam 42.72 305 P **P 23 13 52.2 -1.0**
ZALV Zalesovo Beam 42.72 305 *e*P **P 23 13 53.5 +0.3**
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
MK31 Makanchi Array 47.33 297 *e*P **P 23 14 29.4 -0.4**
MK31 Makanchi Array 47.33 297 *e*P **P 23 14 29.5 -0.4**
MKAR Makanchi Array 47.33 297 P **P 23 14 29.6 -0.2**
comp=Z,2.2nm,0.6s,mb4.2,baz=67,slow=8.1,SNR=27
MKAR Makanchi Array 47.33 297 P **P 23 14 29.7 -0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
KURK Kurchatov 47.54 303 *e*P **P 23 14 31.2 -0.2**
comp=Z,5.4nm,0.6s,mb4.8
KURK Kurchatov 47.54 303 *e*P **P 23 14 31.2 -0.3**
KURK pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
BRVK Borovoye 50.88 309 *e*P **P 23 14 56.4 -0.5**
comp=Z,2.8nm,0.5s,mb4.5
BRVK Borovoye 50.88 309 *e*P **P 23 14 56.4 -0.5**
BRVK pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
LSA Lhasa 51.39 273 *e*P **P 23 15 01.2 +0.1**
LSA Lhasa 51.39 273 *e*P **P 23 15 01.2 +0.1**
CMAR Chiang Mai Arr 53.89 257 P **P 23 15 21.0 +1.3**
comp=Z,0.8nm,0.4s,mb4.0,baz=36,slow=6.7,SNR=3.5
CMAR Chiang Mai Arr 53.89 257 P **P 23 15 21.0 +1.3**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
AAK Ala-Archa 54.25 296 P **P 23 15 21.1 -0.9**
AAK Ala-Archa 54.25 296 P **P 23 15 21.1 -0.9**
EKS2 Erkin-Say 54.66 297 *e*P **P 23 15 25.1 +0.1**
comp=Z,1.3nm,0.6s,mb4.1
ARU Arti 54.72 317 *e*P **P 23 15 24.0 -1.2**
comp=Z,1.4nm,0.6s,mb4.2
ARU Arti 54.72 317 *e*P **P 23 15 24.0 -1.2**
ARU pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
FINES FINESS Array B 63.18 335 P **P 23 16 23.9 +0.2**
comp=Z,3.3nm,0.9s,mb4.4,baz=39,slow=7.0,SNR=9.1
FINES FINESS Array B 63.18 335 P **P 23 16 24.0 +0.2**
FINES pmax pmax
comp=Z,3.0nm,1.0s
NB2 NORSAR Subarra 67.18 342 P **P 23 16 49.3 -0.4**
comp=Z,0.6nm,0.5s,mb3.9,baz=28,slow=6.5
NOA NORSAR Array B 67.18 342 P **P 23 16 49.4 -0.3**
comp=Z,1.3nm,0.7s,mb4.0,baz=27,slow=6.5,SNR=4.9
NOA NORSAR Array B 67.18 342 P **P 23 16 49.4 -0.3**
NOA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 70.34 201 P **P 23 17 11.1 +1.4**
comp=Z,0.3nm,0.8s,mb3.3,baz=16,slow=6.5,SNR=3.0
WRA pP pP 23 17 20.9 -1.9
comp=Z,0.3nm,0.4s,baz=15,slow=6.4,SNR=3.9
WRA Warramunga Arr 70.34 201 P **P 23 17 11.1 +1.4**
WRA *PP pP 23 17 20.9 -1.9
ASAR Alice Springs 74.03 200 P **P 23 17 31.2 -0.5**
comp=Z,0.6nm,1.0s,mb3.5,baz=10,slow=6.1,SNR=4.3
ASAR pP pP 23 17 43.2 -1.7
comp=Z,0.5nm,0.6s,baz=13,slow=5.7,SNR=3.4
ASAR Alice Springs 74.03 200 P **P 23 17 31.2 -0.5**
ASAR *PP pP 23 17 43.2 -1.7
ASAR pmax pmax
comp=Z,1.0nm,1.0s
ASAR pmax pmax
comp=Z,1.0nm,0.6s
DPC Dobruska-Polom 75.51 334 *e*P **P 23 17 41.7 +1.6**
DPC Dobruska-Polom 75.51 334 *e*P **P 23 17 41.7 +1.6**
TXAR Lajitas Array 75.71 62 P **P 23 17 41.3 -0.3**
comp=Z,0.3nm,0.5s,mb3.5,baz=311,slow=4.9,SNR=7.4
TXAR pP pP 23 17 53.2 -1.7
comp=Z,0.8nm,0.7s,baz=301,slow=4.6,SNR=7.5
TXAR Lajitas Array 75.71 62 P **P 23 17 41.3 -0.3**
TXAR pP pP 23 17 53.2 -1.7
TXAR Lajitas Array 75.71 62 P **P 23 17 41.3 -0.3**
TXAR *PP pP 23 17 53.2 -1.6
TXAR pmax pmax
comp=Z,1.0nm,0.7s
PRU Pruhonice 76.35 335 *e*P **P 23 17 46.9 +2.0**
PRU Pruhonice 76.35 335 *e*P **P 23 17 46.9 +2.0**
KHC Kasperske Hory 77.39 335 *e*P **P 23 17 52.3 +1.5**
KHC Kasperske Hory 77.39 335 *e*P **P 23 17 52.3 +1.5**
BRTR Keskin Array B 78.10 318 P **P 23 17 56.3 +1.4**
comp=Z,1.4nm,0.8s,mb3.9,baz=49,slow=6.5,SNR=6.0
BRTR Keskin Array B 78.10 318 P **P 23 17 56.3 +1.4**
BRTR pmax pmax
comp=Z,1.0nm,0.9s

ISCJB ***11*** *23:11:27.6±0.4, 44°.55N±0°.03×10°.06E±0°.04, h58km±6km, Error ellipse: s-maj=4.6km s-min=4.1km az=28.5*
VIE ***11*** *23:11:27.7±0.8, 44°.67N×10°.36E, h10km, mb1.9/1, ML2.8/4, Error ellipse: s-maj=6.8km s-min=6.0km az=7.0 80 km WNW of Bologna*
CSEM ***11*** *23:11:27.8±0.2, 44°.52N×10°.12E, h50km±4km, ML2.8/9, Error ellipse: s-maj=3.6km s-min=3.1km az=29.0*
LDG ***11*** *23:11:28.2±0.2, 44°.56N×10°.04E, h10km, Ml2.8/11, Error ellipse: s-maj=5.0km s-min=3.4km az=70.0*
ROM ***11*** *23:11:28.3±0.2, 44°.54N×10°.08E, h49km±3km, Md2.2/11, Ml2.2/6, Error ellipse: s-maj=3.0km s-min=2.2km az=69.0*
NEIC ***11*** *23:11:28.2, 44°.56N×10°.04E, h10km, ML2.8(LDG), After LDG.*
ISC 11 23:11:28.5±0.4, 44°.55N±0°.02×10°.07E±0°.04, h52km±6km,
n59, σ0s84/99, 3C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRMA	**PARMA**	**0.28**	**39**	Pg	**Pn**	**23 11 36.8**	**-0.8**
PRMA				Sg	**Sn**	**23 11 44.3**	**+0.2**
PRMA	**PARMA**	**0.28**	**39**	Pg	**Pn**	**23 11 36.8**	**-0.8**
ERBM	**Eremo**	**0.28**	**118**	Pg	**Pn**	**23 11 36.7**	**-0.9**
ERBM				Sg	**Sn**	**23 11 43.8**	**-0.3**
66nm,0.6s
ERBM Eremo 0.28 118 Pg **Pn 23 11 36.7 -0.9**
SC2M Scurtabo 0.41 250 Pg **Pn 23 11 38.9 0.0**
SC2M Sg **Sn 23 11 46.7 +0.4**
149nm,0.3s
SC2M Scurtabo 0.41 250 Pg **Pn 23 11 38.9 0.0**
VLC Villacollemand 0.45 150 Pg **Pn 23 11 38.5 -0.8**
VLC Sg **Sn 23 11 46.5 -0.5**
45nm,0.9s
VLC Villacollemand 0.45 150 Pg **Pn 23 11 38.5 -0.8**
VLC Sg **Sn 23 11 46.5 -0.5**
45nm,0.9s
BOB Bobbio (Coli) 0.49 296 Pg **Pn 23 11 40.3 +0.5**
BOB Bobbio (Coli) 0.49 296 Pg **Pn 23 11 40.3 +0.5**
NOVE Novellara 0.52 61 Pg **Pn 23 11 39.5 -0.7**
NOVE Sg **Sn 23 11 49.3 +0.8**
430nm,0.3s
NOVE Novellara 0.52 61 Pg **Pn 23 11 39.5 -0.7**
NOVE Sg **Sn 23 11 49.3 +0.8**
430nm,0.3s
BDI Bagni Di Lucca 0.62 142 Pg **Pn 23 11 40.8 -0.5**
BDI Sg **Sn 23 11 50.8 +0.3**
198nm,0.4s
BDI Bagni Di Lucca 0.62 142 Pg **Pn 23 11 40.8 -0.5**
BDI Sg **Sn 23 11 50.8 +0.3**
198nm,0.4s
MAIM Mastiano 0.70 154 Pg **Pn 23 11 42.1 -0.3**
MAIM Sg **Sn 23 11 52.7 +0.3**
77nm,0.4s
MAIM Mastiano 0.70 154 Pg **Pn 23 11 42.1 -0.3**
MAIM Sg **Sn 23 11 52.7 +0.3**
77nm,0.4s
FNVD Fontana Vidola 0.84 116 Pg **Pn 23 11 44.9 +0.7**
FNVD Fontana Vidola 0.84 116 Pg **Pn 23 11 44.9 +0.7**
PII Pisa 0.89 158 Pg **Pn 23 11 44.6 -0.2**
60nm,0.2s
PII Pisa 0.89 158 Pg **Pn 23 11 44.6 -0.2**
60nm,0.2s
CRMI Carmignano 1.00 139 Pg **Pn 23 11 46.4 +0.2**
CRMI Sg **Sn 23 11 59.8 +0.5**
CRMI Carmignano 1.00 139 Pg **Pn 23 11 46.4 +0.2**
CRMI Sg **Sn 23 11 59.8 +0.5**
FIU Minerbio Fiu 1.02 84 Pg **Pn 23 11 48.0 +1.5**
FIU Minerbio Fiu 1.02 84 Pg **Pn 23 11 48.0 +1.5**
SALO Salr 1.12 17 Pg **Pn 23 11 47.0 -0.8**
SALO Sg **Sn 23 12 02.4 +0.2**
SBF Sospel 2.02 251 *e*Pn **Pn 23 12 00.4 +0.3**
SBF *e*Sn **Sn 23 12 24.6 +0.5**
20nm,0.2s
SBF Sospel 2.02 251 *e*Pn **Pn 23 12 00.4 +0.3**
SBF *e*Sn **Sn 23 12 24.6 +0.5**
9.8nm,0.2s
PGF Pioggiola 2.15 202 *e*Pn **Pn 23 12 01.6 -0.3**
PGF *e*Sn **Sn 23 12 26.6 -0.7**
8.1nm,0.2s
PGF Pioggiola 2.15 202 *e*Pn **Pn 23 12 01.6 -0.3**
PGF *e*Sn **Sn 23 12 26.6 -0.7**
4.1nm,0.2s
MBDF Montbardon 2.36 275 *e*Pg **Pn 23 12 12.4 +7.6**
MBDF *e*Sn **Sn 23 12 33.3 +0.7**
2.8nm,0.3s
MBDF Montbardon 2.36 275 *e*Pn **Pn 23 12 05.4 +0.6**
MBDF *e*Pg **Pn 23 12 12.4 +7.6**
MBDF *e*Sn **Sn 23 12 33.3 +0.7**
MBDF Montbardon 2.36 275 *e*Pn **Pn 23 12 05.4 +0.6**
MBDF Montbardon 2.36 275 *e*Pg **Pn 23 12 12.4 +7.6**
MBDF *e*Sn **Sn 23 12 33.3 +0.7**
1.4nm,0.3s
LPL La Plagne 2.56 293 *e*Pn **Pn 23 12 08.0 +0.5**
LPL *e*Sn **Sn 23 12 38.4 +1.1**
3.4nm,0.3s
LPL La Plagne 2.56 293 *e*Pn **Pn 23 12 08.0 +0.5**
FRF La Foret Royal 2.66 249 *e*Pn **Pn 23 12 09.3 +0.4**
FRF *e*Sn **Sn 23 12 40.2 +0.3**
16nm,0.3s
FRF La Foret Royal 2.66 249 *e*Pn **Pn 23 12 09.3 +0.4**
FRF *e*Sn **Sn 23 12 40.2 +0.3**
7.9nm,0.3s
DAVA Damuels 2.74 357 ⇑*i*Pn **Pn 23 12 10.5 +0.5**
DAVA ⇓*i*Sn **Sn 23 12 43.4 +1.5**
DAVA Damuels 2.74 357 Pn **Pn 23 12 10.5 +0.5**
DAVA Sn **Sn 23 12 43.4 +1.5**
LMR La Mourre 2.84 246 *e*Pn **Pn 23 12 11.3 -0.1**
LMR *e*Sn **Sn 23 12 43.5 -0.9**
27nm,0.4s
LMR La Mourre 2.84 246 *e*Pn **Pn 23 12 11.3 -0.1**
LMR *e*Sn **Sn 23 12 43.5 -0.9**
14nm,0.4s
MOTA Moosalm 2.89 14 ⇑*i*Pn **Pn 23 12 12.9 +0.9**
MOTA ⇑*i*Sn **Sn 23 12 46.8 +1.4**
MOTA Moosalm 2.89 14 Pn **Pn 23 12 12.9 +0.9**
MOTA Sn **Sn 23 12 46.8 +1.3**
ORIF Oris-en-Rattie 3.01 279 *e*Pn **Pn 23 12 14.3 +0.6**
ORIF *e*Sn **Sn 23 12 48.8 +0.3**
2.5nm,0.4s
ORIF Oris-en-Rattie 3.01 279 *e*Pn **Pn 23 12 14.3 +0.6**
ORIF *e*Sn **Sn 23 12 48.8 +0.3**
1.2nm,0.4s
SMRF Simiane la Rot 3.28 262 *e*Pn **Pn 23 12 18.1 +0.7**
SMRF Simiane la Rot 3.28 262 *e*Pn **Pn 23 12 18.1 +0.7**
NVLJ Novalja 3.43 88 *i* Pn **Pn 23 12 18.5 -0.9**
NVLJ Sn **Sn 23 12 53.9 -4.9**
NVLJ Novalja 3.43 88 Pn **Pn 23 12 18.5 -0.9**
CABF La Chapelle 3.48 308 *e*Pn **Pn 23 12 20.3 +0.3**
CABF La Chapelle 3.48 308 *e*Pn **Pn 23 12 20.3 +0.3**
VIVF Saint-Julien-l 3.86 276 *e*Pn **Pn 23 12 25.3 0.0**
VIVF Saint-Julien-l 3.86 276 *e*Pn **Pn 23 12 25.3 0.0**
HINF Hinteralfeld 3.96 327 *e*Pn **Pn 23 12 25.7 -1.0**
HINF *e*Sn **Sn 23 13 09.5 -2.3**
4.6nm,0.4s
HINF Hinteralfeld 3.96 327 *e*Pn **Pn 23 12 25.7 -1.0**
HINF *e*Sn **Sn 23 13 09.5 -2.3**
2.3nm,0.4s
HAU Haudompre 4.31 325 *e*Pn **Pn 23 12 30.8 -0.7**
HAU *e*Sn **Sn 23 13 17.9 -2.6**
6.0nm,0.3s
HAU Haudompre 4.31 325 *e*Pn **Pn 23 12 30.8 -0.7**
HAU *e*Sn **Sn 23 13 17.9 -2.6**
3.0nm,0.3s
CDF Champ du Feu 4.32 334 *e*Pn **Pn 23 12 30.2 -1.4**
CDF *e*Sn **Sn 23 13 17.4 -3.2**
3.4nm,0.3s
CDF Champ du Feu 4.32 334 *e*Pn **Pn 23 12 30.2 -1.4**
CDF *e*Sn **Sn 23 13 17.4 -3.2**
1.7nm,0.3s

ISK ***11*** *23:12:42.7, 39°.76N×26°.03E, h8km, ML4.1*
IDC ***11*** *23:12:42.5±10.0, 38°.65N×26°.01E, h33km±56km, mb3.6/3, mb1 3.7/4, mb1mx3.4/24, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=92.3km s-min=38.3km az=24.0*
DDA ***11*** *23:12:43.0, 39°.78N×26°.06E, h34km±1km, Ml4.2*
ATH ***11*** *23:12:42.7, 39°.75N×26°.08E, h25km±5km, ML3.7*
NEIC ***11*** *23:12:42.7, 39°.77N×26°.03E, h9km, ML4.1(ISK), ML3.6(THE), After ISK.*
ISCJB ***11*** *23:12:43.2±0.4, 39°.79N±0°.01×26°.00E±0°.02, h13km±3km, mb3.6/3, Error ellipse: s-maj=2.2km s-min=1.9km az=36.6*
MOS ***11*** *23:12:43.0±0.9, 39°.81N×26°.04E, h14km, mb4.0/3, Error ellipse: s-maj=6.3km s-min=4.6km az=116.0*
CSEM ***11*** *23:12:43.9±0.1, 39°.77N×26°.03E, h10km, ML4.1, Error ellipse: s-maj=1.6km s-min=1.4km az=31.0*
THE ***11*** *23:12:45.6, 39°.75N×26°.01E, h21km±1km, ML3.6/18, Error ellipse: s-maj=1.8km s-min=0.6km az=110.0*
SOF ***11*** *23:12:45.6, 39°.95N×26°.03E, h18km, MD3.6*
SKO ***11*** *23:12:55.0, 40°.33N×25°.18E, h0km*
ISC 11 23:12:44.4±0.3, 39°.77N±0°.01×26°.03E±0°.01, h14km±2km,
n384, σ0s84/493, mb3.6/3, 15C-28D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.24**	**76**	PG	**Pg**	**23 12 48.2**	**-1.3**
EZN				*e*SG	**Sg**	**23 12 51.8**	**-1.1**
EZN	**Ezine**	**0.24**	**76**	Pg	**Pg**	**23 12 48.2**	**-1.3**
EZN				Sg	**Sg**	**23 12 51.2**	**-1.8**
EZN	**Ezine**	**0.24**	**76**	P	**Pg**	**23 12 48.2**	**-1.3**
EZN	**Ezine**	**0.24**	**76**	*i* Pg	**Pg**	**23 12 48.2**	**-1.3**
EZN				*e*Sg	**Sg**	**23 12 51.8**	**-1.1**
GADA	**Gvkgeada**	**0.43**	**347**	PG	**Pg**	**23 12 52.2**	**-0.9**
GADA	**Gvkgeada**	**0.43**	**347**	*i* Pg	**Pg**	**23 12 52.2**	**-0.8**
PRK	**Paraskevi**	**0.55**	**160**	P	**Pg**	**23 12 55.3**	**+0.1**
PRK				S	**Sg**	**23 13 03.7**	**+1.1**
PRK	**Paraskevi**	**0.55**	**160**	P	**Pg**	**23 12 55.3**	**+0.1**
PRK				S	**Sg**	**23 13 03.7**	**+1.1**
PRK	**Paraskevi**	**0.55**	**160**	P	**Pg**	**23 12 55.3**	**+0.1**
PRK				S	**Sg**	**23 13 03.7**	**+1.1**
PRK	**Paraskevi**	**0.55**	**160**	P	**Pg**	**23 12 55.3**	**+0.1**
PRK				S	**Sg**	**23 13 03.7**	**+1.1**
SIGR	**SIGRI**	**0.57**	**194**	P	**Pg**	**23 12 55.6**	**+0.1**
SIGR				S	**Sg**	**23 13 04.2**	**+1.1**
SIGR	**SIGRI**	**0.57**	**194**	P	**Pg**	**23 12 55.6**	**+0.1**
SIGR				S	**Sg**	**23 13 04.2**	**+1.1**
LIA	**Limnos Island**	**0.66**	**282**	P	**Pg**	**23 12 58.1**	**+0.8**
LIA				S	**Sg**	**23 13 07.5**	**+1.4**
LIA	**Limnos Island**	**0.66**	**282**	P	**Pg**	**23 12 58.1**	**+0.8**
LIA				S	**Sg**	**23 13 07.5**	**+1.4**
LIA	**Limnos Island**	**0.66**	**282**	P	**Pg**	**23 12 58.1**	**+0.8**
LIA				S	**Sg**	**23 13 07.5**	**+1.4**
AYVA	**Ayvalik**	**0.69**	**132**	⇑*i*P	**Pg**	**23 12 57.2**	**-0.5**
AYVA				*i* S	**Sg**	**23 13 07.0**	**+0.2**
AYVA	**Ayvalik**	**0.69**	**132**	*i* P	**Pg**	**23 12 57.2**	**-0.5**
AYVA				*i* S	**Sg**	**23 13 06.9**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.72**	**28**	PG	**Pg**	**23 12 57.1**	**-1.2**
GELI	**Tayfur-Gelibol**	**0.72**	**28**	*i* Pg	**Pg**	**23 12 57.1**	**-1.2**
LPK	**Lapseki**	**0.82**	**43**	PG	**Pg**	**23 12 58.1**	**-2.3**
LPK	**Lapseki**	**0.82**	**43**	*i* Pg	**Pg**	**23 12 58.1**	**-2.2**
ENEZ	**Enez**	**0.97**	**6**	PG	**Pg**	**23 13 01.9**	**-1.2**
ENEZ	**Enez**	**0.97**	**6**	*i* Pg	**Pg**	**23 13 01.9**	**-1.2**
ERIK	**Erikli-Kesan**	**0.97**	**22**	PG	**Pg**	**23 13 01.6**	**-1.6**
ERIK	**Erikli-Kesan**	**0.97**	**22**	*i* Pg	**Pg**	**23 13 01.6**	**-1.6**
ALN	**Alexandroupoli**	**1.13**	**1**	P	**Pb**	**23 13 04.6**	**-1.1**

ALN				S	Sb	23 13 20.5	+0.3
ALN	Alexandroupoli	1.13	1	P	Pb	23 13 04.6	-1.1
ALN				S	Sb	23 13 20.5	+0.3
ALN	Alexandroupoli	1.13	1	ePN	Pb	23 13 04.6	-1.1
ALN				eSN	Sb	23 13 19.8	-0.4
ALN	Alexandroupoli	1.13	1	P	Pb	23 13 04.6	-1.1
ALN				S	Sb	23 13 20.5	+0.3
ALN	Alexandroupoli	1.13	1	P	Pb	23 13 04.6	-1.1
ALN				eS	Sb	23 13 19.8	-0.4
BALY	Balya	1.23	91	⇓iP	Pb	23 13 06.8	-0.3
BALY				iS	Sb	23 13 23.1	+0.2
BALY	Balya	1.23	91	iP	Pn	23 13 06.8	-0.3
BALY				iS	Sb	23 13 23.1	+0.1
RKY	Sarkoy-Tekirda	1.27	43	PN	Pn	23 13 06.6	-1.2
RKY	Sarkoy-Tekirda	1.27	43	iPn	Pn	23 13 06.6	-1.1
SART	Tekirdag	1.27	43	⇑iP	Pn	23 13 05.5	-2.3
SART				iS	Sb	23 13 23.4	-1.0
SART	Tekirdag	1.27	43	iP	Pn	23 13 05.5	-2.2
SART				iS	Sb	23 13 23.4	-1.0
GONE	Gonen-Balikesi	1.30	77	PN	Pn	23 13 07.7	-0.5
GONE	Gonen-Balikesi	1.30	77	iPn	Pn	23 13 07.7	-0.5
CHOS	Chios island	1.38	179	ePN	Pn	23 13 08.8	-0.4
CHOS				eSN	Sn	23 13 26.5	-0.7
CHOS	Chios island	1.38	179	P	Pn	23 13 08.8	-0.4
CHOS				S	Sn	23 13 26.4	-0.8
CHOS	Chios island	1.38	179	P	Pn	23 13 08.8	-0.4
CHOS				eS	Sn	23 13 26.5	-0.7
MFT	Murefte	1.40	43	ePN	Pn	23 13 09.0	-0.5
MFT	Murefte	1.40	43	ePn	Pn	23 13 09.0	-0.4
BALB	Balikesir	1.43	95	ePN	Pn	23 13 09.8	-0.2
BALB	Balikesir	1.43	95	ePn	Pn	23 13 09.8	-0.1
URLA	Izmir	1.47	162	⇑iP	Pn	23 13 09.2	-1.3
URLA				iS	Sn	23 13 27.2	-2.4
URLA	Izmir	1.47	162	iP	Pn	23 13 09.2	-1.3
URLA				iS	Sn	23 13 27.2	-2.3
EDC	Edincik	1.52	67	ePN	Pn	23 13 11.2	0.0
EDC	Edincik	1.52	67	P	Pn	23 13 11.2	0.0
EDC	Edincik	1.52	67	ePn	Pn	23 13 11.2	0.0
BNT	Bandirma	1.57	67	ePN	Pn	23 13 11.3	-0.4
BNT	Bandirma	1.57	67	P	Pn	23 13 11.3	-0.5
BLCB	Balcova	1.59	150	ePN	Pn	23 13 11.7	-0.4
BLCB	Balcova	1.59	150	P	Pn	23 13 12.6	+0.5
BLCB				S	Sn	23 13 32.9	+0.5
BLCB	Balcova	1.59	150	P	Pn	23 13 12.6	+0.5
BLCB				S	Sn	23 13 32.9	+0.5
BLCB	Balcova	1.59	150	ePn	Pn	23 13 11.7	-0.4
BLCB	Balcova	1.59	150	P	Pn	23 13 12.6	+0.5
BLCB				S	Sn	23 13 32.9	+0.5
AKS	Akhisar	1.64	122	ePN	Pn	23 13 12.7	-0.2
AKS	Akhisar	1.64	122	ePn	Pn	23 13 12.7	-0.1
AKHS	Akhisar	1.65	122	⇓iP	Pn	23 13 12.5	-0.4
AKHS				iS	Sn	23 13 33.5	-0.3
AKHS	Akhisar	1.65	122	iP	Pn	23 13 12.5	-0.3
AKHS				iS	Sn	23 13 33.5	-0.3
OUR	Ouranopolis	1.67	290	P	Pn	23 13 12.3	-0.9
OUR				S	Sn	23 13 33.8	-0.6
OUR	Ouranopolis	1.67	290	P	Pn	23 13 12.3	-0.9
OUR				S	Sn	23 13 33.8	-0.6
OUR	Ouranopolis	1.67	290	P	Pn	23 13 12.3	-0.9
OUR				S	Sn	23 13 33.8	-0.6
OUR	Ouranopolis	1.67	290	P	Pn	23 13 12.3	-0.9
OUR				S	Sn	23 13 33.8	-0.6
IZM	Izmir	1.67	145	ePN	Pn	23 13 13.2	0.0
IZM	Izmir	1.67	145	P	Pn	23 13 13.2	0.0
IZM	Izmir	1.67	145	ePn	Pn	23 13 13.2	0.0
TKR	Tekirdag	1.68	43	ePN	Pn	23 13 13.1	-0.2
TKR	Tekirdag	1.68	43	ePn	Pn	23 13 13.1	-0.2
KAVA	Kavala	1.69	317	P	Pn	23 13 13.2	-0.2
KAVA				S	Sn	23 13 33.5	-1.3
KAVA	Kavala	1.69	317	P	Pn	23 13 13.2	-0.2
KAVA				S	Sn	23 13 33.5	-1.3
AOS	Alonnisos	1.77	251	P	Pn	23 13 14.3	-0.2
AOS				S	Sn	23 13 36.4	-0.4
AOS	Alonnisos	1.77	251	P	Pn	23 13 14.3	-0.2
AOS				S	Sn	23 13 36.4	-0.4
AOS	Alonnisos	1.77	251	P	Pn	23 13 14.3	-0.2
AOS				S	Sn	23 13 36.4	-0.4
PAIG	Paliouri	1.82	276	P	Pn	23 13 14.7	-0.5
PAIG				S	Sn	23 13 36.5	-1.5
PAIG	Paliouri	1.82	276	P	Pn	23 13 14.7	-0.5
PAIG				S	Sn	23 13 36.5	-1.5
PAIG	Paliouri	1.82	276	P	Pn	23 13 14.7	-0.5
PAIG				S	Sn	23 13 36.5	-1.5
PAIG	Paliouri	1.82	276	P	Pn	23 13 14.7	-0.5
PAIG				S	Sn	23 13 36.5	-1.5
KCTX	Karacabey (Bur	1.85	74	ePN	Pn	23 13 15.6	-0.2
KCTX	Karacabey (Bur	1.85	74	ePn	Pn	23 13 15.6	-0.1
CRLT	Corlu	1.88	43	ePN	Pn	23 13 16.3	+0.2
CRLT	Corlu	1.88	43	ePn	Pn	23 13 16.3	+0.2
DURS	Dursunbey	1.89	94	⇓iP	Pn	23 13 16.2	-0.1
DURS				iS	Sn	23 13 40.0	0.0
DURS	Dursunbey	1.89	94	iP	Pn	23 13 16.2	-0.1
DURS				iS	Sn	23 13 40.0	+0.1
KDZ	Kurdzhali	1.94	346	iP	Pn	23 13 16.5	-0.4
KDZ	Kurdzhali	1.94	346	iP	Pn	23 13 16.5	-0.4
PLG	Polygyros	2.07	288	P	Pn	23 13 18.5	-0.2
PLG				S	Sn	23 13 43.2	-1.1
PLG	Polygyros	2.07	288	P	Pn	23 13 18.5	-0.2
PLG				S	Sn	23 13 43.2	-1.1
PLG	Polygyros	2.07	288	P	Pn	23 13 18.5	-0.2
PLG				S	Sn	23 13 43.2	-1.1
PLG	Polygyros	2.07	288	P	Pn	23 13 18.5	-0.2
PLG				S	Sn	23 13 43.2	-1.1
EDRB	Edirne	2.15	14	ePN	Pn	23 13 18.9	-0.8
EDRB	Edirne	2.15	14	ePn	Pn	23 13 18.9	-0.8
RZN	Rozhen	2.16	333	iP	Pn	23 13 20.2	+0.2
RZN	Rozhen	2.16	333	iP	Pn	23 13 20.2	+0.2
DEMI	Demirci	2.20	108	⇓iP	Pn	23 13 20.9	+0.4
DEMI				eS	Sn	23 13 48.1	+0.5
DEMI	Demirci	2.20	108	iP	Pn	23 13 20.9	+0.4
DEMI				eS	Sn	23 13 48.1	+0.5
SLVT	Silivri	2.21	48	ePN	Pn	23 13 20.6	-0.1
SLVT	Silivri	2.21	48	ePn	Pn	23 13 20.6	-0.1
MDNY	Mudanya-Bursa	2.27	74	ePN	Pn	23 13 21.5	+0.1
MDNY	Mudanya-Bursa	2.27	74	ePn	Pn	23 13 21.5	0.0
SRS	Serrai	2.30	307	P	Pn	23 13 21.5	-0.3
SRS	Serrai	2.30	307	P	Pn	23 13 21.5	-0.3
SRS	Serrai	2.30	307	P	Pn	23 13 21.5	-0.3
SRS	Serrai	2.30	307	P	Pn	23 13 21.5	-0.3
SOH	Sokhos	2.30	298	P	Pn	23 13 22.0	+0.1
SOH				S	Sn	23 13 49.4	-0.6
SOH	Sokhos	2.30	298	P	Pn	23 13 22.0	+0.1
SOH				S	Sn	23 13 49.4	-0.6
SOH	Sokhos	2.30	298	ePN	Pn	23 13 21.7	-0.2
SOH	Sokhos	2.30	298	P	Pn	23 13 22.0	+0.1
SOH				S	Sn	23 13 49.4	-0.6
SOH	Sokhos	2.30	298	eP	Pn	23 13 21.7	-0.2
SOH				S	Sn	23 13 49.4	-0.6
DIM	Dimitrovgrad	2.31	351	iP	Pn	23 13 21.8	-0.2
DIM	Dimitrovgrad	2.31	351	iP	Pn	23 13 21.8	-0.2
ARMT	Armutlu	2.31	69	ePN	Pn	23 13 22.1	+0.1
ARMT	Armutlu	2.31	69	ePn	Pn	23 13 22.1	+0.1
CTKS	Kestanelik-??a	2.39	51	ePN	Pn	23 13 23.1	0.0
CTKS	Kestanelik-??a	2.39	51	ePn	Pn	23 13 23.1	0.0
HORT	Hortiatis	2.39	291	P	Pn	23 13 23.2	+0.1
HORT				S	Sn	23 13 52.1	-0.1
HORT	Hortiatis	2.39	291	P	Pn	23 13 23.2	+0.1
HORT				S	Sn	23 13 52.1	-0.1
HORT	Hortiatis	2.39	291	P	Pn	23 13 23.2	+0.1
HORT				S	Sn	23 13 52.1	-0.1
KULA	Kula-Manisa	2.40	121	ePN	Pn	23 13 23.5	+0.3
KULA	Kula-Manisa	2.40	121	ePn	Pn	23 13 23.5	+0.3
PTL	Penteli	2.41	225	ePN	Pn	23 13 22.6	-0.7
PTL	Penteli	2.41	225	eP	Pn	23 13 22.6	-0.7
CTYL	Yal??k??y-??at	2.42	45	ePN	Pn	23 13 23.6	+0.1
CTYL	Yal??k??y-??at	2.42	45	ePn	Pn	23 13 23.6	+0.1
GEMT	Gemlik	2.51	74	ePN	Pn	23 13 24.9	+0.1
GEMT	Gemlik	2.51	74	ePn	Pn	23 13 24.9	+0.1
BGKT	Bogazkoy	2.52	55	ePN	Pn	23 13 25.2	+0.3
BGKT	Bogazkoy	2.52	55	ePn	Pn	23 13 25.2	+0.3
MMB	Musomiste	2.52	317	iP	Pn	23 13 24.7	-0.2
MMB	Musomiste	2.52	317	iP	Pn	23 13 24.7	-0.2
PLD	Plovdiv	2.54	337	P	Pn	23 13 25.5	+0.3
PLD	Plovdiv	2.54	337	P	Pn	23 13 25.5	+0.3
PLD	Plovdiv	2.54	337	P	Pn	23 13 25.5	+0.3
PLD	Plovdiv	2.54	337	iP	Pn	23 13 25.7	+0.5
PLD	Plovdiv	2.54	337	P	Pn	23 13 25.5	+0.3
ATH	Athens Observa	2.54	226	ePN	Pn	23 13 24.5	-0.7
ATH	Athens Observa	2.54	226	eP	Pn	23 13 24.5	-0.7
VLY	Voula,Athens	2.59	223	ePN	Pn	23 13 24.9	-0.9
VLY	Voula,Athens	2.59	223	eP	Pn	23 13 24.9	-0.9
ISK	Istanbul-Kandi	2.65	60	ePN	Pn	23 13 26.9	+0.3
ISK	Istanbul-Kandi	2.65	60	P	Pn	23 13 27.0	+0.3
ISK	Istanbul-Kandi	2.65	60	ePn	Pn	23 13 27.0	+0.3
APE	Apeiranthos	2.72	188	ePN	Pn	23 13 28.0	+0.3
APE	Apeiranthos	2.72	188	Pn	Pn	23 13 28.0	+0.3
APE				S	Sn	23 13 59.4	-1.0
APE	Apeiranthos	2.72	188	P	Pn	23 13 28.0	+0.3
APE				S	Sn	23 13 59.4	-1.0
APE	Apeiranthos	2.72	188	ePN	Pn	23 13 26.5	-1.2
APE	Apeiranthos	2.72	188	P	Pn	23 13 27.2	-0.5
APE				S	Sn	23 13 59.4	-1.0
APE	Apeiranthos	2.72	188	⇓iP	Pn	23 13 26.7	-1.0
APE	Apeiranthos	2.72	188	P	Pn	23 13 27.2	-0.5
APE	Apeiranthos	2.72	188	ePn	Pn	23 13 28.0	+0.3
APE				S	Sn	23 13 59.4	-1.0
JMB	Yambol	2.73	9	P	Pn	23 13 27.5	-0.2
JMB				S	Sn	23 14 00.7	+0.2
JMB	Yambol	2.73	9	P	Pn	23 13 27.5	-0.2
JMB				S	Sn	23 14 00.7	+0.2
JMB	Yambol	2.73	9	P	Pn	23 13 27.5	-0.2
JMB				S	Sn	23 14 00.7	+0.2
JMB	Yambol	2.73	9	P	Pn	23 13 28.4	+0.7
JMB	Yambol	2.73	9	P	Pn	23 13 27.5	-0.2
JMB				S	Sn	23 14 00.7	+0.2
KLYT	Kilyos	2.73	56	ePN	Pn	23 13 28.1	+0.3
KLYT	Kilyos	2.73	56	ePn	Pn	23 13 28.1	+0.3
LIT	Litokhoron	2.74	278	ePN	Pn	23 13 28.5	+0.6
LIT	Litokhoron	2.74	278	eP	Pn	23 13 28.5	+0.6
LIT				eS	Sn	23 13 59.2	-1.6
KNT	Kendrikon	2.77	301	P	Pn	23 13 28.8	+0.6
KNT				S	Sn	23 14 01.0	-0.4
KNT	Kendrikon	2.77	301	P	Pn	23 13 28.8	+0.6
KNT				S	Sn	23 14 01.0	-0.4
KNT	Kendrikon	2.77	301	P	Pn	23 13 28.8	+0.6
KNT				S	Sn	23 14 01.0	-0.4
KNT	Kendrikon	2.77	301	P	Pn	23 13 28.8	+0.6
KNT				S	Sn	23 14 01.0	-0.4
MLSB	Milas	2.82	150	ePN	Pn	23 13 29.3	+0.2
MLSB	Milas	2.82	150	ePn	Pn	23 13 29.3	+0.3
BODT	Bodrum	2.88	159	ePN	Pn	23 13 29.0	-0.9
BODT	Bodrum	2.88	159	ePn	Pn	23 13 29.0	-0.9
BDRM	Kayabasi	2.92	157	⇑iP	Pn	23 13 30.4	0.0
BDRM				eS	Sg	23 14 16.7	-1.4
BDRM	Kayabasi	2.92	157	iP	Pn	23 13 30.4	+0.1
ADVT	Abdulvahap	2.92	76	ePN	Pn	23 13 30.7	+0.3
ADVT	Abdulvahap	2.92	76	ePn	Pn	23 13 30.7	+0.3
LTK	Loutraki	2.96	235	P	Pn	23 13 27.4	-3.5
LTK	Loutraki	2.96	235	P	Pn	23 13 27.4	-3.5
AGG	Agios Georgios	2.96	257	P	Pn	23 13 31.0	+0.1
AGG				S	Sn	23 14 06.3	0.0
AGG	Agios Georgios	2.96	257	P	Pn	23 13 31.0	+0.1
AGG				S	Sn	23 14 06.3	0.0
AGG	Agios Georgios	2.96	257	ePN	Pn	23 13 31.0	+0.1
AGG	Agios Georgios	2.96	257	P	Pn	23 13 31.0	+0.1
AGG				S	Sn	23 14 06.3	0.0
AGG	Agios Georgios	2.96	257	P	Pn	23 13 31.0	+0.1
AGG				S	Sn	23 14 06.3	0.0
CAVI	Cavuskoy	2.96	80	ePN	Pn	23 13 31.4	+0.5
CAVI	Cavuskoy	2.96	80	ePn	Pn	23 13 31.5	+0.6
HRT	Hereke	2.98	68	ePN	Pn	23 13 31.6	+0.4
HRT	Hereke	2.98	68	ePn	Pn	23 13 31.6	+0.5
GRG	Griva	3.02	294	P	Pn	23 13 32.8	+1.1
GRG				S	Sn	23 14 07.3	-0.3
GRG	Griva	3.02	294	P	Pn	23 13 32.8	+1.1
GRG				S	Sn	23 14 07.3	-0.3
GRG	Griva	3.02	294	P	Pn	23 13 32.8	+1.1
GRG				S	Sn	23 14 07.3	-0.3
GRG	Griva	3.02	294	P	Pn	23 13 32.8	+1.1
GRG				S	Sn	23 14 07.3	-0.3
VAY	Valandovo	3.06	302	P	Pn	23 13 32.9	+0.6
VAY	Valandovo	3.06	302	P	Pn	23 13 32.9	+0.6
VAY	Valandovo	3.06	302	P	Pn	23 13 32.9	+0.6
VAY	Valandovo	3.06	302	ePn	Pn	23 13 33.1	+0.8
VAY	Valandovo	3.06	302	P	Pn	23 13 32.9	+0.6
KKB	Krupnik	3.06	314	iP	Pn	23 13 32.7	+0.3
KKB	Krupnik	3.06	314	iP	Pn	23 13 32.7	+0.3
KHL	Karahalli	3.08	117	ePN	Pn	23 13 32.7	+0.2
KHL	Karahalli	3.08	117	ePn	Pn	23 13 32.7	+0.1
SILT	Sile	3.08	62	ePN	Pn	23 13 33.1	+0.4
SILT	Sile	3.08	62	ePn	Pn	23 13 33.1	+0.5
DENT	Denizli	3.09	130	ePN	Pn	23 13 33.1	+0.3
DENT	Denizli	3.09	130	ePn	Pn	23 13 33.1	+0.4
THL	Klokotos Trika	3.10	268	ePN	Pn	23 13 33.0	+0.1
THL	Klokotos Trika	3.10	268	P	Pn	23 13 33.0	+0.1
THL				S	Sn	23 14 09.6	-0.2
THL	Klokotos Trika	3.10	268	P	Pn	23 13 33.0	+0.1
THL				S	Sn	23 14 09.6	-0.2
PGB	Panagyurishte	3.12	334	iP	Pn	23 13 32.9	-0.1
PGB	Panagyurishte	3.12	334	iP	Pn	23 13 32.9	-0.1
YER	Yerkesik	3.17	145	ePN	Pn	23 13 34.1	+0.3
YER	Yerkesik	3.17	145	P	Pn	23 13 34.1	+0.3
YER	Yerkesik	3.17	145	ePn	Pn	23 13 34.1	+0.3
DAT	Datca	3.27	158	ePN	Pn	23 13 35.1	-0.1
DAT	Datca	3.27	158	ePn	Pn	23 13 35.1	-0.1
KZN	Kozani	3.31	281	P	Pn	23 13 36.3	+0.5
KZN	Kozani	3.31	281	P	Pn	23 13 36.3	+0.5
KZN	Kozani	3.31	281	P	Pn	23 13 36.3	+0.5
KZN	Kozani	3.31	281	P	Pn	23 13 36.3	+0.5
KALE	Kalithea	3.32	247	P	Pn	23 13 35.9	0.0
KALE				S	Sn	23 14 14.7	-0.5
KALE	Kalithea	3.32	247	P	Pn	23 13 35.9	0.0
KALE				S	Sn	23 14 14.7	-0.5
GPA	Golpazari	3.33	80	ePN	Pn	23 13 36.9	+0.9
GPA	Golpazari	3.33	80	P	Pn	23 13 36.9	+0.9
GPA	Golpazari	3.33	80	ePn	Pn	23 13 36.9	+0.9
EVR	Evrytania	3.38	257	ePN	Pn	23 13 37.4	+0.7
EVR	Evrytania	3.38	257	eP	Pn	23 13 37.4	+0.7
TRIZ	Trizonia	3.38	247	P	Pn	23 13 36.9	+0.2
TRIZ				S	Sn	23 14 16.4	-0.3
TRIZ	Trizonia	3.38	247	P	Pn	23 13 36.9	+0.2
TRIZ				S	Sn	23 14 16.4	-0.3
THR5	Thira Island,	3.39	189	P	Pn	23 13 35.9	-0.9
THR5	Thira Island,	3.39	189	P	Pn	23 13 35.9	-0.9
THR5	Thira Island,	3.39	189	P	Pn	23 13 35.9	-0.9
THR3	Thira Island,	3.39	189	P	Pn	23 13 35.9	-0.9
THR3	Thira Island,	3.39	189	P	Pn	23 13 35.9	-0.9
THR3	Thira Island,	3.39	189	P	Pn	23 13 35.9	-0.9
SPNC	Sapanca-Adapaz	3.40	73	ePN	Pn	23 13 37.6	+0.6
SPNC	Sapanca-Adapaz	3.40	73	ePn	Pn	23 13 37.6	+0.6
GUR	Goura	3.41	239	P	Pn	23 13 37.0	-0.1
GUR				S	Sn	23 14 16.1	-1.2
GUR	Goura	3.41	239	P	Pn	23 13 37.0	-0.1
GUR				S	Sn	23 14 16.1	-1.2
EFP	Efpalio	3.48	249	P	Pn	23 13 38.5	+0.5
EFP	Efpalio	3.48	249	P	Pn	23 13 38.5	+0.5
PVL	Pavlikeni	3.49	352	iP	Pn	23 13 37.5	-0.6
PVL	Pavlikeni	3.49	352	iP	Pn	23 13 37.5	-0.6
SZH	Strazhica	3.50	359	iP	Pn	23 13 38.1	-0.2
SZH	Strazhica	3.50	359	iP	Pn	23 13 38.1	-0.2
GULT	Gulveren	3.50	78	ePN	Pn	23 13 38.8	+0.4
GULT	Gulveren	3.50	78	ePn	Pn	23 13 38.8	+0.4
LAKA	Lakka	3.50	245	P	Pn	23 13 39.0	+0.6
LAKA	Lakka	3.50	245	P	Pn	23 13 39.0	+0.6
VTS	Vitosha	3.53	324	P	Pn	23 13 39.8	+1.0
VTS	Vitosha	3.53	324	P	Pn	23 13 39.8	+1.0
VTS	Vitosha	3.53	324	P	Pn	23 13 39.8	+1.0
VTS	Vitosha	3.53	324	⇑iP	Pn	23 13 39.7	+0.9
VTS	Vitosha	3.53	324	iP	Pn	23 13 39.7	+0.9
VTS	Vitosha	3.53	324	iP	Pn	23 13 39.7	+0.9
VTS				S	Sn	23 14 20.2	-0.2
PRD	Provadia	3.58	16	iP	Pn	23 13 38.8	-0.6
PRD	Provadia	3.58	16	iP	Pn	23 13 38.8	-0.6
FNA	Florina	3.70	287	P	Pn	23 13 41.8	+0.7
FNA				S	Sn	23 14 23.9	-0.6
FNA	Florina	3.70	287	P	Pn	23 13 41.8	+0.7
FNA				S	Sn	23 14 23.9	-0.6
FNA	Florina	3.70	287	P	Pn	23 13 41.8	+0.7
FNA				S	Sn	23 14 23.9	-0.6
FNA	Florina	3.70	287	P	Pn	23 13 41.8	+0.7
FNA				S	Sn	23 14 23.9	-0.6
SHUT	Suhut-Afyon	3.72	108	ePN	Pn	23 13 42.3	+0.9
SHUT	Suhut-Afyon	3.72	108	ePn	Pn	23 13 42.3	+0.9
GLHS	Glhisar (BURDU	3.77	133	ePN	Pn	23 13 42.7	+0.7
GLHS	Glhisar (BURDU	3.77	133	ePn	Pn	23 13 42.7	+0.6
NEST	Nestorio	3.87	281	P	Pn	23 13 44.7	+1.2
NEST	Nestorio	3.87	281	P	Pn	23 13 44.7	+1.2
ARG	Arkhangelos	3.91	154	P	Pn	23 13 44.4	+0.4
ARG	Arkhangelos	3.91	154	P	Pn	23 13 44.4	+0.4
ARG	Arkhangelos	3.91	154	P	Pn	23 13 44.4	+0.4
ARG	Arkhangelos	3.91	154	P	Pn	23 13 44.4	+0.4
MPEP	Malo Peshtene	3.98	335	iP	Pn	23 13 45.4	+0.5
KRUS	Krusevo	3.98	295	ePn	Pn	23 13 45.9	+1.0
MDU	Mudurnu	4.04	78	ePN	Pn	23 13 46.7	+1.0
MDU	Mudurnu	4.04	78	ePn	Pn	23 13 46.7	+1.0
ITM	Ithomi	4.13	233	ePN	Pn	23 13 48.2	+1.2
ITM	Ithomi	4.13	233	eP	Pn	23 13 48.2	+1.2
PSN	Preselentsi	4.23	22	iP	Pn	23 13 47.4	-1.0
PSN	Preselentsi	4.23	22	iP	Pn	23 13 47.4	-1.0
BCK	Bucak	4.25	121	ePN	Pn	23 13 49.7	+1.0
BCK	Bucak	4.25	121	P	Pn	23 13 49.7	+1.0
BCK	Bucak	4.25	121	ePn	Pn	23 13 49.7	+1.0
SVRH	Sivrihisar-ESK	4.26	93	ePN	Pn	23 13 49.6	+0.8
SVRH	Sivrihisar-ESK	4.26	93	ePn	Pn	23 13 49.6	+0.9
ELL	Elmali	4.29	133	ePN	Pn	23 13 50.2	+1.0
ELL	Elmali	4.29	133	P	Pn	23 13 50.2	+1.0
ELL	Elmali	4.29	133	ePn	Pn	23 13 50.2	+1.0
BARS	Barje	4.40	315	⇑iPn	Pn	23 13 51.5	+0.8
KDZE	Karadeniz Ereo	4.41	68	ePN	Pn	23 13 51.9	+1.1
KDZE	Karadeniz Ereo	4.41	68	ePn	Pn	23 13 51.9	+1.1
NPS	Neapolis	4.51	184	ePN	Pn	23 13 51.7	-0.5
NPS	Neapolis	4.51	184	eP	Pn	23 13 51.7	-0.5
SUTC	Sutluce-Ispart	4.51	119	ePN	Pn	23 13 53.4	+1.1
SUTC	Sutluce-Ispart	4.51	119	ePn	Pn	23 13 53.4	+1.1
VLS	Valsamata	4.53	251	ePN	Pn	23 13 54.0	+1.5
KIZT	Kizilcal	4.62	99	ePN	Pn	23 13 54.7	+1.0
KIZT	Kizilcal	4.62	99	ePn	Pn	23 13 54.7	+0.9
ANTB	Antalya	4.63	127	ePN	Pn	23 13 55.0	+1.2
ANTB	Antalya	4.63	127	ePn	Pn	23 13 55.0	+1.1
ZKR	Zakros	4.65	178	ePN	Pn	23 13 54.0	-0.1
ZKR	Zakros	4.65	178	eP	Pn	23 13 54.0	-0.1
TIRR	Tirgusor	5.01	20	ePn	Pn	23 13 58.5	-0.6
	27nm,2.5s						
TIRR				eSn	Sn	23 14 55.3	-1.5
TIRR	Tirgusor	5.01	20	eP	Pn	23 13 58.5	-0.6
TIRR				e		23 14 55.3	
TIRR				pmax	pmax		
	comp=Z,27nm,2.5s						
TIRR	Tirgusor	5.01	20	⇑iP	Pn	23 13 59.2	+0.1
TIRR	Tirgusor	5.01	20	eP	Pn	23 13 58.5	-0.6
	comp=Z,27nm,2.5s						
TIRR				eS	Sn	23 14 55.3	-1.5
BOLS	Boljevac	5.07	324	ePn	Pn	23 14 00.3	+0.3
CFR	Carcaliu	5.63	15	⇓iP	Pn	23 14 07.4	-0.1
CFR	Carcaliu	5.63	15	⇓iP	Pn	23 14 07.4	-0.1
GRER		5.65	7	⇓iP	Pn	23 14 09.7	+1.8
GRER		5.65	7	⇓iP	Pn	23 14 09.7	+1.8
VOIR		5.71	353	⇓iP	Pn	23 14 09.2	+0.5
VOIR		5.71	353	⇓iP	Pn	23 14 09.2	+0.5
GRUS	Gruza	5.72	318	⇑iPn	Pn	23 14 08.7	-0.1
MLR	Muntele Rosu	5.72	359	⇓iP	Pn	23 14 10.1	+1.3
TLCR		5.79	20	⇑iP	Pn	23 14 10.0	+0.2
TLCR		5.79	20	⇑iP	Pn	23 14 10.0	+0.2
BR131	Keskin Array S	5.87	88	ePn	Pn	23 14 11.3	+0.5
	comp=Z,11nm,0.3s						
BR131				eSn	Sn	23 15 15.4	-2.5
BR131	Keskin Array S	5.87	88	ePn	Pn	23 14 11.3	+0.4
	comp=Z,11nm,0.3s						
BRTR	Keskin Array B	5.87	88	Pn	Pn	23 14 11.5	+0.6
	comp=Z,5.4nm,0.3s,baz=262,slow=13,SNR=51						
BRTR				Pg	Pg	23 14 32.9	-3.7
	comp=Z,0.8nm,0.3s,baz=263,slow=16,SNR=5.1						
BRTR				Sn	Sn	23 15 15.9	-1.9
	comp=Z,1.7nm,0.3s,baz=266,slow=19,SNR=6.3						
BRTR				Lg		23 15 54.2	
	comp=Z,0.3nm,0.3s,baz=254,slow=30,SNR=6.8						
BRTR	Keskin Array B	5.87	88	Pn	Pn	23 14 11.5	+0.6
BRTR				Pg	Pg	23 14 32.9	-3.7
BRTR				Sn	Sn	23 15 15.9	-1.9
BRTR				Lg		23 15 54.2	
BRTR	Keskin Array B	5.87	88	P	Pn	23 14 11.5	+0.6
BRTR						23 15 16.0	
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR				smax			
	comp=N,2.0nm,0.3s						
BRTR	Keskin Array B	5.87	88	P	Pn	23 14 11.5	+0.6
	comp=N,1.0nm,0.3s						
BRTR				S	Sn	23 15 16.0	-1.9
	comp=N,2.0nm,0.3s						
PLOR	Plostina	6.10	4	⇑iP	Pn	23 14 15.6	+1.6
TRUS	Trudelj	6.11	319	⇓iPn	Pn	23 14 13.4	-0.8
GZR	Gura Zlata	6.11	338	⇓iP	Pn	23 14 13.9	-0.3
GZR	Gura Zlata	6.11	338	⇓iP	Pn	23 14 13.9	-0.3
VRI	Vrincioaia	6.12	5	⇑iP	Pn	23 14 15.7	+1.4
DOPR	Dopca	6.21	356	⇓iP	Pn	23 14 16.8	+1.2
DOPR	Dopca	6.21	356	⇓iP	Pn	23 14 16.8	+1.2
DIVS	Divibare	6.24	316	P	Pn	23 14 16.4	+0.4
DIVS	Divibare	6.24	316	P	Pn	23 14 16.4	+0.4
BZS	Buzias	6.69	332	⇓iP	Pn	23 14 21.7	-0.4
BZS	Buzias	6.69	332	⇓iP	Pn	23 14 21.7	-0.4
SEV	Sevastopol'	7.41	47	eP	Pn	23 14 30.0	-2.1
SEV	Sevastopol'	7.41	47	eP	Pn	23 14 30.0	-2.1
DRGR		7.42	342	⇓iP	Pn	23 14 31.9	-0.3
DRGR		7.42	342	⇓iP	Pn	23 14 31.9	-0.3
KIS	Kishinev	7.51	15	e	Pb	23 15 00.0	+5.7
KIS				LRM		23 21 40.0	
	comp=N,400nm,20.0s						
YAL	Yalta	7.66	49	eP	Pn	23 14 36.3	+0.8
YAL				eS	Sn	23 15 56.9	-5.1
YAL	Yalta	7.66	49	eP	Pn	23 14 36.3	+0.8
BURAR	Bucovina Array	7.87	356	⇑iP	Pn	23 14 40.1	+1.8
BURAR	Bucovina Array	7.87	356	⇑iP	Pn	23 14 40.1	+1.8
BUR08	Bucovina Ar. S	7.90	356	ePn	Pn	23 14 39.8	+1.1
BUR08				Sn	Sn	23 16 08.4	+0.6
BUR08	Bucovina Ar. S	7.90	356	ePn	Pn	23 14 39.8	+1.1
BUR08				Sn	Sn	23 16 08.4	+0.6
SIM	Simferopol'	7.91	47	eP	Pn	23 14 41.9	+3.0
SIM				eS	Sn	23 16 06.9	-1.3
PKS6	Bocsa	8.30	327	⇓eP	Pn	23 14 44.3	+0.1
PKS2	Kecel	8.36	326	⇓eP	Pn	23 14 44.2	-0.9
RHK3	Tenkes	8.37	320	⇑eP	Pn	23 14 45.4	+0.2
SUDU	Sudak	8.39	49	eP	Pn	23 14 45.8	+0.4
SUDU				eS	Sn	23 16 14.5	-5.3
SUDU	Sudak	8.39	49	eP	Pn	23 14 45.8	+0.4
PKSM	Moragy	8.41	322	⇓eP	Pn	23 14 46.0	+0.2
PSZ	Piszkesteto	9.27	334	ePn	Pn	23 14 57.1	-0.4
	comp=N,7.5nm,0.6s						
PSZ	Piszkesteto	9.27	334	eP	Pn	23 14 57.1	-0.4
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PSZ	Piszkesteto	9.27	334	⇓eSn	Pn	23 14 56.7	-0.8
PSZ	Piszkesteto	9.27	334	eP	Pn	23 14 57.1	-0.4
	comp=Z,7.0nm,0.6s						
PKSG		9.42	327	⇓eP	Pn	23 15 01.1	+1.5
KOLS	Kolonicke sedl	9.55	345	ePn	Pn	23 15 03.1	+1.8
KOLS	Kolonicke sedl	9.55	345	eP	Pn	23 15 03.1	+1.8
KOLS	Kolonicke sedl	9.55	345	ePN	Pn	23 15 03.1	+1.8
KOLS	Kolonicke sedl	9.55	345	eP	Pn	23 15 03.1	+1.8
KECS	Kecovo	9.58	337	eP	Pn	23 15 00.6	-1.1
KECS	Kecovo	9.58	337	ePN	Pn	23 15 00.6	-1.1
KECS	Kecovo	9.58	337	e	Pn	23 15 00.6	-1.1
CRVS	Cervenica-Dubn	9.70	342	ePn	Pn	23 15 05.9	+2.5
CRVS	Cervenica-Dubn	9.70	342	eP	Pn	23 15 05.9	+2.5
CRVS	Cervenica-Dubn	9.70	342	ePN	Pn	23 15 05.9	+2.5
CRVS	Cervenica-Dubn	9.70	342	eP	Pn	23 15 05.9	+2.5
VYHS	Vyhne	10.13	332	ePn	Pn	23 15 08.9	-0.5
VYHS	Vyhne	10.13	332	eP	Pn	23 15 08.9	-0.5
VYHS	Vyhne	10.13	332	ePN	Pn	23 15 08.9	-0.5
VYHS	Vyhne	10.13	332	eP	Pn	23 15 08.9	-0.5
KOLL	Kolacno	10.37	331	ePn	Pn	23 15 12.7	+0.2
KOLL	Kolacno	10.37	331	eP	Pn	23 15 12.7	+0.2
KOLL	Kolacno	10.37	331	ePN	Pn	23 15 12.7	+0.2
KOLL	Kolacno	10.37	331	eP	Pn	23 15 12.7	+0.2
SOP	Sopron	10.46	322	⇓e	Pn	23 15 14.6	+0.8
SOP	Sopron	10.46	322	⇓eP	Pn	23 15 14.6	+0.8
ZST	Bratislava	10.59	326	ePn	Pn	23 15 16.9	+1.3
ZST	Bratislava	10.59	326	eP	Pn	23 15 16.9	+1.3
ZST	Bratislava	10.59	326	ePN	Pn	23 15 16.9	+1.3
ZST	Bratislava	10.59	326	eP	Pn	23 15 16.9	+1.3
FINES	FINESS Array B	21.70	0	P	P	23 17 43.0	+8.4
	comp=Z,1.4nm,0.7s,mb3.5,baz=154,slow=11,SNR=4.0						
FINES	FINESS Array B	21.70	0	P	P	23 17 43.1	+8.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	40.80	61	P	P	23 20 25.6	+0.5
	comp=Z,0.5nm,0.6s,mb3.3,baz=292,slow=7.6,SNR=6.4						

MKAR	**Makanchi Array**	**40.80**	**61**	P	**P**	**23 20 25.6**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**40.80**	**61**	P	**P**	**23 20 25.5**	**+0.4**
ZALV	**Zalesovo Beam**	**41.41**	**50**	P	**P**	**23 20 30.0**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.0,baz=262,slow=10.0,SNR=8.4						
ZALV	**Zalesovo Beam**	**41.41**	**50**	P	**P**	**23 20 30.0**	**0.0**
ZALV	**Zalesovo Beam**	**41.41**	**50**	P	**P**	**23 20 30.0**	**0.0**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
ZALV	**Zalesovo Beam**	**41.41**	**50**	P	**P**	**23 20 30.0**	**0.0**
	comp=Z,2.0nm,0.6s,mb3.9						

PGC ***11*** *23:13:28.6±6.6, 47°.41N×128°.93W, h10km, ML3.9/13, Mw4.5, 295km Wsw of Tofino, Bc Off Coast Of Washington*
ISCJB ***11*** *23:13:32.5±0.9, 47°.87N±0°.02×128°.43W±0°.03, h1km±6km, mb4.8/19, MS4.4/7, Error ellipse: s-maj=4.4km s-min=3.0km az=44.6*
IDC ***11*** *23:13:32.8±1.2, 47°.68N×128°.71W, h0km, mb3.9/6, mb1 4.3/14, mb1mx4.1/30, mbtmp4.1/14, ML3.8/8, MS4.5/10, Ms1 4.5/10, ms1mx4.1/29, Error ellipse: s-maj=27.6km s-min=11.0km az=61.0*
GCMT ***11*** *23:13:33.7±0.2, 47°.45N×129°.03W, h12km, MW5.1, Moment Tensor Solution. s35,c45; s93,c152; Moment tensor: Scale 10^16Nm; Mrr0.23±.13; Mθθ-4.75±.12; Mφφ4.53±.11; Mrθ-1.55±.35; Mθφ-0.46±.11; Mφr0.59±.32; Best double couple: M0=4.90000×10^16 NP1:φs41.00000°, δ72.00000°, λ-5.00000°. NP2:φs133.00000°, δ85.00000°, λ-162.00000°. Principal axes: T 4.6600, Plg9.0000°, Azm266.0000°; N 0.5500, Plg72.0000°, Azm147.0000°; P -5.2000, Plg16.0000°, Azm358.0000°; Data Used: II IU G CN IC.*
BJI ***11*** *23:13:35.3, 48°.31N×128°.99W, h6km, mB5.0/5, mb4.8/13, Ms5.0/6, Ms7 4.7/6*
NEIC ***11*** *23:13:35.6±0.3, 47°.92N×128°.44W, h10km, mb4.6/36, MW4.5(PGC), Error ellipse: s-maj=6.0km s-min=3.2km az=49.0*
ISC 11 23:13:35.1±1.0, 47°.92N±0°.02×128°.45W±0°.03, h6km±7km, n161, σ1§16/174, mb4.8/19, MS4.4/7, 12D, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	**Estevan Point**	**1.93**	**40**	⇑Pn	**Pn**	**23 14 07.2**	**-1.2**
EDB	**Eliza Dome**	**2.15**	**24**	⇓Pn	**Pn**	**23 14 11.1**	**-0.3**
OZB	**Mount Ozzard**	**2.23**	**61**	P	**Pn**	**23 14 10.6**	**-1.9**
OZB	**Mount Ozzard**	**2.23**	**61**	⇑Pn	**Pn**	**23 14 11.5**	**-1.0**
OZB				⇑Sn	**Sn**	**23 14 42.3**	**+2.0**
BPBC	**Brooks Peninsu**	**2.29**	**11**	⇓Pn	**Pn**	**23 14 12.6**	**-0.7**
BMSB	**Bamfield Mari**	**2.40**	**66**	⇓Pn	**Pn**	**23 14 13.6**	**-1.1**
BMSB				⇑Sn	**Sn**	**23 14 45.1**	**+0.7**
GDR	**Gold River**	**2.46**	**40**	⇓Pn	**Pn**	**23 14 15.8**	**+0.2**
WOSB	**Woss**	**2.56**	**28**	⇓Pn	**Pn**	**23 14 17.7**	**+0.6**
MAYB	**Maynard**	**2.62**	**18**	⇓Pn	**Pn**	**23 14 17.7**	**-0.2**
MGB	**Mount Grey**	**2.73**	**65**	⇓Pn	**Pn**	**23 14 18.2**	**-1.1**
HOLB	**Holberg**	**2.73**	**4**	⇓Pn	**Pn**	**23 14 18.6**	**-0.9**
ALB	**Alberni**	**2.76**	**59**	⇓Pn	**Pn**	**23 14 19.1**	**-0.7**
PFB	**Port Renfrew**	**2.76**	**75**	P	**Pn**	**23 14 17.7**	**-2.1**
PFB	**Port Renfrew**	**2.76**	**75**	⇑Pn	**Pn**	**23 14 17.9**	**-1.9**
PFB				⇓Sn	**Sn**	**23 14 53.6**	**+0.2**
PHC	**Port Hardy**	**2.87**	**13**	⇑Pn	**Pn**	**23 14 21.4**	**+0.1**
CBB	**Campbell River**	**2.94**	**43**	⇑Pn	**Pn**	**23 14 22.6**	**+0.4**
CBB				⇓Sn	**Sn**	**23 15 02.0**	**+4.3**
NCRB	**Newcastle Ridg**	**2.94**	**31**	⇓Pn	**Pn**	**23 14 23.3**	**+1.0**
NLWA	**Neilton Lookou**	**3.14**	**98**	*e*Pn	**Pn**	**23 14 22.8**	**-2.2**
NLWA				*e*Sg	**Sg**	**23 15 17.0**	**+1.0**
LZB	**Mount Lazard**	**3.17**	**76**	Pn	**Pn**	**23 14 23.6**	**-1.8**
PGC	**Sidney**	**3.42**	**76**	*e*Pn	**Pn**	**23 14 27.3**	**-1.6**
PGC				*e*Sn	**Sn**	**23 15 08.9**	**-0.8**
VGZ	**Gonzales**	**3.47**	**80**	P	**Pn**	**23 14 27.1**	**-2.4**
BLN	**Blyn Mountain**	**3.68**	**87**	P	**Pn**	**23 14 31.3**	**-1.2**
GNW	**Green Mountain**	**3.81**	**93**	*e*Pn	**Pn**	**23 14 32.4**	**-1.9**
GNW				*e*Sn	**Sn**	**23 15 18.8**	**-0.6**
BBB	**Bella Bella**	**4.28**	**3**	Pn	**Pn**	**23 14 40.5**	**-0.1**
	31nm,0.3s,baz=15,slow=13,SNR=176						
BBB				Sn	**Sn**	**23 15 33.0**	**+2.2**
	baz=24,slow=13,SNR=1.2						
BBB				LR	LR	23 16 14.8	
	comp=Z,5μm,20.1s,baz=360,slow=36						
JCW	**Jim Creek**	**4.38**	**84**	*e*Pn	**Pn**	**23 14 40.9**	**-1.2**
JCW				*e*Sn	**Sn**	**23 15 32.4**	**-1.1**
LON	**Longmire**	**4.67**	**102**	*e*Pn	**Pn**	**23 14 45.7**	**-0.3**
LON				*e*Sn	**Sn**	**23 15 41.0**	**+0.6**
RPW	**Rockport**	**4.67**	**81**	*e*Pn	**Pn**	**23 14 45.2**	**-0.8**
RPW				Sn	**Sn**	**23 15 39.9**	**-0.7**
COR	**Corvallis**	**4.88**	**131**	*e*Pn	**Pn**	**23 14 46.8**	**-2.2**
COR				Sn	**Sn**	**23 15 43.3**	**-2.5**
ASR	**Mount Adams--S**	**5.01**	**108**	P	**Pn**	**23 14 50.2**	**-0.6**
HOOD	**Mount Hood Mea**	**5.36**	**116**	*e*Pn	**Pn**	**23 14 54.4**	**-1.1**
HOOD				*e*Sn	**Sn**	**23 15 56.8**	**-0.6**
VFP	**Flag Point**	**5.47**	**116**	P	**Pn**	**23 14 56.2**	**-0.8**
ETW	**Entiat**	**5.49**	**90**	*e*Pn	**Pn**	**23 14 57.0**	**-0.3**
KEBM	**Edson Butte**	**5.82**	**149**	*e*Pn	**Pn**	**23 14 58.3**	**-3.5**
RSW	**Rattlesnake Hi**	**6.23**	**101**	*e*Pn	**Pn**	**23 15 07.2**	**-0.2**
HAWA	**Hanford**	**6.27**	**101**	*e*Pn	**Pn**	**23 15 06.8**	**-1.2**
HUMO	**Hull Mountain**	**6.58**	**142**	*e*Pn	**Pn**	**23 15 10.4**	**-1.8**
HUMO				Sn	**Sn**	**23 16 19.4**	**-8.0**
OD2	**Odessa Site #2**	**6.60**	**91**	*e*Pn	**Pn**	**23 15 11.2**	**-1.3**
KRMB	**Red Mountain**	**7.17**	**152**	*e*Pn	**Pn**	**23 15 20.0**	**-0.3**
	34nm,1.1s						
LNOR	**Lincton Mounta**	**7.26**	**103**	*e*Pn	**Pn**	**23 15 21.4**	**-0.2**
YBH	**Yreka Blue Hor**	**7.41**	**144**	Pn	**Pn**	**23 15 22.7**	**-1.0**
	0.4nm,0.3s,baz=334,slow=15,SNR=11						
NEW	**Newport**	**7.60**	**83**	*e*Pn	**Pn**	**23 15 24.9**	**-1.3**
KHMM	**Horse Mountain**	**7.81**	**153**	*e*Pn	**Pn**	**23 15 27.8**	**-1.3**
	30nm,1.4s						
MOD	**Modoc**	**8.34**	**133**	*e*Pn	**Pn**	**23 15 36.8**	**+0.4**
WDC	**Whiskeytown Da**	**8.47**	**148**	*e*Pn	**Pn**	**23 15 38.6**	**+0.3**
WVOR	**Wild Horse Val**	**8.84**	**125**	*e*Pn	**Pn**	**23 15 45.2**	**+2.0**
	14nm,1.1s						
WRAK	**Wrangell Islan**	**8.84**	**346**	Pn	**Pn**	**23 15 41.5**	**-1.7**
BSMT	**Bassoo Peak**	**9.19**	**85**	*e*Pn	**Pn**	**23 15 47.3**	**-0.7**
BSMT				*e*Pn	**Pn**	**23 15 47.8**	**-0.2**
JTMT	**Jette**	**9.54**	**86**	*e*Pn	**Pn**	**23 15 52.1**	**-0.7**
YBMT	**Yellow Bay**	**9.71**	**85**	*e*Pn	**Pn**	**23 15 53.5**	**-1.6**
WALA	**Waterton Lakes**	**9.73**	**78**	*e*Pn	**Pn**	**23 15 55.7**	**+0.3**
HOPS	**Hopland**	**9.74**	**154**	*e*Pn	**Pn**	**23 15 53.9**	**-1.7**
SWMT	**Swartz Lake**	**9.76**	**87**	*e*Pn	**Pn**	**23 15 55.6**	**-0.2**
MSO	**Missoula**	**9.91**	**91**	*e*Pn	**Pn**	**23 15 56.9**	**-1.0**
SLMT	**Seeley Lake**	**10.13**	**88**	*e*Pn	**Pn**	**23 16 00.5**	**-0.5**
CHMT	**Chamberlain Mo**	**10.36**	**90**	*e*Pn	**Pn**	**23 16 03.0**	**-1.0**
CHMT				*e*Pn	**Pn**	**23 16 03.2**	**-0.8**
PAHR	**Pah Rah Range**	**10.50**	**138**	*e*Pn	**Pn**	**23 16 07.5**	**+1.6**
DLBC	**Dease Lake**	**10.58**	**355**	Pn	**Pn**	**23 16 11.1**	**+4.1**
	0.3nm,0.3s,baz=178,slow=12,SNR=11						
DLBC				LR	LR	23 20 02.1	
	comp=Z,4μm,20.0s,baz=116,slow=36						
DLBC	**Dease Lake**	**10.58**	**355**	*e*Pn	**Pn**	**23 16 07.9**	**+0.8**
WCN	**Washoe City**	**10.67**	**141**	*e*Pn	**Pn**	**23 16 09.2**	**+0.9**
HLID	**Hailey**	**10.73**	**109**	*e*Pn	**Pn**	**23 16 10.5**	**+1.3**
EDM	**Edmonton**	**10.97**	**55**	*e*Pn	**Pn**	**23 16 13.2**	**+0.9**
BMN	**Battle Mountai**	**10.99**	**129**	*e*Pn	**Pn**	**23 16 19.8**	**+7.1**
LRM	**Limekiln Ridge**	**11.16**	**95**	*e*Pn	**Pn**	**23 16 21.7**	**+6.7**
DLMT	**Dillon**	**11.20**	**97**	*e*Pn	**Pn**	**23 16 17.2**	**+1.7**
WAKR	**Walker**	**11.47**	**142**	*e*Pn	**Pn**	**23 16 19.8**	**+0.4**
CMB	**Columbia Colle**	**11.50**	**146**	*e*Pn	**Pn**	**23 16 20.7**	**+0.9**
BOZ	**Bozeman (W)**	**11.76**	**95**	*e*Pn	**Pn**	**23 16 24.0**	**+0.8**
NVAR	**Mina Array Bea**	**12.02**	**138**	Pn	**Pn**	**23 16 27.2**	**+0.3**
	0.2nm,0.3s,baz=312,slow=11,SNR=23						
EGMT	**Eagleton**	**12.54**	**83**	*e*Pn	**Pn**	**23 16 34.8**	**+1.0**
HVU	**Hansel Valley**	**12.70**	**113**	*e*Pn	**Pn**	**23 16 38.6**	**+2.6**
YNR	**Norris Junctio**	**12.70**	**98**	*e*Pn	**Pn**	**23 16 36.9**	**+0.9**
MTUM	**Tungsten Hills**	**12.81**	**142**	*e*Pn	**Pn**	**23 16 38.5**	**+0.9**
RRI2	**Red Ridge**	**12.83**	**105**	*e*Pn	**Pn**	**23 16 40.0**	**+2.2**
IMW	**Indian Meadow**	**12.84**	**102**	*e*Pn	**Pn**	**23 16 39.8**	**+1.8**
TPAW	**Teton Pass**	**13.01**	**103**	*e*Pn	**Pn**	**23 16 41.5**	**+1.2**
MOOW	**Moose Ponds**	**13.03**	**102**	*e*Pn	**Pn**	**23 16 43.1**	**+2.5**
LOHW	**Long Hollow**	**13.18**	**102**	*e*Pn	**Pn**	**23 16 44.5**	**+1.9**
AHID	**Auburn Hatcher**	**13.24**	**106**	*e*Pn	**Pn**	**23 16 44.9**	**+1.5**
RLMT	**Red Lodge**	**13.50**	**95**	*e*Pn	**Pn**	**23 16 48.4**	**+1.4**
HWUT	**Hardware Ranch**	**13.54**	**112**	*e*Pn	**Pn**	**23 16 48.5**	**+0.9**
DUG	**Dugway**	**13.63**	**119**	*e*Pn	**Pn**	**23 16 50.0**	**+1.2**
	16nm,1.2s						
PDAR	**Pinedale Array**	**14.24**	**104**	Pn	**Pn**	**23 17 00.1**	**+2.9**
	0.1nm,0.3s,baz=304,slow=11,SNR=30						
PDAR				LR	LR	23 22 38.4	
	comp=Z,3μm,19.3s,baz=298,slow=38						
ISA	**Isabella**	**14.31**	**145**	*e*Pn	**Pn**	**23 16 55.1**	**-3.1**
ISA				*e*Pn	**Pn**	**23 16 56.4**	**-1.7**
DAU	**Daniels Canyon**	**14.43**	**115**	*e*Pn	**Pn**	**23 17 01.8**	**+2.2**
SHPR	**Sheep Range**	**15.04**	**134**	*e*Pn	**Pn**	**23 17 08.7**	**+0.7**
MSU	**Marysvale**	**15.11**	**123**	*e*Pn	**Pn**	**23 17 08.7**	**-0.2**
	20nm,1.2s						
MSU				*e*Pn	**Pn**	**23 17 10.7**	**+1.7**
LAO	**LASA Array**	**15.13**	**86**	*e*Pn	**Pn**	**23 17 10.7**	**+1.5**
	57nm,1.3s						
CCUT	**Cedar City**	**15.15**	**128**	*e*Pn	**Pn**	**23 17 09.0**	**-0.5**
	22nm,1.2s						
CCUT				*e*Pn	**Pn**	**23 17 09.9**	**+0.4**
GSC	**Goldstone**	**15.30**	**141**	*e*Pn	**Pn**	**23 17 10.4**	**-1.1**
	43nm,1.3s						
SRU	**San Rafael**	**15.68**	**118**	*e*P	**Pn**	**23 17 22.9**	**+6.6**
	24nm,1.3s						
MWC	**Mount Wilson**	**15.75**	**147**	*e*Pn	**Pn**	**23 17 19.6**	**+2.2**
	48nm,1.2s						
LDFC	**Landfair**	**16.23**	**137**	*e*Pn	**Pn**	**23 17 23.3**	**-0.3**
	66nm,1.1s						
RWWY	**Rawlins**	**16.29**	**105**	*e*Pn	**Pn**	**23 17 25.8**	**+1.5**
	201nm,2.6s						
YKA	**Yellowknife Ar**	**16.55**	**23**	Pn	**Pn**	**23 17 27.8**	**+0.4**
	0.2nm,0.3s,baz=212,slow=11,SNR=11						
YKA				LR	LR	23 24 35.8	
	comp=Z,114nm,19.6s,baz=245,slow=39						
YKA	**Yellowknife Ar**	**16.55**	**23**	Pn	**Pn**	**23 17 27.8**	**+0.4**
YKA				LR	LR	23 24 35.8	
PFO	**Pinyon Flat Ob**	**16.91**	**143**	*e*Pn	**Pn**	**23 17 30.8**	**-1.4**
	20nm,1.2s						
PV04	**Paradox Valley**	**17.11**	**117**	*e*Pn	**Pn**	**23 17 35.5**	**+0.9**
DAWY	**Dawson**	**17.26**	**344**	*e*Pn	**Pn**	**23 17 36.5**	**+0.1**
DAWY				*e*Pn	**Pn**	**23 17 37.1**	**+0.8**
KDAK	**Kodiak Island**	**17.51**	**313**	P	**Pn**	**23 17 40.2**	**+0.7**
	0.3nm,0.3s,baz=136,slow=16,SNR=3.5						
PHWY	**Pilot Hill**	**17.62**	**104**	*e*Pn	**Pn**	**23 17 40.7**	**-0.4**
	34nm,1.1s						
BAR	**Barrett**	**17.64**	**145**	*e*P	**Pn**	**23 17 45.3**	**+4.0**
	16nm,1.1s						
SMCO	**Snowmass**	**17.81**	**111**	*e*P	**Pn**	**23 17 45.0**	**+1.6**
	22nm,1.2s						
FFC	**Flin Flon**	**17.82**	**58**	*e*Pn	**Pn**	**23 17 42.5**	**-1.0**
	104nm,1.0s						
SML	**Sawmill**	**17.90**	**328**	*e*Pn	**Pn**	**23 17 44.8**	**+0.5**
PMR	**Palmer**	**18.05**	**327**	*e*Pn	**Pn**	**23 17 46.8**	**+0.7**
GLA	**Glamis**	**18.07**	**140**	*e*Pn	**Pn**	**23 17 43.8**	**-2.8**
EGAK	**Eagle**	**18.24**	**342**	*e*Pn	**Pn**	**23 17 49.0**	**+0.5**
	11nm,1.1s						
ISCO	**Idaho Springs**	**18.31**	**108**	*e*Pn	**Pn**	**23 17 50.8**	**+1.2**
	20nm,1.5s						
RSO	**Redoubt South**	**18.83**	**321**	P	**Pn**	**23 17 55.7**	**0.0**
MCK	**McKinley**	**19.43**	**332**	*e*P	**Pn**	**23 18 02.5**	**-0.4**
	15nm,1.3s						
SDCO	**Great Sand Dun**	**19.60**	**113**	*e*P	**Pn**	**23 18 04.4**	**-0.7**
	14nm,1.3s						
ILAR	**Eielson Array**	**19.60**	**336**	P	**Pn**	**23 18 03.1**	**-1.9**
	0.0nm,0.3s,baz=150,slow=11,SNR=24						
ILAR				LR	LR	23 24 41.5	
	comp=Z,647nm,18.2s,baz=154,slow=34						
TRF	**Thorofare Moun**	**19.68**	**330**	*e*Pn	**Pn**	**23 18 05.2**	**-0.7**
	93nm,1.8s						
PPLA	**Purkeypile**	**19.98**	**327**	*e*P	**Pn**	**23 18 07.8**	**-1.6**
	64nm,1.4s						
OGNE	**Ogallala**	**20.05**	**101**	*e*P	**P**	**23 18 09.0**	**+0.3**
	86nm,1.4s						
BPAW	**Bear Paw Mtn.**	**20.34**	**331**	*e*P	**P**	**23 18 10.9**	**-0.8**
	61nm,2.0s						
TUC	**Tucson**	**20.55**	**133**	*e*P	**P**	**23 18 14.3**	**+0.1**
	13nm,1.3s						
INK	**Inuvik**	**20.61**	**355**	P	**P**	**23 18 15.0**	**+0.5**
	4.1nm,1.0s,baz=220,slow=0.6,SNR=3.2						
INK				LR	LR	23 26 16.0	
	comp=Z,2μm,21.1s,MS4.5,baz=169,slow=37						
INK	**Inuvik**	**20.61**	**355**	*e*P	**P**	**23 18 15.5**	**+0.9**
	20nm,1.3s						
ANMO	**Albuquerque**	**20.88**	**120**	P	**P**	**23 18 18.0**	**+0.2**
	8.1nm,1.1s,baz=322,slow=10,SNR=15						
ANMO				LR	LR	23 26 03.7	
	comp=Z,456nm,20.0s,MS3.9,baz=140,slow=36						
ANMO	**Albuquerque**	**20.88**	**120**	*e*P	**P**	**23 18 18.0**	**+0.3**
	39nm,1.5s						
LENM	**Lemitar**	**21.15**	**123**	*e*P	**P**	**23 18 21.5**	**+0.8**
LPM	**Los Pinos Moun**	**21.24**	**122**	*e*P	**P**	**23 18 22.8**	**+1.2**
ULM	**Lac du Bonnet**	**21.37**	**72**	P	**P**	**23 18 23.6**	**+0.7**
	31nm,1.1s,mb4.5,baz=282,slow=11,SNR=16						
ULM				LR	LR	23 27 15.3	
	comp=Z,2μm,18.4s,MS4.5,baz=61,slow=38						
ULM	**Lac du Bonnet**	**21.37**	**72**	*e*P	**P**	**23 18 23.5**	**+0.5**
	44nm,1.2s,mb4.7						
TTA	**Tatalina**	**21.44**	**325**	*e*P	**P**	**23 18 24.6**	**+1.1**
AGMN	**Agassiz Nation**	**21.68**	**77**	*e*P	**P**	**23 18 27.9**	**+1.6**
	38nm,1.3s,mb4.7						
COLD	**Coldfoot**	**22.36**	**338**	*e*P	**P**	**23 18 34.0**	**+0.6**
	46nm,1.8s,mb4.6						
ECSD	**EROS Data Cent**	**22.49**	**89**	*e*P	**P**	**23 18 34.5**	**-0.4**
CBKS	**Cedar Bluff**	**22.66**	**103**	*e*P	**P**	**23 18 38.5**	**+1.6**
	93nm,1.5s,mb5.0						
FCC	**Fort Churchill**	**22.94**	**49**	*e*P	**P**	**23 18 42.9**	**+3.2**
	1.4nm,0.9s						
AMTX	**Amarillo**	**23.80**	**113**	*e*P	**P**	**23 18 48.1**	**-0.4**
	65nm,1.5s,mb4.8						
MNTX	**Cornudas Mount**	**23.88**	**124**	*e*P	**P**	**23 18 48.0**	**-1.2**
	52nm,1.7s,mb4.7						
GDL2	**Guadalupe Moun**	**24.07**	**122**	*e*P	**P**	**23 18 50.9**	**-0.2**
KSU1	**Kansas State U**	**24.58**	**99**	*e*P	**P**	**23 18 56.4**	**+0.8**
	18nm,0.9s,mb4.6						
EYMN	**Ely**	**24.61**	**76**	*e*P	**P**	**23 18 57.3**	**+1.4**
	24nm,1.0s,mb4.7						
WMOK	**Wichita Mounta**	**25.70**	**110**	*e*P	**P**	**23 19 05.2**	**-0.7**
	21nm,1.2s,mb4.5						
TXAR	**Lajitas Array**	**26.63**	**125**	P	**P**	**23 19 13.4**	**-0.9**
	2.3nm,0.9s,mb3.7,baz=318,slow=7.3,SNR=11						
TXAR				LR	LR	23 29 52.7	
	comp=Z,702nm,19.3s,MS4.2,baz=270,slow=37						
JCT	**Junction City**	**27.99**	**118**	*e*P	**P**	**23 19 25.2**	**-1.3**
	46nm,1.4s,mb4.9						
RES	**Resolute Bay**	**30.42**	**17**	LR	LR	23 32 38.4	
	comp=Z,1μm,18.3s,MS4.6,baz=75,slow=37						
LRAL	**Lakeview Retre**	**34.42**	**100**	*e*P	**P**	**23 20 23.2**	**+0.2**
	51nm,1.0s,mb5.4						
LONY	**Lake Ozonia**	**36.76**	**75**	*e*P	**P**	**23 20 42.8**	**-0.2**
	25nm,1.5s,mb4.8						
TAOE	**Nuku Hiva Isla**	**57.47**	**194**	*e*LR	LR	23 40 00.5	
	778nm,25.4s,baz=20						
NAO01	**NORSAR Array S**	**66.72**	**20**	*e*P	**P**	**23 24 26.1**	**-0.3**
PPT	**Papeete**	**67.88**	**202**	*e*LR	LR	23 44 42.3	
	519nm,27.8s,baz=19						
CN2	**Changchun**	**67.96**	**311**	*e*P	**P**	**23 24 35.3**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
HFS	**Hagfors**	**67.99**	**19**	LR	LR	23 54 11.7	
	comp=Z,209nm,20.7s,MS4.3,baz=330,slow=36						
RKT	**Rikitea**	**70.95**	**186**	*e*LR	LR	23 46 08.4	
	comp=Z,579nm,31.5s,baz=2.5						
SONM	**Songino Array**	**73.39**	**325**	P	**P**	**23 25 06.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=354,slow=1.5,SNR=3.6						
TBI	**Tubuai**	**73.41**	**200**	*e*LR	LR	23 47 22.1	
	comp=Z,408nm,27.5s,baz=26						
HHC	**Hu-ho-hao-te**	**76.87**	**318**	*e*P	**P**	**23 25 28.5**	**+0.7**
HHC				pP	pP	23 25 33.3	+3.6
HHC				sP	sP	23 25 35.6	+5.2
HHC				PcP	PcP	23 25 40.4	+1.5
HHC				PP	PP	23 28 21.6	+1.6
HHC				S	S	23 35 13.0	-2.8
HHC				sS	sS	23 35 20.6	+1.6
HHC				ScS	ScS	23 35 41.1	-3.8
HHC				SS	SS	23 40 10.6	-0.3
HHC				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,160nm,5.6s						
HHC				LR	LR		
	comp=N,240nm,16.9s,MS4.9						
HHC				LR	LR		
	comp=E,410nm,18.2s,MS4.9						
HHC				LR	LR		
	comp=Z,400nm,16.6s,MS4.8						
BRVK	**Borovoye**	**78.14**	**349**	P	**P**	**23 25 34.6**	**0.0**
KURK	**Kurchatov**	**79.03**	**343**	P	**P**	**23 25 39.5**	**-0.1**
NJ2	**Nanjing**	**80.19**	**307**	*e*P	**P**	**23 25 47.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
MKAR	**Makanchi Array**	**81.93**	**339**	P	**P**	**23 25 53.5**	**-1.8**
	comp=Z,2.2nm,0.7s,baz=5.4,slow=5.1,SNR=3.9						
WMQ	**Urumqi**	**83.26**	**335**	*e*P	**P**	**23 26 03.0**	**+0.8**
WHN	**Wuhan**	**83.75**	**309**	P	**P**	**23 26 01.5**	**-3.5**
CD2	**Chengdu**	**88.63**	**317**	*e*P	**P**	**23 26 29.2**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.2						
DZM	**Mont Dzumac**	**90.79**	**237**	*e*LR	LR	23 55 21.6	
	comp=Z,316nm,22.6s						
GYA	**Guiyang**	**90.97**	**313**	*e*P	**P**	**23 26 40.0**	**0.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						
KMI	**Kunming**	**94.00**	**315**	P	**P**	**23 26 54.5**	**+0.5**
KMI				pmax	pmax		
	comp=Z,4.0nm,2.0s,mb4.5						

NEIC ***11*** *23:13:34.4±1.1, 17°.11N×62°.50W, h157km±14km, MD4.1(RSPR), Error ellipse: s-maj=17.9km s-min=4.2km az=220.0*
ISCJB ***11*** *23:13:35.4±0.7, 16°.96N±0°.06×62°.65W±0°.06, h135km±8km, Error ellipse: s-maj=13.7km s-min=3.1km az=43.1*
TRN ***11*** *23:13:37.9, 16°.67N×62°.92W, h86km, MD4.0, M3.8(FDF)*
RSPR ***11*** *23:13:37.2, 17°.27N×62°.60W, h145km±2km, MD4.1/13*
ISC 11 23:13:36.3±0.7, 16°.95N±0°.06×62°.65W±0°.06, h130km±9km, n64, σ1§13/89, 38C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEUS	**St. Eustatius**	**0.62**	**329**	⇑*e*P	**Pn**	**23 13 56.7**	**+0.6**
SEUS				*e*S	**Sn**	**23 14 12.3**	**+1.2**
SEUS	**St. Eustatius**	**0.62**	**329**	⇑*e*P	**Pn**	**23 13 56.7**	**+0.6**
SEUS				*e*S	**Sn**	**23 14 12.3**	**+1.2**
SABA	**Saba**	**0.88**	**319**	⇑*e*P	**Pn**	**23 13 59.1**	**+1.1**
SABA				*e*S	**Sn**	**23 14 16.0**	**+1.4**
SABA	**Saba**	**0.88**	**319**	⇑*e*P	**Pn**	**23 13 59.1**	**+1.1**
SABA				*e*S	**Sn**	**23 14 16.3**	**+1.7**
ANWB	**Willy Bob**	**1.09**	**49**	*e*Pn	**Pn**	**23 13 59.1**	**-1.0**
ANWB				*e*Sn	**Sn**	**23 14 16.0**	**-2.1**
LZG	**Guadaloupe-1**	**1.16**	**134**	⇑*i*P	**Pn**	**23 14 01.6**	**+0.8**
SMRT	**St. Maarten**	**1.17**	**339**	⇑*e*P	**Pn**	**23 14 00.3**	**-0.5**
SMRT				*e*S	**Sn**	**23 14 17.9**	**-1.6**
SMRT	**St. Maarten**	**1.17**	**339**	⇑*e*P	**Pn**	**23 14 00.3**	**-0.5**
SMRT				*e*S	**Sn**	**23 14 17.9**	**-1.6**
SCG	**Saint Claude**	**1.30**	**135**	*e*P	**Pn**	**23 14 03.1**	**+0.8**
BCG	**Bois Riant Cap**	**1.31**	**131**	*e*P	**Pn**	**23 14 03.4**	**+1.0**
HMG	**Houelmont**	**1.32**	**137**	⇑*i*P	**Pn**	**23 14 03.2**	**+0.7**
PHG	**Guadaloupe-2**	**1.34**	**134**	⇑*i*P	**Pn**	**23 14 03.8**	**+1.1**
TBG	**Guadaloupe-3**	**1.46**	**139**	⇑*i*P	**Pn**	**23 14 04.5**	**+0.6**
SFG	**Saint Francois**	**1.55**	**116**	*e*P	**Pn**	**23 14 04.4**	**-0.6**
MGG	**Marie-Galante**	**1.64**	**129**	⇑*i*P	**Pn**	**23 14 06.4**	**+0.4**
DWS	**Wesley**	**1.88**	**137**	⇓*e*P	**Pn**	**23 14 11.9**	**+2.1**
DWS				*e*S	**Sn**	**23 14 32.8**	**-0.9**
MDN	**Morne-Dani

LPK	Lapseki	0.78	45	ePg	Pg	23 21 05.5	-1.3
ENEZ	Enez	0.92	6	ePG	Pg	23 21 08.8	-0.6
ENEZ	Enez	0.92	6	ePg	Pg	23 21 08.8	-0.6
ERIK	Erikli-Kesan	0.93	23	ePG	Pg	23 21 08.6	-0.8
ERIK	Erikli-Kesan	0.93	23	ePg	Pg	23 21 08.6	-0.9
ALN	Alexandroupoli	1.08	0	P	Pg	23 21 11.8	-0.6
ALN				S	Sg	23 21 27.0	+0.6
BALY	Balya	1.22	93	eP	Pb	23 21 14.1	-0.8
BALY				eS	Sg	23 21 30.3	-0.7
BALY	Balya	1.22	93	eP	Pb	23 21 14.1	-0.9
BALY				eS	Sg	23 21 30.3	-0.7
RKY	Sarkoy-Tekirda	1.23	45	ePN	Pn	23 21 14.2	-0.8
RKY	Sarkoy-Tekirda	1.23	45	ePn	Pn	23 21 14.3	-0.8
SART	Tekirdag	1.23	45	eP	Pb	23 21 13.2	-2.0
SART				eS	Sg	23 21 31.0	-0.4
SART	Tekirdag	1.23	45	eP	Pb	23 21 13.2	-2.0
SART				eS	Sg	23 21 31.0	-0.4
GONE	Gonen-Balikesi	1.29	79	ePN	Pn	23 21 15.0	-0.9
GONE	Gonen-Balikesi	1.29	79	ePn	Pn	23 21 15.0	-0.9
MFT	Murefte	1.36	44	ePN	Pn	23 21 16.6	-0.2
MFT	Murefte	1.36	44	ePn	Pn	23 21 16.6	-0.2
CHOS	Chios island	1.43	179	P	Pn	23 21 15.1	-2.7
CHOS	Chios island	1.43	179	P	Pn	23 21 15.1	-2.7
BALB	Balikesir	1.43	97	ePN	Pn	23 21 18.5	+0.7
BALB	Balikesir	1.43	97	ePn	Pn	23 21 18.5	+0.7
EDC	Edincik	1.50	69	ePN	Pn	23 21 19.3	+0.5
EDC	Edincik	1.50	69	ePn	Pn	23 21 19.3	+0.6
BNT	Bandirma	1.54	69	ePN	Pn	23 21 19.6	+0.3
BLCB	Balcova	1.63	151	ePN	Pn	23 21 22.1	+1.5
BLCB	Balcova	1.63	151	P	Pn	23 21 17.4	-3.2
BLCB	Balcova	1.63	151	P	Pn	23 21 17.4	-3.2
BLCB	Balcova	1.63	151	ePn	Pn	23 21 22.1	+1.5
TKR	Tekirdag	1.64	44	ePN	Pn	23 21 21.0	+0.4
TKR	Tekirdag	1.64	44	ePn	Pn	23 21 21.0	+0.3
KAVA	Kavala	1.65	316	P	Pn	23 21 20.1	-0.8
KAVA				S	Sn	23 21 40.7	-1.6
OUR	Ouranopolis	1.66	289	P	Pn	23 21 19.6	-1.3
OUR				S	Sn	23 21 40.4	-2.0
AKS	Akhisar	1.67	124	ePN	Pn	23 21 22.4	+1.3
AKS	Akhisar	1.67	124	ePn	Pn	23 21 22.4	+1.3
IZM	Izmir	1.71	146	ePN	Pn	23 21 23.1	+1.5
IZM	Izmir	1.71	146	ePn	Pn	23 21 23.1	+1.5
KCTX	Karacabey (Bur	1.84	75	ePN	Pn	23 21 23.9	+0.5
KCTX	Karacabey (Bur	1.84	75	ePn	Pn	23 21 23.9	+0.5
CRLT	Corlu	1.84	44	ePN	Pn	23 21 24.1	+0.6
CRLT	Corlu	1.84	44	ePn	Pn	23 21 24.1	+0.6
EDRB	Edirne	2.10	15	ePN	Pn	23 21 27.7	+0.7
EDRB	Edirne	2.10	15	ePn	Pn	23 21 27.7	+0.7
SLVT	Silivri	2.18	49	ePN	Pn	23 21 28.8	+0.7
SLVT	Silivri	2.18	49	ePn	Pn	23 21 28.8	+0.7
SMG	Samos	2.20	163	ePN	Pn	23 21 28.5	+0.1
MDNY	Mudanya-Bursa	2.25	75	ePN	Pn	23 21 30.1	+1.0
MDNY	Mudanya-Bursa	2.25	75	ePn	Pn	23 21 30.2	+1.1
ARMT	Armutlu	2.29	70	ePN	Pn	23 21 30.6	+1.0
ARMT	Armutlu	2.29	70	ePn	Pn	23 21 30.6	+1.0
CTKS	Kestanelik-??a	2.36	52	ePN	Pn	23 21 31.3	+0.8
CTKS	Kestanelik-??a	2.36	52	ePn	Pn	23 21 31.3	+0.8
CTYL	Yal??k??y-??at	2.38	45	ePN	Pn	23 21 31.8	+0.9
CTYL	Yal??k??y-??at	2.38	45	ePn	Pn	23 21 31.8	+0.9
KULA	Kula-Manisa	2.42	122	ePN	Pn	23 21 33.0	+1.6
KULA	Kula-Manisa	2.42	122	ePn	Pn	23 21 33.0	+1.6
BGKT	Bogazkoy	2.49	56	ePN	Pn	23 21 33.4	+1.0
BGKT	Bogazkoy	2.49	56	ePn	Pn	23 21 33.4	+1.0
KLYT	Kilyos	2.70	57	ePN	Pn	23 21 36.4	+1.1
KLYT	Kilyos	2.70	57	ePn	Pn	23 21 36.4	+1.1

CSEM ***11*** *23:21:03.1±0.1, 41°.95N×19°.70E, h2km, ML2.8, Error ellipse: s-maj=3.3km s-min=2.6km az=25.0*

TIR 11 23:21:04.9, 41°.97N×19°.82E, h15km, ML2.8, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.09**	**36**	*i* PG	Pg	23 21 06.7	-1.3
PUK				*i* SG	Sg	23 21 09.0	-1.1
PUK	**Puka**	**0.09**	**36**	*i* Pg	Pg	23 21 06.7	-1.4
PUK				*i* Sg	Sg	23 21 09.0	-1.1
BCI	**Bajram Curri**	**0.44**	**25**	*i* PG	Pg	23 21 12.4	-1.3
BCI				*i* SG	Sg	23 21 19.6	+0.1
BCI	**Bajram Curri**	**0.44**	**25**	*i* Pg	Pg	23 21 12.4	-1.3
BCI				*i* Sg	Sg	23 21 19.6	0.0
PHP	**Peshkopia**	**0.54**	**121**	*i* PG	Pg	23 21 15.0	-0.6
PHP				*i* SG	Sg	23 21 23.0	+0.1
PHP	**Peshkopia**	**0.54**	**121**	*i* Pg	Pg	23 21 15.0	-0.6
PHP				*i* Sg	Sg	23 21 23.0	+0.1
STON	**Ston**	**1.81**	**301**	ePn	Pn	23 21 34.4	-1.1
STON				Sn	Sn	23 22 03.2	+5.1
STON	**Ston**	**1.81**	**301**	ePn	Pn	23 21 34.4	-1.1

HLW ***11*** *23:25:07.3, 34°.48N×25°.03E, h30km±31km, Md3.6, Ml3.1*
IDC ***11*** *23:25:07.2±1.7, 34°.38N×25°.10E, h0km, mb3.9/9, mb1 3.9/14, mb1mx3.8/29, mbtmp3.8/14, ML4.0/5, Error ellipse: s-maj=34.2km s-min=17.3km az=22.0*
CSEM ***11*** *23:25:09.7±0.2, 34°.24N×25°.13E, h20km, ML3.2/3, Error ellipse: s-maj=6.2km s-min=3.9km az=52.0*
ISCJB ***11*** *23:25:09.7±0.4, 34°.24N±0°.03×25°.19E±0°.04, h40km±6km, mb3.8/10, Error ellipse: s-maj=5.9km s-min=3.5km az=146.3*
NEIC ***11*** *23:25:10.9, 34°.40N×25°.03E, h28km, mb3.8/1, ML3.2(THE), After ATH.*
ATH ***11*** *23:25:10.3, 34°.37N×25°.05E, h28km±2km, MD3.7/12*
THE ***11*** *23:25:11.9, 34°.43N×25°.04E, h5km±1km, ML3.2/3, Error ellipse: s-maj=1.7km s-min=0.8km az=40.0*

ISC 11 23:25:10.0±0.8, 34°.24N±0°.03×25°.13E±0°.03, h22km±6km, n148, σ1°.13/177, mb3.8/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.82**	**341**	ePN	Pn	23 25 24.1	-2.1
SIVA				eSN	Sn	23 25 34.1	-3.5
SIVA	**Sivas**	**0.82**	**341**	P	Pb	23 25 24.0	-1.6
SIVA				S	Sb	23 25 33.3	-2.9
SIVA	**Sivas**	**0.82**	**341**	P	Pb	23 25 24.0	-1.6
SIVA				S	Sb	23 25 33.3	-2.9
SIVA				eSn	Sn	23 25 34.1	-3.5
LAST	**Lasithi**	**0.97**	**17**	P	Pb	23 25 26.9	-1.1
LAST	**Lasithi**	**0.97**	**17**	ePN	Pn	23 25 27.3	-0.9
LAST	**Lasithi**	**0.97**	**17**	P	Pb	23 25 27.2	-0.8
LAST				S	Sb	23 25 39.3	-1.0
LAST	**Lasithi**	**0.97**	**17**	P	Pb	23 25 27.2	-0.8
LAST				S	Sb	23 25 39.3	-1.0
NPS	**Neapolis**	**1.10**	**21**	P	Pn	23 25 29.5	-0.5
NPS	**Neapolis**	**1.10**	**21**	ePN	Pn	23 25 29.6	-0.4
NPS	**Neapolis**	**1.10**	**21**	ePn	Pn	23 25 29.6	-0.4
ZKR	**Zakros**	**1.25**	**45**	P	Pn	23 25 33.2	+1.1
ZKR				S	Sn	23 25 50.9	+2.6
ZKR	**Zakros**	**1.25**	**45**	ePN	Pb	23 25 32.7	-0.2
ZKR	**Zakros**	**1.25**	**45**	P	Pn	23 25 33.2	+1.1
ZKR				S	Sn	23 25 50.9	+2.6
ZKR	**Zakros**	**1.25**	**45**	ePb	Pb	23 25 32.7	-0.2
ZKR	**Zakros**	**1.25**	**45**	P	Pn	23 25 33.2	+1.1
VAM	**Vamos**	**1.40**	**327**	P	Pn	23 25 33.2	-0.9
VAM	**Vamos**	**1.40**	**327**	ePN	Pn	23 25 33.5	-0.6
VAM	**Vamos**	**1.40**	**327**	P	Pn	23 25 33.2	-0.9
VAM	**Vamos**	**1.40**	**327**	ePn	Pn	23 25 33.5	-0.6
KARN	**Karanos**	**1.53**	**320**	ePN	Pn	23 25 35.7	-0.2
KARN	**Karanos**	**1.53**	**320**	P	Pn	23 25 35.6	-0.3
KARN				S	Sn	23 25 54.1	-1.0
KARN	**Karanos**	**1.53**	**320**	ePn	Pn	23 25 35.7	-0.2
KARN				S	Sn	23 25 54.1	-1.0
KARP	**Karpathos**	**2.12**	**51**	P	Pn	23 25 48.0	+4.0
KARP	**Karpathos**	**2.12**	**51**	ePb	Pb	23 25 47.7	0.0
KARP	**Karpathos**	**2.12**	**51**	P	Pn	23 25 48.0	+4.0
THR1	**Thera Island**	**2.15**	**7**	P	Pn	23 25 44.8	+0.4
THR1	**Thera Island**	**2.15**	**7**	P	Pn	23 25 44.8	+0.4
THR3	**Thira Island,**	**2.18**	**6**	P	Pn	23 25 45.5	+0.7
THR3	**Thira Island,**	**2.18**	**6**	P	Pn	23 25 45.5	+0.7
THR3	**Thira Island,**	**2.18**	**6**	P	Pn	23 25 45.5	+0.7
THR5	**Thira Island,**	**2.18**	**5**	P	Pn	23 25 44.9	0.0
THR5	**Thira Island,**	**2.18**	**5**	P	Pn	23 25 44.9	0.0
THR5	**Thira Island,**	**2.18**	**5**	P	Pn	23 25 44.9	0.0
THR2	**Thira island,**	**2.22**	**6**	P	Pn	23 25 45.2	-0.2
THR2	**Thira island,**	**2.22**	**6**	P	Pn	23 25 45.2	-0.2
KYTH	**Kithira**	**2.66**	**321**	ePN	Pn	23 25 52.1	+0.6
KYTH	**Kithira**	**2.66**	**321**	ePn	Pn	23 25 52.1	+0.6
SLUM		**2.74**	**179**	P	Pn	23 25 52.7	+0.2
	baz=177						
SLUM				AMP		23 26 00.0	
	comp=N,50μm,1.1s,logA/T=4.7,baz=177						
SLUM				S	Sn	23 26 25.0	0.0
	baz=177						
SLUM		**2.74**	**179**	P	Pn	23 25 52.7	+0.2
SLUM				S	Sn	23 26 25.0	+0.1
APE	**Apeiranthos**	**2.84**	**6**	P	Pn	23 25 57.5	+3.5
APE	**Apeiranthos**	**2.84**	**6**	P	Pn	23 25 57.5	+3.5
VLI	**Veliai**	**3.05**	**325**	P	Pn	23 25 58.0	+1.1
VLI	**Veliai**	**3.05**	**325**	ePN	Pn	23 25 58.1	+1.2
VLI	**Veliai**	**3.05**	**325**	P	Pn	23 25 58.0	+1.1
ARG	**Arkhangelos**	**3.15**	**50**	P	Pn	23 26 02.6	+4.4
ARG	**Arkhangelos**	**3.15**	**50**	ePN	Pn	23 26 01.4	+3.2
ARG	**Arkhangelos**	**3.15**	**50**	ePn	Pn	23 26 01.4	+3.2
HMAT	**Matruh**	**3.55**	**152**	P	Pn	23 26 03.8	+0.1
	baz=152						
HMAT				S	Sn	23 26 43.8	-1.1
	baz=152						
HMAT	**Matruh**	**3.55**	**152**	P	Pn	23 26 03.8	+0.2
HMAT				S	Sn	23 26 43.8	-1.1
DID	**Didima**	**3.61**	**335**	ePN	Pn	23 26 04.8	+0.3
DID	**Didima**	**3.61**	**335**	P	Pn	23 26 04.7	+0.2
DID				S	Sn	23 26 46.1	-0.2
DID	**Didima**	**3.61**	**335**	P	Pn	23 26 04.7	+0.2
DID				S	Sn	23 26 46.1	-0.2
SMG	**Samos**	**3.73**	**21**	ePN	Pn	23 26 07.3	+1.1
SMG	**Samos**	**3.73**	**21**	ePn	Pn	23 26 07.3	+1.1
VLY	**Voula,Athens**	**3.77**	**344**	P	Pn	23 26 09.2	+2.5
VLY	**Voula,Athens**	**3.77**	**344**	ePN	Pn	23 26 06.9	+0.2
VLY	**Voula,Athens**	**3.77**	**344**	ePn	Pn	23 26 06.9	+0.2
VLY	**Voula,Athens**	**3.77**	**344**	P	Pn	23 26 09.2	+2.5
PYL	**PYLOS**	**3.83**	**315**	ePN	Pn	23 26 08.4	+0.9
PYL	**PYLOS**	**3.83**	**315**	ePn	Pn	23 26 08.4	+0.9
VLX	**Vlachokerasia**	**3.84**	**325**	P	Pn	23 26 08.4	+0.7
VLX				S	Sn	23 26 51.4	-0.8
VLX	**Vlachokerasia**	**3.84**	**325**	P	Pn	23 26 08.4	+0.7
VLX				S	Sn	23 26 51.4	-0.8
ITM	**Ithomi**	**3.92**	**319**	ePN	Pn	23 26 09.1	+0.3
ITM	**Ithomi**	**3.92**	**319**	ePn	Pn	23 26 09.1	+0.3
PTL	**Penteli**	**3.94**	**345**	P	Pn	23 26 09.5	+0.5
PTL	**Penteli**	**3.94**	**345**	ePN	Pn	23 26 09.1	+0.1
PTL	**Penteli**	**3.94**	**345**	ePn	Pn	23 26 09.1	+0.1
PTL	**Penteli**	**3.94**	**345**	P	Pn	23 26 09.5	+0.5
LTK	**Loutraki**	**4.16**	**336**	ePN	Pn	23 26 12.5	+0.4
LTK	**Loutraki**	**4.16**	**336**	ePn	Pn	23 26 12.5	+0.4
GUR	**Goura**	**4.33**	**329**	ePN	Pn	23 26 15.6	+1.2
GUR	**Goura**	**4.33**	**329**	P	Pn	23 26 14.4	0.0
GUR				S	Sn	23 27 03.0	-1.1
GUR	**Goura**	**4.33**	**329**	P	Pn	23 26 14.4	0.0
GUR	**Goura**	**4.33**	**329**	ePn	Pn	23 26 15.6	+1.2
GUR				S	Sn	23 27 03.0	-1.1
LKR	**Lokris**	**4.73**	**339**	P	Pn	23 26 20.5	+0.6
LKR	**Lokris**	**4.73**	**339**	ePN	Pn	23 26 20.0	+0.1
LKR	**Lokris**	**4.73**	**339**	ePn	Pn	23 26 20.0	+0.1
LKR	**Lokris**	**4.73**	**339**	P	Pn	23 26 20.5	+0.6
SWA2		**4.99**	**177**	P	Pn	23 26 23.5	+0.1
	baz=175						
SWA2				AMP		23 27 00.0	
	comp=N,20μm,1.1s,logA/T=4.3,baz=175						
SWA2				S	Sn	23 27 17.4	-3.1
	baz=175						
SWA2		**4.99**	**177**	P	Pn	23 26 23.5	0.0
SWA2				S	Sn	23 27 17.4	-3.0
AOS	**Alonnisos**	**5.03**	**349**	P	Pn	23 26 24.9	+1.0
AOS	**Alonnisos**	**5.03**	**349**	P	Pn	23 26 24.9	+1.0
AGG	**Agios Georgios**	**5.28**	**336**	P	Pn	23 26 29.8	+2.4
AGG	**Agios Georgios**	**5.28**	**336**	P	Pn	23 26 29.8	+2.4
NEO	**Neokhori**	**5.29**	**344**	P	Pn	23 26 28.0	+0.5
NEO	**Neokhori**	**5.29**	**344**	P	Pn	23 26 28.0	+0.5
PAIG	**Paliouri**	**5.80**	**349**	P	Pn	23 26 35.5	+1.0
PAIG	**Paliouri**	**5.80**	**349**	P	Pn	23 26 35.5	+1.0
OUR	**Ouranopolis**	**6.15**	**352**	P	Pn	23 26 40.3	+0.8
OUR	**Ouranopolis**	**6.15**	**352**	P	Pn	23 26 40.3	+0.8
SOH	**Sokhos**	**6.72**	**348**	P	Pn	23 26 49.4	+2.1
SOH	**Sokhos**	**6.72**	**348**	P	Pn	23 26 49.4	+2.1
CSS	**Prodhromos**	**6.80**	**82**	ePn	Pn	23 26 47.7	-0.7
	comp=N,10.0nm,0.8s						
CSS				eSn	Sn	23 28 04.6	-0.5
CSS	**Prodhromos**	**6.80**	**82**	ePn	Pn	23 26 47.7	-0.7
	comp=N,10.0nm,0.8s						
CSS				eSn	Sn	23 28 04.6	-0.5
FNA	**Florina**	**7.18**	**337**	P	Pn	23 26 56.2	+2.6
FNA	**Florina**	**7.18**	**337**	P	Pn	23 26 56.2	+2.6
GLL	**Jalalah**	**7.27**	**128**	P	Pn	23 26 55.5	+0.7
	baz=129						
GLL	**Jalalah**	**7.27**	**128**	P	Pn	23 26 55.5	+0.7
HFRF	**Wahat Farafira**	**7.58**	**158**	P	Pn	23 26 59.3	+0.2
	baz=158						
HFRF	**Wahat Farafira**	**7.58**	**158**	P	Pn	23 26 59.3	+0.3
MMAI	**Mount Meron Ar**	**8.65**	**95**	Pn	Pn	23 27 13.6	-0.3
	comp=N,1.4nm,0.3s,baz=283,slow=11,SNR=13						
MMAI				Sn	Sn	23 28 48.8	-1.9
	comp=N,2.3nm,0.3s,baz=269,slow=23,SNR=6.7						
BRTR	**Keskin Array B**	**8.74**	**49**	Pn	Pn	23 27 14.1	-0.8
	comp=N,0.1nm,0.3s,baz=242,slow=26,SNR=2.7						
BRTR				Sn	Sn	23 28 51.4	-1.2
	comp=N,0.1nm,0.3s,baz=222,slow=21,SNR=3.5						
BRTR	**Keskin Array B**	**8.74**	**49**	Pn	Pn	23 27 14.1	-0.8
BRTR				Sn	Sn	23 28 51.5	-1.1
VAE	**Valguarnera**	**9.28**	**293**	Sn	Sn	23 28 55.5	-10
	comp=N,0.7nm,0.3s,baz=139,slow=21,SNR=2.3						
CUC	**Castrocucco**	**9.39**	**310**	ePn	Pn	23 27 23.2	-0.7
	comp=N,5.0nm,0.6s						
CUC				Sn	Sn	23 29 06.8	-2.0
CUC	**Castrocucco**	**9.39**	**310**	ePn	Pn	23 27 23.2	-0.7
	comp=N,5.0nm,0.6s						
EIL	**Elat**	**9.50**	**116**	Pn	Pn	23 27 25.1	-0.3
	comp=N,1.1nm,0.3s,baz=226,slow=9.9,SNR=14						
EIL				Sn	Sn	23 29 05.5	-6.1
	comp=N,0.4nm,0.3s,baz=199,slow=14,SNR=2.1						
EIL	**Elat**	**9.50**	**116**	Pn	Pn	23 27 25.1	-0.4
ASF	**Jabal al Asfar**	**10.07**	**99**	Pn	Pn	23 27 34.9	+1.6
	comp=N,0.2nm,0.3s,baz=149,slow=20,SNR=2.6						
ASF				Sn	Sn	23 29 17.0	-8.5
	comp=N,0.2nm,0.3s,baz=200,slow=19,SNR=3.1						
VRAC	**Vranov**	**16.33**	**340**	Pn	Pn	23 28 57.7	+0.1
	comp=N,0.3nm,0.3s,baz=125,slow=9.3,SNR=4.1						
VRAC	**Vranov**	**16.33**	**340**	Pn	Pn	23 28 57.7	0.0
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	Pn	23 29 00.7	-2.0
	comp=N,1.7nm,0.3s,baz=200,slow=11,SNR=9.2						
AKASG	**Malin Array Be**	**16.72**	**9**	Pn	Pn	23 29 00.7	-2.0
GEC2	**GERESS Array S**	**16.89**	**333**	*e*P	Pn	23 29 06.8	+2.1
GEC2	**GERESS Array S**	**16.89**	**333**	*e*P	Pn	23 29 06.8	+2.1
KHC	**Kasperske Hory**	**17.17**	**334**	*e*P	Pn	23 29 10.1	+1.8
KHC	**Kasperske Hory**	**17.17**	**334**	P	Pn	23 29 10.1	+1.8
DPC	**Dobruska-Polom**	**17.35**	**341**	*e*P	Px	23 29 21.5	
WET	**Wettzell**	**17.44**	**332**	*e*P	Pn	23 29 12.4	+0.7
WET	**Wettzell**	**17.44**	**332**	*e*P	Pn	23 29 12.4	+0.7
UPC	**Upice**	**17.58**	**340**	*e*P	Pn	23 29 20.2	+6.9
GRA1	**Grafenberg Arr**	**18.54**	**331**	*e*P	Pn	23 29 23.6	-1.5
GRA1	**Grafenberg Arr**	**18.54**	**331**	*e*P	Pn	23 29 23.6	-1.5
GRF	**Grafenberg Arr**	**18.54**	**331**	*e*P	Pn	23 29 23.6	-1.5
GRF	**Grafenberg Arr**	**18.54**	**331**	*e*P	Pn	23 29 23.6	-1.5
CLZ	**Clausthal**	**20.57**	**333**	*e*P	P	23 29 46.0	-1.0
CLZ	**Clausthal**	**20.57**	**333**	*e*P	P	23 29 46.0	-1.0
ESDC	**Sonseca Array**	**23.82**	**292**	P	P	23 30 20.7	-0.5
	comp=N,0.6nm,0.6s,mb3.2,baz=85,slow=8.8,SNR=3.6						
ESDC	**Sonseca Array**	**23.82**	**292**	P	P	23 30 20.7	-0.5
HFS	**Hagfors**	**26.97**	**347**	P	P	23 30 49.6	0.0
	comp=N,5.1nm,0.9s,mb4.1,baz=152,slow=9.6,SNR=5.3						
HFS	**Hagfors**	**26.97**	**347**	P	P	23 30 49.6	0.0
FINES	**FINESS Array B**	**27.23**	**1**	P	P	23 30 50.1	-1.8
	comp=N,5.0nm,0.9s,mb4.0,baz=163,slow=10,SNR=6.9						
FINES	**FINESS Array B**	**27.23**	**1**	P	P	23 30 50.1	-1.8
NB2	**NORSAR Subarra**	**28.28**	**346**	P	P	23 31 00.3	-1.1
	comp=Z,0.6nm,0.6s,mb3.4,baz=161,slow=11						
NB2	**NORSAR Subarra**	**28.28**	**346**	P	P	23 31 00.3	-1.1
	comp=Z,0.6nm,0.6s,mb3.4,SNR=3.8						
NOA	**NORSAR Array B**	**28.28**	**346**	P	P	23 31 00.2	-1.1
	comp=Z,0.9nm,0.7s,mb3.5,baz=178,slow=6.3,SNR=4.1						
NOA	**NORSAR Array B**	**28.28**	**346**	P	P	23 31 00.2	-1.2
EKA	**Eskdalemuir Ar**	**28.78**	**326**	P	P	23 31 06.1	+0.2
	comp=Z,1.2nm,0.9s,mb3.6,baz=162,slow=11,SNR=2.9						
EKA	**Eskdalemuir Ar**	**28.78**	**326**	P	P	23 31 06.1	+0.2
ARCES	**ARCESS Array B**	**35.35**	**0**	P	P	23 32 01.8	-1.5
	comp=Z,0.4nm,0.4s,mb3.7,baz=172,slow=9.8,SNR=10.0						
ARCES	**ARCESS Array B**	**35.35**	**0**	P	P	23 32 01.8	-1.5
KKAR	**Karatay Array**	**36.15**	**62**	*e*P	P	23 32 11.3	+0.8
	comp=Z,0.9nm,0.7s,mb3.8						
MK31	**Makanchi Array**	**44.31**	**56**	*e*P	P	23 33 18.1	+0.1
MK31	**Makanchi Array**	**44.31**	**56**	*e*P	P	23 33 18.1	+0.1
MKAR	**Makanchi Array**	**44.31**	**56**	P	P	23 33 19.0	+1.0
	comp=Z,0.8nm,0.5s,mb3.7,baz=273,slow=6.5,SNR=11						
ZALV	**Zalesovo Beam**	**45.66**	**46**	P	P	23 33 28.2	-0.5
	comp=Z,2.2nm,0.5s,mb4.4,baz=272,slow=9.3,SNR=11						
SONM	**Songino Array**	**60.09**	**50**	P	P	23 35 16.6	+1.4
	comp=Z,0.4nm,0.4s,mb3.8,baz=280,slow=8.3,SNR=2.8						
SONM	**Songino Array**	**60.09**	**50**	P	P	23 35 16.6	+1.3

ISCJB ***11*** *23:26:17.7±0.3, 47°.26N±0°.02×129°.10W±0°.04, h10km, mb4.3/33, MS4.5/21, Error ellipse: s-maj=4.5km s-min=3.1km az=149.6*
NEIC ***11*** *23:26:19.3, 47°.24N×129°.14W, h10km, mb4.7/24, MW4.7(PGC), After PGC.*
PGC ***11*** *23:26:19.3±39.0, 47°.24N×129°.14W, h10km, ML4.1/14, Mw4.7, 319km Wsw of Tofino, Bc Off Coast Of Washington*
IDC ***11*** *23:26:25.6±0.8, 47°.64N×128°.83W, h0km, mb4.0/16, mb1 4.3/23, mb1mx4.2/31, mbtmp4.1/23, ML3.9/6, MS4.5/25, Ms1 4.5/25, ms1mx4.5/31, Error ellipse: s-maj=21.4km s-min=9.7km az=60.0*
BJI ***11*** *23:26:25.0, 47°.20N×129°.10W, h10km, mB5.1/5, mb4.8/11, Ms5.0/7, Ms7 4.6/7*
GCMT ***11*** *23:26:28.0±0.2, 47°.46N×129°.04W, h12km, MW5.2, Moment Tensor Solution. s51,c61; s92,c167; Moment tensor: Scale 10^16Nm; Mrr0.46±.15; Mθθ-7.23±.13; Mφφ6.77±.12; Mrθ-2.86±.39; Mrφ-1.89±.13; Mθφ1.00±.37; Best double couple: M0 7.80000×10^16 NP1:φs36.00000°, δ69.00000°, λ-4.00000°. NP2:φs128.00000°, δ86.00000°, λ-159.00000°. Principal axes: T 7.3100, Plg12.0000°, Azm260.0000°; N 1.0100, Plg69.0000°, Azm137.0000°; P -8.3200, Plg17.0000°, Azm354.0000°; Data Used: II IU G CN IC.*

ISC 11 23:26:19.3±0.3, 47°.30N±0°.02×129°.16W±0°.04, h10km, n167, σ0°.98/168, mb4.3/33, MS4.5/20, 6D, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	**Estevan Point**	**2.71**	**39**	⇑Pn	Pn	23 27 02.2	-0.8
EDB	**Eliza Dome**	**2.91**	**27**	⇑Pn	Pn	23 27 04.2	-1.4
OZB	**Mount Ozzard**	**2.96**	**55**	⇓Pn	Pn	23 27 05.0	-1.4
BPBC	**Brooks Peninsu**	**3.00**	**17**	⇑Pn	Pn	23 27 05.3	-1.6
BMSB	**Bamfield Mari**	**3.11**	**59**	⇑Pn	Pn	23 27 07.0	-1.3
GDR	**Gold River**	**3.24**	**39**	⇓Pn	Pn	23 27 09.4	-0.7
WOSB	**Woss**	**3.34**	**30**	⇑Pn	Pn	23 27 11.2	-0.3
MAYB	**Maynard**	**3.37**	**22**	⇓Pn	Pn	23 27 11.2	-0.7
HOLB	**Holberg**	**3.41**	**11**	⇓Pn	Pn	23 27 12.1	-0.4
PFB	**Port Renfrew**	**3.42**	**66**	⇑Pn	Pn	23 27 11.3	-1.3
MGB	**Mount Grey**	**3.44**	**59**	⇑Pn	Pn	23 27 11.8	-1.1
ALB	**Alberni**	**3.50**	**54**	⇓Pn	Pn	23 27 12.4	-1.4
PHC	**Port Hardy**	**3.59**	**18**	⇑Pn	Pn	23 27 14.9	-0.2
NLWA	**Neilton Lookou**	**3.60**	**87**	ePn	Pn	23 27 16.4	+1.2
NLWA				eSn	Sn	23 27 58.0	+0.4
CBB	**Campbell River**	**3.71**	**41**	⇑P

LAO	LASA Array	15.66	84	ePn	Pn	23 29 59.5	-0.4
	68nm,1.4s						
SRU	San Rafael	15.84	114	eP	Pn	23 30 15.8	+14
LDFC	Landfair	16.12	134	ePn	Pn	23 30 06.3	+0.4
	320nm,1.8s						
RWWY	Rawlins	16.61	102	ePn	Pn	23 30 12.9	+0.8
PFO	Pinyon Flat Ob	16.72	140	ePn	Pn	23 30 13.6	0.0
PV04	Paradox Valley	17.28	114	eP	Pn	23 30 31.7	+11
YKA	Yellowknife Ar	17.30	23	Pn	Pn	23 30 21.9	+1.2
	0.4nm,0.3s,baz=210,slow=12,SNR=18						
YKA				LR	LR	23 36 30.8	
	comp=Z,150nm,21.4s,baz=155,slow=36						
BAR	Barrett	17.43	142	ePn	Pn	23 30 34.7	+12
KDAK	Kodiak Island	17.60	315	LR	LR	23 35 46.7	
	comp=Z,1μm,18.6s,baz=126,slow=32						
PV01	Paradox Valley	17.64	114	ePn	Pn	23 30 25.1	0.0
	3μm,1.0s						
GLA	Glamis	17.92	137	Pn	Pn	23 30 28.7	+0.2
FFC	Flin Flon	18.56	56	ePn	Pn	23 30 36.3	+0.1
EGAK	Eagle	18.69	344	ePn	Pn	23 30 39.2	+1.4
MCK	McKinley	19.76	334	eP	Pn	23 30 50.1	-0.5
	14nm,1.0s						
SDCO	Great Sand Dun	19.82	110	eP	Pn	23 30 50.1	-1.3
	21nm,1.4s						
ILAR	Eielson Array	19.98	338	P	Pn	23 30 57.5	+4.3
	0.1nm,0.3s,baz=147,slow=10,SNR=17						
ILAR				LR	LR	23 37 25.8	
	comp=Z,2μm,22.0s,baz=154,slow=33						
TRF	Thorofare Moun	19.98	332	eP	Pn	23 30 52.4	-0.8
	267nm,2.2s						
PPLA	Purkeypile	20.25	329	eP	P	23 30 55.2	+0.7
	237nm,2.2s						
OGNE	Ogallala	20.42	98	eP	P	23 30 56.1	-0.4
TUC	Tucson	20.50	130	eP	P	23 30 56.1	-1.3
BPAW	Bear Paw Mtn.	20.66	332	eP	P	23 30 58.8	-0.1
	43nm,1.5s						
LAZ	Ladron	20.97	120	P	P	23 31 01.9	-0.6
	16nm,1.5s						
ANMO	Albuquerque	21.00	118	P	P	23 31 11.2	+8.5
	6.1nm,0.9s,baz=318,slow=11,SNR=15						
ANMO	Albuquerque	21.00	118	eP	P	23 31 02.7	-0.1
INK	Inuvik	21.18	356	P	P	23 31 10.5	+6.0
	6.4nm,1.0s,mb3.9,baz=171,slow=18,SNR=8.0						
INK				LR	LR	23 39 09.9	
	comp=Z,4μm,21.4s,MS4.7,baz=174,slow=37						
INK	Inuvik	21.18	356	eP	P	23 31 04.6	+0.1
INK				LR	LR	23 39 09.9	
BNM	Barren Site	21.45	120	eP	P	23 31 07.7	0.0
	80nm,1.8s,mb4.8						
TTA	Tatalina	21.68	326	eP	P	23 31 10.5	+0.7
	27nm,1.0s,mb4.6						
ULM	Lac du Bonnet	22.03	70	P	P	23 31 18.2	+4.5
	25nm,1.0s,mb4.6,baz=285,slow=12,SNR=11						
ULM				LR	LR	23 40 09.7	
	comp=Z,2μm,18.9s,MS4.6,baz=274,slow=38						
AGMN	Agassiz Nation	22.30	75	eP	P	23 31 16.9	+0.3
COLD	Coldfoot	22.76	339	eP	P	23 31 22.1	+0.8
	27nm,1.4s,mb4.5						
ECSD	EROS Data Cent	22.99	87	eP	P	23 31 23.8	-0.1
CPRX	Cap Rock	23.88	118	P	P	23 31 31.5	-1.5
	46nm,1.5s,mb4.7						
MNTX	Cornudas Mount	23.94	122	eP	P	23 31 33.9	+0.4
	42nm,1.6s,mb4.6						
AMTX	Amarillo	24.00	111	eP	P	23 31 33.3	-0.8
	61nm,1.5s,mb4.8						
GDL2	Guadalupe Moun	24.17	120	eP	P	23 31 35.1	-0.5
	5.5nm,1.1s,mb3.9						
KSU1	Kansas State U	24.96	97	eP	P	23 31 43.2	+0.4
	42nm,1.0s,mb4.9						
EYMN	Ely	25.23	75	eP	P	23 31 46.1	+0.9
	42nm,1.2s,mb4.8						
WMOK	Wichita Mounta	25.95	108	eP	P	23 31 51.9	0.0
	18nm,0.9s,mb4.6						
TXAR	Lajitas Array	26.68	123	P	P	23 32 07.4	+9.0
	2.0nm,0.8s,mb3.7,baz=311,slow=6.7,SNR=24						
TXAR				LR	LR	23 42 45.3	
	comp=Z,904nm,18.4s,MS4.4,baz=195,slow=37						
JCT	Junction City	28.13	116	eP	P	23 32 11.9	+0.5
	19nm,0.9s,mb4.7						
GSTR	Great Sitkin T	30.29	297	eP	P	23 32 30.5	+0.2
SCHQ	Schefferville	38.70	55	P	P	23 33 48.3	+5.3
	5.7nm,0.7s,mb4.4,baz=268,slow=8.9,SNR=3.6						
SCHQ				LR	LR	23 49 34.7	
	comp=Z,2μm,18.7s,MS4.8,baz=289,slow=36						
PETK	Petropavlovsk-	45.29	306	LR	LR	23 50 47.1	
	comp=Z,282nm,21.7s,MS4.2,baz=82,slow=32						
ARCES	ARCESS Array B	62.00	10	LR	LR	00 04 46.2	
	comp=Z,388nm,18.1s,MS4.6,baz=162,slow=37						
ROSC	El Rosal	63.11	114	LR	LR	00 04 50.3	
	comp=Z,208nm,21.9s,MS4.3,baz=209,slow=36						
OTAV	Otavalo	64.28	121	P	P	23 36 55.4	+0.5
	4.7nm,1.1s,mb4.4						
MJAR	Matsushiro Arr	65.85	298	LR	LR	23 59 08.6	
	comp=Z,158nm,21.8s,MS4.2,baz=215,slow=30						
PPT	Papeete	67.13	201	LR	LR	23 59 05.3	
	comp=Z,384nm,18.4s,MS4.7,baz=111,slow=29						
NB2	NORSAR Subarra	67.36	20	P	P	23 37 18.1	+4.0
	comp=Z,4.8nm,1.0s,mb4.5,baz=333,slow=6.2						
NOA	NORSAR Array B	67.36	20	P	P	23 37 19.8	+5.7
	comp=Z,2.3nm,0.8s,mb4.2,baz=334,slow=6.2,SNR=6.5						
NOA				LR	LR	00 07 09.8	
	comp=Z,145nm,18.1s,MS4.2,baz=335,slow=36						
CN2	Changchun	68.00	311	eP	P	23 37 29.0	+11
HFS	Hagfors	68.73	19	P	P	23 37 27.4	+4.7
	comp=Z,5.8nm,0.9s,mb4.5,baz=252,slow=3.9,SNR=4.6						
FINES	FINESS Array B	69.78	12	P	P	23 37 33.0	+3.8
	comp=Z,1.8nm,0.7s,mb4.1,baz=5.7,slow=4.2,SNR=2.5						
FINES				LR	LR	00 08 41.0	
	comp=Z,622nm,18.3s,MS4.9,baz=202,slow=36						
KSRS	Korea Array	71.18	305	P	P	23 37 46.1	+7.9
	comp=Z,0.4nm,0.3s,mb3.8,baz=77,slow=6.7,SNR=4.2						
KSRS				LR	LR	00 06 28.0	
	comp=Z,115nm,18.2s,MS4.2,baz=32,slow=34						
TLY	Talaya	71.51	328	P	P	23 37 37.2	-2.7
	comp=Z,5.2nm,0.8s,mb4.5						
RAR	Rarotonga	73.56	210	LR	LR	00 04 31.9	
	comp=Z,335nm,19.1s,MS4.6,baz=62,slow=31						
SONM	Songino Array	73.62	325	P	P	23 38 00.7	+8.2
	comp=Z,0.4nm,0.4s,mb3.7,baz=57,slow=5.3,SNR=3.1						
SONM				LR	LR	00 10 30.8	
	comp=Z,398nm,19.5s,MS4.7,baz=29,slow=36						
ZALV	Zalesovo Beam	75.09	340	P	P	23 38 07.0	+6.1
	comp=Z,0.4nm,0.5s,mb3.6,baz=15,slow=6.3,SNR=3.0						
ZALV				LR	LR	00 11 17.7	
	comp=Z,250nm,21.0s,MS4.5,baz=38,slow=36						
HHC	Hu-ho-hao-te	77.00	317	eP	P	23 38 21.6	+9.5
HHC				pP	pP	23 38 26.3	+11
HHC				sP	sP	23 38 28.7	+12
HHC				PcP	PcP	23 38 33.2	+10
HHC				PP	PP	23 41 15.7	+11
HHC				S	S	23 48 06.6	+6.2
HHC				sS	sS	23 48 15.4	+10
HHC				ScS	ScS	23 48 34.3	+5.2
HHC				SS	SS	23 53 06.4	+10
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
HHC				LR	LR		
	comp=N,350nm,17.7s,MS5.0						
HHC				LR	LR		
	comp=E,460nm,17.1s,MS5.0						
HHC				LR	LR		
	comp=Z,310nm,17.6s,MS4.7						
BRVK	Borovoye	78.65	348	eP	P	23 38 22.3	+1.2
VRAC	Vranov	79.30	22	P	P	23 38 34.1	+9.4
	comp=Z,3.7nm,0.8s,mb4.4,baz=9.2,slow=8.6,SNR=5.7						
KURK	Kurchatov	79.47	342	eP	P	23 38 25.9	+0.3
AKASG	Malin Array Be	80.62	14	P	P	23 38 39.3	+7.5
	comp=Z,0.3nm,0.3s,mb3.7,baz=349,slow=4.9,SNR=4.0						
MK31	Makanchi Array	82.33	339	P	P	23 38 40.9	0.0
MKAR	Makanchi Array	82.33	339	P	P	23 38 48.8	+7.8
	comp=Z,0.5nm,0.8s,mb3.5,baz=321,slow=3.1,SNR=3.9						
MKAR				LR	LR	00 16 25.8	
	comp=Z,295nm,20.8s,MS4.6,baz=18,slow=36						
AKTK	Aktyubinsk	82.45	355	P	P	23 38 47.1	+5.6
AKTO	Aktyubinsk	82.45	355	P	P	23 38 47.1	+5.6
	comp=Z,1.3nm,0.7s,mb4.0,baz=279,slow=1.6,SNR=4.4						
BUR08	Bucovina Ar. S	82.83	17	eP	P	23 38 44.4	+0.8
ABKAR	Akbulak array	83.50	354	eP	P	23 38 47.6	+0.7
	comp=Z,2.6nm,1.0s,mb4.3						
LPAZ	La Paz	83.55	122	P	P	23 38 55.5	+7.9
	comp=Z,1.3nm,0.9s,mb4.1,baz=338,slow=6.9,SNR=2.7						
WMQ	Urumqi	83.61	334	eP	P	23 38 56.0	+8.4
AML	Almayashu	88.67	343	P	P	23 39 13.5	+0.9
CD2	Chengdu	88.75	317	eP	P	23 39 22.2	+9.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.2						
KEST	Kesra	89.36	33	LR	LR	00 18 42.0	
	comp=Z,88nm,20.0s,MS4.2,baz=316,slow=35						
GYA	Guiyang	91.03	312	eP	P	23 39 33.9	+10
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						
BRTR	Keskin Array B	92.01	13	P	P	23 39 32.9	+4.7
	comp=Z,0.5nm,0.7s,mb4.0,baz=340,slow=8.1,SNR=2.7						
BRTR				LR	LR	00 23 51.1	
	comp=Z,182nm,18.0s,MS4.6,baz=149,slow=38						
BDFB	Brasilia	95.47	107	LR	LR	00 26 46.0	
	comp=Z,252nm,18.4s,MS4.7,baz=319,slow=38						
BOSA	Boshof	152.72	56	PKPbc	PKPbc	23 46 22.6	+6.5
	comp=Z,3.4nm,0.9s,baz=27,slow=2.3,SNR=3.2						

ISCJB ***11*** *23:50:45.2±1.4, 47°.42N×0°.03×128°.89W±0°.05, h15km±14km, mb3.9/7, MS3.7/2, Error ellipse: s-maj=6.4km s-min=4.5km az=144.1*
PGC ***11*** *23:50:46.9±6.3, 47°.38N×128°.90W, h10km, ML3.5/13, Mw4.1, 296km Wsw of Tofino, Bc Off Coast Of Washington*
NEIC ***11*** *23:50:46.5±0.5, 47°.42N×128°.93W, h10km, mb4.2/13, MW4.1(PGC), Error ellipse: s-maj=6.4km s-min=3.2km az=60.0*
IDC ***11*** *23:50:51.0±2.0, 47°.87N×128°.55W, h0km, mb3.6/4, mb1 3.9/9, mb1mx3.7/26, mbtmp3.7/9, ML3.9/5, MS3.5/6, Ms1 3.5/6, ms1mx3.3/26, Error ellipse: s-maj=43.3km s-min=13.2km az=66.0*

ISC 11 23:50:48.0±1.5, 47°.47N±0°.03×128°.90W±0°.06, h18km±13km, n112, σ0°.99/126, mb3.9/7, MS3.7/2, 5C-19D, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	Estevan Point	2.47	39	⇓Pn	Pn	23 51 26.8	-0.4
ETB	Estevan Point	2.47	39	⇓Pn	Pn	23 51 26.8	-0.4
EDB	Eliza Dome	2.68	25	⇓Pn	Pn	23 51 28.9	-1.1
EDB	Eliza Dome	2.68	25	⇓Pn	Pn	23 51 28.9	-1.1
OZB	Mount Ozzard	2.72	56	⇓Pn	Pn	23 51 29.7	-1.0
OZB				Sn	Sn	23 52 00.1	-2.9
OZB	Mount Ozzard	2.72	56	⇓Pn	Pn	23 51 29.7	-1.0
OZB				⇓Sn	Sn	23 52 00.1	-2.9
BPBC	Brooks Peninsu	2.79	15	⇓Pn	Pn	23 51 30.2	-1.4
BPBC	Brooks Peninsu	2.79	15	⇓Pn	Pn	23 51 30.2	-1.4
BMSB	Bamfield Mari	2.87	60	⇑Pn	Pn	23 51 31.5	-1.1
GDR	Gold River	2.99	38	⇓Pn	Pn	23 51 34.1	-0.3
GDR	Gold River	2.99	38	⇓Pn	Pn	23 51 34.1	-0.3
WOSB	Woss	3.10	29	Pn	Pn	23 51 35.8	-0.1
WOSB	Woss	3.10	29	Pn	Pn	23 51 35.8	-0.1
MAYB	Maynard	3.15	21	⇓Pn	Pn	23 51 35.9	-0.6
MAYB	Maynard	3.15	21	⇓Pn	Pn	23 51 35.9	-0.6
PFB	Port Renfrew	3.19	68	P	Pn	23 51 36.1	-1.0
PFB				Sn	Sn	23 52 12.2	-2.4
PFB	Port Renfrew	3.19	68	⇑Pn	Pn	23 51 36.0	-1.1
PFB				⇓Sn	Sn	23 52 12.2	-2.4
MGB	Mount Grey	3.20	60	⇓Pn	Pn	23 51 36.4	-0.8
MGB	Mount Grey	3.20	60	⇓Pn	Pn	23 51 36.4	-0.8
HOLB	Holberg	3.21	9	⇑Pn	Pn	23 51 36.5	-0.8
HOLB	Holberg	3.21	9	⇑Pn	Pn	23 51 36.5	-0.8
ALB	Alberni	3.25	55	⇓Pn	Pn	23 51 37.1	-0.8
ALB	Alberni	3.25	55	⇓Pn	Pn	23 51 37.1	-0.8
OBC	Olympics--Boni	3.30	78	P	Pn	23 51 39.0	+0.3
PHC	Port Hardy	3.38	16	⇑Pn	Pn	23 51 38.9	-0.8
PHC	Port Hardy	3.38	16	⇑Pn	Pn	23 51 38.9	-0.8
NLWA	Neilton Lookou	3.41	89	ePn	Pn	23 51 41.0	+0.9
NLWA				Sn	Sn	23 52 20.3	+0.2
CBB	Campbell River	3.47	41	⇑Pn	Pn	23 51 41.1	+0.2
CBB				Sn	Sn	23 52 20.1	-1.4
CBB	Campbell River	3.47	41	⇑Pn	Pn	23 51 41.1	+0.2
CBB				⇑Sn	Sn	23 52 20.1	-1.4
NCRB	Newcastle Ridg	3.48	31	⇑Pn	Pn	23 51 41.7	+0.6
NCRB	Newcastle Ridg	3.48	31	⇑Pn	Pn	23 51 41.7	+0.6
OSD	Olympics--Snow	3.53	82	P	Pn	23 51 42.2	+0.5
LZB	Mount Lazard	3.59	70	⇑Pn	Pn	23 51 42.0	-0.6
LZB				Sn	Sn	23 52 22.8	-1.7
LZB	Mount Lazard	3.59	70	⇑Pn	Pn	23 51 42.0	-0.6
LZB				⇓Sn	Sn	23 52 22.8	-1.7
PGC	Sidney	3.84	70	ePn	Pn	23 51 45.5	-0.5
PGC				eSn	Sn	23 52 30.1	-0.5
GNW	Green Mountain	4.12	86	ePn	Pn	23 51 52.2	+2.4
GNW				Sn	Sn	23 52 39.9	+2.5
MCW	Mount Constitu	4.24	71	P	Pn	23 51 51.7	+0.1
BBB	Bella Bella	4.75	6	Pn	Pn	23 51 58.8	+0.3
	30nm,0.3s,baz=15,slow=11,SNR=129						
BBB				Sn	Sn	23 52 48.0	-4.9
	baz=65,slow=21,SNR=1.2						
BBB				LR	LR	23 53 32.7	
	comp=Z,523nm,20.7s,baz=326,slow=37						
BBB	Bella Bella	4.75	6	Pn	Pn	23 51 58.8	+0.3
BBB				Sn	Sn	23 52 48.0	-4.9
BBB				LR	LR	23 53 32.7	
JCW	Jim Creek	4.75	79	ePn	Pn	23 51 59.7	+1.2
JCW				eSn	Sn	23 52 54.4	+1.4
LON	Longmire	4.89	96	ePn	Pn	23 52 00.7	+0.2
LON				eSn	Sn	23 52 57.8	+1.2
RPW	Rockport	5.06	76	ePn	Pn	23 52 04.0	+1.3
HOOD	Mount Hood Mea	5.45	111	ePn	Pn	23 52 08.3	+0.1
	86nm,1.1s						
VFP	Flag Point	5.57	110	P	Pn	23 52 14.4	+4.5
ETW	Entiat	5.80	86	P	Pn	23 52 14.8	+1.8
HUMO	Hull Mountain	6.43	137	Pn	Pn	23 52 18.9	-2.8
HAWA	Hanford	6.50	96	ePn	Pn	23 52 22.7	+0.1
OD2	Odessa Site #2	6.91	87	ePn	Pn	23 52 30.1	+1.8
YBH	Yreka Blue Hor	7.24	140	Pn	Pn	23 52 42.3	+10
	0.2nm,0.3s,baz=344,slow=11,SNR=7.7						
YBH	Yreka Blue Hor	7.24	140	ePn	Pn	23 52 32.2	-0.5
LNOR	Lincton Mounta	7.47	98	ePn	Pn	23 52 36.4	+0.5
KHMM	Horse Mountain	7.57	149	ePn	Pn	23 52 35.0	-2.2
NEW	Newport	7.96	80	ePn	Pn	23 52 43.5	+0.9
WDC	Whiskeytown Da	8.27	144	ePn	Pn	23 52 45.8	-1.1
MOD	Modoc	8.27	129	ePn	Pn	23 52 46.0	-0.9
WVOR	Wild Horse Val	8.85	121	ePn	Pn	23 52 52.2	-2.5
WRAK	Wrangell Islan	9.21	348	Pn	Pn	23 52 59.0	-0.7
HOPS	Hopland	9.48	151	ePn	Pn	23 53 12.2	+8.8
BSMT	Bassoo Peak	9.53	83	ePn	Pn	23 53 04.5	+0.4
JTMT	Jette	9.88	83	ePn	Pn	23 53 09.3	+0.4
WALA	Waterton Lakes	10.12	75	ePn	Pn	23 53 12.6	+0.4
MSO	Missoula	10.21	88	ePn	Pn	23 53 13.9	+0.4
PAHR	Pah Rah Range	10.38	135	ePn	Pn	23 53 15.2	-0.5
	8.5nm,1.1s						
WCN	Washoe City	10.53	138	ePn	Pn	23 53 16.5	-1.3
CHMT	Chamberlain Mo	10.67	87	ePn	Pn	23 53 19.6	-0.1
	1.7nm,0.8s						
HLID	Hailey	10.89	106	ePn	Pn	23 53 28.4	+5.7
DLBC	Dease Lake	11.01	357	Pn	Pn	23 53 29.6	+5.4
	0.1nm,0.3s,baz=184,slow=15,SNR=4.1						
DLBC				LR	LR	23 57 20.1	
	comp=Z,426nm,19.9s,baz=107,slow=37						
DLBC	Dease Lake	11.01	357	ePn	Pn	23 53 25.3	+1.1
DLBC				LR	LR	23 57 20.1	
CMB	Columbia Colle	11.31	143	ePn	Pn	23 53 43.6	+15
MCMT	McKenzie Canyo	11.44	97	ePn	Pn	23 53 31.1	+0.8
	1.4nm,0.6s						
DLMT	Dillon	11.45	95	ePn	Pn	23 53 30.4	0.0
NVAR	Mina Array Bea	11.90	136	Pn	Pn	23 53 46.5	+10
	0.1nm,0.3s,baz=312,slow=11,SNR=7.9						
EGMT	Eagleton	12.90	80	ePn	Pn	23 53 50.3	+0.2
RRI2	Red Ridge	13.02	102	ePn	Pn	23 54 09.2	+17
IMW	Indian Meadow	13.05	99	ePn	Pn	23 53 52.6	+0.3
TPAW	Teton Pass	13.20	101	ePn	Pn	23 53 54.5	+0.1
MOOW	Moose Ponds	13.24	100	ePn	Pn	23 54 01.7	+6.9
REDW	Red Top Meadow	13.32	101	ePn	Pn	23 54 13.0	+17
GCMT	Greycliff	13.32	90	ePn	Pn	23 53 55.6	-0.4
	8.6nm,1.3s						
DUG	Dugway	13.69	116	Pn	Pn	23 54 00.6	-0.3
	4.9nm,1.1s						
RLMT	Red Lodge	13.77	93	ePn	Pn	23 54 02.2	0.0
	29nm,1.9s						
ISA	Isabella	14.13	143	ePn	Pn	23 54 06.2	-0.8
BW06	Boulder Array	14.43	102	ePn	Pn	23 54 18.8	+7.6
PDAR	Pinedale Array	14.43	102	Pn	Pn	23 54 18.1	+7.0
	0.1nm,0.3s,baz=298,slow=9.9,SNR=8.5						
SHPR	Sheep Range	14.95	132	ePn	Pn	23 54 31.2	+13
CCUT	Cedar City	15.12	125	ePn	Pn	23 54 33.8	+13
LAO	LASA Array	15.46	85	Pn	Pn	23 54 24.9	0.0
	58nm,1.5s						
YKA	Yellowknife Ar	17.07	23	Pn	Pn	23 54 47.2	+1.9
	0.1nm,0.3s,baz=219,slow=10,SNR=5.1						
YKA				LR	LR	00 01 46.5	
	comp=Z,24nm,21.4s,baz=5.0,slow=39						
PV04	Paradox Valley	17.18	115	ePn	Pn	23 54 46.4	-0.5
PV01	Paradox Valley	17.55	115	ePn	Pn	23 54 51.4	-0.1
	1μm,1.2s						
DAWY	Dawson	17.61	345	ePn	Pn	23 54 52.9	+1.0
PHWY	Pilot Hill	17.82	102	ePn	Pn	23 54 55.0	+0.3
	100nm,2.5s						
SMCO	Snowmass	17.93	110	ePn	Pn	23 54 56.3	+0.2
	6.8nm,1.3s						
PMR	Palmer	18.26	328	ePn	Pn	23 55 00.8	+0.7
FFC	Flin Flon	18.32	57	ePn	Pn	23 55 01.4	+0.7
	31nm,0.9s						
ISCO	Idaho Springs	18.47	106	eP	Pn	23 55 11.3	+8.6
	42nm,2.7s						
EGAK	Eagle	18.58	343	ePn	Pn	23 55 03.5	-0.3
SDCO	Great Sand Dun	19.71	111	eP	Pn	23 55 24.5	+6.9
	14nm,1.8s						
ILAR	Eielson Array	19.89	337	P	Pn	23 55 20.2	+0.6
	0.1nm,0.3s,baz=146,slow=9.8,SNR=4.2						
ILAR				LR	LR	00 01 38.2	
	comp=Z,196nm,21.6s,baz=176,slow=33						
LAZ	Ladron	20.90	121	P	P	23 55 28.8	-0.4
	1.5nm,1.0s						
ANMO	Albuquerque	20.92	119	P	P	23 55 34.5	+5.2
	1.2nm,0.5s,baz=311,slow=9.9,SNR=5.1						
ANMO	Albuquerque	20.92	119	eP	P	23 55 29.8	+0.4
	24nm,1.8s						
INK	Inuvik	21.03	355	P	P	23 55 30.4	+0.2
	1.3nm,0.7s,mb3.4,baz=180,slow=13,SNR=2.9						
INK				LR	LR	00 03 21.7	
	comp=Z,267nm,19.0s,MS3.6,baz=284,slow=36						
INK	Inuvik	21.03	355	eP	P	23 55 30.6	+0.4
INK				LR	LR	00 03 21.7	
BNM	Barren Site	21.38	120	eP	P	23 55 34.8	+0.5
	9.2nm,1.5s,mb3.9						
TTA	Tatalina	21.64	326	eP	P	23 55 38.3	+1.5
	18nm,1.4s,mb4.3						
ULM	Lac du Bonnet	21.80	70	P	P	23 55 39.9	+1.1
	8.1nm,1.0s,mb4.1,baz=290,slow=11,SNR=4.8						
ULM	Lac du Bonnet	21.80	70	eP	P	23 55 39.4	+0.7
	18nm,1.3s,mb4.3						
AGMN	Agassiz Nation	22.08	76	ePn	P	23 55 49.6	+7.9
	9.0nm,1.0s,mb4.2						
EYMN	Ely	25.02	75	eP	P	23 56 11.3	+0.8
	26nm,1.5s,mb4.5						
TXAR	Lajitas Array	26.63	124	P	P	23 56 32.0	+6.7
	0.5nm,0.9s,mb3.1,baz=261,slow=4.9,SNR=3.2						
ZALV	Zalesovo Beam	74.99	340	LR	LR	00 37 27.2	
	comp=Z,36nm,18.9s,MS3.7,baz=70,slow=37						

ISK ***11*** *23:58:26.7, 40°.43N×34°.57E, h18km, MD2.8*
ISCJB ***11*** *23:58:27.9±0.8, 40°.36N±0°.03×34°.43E±0°.07, h7km±10km, Error ellipse: s-maj=8.8km s-min=5.1km az=171.8*
CSEM ***11*** *23:58:27.8±0.2, 40°.37N×34°.43E, h10km, MD2.8, Error ellipse: s-maj=4.1km s-min=3.7km az=1.0*
DDA ***11*** *23:58:27.9, 40°.34N×34°.44E, h7km±4km, Md2.9*

ISC 11 23:58:28.3±0.5, 40°.37N±0°.03×34°.44E±0°.05, h12km±5km, n22, σ0°.93/36, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CORM	Corum	0.24	142	ePG	Pg	23 58 32.8	-0.5
CORM				eSG	Sg	23 58 37.4	+0.6
CORM	Corum	0.24	142	ePg	Pg	23 58 32.8	-0.5
CORM				eSg	Sg	23 58 37.4	+0.7
CTKT	Corum	0.37	47	⇑iP	Pg	23 58 35.4	-0.3
CTKT				iS	Sg	23 58 41.9	+1.2
CTKT	Corum	0.37	47	iP	Pg	23 58 35.3	-0.4
CTKT				iS	Sg	23 58 41.9	+1.3
CDAG	Cicekdag	0.75	184	eP	Pg	23 58 41.8	-0.9
CDAG				eS	Sg	23 58 52.8	+0.3
CDAG	Cicekdag	0.75	184	eP	Pg	23 58 41.8	-0.9
CDAG				eS	Sg	23 58 52.8	+0.3
ELDT	Eldivan	0.78	279	eP	Pg	23 58 42.8	-0.6
ELDT				eS	Sg	23 58 54.4	+0.8
ELDT	Eldivan	0.78	279	eP	Pg	23 58 42.8	-0.6
ELDT				eS	Sg	23 58 54.4	+0.8
ILGA	Ilgaz	0.88	321	eP	Pg	23 58 46.3	+1.1
ILGA	Ilgaz	0.88	321	eP	Pg	23 58 46.3	+1.1
YOZ	Yozgat	0.99	137	ePG	Pg	23 58

PFB				⇓Sn	Sn	00 15 12.5	-3.6
MGB	**Mount Grey**	**3.21**	**59**	⇑Pn	Pn	00 14 36.6	-1.6
MGB				⇑Sn	Sn	00 15 13.3	-3.2
YOUB	**Youbou, Lake C**	**3.42**	**63**	⇓Pn	Pn	00 14 39.5	-1.6
CBB	**Campbell River**	**3.49**	**41**	⇓Pn	Pn	00 14 41.2	-0.9
CBB				⇓Sn	Sn	00 15 20.2	-3.2
NCRB	**Newcastle Ridg**	**3.51**	**31**	⇑Pn	Pn	00 14 41.8	-0.5
NCRB				⇓Sn	Sn	00 15 21.0	-2.8
LZB	**Mount Lazard**	**3.59**	**69**	⇓Pn	Pn	00 14 42.3	-1.3
TXB	**Texada**	**3.72**	**51**	⇓Pn	Pn	00 14 44.5	-0.8
NLLB	**Nanaimo Lost L**	**3.73**	**59**	⇓Pn	Pn	00 14 44.3	-1.0
PGC	**Sidney**	**3.84**	**70**	⇓Pn	Pn	00 14 45.1	-1.9
SHB	**Sechelt**	**3.97**	**55**	⇓Pn	Pn	00 14 48.4	-0.3
SNB	**Saturna Island**	**4.05**	**69**	⇑Pn	Pn	00 14 49.3	-0.6
HNB	**Haney**	**4.59**	**64**	⇑Pn	Pn	00 14 56.9	-0.3
BBB	**Bella Bella**	**4.78**	**6**	⇑Pn	Pn	00 14 58.9	-0.9

PGC 12 00:15:26.5±3.2, **47°.42N×128°.87W, h10**km, **ML3.0**/20, **Mw3.6, 15D, 291km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	**Estevan Point**	**2.50**	**38**	⇑Pn	Pn	00 16 05.5	-1.7
EDB	**Eliza Dome**	**2.72**	**25**	⇑Pn	Pn	00 16 08.0	-2.2
OZB	**Mount Ozzard**	**2.74**	**54**	⇑Pn	Pn	00 16 08.6	-1.9
OZB				⇑Sn	Sn	00 16 39.8	-3.8
GDR	**Gold River**	**3.02**	**38**	⇓Pn	Pn	00 16 13.0	-1.3
WOSB	**Woss**	**3.14**	**28**	Pn	Pn	00 16 14.8	-1.1
MAYB	**Maynard**	**3.19**	**20**	⇑Pn	Pn	00 16 14.9	-1.7
PFB	**Port Renfrew**	**3.19**	**67**	⇓Pn	Pn	00 16 14.8	-1.8
PFB				⇓Sn	Sn	00 16 50.3	-4.5
MGB	**Mount Grey**	**3.21**	**59**	⇓Pn	Pn	00 16 15.1	-1.9
HOLB	**Holberg**	**3.26**	**8**	⇓Pn	Pn	00 16 15.6	-2.0
YOUB	**Youbou, Lake C**	**3.42**	**63**	⇓Pn	Pn	00 16 18.5	-1.4
YOUB				⇑Sn	Sn	00 16 57.2	-3.3
CBB	**Campbell River**	**3.50**	**40**	⇑Pn	Pn	00 16 20.1	-0.8
CBB				⇑Sn	Sn	00 16 59.7	-2.6
NCRB	**Newcastle Ridg**	**3.52**	**31**	⇑Pn	Pn	00 16 20.6	-0.5
NCRB				⇓Sn	Sn	00 16 59.9	-2.9
LZB	**Mount Lazard**	**3.59**	**69**	⇑Pn	Pn	00 16 20.7	-1.5
LZB				⇓Sn	Sn	00 17 01.7	-2.9
TXB	**Texada**	**3.73**	**51**	⇑Pn	Pn	00 16 23.1	-0.9
PGC	**Sidney**	**3.84**	**69**	⇓Pn	Pn	00 16 24.2	-1.3
GOBB	**Galiano Island**	**3.90**	**65**	⇓Pn	Pn	00 16 25.8	-0.6
SHB	**Sechelt**	**3.97**	**55**	⇓Pn	Pn	00 16 27.2	-0.2
SNB	**Saturna Island**	**4.05**	**68**	⇓Pn	Pn	00 16 27.8	-0.7
BIB	**Bowen Island**	**4.21**	**60**	⇓Pn	Pn	00 16 30.1	-0.5
HNB	**Haney**	**4.59**	**64**	⇓Pn	Pn	00 16 35.6	-0.3
WSLR	**Whistler**	**4.78**	**53**	⇓Pn	Pn	00 16 39.0	+0.6
BBB	**Bella Bella**	**4.80**	**6**	⇑Pn	Pn	00 16 37.8	-0.9
VDB	**Vedder Mountai**	**4.80**	**68**	⇑Pn	Pn	00 16 38.4	-0.4

*ISK **12** 00:23:08.9, 39°.82N×26°.07E, h3km, MD3.0*
*ISCJB **12** 00:23:09.9±0.8, 39°.83N±0°.04×26°.08E±0°.07, h11km±4km, Error ellipse: s-maj=9.4km s-min=6.3km az=155.4*
*DDA **12** 00:23:10.2, 39°.82N×26°.16E, h6km±3km, Md3.0*
*CSEM **12** 00:23:10.0±0.3, 39°.84N×26°.10E, h10km, MD3.0, Error ellipse: s-maj=6.6km s-min=3.4km az=67.0*
ISC 12 00:23:10.4±0.7, **39°.84N**±0°.04×**26°.11E**±0°.06, **h10**km±4km, **n28**, σ0°**56**/37, **1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.04**	**275**	⇓*i*Pg	**Pg**	**00 23 12.7**	**+0.4**
BOZC				*i* Sg	**Sg**	**00 23 14.2**	**+0.5**
EZN	**Ezine**	**0.17**	**94**	*e*PG	**Pg**	**00 23 13.7**	**-0.3**
EZN				*e*SG	**Sg**	**00 23 17.2**	**+0.8**
EZN	**Ezine**	**0.17**	**94**	*e*Pg	**Pg**	**00 23 13.7**	**-0.3**
EZN				*e*Sg	**Sg**	**00 23 17.3**	**+0.8**
GADA	**Gvkgeada**	**0.39**	**336**	*e*PG	**Pg**	**00 23 17.5**	**-0.5**
GADA	**Gvkgeada**	**0.39**	**336**	*e*Pg	**Pg**	**00 23 17.5**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.63**	**27**	*e*PG	**Pg**	**00 23 22.6**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.63**	**27**	*e*Pg	**Pg**	**00 23 22.6**	**+0.1**
AYVA	**Ayvalik**	**0.69**	**139**	*e*P	**Pg**	**00 23 23.1**	**-0.7**
AYVA				*e*S	**Sg**	**00 23 32.6**	**-0.3**
AYVA	**Ayvalik**	**0.69**	**139**	*e*P	**Pg**	**00 23 23.1**	**-0.7**
AYVA				*e*S	**Sg**	**00 23 32.6**	**-0.2**
LPK	**Lapseki**	**0.73**	**43**	*e*PG	**Pg**	**00 23 24.0**	**-0.5**
LPK	**Lapseki**	**0.73**	**43**	*e*Pg	**Pg**	**00 23 24.0**	**-0.5**
ERIK	**Erikli-Kesan**	**0.89**	**20**	*e*PG	**Pg**	**00 23 27.1**	**-0.4**
ERIK	**Erikli-Kesan**	**0.89**	**20**	*e*Pg	**Pg**	**00 23 27.1**	**-0.4**
ENEZ	**Enez**	**0.90**	**2**	*e*PG	**Pg**	**00 23 27.4**	**-0.3**
ENEZ	**Enez**	**0.90**	**2**	*e*Pg	**Pg**	**00 23 27.4**	**-0.3**
BALY	**Balya**	**1.17**	**94**	*e*P	**Pb**	**00 23 32.1**	**-0.5**
BALY				*e*S	**Sb**	**00 23 48.0**	**+0.2**
BALY	**Balya**	**1.17**	**94**	*e*P	**Pb**	**00 23 32.1**	**-0.5**
BALY				*e*S	**Sb**	**00 23 48.0**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.18**	**44**	*e*PN	**Pn**	**00 23 32.8**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.18**	**44**	*e*Pn	**Pn**	**00 23 32.8**	**-0.1**
SART	**Tekirdag**	**1.18**	**44**	*e*P	**Pb**	**00 23 31.5**	**-1.3**
SART				*e*S	**Sb**	**00 23 48.9**	**+0.7**
SART	**Tekirdag**	**1.18**	**44**	*e*P	**Pb**	**00 23 31.5**	**-1.3**
SART				*e*S	**Sb**	**00 23 48.9**	**+0.7**
GONE	**Gonen-Balikesi**	**1.23**	**80**	*e*PN	**Pn**	**00 23 33.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.23**	**80**	*e*Pn	**Pn**	**00 23 33.8**	**+0.2**
BLCB	**Balcova**	**1.62**	**153**	*e*PN	**Pn**	**00 23 39.2**	**+0.2**
BLCB	**Balcova**	**1.62**	**153**	*e*Pn	**Pn**	**00 23 39.2**	**+0.2**
KCTX	**Karacabey (Bur**	**1.78**	**75**	*e*PN	**Pn**	**00 23 41.9**	**+0.8**
KCTX	**Karacabey (Bur**	**1.78**	**75**	*e*Pn	**Pn**	**00 23 41.9**	**+0.8**
EDRB	**Edirne**	**2.06**	**13**	*e*PN	**Pn**	**00 23 45.9**	**+0.9**

PGC 12 00:37:19.9±11.0, **47°.37N×128°.92W, h10**km, **ML3.0**/13, **Mw3.7, 9D, 297km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**2.77**	**25**	⇑Pn	Pn	00 38 02.2	-2.1
OZB	**Mount Ozzard**	**2.79**	**54**	⇓Pn	Pn	00 38 02.9	-1.6
OZB				⇓Sn	Sn	00 38 34.3	-3.9
GDR	**Gold River**	**3.08**	**37**	⇓Pn	Pn	00 38 07.2	-1.3
WOSB	**Woss**	**3.19**	**28**	⇑Pn	Pn	00 38 08.9	-1.2
PFB	**Port Renfrew**	**3.24**	**67**	⇑Pn	Pn	00 38 09.2	-1.5
PFB				⇑Sn	Sn	00 38 45.0	-4.3
MAYB	**Maynard**	**3.25**	**20**	⇓Pn	Pn	00 38 09.1	-1.7
MGB	**Mount Grey**	**3.26**	**58**	⇓Pn	Pn	00 38 09.2	-1.8
MGB				⇑Sn	Sn	00 38 47.0	-2.9
YOUB	**Youbou, Lake C**	**3.47**	**62**	⇑Pn	Pn	00 38 12.2	-1.7
CBB	**Campbell River**	**3.56**	**40**	⇓Pn	Pn	00 38 14.0	-1.0
CBB				⇑Sn	Sn	00 38 53.6	-3.4
NCRB	**Newcastle Ridg**	**3.58**	**31**	⇓Pn	Pn	00 38 14.5	-0.8
LZB	**Mount Lazard**	**3.64**	**68**	⇑Pn	Pn	00 38 14.8	-1.4
TXB	**Texada**	**3.78**	**50**	⇑Pn	Pn	00 38 17.4	-0.8
SHB	**Sechelt**	**4.03**	**55**	⇓Pn	Pn	00 38 21.4	-0.1
BIB	**Bowen Island**	**4.26**	**59**	⇑Pn	Pn	00 38 24.2	-0.5
HNB	**Haney**	**4.64**	**63**	⇓Pn	Pn	00 38 29.9	0.0
BBB	**Bella Bella**	**4.85**	**6**	⇑Pn	Pn	00 38 32.4	-0.4

*MOS **12** 00:38:30.3±1.0, 42°.70N×47°.86E, h14km, mb3.8/1, Error ellipse: s-maj=12.1km s-min=11.3km az=66.6*
*ISCJB **12** 00:38:32.2±0.5, 42°.60N±0°.03×47°.73E±0°.04, h10km, Error ellipse: s-maj=5.1km s-min=2.9km az=44.7*
*CSEM **12** 00:38:32.2±0.3, 42°.60N×47°.73E, h2km, mb3.8, Error ellipse: s-maj=6.3km s-min=3.8km az=51.0*
ISC 12 00:38:32.5±0.6, **42°.61N**±0°.03×**47°.73E**±0°.04, **h10**km, **n34**, σ1**05**/54, **3C, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSR	**Manas**	**0.09**	**355**	*e*PG	**Pg**	**00 38 34.2**	**-0.8**
MNSR				*e*S	**Sg**	**00 38 37.8**	**+1.1**
MNSR				pmax	pmax		
	comp=Z,157nm,0.2s						
MNSR	**Manas**	**0.09**	**355**	*e*Pg	**Pg**	**00 38 34.2**	**-0.8**
	comp=Z,157nm,0.2s						
MNSR				*e*Sg	**Sg**	**00 38 37.8**	**+1.1**
MAK	**Makhachkala**	**0.39**	**335**	*e*PG	**Pg**	**00 38 39.5**	**-0.6**
MAK				*i*		00 38 47.4	
MAK				pmax	pmax		
	comp=Z,43nm,0.2s						
MAK				smax			
	comp=N,516nm,0.5s						
MAK				smax			
	comp=E,998nm,0.6s						
MAK	**Makhachkala**	**0.39**	**335**	*e*Pg	**Pg**	**00 38 39.5**	**-0.6**
	comp=E,43nm,0.2s						
ARKR	**Arakani**	**0.54**	**269**	*e*PG	**Pg**	**00 38 37.2**	**-5.8**
ARKR				*e*S	**Sg**	**00 38 50.5**	**+0.3**
ARKR				pmax	pmax		
	comp=Z,38nm,0.2s						
ARKR	**Arakani**	**0.54**	**269**	*e*Sg	**Sg**	**00 38 50.5**	**+0.3**
GNBR	**Gunib**	**0.61**	**249**	*e*PG	**Pg**	**00 38 42.2**	**-2.1**
GNBR				*e*S	**Sg**	**00 38 50.5**	**-1.8**
GNBR				pmax	pmax		
	comp=Z,73nm,0.3s						
GNBR	**Gunib**	**0.61**	**249**	*e*Pg	**Pg**	**00 38 42.2**	**-2.1**
	comp=Z,73nm,0.3s						
GNBR				*e*Sg	**Sg**	**00 38 50.5**	**-1.8**
KMKR	**Kumukh**	**0.67**	**224**	*e*PG	**Pg**	**00 38 46.7**	**+1.2**
KMKR				*e*S	**Sg**	**00 39 01.7**	**+7.5**
KMKR				pmax	pmax		
	comp=Z,139nm,0.2s						
KMKR	**Kumukh**	**0.67**	**224**	*e*Pg	**Pg**	**00 38 46.7**	**+1.2**
	comp=Z,139nm,0.2s						
UNCR	**Uncukul**	**0.70**	**279**	*e*PG	**Pg**	**00 38 45.5**	**-0.5**
UNCR				*e*S	**Sg**	**00 38 55.0**	**-0.1**
UNCR				pmax	pmax		
	comp=Z,45nm,0.3s						
UNCR	**Uncukul**	**0.70**	**279**	*e*Pg	**Pg**	**00 38 45.5**	**-0.5**
	comp=Z,45nm,0.3s						
UNCR				*e*Sg	**Sg**	**00 38 55.0**	**-0.1**
DRN	**Derbent**	**0.73**	**142**	*i* PG	**Pg**	**00 38 45.2**	**-1.5**
DRN				*e*S	**Sg**	**00 38 56.0**	**-0.2**
DRN				pmax	pmax		
	comp=Z,87nm,0.2s						
DRN	**Derbent**	**0.73**	**142**	*i* Pg	**Pg**	**00 38 45.2**	**-1.5**
	comp=Z,87nm,0.2s						
DRN				*e*Sg	**Sg**	**00 38 56.0**	**-0.2**
XNZR	**Khunzakh**	**0.76**	**265**	⇑*i*PG	**Pg**	**00 38 47.7**	**+0.5**
XNZR				*e*S	**Sg**	**00 39 02.7**	**+5.6**
XNZR				pmax	pmax		
	comp=Z,110nm,0.2s						
XNZR	**Khunzakh**	**0.76**	**265**	*i* Pg	**Pg**	**00 38 47.7**	**+0.5**
	comp=Z,110nm,0.2s						
KSMR	**Kasumkent**	**1.05**	**163**	⇑*i*PG	**Pg**	**00 38 51.0**	**-1.7**
KSMR				*e*S	**Sg**	**00 39 06.5**	**+0.1**
KSMR				pmax	pmax		
	comp=Z,214nm,0.2s						
KSMR	**Kasumkent**	**1.05**	**163**	*i* Pg	**Pg**	**00 38 51.0**	**-1.7**
	comp=Z,214nm,0.2s						
KSMR				*e*Sg	**Sg**	**00 39 06.5**	**+0.1**
BTLR	**Botlikh**	**1.11**	**273**	*e*PG	**Pg**	**00 38 53.5**	**-0.4**
BTLR				*e*S	**Sg**	**00 39 11.8**	**+3.4**
BTLR				pmax	pmax		
	comp=Z,42nm,0.4s						
BTLR	**Botlikh**	**1.11**	**273**	*e*Pg	**Pg**	**00 38 53.5**	**-0.4**
	comp=Z,42nm,0.4s						
AKT	**Akhty**	**1.13**	**180**	⇑*i*PG	**Pg**	**00 38 53.0**	**-1.3**
AKT				*e*S	**Sg**	**00 39 09.0**	**0.0**
AKT	**Akhty**	**1.13**	**180**	*i* Pg	**Pg**	**00 38 53.0**	**-1.3**
AKT				*e*Sg	**Sg**	**00 39 09.0**	**0.0**
SEKA	**Sheki**	**1.46**	**196**	P	**Pn**	**00 38 58.7**	**-0.2**
	SNR=10						
SIZA	**Siyzn**	**1.77**	**150**	P	**Pn**	**00 39 04.0**	**+0.9**
	SNR=6.8						
SIZA				S	**Sb**	**00 39 27.5**	**+0.3**
IML	**Ismayilli**	**1.85**	**169**	P	**Pn**	**00 39 05.3**	**+1.0**
	SNR=4.1						
IML				S	**Sg**	**00 39 31.3**	**-0.7**
PQL	**Pirkuli**	**1.93**	**160**	P	**Pn**	**00 39 05.9**	**+0.5**
	SNR=2.9						
PQL				S	**Sb**	**00 39 33.0**	**+1.0**
DGRG	**David-gareji**	**2.10**	**237**	P	**Pb**	**00 39 11.3**	**+0.6**
GANJ	**Ganja**	**2.23**	**209**	P	**Pn**	**00 39 10.2**	**+0.7**
	SNR=7.3						
GANJ				S	**Sb**	**00 39 41.5**	**+1.0**
MTA	**Mtatsminda**	**2.37**	**248**	P	**Pb**	**00 39 14.0**	**-1.3**
TBLG	**Delisi**	**2.39**	**249**	PN	**Pn**	**00 39 13.8**	**+2.1**
TBLG	**Delisi**	**2.39**	**249**	P	**Pn**	**00 39 13.9**	**+2.2**
TBLG	**Delisi**	**2.39**	**249**	Pn	**Pn**	**00 39 13.8**	**+2.1**
GOR	**Gori**	**2.76**	**258**	P	**Pb**	**00 39 23.4**	**+1.5**
ZEI	**Tsey**	**2.83**	**274**	*e*PN	**Pg**	**00 39 25.5**	**-1.2**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						

*NIED **12** 00:39:00, 42°.40N×144°.70E, h35km, Mw3.8 Best double couple: M0:5.00000×10^14 NP1:φs:52.00000°, δ:72.00000°, λ:-147.00000°. NP2:φs:310.00000°, δ:59.00000°, λ:-22.00000°.*
*IDC **12** 00:39:51.1±1.2, 42°.43N×144°.79E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, ML3.7/3, Error ellipse: s-maj=25.6km s-min=17.6km az=57.0*
*ISCJB **12** 00:39:55.0±0.7, 42°.31N±0°.04×144°.75E±0°.06, h51km±5km, mb3.8/9, Error ellipse: s-maj=8.6km s-min=4.9km az=43.8*
*MOS **12** 00:39:55.2±1.0, 42°.28N×144°.67E, h52km, mb4.2/5, Error ellipse: s-maj=13.7km s-min=10.1km az=89.4*
*JMA **12** 00:39:56.1, 42°.38N×144°.74E, h42km±1km, M4.0*
JMA Felt I J1.
*NEIC **12** 00:39:57.1±1.1, 42°.37N×144°.65E, h49km±10km, mb4.1/3, Error ellipse: s-maj=12.1km s-min=9.6km az=104.0*
NEIC Recorded [1 JMA] in southeastern Hokkaido.
ISC 12 00:39:56.4±0.7, **42°.36N**±0°.04×**144°.75E**±0°.06, **h43**km±6km, **n50**, σ0°**69**/61, **mb3.8**/9, **6C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.64**	**357**	⇑P	**Pn**	**00 40 08.4**	**-0.7**
JAK				*e*S	**Sn**	**00 40 18.1**	**-0.1**
JOB	**Onbets**	**0.87**	**309**	⇑P	**Pn**	**00 40 12.0**	**-0.1**
JOB				*e*S	**Sn**	**00 40 23.7**	**+0.1**
JCH	**Churui**	**1.06**	**285**	⇓P	**Pn**	**00 40 14.9**	**+0.2**
JCH				*e*S	**Sn**	**00 40 28.9**	**+0.7**
JAR	**Ashorobuto**	**1.19**	**323**	⇑P	**Pn**	**00 40 16.0**	**-0.5**
JAR				*e*S	**Sn**	**00 40 30.4**	**-1.0**
JEM	**Erimo**	**1.23**	**255**	P	**Pn**	**00 40 18.3**	**+1.2**
JNK	**Nakash**	**1.23**	**359**	⇑P	**Pn**	**00 40 16.4**	**-0.7**
JNK				*e*S	**Sn**	**00 40 31.7**	**-0.8**
NEM2	**Nemuro 2**	**1.25**	**36**	⇑P	**Pn**	**00 40 17.3**	**0.0**
NEM2				*e*S	**Sn**	**00 40 32.7**	**-0.2**
JNBK	**Urakawa-nobuka**	**1.48**	**268**	P	**Pn**	**00 40 20.3**	**-0.2**
JRA	**Rausu**	**1.61**	**10**	⇑P	**Pn**	**00 40 22.2**	**0.0**
JRA				*e*S	**Sn**	**00 40 41.8**	**+0.1**
JTKR	**Abashiri--Toko**	**1.73**	**339**	P	**Pn**	**00 40 24.6**	**+0.7**
JTKR				*e*S	**Sn**	**00 40 46.0**	**+1.3**
YUK	**Yuzh-Kuril'sk**	**1.87**	**26**	⇓*i*PN	**Pn**	**00 40 25.8**	**0.0**
YUK				*i* S	**Sn**	**00 40 48.7**	**+0.6**
YUK				pmax	pmax		
	comp=Z,250nm,0.5s						
YUK				smax			
	comp=N,1.0nm,0.7s						
YUK				smax			
	comp=E,1.0nm,0.7s						
YUK				smax			
	comp=N,410nm,0.4s						
ASAJ	**Asahikawa**	**2.36**	**319**	Pn	**Pn**	**00 40 32.8**	**+0.2**
	comp=N,16nm,0.3s,baz=188,slow=14,SNR=43						
ASAJ				Lg		00 41 04.5	
	comp=N,19nm,0.3s,baz=91,slow=18,SNR=9.6						
ASAJ	**Asahikawa**	**2.36**	**319**	*e*Pn	**Pn**	**00 40 33.4**	**+0.8**
ASAJ				*e*Sn	**Sn**	**00 41 01.3**	**+1.1**
ASAJ	**Asahikawa**	**2.36**	**319**	PN	**Pn**	**00 40 32.8**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,17nm,0.3s						
YSS	**Yuzh-Sakhalins**	**4.81**	**344**	*e*PN	**Pn**	**00 41 10.0**	**+3.8**
YSS				*e*		00 42 04.0	
MAJO	**Matsushiro**	**7.70**	**223**	*e*Pn	**Pn**	**00 41 45.7**	**-0.2**
MAJO				*e*Sn	**Sn**	**00 43 11.4**	**-0.3**
MAJO	**Matsushiro**	**7.70**	**223**	*e*PN	**Pn**	**00 41 45.7**	**-0.2**
MJAR	**Matsushiro Arr**	**7.70**	**223**	Pn	**Pn**	**00 41 45.8**	**0.0**
	comp=Z,1.2nm,0.3s,baz=31,slow=14,SNR=4.6						
MJAR	**Matsushiro Arr**	**7.70**	**223**	PN	**Pn**	**00 41 45.8**	**0.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MDJ	**Mudanjiang**	**11.24**	**287**	*e*Pn	**Pn**	**00 42 33.8**	**-0.5**
KSRS	**Korea Array**	**13.81**	**255**	Pn	**Pn**	**00 43 08.7**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=71,slow=14,SNR=2.8						
KSRS	**Korea Array**	**13.81**	**255**	P	**Pn**	**00 43 08.7**	**-0.7**
HIA	**Hailar**	**18.70**	**300**	P	**Pn**	**00 44 10.2**	**-1.3**
HIA	**Hailar**	**18.70**	**300**	P	**Pn**	**00 44 10.2**	**-1.4**
SONM	**Songino Array**	**27.42**	**295**	P	**P**	**00 45 38.8**	**+1.1**
	comp=Z,1.1nm,0.5s,mb3.6,baz=76,slow=9.3,SNR=8.4						
SONM	**Songino Array**	**27.42**	**295**	P	**P**	**00 45 38.8**	**+1.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**40.45**	**308**	P	**P**	**00 47 30.4**	**+0.1**
	comp=Z,0.3nm,0.3s,mb3.5,baz=61,slow=12,SNR=4.2						
ZALV	**Zalesovo Beam**	**40.45**	**308**	P	**P**	**00 47 30.4**	**+0.1**
MCK	**McKinley**	**42.81**	**37**	P	**P**	**00 47 50.0**	**+0.5**
MCK	**McKinley**	**42.81**	**37**	P	**P**	**00 47 50.0**	**+0.5**
ILAR	**Eielson Array**	**43.65**	**35**	P	**P**	**00 47 56.6**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.2,baz=260,slow=5.2,SNR=3.5						
ILAR	**Eielson Array**	**43.65**	**35**	P	**P**	**00 47 56.7**	**+0.5**
MKAR	**Makanchi Array**	**43.68**	**298**	P	**P**	**00 47 57.1**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.5,baz=76,slow=5.1,SNR=5.5						
MKAR	**Makanchi Array**	**43.68**	**298**	P	**P**	**00 47 57.1**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LSA	**Lhasa**	**44.47**	**272**	P	**P**	**00 48 03.4**	**+0.1**
LSA	**Lhasa**	**44.47**	**272**	P	**P**	**00 48 03.4**	**+0.1**
KURK	**Kurchatov**	**44.86**	**304**	P	**P**	**00 48 05.9**	**-0.2**
KURK	**Kurchatov**	**44.86**	**304**	P	**P**	**00 48 05.9**	**-0.2**
INK	**Inuvik**	**48.49**	**29**	*e*P	**P**	**00 48 34.0**	**-0.3**
INK	**Inuvik**	**48.49**	**29**	*e*P	**P**	**00 48 34.0**	**-0.2**
TKM2	**Tokmak 2**	**49.52**	**296**	*e*P	**P**	**00 48 40.6**	**-1.9**
	comp=Z,0.9nm,0.5s,mb4.1						
TKM2	**Tokmak 2**	**49.52**	**296**	*e*P	**P**	**00 48 40.6**	**-1.9**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
AAK	**Ala-Archa**	**50.37**	**296**	*e*P	**P**	**00 48 48.7**	**-0.3**
	comp=Z,2.1nm,0.6s,mb4.3						
AAK	**Ala-Archa**	**50.37**	**296**	*e*P	**P**	**00 48 48.7**	**-0.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
AML	**Almayashu**	**51.12**	**295**	P	**P**	**00 48 54.5**	**-0.2**
ABKAR	**Akbulak array**	**56.56**	**309**	*e*P	**P**	**00 49 33.6**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.8						
WRA	**Warramunga Arr**	**62.72**	**191**	P	**P**	**00 50 18.4**	**+1.6**
	comp=Z,0.3nm,0.8s,mb3.5,baz=9.5,slow=7.2,SNR=5.3						
WRA	**Warramunga Arr**	**62.72**	**191**	P	**P**	**00 50 18.4**	**+1.6**
FINES	**FINESS Array B**	**65.31**	**332**	P	**P**	**00 50 33.1**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.3,baz=44,slow=8.5,SNR=8.2						
FINES	**FINESS Array B**	**65.31**	**332**	P	**P**	**00 50 33.1**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						

*TIR **12** 00:48:44.9, 41°.97N×19°.82E, h15km, ML2.7*
*CSEM **12** 00:48:45.9±0.3, 41°.94N×19°.77E, h2km, ML2.7, Error ellipse: s-maj=6.6km s-min=5.4km az=49.0*
*ISCJB **12** 00:48:47.0±1.2, 41°.96N±0°.07×19°.9E±0°.1, h7km±12km, Error ellipse: s-maj=19.0km s-min=7.0km az=148.2*
ISC 12 00:48:47.3±1.3, **41°.96N**±0°.07×**19°.9E**±0°.1, **h6**km±13km, **n8**, σ1**04**/16, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.09**	**18**	*i* PG	**Pg**	**00 48 48.9**	**-0.4**
PUK				*i* SG	**Sg**	**00 48 51.4**	**+0.7**
PUK	**Puka**	**0.09**	**18**	*i* Pg	**Pg**	**00 48 48.9**	**-0.4**
PUK				*i* Sg	**Sg**	**00 48 51.4**	**+0.8**
BCI	**Bajram Curri**	**0.43**	**21**	*i* PG	**Pg**	**00 48 54.7**	**-1.0**
BCI				*i* SG	**Sg**	**00 49 01.5**	**+0.2**
BCI	**Bajram Curri**	**0.43**	**21**	*i* Pg	**Pg**	**00 48 54.7**	**-1.0**
BCI				*i* Sg	**Sg**	**00 49 01.5**	**+0.1**
PHP	**Peshkopia**	**0.52**	**122**	*i* PG	**Pg**	**00 48 56.5**	**-0.7**
PHP				*i* SG	**Sg**	**00 49 04.9**	**+1.0**
PHP	**Peshkopia**	**0.52**	**122**	*i* Pg	**Pg**	**00 48 56.5**	**-0.7**
PHP				*i* Sg	**Sg**	**00 49 04.9**	**+1.0**
STON	**Ston**	**1.84**	**300**	*e*Pn	**Pn**	**00 49 18.1**	**-1.2**
STON				Sn	**Sn**	**00 49 45.1**	**+2.3**
STON	**Ston**	**1.84**	**300**	*e*Pn	**Pn**	**00 49 18.1**	**-1.2**
STON				Sn	**Sn**	**00 49 45.0**	**+2.2**

PGC 12 00:50:09.1±4.0, **47°.43N×128°.88W, h10**km, **

	269nm,0.9s						
CUC	Castrocucco	1.32	305	Pg	Pg	01 08 07.8	-0.2
	269nm,0.9s						
SIRI	Monte Sirino -	1.40	312	Pg	Pg	01 08 10.0	+0.4
	133nm,0.6s						
SIRI	Monte Sirino -	1.40	312	Pg	Pg	01 08 10.0	+0.4
	133nm,0.6s						
CEL	Celeste	1.44	227	Pg	Pg	01 08 08.7	-1.5
	275nm,1.2s						
CEL	Celeste	1.44	227	Pg	Pg	01 08 08.7	-1.5
	275nm,1.2s						
MATE	Matera	1.46	344	Pg	Pg	01 08 12.0	+1.4
	551nm,0.7s						
MATE	Matera	1.46	344	Pg	Pg	01 08 12.0	+1.4
	551nm,0.7s						
MIGL	Miglionico	1.48	336	Pg	Pg	01 08 10.0	-1.1
	2μm,1.0s						
MIGL	Miglionico	1.48	336	Pg	Pg	01 08 10.0	-1.1
	2μm,1.0s						
SOI	Samo	1.49	218	Pg	Pg	01 08 09.6	-1.6
	72nm,0.7s						
SOI	Samo	1.49	218	Pg	Pg	01 08 09.6	-1.6
	72nm,0.7s						
MTSN	Montesano sull	1.53	312	Pg	Pg	01 08 11.6	-0.3
	243nm,0.8s						
MTSN	Montesano sull	1.53	312	Pg	Pg	01 08 11.6	-0.3
	243nm,0.8s						
MCEL	Monticello	1.54	315	Pg	Pg	01 08 11.5	-0.6
	212nm,0.9s						
MCEL	Monticello	1.54	315	Pg	Pg	01 08 11.5	-0.6
	212nm,0.9s						
NOCI	Noci	1.54	355	Pg	Pg	01 08 10.5	-1.7
	365nm,0.5s						
NOCI	Noci	1.54	355	Pg	Pg	01 08 10.5	-1.7
	365nm,0.5s						
SCLL	Scilla	1.54	231	Pg	Pg	01 08 09.6	-2.6
	37nm,0.8s						
SCLL	Scilla	1.54	231	Pg	Pg	01 08 09.6	-2.6
	37nm,0.8s						
PE1	Pezze di Greco	1.56	5	*e*Pn	Pn	01 08 11.0	-0.5
PE1				*e*Sn	Sn	01 08 33.6	+1.2
MPAZ	Palizzi	1.61	217	Pg	Pg	01 08 10.7	-2.8
	307nm,1.5s						
SG1	Sgolgore (BA)	1.64	345	*e*Pn	Pn	01 08 15.2	+2.5
MSRU	Castanea	1.67	234	Pg	Pg	01 08 11.6	-3.0
	330nm,1.0s						
AMUR	Altamura	1.72	344	Pg	Pg	01 08 15.2	-0.5
	366nm,0.8s						
AMUR	Altamura	1.72	344	Pg	Pg	01 08 15.2	-0.5
	366nm,0.8s						
MTTG	Motta San Giov	1.73	224	Pg	Pg	01 08 09.7	-6.1
	71nm,0.8s						
BAI	Bari	1.88	352	*e*Pn	Pn	01 08 15.5	-0.4
CDT	Castel del Mon	1.97	339	*e*Pn	Pn	01 08 16.5	-0.7
KEK	Kerkira	2.04	76	P	Pn	01 08 17.1	-1.0
KEK				S	Sn	01 08 45.7	+1.4
KEK	Kerkira	2.04	76	P	Pn	01 08 17.1	-1.0
KEK				S	Sn	01 08 45.7	+1.4
SRN	Sarande	2.23	73	*i* PN	Pn	01 08 19.6	-1.1
SRN				*i* SN	Sn	01 08 52.0	+3.0
SRN	Sarande	2.23	73	*i* Pn	Pn	01 08 19.6	-1.2
SRN				*i* Sn	Sn	01 08 52.0	+3.0
IGT	Igoumenitsa	2.42	82	P	Pn	01 08 22.8	-0.6
IGT	Igoumenitsa	2.42	82	P	Pn	01 08 22.8	-0.6
VLS	Valsamata	2.84	111	P	Pn	01 08 27.4	-1.7
VLS				S	Sn	01 09 04.5	+0.6
VLS	Valsamata	2.84	111	P	Pn	01 08 27.4	-1.7
VLS				S	Sn	01 09 04.5	+0.6
TIR	Tirane	2.91	43	P	Pn	01 08 30.1	+0.1
TIR				S	Sn	01 09 09.0	+3.4
TIR	Tirane	2.91	43	P	Pn	01 08 30.1	+0.1
TIR				S	Sn	01 09 09.0	+3.4
KBN	Korca	3.06	62	*i* PN	Pn	01 08 33.9	+1.8
KBN	Korca	3.06	62	*i* Pn	Pn	01 08 33.9	+1.8
NEST	Nestorio	3.16	67	P	Pn	01 08 34.6	+1.0
NEST	Nestorio	3.16	67	P	Pn	01 08 34.6	+1.0
PUK	Puka	3.45	35	*i* PN	Pn	01 08 37.3	-0.2
PUK				*i* SN	Sn	01 09 16.4	-2.5
PUK	Puka	3.45	35	*i* Pn	Pn	01 08 37.3	-0.2
PUK				*i* Sn	Sn	01 09 16.4	-2.6
PHP	Peshkopia	3.45	44	*i* PN	Pn	01 08 37.4	-0.2
PHP				*i* SN	Sn	01 09 18.7	-0.3
PHP	Peshkopia	3.45	44	*i* Pn	Pn	01 08 37.3	-0.2
PHP				*i* Sn	Sn	01 09 18.7	-0.4
FNA	Florina	3.53	63	P	Pn	01 08 39.1	+0.4
FNA	Florina	3.53	63	P	Pn	01 08 39.1	+0.4
STON	Ston	3.64	5	*e*Pn	Pn	01 08 37.9	-2.2
STON				Sn	Sn	01 09 19.0	-4.6
STON	Ston	3.64	5	*e*Pn	Pn	01 08 37.8	-2.3
STON				Sn	Sn	01 09 19.0	-4.6
KZN	Kozani	3.66	72	P	Pn	01 08 41.5	+1.2
KZN	Kozani	3.66	72	P	Pn	01 08 41.5	+1.2
THL	Klokotos Trika	3.72	84	P	Pn	01 08 42.0	+0.8
THL				S	Sn	01 09 28.5	+2.8
THL	Klokotos Trika	3.72	84	P	Pn	01 08 42.0	+0.8
THL				S	Sn	01 09 28.5	+2.8
KRUS	Krusevo	3.73	54	*e*Pn	Pn	01 08 40.7	-0.7
EFP	Efpalio	3.74	101	P	Pn	01 08 40.6	-0.9
EFP	Efpalio	3.74	101	P	Pn	01 08 40.6	-0.9
BCI	Bajram Curri	3.79	34	*i* PN	Pn	01 08 41.9	-0.3
BCI				*i* SN	Sn	01 09 25.2	-2.1
BCI	Bajram Curri	3.79	34	*i* Pn	Pn	01 08 41.9	-0.2
BCI				*i* Sn	Sn	01 09 25.2	-2.1
LAKA	Lakka	3.85	104	P	Pn	01 08 42.8	-0.2
LAKA				S	Sn	01 09 29.8	+1.0
LAKA	Lakka	3.85	104	P	Pn	01 08 42.8	-0.2
LAKA				S	Sn	01 09 29.8	+1.0
TRIZ	Trizonia	3.88	102	P	Pn	01 08 44.0	+0.5
TRIZ	Trizonia	3.88	102	P	Pn	01 08 44.0	+0.5
AGG	Agios Georgios	3.97	92	P	Pn	01 08 45.1	+0.4
AGG				S	Sn	01 09 34.2	+2.3
AGG	Agios Georgios	3.97	92	P	Pn	01 08 45.1	+0.4
AGG				S	Sn	01 09 34.2	+2.3
GUR	Goura	4.21	107	P	Pn	01 08 47.6	-0.4
GUR	Goura	4.21	107	P	Pn	01 08 47.6	-0.4
DSF	Desfina	4.22	100	P	Pn	01 08 49.0	+0.9
DSF	Desfina	4.22	100	P	Pn	01 08 49.0	+0.9
LKR	Lokris	4.54	96	P	Pn	01 08 52.1	-0.4
LKR	Lokris	4.54	96	P	Pn	01 08 52.1	-0.4
PLG	Polygyros	4.92	75	P	Pn	01 08 57.4	-0.3
PLG	Polygyros	4.92	75	P	Pn	01 08 57.4	-0.3
BARS	Barje	4.97	43	*e*Pn	Pn	01 09 01.3	+2.9
AOS	Alonnisos	5.17	89	P	Pn	01 09 00.5	-0.6
AOS	Alonnisos	5.17	89	P	Pn	01 09 00.5	-0.6
DIVS	Divibare	5.27	22	*e*Pn	Pn	01 09 01.8	-0.7
NVLJ	Novalja	5.59	342	*e*Pn	Pn	01 09 05.9	-1.0
NVLJ				Sn	Sn	01 10 06.6	-5.2
NVLJ	Novalja	5.59	342	*e*Pn	Pn	01 09 05.9	-1.0
OBKA	Obir	7.52	346	⇑*i*Pn	Pn	01 09 32.9	-0.5
OBKA				⇑*i*Sn	Sn	01 10 53.3	-5.9
OBKA	Obir	7.52	346	Pn	Pn	01 09 32.9	-0.4

IDC ***12*** *01:23:58.7±1.2,32°.50N×130°.85E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.5/26, mbtmp3.5/6, ML4.2/1, Error ellipse: s-maj=40.9km s-min=22.6km az=64.0*
NIED ***12*** *01:24:00,32°.90N×131°.40E, h92km, Mw3.7 Best double couple: M0=4.06000×10^14 NP1:φ=27.00000°, δ=58.00000°, λ=64.00000°. NP2:φ=249.00000°, δ=40.00000°, λ=125.00000°.*
ISCJB ***12*** *01:24:08.4±0.5,32°.89N±0°.07×131°.47E±0°.08, h108km±4km, mb3.5/6, Error ellipse: s-maj=14.4km s-min=7.4km az=142.6*
NEIC ***12*** *01:24:09.4±0.7,32°.73N×131°.31E, h100km, mb3.8/1, Error ellipse: s-maj=15.9km s-min=14.6km az=220.0*
JMA ***12*** *01:24:10.3±0.1,32°.90N×131°.44E, h96km±1km, M3.5*
JMA Felt I J1.

ISC 12 01:24:09.6±0.5,32°.90N±0°.07×131°.43E±0°.07, h101km±4km, n15, σ0=92/21, mb3.5/6, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKIT	Kitakata	0.28	177	P	Pn	01 24 24.4	+0.2
JKIT				S	Sn	01 24 34.7	-0.4
JUS	Usuki	0.31	58	P	Pn	01 24 24.6	+0.3
JUS				S	Sn	01 24 35.2	-0.2
JIU2	Izumi 2	0.63	236	P	Pn	01 24 26.9	+0.4
JIU2				S	Sn	01 24 39.1	0.0
JTZ	Takazaki	1.04	196	P	Pn	01 24 30.9	+0.4
JTZ				S	Sn	01 24 46.6	+0.4
UWA2	Uwa jima 2	1.05	72	P	Pn	01 24 30.1	-0.5
UWA2				S	Sn	01 24 45.7	-0.7
KSRS	Korea Array	5.38	329	Pn	Pn	01 25 25.4	-2.0
	0.6nm,0.3s,baz=147,slow=14,SNR=13						
KSRS				Lg		01 27 05.0	
	0.2nm,0.3s,baz=148,slow=30,SNR=3.1						
MAT	Matsushiro	6.66	55	P	Pn	01 25 46.2	+1.5
MAT				S	Sn	01 26 58.3	-0.7
MJAR	Matsushiro Arr	6.66	55	Pn	Pn	01 25 47.2	+2.5
	3.6nm,0.3s,baz=241,slow=15,SNR=6.0						
MJAR	Matsushiro Arr	6.66	55	Pn	Pn	01 25 47.2	+2.5
SONM	Songino Array	24.07	316	P	P	01 29 16.1	+0.8
	0.8nm,0.7s,mb3.2,baz=127,slow=8.1,SNR=5.5						
MKAR	Makanchi Array	39.56	305	P	P	01 31 31.1	+0.5
	0.2nm,0.6s,mb3.1,baz=104,slow=11,SNR=2.6						
MKAR				PcP	PcP	01 33 35.9	0.0
	0.2nm,0.5s,baz=83,slow=4.5,SNR=3.5						
BVAR	Borovoye Array	47.40	314	P	P	01 32 33.2	-0.2
	0.4nm,0.4s,mb3.5,baz=101,slow=7.5,SNR=3.7						
KKAR	Karatay Array	48.12	301	*e*P	P	01 32 39.3	+0.2
	1.1nm,0.7s,mb3.8						
WRA	Warrumanga Arr	52.62	177	P	P	01 33 11.1	-2.1
	0.2nm,0.6s,mb3.4,baz=354,slow=8.1,SNR=4.1						
ASAR	Alice Springs	56.30	177	P	P	01 33 39.5	-0.2
	0.5nm,0.6s,mb3.8,baz=356,slow=6.3,SNR=6.8						

IDC 12 01:07:49.0±2.1,2°.06N×127°.75E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/19, mbtmp3.5/4, Error ellipse: s-maj=107.4km s-min=26.0km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.14	186	P	P	01 12 25.5	+0.6
	0.9nm,0.8s,baz=0.0,slow=8.1,SNR=3.1						
WRA	Warramunga Arr	22.80	164	P	P	01 12 53.8	+0.3
	1.4nm,0.4s,baz=343,slow=11,SNR=12						
ASAR	Alice Springs	26.27	167	P	P	01 13 25.5	-0.6
	0.4nm,0.6s,baz=347,slow=6.7,SNR=5.4						
MKAR	Makanchi Array	59.50	325	P	P	01 17 54.2	+0.3
	0.2nm,0.5s,baz=124,slow=8.0,SNR=4.0						

PGC 12 01:10:07.2±7.1,47°.45N×128°.87W, h10km, ML3.0/22, Mw3.6, 17D, 288km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZB	Mount Ozzard	2.71	55	⇓Pn	Pn	01 10 48.5	-2.4
BPBC	Brooks Peninsu	2.80	15	⇓Pn	Pn	01 10 49.8	-2.3
GDR	Gold River	2.99	38	⇓Pn	Pn	01 10 53.3	-1.4
WOSB	Woss	3.11	28	⇑Pn	Pn	01 10 55.2	-1.1
MAYB	Maynard	3.16	20	⇑Pn	Pn	01 10 55.5	-1.5
PFB	Port Renfrew	3.18	68	⇑Pn	Pn	01 10 55.6	-1.6
PFB				⇓Sn	Sn	01 11 31.8	-3.3
MGB	Mount Grey	3.19	59	⇓Pn	Pn	01 10 55.9	-1.6
HOLB	Holberg	3.23	8	⇓Pn	Pn	01 10 55.5	-2.3
ALB	Alberni	3.25	54	⇑Pn	Pn	01 10 56.1	-2.1
YOUB	Youbou, Lake C	3.41	63	⇓Pn	Pn	01 10 59.1	-1.2
CBB	Campbell River	3.47	41	⇓Pn	Pn	01 11 00.3	-1.0
CBB				⇑Sn	Sn	01 11 38.7	-3.6
NCRB	Newcastle Ridg	3.49	31	⇓Pn	Pn	01 11 00.8	-0.7
LZB	Mount Lazard	3.58	69	⇓Pn	Pn	01 11 01.5	-1.2
TXB	Texada	3.70	51	⇓Pn	Pn	01 11 03.7	-0.7
NLLB	Nanaimo Lost L	3.71	60	⇑Pn	Pn	01 11 03.1	-1.4
PGC	Sidney	3.83	70	⇓Pn	Pn	01 11 05.1	-1.1
VGZ	Gonzales	3.85	74	⇑Pn	Pn	01 11 04.5	-2.0
GOBB	Galiano Island	3.88	65	⇓Pn	Pn	01 11 06.0	-0.9
SHB	Sechelt	3.95	55	⇓Pn	Pn	01 11 07.6	-0.3
SNB	Saturna Island	4.04	69	⇓Pn	Pn	01 11 08.4	-0.6
SNB				⇑Sn	Sn	01 11 54.6	-1.7
BIB	Bowen Island	4.19	60	⇑Pn	Pn	01 11 10.6	-0.5
WPB	Watts Point	4.36	58	⇑Pn	Pn	01 11 13.4	0.0
HNB	Haney	4.57	64	⇑Pn	Pn	01 11 15.7	-0.6
BBB	Bella Bella	4.76	6	⇓Pn	Pn	01 11 18.3	-0.7
BBB				⇓Sn	Sn	01 12 08.1	-6.0

IDC ***12*** *01:30:30.8±0.7,33°.12N×96°.90E, h0km, mb3.8/13, mb1 4.0/16, mb1mx3.9/26, mbtmp3.9/16, ML4.0/3, Error ellipse: s-maj=24.2km s-min=14.4km az=52.0*
NEIC ***12*** *01:30:07.8±0.5,33°.13N×97°.03E, h10km, mb4.0/8, Error ellipse: s-maj=11.6km s-min=8.3km az=65.0*
ISCJB ***12*** *01:30:08.4±1.4,33°.01N±0°.05×96°.84E±0°.05, h29km±12km, mb3.9/18, Error ellipse: s-maj=9.3km s-min=7.0km az=153.8*
BJI ***12*** *01:30:08.6,33°.12N×96°.87E, h11km, mb4.1/1, ML3.7/8, Ms3.7/1, Ms7 3.5/1*

ISC 12 01:30:08.5±1.3,33°.06N±0°.04×96°.97E±0°.05, h15km±9km, n43, σ0=86/43, mb3.9/18, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	6.00	238	*e*Pn	Pn	01 31 40.1	+3.5
	28nm,0.6s						
CD2	Chengdu	6.16	109	Pg	Pb	01 31 55.3	-0.1
CD2				Sg	Sg	01 33 25.3	-0.8
CD2				smax			
	comp=N,60nm,1.7s						
CD2				smax			
	comp=E,40nm,1.3s						
LZH	Lanzhou	6.42	60	*e*Pn	Pn	01 31 47.6	+5.1
GTA	Gaotai	6.74	19	*e*P		01 32 17.6	
GTA				pP		01 32 22.3	
GTA				sP		01 32 25.3	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SHL	Shillong	8.69	212	*e*PKP	Pn	01 32 14.5	+0.9
SHL				*ex*	x	01 33 46.5	
TAPN	Taplejung	9.82	237	*e*P	Pn	01 32 28.8	-0.4
	comp=Z,20nm,0.5s						
ODAN	Odare	10.35	236	*e*P	Pn	01 32 37.3	+0.9
	comp=Z,69nm,0.5s						
GUN	Gumba	10.85	245	*e*P	Pn	01 32 43.1	-0.2
	comp=Z,39nm,0.4s						
KKN	Kakani	11.37	246	*e*P	Pn	01 32 49.9	-0.5
	comp=Z,14nm,0.4s						
PKI	Pulchoki	11.38	244	*e*P	Pn	01 32 50.7	+0.1
	comp=Z,29nm,0.5s						
PKIN	Phulchoki	11.39	244	*e*P	Pn	01 32 50.3	-0.3
	comp=Z,38nm,0.6s						
DMN	Daman	11.60	245	*e*P	Pn	01 32 53.0	-0.4
	comp=Z,19nm,0.6s						
GKN	Gorkha	11.76	248	*e*P	Pn	01 32 55.2	-0.5
	comp=Z,17nm,0.4s						
DANN	Dangsing	12.29	251	*e*P	Pn	01 33 02.2	-0.8
	comp=Z,28nm,0.7s						
KOLN	Koldanda	12.68	249	*e*P	Pn	01 33 07.2	-1.1
	comp=Z,11nm,0.5s						
CMAR	Chiang Mai Arr	14.65	173	Pn	Pn	01 33 36.4	+1.2
	comp=Z,0.6nm,0.3s,baz=347,slow=12,SNR=10						
SONM	Songino Array	16.39	23	Pn	Pn	01 33 58.6	+0.8
	comp=Z,0.2nm,0.3s,baz=212,slow=13,SNR=8.8						
MK31	Makanchi Array	17.70	325	*e*P	Pn	01 34 14.7	+0.4
MKAR	Makanchi Array	17.70	325	P	Pn	01 34 14.3	0.0
	comp=Z,0.3nm,0.3s,baz=136,slow=14,SNR=18						
AAK	Ala-Archa	20.10	305	P	P	01 34 42.1	+0.6
	comp=Z,0.5nm,0.3s,baz=144,slow=8.7,SNR=3.2						
AML	Almayashu	20.49	303	*e*P	P	01 34 47.4	+1.6
	comp=Z,1.3nm,0.6s						
EKS2	Erkin-Say	20.61	304	*e*P	P	01 34 48.0	+1.0
	comp=Z,1.8nm,0.6s						
KURK	Kurchatov	22.20	328	*e*P	P	01 35 04.8	+0.7
	comp=Z,7.8nm,1.0s,mb4.1						
ZALV	Zalesovo Beam	22.60	341	P	P	01 35 08.9	+0.7
	comp=Z,1.4nm,0.7s,mb3.5,baz=140,slow=12,SNR=6.2						
KKAR	Karatay Array	23.03	303	*e*P	P	01 35 13.6	+0.8
	comp=Z,3.3nm,0.9s,mb3.8						
KBL	Kabul	23.23	281	*e*P	P	01 35 15.2	+0.1
	comp=Z,7.1nm,0.9s,mb4.1						
KSRS	Korea Array	25.59	71	P	P	01 35 37.2	+0.2
	comp=Z,1.9nm,0.8s,mb3.7,baz=264,slow=9.5,SNR=6.8						
KSRS	Korea Array	25.59	71	P	P	01 35 37.2	+0.2
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
BVAR	Borovoye Array	27.58	324	P	P	01 35 54.8	0.0
	comp=Z,0.2nm,0.4s,mb3.1,baz=90,slow=1.4,SNR=2.2						
ABKAR	Akbulak array	31.84	312	*e*P	P	01 36 31.9	-0.7
	comp=Z,0.9nm,0.8s,mb3.6						
BRTR	Keskin Array B	50.48	297	P	P	01 39 04.6	-1.1
	comp=Z,0.7nm,0.9s,mb3.7,baz=94,slow=7.1,SNR=5.5						
FINES	FINESS Array B	52.53	325	P	P	01 39 18.8	-2.0
	comp=Z,2.2nm,0.9s,mb4.1,baz=101,slow=9.9,SNR=3.4						
FINES	FINESS Array B	52.53	325	P	P	01 39 18.8	-2.0
ARCES	ARCESS Array B	52.97	335	P	P	01 39 21.9	-1.9
	comp=Z,1.9nm,0.9s,mb4.0,baz=81,slow=8.5,SNR=5.3						
KWP	Kalwaria Pacla	55.90	311	*e*P	P	01 39 45.1	-0.4
	comp=Z,2.9nm,0.6s,mb4.5						
NOA	NORSAR Array B	59.70	326	P	P	01 40 10.4	-1.5
	comp=Z,1.1nm,0.8s,mb4.0,baz=75,slow=7.8,SNR=5.1						
WRA	Warramunga Arr	63.66	140	P	P	01 40 39.6	+0.5
	comp=Z,1.6nm,0.8s,mb4.1,baz=333,slow=7.4,SNR=13						
KMBO	Kilima Mbogo	65.62	251	P	P	01 40 52.5	+0.3
	comp=Z,0.6nm,0.5s,mb3.9,baz=180,slow=20,SNR=5.0						
ASAR	Alice Springs	66.50	143	P	P	01 40 58.1	+0.6
	comp=Z,0.9nm,0.6s,mb4.0,baz=328,slow=6.5,SNR=12						
BPAW	Bear Paw Mtn.	69.55	26	*e*P	P	01 41 17.0	+0.8
	comp=Z,2.0nm,0.8s,mb4.1						
ILAR	Eielson Array	70.61	24	P	P	01 41 21.9	-0.9
	comp=Z,0.9nm,0.8s,mb3.7,baz=282,slow=6.0,SNR=10						
STKA	Stephens Creek	77.11	142	P	P	01 42 01.3	+0.1
	comp=Z,1.6nm,0.6s,mb4.1,baz=270,slow=7.1,SNR=3.8						
STKA	Stephens Creek	77.11	142	P	P	01 42 01.3	+0.1

IDC ***12*** *01:30:54.2±0.9,46°.72N×155°.53E, h0km, mb3.8/9, mb1 4.0/11, mb1mx3.8/25, mbtmp3.8/11, ML3.3/2, Error ellipse: s-maj=25.4km s-min=19.5km az=114.0*
ISCJB ***12*** *01:30:57.5±0.7,46°.75N±0°.08×155°.3E±0°.1, h33km, mb3.8/10, Error ellipse: s-maj=14.9km s-min=6.7km az=41.0*
NEIC ***12*** *01:30:59.4±0.7,46°.79N×155°.49E, h35km, Error ellipse: s-maj=19.6km s-min=12.0km az=124.0*
MOS ***12*** *01:31:00.6±1.9,46°.88N×155°.16E, h68km, mb4.0/8, Error ellipse: s-maj=18.4km s-min=12.4km az=63.0*

ISC 12 01:30:59.7±0.7,46°.69N±0°.08×155°.3E±0°.1, h35km, n30, σ0=94/33, mb3.8/10, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	5.39	257	*e*PN	Pn	01 32 18.1	+0.5
KUR				*e*S	Sn	01 33 16.8	-1.6
KUR				pmax	pmax		
	comp=N,40nm,0.5s						
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax			
	comp=N,80nm,0.5s						
KUR				smax			
	comp=E,50nm,0.5s						
PETK	Petropavlovsk-	6.61	13	Pn	Pn	01 32 30.2	-4.1
	comp=E,1.5nm,0.3s,baz=192,slow=12,SNR=9.9						
PETK				Sn	Sn	01 33 49.1	+0.8
	comp=E,0.6nm,0.3s,baz=171,slow=26,SNR=2.9						
PETK	Petropavlovsk-	6.61	13	PN	Pn	01 32 30.2	-4.1
PETK						01 33 49.1	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax			
	comp=N,1.0nm,0.3s						
ASAJ	Asahikawa	9.31	259	Pn	Pn	01 33 12.2	+0.9
	comp=N,0.2nm,0.3s,baz=240,slow=24,SNR=4.6						
ASAJ	Asahikawa	9.31	259	PN	Pn	01 33 12.3	+1.0
ERM	Erimo	9.88	246	*i* PN	Pn	01 33 18.5	-0.6
ERM				pmax	pmax		
	comp=Z,15nm,0.9s						
MAJO	Matsushiro	16.29	238	*e*Pn	Pn	01 34 46.4	+0.7
MAJO	Matsushiro	16.29	238	*e*P	Pn	01 34 46.4	+0.7
BILL	Bilibino	22.14	11	⇓*e*P	P	01 35 48.5	-3.4
BILL				*e*S	S	01 39 46.3	-7.3
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s						
ILAR	Eielson Array	35.66	38	P	P	01 37 52.2	-1.7
	comp=Z,0.3nm,0.5s,mb3.5,baz=255,slow=7.8,SNR=6.2						
ILAR	Eielson Array	35.66	38	P	P	01 37 52.3	-1.6
ZALV	Zalesovo Beam	43.88	306	P	P	01 39 01.4	-0.9
	comp=Z,0.6nm,0.5s,mb3.6,baz=46,slow=8.3,SNR=3.1						
ZALV	Zalesovo Beam	43.88	306	P	P	01 39 01.4	-0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
MK31	Makanchi Array	48.31	298	*e*P	P	01 39 37.8	+0.4
MK31	Makanchi Array	48.31	298	*e*P	P	01 39 37.8	+0.5
MKAR	Makanchi Array	48.31	298	P	P	01 39 37.9	+0.6
	comp=Z,0.2nm,0.5s,mb3.4,baz=65,slow=10,SNR=3.4						
MKAR	Makanchi Array	48.31	298	P	P	01 39 37.9	+0.6
BVAR	Borovoye Array	52.07	310	P	P	01 40 06.1	+0.5
	comp=Z,1.7nm,0.5s,mb4.3,baz=62,slow=8.7,SNR=9.2						
BVAR	Borovoye Array	52.07	310	P	P	01 40 06.1	+0.5
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	64.74	336	P	P	01 41 34.0	+0.2
	comp=Z,1.9nm,0.5s,mb4.4,baz=34,slow=7.4,SNR=16						
FINES	FINESS Array B	64.74	336	P	P	01 41 34.0	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	NORSAR Array B	68.77	342	P	P	01 42 00.6	+1.0
	comp=Z,0.6nm,0.7s,mb3.6,baz=16,slow=6.9,SNR=3.7						
NOA	NORSAR Array B	68.77	342	P	P	01 42 00.6	+1.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	68.97	201	P	P	01 42 01.2	-0

ellipse: s-maj=21.1km s-min=8.3km az=119.7
BJI **12** *02:13:22.3,2′.41N×127°.35E, h98km, mB4.9/18, mb4.8/26*
DJA **12** *02:13:25,3′.21N×127°.49E, h62km, mb4.9/14*
IDC **12** *02:13:25.1±2.5,3′.05N×127°.03E, h58km±21km, mb4.1/16, mb1 4.2/16, mb1mx4.2/20, mbtmp4.1/16, MS3.6/5, Ms1 3.6/5, ms1mx3.1/25, Error ellipse: s-maj=26.4km s-min=9.7km az=76.0*
ISCJB **12** *02:13:26.2±0.8,3′.06N±0′.04×127°.09E±0′.06, h85km±8km, mb4.7/65, Error ellipse: s-maj=10.7km s-min=5.5km az=162.3*
NEIC **12** *02:13:28.2±1.9,3′.07N×127°.09E, h89km±19km, mb4.6/24, Error ellipse: s-maj=11.6km s-min=6.2km az=69.0*
ISC 12 02:13:27.8±0.8,**3′.02N**±0′.04×**127°.08E**±0′.06,**h85**km±7km,
h102km±2.9km:**pP-P,n130,**σ1**9**09/135,**mb4.7**/65,**5C-4D,**
Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.25**	**173**	P	**Pn**	**02 14 01.2**	**-2.0**
MNI	**Manado**	**2.73**	**235**	P	**Pn**	**02 14 15.7**	**+6.0**
LBMI	**Labuha**	**3.66**	**173**	P	**Pn**	**02 14 21.6**	**-0.6**
KMSI	**Cibinong**	**3.94**	**232**	P	**Pn**	**02 14 30.3**	**+4.3**
DAV	**Davao City (W)**	**4.29**	**340**	S	**Sn**	**02 15 19.9**	**+0.2**
	52nm,0.3s,baz=99,slow=14,SNR=4.3						
DAV				LR	LR	02 16 35.3	
	comp=Z,240nm,18.4s,baz=156,slow=45						
MRSI	**Marisa**	**5.72**	**244**	P	**Pn**	**02 14 50.6**	**+0.3**
	2μm185nm,0.6s						
LUWI	**Luwuk**	**5.90**	**227**	P	**Pn**	**02 14 56.7**	**+4.0**
	0.7nm2μm94nm,0.8s						
MYLDM	**Lahad Datu**	**8.82**	**284**	P	**Pn**	**02 15 34.3**	**+1.7**
	30nm,1.4s						
TTSI	**Tana Toraja**	**9.43**	**230**	P	Px	02 15 53.3	
SBUM	**Sibu**	**14.85**	**268**	P	**Pn**	**02 16 57.6**	**+4.1**
	28nm,0.8s						
MTNI	**Mataram**	**15.88**	**223**	P	**Pn**	**02 17 13.8**	**+7.2**
	70nm,0.9s						
KAKA	**Kakadu**	**16.51**	**161**	*e*P	**Pn**	**02 17 11.2**	**-3.1**
	17nm,0.6s						
KAKA	**Kakadu**	**16.51**	**161**	*e*P	**Pn**	**02 17 15.4**	**+1.1**
	49nm,0.6s						
KAKA	**Kakadu**	**16.51**	**161**	P	**Pn**	**02 17 12.7**	**-1.6**
	382nm44nm,0.7s						
NBBI	**Negara**	**16.80**	**228**	P	**Pn**	**02 17 18.0**	**0.0**
	355nm,0.6s						
KSM	**Kuching**	**16.83**	**265**	*e*P	**Pn**	**02 17 19.5**	**+1.2**
	17nm,0.8s						
KSM	**Kuching**	**16.83**	**265**	P	**Pn**	**02 17 19.0**	**+0.7**
	22nm,0.8s						
KNA	**Kununurra**	**18.72**	**175**	P	**Pn**	**02 17 40.5**	**-0.7**
	670nm64nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.03**	**184**	P	**P**	**02 18 04.6**	**-0.3**
	2.7nm,0.4s,mb3.9,baz=14,slow=6.2,SNR=29						
FITZ	**Fitzroy Crossi**	**21.03**	**184**	*e*P	**P**	**02 18 04.5**	**-0.4**
	6.2nm,0.4s,mb4.3						
FITZ	**Fitzroy Crossi**	**21.03**	**184**	*e*P	**P**	**02 18 05.2**	**+0.2**
	3.6nm,0.6s,mb3.9						
KLSI		**23.61**	**251**	P	**P**	**02 18 32.9**	**+1.6**
	50nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**23.91**	**163**	P	**P**	**02 18 33.8**	**-0.1**
	14nm,0.5s,mb4.5,baz=336,slow=11,SNR=102						
WRA				S	**S**	**02 22 49.3**	**+5.1**
	3.6nm,0.8s,baz=340,slow=19,SNR=8.3						
WRA	**Warramunga Arr**	**23.91**	**163**	P	**P**	**02 18 33.8**	**-0.1**
WRA				S	**S**	**02 22 49.4**	**+5.1**
WB2	**Warramunga Arr**	**23.91**	**163**	*e*P	**P**	**02 18 33.4**	**-0.6**
MDSI	**Maura Dua**	**24.07**	**252**	P	**P**	**02 18 38.2**	**+2.7**
	13nm,1.5s,mb4.0						
MBWA	**Marble Bar**	**25.08**	**196**	*e*P	**P**	**02 18 45.8**	**+1.2**
	19nm,1.1s,mb4.4						
ASAR	**Alice Springs**	**27.34**	**166**	P	**P**	**02 19 05.0**	**0.0**
	1.7nm,0.5s,mb3.9,baz=351,slow=7.7,SNR=29						
ASAR				S	**S**	**02 23 39.6**	**+0.9**
	0.4nm,0.6s,baz=344,slow=20,SNR=4.0						
ASAR				ScP	ScP	02 25 59.4	+3.8
	0.7nm,0.9s,baz=349,slow=1.9,SNR=4.2						
ASAR	**Alice Springs**	**27.34**	**166**	P	**P**	**02 19 05.0**	**0.0**
ASAR				S	**S**	**02 23 39.6**	**+0.8**
NJ2	**Nanjing**	**29.90**	**346**	*e*P	**P**	**02 19 29.4**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
WHN	**Wuhan**	**29.91**	**338**	P	**P**	**02 19 27.4**	**-0.3**
JNU	**Nakatsue**	**30.16**	**6**	*e*P	**P**	**02 19 29.1**	**-0.7**
	comp=Z,6.8nm,0.9s,mb4.3						
GYA	**Guiyang**	**30.44**	**322**	P	**P**	**02 19 34.8**	**+2.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
CMAR	**Chiang Mai Arr**	**31.53**	**301**	P	**P**	**02 19 41.1**	**-1.1**
	comp=Z,2.5nm,0.6s,mb4.1,baz=123,slow=7.5,SNR=12						
CMAR				LR	LR	02 33 21.3	
	comp=Z,58nm,18.4s,baz=235,slow=38						
CMAR	**Chiang Mai Arr**	**31.53**	**301**	P	**P**	**02 19 41.1**	**-1.1**
CHTO	**Chiang Mai**	**31.69**	**302**	*e*P	**P**	**02 19 41.9**	**-1.7**
	comp=Z,3.5nm,0.7s,mb4.2						
CHTO	**Chiang Mai**	**31.69**	**302**	*e*P	**P**	**02 19 41.9**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
ENH	**Enshi**	**31.81**	**330**	*e*P	**P**	**02 19 43.3**	**-1.2**
	comp=Z,7.3nm,0.6s,mb4.6						
KMI	**Kunming**	**32.13**	**315**	P	**P**	**02 19 46.7**	**-0.6**
KMI				pP	pP	02 20 10.9	+3.9
KMI				sP	sP	02 20 23.3	+6.4
KMI				PP	PP	02 21 00.8	-0.7
KMI				S	**S**	**02 24 51.8**	**-2.0**
KMI				sS	sS	02 25 33.6	+5.9
KMI				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.9						
KMI				pmax	pmax		
	comp=Z,75nm,5.3s						
KMI				LR	LR		
	comp=N,200nm,14.8s						
KMI				LR	LR		
	comp=E,120nm,18.8s						
KMI				LR	LR		
	comp=Z,160nm,12.7s						
FORT	**Forrest**	**33.62**	**178**	*e*P	**P**	**02 19 59.7**	**-0.6**
	comp=Z,16nm,0.7s,mb5.0						
FORT	**Forrest**	**33.62**	**178**	*e*P	**P**	**02 20 00.3**	**+0.1**
	comp=Z,26nm,0.9s,mb5.1						
KSRS	**Korea Array**	**34.28**	**1**	P	**P**	**02 20 05.7**	**-0.2**
	comp=Z,5.8nm,0.9s,mb4.4,baz=179,slow=10,SNR=22						
MJAR	**Matsushiro Arr**	**34.90**	**16**	P	**P**	**02 20 09.9**	**-1.4**
	comp=Z,1.8nm,0.3s,mb4.3,baz=188,slow=5.7,SNR=2.4						
MJAR	**Matsushiro Arr**	**34.90**	**16**	P	**P**	**02 20 09.9**	**-1.4**
XAN	**Xi'an**	**35.20**	**333**	P	**P**	**02 20 11.9**	**-2.0**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
XAN				pmax	pmax		
	comp=Z,30nm,5.9s						
CD2	**Chengdu**	**35.42**	**324**	*e*P	**P**	**02 20 17.9**	**+2.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
STKA	**Stephens Creek**	**37.34**	**159**	P	**P**	**02 20 32.8**	**+0.6**
	comp=Z,12nm,0.6s,mb5.1,baz=333,slow=9.0,SNR=31						
STKA	**Stephens Creek**	**37.34**	**159**	*e*P	**P**	**02 20 32.7**	**+0.5**
	comp=Z,10nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**37.34**	**159**	*e*P	**P**	**02 20 32.7**	**+0.5**
	comp=Z,2.6nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**37.34**	**159**	*e*P	**P**	**02 20 32.7**	**+0.5**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BJT	**Baijiatuau**	**38.13**	**346**	*e*P	**P**	**02 20 39.0**	**+0.2**
	comp=Z,57nm,1.1s,mb5.3						
BJT	**Baijiatuau**	**38.13**	**346**	*e*P	**P**	**02 20 39.0**	**+0.3**
BJT				pmax	pmax		
	comp=Z,57nm,1.1s						
BJI	**Beijing**	**38.16**	**346**	P	**P**	**02 20 38.7**	**-0.2**
BJI				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.2						
BJI				pmax	pmax		
	comp=Z,150nm,3.9s						
LZH	**Lanzhou**	**39.29**	**330**	*e*P	**P**	**02 20 50.0**	**+1.5**
LZH				pP	pP	02 21 13.0	+4.4
LZH				sP	sP	02 21 27.5	+9.2
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
HHC	**Hu-ho-hao-te**	**40.18**	**342**	*e*P	**P**	**02 20 58.0**	**+2.2**
HHC				sP	sP	02 21 32.3	+6.6
HHC				PP	PP	02 22 36.2	+6.4
HHC				PcP	PcP	02 23 00.1	+1.6
HHC				ScP	ScP	02 26 39.6	-0.6
HHC				S	**S**	**02 26 58.6**	**+2.3**
HHC				sS	sS	02 27 38.0	+7.1
HHC				SS	SS	02 29 56.9	-0.6
HHC				ScS	ScS	02 30 51.4	-2.5
HHC				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,110nm,7.3s						
HHC				LR	LR		
	comp=N,230nm,17.3s						
HHC				LR	LR		
	comp=E,210nm,15.1s						
HHC				LR	LR		
	comp=Z,130nm,15.1s						
CN2	**Changchun**	**40.64**	**358**	*e*P	**P**	**02 21 02.3**	**+2.8**
CN2				*e*pP	pP	02 21 25.0	+5.3
CN2				*e*S	**S**	**02 27 05.7**	**+2.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
ARMA	**Armidale**	**40.68**	**147**	*e*P	**P**	**02 21 01.1**	**+1.0**
MDJ	**Mudanjiang**	**41.48**	**3**	P	**P**	**02 21 06.9**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,61nm,4.6s						
MDJ	**Mudanjiang**	**41.48**	**3**	*e*P	**P**	**02 21 06.0**	**-0.4**
	comp=Z,14nm,1.1s,mb4.7						
LSA	**Lhasa**	**43.17**	**312**	*e*P	**P**	**02 21 20.8**	**+0.4**
	comp=Z,5.9nm,0.6s,mb4.5						
LSA	**Lhasa**	**43.17**	**312**	*e*P	**P**	**02 21 20.8**	**+0.4**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
TAPN	**Taplejung**	**44.72**	**307**	*e*P	**P**	**02 21 32.2**	**-0.6**
	comp=Z,28nm,0.8s,mb5.1						
ODAN	**Odare**	**44.77**	**306**	*e*P	**P**	**02 21 32.5**	**-0.7**
	comp=Z,24nm,0.7s,mb5.1						
GUN	**Gumba**	**46.42**	**306**	*e*P	**P**	**02 21 45.6**	**-0.7**
	comp=Z,56nm,0.7s,mb5.4						
PKI	**Pulchoki**	**46.66**	**306**	*e*P	**P**	**02 21 47.0**	**-1.2**
	comp=Z,14nm,0.7s,mb4.8						
PKIN	**Phulchoki**	**46.68**	**306**	*e*P	**P**	**02 21 46.9**	**-1.4**
	comp=Z,8.6nm,0.6s,mb4.6						
KKN	**Kakani**	**46.86**	**306**	*e*P	**P**	**02 21 48.6**	**-1.1**
	comp=Z,28nm,0.8s,mb5.0						
DMN	**Daman**	**46.92**	**306**	*e*P	**P**	**02 21 49.1**	**-1.1**
	comp=Z,32nm,0.9s,mb5.0						
GKN	**Gorkha**	**47.46**	**306**	*e*P	**P**	**02 21 53.1**	**-1.3**
	comp=Z,25nm,0.7s,mb5.1						
ULN	**Ulaanbaatar**	**47.90**	**342**	*e*P	**P**	**02 21 58.7**	**+1.3**
	comp=Z,7.8nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**47.90**	**342**	*e*P	**P**	**02 21 58.7**	**+1.3**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**47.90**	**342**	P	**P**	**02 21 58.2**	**+0.8**
	comp=Z,8.6nm,1.2s,mb4.5						
SONM	**Songino Array**	**48.08**	**341**	P	**P**	**02 21 59.0**	**+0.3**
	comp=Z,1.8nm,0.6s,mb4.1,baz=152,slow=8.8,SNR=9.4						
SONM				PcP	PcP	02 23 27.1	+1.8
	comp=Z,0.9nm,0.7s,baz=132,slow=2.1,SNR=3.4						
SONM	**Songino Array**	**48.08**	**341**	P	**P**	**02 21 59.0**	**+0.2**
SONM						02 23 27.1	
KOLN	**Koldanda**	**48.21**	**305**	*e*P	**P**	**02 21 59.4**	**-0.8**
	comp=Z,65nm,0.7s,mb5.6						
DANN	**Dangsing**	**48.31**	**306**	*e*P	**P**	**02 22 00.2**	**-0.7**
	comp=Z,87nm,0.6s,mb5.7						
TLY	**Talaya**	**52.31**	**342**	*e*P	**P**	**02 22 31.6**	**+0.9**
	comp=Z,9.9nm,1.1s,mb4.8						
TLY	**Talaya**	**52.31**	**342**	*e*P	**P**	**02 22 30.1**	**-0.6**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
DDI	**Dehra Dun**	**53.66**	**306**	*e*x	**P**	**02 22 40.0**	**-1.1**
PETK	**Petropavlovsk-**	**55.95**	**22**	P	**P**	**02 22 58.4**	**+1.3**
	comp=Z,2.2nm,0.6s,mb4.4,baz=218,slow=11,SNR=3.3						
PETK	**Petropavlovsk-**	**55.95**	**22**	P	**P**	**02 22 58.4**	**+1.3**
MK31	**Makanchi Array**	**58.34**	**325**	*e*P	**P**	**02 23 13.5**	**-0.5**
MK31	**Makanchi Array**	**58.34**	**325**	*e*P	**P**	**02 23 13.5**	**-0.6**
MKAR	**Makanchi Array**	**58.34**	**325**	P	**P**	**02 23 13.5**	**-0.6**
	comp=Z,4.1nm,0.5s,mb4.8,baz=122,slow=8.3,SNR=69						
MKAR				LR	LR	02 48 25.2	
	comp=Z,42nm,19.3s,baz=354,slow=36						
MKAR	**Makanchi Array**	**58.34**	**325**	P	**P**	**02 23 13.5**	**-0.6**
YAK	**Yakutsk**	**58.91**	**1**	*e*P	**P**	**02 23 18.0**	**+0.3**
YAK				pmax	pmax		
	comp=N,14nm,1.4s						
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
KZA	**Kyzart**	**60.37**	**318**	*e*P	**P**	**02 23 28.7**	**+0.5**
	comp=Z,5.9nm,1.1s,mb4.5						
KZA	**Kyzart**	**60.37**	**318**	*e*P	**P**	**02 23 28.7**	**+0.5**
KZA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
TKM2	**Tokmak 2**	**60.51**	**319**	*e*P	**P**	**02 23 28.9**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.5						
TKM2	**Tokmak 2**	**60.51**	**319**	*e*P	**P**	**02 23 28.9**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
ZAA0	**Zalesovo Array**	**61.38**	**333**	*e*P	**P**	**02 23 34.0**	**-0.8**
ZAA0				*e*		02 23 48.7	
ZALV	**Zalesovo Beam**	**61.38**	**333**	P	**P**	**02 23 33.8**	**-0.9**
	comp=Z,2.5nm,0.5s,mb4.5,baz=138,slow=5.7,SNR=9.1						
ZALV				LR	LR	02 53 04.1	
	comp=Z,33nm,19.9s,baz=235,slow=39						
ZALV	**Zalesovo Beam**	**61.38**	**333**	P	**P**	**02 23 33.8**	**-0.9**
AML	**Almayashu**	**61.45**	**317**	*e*P	**P**	**02 23 35.4**	**-0.1**
	comp=Z,6.0nm,0.8s,mb4.7						
AML	**Almayashu**	**61.45**	**317**	*e*P	**P**	**02 23 35.4**	**-0.1**
AML				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
EKS2	**Erkin-Say**	**61.61**	**318**	*e*P	**P**	**02 23 36.8**	**+0.3**
	comp=Z,4.9nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**61.61**	**318**	*e*P	**P**	**02 23 36.8**	**+0.3**
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
KBL	**Kabul**	**62.23**	**308**	*e*P	**P**	**02 23 39.9**	**-1.0**
	comp=Z,6.0nm,0.6s,mb4.8						
KBL	**Kabul**	**62.23**	**308**	*e*P	**P**	**02 23 39.9**	**-1.0**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
KURK	**Kurchatov**	**62.52**	**328**	*e*P	**P**	**02 23 41.8**	**-0.7**
	comp=Z,13nm,0.6s,mb5.0						
KURK	**Kurchatov**	**62.52**	**328**	*c i*P	**P**	**02 23 41.9**	**-0.6**
KURK				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
SEY	**Seymchan**	**62.64**	**13**	⇑*i*P	**P**	**02 23 45.5**	**+2.4**
KKAR	**Karatay Array**	**63.99**	**317**	*e*P	**P**	**02 23 51.6**	**-0.7**
KKAR	**Karatay Array**	**63.99**	**317**	*e*P	**P**	**02 23 51.6**	**-0.7**
BRVK	**Borovoye**	**68.17**	**327**	⇓*i*P	**P**	**02 24 19.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
BILL	**Bilibino**	**70.15**	**15**	⇓*e*P	**P**	**02 24 32.5**	**+1.6**
BILL				*e*		02 27 11.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
ABKAR	**Akbulak array**	**72.92**	**321**	*e*P	**P**	**02 24 47.2**	**-0.7**
	comp=Z,3.5nm,0.7s,mb4.3						
SVE	**Sverdlovsk**	**74.75**	**329**	⇓*e*P	**P**	**02 24 58.7**	**+0.3**
SVE				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.9						
ARU	**Arti**	**75.72**	**328**	*e*P	**P**	**02 25 03.0**	**-1.0**
	comp=Z,12nm,0.7s,mb4.8						
ARU	**Arti**	**75.72**	**328**	*c i*P	**P**	**02 25 03.8**	**-0.2**
ARU				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
ZEI	**Tsey**	**82.95**	**313**	*e*P	**P**	**02 25 44.0**	**+0.3**
ZEI				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.6						
PRGR	**Permogore**	**83.29**	**332**	⇑*i*P	**P**	**02 25 45.6**	**+0.6**
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
PPT	**Papeete**	**84.56**	**108**	LR	LR	03 00 16.3	
	comp=Z,150nm,19.7s,baz=134,slow=33						
VRHR	**Novokhopersk**	**84.81**	**321**	*e*P	**P**	**02 25 52.5**	**-0.4**
VRHR				pmax	pmax		
	comp=N,4.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.7s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
ILAR	**Eielson Array**	**85.59**	**25**	P	**P**	**02 25 56.3**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=255,slow=6.4,SNR=3.6						
ILAR	**Eielson Array**	**85.59**	**25**	P	**P**	**02 25 56.3**	**-0.2**
VORD	**Divnogorie**	**86.28**	**321**	*e*P	**P**	**02 25 59.9**	**-0.3**
VORD				pmax	pmax		
	comp=N,4.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,8.0nm,0.7s						
VORD				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
VSR	**Storozhevoye**	**86.36**	**321**	*e*P	**P**	**02 26 00.6**	**0.0**
VSR				pmax	pmax		
	comp=N,1.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
MALT	**Malatya**	**87.09**	**308**	*e*P	**P**	**02 26 05.3**	**+0.8**
	comp=Z,3.2nm,0.8s,mb4.3						
MALT	**Malatya**	**87.09**	**308**	*e*P	**P**	**02 26 05.3**	**+0.8**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
OBN	**Obninsk**	**87.84**	**325**	⇓*e*P	**P**	**02 26 07.2**	**-0.5**
OBN				*e*		02 29 28.4	
OBN				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.8						
KMBO	**Kilima Mbogo**	**89.89**	**269**	P	**P**	**02 26 20.2**	**+2.0**
	comp=Z,0.5nm,0.4s,mb4.0,baz=0.0,slow=20,SNR=2.4						
KMBO	**Kilima Mbogo**	**89.89**	**269**	P	**P**	**02 26 20.3**	**+2.1**
BR131	**Keskin Array S**	**90.74**	**310**	*e*P	**P**	**02 26 23.0**	**+1.4**
	comp=Z,1.5nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**90.74**	**310**	P	**P**	**02 26 22.1**	**+0.5**
	comp=Z,1.8nm,0.9s,mb4.2,baz=112,slow=6.1,SNR=9.2						
BRTR	**Keskin Array B**	**90.74**	**310**	*c e*P	**P**	**02 26 23.2**	**+1.6**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**91.23**	**340**	P	**P**	**02 26 22.1**	**-1.1**
	comp=Z,1.1nm,0.6s,mb4.2,baz=70,slow=7.0,SNR=8.6						
ARCES	**ARCESS Array B**	**91.23**	**340**	P	**P**	**02 26 22.1**	**-1.2**
FINES	**FINESS Array B**	**92.62**	**332**	P	**P**	**02 26 29.2**	**-0.6**
	comp=Z,3.4nm,1.1s,mb4.6,baz=57,slow=7.0,SNR=4.5						
FINES	**FINESS Array B**	**92.62**	**332**	P	**P**	**02 26 29.3**	**-0.5**

OMAN **12** *02:20:25.1±0.2,27°.51N×56°.34E, h10km, Error ellipse: s-maj=24.4km s-min=5.0km az=292.0*
SGS **12** *02:20:30.9,26°.96N×56°.07E, h12km*
ISCJB **12** *02:20:33.6±0.8,26°.84N±0′.03×55°.64E±0′.07, h10km±9km, Error ellipse: s-maj=9.9km s-min=3.9km az=9.9*
CSEM **12** *02:20:34.3±0.2,26°.80N×55°.71E, h2km, ML2.9, Error ellipse: s-maj=8.5km s-min=5.9km az=109.0*
KISR **12** *02:20:34.8±0.3,26°.94N×55°.19E, h34km, ML3.3*
TEH **12** *02:20:36.5,26°.92N×55°.76E, h11km*
ISC 12 02:20:35.4±0.9,**26°.84N**±0′.03×**55°.69E**±0′.06,**h11**km±9km,
n32,σ1**9**11/43,**1C-3D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.70**	**38**	*e*Pg	**Pg**	**02 20 47.4**	**-1.5**
BNDS				*e*Sg	**Sg**	**02 20 57.8**	**-0.3**
IBND	**Bandar-abas**	**0.97**	**51**	*e*Pg	**Pg**	**02 20 52.4**	**-1.6**
IBND				*e*		02 21 22.0	
	comp=Z,14μm,0.2s						
NAZ	**Nazwa, Dubai**	**1.85**	**181**	P	**Pn**	**02 21 07.1**	**+0.2**
NAZ				S	**Sg**	**02 21 35.8**	**+1.0**
NAZ	**Nazwa, Dubai**	**1.85**	**181**	⇓P	**Pn**	**02 21 07.1**	**+0.2**
NAZ				⇓S	**Sg**	**02 21 35.8**	**+0.9**
ASHO	**Ashiyiah**	**2.18**	**171**	P	**Pn**	**02 21 10.9**	**-0.6**
	SNR=32						
ASHO				S	**Sg**	**02 21 45.1**	**-0.2**
ASHO	**Ashiyiah**	**2.18**	**171**	P	**Pn**	**02 21 10.9**	**-0.6**
	SNR=32						
ASHO				⇑S	**Sg**	**02 21 45.1**	**-0.2**
ASUD	**Al Ashush, Dub**	**2.23**	**189**	P	**Pn**	**02 21 12.9**	**+0.7**
	SNR=11						
ASUD				S	**Sg**	**02 21 50.2**	**+3.0**
ASUD	**Al Ashush, Dub**	**2.23**	**189**	P	**Pn**	**02 21 12.9**	**+0.7**
	SNR=11						
ASUD				⇓S	**Sg**	**02 21 50.2**	**+3.1**
KRBR	**Kerman**	**3.27**	**16**	*e*Pn	**Pn**	**02 21 28.1**	**+1.7**
ISRV	**Sarvestan**	**3.40**	**319**	*e*Pn	**Pn**	**02 21 29.6**	**+1.3**
ISRV				*e*		02 22 42.4	
	comp=Z,340nm,0.3s						
ARQ	**Araqi**	**3.57**	**168**	P	**Pn**	**02 21 29.1**	**-1.6**
	SNR=10						
ARQ	**Araqi**	**3.57**	**168**	P	**Pn**	**02 21 29.1**	**-1.5**
	SNR=10						
IPAR	**Pars**	**3.79**	**323**	*e*Pn	**Pn**	**02 21 34.1**	**+0.5**
IPAR				*e*Sn	**Sn**	**02 22 17.4**	**-0.8**
IPAR				*e*		02 22 23.6	
	comp=Z,449nm,0.5s						
IMEH	**Mehriz**	**4.63**	**348**	*e*Pn	**Pn**	**02 21 46.8**	**+1.6**
IMEH				*e*		02 21 49.5	
	comp=Z,113nm,0.1s						
IBAF	**Bafgh**	**4.73**	**359**	*e*Pn	**Pn**	**02 21 46.4**	**-0.2**
IBAF				*e*		02 21 50.0	
	comp=Z,107nm,0.1s						
BTHS		**5.19**	**239**	P	**Pn**	**02 21 52.2**	**-0.7**
BTHS		**5.19**	**239**	P	**Pn**	**02 21 52.2**	**-0.7**
BTHS				S	**Sn**	**02 22 52.2**	**-0.6**
ZHSF	**Zahedan**	**5.26**	**57**	*e*Pn	**Pn**	**02 21 54.1**	**+0.2**
ISAD	**Sadrabad**	**5.35**	**341**	*e*Pn	**Pn**	**02 21 58.2**	**+3.2**
ISAD				*e*		02 23 02.9	
	comp=Z,123nm,0.3s						
ICHK	**Chekchek**	**5.50**	**349**	*e*

31nm,0.6s,mb4.8
FITZ Fitzroy Crossi 25.78 184 P **P 02 53 41.2 +0.5**
3.5nm,0.7s,mb4.0,baz=353,slow=9.0,SNR=12
WRA Warramunga Arr 28.43 166 P **P 02 54 04.7 +0.2**
0.6nm,0.6s,mb3.4,baz=345,slow=9.6,SNR=4.7
CMAR Chiang Mai Arr 29.49 294 P **P 02 54 13.1 -0.9**
0.7nm,0.4s,mb3.8,baz=97,slow=7.4,SNR=4.0
CMAR LR LR 03 05 28.4
comp=Z,29nm,19.4s,MS2.9,baz=105,slow=35
CMAR Chiang Mai Arr 29.49 294 P **P 02 54 13.1 -0.9**
CMAR LR LR 03 05 28.4
KSRS Korea Array 29.53 1 P **P 02 54 13.2 -0.9**
1.1nm,0.8s,mb3.6,baz=172,slow=9.9,SNR=5.7
ASAR Alice Springs 31.94 168 P **P 02 54 35.6 +0.2**
0.4nm,0.5s,mb3.5,baz=359,slow=8.7,SNR=6.5
ASAR PcP PcP 02 57 26.9 +1.8
0.4nm,0.7s,baz=350,slow=2.8,SNR=3.6
STKA Stephens Creek 41.76 162 LR LR 03 12 41.7
comp=Z,82nm,18.8s,MS3.6,baz=206,slow=35
PETK Petropavlovsk- 51.50 23 P **P 02 57 14.7 -0.1**
2.1nm,0.8s,mb4.1,baz=214,slow=7.0,SNR=2.4
MK31 Makanchi Array 54.58 323 *eP* **P 02 57 37.5 -0.1**
MKAR Makanchi Array 54.58 323 P **P 02 57 37.4 -0.2**
2.7nm,0.7s,mb4.4,baz=121,slow=8.2,SNR=22
MKAR PcP PcP 02 58 41.1 +0.8
0.9nm,0.6s,baz=103,slow=5.4,SNR=3.8
ZALV Zalesovo Beam 57.25 332 P **P 02 57 56.1 -0.5**
0.8nm,0.4s,mb4.1,baz=112,slow=6.6,SNR=5.6
EKS2 Erkin-Say 58.27 316 *eP* **P 02 58 03.7 -0.3**
1.8nm,0.9s,mb4.1
KURK Kurchatov 58.65 326 *eP* **P 02 58 06.1 -0.4**
3.9nm,0.9s,mb4.4
KURK *e*pP pP 02 58 19.1 -1.0
BRVK Borovoye 64.32 326 *eP* **P 02 58 44.5 -0.2**
3.2nm,0.7s,mb4.5
ABKAR Akbulak array 69.38 320 *eP* **P 02 59 16.0 -0.9**
0.8nm,0.8s,mb3.7
AKTK Aktyubinsk 70.84 321 P **P 02 59 25.2 -0.7**
AKTO Aktyubinsk 70.84 321 P **P 02 59 25.2 -0.7**
0.8nm,0.7s,mb3.7,baz=98,slow=13,SNR=4.1
CASY Casey 74.89 187 *eP* **P 02 59 49.5 +0.1**
2.8nm,0.9s,mb4.2
KDAK Kodiak Island 78.20 33 P **P 03 00 10.6 +2.1**
4.7nm,0.7s,mb4.5,baz=225,slow=10.0,SNR=3.2
ILAR Eielson Array 81.23 26 P **P 03 00 27.2 +2.5**
0.4nm,0.6s,mb3.5,baz=235,slow=5.0,SNR=9.0
ARCES ARCESS Array B 86.84 340 P **P 03 00 54.2 +1.0**
1.2nm,0.7s,mb4.2,baz=52,slow=7.9,SNR=4.1
BRTR Keskin Array B 87.85 310 P **P 03 00 58.0 -0.7**
0.5nm,0.9s,mb3.8,baz=86,slow=7.4,SNR=2.8

DJA 12 02:51:13, 0.29N×126.66E, h30km, MLv4.5/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.85**	**56**	P	Pn	02 51 24.0	-5.0
TNTI				E	Sb	02 51 41.5	+1.1
LBMI	**Labuha**	**1.25**	**138**	P	Pn	02 51 35.2	+0.8
LBMI				S	Sn	02 51 59.4	+9.2
MNI	**Manado**	**2.15**	**302**	P	Pn	02 51 44.4	-2.4
MNI				S	Sn	02 52 16.5	+4.0
KMSI	**Cibinong**	**2.69**	**276**	P	Pn	02 51 55.1	+0.8
KMSI				S	Sn	02 52 36.3	+10
NLAI	**Namlea**	**3.53**	**173**	P	Pn	02 52 06.1	+0.2
SGSI	**Sangihe**	**3.56**	**341**	P	Pn	02 52 06.0	-0.2
LUWI	**Luwuk**	**4.11**	**251**	P	Pn	02 52 18.4	+4.6

*ISCJB **12** 03:02:15.9±0.4, 38.94N±0.02×26.64E±0.03, h5km±4km, Error ellipse: s-maj=4.6km s-min=3.1km az=150.3*
*ISK **12** 03:02:15.1, 38.92N×26.57E, h6km, MD3.1*
*DDA **12** 03:02:16.0, 38.94N×26.65E, h7km±4km, Md3.1*
*CSEM **12** 03:02:16.1±0.1, 38.94N×26.62E, h5km, MD3.1, Error ellipse: s-maj=3.4km s-min=2.4km az=69.0*
*THE **12** 03:02:16.1, 38.93N×26.63E, h3km±2km, ML2.3/5, Error ellipse: s-maj=2.5km s-min=0.8km az=222.0*

ISC 12 03:02:16.6±0.4, 38.94N±0.02×26.63E±0.03, h9km±3km, n70, σ0°81/97, 3C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.37**	**7**	⇑*iP*	**Pg**	**03 02 23.1**	**-0.7**
AYVA				*i* S	**Sg**	**03 02 28.4**	**-0.2**
AYVA	**Ayvalik**	**0.37**	**7**	*i* P	**Pg**	**03 02 23.1**	**-0.7**
AYVA				*i* S	**Sg**	**03 02 28.4**	**-0.2**
PRK	**Paraskevi**	**0.41**	**317**	P	**Pg**	**03 02 24.3**	**-0.3**
PRK				S	**Sg**	**03 02 30.7**	**+0.6**
PRK	**Paraskevi**	**0.41**	**317**	P	**Pg**	**03 02 24.3**	**-0.3**
PRK				S	**Sg**	**03 02 30.7**	**+0.6**
URLA	**Izmir**	**0.58**	**183**	⇑*iP*	**Pg**	**03 02 26.0**	**-1.8**
URLA				*i* S	**Sg**	**03 02 36.8**	**+1.4**
URLA	**Izmir**	**0.58**	**183**	*i* P	**Pg**	**03 02 26.0**	**-1.8**
URLA				*i* S	**Sg**	**03 02 36.8**	**+1.3**
BLCB	**Balcova**	**0.64**	**150**	*e*PG	**Pg**	**03 02 28.3**	**-0.7**
BLCB				*e*SG	**Sg**	**03 02 37.4**	**0.0**
BLCB	**Balcova**	**0.64**	**150**	P	**Pg**	**03 02 28.5**	**-0.5**
BLCB				S	**Sg**	**03 02 37.2**	**-0.2**
BLCB	**Balcova**	**0.64**	**150**	*e*Pg	**Pg**	**03 02 28.3**	**-0.7**
BLCB	**Balcova**	**0.64**	**150**	P	**Pg**	**03 02 28.5**	**-0.5**
BLCB				S	**Sg**	**03 02 37.2**	**-0.2**
BLCB				*e*Sg	**Sg**	**03 02 37.4**	**0.0**
SIGR	**SIGRI**	**0.66**	**294**	P	**Pg**	**03 02 29.0**	**-0.3**
SIGR				S	**Sg**	**03 02 38.1**	**+0.1**
SIGR	**SIGRI**	**0.66**	**294**	P	**Pg**	**03 02 29.0**	**-0.3**
SIGR				S	**Sg**	**03 02 38.1**	**+0.1**
CHOS	**Chios island**	**0.72**	**219**	P	**Pg**	**03 02 29.9**	**-0.5**
CHOS				S	**Sg**	**03 02 40.0**	**+0.3**
CHOS	**Chios island**	**0.72**	**219**	P	**Pg**	**03 02 29.9**	**-0.5**
CHOS				S	**Sg**	**03 02 40.0**	**+0.3**
IZM	**Izmir**	**0.73**	**138**	PG	**Pg**	**03 02 30.2**	**-0.6**
IZM	**Izmir**	**0.73**	**138**	*i* Pg	**Pg**	**03 02 30.2**	**-0.5**
EZN	**Ezine**	**0.91**	**345**	*e*PG	**Pg**	**03 02 33.5**	**-0.6**
EZN				*e*SG	**Sg**	**03 02 46.8**	**+0.8**
EZN	**Ezine**	**0.91**	**345**	*e*Pg	**Pg**	**03 02 33.5**	**-0.6**
EZN				*e*Sg	**Sg**	**03 02 46.8**	**+0.8**
AKHS	**Akhisar**	**0.92**	**94**	*e*P	**Pg**	**03 02 33.9**	**-0.4**
AKHS				*e*S	**Sg**	**03 02 46.7**	**+0.4**
AKHS	**Akhisar**	**0.92**	**94**	*e*P	**Pg**	**03 02 33.9**	**-0.4**
AKHS				*e*S	**Sg**	**03 02 46.7**	**+0.4**
AKS	**Akhisar**	**0.92**	**94**	*e*PG	**Pg**	**03 02 34.2**	**-0.1**
AKS	**Akhisar**	**0.92**	**94**	*e*Pg	**Pg**	**03 02 34.2**	**-0.1**
BOZC	**Bozcaada**	**1.00**	**334**	⇑*iP*	**Pg**	**03 02 36.4**	**+0.5**
BOZC				*i* S	**Sg**	**03 02 50.5**	**+1.6**
BALY	**Balya**	**1.10**	**44**	*e*P	**Pg**	**03 02 36.5**	**-1.2**
BALY				*e*S	**Sg**	**03 02 52.4**	**+0.3**
BALY	**Balya**	**1.10**	**44**	*e*P	**Pg**	**03 02 36.5**	**-1.3**
BALY				*e*S	**Sg**	**03 02 52.4**	**+0.3**
BALB	**Balikesir**	**1.19**	**54**	*e*PN	**Pn**	**03 02 38.5**	**-0.9**
BALB	**Balikesir**	**1.19**	**54**	*e*Pn	**Pn**	**03 02 38.5**	**-0.9**
GADA	**Gvkgeada**	**1.37**	**336**	*e*PN	**Pn**	**03 02 40.7**	**-1.2**
GADA	**Gvkgeada**	**1.37**	**336**	*e*Pn	**Pn**	**03 02 40.7**	**-1.2**
GONE	**Gonen-Balikesi**	**1.37**	**36**	*e*PN	**Pn**	**03 02 41.7**	**-0.2**
GONE	**Gonen-Balikesi**	**1.37**	**36**	*e*Pn	**Pn**	**03 02 41.7**	**-0.2**
LPK	**Lapseki**	**1.43**	**4**	*e*PN	**Pn**	**03 02 41.8**	**-1.0**
LPK	**Lapseki**	**1.43**	**4**	*e*Pn	**Pn**	**03 02 41.8**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.46**	**355**	*e*PN	**Pn**	**03 02 42.2**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.46**	**355**	*e*Pn	**Pn**	**03 02 42.2**	**-0.9**
LIA	**Limnos Island**	**1.47**	**311**	P	**Pn**	**03 02 43.2**	**-0.1**
LIA				S	**Sn**	**03 03 03.1**	**+0.4**
LIA	**Limnos Island**	**1.47**	**311**	P	**Pn**	**03 02 43.2**	**-0.1**
LIA				S	**Sn**	**03 03 03.1**	**+0.4**
KULA	**Kula-Manisa**	**1.64**	**105**	*e*PN	**Pn**	**03 02 46.5**	**+0.9**
KULA	**Kula-Manisa**	**1.64**	**105**	*e*Pn	**Pn**	**03 02 46.5**	**+0.9**
EDC	**Edincik**	**1.69**	**34**	*e*PN	**Pn**	**03 02 47.0**	**+0.7**
EDC	**Edincik**	**1.69**	**34**	*e*Pn	**Pn**	**03 02 47.0**	**+0.7**
BNT	**Bandirma**	**1.73**	**35**	*e*PN	**Pn**	**03 02 47.3**	**+0.5**
ERIK	**Erikli-Kesan**	**1.73**	**357**	*e*PN	**Pn**	**03 02 46.9**	**+0.1**
ERIK	**Erikli-Kesan**	**1.73**	**357**	*e*Pn	**Pn**	**03 02 46.9**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.79**	**13**	*e*PN	**Pn**	**03 02 48.6**	**+0.9**
RKY	**Sarkoy-Tekirda**	**1.79**	**13**	*e*Pn	**Pn**	**03 02 48.6**	**+0.9**
SART	**Tekirdag**	**1.79**	**13**	*e*P	**Pn**	**03 02 45.8**	**-1.9**
SART				*e*S	**Sn**	**03 03 08.9**	**-1.7**
SART	**Tekirdag**	**1.79**	**13**	*e*P	**Pn**	**03 02 45.8**	**-1.9**
SART				*e*S	**Sn**	**03 03 08.9**	**-1.7**
ENEZ	**Enez**	**1.83**	**348**	*e*PN	**Pn**	**03 02 48.0**	**-0.2**
ENEZ	**Enez**	**1.83**	**348**	*e*Pn	**Pn**	**03 02 48.0**	**-0.2**
KCTX	**Karacabey (Bur**	**1.88**	**45**	*e*PN	**Pn**	**03 02 49.6**	**+0.8**
KCTX	**Karacabey (Bur**	**1.88**	**45**	*e*Pn	**Pn**	**03 02 49.6**	**+0.8**
MLSB	**Milas**	**1.88**	**151**	*e*PN	**Pn**	**03 02 49.3**	**+0.4**
MLSB	**Milas**	**1.88**	**151**	*e*Pn	**Pn**	**03 02 49.3**	**+0.5**
MFT	**Murefte**	**1.91**	**15**	*e*PN	**Pn**	**03 02 49.7**	**+0.4**
MFT	**Murefte**	**1.91**	**15**	*e*Pn	**Pn**	**03 02 49.7**	**+0.4**
BODT	**Bodrum**	**1.95**	**164**	*e*PN	**Pn**	**03 02 50.1**	**+0.2**
BODT	**Bodrum**	**1.95**	**164**	*e*Pn	**Pn**	**03 02 50.2**	**+0.3**
ALN	**Alexandroupoli**	**2.00**	**347**	P	**Pn**	**03 02 50.1**	**-0.5**
ALN				S	**Sn**	**03 03 15.2**	**-0.6**
ALN	**Alexandroupoli**	**2.00**	**347**	P	**Pn**	**03 02 50.1**	**-0.5**
ALN				S	**Sn**	**03 03 15.2**	**-0.6**
MDNY	**Mudanya-Bursa**	**2.25**	**50**	*e*PN	**Pn**	**03 02 54.5**	**+0.6**
MDNY	**Mudanya-Bursa**	**2.25**	**50**	*e*Pn	**Pn**	**03 02 54.5**	**+0.6**
ARMT	**Armutlu**	**2.36**	**46**	*e*PN	**Pn**	**03 02 56.8**	**+1.3**
ARMT	**Armutlu**	**2.36**	**46**	*e*Pn	**Pn**	**03 02 56.8**	**+1.3**
SLVT	**Silivri**	**2.58**	**27**	*e*PN	**Pn**	**03 02 59.2**	**+0.7**
SLVT	**Silivri**	**2.58**	**27**	*e*Pn	**Pn**	**03 02 59.2**	**+0.6**
CTKS	**Kestanelik-??a**	**2.70**	**32**	*e*PN	**Pn**	**03 03 00.9**	**+0.7**
CTKS	**Kestanelik-??a**	**2.70**	**32**	*e*Pn	**Pn**	**03 03 00.9**	**+0.7**
ADVT	**Abdulvahap**	**2.82**	**57**	*e*PN	**Pn**	**03 03 03.2**	**+1.4**
ADVT	**Abdulvahap**	**2.82**	**57**	*e*Pn	**Pn**	**03 03 03.2**	**+1.4**

*NEIC **12** 03:03:44.5, 17.13N×95.44W, h164km, MD3.8(MEX), After MEX.*

MEX 12 03:03:45.3±1.1, 17.23N×95.33W, h140km±16km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.35**	**264**	*i* P	Pn	03 04 12.1	-0.5
VHO				*i* S	Sn	03 04 32.5	-0.9
VHO	**Vista Hermosa**	**1.35**	**264**	*i* P	Pn	03 04 12.1	-0.5
VHO				*i* S	Sn	03 04 32.5	-0.9
HUIG	**Huatulco**	**1.63**	**207**	*i* P	Pn	03 04 14.1	-1.5
HUIG				*i* S	Sn	03 04 36.6	-2.2
HUIG	**Huatulco**	**1.63**	**207**	*i* P	Pn	03 04 14.1	-1.5
HUIG				*i* S	Sn	03 04 36.6	-2.2
TGIG		**2.15**	**102**	*i* P	Pn	03 04 21.2	-0.5
TGIG				*i* S	Sn	03 04 46.8	-2.8
TPIG	**Tehuac#an**	**2.27**	**302**	*i* P	Pn	03 04 22.0	-1.1
TPIG				*i* S	Sn	03 04 50.3	-1.9
PCIG		**2.52**	**127**	*e*P	Pn	03 04 25.9	-0.4
PCIG				*i* S	Sn	03 04 56.4	-1.4
PNIG	**Pinotepa**	**2.81**	**253**	*i* P	Pn	03 04 27.0	-2.9
PNIG				*i* S	Sn	03 05 00.1	-4.0
PNIG	**Pinotepa**	**2.81**	**253**	*i* P	Pn	03 04 27.7	-2.2
PNIG				*i* S	Sn	03 05 01.7	-2.5
CCIG	**Comitan**	**3.20**	**107**	*i* P	Pn	03 04 35.6	+0.8
CCIG				*i* S	Sn	03 05 12.8	-0.2
CCIG	**Comitan**	**3.20**	**107**	*i* P	Pn	03 04 34.0	-0.9
CCIG				*i* S	Sn	03 05 11.6	-1.5

*ISCJB **12** 03:09:25.0±0.7, 24.27S±0.04×67.10W±0.08, h156km±7km, mb4.0/20, Error ellipse: s-maj=11.8km s-min=5.7km az=169.7*
*IDC **12** 03:09:27.4±1.5, 24.27S×67.07W, h164km±12km, mb3.9/9, mb1 4.1/12, mb1mx3.9/19, mbtmp3.9/12, Error ellipse: s-maj=17.4km s-min=12.2km az=89.0*
*NEIC **12** 03:09:27.3±0.6, 24.34S×67.10W, h166km±6km, mb4.1/15, Error ellipse: s-maj=11.0km s-min=6.7km az=80.0*
*GUC **12** 03:09:29.1±0.7, 24.02S×67.55W, h206km±7km, ML4.8*

ISC 12 03:09:25.8±0.7, 24.28S±0.04×67.07W±0.07, h147km±7km, n49, σ1°04/55, mb4.0/20, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.71**	**323**	*e*P	**Pn**	**03 10 02.9**	**+5.5**
SPCH				*i* S	**Sn**	**03 10 28.3**	**+6.6**
SPCH	**San Pedro de A**	**1.71**	**323**	*e*P	**Pn**	**03 10 02.9**	**+5.5**
SPCH				*i* S	**Sn**	**03 10 28.3**	**+6.6**
SPCH				AML	AML	03 10 30.1
comp=N,3μm,0.6s							
ANCH	**Antofagasta**	**3.11**	**280**	⇑*iP*	**Pn**	**03 10 16.0**	**+1.6**
ANCH				*i* S	**Sn**	**03 10 52.3**	**+0.3**
ANCH	**Antofagasta**	**3.11**	**280**	⇑*iP*	**Pn**	**03 10 16.0**	**+1.6**
ANCH				*i* S	**Sn**	**03 10 52.3**	**+0.3**
ANCH				AML	AML	03 10 53.9
comp=E,3μm,0.1s							
MACH	**Maria Elena**	**3.23**	**310**	⇓*iP*	**Pn**	**03 10 18.1**	**+2.2**
MACH				*i* S	**Sn**	**03 10 55.3**	**+0.6**
MECH	**Mejillones**	**3.31**	**290**	*e*P	**Pn**	**03 10 18.5**	**+1.5**
MECH				*i* S	**Sn**	**03 10 56.1**	**-0.5**
MECH				AML	AML	03 11 00.7
comp=N,2μm,0.3s							
TOCH	**Tocopilla**	**3.61**	**306**	*e*P	**Pn**	**03 10 22.0**	**+1.1**
TOCH				*i* S	**Sn**	**03 11 01.9**	**-1.6**
TOCH				AML	AML	03 11 05.6
comp=N,2μm,0.7s							
HMBC	**Humberston**	**4.76**	**326**	*e*P	**Pn**	**03 10 35.9**	**-0.1**
HMBC				*e*S	**Sn**	**03 11 28.2**	**-2.5**
PSGC	**Pisagua**	**5.45**	**328**	*e*P	**Pn**	**03 10 44.0**	**-1.2**
PSGC				*i* S	**Sn**	**03 11 42.9**	**-4.3**
MNMC	**Miæe Miæ**	**5.63**	**335**	*e*P	**Pn**	**03 10 48.4**	**+0.8**
MNMC				*e*S	**Sn**	**03 11 49.9**	**-1.6**
LCO	**Las Campanas**	**5.72**	**214**	*e*Pn	**Pn**	**03 10 47.6**	**-1.1**
comp=N,73nm,0.6s							
CFAA	**Coronel Fontan**	**7.37**	**188**	P	**Pn**	**03 11 11.5**	**+0.8**
comp=N,0.2nm,0.3s,baz=1.1,slow=15,SNR=5.8							
CFAA				S	**Sn**	**03 12 30.8**	**-2.2**
comp=N,0.6nm,0.3s,baz=222,slow=24,SNR=5.6							
CFAA	**Coronel Fontan**	**7.37**	**188**	P	**Pn**	**03 11 11.5**	**+0.8**
CFAA				S	**Sn**	**03 12 30.8**	**-2.2**
LPAZ	**La Paz**	**8.01**	**353**	P	**Pn**	**03 11 22.2**	**+2.7**
comp=N,4.9nm,0.3s,baz=151,slow=5.9,SNR=207							
LPAZ				S	**Sn**	**03 12 47.9**	**-0.9**
comp=N,0.6nm,0.3s,baz=328,slow=22,SNR=4.9							
LPAZ	**La Paz**	**8.01**	**353**	P	**Pn**	**03 11 22.2**	**+2.7**
LPAZ				S	**Sn**	**03 12 47.9**	**-0.8**
TRQA	**Tornquist**	**14.40**	**164**	*e*Pn	**Pn**	**03 12 42.4**	**-0.4**
comp=N,37nm,0.7s							
TRQA				*e*P		03 12 45.7
PLCA	**Paso Flores**	**16.66**	**189**	P	**Pn**	**03 13 11.1**	**+0.5**
comp=N,0.5nm,0.3s,baz=16,slow=13,SNR=13							
PLCA				PcP	PcP	03 17 51.2	+0.2
comp=N,0.1nm,0.3s,baz=100,slow=3.5,SNR=3.1							
PLCA	**Paso Flores**	**16.66**	**189**	*e*P	**Pn**	**03 13 10.6**	**0.0**
comp=N,22nm,0.6s							
PLCA				PcP	PcP	03 17 51.2	+0.2
BDFB	**Brasilia**	**19.85**	**68**	P	**P**	**03 13 46.1**	**+0.7**
comp=N,8.5nm,0.3s,baz=243,slow=11,SNR=88							
USHA	**Ushuaia**	**30.53**	**182**	P	**P**	**03 15 24.5**	**-0.4**
comp=N,9.1nm,1.0s,mb4.5,baz=356,slow=12,SNR=2.8							
RCBR	**Riachuelo**	**35.11**	**64**	P	**P**	**03 16 04.6**	**-0.7**
comp=N,8.6nm,0.8s,mb4.4,baz=214,slow=11,SNR=6.3							
WVT	**Waverly**	**63.20**	**341**	*e*P	**P**	**03 19 37.5**	**-0.7**
comp=N,1.8nm,0.6s,mb4.1							
TXAR	**Lajitas Array**	**63.87**	**325**	P	**P**	**03 19 43.0**	**+0.3**
comp=N,0.3nm,0.5s,mb3.4,baz=145,slow=3.3,SNR=3.1							
QSPA	**South Pole Qui**	**65.93**	**180**	P	**P**	**03 19 56.2**	**+0.9**
comp=N,11nm,0.5s,mb4.9,baz=176,slow=1.1,SNR=56							
MNTX	**Cornudas Mount**	**66.64**	**325**	*e*P	**P**	**03 19 59.6**	**-0.9**
comp=N,0.6nm,0.6s,mb3.6							
DBIC	**Dimbokro**	**67.95**	**71**	P	**P**	**03 20 08.6**	**-0.7**
comp=N,4.2nm,0.7s,mb4.3,baz=255,slow=8.9,SNR=7.4							
DBIC	**Dimbokro**	**67.95**	**71**	*e*P	**P**	**03 20 07.9**	**-1.3**
comp=N,5.0nm,0.7s,mb4.3							
ANMO	**Albuquerque**	**69.74**	**326**	*e*P	**P**	**03 20 20.1**	**+0.3**
comp=N,1.6nm,0.7s,mb3.9							
SDCO	**Great Sand Dun**	**71.49**	**329**	*e*P	**P**	**03 20 29.5**	**-0.8**
comp=N,2.5nm,1.0s,mb3.9							
SYO	**Syowa Base**	**73.31**	**159**	⇑*e*P	**P**	**03 20 39.5**	**-1.3**
PDAR	**Pinedale Array**	**77.35**	**329**	P	**P**	**03 21 02.9**	**-1.2**
comp=N,0.5nm,0.8s,mb3.2,baz=126,slow=4.6,SNR=3.7							
HWUT	**Hardware Ranch**	**77.42**	**327**	*e*P	**P**	**03 21 04.8**	**+0.3**
comp=N,2.2nm,0.7s,mb3.9							
LOHW	**Long Hollow**	**78.49**	**329**	*e*P	**P**	**03 21 11.0**	**+0.7**
comp=N,1.1nm,0.7s,mb3.6							
MOOW	**Moose Ponds**	**78.66**	**329**	*e*P	**P**	**03 21 11.5**	**+0.2**
comp=N,0.5nm,0.7s,mb3.2							
NVAR	**Mina Array Bea**	**78.71**	**321**	P	**P**	**03 21 12.4**	**+0.7**
comp=N,0.7nm,0.8s,mb3.4,baz=153,slow=6.7,SNR=5.4							
HLID	**Hailey**	**80.28**	**327**	*e*P	**P**	**03 21 21.0**	**+0.9**
comp=N,3.3nm,0.8s,mb4.0							
BOSA	**Boshof**	**80.67**	**117**	P	**P**	**03 21 22.9**	**+0.2**
comp=N,1.3nm,0.4s,mb3.9,baz=260,slow=5.2,SNR=9.0							
MAW	**Mawson**	**81.19**	**163**	P	**P**	**03 21 25.1**	**+0.5**
comp=N,5.5nm,0.6s,mb4.4,baz=208,slow=5.1,SNR=28							
LBTB	**Lobatse**	**82.34**	**114**	*e*P	**P**	**03 21 31.4**	**-0.1**
comp=N,3.1nm,0.7s,mb4.0							
TAM	**Tamanrasset**	**84.58**	**62**	*e*P	**P**	**03 21 43.5**	**+0.6**
comp=N,4.1nm,1.1s,mb4.1							
CASY	**Casey**	**89.71**	**179**	*e*P	**P**	**03 22 07.2**	**+0.4**
comp=N,9.2nm,0.7s,mb4.8							
ASAR	**Alice Springs**	**128.18**	**205**	PKP	PKPdf	03 28 14.3	-0.9
comp=N,2.4nm,0.8s,baz=134,slow=1.7,SNR=22							
WRA	**Warramunga Arr**	**131.35**	**207**	PKP	PKPdf	03 28 20.6	-0.7
comp=N,1.3nm,0.4s,baz=160,slow=1.5,SNR=34							
WRA				SKPbc	SKPbc	03 31 29.2	-3.5
comp=N,1.0nm,0.6s,baz=153,slow=3.7,SNR=17							
FITZ	**Fitzroy Crossi**	**136.09**	**198**	PKP	PKPdf	03 28 29.9	-0.4
comp=N,0.8nm,0.5s,baz=191,slow=5.2,SNR=3.6							
ZALV	**Zalesovo Beam**	**143.67**	**28**	PKP	PKPdf	03 28 40.5	-2.3
comp=N,1.4nm,0.5s,baz=294,slow=4.3,SNR=3.4							
ZALV				SKPbc	SKPbc	03 32 05.5	-2.3
comp=N,0.8nm,0.3s,baz=253,slow=4.5,SNR=4.4							
ZALV	**Zalesovo Beam**	**143.67**	**28**	PKP	PKPdf	03 28 40.5	-2.3
ZALV				SKPbc	SKPbc	03 32 05.5	-2.3
MKAR	**Makanchi Array**	**146.78**	**40**	PKPbc	PKPbc	03 28 48.6	-1.8
comp=N,1.8nm,0.6s,baz=299,slow=1.2,SNR=11							
MJAR	**Matsushiro Arr**	**155.09**	**305**	PKPab	PKPab	03 29 25.2	-1.5
comp=N,2.2nm,0.4s,baz=35,slow=1.1,SNR=6.0							
SONM	**Songino Array**	**155.93**	**11**	PKP	PKPdf	03 29 00.5	-1.7
comp=N,0.4nm,0.5s,baz=332,slow=4.8,SNR=1.9							
SONM				PKPab	PKPab	03 29 31.0	+1.2
comp=N,0.3nm,0.4s,baz=264,slow=1.4,SNR=3.0							

*ISCJB **12** 03:20:33.9±0.4, 31.28S±0.03×69.06W±0.05, h115km±4km, mb3.8/8, Error ellipse: s-maj=7.5km s-min=5.4km az=175.9*
*IDC **12** 03:20:34.9±1.0, 31.30S×69.00W, h108km±8km, mb3.5/6, mb1 3.7/8, mb1mx3.6/16, mbtmp3.4/8, Error ellipse: s-maj=25.9km s-min=19.8km az=97.0*
*NEIC **12** 03:20:34.6±0.4, 31.28S×69.03W, h107km±4km, mb4.1/4, MD4.1(GUC), MD3.9(SJA), Error ellipse: s-maj=7.8km s-min=5.4km az=76.0*
NEIC Felt [III] at San Juan.
*GUC **12** 03:20:34.4±0.7, 31.29S×69.39W, h150km, MD4.1, ML4.1*

ISC 12 03:20:34.9±0.4, 31.26S±0.03×69.06W±0.05, h107km±5km, n42, σ0°75/58, mb3.8/8, 6C-7D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.78**	**116**	P	**Pn**	**03 20 53.7**	**0.0**
33nm,0.3s,baz=298,slow=8.0,SNR=2869							
CFAA				S	**Sn**	**03 21 08.3**	**+0.5**
98nm,0.3s,baz=184,slow=20,SNR=92							
CFAA	**Coronel Fontan**	**0.78**	**116**	P	**Pn**	**03 20 53.7**	**0.0**
CFAA				S	**Sn**	**03 21 08.3**	**+0.5**
CMCH	**Combarbala**	**1.67**	**272**	⇓*iP*	**Pn**	**03 21 03.4**	**-0.2**
CMCH				*i* S	**Sn**	**03 21 25.4**	**0.0**
CMCH	**Combarbala**	**1.67**	**272**	⇓*iP*	**Pn**	**03 21 03.4**	**-0.2**
CMCH				*i* S	**Sn**	**03 21 25.4**	**0.0**
CMCH				AML	AML	03 21 27.0
comp=N,9μm,0.5s							
TLL	**Tololo Astrono**	**1.86**	**305**	⇑*iP*	**Pn**	**03 21 06.4**	**+0.4**
TLL				*i* S	**Sn**	**03 21 30.7**	**+1.1**
TLL	**Tololo Astrono**	**1.86**	**305**	⇑*iP*	**Pn**	**03 21 06.4**	**+0.4**
TLL				*i* S	**Sn**	**03 21 30.7**	**+1.1**
TLL				AML	AML	03 21 35.6
comp=N,1μm,0.6s							
JACH	**Jahuel**	**1.93**	**222**	⇓*iP*	**Pn**	**03 21 07.3**	**+0.5**
JACH	**Jahuel**	**1.93**	**222**	⇓*iP*	**Pn**	**03 21 07.3**	**+0.5**
OVCH	**Ovalle**	**1.95**	**289**	*e*P	**Pn**	**03 21 06.2**	**-0.9**
OVCH				*e*S	**Sn**	**03 21 30.8**	**-1.0**
OVCH	**Ovalle**	**1.95**	**289**	*e*P	**Pn**	**03 21 06.2**	**-0.9**
OVCH				*e*S	**Sn**	**03 21 30.8**	**-1.0**
**C

1.1nm,0.4s,baz=98,slow=9.9,SNR=4.1
ASAR Alice Springs 45.48 256 P P 03 52 08.6 0.0
1.6nm,0.5s,baz=95,slow=8.1,SNR=20
WRA Warramunga Arr 45.48 261 P P 03 52 08.5 -0.2
0.4nm,0.3s,baz=97,slow=7.6,SNR=12
FITZ Fitzroy Crossi 53.91 261 P P 03 53 13.0 0.0
0.3nm,0.3s,baz=98,slow=7.1,SNR=4.0

*NEIC **12** 03:51:17.9, 32°.54S×71°.65W, h4km, ML3.0(GUC), After GUC.*

GUC 12 03:51:17.9±0.8, 32°.54S×71°.65W, h4km±2km, MD3.6, ML3.0, 10C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.67**	**11**	⇑*i*P	Pg	03 51 27.7	-3.0
CHNG				*i* S	Sg	03 51 37.4	-2.0
ROCH	**El Roble**	**0.69**	**129**	⇓*i*P	Pg	03 51 32.4	+1.3
ROCH				*i* S	Sg	03 51 42.6	+2.6
JACH	**Jahuel**	**0.90**	**99**	⇑*i*P	Pg	03 51 35.8	+0.7
JACH				*i* S	Sg	03 51 49.1	+2.3
JACH	**Jahuel**	**0.90**	**99**	⇑*i*P	Pg	03 51 35.8	+0.7
JACH				*i* S	Sg	03 51 49.1	+2.3
LCCH	**Las Cruces**	**0.93**	**176**	P	Pg	03 51 35.3	-0.5
LCCH				S	Sg	03 51 47.4	-0.6
LCCH	**Las Cruces**	**0.93**	**176**	*e*P	Pg	03 51 35.3	-0.5
LCCH				*i* S	Sg	03 51 47.4	-0.6
PEL	**Peldehue**	**1.01**	**127**	⇑*i*P	Pg	03 51 37.5	+0.3
PEL				*i* S	Sg	03 51 52.0	+1.7
PEL				AML	AML	03 51 53.9	
	comp=E,2μm,0.3s						
SAN	**Santiago**	**1.23**	**138**	*e*P	Pg	03 51 40.8	-0.7
SAN				*i* S	Sg	03 51 57.8	+0.3
SAN	**Santiago**	**1.23**	**138**	*e*P	Pg	03 51 40.8	-0.7
SAN				*i* S	Sg	03 51 57.8	+0.3
TACH	**Talagante**	**1.26**	**152**	*e*P	Pg	03 51 40.7	-1.3
TACH				*i* S	Sg	03 51 59.0	+0.6
TACH	**Talagante**	**1.26**	**152**	*e*P	Pg	03 51 40.7	-1.3
TACH				*i* S	Sg	03 51 59.0	+0.6
CLCH	**Cerro Calan**	**1.26**	**133**	⇓*i*P	Pg	03 51 41.3	-0.9
CLCH				*i* S	Sg	03 51 58.6	+0.1
CLCH				AML	AML	03 52 05.1	
	comp=E,346nm,0.4s						
LACH	**Col Las Americ**	**1.31**	**134**	*e*P	Pg	03 51 41.8	-1.2
LACH				*i* S	Sg	03 51 59.5	-0.4
LACH				AML	AML	03 52 04.3	
	comp=E,181nm,0.5s						
FSR	**Penalolen**	**1.33**	**135**	⇑*i*P	Pn	03 51 42.4	-0.9
FSR				*i* S	Sg	03 52 00.4	-0.1
FSR	**Penalolen**	**1.33**	**135**	⇑*i*P	Pn	03 51 42.4	-0.9
FSR				*i* S	Sg	03 52 00.4	-0.1
FSR				AML	AML	03 52 03.1	
	comp=N,114nm,0.3s						
ANTU	**Antumapu**	**1.33**	**141**	⇓*i*P	Pn	03 51 42.2	-1.1
ANTU				*i* S	Sg	03 52 00.6	-0.2
ANTU	**Antumapu**	**1.33**	**141**	⇓*i*P	Pn	03 51 42.2	-1.1
ANTU				*i* S	Sg	03 52 00.6	-0.2
ANTU				AML	AML	03 52 05.8	
	comp=E,460nm,1.5s						
FCH	**Farellones**	**1.38**	**125**	*e*P	Pn	03 51 47.2	+3.2
FCH				*i* S	Sg	03 52 06.9	+4.5
FCH				AML	AML	03 52 08.8	
	comp=E,510nm,0.3s						
LNV	**Longovilo**	**1.43**	**172**	*e*P	Pn	03 51 43.1	-1.5
LNV	**Longovilo**	**1.43**	**172**	*e*P	Pn	03 51 43.1	-1.5
PCH	**Pirque**	**1.44**	**139**	⇓*i*P	Pn	03 51 44.0	-0.8
PCH				*i* S	Sb	03 52 03.7	-0.2
PCH	**Pirque**	**1.44**	**139**	⇓*i*P	Pn	03 51 44.0	-0.8
PCH				*i* S	Sb	03 52 03.7	-0.2
CMCH	**Combarbala**	**1.47**	**22**	⇑*i*P	Pn	03 51 44.0	-1.2
CMCH				*i* S	Sb	03 52 04.7	-0.2
CMCH	**Combarbala**	**1.47**	**22**	⇑*i*P	Pn	03 51 44.0	-1.2
CMCH				*i* S	Sb	03 52 04.7	-0.2
CMCH				AML	AML	03 52 10.8	
	comp=N,1μm,0.9s						
SJCH	**San Jose de Ma**	**1.54**	**136**	*e*P	Pn	03 51 45.7	-0.5
SJCH				*i* S	Sn	03 52 06.6	-0.1
SJCH	**San Jose de Ma**	**1.54**	**136**	*e*P	Pn	03 51 45.7	-0.5
SJCH				*i* S	Sn	03 52 06.6	-0.1
SJCH				AML	AML	03 52 11.4	
	comp=N,199nm,0.4s						
CHCH	**Chadas Angostu**	**1.62**	**149**	*e*P	Pn	03 51 46.8	-0.5
CHCH				*i* S	Sn	03 52 08.7	+0.1
CHCH	**Chadas Angostu**	**1.62**	**149**	*e*P	Pn	03 51 46.8	-0.5
CHCH				*i* S	Sn	03 52 08.7	+0.1
LMEL	**Las Melosas**	**1.78**	**138**	⇑*i*P	Pn	03 51 49.5	0.0
LMEL				*i* S	Sn	03 52 13.6	+1.0
LMEL	**Las Melosas**	**1.78**	**138**	⇑*i*P	Pn	03 51 49.5	0.0
LMEL				*i* S	Sn	03 52 13.6	+1.0
LMEL				AML	AML	03 52 15.5	
	comp=N,466nm,0.1s						
CACH	**El Canelo**	**1.80**	**151**	*e*P	Pn	03 51 50.6	+0.8
CACH				*i* S	Sn	03 52 15.0	+2.0
CACH	**El Canelo**	**1.80**	**151**	*e*P	Pn	03 51 50.6	+0.8
CACH				*i* S	Sn	03 52 15.0	+2.0
TLL	**Tololo Astrono**	**2.47**	**17**	*e*P	Pn	03 52 00.4	+1.4
TLL				*i* S	Sn	03 52 33.3	+3.6
TLL	**Tololo Astrono**	**2.47**	**17**	*e*P	Pn	03 52 00.4	+1.4
TLL				*i* S	Sn	03 52 33.3	+3.6
TLL				AML	AML	03 52 40.7	
	comp=N,146nm,0.5s						

WEL 12 04:05:01.6±0.4, 37°.74S×176°.78E, h166km±3km, ML4.2/17, 9C-2D, Error ellipse: s-maj=1.9km s-min=1.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.21**	**240**	PN	Pn	04 05 23.6	-0.1
OPRZ				SN	Sn	04 05 40.9	+0.3
EDRZ	**Edgecumbe**	**0.36**	**185**	PN	Pn	04 05 24.4	+0.3
TARZ	**Mount Tarawera**	**0.54**	**204**	PN	Pn	04 05 25.4	+0.6
RRRZ	**Republican Roa**	**0.63**	**199**	⇑PN	Pn	04 05 25.5	+0.1
PRRZ	**Plateau Road**	**0.81**	**202**	⇑PN	Pn	04 05 26.4	0.0
PRRZ				SN	Sn	04 05 45.6	0.0
MWZ	**Matawai**	**0.83**	**135**	⇑PN	Pn	04 05 26.2	-0.4
ALRZ	**Allen Road**	**0.89**	**203**	PN	Pn	04 05 27.0	+0.1
RAHZ	**Arahi**	**1.20**	**169**	⇑PN	Pn	04 05 29.9	+0.4
MXZ	**Matakaoa Point**	**1.22**	**82**	PN	Pn	04 05 29.3	-0.4
KUZ	**Kuaotunu**	**1.31**	**319**	⇓PN	Pn	04 05 30.3	-0.2
CNGZ	**Carnagh Statio**	**1.35**	**124**	PN	Pn	04 05 31.3	+0.5
NMHZ	**Naumai**	**1.35**	**179**	PN	Pn	04 05 31.4	+0.5
MKAZ	**Moumakai**	**1.43**	**296**	⇓PN	Pn	04 05 32.2	+0.5
BKZ	**Black Stump Fm**	**1.44**	**189**	⇑PN	Pn	04 05 31.4	-0.3
BKZ				SN	Sn	04 05 53.9	-1.1
KNZ	**Kokohu**	**1.46**	**151**	⇑PN	Pn	04 05 31.9	0.0
PRGZ	**Paritu Road**	**1.46**	**144**	PN	Pn	04 05 31.9	-0.1
KRVZ	**Karewarewa**	**1.62**	**213**	PN	Pn	04 05 33.6	+0.1
WTVZ	**West Tongariro**	**1.66**	**214**	PN	Pn	04 05 34.0	0.0
MHGZ	**Mahia Peninsul**	**1.66**	**148**	PN	Pn	04 05 34.2	+0.2
WPVZ	**Whakapapa**	**1.75**	**213**	PN	Pn	04 05 35.1	+0.2
TUVZ	**Tukino**	**1.76**	**210**	PN	Pn	04 05 35.1	+0.1
FWVZ	**Far West T-bar**	**1.79**	**212**	PN	Pn	04 05 35.4	+0.1
BHHZ	**Black Hill Sta**	**1.83**	**198**	⇑PN	Pn	04 05 35.3	-0.4
WNVZ	**Wahianoa**	**1.83**	**210**	PN	Pn	04 05 35.8	0.0
CKHZ	**Cape Kidnapper**	**1.93**	**173**	⇑PN	Pn	04 05 36.7	-0.1
MTVZ	**Mangateitei**	**1.94**	**212**	PN	Pn	04 05 36.9	0.0
KAHZ	**Kahuranaki**	**2.05**	**178**	⇑PN	Pn	04 05 38.1	-0.1
VRZ	**Vera Road**	**2.10**	**228**	PN	Pn	04 05 38.9	+0.1
PNHZ	**Pukenui**	**2.22**	**192**	PN	Pn	04 05 39.2	-0.9
PXZ	**Pawanui**	**2.29**	**178**	PN	Pn	04 05 40.1	-0.8
WPHZ	**Waipukurau**	**2.33**	**186**	PN	Pn	04 05 40.7	-0.8
TSZ	**Takapari Road**	**2.40**	**195**	PN	Pn	04 05 41.1	-1.2
WAZ	**Wanganui**	**2.45**	**214**	PN	Pn	04 05 42.5	-0.3
PRHZ	**Porangahau**	**2.52**	**183**	PN	Pn	04 05 42.4	-1.3
DVHZ	**Dannevirke**	**2.60**	**190**	PN	Pn	04 05 41.9	-2.7
POWZ	**Post Office Ro**	**2.76**	**196**	PN	Pn	04 05 45.3	-1.3
BFZ	**Birch Farm**	**2.96**	**188**	PN	Pn	04 05 47.4	-1.7
MRZ	**Mangatainoka R**	**3.06**	**197**	PN	Pn	04 05 48.4	-1.9
TIWZ	**Tintock**	**3.11**	**193**	PN	Pn	04 05 49.2	-1.6
HOWZ	**Holdsworth Sta**	**3.30**	**197**	PN	Pn	04 05 50.9	-2.3
OGWZ	**Otaki Gorge**	**3.32**	**202**	PN	Pn	04 05 51.4	-2.0
TMWZ	**Te Maipa**	**3.43**	**191**	PN	Pn	04 05 52.9	-2.0
KIW	**Kapiti Island**	**3.44**	**204**	PN	Pn	04 05 52.5	-2.5
MTW	**Mount Morrison**	**3.55**	**196**	PN	Pn	04 05 53.8	-2.7
CAW	**Cannon Point**	**3.61**	**201**	PN	Pn	04 05 54.6	-2.6
TRWZ	**Traveller**	**3.75**	**193**	PN	Pn	04 05 56.4	-2.5
DUWZ	**D'Urville Isla**	**3.78**	**215**	PN	Pn	04 05 56.8	-2.5
PAWZ	**Paruwai Farm**	**3.78**	**196**	PN	Pn	04 05 56.5	-2.9
MSWZ	**Moikau Station**	**3.85**	**197**	PN	Pn	04 05 57.2	-3.0
WEL	**Wellington**	**3.87**	**203**	PN	Pn	04 05 57.8	-2.6
SNZO	**South Karori**	**3.91**	**204**	PN	Pn	04 05 57.9	-3.1
BHW	**Baring Head**	**3.95**	**201**	PN	Pn	04 05 58.4	-3.0
TCW	**Tory Channel**	**3.97**	**208**	PN	Pn	04 05 58.8	-3.0
PLWZ	**Palliser**	**4.00**	**197**	PN	Pn	04 05 58.9	-3.3
TUWZ	**Tuamarina**	**4.29**	**210**	PN	Pn	04 06 02.6	-3.3
NNZ	**Nelson**	**4.36**	**216**	PN	Pn	04 06 04.0	-2.8
QRZ	**Quartz Range**	**4.51**	**226**	PN	Pn	04 06 05.3	-3.5
BSWZ	**Blackbirch Sta**	**4.55**	**209**	PN	Pn	04 06 06.2	-3.1
THZ	**Tophouse**	**5.00**	**215**	PN	Pn	04 06 12.1	-3.1
KHZ	**Kahutara**	**5.29**	**207**	PN	Pn	04 06 15.3	-3.7
MQZ	**McQueen's Vall**	**6.73**	**206**	PN	Pn	04 06 32.9	-5.0

*ISCJB **12** 04:11:33.9±0.4, 36°.75N±0°.04×71°.13E±0°.09, h216km±6km, mb3.5/6, Error ellipse: s-maj=12.5km s-min=5.6km az=18.7*
*NEIC **12** 04:11:34.5±0.7, 36°.68N×71°.25E, h215km±6km, mb3.9/3, Error ellipse: s-maj=14.5km s-min=7.7km az=132.0*
*IDC **12** 04:11:37.3±8.3, 36°.93N×71°.31E, h225km±49km, mb3.3/5, mb1 3.4/9, mb1mx3.1/26, mbtmp3.2/9, Error ellipse: s-maj=78.6km s-min=30.8km az=179.0*

ISC 12 04:11:34.8±0.4, 36°.74N±0°.04×71°.20E±0°.10, h210km±6km, n34, σ0°95/42, mb3.5/6, 1C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.81**	**219**	*e*Pn	**Pn**	**04 12 23.0**	**+0.3**
KBL				*e*S	**Sn**	**04 12 59.0**	**-1.1**
CEP	**Cherat**	**2.96**	**168**	⇓P	**Pn**	**04 12 25.3**	**+0.8**
CEP				S	**Sn**	**04 13 02.0**	**-1.5**
CHCP	**Chirah Chowk**	**3.50**	**151**	P	**Pn**	**04 12 32.1**	**+1.2**
THW	**Thamme Wali**	**3.96**	**173**	P	**Pn**	**04 12 36.6**	**+0.2**
KSH	**Kashi**	**4.68**	**52**	⇓Pn	**Pn**	**04 12 41.6**	**-3.7**
KSH				Sn	**Sn**	**04 13 30.6**	**-10**
KSH				smax			
	comp=N,42nm,0.4s						
KSH				smax			
	comp=E,60nm,0.5s						
AML	**Almayashu**	**5.72**	**19**	P	**Pn**	**04 12 59.5**	**+1.0**
	SNR=74						
AML	**Almayashu**	**5.72**	**19**	*e*Pn	**Pn**	**04 12 59.1**	**+0.6**
	comp=E,16nm,0.3s						
AML				*e*S	**Sn**	**04 14 03.3**	**-1.7**
KZA	**Kyzart**	**6.19**	**29**	P	**Pn**	**04 13 05.1**	**+0.7**
	SNR=7.7						
KZA	**Kyzart**	**6.19**	**29**	*e*Pn	**Pn**	**04 13 04.8**	**+0.3**
	comp=E,4.5nm,0.4s						
EKS2	**Erkin-Say**	**6.24**	**18**	P	**Pn**	**04 13 06.5**	**+1.4**
	SNR=30						
EKS2	**Erkin-Say**	**6.24**	**18**	*e*Pn	**Pn**	**04 13 05.8**	**+0.6**
	comp=E,8.8nm,0.4s						
KK31	**Karatay Array**	**6.38**	**355**	⇑Pn	**Pn**	**04 13 07.8**	**+0.8**
	comp=E,0.7nm,0.3s,baz=184,slow=15,SNR=9.3						
KK31				Sn	**Sn**	**04 14 15.5**	**-4.7**
	comp=E,2.2nm,0.3s,baz=182,slow=22,SNR=19						
KKAR	**Karatay Array**	**6.38**	**355**	*e*Pn	**Pn**	**04 13 06.8**	**-0.2**
	comp=E,2.6nm,0.2s						
KKAR				*e*S	**Sn**	**04 14 15.1**	**-5.2**
AAK	**Ala-Archa**	**6.42**	**22**	P	**Pn**	**04 13 08.6**	**+1.2**
	SNR=7.8						
AAK	**Ala-Archa**	**6.42**	**22**	P	**Pn**	**04 13 07.9**	**+0.5**
	comp=E,0.1nm,0.3s,baz=176,slow=6.1,SNR=16						
AAK				S	**Sn**	**04 14 19.7**	**-1.3**
	comp=E,0.0nm,0.3s,baz=313,slow=22,SNR=9.2						
KBK	**Karagaybulak**	**6.58**	**25**	P	**Pn**	**04 13 11.4**	**+1.8**
	SNR=6.0						
ULHL	**Ulahol**	**6.74**	**34**	P	**Pn**	**04 13 12.5**	**+0.8**
	SNR=7.4						
TKM2	**Tokmak 2**	**7.04**	**27**	⇓Pn	**Pn**	**04 13 16.1**	**+0.6**
	comp=E,10nm,0.5s						
TKM2				⇓Sn	**Sn**	**04 14 34.4**	**-1.3**
	comp=E,7.9nm,1.1s						
TKM2	**Tokmak 2**	**7.04**	**27**	P	**Pn**	**04 13 16.5**	**+1.0**
	SNR=23						
TKM2	**Tokmak 2**	**7.04**	**27**	*e*Pn	**Pn**	**04 13 16.4**	**+0.9**
	comp=E,17nm,0.7s						
MKAR	**Makanchi Array**	**13.01**	**36**	P	**Pn**	**04 14 31.4**	**-0.5**
	comp=E,0.1nm,0.3s,baz=216,slow=14,SNR=3.2						
ABKAR	**Akbulak array**	**14.96**	**330**	*e*P	**Pn**	**04 14 57.0**	**+1.2**
	comp=E,0.5nm,0.3s						
BVAR	**Borovoye Array**	**16.30**	**358**	P	**P**	**04 15 11.7**	**+0.6**
	comp=E,0.3nm,0.3s,baz=154,slow=7.7,SNR=3.2						
AKTK	**Aktyubinsk**	**16.66**	**329**	P	**P**	**04 15 15.1**	**+0.1**
AKTO	**Aktyubinsk**	**16.66**	**329**	P	**P**	**04 15 15.1**	**+0.1**
	comp=E,0.3nm,0.3s,baz=132,slow=13,SNR=3.4						
ZALV	**Zalesovo Beam**	**19.64**	**24**	P	**P**	**04 15 46.2**	**-1.1**
	comp=E,0.5nm,0.3s,baz=207,slow=9.1,SNR=2.4						
MORC	**Moravsky Berou**	**40.35**	**306**	*e*P	**P**	**04 18 50.6**	**-1.2**
	comp=E,2.6nm,0.5s,mb3.9						
ARCES	**ARCESS Array B**	**40.99**	**337**	P	**P**	**04 18 56.8**	**+0.1**
	comp=E,0.8nm,0.5s,mb3.4,baz=114,slow=8.2,SNR=11						
NB2	**NORSAR Subarra**	**44.29**	**323**	P	**P**	**04 19 22.8**	**-0.5**
	comp=Z,1.0nm,0.5s,mb3.4,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**04 19 23.1**	**-0.2**
	comp=Z,1.3nm,0.5s,mb3.5,baz=96,slow=7.7,SNR=5.5						
INK	**Inuvik**	**73.65**	**9**	P	**P**	**04 22 44.5**	**-0.2**
	comp=Z,1.7nm,0.7s,mb3.8,baz=329,slow=5.9,SNR=5.9						
INK	**Inuvik**	**73.65**	**9**	*e*P	**P**	**04 22 44.6**	**-0.2**
	comp=Z,1.7nm,0.6s,mb3.9						
ILAR	**Eielson Array**	**74.51**	**16**	P	**P**	**04 22 49.9**	**+0.1**
	comp=Z,0.2nm,0.7s,mb2.8,baz=320,slow=2.7,SNR=3.4						
YKA	**Yellowknife Ar**	**81.00**	**3**	P	**P**	**04 23 24.6**	**-1.0**
	comp=Z,0.8nm,0.4s,mb3.7,baz=355,slow=5.1,SNR=5.5						

*IDC **12** 04:12:46.7±0.7, 7°.81N×127°.00E, h0km, mb3.9/13, mb1 4.0/13, mb1mx4.0/23, mbtmp3.9/13, MS2.9/1, Ms1 2.9/1, ms1mx2.3/26, Error ellipse: s-maj=45.3km s-min=15.3km az=76.0*
*ISCJB **12** 04:12:51.3±1.3, 7°.82N±0°.05×127°.30E±0°.08, h54km±11km, mb4.0/19, Error ellipse: s-maj=13.1km s-min=7.8km az=168.4*
*MAN **12** 04:12:51, 7°.81N×127°.28E, h29km, mb4.9, ML3.8, MS3.8*
*BJI **12** 04:12:55.0, 7°.80N×127°.00E, h66km, mB5.0/4, mb4.7/5*
*NEIC **12** 04:12:55.2±2.3, 7°.77N×126°.99E, h66km±20km, mb4.4/6, Error ellipse: s-maj=28.8km s-min=7.3km az=66.0*

ISC 12 04:12:53.2±1.3, 7°.81N±0°.05×127°.25E±0°.09, h52km±11km, n34, σ0°85/41, mb4.0/19, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.31**	**229**	*e*P	**Pn**	**04 13 11.8**	**-3.3**
MATI				*e*S	**Sn**	**04 13 26.0**	**-5.5**
DAV	**Davao City (W)**	**1.81**	**246**	Pn	**Pn**	**04 13 21.0**	**-1.1**
	181nm,0.3s,baz=49,slow=4.3,SNR=22						
DAV				Sn	**Sn**	**04 13 42.3**	**-1.6**
	152nm,0.3s,baz=97,slow=18,SNR=4.9						
DMPH	**Davao City--Mi**	**1.87**	**248**	⇑*e*P	**Pn**	**04 13 22.8**	**-0.1**
DMPH				*e*S	**Sn**	**04 13 45.9**	**+0.5**
BUTP	**Butuan**	**1.98**	**306**	*e*P	**Pn**	**04 13 24.3**	**-0.1**
BUTP				*e*S	**Sn**	**04 13 47.8**	**-0.3**
BUKP	**Musuan**	**2.17**	**272**	*e*P	**Pn**	**04 13 26.6**	**-0.3**
BUKP				*e*S	**Sn**	**04 13 54.8**	**+2.1**
KCP	**Kidapawan**	**2.29**	**250**	⇓*i*P	**Pn**	**04 13 27.6**	**-1.0**
KCP				*i* S	**Sn**	**04 13 55.9**	**+0.4**
SCPH	**Surigao**	**2.62**	**318**	*e*P	**Pn**	**04 13 33.2**	**0.0**
SCPH				*e*S	**Sn**	**04 13 50.2**	**-14**
PAGZ	**Pagadian**	**3.83**	**271**	*e*P	**Pn**	**04 13 49.8**	**0.0**
TBP	**Tagbilaran**	**3.84**	**299**	*e*P	**Pn**	**04 13 49.9**	**+0.1**
TBP				*e*S	**Sn**	**04 14 34.8**	**+1.1**
SNPH	**Sibulan**	**4.25**	**291**	*e*P	**Pn**	**04 13 56.7**	**+1.2**
GUMO	**Guam**	**18.23**	**70**	LR	LR	04 23 04.5	
	comp=Z,34nm,18.6s,baz=151,slow=33						
KAKA	**Kakadu**	**21.03**	**166**	*e*P	**P**	**04 17 33.7**	**+0.9**
	25nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**25.79**	**184**	P	**P**	**04 18 20.1**	**+0.6**
	2.8nm,0.5s,mb4.1,baz=358,slow=8.4,SNR=18						
WRA	**Warramunga Arr**	**28.44**	**166**	P	**P**	**04 18 43.4**	**+0.1**
	0.4nm,0.7s,mb3.2,baz=345,slow=9.6,SNR=3.9						
KSRS	**Korea Array**	**29.52**	**1**	P	**P**	**04 18 52.6**	**-0.1**
	1.0nm,0.5s,mb3.8,baz=174,slow=8.8,SNR=5.6						
ASAR	**Alice Springs**	**31.95**	**168**	P	**P**	**04 19 15.1**	**+0.8**
	0.5nm,0.6s,mb3.5,baz=345,slow=7.3,SNR=7.5						
ASAR				PcP	PcP	04 22 04.4	+0.7
	0.5nm,0.7s,baz=331,slow=2.2,SNR=3.8						
SONM	**Songino Array**	**43.65**	**340**	P	**P**	**04 20 52.4**	**-0.3**
	0.2nm,0.4s,mb3.2,baz=134,slow=6.2,SNR=2.3						
MK31	**Makanchi Array**	**54.57**	**323**	*e*P	**P**	**04 22 16.6**	**+0.4**
MKAR	**Makanchi Array**	**54.57**	**323**	P	**P**	**04 22 16.7**	**+0.5**
	2.8nm,0.7s,mb4.4,baz=124,slow=8.3,SNR=32						
MKAR				PcP	PcP	04 23 19.9	+1.0
	1.3nm,0.8s,baz=131,slow=4.0,SNR=4.9						
MKAR	**Makanchi Array**	**54.57**	**323**	P	**P**	**04 22 16.7**	**+0.5**
MKAR				PcP	PcP	04 23 19.9	+1.0
ZALV	**Zalesovo Beam**	**57.24**	**332**	P	**P**	**04 22 34.5**	**-0.7**
	1.6nm,0.7s,mb4.2,baz=113,slow=6.9,SNR=5.6						
ZALV	**Zalesovo Beam**	**57.24**	**332**	P	**P**	**04 22 34.5**	**-0.7**
EKS2	**Erkin-Say**	**58.26**	**316**	*e*P	**P**	**04 22 41.7**	**-0.9**
	1.4nm,0.8s,mb4.0						
KURK	**Kurchatov**	**58.64**	**326**	*e*P	**P**	**04 22 45.0**	**-0.1**
	3.1nm,0.8s,mb4.4						
KURK				*e*pP	pP	04 22 58.0	-1.2
BVAR	**Borovoye Array**	**64.23**	**326**	P	**P**	**04 23 22.6**	**-0.2**
	1.4nm,0.6s,mb4.1,baz=116,slow=10,SNR=7.0						
BRVK	**Borovoye**	**64.30**	**326**	*e*P	**P**	**04 23 22.8**	**-0.5**
	2.7nm,0.7s,mb4.4						
ABKAR	**Akbulak array**	**69.37**	**320**	*e*P	**P**	**04 23 55.3**	**-0.3**
	0.4nm,0.6s,mb3.5						
AKTK	**Aktyubinsk**	**70.83**	**321**	P	**P**	**04 24 03.5**	**-1.0**
AKTO	**Aktyubinsk**	**70.83**	**321**	P	**P**	**04 24 03.5**	**-1.0**
	0.5nm,0.3s,mb3.9,baz=80,slow=11,SNR=3.4						
CASY	**Casey**	**74.90**	**187**	*e*P	**P**	**04 24 28.9**	**+0.7**
	4.1nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**81.22**	**26**	P	**P**	**04 25 05.6**	**+2.3**
	0.4nm,0.6s,mb3.5,baz=237,slow=5.1,SNR=11						
ARCES	**ARCESS Array B**	**86.83**	**340**	P	**P**	**04 25 31.1**	**-0.7**
	0.9nm,0.6s,mb4.2,baz=88,slow=5.6,SNR=7.6						
MMAI	**Mount Meron Ar**	**87.35**	**303**	P	**P**	**04 25 35.7**	**+0.6**
	0.7nm,0.2s,mb4.5,baz=7.9,slow=14,SNR=3.0						
BRTR	**Keskin Array B**	**87.84**	**310**	P	**P**	**04 25 36.9**	**-0.5**
	0.4nm,0.6s,mb3.8,baz=112,slow=3.9,SNR=2.7						

*NEIC **12** 04:23:26.7±7.8, 8°.54S×149°.94E, h90km±66km, mb3.9/1, Error ellipse: s-maj=38.1km s-min=19.5km az=72.0*
*IDC **12** 04:23:34.0±4.0, 8°.59S×149°.68E, h152km±35km, mb3.8/7, mb1 4.0/8, mb1mx3.7/16, mbtmp3.8/8, Error ellipse: s-maj=32.2km s-min=14.7km az=124.0*
*ISCJB **12** 04:23:36.5±4.2, 8°.8S±0°.2×149°.7E±0°.2, h188km±37km, mb3.9/8, Error ellipse: s-maj=35.6km s-min=25.0km az=175.1*

ISC 12 04:23:35.2±2.5, 8°.7S±0°.1×149°.8E±0°.2, h165km±22km, n18, σ0°83/17, mb3.9/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTSU	**Mount Surprise**	**10.81**	**209**	*e*P	**Pn**	**04 26 06.7**	**+1.2**
	17nm,0.5s						
EIDS	**Eidsvold**	**16.64**	**176**	*e*P	**Pn**	**04 27 27.8**	**+8.8**
QLP	**Quilpie**	**18.57**	**196**	*e*P	**P**	**04 27 40.0**	**+0.3**
WB2	**Warramunga Arr**	**18.68**	**232**	*e*P	**P**	**04 27 40.0**	**-0.9**
WRA	**Warramunga Arr**	**18.69**	**232**	P	**P**	**04 27 40.5**	**-0.5**
	1.2nm,0.3s,baz=57,slow=11,SNR=102						
WRA				PcP	PcP	04 32 02.9	+0.7
	0.1nm,0.3s,baz=56,slow=1.8,SNR=4.9						
ASAR	**Alice Springs**	**21.30**	**224**	P	**P**	**04 28 08.4**	**-0.5**
	3.3nm,0.4s,mb4.0,baz=56,slow=9.0,SNR=54						
ASAR				S	**S**	**04 31 56.5**	**+0.5**
	1.5nm,0.9s,baz=41,slow=18,SNR=8.3						
CMSA	**Cobar Meteorol**	**23.07**	**189**	*e*P	**P**	**04 28 25.2**	**-1.0**
STKA	**Stephens Creek**	**24.31**	**197**	P	**P**	**04 28 37.6**	**0.0**
	3.7nm,0.6s,mb4.1,baz=21,slow=14,SNR=6.4						
FITZ	**Fitzroy Crossi**	**25.27**	**246**	P	**P**	**04 28 46.2**	**-0.3**
	10nm,0.5s,mb4.7

BOAC				*e*S	**Sn**	**04 54 04.6**	**-0.7**
BUSP	**Coron**	**1.80**	**185**	*e*P	**Pn**	**04 53 50.5**	**+0.3**
BUSP				*e*S	**Sn**	**04 54 11.4**	**-1.0**
SCZP	**Santa Cruz**	**2.00**	**348**	*e*P	**Pn**	**04 53 52.6**	**-0.2**
OTRP	**Odiongan**	**2.17**	**131**	*e*P	**Pn**	**04 53 57.5**	**+2.4**
BALP	**Baler**	**2.26**	**32**	*e*P	**Pn**	**04 53 55.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**21.07**	**286**	P	**P**	**04 57 59.5**	**+1.1**
	0.6nm,0.3s,mb3.4,baz=89,slow=7.7,SNR=4.7						
SONM	**Songino Array**	**35.86**	**344**	P	**P**	**05 00 12.4**	**-0.1**
	1.1nm,0.6s,mb4.0,baz=163,slow=8.9,SNR=7.7						
WRA	**Warramunga Arr**	**36.25**	**157**	P	**P**	**05 00 15.7**	**-0.4**
	0.2nm,0.8s,mb3.1,baz=340,slow=9.3,SNR=5.6						
WRA				pP	pP	05 00 34.4	-1.2
	0.3nm,0.7s,baz=337,slow=9.3,SNR=4.9						
ASAR	**Alice Springs**	**39.53**	**160**	P	**P**	**05 00 43.4**	**-0.2**
	0.3nm,0.5s,mb3.3,baz=340,slow=8.0,SNR=4.5						
MK31	**Makanchi Array**	**45.74**	**324**	*e*P	**P**	**05 01 33.5**	**-0.2**
MKAR	**Makanchi Array**	**45.74**	**324**	P	**P**	**05 01 32.9**	**-0.8**
	0.2nm,0.5s,mb3.1,baz=139,slow=6.8,SNR=3.2						
KURK	**Kurchatov**	**49.91**	**326**	*e*P	**P**	**05 02 06.1**	**+0.3**
	0.6nm,0.4s,mb3.9						
ABKAR	**Akbulak array**	**60.43**	**319**	*e*P	**P**	**05 03 21.7**	**+0.1**
	0.7nm,0.6s,mb3.9						

BJI 12 04:57:48.6, 30.′65N×103.′51E, h17km, ML3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**5.69**	**52**	Pg	Pb	04 59 26.4	-1.0
XAN				smax			
	comp=N,50nm,0.7s						
XAN				smax			
	comp=E,25nm,0.8s						

*ISCJB **12** 05:12:34.9±0.6, 44.′07N±0.′07×144.′41E±0.′08, h205km±4km, mb3.4/5, Error ellipse: s-maj=11.7km s-min=9.5km az=17.4*
*JMA **12** 05:12:36.4±0.3, 44.′11N×144.′38E, h198km±2km, M3.0*
*IDC **12** 05:12:37.6±2.4, 44.′65N×144.′33E, h186km±29km, mb3.3/5, mb1 3.4/5, mb1mx3.1/22, mbtmp3.3/5, Error ellipse: s-maj=126.8km s-min=22.1km az=167.0*
ISC 12 05:12:35.9±0.6, 44.′03N±0.′07×144.′40E±0.′08, h201km±4km, n20, σ0s70/30, mb3.4/5, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTKR	**Abashiri--Toko**	**0.36**	**261**	P	**Pn**	**05 13 03.0**	**+0.3**
JTKR				*e*S	**Sn**	**05 13 22.9**	**-0.5**
JNK	**Nakash**	**0.50**	**153**	P	**Pn**	**05 13 03.9**	**+0.7**
JRA	**Rausu**	**0.53**	**100**	*e*S	**Sn**	**05 13 25.3**	**+0.9**
JMP	**Maruseppu**	**0.75**	**269**	P	**Pn**	**05 13 04.4**	**+0.1**
JMP				*e*S	**Sn**	**05 13 25.5**	**-0.7**
JAK	**Akkeshi**	**1.06**	**168**	P	**Pn**	**05 13 06.7**	**+0.5**
JAK				*e*S	**Sn**	**05 13 29.9**	**+0.2**
NEM2	**Nemuro 2**	**1.18**	**124**	P	**Pn**	**05 13 07.0**	**-0.1**
NEM2				*e*S	**Sn**	**05 13 30.2**	**-1.0**
JOB	**Onbets**	**1.20**	**200**	P	**Pn**	**05 13 08.2**	**+0.9**
JOB				*e*S	**Sn**	**05 13 32.2**	**+0.7**
JKK2	**Kamakawa 2**	**1.21**	**263**	P	**Pn**	**05 13 07.7**	**+0.4**
JKK2				*e*S	**Sn**	**05 13 31.2**	**-0.3**
ASAJ	**Asahikawa**	**1.30**	**274**	P	**Pn**	**05 13 08.5**	**+0.5**
	2.3nm,0.3s,baz=83,slow=9.6,SNR=20						
ASAJ				S	**Sn**	**05 13 32.9**	**-0.1**
	1.7nm,0.3s,baz=134,slow=33,SNR=13						
ASAJ	**Asahikawa**	**1.30**	**274**	P	**Pn**	**05 13 08.5**	**+0.5**
ASAJ				*e*S	**Sn**	**05 13 33.0**	**+0.1**
JFR	**Furan**	**1.57**	**237**	P	**Pn**	**05 13 11.6**	**+1.2**
JSE	**Soyaes**	**1.60**	**306**	P	**Pn**	**05 13 09.9**	**-0.7**
JCH	**Churui**	**1.61**	**209**	P	**Pn**	**05 13 11.0**	**+0.3**
JCH				*e*S	**Sn**	**05 13 36.4**	**-1.3**
JNBK	**Urakawa-nobuka**	**2.13**	**215**	P	**Pn**	**05 13 16.1**	**+0.2**
JNBK				*e*S	**Sn**	**05 13 45.5**	**-1.4**
JWK2	**Keihoku**	**2.20**	**307**	P	**Pn**	**05 13 16.6**	**0.0**
SONM	**Songino Array**	**26.52**	**292**	P	**P**	**05 17 56.0**	**+1.3**
	1.4nm,0.7s,mb3.7,baz=79,slow=7.9,SNR=7.2						
ILAR	**Eielson Array**	**42.44**	**36**	P	**P**	**05 20 09.7**	**-0.7**
	0.5nm,0.8s,mb3.0,baz=260,slow=6.8,SNR=5.7						
MKAR	**Makanchi Array**	**42.69**	**296**	P	**P**	**05 20 12.5**	**-0.1**
	0.3nm,0.4s,mb3.1,baz=83,slow=9.5,SNR=3.5						
INK	**Inuvik**	**47.16**	**30**	P	**P**	**05 20 46.7**	**-0.8**
	0.7nm,0.6s,mb3.2,baz=296,slow=6.1,SNR=5.4						
FINES	**FINESS Array B**	**63.71**	**332**	P	**P**	**05 22 45.0**	**-0.5**
	1.5nm,0.6s,mb3.8,baz=62,slow=6.5,SNR=4.6						

*NEIC **12** 05:15:15.2, 32.′09S×70.′33W, h125km, MD3.6(GUC), After GUC.*
GUC 12 05:15:15.2±0.9, 32.′09S×70.′33W, h125km±5km, MD3.6, ML3.8, 14C-10D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.63**	**200**	⇑*i*P	Pn	05 15 34.3	-0.2
JACH				*i* S	Sn	05 15 49.1	0.0
JACH	**Jahuel**	**0.63**	**200**	⇑*i*P	Pn	05 15 34.3	-0.2
JACH				*i* S	Sn	05 15 49.1	0.0
CHNG	**Los Chungos**	**1.01**	**282**	⇑*i*P	Pn	05 15 34.8	-2.9
CHNG				*i* S	Sn	05 15 52.4	-2.5
CHNG				AML	AML	05 15 58.6	
	comp=E,880nm,0.6s						
ROCH	**El Roble**	**1.05**	**213**	⇑*i*P	Pn	05 15 38.7	+0.6
ROCH				*i* S	Sn	05 15 56.7	+1.3
ROCH	**El Roble**	**1.05**	**213**	⇑*i*P	Pn	05 15 38.7	+0.6
ROCH				⇑*i*P		05 15 38.8	
ROCH				*i* S	Sn	05 15 56.5	+1.0
ROCH				*i* S	Sn	05 15 56.7	+1.3
ROCH				AML	AML	05 15 58.8	
	comp=N,3μm,0.4s						
CMCH	**Combarbala**	**1.08**	**328**	⇓*i*P	Pn	05 15 38.6	+0.2
CMCH				*i* S	Sn	05 15 56.6	+0.6
CMCH	**Combarbala**	**1.08**	**328**	⇓*i*P	Pn	05 15 38.6	+0.2
CMCH				*i* S	Sn	05 15 56.6	+0.6
CMCH				AML	AML	05 15 58.7	
	comp=N,3μm,0.9s						
PEL	**Peldehue**	**1.09**	**196**	⇑*i*P	Pn	05 15 38.5	0.0
PEL				*i* S	Sn	05 15 56.2	0.0
PEL				AML	AML	05 15 57.4	
	comp=E,4μm,0.4s						
FCH	**Farellones**	**1.23**	**178**	⇓*i*P	Pn	05 15 39.8	-0.1
FCH				*i* S	Sn	05 15 58.7	-0.2
FCH				AML	AML	05 15 59.7	
	comp=E,2μm,0.3s						
CLCH	**Cerro Calan**	**1.31**	**187**	⇓*i*P	Pn	05 15 41.1	+0.3
CLCH				*i* S	Sn	05 16 00.9	+0.5
CLCH				AML	AML	05 16 04.7	
	comp=E,2μm,0.3s						
LACH	**Col Las Americ**	**1.36**	**187**	*e*P	Pn	05 15 41.6	+0.2
LACH				*i* S	Sn	05 16 01.6	+0.2
LACH				AML	AML	05 16 06.4	
	comp=N,942nm,0.3s						
SAN	**Santiago**	**1.38**	**191**	*e*P	Pn	05 15 41.8	+0.2
SAN				*i* S	Sn	05 16 02.6	+0.9
SAN	**Santiago**	**1.38**	**191**	*e*P	Pn	05 15 41.8	+0.2
SAN				*i* S	Sn	05 16 02.6	+0.9
SAN				AML	AML	05 16 02.9	
	comp=N,1μm,0.5s						
FSR	**Penalolen**	**1.39**	**187**	*e*P	Pn	05 15 42.2	+0.5
FSR				*i* S	Sn	05 16 02.5	+0.6
FSR	**Penalolen**	**1.39**	**187**	*e*P	Pn	05 15 42.2	+0.5
FSR				*i* S	Sn	05 16 02.5	+0.6
FSR				AML	AML	05 16 05.0	
	comp=N,530nm,0.3s						
ANTU	**Antumapu**	**1.49**	**190**	⇓*i*P	Pn	05 15 43.2	+0.4
ANTU				*i* S	Sn	05 16 04.5	+0.6
ANTU	**Antumapu**	**1.49**	**190**	⇓*i*P	Pn	05 15 43.2	+0.4
ANTU				*i* S	Sn	05 16 04.5	+0.6
ANTU				AML	AML	05 16 05.0	
	comp=N,4μm,0.4s						
PCH	**Pirque**	**1.53**	**186**	⇑*i*P	Pn	05 15 43.6	+0.4
PCH				*i* S	Sn	05 16 05.5	+0.7
PCH	**Pirque**	**1.53**	**186**	⇑*i*P	Pn	05 15 43.6	+0.4
PCH				*i* S	Sn	05 16 05.5	+0.7
SJCH	**San Jose de Ma**	**1.54**	**181**	*e*P	Pn	05 15 43.8	+0.3
SJCH				*i* S	Sn	05 16 05.9	+0.9
SJCH	**San Jose de Ma**	**1.54**	**181**	*e*P	Pn	05 15 43.8	+0.3
SJCH				*i* S	Sn	05 16 05.9	+0.9
SJCH				AML	AML	05 16 06.9	
	comp=N,728nm,0.5s						
TACH	**Talagante**	**1.64**	**198**	⇑*i*P	Pn	05 15 44.8	+0.3
TACH				*i* S	Sn	05 16 07.2	+0.3
TACH	**Talagante**	**1.64**	**198**	⇑*i*P	Pn	05 15 44.8	+0.3
TACH				*i* S	Sn	05 16 07.2	+0.3
OVCH	**Ovalle**	**1.66**	**333**	*e*P	Pn	05 15 44.9	+0.1
OVCH				*e*S	Sn	05 16 07.9	+0.5
OVCH	**Ovalle**	**1.66**	**333**	*e*P	Pn	05 15 44.9	+0.1
OVCH				*e*S	Sn	05 16 07.9	+0.5
OVCH				AML	AML	05 16 10.1	
	comp=N,831nm,0.3s						
LMEL	**Las Melosas**	**1.75**	**176**	⇓*i*P	Pn	05 15 46.4	+0.5
LMEL				*i* S	Sn	05 16 10.4	+1.0
LMEL	**Las Melosas**	**1.75**	**176**	⇓*i*P	Pn	05 15 46.4	+0.5
LMEL				*i* S	Sn	05 16 10.4	+1.0
LMEL				AML	AML	05 16 16.3	
	comp=N,1μm,0.2s						
CHCH	**Chadas Angostu**	**1.85**	**188**	*e*P	Pn	05 15 47.6	+0.5
CHCH				*e*S	Sn	05 16 11.9	+0.4
CHCH	**Chadas Angostu**	**1.85**	**188**	*e*P	Pn	05 15 47.6	+0.5
CHCH				*e*S	Sn	05 16 11.9	+0.4
TLL	**Tololo Astrono**	**1.96**	**348**	⇑*i*P	Pn	05 15 42.9	-5.5
TLL				*i* S	Sn	05 16 09.0	-4.9
TLL				AML	AML	05 16 15.4	
	comp=N,605nm,0.5s						
CACH	**El Canelo**	**2.03**	**186**	⇓*i*P	Pn	05 15 50.5	+1.3
CACH				*i* S	Sn	05 16 17.4	+2.1
CACH	**El Canelo**	**2.03**	**186**	⇓*i*P	Pn	05 15 50.5	+1.3
CACH				*i* S	Sn	05 16 17.4	+2.1
LNV	**Longovilo**	**2.07**	**206**	⇑*i*P	Pn	05 15 49.9	+0.2
LNV				*i* S	Sn	05 16 16.0	-0.1
LNV	**Longovilo**	**2.07**	**206**	⇑*i*P	Pn	05 15 49.9	+0.2
LNV				*i* S	Sn	05 16 16.0	-0.1
LCO	**Las Campanas**	**3.09**	**354**	*e*P	Pn	05 16 03.2	+0.4
LCO				*i* S	Sn	05 16 39.4	-0.2
LCO	**Las Campanas**	**3.09**	**354**	*e*P	Pn	05 16 03.2	+0.4
LCO				*i* S	Sn	05 16 39.4	-0.2

*NEIC **12** 05:23:12.1, 37.′75N×17.′19W, h0km, MG3.9(MDD), After MDD.*
*INMG **12** 05:23:15.2±2.2, 37.′40N×17.′45W, h10km, ML3.1, Error ellipse: s-maj=13.8km s-min=4.3km az=119.0*
*CSEM **12** 05:23:18.2±0.4, 37.′81N×16.′63W, h10km, ML4.0/14, Error ellipse: s-maj=8.7km s-min=6.3km az=155.0*
*MDD **12** 05:23:19.6±3.4, 37.′86N×16.′39W, h0km, mb3.8/9, Error ellipse: s-maj=36.8km s-min=27.9km az=159.0, PRIMO*
ISC 12 05:23:13.1±1.1, 37.′42N±0.′07×16.′83W±0.′07, h10km, n127, σ1s62/199, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPS	**Porto Santo**	**4.38**	**175**	*e*Sn	**Sn**	**05 25 02.8**	**-7.8**
PMPS				A		05 25 03.0	
	28nm,0.4s						
PMPS	**Porto Santo**	**4.38**	**175**	Sn	**Sn**	**05 25 02.8**	**-7.8**
	14nm,0.4s						
PMPS	**Porto Santo**	**4.38**	**175**	Sn	**Sn**	**05 25 02.8**	**-7.8**
	14nm,0.4s						
PMAR	**Madeira**	**4.69**	**181**	*e*Pn	**Pn**	**05 24 22.6**	**-1.3**
PMAR				*e*Sn	**Sn**	**05 25 08.4**	**-10**
PMAR				A		05 25 10.0	
	96nm,0.2s						
PMAR	**Madeira**	**4.69**	**181**	Pn	**Pn**	**05 24 22.6**	**-1.3**
PMAR				Sn	**Sn**	**05 25 08.4**	**-10**
	48nm,0.2s						
PMAR	**Madeira**	**4.69**	**181**	Pn	**Pn**	**05 24 22.6**	**-1.3**
PMAR				Sn	**Sn**	**05 25 08.4**	**-10**
	48nm,0.2s						
FUL	**Funchal**	**4.78**	**181**	*e*Pn	**Pn**	**05 24 20.9**	**-4.3**
FUL				*e*Sn	**Sn**	**05 25 10.2**	**-10**
FUL				A		05 25 16.2	
	60nm,0.2s						
FUL	**Funchal**	**4.78**	**181**	Pn	**Pn**	**05 24 20.9**	**-4.3**
FUL				Sn	**Sn**	**05 25 10.2**	**-10**
	30nm,0.2s						
FUL	**Funchal**	**4.78**	**181**	Pn	**Pn**	**05 24 20.9**	**-4.3**
FUL				Sn	**Sn**	**05 25 10.2**	**-10**
	30nm,0.2s						
PMAFR	**Mafra**	**6.14**	**73**	*e*Sn	**Sn**	**05 25 55.4**	**+1.3**
PMAFR				A		05 26 01.8	
	30nm,0.3s						
PMAFR	**Mafra**	**6.14**	**73**	Sn	**Sn**	**05 25 55.3**	**+1.2**
	46nm,0.3s,SNR=8.8						
PMAFR	**Mafra**	**6.14**	**73**	Sn	**Sn**	**05 25 55.3**	**+1.2**
	46nm,0.3s,SNR=8.8						
PMAFR	**Mafra**	**6.14**	**73**	S	**Sn**	**05 25 55.3**	**+1.2**
	46nm,0.3s,SNR=8.8						
PFVI	**Vila Bisbo**	**6.39**	**90**	*e*Pn	**Pn**	**05 24 49.8**	**+2.5**
PFVI				*e*Sn	**Sn**	**05 26 01.0**	**+0.7**
PFVI				A		05 26 13.1	
	12nm,1.1s						
PFVI	**Vila Bisbo**	**6.39**	**90**	P	**Pn**	**05 24 49.7**	**+2.4**
PFVI				S	**Sn**	**05 26 01.1**	**+0.8**
PFVI	**Vila Bisbo**	**6.39**	**90**	Pn	**Pn**	**05 24 49.7**	**+2.4**
	1.1nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**05 26 01.1**	**+0.8**
	11nm,0.3s,SNR=7.9						
PFVI	**Vila Bisbo**	**6.39**	**90**	Pn	**Pn**	**05 24 49.7**	**+2.4**
	1.1nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**05 26 01.1**	**+0.8**
	11nm,0.3s,SNR=7.9						
PFVI	**Vila Bisbo**	**6.39**	**90**	*e*Pn	**Pn**	**05 24 49.8**	**+2.5**
PFVI				S	**Sn**	**05 26 01.1**	**+0.8**
	11nm,0.3s,SNR=7.9						
PTEO	**Sao Teotonio**	**6.45**	**86**	*e*Pn	**Pn**	**05 24 50.8**	**+2.7**
PTEO				*e*Sn	**Sn**	**05 26 01.8**	**+0.1**
PTEO				A		05 26 07.7	
	27nm,0.7s						
PTEO	**Sao Teotonio**	**6.45**	**86**	Pn	**Pn**	**05 24 50.8**	**+2.7**
PTEO				Sn	**Sn**	**05 26 01.8**	**+0.1**
	13nm,0.7s						
PTEO	**Sao Teotonio**	**6.45**	**86**	Pn	**Pn**	**05 24 50.8**	**+2.7**
PTEO				Sn	**Sn**	**05 26 01.8**	**+0.1**
	13nm,0.7s						
PTEO	**Sao Teotonio**	**6.45**	**86**	*e*Pn	**Pn**	**05 24 50.8**	**+2.7**
PTEO				*e*Sn	**Sn**	**05 26 01.8**	**+0.1**
	27nm,0.7s						
MOE	**Montemor**	**6.79**	**78**	*e*Sn	**Sn**	**05 26 11.9**	**+1.8**
MOE	**Montemor**	**6.79**	**78**	Sn	**Sn**	**05 26 11.9**	**+1.8**
MOE	**Montemor**	**6.79**	**78**	Sn	**Sn**	**05 26 11.9**	**+1.8**
MOE	**Montemor**	**6.79**	**78**	*e*Sn	**Sn**	**05 26 11.9**	**+1.8**
PTOM	**Tomar**	**6.96**	**69**	*e*Sn	**Sn**	**05 26 13.3**	**-0.9**
PTOM				A		05 26 17.4	
	14nm,0.5s						
PTOM	**Tomar**	**6.96**	**69**	Sn	**Sn**	**05 26 13.3**	**-0.9**
	7.2nm,0.5s						
PTOM	**Tomar**	**6.96**	**69**	Sn	**Sn**	**05 26 13.3**	**-0.9**
	7.2nm,0.5s						
PTOM	**Tomar**	**6.96**	**69**	*e*Sn	**Sn**	**05 26 13.3**	**-0.9**
	14nm,0.5s						
PCVE	**Castro Verde**	**6.99**	**86**	*e*Pn	**Pn**	**05 24 58.0**	**+2.5**
PCVE				*e*Sn	**Sn**	**05 26 15.5**	**+0.4**
PCVE				A		05 26 28.7	
	7.8nm,0.7s						
PCVE	**Castro Verde**	**6.99**	**86**	Pn	**Pn**	**05 24 58.0**	**+2.5**
PCVE				Sn	**Sn**	**05 26 15.5**	**+0.4**
	7.8nm,0.7s						
PCVE	**Castro Verde**	**6.99**	**86**	Pn	**Pn**	**05 24 58.0**	**+2.5**
PCVE				Sn	**Sn**	**05 26 15.5**	**+0.4**
	7.8nm,0.7s						
PCVE	**Castro Verde**	**6.99**	**86**	*e*Pn	**Pn**	**05 24 58.0**	**+2.5**
PCVE				*e*Sn	**Sn**	**05 26 15.5**	**+0.4**
	7.8nm,0.7s						
EVO	**Evora**	**7.05**	**78**	*e*Sn	**Sn**	**05 26 16.7**	**+0.1**
EVO				A		05 26 24.6	
	11nm,0.3s						
EVO	**Evora**	**7.05**	**78**	Sn	**Sn**	**05 26 16.7**	**+0.1**
	11nm,0.3s						
EVO	**Evora**	**7.05**	**78**	Sn	**Sn**	**05 26 16.7**	**+0.1**
	11nm,0.3s						
EVO	**Evora**	**7.05**	**78**	*e*Sn	**Sn**	**05 26 16.7**	**+0.1**
	11nm,0.3s						
PBDV	**Barranco-do-Ve**	**7.09**	**89**	*e*Pn	**Pn**	**05 24 59.1**	**+2.2**
PBDV				*e*Sn	**Sn**	**05 26 20.0**	**+2.4**
PBDV				A		05 26 24.9	
	7.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**7.09**	**89**	Pn	**Pn**	**05 24 59.1**	**+2.2**
PBDV				Sn	**Sn**	**05 26 20.0**	**+2.4**
	7.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**7.09**	**89**	Pn	**Pn**	**05 24 59.1**	**+2.2**
PBDV				Sn	**Sn**	**05 26 20.0**	**+2.4**
	7.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**7.09**	**89**	*e*Pn	**Pn**	**05 24 59.1**	**+2.2**
PBDV				*e*Sn	**Sn**	**05 26 20.0**	**+2.4**
	7.3nm,0.5s						
PBEJ	**Beja**	**7.13**	**82**	*e*Sn	**Sn**	**05 26 19.4**	**+0.9**
PBEJ				A		05 26 23.9	
	5.7nm,0.2s						
PBEJ	**Beja**	**7.13**	**82**	Sn	**Sn**	**05 26 19.4**	**+0.9**
	2.8nm,0.2s						
PBEJ	**Beja**	**7.13**	**82**	Sn	**Sn**	**05 26 19.4**	**+0.9**
	2.8nm,0.2s						
PBEJ	**Beja**	**7.13**	**82**	*e*Sn	**Sn**	**05 26 19.4**	**+0.9**
	5.7nm,0.2s						
PVAQ	**Vaqueiros**	**7.25**	**87**	*e*Pn	**Pn**	**05 25 02.1**	**+3.0**
PVAQ				*e*Sn	**Sn**	**05 26 21.4**	**-0.1**
PVAQ				A		05 26 29.6	
	6.6nm,0.1s						
PVAQ	**Vaqueiros**	**7.25**	**87**	Pn	**Pn**	**05 25 02.1**	**+3.0**
PVAQ				Sn	**Sn**	**05 26 21.4**	**-0.1**
	6.6nm,0.1s						
PVAQ	**Vaqueiros**	**7.25**	**87**	Pn	**Pn**	**05 25 02.1**	**+3.0**
PVAQ				Sn	**Sn**	**05 26 21.4**	**-0.1**
	6.6nm,0.1s						
PVAQ	**Vaqueiros**	**7.25**	**87**	*e*Pn	**Pn**	**05 25 02.1**	**+3.0**
PVAQ				*e*Sn	**Sn**	**05 26 21.4**	**-0.1**
	6.6nm,0.1s						
PESTR	**Estremoz**	**7.42**	**76**	*e*Sn	**Sn**	**05 26 25.4**	**-0.3**
PESTR				A		05 26 28.9	
	5.4nm,0.4s						
PESTR	**Estremoz**	**7.42**	**76**	Sn	**Sn**	**05 26 25.4**	**-0.3**
	5.4nm,0.4s						
PESTR	**Estremoz**	**7.42**	**76**	Sn	**Sn**	**05 26 25.4**	**-0.3**
	5.4nm,0.4s						
PESTR	**Estremoz**	**7.42**	**76**	*e*Sn	**Sn**	**05 26 25.4**	**-0.3**
	5.4nm,0.4s						
EGRO	**El Granado**	**7.43**	**86**	P	**Pn**	**05 25 04.6**	**+3.0**
EGRO				S	**Sn**	**05 26 27.0**	**+1.0**
EGRO	**El Granado**	**7.43**	**86**	Pn	**Pn**	**05 24 57.3**	**-4.3**
	0.4nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**05 26 25.7**	**-0.3**
	3.4nm,0.1s,SNR=6.4						
EGRO	**El Granado**	**7.43**	**86**	Pn	**Pn**	**05 24 57.3**	**-4.3**
	0.4nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**05 26 25.7**	**-0.3**
	3.4nm,0.1s,SNR=6.4						
EGRO	**El Granado**	**7.43**	**86**	P	**Pn**	**05 25 04.6**	**+3.0**
	0.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**05 26 27.0**	**+1.0**
	3.4nm,0.1s,SNR=6.4						
PMRV	**Marv??o**	**7.67**	**72**	*e*Pn	**Pn**	**05 25 06.5**	**+1.6**
PMRV				*e*Sn	**Sn**	**05 26 31.1**	**-0.8**
PMRV				A		05 26 35.2	
	8.8nm,0.3s						
PMRV	**Marv??o**	**7.67**	**72**	Pn	**Pn**	**05 25 06.5**	**+1.6**
PMRV				Sn	**Sn**	**05 26 31.1**	**-0.8**
	8.8nm,0.3s						
PMRV	**Marv??o**	**7.67**	**72**	Pn	**Pn**	**05 25 06.5**	**+1.6**
PMRV				Sn	**Sn**	**05 26 31.1**	**-0.8**
	8.8nm,0.3s						
PMRV	**Marv??o**	**7.67**	**72**	*e*Pn	**Pn**	**05 25 06.5**	**+1.6**
PMRV				*e*Sn	**Sn**	**05 26 31.1**	**-0.8**
	8.8nm,0.3s						
PVIS	**Viseu**	**7.69**	**62**	*e*Sn	**Sn**	**05 26 28.0**	**-4.2**
PVIS				A		05 26 40.4	
	4.6nm,0.1s						
PVIS	**Viseu**	**7.69**	**62**	Sn	**Sn**	**05 26 28.0**	**-4.2**
	2.3nm,0.1s						
PVIS	**Viseu**	**7.69**	**62**	Sn	**Sn**	**05 26 28.0**	**-4.2**
	2.3nm,0.1s						
PVIS	**Viseu**	**7.69**	**62**	*e*Sn	**Sn**	**05 26 28.0**	**-4.2**
	4.6nm,0.1s						
PCBR	**Castelo Branco**	**7.71**	**69**	*e*Sn	**Sn**	**05 26 32.0**	**-0.7**
PCBR	**Castelo Branco**	**7.71**	**69**	Sn	**Sn**	**05 26 32.0**	**-0.7**
PCBR	**Castelo Branco**	**7.71**	**69**	Sn	**Sn**	**05 26 32.0**	**-0.7**
PCBR	**Castelo Branco**	**7.71**	**69**	*e*Sn	**Sn**	**05 26 32.0**	**-0.7**
PBAR	**Barrancos**	**7.79**	**81**	*e*Pn	**Pn**	**05 25 09.7**	**+3.2**
PBAR				*e*Sn	**Sn**	**05 26 33.6**	**-1.1**
PBAR				A		05 26 42.3	
	7.2nm,0.5s						
PBAR	**Barrancos**	**7.79**	**81**	Pn	**Pn**	**05 25 09.7**	**+3.2**
PBAR				Sn	**Sn**	**05 26 33.6**	**-1.1**
	7.2nm,0.5s						
PBAR	**Barrancos**	**7.79**	**81**	Pn	**Pn**	**05 25 09.7**	**+3.2**
PBAR				Sn	**Sn**	**05 26 33.6**	**-1.1**
	7.2nm,0.5s						
PBAR	**Barrancos**	**7.79**	**81**	*e*Pn	**Pn**	**05 25 09.7**	**+3.2**
PBAR				*e*Sn	**Sn**	**05 26 33.6**	**-1.1**
	7.2nm,0.5s						
MTE	**Manteigas**	**7.83**	**65**	*e*Sn	**Sn**	**05 26 34.3**	**-1.3**
MTE	**Manteigas**	**7.83**	**65**	Sn	**Sn**	**05 26 34.3**	**-1.3**
MTE	**Manteigas**	**7.83**	**65**	Sn	**Sn**	**05 26 34.3**	**-1.3**
MTE	**Manteigas**	**7.83**	**65**	*e*Sn	**Sn**	**05 26 34.3**	**-1.3**
EBAD	**Badajoz**	**7.86**	**77**	P	**Pn**	**05 25 09.6**	**+2.2**
EBAD				S	**Sn**	**05 26 35.4**	**-0.9**
EBAD	**Badajoz**	**7.86**	**77**	Pn	**Pn**	**05 25 09.6**	**+2.2**
	0.1nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**05 26 35.4**	**-0.9**
	12nm

MVO				S	Sn	05 26 48.1	-3.3
	2.9nm,0.2s,SNR=5.7							
MVO				*e*Sn	Sn	05 26 49.8	-1.6
	6.9nm,0.5s							
EPLA	**Plasencia**	**8.80**	**69**	P	**Pn**	05 25 22.3	+1.9
EPLA				S	Sn	05 26 57.0	-2.7
EPLA	**Plasencia**	**8.80**	**69**	Pn	**Pn**	05 25 22.3	+1.9
	0.1nm,0.1s,SNR=7.9							
EPLA				Sn	Sn	05 26 57.0	-2.7
	2.5nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**8.80**	**69**	Pn	**Pn**	05 25 22.3	+1.9
	0.1nm,0.1s,SNR=7.9							
EPLA				Sn	Sn	05 26 57.0	-2.7
	2.5nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**8.80**	**69**	P	**Pn**	05 25 22.3	+1.9
	0.1nm,0.1s,SNR=7.9							
EPLA				S	Sn	05 26 57.0	-2.7
	2.5nm,0.2s,SNR=7.9							
PBRG	**Braganca**	**8.93**	**58**	*e*Sn	**Sn**	05 27 00.1	-2.6
PBRG	**Braganca**	**8.93**	**58**	Sn	**Sn**	05 27 00.1	-2.6
PBRG	**Braganca**	**8.93**	**58**	Sn	**Sn**	05 27 00.1	-2.6
PBRG	**Braganca**	**8.93**	**58**	*e*Sn	**Sn**	05 27 00.1	-2.6
ECAL	**Calabor**	**8.99**	**57**	P	**Pn**	05 25 23.2	+0.2
ECAL				S	Sn	05 27 00.6	-3.7
ECAL	**Calabor**	**8.99**	**57**	Pn	**Pn**	05 25 23.2	+0.2
	0.6nm,0.2s,SNR=7.9							
ECAL				Sn	Sn	05 27 00.6	-3.7
	11nm,0.4s,SNR=7.9							
ECAL	**Calabor**	**8.99**	**57**	Pn	**Pn**	05 25 23.2	+0.2
	0.6nm,0.2s,SNR=7.9							
ECAL				Sn	Sn	05 27 00.6	-3.7
	11nm,0.4s,SNR=7.9							
ECAL	**Calabor**	**8.99**	**57**	P	**Pn**	05 25 23.2	+0.2
	0.6nm,0.2s,SNR=7.9							
ECAL				S	Sn	05 27 00.6	-3.7
	11nm,0.4s,SNR=7.9							
ECAB	**El Cabril**	**9.06**	**82**	P	**Pn**	05 25 26.4	+2.5
ECAB				S	Sn	05 27 04.7	-1.4
ECAB	**El Cabril**	**9.06**	**82**	Pn	**Pn**	05 25 26.4	+2.5
	0.2nm,0.1s,SNR=7.9							
ECAB				Sn	Sn	05 27 04.7	-1.4
	0.7nm,0.1s,SNR=7.9							
ECAB	**El Cabril**	**9.06**	**82**	Pn	**Pn**	05 25 26.4	+2.5
	0.2nm,0.1s,SNR=7.9							
ECAB				Sn	Sn	05 27 04.7	-1.4
	0.7nm,0.1s,SNR=7.9							
ECAB	**El Cabril**	**9.06**	**82**	P	**Pn**	05 25 26.4	+2.4
	0.2nm,0.1s,SNR=7.9							
ECAB				S	Sn	05 27 04.7	-1.4
	0.7nm,0.1s,SNR=7.9							
EPON	**Pontenova**	**9.45**	**48**	Sn	**Sn**	05 27 08.2	-7.2
	0.5nm,0.1s,SNR=7.9							
EPON	**Pontenova**	**9.45**	**48**	Sn	**Sn**	05 27 08.2	-7.2
	0.5nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**9.73**	**82**	P	**Pn**	05 25 35.5	+2.5
EADA				S	Sn	05 27 21.6	-0.8
EADA	**Adamuz**	**9.73**	**82**	Pn	**Pn**	05 25 35.5	+2.5
	0.2nm,0.1s,SNR=7.9							
EADA				Sn	Sn	05 27 21.5	-0.8
	4.7nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**9.73**	**82**	P	**Pn**	05 25 35.5	+2.4
	0.2nm,0.1s,SNR=7.9							
EADA				S	Sn	05 27 21.5	-0.9
	4.7nm,0.2s,SNR=7.9							

WEL 12 06:07:54.1±0.3, 36°48S×177°37E, h307km±3km, ML3.5/7, Error ellipse: s-maj=6.9km s-min=4.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**1.74**	**156**	PN	Pn	06 08 39.5	+0.1
PUZ				SN	S	06 09 14.5	-1.2
URZ	**Urewera**	**1.79**	**187**	PN	Pn	06 08 39.9	0.0
MWZ	**Matawai**	**1.86**	**176**	PN	Pn	06 08 40.7	+0.4
MWZ				SN	S	06 09 16.9	-0.3
BHHZ	**Black Hill Sta**	**3.18**	**199**	PN	Pn	06 08 52.3	+0.3
PNHZ	**Pukenui**	**3.55**	**195**	PN	Pn	06 08 55.9	+0.1
PXZ	**Pawanui**	**3.57**	**186**	PN	Pn	06 08 56.1	+0.2
TSZ	**Takapari Road**	**3.75**	**197**	PN	Pn	06 08 57.9	0.0
OGWZ	**Otaki Gorge**	**4.66**	**201**	PN	Pn	06 09 07.6	-0.3
MTW	**Mount Morrison**	**4.90**	**197**	PN	Pn	06 09 10.5	-0.1
KHZ	**Kahutara**	**6.63**	**205**	PN	Pn	06 09 30.9	-0.1

IDC 12 06:08:33.8±8.0, 18°73N×145°41E, h446km±97km, mb3.0/9, mb1 3.2/9, mb1mx3.1/21, mbtmp3.0/9, Error ellipse: s-maj=31.1km s-min=17.8km az=74.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**23.91**	**263**	P	P	06 13 11.2	+0.2
	234nm,0.4s,baz=100,slow=18,SNR=4.1						
WRA	**Warramunga Arr**	**39.93**	**196**	P	P	06 15 27.9	0.0
	0.3nm,0.4s,baz=13,slow=8.8,SNR=8.9						
SONM	**Songino Array**	**42.95**	**322**	P	P	06 15 52.2	+0.4
	1.1nm,0.4s,baz=139,slow=8.1,SNR=8.2						
ASAR	**Alice Springs**	**43.60**	**195**	P	P	06 15 56.9	-0.2
	0.2nm,0.4s,baz=8.5,slow=7.3,SNR=4.5						
ZALV	**Zalesovo Beam**	**57.83**	**323**	P	P	06 17 41.5	+0.4
	1.1nm,0.4s,baz=114,slow=7.0,SNR=3.5						
MKAR	**Makanchi Array**	**58.25**	**314**	P	P	06 17 43.2	-0.9
	0.3nm,0.4s,baz=83,slow=10,SNR=6.1						
ILAR	**Eielson Array**	**63.74**	**26**	P	P	06 18 19.9	-0.2
	0.7nm,0.6s,baz=250,slow=6.0,SNR=16						
ARCES	**ARCESS Array B**	**82.38**	**342**	P	P	06 20 08.2	+0.7
	2.0nm,0.9s,baz=82,slow=9.2,SNR=4.7						
NVAR	**Mina Array Bea**	**83.34**	**52**	P	P	06 20 13.9	+0.9
	0.1nm,0.3s,baz=255,slow=7.6,SNR=4.4						
FINES	**FINESS Array B**	**86.75**	**335**	P	P	06 20 28.8	-0.3
	0.9nm,0.4s,baz=90,slow=5.7,SNR=4.6						

*PGC **12** 06:22:19.4±7.0, 47°35N×128°94W, h10km, ML3.1/27, Mw3.7, 300km Wsw of Tofino, Bc Off Coast Of Washington*
*ISCJB **12** 06:22:21.7±0.8, 47°69N±0°04×128°67W±0°07, h10km, Error ellipse: s-maj=7.7km s-min=5.0km az=153.6*
*IDC **12** 06:22:21.9±3.0, 47°66N×128°82W, h0km, mb3.7/1, mb1 3.7/4, mb1mx3.4/23, mbtmp3.3/4, ML3.6/2, Error ellipse: s-maj=59.3km s-min=25.8km az=51.0*
*NEIC **12** 06:22:26.3±4.9, 47°85N×128°32W, h10km, ML3.0, Error ellipse: s-maj=56.4km s-min=13.1km az=108.0*

ISC 12 06:22:23.3±0.8, 47°71N±0°04×128°67W±0°08, h10km, n53, σ0°93/61, 16D, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	**Estevan Point**	**2.19**	**40**	⇓Pn	**Pn**	06 22 59.0	-0.7
EDB	**Eliza Dome**	**2.40**	**25**	⇓Pn	**Pn**	06 23 02.0	-0.5
OZB	**Mount Ozzard**	**2.46**	**58**	⇓Pn	**Pn**	06 23 02.8	-0.7
OZB				⇓Sn	**Sn**	06 23 34.3	+0.8
BPBC	**Brooks Peninsu**	**2.52**	**13**	⇓Pn	**Pn**	06 23 03.6	-0.7
BMSB	**Bamfield Mari**	**2.62**	**63**	⇓Pn	**Pn**	06 23 04.6	-1.0
GDR	**Gold River**	**2.71**	**39**	⇑Pn	**Pn**	06 23 06.9	+0.1
WOSB	**Woss**	**2.82**	**29**	⇑Pn	**Pn**	06 23 09.1	+0.8
MAYB	**Maynard**	**2.87**	**20**	Pn	**Pn**	06 23 09.2	+0.2
MGB	**Mount Grey**	**2.95**	**63**	⇑Pn	**Pn**	06 23 09.1	-1.1
MGB				⇑Sn	**Sn**	06 23 45.1	-0.5
HOLB	**Holberg**	**2.95**	**7**	⇑Pn	**Pn**	06 23 09.8	-0.4
PFB	**Port Renfrew**	**2.96**	**72**	P	**Pn**	06 23 08.9	-1.4
PFB	**Port Renfrew**	**2.96**	**72**	⇓Pn	**Pn**	06 23 08.8	-1.5
PFB				⇑Sn	**Sn**	06 23 45.0	-0.9
ALB	**Alberni**	**3.00**	**57**	⇓Pn	**Pn**	06 23 09.6	-1.2
PHC	**Port Hardy**	**3.11**	**15**	⇑Pn	**Pn**	06 23 12.5	+0.2
OBC	**Olympics--Boni**	**3.11**	**82**	P	**Pn**	06 23 12.0	-0.3
YOUB	**Youbou, Lake C**	**3.18**	**66**	⇑Pn	**Pn**	06 23 12.4	-0.8
CBB	**Campbell River**	**3.19**	**42**	⇑Pn	**Pn**	06 23 14.1	+0.7
CBB				⇑Sn	**Sn**	06 23 53.2	+1.8
NCRB	**Newcastle Ridg**	**3.20**	**32**	⇑Pn	**Pn**	06 23 14.8	+1.3
NCRB				⇓Sn	**Sn**	06 23 54.2	+2.5
NLWA	**Neilton Lookou**	**3.27**	**94**	*e*Pn	**Pn**	06 23 13.1	-1.4
OSD	**Olympics--Snow**	**3.35**	**86**	P	**Pn**	06 23 14.7	-1.0
LZB	**Mount Lazard**	**3.37**	**73**	⇓Pn	**Pn**	06 23 14.7	-1.1
LZB				⇓Sn	**Sn**	06 23 56.3	+0.4
SOKB	**Sooke**	**3.42**	**77**	⇑Pn	**Pn**	06 23 15.5	-1.1
TXB	**Texada**	**3.44**	**53**	⇑Pn	**Pn**	06 23 17.3	+0.5
NLLB	**Nanaimo Lost L**	**3.47**	**62**	⇑Pn	**Pn**	06 23 17.2	0.0
PGC	**Sidney**	**3.62**	**73**	*e*Pn	**Pn**	06 23 17.9	-1.3
PGC	**Sidney**	**3.62**	**73**	⇓Pn	**Pn**	06 23 18.3	-1.0
VGZ	**Gonzales**	**3.66**	**77**	⇓Pn	**Pn**	06 23 19.1	-0.7
GOBB	**Galiano Island**	**3.66**	**68**	⇑Pn	**Pn**	06 23 19.5	-0.4
SHB	**Sechelt**	**3.70**	**58**	⇑Pn	**Pn**	06 23 20.9	+0.5
SNB	**Saturna Island**	**3.83**	**72**	⇑Pn	**Pn**	06 23 21.6	-0.6
BIB	**Bowen Island**	**3.95**	**63**	⇑Pn	**Pn**	06 23 23.8	0.0
GNW	**Green Mountain**	**3.96**	**90**	*e*Pn	**Pn**	06 23 23.7	-0.2
WPB	**Watts Point**	**4.11**	**60**	⇓Pn	**Pn**	06 23 26.7	+0.6
HNB	**Haney**	**4.34**	**67**	⇑Pn	**Pn**	06 23 29.1	-0.2
BBB	**Bella Bella**	**4.49**	**4**	⇑Pn	**Pn**	06 23 32.0	+0.7
BBB				⇑Sn	**Sn**	06 24 23.8	+0.2
WSLR	**Whistler**	**4.50**	**55**	⇓Pn	**Pn**	06 23 32.8	+1.4
JCW	**Jim Creek**	**4.56**	**81**	*e*Pn	**Pn**	06 23 31.7	-0.5
VDB	**Vedder Mountai**	**4.57**	**71**	⇓Pn	**Pn**	06 23 32.5	+0.1
MBW	**Mount Baker**	**4.65**	**74**	P	**Pn**	06 23 34.2	+0.7
LON	**Longmire**	**4.77**	**99**	*e*Pn	**Pn**	06 23 35.4	+0.2
RPW	**Rockport**	**4.86**	**79**	*e*Pn	**Pn**	06 23 36.5	+0.2
TWW	**Teanaway**	**5.33**	**93**	P	**Pn**	06 23 44.2	+1.4
HOOD	**Mount Hood Mea**	**5.40**	**114**	*e*Pn	**Pn**	06 23 44.6	+0.7
HOOD				*e*Sn	**Sn**	06 24 49.7	+3.7
ETW	**Entiat**	**5.64**	**88**	*e*Pn	**Pn**	06 23 47.3	+0.3
OD2	**Odessa Site #2**	**6.75**	**89**	*e*Pn	**Pn**	06 24 01.3	-1.0
LNOR	**Lincton Mounta**	**7.36**	**101**	*e*Pn	**Pn**	06 24 11.9	+1.2
NEW	**Newport**	**7.77**	**82**	*e*Pn	**Pn**	06 24 16.1	-0.2
	3.4nm,0.7s						
WDC	**Whiskeytown Da**	**8.38**	**146**	*e*Pn	**Pn**	06 24 27.7	+3.0
	11nm,1.4s						
SLMT	**Seeley Lake**	**10.29**	**87**	*e*Pn	**Pn**	06 24 50.8	0.0
NVAR	**Mina Array Bea**	**11.97**	**137**	Pn	**Pn**	06 25 17.1	+3.2
	0.1nm,0.3s,baz=322,slow=11,SNR=7.3						
PDAR	**Pinedale Array**	**14.34**	**103**	Pn	**Pn**	06 25 51.1	+5.0
	0.1nm,0.3s,baz=300,slow=11,SNR=5.8						
ILAR	**Eielson Array**	**19.73**	**337**	P	**Pn**	06 26 52.9	-1.3
	0.0nm,0.3s,baz=151,slow=11,SNR=5.8						
ULM	**Lac du Bonnet**	**21.58**	**71**	P	**P**	06 27 14.1	+1.2
	2.3nm,0.6s,baz=297,slow=6.8,SNR=2.7						

DJA 12 06:49:15, 7°30S×106°00E, h25km, MLv3.8/11, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.62**	**62**	P	Pb	06 49 26.9	-0.4
SKJI				S	Sb	06 49 37.8	+2.1
CGJI	**Cibinong**	**0.75**	**336**	P	Pb	06 49 30.0	+0.6
DBJI	**Dramaga**	**1.05**	**45**	P	Pn	06 49 33.4	-0.7
DBJI				S	Sb	06 49 46.9	-1.0
SBJI	**Serang**	**1.18**	**6**	P	Pn	06 49 35.7	-0.2
CBJI	**Citeko**	**1.22**	**44**	P	Pn	06 49 34.4	-2.0
RBSI	**Rajabasa**	**1.47**	**350**	P	Pn	06 49 38.5	-1.4
LEM	**Lembang**	**1.67**	**74**	P	Pn	06 49 44.3	+1.6
LEM				S	Sn	06 50 05.9	+2.5
CISI	**Cisompet, Garu**	**1.82**	**98**	P	Pn	06 49 44.8	+0.1
CISI				S	Sn	06 50 06.3	-0.7
KLSI		**2.88**	**334**	P	Pn	06 49 59.3	-0.1
LWLI	**Liwa**	**2.98**	**319**	P	Pn	06 50 01.9	+1.2
MDSI	**Maura Dua**	**3.33**	**327**	P	Pn	06 50 05.3	-0.2

IDC 12 07:05:28.3±1.9, 4°74S×146°71E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/16, mbtmp3.8/4, MS3.3/1, Ms1 3.5/1, ms1mx2.8/19, Error ellipse: s-maj=126.4km s-min=26.5km az=125.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.33**	**218**	P	Pn	07 09 56.1	-0.2
	0.4nm,0.3s,baz=38,slow=12,SNR=24						
ASAR	**Alice Springs**	**22.51**	**212**	P	P	07 10 29.4	-0.3
	0.7nm,0.6s,baz=46,slow=7.7,SNR=13						
FITZ	**Fitzroy Crossi**	**24.51**	**236**	P	P	07 10 49.6	0.0
	2.4nm,0.4s,baz=59,slow=8.9,SNR=33						
CMAR	**Chiang Mai Arr**	**52.41**	**298**	LR	LR	07 37 04.3	
	comp=Z,29nm,20.9s,baz=195,slow=36						
ILAR	**Eielson Array**	**84.44**	**23**	P	P	07 18 02.6	+0.1
	0.4nm,0.6s,baz=254,slow=4.8,SNR=8.0						

CASC 12 07:12:31.4±1.8, 13°23N×89°58W, h35km±8km, MD3.7, ML3.9, 3D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.57**	**37**	*e*P	Pn	07 12 42.9	-0.1
SNET				*e*S	Sn	07 12 52.2	+1.0
SNET				AML	AML	07 12 57.3	
	comp=Z,5μm,0.3s						
BOQS	**Boqueron**	**0.58**	**30**	*i* P	Pn	07 12 43.5	+0.2
BOQS				*e*S	Sn	07 12 52.9	+1.3
SBLS	**San Blas**	**0.61**	**356**	*e*P	Pn	07 12 43.6	0.0
SNJE	**San Jose**	**0.64**	**358**	*e*P	Pn	07 12 43.9	0.0
LFRS	**El Faro**	**0.64**	**52**	*i*/P	Pn	07 12 43.9	-0.1
RTR	**El Retiro**	**0.67**	**355**	*e*P	Pn	07 12 44.4	0.0
LFU	**La Fuente**	**0.69**	**41**	*e*P	Pn	07 12 44.9	+0.2
LBRS	**Las Brisas**	**0.73**	**46**	⇓/P	Pn	07 12 45.3	+0.1
SNVI	**San Vicente**	**0.82**	**62**	*e*P	Pn	07 12 46.4	-0.1
SNVI				*e*S	Sn	07 12 57.8	+0.5
MTO2	**Montecristo 2**	**1.19**	**10**	*e*P	Pn	07 12 51.2	-0.2
VSM	**San Miguel**	**1.29**	**81**	*e*P	Pn	07 12 53.4	+0.5
VSM				*e*S	Sn	07 13 09.3	+0.3
BLLM	**Bellamira**	**1.33**	**81**	*e*P	Pn	07 12 53.5	+0.1
BLLM				*e*S	Sn	07 13 11.8	+1.9
CAHU	**Cacacuatique**	**1.44**	**68**	*e*P	Pn	07 12 54.8	-0.2
NBG	**Las Nubes**	**1.54**	**331**	*e*P	Pn	07 12 57.7	+1.3
CNCH	**Conchagua**	**1.70**	**88**	*i* P	Pn	07 12 58.3	-0.3
FG6		**1.83**	**317**	*e*P	Pn	07 13 01.3	+0.9
MRL	**Marmol**	**1.83**	**357**	⇓*e*P	Pn	07 13 01.6	+1.2
TP2	**Tecpan 2**	**2.08**	**318**	*e*P	Pn	07 13 05.4	+1.6
TP2				*e*S	Sn	07 13 32.6	+4.0
JAT	**Jato**	**2.27**	**299**	*e*P	Pn	07 13 06.7	+0.2
CRIN	**San Cristobal**	**2.52**	**102**	*e*P	Pn	07 13 09.9	0.0
TELN	**Telica**	**2.75**	**103**	*e*P	Pn	07 13 13.2	+0.2
COPN	**Copaltepe**	**3.10**	**109**	*e*P	Pn	07 13 18.2	+0.4

*CSEM **12** 07:18:50.4, 47°34N×11°01E, h6km, ML1.6/4, After ZAMG*
VIE 12 07:18:50.4±0.4, 47°34N×11°01E, h6km±3km, ML1.6/4, 2C-5D, Error ellipse: s-maj=2.4km s-min=1.4km az=59.0 6 km NW of Telfs, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOTA	**Moosalm**	**0.07**	**89**	⇑*i*Pg	Pg	07 18 52.4	+0.3
	29nm,0.1s						
MOTA				⇑*i*Sg	Sg	07 18 54.1	+0.9
	72nm,0.1s						
MOTA	**Moosalm**	**0.07**	**89**	Pg	Pg	07 18 52.4	+0.4
	29nm,0.1s						
MOTA				Sg	Sg	07 18 54.1	+0.9
	72nm,0.1s						
SQTA	**Sankt Quirin**	**0.18**	**132**	⇓*i*Pg	Pg	07 18 54.4	+0.3
SQTA	**Sankt Quirin**	**0.18**	**132**	Pg	Pg	07 18 54.4	+0.3
RETA	**Reutte**	**0.22**	**311**	⇓*i*Pg	Pg	07 18 54.6	-0.1
	1.8nm,0.1s						
RETA				⇓*i*Sg	Sg	07 18 58.3	+0.6
	15nm,0.1s						
RETA	**Reutte**	**0.22**	**311**	Pg	Pg	07 18 54.6	-0.1
	1.8nm,0.1s						
RETA				Sg	Sg	07 18 58.3	+0.6
	15nm,0.1s						
FETA	**Feichten**	**0.37**	**211**	⇓*i*Pg	Pg	07 18 57.9	+0.2
	0.9nm,0.1s						
FETA				⇓*i*Sg	Sg	07 19 03.2	+0.7
	2.7nm,0.1s						
FETA	**Feichten**	**0.37**	**211**	Pg	Pg	07 18 57.9	+0.3
	0.9nm,0.1s						
FETA				Sg	Sg	07 19 03.2	+0.7
	2.7nm,0.1s						

IDC 12 07:33:07.5±2.9, 12°16N×140°66E, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.6/21, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=103.7km s-min=28.1km az=127.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.35**	**70**	Pn	Pn	07 34 15.1	+0.2
	8.9nm,0.3s,baz=329,slow=15,SNR=7.7						
GUMO				Sn	Sn	07 35 00.7	-5.6
	6.2nm,0.3s,baz=24,slow=20,SNR=2.6						
WRA	**Warramunga Arr**	**32.50**	**191**	P	P	07 39 40.0	-0.1
	0.5nm,0.5s,baz=13,slow=9.7,SNR=8.0						
ASAR	**Alice Springs**	**36.21**	**191**	P	P	07 40 12.3	+0.1
	0.3nm,0.6s,baz=17,slow=13,SNR=6.6						
NVAR	**Mina Array Bea**	**91.01**	**50**	P	P	07 46 14.2	+0.2
	0.4nm,0.7s,baz=268,slow=4.6,SNR=3.9						

*KISR **12** 07:41:35.4±0.4, 32°21N×47°48E, h2km±999km, ML2.7*
*ISCJB **12** 07:41:38.0±2.2, 32°34N±0°04×47°47E±0°07, h12km±15km, Error ellipse: s-maj=10.5km s-min=6.1km az=178.7*
*TEH **12** 07:41:38.4, 32°25N×47°35E, h16km*
ISC 12 07:41:38.0±2.7, 32°35N±0°04×47°44E±0°08, h5km±19km, n9, σ0°64/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.82**	**2**	*e*Pn	**Pn**	07 42 10.3	+0.4
IKOM				*e*		07 42 37.5	
	comp=N,4μm,0.3s						
IGHG	**Ghaleghazi**	**2.10**	**340**	*e*Pn	**Pn**	07 42 14.5	+0.7
IGHG				*e*		07 42 50.4	
	comp=Z,1μm,0.3s						
IVIS	**Veis**	**2.23**	**347**	*e*Pn	**Pn**	07 42 16.5	+1.0
IDHR	**Dehrash**	**2.50**	**340**	*e*Pn	**Pn**	07 42 18.4	-0.9
IDHR				*e*Sn	**Sn**	07 42 49.7	-0.5
IDHR				*e*		07 42 57.9	
	comp=Z,640nm,0.2s						
MIB	**Mutribah**	**2.54**	**182**	*e*P	**Pn**	07 42 19.1	-0.8
MIB				*e*S	**Sn**	07 42 51.8	+0.6
MIB				AML	AML	07 42 57.4	
	comp=Z,32nm,0.6s						
IPIR	**Pirpir**	**2.93**	**83**	*e*Pn	**Pn**	07 42 25.7	+0.5
IPIR				*e*		07 43 23.5	
	comp=Z,517nm,0.3s						
NAY	**Al-Naaiem**	**3.10**	**183**	*e*P	**Pn**	07 42 26.7	-0.8
RDF	**Al-Radifah**	**3.42**	**178**	*e*P	**Pn**	07 42 31.4	-0.4
RDF				*e*S	**Sn**	07 43 13.3	+0.5
RDF				AML	AML	07 43 18.3	
	comp=Z,21nm,0.5s						
IKLH	**Kolahrood**	**3.61**	**73**	*e*Pn	**Pn**	07 42 35.0	+0.4
IKLH				*e*Sn	**Sn**	07 43 17.0	-0.6
IKLH				*e*		07 43 39.3	
	comp=E,456nm,0.4s						

*IDC **12** 07:47:32.0±9.8, 1°68N×127°27E, h182km±94km, mb3.6/5, mb1 3.7/6, mb1mx3.4/18, mbtmp3.5/6, Error ellipse: s-maj=70.0km s-min=19.6km az=62.0*
*ISCJB **12** 07:47:34.6±1.2, 1°6N±0°1×127°2E±0°1, h226km±10km, mb3.9/5, Error ellipse: s-maj=23.2km s-min=20.5km az=174.5*
*DJA **12** 07:47:46, 0°66N×126°17E, h10km, mb5.6/4*
ISC 12 07:47:35.5±1.3, 1°6N±0°1×127°3E±0°2, h219km±11km, n12, σ0°55/12, mb3.9/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.84**	**174**	P	**Pn**	07 48 06.5	+0.1
MRSI	**Marisa**	**5.45**	**258**	P	**Pn**	07 48 48.5	-7.7
SPSI	**Sidrap Palu**	**9.32**	**234**	P	**Pn**	07 49 40.9	-5.0
	0.1nm886nm23nm,0.8s						
KHKI	**Kahang-Kahang**	**15.28**	**229**	P	**Pn**	07 51 06.2	+5.8
	529nm,0.6s						
SRBI	**Singaraja**	**15.41**	**231**	P	**Pn**	07 51 01.4	-0.6
	529nm,0.4s						
JAGI	**Jajag, Banyuwa**	**16.47**	**232**	P	**P**	07 51 14.4	+0.8
FITZ	**Fitzroy Crossi**	**19.65**	**185**	P	**P**	07 51 47.3	-0.6
	0.2nm,0.3s,baz=19,slow=6.4,SNR=6.3						
WRA	**Warramunga Arr**	**22.51**	**162**	P	**P**	07 52 16.4	-0.5
	5.8nm,0.4s,mb4.5,baz=342,slow=9.3,SNR=87						
ASAR	**Alice Springs**	**25.94**	**166**	P	**P**	07 52 48.0	+0.1
	2.5nm,0.5s,mb4.1,baz=351,slow=7.5,SNR=59						
ASAR				PcP	PcP	07 56 12.9	+2.4
	0.2nm,0.4s,baz=335,slow=1.8,SNR=5.2						
STKA	**Stephens Creek**	**35.97**	**159**	P	**P**	07 54 16.4	+0.9
	4.9nm,0.4s,mb4.3,baz=337,slow=7.0,SNR=22						
MKAR	**Makanchi Array**	**59.60**	**326**	P	**P**	07 57 16.4	+0.1
	1.0nm,0.5s,mb3.7,baz=121,slow=8.6,SNR=16						
ILAR	**Eielson Array**	**86.77**	**25**	P	**P**	07 59 54.3	-0.3
	0.2nm,0.9s,mb2.9,baz=247,slow=5.1,SNR=3.4						

*ISCJB **12** 08:02:23.0±0.3, 39°64N±0°02×29°46E±0°03, h0km, Error ellipse: s-maj=3.1km s-min=2.7km az=155.9*
*ISK **12** 08:02:22.3, 39°62N×29°44E, h2km, MD3.0*
*CSEM **12** 08:02:23.2±0.1, 39°64N×29°47E, h1km, MD3.0, Error ellipse: s-maj=3.6km s-min=3.0km az=69.0*
ISC 12 08:02:23.5±0.3, 39°64N±0°02×29°46E±0°03, h0km, n73, σ0°81/85, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.55**	**178**	*i* P	**Pg**	08 02 33.4	-0.5
GDZ	**Gediz**	**0

SART				*i* S	**Sb**	**08 03 28.1**	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.04**	**302**	*e*PN	**Pn**	**08 02 58.6**	**-0.4**
RKY	**Sarkoy-Tekirda**	**2.04**	**302**	*e*Pn	**Pn**	**08 02 58.6**	**-0.4**
LPK	**Lapseki**	**2.20**	**290**	*e*PN	**Pn**	**08 03 01.4**	**+0.1**
LPK	**Lapseki**	**2.20**	**290**	*e*Pn	**Pn**	**08 03 01.4**	**+0.2**
SGKT	**Sivrigoynuk**	**2.20**	**64**	*i* P	**Pn**	**08 02 58.6**	**-2.6**
SGKT	**Sivrigoynuk**	**2.20**	**64**	*i* P	**Pn**	**08 02 58.6**	**-2.6**
SGKT				*i* S	**Sn**	**08 03 27.6**	**-1.5**
GELI	**Tayfur-Gelibol**	**2.42**	**289**	*e*PN	**Pn**	**08 03 04.1**	**-0.1**
GELI	**Tayfur-Gelibol**	**2.42**	**289**	*e*Pn	**Pn**	**08 03 04.1**	**-0.1**
ERIK	**Erikli-Kesan**	**2.48**	**296**	*e*PN	**Pn**	**08 03 04.8**	**-0.3**
ERIK	**Erikli-Kesan**	**2.48**	**296**	*e*Pn	**Pn**	**08 03 04.8**	**-0.3**
BOZC	**Bozcaada**	**2.63**	**276**	*i* P	**Pg**	**08 03 14.2**	**+0.2**

ISCJB ***12*** *08:08:58.2±0.5, 36°.37N±0°.04×140°.26E±0°.06, h115km±3km, mb3.8/9, Error ellipse: s-maj=7.7km s-min=5.9km az=17.3*
JMA ***12*** *08:09:00.0±0.1, 36°.39N×140°.17E, h104km±1km, M3.5*
JMA Felt I J1.
IDC ***12*** *08:09:00.0±1.6, 36°.30N×140°.18E, h117km±14km, mb3.4/6, mb1 3.5/8, mb1mx3.4/24, mbtmp3.4/8, Error ellipse: s-maj=23.6km s-min=8.8km az=64.0*
NIED ***12*** *08:09:00, 36°.40N×140°.20E, h110km, Mw3.8 Best double couple: M₀5.07000×10¹⁴ NP1:φs187.00000°, δ76.00000°, λ-104.00000°. NP2:φs53.00000°, δ20.00000°, λ-46.00000°.*
NEIC ***12*** *08:09:00.0, 36°.39N×140°.17E, h104km, mb4.1/3, After JMA.*

ISC 12 08:08:59.3±0.4, 36°.38N±0°.04×140°.24E±0°.06, h110km±3km, n29, σ0s54/39, mb3.8/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.15**	**193**	P	**Pn**	**08 09 14.8**	**+0.2**
JYT				S	**Sn**	**08 09 25.6**	**-0.4**
JAG	**Ashikaga**	**0.64**	**274**	P	**Pn**	**08 09 16.8**	**-0.3**
JKT	**Katashina**	**0.89**	**296**	P	**Pn**	**08 09 19.3**	**0.0**
JKT				S	**Sn**	**08 09 34.4**	**0.0**
JFK	**Kawauchi**	**1.11**	**27**	P	**Pn**	**08 09 21.9**	**+0.3**
JFK				S	**Sn**	**08 09 38.1**	**-0.4**
JFY	**Yanaizu**	**1.11**	**338**	P	**Pn**	**08 09 21.6**	**0.0**
JFY				S	**Sn**	**08 09 37.8**	**-0.7**
JFT	**Otama**	**1.14**	**4**	P	**Pn**	**08 09 22.2**	**+0.2**
JFT				S	**Sn**	**08 09 39.3**	**+0.2**
JRY	**Ryogami san**	**1.14**	**252**	P	**Pn**	**08 09 22.1**	**+0.2**
JRY				*e*S	**Sn**	**08 09 39.3**	**+0.2**
JOD2	**Odawara 2**	**1.45**	**220**	P	**Pn**	**08 09 25.5**	**0.0**
JNS	**Sasagawa**	**1.61**	**333**	P	**Pn**	**08 09 27.4**	**-0.1**
JYN	**Shimob**	**1.63**	**238**	P	**Pn**	**08 09 28.2**	**+0.5**
MJAR	**Matsushiro Arr**	**1.64**	**276**	P	**Pn**	**08 09 28.1**	**+0.3**
	23nm,0.3s,baz=77,slow=10,SNR=57						
MJAR				S	**Sn**	**08 09 49.7**	**+0.2**
	15nm,0.3s,baz=144,slow=21,SNR=12						
MAJO	**Matsushiro**	**1.65**	**276**	*e*Pn	**Pn**	**08 09 27.8**	**0.0**
MAT	**Matsushiro**	**1.65**	**276**	P	**Pn**	**08 09 28.0**	**+0.2**
MAT				S	**Sn**	**08 09 49.0**	**-0.6**
MAT	**Matsushiro**	**1.65**	**276**	P	**Pn**	**08 09 28.1**	**+0.3**
BSO1	**Boso 1**	**1.82**	**160**	P	**Pn**	**08 09 30.1**	**0.0**
JHJ	**Hachijo jima 2**	**3.27**	**187**	P	**Pn**	**08 09 49.4**	**+0.4**
	18nm,0.3s,baz=343,slow=19,SNR=19						
JHJ				S	**Sn**	**08 10 26.2**	**-1.0**
	82nm,0.3s,baz=88,slow=22,SNR=16						
JNU	**Nakatsue**	**8.36**	**250**	*e*P	**Pn**	**08 10 58.2**	**+0.6**
	2.8nm,1.0s						
KSRS	**Korea Array**	**9.92**	**280**	P	**Pn**	**08 11 20.1**	**+1.3**
	0.2nm,0.3s,baz=98,slow=13,SNR=6.5						
HHC	**Hu-ho-hao-te**	**22.80**	**290**	*e*P	**P**	**08 13 53.0**	**+0.3**
HHC				pP		08 14 16.1	
HHC				PP		08 14 27.5	
HHC				PcP	PcP	08 17 42.9	+2.8
HHC				S	**S**	**08 17 50.0**	**-3.1**
HHC				sS	sS	08 18 29.6	-2.0
HHC				SS		08 18 43.3	
HHC				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,220nm,5.1s						
HHC				LR	LR		
	comp=N,160nm,12.2s						
HHC				LR	LR		
	comp=E,260nm,9.4s						
HHC				LR	LR		
	comp=Z,160nm,11.5s						
SONM	**Songino Array**	**27.38**	**305**	P	**P**	**08 14 33.6**	**-0.4**
	comp=Z,1.3nm,0.6s,mb3.7,baz=110,slow=8.4,SNR=8.4						
MKAR	**Makanchi Array**	**43.67**	**303**	P	**P**	**08 16 52.7**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.7,baz=90,slow=10,SNR=13						
MKAR	**Makanchi Array**	**43.67**	**303**	P	**P**	**08 16 52.7**	**-0.2**
KURK	**Kurchatov**	**45.60**	**308**	*e*P	**P**	**08 17 07.1**	**-1.1**
	comp=Z,4.8nm,0.7s,mb4.3						
ILAR	**Eielson Array**	**50.55**	**32**	P	**P**	**08 17 46.3**	**+0.2**
	comp=Z,0.5nm,0.7s,mb3.6,baz=277,slow=6.3,SNR=8.7						
WRA	**Warramunga Arr**	**56.29**	**187**	P	**P**	**08 18 28.3**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.5,baz=4.3,slow=7.4,SNR=15						
WRA	**Warramunga Arr**	**56.29**	**187**	P	**P**	**08 18 28.3**	**-0.2**
ABKAR	**Abkulak array**	**57.64**	**310**	*e*P	**P**	**08 18 37.4**	**-0.3**
	comp=Z,0.9nm,0.4s,mb4.2						
ASAR	**Alice Springs**	**60.02**	**187**	P	**P**	**08 18 54.0**	**-0.4**
	comp=Z,0.5nm,0.9s,mb3.5,baz=15,slow=7.7,SNR=4.2						
NVAR	**Mina Array Bea**	**76.14**	**52**	P	**P**	**08 20 36.4**	**+1.3**
	comp=Z,0.5nm,0.5s,mb3.5,baz=320,slow=8.3,SNR=4.5						

WEL 12 08:19:23.2±0.2, 44°.99S×167°.47E, h54km±2km, ML3.5/10, 2C, Error ellipse: s-maj=1.5km s-min=1.1km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.45**	**46**	⇑PN	Pn	08 19 33.8	-0.3
MSZ				SN	Sn	08 19 41.8	-0.2
DCZ	**Deep Cove**	**0.54**	**205**	⇑PN	Pn	08 19 34.8	-0.3
DCZ				SN	Sn	08 19 44.0	+0.2
MLZ	**Mavora Lakes**	**0.61**	**126**	PN	Pn	08 19 35.5	-0.5
MLZ				SN	Sn	08 19 44.8	-0.5
WHZ	**Wether Hill Ro**	**0.96**	**160**	PN	Pn	08 19 40.2	-0.3
WHZ				SN	Sn	08 19 53.0	-0.3
WKZ	**Wanaka**	**1.11**	**82**	PN	Pn	08 19 42.4	0.0
JCZ	**Jackson Bay**	**1.30**	**46**	PN	Pn	08 19 44.4	-0.5
EAZ	**Earnscleugh**	**1.32**	**101**	PN	Pn	08 19 45.3	0.0
EAZ				SN	Sn	08 20 01.2	-0.6
TUZ	**Tuapeka**	**1.80**	**123**	PN	Pn	08 19 51.3	-0.5
APZ	**The Paps**	**1.88**	**169**	PN	Pn	08 19 52.7	-0.1
SYZ	**Scrubby Hill**	**1.94**	**144**	PN	Pn	08 19 53.3	-0.3
LBZ	**Lake Benmore**	**2.03**	**74**	PN	Pn	08 19 53.9	-1.0
FOZ	**Fox Glacier**	**2.14**	**49**	PN	Pn	08 19 55.8	-0.6
ODZ	**Otahua Downs**	**2.25**	**93**	PN	Pn	08 19 57.0	-0.9
RPZ	**Rata Peaks**	**2.87**	**65**	PN	Pn	08 20 04.9	-1.4
MQZ	**McQueen's Vall**	**3.93**	**73**	PN	Pn	08 20 18.7	-2.3
LTZ	**Lake Taylor**	**4.11**	**59**	PN	Pn	08 20 20.8	-2.6
DSZ	**Denniston Nort**	**4.53**	**46**	PN	Pn	08 20 27.1	-2.0
QRZ	**Quartz Range**	**5.58**	**44**	PN	Pn	08 20 41.6	-1.9
NNZ	**Nelson**	**5.74**	**51**	PN	Pn	08 20 44.9	-0.8

DJA 12 08:51:19, 8°.61S×110°.61E, h33km, MLv3.6/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.70**	**54**	P	Pn	08 51 34.1	+1.6
PCJI				S	Sb	08 51 44.6	+2.4
UGM	**Wanagama**	**0.70**	**353**	P	Pn	08 51 33.6	+1.0
UGM				S	Sb	08 51 44.3	+2.1
YOGI	**Yogyakarta**	**0.85**	**338**	P	Pn	08 51 34.9	+0.3
YOGI				S	Sn	08 51 46.6	+0.7
PWJI	**Pagerwojo**	**1.32**	**64**	P	Pn	08 51 41.2	+0.1
PWJI				S	Sn	08 51 58.1	+0.6
SJI	**Sawahan**	**1.44**	**53**	P	Pn	08 51 43.9	+1.1
SJI				S	Sn	08 52 02.5	+2.0
NGJI	**Ngawi**	**1.50**	**34**	P	Pn	08 51 45.5	+2.0
BJII	**Banjamegara**	**1.55**	**325**	P	Pn	08 51 45.4	+1.1
BJII				S	Sn	08 52 05.5	+2.2
KRKI	**Karangkates**	**1.88**	**76**	P	Pn	08 51 49.9	+1.1
KRKI				S	Sn	08 52 13.0	+1.6

ISCJB ***12*** *09:03:11.2±0.6, 51°.36N±0°.03×16°.15E±0°.03, h0km, Error ellipse: s-maj=4.3km s-min=2.5km az=30.4*
IPEC ***12*** *09:03:12.2±0.3, 51°.46N×16°.23E, h0km±1km, ML2.2/4,*
Error ellipse: s-maj=2.0km s-min=0.6km az=27.0
CSEM ***12*** *09:03:12.3±0.2, 51°.42N×16°.18E, h2km, ML3.2/7, Error ellipse: s-maj=4.7km s-min=2.6km az=31.0*
NEIC ***12*** *09:03:12.5±1.4, 51°.35N×16°.09E, h5km, ML3.1(SZGRF), Error ellipse: s-maj=17.2km s-min=9.8km az=50.0*
WAR ***12*** *09:03:13.3, 51°.45N×16°.18E, ML2.8, Mining Induced*
PRU ***12*** *09:03:14.9, 51°.35N×16°.20E, h0km*
VIE ***12*** *09:03:15.3±0.6, 51°.17N×16°.27E, h0km, mb2.5/4, ML2.7/4, Error ellipse: s-maj=4.2km s-min=3.2km az=170.0 52 km W of Wroclaw Suspected Mining induced.*

ISC 12 09:03:12.0±0.6, 51°.42N±0°.03×16°.20E±0°.03, h0km, n51, σ1s04/93, 4C, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.58**	**174**	*i* Pg	**Pg**	**09 03 24.4**	**+1.3**
KSP				*e*Sg	**Sg**	**09 03 32.2**	**+1.6**
KSP				*e*L		09 03 35.8	
KSP	**Ksiaz**	**0.58**	**174**	*e*Pg	**Pg**	**09 03 24.3**	**+1.2**
	baz=356						
KSP				*e*Sg	**Sg**	**09 03 32.1**	**+1.6**
	baz=356						
UPC	**Upice**	**0.92**	**187**	*e*PG	**Pg**	**09 03 30.4**	**+0.8**
UPC	**Upice**	**0.92**	**187**	*e*Pg	**Pg**	**09 03 30.4**	**+0.8**
	baz=8.1						
DPC	**Dobruska-Polom**	**1.07**	**176**	*e*PG	**Pg**	**09 03 33.2**	**+0.7**
DPC				*e*SG	**Sg**	**09 03 46.6**	**+0.2**
DPC	**Dobruska-Polom**	**1.07**	**176**	*e*Pg	**Pg**	**09 03 33.1**	**+0.6**
	baz=357						
DPC				Sg	**Sg**	**09 03 46.6**	**+0.2**
PVCC	**Panska Ves**	**1.36**	**230**	*e*PG	**Pg**	**09 03 38.2**	**+0.1**
PVCC				*e*SG	**Sg**	**09 03 56.8**	**+1.1**
	comp=Z,158nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**230**	Pg	**Pg**	**09 03 38.2**	**+0.1**
PVCC	**Panska Ves**	**1.36**	**230**	*e*Pn	**Pn**	**09 03 38.8**	**+0.6**
	baz=48						
PVCC				*e*Sg	**Sg**	**09 03 56.7**	**+1.0**
	baz=48						
BRG	**Berggiesshubel**	**1.52**	**250**	PG	**Pg**	**09 03 41.2**	**+0.1**
BRG				SG	**Sg**	**09 04 01.6**	**+0.8**
	comp=Z,56nm,0.6s						
BRG	**Berggiesshubel**	**1.52**	**250**	*e*Pn	**Pn**	**09 03 40.7**	**+0.3**
	baz=67						
BRG				*e*Sg	**Sg**	**09 04 00.5**	**-0.3**
	baz=67						
PRU	**Pruhonice**	**1.78**	**217**	*e*PN	**Pn**	**09 03 45.1**	**+1.2**
PRU				*e*PG	**Pg**	**09 03 46.1**	**+0.1**
PRU				*e*SG	**Sg**	**09 04 10.0**	**+1.0**
	comp=Z,58nm,0.7s						
PRU	**Pruhonice**	**1.78**	**217**	*e*Pn	**Pn**	**09 03 45.0**	**+1.1**
	baz=35						
PRU	**Pruhonice**	**1.78**	**217**	Pg	**Pg**	**09 03 46.1**	**+0.1**
PRU				*e*Sg	**Sg**	**09 04 09.6**	**+0.6**
	baz=35						
RUE	**Ruedersdorf**	**1.83**	**306**	*e*Pg	**Pg**	**09 03 47.2**	**+0.1**
RUE				*e*Sg	**Sg**	**09 04 10.9**	**0.0**
RUE	**Ruedersdorf**	**1.83**	**306**	*e*Pg	**Pg**	**09 03 47.2**	**+0.1**
RUE				*e*Sg	**Sg**	**09 04 10.9**	**0.0**
MORC	**Moravsky Berou**	**1.85**	**152**	*e*Pn	**Pn**	**09 03 44.8**	**-0.2**
MORC				*e*Sn	**Sn**	**09 04 12.1**	**+3.1**
MORC	**Moravsky Berou**	**1.85**	**152**	*e*Pn	**Pn**	**09 03 44.9**	**-0.1**
	baz=334						
MORC				*e*Sg	**Sg**	**09 04 10.5**	**-1.0**
	comp=Z,17nm,0.3s,baz=334						
MORC				*e*Sn	**Sn**	**09 04 12.1**	**+3.0**
CLL	**Collm**	**2.00**	**268**	*e*Pn	**Pn**	**09 03 46.0**	**-1.1**
CLL				*e*Pg	**Pg**	**09 03 49.0**	**-1.4**
CLL				*e*Sg	**Sg**	**09 04 16.0**	**-0.4**
CLL	**Collm**	**2.00**	**268**	*e*Pn	**Pn**	**09 03 46.0**	**-1.1**
CLL				*e*Pg	**Pg**	**09 03 49.0**	**-1.4**
CLL				*e*Sg	**Sg**	**09 04 16.0**	**-0.4**
	comp=Z,25nm,0.5s						
CLL	**Collm**	**2.00**	**268**	*e*Pn	**Pn**	**09 03 47.7**	**+0.6**
	baz=84						
CLL	**Collm**	**2.00**	**268**	*e*Pg	**Pg**	**09 03 49.0**	**-1.4**
CLL				*e*Sg	**Sg**	**09 04 15.5**	**-0.9**
	baz=84						
OKC	**Ostrava-Krasne**	**2.01**	**141**	*e*PG	**Pg**	**09 03 50.6**	**+0.1**
OKC				*e*SG	**Sg**	**09 04 15.9**	**-0.7**
	comp=Z,38nm,0.6s						
OKC	**Ostrava-Krasne**	**2.01**	**141**	Pg	**Pg**	**09 03 50.6**	**+0.1**
OKC				Sg	**Sg**	**09 04 15.9**	**-0.7**
	comp=Z,38nm,0.6s						
VRAC	**Vranov**	**2.13**	**173**	*e*Pn	**Pn**	**09 03 50.2**	**+1.5**
	baz=354						
VRAC				*e*Sg	**Sg**	**09 04 19.6**	**-0.7**
	comp=Z,11nm,0.3s,baz=354						
TREC	**Trest**	**2.17**	**192**	*e*PN	**Pn**	**09 03 49.4**	**0.0**
TREC				*e*PG	**Pg**	**09 03 53.1**	**-0.5**
TREC	**Trest**	**2.17**	**192**	Pn	**Pn**	**09 03 49.4**	**0.0**
KRUC	**Moravsky**	**2.36**	**177**	*e*Pn	**Pn**	**09 03 53.0**	**+1.0**
	baz=358						
KRUC	**Moravsky**	**2.36**	**177**	*e*Pg	**Pg**	**09 03 56.0**	**-1.2**
	baz=358						
KRUC				*e*Sg	**Sg**	**09 04 27.6**	**-0.2**
	comp=Z,9.5nm,0.4s,baz=358						
OJC	**Ojcow**	**2.58**	**116**	*e*Pg	**Pg**	**09 04 00.6**	**-0.8**
OJC				*e*Sg	**Sg**	**09 04 35.6**	**+0.8**
OJC	**Ojcow**	**2.58**	**116**	*e*Pg	**Pg**	**09 04 00.6**	**-0.8**
OJC				*e*Sg	**Sg**	**09 04 35.6**	**+0.8**
NKC	**Novy Kostel**	**2.66**	**245**	*e*PN	**Pn**	**09 03 56.2**	**+0.2**
NKC				*e*PG	**Pg**	**09 04 02.2**	**-0.7**
NKC				*e*SG	**Sg**	**09 04 37.1**	**-0.2**
	comp=Z,36nm,0.3s						
NKC	**Novy Kostel**	**2.66**	**245**	*e*Pn	**Pn**	**09 03 56.1**	**+0.1**
	baz=61						
JAVC	**Velka Javorina**	**2.73**	**159**	*e*Pn	**Pn**	**09 03 59.2**	**+2.2**
	baz=341						
JAVC				*e*Sg	**Sg**	**09 04 40.4**	**+0.7**
	comp=Z,16nm,0.7s,baz=341						
KHC	**Kasperske Hory**	**2.84**	**217**	*e*PN	**Pn**	**09 03 58.9**	**+0.4**
KHC				*e*PG	**Pg**	**09 04 04.7**	**-1.7**
KHC				*e*SN	**Sn**	**09 04 31.5**	**-1.9**
KHC				*e*SG	**Sg**	**09 04 41.7**	**-1.5**
	comp=Z,13nm,0.4s						
MOX	**Moxa**	**2.99**	**257**	*e*PG	**Pg**	**09 04 09.0**	**-0.3**
MOX				*e*SG	**Sg**	**09 04 49.0**	**+0.9**
MOX	**Moxa**	**2.99**	**257**	*e*Pg	**Pg**	**09 04 09.0**	**-0.3**
MOX				*e*Sg	**Sg**	**09 04 49.0**	**+0.9**
GEC2	**GERESS Array S**	**3.04**	**213**	*e*Pg	**Pg**	**09 04 08.2**	**-1.9**
GEC2				*e*Sg	**Sg**	**09 04 47.3**	**-2.1**
GEC2	**GERESS Array S**	**3.04**	**213**	*e*Pg	**Pg**	**09 04 08.2**	**-1.9**
GEC2				*e*Sg	**Sg**	**09 04 47.3**	**-2.1**
ZST	**Bratislava**	**3.28**	**169**	*e*SG	**Sg**	**09 04 58.2**	**+1.0**
ZST	**Bratislava**	**3.28**	**169**	*e*Sg	**Sg**	**09 04 58.2**	**+1.0**
VYHS	**Vyhne**	**3.39**	**149**	*e*	**Pg**	**09 04 21.9**	**+5.0**
VYHS	**Vyhne**	**3.39**	**149**	*e*SG	**Sg**	**09 04 59.5**	**-1.2**
VYHS	**Vyhne**	**3.39**	**149**	*e*Sg	**Sg**	**09 04 59.5**	**-1.2**
MOA	**Molln**	**3.79**	**200**	⇑*i*Pn	**Pn**	**09 04 11.8**	**+0.2**
MOA				⇑*i*Sg	**Sg**	**09 05 14.2**	**+0.7**
	comp=Z,11nm,0.4s						
MOA	**Molln**	**3.79**	**200**	Pn	**Pn**	**09 04 11.8**	**+0.3**
MOA				Sg	**Sg**	**09 05 14.2**	**+0.6**
	comp=Z,11nm,0.4s						
KECS	**Kecovo**	**4.04**	**135**	*e*SG	**Sg**	**09 05 19.9**	**-1.7**
CRVS	**Cervenica-Dubn**	**4.22**	**125**	*e*SG	**Sg**	**09 05 24.4**	**-3.0**
CRVS	**Cervenica-Dubn**	**4.22**	**125**	*e*Sg	**Sg**	**09 05 24.4**	**-3.0**
KBA	**Koelnbreinsper**	**4.73**	**204**	⇑*i*Pn	**Pn**	**09 04 25.9**	**+1.4**
KBA				⇑*i*Sg	**Sg**	**09 05 44.3**	**+0.5**
	comp=Z,8.9nm,0.6s						
KBA	**Koelnbreinsper**	**4.73**	**204**	Pn	**Pn**	**09 04 25.9**	**+1.4**
KBA				Sg	**Sg**	**09 05 44.3**	**+0.5**
	comp=Z,8.9nm,0.6s						

WEL 12 09:19:24.0±0.5, 39°.69S×174°.09E, h192km±4km, ML3.5/11, 8C-1D, Error ellipse: s-maj=2.4km s-min=1.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEZ	**North Egmont**	**0.42**	**0**	PN	Pn	09 19 50.3	+0.4
NWEZ	**Newall Road**	**0.45**	**337**	PN	Pn	09 19 49.8	-0.2
RAEZ	**Rainy Point**	**0.46**	**30**	PN	Pn	09 19 50.0	-0.1
PKE	**Pukeiti**	**0.50**	**351**	PN	Pn	09 19 50.2	-0.1
WAZ	**Wanganui**	**0.69**	**96**	PN	Pn	09 19 51.6	+0.6
WAZ				SN	Sn	09 20 11.6	-0.2
VRZ	**Vera Road**	**0.76**	**43**	PN	Pn	09 19 50.7	-0.7
VRZ				SN	Sn	09 20 10.7	-1.9
PKVZ	**Pokaka**	**1.05**	**68**	PN	Pn	09 19 53.1	-0.1
PKVZ				SN	Sn	09 20 13.9	-1.9
MTVZ	**Mangateitei**	**1.11**	**75**	PN	Pn	09 19 53.8	+0.2
MTVZ				SN	Sn	09 20 14.8	-1.8
DUWZ	**D'Urville Isla**	**1.12**	**187**	PN	Pn	09 19 53.5	-0.2
FWVZ	**Far West T-bar**	**1.21**	**70**	PN	Pn	09 19 54.5	0.0
TWVZ	**Taurewa**	**1.21**	**60**	PN	Pn	09 19 54.0	-0.5
WNVZ	**Wahianoa**	**1.22**	**73**	PN	Pn	09 19 54.8	+0.3
WPVZ	**Whakapapa**	**1.22**	**67**	PN	Pn	09 19 54.6	0.0
NGZ	**Ngauruhoe**	**1.27**	**67**	PN	Pn	09 19 55.0	0.0
TUVZ	**Tukino**	**1.28**	**71**	PN	Pn	09 19 55.4	+0.3
WTVZ	**West Tongariro**	**1.29**	**64**	PN	Pn	09 19 55.1	-0.1
WTVZ				SN	Sn	09 20 17.3	-1.9
HIZ	**Hauiti**	**1.31**	**27**	⇓PN	Pn	09 19 54.6	-0.8
KIW	**Kapiti Island**	**1.33**	**152**	⇑PN	Pn	09 19 55.5	+0.1
KRVZ	**Karewarewa**	**1.34**	**64**	PN	Pn	09 19 55.3	-0.3
OGWZ	**Otaki Gorge**	**1.40**	**144**	⇑PN	Pn	09 19 56.2	+0.2
TSZ	**Takapari Road**	**1.48**	**105**	PN	Pn	09 19 57.1	+0.3
MRZ	**Mangatainoka R**	**1.50**	**131**	PN	Pn	09 19 56.9	0.0
TCW	**Tory Channel**	**1.53**	**175**	⇑PN	Pn	09 19 57.4	+0.2
BHHZ	**Black Hill Sta**	**1.54**	**83**	PN	Pn	09 19 56.8	-0.4
CAW	**Cannon Point**	**1.60**	**153**	⇑PN	Pn	09 19 57.9	+0.1
NNZ	**Nelson**	**1.62**	**199**	⇑PN	Pn	09 19 57.6	-0.5
HOWZ	**Holdsworth Sta**	**1.63**	**138**	⇑PN	Pn	09 19 58.1	0.0
PNHZ	**Pukenui**	**1.64**	**99**	PN	Pn	09 19 58.4	+0.2
QRZ	**Quartz Range**	**1.65**	**226**	PN	Pn	09 19 57.1	-1.2
WEL	**Wellington**	**1.68**	**162**	PN	Pn	09 19 58.6	+0.1
SNZO	**South Karori**	**1.69**	**164**	⇑PN	Pn	09 19 58.6	-0.1
TUWZ	**Tuamarina**	**1.74**	**184**	PN	Pn	09 19 58.8	-0.5
TIWZ	**Tintock**	**1.75**	**129**	PN	Pn	09 19 59.4	+0.1
BHW	**Baring Head**	**1.82**	**161**	PN	Pn	09 19 59.7	-0.3
MTW	**Mount Morrison**	**1.82**	**144**	⇑PN	Pn	09 19 59.8	-0.2
WPHZ	**Waipukurau**	**1.84**	**103**	PN	Pn	09 20 00.7	+0.4
BFZ	**Birch Farm**	**1.93**	**122**	PN	Pn	09 20 01.2	+0.1
BKZ	**Black Stump Fm**	**1.93**	**75**	PN	Pn	09 20 00.8	-0.4
MSWZ	**Moikau Station**	**1.94**	**153**	PN	Pn	09 20 01.0	-0.2
TMWZ	**Te Maipa**	**1.97**	**137**	PN	Pn	09 20 01.5	0.0
PAWZ	**Paruwai Farm**	**1.97**	**149**	PN	Pn	09 20 01.4	-0.2
MCHZ	**McNeill Hill**	**2.03**	**84**	PN	Pn	09 20 02.9	+0.7
PRHZ	**Porangahau**	**2.04**	**107**	PN	Pn	09 20 02.7	+0.4
PLWZ	**Palliser**	**2.08**	**155**	PN	Pn	09 20 02.3	-0.4
TRWZ	**Traveller**	**2.10**	**145**	PN	Pn	09 20 02.6	-0.2
KAHZ	**Kahuranaki**	**2.15**	**94**	PN	Pn	09 20 03.9	+0.5
PXZ	**Pawanui**	**2.16**	**100**	PN	Pn	09 20 03.8	+0.2
NMHZ	**Naumai**	**2.18**	**75**	PN	Pn	09 20 04.6	+0.7
THZ	**Tophouse**	**2.26**	**203**	PN	Pn	09 20 03.8	-0.8
CKHZ	**Cape Kidnapper**	**2.30**	**90**	PN	Pn	09 20 05.6	+0.5
DSZ	**Denniston Nort**	**2.69**	**220**	PN	Pn	09 20 08.5	-1.0
URZ	**Urewera**	**2.75**	**60**	PN	Pn	09 20 09.0	-1.3
KHZ	**Kahutara**	**2.76**	**189**	PN	Pn	09 20 09.8	-0.5
KNZ	**Kokohu**	**2.85**	**78**	PN	Pn	09 20 10.9	-0.6
MWZ	**Matawai**	**3.00**	**64**	PN	Pn	09 20 12.0	-1.2
MHGZ	**Mahia Peninsul**	**3.00**	**81**	PN	Pn	09 20 13.1	-0.1
PRGZ	**Paritu Road**	**3.04**	**77**	PN	Pn	09 20 13.2	-0.4
LTZ	**Lake Taylor**	**3.38**	**203**	PN	Pn	09 20 16.8	-1.0
CNGZ	**Carnagh Statio**	**3.42**	**71**	PN	Pn	09 20 18.2	0.0
PUZ	**Puketiti**	**3.63**	**65**	PN	Pn	09 20 19.2	-1.7
MQZ	**McQueen's Vall**	**4.16**	**195**	PN	Pn	09 20 24.9	-2.5
FOZ	**Fox Glacier**	**5.09**	**219**	PN	Pn	09 20 36.7	-2.5
JCZ	**Jackson Bay**	**5.92**	**221**	PN	Pn	09 20 47.0	-3.0
ODZ	**Otahua Downs**	**5.93**	**204**	PN	Pn	09 20 48.4	-1.7

NEIC ***12*** *09:30:39.2, 15°.05N×92°.95W, h87km, MD3.9(MEX), After MEX.*

MEX 12 09:30:39.2±1.1, 15°.07N×92°.95W, h87km±11km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.68**	**103**	*i* P	Pn	09 30 53.6	-1.6
THIG				*i* S	Sn	09 31 05.7	-1.5
PCIG		**

WB2	Warramunga Arr	13.35	165	*e*Pn	Pn	09 40 34.7	-3.1
WB2				*e*Sn	Sn	09 42 53.2	-11
COEN	Coen	14.13	120	*e*Pn	Pn	09 40 47.3	-0.7
54nm,0.4s							
ASAR	Alice Springs	16.85	170	P	Pn	09 41 22.3	+0.3
3.9nm,0.3s,baz=346,slow=9.1,SNR=162							
ASAR				S	S	09 44 19.3	-14
1.8nm,0.3s,baz=355,slow=26,SNR=5.0							
MBWA	Marble Bar	17.57	216	*e*Pn	Pn	09 41 31.1	+0.3
18nm,0.6s							
MBWA				*e*Sn	Sn	09 44 33.6	-13
MBWA	Marble Bar	17.57	216	P	Pn	09 41 31.6	+0.8
36nm,0.9s							
CTA	Charters Tower	19.96	132	P	P	09 41 57.7	+1.1
5.6nm,0.7s,baz=304,slow=11,SNR=6.0							
CTA				LR	LR	09 50 14.4	
comp=Z,70nm,21.1s,baz=230,slow=38							
CTA	Charters Tower	19.96	132	P	P	09 41 57.7	+1.1
CTA				LR	LR	09 50 14.4	
CTAO	Charters Tower	19.96	132	*e*P	P	09 41 57.2	+0.6
3.7nm,0.6s							
SBUM	Sibu	20.64	296	P	P	09 42 05.1	+1.2
FORT	Forrest	23.76	185	*e*P	P	09 42 37.6	+2.2
24nm,0.7s,mb4.6							
FORT				*e*S	S	09 46 56.4	+13
STKA	Stephens Creek	26.77	159	P	P	09 43 04.2	+1.5
2.2nm,0.5s,mb4.0,baz=329,slow=11,SNR=30							
STKA	Stephens Creek	26.77	159	*e*P	P	09 43 04.0	+1.3
2.0nm,0.6s,mb3.8							
NWAO	Narrogin (SRO)	28.62	204	P	P	09 43 20.4	+1.1
18nm,0.9s,mb4.7,baz=40,slow=7.9,SNR=3.7							
CMAR	Chiang Mai Arr	40.22	309	P	P	09 44 58.4	-0.8
2.6nm,0.6s,mb4.2,baz=136,slow=7.4,SNR=11							
WHN	Wuhan	40.48	338	⇑P	P	09 45 00.8	-0.4
MJAR	Matsushiro Arr	43.91	9	P	P	09 45 27.5	-1.5
4.9nm,0.5s,mb4.5,baz=191,slow=10,SNR=20							
KSRS	Korea Array	44.31	357	P	P	09 45 31.6	-0.5
1.1nm,0.6s,mb3.8,baz=174,slow=9.2,SNR=6.7							
ASAJ	Asahikawa	52.03	11	P	P	09 46 31.1	-0.3
5.0nm,0.4s,mb4.9,baz=220,slow=6.8,SNR=9.0							
ULN	Ulaanbaatar	58.47	342	*e*P	P	09 47 18.0	+0.4
2.7nm,0.3s,mb4.8							
SONM	Songino Array	58.66	341	P	P	09 47 19.0	+0.1
2.1nm,0.6s,mb4.3,baz=153,slow=7.4,SNR=11							
SONM				PcP	PcP	09 48 08.3	+0.4
1.0nm,0.6s,baz=164,slow=5.5,SNR=3.8							
CASY	Casey	60.78	189	*e*P	P	09 47 34.6	+1.4
6.6nm,0.3s,mb5.1							
PETK	Petropavlovsk-	64.15	18	P	P	09 47 56.0	+0.2
2.1nm,0.6s,mb4.1,baz=187,slow=10,SNR=8.6							
PETK				PcP	PcP	09 48 28.9	-1.1
2.4nm,0.8s,baz=226,slow=8.6,SNR=3.8							
PETK	Petropavlovsk-	64.15	18	P	P	09 47 56.0	+0.2
PETK				PcP	PcP	09 48 28.9	-1.1
MK31	Makanchi Array	68.58	327	*e*P	P	09 48 24.2	+0.1
MKAR	Makanchi Array	68.58	327	P	P	09 48 24.2	+0.1
6.2nm,0.5s,mb4.7,baz=120,slow=7.9,SNR=66							
AAK	Ala-Archa	70.95	320	P	P	09 48 39.2	+0.4
0.6nm,0.3s,mb3.9,baz=139,slow=5.6,SNR=8.1							
ZALV	Zalesovo Beam	71.87	334	P	P	09 48 43.4	-0.7
2.6nm,0.4s,mb4.4,baz=123,slow=7.1,SNR=11							
KURK	Kurchatov	72.86	328	*e*P	P	09 48 49.8	-0.2
5.9nm,0.8s,mb4.5							
MAW	Mawson	75.16	202	P	P	09 49 05.1	+1.9
0.9nm,0.5s,mb3.8,baz=84,slow=10,SNR=7.8							
BVAR	Borovoye Array	78.41	328	P	P	09 49 21.0	-0.7
1.9nm,0.4s,mb4.1,baz=126,slow=7.3,SNR=13							
ABKAR	Akbulak array	82.91	321	*e*P	P	09 49 45.1	-0.7
3.1nm,0.8s,mb4.2							
ILAR	Eielson Array	93.10	25	P	P	09 50 32.6	-1.8
0.2nm,0.5s,mb3.7,baz=267,slow=4.7,SNR=5.1							
CLNB	Carlsbad	123.56	56	*e*PKPdf	PKPdf	09 56 23.5	+5.0
LPAZ	La Paz	150.32	141	PKPbc	PKPbc	09 57 15.4	+2.7
1.0nm,0.3s,baz=231,slow=2.8,SNR=14							

CSEM ***12*** *10:11:19.7±0.7,59°.20N×27°.98E, h5km, ML2.3, Error ellipse: s-maj=23.8km s-min=5.0km az=110.0*
ISCJB ***12*** *10:11:20.2±0.9,59°.40N±0°.04×26°.8E±0°.2, h10km, Error ellipse: s-maj=11.8km s-min=6.3km az=173.3*
NAO ***12*** *10:11:22.8±1.0,59°.29N×26°.90E, ML2.3*
BER ***12*** *10:11:23.6±3.8,59°.32N×27°.01E, h4km±17km, ML2.3(NAO)*
IDC ***12*** *10:11:24.3±1.9,59°.39N×27°.05E, h0km, mb1 3.3/4, mb1mx3.1/26, mbtmp3.2/4, ML2.8/4, Error ellipse: s-maj=16.1km s-min=9.4km az=127.0*

ISC 12 10:11:22.7±0.9,59°.31N±0°.04×26°.9E±0°.2, h10km, n14, σ1§46/20, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	Vasula	0.85	186	Pg	Pg	10 11 39.0	0.0
VSU				Lg		10 11 50.3	
VSU	Vasula	0.85	186	Pg	Pg	10 11 39.0	0.0
VSU				*e*S	Sg	10 11 50.0	-0.1
252nm,0.4s,SNR=90							
VSU				Lg		10 11 50.3	
SNR=90							
MEF	Metsahovi	1.56	307	*e*S	Sn	10 12 14.5	+3.8
46nm,0.3s,SNR=50							
FIA0	FINESS Array S	2.18	350	Pn	Pn	10 12 01.0	+2.0
baz=163,slow=18							
FIA0				Lg		10 12 31.5	
baz=168,slow=28							
FIA0				Rg		10 12 43.7	
baz=171,slow=28							
FIA0	FINESS Array S	2.18	350	Pn	Pn	10 12 01.0	+2.0
baz=163,slow=17,SNR=7.7							
FIA0				Lg		10 12 31.5	
SNR=8.3							
FINES	FINESS Array B	2.18	350	Pn	Pn	10 12 00.9	+1.9
3.6nm,0.3s,baz=166,slow=15,SNR=36							
FINES				Pg	Pg	10 12 02.2	-2.3
3.6nm,0.3s,baz=162,slow=16,SNR=37							
FINES				Sn	Sn	10 12 28.7	+2.7
3.3nm,0.3s,baz=176,slow=21,SNR=11							
FINES				Lg		10 12 31.6	
3.7nm,0.3s,baz=169,slow=31,SNR=18							
RAF	Rauma	3.09	306	*e*P	Pn	10 12 16.0	+4.6
SNR=50							
HFS	Hagfors	6.73	283	Sn	Sn	10 14 15.2	-2.9
baz=105,slow=22							
HFS				Lg		10 14 53.0	
baz=110,slow=22							
HFS	Hagfors	6.73	283	Pn	Pn	10 13 02.3	+0.9
0.1nm,0.3s,baz=97,slow=12,SNR=3.3							
HFS				Sn	Sn	10 14 18.5	+0.5
0.4nm,0.3s,baz=96,slow=27,SNR=5.1							
HFS				Lg		10 14 54.7	
0.8nm,0.3s,baz=92,slow=31,SNR=6.5							
HFS	Hagfors	6.73	283	Sn	Sn	10 14 15.1	-2.9
baz=105,slow=22							
NOA	NORSAR Array B	8.01	289	Pn	Pn	10 13 19.8	+0.9
0.3nm,0.3s,baz=91,slow=13,SNR=6.6							
NOA				Sn	Sn	10 14 48.0	-1.4
0.2nm,0.3s,baz=111,slow=13,SNR=3.0							
NOA				Lg		10 15 34.6	
0.6nm,0.3s,baz=60,slow=22,SNR=4.6							
ARA0	ARCESS Array S	10.29	357	Pn	Pn	10 13 49.2	-0.8
baz=173,slow=16							
ARA0				Sn	Sn	10 15 38.5	-6.8
baz=172,slow=28							
ARA0	ARCESS Array S	10.29	357	Pn	Pn	10 13 49.2	-0.9
baz=173,slow=16,SNR=9.2							
ARCES	ARCESS Array B	10.29	357	Pn	Pn	10 13 49.1	-1.0
0.2nm,0.3s,baz=176,slow=14,SNR=7.5							

DDA ***12*** *10:11:19.5,36°.22N×26°.47E, h32km±5km, Md3.4*
NEIC ***12*** *10:11:22.7±0.7,36°.39N×26°.77E, h117km±9km, MD3.4(DDA), Error ellipse: s-maj=12.8km s-min=8.7km az=202.0*
ISCJB ***12*** *10:11:22.5±0.2,36°.41N±0°.02×26°.90E±0°.03, h132km±4km, mb3.6/3, Error ellipse: s-maj=3.9km s-min=3.3km az=18.7*
CSEM ***12*** *10:11:23.0±0.2,36°.46N×26°.83E, h131km±2km, ML3.4, Error ellipse: s-maj=4.4km s-min=3.5km az=107.0*
IDC ***12*** *10:11:23.9±2.3,36°.33N×26°.94E, h137km±30km, mb3.4/3, mb1 3.4/9, mb1mx3.2/30, mbtmp3.4/9, MS3.2/1, Ms1 3.2/1, ms1mx2.3/28, Error ellipse: s-maj=20.0km s-min=17.3km az=82.0*
ATH ***12*** *10:11:25.8,36°.50N×26°.69E, h27km±1km, MD3.1/3*
ISK ***12*** *10:11:26.3,36°.68N×26°.93E, h78km, ML3.4*
HLW ***12*** *10:11:27.8,36°.03N×27°.13E, h33km±51km, Md3.8, Ml4.2*

GII ***12*** *10:11:27.9±0.6,35°.96N×27°.33E, h10km*
ISC 12 10:11:23.5±0.3,36°.41N±0°.02×26°.90E±0°.03, h127km±4km, n180, σ1§12/216, mb3.6/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.73	27	*e*PG	Pn	10 11 40.1	-3.6
BODT	Bodrum	0.73	27	*e*Pg	Pn	10 11 40.1	-3.7
BDRM	Kayabasi	0.79	33	*i* P	Pn	10 11 44.5	+0.3
BDRM	Kayabasi	0.79	33	*i* P	Pn	10 11 44.5	+0.3
KARP	Karpathos	0.89	166	*e*PN	Pn	10 11 46.0	+0.9
KARP				*e*SN	Sn	10 11 59.9	-1.5
KARP	Karpathos	0.89	166	*e*Pn	Pn	10 11 46.0	+0.9
KARP				*e*Sn	Sn	10 11 59.9	-1.5
ARG	Arkhangelos	1.01	101	*e*PN	Pn	10 11 48.1	+1.9
ARG				*e*SN	Sn	10 12 05.2	+1.8
ARG	Arkhangelos	1.01	101	*e*Pn	Pn	10 11 48.1	+1.9
ARG				*e*Sn	Sn	10 12 05.2	+1.8
MLSB	Milas	1.13	38	*e*PG	Pn	10 11 45.7	-1.6
MLSB	Milas	1.13	38	*e*Pg	Pn	10 11 45.7	-1.6
APE	Apeiranthos	1.28	301	*e*PN	Pn	10 11 48.5	-0.4
APE				*e*SN	Sn	10 12 04.6	-3.8
APE	Apeiranthos	1.28	301	Pn	Pn	10 11 48.5	-0.4
APE				Sg	Sn	10 12 04.5	-3.8
APE	Apeiranthos	1.28	301	*e*Pn	Pn	10 11 48.5	-0.5
SMG	Samos	1.30	358	*e*PN	Pn	10 11 48.8	-0.3
SMG	Samos	1.30	358	*e*Pn	Pn	10 11 48.8	-0.3
GCAM	G?zelcaml?	1.31	12	*i* P	Pn	10 11 49.1	-0.2
GCAM	G?zelcaml?	1.31	12	*i* P	Pn	10 11 49.1	-0.2
YER	Yerkesik	1.32	56	*e*PN	Pn	10 11 49.0	-0.4
YER				*e*SN	Sn	10 12 04.6	-4.5
YER	Yerkesik	1.32	56	Pn	Pn	10 11 49.0	-0.4
YER				Sg	Sn	10 12 05.0	-4.1
YER	Yerkesik	1.32	56	*e*Pn	Pn	10 11 49.0	-0.4
ZKR	Zakros	1.41	204	*e*PN	Pn	10 11 52.1	+1.7
ZKR				*e*SN	Sn	10 12 11.3	+0.5
ZKR	Zakros	1.41	204	*e*Pn	Pn	10 11 52.1	+1.7
ZKR				*e*Sn	Sn	10 12 11.3	+0.5
TURN	Turunc	1.44	71	*i* P	Pn	10 11 47.9	-2.8
TURN				*i* S	Sn	10 12 03.1	-8.4
TURN	Turunc	1.44	71	*i* P	Pn	10 11 47.9	-2.8
TURN				*i* S	Sn	10 12 03.1	-8.3
AYDN	Tasoluk	1.47	32	*i* P	Pn	10 11 51.5	+0.5
AYDN				*i* S	Sn	10 12 10.2	-1.8
AYDN	Tasoluk	1.47	32	*i* P	Pn	10 11 51.5	+0.5
AYDN				*i* S	Sn	10 12 10.2	-1.9
NPS	Neapolis	1.55	223	*e*PN	Pn	10 11 52.7	+0.7
NPS				*e*SN	Sn	10 12 12.7	-1.0
NPS	Neapolis	1.55	223	*e*Pn	Pn	10 11 52.7	+0.7
NPS				*e*Sn	Sn	10 12 12.7	-1.0
URLA	Izmir	1.96	353	*i* P	Pn	10 11 55.6	-1.2
URLA				*i* S	Sn	10 12 17.3	-5.0
URLA	Izmir	1.96	353	*i* P	Pn	10 11 55.6	-1.2
URLA				*i* S	Sn	10 12 17.3	-5.0
BLCB	Balcova	1.97	3	*e*PN	Pn	10 11 55.0	-1.9
BLCB	Balcova	1.97	3	*e*Pn	Pn	10 11 55.0	-1.9
IZM	Izmir	2.00	8	*e*PN	Pn	10 11 56.2	-1.1
IZM	Izmir	2.00	8	*e*Pn	Pn	10 11 56.2	-1.1
DENT	Denizli	2.17	51	*e*PN	Pn	10 11 58.9	-0.4
DENT	Denizli	2.17	51	*e*Pn	Pn	10 11 58.9	-0.4
AKAS	Kas	2.19	94	*i* P	Pn	10 12 00.2	+0.6
AKAS	Kas	2.19	94	*i* P	Pn	10 12 00.2	+0.6
SIVA	Sivas	2.20	231	*e*PN	Pn	10 12 01.5	+1.8
SIVA				*e*SN	Sn	10 12 28.0	+0.5
SIVA	Sivas	2.20	231	*e*Pn	Pn	10 12 01.5	+1.8
SIVA				*e*Sn	Sn	10 12 28.0	+0.5
GLHS	Gihisar (BURDU	2.21	70	*e*PN	Pn	10 12 00.9	+1.0
GLHS	Gihisar (BURDU	2.21	70	*e*Pn	Pn	10 12 00.9	+1.0
GOLH	Golhisar	2.29	68	*i* P	Pn	10 12 01.5	+0.6
GOLH	Golhisar	2.29	68	*i* P	Pn	10 12 01.5	+0.7
ELL	Elmali	2.44	81	*e*PN	Pn	10 12 04.3	+1.5
ELL	Elmali	2.44	81	*e*Pn	Pn	10 12 04.3	+1.5
KULA	Kula-Manisa	2.52	33	*e*PN	Pn	10 12 03.2	-0.6
KULA	Kula-Manisa	2.52	33	*e*Pn	Pn	10 12 03.3	-0.5
AKS	Akhisar	2.57	16	*e*PN	Pn	10 12 03.3	-1.1
AKS	Akhisar	2.57	16	*e*Pn	Pn	10 12 03.3	-1.1
KARN	Karanos	2.62	248	*e*PN	Pn	10 12 07.0	+1.9
KARN				*e*SN	Sn	10 12 36.9	-0.3
KARN	Karanos	2.62	248	*e*Pn	Pn	10 12 07.0	+1.9
KARN				*e*Sn	Sn	10 12 36.9	-0.3
KHL	Karahalli	2.83	47	*e*PN	Pn	10 12 08.0	+0.3
KHL	Karahalli	2.83	47	*e*Pn	Pn	10 12 08.0	+0.3
KORT	Korkueli	2.83	77	*i* P	Pn	10 12 05.7	-2.1
KORT	Korkueli	2.83	77	*i* P	Pn	10 12 05.7	-2.1
KHAL	Karahalli	2.84	46	*i* P	Pn	10 12 08.6	+0.7
KHAL				*i* S	Sn	10 12 38.0	-4.2
KHAL	Karahalli	2.84	46	*i* P	Pn	10 12 08.6	+0.7
KHAL				*i* S	Sn	10 12 38.0	-4.1
DEMI	Demirci	3.00	28	*i* P	Pn	10 12 09.6	-0.2
DEMI	Demirci	3.00	28	*i* P	Pn	10 12 09.6	-0.3
ANTB	Antalya	3.06	80	*e*PN	Pn	10 12 13.0	+2.4
ANTB	Antalya	3.06	80	*e*Pn	Pn	10 12 13.0	+2.3
BCK	Bucak	3.13	69	*e*PN	Pn	10 12 13.5	+1.8
BCK	Bucak	3.13	69	*e*Pn	Pn	10 12 13.5	+1.8
BALB	Balikesir	3.31	13	*e*PN	Pn	10 12 13.8	-0.2
BALB	Balikesir	3.31	13	*e*Pn	Pn	10 12 13.8	-0.3
BALY	Balya	3.37	9	*i* P	Pn	10 12 14.6	-0.2
BALY	Balya	3.37	9	*i* P	Pn	10 12 14.6	-0.2
DURS	Dursunbey	3.42	21	*i* P	Pn	10 12 15.3	-0.2
DURS	Dursunbey	3.42	21	*i* P	Pn	10 12 15.3	-0.1
SUTC	Sutluce-Ispart	3.45	71	*e*PN	Pn	10 12 18.4	+2.5
SUTC	Sutluce-Ispart	3.45	71	*e*Pn	Pn	10 12 18.4	+2.6
SHUT	Suhut-Afyon	3.60	53	*e*PN	Pn	10 12 19.2	+1.3
SHUT	Suhut-Afyon	3.60	53	*e*Pn	Pn	10 12 19.2	+1.3
GONE	Gonen-Balikesi	3.68	9	*e*PN	Pn	10 12 18.0	-0.9
GONE	Gonen-Balikesi	3.68	9	*e*Pn	Pn	10 12 18.0	-0.9
GELI	Tayfur-Gelibol	4.00	355	*e*PN	Pn	10 12 23.0	0.0
GELI	Tayfur-Gelibol	4.00	355	*e*Pn	Pn	10 12 23.0	0.0
BNT	Bandirma	4.02	11	*e*PN	Pn	10 12 23.2	-0.2
BNT	Bandirma	4.02	11	*e*Pn	Pn	10 12 23.2	-0.2
RKY	Sarkoy-Tekirda	4.28	3	*e*PN	Pn	10 12 26.9	+0.1
RKY	Sarkoy-Tekirda	4.28	3	*e*Pn	Pn	10 12 26.9	+0.1
GAZI	Gazipasa	4.37	91	*i* P	Pn	10 12 27.6	-0.5
GAZI	Gazipasa	4.37	91	*i* P	Pn	10 12 27.6	-0.5
ARMT	Armutlu	4.42	20	*e*PN	Pn	10 12 29.5	+0.8
ARMT	Armutlu	4.42	20	*e*Pn	Pn	10 12 29.5	+0.8
ADVT	Abdulvahap	4.59	28	*e*PN	Pn	10 12 31.7	+0.7
ADVT	Abdulvahap	4.59	28	*e*Pn	Pn	10 12 31.7	+0.7
KIZT	Kizilcal	4.66	57	*e*PN	Pn	10 12 33.8	+1.9
KIZT	Kizilcal	4.66	57	*e*Pn	Pn	10 12 33.8	+1.9
SVRH	Sivrihisar-ESK	4.75	49	*e*PN	Pn	10 12 35.0	+1.9
SVRH	Sivrihisar-ESK	4.75	49	*e*Pn	Pn	10 12 35.0	+1.9
ERMK	Ermenek	4.84	85	*i* P	Pn	10 12 32.3	-2.1
ERMK	Ermenek	4.84	85	*i* P	Pn	10 12 32.3	-2.1
GULT	Gulveren	4.92	34	*e*PN	Pn	10 12 36.3	+1.0
GULT	Gulveren	4.92	34	*e*Pn	Pn	10 12 36.3	+1.0
LTBQ	Tobruq	5.00	210	*i* P	Pn	10 12 37.1	+0.6
SNR=50							
LTBQ				*e*S	x	10 13 06.0	
66nm,0.3s,SNR=50							
SLUM		5.10	196	P	Pn	10 12 38.3	+0.4
baz=200							
SLUM				AMP		10 13 00.0	
comp=E,190μm,0.5s,logA/T=5.6,baz=200							
SLUM				S	Sn	10 13 27.0	-8.8
baz=200							
SLUM		5.10	196	P	Pn	10 12 38.3	+0.4
SLUM				S	Sn	10 13 27.0	-8.9
HMAT	Matruh	5.31	178	P	Pn	10 12 40.9	+0.3
baz=181							
HMAT				AMP		10 13 00.0	
comp=N,240μm,0.3s,logA/T=5.8,baz=181							
HMAT	Matruh	5.31	178	P	Pn	10 12 40.9	+0.2
BR131	Keskin Array S	6.26	56	*e*Pn	Pn	10 12 54.9	+1.5
comp=N,1.9nm,0.5s							
BR131				*e*Sn	Sn	10 14 05.4	+1.8
BR131	Keskin Array S	6.26	56	*e*Pn	Pn	10 12 54.9	+1.5
comp=N,1.9nm,0.5s							
BR131				*e*Sn	Sn	10 14 05.4	+1.8
BRTR	Keskin Array B	6.26	56	P	Pn	10 12 54.5	+1.1
comp=N,0.3nm,0.3s,baz=232,slow=14,SNR=27							
BRTR				S	Sn	10 14 06.0	+2.5
comp=N,0.3nm,0.3s,baz=221,slow=24,SNR=5.4							
BRTR	Keskin Array B	6.26	56	P	Pn	10 12 54.5	+1.1
BRTR				S	Sn	10 14 06.1	+2.5
SWA2		7.25	190	P	Pn	10 13 06.8	-0.1
baz=193							
SWA2				AMP		10 14 00.0	
comp=N,210μm,0.3s,logA/T=5.8,baz=193							
SWA2				S	Sn	10 14 18.7	-9.0
baz=193							
SWA2		7.25	190	P	Pn	10 13 06.8	-0.1
SWA2				S	Sn	10 14 18.7	-9.0
HNAT	Natroun	7.44	154	P	Pn	10 13 08.9	-0.5
baz=154							
HNAT	Natroun	7.44	154	P	Pn	10 13 08.9	-0.6
KOT	Kottamia	7.67	146	P	Pn	10 13 12.0	-0.6
baz=145							
KOT	Kottamia	7.67	146	P	Pn	10 13 12.0	-0.5
HWQ	Hawqa	7.69	103	*e*P	Pn	10 13 12.6	-0.2
HWQ	Hawqa	7.69	103	*e*P	Pn	10 13 12.6	-0.2
WRDH	Warideh	7.76	94	⇑*i*P	Pn	10 13 14.6	+0.8
HHAG	Hagoal	7.77	144	P	Pn	10 13 13.6	-0.4
baz=144							
HHAG	Hagoal	7.77	144	P	Pn	10 13 13.6	-0.3
MMA0B	Mount Meron ar	7.78	113	Pn	Pn	10 13 13.8	-0.1
MMAI	Mount Meron Ar	7.78	113	P	Pn	10 13 12.3	-1.6
comp=N,12nm,0.3s,baz=312,slow=12,SNR=20							
MMAI				S	Sn	10 14 39.1	-1.2
comp=N,8.1nm,0.3s,baz=306,slow=26,SNR=6.8							
BIDA	Albida	7.79	98	⇑*i*P	Pn	10 13 13.2	-0.9
HSAF	As Saff	7.82	149	P	Pn	10 13 14.4	-0.1
baz=148							
HSAF	As Saff	7.82	149	P	Pn	10 13 14.4	-0.1
LJBD	Adjabya	7.83	227	*i* P	Pn	10 13 13.1	-1.6
SNR=48							
RCY	Rachaya	7.88	109	*e*P	Pn	10 13 15.2	-0.2
RCY	Rachaya	7.88	109	*e*P	Pn	10 13 15.2	-0.1
KSDI	Kefar Szold	7.88	111	Pn	Pn	10 13 14.8	-0.6
KSDI	Kefar Szold	7.88	111	Sn	Sn	10 14 40.4	-2.5
HRI	Mount Hermon	7.91	111	Pn	Pn	10 13 16.2	+0.4
GLL	Jalalah	7.92	148	P	Pn	10 13 16.4	+0.5
baz=147							
GLL	Jalalah	7.92	148	P	Pn	10 13 16.4	+0.5
MMLI	Mount Malkishu	8.08	117	Pn	Pn	10 13 17.6	-0.4
KSHT	Keshet	8.09	112	Pn	Pn	10 13 18.6	+0.4
QASN	Qassioun	8.21	108	⇑*i*P	Pn	10 13 20.9	+1.1
SUZ		8.22	141	P	Pn	10 13 20.3	+0.3
baz=140							
SUZ		8.22	141	P	Pn	10 13 20.3	+0.3
HMDT	Nahal Hemdat	8.25	118	Pn	Pn	10 13 20.7	+0.4
HMDT	Nahal Hemdat	8.25	118	Sn	Sn	10 14 49.3	-2.5
KZIT	Kziot	8.31	129	Pn	Pn	10 13 20.8	-0.4
KZIT	Kziot	8.31	129	Sn	Sn	10 14 49.6	-3.8
RTMI	Retamim	8.40	127	Pn	Pn	10 13 22.0	-0.4
DSI	Dead Sea	8.53	122	Pn	Pn	10 13 24.2	0.0
ZAF		8.55	145	P	Pn	10 13 24.7	+0.3
baz=144							
ZAF		8.55	145	P	Pn	10 13 24.7	+0.3
ZNM		8.62	143	P	Pn	10 13 25.8	+0.4
baz=142							
ZNM		8.62	143	P	Pn	10 13 25.8	+0.4
RMNI	Mount Ramon	8.76	129	Pn	Pn	10 13 27.6	+0.4
HNKL	Nakhl	8.77	135	P	Pn	10 13 27.0	-0.4
baz=134							
HNKL	Nakhl	8.77	135	P	Pn	10 13 27.0	-0.4
ZFRI	Zfri	9.05	128	Pn	Pn	10 13 30.7	-0.3
KRMI	Paran Flat	9.07	132	Pn	Pn	10 13 30.3	-1.0
KRMI	Paran Flat	9.07	132	Sn	Sn	10 15 07.0	-4.6
PRNI	Paran	9.07	129	Pn	Pn	10 13 31.2	-0.3
ASF	Jabal al Asfar	9.29	114	P	Pn	10 13 34.7	+0.4
comp=N,1.1nm,0.3s,baz=308,slow=5.2,SNR=4.5							
ASF				S	Sn	10 15 18.2	+1.3
comp=N,0.8nm,0.3s,baz=348,slow=20,SNR=3.5							
HFRF	Wahat Farafira	9.31	172	P	Pn	10 13 34.4	-0.3
baz=173							
HFRF	Wahat Farafira	9.31	172	P	Pn	10 13 34.4	-0.3
HRFI	Mount Harif	9.31	131	Pn	Pn	10 13 33.9	-0.8
HRFI	Mount Harif	9.31	131	Sn	Sn	10 15 13.6	-4.0
MBRI	Mt Berech	9.41	132	Pn	Pn	10 13 35.7	-0.3
MBRI	Mt Berech	9.41	132	Sn	Sn	10 15 16.4	-3.6
CUC	Castrocucco	9.43	296	*e*Pn	Pn	10 13 33.2	-3.0
comp=N,18nm,0.6s							
CUC				*e*Sn	Sn	10 15 04.8	-15
CUC	Castrocucco	9.43	296	*e*Pn	Pn	10 13 33.2	-2.9
comp=N,18nm,0.6s							
GRB	Gharib	9.52	147	P	Pn	10 13 37.4

LAST				S	Sn	10 22 16.2	+0.5
SMG	Samos	1.47	24	eP	Pn	10 21 58.3	+0.1
SMG				eS	Sn	10 22 17.7	-1.6
SMG	Samos	1.47	24	eP	Pn	10 21 58.3	+0.1
SMG				eS	Sn	10 22 17.7	-1.6
XRY	Khrisi	1.52	192	eP	Pn	10 22 00.0	+1.2
XRY	Khrisi	1.52	192	eP	Pn	10 22 00.0	+1.2
MLSB	Milas	1.65	55	ePN	Pn	10 22 00.1	-0.1
MLSB	Milas	1.65	55	ePn	Pn	10 22 00.1	-0.1
ARG	Arkhangelos	1.66	94	P	Pn	10 22 00.8	+0.4
ARG	Arkhangelos	1.66	94	eP	Pn	10 22 01.2	+0.8
ARG	Arkhangelos	1.66	94	P	Pn	10 22 01.2	+0.8
ARG				S	Sn	10 22 22.8	-0.2
ARG	Arkhangelos	1.66	94	P	Pn	10 22 01.2	+0.8
ARG				S	Sn	10 22 22.8	-0.2
SIVA	Sivas	1.69	218	eP	Pn	10 22 01.6	+0.8
SIVA				eS	Sn	10 22 24.2	+0.4
SIVA	Sivas	1.69	218	P	Pn	10 22 01.7	+0.9
SIVA				S	Sn	10 22 24.3	+0.5
SIVA	Sivas	1.69	218	eP	Pn	10 22 01.6	+0.8
SIVA				S	Sn	10 22 24.3	+0.5
VAM	Vamos	1.80	239	P	Pn	10 22 02.8	+0.7
VAM	Vamos	1.80	239	eP	Pn	10 22 03.0	+0.9
VAM	Vamos	1.80	239	P	Pn	10 22 02.8	+0.7
YER	Yerkesik	1.93	66	ePN	Pn	10 22 04.1	+0.5
YER				eSN	Sn	10 22 28.1	-0.7
YER	Yerkesik	1.93	66	ePn	Pn	10 22 04.1	+0.5
YER				eSn	Sn	10 22 28.1	-0.7
KARN	Karanos	2.00	242	eP	Pn	10 22 05.5	+1.0
KARN	Karanos	2.00	242	P	Pn	10 22 04.9	+0.4
KARN				S	Sn	10 22 29.3	-1.1
KARN	Karanos	2.00	242	P	Pn	10 22 04.9	+0.4
KARN				S	Sn	10 22 29.3	-1.1
CHOS	Chios island	2.02	359	P	Pn	10 22 04.4	-0.3
CHOS				S	Sn	10 22 29.8	-1.0
CHOS	Chios island	2.02	359	P	Pn	10 22 04.4	-0.3
CHOS				S	Sn	10 22 29.8	-1.0
DID	Didima	2.55	297	P	Pn	10 22 11.8	+0.4
DID	Didima	2.55	297	P	Pn	10 22 11.8	+0.4
VLI	Veliai	2.56	279	P	Pn	10 22 10.9	-0.6
VLI	Veliai	2.56	279	P	Pn	10 22 10.9	-0.6
GLHS	Gihisar (BURDU	2.86	73	ePN	Pn	10 22 16.5	+1.2
GLHS	Gihisar (BURDU	2.86	73	ePn	Pn	10 22 16.5	+1.2
PRK	Paraskevi	2.88	3	P	Pn	10 22 16.3	+0.7
PRK	Paraskevi	2.88	3	P	Pn	10 22 16.3	+0.7
ELL	Elmali	3.10	82	ePN	Pn	10 22 19.5	+0.9
ELL	Elmali	3.10	82	ePn	Pn	10 22 19.5	+1.0
VLX	Vlachokerasia	3.13	290	P	Pn	10 22 18.6	-0.3
VLX				S	Sn	10 22 54.9	-1.3
VLX	Vlachokerasia	3.13	290	P	Pn	10 22 18.6	-0.3
VLX				S	Sn	10 22 54.9	-1.3
KHL	Karahalli	3.37	53	ePN	Pn	10 22 23.6	+1.6
KHL	Karahalli	3.37	53	ePn	Pn	10 22 23.6	+1.6
GUR	Goura	3.38	299	P	Pn	10 22 22.7	+0.6
GUR	Goura	3.38	299	P	Pn	10 22 22.7	+0.6
ITM	Ithomi	3.44	285	P	Pn	10 22 23.4	+0.5
ITM	Ithomi	3.44	285	P	Pn	10 22 23.6	+0.7
ITM	Ithomi	3.44	285	P	Pn	10 22 23.6	+0.7
DSF	Desfina	3.49	307	P	Pn	10 22 24.2	+0.6
DSF	Desfina	3.49	307	P	Pn	10 22 24.2	+0.6
RLS	Riolos of Patr	4.05	296	P	Pn	10 22 33.6	+2.5
RLS	Riolos of Patr	4.05	296	P	Pn	10 22 33.6	+2.5
LTBQ	Tobruq	4.65	203	i P	Pn	10 22 39.0	-0.1
	SNR=23						
VLS	Valsamata	4.74	294	P	Pn	10 22 40.9	+0.7
VLS	Valsamata	4.74	294	P	Pn	10 22 39.0	-1.2
VLS	Valsamata	4.74	294	P	Pn	10 22 40.9	+0.7
SLUM		4.91	189	P	Pn	10 22 41.8	-0.8
	baz=191						
SLUM				AMP		10 23 00.0	
	comp=N,50μm,0.1s,logA/T=5.5,baz=191						
SLUM				S	Sn	10 23 33.3	-5.2
	baz=191						
SLUM		4.91	189	P	Pn	10 22 41.8	-0.8
HMAT	Matruh	5.32	171	P	Pn	10 22 47.8	-0.3
	baz=172						
HMAT	Matruh	5.32	171	P	Pn	10 22 47.8	-0.3
HBRG	Burj al 'Arab	6.57	150	P	Pn	10 23 03.8	-1.1
	baz=151						
HBRG	Burj al 'Arab	6.57	150	P	Pn	10 23 03.8	-1.1
SWA2		7.12	184	P	Pn	10 23 11.5	-0.8
	baz=186						
SWA2				AMP		10 24 00.0	
	comp=E,60μm,0.3s,logA/T=5.3,baz=186						
SWA2		7.12	184	P	Pn	10 23 11.5	-0.8
LJBD	Adjabya	7.32	224	i P	Pn	10 23 13.9	-1.1
	SNR=22						
GLL	Jalalah	8.25	143	P	Pn	10 23 26.4	-1.2
	baz=144						
GLL	Jalalah	8.25	143	P	Pn	10 23 26.4	-1.2
AWBH		8.37	163	P	Pn	10 23 28.1	-1.1
	baz=163						
AWBH		8.37	163	P	Pn	10 23 28.1	-1.1
SUZ		8.62	137	P	Pn	10 23 31.8	-0.8
	baz=138						
SUZ		8.62	137	P	Pn	10 23 31.8	-0.8
HKAT	Jabal Katrina	10.28	137	P	Pn	10 23 53.6	-1.2
	baz=138						
HKAT	Jabal Katrina	10.28	137	P	Pn	10 23 53.6	-1.2
HDK1	Dakhla	11.15	164	P	Pn	10 24 07.0	+0.5
	baz=165						
HDK1	Dakhla	11.15	164	P	Pn	10 24 07.0	+0.5

IDC 12 10:38:36.5±1.2, 44°.33N×28°.27W, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/27, mbtmp3.7/5, MS3.5/12, Ms1 3.5/12, ms1mx3.3/31, Error ellipse: s-maj=59.0km s-min=24.5km az=153.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKA	Eskdalemuir Ar	19.47	47	P	Pn	10 43 03.7	-2.0
	baz=254,slow=6.6,SNR=2.9						
DAVOX	Davos/Dischmat	26.65	71	LR	LR	10 53 09.3	
	comp=Z,148nm,18.4s,baz=87,slow=33						
SCHQ	Schefferville	26.79	307	LR	LR	10 52 31.1	
	comp=Z,143nm,21.9s,baz=22,slow=31						
NOA	NORSAR Array B	28.61	40	LR	LR	10 53 34.2	
	comp=Z,34nm,20.8s,baz=280,slow=31						
HFS	Hagfors	29.55	43	LR	LR	10 54 05.5	
	comp=Z,54nm,21.1s,baz=302,slow=31						
VRAC	Vranov	30.75	65	LR	LR	10 56 26.0	
	comp=Z,150nm,18.7s,baz=273,slow=35						
FINES	FINESS Array B	35.74	42	LR	LR	10 58 21.6	
	comp=Z,77nm,19.1s,baz=272,slow=33						
ARCES	ARCESS Array B	36.77	28	LR	LR	10 57 28.7	
	comp=Z,57nm,20.5s,baz=326,slow=31						
DBIC	Dimbokro	42.73	144	LR	LR	11 01 13.8	
	comp=Z,68nm,19.2s,baz=319,slow=32						
BRTR	Keskin Array B	45.26	73	P	P	10 46 54.6	-0.9
	0.4nm,0.4s,baz=310,slow=9.1,SNR=4.7						
BRTR				LR	LR	11 06 20.1	
	comp=Z,45nm,18.3s,baz=298,slow=37						
YKA	Yellowknife Ar	50.36	323	LR	LR	11 05 27.6	
	comp=Z,13nm,18.1s,baz=295,slow=32						
ROSC	El Rosal	56.30	240	LR	LR	11 07 18.9	
	comp=Z,64nm,20.2s,baz=251,slow=31						
TXAR	Lajitas Array	60.17	283	P	P	10 48 45.7	-0.3
	0.9nm,0.8s,baz=83,slow=7.4,SNR=6.4						
TXAR				LR	LR	11 17 11.5	
	comp=Z,156nm,18.1s,baz=130,slow=38						
LPAZ	La Paz	70.43	221	P	P	10 49 53.5	+1.0
	1.5nm,1.0s,baz=12,slow=3.6,SNR=4.7						
MKAR	Makanchi Array	70.56	43	P	P	10 49 54.9	+1.8
	0.5nm,0.8s,baz=323,slow=5.3,SNR=3.6						

SGS 12 11:04:13.9, 26°.78N×56°.23E, h8km
ISCJB 12 11:04:14.7±0.5, 26°.93N±0°.04×55°.75E±0°.04, h10km, Error ellipse: s-maj=6.1km s-min=4.2km az=42.7
OMAN 12 11:04:14.9±99.0, 26°.96N×56°.25E, h10km, Error ellipse: s-maj=41.8km s-min=17.4km az=231.0
CSEM 12 11:04:16.3±0.4, 26°.95N×55°.89E, h20km, ML3.2, Error ellipse: s-maj=11.2km s-min=8.8km az=71.0
KISR 12 11:04:17.7±0.9, 27°.31N×55°.30E, h34km±999km, ML3.5
TEH 12 11:04:19.9, 26°.97N×55°.92E, h18km
ISC 12 11:04:16.1±0.5, 26°.90N±0°.03×55°.82E±0°.04, h10km, n28, σ1§57/37, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.59	32	ePg	Pg	11 04 26.9	-0.7
BNDS				eSg	Sg	11 04 35.8	+0.4
IBND	Bandar-abas	0.85	49	ePg	Pg	11 04 33.4	+0.9
IBND				ePg	Pg	11 04 33.7	+1.2
IBND				eSg	Sg	11 04 42.9	-0.6
IBND				e		11 04 50.2	
	comp=Z,22μm,0.1s						
IBND				e		11 04 50.6	
	comp=Z,24μm,0.1s						
BANOM	Banah	1.06	156	P	Pg	11 04 34.8	-1.7
	SNR=767						
BANOM	Banah	1.06	156	P	Pg	11 04 34.8	-1.7
	SNR=767						
NAZ	Nazwa, Dubai	1.90	184	P	Pn	11 04 49.3	+0.7
	SNR=9.4						
NAZ	Nazwa, Dubai	1.90	184	P	Pn	11 04 49.3	+0.7
	SNR=9.4						
ASHO	Ashiyiah	2.21	174	P	Pn	11 04 52.8	-0.1
	SNR=96						
ASHO	Ashiyiah	2.21	174	P	Pn	11 04 52.8	0.0
	SNR=96						
ASUD	Al Ashush, Dub	2.30	191	P	Pn	11 04 55.0	+0.9
	SNR=117						
ASUD	Al Ashush, Dub	2.30	191	P	Pn	11 04 55.0	+0.9
	SNR=117						
KRBR	Kerman	3.19	15	ePn	Pn	11 05 03.8	-2.4
KRBR				eSg	Sb	11 05 48.5	-3.2
ISRV	Sarvestan	3.44	317	ePn	Pn	11 05 12.3	+2.6
ISRV				e		11 06 02.4	
	comp=Z,596nm,0.1s						
ARQ	Araqi	3.60	170	P	Pn	11 05 10.8	-1.2
	SNR=14						
ARQ	Araqi	3.60	170	P	Pn	11 05 10.8	-1.1
	SNR=14						
IPAR	Pars	3.82	321	ePn	Pn	11 05 17.1	+2.2
IPAR				e		11 06 05.6	
	comp=Z,423nm,0.3s						
IMEH	Mehriz	4.60	347	ePn	Pn	11 05 28.4	+2.7
IMEH				e		11 05 37.6	
	comp=Z,283nm,0.2s						
IBAF	Bafgh	4.68	357	ePn	Pn	11 05 28.6	+1.8
BOQSS		5.87	261	P	Pn	11 05 44.5	+1.3
NASN	Na'in	6.44	337	ePn	Pn	11 05 46.0	-4.9
QRN	Al-Qurain	7.23	287	eP	Pn	11 06 02.5	+0.6
QRN				eS	Sn	11 07 21.3	-2.8
QRN				AML	AML	11 07 22.1	
	comp=Z,10nm,0.4s						
RDF	Al-Radifah	7.59	287	eP	Pn	11 06 08.2	+1.5
RDF	Al-Radifah	7.59	287	eP	Pn	11 06 08.2	+1.4
NAY	Al-Naaiem	7.93	289	eP	Pn	11 06 12.0	+0.6
NAY				eS	Sn	11 07 38.2	-3.0
NAY				AML	AML	11 07 42.1	
	comp=Z,3.7nm,0.4s						
NAY	Al-Naaiem	7.93	289	eP	Pn	11 06 12.0	+0.6
NAY				eS	Sn	11 07 38.2	-3.0
MIB	Mutribah	8.01	293	eP	Pn	11 06 13.2	+0.6
MIB				eS	Sn	11 07 40.1	-3.2
MIB				AML	AML	11 07 43.9	
	comp=Z,8.4nm,0.5s						
MIB	Mutribah	8.01	293	eP	Pn	11 06 13.2	+0.6
MIB				eS	Sn	11 07 40.1	-3.2
ASYS		10.23	276	P	Pn	11 06 41.1	-1.9
ASYS		10.23	276	P	Pn	11 06 41.2	-1.9

PGC 12 11:11:43.2±24.0, 47°.37N×128°.99W, h10km, ML2.8/9, Mw3.5, 7D, 301km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDR	Gold River	3.11	38	⇑Pn	Pn	11 12 31.2	-1.1
WOSB	Woss	3.22	29	⇓Pn	Pn	11 12 32.6	-1.2
WOSB				⇑Sn	Sn	11 13 07.1	-5.0
MAYB	Maynard	3.26	21	⇑Pn	Pn	11 12 33.0	-1.4
PFB	Port Renfrew	3.28	67	⇓Pn	Pn	11 12 33.3	-1.4
MGB	Mount Grey	3.30	59	⇓Pn	Pn	11 12 33.7	-1.2
YOUB	Youbou, Lake C	3.51	62	⇓Pn	Pn	11 12 36.7	-1.1
CBB	Campbell River	3.58	41	⇑Pn	Pn	11 12 38.2	-0.6
CBB				⇓Sn	Sn	11 13 16.6	-4.5
NCRB	Newcastle Ridg	3.60	31	⇓Pn	Pn	11 12 38.5	-0.5
NCRB				⇑Sn	Sn	11 13 17.8	-3.7
LZB	Mount Lazard	3.68	68	⇑Pn	Pn	11 12 39.3	-0.9
SHB	Sechelt	4.06	55	⇓Pn	Pn	11 12 45.4	0.0
BBB	Bella Bella	4.85	6	⇑Pn	Pn	11 12 55.5	-0.7

IDC 12 11:12:35.6±3.1, 57°.08N×24°.01E, h0km, mb1 3.2/3, mb1mx3.1/24, mbtmp3.1/3, ML2.8/3, Error ellipse: s-maj=28.3km s-min=15.1km az=155.0
NAO 12 11:12:37.6±2.5, 57°.25N×23°.88E, ML2.3
BER 12 11:12:37.5±4.1, 57°.10N×23°.89E, h0km±22km, ML2.3(NAO)
CSEM 12 11:12:38.0±0.3, 57°.21N×23°.81E, h10km, ML2.2, Error ellipse: s-maj=9.2km s-min=5.9km az=63.0
ISC 12 11:12:38.5±2.4, 57°.19N±0°.04×23°.73E±0°.09, h14km±16km, n20, σ1§11/32, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	Slitere, Latvi	0.89	300	eS	Sg	11 13 14.5	+7.1
	SNR=90						
IZAR	Zarasai	2.01	135	eP	Pn	11 13 11.0	-1.0
IZAR				eS	Sn	11 13 36.5	-0.3
IZAR	Zarasai	2.01	135	eP	Pn	11 13 11.0	-0.9
IZAR				eS	Sn	11 13 36.5	-0.3
VSU	Vasula	2.05	50	Pn	Pn	11 13 12.5	+0.1
VSU				Lg		11 13 40.2	
VSU	Vasula	2.05	50	eP	Pn	11 13 12.6	+0.1
	SNR=50						
VSU				eS	Sn	11 13 38.2	+0.4
	46nm,0.1s,SNR=50						
IIGN	Ignalina	2.31	142	eP	Pn	11 13 15.6	-0.5
IIGN				eS	Sn	11 13 44.5	+0.2
IIGN	Ignalina	2.31	142	eP	Pn	11 13 15.6	-0.5
IIGN				eS	Sn	11 13 44.5	+0.2
SUW	Suwalki	3.20	186	eP	Pn	11 13 29.8	+1.5
	SNR=50						
RAF	Rauma	3.97	346	eP	Pn	11 13 40.7	+1.9
	SNR=49						
FIA0	FINESS Array S	4.43	15	Pn	Pn	11 13 45.2	0.0
	baz=181,slow=14						
FIA0				Sn	Sn	11 14 36.6	+0.2
FIA0				Lg		11 14 55.3	
	baz=199,slow=37						
FIA0	FINESS Array S	4.43	15	Pn	Pn	11 13 45.2	+0.1
	baz=181,slow=13,SNR=3.4						
FIA0				Sn	Sn	11 14 36.6	+0.2
FINES	FINESS Array B	4.43	15	Pn	Pn	11 13 45.2	+0.1
	0.4nm,0.3s,baz=197,slow=12,SNR=5.5						
FINES				Pg	Pg	11 13 57.0	-6.3
	1.2nm,0.3s,baz=190,slow=15,SNR=13						
FINES				Sn	Sn	11 14 38.3	+1.9
	0.3nm,0.3s,baz=193,slow=18,SNR=2.7						
FINES				Lg		11 14 58.2	
	1.1nm,0.3s,baz=195,slow=27,SNR=6.8						
HFS	Hagfors	6.01	304	Pn	Pn	11 14 07.5	+0.7
	baz=133,slow=14						
HFS				Sn	Sn	11 15 15.8	+0.6
	baz=120,slow=37						
HFS				Lg		11 15 46.0	
	baz=118,slow=37						
HFS	Hagfors	6.01	304	Pn	Pn	11 14 07.5	+0.7
	baz=133,slow=14						
HFS				Sn	Sn	11 15 15.8	+0.6
	baz=120,slow=32,SNR=2.6						
NB2	NORSAR Subarra	7.50	306	Pn	Pn	11 14 27.4	+0.1
	baz=116,slow=12						
NB2	NORSAR Subarra	7.50	306	Pn	Pn	11 14 27.4	+0.1
	baz=116,slow=12,SNR=0.5						
NOA	NORSAR Array B	7.50	306	Pn	Pn	11 14 26.7	-0.5
	0.3nm,0.3s,baz=110,slow=14,SNR=5.1						
NOA				Sn	Sn	11 15 50.3	-1.7
	0.1nm,0.3s,baz=230,slow=25,SNR=2.8						
NOA				Lg		11 16 35.4	
	0.4nm,0.3s,baz=38,slow=19,SNR=3.8						
ARA0	ARCESS Array S	12.41	3	Pn	Pn	11 15 31.8	-2.7
	baz=188,slow=12						
ARA0	ARCESS Array S	12.41	3	Pn	Pn	11 15 31.8	-2.6
	baz=188,slow=11,SNR=3.6						
ARCES	ARCESS Array B	12.41	3	Pn	Pn	11 15 31.0	-3.4
	0.1nm,0.3s,baz=179,slow=12,SNR=8.0						

NNC 12 11:17:23.0±1.1, 42°.92N×77°.58E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=7.8km s-min=6.1km az=43.0
ISCJB 12 11:17:25.5±1.1, 43°.03N±0°.09×77°.56E±0°.09, h10km, Error ellipse: s-maj=13.6km s-min=8.9km az=174.0
ISC 12 11:17:26.5±1.2, 42°.98N±0°.09×77°.49E±0°.09, h10km, n12, σ1§28/14, 3C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	0.45	302	⇑P	Pg	11 17 33.5	-1.8
	16nm,0.2s						
KNDC				⇓S	Sg	11 17 41.5	+0.1
	46nm,0.3s						
ULHL	Ulahol	1.18	232	P	Pb	11 17 47.0	-1.9
	SNR=100						
TKM2	Tokmak 2	1.39	268	⇓P	Pn	11 17 50.8	-1.2
	2.1nm,0.2s						
TKM2				⇑S	Sn	11 18 10.0	-0.4
	20nm,0.4s						
TKM2	Tokmak 2	1.39	268	P	Pn	11 17 50.6	-1.3
	SNR=7.0						
KBK	Karagaybulak	1.90	261	P	Pn	11 18 00.5	+1.5
	SNR=28						
CHMS	Chumysh	2.01	271	P	Pn	11 18 01.4	+1.0
	SNR=21						
USP	Ospenovka	2.21	278	P	Pn	11 18 04.9	+1.7
	SNR=30						
AAK	Ala-Archa	2.23	262	P	Pn	11 18 04.0	+0.5
	SNR=13						
EKS2	Erkin-Say	2.75	265	P	Pn	11 18 14.2	+3.6
	SNR=7.5						
AML	Almayashu	2.93	254	P	Pn	11 18 19.2	+6.1
	SNR=10						
MK31	Makanchi Array	5.11	40	⇑Pn	Pn	11 18 42.8	-0.3
	0.1nm,0.2s,baz=222,slow=11,SNR=3.8						
MK31				⇓Lg		11 19 59.9	
	1.3nm,0.5s,baz=219,slow=27,SNR=6.4						
KK31	Karatay Array	5.12	274	⇓Pg	Pg	11 18 57.7	-6.8
	0.6nm,0.4s,baz=90,slow=16,SNR=6.8						
KK31				⇓Lg		11 20 03.4	
	1.8nm,0.4s,baz=91,slow=27,SNR=7.1						

NEIC 12 11:20:09.6, 61°.47N×140°.24W, h10km, ML2.5(PGC), After PGC.
PGC 12 11:20:09.6±7.4, 61°.47N×140°.24W, h10km, ML2.5/4, 6D, 166km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYT	Haines Junctio	1.48	115	⇓Pn	Pn	11 20 35.1	-1.1
HYT				Sg	Sg	11 20 54.7	-2.3
HYT	Haines Junctio	1.48	115	⇓Pn	Pn	11 20 35.1	-1.1
HYT				⇑Sg	Sg	11 20 54.7	-2.3
PNL	Peninsula	1.85	167	ePn	Pn	11 20 40.3	-1.1
MENT	Mentasta	2.20	314	ePn	Pn	11 20 46.8	+0.7
DAWY	Dawson	2.63	8	ePn	Pn	11 20 52.0	-0.1
DAWY				eSg	Sg	11 21 32.4	-1.7
DAWY	Dawson	2.63	8	⇓Pn	Pn	11 20 52.0	-0.1
DAWY				⇓Sg	Sg	11 21 31.1	-3.0
WHY	Whitehorse	2.73	105	Pn	Pn	11 20 52.9	-0.4
WHY				Pg	Pg	11 20 58.4	-3.4
WHY				Sg	Sg	11 21 35.2	-1.9
WHY	Whitehorse	2.73	105	⇑Pn	Pn	11 20 52.9	-0.4
WHY				⇑Pg	Pg	11 20 58.4	-3.4
WHY				⇑Sg	Sg	11 21 35.2	-1.9
PLBC	Pleasant Camp	2.79	135	⇓Pn	Pn	11 20 54.3	+0.2
PLBC	Pleasant Camp	2.79	135	⇓Pn	Pn	11 20 54.3	+0.2
DOT	Dot Lake	2.81	323	ePn	Pn	11 20 53.8	-0.7
EGAK	Eagle	3.35	353	ePn	Pn	11 21 01.8	0.0

IDC 12 11:21:47.3±2.1, 6°.65S×129°.44E, h0km, mb3.4/1, mb1 3.9/3, mb1mx3.5/16, mbtmp3.7/3, ML3.9/2, Error ellipse: s-maj=124.9km s-min=20.0km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.04	161	Pn	Pn	11 25 09.6	+1.9
	0.6nm,0.3s,baz=341,slow=13,SNR=42						
WRA				Sn	Sn	11 27 35.9	-8.5
	0.6nm,0.3s,baz=338,slow=23,SNR=8.6						
ASAR	Alice Springs	17.45	166	P	Pn	11 25 54.4	+2.0
	0.3nm,0.3s,baz=349,slow=13,SNR=21						
ASAR				S	Sn	11 29 06.9	-0.4
	0.1nm,0.3s,baz=356,slow=26,SNR=4.3						
MKAR	Makanchi Array	67.63	327	P	P	11 32 45.9	-0.1
	0.1nm,0.3s,baz=139,slow=6.8,SNR=3.8						

NEIC 12 11:41:41.3, 17°.08N×95°.50W, h141km, MD3.9(MEX), After MEX.
MEX 12 11:41:41.2±1.2, 17°.08N×95°.50W, h142km±17km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.18	270	i P	Pn	11 42 06.4	-0.4
VHO				i S	Sn	11 42 24.1	-2.2
VHO	Vista Hermosa	1.18	270	i P	Pn	11 42 06.4	-0.4
VHO				i S	Sn	11 42 24.1	-2.2
HUIG	Huatulco	1.43	204	eP	Pn	11 42 08.5	-0.9
HUIG				i S	Sn	11 42 29.1	-1.8
HUIG	Huatulco	1.43	204	eP	Pn	11 42 08.5	-0.9
HUIG				i S	Sn	11 42 29.1	-1.8
TGIG		2.30	97	i P	Pn	11 42 18.1	-1.4
TGIG				i S	Sn	11 42 47.4	-1.5
PCIG		2.58	122	i P	Pn	11 42 20.7	-2.3
PCIG				i S	Sn	11 42 53.8	-1.5
PNIG	Pinotepa	2.60	255	i P	Pn	11 42 22.5	-0.8
PNIG				eS	Sn	11 42 52.7	-3.0
PNIG				i S	Sn	11 42 52.9	-2.7
PNIG	Pinotepa	2.60	255	i P	Pn	11 42 22.3	-1.0
PNIG				i S	Sn	11 42 53.0	-2.6
TEIG	Tepich	7.53	64	Pn	Pn	11 43 27.1	-1.3
TEIG				eSn	Sn	11 44 48.4	-4.1

IDC 12 12:43:12.8±2.8, 25°.30N×128°.15E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=170.4km s-min=26.3km az=66.0
JMA 12 12:43:16.8±0.2, 25°.30N×128°.17E, h62km±4km, M3.2, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	Tamagusuku 2	0.92	336	P	Pn	12 43 34.0	+0.1
JJT2				S	Sn	12 43 47.0	+0.5
NAH1	Naha	1.00	334	P	Pn	12 43 35.2	+0.3
NAH1				S	Sn	12 43 48.3	0.0
JOW	Kunigami	1.53	4	P	Pn	12 43 42.2	+0.3
JOW				S	Sn	12 44 01.2	+0.4
JAGN	Aguni-jima	1.53	327	P	Pn	12 43 42.6	+0.6
JAGN				S	Sn	12

s-min=10.4km az=61.0
*NEIC **12** 13:04:04.5, 39°.39N×123°.28W, h11km, MW3.6(BRK), After NCEDC.*
NEIC Felt [IV] at Willits. Also felt at Albion, Comptche, Mendocino and Redwood Valley.

ISC 12 13:04:04.2±0.6, 39°.38N±0°.03×123°.19W±0°.06, h8km±5km, n28, σ1°.21/40, 1C-2D, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKM	Rackout Spring	0.18	1	⇓*iP*	Pg	13 04 08.6	+0.7
KFPM	Farley Peak	0.32	324	⇓*iP*	Pg	13 04 09.9	-0.5
HOPS	Hopland	0.40	167	*e*Pg	Pg	13 04 13.4	+1.4
KCPM	Cahto Peak	0.43	315	⇑*e*Pg	Pg	13 04 12.1	-0.5
KCPM				*e*Sg	Sg	13 04 19.3	+1.0
KIPM	Iron Peak	0.48	332	*e*Pg	Pg	13 04 13.3	-0.2
MCCM	Marconi Confer	1.26	169	*e*P	Pn	13 04 26.3	-1.9
MCCM				*e*		13 04 30.4	
WDC	Whiskeytown Da	1.29	22	*e*P	Pn	13 04 28.4	-0.3
WDC				*e*S	Sb	13 04 46.2	+0.6
KHMM	Horse Mountain	1.55	344	*e*Pn	Pn	13 04 30.6	-1.5
KHMM				*e*Pg	Pg	13 04 34.7	+0.8
SAC	San Andreas	1.90	161	*e*Pn	Pn	13 04 35.5	-1.4
SAC				*e*Pg	Pg	13 04 41.2	+0.7
KRMB	Red Mountain	2.21	346	*e*Pn	Pn	13 04 39.8	-1.3
YBH	Yreka Blue Hor	2.37	9	Pn	Pn	13 04 43.9	+0.4
	3.6nm,0.3s,baz=190,slow=8.1,SNR=30						
YBH				Pg	Pg	13 04 47.5	-2.2
	16nm,0.3s,baz=201,slow=9.7,SNR=76						
YBH				Lg		13 05 19.0	
	5.9nm,0.3s,baz=131,slow=17,SNR=3.2						
YBH	Yreka Blue Hor	2.37	9	*e*Pn	Pn	13 04 43.8	+0.3
CMB	Columbia Colle	2.57	121	*e*Pn	Pn	13 04 45.4	-0.8
WCN	Washoe City	2.66	91	*e*Pn	Pn	13 04 50.8	+3.4
WCN				*e*Sg	Sg	13 05 27.4	-2.3
KBO	Bosley Butte	2.93	345	*e*Pn	Pn	13 04 50.1	-1.1
KBO				*e*Pg	Pg	13 04 58.5	-1.9
SAO	San Andreas Ge	2.95	152	*e*Pn	Pn	13 04 51.1	-0.4
SAO				*e*Pg	Pg	13 05 05.6	+4.8
PAHR	Pah Rah Range	2.96	83	*e*Pn	Pn	13 04 53.6	+2.2
WAKR	Walker	3.05	106	*e*Pn	Pn	13 04 54.2	+1.4
HUMO	Hull Mountain	3.23	3	Pn	Pn	13 04 55.9	+0.8
HUMO				*e*Pg	Pg	13 05 04.9	-1.1
HUMO				*e*Sg	Sg	13 05 48.6	+0.8
MOD	Modoc	3.34	40	*e*Pn	Pn	13 04 57.6	+0.9
KEBM	Edson Butte	3.59	346	Pn	Pn	13 05 01.2	+1.0
KEBM				*e*Pg	Pg	13 05 14.6	+1.5
NVAR	Mina Array Bea	3.93	103	Pn	Pn	13 05 08.7	+3.9
	1.4nm,0.3s,baz=282,slow=14,SNR=43						
NVAR				Lg		13 06 10.6	
	0.4nm,0.3s,baz=274,slow=29,SNR=2.5						
WVOR	Wild Horse Val	4.60	47	*e*Pn	Pn	13 05 12.9	-1.2
WVOR				*e*Pg	Pg	13 05 32.4	+0.1
ISA	Isabella	5.27	133	*e*Pn	Pn	13 05 24.2	+0.8
	3.0nm,0.6s						
ISA				*e*Sg	Sg	13 06 42.7	-11
TXAR	Lajitas Array	18.94	116	P	Pn	13 08 30.7	+4.4
	0.0nm,0.3s,baz=301,slow=9.3,SNR=3.3						
TXAR	Lajitas Array	18.94	116	P	Pn	13 08 30.7	+4.4
ILAR	Eielson Array	28.94	339	P	P	13 10 04.7	+1.0
	0.3nm,0.6s,baz=146,slow=8.5,SNR=5.4						
SJG	San Juan	53.39	96	LR	LR	13 37 13.9	
	comp=Z,243nm,18.4s,baz=280,slow=37						

IDC 12 13:10:29.4±3.1, 11°.85N×122°.55E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/19, mbtmp3.4/4, Error ellipse: s-maj=340.3km s-min=28.5km az=62.0, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.66	160	P	P	13 17 11.4	-0.6
	0.2nm,0.8s,baz=336,slow=9.1,SNR=2.8						
ASAR	Alice Springs	37.00	163	P	P	13 17 41.0	+0.1
	0.2nm,0.5s,baz=346,slow=7.4,SNR=8.4						
STKA	Stephens Creek	47.15	158	P	P	13 19 03.9	+0.2
	1.0nm,0.8s,baz=322,slow=12,SNR=2.7						
MKAR	Makanchi Array	48.58	324	P	P	13 19 14.6	-0.1
	0.4nm,0.7s,baz=131,slow=7.9,SNR=2.9						

*PGC **12** 13:17:17.5±5.1, 47°.37N×128°.93W, h10km, ML3.4/13, Mw4.0, 298km Wsw of Tofino, Bc Off Coast Of Washington*
*ISCJB **12** 13:17:22.1±0.6, 47°.80N±0°.03×128°.46W±0°.08, h10km, mb3.7/2, MS3.6/5, Error ellipse: s-maj=7.6km s-min=3.8km az=164.9*
*IDC **12** 13:17:22.7±2.1, 47°.74N×128°.41W, h0km, mb3.6/2, mb1 3.8/8, mb1mx3.6/27, mbtmp3.6/8, ML3.3/4, MS3.5/10, Ms1 3.5/10, ms1mx3.4/28, Error ellipse: s-maj=50.5km s-min=12.5km az=66.0*
*NEIC **12** 13:17:25.6±0.8, 47°.90N×128°.21W, h10km, mb3.9/5, Error ellipse: s-maj=10.3km s-min=6.3km az=75.0*

ISC 12 13:17:24.3±0.7, 47°.88N±0°.03×128°.41W±0°.08, h10km, n69, σ1°.07/71, mb3.7/2, MS3.6/5, 9D, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	Estevan Point	1.95	39	⇑Pn	Pn	13 17 57.7	+0.4
EDB	Eliza Dome	2.17	23	⇑Pn	Pn	13 17 60.0	-0.5
OZB	Mount Ozzard	2.23	60	⇓Pn	Pn	13 18 00.6	-0.6
OZB				⇑Sn	Sn	13 18 31.1	+2.4
BPBC	Brooks Peninsu	2.32	10	⇓Pn	Pn	13 18 01.2	-1.2
BMSB	Bamfield Mari	2.38	65	⇓Pn	Pn	13 18 02.7	-0.7
GDR	Gold River	2.47	39	⇓Pn	Pn	13 18 05.0	+0.5
WOSB	Woss	2.58	27	⇓Pn	Pn	13 18 06.8	+0.7
MAYB	Maynard	2.65	17	⇑Pn	Pn	13 18 06.9	-0.1
MGB	Mount Grey	2.72	64	⇑Pn	Pn	13 18 07.2	-0.7
PFB	Port Renfrew	2.74	74	P	Pn	13 18 07.1	-1.1
PFB	Port Renfrew	2.74	74	⇑Pn	Pn	13 18 07.0	-1.2
PFB				⇓Sn	Sn	13 18 43.0	+1.6
ALB	Alberni	2.76	58	⇓Pn	Pn	13 18 07.9	-0.6
HOLB	Holberg	2.77	4	⇑Pn	Pn	13 18 07.5	-1.1
PHC	Port Hardy	2.90	12	⇓Pn	Pn	13 18 10.2	-0.2
CBB	Campbell River	2.95	42	⇑Pn	Pn	13 18 12.1	+1.0
CBB				⇑Sn	Sn	13 18 50.6	+4.2
NCRB	Newcastle Ridg	2.96	31	⇑Pn	Pn	13 18 12.6	+1.3
OSR	Olympics--Salm	3.03	95	P	Pn	13 18 11.0	-1.2
NLWA	Neilton Lookou	3.11	97	*e*Pn	Pn	13 18 12.1	-1.2
LZB	Mount Lazard	3.15	75	⇑Pn	Pn	13 18 12.9	-1.0
OSD	Olympics--Snow	3.17	89	P	Pn	13 18 13.2	-1.0
PGC	Sidney	3.40	75	*e*Pn	Pn	13 18 16.2	-1.1
GNW	Green Mountain	3.78	93	*e*Pn	Pn	13 18 22.0	-0.5
BMW	Boistfort Moun	3.80	110	*e*Pn	Pn	13 18 20.9	-1.9
HEBO	Mount Hebo	4.17	128	*e*Pn	Pn	13 18 29.3	+1.4
BBB	Bella Bella	4.32	2	Pn	Pn	13 18 29.7	-0.1
	20nm,0.3s,baz=14,slow=9.2,SNR=132						
BBB				Sn	Sn	13 19 21.4	+1.2
	baz=11,slow=13,SNR=1.0						
BBB				LR	LR	13 20 13.0	
	comp=Z,859nm,18.1s,baz=204,slow=38						
BBB	Bella Bella	4.32	2	⇓Pn	Pn	13 18 29.9	+0.1
VDB	Vedder Mountai	4.35	72	P	Pn	13 18 30.4	0.0
JCW	Jim Creek	4.36	83	*e*Pn	Pn	13 18 30.3	-0.2
LON	Longmire	4.63	102	*e*Pn	Pn	13 18 34.1	-0.1
COR	Corvallis	4.84	131	*e*Pn	Pn	13 18 35.3	-1.7
COR				*e*Sn	Sn	13 19 30.6	-2.5
ASR	Mount Adams--S	4.97	108	P	Pn	13 18 39.2	+0.2
VLL	Laurance Lake	5.23	115	P	Pn	13 18 42.9	+0.5
HOOD	Mount Hood Mea	5.31	116	*e*Pn	Pn	13 18 43.5	-0.1
TBM	Table Mountain	5.34	95	P	Pn	13 18 45.2	+1.2
ETW	Entiat	5.46	90	P	Pn	13 18 46.1	+0.5
HUMO	Hull Mountain	6.53	142	*e*Pn	Pn	13 18 58.7	-1.5
HUMO				*e*Sn	Sn	13 20 06.8	-7.9
OD2	Odessa Site #2	6.58	91	*e*Pn	Pn	13 18 59.9	-1.0
OD2				*e*Sn	Sn	13 20 09.3	-6.5
YBH	Yreka Blue Hor	7.36	145	Pn	Pn	13 19 11.8	+0.1
	0.1nm,0.3s,baz=355,slow=10,SNR=5.1						
YBH				LR	LR	13 21 48.5	
	comp=Z,257nm,21.4s,baz=329,slow=37						
YBH	Yreka Blue Hor	7.36	145	*e*Pn	Pn	13 19 12.3	+0.6
NEW	Newport	7.57	83	*e*Pn	Pn	13 19 14.1	-0.5
WDC	Whiskeytown Da	8.42	148	*e*Pn	Pn	13 19 26.8	+0.5
WVOR	Wild Horse Val	8.79	125	*e*Pn	Pn	13 19 34.3	+3.0
HOPS	Hopland	9.69	154	*e*Pn	Pn	13 19 46.3	+2.7
WCN	Washoe City	10.62	141	*e*Pn	Pn	13 19 59.1	+2.7
DLBC	Dease Lake	10.62	355	Pn	Pn	13 20 00.2	+3.9
	0.1nm,0.3s,baz=157,slow=9.5,SNR=4.0						
DLBC				LR	LR	13 23 51.5	
	comp=Z,460nm,18.9s,baz=183,slow=36						
HLID	Hailey	10.69	109	*e*Pn	Pn	13 19 58.1	+0.7
MCMT	McKenzie Canyo	11.18	100	Pn	Pn	13 20 04.6	+0.6
CMB	Columbia Colle	11.45	146	*e*Pn	Pn	13 20 07.5	-0.3
NVAR	Mina Array Bea	11.97	138	Pn	Pn	13 20 15.7	+0.8
	0.1nm,0.3s,baz=310,slow=12,SNR=7.2						
EGMT	Eagleton	12.51	82	Pn	Pn	13 20 22.0	-0.2
IMW	Indian Meadow	12.80	102	*e*Pn	Pn	13 20 26.1	-0.1
TPAW	Teton Pass	12.97	103	*e*Pn	Pn	13 20 27.8	-0.7
GCMT	Greycliff	13.00	92	*e*Pn	Pn	13 20 29.3	+0.3
PDAR	Pinedale Array	14.21	104	Pn	Pn	13 20 48.5	+3.1
	0.0nm,0.3s,baz=309,slow=9.4,SNR=11						
SRU	San Rafael	15.63	118	*e*P	Pn	13 21 09.8	+5.2
	4.0nm,0.8s						
YKA	Yellowknife Ar	16.57	23	LR	LR	13 28 17.9	
	comp=Z,22nm,18.1s,baz=115,slow=39						
PV04	Paradox Valley	17.06	117	*e*Pn	Pn	13 21 23.9	+1.1
PV01	Paradox Valley	17.43	117	*e*Pn	Pn	13 21 28.4	+1.0
PHWY	Pilot Hill	17.59	103	*e*Pn	Pn	13 21 30.3	+1.0
	10nm,1.0s						
FFC	Flin Flon	17.82	58	Pn	Pn	13 21 31.7	-0.4
	8.4nm,0.8s						
ILAR	Eielson Array	19.65	336	P	Pn	13 21 53.6	-0.5
	baz=155,slow=11,SNR=4.1						
ILAR				LR	LR	13 28 09.4	
	comp=Z,175nm,20.2s,baz=134,slow=33						
INK	Inuvik	20.65	355	LR	LR	13 30 06.5	
	comp=Z,188nm,21.6s,MS3.4,baz=295,slow=37						
ANMO	Albuquerque	20.84	120	P	P	13 22 05.5	-0.4
	1.6nm,0.6s,baz=317,slow=4.9,SNR=4.9						
ANMO	Albuquerque	20.84	120	*e*P	P	13 22 05.8	-0.2
	4.8nm,1.1s						
BNM	Barren Site	21.31	122	*e*P	P	13 22 11.8	+0.8
	12nm,1.6s,mb4.0						
ULM	Lac du Bonnet	21.36	71	LR	LR	13 30 47.1	
	comp=Z,169nm,19.0s,MS3.5,baz=292,slow=38						
TXAR	Lajitas Array	26.59	125	P	P	13 23 01.1	-1.3
	1.1nm,1.0s,mb3.4,baz=296,slow=6.9,SNR=6.0						
TXAR				LR	LR	13 34 49.7	
	comp=Z,223nm,18.8s,MS3.7,baz=5.0,slow=40						
NOA	NORSAR Array B	66.65	20	LR	LR	14 00 17.4	
	comp=Z,26nm,18.1s,MS3.5,baz=295,slow=39						
ZALV	Zalesovo Beam	74.72	340	LR	LR	14 03 59.7	
	comp=Z,42nm,19.0s,MS3.8,baz=76,slow=37						

*CASC **12** 13:21:18.7±2.0, 12°.86N×89°.94W, h24km±7km, MD4.1, ML4.1, mb4.3(NEIC)*
*BJI **12** 13:21:19.4, 13°.20N×89°.70W, h56km, mB4.8/2, Ms5.1/2, Ms7 4.7/2*
*IDC **12** 13:21:21.9±3.0, 13°.37N×89°.53W, h44km±26km, mb4.1/16, mb1 4.3/18, mb1mx4.1/26, mbtmp4.1/18, ML3.4/1, MS3.5/4, Ms1 3.4/4, ms1mx3.1/27, Error ellipse: s-maj=28.1km s-min=16.6km az=36.0*
*ISCJB **12** 13:21:22.8±0.5, 13°.12N±0°.06×89°.58W±0°.05, h80km±4km, mb4.3/38, Error ellipse: s-maj=11.7km s-min=4.4km az=41.5*
*NEIC **12** 13:21:22.3±1.0, 13°.18N×89°.67W, h57km±9km, mb4.3/25, Error ellipse: s-maj=13.8km s-min=6.2km az=219.0*

ISC 12 13:21:24.4±0.5, 13°.21N±0°.06×89°.53W±0°.05, h73km±4km, n286, σ0°.79/283, mb4.3/38, 92C-84D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.56	31	*e*P	Pn	13 21 37.4	-0.7
SNET				AML	AML	13 22 00.5	
	comp=Z,5μm,0.4s						
BOQS	Boqueron	0.58	24	*e*P	Pn	13 21 38.2	-0.1
BOQS				*e*S	Sn	13 21 54.0	+5.5
LFRS	El Faro	0.61	47	⇑*e*P	Pn	13 21 39.0	+0.4
SBLS	San Blas	0.64	351	⇑*e*P	Pn	13 21 37.6	-1.3
SNJE	San Jose	0.66	353	⇑*e*P	Pn	13 21 38.1	-1.1
RTR	El Retiro	0.70	350	⇑*e*P	Pn	13 21 38.4	-1.1
RTR				*e*S	Sn	13 21 53.8	+3.1
LBRS	Las Brisas	0.71	41	*e*P	Pn	13 21 40.6	+0.9
SNVI	San Vicente	0.78	59	*e*P	Pn	13 21 41.0	+0.5
SNVI				*e*S	Sn	13 21 59.6	+7.3
RBDL	Robledal	0.92	350	⇑*e*P	Pn	13 21 41.4	-0.6
MTO2	Montecristo 2	1.20	8	*e*P	Pn	13 21 46.5	+0.9
VSM	San Miguel	1.24	80	*e*P	Pn	13 21 47.2	+1.1
BLLM	Bellamira	1.27	79	*e*P	Pn	13 21 47.7	+1.2
CAHU	Cacacuatique	1.40	66	*e*P	Pn	13 21 49.7	+1.6
PCG	Pacaya	1.58	318	*e*P	Pn	13 21 47.2	-3.4
NBG	Las Nubes	1.59	330	*e*P	Pn	13 21 49.3	-1.4
CNCH	Conchagua	1.65	87	*e*P	Pn	13 21 51.6	+0.2
MRL	Marmol	1.86	355	*e*P	Pn	13 21 55.9	+1.7
FG6		1.89	316	*e*P	Pn	13 21 49.7	-4.9
TP2	Tecpan 2	2.14	317	*e*P	Pn	13 21 54.3	-3.7
JAT	Jato	2.33	299	*e*P	Pn	13 21 52.6	-8.0
TGUH	Tegucigalpa,Un	2.35	69	*e*Pn	Pn	13 22 03.0	+2.2
COPN	Copaltepe	3.04	109	*e*P	Pn	13 22 07.9	-2.3
JTS	JuntasAbangare	5.33	122	*e*Pn	Pn	13 22 39.8	-1.7
JCR	Jicaral	5.46	127	*e*P	Pn	13 22 40.8	-2.5
CGA2	Cerro Gallo 2	5.88	122	*e*P	Pn	13 22 49.8	+0.8
PRS1	Puriscal	6.03	122	*e*P	Pn	13 22 52.1	+1.1
LAJ	Bijagual	6.25	122	*e*P	Pn	13 22 47.6	-6.4
CMIG	Matias Romero	6.46	307	P	Pn	13 22 51.8	-5.1
	comp=Z,0.8nm,0.3s,baz=106,slow=12,SNR=8.9						
CMIG				S	Sn	13 24 03.5	-5.6
	comp=Z,0.9nm,0.3s,baz=90,slow=20,SNR=1.9						
QCR	Quepos	6.46	125	*e*P	Pn	13 22 55.6	-1.4
URSC	Urasca	6.55	120	*e*P	Pn	13 22 59.5	+1.3
TEIG	Teipich	7.08	10	*e*P	Pn	13 23 08.6	+3.1
ACR	Cerro Adams	7.71	125	*e*P	Pn	13 23 13.1	-0.9
MTDJ	Mount Denham	12.57	65	P	Pn	13 24 19.3	-1.1
ROSC	El Rosal	17.14	118	P	Pn	13 25 20.8	+1.5
	comp=Z,1.8nm,0.3s,baz=91,slow=23,SNR=6.9						
ROSC	El Rosal	17.14	118	Pn	Pn	13 25 21.0	+1.7
SDV	Santo Domingo	19.03	101	*e*P	Pn	13 25 41.1	-1.1
	comp=Z,13nm,0.6s						
JCT	Junction City	19.64	333	⇑P	Pn	13 25 47.1	-2.1
	baz=20						
628A	Black Gap, Mar	20.40	325	⇓P	P	13 25 56.1	+0.6
	baz=20,SNR=8.4						
627A	Terlingua Ranc	20.66	324	P	P	13 25 58.6	+0.4
	baz=21,SNR=20						
TXAR	Lajitas Array	20.73	323	P	P	13 25 58.2	-0.9
	comp=Z,12nm,0.8s,baz=147,slow=11,SNR=99						
TXAR				PcP	PcP	13 30 07.0	+0.8
	comp=Z,0.3nm,0.6s,baz=150,slow=1.0,SNR=3.4						
528A	Cox Ranch, San	20.86	326	⇓P	P	13 26 00.6	+0.1
	baz=21						
626A	Big Bend Ranch	21.17	323	P	P	13 26 04.0	+0.3
	baz=21,SNR=22						
428A	Kincaid Ranch,	21.25	327	⇑P	P	13 26 06.4	+1.8
	baz=21						
527A	Woodward Ranch	21.31	325	P	P	13 26 05.4	+0.2
	baz=21,SNR=23						
526A	Mary Lane Ranc	21.52	324	⇓P	P	13 26 07.6	+0.1
	baz=22						
MIAR	Mount Ida	21.56	351	*e*P	P	13 26 09.3	+1.4
	comp=Z,6.5nm,0.8s,mb4.0						
UALR	University of	21.63	354	*e*P	P	13 26 11.6	+3.0
	comp=Z,12nm,0.5s,mb4.5						
427A	Hayter Ranch,	21.73	326	⇓P	P	13 26 09.3	-0.5
	baz=22						
328A	Wristen Ranch,	21.83	328	⇓P	P	13 26 10.6	-0.2
	baz=22,SNR=8.5						
426A	McDonald Obser	21.94	325	⇑P	P	13 26 12.1	+0.2
	baz=22,SNR=14						
326A	Caldwell Ranch	22.40	326	⇓P	P	13 26 17.0	+0.1
	baz=22,SNR=9.9						
425A	Indio Mountain	22.57	323	P	P	13 26 17.8	-0.9
	baz=23,SNR=12						
TKL	Tuckaleechee C	22.95	12	P	P	13 26 22.2	-0.4
	comp=Z,6.2nm,0.7s,mb4.0,baz=176,slow=9.9,SNR=7.1						
TKL	Tuckaleechee C	22.95	12	P	P	13 26 22.2	-0.4
325A	Bean Ranch, Si	23.00	324	⇑P	P	13 26 22.5	-0.7
	baz=23,SNR=9.1						
WMOK	Wichita Mounta	23.02	340	*e*P	P	13 26 20.9	-2.5
	comp=Z,8.3nm,1.0s,mb4.0						
ATAH	Atahualpa	23.03	151	LR	LR	13 34 09.3	
	comp=Z,89nm,19.7s,baz=159,slow=33						
226A	Malaga, Loving	23.04	327	⇑P	P	13 26 23.1	-0.5
	baz=23						
GDL2	Guadalupe Moun	23.29	327	*e*P	P	13 26 25.7	-0.2
324A	Moseley Ranch,	23.34	324	P	P	13 26 25.2	-1.1
	baz=23,SNR=14						
225A	Deer Hill, Car	23.47	326	P	P	13 26 27.4	-0.2
	baz=24,SNR=9.3						
MNTX	Cornudas Mount	23.47	324	⇓P	P	13 26 26.6	-1.0
	baz=24,SNR=17						
MNTX	Cornudas Mount	23.47	324	*e*P	P	13 26 25.9	-1.6
	comp=Z,5.8nm,0.7s,mb4.0						
Z27A	Tatum	23.59	330	⇓P	P	13 26 27.4	-1.3
	baz=24						
125A	Gardner Draw,	23.80	327	⇑P	P	13 26 29.5	-1.0
	baz=24						
224A	Cornudas Mount	23.83	325	P	P	13 26 30.0	-0.8
	baz=24,SNR=11						
MSTX	Muleshoe	23.92	332	⇓P	P	13 26 30.3	-1.3
	baz=24						
Z26A	Caprock	23.93	329	⇓P	P	13 26 31.3	-0.4
	baz=24						
Y27A	Causey	24.03	331	P	P	13 26 32.2	-0.4
	baz=24,SNR=6.4						
AMTX	Amarillo	24.23	335	⇑P	P	13 26 33.8	-0.6
	baz=24,SNR=5.5						
AMTX	Amarillo	24.23	335	*e*P	P	13 26 33.0	-1.4
	comp=Z,8.3nm,0.6s,mb4.2						
124A	Stringfield Ra	24.26	326	⇑P	P	13 26 35.2	+0.5
	baz=24,SNR=9.8						
Z25A	Roswell	24.32	328	⇓P	P	13 26 35.3	0.0
	baz=24						
SIUC	Southern Illin	24.41	1	*e*P	P	13 26 37.1	+1.1
	comp=Z,51nm,0.9s,mb4.9						
Z24A	Sheeppen Canyo	24.70	327	⇓P	P	13 26 39.0	+0.3
	baz=25,SNR=9.4						
222A	Williams Famil	24.77	322	⇓P	P	13 26 38.9	-0.5
	baz=25						
CCM	Cathedral Cave	24.80	357	*e*P	P	13 26 39.3	-0.3
	comp=Z,16nm,0.9s,mb4.4						
Y25A	Mesa, Roswell	24.81	329	⇓P	P	13 26 39.8	+0.1
	baz=25,SNR=8.4						
X26A	CR and CF Fran	24.89	331	⇑P	P	13 26 40.3	-0.1
	baz=25						
W27A	Bowe Ranch, En	24.97	333	P	P	13 26 41.0	-0.2
	baz=25,SNR=5.6						
221A	Mesquite Ranch	25.11	321	⇑P	P	13 26 42.8	+0.4
	baz=25						
Z23A	Rita Site, Whi	25.12	325	⇑P	P	13 26 42.7	+0.2
	baz=25						
320A	Kipp Ranch, An	25.12	319	⇑P	P	13 26 43.3	+0.7
	baz=25						
122A	Conniff Cattle	25.14	323	⇓P	P	13 26 42.8	+0.1
	baz=25						
Y24A	Capitan	25.20	328	⇓P	P	13 26 43.0	-0.2
	baz=25,SNR=6.3						
OLIL	Olney	25.46	3	*e*P	P	13 26 45.6	+0.1
	comp=Z,18nm,0.6s,mb4.7						
121A	Cookes Peak, D	25.48	322	⇓P	P	13 26 46.4	+0.6
	baz=26,SNR=8.9						
220A	Playas Peak, P	25.50	320	⇑P	P	13 26 46.4	+0.4
	baz=26,SNR=15						
Z22A	Elephant Butte	25.52	324	⇑P	P	13 26 46.0	-0.1
	baz=26,SNR=5.6						
Y23A	Lovelace Mesa,	25.53	327	P	P	13 26 46.6	+0.4
	baz=26,SNR=13						
W25A	X Bar L Ranch,	25.74	331	⇓P	P	13 26 48.7	+0.6
	baz=26						
V26A	Tequesquite Ra	25.91	333	⇑P	P	13 26 49.7	+0.1
	baz=26						
BNM	Barren Site	26.00	326	*e*P	P	13 26 50.8	+0.3
	comp=Z,8.6nm,1.0s,mb4.1						
120A	U Bar Ranch, L	26.00	321	⇑P	P	13 26 50.4	-0.1
	baz=26						
Y22A	Socorro	26.03	325	⇑P	P	13 26 50.8	+0.1
	baz=26,SNR=6.1						
219A	White Tail Can	26.03	319	P	P	13 26 51.8	+1.0
	baz=26,SNR=6.6						
318A	Bisbee	26.14	317	⇓P	P	13 26 50.8	-1.0
	baz=26						
W24A	Lazy 6 Ranch,	26.19	329	⇑P	P	13 26 52.3	+0.1
	baz=26						
V25A	Rancho No Teng	26.32	331	⇓P	P	13 26 53.0	-0.3
	baz=26,SNR=6.2						
Z20A	Nine Sixteen R	26.37	322	⇑P	P	13 26 53.8	0.0
	baz=26,SNR=11						
U26A	Atchley Ranch,	26.39	334	⇓P	P	13 26 54.1	+0.1
	baz=26						
LAZ	Ladron	26.47	326	*e*P	P	13 26 54.1	-0.6
	comp=Z,2.1nm,1.0s,mb3.5						
Y21A	Point of Rocks	26.48	325	P	P	13 26 55.7	+0.9
	baz=27,SNR=13						
ANMO	Albuquerque	26.52	328	P	P	13 26 55.4	+0.2
	comp=Z,1.2nm,0.6s,mb3.6,baz=144,slow=9.3,SNR=4.4						
ANMO	Albuquerque	26.52	328	P	P	13 26 55.4	+0.2
W23A	Werner Place,	26.52	328	⇑P	P	13 26 55.4	+0.1
	baz=27						
V24A	Rampart Ranch,	26.54	330	⇓P	P	13 26 55.8	+0.5
	baz=27						
119A	Ashpeak Ranch,	26.57	320	⇑P	P	13 26 55.9	+0.2
	baz=27	

BC3	Big Chuckawall	31.16	315	⇓P	P	13 27 36.7 +0.3
	baz=31					
N22A	Wattenberg Ran	31.24	335	⇑P	P	13 27 38.0 +1.0
	baz=31					
IRM	Iron Mountain	31.24	316	⇓P	P	13 27 38.1 +1.0
	baz=31					
T15A	Red Dirt Ranch	31.31	323	⇑P	P	13 27 38.6 +0.8
	baz=31					
S16A	Weppner Ranch,	31.35	325	⇓P	P	13 27 38.5 +0.4
	baz=32					
R17A	Hanksville Air	31.38	327	⇑P	P	13 27 38.9 +0.6
	baz=32					
U14A	Mt Trumbull	31.38	322	⇓P	P	13 27 38.9 +0.6
	baz=32,SNR=7.1					
MONP	Monument Peak	31.41	313	⇓P	P	13 27 38.5 -0.2
	baz=32					
V13A	Grand Canyon W	31.51	320	⇓P	P	13 27 39.8 +0.3
	baz=32,SNR=5.8					
R16A	Teasdale	31.69	326	⇓P	P	13 27 41.8 +0.7
	baz=32					
T14A	Hurricane	31.75	323	P	P	13 27 42.7 +1.1
	baz=32,SNR=5.2					
SRU	San Rafael	31.79	328	⇓P	P	13 27 42.1 +0.2
	baz=32					
U13A	Pakoon Wash	31.86	321	⇓P	P	13 27 43.2 +0.7
	baz=32,SNR=9.1					
GMRC	Granite Mounta	31.94	317	⇓P	P	13 27 44.0 +0.7
	baz=32					
V12A	Nelson	31.98	319	⇓P	P	13 27 44.6 +0.9
	baz=32					
P18A	Preston Nutter	32.04	329	⇑P	P	13 27 44.4 +0.3
	baz=32					
N20A	Spence Gulch,	32.04	333	⇑P	P	13 27 44.5 +0.4
	baz=32					
L23A	Garrett	32.05	337	⇓P	P	13 27 44.2 +0.1
	baz=32					
P17A	Butcher Ranch,	32.17	328	⇑P	P	13 27 45.5 +0.2
	baz=32					
T13A	Saint George	32.22	322	⇓P	P	13 27 46.2 +0.5
	baz=32					
M21A	Separation Pea	32.28	335	⇓P	P	13 27 46.7 +0.5
	baz=32					
HEC	Hector,Ludlow	32.42	316	⇑P	P	13 27 48.7 +1.2
	baz=32					
TUQ	Turquoise Moun	32.50	317	⇑P	P	13 27 48.7 +0.5
	baz=33					
M20A	Sweetwater, Wa	32.54	333	⇓P	P	13 27 48.3 -0.2
	baz=33					
S13A	Holt Ranch, En	32.56	323	⇑P	P	13 27 49.4 +0.8
	baz=33,SNR=7.6					
L21A	Rawlins	32.58	335	⇓P	P	13 27 48.8 0.0
	baz=33,SNR=8.8					
SADO	Sadowa	32.68	14	P	P	13 27 47.9 -1.7
	comp=Z,2.7nm,0.6s,mb4.3,baz=213,slow=7.6,SNR=4.5					
SADO	Sadowa	32.68	14	P	P	13 27 47.9 -1.7
DAU	Daniels Canyon	33.14	329	P	P	13 27 53.3 -0.4
	comp=Z,4.5nm,1.1s,mb4.2					
Q14A	Sevier Lake (B	33.18	325	⇓P	P	13 27 53.8 -0.3
	baz=33					
RSSD	Black Hills	33.23	341	eP	P	13 27 53.9 -0.5
	comp=Z,3.2nm,0.6s,mb4.3					
J22A	Midwest	33.46	337	⇑P	P	13 27 56.1 -0.3
	baz=34					
P14A	Drum Mountains	33.49	326	P	P	13 27 58.0 +1.2
	baz=34,SNR=5.7					
K20A	Yellowstone Ra	33.56	335	⇑P	P	13 27 56.9 -0.4
	baz=34					
EDW2	Edwards Air Fo	33.58	315	⇓P	P	13 27 57.5 -0.1
	baz=34					
FURC	Furnace Creek,	33.73	318	⇓P	P	13 27 59.4 +0.5
	baz=34					
S11A	Rachel	33.74	321	P	P	13 27 60.0 +1.0
	baz=34,SNR=5.3					
DUG	Dugway	33.78	327	⇑P	P	13 27 59.9 +0.6
	baz=34					
MPMC	Manual Prospec	33.90	317	⇓P	P	13 28 00.6 +0.2
	baz=34,SNR=7.8					
R11A	Troy Canyon, C	34.09	322	⇑P	P	13 28 02.3 +0.3
	baz=34,SNR=9.2					
PDAR	Pinedale Array	34.17	333	P	P	13 28 01.9 -0.8
	comp=Z,0.9nm,0.6s,mb3.8,baz=131,slow=9.3,SNR=8.8					
PDAR				PcP	PcP	13 30 37.1 -1.0
	comp=Z,0.8nm,0.8s,baz=132,slow=3.6,SNR=5.0					
HWUT	Hardware Ranch	34.19	330	eP	P	13 28 01.3 -1.6
	comp=Z,3.9nm,1.1s,mb4.2					
S10A	Tonopah Range,	34.44	320	⇑P	P	13 28 05.5 +0.5
	baz=34,SNR=9.6					
I20A	Worland	34.55	336	P	P	13 28 06.0 +0.2
	baz=35,SNR=5.4					
H21A	Big Horn, Sher	34.71	338	⇑P	P	13 28 06.8 -0.5
	baz=35					
J18A	Kendall Valley	34.73	333	⇑P	P	13 28 06.8 -0.7
	baz=35					
PKM	Peak Mountain	34.87	314	⇓P	P	13 28 09.1 +0.3
	baz=35					
Q10A	Clear Creek Ra	34.89	322	⇓P	P	13 28 09.5 +0.7
	baz=35					
L15A	Malad City	34.90	330	⇓P	P	13 28 08.5 -0.4
	baz=35					
J17A	Brown Place, J	35.16	333	⇓P	P	13 28 10.7 -0.5
	baz=35					
REDW	Red Top Meadow	35.22	333	eP	P	13 28 11.1 -0.5
	comp=Z,4.3nm,0.6s,mb4.5					
G21A	Lodge Grass	35.28	338	⇓P	P	13 28 11.6 -0.6
	baz=35					
LOHW	Long Hollow	35.31	333	eP	P	13 28 11.8 -0.6
	comp=Z,2.7nm,0.6s,mb4.2					
AGMN	Agassiz Nation	35.38	353	eP	P	13 28 11.6 -1.3
	comp=Z,17nm,0.6s,mb5.0					
G20A	Bridger	35.65	337	⇓P	P	13 28 14.5 -0.8
	baz=36					
IMW	Indian Meadow	35.68	333	eP	P	13 28 15.1 -0.6
	comp=Z,1.8nm,0.6s,mb4.2					
K14A	Jones Ranch, D	35.69	329	⇑P	P	13 28 15.6 -0.1
	baz=36					
H18A	Shoshone NF, C	35.77	335	P	P	13 28 16.2 -0.1
	baz=36,SNR=5.7					
NVAR	Mina Array Bea	35.81	320	P	P	13 28 17.7 +0.9
	comp=Z,8.3nm,1.0s,mb4.6,baz=136,slow=8.0,SNR=35					
NVAR				PcP	PcP	13 30 43.9 +0.8
	comp=Z,2.0nm,0.6s,baz=140,slow=3.3,SNR=11					
RLMT	Red Lodge	35.98	336	⇓P	P	13 28 17.8 -0.3
	baz=36					
LPAZ	La Paz	36.14	144	P	P	13 28 19.8 0.0
G18A	Lazy EL Ranch,	36.25	336	⇓P	P	13 28 20.0 -0.5
	baz=36					
E21A	Keefer Ranch,	36.37	339	⇑P	P	13 28 21.0 -0.4
	baz=36					
J14A	Carey	36.44	330	⇑P	P	13 28 21.9 -0.1
	baz=37					
F19A	Roth Farm, Mol	36.46	337	⇓P	P	13 28 21.6 -0.6
	baz=37					
WAKR	Walker	36.58	319	eP	P	13 28 23.7 +0.3
	comp=Z,3.2nm,0.9s,mb4.2					
E20A	Meyer Farm, Mu	36.71	338	⇓P	P	13 28 24.1 -0.2
	baz=37					
D21A	La Casta Ranch	36.80	340	⇓P	P	13 28 25.6 +0.5
	baz=37					
F18A	Big Timber	36.80	336	⇓P	P	13 28 24.4 -0.7
	baz=37					
I14A	Mackay	36.86	331	⇑P	P	13 28 25.9 +0.3
	baz=37					
E19A	Rath Farm, Rou	36.91	338	⇓P	P	13 28 25.8 -0.3
	baz=37					
H15A	Lima	37.01	332	⇑P	P	13 28 27.6 +0.7
	baz=37					
HLID	Hailey	37.05	329	⇑P	P	13 28 28.6 +1.3
	baz=37					
I13A	Wildhorse Cree	37.17	330	⇓P	P	13 28 28.6 +0.4
	baz=37					
F17A	Fitzpatrick Pl	37.18	335	⇑P	P	13 28 28.4 +0.1
	baz=37					
DGMT	Dagmar	37.21	344	⇓P	P	13 28 28.8 +0.3
	baz=37					
DGMT	Dagmar	37.21	344	eP	P	13 28 28.3 -0.3
	comp=Z,21nm,0.6s,mb5.2					
D20A	Manuel Ranch,	37.21	339	P	P	13 28 29.0 +0.4
	baz=37,SNR=5.2					
MCMT	McKenzie Canyo	37.26	332	eP	P	13 28 29.7 +0.6
	comp=Z,2.3nm,0.7s,mb4.2					
ULM	Lac du Bonnet	37.30	353	P	P	13 28 27.7 -1.6
	comp=Z,8.8nm,0.7s,mb4.8,baz=170,slow=9.4,SNR=9.2					
ULM				LR	LR	13 46 44.3
	comp=Z,191nm,19.9s,baz=337,slow=41					
H14A	Leadore	37.34	332	⇓P	P	13 28 30.1 +0.4
	baz=38					
G15A	Dillon	37.36	333	⇓P	P	13 28 30.2 +0.3
	baz=38					
BOZ	Bozeman (W)	37.37	334	⇓P	P	13 28 29.4 -0.5
	baz=38					
E18A	Harlowton	37.42	337	⇑P	P	13 28 30.2 -0.2
	baz=38					
D19A	Cripps Ranch,	37.54	338	⇑P	P	13 28 31.3 0.0
	baz=38					
I12A	Atlanta	37.58	329	P	P	13 28 31.8 +0.1
	baz=38,SNR=5.2					
H13A	Challis	37.72	331	⇓P	P	13 28 33.1 +0.2
	baz=38,SNR=5.6					
LRM	Limekiln Ridge	37.86	334	eP	P	13 28 33.5 -0.6
F15A	Butte	37.89	334	⇑P	P	13 28 34.0 -0.3
	baz=38					
D18A	Linhart Farms,	37.91	337	⇑P	P	13 28 34.3 -0.2
	baz=38					
H12A	Diamond D Ranc	37.99	330	⇓P	P	13 28 35.3 +0.1
	baz=38					
C19A	Slack Wire Ran	38.09	339	⇓P	P	13 28 36.1 +0.1
	baz=38					
E16A	East Helena	38.10	335	⇑P	P	13 28 36.1 0.0
	baz=38					
G13A	Cobalt	38.10	331	⇓P	P	13 28 35.7 -0.4
	baz=38					
D17A	Six Diamond Ra	38.21	337	⇓P	P	13 28 36.8 -0.2
	baz=38					
EGMT	Eagleton	38.58	338	⇓P	P	13 28 40.0 -0.1
	baz=39					
C17A	Wharram Farm,	38.63	337	⇑P	P	13 28 40.3 -0.3
	baz=39					
G12A	Big Creek, Yel	38.65	330	⇑P	P	13 28 40.0 -0.7
	baz=39					
B19A	Brinkman Farms	38.66	339	⇑P	P	13 28 40.6 -0.2
	baz=39					
F13A	Darby	38.67	332	⇑P	P	13 28 40.3 -0.6
	baz=39					
A20A	Cobblestone Ra	38.69	341	⇓P	P	13 28 40.9 -0.1
	baz=39					
D15A	Lincoln	38.85	335	⇓P	P	13 28 42.3 -0.1
	baz=39					
B18A	Beardsley Farm	38.91	338	⇑P	P	13 28 42.6 -0.2
	baz=39					
J08A	Circle Bar Ran	39.03	326	⇑P	P	13 28 43.4 -0.5
	baz=39					
F12A	Elk City	39.08	331	P	P	13 28 43.8 -0.5
	baz=39,SNR=11					
E13A	Victor	39.10	333	⇑P	P	13 28 43.9 -0.6
	baz=39					
C16A	Fuhringer Ranc	39.15	336	⇑P	P	13 28 44.4 -0.5
	baz=39					
A18A	Metzger Ranch,	39.37	339	⇑P	P	13 28 46.3 -0.4
	baz=40					
A17A	Triple J Farms	39.70	338	P	P	13 28 49.0 -0.5
	baz=40,SNR=5.4					
E12A	Beaver Dam Sad	39.71	332	⇑P	P	13 28 48.4 -1.2
	baz=40					
D13A	Huson	39.72	333	⇑P	P	13 28 48.9 -0.8
	baz=40					
A16A	West Butte Ran	40.03	337	⇓P	P	13 28 51.7 -0.5
	baz=40					
D12A	Red Ives Fores	40.09	332	⇑P	P	13 28 51.7 -1.0
	baz=40					
F10A	Beach Ranch, E	40.18	330	P	P	13 28 52.7 -0.8
	baz=40,SNR=6.1					
YBH	Yreka Blue Hor	40.48	321	eP	P	13 28 53.6 -2.4
	comp=Z,1.2nm,0.7s,mb3.8					
A15A	Johnson Ranch,	40.49	336	⇑P	P	13 28 55.5 -0.5
	baz=41					
A14A	Double T Ranch	40.76	336	P	P	13 28 58.0 -0.2
	baz=41,SNR=6.6					
C11A	Tepee Creek (N	41.09	333	⇓P	P	13 29 00.2 -0.7
	baz=41					
H04A	Detroit Lake	41.93	325	⇑P	P	13 29 06.5 -1.4
	baz=42					
EDM	Edmonton	44.19	340	eP	P	13 29 24.3 -1.6
SCHQ	Schefferville	45.17	18	P	P	13 29 33.2 -0.5
	comp=Z,16nm,0.6s,mb4.9,baz=215,slow=6.7,SNR=21					
SCHQ	Schefferville	45.17	18	eP	P	13 29 33.2 -0.5
	comp=Z,12nm,0.7s,mb4.8					
BDFB	Brasilia	50.07	124	P	P	13 30 13.5 +1.2
	comp=Z,3.5nm,0.8s,mb4.4,baz=164,slow=22,SNR=4.1					
BDFB				LR	LR	13 53 44.3
	comp=Z,81nm,19.0s,baz=103,slow=39					
YKA	Yellowknife Ar	52.37	346	P	P	13 30 27.9 -0.8
	comp=Z,3.1nm,0.6s,mb4.5,baz=134,slow=7.2,SNR=13					
YKA				LR	LR	13 55 45.5
	comp=Z,11nm,18.8s,baz=100,slow=40					
DLBC	Dease Lake	54.37	335	P	P	13 30 43.7 +0.2
	comp=Z,3.6nm,0.8s,mb4.5,baz=145,slow=4.5,SNR=6.6					
DLBC	Dease Lake	54.37	335	P	P	13 30 43.7 +0.2
INK	Inuvik	61.89	343	P	P	13 31 35.1 -0.7
	comp=Z,3.9nm,0.9s,mb4.4,baz=139,slow=8.1,SNR=7.5					
ILAR	Eielson Array	64.52	336	P	P	13 31 52.1 -1.1
	comp=Z,3.4nm,1.1s,mb4.1,baz=141,slow=4.3,SNR=16					
DBIC	Dimbokro	83.33	85	P	P	13 33 44.1 0.0
	comp=Z,8.9nm,1.1s,mb4.5,baz=312,slow=5.6,SNR=4.4					
NOA	NORSAR Array B	83.69	29	P	P	13 33 45.5 +0.6
	comp=Z,1.2nm,0.9s,mb3.7,baz=283,slow=3.8,SNR=2.9					
ARCES	ARCESS Array B	86.13	19	P	P	13 33 56.4 -0.6
	comp=Z,0.5nm,0.6s,mb3.6,baz=290,slow=5.0,SNR=7.5					
KSRS	Korea Array	118.55	327	PKP	PKPdf	13 40 04.1 -0.2
	comp=Z,1.0nm,0.7s,baz=357,slow=1.2,SNR=7.2					
HHC	Hu-ho-hao-te	122.78	341	ePKP	PKPdf	13 40 08.8 -3.5
HHC				PP	PP	13 41 50.9 +1.1
HHC				PKS		13 43 44.5
HHC				SKS	SKSdf	13 47 09.7 -8.4
HHC				SKKS	SKKSac	13 48 33.1 -10
HHC				SS	SS	13 58 22.9 -3.3
HHC				AMB	AMB	
	comp=Z,70nm,8.4s					
HHC				LR	LR	
	comp=N,150nm,20.1s					
HHC				LR	LR	
	comp=E,130nm,22.3s					
HHC				LR	LR	
	comp=Z,120nm,21.9s					
WRA	Warramunga Arr	137.52	255	PKP	PKPdf	13 40 43.7 +3.0
	comp=Z,0.5nm,0.7s,baz=86,slow=2.5,SNR=9.8					
ASAR	Alice Springs	137.65	249	PKP	PKPdf	13 40 43.9 +3.0
	comp=Z,0.6nm,0.9s,baz=102,slow=2.2,SNR=6.5					
CM31	Chiang Mai Arr	147.45	345	ePKPbc	PKPbc	13 41 01.0 +0.1
CMAR	Chiang Mai Arr	147.45	345	PKPbc	PKPbc	13 41 01.4 +0.5
	comp=Z,5.3nm,0.7s,baz=341,slow=3.6,SNR=24					

NNC 12 13:21:43.6±1.3, 50.59N×73.34E, h0km, mb3.6, mpv3.2, 9C-5D, Error ellipse: s-maj=19.1km s-min=8.1km az=31.0, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOSK	Vostochnaya	2.59	326	⇓Pn	Pn	13 22 25.0	-1.7
	9.4nm,0.5s						
VOSK				⇓Sn	Sn	13 22 59.5	+0.7
	28nm,0.5s						
BRVK	Borovoye	3.11	324	⇑Pn	Pn	13 22 34.8	+0.9
	9.7nm,0.4s						
BRVK				⇑Sn	Sn	13 23 15.0	+3.2
	35nm,0.5s						
KURK	Kurchatov	3.36	86	⇑Pn	Pn	13 22 34.6	-2.7
	7.0nm,0.6s						
KURK				⇓Sn	Sn	13 23 21.1	+3.3
	33nm,0.6s						
ZRNK	Zerenda	3.58	313	⇓Pn	Pn	13 22 39.6	-0.7
	2.2nm,0.3s						
ZRNK				⇑Sn	Sn	13 23 23.9	+0.6
	16nm,0.5s						
MK31	Makanchi Array	7.04	119	⇑Pn	Pn	13 23 25.9	-1.9
	0.4nm,0.5s,baz=296,slow=12,SNR=6.7						
MK31				⇑Lg		13 25 23.1	
	5.2nm,0.6s,baz=310,slow=24,SNR=8.9						
KK31	Karaty Array	7.74	196	⇑Pn	Pn	13 23 40.5	+3.1
	0.5nm,0.4s,baz=14,slow=13,SNR=7.1						
KK31				⇑Lg		13 25 48.6	
	3.1nm,0.6s,baz=16,slow=26,SNR=4.1						
TKM2	Tokmak 2	7.83	168	⇑Lg		13 25 53.6	
	8.5nm,0.7s						
AB31	Akbulak array	8.75	266	⇓Pn	Pn	13 23 52.4	+1.1
	0.3nm,0.5s,baz=77,slow=9.3,SNR=18						

PGC 12 13:24:05.9±325.0, 47.22N×129.09W, h10km, ML2.9/8, Mw3.5, 4D, 319km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDR	Gold River	3.28	37	⇑Pn	Pn	13 24 55.8	-1.4
WOSB	Woss	3.39	29	⇓Pn	Pn	13 24 57.5	-1.2
PFB	Port Renfrew	3.41	65	⇑Pn	Pn	13 24 57.9	-1.2
MGB	Mount Grey	3.45	57	⇑Pn	Pn	13 24 58.0	-1.6
CBB	Campbell River	3.75	40	⇓Pn	Pn	13 25 02.9	-0.8
NCRB	Newcastle Ridg	3.77	31	⇑Pn	Pn	13 25 03.2	-0.8
LZB	Mount Lazard	3.81	67	⇓Pn	Pn	13 25 03.0	-1.5
TXB	Texada	3.97	50	⇑Pn	Pn	13 25 06.1	-0.6
SHB	Sechelt	4.21	54	⇓Pn	Pn	13 25 09.8	-0.2
BBB	Bella Bella	5.01	7	⇑Pn	Pn	13 25 21.0	0.0

PGC 12 13:30:50.5±8.1, 47.43N×128.90W, h10km, ML3.0/10, Mw3.6, 5D, 292km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	Eliza Dome	2.72	25	⇑Pn	Pn	13 31 32.4	-1.7
OZB	Mount Ozzard	2.75	55	⇑Pn	Pn	13 31 32.5	-2.0
OZB				⇑Sn	Sn	13 32 04.4	-3.4
BPBC	Brooks Peninsu	2.83	15	⇑Pn	Pn	13 31 33.5	-2.2
BMSB	Bamfield Mari	2.89	59	⇓Pn	Pn	13 31 34.8	-1.7
GDR	Gold River	3.03	38	⇓Pn	Pn	13 31 36.8	-1.6
WOSB	Woss	3.14	29	⇓Pn	Pn	13 31 38.7	-1.2
MAYB	Maynard	3.19	20	⇑Pn	Pn	13 31 39.3	-1.3
MGB	Mount Grey	3.23	59	⇓Pn	Pn	13 31 39.6	-1.4
MGB				⇑Sn	Sn	13 32 15.3	-4.3
HOLB	Holberg	3.25	9	⇑Pn	Pn	13 31 39.7	-1.8
PHC	Port Hardy	3.42	16	⇓Pn	Pn	13 31 43.4	-0.3
CBB	Campbell River	3.50	41	⇑Pn	Pn	13 31 44.1	-0.8
CBB				⇑Sn	Sn	13 32 23.0	-3.4
NCRB	Newcastle Ridg	3.52	31	⇑Pn	Pn	13 31 44.4	-0.8
LZB	Mount Lazard	3.61	69	⇑Pn	Pn	13 31 45.2	-1.1
BBB	Bella Bella	4.79	6	⇑Pn	Pn	13 32 02.0	-0.6

*ATH **12** 13:53:35.8, 37.85N×21.43E, h23km±1km, MD2.9/6*
*ISCJB **12** 13:53:36.6±0.5, 37.86N±0.03×21.41E±0.03, h27km±4km, Error ellipse: s-maj=5.8km s-min=4.0km az=5.0*
*CSEM **12** 13:53:36.7±0.3, 37.87N×21.43E, h19km±1km, MD2.9, Error ellipse: s-maj=6.6km s-min=5.6km az=8.0*
*THE **12** 13:53:36.7, 37.87N×21.43E, h0km±1km, ML2.1/9, Error ellipse: s-maj=1.8km s-min=0.6km az=210.0*

ISC 12 13:53:36.3±0.6, 37.84N±0.03×21.40E±0.03, h18km±4km, n41, σ1.16/71, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.22	13	ePB	Pg	13 53 41.7	+0.2
RLS				eSB	Sg	13 53 45.8	+0.7
RLS	Riolos of Patr	0.22	13	ePb	Pg	13 53 41.7	+0.2
RLS				eSb	Sg	13 53 45.8	+0.7
UPR	University Cam	0.54	34	ePN	Pg	13 53 46.0	-1.0
UPR	University Cam	0.54	34	P	Pg	13 53 45.7	-1.3
UPR				S	Sg	13 53 53.8	-0.4
UPR	University Cam	0.54	34	P	Pg	13 53 45.7	-1.3
UPR	University Cam	0.54	34	ePn	Pg	13 53 46.0	-1.0
UPR				S	Sg	13 53 53.8	-0.4
KFL	Anninata	0.56	299	P	Pg	13 53 47.8	+0.5
KFL				S	Sg	13 53 56.3	+1.5
KFL	Anninata	0.56	299	P	Pg	13 53 47.8	+0.5
KFL				S	Sg	13 53 56.3	+1.5
LAKA	Lakka	0.60	49	P	Pg	13 53 47.5	-0.8
LAKA				S	Sg	13 53 56.4	0.0
LAKA	Lakka	0.60	49	P	Pg	13 53 47.5	-0.8
LAKA				S	Sg	13 53 56.4	0.0
EFP	Efpalio	0.71	34	ePN	Pn	13 53 49.3	-2.1
EFP				eSN	Sn	13 53 59.4	-2.5
EFP	Efpalio	0.71	34	P	Pg	13 53 49.4	-0.8
EFP				S	Sg	13 53 59.9	+0.3
EFP	Efpalio	0.71	34	P	Pg	13 53 49.4	-0.8
EFP				eSn	Sn	13 53 59.4	-2.5
EFP				S	Sg	13 53 59.9	+0.3
VLS	Valsamata	0.72	298	ePN	Pn	13 53 50.2	-1.4
VLS				eSN	Sn	13 54 01.4	-0.9
VLS	Valsamata	0.72	298	P	Pb	13 53 50.3	-0.1
VLS				S	Sb	13 54 01.0	+1.0
VLS	Valsamata	0.72	298	P	Pb	13 53 50.3	-0.1
VLS				S	Sb	13 54 01.0	+1.0
VLS				eSn	Sn	13 54 01.4	-0.9
TRIZ	Trizonia	0.74	45	P	Pb	13 53 49.9	-0.8
TRIZ				S	Sb	13 54 00.5	-0.1
TRIZ	Trizonia	0.74	45	P	Pb	13 53 49.9	-0.8
TRIZ				S	Sb	13 54 00.5	-0.1
GUR	Goura	0.75	82	ePN	Pn	13 53 49.7	-2.3
GUR	Goura	0.75	82	P	Pb	13 53 50.1	-0.7
GUR				S	Sb	13 54 00.7	0.0
GUR	Goura	0.75	82	ePn	Pn	13 53 49.7	-2.3
GUR	Goura	0.75	82	P	Pb	13 53 50.1	-0.7
GUR				S	Sb	13 54 00.7	0.0
ITM	Ithomi	0.78	148	ePN	Pn	13 53 51.1	-1.3
ITM	Ithomi	0.78	148	P	Pb	13 53 51.3	0.0
ITM	Ithomi	0.78	148	P	Pb	13 53 51.3	0.0
KALE	Kalithea	0.80	46	P	Pb	13 53 50.8	-0.9
KALE				S	Sb	13 54 02.7	+0.5
KALE	Kalithea	0.80	46	P	Pb	13 53 50.8	-0.9
KALE				S	Sb	13 54 02.7	+0.5
VLX	Vlachokerasia	0.91	121	P	Pb	13 53 53.9	+0.4
VLX				S	Sb	13 54 07.3	+2.1
VLX	Vlachokerasia	0.91	121	P	Pb	13 53 53.9	+0.4
VLX				S	Sb	13 54 07.3	+2.1
DSF	Desfina	1.05	57	P	Pb	13 53 55.2	-0.8
DSF				S	Sb	13 54 11.1	+1.6
DSF	Desfina	1.05	57	P	Pb	13 53 55.2	-0.8
DSF				S	Sb	13 54 11.1	+1.6
LTK	Loutraki	1.25	81	P	Pn	13 53 59.0	+0.1
LTK	Loutraki	1.25	81	P	Pn	13 53 59.0	+0.1
AGG	Agios Georgios	1.39	31	P	Pn	13 54 02.4	+1.7
AGG				S	Sn	13 54 21.2	+2.6
AGG	Agios Georgios	1.39	31	P	Pn	13 54 02.4	+1.7
AGG				S	Sn	13 54 21.2	+2.6
DID	Didima	1.49	102	ePN	Pn	13 54 03.3	+1.1
DID	Didima	1.49	102	P	Pn	13 54 04.1	+1.9
DID				S	Sn	13 54 25.5	+4.3
DID	Didima	1.49	102	ePn	Pn	13 54 03.3	+1.1
DID	Didima	1.49	102	P	Pn	13 54 04.1	+1.9
DID				S	Sn	13 54 25.5	+4.3
LKR	Lokris	1.50	57	P	Pn	13 54 03.7	+1.5
LKR	Lokris	1.50	57	P	Pn	13 54 03.7	+1.5

WEL 12 14:26:21.7±0.6, 37.80S×176.37E, h154km±4km, ML3.6/18, Error ellipse: s-maj=4.5km s-min=4.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.15	107	PN	Pn	14 26 42.9	+0.5

TMWZ	Te Maipa	3.32	186	PN	Pn	14 27 10.8	-2.5
MTW	Mount Morrison	3.42	191	PN	Pn	14 27 11.1	-3.4
CAW	Cannon Point	3.45	197	PN	Pn	14 27 11.8	-3.1
TRWZ	Traveller	3.63	188	PN	Pn	14 27 14.0	-3.3
PAWZ	Paruwai Farm	3.65	191	PN	Pn	14 27 13.9	-3.5
WEL	Wellington	3.69	199	PN	Pn	14 27 14.8	-3.3
MSWZ	Moikau Station	3.71	193	PN	Pn	14 27 14.6	-3.6
SNZO	South Karori	3.73	200	PN	Pn	14 27 14.9	-3.7
TCW	Tory Channel	3.77	205	PN	Pn	14 27 15.6	-3.5
BHW	Baring Head	3.79	197	PN	Pn	14 27 15.4	-3.8
PLWZ	Palliser	3.86	193	PN	Pn	14 27 16.4	-3.8
NNZ	Nelson	4.12	213	PN	Pn	14 27 19.7	-3.9
QRZ	Quartz Range	4.24	223	PN	Pn	14 27 21.3	-3.9
THZ	Tophouse	4.77	213	PN	Pn	14 27 28.3	-3.8
KHZ	Kahutara	5.10	204	PN	Pn	14 27 31.9	-4.5
LTZ	Lake Taylor	5.88	211	PN	Pn	14 27 41.4	-5.3

*ISCJB **12** 14:30:24.8±1.1, 6°.61S±0°.09×127°.4E±0°.1, h422km±14km, mb3.7/11, Error ellipse: s-maj=23.4km s-min=7.9km az=149.1*
*NEIC **12** 14:30:24.2±1.9, 6°.45S×127°.59E, h393km±23km, mb4.1/3, Error ellipse: s-maj=32.4km s-min=9.5km az=56.0*
*IDC **12** 14:30:26.8±2.5, 6°.60S×127°.47E, h429km±32km, mb3.4/7, mb1 3.5/10, mb1mx3.3/18, mbtmp3.4/10, Error ellipse: s-maj=41.5km s-min=9.8km az=72.0*

ISC 12 14:30:26.2±1.1, 6°.64S±0°.09×127°.4E±0°.1, h420km±15km, n24, σ1§03/28, mb3.7/11, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	7.80	141	⇓iP	P	14 32 19.2	0.0
	10nm,0.4s						
KAPI	Kappang	7.80	282	ePn	P	14 32 18.5	-0.7
KNA	Kununurra	9.15	172	eP	P	14 32 34.9	+0.8
	20nm,0.5s						
FITZ	Fitzroy Crossi	11.53	189	P	P	14 33 00.7	+0.4
	0.9nm,0.3s,baz=17,slow=7.2,SNR=29						
FITZ	Fitzroy Crossi	11.53	189	eP	P	14 33 00.6	+0.3
	8.2nm,0.6s						
WRA	Warramunga Arr	14.83	154	P	P	14 33 36.5	+0.2
	1.3nm,0.3s,baz=335,slow=11,SNR=104						
WRA				S	S	14 36 11.1	-2.4
	1.0nm,0.3s,baz=331,slow=20,SNR=22						
WRA	Warramunga Arr	14.83	154	P	P	14 33 36.5	+0.2
WRA				S	S	14 36 11.1	-2.4
WB2	Warramunga Arr	14.84	154	eP	P	14 33 36.4	0.0
WB2				eS	S	14 36 11.5	-2.1
COEN	Coen	17.11	116	eP	P	14 34 00.7	0.0
ASAR	Alice Springs	18.04	160	P	P	14 34 10.8	+0.4
	1.9nm,0.3s,baz=342,slow=11,SNR=95						
ASAR				S	S	14 37 15.2	-0.4
	0.5nm,0.3s,baz=342,slow=26,SNR=12						
STKA	Stephens Creek	28.39	154	P	P	14 35 45.3	+0.9
	4.4nm,0.4s,mb4.1,baz=327,slow=8.8,SNR=7.4						
STKA	Stephens Creek	28.39	154	eP	P	14 35 45.3	+0.9
	2.8nm,0.3s,mb4.1						
CMSA	Cobar Meteorol	30.09	148	eP	P	14 36 00.6	+1.3
YNG	Young	33.66	148	eP	P	14 36 32.1	+2.0
	1.3nm,0.7s,mb3.4						
KSRS	Korea Array	43.86	1	P	P	14 37 53.5	+0.2
	1.3nm,0.8s,mb3.3,baz=174,slow=11,SNR=8.7						
MJAR	Matsushiro Arr	44.12	12	P	P	14 37 53.2	-2.2
	2.6nm,0.4s,mb4.0,baz=189,slow=10,SNR=5.8						
RPZ	Rata Peaks	53.10	141	P	P	14 39 03.7	+1.1
	4.3nm,0.4s,mb4.0,baz=24,slow=12,SNR=5.1						
SONM	Songino Array	57.32	343	P	P	14 39 32.7	+0.5
	0.3nm,0.4s,mb3.0,baz=171,slow=10,SNR=4.0						
MK31	Makanchi Array	66.54	328	eP	P	14 40 32.9	+0.1
MKAR	Makanchi Array	66.54	328	P	P	14 40 32.7	-0.1
	0.6nm,0.5s,mb3.5,baz=118,slow=9.1,SNR=8.0						
KBL	Kabul	68.58	311	P	P	14 40 44.7	-0.9
	6.8nm,0.7s,mb4.4						
AML	Almayashu	68.87	320	eP	P	14 40 50.8	+3.5
	2.2nm,0.5s,mb4.0						
ZALV	Zalesovo Beam	70.15	335	P	P	14 40 54.2	-0.5
	0.8nm,0.4s,mb3.6,baz=111,slow=8.3,SNR=5.1						
KURK	Kurchatov	70.89	330	eP	P	14 40 59.0	-0.2
	1.3nm,0.4s,mb3.8						

PGC 12 14:40:40.8±31.0, 47°.24N×129°.14W, h10km, ML3.1/19, Mw3.7, 12D, 320km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	Estevan Point	2.75	38	⇑Pn	Pn	14 41 23.4	-1.6
EDB	Eliza Dome	2.96	26	⇑Pn	Pn	14 41 25.9	-1.9
OZB	Mount Ozzard	2.99	53	⇓Pn	Pn	14 41 26.5	-1.7
OZB				⇑Sn	Sn	14 41 57.3	-6.7
BPBC	Brooks Peninsu	3.06	17	⇓Pn	Pn	14 41 27.1	-2.0
BMSB	Bamfield Mari	3.12	58	⇑Pn	Pn	14 41 28.4	-1.7
GDR	Gold River	3.28	38	Pn	Pn	14 41 30.9	-1.2
WOSB	Woss	3.38	29	⇑Pn	Pn	14 41 32.7	-0.9
MAYB	Maynard	3.42	22	⇓Pn	Pn	14 41 32.8	-1.4
PFB	Port Renfrew	3.43	65	⇓Pn	Pn	14 41 32.7	-1.5
MGB	Mount Grey	3.46	58	⇓Pn	Pn	14 41 33.3	-1.4
HOLB	Holberg	3.47	11	⇑Pn	Pn	14 41 33.5	-1.4
ALB	Alberni	3.52	53	⇓Pn	Pn	14 41 33.7	-1.8
PHC	Port Hardy	3.65	17	⇓Pn	Pn	14 41 35.4	-1.9
YOUB	Youbou, Lake C	3.67	61	⇑Pn	Pn	14 41 36.5	-1.0
CBB	Campbell River	3.75	40	⇓Pn	Pn	14 41 38.1	-0.6
NCRB	Newcastle Ridg	3.77	32	⇑Pn	Pn	14 41 38.5	-0.4
LZB	Mount Lazard	3.83	67	⇑Pn	Pn	14 41 38.7	-1.0
NLLB	Nanaimo Lost L	3.98	58	⇓Pn	Pn	14 41 40.9	-0.9
TXB	Texada	3.98	50	⇓Pn	Pn	14 41 41.1	-0.8
PGC	Sidney	4.08	68	⇓Pn	Pn	14 41 42.4	-0.7
GOBB	Galiano Island	4.14	63	⇓Pn	Pn	14 41 42.9	-1.1
SHB	Sechelt	4.23	54	⇑Pn	Pn	14 41 45.1	-0.1
BBB	Bella Bella	5.00	7	⇑Pn	Pn	14 41 55.5	-0.3

PGC 12 14:44:58.1±3.6, 47°.42N×128°.88W, h10km, ML2.9/17, Mw3.5, 13D, 292km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	Eliza Dome	2.72	25	⇑Pn	Pn	14 45 39.8	-2.0
OZB	Mount Ozzard	2.74	54	⇑Pn	Pn	14 45 39.6	-2.5
OZB				⇑Sn	Sn	14 46 10.9	-4.3
BPBC	Brooks Peninsu	2.84	14	⇑Pn	Pn	14 45 41.4	-2.0
BMSB	Bamfield Mari	2.88	59	⇓Pn	Pn	14 45 42.3	-1.6
GDR	Gold River	3.03	37	⇑Pn	Pn	14 45 44.6	-1.4
WOSB	Woss	3.14	28	Pn	Pn	14 45 46.3	-1.2
WOSB				⇑Sn	Sn	14 46 21.3	-3.8
MAYB	Maynard	3.19	20	⇓Pn	Pn	14 45 46.4	-1.9
PFB	Port Renfrew	3.20	67	⇑Pn	Pn	14 45 46.5	-1.7
MGB	Mount Grey	3.22	59	⇓Pn	Pn	14 45 46.9	-1.6
MGB				⇑Sn	Sn	14 46 23.0	-3.9
HOLB	Holberg	3.27	8	⇓Pn	Pn	14 45 47.9	-1.3
YOUB	Youbou, Lake C	3.43	63	⇑Pn	Pn	14 45 50.2	-1.3
YOUB				⇑Sn	Sn	14 46 29.4	-2.8
CBB	Campbell River	3.50	40	⇓Pn	Pn	14 45 51.8	-0.7
NCRB	Newcastle Ridg	3.52	31	⇑Pn	Pn	14 45 52.2	-0.6
NCRB				⇑Sn	Sn	14 46 31.4	-3.0
LZB	Mount Lazard	3.60	69	⇑Pn	Pn	14 45 52.5	-1.3
LZB				⇓Sn	Sn	14 46 31.8	-4.5
TXB	Texada	3.73	51	⇓Pn	Pn	14 45 54.5	-1.1
TXB				⇓Sn	Sn	14 46 36.6	-2.9
NLLB	Nanaimo Lost L	3.73	59	⇑Pn	Pn	14 45 54.3	-1.4
GOBB	Galiano Island	3.90	65	⇓Pn	Pn	14 45 57.5	-0.5
SHB	Sechelt	3.98	55	⇓Pn	Pn	14 45 58.7	-0.3
SHB				⇓Sn	Sn	14 46 43.7	-1.9
BBB	Bella Bella	4.80	6	⇓Pn	Pn	14 46 09.3	-1.0
VDB	Vedder Mountai	4.80	68	⇓Pn	Pn	14 46 09.7	-0.7

*IDC **12** 15:07:32.7±0.9, 51°.96N×171°.62W, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/27, mbtmp3.5/10, ML3.4/1, Error ellipse: s-maj=28.1km s-min=18.9km az=177.0*
*ISCJB **12** 15:07:37.8±1.2, 52°.1N±0°.1×171°.42W±0°.08, h45km±10km, mb3.6/8, Error ellipse: s-maj=24.7km s-min=5.8km az=165.6*
*NEIC **12** 15:07:38.4, 52°.00N×171°.41W, h21km, ML3.3(AEIC), After AEIC.*

ISC 12 15:07:38.6±1.2, 52°.0N±0°.1×171°.44W±0°.08, h36km±10km, n18, σ0§88/22, mb3.6/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	1.71	277	P	Pn	15 08 05.8	0.0
ATKA				S	Sn	15 08 26.8	+0.4
NIKO	Nikolski	1.84	58	ePn	Pn	15 08 06.9	-0.7
NIKO				eS	Sn	15 08 28.3	-1.3
UNV	Unalaska Valle	3.50	57	P	Pn	15 08 31.4	+1.0
UNV				S	Sn	15 09 10.7	+0.2
AMKA	Amchitka	5.79	267	Pn	Pn	15 09 01.6	-0.4
AMKA				eSn	Sn	15 10 11.1	+4.1
ILAR	Eielson Array	17.96	35	P	Pn	15 11 45.4	+0.4
	0.1nm,0.3s,baz=228,slow=11,SNR=4.4						
DLBC	Dease Lake	24.15	58	P	P	15 12 53.0	+2.1
	0.9nm,0.5s,mb3.5,baz=278,slow=15,SNR=3.7						
DLBC	Dease Lake	24.15	58	Pn	P	15 12 53.0	+2.1
NVAR	Mina Array Bea	38.94	89	P	P	15 15 01.4	+0.7
	0.3nm,0.7s,baz=303,slow=7.6,SNR=4.3						
PDAR	Pinedale Array	41.72	77	P	P	15 15 24.3	+0.6
	0.6nm,0.7s,mb3.3,baz=321,slow=2.1,SNR=4.8						
TXAR	Lajitas Array	54.03	87	P	P	15 16 59.1	-0.1
	0.2nm,0.6s,mb3.2,baz=277,slow=7.1,SNR=2.9						
BORG	Borgarnes	61.28	14	P	P	15 17 47.9	-1.7
	17nm,0.9s,baz=333,slow=4.5,SNR=2.8						
MK31	Makanchi Array	63.10	312	P	P	15 18 06.0	+4.0
MK31				e	pP	15 18 14.1	+1.2
MKAR	Makanchi Array	63.10	312	P	P	15 18 01.6	-0.5
	0.2nm,0.7s,mb3.4,baz=55,slow=5.5,SNR=2.9						
BVAR	Borovoye Array	63.23	323	P	P	15 18 03.0	+0.2
	0.7nm,0.5s,mb4.0,baz=44,slow=8.8,SNR=4.6						
AKTK	Aktyubinsk	69.65	329	P	P	15 18 44.1	+0.2
AKTO	Aktyubinsk	69.65	329	P	P	15 18 44.1	+0.2
	0.4nm,0.3s,mb3.9,baz=76,slow=12,SNR=2.8						
WRA	Warramunga Arr	85.80	230	P	P	15 20 12.5	-1.5
	0.2nm,0.9s,mb3.4,baz=31,slow=5.8,SNR=2.4						
ASAR	Alice Springs	89.21	228	P	P	15 20 30.1	-0.2
	0.4nm,0.6s,mb3.9,baz=26,slow=4.9,SNR=11						

DJA 12 15:08:27, 1°.22N×125°.66E, h15km, MLv3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	0.85	285	P	Pb	15 08 41.5	-2.0
MNI				S	Sb	15 08 56.1	+1.4
TNTI	Ternate	1.76	105	P	Pn	15 08 55.7	-1.3
TNTI				S	Sn	15 09 20.9	+1.7
KMSI	Cibinong	1.80	249	P	Pn	15 08 56.6	-0.9
KMSI				S	Sn	15 09 20.9	+0.9
LUWI	Luwuk	3.66	232	P	Pn	15 09 23.0	-0.1
LUWI				S	Sn	15 10 06.0	0.0
MRSI	Marisa	3.79	259	P	Pn	15 09 25.3	+0.4

*IDC **12** 15:14:23.5±0.9, 34°.77N×28°.35E, h0km, mb4.4/17, mb1 4.4/24, mb1mx4.3/33, mbtmp4.4/24, ML4.4/4, MS3.2/3, Ms1 3.2/3, ms1mx2.5/41, Error ellipse: s-maj=23.1km s-min=12.6km az=14.0*
*HLW **12** 15:14:26.0, 34°.87N×28°.57E, h31km±45km, Md4.1, Ml4.2*
*ISCJB **12** 15:14:26.3±0.1, 34°.69N±0°.01×28°.44E±0°.01, h33km, mb4.4/44, MS3.4/6, Error ellipse: s-maj=2.1km s-min=1.4km az=32.7*
*BJI **12** 15:14:26.6, 35°.13N×28°.26E, h25km, mb4.4/4*
*NEIC **12** 15:14:27.1±1.2, 34°.74N×28°.36E, h24km±10km, mb4.2/10, ML4.4(ISK), ML4.2(HLW), ML4.3(DDA), ML4.1(NIC), Error ellipse: s-maj=5.1km s-min=3.9km az=216.0*
*MOS **12** 15:14:27.2±1.1, 34°.85N×28°.35E, h33km, mb4.5/29, Error ellipse: s-maj=8.7km s-min=5.5km az=77.5*
*ISK **12** 15:14:27.5, 34°.79N×28°.34E, h30km, ML4.5*
*CSEM **12** 15:14:28.6±0.1, 34°.68N×28°.42E, h40km, mb4.3/32, Mw3.8, Error ellipse: s-maj=2.6km s-min=1.7km az=37.0*
*NIC **12** 15:14:29.8±0.1, 34°.87N×28°.54E, h35km, mb4.4, ML4.1, MW3.8*
*ATH **12** 15:14:29.1, 34°.87N×28°.25E, h33km±3km, MD3.9/14, ML4.1*
*THE **12** 15:14:30.5, 34°.81N×28°.43E, h43km±3km, ML4.2/10, Error ellipse: s-maj=3.1km s-min=1.3km az=168.0*
*DDA **12** 15:14:31.3, 35°.13N×28°.28E, h30km±4km, Ml4.3*
*GII **12** 15:14:33.2±0.6, 34°.34N×28°.71E, h32km*
*NSSC **12** 15:14:48, 34°.78N×30°.21E, h40km*

ISC 12 15:14:28.6±0.1, 34°.71N±0°.01×28°.43E±0°.01, h35km, n565, σ1§12/686, mb4.4/44, MS3.4/6, 13C-23D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	1.33	309	ePN	Pn	15 14 50.5	-0.2
KARP	Karpathos	1.33	309	ePn	Pn	15 14 50.5	-0.2
ARG	Arkhangelos	1.52	351	ePN	Pn	15 14 53.9	+0.6
ARG				eSN	Sn	15 15 11.6	-0.3
ARG	Arkhangelos	1.52	351	P	Pn	15 14 53.8	+0.5
ARG				S	Sn	15 15 12.1	+0.2
ARG	Arkhangelos	1.52	351	ePn	Pn	15 14 53.9	+0.6
ARG				eSn	Sn	15 15 11.6	-0.3
ARG				S	Sn	15 15 12.1	+0.2
ZKR	Zakros	1.86	283	ePB	Pn	15 14 58.4	+0.5
ZKR	Zakros	1.86	283	P	Pn	15 14 58.3	+0.4
ZKR				S	Sn	15 15 21.2	+1.0
ZKR	Zakros	1.86	283	P	Pn	15 14 58.3	+0.4
ZKR				S	Sn	15 15 21.2	+1.0
NIS1	Nisyros Isl.	2.15	332	P	Pn	15 15 01.7	-0.1
NIS1				S	Sn	15 15 27.6	+0.4
NIS1	Nisyros Isl.	2.15	332	P	Pn	15 15 01.7	-0.1
NIS1				S	Sn	15 15 27.6	+0.4
TURN	Turunc	2.16	4	iP	Pn	15 15 01.4	-0.7
TURN				iS	Sn	15 15 24.3	-3.4
TURN	Turunc	2.16	4	iP	Pn	15 15 01.4	-0.7
TURN				iS	Sn	15 15 24.3	-3.3
NPS	Neapolis	2.38	284	ePN	Pn	15 15 05.5	+0.5
NPS				eSN	Sn	15 15 31.6	-1.3
NPS	Neapolis	2.38	284	ePn	Pn	15 15 05.5	+0.5
NPS				eSn	Sn	15 15 31.6	-1.3
YER	Yerkesik	2.42	357	PN	Pn	15 15 06.8	+1.1
YER				PN	Pn	15 15 07.0	+1.4
YER				eSN	Sn	15 15 32.5	-1.5
YER	Yerkesik	2.42	357	Pn	Pn	15 15 05.7	0.0
YER	Yerkesik	2.42	357	P	Pn	15 15 05.7	+0.1
YER	Yerkesik	2.42	357	iP	Pn	15 15 05.7	+0.1
YER	Yerkesik	2.42	357	iPn	Pn	15 15 06.8	+1.2
YER				eSn	Sn	15 15 32.5	-1.6
LAST	Lasithi	2.46	281	ePN	Pn	15 15 07.2	+1.0
LAST	Lasithi	2.46	281	P	Pn	15 15 07.2	+1.0
LAST				S	Sn	15 15 36.7	+1.6
LAST	Lasithi	2.46	281	P	Pn	15 15 07.2	+1.0
LAST				S	Sn	15 15 36.7	+1.6
BDRM	Kayabasi	2.48	342	iP	Pn	15 15 06.1	-0.3
BDRM				iS	Sn	15 15 33.2	-2.4
BDRM	Kayabasi	2.48	342	iP	Pn	15 15 06.1	-0.4
BDRM				iS	Sn	15 15 33.2	-2.3
BODT	Bodrum	2.52	339	PN	Pn	15 15 05.9	-1.0
BODT				eSN	Sn	15 15 33.6	-2.8
BODT	Bodrum	2.52	339	iPn	Pn	15 15 05.9	-1.0
BODT				eSn	Sn	15 15 33.6	-2.8
GLHS	Glhisar (BURDU	2.59	19	ePN	Pn	15 15 07.9	0.0
GLHS	Glhisar (BURDU	2.59	19	ePN	Pn	15 15 08.1	+0.2
GLHS	Glhisar (BURDU	2.59	19	ePn	Pn	15 15 07.9	0.0
MLSB	Milas	2.63	349	ePN	Pn	15 15 07.1	-1.5
MLSB	Milas	2.63	349	ePN	Pn	15 15 07.6	-0.9
MLSB	Milas	2.63	349	Pn	Pn	15 15 07.6	-0.9
MLSB	Milas	2.63	349	ePn	Pn	15 15 07.6	-0.9
GOLH	Golhisar	2.68	20	iP	Pn	15 15 10.2	+1.0
GOLH				iS	Sn	15 15 39.4	-1.1
GOLH	Golhisar	2.68	20	iP	Pn	15 15 10.2	+1.0
GOLH				iS	Sn	15 15 39.4	-1.1
ANTB	Antalya	2.84	39	ePN	Pn	15 15 11.6	+0.2
ANTB	Antalya	2.84	39	ePn	Pn	15 15 11.6	+0.3
THR1	Thera Island	2.93	305	P	Pn	15 15 12.8	+0.1
THR1	Thera Island	2.93	305	P	Pn	15 15 12.8	+0.1
THR6	Thira Island,	2.97	304	P	Pn	15 15 13.5	+0.4
THR6	Thira Island,	2.97	304	P	Pn	15 15 13.5	+0.4
AYDN	Tasoluk	2.98	352	iP	Pn	15 15 13.9	+0.6
AYDN				iS	Sn	15 15 41.2	-6.5
AYDN	Tasoluk	2.98	352	iP	Pn	15 15 13.9	+0.6
SIVA	Sivas	2.99	277	ePN	Pn	15 15 14.4	+0.9
SIVA	Sivas	2.99	277	P	Pn	15 15 14.5	+1.0
SIVA				S	Sn	15 15 48.9	+0.8
SIVA	Sivas	2.99	277	ePn	Pn	15 15 14.4	+0.9
SIVA				S	Sn	15 15 48.9	+0.8
THR2	Thira island,	2.99	306	P	Pn	15 15 13.5	0.0
THR2	Thira island,	2.99	306	P	Pn	15 15 13.5	0.0
THR3	Thira Island,	3.00	305	P	Pn	15 15 13.7	+0.2
THR3	Thira Island,	3.00	305	P	Pn	15 15 13.7	+0.2
DNZL	Cakiroluk	3.02	9	iP	Pn	15 15 14.7	+0.9
DNZL				iS	Sn	15 15 36.8	-12
DNZL	Cakiroluk	3.02	9	iP	Pn	15 15 14.7	+0.9
THR5	Thira Island,	3.04	305	P	Pn	15 15 14.2	+0.1
THR5	Thira Island,	3.04	305	P	Pn	15 15 14.2	+0.1
DENT	Denizli	3.08	9	ePN	Pn	15 15 14.2	-0.5
DENT	Denizli	3.08	9	ePn	Pn	15 15 14.2	-0.4
GCAM	G?zelcaml?	3.14	342	iP	Pn	15 15 15.5	+0.1
GCAM				iS	Sn	15 15 48.3	-3.4
GCAM	G?zelcaml?	3.14	342	iP	Pn	15 15 15.5	0.0
GCAM				iS	Sn	15 15 48.3	-3.4
PPCY	Paphos	3.23	86	P	Pn	15 15 17.0	+0.3
PPCY	Paphos	3.23	86	P	Pn	15 15 17.0	+0.3
BCK	Bucak	3.25	32	ePN	Pn	15 15 17.8	+0.7
BCK	Bucak	3.25	32	ePN	Pn	15 15 18.3	+1.2
BCK	Bucak	3.25	32	P	Pn	15 15 17.8	+0.7
BCK	Bucak	3.25	32	ePn	Pn	15 15 17.8	+0.7
SMG	Samos	3.26	337	ePN	Pn	15 15 17.0	-0.1
SMG				eSN	Sn	15 15 53.0	-1.6
SMG	Samos	3.26	337	ePn	Pn	15 15 17.0	-0.1
SMG				eSn	Sn	15 15 53.0	-1.6
APE	Apeiranthos	3.33	316	ePN	Pn	15 15 17.9	-0.2
APE	Apeiranthos	3.33	316	ePN	Pn	15 15 18.1	0.0
APE	Apeiranthos	3.33	316	eP	Pn	15 15 18.1	0.0
APE	Apeiranthos	3.33	316	⇑P	Pn	15 15 18.1	0.0
APE	Apeiranthos	3.33	316	ePN	Pn	15 15 18.0	-0.1
APE				eSN	Sn	15 15 54.2	-2.2
APE	Apeiranthos	3.33	316	P	Pn	15 15 17.8	-0.3
APE				S	Sn	15 15 54.1	-2.3
APE	Apeiranthos	3.33	316	⇑iP	Pn	15 15 18.1	0.0
APE	Apeiranthos	3.33	316	P	Pn	15 15 17.8	-0.3
APE	Apeiranthos	3.33	316	ePn	Pn	15 15 18.1	0.0
APE				S	Sn	15 15 54.1	-2.3
ALFC	Alevga	3.46	81	P	Pn	15 15 20.1	+0.3
	55nm,0.2s						
ALFC				S	Sn	15 15 59.4	-0.1
ALFC	Alevga	3.46	81	P	Pn	15 15 20.1	+0.3
	55nm,0.2s						
ALFC				S	Sn	15 15 59.4	-0.1
SUTC	Sutluce-Ispart	3.46	36	ePN	Pn	15 15 21.0	+1.1
SUTC	Sutluce-Ispart	3.46	36	ePN	Pn	15 15 21.1	+1.3
SUTC	Sutluce-Ispart	3.46	36	ePn	Pn	15 15 21.1	+1.2
GAZI	Gazipasa	3.52	63	iP	Pn	15 15 20.4	-0.3
GAZI				iS	Sn	15 15 55.2	-5.9
GAZI	Gazipasa	3.52	63	iP	Pn	15 15 20.4	-0.3
GAZI	Gazipasa	3.52	63	iS	Sn	15 15 55.2	-5.9
VAM	Vamos	3.54	283	ePN	Pn	15 15 21.9	+0.9
VAM	Vamos	3.54	283	ePn	Pn	15 15 21.9	+0.9
SZAC	Souni-Zanaja	3.67	88	P	Pn	15 15 23.4	+0.6
SZAC				S	Sn	15 16 05.4	+0.6
SZAC	Souni-Zanaja	3.67	88	P	Pn	15 15 23.4	+0.6
SZAC				S	Sn	15 16 05.4	+0.6
LEF	Lefka	3.69	82	ePN	Pn	15 15 24.2	+1.1
LEF	Lefka	3.69	82	ePn	Pn	15 15 24.2	+1.2
KHL	Karahalli	3.71	13	ePN	Pn	15 15 23.0	-0.3
KHL	Karahalli	3.71	13	ePN	Pn	15 15 23.8	+0.4
KHL	Karahalli	3.71	13	ePn	Pn	15 15 23.8	+0.4
KHAL	Karahalli	3.75	13	iP	Pn	15 15 24.1	+0.1
KHAL				iS	Sn	15 16 04.4	-2.5
KHAL	Karahalli	3.75	13	iP	Pn	15 15 24.0	+0.1
KHAL				iS	Sn	15 16 04.4	-2.4
KARN	Karanos	3.77	282	ePN	Pn	15 15 25.0	+0.9
KARN	Karanos	3.77	282	P	Pn	15 15 24.9	+0.8
KARN				S	Sn	15 16 07.1	-0.1
KARN	Karanos	3.77	282	P	Pn	15 15 24.9	+0.8
KARN				S	Sn	15 16 07.1	-0.1
HMAT	Matruh	3.78	198	P	Pn	15 15 25.4	+1.2
HMAT	Matruh	3.78	198	P	Pn	15 15 25.4	+1.2
	baz=199						
HMAT				S	Sn	15 16 05.8	-1.7
	baz=199						
HMAT	Matruh	3.78	198	P	Pn	15 15 25.4	+1.1
HMAT				S	Sn	15 16 05.8	-1.6
IZM	Izmir	3.80	346	ePN	Pn	15 15 22.8	-1.8
IZM	Izmir	3.80	346	ePN	Pn	15 15 24.2	-0.4
IZM	Izmir	3.80	346	ePn	Pn	15 15 24.2	-0.3
KULA	Kula-Manisa	3.80	3	ePN	Pn	15 15 23.2	-1.4
KULA	Kula-Manisa	3.80	3	ePN	Pn	15 15 24.3	-0.3
KULA	Kula-Manisa	3.80	3	ePn	Pn	15 15 24.3	-0.3
BLCB	Balcova	3.83	343	ePN	Pn	15 15 24.6	-0.5
BLCB	Balcova	3.83	343	ePN	Pn	15 15 24.8	-0.2
BLCB	Balcova	3.83	343	P	Pn	15 15 24.8	-0.

PRK eSN Sn 15 16 31.1 -2.7
PRK Paraskevi 4.85 340 P Pn 15 15 39.1 +0.2
PRK S Sn 15 16 30.7 -3.1
PRK Paraskevi 4.85 340 P Pn 15 15 39.1 +0.2
PRK Paraskevi 4.85 340 ePn Pn 15 15 39.4 +0.5
PRK S Sn 15 16 30.7 -3.1
VLY Voula,Athens 4.88 311 ePn Pn 15 15 40.3 +0.8
VLY Voula,Athens 4.88 311 ePn Pn 15 15 40.3 +0.8
VLI Veliai 4.90 296 ePN Pn 15 15 40.0 +0.4
VLI Veliai 4.90 296 ePn Pn 15 15 40.0 +0.4
BALB Balikesir 4.94 355 ePn Pn 15 15 39.6 -0.6
ATHU Athens Univers 4.96 312 P Pn 15 15 42.4 +1.9
ATHU Athens Univers 4.96 312 P Pn 15 15 42.4 +1.9
PTL Penteli 4.97 313 ePN Pn 15 15 40.8 +0.2
PTL Penteli 4.97 313 ePn Pn 15 15 40.8 +0.2
KIZT Kizilcal 5.00 33 ePN Pn 15 15 42.2 +1.2
ATH Athens Observa 5.01 312 ePN Pn 15 15 41.7 +0.6
ATH Athens Observa 5.01 312 ePn Pn 15 15 41.7 +0.6
NAIG Nisos Aigina 5.02 309 ePN Pn 15 15 42.1 +0.8
NAIG Nisos Aigina 5.02 309 ePn Pn 15 15 42.1 +0.8
DID Didima 5.04 305 ePN Pn 15 15 42.2 +0.5
DID Didima 5.04 305 P Pn 15 15 42.2 +0.5
DID S Sn 15 16 37.1 -1.6
DID Didima 5.04 305 P Pn 15 15 42.2 +0.5
DID S Sn 15 16 37.1 -1.6
SVRH Sivrihisar-ESK 5.34 27 ePN Pn 15 15 46.1 +0.5
SVRH Sivrihisar-ESK 5.34 27 ePN Pn 15 15 46.7 +1.1
SVRH Sivrihisar-ESK 5.34 27 ePn Pn 15 15 46.7 +1.0
SQR 5.35 153 P Pn 15 15 44.8 -1.1
baz=155
SQR 5.35 153 P Pn 15 15 44.8 -1.1
SULT Sultanhani-AKS 5.38 48 ePN Pn 15 15 48.2 +1.9
SULT Sultanhani-AKS 5.38 48 ePn Pn 15 15 48.2 +1.9
HNAT Natroun 5.39 159 P Pn 15 15 45.8 -0.6
HNAT Natroun 5.39 159 P Pn 15 15 45.8 -0.7
baz=161
HNAT Natroun 5.39 159 P Pn 15 15 45.8 -0.7
HLW Helwan 5.43 152 P Pn 15 15 46.3 -0.7
baz=154
HLW Helwan 5.43 152 P Pn 15 15 46.3 -0.7
FYM Al Fayyum 5.47 155 P Pn 15 15 47.5 0.0
FYM Al Fayyum 5.47 155 P Pn 15 15 47.5 0.0
baz=157
FYM Al Fayyum 5.47 155 P Pn 15 15 47.5 -0.1
AYT Al 'Ayyat 5.50 154 P Pn 15 15 47.8 -0.2
AYT Al 'Ayyat 5.50 154 P Pn 15 15 47.8 -0.2
baz=156
AYT Al 'Ayyat 5.50 154 P Pn 15 15 47.8 -0.1
LTK Loutraki 5.51 308 ePN Pn 15 15 49.2 +1.2
LTK Loutraki 5.51 308 P Pn 15 15 49.2 +1.2
LTK S Sn 15 16 48.5 -1.6
LTK Loutraki 5.51 308 P Pn 15 15 49.2 +1.2
LTK S Sn 15 16 48.5 -1.6
KCTX Karacabey (Bur 5.55 359 ePN Pn 15 15 47.8 -0.7
KCTX Karacabey (Bur 5.55 359 ePN Pn 15 15 48.8 +0.2
KCTX Karacabey (Bur 5.55 359 ePn Pn 15 15 48.8 +0.2
KOT Kottamia 5.57 148 P Pn 15 15 48.4 -0.5
KOT Kottamia 5.57 148 P Pn 15 15 48.4 -0.5
baz=149
KOT Kottamia 5.57 148 P Pn 15 15 48.4 -0.5
VLX Vlachokerasia 5.57 300 ePN Pn 15 15 49.5 +0.6
VLX Vlachokerasia 5.57 300 P Pn 15 15 48.8 -0.1
VLX Vlachokerasia 5.57 300 P Pn 15 15 48.8 -0.1
VLX Vlachokerasia 5.57 300 ePn Pn 15 15 49.5 +0.6
HHAG Hagoal 5.67 146 P Pn 15 15 49.3 -1.0
baz=147
HHAG Hagoal 5.67 146 P Pn 15 15 49.3 -1.0
AMAG Maghara 5.72 134 P Pn 15 15 48.8 -2.1
baz=135
AMAG Maghara 5.72 134 P Pn 15 15 48.8 -2.1
HSAF As Saff 5.72 152 P Pn 15 15 50.8 -0.3
baz=153
HSAF As Saff 5.72 152 P Pn 15 15 50.8 -0.3
AOS Alonnisos 5.75 322 P Pn 15 15 52.4 +1.0
AOS Alonnisos 5.75 322 P Pn 15 15 52.4 +1.0
LIA Limnos Island 5.79 334 P Pn 15 15 50.5 -1.4
LIA Limnos Island 5.79 334 P Pn 15 15 50.5 -1.4
ITM Ithomi 5.82 297 ePN Pn 15 15 53.2 +0.9
ITM Ithomi 5.82 297 P Pn 15 15 52.2 -0.1
ITM Ithomi 5.82 297 P Pn 15 15 52.2 -0.1
ITM Ithomi 5.82 297 ePn Pn 15 15 53.2 +0.9
GLL Jalalah 5.82 151 P Pn 15 15 51.1 -1.3
baz=152
GLL Jalalah 5.82 151 P Pn 15 15 51.1 -1.3
OFRI 'Ofer 5.85 109 Pn Pn 15 15 52.6 -0.1
ARMT Armutlu 5.86 3 ePN Pn 15 15 52.4 -0.4
GUR Goura 5.87 305 ePN Pn 15 15 53.7 +0.6
GUR Goura 5.87 305 P Pn 15 15 53.0 -0.1
GUR S Sn 15 16 58.2 -0.9
GUR Goura 5.87 305 P Pn 15 15 53.0 -0.1
GUR Goura 5.87 305 ePn Pn 15 15 53.7 +0.6
GUR S Sn 15 16 58.2 -0.9
LKR Lokris 5.87 314 ePN Pn 15 15 53.5 +0.5
LKR Lokris 5.87 314 P Pn 15 15 54.1 +1.1
LKR Lokris 5.87 314 ePn Pn 15 15 53.5 +0.5
LKR Lokris 5.87 314 P Pn 15 15 54.1 +1.1
ATAL Atalanti 5.89 314 P Pn 15 15 54.4 +1.2
ATAL Atalanti 5.89 314 P Pn 15 15 54.4 +1.2
GULT Gulveren 5.95 16 ePN Pn 15 15 54.7 +0.6
GULT Gulveren 5.95 16 ePN Pn 15 15 55.1 +1.0
GULT Gulveren 5.95 16 ePn Pn 15 15 55.1 +1.0
BLGI Bet Lehem HaGe 5.97 107 Pn Pn 15 15 54.8 +0.4
SWA2 6.01 206 P Pn 15 15 55.2 +0.3
baz=207
SWA2 AMP 15 17 00.0
comp=N,210µm,0.3s,logA/T=5.8,baz=207
SWA2 6.01 206 P Pn 15 15 55.2 +0.3
AFSR Af'ar-Bala (A 6.01 37 ePN Pn 15 15 56.9 +2.0
AFSR Af'ar-Bala (A 6.01 37 ePn Pn 15 15 56.9 +2.0
DSF Desfina 6.02 310 P Pn 15 15 55.9 +0.9
DSF S Sn 15 17 01.1 -1.5
DSF Desfina 6.02 310 P Pn 15 15 55.9 +0.9
DSF S Sn 15 17 01.1 -1.5
BHL Bhannes 6.03 96 eP Pn 15 15 55.3 +0.1
BHL Bhannes 6.03 96 eP Pn 15 15 55.3 0.0
MMAI Mount Meron Ar 6.04 104 Pn Pn 15 15 54.7 -0.7
comp=N,16nm,0.3s,baz=278,slow=12,SNR=46
MMAI Sn Sn 15 17 01.0 -2.3
comp=N,61nm,0.3s,baz=281,slow=25,SNR=11
SUZ 6.12 141 P Pn 15 15 55.1 -1.4
baz=143
SUZ 6.12 141 P Pn 15 15 55.1 -1.4
ERIK Erikli-Kesan 6.14 346 ePN Pn 15 15 56.2 -0.6
KSDI Kefar Szold 6.20 102 Pn Pn 15 15 57.0 -0.5
KSDI Kefar Szold 6.20 102 Sn Sn 15 17 03.3 -3.8
NEO Neokhori 6.20 319 ePN Pn 15 15 58.3 +0.8
NEO Neokhori 6.20 319 ePn Pn 15 15 58.3 +0.8
HWQ Hawqa 6.22 92 eP Pn 15 15 58.1 +0.3
HWQ Hawqa 6.22 92 eP Pn 15 15 58.2 +0.3
HRI Mount Hermon 6.24 101 Pn Pn 15 15 58.5 +0.5
RCY Rachaya 6.25 99 eP Pn 15 15 58.1 -0.1
RCY Rachaya 6.25 99 eP Pn 15 15 58.1 -0.2
KALE Kalithea 6.25 308 P Pn 15 15 58.9 +0.6
KALE S Sn 15 17 07.9 -0.6
KALE Kalithea 6.25 308 P Pn 15 15 58.9 +0.6
KALE S Sn 15 17 07.9 -0.6
MMLI Mount Malkishu 6.26 109 Pn Pn 15 15 57.9 -0.5
LAKA Lakka 6.28 306 P Pn 15 15 58.7 +0.1
LAKA Lakka 6.28 306 P Pn 15 15 58.7 +0.1
ENEZ Enez 6.28 344 ePN Pn 15 15 59.2 +0.6
ENEZ Enez 6.28 344 ePn Pn 15 15 59.3 +0.7
TRIZ Trizonia 6.28 307 P Pn 15 15 59.3 +0.6
TRIZ S Sn 15 17 08.1 -1.1
TRIZ Trizonia 6.28 307 P Pn 15 15 59.3 +0.6
TRIZ S Sn 15 17 08.1 -1.1
KZIT Kziot 6.29 125 Pn Pn 15 15 58.1 -0.8
BRBR Barbar 6.38 100 ⇑P Pn 15 15 59.0 -1.0
BRBR ⇑S Sn 15 16 54.0 -18
BRBR Barbar 6.38 100 ⇑iP Pn 15 16 00.0 0.0
BRBR ⇑iS Sn 15 16 54.5 -17
KSHT Keshet 6.38 104 Pn Pn 15 16 00.3 +0.3
AWBH 6.38 176 P Pn 15 15 59.6 -0.5
baz=177
AWBH 6.38 176 P Pn 15 15 59.6 -0.5
RTMI Retamim 6.41 123 Pn Pn 15 15 59.3 -1.1
HMDT Nahal Hemdat 6.42 110 Pn Pn 15 16 00.3 -0.3
HMDT Nahal Hemdat 6.42 110 Sn Sn 15 17 08.4 -4.1
EFP Efpalio 6.43 307 ePN Pn 15 16 01.5 +0.8
EFP Efpalio 6.43 307 P Pn 15 16 01.6 +0.9
EFP Efpalio 6.43 307 ePn Pn 15 16 01.5 +0.8
ZAF 6.44 146 P Pn 15 15 59.6 -1.3
baz=147
ZAF 6.44 146 P Pn 15 15 59.6 -1.3
SLNF Slenfeh 6.45 80 ⇑P Pn 15 16 00.0 -0.9
SLNF ⇑S Sn 15 16 54.0 -19
SLNF Slenfeh 6.45 80 ⇑iP Pn 15 16 00.9 0.0
SLNF ⇑iS Sn 15 16 54.5 -19
ALN Alexandroupoli 6.46 344 P Pn 15 16 01.7 +0.6
ALN S Sn 15 17 10.4 -3.1
ALN Alexandroupoli 6.46 344 P Pn 15 16 01.7 +0.6
BIDA Albida 6.50 85 ⇓P Pn 15 16 01.0 -0.6
BIDA ⇓S Sn 15 16 54.0 -20
BIDA Albida 6.50 85 ⇓iP Pn 15 16 01.1 -0.5
BIDA ⇓iS Sn 15 16 54.9 -20
BR131 Keskin Array S 6.51 38 ⇓ePn Pn 15 16 02.5 +0.8
BR131 eSn Sn 15 17 13.3 -1.4
BR131 Keskin Array S 6.51 38 ⇓ePn Pn 15 16 02.5 +0.8
BR131 eSn Sn 15 17 13.3 -1.4
BRTR Keskin Array B 6.51 38 Pn Pn 15 16 02.5 +0.8
comp=N,10nm,0.3s,baz=221,slow=16,SNR=136
BRTR Sn Sn 15 17 13.3 -1.4
comp=N,7.4nm,0.3s,baz=212,slow=26,SNR=16
BRTR Keskin Array B 6.51 38 P Pn 15 16 02.6 +0.9
BRTR 15 17 13.3
BRTR pmax pmax
comp=Z,10.0nm,0.3s
BRTR smax
comp=N,7.0nm,0.3s
BRTR Keskin Array B 6.51 38 Pn Pn 15 16 02.5 +0.8
BRTR S Sn 15 17 13.3 -1.4
comp=N,7.0nm,0.3s
AGG Agios Georgios 6.51 313 ePN Pn 15 16 03.5 +1.7
AGG Agios Georgios 6.51 313 P Pn 15 16 03.6 +1.8
AGG S Sn 15 17 13.3 -1.5
AGG Agios Georgios 6.51 313 ePn Pn 15 16 03.5 +1.7
AGG S Sn 15 17 13.3 -1.5
ZNM 6.52 143 P Pn 15 16 01.4 -0.5
baz=145
ZNM 6.52 143 P Pn 15 16 01.4 -0.6
YTIR Yattir 6.53 119 Pn Pn 15 16 02.2 +0.1
RLS Riolos of Patr 6.53 303 ePN Pn 15 16 03.2 +1.1
RLS Riolos of Patr 6.53 303 ePn Pn 15 16 03.2 +1.1
HAWK Haweek 6.58 89 ⇑P Pn 15 16 02.0 -0.8
HAWK ⇑S Sn 15 16 57.0 -20
HAWK Haweek 6.58 89 ⇑iP Pn 15 16 02.8 0.0
HAWK ⇑iS Sn 15 16 57.1 -19
WRDH Warideh 6.59 81 ⇑P Pn 15 16 02.0 -0.9
WRDH ⇑S Sn 15 16 57.0 -20
WRDH Warideh 6.59 81 ⇑iP Pn 15 16 02.9 0.0
WRDH ⇑iS Sn 15 16 57.3 -20
QASN Qassioun 6.61 98 ⇑P Pn 15 16 04.0 +0.8
QASN ⇑S Sn 15 16 58.0 -19
QASN Qassioun 6.61 98 ⇑iP Pn 15 16 04.4 +1.2
QASN ⇑iS Sn 15 16 58.5 -19
DSI Dead Sea 6.62 116 Pn Pn 15 16 02.9 -0.4
DSI Dead Sea 6.62 116 Sn Sn 15 17 13.4 -4.1
HNKL Nakhl 6.69 134 P Pn 15 16 02.6 -1.7
baz=135
HNKL AMP 15 17 00.0
comp=E,200µm,0.5s,logA/T=5.6,baz=135
HNKL Nakhl 6.69 134 P Pn 15 16 02.6 -1.7
BTCH Batrach 6.69 76 ⇓P Pn 15 16 04.0 -0.3
BTCH ⇓S Sn 15 17 01.0 -18
BTCH Batrach 6.69 76 ⇓iP Pn 15 16 04.2 -0.1
BTCH ⇓iS Sn 15 17 01.3 -18
MARH Ras Al Marh 6.69 94 ⇑P Pn 15 16 03.0 -1.3
MARH ⇑S Sn 15 17 00.0 -19
MARH Ras Al Marh 6.69 94 ⇑iP Pn 15 16 04.0 -0.3
MARH ⇑iS Sn 15 17 00.6 -19
RMNI Mount Ramon 6.73 126 Pn Pn 15 16 04.1 -0.8
MZDA Masada 6.74 118 Pn Pn 15 16 04.4 -0.6
MZDA Masada 6.74 118 Sn Sn 15 17 16.3 -4.2
TOTH TOTAH 6.78 99 ⇑P Pn 15 16 06.0 +0.5
TOTH ⇑S Sn 15 17 02.0 -19
TOTH TOTAH 6.78 99 ⇑iP Pn 15 16 06.5 +1.0
TOTH ⇑iS Sn 15 17 02.6 -19
DRWC Darouich 6.97 72 ⇓P Pn 15 16 09.0 +0.9
DRWC ⇓S Sn 15 17 07.0 -19
DRWC Darouich 6.97 72 ⇓iP Pn 15 16 09.4 +1.3
DRWC ⇓iS Sn 15 17 07.9 -18
KAVA Kavala 7.00 335 P Pn 15 16 09.4 +0.9
KAVA Kavala 7.00 335 P Pn 15 16 09.4 +0.9
KRMI Paran Flat 7.02 129 Pn Pn 15 16 07.4 -1.5
KRMI Paran Flat 7.02 129 Sn Sn 15 17 21.3 -6.1
KFL Anninata 7.03 301 P Pn 15 16 09.2 +0.2
KFL Anninata 7.03 301 P Pn 15 16 09.2 +0.2
ZFRI Zfri 7.04 124 Pn Pn 15 16 07.5 -1.6
ZFRI Zfri 7.04 124 Sn Sn 15 17 22.7 -5.2
PRNI Paran 7.05 126 Pn Pn 15 16 07.8 -1.4
PRNI Paran 7.05 126 Sn Sn 15 17 23.2 -5.0
THL Klokotos Trika 7.05 315 ePN Pn 15 16 10.9 +1.7
THL Klokotos Trika 7.05 315 P Pn 15 16 10.8 +1.6
THL Klokotos Trika 7.05 315 P Pn 15 16 10.8 +1.6
LIT Litokhoron 7.16 320 ePN Pn 15 16 11.8 +1.1
LIT Litokhoron 7.16 320 P Pn 15 16 12.5 +1.8
LIT Litokhoron 7.16 320 ePn Pn 15 16 11.8 +1.1
LIT Litokhoron 7.16 320 P Pn 15 16 12.5 +1.8
SALA Sala 7.20 104 ⇑P Pn 15 16 12.0 +0.7
SALA ⇑S Sn 15 17 13.0 -19
SALA Sala 7.20 104 ⇑iP Pn 15 16 12.0 +0.7
SALA ⇑iS Sn 15 17 13.8 -18
VLS Valsamata 7.20 301 P Pn 15 16 09.4 -1.9
VLS Valsamata 7.20 301 P Pn 15 16 09.4 -1.9
RABH Abou Rabah 7.25 90 ⇑P Pn 15 16 12.0 +0.1
RABH ⇑S Sn 15 17 13.0 -20
RABH Abou Rabah 7.25 90 ⇑iP Pn 15 16 13.0 +1.1
RABH ⇑iS Sn 15 17 13.6 -19
HRFI Mount Harif 7.28 128 Pn Pn 15 16 11.0 -1.4
HRFI Mount Harif 7.28 128 Sn Sn 15 17 28.7 -5.0
THE Thessaloniki 7.33 325 P Pn 15 16 13.9 +0.9
THE Thessaloniki 7.33 325 P Pn 15 16 13.9 +0.9
ROOS tI_alroos 7.34 92 ⇓P Pn 15 16 14.0 +0.8
ROOS ⇓S Sn 15 17 15.0 -20
ROOS tI_alroos 7.34 92 ⇓iP Pn 15 16 14.1 +0.9
ROOS ⇓iS Sn 15 17 15.7 -20
MBRI Mt Berech 7.36 130 Pn Pn 15 16 12.9 -0.6
MBRI Mt Berech 7.36 130 Sn Sn 15 17 30.6 -5.2
GRB Gharib 7.42 149 P Pn 15 16 13.0 -1.3
baz=150
GRB Gharib 7.42 149 P Pn 15 16 13.0 -1.3
SRS Serrai 7.45 331 P Pn 15 16 15.1 +0.4
SRS Serrai 7.45 331 P Pn 15 16 15.1 +0.4
EIL Elat 7.47 130 Pn Pn 15 16 13.9 -1.1
comp=E,20nm,0.3s,baz=342,slow=7.7,SNR=260
EIL Sn Sn 15 17 32.1 -6.3
comp=E,30nm,0.3s,baz=31,slow=16,SNR=11
EIL Elat 7.47 130 Pn Pn 15 16 13.9 -1.1
EIL Elat 7.47 130 Sn Sn 15 17 32.1 -6.4
EIL Elat 7.47 130 Pn Pn 15 16 14.0 -1.0
EIL Elat 7.47 130 Sn Sn 15 17 33.0 -5.5
ASF Jabal al Asfar 7.52 107 Pn Pn 15 16 16.0 +0.4
comp=E,3.1nm,0.3s,baz=176,slow=6.4,SNR=19
ASF Sn Sn 15 17 36.9 -2.7
comp=E,4.6nm,0.3s,baz=307,slow=21,SNR=5.6
ASF Jabal al Asfar 7.52 107 P Pn 15 16 16.0 +0.4
ASF 15 17 36.9
ASF pmax pmax
comp=Z,3.0nm,0.3s
ASF smax
comp=N,5.0nm,0.3s
HFRF Wahat Farafira 7.54 181 P Pn 15 16 15.4 -0.5
baz=182
HFRF Wahat Farafira 7.54 181 P Pn 15 16 15.4 -0.6
MEV Metsovon 7.66 314 P Pn 15 16 19.0 +1.5
MEV Metsovon 7.66 314 P Pn 15 16 19.0 +1.5
TR2 7.75 143 P Pn 15 16 17.6 -1.4
baz=144
TR2 7.75 143 P Pn 15 16 17.6 -1.3
HKAT Jabal Katrina 7.78 141 P Pn 15 16 18.4 -0.8
baz=142
HKAT Jabal Katrina 7.78 141 P Pn 15 16 18.4 -0.9
KNT Kendrikon 7.78 327 P Pn 15 16 16.9 -2.3
GRG Griva 7.85 324 P Pn 15 16 22.4 +2.2
GRG Griva 7.85 324 P Pn 15 16 22.4 +2.2
LJBD Adjabya 7.89 244 iP Pn 15 16 21.4 +0.6
SNR=22
HDHB Dhahab 7.96 137 P Pn 15 16 21.4 -0.4
HDHB Dhahab 7.96 137 P Pn 15 16 21.4 -0.4
baz=138
HDHB Dhahab 7.96 137 P Pn 15 16 21.4 -0.4
VAY Valandovo 8.06 327 ePn Pn 15 16 24.9 +1.9
NEST Nestorio 8.17 316 P Pn 15 16 26.2 +1.7
NEST Nestorio 8.17 316 P Pn 15 16 26.2 +1.7
FNA Florina 8.24 319 P Pn 15 16 27.6 +2.1
FNA Florina 8.24 319 P Pn 15 16 27.6 +2.1
KBN Korca 8.46 317 iP Pn 15 16 28.5 0.0
KBN Korca 8.46 317 iP Pn 15 16 28.5 0.0
SRN Sarande 8.47 310 iP Pn 15 16 27.5 -1.1
SRN Sarande 8.47 310 iP Pn 15 16 27.5 -1.1
KEK Kerkira 8.50 308 P Pn 15 16 27.4 -1.7
KEK Kerkira 8.50 308 P Pn 15 16 27.4 -1.7
KRUS Krusevo 8.73 322 ePn Pn 15 16 33.7 +1.5
MALT Malatya 8.81 63 ePn Pn 15 16 32.8 -0.6
MALT eSn Sn 15 18 05.5 -6.0
MALT Malatya 8.81 63 eP Pn 15 16 32.8 -0.6
MALT e 15 18 05.5
MALT Malatya 8.81 63 ⇑iP Pn 15 16 33.2 -0.2
MALT Malatya 8.81 63 eP Pn 15 16 32.8 -0.6
VTS Vitosha 8.86 334 ⇑iP Pn 15 16 36.1 +2.0
VTS Vitosha 8.86 334 ⇑iP Pn 15 16 36.1 +2.0
TIR Tirane 9.46 317 ePn Pn 15 16 41.2 -1.0
TIR Tirane 9.46 317 eP Pn 15 16 41.3 -0.9
TIR Tirane 9.46 317 eP Pn 15 16 41.3 -0.9
BARS Barje 9.60 329 ePn Pn 15 16 46.2 +2.1
PUK Puka 9.92 320 iP Pn 15 16 49.0 +0.4
PUK Puka 9.92 320 iP Pn 15 16 49.0 +0.5
BCI Bajram Curri 10.06 322 iP Pn 15 16 51.8 +1.3
CEL Celeste 10.70 293 ePn Pn 15 16 55.6 -3.5
CEL eSn Sn 15 18 46.3 -11
MLR Muntele Rosu 10.94 351 ⇓P Pn 15 16 58.4 -4.0
VOIR 11.02 347 ⇑P Pn 15 16 59.4 -4.2
CUC Castrocucco 11.34 301 ePn Pn 15 17 04.1 -3.9
CUC eSn Sn 15 19 02.3 -11
DIVS Divibare 11.42 328 ⇓iPn Pn 15 17 10.2 +1.2
GZR Gura Zlata 11.51 340 ⇓P Pn 15 17 07.4 -2.9
VAE Valguarnera 11.67 288 Sn Sn 15 19 14.2 -7.3
comp=N,2.2nm,0.3s,baz=258,slow=14,SNR=3.8
ANN Anapa 12.22 32 eP Pn 15 17 21.4 +1.4
ANN eS Sn 15 19 36.6 +1.7
ANN pmax pmax
comp=Z,68nm,1.2s
ANN Anapa 12.22 32 eP Pn 15 17 21.4 +1.4
comp=Z,68nm,1.2s
ANN eS Sn 15 19 36.6 +1.7
BURAR Bucovina Array 13.12 350 ⇓P Pn 15 17 29.4 -2.8
GNI Garni 14.05 62 Pn Pn 15 17 48.4 +3.5
comp=Z,0.6nm,0.3s,baz=156,slow=18,SNR=3.1
GNI Garni 14.05 62 iP Pn 15 17 48.9 +3.9
GNI pmax pmax
comp=Z,21nm,1.9s
KIV Kislovodsk 14.37 46 eP Pn 15 17 57.6 +8.3
comp=Z,111nm,1.1s
KIV Kislovodsk 14.37 46 ⇑iP Pn 15 17 52.3 +3.0
KIV eS Sn 15 20 32.5 +5.2
KIV pmax pmax
comp=Z,6.0nm,0.7s
KIV MLR MLR
comp=Z,100nm,17.0s
KIV Kislovodsk 14.37 46 eP Pn 15 17 57.6 +8.3
comp=Z,111nm,1.1s
ZEI Tsey 14.49 52 eP Pn 15 17 52.4 +1.4
ZEI pmax pmax
comp=Z,11nm,0.5s
PSZ Piszkesteto 14.66 337 Pn Pn 15 17 50.0 -3.3
PSZ Piszkesteto 14.66 337 P Pn 15 17 50.0 -3.2
VYHS Vyhne 15.51 336 eP Pn 15 18 10.1 +5.7
VYHS Vyhne 15.51 336 eP Pn 15 18 10.1 +5.7
VYHS Vyhne 15.51 336 eP Pn 15 18 10.1 +5.7
KEST Kesra 15.63 279 Pn Pn 15 18 05.3 -0.8
comp=Z,0.1nm,0.3s,baz=44,slow=12,SNR=4.2
KEST Sn Sn 15 20 50.9 -7.3
comp=Z,0.1nm,0.3s,baz=137,slow=19,SNR=4.0
KEST Kesra 15.63 279 eP Pn 15 18 07.9 +1.8
KEST Kesra 15.63 279 eP Pn 15 18 07.9 +1.8
KIEV Kiev 15.99 2 eP Pn 15 18 14.0 +3.4
comp=Z,5.9nm,0.6s
KIEV Kiev 15.99 2 eP Pn 15 18 14.0 +3.4
KIEV pmax pmax
comp=Z,6.0nm,0.6s
KIEV Kiev 15.99 2 eP Pn 15 18 14.0 +3.4
comp=Z,5.9nm,0.6s
KBA Koelnbreinsper 16.78 322 ⇓iPn Pn 15 18 18.7 -1.9
comp=Z,22nm,1.2s
KBA Koelnbreinsper 16.78 322 Pn Pn 15 18 18.7 -1.9
comp=Z,22nm,1.2s
DPC Dobruska-Polom 17.96 334 eP Pn 15 18 34.8 -0.5
DPC Dobruska-Polom 17.96 334 eP Pn 15 18 34.8 -0.5
DPC Dobruska-Polom 17.96 334 eP Pn 15 18 34.8 -0.5
KHC Kasperske Hory 18.11 327 eP Pn 15 18 35.5 -1.6
KHC ex x 15 18 41.5
MOTA Moosalm 18.12 319 ⇑iPn Pn 15 18 35.6 -1.7
comp=Z,22nm,1.0s
MOTA Moosalm 18.12 319 P Pn 15 18 35.6 -1.7
comp=Z,22nm,1.0s
FETA Feichten 18.13 318 ⇑iP Pn 15 18 37.2 -0.2
comp=Z,18nm,0.9s
FETA Feichten 18.13 318 P Pn 15 18 37.2 -0.2
comp=Z,18nm,0.9s
VSR Storozhevoye 18.24 22 eP Pn 15 18 38.8 +0.1
VSR pmax pmax
comp=N,9.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR Storozhevoye 18.24 22 eP Pn 15 18 38.8 +0.1
DAVOX Davos/Dischmat 18.46 316 P Pn 15 18 41.5 +0.1
comp=E,1.1nm,0.3s,baz=138,slow=17,SNR=7.0
DAVOX Davos/Dischmat 18.46 316 P Pn 15 18 41.5 0.0
DAVOX Davos/Dischmat 18.46 316 P Pn 15 18 41.5 0.0
DAVA Damuels 18.75 318 ⇑iPn Pn 15 18 43.9 -1.0
comp=E,16nm,1.0s
DAVA Damuels 18.75 318 P Pn 15 18 43.9 -1.1
comp=E,16nm,1.0s
BFO Black Forest 20.21 318 eP P 15 19 00.0 -0.2
comp=E,7.2nm,0.9s
BFO Black Forest 20.21 318 eP P 15 19 00.0 -0.2
BFO pmax pmax
comp=Z,7.0nm,0.9s
BFO Black Forest 20.21 318 eP P 15 19 00.0 -0.2
comp=Z,7.2nm,0.9s
OBN Obninsk 21.17 13 ⇑eP P 15 19 09.9 -0.7
OBN eS S 15 22 56.9 -7.0
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
OBN MLR MLR
comp=Z,100nm,18.0s,MS3.2
OBN Obninsk 21.17 13 eP P 15 19 09.9 -0.7
comp=Z,9.0nm,0.8s,mb4.2
TAM Tamanrasset 23.27 245 eP P 15 19 34.5 +1.3
comp=Z,18nm,0.6s,mb4.7
TAM Tamanrasset 23.27 245 eP P 15 19 34.5 +1.3
TAM pmax pmax
comp=Z,18nm,0.6s,mb4.7
TAM Tamanrasset 23.27 245 eP P 15 19 34.5 +1.3
comp=Z,18nm,0.6s,mb4.7
ESDC Sonseca Array 26.19 290 P P 15 19 59.9 +0.1
comp=Z,5.9nm,0.6s,mb4.3,baz=82,slow=9.3,SNR=18
ESDC Sonseca Array 26.19 290 P P 15 19 59.9 +0.1
ATD Arta Tunnel 26.55 147 LR LR 15 33 05.5
comp=Z,38nm,18.6s,MS3.0,baz=162,slow=42
AKTK Aktyubinsk 26.63 45 P P 15 20 03.7 0.0
AKTK Aktyubinsk 26.63 45 P P 15 20 03.7 +0.1
comp=Z,10.0nm,0.6s,mb4.5
AKTO Aktyubinsk 26.63 45 P P 15 20 03.7 +0.1
comp=Z,9.7nm,0.6s,mb4.5,baz=248,slow=8.8,SNR=40
AKTO Aktyubinsk 26.63 45 P P 15 20 03.7 +0.1
AKTO pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
FINES FINESS Array B 26.80 357 P P 15 20 04.4 -0.6
comp=Z,4.4nm,0.6s,mb4.1,baz=160,slow=12,SNR=19
FINES LR LR 15 32 16.1
comp=Z,59nm,18.9s,MS3.2,baz=319,slow=40
FINES FINESS Array B 26.80 357 P P 15 20 04.4 -0.6
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES MLR MLR
comp=Z,59nm,18.9s
FINES FINESS Array B 26.80 357 P P 15 20 04.4 -0.6
comp=Z,59nm,18.9s
KLMR Klimovskoe 27.12 12 eP P 15 20 06.8 -1.1
KLMR pmax pmax
comp=Z,17nm,1.5s,mb4.3
KLMR Klimovskoe 27.12 12 eP P 15 20 06.8 -1.1
comp=Z,17nm,1.5s,mb4.3
HFS Hagfors 27.19 344 P P 15 20 06.8 -1.8
comp=Z,3.9nm,0.6s,mb4.1,baz=144,slow=11,SNR=14

HFS Hagfors 27.19 344 P **P** **15 20 06.8 -1.7**
HFS pmax pmax
comp=Z,4.0nm,0.6s
HFS Hagfors 27.19 344 P **P** **15 20 06.8 -1.7**
comp=Z,4.0nm,0.6s,mb4.1
AB31 Akbulak array 27.33 48 *i* P **P** **15 20 09.8 -0.1**
AB31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.1
AB31 Akbulak array 27.33 48 *i* P **P** **15 20 09.8 -0.1**
comp=Z,2.0nm,0.3s,mb4.1
ABKAR Akbulak array 27.33 48 *e*P **P** **15 20 09.6 -0.3**
comp=Z,1.8nm,0.4s,mb4.0
ABKAR Akbulak array 27.33 48 *e*P **P** **15 20 09.6 -0.3**
comp=Z,1.8nm,0.4s,mb4.0
KAF Kangasniemi 27.46 358 *e*P **P** **15 20 09.1 -1.8**
KAF pmax pmax
comp=Z,1.0nm,0.5s,mb3.6
KAF Kangasniemi 27.46 358 *e*P **P** **15 20 09.1 -1.8**
comp=Z,1.0nm,0.5s,mb3.6
MDT Midelt 27.47 276 P **P** **15 20 11.5 +0.1**
comp=Z,3.0nm,0.9s,mb3.8,baz=99,slow=9.0,SNR=4.7
JOF Joensuu 28.29 3 *e*P **P** **15 20 16.9 -1.4**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
JOF Joensuu 28.29 3 *e*P **P** **15 20 16.9 -1.4**
comp=Z,1.0nm,0.4s,mb3.8
NB2 NORSAR Subarra 28.58 342 P **P** **15 20 19.6 -1.3**
comp=Z,0.8nm,0.6s,mb3.6,baz=156,slow=9.3
NB2 NORSAR Subarra 28.58 342 P **P** **15 20 19.6 -1.3**
comp=Z,0.8nm,0.6s,mb3.6,SNR=3.7
NOA NORSAR Array B 28.58 342 P **P** **15 20 19.5 -1.4**
comp=Z,2.2nm,1.0s,mb3.9,baz=148,slow=8.4,SNR=4.1
NOA NORSAR Array B 28.58 342 P **P** **15 20 19.5 -1.4**
NOA pmax pmax
comp=Z,2.0nm,1.0s
NOA NORSAR Array B 28.58 342 P **P** **15 20 19.5 -1.4**
comp=Z,2.0nm,1.0s,mb3.8
PRGR Permogore 29.09 17 P **P** **15 20 22.2 -3.3**
PRGR pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
EKA Eskdalemuir Ar 29.98 323 P **P** **15 20 31.9 -1.6**
comp=Z,1.2nm,0.5s,mb3.9,baz=125,slow=12,SNR=8.2
EKA Eskdalemuir Ar 29.98 323 P **P** **15 20 31.9 -1.5**
EKA pmax pmax
comp=Z,1.0nm,0.5s
EKA Eskdalemuir Ar 29.98 323 P **P** **15 20 31.9 -1.5**
comp=Z,1.0nm,0.5s,mb3.8
KK31 Karatay Array 33.51 63 *i* P **P** **15 21 05.7 +1.1**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KK31 Karatay Array 33.51 63 *i* P **P** **15 21 05.7 +1.1**
comp=Z,1.0nm,0.3s,mb4.2
KKAR Karatay Array 33.51 63 *e*P **P** **15 21 05.2 +0.6**
comp=Z,2.4nm,0.5s,mb4.4
KKAR Karatay Array 33.51 63 *e*P **P** **15 21 05.2 +0.6**
KKAR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KKAR Karatay Array 33.51 63 *e*P **P** **15 21 05.2 +0.6**
comp=Z,2.4nm,0.5s,mb4.4
BRVK Borovoye 34.68 45⇑ *e*P **P** **15 21 15.4 +0.8**
BRVK pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
BRVK MLR MLR
comp=Z,62nm,18.0s,MS3.4
BRVK Borovoye 34.68 45 *e*P **P** **15 21 15.4 +0.8**
comp=Z,62nm,18.0s
BVAR Borovoye Array 34.74 45 P **P** **15 21 15.3 +0.3**
comp=Z,1.9nm,0.7s,mb4.1,baz=243,slow=6.5,SNR=12
BVAR Borovoye Array 34.74 45 P **P** **15 21 15.3 +0.2**
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 34.74 45 P **P** **15 21 15.3 +0.2**
comp=Z,2.0nm,0.7s,mb4.2
ARCES ARCESS Array B 34.92 358 P **P** **15 21 15.8 -0.6**
comp=Z,2.9nm,0.5s,mb4.4,baz=171,slow=8.2,SNR=46
ARCES ARCESS Array B 34.92 358 P **P** **15 21 15.8 -0.6**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
ARCES ARCESS Array B 34.92 358 P **P** **15 21 15.8 -0.6**
comp=Z,3.0nm,0.5s,mb4.5
ARE0 ARCESS Array S 34.92 358 *e*P **P** **15 21 15.1 -1.4**
ARE0 ARCESS Array S 34.92 358 *e*P **P** **15 21 15.1 -1.3**
KEV Kevo 35.11 359 P **P** **15 21 16.3 -1.8**
comp=Z,1.9nm,0.6s,mb4.2
KEV Kevo 35.11 359 *e*P **P** **15 21 17.4 -0.7**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KEV Kevo 35.11 359 *e*P **P** **15 21 17.4 -0.7**
comp=Z,1.0nm,0.3s,mb4.2
AAK Ala-Archa 36.45 63 *e*P **P** **15 21 31.3 +1.4**
comp=Z,4.2nm,0.4s,mb4.7
AAK Ala-Archa 36.45 63 *e*P **P** **15 21 31.3 +1.3**
AAK pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
AAK Ala-Archa 36.45 63 *e*P **P** **15 21 31.3 +1.3**
comp=Z,4.2nm,0.4s,mb4.7
KZA Kyzart 37.05 64 *e*P **P** **15 21 36.9 +1.8**
comp=Z,1.8nm,0.5s,mb4.2
KZA Kyzart 37.05 64 *e*P **P** **15 21 36.9 +1.9**
comp=Z,1.8nm,0.5s,mb4.2
TKM2 Tokmak 2 37.25 63 *e*P **P** **15 21 37.9 +1.2**
comp=Z,2.5nm,0.6s,mb4.2
TKM2 Tokmak 2 37.25 63 *e*P **P** **15 21 37.9 +1.2**
TKM2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
TKM2 Tokmak 2 37.25 63 *e*P **P** **15 21 37.9 +1.2**
comp=Z,2.5nm,0.6s,mb4.2
KURK Kurchatov 39.39 50 *e*P **P** **15 21 54.9 +0.2**
comp=Z,5.2nm,0.5s,mb4.5
KURK *e*PP PP 15 23 23.1 -2.1
KURK Kurchatov 39.39 50 *e*P **P** **15 21 54.9 +0.3**
KURK *e* 15 23 23.1
KURK pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
KURK Kurchatov 39.39 50 *e*P **P** **15 21 54.8 +0.2**
comp=Z,5.2nm,0.5s,mb4.5
MK31 Makanchi Array 41.78 56 *e*P **P** **15 22 15.0 +0.6**
MK31 Makanchi Array 41.78 56 *i* P **P** **15 22 15.1 +0.7**
MK31 pmax pmax
comp=Z,9.0nm,0.4s,mb4.8
MK31 Makanchi Array 41.78 56 *e*P **P** **15 22 15.0 +0.6**
MKAR Makanchi Array 41.78 56 P **P** **15 22 15.3 +0.9**
comp=Z,9.9nm,0.5s,mb4.7,baz=276,slow=6.9,SNR=168
MKAR LR LR 15 43 56.9
comp=Z,30nm,20.4s,MS3.2,baz=172,slow=42
MKAR Makanchi Array 41.78 56 P **P** **15 22 15.3 +0.9**
MKAR LR LR 15 43 56.9
MKAR Makanchi Array 41.78 56 *i* P **P** **15 22 15.3 +0.9**
MKAR pmax pmax
comp=Z,10.0nm,0.5s
MKAR Makanchi Array 41.78 56 *i* P **P** **15 22 15.3 +0.9**
comp=Z,10.0nm,0.5s,mb4.7
NVS Novosibirsk 42.52 44 *e*P **P** **15 22 19.8 -0.5**
NVS pmax pmax
comp=Z,31nm,2.9s,mb4.5
NVS Novosibirsk 42.52 44 *e*P **P** **15 22 19.8 -0.5**
comp=Z,31nm,2.9s,mb4.5
ZAA0 Zalesovo Array 43.38 46 *e*P **P** **15 22 27.1 -0.2**
ZAA0 Zalesovo Array 43.38 46 *e*P **P** **15 22 27.1 -0.2**
ZALV Zalesovo Beam 43.38 46 P **P** **15 22 27.4 0.0**
comp=Z,1.8nm,0.4s,mb4.2,baz=270,slow=9.2,SNR=11
ZALV Zalesovo Beam 43.38 46 P **P** **15 22 27.4 +0.1**
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
ZALV Zalesovo Beam 43.38 46 P **P** **15 22 27.4 +0.1**
comp=Z,2.0nm,0.4s,mb4.2
DANN Dangsing 47.09 82 *e*P **P** **15 22 59.5 +2.4**
comp=Z,87nm,0.4s
KOLN Koldanda 47.19 83 *e*P **P** **15 22 59.5 +1.7**
comp=Z,13nm,0.6s,mb5.1
GKN Gorkha 47.94 82 *e*P **P** **15 23 05.1 +1.4**
comp=Z,27nm,0.5s,mb5.6
DMN Daman 48.48 82 *e*P **P** **15 23 09.6 +1.7**
comp=Z,14nm,0.5s,mb5.2
KKN Kakani 48.55 82 *e*P **P** **15 23 09.9 +1.5**
comp=Z,23nm,0.5s,mb5.5
PKIN Phulchoki 48.73 82 *e*P **P** **15 23 10.9 +1.1**
comp=Z,8.5nm,0.6s,mb5.0
PKI Pulchoki 48.74 82 *e*P **P** **15 23 11.4 +1.5**
GUN Gumba 48.99 81 *e*P **P** **15 23 13.0 +1.2**
comp=Z,26nm,0.6s,mb5.5
ZAK Zakamensk 55.02 49 *e*P **P** **15 23 57.2 +0.8**
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
ZAK Zakamensk 55.02 49 *e*P **P** **15 23 57.2 +0.8**
comp=Z,5.0nm,1.0s,mb4.5
SONM Songino Array 57.69 51 P **P** **15 24 16.3 +0.9**
comp=Z,8.5nm,0.5s,mb5.0,baz=277,slow=8.7,SNR=42
SONM Songino Array 57.69 51 P **P** **15 24 16.3 +0.9**
SONM pmax pmax
comp=Z,9.0nm,0.5s
SONM Songino Array 57.69 51 P **P** **15 24 16.3 +0.9**
comp=Z,9.0nm,0.5s,mb5.1
CMAR Chiang Mai Arr 63.95 85 P **P** **15 24 59.0 +0.7**
comp=Z,1.3nm,0.8s,mb4.0,baz=285,slow=8.5,SNR=6.6
CMAR Chiang Mai Arr 63.95 85 P **P** **15 24 59.1 +0.7**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 63.95 85 P **P** **15 24 59.0 +0.6**
SCHQ Schefferville 65.25 321 P **P** **15 25 06.2 -0.1**
comp=Z,2.2nm,0.5s,mb4.4,baz=81,slow=9.2,SNR=8.1
SCHQ Schefferville 65.25 321 P **P** **15 25 06.2 -0.1**
SCHQ Schefferville 65.25 321 P **P** **15 25 06.2 -0.2**
BILL Bilibino 72.81 15⇑ *e*P **P** **15 25 53.7 +0.7**
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BILL MLR MLR
comp=Z,100nm,15.0s,MS4.2
BILL Bilibino 72.81 15 *e*P **P** **15 25 53.7 +0.7**
comp=Z,100nm,15.0s
KSRS Korea Array 76.40 54 P **P** **15 26 15.3 +0.9**
comp=Z,2.3nm,0.6s,mb4.3,baz=306,slow=4.7,SNR=20
KSRS Korea Array 76.40 54 P **P** **15 26 15.4 +1.0**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KSRS Korea Array 76.40 54 P **P** **15 26 15.4 +1.0**
comp=Z,2.0nm,0.6s,mb4.2
ILAR Eielson Array 80.78 358 P **P** **15 26 38.0 0.0**
comp=Z,0.5nm,0.8s,mb3.5,baz=342,slow=3.2,SNR=6.2
ILAR Eielson Array 80.78 358 P **P** **15 26 38.0 0.0**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
ILAR Eielson Array 80.78 358 P **P** **15 26 38.0 0.0**
comp=Z,1.0nm,0.8s,mb3.8
MJAR Matsushiro Art 83.60 50 P **P** **15 26 53.8 +0.4**
comp=Z,2.7nm,0.4s,mb4.8,baz=307,slow=4.4,SNR=4.5
MJAR Matsushiro Art 83.60 50 P **P** **15 26 53.8 +0.5**
MJAR pmax pmax
comp=Z,3.0nm,0.4s
MJAR Matsushiro Art 83.60 50 P **P** **15 26 53.8 +0.5**
comp=Z,3.0nm,0.4s,mb4.8
ASAR Alice Springs 115.33 102 PKP PKPdf 15 33 06.5 -0.1
comp=Z,0.2nm,0.7s,baz=297,slow=1.5,SNR=5.5
ASAR Alice Springs 115.33 102 PKIKP PKPdf 15 33 06.6 -0.1

DDA ***12*** *15:20:30.7, 37.°16N×33.°17E, h2km±3km, Md3.3*
ISK ***12*** *15:20:33.3, 37.°08N×33.°34E, h5km, MD3.0*
CSEM 12 15:20:34.4±0.3, 37.°12N×33.°30E, h2km, MD3.3, Error ellipse: s-maj=9.0km s-min=6.5km az=172.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERMK	**Ermenek**	**0.57**	**213**	*i* P	Pg	15 20 40.9	-4.4
ERMK				*i* S	Sg	15 20 50.8	-1.7
ERMK	**Ermenek**	**0.57**	**213**	*i* P	Pg	15 20 40.9	-4.3
ERMK				*i* S	Sg	15 20 50.8	-1.8
HDMB	**Hadim**	**0.67**	**257**	*e*PG	Pg	15 20 47.5	+0.3
HDMB	**Hadim**	**0.67**	**257**	*e*Pg	Pg	15 20 47.5	+0.3
IKL	**Isikli**	**0.93**	**160**	*e*PG	Pg	15 20 51.5	-0.7
IKL				*e*SG	Sg	15 21 05.0	+0.8
IKL	**Isikli**	**0.93**	**160**	*e*Pg	Pg	15 20 51.5	-0.7
IKL				*e*Sg	Sg	15 21 05.0	+0.8
MERS	**Mersin**	**1.01**	**104**	*e*PG	Pg	15 20 52.9	-0.9
MERS	**Mersin**	**1.01**	**104**	*e*Pg	Pg	15 20 52.9	-0.9
SULT	**Sultanhani-AKS**	**1.09**	**9**	*e*PN	Pg	15 20 56.1	+0.7
SULT	**Sultanhani-AKS**	**1.09**	**9**	*e*Pn	Pg	15 20 56.1	+0.7
KONT	**Konya--Tatoy**	**1.11**	**318**	*e*PN	Pg	15 20 56.5	+0.8
KONT	**Konya--Tatoy**	**1.11**	**318**	*e*Pn	Pg	15 20 56.6	+0.8
GAZI	**Gazipasa**	**1.18**	**222**	*i* P	Pg	15 20 57.1	0.0
GAZI				*i* S	Sn	15 21 14.3	-0.3
GAZI	**Gazipasa**	**1.18**	**222**	*i* P	Pg	15 20 57.1	0.0
GAZI				*i* S	Sn	15 21 14.3	-0.3
GULE	**Gulek**	**1.19**	**81**	*i* P	Pg	15 20 56.4	-0.9
GULE				*i* S	Sg	15 21 13.2	+0.5
GULE	**Gulek**	**1.19**	**81**	*i* P	Pg	15 20 56.3	-0.9
GULE				*i* S	Sg	15 21 13.2	+0.5
KARA	**Karaisali**	**1.41**	**84**	*e*PN	Pn	15 21 00.5	-0.6
KARA	**Karaisali**	**1.41**	**84**	*e*Pn	Pn	15 21 00.5	-0.6
SUTC	**Sutluce-Ispart**	**1.87**	**282**	*e*PN	Pn	15 21 08.8	+1.4
SUTC	**Sutluce-Ispart**	**1.87**	**282**	*e*Pn	Pn	15 21 08.8	+1.4
YURE	**YUREGIR**	**1.89**	**98**	*i* P	Pb	15 21 09.8	+0.2
YURE				*i* S	Sg	15 21 38.3	+3.1
YURE	**YUREGIR**	**1.89**	**98**	*i* P	Pb	15 21 09.8	+0.2
YURE				*i* S	Sg	15 21 38.3	+3.2
KOZT	**Kozan**	**2.05**	**79**	*e*PN	Pn	15 21 10.3	+0.5
YAYL	**Yayladag**	**2.50**	**115**	*e*P	Pn	15 21 17.7	+1.6
YAYL				*e*S	Sb	15 21 51.2	-0.2
YAYL	**Yayladag**	**2.50**	**115**	*e*P	Pn	15 21 17.7	+1.6
YAYL				*e*S	Sb	15 21 51.2	-0.1

CSEM ***12*** *15:23:23.4±0.1, 45.°58N×2.°87E, h18km±1km, ML1.8/10, Error ellipse: s-maj=3.4km s-min=2.5km az=104.0*
STR ***12*** *15:23:24.3±0.3, 45.°58N×2.°84E, h5km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
LDG 12 15:23:24.1±0.1, 45.°58N×2.°87E, h9km, Md1.9/4, Ml2.0/11, Error ellipse: s-maj=1.6km s-min=1.1km az=109.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYM	**Petit Puy Mans**	**0.20**	**29**	Pg	Pg	15 23 28.9	+0.7
PYM				Sg	Sg	15 23 31.7	+0.7
PYM	**Petit Puy Mans**	**0.20**	**29**	Pg	Pg	15 23 28.9	+0.7
PYM				Sg	Sg	15 23 31.7	+0.7
FRNF	**Fournols**	**0.29**	**229**	Pg	Pg	15 23 29.9	+0.1
FRNF				Sg	Sg	15 23 33.9	+0.3
FRNF	**Fournols**	**0.29**	**229**	Pg	Pg	15 23 29.9	+0.1
FRNF				Sg	Sg	15 23 33.9	+0.3
AGO	**Saint Agoulin**	**0.51**	**21**	Pg	Pg	15 23 34.7	+0.7
AGO				Sg	Sg	15 23 41.3	+0.6
AGO	**Saint Agoulin**	**0.51**	**21**	Pg	Pg	15 23 34.7	+0.7
AGO				Sg	Sg	15 23 41.3	+0.6
PLDF	**La Plantade**	**0.66**	**53**	Pg	Pg	15 23 38.2	+1.4
PLDF				Sg	Sg	15 23 45.8	+0.4
PLDF	**La Plantade**	**0.66**	**53**	Pg	Pg	15 23 38.2	+1.4
PLDF				Sg	Sg	15 23 45.8	+0.4
TCF	**Toulx Ste Croi**	**0.85**	**327**	*e*Pg	Pg	15 23 39.9	-0.5
TCF	**Toulx Ste Croi**	**0.85**	**327**	*e*Pn	Pn	15 23 40.9	-1.3
TCF				*e*Sg	Sg	15 23 51.3	-0.1
0.8nm,0.1s							
TCF	**Toulx Ste Croi**	**0.85**	**327**	*e*Pg	Pg	15 23 39.9	-0.5
TCF	**Toulx Ste Croi**	**0.85**	**327**	*e*Pn	Pn	15 23 40.9	-1.3
TCF				*e*Sg	Sg	15 23 51.3	-0.1
0.4nm,0.1s							
CAF	**Calviac**	**0.86**	**221**	*e*Pg	Pg	15 23 40.6	-0.1
CAF				*e*Sg	Sg	15 23 51.7	-0.2
7.4nm,0.2s							
CAF	**Calviac**	**0.86**	**221**	*e*Pg	Pg	15 23 40.6	-0.1
CAF				*e*Sg	Sg	15 23 51.7	-0.2
3.7nm,0.2s							
BGF	**Bois d'Agland**	**0.98**	**359**	*e*Pn	Pn	15 23 42.3	-1.7
BGF	**Bois d'Agland**	**0.98**	**359**	*e*Pg	Pg	15 23 42.9	-0.1
BGF				*e*Sg	Sg	15 23 55.1	-0.6
3.4nm,0.3s							
BGF	**Bois d'Agland**	**0.98**	**359**	*e*Pn	Pn	15 23 42.3	-1.7
BGF	**Bois d'Agland**	**0.98**	**359**	*e*Pg	Pg	15 23 42.9	-0.1
BGF				*e*Sg	Sg	15 23 55.1	-0.6
1.7nm,0.3s							
RJF	**Les Rejaudoux**	**0.99**	**255**	*e*Pn	Pn	15 23 42.6	-1.5
RJF				*e*Sg	Sg	15 23 55.6	-0.4
7.8nm,0.2s							
RJF	**Les Rejaudoux**	**0.99**	**255**	*e*Sg	Sg	15 23 55.6	-0.4
3.9nm,0.2s							
RJF	**Les Rejaudoux**	**0.99**	**255**	*e*Pn	Pn	15 23 42.6	-1.5
AVF	**Avril sur Loir**	**1.26**	**15**	*e*Pg	Pg	15 23 47.5	-0.8
AVF				*e*Sg	Sg	15 24 03.1	-1.5
1.7nm,0.2s							
AVF	**Avril sur Loir**	**1.26**	**15**	*e*Pg	Pg	15 23 47.5	-0.8
AVF				*e*Sg	Sg	15 24 03.1	-1.5
0.9nm,0.2s							
SMF	**Signal de Mont**	**1.27**	**32**	*e*Pg	Pg	15 23 47.5	-0.9
SMF				*e*Sg	Sg	15 24 03.8	-1.0
2.4nm,0.3s							
SMF	**Signal de Mont**	**1.27**	**32**	*e*Pg	Pg	15 23 47.5	-0.9
SMF				*e*Sg	Sg	15 24 03.8	-1.0
1.2nm,0.3s							
VIVF	**Saint-Julien-l**	**1.47**	**119**	*e*Pn	Pn	15 23 49.2	-1.5
VIVF	**Saint-Julien-l**	**1.47**	**119**	*e*Pg	Pg	15 23 51.4	-0.8
VIVF				*e*Sg	Sg	15 24 09.8	-1.4
2.3nm,0.3s							
VIVF	**Saint-Julien-l**	**1.47**	**119**	*e*Pn	Pn	15 23 49.2	-1.5
VIVF	**Saint-Julien-l**	**1.47**	**119**	*e*Pg	Pg	15 23 51.4	-0.8
VIVF				*e*Sg	Sg	15 24 09.8	-1.4
1.1nm,0.3s							
SSF	**Saint Saulge**	**1.55**	**16**	*e*Pg	Pg	15 23 53.0	-0.8
SSF				*e*Sg	Sg	15 24 12.6	-1.3
2.9nm,0.3s							
SSF	**Saint Saulge**	**1.55**	**16**	*e*Pg	Pg	15 23 53.0	-0.8
SSF				*e*Sg	Sg	15 24 12.6	-1.3
1.5nm,0.3s							
LFF	**La Frestale**	**1.63**	**248**	*e*Sg	Sg	15 24 15.9	-0.6
1.5nm,0.2s							
LASF	**Ste Croix**	**1.66**	**155**	*e*Pg	Pg	15 23 55.0	-0.8
LASF				*e*Sg	Sg	15 24 15.8	-1.5
1.5nm,0.2s							
LASF	**Ste Croix**	**1.66**	**155**	*e*Pg	Pg	15 23 55.0	-0.8
LASF				*e*Sg	Sg	15 24 15.8	-1.5
0.8nm,0.2s							
LOR	**Lormes**	**1.83**	**22**	*e*Pg	Pg	15 23 57.3	-1.8
LOR				*e*Sg	Sg	15 24 20.8	-2.0
1.6nm,0.2s							
LOR	**Lormes**	**1.83**	**22**	*e*Pg	Pg	15 23 57.3	-1.8
LOR				*e*Sg	Sg	15 24 20.8	-2.0
0.8nm,0.2s							
MFF	**Saint Martin d**	**2.33**	**297**	*e*Sg	Sg	15 24 36.6	-2.5
0.9nm,0.2s							
MFF	**Saint Martin d**	**2.33**	**297**	*e*Sg	Sg	15 24 36.6	-2.5
0.4nm,0.2s							

NEIC ***12*** *15:46:54.2, 61.°46N×140.°29W, h1km, ML2.8(PGC), ML2.5(AEIC), After PGC.*
PGC 12 15:46:54.2±8.4, 61.°46N×140.°29W, h1km, ML2.8/4, 10D, 167km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCA	**Pinnacle**	**1.37**	**179**	P	Pg	15 47 18.6	-1.7
HYT	**Haines Junctio**	**1.49**	**114**	⇓Pn	Pn	15 47 20.5	-1.6
HYT				Sn	Sn	15 47 40.4	-1.7
HYT	**Haines Junctio**	**1.49**	**114**	⇓Pn	Pn	15 47 20.5	-1.6
HYT				⇓Sn	Sn	15 47 40.5	-1.6
BCA3	**Beaver Creek A**	**1.76**	**337**	P	Pn	15 47 24.6	-1.2
PNL	**Peninsula**	**1.85**	**166**	P	Pn	15 47 26.1	-0.8
MENT	**Mentasta**	**2.19**	**314**	*e*Pn	Pn	15 47 31.4	-0.3
DAWY	**Dawson**	**2.65**	**9**	⇓Pn	Pn	15 47 37.7	-0.3
DAWY				Sg	Sg	15 48 16.2	-3.0
DAWY	**Dawson**	**2.65**	**9**	⇓Pn	Pn	15 47 37.7	-0.3
DAWY				⇑Sg	Sg	15 48 16.2	-3.0
WHY	**Whitehorse**	**2.75**	**105**	⇓Pn	Pn	15 47 38.3	-1.0
WHY				Pg	Pg	15 47 43.7	-3.1
WHY				Sg	Sg	15 48 20.5	-1.9
WHY	**Whitehorse**	**2.75**	**105**	⇓Pn	Pn	15 47 38.3	-1.0
WHY				⇓Pg	Pg	15 47 43.7	-3.1
WHY				⇑Sg	Sg	15 48 20.5	-1.9
PLBC	**Pleasant Camp**	**2.79**	**134**	⇓Pn	Pn	15 47 39.1	-0.8
PLBC				Pg	Pg	15 47 44.6	-3.0
PLBC				Sg	Sg	15 48 21.7	-2.2
PLBC	**Pleasant Camp**	**2.79**	**134**	⇓Pn	Pn	15 47 39.1	-0.8
PLBC				⇑Pg	Pg	15 47 44.6	-3.0
PLBC				⇑Sg	Sg	15 48 21.7	-2.2
DOT	**Dot Lake**	**2.81**	**323**	*e*Pn	Pn	15 47 38.9	-1.2
DOT				*e*Sg	Sg	15 48 21.6	-2.7
EGAK	**Eagle**	**3.36**	**354**	*e*Pn	Pn	15 47 47.3	-0.4
EGAK				*e*Sg	Sg	15 48 40.3	-1.6
BPAW	**Bear Paw Mtn.**	**5.58**	**303**	*e*Pn	Pn	15 48 19.1	+0.9
COLD	**Coldfoot**	**7.21**	**328**	*e*Pn	Pn	15 48 40.4	0.0

IDC ***12*** *16:16:49.0±1.6, 11.°09S×113.°04E, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.0/18, mbtmp4.1/9, ML3.4/1, MS3.6/1, Ms1 3.5/1, ms1mx2.7/31, Error ellipse: s-maj=71.3km s-min=15.8km az=51.0*
ISCJB ***12*** *16:16:51.1±0.6, 11.°12S±0.°04×112.°84E±0.°04, h33km, mb4.0/9, Error ellipse: s-maj=6.9km s-min=4.7km az=142.8*
NEIC ***12*** *16:16:52.2±0.9, 11.°59S×112.°64E, h35km, mb3.6/1, Error ellipse: s-maj=45.4km s-min=9.2km az=49.0*
DJA ***12*** *16:16:55, 10.°81S×112.°79E, h15km, MLv4.3/14*
ISC 12 16:16:53.2±0.6, 11.°10S±0.°04×112.°88E±0.°04, h35km, n30, σ1§29/43, mb4.0/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**2.87**	**11**	P	**Pn**	**16 17 37.2**	**+0.8**
GMJI				S	**Sn**	**16 18 09.0**	**-0.7**
JAGI	**Jajag, Banyuwa**	**2.90**	**26**	P	**Pn**	**16 17 37.8**	**+0.9**
JAGI				S	**Sn**	**16 18 10.6**	**0.0**
KRKI	**Karangkates**	**2.95**	**352**	P	**Pn**	**16 17 41.3**	**+3.6**
KRKI				S	**Sn**	**16 18 11.0**	**-0.9**
IGBI	**Denpasar**	**3.19**	**45**	P	**Pn**	**16 17 44.5**	**+3.7**
NBBI	**Negara**	**3.21**	**33**	P	**Pn**	**16 17 45.2**	**+4.0**
NBBI				S	**Sn**	**16 18 19.9**	**+1.6**
BYJI	**Banyuwangi**	**3.22**	**27**	P	**Pn**	**16 17 43.2**	**+1.9**
PWJI	**Pagerwojo**	**3.24**	**341**	P	**Pn**	**16 17 40.0**	**-1.6**
PWJI				S	**Sn**	**16 18 17.7**	**-1.2**
PCJI	**Pacitan**	**3.34**	**330**	P	**Pn**	**16 17 41.7**	**-1.3**
PCJI				S	**Sn**	**16 18 19.7**	**-1.7**
SJI	**Sawahan**	**3.52**	**342**	P	**Pn**	**16 17 44.3**	**-1.1**
SJI				S	**Sn**	**16 18 25.6**	**-0.3**
SRBI	**Singaraja**	**3.78**	**38**	P	**Pn**	**16 17 50.2**	**+1.2**
KHKI	**Kahang-Kahang**	**3.83**	**45**	P	**Pn**	**16 17 51.9**	**+2.2**
UGM	**Wanagama**	**3.93**	**324**	P	**Pn**	**16 17 50.5**	**-0.6**
UGM				S	**Sn**	**16 18 35.5**	**-0.4**
MTNI	**Mataram**	**4.07**	**53**	P	**Pn**	**16 17 52.3**	**-0.7**
MTNI				S	**Sn**	**16 18 37.0**	**-2.4**
KMMI	**Kalianget**	**4.17**	**15**	P	**Pn**	**16 17 57.2**	**+2.8**
BJII	**Banjamegara**	**4.88**	**320**	P	**Pn**	**16 18 05.0**	**+0.9**
CISI	**Cisompet, Garu**	**6.11**	**305**	P	**Pn**	**16 18 21.8**	**+0.7**
BMNI	**Bima**	**6.27**	**67**	P	**Pn**	**16 18 22.0**	**-1.3**
MBWA	**Marble Bar**	**11.97**	**148**	*e*Pn	**Pn**	**16 19 35.1**	**-6.3**
MBWA				*e*Sn	**Sn**	**16 21 35.0**	**-19**
FITZ	**Fitzroy Crossi**	**14.17**	**121**	Pn	**Pn**	**16 20 09.1**	**-2.5**
0.1nm,0.3s,baz=270,slow=8.5,SNR=13							
FITZ				Sn	**Sn**	**16 22 30.4**	**-17**
0.7nm,0.3s,baz=17,slow=22,SNR=6.6							
WRA	**Warramunga Arr**	**22.45**	**116**	P	**P**	**16 21 49.0**	**-0.4**
2.7nm,0.4s,mb4.0,baz=296,slow=11,SNR=77							
WRA				S	**S**	**16 25 46.9**	**-7.3**
0.3nm,0.5s,baz=291,slow=25,SNR=4.9							
WB2	**Warramunga Arr**	**22.46**	**116**	*e*P	**P**	**16 21 48.2**	**-1.2**
ASAR	**Alice Springs**	**23.60**	**125**	P	**P**	**16 22 00.9**	**-0.2**
8.1nm,0.6s,mb4.3,baz=301,slow=9.2,SNR=248							
ASAR

MKAR Makanchi Array 65.72 327 P P 16 38 07.4 +0.1
0.1nm,0.4s,baz=123,slow=7.4,SNR=3.1

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*BJI **12** 16:33:50.4, 12°.45N×124°.11E, h31km, mB5.0/8, mb4.6/14, Ms4.4/4, Ms7 4.1/4*
*MAN **12** 16:33:54, 13°.13N×124°.07E, h20km, mb5.9, ML4.9, MS4.9*
MAN INTENSITY III - LEGASPI CITY; INTENSITY II - IROSIN SORSOGON; LIGNON HILL LEGASPI CITY.
*MOS **12** 16:33:54.5±1.0, 13°.06N×124°.11E, h33km, mb4.9/18, Error ellipse: s-maj=13.6km s-min=7.7km az=120.1*
*ISCJB **12** 16:33:55.7±0.5, 13°.13N±0°.03×124°.16E±0°.04, h43km±4km, mb4.4/54, MS3.9/2, Error ellipse: s-maj=7.3km s-min=3.9km az=152.9*
*NEIC **12** 16:33:56.4±0.2, 13°.02N×124°.10E, h35km, mb4.6/11, Error ellipse: s-maj=7.5km s-min=4.6km az=59.0*
NEIC Felt [III PIVS] at Legaspi and [II PIVS] at Irosin, Luzon.
*IDC **12** 16:33:57.6±2.4, 13°.00N×124°.09E, h44km±21km, mb4.0/23, mb1 4.1/24, mb1mx4.1/27, mbtmp4.0/24, Error ellipse: s-maj=18.6km s-min=9.6km az=71.0*
*DJA **12** 16:34:10, 13°.26N×123°.79E, h130km, mb4.6/15*
ISC 12 16:33:57.3±0.4, 13°.11N±0°.03×124°.16E±0°.04, h41km±4km, n160, σ1.09/147, mb4.4/54, MS3.9/2, 1C-10D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.77**	**140**	*eP*	**Pn**	**16 34 10.0**	**-1.7**
CNP				*eS*	**Sn**	**16 34 21.3**	**-0.8**
MMPH	**Masbate**	**0.91**	**215**	*eP*	**Pn**	**16 34 11.1**	**-2.4**
AUQP	**San Andres**	**1.46**	**279**	*eP*	**Pn**	**16 34 21.1**	**0.0**
AUQP				*eS*	**Sn**	**16 34 41.4**	**+2.3**
BESP	**Borongan**	**1.95**	**140**	*eP*	**Pn**	**16 34 28.1**	**+0.2**
RCP	**Roxas**	**2.07**	**222**	*eP*	**Pn**	**16 34 30.1**	**+0.6**
OCLP	**Ormoc**	**2.09**	**168**	*eP*	**Pn**	**16 34 30.3**	**+0.5**
OTRP	**Odiongan**	**2.21**	**251**	*eP*	**Pn**	**16 34 32.7**	**+1.2**
BOAC	**Boac**	**2.28**	**279**	*eP*	**Pn**	**16 34 31.1**	**-1.3**
POLP	**Polilio Island**	**2.69**	**307**	*eP*	**Pn**	**16 34 39.9**	**+1.8**
LLP	**Lapu-Lapu**	**2.78**	**184**	*eP*	**Pn**	**16 34 38.1**	**-1.2**
LLP				*eS*	**Sn**	**16 35 12.2**	**+0.6**
GUIM	**Jordan**	**2.90**	**212**	*eP*	**Pn**	**16 34 40.6**	**-0.4**
MSLP	**Maasin**	**3.03**	**167**	*eP*	**Pn**	**16 34 47.2**	**+4.4**
TGY	**Tagaytay City**	**3.29**	**288**	P	**Pn**	**16 34 46.6**	**+0.3**
	baz=112,slow=16,SNR=2.0						
TGY	**Tagaytay City**	**3.29**	**288**	P	**Pn**	**16 34 46.6**	**+0.3**
TBP	**Tagbilaran**	**3.41**	**185**	*eP*	**Pn**	**16 34 47.0**	**-0.9**
SCPH	**Surigao**	**3.55**	**158**	*eP*	**Pn**	**16 34 51.5**	**+1.6**
SCPH				*eS*	**Sn**	**16 35 31.8**	**+1.1**
BALP	**Baler**	**3.62**	**317**	*eP*	**Pn**	**16 34 52.7**	**+1.8**
CUYO	**Cuyo Island**	**3.80**	**234**	*eP*	**Pn**	**16 34 52.2**	**-1.2**
SNPH	**Sibulan**	**3.85**	**194**	*eP*	**Pn**	**16 34 53.9**	**-0.1**
BUSP	**Coron**	**4.02**	**255**	*eP*	**Pn**	**16 34 55.5**	**-0.8**
PALP	**Palanan**	**4.28**	**337**	*eP*	**Pn**	**16 34 58.7**	**-1.2**
BUTP	**Butuan**	**4.35**	**161**	*eP*	**Pn**	**16 35 06.2**	**+5.2**
CAUP	**Cauayan**	**4.43**	**330**	*eP*	**Pn**	**16 35 01.3**	**-0.7**
BCPH	**Baguio City Da**	**4.75**	**314**	*eP*	**Pn**	**16 35 03.0**	**-3.5**
SCZP	**Santa Cruz**	**4.90**	**303**	*eP*	**Pn**	**16 35 07.0**	**-1.4**
ENPP	**El Nido**	**5.00**	**248**	*eP*	**Pn**	**16 35 10.5**	**+0.7**
BOLP	**Bolinao**	**5.24**	**309**	*eP*	**Pn**	**16 35 12.2**	**-1.0**
BUKP	**Musuan**	**5.27**	**170**	*eP*	**Pn**	**16 35 15.8**	**+2.3**
PAGZ	**Pagadian**	**5.28**	**188**	*eP*	**Pn**	**16 35 13.6**	**0.0**
APYP	**Conner**	**5.50**	**330**	*eP*	**Pn**	**16 35 16.0**	**-0.7**
IPIL	**Ipil**	**5.51**	**197**	*eP*	**Pn**	**16 35 17.1**	**+0.3**
ABRA	**Dolores**	**5.61**	**324**	*eP*	**Pn**	**16 35 18.5**	**+0.3**
MYLDM	**Lahad Datu**	**9.65**	**216**	P	**Pn**	**16 36 21.5**	**+7.8**
	32nm,1.1s						
TATO	**Taipei**	**12.07**	**348**	P	**Pn**	**16 36 45.6**	**-1.2**
MRSI	**Marisa**	**12.74**	**190**	P	Px	16 37 08.9	
	29nm,0.8s						
LUWI	**Luwuk**	**14.12**	**186**	P	**Pn**	**16 37 22.9**	**+8.1**
	53nm,1.1s						
SBUM	**Sibu**	**15.86**	**229**	P	**Pn**	**16 37 44.3**	**+6.5**
	21nm,1.1s						
TTSI	**Tana Toraja**	**16.61**	**195**	P	**Pn**	**16 37 50.5**	**+3.2**
SPSI	**Sidrap Palu**	**17.51**	**195**	P	**Pn**	**16 38 06.3**	**+7.8**
	23nm,0.8s						
STKI	**Sintang**	**18.05**	**225**	P	**Pn**	**16 38 08.2**	**+3.1**
WHN	**Wuhan**	**19.58**	**334**	P	**Pn**	**16 38 25.9**	**+2.5**
GUMO	**Guam**	**20.16**	**86**	P	**P**	**16 38 29.7**	**+1.4**
	21nm,0.8s,baz=17,slow=19,SNR=2.7						
GUMO	**Guam**	**20.16**	**86**	P	**P**	**16 38 29.7**	**+1.4**
MMRI	**Maumere**	**21.68**	**185**	P	**P**	**16 38 50.4**	**+5.7**
	37nm,1.3s,mb4.7						
ENH	**Enshi**	**21.81**	**324**	*eP*	**P**	**16 38 46.8**	**+0.8**
	15nm,0.9s,mb4.4						
MYKOM	**Kota Tinggi**	**23.03**	**242**	P	**P**	**16 39 00.2**	**+1.1**
	27nm,1.1s,mb4.6						
SJI	**Sawahan**	**24.09**	**211**	P	**P**	**16 39 11.7**	**+2.6**
	70nm,1.0s,mb5.1						
PWJI	**Pagerwojo**	**24.31**	**211**	P	**P**	**16 39 11.6**	**+0.4**
	31nm,0.9s,mb4.7						
KULM	**Kulim**	**24.45**	**254**	P	**P**	**16 39 17.5**	**+5.0**
	21nm,1.9s,mb4.2						
KSRS	**Korea Array**	**24.48**	**7**	P	**P**	**16 39 13.3**	**+0.8**
	1.4nm,0.5s,mb3.7,baz=180,slow=9.7,SNR=19						
KSRS				PcP	PcP	16 42 50.5	+0.1
	0.2nm,0.4s,baz=172,slow=3.0,SNR=4.4						
CM31	**Chiang Mai Arr**	**24.83**	**286**	P	**P**	**16 39 14.5**	**-1.4**
CMAR	**Chiang Mai Arr**	**24.83**	**286**	P	**P**	**16 39 15.8**	**-0.1**
	1.2nm,0.7s,mb3.5,baz=99,slow=7.8,SNR=9.2						
CMAR				PcP	PcP	16 42 51.7	+0.1
	1.9nm,0.7s,baz=60,slow=0.1,SNR=11						
CMAR	**Chiang Mai Arr**	**24.83**	**286**	P	**P**	**16 39 15.9**	**0.0**
CMAR						16 42 51.7	
BJII	**Banjamegara**	**24.87**	**216**	P	**P**	**16 39 20.4**	**+4.2**
	36nm,2.1s,mb4.5						
KAKA	**Kakadu**	**26.93**	**162**	P	**P**	**16 39 42.7**	**+7.8**
	145nm19nm,0.7s,mb4.7						
KNA	**Kununurra**	**29.03**	**171**	P	**P**	**16 39 58.8**	**+5.2**
	28nm,1.0s,mb5.0						
HHC	**Hu-ho-hao-te**	**29.76**	**341**	*eP*	**P**	**16 40 00.3**	**+0.4**
HHC				pP	pP	16 40 09.9	-1.2
HHC				sP	sP	16 40 14.0	-2.0
HHC				PP	PP	16 40 58.6	-9.0
HHC				PcP	PcP	16 43 01.5	-1.5
HHC				S	**S**	**16 44 54.9**	**+1.5**
HHC				sS	sS	16 45 11.2	-0.9
HHC				ScP	ScP	16 46 40.8	-1.1
HHC				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=N,270nm,12.2s,MS4.2						
HHC				LR	LR		
	comp=E,240nm,14.5s,MS4.2						
HHC				LR	LR		
	comp=Z,310nm,11.8s,MS4.2						
FITZ	**Fitzroy Crossi**	**31.04**	**177**	P	**P**	**16 40 09.6**	**-1.8**
	comp=Z,1.5nm,0.6s,mb4.0,baz=360,slow=9.9,SNR=6.1						
FITZ				PcP	PcP	16 43 06.2	-0.4
	comp=Z,1.0nm,0.5s,baz=346,slow=8.6,SNR=4.1						
FITZ	**Fitzroy Crossi**	**31.04**	**177**	P	**P**	**16 40 10.0**	**-1.4**
COEN	**Coen**	**32.83**	**144**	P	**P**	**16 40 27.7**	**+0.5**
WRA	**Warramunga Arr**	**34.33**	**163**	P	**P**	**16 40 38.5**	**-1.7**
	comp=Z,1.6nm,0.5s,mb4.2,baz=344,slow=8.4,SNR=28						
WRA				PcP	PcP	16 43 15.2	-0.5
	comp=Z,0.5nm,0.5s,baz=342,slow=2.9,SNR=7.6						
WRA	**Warramunga Arr**	**34.33**	**163**	P	**P**	**16 40 38.5**	**-1.7**
WRA						16 43 15.2	
WB2	**Warramunga Arr**	**34.34**	**163**	*eP*	**P**	**16 40 38.5**	**-1.8**
HABR	**Khabarovsk**	**36.40**	**12**	*eP*	**P**	**16 40 57.3**	**-0.4**
HABR				*PP	pP	16 41 06.5	-2.5
HABR				*eSP	sP	16 41 11.0	-2.9
HABR				*e*		16 42 19.8	
HABR				PPP		16 42 36.0	
HABR				*e*		16 43 19.5	
HABR				S	**S**	**16 46 38.7**	**+2.4**
HABR				*SS	sS	16 46 55.7	+0.5
HABR				*e*SS	SS	16 49 10.9	-5.5
HABR				*e*SSS		16 49 27.9	
HABR				*e*		16 51 10.4	
HABR				pmax	pmax		
	comp=Z,21nm,2.0s,mb4.7						
HABR				pmax	pmax		
	comp=E,16nm,1.7s						
HABR				pmax	pmax		
	comp=N,17nm,2.2s						
HABR				MLR	MLR		
	comp=Z,60nm,13.0s,MS3.6						
ULN	**Ulaanbaatar**	**37.48**	**341**	*eP*	**P**	**16 41 07.0**	**+0.2**
	comp=Z,5.1nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**37.48**	**341**	*eP*	**P**	**16 41 07.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**37.48**	**341**	P	**P**	**16 41 07.8**	**+1.0**
SONM	**Songino Array**	**37.66**	**340**	P	**P**	**16 41 09.3**	**+0.9**
	comp=Z,2.0nm,0.7s,mb3.9,baz=163,slow=10,SNR=13						
SONM				PcP	PcP	16 43 25.2	0.0
	comp=Z,1.1nm,0.8s,baz=160,slow=4.6,SNR=5.2						
SONM	**Songino Array**	**37.66**	**340**	P	**P**	**16 41 09.3**	**+0.9**
SONM						16 43 25.2	
ASAR	**Alice Springs**	**37.77**	**165**	P	**P**	**16 41 08.9**	**-0.6**
	comp=Z,5.0nm,0.8s,mb4.3,baz=343,slow=6.8,SNR=58						
ASAR				PcP	PcP	16 43 24.9	-0.9
	comp=Z,1.1nm,0.6s,baz=337,slow=2.9,SNR=7.5						
ASAR				S	**S**	**16 46 56.6**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=334,slow=13,SNR=4.9						
ASAR	**Alice Springs**	**37.77**	**165**	P	**P**	**16 41 09.0**	**-0.5**
ZAK	**Zakamensk**	**40.90**	**340**	*eP*	**P**	**16 41 26.5**	**-8.9**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.3						
NWAO	**Narrogin (SRO)**	**46.25**	**188**	P	**P**	**16 42 18.6**	**+0.1**
	comp=Z,8.2nm,0.7s,mb4.8,baz=346,slow=8.3,SNR=4.1						
NWAO	**Narrogin (SRO)**	**46.25**	**188**	P	**P**	**16 42 18.7**	**+0.1**
STKA	**Stephens Creek**	**47.75**	**160**	P	**P**	**16 42 29.8**	**-0.6**
	comp=Z,4.1nm,0.7s,mb4.6,baz=317,slow=7.0,SNR=11						
STKA	**Stephens Creek**	**47.75**	**160**	P	**P**	**16 42 29.8**	**-0.5**
PETK	**Petropavlovsk-**	**47.98**	**27**	P	**P**	**16 42 33.4**	**+1.4**
	comp=Z,3.5nm,0.6s,mb4.5,baz=219,slow=4.2,SNR=13						
PETK	**Petropavlovsk-**	**47.98**	**27**	P	**P**	**16 42 33.4**	**+1.5**
MK31	**Makanchi Array**	**48.53**	**322**	*eP*	**P**	**16 42 36.6**	**+0.4**
MK31				*eP*cP	PcP	16 44 01.8	+0.1
MK31	**Makanchi Array**	**48.53**	**322**	*eP*	**P**	**16 42 36.6**	**+0.3**
MK31				*e*		16 44 01.8	
MKAR	**Makanchi Array**	**48.53**	**322**	P	**P**	**16 42 36.8**	**+0.6**
	comp=Z,4.5nm,0.8s,mb4.6,baz=120,slow=8.1,SNR=38						
MKAR				PcP	PcP	16 44 02.0	+0.3
	comp=Z,2.5nm,0.8s,baz=106,slow=5.4,SNR=6.0						
MKAR	**Makanchi Array**	**48.53**	**322**	*ceP*	**P**	**16 42 36.7**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KZA	**Kyzart**	**51.16**	**314**	*eP*	**P**	**16 42 56.7**	**+0.4**
	comp=Z,3.6nm,1.0s,mb4.3						
KZA	**Kyzart**	**51.16**	**314**	*eP*	**P**	**16 42 56.7**	**+0.4**
KZA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ZAA0	**Zalesovo Array**	**51.16**	**331**	*eP*	**P**	**16 42 54.9**	**-1.2**
ZALV	**Zalesovo Beam**	**51.16**	**331**	P	**P**	**16 42 56.1**	**0.0**
	comp=Z,1.3nm,0.4s,mb4.3,baz=119,slow=8.7,SNR=10						
ZALV				PcP	PcP	16 44 10.2	-1.0
	comp=Z,1.0nm,0.4s,baz=116,slow=3.4,SNR=4.7						
ZALV	**Zalesovo Beam**	**51.16**	**331**	P	**P**	**16 42 56.1**	**0.0**
ZALV						16 44 10.2	
NVS	**Novosibirsk**	**52.44**	**331**	*eP*	**P**	**16 43 02.4**	**-3.2**
NVS				pmax	pmax		
	comp=Z,20nm,2.2s,mb4.7						
KURK	**Kurchatov**	**52.57**	**325**	*eP*	**P**	**16 43 07.0**	**+0.3**
	comp=Z,22nm,0.8s,mb5.2						
KURK				*e*		16 43 13.6	
KURK	**Kurchatov**	**52.57**	**325**	*dP*	**P**	**16 43 07.1**	**+0.4**
KURK				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.2						
KKAR	**Karatay Array**	**54.80**	**314**	*eP*	**P**	**16 43 22.6**	**-0.6**
	comp=Z,1.2nm,0.6s,mb4.1						
KKAR	**Karatay Array**	**54.80**	**314**	*eP*	**P**	**16 43 22.6**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**58.17**	**325**	P	**P**	**16 43 47.5**	**+0.5**
	comp=Z,3.4nm,0.9s,mb4.4,baz=114,slow=9.9,SNR=14						
BVAR	**Borovoye Array**	**58.17**	**325**	P	**P**	**16 43 47.5**	**+0.6**
BRVK	**Borovoye**	**58.24**	**325**	*eP*	**P**	**16 43 47.7**	**+0.3**
	comp=Z,6.6nm,0.8s,mb4.7						
BRVK	**Borovoye**	**58.24**	**325**	*dP*	**P**	**16 43 47.3**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
BILL	**Bilibino**	**61.27**	**17**	*eP*	**P**	**16 44 09.5**	**+1.5**
BILL				*e*		16 46 20.9	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.7						
ABKAR	**Akbulak array**	**63.39**	**319**	*eP*	**P**	**16 44 22.0**	**-0.5**
	comp=Z,1.3nm,0.6s,mb4.2						
SVE	**Sverdlovsk**	**64.72**	**327**	*eP*	**P**	**16 44 31.4**	**+0.3**
SVE				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
AKTK	**Aktyubinsk**	**64.84**	**320**	P	**P**	**16 44 31.7**	**-0.3**
AKTO	**Aktyubinsk**	**64.84**	**320**	P	**P**	**16 44 31.7**	**-0.3**
	comp=Z,1.0nm,0.5s,mb4.2,baz=80,slow=5.8,SNR=6.4						
ARU	**Arti**	**65.73**	**326**	*eP*	**P**	**16 44 36.7**	**-1.0**
	comp=Z,5.3nm,0.5s,mb4.8						
ARU	**Arti**	**65.73**	**326**	*dP*	**P**	**16 44 37.0**	**-0.7**
ARU				*e*		16 46 58.7	
ARU				S	S	16 53 20.9	0.0
ARU				SS	SS	16 57 34.7	-0.9
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
RPZ	**Rata Peaks**	**70.88**	**146**	P	**P**	**16 45 09.3**	**-0.7**
	comp=Z,7.8nm,0.8s,mb4.7,baz=308,slow=16,SNR=3.6						
PRGR	**Permogore**	**73.11**	**331**	*eP*	**P**	**16 45 21.0**	**-2.2**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
ZEI	**Tsey**	**74.11**	**311**	*eP*	**P**	**16 45 28.0**	**-1.4**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
KIV	**Kislovodsk**	**74.92**	**312**	*eP*	**P**	**16 45 34.9**	**+0.8**
KIV				*e*		16 48 23.0	
KIV				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
KDAK	**Kodiak Island**	**75.43**	**33**	*iP*	**P**	**16 45 38.4**	**+1.7**
KLMR	**Klimovskoe**	**76.05**	**330**	*eP*	**P**	**16 45 39.1**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
BPAW	**Bear Paw Mtn.**	**76.07**	**27**	*eP*	**P**	**16 45 41.2**	**+0.9**
	comp=Z,16nm,0.8s,mb5.0						
MCK	**McKinley**	**76.99**	**27**	*eP*	**P**	**16 45 46.0**	**+0.5**
	comp=Z,16nm,0.9s,mb5.0						
MCK				*e*		16 45 53.4	
MCK	**McKinley**	**76.99**	**27**	*eP*	**P**	**16 45 46.0**	**+0.5**
MCK				*e*		16 45 53.4	
MCK				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
COLA	**College**	**77.39**	**26**	P	**P**	**16 45 47.9**	**+0.2**
	comp=Z,2.9nm,0.5s,mb4.5						
COLA	**College**	**77.39**	**26**	P	**P**	**16 45 47.9**	**+0.2**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
ILAR	**Eielson Array**	**77.81**	**26**	P	**P**	**16 45 49.9**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.9,baz=259,slow=4.6,SNR=8.5						
ILAR	**Eielson Array**	**77.81**	**26**	P	**P**	**16 45 49.9**	**-0.1**
JOF	**Joensuu**	**79.74**	**332**	*eP*	**P**	**16 45 59.9**	**-0.8**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
JOF	**Joensuu**	**79.74**	**332**	*ep*	**P**	**16 45 59.9**	**-0.8**
	comp=Z,2.9nm,0.6s,mb4.4						
KEV	**Kevo**	**80.27**	**339**	*eP*	**P**	**16 46 02.5**	**-0.9**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KEV	**Kevo**	**80.27**	**339**	*ep*	**P**	**16 46 02.5**	**-0.9**
	comp=Z,3.1nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	**80.83**	**339**	P	**P**	**16 46 06.8**	**+0.4**
	comp=Z,4.4nm,0.7s,mb4.5,baz=86,slow=6.9,SNR=32						
ARCES	**ARCESS Array B**	**80.83**	**339**	P	**P**	**16 46 06.8**	**+0.4**
ARE0	**ARCESS Array S**	**80.83**	**339**	*eP*	**P**	**16 46 06.3**	**-0.1**
BRTR	**Keskin Array B**	**82.15**	**309**	P	**P**	**16 46 14.4**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=106,slow=5.1,SNR=2.8						
BRTR	**Keskin Array B**	**82.15**	**309**	P	**P**	**16 46 14.4**	**+0.4**
KAF	**Kangasniemi**	**82.17**	**332**	*eP*	**P**	**16 46 11.4**	**-2.2**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KAF	**Kangasniemi**	**82.17**	**332**	*ep*	**P**	**16 46 11.4**	**-2.2**
	comp=Z,1.7nm,0.6s,mb4.2						
FINES	**FINESS Array B**	**82.43**	**331**	P	**P**	**16 46 14.6**	**-0.4**
	comp=Z,1.6nm,0.4s,mb4.3,baz=57,slow=4.8,SNR=15						
FINES	**FINESS Array B**	**82.43**	**331**	P	**P**	**16 46 14.6**	**-0.4**
BURAR	**Bucovina Array**	**86.36**	**318**	*iP*	**P**	**16 46 34.8**	**-0.4**
BUR08	**Bucovina Ar. S**	**86.37**	**318**	*eP*	**P**	**16 46 35.0**	**-0.2**
KMBO	**Kilima Mbogo**	**87.24**	**268**	P	**P**	**16 46 39.9**	**-0.3**
	comp=Z,0.9nm,0.7s,mb4.1,baz=180,slow=24,SNR=5.1						
KMBO	**Kilima Mbogo**	**87.24**	**268**	P	**P**	**16 46 39.9**	**-0.3**
KMBO	**Kilima Mbogo**	**87.24**	**268**	P	**P**	**16 46 39.9**	**-0.3**
HFS	**Hagfors**	**88.59**	**332**	P	**P**	**16 46 45.2**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.5,baz=93,slow=6.4,SNR=4.7						
HFS	**Hagfors**	**88.59**	**332**	P	**P**	**16 46 45.2**	**-0.5**
NOA	**NORSAR Array B**	**89.31**	**333**	P	**P**	**16 46 49.2**	**+0.1**
	comp=Z,1.1nm,0.9s,mb4.2,baz=64,slow=4.0,SNR=2.7						
NOA	**NORSAR Array B**	**89.31**	**333**	P	**P**	**16 46 49.2**	**+0.1**
YKA	**Yellowknife Ar**	**92.01**	**23**	P	**P**	**16 47 02.1**	**+0.6**
	comp=Z,1.2nm,0.6s,mb4.4,baz=299,slow=4.2,SNR=6.1						
YKA	**Yellowknife Ar**	**92.01**	**23**	P	**P**	**16 47 02.1**	**+0.6**
YKA	**Yellowknife Ar**	**92.01**	**23**	P	**P**	**16 47 02.1**	**+0.5**
NVAR	**Mina Array Bea**	**102.38**	**45**	P	Pdif	16 47 49.5	+0.9
	comp=Z,0.2nm,0.6s,baz=261,slow=4.2,SNR=3.6						
NVAR	**Mina Array Bea**	**102.38**	**45**	P	Pdif	16 47 49.5	+0.9
QSPA	**South Pole Qui**	**102.95**	**180**	PKiKP	PKiKP	16 52 10.7	+0.3
	comp=Z,0.7nm,0.8s,baz=306,slow=0.8,SNR=5.0						
TXAR	**Lajitas Array**	**117.47**	**47**	PKP	PKPdf	16 52 40.0	+0.7
	comp=Z,0.8nm,0.5s,baz=222,slow=1.2,SNR=6.5						
TXAR	**Lajitas Array**	**117.47**	**47**	PKIKP	PKPdf	16 52 40.0	+0.7
JCT	**Junction City**	**119.45**	**43**	*e*PKPdf	PKPdf	16 52 43.0	-0.1
JCT	**Junction City**	**119.45**	**43**	*e*PKIKP	PKPdf	16 52 43.0	0.0
WVT	**Waverly**	**122.46**	**31**	*e*PKPdf	PKPdf	16 52 47.7	-0.9
WVT	**Waverly**	**122.46**	**31**	*e*PKIKP	PKPdf	16 52 47.7	-1.0
DBIC	**Dimbokro**	**125.68**	**288**	PKP	PKPdf	16 52 55.2	-0.2
	comp=Z,6.8nm,1.0s,baz=30,slow=5.4,SNR=4.0						
DBIC	**Dimbokro**	**125.68**	**288**	PKP	PKPdf	16 52 55.2	-0.2
DBIC	**Dimbokro**	**125.68**	**288**	PKIKP	PKPdf	16 52 55.2	-0.2
LRS	**Lares**	**146.97**	**19**	*e*PKPbc	PKPbc	16 53 36.5	+0.2
PLCA	**Paso Flores**	**149.61**	**158**	PKPbc	PKPbc	16 53 42.9	+0.3
	comp=Z,2.1nm,0.7s,baz=245,slow=3.0,SNR=6.9						
PLCA	**Paso Flores**	**149.61**	**158**	PKPbc	PKPbc	16 53 42.9	+0.3
PLCA	**Paso Flores**	**149.61**	**158**	PKP2	PKPbc	16 53 42.9	+0.3
SDV	**Santo Domingo**	**153.67**	**35**	PKPdf	PKPdf	16 53 45.8	+0.8
SDV				*e*PKPbc	PKPbc	16 53 53.5	+0.7
LPAZ	**La Paz**	**167.70**	**106**	PKP	PKPdf	16 54 01.6	+1.6
	comp=Z,1.7nm,0.9s,baz=258,slow=9.3,SNR=5.3						
LPAZ	**La Paz**	**167.70**	**106**	PKIKP	PKPdf	16 54 01.6	+1.6

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*SZGRF **12** 16:44:21.3, 21°.09S×171°.67E, h33km, Southeast of Loyalty Islands*
*ISCJB **12** 16:44:29.9±0.2, 21°.68S±0°.03×170°.37E±0°.03, h119km, mb5.5/135, Error ellipse: s-maj=4.3km s-min=3.5km az=178.5*
*NEIC **12** 16:44:30.8±0.2, 21°.68S×170°.47E, mb5.4/53, MW5.8, Error ellipse: s-maj=6.0km s-min=5.1km az=152.0, Moment Tensor Solution. s39 Moment tensor: Scale 10^{17}Nm; M_{rr}1.09; $M_{\theta\theta}$-1.16; $M_{\phi\phi}$0.07; $M_{r\theta}$4.26; $M_{\theta\phi}$3.46; $M_{r\phi}$0.68; Best double couple: $M_0$5.60000×10^{17} NP1: ϕ_s89.00000°, δ83.00000°, λ51.00000°. NP2:ϕ_s350.00000°, δ39.00000°, λ168.00000°. Principal axes: T 5.7400, Plg39.0000°, Azm323.0000°; N -0.2000, Plg38.0000°, Azm94.0000°; P -5.5400, Plg27.0000°, Azm208.0000°;*
*NOU **12** 16:44:31.2±1.2, 20°.22S×169°.99E, h10km, MD3.2, ML5.0*
*IDC **12** 16:44:31.6±0.6, 21°.68S×170°.51E, h122km±5km, mb5.0/24, mb1 5.0/27, mb1mx5.0/28, mbtmp5.0/27, MS4.6/20, Ms1 4.7/20, ms1mx4.5/26, Error ellipse: s-maj=11.5km s-min=10.9km az=128.0*
*BGS **12** 16:44:32.2±4.8, 21°.68S×170°.47E, h116km, mb5.4(NEIC)*
*MOS **12** 16:44:32.4±1.2, 21°.60S×170°.45E, h136km, mb5.3/34, MS4.9/15, Error ellipse: s-maj=11.6km s-min=8.3km az=131.3*
*BJI **12** 16:44:33.4, 20°.87S×170°.42E, h122km, mB5.4/40, mb5.1/47*
*GCMT **12** 16:44:34.9±0.1, 21°.73S×170°.24E, h115km, MW5.8, Moment Tensor Solution. s105,c226; s66,c83; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.05±.06; $M_{\theta\theta}$0.74±.07; $M_{\phi\phi}$-0.68±.07; $M_{r\theta}$4.25±.04; $M_{\theta\phi}$5.54±.06; $M_{r\phi}$0.30±.04; Best double couple: $M_0$7.00000×10^{17} NP1:ϕ_s2.00000°, δ53.00000°, $\l

comp=Z,162nm,0.9s,mb5.3,baz=95,slow=12,SNR=65
CTA S **S** **16 53 20.8 -0.2**
comp=Z,8.0nm,1.0s,baz=127,slow=20,SNR=1.7
CTA LR LR 16 57 56.6
comp=Z,2μm,18.5s,baz=94,slow=35
CTA Charters Tower 22.60 270 *e*P **P** **16 49 23.3 +0.8**
comp=Z,95nm,0.8s,mb5.2
CTA *i* S **S** **16 53 22.4 +1.4**
CTA Charters Tower 22.60 270 P **P** **16 49 23.7 +1.2**
CTA S **S** **16 53 20.8 -0.2**
CTA LR LR 16 57 56.6
CTA Charters Tower 22.60 270 P **P** **16 49 23.7 +1.2**
CTA S **S** **16 53 20.8 -0.2**
CTA pmax pmax
comp=Z,162nm,0.9s
CTA smax
comp=N,8.0nm,1.0s
CTA MLR MLR
comp=Z,2μm,18.5s
CTAO Charters Tower 22.60 270 *e*P **P** **16 49 23.5 +1.0**
comp=Z,241nm,1.1s,mb5.4
CTAO *e*S **S** **16 53 21.1 +0.1**
CTAO Charters Tower 22.60 270 *e*P **P** **16 49 23.5 +1.0**
CTAO *e*S **S** **16 53 21.1 +0.1**
CTAO pmax pmax
comp=Z,241nm,1.1s,mb5.4
CTAO Charters Tower 22.60 270 P **P** **16 49 23.5 +1.0**
comp=Z,2μmcomp=Z,186nm,1.1s,mb5.3
CNB Canberra Magne 22.86 229 *e*P **P** **16 49 26.2 +1.5**
CNB *e*S **S** **16 53 36.3 +11**
PMG Port Moresby 25.45 295⇑ *e*P **P** **16 49 48.9 +0.3**
comp=Z,230nm,0.8s,mb5.7
PMG Port Moresby 25.45 295*c i*P **P** **16 49 49.2 +0.7**
PMG pmax pmax
comp=Z,302nm,1.0s
PMG Port Moresby 25.45 295 P **P** **16 49 48.4 -0.1**
TOO Toolangi 26.69 228 *e*P **P** **16 50 00.4 +0.9**
COEN Coen 27.00 282 *e*P **P** **16 50 03.8 +1.4**
comp=Z,1μm,1.3s,mb6.3
COEN Coen 27.00 282 P **P** **16 50 03.9 +1.5**
comp=Z,419nm,1.5s,mb5.7
STKA Stephens Creek 27.56 242 P **P** **16 50 08.7 +1.4**
comp=Z,84nm,1.0s,mb5.2,baz=79,slow=9.3,SNR=92
STKA Stephens Creek 27.56 242 *e*P **P** **16 50 08.3 +1.0**
comp=Z,67nm,1.1s,mb5.1
STKA Stephens Creek 27.56 242 *e*P **P** **16 50 08.2 +1.0**
comp=Z,16nm,0.9s,mb4.6
RAR Rarotonga 27.76 95 LR LR 16 58 42.6
comp=Z,1μm,21.3s,baz=264,slow=31
BBOO Buckleboo 32.33 243 *e*P **P** **16 50 50.4 +0.9**
comp=Z,271nm,1.0s,mb5.9
ASAR Alice Springs 33.66 260 P **P** **16 51 01.3 +0.2**
comp=Z,91nm,0.8s,mb5.7,baz=84,slow=9.0,SNR=478
ASAR ScP ScP 16 57 14.1 +2.0
comp=Z,4.2nm,1.1s,baz=95,slow=3.4,SNR=5.5
ASAR Alice Springs 33.66 260 P **P** **16 51 01.3 +0.2**
ASAR pmax pmax
comp=Z,91nm,0.8s
ASAR pmax pmax
comp=N,4.0nm,1.1s
WB2 Warramunga Arr 33.68 266 *e*P **P** **16 51 00.6 -0.7**
WRA Warramunga Arr 33.70 266 P **P** **16 51 00.8 -0.7**
comp=N,55nm,0.8s,mb5.5,baz=100,slow=7.9,SNR=173
WRA S **S** **16 56 20.1 +4.2**
comp=N,10nm,1.3s,baz=99,slow=14,SNR=4.9
WRA LR LR 17 04 46.3
comp=N,1μm,18.9s,baz=105,slow=36
WRA Warramunga Arr 33.70 266 P **P** **16 51 00.8 -0.6**
WRA S **S** **16 56 20.1 +4.2**
WRA pmax pmax
comp=Z,55nm,0.8s
WRA smax
comp=N,10.0nm,1.3s
WRA MLR MLR
comp=Z,1μm,18.9s
TBI Tubuai 37.05 100 *e*S **S** **16 57 07.6 +0.5**
comp=Z,2μm,27.2s
TBI *e*LQ 16 59 56.3
comp=Z,5μm,32.0s
TBI *e*LR LR 17 01 37.6
comp=Z,2μm,28.5s
KAKA Kakadu 37.25 278 *e*P **P** **16 51 31.6 -0.3**
comp=Z,71nm,0.6s,mb5.8
KAKA Kakadu 37.25 278 *e*P **P** **16 51 31.4 -0.5**
comp=Z,286nm,0.8s,mb6.2
KAKA Kakadu 37.25 278 P **P** **16 51 31.5 -0.4**
comp=Z,2μmcomp=Z,195nm,0.8s,mb6.1
PPT Papeete 37.86 91 *e*S **S** **16 57 22.9 +3.4**
comp=Z,2μm,26.2s
PPT *e*LQ 17 00 29.8
comp=Z,10μm,26.0s
PPT *e*LR LR 17 01 56.1
comp=Z,3μm,32.5s
PPT Papeete 37.86 91 LR LR 17 05 33.4
comp=Z,498nm,18.5s,baz=258,slow=33
FORT Forrest 38.84 248 *e*P **P** **16 51 44.8 -0.3**
comp=Z,114nm,1.0s,mb5.7
FORT Forrest 38.84 248 *e*P **P** **16 51 44.8 -0.3**
comp=Z,312nm,1.1s,mb6.0
FORT *e* 16 52 32.0
BAKI Biak 39.12 297 P **P** **16 51 48.5 +0.9**
comp=Z,5μmcomp=Z,353nm,1.2s,mb6.1
TLE Tual 39.76 288 P **P** **16 51 54.0 +1.1**
comp=Z,4μmcomp=Z,336nm,1.2s,mb6.0
KNA Kununurra 39.77 271 P **P** **16 51 52.4 -0.6**
comp=Z,4μmcomp=Z,579nm,0.9s,mb6.4
FITZ Fitzroy Crossi 42.12 267 P **P** **16 52 13.2 +0.9**
comp=Z,191nm,0.8s,mb5.9,baz=118,slow=7.4,SNR=260
FITZ Fitzroy Crossi 42.12 267 *e*P **P** **16 52 12.7 +0.5**
comp=Z,342nm,0.8s,mb6.1
FITZ *e*S **S** **16 58 22.5 -0.6**
FITZ Fitzroy Crossi 42.12 267 *e*P **P** **16 52 12.7 +0.5**
comp=Z,190nm,0.8s,mb5.9
FITZ Fitzroy Crossi 42.12 267 P **P** **16 52 13.1 +0.9**
comp=Z,5μmcomp=Z,613nm,1.0s,mb6.3
GUMO Guam 43.09 322 P **P** **16 52 19.7 -0.3**
comp=Z,47nm,0.7s,mb5.3,baz=190,slow=9.5,SNR=5.4
GUMO Guam 43.09 322 P **P** **16 52 19.7 -0.3**
GUMO pmax pmax
comp=Z,47nm,0.7s,mb5.3
NLAI Namlea 45.85 287 P **P** **16 52 42.7 +0.6**
comp=Z,2μmcomp=Z,248nm,1.1s,mb5.9
MBWA Marble Bar 46.98 261 *e*P **P** **16 52 51.1 +0.3**
comp=Z,179nm,0.8s,mb5.8
MBWA Marble Bar 46.98 261 P **P** **16 52 50.6 -0.2**
comp=Z,300nm,0.8s,mb6.1
TNTI Ternate 47.55 292 P **P** **16 52 56.9 +1.6**
comp=Z,3μmcomp=Z,90nm,1.2s,mb5.5
KLBR Kellerberrin 47.68 247 *e*P **P** **16 52 55.3 -0.8**
comp=Z,237nm,1.2s,mb5.9
MMRI Maumere 48.06 278 P **P** **16 52 58.2 -1.0**
comp=Z,2μmcomp=Z,152nm,0.9s,mb5.8
NWAO Narrogin (SRO) 48.10 245 P **P** **16 52 59.8 +0.5**
comp=Z,166nm,1.0s,mb5.8,baz=93,slow=7.7,SNR=21
NWAO Narrogin (SRO) 48.10 245 *e*P **P** **16 52 58.8 -0.5**
comp=Z,129nm,1.0s,mb5.7
NWAO Narrogin (SRO) 48.10 245 P **P** **16 52 59.8 +0.5**
NWAO pmax pmax
comp=Z,166nm,1.0s
DRV Dumont d'Urvil 48.95 195 P **P** **16 53 05.0 -0.3**
DRV S **S** **16 59 57.0 -2.8**
BBSI Bau Bau 48.96 282 P **P** **16 53 05.8 -0.4**
comp=Z,1μmcomp=Z,86nm,1.2s,mb5.6
KDI Kendari 49.55 284 P **P** **16 53 09.5 -1.1**
comp=Z,1μmcomp=Z,81nm,1.1s,mb5.6
MNI Manado 50.07 291 P **P** **16 53 14.7 +0.2**
comp=Z,5μmcomp=Z,541nm,0.9s,mb6.5
RKT Rikitea 50.28 103 *e*S **S** **17 00 19.2 -0.4**
comp=Z,394nm,25.0s
RKT *e*LQ 17 05 19.2
comp=Z,5μm,30.0s
RKT *e*LR LR 17 07 42.1
comp=Z,2μm,30.8s
LUWI Luwuk 50.70 287 P **P** **16 53 20.0 +0.7**
comp=Z,3μmcomp=Z,299nm,1.2s,mb6.2
BMNI Bima 51.36 276 P **P** **16 53 24.1 -0.2**
comp=Z,2μmcomp=Z,212nm,1.2s,mb6.1
BNSI Bone 51.64 282 P **P** **16 53 26.2 -0.2**
comp=Z,1μmcomp=Z,116nm,1.1s,mb5.8
KAPI Kappang 51.72 281 *e*P **P** **16 53 26.9 0.0**
comp=Z,107nm,0.9s,mb5.9
KAPI Kappang 51.72 281 P **P** **16 53 27.0 +0.1**
comp=Z,798nm,1.0s,mb6.7,SNR=12
KAPI Kappang 51.72 281 P **P** **16 53 27.0 +0.1**
comp=Z,965nmcomp=Z,78nm,1.4s,mb5.5
SPSI Sidrap Palu 52.13 282 P **P** **16 53 29.7 -0.3**
comp=Z,749nmcomp=Z,60nm,0.9s,mb5.6

MRSI Marisa 52.13 289 P **P** **16 53 29.4 -0.6**
comp=Z,935nmcomp=Z,68nm,0.8s,mb5.7
DAV Davao City (W) 52.42 298 P **P** **16 53 33.5 +1.4**
comp=Z,42nm,0.4s,mb5.8,baz=241,slow=18,SNR=7.3
DAV Davao City (W) 52.42 298⇓ *e*P **P** **16 53 16.0 -16**
TTSI Tana Toraja 52.46 283 P **P** **16 53 32.6 +0.2**
comp=Z,808nmcomp=Z,56nm,1.1s,mb5.5
TOLI Toli-Toli 53.45 289 P **P** **16 53 39.3 -0.4**
comp=Z,3μmcomp=Z,192nm,0.9s,mb6.1
MTNI Mataram 53.66 275 P **P** **16 53 41.4 +0.2**
comp=Z,2μmcomp=Z,192nm,1.1s,mb6.1
KHKI Kahang-Kahang 54.28 275 P **P** **16 53 44.8 -0.9**
comp=Z,146nm,1.1s,mb5.9
IGBI Denpasar 54.55 275 P **P** **16 53 46.9 -0.8**
comp=Z,3μmcomp=Z,307nm,1.0s,mb6.3
SRBI Singaraja 54.74 275 P **P** **16 53 48.3 -0.8**
comp=Z,2μmcomp=Z,193nm,1.0s,mb6.1
JAGI Jajag, Banyuwa 55.59 275 P **P** **16 53 53.7 -1.5**
comp=Z,2μmcomp=Z,174nm,1.0s,mb6.0
CBIJ Chichi jima 55.66 329 P **P** **16 53 54.8 -0.5**
comp=Z,134nm,0.7s,mb6.1,baz=53,slow=17,SNR=8.0
KBKI Kotabaru 55.68 281 P **P** **16 53 56.4 +0.6**
comp=Z,768nmcomp=Z,50nm,1.2s,mb5.4
SBA Scott Base 56.23 181 *e*P **P** **16 53 59.1 +0.4**
comp=Z,50nm,1.1s,mb5.5
SBA *e*pP pP 16 54 24.5 -3.1
SBA Scott Base 56.23 181 *e*P **P** **16 53 59.1 +0.3**
SBA pmax pmax
comp=Z,50nm,1.1s,mb5.5
GMJI Gumukmas 56.32 275 P **P** **16 53 59.2 -1.1**
comp=Z,80nm,0.9s,mb5.8
MYLDM Lahad Datu 57.40 292 P **P** **16 54 09.7 +1.7**
comp=Z,2μmcomp=Z,69nm,1.2s,mb5.6
TSM Tawau 57.52 290 P **P** **16 54 10.0 +1.2**
PWJI Pagerwojo 57.92 274 P **P** **16 54 10.6 -1.1**
comp=Z,81nm,1.1s,mb5.7
SJI Sawahan 58.06 274 P **P** **16 54 13.1 +0.5**
comp=Z,125nm,1.0s,mb5.9
PLKI Palangkaraya 58.14 281 P **P** **16 54 13.6 +0.4**
comp=Z,4μmcomp=Z,427nm,1.0s,mb6.4
CASY Casey 58.33 204⇓ *i*P **P** **16 54 12.7 -0.9**
CASY *e*pP pP 16 54 37.9 -4.7
CASY *e*sP sP 16 54 51.4 -4.6
CASY Casey 58.33 204⇓ *e*P **P** **16 54 12.8 -0.8**
comp=Z,42nm,1.3s,mb5.3
PCJI Pacitan 58.45 274 P **P** **16 54 16.0 +0.7**
SDKM Sandakan 58.76 291 P **P** **16 54 18.6 +1.2**
KDM Kudat 59.70 292 P **P** **16 54 25.1 +1.2**
KKM Kota Kinabalu 59.81 291 P **P** **16 54 25.8 +1.2**
KKM Kota Kinabalu 59.81 291 *e*P **P** **16 54 25.2 +0.6**
comp=Z,104nm,0.9s,mb5.9
KKM *e* 16 55 01.5
KKM Kota Kinabalu 59.81 291 P **P** **16 54 24.2 -0.4**
comp=Z,2μmcomp=Z,163nm,1.3s,mb5.9
BJII Banjamegara 60.11 274 P **P** **16 54 27.9 +1.2**
comp=Z,53nm,1.3s,mb5.4
TGY Tagaytay City 60.16 302 P **P** **16 54 26.8 -0.2**
comp=Z,208nm,0.9s,mb6.2,baz=168,slow=1.0,SNR=9.4
TGY Tagaytay City 60.16 302 P **P** **16 54 26.8 -0.2**
TGY pmax pmax
comp=Z,208nm,0.9s
STKI Sintang 61.33 283 P **P** **16 54 34.9 -0.1**
comp=Z,7μmcomp=Z,145nm,1.1s,mb5.9
SBUM Sibu 61.68 285 P **P** **16 54 39.1 +1.8**
SBUM Sibu 61.68 285 P **P** **16 54 37.2 -0.1**
comp=Z,963nmcomp=Z,46nm,1.6s,mb5.3
CISI Cisompet, Garu 61.79 273 P **P** **16 54 37.3 -0.8**
comp=Z,146nm,1.0s,mb6.0
JHJ Hachijo jima 2 61.84 331 P **P** **16 54 39.6 +1.6**
comp=Z,74nm,0.6s,mb5.9,baz=67,slow=12,SNR=3.9
LEM Lembang 62.23 274 P **P** **16 54 41.9 +0.9**
comp=Z,3μmcomp=Z,369nm,0.9s,mb6.4
KSM Kuching 62.98 283 P **P** **16 54 47.2 +1.2**
KSM Kuching 62.98 283 *e*P **P** **16 54 46.2 +0.2**
comp=Z,162nm,0.8s,mb6.0
KSM Kuching 62.98 283 P **P** **16 54 46.4 +0.4**
comp=Z,2μmcomp=Z,215nm,0.9s,mb6.1
DBJI Dramaga 63.13 274 P **P** **16 54 46.9 -0.1**
comp=Z,3μmcomp=Z,385nm,0.9s,mb6.3
SKJI Sukabumi 63.15 273 P **P** **16 54 45.7 -1.5**
comp=Z,3μmcomp=Z,209nm,0.9s,mb6.1
TPI Tanjungpandan 63.70 278 P **P** **16 54 48.5 -2.3**
comp=Z,869nmcomp=Z,69nm,1.2s,mb5.3
CGJI Cibinong 64.09 273 P **P** **16 54 50.9 -2.4**
comp=Z,158nm,1.0s,mb5.8
MIR Mirnyy 65.28 205 *e*P **P** **16 55 00.0 -0.2**
MIR *e*S S 17 03 31.0 -2.9
MIR *e*PS 17 04 09.0
MIR *e*PS 17 04 09.0
MIR pmax pmax
comp=Z,86nm,1.6s,mb5.3
MIR pmax pmax
comp=Z,800nm,6.0s
MIR pmax pmax
comp=E,500nm,4.0s
MIR smax
comp=E,900nm,7.0s
MIR MLR MLR
comp=N,300nm,16.0s
MIR MLR MLR
comp=E,500nm,16.0s
MIR MLR MLR
comp=Z,600nm,16.0s
PPBI Pangkal Pinang 65.32 278 P **P** **16 55 00.5 -0.9**
comp=Z,804nmcomp=Z,58nm,1.0s,mb5.3
MJAR Matsushiro Arr 65.42 332 P **P** **16 55 01.3 -0.1**
comp=Z,26nm,0.8s,mb5.1,baz=170,slow=7.0,SNR=69
MJAR LR LR 17 20 02.7
comp=Z,190nm,21.5s,baz=135,slow=33
MJAR Matsushiro Arr 65.42 332 P **P** **16 55 01.3 -0.1**
MJAR pmax pmax
comp=Z,26nm,0.8s
MJAR MLR MLR
comp=Z,190nm,21.5s
MAJO Matsushiro 65.42 332 *e*P **P** **16 55 01.0 -0.4**
comp=Z,34nm,0.7s,mb5.3
MAJO Matsushiro 65.42 332 *e*P **P** **16 55 01.0 -0.4**
MAJO pmax pmax
comp=Z,34nm,0.7s,mb5.3
MAT Matsushiro 65.42 332 P **P** **16 55 01.0 -0.4**
MAT S S 17 03 36.0 -0.2
KASI Kota Agung 65.59 274 P **P** **16 55 01.3 -1.8**
comp=Z,146nm,1.0s,mb5.8
KLSI 65.67 275 P **P** **16 55 02.1 -1.5**
comp=Z,54nm,1.1s,mb5.3
TPUB Ta-pu 65.93 310 *e*P **P** **16 55 04.3 -0.7**
comp=Z,76nm,0.8s,mb5.6
SSLB Suanglung 66.01 310 *e*P **P** **16 55 04.7 -0.8**
comp=Z,61nm,0.8s,mb5.5
LWLI Liwa 66.18 274 P **P** **16 55 05.8 -1.0**
comp=Z,1μmcomp=Z,143nm,1.4s,mb5.6
MDSI Maura Dua 66.26 275 P **P** **16 55 06.3 -1.1**
comp=Z,74nm,1.0s,mb5.5
YHNB Yeheng 66.27 311 *e*P **P** **16 55 07.7 +0.5**
comp=Z,65nm,0.8s,mb5.5
QSPA South Pole Qui 68.37 180 P **P** **16 55 19.4 -0.2**
comp=Z,15nm,1.1s,mb4.7,baz=30,slow=2.5,SNR=35
QSPA South Pole Qui 68.37 180 *e*P **P** **16 55 19.2 -0.4**
QSPA *e*pP pP 16 55 45.2 -4.2
MYKOM Kota Tinggi 68.98 281 P **P** **16 55 23.6 -0.9**
comp=Z,1μmcomp=Z,64nm,1.0s,mb5.4
YUK Yuzh-Kuril'sk 69.17 341⇓ *i*P **P** **16 55 15.3 -10**
SSE Sheshan 70.59 316 P **P** **16 55 35.4 +1.5**
SSE pP pP 16 56 04.3 +0.4
SSE PP PP 16 58 12.0 -0.1
SSE S S 17 04 41.4 +3.4
SSE pmax pmax
comp=Z,25nm,0.8s,mb5.1
SSE pmax pmax
comp=Z,390nm,6.3s
SSE LR LR
comp=N,270nm,26.6s
SSE LR LR
comp=E,290nm,27.5s
SSE LR LR
comp=Z,440nm,26.5s
BKNI Bangkinang 70.98 278 P **P** **16 55 37.3 +0.6**
comp=Z,1μmcomp=Z,118nm,1.2s,mb5.6
KSRS Korea Array 71.13 325 P **P** **16 55 37.8 +0.7**
comp=Z,14nm,0.9s,mb4.8,baz=143,slow=6.2,SNR=61
KSRS LR LR 17 22 47.0
comp=Z,321nm,21.7s,baz=135,slow=32
KSRS Korea Array 71.13 325 P **P** **16 55 37.8 +0.8**
KSRS pmax pmax
comp=Z,14nm,0.9s,mb4.8
KSRS MLR MLR
comp=Z,321nm,21.7s

QIZ Qiongzhong 71.73 300 P **P** **16 55 41.5 +0.5**
QIZ sP sP 16 56 21.2 -3.0
QIZ PP PP 16 58 23.5 +1.5
QIZ S S 17 04 56.2 +4.6
QIZ sS sS 17 05 42.4 -1.0
QIZ pmax pmax
comp=Z,54nm,1.0s,mb5.3
QIZ pmax pmax
comp=Z,410nm,11.8s
QIZ LR LR
comp=N,510nm,23.9s
QIZ LR LR
comp=E,220nm,20.1s
QIZ LR LR
comp=Z,770nm,45.0s
INCN Inchon 71.84 325 *e*P **P** **16 55 41.9 +0.6**
comp=Z,43nm,0.9s,mb5.3
RPN Rapa Nui 72.14 113 LR LR 17 19 54.9
comp=Z,334nm,18.3s,baz=136,slow=30
MNSI Mandailing Nat 72.50 278 P **P** **16 55 44.6 -1.2**
comp=Z,954nmcomp=Z,99nm,0.8s,mb5.7
IPM Ipoh 72.65 282 P **P** **16 55 47.6 +1.0**
IPM Ipoh 72.65 282 *e*P **P** **16 55 46.2 -0.4**
comp=Z,66nm,0.9s,mb5.5
IPM Ipoh 72.65 282 P **P** **16 55 45.1 -1.5**
comp=Z,1μmcomp=Z,97nm,0.9s,mb5.6
NJ2 Nanjing 72.71 316 *e*P **P** **16 55 37.2 -9.4**
NJ2 pP pP 16 56 08.5 -8.3
NJ2 sP sP 16 56 22.3 -7.5
NJ2 PP PP 16 58 23.3 -7.0
NJ2 S S 17 04 56.0 -6.4
NJ2 sS sS 17 05 50.0 -4.3
NJ2 pmax pmax
comp=Z,50nm,1.0s,mb5.3
NJ2 pmax pmax
comp=Z,540nm,3.5s
NJ2 LR LR
comp=N,4μm,18.5s
NJ2 LR LR
comp=E,7μm,20.5s
NJ2 LR LR
comp=Z,820nm,28.2s
YSS Yuzh-Sakhalins 72.74 341 *e*P **P** **16 55 47.0 +0.6**
comp=Z,42nm,0.8s,mb5.3
YSS Yuzh-Sakhalins 72.74 341*α i*P **P** **16 55 47.2 +0.8**
YSS *e**PP pP 16 56 18.9 +2.3
YSS *e*S S 17 05 02.0 0.0
YSS pmax pmax
comp=Z,50nm,0.8s,mb5.4
YSS pmax pmax
comp=Z,800nm,6.0s
YSS smax
comp=N,700nm,14.0s
YSS MLR MLR
comp=Z,400nm,18.0s
SKR Severo-Kuril's 73.15 351 *e*P **P** **16 55 46.0 -2.7**
SKR *e* 16 56 04.0
SKR *e*S S 17 05 06.0 -0.5
SKR pmax pmax
comp=Z,1μm,8.0s
SKR pmax pmax
comp=Z,90nm,1.0s,mb5.5
SKR smax
comp=N,1μm,14.0s
SKR smax
comp=E,1μm,14.0s
SKR MLR MLR
comp=Z,1μm,20.0s
KULM Kulim 73.32 283 *e*P **P** **16 55 50.7 +0.1**
comp=Z,40nm,0.9s,mb5.2
KULM Kulim 73.32 283 P **P** **16 55 50.1 -0.5**
comp=Z,59nm,1.1s,mb5.3
UBT Ubonrachathani 73.85 294 ⇓P **P** **16 55 56.0 +2.4**
PSI Prapat 73.89 280 P **P** **16 55 53.9 -0.1**
comp=Z,28nm,0.8s,mb5.0,baz=173,slow=3.6,SNR=14
PSI Prapat 73.89 280 P **P** **16 55 53.9 -0.1**
PSI pmax pmax
comp=Z,28nm,0.8s,mb5.0
SNG Songkhla 74.13 285 P **P** **16 55 56.0 +0.7**
comp=Z,140nm,0.8s,mb5.7
WHN Wuhan 74.79 312 P **P** **16 55 59.8 +1.0**
PET Petropavlovsk 75.10 353 *e*P **P** **16 56 00.6 +0.6**
comp=Z,18nm,0.9s,mb4.8
PET Petropavlovsk 75.10 353*c i*P **P** **16 56 00.3 +0.3**
PET *e**PP pP 16 56 32.3 +1.9
PET *e**SP sP 16 56 46.6 +3.3
PET *e*S S 17 05 31.0 +2.8
PET *e**SS sS 17 06 25.9 +5.4
PET *e*SS SS 17 10 25.9 +5.4
PET pmax pmax
comp=Z,500nm,7.2s
PET pmax pmax
comp=Z,20nm,0.7s,mb5.0
PET pmax pmax
comp=Z,500nm,10.6s
PETK Petropavlovsk- 75.30 352 P **P** **16 56 01.4 +0.2**
comp=Z,33nm,0.9s,mb5.1,baz=136,slow=5.9,SNR=34
PETK pP pP 16 56 32.4 +0.8
comp=Z,16nm,1.0s,baz=169,slow=9.1,SNR=2.6
PETK LR LR 17 24 06.9
comp=Z,388nm,19.7s,baz=160,slow=32
PETK Petropavlovsk- 75.30 352 P **P** **16 56 01.4 +0.3**
PETK *PP pP 16 56 32.4 +0.9
PETK pmax pmax
comp=Z,33nm,0.9s,mb5.1
PETK pmax pmax
comp=Z,16nm,1.0s,mb4.7
PETK MLR MLR
comp=Z,388nm,19.7s
DL2 Dalian 75.61 323 P **P** **16 56 03.7 +0.4**
DL2 S S 17 05 34.5 0.0
DL2 sS sS 17 06 22.4 -4.5
DL2 pmax pmax
comp=Z,30nm,1.0s,mb5.0
DL2 pmax pmax
comp=Z,280nm,5.7s
TPTI 75.67 279 P **P** **16 56 02.6 -1.6**
comp=Z,20nm,1.0s,mb4.8
MDJ Mudanjiang 75.78 331 P **P** **16 56 05.2 +1.1**
MDJ pP pP 16 56 37.4 +2.9
MDJ sP sP 16 56 50.5 +3.0
MDJ PP PP 16 58 59.1 +3.0
MDJ pmax pmax
comp=Z,15nm,1.1s,mb4.6
MDJ pmax pmax
comp=Z,420nm,7.5s
MDJ LR LR
comp=N,470nm,37.7s
MDJ LR LR
comp=E,470nm,37.7s
MDJ LR LR
comp=Z,650nm,35.9s
MDJ Mudanjiang 75.78 331 *e*P **P** **16 56 04.4 +0.3**
comp=Z,10nm,0.8s,mb4.6
MAW Mawson 76.57 202 P **P** **16 56 08.8 +0.4**
comp=Z,4.2nm,0.7s,baz=115,slow=7.5,SNR=9.3
MAW LR LR 17 27 26.3
comp=Z,346nm,18.9s,baz=101,slow=34
MAW Mawson 76.57 202 *e*P **P** **16 56 08.3 -0.1**
comp=Z,4.2nm,0.8s
MAW *e*pP pP 16 56 35.1 -3.7
MAW *e*sP sP 16 56 44.4 -7.4
MAW *i* S S 17 05 45.7 +1.4
MAW Mawson 76.57 202 P **P** **16 56 08.8 +0.4**
MAW pmax pmax
comp=Z,4.0nm,0.7s
MAW MLR MLR
comp=Z,346nm,18.9s
SNY Shenyang 76.61 326 ⇑P **P** **16 56 07.8 -1.1**
SNY S S 17 05 48.4 +3.1
SNY pmax pmax
comp=Z,460nm,8.7s
SNY LR LR
comp=N,680nm,24.0s
SNY LR LR
comp=E,500nm,34.2s
SNY LR LR
comp=Z,750nm,30.6s
HABR Khabarovsk 76.67 337*de*P **P** **16 56 07.6 -1.4**
HABR *e* 16 56 18.3
HABR *PP pP 16 56 40.1 +0.6
HABR *e* 16 59 01.1
HABR *e*S S 17 05 44.5 -1.2
HABR *e* 17 06 11.8
HABR *e*S 17 06 24.1
HABR *e**SS sS 17 06 41.1 +3.0

HABR				SS	SS	17 10 43.5	-0.9
HABR				eSSS		17 14 08.1	
HABR				pmax	pmax		
comp=Z,153nm,3.2s							
HABR				pmax	pmax		
comp=N,20nm,1.6s							
HABR				pmax	pmax		
comp=E,36nm,2.4s							
HABR				MLR	MLR		
comp=Z,88nm,19.0s							
CN2	**Changchun**	**77.11**	**328**	⇓P	**P**	**16 56 12.5**	**+0.9**
CN2				epP	pP	16 56 44.6	+2.5
CN2				esP	sP	16 56 58.0	+3.0
CN2				eS	S	17 05 51.1	+0.5
CN2				pmax	pmax		
comp=Z,40nm,1.0s,mb5.1							
CN2				pmax	pmax		
comp=Z,200nm,6.0s							
ENH	**Enshi**	**78.06**	**309**	eP	**P**	**16 56 16.8**	**-0.4**
comp=Z,63nm,0.9s,mb5.3							
GYA	**Guiyang**	**78.10**	**305**	⇓iP	**P**	**16 56 18.6**	**+1.1**
GYA				PcP	PcP	16 56 27.4	+0.7
GYA				pP	pP	16 56 52.0	+3.9
GYA				sP	sP	16 57 05.4	+4.4
GYA				PP	PP	16 59 21.0	+5.2
GYA				S	S	17 06 02.3	+0.2
GYA				SKS		17 06 18.6	
GYA				sS	sS	17 06 58.9	+4.2
GYA				pmax	pmax		
comp=Z,30nm,0.8s,mb5.1							
GYA				pmax	pmax		
comp=Z,180nm,6.0s							
NST	**Nakhon Sawan**	**78.23**	**292**	P	**P**	**16 56 12.1**	**-6.3**
comp=Z,50nm,1.0s,mb5.2							
KLR	**Kul'dur**	**78.54**	**335**	eP	**P**	**16 56 15.9**	**-3.5**
KLR				eS	S	17 06 03.0	-2.8
KLR				pmax	pmax		
comp=Z,100nm,2.0s,mb5.3							
BJT	**Baijiatuau**	**79.50**	**321**	eP	**P**	**16 56 25.3**	**+0.4**
comp=Z,26nm,0.8s,mb5.1							
BJT	**Baijiatuau**	**79.50**	**321**	eP	**P**	**16 56 25.3**	**+0.4**
BJT				pmax	pmax		
comp=Z,26nm,0.8s							
BJI	**Beijing**	**79.51**	**321**	P	**P**	**16 56 25.9**	**+1.0**
BJI				sP	sP	16 57 11.0	+2.5
BJI				S	S	17 06 19.1	+2.6
BJI				sS	sS	17 07 09.5	+0.2
BJI				pmax	pmax		
comp=Z,24nm,0.9s,mb5.0							
BJI				pmax	pmax		
comp=Z,580nm,4.3s							
BJI				LR	LR		
comp=N,430nm,32.7s							
BJI				LR	LR		
comp=E,330nm,29.6s							
BJI				LR	LR		
comp=Z,380nm,26.9s							
BDT	**Bhumibol Dam**	**79.90**	**293**	⇑P	**P**	**16 56 30.0**	**+2.5**
comp=Z,18nm,0.9s,mb4.9							
CHRT	**Chiangrai**	**80.42**	**296**	⇑P	**P**	**16 56 31.0**	**+0.7**
comp=Z,276nm,0.8s,mb6.1							
KMI	**Kunming**	**80.48**	**302**	P	**P**	**16 56 32.4**	**+1.9**
KMI				pP	pP	16 57 04.5	+3.3
KMI				sP	sP	16 57 18.6	+4.5
KMI				PP	PP	16 59 35.1	-0.5
KMI				S	S	17 06 29.3	+2.0
KMI				sS	sS	17 07 21.8	+1.6
KMI				pmax	pmax		
comp=Z,62nm,1.0s,mb5.4							
KMI				pmax	pmax		
comp=Z,450nm,6.8s							
KMI				LR	LR		
comp=N,450nm,22.5s							
KMI				LR	LR		
comp=E,400nm,24.5s							
KMI				LR	LR		
comp=Z,620nm,34.2s							
CM31	**Chiang Mai Arr**	**80.49**	**294**	⇑eP	**P**	**16 56 32.2**	**+1.6**
comp=Z,42nm,0.9s,mb5.3							
CMAR	**Chiang Mai Arr**	**80.49**	**294**	P	**P**	**16 56 32.0**	**+1.3**
comp=Z,34nm,0.8s,mb5.2,baz=136,slow=2.2,SNR=8.8							
CMAR				PKKPbc	PKKPbc	17 15 10.5	-0.6
comp=Z,0.8nm,0.7s,baz=273,slow=3.7,SNR=5.6							
CMAR	**Chiang Mai Arr**	**80.49**	**294**	P	**P**	**16 56 32.0**	**+1.3**
CMAR						17 15 10.5	
CMAR				pmax	pmax		
comp=Z,34nm,0.9s							
CMAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
CHG	**Chiang Mai**	**80.65**	**294**	⇑P	**P**	**16 56 33.0**	**+1.5**
comp=Z,60nm,1.0s,mb5.4							
CHTO	**Chiang Mai**	**80.65**	**294**	⇑eP	**P**	**16 56 32.8**	**+1.2**
comp=Z,49nm,0.9s,mb5.3							
CHTO	**Chiang Mai**	**80.65**	**294**	⇑eP	**P**	**16 56 32.8**	**+1.3**
CHTO				pmax	pmax		
comp=Z,49nm,0.9s,mb5.3							
CHTO	**Chiang Mai**	**80.65**	**294**	P	**P**	**16 56 32.5**	**+1.0**
CD2	**Chengdu**	**82.58**	**307**	eP	**P**	**16 56 42.7**	**+1.3**
CD2				pP	pP	16 57 14.4	+2.1
CD2				sP	sP	16 57 28.5	+3.4
CD2				PP	PP	16 59 56.2	+3.4
CD2				S	S	17 06 48.8	+0.1
CD2				sS	sS	17 07 40.2	-1.6
CD2				pmax	pmax		
comp=Z,30nm,1.1s,mb5.0							
CD2				pmax	pmax		
comp=Z,100nm,4.2s							
CD2				LR	LR		
comp=N,650nm,22.6s							
CD2				LR	LR		
comp=E,540nm,23.6s							
CD2				LR	LR		
comp=Z,700nm,23.8s							
HHC	**Hu-ho-hao-te**	**82.78**	**319**	⇑P	**P**	**16 56 43.9**	**+1.7**
HHC				pP	pP	16 57 16.5	+3.4
HHC				sP	sP	16 57 29.6	+3.7
HHC				PP	PP	16 59 58.4	+4.1
HHC				S	S	17 06 52.2	+2.0
HHC				sS	sS	17 07 46.1	+2.7
HHC				pmax	pmax		
comp=Z,33nm,1.1s,mb5.1							
HHC				pmax	pmax		
comp=Z,320nm,7.8s							
HHC				LR	LR		
comp=N,350nm,15.7s							
HHC				LR	LR		
comp=E,350nm,15.2s							
HHC				LR	LR		
comp=Z,640nm,15.2s							
SYO	**Syowa Base**	**82.88**	**196**	⇑eP	**P**	**16 56 40.0**	**-2.4**
SYO	**Syowa Base**	**82.88**	**196**	⇑eP	**P**	**16 56 45.4**	**+3.0**
OHAK	**Old Harbor**	**84.31**	**19**	P	**P**	**16 56 48.3**	**-1.3**
comp=Z,43nm,1.0s,mb5.2							
KDAK	**Kodiak Island**	**84.99**	**19**	LR	LR	17 27 14.0	
comp=Z,372nm,21.5s,baz=216,slow=30							
LZH	**Lanzhou**	**85.16**	**312**	eP	**P**	**16 56 56.0**	**+1.6**
LZH				pP	pP	16 57 25.3	-0.2
LZH				sP	sP	16 57 44.0	+5.7
LZH				SKS		17 07 08.0	
LZH				S	S	17 07 19.0	+4.7
LZH				sS	sS	17 08 08.2	+0.4
LZH				pmax	pmax		
comp=Z,49nm,1.0s,mb5.4							
LZH				pmax	pmax		
comp=Z,410nm,5.0s							
SEY	**Seymchan**	**85.54**	**352**	c iP	**P**	**16 56 55.2**	**-0.4**
NVL	**N'lazarevskaya**	**86.56**	**187**	⇓iP	**P**	**16 57 00.2**	**-0.6**
NVL				e		17 00 28.4	
NVL				i S	S	17 07 14.8	-12
NVL				pmax	pmax		
comp=Z,15nm,0.9s,mb4.9							
NVL				MLR	MLR		
comp=Z,389nm,18.0s							
MAIT	**Maitri**	**86.57**	**187**	eP	**P**	**16 57 00.2**	**-0.6**
MAIT				e	pP	16 57 30.0	-1.9
MAIT				i		16 58 07.4	
WDC	**Whiskeytown Da**	**87.83**	**45**	P	**P**	**16 57 06.0**	**-1.3**
comp=Z,46nm,1.6s,mb5.3							
WDC				epP	pP	16 57 37.0	-1.6
WDC	**Whiskeytown Da**	**87.83**	**45**	P	**P**	**16 57 06.0**	**-1.3**
WDC				e*PP	pP	16 57 37.0	-1.5
WDC				pmax	pmax		
comp=Z,46nm,1.6s,mb5.3							
SLKM	**Skilak Lake**	**87.92**	**18**	eP	**P**	**16 57 06.8**	**-0.4**
SLKM	**Skilak Lake**	**87.92**	**18**	eP	**P**	**16 57 06.9**	**-0.3**
CMB	**Columbia Colle**	**88.00**	**48**	eP	**P**	**16 57 08.1**	**-0.1**
CMB				epP	pP	16 57 37.5	-1.9
CMB	**Columbia Colle**	**88.00**	**48**	eP	**P**	**16 57 08.1**	**-0.1**
ISA	**Isabella**	**88.19**	**50**	eP	**P**	**16 57 09.3**	**+0.1**
comp=Z,25nm,1.1s,mb5.2							
ISA				epP	pP	16 57 37.3	-3.1
ISA	**Isabella**	**88.19**	**50**	eP	**P**	**16 57 09.3**	**+0.1**
ISA				pmax	pmax		
comp=Z,25nm,1.1s,mb5.2							
YBH	**Yreka Blue Hor**	**88.32**	**44**	LR	LR	17 32 10.5	
comp=Z,522nm,18.2s,baz=232,slow=32							
WAKR	**Walker**	**88.88**	**48**	eP	**P**	**16 57 11.9**	**-0.4**
comp=Z,84nm,1.7s,mb5.5							
WAKR				epP	pP	16 57 42.1	-1.5
ULN	**Ulaanbaatar**	**89.47**	**323**	eP	**P**	**16 57 15.0**	**+0.2**
comp=Z,22nm,1.0s,mb5.2							
ULN	**Ulaanbaatar**	**89.47**	**323**	eP	**P**	**16 57 15.0**	**+0.2**
ULN				pmax	pmax		
comp=Z,22nm,1.0s,mb5.1							
PAHR	**Pah Rah Range**	**89.49**	**47**	eP	**P**	**16 57 14.2**	**-0.9**
comp=Z,30nm,1.2s,mb5.2							
PAHR				epP	pP	16 57 45.2	-1.3
BILL	**Bilibino**	**89.52**	**358**	eP	**P**	**16 57 14.4**	**-0.2**
comp=Z,16nm,0.8s,mb5.2							
BILL	**Bilibino**	**89.52**	**358**	⇑eP	**P**	**16 57 14.2**	**-0.4**
BILL				e*PP	pP	16 57 48.6	+2.7
BILL				eS	SKSac	17 07 34.5	+1.4
BILL				i PS	SP	17 09 06.3	+5.8
BILL				eSS	SS	17 13 51.4	-2.4
BILL				pmax	pmax		
comp=Z,27nm,0.9s,mb5.4							
YAK	**Yakutsk**	**89.53**	**342**	eP	**P**	**16 57 13.9**	**-0.9**
comp=Z,39nm,0.8s,mb5.6							
YAK	**Yakutsk**	**89.53**	**342**	i P	**P**	**16 57 14.1**	**-0.7**
YAK				e		17 00 47.7	
YAK				ePPP		17 02 48.5	
YAK				eS	SKSac	17 07 29.5	-3.9
YAK				i		17 07 55.3	
YAK				pmax	pmax		
comp=N,2.0nm,0.9s							
YAK				pmax	pmax		
comp=Z,33nm,1.0s,mb5.4							
YAK				pmax	pmax		
comp=Z,294nm,7.4s							
YAK				smax			
comp=E,264nm,6.9s							
YAK				smax			
comp=N,255nm,3.5s							
GTA	**Gaotai**	**89.59**	**313**	P	**P**	**16 57 17.2**	**+1.6**
GTA				pP	pP	16 57 49.4	+2.5
GTA				sP	sP	16 58 02.4	+2.7
GTA				SKS		17 07 34.4	
GTA				S	S	17 07 55.7	-0.8
GTA				pmax	pmax		
comp=Z,18nm,0.9s,mb5.2							
GTA				pmax	pmax		
comp=Z,320nm,7.6s							
GTA				LR	LR		
comp=N,240nm,17.5s							
GTA				LR	LR		
comp=E,350nm,18.0s							
GTA				LR	LR		
comp=Z,410nm,19.5s							
NVAR	**Mina Array Bea**	**89.62**	**48**	P	**P**	**16 57 16.1**	**+0.3**
comp=Z,4.1nm,0.8s,mb4.6,baz=226,slow=7.8,SNR=23							
NVAR				pP	pP	16 57 45.9	-1.2
comp=Z,8.8nm,0.9s,baz=226,slow=6.9,SNR=9.8							
SONM	**Songino Array**	**89.82**	**323**	P	**P**	**16 57 17.0**	**+0.5**
comp=Z,19nm,0.9s,mb5.2,baz=141,slow=4.8,SNR=85							
SONM				pP	pP	16 57 47.9	+0.2
comp=Z,4.9nm,0.9s,baz=162,slow=5.7,SNR=2.7							
SONM				LR	LR	17 38 31.0	
comp=Z,138nm,18.7s,baz=119,slow=36							
SONM	**Songino Array**	**89.82**	**323**	P	**P**	**16 57 17.0**	**+0.5**
SONM				*PP	pP	16 57 47.9	+0.1
SONM				pmax	pmax		
comp=Z,19nm,0.9s							
SONM				pmax	pmax		
comp=Z,5.0nm,0.9s							
SONM				MLR	MLR		
comp=Z,138nm,18.7s							
MOD	**Modoc**	**89.96**	**44**	eP	**P**	**16 57 18.3**	**+1.0**
comp=Z,13nm,1.3s,mb4.9							
MOD				epP	pP	16 57 47.2	-1.3
MOD				esP	sP	16 58 06.5	+5.1
TRF	**Thorofare Moun**	**90.29**	**17**	eP	**P**	**16 57 16.8**	**-1.5**
comp=Z,12nm,0.9s,mb5.0							
TRF				epP	pP	16 57 47.9	-1.7
LDFC	**Landfair**	**90.37**	**52**	eP	**P**	**16 57 20.7**	**+1.3**
comp=Z,25nm,0.9s,mb5.3							
MCK	**McKinley**	**90.88**	**17**	eP	**P**	**16 57 19.8**	**-1.2**
comp=Z,8.1nm,0.9s,mb4.8							
MCK	**McKinley**	**90.88**	**17**	eP	**P**	**16 57 19.8**	**-1.2**
MCK				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.8							
BBB	**Bella Bella**	**90.94**	**33**	LR	LR	17 30 42.6	
comp=Z,643nm,18.8s,baz=65,slow=30							
GNW	**Green Mountain**	**91.27**	**39**	P	**P**	**16 57 22.7**	**-0.5**
GNW				epP	pP	16 57 52.2	-2.4
LSA	**Lhasa**	**91.72**	**301**	eP	**P**	**16 57 26.7**	**+0.9**
comp=Z,16nm,1.0s,mb5.2							
LSA	**Lhasa**	**91.72**	**301**	eP	**P**	**16 57 26.7**	**+0.9**
LSA				pmax	pmax		
comp=Z,16nm,1.0s,mb5.2							
COLA	**College**	**92.07**	**17**	eP	**P**	**16 57 26.2**	**-0.3**
comp=Z,11nm,0.9s,mb5.1							
COLA	**College**	**92.07**	**17**	eP	**P**	**16 57 26.2**	**-0.3**
COLA				pmax	pmax		
comp=Z,11nm,0.9s,mb5.1							
DOT	**Dot Lake**	**92.19**	**19**	eP	**P**	**16 57 25.8**	**-1.3**
comp=Z,33nm,1.0s,mb5.5							
ILAR	**Eielson Array**	**92.25**	**17**	P	**P**	**16 57 25.8**	**-1.5**
comp=Z,4.0nm,0.8s,mb4.7,baz=237,slow=5.7,SNR=35							
ILAR				pP	pP	16 57 59.8	+1.1
comp=Z,0.9nm,0.4s,baz=235,slow=5.9,SNR=4.1							
ILAR				LR	LR	17 37 34.0	
comp=Z,438nm,18.7s,baz=31,slow=34							
ILAR	**Eielson Array**	**92.25**	**17**	P	**P**	**16 57 25.8**	**-1.6**
ILAR				*PP	pP	16 57 59.8	+1.1
ILAR				pmax	pmax		
comp=Z,4.0nm,0.8s							
ILAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
ILAR				MLR	MLR		
comp=Z,438nm,18.7s							
ZAK	**Zakamensk**	**92.91**	**324**	eP	**P**	**16 57 30.4**	**-0.3**
ZAK				pmax	pmax		
comp=Z,8.0nm,1.2s,mb4.9							
IRK	**Irkutsk**	**93.34**	**326**	eP	**P**	**16 57 30.5**	**-2.2**
IRK				pmax	pmax		
comp=Z,195nm,0.7s,mb6.5							
COLD	**Coldfoot**	**93.37**	**14**	eP	**P**	**16 57 31.6**	**-0.9**
comp=Z,6.8nm,0.9s,mb5.0							
TLY	**Talaya**	**93.38**	**325**	eP	**P**	**16 57 32.9**	**0.0**
comp=Z,10nm,0.8s,mb5.2							
TLY	**Talaya**	**93.38**	**325**	eP	**P**	**16 57 33.1**	**+0.2**
TLY				eS	S	17 08 24.0	-6.1
TLY				ePS	SP	17 09 39.8	-4.1
TLY				eSS	SS	17 14 50.4	+0.5
TLY				pmax	pmax		
comp=Z,12nm,0.8s,mb5.3							
TLY				MLR	MLR		
comp=Z,111nm,18.0s							
DLBC	**Dease Lake**	**93.72**	**27**	P	**P**	**16 57 34.2**	**-0.1**
comp=Z,2.5nm,1.0s,mb4.5,baz=247,slow=15,SNR=3.5							
DLBC	**Dease Lake**	**93.72**	**27**	P	**P**	**16 57 34.2**	**-0.1**
EGAK	**Eagle**	**93.89**	**19**	eP	**P**	**16 57 33.2**	**-1.7**
comp=Z,23nm,1.0s,mb5.5							
DAWY	**Dawson**	**93.92**	**20**	eP	**P**	**16 57 34.5**	**-0.6**
MOY	**Mondy**	**94.80**	**324**	eP	**P**	**16 57 39.9**	**+0.5**
PLCA	**Paso Flores**	**95.99**	**138**	P	**P**	**16 57 45.4**	**+0.1**
comp=Z,2.6nm,0.8s,mb4.7,baz=246,slow=3.7,SNR=4.3							
PLCA				LR	LR	17 33 53.4	
comp=Z,264nm,19.1s,baz=44,slow=31							
PLCA	**Paso Flores**	**95.99**	**138**	P	**P**	**16 57 45.4**	**+0.1**
PLCA				pmax	pmax		
comp=Z,3.0nm,0.8s							
PLCA				MLR	MLR		
comp=Z,264nm,19.1s							
TXAR	**Lajitas Array**	**96.99**	**61**	pP	pP	16 58 21.7	+0.4
comp=Z,1.0nm,0.9s,baz=228,slow=3.2,SNR=5.2							
TXAR				LR	LR	17 32 39.9	
comp=Z,448nm,18.9s,baz=265,slow=30							
PDAR	**Pinedale Array**	**97.49**	**47**	P	**P**	**16 57 52.4**	**+0.6**
comp=Z,0.4nm,0.8s,baz=190,slow=4.5,SNR=2.9							
PDAR				pP	pP	16 58 24.2	+1.0
comp=Z,0.9nm,0.9s,baz=282,slow=1.4,SNR=4.9							
PDAR				LR	LR	17 34 20.3	
comp=Z,446nm,18.7s,baz=248,slow=31							
WMQ	**Urumqi**	**99.67**	**313**	P	Pdif	16 58 03.0	+1.4
WMQ				pP	pP	16 58 35.0	+2.0
WMQ				sP	sP	16 58 49.0	+3.3
WMQ				PP	PP	17 02 11.0	+3.5
WMQ				SKS		17 08 28.0	
WMQ				pmax	pmax		
comp=Z,16nm,1.0s,mb5.6							
WMQ				pmax	pmax		
comp=Z,95nm,8.0s							
WMQ				LR	LR		
comp=N,330nm,25.0s							
WMQ				LR	LR		
comp=E,380nm,25.0s							
WMQ				LR	LR		
comp=Z,490nm,25.0s							
MK31	**Makanchi Array**	**104.23**	**315**	ePdif	Pdif	16 58 22.3	+0.5
MK31	**Makanchi Array**	**104.23**	**315**	eP	Pdif	16 58 22.3	+0.5
MKAR	**Makanchi Array**	**104.23**	**315**	Pdiff	Pdif	16 58 22.4	+0.6
comp=Z,2.1nm,0.8s,baz=93,slow=5.8,SNR=17							
MKAR				PP	PP	17 02 35.1	-6.6
comp=Z,1.3nm,0.8s,baz=107,slow=7.8,SNR=5.0							
MKAR				PKKPbc	PKKPbc	17 14 07.6	-2.9
comp=Z,0.2nm,0.4s,baz=253,slow=3.2,SNR=5.8							
MKAR	**Makanchi Array**	**104.23**	**315**	P	Pdif	16 58 22.5	+0.7
MKAR				pmax	pmax		
comp=Z,2.0nm,0.8s							
MKAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
ZALV	**Zalesovo Beam**	**104.71**	**322**	Pdiff	Pdif	16 58 22.4	-1.5
comp=Z,0.8nm,0.5s,baz=104,slow=6.3,SNR=5.7							
ZALV	**Zalesovo Beam**	**104.71**	**322**	P	Pdif	16 58 22.5	-1.5
BVAR	**Borovoye Array**	**112.98**	**320**	PKiKP	PKiKP	17 02 52.9	-1.2
comp=Z,1.1nm,0.8s,baz=96,slow=1.4,SNR=5.2							
BVAR				PP	PP	17 03 37.3	-7.8
comp=Z,0.7nm,0.5s,baz=2.4,slow=3.6,SNR=4.3							
BVAR	**Borovoye Array**	**112.98**	**320**	i PKIKP	PKiKP	17 02 52.9	-1.3
BVAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
BVAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
BRVK	**Borovoye**	**113.05**	**320**	⇑iPKIKP	PKiKP	17 02 54.0	-0.3
BRVK				pmax	pmax		
comp=Z,6.0nm,2.5s							
ABKAR	**Akbulak array**	**119.37**	**315**	ePKPdf	PKPdf	17 03 05.5	-1.0
BOSA	**Boshof**	**119.72**	**215**	PKP	PKPdf	17 03 07.7	-0.4
comp=Z,2.5nm,0.9s,baz=133,slow=2.5,SNR=5.5							
BOSA	**Boshof**	**119.72**	**215**	PKIKP	PKPdf	17 03 07.7	-0.3
BOSA				pmax	pmax		
comp=Z,3.0nm,0.9s							
ARU	**Arti**	**119.85**	**324**	ePKPdf	PKPdf	17 03 05.8	-1.5
ARU	**Arti**	**119.85**	**324**	i PKIKP	PKPdf	17 03 06.5	-0.8
ARU						17 09 49.1	
ARU				SP	SP	17 14 04.5	-4.3
AKTK	**Aktyubinsk**	**120.59**	**317**	PKP	PKPdf	17 03 08.6	-0.3
AKTO	**Aktyubinsk**	**120.59**	**317**	PKP	PKPdf	17 03 08.6	-0.3
comp=Z,2.4nm,0.8s,baz=96,slow=0.8,SNR=8.3							
AKTO	**Aktyubinsk**	**120.59**	**317**	PKIKP	PKPdf	17 03 08.6	-0.3
AKTO				pmax	pmax		
comp=Z,2.0nm,0.8s							
DAG	**Danmarks Havn**	**124.69**	**3**	i PKIKP	PKPdf	17 03 14.1	-2.0
DAG	**Danmarks Havn**	**124.69**	**3**	i P	PKPdf	17 03 14.1	-2.0
PRGR	**Permogore**	**125.18**	**331**	ePKIKP	PKPdf	17 03 16.2	-1.1
PRGR				e		17 03 50.3	
PRGR				pmax	pmax		
comp=Z,11nm,0.9s							
SUMG	**Summit**	**126.58**	**10**	ePKPdf	PKPdf	17 03 19.4	-0.4
SUMG	**Summit**	**126.58**	**10**	i P	PKPdf	17 03 19.5	-0.3
comp=Z,12nm,0.9s							
APA	**Apatity**	**126.90**	**341**	⇑iPKIKP	PKPdf	17 03 19.0	-1.5
APA				i		17 04 12.0	
APA				pmax	pmax		
comp=Z,10.0nm,1.0s							
APA				MLR	MLR		
comp=Z,400nm,19.0s							
SJG	**San Juan**	**126.96**	**83**	ePKPdf	PKPdf	17 03 20.2	-1.9
SJG	**San Juan**	**126.96**	**83**	ePKIKP	PKPdf	17 03 20.2	-1.9
BDFB	**Brasilia**	**127.14**	**131**	PKP	PKPdf	17 03 22.0	-0.5
comp=Z,2.4nm,0.4s,baz=288,slow=20,SNR=5.1							
BDFB	**Brasilia**	**127.14**	**131**	PKIKP	PKPdf	17 03 22.0	-0.5
BDFB				pmax	pmax		
comp=Z,2.0nm,0.4s							
KEV	**Kevo**	**127.19**	**345**	ePKIKP	PKPdf	17 03 19.1	-1.9
KEV	**Kevo**	**127.19**	**345**	epkp	PKPdf	17 03 19.1	-1.9
ARCES	**ARCESS Array B**	**127.71**	**345**	PKP	PKPdf	17 03 20.6	-1.4
comp=Z,6.4nm,0.9s,baz=42,slow=1.5,SNR=30							
ARCES	**ARCESS Array B**	**127.71**	**345**	PKIKP	PKPdf	17 03 20.6	-1.4
ARCES				pmax	pmax		
comp=Z,6.0nm,0.9s							
LSZ	**Lusaka**	**127.81**	**228**	ePKPdf	PKPdf	17 03 24.3	+0.5
LSZ	**Lusaka**	**127.81**	**228**	ePKIKP	PKPdf	17 03 24.3	+0.5
KLMR	**Klimovskoe**	**128.20**	**332**	ePKIKP	PKPdf	17 03 21.8	-1.3
KLMR						17 05 36.6	
KLMR				pmax	pmax		
comp=Z,23nm,1.4s							
KLMR				MLR	MLR		
comp=Z,493nm,21.0s							
KMBO	**Kilima Mbogo**	**128.94**	**250**	PKP	PKPdf	17 03 26.1	0.0
comp=Z,4.6nm,0.9s,baz=180,slow=20,SNR=8.1							
KMBO	**Kilima Mbogo**	**128.94**	**250**	PKIKP	PKPdf	17 03 26.1	0.0
KMBO				pmax	pmax		
comp=Z,5.0nm,0.9s							
JOF	**Joensuu**	**130.42**	**337**	ePKIKP	PKPdf	17 03 25.5	-1.8
JOF	**Joensuu**	**130.42**	**337**	epkp	PKPdf	17 03 25.5	-1.8
KIV	**Kislovodsk**	**131.68**	**310**	⇑iPKIKP	PKPdf	17 03 28.1	-2.2
KIV				e		17 04 08.1	
KIV				i		17 05 53.0	
KIV				ePS	SP	17 15 54.2	+0.9
KIV				eSS	SS	17 23 37.9	+21
KIV				pmax	pmax		
comp=Z,10.0nm,1.3s							
OBN	**Obninsk**	**132.13**	**326**	⇑iPKIKP	PKPdf	17 03 29.3	-1.5
OBN				e		17 04 02.7	
OBN				i		17 05 55.8	
OBN				ePS	SP	17 15 59.9	+3.8
OBN				eSS	SS	17 23 50.6	+29
OBN				pmax	pmax		
comp=Z,25nm,1.7s							
VSR	**Storozhevoye**	**132.16**	**320**	ePKIKP	PKPdf	17 03 30.2	-0.7
VSR				pmax	pmax		
comp=N,6.0nm,0.9s							
VSR				pmax	pmax		
comp=E,4.0nm,0.9s							
VSR				pmax	pmax		
comp=Z,5.0nm,0.9s							
VORD	**Divnogorie**	**132.17**	**320**	ePKIKP	PKPdf	17 03 31.4	+0.4
VORD				pmax	pmax		
comp=Z,2.0nm,0.5s							
VORD				pmax	pmax		
comp=N,10.0nm,0.9s							
VORD				pmax	pmax		
comp=E,8.0nm,0.5s							
KAF	**Kangasniemi**	**132.73**	**338**	ePKIKP	PKPdf	17 03 30.2	-1.5
KAF	**Kangasniemi**	**132.73**	**338**	epkp	PKPdf	17 03 30.2	-1.5
FINES	**FINESS Array B**	**133.26**	**337**	PKP	PKPdf	17 03 30.4	-2.3
comp=E,5.0nm,0.8s,baz=77

comp=Z,1.0nm,0.3s
AKASG pmax pmax
comp=N,1.0nm,0.6s
BRTR Keskin Array B 139.15 306 PKhKP PKPpre 17 03 37.4
comp=N,1.3nm,0.9s,baz=82,slow=1.7,SNR=6.7
BRTR PKP PKPdf 17 03 43.6 -0.7
comp=N,1.5nm,0.9s,baz=140,slow=2.9,SNR=6.1
BRTR Keskin Array B 139.15 306 PKHKP PKPpre 17 03 37.4
BRTR 17 03 43.6
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR pmax pmax
comp=Z,2.0nm,0.9s
GHRR 141.34 318⇑*i*P PKPdf 17 03 52.5 +4.4
BURAR Bucovina Array 141.92 321 ⇓PKIKP PKPdf 17 03 48.9 -0.2
BURAR Bucovina Array 141.92 321 ⇓*i*P PKPdf 17 03 48.8 -0.3
MLR Muntele Rosu 142.51 318 ⇓PKIKP PKPdf 17 03 50.0 -0.2
MLR Muntele Rosu 142.51 318 ⇓*i*P PKPdf 17 03 50.0 -0.2
KOLS Kolonicke sedl 142.85 325 *e*PKP PKPdf 17 03 48.3 -2.4
KOLS Kolonicke sedl 142.85 325 *e*PKIKP PKPdf 17 03 48.3 -2.4
KOLS Kolonicke sedl 142.85 325 *e*PKP PKPdf 17 03 48.2 -2.5
BMR Baia Mare 142.88 322 ⇓PKIKP PKPdf 17 03 49.3 -1.5
BMR Baia Mare 142.88 322 ⇓*i*P PKPdf 17 03 49.3 -1.5
UZH Uzhgorod 143.01 324 ⇓*i*PKIKP PKPdf 17 03 47.8 -3.2
UZH *e* 17 04 28.6
VOIR 143.09 318 ⇓PKIKP PKPdf 17 03 52.0 +0.8
VOIR 143.09 318 ⇓*i*P PKPdf 17 03 52.0 +0.8
TRPA Tarpa 143.16 324 ⇓*i*P PKPdf 17 03 48.0 -3.3
CRVS Cervenica-Dubn 143.30 325 *e*PKP PKPdf 17 03 50.6 -0.9
CRVS Cervenica-Dubn 143.30 325 *e*PKIKP PKPdf 17 03 50.6 -0.9
CRVS Cervenica-Dubn 143.30 325 *e*PKP PKPdf 17 03 50.6 -0.9
OJC Ojcow 143.33 328 *e*PKP PKPdf 17 03 49.5 -2.0
OJC Ojcow 143.33 328 *e*PKIKP PKPdf 17 03 49.5 -2.0
SZH Strazhica 143.49 314 *i*P PKPdf 17 03 49.0 -3.0
DRGR 143.81 322 ⇓PKIKP PKPdf 17 03 50.9 -1.5
DRGR 143.81 322 ⇓*i*P PKPdf 17 03 50.9 -1.5
MCD Coleburn Disti 143.86 354 P PKPdf 17 03 54.2 +2.0
MCD Coleburn Disti 143.86 354⇑*e*P PKPdf 17 03 54.2 +2.0
PVL Pavlikeni 143.91 315 *i*P PKPdf 17 03 55.7 +3.0
KECS Kecovo 144.07 325 *e*PKP PKPdf 17 03 51.6 -1.2
KECS Kecovo 144.07 325 *e*PKIKP PKPdf 17 03 51.6 -1.2
KECS Kecovo 144.07 325 *e*PKP PKPdf 17 03 51.6 -1.2
MDO Dochfour 144.09 355 P PKPdf 17 03 51.8 -0.8
MDO Dochfour 144.09 355⇑*e*P PKPdf 17 03 51.8 -0.8
KAC Achnashellach 144.10 356 P PKPdf 17 03 50.3 -2.3
KAC Achnashellach 144.10 356⇑*e*P PKPdf 17 03 50.3 -2.3
DIM Dimitrovgrad 144.26 313 *i*P PKPdf 17 03 52.1 -1.3
KPL Plockton 144.28 356 P PKPdf 17 03 49.4 -3.5
KPL AMB AMB 17 03 52.1
comp=Z,161nm,4.9s
KPL Plockton 144.28 356 *e*P PKPdf 17 03 49.4 -3.5
KPL AMB AMB 17 03 52.1
comp=Z,161nm,4.9s
ALN Alexandroupoli 144.34 311 *e*P PKPdf 17 03 51.5 -2.1
ALN Alexandroupoli 144.34 311 P PKPdf 17 03 52.0 -1.6
OKC Ostrava-Krasne 144.39 329 *e*PKIKP PKPdf 17 03 52.4 -1.0
OKC *e* 17 04 30.2
OKC MLR MLR
comp=Z,400nm,24.9s
OKC Ostrava-Krasne 144.39 329 *e*PKP PKPdf 17 03 52.4 -1.0
OKC *ep*PKP pPKPdf 17 04 30.2 +4.1
OKC AMS AMS 18 02 30.0
comp=Z,400nm,24.9s
CRAR CRAIOVA 144.40 317 ⇑PKIKP PKPdf 17 03 54.2 +0.6
CRAR CRAIOVA 144.40 317⇑*i*P PKPdf 17 03 54.2 +0.6
BLCB Balcova 144.45 306 P PKPdf 17 03 52.8 -1.1
KDZ Kurdzhali 144.50 319 *i*P PKPdf 17 03 52.1 -1.7
GZR Gura Zlata 144.50 319 ⇑PKHKP PKPdf 17 03 52.7 -1.0
GZR Gura Zlata 144.50 319⇑*i*P PKPdf 17 03 52.7 -1.0
KSP Ksiaz 144.55 331 *e*PKP PKPdf 17 03 52.9 -0.7
KAR1 Arisaig 144.71 356 P PKPdf 17 03 52.5 -1.1
KAR1 Arisaig 144.71 356⇑*e*P PKPdf 17 03 52.5 -1.1
MORC Moravsky Berou 144.72 329 *e*PKP PKPdf 17 03 52.9 -1.1
MORC Moravsky Berou 144.72 329 PKIKP PKPdf 17 03 53.9 0.0
MORC Moravsky Berou 144.72 329 ⇓*i*P PKPdf 17 03 53.6 -0.3
PSZ Piszkesteto 144.73 325 *e*PKP PKPdf 17 03 52.9 -1.1
PSZ Piszkesteto 144.73 325 ⇑PKIKP PKPdf 17 03 53.6 -0.4
PSZ Piszkesteto 144.73 325⇑*i*P PKPdf 17 03 53.6 -0.4
PSZ Piszkesteto 144.73 325⇑*e*PKP PKPdf 17 03 53.4 -0.6
PRK Paraskevi 144.75 308 *e*P PKPdf 17 03 52.8 -1.6
PRK Paraskevi 144.75 308 P PKPdf 17 03 53.4 -0.9
PLD Plovdiv 144.80 313 P PKPdf 17 03 53.4 -0.9
PLD Plovdiv 144.80 313 *i*P PKPdf 17 03 52.4 -1.9
SMG Samos 144.80 305 *e*P PKPdf 17 03 53.3 -1.2
NIS1 Nisyros Isl. 144.84 303 P PKPdf 17 03 53.8 -0.8
DPC Dobruska-Polom 144.89 331 *e*PKIKP PKPdf 17 03 54.1 -0.1
DPC *e* 17 04 27.9
DPC MLR MLR
comp=Z,900nm,35.6s
DPC Dobruska-Polom 144.89 331 *e*PKP PKPdf 17 03 54.1 -0.1
DPC *ep*PKP pPKPdf 17 04 27.9 +1.0
DPC AMS AMS 17 58 50.0
comp=Z,900nm,35.6s
UPC Upice 144.91 331 *e*PKIKP PKPdf 17 03 53.9 -0.3
UPC *e* 17 04 28.3
UPC Upice 144.91 331 *e*PKP PKPdf 17 03 53.9 -0.3
UPC *ep*PKP pPKPdf 17 04 28.3 +1.3
VYHS Vyhne 144.92 327 *e*PKP PKPdf 17 03 54.3 0.0
VYHS Vyhne 144.92 327 *e*PKIKP PKPdf 17 03 54.3 0.0
VYHS Vyhne 144.92 327 *e*PKP PKPdf 17 03 54.2 -0.1
RZN Rozhen 144.96 313 *i*P PKPdf 17 03 53.6 -1.0
PGB Panagyurishte 144.97 314 *i*P PKPdf 17 03 54.2 -0.4
BZS Buzias 145.08 321 ⇓PKIKP PKPdf 17 03 54.6 -0.1
BZS Buzias 145.08 321 ⇓*i*P PKPbc 17 03 54.6 +0.2
KOLL Kolacno 145.09 327 *e*PKP PKPdf 17 03 55.4 +0.8
KOLL Kolacno 145.09 327 *e*PKIKP PKPdf 17 03 55.4 +0.8
KOLL Kolacno 145.09 327 *e*PKP PKPdf 17 03 55.4 +0.8
KARP Karpathos 145.11 301 *e*P PKPbc 17 03 54.3 -0.5
CHOS Chios island 145.19 307 *e*P PKPbc 17 03 53.9 -1.1
CHOS Chios island 145.19 307 P PKPbc 17 03 55.4 +0.4
EBH Black Hill 145.20 354 P PKPbc 17 03 53.3 -1.2
EBH Black Hill 145.20 354⇑*e*P PKPbc 17 03 53.3 -1.2
LIA Limnos Island 145.32 310 P PKPdf 17 03 56.3 +1.0
EAB Aberfoyle 145.33 355 P PKPdf 17 03 53.8 -1.0
EAB Aberfoyle 145.33 355⇑*e*P PKPdf 17 03 53.8 -1.0
KAVA Kavala 145.38 312 P PKPdf 17 03 55.4 0.0
ESY Stoneypath 145.43 353 P PKPdf 17 03 54.0 -1.0
ESY Stoneypath 145.43 353⇑*e*P PKPdf 17 03 54.0 -1.0
EDI Edinburgh 145.49 354 P PKPdf 17 03 53.2 -1.8
EDI AMB AMB 17 03 53.9
comp=Z,118nm,2.3s
EDI Edinburgh 145.49 354 *e*P PKPdf 17 03 53.2 -1.8
EDI AMB AMB 17 03 53.9
comp=Z,118nm,2.3s
VRAC Vranov 145.49 329 PKP2 PKPab 17 03 56.3 +0.4
VRAC Vranov 145.49 329⇑*i*P PKPdf 17 03 55.9 +0.6
PVCC Panska Ves 145.53 332 *e*PKP2 PKPab 17 03 55.9 -0.1
PVCC MLR MLR
comp=Z,500nm,22.3s
PVCC Panska Ves 145.53 332 *e*PKP PKPdf 17 03 55.9 +0.6
PVCC AMS AMS 18 04 30.0
comp=Z,500nm,22.3s
BRG Berggiesshubel 145.54 333 *e*PKPbc PKPbc 17 03 55.8 +0.1
BRG Berggiesshubel 145.54 333⇑*i*PKP PKPdf 17 03 55.8 +0.5
comp=Z,202nm,0.9s
BRG pPKP pPKPdf 17 04 30.8 +2.8
comp=Z,40nm,0.9s
BRG Berggiesshubel 145.54 333⇑*i*PKP2 PKPab 17 03 55.8 -0.2
BRG 17 07 14.8
BRG pmax pmax
comp=Z,121nm,0.9s
BRG pmax pmax
comp=Z,24nm,1.0s
VTS Vitosha 145.59 315⇑PKP2 PKPab 17 03 56.1 -0.4
VTS Vitosha 145.59 315 P PKPdf 17 03 56.4 +0.7
VTS Vitosha 145.59 315⇑*i*P PKPdf 17 03 56.1 +0.4
VTS Vitosha 145.59 315 *i*P PKPdf 17 03 56.2 +0.5
CLL Collm 145.59 335 *e*PKPbc PKPbc 17 03 55.6 -0.2
CLL Collm 145.59 335 ⇓*i*PKP PKPdf 17 03 56.7 +1.3
CLL *ep*PKP pPKPdf 17 04 31.0 +2.9
CLL Collm 145.59 335 ⇓*i*PKP2 PKPab 17 03 56.7 +0.5
CLL pmax pmax
comp=Z,42nm,0.9s
CLL Collm 145.59 335 *i*PKPdf PKPdf 17 03 55.7 +0.3
CLL ⇓*i*PKPbc PKPbc 17 03 56.7 +0.9
comp=Z,182nm,0.9s
CLL *ep*PKiKP 17 04 31.0
CLL *i* 17 04 33.8
CLL *e*PP PP 17 07 18.0 +1.3
CLL *ep*PP 17 07 50.0
CLL *e*PPP 17 10 31.0
CLL *e*PPPP 17 12 48.0
CLL *e*SKKSac SKKSac 17 13 54.0 -3.5
CLL *e*PSKS 17 17 30.0
CLL *e*PPPrev 17 18 24.0
CLL *e*PPS 17 19 55.0
CLL *e*PSS 17 26 54.0
CLL *e*SSSS 17 36 00.0
EAU Auchinoon 145.59 354 P PKPdf 17 03 54.7 -0.5
EAU Auchinoon 145.59 354 *e*P PKPdf 17 03 54.7 -0.5
EBL Broad Law 145.62 353 P PKPdf 17 03 54.8 -0.5
EBL Broad Law 145.62 353⇑*e*P PKPdf 17 03 54.8 -0.5
NVR Nevrokopi 145.69 313 *e*P PKPdf 17 03 56.1 +0.2
NRDL Niedersach Rie 145.70 339 *e*PKPbc PKPbc 17 03 55.9 -0.2
FBE Freiberg 145.75 344 *e*PKPbc PKPbc 17 03 56.6 +0.3
MODS Modra-Piesok 145.79 328 *e*PKP PKPab 17 03 58.6 +1.5
MODS Modra-Piesok 145.79 328 *e*PKP2 PKPab 17 03 58.6 +1.5
MODS Modra-Piesok 145.79 328 *e*PKP PKPdf 17 03 58.6 +2.8
PRA Prague 145.93 332 PKP PKPbc 17 03 58.0 +1.1
PRA pPKP pPKPdf 17 04 27.0 -1.7
PRU Pruhonice 145.94 332 *e*PKP2 PKPab 17 03 57.7 +0.1
PRU MLR MLR
comp=Z,400nm,19.4s
PRU Pruhonice 145.94 332 *e*PKP PKPdf 17 03 57.7 +1.7
PRU *ep*PKP pPKPdf 17 04 26.2 -2.6
PRU AMS AMS 18 04 50.0
comp=Z,400nm,19.4s
ZKR Zakros 145.96 301 P PKPdf 17 03 57.7 +1.2
SRS Serrai 145.97 312 P PKPdf 17 03 56.5 +0.1
KKB Krupnik 145.99 314 *i*P PKPdf 17 03 56.8 +0.4
ZST Bratislava 146.00 322 *e*PKP PKPbc 17 03 58.8 +1.6
ZST Bratislava 146.00 327 *e*PKP2 PKPab 17 03 58.8 +0.9
ZST Bratislava 146.00 327 *e*PKP PKPdf 17 03 58.8 +2.6
OUR Ouranopolis 146.01 311 P PKPdf 17 03 56.5 0.0
TREC Trest 146.02 330 AMS AMS 17 58 50.0
comp=Z,800nm,34.7s
ESK Eskdalemuir 146.09 353 P PKPdf 17 03 55.1 -1.0
ESK AMB AMB 17 03 56.4
comp=Z,106nm,2.7s
ESK Eskdalemuir 146.09 353 *e*P PKPdf 17 03 55.1 -1.0
ESK AMB AMB 17 03 56.4
comp=Z,106nm,2.7s
ESK Eskdalemuir 146.09 353 *e*PKPdf PKPdf 17 03 55.6 -0.5
ESK Eskdalemuir 146.09 353 *i*PKP2 PKPab 17 03 57.5 -0.5
NEUB Neuenburg 146.15 336 *e*PKPbc PKPbc 17 03 57.5 0.0
CLZ Clausthal 146.15 338 *e*PKPbc PKPbc 17 03 57.7 +0.2
CLZ Clausthal 146.15 338 *e*PKP2 PKPab 17 03 57.7 -0.6
ECK Cauldkaine Hil 146.21 353 P PKPdf 17 03 57.0 +0.6
ECK Cauldkaine Hil 146.21 353⇑*e*P PKPdf 17 03 57.0 +0.6
THR1 Thera Island 146.24 303 P PKPdf 17 03 57.6 +0.6
SOH Sokhos 146.25 312 *e*P PKPdf 17 03 56.9 0.0
SOH Sokhos 146.25 312 P PKPdf 17 03 58.6 +1.7
THR3 Thira Island, 146.27 304 P PKPdf 17 03 57.5 +0.5
THR5 Thira Island, 146.31 304 P PKPdf 17 03 58.5 +1.4
PLG Polygyros 146.37 311 P PKPdf 17 03 57.5 +0.4
PAIG Paliouri 146.38 310 P PKPdf 17 03 56.9 -0.2
NPS Neapolis 146.40 301 *e*P PKPdf 17 03 58.5 +1.2
XAL Allendale 146.42 352 P PKPdf 17 03 57.7 +1.1
XAL Allendale 146.42 352 *e*P PKPdf 17 03 57.7 +1.1
KNT Kendrikon 146.42 313 P PKPdf 17 03 58.2 +1.1
PKSM Moragy 146.44 324 ⇑PKP2 PKPab 17 03 58.6 -1.1
PKSM Moragy 146.44 324⇑*i*P PKPdf 17 03 58.6 +1.6
TANN Tannenbergstha 146.50 334 *e*PKPbc PKPbc 17 03 58.6 0.0
HORT Hortiatis 146.52 312 P PKPdf 17 03 58.1 +0.8
LAST Lasithi 146.53 301 P PKPdf 17 03 59.1 +1.6
WERD Werda 146.53 334 *e*PKPbc PKPbc 17 03 58.7 0.0
VAY Valandovo 146.58 313 P PKPdf 17 03 58.1 +0.7
VAY Valandovo 146.58 313 *e*PKP PKPdf 17 03 57.8 +0.4
GUNZ Gunzen 146.59 334 *e*PKPbc PKPbc 17 03 59.0 +0.2
THE Thessaloniki 146.60 312 P PKPdf 17 03 57.5 0.0
GCD Castle Douglas 146.61 354 P PKPdf 17 03 57.6 +0.7
GCD Castle Douglas 146.61 354⇑*e*P PKPdf 17 03 57.6 +0.7
SOP Sopron 146.61 327⇑*e*PKP PKPdf 17 03 59.6 +2.4
SOP Sopron 146.61 327⇑*e*PKP PKPdf 17 03 58.9 +1.7
IBBN Ibbenburen 146.63 341 *e*PKPbc PKPbc 17 03 58.7 -0.2
WERN Wernitzgruen 146.63 334 *e*PKPbc PKPbc 17 03 59.2 +0.3
NKC Novy Kostel 146.64 334 *e*PKP2 PKPab 17 03 59.2 -1.1
NKC Novy Kostel 146.64 334 *e*PKP PKPab 17 03 59.2 -1.1
MOX Moxa 146.65 335 *e*P PKPdf 17 03 58.8 +1.6
comp=Z,57nm,1.1s
MOX Moxa 146.65 335 *e*PKP2 PKPab 17 03 58.8 -1.5
GAL1 Galloway 146.68 355 P PKPdf 17 03 57.5 +0.4
GAL1 AMB AMB 17 03 59.2
comp=Z,95nm,1.0s
GAL1 Galloway 146.68 355⇑*e*P PKPdf 17 03 57.5 +0.4
GAL1 AMB AMB 17 03 59.2
comp=Z,95nm,1.0s
CONA Conrad Observa 146.79 328⇑*i*PKPab PKPab 17 03 59.9 -1.1
comp=Z,73nm,1.3s,SNR=27
KESW Keswick, Cumbr 146.79 353 P PKPdf 17 03 57.2 -0.1
KESW AMB AMB 17 03 59.1
comp=Z,97nm,4.5s
KESW Keswick, Cumbr 146.79 353 *e*P PKPdf 17 03 57.2 -0.1
KESW AMB AMB 17 03 59.1
comp=Z,97nm,4.5s
GRG Griva 146.85 313 P PKPdf 17 03 59.2 +1.3
DIVS Divibare 146.87 319 P PKPdf 17 04 00.0 +2.2
PTL Penteli 146.93 307 *e*P PKPdf 17 03 58.9 +0.8
NEO Neokhori 146.95 310 *e*P PKPdf 17 03 58.8 +0.7
KHC Kasperske Hory 147.00 332 *e*PKP PKPdf 17 03 58.0 +0.2
KHC *ex* *x* 17 04 00.2
ATHU Athens Univers 147.02 307 P PKPdf 17 04 01.0 +2.8
SKO Skopje 147.04 315 P PKPdf 17 04 01.3 +3.2
SKO Skopje 147.04 315 *e*PKP PKPdf 17 04 01.1 +2.9
SIVA Sivas 147.10 301 P PKPdf 17 04 00.0 +1.5
LIT Litokhoron 147.15 311 *e*P PKPdf 17 03 59.4 +1.0
GEC2 GERESS Array S 147.16 331 *e*PKPbc PKPbc 17 04 00.4 -0.1
GEC2 GERESS Array S 147.16 331 *e*PKP2 PKPab 17 04 00.4 -2.0
GIM North Isle of 147.22 354 P PKPdf 17 03 59.6 +1.5
GIM North Isle of 147.22 354⇑*e*P PKPdf 17 03 59.6 +1.5
HPK Haverah Park 147.22 351 P PKPdf 17 03 59.7 +1.7
HPK AMB AMB 17 04 02.5
comp=Z,132nm,2.5s
HPK Haverah Park 147.22 351 *e*P PKPdf 17 03 59.7 +1.7
HPK AMB AMB 17 04 02.5
comp=Z,132nm,2.5s
WET Wettzell 147.29 332 *e*PKPbc PKPbc 17 04 00.9 +0.1
WET Wettzell 147.29 332 *e*PKP2 PKPbc 17 04 00.9 +0.1
ATAL Atalanti 147.32 309 P PKPdf 17 04 00.5 +1.8
LKR Lokris 147.35 309 *e*P PKPdf 17 03 59.2 +0.4
LKR Lokris 147.35 309 P PKPdf 17 04 00.3 +1.5
GMM Mts of Mourne 147.39 356 P PKPdf 17 03 59.9 +1.5
GMM Mts of Mourne 147.39 356⇑*e*P PKPdf 17 03 59.9 +1.5
ARSA Arzberg 147.42 327 ⇓*i*PKPbc PKPbc 17 04 00.8 -0.4
comp=Z,14nm,1.1s,SNR=8.0
KRUS Krusevo 147.44 314 *e*PKP PKPdf 17 03 59.9 +1.0
VAM Vamos 147.48 302 *e*P PKPdf 17 04 01.6 +2.5
GRA1 Grafenberg Arr 147.56 334 *e*PKPbc PKPbc 17 04 01.5 -0.1
GRF Grafenberg Arr 147.56 334 *e*PKPbc PKPbc 17 04 01.5 -0.1
GRF Grafenberg Arr 147.56 334 *e*PKP2 PKPbc 17 04 01.5 -0.1
KZN Kozani 147.56 312 *e*P PKPdf 17 03 59.6 +0.5
KZN Kozani 147.56 312 P PKPdf 17 04 00.7 +1.6
DID Didima 147.58 306 *e*P PKPdf 17 04 00.2 +1.0
DID Didima 147.58 306 P PKPdf 17 04 00.3 +1.1
LTK Loutraki 147.60 307 *e*P PKPdf 17 04 00.4 +1.2
LTK Loutraki 147.60 307 P PKPdf 17 04 00.7 +1.5
MOA Molln 147.62 329⇑*i*PKPbc PKPbc 17 04 01.4 -0.3
comp=Z,29nm,1.0s,SNR=11
FNA Florina 147.62 313 P PKPdf 17 04 01.2 +2.0
AGG Agios Georgios 147.70 310 *e*P PKPdf 17 04 01.2 +1.9
AGG Agios Georgios 147.70 310 P PKPdf 17 04 01.4 +2.1
KARN Karanos 147.71 302 P PKPdf 17 04 02.6 +3.1
THL Klokotos Trika 147.71 311 P PKPdf 17 04 00.8 +1.5
BCI Bajram Curri 147.73 317 *i*PG PKPdf 17 04 03.2 +3.9
DSF Desfina 147.79 308 P PKPdf 17 04 01.2 +1.7
PUK Puka 148.01 316 *i*PG PKPdf 17 04 02.2 +2.4
NEST Nestorio 148.01 313 P PKPdf 17 04 02.9 +3.1
PERS Pernice 148.04 327 *i*PKPbc PKPbc 17 04 02.8 -0.2
SOKA Soboth 148.06 327⇑*i*PKPbc PKPbc 17 04 02.5 -0.5
comp=Z,49nm,1.0s
VLI Veliai 148.07 305 *e*P PKPdf 17 04 01.7 +1.7
KALE Kalithea 148.08 309 P PKPdf 17 04 03.5 +3.5
GUR Goura 148.10 308 *e*P PKPdf 17 04 03.0 +3.0
GUR Goura 148.10 308 P PKPdf 17 04 02.9 +2.9
KBN Korca 148.10 313 *i*PG PKPdf 17 04 04.9 +4.9
TRIZ Trizonia 148.13 309 P PKPdf 17 04 03.4 +3.3
STNC Stoke 148.15 352 P PKPdf 17 04 02.9 +3.3
STNC AMB AMB 17 04 04.4
comp=Z,197nm,1.1s
STNC Stoke 148.15 352 *e*P PKPbc 17 04 02.9 -0.1
STNC AMB AMB 17 04 04.4
comp=Z,197nm,1.1s
EFP Efpalio 148.23 309 P PKPdf 17 04 04.2 +4.0
LAKA Lakka 148.25 308 P PKPdf 17 04 03.9 +3.6
VLX Vlachokerasia 148.27 307 *e*P PKPdf 17 04 03.5 +3.2
VLX Vlachokerasia 148.27 307 P PKPdf 17 04 03.4 +3.1
CWF Charnwood Fore 148.36 350 P PKPdf 17 04 01.9 +1.9
CWF AMB AMB 17 04 03.5
comp=Z,100nm,0.9s
CWF Charnwood Fore 148.36 350 *e*P PKPdf 17 04 01.9 +1.9
CWF AMB AMB 17 04 03.5
comp=Z,100nm,0.9s
DLF Lyons Farm 148.37 356 *e*P PKPdf 17 04 02.9 +2.9
TIR Tirane 148.37 315 *e*PKPbc PKPbc 17 04 04.1 +0.1
TIR Tirane 148.37 315 *e*PKP2 PKPbc 17 04 04.1 +0.1
TIR Tirane 148.37 315 P PKPdf 17 04 04.3 +3.9
OBKA Obir 148.41 327 ⇓*i*PKPbc PKPbc 17 04 03.3 -0.6
comp=Z,26nm,0.9s,SNR=7.3
TOD Tromm 148.56 337 PKP PKPbc 17 04 04.8 +0.6
TOD Tromm 148.56 337 PKP2 PKPbc 17 04 04.8 +0.6
BEBN Eben Emael 148.58 341 PKPbc PKPbc 17 04 04.9 +0.7
KBA Koelnbreinsper 148.60 329⇑*i*PKPbc PKPbc 17 04 03.5 -0.9
comp=Z,43nm,0.9s,SNR=11
MEM Membach 148.65 341 PKPbc PKPbc 17 04 04.4 0.0
ITM Ithomi 148.68 307 P PKPdf 17 04 04.6 +3.6
BOJS Bojanci 148.73 325 *i*PKPbc PKPbc 17 04 04.9 +0.1
LJU Ljubljana 148.74 327 *e*PKPbc PKPbc 17 04 05.0 +0.2
VISS Visnje 148.75 326 *i*PKPbc PKPbc 17 04 04.5 -0.3
ABH Alteburg 148.77 338 PKP PKPbc 17 04 05.7 +1.0
MYKA Terra Mystica 148.78 328⇑*i*PKPbc PKPbc 17 04 04.4 -0.5
comp=Z,24nm,0.7s
IGT Igoumenitsa 148.90 312 P PKPdf 17 04 06.9 +5.6
PYL PYLOS 148.91 306 P PKPdf 17 04 04.2 +2.8
STON Ston 148.94 319 *e*Pn PKPdf 17 04 00.2 -1.0
STON Sn 17 04 24.4
STON Ston 148.94 319 P PKPdf 17 04 01.1 -0.1
SRN Sarande 148.97 312 *i*PG PKPdf 17 04 07.0 +5.6
BCLA Clavier 149.03 341 PKPbc PKPbc 17 04 04.8 -0.5
VOY Vojsko 149.07 327 *e*PKPbc PKPbc 17 04 04.7 -0.9
VOY *e* 17 04 09.9
VOY *e* 17 04 35.8
VOY *e* 17 04 41.5
VOY *e* 17 04 54.3
VOY *e* 17 05 31.3
JAVS Javornik 149.08 327 *i*PKPbc PKPbc 17 04 05.0 -0.6
RUP Ruppelstein 149.09 339 PKP PKPbc 17 04 06.3 +0.8
RUP Ruppelstein 149.09 339 PKP2 PKPbc 17 04 06.3 +0.8
STU Stuttgart 149.10 335 *e*PKPbc PKPbc 17 04 06.0 +0.4
STU Stuttgart 149.10 335 *e*PKP2 PKPbc 17 04 06.0 +0.4
KFL Anninata 149.17 309 P PKPdf 17 04 11.5 +10
KEK Kerkira 149.19 312 *e*P PKPdf 17 04 04.6 +2.9
KEK Kerkira 149.19 312 P PKPdf 17 04 06.0 +4.3
WATA Walderalm 149.23 331⇑*i*PKPbc PKPbc 17 04 05.5 -0.5
comp=Z,34nm,0.9s,SNR=11
ABTA Abfaltersbach 149.24 330 *i*PKPbc PKPbc 17 04 05.6 -0.4
comp=Z,58nm,1.0s,SNR=13
SNF Seneffe 149.24 343 PKPbc PKPbc 17 04 05.6 -0.3
WTTA Wattenberg 149.26 331 *i*PKPbc PKPbc 17 04 05.8 -0.2
comp=Z,88nm,0.9s,SNR=19
MCH1 Michaelchurch 149.32 352 P PKPdf 17 04 04.8 +3.2
MCH1 AMB AMB 17 04 06.6
comp=Z,66nm,1.0s
MCH1 Michaelchurch 149.32 352 *e*P PKPbc 17 04 04.8 -1.2
MCH1 AMB AMB 17 04 06.6
comp=Z,66nm,1.0s
WLF Walferdange 149.42 340 PKPbc PKPbc 17 04 06.8 +0.5
WLF Walferdange 149.42 340 *e*PKPbc PKPbc 17 04 06.3 -0.1
WLF Walferdange 149.42 340 *e*PKP2 PKPbc 17 04 06.3 0.0
ELSH Elham, Standar 149.43 347 P PKPdf 17 04 05.8 +4.1
ELSH AMB AMB 17 04 07.6
comp=Z,168nm,1.0s
ELSH Elham, Standar 149.43 347 *e*P PKPbc 17 04 05.8 -0.5
ELSH AMB AMB 17 04 07.6
comp=Z,168nm,1.0s
MOTA Moosalm 149.43 332⇑*i*PKPbc PKPbc 17 04 06.0 -0.4
comp=Z,82nm,0.9s,SNR=34
LANF Langenberg 149.44 337 PKP PKPbc 17 04 07.2 +0.8
LANF Langenberg 149.44 337 PKP2 PKPbc 17 04 07.2 +0.8
RETA Reutte 149.47 332 ⇓*i*PKPbc PKPbc 17 04 05.9 -0.6
comp=Z,37nm,1.0s,SNR=16
DOU Dourbes 149.52 342 PKPbc PKPbc 17 04 06.4 -0.2
NVLJ Novalja 149.55 324 *e*Pn PKPdf 17 03 59.4 -2.7
NVLJ Sn 17 04 21.8
NVLJ Novalja 149.55 324 P PKPdf 17 04 00.5 -1.7
SWN1 Swindon 149.62 350 P PKPdf 17 04 05.3 +3.2
SWN1 AMB AMB 17 04 07.9
comp=Z,281nm,0.9s
SWN1 Swindon 149.62 350 *e*P PKPbc 17 04 05.3 -1.5
SWN1 AMB AMB 17 04 07.9
comp=Z,281nm,0.9s
WOL Wolverton 149.72 350 P PKPdf 17 04 05.8 +3.6
WOL AMB AMB 17 04 07.4
comp=Z,118nm,0.9s
WOL Wolverton 149.72 350 *e*P PKPbc 17 04 05.8 -1.2
WOL AMB AMB 17 04 07.4
comp=Z,118nm,0.9s
BFO Black Forest 149.79 336 *e*PKPbc PKPbc 17 04 06.8 -0.5
BFO Black Forest 149.79 336 *e*PKP2 PKPbc 17 04 06.8 -0.5
SPAK Spaichingen-Ko 149.80 335 PKP PKPbc 17 04 07.6 +0.3
FETA Feichten 149.84 332 *i*PKPbc PKPbc 17 04 07.2 -0.2
comp=Z,88nm,1.1s,SNR=37
DAVA Damuels 150.01 333⇑*i*PKiKP PKiKP 17 04 08.0 -0.6
comp=Z,54nm,1.1s,SNR=13
FELD Feldberg im Sc 150.29 336 PKP PKPbc 17 04 08.7 +0.2
ECH Echery 150.32 337 PKP PKPbc 17 04 08.7 +0.1
ECH Echery 150.32 337 PKIKP PKPbc 17 04 08.7 +0.1
HTL Hartland 150.48 353 P PKPdf 17 04 06.7 +3.3
HTL AMB AMB 17 04 10.8
comp=Z,74nm,1.0s
HTL Hartland 150.48 353⇑*e*P PKPbc 17 04 06.7 -2.2
HTL AMB AMB 17 04 10.8
comp=Z,74nm,1.0s
MOF Molkenrain 150.63 337 PKP PKPbc 17 04 09.8 +0.5
MOF Molkenrain 150.63 337 PKIKP PKPbc 17 04 09.8 +0.5
THEF They Montfort 150.72 338 PKP PKPbc 17 04 10.0 +0.5
THEF They Montfort 150.72 338 PKIKP PKPbc 17 04 10.0 +0.5
BBS Basel-Blauen 150.82 336 PKP PKPbc 17 04 09.8 0.0
BBS Basel-Blauen 150.82 336 PKIKP PKPbc 17 04 09.8 0.0
TUE Stuetta 150.87 333 *e*PKPbc PKPbc 17 04 09.9 0.0
LOMF Lomont 151.17 336 PKP PKPbc 17 04 11.1 +0.5
LOMF Lomont 151.17 336 PKIKP PKPbc 17 04 11.1 +0.5
CCA1 Carnmenellis 151.36 354 P PKPdf 17 04 07.0 +2.3
CCA1 AMB AMB 17 04 07.8
comp=Z,66nm,5.0s
CCA1 Carnmenellis 151.36 354 *e*P PKPdf 17 04 07.0 +2.3
CCA1 AMB AMB 17 04 07.8
comp=Z,66nm,5.0s
CUC Castrocucco 151.71 316 *e*PKPbc PKPbc 17 04 10.6 -1.5
AQU L'Aquila 151.79 322 *e*PKPbc PKPbc 17 04 12.7 +0.6
AQU L'Aquila 151.79 322 *e*PKIKP PKPbc 17 04 12.7 +0.5
CEL Celeste 152.55 313 *e*PKPdf PKPdf 17 04 08.2 +1.2
CEL *e*PKPbc PKPbc 17 04 13.1 -0.9
CEL *e*PKPab PKPab 17 04 26.0 +1.1
RSL Roselend 152.63 335 PKP PKPbc 17 04 14.3 +0.4
RSL Roselend 152.63 335 PKIKP PKPbc 17 04 14.3 +0.4
BNI Bardonecchia 153.13 334 *e*PKPbc PKPbc 17 04 14.8 -0.3
BNI Bardonecchia 153.13 334 *e*PKIKP PKPbc 17 04 14.8 -0.3
OG22 Abries 153.20 333 PKP PKPbc 17 04 14.9 -0.3
PLDF La Plantade 153.48 339 PKP PKPbc 17 04 15.9 +0.1
PLDF La Plantade 153.48 339 PKIKP PKPbc 17 04 15.9 +0.1
AGO Saint Agoulin 153.57 340 PKP PKPbc 17 04 16.2 +0.2
KEST Kesra 158.33 314 PKPab PKPab 17 04 48.7 -1.0
comp=Z,3.0nm,0.9s,baz=72,slow=20,SNR=8.1
PVRL Vila Real 160.41 356 *e*PKPab PKPab 17 04 58.4 0.0
MVO Moncorvo 160.47 354 *e*PKPab PKPab 17 04 59.6 +0.9
PVIS Viseu 160.98 356 *e*PKPab PKPab 17 05 01.6 +0.7
MTE Manteigas 161.27 355 *e*PKPab PKPab 17 05 02.9 +0.7
ESDC Sonseca Array 161.44 346 PKPab PKPab 17 05 02.4 -0.6
comp=Z,2.9nm,0.8s,baz=17,slow=2.9,SNR=8.3
PCBR Castelo Branco 161.82 355 *e*PKPab PKPab 17 05 04.9 +0.3
PESTR Estremoz 162.80 355 *e*PKPab PKPab 17 05 09.4 +0.5
**PBEJ Be

mb3.8/9, Error ellipse: s-maj=60.8km s-min=17.4km az=150.0
*IDC **12** 17:12:56.8±3.3, 20°.27S×178°.95W, h621km±40km, mb3.1/7, mb1 3.4/7, mb1mx3.2/16, mbtmp3.1/7, Error ellipse: s-maj=58.5km s-min=15.7km az=151.0*
*NEIC **12** 17:12:57.4±1.6, 20°.15S×179°.05W, h627km±11km, mb4.4/2, Error ellipse: s-maj=44.0km s-min=13.8km az=148.0*
ISC 12 17:12:57.5±2.0, 20°.25±0°.4×179°.0W±0°.2, h625km±15km, n13, σ0s63/12, mb3.8/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.65**	**311**	*eP*	**P**	**17 14 22.9**	**+0.2**
CTAO	**Charters Tower**	**32.55**	**264**	*eP*	**P**	**17 18 40.3**	**+0.6**
2.2nm,0.4s,mb4.1							
PMG	**Port Moresby**	**34.31**	**283**	P	**P**	**17 18 53.0**	**-1.4**
26nm,1.1s,mb4.8							
STKA	**Stephens Creek**	**37.06**	**244**	P	**P**	**17 19 16.1**	**-0.7**
3.7nm,1.1s,mb3.8,baz=112,slow=20,SNR=4.2							
ASAR	**Alice Springs**	**43.65**	**257**	P	**P**	**17 20 09.3**	**+0.3**
3.4nm,0.5s,mb4.2,baz=90,slow=7.5,SNR=140							
ASAR				PcP	PcP	17 21 41.8	-0.1
0.5nm,0.6s,baz=108,slow=3.9,SNR=5.6							
ASAR				S	**S**	**17 25 56.0**	**+0.8**
1.2nm,1.1s,baz=97,slow=15,SNR=5.3							
WRA	**Warramunga Arr**	**43.68**	**262**	P	**P**	**17 20 09.6**	**+0.2**
2.5nm,0.3s,mb4.2,baz=97,slow=7.6,SNR=175							
WRA	**Warramunga Arr**	**43.68**	**262**	P	**P**	**17 20 09.6**	**+0.2**
PETK	**Petropavlovsk-**	**75.69**	**346**	P	**P**	**17 23 40.6**	**+0.6**
0.5nm,0.5s,mb3.2,baz=114,slow=7.5,SNR=5.9							
NVAR	**Mina Array Bea**	**81.45**	**44**	P	**P**	**17 24 10.9**	**0.0**
0.4nm,0.5s,mb3.1,baz=228,slow=8.3,SNR=4.2							
ILAR	**Eielson Array**	**88.20**	**13**	P	**P**	**17 24 42.2**	**-0.6**
0.5nm,0.5s,mb3.5,baz=217,slow=5.1,SNR=7.1							
PDAR	**Pinedale Array**	**89.38**	**44**	P	**P**	**17 24 49.3**	**+0.4**
0.5nm,0.6s,mb3.5,baz=215,slow=4.9,SNR=3.7							
ARCES	**ARCESS Array B**	**128.40**	**349**	PKP	PKPdf	17 30 53.5	-0.2
0.5nm,0.5s,baz=48,slow=1.5,SNR=6.4							
BRTR	**Keskin Array B**	**145.88**	**312**	PKPbc	PKPbc	17 31 28.8	+0.3
0.8nm,0.6s,baz=126,slow=4.1,SNR=5.7							

IDC 12 17:15:23.2±2.7, 2°.09N×98°.86E, h125km±10km, mb3.2/4, mb1 3.3/4, mb1mx3.1/19, mbtmp3.2/4, Error ellipse: s-maj=95.6km s-min=17.9km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.71**	**5**	P	Pn	17 15 43.2	+0.1
23nm,0.3s,baz=190,slow=11,SNR=53							
PSI				S	Sn	17 15 58.5	+0.2
7.0nm,0.3s,baz=236,slow=16,SNR=22							
WRA	**Warramunga Arr**	**41.12**	**124**	P	P	17 22 55.6	+0.3
0.8nm,0.4s,baz=302,slow=9.0,SNR=16							
ASAR	**Alice Springs**	**42.63**	**129**	P	P	17 23 06.9	-0.6
0.9nm,1.1s,baz=300,slow=7.3,SNR=3.5							
MKAR	**Makanchi Array**	**46.81**	**344**	P	P	17 23 40.3	0.0
0.2nm,0.5s,baz=163,slow=5.6,SNR=2.9							
ZALV	**Zalesovo Beam**	**52.97**	**350**	P	P	17 24 26.6	-0.1
0.4nm,0.3s,baz=151,slow=3.3,SNR=2.4							

PGC 12 17:21:04.5±2.8, 47°.37N×128°.89W, h10km, ML3.1/10, Mw3.7, 4D, 296km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**2.77**	**25**	⇑Pn	Pn	17 21 46.9	-2.0
OZB	**Mount Ozzard**	**2.78**	**54**	⇑Pn	Pn	17 21 47.5	-1.5
BPBC	**Brooks Peninsu**	**2.88**	**14**	⇑Pn	Pn	17 21 48.3	-2.1
GDR	**Gold River**	**3.07**	**37**	⇑Pn	Pn	17 21 51.8	-1.2
WOSB	**Woss**	**3.19**	**28**	⇑Pn	Pn	17 21 53.7	-0.9
PFB	**Port Renfrew**	**3.22**	**66**	⇑Pn	Pn	17 21 53.8	-1.4
PFB				⇓Sn	Sn	17 22 28.9	-4.7
MAYB	**Maynard**	**3.24**	**20**	⇑Pn	Pn	17 21 53.7	-1.6
MGB	**Mount Grey**	**3.25**	**58**	⇓Pn	Pn	17 21 54.2	-1.3
HOLB	**Holberg**	**3.31**	**8**	⇑Pn	Pn	17 21 55.8	-0.6
CBB	**Campbell River**	**3.54**	**40**	⇑Pn	Pn	17 21 58.5	-1.1
NCRB	**Newcastle Ridg**	**3.57**	**31**	⇑Pn	Pn	17 21 59.2	-0.7
LZB	**Mount Lazard**	**3.62**	**68**	⇓Pn	Pn	17 21 59.9	-0.8
LZB				⇑Sn	Sn	17 22 40.0	-3.4
BBB	**Bella Bella**	**4.84**	**6**	⇓Pn	Pn	17 22 16.6	-0.8

*ISK **12** 17:30:38.1, 38°.87N×30°.50E, h12km, MD2.8*
*CSEM **12** 17:30:41.3±0.3, 38°.69N×30°.82E, h10km, MD2.9, Error ellipse: s-maj=9.8km s-min=6.9km az=149.0*
*ISCJB **12** 17:30:42.0±0.6, 38°.65N±0°.05×30°.82E±0°.04, h10km±4km, Error ellipse: s-maj=8.4km s-min=5.0km az=158.4*
*DDA **12** 17:30:42.0, 38°.67N×30°.80E, h7km±6km, Md2.9*
ISC 12 17:30:41.9±0.6, 38°.66N±0°.05×30°.82E±0°.04, h12km±5km, n19, σ1s05/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	**Bolvadin**	**0.12**	**59**	*i* P	**Pg**	**17 30 45.7**	**+0.7**
BOLV				*i* S	**Sg**	**17 30 48.3**	**+1.1**
BOLV	**Bolvadin**	**0.12**	**59**	*i* P	**Pg**	**17 30 45.7**	**+0.7**
BOLV				*i* S	**Sg**	**17 30 48.3**	**+1.1**
SHUT	**Suhut-Afyon**	**0.24**	**244**	*e*PG	**Pg**	**17 30 45.5**	**-1.4**
SHUT				*e*SG	**Sg**	**17 30 50.1**	**-0.3**
SHUT	**Suhut-Afyon**	**0.24**	**244**	*e*Pg	**Pg**	**17 30 45.5**	**-1.4**
SHUT				*e*Sg	**Sg**	**17 30 50.1**	**-0.2**
KIZT	**Kizilcal**	**0.85**	**75**	*e*PN	**Pn**	**17 30 59.1**	**-0.5**
KIZT	**Kizilcal**	**0.85**	**75**	*e*Pn	**Pn**	**17 30 59.2**	**-0.5**
ESKT	**Eskisehir**	**0.86**	**1**	*i* P	**Pg**	**17 30 58.5**	**0.0**
ESKT				*i* S	**Sg**	**17 31 10.2**	**+0.4**
SEYT	**Eskypehyr**	**0.86**	**1**	*i* P	**Pg**	**17 30 58.5**	**0.0**
SEYT				*i* S	**Sg**	**17 31 10.2**	**+0.4**
SVRH	**Sivrihisar-ESK**	**0.96**	**34**	*e*PG	**Pg**	**17 30 57.5**	**-2.9**
SVRH	**Sivrihisar-ESK**	**0.96**	**34**	*e*Pg	**Pg**	**17 30 57.5**	**-2.9**
KDHN	**Kadinhani**	**1.02**	**97**	*i* P	**Pb**	**17 31 00.8**	**-0.7**
KDHN				*i* S	**Sb**	**17 31 14.2**	**-0.6**
KDHN	**Kadinhani**	**1.02**	**97**	*i* P	**Pb**	**17 31 00.8**	**-0.7**
KDHN				*i* S	**Sb**	**17 31 14.2**	**-0.6**
KHL	**Karahalli**	**1.07**	**252**	*e*PG	**Pg**	**17 30 56.5**	**-6.0**
KHAL	**Karahalli**	**1.08**	**255**	*i* P	**Pb**	**17 31 01.7**	**-0.8**
KHAL				*i* S	**Sb**	**17 31 18.1**	**+1.5**
KHAL	**Karahalli**	**1.08**	**255**	*i* P	**Pb**	**17 31 01.7**	**-0.8**
KHAL				*i* S	**Sb**	**17 31 18.1**	**+1.5**
SUTC	**Sutluce-Ispart**	**1.19**	**173**	*e*PN	**Pn**	**17 31 04.7**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.19**	**173**	*e*Pn	**Pn**	**17 31 04.7**	**+0.4**
KONT	**Konya--Tatoy**	**1.40**	**120**	*e*PN	**Pn**	**17 31 08.9**	**+1.7**
KONT	**Konya--Tatoy**	**1.40**	**120**	*e*Pn	**Pn**	**17 31 08.9**	**+1.7**

*IDC **12** 17:35:48.9±1.5, 31°.32N×103°.37E, h0km, mb3.0/4, mb1 3.3/4, mb1mx3.2/20, mbtmp3.1/4, Error ellipse: s-maj=48.4km s-min=27.9km az=52.0*
*BJI **12** 17:35:54.6, 31°.82N×104°.13E, h12km, ML2.9/7*
ISC 12 17:35:53.1±0.9, 31°.61N±0°.05×104°.38E±0°.09, h17km±10km, n7, σ0s63/10, mb3.1/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.88**	**218**	Pg	**Pg**	**17 36 09.4**	**-0.8**
CD2				Sg	**Sg**	**17 36 22.4**	**+0.7**
CD2				smax			
comp=N,430nm,0.7s							
CD2				smax			
comp=E,310nm,0.7s							
LZH	**Lanzhou**	**4.49**	**354**	Pg	**Pg**	**17 37 18.3**	**-0.8**
LZH				Sg	**Sg**	**17 38 17.8**	**+0.6**
LZH				smax			
comp=N,24nm,0.5s							
LZH				smax			
comp=E,26nm,0.8s							
XAN	**Xi'an**	**4.53**	**56**	Pg	**Pg**	**17 37 15.2**	**-4.6**
XAN				Sg	**Sg**	**17 38 18.6**	**+0.2**
XAN				smax			
comp=N,25nm,0.5s							
XAN				smax			
comp=E,13nm,0.9s							
KSRS	**Korea Array**	**20.23**	**67**	P	**P**	**17 40 35.3**	**+7.9**
comp=E,0.3nm,0.6s,baz=257,slow=10,SNR=4.2							
MKAR	**Makanchi Array**	**22.76**	**318**	P	**P**	**17 40 48.9**	**-5.6**
comp=E,0.1nm,0.4s,mb2.6,baz=116,slow=11,SNR=2.6							
WRA	**Warramunga Arr**	**58.76**	**147**	P	**P**	**17 45 51.0**	**+0.6**
comp=E,0.3nm,0.6s,mb3.5,baz=340,slow=7.8,SNR=5.6							
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**17 46 10.6**	**-0.5**
comp=E,0.3nm,1.0s,mb3.4,baz=336,slow=6.2,SNR=4.1							

*IDC **12** 17:50:56.4±1.9, 1°.83N×127°.24E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/18, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=101.9km s-min=26.1km az=68.0*
*ISCJB **12** 17:51:09.4±1.7, 1°.8N±0°.2×127°.4E±0°.1, h133km±13km, mb3.5/4, Error ellipse: s-maj=27.4km s-min=14.3km az=25.7*
*DJA **12** 17:51:13, 1°.57N×127°.31E, h95km, MLv4.0/7*
ISC 12 17:51:10.5±1.7, 1°.8N±0°.2×127°.4E±0°.1, h125km±13km, n12, σ0s84/14, mb3.5/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.00**	**182**	P	**Pn**	**17 51 33.2**	**+0.2**
MNI	**Manado**	**2.58**	**263**	P	**Pn**	**17 51 50.7**	**-0.8**
MNI				S	**Sn**	**17 52 20.9**	**-2.2**
KMSI	**Cibinong**	**3.62**	**251**	P	**Pn**	**17 52 05.3**	**+0.1**
KMSI				S	**Sn**	**17 52 47.9**	**+0.4**
NLAI	**Namlea**	**5.00**	**183**	P	**Pn**	**17 52 16.6**	**-6.9**
LUWI	**Luwuk**	**5.41**	**239**	P	**Pn**	**17 52 30.4**	**+1.3**
0.1nm685nm16nm,1.0s							
MRSI	**Marisa**	**5.61**	**257**	P	**Pn**	**17 52 32.8**	**+1.0**
0.1nm440nm16nm,0.6s							
APSI	**Ampana**	**6.34**	**245**	P	**Pn**	**17 52 42.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**19.83**	**185**	P	**P**	**17 55 31.1**	**-0.5**
0.1nm,0.3s,baz=18,slow=9.3,SNR=3.8							
WRA	**Warramunga Arr**	**22.64**	**163**	P	**P**	**17 56 00.5**	**-0.8**
0.8nm,0.4s,mb3.4,baz=339,slow=11,SNR=21							
ASAR	**Alice Springs**	**26.07**	**166**	P	**P**	**17 56 32.0**	**-0.4**
0.3nm,0.3s,mb3.1,baz=345,slow=7.9,SNR=20							
STKA	**Stephens Creek**	**36.08**	**159**	P	**P**	**17 58 00.5**	**+0.3**
2.4nm,0.9s,mb4.1,baz=335,slow=6.8,SNR=5.7							
MKAR	**Makanchi Array**	**59.53**	**326**	P	**P**	**18 01 00.9**	**+0.3**
0.2nm,0.5s,mb3.4,baz=113,slow=8.1,SNR=3.0							

JMA 12 17:54:24.0±0.2, 39°.47N×144°.56E, h45km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**2.12**	**274**	P	Pn	17 54 58.2	+1.3
MIYJ				*e*S	Sn	17 55 23.2	+1.1
JTH	**Tanohata**	**2.13**	**284**	P	Pn	17 54 58.3	+1.2
JTH				*e*S	Sn	17 55 23.3	+1.0
OFUJ	**Ofunato**	**2.28**	**261**	P	Pn	17 55 00.1	+1.0
OFUJ				*e*S	Sn	17 55 26.4	+0.5
JANG	**Nango**	**2.51**	**292**	P	Pn	17 55 03.3	+1.0
JOM	**Ohasama**	**2.53**	**271**	P	Pn	17 55 04.2	+1.7
JOM				*e*S	Sn	17 55 34.0	+1.9
JMK	**Ichinoseki**	**2.65**	**260**	P	Pn	17 55 05.3	+1.2
JMK				*e*S	Sn	17 55 36.0	+1.0
JRG	**Rokugo**	**3.04**	**270**	P	Pn	17 55 11.8	+2.2
JRG				*e*S	Sn	17 55 47.8	+3.1
JAH	**Hinai**	**3.11**	**285**	P	Pn	17 55 12.9	+2.5
JAH				*e*S	Sn	17 55 49.2	+2.9
JCH	**Churui**	**3.27**	**344**	P	Pn	17 55 13.3	+0.6
JCH				*e*S	Sn	17 55 51.1	+0.8
JOT	**Ohata**	**3.29**	**307**	P	Pn	17 55 15.0	+2.0
JOT				*e*S	Sn	17 55 52.9	+2.1
JYK	**Kaneyama**	**3.31**	**262**	P	Pn	17 55 15.1	+1.8
JYK				*e*S	Sn	17 55 53.2	+1.9
JYW	**Yuwa**	**3.37**	**273**	P	Pn	17 55 16.5	+2.5
JYW				*e*S	Sn	17 55 56.4	+3.7
JKB	**Kayabe**	**3.61**	**313**	P	Pn	17 55 19.1	+1.8
JKB				*e*S	Sn	17 56 00.7	+2.0
NEM2	**Nemuro 2**	**3.99**	**12**	P	Pn	17 55 21.4	-1.2
NEM2				*e*S	Sn	17 56 05.3	-2.8
JTKR	**Abashiri--Toko**	**4.52**	**354**	P	Pn	17 55 30.8	+0.9
JTKR				*e*S	Sn	17 56 21.3	+0.1
JOSM	**Okushiri--Mats**	**4.66**	**306**	P	Pn	17 55 33.8	+2.0
JHR	**Hokuryu**	**4.77**	**334**	P	Pn	17 55 36.5	+3.2
JHR				*e*S	Sn	17 56 30.9	+3.7
JRY	**Ryogami san**	**5.66**	**234**	P	Pn	17 55 45.0	-0.5
JRY				*e*S	Sn	17 56 45.3	-3.8
MAT	**Matsushiro**	**5.80**	**242**	P	Pn	17 55 48.7	+1.2
MAT				*e*S	Sn	17 56 53.1	+0.3

*IDC **12** 18:04:50.5±1.6, 0°.45N×121°.79E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/19, mbtmp3.4/4, Error ellipse: s-maj=214.6km s-min=26.5km az=60.0*
*DJA **12** 18:04:53, 0°.96N×121°.51E, h10km, MLv4.0/8*
*ISCJB **12** 18:04:54.2±0.8, 0°.95N±0°.07×121°.38E±0°.08, h33km, mb3.3/4, Error ellipse: s-maj=12.8km s-min=6.9km az=143.2*
ISC 12 18:04:56.1±0.8, 0°.95N±0°.07×121°.47E±0°.09, h35km, n16, σ0s87/17, mb3.3/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.67**	**135**	P	**Pn**	**18 05 01.7**	**-7.4**
TOLI	**Toli-Toli**	**0.70**	**284**	P	**Pn**	**18 05 05.0**	**-4.5**
APSI	**Ampana**	**1.86**	**174**	P	**Pn**	**18 05 24.0**	**-1.5**
LUWI	**Luwuk**	**2.37**	**147**	P	**Pn**	**18 05 31.6**	**-0.9**
LUWI				S	**Sn**	**18 06 01.4**	**+1.0**
KMSI	**Cibinong**	**2.54**	**98**	P	**Pn**	**18 05 35.3**	**+0.5**
TTSI	**Tana Toraja**	**4.30**	**203**	P	**Pn**	**18 05 59.9**	**+0.8**
MYLDM	**Lahad Datu**	**5.14**	**325**	P	**Pn**	**18 06 10.9**	**+0.2**
24nm,0.9s							
SPSI	**Sidrap Palu**	**5.17**	**199**	P	**Pn**	**18 06 11.6**	**+0.6**
0.1nm33nm,0.7s							
BNSI	**Bone**	**5.49**	**194**	P	**Pn**	**18 06 16.1**	**+0.7**
0.1nm22nm,0.8s							
BKSI	**Bulukumba**	**6.37**	**192**	P	**Pn**	**18 06 27.5**	**-0.1**
9.3nm,0.9s							
BBSI	**Bau Bau**	**6.49**	**170**	P	**Pn**	**18 06 27.9**	**-1.3**
18nm,1.2s							
KKM	**Kota Kinabalu**	**7.29**	**314**	P	**Pn**	**18 06 39.9**	**-0.2**
WRA	**Warramunga Arr**	**24.30**	**149**	P	**P**	**18 10 04.2**	**-6.2**
1.4nm,0.8s,mb3.5,baz=326,slow=10,SNR=17							
ASAR	**Alice Springs**	**27.29**	**154**	P	**P**	**18 10 32.2**	**-5.3**
0.4nm,0.8s,mb3.0,baz=330,slow=8.1,SNR=7.1							
STKA	**Stephens Creek**	**37.81**	**151**	P	**P**	**18 12 03.3**	**-6.0**
1.1nm,0.8s,mb3.6,baz=321,slow=13,SNR=6.1							
MKAR	**Makanchi Array**	**57.01**	**329**	P	**P**	**18 14 42.4**	**+4.0**
0.1nm,0.3s,mb3.3,baz=134,slow=6.2,SNR=2.8							

CASC 12 18:05:00.8±1.3, 12°.44N×88°.17W, h41km±99km, MD3.5, ML3.1, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.90**	**22**	*e*P	Pn	18 05 17.0	+0.1
CNCH				*e*S	Sn	18 05 29.7	+1.0
VSM	**San Miguel**	**0.99**	**354**	*e*P	Pn	18 05 19.0	+0.8
BLLM	**Bellamira**	**1.00**	**356**	*e*P	Pn	18 05 18.6	+0.2
BLLM				*e*S	Sn	18 05 32.2	+0.9
CAHU	**Cacacuatique**	**1.32**	**358**	*e*P	Pn	18 05 23.7	+0.9
CAHU				*e*S	Sn	18 05 40.6	+1.3
SNVI	**San Vicente**	**1.34**	**331**	*e*P	Pn	18 05 24.1	+1.0
SNVI				*e*S	Sn	18 05 39.9	+0.4
LFRS	**El Faro**	**1.46**	**324**	*e*P	Pn	18 05 24.6	-0.2
LFRS				*e*S	Sn	18 05 43.1	+0.4
LBRS	**Las Brisas**	**1.55**	**327**	*e*P	Pn	18 05 26.5	+0.6
LBRS				*e*S	Sn	18 05 45.9	+1.1
COPN	**Copaltepe**	**1.56**	**99**	*e*P	Pn	18 05 25.8	-0.3
COPN				*e*S	Sn	18 05 45.5	+0.3
COPN				AML	AML	18 05 49.3	
comp=Z,261nm,0.4s							
MOMN	**Momotombo**	**1.59**	**91**	*e*P	Pn	18 05 25.9	-0.6
BOQS	**Boqueron**	**1.68**	**320**	*e*P	Pn	18 05 27.3	-0.4
BOQS				*e*S	Sn	18 05 49.0	+0.9
CSAN		**1.73**	**98**	*e*P	Pn	18 05 28.5	+0.1
TGUH	**Tegucigalpa,Un**	**1.83**	**28**	*e*P	Pn	18 05 29.4	-0.4
TICN	**Ticuantepe**	**1.94**	**102**	*e*P	Pn	18 05 32.1	+0.8
HUEN		**1.96**	**93**	*e*P	Pn	18 05 31.8	+0.3
SBLS	**San Blas**	**1.98**	**315**	*e*P	Pn	18 05 32.8	+0.9
SNJE	**San Jose**	**1.99**	**316**	*e*P	Pn	18 05 32.2	+0.2
RBDL	**Robledal**	**2.23**	**319**	*e*P	Pn	18 05 36.5	+1.3

CASC 12 18:15:35.3±1.9, 12°.53N×88°.13W, h37km±8km, MD3.6, ML2.7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.80**	**21**	*e*P	Pn	18 15 50.7	+0.6
CNCH				*e*S	Sn	18 16 01.2	+0.4
VSM	**San Miguel**	**0.91**	**351**	*e*P	Pn	18 15 51.9	+0.3
BLLM	**Bellamira**	**0.92**	**353**	*e*P	Pn	18 15 52.0	+0.3
BLLM				*e*S	Sn	18 16 04.1	+0.4
CAHU	**Cacacuatique**	**1.24**	**356**	*e*P	Pn	18 15 56.8	+0.6
CAHU				*e*S	Sn	18 16 13.1	+1.4
SNVI	**San Vicente**	**1.28**	**327**	*e*P	Pn	18 15 57.6	+0.9
SNVI				*e*S	Sn	18 16 13.6	+0.9
CNGN	**Cerro Negro**	**1.40**	**91**	*e*P	Pn	18 15 59.1	+0.9
CNGN				*e*S	Sn	18 16 17.9	+2.4
CNGN				AML	AML	18 16 22.8	
comp=N,103nm,0.3s							
LFRS	**El Faro**	**1.42**	**320**	*e*P	Pn	18 15 58.2	-0.4
LFRS				*e*S	Sn	18 16 17.1	+1.0
LBRS	**Las Brisas**	**1.50**	**324**	*e*P	Pn	18 15 59.9	+0.1
COPN	**Copaltepe**	**1.54**	**103**	*e*P	Pn	18 15 59.9	-0.4
COPN				*e*S	Sn	18 16 18.9	-0.2
MOMN	**Momotombo**	**1.56**	**94**	*e*P	Pn	18 15 58.2	-2.2
TICN	**Ticuantepe**	**1.92**	**105**	*e*P	Pn	18 16 06.1	+0.6
RBDL	**Robledal**	**2.19**	**316**	*e*P	Pn	18 16 09.9	+0.7

*CSEM **12** 18:19:20.3±0.9, 40°.11N×26°.82E, h10km, MD2.6, Error ellipse: s-maj=20.2km s-min=16.9km az=14.0*
*DDA **12** 18:19:21.1, 40°.07N×26°.79E, h7km±6km, Md2.8*
ISK 12 18:19:16.6, 40°.04N×27°.03E, h27km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.39**	**328**	*e*PG	Pb	18 19 25.9	+0.7
LPK	**Lapseki**	**0.39**	**328**	*e*Pg	Pb	18 19 25.9	+0.8
GONE	**Gonen-Balikesi**	**0.50**	**89**	*e*PG	Pb	18 19 27.6	+0.7
GONE	**Gonen-Balikesi**	**0.50**	**89**	*e*Pg	Pb	18 19 27.6	+0.7
BALY	**Balya**	**0.54**	**123**	*i* P	Pb	18 19 34.6	+7.1
BALY				*i* S	Sb	18 19 46.7	+12
BALY	**Balya**	**0.54**	**123**	*i* P	Pb	18 19 34.6	+7.0
BALY				*i* S	Sb	18 19 46.7	+12
GELI	**Tayfur-Gelibol**	**0.56**	**310**	*e*PG	Pb	18 19 28.8	+0.9
GELI				*e*SG	Sb	18 19 37.2	+1.7
GELI	**Tayfur-Gelibol**	**0.56**	**310**	*e*Pg	Pb	18 19 28.8	+1.0
GELI				*e*Sg	Sb	18 19 37.2	+1.7
RKY	**Sarkoy-Tekirda**	**0.66**	**10**	*e*PG	Pb	18 19 30.3	+0.9
RKY	**Sarkoy-Tekirda**	**0.66**	**10**	*e*Pg	Pb	18 19 30.3	+0.8
SART	**Tekirdag**	**0.66**	**10**	*i* P	Pb	18 19 34.1	+4.6
SART				*e*S	Sb	18 19 43.1	+4.8
SART	**Tekirdag**	**0.66**	**10**	*i* P	Pb	18 19 34.1	+4.6
SART				*e*S	Sb	18 19 43.1	+4.8
BOZC	**Bozcaada**	**0.78**	**256**	*i* P	Pb	18 19 34.0	+2.4
BOZC				*i* S	Sb	18 19 41.6	-0.1
GADA	**Gvkgeada**	**0.88**	**280**	*e*PG	Pn	18 19 33.5	+0.3
GADA	**Gvkgeada**	**0.88**	**280**	*e*Pg	Pn	18 19 33.6	+0.4

PGC 12 18:19:51.2±62.0, 47°.34N×128°.92W, h10km, ML2.9/8, Mw3.5, 6D, 300km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDR	**Gold River**	**3.11**	**37**	⇓Pn	Pn	18 20 38.8	-1.4
WOSB	**Woss**	**3.23**	**28**	⇓Pn	Pn	18 20 40.3	-1.5
PFB	**Port Renfrew**	**3.25**	**66**	⇑Pn	Pn	18 20 40.8	-1.3
PFB				⇑Sn	Sn	18 21 16.6	-4.3
MAYB	**Maynard**	**3.28**	**20**	⇓Pn	Pn	18 20 40.7	-1.9
MGB	**Mount Grey**	**3.28**	**58**	⇑Pn	Pn	18 20 41.2	-1.4
CBB	**Campbell River**	**3.58**	**40**	⇓Pn	Pn	18 20 45.2	-1.5
NCRB	**Newcastle Ridg**	**3.60**	**31**	⇑Pn	Pn	18 20 46.4	-0.7
LZB	**Mount Lazard**	**3.65**	**68**	⇓Pn	Pn	18 20 46.5	-1.1
TXB	**Texada**	**3.80**	**50**	⇓Pn	Pn	18 20 49.0	-0.7
BBB	**Bella Bella**	**4.88**	**6**	⇑Pn	Pn	18 21 03.3	-1.2

DJA 12 18:36:24, 3°.39N×126°.35E, h141km, MLv4.2/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**2.45**	**218**	P	Pn	18 37 04.2	+0.1
MNI				S	Sn	18 37 36.8	+1.8
TNTI	**Ternate**	**2.79**	**159**	P	Pn	18 37 07.6	-0.8
TNTI				S	Sn	18 37 46.9	+4.2
KMSI	**Cibinong**	**3.66**	**220**	P	Pn	18 37 20.9	+1.2
MRSI	**Marisa**	**5.27**	**237**	P	Pn	18 37 39.9	-1.0
0.3nm1μm53nm,0.8s							
LUWI	**Luwuk**	**5.67**	**219**	P	Pn	18 37 49.6	+3.3
0.1nm34nm,0.8s							
NLAI	**Namlea**	**6.63**	**173**	P	Pn	18 37 59.6	+0.5
0.5nm3μm46nm,0.3s							
NLAI				S	Sn	18 39 14.6	+1.1
0.5nm3μm46nm,0.3s							
KDI	**Kendari**	**8.20**	**207**	P	Pn	18 38 19.6	-0.5

**IDC 12 18:40:19.9±37.0, 11°

LPAZ S Sn 19 09 46.7 +1.1
LCO Las Campanas 7.29 196 *e*Pn Pn 19 09 02.4 -1.1
26nm,0.3s
LCO *e*Sn Sn 19 10 20.5 -4.2
CFAA Coronel Fontan 9.58 179 P Pn 19 09 33.9 -0.7
0.3nm,0.3s,baz=0.3,slow=12,SNR=13
CFAA S Sn 19 11 15.8 -4.6
0.3nm,0.3s,baz=306,slow=14,SNR=4.1
CFAA Coronel Fontan 9.58 179 P Pn 19 09 33.9 -0.7
CFAA S Sn 19 11 15.8 -4.6
CPUP Villa Florida 11.01 115 *e*Pn Pn 19 09 54.5 +0.4
11nm,0.6s
NNA Nana 12.80 320 Pn Pn 19 10 16.2 -2.0
TRQA Tornquist 16.95 162 *e*Pn Pn 19 11 12.7 +1.9
15nm,1.0s
PLCA Paso Flores 18.77 185 P Pn 19 11 33.6 +0.9
0.2nm,0.3s,baz=348,slow=6.2,SNR=7.1
BCIP Isla Barro Col 32.93 339 P P 19 13 46.1 +0.9
12nm,0.8s,mb4.8
APG El Apazote 42.65 328 P P 19 15 07.7 +0.7
3.5nm,0.7s,mb4.2,baz=85,slow=12,SNR=4.0
DWPF Disney 51.37 345 *e*P P 19 16 13.6 -1.0
19nm,0.7s,mb5.2
TKL Tuckaleechee C 59.15 345 P P 19 17 09.1 -1.3
3.9nm,0.7s,mb4.5,baz=185,slow=7.8,SNR=4.6
SWET Sewanee 59.27 343 *e*P P 19 17 09.9 -1.2
WVT Waverly 60.65 342 *e*P P 19 17 18.6 -2.0
3.7nm,0.8s,mb4.5
MIAR Mount Ida 61.10 336 *e*P P 19 17 22.3 -1.4
4.1nm,0.9s,mb4.5
TXAR Lajitas Array 61.29 325 P P 19 17 24.9 -0.2
0.3nm,0.6s,mb3.5,baz=144,slow=7.1,SNR=4.1
TXAR Lajitas Array 61.29 325 P P 19 17 24.9 -0.2
SNAA Sanae 61.67 161 P P 19 17 28.1 +1.0
1.6nm,0.6s,mb4.2,baz=283,slow=6.5,SNR=40
LIC Lamto 68.08 73 *e*P P 19 18 08.5 -1.2
68nm,1.6s,mb5.2
QSPA South Pole Qui 68.20 180 P P 19 18 11.4 +2.0
5.1nm,0.5s,mb4.6,baz=173,slow=0.7,SNR=72
QSPA South Pole Qui 68.20 180 *e*P P 19 18 11.1 +1.8
2.3nm,0.4s,mb4.4
TIC Toumodi 68.28 73 *e*P P 19 18 10.0 -0.9
38nm,1.2s,mb5.1
KIC Kosan Boka 68.40 73 *e*P P 19 18 10.2 -1.4
18nm,0.6s,mb5.0
DBIC Dimbokro 68.44 73 P P 19 18 10.4 -1.4
8.1nm,0.6s,mb4.7,baz=217,slow=7.8,SNR=14
DBIC Dimbokro 68.44 73 *e*P P 19 18 10.2 -1.6
14nm,0.8s,mb4.9
SDCO Great Sand Dun 68.90 329 *e*P P 19 18 15.1 +0.9
2.3nm,0.8s,mb4.1
SMCO Snowmass 70.74 329 *e*P P 19 18 27.5 +2.1
4.7nm,0.8s,mb4.4
ISA Isabella 74.39 320 *e*P P 19 18 48.0 +0.8
3.8nm,0.8s,mb4.2
PDAR Pinedale Array 74.76 330 P P 19 18 49.5 +0.3
0.7nm,0.6s,mb3.5,baz=122,slow=7.3,SNR=6.7
HWUT Hardware Ranch 74.84 328 *e*P P 19 18 49.7 +0.1
2.4nm,0.6s,mb4.1
SBA Scott Base 75.43 190 *e*P P 19 18 51.4 -1.2
5.0nm,1.3s,mb4.1
SYO Syowa Base 75.89 159⇑*e*P P 19 18 54.8 -0.5
NVAR Mina Array Bea 76.16 322 P P 19 18 58.6 +1.3
1.3nm,0.8s,mb3.7,baz=161,slow=7.1,SNR=9.3
HLID Hailey 77.70 328 *e*P P 19 19 07.1 +1.3
3.6nm,0.7s,mb4.2
SUR Sutherland 77.94 120 P P 19 19 08.5 +1.0
4.6nm,0.8s,mb4.2,baz=270,slow=2.0,SNR=4.4
TSUM Tsumeb 79.46 106 P P 19 19 16.3 +0.1
5.1nm,0.7s,mb4.5,baz=232,slow=6.0,SNR=12
BOSA Boshof 82.81 118 P P 19 19 33.6 -0.2
5.2nm,0.7s,mb4.5,baz=240,slow=3.8,SNR=8.3
MAW Mawson 83.73 163 P P 19 19 38.5 +0.8
2.8nm,0.6s,mb4.2,baz=209,slow=7.2,SNR=9.5
MAW Mawson 83.73 163 *e*P P 19 19 38.1 +0.4
0.6nm,0.6s,mb3.6
LBTB Lobatse 84.40 115 P P 19 19 41.8 -0.2
6.0nm,0.8s,mb4.5,baz=239,slow=7.1,SNR=9.7
YKA Yellowknife Ar 91.80 340 P P 19 20 15.9 -0.4
3.9nm,0.7s,mb4.8,baz=134,slow=4.5,SNR=22
CASY Casey 92.00 180 *e*P P 19 20 18.2 +0.7
4.6nm,0.9s,mb4.7
ASAR Alice Springs 129.69 207 PKP PKPdf 19 26 18.5 +0.1
1.6nm,0.8s,baz=147,slow=2.3,SNR=21
ABKAR Akbulak array 131.19 43 *e*PKPdf PKPdf 19 26 20.7 +0.4
WRA Warramunga Arr 132.76 210 PKP PKPdf 19 26 24.6 +0.3
1.5nm,0.7s,baz=161,slow=1.7,SNR=31
BVAR Borovoye Array 135.93 35 PKP PKPdf 19 26 29.3 +0.2
0.5nm,0.4s,baz=274,slow=4.2,SNR=5.1
FITZ Fitzroy Crossi 137.85 200 PKP PKPdf 19 26 34.2 +0.4
1.4nm,0.7s,baz=176,slow=9.5,SNR=5.2
ZAA0 Zalesovo Array 142.20 26 *e*PKPdf PKPdf 19 26 40.1 -0.3
ZALV Zalesovo Beam 142.20 26 PKhKP PKPpre 19 26 36.6
2.6nm,0.6s,baz=331,slow=5.6,SNR=3.8
ZALV PKP PKPdf 19 26 40.5 0.0
2.9nm,0.6s,baz=313,slow=3.0,SNR=14
ZALV Zalesovo Beam 142.20 26 PKP PKPpre 19 26 36.6
ZALV PKP PKPdf 19 26 40.5 0.0
EKS2 Erkin-Say 142.40 48 *e*PKPdf PKPdf 19 26 42.5 +1.3
MK31 Makanchi Array 145.75 37 *e*PKPdf PKPdf 19 26 47.0 0.0
MKAR Makanchi Array 145.75 37 PKPbc PKPbc 19 26 46.9 -0.7
1.7nm,0.5s,baz=312,slow=4.3,SNR=26
ASAJ Asahikawa 146.22 318 PKPbc PKPbc 19 26 48.8 -0.2
4.6nm,0.7s,baz=59,slow=5.8,SNR=5.6
SONM Songino Array 153.88 8 PKP PKPdf 19 27 00.4 +0.7
0.3nm,0.4s,baz=316,slow=4.1,SNR=4.6
SONM PKPbc PKPbc 19 27 07.9 +0.1
1.5nm,1.1s,baz=355,slow=1.9,SNR=3.5
SONM PKPab PKPab 19 27 21.2 +0.2
0.6nm,0.8s,baz=9.7,slow=0.7,SNR=2.9
KSRS Korea Array 159.10 321 PKP PKPdf 19 27 07.2 +0.4
0.2nm,0.5s,baz=5.7,slow=1.2,SNR=5.2

*ISCJB **12** 19:09:30.2±2.5,2°.3N±0°.2×126°.84E±0°.07,h39km±18km, mb3.5/4, Error ellipse: s-maj=27.0km s-min=10.6km az=15.5*
*IDC **12** 19:09:31.9±1.9,1°.53N×126°.46E,h0km,mb3.5/4, mb1 3.7/4,mb1mx3.5/17,mbtmp3.5/4, Error ellipse: s-maj=152.0km s-min=26.3km az=65.0*
*DJA **12** 19:09:31,2°.21N×126°.83E,h30km,MLv3.6/3*
ISC 12 19:09:30.0±3.9,2°.3N±0°.2×126°.87E±0°.07,h24km±36km,n9, σ0s64/12,mb3.5/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.57**	**162**	P	**Pn**	19 09 56.4	**0.0**
TNTI				S	**Sn**	19 10 15.5	**-0.4**
MNI	**Manado**	**2.19**	**248**	P	**Pn**	19 10 04.5	**-0.4**
MNI				S	**Sn**	19 10 30.2	**-1.1**
MNI	**Manado**	**2.19**	**248**	P	**Pn**	19 10 04.7	**-0.2**
KMSI	**Cibinong**	**3.34**	**240**	P	**Pn**	19 10 20.9	**+0.1**
LUWI	**Luwuk**	**5.25**	**231**	P	**Pn**	19 10 47.6	**+0.5**
LUWI				S	**Sn**	19 11 48.1	**+1.1**
WRA	**Warramunga Arr**	**23.26**	**162**	P	**P**	19 14 35.2	**-0.7**
	1.3nm,0.5s,mb3.6,baz=339,slow=11,SNR=23						
ASAR	**Alice Springs**	**26.67**	**166**	P	**P**	19 15 07.5	**+0.2**
	0.3nm,0.5s,mb3.1,baz=344,slow=7.3,SNR=18						
STKA	**Stephens Creek**	**36.72**	**159**	P	**P**	19 16 36.2	**+0.7**
	2.8nm,1.1s,mb4.0,baz=330,slow=14,SNR=2.8						
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	19 19 35.1	**+8.5**
	0.1nm,0.5s,mb3.1,baz=125,slow=7.5,SNR=3.3						

*IDC **12** 19:35:58.9±1.7,41°.28N×140°.62E,h0km,mb3.4/4, mb1 3.5/5,mb1mx3.3/22,mbtmp3.4/5,ML3.0/1, Error ellipse: s-maj=40.8km s-min=29.0km az=79.0*
*ISCJB **12** 19:36:10.4±0.5,41°.87N±0°.04×141°.43E±0°.06, h134km±4km,mb3.3/4, Error ellipse: s-maj=8.0km s-min=4.7km az=38.3*
*JMA **12** 19:36:11.8±0.1,41°.89N×141°.43E,h128km±1km,M3.0*
ISC 12 19:36:11.3±0.5,41°.87N±0°.04×141°.44E±0°.05,h132km±4km, n22,σ0s59/38,mb3.3/4,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.31**	**273**	P	**Pn**	19 36 29.6	**-0.1**
JKB				*e*S	**Sn**	19 36 43.5	**-0.1**
JOT	**Ohata**	**0.57**	**211**	P	**Pn**	19 36 31.2	**+0.2**
JOT				*e*S	**Sn**	19 36 46.3	**+0.4**
JNB	**Noboribetsu**	**0.67**	**333**	P	**Pn**	19 36 31.4	**-0.2**
JYM2	**Yakumo 2**	**0.84**	**287**	P	**Pn**	19 36 33.1	**+0.2**
JYM2				*e*S	**Sn**	19 36 49.4	**0.0**
JSR	**Shiriuchi**	**0.84**	**246**	P	**Pn**	19 36 33.3	**+0.3**
JSR				*e*S	**Sn**	19 36 48.9	**-0.5**
JEW	**Eniwo**	**0.97**	**0**	P	**Pn**	19 36 34.2	**+0.1**
JEW				*e*S	**Sn**	19 36 51.1	**-0.3**
JNBK	**Urakawa-nobuka**	**1.06**	**67**	P	**Pn**	19 36 35.6	**+0.7**
JNBK				*e*S	**Sn**	19 36 53.9	**+1.1**
JTM	**Tenmabayashi**	**1.12**	**195**	P	**Pn**	19 36 36.1	**+0.6**
JTM				*e*S	**Sn**	19 36 54.3	**+0.4**
JBT2	**Biratori 2**	**1.13**	**37**	P	**Pn**	19 36 36.1	**+0.5**
JBT2				*e*S	**Sn**	19 36 54.5	**+0.3**
JOSM	**Okushiri--Mats**	**1.48**	**279**	P	**Pn**	19 36 39.0	**-0.3**
JOSM				*e*S	**Sn**	19 36 59.9	**-0.8**
JANG	**Nango**	**1.50**	**178**	P	**Pn**	19 36 39.5	**0.0**
JANG				*e*S	**Sn**	19 36 59.8	**-1.2**
JFR	**Furan**	**1.55**	**33**	P	**Pn**	19 36 40.5	**+0.5**
JFR				*e*S	**Sn**	19 37 01.2	**-0.8**
JCH	**Churui**	**1.61**	**62**	P	**Pn**	19 36 41.3	**+0.6**
JCH				*e*S	**Sn**	19 37 02.8	**-0.4**
JSK	**Shakotan**	**1.64**	**335**	P	**Pn**	19 36 41.3	**+0.2**
JHR	**Hokuryu**	**1.88**	**6**	P	**Pn**	19 36 44.8	**+0.9**
JHR				*e*S	**Sn**	19 37 09.8	**+0.9**
JKK2	**Kamakawa 2**	**2.22**	**25**	P	**Pn**	19 36 48.3	**+0.3**
JKK2				*e*S	**Sn**	19 37 15.2	**-1.0**
JAR	**Ashorobuto**	**2.23**	**50**	P	**Pn**	19 36 48.1	**-0.1**
JAR				*e*S	**Sn**	19 37 14.9	**-1.6**
ASAJ	**Asahikawa**	**2.40**	**20**	Pn	**Pn**	19 36 50.5	**+0.3**
	1.1nm,0.3s,baz=222,slow=14,SNR=19						
ASAJ				Sn	**Sn**	19 37 19.5	**-0.7**
	3.0nm,0.3s,baz=232,slow=18,SNR=9.5						
SONM	**Songino Array**	**25.40**	**296**	P	**P**	19 41 26.2	**0.0**
	0.3nm,0.4s,mb3.2,baz=101,slow=7.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**38.81**	**308**	P	**P**	19 43 23.2	**+0.3**
	0.4nm,0.4s,mb3.4,baz=95,slow=8.8,SNR=3.7						
MKAR	**Makanchi Array**	**41.73**	**298**	P	**P**	19 43 47.3	**+0.3**
	0.4nm,0.6s,mb3.2,baz=79,slow=7.5,SNR=4.9						
WRA	**Warramunga Arr**	**61.85**	**188**	P	**P**	19 46 15.3	**-1.0**
	0.3nm,0.7s,mb3.2,baz=4.7,slow=7.0,SNR=5.8						

*ISCJB **12** 19:43:37.3±1.4,13°.38N±0°.06×90°.66W±0°.04,h23km±7km, Error ellipse: s-maj=11.3km s-min=5.0km az=22.5*
*CASC **12** 19:43:39.0±1.9,13°.47N×90°.64W,h37km±247km,MD3.4, ML3.6*
ISC 12 19:43:37.2±1.4,13°.40N±0°.05×90°.65W±0°.04,h16km±10km, n20,σ0s55/36,4C-2D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.79**	**14**	*e*P	**Pb**	19 43 53.2	**+0.7**
PCG	**Pacaya**	**0.98**	**2**	*e*P	**Pb**	19 43 56.0	**+0.1**
PCG				*e*S	**Sb**	19 44 08.3	**-0.3**
FUG	**Fuego 3**	**1.05**	**350**	*e*P	**Pb**	19 43 56.9	**-0.1**
SBLS	**San Blas**	**1.09**	**66**⇑	*e*P	**Pb**	19 43 57.3	**-0.3**
SBLS				*e*P		19 43 57.4	
SBLS				*e*S	**Sb**	19 44 09.8	**-1.7**
SBLS				*e*S	**Sb**	19 44 12.3	**+0.8**
RTR	**El Retiro**	**1.09**	**63**⇑	*e*P	**Pb**	19 43 57.7	**0.0**
RTR				*e*S	**Sb**	19 44 12.6	**+0.9**
SNJE	**San Jose**	**1.11**	**65**⇑	*e*P	**Pb**	19 43 57.7	**-0.4**
SNJE				*e*S	**Sb**	19 44 12.4	**+0.1**
RBDL	**Robledal**	**1.17**	**53**⇑	*e*P	**Pn**	19 43 58.6	**-0.4**
RBDL				*e*S	**Sb**	19 44 13.6	**-0.4**
FG6		**1.17**	**349**	*e*P	**Pn**	19 43 58.6	**-0.4**
FG6				*e*S	**Sb**	19 44 13.1	**-0.9**
NBG	**Las Nubes**	**1.21**	**14**	*e*P	**Pn**	19 44 00.4	**+0.9**
NBG				*e*S	**Sb**	19 44 16.4	**+1.2**
JAT	**Jato**	**1.32**	**314**⇓	*e*P	**Pn**	19 44 01.1	**+0.1**
BOQS	**Boqueron**	**1.37**	**76**	*e*P	**Pn**	19 44 01.9	**+0.2**
BOQS				*e*S	**Sn**	19 44 19.3	**-0.2**
SNET	**Serv Nac Est T**	**1.41**	**78**	*e*P	**Pn**	19 44 02.1	**-0.1**
SNET				*e*S	**Sn**	19 44 19.9	**-0.5**
SNET				AML	AML	19 44 23.4	
	comp=Z,1μm,0.3s						
TP2	**Tecpan 2**	**1.42**	**345**⇓	*e*P	**Pn**	19 44 02.6	**+0.3**
TP2				*e*S	**Sn**	19 44 20.8	**+0.1**
LFRS	**El Faro**	**1.56**	**82**	*e*P	**Pn**	19 44 04.2	**-0.1**
LFRS				*e*S	**Sn**	19 44 24.4	**+0.3**
MTO2	**Montecristo 2**	**1.59**	**51**	*e*P	**Pn**	19 44 03.6	**-1.2**
MTO2				*e*S	**Sn**	19 44 24.9	**-0.2**
LBRS	**Las Brisas**	**1.59**	**78**	*e*P	**Pn**	19 44 04.6	**-0.1**
LBRS				*e*S	**Sn**	19 44 24.5	**-0.6**
SNVI	**San Vicente**	**1.77**	**83**	*e*P	**Pn**	19 44 07.5	**+0.3**
SNVI				*e*S	**Sn**	19 44 29.6	**+0.1**
MRL	**Marmol**	**1.90**	**29**	*e*P	**Pn**	19 44 09.3	**+0.4**
CAHU	**Cacacuatique**	**2.40**	**81**	*e*P	**Pn**	19 44 15.7	**-0.2**
CNCH	**Conchagua**	**2.74**	**92**	*e*P	**Pn**	19 44 20.5	**-0.1**
CNCH				*e*S	**Sn**	19 44 54.5	**+1.1**

*ISCJB **12** 19:50:38.4±0.2,62°.20N±0°.02×149°.52W±0°.06,h60km±3km, mb4.0/15, Error ellipse: s-maj=4.3km s-min=3.8km az=3.0*
*IDC **12** 19:50:39.2±0.8,62°.30N×149°.67W,h58km±6km,mb3.6/12, mb1 3.9/16,mb1mx3.7/25,mbtmp3.7/16,MS3.0/3, Ms1 3.0/3,ms1mx2.6/33, Error ellipse: s-maj=12.5km s-min=10.7km az=121.0*
*NEIC **12** 19:50:40.1,62°.16N×149°.43W,h40km,mb4.6/2, ML4.0(PMR),ML3.9(AEIC),After AEIC.*
NEIC Felt at Chugiak, Palmer and Talkeetna.
ISC 12 19:50:39.5±0.2,62°.18N±0°.02×149°.53W±0°.05,h52km±3km, h56km±2.9km:pP-P,n113,σ0s86/120,mb4.0/15,23C-22D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMR	**Palmer**	**0.61**	**162**	*e*P	**Pn**	19 50 50.8	**-1.4**
SML	**Sawmill**	**0.68**	**122**	P	**Pn**	19 50 51.4	**-1.5**
SML				S	**Sn**	19 51 02.3	**-0.4**
SUA	**Susitna One**	**0.92**	**219**	P	**Pn**	19 50 56.2	**+0.1**
SUA				S	**Sn**	19 51 10.1	**+2.2**
KNK	**Knik Glacier**	**0.92**	**146**	P	**Pn**	19 50 55.4	**-0.8**
SKT	**Skwentna**	**0.96**	**259**	P	**Pn**	19 50 56.4	**-0.2**
SKT				S	**Sn**	19 51 09.7	**+0.7**
FIB	**Fire Island**	**1.06**	**197**	P	**Pn**	19 50 58.6	**+0.6**
RC01	**Rabbit Creek A**	**1.09**	**185**	P	**Pn**	19 50 57.9	**-0.6**
RC01				S	**Sn**	19 51 12.7	**+0.4**
SCM	**Sheep Creek Mo**	**1.10**	**107**	P	**Pn**	19 50 57.5	**-0.9**
RND	**Reindeer**	**1.27**	**14**	P	**Pn**	19 51 00.9	**0.0**
TRF	**Thorofare Moun**	**1.33**	**345**	P	**Pn**	19 51 02.1	**+0.5**
DHY	**Denali Highway**	**1.35**	**47**	P	**Pn**	19 51 01.2	**-0.6**
PPLA	**Purkeypile**	**1.43**	**302**	P	**Pn**	19 51 03.5	**+0.6**
MCK	**McKinley**	**1.59**	**10**	P	**Pn**	19 51 05.6	**+0.4**
SLKM	**Skilak Lake**	**1.71**	**192**	P	**Pn**	19 51 06.3	**-0.5**
BPAW	**Bear Paw Mtn.**	**2.04**	**342**	P	**Pn**	19 51 11.4	**+0.1**
PAX	**Paxson**	**2.04**	**65**	P	**Pn**	19 51 12.2	**+0.9**
CHUM	**Lake Minchumin**	**2.13**	**325**	P	**Pn**	19 51 13.1	**+0.6**
BRLK	**Bradley Lake**	**2.51**	**196**	P	**Pn**	19 51 18.2	**+0.5**
HDA	**Harding Lake**	**2.52**	**26**	P	**Pn**	19 51 18.6	**+0.6**
CNPM	**China Poot**	**2.79**	**198**	P	**Pn**	19 51 22.4	**+0.8**
MENT	**Mentasta**	**2.80**	**72**	*e*P	**Pn**	19 51 23.6	**+1.9**
COLA	**College**	**2.81**	**15**	P	**Pn**	19 51 21.9	**0.0**
MDM	**Murphy Dome**	**2.85**	**11**	P	**Pn**	19 51 22.6	**+0.1**
ILAR	**Eielson Array**	**2.86**	**23**	P	**Pn**	19 51 22.2	**-0.3**
	8.1nm,0.3s,baz=207,slow=14,SNR=145						
ILAR				S	**Sn**	19 51 54.4	**-1.4**
	33nm,0.3s,baz=218,slow=24,SNR=15						
IL1	**Eielson Array**	**2.87**	**23**	P	**Pn**	19 51 22.3	**-0.3**
DOT	**Dot Lake**	**2.91**	**57**	P	**Pn**	19 51 23.9	**+0.8**
SVW2	**Sparrevohn**	**3.08**	**252**	*e*P	**Pn**	19 51 25.2	**-0.4**
TT01	**Tatalina**	**3.09**	**287**	P	**Pn**	19 51 25.8	**0.0**
TTA	**Tatalina**	**3.10**	**287**	*e*P	**Pn**	19 51 25.6	**-0.1**
MID	**Middleton Isla**	**3.17**	**149**	*e*Pn	**Pn**	19 51 28.4	**+1.6**
MID				*e*P		19 51 31.6	
BCA3	**Beaver Creek A**	**3.69**	**73**	P	**Pn**	19 51 33.9	**0.0**
GCSA	**Galena City Sc**	**4.18**	**311**	P	**Pn**	19 51 41.4	**+0.8**
IM3	**Indian Mountai**	**4.25**	**336**	P	**Pn**	19 51 41.9	**+0.4**
EGAK	**Eagle**	**4.57**	**52**	P	**Pn**	19 51 46.1	**+0.1**
KDAK	**Kodiak Island**	**4.67**	**201**	P	**Pn**	19 51 45.3	**-2.0**
	6.5nm,0.3s,baz=35,slow=9.8,SNR=33						
KDAK				S	**Sn**	19 52 28.9	**-11**
	2.1nm,0.3s,baz=307,slow=20,SNR=3.8						
KDAK	**Kodiak Island**	**4.67**	**201**	P	**Pn**	19 51 45.6	**-1.6**
DAWY	**Dawson**	**4.98**	**63**	P	**Pn**	19 51 51.8	**+0.3**
COLD	**Coldfoot**	**5.08**	**357**	P	**Pn**	19 51 53.5	**+0.6**
OHAK	**Old Harbor**	**5.32**	**203**	P	**Pn**	19 51 54.2	**-2.0**
BM3	**Burnt Mountain**	**5.67**	**20**	P	**Pn**	19 52 01.4	**+0.5**
WHY	**Whitehorse**	**7.19**	**96**	P	**Pn**	19 52 19.8	**-2.0**
SKAG	**Skagway**	**7.46**	**105**	*e*P	**Pn**	19 52 25.0	**-0.5**
SIT	**Sitka**	**8.83**	**119**	*e*Pn	**Pn**	19 52 41.7	**-2.6**
INK	**Inuvik**	**9.08**	**41**	P	**Pn**	19 52 48.2	**+0.5**
	0.9nm,0.3s,baz=242,slow=18,SNR=11						
INK				S	**Sn**	19 54 27.3	**-1.0**
	1.4nm,0.3s,baz=230,slow=16,SNR=6.7						
INK				LR	LR	19 56 26.6	
	comp=Z,60nm,18.4s,baz=25,slow=38						
INK	**Inuvik**	**9.08**	**41**	*e*Pn	**Pn**	19 52 48.6	**+0.9**
	12nm,0.9s						
INK				*e*Sn	**Sn**	19 54 29.6	**+1.4**
DLBC	**Dease Lake**	**10.36**	**102**	P	**Pn**	19 53 05.5	**+0.3**
	0.4nm,0.3s,baz=268,slow=10,SNR=4.1						
DLBC				LR	LR	19 58 05.3	
	comp=Z,75nm,20.8s,baz=160,slow=43						
DLBC	**Dease Lake**	**10.36**	**102**	*e*Pn	**Pn**	19 53 05.3	**+0.2**
BBB	**Bella Bella**	**15.25**	**121**	LR	LR	19 59 35.7	
	comp=Z,91nm,19.1s,baz=298,slow=35						
YKA	**Yellowknife Ar**	**16.11**	**73**	P	**Pn**	19 54 22.7	**+0.7**
	0.1nm,0.3s,baz=284,slow=11,SNR=8.4						
EDM	**Edmonton**	**21.04**	**99**	*e*P	**P**	19 55 19.9	**+1.3**
NEW	**Newport**	**22.82**	**113**	⇓P	**P**	19 55 38.1	**+0.4**
	baz=23						
B12A	**Libby**	**23.34**	**110**	⇓P	**P**	19 55 43.2	**+0.3**
	baz=23						
C11A	**Tepee Creek (N**	**23.52**	**112**	⇓P	**P**	19 55 44.4	**-0.2**
	baz=23						
B13A	**Whitefish**	**23.91**	**109**	⇑P	**P**	19 55 47.7	**-0.3**
	baz=24						
A14A	**Double T Ranch**	**23.93**	**107**	⇑P	**P**	19 55 48.5	**+0.2**
	baz=24						
G08A	**Pilot Rock**	**24.40**	**120**	⇓P	**P**	19 55 52.3	**-0.3**
	baz=24						
B14A	**Marquette Ranc**	**24.45**	**108**	⇑P	**P**	19 55 52.4	**-0.6**
	baz=24,SNR=5.4						
D12A	**Red Ives Fores**	**24.52**	**112**	⇑P	**P**	19 55 53.5	**-0.2**
	baz=24						
C14A	**Swan Lake**	**24.68**	**109**	⇓P	**P**	19 55 55.0	**-0.1**
	baz=24						
B15A	**Bradely Ranch,**	**24.80**	**107**	⇓P	**P**	19 55 55.7	**-0.5**
	baz=25,SNR=5.6						
D13A	**Huson**	**24.88**	**111**	⇑P	**P**	19 55 57.1	**+0.1**
	baz=25						
C15A	**Salmond Ranch,**	**25.18**	**108**	⇑P	**P**	19 55 59.8	**+0.2**
	baz=25						
D14A	**Greenough**	**25.31**	**110**	⇑P	**P**	19 56 00.6	**-0.3**
	baz=25						
FFC	**Flin Flon**	**25.44**	**85**	*e*P	**P**	19 56 00.4	**-1.5**
	33nm,1.6s,mb4.6						
B17A	**L&G Farms, Che**	**25.61**	**105**	P	**P**	19 56 03.1	**-0.5**
	baz=26,SNR=5.4						
YBH	**Yreka Blue Hor**	**25.97**	**130**	P	**P**	19 56 07.0	**+0.1**
	0.9nm,0.5s,mb3.6,baz=305,slow=9.3,SNR=3.7						
C17A	**Wharram Farm,**	**26.12**	**106**	⇓P	**P**	19 56 07.5	**-0.6**
	baz=26,SNR=8.6						
D16A	**Dana Ranch, Ca**	**26.22**	**108**	⇑P	**P**	19 56 08.7	**-0.4**
	baz=26						
EGMT	**Eagleton**	**26.29**	**104**	⇓P	**P**	19 56 09.6	**0.0**
	baz=26						
B19A	**Brinkman Farms**	**26.34**	**103**	⇓P	**P**	19 56 10.2	**0.0**
	baz=26						
A20A	**Cobblestone Ra**	**26.50**	**101**	⇓P	**P**	19 56 11.2	**-0.4**
	baz=26						
D17A	**Six Diamond Ra**	**26.51**	**106**	⇓P	**P**	19 56 11.3	**-0.4**
	baz=26						
E16A	**East Helena**	**26.54**	**109**	⇓P	**P**	19 56 12.0	**0.0**
	baz=26						
C19A	**Slack Wire Ran**	**26.82**	**104**	⇓P	**P**	19 56 14.4	**0.0**
	baz=27						
E17A	**Martinsdale**	**26.96**	**108**	⇑P	**P**	19 56 16.0	**+0.3**
	baz=27						
MFID	**Camas Ranch**	**27.23**	**118**	⇓P	**P**	19 56 18.1	**-0.1**
	baz=27						
D19A	**Cripps Ranch,**	**27.32**	**104**	⇑P	**P**	19 56 18.8	**-0.1**
	baz=27						
G16A	**Moss Hill, Enn**	**27.49**	**110**	⇓P	**P**	19 56 20.6	**0.0**
	baz=27						
I13A	**Wildhorse Cree**	**27.54**	**115**	⇑P	**P**	19 56 21.2	**+0.3**
	baz=27						
D20A	**Manuel Ranch,**	**27.71**	**104**	⇑P	**P**	19 56 22.7	**+0.2**
	baz=28						
G18A	**Lazy EL Ranch,**	**28.42**	**108**	⇑P	**P**	19 56 29.0	**+0.3**
	baz=28						
RLMT	**Red Lodge**	**28.70**	**108**	⇑P	**P**	19 56 32.2	**+0.9**
	baz=28,SNR=7.4						
RLMT	**Red Lodge**	**28.70**	**108**	*e*P	**P**	19 56 31.9	**+0.6**
	9.6nm,0.8s,mb4.6						
I19A	**Meeteetse**	**29.67**	**109**	⇑P	**P**	19 56 41.1	**+1.2**
	baz=30						
PDAR	**Pinedale Array**	**30.43**	**111**	P	**P**	19 56 47.1	**+0.5**
	0.7nm,0.8s,mb3.5,baz=332,slow=8.4,SNR=6.4						
NVAR	**Mina Array Bea**	**30.49**	**127**	P	**P**	19 56 48.0	**+0.9**
	2.5nm,0.8s,mb4.0,baz=311,slow=8.7,SNR=19						
I21A	**Big Trails, Te**	**30.61**	**107**	⇑P	**P**	19 56 48.5	**+0.4**
	baz=30						
J21A	**Lysite**	**30.91**	**108**	⇑P	**P**	19 56 51.5	**+0.8**
	baz=31,SNR=6.0						
DUG	**Dugway**	**31.15**	**118**	⇑P	**P**	19 56 53.5	**+0.5**
	baz=31						
J22A	**Midwest**	**31.29**	**107**	⇓P	**P**	19 56

BOSA pPKPbc pPKPbc 20 10 28.6 -0.4
comp=Z,3.3nm,0.8s,baz=349,slow=4.3,SNR=2.6

*KRSC **12** 19:51:59.1±0.8, 50°.37N×156°.96E, h60km±60km, ML4.1*
MOS 12 19:51:47.9±0.2, 49°.39N×156°.87E, h78km, mb4.2/1, 1D, Error ellipse: s-maj=94.4km s-min=20.3km az=78.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.38**	**340**	⇓*i*PN	Pn	19 52 12.5	+0.9
SKR	comp=Z,350nm,0.5s			pmax	pmax		
SKR	comp=N,170nm,0.3s			pmax	pmax		
SKR	comp=E,180nm,0.3s			pmax	pmax		
ALID	**Alaid**	**1.71**	**331**	P	Pn	19 52 17.8	+2.0
ALID				*e*S	Sn	19 52 31.0	-6.0
MIPR	**Malaya Ipel'ka**	**2.89**	**359**	*e*S	Sn	19 52 55.8	-10
GRL	**Gorelyy**	**3.26**	**13**	*e*P	Pn	19 52 36.9	+0.3
GRL				*e*S	Sn	19 53 04.7	-10
PET	**Petropavlovsk**	**3.81**	**16**	*e*P	Pn	19 52 45.6	+1.5
PET				*e*S	Sn	19 53 20.4	-7.3
PET	**Petropavlovsk**	**3.81**	**16**	PN	Pn	19 52 45.6	+1.5
AVH	**Avacha**	**4.05**	**16**	*e*P	Pn	19 52 49.9	+2.5
AVH				*e*S	Sn	19 53 26.1	-7.5
NLC	**Nalytchevo**	**4.09**	**21**	*e*S	Sn	19 53 25.4	-9.2
SPN	**Mys Shipunski**	**4.21**	**27**	*e*P	Pn	19 52 51.4	+1.9
SPN				*e*S	Sn	19 53 29.0	-8.4
SPN	**Mys Shipunski**	**4.21**	**27**	PN	Pn	19 52 51.4	+1.9
GNL	**Ganaly**	**4.37**	**8**	*e*P	Pn	19 52 52.8	+1.1
GNL				S	Sn	19 53 32.8	-8.4
MKZ	**Mys Kozlova**	**5.98**	**28**	*e*P	Pn	19 53 15.4	+1.7
MKZ				*e*S	Sn	19 54 11.8	-8.9
MKZ	**Mys Kozlova**	**5.98**	**28**	PN	Pn	19 53 15.4	+1.7
KBTR	**Krutoberegovo**	**7.72**	**26**	*e*P	Pn	19 53 39.7	+2.3
KBTR	**Krutoberegovo**	**7.72**	**26**	PN	Pn	19 53 39.7	+2.3

IDC 12 19:55:39.4±2.7, 6°.40S×130°.78E, h0km, mb3.4/1, mb1 3.2/3, mb1mx3.1/15, mbtmp3.1/3, ML2.9/2, MS3.7/1, Ms1 3.7/1, ms1mx3.0/12, Error ellipse: s-maj=171.6km s-min=32.6km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.90**	**166**	Pn	Pn	19 58 58.4	+0.6
	0.1nm,0.3s,baz=350,slow=13,SNR=7.3						
WRA				Sn	Sn	20 01 20.4	-13
	0.1nm,0.3s,baz=334,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**17.43**	**170**	P	Pn	19 59 43.7	-0.3
	0.0nm,0.3s,baz=342,slow=10.0,SNR=4.1						
HNR	**Honiara**	**29.04**	**98**	LR	LR	20 12 57.2	
	comp=Z,142nm,18.3s,baz=79,slow=36						
MKAR	**Makanchi Array**	**68.15**	**326**	P	P	20 06 41.5	+0.1
	0.2nm,0.4s,baz=111,slow=7.2,SNR=5.4						

IDC 12 19:58:47.9±2.6, 3°.89N×129°.13E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/19, mbtmp3.2/3, Error ellipse: s-maj=171.2km s-min=27.8km az=68.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.23**	**168**	P	P	20 04 05.7	-0.8
	0.4nm,0.5s,baz=348,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**27.79**	**171**	P	P	20 04 39.8	+1.1
	0.1nm,0.6s,baz=1.8,slow=8.6,SNR=2.8						
MKAR	**Makanchi Array**	**58.80**	**324**	P	P	20 08 48.1	+0.1
	0.2nm,0.4s,baz=123,slow=6.9,SNR=5.1						

*ISCJB **12** 20:12:12.0±0.8, 39°.17N±0°.03×17°.27E±0°.05, h12km±6km, Error ellipse: s-maj=6.5km s-min=4.8km az=38.3*
*ROM **12** 20:12:11.1±0.4, 39°.17N×17°.37E, h10km, MI3.1/24, Error ellipse: s-maj=6.0km s-min=2.7km az=110.0*
*CSEM **12** 20:12:11.9±0.3, 39°.22N×17°.08E, h10km, Error ellipse: s-maj=7.7km s-min=5.5km az=119.0*
ISC 12 20:12:13.5±0.7, 39°.20N±0°.03×17°.21E±0°.05, h19km±5km, n76, σ1°.09/85, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SERS	**Sersale**	**0.43**	**248**	Pg	**Pg**	**20 12 21.9**	**-0.5**
SERS				Sg	**Sg**	**20 12 29.4**	**+1.0**
	1μm,0.6s						
SERS	**Sersale**	**0.43**	**248**	Pg	**Pg**	**20 12 21.9**	**-0.5**
GRI	**Girifalco**	**0.72**	**239**	Pg	**Pg**	**20 12 27.0**	**-0.6**
	907nm,0.7s						
GRI	**Girifalco**	**0.72**	**239**	Pg	**Pg**	**20 12 27.0**	**-0.6**
	907nm,0.7s						
CARO	**Carolei**	**0.77**	**274**	Pg	**Pg**	**20 12 28.1**	**-0.5**
CARO				Sg	**Sg**	**20 12 41.7**	**+2.9**
	902nm,0.7s						
CARO	**Carolei**	**0.77**	**274**	Pg	**Pg**	**20 12 28.1**	**-0.5**
PLAC	**Placanica**	**0.96**	**219**	Pg	**Pg**	**20 12 31.6**	**-0.6**
	304nm,0.7s						
PLAC	**Placanica**	**0.96**	**219**	Pg	**Pg**	**20 12 31.6**	**-0.6**
	304nm,0.7s						
ORI	**Oriolo Calabro**	**1.04**	**326**	Pg	**Pg**	**20 12 33.0**	**-0.7**
	911nm,0.4s						
ORI	**Oriolo Calabro**	**1.04**	**326**	Pg	**Pg**	**20 12 33.0**	**-0.7**
	911nm,0.4s						
JOPP	**Joppolo**	**1.19**	**241**	Pg	**Pn**	**20 12 35.1**	**0.0**
JOPP				Sg	**Sg**	**20 12 51.8**	**-0.2**
	182nm,0.6s						
JOPP	**Joppolo**	**1.19**	**241**	Pg	**Pn**	**20 12 35.1**	**0.0**
CRAC	**Craco**	**1.31**	**333**	Pg	**Pn**	**20 12 37.5**	**+0.8**
	1μm,1.0s						
CRAC	**Craco**	**1.31**	**333**	Pg	**Pn**	**20 12 37.5**	**+0.8**
	1μm,1.0s						
SCTE	**Santa Cesarea**	**1.31**	**48**	Pg	**Pn**	**20 12 36.1**	**-0.6**
SCHR	**S. Chirico Rap**	**1.32**	**319**	Pg	**Pn**	**20 12 37.6**	**+0.6**
	141nm,0.7s						
SCHR	**S. Chirico Rap**	**1.32**	**319**	Pg	**Pn**	**20 12 37.6**	**+0.6**
	141nm,0.7s						
CUC	**Castrocucco**	**1.33**	**307**	Pg	**Pn**	**20 12 37.6**	**+0.5**
CUC	**Castrocucco**	**1.33**	**307**	Pg	**Pn**	**20 12 37.6**	**+0.5**
CEL	**Celeste**	**1.39**	**228**	Pg	**Pn**	**20 12 38.0**	**+0.1**
CEL				Sg	**Sg**	**20 12 58.0**	**-0.5**
	343nm,1.2s						
CEL	**Celeste**	**1.39**	**228**	Pg	**Pn**	**20 12 38.0**	**+0.1**
SIRI	**Monte Sirino -**	**1.42**	**314**	Pg	**Pn**	**20 12 39.2**	**+0.9**
	213nm,0.8s						
SIRI	**Monte Sirino -**	**1.42**	**314**	Pg	**Pn**	**20 12 39.2**	**+0.9**
	213nm,0.8s						
SOI	**Samo**	**1.44**	**219**	Pg	**Pn**	**20 12 38.7**	**+0.1**
	73nm,0.6s						
SOI	**Samo**	**1.44**	**219**	Pg	**Pn**	**20 12 38.7**	**+0.1**
	73nm,0.6s						
SCLL	**Scilla**	**1.50**	**232**	Pg	**Pn**	**20 12 39.5**	**+0.1**
	35nm,0.8s						
SCLL	**Scilla**	**1.50**	**232**	Pg	**Pn**	**20 12 39.5**	**+0.1**
	35nm,0.8s						
MIGL	**Miglionico**	**1.52**	**338**	Pg	**Pn**	**20 12 39.5**	**-0.2**
	1μm,0.6s						
MIGL	**Miglionico**	**1.52**	**338**	Pg	**Pn**	**20 12 39.5**	**-0.2**
	1μm,0.6s						
MTSN	**Montesano sull**	**1.55**	**314**	Pg	**Pn**	**20 12 40.8**	**+0.8**
	266nm,0.8s						
MTSN	**Montesano sull**	**1.55**	**314**	Pg	**Pn**	**20 12 40.8**	**+0.8**
	266nm,0.8s						
MPAZ	**Palizzi**	**1.56**	**217**	Pg	**Pn**	**20 12 40.3**	**+0.1**
	176nm,0.9s						
MPAZ	**Palizzi**	**1.56**	**217**	Pg	**Pn**	**20 12 40.3**	**+0.1**
	176nm,0.9s						
MCEL	**Monticello**	**1.56**	**317**	Pg	**Pn**	**20 12 41.0**	**+0.8**
	234nm,0.9s						
MCEL	**Monticello**	**1.56**	**317**	Pg	**Pn**	**20 12 41.0**	**+0.8**
	234nm,0.9s						
NOCI	**Noci**	**1.59**	**356**	Pg	**Pn**	**20 12 39.9**	**-0.7**
	221nm,0.6s						
PE1	**Pezze di Greco**	**1.61**	**6**	*e*Pn	**Pn**	**20 12 40.0**	**-0.9**
PE1				*e*Sn	**Sn**	**20 13 04.6**	**+3.4**
MSRU	**Castanea**	**1.62**	**235**	Pg	**Pn**	**20 12 40.3**	**-0.8**
	408nm,1.0s						
MSRU	**Castanea**	**1.62**	**235**	Pg	**Pn**	**20 12 40.3**	**-0.8**
	408nm,1.0s						
BULG	**Bulgheria - Ca**	**1.66**	**302**	Pg	**Pn**	**20 12 41.7**	**+0.1**
	115nm,0.6s						
BULG	**Bulgheria - Ca**	**1.66**	**302**	Pg	**Pn**	**20 12 41.7**	**+0.1**
	115nm,0.6s						
MTTG	**Motta San Giov**	**1.68**	**225**	Pg	**Pn**	**20 12 39.7**	**-2.2**
	65nm,0.8s						
MTTG	**Motta San Giov**	**1.68**	**225**	Pg	**Pn**	**20 12 39.7**	**-2.2**
	65nm,0.8s						
SG1	**Sgolgore (BA)**	**1.69**	**346**	*e*Pn	**Pn**	**20 12 44.2**	**+2.2**
CMPR	**Campora**	**1.84**	**308**	Pg	**Pn**	**20 12 43.8**	**-0.3**
CMPR	**Campora**	**1.84**	**308**	Pg	**Pn**	**20 12 43.8**	**-0.3**
LLI	**Lipari**	**1.92**	**248**	Pg	**Pn**	**20 12 44.7**	**-0.4**
	587nm,0.6s						
LLI	**Lipari**	**1.92**	**248**	Pg	**Pn**	**20 12 44.7**	**-0.4**
	587nm,0.6s						
VPL	**Vulcano Piano**	**1.92**	**245**	Pg	**Pn**	**20 12 44.5**	**-0.6**
	193nm,0.7s						
VPL	**Vulcano Piano**	**1.92**	**245**	Pg	**Pn**	**20 12 44.5**	**-0.6**
	193nm,0.7s						
BAI	**Bari**	**1.92**	**353**	*e*Pn	**Pn**	**20 12 44.7**	**-0.5**
CDRU	**Civita di Ruta**	**1.95**	**312**	Pg	**Pn**	**20 12 45.3**	**-0.3**
	135nm,1.2s						
MMME	**Mongiuffi-Meli**	**1.98**	**231**	Pg	**Pn**	**20 12 46.9**	**+0.9**
	102nm,1.0s						
MMME	**Mongiuffi-Meli**	**1.98**	**231**	Pg	**Pn**	**20 12 46.9**	**+0.9**
	102nm,1.0s						
CDT	**Castel del Mon**	**2.01**	**340**	*e*Pn	**Pn**	**20 12 45.9**	**-0.5**
MRVN	**Minervino Murg**	**2.01**	**338**	Pg	**Pn**	**20 12 45.8**	**-0.6**
	198nm,0.7s						
MRLC	**Muro Lucano**	**2.04**	**320**	Pg	**Pn**	**20 12 48.7**	**+1.9**
	123nm,0.9s						
MRLC	**Muro Lucano**	**2.04**	**320**	Pg	**Pn**	**20 12 48.7**	**+1.9**
	123nm,0.9s						
SNAL	**S. Angelo Dei**	**2.31**	**319**	Pg	**Pn**	**20 12 52.7**	**+2.2**
SNAL	**S. Angelo Dei**	**2.31**	**319**	Pg	**Pn**	**20 12 52.7**	**+2.2**
NEST	**Nestorio**	**3.20**	**66**	P	**Pn**	**20 13 04.1**	**+1.4**
NEST	**Nestorio**	**3.20**	**66**	P	**Pn**	**20 13 04.1**	**+1.4**
FNA	**Florina**	**3.57**	**62**	P	**Pn**	**20 13 08.6**	**+0.7**
FNA	**Florina**	**3.57**	**62**	P	**Pn**	**20 13 08.6**	**+0.7**
STON	**Ston**	**3.69**	**6**	*e*Pn	**Pn**	**20 13 07.2**	**-2.2**
STON				Sn	**Sn**	**20 13 48.1**	**-4.3**
STON	**Ston**	**3.69**	**6**	*e*Pn	**Pn**	**20 13 07.2**	**-2.2**
STON				Sn	**Sn**	**20 13 48.0**	**-4.4**
KRUS	**Krusevo**	**3.78**	**54**	*e*Pn	**Pn**	**20 13 09.4**	**-1.2**
AGG	**Agios Georgios**	**3.99**	**91**	P	**Pn**	**20 13 15.3**	**+1.7**
AGG	**Agios Georgios**	**3.99**	**91**	P	**Pn**	**20 13 15.3**	**+1.7**
LIT	**Litokhoron**	**4.18**	**76**	P	**Pn**	**20 13 16.9**	**+0.7**
LIT	**Litokhoron**	**4.18**	**76**	P	**Pn**	**20 13 16.9**	**+0.7**
BARS	**Barje**	**5.02**	**43**	*e*Pn	**Pn**	**20 13 29.2**	**+1.4**
DIVS	**Divibare**	**5.32**	**22**	*i*Pn	**Pn**	**20 13 30.8**	**-1.1**
TRUS	**Trudelj**	**5.56**	**24**	*e*Pn	**Pn**	**20 13 31.8**	**-3.4**
NVLJ	**Novalja**	**5.64**	**343**	*e*Pn	**Pn**	**20 13 34.6**	**-1.6**
NVLJ				Sn	**Sn**	**20 14 38.1**	**-2.3**
NVLJ	**Novalja**	**5.64**	**343**	*e*Pn	**Pn**	**20 13 34.6**	**-1.6**
NVLJ				Sn	**Sn**	**20 14 38.0**	**-2.4**

*CSEM **12** 20:12:34.7, 39°.17N×20°.20E, h15km, MD3.2, After ATH*
ATH 12 20:12:34.7, 39°.17N×20°.20E, h15km±1km, MD3.4/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.62**	**330**	*e*PB	Pb	20 12 46.5	-0.8
KEK				*e*SN	Sg	20 12 55.9	+0.6
KEK	**Kerkira**	**0.62**	**330**	P	Pg	20 12 46.6	-0.4
KEK	**Kerkira**	**0.62**	**330**	P	Pg	20 12 46.6	-0.4
KEK	**Kerkira**	**0.62**	**330**	*e*Pb	Pb	20 12 46.5	-0.8
KEK				*e*Sn	Sg	20 12 55.9	+0.6
JAN	**Janina**	**0.70**	**46**	*e*PN	Pn	20 12 48.0	-2.1
JAN	**Janina**	**0.70**	**46**	*e*Pn	Pn	20 12 48.0	-2.1
VLS	**Valsamata**	**1.04**	**163**	*e*PN	Pn	20 12 55.0	+0.3
VLS				*e*SN	Sn	20 13 09.1	+0.2
VLS	**Valsamata**	**1.04**	**163**	*e*Pn	Pn	20 12 55.0	+0.3
VLS				*e*Sn	Sn	20 13 09.1	+0.2
EVR	**Evrytania**	**1.28**	**101**	*e*PN	Pn	20 12 58.5	+0.5
EVR	**Evrytania**	**1.28**	**101**	*e*Pn	Pn	20 12 58.5	+0.5
THL	**Klokotos Trika**	**1.46**	**74**	*e*PN	Pn	20 13 02.2	+1.7
THL				*e*SN	Sn	20 13 22.5	+3.1
THL	**Klokotos Trika**	**1.46**	**74**	*e*Pn	Pn	20 13 02.2	+1.7
THL				*e*Sn	Sn	20 13 22.5	+3.1
AGG	**Agios Georgios**	**1.66**	**94**	*e*PN	Pn	20 13 05.6	+2.3
AGG				*e*SN	Sn	20 13 27.8	+3.4
AGG	**Agios Georgios**	**1.66**	**94**	*e*Pn	Pn	20 13 05.6	+2.3
AGG				*e*Sn	Sn	20 13 27.8	+3.4

IDC 12 20:14:20.4±2.0, 7°.00S×150°.41E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, MS3.2/3, Ms1 3.2/3, ms1mx2.9/23, Error ellipse: s-maj=107.4km s-min=26.9km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**13.62**	**197**	LR	LR	20 21 16.8	
	comp=Z,40nm,19.4s,baz=51,slow=31						
WRA	**Warramunga Arr**	**20.22**	**229**	P	P	20 18 57.0	-0.1
	1.9nm,0.8s,baz=54,slow=11,SNR=20						
GUMO	**Guam**	**21.18**	**345**	LR	LR	20 25 39.3	
	comp=Z,51nm,18.1s,baz=157,slow=32						
ASAR	**Alice Springs**	**22.94**	**222**	P	P	20 19 26.1	-0.3
	1.7nm,0.8s,baz=54,slow=9.5,SNR=18						
FITZ	**Fitzroy Crossi**	**26.54**	**243**	P	P	20 20 00.3	+0.2
	2.0nm,0.7s,baz=74,slow=7.6,SNR=8.9						
RPZ	**Rata Peaks**	**40.81**	**157**	LR	LR	20 36 03.1	
	comp=Z,114nm,20.4s,baz=311,slow=32						
ILAR	**Eielson Array**	**85.08**	**22**	P	P	20 26 58.0	+0.2
	0.4nm,0.8s,baz=242,slow=5.8,SNR=3.4						

*ATH **12** 20:15:51.9, 37°.85N×20°.84E, h5km±1km, MD3.1/12*
*ISCJB **12** 20:15:52.3±0.7, 37°.86N±0°.03×20°.85E±0°.05, h10km, Error ellipse: s-maj=5.7km s-min=3.8km az=153.7*
*CSEM **12** 20:15:53.3±0.6, 37°.88N×20°.91E, h2km, MD3.1, Error ellipse: s-maj=13.9km s-min=8.6km az=61.0*
ISC 12 20:15:52.4±0.8, 37°.84N±0°.03×20°.86E±0°.05, h5km±7km, n32, σ0°.53/44, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.27**	**348**	P	**Pg**	**20 15 58.5**	**+0.8**
KFL	**Anninata**	**0.27**	**348**	P	**Pg**	**20 15 58.5**	**+0.8**
VLS	**Valsamata**	**0.40**	**328**	*e*PB	**Pg**	**20 15 59.7**	**-0.4**
VLS				*e*SB	**Sg**	**20 16 05.7**	**+0.5**
VLS	**Valsamata**	**0.40**	**328**	*e*Pb	**Pg**	**20 15 59.7**	**-0.4**
VLS				*e*Sb	**Sg**	**20 16 05.7**	**+0.5**
RLS	**Riolos of Patr**	**0.53**	**66**	*e*PG	**Pg**	**20 16 02.2**	**-0.4**
RLS				*e*SB	**Sg**	**20 16 09.9**	**+0.5**
RLS	**Riolos of Patr**	**0.53**	**66**	*e*Pg	**Pg**	**20 16 02.2**	**-0.4**
RLS				*e*Sb	**Sg**	**20 16 09.9**	**+0.5**
LAKA	**Lakka**	**0.97**	**65**	P	**Sb**	**20 16 24.5**	**-0.3**
EFP	**Efpalio**	**1.01**	**54**	*e*PB	**Pg**	**20 16 11.3**	**-0.5**
EFP				*e*SB	**Sg**	**20 16 25.3**	**+0.3**
EFP	**Efpalio**	**1.01**	**54**	P	**Sb**	**20 16 26.3**	**+0.3**
EFP	**Efpalio**	**1.01**	**54**	*e*Pb	**Pg**	**20 16 11.3**	**-0.5**
EFP				*e*Sb	**Sg**	**20 16 25.3**	**+0.3**
ITM	**Ithomi**	**1.08**	**128**	*e*PG	**Pg**	**20 16 12.5**	**-0.6**
ITM				*e*SB	**Sg**	**20 16 28.4**	**+1.4**
ITM	**Ithomi**	**1.08**	**128**	*e*Pg	**Pg**	**20 16 12.5**	**-0.6**
ITM				*e*Sb	**Sg**	**20 16 28.4**	**+1.4**
GUR	**Goura**	**1.18**	**85**	*e*PG	**Pg**	**20 16 14.2**	**-0.8**
GUR	**Goura**	**1.18**	**85**	*e*Pg	**Pg**	**20 16 14.2**	**-0.8**
PYL	**PYLOS**	**1.18**	**143**	*e*PB	**Pg**	**20 16 14.7**	**-0.3**
PYL				*e*SB	**Sb**	**20 16 31.5**	**+0.7**
PYL	**PYLOS**	**1.18**	**143**	*e*Pb	**Pg**	**20 16 14.7**	**-0.3**
PYL				*e*Sb	**Sb**	**20 16 31.5**	**+0.7**
EVR	**Evrytania**	**1.31**	**35**	*e*PB	**Pg**	**20 16 17.1**	**-0.4**
EVR	**Evrytania**	**1.31**	**35**	*e*Pb	**Pg**	**20 16 17.1**	**-0.4**
AGG	**Agios Georgios**	**1.65**	**44**	*e*PB	**Pb**	**20 16 23.4**	**+0.1**
AGG	**Agios Georgios**	**1.65**	**44**	*e*Pb	**Pb**	**20 16 23.4**	**+0.1**
LTK	**Loutraki**	**1.68**	**83**	*e*PB	**Pb**	**20 16 23.8**	**0.0**
LTK	**Loutraki**	**1.68**	**83**	*e*Pb	**Pb**	**20 16 23.8**	**0.0**
DID	**Didima**	**1.92**	**99**	*e*PN	**Pb**	**20 16 28.0**	**+0.2**
DID	**Didima**	**1.92**	**99**	*e*Pn	**Pb**	**20 16 28.0**	**+0.2**
THL	**Klokotos Trika**	**1.94**	**27**	*e*PN	**Pb**	**20 16 28.7**	**+0.4**
THL				*e*SN	**Sg**	**20 16 54.8**	**-0.1**
THL	**Klokotos Trika**	**1.94**	**27**	*e*Pn	**Pb**	**20 16 28.7**	**+0.4**
THL				*e*Sn	**Sg**	**20 16 54.8**	**-0.1**
VLI	**Veliai**	**2.00**	**123**	*e*PN	**Pb**	**20 16 29.3**	**0.0**
VLI	**Veliai**	**2.00**	**123**	*e*Pn	**Pb**	**20 16 29.3**	**0.0**
VLY	**Voula,Athens**	**2.33**	**89**	*e*PN	**Pb**	**20 16 34.2**	**-0.6**
VLY	**Voula,Athens**	**2.33**	**89**	*e*Pn	**Pb**	**20 16 34.2**	**-0.6**
KYTH	**Kithira**	**2.34**	**131**	*e*PN	**Pb**	**20 16 34.3**	**-0.7**
KYTH	**Kithira**	**2.34**	**131**	*e*Pn	**Pb**	**20 16 34.3**	**-0.7**

*NIED **12** 21:05:00.34°.60N×141°.00E, h68km, Mw4.2 Best double couple: M0=2.51000×10^15 NP1:φ0=328.00000°, δ90.00000°, λ37.00000°. NP2:φ0=238.00000°, δ53.00000°, λ180.00000°.*
*IDC **12** 21:05:18.4±1.6, 34°.66N×140°.96E, h50km±14km, mb3.7/16, mb1 3.9/20, mb1mx3.8/29, mbtmp3.8/20, ML4.5/3, MS3.2/3, Ms1 3.3/3, ms1mx2.6/40, Error ellipse: s-maj=18.8km s-min=7.1km az=83.0*
*JMA **12** 21:05:18.6±0.1, 34°.64N×140°.92E, h79km±1km, M4.3*
JMA Felt I J1.
*NEIC **12** 21:05:18.6±1.0, 34°.72N×141°.03E, h53km±8km, mb4.3/7, Error ellipse: s-maj=11.0km s-min=7.5km az=82.0*
NEIC Recorded [1 JMA] in Shizuoka. Also recorded [1 JMA] on O-shima.
*ISCJB **12** 21:05:19.4±0.5, 34°.63N±0°.04×140°.85E±0°.05, h76km±2km, mb4.0/23, Error ellipse: s-maj=7.0km s-min=6.0km az=152.4*
ISC 12 21:05:20.5±0.4, 34°.62N±0°.04×140°.85E±0°.05, h68km±2km, n48, σ0°.82/63, mb4.0/23, 1C-9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.12**	**72**	⇑P	**Pn**	**21 05 29.7**	**-0.8**
BSO1				S	**Sn**	**21 05 38.0**	**+0.1**
BSO2	**Boso 2**	**0.15**	**331**	*e*S	**Sn**	**21 05 39.3**	**+1.2**
BSO3	**Boso 3**	**0.33**	**304**	⇓P	**Pn**	**21 05 31.3**	**-0.4**
BSO3				*e*S	**Sn**	**21 05 40.9**	**+1.1**
BSO4	**Boso 4**	**0.56**	**312**	⇓P	**Pn**	**21 05 33.7**	**0.0**
BSO4				*e*S	**Sn**	**21 05 44.7**	**+1.3**
KTR	**Katsuura**	**0.69**	**321**	⇓P	**Pn**	**21 05 34.7**	**-0.4**
KTR				S	**Sn**	**21 05 46.0**	**+0.2**
TATJ	**Tateyama 2**	**0.89**	**298**	⇓P	**Pn**	**21 05 37.5**	**0.0**
TATJ				*e*S	**Sn**	**21 05 51.1**	**+1.0**
JIM2	**Oshima 3**	**1.17**	**275**	⇓P	**Pn**	**21 05 40.4**	**-0.6**
JIM2				S	**Sn**	**21 05 56.1**	**-0.3**
JMY	**Miyakejima3**	**1.23**	**244**	P	**Pn**	**21 05 41.9**	**+0.1**
JMY				*e*S	**Sn**	**21 05 57.9**	**+0.1**
JKO	**Kozu shima**	**1.48**	**254**	⇓P	**Pn**	**21 05 45.1**	**0.0**
JKO				*e*S	**Sn**	**21 06 04.7**	**+1.1**
KTJJ	**Kamata 2**	**1.50**	**282**	⇓P	**Pn**	**21 05 44.5**	**-0.8**
KTJJ				S	**Sn**	**21 06 02.9**	**-1.2**
JOD2	**Odawara 2**	**1.58**	**295**	⇓P	**Pn**	**21 05 45.6**	**-0.8**
JOD2				S	**Sn**	**21 06 05.3**	**-0.8**
JIZS	**Izushimoda**	**1.62**	**274**	⇓P	**Pn**	**21 05 46.6**	**-0.4**
JIZS				*e*S	**Sn**	**21 06 07.0**	**-0.1**
JHJ	**Hachijo jima 2**	**1.74**	**211**	P	**Pn**	**21 05 47.8**	**-0.7**
	240nm,0.3s,baz=72,slow=20,SNR=171						
JHJ				S	**Sn**	**21 06 09.5**	**-0.3**
	364nm,0.3s,baz=58,slow=19,SNR=19						
MJAR	**Matsushiro Arr**	**2.88**	**313**	P	**Pn**	**21 06 02.4**	**-1.6**
	16nm,0.3s,baz=126,slow=9.3,SNR=49						
MJAR				S	**Sn**	**21 06 36.2**	**-1.3**
	15nm,0.3s,baz=133,slow=20,SNR=6.3						
MAJO	**Matsushiro**	**2.88**	**313**	*e*Pn	**Pn**	**21 06 03.8**	**-0.2**
MAT	**Matsushiro**	**2.88**	**313**	P	**Pn**	**21 06 03.6**	**-0.5**
MAT				S	**Sn**	**21 06 38.6**	**+1.0**
CBIJ	**Chichi jima**	**7.58**	**171**	P	**Pn**	**21 07 05.5**	**-2.9**
	57nm,0.3s,baz=286,slow=14,SNR=12						
CBIJ				S	**Sn**	**21 08 24.7**	**-8.2**
	13nm,0.3s,baz=294,slow=19,SNR=3.5						
JNU	**Nakatsue**	**8.42**	**263**	*e*Pn	**Pn**	**21 07 21.5**	**+1.7**
	7.7nm,1.0s						
ASAJ	**Asahikawa**	**9.58**	**8**	P	**Pn**	**21 07 31.6**	**-4.0**
	4.0nm,0.3s,baz=215,slow=9.6,SNR=33						
ASAJ				S	**Sn**	**21 09 09.4**	**-12**
	0.7nm,0.3s,baz=217,slow=20,SNR=2.7						
ASAJ	**Asahikawa**	**9.58**	**8**	*e*Pn	**Pn**	**21 07 30.8**	**-4.8**
	6.2nm,0.6s						
KSRS	**Korea Array**	**10.84**	**289**	P	**Pn**	**21 07 53.1**	**+0.4**
	0.1nm,0.3s,baz=101,slow=14,SNR=9.3						
KSRS				LR	LR	21 11 51.0	
	comp=Z,66nm,21.5s,baz=130,slow=36						
GUMO	**Guam**	**21.25**	**169**	P	**P**	**21 10 01.1**	**0.0**
	21nm,0.8s,mb4.5,baz=319,slow=19,SNR=3.0						
SONM	**Songino Array**	**28.82**	**308**	P	**P**	**21 11 12.2**	**+0.1**
	0.6nm,0.7s,mb3.4,baz=94,slow=9.4,SNR=4.0						
DAV	**Davao City (W)**	**30.82**	**211**	LR	LR	21 24 33.7	
	comp=Z,100nm,18.0s,baz=180,slow=37						
CMAR	**Chiang Mai Arr**	**40.48**	**258**	P	**P**	**21 12 52.2**	**-0.5**
	0.7nm,0.7s,mb3.6,baz=55,slow=7.5,SNR=5.1						
CMAR			

IDC 12 21:14:50.1±0.8, 0°98S×126°98E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.9/20, mbtmp3.9/9, ML3.8/1, Error ellipse: s-maj=70.5km s-min=11.0km az=70.0
ISCJB 12 21:14:54.4±0.9, 0°99S±0°05×127°02E±0°07, h43km±9km, mb3.9/9, Error ellipse: s-maj=11.7km s-min=7.1km az=160.7
DJA 12 21:14:55, 1°08S×127°01E, h25km, MLv4.3/7
NEIC 12 21:14:55.3±0.6, 1°03S×127°13E, h35km, mb4.0/2, Error ellipse: s-maj=21.4km s-min=10.3km az=75.0
ISC 12 21:14:55.2±2.5, 0°97S±0°05×127°10E±0°07, h33km±19km, n26, σ0°91/30, mb3.9/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.75**	**9**	P	**Pn**	**21 15 23.4**	**+0.1**
TNTI				S	**Sn**	**21 15 53.4**	**+8.9**
NLAI	**Namlea**	**2.25**	**180**	P	**Pn**	**21 15 30.0**	**-0.2**
NLAI				S	**Sn**	**21 15 57.2**	**+0.3**
MNI	**Manado**	**3.30**	**317**	P	**Pn**	**21 15 44.8**	**+0.2**
MNI				S	**Sn**	**21 16 27.3**	**+4.6**
KMSI	**Cibinong**	**3.48**	**296**	P	**Pn**	**21 15 46.6**	**-0.4**
LUWI	**Luwuk**	**4.33**	**269**	P	**Pn**	**21 15 56.9**	**-1.9**
BNDI	**Bandanaira**	**4.50**	**142**	P	**Pn**	**21 16 02.2**	**+1.0**
MRSI	**Marisa**	**5.36**	**286**	P	**Pn**	**21 16 13.4**	**+0.5**
	2μm48nm,0.3s						
KDI	**Kendari**	**5.37**	**236**	P	**Pn**	**21 16 12.6**	**-0.5**
	587nm18nm,0.6s						
BBSI	**Bau Bau**	**6.37**	**225**	P	**Pn**	**21 16 28.4**	**+1.6**
	27nm,0.9s						
TTSI	**Tana Toraja**	**7.56**	**254**	P	**Pn**	**21 16 43.0**	**-0.2**
	966nm58nm,0.5s						
SPSI	**Sidrap Palu**	**7.90**	**248**	P	**Pn**	**21 16 47.9**	**0.0**
	4μm139nm,0.4s						
BKSI	**Bulukumba**	**8.20**	**238**	P	**Pn**	**21 16 53.3**	**+1.4**
KAPI	**Kappang**	**8.36**	**241**	*e*Pn	**Pn**	**21 16 53.9**	**-0.4**
	19nm,0.5s						
FITZ	**Fitzroy Crossi**	**17.08**	**185**	P	**Pn**	**21 18 51.4**	**-0.2**
	0.2nm,0.3s,baz=44,slow=9.9,SNR=7.1						
WRA	**Warramunga Arr**	**20.14**	**160**	P	**P**	**21 19 25.2**	**-1.5**
	4.1nm,0.6s,baz=338,slow=11,SNR=5.1						
WRA				S	**S**	**21 23 15.5**	**+4.3**
	0.8nm,1.1s,baz=356,slow=23,SNR=2.5						
ASAR	**Alice Springs**	**23.50**	**164**	P	**P**	**21 20 01.2**	**-1.3**
	5.1nm,0.9s,mb3.9,baz=342,slow=6.7,SNR=46						
STKA	**Stephens Creek**	**33.65**	**157**	P	**P**	**21 21 33.3**	**+0.3**
	7.7nm,0.8s,mb4.7,baz=325,slow=9.5,SNR=11						
KSRS	**Korea Array**	**38.24**	**1**	P	**P**	**21 22 11.9**	**-0.3**
	0.4nm,0.8s,mb3.2,baz=173,slow=9.0,SNR=2.6						
SONM	**Songino Array**	**51.85**	**342**	P	**P**	**21 23 59.1**	**-1.1**
	0.6nm,0.7s,mb3.7,baz=147,slow=5.6,SNR=2.7						
MK31	**Makanchi Array**	**61.63**	**327**	*e*P	**P**	**21 25 10.7**	**+1.0**
MKAR	**Makanchi Array**	**61.63**	**327**	P	**P**	**21 25 08.7**	**-1.0**
	0.7nm,0.3s,mb4.2,baz=120,slow=7.7,SNR=27						
ZALV	**Zalesovo Beam**	**64.93**	**334**	P	**P**	**21 25 32.9**	**+1.5**
	0.3nm,0.4s,mb3.7,baz=147,slow=3.4,SNR=2.3						
KURK	**Kurchatov**	**65.90**	**329**	*e*P	**P**	**21 25 39.2**	**+1.4**
	2.9nm,1.0s,mb4.3						
ABKAR	**Akbulak array**	**76.02**	**322**	*e*P	**P**	**21 26 40.0**	**+0.8**
	0.3nm,0.4s,mb3.6						
AKTK	**Aktyubinsk**	**77.57**	**322**	P	**P**	**21 26 47.3**	**-0.6**
AKTO	**Aktyubinsk**	**77.57**	**322**	P	**P**	**21 26 47.3**	**-0.6**
	0.6nm,0.6s,mb3.7,baz=112,slow=11,SNR=3.2						

IDC 12 21:35:23.0±4.0, 15°87S×175°30W, h0km, mb4.7/3, mb1 4.8/3, mb1mx4.0/17, mbtmp4.7/3, Error ellipse: s-maj=159.4km s-min=54.6km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**33.54**	**239**	*e*P	P	21 42 06.6	+1.9
CMSA	**Cobar Meteorol**	**38.74**	**239**	*e*P	P	21 42 49.9	+0.7
STKA	**Stephens Creek**	**42.22**	**240**	P	P	21 43 18.7	+0.7
	2.7nm,0.5s,baz=98,slow=10.0,SNR=15						
STKA	**Stephens Creek**	**42.22**	**240**	*e*P	P	21 43 18.5	+0.5
	2.1nm,0.4s						
WRA	**Warramunga Arr**	**47.96**	**257**	P	P	21 44 03.4	-0.4
	2.8nm,0.5s,baz=92,slow=7.1,SNR=73						
WRA				PcP	PcP	21 45 30.4	-1.9
	0.5nm,0.7s,baz=94,slow=3.3,SNR=4.0						
ASAR	**Alice Springs**	**48.23**	**252**	P	P	21 44 05.8	-0.1
	20nm,0.5s,baz=86,slow=8.1,SNR=444						
KNA	**Kununurra**	**53.67**	**262**	*e*P	P	21 44 46.9	-0.1
	8.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**56.33**	**259**	*e*P	P	21 45 06.1	-0.1
	7.0nm,1.0s						
BRTR	**Keskin Array B**	**145.34**	**319**	PKPbc	PKPbc	21 55 03.5	+0.6
	0.8nm,0.7s,baz=53,slow=4.7,SNR=3.9						

IDC 12 21:59:03.1±3.1, 2°24S×100°49E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.6/19, mbtmp3.5/7, MS2.7/1, Ms1 2.7/1, ms1mx2.2/20, Error ellipse: s-maj=135.1km s-min=19.8km az=58.0
ISCJB 12 21:59:08.9±1.0, 2°17S±0°08×100°55E±0°08, h59km±8km, mb3.6/6, Error ellipse: s-maj=17.7km s-min=8.2km az=42.7
DJA 12 21:59:09, 2°14S×100°55E, h13km, MLv4.3/14
NEIC 12 21:59:09.1±2.7, 2°14S×100°62E, h40km±19km, mb3.8/1, Error ellipse: s-maj=59.3km s-min=12.4km az=55.0
ISC 12 21:59:10.0±1.0, 2°19S±0°09×100°53E±0°08, h49km±9km, n25, σ1°37/27, mb3.6/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.94**	**84**	P	**Pn**	**21 59 25.3**	**-1.6**
KRJI				S	**Sn**	**21 59 37.8**	**-1.5**
PDSI	**Padang**	**1.27**	**357**	P	**Pn**	**21 59 28.5**	**-2.8**
SDSI	**Sungai Dareh**	**1.54**	**36**	P	**Pn**	**21 59 33.5**	**-1.5**
SISI	**Saibi**	**1.67**	**301**	P	**Pn**	**21 59 36.6**	**-0.2**
PPI	**Padang Panjang**	**1.72**	**356**	P	**Pn**	**21 59 36.9**	**-0.6**
KSI	**Kapahiang**	**2.52**	**125**	P	**Pn**	**21 59 53.7**	**+5.2**
BKNI	**Bangkinang**	**2.55**	**12**	P	**Pn**	**21 59 51.2**	**+2.4**
BKNI				S	**Sn**	**22 00 25.1**	**+6.5**
RGRI	**Rengat**	**2.57**	**45**	P	**Pn**	**21 59 52.4**	**+3.3**
RGRI				S	**Sn**	**22 00 29.9**	**+11**
MNSI	**Mandailing Nat**	**3.11**	**342**	P	**Pn**	**21 59 59.7**	**+3.1**
MNAI	**Manna**	**3.25**	**132**	P	**Pn**	**22 00 03.2**	**+4.7**
MDSI	**Maura Dua**	**4.30**	**122**	P	**Pn**	**22 00 12.5**	**-0.4**
LWLI	**Liwa**	**4.51**	**129**	P	**Pn**	**22 00 18.2**	**+2.4**
MYKOM	**Kota Tinggi**	**5.16**	**40**	P	**Pn**	**22 00 26.5**	**+1.8**
	0.1nm17nm,0.9s						
PSI	**Prapat**	**5.21**	**342**	Pn	**Pn**	**22 00 23.2**	**-2.2**
	0.2nm,0.3s,baz=166,slow=19,SNR=2.7						
PSI				Lg		22 01 44.2	
	1.3nm,0.3s,baz=152,slow=18,SNR=2.6						
PSI				LR	LR	22 02 45.6	
	comp=Z,81nm,20.2s,baz=169,slow=43						
PSI	**Prapat**	**5.21**	**342**	Pn	**Pn**	**22 00 23.2**	**-2.2**
PSI				Lg		22 01 44.2	
PSI				LR	LR	22 02 45.6	
PPBI	**Pangkal Pinang**	**5.61**	**90**	P	**Pn**	**22 00 31.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**20.57**	**356**	P	**P**	**22 03 44.2**	**-0.5**
	0.5nm,0.4s,baz=187,slow=8.7,SNR=3.2						
WRA	**Warramunga Arr**	**37.45**	**121**	P	**P**	**22 06 18.1**	**-0.7**
	0.3nm,0.7s,mb3.3,baz=300,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**38.72**	**126**	P	**P**	**22 06 29.5**	**0.0**
	0.9nm,0.5s,mb3.8,baz=300,slow=8.0,SNR=13						
SONM	**Songino Array**	**50.08**	**5**	P	**P**	**22 08 00.3**	**+0.5**
	0.6nm,0.9s,mb3.6,baz=179,slow=7.2,SNR=3.5						
MK31	**Makanchi Array**	**51.35**	**344**	*e*P	**P**	**22 08 09.7**	**+0.3**
MKAR	**Makanchi Array**	**51.35**	**344**	P	**P**	**22 08 09.8**	**+0.4**
	0.6nm,0.5s,mb3.8,baz=154,slow=8.3,SNR=14						
ZALV	**Zalesovo Beam**	**57.45**	**349**	P	**P**	**22 08 52.1**	**-1.4**
	0.3nm,0.4s,mb3.7,baz=142,slow=7.2,SNR=2.8						
ABKAR	**Akbulak array**	**62.05**	**331**	*e*P	**P**	**22 09 25.5**	**+0.1**
	0.5nm,0.6s,mb3.8						
TXAR	**Lajitas Array**	**144.53**	**38**	PKP	PKPdf	22 18 42.6	+1.0
	0.3nm,0.4s,baz=330,slow=0.2,SNR=6.0						

PGC 12 22:16:14.0±66.0, 47°22N×129°12W, h10km, ML3.0/10, Mw3.6, 8D, 320km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**2.97**	**26**	⇑Pn	Pn	22 16 59.7	-1.4
OZB	**Mount Ozzard**	**2.99**	**53**	⇓Pn	Pn	22 17 00.1	-1.3
BPBC	**Brooks Peninsu**	**3.08**	**16**	⇓Pn	Pn	22 17 00.5	-2.0
GDR	**Gold River**	**3.29**	**37**	⇑Pn	Pn	22 17 04.2	-1.2
WOSB	**Woss**	**3.40**	**29**	⇓Pn	Pn	22 17 05.8	-1.1
PFB	**Port Renfrew**	**3.43**	**65**	⇓Pn	Pn	22 17 06.0	-1.3
MAYB	**Maynard**	**3.44**	**21**	⇓Pn	Pn	22 17 05.9	-1.6
MGB	**Mount Grey**	**3.46**	**57**	⇓Pn	Pn	22 17 06.2	-1.6
HOLB	**Holberg**	**3.49**	**10**	⇑Pn	Pn	22 17 08.1	-0.1
CBB	**Campbell River**	**3.76**	**40**	⇓Pn	Pn	22 17 11.1	-0.8
NCRB	**Newcastle Ridg**	**3.78**	**31**	⇑Pn	Pn	22 17 11.6	-0.6
LZB	**Mount Lazard**	**3.83**	**67**	⇓Pn	Pn	22 17 12.3	-0.5
TXB	**Texada**	**3.98**	**50**	⇑Pn	Pn	22 17 13.8	-1.2
BBB	**Bella Bella**	**5.02**	**7**	⇑Pn	Pn	22 17 29.0	-0.2

ISCJB 12 22:21:32.6±2.1, 20°0S±0°1×69°0W±0°2, h153km±20km, mb3.8/4, Error ellipse: s-maj=28.1km s-min=22.1km az=179.1
IDC 12 22:21:33.2±2.4, 19°95S×68°95W, h141km±21km, mb3.6/6, mb1 3.7/7, mb1mx3.6/17, mbtmp3.6/7, Error ellipse: s-maj=25.7km s-min=20.5km az=86.0
NEIC 12 22:21:33.0±1.8, 20°01S×68°98W, h142km±17km, mb3.9/1, Error ellipse: s-maj=21.1km s-min=17.9km az=87.0
ISC 12 22:21:33.6±1.9, 20°0S±0°1×69°0W±0°2, h145km±18km, n8, σ0°72/9, mb3.8/4, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.76**	**12**	P	**Pn**	**22 22 30.8**	**+0.3**
	3.4nm,0.3s,baz=189,slow=7.7,SNR=51						
LPAZ				S	**Sn**	**22 23 14.5**	**-0.3**
	0.8nm,0.3s,baz=25,slow=19,SNR=2.7						
BDFB	**Brasilia**	**20.40**	**81**	P	**P**	**22 25 59.6**	**+0.2**
	8.6nm,0.6s,baz=257,slow=11,SNR=10						
PLCA	**Paso Flores**	**20.73**	**183**	P	**P**	**22 26 02.8**	**+0.2**
	2.2nm,0.7s,baz=351,slow=10,SNR=1.8						
PLCA	**Paso Flores**	**20.73**	**183**	*e*P	**P**	**22 26 02.2**	**-0.4**
	3.1nm,0.6s						
RCBR	**Riachuelo**	**35.07**	**71**	P	**P**	**22 28 13.6**	**+0.7**
	8.9nm,1.1s,mb4.3,baz=250,slow=9.7,SNR=4.4						
TXAR	**Lajitas Array**	**59.36**	**325**	P	**P**	**22 31 20.1**	**-0.5**
	0.4nm,0.9s,mb3.2,baz=121,slow=8.5,SNR=2.7						
DBIC	**Dimbokro**	**68.36**	**74**	P	**P**	**22 32 18.5**	**-1.4**
	1.8nm,0.7s,mb3.9,baz=240,slow=7.7,SNR=5.4						
YKA	**Yellowknife Ar**	**89.74**	**341**	P	**P**	**22 34 16.0**	**+1.1**
	0.8nm,0.7s,mb3.8,baz=128,slow=4.3,SNR=3.8						

ISCJB 12 22:34:21.2±0.4, 24°71N±0°03×98°08E±0°04, h10km, mb3.5/10, Error ellipse: s-maj=5.8km s-min=3.7km az=168.0
IDC 12 22:34:23.3±1.0, 24°92N×97°85E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/24, mbtmp3.6/7, ML4.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/27, Error ellipse: s-maj=41.0km s-min=15.5km az=71.0
BJI 12 22:34:24.7, 24°94N×97°83E, h18km, ML3.9/9
NEIC 12 22:34:27.1±3.5, 24°89N×97°92E, h27km±28km, mb3.8/4, Error ellipse: s-maj=20.5km s-min=7.2km az=60.0
ISC 12 22:34:24.4±0.4, 24°82N±0°03×98°01E±0°04, h10km, n23, σ1°24/30, mb3.5/10, 1C-1D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.31**	**85**	Pg	**Pg**	**22 35 46.9**	**-0.1**
KMI				Sg	**Sg**	**22 36 41.6**	**-1.2**
KMI				smax			
	comp=N,160nm,1.1s						
KMI				smax			
	comp=E,110nm,1.2s						
CHRT	**Chiangrai**	**5.19**	**161**	⇑PN	**Pn**	**22 35 42.5**	**+0.3**
CHRT	**Chiangrai**	**5.19**	**161**	PG	**Pg**	**22 36 01.5**	**-2.4**
CHRT				SG	**Sg**	**22 37 10.0**	**-1.2**
SHL	**Shillong**	**5.60**	**279**	*e*PKP	**Pn**	**22 35 48.5**	**+0.8**
CHG	**Chiang Mai**	**6.04**	**172**	⇓P	**Sg**	**22 37 39.9**	**+1.5**
	comp=E,96nm,0.8s						
CHTO	**Chiang Mai**	**6.04**	**172**	*e*Pn	**Pn**	**22 35 55.6**	**+1.8**
	comp=E,11nm,0.6s						
CHTO				*e*Pg	**Pg**	**22 36 18.1**	**-2.1**
CHTO				*e*Sg	**Sg**	**22 37 38.5**	**+0.2**
CM31	**Chiang Mai Arr**	**6.39**	**172**	*e*Pn	**Pn**	**22 36 00.6**	**+2.0**
	comp=E,7.4nm,0.5s						
CM31				*e*Pg	**Pg**	**22 36 25.6**	**-1.3**
CM31				*e*Sg	**Sg**	**22 37 50.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**6.39**	**172**	Pn	**Pn**	**22 36 00.7**	**+2.1**
	comp=E,1.6nm,0.3s,baz=346,slow=13,SNR=14						
CMAR				Pg	**Pg**	**22 36 23.3**	**-3.5**
	comp=E,1.2nm,0.3s,baz=348,slow=18,SNR=12						
CMAR				Lg		22 37 50.1	
	comp=E,1.5nm,0.3s,baz=351,slow=29,SNR=9.5						
LSA	**Lhasa**	**7.80**	**310**	*e*Pn	**Pn**	**22 36 18.0**	**0.0**
	comp=E,3.3nm,0.5s						
CD2	**Chengdu**	**7.92**	**39**	*e*P	**Pn**	**22 36 20.9**	**+1.3**
CD2				S	**Sn**	**22 37 50.9**	**+1.6**
CD2				smax			
	comp=N,20nm,1.8s						
CD2				smax			
	comp=E,20nm,1.7s						
SONM	**Songino Array**	**23.91**	**14**	P	**P**	**22 39 38.2**	**-0.2**
	comp=E,0.6nm,0.6s,mb3.2,baz=200,slow=7.5,SNR=3.3						
MK31	**Makanchi Array**	**25.27**	**334**	*e*P	**P**	**22 39 50.7**	**-0.1**
MKAR	**Makanchi Array**	**25.27**	**334**	P	**P**	**22 39 50.2**	**-0.5**
	comp=E,0.8nm,0.8s,mb3.3,baz=149,slow=9.4,SNR=9.3						
AAK	**Ala-Archa**	**26.28**	**318**	P	**P**	**22 40 00.2**	**+0.3**
	comp=E,0.7nm,0.3s,mb3.7,baz=183,slow=7.7,SNR=4.8						
AML	**Almayashu**	**26.49**	**317**	*e*P	**P**	**22 40 01.7**	**-0.2**
	comp=E,1.6nm,0.7s,mb3.7						
EKS2	**Erkin-Say**	**26.73**	**318**	*e*P	**P**	**22 40 03.3**	**-0.7**
	comp=E,2.7nm,1.0s,mb3.7						
KBL	**Kabul**	**26.89**	**298**	*e*P	**P**	**22 40 06.0**	**+0.5**
	comp=E,1.8nm,0.6s,mb3.8						
KSRS	**Korea Array**	**28.41**	**57**	LR	LR	22 51 19.9	
	comp=E,30nm,19.4s,baz=255,slow=36						
ZALV	**Zalesovo Beam**	**30.72**	**345**	P	**P**	**22 40 38.5**	**-0.9**
	comp=E,0.6nm,0.5s,mb3.7,baz=151,slow=8.5,SNR=5.2						
ZALV	**Zalesovo Beam**	**30.72**	**345**	P	**P**	**22 40 38.5**	**-0.9**
ABKAR	**Akbulak array**	**38.36**	**319**	*e*P	**P**	**22 41 44.2**	**-1.4**
	comp=E,0.6nm,0.6s,mb3.5						
BRTR	**Keskin Array B**	**55.33**	**302**	P	**P**	**22 43 56.8**	**-1.6**
	comp=E,0.4nm,0.7s,mb3.5,baz=119,slow=9.0,SNR=2.8						
WRA	**Warramunga Arr**	**56.83**	**138**	P	**P**	**22 44 11.0**	**+1.7**
	comp=E,0.1nm,0.4s,mb3.2,baz=326,slow=7.4,SNR=3.8						

ISCJB 12 22:38:46.2±0.7, 37°08N±0°04×27°83E±0°05, h12km±6km, Error ellipse: s-maj=7.3km s-min=5.9km az=158.6
CSEM 12 22:38:46.6±0.3, 37°09N×27°83E, h10km, MD1.9, Error ellipse: s-maj=6.1km s-min=5.5km az=91.0
ISK 12 22:38:46.7, 37°16N×27°69E, h18km, MD1.9
DDA 12 22:38:47.9, 37°13N×27°73E, h7km±2km, Md2.6
ISC 12 22:38:46.4±1.2, 37°08N±0°04×27°84E±0°04, h11km±20km, n14, σ0°90/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.22**	**348**	*e*PG	**Pg**	**22 38 51.5**	**+0.3**
MLSB				*e*SG	**Sg**	**22 38 54.4**	**+0.1**
MLSB	**Milas**	**0.22**	**348**	*e*Pg	**Pg**	**22 38 51.5**	**+0.3**
MLSB				*e*Sg	**Sg**	**22 38 54.4**	**+0.1**
BDRM	**Kayabasi**	**0.31**	**268**	*i* P	**Pg**	**22 38 52.7**	**-0.1**
BDRM				*i* S	**Sg**	**22 38 56.7**	**-0.3**
BDRM	**Kayabasi**	**0.31**	**268**	*i* P	**Pg**	**22 38 52.7**	**-0.1**
BDRM				*i* S	**Sg**	**22 38 56.7**	**-0.3**
DAT	**Datca**	**0.40**	**211**	*e*PG	**Pg**	**22 38 56.0**	**+1.6**
DAT	**Datca**	**0.40**	**211**	*e*Pg	**Pg**	**22 38 56.0**	**+1.6**
DAT				*e*Sg	**Sg**	**22 39 03.0**	**+3.2**
BODT	**Bodrum**	**0.42**	**268**	*e*PG	**Pg**	**22 38 53.8**	**-1.0**
BODT	**Bodrum**	**0.42**	**268**	*e*Pg	**Pg**	**22 38 53.8**	**-0.9**
BODT				*e*Sg	**Sg**	**22 38 59.2**	**-1.1**
AYDN	**Tasoluk**	**0.58**	**3**	*i* P	**Pg**	**22 38 58.6**	**+0.8**
AYDN				*i* S	**Sg**	**22 39 06.0**	**+0.5**
AYDN	**Tasoluk**	**0.58**	**3**	*i* P	**Pg**	**22 38 58.6**	**+0.8**
AYDN				*i* S	**Sg**	**22 39 06.1**	**+0.6**
TURN	**Turunc**	**0.65**	**108**	*e*P	**Pg**	**22 38 58.9**	**0.0**
TURN				*i* S	**Sg**	**22 39 06.1**	**-1.3**
TURN	**Turunc**	**0.65**	**108**	*e*P	**Pg**	**22 38 58.9**	**-0.1**
TURN				*i* S	**Sg**	**22 39 06.1**	**-1.3**
GCAM	**G?zelcaml?**	**0.79**	**323**	*e*P	**Pg**	**22 39 01.2**	**-0.4**
GCAM				*i* S	**Sg**	**22 39 11.9**	**0.0**
GCAM	**G?zelcaml?**	**0.79**	**323**	*e*P	**Pg**	**22 39 01.2**	**-0.4**
GCAM				*i* S	**Sg**	**22 39 11.9**	**0.0**

MAN 12 22:46:01.8±44N×126°89E, h49km, mb4.8, ML3.7, MS3.7
MAN INTENSITY II - BISLIG SURIGAO DEL SUR.

ISCJB 12 22:46:04.3±1.4, 8°48N±0°05×126°8E±0°1, h76km±12km, mb3.8/20, Error ellipse: s-maj=18.5km s-min=7.0km az=170.6
NEIC 12 22:46:06.5±1.2, 8°43N×126°61E, h78km±11km, mb4.1/5, Error ellipse: s-maj=17.7km s-min=5.6km az=72.0
NEIC Felt [II PIVS] at Bislig.
IDC 12 22:46:07.6±2.8, 8°37N×126°54E, h89km±26km, mb3.6/14, mb1 3.7/14, mb1mx3.7/20, mbtmp3.6/14, Error ellipse: s-maj=36.4km s-min=13.7km az=72.0
ISC 12 22:46:05.3±1.4, 8°48N±0°05×126°8E±0°1, h67km±12km, n30, σ0°92/37, mb3.8/20, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.84**	**315**	*e*P	**Pn**	**22 46 33.8**	**-1.0**
SCPH				*e*S	**Sn**	**22 46 47.0**	**-10**
DAV	**Davao City (W)**	**1.86**	**221**	P	**Pn**	**22 46 34.4**	**-0.7**
	169nm,0.3s,baz=76,slow=4.2,SNR=13						
DAV				S	**Sn**	**22 46 59.8**	**+2.1**
	155nm,0.3s,baz=98,slow=19,SNR=11						
DAV	**Davao City (W)**	**1.86**	**221**	P	**Pn**	**22 46 34.4**	**-0.7**
DAV				S	**Sn**	**22 46 59.8**	**+2.1**
DMPH	**Davao City--Mi**	**1.90**	**223**	⇑*e*P	**Pn**	**22 46 34.6**	**-0.9**
DMPH				*e*S	**Sn**	**22 46 59.5**	**+0.9**
KCP	**Kidapawan**	**2.25**	**230**	⇓*e*P	**Pn**	**22 46 36.4**	**-3.9**
KCP				*e*S	**Sn**	**22 47 06.5**	**-0.5**
TBP	**Tagbilaran**	**3.16**	**293**	*e*P	**Pn**	**22 46 51.7**	**-0.9**
LLP	**Lapu-Lapu**	**3.36**	**303**	*e*P	**Pn**	**22 46 55.1**	**-0.2**
LLP				*e*S	**Sn**	**22 47 36.1**	**+2.1**
TPUB	**Ta-pu**	**15.89**	**339**	*e*Pn	**Pn**	**22 49 45.2**	**+0.4**
KAKA	**Kakadu**	**21.78**	**165**	*e*P	**P**	**22 50 52.3**	**+0.6**
	38nm,1.1s,mb4.6						
FITZ	**Fitzroy Crossi**	**26.44**	**183**	P	**P**	**22 51 35.4**	**-0.5**
	1.5nm,0.5s,mb3.7,baz=0.3,slow=12,SNR=6.9						
CMAR	**Chiang Mai Arr**	**28.83**	**293**	P	**P**	**22 51 55.9**	**-1.5**
	0.6nm,0.6s,mb3.4,baz=96,slow=8.3,SNR=2.9						
KSRS	**Korea Array**	**28.86**	**2**	P	**P**	**22 51 58.8**	**+1.3**
	1.8nm,0.7s,mb3.8,baz=180,slow=10.0,SNR=12						
WRA	**Warramunga Arr**	**29.20**	**165**	P	**P**	**22 52 01.3**	**+0.7**
	0.2nm,0.4s,mb3.1,baz=343,slow=9.3,SNR=5.1						
WRA	**Warramunga Arr**	**29.20**	**165**	P	**P**	**22 52 01.3**	**+0.7**
ASAR	**Alice Springs**	**32.69**	**168**	P	**P**	**22 52 30.8**	**-0.5**
	0.4nm,0.5s,mb3.5,baz=348,slow=6.7,SNR=7.2						
HHC	**Hu-ho-hao-te**	**34.97**	**340**	*e*P	**P**	**22 52 54.5**	**+3.5**
HHC				pP	pP	22 53 12.7	+5.3
HHC				sP	sP	22 53 21.6	+6.4
HHC				PP	PP	22 54 16.0	+4.6
HHC				PcP	PcP	22 55 24.1	+2.0
HHC				S	**S**	**22 58 21.7**	**+3.7**
HHC				sS	sS	22 58 53.6	+7.6
HHC				ScP	ScP	22 59 02.3	+0.4
HHC				SS	SS	23 00 52.2	-0.1
HHC				ScS	ScS	23 03 04.7	-0.9
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,83nm,6.3s						
HHC				LR	LR		
	comp=N,170nm,16.9s						
HHC				LR	LR		
	comp=E,190nm,15.4s						
HHC				LR	LR		
	comp=Z,180nm,16.7s						
STKA	**Stephens Creek**	**42.54**	**161**	P	**P**	**22 53 53.9**	**-0.5**
	comp=Z,3.1nm,1.0s,mb4.0,baz=336,slow=10.0,SNR=4.6						
ULN	**Ulaanbaatar**	**42.68**	**340**	*e*P	**P**	**22 53 55.5**	**+0.3**
	comp=Z,1.3nm,0.5s,mb3.9						
SONM	**Songino Array**	**42.88**	**340**	P	**P**	**22 53 56.6**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.5,baz=144,slow=8.4,SNR=2.2						
MK31	**Makanchi Array**	**53.77**	**323**	*e*P	**P**	**22 55 20.5**	**-0.3**
MKAR	**Makanchi Array**	**53.77**	**323**	P	**P**	**22 55 20.8**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.9,baz=126,slow=7.4,SNR=16						
ZALV	**Zalesovo Beam**	**56.45**	**332**	P	**P**	**22 55 39.5**	**-0.5**
	comp=Z,0.9nm,0.6s,mb4.0,baz=146,slow=8.9,SNR=4.1						
KURK	**Kurchatov**	**57.84**	**326**	*e*P	**P**	**22 55 49.4**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.3						
ABKAR	**Akbulak array**	**68.58**	**320**	*e*P	**P**	**22 57 01.3**	**+0.4**
	comp=Z,0.2nm,0.3s,mb3.4						
CASY	**Casey**	**75.51**	**187**	*e*P	**P**	**22 57 42.4**	**+0.5**
	comp=Z,0.8nm,0.5s,mb3.7						
ILAR	**Eielson Array**	**80.81**	**26**	P	**P**	**22 58 12.6**	**+1.2**
	comp=Z,0.4nm

Moment Tensor Solution. s132 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.05; $M_{\theta\theta}$-1.16; $M_{\phi\phi}$1.21; $M_{r\theta}$-0.64; $M_{\theta\phi}$-3.96; $M_{\phi r}$-2.38; Best double couple: $M_0$4.80000×10^{17} NP1:ϕ_s99.00000°,δ59.00000°,λ-177.00000°. NP2: ϕ_s8.00000°,δ88.00000°,λ-31.00000°. Principal axes: T 4.7000, Plg19.0000°, Azm57.0000°; N 0.2200, Plg59.0000°, Azm184.0000°; P -4.9200, Plg22.0000°, Azm319.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.

*KRSC **12** 23:07:50.8±0.8,56°.07N×164°.11E,h9km±9km,ML5.5*

*GCMT **12** 23:07:56.1±0.1,56°.27N×164°.31E,h15km,MW5.9, Moment Tensor Solution. s109,c234; s87,c125; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.01±.07; $M_{\theta\theta}$-3.00±.07; $M_{\phi\phi}$4.01±.07; $M_{r\theta}$0.74±.22; $M_{\theta\phi}$-7.85±.07; $M_{\phi r}$-1.08±.21; Best double couple: $M_0$8.70000×10^{17} NP1:ϕ_s192.00000°,δ85.00000°,λ5.00000°. NP2: ϕ_s102.00000°,δ85.00000°,λ175.00000°. Principal axes: T 9.2700, Plg7.0000°, Azm57.0000°; N -1.1800, Plg83.0000°, Azm239.0000°; P -8.0900, Plg0.0000°, Azm147.0000°; Data Used: II IU IC G CN. Surface waves: sta=121, comp=285, per= 50.*

*DJA **12** 23:07:58,57°.22N×162°.22E,h10km,mb5.4/29*

*SZGRF **12** 23:07:59.7,57°.34N×165°.96E,h33km,mb5.3,MS5.9, Bering Sea*

ISC 12 23:07:50.4±0.6,56°.31N±0°.02×164°.01E±0°.02,h9km±3km, h15km±1.5km:pP-P,n1323,σ0°85/1254,mb5.3/340, MS5.7/267,156C-95D,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.67**	**262**	**P**	**Pg**		**23 08 03.9**	**+0.6**
KBTR	**Krutoberegovo**	**0.67**	**262**	PN	**Pg**		**23 08 03.9**	**+0.6**
SMKR	**Semkarok**	**1.44**	**282**	*e*P	**Pn**		**23 08 16.7**	**+0.1**
BKI	**Bering**	**1.57**	**134**	*e*P	**Pn**		**23 08 14.5**	**-3.9**
BKI				*i* S	**Sn**		**23 08 32.4**	**-6.3**
BKI	**Bering**	**1.57**	**134**	PN	**Pn**		**23 08 14.5**	**-3.9**
BKI				S	**Sn**		**23 08 32.4**	**-6.3**
BDR	**Baidarnaya**	**1.58**	**281**	*e*P	**Pn**		**23 08 19.2**	**+0.7**
SRKR	**Sorokina**	**1.61**	**284**	P	**Pn**		**23 08 19.9**	**+0.9**
ZLN	**Zelenaya**	**1.82**	**262**	P	**Pn**		**23 08 23.5**	**+1.7**
KLY	**Klyuchi**	**1.87**	**272**	P	**Pn**		**23 08 21.8**	**-0.7**
KLY	**Klyuchi**	**1.87**	**272**	PN	**Pn**		**23 08 21.8**	**-0.7**
BZGR	**Bezymyannyi-Gr**	**1.89**	**260**	*e*P	**Pn**		**23 08 23.9**	**+1.1**
KRSR	**Krestovskiy**	**1.92**	**269**	P	**Pn**		**23 08 24.6**	**+1.4**
BZWR	**Bezymyannyi-We**	**2.00**	**261**	P	**Pn**		**23 08 25.7**	**+1.5**
BZMR	**Bezymyannaya**	**2.00**	**261**	P	**Pn**		**23 08 26.2**	**+1.8**
BZMR				*i* S	**Sn**		**23 08 51.7**	**+2.2**
KPT	**Kopyto**	**2.15**	**262**	P	**Pn**		**23 08 28.2**	**+1.9**
KPT				*i* S	**Sn**		**23 08 55.2**	**+2.2**
MKZ	**Mys Kozlova**	**2.18**	**217**	P	**Pn**		**23 08 25.2**	**-1.6**
MKZ				*i* S	**Sn**		**23 08 50.2**	**-3.7**
MKZ	**Mys Kozlova**	**2.18**	**217**	PN	**Pn**		**23 08 25.2**	**-1.6**
MKZ				S	**Sn**		**23 08 50.2**	**-3.7**
KOZR	**Kozyr**	**2.31**	**266**	PN	**Pn**		**23 08 30.9**	**+2.3**
KOZ	**Kozyrevsk**	**2.33**	**266**	P	**Pn**		**23 08 30.9**	**+2.1**
SRDR	**Sredinnyy**	**2.39**	**272**	P	**Pn**		**23 08 31.4**	**+1.7**
SRDR				*i* S	**Sn**		**23 09 00.9**	**+1.9**
TUMR	**Tumrok**	**2.41**	**246**	P	**Pn**		**23 08 30.0**	**+0.1**
KII	**Karymskiy**	**3.47**	**231**	P	**Pn**		**23 08 45.1**	**+0.6**
KII				*i* S	**Sn**		**23 09 23.7**	**-1.9**
SPN	**Mys Shipunski**	**3.96**	**217**	*e*P	**Pn**		**23 08 49.5**	**-1.7**
SPN				*i* S	**Sn**		**23 09 31.8**	**-6.0**
SPN	**Mys Shipunski**	**3.96**	**217**	PN	**Pn**		**23 08 49.5**	**-1.7**
NLC	**Nalytchevo**	**4.14**	**223**	P	**Pn**		**23 08 53.1**	**-0.7**
NLC				*i* S	**Sn**		**23 09 38.7**	**-3.6**
NLC	**Nalytchevo**	**4.14**	**223**	PN	**Pn**		**23 08 53.1**	**-0.7**
AVH	**Avacha**	**4.31**	**227**	P	**Pn**		**23 08 56.8**	**+0.7**
AVH				*i* S	**Sn**		**23 09 45.7**	**-0.7**
GNL	**Ganaly**	**4.37**	**236**	*e*P	**Pn**		**23 08 57.9**	**+1.1**
GNL				*i* S	**Sn**		**23 09 46.2**	**-1.5**
INSR	**Institute**	**4.51**	**226**	*e*P	**Pn**		**23 08 56.2**	**-2.6**
PET	**Petropavlovsk**	**4.53**	**226**	P	**Pn**		**23 08 59.5**	**+0.5**
PET				*i* S	**Sn**		**23 09 49.0**	**-2.7**
PET	**Petropavlovsk**	**4.53**	**226**	*e*Pn	**Pn**		**23 08 59.1**	**+0.1**
PET				*e*Sn	**Sn**		**23 09 50.1**	**-1.6**
PET	**Petropavlovsk**	**4.53**	**226**	α *i*PN	**Pn**		**23 08 59.0**	**0.0**
PET				pmax	pmax			
	comp=Z,855nm,0.7s							
PET				MLR	MLR			
	comp=Z,86μm,21.0s							
PETK	**Petropavlovsk-**	**4.86**	**231**	Pn	**Pn**		**23 09 04.3**	**+0.7**
	comp=Z,14nm,0.3s,baz=62,slow=18,SNR=89							
PETK				Sn	**Sn**		**23 10 04.8**	**+4.8**
	comp=Z,33nm,0.3s,baz=27,slow=20,SNR=5.1							
PETK	**Petropavlovsk-**	**4.86**	**231**	Pn	**Pn**		**23 09 04.3**	**+0.7**
PETK				Sn	**Sn**		**23 10 04.8**	**+4.8**
PETK	**Petropavlovsk-**	**4.86**	**231**	PN	**Pn**		**23 09 04.3**	**+0.7**
PETK							23 10 04.8	
PETK				pmax	pmax			
	comp=Z,14nm,0.3s							
PETK				smax				
	comp=N,33nm,0.3s							
GRL	**Gorelyy**	**5.12**	**225**	*e*P	**Pn**		**23 09 09.0**	**+1.9**
GRL				*i* S	**Sn**		**23 10 06.1**	**-0.1**
FX1	**Attu Island--F**	**6.33**	**119**	*e*Pn	**Pn**		**23 09 20.0**	**-3.8**
FX1	**Attu Island--F**	**6.33**	**119**	*e*PN	**Pn**		**23 09 20.0**	**-3.8**
SMY	**Shemya**	**6.88**	**117**	*e*P	**Pn**		**23 09 28.2**	**-3.1**
SMY	**Shemya**	**6.88**	**117**	*e*PN	**Pn**		**23 09 28.2**	**-3.1**
SKR	**Severo-Kuril's**	**7.34**	**223**	*e*P	**Pn**		**23 09 38.0**	**+0.4**
SKR	**Severo-Kuril's**	**7.34**	**223**	*e*PN	**Pn**		**23 09 38.0**	**+0.4**
SKR				pmax	pmax			
	comp=Z,190nm,0.5s							
SKR				pmax	pmax			
	comp=E,80nm,0.4s							
SKR				pmax	pmax			
	comp=N,2μm,8.0s							
SKR				pmax	pmax			
	comp=E,2μm,8.0s							
SKR				pmax	pmax			
	comp=Z,3μm,8.0s							
SKR				MLR	MLR			
	comp=N,37μm,20.0s							
SKR				MLR	MLR			
	comp=E,53μm,20.0s							
SKR				MLR	MLR			
	comp=Z,33μm,20.0s							
ALID	**Alaid**	**7.41**	**226**	*e*P	**Pn**		**23 09 41.2**	**+2.5**
SEY	**Seymchan**	**8.87**	**323** ⇑	*e*P	**Pn**		**23 09 59.2**	**+0.7**
SEY	**Seymchan**	**8.87**	**323** ⇑	*e*PN	**Pn**		**23 09 59.2**	**+0.7**
AMKA	**Amchitka**	**10.29**	**112**	*e*P	**Pn**		**23 10 17.9**	**-0.1**
	comp=Z,19nm,0.4s							
BILL	**Bilibino**	**11.82**	**4**	*e*Pn	**Pn**		**23 10 42.8**	**+3.9**
	comp=Z,108nm,0.9s							
BILL	**Bilibino**	**11.82**	**4** ⇑	*e*PN	**Pn**		**23 10 42.7**	**+3.8**
BILL				*e*S	**Sn**		**23 12 57.3**	**+6.6**
BILL				pmax	pmax			
	comp=Z,93nm,1.7s							
BILL				MLR	MLR			
	comp=Z,43μm,17.0s							
GAMB	**Gambell**	**14.18**	**48**	*e*Pn	**Pn**		**23 11 12.2**	**+1.1**
	comp=Z,418nm,1.3s							
NIKO	**Nikolski**	**16.01**	**91**	*e*Pn	**Pn**		**23 11 35.8**	**+0.2**
	comp=Z,1μm,1.2s							
YSS	**Yuzh-Sakhalins**	**16.12**	**243**	*e*Pn	**Pn**		**23 11 38.4**	**+1.5**
	comp=Z,161nm,1.1s							
YSS	**Yuzh-Sakhalins**	**16.12**	**243**	*j* eP	**Pn**		**23 11 37.2**	**+0.3**
YSS				*e*S	**Sn**		**23 14 34.0**	**-1.6**
YSS				pmax	pmax			
	comp=N,2μm,6.0s							
YSS				pmax	pmax			
	comp=E,1μm,6.0s							
YSS				pmax	pmax			
	comp=Z,2μm,6.0s							
YSS				pmax	pmax			
	comp=Z,80nm,1.1s							
YSS				MLR	MLR			
	comp=Z,38μm,14.0s							
YSS				MLR	MLR			
	comp=N,23μm,15.0s							
YSS				MLR	MLR			
	comp=E,28μm,15.0s							
TNA	**Tin City**	**16.34**	**44**	*e*Pn	**Pn**		**23 11 40.0**	**+0.4**
	comp=E,398nm,1.3s							
YUK	**Yuzh-Kuril'sk**	**16.84**	**231** ⇑	*i* P	**Pn**		**23 11 44.5**	**-1.7**
YUK				pmax	pmax			
	comp=Z,285nm,1.0s							
YUK				pmax	pmax			
	comp=N,176nm,1.0s							
YUK				pmax	pmax			
	comp=E,158nm,1.0s							
YUK				pmax	pmax			
	comp=Z,100nm,0.3s							
YUK				MLR	MLR			
	comp=N,13μm,20.0s							
YUK				MLR	MLR			
	comp=E,30μm,20.0s							
YUK				MLR	MLR			
	comp=Z,17μm,20.0s							
UNV	**Unalaska Valle**	**17.00**	**86**	*e*P	**Pn**		**23 11 48.8**	**+0.7**
	comp=Z,291nm,1.0s							
AKUT	**Akutan**	**17.31**	**85**	*e*P	**Pn**		**23 11 54.5**	**+2.5**
	comp=Z,1μm,1.7s							
ASAJ	**Asahikawa**	**18.25**	**237**	P	**Pn**		**23 12 02.7**	**-1.0**
	comp=Z,2.6nm,0.3s,baz=34,slow=7.0,SNR=31							
ASAJ				LR	LR		23 19 44.1	
	comp=Z,36μm,18.6s,baz=51,slow=39							
ASAJ	**Asahikawa**	**18.25**	**237**	*e*P	**Pn**		**23 12 03.2**	**-0.5**
ASAJ	**Asahikawa**	**18.25**	**237**	P	**Pn**		**23 12 02.7**	**-1.0**
ASAJ				pmax	pmax			
	comp=Z,3.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,36μm,18.6s							
YAK	**Yakutsk**	**18.34**	**302**	*e*P	**Pn**		**23 12 04.4**	**-0.2**
YAK	**Yakutsk**	**18.34**	**302**	*d i*P	**Pn**		**23 12 03.9**	**-0.7**
YAK				*e*S	**Sn**		**23 15 35.4**	**+6.2**
YAK				pmax	pmax			
	comp=Z,131nm,1.0s							
YAK				pmax	pmax			
	comp=E,115nm,1.4s							
YAK				pmax	pmax			
	comp=N,27nm,1.3s							
YAK				pmax	pmax			
	comp=Z,219nm,0.9s							
YAK				pmax	pmax			
	comp=E,374nm,1.6s							
YAK				smax				
	comp=E,318nm,3.4s							
YAK				smax				
	comp=N,6μm,10.6s							
YAK				MLR	MLR			
	comp=Z,11μm,12.0s							
YAK				MLR	MLR			
	comp=N,9μm,12.0s							
YAK				MLR	MLR			
	comp=E,9μm,12.0s							
HABR	**Khabarovsk**	**19.22**	**258**	*c i*P	**Pn**		**23 12 16.0**	**+0.6**
HABR				*e*			23 15 51.8	
HABR				pmax	pmax			
	comp=Z,126nm,2.0s							
HABR				MLR	MLR			
	comp=E,19μm,15.0s							
HABR				MLR	MLR			
	comp=N,14μm,15.0s							
HABR				MLR	MLR			
	comp=Z,16μm,19.0s							
ERM	**Erimo**	**19.65**	**232**	*e*P	**Pn**		**23 12 18.8**	**-1.8**
ERM	**Erimo**	**19.65**	**232**	*e*P	**Pn**		**23 12 18.8**	**-1.7**
ERM	**Erimo**	**19.65**	**232**	P	**Pn**		**23 12 18.0**	**-2.5**
	comp=Z,785nm,0.4s,SNR=9.1							
SDPT	**Sand Point**	**19.84**	**78**	*e*P	**Pn**		**23 12 19.3**	**-3.5**
	comp=Z,817nm,1.6s							
KLR	**Kul'dur**	**20.62**	**264**	*e*P	**P**		**23 12 24.3**	**-5.4**
KLR				*e*			23 12 54.8	
KLR				pmax	pmax			
	comp=E,45nm,2.0s							
KLR				pmax	pmax			
	comp=Z,80nm,2.0s							
CHGN	**Chignik**	**20.68**	**74**	*e*P	**P**		**23 12 29.3**	**-1.0**
TIXI	**Tiksi**	**21.27**	**330**	*e*P	**P**		**23 12 37.3**	**+0.8**
TIXI				LR	LR			
	comp=Z,19μm,20.0s,MS5.5							
TIXI	**Tiksi**	**21.27**	**330**	*e*P	**P**		**23 12 37.1**	**+0.6**
TIXI				*e*S	**S**		**23 16 35.4**	**+2.9**
TIXI				pmax	pmax			
	comp=Z,173nm,1.2s,mb5.3							
TIXI				MLR	MLR			
	comp=Z,32μm,14.0s,MS5.9							
SVW2	**Sparrevohn**	**21.27**	**60**	*e*P	**P**		**23 12 36.7**	**+0.1**
	comp=Z,326nm,1.6s,mb5.4							
CLNS	**Chul'man**	**21.36**	**288**	*c i*P	**P**		**23 12 42.3**	**+4.7**
CLNS				*e**PP			23 12 48.2	
CLNS				*e*			23 12 56.6	
CLNS				*e*			23 16 25.6	
CLNS				*e*SS			23 17 24.4	
CLNS				pmax	pmax			
	comp=Z,234nm,1.4s,mb5.3							
CLNS				pmax	pmax			
	comp=E,162nm,0.9s							
CLNS				pmax	pmax			
	comp=N,76nm,0.8s							
CLNS				pmax	pmax			
	comp=Z,94nm,1.2s,mb5.0							
CLNS				pmax	pmax			
	comp=N,27nm,1.1s							
CLNS				pmax	pmax			
	comp=E,55nm,0.8s							
CLNS				smax				
	comp=E,4μm,11.9s							
CLNS				smax				
	comp=N,7μm,14.3s							
CLNS				MLR	MLR			
	comp=N,4μm,10.0s,MS5.5							
CLNS				MLR	MLR			
	comp=E,10μm,13.0s,MS5.5							
CLNS				MLR	MLR			
	comp=Z,14μm,14.0s,MS5.5							
RSO	**Redoubt South**	**22.72**	**61**	*e*P	**P**		**23 12 44.0**	**-8.1**
PPLA	**Purkeypile**	**22.73**	**55**	*e*P	**P**		**23 12 53.0**	**+0.8**
	comp=Z,732nm,1.5s,mb5.9							
OHAK	**Old Harbor**	**23.15**	**70**	*e*P	**P**		**23 12 56.2**	**-0.5**
	comp=Z,83nm,0.8s,mb5.2							
KDAK	**Kodiak Island**	**23.36**	**68**	P	**P**		**23 12 57.0**	**-1.9**
	comp=Z,38nm,0.6s,mb5.0,baz=291,slow=3.8,SNR=24							
KDAK				LR	LR		23 21 54.8	
	comp=Z,23μm,18.6s,MS5.7,baz=277,slow=36							
KDAK	**Kodiak Island**	**23.36**	**68**	*e*P	**P**		**23 12 55.9**	**-3.1**
	comp=Z,174nm,1.3s,mb5.3							
KDAK				LR	LR			
	comp=Z,23μm,20.0s,MS5.6							
KDAK	**Kodiak Island**	**23.36**	**68**	*i* P	**P**		**23 12 57.7**	**-1.2**
KDAK	**Kodiak Island**	**23.36**	**68**	P	**P**		**23 12 56.8**	**-2.1**
	comp=Z,534nm,1.1s,mb5.9,SNR=8.4							
TRF	**Thorofare Moun**	**23.56**	**54**	*e*P	**P**		**23 13 00.1**	**-0.8**
	comp=Z,404nm,1.2s,mb5.7							
COLD	**Coldfoot**	**23.64**	**44**	*e*P	**P**		**23 13 00.6**	**-1.0**
	comp=Z,115nm,1.1s,mb5.2							
SLKM	**Skilak Lake**	**23.95**	**61**	*e*P	**P**		**23 13 05.4**	**+0.9**
SLKM	**Skilak Lake**	**23.95**	**61**	*e*P	**P**		**23 13 05.4**	**+0.9**
RC01	**Rabbit Creek A**	**24.09**	**59**	*e*P	**P**		**23 13 06.9**	**+1.2**
	comp=Z,50nm,0.9s,mb5.0							
MCK	**McKinley**	**24.14**	**53**	*e*P	**P**		**23 13 05.4**	**-0.8**
	comp=Z,286nm,1.1s,mb5.6							
MCK	**McKinley**	**24.14**	**53**	*e*P	**P**		**23 13 05.4**	**-0.8**
MCK				pmax	pmax			
	comp=Z,286nm,1.1s,mb5.6							
PMR	**Palmer**	**24.30**	**58**	*e*P	**P**		**23 13 07.8**	**+0.2**
	comp=Z,5.0nm,0.3s,mb4.4							
PMR	**Palmer**	**24.30**	**58**	*e*P	**P**		**23 13 07.8**	**+0.2**
PMR				pmax	pmax			
	comp=Z,5.0nm,0.3s,mb4.4							
VLA	**Vladivostok**	**24.34**	**251** ⇓	*e*P	**P**		**23 13 05.7**	**-2.5**
VLA				*e*			23 13 36.4	
VLA							23 16 44.8	
VLA				*e*S	**S**		**23 17 26.4**	**-0.9**
VLA				pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.3							
COLA	**College**	**24.55**	**50**	*e*P	**P**		**23 13 08.9**	**-1.0**
	comp=Z,166nm,1.1s,mb5.5							
COLA				LR	LR			
	comp=Z,16μm,19.0s,MS5.5							
COLA	**College**	**24.55**	**50**	*e*P	**P**		**23 13 08.9**	**-1.0**
COLA				pmax	pmax			
	comp=Z,166nm,1.1s,mb5.5							
COLA				MLR	MLR			
	comp=Z,16μm,19.0s,MS5.5							
MDJ	**Mudanjiang**	**24.56**	**256**	P	**P**		**23 13 10.1**	**-0.1**
MDJ				pP			23 13 13.2	
MDJ				sP	sP		23 13 14.6	+0.5
MDJ				S	**S**		**23 17 31.5**	**+0.6**
MDJ				sS	sS		23 17 36.7	+1.3
MDJ				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.3							
MDJ				pmax	pmax			
	comp=Z,950nm,12.3s							
MDJ				LR	LR			
	comp=N,26μm,18.7s,MS5.9							
MDJ				LR	LR			
	comp=E,27μm,17.6s,MS5.9							
MDJ				LR	LR			
	comp=Z,20μm,20.2s,MS5.6							
MDJ	**Mudanjiang**	**24.56**	**256**	*e*P	**P**		**23 13 09.0**	**-1.2**
	comp=Z,8.1nm,0.7s,mb4.4							
MDJ				LR	LR			
	comp=Z,21μm,20.0s,MS5.6							
SML	**Sawmill**	**24.64**	**57**	*e*P	**P**		**23 13 09.8**	**-1.0**
	comp=Z,32nm,0.9s,mb4.9							
SML	**Sawmill**	**24.64**	**57**	*e*P	**P**		**23 13 09.8**	**-0.9**
SML				pmax	pmax			
	comp=Z,33nm,0.9s,mb4.9							
ILAR	**Eielson Array**	**24.97**	**50**	P	**P**		**23 13 12.3**	**-1.4**
	comp=Z,32nm,0.9s,mb4.9,baz=265,slow=7.9,SNR=207							
ILAR				LR	LR		23 23 37.7	
	comp=Z,16μm,18.4s,MS5.6,baz=262,slow=38							
ILAR	**Eielson Array**	**24.97**	**50**	P	**P**		**23 13 12.3**	**-1.4**
ILAR				pmax	pmax			
	comp=Z,33nm,0.9s							
ILAR				MLR	MLR			
	comp=Z,16μm,18.5s							
PAX	**Paxson**	**25.78**	**54**	*e*P	**P**		**23 13 21.1**	**0.0**
	comp=Z,135nm,1.1s,mb5.4							
PAX	**Paxson**	**25.78**	**54**	*e*P	**P**		**23 13 21.1**	**0.0**
PAX				pmax	pmax			
	comp=Z,135nm,1.1s,mb5.4							
DOT	**Dot Lake**	**26.31**	**52**	*e*P	**P**		**23 13 23.8**	**-2.2**
	comp=Z,306nm,1.1s,mb5.7							
MAJO	**Matsushiro**	**26.32**	**232**	*e*P	**P**		**23 13 25.5**	**-0.8**
	comp=Z,115nm,0.9s,mb5.4							
MAJO				LR	LR			
	comp=Z,22μm,22.0s,MS5.7							
MAJO	**Matsushiro**	**26.32**	**232**	*e*P	**P**		**23 13 25.5**	**-0.8**
MAJO				pmax	pmax			
	comp=Z,115nm,0.9s,mb5.4							
MAJO				MLR	MLR			
	comp=Z,22μm,22.0s,MS5.7							
MAT	**Matsushiro**	**26.32**	**232**	P	**P**		**23 13 25.5**	**-0.8**
MAT				S	**S**		**23 18 01.0**	**+2.0**
MJAR	**Matsushiro Arr**	**26.32**	**232**	P	**P**		**23 13 26.7**	**+0.5**
	comp=Z,44nm,0.9s,mb5.0,baz=20,slow=7.0,SNR=58							
MJAR				LR	LR		23 24 21.2	
	comp=Z,19μm,22.0s,MS5.6,baz=55,slow=38							
MJAR	**Matsushiro Arr**	**26.32**	**232**	P	**P**		**23 13 26.7**	**+0.4**
MJAR				pmax	pmax			
	comp=Z,44nm,0.9s							
MJAR				MLR	MLR			
	comp=Z,19μm,22.0s							
MENT	**Mentasta**	**26.58**	**54**	*e*P	**P**		**23 13 26.9**	**-1.4**
HIA	**Hailar**	**27.28**	**274**	PFAKE			23 13 40.0	+5.2
HIA				LR	LR			
	comp=Z,3μm,19.0s,MS4.8							
HIA	**Hailar**	**27.28**	**274**	P	sP		23 13 50.0	+11
HIA				MLR	MLR			
	comp=Z,3μm,19.0s							
CN2	**Changchun**	**27.35**	**259**	*e*P	**P**		**23 13 35.6**	**+0.2**
CN2				*e*sP	sP		23 13 41.0	+1.7
CN2				*e*S	**S**		**23 18 12.9**	**-2.2**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.5							
CN2				pmax	pmax			
	comp=Z,200nm,6.0s							
CN2				LR	LR			
	comp=N,19μm,19.0s,MS5.8							
CN2				LR	LR			
	comp=E,16μm,19.0s,MS5.8							
CN2				LR	LR			
	comp=Z,15μm,17.0s,MS5.6							
EGAK	**Eagle**	**27.41**	**50**	*e*P	**P**		**23 13 33.7**	**-2.0**
	comp=Z,244nm,0.2s,mb6.4							
EGAK				LR	LR			
	comp=Z,16μm,21.0s,MS5.6							
DAWY	**Dawson**	**28.28**	**51**	*e*P	**P**		**23 13 42.2**	**-1.4**
INK	**Inuvik**	**29.94**	**41**	P	**P**		**23 13 58.1**	**-0.2**
	comp=Z,20nm,0.5s,mb5.1,baz=286,slow=7.2,SNR=45							
INK	**Inuvik**	**29.94**	**41**	*e*P	**P**		**23 13 57.8**	**-0.5**
	comp=Z,213nm,1.5s,mb5.7							
INK	**Inuvik**	**29.94**	**41**	P	**P**		**23 13 58.1**	**-0.1**
INK				pmax	pmax			
	comp=Z,20nm,0.5s							
KSRS	**Korea Array**	**30.55**	**247**	P	**P**		**23 14 02.8**	**-1.2**
	comp=Z,4.6nm,0.7s,mb4.4,baz=36,slow=8.9,SNR=23							
KSRS				PcP	PcP		23 17 02.9	+0.4
	comp=Z,2.7nm,1.0s,baz=9.5,slow=1.5,SNR=3.4							
KSRS				LR	LR		23 26 35.3	
	comp=Z,8μm,18.9s,MS5.4,baz=63,slow=37							
KSRS	**Korea Array**	**30.55**	**247**	P	**P**		**23 14 02.8**	**-1.1**
KSRS							23 17 02.9	
KSRS				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5							
KSRS				MLR	MLR			
	comp=Z,8μm,19.0s,MS5.4							
MIDW	**Midway**	**31.07**	**147**	PFAKE			23 14 20.0	+11
MIDW				LR	LR			
	comp=Z,8μm,21.0s,MS5.3							
INCN	**Inchon**	**31.19**	**249**	PFAKE			23 14 20.0	+10
INCN				LR	LR			
	comp=Z,10μm,19.0s,MS5.5							
SKAG	**Skagway**	**31.43**	**59**	*e*P	**P**		**23 14 12.3**	**+0.9**
	comp=Z,189nm,1.6s,mb5.7							
SIT	**Sitka**	**32.37**	**63**	*e*P	**P**		**23 14 20.8**	**+1.0**
	comp=Z,257nm,1.6s,mb5.8							
SIT	**Sitka**	**32.37**	**63**	*e*P	**P**		**23 14 20.8**	**+1.0**
SIT				pmax	pmax			
	comp=Z,257nm,1.6s,mb5.8							
JNU	**Nakatsue**	**32.52**	**239**	*e*P	**P**		**23 14 21.6**	**+0.4**
	comp=Z,12nm,1.4s,mb4.6							
DL2	**Dalian**	**32.80**	**256**	P	**P**		**23 14 25.3**	**+1.6**
DL2				S	**S**		**23 19 44.2**	**+3.6**
DL2				pmax	pmax			
	comp=Z,20nm,1.2s,mb4.9							
DL2				pmax	pmax			
	comp=Z,200nm,3.9s							
DL2				LR	LR			
	comp=N,10μm,20.1s,MS5.6							
DL2				LR	LR			
	comp=E,8μm,18.6s,MS5.6							
DL2				LR	LR			
	comp=Z,7μm,14.3s,MS5.5							
WRAK	**Wrangell Islan**	**34.13**	**63**	*e*P	**P**		**23 14 36.0**	**+0.9**
	comp=Z,193nm,1.5s,mb5.8							
WRAK				LR	LR			
	comp=Z,16μm,20.0s,MS5.8							
IRK	**Irkutsk**	**34.16**	**289**	*e*P	sP		23 14 47.1	+7.8
IRK				pmax	pmax			
	comp=Z,33nm,2.0s,mb4.9						

ULN Ulaanbaatar 35.07 281 P **P** **23 14 43.0 -0.3**
SNR=18
SONM Songino Array 35.44 281 P **P** **23 14 45.6 -0.9**
comp=Z,14nm,0.8s,mb5.0,baz=58,slow=8.2,SNR=34
SONM PcP PcP 23 17 15.9 0.0
comp=Z,2.5nm,0.8s,baz=50,slow=2.1,SNR=2.5
SONM ScP ScP 23 21 03.1 +1.5
comp=Z,0.7nm,0.5s,baz=90,slow=2.9,SNR=2.4
SONM LR LR 23 30 45.7
comp=Z,10μm,18.6s,MS5.6,baz=55,slow=39
SONM Songino Array 35.44 281 P **P** **23 14 45.6 -0.9**
SONM 23 17 15.9
SONM pmax pmax
comp=Z,15nm,0.8s
SONM MLR MLR
comp=Z,10μm,18.6s
ZAK Zakamensk 35.68 287 *e*P **P** **23 14 47.6 -0.9**
ZAK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MOY Mondy 36.19 290 *e*P **P** **23 14 56.0 +3.1**
HHC Hu-ho-hao-te 37.00 268 ⇑P **P** **23 15 00.4 +0.5**
HHC pP pP 23 15 07.5 +4.8
HHC PP PP 23 16 27.9 +3.9
HHC PcP PcP 23 17 21.8 +1.1
HHC S **S** **23 20 45.1 0.0**
HHC sS sS 23 20 52.0 +2.3
HHC ScP ScP 23 21 07.3 -0.1
HHC ScS ScS 23 25 12.5 -2.2
HHC pmax pmax
comp=Z,18nm,1.2s,mb4.8
HHC pmax pmax
comp=Z,480nm,7.9s
HHC LR LR
comp=N,30μm,16.3s,MS6.3
HHC LR LR
comp=E,28μm,14.9s,MS6.3
HHC LR LR
comp=Z,11μm,12.9s,MS5.8
WAKE Wake Island 37.02 176 PFAKE 23 15 10.0 +10
WAKE LR LR
comp=Z,4μm,19.0s,MS5.2
BTO Baotou 38.02 269 *e*P **P** **23 15 08.3 -0.3**
BBB Bella Bella 38.42 67 P **P** **23 15 12.3 +0.5**
comp=Z,28nm,0.9s,mb5.0,baz=115,slow=8.6,SNR=8.5
SSE Sheshan 38.98 248 P **P** **23 15 15.9 -0.8**
SSE S **S** **23 21 18.6 +3.3**
SSE sS sS 23 21 25.2 +5.2
SSE pmax pmax
comp=Z,13nm,1.1s,mb4.6
SSE pmax pmax
comp=Z,430nm,7.2s
SSE LR LR
comp=N,5μm,24.4s,MS5.5
SSE LR LR
comp=E,6μm,24.4s,MS5.5
SSE LR LR
comp=Z,8μm,12.2s
YKA Yellowknife Ar 39.27 46 P **P** **23 15 18.4 -0.4**
comp=Z,27nm,0.8s,mb5.1,baz=299,slow=8.1,SNR=82
YKA LR LR 23 32 54.5
comp=Z,479nm,19.1s,MS4.3,baz=180,slow=38
YKA Yellowknife Ar 39.27 46 P **P** **23 15 18.4 -0.4**
YKA pmax pmax
comp=Z,27nm,0.8s
YKA MLR MLR
comp=Z,479nm,19.2s
ALE Alert 39.41 9 P **P** **23 15 20.0 +0.2**
comp=Z,78nm,0.7s,mb5.5,SNR=7.6
NJ2 Nanjing 39.45 251 *e*P **P** **23 15 20.2 -0.4**
NJ2 pP pP 23 15 24.7 +1.3
NJ2 sP sP 23 15 27.2 +2.7
NJ2 PP PP 23 16 54.6 +3.6
NJ2 S **S** **23 21 21.0 -1.3**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
NJ2 pmax pmax
comp=Z,120nm,6.8s
NJ2 LR LR
comp=N,3μm,23.3s,MS5.2
NJ2 LR LR
comp=E,3μm,21.6s,MS5.2
NJ2 LR LR
comp=Z,2μm,19.8s,MS5.0
RES Resolute Bay 39.47 24 *e*P **P** **23 15 20.4 +0.1**
comp=Z,20nm,0.9s,mb4.8
RES Resolute Bay 39.47 24 *e*P **P** **23 15 20.5 +0.1**
RES pmax pmax
comp=Z,20nm,0.9s,mb4.8
PGC Sidney 42.92 68 *e*P **P** **23 15 49.2 +0.2**
comp=Z,9.2nm,1.6s,mb4.3
ZAA0 Zalesovo Array 42.99 302 *e*P **P** **23 15 49.9 +0.4**
ZALV Zalesovo Beam 42.99 302 P **P** **23 15 49.2 -0.2**
comp=Z,1.7nm,0.8s,baz=46,slow=8.5,SNR=8.1
ZALV PP PP 23 17 29.5 +0.5
comp=Z,4.6nm,0.8s,baz=54,slow=9.7,SNR=4.8
ZALV LR LR 23 35 14.7
comp=Z,6μm,18.6s,MS5.5,baz=50,slow=38
ZALV Zalesovo Beam 42.99 302 P **P** **23 15 49.2 -0.2**
ZALV PP PP 23 17 29.5 +0.5
ZALV LR LR 23 35 14.7
ZALV Zalesovo Beam 42.99 302 P **P** **23 15 49.2 -0.3**
ZALV 23 17 29.5
ZALV MLR MLR
comp=Z,6μm,18.7s,MS5.5
WHN Wuhan 43.02 255 P **P** **23 15 47.2 -2.8**
WHN S **S** **23 22 16.2 +0.7**
WHN LR LR
comp=N,32μm,18.1s,MS6.5
WHN LR LR
comp=E,47μm,18.6s,MS6.5
WHN LR LR
comp=Z,31μm,16.0s,MS6.3
NVS Novosibirsk 43.20 303 ⇑*i*P **P** **23 15 49.6 -1.6**
NVS pmax pmax
comp=Z,120nm,2.2s,mb5.2
NVS pmax pmax
comp=N,50nm,2.1s
NVS pmax pmax
comp=E,65nm,2.3s
XAN Xi'an 43.32 263 P **P** **23 15 52.5 +0.1**
XAN S **S** **23 22 18.2 -1.6**
XAN pmax pmax
comp=Z,190nm,8.2s
XAN LR LR
comp=N,12μm,19.8s,MS5.9
XAN LR LR
comp=E,9μm,19.8s,MS5.9
XAN LR LR
comp=Z,3μm,19.2s,MS5.2
VDB Vedder Mountai 43.38 67 P **P** **23 15 52.6 -0.1**
A05A Maple Falls 43.40 67 ⇑P **P** **23 15 53.2 +0.3**
baz=43
NLWA Neilton Lookou 43.49 70 *e*P **P** **23 15 53.8 +0.1**
comp=Z,111nm,1.4s,mb5.4
NLWA LR LR
comp=Z,7μm,21.0s,MS5.6
CMW Cultus Mountai 43.75 68 P **P** **23 15 56.4 +0.7**
TATO Taipei 43.83 242 PFAKE 23 16 10.0 +13
TATO LR LR
comp=Z,10μm,19.0s,MS5.8
GNW Green Mountain 43.93 69 *e*P **P** **23 15 57.5 +0.4**
comp=Z,43nm,1.7s,mb4.9
JCW Jim Creek 43.99 68 P **P** **23 15 58.0 +0.3**
KBS Kingsbay 43.99 353 *e*P **P** **23 15 59.4 +2.1**
KBS *e*S **S** **23 22 33.2 +4.5**
KBS AMS AMS 23 33 12.8
comp=Z,3μm,18.2s,MS5.2
KBS Kingsbay 43.99 353 *e*P **P** **23 15 58.2 +0.9**
comp=Z,50nm,1.1s,mb5.2
KBS LR LR
comp=Z,3μm,20.0s,MS5.2
KBS Kingsbay 43.99 353 *e*P **P** **23 15 58.2 +0.9**
KBS pmax pmax
comp=Z,50nm,1.1s,mb5.2
KBS MLR MLR
comp=Z,3μm,20.0s,MS5.2
B06A Marblemount 44.01 67 ⇑P **P** **23 15 57.6 -0.2**
baz=44,SNR=8.7
JOHN Johnston Islan 44.30 142 PFAKE 23 16 10.0 +10
JOHN LR LR
comp=Z,6μm,20.0s,MS5.5
GTA Gaotai 44.52 276 *e*P **P** **23 16 01.3 -0.7**
GTA pP pP 23 16 05.3 +0.5
GTA sP sP 23 16 08.5 +2.6
GTA S **S** **23 22 33.5 -3.7**
GTA sS sS 23 22 41.5 -0.4
GTA SS SS 23 25 43.9 -12
GTA pmax pmax
comp=Z,24nm,1.4s,mb4.8
GTA pmax pmax
comp=Z,490nm,6.2s
GTA LR LR
comp=N,24μm,20.2s,MS6.3
GTA LR LR
comp=E,23μm,19.9s,MS6.3
GTA LR LR
comp=Z,13μm,19.5s,MS5.8
F03A Seaside 44.60 71 ⇑P **P** **23 16 03.4 +0.8**
baz=44
D05A Enumclaw 44.61 69 ⇓P **P** **23 16 03.3 +0.7**
baz=44,SNR=13
LZH Lanzhou 44.64 269 ⇑P **P** **23 16 04.2 +1.2**
LZH pP pP 23 16 09.2 +3.4
LZH sP sP 23 16 12.0 +5.1
LZH S **S** **23 22 40.0 +1.0**
LZH sS sS 23 22 45.2 +1.5
LZH SS SS 23 25 48.5 -10
LZH pmax pmax
comp=Z,85nm,1.0s,mb5.5
LZH pmax pmax
comp=Z,380nm,6.2s
LZH LR LR
comp=N,14μm,14.7s,MS6.3
LZH LR LR
comp=E,22μm,15.0s,MS6.3
LZH LR LR
comp=Z,21μm,15.8s,MS6.2
KIP Kipapa 44.70 125 *e*P **P** **23 16 03.8 +0.2**
comp=Z,160nm,1.2s,mb5.7
KIP LR LR
comp=Z,6μm,19.0s,MS5.6
KIP Kipapa 44.70 125 *i*P **P** **23 16 05.2 +1.6**
WRW Wenatchee Ridg 44.75 68 P **P** **23 16 04.0 +0.3**
LON Longmire 44.98 69 *e*P **P** **23 16 05.9 +0.3**
comp=Z,60nm,1.5s,mb5.2
LON Longmire 44.98 69 *e*P **P** **23 16 05.9 +0.3**
LON pmax pmax
comp=Z,60nm,1.5s,mb5.2
GUMO Guam 45.10 207 PFAKE 23 16 20.0 +13
GUMO LR LR
comp=Z,3μm,19.0s,MS5.3
ETW Entiat 45.19 68 *e*P **P** **23 16 06.8 -0.4**
comp=Z,198nm,1.4s,mb5.8
F04A Amboy 45.20 71 ⇓P **P** **23 16 07.2 -0.1**
baz=45,SNR=6.7
B08A Colville Reser 45.22 66 P **P** **23 16 07.1 -0.3**
baz=45,SNR=43
QZH Quanzhou 45.30 245 P **P** **23 16 13.0 +4.7**
QZH S **S** **23 22 51.0 +2.2**
QZH LR LR
comp=N,11μm,11.3s,MS6.1
QZH LR LR
comp=E,7μm,10.0s,MS6.1
QZH LR LR
comp=Z,13μm,16.0s
COR Corvallis 45.62 73 PFAKE 23 16 20.0 +9.3
COR LR LR
comp=Z,6μm,21.0s,MS5.5
ENH Enshi 45.87 259 *e*P **P** **23 16 13.7 +0.9**
comp=Z,8.8nm,0.6s,mb4.9
ENH LR LR
comp=Z,17μm,21.0s,MS6.0
HOOD Mount Hood Mea 46.01 71 *e*P **P** **23 16 13.8 +0.1**
comp=Z,370nm,1.5s,mb6.1
C09A Chrisman Ranch 46.12 66 ⇑P **P** **23 16 14.2 -0.4**
baz=46
E07A Sunnyside 46.13 68 P **P** **23 16 14.9 +0.3**
baz=46,SNR=7.2
H04A Detroit Lake 46.15 72 ⇓P **P** **23 16 14.4 -0.4**
baz=46,SNR=18
OD2 Odessa Site #2 46.17 67 *e*P **P** **23 16 14.0 -1.0**
comp=Z,202nm,1.4s,mb5.9
D08A Wollman Farm, 46.28 67 ⇑P **P** **23 16 15.2 -0.6**
baz=46,SNR=14
RSW Rattlesnake Hi 46.37 68 *e*P **P** **23 16 16.1 -0.4**
comp=Z,188nm,1.5s,mb5.8
NEW Newport 46.40 65 ⇑P **P** **23 16 16.2 -0.5**
baz=46,SNR=27
NEW Newport 46.40 65 *e*P **P** **23 16 15.9 -0.8**
comp=Z,68nm,1.3s,mb5.4
NEW LR LR
comp=Z,10μm,22.0s,MS5.7
NEW Newport 46.40 65 *e*P **P** **23 16 15.9 -0.8**
NEW pmax pmax
comp=Z,68nm,1.3s
NEW MLR MLR
comp=Z,10μm,22.0s
HAWA Hanford 46.40 68 *e*P **P** **23 16 15.8 -0.9**
comp=Z,140nm,1.5s,mb5.7
HAWA LR LR
comp=Z,7μm,22.0s,MS5.5
F07A Phinny Hill Vi 46.53 69 ⇓P **P** **23 16 17.8 +0.1**
baz=46,SNR=5.8
G06A Carlson Farm, 46.60 70 ⇑P **P** **23 16 17.9 -0.5**
baz=46
A12A Yaak River Ran 46.70 63 ⇑P **P** **23 16 19.2 +0.1**
baz=46,SNR=5.6
B12A Libby 47.03 64 ⇑P **P** **23 16 21.9 +0.2**
baz=47
E09A Wood Farm, Sta 47.04 67 P **P** **23 16 21.2 -0.6**
baz=47,SNR=52
VIPM Ingram Point 47.10 71 P **P** **23 16 22.1 -0.2**
VIPM Ingram Point 47.10 71 P **P** **23 16 22.1 -0.2**
C11A Tepee Creek (N 47.12 65 ⇑P **P** **23 16 22.0 -0.4**
baz=47
HUMO Hull Mountain 47.15 74 *e*P **P** **23 16 22.8 +0.1**
comp=Z,94nm,1.6s,mb5.5
HUMO LR LR
comp=Z,4μm,21.0s,MS5.4
DAG Danmarks Havn 47.17 1 P **P** **23 16 25.4 +2.9**
DAG Danmarks Havn 47.17 1 P **P** **23 16 25.4 +2.9**
DAG Danmarks Havn 47.17 1 *i*P **P** **23 16 24.3 +1.8**
comp=Z,126nm,0.9s,mb5.8
DAG
comp=Z,6μm,17.0s
POHA Pohakuloa 47.28 124 PFAKE 23 16 30.0 +6.1
POHA LR LR
comp=Z,6μm,20.0s,MS5.5
A13A Flathead Natio 47.31 63 ⇓P **P** **23 16 23.7 -0.2**
baz=47
LNOR Lincton Mounta 47.40 68 *e*P **P** **23 16 24.2 -0.4**
comp=Z,76nm,1.5s,mb5.4
LNOR Lincton Mounta 47.40 68 *e*P **P** **23 16 24.2 -0.4**
LNOR pmax pmax
comp=Z,76nm,1.5s,mb5.4
G08A Pilot Rock 47.44 69 P **P** **23 16 24.4 -0.5**
baz=47,SNR=21
WALA Waterton Lakes 47.48 62 ⇑*i*P **P** **23 16 24.6 -0.6**
comp=Z,4.7nm,1.1s,mb4.3
C12B Naegeli Ranch, 47.60 64 ⇓P **P** **23 16 26.0 -0.1**
baz=47,SNR=16
B13A Whitefish 47.66 63 P **P** **23 16 26.3 -0.2**
baz=47,SNR=29
A14A Double T Ranch 47.78 62 P **P** **23 16 26.9 -0.5**
baz=48,SNR=44
BSMT Bassoo Peak 47.85 64 *e*P **P** **23 16 27.9 -0.1**
comp=Z,104nm,0.9s,mb5.9
F10A Beach Ranch, E 47.87 67 P **P** **23 16 27.9 -0.4**
baz=48,SNR=26
YBH Yreka Blue Hor 47.89 75 P **P** **23 16 28.9 +0.5**
comp=Z,26nm,0.8s,mb5.3,baz=341,slow=3.8,SNR=51
YBH Yreka Blue Hor 47.89 75 *e*P **P** **23 16 28.7 +0.3**
comp=Z,27nm,0.9s,mb5.3
YBH LR LR
comp=Z,2μm,20.0s,MS5.2
YBH Yreka Blue Hor 47.89 75 P **P** **23 16 28.9 +0.5**
YBH pmax pmax
comp=Z,26nm,0.8s
KHMM Horse Mountain 47.93 77 *e*P **P** **23 16 29.7 +0.9**
comp=Z,72nm,1.5s,mb5.5
BLMT Blacktail Moun 47.95 63 *e*P **P** **23 16 28.8 0.0**
comp=Z,96nm,1.2s,mb5.7
I07A Izee 47.97 71 ⇓P **P** **23 16 28.4 -0.7**
baz=48,SNR=25
KURK Kurchatov 47.98 301 ⇓*i*P **P** **23 16 27.5 -1.5**
comp=Z,46nm,1.1s,mb5.4
KURK LR LR
comp=Z,3μm,19.0s,MS5.3
KURK Kurchatov 47.98 301 *d*/*i*P **P** **23 16 27.5 -1.5**
KURK pmax pmax
comp=Z,17nm,0.7s,mb5.2
KURK MLR MLR
comp=Z,18μm,19.0s,MS6.1
KURK Kurchatov 47.98 301 P **P** **23 16 27.1 -1.9**
comp=Z,118nm,0.9s,mb5.9,SNR=15
WMQ Urumqi 48.06 289 P **P** **23 16 29.6 -0.2**
WMQ sP sP 23 16 36.6 +2.9
WMQ PP PP 23 18 21.0 -0.6
WMQ S **S** **23 23 27.0 -0.9**
WMQ ScS ScS 23 26 20.0 -2.7
WMQ pmax pmax
comp=Z,43nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,130nm,4.0s
WMQ LR LR
comp=Z,10μm,15.0s,MS5.9
C13A Hot Springs 48.07 64 P **P** **23 16 29.6 -0.1**
baz=48,SNR=107
D12A Red Ives Fores 48.10 65 ⇓P **P** **23 16 29.4 -0.6**
baz=48
A15A Johnson Ranch, 48.11 62 P **P** **23 16 29.1 -1.0**
baz=48,SNR=31
JTMT Jette 48.17 64 *e*P **P** **23 16 30.3 -0.3**
comp=Z,88nm,0.9s,mb5.8
K05A Summer Lake 48.17 73 P **P** **23 16 31.2 +0.6**
baz=48,SNR=22
YBMT Yellow Bay 48.23 63 *e*P **P** **23 16 30.5 -0.5**
comp=Z,44nm,1.0s,mb5.5
B14A Marquette Ranc 48.26 62 P **P** **23 16 31.1 -0.2**
baz=48,SNR=16
E12A Beaver Dam Sad 48.42 66 ⇓P **P** **23 16 32.0 -0.5**
baz=48
C14A Swan Lake 48.42 63 ⇓P **P** **23 16 32.1 -0.3**
baz=48
SWMT Swartz Lake 48.47 64 *e*P **P** **23 16 32.5 -0.4**
comp=Z,66nm,1.0s,mb5.6
D13A Huson 48.52 64 P **P** **23 16 32.6 -0.7**
baz=48,SNR=30
CD2 Chengdu 48.54 265 ⇑*i*P **P** **23 16 33.7 +0.1**
CD2 pP pP 23 16 38.2 +1.7
CD2 sP sP 23 16 40.9 +3.3
CD2 PP PP 23 18 26.4 +0.2
CD2 PcS PcS 23 21 54.2 -1.2
CD2 S **S** **23 23 34.0 -0.9**
CD2 sS sS 23 23 41.5 +1.9
CD2 ScS ScS 23 26 23.0 -3.3
CD2 SS SS 23 26 59.3 -5.2
CD2 pmax pmax
comp=Z,50nm,0.7s,mb5.7
CD2 pmax pmax
comp=Z,180nm,5.2s
CD2 LR LR
comp=N,20μm,20.2s,MS6.3
CD2 LR LR
comp=E,19μm,15.5s,MS6.3
CD2 LR LR
comp=Z,10μm,16.6s,MS5.9
B15A Bradely Ranch, 48.64 62 P **P** **23 16 33.1 -1.0**
baz=48,SNR=36
A16A West Butte Ran 48.69 61 P **P** **23 16 33.5 -1.0**
baz=48,SNR=85
WDC Whiskeytown Da 48.78 76 *e*P **P** **23 16 34.9 -0.4**
comp=Z,74nm,1.4s,mb5.5
WDC LR LR
comp=Z,5μm,21.0s,MS5.5
WDC Whiskeytown Da 48.78 76 *e*P **P** **23 16 34.9 -0.5**
WDC pmax pmax
comp=Z,74nm,1.4s,mb5.5
WDC MLR MLR
comp=Z,5μm,21.0s,MS5.5
KIPM Iron Peak 48.82 77 *e*P **P** **23 16 35.6 0.0**
comp=Z,56nm,1.4s,mb5.4
MK31 Makanchi Array 48.82 295 *e*P **P** **23 16 33.8 -1.7**
MK31 Makanchi Array 48.82 295 *i*P **P** **23 16 33.9 -1.7**
MK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
MKAR Makanchi Array 48.82 295 P **P** **23 16 33.9 -1.6**
comp=Z,6.2nm,0.7s,mb4.7,baz=58,slow=6.2,SNR=36
MKAR LR LR 23 37 47.8
comp=Z,4μm,20.0s,MS5.4,baz=40,slow=37
MKAR Makanchi Array 48.82 295 P **P** **23 16 33.9 -1.6**
MKAR LR LR 23 37 47.8
MKAR Makanchi Array 48.82 295 *i*P **P** **23 16 33.9 -1.7**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
SLMT Seeley Lake 48.91 64 *e*P **P** **23 16 35.7 -0.5**
comp=Z,117nm,1.1s,mb5.8
MSO Missoula 48.96 64 P **P** **23 16 36.3 -0.4**
baz=49,SNR=30
MSO Missoula 48.96 64 *e*P **P** **23 16 35.9 -0.8**
comp=Z,103nm,1.5s,mb5.6
MSO LR LR
comp=Z,7μm,22.0s,MS5.6
C15A Salmond Ranch, 48.98 63 P **P** **23 16 36.4 -0.4**
baz=49,SNR=54
B16A M & M Farms, S 48.99 61 ⇓P **P** **23 16 35.7 -1.2**
baz=49,SNR=13
D14A Greenough 49.01 64 P **P** **23 16 36.2 -0.8**
baz=49,SNR=93
J08A Circle Bar Ran 49.01 71 P **P** **23 16 37.5 +0.4**
baz=49,SNR=14
F12A Elk City 49.03 66 P **P** **23 16 36.8 -0.4**
baz=49,SNR=74
MOD Modoc 49.06 73 *e*P **P** **23 16 37.8 +0.3**
comp=Z,74nm,1.4s,mb5.5
MOD LR LR
comp=Z,2μm,20.0s,MS5.2
E13A Victor 49.10 65 P **P** **23 16 37.5 -0.2**
baz=49,SNR=19
A17A Triple J Farms 49.12 60 P **P** **23 16 36.8 -1.0**
baz=49,SNR=86
FFC Flin Flon 49.18 50 *e*P **P** **23 16 37.5 -0.7**
comp=Z,102nm,1.5s,mb5.6
FFC LR LR
comp=Z,11μm,19.0s,MS5.9
FFC Flin Flon 49.18 50 *i*P **P** **23 16 37.8 -0.4**
FFC Flin Flon 49.18 50 P **P** **23 16 37.7 -0.5**
comp=Z,203nm,1.0s,mb6.1,SNR=12
CHMT Chamberlain Mo 49.25 64 *e*P **P** **23 16 38.0 -0.8**
comp=Z,37nm,1.1s,mb5.3
C16A Fuhringer Ranc 49.39 62 ⇓P **P** **23 16 39.5 -0.4**
baz=49,SNR=29
G12A Big Creek, Yel 49.43 67 ⇑P **P** **23 16 39.9 -0.3**
baz=49
E14A Clinton 49.47 64 P **P** **23 16 40.8 +0.2**
baz=49,SNR=5.7
F13A Darby 49.48 66 P **P** **23 16 40.0 -0.7**
baz=49,SNR=44
B17A L&G Farms, Che 49.52 61 ⇓P **P** **23 16 40.2 -0.7**
baz=49,SNR=20
D15A Lincoln 49.53 63 P **P** **23 16 40.7 -0.2**
baz=49,SNR=34
GZH Guangzhou 49.53 249 P **P** **23 16 30.6 -11**
GZH S **S** **23 23 37.6 -11**
GZH LR LR
comp=N,8μm,16.6s,MS5.9
GZH LR LR
comp=E,7μm,17.5s,MS5.9
GZH LR LR
comp=Z,13μm,14.1s,MS6.1
A18A Metzger Ranch, 49.55 60 ⇑P **P** **23 16 40.2 -1.0**
baz=49,SNR=41
FCC Fort Churchill 49.56 42 *e*P **P** **23 16 40.2 -0.8**
comp=Z,1.7nm,0.8s,mb4.1
FCC Fort Churchill 49.56 42 *e*P **P** **23 16 40.2 -0.8**
FCC pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
WVOR Wild Horse Val 49.57 72 *e*P **P** **23 16 41.0 -0.4**
comp=Z,35nm,1.0s,mb5.3
WVOR LR LR
comp=Z,4μm,20.0s,MS5.4
WVOR Wild Horse Val 49.57 72 *e*P **P** **23 16 41.0 -0.4**
WVOR pmax pmax
comp=Z,35nm,1.0s,mb5.3
WVOR MLR MLR
comp=Z,4μm,20.0s,MS5.4
HOPS Hopland 49.62 78 PFAKE 23 16 50.0 +8.2
HOPS LR LR
comp=Z,4μm,20.0s,MS5.5
E15A Deer Lodge 49.89 64 P **P** **23 16 43.4 -0.4**
baz=50,SNR=55
B18A Beardsley Farm 49.95 60 P **P** **23 16 43.5 -0.7**
baz=50,SNR=73
F14A Wisdom 49.95 65 ⇓P **P** **23 16 44.1 -0.1**
baz=50
C17A Wharram Farm, 49.99 62 P **P** **23 16 43.5 -1.0**
baz=50,SNR=48
G13A Cobalt 50.01 66 P **P** **23 16 44.0 -0.7**
baz=50,SNR=55
D16A Dana Ranch, Ca 50.02 63 P **P** **23 16 44.5 -0.2**

baz=50,SNR=54
H12A Diamond D Ranc 50.07 67 ⇓P **P 23 16 44.5 -0.6**
baz=50,SNR=11
A19A Klindworth Far 50.08 59 ⇑P **P 23 16 44.7 -0.4**
baz=50,SNR=17
HRY Holter Researc 50.10 63 *e*P **P 23 16 44.8 -0.5**
comp=Z,48nm,0.9s,mb5.5
VOSK Vostochnaya 50.12 308 P **P 23 16 44.3 -1.1**
VOSK pmax pmax
comp=Z,22nm,1.1s,mb5.1
BRVK Borovoye 50.20 308 *e*P **P 23 16 45.6 -0.3**
BRVK LR LR
comp=Z,4μm,20.0s,MS5.4
BRVK Borovoye 50.20 308 *d i*P **P 23 16 45.4 -0.6**
BRVK pmax pmax
comp=Z,43nm,0.7s,mb5.6
BRVK MLR MLR
comp=Z,19μm,19.0s,MS6.1
BRVK Borovoye 50.20 308 P **P 23 16 46.5 +0.5**
comp=Z,301nm,0.9s,mb6.3,SNR=14
BRVK Borovoye 50.20 308 P **P 23 16 45.9 -0.1**
SNR=26
EGMT Eagleton 50.21 61 P **P 23 16 45.4 -0.8**
baz=50,SNR=25
EGMT Eagleton 50.21 61 *e*P **P 23 16 44.7 -1.4**
comp=Z,63nm,1.0s,mb5.6
EGMT LR LR
comp=Z,14μm,19.0s,MS6.0
E16A East Helena 50.30 63 P **P 23 16 46.8 0.0**
baz=50,SNR=79
B19A Brinkman Farms 50.31 60 P **P 23 16 46.3 -0.6**
baz=50,SNR=27
MCCM Marconi Confer 50.33 79 PFAKE 23 17 00.0 +13
MCCM LR LR
comp=Z,5μm,19.0s,MS5.5
MFID Camas Ranch 50.36 69 P **P 23 16 47.0 -0.4**
baz=50,SNR=18
D17A Six Diamond Ra 50.36 62 ⇑P **P 23 16 46.6 -0.7**
baz=50,SNR=60
H13A Challis 50.37 67 ⇑P **P 23 16 46.5 -0.9**
baz=50
F15A Butte 50.37 64 P **P 23 16 47.0 -0.4**
baz=50,SNR=26
GYA Guiyang 50.39 258 ⇑*i*P **P 23 16 49.0 +1.2**
GYA PP PP 23 18 45.2 +2.0
GYA ScP ScP 23 22 01.8 -0.1
GYA S **S 23 24 01.9 +0.9**
GYA SS SS 23 27 29.0 -5.4
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,190nm,5.0s
GYA LR LR
comp=N,7μm,18.5s,MS5.8
GYA LR LR
comp=E,5μm,19.4s,MS5.8
GYA LR LR
comp=Z,8μm,19.8s,MS5.7
LRM Limekiln Ridge 50.41 64 *e*P **P 23 16 46.9 -0.7**
comp=Z,116nm,0.9s,mb5.9
I12A Atlanta 50.45 68 P **P 23 16 47.5 -0.5**
baz=50,SNR=33
SUMG Summit 50.47 9 *e*P **P 23 16 48.2 +0.5**
comp=Z,69nm,1.0s,mb5.6
SUMG Summit 50.47 9 *i*P **P 23 16 49.6 +1.8**
comp=Z,55nm,1.0s,mb5.5
SUMG *e*S **S 23 24 03.1 +2.2**
SUMG
comp=Z,4μm,16.0s
KEV Kevo 50.47 342 *e*P **P 23 16 47.0 -0.8**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KEV Kevo 50.47 342 *e*p **P 23 16 47.0 -0.8**
comp=Z,4.1nm,0.6s,mb4.6
A20A Cobblestone Ra 50.50 59 ⇓P **P 23 16 48.1 -0.2**
baz=50
LVZ Lovozero 50.59 338 ⇓*i*P **P 23 16 48.0 -0.8**
LVZ LR LR
comp=Z,8μm,20.0s,MS5.7
LVZ Lovozero 50.59 338 *d i*P **P 23 16 48.0 -0.8**
LVZ pmax pmax
comp=Z,54nm,2.5s,mb5.0
LVZ MLR MLR
comp=Z,8μm,22.0s,MS5.7
DLMT Dillon 50.65 65 *e*P **P 23 16 48.8 -0.8**
comp=Z,150nm,1.6s,mb5.7
E17A Martinsdale 50.75 63 P **P 23 16 50.5 +0.2**
baz=50,SNR=71
C19A Slack Wire Ran 50.76 61 P **P 23 16 50.0 -0.3**
baz=50,SNR=52
D18A Linhart Farms, 50.76 61 P **P 23 16 50.2 -0.1**
baz=50,SNR=34
H14A Leadore 50.78 66 P **P 23 16 49.8 -0.7**
baz=50,SNR=15
G15A Dillon 50.84 65 P **P 23 16 50.4 -0.6**
baz=51,SNR=89
F16A Kennard Place, 50.84 64 ⇓P **P 23 16 50.5 -0.4**
baz=51,SNR=7.0
I13A Wildhorse Cree 50.89 67 P **P 23 16 51.3 -0.1**
baz=51,SNR=78
SOKR Solikamsk 50.90 321 *d i*P **P 23 16 51.1 -0.1**
SOKR S **S 23 24 17.4 +10**
SOKR pmax pmax
comp=Z,60nm,1.3s,mb5.4
SOKR MLR MLR
comp=Z,7μm,15.0s,MS5.8
MCMT McKenzie Canyo 50.90 66 *e*P **P 23 16 50.5 -0.9**
comp=Z,13nm,0.9s,mb4.8
ARCES ARCESS Array B 50.92 343 P **P 23 16 50.6 -0.5**
comp=Z,4.1nm,0.7s,mb4.4,baz=15,slow=10.0,SNR=14
ARCES LR LR 23 43 16.9
comp=Z,6μm,19.1s,MS5.6,baz=84,slow=42
ARCES ARCESS Array B 50.92 343 P **P 23 16 50.6 -0.5**
ARCES LR LR 23 43 16.9
ARCES ARCESS Array B 50.92 343 P **P 23 16 50.7 -0.5**
ARCES pmax pmax
comp=Z,40nm,0.7s
ARCES MLR MLR
comp=Z,6μm,19.2s
ARE0 ARCESS Array S 50.92 343 *e*P **P 23 16 50.5 -0.7**
BOZ Bozeman (W) 50.94 64 P **P 23 16 51.6 0.0**
baz=51,SNR=33
BOZ Bozeman (W) 50.94 64 *e*P **P 23 16 51.4 -0.3**
comp=Z,24nm,0.9s,mb5.1
BOZ LR LR
comp=Z,6μm,21.0s,MS5.6
BOZ Bozeman (W) 50.94 64 *e*P **P 23 16 51.4 -0.3**
BOZ pmax pmax
comp=Z,24nm,0.9s,mb5.1
BOZ MLR MLR
comp=Z,6μm,21.0s,MS5.6
HLID Hailey 50.99 68 P **P 23 16 51.7 -0.3**
baz=51,SNR=34
HLID Hailey 50.99 68 *e*P **P 23 16 51.3 -0.8**
comp=Z,20nm,0.9s,mb5.0
HLID LR LR
comp=Z,6μm,19.0s,MS5.7
PAHR Pah Rah Range 51.10 75 *e*P **P 23 16 52.6 -0.4**
comp=Z,33nm,0.9s,mb5.3
APA Apatity 51.13 338 ⇓*i*P **P 23 16 52.0 -0.8**
APA *e* 23 18 48.0
APA *i*S **S 23 24 09.0 -1.3**
APA *e*PS 23 24 18.0
APA pmax pmax
comp=Z,13nm,1.0s,mb4.8
APA pmax pmax
comp=Z,300nm,1.4s,mb6.0
APA MLR MLR
comp=Z,10μm,19.0s,MS5.9
G16A Moss Hill, Enn 51.15 65 P **P 23 16 53.0 -0.3**
baz=51,SNR=53
E18A Harlowton 51.15 62 P **P 23 16 53.4 +0.2**
baz=51,SNR=39
H15A Lima 51.15 66 P **P 23 16 52.7 -0.6**
baz=51,SNR=22
WCN Washoe City 51.20 75 P **P 23 16 54.0 +0.3**
baz=51,SNR=15
WCN Washoe City 51.20 75 *e*P **P 23 16 53.6 -0.1**
comp=Z,39nm,1.2s,mb5.2
WCN Washoe City 51.20 75 *e*P **P 23 16 53.6 -0.1**
WCN pmax pmax
comp=Z,39nm,1.2s,mb5.2
I14A Mackay 51.22 67 P **P 23 16 53.5 -0.3**
baz=51,SNR=47
J13A Cove Ranch, Pi 51.23 68 P **P 23 16 53.8 0.0**
baz=51,SNR=28

D19A Cripps Ranch, 51.23 61 P **P 23 16 53.5 -0.3**
baz=51,SNR=21
F17A Fitzpatrick Pl 51.24 63 P **P 23 16 54.0 0.0**
baz=51,SNR=26
B21A Ellsworth Farm 51.25 59 ⇑P **P 23 16 53.9 0.0**
baz=51
C20A Veseth Ranch, 51.27 60 P **P 23 16 53.8 -0.4**
baz=51,SNR=74
SVE Sverdlovsk 51.48 317 ⇑*e*P **P 23 16 56.3 +0.7**
SVE *e*PPP 23 19 59.3
SVE *e*S **S 23 24 15.1 -0.3**
SVE pmax pmax
comp=Z,47nm,1.4s,mb5.2
SVE MLR MLR
comp=Z,11μm,14.0s,MS6.0
G17A Pierce Place, 51.61 64 P **P 23 16 57.4 +0.7**
baz=51,SNR=10
QLMT Earthquake Lak 51.61 65 *e*P **P 23 16 56.5 -0.2**
comp=Z,26nm,1.3s,mb5.0
J14A Carey 51.62 67 P **P 23 16 57.2 +0.5**
baz=51,SNR=57
C21A Desert Coulee 51.63 59 P **P 23 16 56.4 -0.4**
baz=51,SNR=36
D20A Manuel Ranch, 51.65 61 P **P 23 16 57.4 +0.4**
baz=51,SNR=30
F18A Big Timber 51.71 63 P **P 23 16 57.5 +0.1**
baz=51,SNR=65
BMN Battle Mountai 51.74 72 *e*P **P 23 16 57.3 -0.5**
comp=Z,60nm,1.5s,mb5.3
BMN LR LR
comp=Z,4μm,21.0s,MS5.4
BMN Battle Mountai 51.74 72 *e*P **P 23 16 57.3 -0.5**
BMN pmax pmax
comp=Z,60nm,1.5s,mb5.3
BMN MLR MLR
comp=Z,4μm,21.0s,MS5.4
KTK1 Kautokeino 51.76 343 *e*P **P 23 16 56.3 -1.2**
KTK1 *e*S **S 23 24 19.7 +0.9**
KTK1 AMS AMS 23 43 41.2
comp=Z,9μm,16.4s,MS5.9
CMB Columbia Colle 51.77 77 *e*P **P 23 16 57.4 -0.6**
comp=Z,48nm,1.4s,mb5.2
CMB LR LR
comp=Z,5μm,19.0s,MS5.6
CMB Columbia Colle 51.77 77 *e*P **P 23 16 57.4 -0.6**
CMB pmax pmax
comp=Z,48nm,1.4s,mb5.2
CMB MLR MLR
comp=Z,5μm,19.0s,MS5.6
E19A Rath Farm, Rou 51.78 62 P **P 23 16 57.6 -0.3**
baz=52,SNR=34
H16A Russell Place, 51.80 65 P **P 23 16 58.2 +0.1**
baz=52,SNR=39
GCMT Greycliff 51.81 63 *e*P **P 23 16 58.1 -0.1**
comp=Z,69nm,1.3s,mb5.4
TRO Tromso 51.85 345 *e*P **P 23 16 59.4 +1.2**
TRO *e*S **S 23 24 22.0 +1.9**
TRO AMS AMS 23 44 24.0
comp=Z,3μm,15.6s,MS5.4
TRO Tromso 51.85 345 *e*P **P 23 16 59.4 +1.2**
TRO MLR MLR
comp=Z,3μm,15.6s,MS5.4
WAKR Walker 51.94 76 *e*P **P 23 16 59.5 +0.2**
comp=Z,42nm,0.8s,mb5.4
YMR Madison River 51.96 64 *e*P **P 23 16 59.1 -0.2**
comp=Z,67nm,0.9s,mb5.6
E20A Meyer Farm, Mu 52.07 61 P **P 23 17 00.1 0.0**
baz=52,SNR=14
YNR Norris Junctio 52.07 64 *e*P **P 23 17 00.7 +0.5**
comp=Z,95nm,1.4s,mb5.5
SAO San Andreas Ge 52.12 79 *e*P **P 23 16 59.9 -0.7**
comp=Z,24nm,1.0s,mb5.1
SAO LR LR
comp=Z,4μm,19.0s,MS5.5
SAO San Andreas Ge 52.12 79 *e*P **P 23 16 59.9 -0.7**
SAO pmax pmax
comp=Z,24nm,1.0s,mb5.1
SAO MLR MLR
comp=Z,4μm,19.0s,MS5.5
J15A Blackfoot 52.12 67 P **P 23 17 00.6 0.0**
baz=52,SNR=17
F19A Roth Farm, Mol 52.13 62 P **P 23 17 00.5 -0.1**
baz=52,SNR=43
YFT Old Faithful 52.18 65 *e*P **P 23 17 01.9 +0.9**
comp=Z,62nm,0.8s,mb5.6
G18A Lazy EL Ranch, 52.20 63 P **P 23 17 00.6 -0.5**
baz=52,SNR=12
D21A La Casta Ranch 52.22 60 ⇑P **P 23 17 01.2 0.0**
baz=52,SNR=7.3
I16A Newdale 52.26 66 P **P 23 17 02.5 +0.9**
baz=52,SNR=7.1
LKWY Lake 52.32 64 *e*P **P 23 17 03.2 +1.2**
comp=Z,50nm,1.0s,mb5.4
LKWY LR LR
comp=Z,12μm,19.0s,MS6.0
LKWY Lake 52.32 64 *e*P **P 23 17 03.2 +1.2**
LKWY pmax pmax
comp=Z,50nm,1.0s,mb5.4
LKWY MLR MLR
comp=Z,12μm,19.0s,MS6.0
K14A Jones Ranch, D 52.35 68 P **P 23 17 03.0 +0.7**
baz=52,SNR=22
H17A Grant Village 52.35 64 P **P 23 17 03.9 +1.7**
baz=52,SNR=17
RLMT Red Lodge 52.49 63 P **P 23 17 03.7 +0.4**
baz=52,SNR=71
RLMT Red Lodge 52.49 63 ⇑*i*P **P 23 17 03.2 -0.1**
comp=Z,111nm,0.9s,mb5.8
RLMT LR LR
comp=Z,11μm,19.0s,MS5.9
FLWY Flagg Ranch 52.51 65 ⇑*i*P **P 23 17 04.0 +0.6**
comp=Z,149nm,1.3s,mb5.8
IMW Indian Meadow 52.52 65 ⇑*i*P **P 23 17 03.8 +0.3**
comp=Z,80nm,1.1s,mb5.6
DGMT Dagmar 52.55 57 P **P 23 17 03.3 -0.3**
baz=52,SNR=14
DGMT Dagmar 52.55 57 ⇑*i*P **P 23 17 02.9 -0.7**
comp=Z,131nm,1.3s,mb5.7
DGMT LR LR
comp=Z,6μm,19.0s,MS5.7
E21A Keefer Ranch, 52.55 60 P **P 23 17 04.0 +0.3**
baz=52,SNR=28
F20A Billings 52.56 62 P **P 23 17 03.8 +0.1**
baz=52,SNR=17
ARU Arti 52.56 318 ⇓*i*P **P 23 17 03.3 -0.3**
comp=Z,29nm,0.8s,mb5.3
ARU LR LR
comp=Z,9μm,20.0s,MS5.8
ARU Arti 52.56 318 *d i*P **P 23 17 03.4 -0.2**
ARU *e* 23 18 15.5
ARU *e* 23 18 58.9
ARU *e*PPP 23 20 04.1
ARU S **S 23 24 31.0 +0.9**
ARU 23 26 49.0
ARU SS SS 23 28 14.4 +6.9
ARU pmax pmax
comp=Z,73nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,8μm,18.0s,MS5.8
ARU Arti 52.56 318 P **P 23 17 03.1 -0.5**
comp=Z,200nm,0.9s,mb6.0,SNR=22
K15A Arbon 52.58 67 P **P 23 17 04.7 +0.7**
baz=52,SNR=46
H18A Shoshone NF, C 52.61 64 P **P 23 17 04.3 +0.2**
baz=52,SNR=28
NVAR Mina Array Bea 52.61 75 P **P 23 17 04.6 +0.4**
comp=Z,22nm,0.8s,mb5.2,baz=297,slow=7.7,SNR=114
NVAR PcP PcP 23 18 15.0 +0.8
comp=Z,9.3nm,0.8s,baz=297,slow=4.0,SNR=2.1
DCID1 Drake Creek 52.62 66 *e*P **P 23 17 04.7 +0.5**
comp=Z,146nm,1.3s,mb5.8
J16A Bone 52.63 66 P **P 23 17 05.1 +0.8**
baz=52,SNR=6.2
L14A Malta 52.68 68 P **P 23 17 05.1 +0.4**
baz=52,SNR=44
I17A Pilgrim Ck. 52.69 65 ⇓P **P 23 17 05.8 +1.0**
baz=52
RRI2 Red Ridge 52.72 66 *e*P **P 23 17 05.3 +0.3**
comp=Z,30nm,0.9s,mb5.2
MOOW Moose Ponds 52.73 65 *e*P **P 23 17 05.2 +0.1**
comp=Z,27nm,1.0s,mb5.1
TPAW Teton Pass 52.81 66 ⇑*i*P **P 23 17 06.0 +0.3**
comp=Z,75nm,1.1s,mb5.5
LAO LASA Array 52.86 60 P **P 23 17 06.1 +0.2**
baz=53,SNR=26
LAO LASA Array 52.86 60 ⇑*i*P **P 23 17 05.7 -0.3**
comp=Z,134nm,1.0s,mb5.8

LAO LR LR
comp=Z,8μm,21.0s,MS5.8
JMIC Jan Mayen 52.89 357 *e*S **S 23 24 39.4 +5.1**
LOHW Long Hollow 52.90 65 ⇑*i*P **P 23 17 06.5 +0.1**
comp=Z,44nm,0.9s,mb5.4
PRGR Permogore 52.91 328 ⇑*i*P **P 23 17 06.2 0.0**
PRGR *e**PP pP 23 17 11.0 +1.9
PRGR *e* 23 19 06.5
PRGR *e*S **S 23 24 37.9 +3.1**
PRGR pmax pmax
comp=Z,40nm,0.6s,mb5.5
SNOW Snow King Moun 52.93 65 *e*P **P 23 17 07.1 +0.6**
comp=Z,61nm,1.3s,mb5.4
G20A Bridger 52.94 62 P **P 23 17 06.2 -0.4**
baz=53,SNR=72
H19A Powell 52.95 63 P **P 23 17 07.2 +0.5**
baz=53,SNR=19
REDW Red Top Meadow 52.95 66 ⇑*i*P **P 23 17 07.0 +0.3**
comp=Z,92nm,1.4s,mb5.5
K16A Soda Springs 52.96 67 P **P 23 17 08.7 +1.9**
baz=53,SNR=21
J17A Brown Place, J 53.02 65 ⇑P **P 23 17 07.9 +0.7**
baz=53,SNR=11
F21A Absaloka Mine, 53.04 61 P **P 23 17 07.6 +0.3**
baz=53,SNR=8.2
HVU Hansel Valley 53.10 68 *e*P **P 23 17 08.0 +0.2**
comp=Z,62nm,1.4s,mb5.3
HVU Hansel Valley 53.10 68 *e*P **P 23 17 08.0 +0.1**
HVU pmax pmax
comp=Z,62nm,1.4s,mb5.3
L15A Malad City 53.14 68 P **P 23 17 08.6 +0.4**
baz=53,SNR=14
I18A Diamond G Ranc 53.23 65 ⇑P **P 23 17 09.6 +0.9**
baz=53,SNR=11
AHID Auburn Hatcher 53.25 66 *e*P **P 23 17 08.5 -0.5**
comp=Z,43nm,1.2s,mb5.3
AHID LR LR
comp=Z,6μm,20.0s,MS5.7
Q10A Clear Creek Ra 53.34 73 P **P 23 17 10.1 +0.4**
baz=53,SNR=41
K17A Gardner Place, 53.36 66 P **P 23 17 10.1 +0.3**
baz=53,SNR=6.5
I19A Meeteetse 53.40 64 ⇓P **P 23 17 09.9 -0.2**
baz=53,SNR=8.9
G21A Lodge Grass 53.43 62 P **P 23 17 09.8 -0.4**
baz=53,SNR=19
SCO Scoresbysund 53.44 2 *e*P **P 23 17 14.6 +4.7**
SCO MLR MLR
comp=Z,4μm,18.0s,MS5.5
SCO Scoresbysund 53.44 2 *i*P **P 23 17 14.6 +4.7**
SCO
comp=Z,4μm,18.0s
TPH Tonopah 53.45 75 PFAKE 23 17 20.0 +10
TPH LR LR
comp=Z,4μm,20.0s,MS5.5
J18A Kendall Valley 53.48 65 ⇑P **P 23 17 11.1 +0.5**
baz=53,SNR=14
M15A Larsen Ranch, 53.50 68 P **P 23 17 10.9 +0.1**
baz=53,SNR=31
H20A Greybull 53.57 63 P **P 23 17 11.0 -0.2**
baz=53,SNR=7.2
BGU Big Grassy Mou 53.59 69 *e*P **P 23 17 11.3 -0.2**
comp=Z,40nm,1.4s,mb5.2
KMI Kunming 53.60 261 P **P 23 17 12.5 +0.8**
KMI pP pP 23 17 15.7 +1.1
KMI sP sP 23 17 17.2 +1.5
KMI PP PP 23 19 14.0 +1.8
KMI S **S 23 24 44.9 -0.1**
KMI sS sS 23 24 48.9 -0.9
KMI pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
KMI pmax pmax
comp=Z,500nm,7.7s
KMI LR LR
comp=N,26μm,19.2s,MS6.4
KMI LR LR
comp=E,19μm,20.1s,MS6.4
KMI LR LR
comp=Z,7μm,20.1s,MS5.7
SPUT South Promonto 53.61 68 ⇑*i*P **P 23 17 11.5 -0.1**
comp=Z,95nm,1.6s,mb5.5
L16A Fish Haven 53.63 67 ⇓P **P 23 17 11.7 0.0**
baz=53,SNR=11
FRB Frobisher Bay 53.63 26 P **P 23 17 10.3 -1.1**
comp=Z,32nm,0.9s,mb5.3,baz=329,slow=7.2,SNR=6.7
FRB Frobisher Bay 53.63 26 P **P 23 17 10.3 -1.1**
FRB Frobisher Bay 53.63 26 P **P 23 17 10.3 -1.1**
FRB pmax pmax
comp=Z,32nm,0.9s
RCTC Rector, Farmer 53.65 77 ⇓P **P 23 17 12.5 +0.6**
baz=53
L17A Cokeville 53.85 67 P **P 23 17 13.8 +0.5**
baz=54,SNR=9.0
HWUT Hardware Ranch 53.85 68 ⇑*i*P **P 23 17 13.4 0.0**
comp=Z,38nm,0.9s,mb5.3
HWUT LR LR
comp=Z,4μm,21.0s,MS5.5
N15A Stansbury Isla 53.88 69 P **P 23 17 13.7 +0.1**
baz=54,SNR=20
K18A Toltan Ranch, 53.89 66 P **P 23 17 14.3 +0.7**
baz=54,SNR=71
I20A Worland 53.90 63 P **P 23 17 13.6 0.0**
baz=54,SNR=27
J19A Crowheart 53.93 64 P **P 23 17 14.4 +0.5**
baz=54,SNR=20
H21A Big Horn, Sher 53.94 62 P **P 23 17 13.8 -0.1**
baz=54,SNR=24
SMMC Simmler 53.98 79 P **P 23 17 15.3 +0.9**
baz=54,SNR=12
AAA Alma-Ata 53.99 296 *e*P **P 23 17 22.3 +8.0**
AAA *e*S **S 23 24 56.9 +7.0**
AAA pmax pmax
comp=Z,800nm,9.4s
AAA smax
comp=E,1μm,12.9s
AAA MLR MLR
comp=Z,8μm,13.0s,MS6.0
M16A Huntsville 54.03 68 P **P 23 17 15.1 +0.4**
baz=54,SNR=5.7
BW06 Boulder Array 54.04 65 ⇓P **P 23 17 14.4 -0.3**
baz=54,SNR=54
BW06 Boulder Array 54.04 65 ⇑*i*P **P 23 17 14.3 -0.4**
comp=Z,48nm,0.9s,mb5.4
BW06 LR LR
comp=Z,7μm,20.0s,MS5.7
PDAR Pinedale Array 54.04 65 P **P 23 17 14.5 -0.2**
comp=Z,30nm,0.8s,mb5.3,baz=324,slow=3.0,SNR=228
PDAR LR LR 23 41 13.4
comp=Z,6μm,20.5s,MS5.6,baz=324,slow=37
VES Vestal, Richgr 54.08 78 P **P 23 17 14.6 -0.5**
baz=54,SNR=9.4
R11A Troy Canyon, C 54.12 73 P **P 23 17 15.2 -0.1**
baz=54,SNR=44
GRAC Grapevine Rang 54.16 76 ⇓P **P 23 17 16.3 +0.7**
baz=54,SNR=9.4
CWC Cottonwood Cre 54.19 76 P **P 23 17 16.3 +0.4**
baz=54,SNR=12
DUG Dugway 54.23 70 P **P 23 17 16.3 +0.1**
baz=54,SNR=42
DUG Dugway 54.23 70 ⇑*i*P **P 23 17 15.9 -0.2**
comp=Z,33nm,0.9s,mb5.3
DUG LR LR
comp=Z,5μm,19.0s,MS5.6
DUG Dugway 54.23 70 ⇑*i*P **P 23 17 15.9 -0.3**
DUG pmax pmax
comp=Z,33nm,0.9s,mb5.3
DUG MLR MLR
comp=Z,5μm,19.0s,MS5.6
NOQ North Oquirrh 54.26 69 *e*P **P 23 17 16.5 +0.1**
comp=Z,172nm,1.5s,mb5.8
SFJD Kangerlussuaq 54.32 16 *e*P **P 23 17 15.6 -0.8**
comp=Z,11nm,1.5s,mb4.6
SFJD LR LR
comp=Z,4μm,19.0s,MS5.5
SFJD Kangerlussuaq 54.32 16 *e*P **P 23 17 15.6 -0.8**
SFJD pmax pmax
comp=Z,11nm,1.5s,mb4.6
SFJD MLR MLR
comp=Z,4μm,19.0s,MS5.5
J20A Shoshoni 54.35 64 P **P 23 17 17.2 +0.3**
baz=54,SNR=71
O15A The Old Anders 54.35 69 ⇑P **P 23 17 17.7 +0.7**
baz=54
K19A Absolon Red Bu 54.35 65 P **P 23 17 16.4 -0.5**
baz=54,SNR=22
PKM Peak Mountain 54.38 79 ⇑P **P 23 17 17.7 +0.4**
baz=54,SNR=17

L18A	Fontenelle, Gr	54.41	66	⇑P	P	23 17 17.7	+0.3
	baz=54,SNR=14						
I21A	Big Trails, Te	54.41	63	P	P	23 17 16.9	-0.5
	baz=54,SNR=16						
M17A	Scullys Gap (B	54.41	67	P	P	23 17 17.4	0.0
	baz=54,SNR=14						
CTU	Camp Tracy	54.42	68	eP	P	23 17 16.9	-0.6
	comp=Z,45nm,1.3s,mb5.2						
N16A	Rees Ranch, Co	54.45	68	⇓P	P	23 17 17.6	-0.1
	baz=54,SNR=6.9						
P14A	Drum Mountains	54.54	70	P	P	23 17 18.8	+0.4
	baz=54,SNR=65						
ISA	Isabella	54.55	77	P	P	23 17 17.9	-0.7
	baz=54,SNR=20						
ISA	Isabella	54.55	77	⇑eP	P	23 17 17.6	-0.9
	comp=Z,34nm,1.1s,mb5.3						
ISA	Isabella	54.55	77	⇑eP	P	23 17 17.6	-0.9
ISA				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.3						
S11A	Rachel	54.55	74	P	P	23 17 19.1	+0.6
	baz=54,SNR=26						
DAC	Darwin (Calif)	54.57	76	PFAKE		23 17 30.0	+11
DAC				LR	LR		
	comp=Z,3μm,21.0s,MS5.4						
L19A	Farson	54.62	66	P	P	23 17 18.8	-0.1
	baz=54,SNR=16						
JLU	Jordanelle	54.65	68	⇑iP	P	23 17 19.1	0.0
	comp=Z,65nm,1.5s,mb5.4						
J21A	Lysite	54.68	63	P	P	23 17 19.4	0.0
	baz=54,SNR=26						
QIZ	Qiongzhong	54.71	250	P	P	23 17 21.2	+1.4
QIZ				pP	pP	23 17 23.0	+0.3
QIZ				sP	sP	23 17 26.3	+2.5
QIZ				S	S	23 25 01.2	+1.1
QIZ				sS	sS	23 25 07.8	+3.0
QIZ				pmax	pmax		
	comp=Z,440nm,7.1s						
QIZ				LR	LR		
	comp=N,4μm,23.9s,MS5.5						
QIZ				LR	LR		
	comp=E,3μm,21.9s,MS5.5						
QIZ				LR	LR		
	comp=Z,7μm,14.6s						
QIZ	Qiongzhong	54.71	250	PFAKE		23 17 30.0	+10
QIZ				LR	LR		
	comp=Z,4μm,22.0s,MS5.4						
N17A	Moffit Pass	54.72	68	P	P	23 17 19.6	0.0
	baz=54,SNR=9.1						
K20A	Yellowstone Ra	54.73	65	P	P	23 17 18.9	-0.9
	baz=54,SNR=20						
M18A	Lyman	54.75	67	P	P	23 17 20.2	+0.3
	baz=54,SNR=11						
MPMC	Manual Prospec	54.79	76	P	P	23 17 20.6	+0.3
	baz=55,SNR=53						
NLU	North Lily Min	54.80	69	⇑iP	P	23 17 20.1	-0.1
	comp=Z,78nm,1.4s,mb5.5						
FURC	Furnace Creek,	54.83	76	P	P	23 17 20.9	+0.4
	baz=55,SNR=71						
Q14A	Sevier Lake (B	54.88	71	P	P	23 17 21.3	+0.5
	baz=55,SNR=72						
DAU	Daniels Canyon	54.89	68	eP	P	23 17 21.1	+0.2
	comp=Z,93nm,1.5s,mb5.6						
DAU	Daniels Canyon	54.89	68	eP	P	23 17 21.1	+0.2
DAU				pmax	pmax		
	comp=Z,93nm,1.5s,mb5.6						
TKM2	Tokmak 2	54.92	296	P	P	23 17 20.8	-0.3
	SNR=5.7						
TKM2	Tokmak 2	54.92	296	eP	P	23 17 20.4	-0.7
	comp=Z,16nm,1.0s,mb5.0						
TKM2				LR	LR		
	comp=Z,6μm,21.0s,MS5.7						
TKM2	Tokmak 2	54.92	296	eP	P	23 17 20.4	-0.7
TKM2				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
TKM2				MLR	MLR		
	comp=Z,6μm,21.0s,MS5.7						
P15A	Leamington	54.97	70	P	P	23 17 22.0	+0.5
	baz=55,SNR=17						
MPU	Maple Canyon	54.98	69	⇑iP	P	23 17 21.7	+0.1
	comp=Z,106nm,1.4s,mb5.7						
ULM	Lac du Bonnet	54.99	51	P	P	23 17 21.1	-0.4
	comp=Z,39nm,0.8s,mb5.5,baz=316,slow=7.5,SNR=40						
ULM				LR	LR	23 43 51.8	
	comp=Z,6μm,18.3s,MS5.7,baz=326,slow=39						
ULM	Lac du Bonnet	54.99	51	⇑iP	P	23 17 20.7	-0.8
	comp=Z,98nm,1.3s,mb5.7						
ULM				LR	LR		
	comp=Z,5μm,20.0s,MS5.6						
S12A	Delamar Landin	55.06	73	P	P	23 17 23.0	+0.8
	baz=55,SNR=43						
R13A	O'Grain Ranch,	55.11	72	P	P	23 17 22.9	+0.4
	baz=55,SNR=31						
J22A	Midwest	55.11	63	P	P	23 17 22.2	-0.3
	baz=55,SNR=30						
LRMC	Laurel Mountai	55.11	77	P	P	23 17 22.7	+0.1
	baz=55,SNR=17						
T11A	Corn Creek, Al	55.13	74	⇑P	P	23 17 23.3	+0.5
	baz=55						
U10A	Ash Meadows, A	55.15	75	P	P	23 17 23.4	+0.5
	baz=55,SNR=18						
L20A	Wamsutter	55.21	65	P	P	23 17 23.2	0.0
	baz=55,SNR=12						
USP	Ospenovka	55.21	297	P	P	23 17 22.9	-0.3
	SNR=29						
CHMS	Chumysh	55.28	297	P	P	23 17 23.4	-0.3
	SNR=7.1						
KLMR	Klimovskoe	55.28	331	diP	P	23 17 23.7	+0.2
KLMR				S	S	23 25 10.5	+3.7
KLMR				pmax	pmax		
	comp=Z,73nm,1.2s,mb5.6						
KLMR				pmax	pmax		
	comp=Z,270nm,8.9s						
KLMR				MLR	MLR		
	comp=Z,10μm,20.0s,MS5.9						
N18A	Larsen Ranch,	55.29	67	P	P	23 17 23.7	-0.1
	baz=55,SNR=21						
K21A	Alcova	55.30	64	P	P	23 17 23.4	-0.4
	baz=55,SNR=16						
O17A	Robinson Place	55.31	68	P	P	23 17 24.6	+0.6
	baz=55,SNR=26						
Q15A	Fillmore	55.34	70	P	P	23 17 24.9	+0.7
	baz=55,SNR=25						
EDW2	Edwards Air Fo	55.40	78	P	P	23 17 24.5	-0.2
	baz=55,SNR=20						
KBK	Karagaybulak	55.44	296	P	P	23 17 24.5	-0.3
	SNR=27						
FRU	Bishkek	55.47	297	eP	P	23 17 24.0	-1.1
FRU				e		23 18 30.0	
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.3						
FRU				MLR	MLR		
	comp=Z,6μm,12.0s,MS5.9						
JOF	Joensuu	55.58	336	eP	P	23 17 23.6	-2.0
JOF				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
JOF	Joensuu	55.58	336	ep	P	23 17 23.6	-2.0
	comp=Z,14nm,0.7s,mb5.1						
N19A	John Jarvie Ra	55.60	67	⇑P	P	23 17 26.1	0.0
	baz=55,SNR=10						
S13A	Holt Ranch, En	55.61	72	P	P	23 17 26.7	+0.5
	baz=55,SNR=19						
O18A	Roosevelt	55.64	68	⇑P	P	23 17 27.4	+1.1
	baz=55,SNR=16						
K22A	Casper	55.65	63	P	P	23 17 26.5	+0.1
	baz=55,SNR=18						
M20A	Sweetwater, Wa	55.67	65	P	P	23 17 26.9	+0.4
	baz=55,SNR=31						
ARUT	Antelope Range	55.68	72	eP	P	23 17 26.8	+0.1
	comp=Z,40nm,0.9s,mb5.4						
ARUT	Antelope Range	55.68	72	eP	P	23 17 26.8	+0.2
ARUT				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.5						
AAK	Ala-Archa	55.68	297	P	P	23 17 26.2	-0.4
	SNR=27						
AAK	Ala-Archa	55.68	297	LR	LR	23 41 04.1	
	comp=Z,6μm,20.3s,MS5.6,baz=40,slow=36						
AAK	Ala-Archa	55.68	297	P	P	23 17 26.1	-0.5
	comp=Z,200nm,0.7s,mb6.3,SNR=17						
DECC	Green Verdugo	55.68	78	⇓P	P	23 17 27.1	+0.4
	baz=56						
KZA	Kyzart	55.71	296	eP	P	23 17 26.8	0.0
	comp=Z,12nm,0.8s,mb5.0						
SHPR	Sheep Range	55.71	74	eP	P	23 17 27.0	+0.1
	comp=Z,40nm,1.4s,mb5.3						
GSC	Goldstone	55.72	76	P	P	23 17 27.1	+0.1
	baz=56,SNR=44						
GSC	Goldstone	55.72	76	⇓iP	P	23 17 26.8	-0.2
	comp=Z,65nm,1.1s,mb5.6						
GSC	Goldstone	55.72	76	⇓iP	P	23 17 26.8	-0.2
GSC				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.6						
L21A	Rawlins	55.73	64	P	P	23 17 26.6	-0.3
	baz=56,SNR=18						
TMUT	Trail Mountain	55.73	69	⇑iP	P	23 17 27.5	+0.5
	comp=Z,56nm,0.8s,mb5.7						
RSSD	Black Hills	55.78	61	⇑iP	P	23 17 26.7	-0.6
	comp=Z,42nm,0.9s,mb5.5						
RSSD				LR	LR		
	comp=Z,9μm,19.0s,MS5.8						
RSSD	Black Hills	55.78	61	⇑iP	P	23 17 26.7	-0.6
RSSD				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.5						
RSSD				MLR	MLR		
	comp=Z,9μm,19.0s,MS5.8						
T12A	Moapa	55.79	74	P	P	23 17 28.4	+0.9
	baz=56,SNR=6.3						
MVU	Marysvale	55.80	71	PFAKE		23 17 40.0	+13
MVU				LR	LR		
	comp=Z,4μm,20.0s,MS5.5						
MSU	Marysvale	55.81	71	eP	P	23 17 27.9	+0.3
	comp=Z,102nm,1.4s,mb5.7						
MSU	Marysvale	55.81	71	eP	P	23 17 27.9	+0.3
MSU				pmax	pmax		
	comp=Z,102nm,1.4s,mb5.7						
S14A	Cedar City	55.84	72	P	P	23 17 28.4	+0.6
	baz=56,SNR=12						
P17A	Butcher Ranch,	55.85	69	P	P	23 17 28.5	+0.7
	baz=56,SNR=11						
MWC	Mount Wilson	55.85	78	eP	P	23 17 27.8	-0.1
	comp=Z,116nm,1.4s,mb5.7						
MWC	Mount Wilson	55.85	78	eP	P	23 17 27.8	-0.1
MWC				pmax	pmax		
	comp=Z,116nm,1.4s,mb5.7						
CCUT	Cedar City	55.90	72	⇑iP	P	23 17 28.6	+0.4
	comp=Z,28nm,0.9s,mb5.3						
R15A	Junction	55.98	71	⇓P	P	23 17 29.6	+0.9
	baz=56,SNR=5.6						
P18A	Preston Nutter	55.99	68	P	P	23 17 29.5	+0.7
	baz=56,SNR=37						
M21A	Separation Pea	56.00	65	P	P	23 17 28.6	-0.2
	baz=56,SNR=9.6						
T13A	Saint George	56.00	73	P	P	23 17 29.6	+0.7
	baz=56,SNR=30						
RWWY	Rawlins	56.01	65	⇑eP	P	23 17 28.5	-0.5
	comp=Z,64nm,1.3s,mb5.5						
EKS2	Erkin-Say	56.02	297	P	P	23 17 28.6	-0.4
	SNR=56						
EKS2	Erkin-Say	56.02	297	⇓iP	P	23 17 28.5	-0.5
	comp=Z,26nm,0.8s,mb5.3						
EKS2				LR	LR		
	comp=Z,6μm,19.0s,MS5.7						
Q16A	Castle Valley	56.03	70	P	P	23 17 29.9	+0.8
	baz=56,SNR=25						
BFSC	Mount Baldy Ra	56.06	78	P	P	23 17 29.4	0.0
	baz=56,SNR=13						
O19A	Miners Draw (B	56.07	67	P	P	23 17 29.4	0.0
	baz=56,SNR=27						
TUQ	Turquoise Moun	56.10	76	⇑P	P	23 17 29.9	+0.2
	baz=56,SNR=18						
N20A	Spence Gulch,	56.11	66	P	P	23 17 30.1	+0.4
	baz=56,SNR=65						
SRU	San Rafael	56.23	69	P	P	23 17 31.0	+0.4
	baz=56,SNR=94						
SRU	San Rafael	56.23	69	⇑iP	P	23 17 30.8	+0.2
	comp=Z,103nm,0.9s,mb5.9						
SRU	San Rafael	56.23	69	⇑iP	P	23 17 30.8	+0.2
SRU				pmax	pmax		
	comp=Z,103nm,0.9s,mb5.9						
S15A	Panguitch	56.33	71	P	P	23 17 32.6	+1.3
	baz=56,SNR=10						
HEC	Hector,Ludlow	56.34	77	⇑P	P	23 17 31.7	+0.4
	baz=56,SNR=5.2						
R16A	Teasdale	56.34	70	P	P	23 17 32.4	+1.0
	baz=56,SNR=36						
T14A	Hurricane	56.41	72	P	P	23 17 32.5	+0.6
	baz=56,SNR=25						
U13A	Pakoon Wash	56.42	74	P	P	23 17 32.8	+0.8
	baz=56,SNR=35						
Q18A	Rafter H Ranch	56.44	69	⇓P	P	23 17 31.8	-0.3
	baz=56,SNR=30						
AML	Almayashu	56.45	297	P	P	23 17 32.2	+0.1
	SNR=38						
AML	Almayashu	56.45	297	⇓eP	P	23 17 32.5	+0.3
	comp=Z,22nm,0.7s,mb5.3						
AML				LR	LR		
	comp=Z,4μm,19.0s,MS5.6						
L23A	Garrett	56.45	63	P	P	23 17 31.8	-0.4
	baz=56,SNR=43						
AGMN	Agassiz Nation	56.45	52	⇑iP	P	23 17 30.9	-1.1
	comp=Z,145nm,1.4s,mb5.8						
AGMN				LR	LR		
	comp=Z,17μm,20.0s,MS6.1						
V12A	Nelson	56.46	75	P	P	23 17 32.8	+0.5
	baz=56,SNR=22						
LSA	Lhasa	56.48	274	P	P	23 17 32.6	+0.1
LSA				S	S	23 25 14.6	-9.0
LSA				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
LSA				pmax	pmax		
	comp=Z,310nm,10.0s						
LSA				LR	LR		
	comp=N,5μm,17.0s,MS5.9						
LSA				LR	LR		
	comp=E,7μm,15.0s,MS5.9						
LSA				LR	LR		
	comp=Z,8μm,17.0s,MS5.9						
LSA	Lhasa	56.48	274	eP	P	23 17 32.6	+0.1
	comp=Z,36nm,0.7s,mb5.5						
LSA				LR	LR		
	comp=Z,8μm,20.0s,MS5.8						
LSA	Lhasa	56.48	274	eP	P	23 17 32.6	+0.1
LSA				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.5						
LSA				MLR	MLR		
	comp=Z,8μm,20.0s,MS5.8						
M22A	Cedar Creek Ra	56.53	64	P	P	23 17 32.9	+0.2
	baz=56,SNR=7.5						
N21A	Black Mountain	56.55	66	P	P	23 17 32.9	+0.1
	baz=56,SNR=24						
P19A	Cripple Cowboy	56.64	67	P	P	23 17 33.6	+0.2
	baz=56,SNR=33						
O20A	White River Ci	56.64	67	P	P	23 17 33.6	+0.2
	baz=56,SNR=57						
R17A	Hanksville Air	56.65	70	P	P	23 17 33.6	+0.1
	baz=56,SNR=43						
S16A	Weppner Ranch,	56.70	71	P	P	23 17 34.9	+1.0
	baz=56,SNR=38						
GMRC	Granite Mounta	56.73	76	P	P	23 17 34.5	+0.3
	baz=56,SNR=14						
MURC	Murrieta	56.79	78	P	P	23 17 34.8	+0.2
	baz=57,SNR=5.7						
LDFC	Landfair	56.81	75	⇑iP	P	23 17 34.4	-0.3
	comp=Z,88nm,1.1s,mb5.7						
T15A	Red Dirt Ranch	56.81	72	P	P	23 17 35.5	+0.8
	baz=57,SNR=16						
V13A	Grand Canyon W	56.83	74	P	P	23 17 35.3	+0.4
	baz=57,SNR=34						
U14A	Mt Trumbull	56.84	73	P	P	23 17 35.6	+0.7
	baz=57,SNR=40						
L24A	Wheatland	56.89	63	⇓P	P	23 17 35.3	+0.1
	baz=57,SNR=7.8						
M23A	Laramie	56.92	64	P	P	23 17 35.3	-0.2
	baz=57,SNR=9.1						
Q19A	Hogan Spring (	57.00	68	P	P	23 17 35.9	-0.1
	baz=57,SNR=163						
P20A	De Beque	57.04	67	P	P	23 17 36.2	-0.1
	baz=57,SNR=13						
N22A	Wattenberg Ran	57.05	65	P	P	23 17 36.8	+0.4
	baz=57,SNR=27						
R18A	Canyonlands Na	57.09	69	P	P	23 17 36.4	-0.4
	baz=57,SNR=64						
BELC	Belle Mtn. Jos	57.14	77	P	P	23 17 36.7	-0.4
	baz=57,SNR=11						
S17A	Black Ridge (B	57.18	70	P	P	23 17 37.8	+0.4
	baz=57,SNR=15						
PFO	Pinyon Flat Ob	57.19	78	P	P	23 17 37.1	-0.3
	baz=57,SNR=9.4						
PFO	Pinyon Flat Ob	57.19	78	eP	P	23 17 36.4	-1.0
	comp=Z,23nm,1.2s,mb5.1						
PFO				LR	LR		
	comp=Z,4μm,19.0s,MS5.5						
PFO	Pinyon Flat Ob	57.19	78	eP	P	23 17 36.4	-1.0
PFO				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.1						
PFO				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.6						
PFO	Pinyon Flat Ob	57.19	78	P	P	23 17 37.5	+0.1
	comp=Z,74nm,1.1s,mb5.6,SNR=6.2						
N23A	Red Feather La	57.24	64	P	P	23 17 37.9	+0.2
	baz=57,SNR=22						
KSH	Kashi	57.25	293	eP	P	23 17 40.5	+2.7
KSH				epP	pP	23 17 45.1	+4.4
KSH				esP	sP	23 17 47.5	+5.7
KSH				ePcP	PcP	23 18 34.7	+2.6
KSH				ePP	PP	23 19 49.1	+4.6
KSH				eScP	ScP	23 22 33.0	+1.3
KSH				ePcS	PcS	23 22 34.2	+1.2
KSH				eS	S	23 25 33.8	+0.3
KSH				esS	sS	23 25 41.7	+3.4
KSH				eSS	SS	23 29 24.1	+2.1
KSH				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
KSH				pmax	pmax		
	comp=Z,290nm,5.0s						
KSH				LR	LR		
	comp=N,12μm,14.7s,MS6.3						
KSH				LR	LR		
	comp=E,14μm,15.8s,MS6.3						
KSH				LR	LR		
	comp=Z,13μm,18.7s,MS6.1						
KK31	Karatay Array	57.29	300	P	P	23 17 36.9	-1.1
KK31				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
KKAR	Karatay Array	57.29	300	eP	P	23 17 37.1	-0.9
	comp=Z,26nm,0.8s,mb5.3						
KKAR	Karatay Array	57.29	300	eP	P	23 17 37.1	-0.9
KKAR				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.3						
U15A	North Rim	57.30	72	P	P	23 17 38.8	+0.5
	baz=57,SNR=21						
AKTO	Aktyubinsk	57.31	313	LR	LR	23 42 41.3	
	comp=Z,7μm,20.6s,MS5.8,baz=212,slow=37						
M24A	Cheyenne	57.37	63	⇓P	P	23 17 39.1	+0.4
	baz=57,SNR=13						
KAF	Kangasniemi	57.39	338	eP	P	23 17 36.1	-2.3
KAF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
KAF	Kangasniemi	57.39	338	ep	P	23 17 36.1	-2.3
	comp=Z,6.7nm,0.7s,mb4.8						
AB31	Akbulak array	57.42	311	iP	P	23 17 38.4	-0.4
AB31				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.4						
ABKAR	Akbulak array	57.42	311	⇓iP	P	23 17 38.5	-0.4
	comp=Z,27nm,0.8s,mb5.3						
W13A	Hualapai Mount	57.45	74	⇑P	P	23 17 39.9	+0.6
	baz=57						
V14A	Boquillas Ranc	57.47	73	P	P	23 17 40.1	+0.7
	baz=57,SNR=48						
IRM	Iron Mountain	57.48	76	P	P	23 17 39.7	+0.2
	baz=57,SNR=30						
O22A	Kremmling	57.48	65	P	P	23 17 40.1	+0.6
	baz=57,SNR=12						
R19A	Curley Farm, L	57.49	69	P	P	23 17 39.6	0.0
	baz=57,SNR=27						
Q20A	Ridgley Place,	57.50	67	P	P	23 17 39.2	-0.3
	baz=57,SNR=16						
S18A	Hurst Farm, Bl	57.56	70	P	P	23 17 39.9	-0.2
	baz=57,SNR=54						
PV04	Paradox Valley	57.60	68	⇑iP	P	23 17 40.2	-0.1
T17A	Navajo Res., N	57.66	71	P	P	23 17 40.5	-0.2
	baz=57,SNR=15						
DAV	Davao City (W)	57.67	227	PFAKE		23 17 50.0	+9.0
DAV				LR	LR		
	comp=Z,3μm,20.0s,MS5.4						
BC3	Big Chuckawall	57.70	77	P	P	23 17 40.8	-0.3
	baz=58,SNR=12						
MONP	Monument Peak	57.75	78	⇓P	P	23 17 41.7	+0.2
	baz=58						
O23A	Lake Granby, G	57.77	65	P	P	23 17 42.7	+1.2
	baz=58,SNR=37						
BAR	Barrett	57.77	78	eP	P	23 17 41.0	-0.6
	comp=Z,13nm,1.1s,mb4.9						
W14A	Seligman	57.80	74	P	P	23 17 42.4	+0.7
	baz=58,SNR=26						
P22A	Eagle	57.80	66	P	P	23 17 42.2	+0.5
	baz=58,SNR=14						
N24A	Carr	57.82	64	⇓P	P	23 17 42.4	+0.6
	baz=58,SNR=7.3						
V15A	Kaibab Nationa	57.82	73	P	P	23 17 42.7	+0.8
	baz=58,SNR=26						
X13A	Yucca	57.86	75	⇓P	P	23 17 42.3	+0.1
	baz=58						
PDMCI	Parker Dam,Lak	57.92	75	⇑P	P	23 17 42.5	-0.1
	baz=58,SNR=5.4						
Q21A	Lamborn Mesa,	57.96	67	P	P	23 17 43.3	+0.5
	baz=58,SNR=9.5						
S19A	Harvey Farm, M	57.97	69	P	P	23 17 43.0	0.0
	baz=58,SNR=22						
PV01	Paradox Valley	57.97	68	eP	P	23 17 42.6	-0.3
	comp=Z,3μm,0.9s						
SMCO	Snowmass	58.01	66	⇑iP	P	23 17 43.3	+0.1
	comp=Z,39nm,1.0s,mb5.4						
R20A	Redvale	58.03	68	P	P	23 17 43.7	+0.4
	baz=58,SNR=12						
FINES	FINESS Array B	58.04	338	P	P	23 17 42.4	-0.6
	comp=Z,8.8nm,0.8s,mb4.8,baz=30,slow=8.8,SNR=19						
FINES				LR	LR	23 44 31.8	
	comp=Z,9μm,20.2s,MS5.8,baz=32,slow=38						
FINES	FINESS Array B	58.04	338	P	P	23 17 42.4	-0.6
FINES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FINES				MLR	MLR		
	comp=Z,9μm,20.2s						
T18A	Mexican Hat	58.04	70	P	P	23 17 43.0	-0.4
	baz=58,SNR=48						
DVTC	Desert V Tower	58.10	78	⇑P	P	23 17 44.0	+0.1
	baz=58						
Y12C	Blythe	58.13	76	⇑P	P	23 17 44.4	+0.3
	baz=58						
U16A	Tuba City	58.13	72	⇑P	P	23 17 44.6	+0.6
	baz=58,SNR=11						
ISCO	Idaho Springs	58.23	65	P	P	23 17 45.4	+0.7
	baz=58,SNR=36						
ISCO	Idaho Springs	58.23	65	⇑iP	P	23 17 45.3	+0.6
	comp=Z,38nm,0.9s,mb5.4						
ISCO				LR	LR		
	comp=Z,8μm,20.0s,MS5.8						
ISCO	Idaho Springs	58.23	65	⇑iP	P	23 17 45.3	+0.6
ISCO				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.4						
ISCO				MLR	MLR		
	comp=Z,8μm,20.0s,MS5.8						
O24A	Longmont	58.26	64	P	P	23 17 46.1	+1.2
	baz=58,SNR=11						
W15A	Williams	58.26	73	⇑P	P	23 17 46.1	+1.2
	baz=58,SNR=10						
Q22A	Crested Butte,	58.28	67	⇑P	P	23 17 45.8	+0.8
	baz=58,SNR=13						
S20A	Disappointment	58.31	68	P	P	23 17 45.4	+0.1
	baz=58,SNR=18						
R21A	Cimarron	58.32	67	P	P	23 17 46.4	+1.0
	baz=58,SNR=24						
P23A	Jefferson	58.44	65	⇓P	P	23 17 47.7	+1.6
	baz=58						
Y13A	Salome	58.45	75	⇑P	P	23 17 46.5	+0.2
	baz=58						
X14A	Yava	58.46	74	P	P	23 17 46.9	+0.5
	baz=58,SNR=19						
GLA	Glamis	58.49	77	P	P	23 17 46.9	+0.3
	baz=58,SNR=6.4						
GLA	Glamis	58.49	77	⇑iP	P	23 17 46.4	-0.2
	comp=Z,50nm,1.3s,mb5.4						
GLA	Glamis	58.49	77	⇑iP	P	23 17 46.4	-0.2
GLA				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.4						
EYMN	Ely	58.61	50	⇑iP	P	23 17 46.4	-0.9
	comp=Z,218nm,1.5s,mb6.0						
EYMN				LR	LR		
	comp=Z,7μm,20.0s,MS5.8						
V17A	Tonalea,

Y14A	**Wickenburg**	**58.80**	**75**	⇓P	**P**	**23 17 49.2 +0.4**
	baz=59,SNR=8.3					
R22A	**Saguache, Gunn**	**58.84**	**67**	⇓P	**P**	**23 17 50.2 +1.3**
	baz=59,SNR=6.0					
Z13A	**Yuma Proving G**	**59.02**	**76**	P	**P**	**23 17 50.3 +0.1**
	baz=59,SNR=18					
U19A	**Dine' College,**	**59.03**	**70**	⇑P	**P**	**23 17 50.7 +0.3**
	baz=59,SNR=14					
V18A	**Ganado**	**59.09**	**71**	⇓P	**P**	**23 17 51.4 +0.7**
	baz=59,SNR=10					
Q24A	**Divide**	**59.10**	**65**	P	**P**	**23 17 51.2 +0.5**
	baz=59,SNR=12					
OGNE	**Ogallala**	**59.14**	**62**	⇓P	**P**	**23 17 51.2 +0.2**
	baz=59,SNR=6.6					
OGNE	**Ogallala**	**59.14**	**62**	*e*P	**P**	**23 17 51.0 0.0**
	comp=Z,98nm,1.4s,mb5.6					
OGNE				LR	LR	
	comp=Z,7μm,21.0s,MS5.8					
Y15A	**Casa Rosa Ranc**	**59.15**	**74**	P	**P**	**23 17 51.8 +0.6**
	baz=59,SNR=21					
W17A	**Winslow**	**59.16**	**72**	⇓P	**P**	**23 17 52.1 +0.8**
	baz=59					
S22A	**4UR Ranch, Cre**	**59.16**	**67**	P	**P**	**23 17 52.2 +1.0**
	baz=59,SNR=23					
P25A	**Willow Gulch B**	**59.17**	**64**	P	**P**	**23 17 52.0 +0.8**
	baz=59,SNR=19					
Z14A	**Wintersburg**	**59.27**	**75**	⇓P	**P**	**23 17 52.2 +0.2**
	baz=59					
X16A	**Lo Mia Camp, P**	**59.28**	**73**	P	**P**	**23 17 52.8 +0.7**
	baz=59,SNR=18					
SHL	**Shillong**	**59.28**	**271**	*e*PKP	**P**	**23 17 52.0 -0.2**
SHL				*e*S	**S**	**23 25 53.0 -7.3**
113A	**Mohawk Valley,**	**59.28**	**76**	P	**P**	**23 17 51.9 -0.2**
	baz=59,SNR=5.6					
U20A	**Newcomb**	**59.33**	**70**	⇓P	**P**	**23 17 53.0 +0.7**
	baz=59,SNR=5.1					
T21A	**Navajo Lake**	**59.37**	**68**	⇓P	**P**	**23 17 53.7 +1.0**
	baz=59,SNR=6.0					
CHRT	**Chiangrai**	**59.43**	**260**	⇑P	**P**	**23 17 52.0 -1.2**
	comp=Z,108nm,0.9s,mb5.9					
V19A	**Window Rock**	**59.56**	**70**	P	**P**	**23 17 54.9 +1.0**
	baz=59,SNR=8.3					
Q25A	**Bedland, Calha**	**59.59**	**65**	P	**P**	**23 17 54.6 +0.5**
	baz=59,SNR=13					
ECSD	**EROS Data Cent**	**59.59**	**56**	⇑*e*P	**P**	**23 17 52.6 -1.5**
	comp=Z,67nm,1.3s,mb5.5					
ECSD				LR	LR	
	comp=Z,6μm,22.0s,MS5.7					
W18A	**Petrified Fore**	**59.65**	**71**	⇓P	**P**	**23 17 55.5 +0.9**
	baz=59					
Y16A	**Circle Bar Ran**	**59.67**	**74**	⇑P	**P**	**23 17 55.5 +0.8**
	baz=59					
R24A	**Sanders Place,**	**59.67**	**66**	⇓P	**P**	**23 17 55.4 +0.7**
	baz=59,SNR=17					
X17A	**Forest Lakes**	**59.68**	**73**	⇑P	**P**	**23 17 55.9 +1.1**
	baz=59					
T22A	**Edith**	**59.68**	**68**	P	**P**	**23 17 55.6 +0.8**
	baz=59,SNR=16					
U21A	**Nageezi**	**59.74**	**69**	P	**P**	**23 17 55.6 +0.4**
	baz=60,SNR=21					
114A	**Black Gap (USA**	**59.77**	**76**	⇓P	**P**	**23 17 56.2 +0.7**
	baz=60					
V20A	**Brimhall**	**59.80**	**70**	⇓P	**P**	**23 17 55.7 +0.1**
	baz=60,SNR=7.1					
W19A	**Sanders**	**59.84**	**71**	⇓P	**P**	**23 17 56.4 +0.5**
	baz=60,SNR=18					
SDCO	**Great Sand Dun**	**59.84**	**66**	P	**P**	**23 17 56.5 +0.6**
	baz=60,SNR=16					
SDCO	**Great Sand Dun**	**59.84**	**66**	*e*P	**P**	**23 17 56.4 +0.4**
	comp=Z,42nm,1.5s,mb5.2					
SDCO				LR	LR	
	comp=Z,7μm,19.0s,MS5.8					
X18A	**Snowflake**	**59.98**	**72**	P	**P**	**23 17 57.7 +0.8**
	baz=60,SNR=17					
S24A	**Houchin Ranch,**	**60.07**	**66**	P	**P**	**23 17 58.1 +0.7**
	baz=60,SNR=14					
Z16A	**Peralta Trail,**	**60.11**	**74**	⇑P	**P**	**23 17 58.2 +0.4**
	baz=60,SNR=7.5					
MOS	**Moscow**	**60.15**	**328**	*e*P	**P**	**23 17 57.6 -0.1**
MOS				*e*		23 20 11.3
MOS				*e*PPP		23 21 35.5
MOS				*i* S	**S**	**23 26 11.0 +0.3**
MOS				*e*		23 27 46.4
MOS				*i* SS	SS	23 30 10.4 +3.7
MOS				pmax	pmax	
	comp=Z,100nm,1.5s,mb5.6					
MOS				pmax	pmax	
	comp=Z,63nm,1.1s,mb5.6					
MOS				MLR	MLR	
	comp=Z,8μm,15.0s,MS6.0					
MOS				MLR	MLR	
	comp=E,5μm,15.0s,MS6.0					
MOS				MLR	MLR	
	comp=N,6μm,15.0s,MS6.0					
Y17A	**Roosevelt**	**60.15**	**73**	P	**P**	**23 17 58.6 +0.6**
	baz=60,SNR=8.4					
R25A	**Fountain Ranch**	**60.16**	**65**	P	**P**	**23 17 58.3 +0.2**
	baz=60,SNR=23					
115A	**Sonoran Desert**	**60.17**	**75**	P	**P**	**23 17 58.9 +0.7**
	baz=60,SNR=23					
U22A	**Llaves**	**60.19**	**68**	P	**P**	**23 17 58.9 +0.6**
	baz=60,SNR=13					
V21A	**Milan**	**60.22**	**69**	⇑P	**P**	**23 17 58.9 +0.3**
	baz=60,SNR=5.6					
W20A	**Ramah**	**60.29**	**71**	P	**P**	**23 17 59.3 +0.3**
	baz=60,SNR=26					
X19A	**St. Johns**	**60.41**	**72**	P	**P**	**23 18 00.6 +0.8**
	baz=60,SNR=22					
214A	**Organ Pipe Nat**	**60.42**	**76**	⇑P	**P**	**23 17 59.9 -0.1**
	baz=60,SNR=21					
S25A	**Robets Cordova**	**60.45**	**66**	⇑P	**P**	**23 17 59.9 -0.2**
	baz=60,SNR=14					
Y18A	**Canyon Day Jun**	**60.52**	**73**	P	**P**	**23 18 01.4 +0.8**
	baz=60,SNR=10					
V22A	**San Miguel Ran**	**60.52**	**69**	P	**P**	**23 18 00.8 +0.2**
	baz=60,SNR=9.4					
116A	**Eloy**	**60.56**	**75**	⇑P	**P**	**23 18 01.4 +0.5**
	baz=60					
U23A	**El Rito**	**60.57**	**68**	P	**P**	**23 18 01.6 +0.7**
	baz=60,SNR=27					
VSU	**Vasula**	**60.58**	**336**	⇑*i*P	**P**	**23 18 01.2 +0.5**
VSU	**Vasula**	**60.58**	**336**	⇑*i*P	**P**	**23 18 01.2 +0.5**
T24A	**Torres, Weston**	**60.59**	**67**	⇑P	**P**	**23 18 01.7 +0.7**
	baz=60,SNR=18					
Z17A	**San Carlos Hig**	**60.65**	**73**	⇓P	**P**	**23 18 02.0 +0.5**
	baz=60					
X20A	**Quemado**	**60.74**	**71**	P	**P**	**23 18 03.0 +0.8**
	baz=60,SNR=34					
CHG	**Chiang Mai**	**60.74**	**260**	⇓P	**P**	**23 18 01.9 -0.4**
	comp=N,24nm,0.8s,mb5.4					
CHTO	**Chiang Mai**	**60.74**	**260**	*e*P	**P**	**23 18 01.2 -1.1**
	comp=N,16nm,0.8s,mb5.2					
CHTO				LR	LR	
	comp=Z,7μm,19.0s,MS5.8					
CHTO	**Chiang Mai**	**60.74**	**260**	*e*P	**P**	**23 18 01.2 -1.1**
CHTO				pmax	pmax	
	comp=Z,16nm,0.8s,mb5.2					
CHTO				MLR	MLR	
	comp=Z,7μm,19.0s,MS5.8					
CHTO	**Chiang Mai**	**60.74**	**260**	P	**P**	**23 18 01.9 -0.4**
	comp=Z,679nmcomp=Z,27nm,0.9s,mb5.4					
GUN	**Gumba**	**60.79**	**277**	*e*P	**P**	**23 18 02.2 -0.3**
	comp=Z,139nm,0.8s,mb6.2					
Y19A	**Nutrioso**	**60.79**	**72**	⇓P	**P**	**23 18 03.5 +1.0**
	baz=61,SNR=7.5					
T25A	**Trinidad**	**60.87**	**66**	P	**P**	**23 18 03.1 +0.2**
	baz=61,SNR=19					
OBN	**Obninsk**	**60.99**	**329**	*e*P	**P**	**23 18 03.0 -0.5**
	comp=Z,78nm,1.6s,mb5.6					
OBN				LR	LR	
	comp=Z,6μm,19.0s,MS5.8					
OBN	**Obninsk**	**60.99**	**329**	⇑*e*P	**P**	**23 18 03.1 -0.4**
OBN				*e*		23 20 23.0
OBN				*i* S	**S**	**23 26 24.1 +2.6**
OBN				pmax	pmax	
	comp=Z,62nm,1.7s,mb5.5					
OBN				MLR	MLR	
	comp=Z,7μm,15.0s,MS5.9					
V23A	**Ortiz Mt. (NFS**	**61.03**	**68**	P	**P**	**23 18 04.9 +0.9**
	baz=61,SNR=25					
CM31	**Chiang Mai Arr**	**61.03**	**260**	*e*P	**P**	**23 18 04.6 +0.3**
	comp=Z,13nm,0.7s,mb5.2					
CM31				LR	LR	
	comp=Z,5μm,19.0s,MS5.7					
CMAR	**Chiang Mai Arr**	**61.03**	**260**	P	**P**	**23 18 03.8 -0.5**
	comp=Z,13nm,0.8s,mb5.1,baz=19,slow=6.4,SNR=38					
CMAR				LR	LR	23 48 28.6
	comp=Z,7μm,18.2s,MS5.9,baz=193,slow=40					
CMAR	**Chiang Mai Arr**	**61.03**	**260**	P	**P**	**23 18 03.8 -0.5**
CMAR				pmax	pmax	
	comp=Z,13nm,0.8s					
CMAR				MLR	MLR	
	comp=Z,7μm,18.2s					
NB2	**NORSAR Subarra**	**61.05**	**345**	P	**P**	**23 18 03.1 -0.7**
	comp=Z,1.2nm,0.8s,mb4.1,baz=20,slow=6.9					
NOA	**NORSAR Array B**	**61.05**	**345**	P	**P**	**23 18 03.0 -0.7**
	comp=Z,7.5nm,0.9s,mb4.8,baz=17,slow=6.9,SNR=17					
NOA				LR	LR	23 49 19.6
	comp=Z,3μm,19.3s,MS5.5,baz=10.0,slow=41					
NOA	**NORSAR Array B**	**61.05**	**345**	P	**P**	**23 18 03.1 -0.7**
NOA				pmax	pmax	
	comp=Z,8.0nm,0.9s					
NOA				MLR	MLR	
	comp=Z,3μm,19.3s					
COWI	**Conover**	**61.06**	**50**	*e*P	**P**	**23 18 02.7 -1.4**
	comp=Z,60nm,1.3s,mb5.6					
COWI				LR	LR	
	comp=Z,7μm,20.0s,MS5.8					
117A	**Oracle**	**61.07**	**74**	P	**P**	**23 18 04.7 +0.4**
	baz=61,SNR=13					
216A	**Three Points,**	**61.12**	**75**	⇓P	**P**	**23 18 05.2 +0.5**
	baz=61					
X21A	**Alamocita Cree**	**61.19**	**71**	P	**P**	**23 18 06.2 +1.0**
	baz=61,SNR=52					
KKN	**Kakani**	**61.21**	**278**	*e*P	**P**	**23 18 04.4 -1.0**
	comp=Z,63nm,0.6s,mb5.9					
TUC	**Tucon**	**61.24**	**74**	*e*P	**P**	**23 18 05.4 -0.1**
	comp=Z,28nm,1.5s,mb5.2					
TUC				LR	LR	
	comp=Z,3μm,19.0s,MS5.4					
TUC	**Tucson**	**61.24**	**74**	*e*P	**P**	**23 18 05.4 -0.1**
TUC				pmax	pmax	
	comp=Z,28nm,1.5s,mb5.2					
TUC				MLR	MLR	
	comp=Z,3μm,19.0s,MS5.4					
FOO	**Floro**	**61.28**	**349**	*e*S	**S**	**23 26 27.4 +2.4**
FOO				AMS	AMS	23 50 35.9
	comp=Z,2μm,19.7s,MS5.3					
FOO	**Floro**	**61.28**	**349**	*e*P	**P**	**23 18 13.9 +8.6**
FOO				LR	LR	
	comp=Z,2μm,19.7s,MS5.3					
NAO01	**NORSAR Array S**	**61.28**	**345**	*e*P	**P**	**23 18 05.1 -0.3**
NAO01				LR	LR	
	comp=Z,14nm,1.0s,mb5.1					
NAO01				LR	LR	
	comp=Z,4μm,19.0s,MS5.6					
Y20A	**Horse Springs,**	**61.29**	**71**	P	**P**	**23 18 07.0 +1.1**
	baz=61,SNR=20					
Z19A	**T-Link Ranch,**	**61.30**	**72**	P	**P**	**23 18 07.1 +1.2**
	baz=61,SNR=5.6					
PKI	**Pulchoki**	**61.31**	**277**	*e*P	**P**	**23 18 05.2 -0.9**
	comp=Z,96nm,0.8s,mb6.0					
PKIN	**Phulchoki**	**61.31**	**277**	*e*P	**P**	**23 18 05.2 -0.9**
	comp=Z,64nm,0.8s,mb5.8					
GKN	**Gorkha**	**61.40**	**278**	*e*P	**P**	**23 18 05.4 -1.3**
	comp=Z,96nm,0.9s,mb5.9					
118A	**Homack Ranch,**	**61.42**	**73**	P	**P**	**23 18 07.2 +0.5**
	baz=61,SNR=14					
U25A	**Circle Dot Ran**	**61.44**	**67**	P	**P**	**23 18 06.9 +0.1**
	baz=61,SNR=17					
DMN	**Daman**	**61.45**	**278**	*e*P	**P**	**23 18 06.2 -0.8**
	comp=Z,64nm,1.0s,mb5.7					
W23A	**Werner Place,**	**61.49**	**69**	⇑P	**P**	**23 18 07.4 +0.2**
	baz=61					
ANMO	**Albuquerque**	**61.49**	**69**	⇑*e*P	**P**	**23 18 07.3 +0.1**
	comp=Z,16nm,0.8s,mb5.2					
ANMO				LR	LR	
	comp=Z,3μm,21.0s,MS5.5					
ANMO	**Albuquerque**	**61.49**	**69**	⇑*e*P	**P**	**23 18 07.3 +0.1**
ANMO				pmax	pmax	
	comp=Z,16nm,0.8s					
ANMO				MLR	MLR	
	comp=Z,3μm,21.0s					
V24A	**Rampart Ranch,**	**61.51**	**68**	P	**P**	**23 18 07.9 +0.6**
	baz=61,SNR=17					
HFA0	**Hagfors New Ar**	**61.54**	**344**	P	**P**	**23 18 05.0 -2.1**
X22A	**Bernardo**	**61.55**	**70**	⇓P	**P**	**23 18 08.7 +1.1**
	baz=61,SNR=5.4					
LAZ	**Ladron**	**61.56**	**70**	*e*P	**P**	**23 18 07.7 0.0**
	comp=Z,10nm,1.0s,mb4.9					
Y21A	**Point of Rocks**	**61.59**	**71**	P	**P**	**23 18 08.9 +1.0**
	baz=61,SNR=14					
DANN	**Dangsing**	**61.61**	**279**	*e*P	**P**	**23 18 07.5 -0.6**
	comp=Z,114nm,0.8s,mb6.1					
BAKI	**Biak**	**61.62**	**212**	P	**P**	**23 18 17.2 +9.0**
	comp=Z,1μmcomp=Z,68nm,1.8s,mb5.5					
217A	**Green Valley**	**61.64**	**75**	P	**P**	**23 18 08.3 +0.1**
	baz=61,SNR=8.5					
119A	**Ashpeak Ranch,**	**61.68**	**73**	⇑P	**P**	**23 18 09.3 +0.8**
	baz=62,SNR=7.0					
SCHQ	**Schefferville**	**61.73**	**31**	P	**P**	**23 18 07.3 -1.2**
	comp=Z,25nm,0.6s,mb5.5,baz=356,slow=7.1,SNR=43					
SCHQ				LR	LR	23 46 15.3
	comp=Z,4μm,21.7s,MS5.5,baz=325,slow=37					
SCHQ	**Schefferville**	**61.73**	**31**	*e*P	**P**	**23 18 07.3 -1.2**
	comp=Z,42nm,0.8s,mb5.6					
SCHQ				LR	LR	
	comp=Z,5μm,22.0s,MS5.6					
V25A	**Rancho No Teng**	**61.76**	**67**	P	**P**	**23 18 09.1 +0.1**
	baz=62,SNR=19					
U26A	**Atchley Ranch,**	**61.78**	**66**	P	**P**	**23 18 08.9 -0.2**
	baz=62,SNR=9.4					
Z20A	**Nine Sixteen R**	**61.79**	**72**	⇑P	**P**	**23 18 10.0 +0.7**
	baz=62					
LENM	**Lemitar**	**61.83**	**70**	*e*P	**P**	**23 18 09.7 +0.2**
	comp=Z,12nm,0.9s,mb5.0					
W24A	**Lazy 6 Ranch,**	**61.84**	**68**	P	**P**	**23 18 10.0 +0.4**
	baz=62,SNR=14					
218A	**Dragoon**	**61.90**	**74**	P	**P**	**23 18 10.6 +0.6**
	baz=62,SNR=12					
LPM	**Los Pinos Moun**	**61.90**	**70**	*e*P	**P**	**23 18 10.4 +0.4**
	comp=Z,26nm,1.4s,mb5.2					
CBKS	**Cedar Bluff**	**61.91**	**62**	P	**P**	**23 18 09.1 -0.8**
	baz=62,SNR=13					
CBKS	**Cedar Bluff**	**61.91**	**62**	⇑*i*P	**P**	**23 18 08.8 -1.2**
	comp=Z,48nm,0.8s,mb5.7					
CBKS				LR	LR	
	comp=Z,6μm,21.0s,MS5.7					
CBKS	**Cedar Bluff**	**61.91**	**62**	⇑*i*P	**P**	**23 18 08.8 -1.2**
CBKS				pmax	pmax	
	comp=Z,48nm,0.8s,mb5.7					
CBKS				MLR	MLR	
	comp=Z,6μm,21.0s,MS5.7					
Y22A	**Socorro**	**62.01**	**70**	P	**P**	**23 18 11.4 +0.7**
	baz=62,SNR=23					
BNM	**Barren Site**	**62.03**	**70**	*e*P	**P**	**23 18 11.0 +0.2**
	comp=Z,63nm,1.8s,mb5.4					
Z21A	**St. Cloud Mine**	**62.13**	**71**	P	**P**	**23 18 12.3 +0.8**
	baz=62,SNR=16					
KOLN	**Koldanda**	**62.15**	**279**	*e*P	**P**	**23 18 10.8 -0.9**
	comp=Z,86nm,0.8s,mb5.9					
120A	**U Bar Ranch, L**	**62.21**	**72**	P	**P**	**23 18 12.7 +0.6**
	baz=62,SNR=22					
V26A	**Tequesquite Ra**	**62.22**	**67**	P	**P**	**23 18 11.6 -0.5**
	baz=62,SNR=23					
XMAS	**Kiritimati**	**62.29**	**135**	PFAKE		23 18 20.0 +7.3
XMAS				LR	LR	
	comp=Z,3μm,21.0s,MS5.4					
219A	**White Tail Can**	**62.30**	**73**	P	**P**	**23 18 13.2 +0.5**
	baz=62,SNR=36					
W25A	**X Bar L. Ranch,**	**62.32**	**68**	P	**P**	**23 18 12.7 -0.1**
	baz=62,SNR=17					
X24A	**Lazy VL Ranch,**	**62.33**	**69**	P	**P**	**23 18 13.8 +1.0**
	baz=62,SNR=9.9					
318A	**Bisbee**	**62.34**	**74**	⇑P	**P**	**23 18 13.3 +0.4**
	baz=62					
MYLDM	**Lahad Datu**	**62.39**	**233**	P	**P**	**23 18 18.8 +5.4**
	comp=Z,44nm,1.3s,mb5.4					
BER	**Bergen**	**62.43**	**348**	*e*S	**S**	**23 26 43.2 +3.6**
BER				AMS	AMS	23 52 26.3
	comp=Z,3μm,17.3s,MS5.5					
BER	**Bergen**	**62.43**	**348**	*e*P	**P**	**23 18 21.7 +8.6**
BER				LR	LR	
	comp=Z,3μm,17.3s,MS5.5					
BER	**Bergen**	**62.43**	**348**	*e*P	**P**	**23 18 21.7 +8.6**
BER				MLR	MLR	
	comp=Z,3μm,17.3s,MS5.5					
Y23A	**Lovelace Mesa,**	**62.49**	**70**	P	**P**	**23 18 14.4 +0.4**
	baz=62,SNR=27					
Z22A	**Elephant Butte**	**62.54**	**71**	P	**P**	**23 18 14.7 +0.5**
	baz=62,SNR=23					
SCIA	**State Center**	**62.58**	**55**	*e*P	**P**	**23 18 13.2 -1.2**
	comp=Z,92nm,1.0s,mb5.9					
SCIA				LR	LR	
	comp=Z,7μm,20.0s,MS5.8					
KONO	**Kongsberg**	**62.61**	**346**	*e*P	**P**	**23 18 16.3 +2.0**
KONO				*e*S	**S**	**23 26 43.8 +1.9**
KONO				AMS	AMS	23 49 44.1
	comp=Z,3μm,23.9s,MS5.4					
KONO	**Kongsberg**	**62.61**	**346**	*e*P	**P**	**23 18 20.4 +6.1**
KONO	**Kongsberg**	**62.61**	**346**	*e*P	**P**	**23 18 20.5 +6.2**
NST	**Nakhon Sawan**	**62.66**	**257**	P	**P**	**23 18 14.0 -1.2**
KKM	**Kota Kinabalu**	**62.66**	**236**	*e*P	**P**	**23 18 16.2 +1.0**
	comp=Z,27nm,1.0s,mb5.3					
KKM				LR	LR	
	comp=Z,3μm,22.0s,MS5.4					
KKM	**Kota Kinabalu**	**62.66**	**236**	P	**P**	**23 18 19.2 +3.9**
	comp=Z,710nmcomp=Z,33nm,1.6s,mb5.2					
121A	**Cookes Peak, D**	**62.67**	**72**	P	**P**	**23 18 15.8 +0.6**
	baz=62,SNR=11					
X25A	**Clemmons Ranch**	**62.76**	**68**	⇑P	**P**	**23 18 16.0 +0.3**
	baz=62					
220A	**Playas Peak, P**	**62.77**	**73**	P	**P**	**23 18 16.2 +0.4**
	baz=62,SNR=14					
319A	**Douglas**	**62.77**	**74**	P	**P**	**23 18 16.2 +0.3**
	baz=63,SNR=13					
W26A	**Owens Ranch, T**	**62.78**	**67**	⇑P	**P**	**23 18 15.9 +0.1**
	baz=62					
Y24A	**Capitan**	**62.82**	**69**	P	**P**	**23 18 16.6 +0.4**
	baz=63,SNR=66					
VRHR	**Novokhopersk**	**62.86**	**323**	*e*P	**P**	**23 18 14.8 -1.3**
VRHR				*e*S	**S**	**23 26 43.4 -1.8**
VRHR				pmax	pmax	
	comp=N,10.0nm,0.8s					
VRHR				pmax	pmax	
	comp=Z,60nm,0.8s,mb5.8					
VRHR				pmax	pmax	
	comp=E,3.0nm,0.4s					
VRHR				smax		
	comp=N,20nm,0.9s					
VRHR				smax		
	comp=E,10.0nm,0.9s					
VRHR				smax		
	comp=Z,5.0nm,0.9s					
Z23A	**Rita Site, Whi**	**62.92**	**70**	⇑P	**P**	**23 18 17.2 +0.4**
	baz=63,SNR=8.1					
122A	**Conniff Cattle**	**62.95**	**71**	⇓P	**P**	**23 18 18.3 +1.3**
	baz=63					
221A	**Mesquite Ranch**	**63.08**	**72**	P	**P**	**23 18 18.8 +0.9**
	baz=63,SNR=12					
JFWS	**Jewell Farm**	**63.11**	**52**	*e*P	**P**	**23 18 15.9 -2.0**
	comp=Z,74nm,1.5s,mb5.6					
JFWS				LR	LR	
	comp=Z,16μm,20.0s,MS6.2					
JFWS	**Jewell Farm**	**63.11**	**52**	*e*P	**P**	**23 18 16.0 -1.9**
JFWS				pmax	pmax	
	comp=Z,74nm,1.5s,mb5.6					
JFWS				MLR	MLR	
	comp=Z,16μm,20.0s,MS6.2					
W27A	**Bowe Ranch, En**	**63.16**	**67**	⇓P	**P**	**23 18 17.3 -1.0**
	baz=63,SNR=10.0					
X26A	**CR and CF Fran**	**63.18**	**68**	P	**P**	**23 18 18.4 -0.1**
	baz=63,SNR=22					
KSU1	**Kansas State U**	**63.20**	**59**	⇑*i*P	**P**	**23 18 16.8 -1.8**
	comp=Z,59nm,0.8s,mb5.8					
KSU1				LR	LR	
	comp=Z,8μm,21.0s,MS5.9					
320A	**Kipp Ranch, An**	**63.20**	**73**	⇑P	**P**	**23 18 19.5 +0.8**
	baz=63					
Y25A	**Mesa, Roswell**	**63.21**	**69**	P	**P**	**23 18 18.8 +0.1**
	baz=63,SNR=46					
Z24A	**Sheeppen Canyo**	**63.32**	**70**	P	**P**	**23 18 19.9 +0.4**
	baz=63,SNR=32					
222A	**Williams Famil**	**63.37**	**72**	P	**P**	**23 18 20.1 +0.4**
	baz=63,SNR=5.5					
X27A	**F and S Farms,**	**63.47**	**67**	⇓P	**P**	**23 18 20.5 +0.1**
	baz=63,SNR=11					
VSR	**Storozhevoye**	**63.56**	**325**	*d i*P	**P**	**23 18 20.4 -0.3**
VSR				*e*S	**S**	**23 26 54.0 0.0**
VSR				*e*SS	SS	23 31 03.3 +3.1
VSR				pmax	pmax	
	comp=N,50nm,0.9s					
VSR				pmax	pmax	
	comp=E,30nm,0.9s					
VSR				pmax	pmax	
	comp=Z,50nm,0.9s,mb5.5					
VSR				pmax	pmax	
	comp=Z,140nm,2.9s,mb5.5					
VSR				pmax	pmax	
	comp=N,10.0nm,0.7s					
VSR				pmax	pmax	
	comp=E,10.0nm,1.0s					
VSR				smax		
	comp=N,240nm,3.6s					
VSR				smax		
	comp=E,260nm,3.6s					
VSR				smax		
	comp=Z,150nm,3.6s					
VSR				MLR	MLR	
	comp=N,6μm,23.0s,MS6.0					
VSR				MLR	MLR	
	comp=E,12μm,23.0s,MS6.0					
VSR				MLR	MLR	
	comp=Z,12μm,23.0s,MS6.0					
CAL	**Calcutta**	**63.65**	**271**	*e*PKP	**P**	**23 18 21.2 -0.5**
CAL				*ex*	x	23 26 59.9
Y26A	**Elida**	**63.66**	**68**	P	**P**	**23 18 21.5 -0.2**
	baz=63,SNR=22					
Z25A	**Roswell**	**63.70**	**69**	⇓P	**P**	**23 18 22.4 +0.4**
	baz=64,SNR=16					
VORD	**Divnogorie**	**63.73**	**325**	*e*P	**P**	**23 18 22.0 +0.1**
VORD				*e*S	**S**	**23 26 56.1 -0.1**
VORD				pmax	pmax	
	comp=N,20nm,0.8s					
VORD				pmax	pmax	
	comp=E,10.0nm,0.8s					
VORD				pmax	pmax	
	comp=Z,20nm,0.8s,mb5.2					
VORD				smax		
	comp=N,250nm,6.1s					
VORD				smax		
	comp=E,920nm,6.1s					
VORD				smax		
	comp=Z,160nm,6.1s					
VORD				MLR	MLR	
	comp=N,2μm,14.0s,MS5.9					
VORD				MLR	MLR	
	comp=E,5μm,14.0s,MS5.9					
VORD				MLR	MLR	
	comp=Z,6μm,14.0s,MS5.9					
124A	**Stringfield Ra**	**63.77**	**70**	⇓P	**P**	**23 18 22.7 +0.3**
	baz=64,SNR=5.2					
NACGM	**Naroch**	**63.80**	**334**	*e*P	**P**	**23 18 20.0 -2.3**
MICGM	**Minsk**	**63.89**	**333**	*e*P	**P**	**23 18 22.0 -0.9**
MNK	**Minsk**	**63.90**	**333**	*e*P	**P**	**23 18 22.0 -1.0**
MNK	**Minsk**	**63.90**	**333**	*e*P	**P**	**23 18 22.0 -1.0**
LBMI	**Labuha**	**63.98**	**221**	P	sP	23 18 34.3 +6.4
	comp=Z,1μmcomp=Z,90nm,1.2s					
AMTX	**Amarillo**	**64.01**	**66**	⇓P	**P**	**23 18 23.4 -0.5**
	baz=64,SNR=14					
AMTX	**Amarillo**	**64.01**	**66**	⇑*i*P	**P**	**23 18 23.0 -1.0**
	comp=Z,22nm,0.8s,mb5.2					
AMTX				LR	LR	
	comp=Z,6μm,21.0s,MS5.7					
Y27A	**Causey**	**64.03**	**68**	P	**P**	**23 18 24.3 +0.2**
	baz=64,SNR=6.7					
Z26A	**Caprock**	**64.09**	**69**	P	**P**	**23 18

comp=Z,22nm,1.2s,mb5.1
324A Moseley Ranch, 64.74 71 P **P 23 18 28.5 -0.3**
baz=64,SNR=17
127A Arkansas Junct 64.88 69 P **P 23 18 29.6 -0.1**
baz=65,SNR=7.5
CLNB Carlsbad 64.93 69 *e*P **P 23 18 29.2 -0.8**
comp=Z,5.0nm,0.8s,mb4.6
226A Malaga, Loving 64.98 69 ⇑P **P 23 18 30.2 -0.1**
baz=65,SNR=13
325A Bean Ranch, Si 65.06 71 P **P 23 18 30.9 0.0**
baz=65,SNR=22
HDIL Hopedale 65.43 53 *e*P **P 23 18 31.2 -2.0**
comp=Z,68nm,0.9s,mb5.7
HDIL LR LR
comp=Z,12μm,21.0s,MS6.1
SUW Suwalki 65.46 336 *e*P **P 23 18 32.6 -0.5**
SUW *e*S S 23 27 16.1 -1.3
SUW LMZ 23 51 10.4
comp=Z,10μm,16.6s
SUW Suwalki 65.46 336 *e*P **P 23 18 32.6 -0.6**
comp=Z,14nm,0.8s,mb5.0
SUW Suwalki 65.46 336 *e*P **P 23 18 32.6 -0.5**
SUW *e*S S 23 27 16.1 -1.3
SUW MLR MLR
comp=Z,10μm,16.6s,MS6.1
425A Indio Mountain 65.52 71 P **P 23 18 33.9 +0.1**
baz=65,SNR=33
WMOK Wichita Mounta 65.58 64⇑ *i*P **P 23 18 33.1 -1.2**
comp=Z,63nm,0.9s,mb5.6
WMOK LR LR
comp=Z,6μm,19.0s,MS5.8
WMOK Wichita Mounta 65.58 64⇑ *i*P **P 23 18 33.1 -1.1**
WMOK pmax pmax
comp=Z,63nm,0.9s,mb5.7
WMOK MLR MLR
comp=Z,6μm,19.0s,MS5.8
HNR Honiara 65.59 184 PFAKE 23 18 40.0 +5.7
HNR LR LR
comp=Z,5μm,22.0s,MS5.7
326A Caldwell Ranch 65.63 70 P **P 23 18 34.5 -0.1**
baz=65,SNR=9.8
MUD Monsted U'grnd 65.76 345 *e*P **P 23 18 43.0 +8.0**
MUD *e*S S 23 27 26.3 +5.3
MUD MLR MLR
comp=Z,5μm,18.0s,MS5.8
MUD Monsted U'grnd 65.76 345 *i* P **P 23 18 43.0 +8.0**
MUD *e*S S 23 27 26.3 +5.3
MUD
comp=Z,5μm,18.0s
FUNA Funafuti 65.81 163 PFAKE 23 18 50.0 +14
FUNA LR LR
comp=Z,6μm,19.0s,MS5.8
327A Balmorhea Ranc 65.84 69⇑P **P 23 18 36.5 +0.6**
baz=66
COP Copenhagen 66.00 343 *e*P **P 23 18 41.4 +4.8**
COP *e*S S 23 27 28.9 +5.0
COP MLR MLR
comp=Z,2μm,15.0s,MS5.4
COP Copenhagen 66.00 343 *i* P **P 23 18 41.4 +4.8**
COP *e*S S 23 27 28.9 +5.0
COP
comp=Z,2μm,15.0s
426A McDonald Obser 66.11 70 P **P 23 18 37.5 -0.2**
baz=66,SNR=10
BSD Bornholm Skovb 66.12 341 *e*P **P 23 18 43.5 +6.2**
BSD MLR MLR
comp=Z,5μm,19.0s,MS5.7
BSD Bornholm Skovb 66.12 341 *i* P **P 23 18 43.5 +6.2**
BSD
comp=Z,5μm,19.0s
LUWI Luwuk 66.17 226 P **P 23 18 45.3 +7.1**
comp=Z,614nmcomp=Z,48nm,1.1s,mb5.4
328A Wristen Ranch, 66.19 69 P **P 23 18 37.8 -0.4**
baz=66,SNR=16
SADO Sadowa 66.21 44 P **P 23 18 35.3 -2.8**
comp=Z,11nm,1.0s,mb4.8,baz=343,slow=2.7,SNR=4.5
427A Hayter Ranch, 66.30 70⇑P **P 23 18 38.7 -0.1**
baz=66,SNR=9.3
AAM Ann Arbor 66.44 48 *e*P **P 23 18 39.1 -0.6**
comp=Z,18nm,0.4s,mb5.5
AAM LR LR
comp=Z,10μm,19.0s,MS6.0
AAM Ann Arbor 66.44 48 *e*P **P 23 18 39.1 -0.6**
AAM pmax pmax
comp=Z,18nm,0.4s,mb5.5
AAM MLR MLR
comp=Z,10μm,19.0s,MS6.0
526A Mary Lane Ranc 66.56 71 P **P 23 18 40.8 +0.2**
baz=66,SNR=17
SLM Saint Louis 66.56 55 *e*P **P 23 18 38.3 -2.2**
comp=Z,36nm,0.8s,mb5.5
SLM Saint Louis 66.56 55 *e*P **P 23 18 38.3 -2.2**
SLM pmax pmax
comp=Z,36nm,0.8s,mb5.5
CCM Cathedral Cave 66.57 56 *e*P **P 23 18 38.8 -1.7**
comp=Z,50nm,1.1s,mb5.5
CCM LR LR
comp=Z,6μm,20.0s,MS5.8
CCM Cathedral Cave 66.57 56 *e*P **P 23 18 38.8 -1.7**
CCM pmax pmax
comp=Z,50nm,1.1s,mb5.5
CCM MLR MLR
comp=Z,6μm,20.0s,MS5.8
527A Woodward Ranch 66.75 70 P **P 23 18 41.6 -0.2**
baz=66,SNR=14
428A Kincaid Ranch, 66.77 69 P **P 23 18 42.2 +0.3**
baz=66,SNR=26
TLE Tual 66.86 214 P sP 23 18 54.1 +7.6
comp=Z,73nm,1.4s
626A Big Bend Ranch 66.94 71 P **P 23 18 42.9 -0.2**
baz=67,SNR=19
PMG Port Moresby 66.95 198 *e*P **P 23 18 42.8 -0.3**
comp=Z,32nm,0.9s,mb5.4
PMG LR LR
comp=Z,3μm,22.0s,MS5.5
PMG Port Moresby 66.95 198 *e*P **P 23 18 42.8 -0.3**
PMG pmax pmax
comp=Z,32nm,0.9s
PMG MLR MLR
comp=Z,3μm,22.0s
PMG Port Moresby 66.95 198 P sP 23 18 54.4 +7.3
comp=Z,49nm,1.1s
KIEV Kiev 66.99 331 *e*P **P 23 18 42.1 -0.8**
comp=Z,52nm,1.5s,mb5.3
KIEV LR LR
comp=Z,8μm,20.0s,MS6.0
KIEV Kiev 66.99 331 *e*P **P 23 18 42.1 -0.9**
KIEV pmax pmax
comp=Z,52nm,1.5s,mb5.3
KIEV MLR MLR
comp=Z,8μm,20.0s,MS6.0
FVM French Village 67.00 56⇑ *i*P **P 23 18 41.6 -1.7**
comp=Z,36nm,0.6s,mb5.6
FVM French Village 67.00 56⇑ *i*P **P 23 18 41.6 -1.7**
FVM pmax pmax
comp=Z,35nm,0.6s,mb5.6
528A Cox Ranch, San 67.16 70 P **P 23 18 44.5 +0.1**
baz=67,SNR=21
VAN Vannovskaya 67.19 304⇓ *i*P **P 23 18 44.5 +0.1**
VAN Vannovskaya 67.19 304 *d i*P **P 23 18 44.5 +0.1**
ABKT Ailbek 67.19 304 P **P 23 18 44.5 0.0**
comp=Z,398nm,0.9s,mb6.5,SNR=59
TXAR Lajitas Array 67.36 71 P **P 23 18 45.5 -0.2**
comp=Z,40nm,0.8s,mb5.5,baz=300,slow=4.6,SNR=138
TXAR PKP2bc 23 47 12.8
comp=Z,0.5nm,0.9s,baz=120,slow=5.4,SNR=3.8
TXAR Lajitas Array 67.36 71 P **P 23 18 45.5 -0.2**
TXAR ⇑ *e* 23 47 12.8
TXAR Lajitas Array 67.36 71 P **P 23 18 45.5 -0.2**
TXAR pmax pmax
comp=Z,40nm,0.8s
627A Terlingua Ranc 67.41 71 P **P 23 18 46.0 0.0**
baz=67,SNR=46
GKP Gorka Klasztor 67.43 339 *e*P **P 23 18 45.8 +0.1**
GKP LMZ 23 49 33.8
comp=Z,10μm,21.3s
GKP Gorka Klasztor 67.43 339 *e*P **P 23 18 45.8 +0.1**
GKP MLR MLR
comp=Z,10μm,21.3s,MS6.0
OLIL Olney 67.45 54 *e*P **P 23 18 44.6 -1.5**
comp=Z,31nm,1.0s,mb5.3
GOF Gofitskoye 67.52 319⇑ *i*P **P 23 18 31.5 -15**
GOF pmax pmax
comp=Z,25nm,1.1s,mb5.2
MAK Makhachkala 67.59 315 *e*P **P 23 18 42.7 -4.2**
MAK *e* 23 19 15.6
MAK *e* 23 21 15.0
MAK *e*PPP 23 22 52.1
MAK *e*S S 23 27 37.4 -6.1
MAK *e* 23 28 46.4
MAK *e*SS SS 23 32 09.5 +6.4
MAK pmax pmax
comp=Z,67nm,1.0s,mb5.6
MSNY Massena 67.62 41 *e*P **P 23 18 45.1 -2.0**
comp=Z,688nm,1.1s,mb6.6
628A Black Gap, Mar 67.65 70 P **P 23 18 47.2 -0.3**
baz=67,SNR=26
SBUM Sibu 67.69 238 P **P 23 18 48.9 +1.0**
comp=Z,65nm,1.3s,mb5.5
BLO Bloomington 67.79 52 *e*P **P 23 18 46.4 -1.9**
comp=Z,26nm,0.8s,mb5.3
BLO Bloomington 67.79 52 *e*P **P 23 18 46.4 -1.9**
BLO pmax pmax
comp=Z,26nm,0.8s,mb5.3
LONY Lake Ozonia 68.05 41 *e*P **P 23 18 47.6 -2.2**
comp=Z,71nm,1.7s,mb5.4
LONY LR LR
comp=Z,4μm,20.0s,MS5.6
ERPA Erie 68.10 46 *e*P **P 23 18 48.7 -1.4**
comp=Z,141nm,1.3s,mb5.8
ERPA LR LR
comp=Z,6μm,20.0s,MS5.8
ESK Eskdalemuir 68.25 352 *e*P **P 23 18 50.9 0.0**
comp=Z,29nm,1.1s,mb5.2
ESK LR LR
comp=Z,3μm,20.0s,MS5.5
ESK Eskdalemuir 68.25 352 *e*P **P 23 18 50.9 +0.1**
ESK pmax pmax
comp=Z,29nm,1.1s,mb5.2
ESK MLR MLR
comp=Z,3μm,20.0s,MS5.5
USIN University of 68.28 54 *e*P **P 23 18 49.8 -1.6**
comp=Z,96nm,1.4s,mb5.6
MIAR Mount Ida 68.30 60⇑ *i*P **P 23 18 50.4 -1.1**
comp=Z,80nm,1.3s,mb5.6
MIAR LR LR
comp=Z,6μm,22.0s,MS5.8
MIAR Mount Ida 68.30 60⇑ *i*P **P 23 18 50.4 -1.1**
MIAR pmax pmax
comp=Z,80nm,1.3s,mb5.6
MIAR MLR MLR
comp=Z,6μm,22.0s,MS5.8
ALLY Alegheny Colle 68.43 46 *e*P **P 23 18 50.7 -1.5**
comp=Z,248nm,1.4s,mb6.0
ACSO Alum Creek Sta 68.45 49 *e*P **P 23 18 50.7 -1.7**
comp=Z,104nm,1.4s,mb5.7
ACSO LR LR
comp=Z,7μm,20.0s,MS5.9
JCT Junction City 68.46 67 P **P 23 18 52.1 -0.5**
baz=68,SNR=19
JCT Junction City 68.46 67⇑ *i*P **P 23 18 51.6 -1.0**
comp=Z,74nm,0.9s,mb5.7
JCT LR LR
comp=Z,6μm,20.0s,MS5.8
JCT Junction City 68.46 67⇑ *i*P **P 23 18 51.6 -1.0**
JCT pmax pmax
comp=Z,74nm,0.9s,mb5.7
JCT MLR MLR
comp=Z,6μm,20.0s,MS5.8
KIV Kislovodsk 68.59 318 *e*P **P 23 18 53.1 0.0**
comp=Z,34nm,1.1s,mb5.2
KIV LR LR
comp=Z,8μm,21.0s,MS5.9
KIV Kislovodsk 68.59 318⇑ *e*P **P 23 18 53.3 +0.1**
KIV *i* S S 23 27 59.6 +4.2
KIV pmax pmax
comp=Z,21nm,1.2s,mb4.9
KIV MLR MLR
comp=Z,8μm,22.0s,MS5.9
KIV Kislovodsk 68.59 318 P **P 23 18 53.7 +0.5**
comp=Z,134nm,0.8s,mb5.9,SNR=5.3
WCI Wyandotte Cave 68.67 53 *e*P **P 23 18 51.9 -1.9**
comp=Z,26nm,0.9s,mb5.2
WCI LR LR
comp=Z,12μm,20.0s,MS6.1
WCI Wyandotte Cave 68.67 53 *e*P **P 23 18 51.9 -1.9**
WCI pmax pmax
comp=Z,27nm,0.9s,mb5.2
WCI MLR MLR
comp=Z,12μm,20.0s,MS6.1
NCB Newcomb 68.74 41 PFAKE 23 19 00.0 +5.9
NCB LR LR
comp=Z,4μm,19.0s,MS5.7
GNAR Gosnell 68.83 57 *e*P **P 23 18 54.0 -0.9**
comp=Z,3μm,1.5s
HBAR Harrisburg 68.87 57 *e*P **P 23 18 55.1 +0.1**
KDI Kendari 68.89 225 P sP 23 19 09.1 +10
GLAT Glass 68.93 56 *e*P **P 23 18 54.7 -0.7**
LVV L'vov 69.14 334 *e*P **P 23 18 50.8 -5.7**
LVV *e* 23 21 29.2
LVV MLR MLR
comp=N,7μm,17.0s,MS6.0
LVV MLR MLR
comp=E,4μm,17.0s,MS6.0
LVV MLR MLR
comp=Z,8μm,17.0s,MS6.0
ZEI Tsey 69.15 317 *e*P **P 23 18 56.0 -0.7**
ZEI *e*S S 23 28 04.0 +1.9
ZEI pmax pmax
comp=Z,33nm,1.1s,mb5.2
ZEI MLR MLR
comp=Z,10μm,15.0s,MS6.2
ZEI MLR MLR
comp=N,14μm,18.0s
ZEI MLR MLR
comp=E,2μm,12.0s
HALT Halls 69.19 56 *e*P **P 23 18 56.7 -0.4**
LBNH Lisbon 69.34 40 *e*P **P 23 18 57.1 -0.7**
comp=E,22nm,1.0s,mb5.0
LBNH LR LR
comp=Z,5μm,20.0s,MS5.7
LBNH Lisbon 69.34 40 *e*P **P 23 18 57.1 -0.7**
LBNH pmax pmax
comp=Z,22nm,1.0s,mb5.0
LBNH MLR MLR
comp=Z,5μm,20.0s,MS5.7
PKME Peaks-Kenny Pk 69.35 37 *e*P **P 23 18 56.9 -1.0**
comp=Z,44nm,1.4s,mb5.2
PKME LR LR
comp=Z,7μm,19.0s,MS5.9
KSM Kuching 69.45 239 *e*P **P 23 18 59.0 +0.2**
comp=Z,53nm,1.2s,mb5.3
KSM LR LR
comp=Z,2μm,19.0s,MS5.3
KSM Kuching 69.45 239 P **P 23 19 01.9 +3.0**
comp=Z,32nm,1.3s,mb5.1
ACCN Adirondack Com 69.45 41 *e*P **P 23 18 56.6 -2.0**
comp=Z,105nm,1.7s,mb5.5
BINY Binghamton 69.60 43 PFAKE 23 19 10.0 +11
BINY LR LR
comp=Z,4μm,20.0s,MS5.7
KWP Kalwaria Pacla 69.64 334 *e*P **P 23 19 00.3 +0.7**
KWP LMZ 23 54 01.6
comp=Z,8μm,18.3s
KWP Kalwaria Pacla 69.64 334⇓ *i*P **P 23 19 00.1 +0.5**
comp=Z,86nm,1.1s,mb5.6
KWP LR LR
comp=Z,8μm,20.0s,MS6.0
KWP Kalwaria Pacla 69.64 334⇓ *e*P **P 23 19 00.3 +0.7**
KWP MLR MLR
comp=Z,8μm,18.3s,MS6.0
KWP Kalwaria Pacla 69.64 334⇑ *i*P **P 23 19 00.1 +0.5**
DGRG David-gareji 69.71 315 P **P 23 18 59.7 -0.5**
WVT Waverly 69.71 55⇑ *e*P **P 23 18 59.1 -1.2**
WVT LR LR
comp=Z,7μm,20.0s,MS5.9
WVT Waverly 69.71 55⇑ *e*P **P 23 18 59.1 -1.2**
WVT MLR MLR
comp=Z,7μm,20.0s,MS5.9
ANN Anapa 69.72 322 *e*P **P 23 19 02.8 +2.6**
ANN *e**PP pP 23 19 07.7 +4.6
ANN *e* 23 19 25.6
ANN *e* 23 21 35.8
ANN *e*S S 23 28 15.9 +7.2
ANN pmax pmax
comp=N,115nm,1.1s
ANN pmax pmax
comp=E,64nm,1.1s
ANN pmax pmax
comp=Z,119nm,1.1s,mb5.7
ANN smax
comp=E,1μm,14.6s
ANN MLR MLR
comp=N,3μm,17.0s,MS5.9
ANN MLR MLR
comp=E,5μm,17.0s,MS5.9
ANN MLR MLR
comp=Z,5μm,17.0s,MS5.9
TBLG Delisi 69.72 316 P **P 23 19 01.0 +0.8**
TBLG Delisi 69.72 316 P **P 23 19 01.0 +0.8**
MTA Mtatsminda 69.73 316 P **P 23 19 00.5 +0.2**
GOR Gori 69.74 316 P **P 23 19 00.8 +0.5**
OJC Ojcow 69.76 336 *e*P **P 23 19 00.6 +0.3**
OJC *e*PcP PcP 23 19 22.1 -0.9
OJC *e*S S 23 28 11.7 +2.6
OJC L 23 51 17.8
comp=Z,6.1nm,19.2s
OJC Ojcow 69.76 336 P **P 23 19 01.1 +0.8**
OJC Ojcow 69.76 336 *e*P **P 23 19 00.6 +0.3**
OJC *e* 23 19 22.1
OJC *e*S S 23 28 11.7 +2.6
OJC MLR MLR
comp=Z,6μm,19.2s,MS5.9
WVL Waterville 69.84 38 *e*P **P 23 19 01.1 +0.1**
comp=Z,11nm,0.6s,mb5.0
KSP Ksiaz 69.92 339 *e*P **P 23 19 01.9 +0.6**
KSP *e*S S 23 28 05.6 -5.3
KSP LMZ 23 51 00.7
comp=Z,13μm,21.1s
KSP Ksiaz 69.92 339 P **P 23 19 02.6 +1.3**
KSP Ksiaz 69.92 339 P **P 23 19 02.6 +1.3**
SOC Sochi 69.99 320 *e*P **P 23 19 03.4 +1.6**
SOC Sochi 69.99 320 *c i*P **P 23 19 03.4 +1.6**
SOC *e* 23 21 35.9
SOC *e*S S 23 28 13.8 +1.9
SOC *e* 23 29 02.6
SOC pmax pmax
comp=Z,27nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,8μm,15.0s,MS6.1
NATX Nacogdoches 70.02 63 *e*P **P 23 19 01.6 -0.6**
comp=Z,36nm,0.8s,mb5.3
NATX LR LR
comp=Z,6μm,20.0s,MS5.8
CLZ Clausthal 70.04 343 *e*P **P 23 19 02.5 +0.5**
comp=Z,40nm,1.3s,mb5.2
CLZ Clausthal 70.04 343 *e*P **P 23 19 02.5 +0.5**
CLZ pmax pmax
comp=Z,40nm,1.3s,mb5.2
SPSI Sidrap Palu 70.04 228 P **P 23 19 05.7 +3.2**
comp=Z,32nm,1.4s,mb5.0
CLL Collm 70.10 341 *e*P **P 23 19 02.0 -0.4**
comp=Z,46nm,1.5s,mb5.2
CLL Collm 70.10 341 *i* P **P 23 19 02.0 -0.4**
comp=Z,14nm,1.4s,mb4.7
CLL *i* sP sP 23 19 07.3 +0.8
CLL *e*S S 23 28 12.0 -1.0
CLL LR LR
comp=Z,4μm,20.3s,MS5.7
CLL Collm 70.10 341 *i* P **P 23 19 02.0 -0.4**
CLL *i* *SP sP 23 19 07.3 +0.8
CLL *e*S S 23 28 12.0 -1.0
CLL pmax pmax
comp=Z,182nm,1.4s,mb5.8
CLL MLR MLR
comp=Z,4μm,20.3s,MS5.7
CLL Collm 70.10 341 *i* P **P 23 19 02.0 -0.4**
comp=Z,14nm,1.4s,mb4.7
CLL *i* sP sP 23 19 07.3 +0.8
CLL *i* 23 19 15.9
CLL *e*PP PP 23 21 40.0 +3.2
CLL *e*PPP 23 23 22.0
CLL *e*PPPP 23 24 18.0
CLL *e*S S 23 28 12.0 -1.0
CLL *e*PPS 23 28 47.0
CLL *e*SS SS 23 32 49.0 +7.7
CLL *e*SSS 23 36 18.0
CLL Lm 23 52 00.0
comp=Z,4μm,20.3s
SSPA Standing Stone 70.19 46 *e*P **P 23 19 01.3 -1.9**
comp=Z,44nm,1.3s,mb5.2
MCWV Mont Chateau 70.23 47 *e*P **P 23 19 01.6 -1.8**
comp=Z,24nm,0.9s,mb5.1
MCWV LR LR
comp=Z,11μm,20.0s,MS6.1
UPC Upice 70.29 339 *e*P **P 23 19 03.5 -0.1**
UPC Upice 70.29 339 *e*P **P 23 19 03.5 -0.1**
UPC *e*x x 23 19 17.0
BNSI Bone 70.30 227 P sP 23 19 14.4 +6.3
comp=Z,31nm,1.3s
OXF Oxford 70.31 57 *e*P **P 23 19 03.3 -0.7**
comp=Z,212nm,1.2s,mb6.0
OXF *e*PP PP 23 21 30.5 -8.6
OXF LR LR
comp=Z,6μm,20.0s,MS5.8
OXF Oxford 70.31 57 *e*P **P 23 19 03.3 -0.7**
OXF pmax pmax
comp=Z,212nm,1.2s,mb6.0
OXF MLR MLR
comp=Z,6μm,20.0s,MS5.8
BRG Berggiesshubel 70.34 340 *i* P **P 23 19 03.6 -0.3**
comp=Z,10nm,1.4s,mb4.6
BRG *e* 23 19 17.8
comp=Z,26nm,1.6s
BRG S S 23 28 21.0 +5.1
BRG SS SS 23 32 53.0 +7.9
BRG
comp=Z,6μm,16.6s
BRG
comp=N,3μm,17.8s
BRG
comp=E,7μm,17.8s
BRG Berggiesshubel 70.34 340 *i* P **P 23 19 03.6 -0.3**
BRG S S 23 28 21.0 +5.1
BRG SS SS 23 32 53.0 +7.9
BRG pmax pmax
comp=Z,150nm,1.6s,mb5.7
BRG MLR MLR
comp=Z,3μm,16.6s,MS5.7
BRG MLR MLR
comp=N,2μm,17.8s,MS5.8
BRG MLR MLR
comp=E,4μm,17.8s,MS5.8
DPC Dobruska-Polom 70.38 339 P **P 23 19 05.2 +1.1**
DPC Dobruska-Polom 70.38 339 *e*P **P 23 19 04.6 +0.5**
DPC *e*S S 23 28 16.7 +0.4
DPC *e*S S 23 28 17.5 +1.2
DPC MLR MLR
comp=Z,6μm,21.0s,MS5.9
DPC Dobruska-Polom 70.38 339 *e*P **P 23 19 04.6 +0.5**
DPC *e*x x 23 19 18.0
DPC *e*S S 23 28 17.5 +1.2
DPC AMS AMS 23 51 00.0
comp=Z,6μm,21.0s
KOLS Kolonicke sedl 70.39 334 *e*P **P 23 19 04.8 +0.6**
comp=Z,9.1nm,1.0s,mb4.7
KOLS *e*S S 23 28 15.9 -0.6
KOLS LR LR
comp=Z,6μm,18.1s,MS5.9
KOLS Kolonicke sedl 70.39 334 *e*P **P 23 19 04.8 +0.6**
KOLS pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KOLS Kolonicke sedl 70.39 334 *e*P **P 23 19 04.8 +0.6**
KOLS *e*S S 23 28 15.9 -0.6
NIE Niedzica 70.40 336 *e*P **P 23 19 04.9 +0.6**
NIE Niedzica 70.40 336 P **P 23 19 05.5 +1.2**
NIE Niedzica 70.40 336 *e*P **P 23 19 04.9 +0.6**
FBE Freiberg 70.41 341 *e*P **P 23 19 04.3 0.0**
comp=Z,42nm,1.5s,mb5.2
NEUB Neuenburg 70.41 342 *e*P **P 23 19 04.3 0.0**
comp=Z,35nm,1.3s,mb5.1
KIS Kishinev 70.45 329 *e*P **P 23 19 05.0 +0.4**
KIS Kishinev 70.45 329 *e*P **P 23 19 05.0 +0.4**
KIS *e* 23 19 20.0
KIS *e*S S 23 28 17.0 -0.2
KIS *e* 23 28 56.0
KIS MLR MLR
comp=Z,6μm,15.0s,MS6.0
KIS MLR MLR
comp=N,5μm,14.0s,MS6.0
KIS MLR MLR
comp=E,4μm,13.0s,MS6.0
DLF Lyons Farm 70.48 354 *e*P **P 23 19 01.4 -3.3**
OKC Ostrava-Krasne 70.48 337 P **P 23 19 05.7 +0.9**
OKC Ostrava-Krasne 70.48 337 *e*P **P 23 19 03.6 -1.2**
OKC *e*S S 23 28 15.0 -2.5
OKC *e*S S 23 28 17.5 0.0
OKC MLR MLR

comp=Z,5µm,14.2s,MS5.9
OKC Ostrava-Krasne 70.48 337 *e*P **P** **23 19 03.6 -1.2**
OKC *ex* x 23 19 18.6
OKC *e*S S 23 28 17.5 0.0
OKC AMS AMS 23 55 00.0
comp=Z,5µm,14.2s
PVCC Panska Ves 70.56 340 *e*P **P** **23 19 05.7 +0.5**
PVCC *e* 23 19 14.4
PVCC *e*S S 23 28 19.4 +1.1
PVCC MLR MLR
comp=Z,6µm,15.3s,MS6.0
PVCC Panska Ves 70.56 340 *e*P **P** **23 19 05.7 +0.5**
PVCC *ex* x 23 19 14.4
PVCC *e*S S 23 28 19.4 +1.1
PVCC AMS AMS 23 54 40.0
comp=Z,6µm,15.3s
CRVS Cervenica-Dubn 70.61 335 P **P** **23 19 07.9 +2.3**
CRVS *e*S S 23 28 21.5 +2.4
CRVS LR LR
comp=Z,3µm,22.8s,MS5.4
CRVS Cervenica-Dubn 70.61 335 P **P** **23 19 07.9 +2.3**
CRVS *e*S S 23 28 21.5 +2.4
CRVS MLR MLR
comp=Z,3µm,22.8s,MS5.4
CRVS Cervenica-Dubn 70.61 335 *e*P **P** **23 19 06.4 +0.8**
CRVS *e*S S 23 28 21.5 +2.4
UZH Uzhgorod 70.67 334 *e*P **P** **23 19 04.8 -1.1**
UZH *e* 23 19 13.0
UZH *i* 23 19 33.8
UZH *i* S S 23 28 15.0 -4.7
UZH *i* 23 29 03.2
UZH MLR MLR
comp=N,4µm,16.3s,MS5.9
UZH MLR MLR
comp=E,4µm,16.3s,MS5.9
UZH MLR MLR
comp=Z,4µm,16.3s,MS5.8
MORC Moravsky Berou 70.67 338 *e*P **P** **23 19 06.4 +0.4**
comp=Z,39nm,1.4s,mb5.2
MORC Moravsky Berou 70.67 338 ⇑P **P** **23 19 06.3 +0.4**
MORC Moravsky Berou 70.67 338 ⇑*i*P **P** **23 19 06.3 +0.4**
SIM Simferopol' 70.68 325 P **P** **23 19 11.2 +5.1**
SIM *e*S S 23 28 25.0 +5.0
BUR08 Bucovina Ar. S 70.85 332 *e*P **P** **23 19 07.1 +0.1**
BURAR Bucovina Array 70.87 332 ⇓P **P** **23 19 07.3 +0.1**
BURAR Bucovina Array 70.87 332 ⇓*i*P **P** **23 19 07.3 +0.1**
KBKI Kotabaru 70.97 232 P **P** **23 19 16.3 +8.1**
comp=Z,4µmcomp=Z,35nm,1.8s,mb5.0
MOX Moxa 70.98 342 *e*P **P** **23 18 59.2 -8.6**
comp=Z,47nm,1.9s,mb5.1
MOX *e*S S 23 28 26.0 +2.7
MOX
comp=Z,4µm,21.0s
MOX Moxa 70.98 342 *e*P **P** **23 18 59.2 -8.6**
MOX *e*S S 23 28 26.0 +2.7
MOX pmax pmax
comp=Z,57nm,1.9s,mb5.2
KAPI Kappang 71.00 227 PFAKE 23 19 20.0 +12
KAPI LR LR
comp=Z,1µm,20.0s,MS5.1
PRA Prague 71.02 340 P **P** **23 19 09.0 +1.0**
PRA S S 23 28 27.0 +3.3
PRA AMS AMS 23 55 00.0
KULM Kulim 71.04 250 *e*P **P** **23 19 09.3 +0.7**
comp=Z,11nm,0.9s,mb4.8
KULM LR LR
comp=Z,4µm,21.0s,MS5.6
PLN Plauen 71.04 341 *e*P **P** **23 19 08.2 0.0**
WERD Werda 71.05 341 *e*P **P** **23 19 08.5 +0.3**
comp=Z,27nm,1.3s,mb5.0
TANN Tannenbergstha 71.06 341 *e*P **P** **23 19 08.6 +0.4**
comp=Z,31nm,1.4s,mb5.0
GNI Garni 71.07 315 *e*P **P** **23 19 10.0 +1.5**
comp=Z,112nm,1.4s,mb5.6
GNI LR LR
comp=Z,13µm,20.0s,MS6.2
GNI Garni 71.07 315 *d i*P **P** **23 19 09.4 +0.9**
GNI pmax pmax
comp=Z,62nm,2.5s
GNI MLR MLR
comp=Z,14µm,22.0s
TRPA Tarpa 71.07 334 ⇑*i*P **P** **23 19 08.7 +0.3**
PRU Pruhonice 71.08 340 P **P** **23 19 09.8 +1.4**
PRU Pruhonice 71.08 340 *e*P **P** **23 19 09.3 +0.9**
PRU *e* 23 19 22.1
PRU *e*S S 23 28 26.6 +2.2
PRU MLR MLR
comp=Z,7µm,16.1s,MS6.0
PRU Pruhonice 71.08 340 *e*P **P** **23 19 09.3 +0.9**
PRU *ex* x 23 19 22.1
PRU *e*S S 23 28 26.6 +2.2
PRU AMS AMS 23 54 40.0
comp=Z,7µm,16.1s
BKSI Bulukumba 71.13 227 P **P** **23 19 18.5 +9.4**
comp=Z,19nm,1.1s,mb4.9
WES Weston 71.17 40 *e*P **P** **23 19 07.7 -1.4**
comp=Z,45nm,1.0s,mb5.3
WES Weston 71.17 40 *e*P **P** **23 19 07.7 -1.4**
WES pmax pmax
comp=Z,45nm,1.0s,mb5.3
WERN Wernitzgruen 71.19 341 *e*P **P** **23 19 09.6 +0.5**
comp=Z,30nm,1.3s,mb5.1
NKC Novy Kostel 71.23 341 *e*P **P** **23 19 09.9 +0.6**
NKC MLR MLR
comp=Z,6µm,14.1s,MS6.0
NKC Novy Kostel 71.23 341 *e*P **P** **23 19 09.9 +0.6**
NKC *ex* x 23 19 20.5
NKC AMS AMS 23 56 40.0
comp=Z,6µm,14.1s
KECS Kecovo 71.23 335 *e*P **P** **23 19 10.1 +0.7**
comp=Z,3.6nm,0.8s,mb4.3
KECS Kecovo 71.23 335 *e*P **P** **23 19 10.1 +0.7**
KECS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KECS Kecovo 71.23 335 *e*P **P** **23 19 10.1 +0.7**
ARTV Artvin 71.26 318 *i*P **P** **23 19 08.9 -0.7**
VRAC Vranov 71.31 338 P **P** **23 19 11.0 +1.2**
VRAC Vranov 71.31 338 P **P** **23 19 11.0 +1.2**
VRAC Vranov 71.31 338 ⇓*i*P **P** **23 19 10.2 +0.4**
SWET Sewanee 71.33 54 *e*P **P** **23 19 07.9 -2.3**
comp=Z,34nm,0.9s,mb5.3
PAL Palisades 71.42 43 *e*P **P** **23 19 08.5 -2.1**
comp=Z,87nm,1.5s,mb5.5
PAL Palisades 71.42 43 *e*P **P** **23 19 08.5 -2.1**
PAL pmax pmax
comp=Z,87nm,1.5s,mb5.5
TREC Trest 71.55 339 *e*P **P** **23 19 12.1 +0.8**
TREC *e*S S 23 28 32.9 +3.0
TREC MLR MLR
comp=Z,7µm,21.5s,MS5.9
TREC Trest 71.55 339 *e*P **P** **23 19 12.1 +0.8**
TREC *e*S S 23 28 32.9 +3.0
TREC AMS AMS 23 51 40.0
comp=Z,7µm,21.5s
DDEM Demirkent 71.58 317 *e*P **P** **23 19 11.9 +0.3**
VYHS Vyhne 71.60 336 *e*P **P** **23 19 12.4 +0.8**
comp=Z,4.8nm,1.0s,mb4.4
VYHS LR LR
comp=Z,3µm,29.1s,MS5.3
VYHS Vyhne 71.60 336 *e*P **P** **23 19 12.4 +0.8**
VYHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
VYHS MLR MLR
comp=Z,3µm,29.1s,MS5.3
VYHS Vyhne 71.60 336 *e*P **P** **23 19 12.4 +0.8**
KOLL Kolacno 71.62 337 *e*P **P** **23 19 12.8 +1.1**
KOLL Kolacno 71.62 337 *e*P **P** **23 19 12.8 +1.1**
KOLL Kolacno 71.62 337 *e*P **P** **23 19 12.8 +1.1**
KOLL *e* 23 42 49.4
SDMD Soldier's Deli 71.66 45 *e*P **P** **23 19 10.3 -1.8**
comp=Z,113nm,1.7s,mb5.5
VBMS Vicksburg 71.67 59 PFAKE 23 19 20.0 +7.7
VBMS LR LR
comp=Z,8µm,19.0s,MS6.0
ROTZ Rotzenmuhle 71.72 341 *e*P **P** **23 19 13.0 +0.7**
comp=Z,24nm,1.3s,mb5.0
CPCT Cooper Cave 71.77 53 *e*P **P** **23 19 11.2 -1.6**
KVTX Kingsville 71.81 68 PFAKE 23 19 20.0 +6.9
KVTX LR LR
comp=Z,5µm,19.0s,MS5.8
MEM Membach 71.90 345 P **P** **23 19 13.6 +0.2**
comp=Z,21nm,1.2s,mb5.0
PSZ Piszkesteto 71.90 335 *e*P **P** **23 19 14.0 +0.6**
comp=Z,60nm,1.9s,mb5.2
PSZ LR LR
comp=Z,5µm,21.0s,MS5.8
PSZ Piszkesteto 71.90 335 ⇓P **P** **23 19 14.1 +0.7**
PSZ Piszkesteto 71.90 335 ⇓*i*P **P** **23 19 14.1 +0.7**
PSZ Piszkesteto 71.90 335 ⇑*e*P **P** **23 19 16.3 +2.9**
TKL Tuckaleechee C 71.93 52 P **P** **23 19 12.3 -1.5**
comp=Z,13nm,1.0s,mb4.8,baz=338,slow=1.5,SNR=7.0
TKL Tuckaleechee C 71.93 52 *e*P **P** **23 19 11.8 -2.0**
TKL Tuckaleechee C 71.93 52 P **P** **23 19 12.3 -1.4**
TKL pmax pmax
comp=Z,13nm,1.0s,mb4.8
GRA1 Grafenberg Arr 71.97 342 *e*P **P** **23 19 14.3 +0.5**
comp=Z,70nm,1.4s,mb5.4
GRA1 LR LR
comp=Z,6µm,20.3s,MS5.9
GRF Grafenberg Arr 71.97 342 *e*P **P** **23 19 14.3 +0.5**
comp=Z,70nm,1.4s,mb5.4
GRF *e*L 23 52 51.2
comp=Z,6µm,20.3s
GRF Grafenberg Arr 71.97 342 *e*P **P** **23 19 14.3 +0.5**
GRF pmax pmax
comp=Z,70nm,1.4s,mb5.4
GRF MLR MLR
comp=Z,6µm,20.3s,MS5.9
BLA Blacksburg 72.06 49 *e*P **P** **23 19 12.5 -2.1**
comp=Z,55nm,1.1s,mb5.4
BLA LR LR
comp=Z,5µm,21.0s,MS5.7
BLA Blacksburg 72.06 49 *e*P **P** **23 19 12.5 -2.1**
BLA pmax pmax
comp=Z,55nm,1.1s,mb5.4
BLA MLR MLR
comp=Z,5µm,21.0s,MS5.7
VRI Vrincioaia 72.07 330 ⇑P **P** **23 19 14.9 +0.5**
VRI Vrincioaia 72.07 330 ⇑*i*P **P** **23 19 14.9 +0.5**
KHC Kasperske Hory 72.08 340 *e*P **P** **23 19 15.3 +0.9**
KHC *ex* x 23 19 28.6
KHC *e*S S 23 28 35.5 -0.5
KHC AMS AMS 23 55 20.0
comp=Z,7µm,14.9s
COEN Coen 72.14 201 *e*P **P** **23 19 14.9 -0.1**
comp=Z,284nm,1.0s,mb6.2
COEN Coen 72.14 201 P PcP 23 19 26.9 -6.5
comp=Z,152nm,1.0s
WET Wettzell 72.20 341 *e*P **P** **23 19 15.7 +0.5**
comp=Z,38nm,1.4s,mb5.1
WET Wettzell 72.20 341 *e*P **P** **23 19 15.7 +0.5**
WET pmax pmax
comp=Z,38nm,1.4s,mb5.1
ZST Bratislava 72.26 337 *e*P **P** **23 19 17.5 +2.0**
comp=Z,7.7nm,0.8s,mb4.7
ZST *e*S S 23 28 42.2 +4.1
ZST Bratislava 72.26 337 *e*P **P** **23 19 17.5 +2.0**
ZST pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ZST Bratislava 72.26 337 *e*P **P** **23 19 17.5 +2.0**
ZST *e*S S 23 28 42.1 +4.0
DRGR 72.28 333 P **P** **23 19 16.2 +0.5**
DRGR 72.28 333 ⇑P **P** **23 19 16.1 +0.4**
DRGR 72.28 333 ⇑*i*P **P** **23 19 16.1 +0.4**
GEC2 GERESS Array S 72.33 340 *e*P **P** **23 19 16.0 +0.1**
comp=Z,22nm,1.4s,mb4.9
GEC2 GERESS Array S 72.33 340 *e*P **P** **23 19 16.0 +0.1**
GEC2 pmax pmax
comp=Z,22nm,1.4s,mb4.9
CBN Corbin 72.48 46 PFAKE 23 19 30.0 +13
CBN LR LR
comp=Z,8µm,20.0s,MS6.0
ERZM Erzurum 72.58 317 *i*P **P** **23 19 17.9 +0.3**
DOU Dourbes 72.59 346 P **P** **23 19 17.6 +0.2**
MLR Muntele Rosu 72.63 330 ⇑P **P** **23 19 18.9 +1.1**
MLR Muntele Rosu 72.63 330 ⇑*i*P **P** **23 19 18.9 +1.1**
LRAL Lakeview Retre 72.66 56 *e*P **P** **23 19 16.6 -1.6**
comp=Z,26nm,0.6s,mb5.3
LRAL LR LR
comp=Z,6µm,20.0s,MS5.9
CSNA Conrad Observa 72.78 338 P **P** **23 19 20.0 +1.4**
comp=Z,13nm,1.1s,mb4.8
WLF Walferdange 72.80 345 PFAKE 23 19 30.0 +11
WLF LR LR
comp=Z,5µm,19.0s,MS5.8
AFI Afiamalu 72.83 155 PFAKE 23 19 30.0 +11
AFI LR LR
comp=Z,2µm,20.0s,MS5.4
SOP Sopron 72.86 338 P **P** **23 19 21.0 +1.9**
SOP Sopron 72.86 338 P **P** **23 19 21.0 +1.9**
SOP Sopron 72.86 338 ⇓*e*P **P** **23 19 18.8 -0.3**
VOIR 72.92 331 ⇑P **P** **23 19 20.0 +0.5**
VOIR 72.92 331 ⇑*i*P **P** **23 19 20.0 +0.5**
KELT Kelkit 73.16 319 *i*P **P** **23 19 20.4 -0.6**
MOA Molln 73.17 339 P **P** **23 19 22.3 +1.3**
MOA Molln 73.17 339 ⇓*i*pP pP 23 19 21.5 -2.4
comp=Z,7.9nm,1.1s
HYB Hyderabad 73.19 276 *i*P **P** **23 19 20.0 -1.5**
HYB *e*S S 23 28 50.0 +0.5
HYB LR LR 23 55 00.0
comp=Z,11nm,16.0s
MMRI Maumere 73.31 223 P **P** **23 19 29.7 +7.6**
comp=Z,70nm,1.4s,mb5.4
ARSA Arzberg 73.49 338 P **P** **23 19 24.2 +1.3**
ARSA Arzberg 73.49 338 ⇓*i*pP pP 23 19 23.5 -2.3
comp=Z,8.9nm,0.9s,SNR=5.9
GZR Gura Zlata 73.56 333 P **P** **23 19 24.0 +0.7**
GZR Gura Zlata 73.56 333 ⇑P **P** **23 19 23.9 +0.6**
GZR Gura Zlata 73.56 333 ⇑*i*P **P** **23 19 23.9 +0.6**
RJOB Jochberg 73.57 340 *e*P **P** **23 19 24.0 +0.7**
comp=Z,30nm,1.3s,mb5.1
KAKA Kakadu 73.63 212 *e*P **P** **23 19 23.5 -0.4**
comp=Z,35nm,0.9s,mb5.3
KAKA Kakadu 73.63 212 *e*P **P** **23 19 23.5 -0.5**
comp=Z,111nm,1.0s,mb5.7
BZS Buzias 73.65 333 ⇑P **P** **23 19 23.9 +0.1**
BZS Buzias 73.65 333 ⇑*i*P **P** **23 19 23.9 +0.1**
HAKT HAKKARI 73.71 314 *i*P **P** **23 19 23.0 -1.3**
BFO Black Forest 73.77 343 *e*P **P** **23 19 24.0 -0.5**
comp=Z,33nm,1.6s,mb5.0
BFO Black Forest 73.77 343 *e*P **P** **23 19 24.0 -0.5**
BFO pmax pmax
comp=Z,33nm,1.6s,mb5.0
PKSM Moragy 73.80 336 P **P** **23 19 25.2 +0.5**
PKSM Moragy 73.80 336 P **P** **23 19 25.2 +0.5**
SPAK Spaichingen-Ko 73.92 343 *e*P **P** **23 19 25.8 +0.5**
GOGA Godfrey 73.95 54 *e*P **P** **23 19 23.8 -2.0**
comp=Z,27nm,1.3s,mb5.0
GOGA LR LR
comp=Z,7µm,19.0s,MS6.0
GOGA Godfrey 73.95 54 *e*P **P** **23 19 23.8 -2.0**
GOGA pmax pmax
comp=Z,27nm,1.3s,mb5.0
GOGA MLR MLR
comp=Z,7µm,19.0s,MS6.0
BALT Daday 73.98 324 *i*P **P** **23 19 25.5 -0.3**
PSI Prapat 74.05 250 P **P** **23 19 25.5 -1.0**
comp=Z,10nm,0.8s,mb4.8,baz=24,slow=8.5,SNR=8.2
PSI Prapat 74.05 250 P **P** **23 19 25.5 -1.0**
PSI Prapat 74.05 250 P **P** **23 19 25.5 -1.1**
PSI pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ECH Echery 74.07 344 *e*P **P** **23 19 26.3 +0.1**
ECH Echery 74.07 344 *e*P **P** **23 19 25.9 -0.4**
comp=Z,18nm,1.2s,mb4.9
ECH LR LR
comp=Z,4µm,22.0s,MS5.6
ECH Echery 74.07 344 *e*P **P** **23 19 25.9 -0.3**
ECH pmax pmax
comp=Z,18nm,1.2s,mb4.9
ECH MLR MLR
comp=Z,4µm,22.0s,MS5.6
KBA Koelnbreinsper 74.09 340 ⇓*i*pP pP 23 19 27.9 -1.4
comp=Z,25nm,1.2s,SNR=8.5
PERS Pernice 74.16 338 *i*P **P** **23 19 28.2 +1.4**
PERS *e*S S 23 29 02.3 +2.6
JSC Jenkinsville 74.19 51 *e*P **P** **23 19 25.7 -1.4**
JSC Jenkinsville 74.19 51 *e*P **P** **23 19 25.7 -1.5**
KEMA Kemaliye 74.21 319 *i*P **P** **23 19 26.8 -0.4**
THEF They Montfort 74.23 345 *e*P **P** **23 19 31.4 +4.2**
THEF They Montfort 74.23 345 *e*P **P** **23 19 31.4 +4.2**
WTTA Wattenberg 74.24 341 ⇓*i*pP pP 23 19 28.0 -2.2
comp=Z,16nm,1.2s
MOTA Moosalm 74.26 341 ⇑*i*pP pP 23 19 28.1 -2.2
comp=Z,7.0nm,0.9s
FELD Feldberg im Sc 74.27 343 *e*P **P** **23 19 27.5 +0.1**
BRAL Brewton 74.31 58 PFAKE 23 19 40.0 +12
BRAL LR LR
comp=Z,6µm,22.0s,MS5.9
CTKT Corum 74.32 322 *i*P **P** **23 19 26.6 -1.2**
TPI Tanjungpandan 74.41 240 P **P** **23 19 38.0 +9.4**
comp=Z,38nm,1.2s,mb5.2
ABTA Abfaltersbach 74.57 340 ⇑*i*pP pP 23 19 29.4 -2.7
comp=Z,15nm,1.0s
BMNI Bima 74.62 227 P PcP 23 19 42.4 -1.7
comp=Z,24nm,1.4s
PPBI Pangkal Pinang 74.63 241 P **P** **23 19 30.0 +0.1**
comp=Z,74nm,0.5s,mb5.9
FETA Feichten 74.64 341 *i*pP pP 23 19 30.6 -1.9
comp=Z,13nm,1.0s,SNR=7.5
MSVF Nonsavu 74.70 166 PFAKE 23 19 40.0 +10
MSVF LR LR
comp=Z,3µm,20.0s,MS5.7
ELZG Elazig 74.71 318 *e*P **P** **23 19 31.1 +1.0**
CNNC Cliffs of the 74.81 48 *e*P **P** **23 19 29.4 -1.4**
comp=Z,141nm,1.4s,mb5.7
CNNC LR LR
comp=Z,6µm,19.0s,MS5.9
ELDT Eldivan 74.90 323 *e*P **P** **23 19 32.0 +0.8**
LOMF Lomont 74.96 344 *e*P **P** **23 19 30.6 -0.8**
LOMF Lomont 74.96 344 *e*P **P** **23 19 30.6 -0.8**
VISS Visnje 75.02 338 *i*P **P** **23 19 28.7 -3.1**
VISS *e*S S 23 29 10.4 +1.1
MARD Mardin 75.07 316 *i*P **P** **23 19 30.9 -1.3**
MALT Malatya 75.08 319 *e*P **P** **23 19 32.7 +0.5**
comp=Z,12nm,1.0s,mb4.8
MALT LR LR
comp=Z,4µm,19.0s,MS5.7
MALT Malatya 75.08 319 ⇓P **P** **23 19 33.1 +0.9**
MALT Malatya 75.08 319 ⇓*i*P **P** **23 19 33.1 +0.9**
MALT Malatya 75.08 319 P **P** **23 19 33.2 +1.0**
comp=Z,12nm,1.5s,mb4.6
JAVS Javornik 75.09 339 *e*P **P** **23 19 32.9 +0.7**
JAVS *e*S S 23 29 10.4 +0.3
COW Cow Castle Cre 75.20 51 *e*P **P** **23 19 32.1 -0.9**
BOJS Bojanci 75.22 338 *i*P **P** **23 19 33.8 +0.8**
BOJS *e*S S 23 29 12.7 +1.1
SGKT Sivrigoynuk 75.28 324 *i*P **P** **23 19 32.6 -0.7**
CDAG Cicekdag 75.36 322 *e*P **P** **23 19 24.7 -9.1**
TUE Stuetta 75.41 342 *e*P **P** **23 19 34.3 +0.3**
comp=Z,19nm,1.0s,mb5.0
TUE LR LR
comp=Z,5µm,20.0s,MS5.8
BR131 Keskin Array S 75.51 323 *e*P **P** **23 19 35.1 +0.3**
comp=Z,4.8nm,0.8s,mb4.5
BR131 LR LR
comp=Z,3µm,20.0s,MS5.6
BRTR Keskin Array B 75.52 323 P **P** **23 19 34.5 -0.2**
comp=Z,4.6nm,0.7s,mb4.5,baz=61,slow=3.5,SNR=31
BRTR LR LR 23 56 18.2
comp=Z,3µm,20.4s,MS5.6,baz=173,slow=39
BRTR Keskin Array B 75.52 323 *i*P **P** **23 19 35.2 +0.5**
BRTR pmax pmax
comp=Z,5.0nm,0.7s
NHSC New Hope 75.66 51 *e*P **P** **23 19 34.7 -1.0**
comp=Z,220nm,1.4s,mb5.9
NHSC LR LR
comp=Z,8µm,19.0s,MS6.0
KHKI Kahang-Kahang 75.75 230 P **P** **23 19 43.9 +7.6**
comp=Z,40nm,1.3s,mb5.2
BBAL Bala 75.85 323 *i*P **P** **23 19 36.8 +0.2**
ATAB Bozova 75.87 318 *i*P **P** **23 19 36.6 -0.2**
AVNT Avonos 75.94 321 *i*P **P** **23 19 37.4 +0.2**
VTS Vitosha 76.06 331 ⇑P **P** **23 19 37.5 -0.3**
VTS Vitosha 76.06 331 ⇑*i*P **P** **23 19 37.5 -0.3**
GZT Gaziantep 76.24 319 *i*P **P** **23 19 38.8 -0.1**
ANDN Andirin 76.49 320 *i*P **P** **23 19 40.6 +0.2**
ESKT Eskisehir 76.62 325 *i*P **P** **23 19 39.8 -1.2**
AGO Saint Agoulin 76.75 346 *e*P **P** **23 19 42.3 +0.6**
SJI Sawahan 76.87 234 P **P** **23 19 51.1 +8.4**
comp=Z,99nm,0.3s,mb6.2
PWJI Pagerwojo 77.11 233 P **P** **23 19 47.2 +3.2**
comp=Z,90nm,1.2s,mb5.6
BNI Bardonecchia 77.22 344 *e*P **P** **23 19 45.1 +0.7**
comp=Z,14nm,1.0s,mb4.9
BNI LR LR
comp=Z,5µm,22.0s,MS5.8
BNI Bardonecchia 77.22 344 *e*P **P** **23 19 45.1 +0.8**
BNI pmax pmax
comp=Z,14nm,1.0s,mb4.8
BNI MLR MLR
comp=Z,5µm,22.0s,MS5.8
DURS Dursunbey 77.30 326 *i*P **P** **23 19 44.3 -0.6**
GULE Gulek 77.31 321 *i*P **P** **23 19 45.0 +0.1**
BOLV Bolvadin 77.32 324 *i*P **P** **23 19 44.8 -0.2**
SSB Saint Sauveur 77.32 345 PFAKE 23 19 50.0 +5.1
SSB LR LR
comp=Z,3µm,22.0s,MS5.5
VAY Valandovo 77.41 331 *e*P **P** **23 19 47.1 +1.7**
YURE YUREGIR 77.41 320 *i*P **P** **23 19 45.5 0.0**
BALY Balya 77.43 327 *i*P **P** **23 19 45.3 -0.4**
GDZ Gediz 77.45 325 *i*P **P** **23 19 44.0 -1.7**
VLC Villacollemand 77.46 341 PFAKE 23 20 00.0 +14
VLC LR LR
comp=Z,4µm,20.0s,MS5.8
CTA Charters Tower 77.56 197 P **P** **23 19 47.5 +1.1**
comp=Z,16nm,0.8s,mb5.0,baz=8.5,slow=5.8,SNR=10
CTA Charters Tower 77.56 197 *e*P **P** **23 19 49.0 +2.7**
comp=Z,27nm,0.9s,mb5.2
CTA Charters Tower 77.56 197 P **P** **23 19 47.5 +1.2**
CTA pmax pmax
comp=Z,16nm,0.8s
CTAO Charters Tower 77.56 197 *e*P **P** **23 19 49.6 +3.2**
comp=Z,49nm,1.0s,mb5.4
CTAO LR LR
comp=Z,2µm,21.0s,MS5.4
CTAO Charters Tower 77.56 197 *e*P **P** **23 19 49.6 +3.3**
CTAO pmax pmax
comp=Z,49nm,1.0s,mb5.4
CTAO MLR MLR
comp=Z,2µm,21.0s,MS5.4
CTAO Charters Tower 77.56 197 P **P** **23 19 52.6 +6.3**
comp=Z,49nm,1.0s,mb5.4
KRUS Krusevo 77.72 332 *e*P **P** **23 19 46.1 -1.0**
YAYL Yayladag 77.95 319 *i*P **P** **23 19 48.4 -0.2**
BANOM Banah 77.97 299 P **P** **23 19 48.5 -0.3**
SNR=7.0
TIR Tirane 78.09 333 PFAKE 23 20 00.0 +11
TIR LR LR
comp=Z,10µm,19.0s,MS6.2
DZM Mont Dzumac 78.09 178 *e*S S 23 29 43.3 +0.1
comp=Z,2µm,35.9s
DZM *e*LQ 23 40 28.6
comp=Z,5µm,30.2s
DZM *e*LR LR 23 44 04.2
comp=Z,4µm,27.8s
KHAL Karahalli 78.11 325 *i*P **P** **23 19 48.7 -0.7**
AQU L'Aquila 78.62 338 *e*P **P** **23 19 51.5 -0.6**
comp=Z,27nm,1.0s,mb5.1
AQU LR LR
comp=Z,6µm,22.0s,MS5.9
AQU L'Aquila 78.62 338 *e*P **P** **23 19 51.5 -0.6**
AQU pmax pmax
comp=Z,27nm,1.0s,mb5.1
AQU MLR MLR
comp=Z,6µm,22.0s,MS5.9
MIB Mutribah 78.86 308 *e*P **P** **23 19 52.3 -1.4**
MIB AMb AMB 23 19 54.0
comp=Z,81nm,0.8s,mb5.7
DNZL Cakiroluk 78.87 325 *e*P **P** **23 19 53.2 -0.4**
UMR Umm Al-Rimmam 78.91 307 *e*P **P** **23 19 52.6 -1.4**
UMR AMb AMB 23 19 54.2
comp=Z,64nm,0.9s,mb5.6
NAZ Nazwa, Dubai 79.07 299 P **P** **23 19 53.8 -1.1**
SNR=8.7
ASHO Ashiyiah 79.13 298 P **P** **23 19 54.9 -0.3**
SNR=12
AYDN Tasoluk 79.26 326 *i*P **P** **23 19 55.7 -0.1**
DWPF Disney 79.37 55 PFAKE 23 20 10.0 +14
DWPF LR LR
comp=Z,8µm,19.0s,MS6.1
NAY Al-Naaiem 79.38 307 *e*P **P** **23 19 54.6 -1.9**
NAY AMb AMB 23 19 56.4
comp=Z,32nm,0.8s,mb5.3
HOQ Hoqain 79.43 297 P **P** **23 19 56.2 -0.7**
SNR=11
TAOE Nuku Hiva Isla 79.50 124 *e*S S 23 29 58.8 +0.1
comp=Z,686nm,27.3s
TAOE *e*LQ 23 40 40.9
comp=Z,5µm,33.8s
TAOE *e*LR LR 23 44 45.5
comp=Z,8µm,25.6s,baz=341
SMDO Samad 79.50 296 P **P** **23 19 57.3 0.0**
SNR=11

ASUD Al Ashush, Dub 79.54 299 P **P** **23 19 57.3 -0.2**
SNR=7.3
CSS Prodhromos 79.91 321 *e*P **P** **23 19 58.5 -0.8**
comp=Z,38nm,1.3s,mb5.2
CSS LR LR
comp=Z,3μm,21.0s,MS5.7
BDRM Kayabasi 79.95 326 *i* P **P** **23 19 56.6 -2.9**
WB2 Warramunga Arr 79.97 208 *e*P **P** **23 19 59.5 -0.2**
WRA Warramunga Arr 79.98 208 P **P** **23 19 59.4 -0.2**
comp=Z,7.3nm,0.7s,mb4.7,baz=3.9,slow=5.9,SNR=21
WRA Warramunga Arr 79.98 208 P **P** **23 19 59.4 -0.2**
WRA pmax pmax
comp=Z,7.0nm,0.7s
ARQ Araqi 80.03 297 P **P** **23 19 59.5 -0.7**
SNR=17
JMDO Jabal Madar 80.05 295 P **P** **23 19 59.9 -0.3**
SNR=27
BSY Bisya 80.19 296 P **P** **23 20 00.6 -0.4**
SNR=24
CUC Castrocucco 80.35 336 PFAKE 23 20 10.0 +8.4
CUC LR LR
comp=Z,5μm,19.0s,MS5.9
FITZ Fitzroy Crossi 80.84 217 *e*P **P** **23 20 04.0 -0.3**
comp=Z,36nm,1.0s,mb5.3
FITZ Fitzroy Crossi 80.84 217 *e*P **P** **23 20 05.6 +1.3**
comp=Z,34nm,1.1s,mb5.2
FITZ Fitzroy Crossi 80.84 217 P **P** **23 20 10.8 +6.5**
comp=Z,70nm,1.3s,mb5.4
CMIG Matias Romero 81.96 71 P **P** **23 20 10.0 -0.5**
comp=Z,16nm,0.9s,mb5.0,baz=321,slow=3.9,SNR=16
CEL Celeste 81.98 335 PFAKE 23 20 20.0 +10
CEL LR LR
comp=Z,5μm,19.0s,MS5.9
EIDS Eidsvold 82.09 192 *e*P **P** **23 20 10.9 +0.1**
comp=Z,41nm,1.7s,mb5.1
VSL Villasalto 82.17 340 PFAKE 23 20 20.0 +8.7
VSL LR LR
comp=Z,3μm,20.0s,MS5.6
BBSR BB Station 82.46 40 PFAKE 23 20 20.0 +7.0
BBSR LR LR
comp=Z,3μm,20.0s,MS5.7
PVRL Vila Real 82.53 354 *e*P **P** **23 20 13.6 +0.4**
MVO Moncorvo 82.60 353 *e*P **P** **23 20 16.8 +3.3**
comp=Z,47nm,1.4s,mb5.3
MVO *e*S S 23 30 33.0 +2.5
MVO *e*LQ 23 42 15.8
MVO *e*LR LR 23 49 59.3
comp=Z,2μm,20.0s
TEIG Tepich 82.76 64 PFAKE 23 20 20.0 +5.4
TEIG LR LR
comp=Z,3μm,19.0s,MS5.7
RAR Rarotonga 83.06 146 PFAKE 23 20 30.0 +14
RAR LR LR
comp=Z,2μm,19.0s,MS5.5
PPT Papeete 83.26 136 *e*S S 23 30 32.6 -4.8
comp=Z,1μm,23.2s
PPT *e*SS SS 23 36 02.4 -0.3
comp=Z,779nm,28.0s
PPT *e*LQ 23 42 02.8
comp=Z,3μm,29.8s
PPT *e*LR LR 23 46 18.4
comp=Z,13μm,29.2s,baz=340
PPT Papeete 83.26 136 LR LR 23 48 49.4
comp=Z,3μm,21.4s,MS5.7,baz=328,slow=30
MTE Manteigas 83.39 354 *e*S S 23 30 42.1 +3.5
MTE *e*LQ 23 42 38.6
MTE *e*LR LR 23 45 47.4
comp=Z,3μm,20.0s
MTE Manteigas 83.39 354 PFAKE 23 20 30.0 +12
MTE LR LR
comp=Z,4μm,20.0s,MS5.8
ASAR Alice Springs 83.65 208 P **P** **23 20 19.1 +0.2**
comp=Z,3.0nm,0.6s,mb4.6,baz=14,slow=4.8,SNR=25
ASAR Alice Springs 83.65 208 P **P** **23 20 19.2 +0.3**
ASAR pmax pmax
comp=Z,3.0nm,0.6s
ESDC Sonseca Array 83.84 351 P **P** **23 20 20.4 +0.5**
comp=Z,2.3nm,0.6s,mb4.5,baz=360,slow=5.0,SNR=12
ESDC Sonseca Array 83.84 351 P **P** **23 20 20.4 +0.5**
ESLA Sonseca Array 83.84 351 PFAKE 23 20 30.0 +10
ESLA LR LR
comp=Z,21μm,19.0s,MS6.5
PAB San Pablo 84.00 351 PFAKE 23 20 30.0 +9.2
PAB LR LR
comp=Z,3μm,19.0s,MS5.7
PMRV Marv??o 84.35 353 *e*S S 23 30 50.1 +1.9
PMRV *e*LQ 23 43 44.9
PMRV *e*LR LR 23 45 55.8
comp=Z,2μm,18.0s
WDD Wield Dalam 84.59 336 PFAKE 23 20 30.0 +6.2
WDD LR LR
comp=Z,2μm,20.0s,MS5.5
PESTR Estremoz 84.92 353 *e*P **P** **23 20 26.2 +0.7**
comp=Z,53nm,1.8s,mb5.4
PESTR *e*S S 23 30 53.5 -0.4
PESTR *e*LQ 23 44 00.4
PESTR *e*LR LR 23 51 54.2
comp=Z,2μm,18.0s
PMAFR Mafra 84.93 355 *e*S S 23 30 59.9 +5.9
PMAFR *e*LQ 23 43 10.2
PMAFR *e*LR LR 23 48 37.5
comp=Z,2μm,20.0s
EVO Evora 85.28 354 *e*P **P** **23 20 30.1 +2.8**
comp=Z,48nm,1.6s,mb5.4
PBAR Barrancos 85.58 353 *e*P **P** **23 20 29.0 +0.3**
comp=Z,69nm,1.2s,mb5.8
PBAR *e*S S 23 31 02.8 +2.4
PBAR *e*LQ 23 43 54.7
PBAR *e*LR LR 23 46 07.4
comp=Z,2μm,20.0s
MBWA Marble Bar 85.73 221 *e*P **P** **23 20 31.0 +1.5**
comp=Z,68nm,1.1s,mb5.8
MBWA LR LR
comp=Z,2μm,20.0s,MS5.4
MBWA Marble Bar 85.73 221 P **P** **23 20 38.6 +9.1**
KEST Kesra 85.82 340 P **P** **23 20 30.0 0.0**
comp=Z,1.0nm,0.6s,mb4.2,baz=243,slow=6.3,SNR=4.6
KEST LR LR 00 05 09.9
comp=Z,2μm,18.2s,MS5.5,baz=120,slow=40
KEST Kesra 85.82 340 *e*P **P** **23 20 29.6 -0.4**
CMLA Cha da Macela 85.94 8 PFAKE 23 20 40.0 +9.4
CMLA LR LR
comp=Z,1μm,20.0s,MS5.4
PCVE Castro Verde 86.18 354 *e*S S 23 31 14.0 +7.6
PCVE *e*LQ 23 44 36.8
PCVE *e*LR LR 23 52 28.1
comp=Z,2μm,20.0s
PVAQ Vaqueiros 86.39 353 *e*P **P** **23 20 36.6 +3.8**
PVAQ *e*S S 23 31 14.9 +6.5
PVAQ *e*LQ 23 44 38.6
PVAQ *e*LR LR 23 49 27.0
comp=Z,2μm,20.0s
MORF Marmelete 86.54 354 *e*S S 23 31 17.4 +7.5
MORF *e*LQ 23 44 18.7
MORF *e*LR LR 23 47 01.3
comp=Z,2μm,20.0s
PBDV Barranco-do-Ve 86.56 354 *e*S S 23 31 12.6 +2.5
PBDV *e*LQ 23 43 40.5
PBDV *e*LR LR 23 49 38.3
comp=Z,2μm,20.0s
PFVI Vila Bisbo 86.72 354 *e*S S 23 31 13.1 +1.4
PFVI *e*LQ 23 44 46.5
PFVI *e*LR LR 23 46 32.3
comp=Z,2μm,20.0s
ARMA Armidale 87.02 191 *e*P **P** **23 20 42.4 +6.8**
SFS San Fernando 87.21 352 PFAKE 23 20 50.0 +13
SFS LR LR
comp=Z,7μm,20.0s,MS6.1
COCO West Island 87.87 244 PFAKE 23 20 50.0 +10
COCO LR LR
comp=Z,2μm,21.0s,MS5.5
TGUH Tegucigalpa,Un 88.46 67 *e*P **P** **23 20 43.4 +0.4**
comp=Z,15nm,0.4s,mb5.6
TGUH LR LR
comp=Z,3μm,22.0s,MS5.6
TBI Tubuai 88.56 138 *e*S S 23 31 27.6 -1.6
comp=Z,795nm,32.2s
TBI *e*SS SS 23 37 20.8 +0.3
comp=Z,715nm,27.8s
TBI *e*LQ 23 43 48.0
comp=Z,2μm,35.8s
TBI *e*LR LR 23 48 33.6
comp=Z,5μm,32.5s,baz=334
GTBY Guantanamo Bay 89.30 54 PFAKE 23 21 00.0 +13
GTBY LR LR
comp=Z,8μm,19.0s,MS6.2

MTDJ Mount Denham 89.67 57 PFAKE 23 21 00.0 +11
MTDJ LR LR
comp=Z,3μm,20.0s,MS5.7
STKA Stephens Creek 89.89 199 P **P** **23 20 51.2 +2.0**
comp=Z,10nm,1.0s,mb5.1,baz=345,slow=8.9,SNR=6.2
STKA Stephens Creek 89.89 199 *e*P **P** **23 20 51.4 +2.2**
comp=Z,18nm,1.0s,mb5.3
STKA Stephens Creek 89.89 199 *e*P **P** **23 20 50.8 +1.7**
comp=Z,8.5nm,1.1s,mb5.0
SDDR Presa de Saban 91.82 51 *e*P **P** **23 20 59.7 +1.0**
comp=Z,12nm,0.2s,mb5.9
SDDR LR LR
comp=Z,2μm,21.0s,MS5.5
CAN Canberra 92.16 192 PFAKE 23 21 10.0 +10
CAN LR LR
comp=Z,2μm,19.0s,MS5.7
JTS JuntasAbangare 92.84 67 PFAKE 23 21 10.0 +6.5
JTS LR LR
comp=Z,1μm,20.0s,MS5.4
RKT Rikitea 94.33 126 *e*S S 23 32 22.0 +0.4
comp=Z,639nm,27.0s
RKT Rikitea 94.33 126 *e*PS PS 23 33 40.6 +2.9
comp=Z,1μm,30.8s
RKT *e*SS SS 23 38 44.4 +0.6
comp=Z,807nm,26.5s
RKT *e*LQ 23 46 50.7
comp=Z,3μm,39.0s
RKT *e*LR LR 23 51 24.1
comp=Z,5μm,33.2s,baz=330
SJG San Juan 94.76 47 PFAKE 23 21 20.0 +7.7
SJG LR LR
comp=Z,3μm,20.0s,MS5.7
BCIP Isla Barro Col 96.38 63 PFAKE 23 21 30.0 +10
BCIP LR LR
comp=Z,2μm,21.0s,MS5.5
ANWB Willy Bob 96.89 44 PFAKE 23 21 30.0 +8.0
ANWB LR LR
comp=Z,2μm,21.0s,MS5.5
DGAR Diego Garcia 96.97 267 PFAKE 23 21 30.0 +7.7
DGAR LR LR
comp=Z,3μm,21.0s,MS5.8
NWAO Narrogin (SRO) 97.36 218 PFAKE 23 21 30.0 +6.5
NWAO LR LR
comp=Z,2μm,20.0s,MS5.5
SNZO South Karori 97.67 172 PFAKE 23 21 30.0 +5.3
SNZO LR LR
comp=Z,2μm,19.0s,MS5.6
PTCN Pitcairn Islan 98.25 123 PFAKE 23 21 40.0 +12
PTCN LR LR
comp=Z,4μm,21.0s,MS5.9
TAM Tamanrasset 99.13 340 PFAKE 23 21 40.0 +8.0
TAM LR LR
comp=Z,2μm,19.0s,MS5.7
PAYG Puerto Ayora 99.24 77 PFAKE 23 21 40.0 +7.5
PAYG LR LR
comp=Z,1μm,20.0s,MS5.5
FDF Fort de France 99.81 44 PFAKE 23 21 40.0 +4.9
FDF LR LR
comp=Z,3μm,21.0s,MS5.7
SDV Santo Domingo 101.03 55 PFAKE 23 21 50.0 +9.5
SDV LR LR
comp=Z,1μm,20.0s,MS5.4
BBGH Gun Hill 101.88 43 PFAKE 23 21 50.0 +5.7
BBGH LR LR
comp=Z,5μm,20.0s,MS6.0
GRGR Grenville 101.98 46 PFAKE 23 21 50.0 +5.3
GRGR LR LR
comp=Z,3μm,20.0s,MS5.7
OTAV Otavalo 104.73 66 PFAKE 23 22 10.0 +13
OTAV LR LR
comp=Z,914nm,21.0s,MS5.3
KMBO Kilima Mbogo 110.47 301 PFAKE 23 26 30.0 +6.9
KMBO LR LR
comp=Z,2μm,19.0s,MS5.8
DBIC Dimbokro 116.58 348 PFAKE 23 26 40.0 +5.2
DBIC LR LR
comp=Z,2μm,19.0s,MS5.7
ABPO Ambohimpanom 120.43 282 PFAKE 23 26 50.0 +8.1
ABPO LR LR
comp=Z,2μm,20.0s,MS5.8
LPAZ La Paz 124.05 66 PKP PKPdf 23 26 50.4 +1.4
comp=Z,0.4nm,0.5s,baz=11,slow=5.2,SNR=2.7
LPAZ La Paz 124.05 66 PKP PKPdf 23 26 50.4 +1.4
LPAZ LR LR
comp=Z,2μm,21.0s,MS5.7
LPAZ La Paz 124.05 66 PKIKP PKPdf 23 26 50.4 +1.4
RCBR Riachuelo 127.23 25 PFAKE 23 27 00.0 +4.8
RCBR LR LR
comp=Z,1μm,20.0s,MS5.7
CASY Casey 128.69 205 PFAKE 23 27 10.0 +14
CASY LR LR
comp=Z,2μm,22.0s,MS5.7
BDFB Brasilia 132.66 44 PKP PKPdf 23 27 06.3 +0.9
comp=Z,2.0nm,0.5s,baz=332,slow=14,SNR=2.1
BDFB Brasilia 132.66 44 PKIKP PKPdf 23 27 06.3 +0.9
BDFB pmax pmax
comp=Z,2.0nm,0.5s
LCO Las Campanas 133.05 78 PFAKE 23 27 20.0 +14
LCO LR LR
comp=Z,2μm,19.0s,MS5.8
SBA Scott Base 133.91 179 PFAKE 23 27 20.0 +14
SBA LR LR
comp=Z,787nm,20.0s,MS5.4
TSUM Tsumeb 135.26 312 PFAKE 23 27 20.0 +10
TSUM LR LR
comp=Z,2μm,19.0s,MS5.9
LBTB Lobatse 136.66 299 *e*PKPdf PKPdf 23 27 14.5 +1.9
LBTB LR LR
comp=Z,2μm,21.0s,MS5.9
LBTB Lobatse 136.66 299 *e*PKIKP PKPdf 23 27 14.5 +1.9
LBTB MLR MLR
comp=Z,2μm,21.0s,MS5.9
CPUP Villa Florida 137.89 62 *e*PKPdf PKPdf 23 27 16.5 +1.7
CPUP LR LR
comp=Z,277nm,19.0s,MS5.0
CPUP Villa Florida 137.89 62 *e*PKIKP PKPdf 23 27 16.5 +1.6
CPUP MLR MLR
comp=Z,277nm,19.0s
SHEL Horse Pasture 138.97 345 PFAKE 23 27 30.0 +13
SHEL LR LR
comp=Z,1μm,21.0s,MS5.6
BOSA Boshof 139.82 296 PKP PKPdf 23 27 18.1 -0.2
comp=Z,2.4nm,0.9s,baz=72,slow=6.4,SNR=2.7
BOSA Boshof 139.82 296 *e*PKPdf PKPdf 23 27 18.1 -0.3
BOSA LR LR
comp=Z,2μm,20.0s,MS5.8
BOSA Boshof 139.82 296 PKIKP PKPdf 23 27 18.1 -0.2
BOSA pmax pmax
comp=Z,2.0nm,0.9s
SPB Sao Paulo 140.05 48 PFAKE 23 27 30.0 +11
SPB LR LR
comp=Z,1μm,20.0s,MS5.6
PLCA Paso Flores 141.75 90 PKP PKPdf 23 27 21.1 -0.3
comp=Z,3.8nm,0.9s,baz=312,slow=6.1,SNR=3.4
PLCA Paso Flores 141.75 90 *e*PKPdf PKPdf 23 27 23.2 +1.8
PLCA LR LR
comp=Z,2μm,21.0s,MS5.8
PLCA Paso Flores 141.75 90 *e*PKIKP PKPdf 23 27 23.2 +1.8
PLCA MLR MLR
comp=Z,2μm,21.0s
MAW Mawson 143.92 220 PKP PKPdf 23 27 24.1 -0.3
comp=Z,9.9nm,0.9s,baz=285,slow=2.1,SNR=11
MAW Mawson 143.92 220 *e*PKPdf PKPdf 23 27 22.6 -1.7
MAW LR LR
comp=Z,1μm,21.0s,MS5.7
MAW Mawson 143.92 220 PKIKP PKPdf 23 27 24.1 -0.3
MAW pmax pmax
comp=Z,10.0nm,0.9s
LPA La Plata 144.46 71 PKIKP PKPdf 23 27 31.0 +4.6
TRQA Tornquist 144.62 79 *e*PKPdf PKPdf 23 27 25.6 -1.0
TRQA LR LR
comp=Z,2μm,20.0s,MS5.9
SUR Sutherland 145.09 298 PKPbc PKPbc 23 27 27.7 +0.6
comp=Z,8.2nm,0.9s,baz=259,slow=5.2,SNR=3.2
SUR Sutherland 145.09 298 *e*PKPbc PKPbc 23 27 27.5 +0.4
SUR LR LR
comp=Z,3μm,22.0s,MS6.0
QSPA South Pole Qui 146.06 180 *e*PKPbc PKPbc 23 27 27.4 -1.3
QSPA LR LR
comp=Z,1μm,20.0s,MS5.6
USHA Ushuaia 150.90 109 PKPbc PKPbc 23 27 41.5 -0.6
comp=Z,4.5nm,0.5s,baz=304,slow=5.9,SNR=3.2

ISK ***12*** *23:13:50.8, 39°.95N×38°.62E, h8km, MD2.7*

CSEM ***12*** *23:13:51.9±0.2, 39°.96N×38°.63E, h15km, MD2.9, Error ellipse: s-maj=5.9km s-min=4.7km az=9.0*
ISCJB ***12*** *23:13:52.6±0.6, 39°.97N±0°.05×38°.61E±0°.04, h20km±11km, Error ellipse: s-maj=8.0km s-min=5.6km az=1.7*
DDA ***12*** *23:13:52.5, 39°.95N×38°.59E, h7km±2km, Md2.9*
ISC 12 23:13:52.4±0.6, 39°.96N±0°.05×38°.61E±0°.04, h18km±6km, n16, σ0°.74/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUSE	**Susehri**	**0.40**	**308**	*i* P	**Pg**	**23 14 00.6**	**0.0**
SUSE				*i* S	**Sg**	**23 14 06.6**	**+0.4**
SUSE	**Susehri**	**0.40**	**308**	*i* P	**Pg**	**23 14 00.6**	**0.0**
SUSE				*i* S	**Sg**	**23 14 06.6**	**+0.4**
KELT	**Kelkit**	**0.53**	**69**	*i* P	**Pg**	**23 14 03.8**	**+0.8**
KELT				*i* S	**Sg**	**23 14 11.2**	**+1.0**
KELT	**Kelkit**	**0.53**	**69**	*i* P	**Pg**	**23 14 03.8**	**+0.8**
EZC	**Erzincan**	**0.61**	**110**	*e*PG	**Pg**	**23 14 02.9**	**-1.6**
EZC	**Erzincan**	**0.61**	**110**	*e*Pg	**Pg**	**23 14 02.9**	**-1.6**
KEMA	**Kemaliye**	**0.70**	**188**	*i* P	**Pb**	**23 14 05.6**	**-0.5**
KEMA				*i* S	**Sg**	**23 14 15.9**	**+0.4**
KEMA	**Kemaliye**	**0.70**	**188**	*i* P	**Pb**	**23 14 05.6**	**-0.5**
KEMA				*i* S	**Sg**	**23 14 15.9**	**+0.4**
GUMT	**Gumushane**	**0.83**	**53**	*e*PG	**Pg**	**23 14 07.3**	**-1.3**
GUMT	**Gumushane**	**0.83**	**53**	*e*Pg	**Pg**	**23 14 07.3**	**-1.3**
SCER	**sogukcermik**	**1.15**	**265**	*i* P	**Pn**	**23 14 13.4**	**-0.1**
SCER				*i* S	**Sb**	**23 14 28.0**	**-0.2**
SCER	**sogukcermik**	**1.15**	**265**	*i* P	**Pn**	**23 14 13.4**	**-0.1**
SCER				*i* S	**Sb**	**23 14 28.0**	**-0.2**
PTK	**Pertek**	**1.23**	**150**	*e*PN	**Pn**	**23 14 14.5**	**-0.2**
PTK				*e*SN	**Sn**	**23 14 31.6**	**+0.8**
PTK	**Pertek**	**1.23**	**150**	*e*Pn	**Pn**	**23 14 14.5**	**-0.2**
PTK				*e*Sn	**Sn**	**23 14 31.6**	**+0.8**
SVSK	**Karacayir**	**1.24**	**268**	*e*PN	**Pn**	**23 14 15.1**	**+0.3**
SVSK	**Karacayir**	**1.24**	**268**	*e*Pn	**Pn**	**23 14 15.1**	**+0.3**

MOS ***12*** *23:28:23.6±1.2, 56°.09N×164°.33E, h9km, mb4.3/1, Error ellipse: s-maj=24.0km s-min=21.0km az=54.5*
ISCJB ***12*** *23:28:24.8±0.8, 56°.01N±0°.06×164°.33E±0°.07, h10km, Error ellipse: s-maj=8.8km s-min=4.3km az=28.4*
KRSC ***12*** *23:28:24.3±0.4, 56°.02N×164°.28E, h8km±7km, ML4.1*
ISC 12 23:28:24.8±0.8, 56°.06N±0°.06×164°.40E±0°.07, h10km, n22, σ1°.14/39, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.90**	**280**	*e*P	**Pg**	**23 28 39.9**	**-2.2**
KBTR				*e*S	**Sg**	**23 28 51.7**	**-2.0**
KBTR	**Krutoberegovo**	**0.90**	**280**	PN	**Pg**	**23 28 39.9**	**-2.2**
KBTR				S	**Sg**	**23 28 51.7**	**-2.0**
BKI	**Bering**	**1.24**	**133**	*e*P	**Pn**	**23 28 47.4**	**-0.7**
BKI				*e*S	**Sb**	**23 29 04.1**	**-0.1**
BKI	**Bering**	**1.24**	**133**	PN	**Pn**	**23 28 47.4**	**-0.7**
BKI				S	**Sb**	**23 29 04.1**	**-0.1**
BDR	**Baidarnaya**	**1.85**	**287**	P	**Pn**	**23 28 56.3**	**-0.2**
BDR				S	**Sn**	**23 29 18.9**	**-1.0**
ZLN	**Zelenaya**	**2.02**	**270**	*e*S	**Sn**	**23 29 24.9**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**2.08**	**268**	*e*P	**Pn**	**23 29 00.0**	**+0.2**
BZGR				*e*S	**Sn**	**23 29 26.5**	**+0.8**
KLY	**Klyuchi**	**2.11**	**278**	*e*P	**Pn**	**23 28 57.8**	**-2.3**
KLY				*e*S	**Sn**	**23 29 22.8**	**-3.6**
KLY	**Klyuchi**	**2.11**	**278**	PN	**Pn**	**23 28 57.8**	**-2.3**
KLY				S	**Sn**	**23 29 22.8**	**-3.6**
MKZ	**Mys Kozlova**	**2.15**	**226**	*e*P	**Pn**	**23 28 59.3**	**-1.3**
MKZ				*e*S	**Sn**	**23 29 25.6**	**-1.7**
MKZ	**Mys Kozlova**	**2.15**	**226**	PN	**Pn**	**23 28 59.3**	**-1.3**
MKZ				S	**Sn**	**23 29 25.6**	**-1.7**
BZMR	**Bezymyannaya**	**2.20**	**268**	*e*P	**Pn**	**23 29 01.9**	**+0.6**
BZMR				*e*S	**Sn**	**23 29 29.3**	**+0.7**
KPT	**Kopyto**	**2.35**	**269**	*e*P	**Pn**	**23 29 03.5**	**+0.1**
KPT				*e*S	**Sn**	**23 29 32.6**	**+0.4**
KOZR	**Kozyr**	**2.53**	**272**	PN	**Pn**	**23 29 06.6**	**+0.8**
KOZR				S	**Sn**	**23 29 37.8**	**+1.2**
KOZ	**Kozyrevsk**	**2.54**	**272**	*e*P	**Pn**	**23 29 06.6**	**+0.6**
KOZ				*e*S	**Sn**	**23 29 37.8**	**+0.9**
SRDR	**Sredinnyy**	**2.63**	**277**	*e*P	**Pn**	**23 29 07.2**	**-0.1**
SRDR				*e*S	**Sn**	**23 29 39.2**	**0.0**
SPN	**Mys Shipunski**	**3.91**	**222**	*e*S	**Sn**	**23 30 07.5**	**-3.3**
NLC	**Nalytchevo**	**4.13**	**227**	*e*P	**Pn**	**23 29 28.3**	**+0.5**
NLC				*e*S	**Sn**	**23 30 15.6**	**-0.5**
NLC	**Nalytchevo**	**4.13**	**227**	PN	**Pn**	**23 29 28.3**	**+0.5**
AVH	**Avacha**	**4.32**	**232**	*e*P	**Pn**	**23 29 32.2**	**+1.7**
AVH				*e*S	**Sn**	**23 30 21.1**	**+0.3**
GNL	**Ganaly**	**4.42**	**240**	*e*P	**Pn**	**23 29 33.0**	**+1.2**
PET	**Petropavlovsk**	**4.52**	**230**	*e*PN	**Pn**	**23 29 35.5**	**+2.2**

KRSC 12 23:30:24.3±0.9, 56°.12N×164°.22E, h15km±14km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.79**	**277**	*e*P	Pg	23 30 38.6	-1.0
KBTR				*e*S	Sg	23 30 49.7	-0.3
BKI	**Bering**	**1.35**	**132**	*e*P	Pn	23 30 48.1	-0.5
BKI				*e*S	Sn	23 31 05.2	-1.0
SMKR	**Semkarok**	**1.60**	**288**	*e*P	Pn	23 30 52.2	+0.2
SMKR				*e*S	Sn	23 31 12.3	0.0
BDR	**Baidarnaya**	**1.74**	**286**	*e*S	Sn	23 31 16.6	+0.9
KLY	**Klyuchi**	**2.00**	**277**	*e*P	Pn	23 30 56.5	-1.0
KLY				*e*S	Sn	23 31 20.2	-2.1
MKZ	**Mys Kozlova**	**2.12**	**223**	*e*P	Pn	23 30 59.6	+0.5
MKZ				*e*S	Sn	23 31 25.7	+0.6
SRDR	**Sredinnyy**	**2.52**	**276**	*e*P	Pn	23 31 06.9	+2.2
AVH	**Avacha**	**4.28**	**230**	*e*P	Pn	23 31 31.1	+2.3
GNL	**Ganaly**	**4.36**	**239**	*e*P	Pn	23 31 32.2	+2.3

BJI ***12*** *23:49:49.6, 56°.20N×164°.30E, h10km, mB5.5/24, mb4.8/42, Ms5.5/37, Ms7 5.2/38*
IDC ***12*** *23:49:51.6±0.4, 56°.34N×164°.26E, h0km, mb4.6/29, mb1 4.8/31, mb1mx4.8/32, mbtmp4.6/31, ML4.3/2, MS4.9/24, Ms1 5.0/24, ms1mx4.7/46, Error ellipse: s-maj=15.1km s-min=9.7km az=149.0*
ISCJB ***12*** *23:49:52.8±0.7, 56°.19N±0°.03×164°.32E±0°.02, h19km±5km, mb5.0/191, MS5.1/59, Error ellipse: s-maj=4.3km s-min=1.8km az=169.2*
NEIC ***12*** *23:49:53.0±0.1, 56°.25N×164°.30E, h10km, mb5.1/105, Error ellipse: s-maj=4.7km s-min=2.6km az=166.0*
MOS ***12*** *23:49:54.0±1.0, 56°.15N×164°.33E, h32km, mb5.0/78, MS5.1/41, Error ellipse: s-maj=7.1km s-min=4.6km az=90.1*
KRSC ***12*** *23:49:54.5±0.3, 56°.05N×164°.29E, h40km±40km, ML5.4*
GCMT ***12*** *23:49:56.2±0.1, 56°.26N×164°.52E, h12km, MW5.4, Moment Tensor Solution. s65,c105; s99,c195; Moment tensor: Scale 10^{17}Nm; M_{rr}=0.19±.03; $M_{\theta\theta}$=1.07±.03; $M_{\phi\phi}$=1.26±.03; $M_{r\theta}$=0.23±.06; $M_{r\phi}$=-0.74±.02; $M_{\theta\phi}$=0.21±.06; Best double couple: M_0=1.40000×10^{17} NP1:ϕ_s=299.00000°, δ77.00000°, λ,-174.00000°. NP2:ϕ_s=208.00000°, δ84.00000°, λ,-13.00000°. Principal axes: T 1.4900, Plg5.0000°, Azm254.0000°; N -0.1300, Plg76.0000°, Azm3.0000°; P -1.3500, Plg14.0000°, Azm163.0000°; Data Used: II IU IC G CN. Surface waves from 107 sta.*
SZGRF ***12*** *23:50:06.9, 57°.82N×164°.76E, h33km, mb5.2, Bering Sea*
DJA ***12*** *23:50:20, 56°.63N×161°.43E, h146km, mb5.1/18*
ISC 12 23:49:54.4±0.9, 56°.23N±0°.02×164°.26E±0°.02, h16km±5km, h22km±1.5km; pP-P, n735, σ0°.82/725, mb5.0/191, MS5.1/59, 156C-129D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.80**	**269**	P	**Pb**	**23 50 08.3**	**-1.6**
KBTR	**Krutoberegovo**	**0.80**	**269**	PN	**Pb**	**23 50 08.3**	**-1.6**
BKI	**Bering**	**1.41**	**136**	*e*P	**Pn**	**23 50 15.5**	**-3.8**
BKI				*i* S	**Sn**	**23 50 31.2**	**-6.3**
BKI	**Bering**	**1.41**	**136**	PN	**Pn**	**23 50 15.5**	**-3.8**
BKI				S	**Sn**	**23 50 31.2**	**-6.3**
SMKR	**Semkarok**	**1.59**	**284**	P	**Pn**	**23 50 21.7**	**-0.1**
BDR	**Baidarnaya**	**1.73**	**283**	P	**Pn**	**23 50 24.1**	**+0.4**
SRKR	**Sorokina**	**1.77**	**285**	P	**Pn**	**23 50 24.6**	**+0.4**
ZLN	**Zelenaya**	**1.94**	**265**	P	**Pn**	**23 50 27.5**	**+0.9**
KLY	**Klyuchi**	**2.01**	**274**	P	**Pn**	**23 50 26.5**	**-1.1**
KLY				*i* S	**Sn**	**23 50 49.1**	**-3.2**
KLY	**Klyuchi**	**2.01**	**274**	PN	**Pn**	**23 50 26.5**	**-1.1**
KLY				S	**Sn**	**23 50 49.1**	**-3.2**
BZGR	**Bezymyannyi-Gr**	**2.02**	**263**	*e*P	**Pn**	**23 50 28.4**	**+0.8**

BZGR *i* S **Sn** **23 50 53.0 +0.6**
KRSR Krestovskiy 2.06 271 P **Pn** **23 50 28.6 +0.4**
KRSR *i* S **Sn** **23 50 52.6 -0.9**
BZMR Bezymyannaya 2.13 264 P **Pn** **23 50 30.0 +0.8**
BZMR *i* S **Sn** **23 50 56.3 +1.0**
MKZ Mys Kozlova 2.21 222 P **Pn** **23 50 28.7 -1.6**
MKZ *i* S **Sn** **23 50 53.2 -4.0**
MKZ Mys Kozlova 2.21 222 PN **Pn** **23 50 28.7 -1.6**
MKZ S **Sn** **23 50 53.2 -4.0**
KPT Kopyto 2.27 265 P **Pn** **23 50 32.2 +1.0**
KPT *i* S **Sn** **23 50 59.6 +0.8**
KOZR Kozyr 2.44 268 PN **Pn** **23 50 35.3 +1.8**
KOZR S **Sn** **23 51 05.1 +2.1**
KOZ Kozyrevsk 2.46 268 P **Pn** **23 50 35.3 +1.6**
KOZ *i* S **Sn** **23 51 05.1 +1.8**
SRDR Sredinnyy 2.53 274 P **Pn** **23 50 35.9 +1.2**
SRDR *i* S **Sn** **23 51 07.2 +2.0**
KII Karymskiy 3.52 233 *e*P **Pn** **23 50 48.3 -0.1**
KII *i* S **Sn** **23 51 27.3 -2.3**
SPN Mys Shipunski 3.98 220 *e*P **Pn** **23 50 52.8 -1.8**
SPN *i* S **Sn** **23 51 35.8 -5.1**
SPN Mys Shipunski 3.98 220 PN **Pn** **23 50 52.8 -1.8**
NLC Nalytchevo 4.18 225 *e*P **Pn** **23 50 56.7 -0.7**
NLC *i* S **Sn** **23 51 42.8 -3.0**
NLC Nalytchevo 4.18 225 PN **Pn** **23 50 56.7 -0.7**
AVH Avacha 4.36 229 P **Pn** **23 51 00.9 +1.1**
AVH *i* S **Sn** **23 51 49.8 -0.4**
GNL Ganaly 4.43 238 *e*P **Pn** **23 51 01.9 +1.1**
INSR Institute 4.56 228 *e*P **Pn** **23 51 03.3 +0.7**
INSR *i* S **Sn** **23 51 52.7 -2.4**
PET Petropavlovsk 4.57 228 *e*P **Pn** **23 51 02.9 +0.2**
PET *i* S **Sn** **23 51 53.4 -2.0**
PET Petropavlovsk 4.57 228 *e*Pn **Pn** **23 51 02.6 -0.1**
PET Petropavlovsk 4.57 228 *α i*PN **Pn** **23 51 02.7 0.0**
PET MLR MLR
comp=Z,16μm,17.0s
PETK Petropavlovsk- 4.92 233 Pn **Pn** **23 51 08.1 +0.6**
comp=Z,4.3nm,0.3s,baz=70,slow=18,SNR=62
PETK Sn **Sn** **23 52 04.7 +0.6**
comp=Z,4.7nm,0.3s,baz=77,slow=25,SNR=3.2
PETK Petropavlovsk- 4.92 233 PN **Pn** **23 51 08.1 +0.5**
PETK 23 52 04.7
PETK pmax pmax
comp=Z,4.0nm,0.3s
PETK smax
comp=N,5.0nm,0.3s
GRL Gorelyy 5.16 227 *e*P **Pn** **23 51 12.2 +1.4**
FX1 Attu Island--F 6.17 119 *e*Pn **Pn** **23 51 21.2 -3.4**
FX1 Attu Island--F 6.17 119 *e*PN **Pn** **23 51 21.2 -3.5**
SMY Shemya 6.72 117 *e*Pn **Pn** **23 51 29.9 -2.3**
SMY Shemya 6.72 117 *e*PN **Pn** **23 51 29.9 -2.3**
SKR Severo-Kuril's 7.38 225 *e*PN **Pn** **23 51 40.5 -0.7**
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=E,340nm,1.0s
SKR pmax pmax
comp=Z,560nm,1.0s
SEY Seymchan 9.02 323 *i* PN **Pn** **23 52 05.0 +1.4**
BILL Bilibino 11.89 4 *e*Pn **Pn** **23 52 43.5 +0.6**
comp=Z,50nm,0.6s
BILL Bilibino 11.89 4⇑ *e*PN **Pn** **23 52 43.4 +0.4**
BILL pmax pmax
comp=Z,96nm,1.7s
BILL MLR MLR
comp=Z,12μm,17.0s
NIKO Nikolski 15.88 91 *e*P **Pn** **23 53 38.9 +2.0**
YSS Yuzh-Sakhalins 16.20 244 *e*Pn **Pn** **23 53 41.8 +0.7**
comp=Z,95nm,1.0s
YSS Yuzh-Sakhalins 16.20 244⇓ *e*P **Pn** **23 53 41.4 +0.3**
YSS *e*S **Sn** **23 56 41.0 +0.7**
YSS pmax pmax
comp=Z,80nm,1.1s
YSS MLR MLR
comp=E,6μm,14.0s
YSS MLR MLR
comp=Z,9μm,14.0s
YSS MLR MLR
comp=N,7μm,15.0s
UNV Unalaska Valle 16.87 86 *e*Pn **Pn** **23 53 51.2 +1.7**
comp=N,377nm,1.4s
YUK Yuzh-Kuril'sk 16.90 232 *e*P **Pn** **23 53 48.8 -1.1**
YUK pmax pmax
comp=N,80nm,1.1s
YUK pmax pmax
comp=E,151nm,1.1s
YUK pmax pmax
comp=Z,235nm,1.1s
YUK MLR MLR
comp=N,5μm,18.0s
YUK MLR MLR
comp=E,3μm,18.0s
YUK MLR MLR
comp=Z,3μm,18.0s
AKUT Akutan 17.18 84 *e*P **Pn** **23 53 54.1 +0.8**
comp=Z,197nm,1.0s
ASAJ Asahikawa 18.32 238 P **Pn** **23 54 06.6 -1.0**
comp=Z,3.2nm,0.3s,baz=36,slow=6.8,SNR=68
ASAJ LR LR 00 01 46.8
comp=Z,8μm,18.1s,baz=202,slow=39
ASAJ Asahikawa 18.32 238 *e*Pn **Pn** **23 54 06.4 -1.1**
ASAJ Asahikawa 18.32 238 P **Pn** **23 54 06.6 -1.0**
ASAJ pmax pmax
comp=Z,3.0nm,0.3s
ASAJ MLR MLR
comp=Z,8μm,18.1s
YAK Yakutsk 18.50 303 *e*P **Pn** **23 54 09.1 -0.5**
comp=Z,65nm,0.6s
YAK Yakutsk 18.50 303 *e*P **Pn** **23 54 07.7 -1.9**
YAK *e*S **Sn** **23 57 35.7 +0.1**
YAK pmax pmax
comp=N,5.0nm,0.8s
YAK pmax pmax
comp=E,20nm,1.1s
YAK pmax pmax
comp=Z,30nm,0.9s
YAK pmax pmax
comp=Z,68nm,0.6s
YAK pmax pmax
comp=N,8.0nm,0.6s
YAK pmax pmax
comp=E,24nm,0.5s
YAK smax
comp=N,111nm,1.6s
YAK smax
comp=E,233nm,2.5s
YAK MLR MLR
comp=Z,2μm,12.0s
YAK MLR MLR
comp=N,2μm,10.0s
YAK MLR MLR
comp=E,3μm,14.0s
HABR Khabarovsk 19.34 259 *c e*P **Pn** **23 54 16.6 -3.2**
HABR *e*S **Sn** **23 57 55.5 -0.6**
HABR MLR MLR
comp=Z,8μm,17.0s
HABR MLR MLR
comp=N,4μm,14.0s
HABR MLR MLR
comp=E,5μm,15.0s
ERM Erimo 19.70 233 *e*P **Pn** **23 54 23.3 -0.9**
ERM Erimo 19.70 233 *e*P **Pn** **23 54 23.3 -0.9**
SDPT Sand Point 19.72 78 *e*P **Pn** **23 54 19.9 -4.4**
SDPT *e*Pn **Pn** **23 54 27.1 +2.7**
CHGN Chignik 20.57 74 *e*P **P** **23 54 31.1 -1.0**
KLR Kul'dur 20.75 264 *e*P **P** **23 54 28.6 -5.4**
TTA Tatalina 20.92 55 *e*P **P** **23 54 35.7 0.0**
comp=E,201nm,1.2s
TTA Tatalina 20.92 55 *e*P **P** **23 54 35.7 0.0**
TTA pmax pmax
comp=Z,201nm,1.2s
TIXI Tiksi 21.41 330 *e*P **P** **23 54 41.9 +0.9**
TIXI Tiksi 21.41 330 *e*P **P** **23 54 41.4 +0.4**
TIXI pmax pmax
comp=Z,85nm,1.0s,mb5.0
TIXI MLR MLR
comp=Z,6μm,14.0s,MS5.2
CLNS Chul'man 21.52 288 *e*P **P** **23 54 43.8 +1.6**
CLNS *e**PP 23 54 53.2
CLNS *e* 23 55 12.8
CLNS pmax pmax
comp=Z,37nm,0.9s,mb4.8
CLNS pmax pmax
comp=N,20nm,0.7s
CLNS pmax pmax
comp=E,97nm,1.1s
CLNS MLR MLR
comp=Z,3μm,12.0s,MS4.9
CLNS MLR MLR
comp=N,1μm,13.0s
PPLA Purkeypile 22.67 55 *e*P **P** **23 54 55.4 +1.0**
comp=N,190nm,1.4s,mb5.3
OHAK Old Harbor 23.05 70 *e*P **P** **23 54 56.9 -1.6**
comp=N,51nm,0.9s,mb5.0
KDAK Kodiak Island 23.27 68 P **P** **23 54 59.1 -1.7**
comp=N,21nm,0.9s,mb4.5,baz=294,slow=2.8,SNR=7.0
KDAK LR LR 00 03 52.3
comp=N,5μm,18.7s,MS5.0,baz=267,slow=36
KDAK Kodiak Island 23.27 68 *i* P **P** **23 55 00.5 -0.3**
TRF Thorofare Moun 23.50 53 *e*P **P** **23 55 02.6 -0.6**
comp=N,99nm,0.9s,mb5.2
COLD Coldfoot 23.60 44 *e*P **P** **23 55 02.9 -1.2**
comp=N,97nm,0.5s,mb5.5
RC01 Rabbit Creek A 24.01 59 *e*P **P** **23 55 07.5 -0.4**
comp=N,22nm,0.8s,mb4.7
MCK McKinley 24.08 53 *e*P **P** **23 55 06.9 -1.6**
comp=N,39nm,0.8s,mb4.9
MCK McKinley 24.08 53 *e*P **P** **23 55 06.9 -1.7**
MCK pmax pmax
comp=Z,39nm,0.8s,mb4.9
PMR Palmer 24.22 58 *e*P **P** **23 55 09.6 -0.2**
comp=Z,17nm,0.8s,mb4.5
PMR Palmer 24.22 58 *e*P **P** **23 55 09.6 -0.2**
PMR pmax pmax
comp=Z,17nm,0.8s,mb4.5
COLA College 24.50 50 *e*P **P** **23 55 11.8 -0.5**
comp=Z,45nm,0.8s,mb5.0
COLA College 24.50 50 *e*P **P** **23 55 11.8 -0.5**
COLA pmax pmax
comp=Z,45nm,0.8s,mb5.0
SML Sawmill 24.57 57 *e*P **P** **23 55 12.8 -0.1**
comp=Z,14nm,0.9s,mb4.5
SML Sawmill 24.57 57 *e*P **P** **23 55 12.8 -0.2**
SML pmax pmax
comp=Z,14nm,0.9s,mb4.5
MDJ Mudanjiang 24.68 257 P **P** **23 55 12.9 -1.2**
MDJ pP 23 55 15.9
MDJ sP sP 23 55 17.3 -3.8
MDJ S **S** **23 59 34.8 -0.1**
MDJ sS sS 23 59 40.0 -3.0
MDJ pmax pmax
comp=Z,6.0nm,1.1s,mb4.0
MDJ pmax pmax
comp=Z,1μm,12.2s
MDJ LR LR
comp=N,5μm,15.8s,MS5.1
MDJ LR LR
comp=E,4μm,20.1s,MS5.1
MDJ LR LR
comp=Z,4μm,19.7s,MS4.9
MDJ Mudanjiang 24.68 257 *e*P **P** **23 55 13.4 -0.7**
comp=Z,13nm,0.9s,mb4.5
ILAR Eielson Array 24.91 50 P **P** **23 55 14.6 -1.6**
comp=Z,14nm,1.0s,mb4.5,baz=266,slow=8.5,SNR=45
ILAR LR LR 00 05 45.5
comp=Z,3μm,18.7s,MS4.8,baz=48,slow=38
ILAR Eielson Array 24.91 50 P **P** **23 55 14.6 -1.5**
ILAR pmax pmax
comp=Z,14nm,1.0s
ILAR MLR MLR
comp=Z,3μm,18.7s
DOT Dot Lake 26.25 52 *e*P **P** **23 55 29.0 +0.7**
comp=Z,96nm,0.7s,mb5.4
MAJO Matsushiro 26.38 233 *e*P **P** **23 55 29.5 -0.1**
comp=Z,94nm,0.9s,mb5.3
MAJO Matsushiro 26.38 233 *e*P **P** **23 55 29.5 -0.2**
MAJO pmax pmax
comp=Z,94nm,0.9s,mb5.3
MAT Matsushiro 26.38 233 P **P** **23 55 29.4 -0.3**
MJAR Matsushiro Arr 26.38 233 P **P** **23 55 29.7 0.0**
comp=Z,32nm,0.8s,mb4.9,baz=15,slow=7.3,SNR=71
MJAR LR LR 00 06 22.7
comp=Z,3μm,19.7s,MS4.9,baz=25,slow=38
MJAR Matsushiro Arr 26.38 233 P **P** **23 55 29.7 0.0**
MJAR LR LR 00 06 22.7
MJAR Matsushiro Arr 26.38 233 P **P** **23 55 29.7 0.0**
MJAR pmax pmax
comp=Z,32nm,0.8s
MJAR MLR MLR
comp=Z,3μm,19.7s
EGAK Eagle 27.36 49 *e*P **P** **23 55 36.2 -2.0**
comp=Z,23nm,0.7s,mb4.8
CN2 Changchun 27.47 260 *e*P **P** **23 55 39.4 0.0**
CN2 *e*sP sP 23 55 46.0 -0.4
CN2 *e*S **S** **00 00 17.4 -1.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2μm,18.0s,MS5.1
CN2 LR LR
comp=E,4μm,18.0s,MS5.1
CN2 LR LR
comp=Z,5μm,19.0s,MS5.1
DAWY Dawson 28.23 51 *e*P **P** **23 55 44.9 -1.1**
JHJ Hachijo jima 2 28.64 227 LR LR 00 09 34.9
comp=Z,949nm,18.0s,MS4.4,baz=51,slow=41
INK Inuvik 29.91 41 P **P** **23 55 59.0 -1.8**
comp=Z,6.7nm,0.8s,mb4.4,baz=275,slow=3.5,SNR=10
INK Inuvik 29.91 41 *e*P **P** **23 56 00.4 -0.5**
comp=Z,45nm,1.0s,mb5.2
INK Inuvik 29.91 41 *e*P **P** **23 56 00.4 -0.4**
INK pmax pmax
comp=Z,45nm,1.0s
KSRS Korea Array 30.64 248 P **P** **23 56 06.0 -1.6**
comp=Z,6.2nm,0.8s,mb4.5,baz=37,slow=8.8,SNR=28
KSRS PcP PcP 23 59 06.7 +1.2
comp=Z,0.5nm,0.6s,baz=5.6,slow=1.0,SNR=3.0
KSRS LR LR 00 08 35.8
comp=Z,2μm,18.6s,MS4.8,baz=171,slow=37
KSRS Korea Array 30.64 248 P **P** **23 56 06.1 -1.5**
KSRS 23 59 06.7
KSRS pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
KSRS MLR MLR
comp=Z,2μm,18.6s,MS4.8
JNU Nakatsue 32.59 239 *e*P **P** **23 56 24.2 -0.6**
comp=Z,5.6nm,0.9s,mb4.5
CBIJ Chichi jima 33.15 218 LR LR 00 09 24.8
comp=Z,487nm,20.1s,MS4.2,baz=227,slow=35
WRAK Wrangell Islan 34.04 63 *e*P **P** **23 56 38.5 +1.3**
comp=Z,22nm,1.2s,mb5.0
DLBC Dease Lake 34.28 58 *e*P **P** **23 56 40.4 +1.1**
TLY Talaya 34.94 289 *e*P **P** **23 56 45.9 +0.9**
TLY pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
TLY MLR MLR
comp=Z,3μm,18.0s,MS5.0
BJI Beijing 35.12 263 P **P** **23 56 47.2 +0.5**
BJI S **S** **00 02 19.1 +0.6**
BJI pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BJI LR LR
comp=N,4μm,12.8s,MS5.6
BJI LR LR
comp=E,5μm,14.6s,MS5.6
BJI LR LR
comp=Z,3μm,16.1s,MS5.2
ULN Ulaanbaatar 35.22 281 *e*P **P** **23 56 46.7 -0.7**
comp=Z,31nm,1.4s,mb5.0
ULN Ulaanbaatar 35.22 281 *e*P **P** **23 56 46.7 -0.7**
ULN pmax pmax
comp=Z,31nm,1.4s,mb5.0
ULN Ulaanbaatar 35.22 281 P **P** **23 56 47.1 -0.3**
comp=Z,17nm,1.4s,mb4.8
SONM Songino Array 35.60 281 P **P** **23 56 49.7 -1.0**
comp=Z,8.9nm,0.9s,mb4.7,baz=62,slow=8.6,SNR=42
SONM PcP PcP 23 59 19.6 +0.5
comp=Z,1.5nm,0.8s,baz=64,slow=1.5,SNR=3.2
SONM Songino Array 35.60 281 P **P** **23 56 49.7 -1.0**
SONM 23 59 19.6
SONM pmax pmax
comp=Z,9.0nm,0.9s
ZAK Zakamensk 35.84 287 *e*P **P** **23 56 52.4 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MOY Mondy 36.34 290 *e*P **P** **23 56 58.1 +1.0**
BTO Baotou 38.16 269 *e*P **P** **23 57 13.0 +0.4**
JOW Kunigami 39.08 236 *e*P **P** **23 57 19.4 -1.0**
comp=Z,60nm,1.3s,mb5.2
YKA Yellowknife Ar 39.23 47 P **P** **23 57 19.5 -1.8**
comp=Z,5.6nm,0.7s,mb4.4,baz=299,slow=8.0,SNR=20
YKA Yellowknife Ar 39.23 47 P **P** **23 57 19.5 -1.8**
YKA pmax pmax
comp=Z,6.0nm,0.7s
NJ2 Nanjing 39.55 252 *e*P **P** **23 57 24.6 +0.3**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
WHN Wuhan 43.13 255 P **P** **23 58 10.3 +17**
WHN LR LR
comp=N,5μm,13.7s,MS5.8
WHN LR LR
comp=E,7μm,15.9s,MS5.8
WHN LR LR
comp=Z,10μm,14.2s,MS5.9
ZALV Zalesovo Beam 43.15 302 P **P** **23 57 53.0 -0.5**
comp=Z,0.3nm,0.3s,baz=69,slow=7.9,SNR=3.3
ZALV PP PP 23 59 29.6 -4.0
comp=Z,2.6nm,0.9s,baz=53,slow=9.6,SNR=3.6
ZALV Zalesovo Beam 43.15 302 P **P** **23 57 53.1 -0.5**
ZALV 23 59 29.6
NVS Novosibirsk 43.36 304⇑ *i*P **P** **23 57 53.8 -1.5**
NVS pmax pmax
comp=Z,55nm,1.9s,mb5.0
NVS pmax pmax
comp=N,23nm,2.0s
NVS pmax pmax
comp=E,26nm,1.5s
JCW Jim Creek 43.89 68 *e*P **P** **23 57 59.7 0.0**
comp=E,19nm,0.6s,mb5.0
KBS Kingsbay 44.09 353⇑ *e*P **P** **23 58 01.6 +0.7**
KBS pmax pmax
comp=Z,32nm,1.2s,mb4.9
F03A Seaside 44.50 71 ⇓pP pP 23 58 05.4 -4.2
baz=44
D05A Enumclaw 44.51 69 ⇓pP pP 23 58 05.8 -4.0
baz=44
GTA Gaotai 44.67 276 *e*P **P** **23 58 05.9 -0.1**
GTA pP pP 23 58 10.4 -0.7
GTA sP sP 23 58 13.6 +0.5
GTA S **S** **00 04 44.6 +3.2**
GTA sS sS 00 04 51.9 +2.0
GTA SS SS 00 07 56.0 -5.3
GTA pmax pmax
comp=Z,13nm,1.0s,mb4.7
GTA LR LR
comp=N,4μm,19.0s,MS5.5
GTA LR LR
comp=E,4μm,15.2s,MS5.5
GTA LR LR
comp=Z,2μm,17.3s,MS5.1
LZH Lanzhou 44.78 270 *e*P **P** **23 58 08.6 +1.7**
LZH pP pP 23 58 12.5 +0.5
LZH sP sP 23 58 15.0 +0.9
LZH pmax pmax
comp=Z,21nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,140nm,4.0s
LZH LR LR
comp=N,4μm,13.0s,MS5.7
LZH LR LR
comp=E,4μm,13.9s,MS5.7
LZH LR LR
comp=Z,2μm,17.5s,MS5.2
F04A Amboy 45.10 71 ⇓P **P** **23 58 09.5 +0.2**
baz=45
ETW Entiat 45.10 68 *e*P **P** **23 58 09.0 -0.3**
comp=Z,22nm,0.7s,mb5.1
B08A Colville Reser 45.12 66 ⇑P **P** **23 58 09.3 -0.2**
baz=45
HOOD Mount Hood Mea 45.90 71 *e*P **P** **23 58 16.2 +0.5**
comp=Z,30nm,0.7s,mb5.3
ENH Enshi 45.99 259 *e*P **P** **23 58 15.8 -0.8**
comp=Z,12nm,0.7s,mb5.0
H04A Detroit Lake 46.05 72 ⇑P **P** **23 58 15.1 -1.7**
baz=46
OD2 Odessa Site #2 46.07 67 *e*P **P** **23 58 15.8 -1.2**
comp=Z,14nm,0.8s,mb4.9
D08A Wollman Farm, 46.18 67 ⇓P **P** **23 58 17.2 -0.7**
baz=46
RSW Rattlesnake Hi 46.27 68 *e*P **P** **23 58 18.4 -0.2**
comp=Z,25nm,1.0s,mb5.1
NEW Newport 46.31 65 ⇓P **P** **23 58 17.4 -1.4**
baz=46
NEW Newport 46.31 65 *e*P **P** **23 58 18.5 -0.4**
comp=Z,13nm,1.2s,mb4.8
NEW Newport 46.31 65 *e*P **P** **23 58 18.5 -0.4**
NEW pmax pmax
comp=Z,13nm,1.2s
E09A Wood Farm, Sta 46.94 67 ⇓P **P** **23 58 23.4 -0.4**
baz=47,SNR=14
C11A Tepee Creek (N 47.03 65 ⇑P **P** **23 58 24.0 -0.4**
baz=47
POHA Pohakuloa 47.12 124 *e*P **P** **23 58 25.0 -0.5**
comp=Z,106nm,0.8s,mb5.8
A13A Flathead Natio 47.23 63 ⇓P **P** **23 58 25.6 -0.4**
baz=47
DAG Danmarks Havn 47.26 1 *i* P **P** **23 58 21.7 -4.2**
DAG pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
DAG Danmarks Havn 47.26 1 *i* P **P** **23 58 21.7 -4.2**
comp=Z,86nm,1.0s,mb5.6
LNOR Lincton Mounta 47.30 68 *e*P **P** **23 58 26.1 -0.6**
comp=Z,0.9nm,0.3s,mb4.2
LNOR Lincton Mounta 47.30 68 *e*P **P** **23 58 26.1 -0.5**
LNOR pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
G08A Pilot Rock 47.34 69 ⇑P **P** **23 58 26.2 -0.8**
baz=47
WALA Waterton Lakes 47.39 62 *e*P **P** **23 58 26.9 -0.5**
comp=Z,0.1nm,0.9s
C12B Naegeli Ranch, 47.51 65 ⇑P **P** **23 58 28.4 +0.1**
baz=47
B13A Whitefish 47.57 63 ⇓P **P** **23 58 27.6 -1.1**
baz=47,SNR=5.4
A14A Double T Ranch 47.69 62 ⇓P **P** **23 58 29.0 -0.6**
baz=47,SNR=9.2
BSMT Bassoo Peak 47.76 64 *e*P **P** **23 58 29.6 -0.5**
comp=Z,14nm,0.7s,mb5.1
YBH Yreka Blue Hor 47.77 75 *e*P **P** **23 58 30.0 -0.3**
comp=Z,18nm,1.0s,mb5.0
YBH Yreka Blue Hor 47.77 75 *e*P **P** **23 58 30.0 -0.4**
YBH pmax pmax
comp=Z,18nm,1.0s
F10A Beach Ranch, E 47.78 67 ⇓P **P** **23 58 29.4 -1.0**
baz=48,SNR=7.1
BLMT Blacktail Moun 47.87 64 *e*P **P** **23 58 30.9 -0.2**
comp=Z,21nm,1.1s,mb5.1
I07A Izee 47.87 71 ⇓P **P** **23 58 31.2 +0.1**
baz=48
C13A Hot Springs 47.98 64 ⇑P **P** **23 58 32.0 +0.1**
baz=48,SNR=16
A15A Johnson Ranch, 48.03 62 ⇓P **P** **23 58 31.7 -0.6**
baz=48
K05A Summer Lake 48.06 73 ⇑P **P** **23 58 33.2 +0.6**
baz=48
JTMT Jette 48.08 64 *e*P **P** **23 58 32.2 -0.5**
comp=Z,14nm,0.7s,mb5.1
KURK Kurchatov 48.14 302 *e*P **P** **23 58 32.1 -0.9**
comp=Z,17nm,1.0s,mb5.0
KURK Kurchatov 48.14 302 *d i*P **P** **23 58 32.2 -0.9**
KURK pmax pmax
comp=Z,21nm,1.7s,mb4.9
KURK MLR MLR
comp=Z,2μm,15.0s,MS5.2
KURK Kurchatov 48.14 302 P **P** **23 58 32.2 -0.9**
comp=Z,58nm,1.0s,mb5.6,SNR=8.9
YBMT Yellow Bay 48.14 63 *e*P **P** **23 58 32.5 -0.7**
comp=Z,5.9nm,0.8s,mb4.7
B14A Marquette Ranc 48.17 63 ⇓P **P** **23 58 33.5 +0.1**
baz=48
WMQ Urumqi 48.22 289 P **P** **23 58 34.0 +0.2**
WMQ sP sP 23 58 41.0 0.0
WMQ PP PP 00 00 25.0 -0.9
WMQ S **S** **00 05 31.0 -1.2**
WMQ ScS ScS 00 08 24.0 -1.7
WMQ SS SS 00 08 56.0 -5.0
WMQ pmax pmax
comp=Z,38nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,95nm,4.0s
WMQ LR LR
comp=N,8μm,15.0s,MS5.9
WMQ LR LR
comp=E,5μm,15.0s,MS5.9
WMQ LR LR
comp=Z,2μm,15.0s,MS5.2
E12A Beaver Dam Sad 48.33 66 ⇑P **P** **23 58 34.5 -0.1**

baz=48
C14A **Swan Lake** 48.34 63 ⇑P P 23 58 34.4 -0.2
baz=48
SWMT **Swartz Lake** 48.38 64 *e*P P 23 58 34.4 -0.7
comp=Z,9.3nm,0.8s,mb4.9
D13A **Huson** 48.43 65 ⇑P P 23 58 35.2 -0.2
baz=48
B15A **Bradely Ranch,** 48.56 62 ⇑P P 23 58 35.3 -1.1
baz=48,SNR=7.5
A16A **West Butte Ran** 48.60 61 ⇑P P 23 58 35.3 -1.4
baz=48,SNR=9.0
WDC **Whiskeytown Da** 48.67 76 *e*P P 23 58 36.1 -1.2
comp=Z,16nm,1.0s,mb5.0
WDC **Whiskeytown Da** 48.67 76 *e*P P 23 58 36.1 -1.2
WDC pmax pmax
comp=Z,16nm,1.0s,mb5.0
CD2 **Chengdu** 48.67 265 *e*P P 23 58 36.6 -0.8
CD2 pP pP 23 58 41.1 -1.5
CD2 PP PP 00 00 30.3 0.0
CD2 S **S** **00 05 36.9 -1.9**
CD2 sS sS 00 05 50.8 +3.5
CD2 pmax pmax
comp=Z,20nm,1.2s,mb5.0
CD2 pmax pmax
comp=Z,60nm,5.2s
CD2 LR LR
comp=N,2μm,14.3s
CD2 LR LR
comp=Z,4μm,15.5s,MS5.5
SLMT **Seeley Lake** 48.82 64 *e*P P 23 58 37.6 -0.8
comp=Z,15nm,0.9s,mb5.0
MSO **Missoula** 48.87 64 ⇑P P 23 58 38.6 -0.2
baz=49
C15A **Salmond Ranch,** 48.90 63 ⇑P P 23 58 38.8 -0.1
baz=49,SNR=9.3
B16A **M & M Farms, S** 48.91 62 ⇓P P 23 58 38.3 -0.7
baz=49,SNR=6.1
J08A **Circle Bar Ran** 48.91 71 ⇑P P 23 58 39.2 +0.1
baz=49
D14A **Greenough** 48.92 64 ⇓P P 23 58 38.7 -0.5
baz=49,SNR=9.2
F12A **Elk City** 48.94 66 ⇓P P 23 58 38.8 -0.5
baz=49,SNR=13
MOD **Modoc** 48.95 73 *e*P P 23 58 39.4 0.0
comp=Z,10nm,0.8s,mb4.9
MK31 **Makanchi Array** 48.98 296 *e*P P 23 58 38.3 -1.3
MK31 **Makanchi Array** 48.98 296 *ce*P P 23 58 38.3 -1.3
MK31 pmax pmax
comp=Z,17nm,1.0s,mb5.0
MKAR **Makanchi Array** 48.98 296 P P 23 58 38.4 -1.2
comp=Z,3.8nm,0.8s,mb4.5,baz=58,slow=6.7,SNR=26
MKAR LR LR 00 20 30.9
comp=Z,873nm,19.8s,MS4.8,baz=40,slow=38
MKAR **Makanchi Array** 48.98 296 P P 23 58 38.4 -1.2
MKAR pmax pmax
comp=Z,4.0nm,0.9s
MKAR MLR MLR
comp=Z,873nm,19.8s
E13A **Victor** 49.01 65 ⇓P P 23 58 39.3 -0.6
baz=49
A17A **Triple J Farms** 49.04 60 P P 23 58 39.4 -0.7
baz=49,SNR=11
FFC **Flin Flon** 49.13 50 *e*P P 23 58 40.1 -0.5
comp=Z,7.7nm,0.9s,mb4.7
FFC **Flin Flon** 49.13 50 *i*P P 23 58 41.1 +0.5
CHMT **Chamberlain Mo** 49.16 64 *e*P P 23 58 39.9 -1.1
comp=Z,4.4nm,0.8s,mb4.5
G12A **Big Creek, Yel** 49.33 67 ⇓P P 23 58 42.0 -0.3
baz=49
E14A **Clinton** 49.38 65 ⇑P P 23 58 42.5 -0.2
baz=49
F13A **Darby** 49.39 66 ⇓P P 23 58 42.5 -0.2
baz=49,SNR=7.1
B17A **L&G Farms, Che** 49.44 61 ⇑P P 23 58 42.9 -0.2
baz=49
D15A **Lincoln** 49.44 63 ⇑P P 23 58 42.6 -0.5
baz=49,SNR=8.4
WVOR **Wild Horse Val** 49.47 72 *e*P P 23 58 43.0 -0.3
comp=Z,14nm,0.9s,mb5.0
WVOR **Wild Horse Val** 49.47 72 *e*P P 23 58 43.1 -0.3
WVOR pmax pmax
comp=Z,14nm,0.9s,mb5.0
A18A **Metzger Ranch,** 49.47 60 ⇑P P 23 58 42.5 -0.9
baz=49,SNR=5.6
FCC **Fort Churchill** 49.52 42 *e*P P 23 58 43.4 -0.2
comp=Z,0.6nm,0.8s
FCC **Fort Churchill** 49.52 42 *e*P P 23 58 43.4 -0.2
E15A **Deer Lodge** 49.80 64 ⇓P P 23 58 45.6 -0.3
baz=50,SNR=9.9
B18A **Beardsley Farm** 49.87 60 ⇑P P 23 58 45.4 -1.0
baz=50,SNR=8.5
C17A **Wharram Farm,** 49.91 62 ⇓P P 23 58 45.7 -0.9
baz=50,SNR=8.5
G13A **Cobalt** 49.92 66 ⇓P P 23 58 45.9 -0.8
baz=50,SNR=6.2
D16A **Dana Ranch, Ca** 49.93 63 P P 23 58 46.8 -0.1
baz=50,SNR=15
H12A **Diamond D Ranc** 49.97 67 ⇓P P 23 58 46.8 -0.4
baz=50
A19A **Klindworth Far** 50.00 59 ⇓P P 23 58 46.8 -0.6
baz=50
HRY **Holter Researc** 50.01 63 *e*P P 23 58 46.7 -0.8
comp=Z,62nm,1.3s,mb5.5
EGMT **Eagleton** 50.13 61 ⇑P P 23 58 47.9 -0.5
baz=50
EGMT **Eagleton** 50.13 61 *e*P P 23 58 47.8 -0.6
comp=Z,25nm,1.3s,mb5.1
E16A **East Helena** 50.21 63 ⇑P P 23 58 48.9 -0.1
baz=50,SNR=14
MFID **Camas Ranch** 50.26 69 ⇑P P 23 58 49.2 -0.2
baz=50,SNR=5.7
H13A **Challis** 50.27 67 ⇑P P 23 58 48.5 -1.0
baz=50
D17A **Six Diamond Ra** 50.27 62 ⇓P P 23 58 48.5 -1.0
baz=50,SNR=9.2
F15A **Butte** 50.28 64 ⇓P P 23 58 47.9 -1.6
baz=50
LRM **Limekiln Ridge** 50.32 64 *e*P P 23 58 48.9 -0.9
comp=Z,30nm,0.8s,mb5.4
BVAR **Borovoye Array** 50.34 308 P P 23 58 49.4 -0.4
comp=Z,18nm,0.7s,mb5.2,baz=52,slow=8.0,SNR=109
BVAR PP PP 00 00 53.8 +8.9
comp=Z,10nm,1.1s,baz=57,slow=8.8,SNR=3.7
BVAR **Borovoye Array** 50.34 308 P P 23 58 49.4 -0.4
BVAR 00 00 53.8
BVAR pmax pmax
comp=Z,18nm,0.7s
I12A **Atlanta** 50.35 68 ⇑P P 23 58 49.4 -0.7
baz=50
BRVK **Borovoye** 50.36 309 *e*P P 23 58 49.3 -0.7
comp=Z,41nm,0.9s,mb5.5
BRVK **Borovoye** 50.36 309 *d*P P 23 58 49.5 -0.5
BRVK pmax pmax
comp=Z,27nm,0.8s,mb5.3
BRVK MLR MLR
comp=Z,2μm,17.0s,MS5.2
BRVK **Borovoye** 50.36 309 P P 23 58 49.6 -0.4
comp=Z,223nm,0.5s,SNR=23
A20A **Cobblestone Ra** 50.42 59 ⇓P P 23 58 49.8 -0.8
baz=50
GYA **Guiyang** 50.51 259 ⇑*i*P P 23 58 52.0 +0.5
GYA PP PP 00 00 48.9 +1.8
GYA ScP ScP 00 04 04.3 0.0
GYA S **S** **00 06 04.1 -0.6**
GYA SS SS 00 09 34.5 -3.9
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,560nm,18.9s,MS4.7
GYA LR LR
comp=E,450nm,19.0s,MS4.7
GYA LR LR
comp=Z,580nm,19.1s,MS4.6
SUMG **Summit** 50.53 9 *e*P P 23 58 50.0 -1.1
comp=Z,42nm,1.1s,mb5.3
SUMG **Summit** 50.53 9 *i*P P 23 58 51.2 +0.2
comp=Z,19nm,1.0s,mb5.0
DLMT **Dillon** 50.56 65 *e*P P 23 58 50.6 -1.0
comp=Z,30nm,1.4s,mb5.0
KEV **Kevo** 50.59 342 *e*P P 23 58 52.1 +0.6
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KEV **Kevo** 50.59 342 *ep* P 23 58 52.1 +0.6
comp=Z,3.1nm,0.6s,mb4.4
E17A **Martinsdale** 50.67 63 ⇓P P 23 58 52.3 -0.2
baz=50,SNR=11
C19A **Slack Wire Ran** 50.68 61 ⇑P P 23 58 52.3 -0.1
baz=50,SNR=8.7
D18A **Linhart Farms,** 50.68 62 ⇑P P 23 58 52.9 +0.3
baz=50
H14A **Leadore** 50.69 66 ⇓P P 23 58 52.4 -0.3
baz=50
LVZ **Lovozero** 50.72 338 *i*P P 23 58 51.3 -1.3
LVZ pmax pmax
comp=Z,17nm,1.7s,mb4.7
LVZ MLR MLR
comp=Z,1μm,21.0s,MS5.0
G15A **Dillon** 50.75 65 ⇓P P 23 58 52.3 -0.8
baz=50,SNR=12
I13A **Wildhorse Cree** 50.80 67 ⇑P P 23 58 53.2 -0.3
baz=51,SNR=11
MCMT **McKenzie Canyo** 50.81 66 *e*P P 23 58 52.5 -1.0
comp=Z,4.2nm,0.8s,mb4.4
BOZ **Bozeman (W)** 50.85 64 ⇓P P 23 58 54.0 +0.2
baz=51,SNR=5.6
BOZ **Bozeman (W)** 50.85 64 *e*P P 23 58 53.3 -0.5
comp=Z,4.5nm,0.7s,mb4.5
BOZ **Bozeman (W)** 50.85 64 *e*P P 23 58 53.3 -0.5
BOZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
HLID **Hailey** 50.89 68 ⇓P P 23 58 53.8 -0.4
baz=51
HLID **Hailey** 50.89 68 *e*P P 23 58 53.5 -0.6
comp=Z,4.9nm,0.8s,mb4.5
PAHR **Pah Rah Range** 50.99 75 *e*P P 23 58 53.9 -1.1
comp=Z,6.8nm,0.6s,mb4.8
ARCES **ARCESS Array B** 51.04 343 P P 23 58 54.2 -0.7
comp=Z,5.0nm,0.8s,mb4.5,baz=17,slow=8.9,SNR=15
ARCES LR LR 00 22 04.2
comp=Z,1μm,19.1s,MS4.9,baz=351,slow=38
ARCES **ARCESS Array B** 51.04 343 P P 23 58 54.2 -0.7
ARCES LR LR 00 22 04.2
ARCES **ARCESS Array B** 51.04 343 P P 23 58 54.2 -0.7
ARCES pmax pmax
comp=Z,5.0nm,0.8s
ARCES MLR MLR
comp=Z,1μm,19.1s
ARE0 **ARCESS Array S** 51.04 343 *e*P P 23 58 54.0 -0.9
SOKR **Solikamsk** 51.05 321 *ci*P P 23 58 55.2 +0.1
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.2
G16A **Moss Hill, Enn** 51.05 65 ⇑P P 23 58 55.3 -0.1
baz=51,SNR=12
H15A **Lima** 51.06 66 ⇓P P 23 58 55.0 -0.4
baz=51
E18A **Harlowton** 51.06 62 ⇓P P 23 58 55.4 0.0
baz=51,SNR=10
WCN **Washoe City** 51.08 75 ⇑P P 23 58 55.1 -0.6
baz=51
WCN **Washoe City** 51.08 75 *e*P P 23 58 54.9 -0.7
comp=Z,12nm,0.9s,mb4.8
WCN **Washoe City** 51.08 75 *e*P P 23 58 54.9 -0.8
WCN pmax pmax
comp=Z,12nm,0.9s,mb4.8
I14A **Mackay** 51.13 67 ⇓P P 23 58 55.7 -0.2
baz=51
J13A **Cove Ranch, Pi** 51.13 68 ⇓P P 23 58 55.8 -0.2
baz=51
D19A **Cripps Ranch,** 51.15 61 ⇓P P 23 58 55.2 -0.9
baz=51,SNR=6.3
F17A **Fitzpatrick Pl** 51.16 63 ⇓P P 23 58 54.9 -1.3
baz=51
C20A **Veseth Ranch,** 51.20 60 ⇓P P 23 58 56.1 -0.3
baz=51,SNR=6.8
APA **Apatity** 51.26 338 ⇑*e*P P 23 59 04.2 +7.6
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
APA MLR MLR
comp=Z,2μm,18.0s,MS5.3
J14A **Carey** 51.52 67 ⇑P P 23 58 59.1 +0.2
baz=51,SNR=7.2
G17A **Piece Place,** 51.53 64 ⇑P P 23 58 59.8 +0.9
baz=51
C21A **Desert Coulee** 51.56 59 ⇓P P 23 58 59.2 +0.1
baz=51
D20A **Manuel Ranch,** 51.57 61 ⇓P P 23 58 59.6 +0.4
baz=51
F18A **Big Timber** 51.63 63 ⇑P P 23 59 00.0 +0.4
baz=51,SNR=7.5
SVE **Sverdlovsk** 51.64 317 ⇑*e*P P 23 58 59.9 +0.3
SVE pmax pmax
comp=Z,45nm,1.1s,mb5.3
SVE MLR MLR
comp=Z,2μm,16.0s,MS5.3
CMB **Columbia Colle** 51.65 77 *e*P P 23 58 59.6 -0.3
comp=Z,4.9nm,0.7s,mb4.5
CMB **Columbia Colle** 51.65 77 *e*P P 23 58 59.6 -0.4
CMB pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
E19A **Rath Farm, Rou** 51.69 62 ⇑P P 23 59 00.1 -0.1
baz=51
H16A **Russell Place,** 51.70 65 ⇑P P 23 59 00.5 +0.2
baz=52
GCMT **Greycliff** 51.73 63 *e*P P 23 59 00.5 +0.1
comp=Z,6.2nm,0.6s,mb4.7
E20A **Meyer Farm, Mu** 51.98 61 ⇓P P 23 59 02.1 -0.2
baz=52
F19A **Roth Farm, Mol** 52.04 62 ⇓P P 23 59 03.0 +0.3
baz=52,SNR=7.7
YFT **Old Faithful** 52.09 65 *e*P P 23 59 04.1 +1.0
comp=Z,7.4nm,0.7s,mb4.7
G18A **Lazy EL Ranch,** 52.12 63 ⇓P P 23 59 02.9 -0.4
baz=52
C22A **Vida** 52.19 59 ⇑P P 23 59 03.8 0.0
baz=52
A24A **Westby** 52.25 56 ⇑P P 23 59 04.0 -0.2
baz=52
K14A **Jones Ranch, D** 52.25 68 ⇓P P 23 59 05.1 +0.8
baz=52
RLMT **Red Lodge** 52.40 63 ⇓P P 23 59 05.8 +0.4
baz=52,SNR=15
IMW **Indian Meadow** 52.43 65 *e*P P 23 59 05.9 +0.2
comp=Z,21nm,1.2s,mb4.9
E21A **Keefer Ranch,** 52.47 60 ⇑P P 23 59 06.5 +0.6
baz=52
D22A **Cohagen** 52.47 59 ⇓P P 23 59 06.3 +0.3
baz=52
F20A **Billings** 52.47 62 ⇑P P 23 59 06.0 +0.1
baz=52
DGMT **Dagmar** 52.48 57 ⇓P P 23 59 06.0 +0.1
baz=52
K15A **Arbon** 52.48 67 ⇓P P 23 59 06.5 +0.4
baz=52
C23A **Lambert** 52.48 58 ⇓P P 23 59 06.5 +0.5
baz=52
NVAR **Mina Array Bea** 52.49 75 P P 23 59 06.6 +0.4
comp=Z,3.8nm,0.8s,mb4.4,baz=299,slow=7.4,SNR=20
NVAR **Mina Array Bea** 52.49 75 P P 23 59 06.6 +0.4
H18A **Shoshone NF, C** 52.52 64 ⇑P P 23 59 07.0 +0.7
baz=52
L14A **Malta** 52.58 68 ⇑P P 23 59 07.4 +0.5
baz=52,SNR=9.5
MOOW **Moose Ponds** 52.64 65 *e*P P 23 59 06.2 -1.0
comp=Z,7.2nm,0.9s,mb4.6
ARU **Arti** 52.71 318 *e*P P 23 59 07.2 -0.4
comp=Z,44nm,0.9s,mb5.4
ARU **Arti** 52.71 318 *d*P P 23 59 07.3 -0.3
ARU *e* 00 00 12.8
ARU *e* 00 01 06.1
ARU S **S** **00 06 37.5 +3.2**
ARU SS SS 00 10 11.4 -0.7
ARU SSS 00 11 53.8
ARU pmax pmax
comp=Z,18nm,0.8s,mb5.0
ARU MLR MLR
comp=Z,1μm,14.0s,MS5.1
ARU **Arti** 52.71 318 P P 23 59 07.8 +0.2
comp=Z,266nm,1.0s,mb6.1,SNR=10
LAO **LASA Array** 52.78 60 ⇓P P 23 59 08.4 +0.2
baz=52
LOHW **Long Hollow** 52.81 65 *e*P P 23 59 08.3 -0.1
comp=Z,14nm,1.1s,mb4.8
G20A **Bridger** 52.85 62 ⇑P P 23 59 08.0 -0.8
baz=53,SNR=11
K16A **Soda Springs** 52.86 67 ⇑P P 23 59 10.6 +1.7
baz=53
H19A **Powell** 52.87 63 ⇑P P 23 59 09.5 +0.6
baz=53
F21A **Absaloka Mine,** 52.96 61 ⇑P P 23 59 09.8 +0.3
baz=53
L15A **Malad City** 53.05 68 ⇓P P 23 59 10.5 +0.3
baz=53
PRGR **Permogore** 53.06 328 ⇑*i*P P 23 59 09.4 -0.6
PRGR pmax pmax
comp=Z,23nm,0.8s,mb5.2
Q10A **Clear Creek Ra** 53.23 73 ⇓P P 23 59 12.1 +0.5
baz=53,SNR=6.8
M15A **Larsen Ranch,** 53.41 68 ⇑P P 23 59 12.3 -0.6
baz=53
TGY **Tagaytay City** 53.48 236 P P 23 59 14.3 +0.6
comp=Z,92nm,0.3s,mb6.2,baz=108,slow=9.6,SNR=2.5
TGY **Tagaytay City** 53.48 236 P P 23 59 14.3 +0.6
SPUT **South Promonto** 53.52 69 *e*P P 23 59 13.4 -0.3
comp=Z,7.0nm,0.9s,mb4.6
KMI **Kunming** 53.72 261 P P 23 59 17.4 +2.0
KMI pP pP 23 59 20.6 0.0
KMI sP sP 23 59 22.4 -0.2
KMI PP PP 00 01 19.4 +3.2
KMI S **S** **00 06 49.2 +0.4**
KMI SS SS 00 10 29.1 -0.1
KMI pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KMI LR LR
comp=N,3μm,16.2s,MS5.5
KMI LR LR
comp=E,2μm,16.2s,MS5.5
KMI LR LR
comp=Z,2μm,12.9s,MS5.4
N15A **Stansbury Isla** 53.78 69 ⇑P P 23 59 15.9 +0.2
baz=54
K18A **Toltan Ranch,** 53.79 66 ⇑P P 23 59 16.3 +0.6
baz=54,SNR=16
I20A **Worland** 53.81 63 ⇑P P 23 59 16.3 +0.5
baz=54
J19A **Crowheart** 53.84 65 ⇓P P 23 59 16.5 +0.4
baz=54
SMMC **Simmler** 53.86 79 ⇑P P 23 59 16.1 -0.2
baz=54
H21A **Big Horn, Sher** 53.86 62 ⇑P P 23 59 17.6 +1.4
baz=54
BW06 **Boulder Array** 53.95 65 ⇑P P 23 59 16.6 -0.2
baz=54,SNR=5.1
PDAR **Pinedale Array** 53.95 65 P P 23 59 16.4 -0.4
comp=Z,3.6nm,0.7s,mb4.4,baz=333,slow=2.4,SNR=23
PDAR LR LR 00 23 11.5
comp=Z,938nm,21.0s,MS4.8,baz=344,slow=37
R11A **Troy Canyon, C** 54.01 73 ⇑P P 23 59 17.4 0.0
baz=54,SNR=8.3
GRAC **Grapevine Rang** 54.04 76 ⇓P P 23 59 18.6 +1.0
baz=54
CWC **Cottonwood Cre** 54.07 77 ⇑P P 23 59 18.4 +0.6
baz=54,SNR=7.7
DUG **Dugway** 54.13 70 *e*P P 23 59 18.8 +0.5
comp=Z,7.7nm,0.7s,mb4.7
DUG **Dugway** 54.13 70 *e*P P 23 59 18.8 +0.6
DUG pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
K19A **Absolon Red Bu** 54.26 65 ⇓P P 23 59 18.6 -0.5
baz=54
J20A **Shoshoni** 54.27 64 P P 23 59 19.4 +0.3
baz=54,SNR=9.7
PKM **Peak Mountain** 54.27 79 ⇓P P 23 59 19.4 +0.2
baz=54
L18A **Fontenelle, Gr** 54.31 66 ⇓P P 23 59 19.8 +0.3
baz=54
M17A **Scullys Gap (B** 54.32 67 ⇑P P 23 59 20.0 +0.5
baz=54
I21A **Big Trails, Te** 54.33 63 ⇓P P 23 59 19.7 +0.1
baz=54
ISA **Isabella** 54.43 78 ⇑P P 23 59 20.2 -0.3
baz=54
ISA **Isabella** 54.43 78 *e*P P 23 59 19.5 -1.0
comp=Z,9.2nm,1.4s,mb4.5
ISA **Isabella** 54.43 78 *e*P P 23 59 19.5 -1.0
ISA pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
P14A **Drum Mountains** 54.44 70 ⇑P P 23 59 20.9 +0.4
baz=54,SNR=7.6
S11A **Rachel** 54.45 74 ⇑P P 23 59 21.3 +0.8
baz=54
J21A **Lysite** 54.59 63 ⇑P P 23 59 21.8 +0.3
baz=54
N17A **Moffit Pass** 54.62 68 ⇓P P 23 59 22.1 +0.3
baz=54
K20A **Yellowstone Ra** 54.64 65 ⇑P P 23 59 21.0 -0.9
baz=54
MPMC **Manual Prospec** 54.67 76 ⇓P P 23 59 22.8 +0.5
baz=54,SNR=7.3
FURC **Furnace Creek,** 54.71 76 ⇑P P 23 59 23.3 +0.8
baz=54,SNR=5.5
Q14A **Sevier Lake (B** 54.77 71 ⇓P P 23 59 23.6 +0.7
baz=54,SNR=8.4
DAU **Daniels Canyon** 54.79 68 *e*P P 23 59 21.0 -2.0
DAU **Daniels Canyon** 54.79 68 *e*P P 23 59 21.0 -2.0
QIZ **Qiongzhong** 54.81 250 *e*P P 23 59 23.3 -0.1
comp=Z,18nm,1.0s,mb5.1
P15A **Leamington** 54.87 70 ⇓P P 23 59 23.5 -0.1
baz=55
MPU **Maple Canyon** 54.88 69 *e*P P 23 59 23.6 -0.1
comp=Z,6.8nm,0.6s,mb4.8
ULM **Lac du Bonnet** 54.93 51 P P 23 59 23.0 -0.9
comp=Z,5.5nm,0.7s,mb4.7,baz=312,slow=8.3,SNR=6.9
ULM LR LR 00 22 13.0
comp=Z,1μm,18.1s,MS5.0,baz=229,slow=35
ULM **Lac du Bonnet** 54.93 51 P P 23 59 23.0 -0.9
ULM LR LR 00 22 13.0
S12A **Delamar Landin** 54.95 73 ⇑P P 23 59 25.2 +1.0
baz=55,SNR=11
LRMC **Laurel Mountai** 55.00 77 ⇑P P 23 59 24.8 +0.2
baz=55
R13A **O'Grain Ranch,** 55.00 72 ⇑P P 23 59 25.6 +1.1
baz=55
J22A **Midwest** 55.02 63 ⇓P P 23 59 24.9 +0.3
baz=55
T11A **Corn Creek, Al** 55.02 74 ⇓P P 23 59 25.5 +0.7
baz=55
U10A **Ash Meadows, A** 55.03 75 ⇓P P 23 59 25.5 +0.7
baz=55
TKM2 **Tokmak 2** 55.08 296 *e*P P 23 59 24.9 -0.2
comp=Z,14nm,1.0s,mb4.9
TKM2 **Tokmak 2** 55.08 296 *e*P P 23 59 24.9 -0.2
TKM2 pmax pmax
comp=Z,14nm,1.0s,mb5.0
L20A **Wamsutter** 55.12 65 ⇑P P 23 59 25.3 0.0
baz=55,SNR=5.8
N18A **Larsen Ranch,** 55.19 67 ⇑P P 23 59 25.7 -0.2
baz=55
K21A **Alcova** 55.21 64 ⇓P P 23 59 25.7 -0.3
baz=55,SNR=5.4
O17A **Robinson Place** 55.22 68 ⇓P P 23 59 25.5 -0.5
baz=55
Q15A **Fillmore** 55.24 70 ⇓P P 23 59 27.2 +0.9
baz=55
EDW2 **Edwards Air Fo** 55.28 78 ⇓P P 23 59 26.8 +0.2
baz=55
USP **Ospenovka** 55.37 297 P P 23 59 27.3 +0.1
SNR=17
KLMR **Klimovskoe** 55.42 331 *e*P P 23 59 25.3 -2.0
KLMR pmax pmax
comp=Z,43nm,1.1s,mb5.4
KLMR pmax pmax
comp=Z,640nm,10.0s
KLMR MLR MLR
comp=Z,3μm,17.0s,MS5.4
S13A **Holt Ranch, En** 55.50 73 ⇑P P 23 59 28.5 +0.3
baz=55
N19A **John Jarvie Ra** 55.51 67 ⇓P P 23 59 28.2 0.0
baz=55
K22A **Casper** 55.56 63 ⇑P P 23 59 28.4 -0.1
baz=55
M20A **Sweetwater, Wa** 55.57 66 ⇓P P 23 59 28.6 0.0
baz=55,SNR=5.0
KBK **Karagaybulak** 55.60 297 P P 23 59 28.8 0.0
SNR=9.3
SHPR **Sheep Range** 55.60 74 *e*P P 23 59 28.6 -0.3
GSC **Goldstone** 55.61 77 ⇓P P 23 59 29.5 +0.5
baz=55,SNR=6.6
FRU **Bishkek** 55.63 297 *e*P P 23 59 29.0 -0.1
FRU *e* pP 23 59 34.0 -0.3
L21A **Rawlins** 55.64 65 ⇑P P 23 59 29.4 +0.3
baz=55
JOF **Joensuu** 55.71 336 *e*P P 23 59 27.6 -1.7
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
JOF **Joensuu** 55.71 336 *ep* P 23 59 27.6 -1.7
comp=Z,5.4nm,0.6s,mb4.8
CCUT **Cedar City** 55.79 72 *e*P P 23 59 30.4 +0.2
comp=Z,10nm,0.7s,mb5.0
AAK **Ala-Archa** 55.84 297 P P 23 59 31.0 +0.5

SNR=16
AAK Ala-Archa 55.84 297 P **P 23 59 30.5 0.0**
comp=Z,6.9nm,0.7s,mb4.8,baz=112,slow=3.4,SNR=29
AAK LR LR 00 23 07.6
comp=Z,2μm,18.7s,MS5.1,baz=298,slow=36
AAK Ala-Archa 55.84 297 P **P 23 59 30.5 0.0**
AAK LR LR 00 23 07.6
AAK Ala-Archa 55.84 297 P **P 23 59 30.5 0.0**
AAK pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
AAK MLR MLR
comp=Z,2μm,18.7s,MS5.1
AAK Ala-Archa 55.84 297 P **P 23 59 31.4 +0.9**
comp=Z,100nm,0.6s,mb6.0,SNR=7.1
P18A Preston Nutter 55.89 68 ⇑P **P 23 59 31.8 +0.8**
baz=56,SNR=10
T13A Saint George 55.89 73 ⇓P **P 23 59 32.0 +1.0**
baz=56,SNR=5.6
M21A Separation Pea 55.91 65 ⇑P **P 23 59 31.1 +0.1**
baz=56
Q16A Castle Valley 55.93 70 ⇑P **P 23 59 32.1 +0.9**
baz=56
V11A Goodsprings 55.95 75 ⇓P **P 23 59 32.0 +0.5**
baz=56
O19A Miners Draw (B 55.97 67 ⇓P **P 23 59 31.8 +0.3**
baz=56
U12A Valley of Fire 55.99 74 ⇓P **P 23 59 32.5 +0.8**
baz=56
N20A Spence Gulch, 56.02 66 P **P 23 59 32.6 +0.7**
baz=56,SNR=18
SRU San Rafael 56.13 69 ⇑P **P 23 59 33.4 +0.7**
baz=56,SNR=12
EKS2 Erkin-Say 56.18 297 P **P 23 59 33.5 +0.6**
SNR=20
EKS2 Erkin-Say 56.18 297 *e*P **P 23 59 33.2 +0.2**
comp=Z,22nm,1.0s,mb5.1
R16A Teasdale 56.24 70 ⇑P **P 23 59 34.2 +0.8**
baz=56,SNR=5.4
U13A Pakoon Wash 56.31 74 ⇑P **P 23 59 34.8 +0.8**
baz=56
Q18A Rafter H Ranch 56.34 69 ⇓P **P 23 59 34.4 +0.3**
baz=56
V12A Nelson 56.35 75 ⇑P **P 23 59 34.9 +0.6**
baz=56
L23A Garrett 56.37 63 ⇑P **P 23 59 33.8 -0.5**
baz=56,SNR=6.6
P19A Cripple Cowboy 56.54 68 ⇓P **P 23 59 35.9 +0.3**
baz=56
R17A Hanksville Air 56.54 70 ⇑P **P 23 59 35.8 +0.2**
baz=56,SNR=11
O20A White River Ci 56.55 67 ⇑P **P 23 59 36.0 +0.4**
baz=56,SNR=5.9
S16A Weppner Ranch, 56.60 71 ⇑P **P 23 59 36.9 +0.8**
baz=56,SNR=10
AML Almayashu 56.61 297 P **P 23 59 36.7 +0.6**
SNR=17
GMRC Granite Mounta 56.62 76 ⇑P **P 23 59 36.5 +0.3**
baz=56
LSA Lhasa 56.63 275 P **P 23 59 37.0 +0.7**
LSA Lhasa 56.63 275 *e*P **P 23 59 36.4 +0.1**
comp=Z,34nm,0.7s,mb5.5
LSA Lhasa 56.63 275 *e*P **P 23 59 36.4 +0.1**
LSA pmax pmax
comp=Z,34nm,0.7s,mb5.5
T15A Red Dirt Ranch 56.71 72 ⇑P **P 23 59 37.7 +0.9**
baz=56
V13A Grand Canyon W 56.72 74 ⇑P **P 23 59 37.6 +0.7**
baz=56,SNR=6.6
U14A Mt Trumbull 56.73 73 ⇑P **P 23 59 37.9 +0.9**
baz=56,SNR=5.3
Q19A Hogan Spring (56.90 68 P **P 23 59 37.9 -0.2**
baz=57,SNR=19
N22A Wattenberg Ran 56.96 65 ⇓P **P 23 59 39.2 +0.7**
baz=57
R18A Canyonlands Na 56.99 69 P **P 23 59 38.5 -0.3**
baz=57,SNR=11
S17A Black Ridge (B 57.08 70 ⇑P **P 23 59 39.8 +0.4**
baz=57
N23A Red Feather La 57.15 64 ⇑P **P 23 59 40.3 +0.4**
baz=57
U15A North Rim 57.20 72 ⇓P **P 23 59 40.9 +0.7**
baz=57
M24A Cheyenne 57.28 63 ⇓P **P 23 59 41.5 +0.6**
baz=57
W13A Hualapai Mount 57.34 75 ⇓P **P 23 59 41.8 +0.5**
baz=57
V14A Boquillas Ranc 57.36 74 ⇑P **P 23 59 41.8 +0.4**
baz=57,SNR=5.6
IRM Iron Mountain 57.36 76 ⇑P **P 23 59 41.4 -0.1**
baz=57
O22A Kremmling 57.39 65 ⇓P **P 23 59 43.0 +1.4**
baz=57
R19A Curley Farm, L 57.40 69 ⇓P **P 23 59 41.7 0.0**
baz=57
Q20A Ridgley Place, 57.40 68 ⇓P **P 23 59 41.5 -0.2**
baz=57
KSH Kashi 57.41 293 *e*P **P 23 59 45.5 +3.8**
KSH *e*pP pP 23 59 50.1 +3.1
KSH *e*PcP PcP 00 00 37.9 +2.5
KSH *e*PP PP 00 01 55.3 +6.5
KSH *e*ScP ScP 00 04 35.9 +1.6
KSH *e*PcS PcS 00 04 37.7 +1.2
KSH *e*S **S 00 07 41.8 +4.1**
KSH *e*sS sS 00 07 50.2 +3.9
KSH *e*ScS ScS 00 09 30.9 +0.7
KSH *e*SS SS 00 11 34.5 +7.9
KSH pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KSH pmax pmax
comp=Z,380nm,4.9s
KSH LR LR
comp=N,3μm,15.2s,MS5.7
KSH LR LR
comp=E,4μm,14.5s,MS5.7
KSH LR LR
comp=Z,4μm,17.7s,MS5.6
S18A Hurst Farm, Bl 57.46 70 ⇑P **P 23 59 41.7 -0.5**
baz=57,SNR=14
AKTK Aktyubinsk 57.47 313 P **P 23 59 41.6 -0.4**
AKTK LR LR 00 26 25.8
AKTO Aktyubinsk 57.47 313 P **P 23 59 41.6 -0.4**
comp=Z,6.7nm,0.8s,mb4.7,baz=48,slow=7.9,SNR=29
AKTO LR LR 00 26 25.8
comp=Z,1μm,18.1s,MS5.0,baz=221,slow=38
AKTO Aktyubinsk 57.47 313 P **P 23 59 41.6 -0.4**
AKTO pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
AKTO MLR MLR
comp=Z,1μm,18.1s,MS5.0
PV04 Paradox Valley 57.51 68 *e*P **P 23 59 42.1 -0.4**
KAF Kangasniemi 57.52 338 *e*P **P 23 59 35.3 -6.8**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KAF Kangasniemi 57.52 338 *e*p **P 23 59 35.3 -6.8**
comp=Z,3.2nm,0.7s,mb4.5
T17A Navajo Res., N 57.56 71 ⇑P **P 23 59 42.9 +0.1**
baz=57
AB31 Akbulak array 57.58 311 *ce*P **P 23 59 42.4 -0.4**
AB31 pmax pmax
comp=Z,22nm,0.8s,mb5.2
ABKAR Akbulak array 57.58 311 *e*P **P 23 59 42.3 -0.5**
comp=Z,57nm,1.2s,mb5.5
O23A Lake Granby, G 57.68 65 ⇑P **P 23 59 44.8 +1.2**
baz=57,SNR=15
W14A Seligman 57.69 74 ⇑P **P 23 59 44.7 +1.0**
baz=58
X13A Yucca 57.75 75 ⇑P **P 23 59 43.9 -0.3**
baz=58
Q21A Lamborn Mesa, 57.86 67 ⇑P **P 23 59 45.4 +0.5**
baz=58
S19A Harvey Farm, M 57.87 69 ⇑P **P 23 59 45.3 +0.3**
baz=58
SMCO Snowmass 57.91 67 *e*P **P 23 59 44.8 -0.5**
comp=Z,7.8nm,0.7s,mb4.8
T18A Mexican Hat 57.94 70 P **P 23 59 45.1 -0.4**
baz=58,SNR=5.5
ISCO Idaho Springs 58.14 65 ⇑P **P 23 59 48.0 +1.1**
baz=58,SNR=6.3
ISCO Idaho Springs 58.14 65 *e*P **P 23 59 47.5 +0.6**
ISCO Idaho Springs 58.14 65 *e*P **P 23 59 47.5 +0.6**
FINES FINESS Array B 58.17 338 P **P 23 59 45.8 -0.9**
comp=Z,6.1nm,0.9s,mb4.6,baz=132,slow=2.8,SNR=7.5
FINES LR LR 00 28 17.7
comp=Z,1μm,18.4s,MS5.1,baz=66,slow=40
FINES FINESS Array B 58.17 338 P **P 23 59 45.8 -0.9**
FINES pmax pmax
comp=Z,6.0nm,0.9s
FINES MLR MLR
comp=Z,1μm,18.4s
O24A Longmont 58.17 64 ⇑P **P 23 59 47.8 +0.7**
baz=58
Q22A Crested Butte, 58.18 67 ⇑P **P 23 59 47.8 +0.6**
baz=58
S20A Disappointment 58.21 69 ⇑P **P 23 59 47.5 +0.2**
baz=58
R21A Cimarron 58.23 68 ⇑P **P 23 59 48.2 +0.7**
baz=58
P23A Jefferson 58.34 66 ⇑P **P 23 59 49.7 +1.4**
baz=58
V17A Tonalea, Kykot 58.60 72 ⇑P **P 23 59 51.0 +0.9**
baz=58,SNR=9.6
W16A Flagstaff 58.60 73 ⇑P **P 23 59 51.0 +0.9**
baz=58
T19A Beclabito 58.62 70 ⇓P **P 23 59 50.2 0.0**
baz=58,SNR=7.8
S21A Coal Bank Pass 58.63 68 ⇑P **P 23 59 51.3 +1.0**
baz=58
R22A Saguache, Gunn 58.74 67 ⇑P **P 23 59 52.3 +1.2**
baz=58
Z13A Yuma Proving G 58.90 76 ⇑P **P 23 59 52.8 +0.5**
baz=59
U19A Dine' College, 58.93 70 ⇑P **P 23 59 52.6 +0.2**
baz=59
Y15A Casa Rosa Ranc 59.04 74 ⇓P **P 23 59 53.8 +0.6**
baz=59
S22A 4UR Ranch, Cre 59.07 68 ⇑P **P 23 59 54.4 +1.0**
baz=59
P25A Willow Gulch B 59.09 64 ⇑P **P 23 59 54.3 +0.8**
baz=59
X16A Lo Mia Camp, P 59.17 73 ⇓P **P 23 59 54.7 +0.6**
baz=59
CHRT Chiangrai 59.55 260 ⇓P **P 23 59 56.0 -0.9**
comp=Z,113nm,1.0s,mb5.8
R24A Sanders Place, 59.58 66 ⇑P **P 23 59 57.7 +0.8**
baz=59
U21A Nageezi 59.64 69 ⇓P **P 23 59 57.9 +0.5**
baz=59
SDCO Great Sand Dun 59.75 67 ⇓P **P 23 59 58.7 +0.6**
baz=60
Y17A Roosevelt 60.04 73 ⇑P **P 00 00 00.5 +0.4**
baz=60
115A Sonoran Desert 60.05 75 ⇓P **P 00 00 01.4 +1.2**
baz=60
R25A Fountain Ranch 60.07 65 ⇑P **P 00 00 00.4 +0.2**
baz=60
U22A Llaves 60.09 69 ⇑P **P 23 59 59.9 -0.6**
baz=60
W20A Ramah 60.19 71 ⇑P **P 00 00 01.3 +0.2**
baz=60
MOS Moscow 60.29 328 *e*P **P 00 00 08.1 +6.6**
MOS *e*S **S 00 08 16.8 +2.2**
MOS pmax pmax
comp=Z,52nm,1.3s,mb5.4
MOS MLR MLR
comp=Z,2μm,15.0s,MS5.4
X19A St. Johns 60.31 72 ⇑P **P 00 00 03.4 +1.5**
baz=60
214A Organ Pipe Nat 60.31 76 ⇓P **P 00 00 01.9 -0.1**
baz=60
U23A El Rito 60.48 68 ⇓P **P 00 00 03.7 +0.6**
baz=60
T24A Torres, Weston 60.49 67 ⇓P **P 00 00 04.0 +0.8**
baz=60
X20A Quemado 60.64 71 ⇓P **P 00 00 05.1 +0.9**
baz=60
VSU Vasula 60.72 336 *i* P **P 00 00 02.3 -2.0**
VSU pmax pmax
comp=Z,38nm,1.5s,mb5.3
VSU MLR MLR
comp=Z,1μm,17.0s,MS5.1
CHTO Chiang Mai 60.87 260 *e*P **P 00 00 05.7 -0.3**
comp=Z,22nm,0.9s,mb5.3
CHTO Chiang Mai 60.87 260 *e*P **P 00 00 05.7 -0.2**
CHTO pmax pmax
comp=Z,22nm,0.9s,mb5.3
CHTO Chiang Mai 60.87 260 P **P 00 00 05.9 0.0**
comp=Z,30nm,0.9s,mb5.4
V23A Ortiz Mt. (NFS 60.93 69 ⇑P **P 00 00 07.2 +1.0**
baz=61
GUN Gumba 60.93 277 *e*P **P 00 00 06.5 +0.2**
comp=Z,109nm,0.9s,mb6.0
X21A Alamocita Cree 61.09 71 ⇓P **P 00 00 08.5 +1.2**
baz=61,SNR=5.8
OBN Obninsk 61.13 329⇑ *e*P **P 00 00 07.1 -0.2**
OBN *e* 00 02 22.9
OBN *e*S **S 00 08 22.9 -2.5**
OBN pmax pmax
comp=Z,20nm,1.7s,mb5.0
OBN MLR MLR
comp=Z,2μm,17.0s,MS5.2
CM31 Chiang Mai Arr 61.16 260 *e*P **P 00 00 07.7 -0.2**
comp=Z,6.1nm,0.7s,mb4.8
CMAR Chiang Mai Arr 61.16 260 P **P 00 00 08.0 +0.1**
comp=Z,9.7nm,0.8s,mb5.0,baz=19,slow=7.1,SNR=39
CMAR LR LR 00 29 08.1
comp=Z,2μm,18.8s,MS5.2,baz=218,slow=38
CMAR Chiang Mai Arr 61.16 260 P **P 00 00 08.0 +0.1**
CMAR pmax pmax
comp=Z,10.0nm,0.8s
CMAR MLR MLR
comp=Z,2μm,18.8s
NB2 NORSAR Subarra 61.16 345 P **P 00 00 06.7 -0.6**
comp=Z,8.8nm,0.9s,mb4.9,baz=17,slow=6.9
NOA NORSAR Array B 61.16 345 P **P 00 00 06.7 -0.7**
comp=Z,8.2nm,0.8s,mb4.9,baz=17,slow=6.9,SNR=22
NOA LR LR 00 27 39.6
comp=Z,490nm,18.1s,MS4.7,baz=0.0,slow=37
NOA NORSAR Array B 61.16 345 P **P 00 00 06.7 -0.6**
NOA pmax pmax
comp=Z,8.0nm,0.8s
NOA MLR MLR
comp=Z,490nm,18.1s
Y20A Horse Springs, 61.19 71 ⇓P **P 00 00 09.1 +1.2**
baz=61
KKN Kakani 61.36 278 *e*P **P 00 00 08.9 -0.3**
comp=Z,77nm,0.8s,mb5.9
NAO01 NORSAR Array S 61.40 346 *e*P **P 00 00 08.1 -0.8**
comp=Z,10nm,0.9s,mb5.0
V24A Rampart Ranch, 61.42 68 ⇑P **P 00 00 10.1 +0.6**
baz=61
PKI Pulchoki 61.46 278 *e*P **P 00 00 09.5 -0.3**
comp=Z,120nm,0.9s,mb6.0
PKIN Phulchoki 61.46 278 *e*P **P 00 00 09.6 -0.3**
comp=Z,91nm,0.9s,mb5.9
GKN Gorkha 61.55 278 *e*P **P 00 00 09.9 -0.6**
comp=Z,123nm,0.9s,mb6.0
DMN Daman 61.60 278 *e*P **P 00 00 10.8 0.0**
comp=Z,99nm,1.0s,mb5.9
BAKI Biak 61.63 212 P pP 00 00 20.6 +4.3
comp=Z,86nm,1.1s
V25A Rancho No Teng 61.67 67 ⇑P **P 00 00 10.4 -0.7**
baz=61
SCHQ Schefferville 61.73 31 P **P 00 00 09.6 -1.7**
comp=Z,11nm,1.2s,mb4.9,baz=357,slow=9.4,SNR=5.9
SCHQ LR LR 00 31 09.8
comp=Z,884nm,19.2s,MS4.9,baz=85,slow=40
DANN Dangsing 61.76 279 *e*P **P 00 00 11.9 0.0**
comp=Z,106nm,0.8s,mb6.0
CBKS Cedar Bluff 61.83 62 ⇑P **P 00 00 11.4 -0.8**
baz=62
Z21A St. Cloud Mine 62.02 71 ⇓P **P 00 00 14.2 +0.6**
baz=62
120A U Bar Ranch, L 62.10 73 ⇓P **P 00 00 14.9 +0.8**
baz=62
V26A Tequesquite Ra 62.13 67 ⇓P **P 00 00 13.9 -0.3**
baz=62
219A White Tail Can 62.19 73 ⇓P **P 00 00 15.4 +0.7**
baz=62
KOLN Koldanda 62.30 279 *e*P **P 00 00 15.1 -0.4**
comp=Z,59nm,0.8s,mb5.8
Y23A Lovelace Mesa, 62.39 70 ⇑P **P 00 00 16.8 +0.7**
baz=62
Z22A Elephant Butte 62.44 71 ⇑P **P 00 00 16.9 +0.6**
baz=62
MYLDM Lahad Datu 62.45 234 P **P 00 00 20.2 +3.6**
comp=Z,39nm,1.4s,mb5.4
220A Playas Peak, P 62.66 73 ⇑P **P 00 00 18.2 +0.3**
baz=62
319A Douglas 62.66 74 ⇓P **P 00 00 18.2 +0.4**
baz=62
Y24A Capitan 62.72 69 ⇑P **P 00 00 18.8 +0.5**
baz=62
KKM Kota Kinabalu 62.73 236 *e*P **P 00 00 19.9 +1.4**
comp=Z,64nm,1.4s,mb5.6
KKM Kota Kinabalu 62.73 236 P pP 00 00 27.9 +4.1
comp=Z,24nm,1.4s
VRHR Novokhopersk 63.01 323 *e*P **P 00 00 18.0 -1.9**
VRHR *e* 00 00 26.1
VRHR pmax pmax
comp=N,4.0nm,0.6s
VRHR pmax pmax
comp=E,2.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
Y25A Mesa, Roswell 63.11 69 ⇓P **P 00 00 21.0 +0.2**
baz=63
Z24A Sheeppen Canyo 63.22 70 ⇓P **P 00 00 22.0 +0.4**
baz=63
VSR Storozhevoye 63.71 325 *e*P **P 00 00 23.8 -0.7**
VSR *e* 00 00 31.9
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR MLR MLR
comp=N,1μm,14.0s,MS5.3
VSR MLR MLR
comp=E,1μm,14.0s,MS5.3
VSR MLR MLR
comp=Z,2μm,14.0s,MS5.4
VORD Divnogorie 63.88 325 *e*P **P 00 00 25.0 -0.7**
VORD *e* 00 00 33.0
VORD pmax pmax
comp=N,4.0nm,0.6s
VORD pmax pmax
comp=E,7.0nm,0.6s
VORD pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
VORD MLR MLR
comp=N,300nm,14.0s,MS5.3
VORD MLR MLR
comp=E,1μm,14.0s,MS5.3
VORD MLR MLR
comp=Z,2μm,14.0s,MS5.4
Z26A Caprock 63.99 69 ⇓P **P 00 00 26.7 0.0**
baz=64
LBMI Labuha 64.01 222 P pP 00 00 35.7 +3.5
MSTX Muleshoe 64.07 67 ⇑P **P 00 00 26.5 -0.7**
baz=64
125A Gardner Draw, 64.12 70 ⇑P **P 00 00 27.6 +0.1**
baz=64
224A Cornudas Mount 64.12 71 ⇓P **P 00 00 27.3 -0.2**
baz=64
Z27A Tatum 64.35 68 ⇑P **P 00 00 28.5 -0.5**
baz=64
MNTX Cornudas Mount 64.49 71 ⇓P **P 00 00 30.2 +0.3**
baz=64
KBL Kabul 64.77 295 *e*P **P 00 00 30.4 -1.4**
comp=Z,18nm,0.9s,mb5.1
KBL Kabul 64.77 295 *e*P **P 00 00 30.4 -1.3**
KBL pmax pmax
comp=Z,18nm,0.9s,mb5.1
325A Bean Ranch, Si 64.96 71 ⇑P **P 00 00 33.1 0.0**
baz=65
425A Indio Mountain 65.41 71 ⇑P **P 00 00 36.3 +0.3**
baz=65
HNR Honiara 65.51 185 LR LR 00 27 09.8
comp=Z,1μm,18.1s,MS5.2,baz=186,slow=34
326A Caldwell Ranch 65.53 70 ⇓P **P 00 00 36.1 -0.6**
baz=65
426A McDonald Obser 66.01 71 ⇓P **P 00 00 39.7 -0.1**
baz=66
328A Wristen Ranch, 66.08 69 ⇑P **P 00 00 39.4 -0.9**
baz=66
427A Hayter Ranch, 66.20 70 ⇑P **P 00 00 40.6 -0.4**
baz=66
526A Mary Lane Ranc 66.46 71 ⇑P **P 00 00 42.8 +0.1**
baz=66
527A Woodward Ranch 66.64 71 ⇑P **P 00 00 43.9 0.0**
baz=66
428A Kincaid Ranch, 66.67 69 ⇓P **P 00 00 44.4 +0.3**
baz=66
626A Big Bend Ranch 66.83 71 ⇓P **P 00 00 45.1 -0.1**
baz=67
TLE Tual 66.86 214 P pP 00 00 52.1 +1.4
comp=Z,5μmcomp=Z,201nm,0.7s
528A Cox Ranch, San 67.06 70 ⇓P **P 00 00 46.7 +0.1**
baz=67
KIEV Kiev 67.12 331 *e*P **P 00 00 45.2 -1.4**
comp=Z,19nm,1.1s,mb5.0
KIEV Kiev 67.12 331 *e*P **P 00 00 45.2 -1.4**
KIEV pmax pmax
comp=Z,19nm,1.1s,mb5.0
TXAR Lajitas Array 67.26 71 P **P 00 00 47.5 -0.3**
comp=Z,5.3nm,0.8s,mb4.6,baz=299,slow=4.2,SNR=51
TXAR LR LR 00 32 00.5
comp=Z,1μm,19.2s,MS5.1,baz=30,slow=38
TXAR Lajitas Array 67.26 71 P **P 00 00 47.5 -0.3**
TXAR pmax pmax
comp=Z,5.0nm,0.8s
TXAR MLR MLR
comp=Z,1μm,19.2s
627A Terlingua Ranc 67.31 71 ⇓P **P 00 00 48.2 +0.1**
baz=67
ABKT Ailbek 67.36 305 P **P 00 00 48.7 +0.4**
comp=Z,335nm,1.2s,mb6.2,SNR=12
628A Black Gap, Mar 67.55 70 ⇓P **P 00 00 49.2 -0.4**
baz=67
SBUM Sibu 67.76 238 P **P 00 00 52.2 +1.1**
comp=Z,51nm,1.3s,mb5.4
ESK Eskdalemuir 68.35 352 *e*P **P 00 00 54.0 -0.2**
comp=Z,19nm,0.8s,mb5.2
ESK Eskdalemuir 68.35 352 *e*P **P 00 00 54.0 -0.3**
ESK pmax pmax
comp=Z,19nm,0.8s,mb5.2
JCT Junction City 68.36 67 ⇑P **P 00 00 54.4 -0.4**
baz=68
KIV Kislovodsk 68.74 319 *e*P **P 00 00 56.8 -0.1**
comp=Z,16nm,0.9s,mb4.9
KIV Kislovodsk 68.74 319⇑ *e*P **P 00 00 57.3 +0.4**
KIV *e* 00 03 31.2
KIV *e*S S 00 09 57.4 -1.9
KIV pmax pmax
comp=Z,13nm,2.3s,mb4.5
KIV MLR MLR
comp=Z,2μm,22.0s,MS5.2
LVV L'vov 69.27 334 *e*P **P 00 01 07.4 +7.3**
LVV MLR MLR
comp=Z,2μm,17.0s,MS5.4
LVV MLR MLR
comp=N,2μm,16.0s,MS5.4
LVV MLR MLR
comp=E,1μm,16.0s,MS5.4
ZEI Tsey 69.31 317 *e*P **P 00 00 59.2 -1.2**
ZEI pmax pmax
comp=Z,33nm,1.4s,mb5.1
KSM Kuching 69.53 240 *e*P **P 00 01 02.6 +0.4**
comp=Z,8.1nm,0.7s,mb4.8
KSM Kuching 69.53 240 P **P 00 01 03.9 +1.8**
comp=Z,33nm,1.1s,mb5.2
KWP Kalwaria Pacla 69.77 334 *e*P **P 00 01 04.0 +0.9**
KWP Kalwaria Pacla 69.77 334 *e*P **P 00 01 04.0 +0.8**
KWP Kalwaria Pacla 69.77 334⇓ *i*P **P 00 01 03.7 +0.5**
OJC Ojcow 69.89 337 *e*P **P 00 01 04.3 +0.4**
OJC Ojcow 69.89 337 *e*P **P 00 01 04.3 +0.4**
CLZ Clausthal 70.16 343 *e*P **P 00 01 05.8 +0.3**
comp=Z,33nm,1.2s,mb5.1
CLZ Clausthal 70.16 343 *e*P **P 00 01 05.8 +0.3**
comp=Z,33nm,1.2s,mb5.1
CLZ Clausthal 70.16 343 *e*P **P 00 01 05.8 +0.3**
CLZ pmax pmax
comp=Z,33nm,1.2s,mb5.1
CLL Collm 70.22 341 *e*P **P 00 01 05.5 -0.4**
comp=Z,26nm,1.3s,mb5.0
CLL Collm 70.22 341 *i* P **P 00 01 05.1 -0.8**
comp=Z,20nm,1.5s,mb4.8
CLL *i* 00 01 12.1
CLL LR LR
comp=Z,1μm,21.0s,MS5.2
CLL Collm 70.22 341 *i* P **P 00 01 05.1 -0.8**
CLL *i* 00 01 12.1
CLL pmax pmax
comp=Z,14nm,1.5s,mb4.7
CLL MLR MLR
comp=Z,1μm,21.0s,MS5.2
CLL Collm 70.22 341 *i* P **P 00 01 05.1 -0.8**
comp=Z,20nm,1.5s,mb4.8
CLL *i* (sP) sP 00 01 12.1 -1.1
comp=Z,26nm,1.3s
CLL *i* 00 02 04.8

CLL Lm 00 31 00.0
comp=Z,1μm,21.0s
UPC Upice 70.42 339 *e*P **P** **00 01 07.4 +0.3**
UPC *e**PP pP 00 01 14.6 +2.1
UPC Upice 70.42 339 *e*P **P** **00 01 07.4 +0.3**
UPC *e*x x 00 01 14.6
BRG Berggiesshubel 70.47 341 *e*P **P** **00 01 07.1 -0.3**
BRG Berggiesshubel 70.47 341 *e*P **P** **00 01 07.1 -0.4**
comp=Z,13nm,1.6s,mb4.6
BRG *e* 00 01 15.5
comp=Z,15nm,1.3s
BRG
comp=Z,2μm,14.9s
BRG
comp=N,1μm,14.2s
BRG
comp=E,1μm,14.5s
BRG Berggiesshubel 70.47 341 *e*P **P** **00 01 07.1 -0.3**
BRG *e* 00 01 15.5
BRG pmax pmax
comp=Z,8.0nm,1.6s,mb4.4
BRG MLR MLR
comp=Z,904nm,14.9s,MS5.2
BRG MLR MLR
comp=N,723nm,14.2s,MS5.2
BRG MLR MLR
comp=E,608nm,14.5s,MS5.2
DPC Dobruska-Polom 70.51 339 *e*P **P** **00 01 07.9 +0.2**
DPC *e**PP pP 00 01 15.5 +2.5
DPC MLR MLR
comp=Z,1μm,15.7s,MS5.3
DPC Dobruska-Polom 70.51 339 *e*P **P** **00 01 07.9 +0.2**
DPC *e*pP pP 00 01 15.5 +2.5
DPC AMS AMS 00 35 40.0
comp=Z,1μm,15.7s
KOLS Kolonicke sedl 70.53 334 *e*P **P** **00 01 08.4 +0.6**
comp=Z,3.8nm,0.9s,mb4.3
KOLS *e* 00 01 16.3
KOLS Kolonicke sedl 70.53 334 *e*P **P** **00 01 08.4 +0.6**
KOLS *e* 00 01 16.3
KOLS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
NIE Niedzica 70.53 336 *e*P **P** **00 01 08.5 +0.7**
NIE Niedzica 70.53 336 *e*P **P** **00 01 08.5 +0.7**
FBE Freiberg 70.53 341 *e*P **P** **00 01 07.8 0.0**
comp=Z,65nm,1.9s,mb5.2
DLF Lyons Farm 70.58 354 *e*P **P** **00 01 07.7 -0.4**
OKC Ostrava-Krasne 70.61 337 *e*P **P** **00 01 08.7 +0.4**
OKC *e**PP pP 00 01 15.5 +1.8
OKC MLR MLR
comp=Z,900nm,16.4s,MS5.1
OKC Ostrava-Krasne 70.61 337 *e*P **P** **00 01 08.7 +0.4**
OKC *e*x x 00 01 15.5
OKC AMS AMS 00 36 20.0
comp=Z,900nm,16.4s
PVCC Panska Ves 70.68 340 *e*P **P** **00 01 11.7 +3.0**
PVCC *e**PP pP 00 01 18.5 +4.4
PVCC MLR MLR
comp=Z,1μm,18.6s,MS5.2
PVCC Panska Ves 70.68 340 *e*P **P** **00 01 11.7 +3.0**
PVCC *e*x x 00 01 18.5
PVCC AMS AMS 00 36 40.0
comp=Z,1μm,18.6s
CRVS Cervenica-Dubn 70.75 335 *e*P **P** **00 01 09.8 +0.6**
comp=Z,3.5nm,1.0s,mb4.2
CRVS *e* 00 01 17.6
CRVS Cervenica-Dubn 70.75 335 *e*P **P** **00 01 09.8 +0.6**
CRVS *e* 00 01 17.6
CRVS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
MORC Moravsky Berou 70.80 338 *e*P **P** **00 01 09.4 -0.1**
comp=Z,27nm,1.4s,mb5.0
MORC Moravsky Berou 70.80 338 *e*P **P** **00 01 09.4 -0.1**
MORC pmax pmax
comp=Z,27nm,1.4s,mb5.0
MORC Moravsky Berou 70.80 338⇑ *i*P **P** **00 01 10.1 +0.6**
UZH Uzhgorod 70.80 334 *e*P **P** **00 01 09.0 -0.5**
BURAR Bucovina Array 71.01 332 ‖*i*P **P** **00 01 10.6 -0.2**
KAPI Kappang 71.05 228 *e*P **P** **00 01 09.8 -1.5**
comp=Z,15nm,2.8s,mb5.4
KAPI Kappang 71.05 228 P pP 00 01 19.3 +2.6
comp=Z,12nm,1.6s
MOX Moxa 71.11 342 *e*P **P** **00 01 11.4 +0.1**
MOX *e* 00 01 19.6
comp=Z,19nm,1.3s
MOX Moxa 71.11 342 *e*P **P** **00 01 11.3 0.0**
comp=Z,15nm,1.2s,mb4.8
MOX Moxa 71.11 342 *e*P **P** **00 01 11.4 +0.1**
comp=Z,19nm,1.3s,mb4.9
MOX *e* 00 01 19.6
MOX Moxa 71.11 342 *e*P **P** **00 01 11.4 +0.1**
MOX *e* 00 01 19.6
MOX pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
KULM Kulim 71.14 250 *e*P **P** **00 01 13.5 +1.4**
comp=Z,19nm,1.1s,mb4.9
WERD Werda 71.17 341 *e*P **P** **00 01 12.0 +0.3**
comp=Z,28nm,1.3s,mb5.0
TANN Tannenbergstha 71.18 341 *e*P **P** **00 01 11.9 +0.1**
comp=Z,15nm,1.2s,mb4.8
PRU Pruhonice 71.20 340 *e*P **P** **00 01 12.6 +0.7**
PRU *e**PP pP 00 01 20.1 +2.8
PRU MLR MLR
comp=Z,1μm,17.7s,MS5.2
PRU Pruhonice 71.20 340 *e*P **P** **00 01 12.6 +0.7**
PRU *e*x x 00 01 20.1
PRU AMS AMS 00 36 40.0
comp=Z,1μm,17.7s
TRPA Tarpa 71.21 334⇑ *i*P **P** **00 01 12.8 +0.8**
GNI Garni 71.23 315 LR LR 00 36 09.9
comp=Z,2μm,19.5s,MS5.3,baz=62,slow=39
GNI Garni 71.23 315 *i*P **P** **00 01 08.1 -4.1**
GNI MLR MLR
comp=Z,2μm,22.0s
GUNZ Gunzen 71.25 341 *e*P **P** **00 01 12.4 +0.2**
comp=Z,17nm,1.2s,mb4.8
WERN Wernitzgruen 71.32 341 *e*P **P** **00 01 12.7 +0.1**
comp=Z,24nm,1.3s,mb5.0
NKC Novy Kostel 71.36 341 *e*P **P** **00 01 11.6 -1.2**
NKC *e**PP pP 00 01 20.7 +2.5
NKC MLR MLR
comp=Z,1μm,20.3s,MS5.2
NKC Novy Kostel 71.36 341 *e*P **P** **00 01 11.6 -1.2**
NKC *e*x x 00 01 20.7
NKC AMS AMS 00 31 40.0
comp=Z,1μm,20.3s
KECS Kecovo 71.37 335 *e*P **P** **00 01 12.9 0.0**
comp=Z,3.2nm,0.9s,mb4.2
KECS *e* 00 01 20.2
KECS Kecovo 71.37 335 *e*P **P** **00 01 12.9 0.0**
KECS *e* 00 01 20.2
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
VRAC Vranov 71.44 338 ‖*i*P **P** **00 01 13.8 +0.4**
TREC Trest 71.68 339 *e*P **P** **00 01 14.9 +0.1**
TREC *e**PP pP 00 01 22.2 +2.1
TREC MLR MLR
comp=Z,1μm,17.4s,MS5.3
TREC Trest 71.68 339 *e*P **P** **00 01 14.9 +0.1**
TREC *e*x x 00 01 22.2
TREC AMS AMS 00 36 50.0
comp=Z,1μm,17.4s
VYHS Vyhne 71.73 337 *e*P **P** **00 01 15.8 +0.7**
VYHS *e* 00 01 23.7
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KOLL Kolacno 71.75 337 *e*P **P** **00 01 15.6 +0.4**
KOLL Kolacno 71.75 337 *e*P **P** **00 01 15.6 +0.4**
TKL Tuckaleechee C 71.87 53 LR LR 00 33 35.5
comp=Z,2μm,21.0s,MS5.4,baz=339,slow=36
MEM Membach 72.01 346 P **P** **00 01 16.4 -0.4**
comp=Z,22nm,1.2s,mb5.0
PSZ Piszkesteto 72.03 336 *e*P **P** **00 01 17.3 +0.3**
comp=Z,14nm,1.2s,mb4.8
PSZ Piszkesteto 72.03 336 *e*P **P** **00 01 17.3 +0.3**
PSZ pmax pmax
comp=Z,14nm,1.2s,mb4.8
PSZ Piszkesteto 72.03 336 ‖*i*P **P** **00 01 25.9 +8.9**
GRA1 Grafenberg Arr 72.09 342 *e*P **P** **00 01 17.6 +0.3**
comp=Z,33nm,1.1s,mb5.2
GRF Grafenberg Arr 72.09 342 *e*P **P** **00 01 17.6 +0.3**
comp=Z,33nm,1.1s,mb5.2
GRF Grafenberg Arr 72.09 342 *e*P **P** **00 01 17.6 +0.3**
comp=Z,33nm,1.1s,mb5.2
GRF Grafenberg Arr 72.09 342 *e*P **P** **00 01 17.6 +0.3**
GRF pmax pmax
comp=Z,33nm,1.1s,mb5.2
GRF Grafenberg Arr 72.09 342 *e*P **P** **00 01 17.6 +0.3**
GRF pmax pmax
comp=Z,33nm,1.1s,mb5.2
COEN Coen 72.11 202 *e*P **P** **00 01 19.2 +1.5**
comp=Z,148nm,0.9s,mb5.9
COEN Coen 72.11 202 P pP 00 01 26.5 +3.5
comp=Z,100nm,2.2s
KHC Kasperske Hory 72.21 340 *e*P **P** **00 01 18.2 +0.2**
KHC *e*pP pP 00 01 25.6 +2.3
VRI Vrincioaia 72.21 330 ‖*i*P **P** **00 01 26.7 +8.7**
PLOR Plostina 72.25 330 ‖*i*P **P** **00 01 27.2 +8.9**
WET Wettzell 72.32 341 *e*P **P** **00 01 19.2 +0.5**
comp=Z,25nm,1.2s,mb5.0
WET Wettzell 72.32 341 *e*P **P** **00 01 19.2 +0.5**
comp=Z,25nm,1.2s,mb5.0
WET Wettzell 72.32 341 *e*P **P** **00 01 19.2 +0.5**
WET pmax pmax
comp=Z,25nm,1.2s,mb5.0
ZST Bratislava 72.39 338 *e*P pP 00 01 28.2 +3.8
ZST Bratislava 72.39 338 *e*P pP 00 01 28.2 +3.8
DRGR 72.41 333⇑ *i*P **P** **00 01 19.3 +0.1**
GEC2 GERESS Array S 72.46 340 *e*P **P** **00 01 19.6 +0.1**
comp=Z,19nm,1.3s,mb4.9
GEC2 GERESS Array S 72.46 340 *e*P **P** **00 01 19.6 +0.1**
comp=Z,19nm,1.3s,mb4.9
GEC2 GERESS Array S 72.46 340 *e*P **P** **00 01 19.6 +0.1**
GEC2 pmax pmax
comp=Z,19nm,1.3s,mb4.9
AFI Afiamalu 72.70 156 LR LR 00 29 55.5
comp=Z,549nm,18.5s,MS4.9,baz=346,slow=33
MLR Muntele Rosu 72.77 331 ‖*i*P **P** **00 01 22.5 +1.1**
MMRI Maumere 73.35 224 P pP 00 01 32.8 +2.3
comp=Z,60nm,1.0s
KAKA Kakadu 73.64 212 *e*P **P** **00 01 26.5 -0.2**
comp=Z,10nm,0.8s,mb4.8
KAKA *e*pP pP 00 01 34.5 +2.4
RJOB Jochberg 73.69 340 *e*P **P** **00 01 27.5 +0.7**
comp=Z,19nm,1.2s,mb4.9
GZR Gura Zlata 73.70 333 ‖*i*P **P** **00 01 27.4 +0.5**
BZS Buzias 73.78 334⇑ *i*P **P** **00 01 27.4 0.0**
BFO Black Forest 73.89 344 *e*P **P** **00 01 27.7 -0.2**
comp=Z,15nm,1.1s,mb4.8
BFO Black Forest 73.89 344 *e*P **P** **00 01 27.7 -0.2**
comp=Z,15nm,1.1s,mb4.8
BFO Black Forest 73.89 344 *e*P **P** **00 01 27.7 -0.2**
BFO pmax pmax
comp=Z,15nm,1.1s,mb4.8
PKSM Moragy 73.93 336⇑ *i*P **P** **00 01 27.9 -0.3**
PSI Prapat 74.15 251 P **P** **00 01 29.3 -0.7**
comp=Z,3.8nm,0.7s,mb4.5,baz=99,slow=4.1,SNR=4.1
PSI Prapat 74.15 251 P **P** **00 01 29.3 -0.7**
PSI Prapat 74.15 251 P **P** **00 01 29.3 -0.6**
PSI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
OBKA Obir 74.53 339 *i*pP **P** **00 01 32.7 +1.0**
SNR=8.5
ABTA Abfaltersbach 74.70 340 *i*pP **P** **00 01 32.9 +0.3**
comp=Z,28nm,1.0s,mb5.2,SNR=6.4
MALT Malatya 75.23 319 *e*P **P** **00 01 36.6 +0.7**
comp=Z,18nm,1.3s,mb4.8
MALT Malatya 75.23 319 *e*P **P** **00 01 36.6 +0.7**
MALT pmax pmax
comp=Z,18nm,1.3s,mb4.8
MALT Malatya 75.23 319 ‖*i*P **P** **00 01 36.8 +0.9**
MALT Malatya 75.23 319 P **P** **00 01 37.0 +1.1**
comp=Z,12nm,1.4s,mb4.7
BR131 Keskin Array S 75.66 323 *e*P **P** **00 01 38.2 -0.1**
comp=Z,7.0nm,1.0s,mb4.5
BRTR Keskin Array B 75.66 323 P **P** **00 01 38.4 0.0**
comp=Z,2.5nm,0.8s,mb4.2,baz=63,slow=3.7,SNR=18
BRTR PP PP 00 04 25.2 -2.1
comp=Z,1.5nm,0.9s,baz=28,slow=6.5,SNR=3.6
BRTR Keskin Array B 75.66 323 *c*e*P* **P** **00 01 38.4 0.0**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
VTS Vitosha 76.20 331 ‖*i*P **P** **00 01 41.3 -0.1**
BNI Bardonecchia 77.34 344 *e*P **P** **00 01 48.9 +1.1**
comp=Z,19nm,1.1s,mb4.9
BNI Bardonecchia 77.34 344 *e*P **P** **00 01 48.9 +1.1**
BNI pmax pmax
comp=Z,19nm,1.1s,mb4.9
CTA Charters Tower 77.52 197 P **P** **00 01 50.4 +1.5**
comp=Z,6.9nm,0.9s,mb4.6,baz=32,slow=6.9,SNR=5.6
CTA Charters Tower 77.52 197 *e*P **P** **00 01 50.5 +1.6**
comp=Z,11nm,1.1s,mb4.7
CTA Charters Tower 77.52 197 P **P** **00 01 50.4 +1.5**
CTA pmax pmax
comp=Z,7.0nm,0.9s
CTAO Charters Tower 77.52 197 P pP 00 01 57.6 +3.3
comp=Z,25nm,1.7s
KNA Kununurra 77.64 215 P pP 00 01 57.5 +2.5
comp=Z,619nmcomp=Z,69nm,1.1s
BANOM Banah 78.14 299 P **P** **00 02 01.0 +8.5**
SNR=7.7
AQU L'Aquila 78.74 338 *e*P **P** **00 01 57.1 +1.5**
comp=Z,35nm,1.1s,mb5.2
AQU L'Aquila 78.74 338 *e*P **P** **00 01 57.1 +1.5**
AQU pmax pmax
comp=Z,35nm,1.1s,mb5.2
MIB Mutribah 79.02 308 *e*P **P** **00 01 56.1 -1.3**
MIB AMb AMB 00 02 05.8
comp=Z,88nm,0.9s,mb5.7
TAOE Nuku Hiva Isla 79.34 124 *e*LR LR 00 26 27.2
comp=Z,883nm,25.0s
NAY Al-Naaiem 79.54 308 *e*P **P** **00 01 58.7 -1.5**
NAY AMb AMB 00 02 08.6
comp=Z,28nm,1.0s,mb5.2
WBK Wadi Bani Khal 79.57 295 P **P** **00 02 09.6 +9.1**
SNR=9.6
SMDO Samad 79.66 296 P **P** **00 02 09.4 +8.5**
SNR=8.7
RDF Al-Radifah 79.68 307 *e*P **P** **00 01 59.4 -1.5**
RDF AMb AMB 00 02 03.5
comp=Z,78nm,1.1s,mb5.6
WRA Warramunga Arr 79.97 208 P **P** **00 02 02.5 +0.2**
comp=Z,4.1nm,1.0s,mb4.3,baz=16,slow=5.9,SNR=15
WRA LR LR 00 34 22.9
comp=Z,524nm,20.6s,MS4.9,baz=0.0,slow=33
WRA Warramunga Arr 79.97 208 P **P** **00 02 02.5 +0.1**
WRA pmax pmax
comp=Z,4.0nm,1.0s
CSS Prodhromos 80.06 321 *e*P **P** **00 02 01.4 -1.5**
comp=Z,47nm,1.4s,mb5.2
ARQ Araqi 80.19 297 P **P** **00 02 12.0 +8.2**
SNR=12
JMDO Jabal Madar 80.21 296 P **P** **00 02 03.9 0.0**
SNR=37
BSY Bisya 80.35 296 P **P** **00 02 04.5 -0.1**
SNR=20
PALK Pallekele 80.41 269 *e*P **P** **00 02 04.5 -0.6**
comp=Z,42nm,1.3s,mb5.2
PALK Pallekele 80.41 269 *i*P **P** **00 02 06.2 +1.1**
FITZ Fitzroy Crossi 80.86 217 P **P** **00 02 07.4 +0.2**
comp=Z,4.0nm,0.9s,mb4.3,baz=76,slow=4.7,SNR=5.1
FITZ Fitzroy Crossi 80.86 217 *e*P **P** **00 02 07.1 -0.1**
comp=Z,6.3nm,0.9s,mb4.5
FITZ *e*pP pP 00 02 14.6 +2.0
FITZ Fitzroy Crossi 80.86 217 P pP 00 02 15.4 +2.8
comp=Z,64nm,1.2s
MMAI Mount Meron Ar 81.06 319 LR LR 00 44 31.0
comp=Z,736nm,18.1s,MS5.1,baz=20,slow=40
PPT Papeete 83.10 136 *e*LR LR 00 28 12.6
comp=Z,2μm,23.2s,baz=340
ASAR Alice Springs 83.64 208 P **P** **00 02 23.1 +1.5**
comp=Z,5.7nm,1.1s,mb4.6,baz=12,slow=4.9,SNR=16
ASAR Alice Springs 83.64 208 P **P** **00 02 23.1 +1.5**
ASAR pmax pmax
comp=Z,6.0nm,1.1s
ESDC Sonseca Array 83.95 351 P **P** **00 02 23.2 0.0**
comp=Z,2.4nm,0.7s,mb4.4,baz=0.6,slow=5.3,SNR=15
PCBR Castelo Branco 84.05 354 *e*P pP 00 02 31.6 +2.4
PESTR Estremoz 85.02 354 *e*P **P** **00 02 29.4 +0.7**
PESTR *i*P 00 02 37.0
EVO Evora 85.38 354 *e*P **P** **00 02 30.5 0.0**
comp=Z,26nm,1.3s,mb5.2
PBAR Barrancos 85.67 353 *e*P **P** **00 02 31.8 -0.2**
comp=Z,54nm,1.4s,mb5.6
MBWA Marble Bar 85.76 221 *e*P **P** **00 02 33.6 +1.2**
MBWA Marble Bar 85.76 221 P pP 00 02 39.7 +1.9
KEST Kesra 85.94 340 P **P** **00 02 33.4 0.0**
comp=Z,2.0nm,1.1s,mb4.3,baz=349,slow=12,SNR=2.8
ARMA Armidale 86.97 191 *e*P **P** **00 02 41.1 +3.0**
TBI Tubuai 88.40 138 *e*LR LR 00 30 35.4
comp=Z,1μm,25.0s,baz=330
STKA Stephens Creek 89.85 199 P **P** **00 02 53.2 +1.5**
comp=Z,19nm,1.0s,mb5.4,baz=24,slow=6.4,SNR=3.3
STKA Stephens Creek 89.85 199 *e*P **P** **00 02 55.5 +3.7**
comp=Z,15nm,1.0s,mb5.3
STKA Stephens Creek 89.85 199 P **P** **00 02 53.2 +1.5**
FORT Forrest 91.97 211 *e*P **P** **00 03 05.2 +3.5**
comp=Z,35nm,0.9s,mb5.7
DRV Dumont d'Urvil 123.92 191 Pdif Pdif 00 05 21.0 -4.0
DRV P 00 34 00.0
LPAZ La Paz 123.96 67 PKP PKPdf 00 08 53.4 +1.9
comp=Z,0.5nm,0.7s,baz=0.0,slow=8.1,SNR=2.3
LPAZ La Paz 123.96 67 *e*PKPdf PKPdf 00 08 54.4 +2.9
LPAZ La Paz 123.96 67 PKIKP PKPdf 00 08 53.4 +1.9
LPAZ pmax pmax
comp=Z,1.0nm,0.7s
SBA Scott Base 133.83 179 *e*PKPdf PKiKP 00 09 12.0 +2.3
SBA Scott Base 133.83 179 *e*PKIKP PKPdf 00 09 12.0 +3.5
TSUM Tsumeb 135.41 312 *e*PKPdf pPKPdf 00 09 20.3 +1.5
LBTB Lobatse 136.82 299 *e*PKPdf PKPdf 00 09 16.4 +0.8
LBTB Lobatse 136.82 299 *e*PKIKP PKPdf 00 09 16.4 +0.7
BOSA Boshof 139.98 296 PKP PKPdf 00 09 21.9 +0.6
comp=Z,3.2nm,1.0s,baz=333,slow=2.3,SNR=3.0
BOSA Boshof 139.98 296 PKP PKPdf 00 09 21.9 +0.6
BOSA Boshof 139.98 296 PKIKP PKPdf 00 09 21.9 +0.6
BOSA pmax pmax
comp=Z,3.0nm,1.0s
MAW Mawson 143.94 220 PKP PKPdf 00 09 26.6 -0.5
comp=Z,1.8nm,0.7s,baz=357,slow=4.1,SNR=5.2
MAW Mawson 143.94 220 *e*P PKPdf 00 09 33.2 +6.1
comp=Z,13nm,1.0s
MAW Mawson 143.94 220 PKP PKPdf 00 09 26.6 -0.5
MAW *e*PKPdf pPKPdf 00 09 32.6 -0.1
MAW Mawson 143.94 220 PKIKP PKPdf 00 09 26.6 -0.5
MAW pmax pmax
comp=Z,2.0nm,0.7s
SUR Sutherland 145.25 298 PKPbc PKPbc 00 09 31.2 +0.9
comp=Z,5.3nm,0.9s,baz=117,slow=4.5,SNR=2.9
SUR Sutherland 145.25 298 *e*PKPbc pPKPdf 00 09 38.2 +2.0
QSPA South Pole Qui 145.98 180 *e*PKPbc PKPbc 00 09 30.4 -0.9
SYO Syowa Base 152.65 220⇑ *e*PKPbc PKPbc 00 09 48.6 +0.3

IDC 12 23:51:47.2±10.0, 11°.34N×92°.66E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/22, mbtmp3.6/4, Error ellipse: s-maj=226.8km s-min=46.4km az=100.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.32**	**40**	Pn	Pn	23 54 03.0	+0.1
baz=234,slow=14,SNR=2.8							
FITZ	**Fitzroy Crossi**	**43.77**	**132**	P	P	23 59 55.1	+0.2
1.0nm,0.8s,baz=332,slow=11,SNR=4.4							
WRA	**Warramunga Arr**	**51.48**	**127**	P	P	00 00 54.5	-0.4
0.7nm,0.5s,baz=306,slow=8.5,SNR=16							
ASAR	**Alice Springs**	**53.27**	**131**	P	P	00 01 08.2	+0.2
0.3nm,0.4s,baz=310,slow=6.9,SNR=5.8							

KRSC 12 23:53:08.1±0.6, 56°.09N×164°.37E, h18km±18km, ML4.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.88**	**278**	*e*P	Pb	23 53 23.1	-1.6
KBTR				*e*S	Sb	23 53 34.6	-1.5
BKI	**Bering**	**1.27**	**134**	*e*P	Pn	23 53 30.8	-0.1
BKI				*e*S	Sb	23 53 46.7	-0.7
ZLN	**Zelenaya**	**2.00**	**269**	*e*P	Pn	23 53 41.7	+0.8
ZLN				*e*S	Sn	23 54 06.2	+0.7
KLY	**Klyuchi**	**2.09**	**278**	*e*P	Pn	23 53 41.4	-0.7
KLY				*e*S	Sn	23 54 06.2	-1.5
MKZ	**Mys Kozlova**	**2.15**	**226**	*e*S	Sn	23 54 09.8	+0.6
KPT	**Kopyto**	**2.33**	**269**	*e*P	Pn	23 53 47.0	+1.5
KPT				*e*S	Sn	23 54 16.1	+2.5
GNL	**Ganaly**	**4.42**	**240**	*e*P	Pn	23 54 17.2	+3.0

ISCJB ***13*** *00:00:42.5±0.5, 41°.37N±0°.04×44°.14E±0°.03, h10km, Error ellipse: s-maj=5.8km s-min=3.3km az=159.0*
DDA ***13*** *00:00:43.6, 41°.51N×43°.86E, h7km±4km, Md3.2*
CSEM ***13*** *00:00:43.6, 41°.51N×43°.86E, h7km, MD3.2, After DDA*

ISC 13 00:00:42.9±0.5, 41°.35N±0°.04×44°.14E±0°.04, h10km, n14, σ1°01/27, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**0.59**	**50**	P	**Pg**	**00 00 53.9**	**-0.4**
TBLG				S	**Sg**	**00 01 02.4**	**+0.4**
TBLG	**Delisi**	**0.59**	**50**	P	**Pg**	**00 00 53.9**	**-0.4**
TBLG				S	**Sg**	**00 01 02.5**	**+0.5**
MTA	**Mtatsminda**	**0.60**	**55**	P	**Pg**	**00 00 54.2**	**-0.3**
MTA				S	**Sg**	**00 01 02.7**	**+0.3**
GOR	**Gori**	**0.63**	**358**	P	**Pg**	**00 00 54.2**	**-1.0**
GOR				S	**Sg**	**00 01 02.8**	**-0.7**
DGRG	**David-gareji**	**0.93**	**84**	P	**Pg**	**00 01 00.3**	**-0.6**
DGRG				S	**Sg**	**00 01 15.1**	**+2.1**
GNI	**Garni**	**1.29**	**159**	P	**Sb**	**00 01 22.1**	**-1.6**
SNR=5.7							
ARTV	**Artvin**	**1.68**	**265**	*i* P	**Pn**	**00 01 11.5**	**-0.8**
ARTV				*i* S	**Sn**	**00 01 32.0**	**-1.8**
ARTV	**Artvin**	**1.68**	**265**	*i* P	**Pn**	**00 01 11.5**	**-0.8**
ARTV				*i* S	**Sn**	**00 01 32.0**	**-1.8**
DBOC	**Borcka**	**1.86**	**271**	*i* P	**Pn**	**00 01 15.5**	**+0.7**
DBOC				*i* S	**Sn**	**00 01 38.5**	**+0.1**
DBOC	**Borcka**	**1.86**	**271**	*i* P	**Pn**	**00 01 15.5**	**+0.7**
DBOC				*i* S	**Sn**	**00 01 38.5**	**+0.1**
DDEM	**Demirkent**	**1.86**	**256**	*i* P	**Pn**	**00 01 15.7**	**+0.8**
DDEM				*i* S	**Sn**	**00 01 39.6**	**+1.2**
DDEM	**Demirkent**	**1.86**	**256**	*i* P	**Pn**	**00 01 15.7**	**+0.8**
DDEM				*i* S	**Sn**	**00 01 39.6**	**+1.2**
DBAD	**Bademkaya**	**1.88**	**261**	*i* P	**Pn**	**00 01 15.2**	**+0.1**
DBAD				*i* S	**Sn**	**00 01 40.4**	**+1.6**
DBAD	**Bademkaya**	**1.88**	**261**	*i* P	**Pn**	**00 01 15.1**	**+0.1**
DBAD				*i* S	**Sn**	**00 01 40.3**	**+1.6**

BJI ***13*** *00:03:59.0, 4°.33S×129°.29E, h110km, mB5.6/31, mb5.2/55*
ISCJB ***13*** *00:04:04.2±0.4, 3°.79S±0°.02×128°.99E±0°.02, h113km±4km, mb5.3/145, Error ellipse: s-maj=4.3km s-min=3.2km az=139.8*
NEIC ***13*** *00:04:04.2±0.7, 3°.78S×128°.96E, h95km±6km, mb5.5/61, MW5.6, Error ellipse: s-maj=5.6km s-min=3.5km az=57.0*
NEIC Felt [IV] at Amahai and Tehoru.
IDC ***13*** *00:04:05.4±0.5, 3°.83S×128°.85E, h108km±3km, mb5.1/29, mb1 5.1/32, mb1mx5.1/33, mbtmp5.1/32, MS4.6/9, Ms1 4.6/9, ms1mx4.3/31, Error ellipse: s-maj=9.8km s-min=5.5km az=66.0*
MOS ***13*** *00:04:05.3±1.4, 3°.67S×128°.86E, h115km, mb5.3/53, MS4.6/5, Error ellipse: s-maj=9.6km s-min=5.6km az=110.8*
DJA ***13*** *00:04:06, 3°.69S×129°.06E, h113km, Mw5.9/51*
TEH ***13*** *00:04:06.0, 3°.81S×128°.94E, h115km*
GCMT ***13*** *00:04:07.0±0.1, 3°.67S×128°.95E, h109km±1km, MW5.6, Moment Tensor Solution. s89,c157; s27,c31; Moment tensor: Scale 10^17^Nm; M_{rr}1.04±.04; $M_{\theta\theta}$2.08±.04; $M_{\phi\phi}$-3.12±.04; $M_{r\theta}$-1.30±.03; $M_{\theta\phi}$0.85±.04; $M_{\phi r}$-1.02±.03; Best double couple: $M_0$3.30000×10^17^ NP1:ϕ_s311.00000°, δ57.00000°, λ18.00000°. NP2:ϕ_s211.00000°, δ75.00000°, λ146.00000°. Principal axes: T 3.2200, Plg35.0000°, Azm166.0000°; N 0.1900, Plg53.0000°, Azm9.0000°; P -3.4100, Plg11.0000°, Azm264.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=223, per= 50.*

ISC 13 00:04:05.9±0.4, 3°.78S±0°.02×128°.99E±0°.02, h113km±3km, h110km±1.4km; pP-P, n721, σ1°06/444, mb5.3/144, 105C-120D, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.18**	**129**	P	**Pn**	**00 04 28.4**	**-0.8**
TLE	**Tual**	**4.17**	**116**	P	**Pn**	**00 05 07.9**	**+0.3**
TNTI	**Ternate**	**4.80**	**340**	P	**Pn**	**00 05 13.5**	**-2.6**
KDI	**Kendari**	**6.36**	**268**	P	**Pn**	**00 05 37.5**	**+0.3**
5.0nm988nm,0.7s							
MNI	**Manado**	**6.64**	**321**	P	**Pn**	**00 05 38.8**	**-2.2**
14nm1μm,0.7s							
LUWI	**Luwuk**	**6.78**	**293**	P	**Pn**	**00 05 41.0**	**-1.9**
8.5nm1μm,0.8s							
BAKI	**Biak**	**7.56**	**70**	P	**Pn**	**00 05 51.9**	**-1.6**
26nm7μm,1.4s							

MMRI	Maumere	8.27 234	P	Pn	00 06 05.8	+2.7
	1μm,1.9s					
KAPI	Kappang	9.29 262	⇓iPn	Pn	00 06 17.2	+0.2
KAPI	Kappang	9.29 262	Pn	Pn	00 06 17.9	+0.9
	5μm,0.6s					
KAPI	Kappang	9.29 262	P	Pn	00 06 17.1	+0.1
	5μm340nm,0.8s					
KAKA	Kakadu	9.51 159	eP	Pn	00 06 17.2	-2.8
	1μm,0.8s					
KAKA			eS	Sn	00 07 59.2	-5.8
KAKA	Kakadu	9.51 159	P	Pn	00 06 17.3	-2.7
	2μm,0.5s					
TOLI	Toli-Toli	9.53 301	P	Pn	00 06 18.4	-1.8
	5μm407nm,0.9s					
WSI	Waingapu	10.43 235	P	Pn	00 06 34.8	+2.4
	2μm,1.4s					
BMNI	Bima	11.28 245	P	Pn	00 06 45.3	+1.6
DAV	Davao City (W)	11.30 342	P	Pn	00 06 42.3	-1.7
	49nm,0.3s,baz=232,slow=12,SNR=6.2					
DAV	Davao City (W)	11.30 342	P	Pn	00 06 42.3	-1.7
DAV	Davao City (W)	11.30 342	⇓eP	Pn	00 06 37.7	-6.3
KNA	Kununurra	11.90 181	P	Pn	00 06 51.5	-0.5
	5μm,1.0s					
MTNI	Mataram	13.62 249	P	Pn	00 07 15.8	+1.2
	6μm381nm,1.6s					
TSM	Tawau	13.70 306	P	Pn	00 07 15.9	+0.4
MYLDM	Lahad Datu	13.74 310	P	Pn	00 07 17.2	+1.0
MYLDM	Lahad Datu	13.74 310	P	Pn	00 07 18.2	+2.0
	5μm270nm,1.3s					
KHKI	Kahang-Kahang	14.06 250	P	Pn	00 07 22.1	+1.8
	7μm304nm,1.2s					
SRBI	Singaraja	14.35 252	P	Pn	00 07 25.0	+1.0
FITZ	Fitzroy Crossi	14.61 193	P	Pn	00 07 25.0	-2.2
	7.8nm,0.3s,baz=25,slow=11,SNR=132					
FITZ			S	Sn	00 10 02.8	-5.8
	5.5nm,0.3s,baz=232,slow=20,SNR=2.1					
FITZ			LR	LR	00 13 46.3	
	comp=Z,2μm,19.6s,baz=18,slow=40					
FITZ	Fitzroy Crossi	14.61 193	eP	Pn	00 07 24.9	-2.3
	641nm,0.6s					
FITZ	Fitzroy Crossi	14.61 193	P	Pn	00 07 24.2	-3.0
	1μm,1.1s					
IGBI	Denpasar	14.64 249	P	Pn	00 07 28.1	+0.5
	8μm339nm,0.9s					
NBBI	Negara	15.00 252	P	Pn	00 07 35.6	+3.5
	779nm,1.5s					
SDKM	Sandakan	15.04 308	P	Pn	00 07 33.1	+0.4
PLKI	Palangkaraya	15.10 275	P	Pn	00 07 34.8	+1.3
	2μm,1.5s					
KMMI	Kalianget	15.30 257	P	Pn	00 07 40.4	+4.4
	382nm,1.0s					
KKM	Kota Kinabalu	16.06 307	P	Pn	00 07 46.0	+0.6
KKM	Kota Kinabalu	16.06 307	⇓iPn	Pn	00 07 45.2	-0.2
	2μm,2.3s					
KKM	Kota Kinabalu	16.06 307	P	Pn	00 07 45.2	-0.2
	5μm362nm,1.6s					
GMJI	Gumukmas	16.09 253	P	Pn	00 07 47.4	+1.6
KDM	Kudat	16.13 311	P	Pn	00 07 46.9	+0.6
WRA	Warramunga Arr	16.89 162	P	Pn	00 07 52.2	-3.4
	17nm,0.3s,baz=336,slow=14,SNR=194					
WRA			S	S	00 10 50.1	-14
	21nm,0.3s,baz=351,slow=24,SNR=5.0					
WRA	Warramunga Arr	16.89 162	P	Pn	00 07 52.2	-3.4
WRA			S	S	00 10 50.1	-14
WRA	Warramunga Arr	16.89 162	P	Pn	00 07 52.2	-3.4
WRA			pmax	pmax		
	comp=Z,17nm,0.3s					
WB2	Warramunga Arr	16.90 162	ePn	Pn	00 07 51.5	-4.1
KRKI	Karangkates	17.01 254	P	Pn	00 07 57.7	+0.6
COEN	Coen	17.27 127	eP	Pn	00 07 59.1	-1.1
COEN			eS	S	00 10 53.2	-20
COEN	Coen	17.27 127	eP	Pn	00 07 59.3	-0.9
	comp=Z,6μm,0.9s					
COEN			eSn	Sn	00 10 55.5	-17
COEN	Coen	17.27 127	P	Pn	00 07 59.1	-1.1
	comp=Z,4μm,0.8s					
PBKI	Pangkalan Bun	17.32 273	P	Pn	00 08 01.3	+0.4
	comp=Z,827nm,1.5s					
BTM	Bintulu	17.34 293	P	Pn	00 08 02.3	+1.2
SJI	Sawahan	17.58 256	P	Pn	00 08 05.2	+1.2
	comp=Z,9μmcomp=Z,282nm,1.8s					
PWJI	Pagerwojo	17.61 255	P	ScS	00 19 50.9	+7.8
	comp=Z,0.3nmcomp=Z,73nm,1.5s					
PWJI	Pagerwojo	17.61 255	P	Pn	00 08 02.5	-1.8
	comp=Z,4μmcomp=Z,212nm,0.8s					
NGJI	Ngawi	17.80 258	P	Pn	00 08 07.6	+0.9
	comp=Z,9μmcomp=Z,346nm,1.3s					
SBUM	Sibu	17.86 290	P	Pn	00 08 08.1	+0.7
SBUM	Sibu	17.86 290	P	Pn	00 08 07.8	+0.4
	comp=Z,426nm,2.1s					
STKI	Sintang	17.91 282	P	Pn	00 08 08.8	+0.8
	comp=Z,538nm,1.5s					
PCJI	Pacitan	18.25 255	P	P	00 08 10.0	-0.7
	comp=Z,381nm,1.0s					
SMRI	Semarang	18.75 259	P	P	00 08 17.0	+0.8
	comp=Z,410nm,0.9s					
UGM	Wanagama	18.82 257	eP	P	00 08 16.6	-0.5
	comp=Z,980nm,1.6s					
UGM	Wanagama	18.82 257	P	P	00 08 17.4	+0.4
	comp=Z,380nm,1.5s					
PMG	Port Moresby	18.89 108	eP	P	00 08 19.0	+1.2
	comp=Z,601nm,0.9s					
PMG	Port Moresby	18.89 108	⇑eP	P	00 08 19.6	+1.9
PMG			pmax	pmax		
	comp=Z,964nm,1.2s					
PMG	Port Moresby	18.89 108	P	P	00 08 18.6	+0.9
	comp=Z,8μmcomp=Z,826nm,1.1s					
KSM	Kuching	19.39 285	P	P	00 08 24.5	+1.4
KSM	Kuching	19.39 285	⇓iP	P	00 08 23.8	+0.7
KSM	Kuching	19.39 285	P	P	00 08 23.0	-0.2
	comp=Z,9μmcomp=Z,716nm,0.9s					
TGY	Tagaytay City	19.48 336	P	P	00 08 25.2	+1.1
	comp=Z,30nm,0.3s,baz=280,slow=7.0,SNR=4.7					
TGY	Tagaytay City	19.48 336	P	P	00 08 25.2	+1.1
TGY			pmax	pmax		
	comp=Z,30nm,0.3s					
MBWA	Marble Bar	19.48 207	eP	P	00 08 23.1	-1.0
MBWA	Marble Bar	19.48 207	eP	P	00 08 23.2	-1.0
	comp=Z,453nm,1.0s					
MBWA			eS	S	00 11 54.3	-4.1
MBWA	Marble Bar	19.48 207	P	P	00 08 25.1	+1.0
	comp=Z,7μmcomp=Z,565nm,1.0s					
MBWA	Marble Bar	19.48 207	P	P	00 08 23.5	-0.6
	SNR=23					
BJII	Banjamegara	19.51 259	P	ScS	00 20 01.5	+12
BJII	Banjamegara	19.51 259	P	P	00 08 24.4	-0.1
	comp=Z,5μmcomp=Z,359nm,1.0s					
ASAR	Alice Springs	20.34 167	P	P	00 08 33.6	+0.3
	comp=Z,4μm,0.9s,baz=351,slow=12,SNR=6395					
ASAR			S	S	00 12 13.0	-2.1
	comp=Z,198nm,0.9s,baz=349,slow=21,SNR=8.8					
ASAR			P3KPbc		00 42 42.6	
	comp=Z,0.9nm,0.8s,baz=146,slow=4.4,SNR=5.8					
ASAR	Alice Springs	20.34 167	P	P	00 08 33.6	+0.3
ASAR			S	S	00 12 13.0	-2.1
ASAR	Alice Springs	20.34 167	P	P	00 08 33.7	+0.4
ASAR			S	S	00 12 13.0	-2.1
ASAR			smax			
	comp=N,198nm,0.9s					
TPI	Tanjungpandan	21.33 272	P	P	00 08 43.7	-0.4
	comp=N,3μmcomp=N,180nm,1.5s,mb5.2					
CISI	Cisompet, Garu	21.40 259	P	ScS	00 19 59.1	+3.4
	comp=N,134nm,1.5s					
CISI	Cisompet, Garu	21.40 259	P	P	00 08 42.0	-2.8
	comp=N,3μmcomp=N,315nm,0.8s,mb5.7					
LEM	Lembang	21.49 261	P	P	00 08 43.7	-2.1
	comp=N,4μmcomp=N,153nm,1.0s,mb5.3					
DBJI	Dramaga	22.32 262	P	P	00 08 50.7	-3.9
	comp=N,4μmcomp=N,110nm,1.0s,mb5.1					
SKJI	Sukabumi	22.56 261	P	ScS	00 20 00.0	0.0
	comp=N,4μmcomp=N,262nm,1.3s					
PPBI	Pangkal Pinang	22.88 273	P	P	00 08 58.6	-1.6
	comp=N,5μmcomp=N,153nm,1.4s,mb5.1					
GUMO	Guam	23.37 42	P	P	00 09 03.7	-0.8
	comp=N,100nm,0.5s,mb5.4,baz=175,slow=4.4,SNR=17					
GUMO			LR	LR	00 17 58.6	
	comp=N,2μm,20.0s,baz=50,slow=36					
GUMO	Guam	23.37 42	⇓iP	P	00 09 03.1	-1.5
	comp=N,354nm,1.2s,mb5.6					
GUMO	Guam	23.37 42	⇓iP	P	00 09 03.1	-1.5
GUMO			pmax	pmax		
	comp=Z,354nm,1.2s,mb5.6					
GUMO	Guam	23.37 42	P	P	00 09 04.1	-0.5
	comp=Z,4μmcomp=Z,298nm,1.3s,mb5.5					
CTA	Charters Tower	23.37 135	P	P	00 09 05.1	+0.6
	comp=Z,443nm,0.8s,mb5.8,baz=317,slow=12,SNR=144					
CTA			S	S	00 13 14.6	+5.5
	comp=Z,15nm,0.7s,baz=273,slow=23,SNR=0.9					
CTA			LR	LR	00 19 50.2	
	comp=Z,1μm,18.0s,baz=317,slow=40					
CTA	Charters Tower	23.37 135	⇑iP	P	00 09 05.3	+0.8
	comp=Z,430nm,0.8s,mb5.8					
CTA			eS	S	00 13 15.3	+6.2
CTA	Charters Tower	23.37 135	P	P	00 09 05.1	+0.6
CTA			S	S	00 13 14.6	+5.5
CTA			pmax	pmax		
	comp=Z,443nm,0.8s					
CTA			smax			
	comp=N,15nm,0.7s					
CTA			MLR	MLR		
	comp=Z,1μm,18.0s					
CTAO	Charters Tower	23.37 135	⇑iP	P	00 09 05.3	+0.7
	comp=Z,605nm,0.9s,mb5.9					
CTAO	Charters Tower	23.37 135	⇑iP	P	00 09 05.3	+0.8
CTAO			pmax	pmax		
	comp=Z,605nm,0.9s,mb5.9					
CTAO	Charters Tower	23.37 135	P	P	00 09 05.8	+1.3
	comp=Z,1μm,1.6s,mb5.9					
XMIS	Christmas Isla	24.08 253	eP	P	00 09 08.8	-2.4
KASI	Kota Agung	24.47 265	P	ScS	00 20 06.5	-1.0
	comp=Z,2μmcomp=Z,162nm,1.2s					
MDSI	Maura Dua	24.76 267	P	P	00 09 15.2	-2.1
	comp=Z,2μmcomp=Z,74nm,1.5s,mb4.9					
MEEK	Meekatharra	24.81 203	eP	P	00 09 16.0	-1.6
MYKOM	Kota Tinggi	25.73 282	P	P	00 09 27.6	+1.5
MYKOM	Kota Tinggi	25.73 282	P	P	00 09 27.2	+1.1
	comp=Z,7μmcomp=Z,476nm,2.0s,mb5.6					
KGM	Kluang	26.29 282	P	P	00 09 32.6	+1.3
KSI	Kapahiang	26.34 269	P	ScS	00 20 16.5	+1.2
	comp=Z,127nm,1.3s					
RGRI	Rengat	26.85 277	P	ScS	00 20 02.1	-15
	comp=Z,412nm,0.5s					
FORT	Forrest	26.87 182	eP	P	00 09 35.2	-1.0
	comp=Z,452nm,0.6s,mb6.2					
FORT	Forrest	26.87 182	⇑iP	P	00 09 35.3	-0.9
	comp=Z,647nm,0.8s,mb6.2					
KTGM	Kuala Trenggan	27.36 289	P	P	00 09 41.9	+1.1
SDSI	Sungai Dareh	27.68 275	P	P	00 09 41.9	-1.7
	comp=Z,2μmcomp=Z,105nm,1.1s,mb5.3					
BKNI	Bangkinang	28.23 278	P	P	00 09 48.4	-0.1
	comp=Z,5μmcomp=Z,396nm,1.1s,mb5.8					
PDSI	Padang	28.64 275	P	ScS	00 20 29.6	+4.0
	comp=Z,46nm,1.2s					
PDSI	Padang	28.64 275	P	P	00 09 50.8	-1.4
	comp=Z,3μmcomp=Z,157nm,1.5s,mb5.4					
PPI	Padang Panjang	28.76 276	P	ScS	00 20 28.0	+1.9
	comp=Z,26nm,1.6s					
PPI	Padang Panjang	28.76 276	P	P	00 09 52.5	-0.7
	comp=Z,352nm,1.1s,mb5.9					
IPM	Ipoh	29.12 286	P	P	00 09 57.5	+1.1
IPM	Ipoh	29.12 286	⇓iP	P	00 09 56.9	+0.5
	comp=Z,364nm,0.7s,mb6.1					
IPM	Ipoh	29.12 286	P	P	00 09 57.3	+0.9
	comp=Z,5μmcomp=Z,578nm,0.7s,mb6.3					
QIZ	Qiongzhong	29.47 321	P	P	00 10 00.1	+0.7
QIZ			pP	pP	00 10 22.4	-1.9
QIZ			S	S	00 14 46.5	+0.8
QIZ			pmax	pmax		
	comp=Z,49nm,1.5s,mb4.9					
QIZ			LR	LR		
	comp=N,1μm,16.1s					
QIZ			LR	LR		
	comp=Z,2μm,18.6s					
QIZ	Qiongzhong	29.47 321	⇓iP	P	00 09 59.5	+0.1
	comp=Z,109nm,1.4s,mb5.3					
KLBR	Kellerberrin	29.62 200	eP	P	00 09 59.3	-1.3
	comp=Z,186nm,1.6s,mb5.5					
BBOO	Buckleboo	29.63 168	⇑iP	P	00 10 00.3	-0.4
	comp=Z,343nm,0.6s,mb6.2					
BBOO	Buckleboo	29.63 168	eP	P	00 10 00.3	-0.4
KULM	Kulim	29.71 287	P	P	00 10 02.9	+1.2
KULM	Kulim	29.71 287	eP	P	00 10 00.7	-1.0
	comp=Z,150nm,0.7s,mb5.7					
KULM	Kulim	29.71 287	P	P	00 10 01.9	+0.3
	comp=Z,3μmcomp=Z,248nm,0.7s,mb5.9					
MNSI	Mandailing Nat	29.74 278	P	P	00 10 00.5	-1.4
	comp=Z,4μmcomp=Z,380nm,0.7s,mb6.2					
SISI	Saibi	29.97 274	P	P	00 09 59.7	-4.2
	comp=Z,2μmcomp=Z,166nm,1.5s,mb5.5					
EIDS	Eidsvold	30.19 137	⇑iP	P	00 10 05.2	-0.6
	comp=Z,176nm,1.3s,mb5.5					
SNG	Songkhla	30.34 291	P	P	00 10 07.0	-0.2
	comp=Z,140nm,0.8s,mb5.6					
STKA	Stephens Creek	30.36 158	P	P	00 10 07.2	+0.1
	comp=Z,449nm,0.9s,mb6.1,baz=330,slow=8.8,SNR=340					
STKA			S	S	00 14 57.6	-1.7
	comp=Z,22nm,0.9s,baz=252,slow=22,SNR=1.4					
STKA	Stephens Creek	30.36 158	eP	P	00 10 07.1	0.0
	comp=Z,449nm,0.9s,mb6.1					
STKA	Stephens Creek	30.36 158	⇑iP	P	00 10 07.2	0.0
	comp=Z,143nm,1.1s,mb5.5					
PSI	Prapat	30.75 282	P	P	00 10 09.6	-1.3
	comp=Z,133nm,0.8s,mb5.7,baz=124,slow=6.0,SNR=70					
PSI			S	S	00 15 04.1	-1.8
	comp=Z,1.2nm,0.3s,baz=307,slow=22,SNR=0.8					
PSI			ScP	ScP	00 16 38.0	-0.5
	comp=Z,25nm,0.8s,baz=185,slow=1.9,SNR=14					
PSI	Prapat	30.75 282	P	P	00 10 09.6	-1.3
PSI			S	S	00 15 04.1	-1.8
PSI			ScP	ScP	00 16 38.0	-0.5
PSI	Prapat	30.75 282	P	P	00 10 09.6	-1.2
PSI			S	S	00 15 04.1	-1.9
PSI			pmax	pmax		
	comp=Z,133nm,0.8s,mb5.7					
PSI			smax			
	comp=N,1.0nm,0.3s					
PSI			pmax	pmax		
	comp=N,25nm,0.8s					
NWAO	Narrogin (SRO)	31.02 199	P	P	00 10 11.8	-1.1
	comp=N,27nm,0.5s,mb5.3,baz=32,slow=7.8,SNR=30					
NWAO			PP	PP	00 11 16.1	-9.0
	comp=N,52nm,0.9s,baz=28,slow=14,SNR=5.3					
NWAO			S	S	00 15 06.8	-2.8
	comp=N,16nm,0.6s,baz=338,slow=13,SNR=1.9					
NWAO			ScP	ScP	00 16 38.8	-0.2
	comp=N,28nm,0.9s,baz=325,slow=6.7,SNR=3.6					
NWAO			LR	LR	00 22 40.8	
	comp=N,2μm,20.7s,baz=19,slow=36					
NWAO	Narrogin (SRO)	31.02 199	eP	P	00 10 11.9	-1.0
	comp=N,110nm,1.4s,mb5.4					
NWAO	Narrogin (SRO)	31.02 199	P	P	00 10 11.8	-1.1
NWAO					00 11 16.2	
NWAO			S	S	00 15 06.8	-2.8
NWAO			pmax	pmax		
	comp=Z,27nm,0.5s					
NWAO			pmax	pmax		
	comp=Z,52nm,0.9s					
NWAO			smax			
	comp=N,16nm,0.6s					
NWAO			pmax	pmax		
	comp=N,28nm,0.9s					
NWAO			MLR	MLR		
	comp=Z,2μm,20.7s					
HNR	Honiara	31.25 102	P	P	00 10 14.9	-0.3
	comp=Z,156nm,0.6s,mb5.9,baz=220,slow=5.7,SNR=7.0					
HNR			ScP	ScP	00 16 41.6	+1.5
	comp=Z,38nm,0.3s,baz=199,slow=7.2,SNR=4.4					
HNR	Honiara	31.25 102	P	P	00 10 14.9	-0.3
HNR			pmax	pmax		
	comp=Z,156nm,0.6s,mb5.9					
HNR			pmax	pmax		
	comp=N,38nm,0.3s					
TPTI		32.55 282	P	P	00 10 25.3	-1.3
	comp=N,120nm,1.6s,mb5.5					
CBIJ	Chichi jima	33.23 22	P	P	00 10 33.2	+0.9
	comp=N,22nm,0.3s,mb5.4,baz=199,slow=17,SNR=2.8					
CBIJ			LR	LR	00 20 50.4	
	comp=N,878nm,20.9s,baz=30,slow=30					
ARMA	Armidale	34.05 144	eP	P	00 10 39.8	+0.3
ARMA			e		00 11 59.7	
ARMA	Armidale	34.05 144	⇑iP	P	00 10 40.1	+0.6
	comp=N,427nm,1.5s,mb6.0					
ARMA			ePP	PP	00 11 53.5	-5.4
NST	Nakhon Sawan	34.48 305	⇑P	P	00 10 44.0	+0.7
	comp=N,88nm,1.2s,mb5.5					
BDT	Bhumibol Dam	36.23 306	⇑P	P	00 10 59.0	+0.7
	comp=N,111nm,0.9s,mb5.8					
RIV	Riverview	36.34 148	eP	P	00 11 00.6	+1.6
RIV			e		00 12 24.8	
CAN	Canberra	36.45 152	⇑iP	P	00 11 01.1	+1.2
	comp=N,273nm,0.8s,mb6.2					
CAN	Canberra	36.45 152	⇑iP	P	00 11 01.1	+1.2
CAN			pmax	pmax		
	comp=Z,273nm,0.8s,mb6.2					
CNB	Canberra Magne	36.62 151	eP	P	00 11 02.4	+1.1
JNU	Nakatsue	36.74 3	eP	P	00 11 01.6	-0.7
	comp=Z,10nm,0.8s,mb4.8					
TOO	Toolangi	36.88 158	eP	P	00 11 05.1	+1.6
TOO			e		00 12 28.6	
WHN	Wuhan	36.88 339	P	P	00 11 04.5	+0.9
WHN			pP	pP	00 11 29.1	+0.1
NJ2	Nanjing	36.91 346	eP	P	00 11 04.0	+0.2
NJ2			pP	pP	00 11 28.9	-0.3
NJ2			sP	sP	00 11 42.2	+0.1
NJ2			PP	PP	00 12 34.9	+4.6
NJ2			S	S	00 16 38.0	-2.5
NJ2			pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5					
NJ2			pmax	pmax		
	comp=Z,720nm,4.5s					
NJ2			LR	LR		
	comp=N,1μm,15.4s					
NJ2			LR	LR		
	comp=E,2μm,16.6s					
NJ2			LR	LR		
	comp=Z,3μm,16.3s					
CM31	Chiang Mai Arr	36.94 308	eP	P	00 11 04.6	+0.3
	comp=Z,36nm,0.6s,mb5.5					
CMAR	Chiang Mai Arr	36.94 308	P	P	00 11 05.2	+0.9
	comp=Z,60nm,0.6s,mb5.7,baz=134,slow=7.1,SNR=240					
CMAR			S	S	00 16 42.6	+1.3
	comp=Z,0.7nm,0.3s,baz=247,slow=44,SNR=1.5					
CMAR			ScP	ScP	00 17 01.8	+1.6
	comp=Z,8.3nm,0.9s,baz=155,slow=2.9,SNR=12					
CMAR	Chiang Mai Arr	36.94 308	P	P	00 11 05.2	+0.9
CMAR			S	S	00 16 42.6	+1.3
CMAR			pmax	pmax		
	comp=Z,60nm,0.6s					
CMAR			smax			
	comp=N,1.0nm,0.4s					
CMAR			pmax	pmax		
	comp=N,8.0nm,0.9s					
GYA	Guiyang	37.01 326	⇑iP	P	00 11 05.4	+0.6
GYA			pP	pP	00 11 31.6	+1.4
GYA			sP	sP	00 11 47.0	+3.9
GYA			PP	PP	00 12 35.8	+4.3
GYA			PcP	PcP	00 13 25.0	+1.4
GYA			S	S	00 16 43.5	+1.3
GYA			ScP	ScP	00 17 01.2	+0.8
GYA			PcS	PcS	00 17 13.2	+1.2
GYA			sS	sS	00 17 30.0	+3.8
GYA			ScS	ScS	00 21 05.4	-2.7
GYA			pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4					
GYA			pmax	pmax		
	comp=Z,180nm,4.9s					
GYA			LR	LR		
	comp=N,5μm,16.9s					
GYA			LR	LR		
	comp=E,2μm,17.0s					
GYA			LR	LR		
	comp=Z,6μm,16.1s					
CHRT	Chiangrai	37.09 310	⇓P	P	00 11 05.5	-0.1
	comp=Z,474nm,1.0s,mb6.4					
CHG	Chiang Mai	37.13 308	⇓P	P	00 11 06.9	+1.0
	comp=Z,208nm,0.8s,mb6.1					
CHTO	Chiang Mai	37.13 308	⇓iP	P	00 11 06.8	+0.9
	comp=Z,213nm,1.0s,mb6.0					
CHTO	Chiang Mai	37.13 308	⇓iP	P	00 11 06.8	+0.9
CHTO			pmax	pmax		
	comp=Z,213nm,1.0s,mb6.0					
CHTO	Chiang Mai	37.13 308	P	P	00 11 06.7	+0.8
	comp=Z,3μmcomp=Z,276nm,1.0s,mb6.2					
JHJ	Hachijo jima 2	38.09 15	LR	LR	00 24 46.3	
	comp=Z,947nm,20.8s,baz=356,slow=32					
KMI	Kunming	38.40 320	P	P	00 11 18.1	+1.5
KMI			pP	pP	00 11 43.6	+1.6
KMI			sP	sP	00 11 56.7	+1.8
KMI			PP	PP	00 12 47.0	+0.3
KMI			S	S	00 16 58.9	-4.4
KMI			pmax	pmax		
	comp=Z,79nm,1.5s,mb5.3					
KMI			pmax	pmax		
	comp=Z,250nm,7.8s					
KMI			LR	LR		
	comp=N,3μm,13.6s					
KMI			LR	LR		
	comp=E,1μm,15.6s					
KMI			LR	LR		
	comp=Z,2μm,13.6s					
ENH	Enshi	38.65 332	eP	P	00 11 17.9	-0.6
	comp=Z,20nm,0.8s,mb5.0					
NOUC	Port Laguerre	40.49 120	eP	P	00 11 32.8	-1.2
DZM	Mont Dzumac	40.60 120	eP	P	00 11 32.3	-2.6
MAJO	Matsushiro	41.02 11	eP	P	00 11 36.3	-1.7
	comp=Z,8.3nm,0.8s,mb4.6					
MAJO	Matsushiro	41.02 11	eP	P	00 11 36.3	-1.8
MAJO			pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6					
MAT	Matsushiro	41.02 11	P	P	00 11 37.3	-0.8
MJAR	Matsushiro Arr	41.02 11	P	P	00 11 37.7	-0.3
	comp=Z,3.0nm,0.4s,mb4.4,baz=172,slow=8.7,SNR=7.9					
MJAR			pP	pP	00 12 02.3	-1.6
	comp=Z,9.4nm,0.6s,baz=194,slow=11,SNR=3.5					
MJAR			ScP	ScP	00 17 17.0	+1.4
	comp=Z,0.9nm,0.2s,baz=325,slow=25,SNR=4.0					
MJAR	Matsushiro Arr	41.02 11	P	P	00 11 37.7	-0.3
MJAR			*PP	pP	00 12 02.3	-1.5
MJAR			pmax	pmax		
	comp=Z,3.0nm,0.4s					
MJAR			pmax	pmax		
	comp=Z,9.0nm,0.6s					
MJAR			pmax	pmax		
	comp=N,1.0nm,0.2s					
KSRS	Korea Array	41.03 359	P	P	00 11 38.6	+0.5
	comp=N,4.6nm,0.8s,mb4.4,baz=171,slow=10,SNR=25					
KSRS			PcP	PcP	00 13 37.3	+1.3
	comp=N,3.9nm,0.8s,baz=191,slow=3.1,SNR=5.4					
KSRS			ScP	ScP	00 17 16.9	+1.4
	comp=N,6.7nm,0.9s,baz=188,slow=3.6,SNR=14					
KSRS			LR	LR	00 29 42.9	
	comp=N,806nm,19.5s,baz=164,slow=37					
KSRS	Korea Array	41.03 359	P	P	00 11 38.6	+0.5
KSRS					00 13 37.3	
KSRS			pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4					
KSRS			pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3					
KSRS			pmax	pmax		
	comp=N,7.0nm,0.9s					
KSRS			MLR	MLR		
	comp=Z,806nm,19.5s					
INCN	Inchon	41.10 357	eP	P	00 11 39.6	+0.9
	comp=Z,27nm,0.9s,mb5.1					
MOO	Moorlands	41.78 160	eP	P	00 11 45.2	+1.0
CD2	Chengdu	42.06 327	⇓iP	P	00 11 46.8	+0.1
CD2			pP	pP	00 12 11.9	-0.6
CD2			sP	sP	00 12 24.9	-0.4
CD2			PP	PP	00 13 28.4	+2.1
CD2			PcP	PcP	00 13 39.2	-0.4
CD2			PcS	PcS	00 17 29.9	-1.6
CD2			S	S	00 17 57.9	+0.2
CD2			sS	sS	00 18 42.4	+0.1
CD2			ScS	ScS	00 21 34.7	-3.0
CD2			pmax	pmax		
	comp=Z,50nm,1.3s,mb5.1					
CD2			pmax	pmax		
	comp=Z,130nm,6.2s

SNY pmax pmax
comp=Z,19nm,1.0s,mb4.8
AGT Agartala 45.89 309 *ex* **P 00 12 13.0 -4.4**
AGT *ex* x 00 12 39.0
LZH Lanzhou 46.11 331 ⇓P **P 00 12 19.8 +1.0**
LZH pP pP 00 12 46.1 +1.0
LZH sP sP 00 12 59.5 +1.7
LZH ScP ScP 00 17 37.2 +0.9
LZH S **S 00 18 57.0 +0.8**
LZH sS sS 00 19 43.1 +1.7
LZH ScS ScS 00 22 02.0 -1.1
LZH pmax pmax
comp=Z,140nm,1.4s,mb5.5
LZH pmax pmax
comp=Z,400nm,4.2s
LZH LR LR
comp=N,2μm,12.8s
LZH LR LR
comp=E,2μm,11.6s
LZH LR LR
comp=Z,2μm,14.5s
SHL Shillong 46.31 311 ⇓*iP* **P 00 12 20.0 -0.7**
SHL *ex* x 00 19 01.0
VLA Vladivostok 46.75 3⇓*eP* **P 00 12 21.5 -2.2**
VLA 00 14 12.8
VLA *e*S **S 00 19 03.7 -1.5**
VLA pmax pmax
comp=Z,29nm,1.4s,mb4.8
HHC Hu-ho-hao-te 47.19 342 *eP* **P 00 12 27.1 -0.1**
HHC pP pP 00 12 50.3 -3.2
HHC sP sP 00 13 01.6 -4.6
HHC PcP PcP 00 13 56.6 -0.3
HHC PP PP 00 14 19.7 +0.5
HHC ScP ScP 00 17 40.4 -0.3
HHC S **S 00 19 11.4 0.0**
HHC ScS ScS 00 22 08.9 -1.1
HHC SS SS 00 22 35.9 -4.4
HHC pmax pmax
comp=Z,24nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,1μm,7.3s
HHC LR LR
comp=N,2μm,12.3s
HHC LR LR
comp=E,900nm,12.7s
HHC LR LR
comp=Z,970nm,13.1s
CN2 Changchun 47.47 357 *eP* **P 00 12 30.4 +1.1**
CN2 *e*S **S 00 19 20.5 +5.2**
CN2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
CN2 pmax pmax
comp=Z,2μm,12.0s
CN2 LR LR
comp=N,500nm,15.0s
CN2 LR LR
comp=E,900nm,15.0s
CN2 LR LR
comp=Z,800nm,16.0s
MDJ Mudanjiang 48.18 1 P **P 00 12 36.6 +1.9**
MDJ pP pP 00 12 59.4 -1.8
MDJ sP sP 00 13 11.4 -2.4
MDJ PcP PcP 00 13 57.8 -2.6
MDJ PP PP 00 14 30.1 +1.9
MDJ ScP ScP 00 17 43.7 -1.0
MDJ PcS PcS 00 17 57.2 +1.0
MDJ S **S 00 19 29.8 +4.5**
MDJ sS sS 00 20 14.9 +4.1
MDJ pmax pmax
comp=Z,8.0nm,1.4s,mb4.4
MDJ pmax pmax
comp=Z,850nm,11.3s
MDJ LR LR
comp=N,690nm,31.4s
MDJ LR LR
comp=E,240nm,29.9s
MDJ LR LR
comp=Z,790nm,35.9s
MDJ Mudanjiang 48.18 1 *eP* **P 00 12 34.1 -0.6**
comp=Z,78nm,1.5s,mb5.3
LSA Lhasa 49.20 315⇓*iP* **P 00 12 44.1 +1.2**
comp=Z,36nm,0.7s,mb5.4
LSA Lhasa 49.20 315⇓*iP* **P 00 12 44.1 +1.2**
LSA pmax pmax
comp=Z,35nm,0.7s,mb5.4
ASAJ Asahikawa 49.22 13 P **P 00 12 43.6 +0.9**
comp=Z,14nm,0.8s,mb5.0,baz=226,slow=11,SNR=13
ASAJ LR LR 00 29 53.5
comp=Z,715nm,21.2s,baz=171,slow=31
ASAJ Asahikawa 49.22 13 *eP* **P 00 12 43.7 +0.9**
comp=Z,10nm,0.9s,mb4.8
ASAJ Asahikawa 49.22 13 P **P 00 12 43.7 +1.0**
ASAJ pmax pmax
comp=Z,14nm,0.8s
PALK Pallekele 49.42 283⇓*iP* **P 00 12 43.8 -1.1**
comp=Z,37nm,0.6s,mb5.5
PALK Pallekele 49.42 283⇓*iP* **P 00 12 43.8 -1.1**
PALK pmax pmax
comp=Z,37nm,0.6s,mb5.5
PALK Pallekele 49.42 283 P **P 00 12 44.9 0.0**
comp=Z,41nm,1.7s,mb5.1
VIS Vishakhapatnam 49.84 297 *e*PKP **P 00 12 47.2 -0.7**
YUK Yuzh-Kuril'sk 49.95 16 P **P 00 12 39.1 -9.2**
YUK S **S 00 20 06.4 +16**
MSVF Nonsavu 49.98 110⇑*iP* **P 00 12 51.5 +2.5**
comp=Z,237nm,1.4s,mb5.9
MSVF Nonsavu 49.98 110 P **P 00 12 51.0 +1.9**
comp=Z,742nm,1.3s,mb6.5,SNR=19
ODAN Odare 50.42 310 *eP* **P 00 12 52.3 +0.2**
comp=Z,150nm,0.7s,mb6.1
TAPN Taplejung 50.42 310 *eP* **P 00 12 52.5 +0.3**
GTA Gaotai 50.68 331 ⇓P **P 00 12 54.4 +0.5**
GTA pP pP 00 13 20.9 +0.3
GTA sP sP 00 13 33.2 +0.1
GTA ScP ScP 00 17 57.1 +1.5
GTA S **S 00 19 58.6 -1.9**
GTA ScS ScS 00 22 33.5 -0.1
GTA pmax pmax
comp=Z,42nm,1.2s,mb5.3
GTA pmax pmax
comp=Z,760nm,10.0s
GTA LR LR
comp=N,1μm,13.8s
GTA LR LR
comp=E,930nm,14.7s
GTA LR LR
comp=Z,960nm,15.7s
OUZ Omahuta 51.74 133⇓*iP* **P 00 13 04.0 +2.0**
comp=Z,318nm,1.3s,mb6.2
YSS Yuzh-Sakhalins 51.95 12 *eP* **P 00 13 02.8 -0.4**
GUN Gumba 52.10 310 *eP* **P 00 13 05.0 +0.3**
comp=Z,281nm,0.7s,mb6.4
PKI Pulchoki 52.30 309 *eP* **P 00 13 06.1 -0.1**
HABR Khabarovsk 52.30 5 *eP* **P 00 13 05.4 -0.4**
HABR *e**PP pP 00 13 30.9 -1.7
HABR *e**SP sP 00 13 42.7 -2.4
HABR 00 15 04.1
HABR *e*S **S 00 20 22.0 -0.4**
HABR *e**SS sS 00 21 07.0 -1.5
HABR *e* 00 22 43.2
HABR *e*SS SS 00 24 02.0 +0.3
HABR MLR MLR
comp=Z,450nm,18.0s
PKIN Phulchoki 52.31 309 *eP* **P 00 13 06.9 +0.6**
comp=Z,67nm,0.6s,mb5.8
KKN Kakani 52.50 310 *eP* **P 00 13 07.8 +0.1**
DMN Daman 52.55 309 *eP* **P 00 13 08.3 +0.3**
KLR Kul'dur 52.84 2 *eP* **P 00 13 06.0 -3.8**
GKN Gorkha 53.10 309 *eP* **P 00 13 12.1 0.0**
JCZ Jackson Bay 53.26 145 PN **P 00 13 15.0 +2.0**
TRD Trivandrum 53.30 283 *e*PKP **P 00 13 13.0 -0.8**
TRD AMb AMB 00 13 16.2
comp=Z,149nm,1.3s,mb5.9
KOLN Koldanda 53.80 309 *eP* **P 00 13 17.5 +0.3**
comp=Z,154nm,0.6s,mb6.2
DANN Dangsing 53.95 309 *eP* **P 00 13 18.3 0.0**
HYB Hyderabad 54.03 295⇓*iP* **P 00 13 18.0 -1.0**
comp=Z,170nm,1.0s,mb6.0
RPZ Rata Peaks 54.40 143 P **P 00 13 22.3 +1.0**
comp=Z,183nm,0.9s,mb6.1,baz=309,slow=2.8,SNR=59
RPZ Rata Peaks 54.40 143⇑*iP* **P 00 13 22.0 +0.7**
comp=Z,973nm,1.6s,mb6.6
THZ Tophouse 54.47 140 PN **P 00 13 22.3 +0.5**
TGRZ Tauranga 54.78 135 PN **P 00 13 25.8 +1.7**
PKVZ Pokaka 54.85 137 PN **P 00 13 25.5 +0.9**

ULN Ulaanbaatar 54.91 342 *eP* **P 00 13 25.1 +0.3**
comp=Z,54nm,1.2s,mb5.5
ULN Ulaanbaatar 54.91 342 *eP* **P 00 13 25.1 +0.3**
ULN pmax pmax
comp=Z,54nm,1.2s,mb5.5
ULN Ulaanbaatar 54.91 342 P **P 00 13 25.1 +0.3**
comp=Z,34nm,1.3s,mb5.2
WNVZ Wahianoa 55.04 137 PN **P 00 13 27.1 +1.1**
SONM Songino Array 55.08 342 P **P 00 13 26.3 +0.2**
comp=Z,19nm,1.1s,mb5.0,baz=162,slow=8.0,SNR=65
SONM pP pP 00 13 52.1 -1.1
comp=Z,6.0nm,0.7s,baz=142,slow=6.7,SNR=2.9
SONM ScP ScP 00 18 16.4 +1.8
comp=Z,4.2nm,0.9s,baz=161,slow=4.1,SNR=5.2
SONM S **S 00 20 59.7 -0.3**
comp=Z,0.3nm,0.3s,baz=107,slow=26,SNR=1.1
SONM ScS ScS 00 23 02.0 -2.2
comp=Z,0.3nm,0.3s,baz=233,slow=26,SNR=1.6
SONM PKP2bc 00 43 46.7
comp=Z,0.5nm,0.8s,baz=168,slow=1.4,SNR=3.7
SONM PKP2ab 00 44 05.0
comp=Z,0.7nm,0.7s,baz=343,slow=4.6,SNR=3.5
SONM Songino Array 55.08 342 P **P 00 13 26.3 +0.2**
SONM pP pP 00 13 52.1 -1.1
SONM ScP ScP 00 18 16.4 +1.8
SONM S **S 00 20 59.7 -0.3**
SONM ScS ScS 00 23 02.0 -2.2
SONM ⇑*e* 00 43 46.7
SONM P'P'ab 00 44 05.0
SONM Songino Array 55.08 342 P **P 00 13 26.3 +0.2**
SONM *PP pP 00 13 52.1 -1.0
SONM S **S 00 20 59.7 -0.3**
SONM 00 23 02.0
SONM pmax pmax
comp=Z,19nm,1.1s
SONM pmax pmax
comp=Z,6.0nm,0.7s
SONM pmax pmax
comp=N,4.0nm,0.9s
SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM pmax pmax
comp=Z,1.0nm,0.7s
KHZ Kahutara 55.21 141⇓*iP* **P 00 13 27.2 +0.1**
comp=Z,138nm,0.6s,mb6.2
SNZO South Karori 55.40 139⇑*iP* **P 00 13 28.1 -0.4**
comp=Z,165nm,0.8s,mb6.1
BKZ Black Stump Fm 55.59 136 PN **P 00 13 30.4 +0.5**
URZ Urewera 55.62 135 P **P 00 13 30.2 +0.1**
comp=Z,82nm,0.4s,mb6.1,baz=273,slow=4.3,SNR=100
URZ S **S 00 21 06.9 -0.6**
comp=Z,5.1nm,0.8s,baz=212,slow=24,SNR=2.1
URZ LR LR 00 34 26.4
comp=Z,442nm,18.4s,baz=184,slow=33
URZ Urewera 55.62 135⇑*iP* **P 00 13 30.3 +0.2**
comp=Z,214nm,0.6s,mb6.3
URZ Urewera 55.62 135 PN **P 00 13 30.3 +0.1**
NMHZ Naumai 55.77 136 *e*PN **P 00 13 32.7 +1.4**
MWZ Matawai 55.94 135 PN **P 00 13 33.1 +0.7**
BFZ Birch Farm 56.11 138 PN **P 00 13 33.8 +0.1**
BHPL Bhopal 56.98 301 *e*PKP **P 00 13 39.0 -1.1**
BHPL AMb AMB 00 13 42.1
comp=Z,120nm,1.2s,mb5.8
KAD Karad 57.99 293 *e*PKP **P 00 13 45.8 -1.5**
KAD AMb AMB 00 13 48.1
comp=Z,102nm,1.2s,mb5.7
ZAK Zakamensk 58.31 341 *eP* **P 00 13 48.5 -0.3**
ZAK pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
POO Poona 58.64 294 *e*PKP **P 00 13 50.3 -1.5**
POO AMb AMB 00 13 52.6
comp=Z,98nm,1.3s,mb5.7
AFI Afiamalu 59.25 104 P **P 00 13 57.7 +1.6**
comp=Z,26nm,0.5s,mb5.5,baz=73,slow=5.1,SNR=4.6
AFI Afiamalu 59.25 104 P **P 00 13 57.7 +1.6**
AFI pmax pmax
comp=Z,27nm,0.5s,mb5.5
NDI New Delhi 59.25 307 *e*PKP **P 00 13 54.5 -1.3**
NDI *ex* x 00 21 48.0
TLY Talaya 59.32 342 *eP* **P 00 13 56.7 +0.9**
comp=Z,13nm,0.8s,mb5.0
TLY Talaya 59.32 342 *eP* **P 00 13 56.0 +0.2**
TLY pmax pmax
comp=Z,18nm,1.0s,mb5.1
IRK Irkutsk 59.62 343 *eP* **P 00 13 58.1 +0.3**
IRK *e* 00 14 30.6
IRK pmax pmax
comp=Z,61nm,1.7s,mb5.3
MOY Mondy 60.16 340 *eP* **P 00 14 02.9 +1.3**
MOY pmax pmax
comp=Z,89nm,1.8s,mb5.5
WMQ Urumqi 60.16 327 P **P 00 14 02.0 +0.2**
WMQ pP pP 00 14 29.0 -0.2
WMQ sP sP 00 14 42.0 +0.4
WMQ PP PP 00 16 18.0 +2.2
WMQ S **S 00 22 05.0 -1.5**
WMQ sS sS 00 22 52.0 -1.7
WMQ ScS ScS 00 23 38.0 -3.6
WMQ SS SS 00 26 05.0 -0.7
WMQ pmax pmax
comp=Z,45nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,97nm,5.0s
WMQ LR LR
comp=N,700nm,18.0s
WMQ LR LR
comp=E,570nm,18.0s
WMQ LR LR
comp=Z,600nm,18.0s
CLNS Chul'man 60.50 357 *eP* **P 00 14 00.1 -3.7**
CLNS pmax pmax
comp=Z,11nm,0.8s,mb4.9
CLNS pmax pmax
comp=N,7.0nm,0.6s
CLNS pmax pmax
comp=E,9.0nm,1.0s
AJM Ajmer 60.51 303 *e*PKP **P 00 14 03.4 -1.0**
SDNR Sundarnagar 60.62 309 *e*PKP **P 00 14 04.5 -0.7**
PETK Petropavlovsk- 61.61 19 P **P 00 14 12.2 +0.9**
comp=E,13nm,0.7s,mb5.0,baz=190,slow=6.1,SNR=23
PETK pP pP 00 14 36.8 -2.1
comp=E,12nm,0.7s,baz=212,slow=5.3,SNR=4.8
PETK Petropavlovsk- 61.61 19 P **P 00 14 12.3 +0.9**
PETK *PP pP 00 14 36.8 -2.1
PETK pmax pmax
comp=Z,13nm,0.7s,mb5.1
PETK pmax pmax
comp=Z,12nm,0.7s,mb5.0
CASY Casey 63.72 188 *eP* **P 00 14 24.3 -0.9**
CASY Casey 63.72 188⇑*iP* **P 00 14 24.6 -0.6**
comp=Z,104nm,1.2s,mb5.5
BHJ Bhuj 63.74 298 *e*PKP **P 00 14 24.8 -1.4**
KSH Kashi 64.98 317 *eP* **P 00 14 34.7 +0.8**
KSH *e*pP pP 00 14 59.4 -2.3
KSH *e*PcP PcP 00 15 08.6 +2.6
KSH *e*sP sP 00 15 10.1 -3.9
KSH *e*PP PP 00 16 58.8 +0.5
KSH *e*ScP 00 19 00.8
KSH *e*PcS 00 19 11.1
KSH *e*S **S 00 23 02.8 -4.2**
KSH *e*ScS ScS 00 24 15.6 -2.8
KSH pmax pmax
comp=Z,38nm,0.8s,mb5.3
KSH pmax pmax
comp=Z,1μm,10.1s
KSH LR LR
comp=N,1μm,10.3s
KSH LR LR
comp=E,2μm,10.6s
KSH LR LR
comp=Z,2μm,13.0s
MK31 Makanchi Array 65.00 327⇓*iP* **P 00 14 33.8 0.0**
MK31 Makanchi Array 65.00 327⇓*iP* **P 00 14 33.8 0.0**
MKAR Makanchi Array 65.00 327 P **P 00 14 33.7 -0.2**
comp=Z,11nm,0.5s,mb4.9,baz=117,slow=8.7,SNR=192
MKAR pP pP 00 15 01.5 -0.1
comp=Z,5.9nm,0.5s,baz=120,slow=8.0,SNR=2.5
MKAR S S 00 23 05.7 -1.2
comp=Z,0.5nm,0.7s,baz=90,slow=7.3,SNR=1.6
MKAR ScS ScS 00 24 15.1 -3.1
comp=Z,0.1nm,0.4s,baz=113,slow=44,SNR=1.3
MKAR PKPPKP 00 43 16.4
comp=Z,0.7nm,0.8s,baz=306,slow=2.9,SNR=4.9
MKAR PKP2bc 00 43 22.5
comp=Z,1.5nm,0.7s,baz=309,slow=2.5,SNR=6.5

MKAR Makanchi Array 65.00 327 P **P 00 14 33.7 -0.2**
MKAR pP pP 00 15 01.5 -0.1
MKAR S S 00 23 05.7 -1.2
MKAR ScS ScS 00 24 15.1 -3.1
MKAR P'P' 00 43 16.4
MKAR ⇑*e* 00 43 22.5
MKAR Makanchi Array 65.00 327 P **P 00 14 33.7 -0.1**
MKAR *PP pP 00 15 01.5 -0.1
MKAR S S 00 23 05.7 -1.2
MKAR 00 24 15.1
MKAR pmax pmax
comp=Z,11nm,0.5s
MKAR pmax pmax
comp=Z,6.0nm,0.5s
MKAR smax
comp=N,1.0nm,0.7s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR pmax pmax
comp=Z,2.0nm,0.7s
YAK Yakutsk 65.62 0 *eP* **P 00 14 37.9 +0.4**
comp=Z,120nm,0.8s,mb5.8
YAK Yakutsk 65.62 0 *eP* **P 00 14 37.5 0.0**
YAK *e* pP 00 15 05.2 -0.2
YAK *e* 00 17 04.2
YAK *e*S S 00 23 13.2 -0.8
YAK *e**SS sS 00 23 46.8 -15
YAK pmax pmax
comp=Z,81nm,0.9s,mb5.5
YAK pmax pmax
comp=N,14nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.6s
YAK pmax pmax
comp=Z,16nm,0.8s,mb4.9
YAK pmax pmax
comp=N,3.0nm,0.7s
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK smax
comp=N,185nm,2.2s
YAK smax
comp=E,153nm,2.0s
KZA Kyzart 66.69 319 P **P 00 14 46.1 +1.3**
SNR=9.2
KZA Kyzart 66.69 319⇓*iP* **P 00 14 45.7 +0.9**
comp=E,86nm,1.4s,mb5.4
TKM2 Tokmak 2 66.88 320 P **P 00 14 46.5 +0.5**
SNR=13
TKM2 Tokmak 2 66.88 320 *eP* **P 00 14 46.3 +0.4**
comp=E,12nm,0.6s,mb4.9
TKM2 Tokmak 2 66.88 320 *eP* **P 00 14 46.3 +0.3**
TKM2 pmax pmax
comp=Z,12nm,0.6s,mb4.9
KBK Karagaybulak 67.17 320 P **P 00 14 48.6 +0.8**
SNR=12
AAK Ala-Archa 67.45 319 P **P 00 14 50.2 +0.6**
SNR=14
AAK Ala-Archa 67.45 319 P **P 00 14 49.6 +0.1**
comp=Z,3.6nm,0.3s,mb4.7,baz=147,slow=4.9,SNR=30
AAK pP pP 00 15 17.8 +0.2
comp=Z,3.6nm,0.7s,baz=221,slow=7.2,SNR=2.0
AAK S S 00 23 35.8 -0.9
comp=Z,0.6nm,0.3s,baz=0.6,slow=23,SNR=1.4
AAK Ala-Archa 67.45 319 P **P 00 14 49.6 +0.1**
AAK pP pP 00 15 17.8 +0.2
AAK S S 00 23 35.8 -0.9
AAK Ala-Archa 67.45 319 P **P 00 14 49.6 0.0**
AAK *PP pP 00 15 17.8 +0.2
AAK S S 00 23 35.8 -1.0
AAK pmax pmax
comp=Z,4.0nm,0.3s,mb4.7
AAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
AAK smax
comp=N,1.0nm,0.3s
AAK Ala-Archa 67.45 319 P **P 00 14 50.6 +1.0**
comp=N,120nm,1.4s,mb5.5,SNR=8.8
FRU Bishkek 67.46 320 *eP* **P 00 14 48.0 -1.7**
MIR Mirnyy 67.47 195⇓*iP* **P 00 14 49.2 -0.1**
MIR pmax pmax
comp=Z,112nm,1.8s,mb5.4
AML Almayashu 67.73 319 P **P 00 14 52.5 +1.1**
SNR=39
AML Almayashu 67.73 319⇓*iP* **P 00 14 52.0 +0.6**
comp=Z,107nm,1.5s,mb5.5
USP Ospenovka 67.75 320 P **P 00 14 51.6 +0.2**
SNR=30
EKS2 Erkin-Say 67.93 319 P **P 00 14 53.1 +0.5**
SNR=34
EKS2 Erkin-Say 67.93 319⇓*iP* **P 00 14 53.2 +0.6**
comp=Z,47nm,1.3s,mb5.2
KBL Kabul 67.94 310⇓*iP* **P 00 14 52.4 -0.4**
comp=Z,30nm,0.8s,mb5.2
KBL Kabul 67.94 310⇓*iP* **P 00 14 52.4 -0.4**
KBL pmax pmax
comp=Z,30nm,0.8s,mb5.2
ZAA0 Zalesovo Array 68.27 334⇓*eP* **P 00 14 53.8 -0.7**
ZALV Zalesovo Beam 68.27 334 P **P 00 14 53.5 -0.9**
comp=Z,18nm,0.7s,mb5.0,baz=111,slow=4.7,SNR=93
ZALV pP pP 00 15 21.2 -1.3
comp=Z,6.8nm,0.8s,baz=92,slow=4.5,SNR=1.9
ZALV S S 00 23 45.1 -0.9
comp=Z,1.6nm,0.3s,baz=89,slow=27,SNR=5.7
ZALV PKPPKP 00 43 11.5
comp=Z,3.4nm,0.9s,baz=270,slow=3.0,SNR=9.4
ZALV Zalesovo Beam 68.27 334 P **P 00 14 53.5 -0.9**
ZALV pP pP 00 15 21.2 -1.3
ZALV S S 00 23 45.1 -0.9
ZALV P'P' 00 43 11.5
ZALV Zalesovo Beam 68.27 334 P **P 00 14 53.6 -0.8**
ZALV *PP pP 00 15 21.2 -1.3
ZALV S S 00 23 45.1 -0.9
ZALV pmax pmax
comp=Z,18nm,0.7s,mb5.0
ZALV pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
ZALV smax
comp=N,2.0nm,0.3s
ZALV pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
SEY Seymchan 68.85 11⇓*eP* **P 00 14 59.4 +1.5**
KURK Kurchatov 69.26 328⇓*iP* **P 00 15 00.7 0.0**
comp=Z,108nm,1.1s,mb5.6
KURK Kurchatov 69.26 328*d iP* **P 00 15 00.6 -0.1**
KURK pmax pmax
comp=Z,114nm,1.2s,mb5.6
KURK Kurchatov 69.26 328 P **P 00 15 00.5 -0.2**
comp=Z,464nm,1.2s,mb6.2,SNR=71
NVS Novosibirsk 69.55 334⇓*iP* **P 00 15 00.8 -1.6**
NVS *e**PP pP 00 15 28.7 -1.8
NVS *i* S S 00 23 56.2 -5.0
NVS *i* *SS sS 00 24 44.5 -5.0
NVS pmax pmax
comp=Z,85nm,1.3s,mb5.4
NVS pmax pmax
comp=N,42nm,1.4s
NVS pmax pmax
comp=E,44nm,1.3s
NVS smax
comp=N,125nm,2.5s
NVS smax
comp=E,127nm,2.5s
KK31 Karatay Array 70.27 318 *i* P **P 00 15 06.5 -0.6**
KK31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.4
KKAR Karatay Array 70.27 318⇓*eP* **P 00 15 06.7 -0.4**
comp=Z,5.2nm,0.6s,mb4.5
KKAR Karatay Array 70.27 318⇓*eP* **P 00 15 06.7 -0.4**
KKAR pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
IDAH Dahanechah 74.66 305 *eP* **P 00 15 34.7 +1.3**
BVAR Borovoye Array 74.82 328 P **P 00 15 33.5 -0.3**
comp=Z,18nm,0.9s,mb4.8,baz=131,slow=6.1,SNR=72
BVAR pP pP 00 16 01.9 -0.4
comp=Z,13nm,0.9s,baz=108,slow=4.8,SNR=2.8
BVAR S S 00 25 00.7 -0.7
comp=Z,0.8nm,0.7s,baz=249,slow=41,SNR=2.0
BVAR Borovoye Array 74.82 328 P **P 00 15 33.5 -0.3**
BVAR *PP pP 00 16 01.9 -0.4
BVAR S S 00 25 00.7 -0.7
BVAR pmax pmax
comp=Z,18nm,0.9s
BVAR pmax pmax
comp=Z,13nm,0.9s
BVAR smax

comp=N,1.0nm,0.7s
BRVK **Borovoye** 74.89 328⇓*i*P P 00 15 34.1 -0.1
comp=N,126nm,1.5s,mb5.4
BRVK **Borovoye** 74.89 328*d i*P P 00 15 34.3 +0.1
BRVK pmax pmax
comp=Z,69nm,1.2s,mb5.3
BRVK **Borovoye** 74.89 328 P P 00 15 34.0 -0.2
comp=Z,209nm,0.9s,mb5.9,SNR=15
IMON **Monand** 74.94 306 *e*P P 00 15 35.9 +0.9
TIXI **Tiksi** 75.28 360 *e*P P 00 15 35.7 -0.4
comp=Z,25nm,0.8s,mb5.0
TIXI **Tiksi** 75.28 360 *e*P P 00 15 35.9 -0.2
TIXI pmax pmax
comp=Z,24nm,0.9s,mb4.9
IKOO **Kooshah** 75.29 305 *e*P P 00 15 37.8 +0.8
BILL **Bilibino** 76.23 14 *e*P P 00 15 43.3 +1.8
BILL *e* 00 15 54.5
BILL *e* 00 18 32.5
BILL *e*SS SS 00 30 18.3 +5.7
BILL pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
IAKL **Akhelmad** 76.54 309 *e*P P 00 15 44.5 +0.5
SBA **Scott Base** 76.64 172 *e*P P 00 15 42.7 -1.1
comp=Z,103nm,1.2s,mb5.4
SBA **Scott Base** 76.64 172 *e*P P 00 15 42.7 -1.1
SBA pmax pmax
comp=Z,103nm,1.2s,mb5.4
ISFR **Sfrayin** 77.24 309 *e*P P 00 15 48.9 +1.0
ABKT **Ailbek** 77.38 310 P P 00 15 49.9 +1.2
comp=Z,138nm,1.4s,mb5.5,SNR=9.0
VAN **Vannovskaya** 77.39 310 *i*P P 00 15 49.4 +0.7
VAN eS S 00 25 17.8 -12
MAW **Mawson** 77.57 201 P P 00 15 48.8 -0.3
comp=Z,28nm,1.1s,mb4.9,baz=67,slow=7.1,SNR=32
MAW S S 00 25 27.6 -3.5
comp=Z,0.4nm,0.2s,baz=309,slow=22,SNR=1.5
MAW ScS ScS 00 25 50.2 -6.9
comp=Z,0.5nm,0.2s,baz=291,slow=19,SNR=1.5
MAW **Mawson** 77.57 201 *e*P P 00 15 48.8 -0.3
comp=Z,19nm,1.0s,mb4.8
MAW **Mawson** 77.57 201⇑*i*P P 00 15 48.9 -0.3
comp=Z,9.8nm,1.2s,mb4.4
MAW **Mawson** 77.57 201 P P 00 15 48.8 -0.3
MAW S S 00 25 27.6 -3.5
MAW 00 25 50.2
MAW pmax pmax
comp=Z,28nm,1.1s
MAW pmax pmax
comp=N,1.0nm,0.2s
IBAF **Bafgh** 77.94 303 *e*P P 00 15 52.1 +0.1
IMEH **Mehriz** 78.70 303 *e*P P 00 15 55.6 -0.5
AB31 **Akbulak array** 79.37 321 *i*P P 00 15 59.2 -0.2
AB31 pmax pmax
comp=Z,8.0nm,0.4s,mb4.9
ABKAR **Akbulak array** 79.37 321⇓*i*P P 00 15 59.2 -0.2
comp=Z,9.6nm,0.5s,mb4.9
ISAD **Sadrabad** 79.58 303 *e*P P 00 16 01.0 +0.1
ISRV **Sarvestan** 79.60 301 *e*P P 00 16 01.4 +0.3
IPAR **Pars** 79.73 301 *e*P P 00 16 01.4 -0.4
IANJ **Anjilo** 80.10 307 *e*P P 00 16 03.7 +0.1
ISHM **Shahmirzad** 80.66 307 *e*P P 00 16 07.3 +0.7
ILAS **Lasjerd** 80.84 307 *e*P P 00 16 07.9 +0.3
AKTK **Aktyubinsk** 80.92 322 P P 00 16 07.8 +0.1
AKTK pP pP 00 16 37.8 +1.2
AKTK S S 00 26 04.1 -3.1
AKTO **Aktyubinsk** 80.92 322 P P 00 16 07.8 +0.1
comp=Z,11nm,0.5s,mb5.0,baz=113,slow=7.2,SNR=53
AKTO pP pP 00 16 37.8 +1.2
comp=Z,12nm,0.8s,baz=98,slow=10,SNR=2.9
AKTO S S 00 26 04.1 -3.1
comp=Z,0.4nm,0.4s,baz=348,slow=22,SNR=2.2
AKTO **Aktyubinsk** 80.92 322 P P 00 16 07.8 +0.1
AKTO *PP pP 00 16 37.8 +1.3
AKTO S S 00 26 04.1 -3.1
AKTO pmax pmax
comp=Z,11nm,0.5s,mb4.9
AKTO pmax pmax
comp=Z,12nm,0.8s,mb4.8
IFIR **Firoozkooh** 81.06 307 *e*P P 00 16 09.3 +0.5
SVE **Sverdlovsk** 81.50 329⇑*e*P P 00 16 10.8 +0.2
SVE pmax pmax
comp=Z,70nm,1.2s,mb5.4
IDMV **Damavand** 81.62 307 *e*P P 00 16 11.9 +0.2
ARU **Arti** 82.45 328⇓*i*P P 00 16 15.0 -0.6
comp=Z,37nm,1.1s,mb5.1
ARU **Arti** 82.45 328*d i*P P 00 16 15.4 -0.2
ARU *e*PP pP 00 16 43.5 -1.0
ARU 00 19 23.2
ARU PPP 00 21 21.6
ARU *e*S S 00 26 22.6 0.0
ARU SS SS 00 31 44.1 -2.1
ARU pmax pmax
comp=Z,36nm,1.0s,mb5.2
ARU **Arti** 82.45 328 P P 00 16 15.7 +0.1
comp=Z,163nm,1.2s,mb5.7,SNR=10
IRAZ **Razeghan** 83.28 306 *e*P P 00 16 21.0 +0.6
KBD **Kabd** 84.24 300 *e*P P 00 16 25.3 -0.1
KBD AMb AMB 00 16 27.5
comp=Z,55nm,1.4s,mb5.2
UMR **Umm Al-Rimmam** 84.27 300 *e*P P 00 16 25.5 0.0
UMR AMb AMB 00 16 28.4
comp=Z,112nm,1.6s,mb5.5
SOKR **Solikamsk** 84.32 331⇑*i*P P 00 16 25.7 +0.6
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.2
MIB **Mutribah** 84.63 300 *e*P P 00 16 27.2 -0.1
MIB AMb AMB 00 16 29.3
comp=Z,151nm,1.2s,mb5.8
NAY **Al-Naaiem** 84.64 300 *e*P P 00 16 27.2 -0.2
NAY AMb AMB 00 16 28.5
comp=Z,87nm,1.6s,mb5.4
IKOM **Komasi** 85.07 305 *e*P P 00 16 28.8 -0.6
ISRB **Sarab** 85.45 308 *e*P P 00 16 32.0 +0.7
IHRS **Heris** 86.01 309 *e*P P 00 16 34.5 +0.5
QSPA **South Pole Qui** 86.18 180 P P 00 16 33.7 -0.3
comp=Z,65nm,0.9s,mb5.6,baz=338,slow=2.2,SNR=125
QSPA **South Pole Qui** 86.18 180⇑*i*P P 00 16 33.5 -0.5
comp=Z,99nm,1.0s,mb5.7
SYO **Syowa Base** 86.28 201⇑*e*X P 00 16 32.4 -2.3
OHAK **Old Harbor** 86.53 32 *e*P P 00 16 36.7 +0.6
comp=Z,26nm,0.8s,mb5.2
TTA **Tatalina** 86.56 26 *e*P P 00 16 36.7 +0.6
TTA **Tatalina** 86.56 26 *e*P P 00 16 36.7 +0.6
KDAK **Kodiak Island** 87.02 32 P P 00 16 39.0 +0.5
comp=Z,39nm,0.9s,mb5.3,baz=222,slow=0.9,SNR=9.2
KDAK **Kodiak Island** 87.02 32 *e*P P 00 16 39.6 +1.1
comp=Z,63nm,1.2s,mb5.4
KDAK **Kodiak Island** 87.02 32 *i*P P 00 16 39.7 +1.2
IMRD **Marand** 87.10 309 *e*P P 00 16 40.1 +0.8
ISHB **Shabestar** 87.12 308 *e*P P 00 16 40.4 +1.0
RSO **Redoubt South** 87.49 29 *e*P P 00 16 41.3 +0.6
BHD **Baghdad** 87.55 303 *i*x x 00 16 40.0
BHD *i*x x 00 16 42.0
BHD *i*x x 00 17 08.0
BHD *i*x x 00 20 06.0
BHD *i*x x 00 20 06.0
BHD *i*x x 00 27 10.0
BHD *i*x x 00 27 49.0
BHD *i*x x 00 33 02.0
DGRG **David-gareji** 87.69 312 P P 00 16 42.9 +0.8
DGRG **David-gareji** 87.69 312 S sP 00 17 30.5 +7.1
GNI **Garni** 88.02 310 *e*P P 00 16 45.0 +1.4
comp=Z,16nm,1.0s,mb5.0
GNI **Garni** 88.02 310*d i*P P 00 16 44.6 +0.9
GNI pmax pmax
comp=Z,24nm,1.6s
MTA **Mtatsminda** 88.15 312 P P 00 16 45.8 +1.5
MTA **Mtatsminda** 88.15 312 S pP 00 17 16.0 +2.4
TBLG **Delisi** 88.20 312 P P 00 16 45.5 +1.0
TBLG **Delisi** 88.20 312 P P 00 16 45.5 +1.0
TBLG **Delisi** 88.20 312 S pP 00 17 15.6 +1.8
TBLG **Delisi** 88.20 312 S pP 00 17 15.5 +1.7
GOR **Gori** 88.69 312 P P 00 16 48.2 +1.4
GOR **Gori** 88.69 312 S pP 00 17 18.2 +2.1
SLKM **Skilak Lake** 88.73 29 *e*P P 00 16 47.1 +0.6
SLKM **Skilak Lake** 88.73 29 *e*P P 00 16 47.2 +0.7
ZEI **Tsey** 88.93 313 *e*P P 00 16 47.8 -0.1
ZEI pmax pmax
comp=Z,16nm,0.9s,mb5.0
SML **Sawmill** 89.84 28 *e*P P 00 16 51.9 +0.2
comp=Z,5.3nm,0.8s,mb4.7
SML **Sawmill** 89.84 28 *e*P P 00 16 51.9 +0.2
SML pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
MCK **McKinley** 89.85 26 *e*P P 00 16 51.6 -0.1
comp=Z,13nm,0.9s,mb5.0
MCK **McKinley** 89.85 26 *e*P P 00 16 51.6 -0.1
MCK pmax pmax
comp=Z,13nm,0.9s,mb5.1
KIV **Kislovodsk** 89.93 314 *e*P P 00 16 50.1 -2.4
KIV *e* 00 20 25.5
KIV pmax pmax
comp=Z,13nm,2.1s,mb4.7
PRGR **Permogore** 90.14 332 *e*P P 00 16 50.5 -2.6
PRGR *e*PP pP 00 17 19.2 -3.3
PRGR *i*S SKSac 00 27 10.8 -2.7
PRGR *e* 00 27 36.4
PRGR pmax pmax
comp=Z,16nm,0.9s,mb5.2
COLA **College** 90.48 25 *e*P P 00 16 53.9 -0.7
comp=Z,6.3nm,0.7s,mb4.8
COLA **College** 90.48 25 *e*P P 00 16 53.9 -0.7
COLA pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
ILAR **Eielson Array** 90.88 25 P P 00 16 55.2 -1.2
comp=Z,4.9nm,0.6s,mb4.8,baz=246,slow=4.7,SNR=63
ILAR pP pP 00 17 24.5 -1.4
comp=Z,1.3nm,0.8s,baz=242,slow=3.4,SNR=1.7
ILAR PKKPbc PKKPbc 00 34 21.4 -2.6
comp=Z,1.6nm,0.8s,baz=34,slow=2.1,SNR=15
ILAR **Eielson Array** 90.88 25 P P 00 16 55.2 -1.3
ILAR *PP pP 00 17 24.5 -1.3
ILAR pmax pmax
comp=Z,5.0nm,0.6s
ILAR pmax pmax
comp=Z,1.0nm,0.8s
ILAR pmax pmax
comp=Z,2.0nm,0.8s
KMBO **Kilima Mbogo** 91.66 269 P P 00 17 02.2 +1.0
comp=Z,7.9nm,1.0s,mb4.9,baz=180,slow=24,SNR=13
KMBO **Kilima Mbogo** 91.66 269 *e*P P 00 17 00.4 -0.9
comp=Z,17nm,1.3s,mb5.1
KMBO **Kilima Mbogo** 91.66 269 P P 00 17 02.3 +1.0
KMBO pmax pmax
comp=Z,8.0nm,1.0s
DOT **Dot Lake** 92.00 26 *e*P P 00 17 01.8 +0.1
comp=Z,34nm,0.9s,mb5.6
MALT **Malatya** 92.76 308 *e*P P 00 17 06.3 +0.5
comp=Z,14nm,1.4s,mb5.1
MALT **Malatya** 92.76 308 *e*P P 00 17 06.3 +0.5
MALT pmax pmax
comp=Z,14nm,1.4s,mb5.1
MALT **Malatya** 92.76 308⇓*i*P P 00 17 06.7 +0.9
MALT **Malatya** 92.76 308 P P 00 17 05.6 -0.2
KLMR **Klimovskoe** 93.01 331 *e*P P 00 17 03.8 -2.6
KLMR pmax pmax
comp=Z,18nm,1.4s,mb5.2
EGAK **Eagle** 93.33 25 *e*P P 00 17 07.8 0.0
ANN **Anapa** 93.74 315 *e*P P 00 17 05.6 -4.6
ANN pmax pmax
comp=Z,143nm,1.3s,mb6.1
ASF **Jabal al Asfar** 93.76 302 PKKPbc PKKPbc 00 34 15.9 +0.6
baz=272,slow=3.3
DAWY **Dawson** 94.08 26 *e*P P 00 17 11.6 +0.3
OBN **Obninsk** 94.46 325⇓*e*P P 00 17 12.6 -0.6
OBN *e* 00 21 02.2
OBN pmax pmax
comp=Z,17nm,1.4s,mb5.2
LVZ **Lovozero** 95.11 338⇓*e*P P 00 17 15.1 -0.8
LVZ pmax pmax
comp=Z,18nm,1.7s,mb5.2
MAIT **Maitri** 95.14 197 *e*P P 00 17 16.8 +0.7
APA **Apatity** 95.61 337⇑*i*P P 00 17 17.0 -1.2
APA pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
APA MLR MLR
comp=Z,300nm,15.0s
INK **Inuvik** 96.26 22 P P 00 17 21.1 -0.1
comp=Z,11nm,0.9s,mb5.3,baz=302,slow=3.9,SNR=11
INK **Inuvik** 96.26 22 *e*P P 00 17 21.1 -0.1
comp=Z,9.6nm,0.8s,mb5.3
INK **Inuvik** 96.26 22 P P 00 17 21.1 -0.1
INK pmax pmax
comp=Z,11nm,0.9s
BR131 **Keskin Array S** 96.51 309 *e*P P 00 17 21.7 -1.3
comp=Z,1.7nm,0.8s,mb4.5
BRTR **Keskin Array B** 96.51 309 P P 00 17 21.7 -1.2
comp=Z,2.3nm,1.0s,mb4.6,baz=105,slow=4.2,SNR=10
BRTR PP PP 00 21 07.7 -11
comp=Z,0.7nm,0.7s,baz=128,slow=9.3,SNR=3.1
BRTR PKKPbc PKKPbc 00 34 07.5 -0.7
comp=Z,1.1nm,1.0s,baz=336,slow=5.4,SNR=4.4
BRTR **Keskin Array B** 96.51 309 P P 00 17 21.7 -1.2
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR pmax pmax
comp=Z,1.0nm,1.0s
JOF **Joensuu** 96.84 333 *e*P P 00 17 21.4 -2.5
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
JOF **Joensuu** 96.84 333 *e*p P 00 17 21.4 -2.5
comp=Z,2.4nm,0.6s,mb4.8
KEV **Kevo** 97.67 340 *e*P P 00 17 24.5 -3.0
KEV pmax pmax
comp=Z,2.0nm,0.8s,mb4.7
KEV **Kevo** 97.67 340 *e*p P 00 17 24.5 -3.0
comp=Z,2.4nm,0.8s,mb4.8
ARCES **ARCESS Array B** 98.22 340 P P 00 17 28.9 -1.1
comp=Z,5.7nm,0.6s,mb5.3,baz=88,slow=6.7,SNR=64
ARCES pP pP 00 17 56.7 -2.8
comp=Z,2.3nm,0.7s,baz=104,slow=5.1,SNR=2.1
ARCES PKiKP PKiKP 00 22 02.1 +0.1
comp=Z,0.5nm,0.4s,baz=93,slow=2.1,SNR=5.4
ARCES PKKPbc PKKPbc 00 34 01.4 -3.2
comp=Z,0.6nm,0.5s,baz=230,slow=2.2,SNR=12
ARCES **ARCESS Array B** 98.22 340 P P 00 17 28.9 -1.1
ARCES pP pP 00 17 56.7 -2.8
ARCES **ARCESS Array B** 98.22 340 P P 00 17 28.9 -1.1
ARCES *PP pP 00 17 56.7 -2.8
ARCES pmax pmax
comp=Z,6.0nm,0.6s
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARE0 **ARCESS Array S** 98.22 340 *e*P P 00 17 29.1 -0.9
KAF **Kangasniemi** 99.25 332 *e*P P 00 17 32.8 -1.9
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.9
KAF **Kangasniemi** 99.25 332 *e*p P 00 17 32.8 -1.9
comp=Z,1.6nm,0.5s,mb4.8
LSZ **Lusaka** 99.40 254 *e*Pdif Pdif 00 17 36.2 +0.6
comp=Z,17nm,1.0s
LSZ **Lusaka** 99.40 254 *e*P Pdif 00 17 36.2 +0.6
LSZ pmax pmax
comp=Z,17nm,1.0s,mb5.5
FINES **FINESS Array B** 99.47 332 P Pdif 00 17 33.7 -2.1
comp=Z,1.1nm,0.5s,baz=58,slow=6.8,SNR=7.1
FINES pP pP 00 18 04.0 -1.2
comp=Z,3.2nm,0.9s,baz=108,slow=4.5,SNR=2.0
FINES PKiKP PKiKP 00 22 05.4 +1.0
comp=Z,2.0nm,0.9s,baz=93,slow=4.0,SNR=4.3
FINES **FINESS Array B** 99.47 332 P Pdif 00 17 33.7 -2.1
FINES pP pP 00 18 04.0 -1.2
FINES **FINESS Array B** 99.47 332 P Pdif 00 17 33.7 -2.2
FINES *PP pP 00 18 04.0 -1.2
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES pmax pmax
comp=Z,2.0nm,0.9s
BOSA **Boshof** 100.20 240 P Pdif 00 17 39.4 +0.2
comp=Z,7.9nm,1.0s,baz=92,slow=7.1,SNR=6.1
BOSA **Boshof** 100.20 240 *e*Pdif Pdif 00 17 39.6 +0.5
BOSA **Boshof** 100.20 240 *e*P Pdif 00 17 39.6 +0.5
LBTB **Lobatse** 100.50 244 *e*Pdif Pdif 00 17 41.0 +0.5
LBTB **Lobatse** 100.50 244 *e*P Pdif 00 17 41.0 +0.6
VRI **Vrincioaia** 101.24 316⇓*i*P Pdif 00 17 46.7 +3.0
VRI **Vrincioaia** 101.24 316⇓*i*P PP 00 22 00.3 +6.0
PLOR **Plostina** 101.29 316⇑*i*P PP 00 22 01.1 +6.4
MLR **Muntele Rosu** 101.83 316⇑*i*P Pdif 00 17 54.0 +7.7
MLR **Muntele Rosu** 101.83 316⇑*i*P PP 00 21 59.0 +0.3
BURAR **Bucovina Array** 102.06 318⇓*i*P Pdif 00 17 47.7 +0.3
BUR08 **Bucovina Ar. S** 102.06 318 *e*Pdif Pdif 00 17 47.4 -0.1
KWP **Kalwaria Pacla** 103.39 320⇓*i*P Pdif 00 17 54.7 +1.4
BZS **Buzias** 104.82 316⇓*i*P PKiKP 00 22 16.5 +1.9
YKA **Yellowknife Ar** 105.31 26 Pdiff Pdif 00 18 01.1 -0.7
comp=Z,0.9nm,0.7s,baz=293,slow=4.4,SNR=5.6
YKA PKiKP PKiKP 00 22 15.2 +0.2
comp=Z,1.4nm,0.8s,baz=298,slow=1.9,SNR=8.8
YKA PKKPbc PKKPbc 00 33 40.5 -3.2
comp=Z,1.9nm,0.7s,baz=112,slow=3.2,SNR=11
YKA **Yellowknife Ar** 105.31 26 Pdif Pdif 00 18 01.1 -0.7
YKA PKPdif PKiKP 00 22 15.2 +0.2
YKA PKKPbc PKKPbc 00 33 40.5 -3.2
YKA **Yellowknife Ar** 105.31 26 P Pdif 00 18 01.1 -0.7
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA pmax pmax
comp=Z,2.0nm,0.7s
OKC **Ostrava-Krasne** 106.24 321 *e*PP PP 00 22 25.8 -5.5
NOA **NORSAR Array B** 106.47 333 Pdiff Pdif 00 18 05.7 -1.3
comp=Z,0.9nm,0.8s,baz=69,slow=4.7,SNR=3.7
NOA PKKP PKKPdf 00 33 50.5 -0.9
comp=Z,0.7nm,0.7s,baz=257,slow=5.5,SNR=3.5
NOA PKKPab PKKPab 00 33 58.8 +4.7
comp=Z,1.5nm,0.9s,baz=86,slow=1.4,SNR=3.8
NOA **NORSAR Array B** 106.47 333 P Pdif 00 18 05.7 -1.3
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA pmax pmax
comp=Z,2.0nm,0.9s
MORC **Moravsky Berou** 106.64 321 *e*PKP PKiKP 00 22 18.9 +1.0
MORC **Moravsky Berou** 106.64 321⇓*i*P PP 00 22 32.3 -1.9
PKSM **Moragy** 106.74 317⇑*i*P PP 00 22 30.9 -4.2
DPC **Dobruska-Polom** 107.25 322 *e*PP PP 00 22 34.3 -4.4
CLL **Collm** 108.99 323 *e*PKP PKiKP 00 22 21.0 -1.2
CLL *i*PP PP 00 22 49.4 -1.8
CLL **Collm** 108.99 323 *e*PKiKP PKiKP 00 22 21.0 -1.2
CLL *i*PP PP 00 22 49.4 -1.8
NVAR **Mina Array Bea** 110.06 50 Pdiff Pdif 00 18 24.2 +1.3
comp=Z,0.3nm,0.5s,baz=253,slow=5.6,SNR=3.4
NVAR PKiKP PKiKP 00 22 26.2 +1.5
comp=Z,1.0nm,0.7s,baz=247,slow=2.2,SNR=6.6
NVAR PP PP 00 22 60.0 +0.5
comp=Z,0.8nm,0.8s,baz=252,slow=4.6,SNR=2.6
NVAR PKKPbc PKKPbc 00 33 27.4 -0.5
comp=Z,1.5nm,0.7s,baz=121,slow=5.1,SNR=11
NVAR PKKPab PKKPab 00 33 39.1 +0.7
comp=Z,1.8nm,0.8s,baz=112,slow=5.2,SNR=8.6
NVAR **Mina Array Bea** 110.06 50 Pdif Pdif 00 18 24.2 +1.3
NVAR PKPdif PKiKP 00 22 26.2 +1.5
NVAR PP PP 00 22 60.0 +0.5
NVAR PKKPbc PKKPbc 00 33 27.4 -0.5
NVAR PKKPab PKKPab 00 33 39.1 +0.7
BSMT **Bassoo Peak** 110.20 40 *e*PKP PKiKP 00 22 25.5 +0.9
SLMT **Seeley Lake** 111.22 40 *e*PKP PKiKP 00 22 27.2 +0.7
B15A **Bradely Ranch,** 111.47 39 ⇓PKiKP PKiKP 00 22 27.8 +0.8
baz=112,SNR=6.2
C15A **Salmond Ranch,** 111.62 40 ⇑PKiKP PKiKP 00 22 28.0 +0.8
baz=112,SNR=10.0
MCMT **McKenzie Canyo** 112.40 43 *e*PKP PKiKP 00 22 30.8 +2.0
A17A **Triple J Farms** 112.41 38 ⇓PKiKP PKiKP 00 22 29.7 +0.9
baz=112,SNR=9.0
D16A **Dana Ranch, Ca** 112.55 40 ⇓PKiKP PKiKP 00 22 30.6 +1.6
baz=112,SNR=5.4
C17A **Wharram Farm,** 112.84 39 ⇑PKiKP PKiKP 00 22 30.4 +0.8
baz=113,SNR=5.1
F16A **Kennard Place,** 112.91 41 ⇑PKiKP PKiKP 00 22 30.5 +0.7
baz=113,SNR=6.1
L14A **Malta** 112.95 46 ⇑PKiKP PKiKP 00 22 32.3 +2.3
baz=113
BOZ **Bozeman (W)** 112.96 42 ⇑PKiKP PKiKP 00 22 30.8 +0.9
baz=113
D17A **Six Diamond Ra** 113.06 40 ⇓PKiKP PKiKP 00 22 30.7 +0.7
baz=113
BC3 **Big Chuckawall** 113.28 55 ⇓PKiKP PKiKP 00 22 32.1 +1.2
baz=113
V12A **Nelson** 113.33 53 ⇓PKiKP PKiKP 00 22 33.1 +2.1
baz=113
EGMT **Eagleton** 113.33 39 ⇓PKiKP PKiKP 00 22 31.9 +1.3
baz=113,SNR=6.0
F17A **Fitzpatrick Pl** 113.51 41 ⇓PKiKP PKiKP 00 22 33.0 +2.1
baz=114,SNR=7.6
P14A **Drum Mountains** 113.75 48 ⇑PKiKP PKiKP 00 22 32.8 +1.2
baz=114
E18A **Harlowton** 113.76 40 ⇑PKiKP PKiKP 00 22 32.1 +0.7
baz=114
DUG **Dugway** 113.78 48 ⇑PKiKP PKiKP 00 22 33.5 +1.8
baz=114
C19A **Slack Wire Ran** 113.88 39 ⇑PKiKP PKiKP 00 22 32.9 +1.3
baz=114,SNR=5.2
K16A **Soda Springs** 113.89 44 ⇓PKiKP PKiKP 00 22 34.0 +2.2
baz=114
RRI2 **Red Ridge** 113.91 44 *e*PKP PKiKP 00 22 33.5 +1.7
V13A **Grand Canyon W** 113.98 52 ⇓PKiKP PKiKP 00 22 34.1 +1.9
baz=114
IMW **Indian Meadow** 114.00 43 *e*PKP PKiKP 00 22 33.5 +1.5
TPAW **Teton Pass** 114.12 44 *e*PKP PKiKP 00 22 34.1 +1.9
F18A **Big Timber** 114.13 41 ⇑PKiKP PKiKP 00 22 33.9 +1.8
baz=114,SNR=7.0
D19A **Cripps Ranch,** 114.20 39 ⇓PKiKP PKiKP 00 22 32.5 +0.3
baz=114,SNR=5.8
REDW **Red Top Meadow** 114.23 44 *e*PKP PKiKP 00 22 33.9 +1.5
W13A **Hualapai Mount** 114.24 53 ⇓PKiKP PKiKP 00 22 34.9 +2.2
baz=114
L16A **Fish Haven** 114.25 45 ⇑PKiKP PKiKP 00 22 34.6 +2.1
baz=114
SNOW **Snow King Moun** 114.26 44 *e*PKP PKiKP 00 22 34.0 +1.6
HWUT **Hardware Ranch** 114.28 46 *e*PKP PKiKP 00 22 33.7 +1.1
LOHW **Long Hollow** 114.32 43 *e*PKP PKiKP 00 22 34.0 +1.4
X13A **Yucca** 114.39 54 ⇓PKiKP PKiKP 00 22 35.0 +2.0
baz=114
U14A **Mt Trumbull** 114.48 52 ⇑PKiKP PKiKP 00 22 35.2 +2.1
baz=114
E19A **Rath Farm, Rou** 114.53 40 PKiKP PKiKP 00 22 34.2 +1.3
baz=114,SNR=6.8
C20A **Veseth Ranch,** 114.54 39 PKiKP PKiKP 00 22 34.3 +1.4
baz=114,SNR=5.3
FFC **Flin Flon** 114.70 30 *e*PKP PKiKP 00 22 34.0 +1.1
FFC **Flin Flon** 114.70 30 *e*PKiKP PKiKP 00 22 34.1 +1.2
D20A **Manuel Ranch,** 114.70 39 ⇓PKiKP PKiKP 00 22 34.4 +1.2
baz=115
MSU **Marysvale** 114.71 49 *e*PKP PKiKP 00 22 36.0 +2.5
MSU **Marysvale** 114.71 49 *e*PKiKP PKiKP 00 22 36.0 +2.5
Z13A **Yuma Proving G** 114.84 55 ⇓PKiKP PKiKP 00 22 35.5 +1.6
baz=115
M17A **Scullys Gap (B** 114.96 46 ⇑PKiKP PKiKP 00 22 34.9 +1.1
baz=115
K18A **Toltan Ranch,** 115.03 44 ⇑PKiKP PKiKP 00 22 35.9 +1.9
baz=115
C21A **Desert Coulee** 115.06 38 ⇓PKiKP PKiKP 00 22 35.1 +1.2
baz=115
BNI **Bardonecchia** 115.10 319 *e*PKP PKiKP 00 22 34.7 +0.6
BNI **Bardonecchia** 115.10 319 *e*PKiKP PKiKP 00 22 34.7 +0.7
U15A **North Rim** 115.17 51 ⇓PKiKP PKiKP 00 22 36.5 +2.1
baz=115
Y14A **Wickenburg** 115.21 54 ⇓PKiKP PKiKP 00 22 36.0 +1.4
baz=115
L18A **Fontenelle, Gr** 115.26 45 ⇑PKiKP PKiKP 00 22 36.1 +1.6
baz=115
PDAR **Pinedale Array** 115.32 44 PKP PKPdf 00 22 35.6 +1.1
comp=Z,1.9nm,0.6s,baz=236,slow=1.6,SNR=17
PDAR PKKPbc PKKPbc 00 33 08.9 -1.6
comp=Z,3.1nm,0.9s,baz=106,slow=4.4,SNR=17
PDAR PKKPab PKKPab 00 33 14.6 -0.5
comp=Z,2.2nm,1.0s,baz=106,slow=5.4,SNR=6.6
G20A **Bridger** 115.36 41 ⇑PKiKP PKiKP 00 22 35.9 +1.4
baz=115,SNR=9.8
S16A **Weppner Ranch,** 115.37 50 ⇓PKiKP PKiKP 00 22 36.6 +1.8
baz=115
V15A **Kaibab Nationa** 115.42 52 ⇑PKiKP PKiKP 00 22 37.5 +2.5
baz=115
J19A **Crowheart** 115.50 43 ⇑PKiKP PKiKP 00 22 36.5 +1.7
baz=116,SNR=5.7
L19A **Farson** 115.68 45 ⇓PKiKP PKiKP 00 22 36.9 +1.7
baz=116,SNR=6.4
K19A **Absolon Red Bu** 115.79 44 ⇓PKiKP PKiKP 00 22 36.3 +0.9
baz=116,SNR=12
R17A **Hanksville Air** 115.84 49 ⇓PKiKP PKiKP 00 22 37.4 +1.7
baz=116
I20A **Worland** 115.88 42 ⇓PKiKP PKiKP 00 22 36.8 +1.2
baz=116
D22A **Cohagen** 115.90 39 ⇑PKiKP PKiKP 00 22 37.3 +1.7
baz=116
S17A **Black Ridge (B** 116.00 50 ⇓PKiKP PKiKP 00 22 36.1 +0.1
baz=116

G21A	Lodge Grass	116.02	41	⇑PKiKP	PKiKP	00 22 36.7	+0.9
	baz=116						
LAO	LASA Array	116.06	39	*e*PKPdf	PKPdf	00 22 38.0	+2.1
	baz=116						
LAO	LASA Array	116.06	39	*e*PKPdf	PKPdf	00 22 37.3	+1.5
Q18A	Rafter H Ranch	116.08	48	⇑PKiKP	PKiKP	00 22 37.1	+1.0
	baz=116						
KEST	Kesra	116.08	308	PP	PP	00 23 39.8	-2.5
	comp=Z,2.5nm,1.1s,baz=225,slow=4.1,SNR=3.7						
KEST				SKP		00 26 02.2	
	comp=Z,2.5nm,1.0s,baz=41,slow=9.3,SNR=3.4						
KEST				PKKPbc	PKKPbc	00 33 08.8	+1.1
	comp=Z,1.4nm,0.7s,baz=199,slow=20,SNR=5.7						
115A	Sonoran Desert	116.12	55	⇑PKiKP	PKiKP	00 22 38.5	+2.1
	baz=116						
J20A	Shoshoni	116.13	43	⇑PKiKP	PKiKP	00 22 37.2	+1.1
	baz=116,SNR=10						
U16A	Tuba City	116.16	51	⇑PKiKP	PKiKP	00 22 39.1	+2.7
	baz=116						
T17A	Navajo Res., N	116.18	50	⇓PKiKP	PKiKP	00 22 38.6	+2.3
	baz=116						
K20A	Yellowstone Ra	116.20	44	⇑PKiKP	PKiKP	00 22 37.5	+1.2
	baz=116,SNR=8.2						
L20A	Wamsutter	116.43	44	⇓PKiKP	PKiKP	00 22 38.6	+1.9
	baz=116,SNR=10						
R18A	Canyonlands Na	116.47	49	⇓PKiKP	PKiKP	00 22 38.2	+1.4
	baz=116						
I21A	Big Trails, Te	116.50	42	⇓PKiKP	PKiKP	00 22 37.7	+0.9
	baz=116,SNR=6.6						
V17A	Tonalea, Kykot	116.56	52	⇑PKiKP	PKiKP	00 22 39.1	+1.9
	baz=117						
J21A	Lysite	116.56	43	PKiKP	PKiKP	00 22 38.3	+1.4
	baz=116,SNR=6.1						
116A	Eloy	116.58	55	⇓PKiKP	PKiKP	00 22 38.5	+1.2
	baz=117						
S18A	Hurst Farm, Bl	116.60	49	⇑PKiKP	PKiKP	00 22 39.1	+2.0
	baz=117						
PLDF	La Plantade	116.73	320	*e*P	Pdif	00 18 56.9	+4.3
PLDF	La Plantade	116.73	320	*e*P	Pdif	00 18 56.9	+4.3
T18A	Mexican Hat	116.85	50	⇑PKiKP	PKiKP	00 22 39.1	+1.4
	baz=117						
N20A	Spence Gulch,	116.88	46	⇑PKiKP	PKiKP	00 22 39.2	+1.6
	baz=117,SNR=8.9						
K21A	Alcova	116.96	43	⇑PKiKP	PKiKP	00 22 38.9	+1.2
	baz=117,SNR=18						
AGO	Saint Agoulin	117.00	321	*e*P	Pdif	00 18 57.4	+3.6
L21A	Rawlins	117.12	44	PKiKP	PKiKP	00 22 39.5	+1.4
	baz=117,SNR=6.8						
O20A	White River Ci	117.13	46	⇓PKiKP	PKiKP	00 22 40.0	+1.8
	baz=117,SNR=12						
J22A	Midwest	117.19	42	PKiKP	PKiKP	00 22 38.5	+0.4
	baz=117,SNR=24						
PYM	Petit Puy Mans	117.21	320	*e*P	Pdif	00 18 58.0	+3.3
PYM	Petit Puy Mans	117.21	320	*e*P	Pdif	00 18 58.0	+3.3
P20A	De Beque	117.23	47	⇓PKiKP	PKiKP	00 22 40.2	+1.9
	baz=117,SNR=7.6						
M21A	Separation Pea	117.25	45	PKiKP	PKiKP	00 22 39.9	+1.5
	baz=117,SNR=7.0						
RWWY	Rawlins	117.33	44	*e*PKPdf	PKPdf	00 22 39.8	+1.4
N21A	Black Mountain	117.44	46	PKiKP	PKiKP	00 22 40.8	+2.1
	baz=117,SNR=9.8						
K22A	Casper	117.45	43	⇓PKiKP	PKiKP	00 22 39.4	+0.8
	baz=117,SNR=6.3						
Q20A	Ridgley Place,	117.48	48	⇑PKiKP	PKiKP	00 22 41.1	+2.3
	baz=118,SNR=10.0						
217A	Green Valley	117.50	56	⇓PKiKP	PKiKP	00 22 41.1	+2.0
	baz=118,SNR=6.9						
PV01	Paradox Valley	117.54	49	*e*PKPdf	PKPdf	00 22 40.4	+1.5
VERF	Verneugheol	117.54	321	*e*P	Pdif	00 18 58.4	+2.2
R20A	Redvale	117.66	49	PKiKP	PKiKP	00 22 41.1	+1.9
	baz=118,SNR=5.6						
S20A	Disappointment	117.79	49	⇑PKiKP	PKiKP	00 22 41.3	+1.8
	baz=118,SNR=5.8						
Q21A	Lamborn Mesa,	118.05	48	⇑PKiKP	PKiKP	00 22 41.7	+1.7
	baz=118,SNR=7.0						
X19A	St. Johns	118.07	53	⇓PKiKP	PKiKP	00 22 42.1	+2.0
	baz=118,SNR=5.8						
218A	Dragoon	118.09	56	⇓PKiKP	PKiKP	00 22 41.9	+1.7
	baz=118,SNR=6.8						
N22A	Wattenberg Ran	118.18	45	⇑PKiKP	PKiKP	00 22 42.1	+2.0
	baz=118,SNR=5.3						
318A	Bisbee	118.26	56	⇑PKiKP	PKiKP	00 22 42.7	+2.1
	baz=118						
S21A	Coal Bank Pass	118.27	49	⇑PKiKP	PKiKP	00 22 42.8	+2.4
	baz=118,SNR=19						
SMCO	Snowmass	118.38	47	*e*PKPdf	PKPdf	00 22 42.0	+1.4
P22A	Eagle	118.39	47	⇑PKiKP	PKiKP	00 22 43.1	+2.5
	baz=118						
W20A	Ramah	118.49	52	⇑PKiKP	PKiKP	00 22 42.7	+1.7
	baz=118,SNR=9.0						
119A	Ashpeak Ranch,	118.50	55	⇓PKiKP	PKiKP	00 22 43.2	+2.2
	baz=118						
N23A	Red Feather La	118.51	45	⇑PKiKP	PKiKP	00 22 42.6	+1.8
	baz=118						
RSSD	Black Hills	118.53	41	*e*PKPdf	PKPdf	00 22 41.3	+0.6
RSSD	Black Hills	118.53	41	*e*PKIKP	PKPdf	00 22 41.3	+0.6
Q22A	Crested Butte,	118.53	47	PKiKP	PKiKP	00 22 43.5	+2.6
	baz=118,SNR=8.0						
X20A	Quemado	118.66	52	⇓PKiKP	PKiKP	00 22 43.8	+2.5
	baz=119						
T21A	Navajo Lake	118.68	50	⇑PKiKP	PKiKP	00 22 43.5	+2.3
	baz=119,SNR=6.6						
219A	White Tail Can	118.73	55	⇑PKiKP	PKiKP	00 22 42.9	+1.4
	baz=119,SNR=9.1						
U21A	Nageezi	118.76	50	⇑PKiKP	PKiKP	00 22 43.4	+2.0
	baz=119,SNR=10						
O23A	Lake Granby, G	118.78	46	⇓PKiKP	PKiKP	00 22 43.5	+2.2
	baz=119,SNR=11						
R22A	Saguache, Gunn	118.86	48	⇓PKiKP	PKiKP	00 22 44.1	+2.6
	baz=119,SNR=11						
319A	Douglas	118.86	56	PKiKP	PKiKP	00 22 44.1	+2.3
	baz=119,SNR=13						
S22A	4UR Ranch, Cre	118.97	49	⇓PKiKP	PKiKP	00 22 44.5	+2.7
	baz=119,SNR=11						
120A	U Bar Ranch, L	119.10	55	⇓PKiKP	PKiKP	00 22 44.4	+2.2
	baz=119,SNR=8.4						
ISCO	Idaho Springs	119.14	46	⇑PKiKP	PKiKP	00 22 44.1	+2.1
	baz=119,SNR=7.3						
ISCO	Idaho Springs	119.14	46	*e*PKPdf	PKPdf	00 22 43.7	+1.7
ISCO	Idaho Springs	119.14	46	*e*PKIKP	PKPdf	00 22 43.7	+1.7
T22A	Edith	119.15	49	PKiKP	PKiKP	00 22 44.8	+2.6
	baz=119,SNR=6.5						
W21A	San Fidel	119.17	52	⇓PKiKP	PKiKP	00 22 44.8	+2.5
	baz=119,SNR=5.6						
X21A	Alamocita Cree	119.25	52	PKiKP	PKiKP	00 22 44.5	+2.1
	baz=119,SNR=14						
220A	Playas Peak, P	119.35	55	⇑PKiKP	PKiKP	00 22 44.6	+1.9
	baz=119,SNR=6.6						
U22A	Llaves	119.39	50	PKiKP	PKiKP	00 22 44.7	+2.1
	baz=119,SNR=15						
V22A	San Miguel Ran	119.50	51	⇑PKiKP	PKiKP	00 22 45.3	+2.4
	baz=120,SNR=5.7						
320A	Kipp Ranch, An	119.50	56	⇑PKiKP	PKiKP	00 22 45.6	+2.6
	baz=120						
LAZ	Ladron	119.78	52	*e*PKPdf	PKPdf	00 22 44.9	+1.5
121A	Cookes Peak, D	119.79	55	⇓PKiKP	PKiKP	00 22 44.8	+1.3
	baz=120,SNR=6.7						
USHA	Ushuaia	119.83	168	PKP	PKPdf	00 22 44.0	+1.1
	comp=Z,10nm,0.6s,baz=106,slow=1.7,SNR=11						
N25A	Grover	119.84	44	⇓PKiKP	PKiKP	00 22 44.9	+1.5
	baz=120						
X22A	Bernardo	119.85	52	⇓PKiKP	PKiKP	00 22 46.0	+2.4
	baz=120,SNR=7.8						
U23A	El Rito	119.91	50	⇑PKiKP	PKiKP	00 22 45.7	+2.0
	baz=120,SNR=8.0						
SDCO	Great Sand Dun	119.95	48	⇑PKiKP	PKiKP	00 22 45.6	+1.9
	baz=120,SNR=14						
SDCO	Great Sand Dun	119.95	48	*e*PKPdf	PKPdf	00 22 45.0	+1.4
Y22A	Socorro	120.05	53	⇓PKiKP	PKiKP	00 22 45.5	+1.5
	baz=120,SNR=9.0						
R24A	Sanders Place,	120.08	47	⇑PKiKP	PKiKP	00 22 45.2	+1.2
	baz=120						
O25A	Wiggins	120.09	45	⇓PKiKP	PKiKP	00 22 45.4	+1.5
	baz=120						
V23A	Ortiz Mt. (NFS	120.11	51	⇓PKiKP	PKiKP	00 22 46.9	+2.8
	baz=120,SNR=8.8						
ANMO	Albuquerque	120.14	51	*e*PKPdf	PKPdf	00 22 45.4	+1.3
ANMO	Albuquerque	120.14	51	*e*PKIKP	PKPdf	00 22 45.4	+1.3
S24A	Houchin Ranch,	120.21	48	⇑PKiKP	PKiKP	00 22 46.9	+2.7
	baz=120						
Z22A	Elephant Butte	120.25	53	⇓PKiKP	PKiKP	00 22 46.4	+1.9
	baz=120						
ULM	Lac du Bonnet	120.28	32	PKP	PKPdf	00 22 43.6	-0.2
	comp=Z,2.9nm,0.5s,baz=271,slow=4.7,SNR=3.8						
ULM				pPKP	pPKPdf	00 23 13.4	-1.1
	comp=Z,2.2nm,0.6s,baz=347,slow=3.7,SNR=2.4						
ULM				PKKPbc	PKKPbc	00 32 50.9	-2.2
	comp=Z,5.4nm,0.7s,baz=100,slow=6.6,SNR=5.0						
P25A	Willow Gulch B	120.28	46	⇑PKiKP	PKiKP	00 22 45.9	+1.6
	baz=120,SNR=10						
X23A	Hourglass Bar	120.47	52	⇓PKiKP	PKiKP	00 22 46.2	+1.4
	baz=120,SNR=5.3						
T24A	Torres, Weston	120.52	49	⇓PKiKP	PKiKP	00 22 47.2	+2.4
	baz=120,SNR=6.9						
R25A	Fountain Ranch	120.71	47	⇑PKiKP	PKiKP	00 22 46.7	+1.5
	baz=121,SNR=12						
S25A	Robets Cordova	120.78	48	PKiKP	PKiKP	00 22 47.2	+1.9
	baz=121,SNR=8.9						
Y23A	Lovelace Mesa,	120.78	52	⇓PKiKP	PKiKP	00 22 47.0	+1.6
	baz=121,SNR=7.3						
V24A	Rampart Ranch,	120.81	50	⇑PKiKP	PKiKP	00 22 47.5	+2.0
	baz=121,SNR=16						
Z23A	Rita Site, Whi	120.84	53	⇑PKiKP	PKiKP	00 22 47.2	+1.7
	baz=121,SNR=6.4						
W24A	Lazy 6 Ranch,	120.88	51	⇑PKiKP	PKiKP	00 22 47.8	+2.2
	baz=121,SNR=11						
T25A	Trinidad	120.98	48	⇑PKiKP	PKiKP	00 22 47.4	+1.6
	baz=121,SNR=12						
U25A	Circle Dot Ran	121.24	49	PKiKP	PKiKP	00 22 48.3	+2.0
	baz=121,SNR=8.2						
Y24A	Capitan	121.27	52	⇑PKiKP	PKiKP	00 22 47.8	+1.5
	baz=121,SNR=23						
V25A	Rancho No Teng	121.28	50	PKiKP	PKiKP	00 22 48.0	+1.7
	baz=121,SNR=15						
Z24A	Sheeppen Canyo	121.51	53	⇓PKiKP	PKiKP	00 22 48.9	+2.0
	baz=122,SNR=15						
W25A	X Bar L Ranch,	121.61	51	⇓PKiKP	PKiKP	00 22 48.5	+1.4
	baz=122,SNR=6.9						
124A	Stringfield Ra	121.63	54	⇓PKiKP	PKiKP	00 22 49.1	+1.9
	baz=122,SNR=11						
U26A	Atchley Ranch,	121.75	49	PKiKP	PKiKP	00 22 48.9	+1.6
	baz=122,SNR=6.6						
224A	Cornudas Mount	121.76	54	⇓PKiKP	PKiKP	00 22 49.1	+1.7
	baz=122,SNR=8.0						
Y25A	Mesa, Roswell	121.85	52	PKiKP	PKiKP	00 22 48.7	+1.2
	baz=122,SNR=16						
V26A	Tequesquite Ra	121.93	50	⇑PKiKP	PKiKP	00 22 48.7	+1.1
	baz=122						
324A	Moseley Ranch,	121.98	55	⇑PKiKP	PKiKP	00 22 49.1	+1.2
	baz=122,SNR=17						
MNTX	Cornudas Mount	121.98	55	PKiKP	PKiKP	00 22 49.1	+1.3
	baz=122,SNR=24						
MNTX	Cornudas Mount	121.98	55	*e*PKPdf	PKPdf	00 22 48.6	+0.9
Z25A	Roswell	122.04	53	PKiKP	PKiKP	00 22 49.4	+1.4
	baz=122,SNR=8.2						
TAM	Tamanrasset	122.21	295	*e*PKPdf	PKPdf	00 22 49.3	+1.0
TAM	Tamanrasset	122.21	295	*e*PKIKP	PKPdf	00 22 49.3	+0.9
125A	Gardner Draw,	122.28	53	⇓PKiKP	PKiKP	00 22 49.9	+1.5
	baz=122,SNR=8.3						
225A	Deer Hill, Car	122.32	54	⇓PKiKP	PKiKP	00 22 50.2	+1.7
	baz=122,SNR=7.5						
325A	Bean Ranch, Si	122.42	55	⇑PKiKP	PKiKP	00 22 49.9	+1.2
	baz=122,SNR=8.8						
Y26A	Elida	122.54	52	⇑PKiKP	PKiKP	00 22 49.8	+0.9
	baz=122,SNR=6.9						
425A	Indio Mountain	122.57	56	⇑PKiKP	PKiKP	00 22 50.3	+1.2
	baz=123,SNR=15						
226A	Malaga, Loving	122.91	54	⇑PKiKP	PKiKP	00 22 50.5	+0.8
	baz=123,SNR=13						
CLNB	Carlsbad	123.03	54	*e*PKPdf	PKPdf	00 22 51.2	+1.5
Y27A	Causey	123.07	52	⇓PKiKP	PKiKP	00 22 51.1	+1.2
	baz=123,SNR=11						
Z27A	Tatum	123.22	52	⇑PKiKP	PKiKP	00 22 51.6	+1.3
	baz=123						
326A	Caldwell Ranch	123.24	55	⇑PKiKP	PKiKP	00 22 51.3	+1.0
	baz=123,SNR=6.6						
MSTX	Muleshoe	123.34	51	⇑PKiKP	PKiKP	00 22 51.6	+1.1
	baz=123,SNR=10						
426A	McDonald Obser	123.39	56	⇑PKiKP	PKiKP	00 22 51.9	+1.3
	baz=123,SNR=8.4						
ECSD	EROS Data Cent	123.44	38	*e*PKPdf	PKPdf	00 22 50.3	+0.2
526A	Mary Lane Ranc	123.52	56	⇓PKiKP	PKiKP	00 22 52.0	+1.1
	baz=124,SNR=16						
626A	Big Bend Ranch	123.63	57	⇓PKiKP	PKiKP	00 22 51.9	+0.7
	baz=124,SNR=8.4						
CBKS	Cedar Bluff	123.72	45	⇑PKiKP	PKiKP	00 22 51.8	+0.7
	baz=124						
CBKS	Cedar Bluff	123.72	45	*e*PKPdf	PKPdf	00 22 51.6	+0.8
CBKS	Cedar Bluff	123.72	45	*e*PKIKP	PKPdf	00 22 51.6	+0.8
427A	Hayter Ranch,	123.86	55	⇓PKiKP	PKiKP	00 22 52.6	+1.0
	baz=124,SNR=17						
AMTX	Amarillo	123.86	50	⇑PKiKP	PKiKP	00 22 52.5	+1.1
	baz=124						
527A	Woodward Ranch	123.89	56	⇑PKiKP	PKiKP	00 22 52.7	+1.0
	baz=124,SNR=20						
EYMN	Ely	123.96	32	*e*PKPdf	PKPdf	00 22 51.1	+0.1
TXAR	Lajitas Array	124.08	57	PKP	PKPdf	00 22 52.2	+0.4
	comp=Z,5.6nm,0.8s,baz=233,slow=1.1,SNR=46						
TXAR				PKKPbc	PKKPbc	00 32 37.8	-0.1
	comp=Z,1.5nm,0.8s,baz=126,slow=6.9,SNR=10						
TXAR				SKKPbc		00 36 18.7	
	comp=Z,1.2nm,0.9s,baz=115,slow=5.9,SNR=4.8						
TXAR	Lajitas Array	124.08	57	PKP	PKPdf	00 22 52.2	+0.4
TXAR				PKKPbc	PKKPbc	00 32 37.8	-0.1
TXAR				SKKPbc		00 36 18.7	
TXAR	Lajitas Array	124.08	57	PKIKP	PKPdf	00 22 52.2	+0.4
TXAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TXAR				pmax	pmax		
	comp=N,1.0nm,0.9s						
328A	Wristen Ranch,	124.17	54	⇓PKiKP	PKiKP	00 22 53.2	+1.0
	baz=124,SNR=15						
627A	Terlingua Ranc	124.28	57	⇓PKiKP	PKiKP	00 22 53.6	+1.1
	baz=124,SNR=13						
428A	Kincaid Ranch,	124.48	55	⇓PKiKP	PKiKP	00 22 54.5	+1.6
	baz=124,SNR=11						
ESDC	Sonseca Array	124.50	317	PKP	PKPdf	00 22 53.1	+0.8
	comp=N,0.6nm,0.6s,baz=76,slow=2.6,SNR=3.7						
528A	Cox Ranch, San	124.57	56	⇑PKiKP	PKiKP	00 22 54.1	+1.1
	baz=125,SNR=7.8						
628A	Black Gap, Mar	124.69	57	⇑PKiKP	PKiKP	00 22 54.2	+0.9
	baz=125,SNR=7.3						
KSU1	Kansas State U	125.76	43	*e*PKPdf	PKPdf	00 22 55.7	+1.0
WMOK	Wichita Mounta	126.12	49	*e*PKPdf	PKPdf	00 22 56.3	+0.8
WMOK	Wichita Mounta	126.12	49	*e*PKIKP	PKPdf	00 22 56.3	+0.8
JCT	Junction City	126.91	54	*e*PKPdf	PKPdf	00 22 58.0	+0.9
JCT	Junction City	126.91	54	*e*PKIKP	PKPdf	00 22 58.0	+0.8
SCHQ	Schefferville	127.50	11	PKP	PKPdf	00 22 58.5	+0.9
	comp=N,3.3nm,0.7s,baz=333,slow=1.5,SNR=6.3						
SCHQ	Schefferville	127.50	11	PKP	PKPdf	00 22 58.5	+0.9
JFWS	Jewell Farm	127.75	36	*e*PKPdf	PKPdf	00 22 58.3	-0.1
JFWS	Jewell Farm	127.75	36	*e*PKIKP	PKPdf	00 22 58.3	-0.1
CCM	Cathedral Cave	129.91	42	*e*PKPdf	PKPdf	00 23 03.1	+0.5
CCM	Cathedral Cave	129.91	42	*e*PKIKP	PKPdf	00 23 03.1	+0.4
MIAR	Mount Ida	130.06	47	*e*PKPdf	PKPdf	00 23 04.5	+1.4
MIAR				*e*SKPab		00 26 16.6	
MIAR	Mount Ida	130.06	47	*e*PKIKP	PKPdf	00 23 04.5	+1.4
FVM	French Village	130.49	41	*e*PKPdf	PKPdf	00 23 04.3	+0.5
FVM	French Village	130.49	41	*e*PKIKP	PKPdf	00 23 04.3	+0.5
OLIL	Olney	131.55	39	*e*PKPdf	PKPdf	00 23 05.4	-0.4
OLIL				*e*SKP		00 26 22.9	
PLCA	Paso Flores	132.23	160	PKhKP	PKPpre	00 22 55.3	
	comp=N,1.2nm,0.7s,baz=234,slow=2.9,SNR=3.6						
PLCA				PKP	PKPdf	00 23 08.5	+1.5
	comp=N,8.8nm,0.8s,baz=212,slow=1.9,SNR=15						
PLCA				PP	PP	00 25 28.3	-1.0
	comp=N,3.4nm,1.1s,baz=171,slow=6.3,SNR=2.2						
PLCA				SKPbc	SKPbc	00 26 24.9	+1.5
	comp=N,16nm,0.8s,baz=216,slow=3.6,SNR=19						
PLCA	Paso Flores	132.23	160	PKP	PKPpre	00 22 55.3	
PLCA				*e*PKPdf	PKPdf	00 23 08.4	+1.4
PLCA	Paso Flores	132.23	160	PKHKP	PKPpre	00 22 55.3	
PLCA						00 23 08.5	
PLCA						00 25 28.3	
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PLCA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PLCA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PLCA				pmax	pmax		
	comp=N,16nm,0.8s						
WVT	Waverly	133.24	42	*e*PKPdf	PKPdf	00 23 10.1	+1.1
WVT				*e*SKP		00 26 27.8	
WVT	Waverly	133.24	42	*e*PKIKP	PKPdf	00 23 10.1	+1.1
KIC	Kosan Boka	133.85	275	*e*PKP1	PKPdf	00 23 12.8	+2.0
	comp=N,55nm,1.4s						
KIC	Kosan Boka	133.85	275	*e*PKP1	SKPbc	00 26 29.8	+0.1
	comp=N,106nm,0.9s						
DBIC	Dimbokro	133.96	276	PKhKP	PKPpre	00 23 00.3	
	comp=N,2.2nm,0.6s,baz=50,slow=2.0,SNR=9.4						
DBIC				PKP	PKPdf	00 23 12.2	+1.2
	comp=N,7.6nm,0.7s,baz=84,slow=2.9,SNR=9.5						
DBIC				SKPbc	SKPbc	00 26 30.0	-0.1
	comp=N,35nm,0.7s,baz=67,slow=4.1,SNR=27						
DBIC	Dimbokro	133.96	276	PKP	PKPpre	00 23 00.3	
DBIC				*e*PKPdf	PKPdf	00 23 11.6	+0.6
DBIC				*e*SKPbc	SKPbc	00 26 30.2	+0.1
DBIC	Dimbokro	133.96	276	PKHKP	PKPpre	00 23 00.3	
DBIC						00 23 12.2	
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DBIC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DBIC				pmax	pmax		
	comp=N,35nm,0.7s						
TIC	Toumodi	134.12	276	*e*PKP1	PKPdf	00 23 12.6	+1.3
	comp=N,7.3nm,0.3s						
TIC	Toumodi	134.12	276	*e*PKP1	SKPbc	00 26 30.5	-0.1
	comp=N,95nm,1.0s						
TIC	Toumodi	134.12	276	*e*PKIKP	PKPdf	00 23 12.6	+1.3
LIC	Lamto	134.14	275	*e*PKP1	PKPdf	00 23 13.4	+2.1
	comp=N,43nm,1.0s						
LIC	Lamto	134.14	275	*e*PKP1	SKPbc	00 26 30.7	0.0
	comp=N,128nm,1.0s						
MDV	Middlebury	135.41	23	*e*PKPdf	PKPdf	00 23 14.1	+1.3
LRAL	Lakeview Retre	135.54	45	*e*PKPdf	PKPdf	00 23 14.2	+0.8
TKL	Tuckaleechee C	136.16	40	SKP		00 26 41.0	
	comp=N,9.0nm,1.1s,baz=70,slow=2.0,SNR=4.7						
TKL	Tuckaleechee C	136.16	40	*e*PKPdf	PKPdf	00 23 15.0	+0.5
TKL	Tuckaleechee C	136.16	40	*e*PKIKP	PKPdf	00 23 15.0	+0.5
TRQA	Tornquist	137.15	167	*e*PKPdf	PKPdf	00 23 18.1	+1.8
CFAA	Coronel Fontan	141.18	156	PP	PP	00 26 23.0	-2.3
	comp=N,0.4nm,0.7s,baz=299,slow=3.0,SNR=2.9						
CFAA				SKPbc	SKPbc	00 26 51.5	+0.9
	comp=N,0.9nm,0.7s,baz=236,slow=3.2,SNR=7.9						
LCO	Las Campanas	142.31	151	*e*PKPpre	PKPpre	00 23 22.5	
JTS	JuntasAbangare	145.72	77	*e*PKPdf	PKPdf	00 23 32.9	+0.7
JTS				*e*PKPbc	PKPbc	00 23 34.2	+1.4
JTS	JuntasAbangare	145.72	77	*e*PKP2	PKPab	00 23 32.9	-0.4
BBSR	BB Station	148.79	23	*e*PKPbc	PKPbc	00 23 41.0	+0.2
CPUP	Villa Florida	149.45	169	*e*PKPdf	PKPdf	00 23 39.0	+0.9
CPUP				*e*PKPbc	PKPbc	00 23 42.9	+0.2
CPUP	Villa Florida	149.45	169	*e*PKHKP	PKPdf	00 23 39.0	+0.9
BCIP	Isla Barro Col	150.87	78	*e*PKPbc	PKPbc	00 23 46.0	-0.4
GTBY	Guantanamo Bay	151.54	54	*e*PKPbc	PKPbc	00 23 48.1	+0.3
OTAV	Otavalo	152.36	97	*e*PKPdf	PKPdf	00 23 44.8	+1.8
OTAV				*e*PKPbc	PKPbc	00 23 51.6	+1.7
SPB	Sao Paulo	152.58	187	*e*PKPdf	PKPdf	00 23 43.3	+0.3
SPB				*e*PKPbc	PKPbc	00 23 50.9	+0.9
SPB				*e*PKPab	PKPab	00 24 01.0	+0.3
CAM4	Nova Friburgo	152.75	197	⇑*i*P	PKPbc	00 23 51.3	+0.9
CAM4				*i*		00 23 52.0	
CAM4				*i*		00 23 53.0	
CAM4				*i*		00 23 57.5	
CAM4				*i*		00 24 02.3	
CAM4				*i*		00 24 05.0	
LPAZ	La Paz	153.85	140	PKP	PKPdf	00 23 47.4	+2.4
	comp=N,7.0nm,0.9s,baz=100,slow=0.5,SNR=25						
LPAZ				PKPbc	PKPbc	00 23 54.3	+1.3
	comp=N,12nm,0.8s,baz=318,slow=1.4,SNR=23						
LPAZ				PKPab	PKPab	00 24 08.6	+2.4
	comp=N,43nm,1.0s,baz=182,slow=4.8,SNR=20						
LPAZ			

*ROM **13** 00:17:14.0±0.2, 46°.00N×7°.50E, h11km±2km, Md2.1/8, Ml1.8/2, Error ellipse: s-maj=2.9km s-min=1.9km az=170.0*
*ZUR **13** 00:17:14.5, 45°.98N×7°.50E, h-2km±2km, ML1.4/6*
*LDG **13** 00:17:14.3±0.1, 46°.01N×7°.51E, h6km, Md2.6/2, Ml2.3/14, Error ellipse: s-maj=1.5km s-min=0.9km az=88.0*

ISC 13 00:17:13.7±0.4, 46°.01N±0°.01×7°.48E±0°.03, h17km±4km, n64, σ0s86/113, 1C-4D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIX	**Grande Dixence** 834nm,0.2s	**0.09**	**323**	⇓*i*Pg	**Pg**	**00 17 17.4**	**+0.2**
DIX	834nm,0.2s			*i* Sg	**Sg**	**00 17 19.0**	**-0.5**
DIX	**Grande Dixence**	**0.09**	**323**	Pg	**Pg**	**00 17 17.3**	**+0.1**
DIX				Sg	**Sg**	**00 17 19.0**	**-0.5**
DIX	**Grande Dixence**	**0.09**	**323**	Pg	**Pg**	**00 17 17.3**	**+0.1**
DIX	834nm,0.2s			*i* Sg	**Sg**	**00 17 19.0**	**-0.5**
MMK	**Mattmark** 107nm,0.4s	**0.34**	**83**	*e*Pg	**Pg**	**00 17 21.2**	**+0.3**
MMK	**Mattmark**	**0.34**	**83**	Pg	**Pg**	**00 17 21.2**	**+0.3**
MMK				Sg	**Sg**	**00 17 25.6**	**-0.1**
MMK	**Mattmark** 107nm,0.4s	**0.34**	**83**	*e*Pg	**Pg**	**00 17 21.2**	**+0.3**
MMK				Sg	**Sg**	**00 17 25.6**	**-0.1**
GRYON	**Gryon** 22nm,0.3s	**0.35**	**313**	*e*Pg	**Pg**	**00 17 22.3**	**+1.2**
GRYON	22nm,0.3s			*i* Sg	**Sg**	**00 17 27.5**	**+1.4**
GRYON	**Gryon** 22nm,0.3s	**0.35**	**313**	*e*Pg	**Pg**	**00 17 22.3**	**+1.2**
GRYON	22nm,0.3s			*i* Sg	**Sg**	**00 17 27.5**	**+1.4**
SENIN	**Lac Senin/Sane** 40nm,0.5s	**0.38**	**340**	⇑*i*Pg	**Pg**	**00 17 28.6**	**+7.1**
SALAN	**Lac Salanfe** 13nm,0.3s	**0.38**	**291**	⇓*i*Pg	**Pg**	**00 17 22.9**	**+1.3**
SALAN	13nm,0.3s			*i* Sg	**Sg**	**00 17 23.0**	**-3.9**
SALAN	**Lac Salanfe** 13nm,0.3s	**0.38**	**291**	⇓*i*Pg	**Pg**	**00 17 22.9**	**+1.3**
SALAN	13nm,0.3s			*i* Sg	**Sg**	**00 17 23.0**	**-3.9**
MRGE	**Morge**	**0.38**	**231**	Pg	**Pg**	**00 17 22.0**	**+0.4**
MRGE				Sg	**Sg**	**00 17 27.2**	**+0.3**
MRGE	**Morge**	**0.38**	**231**	Pg	**Pg**	**00 17 22.0**	**+0.4**
MRGE				Sg	**Sg**	**00 17 27.2**	**+0.3**
LKBD2	**Leukerbad 2**	**0.38**	**17**	*e*P	**Pg**	**00 17 23.1**	**+1.5**
LKBD2	**Leukerbad 2**	**0.38**	**17**	*e*P	**Pg**	**00 17 23.1**	**+1.5**
EMV	**Vieux Emosson** 67nm,0.2s	**0.41**	**278**	⇓*i*Pg	**Pg**	**00 17 23.4**	**+1.3**
EMV	**Vieux Emosson**	**0.41**	**278**	Pg	**Pg**	**00 17 23.3**	**+1.2**
EMV				Sg	**Sg**	**00 17 29.3**	**+1.5**
EMV	**Vieux Emosson**	**0.41**	**278**	Pg	**Pg**	**00 17 23.3**	**+1.2**
EMV				Sg	**Sg**	**00 17 29.3**	**+1.5**
ORO	**Oropa**	**0.52**	**137**	Pg	**Pg**	**00 17 24.2**	**+0.1**
ORO				Sg	**Sg**	**00 17 31.8**	**+0.8**
ORO	**Oropa**	**0.52**	**137**	Pg	**Pg**	**00 17 24.2**	**+0.1**
ORO				Sg	**Sg**	**00 17 31.8**	**+0.8**
TRAV	**Traversella** 43nm,0.2s	**0.53**	**160**	Pg	**Pg**	**00 17 24.3**	**0.0**
TRAV				Sg	**Sg**	**00 17 31.1**	**-0.3**
TRAV	**Traversella**	**0.53**	**160**	Pg	**Pg**	**00 17 24.3**	**0.0**
TRAV	43nm,0.2s			Sg	**Sg**	**00 17 31.1**	**-0.3**
LSD	**Lago del Serru** 39nm,0.2s	**0.60**	**204**	Pg	**Pg**	**00 17 26.1**	**+0.5**
LSD				Sg	**Sg**	**00 17 33.5**	**-0.2**
LSD	**Lago del Serru**	**0.60**	**204**	Pg	**Pg**	**00 17 26.1**	**+0.5**
LSD	39nm,0.2s			Sg	**Sg**	**00 17 33.5**	**-0.2**
LPL	**La Plagne** 16nm,0.4s	**0.72**	**227**	*e*Pg	**Pg**	**00 17 28.2**	**+0.3**
LPL				*e*Sg	**Sg**	**00 17 38.1**	**+0.7**
LPL	**La Plagne** 7.8nm,0.4s	**0.72**	**227**	*e*Pg	**Pg**	**00 17 28.2**	**+0.3**
LPL				*e*Sg	**Sg**	**00 17 38.1**	**+0.7**
LPG	**La Plagne** 15nm,0.3s	**0.72**	**225**	*e*Pg	**Pg**	**00 17 28.2**	**+0.3**
LPG				*e*Sg	**Sg**	**00 17 37.8**	**+0.3**
LPG	**La Plagne** 7.7nm,0.3s	**0.72**	**225**	*e*Pg	**Pg**	**00 17 28.2**	**+0.3**
LPG				*e*Sg	**Sg**	**00 17 37.8**	**+0.3**
RSP	**Reno Superiore**	**0.88**	**190**	Pg	**Pg**	**00 17 30.9**	**+0.1**
RSP				Sg	**Sg**	**00 17 42.3**	**0.0**
RSP	**Reno Superiore**	**0.88**	**190**	Pg	**Pg**	**00 17 30.9**	**+0.1**
RSP				Sg	**Sg**	**00 17 42.3**	**0.0**
CABF	**La Chapelle**	**1.14**	**302**	*e*Pg	**Pg**	**00 17 35.7**	**-0.1**
CABF	**La Chapelle**	**1.14**	**302**	*e*P	**Pn**	**00 17 37.5**	**+2.7**
CABF	5.6nm,0.3s			*e*Sg	**Sg**	**00 17 50.8**	**+0.2**
CABF	**La Chapelle**	**1.14**	**302**	*e*Pg	**Pg**	**00 17 35.7**	**-0.1**
CABF	**La Chapelle**	**1.14**	**302**	*e*P	**Pn**	**00 17 37.5**	**+2.7**
CABF	2.8nm,0.3s			*e*Sg	**Sg**	**00 17 50.8**	**+0.2**
MBDF	**Montbardon**	**1.38**	**202**	*e*Pg	**Pg**	**00 17 40.1**	**-0.2**
MBDF	27nm,0.5s			*e*Sg	**Sg**	**00 17 58.4**	**+0.2**
MBDF	**Montbardon**	**1.38**	**202**	*e*Pg	**Pg**	**00 17 40.1**	**-0.2**
MBDF	14nm,0.5s			*e*Sg	**Sg**	**00 17 58.4**	**+0.2**
ORIF	**Oris-en-Rattie**	**1.57**	**226**	*e*Pg	**Pg**	**00 17 43.1**	**-0.8**
ORIF	8.5nm,0.4s			*e*Sg	**Sg**	**00 18 04.1**	**-0.3**
ORIF	**Oris-en-Rattie**	**1.57**	**226**	*e*Pg	**Pg**	**00 17 43.1**	**-0.8**
ORIF	4.2nm,0.4s			*e*Sg	**Sg**	**00 18 04.1**	**-0.3**
HINF	**Hinteralfeld**	**1.86**	**347**	*e*Pg	**Pg**	**00 17 48.8**	**-0.6**
HINF	6.6nm,0.6s			*e*Sg	**Sg**	**00 18 13.1**	**-0.5**
HINF	**Hinteralfeld**	**1.86**	**347**	*e*Pg	**Pg**	**00 17 48.8**	**-0.6**
HINF	3.3nm,0.6s			*e*Sg	**Sg**	**00 18 13.1**	**-0.5**
HAU	**Haudompre**	**2.14**	**339**	*e*Pg	**Pg**	**00 17 54.0**	**-0.8**
HAU	3.5nm,0.3s			*e*Sg	**Sg**	**00 18 22.5**	**-0.1**
HAU	**Haudompre**	**2.14**	**339**	*e*Pg	**Pg**	**00 17 54.0**	**-0.8**
HAU	1.8nm,0.3s			*e*Sg	**Sg**	**00 18 22.5**	**-0.1**
SBF	**Sospel**	**2.15**	**181**	*e*P	**Pn**	**00 17 50.9**	**+2.2**
SBF	**Sospel**	**2.15**	**181**	*e*Pg	**Pg**	**00 17 53.4**	**-1.5**
SBF	9.0nm,0.4s			*e*Sg	**Sg**	**00 18 22.3**	**-0.5**
SBF	**Sospel**	**2.15**	**181**	*e*P	**Pn**	**00 17 50.9**	**+2.2**
SBF	**Sospel**	**2.15**	**181**	*e*Pg	**Pg**	**00 17 53.4**	**-1.5**
SBF	4.5nm,0.4s			*e*Sg	**Sg**	**00 18 22.3**	**-0.5**
VIVF	**Saint-Julien-I**	**2.29**	**241**	*e*Pn	**Pn**	**00 17 51.0**	**+0.3**
VIVF	4.0nm,0.3s			*e*Sg	**Sg**	**00 18 27.1**	**-0.3**
VIVF	**Saint-Julien-I**	**2.29**	**241**	*e*Pn	**Pn**	**00 17 51.0**	**+0.3**
VIVF	2.0nm,0.3s			*e*Sg	**Sg**	**00 18 27.1**	**-0.3**
CDF	**Champ du Feu**	**2.41**	**357**	*e*Pn	**Pn**	**00 17 52.7**	**+0.4**
CDF	**Champ du Feu**	**2.41**	**357**	*e*Pg	**Pg**	**00 17 58.9**	**-1.0**
CDF	6.6nm,0.5s			*e*Sg	**Sg**	**00 18 29.9**	**-1.2**
CDF	**Champ du Feu**	**2.41**	**357**	*e*Pn	**Pn**	**00 17 52.7**	**+0.4**
CDF	**Champ du Feu**	**2.41**	**357**	*e*Pg	**Pg**	**00 17 58.9**	**-1.0**
CDF	3.3nm,0.5s			*e*Sg	**Sg**	**00 18 29.9**	**-1.2**
FRF	**La Foret Royal**	**2.52**	**194**	*e*Pg	**Pg**	**00 18 01.3**	**-0.8**
FRF	4.0nm,0.4s			*e*Sg	**Sg**	**00 18 34.1**	**-0.6**
FRF	**La Foret Royal**	**2.52**	**194**	*e*Pg	**Pg**	**00 18 01.3**	**-0.8**
FRF	2.0nm,0.4s			*e*Sg	**Sg**	**00 18 34.1**	**-0.6**
SMF	**Signal de Mont** 2.2nm,0.2s	**2.60**	**285**	*e*Sg	**Sg**	**00 18 36.6**	**-0.7**
SMF	**Signal de Mont** 1.1nm,0.2s	**2.60**	**285**	*e*Sg	**Sg**	**00 18 36.6**	**-0.7**
SFTF	**Sexfontaines** 3.7nm,0.4s	**2.76**	**324**	*e*Sg	**Sg**	**00 18 41.3**	**-1.0**
SFTF	**Sexfontaines** 1.9nm,0.4s	**2.76**	**324**	*e*Sg	**Sg**	**00 18 41.3**	**-1.0**
LMR	**La Mourre**	**2.77**	**195**	*e*Pg	**Pg**	**00 18 05.5**	**-1.2**
LMR	1.2nm,0.3s			*e*Sg	**Sg**	**00 18 41.6**	**-1.0**
LMR	**La Mourre**	**2.77**	**195**	*e*Pg	**Pg**	**00 18 05.5**	**-1.2**
LMR	0.6nm,0.3s			*e*Sg	**Sg**	**00 18 41.6**	**-1.0**
LOR	**Lormes**	**2.80**	**298**	*e*Pg	**Pg**	**00 18 06.2**	**-1.1**
LOR	4.3nm,0.4s			*e*Sg	**Sg**	**00 18 42.8**	**-0.7**
LOR	**Lormes**	**2.80**	**298**	*e*Pg	**Pg**	**00 18 06.2**	**-1.1**
LOR	2.2nm,0.4s			*e*Sg	**Sg**	**00 18 42.8**	**-0.7**
AVF	**Avril sur Loir**	**2.96**	**287**	*e*P	**Pn**	**00 18 03.7**	**+3.8**
AVF	0.7nm,0.2s			*e*Sg	**Sg**	**00 18 48.1**	**-0.8**
AVF	**Avril sur Loir**	**2.96**	**287**	*e*P	**Pn**	**00 18 03.7**	**+3.8**
AVF	0.3nm,0.2s			*e*Sg	**Sg**	**00 18 48.1**	**-0.8**

*ISCJB **13** 00:24:38.8±0.3, 45°.98N±0°.02×7°.50E±0°.03, h10km, Error ellipse: s-maj=3.3km s-min=2.3km az=6.3*
*ROM **13** 00:24:38.7±0.2, 46°.01N×7°.51E, h11km±2km, Md2.2/8, Ml1.8/2, Error ellipse: s-maj=3.0km s-min=2.1km az=172.0*
*CSEM **13** 00:24:39.4±0.2, 45°.97N×7°.50E, h2km, ML2.3/16, Error ellipse: s-maj=3.2km s-min=2.3km az=93.0*
*ZUR **13** 00:24:39.8, 45°.98N×7°.50E, h1km±2km, ML1.5/7*
*LDG **13** 00:24:39.5±0.1, 45°.98N×7°.52E, h2km, Md2.5/3, Ml2.4/10, Error ellipse: s-maj=1.3km s-min=0.7km az=105.0*

ISC 13 00:24:39.5±0.3, 45°.99N±0°.01×7°.49E±0°.03, h10km, n69, σ1s00/110, 2C-6D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIX	**Grande Dixence** 2μm,0.2s	**0.11**	**328**	⇓*i*Pg	**Pg**	**00 24 42.2**	**-0.1**
DIX	2μm,0.2s			*i* Sg	**Sg**	**00 24 43.7**	**-0.5**
DIX	**Grande Dixence**	**0.11**	**328**	Pg	**Pg**	**00 24 42.2**	**-0.1**
DIX				Sg	**Sg**	**00 24 43.7**	**-0.5**
DIX	**Grande Dixence** 2μm,0.2s	**0.11**	**328**	⇓*i*Pg	**Pg**	**00 24 42.2**	**-0.1**
DIX	2μm,0.2s			*i* Sg	**Sg**	**00 24 43.7**	**-0.5**
MMK	**Mattmark** 98nm,0.5s	**0.34**	**79**	⇑*i*Pg	**Pg**	**00 24 46.1**	**-0.1**
MMK	**Mattmark**	**0.34**	**79**	Pg	**Pg**	**00 24 46.1**	**-0.1**
MMK				Sg	**Sg**	**00 24 50.3**	**-0.4**
MMK	**Mattmark** 98nm,0.5s	**0.34**	**79**	⇑*i*Pg	**Pg**	**00 24 46.1**	**-0.1**
MMK				Sg	**Sg**	**00 24 50.3**	**-0.4**
MRGE	**Morge** 61nm,0.7s	**0.37**	**234**	Pg	**Pg**	**00 24 46.8**	**0.0**
MRGE				Sg	**Sg**	**00 24 52.2**	**+0.4**
MRGE	**Morge** 61nm,0.7s	**0.37**	**234**	Pg	**Pg**	**00 24 46.8**	**0.0**
MRGE				Sg	**Sg**	**00 24 52.2**	**+0.4**
GRYON	**Gryon** 45nm,0.2s	**0.37**	**315**	*e*Pg	**Pg**	**00 24 47.3**	**+0.4**
GRYON	45nm,0.2s			*e*Sg	**Sg**	**00 24 52.3**	**+0.4**
GRYON	**Gryon** 45nm,0.2s	**0.37**	**315**	*e*Pg	**Pg**	**00 24 47.3**	**+0.4**
GRYON	45nm,0.2s			*e*Sg	**Sg**	**00 24 52.3**	**+0.4**
SALAN	**Lac Salanfe** 18nm,0.3s	**0.39**	**294**	*e*Pg	**Pg**	**00 24 47.7**	**+0.4**
SALAN	**Lac Salanfe** 18nm,0.3s	**0.39**	**294**	*e*Pg	**Pg**	**00 24 47.7**	**+0.4**
SENIN	**Lac Senin/Sane** 94nm,0.6s	**0.40**	**341**	*e*Sg	**Sg**	**00 24 47.7**	**-5.0**
SENIN	**Lac Senin/Sane** 94nm,0.6s	**0.40**	**341**	*e*P	**Pg**	**00 24 53.2**	**+5.8**
LKBD2	**Leukerbad 2**	**0.40**	**15**	⇓*i*Pg	**Pg**	**00 24 47.8**	**+0.4**
LKBD2	**Leukerbad 2**	**0.40**	**15**	⇓*i*Pg	**Pg**	**00 24 47.8**	**+0.4**
LKBD	**Leukerbad** 40nm,0.3s	**0.41**	**13**	⇓*i*Pg	**Pg**	**00 24 47.9**	**+0.3**
LKBD	**Leukerbad** 40nm,0.3s	**0.41**	**13**	⇓*i*Pg	**Pg**	**00 24 47.9**	**+0.3**
EMV	**Vieux Emosson** 85nm,0.4s	**0.42**	**281**	*e*Pg	**Pg**	**00 24 48.2**	**+0.5**
EMV	**Vieux Emosson**	**0.42**	**281**	Pg	**Pg**	**00 24 48.3**	**+0.6**
EMV				Sg	**Sg**	**00 24 53.9**	**+0.6**
EMV	**Vieux Emosson** 85nm,0.4s	**0.42**	**281**	*e*Pg	**Pg**	**00 24 48.2**	**+0.5**
EMV				Sg	**Sg**	**00 24 53.9**	**+0.6**
ORO	**Oropa** 27nm,0.2s	**0.50**	**136**	Pg	**Pg**	**00 24 49.1**	**-0.1**
ORO	**Oropa** 27nm,0.2s	**0.50**	**136**	Pg	**Pg**	**00 24 49.1**	**-0.1**
TRAV	**Traversella** 73nm,0.2s	**0.51**	**159**	Pg	**Pg**	**00 24 49.3**	**-0.1**
TRAV				Sg	**Sg**	**00 24 55.9**	**-0.1**
TRAV	**Traversella** 73nm,0.2s	**0.51**	**159**	Pg	**Pg**	**00 24 49.3**	**-0.1**
TRAV				Sg	**Sg**	**00 24 55.9**	**-0.1**
LSD	**Lago del Serru**	**0.58**	**206**	Pg	**Pg**	**00 24 50.7**	**-0.1**
LSD				Sg	**Sg**	**00 24 58.9**	**+0.4**
LSD	**Lago del Serru**	**0.58**	**206**	Pg	**Pg**	**00 24 50.7**	**-0.1**
LSD				Sg	**Sg**	**00 24 58.9**	**+0.4**
LPL	**La Plagne** SNR=1.0	**0.71**	**229**	Pg	**Pg**	**00 24 53.1**	**-0.1**
LPL	10nm,0.3s			*e*Sg	**Sg**	**00 25 02.8**	**+0.3**
LPL	**La Plagne** SNR=1.0	**0.71**	**229**	Pg	**Pg**	**00 24 53.1**	**-0.1**
LPL	5.2nm,0.3s			*e*Sg	**Sg**	**00 25 02.8**	**+0.3**
LPG	**La Plagne** SNR=1.0	**0.71**	**227**	Pg	**Pg**	**00 24 53.1**	**-0.2**
LPG	11nm,0.2s,SNR=1.0			Sg	**Sg**	**00 25 02.9**	**+0.3**
LPG	**La Plagne** SNR=1.0	**0.71**	**227**	Pg	**Pg**	**00 24 53.1**	**-0.2**
LPG	5.3nm,0.2s,SNR=1.0			Sg	**Sg**	**00 25 02.9**	**+0.3**
RSP	**Reno Superiore**	**0.85**	**191**	Pg	**Pg**	**00 24 55.7**	**-0.2**
RSP				Sg	**Sg**	**00 25 07.8**	**+0.7**
RSP	**Reno Superiore**	**0.85**	**191**	Pg	**Pg**	**00 24 55.7**	**-0.2**
RSP				Sg	**Sg**	**00 25 07.8**	**+0.7**
CABF	**La Chapelle** SNR=1.0	**1.16**	**303**	Pg	**Pg**	**00 25 01.9**	**+0.2**
CABF	**La Chapelle** SNR=1.0	**1.16**	**303**	P	**Pn**	**00 25 03.2**	**+1.5**
CABF	9.8nm,0.3s,SNR=1.0			Sg	**Sg**	**00 25 17.2**	**+0.4**
CABF	**La Chapelle** SNR=1.0	**1.16**	**303**	Pg	**Pg**	**00 25 01.9**	**+0.2**
CABF	**La Chapelle** SNR=1.0	**1.16**	**303**	P	**Pn**	**00 25 03.2**	**+1.5**
CABF	4.9nm,0.3s,SNR=1.0			Sg	**Sg**	**00 25 17.2**	**+0.4**
MBDF	**Montbardon**	**1.36**	**202**	*e*Pg	**Pg**	**00 25 05.0**	**-0.6**
MBDF	16nm,0.4s,SNR=1.0			Sg	**Sg**	**00 25 22.5**	**-0.7**
MBDF	**Montbardon**	**1.36**	**202**	*e*Pg	**Pg**	**00 25 05.0**	**-0.6**
MBDF	7.8nm,0.4s,SNR=1.0			Sg	**Sg**	**00 25 22.5**	**-0.7**
ORIF	**Oris-en-Rattie** SNR=1.0	**1.56**	**227**	Pg	**Pg**	**00 25 08.8**	**-0.6**
ORIF	9.8nm,0.6s			*e*Sg	**Sg**	**00 25 29.2**	**-0.4**
ORIF	**Oris-en-Rattie** SNR=1.0	**1.56**	**227**	Pg	**Pg**	**00 25 08.8**	**-0.6**
ORIF	4.9nm,0.6s			*e*Sg	**Sg**	**00 25 29.2**	**-0.4**
HINF	**Hinteralfeld** SNR=1.0	**1.88**	**347**	P	**Pn**	**00 25 13.2**	**+1.5**
HINF	**Hinteralfeld**	**1.88**	**347**	*e*Pg	**Pg**	**00 25 14.9**	**-0.7**
HINF	6.5nm,0.4s,SNR=1.0			Sg	**Sg**	**00 25 39.6**	**-0.4**
HINF	**Hinteralfeld** SNR=1.0	**1.88**	**347**	P	**Pn**	**00 25 13.2**	**+1.5**
HINF	**Hinteralfeld**	**1.88**	**347**	*e*Pg	**Pg**	**00 25 14.9**	**-0.7**
HINF	3.2nm,0.4s,SNR=1.0			Sg	**Sg**	**00 25 39.6**	**-0.4**
HAU	**Haudompre** SNR=1.0	**2.17**	**339**	Pg	**Pg**	**00 25 20.2**	**-0.8**
HAU	6.9nm,0.3s			*e*Sg	**Sg**	**00 25 48.5**	**-0.6**
HAU	**Haudompre** SNR=1.0	**2.17**	**339**	Pg	**Pg**	**00 25 20.2**	**-0.8**
HAU	3.5nm,0.3s			*e*Sg	**Sg**	**00 25 48.5**	**-0.6**
VIVF	**Saint-Julien-I** 5.2nm,0.4s,SNR=1.0	**2.28**	**241**	*e*Pg	**Pg**	**00 25 22.0**	**-1.3**
VIVF				Sg	**Sg**	**00 25 52.1**	**-0.8**
VIVF	**Saint-Julien-I** 2.6nm,0.4s,SNR=1.0	**2.28**	**241**	*e*Pg	**Pg**	**00 25 22.0**	**-1.3**
VIVF				Sg	**Sg**	**00 25 52.1**	**-0.8**
SMRF	**Simiane la Rot**	**2.43**	**215**	*e*Pg	**Pg**	**00 25 25.0**	**-1.0**
SMRF	**Simiane la Rot**	**2.43**	**215**	*e*Pg	**Pg**	**00 25 25.0**	**-1.0**
CDF	**Champ du Feu** SNR=1.0	**2.43**	**357**	P	**Pn**	**00 25 21.1**	**+1.8**
CDF	**Champ du Feu** SNR=1.0	**2.43**	**357**	Pg	**Pg**	**00 25 25.1**	**-1.0**
CDF	SNR=1.0			Sn	**Sn**	**00 25 47.2**	**-1.8**
CDF	SNR=1.0			Sg	**Sg**	**00 25 56.4**	**-1.2**
CDF	**Champ du Feu** SNR=1.0	**2.43**	**357**	P	**Pn**	**00 25 21.1**	**+1.8**
CDF	**Champ du Feu** SNR=1.0	**2.43**	**357**	Pg	**Pg**	**00 25 25.1**	**-1.0**
CDF	SNR=1.0			Sn	**Sn**	**00 25 47.2**	**-1.8**
CDF	SNR=1.0			Sg	**Sg**	**00 25 56.4**	**-1.2**
FRF	**La Foret Royal** SNR=1.0	**2.50**	**194**	Pg	**Pg**	**00 25 26.0**	**-1.4**
FRF	**La Foret Royal** SNR=1.0	**2.50**	**194**	Pg	**Pg**	**00 25 26.0**	**-1.4**
LOR	**Lormes**	**2.81**	**298**	*e*P	**Pn**	**00 25 26.8**	**+2.3**
LOR	3.7nm,0.4s,SNR=1.0			Sg	**Sg**	**00 26 08.3**	**-1.5**
LOR	**Lormes**	**2.81**	**298**	*e*P	**Pn**	**00 25 26.8**	**+2.3**
LOR	1.9nm,0.4s,SNR=1.0			Sg	**Sg**	**00 26 08.3**	**-1.5**
SSF	**Saint Saulge**	**2.95**	**293**	*e*P	**Pn**	**00 25 28.9**	**+2.5**
SSF	**Saint Saulge**	**2.95**	**293**	*e*P	**Pn**	**00 25 28.9**	**+2.5**
AVF	**Avril sur Loir** SNR=1.0	**2.98**	**287**	P	**Pn**	**00 25 28.9**	**+2.2**
AVF	1.4nm,0.3s,SNR=1.0			Sg	**Sg**	**00 26 13.5**	**-1.5**
AVF	**Avril sur Loir** SNR=1.0	**2.98**	**287**	P	**Pn**	**00 25 28.9**	**+2.2**
AVF	0.7nm,0.3s,SNR=1.0			Sg	**Sg**	**00 26 13.5**	**-1.5**
BGF	**Bois d'Agland** SNR=1.0	**3.27**	**282**	P	**Pn**	**00 25 33.5**	**+2.7**
BGF	**Bois d'Agland** SNR=1.0	**3.27**	**282**	P	**Pn**	**00 25 33.5**	**+2.7**
HYF	**Humbligny**	**3.58**	**293**	*e*P	**Pn**	**00 25 37.7**	**+2.7**
HYF	**Humbligny**	**3.58**	**293**	*e*P	**Pn**	**00 25 37.7**	**+2.7**
TCF	**Toulx Ste Croi** 3.9nm,0.8s,SNR=1.0	**3.68**	**277**	Sg	**Sg**	**00 26 36.8**	**-1.0**
TCF	**Toulx Ste Croi** 2.0nm,0.8s,SNR=1.0	**3.68**	**277**	Sg	**Sg**	**00 26 36.8**	**-1.0**

KRSC 13 00:24:56.3±0.5, 56°.14N×164°.22E, h17km±17km, ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.79**	**276**	*e*P	Pb	00 25 09.6	-1.9
KBTR				*e*S	Sb	00 25 20.2	-1.6
BKI	**Bering**	**1.37**	**133**	*e*P	Pn	00 25 20.5	0.0
BKI				*e*S	Sn	00 25 38.5	+0.3
BZGR	**Bezymyannyi-Gr**	**1.99**	**266**	*e*S	Sn	00 25 56.5	+3.0
KLY	**Klyuchi**	**2.00**	**276**	*e*S	Sn	00 25 51.6	-2.2
BZMR	**Bezymyannaya**	**2.10**	**266**	*e*P	Pn	00 25 32.1	+1.4
BZMR				*e*S	Sn	00 25 58.9	+2.5
MKZ	**Mys Kozlova**	**2.13**	**223**	*e*S	Sn	00 25 57.1	0.0
KPT	**Kopyto**	**2.25**	**267**	*e*P	Pn	00 25 34.8	+2.1
KPT				*e*S	Sn	00 26 02.2	+2.2
KOZ	**Kozyrevsk**	**2.44**	**270**	*e*P	Pn	00 25 37.7	+2.5
KOZ				*e*S	Sn	00 26 07.8	+3.2
SRDR	**Sredinnyy**	**2.52**	**276**	*e*P	Pn	00 25 38.0	+1.6
SRDR				*e*S	Sn	00 26 08.5	+1.8
AVH	**Avacha**	**4.29**	**230**	*e*P	Pn	00 26 02.8	+2.1
GNL	**Ganaly**	**4.37**	**239**	*e*P	Pn	00 26 04.0	+2.2

*ISK **13** 00:42:52.7, 39°.43N×33°.04E, h5km, MD3.0*
*DDA **13** 00:42:53.5, 39°.38N×33°.05E, h7km±3km, Md2.8*
*ISCJB **13** 00:42:54.6±0.6, 39°.42N±0°.03×33°.03E±0°.05, h10km, Error ellipse: s-maj=5.2km s-min=4.5km az=4.2*
*CSEM **13** 00:42:54.2±0.2, 39°.41N×33°.06E, h2km, MD3.0, Error ellipse: s-maj=3.9km s-min=3.6km az=104.0*

ISC 13 00:42:54.3±0.7, 39°.40N±0°.03×33°.05E±0°.05, h2km±9km, n22, σ0s71/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Afşar-Bala (A**	**0.05**	**18**	*e*PG	**Pg**	**00 42 53.3**	**-2.0**
AFSR	**Afşar-Bala (A**	**0.05**	**18**	*e*Pg	**Pg**	**00 42 53.3**	**-2.0**
BBAL	**Bala**	**0.15**	**21**	*i* P	**Pg**	**00 42 57.4**	**+0.1**
BBAL				*i* S	**Sg**	**00 42 59.9**	**+0.6**
BBAL	**Bala**	**0.15**	**21**	*i* P	**Pg**	**00 42 57.4**	**+0.1**
BBAL				*i* S	**Sg**	**00 42 59.9**	**+0.6**
KAMT	**Kaman**	**0.51**	**93**	*e*PG	**Pg**	**00 43 04.1**	**-0.1**
KAMT	**Kaman**	**0.51**	**93**	*e*Pg	**Pg**	**00 43 04.1**	**0.0**
LOD	**Lodumlu**	**0.54**	**336**	*e*PG	**Pg**	**00 43 03.8**	**-0.8**
LOD				*e*SG	**Sg**	**00 43 11.9**	**+0.4**
LOD	**Lodumlu**	**0.54**	**336**	*e*Pg	**Pg**	**00 43 03.8**	**-0.8**
LOD				*e*Sg	**Sg**	**00 43 12.0**	**+0.4**
CDAG	**Cicekdag**	**1.05**	**77**	*i* P	**Pg**	**00 43 13.5**	**-0.8**
CDAG				*i* S	**Sg**	**00 43 28.5**	**+0.6**
CDAG	**Cicekdag**	**1.05**	**77**	*i* P	**Pg**	**00 43 13.5**	**-0.8**
CDAG				*i* S	**Sg**	**00 43 28.5**	**+0.6**
ELDT	**Eldivan**	**1.13**	**15**	*i* P	**Pg**	**00 43 16.1**	**+0.2**
ELDT				*i* S	**Sg**	**00 43 31.4**	**+0.9**
ELDT	**Eldivan**	**1.13**	**15**	*i* P	**Pg**	**00 43 16.1**	**+0.2**
ELDT				*i* S	**Sg**	**00 43 31.4**	**+0.9**
KDHN	**Kadinhani**	**1.14**	**220**	*i* P	**Pg**	**00 43 17.2**	**+1.1**
KDHN				*i* S	**Sg**	**00 43 30.9**	**0.0**
KDHN	**Kadinhani**	**1.14**	**220**	*i* P	**Pg**	**00 43 17.2**	**+1.1**
KDHN				*i* S	**Sg**	**00 43 30.9**	**0.0**
SULT	**Sultanhani-AKS**	**1.25**	**163**	*e*PN	**Pn**	**00 43 18.3**	**-0.5**
SULT	**Sultanhani-AKS**	**1.25**	**163**	*e*Pn	**Pn**	**00 43 18.3**	**-0.5**
CORM	**Corum**	**1.44**	**57**	*e*PN	**Pn**	**00 43 20.9**	**-0.6**
CORM	**Corum**	**1.44**	**57**	*e*Pn	**Pn**	**00 43 20.9**	**-0.6**
AVNT	**Avonos**	**1.54**	**113**	*i* P	**Pn**	**00 43 23.2**	**+0.4**
AVNT				*e*S	**Sn**	**00 43 43.6**	**+0.4**
AVNT	**Avonos**	**1.54**	**113**	*i* P	**Pn**	**00 43 23.2**	**+0.5**
AVNT				*e*S

NVLJ	**Novalja**	**1.43**	**250**	*e*Pn	**Pn**	**00 52 13.0**	**+0.1**
NVLJ				Sn	**Sn**	**00 52 32.6**	**+0.6**
NVLJ	**Novalja**	**1.43**	**250**	*e*Pn	**Pn**	**00 52 12.9**	**0.0**
NVLJ				Sn	**Sn**	**00 52 32.5**	**+0.5**
PKSM	**Moragy**	**1.75**	**49**	*i* Pn	**Pn**	**00 52 18.0**	**+0.8**
PKSM				*e*Sg	**Sg**	**00 52 42.9**	**+0.4**
PKSM	**Moragy**	**1.75**	**49**	*i* Pn	**Pn**	**00 52 18.0**	**+0.8**
PKSM				*e*Sg	**Sg**	**00 52 42.9**	**+0.4**
PKS9	**Tamasi**	**1.85**	**35**	*e*Pn	**Pn**	**00 52 21.1**	**+2.4**
SOKA	**Soboth**	**2.00**	**324**	⇓*i*Pn	**Pn**	**00 52 19.9**	**-0.8**
SOKA				⇑*i*Sn	**Sn**	**00 52 43.6**	**-2.5**
SOKA	**Soboth**	**2.00**	**324**	Pn	**Pn**	**00 52 19.9**	**-0.8**
SOKA				Sn	**Sn**	**00 52 43.6**	**-2.5**
OBKA	**Obir**	**2.10**	**314**	⇑*i*Pn	**Pn**	**00 52 22.2**	**+0.1**
OBKA				⇑*i*Sg	**Sg**	**00 52 53.0**	**-0.8**
	comp=Z,19nm,0.5s						
OBKA	**Obir**	**2.10**	**314**	Pn	**Pn**	**00 52 22.2**	**+0.1**
OBKA				Sg	**Sg**	**00 52 53.0**	**-0.8**
	comp=Z,19nm,0.5s						
FRGS	**Fruska Gora**	**2.17**	**87**	*e*Pn	**Pn**	**00 52 23.0**	**-0.1**
FRGS				*e*Sg	**Sg**	**00 52 55.7**	**-0.4**
FRGS	**Fruska Gora**	**2.17**	**87**	*e*Pn	**Pn**	**00 52 23.0**	**-0.1**
FRGS				*e*Sg	**Sg**	**00 52 55.7**	**-0.4**
VOY	**Vojsko**	**2.22**	**296**	*e*Pn	**Pn**	**00 52 27.8**	**+4.1**
VOY				*e*Sn	**Sn**	**00 52 53.0**	**+1.5**
STON	**Ston**	**2.31**	**162**	*e*Pn	**Pn**	**00 52 25.1**	**+0.1**
STON				Sn	**Sn**	**00 52 54.9**	**+1.2**
STON	**Ston**	**2.31**	**162**	*e*Pn	**Pn**	**00 52 25.1**	**+0.1**
STON				Sn	**Sn**	**00 52 54.8**	**+1.1**
ARSA	**Arzberg**	**2.33**	**339**	⇓*i*Pn	**Pn**	**00 52 23.5**	**-1.8**
ARSA				*e*Sg	**Sg**	**00 53 00.3**	**-1.0**
ARSA	**Arzberg**	**2.33**	**339**	⇑*e*Pn	**Pn**	**00 52 23.6**	**-1.7**
	SNR=7.4						
ARSA	**Arzberg**	**2.33**	**339**	Pn	**Pn**	**00 52 23.6**	**-1.7**
	SNR=7.4						
ARSA				*e*Sg	**Sg**	**00 53 00.3**	**-1.0**
DIVS	**Divibare**	**2.52**	**112**	⇑*i*Pn	**Pn**	**00 52 28.8**	**+1.0**
DIVS				*e*Sg	**Sg**	**00 53 07.8**	**+0.6**
DIVS	**Divibare**	**2.52**	**112**	⇑*i*Pn	**Pn**	**00 52 28.8**	**+1.0**
DIVS				*e*Sg	**Sg**	**00 53 07.8**	**+0.6**
PKSG		**2.58**	**26**	⇑*e*Pn	**Pn**	**00 52 27.9**	**-0.8**
PKSG				*e*Sn	**Sn**	**00 53 01.9**	**+1.5**
SOP	**Sopron**	**2.61**	**357**	⇑*e*Pn	**Pn**	**00 52 29.2**	**+0.1**
SOP				*e*Sn	**Sn**	**00 53 01.4**	**+0.3**
SOP	**Sopron**	**2.61**	**357**	⇑*e*Pn	**Pn**	**00 52 29.2**	**+0.1**
SOP				*e*Sn	**Sn**	**00 53 01.4**	**+0.3**
CONA	**Conrad Observa**	**2.92**	**348**	⇑*e*Pn	**Pn**	**00 52 32.9**	**-0.4**
	SNR=21						
CONA	**Conrad Observa**	**2.92**	**348**	Pn	**Pn**	**00 52 32.9**	**-0.4**
	SNR=21						
MOA	**Molln**	**3.26**	**329**	⇑*i*Pn	**Pn**	**00 52 36.0**	**-2.0**
	SNR=12						
MOA				⇓*i*Sn	**Sn**	**00 53 15.0**	**-2.1**
MOA	**Molln**	**3.26**	**329**	Pn	**Pn**	**00 52 36.0**	**-2.0**
	SNR=12						
MOA				Sn	**Sn**	**00 53 15.0**	**-2.1**
VRAC	**Vranov**	**4.24**	**359**	*e*Pn	**Pn**	**00 52 50.6**	**-0.8**
BARS	**Barje**	**4.30**	**120**	*e*Pn	**Pn**	**00 52 50.8**	**-1.5**
BARS	**Barje**	**4.30**	**120**	*e*Pn	**Pn**	**00 52 50.8**	**-1.5**

*ATH **13** 00:57:37.5, 37°.88N×21°.43E, h22km±2km, MD2.8/8*
*ISCJB **13** 00:57:38.2±0.5, 37°.88N±0°.03×21°.40E±0°.03, h19km±5km, Error ellipse: s-maj=5.2km s-min=3.8km az=12.0*
*CSEM **13** 00:57:38.1±0.2, 37°.90N×21°.41E, h20km, MD2.8, Error ellipse: s-maj=4.6km s-min=4.3km az=30.0*
*THE **13** 00:57:38.0, 37°.87N×21°.45E, h0km±1km, ML1.9/6, Error ellipse: s-maj=1.9km s-min=0.6km az=220.0*
ISC 13 00:57:38.0±0.5, 37°.88N±0°.03×21°.41E±0°.03, h18km±4km, n49, σ0°98/79, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**15**	*e*PB	**Pg**	**00 57 42.7**	**0.0**
RLS				*e*SB	**Sg**	**00 57 46.5**	**+0.6**
RLS	**Riolos of Patr**	**0.18**	**15**	*e*Pb	**Pg**	**00 57 42.7**	**0.0**
RLS				*e*Sb	**Sg**	**00 57 46.5**	**+0.6**
UPR	**University Cam**	**0.50**	**36**	*e*PB	**Pg**	**00 57 47.7**	**-0.5**
UPR				*e*SB	**Sb**	**00 57 55.2**	**-0.2**
UPR	**University Cam**	**0.50**	**36**	P	**Pg**	**00 57 47.7**	**-0.5**
UPR				S	**Sg**	**00 57 55.1**	**+0.1**
UPR	**University Cam**	**0.50**	**36**	P	**Pg**	**00 57 47.7**	**-0.5**
UPR				*e*Sb	**Sb**	**00 57 55.2**	**-0.2**
KFL	**Anninata**	**0.54**	**295**	P	**Pg**	**00 57 48.9**	**+0.1**
KFL				S	**Sg**	**00 57 57.7**	**+1.6**
KFL	**Anninata**	**0.54**	**295**	P	**Pg**	**00 57 48.9**	**+0.1**
KFL				S	**Sg**	**00 57 57.7**	**+1.6**
LAKA	**Lakka**	**0.58**	**51**	P	**Pg**	**00 57 48.5**	**-1.0**
LAKA				S	**Sg**	**00 57 56.9**	**-0.4**
LAKA	**Lakka**	**0.58**	**51**	P	**Pg**	**00 57 48.5**	**-1.0**
LAKA				S	**Sg**	**00 57 56.9**	**-0.4**
EFP	**Efpalio**	**0.67**	**36**	*e*PN	**Pg**	**00 57 50.3**	**-1.0**
EFP	**Efpalio**	**0.67**	**36**	P	**Pg**	**00 57 50.3**	**-1.0**
EFP				S	**Sg**	**00 58 00.5**	**+0.2**
EFP	**Efpalio**	**0.67**	**36**	P	**Pg**	**00 57 50.3**	**-1.0**
EFP				S	**Sg**	**00 58 00.5**	**+0.2**
VLS	**Valsamata**	**0.71**	**295**	*e*PN	**Pn**	**00 57 51.3**	**-1.9**
VLS				*e*SN	**Sn**	**00 58 03.0**	**-0.7**
VLS	**Valsamata**	**0.71**	**295**	P	**Pb**	**00 57 51.4**	**-0.5**
VLS				S	**Sg**	**00 58 03.2**	**+1.7**
VLS	**Valsamata**	**0.71**	**295**	P	**Pb**	**00 57 51.4**	**-0.5**
VLS				*e*Sn	**Sn**	**00 58 03.0**	**-0.7**
TRIZ	**Trizonia**	**0.72**	**47**	P	**Pb**	**00 57 50.8**	**-1.2**
TRIZ				S	**Sb**	**00 58 02.1**	**+0.6**
TRIZ	**Trizonia**	**0.72**	**47**	P	**Pb**	**00 57 50.8**	**-1.2**
TRIZ				S	**Sb**	**00 58 02.1**	**+0.6**
GUR	**Goura**	**0.74**	**85**	*e*PB	**Pb**	**00 57 51.0**	**-1.4**
GUR	**Goura**	**0.74**	**85**	P	**Pb**	**00 57 51.0**	**-1.4**
GUR				S	**Sb**	**00 58 02.0**	**-0.2**
GUR	**Goura**	**0.74**	**85**	P	**Pb**	**00 57 51.0**	**-1.4**
GUR				S	**Sb**	**00 58 02.0**	**-0.2**
KALE	**Kalithea**	**0.77**	**48**	P	**Pb**	**00 57 51.8**	**-1.1**
KALE				S	**Sb**	**00 58 03.2**	**+0.1**
KALE	**Kalithea**	**0.77**	**48**	P	**Pb**	**00 57 51.8**	**-1.1**
KALE				S	**Sb**	**00 58 03.2**	**+0.1**
ITM	**Ithomi**	**0.81**	**149**	*e*PN	**Pb**	**00 57 53.3**	**-0.3**
ITM	**Ithomi**	**0.81**	**149**	P	**Pb**	**00 57 53.3**	**-0.3**
ITM	**Ithomi**	**0.81**	**149**	P	**Pb**	**00 57 53.3**	**-0.3**
VLX	**Vlachokerasia**	**0.92**	**123**	*e*PN	**Pb**	**00 57 55.3**	**-0.2**
VLX				*e*SN	**Sn**	**00 58 08.1**	**-0.8**
VLX	**Vlachokerasia**	**0.92**	**123**	P	**Pb**	**00 57 55.3**	**-0.2**
VLX				S	**Sb**	**00 58 07.8**	**+0.4**
VLX	**Vlachokerasia**	**0.92**	**123**	P	**Pb**	**00 57 55.3**	**-0.2**
VLX				S	**Sb**	**00 58 07.8**	**+0.4**
VLX				*e*Sn	**Sn**	**00 58 08.1**	**-0.8**
PYL	**PYLOS**	**1.02**	**165**	*e*PN	**Pn**	**00 57 56.8**	**-0.6**
PYL	**PYLOS**	**1.02**	**165**	P	**Pb**	**00 57 56.7**	**-0.4**
PYL	**PYLOS**	**1.02**	**165**	*e*Pn	**Pn**	**00 57 56.8**	**-0.6**
DSF	**Desfina**	**1.03**	**59**	P	**Pb**	**00 57 56.1**	**-1.2**
DSF				S	**Sb**	**00 58 11.3**	**+0.8**
DSF	**Desfina**	**1.03**	**59**	P	**Pb**	**00 57 56.1**	**-1.2**
DSF				S	**Sb**	**00 58 11.3**	**+0.8**
EVR	**Evrytania**	**1.08**	**17**	*e*PN	**Pn**	**00 57 57.8**	**-0.5**
EVR	**Evrytania**	**1.08**	**17**	*e*Pn	**Pn**	**00 57 57.8**	**-0.5**
LTK	**Loutraki**	**1.24**	**83**	*e*PN	**Pn**	**00 58 00.5**	**0.0**
LTK	**Loutraki**	**1.24**	**83**	P	**Pn**	**00 58 00.1**	**-0.4**
LTK				S	**Sb**	**00 58 18.9**	**+2.3**
LTK	**Loutraki**	**1.24**	**83**	P	**Pn**	**00 58 00.1**	**-0.4**
LTK	**Loutraki**	**1.24**	**83**	*e*Pn	**Pn**	**00 58 00.5**	**0.0**
LTK				S	**Sb**	**00 58 18.9**	**+2.3**
AGG	**Agios Georgios**	**1.35**	**32**	P	**Pn**	**00 58 02.7**	**+0.7**
AGG	**Agios Georgios**	**1.35**	**32**	P	**Pn**	**00 58 02.7**	**+0.7**
DID	**Didima**	**1.50**	**104**	*e*PN	**Pn**	**00 58 05.3**	**+1.3**
DID	**Didima**	**1.50**	**104**	P	**Pn**	**00 58 04.9**	**+0.9**
DID				S	**Sn**	**00 58 25.7**	**+2.6**
DID	**Didima**	**1.50**	**104**	P	**Pn**	**00 58 04.9**	**+0.9**
DID	**Didima**	**1.50**	**104**	*e*Pn	**Pn**	**00 58 05.3**	**+1.3**
DID				S	**Sn**	**00 58 25.7**	**+2.6**
ATAL	**Atalanti**	**1.51**	**57**	P	**Pn**	**00 58 05.5**	**+1.4**
ATAL	**Atalanti**	**1.51**	**57**	P	**Pn**	**00 58 05.5**	**+1.4**
VLI	**Veliai**	**1.68**	**133**	*e*PN	**Pn**	**00 58 08.1**	**+1.6**
VLI	**Veliai**	**1.68**	**133**	*e*Pn	**Pn**	**00 58 08.1**	**+1.6**

*BJI **13** 01:04:24.3, 27°.97N×51°.68E, h17km, mb4.5/5*
*THR **13** 01:04:25.3±0.3, 27°.79N×52°.04E, h15km, ML3.5*
*IDC **13** 01:04:25.4±0.9, 27°.69N×52°.31E, h0km, mb4.0/16, mb1 4.0/19, mb1mx4.0/30, mbtmp4.0/19, ML3.5/3, MS3.5/2, Ms1 3.5/2, ms1mx2.9/34, Error ellipse: s-maj=22.9km s-min=16.0km az=9.0*
*ISCJB **13** 01:04:26.8±0.3, 27°.86N±0°.03×52°.18E±0°.04, h10km, mb4.0/26, Error ellipse: s-maj=5.2km s-min=4.1km az=38.9*
*NEIC **13** 01:04:28.0, 27°.80N×52°.10E, h7km, mb4.0/11, ML3.8(THR), MN4.0(TEH), After TEH.*
*TEH **13** 01:04:28.0, 27°.80N×52°.10E, h7km*
*CSEM **13** 01:04:31.1±0.1, 27°.89N×52°.21E, h30km, mb4.0/10, Error ellipse: s-maj=4.3km s-min=3.2km az=33.0*
*OMAN **13** 01:04:36.4±99.0, 27°.75N×52°.71E, h144km±16km, Error ellipse: s-maj=521.1km s-min=37.9km az=308.0*
ISC 13 01:04:28.6±0.3, 27°.86N±0°.03×52°.19E±0°.04, h10km, n136, σ0°86/137, mb4.0/26, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRV	**Sarvestan**	**1.72**	**28**	Pn	**Pn**	**01 04 59.9**	**+1.3**
ISRV				Sg	**Sg**	**01 05 24.5**	**+0.6**
ISRV	**Sarvestan**	**1.72**	**28**	*e*Pn	**Pn**	**01 05 00.0**	**+1.4**
ISRV				*e*Sg	**Sg**	**01 05 24.6**	**+0.7**
ISRV				*e*		01 05 29.8	
	comp=Z,22μm,0.4s						
ISRV	**Sarvestan**	**1.72**	**28**	Pn	**Pn**	**01 04 59.9**	**+1.3**
ISRV				*e*Sg	**Sg**	**01 05 24.6**	**+0.7**
IPAR	**Pars**	**2.11**	**21**	Pn	**Pn**	**01 05 04.5**	**+0.5**
IPAR	**Pars**	**2.11**	**21**	*e*Pn	**Pn**	**01 05 04.6**	**+0.6**
IPAR				*e*		01 05 55.0	
	comp=Z,5μm,0.5s						
IPAR	**Pars**	**2.11**	**21**	*e*Pn	**Pn**	**01 05 04.6**	**+0.6**
BNDS	**Bandar-Abbas**	**3.56**	**97**	Pn	**Pn**	**01 05 23.0**	**-1.0**
BNDS	**Bandar-Abbas**	**3.56**	**97**	*e*Pn	**Pn**	**01 05 23.9**	**0.0**
BNDS				AML	AML	01 06 45.6	
	comp=E,61nm,0.6s						
BNDS	**Bandar-Abbas**	**3.56**	**97**	*e*Pn	**Pn**	**01 05 23.9**	**-0.1**
IBND	**Bandar-abas**	**3.88**	**95**	*e*Pn	**Pn**	**01 05 28.6**	**+0.3**
IBND				*e*		01 07 03.5	
	comp=Z,5μm,0.6s						
IBND				*e*		01 07 19.8	
	comp=Z,8μm,0.6s						
IBND	**Bandar-abas**	**3.88**	**95**	*e*Pn	**Pn**	**01 05 28.6**	**+0.3**
IMEH	**Mehriz**	**4.10**	**30**	Pn	**Pn**	**01 05 32.4**	**+1.1**
IMEH	**Mehriz**	**4.10**	**30**	*e*Pn	**Pn**	**01 05 32.5**	**+1.2**
IMEH				*e*		01 05 34.4	
	comp=Z,1μm,0.3s						
IMEH	**Mehriz**	**4.10**	**30**	Pn	**Pn**	**01 05 32.4**	**+1.1**
BANOM	**Banah**	**4.15**	**117**	P	**Pn**	**01 05 32.0**	**0.0**
	SNR=23						
BANOM	**Banah**	**4.15**	**117**	P	**Pn**	**01 05 32.0**	**0.0**
	SNR=23						
BANOM				P		01 05 32.9	
	SNR=6.0						
RDF	**Al-Radifah**	**4.22**	**286**	*e*P	**Pn**	**01 05 33.4**	**+0.5**
RDF				AML	AML	01 06 28.1	
	comp=Z,35nm,0.4s						
RDF	**Al-Radifah**	**4.22**	**286**	*e*P	**Pn**	**01 05 33.4**	**+0.4**
NAZ	**Nazwa, Dubai**	**4.23**	**132**	P	**Pn**	**01 05 34.2**	**+1.1**
	SNR=16						
NAZ	**Nazwa, Dubai**	**4.23**	**132**	P	**Pn**	**01 05 34.2**	**+1.1**
	SNR=15						
NAZ				P		01 05 34.2	
	SNR=16						
ISAD	**Sadrabad**	**4.24**	**17**	Pn	**Pn**	**01 05 33.9**	**+0.7**
ISAD	**Sadrabad**	**4.24**	**17**	*e*Pn	**Pn**	**01 05 34.0**	**+0.8**
ISAD	**Sadrabad**	**4.24**	**17**	Pn	**Pn**	**01 05 33.9**	**+0.7**
UMR	**Umm Al-Rimmam**	**4.27**	**294**	*e*P	**Pn**	**01 05 34.9**	**+1.2**
UMR	**Umm Al-Rimmam**	**4.27**	**294**	*e*P	**Pn**	**01 05 34.9**	**+1.2**
ASUD	**Al Ashush, Dub**	**4.28**	**138**	P	**Pn**	**01 05 35.5**	**+1.6**
	SNR=9.7						
ASUD	**Al Ashush, Dub**	**4.28**	**138**	P	**Pn**	**01 05 35.5**	**+1.6**
	SNR=9.7						
IGAR	**Gharneh**	**4.53**	**358**	*e*Pn	**Pn**	**01 05 37.7**	**+0.5**
IGAR				*e*		01 06 06.7	
	comp=Z,318nm,0.3s						
KRBR	**Kerman**	**4.53**	**61**	Pn	**Pn**	**01 05 37.0**	**-0.2**
KRBR	**Kerman**	**4.53**	**61**	*e*Pn	**Pn**	**01 05 37.9**	**+0.7**
KRBR				AML	AML	01 06 38.0	
	comp=E,63nm,0.9s						
KRBR	**Kerman**	**4.53**	**61**	*e*Pn	**Pn**	**01 05 37.9**	**+0.7**
NAY	**Al-Naaiem**	**4.56**	**289**	*e*P	**Pn**	**01 05 38.2**	**+0.5**
NAY				AML	AML	01 06 44.3	
	comp=Z,12nm,0.6s						
NAY	**Al-Naaiem**	**4.56**	**289**	*e*P	**Pn**	**01 05 38.2**	**+0.5**
MIB	**Mutribah**	**4.67**	**296**	*e*P	**Pn**	**01 05 40.1**	**+1.0**
MIB				AML	AML	01 06 40.2	
	comp=Z,36nm,0.5s						
MIB	**Mutribah**	**4.67**	**296**	*e*P	**Pn**	**01 05 40.2**	**+1.0**
ASHO	**Ashiyiah**	**4.70**	**131**	P	**Pn**	**01 05 39.7**	**+0.1**
	SNR=21						
ASHO	**Ashiyiah**	**4.70**	**131**	P	**Pn**	**01 05 39.7**	**+0.1**
	SNR=21						
ASHO				P		01 05 40.5	
	SNR=9.6						
IBAF	**Bafgh**	**4.74**	**38**	Pn	**Pn**	**01 05 40.3**	**+0.2**
IBAF	**Bafgh**	**4.74**	**38**	*e*Pn	**Pn**	**01 05 40.3**	**+0.2**
IBAF	**Bafgh**	**4.74**	**38**	*e*Pn	**Pn**	**01 05 40.3**	**+0.2**
ICHK	**Chekchek**	**4.77**	**23**	Pn	**Pn**	**01 05 41.2**	**+0.7**
ICHK	**Chekchek**	**4.77**	**23**	*e*Pn	**Pn**	**01 05 41.2**	**+0.7**
ICHK				*e*		01 05 42.4	
	comp=Z,573nm,0.2s						
ICHK	**Chekchek**	**4.77**	**23**	*e*Pn	**Pn**	**01 05 41.2**	**+0.7**
IPIR	**Pirpir**	**4.93**	**347**	Pn	**Pn**	**01 05 42.5**	**-0.3**
IPIR	**Pirpir**	**4.93**	**347**	*e*Pn	**Pn**	**01 05 42.5**	**-0.3**
IPIR				*e*		01 07 42.7	
	comp=Z,604nm,0.5s						
IPIR	**Pirpir**	**4.93**	**347**	*e*Pn	**Pn**	**01 05 42.5**	**-0.3**
NASN	**Na'in**	**4.95**	**6**	Pn	**Pn**	**01 05 42.0**	**-1.0**
NASN	**Na'in**	**4.95**	**6**	*e*Pn	**Pn**	**01 05 42.7**	**-0.3**
NASN	**Na'in**	**4.95**	**6**	*e*Pn	**Pn**	**01 05 42.7**	**-0.3**
IZEF	**Zefreh**	**5.02**	**1**	Pn	**Pn**	**01 05 44.2**	**+0.3**
IZEF	**Zefreh**	**5.02**	**1**	*e*Pn	**Pn**	**01 05 44.2**	**+0.3**
IZEF				*e*		01 06 12.9	
	comp=Z,229nm,0.4s						
IZEF	**Zefreh**	**5.02**	**1**	*e*Pn	**Pn**	**01 05 44.2**	**+0.3**
IKLH	**Kolahrood**	**5.46**	**355**	Pn	**Pn**	**01 05 50.2**	**+0.2**
IKLH	**Kolahrood**	**5.46**	**355**	*e*Pn	**Pn**	**01 05 50.3**	**+0.3**
IKLH				*e*		01 07 06.8	
	comp=Z,386nm,0.6s						
IKLH	**Kolahrood**	**5.46**	**355**	*e*Pn	**Pn**	**01 05 50.3**	**+0.3**
HOQ	**Hoqain**	**6.29**	**132**	P	**Pn**	**01 06 02.6**	**+1.2**
	SNR=15						
HOQ	**Hoqain**	**6.29**	**132**	P	**Pn**	**01 06 02.6**	**+1.2**
	SNR=15						
BSY	**Bisya**	**6.82**	**137**	P	**Pn**	**01 06 08.9**	**+0.2**
	SNR=36						
BSY				P		01 06 09.1	
	SNR=9.4						
BSYO	**Bisya**	**6.86**	**137**	P	**Pn**	**01 06 08.9**	**-0.3**
	SNR=36						
DAMV	**Damavand**	**7.75**	**359**	Pn	**Pn**	**01 06 21.0**	**-0.4**
DAMV	**Damavand**	**7.75**	**359**	*e*Pn	**Pn**	**01 06 21.1**	**-0.3**
DAMV	**Damavand**	**7.75**	**359**	*e*Pn	**Pn**	**01 06 21.1**	**-0.3**
SNGE	**Sanandaj**	**8.31**	**331**	*e*P	**Pn**	**01 06 28.0**	**-1.0**
ASF	**Jabal al Asfar**	**13.92**	**292**	Pn	**Pn**	**01 07 46.9**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=169,slow=5.2,SNR=2.7						
ASF				Lg		01 12 14.9	
	comp=Z,0.1nm,0.3s,baz=202,slow=15,SNR=3.1						
ASF				LR	LR	01 13 32.2	
	comp=Z,148nm,19.2s,baz=43,slow=39						
ASF	**Jabal al Asfar**	**13.92**	**292**	Pn	**Pn**	**01 07 46.9**	**+0.9**
ASF				Lg		01 12 14.8	
ASF				LR	LR	01 13 32.2	
EIL	**Elat**	**15.22**	**281**	Pn	**Pn**	**01 08 09.4**	**+5.8**
	comp=Z,0.1nm,0.3s,baz=44,slow=7.3,SNR=3.6						
EIL				Lg		01 12 58.7	
	comp=Z,0.1nm,0.3s,baz=71,slow=23,SNR=4.2						
EIL	**Elat**	**15.22**	**281**	Pn	**Pn**	**01 08 09.4**	**+5.8**
EIL				Lg		01 12 58.7	
MMAI	**Mount Meron Ar**	**15.36**	**294**	Pn	**Pn**	**01 08 06.8**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=84,slow=15,SNR=3.3						
MMAI				Lg		01 13 09.0	
	comp=Z,0.1nm,0.3s,baz=121,slow=22,SNR=3.3						
MALT	**Malatya**	**15.53**	**316**	*e*P	**Pn**	**01 08 08.0**	**+0.5**
	comp=Z,13nm,1.2s						
KIV	**Kislovodsk**	**17.79**	**337**	*e*P	**Pn**	**01 08 37.4**	**+1.2**
	comp=Z,12nm,0.9s						
KIV	**Kislovodsk**	**17.79**	**337**	*e*P	**Pn**	**01 08 37.4**	**+1.2**
	comp=Z,12nm,0.9s						
BR131	**Keskin Array S**	**19.39**	**312**	*e*P	**Pn**	**01 08 55.4**	**-0.4**
	comp=Z,2.2nm,0.8s						
BR131	**Keskin Array S**	**19.39**	**312**	*e*P	**Pn**	**01 08 55.4**	**-0.3**
	comp=Z,2.2nm,0.8s						
BRTR	**Keskin Array B**	**19.39**	**312**	P	**Pn**	**01 08 55.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=133,slow=12,SNR=11						
BRTR	**Keskin Array B**	**19.39**	**312**	P	**Pn**	**01 08 55.3**	**-0.4**
KKAR	**Karatay Array**	**21.23**	**39**	*e*P	**P**	**01 09 13.3**	**-1.3**
KKAR	**Karatay Array**	**21.23**	**39**	*e*P	**P**	**01 09 13.3**	**-1.3**
ABKAR	**Akbulak array**	**22.18**	**14**	*e*P	**P**	**01 09 24.4**	**-0.3**
	comp=Z,4.6nm,0.9s,mb3.9						
ABKAR	**Akbulak array**	**22.18**	**14**	*e*P	**P**	**01 09 24.4**	**-0.3**
	comp=Z,4.6nm,0.9s,mb3.9						
AML	**Almayashu**	**22.57**	**45**	*e*P	**P**	**01 09 30.3**	**+1.4**
	comp=Z,2.6nm,0.7s,mb3.8						
AML	**Almayashu**	**22.57**	**45**	*e*P	**P**	**01 09 30.3**	**+1.4**
	comp=Z,2.6nm,0.7s,mb3.8						
EKS2	**Erkin-Say**	**22.90**	**44**	*e*P	**P**	**01 09 32.7**	**+0.2**
	comp=Z,3.7nm,1.1s,mb3.7						
EKS2	**Erkin-Say**	**22.90**	**44**	*e*P	**P**	**01 09 32.7**	**+0.2**
	comp=Z,3.7nm,1.1s,mb3.7						
AKTK	**Aktyubinsk**	**22.98**	**10**	P	**P**	**01 09 33.3**	**+0.2**
AKTK	**Aktyubinsk**	**22.98**	**10**	P	**P**	**01 09 33.3**	**+0.2**
AKTO	**Aktyubinsk**	**22.98**	**10**	P	**P**	**01 09 33.3**	**+0.2**
	comp=Z,2.4nm,0.9s,mb3.6,baz=204,slow=11,SNR=6.8						
AAK	**Ala-Archa**	**23.34**	**45**	P	**P**	**01 09 36.4**	**-0.6**
	comp=Z,0.6nm,0.3s,mb3.5,baz=196,slow=18,SNR=2.1						
AAK	**Ala-Archa**	**23.34**	**45**	P	**P**	**01 09 36.4**	**-0.6**
TKM2	**Tokmak 2**	**24.18**	**45**	*e*P	**P**	**01 09 45.2**	**+0.2**
	comp=Z,2.6nm,0.8s,mb3.7						
TKM2	**Tokmak 2**	**24.18**	**45**	*e*P	**P**	**01 09 45.2**	**+0.2**
	comp=Z,2.6nm,0.8s,mb3.7						
BVAR	**Borovoye Array**	**28.53**	**23**	P	**P**	**01 10 23.9**	**-0.2**
	comp=Z,1.2nm,0.7s,mb3.8,baz=222,slow=8.0,SNR=8.8						
BVAR				PcP	PcP	01 13 35.6	+0.1
	comp=Z,0.5nm,0.5s,baz=226,slow=5.8,SNR=4.1						
BVAR	**Borovoye Array**	**28.53**	**23**	P	**P**	**01 10 23.9**	**-0.3**
BVAR	**Borovoye Array**	**28.53**	**23**	PcP	PcP	01 13 35.6	+0.1
BUR08	**Bucovina Ar. S**	**28.84**	**320**	*e*P	**P**	**01 10 27.2**	**+0.3**
BUR08	**Bucovina Ar. S**	**28.84**	**320**	*e*P	**P**	**01 10 27.2**	**+0.2**
MK31	**Makanchi Array**	**30.23**	**43**	*e*P	**P**	**01 10 39.0**	**-0.2**
MK31	**Makanchi Array**	**30.23**	**43**	*e*P	**P**	**01 10 39.0**	**-0.3**
MKAR	**Makanchi Array**	**30.23**	**43**	P	**P**	**01 10 38.7**	**-0.6**
	comp=Z,1.9nm,0.8s,mb3.9,baz=231,slow=7.7,SNR=13						
MKAR				PcP	PcP	01 13 38.7	-1.3
	comp=Z,0.4nm,0.6s,baz=256,slow=3.6,SNR=3.9						
MKAR	**Makanchi Array**	**30.23**	**43**	P	**P**	**01 10 38.7**	**-0.6**
MKAR	**Makanchi Array**	**30.23**	**43**	PcP	PcP	01 13 38.7	-1.3
KURK	**Kurchatov**	**30.36**	**34**	*e*P	**P**	**01 10 39.9**	**-0.5**
	comp=Z,3.2nm,0.9s,mb4.0						
KURK	**Kurchatov**	**30.36**	**34**	*e*P	**P**	**01 10 39.9**	**-0.5**
	comp=Z,3.2nm,0.9s,mb4.0						
ZAA0	**Zalesovo Array**	**35.34**	**33**	*e*P	**P**	**01 11 23.0**	**-0.9**
ZAA0	**Zalesovo Array**	**35.34**	**33**	*e*P	**P**	**01 11 23.0**	**-0.9**
ZALV	**Zalesovo Beam**	**35.34**	**33**	P	**P**	**01 11 22.9**	**-0.9**
	comp=Z,6.2nm,0.7s,mb4.7,baz=243,slow=9.1,SNR=27						
ZALV				LR	LR	01 27 49.1	
	comp=Z,89nm,21.3s,baz=241,slow=40						
JOF	**Joensuu**	**37.63**	**345**	*e*p	**P**	**01 11 41.7**	**-1.6**
	com

LOD				*e*Sg	**Sg**	**01 13 14.1**	**+0.1**
KAMT	**Kaman**	**0.53**	**95**	*e*PG	**Pg**	**01 13 07.3**	**-0.3**
KAMT	**Kaman**	**0.53**	**95**	*e*Pg	**Pg**	**01 13 07.3**	**-0.3**
KIZT	**Kizilcal**	**1.04**	**240**	*e*PN	**Pn**	**01 13 17.8**	**-1.4**
KIZT	**Kizilcal**	**1.04**	**240**	*e*Pn	**Pn**	**01 13 17.8**	**-1.3**
CDAG	**Cicekdag**	**1.05**	**78**	*i* P	**Pg**	**01 13 16.9**	**-0.8**
CDAG				*i* S	**Sg**	**01 13 31.7**	**+0.4**
CDAG	**Cicekdag**	**1.05**	**78**	*i* P	**Pg**	**01 13 16.9**	**-0.8**
CDAG				*i* S	**Sg**	**01 13 31.7**	**+0.4**
ELDT	**Eldivan**	**1.11**	**16**	*i* P	**Pg**	**01 13 19.1**	**+0.3**
ELDT				*i* S	**Sg**	**01 13 34.7**	**+1.4**
ELDT	**Eldivan**	**1.11**	**16**	*i* P	**Pg**	**01 13 19.1**	**+0.3**
ELDT				*i* S	**Sg**	**01 13 34.7**	**+1.5**
KDHN	**Kadinhani**	**1.15**	**219**	*i* P	**Pg**	**01 13 20.2**	**+0.8**
KDHN				*i* S	**Sg**	**01 13 36.0**	**+1.8**
KDHN	**Kadinhani**	**1.15**	**219**	*i* P	**Pg**	**01 13 20.2**	**+0.8**
KDHN				*i* S	**Sg**	**01 13 36.0**	**+1.8**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*PN	**Pn**	**01 13 21.9**	**-0.4**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*Pn	**Pn**	**01 13 21.9**	**-0.4**
CORM	**Corum**	**1.45**	**58**	*e*PN	**Pn**	**01 13 23.3**	**-1.4**
CORM	**Corum**	**1.45**	**58**	*e*Pn	**Pn**	**01 13 23.3**	**-1.3**
AVNT	**Avonos**	**1.55**	**114**	*i* P	**Pn**	**01 13 26.3**	**+0.2**
AVNT				*i* S	**Sn**	**01 13 47.6**	**+0.7**
AVNT	**Avonos**	**1.55**	**114**	*i* P	**Pn**	**01 13 26.3**	**+0.2**
AVNT				*i* S	**Sn**	**01 13 47.6**	**+0.8**
YOZ	**Yozgat**	**1.78**	**82**	*e*PN	**Pn**	**01 13 28.2**	**-1.1**
YOZ	**Yozgat**	**1.78**	**82**	*e*Pn	**Pn**	**01 13 28.2**	**-1.1**
CTKT	**Corum**	**1.81**	**48**	*i* P	**Pn**	**01 13 29.9**	**+0.3**
CTKT				*i* S	**Sn**	**01 13 56.2**	**+3.0**
CTKT	**Corum**	**1.81**	**48**	*i* P	**Pn**	**01 13 29.9**	**+0.3**
CTKT				*i* S	**Sn**	**01 13 56.2**	**+3.1**

ISCJB ***13*** *01:14:14.9±0.4, 50°.48N±0°.02×4°.43E±0°.02, h2km±2km, Error ellipse: s-maj=3.1km s-min=2.4km az=153.5*
CSEM ***13*** *01:14:16.5±0.2, 50°.57N×4°.49E, h2km, ML3.4/19, Error ellipse: s-maj=4.1km s-min=3.0km az=158.0*
LDG ***13*** *01:14:17.5±0.1, 50°.62N×4°.59E, h5km, Md3.5/2, Ml3.3/34, Error ellipse: s-maj=1.8km s-min=1.2km az=166.0*
UCC ***13*** *01:14:17.2±0.5, 50°.63N×4°.58E, h6km, ML2.6*
NEIC ***13*** *01:14:24.1, 50°.22N×4°.63E, h5km, ML3.3(LDG), ML3.0(STR), ML2.8(SZGRF), After STR.*
STR ***13*** *01:14:24.1±0.5, 50°.22N×4°.63E, h5km, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 13 01:14:16.7±0.4,**50°.55N**±0°.02×**4°.50E**±0°.02,**h11**km±2km,
n128,σ1$**36**/269,**2C-5D, Belgium**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCC	**Uccle**	**0.26**	**340**	⇓P	**Pg**	**01 14 20.6**	**-1.4**
UCC				S	**Sg**	**01 14 23.5**	**-2.2**
	comp=Z,3μm,0.2s						
UCC	**Uccle**	**0.26**	**340**	P	**Pg**	**01 14 20.6**	**-1.5**
UCC				S	**Sg**	**01 14 23.4**	**-2.3**
	comp=Z,3μm,0.2s						
DOU	**Dourbes**	**0.46**	**172**	⇑P	**Pg**	**01 14 27.6**	**+2.0**
DOU	**Dourbes**	**0.46**	**172**	P	**Pg**	**01 14 27.6**	**+2.0**
GIVF	**Givet**	**0.49**	**155**	*e*Pg	**Pg**	**01 14 28.2**	**+1.9**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**01 14 35.3**	**+2.5**
	comp=Z,364nm,0.2s						
GIVF	**Givet**	**0.49**	**155**	*e*Pg	**Pg**	**01 14 28.2**	**+1.9**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**01 14 35.3**	**+2.5**
	comp=Z,182nm,0.2s						
BAIF	**Baives**	**0.53**	**201**	*e*Pg	**Pg**	**01 14 29.2**	**+2.3**
	SNR=1.0						
BAIF				*e*Sg	**Sg**	**01 14 37.1**	**+3.3**
	comp=Z,61nm,0.2s,SNR=1.0						
BAIF	**Baives**	**0.53**	**201**	*e*Pg	**Pg**	**01 14 29.2**	**+2.3**
	SNR=1.0						
BAIF				*e*Sg	**Sg**	**01 14 37.1**	**+3.3**
	comp=Z,30nm,0.2s,SNR=1.0						
BCLA	**Clavier**	**0.53**	**104**	⇓P	**Pg**	**01 14 26.9**	**-0.1**
BCLA				S	**Sg**	**01 14 33.9**	**-0.1**
	comp=N,156nm,0.2s						
BCLA	**Clavier**	**0.53**	**104**	P	**Pg**	**01 14 26.9**	**-0.1**
BCLA				S	**Sg**	**01 14 33.8**	**-0.2**
	comp=N,156nm,0.2s						
BEBN	**Eben Emael**	**0.79**	**71**	⇑P	**Pg**	**01 14 30.6**	**-1.4**
BEBN				S	**Sg**	**01 14 40.4**	**-1.8**
	comp=N,84nm,0.2s						
BEBN	**Eben Emael**	**0.79**	**71**	P	**Pg**	**01 14 30.5**	**-1.4**
BEBN				S	**Sg**	**01 14 40.4**	**-1.8**
	comp=N,84nm,0.2s						
HGN	**Heimansgroeve**	**0.94**	**76**	⇓*i*Pg	**Pg**	**01 14 33.5**	**-1.2**
	comp=N,79nm,0.1s,baz=275						
HGN				*e*Sg	**Sg**	**01 14 45.5**	**-1.4**
MEM	**Membach**	**0.96**	**86**	⇓P	**Pg**	**01 14 34.3**	**-0.9**
MEM				S	**Sg**	**01 14 46.2**	**-1.5**
MEM	**Membach**	**0.96**	**86**	P	**Pg**	**01 14 34.3**	**-0.9**
MEM				S	**Sg**	**01 14 46.2**	**-1.5**
WLF	**Walferdange**	**1.39**	**129**	⇓P	**Pn**	**01 14 43.4**	**+1.5**
WLF				S	**Sb**	**01 15 00.5**	**+0.2**
	comp=N,94nm,0.3s						
WLF	**Walferdange**	**1.39**	**129**	*e*Pn	**Pn**	**01 14 43.4**	**+1.4**
WLF				*e*Sg	**Sg**	**01 15 00.4**	**-0.9**
WLF	**Walferdange**	**1.39**	**129**	P	**Pn**	**01 14 43.4**	**+1.4**
WLF				*e*Sg	**Sg**	**01 15 00.4**	**-0.8**
BUG	**Bochum--Univer**	**1.96**	**62**	*e*Pg	**Pg**	**01 14 51.6**	**-2.7**
BUG				*e*Sg	**Sg**	**01 15 12.7**	**-7.1**
BUG	**Bochum--Univer**	**1.96**	**62**	*e*Pg	**Pg**	**01 14 51.6**	**-2.7**
WTSB	**Winterswijk**	**2.02**	**45**	*i* Pg	**Pg**	**01 14 49.7**	**-5.8**
	comp=N,19nm,0.3s						
WTSB				*e*Sg	**Sg**	**01 15 13.2**	**-8.5**
ABH	**Alteburg**	**2.07**	**108**	Pn	**Pn**	**01 14 55.9**	**+4.5**
ABH	**Alteburg**	**2.07**	**108**	Pn	**Pn**	**01 14 55.9**	**+4.5**
MEZF	**Maizieres J'vi**	**2.08**	**170**	*e*Pg	**Pg**	**01 14 57.4**	**+0.8**
	baz=354						
MEZF				*e*Sn	**Sn**	**01 15 17.3**	**-0.1**
MEZF				*e*Sg	**Sg**	**01 15 24.9**	**+1.4**
	comp=N,70nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.08**	**170**	*e*Pn	**Pn**	**01 14 52.9**	**+1.4**
MEZF				*e*Pg	**Pg**	**01 14 57.4**	**+0.8**
MEZF				*e*Sn	**Sn**	**01 15 17.3**	**-0.1**
MEZF				*e*Sg	**Sg**	**01 15 24.9**	**+1.4**
MEZF	**Maizieres J'vi**	**2.08**	**170**	*e*Pn	**Pn**	**01 14 52.9**	**+1.4**
	SNR=1.0						
MEZF	**Maizieres J'vi**	**2.08**	**170**	*e*Pg	**Pg**	**01 14 57.4**	**+0.8**
	baz=354						
MEZF				*e*Sn	**Sn**	**01 15 17.3**	**-0.1**
MEZF				*e*Sg	**Sg**	**01 15 24.9**	**+1.4**
	comp=N,35nm,0.3s,SNR=1.0						
SFTF	**Sexfontaines**	**2.37**	**171**	*e*Pg	**Pg**	**01 15 02.6**	**+0.4**
	baz=344						
SFTF				*e*Sn	**Sn**	**01 15 24.4**	**-0.2**
SFTF				*e*Sg	**Sg**	**01 15 34.1**	**+1.2**
	comp=N,51nm,0.3s						
SFTF	**Sexfontaines**	**2.37**	**171**	*e*Pn	**Pn**	**01 14 56.9**	**+1.3**
SFTF				*e*Pg	**Pg**	**01 15 02.6**	**+0.4**
SFTF				*e*Sn	**Sn**	**01 15 24.4**	**-0.2**
SFTF				*e*Sg	**Sg**	**01 15 34.1**	**+1.2**
SFTF	**Sexfontaines**	**2.37**	**171**	*e*Pn	**Pn**	**01 14 56.9**	**+1.3**
SFTF	**Sexfontaines**	**2.37**	**171**	*e*Pg	**Pg**	**01 15 02.6**	**+0.4**
	baz=344						
SFTF				*e*Sn	**Sn**	**01 15 24.4**	**-0.2**
SFTF				*e*Sg	**Sg**	**01 15 34.1**	**+1.2**
	comp=N,25nm,0.3s						
THEF	**They Montfort**	**2.52**	**157**	Pn	**Pn**	**01 14 58.8**	**+1.2**
THEF	**They Montfort**	**2.52**	**157**	Pn	**Pn**	**01 14 58.8**	**+1.2**
TNS	**Taunus Mts**	**2.55**	**96**	*e*Pn	**Pn**	**01 14 58.9**	**+0.9**
TNS				*e*Pg	**Pg**	**01 15 04.1**	**-1.4**
TNS				*e*Sg	**Sg**	**01 15 31.3**	**-7.2**
TNS	**Taunus Mts**	**2.55**	**96**	*e*Pn	**Pn**	**01 14 58.9**	**+0.9**
LANF	**Langenberg**	**2.66**	**125**	Pn	**Pn**	**01 15 02.5**	**+3.0**
LANF				Sg	**Sg**	**01 15 42.9**	**+0.9**
LANF	**Langenberg**	**2.66**	**125**	Pn	**Pn**	**01 15 02.5**	**+3.0**
LANF				Sg	**Sg**	**01 15 42.9**	**+0.9**
CDF	**Champ du Feu**	**2.80**	**139**	*e*Pg	**Pg**	**01 15 09.8**	**-0.6**
CDF				*e*Sn	**Sn**	**01 15 33.7**	**-1.5**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**01 15 45.8**	**-0.9**
	comp=N,37nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**2.80**	**139**	*e*Pn	**Pn**	**01 15 02.8**	**+1.3**
CDF				*e*P		01 15 04.2	
CDF				*e*Pg	**Pg**	**01 15 09.8**	**-0.6**
CDF				*e*Sn	**Sn**	**01 15 33.7**	**-1.5**
CDF				*e*Sg	**Sg**	**01 15 45.8**	**-0.9**
CDF	**Champ du Feu**	**2.80**	**139**	*e*Pn	**Pn**	**01 15 02.8**	**+1.3**
	SNR=1.0						
CDF	**Champ du Feu**	**2.80**	**139**	*e*Pg	**Pg**	**01 15 09.8**	**-0.6**
CDF				*e*Sn	**Sn**	**01 15 33.7**	**-1.5**
CDF				*e*Sg	**Sg**	**01 15 45.8**	**-0.9**
	comp=N,19nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**2.82**	**154**	*e*Pg	**Pg**	**01 15 10.2**	**-0.5**
HAU				*e*Sn	**Sn**	**01 15 34.6**	**-1.1**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**01 15 46.6**	**-0.6**
	comp=N,60nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**2.82**	**154**	*e*Pn	**Pn**	**01 15 02.6**	**+0.9**
HAU				*e*Pg	**Pg**	**01 15 10.2**	**-0.5**
HAU				*e*Sn	**Sn**	**01 15 34.6**	**-1.1**
HAU				*e*Sg	**Sg**	**01 15 46.6**	**-0.6**
HAU	**Haudompre**	**2.82**	**154**	*e*Pn	**Pn**	**01 15 02.6**	**+0.9**
	SNR=1.0						
HAU	**Haudompre**	**2.82**	**154**	*e*Pg	**Pg**	**01 15 10.2**	**-0.5**
HAU				*e*Sn	**Sn**	**01 15 34.6**	**-1.1**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**01 15 46.6**	**-0.6**
	comp=N,30nm,0.4s,SNR=1.0						
ECH	**Echery**	**2.91**	**142**	Pn	**Pn**	**01 15 05.7**	**+2.8**
ECH				Sg	**Sg**	**01 15 49.1**	**-1.0**
ECH	**Echery**	**2.91**	**142**	*e*Pn	**Pn**	**01 15 06.0**	**+3.0**
ECH				*e*Sg	**Sg**	**01 15 46.4**	**-3.8**
ECH	**Echery**	**2.91**	**142**	Pn	**Pn**	**01 15 05.7**	**+2.8**
ECH				Sg	**Sg**	**01 15 49.1**	**-1.0**
HINF	**Hinteralfeld**	**3.14**	**150**	*e*Pg	**Pg**	**01 15 16.1**	**-0.7**
HINF				*e*Sn	**Sn**	**01 15 42.1**	**-1.5**
	comp=N,24nm,0.4s,SNR=1.0						
HINF				*e*Sg	**Sg**	**01 15 57.0**	**-0.5**
	comp=N,27nm,0.4s						
HINF	**Hinteralfeld**	**3.14**	**150**	*e*Pn	**Pn**	**01 15 06.3**	**+0.2**
HINF				*e*P		01 15 09.1	
HINF				*e*Pg	**Pg**	**01 15 16.1**	**-0.7**
HINF				*e*Sn	**Sn**	**01 15 42.1**	**-1.5**
HINF				*e*Sg	**Sg**	**01 15 57.0**	**-0.5**
HINF	**Hinteralfeld**	**3.14**	**150**	*e*Pn	**Pn**	**01 15 06.3**	**+0.2**
	SNR=1.0						
HINF	**Hinteralfeld**	**3.14**	**150**	*e*Pg	**Pg**	**01 15 16.1**	**-0.7**
HINF				*e*Sn	**Sn**	**01 15 42.1**	**-1.5**
	comp=N,12nm,0.4s,SNR=1.0						
HINF				*e*Sg	**Sg**	**01 15 57.0**	**-0.5**
	comp=N,14nm,0.4s						
MOF	**Molkenrain**	**3.21**	**146**	Pn	**Pn**	**01 15 09.5**	**+2.5**
MOF	**Molkenrain**	**3.21**	**146**	Pn	**Pn**	**01 15 09.5**	**+2.5**
LOR	**Lormes**	**3.31**	**188**	*e*Pn	**Pn**	**01 15 10.0**	**+1.5**
	baz=14,SNR=1.0						
LOR	**Lormes**	**3.31**	**188**	*e*Pg	**Pg**	**01 15 20.0**	**-0.1**
	baz=9.5						
LOR				*e*Sn	**Sn**	**01 15 46.6**	**-1.2**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**01 16 03.8**	**+0.8**
	comp=N,21nm,0.3s,SNR=1.0						
LOR	**Lormes**	**3.31**	**188**	*e*Pn	**Pn**	**01 15 10.0**	**+1.5**
LOR				*e*Pg	**Pg**	**01 15 20.0**	**-0.1**
LOR				*e*Sn	**Sn**	**01 15 46.6**	**-1.2**
LOR				*e*Sg	**Sg**	**01 16 03.8**	**+0.8**
LOR	**Lormes**	**3.31**	**188**	*e*Pn	**Pn**	**01 15 10.0**	**+1.5**
	baz=14,SNR=1.0						
LOR	**Lormes**	**3.31**	**188**	*e*Pg	**Pg**	**01 15 20.0**	**-0.1**
	baz=9.5						
LOR				*e*Sn	**Sn**	**01 15 46.6**	**-1.2**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**01 16 03.8**	**+0.8**
	comp=N,10nm,0.3s,SNR=1.0						
BFO	**Black Forest**	**3.34**	**130**	*e*Pn	**Pn**	**01 15 11.2**	**+2.3**
BFO				*e*Sg	**Sg**	**01 16 00.5**	**-3.5**
BFO	**Black Forest**	**3.34**	**130**	*e*Pn	**Pn**	**01 15 11.2**	**+2.3**
BFO				*e*Sg	**Sg**	**01 16 00.5**	**-3.5**
HYF	**Humbligny**	**3.51**	**201**	*e*Pn	**Pn**	**01 15 10.8**	**-0.3**
HYF				*e*P		01 15 14.2	
HYF				*e*Pg	**Pg**	**01 15 24.1**	**+0.3**
HYF				*e*Sn	**Sn**	**01 15 51.7**	**-0.9**
HYF				*e*Sg	**Sg**	**01 16 09.1**	**-0.1**
HYF	**Humbligny**	**3.51**	**201**	*e*Pn	**Pn**	**01 15 10.8**	**-0.3**
FELD	**Feldberg im Sc**	**3.53**	**138**	Pn	**Pn**	**01 15 13.4**	**+2.0**
FELD	**Feldberg im Sc**	**3.53**	**138**	Pn	**Pn**	**01 15 13.4**	**+2.0**
SSF	**Saint Saulge**	**3.55**	**191**	*e*Pg	**Pg**	**01 15 24.3**	**-0.4**
SSF				*e*Sn	**Sn**	**01 15 52.6**	**-1.1**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**01 16 10.5**	**-0.2**
	comp=N,15nm,0.4s						
SSF	**Saint Saulge**	**3.55**	**191**	*e*Pn	**Pn**	**01 15 13.5**	**+1.7**
SSF				*e*Pg	**Pg**	**01 15 24.3**	**-0.4**
SSF				*e*Sn	**Sn**	**01 15 52.6**	**-1.1**
SSF				*e*Sg	**Sg**	**01 16 10.5**	**-0.2**
SSF	**Saint Saulge**	**3.55**	**191**	*e*Pn	**Pn**	**01 15 13.5**	**+1.7**
	SNR=1.0						
SSF	**Saint Saulge**	**3.55**	**191**	*e*Pg	**Pg**	**01 15 24.3**	**-0.4**
SSF				*e*Sn	**Sn**	**01 15 52.6**	**-1.1**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**01 16 10.5**	**-0.2**
	comp=N,7.3nm,0.4s						
LDF	**La Druitiere**	**3.59**	**239**	*e*Pn	**Pn**	**01 15 13.8**	**+1.5**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**01 16 12.0**	**+0.1**
	comp=N,15nm,0.3s						
LDF	**La Druitiere**	**3.59**	**239**	*e*Pn	**Pn**	**01 15 13.8**	**+1.5**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**01 16 12.0**	**+0.1**
	comp=N,7.5nm,0.3s						
BBS	**Basel-Blauen**	**3.67**	**146**	Pn	**Pn**	**01 15 16.5**	**+3.1**
BBS	**Basel-Blauen**	**3.67**	**146**	Pn	**Pn**	**01 15 16.5**	**+3.1**
FLN	**La Foliniere**	**3.70**	**243**	*e*Pn	**Pn**	**01 15 15.0**	**+1.2**
	baz=65,SNR=1.0						
FLN				*e*Sn	**Sn**	**01 15 55.3**	**-2.0**
	SNR=1.0						
FLN				*e*Sg	**Sg**	**01 16 15.1**	**-0.3**
	comp=N,22nm,0.3s						
FLN	**La Foliniere**	**3.70**	**243**	*e*Pn	**Pn**	**01 15 15.0**	**+1.2**
	baz=65,SNR=1.0						
FLN				*e*Sn	**Sn**	**01 15 55.3**	**-2.0**
	SNR=1.0						
FLN				*e*Sg	**Sg**	**01 16 15.1**	**-0.3**
	comp=N,11nm,0.3s						
AVF	**Avril sur Loir**	**3.84**	**192**	*e*Pg	**Pg**	**01 15 29.6**	**-0.6**
AVF				*e*Sn	**Sn**	**01 15 59.9**	**-0.9**
AVF				*e*Sg	**Sg**	**01 16 19.2**	**-0.7**
	comp=N,6.9nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**3.84**	**192**	*e*Pn	**Pn**	**01 15 17.0**	**+1.3**
AVF				*e*Pg	**Pg**	**01 15 29.6**	**-0.6**
AVF				*e*Sn	**Sn**	**01 15 59.9**	**-0.9**
AVF				*e*Sg	**Sg**	**01 16 19.2**	**-0.7**
AVF	**Avril sur Loir**	**3.84**	**192**	*e*Pn	**Pn**	**01 15 17.0**	**+1.3**
	SNR=1.0						
AVF	**Avril sur Loir**	**3.84**	**192**	*e*Pg	**Pg**	**01 15 29.6**	**-0.6**
AVF				*e*Sn	**Sn**	**01 15 59.9**	**-0.9**
AVF				*e*Sg	**Sg**	**01 16 19.2**	**-0.7**
	comp=N,3.5nm,0.3s,SNR=1.0						
CLZ	**Clausthal**	**3.91**	**68**	*e*Pn	**Pn**	**01 15 17.2**	**+0.5**
CLZ				*e*Sg	**Sg**	**01 16 13.9**	**-8.4**
CLZ	**Clausthal**	**3.91**	**68**	*e*Pn	**Pn**	**01 15 17.2**	**+0.5**
SMF	**Signal de Mont**	**3.93**	**187**	*e*Pg	**Pg**	**01 15 31.3**	**-0.7**
SMF				*e*Sn	**Sn**	**01 16 02.1**	**-1.0**
SMF				*e*Sg	**Sg**	**01 16 22.8**	**-0.1**
	comp=N,12nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**3.93**	**187**	*e*Pn	**Pn**	**01 15 17.5**	**+0.5**
SMF				*e*Pg	**Pg**	**01 15 31.3**	**-0.7**
SMF				*e*Sn	**Sn**	**01 16 02.1**	**-1.0**
SMF				*e*Sg	**Sg**	**01 16 22.8**	**-0.1**
SMF	**Signal de Mont**	**3.93**	**187**	*e*Pn	**Pn**	**01 15 17.5**	**+0.5**
	SNR=1.0						
SMF	**Signal de Mont**	**3.93**	**187**	*e*Pg	**Pg**	**01 15 31.3**	**-0.7**
SMF				*e*Sn	**Sn**	**01 16 02.1**	**-1.0**
SMF				*e*Sg	**Sg**	**01 16 22.8**	**-0.1**
	comp=N,6.0nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**4.08**	**164**	*e*Pn	**Pn**	**01 15 20.8**	**+1.8**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**01 16 05.3**	**-1.4**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**01 16 26.6**	**-1.0**
	comp=N,24nm,0.6s,SNR=1.0						
CABF	**La Chapelle**	**4.08**	**164**	*e*Pn	**Pn**	**01 15 20.8**	**+1.8**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**01 16 05.3**	**-1.4**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**01 16 26.6**	**-1.0**
	comp=N,12nm,0.6s,SNR=1.0						
GRR	**Gorron**	**4.11**	**240**	*e*Pn	**Pn**	**01 15 20.8**	**+1.4**
	SNR=1.0						
GRR				*e*Sn	**Sn**	**01 16 06.3**	**-1.2**
	comp=N,11nm,0.2s,SNR=1.0						
GRR				*e*Sg	**Sg**	**01 16 28.2**	**-0.4**
	comp=N,12nm,0.3s						
GRR	**Gorron**	**4.11**	**240**	*e*Pn	**Pn**	**01 15 20.8**	**+1.4**
	SNR=1.0						
GRR				*e*Sn	**Sn**	**01 16 06.3**	**-1.2**
	comp=N,5.4nm,0.2s,SNR=1.0						
GRR				*e*Sg	**Sg**	**01 16 28.2**	**-0.4**
	comp=N,5.9nm,0.3s						
BGF	**Bois d'Agland**	**4.14**	**196**	*e*Pn	**Pn**	**01 15 21.5**	**+1.6**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**01 16 07.2**	**-1.1**
BGF				*e*Sg	**Sg**	**01 16 29.6**	**-0.1**
	comp=N,45nm,0.4s						
BGF	**Bois d'Agland**	**4.14**	**196**	*e*Pn	**Pn**	**01 15 21.5**	**+1.6**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**01 16 07.2**	**-1.1**
BGF				*e*Sg	**Sg**	**01 16 29.6**	**-0.1**
	comp=N,22nm,0.4s						
TCF	**Toulx Ste Croi**	**4.53**	**201**	*e*Pn	**Pn**	**01 15 26.9**	**+1.7**
TCF				*e*Sn	**Sn**	**01 16 16.2**	**-1.6**
TCF				*e*Sg	**Sg**	**01 16 41.8**	**-0.2**
	comp=N,10nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**4.53**	**201**	*e*Pn	**Pn**	**01 15 26.9**	**+1.7**
TCF				*e*Sn	**Sn**	**01 16 16.2**	**-1.6**
TCF				*e*Sg	**Sg**	**01 16 41.8**	**-0.2**
	comp=N,5.1nm,0.4s,SNR=1.0						
MFF	**Saint Martin d**	**5.01**	**220**	*e*Pn	**Pn**	**01 15 32.9**	**+1.1**
	SNR=1.0						
MFF				*e*Sn	**Sn**	**01 16 27.5**	**-2.2**
MFF				*e*Sg	**Sg**	**01 16 56.8**	**-0.7**
	comp=N,11nm,0.3s						
MFF	**Saint Martin d**	**5.01**	**220**	*e*Pn	**Pn**	**01 15 32.9**	**+1.1**
	SNR=1.0						
MFF				*e*Sn	**Sn**	**01 16 27.5**	**-2.2**
MFF				*e*Sg	**Sg**	**01 16 56.8**	**-0.7**
	comp=N,5.6nm,0.3s						
SGMF	**Saint Gilles**	**5.15**	**246**	*e*Pn	**Pn**	**01 15 34.5**	**+0.8**
	SNR=1.0						
SGMF				*e*Sn	**Sn**	**01 16 30.1**	**-3.0**
	comp=N,2.2nm,0.2s						
SGMF	**Saint Gilles**	**5.15**	**246**	*e*Pn	**Pn**	**01 15 34.5**	**+0.8**
	SNR=1.0						
SGMF				*e*Sn	**Sn**	**01 16 30.1**	**-3.0**
	comp=N,1.1nm,0.2s						
LPL	**La Plagne**	**5.25**	**163**	*e*Pn	**Pn**	**01 15 37.5**	**+2.4**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**01 16 33.5**	**-2.2**
	comp=N,2.4nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**5.25**	**163**	*e*Pn	**Pn**	**01 15 37.5**	**+2.4**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**01 16 33.5**	**-2.2**
	comp=N,1.2nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**5.28**	**163**	*e*Pn	**Pn**	**01 15 38.1**	**+2.7**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**01 16 34.2**	**-2.0**
	comp=N,3.1nm,0.3s						
LPG	**La Plagne**	**5.28**	**163**	*e*Pn	**Pn**	**01 15 38.1**	**+2.7**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**01 16 34.2**	**-2.0**
	comp=N,1.5nm,0.3s						
CLL	**Collm**	**5.43**	**79**	*e*Sb	**Sb**	**01 17 03.0**	**+6.4**
ROSF	**Rostrenen**	**5.53**	**249**	*e*Pn	**Pn**	**01 15 38.9**	**-0.1**
ROSF				*e*Sn	**Sn**	**01 16 40.3**	**-2.2**
	SNR=1.0						
ROSF				*e*Sg	**Sg**	**01 17 13.1**	**-1.1**
	comp=N,14nm,0.7s,SNR=1.0						
ROSF	**Rostrenen**	**5.53**	**249**	*e*Pn	**Pn**	**01 15 38.9**	**-0.1**
ROSF				*e*Sg	**Sg**	**01 17 13.1**	**-1.1**
	comp=N,7.1nm,0.7s,SNR=1.0						
RJF	**Les Rejaudoux**	**5.62**	**202**	*e*Pn	**Pn**	**01 15 40.9**	**+0.8**
	SNR=1.0						
RJF				*e*Sn	**Sn**	**01 16 42.4**	**-2.2**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**01 17 15.8**	**-1.2**
	comp=N,6.4nm,0.4s,SNR=1.0						
RJF	**Les Rejaudoux**	**5.62**	**202**	*e*Pn	**Pn**	**01 15 40.9**	**+0.8**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**01 17 15.8**	**-1.2**
	comp=N,3.2nm,0.4s,SNR=1.0		

URLA	**Izmir**	**0.95**	**251**	*i* P	**Pg**	**01 15 08.5**	**-0.2**
URLA				*i* S	**Sg**	**01 15 21.5**	**+0.6**
AYDN	**Tasoluk**	**1.01**	**174**	*i* P	**Pg**	**01 15 11.2**	**+1.2**
AYDN				*i* S	**Sg**	**01 15 24.1**	**+1.0**
AYDN	**Tasoluk**	**1.01**	**174**	*i* P	**Pg**	**01 15 11.2**	**+1.3**
AYDN				*i* S	**Sg**	**01 15 24.1**	**+1.0**
BALY	**Balya**	**1.07**	**355**	*i* P	**Pg**	**01 15 11.2**	**0.0**
BALY				*i* S	**Sg**	**01 15 25.5**	**+0.4**
BALY	**Balya**	**1.07**	**355**	*i* P	**Pg**	**01 15 11.2**	**0.0**
BALY				*i* S	**Sg**	**01 15 25.5**	**+0.4**
DURS	**Dursunbey**	**1.09**	**31**	*i* P	**Pg**	**01 15 11.8**	**+0.3**
DURS				*i* S	**Sg**	**01 15 26.1**	**+0.4**
DURS	**Dursunbey**	**1.09**	**31**	*i* P	**Pg**	**01 15 11.8**	**+0.2**
DURS				*i* S	**Sg**	**01 15 26.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.38**	**358**	*e*PN	**Pn**	**01 15 14.6**	**-1.8**
GONE	**Gonen-Balikesi**	**1.38**	**358**	*e*Pn	**Pn**	**01 15 14.6**	**-1.8**
GDZ	**Gediz**	**1.43**	**72**	*i* P	**Pn**	**01 15 17.4**	**+0.3**
GDZ				*i* S	**Sb**	**01 15 35.1**	**-0.9**
GDZ	**Gediz**	**1.43**	**72**	*i* P	**Pn**	**01 15 17.4**	**+0.3**
GDZ				*i* S	**Sb**	**01 15 35.1**	**-0.9**
ULDT	**Uludag**	**1.83**	**36**	*e*P	**Pn**	**01 15 23.2**	**+0.6**
ULDT				*e*S	**Sn**	**01 15 47.3**	**+1.2**
ULDT	**Uludag**	**1.83**	**36**	*e*P	**Pn**	**01 15 23.2**	**+0.6**
ULDT				*e*S	**Sn**	**01 15 47.3**	**+1.2**

*IDC **13** 01:35:16.4±1.1, 2°51S×142°26E, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.0/16, mbtmp4.0/9, ML4.0/1, Error ellipse: s-maj=40.6km s-min=18.6km az=94.0*
*ISCJB **13** 01:35:20.2±0.9, 2°58S±0°07×142°1E±0°2, h33km, mb4.1/12, Error ellipse: s-maj=27.4km s-min=10.3km az=5.4*
*NEIC **13** 01:35:22.5±0.6, 2°53S×141°98E, h35km, mb4.4/3, Error ellipse: s-maj=19.9km s-min=9.6km az=94.0*
ISC 13 01:35:22.7±0.8, **2°57S**±0°07×**142°0E**±0°2, **h35**km, **n20, σ0s94/17, mb4.1/12, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**13.82**	**223**	*e*Pn	**Pn**	**01 38 35.9**	**-0.3**
WB2	**Warramunga Arr**	**18.81**	**203**	*e*P	**Pn**	**01 39 39.9**	**-0.2**
WRA	**Warramunga Arr**	**18.82**	**203**	P	**Pn**	**01 39 39.8**	**-0.4**
	0.5nm,0.3s,baz=23,slow=11,SNR=16						
FITZ	**Fitzroy Crossi**	**22.25**	**225**	P	**P**	**01 40 16.6**	**-0.1**
	3.3nm,0.8s,mb3.8,baz=41,slow=9.7,SNR=5.1						
ASAR	**Alice Springs**	**22.39**	**200**	P	**P**	**01 40 17.3**	**-0.7**
	2.2nm,0.8s,mb3.6,baz=31,slow=9.3,SNR=18						
EIDS	**Eidsvold**	**24.30**	**160**	*e*P	**P**	**01 40 39.1**	**+2.1**
	38nm,1.4s,mb4.6						
STKA	**Stephens Creek**	**29.16**	**181**	P	**P**	**01 41 20.8**	**+0.2**
	1.1nm,0.4s,mb3.9,baz=10.0,slow=9.5,SNR=4.6						
KSRS	**Korea Array**	**41.91**	**343**	PcP	PcP	01 45 06.9	+1.8
	0.3nm,0.4s,baz=159,slow=3.9,SNR=4.5						
CMAR	**Chiang Mai Arr**	**47.23**	**298**	P	**P**	**01 43 53.7**	**+1.0**
	0.4nm,0.3s,mb3.9,baz=106,slow=5.7,SNR=4.1						
GTA	**Gaotai**	**56.94**	**322**	*e*P	**P**	**01 45 05.9**	**+1.3**
GTA				pP	pP	01 45 11.4	-3.8
GTA				sP	sP	01 45 15.4	-3.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
MK31	**Makanchi Array**	**71.70**	**321**	*e*P	**P**	**01 46 42.0**	**+0.8**
MKAR	**Makanchi Array**	**71.70**	**321**	P	**P**	**01 46 41.2**	**+0.1**
	comp=Z,2.8nm,0.8s,mb4.2,baz=100,slow=6.8,SNR=16						
MKAR	**Makanchi Array**	**71.70**	**321**	P	**P**	**01 46 41.2**	**+0.1**
ZALV	**Zalesovo Beam**	**73.48**	**329**	P	**P**	**01 46 50.9**	**-0.7**
	comp=Z,1.1nm,0.7s,mb3.9,baz=110,slow=11,SNR=5.4						
KURK	**Kurchatov**	**75.50**	**324**	*e*P	**P**	**01 47 02.6**	**-0.8**
	comp=Z,4.1nm,1.2s,mb4.2						
BVAR	**Borovoye Array**	**81.08**	**325**	P	**P**	**01 47 34.6**	**+0.4**
	comp=Z,1.9nm,0.8s,mb4.0,baz=79,slow=7.7,SNR=6.4						
ILAR	**Eielson Array**	**84.36**	**24**	P	**P**	**01 47 48.5**	**-2.5**
	comp=Z,1.0nm,0.7s,mb4.0,baz=249,slow=4.8,SNR=9.2						
ABKAR	**Akbulak array**	**86.73**	**319**	*e*P	**P**	**01 48 02.5**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.4						
LPAZ	**La Paz**	**144.84**	**123**	PKP	PKPdf	01 54 57.7	+0.7
	comp=Z,1.5nm,1.0s,baz=181,slow=1.7,SNR=5.0						
LPAZ	**La Paz**	**144.84**	**123**	PKP	PKPdf	01 54 57.7	+0.7

*IDC **13** 01:41:46.4±2.9, 37°02N×69°91E, h0km, mb3.7/2, mb1 3.8/7, mb1mx3.5/26, mbtmp3.7/7, ML3.7/4, Error ellipse: s-maj=47.2km s-min=23.2km az=148.0*
*NEIC **13** 01:41:50.7±0.7, 37°49N×69°57E, h10km, Error ellipse: s-maj=14.0km s-min=9.9km az=101.0*
*NNC **13** 01:41:54.5±3.0, 37°86N×69°37E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=22.9km s-min=20.5km az=154.0*
ISC 13 01:41:54.1±2.3, **37°45N**±0°04×**69°13E**±0°08, **h34**km±21km, **n29,** σ1s14/36, **6C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.90**	**181**	*e*Pn	**Pn**	**01 42 37.9**	**+0.1**
KBL				*e*Sn	**Sn**	**01 43 18.1**	**+6.7**
CEP	**Cherat**	**4.26**	**147**	P	**Pn**	**01 42 55.9**	**-0.7**
CEP				S	**Sn**	**01 43 45.0**	**-0.1**
THW	**Thamme Wali**	**5.11**	**154**	P	**Pn**	**01 43 12.2**	**+4.0**
KK31	**Karatay Array**	**5.75**	**10**	⇓Pn	**Pn**	**01 43 18.4**	**+1.5**
	1.1nm,0.3s,baz=202,slow=14,SNR=17						
KK31				⇑Sn	**Sn**	**01 44 23.9**	**+2.3**
	4.7nm,0.5s						
KK31				⇓Lg		01 44 42.6	
	8.4nm,0.6s,baz=192,slow=27,SNR=6.4						
KKAR	**Karatay Array**	**5.75**	**10**	*e*Pn	**Pn**	**01 43 19.1**	**+2.2**
	2.9nm,0.3s						
AML	**Almayashu**	**5.85**	**35**	P	**Pn**	**01 43 17.9**	**-0.4**
	SNR=26						
AML	**Almayashu**	**5.85**	**35**	*e*Pn	**Pn**	**01 43 17.6**	**-0.7**
	13nm,0.6s						
EKS2	**Erkin-Say**	**6.31**	**33**	P	**Pn**	**01 43 24.9**	**+0.3**
	SNR=13						
EKS2	**Erkin-Say**	**6.31**	**33**	*e*Pn	**Pn**	**01 43 24.8**	**+0.2**
	3.3nm,0.5s						
AAK	**Ala-Archa**	**6.61**	**37**	P	**Pn**	**01 43 28.6**	**-0.2**
	SNR=22						
AAK	**Ala-Archa**	**6.61**	**37**	Pn	**Pn**	**01 43 28.5**	**-0.3**
	0.1nm,0.3s,baz=189,slow=8.5,SNR=42						
AAK				Sn	**Sn**	**01 44 42.5**	**-0.4**
	0.0nm,0.3s,baz=44,slow=22,SNR=1.7						
AAK				Lg		01 45 15.8	
	0.0nm,0.3s,baz=62,slow=21,SNR=2.4						
KBK	**Karagaybulak**	**6.85**	**39**	P	**Pn**	**01 43 32.4**	**+0.3**
	SNR=5.8						
CHMS	**Chumysh**	**7.01**	**36**	P	**Pn**	**01 43 33.7**	**-0.6**
	SNR=11						
USP	**Ospenovka**	**7.11**	**34**	P	**Pn**	**01 43 34.7**	**-0.9**
	SNR=8.2						
TKM2	**Tokmak 2**	**7.37**	**40**	⇑Pn	**Pn**	**01 43 38.1**	**-1.1**
	10nm,0.8s						
TKM2				⇑Sn	**Sn**	**01 44 56.2**	**-5.4**
	4.2nm,0.7s						
TKM2				⇑Lg		01 45 32.4	
	5.2nm,0.7s						
TKM2	**Tokmak 2**	**7.37**	**40**	P	**Pn**	**01 43 38.1**	**-1.1**
	SNR=9.4						
TKM2	**Tokmak 2**	**7.37**	**40**	*e*Pn	**Pn**	**01 43 38.3**	**-0.9**
	8.6nm,0.7s						
MK31	**Makanchi Array**	**13.50**	**42**	*e*Pn	**Pn**	**01 44 58.9**	**-4.1**
MKAR	**Makanchi Array**	**13.50**	**42**	Pn	**Pn**	**01 44 57.8**	**-5.2**
	baz=228,slow=14,SNR=8.3						
AB31	**Akbulak array**	**13.55**	**333**	Pn	**Pn**	**01 45 03.4**	**-0.4**
	0.6nm,0.3s,baz=166,slow=11,SNR=38						
AB31				⇑Sn	**Sn**	**01 47 31.3**	**-1.7**
	1.3nm,0.7s,baz=163,slow=23,SNR=6.0						
ABKAR	**Akbulak array**	**13.55**	**333**	*e*Pn	**Pn**	**01 45 03.4**	**-0.3**
	1.4nm,0.3s						
AKTK	**Aktyubinsk**	**15.23**	**332**	Pn	**Pn**	**01 45 27.6**	**+1.3**
AKTO	**Aktyubinsk**	**15.23**	**332**	⇓Pn	**Pn**	**01 45 26.0**	**-0.3**
	1.0nm,1.0s						
AKTO				⇑Sn	**Sn**	**01 48 10.8**	**-2.9**
	0.2nm,0.8s						
AKTO	**Aktyubinsk**	**15.23**	**332**	Pn	**Pn**	**01 45 27.6**	**+1.3**
	0.2nm,0.3s,baz=146,slow=14,SNR=5.3						
BVAR	**Borovoye Array**	**15.60**	**3**	Pn	**Pn**	**01 45 30.3**	**-0.9**
	0.3nm,0.3s,baz=171,slow=10,SNR=4.0						
BVAR	**Borovoye Array**	**15.60**	**3**	Pn	**Pn**	**01 45 30.3**	**-0.9**
ZALV	**Zalesovo Beam**	**19.73**	**28**	P	**Pn**	**01 46 18.4**	**-3.9**
	0.4nm,0.3s,baz=226,slow=9.7,SNR=5.4						
ARCES	**ARCESS Array B**	**39.70**	**338**	P	**P**	**01 49 24.3**	**+1.7**
	1.1nm,1.0s,baz=118,slow=7.0,SNR=7.4						
YKA	**Yellowknife Ar**	**80.36**	**2**	P	**P**	**01 54 01.6**	**+0.3**
	0.3nm,0.5s,baz=353,slow=5.1,SNR=6.2						

*IDC **13** 01:49:56.5±0.8, 2°51S×142°09E, h0km, mb4.1/10, mb1 4.3/12, mb1mx4.3/18, mbtmp4.2/12, ML4.6/2, MS3.7/4, Ms1 3.7/4, ms1mx3.2/19, Error ellipse: s-maj=24.6km s-min=9.6km az=101.0*
*ISCJB **13** 01:50:01.1±0.6, 2°51S±0°06×141°8E±0°1, h33km, mb4.3/17, MS3.7/2, Error ellipse: s-maj=16.6km s-min=7.9km az=171.7*
*NEIC **13** 01:50:03.4±3.5, 2°49S×142°03E, h47km±33km, mb4.6/7, Error ellipse: s-maj=16.4km s-min=13.5km az=217.0*
ISC 13 01:50:03.4±0.6, **2°53S**±0°05×**141°8E**±0°1, **h35**km, **n35, σ0s92/34, mb4.3/17, MS3.7/2, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**13.70**	**222**	*e*P	**Pn**	**01 53 13.9**	**-1.4**
	8.8nm,0.5s						
CTA	**Charters Tower**	**17.99**	**166**	P	**Pn**	**01 54 11.9**	**+1.2**
	0.2nm,0.3s,baz=337,slow=10,SNR=7.4						
CTA				LR	LR	02 00 45.6	
	comp=Z,147nm,22.0s,baz=51,slow=36						
CTAO	**Charters Tower**	**17.99**	**166**	*e*P	**Pn**	**01 54 11.8**	**+1.1**
	9.4nm,0.9s						
KNA	**Kununurra**	**18.35**	**224**	*e*P	**Pn**	**01 54 17.4**	**+2.2**
	15nm,0.7s						
WB2	**Warramunga Arr**	**18.76**	**202**	*e*P	**Pn**	**01 54 19.9**	**-0.3**
WRA	**Warramunga Arr**	**18.77**	**202**	P	**Pn**	**01 54 19.0**	**-1.2**
	1.0nm,0.3s,baz=24,slow=11,SNR=30						
WRA				S	**S**	**01 57 51.9**	**+0.4**
	0.1nm,0.3s,baz=12,slow=21,SNR=4.7						
WRA				LR	LR	02 01 59.5	
	comp=Z,413nm,18.3s,baz=200,slow=38						
WRA	**Warramunga Arr**	**18.77**	**202**	P	**Pn**	**01 54 19.0**	**-1.2**
WRA				S	**S**	**01 57 51.9**	**+0.4**
WRA				LR	LR	02 01 59.5	
HNR	**Honiara**	**19.31**	**112**	P	**Pn**	**01 54 20.2**	**-6.7**
	11nm,0.3s,baz=237,slow=3.8,SNR=3.6						
HNR	**Honiara**	**19.31**	**112**	P	**Pn**	**01 54 20.2**	**-6.7**
FITZ	**Fitzroy Crossi**	**22.14**	**225**	P	**P**	**01 54 55.9**	**-0.2**
	4.9nm,0.7s,mb4.0,baz=77,slow=11,SNR=12						
FITZ	**Fitzroy Crossi**	**22.14**	**225**	*e*P	**P**	**01 54 55.9**	**-0.2**
	12nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**22.35**	**199**	P	**P**	**01 54 57.5**	**-0.8**
	6.2nm,0.8s,mb4.1,baz=31,slow=9.5,SNR=46						
ASAR				S	**S**	**01 59 07.4**	**+5.0**
	1.7nm,1.0s,baz=18,slow=27,SNR=4.2						
EIDS	**Eidsvold**	**24.41**	**159**	*e*P	**P**	**01 55 18.2**	**-0.4**
	49nm,0.9s,mb4.9						
RMQ	**Roma**	**24.74**	**165**	*e*P	**P**	**01 55 22.5**	**+0.9**
	54nm,1.0s,mb5.0						
STKA	**Stephens Creek**	**29.19**	**180**	P	**P**	**01 56 01.0**	**-0.6**
	1.7nm,0.5s,mb4.1,baz=7.6,slow=8.7,SNR=9.9						
STKA				LR	LR	02 08 53.6	
	comp=Z,212nm,18.8s,MS3.8,baz=26,slow=39						
STKA	**Stephens Creek**	**29.19**	**180**	*e*P	**P**	**01 56 00.9**	**-0.7**
	1.7nm,0.5s,mb4.0						
ARMA	**Armidale**	**29.26**	**162**	*e*P	**P**	**01 56 02.9**	**+0.7**
FORT	**Forrest**	**30.95**	**203**	*e*P	**P**	**01 56 17.3**	**+0.1**
	13nm,0.6s,mb4.9						
KSRS	**Korea Array**	**41.81**	**343**	P	**P**	**01 57 49.5**	**-0.2**
	0.8nm,0.9s,mb3.4,baz=161,slow=9.5,SNR=4.9						
KSRS				PcP	PcP	01 59 45.5	+0.1
	0.8nm,0.8s,baz=168,slow=3.2,SNR=4.7						
KSRS				LR	LR	02 12 27.9	
	comp=Z,90nm,19.6s,MS3.7,baz=125,slow=32						
PSI	**Prapat**	**43.17**	**277**	P	**P**	**01 58 01.4**	**+0.2**
	1.9nm,0.3s,mb4.3,baz=144,slow=17,SNR=5.8						
CMAR	**Chiang Mai Arr**	**47.04**	**298**	P	**P**	**01 58 32.6**	**+0.8**
	0.7nm,0.4s,mb4.0,baz=112,slow=5.6,SNR=5.5						
SONM	**Songino Array**	**58.91**	**333**	P	**P**	**01 59 59.6**	**+0.7**
	0.3nm,0.3s,mb3.8,baz=122,slow=11,SNR=2.7						
MK31	**Makanchi Array**	**71.54**	**321**	*e*P	**P**	**02 01 21.3**	**+0.5**
MKAR	**Makanchi Array**	**71.54**	**321**	P	**P**	**02 01 20.5**	**-0.4**
	4.1nm,0.9s,mb4.4,baz=115,slow=7.5,SNR=25						
ZALV	**Zalesovo Beam**	**73.35**	**329**	P	**P**	**02 01 29.4**	**-2.1**
	1.7nm,0.8s,mb4.0,baz=104,slow=6.3,SNR=6.8						
KZA	**Kyzart**	**74.52**	**315**	*e*P	**P**	**02 01 39.4**	**+0.8**
	7.2nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**74.54**	**316**	*e*P	**P**	**02 01 38.9**	**+0.2**
AML	**Almayashu**	**75.64**	**315**	*e*P	**P**	**02 01 46.0**	**+1.0**
	4.3nm,0.9s,mb4.4						
ILAR	**Eielson Array**	**84.41**	**24**	P	**P**	**02 02 28.2**	**-3.7**
	2.7nm,0.9s,mb4.4,baz=257,slow=4.9,SNR=18						
ABKAR	**Akbulak array**	**86.57**	**319**	*e*P	**P**	**02 02 42.0**	**-1.0**
	1.1nm,0.7s,mb4.2						
QSPA	**South Pole Qui**	**87.41**	**180**	*e*P	**P**	**02 02 46.1**	**-0.4**
	6.5nm,1.0s,mb4.8						
LPAZ	**La Paz**	**145.03**	**123**	PKP	PKPdf	02 09 37.4	-0.6
	4.5nm,0.9s,baz=355,slow=1.4,SNR=18						
LPAZ	**La Paz**	**145.03**	**123**	PKP	PKPdf	02 09 37.4	-0.6
DBIC	**Dimbokro**	**146.50**	**278**	PKPbc	PKPbc	02 09 41.8	-0.3
	4.9nm,1.1s,baz=53,slow=2.4,SNR=4.1						
SDV	**Santo Domingo**	**147.15**	**78**	*e*PKPbc	PKPbc	02 09 41.6	-2.3

*DJA **13** 02:08:01, 2°34S×100°67E, h35km, MLv3.7/4*
*ISCJB **13** 02:08:02.8±1.0, 2°26S±0°06×100°58E±0°09, h33km, mb3.3/3, Error ellipse: s-maj=13.3km s-min=8.9km az=169.4*
*IDC **13** 02:08:04.9±5.7, 0°86S×102°25E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/18, mbtmp3.3/3, Error ellipse: s-maj=324.9km s-min=27.0km az=53.0*
ISC 13 02:08:04.3±1.0, **2°21S**±0°06×**100°57E**±0°09, **h35**km, **n9, σ0s82/11, mb3.3/3, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.29**	**355**	P	**Pn**	**02 08 24.3**	**-1.6**
PDSI				S	**Sn**	**02 08 40.9**	**-1.0**
SDSI	**Sungai Dareh**	**1.53**	**34**	P	**Pn**	**02 08 28.9**	**-0.3**
SDSI				S	**Sn**	**02 08 48.2**	**+0.3**
SISI	**Saibi**	**1.71**	**301**	P	**Pn**	**02 08 32.2**	**+0.5**
PPI	**Padang Panjang**	**1.75**	**354**	P	**Pn**	**02 08 32.3**	**+0.1**
PPI				S	**Sn**	**02 08 54.9**	**+1.7**
KSI	**Kapahiang**	**2.48**	**125**	P	**Pn**	**02 08 35.6**	**-6.7**
WRA	**Warramunga Arr**	**37.40**	**121**	P	**P**	**02 15 14.5**	**+0.2**
	0.2nm,0.7s,mb3.1,baz=303,slow=8.7,SNR=2.8						
ASAR	**Alice Springs**	**38.67**	**126**	P	**P**	**02 15 25.2**	**+0.2**
	0.5nm,0.6s,mb3.4,baz=301,slow=8.1,SNR=5.8						
MKAR	**Makanchi Array**	**51.38**	**344**	P	**P**	**02 17 05.2**	**-0.3**
	0.2nm,0.3s,mb3.5,baz=156,slow=7.4,SNR=2.9						
TXAR	**Lajitas Array**	**144.52**	**38**	PKP	PKPdf	02 27 42.2	+4.4
	0.2nm,0.4s,baz=299,slow=1.0,SNR=5.9						

*NEIC **13** 02:13:35.5, 16°73N×94°09W, h126km, MD3.9(MEX), After MEX.*
MEX 13 02:13:35.5±0.6, **16°73N×94°09W, h126**km±12km, **MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.93**	**87**	*i* P	Pn	02 13 56.4	-1.0
TGIG				*i* S	Sn	02 14 12.1	-1.8
PCIG		**1.32**	**140**	*e*P	Pn	02 14 00.4	-1.0
PCIG				*i* S	Sn	02 14 19.2	-1.8
CCIG	**Comitan**	**1.93**	**103**	*e*P	Pn	02 14 07.0	-1.4
CCIG				*i* S	Sn	02 14 31.6	-1.9
CCIG	**Comitan**	**1.93**	**103**	*e*P	Pn	02 14 07.0	-1.4
CCIG				*i* S	Sn	02 14 31.6	-1.9
HUIG	**Huatulco**	**2.16**	**244**	*i* P	Pn	02 14 08.9	-2.4
HUIG				*e*S	Sn	02 14 37.5	-1.2
HUIG	**Huatulco**	**2.16**	**244**	*i* P	Pn	02 14 08.9	-2.4
HUIG				*e*S	Sn	02 14 37.5	-1.2
VHO	**Vista Hermosa**	**2.55**	**278**	*i* P	Pn	02 14 16.5	+0.3
VHO				*i* S	Sn	02 14 46.4	-1.1
VHO	**Vista Hermosa**	**2.55**	**278**	*i* P	Pn	02 14 16.5	+0.3
VHO				*i* S	Sn	02 14 46.4	-1.1
PNIG	**Pinotepa**	**3.88**	**266**	*i* P	Pn	02 14 32.5	-1.2
PNIG				*e*S	Sn	02 15 15.8	-2.9
PNIG	**Pinotepa**	**3.88**	**266**	*i* P	Pn	02 14 32.5	-1.2
PNIG				*e*S	Sn	02 15 15.8	-2.9

*IDC **13** 02:16:36.7±1.1, 2°47S×142°19E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/16, mbtmp4.0/7, ML3.8/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/27, Error ellipse: s-maj=46.9km s-min=19.1km az=97.0*
*ISCJB **13** 02:16:40.8±0.8, 2°48S±0°09×141°9E±0°2, h33km, mb4.0/9, MS3.4/2, Error ellipse: s-maj=30.8km s-min=12.7km az=178.5*

*NEIC **13** 02:16:42.5±0.7, 2°47S×141°95E, h35km, mb4.2/3, Error ellipse: s-maj=25.0km s-min=11.5km az=89.0*
ISC 13 02:16:42.9±0.8, **2°50S**±0°09×**141°9E**±0°2, **h35**km, **n13, σ0s91/11, mb4.0/9, MS3.4/2, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**16.25**	**10**	LR	LR	02 25 48.7	
	comp=Z,58nm,20.9s,baz=329,slow=34						
WRA	**Warramunga Arr**	**18.84**	**202**	P	**Pn**	**02 20 59.6**	**-1.0**
	0.3nm,0.3s,baz=29,slow=12,SNR=15						
WRA				LR	LR	02 28 41.2	
	comp=Z,166nm,21.4s,baz=270,slow=38						
FITZ	**Fitzroy Crossi**	**22.23**	**225**	P	**P**	**02 21 37.1**	**+0.5**
	2.4nm,0.9s,mb3.6,baz=65,slow=13,SNR=5.2						
FITZ				LR	LR	02 30 44.6	
	comp=Z,126nm,18.7s,MS3.4,baz=132,slow=38						
ASAR	**Alice Springs**	**22.42**	**199**	P	**P**	**02 21 37.8**	**-0.8**
	3.2nm,1.0s,mb3.7,baz=29,slow=8.4,SNR=16						
EIDS	**Eidsvold**	**24.41**	**160**	*e*P	**P**	**02 21 59.6**	**+1.5**
	34nm,1.3s,mb4.6						
STKA	**Stephens Creek**	**29.23**	**180**	P	**P**	**02 22 41.6**	**+0.2**
	1.8nm,0.8s,mb3.8,baz=54,slow=15,SNR=2.1						
STKA				LR	LR	02 36 25.3	
	comp=Z,121nm,20.1s,MS3.5,baz=209,slow=41						
MK31	**Makanchi Array**	**71.58**	**321**	*e*P	**P**	**02 28 00.7**	**+0.1**
MKAR	**Makanchi Array**	**71.58**	**321**	P	**P**	**02 28 01.0**	**+0.4**
	2.3nm,0.8s,mb4.1,baz=108,slow=6.6,SNR=14						
ZALV	**Zalesovo Beam**	**73.37**	**329**	P	**P**	**02 28 11.9**	**+0.8**
	0.9nm,0.5s,mb4.0,baz=144,slow=5.4,SNR=3.0						
KURK	**Kurchatov**	**75.38**	**324**	*e*P	**P**	**02 28 22.7**	**-0.2**
	1.8nm,0.9s,mb4.0						
EKS2	**Erkin-Say**	**75.78**	**315**	*e*P	**P**	**02 28 25.5**	**+0.2**
	1.0nm,0.6s,mb3.9						
ILAR	**Eielson Array**	**84.34**	**24**	P	**P**	**02 29 08.8**	**-2.2**
	0.8nm,0.8s,mb3.9,baz=256,slow=4.3,SNR=8.6						
LPAZ	**La Paz**	**144.96**	**123**	PKP	PKPdf	02 36 17.0	-0.5
	0.5nm,0.4s,baz=214,slow=3.6,SNR=4.9						

IDC 13 02:19:21.5±1.6, **2°35S×141°97E, h0**km, **mb3.4/3, mb1 3.7/4, mb1mx3.5/15, mbtmp3.5/4, Error ellipse: s-maj=66.7km s-min=26.9km az=102.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.01**	**203**	P	Pn	02 23 44.6	-1.0
	0.2nm,0.3s,baz=20,slow=12,SNR=5.7						
ASAR	**Alice Springs**	**22.59**	**200**	P	P	02 24 23.4	-0.3
	0.5nm,0.6s,baz=28,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**71.52**	**321**	P	P	02 30 45.6	+1.4
	0.5nm,0.8s,baz=108,slow=8.2,SNR=3.8						
ILAR	**Eielson Array**	**84.17**	**24**	P	P	02 31 53.2	-1.1
	0.2nm,0.6s,baz=244,slow=5.2,SNR=4.0						

*IDC **13** 02:29:00.9±1.3, 2°45S×142°24E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/16, mbtmp3.9/6, ML3.8/1, MS3.4/3, Ms1 3.4/3, ms1mx2.8/21, Error ellipse: s-maj=53.2km s-min=21.0km az=105.0*
*ISCJB **13** 02:29:05.1±1.0, 2°49S±0°09×142°0E±0°3, h33km, mb3.9/7, Error ellipse: s-maj=36.6km s-min=12.9km az=6.8*
*NEIC **13** 02:29:07.2±0.7, 2°46S×141°98E, h35km, mb4.1/2, Error ellipse: s-maj=26.1km s-min=11.8km az=95.0*
ISC 13 02:29:07.1±0.9, **2°50S**±0°09×**142°0E**±0°2, **h35**km, **n14, σ0s98/10, mb3.9/7, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**16.23**	**10**	LR	LR	02 37 44.1	
	comp=Z,97nm,19.2s,baz=227,slow=32						
WB2	**Warramunga Arr**	**18.88**	**203**	*e*P	**Pn**	**02 33 24.5**	**-0.8**
WRA	**Warramunga Arr**	**18.89**	**203**	P	**Pn**	**02 33 25.0**	**-0.4**
	0.3nm,0.3s,baz=21,slow=11,SNR=19						
WRA				LR	LR	02 41 05.3	
	comp=Z,198nm,21.3s,baz=235,slow=38						
FITZ	**Fitzroy Crossi**	**22.32**	**225**	P	**P**	**02 34 02.5**	**+0.7**
	1.6nm,0.6s,mb3.6,baz=54,slow=15,SNR=7.5						
ASAR	**Alice Springs**	**22.46**	**200**	P	**P**	**02 34 02.5**	**-0.6**
	1.4nm,0.7s,mb3.5,baz=30,slow=9.3,SNR=13						
EIDS	**Eidsvold**	**24.36**	**160**	*e*P	**P**	**02 34 24.1**	**+2.2**
	2.3nm,0.5s,mb3.9		

STON				Sn	Sn	02 53 02.5	-1.3
UPM	**Unac-Piva**	**1.86**	**137**	⇑*i*Pn	Pn	02 52 42.3	-0.8
UPM				*e*Sn	Sn	02 53 07.0	+0.4
UPM	**Unac-Piva**	**1.86**	**137**	⇑*i*Pn	Pn	02 52 42.3	-0.8
UPM				*e*Sn	Sn	02 53 07.0	+0.4
BEHE	**Becsehely**	**1.91**	**352**	⇑*e*Pn	Pn	02 52 44.9	+1.1
PKSM	**Moragy**	**1.93**	**32**	*e*Pn	Pn	02 52 43.4	-0.7
PKSM				*e*Sg	Sg	02 53 13.5	0.0
PKSM	**Moragy**	**1.93**	**32**	⇑*i*P	Pn	02 52 43.4	-0.7
PKSM	**Moragy**	**1.93**	**32**	⇑*i*P	Pn	02 52 43.4	-0.7
PKSM				*e*Sg	Sg	02 53 13.5	0.0
BRY	**Bratogost**	**1.95**	**149**	⇓*i*Pn	Pn	02 52 43.3	-1.0
BRY				*e*Sn	Sn	02 53 10.4	+1.7
BRY	**Bratogost**	**1.95**	**149**	⇓*i*Pn	Pn	02 52 43.3	-1.0
BRY				*e*Sn	Sn	02 53 10.4	+1.7
FRGS	**Fruska Gora**	**1.96**	**72**	*e*Pn	Pn	02 52 43.4	-1.1
FRGS				*e*Sg	Sg	02 53 13.8	-0.6
FRGS	**Fruska Gora**	**1.96**	**72**	*e*Pn	Pn	02 52 43.4	-1.1
FRGS				*e*Sg	Sg	02 53 13.8	-0.6
PLE	**Pljevlja**	**2.03**	**127**	⇑*i*Pn	Pn	02 52 45.4	-0.1
PLE				*e*Sn	Sn	02 53 12.6	+1.9
PLE	**Pljevlja**	**2.03**	**127**	⇑*i*Pn	Pn	02 52 45.4	-0.1
PLE				*e*Sn	Sn	02 53 12.6	+1.9
DIVS	**Divibare**	**2.08**	**102**	*e*Pn	Pn	02 52 45.9	-0.2
DIVS				*e*Sg	Sg	02 53 14.5	-3.7
DIVS	**Divibare**	**2.08**	**102**	*e*Pn	Pn	02 52 45.9	-0.2
NKY	**Niksic**	**2.21**	**143**	⇓*i*Pn	Pn	02 52 47.7	-0.2
NKY				*e*Sn	Sn	02 53 16.7	+1.7
NKY	**Niksic**	**2.21**	**143**	⇓*i*Pn	Pn	02 52 47.7	-0.2
NKY				*e*Sn	Sn	02 53 16.7	+1.7
HCY	**Herceg Novi**	**2.34**	**155**	⇓*i*Pn	Pn	02 52 49.9	+0.2
HCY				*e*Sn	Sn	02 53 20.2	+1.9
HCY	**Herceg Novi**	**2.34**	**155**	⇓*i*Pn	Pn	02 52 49.9	+0.2
HCY				*e*Sn	Sn	02 53 20.2	+1.9
TRUS	**Trudelj**	**2.34**	**98**	⇑*i*Pn	Pn	02 52 47.7	-2.0
TRUS	**Trudelj**	**2.34**	**98**	⇑*i*Pn	Pn	02 52 47.7	-2.0
PKS2	**Kecel**	**2.39**	**36**	*e*Pg	Pg	02 52 59.1	+1.9
SOKA	**Soboth**	**2.58**	**325**	⇑*i*Pn	Pn	02 52 53.0	-0.1
SOKA				⇓*i*Sn	Sn	02 53 23.2	-1.2
SOKA	**Soboth**	**2.58**	**325**	Pn	Pn	02 52 53.0	0.0
SOKA				Sn	Sn	02 53 23.2	-1.1
BUM	**Brajici-Budva**	**2.60**	**151**	⇑*i*Pn	Pn	02 52 53.8	+0.5
BUM				*e*Sn	Sn	02 53 25.9	+1.1
BUM	**Brajici-Budva**	**2.60**	**151**	⇑*i*Pn	Pn	02 52 53.8	+0.5
BUM				*e*Sn	Sn	02 53 25.9	+1.1
BEY	**Berane**	**2.61**	**130**	⇑*i*Pn	Pn	02 52 53.6	+0.2
BEY				*e*Sn	Sn	02 53 25.8	+0.8
IVA	**Berane**	**2.61**	**130**	⇑*i*Pn	Pn	02 52 53.6	+0.2
IVA				*e*Sn	Sn	02 53 25.8	+0.8
IVA	**Berane**	**2.61**	**130**	⇑*i*Pn	Pn	02 52 53.6	+0.2
IVA				*e*Sn	Sn	02 53 25.8	+0.8
PDG	**Podgorica**	**2.63**	**144**	⇑*i*Pn	Pn	02 52 53.8	+0.1
PDG				*e*Sn	Sn	02 53 26.2	+0.7
TTG	**Podgorica**	**2.63**	**144**	⇑*i*Pn	Pn	02 52 53.8	+0.1
TTG				*e*Sn	Sn	02 53 26.2	+0.7
TTG	**Podgorica**	**2.63**	**144**	⇑*i*Pn	Pn	02 52 53.8	+0.1
TTG				*e*Sn	Sn	02 53 26.2	+0.7
VOY	**Vojsko**	**2.73**	**303**	*e*Pn	Pn	02 52 56.7	+1.6
VOY				*e*		02 52 58.7	
VOY				*e*Sn	Sn	02 53 32.3	+4.2
VOY	**Vojsko**	**2.73**	**303**	*e*Pn	Pn	02 52 56.7	+1.6
VOY				*e*Sn	Sn	02 53 32.3	+4.2
PVY	**Plav**	**2.84**	**133**	⇓*i*Pn	Pn	02 52 57.0	+0.4
PVY				*e*Sn	Sn	02 53 31.6	+0.9
PVY	**Plav**	**2.84**	**133**	⇓*i*Pn	Pn	02 52 57.0	+0.4
PVY				*e*Sn	Sn	02 53 31.6	+0.9
ARSA	**Arzberg**	**2.91**	**337**	*e*Pn	Pn	02 52 57.7	+0.2
ARSA				*e*Sn	Sn	02 52 32.1	-0.3
ARSA	**Arzberg**	**2.91**	**337**	*e*Pn	Pn	02 52 57.9	+0.4
	SNR=14						
ARSA				⇑*i*Sn	Sn	02 53 32.2	-0.2
ARSA	**Arzberg**	**2.91**	**337**	*e*Pn	Pn	02 52 57.7	+0.2
ARSA				Sn	Sn	02 53 32.2	-0.2
SVIS	**Svilajnac**	**2.91**	**95**	*e*Pn	Pn	02 52 57.1	-0.5
SVIS				*e*Sn	Sn	02 53 33.1	+0.7
SVIS	**Svilajnac**	**2.91**	**95**	*e*Pn	Pn	02 52 57.1	-0.5
SVIS				*e*Sn	Sn	02 53 33.1	+0.7
PKSG		**2.94**	**16**	⇓*e*Pn	Pn	02 52 58.4	+0.5
PKSN	**Nyarlorinc**	**2.99**	**38**	*e*Pg	Pg	02 53 11.8	+3.1
ULC	**Ulcinj**	**3.02**	**149**	⇑*i*Pn	Pn	02 52 59.8	+0.7
ULC				*e*Sn	Sn	02 53 36.1	+0.9
ULC	**Ulcinj**	**3.02**	**149**	⇑*i*Pn	Pn	02 52 59.8	+0.7
ULC				*e*Sn	Sn	02 53 36.1	+0.9
RGNG	**Rignano Grg**	**3.13**	**202**	Pn	Pn	02 53 00.9	+0.3
RGNG	**Rignano Grg**	**3.13**	**202**	Pn	Pn	02 53 00.9	+0.3
SOP	**Sopron**	**3.13**	**352**	⇓*e*Pn	Pn	02 53 01.1	+0.5
SOP	**Sopron**	**3.13**	**352**	⇓*e*Pn	Pn	02 53 01.1	+0.5
PTCC	**Patocco-Chiusa**	**3.25**	**306**	Pn	Pn	02 53 08.6	+6.4
	comp=Z,13nm,0.6s						
BZS	**Buzias**	**3.31**	**70**	⇑*i*P	Pn	02 53 01.9	-1.2
BZS	**Buzias**	**3.31**	**70**	⇑*i*P	Pn	02 53 01.9	-1.2
SNTG	**Esanatoglia**	**3.33**	**248**	Pn	Pn	02 53 04.9	+1.5
	comp=Z,11nm,0.6s						
SNTG	**Esanatoglia**	**3.33**	**248**	Pn	Pn	02 53 04.9	+1.5
	comp=Z,11nm,0.6s						
NRCA	**Norcia**	**3.42**	**241**	Pn	Pn	02 53 04.0	-0.6
	comp=Z,13nm,0.8s						
NRCA	**Norcia**	**3.42**	**241**	Pn	Pn	02 53 04.0	-0.6
	comp=Z,13nm,0.8s						
CESI	**CESI - Serrava**	**3.47**	**245**	Pn	Pn	02 53 04.8	-0.5
	comp=Z,14nm,0.6s						
CESI	**CESI - Serrava**	**3.47**	**245**	Pn	Pn	02 53 04.8	-0.5
	comp=Z,14nm,0.6s						
CONA	**Conrad Observa**	**3.47**	**345**	*i* Pn	Pn	02 53 05.9	+0.6
	SNR=18						
CONA				⇓*i*Sn	Sn	02 53 48.9	+2.6
CONA	**Conrad Observa**	**3.47**	**345**	Pn	Pn	02 53 05.9	+0.6
	SNR=18						
CONA				Sn	Sn	02 53 48.9	+2.7
AQU	**L'Aquila**	**3.54**	**232**	⇑*i*P	Pn	02 53 02.5	-3.7
AQU	**L'Aquila**	**3.54**	**232**	⇑*i*P	Pn	02 53 02.5	-3.7
ASS	**Assisi**	**3.61**	**247**	Pn	Pn	02 53 06.9	-0.3
	comp=Z,19nm,0.8s						
ASS	**Assisi**	**3.61**	**247**	Pn	Pn	02 53 06.9	-0.3
	comp=Z,19nm,0.8s						
ZST	**Bratislava**	**3.62**	**359**	*e*Pn	Pn	02 53 07.3	0.0
ZST				*e*Sn	Sn	02 53 50.2	+0.3
ZST	**Bratislava**	**3.62**	**359**	*e*PN	Pn	02 53 07.3	0.0
ZST				*e*SN	Sn	02 53 50.2	+0.3
ZST	**Bratislava**	**3.62**	**359**	*e*Pn	Pn	02 53 07.3	0.0
ZST				*e*Sn	Sn	02 53 50.2	+0.3
SDI	**San Donato**	**3.78**	**222**	Pn	Pn	02 53 10.0	+0.5
	comp=Z,3.0nm,0.3s						
SDI	**San Donato**	**3.78**	**222**	Pn	Pn	02 53 10.0	+0.5
	comp=Z,3.0nm,0.3s						
MODS	**Modra-Piesok**	**3.79**	**1**	*e*Pn	Pn	02 53 09.7	0.0
MODS				*e*Sn	Sn	02 53 54.2	0.0
MODS	**Modra-Piesok**	**3.79**	**1**	*e*PN	Pn	02 53 09.7	0.0
MODS				*e*SN	Sn	02 53 54.2	0.0
MODS	**Modra-Piesok**	**3.79**	**1**	*e*Pn	Pn	02 53 09.7	0.0
MODS				*e*Sn	Sn	02 53 54.2	0.0
BARS	**Barje**	**3.80**	**116**	⇑*i*Pn	Pn	02 53 08.9	-0.9
BARS				*e*Sn	Sn	02 53 52.8	-1.5
BARS	**Barje**	**3.80**	**116**	⇑*i*Pn	Pn	02 53 08.9	-0.9
BARS				*e*Sn	Sn	02 53 52.8	-1.5
PSZ	**Piszkesteto**	**3.83**	**28**	*e*Pn	Pn	02 53 08.1	-2.1
PSZ				*e*Pg	Pg	02 53 23.1	-1.8
PSZ	**Piszkesteto**	**3.83**	**28**	⇑*i*P	Pn	02 53 09.8	-0.4
PSZ	**Piszkesteto**	**3.83**	**28**	⇓*e*PB	Pb	02 53 22.9	+3.9
PSZ				*e*Sg	Sg	02 54 16.0	+1.5
PSZ	**Piszkesteto**	**3.83**	**28**	*e*Pn	Pn	02 53 08.1	-2.1
PSZ	**Piszkesteto**	**3.83**	**28**	⇑*i*P	Pn	02 53 09.8	-0.4
MOA	**Molln**	**3.84**	**329**	*i* Pn	Pn	02 53 11.5	+1.1
	SNR=24						
MOA				⇑*i*Sn	Sn	02 53 55.4	-0.1
MOA	**Molln**	**3.84**	**329**	Pn	Pn	02 53 11.5	+1.1
	SNR=24						
MOA				Sn	Sn	02 53 55.4	0.0
CSSN	**Cassano Irpino**	**4.04**	**204**	Pn	Pn	02 53 12.7	-0.4
	comp=Z,10.0nm,0.4s						
CSSN	**Cassano Irpino**	**4.04**	**204**	Pn	Pn	02 53 12.7	-0.4
	comp=Z,10.0nm,0.4s						
MCRV	**Calabrutti - M**	**4.07**	**202**	Pn	Pn	02 53 12.6	-1.0
MCRV	**Calabrutti - M**	**4.07**	**202**	Pn	Pn	02 53 12.6	-1.0
VYHS	**Vyhne**	**4.08**	**16**	*e*Pn	Pn	02 53 13.9	+0.3
VYHS				*e*Sn	Sn	02 54 00.3	-0.9
VYHS	**Vyhne**	**4.08**	**16**	*e*PN	Pn	02 53 13.9	+0.3
VYHS				*e*SN	Sn	02 54 00.3	-0.9
VYHS	**Vyhne**	**4.08**	**16**	*e*Pn	Pn	02 53 13.9	+0.3
VYHS				*e*Sn	Sn	02 54 00.3	-0.9
KOLL	**Kolacno**	**4.09**	**11**	*e*Pn	Pn	02 53 14.0	+0.3
KOLL				*e*Sn	Sn	02 53 59.9	-1.6
KOLL	**Kolacno**	**4.09**	**11**	*e*PN	Pn	02 53 14.0	+0.3
KOLL				*e*SN	Sn	02 53 59.9	-1.6
KOLL	**Kolacno**	**4.09**	**11**	*e*Pn	Pn	02 53 14.0	+0.3
KOLL				*e*Sn	Sn	02 53 59.9	-1.6
ZAPS	**Zavoj**	**4.15**	**106**	*e*Pn	Pn	02 53 14.3	-0.3
ZAPS				*e*Sn	Sn	02 54 01.9	-1.2
DRGR		**4.46**	**58**	⇓*i*P	Pn	02 53 25.1	+6.2
KECS	**Kecovo**	**4.52**	**29**	*e*Pn	Pn	02 53 21.1	+1.4
KECS				*e*Sn	Sn	02 54 10.7	-1.5
KECS	**Kecovo**	**4.52**	**29**	*e*PN	Pn	02 53 21.1	+1.4
KECS				*e*SN	Sn	02 54 10.7	-1.5
VRAC	**Vranov**	**4.75**	**355**	*e*Pn	Pn	02 53 22.9	+0.1
MORC	**Moravsky Berou**	**5.21**	**3**	*e*Pn	Pn	02 53 27.2	-1.9
	comp=Z,2.3nm,0.6s						
MORC	**Moravsky Berou**	**5.21**	**3**	*e*Pn	Pn	02 53 27.2	-1.9
	comp=Z,2.3nm,0.6s						
MORC				*e*Sn	Sn	02 54 29.1	+0.1
CRVS	**Cervenica-Dubn**	**5.23**	**33**	*e*P	Pg	02 53 50.8	-0.8
CRVS	**Cervenica-Dubn**	**5.23**	**33**	*e*	Pg	02 53 50.8	-0.8
KOLS	**Kolonicke sedl**	**5.59**	**37**	*e*P	Pg	02 53 59.7	+1.3
KOLS	**Kolonicke sedl**	**5.59**	**37**	*e*	Pg	02 53 59.7	+1.3
PRU	**Pruhonice**	**5.70**	**343**	*e*PN	Pn	02 53 37.8	+1.9
PRU	**Pruhonice**	**5.70**	**343**	Pn	Pn	02 53 37.8	+1.9
DPC	**Dobruska-Polom**	**5.80**	**355**	*e*SN	Sn	02 54 42.7	-1.0
DPC	**Dobruska-Polom**	**5.80**	**355**	Sn	Sn	02 54 42.7	-1.0
KFL	**Anninata**	**7.01**	**156**	P	Sn	02 55 18.8	+5.3
KFL				S	Sn	02 55 19.3	+5.8
SBF	**Sospel**	**7.04**	**268**	*e*Pn	Pn	02 53 51.4	-2.8
MBDF	**Montbardon**	**7.42**	**275**	*e*Pn	Pn	02 53 57.1	-2.4
MBDF				*e*Sn	Sn	02 55 18.0	-5.6
	comp=Z,2.9nm,0.5s						
LPG	**La Plagne**	**7.44**	**281**	*e*Pn	Pn	02 53 58.3	-1.5
LPG				*e*Sn	Sn	02 55 18.7	-5.4
	comp=Z,1.3nm,0.3s						
LPG	**La Plagne**	**7.44**	**281**	*e*Pn	Pn	02 53 58.3	-1.5
LPL	**La Plagne**	**7.46**	**281**	*e*Pn	Pn	02 53 58.6	-1.4
LPL	**La Plagne**	**7.46**	**281**	*e*Pn	Pn	02 53 58.6	-1.4
FRF	**La Foret Royal**	**7.65**	**266**	*e*Pn	Pn	02 54 00.2	-2.5
FRF				*e*Sn	Sn	02 55 22.5	-6.8
ORIF	**Oris-en-Rattie**	**8.05**	**276**	*e*Pn	Pn	02 54 06.1	-2.0

BJI **13** *02:52:42.2, 7.°55N×123.°88E, h614km, mB4.7/20, mb4.6/31*
MOS **13** *02:52:43.5±1.1, 7.°76N×123.°85E, h618km, mb4.5/26, Error ellipse: s-maj=15.6km s-min=7.1km az=123.2*
TEH **13** *02:52:43.0, 7.°69N×123.°90E, h599km*
IDC **13** *02:52:44.0±0.7, 7.°64N×123.°87E, h611km±8km, mb3.6/21, mb1 3.8/22, mb1mx3.8/23, mbtmp3.7/22, Error ellipse: s-maj=13.9km s-min=6.1km az=72.0*
ISCJB **13** *02:52:43.0±0.2, 7.°70N±0.°03×123.°90E±0.°05, h616km±3km, mb4.5/73, Error ellipse: s-maj=7.2km s-min=4.3km az=173.1*
NEIC **13** *02:52:43.7±0.4, 7.°69N×123.°89E, h606km±5km, mb4.5/22, Error ellipse: s-maj=7.7km s-min=4.9km az=80.0*
DJA **13** *02:52:45, 7.°67N×123.°83E, h594km, mb4.8/23*
ISC 13 02:52:43.8±0.2, 7.°67N±0.°03×123.°90E±0.°05, h606km±3km, n223, σ0.95/227, mb4.5/73, 9C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.54**	**289**	*e*P	**P**	**02 53 55.0**	**+0.2**
BUKP	**Musuan**	**1.17**	**80**	*e*P	**P**	**02 53 56.6**	**+0.7**
DAV	**Davao City (W)**	**1.77**	**110**	P	**P**	**02 53 57.7**	**0.0**
	82nm,0.3s,baz=228,slow=7.0,SNR=9.8						
MATI	**Mati**	**2.45**	**107**	*e*P	**P**	**02 54 00.4**	**-0.2**
SCPH	**Surigao**	**2.62**	**37**	⇑*e*P	**P**	**02 54 01.3**	**-0.1**
MSLP	**Maasin**	**2.62**	**21**	*e*P	**P**	**02 54 01.3**	**-0.1**
GUIM	**Jordan**	**3.21**	**336**	*e*P	**P**	**02 54 03.1**	**-1.4**
CUYO	**Cuyo Island**	**4.25**	**318**	*e*P	**P**	**02 54 11.4**	**+0.1**
CNP	**Catarman**	**4.87**	**9**	*e*P	**P**	**02 54 15.3**	**-0.6**
OTRP	**Odiongan**	**5.01**	**339**	*e*P	**P**	**02 54 17.4**	**+0.4**
ENPP	**El Nido**	**5.64**	**309**	*e*P	**P**	**02 54 22.3**	**+0.2**
MYLDM	**Lahad Datu**	**5.91**	**246**	P	**P**	**02 54 24.8**	**+0.3**
MYLDM	**Lahad Datu**	**5.91**	**246**	P	**P**	**02 54 25.6**	**+1.1**
	1.7nm5μm566nm,1.3s						
BATP	**Bataraza**	**6.14**	**281**	*e*P	**P**	**02 54 26.2**	**-0.2**
MNI	**Manado**	**6.26**	**171**	P	**P**	**02 54 27.8**	**+0.3**
	1.2nm5μm210nm,0.8s						
TSM	**Tawau**	**6.87**	**241**	P	**P**	**02 54 32.8**	**-0.1**
SDKM	**Sandakan**	**6.96**	**254**	P	**P**	**02 54 33.5**	**-0.2**
TGY	**Tagaytay City**	**7.02**	**336**	P	**P**	**02 54 34.4**	**+0.3**
	31nm,0.3s,baz=114,slow=19,SNR=3.3						
TGY				S	**S**	**02 56 03.5**	**-1.0**
	56nm,0.3s,baz=229,slow=17,SNR=3.6						
TGY	**Tagaytay City**	**7.02**	**336**	P	**P**	**02 54 34.4**	**+0.2**
TGY				S	**S**	**02 56 03.5**	**-1.0**
KDM	**Kudat**	**7.05**	**264**	P	**P**	**02 54 33.8**	**-0.7**
TOLI	**Toli-Toli**	**7.21**	**206**	P	**P**	**02 54 35.6**	**-0.4**
	1.5nm6μm465nm,0.9s						
TNTI	**Ternate**	**7.68**	**153**	P	**P**	**02 54 40.8**	**+0.5**
	1.9nm3μm141nm,0.4s						
KKM	**Kota Kinabalu**	**7.80**	**258**	P	**P**	**02 54 40.8**	**-0.6**
KKM	**Kota Kinabalu**	**7.80**	**258**	*e*P	**P**	**02 54 40.4**	**-1.0**
KKM	**Kota Kinabalu**	**7.80**	**258**	P	**P**	**02 54 40.1**	**-1.3**
	1μm161nm,0.9s						
LUWI	**Luwuk**	**8.73**	**187**	P	**P**	**02 54 49.4**	**-0.9**
	3μm204nm,0.9s						
LBMI	**Labuha**	**9.01**	**156**	P	**P**	**02 54 53.7**	**+0.7**
	2μm97nm,0.9s						
CAUP	**Cauayan**	**9.43**	**348**	*e*P	**P**	**02 54 57.1**	**0.0**
NLAI	**Namlea**	**11.30**	**163**	P	**P**	**02 55 17.3**	**+1.7**
	1μm98nm,0.8s						
TTSI	**Tana Toraja**	**11.40**	**201**	P	**P**	**02 55 16.2**	**-0.4**
	1μm91nm,1.2s						
KDI	**Kendari**	**11.62**	**186**	P	**P**	**02 55 16.9**	**-2.0**
	561nm56nm,1.1s						
SPSI	**Sidrap Palu**	**12.27**	**200**	P	**P**	**02 55 22.8**	**-2.6**
	43nm,0.8s						
BNSI	**Bone**	**12.58**	**198**	P	**P**	**02 55 28.8**	**+0.4**
	972nm135nm,0.8s						
SBUM	**Sibu**	**12.73**	**247**	P	**P**	**02 55 30.2**	**+0.2**
	1μm155nm,1.1s						
KAPI	**Kappang**	**13.26**	**198**	*e*P	**P**	**02 55 35.6**	**+0.3**
KAPI	**Kappang**	**13.26**	**198**	P	**P**	**02 55 33.6**	**-1.7**
	18nm,1.1s						
KBKI	**Kotabaru**	**13.35**	**216**	P	**P**	**02 55 35.5**	**-0.7**
	2μm93nm,1.1s						
BKSI	**Bulukumba**	**13.45**	**196**	P	**P**	**02 55 38.7**	**+1.5**
	509nm20nm,0.7s						
STKI	**Sintang**	**14.51**	**239**	P	**P**	**02 55 47.8**	**+0.5**
	62nm,1.3s						
KSM	**Kuching**	**14.87**	**246**	*e*P	**P**	**02 55 50.4**	**-0.2**
KSM	**Kuching**	**14.87**	**246**	P	**P**	**02 55 50.6**	**-0.1**
	2μm172nm,0.9s						
TWG	**Pinlang**	**15.30**	**350**	*e*P	**P**	**02 55 52.8**	**-1.7**
	74nm,0.6s						
YULB	**Yu-li**	**15.83**	**351**	*e*P	**P**	**02 55 57.6**	**-1.6**
	42nm,0.5s						
TPUB	**Ta-pu**	**15.85**	**349**	*e*P	**P**	**02 55 58.8**	**-0.7**
	346nm,0.9s						
PBKI	**Pangkalan Bun**	**15.97**	**230**	P	**P**	**02 56 01.5**	**+0.8**
	466nm,0.7s						
SSLB	**Suanglung**	**16.27**	**350**	*e*P	**P**	**02 56 02.5**	**-0.7**
	76nm,0.8s						
MMRI	**Maumere**	**16.29**	**186**	P	**P**	**02 56 05.2**	**+1.6**
	1μm149nm,0.8s						
BMNI	**Bima**	**16.92**	**198**	P	**P**	**02 56 10.9**	**+1.5**
	68nm,0.6s						
QIZ	**Qiongzhong**	**17.71**	**311**	P	**P**	**02 56 16.3**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,14nm,1.1s						
QZH	**Quanzhou**	**17.91**	**344**	P	**P**	**02 56 17.8**	**-0.4**
JAGI	**Jajag, Banyuwa**	**18.75**	**211**	P	**P**	**02 56 27.9**	**+1.9**
	comp=Z,1μmcomp=Z,136nm,0.9s						
JOW	**Kunigami**	**19.50**	**12**	*e*P	**P**	**02 56 34.0**	**+1.4**
	comp=Z,27nm,0.6s						
GYA	**Guiyang**	**24.85**	**321**	P	**P**	**02 57 21.0**	**+0.6**
GYA				sP	sP	03 00 01.0	-1.7
GYA				PcP	PcP	03 00 35.4	+0.5
GYA				S	**S**	**03 01 04.3**	**+2.2**
GYA				ScP	ScP	03 03 18.7	+1.2
GYA				PcS	PcS	03 04 15.8	-0.1
GYA				ScS	ScS	03 07 07.0	+0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
PSI	**Prapat**	**25.33**	**260**	P	**P**	**02 57 25.1**	**+0.4**
	comp=Z,2.4nm,0.3s,mb4.3,baz=161,slow=4.6,SNR=5.7						
PSI	**Prapat**	**25.33**	**260**	P	**P**	**02 57 25.2**	**+0.4**
FITZ	**Fitzroy Crossi**	**25.67**	**176**	P	**P**	**02 57 27.7**	**+0.1**
	comp=Z,2.9nm,0.3s,mb4.5,baz=11,slow=7.9,SNR=54						
FITZ				PcP	PcP	03 00 37.1	+0.2
	comp=Z,2.5nm,0.5s,baz=347,slow=2.5,SNR=5.9						
FITZ				S	**S**	**03 01 12.2**	**-2.9**
	comp=Z,2.0nm,0.7s,baz=122,slow=20,SNR=2.7						
JNU	**Nakatsue**	**26.14**	**13**	*e*P	**P**	**02 57 31.8**	**+0.3**
	comp=Z,7.4nm,1.0s,mb4.3						
ENH	**Enshi**	**26.23**	**331**	*e*P	**P**	**02 57 32.8**	**+0.3**
	comp=Z,9.8nm,0.6s,mb4.6						
CM31	**Chiang Mai Arr**	**26.53**	**296**	*e*P	**P**	**02 57 36.0**	**+0.7**
	comp=Z,6.5nm,0.4s,mb4.6						
CMAR	**Chiang Mai Arr**	**26.53**	**296**	P	**P**	**02 57 35.8**	**+0.5**
	comp=Z,11nm,0.6s,mb4.7,baz=105,slow=7.0,SNR=38						
CMAR				ScP	ScP	03 03 22.9	+0.3
	comp=Z,1.1nm,0.3s,baz=142,slow=1.8,SNR=5.7						
CMAR	**Chiang Mai Arr**	**26.53**	**296**	P	**P**	**02 57 35.8**	**+0.6**
KMI	**Kunming**	**26.63**	**313**	P	**P**	**02 57 36.8**	**+0.8**
KMI				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.5						
CHTO	**Chiang Mai**	**26.65**	**297**	*e*P	**P**	**02 57 36.4**	**+0.1**
	comp=Z,20nm,0.7s,mb4.9						
CHTO	**Chiang Mai**	**26.65**	**297**	*e*P	**P**	**02 57 36.4**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.9						
CHTO	**Chiang Mai**	**26.65**	**297**	P	**P**	**02 57 36.4**	**+0.1**
MBWA	**Marble Bar**	**28.94**	**188**	*e*P	**P**	**02 57 55.7**	**-0.4**
	comp=Z,7.6nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**29.30**	**160**	P	**P**	**02 57 59.2**	**-0.1**
	comp=Z,2.6nm,0.3s,mb4.3,baz=332,slow=11,SNR=57						
WRA				PcP	PcP	03 00 45.9	0.0
	comp=Z,2.4nm,0.5s,baz=338,slow=3.1,SNR=16						
WRA				S	**S**	**03 02 08.1**	**-3.4**
	comp=Z,16nm,1.0s,baz=340,slow=15,SNR=24						
WRA	**Warramunga Arr**	**29.30**	**160**	P	**P**	**02 57 59.2**	**-0.1**
WRA						03 00 45.9	
WRA				S	**S**	**03 02 08.1**	**-3.4**
WB2	**Warramunga Arr**	**29.31**	**160**	*e*P	**P**	**02 57 59.3**	**0.0**
XAN	**Xi'an**	**29.66**	**334**	P	**P**	**02 58 02.3**	**+0.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
XAN				pmax	pmax		
	comp=Z,39nm,4.2s						
CD2	**Chengdu**	**29.82**	**323**	*e*P	**P**	**02 58 03.9**	**+0.3**
CD2				sP	sP	03 00 49.4	-0.9
CD2				S	**S**	**03 02 21.9**	**+2.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s,mb5.2						
CD2				pmax	pmax		
	comp=Z,100nm,4.2s						
KSRS	**Korea Array**	**29.87**	**6**	P	**P**	**02 58 04.7**	**+0.8**
	comp=Z,4.5nm,0.7s,mb4.2,baz=188,slow=9.9,SNR=20						
KSRS				PcP	PcP	03 00 47.5	+0.4
	comp=Z,0.9nm,0.8s,baz=195,slow=1.7,SNR=4.1						
MAJO	**Matsushiro**	**31.56**	**22**	*e*P	**P**	**02 58 18.0**	**-0.4**
	comp=Z,16nm,0.8s,mb4.7						
MAJO	**Matsushiro**	**31.56**

comp=Z,6.6nm,0.8s,baz=122,slow=4.4,SNR=7.6
MKAR S **S** **03 07 47.6 +0.5**
comp=Z,0.9nm,0.7s,baz=123,slow=15,SNR=3.9
MKAR Makanchi Array 52.73 325 P **P** **03 01 03.8 +0.4**
MKAR 03 02 02.1
MKAR S **S** **03 07 47.6 +0.5**
PETK Petropavlovsk- 52.96 25 P **P** **03 01 06.4 +1.5**
comp=Z,2.1nm,0.5s,mb3.8,baz=196,slow=9.7,SNR=2.4
PETK Petropavlovsk- 52.96 25 P **P** **03 01 06.4 +1.5**
KZA Kyzart 54.82 317 P **P** **03 01 19.9 +1.7**
SNR=6.0
KZA Kyzart 54.82 317 *e*P **P** **03 01 19.9 +1.7**
KZA Kyzart 54.82 317 *e*P **P** **03 01 19.9 +1.7**
TKM2 Tokmak 2 54.95 318 P **P** **03 01 20.0 +0.9**
SNR=19
TKM2 Tokmak 2 54.95 318 *e*P **P** **03 01 19.7 +0.6**
comp=Z,15nm,0.7s,mb4.4
TKM2 Tokmak 2 54.95 318 *e*P **P** **03 01 19.7 +0.6**
TKM2 pmax pmax
comp=Z,15nm,0.7s,mb4.4
KBK Karagaybulak 55.27 317 *e*P **P** **03 01 22.4 +1.1**
KBK Karagaybulak 55.27 317 *e*P **P** **03 01 22.4 +1.1**
AAK Ala-Archa 55.56 317 P **P** **03 01 24.4 +1.1**
SNR=6.9
AAK Ala-Archa 55.56 317 P **P** **03 01 24.1 +0.8**
comp=Z,3.8nm,0.4s,mb4.0,baz=100,slow=6.0,SNR=10
AAK PcP PcP 03 02 11.8 -2.1
comp=Z,2.6nm,0.4s,baz=180,slow=3.0,SNR=4.2
AAK Ala-Archa 55.56 317 P **P** **03 01 24.1 +0.8**
AAK 03 02 11.8
ZAA0 Zalesovo Array 55.82 333 *e*P **P** **03 01 24.1 -0.8**
ZALV Zalesovo Beam 55.82 333 P **P** **03 01 23.9 -0.9**
comp=Z,7.2nm,0.5s,mb4.2,baz=120,slow=6.4,SNR=9.2
ZALV PcP PcP 03 02 13.7 -0.9
comp=Z,1.3nm,0.6s,baz=126,slow=7.3,SNR=2.5
ZALV Zalesovo Beam 55.82 333 P **P** **03 01 23.9 -1.0**
ZALV 03 02 13.7
USP Ospenovka 55.82 318 P **P** **03 01 25.7 +0.6**
SNR=20
AML Almayashu 55.91 316 P **P** **03 01 27.2 +1.5**
SNR=28
AML Almayashu 55.91 316 *e*P **P** **03 01 27.1 +1.4**
AML Almayashu 55.91 316 *e*P **P** **03 01 27.2 +1.5**
EKS2 Erkin-Say 56.06 317 P **P** **03 01 27.9 +1.1**
SNR=18
EKS2 Erkin-Say 56.06 317 *e*P **P** **03 01 27.5 +0.8**
comp=Z,15nm,0.8s,mb4.3
EKS2 Erkin-Say 56.06 317 *e*P **P** **03 01 27.5 +0.8**
EKS2 pmax pmax
comp=Z,15nm,0.8s,mb4.3
KBL Kabul 56.91 306 *e*P **P** **03 01 32.6 -0.2**
comp=Z,19nm,0.8s,mb4.4
KBL Kabul 56.91 306 *e*P **P** **03 01 32.6 -0.2**
KBL pmax pmax
comp=Z,19nm,0.8s,mb4.4
KURK Kurchatov 56.92 327 *e*P **P** **03 01 32.5 0.0**
comp=Z,39nm,0.6s,mb4.8
KURK Kurchatov 56.92 327 *e*P **P** **03 01 32.5 0.0**
KURK pmax pmax
comp=Z,39nm,0.6s,mb4.8
NVS Novosibirsk 57.10 333 *e*P **P** **03 01 31.9 -1.7**
NVS *e* 03 08 41.5
NVS pmax pmax
comp=Z,15nm,0.9s,mb4.2
NVS pmax pmax
comp=N,6.0nm,0.6s
NVS pmax pmax
comp=E,4.0nm,0.5s
KK31 Karatay Array 58.45 316*ce*P **P** **03 01 42.9 -0.1**
KK31 pmax pmax
comp=Z,5.0nm,0.3s,mb4.1
KKAR Karatay Array 58.45 316 *e*P **P** **03 01 43.0 +0.1**
KKAR Karatay Array 58.45 316 *e*P **P** **03 01 43.1 +0.1**
BRVK Borovoye 62.57 327 *e*P **P** **03 02 09.6 -0.2**
comp=Z,31nm,1.1s,mb4.5
BRVK Borovoye 62.57 327*d i*P **P** **03 02 09.7 -0.1**
BRVK pmax pmax
comp=Z,26nm,0.9s,mb4.6
IDAH Dahanechah 64.07 303 *e*P **P** **03 02 20.6 +0.8**
IMYA Miami 64.43 307 *e*P **P** **03 02 23.0 +1.0**
IKOO Kooshah 64.76 302 *e*P **P** **03 02 25.0 +0.9**
IPAY Payeh 65.33 307 *e*P **P** **03 02 28.4 +0.8**
IKRD Kardeh 65.76 307 *e*P **P** **03 02 27.0 -3.3**
ISFR Sfrayin 66.21 307 *e*P **P** **03 02 33.8 +0.7**
AB31 Akbulak array 67.33 320*ce*P **P** **03 02 39.3 -0.4**
AB31 pmax pmax
comp=Z,3.0nm,0.3s,mb4.2
ABKAR Akbulak array 67.33 320 *e*P **P** **03 02 39.3 -0.4**
comp=Z,12nm,0.6s,mb4.5
ICHK Chekchek 68.61 302 *e*P **P** **03 02 46.3 -1.5**
SVE Sverdlovsk 69.15 328⇑*e*P **P** **03 02 50.2 -0.3**
SVE pmax pmax
comp=Z,19nm,0.7s,mb4.6
ISRV Sarvestan 69.55 298 *e*P **P** **03 02 53.0 -0.5**
IPAR Pars 69.62 299 *e*P **P** **03 02 53.0 -0.9**
ISHM Shahmirzad 69.83 305 *e*P **P** **03 02 55.6 +0.6**
ARU Arti 70.12 328 *e*P **P** **03 02 55.6 -0.7**
comp=Z,8.0nm,0.5s,mb4.4
ARU Arti 70.12 328*d i*P **P** **03 02 55.5 -0.8**
ARU 03 05 36.6
ARU S S 03 11 21.1 +1.0
ARU SS SS 03 16 01.9 -4.7
ARU pmax pmax
comp=Z,20nm,1.0s,mb4.5
IFIR Firoozkooh 70.25 305 *e*P **P** **03 02 57.6 +0.1**
IZEF Zefreh 70.41 302 *e*P **P** **03 02 57.1 -1.4**
IKLH Kolahrood 71.06 302 *e*P **P** **03 03 02.4 +0.1**
IPIR Pirpir 71.60 302 *e*P **P** **03 03 06.1 +0.6**
IRAZ Razeghan 72.53 305 *e*P **P** **03 03 10.9 +0.1**
QRN Al-Qurain 74.08 298 *e*P **P** **03 03 19.0 -0.7**
QRN AML AML 03 03 19.4
comp=Z,63nm,0.4s
RDF Al-Radifah 74.40 298 *e*P **P** **03 03 21.3 -0.2**
RDF AMb AMB 03 03 21.9
comp=Z,32nm,0.6s,mb5.1
CASY Casey 74.41 186 *e*P **P** **03 03 20.3 -0.4**
comp=Z,3.6nm,0.5s,mb4.2
ISRB Sarab 74.47 307 *e*P **P** **03 03 22.7 +1.0**
MIB Mutribah 74.58 299 *e*P **P** **03 03 21.7 -0.8**
MIB AMb AMB 03 03 22.8
comp=Z,76nm,0.8s,mb5.3
NAY Al-Naaiem 74.67 298 *e*P **P** **03 03 22.1 -0.9**
NAY AMb AMB 03 03 22.8
comp=Z,36nm,1.0s,mb4.9
IHRS Heris 74.98 308 *e*P **P** **03 03 24.8 +0.3**
IMRD Marand 76.04 308 *e*P **P** **03 03 29.3 -1.1**
ISHB Shabestar 76.10 307 *e*P **P** **03 03 31.0 +0.3**
GNI Garni 76.81 309⇑*e*P **P** **03 03 36.3 +1.7**
GNI pmax pmax
comp=Z,22nm,1.6s
ZEI Tsey 77.50 312 *e*P **P** **03 03 37.7 -0.5**
ZEI pmax pmax
comp=Z,29nm,1.3s,mb4.5
PRGR Permogore 77.72 331 *e*P **P** **03 03 34.9 -4.1**
PRGR pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
KIV Kislovodsk 78.40 313*c i*P **P** **03 03 43.5 +0.5**
KIV pmax pmax
comp=Z,17nm,1.2s,mb4.3
KLMR Klimovskoe 80.61 330 *e*P **P** **03 03 52.7 -1.5**
KLMR pmax pmax
comp=Z,32nm,1.5s,mb4.5
VORD Divnogorie 80.69 320 *e*P **P** **03 03 52.1 -2.8**
VORD pmax pmax
comp=N,30nm,0.4s
VORD pmax pmax
comp=E,40nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s,mb4.6
VSR Storozhevoye 80.77 321 *e*P **P** **03 03 52.7 -2.6**
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
VSR pmax pmax
comp=E,1.0nm,0.3s
MALT Malatya 81.75 308 *e*P **P** **03 04 01.4 +0.9**
comp=E,4.7nm,0.8s,mb4.1
MALT Malatya 81.75 308 *e*P **P** **03 04 01.5 +0.9**
MALT pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
MCK McKinley 81.92 27 *e*P **P** **03 04 01.2 +0.4**
comp=Z,12nm,0.7s,mb4.5
MCK McKinley 81.92 27 *e*P **P** **03 04 01.2 +0.3**
MCK pmax pmax

comp=Z,12nm,0.7s,mb4.5
OBN Obninsk 82.23 325*d i*P **P** **03 04 01.5 -1.1**
OBN pmax pmax
comp=Z,34nm,1.3s,mb4.7
ILAR Eielson Array 82.78 26 P **P** **03 04 04.5 -0.7**
comp=Z,1.5nm,0.5s,mb3.8,baz=247,slow=4.9,SNR=37
ILAR Eielson Array 82.78 26 P **P** **03 04 04.5 -0.7**
JOF Joensuu 84.41 333 *e*P **P** **03 04 10.7 -2.5**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.4
KEV Kevo 85.24 340 *e*P **P** **03 04 18.9 +1.7**
KEV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
BR131 Keskin Array S 85.35 309 *e*P **P** **03 04 17.4 -1.0**
comp=Z,1.0nm,0.4s,mb3.8
BRTR Keskin Array B 85.35 309 *e*P **P** **03 04 17.1 -1.3**
comp=Z,3.2nm,0.8s,mb4.0,baz=118,slow=4.7,SNR=21
BRTR Keskin Array B 85.35 309 P **P** **03 04 17.1 -1.3**
BRTR Keskin Array B 85.35 309 *i*P **P** **03 04 17.2 -1.2**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 85.80 340 P **P** **03 04 18.5 -1.3**
comp=Z,5.3nm,0.8s,mb4.2,baz=86,slow=6.2,SNR=23
ARCES ARCESS Array B 85.80 340 P **P** **03 04 18.5 -1.3**
MAW Mawson 86.48 200 P **P** **03 04 22.8 -0.1**
comp=Z,0.5nm,0.5s,mb3.4,baz=22,slow=7.3,SNR=3.9
MAW Mawson 86.48 200 P **P** **03 04 22.8 -0.1**
KAF Kangasniemi 86.82 332 *e*P **P** **03 04 23.1 -1.7**
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
KMBO Kilima Mbogo 86.82 268 P **P** **03 04 26.4 +0.6**
comp=Z,6.0nm,0.9s,mb4.3,baz=180,slow=24,SNR=13
KMBO Kilima Mbogo 86.82 268 *e*P **P** **03 04 26.0 +0.2**
comp=Z,3.2nm,0.8s,mb4.1
KMBO Kilima Mbogo 86.82 268 *e*P **P** **03 04 26.0 +0.2**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 87.05 332 P **P** **03 04 24.6 -1.2**
comp=Z,7.5nm,0.6s,mb4.6,baz=54,slow=5.2,SNR=58
FINES FINESS Array B 87.05 332 P **P** **03 04 24.6 -1.3**
FINES FINESS Array B 87.05 332 P **P** **03 04 24.6 -1.2**
VRI Vrincioaia 89.52 316⇑P **P** **03 04 37.6 -0.1**
PLOR Plostina 89.57 316⇓P **P** **03 04 36.9 -1.1**
MLR Muntele Rosu 90.12 316⇑P **P** **03 04 40.2 -0.3**
BURAR Bucovina Array 90.20 318⇑P **P** **03 04 40.7 -0.1**
BUR08 Bucovina Ar. S 90.21 318 *e*P **P** **03 04 40.5 -0.4**
NB2 NORSAR Subarra 94.02 333 P **P** **03 04 56.4 -1.6**
comp=Z,5.5nm,0.9s,mb4.7,baz=67,slow=4.8
NOA NORSAR Array B 94.02 333 P **P** **03 04 56.6 -1.5**
comp=Z,2.8nm,0.7s,mb4.5,baz=68,slow=4.6,SNR=8.6
NOA NORSAR Array B 94.02 333 P **P** **03 04 56.6 -1.4**
YKA Yellowknife Ar 97.06 24 P **P** **03 05 11.0 -0.6**
comp=Z,0.7nm,0.8s,mb4.0,baz=306,slow=4.2,SNR=4.0
YKA Yellowknife Ar 97.06 24 P **P** **03 05 11.1 -0.6**
SCHQ Schefferville 117.08 7 PKP PKPdf 03 10 21.0 +0.2
comp=Z,1.3nm,0.4s,baz=81,slow=19,SNR=5.7
SCHQ Schefferville 117.08 7 PKP PKPdf 03 10 21.0 +0.2
TXAR Lajitas Array 121.29 49 PKP PKPdf 03 10 30.4 +0.6
comp=Z,0.6nm,0.6s,baz=303,slow=1.2,SNR=11
TXAR Lajitas Array 121.29 49 PKIKP PKPdf 03 10 30.4 +0.7
SADO Sadowa 123.82 20 PKP PKPdf 03 10 33.9 -0.3
comp=Z,2.1nm,0.5s,baz=334,slow=2.5,SNR=5.4
PLCA Paso Flores 144.65 161 PKP PKPdf 03 11 14.1 +1.3
comp=Z,6.1nm,0.7s,baz=209,slow=2.0,SNR=7.6
PLCA Paso Flores 144.65 161 PKIKP PKPdf 03 11 14.1 +1.3
LPAZ La Paz 165.46 127 PKP PKPdf 03 11 41.2 +0.5
comp=Z,1.9nm,1.0s,baz=43,slow=7.0,SNR=5.7
LPAZ La Paz 165.46 127 PKIKP PKPdf 03 11 41.3 +0.5

*NEIC **13** 02:58:37.0±1.3, 24°.00N×121°.59E, h10km, ML3.8(TAP),*
Error ellipse: s-maj=20.2km s-min=6.8km az=104.0
NEIC Recorded [4 TAP] in Hua-lien and [1 TAP] in I-lan and Nan-t'ou.
*TAP **13** 02:58:36.8, 23°.99N×121°.60E, h7km, ML3.4, B*
ISC 13 02:58:37.2±0.4, 23°.98N±0°.01×121°.65E±0°.03, h5km±6km, n43, σ0°78/75, 2C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=124	**0.04**	**262**	⇓*i*P	**Pg**	**02 58 38.5**	**+0.1**
TWD	**Chiawan** baz=4.0	**0.11**	**332**	⇑*i*P	**Pg**	**02 58 39.5**	**+0.1**
TWD	baz=4.0			*i* S	**Sg**	**02 58 41.2**	**+0.2**
ESF	**Shoufeng Towns** baz=226	**0.17**	**230**	*i* P	**Pg**	**02 58 40.2**	**-0.5**
ESF	baz=226			S	**Sg**	**02 58 42.5**	**-0.4**
NACB	**Ninganchiao**	**0.20**	**344**	*e*Pg	**Pg**	**02 58 40.3**	**-0.8**
NACB				*e*Sg	**Sg**	**02 58 43.4**	**-0.4**
ESL	**Shilin** baz=221	**0.26**	**230**	⇓P	**Pg**	**02 58 41.6**	**-0.7**
ESL	baz=221			*e*S	**Sg**	**02 58 45.3**	**-0.5**
TEGC	**Jichi Village** baz=195	**0.29**	**201**	*e*P	**Pg**	**02 58 43.7**	**+0.8**
TEGC	baz=195			*e*S	**Sg**	**02 58 49.6**	**+3.0**
WHF	**Hehuan Shan** baz=298	**0.39**	**295**	⇑*i*P	**Pg**	**02 58 44.3**	**-0.4**
WHF	baz=298			S	**Sg**	**02 58 49.1**	**-0.7**
ENA	**Nanau** baz=17	**0.45**	**10**	P	**Pg**	**02 58 46.1**	**+0.2**
ENA	baz=17			*e*S	**Sg**	**02 58 52.6**	**+0.8**
TWT	**Tachien** baz=312	**0.51**	**302**	P	**Pg**	**02 58 47.1**	**0.0**
TWT	baz=312			S	**Sg**	**02 58 54.2**	**+0.5**
NNS	**Nan Shan** baz=336	**0.52**	**331**	*e*P	**Pg**	**02 58 47.2**	**-0.1**
NNS	baz=336			*e*S	**Sg**	**02 58 54.1**	**0.0**
EHY	**Hungye** baz=218	**0.56**	**213**	P	**Pg**	**02 58 47.4**	**-0.6**
EHY	baz=218			*e*S	**Sg**	**02 58 55.1**	**-0.3**
TWC	**Suao** baz=11	**0.65**	**16**	P	**Pg**	**02 58 49.9**	**+0.2**
TWC	baz=11			*e*S	**Sg**	**02 58 59.2**	**+1.0**
ENTT	**Nioudou** baz=358	**0.66**	**353**	P	**Pg**	**02 58 50.1**	**+0.2**
ENTT	baz=358			*e*S	**Sg**	**02 58 59.1**	**+0.6**
SSLB	**Suanglung**	**0.67**	**253**	*e*Pg	**Pg**	**02 58 48.7**	**-1.4**
YULB	**Yu-li**	**0.67**	**209**	*e*Pg	**Pg**	**02 58 49.2**	**-0.9**
YULB				*e*Sg	**Sg**	**02 58 58.8**	**-0.1**
SMLT	**Sun Moon Lake** baz=262	**0.70**	**262**	P	**Pg**	**02 58 50.3**	**-0.2**
SMLT	baz=262			S	**Sg**	**02 58 58.5**	**-1.1**
TWF1	**Yuli** baz=212	**0.71**	**208**	P	**Pg**	**02 58 50.5**	**-0.3**
YHNB	**Yeheng**	**0.73**	**340**	*e*Pg	**Pg**	**02 58 50.7**	**-0.5**
YHNB				*e*Sg	**Sg**	**02 58 59.6**	**-1.1**
TYC	**Yuchr** baz=264	**0.73**	**264**	*i* P	**Pg**	**02 58 50.8**	**-0.4**
TYC	baz=264			*e*S	**Sg**	**02 58 59.9**	**-0.9**
TWE	**Neicheng** baz=6.0	**0.73**	**1**	*e*P	**Pg**	**02 58 51.4**	**+0.1**
TWE	baz=6.0			*e*S	**Sg**	**02 59 00.8**	**-0.1**
NSK	**Sanguang** baz=343	**0.74**	**339**	*e*P	**Pg**	**02 58 51.2**	**-0.3**
NSK	baz=343			*e*S	**Sg**	**02 59 01.1**	**0.0**
YUS	**Yu-Shan** baz=231	**0.81**	**233**	*e*P	**Pg**	**02 58 52.9**	**+0.1**
YUS	baz=231			*e*S	**Sg**	**02 59 03.4**	**+0.2**
NSTT	**Nanjuang** baz=320	**0.88**	**317**	*e*P	**Pg**	**02 58 54.2**	**+0.1**
NSTT	baz=320			*e*S	**Sg**	**02 59 05.3**	**-0.1**
TWQ1	**Liyutan** baz=295	**0.88**	**295**	*e*P	**Pg**	**02 58 54.5**	**+0.4**
WNT	**Mingjian** baz=255	**0.89**	**263**	*e*P	**Pg**	**02 58 55.2**	**+0.9**
ALS	**Alishan** baz=238	**0.91**	**239**	*e*P	**Pg**	**02 58 54.3**	**-0.4**
ALS	baz=238			*e*S	**Sg**	**02 59 06.8**	**+0.4**
TCU	**Taichung** baz=275	**0.91**	**281**	*e*P	**Pg**	**02 58 56.9**	**+2.2**
CHKT	**Chengkung** baz=184	**0.92**	**197**	P	**Pg**	**02 58 54.4**	**-0.4**
CHKT	baz=184			*e*S	**Sg**	**02 59 08.3**	**+1.6**
NSY	**Sanyi** baz=300	**0.92**	**298**	*e*P	**Pg**	**02 58 53.8**	**-1.1**
NSY	baz=300			*e*S	**Sg**	**02 59 08.0**	**+1.1**
CHN5	**Tsauling** baz=236	**0.97**	**247**	*e*P	**Pg**	**02 58 55.6**	**-0.3**
CHN5	baz=236			*e*S	**Sg**	**02 59 10.3**	**+1.8**
ELDTW	**Lidau** baz=207	**0.98**	**217**	*e*P	**Pg**	**02 58 55.4**	**-0.7**
ELDTW	baz=207			*e*S	**Sg**	**02 59 08.9**	**+0.1**
TWA	**Mucha** baz=349	**0.99**	**356**	*e*P	**Pg**	**02 58 56.3**	**-0.1**
TWA	baz=349			*e*S	**Sg**	**02 59 08.8**	**-0.5**
WGK	**Gukeng** baz=254	**1.04**	**254**	*e*P	**Pg**	**02 58 56.4**	**-0.8**
WGK	baz=254			*e*S	**Sg**	**02 59 11.8**	**+1.1**
TWS1	**Kuangyinshan** baz=359	**1.13**	**349**	*e*P	**Pg**	**02 59 00.2**	**+1.2**
TPUB	**Ta-pu**	**1.16**	**234**	*e*Pg	**Pg**	**02 58 59.0**	**-0.5**
TPUB				*e*Sg	**Sg**	**02 59 10.9**	**-3.5**
WTP	**Ta-pu** baz=233	**1.20**	**233**	*e*P	**Pg**	**02 59 00.0**	**-0.2**
WTP	baz=233			*e*S	**Sg**	**02 59 17.3**	**+1.4**
CHY	**Chiayi** baz=248	**1.23**	**247**	*e*P	**Pg**	**02 59 01.7**	**+1.0**
TWG	**Pinlang**	**1.27**	**205**	*e*Pn	**Pn**	**02 59 01.4**	**-0.3**
TWG	**Pinlang** baz=213	**1.27**	**205**	*e*P	**Pg**	**02 59 00.3**	**-1.4**
TWG	baz=213			*e*S	**Sg**	**02 59 17.7**	**-0.5**
CHN1	**Nanshi** baz=234	**1.30**	**233**	*e*P	**Pn**	**02 59 01.8**	**-0.2**
CHN1	baz=234			*e*S	**Sg**	**02 59 19.6**	**+0.5**
SGST	**Jiashian** baz=229	**1.33**	**228**	*e*P	**Pn**	**02 59 02.2**	**-0.3**
SGST	baz=229			*e*S	**Sg**	**02 59 21.0**	**+1.0**
TWM1	**Shoushan** baz=228	**1.62**	**225**	*e*P	**Pn**	**02 59 09.9**	**+3.6**
SCZT	**Fangliau** baz=203	**1.86**	**211**	*e*P	**Pn**	**02 59 09.9**	**+0.1**

*CSEM **13** 03:01:53.3, 38°.59N×29°.81W, h5km, ML2.7, After PDA*
PDA 13 03:01:53.3±0.8, 38°.59N×29°.81W, h5km, MD3.5, ML2.7, Error ellipse: s-maj=17.4km s-min=8.0km az=9.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.87**	**90**	*e*P	Pg	03 02 07.2	-2.7
CALA				*e*S	Sg	03 02 17.9	-3.3
CALA	**Caldeira**	**0.87**	**90**	*e*P	Pg	03 02 07.2	-2.7
CALA				*e*S	Sg	03 02 17.9	-3.3
PCED	**Cedros**	**0.87**	**87**	*e*P	Pg	03 02 07.7	-2.9
PCED				*e*S	Sg	03 02 17.9	-3.3
PCED	91nm,0.3s			A		03 02 20.6	
PCED	**Cedros**	**0.87**	**87**	*e*P	Pg	03 02 07.1	-2.9
PCED				*e*S	Sg	03 02 17.9	-3.3
HOR	**Horta**	**0.93**	**93**	*e*S	Sg	03 02 19.2	-3.9
HOR	**Horta**	**0.93**	**93**	*e*S	Sg	03 02 19.2	-3.9
PCAN	**Candelaria**	**1.05**	**96**	*e*S	Sg	03 02 21.6	-5.3
PCAN	78nm,0.2s			A		03 02 24.1	
PCAN	**Candelaria**	**1.05**	**96**	*e*S	Sg	03 02 21.6	-5.3
PICO	**Pico**	**1.09**	**94**	*e*S	Sg	03 02 23.6	-4.7
PICO	**Pico**	**1.09**	**94**	*e*S	Sg	03 02 23.6	-4.7
ROSA	**Rosais**	**1.23**	**83**	*e*P	Pg	03 02 12.8	-4.2
ROSA				*e*S	Sg	03 02 26.4	-6.6
ROSA	**Rosais**	**1.23**	**83**	*e*P	Pg	03 02 12.8	-4.2
ROSA				*e*S	Sg	03 02 26.4	-6.6
PID	**Ribeirinha**	**1.33**	**96**	*e*S	Sb	03 02 29.2	-6.9
PID	**Ribeirinha**	**1.33**	**96**	*e*S	Sb	03 02 29.2	-6.9
PMAN	**Manadas**	**1.35**	**88**	*e*S	Sb	03 02 29.2	-7.4
PMAN	29nm,0.2s			A		03 02 31.6	
PMAN	**Manadas**	**1.35**	**88**	*e*S	Sb	03 02 29.2	-7.4

NNC 13 03:17:26.8±9.9, 37°.51N×71°.20E, h0km, mb3.7, mpv3.5, 2C-2D, Error ellipse: s-maj=110.0km s-min=76.0km az=67.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 1.8nm,0.2s,baz=175,slow=12,SNR=84	**5.62**	**355**	Pn	Pn	03 18 54.3	+2.8
KK31	4.3nm,0.5s,baz=167,slow=23			⇓Sn	Sn	03 20 03.6	+6.9
TKM2	**Tokmak 2** 1.5nm,0.4s	**6.37**	**31**	⇑Pn	Pn	03 19 03.9	+2.0
AB31	**Akbulak array** 0.3nm,0.5s,baz=170,slow=13,SNR=7.7	**14.29**	**329**	⇑Pn	Pn	03 20 45.4	-4.9
AB31	0.2nm,0.5s			⇓Sn	Sn	03 23 26.0	-3.5

IDC 13 03:27:29.3±1.3, 38°.35N×110°.01E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/22, mbtmp3.5/6, ML3.0/1, Error ellipse: s-maj=45.7km s-min=19.3km az=62.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array** 0.1nm,0.3s,baz=165,slow=12,SNR=5.1	**9.84**	**346**	Pn	Pn	03 29 51.0	-1.0
SONM	0.3nm,0.3s,baz=118,slow=44,SNR=2.8			Lg		03 32 43.5	
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=98,slow=14,SNR=5.1	**22.00**	**301**	P	P	03 32 23.9	-1.1
CMAR	**Chiang Mai Arr** 1.0nm,0.3s,baz=15,slow=8.7,SNR=4.4	**22.05**	**209**	P	P	03 32 25.6	0.0
BRTR	**Keskin Array B** 0.3nm,0.5s,baz=83,slow=12,SNR=3.0	**57.58**	**297**	P	P	03 37 21.7	+1.0
WRA	**Warramunga Arr** 0.6nm,0.7s,baz=345,slow=7.1,SNR=6.0	**62.32**	**154**	P	P	03 37 53.3	-0.1
ASAR	**Alice Springs** 0.5nm,0.6s,baz=347,slow=7.3,SNR=5.1	**65.64**	**156**	P	P	03 38 15.4	+0.2

*ISCJB **13** 03:29:13.0±0.7, 44°.3S±0°.2×39°.1E±0°.3, h10km, mb4.0/7, MS4.0/19, Error ellipse: s-maj=34.1km s-min=13.2km az=143.6*
*IDC **13** 03:29:13.1±0.8, 44°.23S×39°.19E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.1/16, mbtmp4.1/8, ML3.6/1, MS4.0/21, Ms1 4.0/21, ms1mx4.0/25, Error ellipse: s-maj=35.9km s-min=19.8km az=41.0*
*NEIC **13** 03:29:14.7±0.4, 44°.25S×39°.18E, h10km, mb4.4/1, Error ellipse: s-maj=22.0km s-min=10.4km az=45.0*
ISC 13 03:29:14.6±0.7, 44°.3S±0°.2×39°.1E±0°.3, h10km, n46, σ0°87/12, mb4.0/7, MS4.0/19, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland** comp=Z,407nm,19.0s,baz=238,slow=32	**18.57**	**304**	LR	LR	03 39 07.0	
BOSA	**Boshof** 0.1nm,0.3s,baz=150,slow=13,SNR=3.2	**19.13**	**320**	P	**Pn**	**03 33 39.1**	**+0.5**
BOSA	comp=Z,548nm,18.6s,baz=149,slow=33			LR	LR	03 39 45.8	
BOSA	**Boshof**	**19.13**	**320**	P	**Pn**	**03 33 39.1**	**+0.5**
BOSA				LR	LR	03 39 45.8	
LBTB	**Lobatse** 7.5nm,1.0s,mb4.1,baz=196,slow=11,SNR=4.4	**22.12**	**326**	P	**P**	**03 34 09.4**	**-0.8**
LBTB	comp=Z,547nm,20.0s,MS4.0,baz=140,slow=33			LR	LR	03 41 16.2	
LBTB	**Lobatse** 18nm,1.2s,mb4.4	**22.12**	**326**	*e*P	**P**	**03 34 09.5**	**-0.7**
LBTB				LR	LR	03 41 16.2	
MAW	**Mawson**	**26.57**	**160**	P	**P**	**03 34 51.7**	**-0.7**

0.7nm,0.8s,mb3.3,baz=322,slow=9.5,SNR=2.2
MAW LR LR 03 42 33.8
comp=Z,361nm,20.9s,MS3.9,baz=328,slow=30
KMBO Kilima Mbogo 42.98 357 LR LR 03 52 34.2
comp=Z,306nm,20.3s,MS4.2,baz=90,slow=33
QSPA South Pole Qui 45.95 180 P **P 03 37 37.9 +0.8**
1.6nm,0.9s,mb4.0,baz=252,slow=6.8,SNR=6.7
QSPA South Pole Qui 45.95 180 P **P 03 37 37.9 +0.8**
DBIC Dimbokro 64.30 310 LR LR 04 03 07.2
comp=Z,81nm,20.7s,MS3.9,baz=138,slow=32
PSI Prapat 70.92 66 LR LR 04 03 49.2
comp=Z,82nm,20.2s,MS4.0,baz=347,slow=29
EIL Elat 73.67 356 LR LR 04 09 06.9
comp=Z,75nm,20.7s,MS4.0,baz=231,slow=32
PLCA Paso Flores 74.43 228 LR LR 04 06 13.3
comp=Z,125nm,19.2s,MS4.2,baz=270,slow=30
FITZ Fitzroy Crossi 75.17 101 P **P 03 40 59.1 +1.8**
3.5nm,1.1s,mb4.2,baz=153,slow=6.8,SNR=2.9
ASF Jabal al Asfar 76.09 358 LR LR 04 14 23.1
comp=Z,78nm,21.4s,MS4.0,baz=46,slow=36
STKA Stephens Creek 76.52 121 P **P 03 41 03.8 -1.0**
4.6nm,0.9s,mb4.4,baz=5.9,slow=4.8,SNR=4.5
STKA LR LR 04 05 34.7
comp=Z,198nm,21.5s,MS4.4,baz=206,slow=28
MMAI Mount Meron Ar 76.98 357 LR LR 04 16 58.2
comp=Z,64nm,18.5s,MS4.0,baz=220,slow=37
ASAR Alice Springs 77.15 110 P **P 03 41 08.2 -0.4**
3.5nm,1.0s,mb4.2,baz=218,slow=5.7,SNR=12
ASAR Alice Springs 77.15 110 P **P 03 41 08.2 -0.4**
BDFB Brasilia 77.22 261 LR LR 04 07 24.1
comp=Z,58nm,20.7s,MS3.9,baz=133,slow=30
WRA Warramunga Arr 79.98 108 P **P 03 41 24.1 -0.1**
2.1nm,1.1s,mb4.0,baz=227,slow=4.4,SNR=8.6
WRA LR LR 04 10 45.1
comp=Z,128nm,19.3s,MS4.3,baz=215,slow=31
CMAR Chiang Mai Arr 82.89 56 LR LR 04 14 32.8
comp=Z,79nm,18.0s,MS4.1,baz=48,slow=33
BRTR Keskin Array B 83.75 356 LR LR 04 19 09.9
comp=Z,33nm,18.0s,MS3.8,baz=322,slow=36
KEST Kesra 84.08 336 LR LR 04 21 38.3
comp=Z,60nm,18.3s,MS4.0,baz=269,slow=37
MDT Midelt 86.43 324 LR LR 04 20 28.2
comp=Z,203nm,18.8s,MS4.5,baz=163,slow=36
LPAZ La Paz 90.60 247 LR LR 04 18 01.0
comp=Z,45nm,21.8s,MS3.9,baz=225,slow=32
AKTO Aktyubinsk 95.74 12 LR LR 04 27 15.1
comp=Z,35nm,18.1s,MS3.9,baz=214,slow=36
MKAR Makanchi Array 98.36 28 LR LR 04 21 27.1
comp=Z,37nm,21.8s,MS3.8,baz=172,slow=32
JFWS Jewell Farm 143.75 286 *e*PKPdf PKPdf 03 48 46.8 -2.5
JCT Junction City 144.93 261 *e*PKPdf PKPdf 03 48 51.8 0.0
WMOK Wichita Mounta 146.45 268 *e*PKPbc PKPbc 03 48 55.7 +0.1
KSU1 Kansas State U 146.83 277 *e*PKPbc PKPbc 03 48 57.3 +0.7
TXAR Lajitas Array 146.98 256 PKPbc PKPbc 03 48 57.6 +0.2
4.3nm,0.9s,baz=141,slow=5.9,SNR=26
ECSD EROS Data Cent 148.42 285 *e*PKPbc PKPbc 03 49 00.2 -0.6
AMTX Amarillo 148.60 266 *e*PKPbc PKPbc 03 49 02.0 +0.4
CPRX Cap Rock 149.22 261 *e*PKPbc PKPbc 03 49 03.6 +0.4
CPRX *e*PKPab PKPab 03 49 09.4 +1.8
ULM Lac du Bonnet 149.23 297 PKPbc PKPbc 03 49 02.0 -0.6
4.8nm,0.8s,baz=172,slow=1.9,SNR=3.5
ULM Lac du Bonnet 149.23 297 *e*PKPbc PKPbc 03 49 02.1 -0.5
ANMO Albuquerque 152.05 262 *e*PKPbc PKPbc 03 49 08.8 -1.0
SDCO Great Sand Dun 152.65 269 *e*PKPab PKPab 03 49 23.6 +1.8
TUC Tucson 153.67 253 *e*PKPbc PKPbc 03 49 13.7 +0.2
PV01 Paradox Valley 155.02 267 *e*PKPab PKPab 03 49 33.9 +2.1
PDAR Pinedale Array 157.28 277 PKP PKPdf 03 49 13.4 +3.2
0.1nm,0.5s,baz=42,slow=4.1,SNR=3.9
PDAR PKPab PKPab 03 49 40.4 -1.0
0.4nm,0.7s,baz=129,slow=6.1,SNR=3.6
DUG Dugway 158.85 269 *e*PKPab PKPab 03 49 49.2 +0.9
BOZ Bozeman (W) 159.28 284 *e*PKPab PKPab 03 49 51.4 +1.4
NVAR Mina Array Bea 162.08 259 PKPab PKPab 03 50 04.5 +2.0
0.2nm,0.7s,baz=152,slow=4.2,SNR=4.1

*ISCJB **13** 03:50:53.8±0.7,51°.40N±0°.03×16°.14E±0°.03, h0km, Error ellipse: s-maj=5.0km s-min=2.6km az=17.9*
*IPEC **13** 03:50:54.0±0.3,51°.54N×16°.19E, h0km, ML2.4/4, Error ellipse: s-maj=2.0km s-min=1.5km az=33.0*
*CSEM **13** 03:50:55.6±0.4,51°.44N×16°.17E, h1km, ML3.2/4, Error ellipse: s-maj=7.1km s-min=4.8km az=1.0*
*PRU **13** 03:50:56.3,51°.42N×16°.13E, h0km*
*WAR **13** 03:50:56,51°.46N×16°.10E,ML2.8,Mining Induced*
*VIE **13** 03:50:58.9±0.4,51°.19N×16°.30E, h0km, mb2.3/4, ML2.8/4, Error ellipse: s-maj=2.7km s-min=2.5km az=119.0 50 km WNW of Wroclaw Suspected Mining induced.*
ISC 13 03:50:54.8±0.7,51°.47N±0°.03×16°.14E±0°.03, h0km, n40, σ0s84/63, 1C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**171**	*e*Pg	**Pg**	**03 51 08.0**	**+1.1**
KSP				*e*Sg	**Sg**	03 51 16.4	+1.4
KSP	**Ksiaz**	**0.63**	**171**	*i* Pg	**Pg**	**03 51 08.0**	**+1.1**
KSP				*i*		03 51 09.2	
KSP				*e*Sg	**Sg**	**03 51 16.4**	**+1.3**
KSP	**Ksiaz**	**0.63**	**171**	⇓*i*Pg	**Pg**	**03 51 08.0**	**+1.1**
UPC	**Upice**	**0.96**	**185**	*e*PG	**Pg**	**03 51 14.1**	**+0.8**
UPC	**Upice**	**0.96**	**185**	Pg	**Pg**	**03 51 14.1**	**+0.8**
DPC	**Dobruska-Polom**	**1.12**	**174**	*e*PG	**Pg**	**03 51 16.9**	**+0.6**
DPC				*e*SG	**Sg**	**03 51 31.2**	**+0.3**
DPC	**Dobruska-Polom**	**1.12**	**174**	Pg	**Pg**	**03 51 16.9**	**+0.6**
PVCC	**Panska Ves**	**1.37**	**227**	*e*PG	**Pg**	**03 51 21.2**	**+0.2**
PVCC				*e*SG	**Sg**	**03 51 38.9**	**+0.2**
comp=Z,129nm,0.3s							
PVCC	**Panska Ves**	**1.37**	**227**	*e*Sg	**Sg**	**03 51 39.2**	**+0.5**
baz=45							
BRG	**Berggiesshubel**	**1.51**	**248**	PN	**Pn**	**03 51 22.4**	**-0.6**
BRG				PG	**Pg**	**03 51 23.8**	**+0.1**
BRG				SG	**Sg**	**03 51 44.0**	**+0.8**
comp=Z,52nm,0.3s							
PRU	**Pruhonice**	**1.79**	**215**	*e*PN	**Pn**	**03 51 27.3**	**+0.3**
PRU				*e*PG	**Pg**	**03 51 29.1**	**-0.1**
PRU				*e*SG	**Sg**	**03 51 51.9**	**-0.5**
comp=Z,25nm,0.5s							
CLL	**Collm**	**1.97**	**267**	*e*(Pn)	**Pn**	**03 51 29.0**	**-0.4**
CLL				*e*Pg	**Pg**	**03 51 31.0**	**-1.6**
CLL				*i*		03 51 35.7	
CLL				*i*		03 51 46.3	
CLL				*e*Sg	**Sg**	**03 51 58.0**	**-0.2**
comp=Z,14nm,0.7s							
OKC	**Ostrava-Krasne**	**2.07**	**141**	*e*PG	**Pg**	**03 51 33.8**	**-0.7**
OKC				*e*SG	**Sg**	**03 52 00.2**	**-1.1**
OKC	**Ostrava-Krasne**	**2.07**	**141**	Pg	**Pg**	**03 51 33.8**	**-0.7**
VRAC	**Vranov**	**2.18**	**172**	*e*Sg	**Sg**	**03 52 04.5**	**-0.3**
TREC	**Trest**	**2.21**	**191**	*e*PN	**Pn**	**03 51 33.9**	**+1.2**
TREC	**Trest**	**2.21**	**191**	Pn	**Pn**	**03 51 33.9**	**+1.2**
KRUC	**Moravsky**	**2.41**	**176**	*e*Sg	**Sg**	**03 52 11.8**	**-0.5**
comp=Z,19nm,0.6s,baz=357							
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**03 51 44.8**	**-0.5**
OJC				*e*Sg	**Sg**	**03 52 20.0**	**+0.6**
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**03 51 44.8**	**-0.5**
OJC				*e*Sg	**Sg**	**03 52 20.0**	**+0.6**
NKC	**Novy Kostel**	**2.65**	**244**	*e*PN	**Pn**	**03 51 39.0**	**+0.3**
NKC				*e*PG	**Pg**	**03 51 45.3**	**-0.2**
NKC				*e*SG	**Sg**	**03 52 19.9**	**+0.1**
comp=Z,24nm,0.3s							
NKC	**Novy Kostel**	**2.65**	**244**	Pn	**Pn**	**03 51 39.0**	**+0.3**
JAVC	**Velka Javorina**	**2.79**	**159**	*e*Sg	**Sg**	**03 52 25.9**	**+1.5**
comp=Z,23nm,0.8s							
KHC	**Kasperske Hory**	**2.86**	**216**	*e*PN	**Pn**	**03 51 41.8**	**+0.2**
KHC				*e*PG	**Pg**	**03 51 48.0**	**-1.6**
KHC				*e*SG	**Sg**	**03 52 24.6**	**-2.0**
comp=Z,13nm,0.4s							
MOX	**Moxa**	**2.97**	**256**	*e*PG	**Pg**	**03 51 51.5**	**-0.2**
MOX				*e*SG	**Sg**	**03 52 30.8**	**+0.6**
KOLL	**Kolacno**	**3.24**	**152**	*e*PN	**Pn**	**03 51 48.1**	**+1.3**
KOLL				*e*		03 51 57.1	
KOLL	**Kolacno**	**3.24**	**152**	*e*Pn	**Pn**	**03 51 48.1**	**+1.3**
KOLL				*e*Sg	**Sg**	**03 52 37.3**	**-1.5**
ZST	**Bratislava**	**3.33**	**169**	*e*	**Pn**	**03 51 53.0**	**+4.9**
ZST	**Bratislava**	**3.33**	**169**	*e*SG	**Sg**	**03 52 42.5**	**+0.7**
ZST	**Bratislava**	**3.33**	**169**	*e*Sg	**Sg**	**03 52 42.5**	**+0.7**
NIE	**Niedzica**	**3.36**	**126**	*e*P	**Pg**	**03 51 58.9**	**-0.3**
NIE				*e*S	**Sg**	**03 52 43.2**	**+0.4**
VYHS	**Vyhne**	**3.45**	**149**	*e*PN	**Pn**	**03 51 50.1**	**+0.4**
VYHS				*e*		03 52 01.3	
VYHS				*e*		03 52 40.8	
VYHS	**Vyhne**	**3.45**	**149**	*e*Pn	**Pn**	**03 51 50.2**	**+0.5**
CONA	**Conrad Observa**	**3.55**	**183**	⇓*i*Pn	**Pn**	**03 51 51.6**	**+0.6**
CONA				⇓*i*Sg	**Sg**	**03 52 47.1**	**-1.6**
comp=Z,15nm,0.5s							
CONA	**Conrad Observa**	**3.55**	**183**	Pn	**Pn**	**03 51 51.6**	**+0.5**
CONA				Sg	**Sg**	**03 52 47.1**	**-1.6**
comp=Z,15nm,0.5s							
MOA	**Molln**	**3.82**	**199**	⇑*i*Pn	**Pn**	**03 51 55.7**	**+0.9**
MOA				⇓*i*Sg	**Sg**	**03 52 57.8**	**+0.3**
comp=Z,19nm,0.6s							
MOA	**Molln**	**3.82**	**199**	Pn	**Pn**	**03 51 55.7**	**+0.9**
KECS	**Kecovo**	**4.09**	**135**	*e*SG	**Sg**	**03 53 05.6**	**-0.7**
CRVS	**Cervenica-Dubn**	**4.27**	**125**	*e*SG	**Sg**	**03 53 10.9**	**-1.2**
CRVS	**Cervenica-Dubn**	**4.27**	**125**	*e*Sg	**Sg**	**03 53 10.9**	**-1.2**

*NEIC **13** 03:53:03.0,39°.31N×26°.00E, h5km, MD3.4(ISK), After ISK.*
*ISK **13** 03:53:03.4,39°.31N×26°.00E, h5km, MD3.4*
*DDA **13** 03:53:04.2,39°.33N×26°.02E, h31km±2km, Md3.6*
*ATH **13** 03:53:04.3,39°.30N×26°.10E, h28km±1km, MD3.4/4*
*THE **13** 03:53:04.8,39°.31N×25°.96E, h11km, ML2.9/6, Error ellipse: s-maj=0.9km s-min=0.5km az=210.0*
*CSEM **13** 03:53:04.2±0.1,39°.29N×25°.95E, h10km, ML2.9/6, Error ellipse: s-maj=2.8km s-min=2.3km az=83.0*
*ISCJB **13** 03:53:04.3±0.4,39°.31N±0°.02×25°.96E±0°.03, h11km±3km, Error ellipse: s-maj=3.6km s-min=2.9km az=171.5*
ISC 13 03:53:04.7±0.4,39°.30N±0°.02×25°.95E±0°.03, h13km±2km, n114, σ0s75/150, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.11**	**221**	P	**Pg**	**03 53 08.0**	**+0.2**
SIGR				S	**Sg**	**03 53 10.2**	**+0.2**
SIGR	**SIGRI**	**0.11**	**221**	P	**Pg**	**03 53 08.0**	**+0.2**
SIGR				S	**Sg**	**03 53 10.2**	**+0.2**
PRK	**Paraskevi**	**0.26**	**101**	P	**Pg**	**03 53 09.6**	**-0.5**
PRK	**Paraskevi**	**0.26**	**101**	*e*PB	**Pg**	**03 53 10.0**	**-0.1**
PRK				*e*SB	**Sg**	**03 53 14.0**	**+0.3**
PRK	**Paraskevi**	**0.26**	**101**	P	**Pg**	**03 53 10.0**	**-0.1**
PRK				S	**Sg**	**03 53 13.7**	**0.0**
PRK	**Paraskevi**	**0.26**	**101**	P	**Pg**	**03 53 10.0**	**-0.1**
PRK				S	**Sg**	**03 53 13.7**	**0.0**
PRK				*e*Sb	**Sg**	**03 53 14.0**	**+0.3**
BOZC	**Bozcaada**	**0.55**	**8**	*i* P	**Pg**	**03 53 15.6**	**+0.1**
BOZC				*i* S	**Sg**	**03 53 23.0**	**+0.2**
AYVA	**Ayvalik**	**0.57**	**89**	*i* P	**Pg**	**03 53 15.6**	**-0.3**
AYVA				*i* S	**Sg**	**03 53 23.5**	**-0.1**
AYVA	**Ayvalik**	**0.57**	**89**	*i* P	**Pg**	**03 53 15.6**	**-0.3**
AYVA				*i* S	**Sg**	**03 53 23.5**	**0.0**
EZN	**Ezine**	**0.60**	**29**	PG	**Pg**	**03 53 15.3**	**-1.1**
EZN				*e*SG	**Sg**	**03 53 23.4**	**-1.0**
EZN	**Ezine**	**0.60**	**29**	*i* Pg	**Pg**	**03 53 15.3**	**-1.2**
EZN				*e*Sg	**Sg**	**03 53 23.4**	**-1.0**
LIA	**Limnos Island**	**0.84**	**316**	P	**Pg**	**03 53 21.4**	**+0.4**
LIA				S	**Sg**	**03 53 32.8**	**+0.7**
LIA	**Limnos Island**	**0.84**	**316**	P	**Pg**	**03 53 21.4**	**+0.4**
LIA				S	**Sg**	**03 53 32.8**	**+0.7**
GADA	**Gvkgeada**	**0.89**	**357**	PG	**Pg**	**03 53 20.9**	**-1.1**
GADA	**Gvkgeada**	**0.89**	**357**	*i* Pg	**Pg**	**03 53 20.9**	**-1.1**
CHOS	**Chios island**	**0.91**	**175**	*e*PN	**Pn**	**03 53 21.8**	**-1.4**
CHOS				*e*SN	**Sn**	**03 53 35.3**	**-0.9**
CHOS	**Chios island**	**0.91**	**175**	P	**Pg**	**03 53 22.1**	**-0.2**
CHOS				S	**Sg**	**03 53 35.4**	**+1.2**
CHOS	**Chios island**	**0.91**	**175**	*e*Pn	**Pn**	**03 53 21.8**	**-1.4**
CHOS	**Chios island**	**0.91**	**175**	P	**Pg**	**03 53 22.1**	**-0.2**
CHOS				*e*Sn	**Sn**	**03 53 35.3**	**-0.9**
URLA	**Izmir**	**1.06**	**151**	*i* P	**Pb**	**03 53 23.5**	**-1.4**
URLA				*i* S	**Sb**	**03 53 38.4**	**-0.4**
URLA	**Izmir**	**1.06**	**151**	*i* P	**Pb**	**03 53 23.5**	**-1.4**
URLA				*i* S	**Sb**	**03 53 38.4**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.17**	**20**	PN	**Pn**	**03 53 25.7**	**-1.1**
GELI	**Tayfur-Gelibol**	**1.17**	**20**	*i* Pn	**Pn**	**03 53 25.7**	**-1.1**
LPK	**Lapseki**	**1.24**	**30**	PN	**Pn**	**03 53 26.9**	**-0.9**
LPK	**Lapseki**	**1.24**	**30**	*i* Pn	**Pn**	**03 53 26.9**	**-0.9**
BLCB	**Balcova**	**1.25**	**137**	*e*PN	**Pn**	**03 53 27.2**	**-0.6**
BLCB	**Balcova**	**1.25**	**137**	P	**Pn**	**03 53 26.8**	**-1.0**
BLCB				S	**Sb**	**03 53 44.9**	**+0.8**
BLCB	**Balcova**	**1.25**	**137**	P	**Pn**	**03 53 26.8**	**-1.0**
BLCB	**Balcova**	**1.25**	**137**	*e*Pn	**Pn**	**03 53 27.2**	**-0.6**
BLCB				S	**Sb**	**03 53 44.9**	**+0.8**
IZM	**Izmir**	**1.36**	**131**	*e*PN	**Pn**	**03 53 29.4**	**-0.1**
BALY	**Balya**	**1.36**	**71**	*i* P	**Pn**	**03 53 28.7**	**-0.8**
BALY				*i* S	**Sn**	**03 53 46.6**	**-0.8**
BALY	**Balya**	**1.36**	**71**	*i* P	**Pn**	**03 53 28.7**	**-0.8**
BALY				*i* S	**Sn**	**03 53 46.6**	**-0.8**
ERIK	**Erikli-Kesan**	**1.44**	**17**	*e*PN	**Pn**	**03 53 30.4**	**-0.1**
ERIK	**Erikli-Kesan**	**1.44**	**17**	*e*Pn	**Pn**	**03 53 30.4**	**-0.1**
ENEZ	**Enez**	**1.45**	**6**	*e*PN	**Pn**	**03 53 30.1**	**-0.4**
ENEZ	**Enez**	**1.45**	**6**	*e*Pn	**Pn**	**03 53 30.1**	**-0.5**
AKS	**Akhisar**	**1.51**	**105**	*e*PN	**Pn**	**03 53 31.3**	**-0.2**
AKS	**Akhisar**	**1.51**	**105**	*e*Pn	**Pn**	**03 53 31.3**	**-0.1**
AKHS	**Akhisar**	**1.51**	**105**	*i* P	**Pn**	**03 53 30.8**	**-0.6**
AKHS				*i* S	**Sn**	**03 53 54.4**	**+3.4**
AKHS	**Akhisar**	**1.51**	**105**	*i* P	**Pn**	**03 53 30.8**	**-0.6**
AKHS				*i* S	**Sn**	**03 53 54.4**	**+3.4**
BALB	**Balikesir**	**1.53**	**76**	*e*PN	**Pn**	**03 53 31.5**	**-0.3**
BALB	**Balikesir**	**1.53**	**76**	*e*Pn	**Pn**	**03 53 31.5**	**-0.3**
GONE	**Gonen-Balikesi**	**1.54**	**60**	*e*PN	**Pn**	**03 53 31.3**	**-0.5**
GONE	**Gonen-Balikesi**	**1.54**	**60**	*e*Pn	**Pn**	**03 53 31.3**	**-0.5**
ALN	**Alexandroupoli**	**1.60**	**3**	P	**Pn**	**03 53 32.4**	**-0.3**
ALN	**Alexandroupoli**	**1.60**	**3**	*e*PN	**Pn**	**03 53 32.5**	**-0.2**
ALN	**Alexandroupoli**	**1.60**	**3**	P	**Pn**	**03 53 31.9**	**-0.8**
ALN				S	**Sn**	**03 53 52.5**	**-0.7**
ALN	**Alexandroupoli**	**1.60**	**3**	P	**Pn**	**03 53 31.9**	**-0.8**
ALN				S	**Sn**	**03 53 52.5**	**-0.7**
AOS	**Alonnisos**	**1.61**	**266**	P	**Pn**	**03 53 36.6**	**+3.7**
AOS	**Alonnisos**	**1.61**	**266**	P	**Pn**	**03 53 32.6**	**-0.3**
AOS	**Alonnisos**	**1.61**	**266**	P	**Pn**	**03 53 32.6**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.68**	**34**	*e*PN	**Pn**	**03 53 34.1**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.68**	**34**	*e*Pn	**Pn**	**03 53 34.1**	**+0.3**
SART	**Tekirdag**	**1.68**	**34**	*i* P	**Pn**	**03 53 33.5**	**-0.3**
SART				*i* S	**Sn**	**03 53 55.8**	**+0.6**
SART	**Tekirdag**	**1.68**	**34**	*i* P	**Pn**	**03 53 33.5**	**-0.3**
SART				*i* S	**Sn**	**03 53 55.8**	**+0.6**
SMG	**Samos**	**1.73**	**156**	*e*PN	**Pn**	**03 53 33.9**	**-0.6**
SMG	**Samos**	**1.73**	**156**	*e*Pn	**Pn**	**03 53 33.9**	**-0.6**
MFT	**Murefte**	**1.81**	**34**	*e*PN	**Pn**	**03 53 36.4**	**+0.9**
EDC	**Edincik**	**1.81**	**54**	*e*PN	**Pn**	**03 53 35.4**	**-0.2**
EDC	**Edincik**	**1.81**	**54**	*e*Pn	**Pn**	**03 53 35.4**	**-0.2**
OUR	**Ouranopolis**	**1.84**	**305**	P	**Pn**	**03 53 39.4**	**+3.5**
OUR	**Ouranopolis**	**1.84**	**305**	P	**Pn**	**03 53 35.6**	**-0.3**
OUR				S	**Sn**	**03 53 59.0**	**0.0**
OUR	**Ouranopolis**	**1.84**	**305**	P	**Pn**	**03 53 35.6**	**-0.3**
OUR				S	**Sn**	**03 53 59.0**	**0.0**
BNT	**Bandirma**	**1.85**	**54**	*e*PN	**Pn**	**03 53 35.8**	**-0.3**
PAIG	**Paliouri**	**1.86**	**290**	P	**Pn**	**03 53 39.3**	**+3.0**
PAIG	**Paliouri**	**1.86**	**290**	P	**Pn**	**03 53 36.0**	**-0.3**
PAIG	**Paliouri**	**1.86**	**290**	P	**Pn**	**03 53 36.0**	**-0.3**
GCAM	**G?zelcaml?**	**1.89**	**147**	*i* P	**Pn**	**03 53 40.3**	**+3.7**
GCAM				*i* S	**Sn**	**03 54 04.5**	**+4.2**
GCAM	**G?zelcaml?**	**1.89**	**147**	*i* P	**Pn**	**03 53 40.3**	**+3.7**
GCAM				*i* S	**Sn**	**03 54 04.5**	**+4.2**
DURS	**Dursunbey**	**1.98**	**80**	*i* P	**Pn**	**03 53 37.6**	**-0.3**
DURS				*i* S	**Sn**	**03 54 01.9**	**-0.7**
DURS	**Dursunbey**	**1.98**	**80**	*i* P	**Pn**	**03 53 37.6**	**-0.3**
DURS				*i* S	**Sn**	**03 54 01.9**	**-0.6**
TKR	**Tekirdag**	**2.08**	**35**	*e*PN	**Pn**	**03 53 39.5**	**+0.2**
KCTX	**Karacabey (Bur**	**2.09**	**62**	*e*PN	**Pn**	**03 53 39.7**	**+0.2**
KCTX	**Karacabey (Bur**	**2.09**	**62**	*e*Pn	**Pn**	**03 53 39.7**	**+0.3**
DEMI	**Demirci**	**2.17**	**96**	*i* P	**Pn**	**03 53 40.5**	**+0.1**
DEMI				*i* S	**Sn**	**03 54 12.1**	**+4.9**
DEMI	**Demirci**	**2.17**	**96**	*i* P	**Pn**	**03 53 40.5**	**0.0**
APE	**Apeiranthos**	**2.25**	**189**	*e*PN	**Pn**	**03 53 42.7**	**+1.1**
APE	**Apeiranthos**	**2.25**	**189**	P	**Pn**	**03 53 41.2**	**-0.4**
APE	**Apeiranthos**	**2.25**	**189**	P	**Pn**	**03 53 41.3**	**-0.3**
APE	**Apeiranthos**	**2.25**	**189**	P	**Pn**	**03 53 41.3**	**-0.3**
APE	**Apeiranthos**	**2.25**	**189**	*e*Pn	**Pn**	**03 53 42.7**	**+1.1**
KULA	**Kula-Manisa**	**2.25**	**109**	*e*PN	**Pn**	**03 53 41.7**	**0.0**
KULA	**Kula-Manisa**	**2.25**	**109**	*e*Pn	**Pn**	**03 53 41.7**	**0.0**
CRLT	**Corlu**	**2.28**	**36**	*e*PN	**Pn**	**03 53 42.3**	**+0.2**
CRLT	**Corlu**	**2.28**	**36**	*e*Pn	**Pn**	**03 53 42.3**	**+0.2**
BODT	**Bodrum**	**2.48**	**154**	*e*PN	**Pn**	**03 53 45.5**	**+0.8**
BODT	**Bodrum**	**2.48**	**154**	*e*Pn	**Pn**	**03 53 45.5**	**+0.8**
MDNY	**Mudanya-Bursa**	**2.50**	**64**	*e*PN	**Pn**	**03 53 46.0**	**+0.9**
MDNY	**Mudanya-Bursa**	**2.50**	**64**	*e*Pn	**Pn**	**03 53 46.0**	**+0.9**
ARMT	**Armutlu**	**2.57**	**60**	*e*PN	**Pn**	**03 53 46.9**	**+0.9**
SLVT	**Silivri**	**2.59**	**41**	*e*PN	**Pn**	**03 53 46.5**	**+0.2**
SLVT	**Silivri**	**2.59**	**41**	*e*Pn	**Pn**	**03 53 46.6**	**+0.3**
EDRB	**Edirne**	**2.62**	**13**	*e*PN	**Pn**	**03 53 47.8**	**+1.1**
EDRB	**Edirne**	**2.62**	**13**	*e*Pn	**Pn**	**03 53 47.8**	**+1.1**
GEMT	**Gemlik**	**2.74**	**64**	*e*PN	**Pn**	**03 53 49.1**	**+0.8**
GDZ	**Gediz**	**2.75**	**93**	*i* P	**Pn**	**03 53 51.8**	**+3.3**
GDZ				*i* S	**Sn**	**03 54 30.1**	**+8.5**
GDZ	**Gediz**	**2.75**	**93**	*i* P	**Pn**	**03 53 51.8**	**+3.3**
CTKS	**Kestanelik-??a**	**2.75**	**44**	*e*PN	**Pn**	**03 53 49.3**	**+0.8**
CTKS	**Kestanelik-??a**	**2.75**	**44**	*e*Pn	**Pn**	**03 53 49.3**	**+0.8**
DID	**Didima**	**2.78**	**231**	P	**Pn**	**03 53 48.4**	**-0.5**
DID	**Didima**	**2.78**	**231**	P	**Pn**	**03 53 48.4**	**-0.5**
CTYL	**Yal??k??y-??at**	**2.81**	**39**	*e*PN	**Pn**	**03 53 50.0**	**+0.6**
CTYL	**Yal??k??y-??at**	**2.81**	**39**	*e*Pn	**Pn**	**03 53 50.0**	**+0.6**
BGKT	**Bogazkoy**	**2.87**	**48**	*e*PN	**Pn**	**03 53 50.8**	**+0.7**
BGKT	**Bogazkoy**	**2.87**	**48**	*e*Pn	**Pn**	**03 53 50.8**	**+0.7**
KLYT	**Kilyos**	**3.07**	**49**	*e*PN	**Pn**	**03 53 53.5**	**+0.6**
KLYT	**Kilyos**	**3.07**	**49**	*e*Pn	**Pn**	**03 53 53.5**	**+0.6**
ADVT	**Abdulvahap**	**3.13**	**68**	*e*PN	**Pn**	**03 53 54.3**	**+0.6**
GRG	**Griva**	**3.19**	**302**	P	**Pn**	**03 53 59.1**	**+4.6**
GRG	**Griva**	**3.19**	**302**	P	**Pn**	**03 53 59.1**	**+4.6**
SILT	**Sile**	**3.38**	**56**	*e*PN	**Pn**	**03 53 58.0**	**+0.8**
SILT	**Sile**	**3.38**	**56**	*e*Pn	**Pn**	**03 53 58.0**	**+0.8**
GULT	**Gulveren**	**3.69**	**71**	*e*PN	**Pn**	**03 54 02.1**	**+0.7**
GULT	**Gulveren**	**3.69**	**71**	*e*Pn	**Pn**	**03 54 02.2**	**+0.8**

KRSC 13 04:28:17.3±0.6,56°.15N×164°.30E, h17km±17km, ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.83**	**275**	*e*P	Pb	04 28 31.6	-1.6
KBTR				*e*S	Sb	04 28 42.9	-1.2
BKI	**Bering**	**1.34**	**134**	*e*P	Pn	04 28 41.9	+0.7
BKI				*e*S	Sn	04 28 59.1	+0.6
KLY	**Klyuchi**	**2.04**	**276**	*e*P	Pn	04 28 49.9	-0.9
KLY				*e*S	Sn	04 29 14.2	-1.7
MKZ	**Mys Kozlova**	**2.17**	**224**	*e*P	Pn	04 28 52.8	+0.2
MKZ				*e*S	Sn	04 29 19.2	+0.2
KPT	**Kopyto**	**2.29**	**267**	*e*P	Pn	04 28 56.7	+2.4
KPT				*e*S	Sn	04 29 25.6	+3.5
KOZ	**Kozyrevsk**	**2.48**	**270**	*e*P	Pn	04 28 59.3	+2.4
KOZ				*e*S	Sn	04 29 30.5	+3.8
SRDR	**Sredinnyy**	**2.56**	**276**	*e*P	Pn	04 28 59.7	+1.7
SRDR				*e*S	Sn	04 29 31.2	+2.5
SPN	**Mys Shipunski**	**3.94**	**221**	*e*S	Sn	04 30 03.7	+1.0
NLC	**Nalytchevo**	**4.14**	**226**	*e*S	Sn	04 30 09.4	+1.7
AVH	**Avacha**	**4.33**	**230**	*e*P	Pn	04 29 25.4	+3.1
GNL	**Ganaly**	**4.42**	**239**	*e*P	Pn	04 29 25.8	+2.4

MEX 13 04:55:20.2±0.3,14°.13N×91°.73W, h90km±8km, MD3.8, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.93**	**326**	*i* P	Pn	04 55 38.0	-1.2
THIG				*e*S	Sn	04 55 51.5	-1.8
PCIG		**2.12**	**318**	*

ellipse: s-maj=3.5km s-min=2.9km az=135.0
DDA ***13*** *06:02:30.4, 39.44N×33.10E, h14km±1km, Md3.5*
ISC 13 06:02:30.8±0.5, 39.43N±0.02×33.07E±0.03, h4km±3km, n59, σ0.96/85, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Afar-Bala (A**	**0.01**	**5**	*e*PG	**Pg**	**06 02 29.8**	**-1.8**
AFSR	**Afar-Bala (A**	**0.01**	**5**	*e*Pg	**Pg**	**06 02 29.8**	**-1.7**
BBAL	**Bala**	**0.12**	**21**	*i* P	**Pg**	**06 02 33.8**	**+0.6**
BBAL				*i* S	**Sg**	**06 02 35.8**	**+1.0**
BBAL	**Bala**	**0.12**	**21**	*i* P	**Pg**	**06 02 33.8**	**+0.6**
BBAL				*i* S	**Sg**	**06 02 35.8**	**+1.0**
KAMT	**Kaman**	**0.50**	**97**	*e*PG	**Pg**	**06 02 40.3**	**-0.1**
KAMT	**Kaman**	**0.50**	**97**	*e*Pg	**Pg**	**06 02 40.3**	**-0.2**
LOD	**Lodumlu**	**0.51**	**333**	*e*PG	**Pg**	**06 02 39.5**	**-1.1**
LOD				*e*SG	**Sg**	**06 02 47.4**	**0.0**
LOD	**Lodumlu**	**0.51**	**333**	*e*Pg	**Pg**	**06 02 39.6**	**-1.1**
LOD				*e*Sg	**Sg**	**06 02 47.4**	**0.0**
CDAG	**Cicekdag**	**1.03**	**79**	*i* P	**Pg**	**06 02 49.8**	**-0.7**
CDAG				*i* S	**Sg**	**06 03 03.1**	**-0.6**
CDAG	**Cicekdag**	**1.03**	**79**	*i* P	**Pg**	**06 02 49.8**	**-0.7**
CDAG				*i* S	**Sg**	**06 03 03.2**	**-0.6**
KIZT	**Kizilcal**	**1.08**	**240**	*e*PN	**Pn**	**06 02 51.2**	**-1.4**
KIZT	**Kizilcal**	**1.08**	**240**	*e*Pn	**Pn**	**06 02 51.2**	**-1.5**
ELDT	**Eldivan**	**1.09**	**14**	*i* P	**Pg**	**06 02 52.2**	**+0.5**
ELDT				*i* S	**Sg**	**06 03 07.8**	**+1.8**
ELDT	**Eldivan**	**1.09**	**14**	*i* P	**Pg**	**06 02 52.2**	**+0.4**
ELDT				*i* S	**Sg**	**06 03 07.8**	**+1.9**
KDHN	**Kadinhani**	**1.17**	**220**	*i* P	**Pg**	**06 02 52.8**	**-0.5**
KDHN				*i* S	**Sg**	**06 03 09.2**	**+0.7**
KDHN	**Kadinhani**	**1.17**	**220**	*i* P	**Pg**	**06 02 52.8**	**-0.5**
KDHN				*i* S	**Sg**	**06 03 09.2**	**+0.7**
SVRH	**Sivrihisar-ESK**	**1.20**	**271**	*e*PN	**Pn**	**06 02 53.4**	**-1.0**
SVRH				*e*SN	**Sn**	**06 03 10.4**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.20**	**271**	*e*Pn	**Pn**	**06 02 53.4**	**-0.9**
SVRH				*e*Sn	**Sn**	**06 03 10.4**	**-0.6**
CANT	**Cankiri**	**1.25**	**20**	*e*PN	**Pn**	**06 02 53.5**	**-1.6**
SULT	**Sultanhani-AKS**	**1.28**	**164**	*e*PN	**Pn**	**06 02 55.3**	**-0.1**
SULT	**Sultanhani-AKS**	**1.28**	**164**	*e*Pn	**Pn**	**06 02 55.3**	**-0.2**
SGKT	**Sivrigoynuk**	**1.38**	**326**	*i* P	**Pn**	**06 02 56.7**	**-0.1**
SGKT				*i* S	**Sg**	**06 03 18.0**	**+2.8**
SGKT	**Sivrigoynuk**	**1.38**	**326**	*i* P	**Pn**	**06 02 56.7**	**-0.2**
SGKT				*i* S	**Sg**	**06 03 18.0**	**+2.8**
CORM	**Corum**	**1.42**	**58**	*e*PN	**Pn**	**06 02 56.9**	**-0.4**
CORM	**Corum**	**1.42**	**58**	*e*Pn	**Pn**	**06 02 56.9**	**-0.4**
AVNT	**Avonos**	**1.54**	**115**	*i* P	**Pn**	**06 02 59.3**	**+0.3**
AVNT				*i* S	**Sn**	**06 03 20.6**	**+1.2**
AVNT	**Avonos**	**1.54**	**115**	*i* P	**Pn**	**06 02 59.3**	**+0.3**
AVNT				*i* S	**Sn**	**06 03 20.6**	**+1.2**
KONT	**Konya--Tatoy**	**1.58**	**201**	*e*PN	**Pn**	**06 02 59.8**	**+0.2**
KONT	**Konya--Tatoy**	**1.58**	**201**	*e*Pn	**Pn**	**06 02 59.8**	**+0.2**
ILGA	**Ilgaz**	**1.69**	**17**	*i* P	**Pn**	**06 03 02.0**	**+0.9**
ILGA				*i* S	**Sn**	**06 03 23.9**	**+0.6**
ILGA	**Ilgaz**	**1.69**	**17**	*i* P	**Pn**	**06 03 02.0**	**+0.8**
ILGA				*i* S	**Sn**	**06 03 23.9**	**+0.6**
ESKT	**Eskisehir**	**1.72**	**274**	*i* P	**Pn**	**06 03 02.0**	**+0.5**
ESKT				*i* S	**Sn**	**06 03 28.2**	**+4.3**
SEYT	**Eskypehyr**	**1.72**	**274**	*i* P	**Pn**	**06 03 02.0**	**+0.5**
SEYT				*i* S	**Sn**	**06 03 28.2**	**+4.3**
YOZ	**Yozgat**	**1.75**	**82**	*e*PN	**Pn**	**06 03 02.2**	**+0.3**
YOZ	**Yozgat**	**1.75**	**82**	*e*Pn	**Pn**	**06 03 02.2**	**+0.2**
MDU	**Mudurnu**	**1.76**	**307**	*e*PN	**Pn**	**06 03 01.7**	**-0.4**
MDU	**Mudurnu**	**1.76**	**307**	*e*Pn	**Pn**	**06 03 01.7**	**-0.4**
TOS	**Tosya**	**1.76**	**24**	*e*PN	**Pn**	**06 03 01.8**	**-0.3**
TOS	**Tosya**	**1.76**	**24**	*e*Pn	**Pn**	**06 03 01.8**	**-0.3**
CTKT	**Corum**	**1.78**	**47**	*i* P	**Pn**	**06 03 02.7**	**+0.3**
CTKT				*i* S	**Sn**	**06 03 24.3**	**-1.1**
CTKT	**Corum**	**1.78**	**47**	*i* P	**Pn**	**06 03 02.7**	**+0.4**
CTKT				*i* S	**Sn**	**06 03 24.3**	**-1.1**
BOLV	**Bolvadin**	**1.80**	**247**	*i* P	**Pn**	**06 03 03.3**	**+0.7**
BOLV				*i* S	**Sn**	**06 03 28.9**	**+3.1**
BOLV	**Bolvadin**	**1.80**	**247**	*i* P	**Pn**	**06 03 03.3**	**+0.7**
BOLV				*i* S	**Sn**	**06 03 28.9**	**+3.1**
SAFT	**Safranbolu**	**1.83**	**351**	*e*PN	**Pn**	**06 03 02.2**	**-0.9**
SAFT	**Safranbolu**	**1.83**	**351**	*e*Pn	**Pn**	**06 03 02.2**	**-0.8**
BALT	**Daday**	**2.11**	**6**	*i* P	**Pn**	**06 03 08.7**	**+1.8**
BALT				*e*S	**Sn**	**06 03 31.9**	**-1.7**
BALT	**Daday**	**2.11**	**6**	*i* P	**Pn**	**06 03 08.7**	**+1.7**
BALT				*e*S	**Sn**	**06 03 31.9**	**-1.8**
SHUT	**Suhut-Afyon**	**2.15**	**247**	*e*PN	**Pn**	**06 03 07.0**	**-0.5**
SHUT	**Suhut-Afyon**	**2.15**	**247**	*e*Pn	**Pn**	**06 03 07.0**	**-0.4**
GULT	**Gulveren**	**2.20**	**298**	*e*PN	**Pn**	**06 03 07.6**	**-0.6**
GULT	**Gulveren**	**2.20**	**298**	*e*Pn	**Pn**	**06 03 07.6**	**-0.6**
HDMB	**Hadim**	**2.51**	**191**	*e*PN	**Pn**	**06 03 12.9**	**+0.5**
HDMB	**Hadim**	**2.51**	**191**	*e*Pn	**Pn**	**06 03 12.9**	**+0.6**
SUTC	**Sutluce-Ispart**	**2.54**	**220**	*e*PN	**Pn**	**06 03 13.0**	**+0.2**
SUTC	**Sutluce-Ispart**	**2.54**	**220**	*e*Pn	**Pn**	**06 03 13.0**	**+0.2**
BZK	**Bozkurt**	**2.62**	**15**	*e*PN	**Pn**	**06 03 13.7**	**-0.3**
BZK	**Bozkurt**	**2.62**	**15**	*e*Pn	**Pn**	**06 03 13.7**	**-0.3**
KARA	**Karaisali**	**2.67**	**144**	*e*PN	**Pn**	**06 03 15.3**	**+0.7**
KARA	**Karaisali**	**2.67**	**144**	*e*Pn	**Pn**	**06 03 15.3**	**+0.7**

IDC ***13*** *06:38:42.2±2.5, 0.08N×98.60E, h0km, mb3.6/5, mb1 3.6/6, mb1mx3.5/19, mbtmp3.5/6, ML3.3/1, Error ellipse: s-maj=76.6km s-min=21.0km az=65.0*
DJA ***13*** *06:38:48, 0.37N×98.45E, h15km, MLv4.0/4*
ISCJB ***13*** *06:38:50.5±2.2, 0.4N±0.1×98.6E±0.2, h77km±15km, mb3.5/5, Error ellipse: s-maj=37.0km s-min=13.3km az=153.4*
ISC 13 06:38:51.0±2.0, 0.3N±0.1×98.6E±0.2, h66km±15km, n10, σ1.20/11, mb3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.11**	**65**	P	**Pn**	**06 39 09.5**	**-1.2**
MNSI				S	**Sn**	**06 39 25.8**	**+0.4**
SBSI	**Sibolga**	**1.26**	**14**	P	**Pn**	**06 39 12.7**	**0.0**
PPI	**Padang Panjang**	**1.98**	**113**	P	**Pn**	**06 39 23.8**	**+1.5**
PDSI	**Padang**	**2.25**	**123**	P	**Pn**	**06 39 26.7**	**+0.8**
PSI	**Prapat**	**2.49**	**8**	Pn	**Pn**	**06 39 27.6**	**-1.6**
	6.3nm,0.3s,baz=158,slow=5.4,SNR=21						
WRA	**Warramunga Arr**	**40.41**	**122**	P	**P**	**06 46 20.7**	**-2.3**
	0.3nm,0.3s,mb3.5,baz=304,slow=9.0,SNR=2.9						
ASAR	**Alice Springs**	**41.77**	**127**	P	**P**	**06 46 33.0**	**-1.1**
	0.2nm,0.4s,mb3.2,baz=297,slow=7.5,SNR=7.6						
KSRS	**Korea Array**	**45.81**	**33**	P	**P**	**06 47 06.7**	**+0.4**
	0.7nm,0.6s,mb3.5,baz=224,slow=8.3,SNR=6.0						
SONM	**Songino Array**	**47.81**	**7**	P	**P**	**06 47 23.1**	**+1.3**
	0.5nm,0.5s,mb3.6,baz=186,slow=12,SNR=5.1						
MKAR	**Makanchi Array**	**48.43**	**345**	P	**P**	**06 47 27.8**	**+1.3**
	0.8nm,0.5s,mb3.8,baz=150,slow=8.1,SNR=13						

IDC ***13*** *06:55:59.8±2.2, 30.01N×69.85E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML3.2/2, Error ellipse: s-maj=56.1km s-min=28.7km az=69.0*
ISCJB ***13*** *06:56:05.2±1.6, 30.3N±0.1×70.5E±0.3, h33km, mb3.4/5, Error ellipse: s-maj=36.1km s-min=21.5km az=176.3*
ISC 13 06:56:06.6±1.6, 30.2N±0.1×70.3E±0.3, h35km, n8, σ1.14/9, mb3.4/5, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**10.36**	**25**	*e*Pn	**Pn**	**06 58 30.8**	**-1.8**
KSH				Sn	**Sn**	**07 00 09.1**	**-18**
KSH				smax			
	comp=N,6.0nm,0.5s						
KSH				smax			
	comp=E,6.0nm,0.7s						
AAK	**Ala-Archa**	**12.82**	**14**	Pn	**Pn**	**06 59 07.1**	**+0.8**
	comp=E,0.0nm,0.3s,baz=222,slow=15,SNR=2.4						
MKAR	**Makanchi Array**	**18.97**	**26**	P	**Pn**	**07 00 26.3**	**+0.7**
	comp=E,0.2nm,0.3s,baz=209,slow=11,SNR=2.6						
AKTO	**Aktyubinsk**	**22.19**	**339**	P	**P**	**07 00 59.4**	**-0.1**
	comp=E,0.7nm,0.3s,mb3.5,baz=219,slow=6.5,SNR=2.3						
BVAR	**Borovoye Array**	**22.77**	**0**	P	**P**	**07 01 06.5**	**+0.8**
	comp=E,0.4nm,0.4s,mb3.2,baz=170,slow=10,SNR=2.9						
SONM	**Songino Array**	**32.71**	**47**	P	**P**	**07 02 39.0**	**+3.5**
	comp=E,0.5nm,0.7s,mb3.6,baz=248,slow=7.6,SNR=3.1						
ILAR	**Eielson Array**	**80.96**	**15**	P	**P**	**07 08 15.6**	**-1.5**
	comp=E,0.2nm,0.6s,mb3.2,baz=305,slow=5.0,SNR=5.2						
ASAR	**Alice Springs**	**81.20**	**124**	P	**P**	**07 08 19.3**	**+0.4**
	comp=E,0.2nm,0.3s,mb3.5,baz=313,slow=4.8,SNR=5.4						

ISCJB ***13*** *07:03:43.8±0.5, 39.98N±0.02×23.74E±0.04, h13km±4km, Error ellipse: s-maj=5.1km s-min=3.5km az=7.6*
CSEM ***13*** *07:03:43.8±0.2, 39.99N×23.73E, h15km, ML2.3/9, Error ellipse: s-maj=4.0km s-min=3.0km az=91.0*
THE ***13*** *07:03:43.9, 39.99N×23.73E, h15km, ML2.3/9, Error ellipse: s-maj=1.0km s-min=0.6km az=264.0*
ATH ***13*** *07:03:45.2, 39.98N×23.71E, h3km, MD3.0/4*
ISC 13 07:03:44.0±0.5, 39.99N±0.02×23.75E±0.04, h16km±3km, n36, σ0.62/61, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.08**	**221**	P	**Pg**	**07 03 46.7**	**-0.5**
PAIG				S	**Sg**	**07 03 48.5**	**-0.8**
PAIG	**Paliouri**	**0.08**	**221**	P	**Pg**	**07 03 46.7**	**-0.5**
PAIG				S	**Sg**	**07 03 48.5**	**-0.8**
OUR	**Ouranopolis**	**0.39**	**27**	P	**Pg**	**07 03 52.2**	**+0.2**
OUR				S	**Sg**	**07 03 57.6**	**+0.2**
OUR	**Ouranopolis**	**0.39**	**27**	P	**Pg**	**07 03 52.2**	**+0.2**
OUR				S	**Sg**	**07 03 57.6**	**+0.2**
PLG	**Polygyros**	**0.45**	**329**	*e*PG	**Pg**	**07 03 52.7**	**-0.3**
PLG				*e*SG	**Sg**	**07 03 58.8**	**-0.4**
PLG	**Polygyros**	**0.45**	**329**	P	**Pg**	**07 03 52.7**	**-0.3**
PLG				S	**Sg**	**07 03 58.9**	**-0.3**
PLG	**Polygyros**	**0.45**	**329**	P	**Pg**	**07 03 52.7**	**-0.3**
PLG				S	**Sg**	**07 03 58.9**	**-0.3**
HORT	**Hortiatis**	**0.79**	**321**	P	**Pb**	**07 03 58.9**	**-0.3**
HORT				S	**Sb**	**07 04 10.1**	**+0.5**
HORT	**Hortiatis**	**0.79**	**321**	P	**Pb**	**07 03 58.9**	**-0.3**
HORT				S	**Sb**	**07 04 10.1**	**+0.5**
NEO	**Neokhori**	**0.79**	**211**	*e*PG	**Pg**	**07 03 59.6**	**+0.2**
NEO				*e*SG	**Sg**	**07 04 10.2**	**+0.4**
NEO	**Neokhori**	**0.79**	**211**	*e*Pg	**Pg**	**07 03 59.6**	**+0.2**
NEO				*e*Sg	**Sg**	**07 04 10.2**	**+0.4**
AOS	**Alonnisos**	**0.82**	**173**	P	**Pb**	**07 03 59.4**	**-0.4**
AOS				S	**Sb**	**07 04 10.8**	**+0.2**
AOS	**Alonnisos**	**0.82**	**173**	P	**Pb**	**07 03 59.4**	**-0.4**
AOS				S	**Sb**	**07 04 10.8**	**+0.2**
SOH	**Sokhos**	**0.89**	**340**	*e*PG	**Pg**	**07 04 01.0**	**-0.2**
SOH	**Sokhos**	**0.89**	**340**	P	**Pb**	**07 04 00.9**	**0.0**
SOH				S	**Sb**	**07 04 12.6**	**+0.1**
SOH	**Sokhos**	**0.89**	**340**	*e*Pg	**Pg**	**07 04 01.0**	**-0.2**
SOH				S	**Sb**	**07 04 12.6**	**+0.1**
LIT	**Litokhoron**	**0.97**	**277**	*e*PG	**Pg**	**07 04 03.6**	**+0.8**
LIT				*e*SG	**Sg**	**07 04 16.9**	**+1.4**
LIT	**Litokhoron**	**0.97**	**277**	*e*Pg	**Pg**	**07 04 03.6**	**+0.8**
LIT				*e*Sg	**Sg**	**07 04 16.9**	**+1.4**
LIA	**Limnos Island**	**1.11**	**94**	*e*PB	**Pb**	**07 04 07.1**	**+2.4**
LIA	**Limnos Island**	**1.11**	**94**	*e*Pb	**Pb**	**07 04 07.1**	**+2.4**
SRS	**Serrai**	**1.14**	**354**	P	**Pn**	**07 04 04.8**	**-0.3**
SRS				S	**Sb**	**07 04 20.0**	**+0.3**
SRS	**Serrai**	**1.14**	**354**	P	**Pn**	**07 04 04.8**	**-0.3**
SRS				S	**Sb**	**07 04 20.0**	**+0.3**
KAVA	**Kavala**	**1.17**	**30**	P	**Pn**	**07 04 05.0**	**-0.5**
KAVA				S	**Sb**	**07 04 21.1**	**+0.6**
KAVA	**Kavala**	**1.17**	**30**	P	**Pn**	**07 04 05.0**	**-0.5**
KAVA				S	**Sb**	**07 04 21.1**	**+0.6**
KNT	**Kendrikon**	**1.34**	**331**	P	**Pn**	**07 04 07.3**	**-0.6**
KNT				S	**Sn**	**07 04 25.7**	**+0.3**
KNT	**Kendrikon**	**1.34**	**331**	P	**Pn**	**07 04 07.3**	**-0.6**
KNT				S	**Sn**	**07 04 25.7**	**+0.3**
ATAL	**Atalanti**	**1.41**	**204**	P	**Pn**	**07 04 08.5**	**-0.4**
ATAL	**Atalanti**	**1.41**	**204**	P	**Pn**	**07 04 08.5**	**-0.4**
GRG	**Griva**	**1.41**	**314**	P	**Pn**	**07 04 08.3**	**-0.6**
GRG				S	**Sn**	**07 04 26.4**	**-0.7**
GRG	**Griva**	**1.41**	**314**	P	**Pn**	**07 04 08.3**	**-0.6**
GRG				S	**Sn**	**07 04 26.4**	**-0.7**
AGG	**Agios Georgios**	**1.46**	**229**	P	**Pn**	**07 04 09.4**	**-0.2**
AGG	**Agios Georgios**	**1.46**	**229**	P	**Pn**	**07 04 09.4**	**-0.2**
RDO	**Rodhopi**	**1.79**	**49**	P	**Pn**	**07 04 13.6**	**-0.5**
RDO	**Rodhopi**	**1.79**	**49**	P	**Pn**	**07 04 13.6**	**-0.5**
ALN	**Alexandroupoli**	**1.98**	**62**	P	**Pn**	**07 04 16.4**	**-0.3**
ALN	**Alexandroupoli**	**1.98**	**62**	P	**Pn**	**07 04 16.4**	**-0.3**

JMA 13 07:05:49.1±0.1, 39.64N×144.05E, h54km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.71**	**281**	P	Pn	07 06 17.2	+0.7
JTH				*e*S	Sn	07 06 38.4	+1.2
MIYJ	**Miyakonagasawa**	**1.72**	**269**	P	Pn	07 06 17.6	+0.9
MIYJ				S	Sn	07 06 38.6	+1.1
OFUJ	**Ofunato**	**1.93**	**254**	P	Pn	07 06 20.0	+0.5
OFUJ				S	Sn	07 06 42.7	+0.2
JANG	**Nango**	**2.08**	**291**	P	Pn	07 06 22.2	+0.7
JANG				S	Sn	07 06 46.7	+0.4
JOM	**Ohasama**	**2.14**	**266**	P	Pn	07 06 23.6	+1.3
JOM				S	Sn	07 06 49.0	+1.3
JMK	**Ichinoseki**	**2.30**	**254**	P	Pn	07 06 25.4	+0.8
JMK				S	Sn	07 06 52.1	+0.4
JNBK	**Urakawa-nobuka**	**2.81**	**340**	P	Pn	07 06 32.7	+1.1
JNBK				S	Sn	07 07 06.3	+2.0
JOT	**Ohata**	**2.88**	**308**	P	Pn	07 06 33.9	+1.5
JCH	**Churui**	**3.02**	**350**	P	Pn	07 06 35.1	+0.8
NEM2	**Nemuro 2**	**3.93**	**18**	P	Pn	07 06 45.4	-1.5
NEM2				S	Sn	07 07 27.1	-4.6
JTKR	**Abashiri--Toko**	**4.33**	**359**	P	Pn	07 06 52.8	+0.5
JTKR				S	Sn	07 07 39.7	-1.7
MAT	**Matsushiro**	**5.55**	**238**	P	Pn	07 07 10.4	+1.3
MAT				*e*S	Sn	07 08 17.2	+5.7

ISCJB ***13*** *07:07:47.0±0.6, 36.99N±0.03×29.30E±0.03, h2km±6km, Error ellipse: s-maj=5.1km s-min=4.1km az=158.0*
ISK ***13*** *07:07:46.3, 36.97N×29.29E, h5km, MD3.0*
DDA ***13*** *07:07:47.8, 37.01N×29.32E, h7km±7km, Md3.1*
CSEM ***13*** *07:07:47.1±0.2, 36.98N×29.30E, h5km, MD3.1, Error ellipse: s-maj=4.6km s-min=3.7km az=4.0*
ISC 13 07:07:47.5±0.5, 36.99N±0.03×29.30E±0.03, h6km±5km, n45, σ1.03/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.33**	**40**	*i* P	**Pg**	**07 07 53.5**	**-0.4**
GOLH				*i* S	**Sg**	**07 07 58.7**	**+0.5**
GOLH	**Golhisar**	**0.33**	**40**	*i* P	**Pg**	**07 07 53.5**	**-0.4**
GOLH				*i* S	**Sg**	**07 07 58.7**	**+0.5**
FETY	**Fethiye**	**0.39**	**206**	*e*PG	**Pg**	**07 07 54.0**	**-1.1**
FETY				*e*SG	**Sg**	**07 07 59.6**	**-0.5**
FETY	**Fethiye**	**0.39**	**206**	*e*Pg	**Pg**	**07 07 54.0**	**-1.1**
FETY				*e*Sg	**Sg**	**07 07 59.6**	**-0.5**
ELL	**Elmali**	**0.54**	**116**	*e*PG	**Pg**	**07 07 57.2**	**-0.8**
ELL				*e*SG	**Sg**	**07 08 05.3**	**+0.2**
ELL	**Elmali**	**0.54**	**116**	*e*Pg	**Pg**	**07 07 57.2**	**-0.8**
ELL				*e*Sg	**Sg**	**07 08 05.3**	**+0.2**
TURN	**Turunc**	**0.57**	**259**	*i* P	**Pg**	**07 08 04.4**	**+5.9**
AKAS	**Kas**	**0.79**	**162**	*i* P	**Pg**	**07 08 02.1**	**-0.6**
AKAS				*i* S	**Sg**	**07 08 15.8**	**+2.9**
AKAS	**Kas**	**0.79**	**162**	*i* P	**Pg**	**07 08 02.1**	**-0.6**
DENT	**Denizli**	**0.80**	**345**	*e*PG	**Pg**	**07 08 02.2**	**-0.7**
DENT	**Denizli**	**0.80**	**345**	*e*Pg	**Pg**	**07 08 02.2**	**-0.6**
YER	**Yerkesik**	**0.83**	**281**	*e*PG	**Pg**	**07 08 02.5**	**-0.9**
YER	**Yerkesik**	**0.83**	**281**	*e*Pg	**Pg**	**07 08 02.5**	**-0.9**
KORT	**Korkueli**	**0.84**	**89**	*i* P	**Pg**	**07 08 04.1**	**+0.4**
KORT				*i* S	**Sg**	**07 08 16.4**	**+1.7**
KORT	**Korkueli**	**0.84**	**89**	*i* P	**Pg**	**07 08 04.1**	**+0.4**
KORT				*i* S	**Sg**	**07 08 16.4**	**+1.8**
ANTB	**Antalya**	**1.09**	**94**	*e*PN	**Pn**	**07 08 07.6**	**-1.7**
ANTB	**Antalya**	**1.09**	**94**	*e*Pn	**Pn**	**07 08 07.6**	**-1.8**
BCK	**Bucak**	**1.13**	**65**	*e*PN	**Pn**	**07 08 08.7**	**-1.2**
BCK	**Bucak**	**1.13**	**65**	*e*Pn	**Pn**	**07 08 08.7**	**-1.3**
MLSB	**Milas**	**1.25**	**285**	*e*PN	**Pn**	**07 08 10.7**	**-0.9**
MLSB	**Milas**	**1.25**	**285**	*e*Pn	**Pn**	**07 08 10.7**	**-0.9**
AYDN	**Tasoluk**	**1.32**	**301**	*i* P	**Pn**	**07 08 13.5**	**+1.0**
AYDN				*i* S	**Sg**	**07 08 32.4**	**+2.5**
AYDN	**Tasoluk**	**1.32**	**301**	*i* P	**Pn**	**07 08 13.5**	**+1.0**
KHL	**Karahalli**	**1.35**	**8**	*e*PN	**Pn**	**07 08 12.5**	**-0.4**
KHL	**Karahalli**	**1.35**	**8**	*e*Pn	**Pn**	**07 08 12.5**	**-0.4**
KHAL	**Karahalli**	**1.39**	**6**	*i* P	**Pn**	**07 08 13.1**	**-0.4**
KHAL				*i* S	**Sb**	**07 08 31.7**	**-0.3**
KHAL	**Karahalli**	**1.39**	**6**	*i* P	**Pn**	**07 08 13.1**	**-0.4**
KHAL				*i* S	**Sb**	**07 08 31.7**	**-0.3**
DAT	**Datca**	**1.40**	**260**	*e*PN	**Pn**	**07 08 13.1**	**-0.6**
DAT	**Datca**	**1.40**	**260**	*e*Pn	**Pn**	**07 08 13.1**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.44**	**70**	*e*PN	**Pn**	**07 08 13.8**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.44**	**70**	*e*Pn	**Pn**	**07 08 13.8**	**-0.4**
BDRM	**Kayabasi**	**1.49**	**274**	*i* P	**Pn**	**07 08 16.0**	**+1.2**
BDRM				*i* S	**Sn**	**07 08 36.8**	**+2.2**
BDRM	**Kayabasi**	**1.49**	**274**	*i* P	**Pn**	**07 08 16.0**	**+1.2**
BODT	**Bodrum**	**1.59**	**273**	*e*PN	**Pn**	**07 08 15.6**	**-0.7**
BODT	**Bodrum**	**1.59**	**273**	*e*Pn	**Pn**	**07 08 15.6**	**-0.7**
KULA	**Kula-Manisa**	**1.61**	**342**	*e*PN	**Pn**	**07 08 16.3**	**-0.2**
KULA	**Kula-Manisa**	**1.61**	**342**	*e*Pn	**Pn**	**07 08 16.3**	**-0.2**
GAZI	**Gazipasa**	**2.54**	**106**	*i* P	**Pn**	**07 08 30.8**	**+1.4**
GAZI	**Gazipasa**	**2.54**	**106**	*i* P	**Pn**	**07 08 30.8**	**+1.5**
HDMB	**Hadim**	**2.55**	**90**	*e*PN	**Pn**	**07 08 29.7**	**+0.2**
HDMB	**Hadim**	**2.55**	**90**	*e*Pn	**Pn**	**07 08 29.7**	**+0.2**
KONT	**Konya--Tatoy**	**2.62**	**68**	*e*PN	**Pn**	**07 08 30.4**	**0.0**
KONT	**Konya--Tatoy**	**2.62**	**68**	*e*Pn	**Pn**	**07 08 30.4**	**0.0**
KIZT	**Kizilcal**	**2.78**	**46**	*e*PN	**Pn**	**07 08 32.9**	**+0.3**
KIZT	**Kizilcal**	**2.78**	**46**	*e*Pn	**Pn**	**07 08 32.9**	**+0.3**

IDC ***13*** *07:17:55.6±0.9, 3.43S×135.46E, h0km, mb4.1/3, mb1 4.3/5, mb1mx3.9/15, mbtmp4.2/5, ML4.1/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/24, Error ellipse: s-maj=47.7km s-min=22.7km az=72.0*
ISCJB ***13*** *07:17:57.6±3.9, 3.71S±0.08×135.6E±0.1, h25km±28km, mb4.3/4, Error ellipse: s-maj=20.5km s-min=13.0km az=17.0*
NEIC ***13*** *07:18:00.6±0.8, 3.51S×135.54E, h35km, mb4.2/3, Error ellipse: s-maj=18.8km s-min=13.9km az=75.0*
ISC 13 07:18:02.2±2.8, 3.7S±0.1×135.6E±0.1, h50km±29km, n19, σ1.42/15, mb4.3/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**9.45**	**199**	*e*Pn	**Pn**	**07 20 16.9**	**+1.1**
	136nm,0.5s						
KAKA				*e*Sn	**Sn**	**07 22 01.5**	**+0.8**
COEN	**Coen**	**12.61**	**144**	*e*Pn	**Pn**	**07 20 58.9**	**-0.1**
	96nm,0.6s						
WB2	**Warramunga Arr**	**16.16**	**184**	*e*P	**Pn**	**07 21 43.7**	**-2.3**
WB2				*e*S	Sx	07 24 34.7	
WRA	**Warramunga Arr**	**16.16**	**184**	Pn	**Pn**	**07 21 43.4**	**-2.7**
	1.1nm,0.3s,baz=2.8,slow=13,SNR=36						
WRA				Sn	Sx	07 24 35.1	
	0.3nm,0.3s,baz=8.7,slow=23,SNR=4.6						
FITZ	**Fitzroy Crossi**	**17.29**	**214**	P	**Pn**	**07 21 59.1**	**-1.2**
	0.6nm,0.3s,baz=40,slow=14,SNR=26						
FITZ				S	Sx	07 24 58.9	
	0.7nm,0.3s,baz=187,slow=10,SNR=5.9						
FITZ				LR	LR	07 27 58.7	
	comp=Z,98nm,20.7s,baz=328,slow=34						
FITZ	**Fitzroy Crossi**	**17.29**	**214**	*e*P	**Pn**	**07 21 59.8**	**-0.4**
	3.8nm,0.7s						
FITZ				S	Sx	07 24 58.9	
CTA	**Charters Tower**	**19.29**	**148**	P	**Pn**	**07 22 26.4**	**+2.0**
	0.3nm,0.3s,baz=334,slow=5.9,SNR=6.2						
CTAO	**Charters Tower**	**19.29**	**148**	*e*P	**Pn**	**07 22 26.3**	**+1.8**
	16nm,1.1s						
GUMO	**Guam**	**19.52**	**28**	LR	LR

NOUC AML AML 07 33 07.0
comp=Z,3μm,6.8s
MSVF Nonsavu 10.23 71 *e*Pn **Pn 07 34 39.6 -0.1**
MSVF Nonsavu 10.23 71 Pn **Pn 07 34 40.0 +0.3**
comp=Z,486nm,0.9s,SNR=20
HNR Honiara 14.05 326 Pn **Pn 07 35 31.7 -0.1**
comp=Z,7.0nm,0.3s,baz=12,slow=3.7,SNR=4.3
HNR LR LR 07 40 23.0
comp=Z,639nm,18.0s,baz=302,slow=35
HNR Honiara 14.05 326 *e*Pn **Pn 07 35 33.0 +1.2**
HNR Honiara 14.05 326 *e*P **Pn 07 35 33.0 +1.2**
OUZ Omahuta 14.76 161 *e*Pn **Pn 07 35 42.2 +1.0**
comp=Z,163nm,1.9s
EIDS Eidsvold 15.94 252 *e*P **Pn 07 35 57.1 +0.4**
comp=Z,32nm,0.9s
ARMA Armidale 17.19 235 *e*P **Pn 07 36 14.3 +1.9**
ARMA Armidale 17.19 235 *e*P **Pn 07 36 15.2 +2.8**
comp=Z,162nm,1.4s
URZ Urewera 18.69 157 P **Pn 07 36 30.0 -0.7**
comp=Z,0.8nm,0.3s,baz=2.6,slow=5.5,SNR=17
URZ LR LR 07 42 53.3
comp=Z,2μm,18.2s,baz=225,slow=34
URZ Urewera 18.69 157 *e*P **Pn 07 36 31.0 +0.3**
comp=Z,324nm,1.7s
WPVZ Whakapapa 19.02 161 P **Pn 07 36 36.8 +2.1**
BKZ Black Stump Fm 19.29 159 P **Pn 07 36 37.7 -0.1**
CTA Charters Tower 20.26 270 P **P 07 36 48.5 +1.2**
comp=Z,44nm,1.0s,baz=90,slow=14,SNR=13
CTA Charters Tower 20.26 270 *e*P **P 07 36 48.6 +1.3**
comp=Z,31nm,1.0s
CTA Charters Tower 20.26 270 P **P 07 36 48.5 +1.2**
CTAO Charters Tower 20.26 270 *e*P **P 07 36 48.6 +1.4**
comp=Z,80nm,1.2s
CTAO Charters Tower 20.26 270 *e*P **P 07 36 48.6 +1.3**
CTAO pmax pmax
comp=Z,80nm,1.2s
CTAO Charters Tower 20.26 270 P **P 07 36 48.8 +1.5**
comp=Z,63nm,1.3s
BFZ Birch Farm 20.59 162 P **P 07 36 50.1 -0.6**
AFI Afiamalu 20.73 73 P **P 07 36 48.1 -4.4**
comp=Z,135nm,1.0s,baz=243,slow=4.5,SNR=4.9
AFI Afiamalu 20.73 73 *e*P **P 07 36 49.0 -3.4**
comp=Z,121nm,0.9s
AFI Afiamalu 20.73 73 *e*P **P 07 36 49.0 -3.4**
AFI pmax pmax
comp=Z,121nm,0.9s
SNZO South Karori 20.77 165 *e*P **P 07 36 52.2 -0.4**
comp=Z,44nm,1.0s
CNB Canberra Magne 21.41 225 *e*P **P 07 37 01.7 +2.2**
KHZ Kahutara 21.59 169 *e*P **P 07 37 01.5 0.0**
comp=Z,90nm,1.1s,mb5.1
CAN Canberra 21.65 226 *e*P **P 07 37 04.0 +1.8**
comp=Z,43nm,0.8s,mb4.9
CAN Canberra 21.65 226 *e*P **P 07 37 04.0 +1.8**
CAN pmax pmax
comp=Z,43nm,0.8s,mb4.9
RPZ Rata Peaks 22.51 174 P **P 07 37 11.1 -0.1**
comp=Z,89nm,1.2s,mb5.1,baz=25,slow=6.4,SNR=11
RPZ Rata Peaks 22.51 174 *e*P **P 07 37 11.3 +0.1**
comp=Z,221nm,1.5s,mb5.4
PMG Port Moresby 23.17 298 *e*P **P 07 37 18.4 -0.1**
comp=Z,67nm,0.9s,mb5.1
PMG Port Moresby 23.17 298⇑ *e*P **P 07 37 18.3 -0.2**
PMG pmax pmax
comp=Z,63nm,0.8s
PMG Port Moresby 23.17 298 P **P 07 37 18.5 0.0**
comp=Z,87nm,0.9s,mb5.2
COEN Coen 24.62 283 *e*P **P 07 37 32.6 +0.7**
comp=Z,187nm,0.8s,mb5.7
COEN Coen 24.62 283 P **P 07 37 33.0 +1.1**
comp=Z,151nm,1.7s,mb5.3
TOO Toolangi 25.25 225 *e*P **P 07 37 38.3 +0.8**
STKA Stephens Creek 25.69 240 P **P 07 37 42.1 +0.7**
comp=Z,30nm,0.9s,mb4.8,baz=67,slow=7.9,SNR=30
STKA LR LR 07 48 09.5
comp=Z,1μm,18.0s,MS4.5,baz=48,slow=37
STKA Stephens Creek 25.69 240 *e*P **P 07 37 41.7 +0.2**
comp=Z,28nm,0.9s,mb4.8
STKA Stephens Creek 25.69 240 *e*P **P 07 37 42.1 +0.7**
comp=Z,29nm,1.6s,mb4.6
RAR Rarotonga 30.13 96 LR LR 07 46 58.3
comp=Z,372nm,20.9s,MS4.0,baz=270,slow=30
WB2 Warramunga Arr 31.37 266 *e*P **P 07 38 30.5 -1.8**
WRA Warramunga Arr 31.38 266 P **P 07 38 31.1 -1.3**
comp=Z,10nm,0.9s,mb4.7,baz=93,slow=8.9,SNR=37
WRA PKiKP PKiKP 07 48 53.0 -2.1
comp=Z,0.3nm,0.9s,baz=358,slow=0.5,SNR=6.1
WRA LR LR 07 50 44.4
comp=Z,525nm,18.5s,MS4.2,baz=100,slow=35
WRA Warramunga Arr 31.38 266 P **P 07 38 31.1 -1.2**
ASAR Alice Springs 31.43 259 P **P 07 38 32.3 -0.5**
comp=Z,40nm,0.7s,mb5.3,baz=83,slow=9.5,SNR=358
ASAR PcP PcP 07 41 24.9 -0.6
comp=Z,4.1nm,1.0s,baz=91,slow=3.7,SNR=5.2
ASAR PKiKP PKiKP 07 48 53.2 -1.9
comp=Z,0.6nm,0.8s,baz=121,slow=1.3,SNR=4.5
ASAR Alice Springs 31.43 259 P **P 07 38 32.3 -0.5**
ASAR PcP PcP 07 41 24.9 -0.6
ASAR Alice Springs 31.43 259 P **P 07 38 32.3 -0.5**
ASAR 07 41 25.0
KAKA Kakadu 34.87 278⇓ *i*P **P 07 39 02.0 -0.9**
comp=Z,25nm,0.8s,mb5.2
KAKA Kakadu 34.87 278 *e*P **P 07 39 02.0 -0.9**
comp=Z,121nm,1.0s,mb5.8
KAKA Kakadu 34.87 278 P **P 07 39 02.4 -0.5**
comp=Z,366nmcomp=Z,53nm,0.9s,mb5.5
FORT Forrest 36.83 247 *e*P **P 07 39 16.8 -2.7**
comp=Z,92nm,0.8s,mb5.7
FORT Forrest 36.83 247 *e*P **P 07 39 19.5 0.0**
comp=Z,105nm,0.7s,mb5.8
BAKI Biak 36.85 299 P **P 07 39 20.2 +0.3**
BAKI Biak 36.85 299 P **P 07 39 20.3 +0.4**
comp=Z,106nm,0.8s,mb5.7
KNA Kununurra 37.42 272 P **P 07 39 24.1 -0.5**
comp=Z,1μmcomp=Z,198nm,0.9s,mb6.0
TLE Tual 37.42 290 P **P 07 39 25.6 +1.0**
TLE Tual 37.42 290 P **P 07 39 25.6 +1.0**
TBI Tubuai 39.42 101 *e*S **S 07 45 37.3 -3.2**
comp=Z,255nm,28.8s
TBI *e*LQ 07 48 34.1
comp=Z,852nm,32.2s
TBI *e*LR LR 07 50 17.5
comp=Z,416nm,30.8s
FITZ Fitzroy Crossi 39.80 267 P **P 07 39 44.6 0.0**
comp=Z,78nm,0.8s,mb5.5,baz=122,slow=7.5,SNR=105
FITZ Fitzroy Crossi 39.80 267⇓ *i*P **P 07 39 44.5 -0.1**
comp=Z,134nm,0.9s,mb5.7
FITZ Fitzroy Crossi 39.80 267 *e*P **P 07 39 44.5 -0.1**
comp=Z,89nm,0.9s,mb5.5
FITZ Fitzroy Crossi 39.80 267 P **P 07 39 44.8 +0.2**
comp=Z,3μmcomp=Z,224nm,0.9s,mb5.9
PPT Papeete 40.22 92 *e*S **S 07 45 47.8 -4.6**
comp=Z,311nm,25.2s
PPT *e*LQ 07 49 13.0
comp=Z,1μm,27.5s
PPT *e*LR LR 07 50 55.5
comp=Z,782nm,31.8s,baz=254
PPT Papeete 40.22 92 LR LR 07 52 50.7
comp=Z,114nm,18.9s,MS3.7,baz=265,slow=31
GUMO Guam 41.38 325 P **P 07 39 56.8 -0.7**
comp=Z,98nm,1.2s,mb5.3,baz=191,slow=12,SNR=3.7
GUMO Guam 41.38 325 P **P 07 39 56.8 -0.8**
MBWA Marble Bar 44.73 261 *e*P **P 07 40 24.5 -0.3**
comp=Z,83nm,0.9s,mb5.6
MBWA Marble Bar 44.73 261 P **P 07 40 24.8 +0.1**
comp=Z,109nm,0.9s,mb5.7
KLBR Kellerberrin 45.69 246 *e*P **P 07 40 31.3 -0.9**
comp=Z,89nm,1.0s,mb5.7
NWAO Narrogin (SRO) 46.15 244 *e*P **P 07 40 35.5 -0.3**
comp=Z,46nm,0.8s,mb5.5
NWAO Narrogin (SRO) 46.15 244 *e*P **P 07 40 35.5 -0.3**
NWAO pmax pmax
comp=Z,46nm,0.8s
KDI Kendari 47.18 285 P **P 07 40 44.3 +0.2**
comp=Z,34nm,1.1s,mb5.2
BKSI Bulukumba 48.88 282 P **P 07 40 57.0 -0.3**
comp=Z,524nmcomp=Z,32nm,1.0s,mb5.3
BMNI Bima 48.99 277 P **P 07 40 58.1 0.0**
comp=Z,133nm,1.0s,mb5.9
SPSI Sidrap Palu 49.75 283 P **P 07 41 03.3 -0.6**
comp=Z,28nm,1.2s,mb5.2
TTSI Tana Toraja 50.09 284 P **P 07 41 06.7 +0.2**
comp=Z,36nm,1.0s,mb5.3
MTNI Mataram 51.29 276 P **P 07 41 15.7 +0.1**
comp=Z,6μmcomp=Z,67nm,1.4s,mb5.4
KHKI Kahang-Kahang 51.91 276 P **P 07 41 21.0 +0.8**
KHKI Kahang-Kahang 51.91 276 P **P 07 41 19.5 -0.7**
comp=Z,51nm,1.2s,mb5.3
JAGI Jajag, Banyuwa 53.22 275 P **P 07 41 29.4 -0.5**
comp=Z,92nm,1.3s,mb5.6
MYLDM Lahad Datu 55.08 293 P **P 07 41 43.8 +0.4**
MYLDM Lahad Datu 55.08 293 P **P 07 41 45.2 +1.8**
comp=Z,40nm,1.3s,mb5.3
TSM Tawau 55.18 291 P **P 07 41 44.9 +0.7**
SJI Sawahan 55.69 275 P **P 07 41 48.5 +0.7**
comp=Z,4μmcomp=Z,60nm,1.1s,mb5.5
SDKM Sandakan 56.43 292 P **P 07 41 52.7 -0.4**
SBA Scott Base 56.60 180 *e*P **P 07 41 54.0 +0.6**
comp=Z,62nm,1.0s,mb5.6
SBA Scott Base 56.60 180 *e*P **P 07 41 54.0 +0.6**
SBA pmax pmax
comp=Z,62nm,1.0s,mb5.6
KDM Kudat 57.38 294 P **P 07 42 00.4 +0.5**
KKM Kota Kinabalu 57.48 292 P **P 07 42 00.9 +0.3**
KKM Kota Kinabalu 57.48 292 *e*P **P 07 42 00.5 -0.1**
comp=Z,103nm,1.3s,mb5.7
KKM Kota Kinabalu 57.48 292 P **P 07 42 00.8 +0.3**
comp=Z,743nmcomp=Z,71nm,1.2s,mb5.6
CASY Casey 57.73 204 *e*P **P 07 42 00.7 -0.8**
CASY Casey 57.73 204 *e*P **P 07 42 00.6 -0.9**
comp=Z,31nm,1.0s,mb5.3
BJII Banjamegara 57.74 275 P **P 07 42 02.8 +0.4**
comp=Z,36nm,1.9s,mb5.1
BTM Bintulu 58.88 288 P **P 07 42 10.9 +0.6**
STKI Sintang 58.95 284 P **P 07 42 12.0 +1.1**
comp=Z,94nm,1.0s,mb5.8
SBUM Sibu 59.31 286 P **P 07 42 14.2 +0.8**
SBUM Sibu 59.31 286 P **P 07 42 14.0 +0.6**
comp=Z,23nm,1.3s,mb5.0
LEM Lembang 59.86 274 P **P 07 42 18.0 +0.8**
LEM Lembang 59.86 274 P **P 07 42 18.0 +0.8**
LEM Lembang 59.86 274 P **P 07 42 18.0 +0.8**
comp=Z,156nm,1.0s,mb6.0
KSM Kuching 60.60 284 P **P 07 42 22.6 +0.3**
KSM Kuching 60.60 284 *e*P **P 07 42 22.3 0.0**
comp=Z,73nm,0.9s,mb5.8
KSM Kuching 60.60 284 P **P 07 42 22.0 -0.2**
comp=Z,655nmcomp=Z,86nm,1.0s,mb5.8
CBJI Citeko 60.72 275 P **P 07 42 22.3 -0.7**
CBJI Citeko 60.72 275 P **P 07 42 22.1 -0.9**
comp=Z,293nm,0.9s,mb6.4
KASI Kota Agung 63.22 275 P **P 07 42 38.6 -1.2**
comp=Z,2μmcomp=Z,100nm,1.0s,mb5.9
MDSI Maura Dua 63.89 276 P **P 07 42 43.0 -1.3**
comp=Z,50nm,1.1s,mb5.5
MJAR Matsushiro Arr 63.99 334 P **P 07 42 43.5 -0.8**
comp=Z,13nm,0.7s,mb5.0,baz=172,slow=7.7,SNR=43
MJAR Matsushiro Arr 63.99 334 P **P 07 42 43.5 -0.9**
MAJO Matsushiro 63.99 334 *e*P **P 07 42 43.4 -1.0**
comp=Z,23nm,1.0s,mb5.2
MAJO Matsushiro 63.99 334 *e*P **P 07 42 43.4 -1.0**
MAJO pmax pmax
comp=Z,23nm,1.0s,mb5.2
MAT Matsushiro 63.99 334 P **P 07 42 43.4 -1.0**
MAT *e*S **S 07 51 33.0 +15**
JNU Nakatsue 64.62 326 *e*P **P 07 42 48.3 -0.2**
comp=Z,22nm,1.5s,mb5.0
MIR Mirnyy 64.63 205⇓ *i*P **P 07 42 48.2 0.0**
MIR pmax pmax
comp=Z,86nm,1.6s,mb5.5
MYKOM Kota Tinggi 66.60 282 P **P 07 43 02.4 +0.5**
KGM Kluang 67.18 282 P **P 07 43 06.1 +0.6**
SDSI Sungai Dareh 67.76 278 P **P 07 43 07.6 -1.6**
comp=Z,8μmcomp=Z,23nm,1.0s,mb5.2
YUK Yuzh-Kuril'sk 68.07 343⇓ *i*P **P 07 43 04.1 -6.3**
YUK *i* S S 07 51 58.9 -8.0
YUK MLR MLR
comp=Z,225nm,20.2s,MS4.4
BKNI Bangkinang 68.60 279 P **P 07 43 13.1 -1.4**
comp=Z,6μmcomp=Z,210nm,0.6s,mb6.2
KTGM Kuala Trenggan 68.72 285 P **P 07 43 15.8 +0.6**
QSPA South Pole Qui 68.77 180 P **P 07 43 14.2 -0.2**
comp=Z,53nm,0.9s,mb5.5,baz=16,slow=2.1,SNR=153
ASAJ Asahikawa 69.09 341 P **P 07 43 17.7 +0.9**
comp=Z,43nm,0.9s,mb5.4,baz=245,slow=12,SNR=15
ASAJ Asahikawa 69.09 341 *e*P **P 07 43 17.4 +0.6**
comp=Z,24nm,1.0s,mb5.1
KSRS Korea Array 69.50 327 P **P 07 43 19.2 -0.2**
comp=Z,13nm,0.9s,mb4.9,baz=144,slow=6.2,SNR=50
QIZ Qiongzhong 69.50 301 P **P 07 43 20.5 +0.6**
QIZ pP pP 07 43 32.5 +0.2
QIZ S S 07 52 24.4 -0.4
QIZ sS sS 07 52 50.6 +5.1
QIZ pmax pmax
comp=Z,19nm,1.3s,mb4.9
QIZ pmax pmax
comp=Z,200nm,5.7s
QIZ Qiongzhong 69.50 301 *e*P **P 07 43 19.3 -0.6**
comp=Z,7.9nm,0.9s,mb4.6
MNSI Mandailing Nat 70.13 279 P **P 07 43 22.8 -1.1**
comp=Z,1μmcomp=Z,38nm,0.9s,mb5.3
INCN Inchon 70.18 326 *e*P **P 07 43 24.0 +0.4**
comp=Z,92nm,1.4s,mb5.5
IPM Ipoh 70.27 283 P **P 07 43 24.6 -0.2**
IPM Ipoh 70.27 283 *e*P **P 07 43 24.4 -0.4**
comp=Z,26nm,0.8s,mb5.2
NJ2 Nanjing 70.81 317 *e*P **P 07 43 09.8 -18**
NJ2 pP pP 07 43 20.4 -20
NJ2 sP sP 07 43 23.8 -21
NJ2 PP PP 07 45 47.6 -18
NJ2 S S 07 52 20.5 -19
NJ2 sS sS 07 52 36.5 -24
NJ2 pmax pmax
comp=Z,30nm,0.9s,mb5.2
NJ2 pmax pmax
comp=Z,450nm,5.8s
NJ2 LR LR
comp=N,1μm,15.4s,MS5.5
NJ2 LR LR
comp=E,2μm,16.3s,MS5.5
NJ2 LR LR
comp=Z,4μm,17.5s,MS5.7
KULM Kulim 70.94 284 P **P 07 43 29.1 +0.2**
YSS Yuzh-Sakhalins 71.62 342 *e*P **P 07 43 33.4 +1.2**
comp=Z,71nm,1.0s,mb5.5
YSS Yuzh-Sakhalins 71.62 342⇓ *e*P **P 07 43 32.6 +0.5**
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.5
VLA Vladivostok 72.14 333 *i* P **P 07 43 36.5 +1.1**
VLA pmax pmax
comp=Z,1.0nm,79.0s
WHN Wuhan 72.80 313 P **P 07 43 39.0 -0.6**
DL2 Dalian 73.90 324 P **P 07 43 46.0 +0.1**
DL2 pmax pmax
comp=Z,50nm,0.8s,mb5.5
MDJ Mudanjiang 74.33 333 P **P 07 43 48.8 +0.5**
MDJ pP pP 07 44 03.3 +2.5
MDJ sP sP 07 44 09.3 +3.7
MDJ PP PP 07 46 36.3 +1.2
MDJ pmax pmax
comp=Z,39nm,1.1s,mb5.2
MDJ pmax pmax
comp=Z,97nm,4.6s
MDJ LR LR
comp=N,120nm,26.5s,MS4.1
MDJ LR LR
comp=E,44nm,26.5s,MS4.1
MDJ LR LR
comp=Z,190nm,20.3s
MDJ Mudanjiang 74.33 333 *e*P **P 07 43 48.7 +0.5**
comp=Z,39nm,1.0s,mb5.3
PET Petropavlovsk 74.44 354 *e*P **P 07 43 46.0 -2.7**
PET *e*S S 07 53 17.1 -3.0
PET pmax pmax
comp=Z,100nm,13.8s
PET MLR MLR
comp=Z,100nm,21.0s,MS4.1
PETK Petropavlovsk- 74.62 354 P **P 07 43 50.3 +0.6**
comp=Z,28nm,0.8s,mb5.2,baz=150,slow=8.0,SNR=33
PETK Petropavlovsk- 74.62 354 P **P 07 43 50.3 +0.6**
SNY Shenyang 74.99 327⇑ P **P 07 43 52.5 +0.3**
SNY pmax pmax
comp=Z,21nm,0.7s,mb5.2
HABR Khabarovsk 75.41 338 *e*P **P 07 43 52.8 -1.6**
HABR *e**PP pP 07 44 03.0 -3.9
HABR *e* pP 07 44 05.8 -1.1
HABR *e*S S 07 53 29.2 -1.9
HABR *e* 07 54 02.3
HABR *e*SSS 08 01 42.2
HABR pmax pmax
comp=N,7.0nm,0.7s
HABR pmax pmax
comp=E,16nm,1.2s
HABR pmax pmax
comp=Z,40nm,1.2s,mb5.2
HABR MLR MLR
comp=Z,104nm,18.0s,MS4.2
CN2 Changchun 75.56 330 *e*P **P 07 43 55.3 -0.1**
CN2 pmax pmax
comp=Z,50nm,0.9s,mb5.4
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,10.0s,MS5.0
CN2 LR LR
comp=E,300nm,10.0s,MS5.0
CN2 LR LR
comp=Z,200nm,10.0s,MS4.7
GYA Guiyang 75.96 306 P **P 07 44 00.3 +2.2**
GYA pP pP 07 44 14.3 +3.7
GYA sP sP 07 44 19.8 +4.4
GYA PP PP 07 46 53.0 +3.8
GYA S S 07 53 37.8 -0.3
GYA SKS 07 54 01.3
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,150nm,5.3s
GYA LR LR
comp=N,590nm,19.9s,MS5.0
GYA LR LR
comp=E,480nm,20.0s,MS5.0
GYA LR LR
comp=Z,540nm,18.1s,MS4.9
ENH Enshi 76.01 311 *e*P **P 07 43 57.9 -0.3**
comp=Z,14nm,0.7s,mb5.0
MAW Mawson 76.05 202 P **P 07 43 58.8 +0.8**
comp=Z,19nm,1.0s,mb5.0,baz=106,slow=7.9,SNR=32
MAW LR LR 08 14 31.7
comp=Z,197nm,18.3s,MS4.5,baz=256,slow=33
MAW Mawson 76.05 202 *e*P **P 07 43 58.3 +0.3**
comp=Z,16nm,1.0s,mb4.9
MAW Mawson 76.05 202 *e*P **P 07 43 58.4 +0.5**
comp=Z,7.6nm,1.2s,mb4.5
MAW Mawson 76.05 202 *e*P **P 07 43 58.4 +0.4**
MAW pmax pmax
comp=Z,8.0nm,1.2s
KLR Kul'dur 77.22 337 *e*P **P 07 44 00.0 -4.7**
KLR pmax pmax
comp=Z,70nm,1.8s,mb5.3
BJT Baijiatuau 77.73 322 *e*P **P 07 44 08.0 +0.2**
comp=Z,20nm,0.8s,mb5.1
BJT Baijiatuau 77.73 322 *e*P **P 07 44 08.0 +0.3**
BJT pmax pmax
comp=Z,19nm,0.8s
BJI Beijing 77.74 322 P **P 07 44 07.9 +0.1**
BJI pmax pmax
comp=Z,33nm,0.9s,mb5.3
BJI LR LR
comp=N,260nm,18.6s,MS4.8
BJI LR LR
comp=E,270nm,16.6s,MS4.8
BJI LR LR
comp=Z,160nm,19.2s,MS4.4
CHRT Chiangrai 78.14 297 ⇓P **P 07 44 10.5 0.0**
comp=Z,329nm,1.0s,mb6.2
CM31 Chiang Mai Arr 78.19 295 *e*P **P 07 44 11.9 +1.1**
comp=Z,2.5nm,0.5s,mb4.4
CMAR Chiang Mai Arr 78.19 295 P **P 07 44 11.8 +1.0**
comp=Z,17nm,0.9s,mb5.0,baz=135,slow=4.4,SNR=43
CMAR Chiang Mai Arr 78.19 295 P **P 07 44 11.8 +1.0**
KMI Kunming 78.28 303 P **P 07 44 12.8 +1.6**
KMI pP pP 07 44 32.5 +8.7
KMI PP PP 07 47 12.3 +3.5
KMI S S 07 53 59.1 -4.4
KMI SS SS 07 59 08.3 +1.2
KMI pmax pmax
comp=Z,22nm,1.0s,mb5.0
KMI pmax pmax
comp=Z,160nm,4.5s
KMI LR LR
comp=N,360nm,24.7s,MS4.8
KMI LR LR
comp=E,350nm,25.3s,MS4.8
KMI LR LR
comp=Z,320nm,24.2s,MS4.6
CHG Chiang Mai 78.35 296 ⇓P **P 07 44 12.5 +0.8**
comp=Z,31nm,1.0s,mb5.2
CHTO Chiang Mai 78.35 296 *e*P **P 07 44 12.3 +0.6**
comp=Z,23nm,0.9s,mb5.1
CHTO Chiang Mai 78.35 296 *e*P **P 07 44 12.3 +0.6**
CHTO pmax pmax
comp=Z,23nm,0.9s,mb5.1
CHTO Chiang Mai 78.35 296 P **P 07 44 12.6 +0.9**
comp=Z,40nm,1.1s,mb5.3
CD2 Chengdu 80.48 308⇑ *i*P **P 07 44 23.6 +0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CD2 pmax pmax
comp=Z,40nm,5.2s
HHC Hu-ho-hao-te 80.96 320 ⇑P **P 07 44 26.8 +1.5**
HHC pP pP 07 44 43.6 +5.6
HHC sP sP 07 44 50.4 +7.6
HHC S S 07 54 30.1 -1.0
HHC pmax pmax
comp=Z,42nm,1.1s,mb5.3
HHC pmax pmax
comp=Z,180nm,5.7s
HHC LR LR
comp=N,270nm,15.4s,MS4.8
HHC LR LR
comp=E,210nm,14.7s,MS4.8
HHC LR LR
comp=Z,220nm,14.6s,MS4.7
SYO Syowa Base 82.61 197⇑ *i*P **P 07 44 31.6 -2.1**
SYO Syowa Base 82.61 197⇑ *e*PcP PcP 07 44 36.2 -2.4
LZH Lanzhou 83.16 313 *e*P **P 07 44 38.1 +1.1**
LZH pP pP 07 44 52.3 +2.6
LZH sP sP 07 44 57.5 +3.0
LZH *e*PP PP 07 47 52.1 +3.1
LZH *e*S S 07 54 53.3 -0.7
LZH sS sS 07 55 17.5 +2.3
LZH pmax pmax
comp=Z,49nm,1.6s,mb5.3
LZH pmax pmax
comp=Z,150nm,7.2s
LZH LR LR
comp=N,300nm,16.2s,MS5.3
LZH LR LR
comp=E,1μm,15.8s,MS5.3
LZH LR LR
comp=Z,440nm,19.3s,MS4.8
SEY Seymchan 84.84 353⇑ *e*P **P 07 44 45.1 +0.2**
CLNS Chul'man 85.80 338 *e*P **P 07 44 46.9 -2.9**
CLNS *e* pP 07 44 56.6 -6.0
CLNS *e**SS sS 07 55 18.6 -22
CLNS pmax pmax
comp=Z,66nm,1.0s,mb5.8
CLNS pmax pmax
comp=N,18nm,0.9s
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
NVL N'lazarevskaya 86.66 188 *e*P **P 07 44 52.7 -1.4**
NVL MLR MLR
comp=Z,468nm,18.0s,MS4.9
MAIT Maitri 86.66 188 *e*P **P 07 44 53.2 -0.9**
GTA Gaotai 87.61 314 *e*P **P 07 44 59.6 +0.5**
GTA pP pP 07 45 13.6 +1.7
GTA sP sP 07 45 18.9 +2.2
GTA SKS 07 55 22.4
GTA S S 07 55 36.9 -0.8
GTA sS sS 07 56 00.1 +1.0
GTA pmax pmax
comp=Z,13nm,1.3s,mb5.0
GTA pmax pmax
comp=Z,150nm,6.2s
GTA LR LR
comp=N,210nm,19.5s,MS4.8
GTA LR LR
comp=E,270nm,18.5s,MS4.8
ULN Ulaanbaatar 87.75 324 *e*P **P 07 45 00.2 +0.6**
comp=E,56nm,1.0s,mb5.8
ULN Ulaanbaatar 87.75 324 *e*P **P 07 45 00.2 +0.6**
ULN pmax pmax
comp=Z,56nm,1.0s,mb5.8
ULN Ulaanbaatar 87.75 324 P **P 07 45 00.3 +0.7**

HOPS Hopland 88.08 47 *eP* **P 07 45 01.3 -0.1**
comp=Z,9.2nm,1.0s,mb5.0
SONM Songino Array 88.10 324 P **P 07 45 01.5 +0.3**
comp=Z,27nm,0.9s,mb5.5,baz=139,slow=5.0,SNR=116
SONM Songino Array 88.10 324 P **P 07 45 01.5 +0.3**
SAO San Andreas Ge 88.14 49 *eP* **P 07 45 00.6 -1.1**
comp=Z,10nm,1.0s,mb5.0
SAO San Andreas Ge 88.14 49 *eP* **P 07 45 00.6 -1.1**
SAO pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
YAK Yakutsk 88.45 343 *eP* **P 07 45 00.6 -1.9**
YAK *e* pP 07 45 10.1 -5.2
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK pmax pmax
comp=Z,88nm,1.4s,mb5.8
YAK pmax pmax
comp=N,18nm,1.4s
TTA Tatalina 88.65 16 *eP* **P 07 45 03.3 -0.2**
TTA Tatalina 88.65 16 *eP* **P 07 45 03.3 -0.2**
BILL Bilibino 89.08 359 *eP* **P 07 45 05.5 +0.1**
comp=N,11nm,0.8s,mb5.2
BILL Bilibino 89.08 359 *d iP* **P 07 45 05.2 -0.2**
BILL *e* 07 48 32.3
BILL *e* 07 55 35.7
BILL *e*PS PS 07 56 59.5 -1.0
BILL pmax pmax
comp=Z,51nm,1.7s,mb5.6
WDC Whiskeytown Da 89.22 46 *eP* **P 07 45 06.7 0.0**
comp=Z,18nm,1.2s,mb5.3
WDC Whiskeytown Da 89.22 46 *eP* **P 07 45 06.7 0.0**
WDC pmax pmax
comp=Z,18nm,1.2s,mb5.3
ARVC Arvin 89.27 52 ⇓P **P 07 45 07.2 +0.2**
baz=89
PASC Pasadena Art C 89.32 53 *eP* **P 07 45 06.5 -0.8**
comp=Z,12nm,1.1s,mb5.2
VES Vestal, Richgr 89.40 51 ⇑P **P 07 45 07.3 -0.4**
baz=90,SNR=7.5
MWC Mount Wilson 89.44 53 *eP* **P 07 45 07.5 -0.4**
comp=Z,29nm,1.3s,mb5.4
MWC Mount Wilson 89.44 53 *eP* **P 07 45 07.5 -0.4**
MWC pmax pmax
comp=Z,29nm,1.3s,mb5.5
CMB Columbia Colle 89.48 49 *eP* **P 07 45 07.7 -0.3**
comp=Z,22nm,1.1s,mb5.4
CMB Columbia Colle 89.48 49 *eP* **P 07 45 07.7 -0.3**
CMB pmax pmax
comp=Z,22nm,1.1s,mb5.4
109C Camp Elliot, M 89.57 54 ⇓P **P 07 45 08.5 -0.1**
baz=90
YBH Yreka Blue Hor 89.66 44 P **P 07 45 08.8 +0.1**
comp=Z,13nm,1.1s,mb5.2,baz=202,slow=2.3,SNR=10
YBH LR LR 08 15 35.4
comp=Z,85nm,21.7s,MS4.1,baz=253,slow=29
YBH Yreka Blue Hor 89.66 44 P **P 07 45 08.8 0.0**
BFSC Mount Baldy Ra 89.74 53 ⇑P **P 07 45 09.1 -0.2**
baz=90,SNR=10
ISA Isabella 89.77 51 ⇓P **P 07 45 09.1 -0.3**
baz=90,SNR=25
ISA Isabella 89.77 51 *eP* **P 07 45 09.4 0.0**
comp=Z,32nm,1.1s,mb5.6
ISA Isabella 89.77 51 *eP* **P 07 45 09.4 0.0**
ISA pmax pmax
comp=Z,32nm,1.1s,mb5.6
EDW2 Edwards Air Fo 89.77 52 ⇓P **P 07 45 09.7 +0.2**
baz=90,SNR=10
MURC Murrieta 89.80 54 ⇑P **P 07 45 09.4 -0.3**
baz=90
HUMO Hull Mountain 89.93 44 *eP* **P 07 45 10.2 +0.2**
comp=Z,22nm,1.3s,mb5.3
MONP Monument Peak 90.09 55 ⇑P **P 07 45 11.2 +0.2**
baz=90
DVTC Desert V Tower 90.23 55 ⇑P **P 07 45 11.8 +0.2**
baz=90
LRMC Laurel Mountai 90.26 52 ⇑P **P 07 45 11.7 0.0**
baz=90,SNR=11
WAKR Walker 90.36 49 *eP* **P 07 45 12.3 +0.2**
comp=Z,19nm,1.2s,mb5.3
PFO Pinyon Flat Ob 90.37 54 ⇑P **P 07 45 12.3 0.0**
baz=90,SNR=11
PFO Pinyon Flat Ob 90.37 54 *eP* **P 07 45 11.7 -0.5**
comp=Z,14nm,1.1s,mb5.2
PFO Pinyon Flat Ob 90.37 54 *eP* **P 07 45 11.7 -0.6**
PFO pmax pmax
comp=Z,14nm,1.1s,mb5.2
PFO Pinyon Flat Ob 90.37 54 P **P 07 45 12.2 -0.1**
comp=Z,58nm,0.9s,mb5.9,SNR=5.1
WCN Washoe City 90.50 48 ⇑P **P 07 45 13.1 +0.4**
baz=91
WCN Washoe City 90.50 48 *eP* **P 07 45 12.6 -0.2**
comp=Z,8.4nm,1.2s,mb5.0
WCN Washoe City 90.50 48 *eP* **P 07 45 12.6 -0.1**
WCN pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
TIN Tinemaha 90.56 50 ⇓P **P 07 45 13.5 +0.4**
baz=91,SNR=5.1
SWSC Sam W. Stewart 90.58 55 ⇓P **P 07 45 13.1 -0.2**
baz=91,SNR=15
MPMC Manual Prospec 90.66 51 ⇓P **P 07 45 13.6 +0.1**
baz=91,SNR=21
GSC Goldstone 90.83 52 ⇑P **P 07 45 13.9 -0.5**
baz=91,SNR=6.4
GSC Goldstone 90.83 52 *eP* **P 07 45 14.3 -0.1**
comp=Z,16nm,1.4s,mb5.2
GSC Goldstone 90.83 52 *eP* **P 07 45 14.3 -0.1**
GSC pmax pmax
comp=Z,16nm,1.4s,mb5.2
BELC Belle Mtn. Jos 90.88 54 P **P 07 45 14.7 +0.1**
baz=91,SNR=28
PAHR Pah Rah Range 90.94 47 *eP* **P 07 45 14.4 -0.3**
comp=Z,20nm,1.2s,mb5.3
HEC Hector,Ludlow 90.98 53 ⇑P **P 07 45 15.0 -0.1**
baz=91,SNR=10
NVAR Mina Array Bea 91.12 49 P **P 07 45 15.6 0.0**
comp=Z,8.2nm,0.7s,mb5.2,baz=227,slow=8.5,SNR=74
NVAR Mina Array Bea 91.12 49 P **P 07 45 15.6 -0.1**
BC3 Big Chuckawall 91.14 54 ⇑P **P 07 45 16.3 +0.4**
baz=91,SNR=9.8
GRAC Grapevine Rang 91.16 51 ⇓P **P 07 45 15.9 +0.1**
baz=91,SNR=17
ZAK Zakamensk 91.22 325 *eP* **P 07 45 15.2 -0.6**
ZAK pmax pmax
comp=Z,18nm,1.2s,mb5.3
FURC Furnace Creek, 91.30 51 P **P 07 45 16.4 -0.1**
baz=91,SNR=12
K05A Summer Lake 91.32 44 ⇓P **P 07 45 16.7 +0.2**
baz=91
MOD Modoc 91.33 45 *eP* **P 07 45 16.4 -0.1**
comp=Z,13nm,1.3s,mb5.1
GLA Glamis 91.37 55 ⇓P **P 07 45 17.6 +0.6**
baz=91,SNR=5.1
GLA Glamis 91.37 55 *eP* **P 07 45 17.5 +0.6**
comp=Z,35nm,1.4s,mb5.5
GLA Glamis 91.37 55 *eP* **P 07 45 17.5 +0.6**
GLA pmax pmax
comp=Z,35nm,1.4s,mb5.5
GMRC Granite Mounta 91.46 53 ⇑P **P 07 45 17.4 +0.1**
baz=92,SNR=7.8
SHOC Shoshone 91.47 52 ⇑P **P 07 45 17.3 -0.1**
baz=92,SNR=13
TUQ Turquoise Moun 91.54 52 ⇑P **P 07 45 17.9 +0.3**
baz=92,SNR=6.8
IRM Iron Mountain 91.58 54 ⇑P **P 07 45 18.0 +0.1**
baz=92,SNR=14
U10A Ash Meadows, A 91.66 51 ⇓P **P 07 45 18.6 +0.4**
baz=92
IRK Irkutsk 91.71 327 *eP* **P 07 45 17.0 -1.0**
IRK pmax pmax
comp=Z,35nm,1.5s,mb5.5
TLY Talaya 91.72 326 *eP* **P 07 45 18.1 0.0**
comp=Z,39nm,1.3s,mb5.6
TLY Talaya 91.72 326 *eP* **P 07 45 17.9 -0.2**
TLY pmax pmax
comp=Z,35nm,1.3s,mb5.5
Y12C Blythe 91.89 55 ⇓P **P 07 45 19.3 0.0**
baz=92,SNR=6.8
LDFC Landfair 92.00 53 *eP* **P 07 45 19.9 +0.2**
comp=Z,28nm,1.2s,mb5.5
113A Mohawk Valley, 92.07 56 P **P 07 45 20.1 -0.1**
baz=92,SNR=12
V11A Goodsprings 92.07 52 P **P 07 45 20.2 +0.1**
baz=92,SNR=12
WRAK Wrangell Islan 92.26 29 *eP* **P 07 45 20.1 -0.3**
comp=Z,31nm,1.3s,mb5.5
W12A Cal Nev Ari 92.27 53 ⇓P **P 07 45 21.3 +0.3**
baz=92,SNR=6.4

Z13A Yuma Proving G 92.33 55 ⇓P **P 07 45 21.7 +0.3**
baz=92,SNR=19
COLA College 92.38 17 *eP* **P 07 45 19.1 -1.7**
comp=Z,13nm,1.0s,mb5.2
COLA College 92.38 17 *eP* **P 07 45 19.1 -1.7**
COLA pmax pmax
comp=Z,13nm,1.0s,mb5.2
PDMCI Parker Dam,Lak 92.40 54 ⇓P **P 07 45 22.0 +0.3**
baz=92,SNR=7.7
Y13A Salome 92.44 55 ⇑P **P 07 45 22.1 +0.2**
baz=92,SNR=9.3
V12A Nelson 92.46 53 ⇓P **P 07 45 22.0 +0.1**
baz=92,SNR=9.6
214A Organ Pipe Nat 92.48 57 P **P 07 45 22.3 +0.2**
baz=92,SNR=7.8
SHPR Sheep Range 92.55 52 *eP* **P 07 45 22.4 +0.1**
comp=Z,10nm,1.1s,mb5.2
ILAR Eielson Array 92.57 18 P **P 07 45 19.9 -1.8**
comp=Z,4.4nm,0.8s,mb5.0,baz=239,slow=4.6,SNR=39
ILAR LR LR 08 23 56.4
comp=Z,75nm,19.4s,MS4.2,baz=259,slow=34
ILAR Eielson Array 92.57 18 P **P 07 45 19.9 -1.8**
WVOR Wild Horse Val 92.67 45 *eP* **P 07 45 22.4 -0.3**
comp=Z,14nm,1.3s,mb5.2
WVOR Wild Horse Val 92.67 45 *eP* **P 07 45 22.4 -0.3**
WVOR pmax pmax
comp=Z,14nm,1.3s,mb5.2
114A Black Gap (USA 92.74 56 ⇓P **P 07 45 23.3 0.0**
baz=93
X13A Yucca 92.76 54 ⇑P **P 07 45 23.3 0.0**
baz=93,SNR=9.5
T11A Corn Creek, Al 92.81 51 ⇑P **P 07 45 23.7 +0.2**
baz=93
SKAG Skagway 92.85 25 *eP* **P 07 45 23.4 +0.3**
comp=Z,40nm,1.6s,mb5.6
W13A Hualapai Mount 92.92 53 ⇑P **P 07 45 24.4 +0.4**
baz=93
U12A Valley of Fire 92.98 52 ⇓P **P 07 45 24.5 +0.2**
baz=93,SNR=9.2
Y14A Wickenburg 93.12 55 ⇑P **P 07 45 25.1 +0.1**
baz=93
V13A Grand Canyon W 93.15 53 ⇑P **P 07 45 25.2 +0.1**
baz=93,SNR=9.4
J08A Circle Bar Ran 93.19 45 ⇑P **P 07 45 25.2 +0.1**
baz=93
S12A Delamar Landin 93.23 51 ⇑P **P 07 45 26.2 +0.8**
baz=93,SNR=5.7
U13A Pakoon Wash 93.39 52 ⇓P **P 07 45 26.9 +0.7**
baz=94,SNR=7.5
X14A Yava 93.42 54 ⇑P **P 07 45 26.7 +0.4**
baz=94,SNR=5.6
W14A Seligman 93.57 54 ⇑P **P 07 45 27.7 +0.7**
baz=94,SNR=6.7
116A Eloy 93.58 57 ⇑P **P 07 45 27.5 +0.4**
baz=94,SNR=6.4
COLD Coldfoot 93.59 15 *eP* **P 07 45 25.8 -0.5**
comp=Z,22nm,1.0s,mb5.5
Y15A Casa Rosa Ranc 93.64 55 P **P 07 45 27.4 0.0**
baz=94,SNR=12
T13A Saint George 93.68 52 ⇓P **P 07 45 27.6 +0.1**
baz=94,SNR=6.2
V14A Boquillas Ranc 93.72 53 ⇑P **P 07 45 28.0 +0.3**
baz=94,SNR=6.8
G08A Pilot Rock 93.74 43 ⇓P **P 07 45 27.4 -0.2**
baz=94
X15A Humboldt 93.92 55 ⇓P **P 07 45 29.0 +0.4**
baz=94,SNR=9.3
S13A Holt Ranch, En 93.94 51 ⇑P **P 07 45 28.9 +0.3**
baz=94
U14A Mt Trumbull 93.97 53 ⇓P **P 07 45 29.6 +0.8**
baz=94,SNR=8.5
217A Green Valley 93.97 58 ⇓P **P 07 45 29.1 +0.1**
baz=94,SNR=9.4
TUC Tucson 94.20 57 *eP* **P 07 45 30.2 +0.2**
comp=Z,7.3nm,1.1s,mb5.0
TUC Tucson 94.20 57 *eP* **P 07 45 30.2 +0.2**
TUC pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
Y16A Circle Bar Ran 94.27 55 ⇓P **P 07 45 30.6 +0.3**
baz=94,SNR=11
EGAK Eagle 94.28 20 *eP* **P 07 45 28.7 -0.9**
comp=Z,28nm,1.0s,mb5.6
117A Oracle 94.34 57 P **P 07 45 31.1 +0.5**
baz=94,SNR=9.5
DAWY Dawson 94.36 21 *eP* **P 07 45 29.2 -0.8**
DLBC Dease Lake 94.45 28 P **P 07 45 28.4 -2.1**
comp=Z,6.0nm,1.1s,mb4.9,baz=288,slow=9.5,SNR=5.4
DLBC Dease Lake 94.45 28 P **P 07 45 28.4 -2.1**
V15A Kaibab Nationa 94.49 53 ⇓P **P 07 45 32.2 +1.0**
baz=94
318A Bisbee 94.50 58 ⇓P **P 07 45 31.6 +0.2**
baz=94,SNR=6.8
X16A Lo Mia Camp, P 94.50 55 ⇓P **P 07 45 31.6 +0.3**
baz=95,SNR=7.4
U15A North Rim 94.64 53 ⇑P **P 07 45 32.4 +0.5**
baz=95
Q14A Sevier Lake (B 94.92 50 ⇓P **P 07 45 33.0 -0.1**
baz=95
X17A Forest Lakes 94.95 55 ⇑P **P 07 45 33.9 +0.5**
baz=95
MFID Camas Ranch 94.96 45 ⇓P **P 07 45 33.3 +0.1**
baz=95
118A Homack Ranch, 94.96 57 ⇑P **P 07 45 33.8 +0.3**
baz=95
319A Douglas 95.04 58 ⇓P **P 07 45 34.2 +0.3**
baz=95
219A White Tail Can 95.28 58 ⇑P **P 07 45 35.3 +0.3**
baz=95
U16A Tuba City 95.39 53 ⇑P **P 07 45 35.9 +0.5**
baz=96
V17A Tonalea, Kykot 95.45 54 ⇓P **P 07 45 35.8 +0.1**
baz=96
320A Kipp Ranch, An 95.62 59 ⇑P **P 07 45 37.3 +0.7**
baz=96
HLID Hailey 95.96 46 ⇓P **P 07 45 36.6 -1.2**
baz=96
G12A Big Creek, Yel 95.99 44 ⇓P **P 07 45 36.3 -1.6**
baz=96
H12A Diamond D Ranc 96.06 45 ⇑P **P 07 45 37.8 -0.4**
baz=96
S17A Black Ridge (B 96.20 52 ⇑P **P 07 45 38.4 -0.6**
baz=96
Q16A Castle Valley 96.41 51 ⇓P **P 07 45 40.7 +0.8**
baz=96
J14A Carey 96.46 46 ⇑P **P 07 45 39.9 -0.1**
baz=96
T18A Mexican Hat 96.70 53 ⇓P **P 07 45 41.2 -0.1**
baz=97
SRU San Rafael 96.95 51 ⇓P **P 07 45 42.4 +0.1**
baz=97
WMQ Urumqi 97.70 314 *eP* **P 07 45 47.0 +1.4**
WMQ pmax pmax
comp=Z,15nm,1.0s,mb5.5
ANMO Albuquerque 98.52 56 P **P 07 45 48.5 -1.0**
comp=Z,0.5nm,0.5s,mb4.3,baz=317,slow=2.5,SNR=4.4
ANMO Albuquerque 98.52 56 P **P 07 45 48.6 -1.0**
TXAR Lajitas Array 98.87 62 P **P 07 45 50.8 -0.5**
comp=Z,1.0nm,0.9s,mb4.4,baz=224,slow=7.0,SNR=8.0
TXAR PKKPbc PKKPbc 08 02 18.4 -0.3
comp=Z,0.2nm,0.8s,baz=66,slow=3.1,SNR=3.5
TXAR LR LR 08 26 48.2
comp=Z,103nm,18.1s,MS4.4,baz=180,slow=33
TXAR Lajitas Array 98.87 62 P **P 07 45 50.8 -0.5**
INK Inuvik 98.90 19 P **P 07 45 49.6 -0.8**
comp=Z,5.6nm,1.0s,mb5.0,baz=308,slow=14,SNR=4.5
INK Inuvik 98.90 19 *eP* **P 07 45 49.1 -1.4**
comp=Z,20nm,1.5s,mb5.4
INK Inuvik 98.90 19 *eP* **P 07 45 49.1 -1.3**
INK pmax pmax
comp=Z,20nm,1.5s
PDAR Pinedale Array 98.95 48 P **P 07 45 51.1 -0.2**
comp=Z,0.5nm,0.8s,baz=207,slow=3.0,SNR=6.0
PDAR LR LR 08 20 00.9
comp=Z,60nm,20.1s,baz=112,slow=29
MK31 Makanchi Array 102.30 315 *e*Pdif Pdif 07 46 05.7 -0.4
MK31 Makanchi Array 102.30 315 *e*P Pdif 07 46 05.7 -0.4
MKAR Makanchi Array 102.30 315 P Pdif 07 46 06.0 -0.1
comp=Z,1.2nm,0.9s,baz=100,slow=6.3,SNR=7.7
MKAR PP PP 07 50 16.1 -3.0
comp=Z,0.8nm,0.8s,baz=106,slow=8.9,SNR=5.2
MKAR PKiKP PKiKP 07 50 26.8 -1.0
comp=Z,1.9nm,1.1s,baz=95,slow=3.0,SNR=4.5
MKAR PKKPbc PKKPbc 08 02 07.2 -2.2
comp=Z,1.3nm,0.8s,baz=286,slow=3.8,SNR=12
MKAR Makanchi Array 102.30 315 P Pdif 07 46 06.0 -0.1
MKAR PP PP 07 50 16.1 -3.0
MKAR Makanchi Array 102.30 315 P Pdif 07 46 06.1 0.0
MKAR 07 50 16.1

ZALV Zalesovo Beam 102.98 323 Pdiff Pdif 07 46 07.4 -1.8
comp=Z,1.1nm,0.6s,baz=104,slow=5.0,SNR=5.3
ZALV Zalesovo Beam 102.98 323 P Pdif 07 46 07.4 -1.8
YKA Yellowknife Ar 103.08 28 P Pdif 07 46 07.8 -1.8
comp=Z,1.9nm,0.9s,baz=252,slow=4.6,SNR=4.1
YKA Yellowknife Ar 103.08 28 P Pdif 07 46 07.8 -1.8
KKAR Karatay Array 109.47 310 *e*PKPdf PKiKP 07 50 40.4 -0.8
BVAR Borovoye Array 111.17 320 PKiKP PKiKP 07 50 43.5 -0.6
comp=Z,3.0nm,0.8s,baz=119,slow=1.9,SNR=14
BVAR PKKPbc PKKPbc 08 01 38.7 -3.3
comp=Z,0.9nm,0.8s,baz=255,slow=4.5,SNR=4.8
BVAR Borovoye Array 111.17 320 PKIKP PKiKP 07 50 43.5 -0.6
BRVK Borovoye 111.24 320 *c i*PKIKP PKiKP 07 50 43.5 -0.7
BRVK pmax pmax
comp=Z,2.0nm,0.7s
LPAZ La Paz 113.59 120 PKiKP PKiKP 07 50 49.8 0.0
comp=Z,1.6nm,0.8s,baz=19,slow=1.6,SNR=4.9
LPAZ La Paz 113.59 120 PKIKP PKiKP 07 50 49.8 0.0
ABKAR Akbulak array 117.44 315 *e*PKPdf PKPdf 07 50 55.1 -1.1
ARU Arti 118.13 324 *e*PKPdf PKPdf 07 50 56.4 -0.9
ARU Arti 118.13 324 *i* PKIKP PKPdf 07 50 56.4 -0.9
ARU 07 57 46.6
ARU SP SP 08 01 52.8 -0.6
AKTK Aktyubinsk 118.69 317 PKP PKPdf 07 50 58.3 -0.3
AKTO Aktyubinsk 118.69 317 PKP PKPdf 07 50 58.3 -0.3
comp=Z,7.4nm,0.7s,baz=95,slow=2.1,SNR=29
AKTO Aktyubinsk 118.69 317 PKIKP PKPdf 07 50 58.3 -0.3
LBTB Lobatse 121.15 220 PKP PKPdf 07 51 03.1 -1.1
comp=Z,1.9nm,0.7s,baz=321,slow=4.0,SNR=3.3
LBTB Lobatse 121.15 220 PKIKP PKPdf 07 51 03.2 -1.0
PRGR Permogore 123.70 331 PKIKP PKPdf 07 51 06.1 -1.8
PRGR pmax pmax
comp=Z,7.0nm,0.6s
LVZ Lovozero 125.16 340 *c i*PKIKP PKPdf 07 51 09.7 -0.8
LVZ pmax pmax
comp=Z,16nm,1.7s
APA Apatity 125.74 340 ⇓*i*PKIKP PKPdf 07 51 11.0 -0.6
APA pmax pmax
comp=Z,13nm,1.0s
ARCES ARCESS Array B 126.71 344 PKP PKPdf 07 51 13.1 -0.3
comp=Z,5.3nm,0.7s,baz=94,slow=1.8,SNR=31
ARCES ARCESS Array B 126.71 344 PKIKP PKPdf 07 51 13.1 -0.3
KLMR Klimovskoe 126.74 331 *e*PKIKP PKPdf 07 51 11.8 -1.9
KLMR pmax pmax
comp=Z,30nm,1.4s
KMBO Kilima Mbogo 126.86 252 PKP PKPdf 07 51 15.7 +0.2
comp=Z,1.2nm,0.5s,baz=180,slow=24,SNR=7.3
KMBO Kilima Mbogo 126.86 252 PKIKP PKPdf 07 51 15.7 +0.3
GNI Garni 128.50 305 PKIKP PKPdf 07 51 17.9 +0.2
comp=Z,6.4nm,0.6s,baz=39,slow=23,SNR=5.8
GNI Garni 128.50 305 *c i*PKIKP PKPdf 07 51 18.5 +0.8
GNI pmax pmax
comp=Z,16nm,1.7s
BDFB Brasilia 129.14 133 PKP PKPdf 07 51 19.2 -0.5
comp=Z,5.8nm,0.7s,baz=260,slow=1.5,SNR=8.4
BDFB Brasilia 129.14 133 PKIKP PKPdf 07 51 19.2 -0.5
KIV Kislovodsk 129.63 310 ⇓*i*PKIKP PKPdf 07 51 20.6 +0.9
KIV pmax pmax
comp=Z,17nm,1.5s
VORD Divnogorie 130.35 320 *e*PKIKP PKPdf 07 51 21.2 +0.3
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,4.0nm,0.3s
VORD pmax pmax
comp=E,10.0nm,0.9s
VSR Storozhevoye 130.35 320 *e*PKIKP PKPdf 07 51 20.1 -0.8
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.8s
OBN Obninsk 130.48 325 ⇓*i*PKIKP PKPdf 07 51 21.5 +0.5
OBN pmax pmax
comp=Z,27nm,1.3s
FINES FINESS Array B 131.97 336 PKP PKPdf 07 51 23.3 -0.3
comp=Z,9.3nm,1.0s,baz=101,slow=9.9,SNR=8.0
FINES FINESS Array B 131.97 336 PKIKP PKPdf 07 51 23.3 -0.3
ANN Anapa 133.17 312 *i* PKIKP PKPdf 07 51 23.3 -3.1
ANN pmax pmax
comp=Z,82nm,1.1s
MALT Malatya 133.55 303 *e*PKPdf PKPdf 07 51 27.7 +0.3
MALT Malatya 133.55 303 *e*PKIKP PKPdf 07 51 27.7 +0.4
ASF Jabal al Asfar 135.23 295 PKP PKPdf 07 51 31.5 +0.8
comp=Z,2.2nm,0.7s,baz=187,slow=2.7,SNR=6.4
ASF Jabal al Asfar 135.23 295 PKIKP PKPdf 07 51 31.5 +0.8
KIEV Kiev 136.38 322 *e*PKPdf PKPdf 07 51 31.3 -0.9
KIEV Kiev 136.38 322 *e*PKIKP PKPdf 07 51 31.3 -0.9
MMAI Mount Meron Ar 136.45 296 PKP PKPdf 07 51 33.2 +0.3
comp=Z,2.2nm,0.5s,baz=148,slow=3.2,SNR=5.1
EIL Elat 136.93 291 PKP PKPdf 07 51 32.9 -1.0
comp=Z,9.1nm,0.9s,baz=43,slow=2.8,SNR=6.3
EIL Elat 136.93 291 PKP PKPdf 07 51 32.9 -1.0
BR131 Keskin Array S 137.01 306 *e*PKPdf PKPdf 07 51 34.0 +0.2
BRTR Keskin Array B 137.01 306 PKP PKPdf 07 51 33.4 -0.4
comp=Z,3.6nm,1.0s,baz=126,slow=1.7,SNR=11
BRTR Keskin Array B 137.01 306 PKIKP PKPdf 07 51 33.4 -0.4
NB2 NORSAR Subarra137.07 344 PKPdf PKPdf 07 51 32.2 -1.0
comp=Z,6.1nm,1.4s,baz=31,slow=1.9
NOA NORSAR Array B137.07 344 PKP PKPdf 07 51 32.2 -0.9
comp=Z,3.5nm,1.0s,baz=33,slow=2.0,SNR=5.0
NOA NORSAR Array B137.07 344 PKIKP PKPdf 07 51 32.3 -0.9
BUR08 Bucovina Ar. S 140.12 320 *e*PKPdf PKPdf 07 51 40.9 +1.7
KOLS Kolonicke sedl 141.16 324 *e*PKP PKPdf 07 51 41.0 0.0
KOLS Kolonicke sedl 141.16 324 *e*PKIKP PKPdf 07 51 41.0 0.0
KOLS Kolonicke sedl 141.16 324 *e*PKP PKPdf 07 51 41.0 0.0
CRVS Cervenica-Dubn 141.62 324 *e*PKP PKPdf 07 51 42.0 +0.1
CRVS Cervenica-Dubn 141.62 324 *e*PKIKP PKPdf 07 51 42.0 +0.1
CRVS Cervenica-Dubn 141.62 324 *e*PKP PKPdf 07 51 42.0 +0.1
PSZ Piszkesteto 143.04 324 *e*PKPdf PKPdf 07 51 41.6 -2.8
PSZ Piszkesteto 143.04 324 *e*PKIKP PKPdf 07 51 41.6 -2.8
PSZ Piszkesteto 143.04 324 ⇓*e*PKP PKPdf 07 51 39.8 -4.6
VYHS Vyhne 143.28 325 *e*PKP PKPdf 07 51 42.2 -2.6
VYHS Vyhne 143.28 325 *e*PKIKP PKPdf 07 51 42.2 -2.6
VYHS Vyhne 143.28 325 *e*PKP PKPdf 07 51 42.2 -2.6
DPC Dobruska-Polom 143.37 329 *e*PKIKP PKPdf 07 51 42.2 -2.7
DPC Dobruska-Polom 143.37 329 *e*PKP PKPdf 07 51 42.2 -2.7
UPC Upice 143.41 330 *e*PKIKP PKPdf 07 51 41.9 -3.1
UPC Upice 143.41 330 *e*PKP PKPdf 07 51 41.9 -3.1
VRAC Vranov 143.93 328 PKP PKPdf 07 51 44.1 -1.8
comp=Z,4.2nm,0.5s,baz=90,slow=2.4,SNR=12
VRAC Vranov 143.93 328 PKIKP PKPdf 07 51 44.1 -1.8
SRS Serrai 143.96 311 P PKPdf 07 51 42.9 -3.4
OUR Ouranopolis 143.97 310 P PKPdf 07 51 42.8 -3.5
PVCC Panska Ves 144.07 331 *e*PKIKP PKPdf 07 51 44.6 -1.5
PVCC Panska Ves 144.07 331 *e*PKP PKPdf 07 51 44.6 -1.5
BRG Berggiesshubel 144.10 332 *e*PKPbc PKPdf 07 51 44.2 -2.0
BRG Berggiesshubel 144.10 332 *i* PKP PKPdf 07 51 44.1 -2.1
comp=Z,29nm,1.0s
BRG pPKP pPKPdf 07 52 07.3 +7.9
comp=Z,13nm,1.1s
BRG Berggiesshubel 144.10 332 *i* PKIKP PKPdf 07 51 44.1 -2.1
BRG pmax pmax
comp=Z,17nm,1.0s
BRG pmax pmax
comp=Z,8.0nm,1.2s
CLL Collm 144.20 333 *e*PKPbc PKPdf 07 51 44.4 -1.9
CLL Collm 144.20 333 ⇓*i*PKP PKPdf 07 51 44.1 -2.2
CLL *e*PKP PKiKP 07 51 50.0 +0.1
CLL Collm 144.20 333 ⇓*i*PKIKP PKPdf 07 51 44.1 -2.2
CLL *e* 07 51 50.0
CLL pmax pmax
comp=Z,20nm,0.9s
CLL Collm 144.20 333 ⇓*i*PKPdf PKPdf 07 51 44.1 -2.2
comp=Z,23nm,0.9s
CLL *e*PKiKP PKiKP 07 51 50.0 +0.1
CLL *e*PP PP 07 55 01.0 0.0
LAST Lasithi 144.32 301 P PKPdf 07 51 45.3 -1.8
FBE Freiberg 144.33 332 *e*PKPbc PKPdf 07 51 45.4 -1.2
PAIG Paliouri 144.33 310 P PKPdf 07 51 43.9 -3.1
PLG Polygyros 144.34 310 P PKPdf 07 51 44.1 -2.9
KNT Kendrikon 144.42 312 P PKPdf 07 51 44.6 -2.5
NRDL Niedersach Rie 144.44 337 *e*PKPbc PKPdf 07 51 45.2 -1.5
AOS Alonnisos 144.44 308 P PKPdf 07 51 44.0 -3.2
PRU Pruhonice 144.46 330 *e*PKIKP PKPdf 07 51 46.1 -0.7
PRU Pruhonice 144.46 330 *e*PKP PKPdf 07 51 46.1 -0.7
TREC Trest 144.48 329 *e*PKIKP PKPdf 07 51 45.4 -1.5
TREC Trest 144.48 329 *e*PKP PKPdf 07 51 45.4 -1.5
HORT Hortiatis 144.50 311 P PKPdf 07 51 44.3 -2.9
VAY Valandovo 144.59 312 P PKPdf 07 51 44.7 -2.7
VAY Valandovo 144.59 312 *e*P PKPdf 07 51 44.8 -2.5
NEUB Neuenburg 144.78 334 *e*PKPbc PKPdf 07 51 46.9 -0.5
GRG Griva 144.85 312 P PKPdf 07 51 45.9 -1.9

CLZ	**Clausthal**	**144.86 336**	*e*PKPbc	PKPdf	07 51 47.2	-0.3
CLZ	**Clausthal**	**144.86 336**	*e*PKIKP	PKPdf	07 51 47.2	-0.3
SIVA	**Sivas**	**144.89 301**	P	PKPdf	07 51 47.1	-1.0
ATHU	**Athens Univers**	**144.90 306**	P	PKPdf	07 51 47.1	-0.9
SOP	**Sopron**	**144.98 326**⇓	*e*PKP	PKPdf	07 51 47.5	-0.3
DIVS	**Divibare**	**145.03 318**	P	PKPbc	07 51 47.6	+0.1
SKO	**Skopje**	**145.09 314**	P	PKPbc	07 51 48.1	+0.4
SKO	**Skopje**	**145.09 314**	*e*P	PKPbc	07 51 48.2	+0.5
TANN	**Tannenbergstha**	**145.09 332**	*e*PKPbc	PKPbc	07 51 47.8	+0.4
LIT	**Litokhoron**	**145.12 310**	P	PKPbc	07 51 46.5	-1.4
WERD	**Werda**	**145.13 332**	*e*PKPbc	PKPbc	07 51 48.0	+0.4
PLN	**Plauen**	**145.17 333**	*e*PKPbc	PKPbc	07 51 48.1	+0.4
GUNZ	**Gunzen**	**145.18 332**	*e*PKPbc	PKPbc	07 51 48.4	+0.7
CONA	**Conrad Observa**	**145.19 326**⇓	*i*PKPdf	PKPdf	07 51 48.5	+0.3
	comp=Z,133nm,1.7s,SNR=34					
WERN	**Wernitzgruen**	**145.22 332**	*e*PKPbc	PKPbc	07 51 48.5	+0.6
NKC	**Novy Kostel**	**145.23 332**	*e*PKIKP	PKPdf	07 51 48.1	-0.1
NKC	**Novy Kostel**	**145.23 332**	*e*PKP	PKPdf	07 51 48.1	-0.1
ATAL	**Atalanti**	**145.23 308**	P	PKPbc	07 51 46.7	-1.6
LKR	**Lokris**	**145.26 308**	P	PKPbc	07 51 46.7	-1.7
MOX	**Moxa**	**145.28 333**	*e*PKP	PKPdf	07 51 48.1	-0.1
	comp=Z,90nm,1.2s					
MOX	**Moxa**	**145.28 333**	*e*PKPbc	PKPbc	07 51 48.3	+0.3
MOX	**Moxa**	**145.28 333**	*e*PKIKP	PKPdf	07 51 48.1	-0.1
MOX			pmax	pmax		
	comp=Z,19nm,1.2s					
IBBN	**Ibbenburen**	**145.43 338**	*e*PKPbc	PKPbc	07 51 48.8	+0.3
DID	**Didima**	**145.45 306**	P	PKPdf	07 51 47.1	-1.9
LTK	**Loutraki**	**145.49 307**	P	PKPdf	07 51 47.3	-1.7
KHC	**Kasperske Hory**	**145.50 330**	*e*PKP	PKPdf	07 51 49.1	+0.4
KZN	**Kozani**	**145.54 311**	P	PKPdf	07 51 47.6	-1.4
AGG	**Agios Georgios**	**145.63 309**	P	PKPdf	07 51 48.0	-1.2
GEC2	**GERESS Array S**	**145.65 329**	*e*PKPbc	PKPbc	07 51 49.7	+0.4
GEC2	**GERESS Array S**	**145.65 329**	*e*PKP2	PKPab	07 51 49.7	+0.1
ROTZ	**Rotzenmuhle**	**145.67 332**	*e*PKPbc	PKPbc	07 51 50.0	+0.7
IVA	**Berane**	**145.69 316**⇓	*i*PKP	PKPdf	07 51 49.0	-0.2
IVA	**Berane**	**145.69 316**⇓	*i*PKP	PKPdf	07 51 49.1	-0.1
DSF	**Desfina**	**145.69 308**	P	PKPdf	07 51 48.3	-1.1
PVY	**Plav**	**145.77 316**⇓	*i*PKP	PKPdf	07 51 49.0	-0.4
PVY	**Plav**	**145.77 316**⇓	*i*PKP	PKPdf	07 51 49.1	-0.3
PLE	**Pljevlja**	**145.79 317**⇓	*i*PKP	PKPdf	07 51 50.0	+0.6
PLE	**Pljevlja**	**145.79 317**⇓	*i*PKP	PKPdf	07 51 50.0	+0.7
PLE	**Pljevlja**	**145.79 317**⇓	*i*PKP2	PKPab	07 51 50.0	-0.3
ARSA	**Arzberg**	**145.80 326**⇑	*i*PKPab	PKPab	07 51 49.8	-0.4
	comp=Z,49nm,1.2s,SNR=18					
UBBA	**Unterbreizbach**	**145.80 335**	*e*PKPbc	PKPbc	07 51 49.9	+0.2
WET	**Wettzell**	**145.82 330**	*e*PKPbc	PKPbc	07 51 50.2	+0.4
WET	**Wettzell**	**145.82 330**	*e*PKP2	PKPab	07 51 50.2	0.0
MOA	**Molln**	**146.05 328**⇑	*i*PKPab	PKPab	07 51 50.7	-0.4
	comp=Z,43nm,0.9s,SNR=17					
GRF	**Grafenberg Arr**	**146.16 332**	*e*PKPbc	PKPbc	07 51 51.4	+0.6
GRF	**Grafenberg Arr**	**146.16 332**	*e*PKP2	PKPab	07 51 51.4	-0.1
GRF	**Grafenberg Arr**	**146.16 332**	*e*PKP2	PKPab	07 51 51.4	-0.1
GRFO	**Grafenberg**	**146.16 332**	*e*PKPdf	PKPdf	07 51 50.9	+1.1
GRFO	**Grafenberg**	**146.16 332**	*e*PKP2	PKPab	07 51 50.9	-0.6
NKY	**Niksic**	**146.30 317**	*e*PKP	PKPdf	07 51 51.1	+0.9
NKY	**Niksic**	**146.30 317**	*e*PKP2	PKPab	07 51 51.1	-1.2
TTG	**Podgorica**	**146.31 316**⇓	*i*PKP	PKPdf	07 51 51.1	+0.8
SOKA	**Soboth**	**146.42 325**⇑	*i*PKPdf	PKPdf	07 51 50.0	-0.3
	comp=Z,37nm,1.1s					
BRY	**Bratogost**	**146.54 317**⇓	*i*PKP	PKPdf	07 51 51.7	+1.1
BRY	**Bratogost**	**146.54 317**⇓	*i*PKP	PKPdf	07 51 51.7	+1.1
BRY	**Bratogost**	**146.54 317**⇓	*i*PKP2	PKPab	07 51 51.7	-1.5
ULC	**Ulcinj**	**146.54 315**⇓	*i*PKP	PKPdf	07 51 51.0	+0.3
ULC	**Ulcinj**	**146.54 315**⇓	*i*PKP	PKPdf	07 51 51.0	+0.4
ULC	**Ulcinj**	**146.54 315**⇓	*i*PKP2	PKPab	07 51 51.0	-2.3
BUM	**Brajici-Budva**	**146.61 316**⇓	*i*PKP	PKPdf	07 51 52.1	+1.3
BUM	**Brajici-Budva**	**146.61 316**⇓	*i*PKP	PKPdf	07 51 52.1	+1.4
HCY	**Herceg Novi**	**146.80 316**⇓	*i*PKP	PKPdf	07 51 52.3	+1.2
HCY	**Herceg Novi**	**146.80 316**⇓	*i*PKP2	PKPab	07 51 52.3	-1.9
RJOB	**Jochberg**	**146.85 329**	*e*PKPbc	PKPbc	07 51 52.9	0.0
TNS	**Taunus Mts**	**146.88 336**	*e*PKPbc	PKPbc	07 51 53.4	+0.5
TNS	**Taunus Mts**	**146.88 336**	*e*PKP2	PKPab	07 51 53.4	-0.9
KBA	**Koelnbreinsper**	**147.03 327**⇓	*i*PKPbc	PKPbc	07 51 52.7	-0.7
	comp=Z,48nm,1.7s,SNR=9.0					
TOD	**Tromm**	**147.23 335**	PKP	PKPdf	07 51 50.8	-0.8
TOD	**Tromm**	**147.23 335**	PKIKP	PKPdf	07 51 50.8	-0.8
ABH	**Alteburg**	**147.50 336**	PKP	PKPdf	07 51 52.5	+0.5
ABTA	**Abfaltersbach**	**147.68 328**⇓	*i*PKPdf	PKPdf	07 51 51.5	-0.9
	comp=Z,41nm,1.0s,SNR=25					
STU	**Stuttgart**	**147.72 333**	*e*PKPbc	PKPbc	07 51 55.7	+0.4
STU	**Stuttgart**	**147.72 333**	*e*PKPbc	PKPbc	07 51 55.6	+0.4
STU	**Stuttgart**	**147.72 333**	*e*PKP2	PKPab	07 51 55.6	-2.0
RUP	**Ruppelstein**	**147.83 336**	PKP	PKPdf	07 51 52.7	+0.1
RUP	**Ruppelstein**	**147.83 336**	PKIKP	PKPdf	07 51 52.7	+0.1
MOTA	**Moosalm**	**147.94 330**⇓	*i*PKPbc	PKPbc	07 51 55.7	-0.2
	comp=Z,34nm,0.8s					
LANF	**Langenberg**	**148.13 335**	PKP	PKPdf	07 51 52.1	-1.0
LANF	**Langenberg**	**148.13 335**	PKIKP	PKPdf	07 51 52.1	-1.0
WLF	**Walferdange**	**148.19 337**	*e*PKPbc	PKPbc	07 51 57.4	+0.9
WLF	**Walferdange**	**148.19 337**	*e*PKPbc	PKPbc	07 51 57.0	+0.5
WLF	**Walferdange**	**148.19 337**	*e*PKP2	PKPab	07 51 57.0	-2.5
FETA	**Feichten**	**148.35 330**	*i*PKPbc	PKPbc	07 51 57.1	+0.1
	comp=Z,53nm,1.1s,SNR=11					
SPAK	**Spaichingen-Ko**	**148.41 333**	PKP	PKPdf	07 51 53.8	+0.2
BFO	**Black Forest**	**148.43 334**	*e*PKPbc	PKPbc	07 51 57.2	+0.1
BFO			*e*PKPab	PKPab	07 52 01.0	+0.5
BFO	**Black Forest**	**148.43 334**	*e*PKP2	PKPab	07 51 57.2	-3.3
DAVA	**Damuels**	**148.55 331**⇑	*i*PKPbc	PKPbc	07 51 57.3	-0.2
	comp=Z,25nm,0.8s,SNR=6.8					
FELD	**Feldberg im Sc**	**148.92 333**	PKP	PKPdf	07 51 54.2	-0.2
DAVOX	**Davos/Dischmat**	**148.92 330**	PKPbc	PKPbc	07 51 58.7	+0.2
	comp=Z,36nm,0.7s,baz=94,slow=1.8,SNR=16					
ECH	**Echery**	**149.00 335**	PKP	PKPdf	07 51 54.9	+0.4
ECH	**Echery**	**149.00 335**	PKIKP	PKPdf	07 51 54.9	+0.4
MOF	**Molkenrain**	**149.30 334**	PKP	PKPdf	07 51 54.9	-0.1
MOF	**Molkenrain**	**149.30 334**	PHKKP	PKPpre	07 51 54.9	
TUE	**Stuetta**	**149.40 330**	*e*PKPdf	PKPdf	07 51 54.2	-1.0
TUE			*e*PKPbc	PKPbc	07 51 59.7	0.0
THEF	**They Montfort**	**149.45 336**	PKP	PKPdf	07 51 56.0	+0.8
THEF	**They Montfort**	**149.45 336**	PHKKP	PKPpre	07 51 56.0	
CUC	**Castrocucco**	**149.77 314**	*e*PKPbc	PKPbc	07 51 59.5	-1.3
LOMF	**Lomont**	**149.82 334**	PKP	PKPdf	07 51 56.8	+0.9
LOMF	**Lomont**	**149.82 334**	PHKKP	PKPpre	07 51 56.8	
AQU	**L'Aquila**	**150.01 320**	*e*PKPbc	PKPbc	07 52 01.6	+0.3
AQU	**L'Aquila**	**150.01 320**	*e*PKP2	PKPbc	07 52 01.6	+0.3
OG01	**Vacheresse**	**150.69 333**	PKP	PKPdf	07 52 02.7	-0.1
BNI	**Bardonecchia**	**151.69 331**	*e*PKPdf	PKPdf	07 51 58.5	-0.3
BNI			*e*PKPbc	PKPbc	07 52 05.5	+0.4
BNI	**Bardonecchia**	**151.69 331**	*e*PKIKP	PKPdf	07 51 58.6	-0.2
BNI			*e*		07 52 05.5	
VAE	**Valguarnera**	**151.94 311**	PKPab	PKPab	07 52 13.4	-1.9
	comp=Z,26nm,0.9s,baz=354,slow=12,SNR=6.2					
PLDF	**La Plantade**	**152.22 336**	PKP	PKPbc	07 52 06.5	+0.2
AGO	**Saint Agoulin**	**152.33 337**	PKP	PKPbc	07 52 06.7	+0.1
SSB	**Saint Sauveur**	**152.43 334**	*e*PKPbc	PKPbc	07 52 06.6	-0.2
SSB	**Saint Sauveur**	**152.43 334**	*e*PKIKP	PKPbc	07 52 06.6	-0.2
PYM	**Petit Puy Mans**	**152.64 337**	PKP	PKPbc	07 52 06.7	-0.6
ESDC	**Sonseca Array**	**160.40 341**	PKPab	PKPab	07 52 50.6	-0.7
	comp=Z,1.1nm,0.7s,baz=16,slow=4.4,SNR=7.7					
LIC	**Lamto**	**163.51 206**	*e*PKP2	PKPab	07 53 05.9	+0.3
	comp=Z,131nm,1.4s					
KIC	**Kosan Boka**	**163.52 207**	*e*PKP2	PKPab	07 53 05.8	+0.1
	comp=Z,48nm,0.8s					
DBIC	**Dimbokro**	**163.84 207**	PKP	PKPdf	07 52 14.2	-0.6
	comp=Z,6.0nm,1.1s,baz=121,slow=6.2,SNR=3.0					
DBIC			PKPab	PKPab	07 53 06.8	-0.2
	comp=Z,23nm,0.9s,baz=142,slow=4.8,SNR=16					
DBIC	**Dimbokro**	**163.84 207**	PKIKP	PKPdf	07 52 14.2	-0.6
DBIC					07 53 06.9	
TIC	**Toumodi**	**163.89 206**	*e*PKP2	PKPab	07 53 07.4	+0.1
	comp=Z,81nm,0.9s					

ISCJB ***13*** *07:38:22.1±0.6, 56°.27N±0°.06×164°.51E±0°.06, h10km, mb3.4/5, Error ellipse: s-maj=8.4km s-min=4.5km az=11.6*
IDC ***13*** *07:38:22.1±1.3, 55°.95N×164°.85E, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.6/24, mbtmp3.5/6, ML2.7/1, Error ellipse: s-maj=107.6km s-min=20.0km az=138.0*
KRSC ***13*** *07:38:22.1±0.9, 56°.25N×164°.43E, h5km±5km, ML3.9*
ISC 13 07:38:23.3±0.6,**56°.22N**±0°.06×**164°.53E**±0°.06,**h10km**,**n19**, σ19**08/28**,**mb3.4/5**,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.95**	**270**	*e*P	**Pg**	**07 38 38.3**	**-3.3**
KBTR				*e*S	**Sg**	**07 38 50.0**	**-4.0**
BKI	**Bering**	**1.31**	**141**	*e*P	**Pn**	**07 38 46.7**	**-0.9**
BKI				*e*S	**Sb**	**07 39 04.2**	**-0.5**
BDR	**Baidarnaya**	**1.88**	**282**	*e*P	**Pn**	**07 38 54.7**	**-0.7**
KLY	**Klyuchi**	**2.16**	**274**	*e*P	**Pn**	**07 38 56.7**	**-2.6**
KLY				*e*S	**Sn**	**07 39 21.6**	**-4.5**
KRSR	**Krestovskiy**	**2.21**	**272**	*e*P	**Pn**	**07 38 59.2**	**-0.8**
KRSR				*e*S	**Sn**	**07 39 26.3**	**-1.0**
BZMR	**Bezymyannaya**	**2.28**	**264**	*e*P	**Pn**	**07 39 01.2**	**+0.3**
BZMR				*e*S	**Sn**	**07 39 30.2**	**+1.2**
MKZ	**Mys Kozlova**	**2.31**	**225**	*e*P	**Pn**	**07 39 01.9**	**+0.6**
MKZ				*e*S	**Sn**	**07 39 30.4**	**+0.7**
KPT	**Kopyto**	**2.42**	**266**	*e*P	**Pn**	**07 39 03.2**	**+0.3**
KPT				*e*S	**Sn**	**07 39 32.8**	**+0.2**
KOZ	**Kozyrevsk**	**2.61**	**268**	*e*P	**Pn**	**07 39 06.2**	**+0.8**
KOZ				*e*S	**Sn**	**07 39 38.2**	**+1.1**
SRDR	**Sredinnyy**	**2.68**	**274**	*e*P	**Pn**	**07 39 06.4**	**-0.1**
SRDR				*e*S	**Sn**	**07 39 38.4**	**-0.6**
NLC	**Nalytchevo**	**4.29**	**227**	*e*S	**Sn**	**07 40 16.7**	**-1.8**
AVH	**Avacha**	**4.47**	**231**	*e*P	**Pn**	**07 39 33.3**	**+0.1**
GNL	**Ganaly**	**4.56**	**239**	*e*P	**Pn**	**07 39 32.9**	**+0.6**
PETK	**Petropavlovsk-**	**5.04**	**235**	Pn	**Pn**	**07 39 40.2**	**+1.4**
	0.3nm,0.3s,baz=94,slow=14,SNR=2.8						
ILAR	**Eielson Array**	**24.80**	**50**	P	**P**	**07 43 44.8**	**-0.1**
	0.4nm,0.9s,mb3.0,baz=267,slow=9.6,SNR=6.6						
YKA	**Yellowknife Ar**	**39.12**	**47**	P	**P**	**07 45 51.1**	**+0.8**
	0.8nm,0.5s,mb3.7,baz=299,slow=8.1,SNR=3.6						
TXAR	**Lajitas Array**	**67.11**	**71**	P	**P**	**07 49 17.6**	**+0.8**
	0.5nm,0.6s,mb3.8,baz=298,slow=4.9,SNR=9.2						
WRA	**Warramunga Arr**	**80.04**	**209**	P	**P**	**07 50 30.9**	**-1.8**
	0.4nm,0.9s,mb3.3,baz=23,slow=5.9,SNR=3.8						
ASAR	**Alice Springs**	**83.70**	**208**	P	**P**	**07 50 52.7**	**+0.8**
	0.2nm,0.7s,mb3.4,baz=23,slow=5.0,SNR=2.5						

WEL 13 07:44:06.0±0.4,**38°.58S**×**175°.31E**,**h228km**±3km,**ML3.7**/19, **Error ellipse: s-maj=4.6km s-min=4.5km az=0.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGZ	**Ngauruhoe**	**0.64**	**160**	PN	Pn	07 44 37.2	+0.5
NGZ				SN	S	07 45 01.1	+0.1
VRZ	**Vera Road**	**0.70**	**218**	PN	Pn	07 44 36.5	-0.6
VRZ				SN	S	07 45 01.7	+0.3
PKVZ	**Pokaka**	**0.71**	**178**	PN	Pn	07 44 37.0	-0.1
PKVZ				SN	S	07 45 01.3	-0.3
TUVZ	**Tukino**	**0.74**	**159**	PN	Pn	07 44 37.6	+0.4
WNVZ	**Wahianoa**	**0.78**	**164**	PN	Pn	07 44 37.7	+0.3
WNVZ				SN	S	07 45 01.6	-0.6
MTVZ	**Mangateitei**	**0.82**	**171**	PN	Pn	07 44 37.7	+0.1
MTVZ				SN	S	07 45 01.7	-0.8
BHHZ	**Black Hill Sta**	**1.08**	**148**	PN	Pn	07 44 39.0	-0.1
BHHZ				SN	S	07 45 03.3	-1.9
BKZ	**Black Stump Fm**	**1.09**	**123**	PN	Pn	07 44 39.3	+0.1
BKZ				SN	S	07 45 04.3	-0.9
WAZ	**Wanganui**	**1.21**	**192**	PN	Pn	07 44 39.7	-0.2
NMHZ	**Naumai**	**1.28**	**115**	PN	Pn	07 44 41.8	+1.4
MCHZ	**McNeill Hill**	**1.38**	**129**	PN	Pn	07 44 42.1	+0.9
URZ	**Urewera**	**1.45**	**78**	PN	Pn	07 44 41.3	-0.5
PNHZ	**Pukenui**	**1.50**	**153**	PN	Pn	07 44 42.1	-0.1
TSZ	**Takapari Road**	**1.56**	**161**	PN	Pn	07 44 42.4	-0.3
KAHZ	**Kahuranaki**	**1.72**	**136**	PN	Pn	07 44 44.4	+0.4
WPHZ	**Waipukurau**	**1.72**	**150**	PN	Pn	07 44 44.0	-0.1
MWZ	**Matawai**	**1.75**	**83**	PN	Pn	07 44 44.2	-0.2
DVHZ	**Dannevirke**	**1.84**	**159**	PN	Pn	07 44 44.4	-0.7
POWZ	**Post Office Ro**	**1.85**	**169**	PN	Pn	07 44 44.5	-0.7
PXZ	**Pawanui**	**1.89**	**141**	PN	Pn	07 44 45.3	-0.2
KNZ	**Kokohu**	**1.90**	**104**	PN	Pn	07 44 45.8	+0.2
PRHZ	**Porangahau**	**1.97**	**149**	PN	Pn	07 44 46.0	-0.3
MRZ	**Mangatainoka R**	**2.09**	**174**	PN	Pn	07 44 46.2	-1.3
MRZ				SN	S	07 45 47.0	-3.1
MHGZ	**Mahia Peninsul**	**2.10**	**107**	PN	Pn	07 44 47.9	+0.2
BFZ	**Birch Farm**	**2.22**	**161**	PN	Pn	07 44 47.5	-1.2
OGWZ	**Otaki Gorge**	**2.24**	**183**	PN	Pn	07 44 47.7	-1.2
TIWZ	**Tintock**	**2.24**	**169**	PN	Pn	07 44 47.6	-1.3
KIW	**Kapiti Island**	**2.30**	**188**	PN	Pn	07 44 47.8	-1.7
HOWZ	**Holdsworth Sta**	**2.32**	**176**	PN	Pn	07 44 48.1	-1.7
PUZ	**Puketiti**	**2.37**	**79**	PN	Pn	07 44 49.7	-0.6
DUWZ	**D'Urville Isla**	**2.47**	**205**	PN	Pn	07 44 49.2	-2.1
CAW	**Cannon Point**	**2.54**	**184**	PN	Pn	07 44 50.1	-1.8
TMWZ	**Te Maipa**	**2.57**	**170**	PN	Pn	07 44 50.6	-1.7
MTW	**Mount Morrison**	**2.58**	**177**	PN	Pn	07 44 50.5	-2.0
TCW	**Tory Channel**	**2.75**	**197**	PN	Pn	07 44 52.2	-2.1
SNZO	**South Karori**	**2.77**	**190**	PN	Pn	07 44 52.1	-2.4
PAWZ	**Paruwai Farm**	**2.80**	**178**	PN	Pn	07 44 52.7	-2.2
TRWZ	**Traveller**	**2.83**	**174**	PN	Pn	07 44 53.2	-2.0
MSWZ	**Moikau Station**	**2.83**	**181**	PN	Pn	07 44 53.0	-2.3
BHW	**Baring Head**	**2.85**	**187**	PN	Pn	07 44 53.0	-2.4
PLWZ	**Palliser**	**2.99**	**181**	PN	Pn	07 44 54.5	-2.4
NNZ	**Nelson**	**3.03**	**209**	PN	Pn	07 44 54.3	-3.1
TUWZ	**Tuamarina**	**3.04**	**200**	PN	Pn	07 44 54.9	-2.6
QRZ	**Quartz Range**	**3.11**	**223**	PN	Pn	07 44 54.7	-3.6
BSWZ	**Blackbirch Sta**	**3.32**	**199**	PN	Pn	07 44 58.3	-2.4
THZ	**Tophouse**	**3.68**	**209**	PN	Pn	07 45 01.2	-3.7
KHZ	**Kahutara**	**4.07**	**199**	PN	Pn	07 45 06.3	-3.2

TRN 13 07:50:05.8,**13°.84N**×**60°.46W**,**h18km**,**MD3.6**,**M3.5**(FDF), **3C-8D**,**Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCLT	**Moule a Chique**	**0.48**	**255**	*e*P	Pg	07 50 17.4	+1.8
SLW	**Petit Monier**	**0.50**	**291**⇓	*e*P	Pg	07 50 17.2	+1.3
SLW	**Petit Monier**	**0.50**	**291**⇓	*i*P	Pg	07 50 18.2	+2.3
SLW				⇓*e*S	Sg	07 50 26.5	+3.9
SLW				*e*S	Sg	07 50 27.4	+4.8
SLPE	**Piton Saint Es**	**0.52**	**271**	*e*P	Pg	07 50 18.5	+2.3
SLB	**Belfond**	**0.56**	**269**	*e*P	Pg	07 50 20.3	+3.2
SLB				*e*S	Sg	07 50 29.8	+5.1
SLDE	**Delcer**	**0.58**	**267**⇓	*i*P	Pg	07 50 19.8	+2.4
SLDE				*e*S	Sg	07 50 29.6	+4.4
MVM	**Montagne Vaucl**	**0.83**	**330**⇑	*e*P	Pb	07 50 21.1	-0.5
BHS	**Barnard House**	**0.84**	**230**	*e*P	Pb	07 50 23.7	+1.8
BHS				*e*S	Sb	07 50 36.6	+3.7
BIM	**Bigot**	**0.90**	**319**⇓	*e*P	Pb	07 50 22.6	-0.3
BIM				⇓*e*S	Sb	07 50 35.7	+1.2
SVV	**Soufriere Volc**	**0.90**	**235**⇓	*i*P	Pb	07 50 25.1	+2.2
SVV				*e*S	Sb	07 50 38.8	+4.3
SVB	**Belmont**	**0.95**	**234**	*e*P	Pb	07 50 23.8	0.0
SVB				*e*S	Sb	07 50 39.2	+3.1
FCV	**Fort Charlotte**	**1.02**	**228**	*e*P	Pb	07 50 26.6	+1.6
FCV				*e*S	Sb	07 50 40.7	+2.7
FDF	**Fort de France**	**1.11**	**323**⇑	*e*P	Pn	07 50 25.8	-0.7
FDF				⇑*e*S	Sb	07 50 41.8	+1.1
DSTT	**Stowe**	**1.62**	**330**⇑	*e*P	Pn	07 50 34.8	+1.3
DSTT				*e*S	Sn	07 50 56.5	+2.5
DSHT	**Scott's Head**	**1.63**	**327**	*e*P	Pn	07 50 35.2	+1.6
DSHT				*e*S	Sn	07 50 55.5	+1.4
DFBT	**Forest Bistro**	**1.64**	**328**	*e*P	Pn	07 50 34.7	+0.9
DFBT				*e*S	Sn	07 50 56.5	+2.1
GRCU	**Cariacou**	**1.67**	**216**	*e*P	Pn	07 50 35.2	+1.1
GRCU				*e*S	Sn	07 50 56.9	+1.8
DLPL	**La Plaine**	**1.67**	**333**	*e*P	Pn	07 50 35.6	+1.4
DLPL				*e*S	Sn	07 50 56.6	+1.4
MDN	**Morne-Daniel**	**1.73**	**329**	*e*S	Sn	07 50 58.9	+2.3
GRIC	**Isle de Caille**	**1.89**	**215**	*e*P	Pn	07 50 38.8	+1.5
GRIC				*e*S	Sn	07 51 02.5	+1.9
GRSS	**Sisters**	**1.90**	**216**	*e*P	Pn	07 50 39.2	+1.9
DWS	**Wesley**	**1.91**	**335**	*e*P	Pn	07 50 39.5	+2.1
DWS				*e*S	Sn	07 51 03.6	+2.6
GRHS	**Sauteurs**	**1.97**	**216**	*e*P	Pn	07 50 39.4	+1.0
GRHS				*e*S	Sn	07 51 04.2	+1.5
GRW	**Mount Saint Ca**	**2.04**	**215**	*e*P	Pn	07 50 41.3	+2.1
GRW				*e*S	Sn	07 51 06.4	+2.2
TBG	**Guadaloupe-3**	**2.31**	**330**	*e*P	Pn	07 50 44.2	+1.3
HMG	**Houelmont**	**2.44**	**331**	*e*P	Pn	07 50 45.5	+0.7
PHG	**Guadaloupe-2**	**2.45**	**332**	*e*P	Pn	07 50 45.9	+1.0
SCG	**Saint Claude**	**2.48**	**332**	*e*P	Pn	07 50 46.2	+0.9
TOSP	**Speyside**	**2.52**	**182**	*e*P	Pn	07 50 48.3	+2.3
DEG	**La Desirade**	**2.53**	**347**	*e*P	Pn	07 50 45.4	-0.6
LZG	**Guadaloupe-1**	**2.62**	**331**	*e*P	Pn	07 50 47.8	+0.6
SKI	**Saint Kitts**	**4.11**	**328**	*e*P	Pn	07 51 10.2	+2.5
SKI				*e*S	Sn	07 51 56.4	+1.0

TRN 13 07:52:25.9,**13°.84N**×**60°.48W**,**h19km**,**MD3.5**,**M3.7**(FDF), **2C-7D**,**Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCLT	**Moule a Chique**	**0.47**	**253**	*e*P	Pg	07 52 37.2	+1.7
MCLT				*e*S	Sg	07 52 46.0	+4.2
SLW	**Petit Monier**	**0.48**	**292**⇓	*e*P	Pg	07 52 37.2	+1.6
SLW	**Petit Monier**	**0.48**	**292**	*e*P	Pg	07 52 38.2	+2.6
SLW				*e*S	Sg	07 52 45.4	+3.2
SLW				⇓*e*S	Sg	07 52 46.8	+4.6
SLPE	**Piton Saint Es**	**0.50**	**270**	*e*P	Pg	07 52 38.7	+2.7
SLPE				*e*S	Sg	07 52 46.5	+3.6
SLB	**Belfond**	**0.54**	**268**⇑	*i*P	Pg	07 52 40.4	+3.6
SLB				*e*S	Sg	07 52 48.5	+4.3
SLDE	**Delcer**	**0.56**	**266**⇓	*i*P	Pb	07 52 39.9	+2.7
SLDE				*e*S	Sg	07 52 48.8	+4.1
MVM	**Montagne Vaucl**	**0.81**	**330**	*e*P	Pb	07 52 41.3	-0.2
MVM				*e*S	Sb	07 52 53.8	+1.7
BHS	**Barnard House**	**0.83**	**229**⇓	*e*P	Pb	07 52 44.0	+2.2
BHS				*e*S	Sb	07 52 57.1	+4.6
BIM	**Bigot**	**0.88**	**320**⇓	*e*P	Pb	07 52 42.7	+0.1
BIM				⇓*e*S	Sb	07 52 56.3	+2.3
SVV	**Soufriere Volc**	**0.89**	**234**⇓	*i*P	Pb	07 52 45.2	+2.5
SVV				*e*S	Sb	07 52 58.2	+4.1
SVB	**Belmont**	**0.94**	**233**	*e*P	Pb	07 52 44.4	+0.8
SVB				*e*S	Sb	07 52 59.5	+3.8
FCV	**Fort Charlotte**	**1.01**	**228**	*e*P	Pb	07 52 46.8	+2.0
FCV				*e*S	Sb	07 53 01.0	+3.3
FDF	**Fort de France**	**1.10**	**324**	*e*P	Pn	07 52 45.8	-0.5
FDF				*e*S	Sb	07 53 02.1	+1.9
DLPL	**La Plaine**	**1.66**	**333**	*e*P	Pn	07 52 55.7	+1.7
DLPL			

ASAR			S	**S**	**08 06 55.6**	**+4.8**
	comp=Z,3.5nm,0.8s,baz=19,slow=23,SNR=4.4					
ASAR	**Alice Springs**	**21.80 193**	P	**P**	**08 02 50.6**	**-0.9**
ASAR			S	**S**	**08 06 55.6**	**+4.9**
MYLDM	**Lahad Datu**	**21.86 290**	P	**P**	**08 02 54.0**	**+1.8**
	comp=Z,2μmcomp=Z,110nm,1.5s,mb5.1					
KBKI	**Kotabaru**	**22.90 267**	P	**P**	**08 03 03.8**	**+0.5**
	comp=Z,2μmcomp=Z,40nm,1.5s,mb4.6					
MTNI	**Mataram**	**23.63 254**	P	**P**	**08 03 08.9**	**-1.8**
	comp=Z,87nm,1.1s,mb5.1					
KKM	**Kota Kinabalu**	**24.29 290**	*e*P	**P**	**08 03 16.8**	**+0.1**
	comp=Z,89nm,1.4s,mb5.0					
KKM	**Kota Kinabalu**	**24.29 290**	P	**P**	**08 03 15.7**	**-1.0**
	comp=Z,748nmcomp=Z,49nm,1.5s,mb4.7					
EIDS	**Eidsvold**	**25.67 154**	*e*P	**P**	**08 03 30.5**	**+1.4**
	comp=Z,31nm,0.9s,mb4.8					
MBWA	**Marble Bar**	**26.57 224**	*e*P	**P**	**08 03 37.2**	**0.0**
	comp=Z,24nm,1.1s,mb4.7					
MBWA	**Marble Bar**	**26.57 224**	P	**P**	**08 03 37.0**	**-0.2**
	comp=Z,43nm,2.3s,mb4.6					
SBUM	**Sibu**	**27.26 280**	P	**P**	**08 03 44.1**	**+0.5**
	comp=Z,12nm,1.3s,mb4.3					
KSM	**Kuching**	**29.00 277**	*e*P	**P**	**08 04 00.0**	**+0.8**
	comp=Z,35nm,1.4s,mb4.9					
KSM	**Kuching**	**29.00 277**	P	**P**	**08 03 59.7**	**+0.5**
	comp=Z,19nm,1.3s,mb4.6					
STKA	**Stephens Creek**	**29.50 176**	P	**P**	**08 04 03.4**	**+0.1**
	comp=Z,6.5nm,0.6s,mb4.5,baz=346,slow=8.0,SNR=16					
STKA			LR	LR	08 17 02.7	
	comp=Z,1μm,18.8s,MS4.6,baz=348,slow=39					
STKA	**Stephens Creek**	**29.50 176**	*e*P	**P**	**08 04 03.0**	**-0.3**
	comp=Z,6.0nm,0.6s,mb4.5					
STKA	**Stephens Creek**	**29.50 176**	*e*P	**P**	**08 04 03.0**	**-0.2**
	comp=Z,41nm,2.4s,mb4.7					
STKA	**Stephens Creek**	**29.50 176**	*e*P	**P**	**08 04 03.0**	**-0.3**
STKA			pmax	pmax		
	comp=Z,41nm,2.4s					
ARMA	**Armidale**	**30.38 158**	*e*P	**P**	**08 04 12.8**	**+1.7**
	comp=Z,8.0nm,0.9s,mb4.5					
CNB	**Canberra Magne**	**34.20 165**	*e*P	**P**	**08 04 45.4**	**+0.9**
TOO	**Toolangi**	**35.58 171**	*e*P	**P**	**08 04 57.1**	**+0.7**
QIZ	**Qiongzhong**	**35.72 308**	P	**P**	**08 04 57.3**	**-0.6**
QIZ			S	**S**	**08 10 32.8**	**+0.1**
QIZ			pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7					
QIZ			pmax	pmax		
	comp=Z,200nm,11.7s					
QIZ			LR	LR		
	comp=Z,430nm,13.6s,MS4.4					
JNU	**Nakatsue**	**36.09 348**	*e*P	**P**	**08 05 00.9**	**+0.1**
	comp=Z,6.7nm,1.1s,mb4.5					
SDSI	**Sungai Dareh**	**37.65 271**	P	**P**	**08 05 14.2**	**-0.3**
	comp=Z,5μmcomp=Z,16nm,1.8s,mb4.5					
IPM	**Ipoh**	**38.61 280**	*e*P	**P**	**08 05 22.0**	**-0.6**
	comp=Z,25nm,1.1s,mb4.9					
PDSI	**Padang**	**38.62 271**	P	**P**	**08 05 21.0**	**-1.6**
	comp=Z,46nm,0.5s,mb5.5					
MJAR	**Matsushiro Arr**	**38.67 359**	P	**P**	**08 05 21.6**	**-1.0**
	comp=Z,3.6nm,0.4s,mb4.4,baz=211,slow=2.8,SNR=13					
MJAR			LR	LR	08 19 13.0	
	comp=Z,183nm,18.3s,MS3.9,baz=140,slow=33					
MJAR	**Matsushiro Arr**	**38.67 359**	P	**P**	**08 05 21.6**	**-1.0**
MAJO	**Matsushiro**	**38.67 359**	*e*P	**P**	**08 05 21.6**	**-1.1**
	comp=Z,4.7nm,0.7s,mb4.3					
MAJO	**Matsushiro**	**38.67 359**	*e*P	**P**	**08 05 21.6**	**-1.0**
MAJO			pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3					
MAT	**Matsushiro**	**38.67 359**	P	**P**	**08 05 21.1**	**-1.5**
PPI	**Padang Panjang**	**38.70 272**	P	**P**	**08 05 22.5**	**-0.8**
	comp=Z,20nm,1.4s,mb4.7					
KULM	**Kulim**	**39.12 281**	*e*P	**P**	**08 05 26.5**	**-0.3**
	comp=Z,34nm,1.1s,mb5.0					
KULM	**Kulim**	**39.12 281**	P	**P**	**08 05 26.4**	**-0.4**
NJ2	**Nanjing**	**39.20 332**	*e*P	**P**	**08 05 26.4**	**-0.7**
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8					
WHN	**Wuhan**	**40.30 326**	P	**P**	**08 05 43.5**	**+7.2**
KSRS	**Korea Array**	**40.90 346**	P	**P**	**08 05 40.8**	**-0.4**
	comp=Z,1.2nm,0.6s,mb3.7,baz=158,slow=7.6,SNR=8.0					
KSRS			LR	LR	08 22 21.9	
	comp=Z,170nm,18.2s,MS3.9,baz=167,slow=36					
GYA	**Guiyang**	**42.40 315**	P	**P**	**08 05 55.4**	**+1.7**
GYA			pP	pP	08 06 05.8	+1.8
GYA			sP	sP	08 06 11.3	+3.2
GYA			PP	PP	08 07 36.0	+3.6
GYA			ScP	ScP	08 11 35.4	+0.5
GYA			S	**S**	**08 12 14.5**	**+1.4**
GYA			sS	sS	08 12 30.8	+0.8
GYA			SS	SS	08 15 18.3	-4.8
GYA			pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8					
GYA			pmax	pmax		
	comp=Z,120nm,5.0s					
GYA			LR	LR		
	comp=N,540nm,17.9s,MS4.6					
GYA			LR	LR		
	comp=E,490nm,17.0s,MS4.6					
GYA			LR	LR		
	comp=Z,500nm,15.1s,MS4.5					
KMI	**Kunming**	**44.54 310**	P	**P**	**08 06 11.5**	**+0.5**
KMI			pP	pP	08 06 21.0	-0.3
KMI			sP	sP	08 06 25.0	-0.5
KMI			PP	PP	08 07 59.3	+3.9
KMI			S	**S**	**08 12 46.5**	**+2.0**
KMI			SS	SS	08 15 57.8	-7.2
KMI			pmax	pmax		
	comp=Z,13nm,1.5s,mb4.5					
KMI			LR	LR		
	comp=N,360nm,22.2s					
KMI			LR	LR		
	comp=E,220nm,28.6s					
KMI			LR	LR		
	comp=Z,320nm,23.8s,MS4.2					
CMAR	**Chiang Mai Arr**	**44.56 299**	P	**P**	**08 06 10.6**	**-0.6**
	comp=Z,8.9nm,0.9s,mb4.6,baz=116,slow=5.6,SNR=9.1					
CMAR	**Chiang Mai Arr**	**44.56 299**	P	**P**	**08 06 10.6**	**-0.6**
CHTO	**Chiang Mai**	**44.70 300**	*e*P	**P**	**08 06 12.1**	**-0.2**
	comp=Z,25nm,1.3s,mb4.9					
CHTO	**Chiang Mai**	**44.70 300**	*e*P	**P**	**08 06 12.1**	**-0.2**
CHTO			pmax	pmax		
	comp=Z,25nm,1.3s,mb4.9					
XAN	**Xi'an**	**45.97 325**	P	**P**	**08 06 21.5**	**-0.6**
XAN			pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.0					
XAN			pmax	pmax		
	comp=Z,52nm,4.4s					
BJI	**Beijing**	**47.08 336**	P	**P**	**08 06 30.3**	**-0.5**
BJI			S	**S**	**08 13 26.3**	**+5.7**
BJI			pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7					
BJI			LR	LR		
	comp=N,320nm,13.7s,MS4.5					
BJI			LR	LR		
	comp=E,230nm,13.0s,MS4.5					
CD2	**Chengdu**	**47.14 317⇑**	*i*P	**P**	**08 06 31.4**	**0.0**
CD2			pP	pP	08 06 41.3	-0.4
CD2			sP	sP	08 06 45.6	-0.3
CD2			PP	PP	08 08 21.8	-0.7
CD2			S	**S**	**08 13 21.3**	**-0.3**
CD2			sS	sS	08 13 37.5	-1.2
CD2			SS	SS	08 16 41.6	-7.7
CD2			pmax	pmax		
	comp=Z,30nm,0.6s,mb5.4					
CD2			pmax	pmax		
	comp=Z,100nm,4.8s					
CD2			LR	LR		
	comp=N,520nm,11.9s					
CD2			LR	LR		
	comp=E,230nm,15.6s,MS4.2					
CN2	**Changchun**	**47.51 347**	*e*P	**P**	**08 06 33.8**	**-0.2**
CN2			*e*S	**S**	**08 13 29.0**	**+2.5**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0					
CN2			pmax	pmax		
	comp=Z,200nm,7.0s					
CN2			LR	LR		
	comp=N,200nm,10.0s,MS4.5					
CN2			LR	LR		
	comp=E,200nm,10.0s,MS4.5					
CN2			LR	LR		
	comp=Z,200nm,13.0s,MS4.3					
HHC	**Hu-ho-hao-te**	**49.75 333**	*e*P	**P**	**08 06 54.9**	**+3.6**
HHC			pP	pP	08 07 04.8	+3.1
HHC			sP	sP	08 07 08.8	+2.9
HHC			PcP	PcP	08 08 14.9	+2.9
HHC			PP	PP	08 08 50.3	+4.1
HHC			ScP	ScP	08 12 06.0	+0.9
HHC			S	**S**	**08 14 02.9**	**+4.7**
HHC			sS	sS	08 14 18.1	+2.7
HHC			ScS	ScS	08 16 41.4	+1.1
HHC			SS	SS	08 17 31.0	-0.2
HHC			pmax	pmax		
	comp=Z,28nm,1.1s,mb5.2					
HHC			pmax	pmax		
	comp=Z,140nm,5.8s					
HHC			LR	LR		
	comp=N,300nm,10.3s,MS4.7					
HHC			LR	LR		
	comp=E,250nm,12.5s,MS4.7					
HHC			LR	LR		
	comp=Z,210nm,15.2s,MS4.3					
LZH	**Lanzhou**	**50.39 323**	*e*P	**P**	**08 06 57.0**	**+0.8**
LZH			pP	pP	08 07 07.1	+0.4
LZH			sP	sP	08 07 10.8	0.0
LZH			*e*PP	PP	08 08 53.5	+1.4
LZH			*e*S	**S**	**08 14 06.3**	**-1.0**
LZH			sS	sS	08 14 23.3	-1.2
LZH			pmax	pmax		
	comp=Z,31nm,1.3s,mb5.2					
LZH			pmax	pmax		
	comp=Z,150nm,8.0s					
LZH			LR	LR		
	comp=N,440nm,15.0s,MS4.7					
LZH			LR	LR		
	comp=E,390nm,14.5s,MS4.7					
LZH			LR	LR		
	comp=Z,580nm,17.8s,MS4.6					
HABR	**Khabarovsk**	**50.70 357**	*e*P	**P**	**08 06 56.1**	**-2.3**
HABR			*e**PP	pP	08 07 06.0	-2.8
HABR			*e**SP	sP	08 07 10.4	-2.6
HABR			*e*S	**S**	**08 14 09.8**	**-1.4**
HABR			*e**SS	sS	08 14 26.5	-1.9
HABR			*e*		08 16 44.3	
HABR			MLR	MLR		
	comp=Z,97nm,14.0s,MS4.0					
KLR	**Kul'dur**	**51.73 354**	*e*P	**P**	**08 07 01.6**	**-4.5**
SHL	**Shillong**	**53.41 304**	*e*PKP	**P**	**08 07 18.0**	**-1.0**
GTA	**Gaotai**	**54.97 323**	P	**P**	**08 07 31.1**	**+1.0**
GTA			pP	pP	08 07 41.1	+0.5
GTA			sP	sP	08 07 44.8	0.0
GTA			S	**S**	**08 15 08.8**	**-1.0**
GTA			pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7					
GTA			LR	LR		
	comp=N,240nm,18.0s					
GTA			LR	LR		
	comp=E,240nm,23.2s					
GTA			LR	LR		
	comp=Z,140nm,11.9s					
LSA	**Lhasa**	**55.75 309**	*e*P	**P**	**08 07 37.0**	**+1.1**
	comp=Z,7.3nm,0.7s,mb4.8					
LSA	**Lhasa**	**55.75 309**	*e*P	**P**	**08 07 37.0**	**+1.1**
LSA			pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8					
ULN	**Ulaanbaatar**	**57.26 335**	*e*P	**P**	**08 07 47.0**	**+0.7**
	comp=Z,28nm,1.7s,mb5.0					
ULN	**Ulaanbaatar**	**57.26 335**	*e*P	**P**	**08 07 47.0**	**+0.7**
ULN			pmax	pmax		
	comp=Z,28nm,1.7s,mb5.0					
PETK	**Petropavlovsk-**	**57.40 13**	LR	LR	08 27 55.9	
	comp=Z,115nm,19.9s,MS4.0,baz=92,slow=31					
SONM	**Songino Array**	**57.52 334**	P	**P**	**08 07 47.5**	**-0.6**
	comp=Z,1.1nm,0.6s,mb4.1,baz=158,slow=6.2,SNR=8.6					
SONM	**Songino Array**	**57.52 334**	P	**P**	**08 07 47.5**	**-0.6**
TAPN	**Taplejung**	**57.55 305**	*e*P	**P**	**08 07 49.1**	**+0.4**
GUN	**Gumba**	**59.26 304**	*e*P	**P**	**08 08 01.2**	**+0.5**
PKI	**Pulchoki**	**59.53 304**	*e*P	**P**	**08 08 02.4**	**-0.1**
KKN	**Kakani**	**59.71 304**	*e*P	**P**	**08 08 03.9**	**+0.1**
DMN	**Daman**	**59.79 304**	*e*P	**P**	**08 08 04.6**	**+0.2**
GKN	**Gorkha**	**60.32 304**	*e*P	**P**	**08 08 08.0**	**0.0**
	comp=Z,42nm,0.7s,mb5.6					
ZAK	**Zakamensk**	**60.79 335⇓**	*i*P	**P**	**08 08 10.5**	**-0.2**
ZAK			pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.7					
KOLN	**Koldanda**	**61.10 304**	*e*P	**P**	**08 08 13.4**	**+0.1**
	comp=Z,31nm,0.6s,mb5.6					
DANN	**Dangsing**	**61.17 304**	*e*P	**P**	**08 08 13.8**	**+0.1**
	comp=Z,18nm,0.7s,mb5.3					
TLY	**Talaya**	**61.61 336**	*e*P	**P**	**08 08 16.9**	**+0.7**
TLY			pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8					
TLY			MLR	MLR		
	comp=Z,132nm,17.0s,MS4.2					
IRK	**Irkutsk**	**61.78 337**	*e*P	**P**	**08 08 18.0**	**+0.6**
IRK			*e*		08 08 24.8	
IRK			pmax	pmax		
	comp=Z,34nm,1.5s,mb5.3					
WMQ	**Urumqi**	**64.93 321**	*e*P	**P**	**08 08 39.0**	**+0.6**
WMQ			pP	pP	08 08 49.0	-0.1
WMQ			sP	sP	08 08 53.0	-0.2
WMQ			PP	PP	08 11 03.0	+1.4
WMQ			S	**S**	**08 17 16.0**	**-1.7**
WMQ			ScS	ScS	08 18 27.0	-3.7
WMQ			SS	SS	08 21 29.0	-1.0
WMQ			pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2					
WMQ			pmax	pmax		
	comp=Z,86nm,6.0s					
WMQ			LR	LR		
	comp=N,84nm,18.0s,MS4.2					
WMQ			LR	LR		
	comp=E,92nm,18.0s,MS4.2					
SEY	**Seymchan**	**65.85 7⇓**	*e*P	**P**	**08 08 44.7**	**+0.7**
DDI	**Dehra Dun**	**66.52 304**	*e*x	**P**	**08 08 47.5**	**-1.4**
CASY	**Casey**	**66.93 192**	*e*P	**P**	**08 08 50.3**	**-0.5**
CASY	**Casey**	**66.93 192**	*e*P	**P**	**08 08 50.4**	**-0.4**
	comp=E,11nm,1.3s,mb4.7					
MK31	**Makanchi Array**	**69.70 322**	*e*P	**P**	**08 09 08.7**	**+0.1**
MK31	**Makanchi Array**	**69.70 322**	*e*P	**P**	**08 09 08.7**	**+0.1**
MKAR	**Makanchi Array**	**69.70 322**	P	**P**	**08 09 08.9**	**+0.4**
	comp=E,6.3nm,0.6s,mb4.8,baz=114,slow=7.4,SNR=75					
MKAR			LR	LR	08 41 19.4	
	comp=E,79nm,19.5s,MS4.0,baz=266,slow=37					
MKAR	**Makanchi Array**	**69.70 322**	*ce*P	**P**	**08 09 08.8**	**+0.2**
MKAR			pmax	pmax		
	comp=Z,6.0nm,0.6s					
KSH	**Kashi**	**71.08 313**	*e*P	**P**	**08 09 18.6**	**+1.4**
KSH			*e*pP	pP	08 09 28.9	+0.9
KSH			*e*sP	sP	08 09 32.9	+0.9
KSH			*e*PcP	PcP	08 09 39.8	+2.6
KSH			*e*PP	PP	08 11 57.1	+2.0
KSH			*e*S	S	08 18 28.8	-2.5
KSH			*e*SKS		08 19 13.6	
KSH			*e*ScS	ScS	08 19 15.8	-3.2
KSH			pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6					
KSH			LR	LR		
	comp=N,170nm,5.7s					
KSH			LR	LR		
	comp=E,230nm,5.2s					
KSH			LR	LR		
	comp=Z,290nm,16.3s,MS4.6					
ZAA0	**Zalesovo Array**	**71.78 330**	*e*P	**P**	**08 09 20.4**	**-0.7**
ZALV	**Zalesovo Beam**	**71.78 330**	P	**P**	**08 09 19.9**	**-1.2**
	comp=Z,4.9nm,0.6s,mb4.6,baz=109,slow=6.2,SNR=14					
ZALV	**Zalesovo Beam**	**71.78 330**	P	**P**	**08 09 19.9**	**-1.2**
KZA	**Kyzart**	**72.46 316**	*e*P	**P**	**08 09 27.1**	**+1.7**
	comp=Z,78nm,1.6s,mb5.4					
KZA	**Kyzart**	**72.46 316**	*e*P	**P**	**08 09 27.1**	**+1.7**
KZA			pmax	pmax		
	comp=Z,78nm,1.6s,mb5.4					
TKM2	**Tokmak 2**	**72.51 316**	*e*P	**P**	**08 09 26.2**	**+0.6**
	comp=Z,40nm,1.6s,mb5.1					
TKM2	**Tokmak 2**	**72.51 316**	*e*P	**P**	**08 09 26.3**	**+0.6**
TKM2			pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1					
KBK	**Karagaybulak**	**72.87 316**	*e*P	**P**	**08 09 28.3**	**+0.5**
	comp=Z,6.7nm,0.4s,mb4.9					
KBK	**Karagaybulak**	**72.87 316**	*e*P	**P**	**08 09 28.3**	**+0.5**
KBK			pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9					
NVS	**Novosibirsk**	**73.03 330⇑**	*i*P	**P**	**08 09 26.7**	**-1.8**
NVS			*e*	pP	08 09 36.3	-3.1
NVS			pmax	pmax		
	comp=N,19nm,1.6s					
NVS			pmax	pmax		
	comp=Z,53nm,1.6s,mb5.2					
NVS			pmax	pmax		
	comp=E,24nm,1.5s					
AAK	**Ala-Archa**	**73.17 316**	P	**P**	**08 09 30.3**	**+0.7**
	comp=E,2.3nm,0.6s,mb4.3,baz=161,slow=7.0,SNR=8.6					
AAK	**Ala-Archa**	**73.17 316**	P	**P**	**08 09 30.3**	**+0.7**
AML	**Almayashu**	**73.57 315**	*e*P	**P**	**08 09 33.2**	**+1.2**
	comp=E,64nm,1.6s,mb5.3					
AML	**Almayashu**	**73.57 315**	*e*P	**P**	**08 09 33.2**	**+1.2**
AML			pmax	pmax		
	comp=Z,64nm,1.6s,mb5.3					
KURK	**Kurchatov**	**73.60 325**	*e*P	**P**	**08 09 31.3**	**-0.6**
	comp=Z,70nm,1.7s,mb5.3					
KURK	**Kurchatov**	**73.60 325**	*c i*P	**P**	**08 09 31.8**	**-0.2**
KURK			pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1					
EKS2	**Erkin-Say**	**73.68 316**	*e*P	**P**	**08 09 33.5**	**+0.9**
	comp=Z,29nm,1.5s,mb5.0					
EKS2	**Erkin-Say**	**73.68 316**	*e*P	**P**	**08 09 33.5**	**+0.9**
EKS2			pmax	pmax		
	comp=Z,29nm,1.5s,mb5.0					
KBL	**Kabul**	**74.99 307**	*e*P	**P**	**08 09 39.8**	**-0.6**
	comp=Z,33nm,1.6s,mb5.0					
KBL	**Kabul**	**74.99 307**	*e*P	**P**	**08 09 39.8**	**-0.6**
KBL			pmax	pmax		
	comp=Z,33nm,1.6s,mb5.0					
KK31	**Karatay Array**	**76.10 315**	*ce*P	**P**	**08 09 46.3**	**-0.3**
KK31			pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.4					
SBA	**Scott Base**	**76.90 174**	*e*P	**P**	**08 09 51.5**	**+1.0**
	comp=Z,24nm,1.7s,mb4.9					
SBA	**Scott Base**	**76.90 174**	*e*P	**P**	**08 09 51.5**	**+1.0**
SBA			pmax	pmax		
	comp=Z,24nm,1.7s,mb4.8					
VOSK	**Vostochnaya**	**78.76 325**	P	**P**	**08 10 00.6**	**-0.7**
VOSK			pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9					
BVAR	**Borovoye Array**	**79.20 325**	P	**P**	**08 10 03.8**	**+0.2**
	comp=Z,11nm,0.6s,mb5.0,baz=116,slow=7.6,SNR=72					
BVAR	**Borovoye Array**	**79.20 325**	P	**P**	**08 10 03.8**	**+0.2**
BRVK	**Borovoye**	**79.27 325**	*e*P	**P**	**08 10 04.3**	**+0.3**
	comp=Z,86nm,1.7s,mb5.4					
BRVK	**Borovoye**	**79.27 325**	*c i*P	**P**	**08 10 04.1**	**+0.1**
BRVK			pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1					
ZRNK	**Zerenda**	**79.97 325**	*i* P	**P**	**08 10 07.2**	**-0.6**
ZRNK			pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2					
TTA	**Tatalina**	**80.90 25**	*e*P	**P**	**08 10 13.0**	**+0.4**
	comp=Z,23nm,1.4s,mb4.9					
TTA	**Tatalina**	**80.90 25**	*e*P	**P**	**08 10 13.0**	**+0.4**
TTA			pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9					
MAW	**Mawson**	**82.62 202**	P	**P**	**08 10 21.6**	**0.0**
	comp=Z,3.2nm,0.6s,mb4.5,baz=74,slow=4.3,SNR=11					
MAW			LR	LR	08 45 06.1	
	comp=Z,335nm,18.4s,MS4.7,baz=240,slow=34					
MAW	**Mawson**	**82.62 202**	*e*P	**P**	**08 10 21.4**	**-0.2**
	comp=Z,2.7nm,0.6s,mb4.5					
MAW	**Mawson**	**82.62 202**	*e*P	**P**	**08 10 21.6**	**-0.1**
	comp=Z,3.9nm,1.8s,mb4.1					
MAW	**Mawson**	**82.62 202**	*e*P	**P**	**08 10 21.6**	**0.0**
MAW			pmax	pmax		
	comp=Z,4.0nm,1.8s					
BPAW	**Bear Paw Mtn.**	**83.43 25**	*e*P	**P**	**08 10 27.8**	**+1.9**
	comp=Z,30nm,1.8s,mb5.0					
PMR	**Palmer**	**83.45 27**	*e*P	**P**	**08 10 25.7**	**-0.3**
	comp=Z,26nm,1.2s,mb5.1					
PMR	**Palmer**	**83.45 27**	*e*P	**P**	**08 10 25.7**	**-0.3**
PMR			pmax	pmax		
	comp=Z,26nm,1.2s,mb5.1					
SML	**Sawmill**	**83.88 27**	*e*P	**P**	**08 10 28.4**	**+0.2**
	comp=Z,8.4nm,1.2s,mb4.8					
SML	**Sawmill**	**83.88 27**	*e*P	**P**	**08 10 28.4**	**+0.2**
SML			pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.7					
MCK	**McKinley**	**84.18 25**	*e*P	**P**	**08 10 30.3**	**+0.6**
	comp=Z,11nm,0.9s,mb5.0					
MCK	**McKinley**	**84.18 25**	*e*P	**P**	**08 10 30.3**	**+0.6**
MCK			pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0					
AB31	**Akbulak array**	**84.66 320**	*ce*P	**P**	**08 10 31.7**	**-0.7**
AB31			pmax	pmax		
	comp=Z,12nm,0.7s,mb5.1					
ABKAR	**Akbulak array**	**84.66 320**	*e*P	**P**	**08 10 32.0**	**-0.4**
	comp=Z,6.0nm,0.6s,mb4.9					
COLD	**Coldfoot**	**84.76 22**	*e*P	**P**	**08 10 35.0**	**+2.5**
	comp=Z,5.4nm,1.0s,mb4.6					
COLA	**College**	**84.96 24**	*e*P	**P**	**08 10 33.2**	**-0.4**
	comp=Z,4.9nm,0.9s,mb4.6					
COLA	**College**	**84.96 24**	*e*P	**P**	**08 10 33.2**	**-0.4**
COLA			pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6					
ILAR	**Eielson Array**	**85.33 24**	P	**P**	**08 10 34.2**	**-1.3**
	comp=Z,0.4nm,0.7s,mb3.7,baz=264,slow=26,SNR=4.1					
ILAR			LR	LR	08 47 42.2	
	comp=Z,69nm,18.1s,MS4.1,baz=228,slow=35					
ILAR	**Eielson Array**	**85.33 24**	P	**P**	**08 10 34.2**	**-1.3**
AKTK	**Aktyubinsk**	**86.07 321**	P	**P**	**08 10 38.8**	**-0.7**
AKTO	**Aktyubinsk**	**86.07 321**	P	**P**	**08 10 38.8**	**-0.7**
	comp=Z,2.1nm,0.5s,mb4.6,baz=72,slow=6.2,SNR=7.5					
ARU	**Arti**	**86.67 327**	*e*P	**P**	**08 10 41.3**	**-1.0**
	comp=Z,5.8nm,0.8s,mb4.9					
ARU	**Arti**	**86.67 327**	*c i*P	**P**	**08 10 41.0**	**-1.3**
ARU					08 13 59.7	
ARU			S	S	08 21 04.3	-13
ARU			pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.9					
EGAK	**Eagle**	**87.72 25**	*e*P	**P**	**08 10 47.0**	**-0.2**
	comp=Z,35nm,1.6s,mb5.3					
DAWY	**Dawson**	**88.36 26**	*e*P	**P**	**08 10 51.3**	**+1.1**
OBN	**Obninsk**	**99.04 325⇑**	*e*P	**P**	**08 11 38.6**	**-0.9**
OBN			pmax	pmax		
	comp=Z,4.0nm,0.9s,mb5.0					
YKA	**Yellowknife Ar**	**99.55 27**	LR	LR	08 50 12.1	
	comp=Z,7.5nm,22.0s,MS3.1,baz=135,slow=32					
ARCES	**ARCESS Array B**	**100.26 341**	P	Pdif	08 11 43.3	-1.6
	comp=Z,2.3nm,0.7s,baz=79,slow=7.5,SNR=18					
ARCES	**ARCESS Array B**	**100.26 341**	P	Pdif	08 11 43.3	-1.6
FINES	**FINESS Array B**	**102.87 333**	P	Pdif	08 11 54.8	-1.7
	comp=Z,1.4nm,0.7s,baz=35,slow=5.1,SNR=3.5					
FINES	**FINESS Array B**	**102.87 333**	P	Pdif	08 11 54.8	-1.7
SCHQ	**Schefferville**	**123.56 18**	PKP	PKPdf	08 16 55.4	-0.6
	comp=Z,3.1nm,0.6s,baz=336,slow=3.2,SNR=6.9					
DBIC	**Dimbokro**	**143.79 278**	PKP	PKPdf	08 17 32.2	-2.7
	comp=Z,3.7nm,0.5s,baz=231,slow=14,SNR=8.2					
DBIC	**Dimbokro**	**143.79 278**	PKP	PKPdf	08 17 32.2	-2.7
DBIC	**Dimbokro**	**143.79 278**	PKIKP	PKPdf	08 17 32.2	-2.8
ROSC	**El Rosal**	**146.57 85**	PKPbc	PKPbc	08 17 40.3	-1.0

ARNR	**Ardon**	**1.26 262**	⇑*i*PG	Pg	08 00 24.7	-0.5
ARNR			*e*S	Sb	08 00 43.4	+2.5
ARNR	**Ardon**	**1.26 262**	*i* Pg	Pg	08 00 24.7	-0.5
ARNR			*e*Sg	Sg	08 00 43.4	+1.8
PRTR	**Priterechnaya**	**1.29 287**	⇑*i*PG	Pg	08 00 23.8	-2.1
PRTR			*i* S	Sb	08 00 42.7	+0.8
PRTR	**Priterechnaya**	**1.29 287**	*i* Pg	Pg	08 00 23.8	-2.1
PRTR			*i* Sg	Sg	08 00 42.7	+0.1
KORR	**Kora**	**1.43 259**	⇑*i*PG	Pg	08 00 26.9	-1.6
KORR			*e*S	Sn	08 00 47.8	+2.1
KORR	**Kora**	**1.43 259**	*i* Pg	Pg	08 00 26.9	-1.6
KORR			*e*Sg	Sg	08 00 47.8	+0.8
LSNR	**Lesken**	**1.58 267**	*e*PG	Pg	08 00 29.2	-2.3
LSNR			*e*S	Sn	08 00 51.5	+2.0
LSNR	**Lesken**	**1.58 267**	*e*Pg	Pg	08 00 29.2	-2.3
LSNR			*e*Sg	Sg	08 00 51.5	-0.5
ZEI	**Tsey**	**1.64 249**	⇓*i*PN	Pn	08 00 29.9	0.0
ZEI			*i* S	Sn	08 00 52.8	+1.9
ZEI	**Tsey**	**1.64 249**	*i* Pn	Pn	08 00 29.9	0.0
ZEI			*i* Sg	Sg	08 00 52.8	-1.1
DIGR	**Digorskoe uzhe**	**1.82 256**	⇑*i*PN	Pn	08 00 32.6	+0.3
DIGR			*e*S	Sn	08 00 57.5	+2.1
DIGR	**Digorskoe uzhe**	**1.82 256**	*i* Pn	Pn	08 00 32.6	+0.3
DIGR			*e*Sg	Sg	08 00 57.5	-2.1
KIV	**Kislovodsk**	**2.46 285**	*e*PN	Pn	08 00 44.7	+3.6
KIV			*i*		08 01 12.1	
KIV			pmax	pmax		
comp=Z,6.0nm,0.5s						
KIV	**Kislovodsk**	**2.46 285**	*e*Pn	Pn	08 00 44.7	+3.6
comp=Z,6.0nm,0.5s						
KIV			*i* Sn	Sn	08 01 12.1	+1.0

IDC 13 08:37:20.1±1.4, 18°15N×145°43E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.6/4, MS3.7/1, Ms1 3.7/1, ms1mx2.5/26, Error ellipse: s-maj=164.7km s-min=25.1km az=113.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.01**	**179**	LR	LR	08 56 44.0	
comp=Z,124nm,21.6s,baz=53,slow=31							
WRA	**Warramunga Arr**	**39.39**	**197**	P	P	08 44 50.7	-1.0
0.3nm,0.3s,baz=17,slow=9.2,SNR=20							
FITZ	**Fitzroy Crossi**	**40.94**	**209**	P	P	08 45 05.3	+0.7
0.8nm,0.3s,baz=16,slow=9.8,SNR=31							
ASAR	**Alice Springs**	**43.06**	**196**	P	P	08 45 21.9	+0.2
0.2nm,0.6s,baz=21,slow=8.0,SNR=4.1							
ILAR	**Eielson Array**	**64.25**	**26**	P	P	08 47 56.8	0.0
0.5nm,0.8s,baz=256,slow=6.2,SNR=5.3							

*OMAN **13** 08:48:53.5±99.0, 26°49N×64°19E, h0km±999km, Error ellipse: s-maj=558.6km s-min=31.8km az=245.0*
*ISCJB **13** 08:49:15.5±0.9, 26°1N±0°1×62°5E±0°1, h33km, mb4.0/8, Error ellipse: s-maj=22.2km s-min=6.0km az=40.1*
*IDC **13** 08:49:15.8±8.0, 26°50N×62°19E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.7/27, mbtmp4.0/8, ML3.2/1, Error ellipse: s-maj=148.1km s-min=32.7km az=166.0*
*CSEM **13** 08:49:15.4±0.7, 26°25N×62°38E, h10km, mb3.9, Error ellipse: s-maj=33.9km s-min=9.9km az=131.0*
*NEIC **13** 08:49:21.1±2.9, 26°51N×62°20E, h35km, mb3.9/3, Error ellipse: s-maj=53.2km s-min=16.0km az=164.0*
ISC 13 08:49:17.7±0.9, 26°1N±0°1×62°5E±0°1, h35km, n39, σ0°98/39, mb4.0/8, Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBK	**Wadi Bani Khal**	**4.72**	**224**	P	**Pn**	**08 50 25.0**	**-1.4**
SNR=34							
JMDO	**Jabal Madar**	**5.45**	**228**	P	**Pn**	**08 50 36.0**	**-0.5**
SNR=82							
JMDO	**Jabal Madar**	**5.45**	**228**	P	**Pn**	**08 50 36.0**	**-0.5**
SNR=82							
BSYO	**Bisya**	**5.84**	**236**	P	**Pn**	**08 50 42.2**	**+0.4**
SNR=81							
BSY	**Bisya**	**5.86**	**236**	P	**Pn**	**08 50 42.1**	**+0.1**
SNR=81							
ARQ	**Araqi**	**6.08**	**244**	P	**Pn**	**08 50 46.2**	**+1.1**
SNR=135							
ARQ	**Araqi**	**6.08**	**244**	P	**Pn**	**08 50 46.2**	**+1.1**
SNR=135							
NAZ	**Nazwa, Dubai**	**6.26**	**261**	P	**Pn**	**08 50 48.6**	**+1.0**
SNR=14							
NAZ	**Nazwa, Dubai**	**6.26**	**261**	P	**Pn**	**08 50 48.6**	**+1.0**
SNR=14							
ASUD	**Al Ashush, Dub**	**6.64**	**259**	P	**Pn**	**08 50 53.9**	**+1.1**
SNR=16							
ASUD	**Al Ashush, Dub**	**6.64**	**259**	P	**Pn**	**08 50 53.9**	**+1.2**
SNR=16							
ABTO	**Aybut**	**12.18**	**226**	P	**Pn**	**08 52 07.9**	**-0.9**
SNR=6.3							
ABTO	**Aybut**	**12.18**	**226**	P	**Pn**	**08 52 07.9**	**-0.9**
SNR=6.3							
KKAR	**Karatay Array**	**18.19**	**19**	*e*P	**Pn**	**08 53 27.2**	**-0.2**
3.9nm,0.6s							
KKAR	**Karatay Array**	**18.19**	**19**	*e*P	**Pn**	**08 53 27.2**	**-0.2**
3.9nm,0.6s							
EKS2	**Erkin-Say**	**18.94**	**26**	*e*P	**Pn**	**08 53 36.9**	**+0.4**
5.3nm,0.8s							
EKS2	**Erkin-Say**	**18.94**	**26**	*e*P	**Pn**	**08 53 36.8**	**+0.3**
5.3nm,0.8s							
AAK	**Ala-Archa**	**19.21**	**28**	P	**Pn**	**08 53 39.7**	**0.0**
0.0nm,0.3s,baz=214,slow=9.5,SNR=5.8							
AAK	**Ala-Archa**	**19.21**	**28**	P	**Pn**	**08 53 39.7**	**0.0**
ABKAR	**Abkulak array**	**23.21**	**356**	*e*P	**P**	**08 54 20.3**	**-1.1**
9.2nm,0.5s,mb4.5							
ABKAR	**Abkulak array**	**23.21**	**356**	*e*P	**P**	**08 54 20.3**	**-1.1**
9.2nm,0.5s,mb4.5							
AKTK	**Aktyubinsk**	**24.55**	**353**	P	**P**	**08 54 33.5**	**-0.4**
AKTK	**Aktyubinsk**	**24.55**	**353**	P	**P**	**08 54 33.5**	**-0.4**
AKTO	**Aktyubinsk**	**24.55**	**353**	P	**P**	**08 54 33.5**	**-0.4**
2.9nm,0.4s,mb4.2,baz=170,slow=11,SNR=13							
MK31	**Makanchi Array**	**25.95**	**32**	*e*P	**P**	**08 54 48.3**	**+1.5**
MK31	**Makanchi Array**	**25.95**	**32**	*e*P	**P**	**08 54 48.3**	**+1.6**
MKAR	**Makanchi Array**	**25.95**	**32**	P	**P**	**08 54 48.1**	**+1.4**
0.5nm,0.5s,mb3.3,baz=214,slow=9.1,SNR=8.8							
BVAR	**Borovoye Array**	**27.54**	**10**	P	**P**	**08 55 01.6**	**+0.6**
2.4nm,0.8s,mb3.9,baz=202,slow=11,SNR=10							
BVAR	**Borovoye Array**	**27.54**	**10**	P	**P**	**08 55 01.6**	**+0.6**
BRTR	**Keskin Array B**	**27.64**	**307**	P	**P**	**08 55 03.2**	**+1.2**
1.0nm,0.8s,mb3.5,baz=123,slow=10,SNR=5.0							
BRTR	**Keskin Array B**	**27.64**	**307**	P	**P**	**08 55 03.2**	**+1.2**
FINES	**FINESS Array B**	**43.00**	**335**	P	**P**	**08 57 11.7**	**-1.6**
2.5nm,0.3s,mb4.3,baz=129,slow=8.8,SNR=22							
FINES	**FINESS Array B**	**43.00**	**335**	P	**P**	**08 57 11.7**	**-1.6**
ARCES	**ARCESS Array B**	**48.54**	**344**	P	**P**	**08 57 56.0**	**-0.9**
1.6nm,0.8s,mb4.1,baz=148,slow=8.6,SNR=16							
ARCES	**ARCESS Array B**	**48.54**	**344**	P	**P**	**08 57 56.0**	**-0.9**
NB2	**NORSAR Subarra**	**49.01**	**330**	P	**P**	**08 57 59.1**	**-1.6**
comp=Z,1.7nm,0.9s,mb4.1,baz=112,slow=7.9							
NB2	**NORSAR Subarra**	**49.01**	**330**	P	**P**	**08 57 59.1**	**-1.6**
comp=Z,1.7nm,0.9s,mb4.1,SNR=5.4							
NOA	**NORSAR Array B**	**49.01**	**330**	P	**P**	**08 57 59.2**	**-1.5**
comp=Z,1.1nm,0.8s,mb3.9,baz=119,slow=7.2,SNR=3.9							
NOA	**NORSAR Array B**	**49.01**	**330**	P	**P**	**08 57 59.2**	**-1.5**

IDC 13 08:57:58.0±2.5, 6°45N×127°66E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, Error ellipse: s-maj=153.4km s-min=24.6km az=69.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**24.47**	**185**	P	P	09 03 19.1	+0.3
1.0nm,0.6s,baz=3.9,slow=8.4,SNR=4.1							
WRA	**Warramunga Arr**	**27.03**	**166**	P	P	09 03 42.0	-0.1
0.9nm,0.7s,baz=347,slow=9.9,SNR=19							
ASAR	**Alice Springs**	**30.54**	**169**	P	P	09 04 13.5	+0.2
0.4nm,0.6s,baz=345,slow=6.7,SNR=5.8							
MKAR	**Makanchi Array**	**55.90**	**324**	P	P	09 07 37.6	0.0
0.2nm,0.6s,baz=113,slow=3.7,SNR=3.0							

IDC 13 09:00:09.8±5.1, 1°83S×139°45E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=204.3km s-min=30.1km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.68**	**195**	P	Pn	09 04 29.8	-0.2
0.4nm,0.3s,baz=18,slow=12,SNR=12							
ASAR	**Alice Springs**	**22.36**	**193**	P	P	09 05 09.8	+0.2
1.3nm,0.6s,baz=15,slow=12,SNR=15							
MKAR	**Makanchi Array**	**69.55**	**322**	P	P	09 11 20.6	0.0
0.4nm,0.7s,baz=116,slow=8.1,SNR=3.6							

IDC 13 09:01:50.8±1.7, 8°25S×121°78E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.6/19, mbtmp3.5/5, ML3.3/2, Error ellipse: s-maj=136.7km s-min=25.3km az=62.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.49**	**159**	Pn	Pn	09 04 23.3	+0.8
0.1nm,0.3s,baz=351,slow=13,SNR=3.2							
WRA	**Warramunga Arr**	**16.82**	**135**	Pn	Pn	09 05 46.3	-1.6
baz=306,slow=14,SNR=4.0							
ASAR	**Alice Springs**	**19.23**	**144**	Pn	Pn	09 06 18.4	+0.7
0.1nm,0.3s,baz=323,slow=12,SNR=12							
SONM	**Songino Array**	**57.48**	**348**	P	P	09 11 42.0	+0.4
0.6nm,0.7s,baz=156,slow=7.9,SNR=5.0							
MKAR	**Makanchi Array**	**65.09**	**331**	P	P	09 12 33.1	-0.1
0.2nm,0.4s,baz=124,slow=6.3,SNR=4.1							

*IDC **13** 09:06:38.8±1.6, 37°43N×139°13E, h0km, mb3.1/2, mb1 3.5/3, mb1mx3.2/23, mbtmp3.3/3, ML3.4/1, Error ellipse: s-maj=32.2km s-min=20.1km az=127.0*
*ISCJB **13** 09:06:42.3±0.5, 37°26N±0°03×139°02E±0°05, h17km±6km, mb3.2/2, Error ellipse: s-maj=6.5km s-min=5.4km az=12.3*
*JMA **13** 09:06:42.9, 37°26N×139°02E, h9km±1km, M3.1*
JMA Felt III J1.
ISC 13 09:06:42.3±0.5, 37°26N±0°03×139°03E±0°05, h17km±4km, n13, σ0°92/19, mb3.2/2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.01**	**222**	P	**Pg**	**09 06 44.6**	**-0.6**
JHK				S	**Sg**	**09 06 46.0**	**-1.1**
JIZZ	**Izumozaki**	**0.37**	**317**	P	**Pg**	**09 06 50.6**	**+0.6**
JIZZ				S	**Sg**	**09 06 56.7**	**+1.5**
JKT	**Katashina**	**0.52**	**160**	P	**Pg**	**09 06 53.1**	**+0.4**
JKT				S	**Sg**	**09 07 00.2**	**+0.5**
JFY	**Yanaizu**	**0.56**	**74**	P	**Pg**	**09 06 53.6**	**+0.2**
JFY				*e*S	**Sg**	**09 07 01.4**	**+0.5**
JNS	**Sasagawa**	**0.60**	**22**	P	**Pg**	**09 06 54.0**	**-0.2**
JNS				*e*S	**Sg**	**09 07 02.0**	**-0.3**
JAG	**Ashikaga**	**0.90**	**158**	P	**Pb**	**09 07 00.2**	**+0.7**
MJAR	**Matsushiro Arr**	**0.97**	**223**	Pg	**Pg**	**09 07 00.8**	**-0.4**
8.2nm,0.3s,baz=33,slow=18,SNR=37							
MAT	**Matsushiro**	**0.97**	**223**	P	**Pb**	**09 07 00.4**	**-0.3**
MAT				S	**Sb**	**09 07 12.6**	**-0.7**
MAT	**Matsushiro**	**0.97**	**223**	P	**Pb**	**09 07 00.4**	**-0.3**
JSD	**Sado**	**0.99**	**322**	P	**Pb**	**09 06 59.8**	**-1.2**
KSRS	**Korea Array**	**8.85**	**275**	Pn	**Pn**	**09 08 51.2**	**+1.9**
0.4nm,0.3s,baz=89,slow=15,SNR=9.2							
ILAR	**Eielson Array**	**50.33**	**32**	P	**P**	**09 15 35.2**	**-2.5**
0.1nm,0.6s,mb3.0,baz=276,slow=9.3,SNR=4.5							
WRA	**Warramunga Arr**	**57.06**	**185**	P	**P**	**09 16 27.7**	**+0.2**
0.3nm,0.7s,mb3.4,baz=0.6,slow=7.3,SNR=3.1							

IDC 13 09:07:55.3±2.3, 7°02S×155°98E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.5/16, mbtmp3.4/4, Error ellipse: s-maj=101.2km s-min=29.0km az=127.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.61**	**236**	P	P	09 13 18.2	+0.7
0.2nm,0.3s,baz=61,slow=9.6,SNR=8.0							
ASAR	**Alice Springs**	**26.90**	**230**	P	P	09 13 37.4	-0.7
0.2nm,0.4s,baz=59,slow=10,SNR=4.3							
ILAR	**Eielson Array**	**83.04**	**21**	P	P	09 20 22.0	-0.3
0.4nm,1.1s,baz=229,slow=8.2,SNR=2.9							
MKAR	**Makanchi Array**	**84.07**	**318**	P	P	09 20 28.6	+0.6
0.4nm,0.7s,baz=111,slow=5.3,SNR=5.1							

*IDC **13** 09:13:14.0±1.3, 2°54S×142°42E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/16, mbtmp3.7/6, ML3.9/1, Error ellipse: s-maj=53.5km s-min=22.2km az=104.0*
*ISCJB **13** 09:13:17.6±1.1, 2°6S±0°1×142°3E±0°2, h33km, mb3.6/5, Error ellipse: s-maj=27.5km s-min=15.7km az=11.3*
*NEIC **13** 09:13:19.5±0.9, 2°61S×142°29E, h35km, mb3.9/1, Error ellipse: s-maj=23.8km s-min=14.1km az=103.0*
ISC 13 09:13:19.5±1.1, 2°6S±0°1×142°3E±0°2, h35km, n9, σ0°65/10, mb3.6/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**13.98**	**224**	Pn	**Pn**	**09 16 33.8**	**-1.5**
KAKA				*e*Sn	**Sn**	**09 19 00.2**	**-9.1**
CTAO	**Charters Tower**	**17.78**	**168**	*e*Pn	**Pn**	**09 17 23.8**	**-0.5**
14nm,1.4s							
WB2	**Warramunga Arr**	**18.88**	**204**	*e*P	**Pn**	**09 17 37.7**	**+0.1**
WRA	**Warramunga Arr**	**18.88**	**204**	P	**Pn**	**09 17 38.1**	**+0.4**
0.4nm,0.3s,baz=25,slow=11,SNR=26							
FITZ	**Fitzroy Crossi**	**22.43**	**226**	P	**P**	**09 18 16.0**	**+0.6**
1.0nm,0.5s,mb3.5,baz=40,slow=7.9,SNR=4.9							
ASAR	**Alice Springs**	**22.43**	**201**	P	**P**	**09 18 16.1**	**+0.7**
1.5nm,0.7s,mb3.6,baz=28,slow=10,SNR=17							
STKA	**Stephens Creek**	**29.10**	**181**	P	**P**	**09 19 17.1**	**+0.3**
3.5nm,1.0s,mb4.1,baz=354,slow=9.2,SNR=2.5							
MKAR	**Makanchi Array**	**71.94**	**321**	P	**P**	**09 24 39.6**	**+0.3**
0.2nm,0.5s,mb3.3,baz=114,slow=7.0,SNR=3.7							
ILAR	**Eielson Array**	**84.29**	**24**	P	**P**	**09 25 46.9**	**-0.5**
0.3nm,0.6s,mb3.6,baz=266,slow=4.9,SNR=7.3							

*IDC **13** 09:28:24.9±2.4, 39°57N×73°27E, h0km, mb3.6/4, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML2.9/3, MS4.2/1, Ms1 4.2/1, ms1mx2.6/31, Error ellipse: s-maj=42.7km s-min=20.1km az=141.0*
*NNC **13** 09:28:26.5±13.0, 39°47N×73°45E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=110.2km s-min=59.0km az=171.0*
*NEIC **13** 09:28:33.2±7.9, 39°72N×73°56E, h60km±36km, Error ellipse: s-maj=94.7km s-min=18.4km az=179.0*
ISC 13 09:28:24.3±2.2, 39°08N±0°09×73°58E±0°08, h19km±19km, n29, σ1°02/39, mb3.5/4, 2C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.91**	**76**	Pg	**Pn**	**09 28 47.6**	**-8.2**
KSH				Sg	**Pg**	**09 29 05.8**	**+4.8**
KSH				smax			
comp=N,270nm,0.6s							
KSH				smax			
comp=E,280nm,0.8s							
AML	**Almayashu**	**3.05**	**2**	P	**Pn**	**09 29 12.0**	**+0.5**
SNR=12							
AML	**Almayashu**	**3.05**	**2**	*e*Pn	**Pn**	**09 29 10.5**	**-0.9**
AML				*e*Sg	**Sn**	**09 29 47.6**	**+0.3**
KZA	**Kyzart**	**3.25**	**23**	P	**Pn**	**09 29 13.0**	**-1.2**
SNR=18							
KZA	**Kyzart**	**3.25**	**23**	*e*Pn	**Pn**	**09 29 12.7**	**-1.5**
KZA				*e*Sn	**Sn**	**09 29 53.2**	**+0.8**
EKS2	**Erkin-Say**	**3.58**	**2**	P	**Pn**	**09 29 19.4**	**+0.7**
SNR=6.7							
EKS2	**Erkin-Say**	**3.58**	**2**	*e*Pn	**Pn**	**09 29 17.6**	**-1.2**
EKS2				*e*S	**Sn**	**09 29 58.5**	**-1.9**
AAK	**Ala-Archa**	**3.62**	**11**	P	**Pn**	**09 29 19.1**	**-0.1**
SNR=12							
AAK	**Ala-Archa**	**3.62**	**11**	Pn	**Pn**	**09 29 19.1**	**-0.1**
comp=E,0.1nm,0.3s,baz=166,slow=11,SNR=19							
AAK				Sn	**Sn**	**09 30 01.7**	**+0.4**
comp=E,0.2nm,0.3s,baz=135,slow=20,SNR=11							
KBK	**Karagaybulak**	**3.72**	**16**	P	**Pn**	**09 29 21.0**	**+0.3**
SNR=9.9							
ULHL	**Ulahol**	**3.75**	**32**	P	**Pn**	**09 29 21.3**	**+0.2**
SNR=9.4							
CHMS	**Chumysh**	**4.01**	**12**	P	**Pn**	**09 29 24.3**	**-0.4**
SNR=5.3							
TKM2	**Tokmak 2**	**4.13**	**21**	⇓Pn	**Pn**	**09 29 24.6**	**-1.6**
comp=E,14nm,0.7s							
TKM2				⇓Sn	**Sn**	**09 30 17.9**	**+3.9**
comp=E,41nm,0.8s							
TKM2	**Tokmak 2**	**4.13**	**21**	P	**Pn**	**09 29 25.4**	**-0.8**
SNR=8.7							
TKM2	**Tokmak 2**	**4.13**	**21**	*e*Pn	**Pn**	**09 29 25.3**	**-1.0**
TKM2				*e*S	**Sn**	**09 30 20.7**	**+6.8**
USP	**Ospenovka**	**4.24**	**9**	P	**Pn**	**09 29 34.3**	**+6.5**
SNR=6.7							
CHM	**Chimkent**	**4.42**	**318**	*e*Pn	**Pn**	**09 29 23.9**	**-6.5**
CHM				*e*Sn	**Sn**	**09 30 17.3**	**-4.0**
KK31	**Karatay Array**	**4.64**	**331**	Pn	**Pn**	**09 29 33.9**	**+0.6**
comp=E,13nm,0.8s,baz=135,slow=13,SNR=37							
KK31				⇑Sn	**Sn**	**09 30 28.4**	**+1.9**
comp=E,5.3nm,0.4s,baz=141,slow=24,SNR=4.7							
KK31				⇓Lg		09 30 43.4	
comp=E,17nm,0.6s,baz=132,slow=24,SNR=4.5							
KKAR	**Karatay Array**	**4.64**	**331**	*e*Pn	**Pn**	**09 29 34.4**	**+1.1**
KKAR				*e*Sn	**Sn**	**09 30 26.6**	**+0.1**
MKAR	**Makanchi Array**	**10.01**	**37**	Pn	**Pn**	**09 30 48.1**	**+1.2**
comp=E,0.1nm,0.3s,baz=216,slow=14,SNR=4.7							
MKAR	**Makanchi Array**	**10.01**	**37**	Pn	**Pn**	**09 30 48.1**	**+1.2**
AB31	**Akbulak array**	**14.09**	**321**	⇓Pn	**Pn**	**09 31 43.4**	**+0.7**
comp=E,0.2nm,0.3s,baz=104,slow=17,SNR=4.9							
AB31				⇑Sn	**Sn**	**09 34 17.5**	**-0.9**
comp=E,0.9nm,0.7s,baz=177,slow=15,SNR=5.1							
ZALV	**Zalesovo Beam**	**16.73**	**24**	Pn	**Pn**	**09 32 17.0**	**-0.4**
comp=E,0.1nm,0.3s,baz=213,slow=12,SNR=2.7							
FINES	**FINESS Array B**	**36.55**	**323**	P	**P**	**09 35 28.8**	**+0.4**
comp=E,0.8nm,0.4s,mb3.9,baz=114,slow=9.3,SNR=8.0							
ARCES	**ARCESS Array B**	**39.59**	**336**	P	**P**	**09 35 52.0**	**-1.9**
comp=E,0.3nm,0.5s,mb3.3,baz=103,slow=7.9,SNR=8.4							
KSRS	**Korea Array**	**42.16**	**74**	LR	LR	09 54 41.0	
comp=E,343nm,21.3s,baz=131,slow=37							
NOA	**NORSAR Array B**	**43.60**	**321**	P	**P**	**09 36 25.9**	**-0.9**
comp=E,0.7nm,0.8s,mb3.5,baz=88,slow=7.3,SNR=3.1							
ILAR	**Eielson Array**	**71.73**	**17**	P	**P**	**09 39 46.3**	**+1.7**
comp=E,0.8nm,1.2s,mb3.5,baz=322,slow=6.8,SNR=4.0							
ILAR	**Eielson Array**	**71.73**	**17**	P	**P**	**09 39 46.3**	**+1.7**

*IDC **13** 09:28:39.3±1.0, 17°58S×173°77W, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.3/23, mbtmp4.3/10, ML2.1/1, MS3.8/5, Ms1 3.8/5, ms1mx3.5/28, Error ellipse: s-maj=38.4km s-min=17.7km az=133.0*
*ISCJB **13** 09:28:42.7±2.3, 17°5S±0°1×173°8W±0°2, h34km±22km, mb4.4/12, MS3.7/4, Error ellipse: s-maj=30.4km s-min=14.8km az=37.3*
*NEIC **13** 09:28:44.8±0.7, 17°54S×173°81W, h35km, mb4.7/4, Error ellipse: s-maj=25.4km s-min=11.7km az=129.0*
ISC 13 09:28:44.7±2.0, 17°5S±0°1×173°8W±0°2, h36km±21km, n28, σ1°23/23, mb4.4/12, MS3.7/4, 1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.09**	**29**	Pn	**Pn**	**09 29 45.1**	**+0.4**
7.1nm,0.3s,baz=282,slow=22,SNR=14							
AFI				Sn	**Sn**	**09 30 25.8**	**-5.5**
32nm,0.3s,baz=108,slow=20,SNR=6.9							
AFI	**Afiamalu**	**4.09**	**29**	Pn	**Pn**	**09 29 45.1**	**+0.4**
AFI				Sn	**Sn**	**09 30 25.8**	**-5.5**
MSVF	**Nonsavu**	**7.77**	**267**	*e*Pn	**Pn**	**09 30 46.3**	**+11**
RAR	**Rarotonga**	**13.74**	**108**	LR	LR	09 35 38.0	
comp=Z,505nm,18.4s,baz=267,slow=31							
DZM	**Mont Dzumac**	**19.12**	**253**	*e*LR	LR	09 38 24.0	
500nm,24.9s							
URZ	**Urewera**	**22.14**	**199**	P	**P**	**09 33 35.5**	**-1.7**
10nm,0.6s,mb4.5,baz=55,slow=12,SNR=7.4							
URZ				S	**S**	**09 37 28.3**	**-11**
6.4nm,1.0s,baz=198,slow=20,SNR=3.0							
URZ				LR	LR	09 40 35.0	
comp=Z,171nm,21.2s,MS3.4,baz=35,slow=32							
PPT	**Papeete**	**23.10**	**94**	*e*LR	LR	09 39 03.0	
299nm,24.8s							
PPT	**Papeete**	**23.10**	**94**	LR	LR	09 39 41.9	
comp=Z,239nm,19.8s,MS3.6,baz=300,slow=29							
TBI	**Tubuai**	**23.52**	**108**	*e*LR	LR	09 39 17.1	
502nm,29.8s							
HNR	**Honiara**	**26.73**	**284**	LR	LR	09 42 58.3	
comp=Z,157nm,20.9s,MS3.5,baz=75,slow=32							
RPZ	**Rata Peaks**	**29.09**	**203**	P	**P**	**09 34 42.0**	**+0.3**
8.8nm,0.7s,mb4.6,baz=16,slow=6.2,SNR=6.0							
RPZ				S	**S**	**09 39 43.7**	**+13**
1.8nm,0.3s,baz=319,slow=19,SNR=3.4							
RKT	**Rikitea**	**36.76**	**105**	*e*LR	LR	09 45 22.8	
248nm,27.8s							
CTA	**Charters Tower**	**37.84**	**260**	P	**P**	**09 35 59.2**	**+1.1**
2.2nm,0.5s,mb4.1,baz=93,slow=12,SNR=2.9							
CTAO	**Charters Tower**	**37.84**	**260**	*e*P	**P**	**09 35 59.4**	**+1.3**
4.9nm,0.9s,mb4.2							
COEN	**Coen**	**41.49**	**269**	P	**P**	**09 36 28.1**	**-0.5**
133nm,1.2s,mb5.4							
STKA	**Stephens Creek**	**42.67**	**242**	P	**P**	**09 36 39.0**	**+1.0**
1.3nm,0.5s,mb3.9,baz=73,slow=11,SNR=4.5							
WB2	**Warramunga Arr**	**49.00**	**259**	*e*P	**P**	**09 37 28.4**	**+0.3**
WRA	**Warramunga Arr**	**49.01**	**259**	P	**P**	**09 37 26.6**	**-1.6**
1.2nm,0.5s,mb4.2,baz=97,slow=8.3,SNR=33							
WRA				LR	LR	09 56 45.9	
comp=Z,157nm,18.0s,MS4.0,baz=245,slow=34							
WRA	**Warramunga Arr**	**49.01**	**259**	P	**P**	**09 37 26.6**	**-1.6**
WRA				LR	LR	09 56 45.9	
ASAR	**Alice Springs**	**49.11**	**254**	P	**P**

Ms1 4.7/13,ms1mx4.4/26 Error ellipse: s-maj=10.5km s-min=8.4km az=25.0
GCMT ***13*** *09:32:06.1±0.1, 4°.94N×75°.48W, h140km, MW5.7, Moment Tensor Solution. s105,c208; s43,c46; Moment tensor: Scale 10^{17}Nm; M_{rr}=2.35±.05; $M_{\theta\theta}$0.87±.06; $M_{\phi\phi}$1.49±.06; $M_{r\theta}$-3.94±.04; $M_{\theta\phi}$0.23±.06; $M_{\phi r}$-1.00±.05; Best double couple: $M_0$4.40000×10^{17} NP1:ϕ=227.00000°, δ13.00000°, λ-115.00000°. NP2:ϕ=72.00000°, δ79.00000°, λ-85.00000°. Principal axes: T 3.7700, Plg33.0000°, Azm158.0000°; N 1.3100, Plg5.0000°, Azm251.0000°; P -5.0700, Plg56.0000°, Azm349.0000°; Data Used: II IU CN IC G. Surface waves: sta=109, comp=239, per= 50.*
SZGRF ***13*** *09:32:09.5, 5°.41N×74°.11W, h136km, mb5.9, Colombia*
CASC ***13*** *09:32:12.4±2.4, 6°.38N×75°.71W, h133km, MD5.0, mb5.9(NEIC)*
ISC 13 09:32:02.1±0.1, 4°.84N±0°.02×75°.48W±0°.02, h134km, h134km±1.0km:pP-P, n1356, σ0.983/1020, mb5.7/404, 156C-520D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**1.15**	**89**	P	**Pn**	**09 32 28.6**	**+1.9**
	3μm,0.3s,baz=270,slow=6.1,SNR=7329						
ROSC				S	**Sn**	**09 32 49.3**	**+3.9**
	2μm,0.3s,baz=107,slow=19,SNR=41						
ROSC	**El Rosal**	**1.15**	**89**	↓*i*Pn	**Pn**	**09 32 29.1**	**+2.3**
ROSC				*e*Sn	**Sn**	**09 32 49.5**	**+4.1**
HELC	**Santa Helena**	**1.38**	**357**	↑*i*P	**Pn**	**09 32 27.7**	**-1.5**
CHIC	**Chingaza**	**1.75**	**97**	↓*i*P	**Pn**	**09 32 35.8**	**+2.4**
RUSC	**La Rusia**	**2.62**	**66**	↑*i*P	**Pn**	**09 32 44.8**	**+0.7**
OTAV	**Otavalo**	**5.45**	**213**	*e*Pn	**Pn**	**09 33 20.7**	**-0.7**
OTAV				*e*Sn	**Sn**	**09 34 22.1**	**-1.1**
BCIP	**Isla Barro Col**	**6.10**	**315**	↑*i*Pn	**Pn**	**09 33 26.7**	**-3.3**
BCIP				*e*Sn	**Sn**	**09 34 34.2**	**-4.5**
SDV	**Santo Domingo**	**6.27**	**50**	*e*Pn	**Pn**	**09 33 31.6**	**-0.7**
SDV				*e*Sn	**Sn**	**09 34 37.9**	**-4.9**
BRU2	**Volcan**	**8.17**	**299**	*e*P	**Pn**	**09 33 58.6**	**+0.7**
ACR	**Cerro Adams**	**8.52**	**297**	*e*P	**Pn**	**09 34 02.3**	**-0.4**
URSC	**Urasca**	**9.61**	**302**	*e*P	**Pn**	**09 34 17.1**	**-0.2**
QCR	**Quepos**	**9.75**	**298**	*e*P	**Pn**	**09 34 22.2**	**+3.1**
SJS	**Escuela Geolog**	**9.90**	**301**	*e*P	**Pn**	**09 34 22.9**	**+1.8**
LAJ	**Bijagual**	**9.92**	**301**	*e*P	**Pn**	**09 34 27.6**	**+6.2**
PRS1	**Puriscal**	**10.14**	**301**	*e*P	**Pn**	**09 34 27.2**	**+2.9**
CGA2	**Cerro Gallo 2**	**10.29**	**300**	*e*P	**Pn**	**09 34 28.9**	**+2.6**
JCR	**Jicaral**	**10.77**	**298**	*e*P	**Pn**	**09 34 36.2**	**+3.5**
JTS	**JuntasAbangare**	**10.84**	**301**	*e*Pn	**Pn**	**09 34 32.3**	**-1.3**
JTS				*e*Sn	**Sn**	**09 36 35.5**	**+2.2**
JTS	**JuntasAbangare**	**10.84**	**301**	*e*P	**Pn**	**09 34 32.3**	**-1.3**
JTS				*e*		09 36 35.5	
JTS	**JuntasAbangare**	**10.84**	**301**	Pn	**Pn**	**09 34 35.6**	**+2.0**
	2μm,0.9s,SNR=39						
VCR	**Vista de Mar**	**11.35**	**298**	*e*P	**Pn**	**09 34 39.4**	**-1.0**
PCRV	**Puerto La Cruz**	**11.98**	**63**	P	**Pn**	**09 34 47.3**	**-1.4**
	22nm,0.3s,baz=227,slow=10.0,SNR=72						
PCRV				S	**Sn**	**09 36 57.3**	**-3.6**
	65nm,0.3s,baz=315,slow=17,SNR=6.0						
CONN	**Concepcion**	**12.06**	**304**	*e*P	**Pn**	**09 34 48.1**	**-1.6**
SSN	**San Juan del S**	**12.11**	**303**	*e*P	**Pn**	**09 34 49.7**	**-0.6**
ATAH	**Atahualpa**	**12.25**	**194**	P	**Pn**	**09 34 52.4**	**+0.1**
	2.5nm,0.3s,baz=14,slow=15,SNR=16						
BOAB	**BOACO BROADBAN**	**12.59**	**308**	*e*P	**Pn**	**09 34 56.7**	**+0.1**
MGAN	**Managua**	**12.88**	**305**	*e*P	**Pn**	**09 35 00.0**	**-0.4**
HUEN		**12.93**	**306**	*e*P	**Pn**	**09 35 01.2**	**+0.2**
XAVN	**Gruta Xavier**	**12.95**	**305**	*e*P	**Pn**	**09 35 01.6**	**+0.3**
YHJ	**Yallahs**	**13.01**	**356**	*i* S	**Sn**	**09 37 18.5**	**-7.2**
CSAN		**13.05**	**305**	*e*P	**Pn**	**09 35 03.0**	**+0.5**
HOJ	**Hope**	**13.14**	**355**	↑*i*P	**Pn**	**09 35 05.8**	**+2.1**
MCJ	**Malvern**	**13.18**	**351**	↑*i*P	**Pn**	**09 35 05.5**	**+1.3**
COPN	**Copaltepe**	**13.18**	**304**	*e*P	**Pn**	**09 35 04.9**	**+0.5**
GWJ	**Greenwich**	**13.21**	**355**	↑*i*P	**Pn**	**09 35 05.7**	**+1.1**
STH	**Stony Hill**	**13.22**	**354**	↑*i*P	**Pn**	**09 35 05.7**	**+0.9**
CMJ	**Castle Mountai**	**13.24**	**356**	*i* P	**Pn**	**09 35 06.6**	**+1.6**
MOMN	**Momotombo**	**13.27**	**305**	*e*P	**Pn**	**09 35 06.9**	**+1.5**
CNGN	**Cerro Negro**	**13.44**	**305**	*e*P	**Pn**	**09 35 07.9**	**+0.2**
MTDJ	**Mount Denham**	**13.45**	**352**	*e*Pn	**Pn**	**09 35 08.2**	**+0.5**
BNJ	**Bonny Gate**	**13.47**	**354**	*i* P	**Pn**	**09 35 09.5**	**+1.4**
LEON	**Leon**	**13.56**	**304**	*e*P	**Pn**	**09 35 09.1**	**0.0**
BBJ	**Bamboo Saint A**	**13.57**	**353**	↓*i*P	**Pn**	**09 35 12.5**	**+3.2**
BBJ				*i* S	**Sn**	**09 37 29.5**	**-10**
TELN	**Telica**	**13.61**	**305**	*e*P	**Pn**	**09 35 11.4**	**+1.6**
CRIN	**San Cristobal**	**13.84**	**305**	*e*P	**Pn**	**09 35 13.3**	**+0.5**
SDDR	**Presa de Saban**	**14.64**	**16**	*e*Pn	**Pn**	**09 35 23.2**	**+0.5**
CNCH	**Conchagua**	**14.79**	**305**	*e*P	**Pn**	**09 35 25.0**	**+0.2**
TGUH	**Tegucigalpa,Un**	**14.80**	**309**	*e*Pn	**Pn**	**09 35 24.4**	**-0.4**
GTBY	**Guantanamo Bay**	**15.00**	**1**	*e*P	**Pn**	**09 35 28.5**	**+1.2**
TRN	**Trinidad (W)**	**15.09**	**67**	*e*P	**Pn**	**09 35 28.6**	**+0.1**
TBH	**Brigand Hill**	**15.34**	**68**	*e*P	**Pn**	**09 35 32.0**	**+0.4**
CAHU	**Cacacuatique**	**15.37**	**306**	*e*P	**Pn**	**09 35 32.5**	**+0.5**
CRPR	**Cabo Rojo, PR**	**15.43**	**31**	*e*Pn	**Pn**	**09 35 28.6**	**-4.2**
	624nm,1.6s						
CRPR				*e*Sn	**Sn**	**09 38 06.7**	**-17**
GRGR	**Grenville**	**15.46**	**61**	*e*Pn	**Pn**	**09 35 32.5**	**-0.7**
GRW	**Mount Saint Ca**	**15.47**	**61**	*e*P	**Pn**	**09 35 33.0**	**-0.3**
LSP	**Las Mesas**	**15.59**	**31**	*e*Pn	**Pn**	**09 35 31.5**	**-3.2**
LSP				*e*Sn	Sn	09 38 07.5	-20
MPR	**Mayaguez**	**15.59**	**31**	*e*Pn	**Pn**	**09 35 30.5**	**-4.2**
	805nm,1.0s						
ICM	**Isla Caja Muer**	**15.65**	**33**	*e*Pn	**Pn**	**09 35 32.7**	**-2.7**
OBIP	**Obispado Ponce**	**15.73**	**33**	*e*Pn	**Pn**	**09 35 34.3**	**-2.1**
	365nm,0.8s						
OBIP				*e*S	**S**	**09 38 37.8**	**+1.5**
AGP	**Aguadilla**	**15.75**	**30**	*e*Pn	**Pn**	**09 35 34.5**	**-2.2**
	536nm,0.8s						
CELP	**Cerrillos**	**15.77**	**33**	*e*Pn	**Pn**	**09 35 33.2**	**-3.7**
CELP				*e*Sn	Sn	09 38 09.1	-23
PAYG	**Puerto Ayora**	**15.77**	**250**	*e*Pn	**Pn**	**09 35 36.8**	**-0.2**
LRS	**Lares**	**15.81**	**32**	*e*Pn	**Pn**	**09 35 40.1**	**+2.7**
AGPR	**Aguadilla, PR**	**15.82**	**30**	*e*Pn	**Pn**	**09 35 34.3**	**-3.2**
	657nm,0.9s						
AGPR				*e*Sn	**Sn**	**09 38 13.9**	**-19**
AOPR	**Arecibo Observ**	**15.90**	**32**	*e*Pn	**Pn**	**09 35 35.1**	**-3.4**
	408nm,0.6s						
SJG	**San Juan**	**16.03**	**34**	P	**Pn**	**09 35 38.7**	**-1.5**
	30nm,0.3s,baz=217,slow=12,SNR=33						
SJG				S	**S**	**09 38 23.5**	**-16**
	29nm,0.3s,baz=11,slow=16,SNR=7.3						
SJG	**San Juan**	**16.03**	**34**	*e*Pn	**Pn**	**09 35 36.0**	**-4.2**
	604nm,0.9s						
SJG	**San Juan**	**16.03**	**34**	P	**Pn**	**09 35 38.7**	**-1.5**
SJG				pmax	pmax		
	comp=Z,30nm,0.3s						
SJG	**San Juan**	**16.03**	**34**	*e*P	**Pn**	**09 35 36.5**	**-3.7**
TOSP	**Speyside**	**16.12**	**66**	*e*P	**Pn**	**09 35 41.9**	**+0.6**
HUMP	**Col San Antoni**	**16.23**	**35**	*e*Pn	**Pn**	**09 35 39.9**	**-2.7**
	comp=Z,664nm,1.4s						
FCV	**Fort Charlotte**	**16.30**	**59**	*e*P	**Pn**	**09 35 44.7**	**+1.3**
SVB	**Belmont**	**16.35**	**58**	*e*P	**Pn**	**09 35 43.0**	**-1.1**
SVV	**Soufriere Volc**	**16.40**	**58**	*e*P	**Pn**	**09 35 45.4**	**+0.7**
BHS	**Barnard House**	**16.46**	**58**	*e*P	**Pn**	**09 35 46.9**	**+1.4**
SBLS	**San Blas**	**16.56**	**304**	*e*P	**Pn**	**09 35 46.7**	**0.0**
NNA	**Nana**	**16.77**	**185**	P	**Pn**	**09 35 48.9**	**-0.4**
	comp=Z,3.6nm,0.3s,baz=16,slow=11,SNR=11						
NNA	**Nana**	**16.77**	**185**	*e*Pn	**Pn**	**09 35 47.8**	**-1.5**
	comp=Z,167nm,1.1s						
NNA	**Nana**	**16.77**	**185**	P	**Pn**	**09 35 48.2**	**-1.1**
	comp=Z,484nm,1.0s,SNR=6.6						
SLB	**Belfond**	**16.80**	**57**	*e*P	**Pn**	**09 35 50.7**	**+1.1**
MCLT	**Moule a Chique**	**16.82**	**57**	*e*P	**Pn**	**09 35 49.3**	**-0.6**
SLPE	**Piton Saint Es**	**16.85**	**57**	*e*P	**Pn**	**09 35 53.2**	**+3.1**
STVI	**Saint Thomas**	**16.91**	**37**	*e*Pn	**Pn**	**09 35 49.1**	**-1.8**
	comp=Z,698nm,0.7s						
STVI				*e*S	S	09 38 37.5	-22
SLW	**Petit Monier**	**16.98**	**57**	*e*P	**Pn**	**09 35 51.1**	**-0.7**
SLW	**Petit Monier**	**16.98**	**57**	*e*P	**Pn**	**09 35 52.0**	**+0.2**
BIM	**Bigot**	**17.14**	**55**	*e*P	**Pn**	**09 35 51.9**	**-1.8**
FDF	**Fort de France**	**17.19**	**54**	*e*P	**Pn**	**09 35 51.7**	**-2.6**
MVM	**Montagne Vaucl**	**17.30**	**55**	*e*P	**Pn**	**09 35 54.6**	**-1.0**
DLPL	**La Plaine**	**17.45**	**52**	*e*P	**Pn**	**09 36 02.6**	**+5.3**
HMG	**Houelmont**	**17.48**	**50**	*e*P	**Pn**	**09 35 56.0**	**-1.8**
LZG	**Guadaloupe-1**	**17.52**	**49**	*e*P	**Pn**	**09 35 56.1**	**-2.2**
PHG	**Guadaloupe-2**	**17.55**	**50**	*e*P	**Pn**	**09 35 56.9**	**-1.6**
SKI	**Saint Kitts**	**17.60**	**44**	*e*P	**Pn**	**09 35 58.9**	**-0.3**
MGG	**Marie-Galante**	**17.74**	**51**	*e*P	**Pn**	**09 35 59.6**	**-1.2**
BPA	**Boggy Peak**	**18.04**	**47**	*e*P	**P**	**09 36 01.9**	**-1.1**
TEIG	**Tepich**	**19.72**	**322**	↓*i*P	**P**	**09 36 21.4**	**0.0**
	comp=Z,815nm,1.0s						
TEIG				*e*PcP	PcP	09 40 34.3	-0.4
LPAZ	**La Paz**	**22.22**	**161**	P	**P**	**09 36 46.5**	**-1.4**
	comp=Z,81nm,0.8s,mb5.2,baz=343,slow=12,SNR=101						
LPAZ				S	**S**	**09 40 39.0**	**-4.1**
	comp=Z,7.1nm,0.7s,baz=37,slow=20,SNR=1.7						
LPAZ	**La Paz**	**22.22**	**161**	*e*P	**P**	**09 36 46.1**	**-1.9**
	comp=Z,113nm,0.9s,mb5.3						
LPAZ	**La Paz**	**22.22**	**161**	P	**P**	**09 36 46.6**	**-1.4**
LPAZ				S	**S**	**09 40 39.0**	**-4.1**
LPAZ				pmax	pmax		
	comp=Z,81nm,0.8s						
LPAZ				smax			
	comp=N,7.0nm,0.7s						
CMIG	**Matias Romero**	**22.57**	**304**	P	**P**	**09 36 48.4**	**-3.2**
	comp=N,78nm,0.9s,mb5.2,baz=110,slow=13,SNR=61						
CMIG				ScP	ScP	09 44 04.5	-1.2
	comp=N,19nm,0.8s,baz=80,slow=2.1,SNR=18						
CMIG				LR	LR	09 46 41.9	
	comp=N,1μm,18.2s,baz=104,slow=39						
CMIG	**Matias Romero**	**22.57**	**304**	P	**P**	**09 36 48.4**	**-3.2**
CMIG				ScP	ScP	09 44 04.5	-1.2
CMIG				LR	LR	09 46 41.9	
DWPF	**Disney**	**23.82**	**347**	↓*i*P	**P**	**09 37 03.9**	**+1.0**
	comp=N,722nm,0.8s,mb6.3						
BRAL	**Brewton**	**28.22**	**339**	↓*i*P	**P**	**09 37 44.8**	**+2.4**
	comp=N,929nm,0.9s,mb6.5						
NHSC	**New Hope**	**28.46**	**352**	↓*i*P	**P**	**09 37 45.5**	**+0.9**
	comp=N,2μm,1.9s,mb6.6						
COW	**Cow Castle Cre**	**28.81**	**351**	*e*P	**P**	**09 37 48.4**	**+0.8**
BBSR	**BB Station**	**29.19**	**19**	↓*i*P	**P**	**09 37 51.2**	**+0.2**
	comp=N,130nm,0.6s,mb5.8						
BBSR				*e*pP	pP	09 38 18.6	-1.1
BBSR				*e*sP	sP	09 38 34.1	-1.1
GOGA	**Godfrey**	**29.38**	**346**	↓*i*P	**P**	**09 37 53.3**	**+0.6**
	comp=N,216nm,0.6s,mb6.1						
GOGA	**Godfrey**	**29.38**	**346**	↓*i*P	**P**	**09 37 53.3**	**+0.6**
GOGA				pmax	pmax		
	comp=Z,216nm,0.6s,mb6.1						
JSC	**Jenkinsville**	**29.78**	**350**	*e*P	**P**	**09 37 56.8**	**+0.6**
JSC				*e*pP	pP	09 38 26.6	+1.7
JSC				*e*sP	sP	09 38 42.4	+2.0
JSC				*e*PcP	PcP	09 40 53.9	-2.8
JSC	**Jenkinsville**	**29.78**	**350**	*e*P	**P**	**09 37 56.8**	**+0.6**
JSC				*e**PP	pP	09 38 26.6	+1.6
JSC				*e*		09 40 53.9	
LRAL	**Lakeview Retre**	**30.04**	**340**	↓*i*P	**P**	**09 37 59.0**	**+0.5**
	comp=Z,617nm,1.0s,mb6.3						
CNNC	**Cliffs of the**	**30.33**	**356**	↓*i*P	**P**	**09 38 01.3**	**+0.3**
	comp=Z,195nm,0.8s,mb5.9						
VBMS	**Vicksburg**	**30.66**	**334**	↓*i*P	**P**	**09 38 04.0**	**0.0**
	comp=Z,594nm,0.9s,mb6.3						
KVTX	**Kingsville**	**31.07**	**319**	↓*i*P	**P**	**09 38 06.9**	**-0.9**
	comp=Z,887nm,1.1s,mb6.4						
KVTX				*e*pP	pP	09 38 33.2	-3.4
CPCT	**Cooper Cave**	**31.58**	**346**	↓*i*P	**P**	**09 38 12.9**	**+0.9**
TKL	**Tuckaleechee C**	**31.61**	**347**	↓*i*P	**P**	**09 38 12.6**	**+0.3**
TKL	**Tuckaleechee C**	**31.61**	**347**	↓*i*P	**P**	**09 38 12.6**	**+0.3**
SWET	**Sewanee**	**31.73**	**344**	↓*i*P	**P**	**09 38 13.8**	**+0.4**
SWET				*e*pP	pP	09 38 41.9	-0.4
SWET				*e*sP	sP	09 38 57.6	0.0
OXF	**Oxford**	**32.22**	**338**	↓*i*P	**P**	**09 38 16.7**	**-1.0**
	comp=Z,370nm,0.8s,mb6.2						
OXF	**Oxford**	**32.22**	**338**	↓*i*P	**P**	**09 38 16.7**	**-1.0**
OXF				pmax	pmax		
	comp=Z,371nm,0.8s,mb6.2						
NATX	**Nacogdoches**	**32.26**	**328**	↓*i*P	**P**	**09 38 17.8**	**-0.2**
	comp=Z,676nm,1.0s,mb6.3						
VWCC	**Virginia Weste**	**32.51**	**353**	↓*i*P	**P**	**09 38 21.0**	**+0.8**
BLA	**Blacksburg**	**32.53**	**353**	↓*i*P	**P**	**09 38 21.4**	**+1.1**
	comp=Z,526nm,1.0s,mb6.2						
BLA				*e*pP	pP	09 38 49.8	+0.5
BLA				*e*sP	sP	09 39 05.2	+0.5
BLA				*e*PcP	PcP	09 41 03.5	-0.5
BLA	**Blacksburg**	**32.53**	**353**	↓*i*P	**P**	**09 38 21.4**	**+1.1**
BLA				*e**PP	pP	09 38 49.8	+0.5
BLA				*e**SP	sP	09 39 05.2	+0.5
BLA				*e*		09 41 03.5	
BLA				pmax	pmax		
	comp=Z,526nm,1.0s,mb6.2						
MET	**Memphis--Engin**	**32.96**	**338**	↓*i*P	**P**	**09 38 23.4**	**-0.7**
	comp=Z,1μm,0.8s,mb6.7						
WVT	**Waverly**	**33.15**	**342**	↓*i*P	**P**	**09 38 25.2**	**-0.6**
	comp=Z,726nm,0.6s,mb6.6						
WVT	**Waverly**	**33.15**	**342**	↓*i*P	**P**	**09 38 25.2**	**-0.5**
WVT				pmax	pmax		
	comp=Z,726nm,0.6s,mb6.6						
CBN	**Corbin**	**33.25**	**357**	↓*i*P	**P**	**09 38 27.3**	**+0.7**
	comp=Z,358nm,0.9s,mb6.1						
HALT	**Halls**	**33.45**	**339**	↓*i*P	**P**	**09 38 27.8**	**-0.6**
HALT				*e*pP	pP	09 38 58.1	+0.7
HALT				*e*sP	sP	09 39 13.8	+1.0
HBAR	**Harrisburg**	**33.62**	**337**	↓*i*P	**P**	**09 38 29.4**	**-0.5**
HBAR				*e*pP	pP	09 38 59.1	+0.2
UALR	**University of**	**33.63**	**334**	↓*i*P	**P**	**09 38 28.8**	**-1.1**
	comp=Z,285nm,1.0s,mb6.0						
UTMT	**University of**	**33.68**	**340**	↓*i*P	**P**	**09 38 29.8**	**-0.5**
	comp=Z,1μm,0.9s,mb6.6						
GNAR	**Gosnell**	**33.74**	**338**	↓*i*P	**P**	**09 38 30.5**	**-0.4**
	comp=Z,13μm,1.1s						
GLAT	**Glass**	**33.76**	**340**	↓*i*P	**P**	**09 38 30.7**	**-0.3**
GLAT				*e*pP	pP	09 39 00.2	+0.2
GLAT				*e*sP	sP	09 39 16.5	+1.1
BDFB	**Brasilia**	**33.97**	**127**	P	**P**	**09 38 32.5**	**-0.6**
	comp=Z,258nm,0.8s,mb6.0,baz=298,slow=12,SNR=149						
BDFB				LR	LR	09 53 20.3	
	comp=Z,7μm,18.5s,baz=280,slow=38						
BDFB	**Brasilia**	**33.97**	**127**	P	**P**	**09 38 32.5**	**-0.6**
BDFB				pmax	pmax		
	comp=Z,258nm,0.8s						
BDFB				MLR	MLR		
	comp=Z,7μm,18.5s						
LCO	**Las Campanas**	**33.97**	**172**	↑*i*P	**P**	**09 38 33.8**	**+0.9**
	comp=Z,281nm,1.4s,mb5.8						
MIAR	**Mount Ida**	**33.98**	**333**	↓*i*P	**P**	**09 38 31.4**	**-1.6**
MIAR	**Mount Ida**	**33.98**	**333**	↓*i*P	**P**	**09 38 31.4**	**-1.6**
PVMO	**Portageville**	**34.03**	**339**	↓*i*P	**P**	**09 38 32.8**	**-0.6**
	comp=Z,570nm,0.5s,mb6.6						
PARMO	**Parma**	**34.27**	**339**	↓*i*P	**P**	**09 38 35.2**	**-0.3**
JCT	**Junction City**	**34.29**	**321**	↓*i*P	**P**	**09 38 34.6**	**-1.1**
	comp=Z,454nm,1.7s,mb5.9						
JCT	**Junction City**	**34.29**	**321**	↓*i*P	**P**	**09 38 34.6**	**-1.1**
JCT				pmax	pmax		
	comp=Z,454nm,1.7s,mb5.9						
SDMD	**Soldier's Deli**	**34.43**	**358**	↓*i*P	**P**	**09 38 37.5**	**+0.7**
	comp=Z,214nm,0.8s,mb5.9						
SDMD				*e*PP	PP	09 39 58.4	+0.8
WCI	**Wyandotte Cave**	**34.66**	**345**	*e*P	**P**	**09 38 38.5**	**-0.3**
	comp=Z,655nm,1.1s,mb6.2						
WCI	**Wyandotte Cave**	**34.66**	**345**	*e*P	**P**	**09 38 38.5**	**-0.3**
WCI				pmax	pmax		
	comp=Z,655nm,1.1s,mb6.2						
USIN	**University of**	**34.79**	**343**	↓*i*P	**P**	**09 38 39.8**	**-0.1**
	comp=Z,3μm,0.7s						
MCWV	**Mont Chateau**	**34.88**	**354**	↓*i*P	**P**	**09 38 41.8**	**+1.2**
	comp=Z,276nm,0.8s,mb5.9						
MVL	**Millersville**	**35.01**	**359**	*e*P	**P**	**09 38 42.8**	**+1.0**
	comp=Z,269nm,0.8s,mb5.9						
SIUC	**Southern Illin**	**35.04**	**341**	↓*i*P	**P**	**09 38 41.6**	**-0.4**
	comp=Z,2μm,0.8s,mb6.7						
BLO	**Bloomington**	**35.61**	**345**	↓*i*P	**P**	**09 38 46.9**	**0.0**
	comp=Z,844nm,0.9s,mb6.4						
BLO	**Bloomington**	**35.61**	**345**	↓*i*P	**P**	**09 38 46.9**	**0.0**
BLO				pmax	pmax		
	comp=Z,844nm,0.9s,mb6.4						
OLIL	**Olney**	**35.63**	**343**	↓*i*P	**P**	**09 38 46.6**	**-0.5**
	comp=Z,1μm,1.0s,mb6.5						
BRNJ	**Basking Ridge**	**35.69**	**1**	↓*i*P	**P**	**09 38 48.7**	**+1.1**
	comp=Z,357nm,0.7s,mb6.1						
BRNJ				*e*pP	pP	09 39 18.6	+1.8
BRNJ				*e*sP	sP	09 39 33.1	+1.0
FVM	**French Village**	**35.69**	**340**	↓*i*P	**P**	**09 38 47.0**	**-0.6**
FVM				*e*pP	pP	09 39 15.7	-1.2
FVM				*e*sP	sP	09 39 32.0	-0.3
FVM	**French Village**	**35.69**	**340**	↓*i*P	**P**	**09 38 47.0**	**-0.6**
FVM				*e**PP	pP	09 39 15.7	-1.2
SSPA	**Standing Stone**	**35.70**	**357**	*e*P	**P**	**09 38 48.8**	**+1.2**
	comp=Z,349nm,1.0s,mb5.9						
CPNY	**Central Park**	**35.82**	**2**	↓*i*P	**P**	**09 38 49.0**	**+0.4**
	comp=Z,76nm,0.8s,mb5.4						
ACSO	**Alum Creek Sta**	**35.88**	**350**	↓*i*P	**P**	**09 38 49.8**	**+0.6**
	comp=Z,610nm,1.0s,mb6.2						
PAL	**Palisades**	**36.03**	**2**	↓*i*P	**P**	**09 38 51.0**	**+0.5**
	comp=Z,356nm,0.8s,mb6.0						
PAL	**Palisades**	**36.03**	**2**	↓*i*P	**P**	**09 38 51.0**	**+0.5**
PAL				pmax	pmax		
	comp=Z,357nm,0.8s,mb6.0						
CCM	**Cathedral Cave**	**36.05**	**339**	↓*i*P	**P**	**09 38 49.3**	**-1.3**
CCM	**Cathedral Cave**	**36.05**	**339**	↓*i*P	**P**	**09 38 49.3**	**-1.4**
TXAR	**Lajitas Array**	**36.12**	**316**	P	**P**	**09 38 50.6**	**-0.8**
	comp=Z,72nm,1.0s,mb5.3,baz=135,slow=9.0,SNR=360						
TXAR				PP	PP	09 40 19.6	+3.3
	comp=Z,31nm,1.0s,baz=138,slow=11,SNR=4.5						
TXAR				PcP	PcP	09 41 14.4	-0.1
	comp=Z,56nm,0.8s,baz=147,slow=5.4,SNR=17						
TXAR				ScP	ScP	09 44 47.5	-1.2
	comp=Z,4.9nm,0.8s,baz=133,slow=3.8,SNR=5.2						
TXAR	**Lajitas Array**	**36.12**	**316**	P	**P**	**09 38 50.6**	**-0.8**
TXAR				PP	PP	09 40 19.6	+3.3
TXAR				PcP	PcP	09 41 14.4	-0.1
TXAR				ScP	ScP	09 44 47.5	-1.2
TXAR	**Lajitas Array**	**36.12**	**316**	P	**P**	**09 38 50.6**	**-0.8**
TXAR						09 40 19.6	
TXAR						09 41 14.4	
TXAR				pmax	pmax		
	comp=Z,72nm,1.0s						
TXAR				pmax	pmax		
	comp=Z,31nm,1.0s						
TXAR				pmax	pmax		
	comp=Z,56nm,0.8s						
TXAR				pmax	pmax		
	comp=N,5.0nm,0.8s						
SLM	**Saint Louis**	**36.21**	**340**	↓*i*P	**P**	**09 38 51.3**	**-0.8**
	comp=N,724nm,0.7s,mb6.4						
SLM	**Saint Louis**	**36.21**	**340**	↓*i*P	**P**	**09 38 51.3**	**-0.8**
SLM				pmax	pmax		
	comp=Z,724nm,0.7s,mb6.4						
428A	**Kincaid Ranch,**	**36.31**	**318**	↓ScP	ScP	09 44 48.0	-1.3
	baz=36						
YLE	**Yale**	**36.38**	**3**	↓*i*P	**P**	**09 38 54.2**	**+0.7**
527A	**Woodward Ranch**	**36.57**	**317**	↓ScP	ScP	09 44 49.1	-1.2
	baz=37,SNR=5.5						
626A	**Big Bend Ranch**	**36.58**	**315**	↓ScP	ScP	09 44 49.8	-0.5
	baz=37,SNR=6.5						
WMOK	**Wichita Mounta**	**36.75**	**327**	↓*i*P	**P**	**09 38 55.3**	**-1.4**
	comp=Z,481nm,0.9s,mb6.1						
WMOK				*e*PcP	PcP	09 41 15.5	-0.8
WMOK				*e*ScP	ScP	09 44 50.0	-0.8
WMOK	**Wichita Mounta**	**36.75**	**327**	↓*i*P	**P**	**09 38 55.3**	**-1.4**
WMOK				*e*		09 41 15.5	
WMOK				pmax	pmax		
	comp=Z,481nm,0.9s,mb6.1						
526A	**Mary Lane Ranc**	**36.85**	**316**	↑ScP	ScP	09 44 50.5	-0.8
	baz=37						
ALLY	**Alegheny Colle**	**36.88**	**354**	↓*i*P	**P**	**09 38 58.5**	**+0.8**
	comp=Z,510nm,0.8s,mb6.2						
ALLY				*e*pP	pP	09 39 26.2	-0.8
ALLY				*e*sP	sP	09 39 42.9	+0.5
BRYW	**Bryant College**	**37.08**	**5**	↓*i*P	**P**	**09 38 59.9**	**+0.6**
	comp

EMMW *e*pP pP 09 39 54.4 -1.8
EMMW *e*sP sP 09 40 10.9 -0.5
EMMW *e*PP PP 09 41 02.4 +0.4
CBKS Cedar Bluff 40.35 330 *e*P **P 09 39 25.9 -0.8**
CBKS Cedar Bluff 40.35 330 *e*P **P 09 39 25.9 -0.8**
V26A Tequesquite Ra 40.35 323 ⇓ScP ScP 09 45 04.0 -0.7
baz=40,SNR=6.4
W25A X Bar L Ranch, 40.37 322 ⇑ScP ScP 09 45 03.6 -1.1
baz=40,SNR=6.0
122A Conniff Cattle 40.42 317 ⇓P **P 09 39 28.6 +1.3**
baz=40
Y23A Lovelace Mesa, 40.54 319 ⇑ScP ScP 09 45 04.4 -1.1
baz=41,SNR=5.5
GLMI Grayling 40.62 350 ⇓*i*P **P 09 39 28.5 -0.3**
comp=Z,860nm,0.8s,mb6.4
PKME Peaks-Kenny Pk 40.62 7 ⇓*i*P **P 09 39 29.5 +0.7**
320A Kipp Ranch, An 40.70 314 ⇑P **P 09 39 30.8 +1.0**
baz=41
Z22A Elephant Butte 40.73 318 ⇓ScP ScP 09 45 04.2 -1.9
baz=41,SNR=5.9
V25A Rancho No Teng 40.88 323 ⇑ScP ScP 09 45 05.9 -0.7
baz=41,SNR=8.8
RCBR Riachuelo 40.91 105 *e*P **P 09 39 30.8 -0.9**
W24A Lazy 6 Ranch, 40.95 321 ⇑ScP ScP 09 45 05.9 -1.1
baz=41,SNR=7.3
X23A Hourglass Bar 41.04 320 ⇓ScP ScP 09 45 07.6 +0.3
baz=41,SNR=8.0
BNM Barren Site 41.05 319 ⇓*i*P **P 09 39 33.0 +0.4**
comp=Z,98nm,0.8s,mb5.5
BNM *e*pP pP 09 40 02.2 -0.2
BNM *e*PcP PcP 09 41 29.6 -0.3
BNM *e*ScP ScP 09 45 07.6 +0.2
Y22A Socorro 41.14 319 ⇓ScP ScP 09 45 07.7 0.0
baz=41
LPM Los Pinos Moun 41.16 319 ⇑*i*P **P 09 39 33.6 +0.2**
Y22D IRIS PASSCAL I 41.20 319 ⇑ScP ScP 09 45 07.7 -0.3
baz=41
Z21A St. Cloud Mine 41.23 317 ⇑ScP ScP 09 45 09.2 +1.0
baz=41
319A Douglas 41.26 314 ⇓ScP ScP 09 45 07.0 -1.4
baz=41
LENM Lemitar 41.29 319 *e*P **P 09 39 35.0 +0.5**
W23A Werner Place, 41.38 321 ⇑ScP ScP 09 45 07.7 -1.0
baz=42,SNR=7.4
ANMO Albuquerque 41.44 320 ⇓*i*P **P 09 39 36.2 +0.5**
ANMO Albuquerque 41.44 320 ⇓*i*P **P 09 39 36.2 +0.5**
120A U Bar Ranch, L 41.45 316 ⇑ScP ScP 09 45 08.8 -0.3
baz=42
X22A Bernardo 41.52 319 ⇑ScP ScP 09 45 09.7 +0.4
baz=42
LAZ Ladron 41.54 319 ⇓*i*P **P 09 39 37.4 +0.9**
comp=Z,264nm,0.9s,mb5.9
LAZ *e*PcP PcP 09 41 31.7 +0.2
219A White Tail Can 41.59 315 ⇑ScP ScP 09 45 08.5 -1.1
baz=42,SNR=5.6
Y21A Point of Rocks 41.65 318 ⇓ScP ScP 09 45 10.2 +0.4
baz=42,SNR=8.5
Z20A Nine Sixteen R 41.75 316 ⇑P **P 09 39 39.7 +1.5**
baz=42
Z20A ⇑ScP ScP 09 45 10.4 +0.2
baz=42
318A Bisbee 41.81 313 ⇓ScP ScP 09 45 09.9 -0.6
baz=42,SNR=8.3
X21A Alamocita Cree 41.99 319 ⇑ScP ScP 09 45 11.3 +0.2
baz=42,SNR=12
CAM4 Nova Friburgo 42.04 131 ⇑*i*P **P 09 39 39.6 -1.1**
CAM4 *i* 09 39 42.0
CAM4 *i* 09 39 43.9
CAM4 *i* 09 39 48.4
CAM4 *i* 09 39 56.9
CAM4 *i* pP 09 40 13.9 +3.1
119A Ashpeak Ranch, 42.04 316 ⇓ScP ScP 09 45 12.2 +0.8
baz=42,SNR=7.3
Y20A Horse Springs, 42.06 318 ⇓ScP ScP 09 45 11.1 -0.4
baz=42,SNR=10
218A Dragoon 42.13 314 ⇑ScP ScP 09 45 11.3 -0.5
baz=42,SNR=8.8
U23A El Rito 42.16 322 ⇑ScP ScP 09 45 12.0 +0.2
baz=42,SNR=7.2
PQI Presque Isle 42.17 8 ⇓*i*P **P 09 39 42.0 +0.6**
comp=Z,349nm,0.9s,mb6.0
PQI *e*pP pP 09 40 10.8 -0.6
PQI *e*sP sP 09 40 26.8 +0.2
Z19A T-Link Ranch, 42.31 316 ⇑ScP ScP 09 45 13.6 +1.1
baz=42,SNR=6.5
V22A San Miguel Ran 42.34 321 ⇑ScP ScP 09 45 13.5 +1.0
baz=42,SNR=19
118A Homack Ranch, 42.44 315 ⇑P **P 09 39 44.9 +1.0**
baz=42
S24A Houchin Ranch, 42.45 324 ⇑ScP ScP 09 45 13.0 +0.1
baz=43,SNR=6.2
X20A Quemado 42.52 318 ⇑P **P 09 39 46.2 +1.7**
baz=43
X20A ⇑ScP ScP 09 45 13.2 -0.1
baz=43
T23A Casias Ranch, 42.53 323 ⇓ScP ScP 09 45 12.7 -0.5
baz=43,SNR=6.9
217A Green Valley 42.58 313 ⇑ScP ScP 09 45 13.6 0.0
baz=43,SNR=11
U22A Llaves 42.60 322 ⇓ScP ScP 09 45 13.8 +0.3
baz=43,SNR=6.2
Y19A Nutrioso 42.68 317 ⇑ScP ScP 09 45 14.8 +0.9
baz=43,SNR=12
SDCO Great Sand Dun 42.69 324 ⇓*i*P **P 09 39 46.5 +0.7**
comp=Z,2μm,0.9s,mb6.8
SDCO *e*ScP ScP 09 45 13.8 -0.1
V21A Milan 42.73 320 ⇑ScP ScP 09 45 13.8 -0.3
baz=43,SNR=8.9
COWI Conover 42.78 346 ⇓*i*P **P 09 39 45.5 -0.9**
comp=Z,699nm,1.3s,mb6.1
COWI *e*pP pP 09 40 15.0 -1.4
TUC Tucson 42.84 314 ⇓*i*P **P 09 39 47.7 +0.5**
comp=Z,237nm,1.0s,mb5.8
TUC Tucson 42.84 314 ⇓*i*P **P 09 39 47.7 +0.6**
TUC pmax pmax
comp=Z,237nm,1.0s,mb5.8
W20A Ramah 42.87 319 ⇓ScP ScP 09 45 15.1 +0.4
baz=43,SNR=5.2
117A Oracle 42.95 314 ⇑ScP ScP 09 45 14.6 -0.5
baz=43
S23A Nye Farm, Mont 42.95 324 ⇑ScP ScP 09 45 15.0 +0.1
baz=43
X19A St. Johns 42.98 318 ⇓ScP ScP 09 45 14.9 -0.2
baz=43,SNR=9.9
ECSD EROS Data Cent 42.99 337 ⇓*i*P **P 09 39 45.9 -2.1**
T22A Edith 43.04 322 ⇑ScP ScP 09 45 15.9 +0.6
baz=43,SNR=16
OGNE Ogallala 43.12 330 ⇓*i*P **P 09 39 48.4 -0.7**
Y18A Canyon Day Jun 43.12 316 ⇑ScP ScP 09 45 16.1 +0.4
baz=43,SNR=9.0
U21A Nageezi 43.13 321 ⇑ScP ScP 09 45 15.6 -0.1
baz=43,SNR=24
216A Three Points, 43.17 313 ⇑ScP ScP 09 45 16.6 +0.7
baz=43,SNR=5.1
V20A Brimhall 43.25 320 ⇑ScP ScP 09 45 15.5 -0.7
baz=43,SNR=6.5
T21A Navajo Lake 43.41 322 ⇓ScP ScP 09 45 17.4 +0.5
baz=44
W19A Sanders 43.45 318 ⇑ScP ScP 09 45 16.5 -0.5
baz=44,SNR=11
X18A Snowflake 43.48 317 ⇓ScP ScP 09 45 17.2 0.0
baz=44
V19A Window Rock 43.58 319 ⇑ScP ScP 09 45 18.0 +0.5
baz=44,SNR=12
Y17A Roosevelt 43.63 316 ⇑ScP ScP 09 45 17.9 +0.1
baz=44,SNR=18
U20A Newcomb 43.64 320 ⇓ScP ScP 09 45 17.6 -0.2
baz=44,SNR=15
W18A Petrified Fore 43.68 318 ⇑ScP ScP 09 45 17.2 -0.7
baz=44,SNR=7.6
R22A Saguache, Gunn 43.75 324 ⇑ScP ScP 09 45 18.0 -0.1
baz=44,SNR=6.6
Z16A Peralta Trail, 43.85 315 ⇑ScP ScP 09 45 18.6 -0.1
baz=44,SNR=6.3
X17A Forest Lakes 43.96 316 ⇓ScP ScP 09 45 18.6 -0.5
baz=44,SNR=6.6
P23A Jefferson 43.99 326 ⇑P **P 09 39 57.1 +0.9**
baz=44
S21A Coal Bank Pass 44.00 322 ⇑ScP ScP 09 45 19.1 -0.1
baz=44,SNR=17
U19A Dine' College, 44.03 320 ⇑ScP ScP 09 45 18.9 -0.4
baz=44,SNR=11
N25A Grover 44.06 328 ⇓P **P 09 39 56.8 +0.1**
baz=44
115A Sonoran Desert 44.09 314 ⇓P **P 09 39 57.8 +0.7**
baz=44
115A ⇑ScP ScP 09 45 19.3 -0.4
baz=44
214A Organ Pipe Nat 44.14 312 ⇑ScP ScP 09 45 19.4 -0.5
baz=44,SNR=6.6
V18A Ganado 44.16 319 ⇓ScP ScP 09 45 19.9 0.0
baz=44,SNR=6.1
ISCO Idaho Springs 44.16 326 ⇑ScP ScP 09 45 19.1 -0.7
baz=44,SNR=8.1
ISCO Idaho Springs 44.16 326 *e*P **P 09 39 58.1 +0.6**
ISCO Idaho Springs 44.16 326 *e*P **P 09 39 58.1 +0.6**
Y16A Circle Bar Ran 44.17 315 ⇓ScP ScP 09 45 19.6 -0.4
baz=44,SNR=9.2
T19A Beclabito 44.24 321 ⇓ScP ScP 09 45 20.4 +0.2
baz=44,SNR=24
Q22A Crested Butte, 44.26 324 ⇓ScP ScP 09 45 20.2 -0.1
baz=44,SNR=11
X16A Lo Mia Camp, P 44.44 316 ⇑ScP ScP 09 45 21.3 +0.2
baz=44,SNR=13
SMCO Snowmass 44.51 325 ⇓*i*P **P 09 40 01.0 +0.7**
comp=Z,144nm,0.9s,mb5.6
SMCO *e*ScP ScP 09 45 21.7 +0.5
114A Black Gap (USA 44.59 313 ⇓ScP ScP 09 45 21.2 -0.6
baz=45,SNR=11
Q21A Lamborn Mesa, 44.63 324 ⇑ScP ScP 09 45 21.6 -0.1
baz=45,SNR=7.6
P22A Eagle 44.66 325 ⇓ScP ScP 09 45 21.9 +0.1
baz=45,SNR=12
V17A Tonalea, Kykot 44.68 318 ⇓ScP ScP 09 45 21.4 -0.7
baz=45,SNR=12
R20A Redvale 44.69 323 ⇓ScP ScP 09 45 22.0 -0.1
baz=45,SNR=18
PV01 Paradox Valley 44.77 322 ⇓*i*P **P 09 40 03.3 +0.8**
comp=Z,21μm,1.0s
PV01 *e*ScP ScP 09 45 21.8 -0.6
Y15A Casa Rosa Ranc 44.81 315 ⇑ScP ScP 09 45 22.8 +0.2
baz=45,SNR=12
S19A Harvey Farm, M 44.88 321 ⇑ScP ScP 09 45 22.0 -0.8
baz=45,SNR=14
W16A Flagstaff 44.88 317 ⇓ScP ScP 09 45 22.8 -0.1
baz=45,SNR=11
M24A Cheyenne 44.92 329 ⇓ScP ScP 09 45 22.1 -0.8
baz=45
O22A Kremmling 44.93 326 ⇓ScP ScP 09 45 22.6 -0.4
baz=45,SNR=6.2
Z14A Wintersburg 44.94 314 ⇑ScP ScP 09 45 22.4 -0.8
baz=45,SNR=5.5
T18A Mexican Hat 44.97 320 ⇑ScP ScP 09 45 22.7 -0.5
baz=45,SNR=12
X15A Humboldt 45.03 316 ⇑ScP ScP 09 45 23.5 0.0
baz=45,SNR=16
EYMN Ely 45.09 345 ⇓*i*P **P 09 40 03.7 -1.1**
comp=Z,859nm,0.8s,mb6.4
EYMN *e*PP PP 09 41 54.0 +1.2
PHWY Pilot Hill 45.13 328 ⇓*i*P **P 09 40 05.4 +0.1**
comp=Z,465nm,1.3s,mb6.0
Q20A Ridgley Place, 45.13 323 ⇑ScP ScP 09 45 22.7 -1.1
baz=45,SNR=7.8
PV04 Paradox Valley 45.14 322 ⇓*i*P **P 09 40 05.8 +0.4**
PV04 *e*PP PP 09 41 57.1 +3.5
PV04 *e*ScP ScP 09 45 23.9 +0.1
U17A Shonto 45.16 319 ⇓ScP ScP 09 45 23.8 -0.2
baz=45
U16A Tuba City 45.20 318 ⇓ScP ScP 09 45 24.2 0.0
baz=45,SNR=12
113A Mohawk Valley, 45.24 313 ⇑ScP ScP 09 45 24.5 +0.1
baz=45,SNR=11
Y14A Wickenburg 45.28 315 ⇓ScP ScP 09 45 24.3 -0.3
baz=45,SNR=11
R19A Curley Farm, L 45.29 322 ⇓ScP ScP 09 45 23.3 -1.3
baz=45,SNR=8.1
Z13A Yuma Proving G 45.37 313 ⇓ScP ScP 09 45 25.2 +0.2
baz=45,SNR=8.2
S18A Hurst Farm, Bl 45.38 321 ⇑ScP ScP 09 45 24.9 0.0
baz=46,SNR=10
W15A Williams 45.43 316 ⇑ScP ScP 09 45 26.3 +1.2
baz=46,SNR=10
X14A Yava 45.48 315 ⇑ScP ScP 09 45 25.5 +0.1
baz=46,SNR=18
T17A Navajo Res., N 45.48 320 ⇓ScP ScP 09 45 25.9 +0.6
baz=46,SNR=13
O21A Pagoda 45.48 325 ⇑ScP ScP 09 45 25.1 -0.2
baz=46,SNR=5.4
P20A De Beque 45.54 324 ⇑ScP ScP 09 45 24.7 -0.8
baz=46
PLCA Paso Flores 45.58 175 P **P 09 40 09.2 +0.5**
comp=Z,90nm,1.0s,mb5.3,baz=356,slow=9.5,SNR=89
PLCA ScP ScP 09 45 24.4 -1.2
comp=Z,22nm,1.0s,baz=2.5,slow=4.6,SNR=8.8
PLCA Paso Flores 45.58 175 ⇑*i*P **P 09 40 07.6 -1.1**
comp=Z,160nm,1.2s,mb5.5
PLCA *e*pP pP 09 40 37.9 -1.2
PLCA Paso Flores 45.58 175 ⇑*i*P **P 09 40 07.6 -1.1**
PLCA *e**PP pP 09 40 37.9 -1.2
PLCA pmax pmax
comp=Z,160nm,1.2s
Q19A Hogan Spring (45.71 323 ⇑ScP ScP 09 45 25.9 -0.4
baz=46,SNR=9.9
V15A Kaibab Nationa 45.71 317 ⇑ScP ScP 09 45 26.2 -0.1
baz=46,SNR=10
R18A Canyonlands Na 45.74 322 ⇓ScP ScP 09 45 26.3 -0.1
baz=46,SNR=9.7
Y13A Salome 45.81 314 ⇑ScP ScP 09 45 26.5 -0.3
baz=46,SNR=9.9
S17A Black Ridge (B 45.86 320 ⇑ScP ScP 09 45 26.5 -0.4
baz=46,SNR=5.0
O20A White River Ci 45.87 325 ⇓ScP ScP 09 45 26.1 -0.8
baz=46,SNR=7.9
P19A Cripple Cowboy 45.98 324 ⇓ScP ScP 09 45 27.1 -0.2
baz=46,SNR=11
W14A Seligman 46.01 316 ⇓ScP ScP 09 45 27.8 +0.2
baz=46,SNR=8.7
U15A North Rim 46.13 318 ⇑ScP ScP 09 45 28.5 +0.4
baz=46,SNR=8.9
GLA Glamis 46.16 312 ⇓ScP ScP 09 45 28.0 -0.2
baz=46,SNR=11
GLA Glamis 46.16 312 ⇓*i*P **P 09 40 14.0 +0.6**
comp=Z,378nm,1.3s,mb5.9
GLA *e*pP pP 09 40 45.3 +1.4
GLA *e*PcP PcP 09 41 48.0 +0.8
GLA *e*PP PP 09 42 07.3 +3.1
GLA Glamis 46.16 312 ⇓*i*P **P 09 40 14.0 +0.6**
GLA *e**PP pP 09 40 45.3 +1.4
GLA *e* 09 41 48.0
GLA *e* 09 42 07.3
GLA pmax pmax
comp=Z,378nm,1.3s,mb5.9
X13A Yucca 46.20 315 ⇓ScP ScP 09 45 28.4 -0.1
baz=46,SNR=14
V14A Boquillas Ranc 46.25 316 ⇓ScP ScP 09 45 29.0 +0.4
baz=46,SNR=16
R17A Hanksville Air 46.27 321 ⇓ScP ScP 09 45 27.9 -0.7
baz=46
PDMCI Parker Dam,Lak 46.27 314 ⇑ScP ScP 09 45 28.7 0.0
baz=46,SNR=8.7
Y12C Blythe 46.27 313 ⇓ScP ScP 09 45 28.3 -0.4
baz=46,SNR=6.8
Q18A Rafter H Ranch 46.33 322 ⇑ScP ScP 09 45 28.7 -0.2
baz=46,SNR=9.0
RWWY Rawlins 46.34 327 ⇓*i*P **P 09 40 14.9 +0.2**
comp=Z,428nm,1.0s,mb6.0
RWWY *e*PP PP 09 42 07.2 +1.4
N20A Spence Gulch, 46.35 325 ⇑ScP ScP 09 45 28.0 -0.9
baz=46,SNR=7.7
M21A Separation Pea 46.37 327 ⇓ScP ScP 09 45 28.2 -0.8
baz=46,SNR=9.3
S16A Weppner Ranch, 46.42 320 ⇓ScP ScP 09 45 28.2 -1.0
baz=46,SNR=7.0
RSSD Black Hills 46.48 332 ⇓*i*P **P 09 40 15.5 -0.3**
comp=Z,446nm,1.0s,mb6.0
RSSD *e*PP PP 09 42 07.6 +0.6
RSSD Black Hills 46.48 332 ⇓*i*P **P 09 40 15.5 -0.3**
RSSD *e* 09 42 07.6
RSSD pmax pmax
comp=Z,446nm,1.0s,mb6.0
O19A Miners Draw (B 46.49 324 ⇑ScP ScP 09 45 28.8 -0.7
baz=47,SNR=8.9
W13A Hualapai Mount 46.51 315 ⇑ScP ScP 09 45 29.5 -0.2
baz=47
T15A Red Dirt Ranch 46.52 319 ⇓ScP ScP 09 45 29.1 -0.6
baz=47,SNR=7.3
SRU San Rafael 46.58 322 ⇓ScP ScP 09 45 29.4 -0.4
baz=47,SNR=6.4
SRU San Rafael 46.58 322 ⇓*i*P **P 09 40 16.8 +0.2**
comp=Z,33nm,0.8s,mb5.0
SRU *e*PP PP 09 42 08.5 +0.6
SRU San Rafael 46.58 322 ⇓*i*P **P 09 40 16.8 +0.2**
SRU *e* 09 42 08.5
SRU pmax pmax
comp=Z,33nm,0.8s,mb5.0
L21A Rawlins 46.62 327 ⇑ScP ScP 09 45 29.2 -0.8
baz=47
K22A Casper 46.65 328 ⇑ScP ScP 09 45 28.9 -1.2
baz=47,SNR=5.9
AGMN Agassiz Nation 46.67 341 ⇓*i*P **P 09 40 15.9 -1.3**
comp=Z,637nm,0.9s,mb6.2
AGMN *e*PP PP 09 42 08.5 -0.1
R16A Teasdale 46.67 321 ⇑ScP ScP 09 45 29.3 -1.0
baz=47,SNR=7.3
U14A Mt Trumbull 46.72 317 ⇓ScP ScP 09 45 30.4 -0.1
baz=47,SNR=14
P18A Preston Nutter 46.73 323 ScP ScP 09 45 30.6 +0.1
baz=47,SNR=12
M20A Sweetwater, Wa 46.74 326 ⇓ScP ScP 09 45 29.6 -0.9
baz=47
S15A Panguitch 46.88 319 ⇓ScP ScP 09 45 30.8 -0.4
baz=47,SNR=6.4
BC3 Big Chuckawall 46.91 313 ⇓ScP ScP 09 45 30.2 -1.2
baz=47,SNR=7.5
N19A John Jarvie Ra 46.91 325 ⇑ScP ScP 09 45 30.3 -0.8
baz=47,SNR=6.9
DVTC Desert V Tower 46.92 311 ⇓ScP ScP 09 45 31.0 -0.4
baz=47,SNR=5.7
IRM Iron Mountain 46.93 314 ⇑ScP ScP 09 45 31.1 -0.4
baz=47,SNR=9.8
P17A Butcher Ranch, 46.93 322 ⇓ScP ScP 09 45 30.5 -0.9
baz=47,SNR=6.7
V13A Grand Canyon W 46.97 316 ⇓ScP ScP 09 45 31.1 -0.5
baz=47,SNR=12
O18A Roosevelt 46.99 324 ⇑ScP ScP 09 45 30.7 -0.8
baz=47,SNR=6.2
T14A Hurricane 47.01 318 ⇑ScP ScP 09 45 31.7 -0.1
baz=47,SNR=13
TMUT Trail Mountain 47.11 322 ⇓*i*P **P 09 40 21.0 +0.2**
comp=Z,228nm,1.1s,mb5.7
TMUT *e*PP PP 09 42 14.0 +1.2
R15A Junction 47.14 320 ⇓ScP ScP 09 45 31.9 -0.4
baz=47,SNR=10.0
J22A Midwest 47.17 329 ⇑ScP ScP 09 45 30.7 -1.6
baz=47,SNR=6.3
L20A Wamsutter 47.18 327 ⇑ScP ScP 09 45 32.0 -0.3
baz=47,SNR=5.4
N18A Larsen Ranch, 47.25 325 ⇓ScP ScP 09 45 31.4 -1.3
baz=47,SNR=6.9
MSU Marysvale 47.25 320 ⇓*i*P **P 09 40 22.6 +0.7**
comp=Z,272nm,1.0s,mb5.8
MSU *e*PcP PcP 09 41 51.1 +0.1
MSU *e*PP PP 09 42 14.4 +0.3
MSU *e*ScP ScP 09 45 33.0 +0.3
MSU Marysvale 47.25 320 ⇓*i*P **P 09 40 22.6 +0.7**
MSU *e* 09 41 51.1
MSU *e* 09 42 14.4
MSU pmax pmax
comp=Z,271nm,1.0s,mb5.8
U13A Pakoon Wash 47.25 317 ⇓ScP ScP 09 45 32.3 -0.4
baz=47,SNR=11
MONP Monument Peak 47.26 311 ⇓ScP ScP 09 45 32.1 -0.8
baz=47,SNR=14
M19A Rock Springs 47.30 325 ⇑ScP ScP 09 45 32.2 -0.6
baz=47,SNR=13
W12A Cal Nev Ari 47.30 315 ⇓ScP ScP 09 45 32.9 -0.1
baz=47,SNR=10.0
BAR Barrett 47.36 311 ⇓*i*P **P 09 40 22.9 +0.1**
comp=Z,92nm,1.4s,mb5.2
BAR *e*pP pP 09 40 55.0 +1.6
BAR *e*sP sP 09 41 09.2 +0.9
BAR *e*PcP PcP 09 41 51.9 +0.4
LDFC Landfair 47.36 315 ⇓*i*P **P 09 40 23.8 +1.0**
comp=Z,162nm,1.0s,mb5.6
LDFC *e*PcP PcP 09 41 52.1 +0.6
O17A Robinson Place 47.38 323 ⇓ScP ScP 09 45 33.1 -0.1
baz=48,SNR=6.4
S14A Cedar City 47.46 319 ⇓ScP ScP 09 45 34.0 +0.4
baz=48,SNR=7.2
BELC Belle Mtn. Jos 47.47 313 ⇑ScP ScP 09 45 33.9 +0.1
baz=48,SNR=19
CCUT Cedar City 47.47 319 ⇓*i*P **P 09 40 24.4 +0.8**
comp=Z,129nm,0.9s,mb5.5
CCUT *e*PcP PcP 09 41 51.9 +0.1
CCUT *e*PP PP 09 42 17.5 +1.3
CCUT *e*ScP ScP 09 45 34.2 +0.6
V12A Nelson 47.50 316 ⇑ScP ScP 09 45 32.9 -1.0
baz=48,SNR=11
T13A Saint George 47.54 318 ⇓ScP ScP 09 45 33.4 -0.5
baz=48,SNR=7.5
P16A Fountain Green 47.58 322 ⇑ScP ScP 09 45 33.7 -0.3
baz=48
GMRC Granite Mounta 47.60 314 ⇑ScP ScP 09 45 34.5 +0.2
baz=48,SNR=25
J21A Lysite 47.62 328 ⇑ScP ScP 09 45 32.7 -1.4
baz=48,SNR=8.0
K20A Yellowstone Ra 47.62 327 ⇓ScP ScP 09 45 33.2 -1.0
baz=48,SNR=10
PFO Pinyon Flat Ob 47.62 312 ⇑ScP ScP 09 45 34.0 -0.4
baz=48,SNR=16
PFO Pinyon Flat Ob 47.62 312 ⇓*i*P **P 09 40 25.4 +0.6**
comp=Z,155nm,1.3s,mb5.5
PFO *e*PcP PcP 09 41 53.2 +0.7
PFO Pinyon Flat Ob 47.62 312 ⇓*i*P **P 09 40 25.4 +0.6**
PFO *e* 09 41 53.2
PFO pmax pmax
comp=Z,155nm,1.3s,mb5.5
PFO Pinyon Flat Ob 47.62 312 P **P 09 40 25.0 +0.2**
comp=Z,542nm,1.4s,mb6.0,SNR=43
ARUT Antelope Range 47.65 319 ⇓*i*P **P 09 40 25.6 +0.6**
comp=Z,258nm,0.8s,mb5.9
ARUT *e*ScP ScP 09 45 34.8 +0.4
ARUT Antelope Range 47.65 319 ⇓*i*P **P 09 40 25.6 +0.6**
ARUT pmax pmax
comp=Z,258nm,0.8s,mb5.9
U12A Valley of Fire 47.66 317 ⇑ScP ScP 09 45 34.6 +0.2
baz=48,SNR=10
Q15A Fillmore 47.66 321 ⇓ScP ScP 09 45 34.0 -0.4
baz=48,SNR=8.1
R14A James Farms, M 47.67 320 ⇓ScP ScP 09 45 34.8 +0.3
baz=48,SNR=8.6
QLLN Quelln 47.75 178 *e*P **P 09 40 26.1 +0.5**
M18A Lyman 47.76 325 ⇓ScP ScP 09 45 33.6 -1.1
baz=48,SNR=12
109C Camp Elliot, M 47.78 311 ⇓ScP ScP 09 45 35.0 0.0
baz=48,SNR=8.5
L19A Farson 47.80 326 ⇓ScP ScP 09 45 34.2 -0.7
baz=48,SNR=8.0
MPU Maple Canyon 47.81 322 ⇓*i*P **P 09 40 26.2 +0.1**
comp=Z,390nm,1.0s,mb6.0
MPU *e*PP PP 09 42 20.9 +1.7
S13A Holt Ranch, En 47.82 318 ⇓ScP ScP 09 45 35.4 +0.3
baz=48,SNR=12
DAU Daniels Canyon 47.82 323 ⇓*i*P **P 09 40 26.8 +0.6**
comp=Z,484nm,0.5s,mb6.4
DAU *e*PcP PcP 09 41 52.5 -0.5
DAU *e*ScP ScP 09 45 35.2 +0.1
DAU Daniels Canyon 47.82 323 ⇓*i*P **P 09 40 26.8 +0.6**
DAU *e* 09 41 52.5
DAU pmax pmax
comp=Z,483nm,0.5s,mb6.4
N17A Moffit Pass 47.90 324 ⇓ScP ScP 09 45 34.3 -1.1
baz=48,SNR=8.6
P15A Leamington 47.94 321 ⇓ScP ScP 09 45 35.3 -0.2
baz=48,SNR=5.7
J20A Shoshoni 47.96 328 ⇓ScP ScP 09 45 34.8 -0.8
baz=48,SNR=9.8
V11A Goodsprings 47.97 315 ⇓ScP ScP 09 45 34.7 -1.1
baz=48,SNR=5.0
K19A Absolon Red Bu 48.01 327 ⇑ScP ScP 09 45 34.9 -0.9
baz=48,SNR=10
NLU North Lily Min 48.04 322 ⇓*i*P **P 09 40 28.2 +0.3**
comp=Z,230nm,1.2s,mb5.7
NLU *e*PcP PcP 09 41 54.1 +0.3
JLU Jordanelle 48.05 323 ⇓*i*P **P 09 40 28.2 +0.2**
comp=Z,274nm,1.1s,mb5.8
JLU *e*PcP PcP 09 41 51.9 -2.0
L18A Fontenelle, Gr 48.07 325 ⇓ScP ScP 09 45 35.1 -1.0
baz=48,SNR=5.9
HEC Hector,Ludlow 48.11 314 ⇑ScP ScP 09 45 34.9 -1.5
baz=48,SNR=5.7
TUQ Turquoise Moun 48.11 315 ⇑ScP ScP 09 45 36.0 -0.4
baz=48,SNR=13
SHPR Sheep Range 48.12 316 ⇓*i*P **P 09 40 29.2 +0.6**
comp=Z,311nm,1.5s,mb5.7
SHPR *e*pP pP 09 40 55.9 -3.4
SHPR *e*sP sP 09 41 15.5 +1.3
SHPR *e*PP PP 09 42 21.3 -0.8
M17A Scullys Gap (B 48.14 324 ⇑ScP ScP 09 45 35.0 -1.4
baz=48,SNR=5.2
MURC Murrieta 48.17 312 ⇑ScP ScP 09 45 36.1 -0.6

baz=48,SNR=8.0
R13A O'Grain Ranch, 48.22 319 ⇑ScP ScP 09 45 37.2 +0.4
baz=48,SNR=7.6
N16A Rees Ranch, Co 48.22 323 ⇑ScP ScP 09 45 36.6 -0.2
baz=48,SNR=8.8
Q14A Sevier Lake (B 48.23 320 ⇓ScP ScP 09 45 36.8 0.0
baz=48,SNR=9.1
CTU Camp Tracy 48.29 323 ⇓*iP* **P 09 40 29.9 +0.1**
comp=Z,210nm,1.1s,mb5.7
PDAR Pinedale Array 48.35 326 P **P 09 40 29.6 -0.6**
comp=Z,143nm,0.8s,mb5.7,baz=133,slow=9.2,SNR=622
PDAR ScP ScP 09 45 35.9 -1.4
comp=Z,23nm,1.0s,baz=126,slow=4.6,SNR=14
BW06 Boulder Array 48.35 326 ⇑ScP ScP 09 45 36.0 -1.2
baz=48,SNR=12
BW06 Boulder Array 48.35 326 ⇓*iP* **P 09 40 29.7 -0.6**
comp=Z,207nm,0.3s,mb6.2
I20A Worland 48.39 329 ⇑ScP ScP 09 45 36.1 -1.3
baz=48,SNR=6.1
ULM Lac du Bonnet 48.40 343 P **P 09 40 28.3 -2.2**
comp=Z,297nm,0.6s,mb6.1,baz=155,slow=9.5,SNR=268
ULM LR LR 10 01 36.0
comp=Z,1μm,18.9s,baz=333,slow=37
ULM Lac du Bonnet 48.40 343 ⇓*iP* **P 09 40 28.8 -1.7**
comp=Z,547nm,1.0s,mb6.1
ULM *e*PP PP 09 42 25.7 +1.3
P14A Drum Mountains 48.44 321 ⇓ScP ScP 09 45 36.6 -1.2
baz=48,SNR=9.9
O15A The Old Anders 48.48 322 ⇑ScP ScP 09 45 37.7 -0.2
baz=49
NOQ North Oquirrh 48.49 323 ⇓*iP* **P 09 40 31.3 -0.1**
comp=Z,126nm,1.0s,mb5.5
S12A Delamar Landin 48.49 318 ⇓ScP ScP 09 45 37.2 -0.8
baz=49
K18A Toltan Ranch, 48.54 326 ⇑ScP ScP 09 45 37.1 -1.0
baz=49,SNR=13
T11A Corn Creek, Al 48.55 317 ⇑ScP ScP 09 45 37.8 -0.4
baz=49
M16A Huntsville 48.60 324 ⇓ScP ScP 09 45 37.8 -0.6
baz=49,SNR=7.9
DUG Dugway 48.64 322 ⇑ScP ScP 09 45 38.0 -0.6
baz=49,SNR=7.8
DUG Dugway 48.64 322 ⇓*iP* **P 09 40 32.9 +0.4**
comp=Z,268nm,0.9s,mb5.9
DUG Dugway 48.64 322 ⇓*iP* **P 09 40 32.9 +0.4**
DUG pmax pmax
comp=Z,268nm,0.9s,mb5.9
L17A Cokeville 48.66 325 ⇑ScP ScP 09 45 37.5 -1.1
baz=49,SNR=17
GSC Goldstone 48.68 314 ⇑ScP ScP 09 45 38.6 -0.2
baz=49,SNR=8.7
GSC Goldstone 48.68 314 ⇑*iP* **P 09 40 33.5 +0.6**
comp=Z,183nm,1.0s,mb5.7
GSC Goldstone 48.68 314 ⇑*iP* **P 09 40 33.5 +0.6**
GSC pmax pmax
comp=Z,183nm,1.0s,mb5.7
HWUT Hardware Ranch 48.75 324 ⇓*iP* **P 09 40 32.8 -0.5**
comp=Z,222nm,0.9s,mb5.8
HWUT *e*PP PP 09 42 28.1 +0.4
HWUT *e*ScP ScP 09 45 37.8 -1.1
BFSC Mount Baldy Ra 48.80 312 ⇓ScP ScP 09 45 39.1 -0.2
baz=49,SNR=12
N15A Stansbury Isla 48.88 323 ⇓ScP ScP 09 45 38.9 -0.7
baz=49,SNR=5.8
U10A Ash Meadows, A 48.89 316 ⇑ScP ScP 09 45 40.4 +0.7
baz=49,SNR=13
J18A Kendall Valley 48.90 327 ⇓ScP ScP 09 45 38.4 -1.2
baz=49,SNR=11
SCI San Clemente I 48.91 310 ⇓ScP ScP 09 45 39.6 -0.2
baz=49,SNR=7.4
L16A Fish Haven 48.92 325 ⇓ScP ScP 09 45 38.7 -1.0
baz=49
CIS Catalina Islan 48.98 311 ⇑ScP ScP 09 45 38.8 -1.4
baz=49,SNR=13
MWC Mount Wilson 49.09 312 ⇓*iP* **P 09 40 36.3 +0.3**
comp=Z,337nm,1.8s,mb5.7
MWC *e*PcP PcP 09 41 57.9 +0.1
MWC Mount Wilson 49.09 312 ⇓*iP* **P 09 40 36.3 +0.3**
MWC *e* 09 41 57.9
MWC pmax pmax
comp=Z,337nm,1.8s,mb5.7
SPUT South Promonto 49.09 323 ⇓*iP* **P 09 40 35.8 -0.1**
comp=Z,342nm,1.1s,mb5.9
SPUT *e*PcP PcP 09 41 55.8 -1.7
SPUT *e*PP PP 09 42 33.2 +2.4
K17A Gardner Place, 49.10 326 ⇓ScP ScP 09 45 39.5 -0.9
baz=49,SNR=5.9
S11A Rachel 49.11 317 ⇑ScP ScP 09 45 39.4 -1.2
baz=49,SNR=8.6
PASC Pasadena Art C 49.16 312 ⇓*iP* **P 09 40 36.8 +0.3**
comp=Z,322nm,1.6s,mb5.7
PASC *e*PcP PcP 09 41 58.2 +0.2
M15A Larsen Ranch, 49.18 323 ⇓ScP ScP 09 45 39.7 -1.1
baz=49,SNR=7.3
BGU Big Grassy Mou 49.20 322 ⇓*iP* **P 09 40 36.8 0.0**
comp=Z,360nm,1.0s,mb6.0
AHID Auburn Hatcher 49.21 325 ⇓*iP* **P 09 40 36.4 -0.5**
comp=Z,258nm,0.9s,mb5.9
AHID *e*ScP ScP 09 45 40.2 -0.8
EDW2 Edwards Air Fo 49.33 313 ⇓ScP ScP 09 45 40.6 -1.0
baz=49,SNR=12
R11A Troy Canyon, C 49.38 318 ⇓ScP ScP 09 45 41.9 +0.1
baz=50,SNR=12
J17A Brown Place, J 49.38 326 ⇑ScP ScP 09 45 41.2 -0.4
baz=50
LRMC Laurel Mountai 49.39 314 ⇑ScP ScP 09 45 41.6 -0.3
baz=50,SNR=7.6
LAO LASA Array 49.43 332 ⇓*iP* **P 09 40 37.4 -1.0**
comp=Z,1μm,1.6s,mb6.2
LAO *e*PcP PcP 09 41 57.4 -1.3
REDW Red Top Meadow 49.46 326 ⇓*iP* **P 09 40 38.5 -0.2**
comp=Z,564nm,0.9s,mb6.2
SNOW Snow King Moun 49.47 326 ⇓*iP* **P 09 40 38.8 0.0**
comp=Z,328nm,0.9s,mb6.0
SNOW *e*PP PP 09 42 33.8 -0.5
L15A Malad City 49.48 324 ⇓ScP ScP 09 45 41.1 -1.0
baz=50,SNR=14
LOHW Long Hollow 49.49 327 ⇓*iP* **P 09 40 38.6 -0.3**
comp=Z,324nm,1.0s,mb5.9
LOHW *e*PP PP 09 42 35.2 +0.8
LOHW *e*ScP ScP 09 45 41.5 -0.6
K16A Soda Springs 49.53 325 ⇑ScP ScP 09 45 41.3 -1.0
baz=50,SNR=9.9
HVU Hansel Valley 49.57 323 ⇓*iP* **P 09 40 38.9 -0.6**
comp=Z,152nm,0.9s,mb5.6
HVU Hansel Valley 49.57 323 ⇓*iP* **P 09 40 38.9 -0.6**
HVU pmax pmax
comp=Z,152nm,0.9s,mb5.6
TPAW Teton Pass 49.60 326 ⇓*iP* **P 09 40 39.6 -0.2**
comp=Z,235nm,0.8s,mb5.9
TPAW *e*PP PP 09 42 34.7 -0.7
TPAW *e*ScP ScP 09 45 41.7 -0.9
MOOW Moose Ponds 49.65 327 ⇓*iP* **P 09 40 39.8 -0.4**
comp=Z,259nm,0.9s,mb5.9
I17A Pilgrim Ck. 49.67 327 ⇓ScP ScP 09 45 42.1 -0.8
baz=50,SNR=7.1
H18A Shoshone NF, C 49.69 328 ⇑ScP ScP 09 45 41.8 -1.1
baz=50,SNR=5.2
RRI2 Red Ridge 49.71 326 ⇓*iP* **P 09 40 40.5 -0.1**
comp=Z,315nm,0.8s,mb6.0
RRI2 *e*PP PP 09 42 36.6 +0.2
RLMT Red Lodge 49.79 329 ⇓*iP* **P 09 40 40.6 -0.6**
comp=Z,205nm,1.0s,mb5.7
RLMT *e*ScP ScP 09 45 42.5 -0.8
DCID1 Drake Creek 49.80 326 ⇓*iP* **P 09 40 41.1 -0.2**
comp=Z,268nm,0.9s,mb5.9
DCID1 *e*PP PP 09 42 37.1 -0.1
J16A Bone 49.83 326 ⇓ScP ScP 09 45 42.7 -0.8
baz=50,SNR=6.4
FLWY Flagg Ranch 49.85 327 ⇓*iP* **P 09 40 41.5 -0.1**
comp=Z,266nm,1.3s,mb5.7
FLWY *e*PcP PcP 09 41 48.9 -11
IMW Indian Meadow 49.86 327 ⇓*iP* **P 09 40 41.6 -0.1**
comp=Z,432nm,1.0s,mb6.0
IMW *e*PP PP 09 42 38.5 +0.8
IMW *e*ScP ScP 09 45 43.0 -0.7
DGMT Dagmar 49.90 335 ⇓*iP* **P 09 40 41.5 -0.4**
comp=Z,605nm,0.8s,mb6.3
K15A Arbon 49.98 325 ⇓ScP ScP 09 45 43.3 -0.9
baz=50,SNR=5.4
L14A Malta 50.00 323 ⇑ScP ScP 09 45 43.4 -0.9
baz=50,SNR=6.0
LKWY Lake 50.01 328 ⇓*iP* **P 09 40 43.2 +0.4**
comp=Z,52nm,0.7s,mb5.3
LKWY Lake 50.01 328 ⇓*iP* **P 09 40 43.3 +0.5**
LKWY pmax pmax
comp=Z,52nm,0.7s,mb5.3

ISA Isabella 50.05 314 ⇓*iP* **P 09 40 43.7 +0.4**
comp=Z,137nm,1.1s,mb5.5
ISA *e*PcP PcP 09 42 01.0 -0.2
ISA Isabella 50.05 314 ⇓*iP* **P 09 40 43.7 +0.4**
ISA *e* 09 42 01.0
ISA pmax pmax
comp=Z,137nm,1.1s,mb5.5
G18A Lazy EL Ranch, 50.08 329 ⇑ScP ScP 09 45 43.4 -1.2
baz=50
F19A Roth Farm, Mol 50.14 330 ⇑ScP ScP 09 45 43.6 -1.2
baz=50
I16A Newdale 50.14 326 ⇑ScP ScP 09 45 44.0 -0.9
baz=50,SNR=8.3
YFT Old Faithful 50.16 327 ⇓*iP* **P 09 40 45.0 +1.0**
comp=Z,172nm,1.0s,mb5.6
Q10A Clear Creek Ra 50.17 318 ⇓ScP ScP 09 45 45.1 0.0
baz=50,SNR=13
E20A Meyer Farm, Mu 50.20 331 ⇑ScP ScP 09 45 43.9 -1.1
baz=50
YNR Norris Junctio 50.26 328 ⇓*iP* **P 09 40 44.7 0.0**
comp=Z,98nm,1.2s,mb5.3
YNR *e*ScP ScP 09 45 44.4 -0.9
K14A Jones Ranch, D 50.27 324 ⇑ScP ScP 09 45 44.8 -0.7
baz=50,SNR=6.0
COYC Coyhaique 50.28 177 *e*P **P 09 40 44.7 -0.1**
COYC Coyhaique 50.28 177 *e*P **P 09 40 44.7 -0.1**
SCHQ Schefferville 50.33 6 P **P 09 40 44.6 -0.5**
comp=Z,231nm,0.8s,mb5.9,baz=191,slow=9.1,SNR=201
SCHQ LR LR 10 02 22.2
comp=Z,510nm,18.7s,baz=17,slow=36
SCHQ Schefferville 50.33 6 ⇓*iP* **P 09 40 45.0 0.0**
comp=Z,308nm,0.9s,mb5.9
SCHQ *e*pP pP 09 41 16.7 +0.8
SCHQ *e*sP sP 09 41 31.5 +0.6
YMR Madison River 50.38 327 ⇓*iP* **P 09 40 45.8 +0.2**
comp=Z,325nm,0.9s,mb6.0
YMR *e*PcP PcP 09 42 02.0 -0.2
GCMT Greycliff 50.46 329 ⇓*iP* **P 09 40 45.8 -0.4**
comp=Z,324nm,0.8s,mb6.0
F18A Big Timber 50.56 329 ⇑ScP ScP 09 45 45.6 -1.0
baz=51
PKM Peak Mountain 50.69 312 ⇑ScP ScP 09 45 47.5 0.0
baz=51
QLMT Earthquake Lak 50.73 327 ⇓*iP* **P 09 40 49.2 +0.9**
comp=Z,75nm,0.9s,mb5.3
QLMT *e*ScP ScP 09 45 46.5 -0.9
I15A Monteview 50.78 326 ⇓ScP ScP 09 45 46.7 -0.9
baz=51
J14A Carey 50.94 325 ⇓ScP ScP 09 45 47.9 -0.5
baz=51,SNR=9.8
SMMC Simmler 51.00 312 ⇓ScP ScP 09 45 47.9 -0.8
baz=51
NVAR Mina Array Bea 51.25 317 P **P 09 40 52.9 +0.6**
comp=Z,219nm,0.9s,mb5.8,baz=128,slow=5.8,SNR=814
NVAR PcP PcP 09 42 05.8 +0.2
comp=Z,14nm,0.5s,baz=139,slow=4.8,SNR=21
NVAR ScP ScP 09 45 49.8 0.0
comp=Z,24nm,0.8s,baz=134,slow=5.2,SNR=20
H15A Lima 51.26 326 ⇑ScP ScP 09 45 49.0 -0.7
baz=51,SNR=5.3
I14A Mackay 51.28 325 ⇑ScP ScP 09 45 49.6 -0.2
baz=51,SNR=11
J13A Cove Ranch, Pi 51.37 324 ⇓ScP ScP 09 45 50.1 -0.1
baz=52,SNR=12
BOZ Bozeman (W) 51.38 328 ⇓*iP* **P 09 40 52.7 -0.4**
comp=Z,220nm,0.9s,mb5.8
BOZ Bozeman (W) 51.38 328 ⇓*iP* **P 09 40 52.7 -0.4**
BOZ pmax pmax
comp=Z,220nm,0.9s,mb5.8
MCMT McKenzie Canyo 51.50 327 ⇓*iP* **P 09 40 54.6 +0.6**
comp=Z,195nm,1.4s,mb5.5
MCMT *e*ScP ScP 09 45 50.5 -0.3
G15A Dillon 51.52 327 ⇑ScP ScP 09 45 50.1 -0.7
baz=52,SNR=7.5
BMN Battle Mountai 51.56 320 ⇓*iP* **P 09 40 54.6 +0.1**
comp=Z,360nm,1.1s,mb5.9
BMN Battle Mountai 51.56 320 ⇓*iP* **P 09 40 54.6 +0.1**
BMN pmax pmax
comp=Z,360nm,1.1s,mb5.9
HLID Hailey 51.61 324 ⇓ScP ScP 09 45 51.1 -0.1
baz=52,SNR=6.0
HLID Hailey 51.61 324 ⇓*iP* **P 09 40 54.8 -0.1**
comp=Z,192nm,1.0s,mb5.7
HLID *e*pP pP 09 41 27.4 +1.5
HLID *e*ScP ScP 09 45 50.8 -0.4
I13A Wildhorse Cree 51.65 325 ⇑ScP ScP 09 45 50.8 -0.5
baz=52,SNR=5.9
DLMT Dillon 51.71 327 ⇓*iP* **P 09 40 55.3 -0.2**
comp=Z,242nm,1.2s,mb5.7
DLMT *e*ScP ScP 09 45 51.3 -0.3
LRM Limekiln Ridge 51.93 328 ⇓*iP* **P 09 40 57.0 -0.2**
comp=Z,824nm,0.8s,mb6.4
LRM *e*ScP ScP 09 45 52.0 -0.6
F15A Butte 51.96 328 ⇓ScP ScP 09 45 51.9 -0.8
baz=52,SNR=6.2
EGMT Eagleton 52.05 331 ⇓*iP* **P 09 40 57.5 -0.6**
comp=Z,226nm,1.0s,mb5.8
WAKR Walker 52.06 316 ⇓*iP* **P 09 40 59.1 +0.7**
comp=Z,303nm,1.2s,mb5.8
H13A Challis 52.12 325 ⇓ScP ScP 09 45 52.8 -0.7
baz=52,SNR=8.0
I12A Atlanta 52.16 324 ⇑ScP ScP 09 45 52.8 -0.8
baz=52,SNR=5.7
HRY Holter Researc 52.19 329 ⇓*iP* **P 09 40 58.8 -0.3**
comp=Z,228nm,0.8s,mb5.8
MFID Camas Ranch 52.35 323 ⇓P **P 09 41 00.3 -0.1**
baz=52,SNR=255
F14A Wisdom 52.41 327 ⇓P **P 09 41 00.5 -0.2**
baz=52,SNR=80
E15A Deer Lodge 52.42 328 ⇑ScP ScP 09 45 53.2 -1.5
baz=52
G13A Cobalt 52.44 326 ⇓ScP ScP 09 45 54.2 -0.6
baz=53
CMB Columbia Colle 52.50 315 ⇓*iP* **P 09 41 01.2 -0.4**
comp=Z,65nm,1.0s,mb5.3
CMB Columbia Colle 52.50 315 ⇓*iP* **P 09 41 01.2 -0.4**
CMB pmax pmax
comp=Z,65nm,1.0s,mb5.3
PAHR Pah Rah Range 52.61 318 ⇓*iP* **P 09 41 02.5 +0.1**
comp=Z,253nm,0.9s,mb6.0
PAHR *e*PcP PcP 09 42 10.6 -0.1
WCN Washoe City 52.66 317 ⇑ScP ScP 09 45 55.7 -0.2
baz=53
WCN Washoe City 52.66 317 ⇓*iP* **P 09 41 03.3 +0.5**
comp=Z,210nm,1.0s,mb5.8
WCN Washoe City 52.66 317 ⇓*iP* **P 09 41 03.3 +0.6**
WCN pmax pmax
comp=Z,210nm,1.0s,mb5.8
SAO San Andreas Ge 52.69 313 ⇓*iP* **P 09 41 02.5 -0.5**
comp=Z,49nm,0.8s,mb5.3
SAO *e*ScP ScP 09 45 55.6 -0.4
SAO San Andreas Ge 52.69 313 ⇓*iP* **P 09 41 02.5 -0.5**
SAO pmax pmax
comp=Z,49nm,0.8s,mb5.3
E14A Clinton 52.86 328 ⇑ScP ScP 09 45 56.0 -0.6
baz=53
F13A Darby 52.92 327 ⇓ScP ScP 09 45 55.7 -1.2
baz=53,SNR=5.4
CHMT Chamberlain Mo 53.06 328 ⇓*iP* **P 09 41 04.8 -0.6**
comp=Z,70nm,1.5s,mb5.2
E13A Victor 53.25 327 ⇓ScP ScP 09 45 57.4 -0.9
baz=53
D14A Greenough 53.30 328 ⇓ScP ScP 09 45 57.8 -0.7
baz=53
MSO Missoula 53.37 328 ⇓*iP* **P 09 41 07.3 -0.4**
comp=Z,88nm,1.0s,mb5.4
MSO *e*ScP ScP 09 45 54.2 -4.6
SLMT Seeley Lake 53.39 328 ⇓*iP* **P 09 41 07.2 -0.7**
comp=Z,48nm,0.6s,mb5.4
WVOR Wild Horse Val 53.52 321 ⇓*iP* **P 09 41 09.0 0.0**
comp=Z,735nm,1.1s,mb6.3
WVOR *e*ScP ScP 09 45 59.5 -0.1
WVOR Wild Horse Val 53.52 321 ⇓*iP* **P 09 41 09.0 0.0**
WVOR pmax pmax
comp=Z,735nm,1.1s,mb6.3
A16A West Butte Ran 53.58 331 ⇑ScP ScP 09 45 58.6 -1.0
baz=54
SAC San Andreas 53.74 314 ⇓*iP* **P 09 41 11.0 +0.3**
comp=Z,55nm,0.8s,mb5.3
SAC San Andreas 53.74 314 ⇓*iP* **P 09 41 11.0 +0.4**
SAC pmax pmax
comp=Z,55nm,0.8s,mb5.3
SWMT Swartz Lake 53.83 328 ⇓*iP* **P 09 41 10.4 -0.7**
comp=Z,61nm,0.9s,mb5.3
SWMT *e*PcP PcP 09 42 14.6 -0.5
SWMT *e*ScP ScP 09 46 00.1 -0.7
J08A Circle Bar Ran 53.92 322 ⇑ScP ScP 09 46 01.1 -0.2
baz=54
YBMT Yellow Bay 54.06 329 ⇓*e*P **P 09 41 12.7 -0.1**
comp=Z,120nm,1.0s,mb5.6
PCED Cedros 54.08 45 *e*P **P 09 41 14.0 +0.9**
comp=Z,155nm,1.0s,mb5.7
JTMT Jette 54.13 329 ⇓*iP* **P 09 41 13.1 -0.2**
comp=Z,151nm,1.0s,mb5.7
FFC Flin Flon 54.15 341 ⇓*iP* **P 09 41 11.9 -1.4**
comp=Z,340nm,1.1s,mb6.0
FFC Flin Flon 54.15 341 *i* P **P 09 41 11.8 -1.5**
FFC Flin Flon 54.15 341 P **P 09 41 12.2 -1.1**
comp=Z,1μm,1.2s,mb6.5,SNR=63
MOD Modoc 54.31 320 ⇓*iP* **P 09 41 13.9 -0.8**
comp=Z,48nm,0.7s,mb5.3
MCCM Marconi Confer 54.31 314 ⇓*iP* **P 09 41 14.8 +0.1**
comp=Z,258nm,1.2s,mb5.8
BLMT Blacktail Moun 54.34 329 ⇓*iP* **P 09 41 15.1 +0.3**
comp=Z,294nm,0.9s,mb6.0
PID Ribeirinha 54.41 45 *e*P **P 09 41 16.6 +1.1**
ROSA Rosais 54.44 45 *e*P **P 09 41 16.8 +1.1**
BSMT Bassoo Peak 54.46 328 ⇓*iP* **P 09 41 15.6 0.0**
comp=Z,241nm,1.2s,mb5.8
PMAN Manadas 54.51 45 *e*P **P 09 41 17.1 +0.9**
comp=Z,438nm,1.4s,mb6.0
WALA Waterton Lakes 54.79 330 ⇓*iP* **P 09 41 17.0 -1.0**
comp=Z,3.4nm,1.0s
HOPS Hopland 54.81 315 *e*P **P 09 41 18.0 -0.4**
comp=Z,134nm,1.4s,mb5.5
WDC Whiskeytown Da 55.16 317 ⇓*iP* **P 09 41 18.3 -2.5**
comp=Z,63nm,0.9s,mb5.3
WDC *e*PcP PcP 09 42 19.5 -0.9
WDC Whiskeytown Da 55.16 317 ⇓*iP* **P 09 41 18.3 -2.5**
WDC *e* 09 42 19.5
WDC pmax pmax
comp=Z,63nm,0.9s,mb5.3
LNOR Lincton Mounta 55.20 325 ⇓*e*P **P 09 41 20.4 -0.6**
comp=Z,144nm,0.8s,mb5.8
LNOR *e*PcP PcP 09 42 18.2 -2.3
LNOR Lincton Mounta 55.20 325 ⇓*e*P **P 09 41 20.4 -0.6**
LNOR *e* 09 42 18.2
LNOR pmax pmax
comp=Z,144nm,0.8s,mb5.8
KIPM Iron Peak 55.45 316 *e*P **P 09 41 23.9 +0.9**
comp=Z,299nm,0.9s,mb6.0
KIPM *e*PcP PcP 09 42 22.6 +1.0
KIPM *e*ScP ScP 09 46 09.1 +1.0
KCPM Cahto Peak 55.47 316 ⇓*iP* **P 09 41 23.9 +0.8**
comp=Z,142nm,0.9s,mb5.7
KCPM *e*ScP ScP 09 46 09.2 +1.0
FCC Fort Churchill 55.69 348 ⇓*iP* **P 09 41 22.5 -1.7**
comp=Z,20nm,1.0s,mb4.9
FCC *e*pP pP 09 41 53.7 -2.0
FCC *e*sP sP 09 42 12.0 +1.5
FCC Fort Churchill 55.69 348 ⇓*iP* **P 09 41 22.5 -1.7**
FCC *e**PP pP 09 41 53.7 -2.0
FCC pmax pmax
comp=Z,20nm,1.0s,mb4.9
YBH Yreka Blue Hor 55.80 318 ⇓*iP* **P 09 41 23.8 -1.6**
comp=Z,94nm,0.9s,mb5.6
YBH *e*PcP PcP 09 42 22.3 -0.6
YBH Yreka Blue Hor 55.80 318 ⇓*iP* **P 09 41 23.8 -1.6**
YBH *e* 09 42 22.3
YBH pmax pmax
comp=Z,94nm,0.9s
VIPM Ingram Point 55.84 322 P **P 09 41 26.0 +0.3**
VIPM Ingram Point 55.84 322 P **P 09 41 26.0 +0.4**
PSET Sete Cidades 55.88 47 *e*P **P 09 41 26.7 +0.7**
comp=Z,116nm,0.8s,mb5.8
PDA Ponta Delgada 55.89 47 *e*P **P 09 41 27.1 +1.0**
NEW Newport 55.95 328 ⇓*iP* **P 09 41 25.3 -1.1**
comp=Z,152nm,1.1s,mb5.7
NEW *e*pP pP 09 41 57.0 -0.8
NEW *e*ScP ScP 09 46 10.3 +0.2
NEW Newport 55.95 328 ⇓*iP* **P 09 41 25.3 -1.0**
NEW *e**PP pP 09 41 57.0 -0.8
NEW pmax pmax
comp=Z,152nm,1.1s
PSMA Santa Maria 55.99 48 *e*P **P 09 41 26.3 -0.6**
comp=Z,162nm,0.8s,mb5.9
CMLA Cha da Macela 55.99 47 *e*P **P 09 41 27.2 +0.3**
comp=Z,337nm,0.7s,mb6.3
KHMM Horse Mountain 56.09 317 ⇓*iP* **P 09 41 27.6 +0.1**
comp=Z,230nm,1.0s,mb6.0
KHMM *e*PcP PcP 09 42 20.8 -3.2
HAWA Hanford 56.21 325 ⇓*iP* **P 09 41 27.4 -0.8**
comp=Z,136nm,1.2s,mb5.7
WRD Warden 56.21 325 P **P 09 41 28.6 +0.3**
RSW Rattlesnake Hi 56.24 325 *e*P **P 09 41 28.0 -0.4**
comp=Z,229nm,1.2s,mb5.9
RSW *e*ScP ScP 09 46 09.9 -1.5
BART Pico Bartolome 56.26 47 *e*P **P 09 41 29.3 +0.5**
comp=Z,536nm,1.2s,mb6.2
OD2 Odessa Site #2 56.30 326 ⇓*iP* **P 09 41 28.2 -0.6**
comp=Z,122nm,0.9s,mb5.7
CROR Criterion Ridg 56.31 323 P **P 09 41 30.0 +1.0**
HUMO Hull Mountain 56.37 319 ⇓*iP* **P 09 41 27.8 -1.6**
comp=Z,34nm,0.6s,mb5.4
HUMO *e*PcP PcP 09 42 27.0 +1.9
HUMO *e*ScP ScP 09 46 11.0 -1.1
KRMB Red Mountain 56.50 318 ⇓*iP* **P 09 41 30.6 +0.2**
comp=Z,371nm,1.1s,mb6.1
HOOD Mount Hood Mea 56.89 323 ⇓*iP* **P 09 41 33.8 +0.8**
comp=Z,971nm,1.1s,mb6.5
KBO Bosley Butte 57.02 318 ⇓*iP* **P 09 41 34.8 +0.7**
comp=Z,1μm,1.3s,mb6.5
WTV Waterville 57.17 326 P **P 09 41 34.6 -0.4**
TBM Table Mountain 57.24 325 P **P 09 41 35.8 +0.3**
ETW Entiat 57.33 325 P **P 09 41 36.1 0.0**
KEBM Edson Butte 57.40 319 ⇓*iP* **P 09 41 37.3 +0.6**
comp=Z,662nm,1.2s,mb6.3
COR Corvallis 57.54 321 ⇓*iP* **P 09 41 37.7 +0.1**
comp=Z,461nm,1.1s,mb6.2
COR Corvallis 57.54 321 ⇓*iP* **P 09 41 37.7 +0.1**
COR pmax pmax
comp=Z,461nm,1.1s,mb6.2
LON Longmire 57.72 324 ⇓*iP* **P 09 41 38.6 -0.3**
comp=Z,200nm,1.0s,mb5.9
LON *e*PP PP 09 43 47.2 -1.1
LON Longmire 57.72 324 ⇓*iP* **P 09 41 38.6 -0.3**
LON *e* 09 43 47.2
LON pmax pmax
comp=Z,200nm,1.0s,mb5.9
WRW Wenatchee Ridg 57.78 325 P **P 09 41 39.2 0.0**
RMW Rattlesnake Mo 58.09 325 P **P 09 41 40.7 -0.7**
RMW Rattlesnake Mo 58.09 325 P **P 09 41 40.7 -0.7**
HEBO Mount Hebo 58.12 322 ⇓*iP* **P 09 41 42.4 +0.7**
comp=Z,280nm,1.0s,mb6.0
EFI East Falkland 58.23 167 *c iP* **P 09 41 42.0 -0.3**
EFI *i **PP pP 09 42 09.1 -4.9
EFI East Falkland 58.23 167 P **P 09 41 42.9 +0.6**
comp=Z,848nm,1.0s,mb6.5,SNR=10
RPW Rockport 58.46 326 ⇓*iP* **P 09 41 43.0 -0.9**
comp=Z,229nm,1.2s,mb5.9
JCW Jim Creek 58.55 325 ⇓*iP* **P 09 41 43.4 -1.2**
comp=Z,256nm,0.8s,mb6.1
JCW *e*pP pP 09 42 12.4 -4.0
GNW Green Mountain 58.74 324 P **P 09 41 45.2 -0.7**
CHIE El Hierro 59.12 61 P **P 09 41 48.3 -0.7**
comp=Z,81nm,0.6s,mb5.7
NLWA Neilton Lookou 59.26 324 ⇓*iP* **P 09 41 50.0 +0.5**
comp=Z,499nm,1.0s,mb6.3
NLWA *e*ScP ScP 09 46 24.5 -0.2
PGC Sidney 59.66 325 ⇓*iP* **P 09 41 52.0 -0.2**
comp=Z,51nm,1.6s,mb5.1
PGC *e*ScP ScP 09 46 25.4 -1.1
EBAJ Bajamar 60.68 60 P **P 09 41 59.7 +0.1**
comp=Z,78nm,0.7s,mb5.7
CFTV Fuerteventura 62.62 61 P **P 09 42 12.2 -0.4**
comp=Z,37nm,0.9s,mb5.2
YKA Yellowknife Ar 64.33 341 P **P 09 42 21.4 -1.8**
comp=Z,305nm,0.8s,mb6.2,baz=134,slow=6.2,SNR=645
YKA Yellowknife Ar 64.33 341 P **P 09 42 21.4 -1.8**
YKA pmax pmax
comp=Z,305nm,0.8s
RKT Rikitea 64.34 242 *e*S **S 09 50 42.0 -10**
comp=Z,252nm,26.2s
RKT *e*LR LR 10 01 37.2
comp=Z,428nm,26.2s
SFJD Kangerlussuaq 64.38 11 ⇓*iP* **P 09 42 22.0 -1.4**
comp=Z,62nm,1.4s,mb5.2
SFJD Kangerlussuaq 64.38 11 ⇓*iP* **P 09 42 22.0 -1.4**
SFJD pmax pmax
comp=Z,62nm,1.4s,mb5.2
DLBC Dease Lake 67.95 332 ⇓*iP* **P 09 42 46.5 +0.1**
CRAG Craig 68.12 329 ⇓*iP* **P 09 42 47.0 -0.5**
comp=Z,167nm,1.0s,mb5.7

WRAK Wrangell Islan 68.14 330⇓*i*P P 09 42 47.1 -0.5
comp=Z,78nm,0.8s,mb5.5
PMAFR Mafra 68.53 50 *e*S S 09 51 41.8 -0.2
PFVI Vila Bisbo 68.53 52 *i* P **P 09 42 51.1 +0.7**
comp=Z,337nm,1.5s,mb5.8
PFVI *e*S S 09 51 43.4 +1.3
PFVI Vila Bisbo 68.53 52 P **P 09 42 50.2 -0.2**
PTEO Sao Teotonio 68.69 52 *e*P **P 09 42 52.0 +0.6**
comp=Z,213nm,0.9s,mb5.9
MORF Marmelete 68.70 52 *i* P **P 09 42 52.2 +0.7**
comp=Z,291nm,1.9s,mb5.7
MORF *e*S S 09 51 47.8 +3.7
MORF Marmelete 68.70 52 *e*P **P 09 42 50.8 -0.7**
MORF *e*S S 09 51 45.3 +1.2
MESJ Messejana 69.13 51 *e*P **P 09 42 53.3 -0.8**
comp=Z,125nm,1.5s,mb5.4
MESJ *e*S S 09 51 50.4 +1.2
MESJ Messejana 69.13 51 *e*P **P 09 42 53.3 -0.9**
MESJ AMb AMB 09 42 56.9
comp=Z,125nm,1.5s,mb5.4
MESJ *e*S S 09 51 50.4 +1.2
MESJ *e*S S 09 51 50.6 +1.5
MESJ Messejana 69.13 51 *e*P **P 09 42 53.3 -0.8**
MESJ *e*S S 09 51 50.4 +1.2
PCVE Castro Verde 69.24 52 *i* P **P 09 42 55.3 +0.5**
comp=Z,140nm,2.0s,mb5.3
PCVE *e*S S 09 51 51.0 +0.6
PBDV Barranco-do-Ve 69.25 52 *e*P **P 09 42 55.7 +0.8**
PBDV *e*S S 09 51 52.1 +1.5
PTOM Tomar 69.32 49 *e*P **P 09 42 55.1 -0.2**
comp=Z,151nm,1.6s,mb5.5
EVO Evora 69.42 51 *e*P **P 09 42 55.9 0.0**
comp=Z,122nm,1.5s,mb5.4
PBEJ Beja 69.44 51 *e*P **P 09 42 56.3 +0.3**
comp=Z,96nm,1.8s,mb5.2
PVAQ Vaqueiros 69.45 52 *e*P **P 09 42 56.5 +0.4**
comp=Z,94nm,1.6s,mb5.3
PVAQ *e*S S 09 51 55.5 +2.6
EMAZ Mazaricos 69.59 46 P **P 09 42 55.7 -1.2**
comp=Z,544nm,2.4s,mb5.9
EZAM Zamans 69.62 47 P **P 09 42 56.9 -0.2**
comp=Z,217nm,1.2s,mb5.8
EZAM Zamans 69.62 47 P **P 09 42 56.9 -0.2**
EZAM pmax pmax
comp=Z,217nm,1.2s,mb5.8
EGRO El Granado 69.65 52 P **P 09 42 57.1 -0.2**
comp=Z,250nm,1.4s,mb5.8
PESTR Estremoz 69.80 50 *i* P **P 09 42 58.5 +0.2**
comp=Z,209nm,1.5s,mb5.6
PESTR *e*S S 09 51 57.2 +0.2
STS Santiago 69.89 46 P **P 09 42 58.2 -0.5**
comp=Z,32nm,0.5s,mb5.3
STS Santiago 69.89 46 P **P 09 42 58.2 -0.5**
STS pmax pmax
comp=Z,32nm,0.5s,mb5.3
SIT Sitka 69.90 330⇓*i*P P 09 42 57.8 -0.6
comp=Z,183nm,1.1s,mb5.7
SIT Sitka 69.90 330⇓*i*P P 09 42 57.8 -0.6
SIT pmax pmax
comp=Z,183nm,1.1s,mb5.7
PVIS Viseu 69.92 48 *i* P **P 09 42 58.8 -0.1**
comp=Z,139nm,1.8s,mb5.4
PCAB Cabril 70.02 47 *e*P **P 09 42 59.2 -0.3**
comp=Z,151nm,1.2s,mb5.6
ELOB Lobios 70.03 47 P **P 09 42 58.4 -1.2**
comp=Z,313nm,1.9s,mb5.7
PMRV Marv??o 70.06 50 *i* P **P 09 42 59.3 -0.5**
comp=Z,127nm,1.7s,mb5.4
PMRV *e*S S 09 51 59.7 -0.2
PCBR Castelo Branco 70.07 49 *e*P **P 09 42 59.5 -0.3**
comp=Z,119nm,1.5s,mb5.4
TIC Toumodi 70.08 85 *e*P **P 09 42 59.0 -1.4**
comp=Z,108nm,0.7s,mb5.7
TIC Toumodi 70.08 85 *e*P **P 09 42 59.0 -1.4**
TIC pmax pmax
comp=Z,108nm,0.7s,mb5.7
LIC Lamto 70.09 85 *e*P **P 09 42 59.3 -1.2**
comp=Z,295nm,0.7s,mb6.1
PBAR Barrancos 70.11 51 *e*P **P 09 43 00.3 +0.2**
comp=Z,125nm,1.7s,mb5.4
PBAR *e*S S 09 52 02.1 +1.5
MTE Manteigas 70.12 49 *e*P **P 09 42 59.9 -0.3**
comp=Z,135nm,1.7s,mb5.4
MTE *e*S S 09 52 00.0 -0.7
MTE Manteigas 70.12 49⇓*i*P **P 09 42 59.9 -0.3**
comp=Z,18nm,0.6s,mb5.0
EBAD Badajoz 70.23 51 P **P 09 43 00.6 -0.2**
comp=Z,539nm,3.2s
DBIC Dimbokro 70.24 85 P **P 09 43 00.1 -1.3**
comp=Z,95nm,0.7s,mb5.7,baz=264,slow=7.4,SNR=112
DBIC LR LR 10 11 44.9
comp=Z,465nm,20.0s,baz=248,slow=34
DBIC Dimbokro 70.24 85 *e*P **P 09 43 00.2 -1.1**
comp=Z,106nm,0.7s,mb5.7
DBIC Dimbokro 70.24 85 *e*P **P 09 43 00.3 -1.1**
DBIC pmax pmax
comp=Z,106nm,0.7s
EMIN Mina Concepcio 70.33 52 P **P 09 43 00.6 -0.8**
comp=Z,404nm,2.3s,mb5.7
KIC Kosan Boka 70.37 85 *e*P **P 09 43 01.1 -1.1**
comp=Z,295nm,0.7s,mb6.1
MVO Moncorvo 70.65 48 *i* P **P 09 43 03.1 -0.3**
comp=Z,128nm,1.9s,mb5.3
MVO *e*S S 09 52 07.6 +0.8
MVO Moncorvo 70.65 48 P **P 09 43 02.1 -1.2**
RES Resolute Bay 70.69 355⇓*i*P P 09 43 01.9 -1.1
comp=Z,102nm,0.8s,mb5.6
RES Resolute Bay 70.69 355⇓*i*P P 09 43 01.9 -1.1
RES pmax pmax
comp=Z,102nm,0.8s,mb5.6
ERUA La Rua 70.80 47 P **P 09 43 03.8 -0.4**
comp=Z,42nm,0.8s,mb5.2
ERUA La Rua 70.80 47 P **P 09 43 03.8 -0.4**
ERUA pmax pmax
comp=Z,42nm,0.8s,mb5.2
ESPR Espera 70.83 53 P **P 09 43 04.2 -0.3**
comp=Z,301nm,1.5s,mb5.8
SKAG Skagway 70.87 332⇓*i*P P 09 43 04.1 -0.2
comp=Z,155nm,1.0s,mb5.7
BORG Borgarnes 70.97 22 P **P 09 43 06.0 +1.2**
comp=Z,965nm,2.0s,mb6.2,SNR=6.6
EPON Pontenova 70.98 46 P **P 09 43 03.3 -2.0**
comp=Z,431nm,3.0s
PBRG Braganca 70.98 47 *e*P **P 09 43 05.2 -0.1**
comp=Z,91nm,1.8s,mb5.2
ECAL Calabor 71.01 47 P **P 09 43 04.3 -1.2**
comp=Z,696nm,2.4s,mb6.0
EJIF Jimena Fronter 71.08 53 P **P 09 43 07.3 +1.2**
comp=Z,155nm,0.8s,mb5.8
EJIF Jimena Fronter 71.08 53 P **P 09 43 07.3 +1.2**
EJIF pmax pmax
comp=Z,155nm,0.8s,mb5.8
EPLA Plasencia 71.16 49 P **P 09 43 05.0 -1.4**
comp=Z,118nm,0.9s,mb5.6
EPLA Plasencia 71.16 49 P **P 09 43 05.0 -1.5**
EPLA pmax pmax
comp=Z,118nm,0.9s,mb5.6
ECAB El Cabril 71.36 52 P **P 09 43 07.7 0.0**
comp=Z,223nm,1.3s,mb5.7
SUMG Summit 71.36 11⇓*i*P **P 09 43 07.4 +0.4**
comp=Z,703nm,0.8s,mb6.4
SUMG *e*pP pP 09 43 40.2 +0.3
SUMG *e*sP sP 09 43 55.6 +1.2
SUMG Summit 71.36 11⇓*i*P **P 09 43 07.5 +0.5**
comp=Z,593nm,0.8s,mb6.4
EMIJ Mijas 71.65 53 P **P 09 43 09.0 -0.5**
comp=Z,123nm,1.2s,mb5.5
EADA Adamuz 72.03 52 P **P 09 43 11.4 -0.3**
comp=Z,331nm,2.1s,mb5.7
ELUQ Luque 72.19 52 P **P 09 43 12.7 +0.1**
comp=Z,73nm,1.1s,mb5.3
ELUQ Luque 72.19 52 P **P 09 43 12.7 0.0**
ELUQ pmax pmax
comp=Z,73nm,1.1s,mb5.3
ELOJ Sierra Loja 72.22 53 P **P 09 43 13.9 +1.0**
comp=Z,148nm,0.8s,mb5.8
ELOJ Sierra Loja 72.22 53 P **P 09 43 13.9 +1.0**
ELOJ pmax pmax
comp=Z,148nm,0.8s,mb5.8
EARI Arriondas 72.37 46 P **P 09 43 13.3 -0.3**
comp=Z,1μm,3.7s
PAB San Pablo 72.40 50⇓*i*P **P 09 43 14.0 +0.1**
comp=Z,208nm,1.4s,mb5.7
PAB San Pablo 72.40 50⇓*i*P **P 09 43 14.0 +0.1**
PAB pmax pmax
comp=Z,208nm,1.4s,mb5.7

ERON Agron 72.48 53 P **P 09 43 14.7 +0.3**
comp=Z,35nm,0.7s,mb5.2
EBAN Banos Encina 72.64 52 P **P 09 43 15.3 -0.1**
comp=Z,46nm,1.0s,mb5.2
EBAN Banos Encina 72.64 52 P **P 09 43 15.3 -0.1**
EBAN pmax pmax
comp=Z,47nm,1.0s,mb5.2
EGUA Guajares 72.65 53 P **P 09 43 14.9 -0.5**
comp=Z,140nm,0.8s,mb5.7
EGUA Guajares 72.65 53 P **P 09 43 14.9 -0.5**
EGUA pmax pmax
comp=Z,140nm,0.8s,mb5.7
ECOG Cogollos-Vega 72.70 53 P **P 09 43 16.2 +0.5**
comp=Z,129nm,0.9s,mb5.7
ECOG Cogollos-Vega 72.70 53 P **P 09 43 16.2 +0.5**
ECOG pmax pmax
comp=Z,129nm,0.9s,mb5.7
GUD Guadarrama 72.71 49 P **P 09 43 15.9 +0.2**
comp=Z,73nm,0.8s,mb5.5
GUD Guadarrama 72.71 49 P **P 09 43 15.9 +0.2**
GUD pmax pmax
comp=Z,73nm,0.8s,mb5.5
ESDC Sonseca Array 72.71 50 P **P 09 43 15.4 -0.3**
comp=Z,16nm,0.6s,mb5.0,baz=260,slow=5.0,SNR=96
ESDC Sonseca Array 72.71 50 P **P 09 43 15.7 0.0**
comp=Z,40nm,0.8s,mb5.2
ESLA Sonseca Array 72.71 50⇓*i*P **P 09 43 16.0 +0.2**
comp=Z,82nm,1.5s,mb5.2
EQES Quesada 73.16 52 P **P 09 43 18.8 +0.4**
comp=Z,246nm,1.4s,mb5.7
EBER Berja 73.19 53 P **P 09 43 19.2 +0.6**
comp=Z,390nm,1.4s,mb5.9
EHUE Huescar 73.53 52 P **P 09 43 21.1 +0.5**
comp=Z,270nm,1.3s,mb5.8
EHUE Huescar 73.53 52 P **P 09 43 21.1 +0.5**
EHUE pmax pmax
comp=Z,270nm,1.3s,mb5.8
ELAN Lanestosa 73.64 46 P **P 09 43 21.3 +0.2**
comp=Z,332nm,1.9s,mb5.7
EVIA Vianos 73.70 51 P **P 09 43 21.7 +0.2**
comp=Z,107nm,1.1s,mb5.5
EVIA Vianos 73.70 51 P **P 09 43 21.7 +0.1**
EVIA pmax pmax
comp=Z,107nm,1.1s,mb5.5
SCO Scoresbysund 73.86 16 *i* P **P 09 43 21.8 0.0**
SCO pmax pmax
comp=Z,55nm,0.8s,mb5.3
SCO Scoresbysund 73.86 16 *i* P **P 09 43 21.8 0.0**
comp=Z,55nm,0.8s,mb5.3
BST Brest 74.07 41 *e*P **P 09 43 23.8 +0.3**
INK Inuvik 74.10 341⇓*i*P **P 09 43 22.2 -1.1**
comp=Z,386nm,1.4s,mb5.9
INK *e*pP pP 09 43 54.7 -1.7
INK *e*sP sP 09 44 09.2 -1.6
INK Inuvik 74.10 341⇓*i*P **P 09 43 22.2 -1.1**
INK *e**PP pP 09 43 54.7 -1.7
INK pmax pmax
comp=Z,386nm,1.4s
GMM Mts of Mourne 74.19 35 P **P 09 43 23.5 -0.6**
GMM 09 44 09.9
GMM Mts of Mourne 74.19 35 *e*P **P 09 43 23.5 -0.6**
GMM *e* 09 44 09.9
ECRI Cripan 74.21 47 P **P 09 43 25.1 +0.7**
comp=Z,46nm,0.7s,mb5.3
ECRI Cripan 74.21 47 P **P 09 43 25.1 +0.6**
ECRI pmax pmax
comp=Z,46nm,0.7s,mb5.3
ETOB Tobarra 74.45 51 P **P 09 43 26.4 +0.5**
comp=Z,952nm,2.3s,mb6.1
DAWY Dawson 74.45 336⇓*i*P **P 09 43 24.5 -0.9**
DAWY *e*PP PP 09 46 13.3 -0.2
EMUR La Murta 74.60 52 P **P 09 43 26.0 -0.8**
comp=Z,66nm,0.9s,mb5.3
KSK Scoval 74.60 31 P **P 09 43 25.8 -0.6**
KSK Scoval 74.60 31 *e*P **P 09 43 25.8 -0.6**
RRH Rhenigidale 74.73 31 P **P 09 43 26.6 -0.5**
RRH Rhenigidale 74.73 31 *e*P **P 09 43 26.6 -0.5**
KAR1 Arisaig 74.92 32 P **P 09 43 27.2 -1.0**
KAR1 Arisaig 74.92 32 *e*P **P 09 43 27.2 -1.0**
ECHE Chera 75.00 50 P **P 09 43 29.6 +0.6**
comp=Z,21nm,0.7s,mb4.9
ECHE Chera 75.00 50 P **P 09 43 29.6 +0.5**
ECHE pmax pmax
comp=Z,21nm,0.7s,mb4.9
ELIZ Elizondo 75.00 47 P **P 09 43 29.3 +0.3**
comp=Z,78nm,1.1s,mb5.2
ELIZ Elizondo 75.00 47 P **P 09 43 29.3 +0.3**
ELIZ pmax pmax
comp=Z,78nm,1.1s,mb5.2
EALK Alkurruntz 75.03 47 P **P 09 43 28.8 -0.3**
comp=Z,548nm,1.8s,mb5.9
GAL1 Galloway 75.04 34 P **P 09 43 28.3 -0.6**
GAL1 AMB AMB 09 43 29.4
comp=Z,177nm,1.2s,mb5.6
GAL1 pP pP 09 44 00.9 -1.2
GAL1 Galloway 75.04 34 *e*P **P 09 43 28.3 -0.6**
GAL1 AMB AMB 09 43 29.4
comp=Z,177nm,1.2s,mb5.6
GAL1 *e* pP 09 44 00.9 -1.2
KPL Plockton 75.12 32 P **P 09 43 28.1 -1.2**
KPL AMB AMB 09 43 29.5
comp=Z,162nm,1.4s,mb5.5
KPL Plockton 75.12 32 *e*P **P 09 43 28.1 -1.2**
KPL AMB AMB 09 43 29.5
comp=Z,162nm,1.4s,mb5.5
RRR Rubha Reidh 75.17 31 P **P 09 43 29.0 -0.7**
RRR Rubha Reidh 75.17 31 P **P 09 43 29.0 -0.6**
RRR Rubha Reidh 75.17 31 *e*P **P 09 43 29.0 -0.7**
RRR *e*P 09 43 29.0
KSB Sheil Bridge 75.21 32 P **P 09 43 28.9 -0.9**
KSB Sheil Bridge 75.21 32 *e*P **P 09 43 28.9 -0.9**
OSSF Osses 75.21 47 *e*P **P 09 43 30.2 0.0**
HTR Trewern Hill 75.29 37 P **P 09 43 29.5 -1.0**
HTR 09 44 16.5
HTR Trewern Hill 75.29 37 *e*P **P 09 43 29.5 -1.0**
HTR *e* 09 44 16.5
KAC Achnashellach 75.34 32 P **P 09 43 29.1 -1.6**
KAC Achnashellach 75.34 32 *e*P **P 09 43 29.1 -1.6**
PGBU Glenifferbraes 75.38 33 P **P 09 43 30.2 -0.6**
PGBU AMB AMB 09 43 31.9
comp=Z,197nm,4.6s
PGBU Glenifferbraes 75.38 33 *e*P **P 09 43 30.2 -0.6**
PGBU AMB AMB 09 43 31.9
comp=Z,197nm,4.6s
LARF Larrau 75.38 47 *e*P **P 09 43 29.7 -1.5**
EGAK Eagle 75.43 336⇓*i*P **P 09 43 30.3 -0.6**
comp=Z,277nm,1.0s,mb5.8
EGAK *e*PP PP 09 46 15.9 -5.8
MCH1 Michaelchurch 75.44 38 P **P 09 43 30.5 -0.8**
MCH1 AMB AMB 09 43 31.8
comp=Z,118nm,1.8s,mb5.2
MCH1 Michaelchurch 75.44 38 *e*P **P 09 43 30.5 -0.8**
MCH1 AMB AMB 09 43 31.8
comp=Z,118nm,1.8s,mb5.2
EMOS Mosqueruela 75.46 50 P **P 09 43 31.9 +0.2**
comp=Z,310nm,1.5s,mb5.7
GCD Castle Douglas 75.47 35 P **P 09 43 30.4 -1.0**
GCD 09 44 17.0
GCD Castle Douglas 75.47 35 *e*P **P 09 43 30.4 -1.0**
GCD *e* 09 44 17.0
EBEN Beniarda 75.48 51 P **P 09 43 31.9 +0.1**
comp=Z,372nm,2.4s,mb5.6
HGH Gray Hill 75.49 38 P **P 09 43 30.6 -1.0**
HGH 09 44 18.0
HGH Gray Hill 75.49 38 *e*P **P 09 43 30.6 -1.0**
HGH *e* 09 44 18.0
EAB Aberfoyle 75.55 33 P **P 09 43 30.9 -0.9**
EAB Aberfoyle 75.55 33 *e*P **P 09 43 30.9 -0.9**
ATE Arette 75.60 47 *e*P **P 09 43 32.5 +0.1**
ESAC San Caprasio 75.61 48 P **P 09 43 32.9 +0.4**
comp=Z,241nm,0.8s,mb5.9
RSC Scourie 75.62 31 P **P 09 43 31.4 -0.8**
RSC Scourie 75.62 31 *e*P **P 09 43 31.4 -0.8**
XDE Dent Fell 75.65 35 P **P 09 43 31.6 -0.8**
XDE Dent Fell 75.65 35 *e*P **P 09 43 31.6 -0.8**
REYF Montagne du Re 75.82 47 *e*P **P 09 43 34.3 +0.6**
MDO Dochfour 75.82 32 P **P 09 43 31.9 -1.4**
MDO Dochfour 75.82 32 *e*P **P 09 43 31.9 -1.4**
KESW Keswick, Cumbr 75.89 35 P **P 09 43 32.4 -1.4**
KESW AMB AMB 09 43 34.2
comp=Z,153nm,1.2s,mb5.5
KESW Keswick, Cumbr 75.89 35 *e*P **P 09 43 32.4 -1.4**
KESW AMB AMB 09 43 34.2
comp=Z,153nm,1.2s,mb5.5

MENT Mentasta 75.91 334⇓*i*P **P 09 43 33.5 -0.3**
EAU Auchinoon 75.96 34 P **P 09 43 33.1 -1.0**
EAU Auchinoon 75.96 34 *e*P **P 09 43 33.1 -1.0**
ESK Eskdalemuir 75.98 34 P **P 09 43 33.3 -1.0**
ESK AMB AMB 09 43 34.2
comp=Z,97nm,2.2s,mb5.0
ESK Eskdalemuir 75.98 34 *e*P **P 09 43 33.3 -1.0**
ESK AMB AMB 09 43 34.2
comp=Z,97nm,2.2s,mb5.0
ESK Eskdalemuir 75.98 34⇓*i*P **P 09 43 33.9 -0.4**
comp=Z,289nm,1.7s,mb5.6
ESK Eskdalemuir 75.98 34⇓*i*P **P 09 43 33.9 -0.4**
ESK pmax pmax
comp=Z,289nm,1.7s,mb5.6
ESK Eskdalemuir 75.98 34 P **P 09 43 33.4 -0.9**
comp=Z,436nm,0.8s,mb6.1,SNR=6.8
ECK Cauldkaine Hil 76.00 34 P **P 09 43 32.9 -1.5**
ECK Cauldkaine Hil 76.00 34 *e*P **P 09 43 32.9 -1.5**
EBH Black Hill 76.01 33 P **P 09 43 33.5 -0.9**
EBH Black Hill 76.01 33 *e*P **P 09 43 33.5 -0.9**
MVH1 Achvaich 76.03 31 P **P 09 43 33.6 -1.0**
MVH1 Achvaich 76.03 31 *e*P **P 09 43 33.6 -1.0**
VIEF Viey 76.10 47 *e*P **P 09 43 36.0 +0.7**
STNC Stoke 76.12 37 P **P 09 43 34.5 -0.6**
STNC AMB AMB 09 43 35.9
comp=Z,184nm,1.9s,mb5.4
STNC Stoke 76.12 37 *e*P **P 09 43 34.5 -0.6**
STNC AMB AMB 09 43 35.9
comp=Z,184nm,1.9s,mb5.4
ERTA Horta de San J 76.13 49 P **P 09 43 35.2 -0.3**
comp=Z,123nm,1.0s,mb5.5
LABF Labassere 76.16 47 *e*P **P 09 43 36.3 +0.7**
EBIE Bielsa 76.17 47 P **P 09 43 35.6 -0.1**
comp=Z,213nm,1.3s,mb5.6
DOT Dot Lake 76.27 335⇓*i*P **P 09 43 35.6 -0.2**
comp=Z,1μm,0.8s,mb6.7
EANR 'Ain N'Sour 76.31 54 P **P 09 43 37.5 +0.9**
RESF Ens 76.32 47 *e*P **P 09 43 37.5 +1.0**
PPT Papeete 76.39 251 *e*S S 09 53 19.6 +7.5
comp=Z,2μm,28.5s
PPT *e*LR LR 10 07 44.7
comp=Z,377nm,22.5s
PPT Papeete 76.39 251 LR LR 10 10 16.3
comp=Z,350nm,18.4s,baz=81,slow=30
ESY Stoneypath 76.43 34 P **P 09 43 35.9 -1.0**
ESY Stoneypath 76.43 34 *e*P **P 09 43 35.9 -1.0**
ETRT Tiaret 76.43 55 P **P 09 43 39.2 +1.9**
MCD Coleburn Disti 76.44 32 P **P 09 43 35.8 -1.1**
MCD Coleburn Disti 76.44 32 *e*P **P 09 43 35.8 -1.1**
TORD Torodi Ar. Bea 76.44 78 LR LR 10 15 25.8
comp=Z,932nm,21.7s,baz=265,slow=34
XAL Allendale 76.45 35 P **P 09 43 36.2 -0.8**
XAL Allendale 76.45 35 *e*P **P 09 43 36.2 -0.8**
MME1 Meikle Cairn 76.53 32 P **P 09 43 37.0 -0.4**
MME1 Meikle Cairn 76.53 32 *e*P **P 09 43 37.0 -0.4**
ECHA Ech Chlef 76.54 54 P **P 09 43 41.2 +3.3**
CWF Charnwood Fore 76.59 37 P **P 09 43 36.1 -1.7**
CWF AMB AMB 09 43 37.2
comp=Z,141nm,2.1s,mb5.2
CWF Charnwood Fore 76.59 37 *e*P **P 09 43 36.1 -1.7**
CWF AMB AMB 09 43 37.2
comp=Z,141nm,2.1s,mb5.2
HPK Haverah Park 76.62 36 P **P 09 43 37.4 -0.6**
HPK AMB AMB 09 43 45.2
comp=Z,107nm,2.0s,mb5.1
HPK Haverah Park 76.62 36 *e*P **P 09 43 37.4 -0.6**
HPK AMB AMB 09 43 45.2
comp=Z,107nm,2.0s,mb5.1
MELF Melles 76.64 47 *e*P **P 09 43 38.8 +0.5**
EBNR Beni Rached 76.68 54 P **P 09 43 44.0 +5.3**
PAX Paxson 76.68 334⇓*i*P **P 09 43 37.4 -0.7**
comp=Z,239nm,1.0s,mb5.8
PAX Paxson 76.68 334⇓*i*P **P 09 43 37.4 -0.7**
PAX pmax pmax
comp=Z,239nm,1.0s,mb5.8
EPOB Poblet 76.73 49 P **P 09 43 38.1 -0.8**
comp=Z,213nm,1.6s,mb5.5
EIBI Ibiza 76.73 51 P **P 09 43 39.0 +0.1**
comp=Z,337nm,1.5s,mb5.8
CSOR Sort 76.86 48 P **P 09 43 40.2 +0.6**
comp=Z,332nm,1.3s,mb5.8
MLS Moulis 76.89 47 *e*P **P 09 43 39.9 +0.2**
SALF Salau 76.94 47 *e*P **P 09 43 41.0 +1.0**
EMIR Miracle 77.11 48 P **P 09 43 40.6 -0.4**
comp=Z,242nm,1.2s,mb5.7
TBI Tubuai 77.31 245 *e*S S 09 53 18.3 -3.7
comp=Z,737nm,30.8s
TBI *e*LR LR 10 07 39.1
comp=Z,494nm,26.2s
CLLI Llivia 77.49 48 P **P 09 43 43.6 +0.6**
VALF Valcebollere 77.52 48 *e*P **P 09 43 44.0 +0.8**
CARF Carcanieres 77.61 47 *e*P **P 09 43 43.9 +0.2**
SML Sawmill 77.68 332⇓*i*P **P 09 43 42.9 -0.8**
comp=Z,68nm,1.2s,mb5.2
SML Sawmill 77.68 332⇓*i*P **P 09 43 42.9 -0.8**
SML pmax pmax
comp=Z,69nm,1.2s,mb5.2
ILAR Eielson Array 77.76 335 P **P 09 43 42.8 -1.3**
comp=Z,103nm,0.9s,mb5.5,baz=111,slow=4.3,SNR=813
ILAR PP PP 09 46 35.8 -5.5
comp=Z,13nm,0.9s,baz=108,slow=5.6,SNR=8.6
ILAR LR LR 10 18 48.1
comp=Z,484nm,18.5s,baz=111,slow=36
ILAR Eielson Array 77.76 335 P **P 09 43 42.8 -1.3**
ILAR 09 46 35.8
ILAR pmax pmax
comp=Z,103nm,0.9s
ILAR pmax pmax
comp=Z,13nm,0.9s
ILAR MLR MLR
comp=Z,484nm,18.5s
CFON Fontmartina 77.78 48 P **P 09 43 44.1 -0.6**
comp=Z,46nm,0.9s,mb5.1
EMHD Djebel Mahouad 77.82 54 P **P 09 43 46.0 +0.9**
WAL1 Walls 77.83 29 P **P 09 43 43.9 -0.6**
WAL1 Walls 77.83 29 *e*P **P 09 43 43.9 -0.6**
ALE Alert 77.84 2 P **P 09 43 43.0 -1.3**
comp=Z,2μm,0.8s,mb6.8,SNR=96
ELSH Elham, Standar 77.85 39 P **P 09 43 44.3 -0.6**
ELSH AMB AMB 09 43 45.5
comp=Z,227nm,1.4s,mb5.6
ELSH Elham, Standar 77.85 39 *e*P **P 09 43 44.3 -0.6**
ELSH AMB AMB 09 43 45.5
comp=Z,227nm,1.4s,mb5.6
FILF Fillols 77.93 48 *e*P **P 09 43 45.4 -0.1**
PMR Palmer 78.01 332⇓*i*P **P 09 43 44.2 -1.3**
comp=Z,113nm,1.1s,mb5.4
PMR Palmer 78.01 332⇓*i*P **P 09 43 44.3 -1.2**
PMR pmax pmax
comp=Z,113nm,1.1s,mb5.4
LRW Lerwick 78.02 30 P **P 09 43 44.5 -1.1**
LRW AMB AMB 09 43 46.3
comp=Z,129nm,2.5s,mb5.1
LRW Lerwick 78.02 30 *e*P **P 09 43 44.5 -1.1**
LRW AMB AMB 09 43 46.3
comp=Z,129nm,2.5s,mb5.1
DAG Danmarks Havn 78.04 11⇓*i*P **P 09 43 44.6 -0.9**
DAG pmax pmax
comp=Z,73nm,0.8s,mb5.4
DAG Danmarks Havn 78.04 11⇓*i*P **P 09 43 44.6 -0.9**
comp=Z,733nm,0.8s,mb6.4
AEU East Anglia Un 78.11 37 P **P 09 43 45.1 -1.1**
AEU East Anglia Un 78.11 37 *e*P **P 09 43 45.1 -1.1**
VERF Verneugheol 78.15 44 *e*P **P 09 43 46.7 +0.1**
SJAF Saint Jean de 78.16 48 *e*P **P 09 43 47.0 +0.2**
EJON La Jonquera 78.16 48 P **P 09 43 46.8 0.0**
comp=Z,161nm,1.6s,mb5.4
FRNF Fournols 78.17 45 *e*P **P 09 43 46.9 +0.1**
COLA College 78.19 335⇓*i*P **P 09 43 45.4 -1.1**
comp=Z,167nm,1.0s,mb5.6
COLA *e*PcP PcP 09 43 54.4 -1.0
COLA *e*PP PP 09 46 42.5 -2.3
COLA College 78.19 335⇓*i*P **P 09 43 45.4 -1.1**
COLA *e* 09 43 54.4
COLA *e* 09 46 42.5
COLA pmax pmax
comp=Z,167nm,1.0s,mb5.6
RC01 Rabbit Creek A 78.19 331⇓*i*P **P 09 43 45.6 -1.0**
comp=Z,172nm,1.3s,mb5.5
RC01 *e*PP PP 09 46 43.6 -1.3
SLKM Skilak Lake 78.31 331 *e*P **P 09 43 46.2 -1.0**
SLKM Skilak Lake 78.31 331 *e*P **P 09 43 46.2 -1.0**
MCK McKinley 78.38 334⇓*i*P **P 09 43 46.9 -0.7**
comp=Z,300nm,1.0s,mb5.9
MCK McKinley 78.38 334⇓*i*P **P 09 43 46.9 -0.7**

MCK pmax pmax
comp=Z,300nm,1.0s,mb5.9
PYM Petit Puy Mans 78.51 44 *eP* **P 09 43 48.7 0.0**
PYM Petit Puy Mans 78.51 44 *eP* **P 09 43 48.7 0.0**
AGO Saint Agoulin 78.62 44 *eP* **P 09 43 49.2 -0.1**
TRF Thorofare Moun 78.92 334 *eP* **P 09 43 49.8 -0.6**
comp=Z,272nm,1.1s,mb5.8
PLDF La Plantade 78.96 44 *eP* **P 09 43 51.0 -0.1**
PLDF La Plantade 78.96 44 *eP* **P 09 43 51.0 -0.1**
KDAK Kodiak Island 79.05 328 LR LR 10 21 03.2
comp=Z,348nm,18.1s,baz=199,slow=37
KDAK Kodiak Island 79.05 328 ⇓*iP* **P 09 43 50.1 -1.2**
comp=Z,216nm,1.6s,mb5.5
KDAK Kodiak Island 79.05 328 ⇓*iP* **P 09 43 50.1 -1.2**
KDAK pmax pmax
comp=Z,216nm,1.6s,mb5.5
KDAK Kodiak Island 79.05 328 P **P 09 43 50.3 -1.0**
comp=Z,562nm,0.8s,mb6.2,SNR=8.3
BPAW Bear Paw Mtn. 79.35 334 ⇓*iP* **P 09 43 52.0 -0.8**
comp=Z,507nm,0.9s,mb6.2
BPAW *ep*P pP 09 44 26.4 +0.1
OHAK Old Harbor 79.35 327 ⇓*iP* **P 09 43 51.5 -1.4**
comp=Z,153nm,1.0s,mb5.6
RSO Redoubt South 79.54 331 ⇓*eP* **P 09 43 53.0 -0.9**
comp=Z,452nm,1.1s,mb6.0
RSO *ep*P pP 09 44 27.2 -0.3
SSB Saint Sauveur 79.55 45 *eP* **P 09 43 54.7 +0.4**
SSB Saint Sauveur 79.55 45 ⇓*iP* **P 09 43 54.6 +0.3**
comp=Z,20nm,1.6s
SSB Saint Sauveur 79.55 45 ⇓*iP* **P 09 43 54.7 +0.4**
SSB pmax pmax
comp=Z,20nm,1.6s
PPLA Purkeypile 79.66 333 ⇓*iP* **P 09 43 53.6 -1.0**
comp=Z,517nm,1.1s,mb6.1
PPLA *ep*P pP 09 44 26.1 -1.9
PPLA *es*P sP 09 44 43.0 +0.7
PPLA *eP*P PP 09 46 53.7 -3.4
COLD Coldfoot 79.66 338 ⇓*iP* **P 09 43 54.4 0.0**
comp=Z,207nm,1.0s,mb5.7
COLD *eP*P PP 09 46 56.0 -1.0
SNF Seneffe 79.77 40 P **P 09 43 55.1 -0.3**
SNF AP pP 09 44 29.6 +0.7
SNF XP sP 09 44 43.2 +0.1
comp=Z,84nm,1.9s
SET Setif 79.80 54 P **P 09 43 57.0 +1.1**
UCC Uccle 79.84 39 P **P 09 43 54.5 -1.3**
UCC XP sP 09 44 42.4 -1.2
TAM Tamanrasset 79.86 68 ⇓*iP* **P 09 43 57.7 +1.3**
comp=Z,22nm,0.8s,mb4.8
TAM Tamanrasset 79.86 68 ⇓*iP* **P 09 43 57.7 +1.3**
TAM pmax pmax
comp=Z,22nm,0.8s,mb4.8
DOU Dourbes 79.93 40 P **P 09 43 56.1 -0.2**
DOU AP pP 09 44 29.6 -0.2
DOU XP sP 09 44 43.6 -0.4
comp=Z,84nm,2.0s
DFRA Djebel Bou Aff 80.19 54 P **P 09 43 59.0 +1.0**
BCLA Clavier 80.41 40 P **P 09 43 58.6 -0.2**
BCLA AP pP 09 44 32.2 -0.3
BCLA XP sP 09 44 46.3 -0.4
comp=Z,98nm,2.2s
OG25 Le Caire 80.59 46 *eP* **P 09 44 00.7 +0.8**
BEBN Eben Emael 80.67 39 P **P 09 44 00.3 +0.1**
BEBN XP sP 09 44 48.0 -0.1
comp=Z,54nm,2.2s
CASM Ain Smara 80.68 54 P **P 09 44 01.3 +0.7**
THEF They Montfort 80.72 42 *eP* **P 09 44 00.3 -0.2**
THEF They Montfort 80.72 42 *eP* **P 09 44 00.3 -0.2**
GIMEL St. Georges / 80.83 44 ⇓*iP* **P 09 44 01.2 +0.1**
comp=Z,382nm,2.3s,mb5.6
HGN Heimansgroeve 80.83 40 ⇓*iP* **P 09 44 00.9 -0.1**
comp=Z,120nm,1.1s,mb5.5
CKFL Kef-Lekhel 80.87 54 P **P 09 44 02.5 +0.9**
MEM Membach 80.87 40 P **P 09 44 01.2 -0.1**
MEM XP sP 09 44 49.9 +0.8
comp=Z,99nm,1.9s
WLF Walferdange 80.91 41 P **P 09 44 01.7 +0.2**
WLF AP pP 09 44 34.5 -0.6
WLF XP sP 09 44 50.1 +0.7
comp=Z,162nm,1.6s
WLF Walferdange 80.91 41 *eP* **P 09 44 02.0 +0.5**
comp=Z,198nm,0.8s,mb5.8
WLF *es*P sP 09 44 50.6 +1.2
WLF Walferdange 80.91 41 ⇓*iP* **P 09 44 01.8 +0.3**
comp=Z,184nm,0.8s,mb5.8
WLF Walferdange 80.91 41 ⇓*iP* **P 09 44 01.8 +0.3**
WLF pmax pmax
comp=Z,185nm,0.8s,mb5.8
CAEH `Ain El Ouahch 80.98 54 P **P 09 44 02.3 +0.1**
BRANT Les Verrieres 80.99 43 ⇓*iP* **P 09 44 02.2 +0.2**
comp=Z,804nm,2.9s,mb5.8
RSL Roselend 81.04 45 *eP* **P 09 44 02.6 +0.3**
RSL Roselend 81.04 45 *eP* **P 09 44 02.6 +0.3**
BNI Bardonecchia 81.05 45 *eP* **P 09 44 02.6 +0.2**
comp=Z,117nm,1.5s,mb5.3
BNI *ep*P pP 09 44 37.8 +1.8
BNI Bardonecchia 81.05 45 *eP* **P 09 44 02.6 +0.2**
BNI pmax pmax
comp=Z,117nm,1.5s,mb5.3
OG01 Vacheresse 81.11 44 *eP* **P 09 44 02.6 0.0**
CALN Calern 81.16 47 *eP* **P 09 44 02.9 -0.1**
CALN Calern 81.16 47 *eP* **P 09 44 02.9 -0.1**
LOMF Lomont 81.25 43 *eP* **P 09 44 03.5 +0.2**
LOMF Lomont 81.25 43 *eP* **P 09 44 03.5 +0.2**
AIGLE Aigle 81.29 44 ⇓*iP* **P 09 44 04.0 +0.4**
comp=Z,246nm,1.4s,mb5.6
SALAN Lac Salanfe 81.30 44 ⇓*iP* **P 09 44 04.0 +0.4**
comp=Z,382nm,3.0s,mb5.5
KIP Kipapa 81.31 291 *eP* **P 09 44 05.1 +0.9**
comp=Z,12nm,0.5s,mb4.8
KIP Kipapa 81.31 291 *eP* **P 09 44 05.1 +0.9**
KIP pmax pmax
comp=Z,12nm,0.5s,mb4.8
TORNY Torny/Romont 81.31 44 ⇓*iP* **P 09 44 03.7 0.0**
comp=Z,713nm,2.7s,mb5.8
MVIF Mont Vial 81.35 46 *eP* **P 09 44 04.4 +0.4**
MVIF Mont Vial 81.35 46 *eP* **P 09 44 04.4 +0.4**
GRYON Gryon 81.40 44 ⇓*iP* **P 09 44 04.6 +0.4**
comp=Z,189nm,1.4s,mb5.5
TTA Tatalina 81.40 333 ⇓*iP* **P 09 44 02.1 -1.7**
comp=Z,282nm,1.6s,mb5.7
TTA *eP*P PP 09 47 08.0 -3.4
TTA Tatalina 81.40 333 ⇓*iP* **P 09 44 02.1 -1.7**
TTA *e* 09 47 08.0
TTA pmax pmax
comp=Z,282nm,1.6s,mb5.7
WIT Witteveen 81.41 37 *eP* **P 09 44 04.8 +0.7**
comp=Z,671nm,1.4s,mb6.1
TOUF Mont Tournerai 81.43 46 *eP* **P 09 44 04.9 +0.5**
TOUF Mont Tournerai 81.43 46 *eP* **P 09 44 04.9 +0.5**
CMAH Djebel Manchou 81.44 54 P **P 09 44 05.0 +0.4**
WTSB Winterswijk 81.45 38 ⇓*iP* **P 09 44 04.3 0.0**
comp=Z,223nm,2.0s,mb5.5
MOF Molkenrain 81.47 42 *eP* **P 09 44 04.2 -0.3**
MOF Molkenrain 81.47 42 *eP* **P 09 44 04.2 -0.3**
ABSA Djebel Ababsia 81.48 54 P **P 09 44 05.5 +0.7**
LUXF Luceram 81.49 46 *eP* **P 09 44 05.0 +0.3**
RUP Ruppelstein 81.50 41 *eP* **P 09 44 05.1 +0.5**
RUP Ruppelstein 81.50 41 *eP* **P 09 44 05.1 +0.5**
ECH Echery 81.50 42 *eP* **P 09 44 04.6 -0.1**
ECH Echery 81.50 42 *eP* **P 09 44 04.6 -0.1**
REVF Revere 81.50 47 *eP* **P 09 44 04.9 +0.1**
REVF Revere 81.50 47 *eP* **P 09 44 04.9 +0.1**
BOURR Bourrignon 81.52 43 ⇓*iP* **P 09 44 04.6 -0.2**
comp=Z,278nm,2.1s,mb5.5
SENIN Lac Senin/Sane 81.53 44 ⇓*iP* **P 09 44 05.5 +0.6**
comp=Z,611nm,3.2s
AUTN L'Aution 81.56 46 *eP* **P 09 44 05.5 +0.5**
AUTN L'Aution 81.56 46 *eP* **P 09 44 05.5 +0.5**
DIX Grande Dixence 81.60 44 ⇓*iP* **P 09 44 06.1 +0.9**
comp=Z,253nm,1.6s,mb5.6
SAOF Saorge 81.65 46 *eP* **P 09 44 05.8 +0.3**
SAOF Saorge 81.65 46 *eP* **P 09 44 05.8 +0.3**
BBS Basel-Blauen 81.71 43 *eP* **P 09 44 05.5 -0.3**
BBS Basel-Blauen 81.71 43 *eP* **P 09 44 05.5 -0.3**
BUG Bochum--Univer 81.71 39 *eP* **P 09 44 05.9 +0.2**
comp=Z,112nm,1.0s,mb5.5
BUG *es*P sP 09 44 54.7 +1.1
BLS5 Blasjo 81.75 31 ⇓*iP* **P 09 44 06.2 +0.5**
BLS5 AMB AMB 09 44 06.8
comp=Z,83nm,0.8s,mb5.4
LKBD Leukerbad 81.76 44 ⇓*iP* **P 09 44 06.3 +0.2**
comp=Z,201nm,1.9s,mb5.4
WIMIS Wimmis 81.77 44 ⇓*iP* **P 09 44 06.3 +0.2**
comp=Z,288nm,3.2s
LIBD Limburg 81.80 42 *eP* **P 09 44 06.1 -0.1**
LIBD Limburg 81.80 42 *eP* **P 09 44 06.1 -0.1**
ABH Alteburg 81.82 40 *eP* **P 09 44 06.8 +0.5**
BALST Balsthal 81.83 43 ⇓*iP* **P 09 44 06.5 +0.1**
comp=Z,295nm,1.7s,mb5.6
LANF Langenberg 81.96 41 *eP* **P 09 44 07.2 +0.2**
LANF Langenberg 81.96 41 *eP* **P 09 44 07.2 +0.2**
MMK Mattmark 81.98 44 ⇓*iP* **P 09 44 07.8 +0.6**
comp=Z,313nm,1.7s,mb5.7
IBBN Ibbenburen 82.05 38 *eP* **P 09 44 07.8 +0.3**
comp=Z,161nm,1.2s,mb5.5
IBBN *es*P sP 09 44 56.6 +1.2
FELD Feldberg im Sc 82.06 42 *eP* **P 09 44 07.2 -0.4**
CHGN Chignik 82.07 326 ⇓*iP* **P 09 44 05.9 -1.6**
SULZ Cheisacher 82.12 43 ⇓*iP* **P 09 44 08.4 +0.5**
comp=Z,321nm,1.8s,mb5.7
HASLI Hasliberg/Brie 82.13 44 ⇓*iP* **P 09 44 08.5 +0.5**
comp=Z,668nm,2.8s,mb5.8
KTD Kalmit 82.15 41 *eP* **P 09 44 08.1 +0.1**
KTD Kalmit 82.15 41 *eP* **P 09 44 08.1 +0.1**
HLG Helgoland 82.21 36 *eP* **P 09 44 08.7 +0.5**
comp=Z,350nm,1.1s,mb5.9
BFO Black Forest 82.29 42 *eP* **P 09 44 08.3 -0.5**
comp=Z,39nm,0.9s,mb5.0
BFO *es*P sP 09 44 57.0 +0.3
BFO Black Forest 82.29 42 *eP* **P 09 44 08.3 -0.5**
BFO pmax pmax
comp=Z,39nm,0.9s,mb5.0
BFO Black Forest 82.29 42 P **P 09 44 08.2 -0.6**
comp=Z,216nm,0.8s,mb5.8,SNR=12
BNALP Bannalp 82.32 44 ⇓*iP* **P 09 44 09.1 +0.1**
comp=Z,524nm,3.2s
SLE Schleitheim 82.39 43 ⇓*iP* **P 09 44 09.5 +0.2**
comp=Z,205nm,1.2s,mb5.6
TNS Taunus Mts 82.42 40 *eP* **P 09 44 09.7 +0.3**
comp=Z,184nm,1.2s,mb5.6
TNS *es*P sP 09 44 58.4 +1.1
TNS Taunus Mts 82.42 40 *eP* **P 09 44 09.7 +0.3**
TNS pmax pmax
comp=Z,184nm,1.2s,mb5.6
FLACH Flaach 82.43 43 ⇓*iP* **P 09 44 09.6 +0.1**
comp=Z,684nm,2.9s,mb5.8
ZUR Degenried 82.44 43 ⇓*iP* **P 09 44 09.7 +0.1**
comp=Z,777nm,3.6s
MUO Muotathal 82.47 43 ⇓*iP* **P 09 44 10.5 +0.8**
comp=Z,961nm,3.1s
FUSIO Fusio 82.48 44 ⇓*iP* **P 09 44 10.5 +0.7**
comp=Z,520nm,1.9s,mb5.8
TRULL Truellikon 82.51 43 ⇓*iP* **P 09 44 09.8 -0.1**
comp=Z,288nm,1.3s,mb5.8
SPAK Spaichingen-Ko 82.59 42 *eP* **P 09 44 10.0 -0.3**
TOD Tromm 82.63 41 *eP* **P 09 44 09.8 -0.7**
TOD Tromm 82.63 41 *eP* **P 09 44 09.8 -0.7**
STEIN Stein am Rhein 82.64 43 ⇓*iP* **P 09 44 10.7 +0.1**
comp=Z,267nm,1.5s,mb5.8
LLS Linth-Limmern 82.72 44 ⇓*iP* **P 09 44 11.6 +0.5**
comp=Z,424nm,2.9s,mb5.7
STU Stuttgart 82.87 42 *eP* **P 09 44 11.7 -0.1**
comp=Z,97nm,0.9s,mb5.5
STU *es*P sP 09 45 00.3 +0.5
STU Stuttgart 82.87 42 ⇓*iP* **P 09 44 11.5 -0.3**
comp=Z,58nm,0.8s,mb5.4
STU Stuttgart 82.87 42 ⇓*iP* **P 09 44 11.5 -0.3**
STU pmax pmax
comp=Z,58nm,0.8s,mb5.4
TUE Stuetta 82.95 44 *eP* **P 09 44 12.7 +0.4**
comp=Z,82nm,0.8s,mb5.5
PLONS Plons/SG 82.98 43 ⇓*iP* **P 09 44 12.8 +0.4**
comp=Z,411nm,1.8s,mb5.9
VSL Villasalto 82.98 51 ⇓*iP* **P 09 44 13.1 +0.5**
comp=Z,258nm,0.8s,mb6.0
VSL *ep*P pP 09 44 46.9 +0.5
VSL *es*P sP 09 45 00.7 +0.1
KEST Kesra 83.00 55 P **P 09 44 13.3 +0.5**
comp=Z,21nm,1.0s,mb4.8,baz=261,slow=2.2,SNR=30
KEST Kesra 83.00 55 ⇓*iP* **P 09 44 13.2 +0.5**
VDL Val di Lei 83.02 44 ⇓*iP* **P 09 44 13.3 +0.7**
comp=Z,586nm,3.0s,mb5.8
MUD Monsted U'grnd 83.03 34 ⇓*iP* **P 09 44 13.1 +0.7**
MUD pmax pmax
comp=Z,99nm,1.0s,mb5.5
MUD Monsted U'grnd 83.03 34 ⇓*iP* **P 09 44 13.1 +0.7**
comp=Z,99nm,1.0s,mb5.5
MUD *i* 09 45 01.5
LIENZ Kamor/St.Gall 83.06 43 ⇓*iP* **P 09 44 13.2 +0.4**
comp=Z,848nm,3.0s
SDPT Sand Point 83.20 325 ⇓*iP* **P 09 44 11.9 -1.4**
comp=Z,135nm,1.1s,mb5.6
DAVOX Davos/Dischmat 83.32 44 ⇓*iP* **P 09 44 14.9 +0.8**
comp=Z,554nm,2.2s,mb5.9
DAVA Damuels 83.32 43 *iP* **P 09 44 14.7 +0.5**
comp=Z,139nm,0.8s,mb5.7,SNR=52
KONO Kongsberg 83.36 31 ⇓*iP* **P 09 44 14.0 0.0**
comp=Z,20nm,0.7s,mb5.0
KONO Kongsberg 83.36 31 ⇓*iP* **P 09 44 14.0 0.0**
KONO pmax pmax
comp=Z,20nm,0.7s,mb5.0
UBBA Unterbreizbach 83.42 40 *eP* **P 09 44 14.5 0.0**
comp=Z,120nm,1.9s,mb5.3
UBBA *es*P sP 09 45 03.4 +0.9
BERNI Berninapass 83.42 44 ⇓*iP* **P 09 44 15.3 +0.7**
comp=Z,571nm,3.1s
NRDL Niedersach Rie 83.50 38 *eP* **P 09 44 15.4 +0.5**
comp=Z,78nm,1.0s,mb5.4
NRDL *es*P sP 09 45 04.2 +1.3
FUORN Ofenpass-Fuorn 83.58 44 ⇓*iP* **P 09 44 16.1 +0.6**
comp=Z,570nm,3.0s
CLZ Clausthal 83.66 39 *eP* **P 09 44 16.3 +0.6**
comp=Z,89nm,0.9s,mb5.5
CLZ *es*P sP 09 45 05.2 +1.4
CLZ Clausthal 83.66 39 *eP* **P 09 44 16.3 +0.6**
CLZ pmax pmax
comp=Z,89nm,0.9s,mb5.5
FETA Feichten 83.90 43 ⇓*iP* **P 09 44 17.4 +0.3**
comp=Z,106nm,1.2s,mb5.5,SNR=51
RETA Reutte 83.92 43 ⇓*iP* **P 09 44 17.3 +0.1**
comp=Z,44nm,1.1s,mb5.1,SNR=15
OSL Oslo 83.93 30 *eP* **P 09 44 17.3 +0.4**
NAO01 NORSAR Array S 84.03 29 ⇓*iP* **P 09 44 17.9 +0.5**
comp=Z,104nm,0.9s,mb5.6
NAO01 *ep*P pP 09 44 51.6 +0.3
NAO01 *es*P sP 09 45 05.6 +0.1
MOTA Moosalm 84.15 43 ⇑*iP* **P 09 44 18.3 -0.1**
comp=Z,28nm,0.8s,mb5.0,SNR=12
NB2 NORSAR Subarra 84.19 29 P **P 09 44 18.5 +0.3**
comp=Z,7.3nm,0.7s,baz=270,slow=4.8
NOA NORSAR Array B 84.19 29 P **P 09 44 18.2 0.0**
comp=Z,58nm,0.8s,mb5.4,baz=272,slow=5.7,SNR=132
NOA pP pP 09 44 51.7 -0.4
comp=Z,25nm,0.9s,baz=269,slow=5.2,SNR=4.5
NOA PKKPbc PKKPbc 10 02 28.8 -4.8
comp=Z,0.7nm,0.7s,baz=258,slow=2.8,SNR=3.2
NOA LR LR 10 16 26.3
comp=Z,142nm,20.3s,baz=280,slow=32
NOA NORSAR Array B 84.19 29 P **P 09 44 18.2 0.0**
NOA pP pP 09 44 51.7 -0.4
NOA PKKPbc PKKPbc 10 02 28.8 -4.8
NOA LR LR 10 16 26.3
NOA NORSAR Array B 84.19 29 P **P 09 44 18.2 0.0**
NOA *PP pP 09 44 51.7 -0.4
NOA pmax pmax
comp=Z,58nm,0.8s
NOA pmax pmax
comp=Z,25nm,0.9s
NOA pmax pmax
comp=Z,1.0nm,0.7s
GRFO Grafenberg 84.20 41 ⇓*iP* **P 09 44 18.2 -0.3**
comp=Z,8.8nm,0.6s,mb4.7
GRFO Grafenberg 84.20 41 ⇓*iP* **P 09 44 18.2 -0.4**
GRFO pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
GRA1 Grafenberg Arr 84.20 41 *eP* **P 09 44 19.0 +0.4**
comp=Z,81nm,1.0s,mb5.4
GRA1 *es*P sP 09 45 07.5 +0.9
GRF Grafenberg Arr 84.20 41 *eP* **P 09 44 19.0 +0.4**
comp=Z,81nm,1.0s,mb5.4
GRF *es*P sP 09 45 07.5 +0.9
GRF Grafenberg Arr 84.20 41 *eP* **P 09 44 19.0 +0.4**
GRF pmax pmax
comp=Z,81nm,1.0s,mb5.4
GRF Grafenberg Arr 84.20 41 *eP* **P 09 44 19.0 +0.4**
GRF pmax pmax
comp=Z,81nm,1.0s,mb5.4
FUR Furstenfeldbru 84.26 42 *eP* **P 09 44 19.2 +0.3**
comp=Z,213nm,1.8s,mb5.6
FUR *es*P sP 09 45 07.8 +0.9
FUR Furstenfeldbru 84.26 42 *eP* **P 09 44 19.2 +0.3**
FUR pmax pmax
comp=Z,213nm,1.8s,mb5.6
MOX Moxa 84.44 40 *eP* **P 09 44 19.8 0.0**
comp=Z,107nm,1.8s,mb5.3
MOX *ep*P sP 09 45 08.1 +0.3
MOX *e*S S 09 54 37.0 +2.0
MOX Moxa 84.44 40 *eP* **P 09 44 20.0 +0.2**
comp=Z,73nm,1.5s,mb5.2
MOX *es*P sP 09 45 08.8 +1.0
MOX Moxa 84.44 40 *eP* **P 09 44 19.8 0.0**
MOX *e*S S 09 54 37.0 +2.0
MOX pmax pmax
comp=Z,90nm,1.8s,mb5.2
WATA Walderalm 84.47 43 ⇓*iP* **P 09 44 20.0 0.0**
comp=Z,32nm,1.2s,mb4.9
WTTA Wattenberg 84.52 43 *iP* **P 09 44 20.5 +0.3**
comp=Z,42nm,1.0s,mb5.1,SNR=10
NEUB Neuenburg 84.54 39 *eP* **P 09 44 20.7 +0.5**
comp=Z,106nm,1.3s,mb5.4
NEUB *es*P sP 09 45 09.6 +1.3
KBS Kingsbay 84.78 11 *dP* **P 09 44 21.5 +0.6**
KBS pmax pmax
comp=Z,273nm,1.4s,mb5.8
PLN Plauen 84.79 40 *eP* **P 09 44 21.9 +0.4**
PLN *es*P sP 09 45 10.8 +1.2
ROTZ Rotzenmuhle 84.84 41 *eP* **P 09 44 22.4 +0.6**
comp=Z,157nm,1.9s,mb5.4
ROTZ *es*P sP 09 45 11.2 +1.4
COP Copenhagen 84.85 35 ⇓*iP* **P 09 44 22.2 +0.5**
COP pmax pmax
comp=Z,48nm,0.8s,mb5.3
COP Copenhagen 84.85 35 ⇓*iP* **P 09 44 22.2 +0.5**
comp=Z,48nm,0.8s,mb5.3
COP *i*pP pP 09 45 12.1 +16
FALS False Pass 84.89 325 ⇓*iP* **P 09 44 20.7 -1.1**
comp=Z,308nm,0.8s,mb6.1
WERD Werda 84.89 40 *eP* **P 09 44 22.4 +0.4**
comp=Z,73nm,1.1s,mb5.3
WERD *es*P sP 09 45 11.3 +1.2
GUNZ Gunzen 84.91 40 *eP* **P 09 44 22.5 +0.4**
comp=Z,60nm,1.1s,mb5.2
GUNZ *es*P sP 09 45 11.5 +1.3
WERN Wernitzgruen 84.94 40 *eP* **P 09 44 22.9 +0.7**
comp=Z,75nm,1.1s,mb5.3
WERN *es*P sP 09 45 11.7 +1.4
NKC Novy Kostel 84.98 40 ⇓*iP* **P 09 44 23.0 +0.5**
NKC Novy Kostel 84.98 40 ⇓*iP* **P 09 44 23.0 +0.5**
NKC *es*P sP 09 45 11.7 +1.1
TANN Tannenbergstha 84.99 40 *eP* **P 09 44 23.1 +0.6**
comp=Z,92nm,1.1s,mb5.4
TANN *es*P sP 09 45 11.9 +1.3
ABTA Abfaltersbach 85.13 44 *iP* **P 09 44 23.5 +0.2**
comp=Z,80nm,0.9s,mb5.4,SNR=42
LOF Lofoten 85.17 22 ⇓*iP* **P 09 44 23.2 +0.1**
LOF AMB AMB 09 44 23.8
comp=Z,223nm,1.1s,mb5.8
RJOB Jochberg 85.29 43 *eP* **P 09 44 24.3 +0.2**
comp=Z,48nm,1.0s,mb5.2
RJOB *es*P sP 09 45 12.9 +0.7
WET Wettzell 85.30 41 *eP* **P 09 44 24.6 +0.5**
comp=Z,124nm,1.2s,mb5.5
WET *es*P sP 09 45 13.3 +1.1
WET Wettzell 85.30 41 *eP* **P 09 44 24.6 +0.5**
WET pmax pmax
comp=Z,124nm,1.2s,mb5.5
CLL Collm 85.31 39 *eP* **P 09 44 24.5 +0.5**
comp=Z,92nm,1.1s,mb5.4
CLL *es*P sP 09 45 13.4 +1.2
CLL Collm 85.31 39 ⇓*iP* **P 09 44 24.3 +0.3**
comp=Z,93nm,1.1s,mb5.4
CLL *ep*P pP 09 44 59.0 +1.0
CLL *i*sP sP 09 45 12.9 +0.8
CLL *e*S S 09 54 41.0 -2.4
CLL Collm 85.31 39 ⇓*iP* **P 09 44 24.3 +0.3**
CLL *e*PP pP 09 44 59.0 +1.0
CLL *e*S S 09 54 41.0 -2.4
CLL pmax pmax
comp=Z,23nm,1.1s,mb4.8
CLL Collm 85.31 39 ⇓*iP* **P 09 44 24.3 +0.3**
comp=Z,93nm,1.1s,mb5.4
CLL *e* 09 44 34.0
CLL *ep*P pP 09 44 59.0 +1.0
CLL *i*sP sP 09 45 12.9 +0.8
comp=Z,125nm,1.4s
CLL *e*PP PP 09 47 41.0 -2.6
CLL *e*S S 09 54 41.0 -2.4
CLL *e*SP 09 55 35.0
CLL *es*S sS 09 55 45.0 +2.9
CLL *e*PPS 09 56 18.0
CLL *e* 09 56 48.0
CLL *e*(SS) 10 01 00.0
CLL *e* 10 02 42.0
CLL *e*SSSS 10 06 54.0
FBE Freiberg 85.54 39 *eP* **P 09 44 26.0 +0.8**
comp=Z,99nm,1.0s,mb5.5
FBE *es*P sP 09 45 14.9 +1.6
MOR8 Moi Rana 85.57 24 ⇓*iP* **P 09 44 25.8 +0.7**
MOR8 AMB AMB 09 44 26.5
comp=Z,174nm,1.0s,mb5.7
MOR8 *ep*P pP 09 45 00.5 +1.4
KBA Koelnbreinsper 85.69 43 ⇑*iP* **P 09 44 26.1 +0.1**
comp=Z,84nm,1.1s,mb5.4,SNR=26
RUE Ruedersdorf 85.74 38 *eP* **P 09 44 26.7 +0.5**
comp=Z,114nm,1.0s,mb5.6
RUE *ep*P pP 09 45 00.4 +0.2
RUE *es*P sP 09 45 15.8 +1.5
RUE Ruedersdorf 85.74 38 *eP* **P 09 44 26.3 +0.1**
comp=Z,211nm,1.4s,mb5.7
KHC Kasperske Hory 85.76 41 ⇓*iP* **P 09 44 26.5 +0.2**
KHC *es*P sP 09 45 14.5 0.0
KHC *e*S S 09 54 48.9 +1.0
KHC *ex* x 09 55 30.1
GEC2 GERESS Array S 85.85 41 *eP* **P 09 44 27.2 +0.4**
comp=Z,75nm,1.0s,mb5.4
GEC2 *es*P sP 09 45 16.0 +1.1
GEC2 GERESS Array S 85.85 41 *eP* **P 09 44 27.2 +0.4**
GEC2 pmax pmax
comp=Z,75nm,1.0s,mb5.4
MYKA Terra Mystica 85.91 44 ⇑*iP* **P 09 44 27.3 +0.1**
comp=Z,106nm,0.9s,mb5.6
BRG Berggiesshubel 85.91 39 *eP* **P 09 44 27.7 +0.6**
comp=Z,94nm,1.0s,mb5.5
BRG *es*P sP 09 45 16.5 +1.3
BRG Berggiesshubel 85.91 39 ⇓*iP* **P 09 44 27.7 +0.6**
comp=Z,94nm,1.0s,mb5.5
BRG *e* 09 44 53.6
comp=Z,47nm,1.7s
BRG pP pP 09 45 02.7 +1.7
comp=Z,26nm,1.0s
BRG sP sP 09 45 16.6 +1.4
comp=Z,133nm,1.4s
BRG PP PP 09 47 46.9 -1.6
comp=Z,76nm,2.0s
BRG S S 09 54 53.0 +3.6
BRG SCS sS 09 55 44.0 -4.1
BRG SS SS 10 00 33.0 +3.3
BRG Berggiesshubel 85.91 39 ⇓*iP* **P 09 44 27.7 +0.6**
BRG *e* 09 44 53.7
BRG 09 47 46.9
BRG S S 09 54 53.0 +3.6
BRG 09 55 44.0
BRG SS SS 10 00 33.0 +3.3
BRG pmax pmax
comp=Z,56nm,1.0s,mb5.2
BRG pmax pmax
comp=Z,28nm,1.7s,mb4.7
BRG pmax pmax
comp=Z,16nm,1.0s,mb4.7
BRG pmax pmax
comp=N,80nm,1.4s
BRG pmax pmax
comp=Z,45nm,2.1s,mb4.8
AQU L'Aquila 85.94 48 *eP* **P 09 44 27.6 +0.2**
comp=Z,60nm,0.8s,mb5.4
AQU *eP*cP PcP 09 44 30.4 +0.5
AQU *ep*P pP 09 45 02.1 +0.7
AQU *es*P sP 09 45 16.6 +1.0
AQU L'Aquila 85.94 48 *eP* **P 09 44 27.6 +0.2**
AQU *e*PP pP 09 45 02.1 +0.7
AQU pmax pmax
comp=Z,60nm,0.8s,mb5.4
AQU L'Aquila 85.94 48 ⇑*iP* **P 09 44 27.5 +0.1**

VOY Vojsko 86.11 44⇓*i*P P 09 44 28.2 0.0
VOY *e*pP pP 09 45 17.3 +15
VOY *e* 09 45 25.3
PRA Prague 86.27 40 ⇓P P 09 44 31.0 +2.2
PRA S S 09 54 54.0 +1.1
MOA Molln 86.27 42 *i* P P 09 44 29.0 +0.1
comp=Z,92nm,1.0s,mb5.5,SNR=38
BSD Bornholm Skovb 86.29 35 *i* P P 09 44 27.4 -1.4
BSD pmax pmax
comp=Z,62nm,1.0s,mb5.3
BSD Bornholm Skovb 86.29 35 *i* P P 09 44 27.4 -1.4
comp=Z,62nm,1.0s,mb5.3
PVCC Panska Ves 86.33 40⇓*i*P P 09 44 29.8 +0.7
PVCC Panska Ves 86.33 40⇓*i*P P 09 44 29.8 +0.7
PVCC *es*P sP 09 45 18.8 +1.5
PRU Pruhonice 86.34 40⇓*i*P P 09 44 30.4 +1.2
PRU *e* 09 54 53.2
PRU *e* 10 00 40.7
PRU Pruhonice 86.34 40⇓*i*P P 09 44 30.4 +1.2
PRU *es*P sP 09 45 19.0 +1.7
PRU *e*S S 09 54 53.2 -0.4
PRU *ex* x 09 55 44.4
PRU *e*SS SS 10 00 40.7 +4.7
RAR Rarotonga 86.43 248 LR LR 10 17 41.9
comp=Z,338nm,18.9s,baz=70,slow=32
OBKA Obir 86.54 44 *i* P P 09 44 30.3 +0.1
comp=Z,60nm,0.8s,mb5.5,SNR=24
LJU Ljubljana 86.55 44 *e*P P 09 44 30.9 +0.6
LJU *e* 09 45 18.6
TNA Tin City 86.64 335 *e*P P 09 44 30.1 -0.2
comp=Z,542nm,2.0s,mb6.0
UNV Unalaska Valle 86.73 324 *e*P P 09 44 30.3 -0.7
comp=Z,205nm,1.0s,mb5.9
SOKA Soboth 86.86 44⇓*i*P P 09 44 31.5 -0.3
comp=Z,32nm,0.9s,mb5.2
PERS Pernice 86.92 44 *e*P P 09 44 31.8 -0.3
PERS *i* 09 45 19.6
TREC Trest 87.00 41⇓*i*P P 09 44 32.8 +0.4
TREC Trest 87.00 41⇓*i*P P 09 44 32.8 +0.4
TREC *es*P sP 09 45 21.9 +1.3
BOJS Bojanci 87.09 45 *e*P P 09 44 33.3 +0.3
BOJS *i* 09 45 21.0
ARSA Arzberg 87.16 43 *i* P P 09 44 33.1 -0.2
comp=Z,59nm,0.7s,mb5.5,SNR=41
UPC Upice 87.25 40⇓*i*P P 09 44 34.3 +0.7
UPC Upice 87.25 40⇓*i*P P 09 44 34.3 +0.7
CONA Conrad Observa 87.34 42 *i* PcP PcP 09 44 34.5 -1.5
comp=Z,69nm,0.9s,SNR=39
KSP Ksiaz 87.40 39 *i* P P 09 44 35.2 +0.9
DPC Dobruska-Polom 87.46 40⇓*i*P P 09 44 35.4 +0.8
DPC *e* 09 54 58.4
DPC Dobruska-Polom 87.46 40⇓*i*P P 09 44 35.4 +0.8
DPC *es*P sP 09 45 24.4 +1.6
DPC *e*S S 09 54 58.4 -5.9
DPC *ex* x 09 55 53.0
VRAC Vranov 87.72 41 ⇓P P 09 44 36.4 +0.6
VRAC Vranov 87.72 41⇓*i*P P 09 44 36.4 +0.6
KOGS Kog 87.72 44 *i* P P 09 44 36.2 +0.3
KOGS *i* 09 45 24.3
GKP Gorka Klasztor 87.78 37 *i* P P 09 44 37.3 +1.2
GKP Gorka Klasztor 87.78 37⇓*i*P P 09 44 37.3 +1.2
SOP Sopron 87.83 43⇓*e*PcP PcP 09 44 36.7 -1.4
SOP *es*P sP 09 45 25.8 +1.1
CUC Castrocucco 87.91 50 *e*P P 09 44 36.4 -0.6
comp=Z,15nm,1.1s,mb4.7
CUC *ep*P pP 09 45 08.2 -3.0
CUC *es*P sP 09 45 24.0 -1.3
ZST Bratislava 88.15 42 *e*P P 09 44 38.6 +0.7
comp=Z,44nm,0.7s,mb5.4
ZST *e* 09 45 28.3
ZST Bratislava 88.15 42 *e*P P 09 44 38.6 +0.7
ZST pmax pmax
comp=Z,45nm,0.7s,mb5.4
ZST Bratislava 88.15 42 *e*P P 09 44 38.6 +0.7
ZST *es*P sP 09 45 28.3 +2.1
MODS Modra-Piesok 88.25 42 *e*P P 09 44 39.3 +0.9
MODS *e* 09 45 28.5
MODS Modra-Piesok 88.25 42 *e*P P 09 44 39.3 +0.9
MODS Modra-Piesok 88.25 42 *e*P P 09 44 39.3 +0.9
MODS *es*P sP 09 45 28.5 +1.8
MORC Moravsky Berou 88.29 40⇓*i*P P 09 44 39.4 +0.9
comp=Z,41nm,0.9s,mb5.3
MORC Moravsky Berou 88.29 40 P P 09 44 39.9 +1.4
MORC Moravsky Berou 88.29 40⇓*i*P P 09 44 39.5 +1.0
GAMB Gambell 88.44 334 *e*P P 09 44 38.9 -0.1
comp=Z,191nm,1.2s,mb5.8
OKC Ostrava-Krasne 88.68 40⇓*i*P P 09 44 41.3 +0.9
OKC *e* 09 55 17.9
OKC Ostrava-Krasne 88.68 40⇓*i*P P 09 44 41.3 +0.9
OKC *es*P sP 09 45 30.5 +1.9
OKC *e*S S 09 55 17.9 +2.0
OKC *ex* x 09 55 59.5
KOLL Kolacno 88.97 42 *e*P P 09 44 42.9 +1.1
KOLL *e* 09 45 32.1
KOLL Kolacno 88.97 42 *e*P P 09 44 42.9 +1.1
KOLL Kolacno 88.97 42 *e*P P 09 44 42.9 +1.1
KOLL *es*P sP 09 45 32.1 +2.0
VYHS Vyhne 89.27 42 *e*P P 09 44 43.8 +0.6
comp=Z,23nm,1.1s,mb5.0
VYHS *e* 09 45 32.9
VYHS Vyhne 89.27 42 *e*P P 09 44 43.8 +0.6
VYHS pmax pmax
comp=Z,23nm,1.1s,mb5.0
VYHS Vyhne 89.27 42 *e*P P 09 44 43.8 +0.6
VYHS *es*P sP 09 45 32.9 +1.4
ARCES ARCESS Array B 89.33 20 P P 09 44 42.1 -0.9
comp=Z,19nm,0.7s,mb5.1,baz=270,slow=4.1,SNR=102
ARCES PP PP 09 48 13.2 -2.1
comp=Z,7.8nm,0.8s,baz=278,slow=8.5,SNR=5.1
ARCES PKKPbc PKKPbc 10 02 17.3 -4.1
comp=Z,1.7nm,0.6s,baz=128,slow=2.6,SNR=16
ARCES ARCESS Array B 89.33 20 P P 09 44 42.1 -0.9
ARCES 09 48 13.2
ARCES pmax pmax
comp=Z,19nm,0.7s
ARCES pmax pmax
comp=Z,8.0nm,0.8s
ARCES pmax pmax
comp=Z,2.0nm,0.6s
ARE0 ARCESS Array S 89.33 20⇓*i*P P 09 44 42.3 -0.7
ARE0 *e*PP PP 09 48 15.7 +0.3
PKSM Moragy 89.39 44 P P 09 44 44.6 +0.8
PKSM Moragy 89.39 44⇓*i*P P 09 44 44.2 +0.4
OJC Ojcow 89.69 40 *i* P P 09 44 46.1 +1.0
OJC *ep*P pP 09 45 16.1 -3.2
OJC *e* 09 45 35.3
OJC *e*PP PP 09 48 16.9 -1.9
OJC *e*S S 09 55 26.9 +1.6
OJC L 10 19 43.1
comp=Z,0.3nm,22.0s
OJC Ojcow 89.69 40⇓*i*P P 09 44 46.1 +1.0
OJC *e**PP pP 09 45 16.1 -3.2
OJC *e* 09 48 16.9
OJC *e*S S 09 55 26.9 +1.6
KEV Kevo 89.79 20⇓*i*P P 09 44 44.5 -0.7
comp=Z,97nm,1.4s,mb5.5
KEV *e*PP PP 09 48 18.1 -0.9
KEV Kevo 89.79 20⇓*i*P P 09 44 44.5 -0.7
KEV *e* 09 48 18.1
KEV pmax pmax
comp=Z,97nm,1.4s,mb5.5
KEV Kevo 89.79 20 *e*p P 09 44 44.4 -0.8
comp=Z,9.6nm,0.7s,mb4.8
PSZ Piszkesteto 90.04 42⇓*i*P P 09 44 47.5 +0.7
comp=Z,118nm,1.7s,mb5.5
PSZ Piszkesteto 90.04 42 P P 09 44 48.1 +1.3
PSZ Piszkesteto 90.04 42⇓*i*P P 09 44 47.5 +0.7
PSZ Piszkesteto 90.04 42⇓*e*PcP PcP 09 44 47.6 -0.3
PSZ *es*P sP 09 45 35.7 +0.6
NIE Niedzica 90.12 41 *i* P P 09 44 48.9 +1.8
NIE e 09 45 38.2
NIE Niedzica 90.12 41⇓*i*P P 09 44 48.9 +1.8
WAR Warsaw 90.19 38 *e*P P 09 44 48.7 +1.4
WAR Warsaw 90.19 38 *e*P P 09 44 48.7 +1.3
KECS Kecovo 90.36 41 *e*P P 09 44 49.4 +1.1
comp=Z,44nm,2.0s,mb5.0
KECS *e* 09 45 39.0
KECS Kecovo 90.36 41 *e*P P 09 44 49.4 +1.1
KECS pmax pmax
comp=Z,44nm,2.0s,mb5.0
KECS Kecovo 90.36 41 *e*P P 09 44 49.4 +1.1
KECS *es*P sP 09 45 39.0 +2.4

DIVS Divibare 90.59 46 P P 09 44 50.1 +0.7
CRVS Cervenica-Dubn 90.94 41 *e*P P 09 44 52.4 +1.4
comp=Z,39nm,1.3s,mb5.3
CRVS *e* 09 45 42.0
CRVS Cervenica-Dubn 90.94 41 *e*P P 09 44 52.4 +1.4
CRVS pmax pmax
comp=Z,39nm,1.3s,mb5.3
CRVS Cervenica-Dubn 90.94 41 *e*P P 09 44 52.4 +1.4
CRVS *es*P sP 09 45 42.0 +2.7
SUW Suwalki 91.19 36 *i* P P 09 44 52.2 +0.2
SUW Suwalki 91.19 36⇓*i*P P 09 44 52.2 +0.2
comp=Z,22nm,0.4s,mb5.5
SUW Suwalki 91.19 36⇓*i*P P 09 44 52.2 +0.2
KAF Kangasniemi 91.24 27 *e*P P 09 44 51.3 -0.7
KAF pmax pmax
comp=Z,19nm,0.8s,mb5.2
KAF Kangasniemi 91.24 27 *e*p P 09 44 51.3 -0.7
comp=Z,19nm,0.8s,mb5.2
FINES FINESS Array B 91.28 28 P P 09 44 51.4 -0.9
comp=Z,57nm,1.0s,mb5.6,baz=290,slow=4.0,SNR=60
FINES pP pP 09 45 26.9 +0.4
comp=Z,9.3nm,0.7s,baz=288,slow=1.8,SNR=2.4
FINES PKKP PKKPbc 10 02 12.5 -3.8
comp=Z,1.3nm,0.5s,baz=127,slow=4.2,SNR=8.4
FINES LR LR 10 19 32.4
comp=Z,235nm,19.8s,baz=175,slow=31
FINES FINESS Array B 91.28 28 P P 09 44 51.4 -0.8
FINES pmax pmax
comp=Z,57nm,1.0s
FINES pmax pmax
comp=Z,9.0nm,0.7s
FINES pmax pmax
comp=Z,1.0nm,0.5s
KOLS Kolonicke sedl 91.47 41 *e*P P 09 44 54.6 +1.2
comp=Z,119nm,2.4s,mb5.5
KOLS *e* 09 45 44.6
KOLS Kolonicke sedl 91.47 41 *e*P P 09 44 54.6 +1.2
KOLS pmax pmax
comp=Z,119nm,2.4s,mb5.5
KOLS Kolonicke sedl 91.47 41 *e*P P 09 44 54.6 +1.2
KOLS *es*P sP 09 45 44.6 +2.9
BZS Buzias 91.53 44 P P 09 44 54.9 +1.2
BZS Buzias 91.53 44⇓*i*P P 09 44 54.6 +0.9
UZH Uzhgorod 91.53 41⇑*i*P P 09 44 54.0 +0.3
UZH *e*S S 09 55 44.0 +1.8
UZH *e*PS PS 09 57 11.0 +2.3
KWP Kalwaria Pacla 91.64 40 *i* P P 09 44 55.6 +1.5
KWP Kalwaria Pacla 91.64 40⇓*i*P P 09 44 55.4 +1.3
comp=Z,30nm,1.0s,mb5.3
KWP Kalwaria Pacla 91.64 40⇓*i*P P 09 44 55.7 +1.6
TRPA Tarpa 91.77 42⇓*i*P P 09 44 55.5 +0.7
VLS Valsamata 91.80 52 P P 09 44 55.1 -0.1
NEST Nestorio 91.85 49 P P 09 44 56.6 +1.2
KFL Anninata 91.96 52 P P 09 44 56.1 +0.2
FNA Florina 92.05 49 P P 09 44 56.9 +0.6
DRGR 92.10 43 ⇓P P 09 44 57.1 +0.7
DRGR 92.10 43⇓*i*P P 09 44 57.1 +0.7
VSU Vasula 92.26 31*d*iP P 09 44 55.7 -1.1
VSU pmax pmax
comp=Z,129nm,1.2s,mb5.8
KZN Kozani 92.41 49 P P 09 44 58.6 +0.6
LVV L'vov 92.45 40 *e*P P 09 44 57.8 -0.1
BMR Baia Mare 92.48 42 P P 09 44 59.1 +1.0
ISAL Salakas 92.57 34 *e*P pP 09 45 31.9 -0.7
IZAR Zarasai 92.60 34 *e*P pP 09 45 32.0 -0.7
APA Apatity 92.66 21⇑*i*P P 09 44 58.0 -0.5
APA *i* *PP pP 09 45 32.0 -0.8
APA *i* 09 48 41.0
APA *e*S S 09 55 50.0 -1.5
APA pmax pmax
comp=Z,26nm,1.0s,mb5.3
APA MLR MLR
comp=Z,200nm,22.0s
IIGN Ignalina 92.67 34 *e*P pP 09 45 32.4 -0.7
THL Klokotos Trika 92.71 50 P P 09 44 59.5 +0.2
EFP Efpalio 92.79 51 P P 09 45 00.3 +0.5
GRG Griva 92.79 49 P P 09 45 00.5 +0.8
VAY Valandovo 92.86 48 P P 09 45 00.0 0.0
LAKA Lakka 92.87 51 P P 09 45 01.1 +1.0
ITM Ithomi 92.99 52 P P 09 45 00.9 +0.2
LIT Litokhoron 92.99 50 P P 09 45 00.5 -0.1
LVZ Lovozero 92.99 21*d*iP P 09 44 59.5 -0.5
LVZ pmax pmax
comp=Z,75nm,1.4s,mb5.6
LVZ Lovozero 92.99 21 P P 09 44 59.1 -0.9
comp=Z,248nm,1.1s,mb6.2,SNR=10
AGG Agios Georgios 93.03 51 P P 09 45 01.3 +0.5
VTS Vitosha 93.13 47 ⇓P P 09 45 02.1 +0.9
VTS Vitosha 93.13 47 P P 09 45 01.9 +0.7
VTS Vitosha 93.13 47⇓*i*P P 09 45 02.1 +0.9
KNT Kendrikon 93.13 48 P P 09 45 01.9 +0.6
GUR Goura 93.20 52 P P 09 45 02.1 +0.4
THE Thessaloniki 93.27 49 P P 09 45 02.1 +0.2
DSF Desfina 93.28 51 P P 09 45 02.1 +0.1
JOF Joensuu 93.28 26 *e*P P 09 45 01.0 -0.4
JOF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
JOF Joensuu 93.28 26 *e*p P 09 45 01.0 -0.4
comp=Z,9.8nm,0.7s,mb5.0
VLX Vlachokerasia 93.32 52 P P 09 45 03.4 +1.2
HORT Hortiatis 93.37 49 P P 09 45 02.9 +0.5
SOH Sokhos 93.53 49 P P 09 45 03.6 +0.5
LKR Lokris 93.61 51 P P 09 45 03.4 -0.1
ATAL Atalanti 93.61 51 P P 09 45 03.4 -0.1
BUR08 Bucovina Ar. S 93.62 42⇓*i*P P 09 45 04.1 +0.8
BUR08 *e*PP PP 09 48 48.2 -1.5
MAIT Maitri 93.62 161 *i* P P 09 45 02.5 -0.3
MAIT *e* 09 45 44.0
BURAR Bucovina Array 93.63 42 ⇓P P 09 45 04.4 +1.0
BURAR Bucovina Array 93.63 42⇓*i*P P 09 45 04.4 +1.0
NVL N'lazarevskaya 93.65 161⇓*i*P P 09 45 02.3 -0.6
NVL pmax pmax
comp=Z,12nm,0.8s,mb5.1
SRS Serrai 93.66 48 P P 09 45 03.9 +0.2
PLG Polygyros 93.67 49 P P 09 45 04.1 +0.3
MNK Minsk 93.77 35⇓*e*P P 09 45 02.0 -1.9
MNK pmax pmax
comp=Z,190nm,1.0s,mb6.2
MICGM Minsk 93.79 35⇓*e*P P 09 45 02.0 -2.0
PAIG Paliouri 93.92 50 P P 09 45 05.1 +0.2
VOIR 93.94 44 ⇓P P 09 45 05.4 +0.5
VOIR 93.94 44⇓*i*P P 09 45 05.4 +0.5
DID Didima 93.97 52 P P 09 45 04.7 -0.5
OUR Ouranopolis 94.08 49 P P 09 45 05.5 -0.1
AOS Alonnisos 94.20 50 P P 09 45 06.0 -0.2
ATHU Athens Univers 94.32 51 P P 09 45 08.2 +1.4
MLR Muntele Rosu 94.54 44 P P 09 45 08.5 +0.9
MLR Muntele Rosu 94.54 44⇓*i*P P 09 45 08.2 +0.6
KIEV Kiev 95.51 38 *e*P P 09 45 11.2 -0.8
comp=Z,6.1nm,0.8s,mb5.0
KIEV Kiev 95.51 38 *e*P P 09 45 11.2 -0.7
KIEV pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
ALN Alexandroupoli 95.52 48 P P 09 45 12.0 -0.2
AMKA Amchitka 95.66 323⇓*i*P P 09 45 11.0 -1.6
comp=Z,36nm,0.8s,mb5.8
BILL Bilibino 95.72 341⇓*i*P P 09 45 11.3 -1.2
comp=Z,13nm,0.5s,mb5.5
BILL Bilibino 95.72 341*d*iP P 09 45 11.1 -1.4
BILL *e* 09 49 04.2
BILL *e*PS PS 09 57 59.0 +5.0
BILL *e*SS SS 10 02 48.7 -1.1
BILL pmax pmax
comp=Z,72nm,1.6s,mb5.8
APE Apeiranthos 95.85 52 P P 09 45 11.8 -2.0
CHOS Chios island 96.01 51 P P 09 45 14.4 -0.1
LAST Lasithi 96.15 54 P P 09 45 15.0 -0.2
ZKR Zakros 96.75 54 P P 09 45 17.6 -0.3
AFI Afiamalu 97.25 257 LR LR 10 20 08.1
comp=Z,290nm,18.1s,baz=356,slow=30
KLMR Klimovskoe 97.64 27*d*iP P 09 45 20.8 -0.5
KLMR *e* 09 49 19.4
KLMR pmax pmax
comp=Z,132nm,1.5s,mb6.1
KLMR pmax pmax
comp=Z,86nm,7.1s
OBN Obninsk 98.41 33*d*iP P 09 45 23.9 -1.0
OBN *i* 09 49 29.9
OBN *i*S SKSac 09 55 51.4 +1.2
OBN *e*SS SS 10 03 31.7 +3.4
OBN pmax pmax
comp=Z,69nm,1.6s,mb5.8
MOS Moscow 98.74 32 *e*P P 09 45 25.5 -0.9

MOS *e* 09 49 33.0
MOS pmax pmax
comp=Z,68nm,1.3s,mb5.9
MOS pmax pmax
comp=Z,100nm,1.5s,mb6.0
PRGR Permogore 99.91 25 *e*P Pdif 09 45 30.2 -1.4
PRGR *e**SP 09 46 12.5
PRGR *e* 09 49 37.4
PRGR *e*S SKSac 09 55 57.4 0.0
PRGR *e**SS Sdif 09 56 52.9 -1.4
PRGR pmax pmax
comp=Z,44nm,1.3s,mb5.7
VSR Storozhevoye 101.31 36 *e*P Pdif 09 45 36.9 -0.9
VSR *e* 09 49 44.3
VSR pmax pmax
comp=Z,10.0nm,1.4s
VSR pmax pmax
comp=N,5.0nm,0.7s
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR pmax pmax
comp=N,140nm,4.7s
VSR pmax pmax
comp=Z,210nm,4.7s
VSR pmax pmax
comp=E,30nm,1.6s
BRTR Keskin Array B 101.44 48 P Pdif 09 45 38.0 -0.4
comp=E,2.2nm,0.8s,baz=276,slow=4.0,SNR=10.0
BRTR Keskin Array B 101.44 48 *i* P Pdif 09 45 39.5 +1.1
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BOSA Boshof 101.72 118 PKKPbc PKKPbc 10 01 45.3 -1.5
comp=Z,5.5nm,0.8s,baz=234,slow=1.8,SNR=4.0
LBTB Lobatse 102.06 114 *e*Pdif Pdif 09 45 41.1 -0.1
comp=Z,14nm,0.7s
LBTB Lobatse 102.06 114 *e*P Pdif 09 45 41.1 -0.1
LBTB pmax pmax
comp=Z,14nm,0.7s
PET Petropavlovsk 106.61 329 *e*P Pdif 09 46 00.6 -0.8
PET *e* 09 56 32.9
PET *e*SPP 09 59 30.5
PET *e*PPS 10 00 36.3
PET pmax pmax
comp=Z,100nm,13.6s
PET MLR MLR
comp=Z,100nm,22.0s
DZM Mont Dzumac 117.80 248 *e*PS PKKPdf 10 01 21.6 -1.5
comp=Z,224nm,27.8s
DZM *e*LR LR 10 26 26.8
comp=Z,252nm,22.9s
ZAA0 Zalesovo Array 119.14 13 *e*PKPdf PKPdf 09 50 33.5 -1.7
ZALV Zalesovo Beam 119.14 13 PKP PKPdf 09 50 33.4 -1.8
comp=Z,5.4nm,0.7s,baz=294,slow=1.4,SNR=10
ZALV pPKP pPKPdf 09 51 10.3 -0.7
comp=Z,2.3nm,0.5s,baz=298,slow=3.1,SNR=2.8
ZALV Zalesovo Beam 119.14 13 PKP PKPdf 09 50 33.4 -1.8
ZALV pPKP pPKPdf 09 51 10.3 -0.7
ZALV Zalesovo Beam 119.14 13 PKIKP PKPdf 09 50 33.4 -1.8
ZALV pmax pmax
comp=Z,5.0nm,0.7s
ZALV pmax pmax
comp=Z,2.0nm,0.5s
KURK Kurchatov 120.34 19 *e*PKPdf PKPdf 09 50 36.1 -1.6
KURK Kurchatov 120.34 19*d*iPKIKP PKPdf 09 50 36.1 -1.5
KURK pmax pmax
comp=Z,7.0nm,1.7s
HABR Khabarovsk 120.57 337*d*iPKIKP PKPdf 09 50 36.6 -1.5
HABR *e* 09 52 04.5
HABR *e* 09 57 37.5
HABR *e*PS PS 10 01 57.0 -2.2
HABR *e*SS SS 10 08 26.4 +1.8
HABR SSS 10 12 55.4
HABR pmax pmax
comp=Z,16nm,1.7s
HABR MLR MLR
comp=Z,155nm,23.0s
KLR Kul'dur 121.17 339 *e*PKIKP PKPdf 09 50 32.7 -6.6
KLR *e* 09 57 19.0
MK31 Makanchi Array 124.95 18 *e*PKPdf PKPdf 09 50 44.8 -1.8
MK31 Makanchi Array 124.95 18 *e*PKIKP PKPdf 09 50 44.8 -1.8
MKAR Makanchi Array 124.95 18 PKP PKPdf 09 50 44.1 -2.5
comp=Z,3.9nm,0.7s,baz=348,slow=2.1,SNR=29
MKAR pPKP pPKPdf 09 51 21.2 -1.2
comp=Z,3.6nm,0.9s,baz=327,slow=2.4,SNR=5.0
MKAR PP PP 09 52 33.2 -2.4
comp=Z,4.4nm,0.9s,baz=332,slow=4.8,SNR=6.7
MKAR Makanchi Array 124.95 18 PKIKP PKPdf 09 50 44.1 -2.5
MKAR 09 52 33.2
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR pmax pmax
comp=Z,4.0nm,0.9s
MKAR pmax pmax
comp=Z,4.0nm,0.9s
ZAK Zakamensk 124.99 1 *e*PKIKP PKPdf 09 50 45.3 -1.3
ZAK pmax pmax
comp=Z,2.0nm,1.1s
FRU Bishkek 125.35 27 *e*PKIKP PKPdf 09 50 47.0 -0.5
FRU *e* 09 52 39.0
AAK Ala-Archa 125.46 27 PKP PKPdf 09 50 47.4 -0.3
comp=Z,4.9nm,0.7s,baz=263,slow=1.8,SNR=14
AAK pPKP pPKPdf 09 51 23.1 -0.4
comp=Z,9.8nm,0.9s,baz=159,slow=1.9,SNR=4.5
AAK Ala-Archa 125.46 27 PKIKP PKPdf 09 50 47.4 -0.3
AAK 09 51 23.1
AAK pmax pmax
comp=Z,5.0nm,0.7s
AAK pmax pmax
comp=Z,10.0nm,1.0s
TKM2 Tokmak 2 125.72 26 *e*PKPdf PKPdf 09 50 47.7 -0.5
TKM2 Tokmak 2 125.72 26 *e*PKIKP PKPdf 09 50 47.7 -0.5
MDJ Mudanjiang 125.87 338 PKP PKPdf 09 50 47.0 -1.4
MDJ sPKP 09 51 29.9
MDJ PP PP 09 52 41.4 -0.4
MDJ PKS 09 54 24.8
MDJ SKS SKSdf 09 57 47.8 -0.2
MDJ SS SS 10 09 26.5 -5.0
MDJ LR LR
comp=N,190nm,41.4s
MDJ LR LR
comp=E,230nm,32.6s
MDJ LR LR
comp=Z,340nm,37.6s
ULN Ulaanbaatar 127.47 358 *e*PKPdf PKPdf 09 50 50.8 -0.6
ULN Ulaanbaatar 127.47 358 *e*PKIKP PKPdf 09 50 50.8 -0.6
SONM Songino Array 127.52 358 PKP PKPdf 09 50 50.4 -1.1
comp=Z,5.5nm,0.9s,baz=299,slow=1.1,SNR=20
SONM pPKP pPKPdf 09 51 26.5 -0.7
comp=Z,4.0nm,1.0s,baz=301,slow=0.8,SNR=3.8
SONM PP PP 09 52 47.4 -4.9
comp=Z,6.8nm,0.8s,baz=348,slow=5.7,SNR=8.1
SONM Songino Array 127.52 358 PKIKP PKPdf 09 50 50.4 -1.1
SONM pmax pmax
comp=Z,6.0nm,0.9s
SONM pmax pmax
comp=Z,4.0nm,1.0s
SONM pmax pmax
comp=Z,7.0nm,0.8s
CN2 Changchun 128.03 341 *e*PKP PKPdf 09 50 54.1 +1.5
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,10.0s
CN2 LR LR
comp=E,300nm,10.0s
CN2 LR LR
comp=Z,300nm,10.0s
MJAR Matsushiro Arr 128.17 325 PKP PKPdf 09 50 51.7 -1.4
comp=Z,11nm,0.9s,baz=230,slow=2.8,SNR=46
MJAR pPKP pPKPdf 09 51 28.3 -0.6
comp=Z,2.4nm,0.4s,baz=36,slow=4.5,SNR=2.3
MJAR Matsushiro Arr 128.17 325 PKP PKPdf 09 50 51.7 -1.4
MJAR pPKP pPKPdf 09 51 28.3 -0.6
MJAR Matsushiro Arr 128.17 325 PKIKP PKPdf 09 50 51.7 -1.4
MJAR pmax pmax
comp=Z,11nm,0.9s
MJAR pmax pmax
comp=Z,2.0nm,0.4s
MAJO Matsushiro 128.17 325 *e*PKPdf PKPdf 09 50 51.7 -1.4
MAJO *ep*PKPdf pPKPdf 09 51 28.7 -0.2
MAJO Matsushiro 128.17 325 *e*PKIKP PKPdf 09 50 51.7 -1.4
KBL Kabul 128.50 38 *e*PKPdf PKPdf 09 50 52.9 -0.8
KBL Kabul 128.50 38 *e*PKIKP PKPdf 09 50 52.9 -0.9
WMQ Urumqi 129.24 16 PKP PKPdf 09 50 54.0 -0.9
WMQ PP PP 09 53 08.0 +4.2

WMQ SKS SKSdf 09 57 54.0 -0.2
WMQ AMB AMB
comp=Z,110nm,10.0s
WMQ LR LR
comp=N,430nm,25.0s
WMQ LR LR
comp=E,470nm,25.0s
WMQ LR LR
comp=Z,350nm,25.0s
KSRS Korea Array 132.61 335 PKP PKPdf 09 51 00.1 -1.4
comp=Z,8.0nm,0.8s,baz=18,slow=1.6,SNR=24
KSRS pPKP pPKPdf 09 51 36.4 -0.9
comp=Z,10nm,1.0s,baz=29,slow=2.0,SNR=4.9
KSRS PP PP 09 53 23.6 -2.3
comp=Z,4.5nm,0.9s,baz=24,slow=5.7,SNR=7.2
KSRS Korea Array 132.61 335 PKIKP PKPdf 09 51 00.1 -1.4
KSRS 09 53 23.6
KSRS pmax pmax
comp=Z,8.0nm,0.8s
KSRS pmax pmax
comp=Z,10.0nm,1.0s
KSRS pmax pmax
comp=Z,5.0nm,0.9s
BJI Beijing 134.07 348 PKP PKPdf 09 51 03.1 -1.0
BJI PP PP 09 53 37.1 +2.4
BJI PKS 09 54 34.0
BJI SS SS 10 11 05.5 -6.2
BJI AMB AMB
comp=Z,500nm,10.2s
BJI LR LR
comp=Z,470nm,53.0s
HHC Hu-ho-hao-te 134.07 353 ‖PKP PKPdf 09 51 04.3 +0.2
HHC sPKP 09 51 42.3
HHC PP PP 09 53 30.5 -4.2
HHC PKS 09 54 39.3
HHC SKS SKSdf 09 58 03.8 +0.7
HHC SKKS SKKSac 10 00 10.8 -7.8
HHC AMB AMB
comp=Z,310nm,8.1s
HHC LR LR
comp=N,350nm,18.3s
HHC LR LR
comp=E,220nm,17.7s
HHC LR LR
comp=Z,360nm,20.7s
GTA Gaotai 135.75 5 PKP PKPdf 09 51 06.6 -0.7
GTA PP PP 09 53 45.0 -0.3
GTA SKS SKSdf 09 58 07.1 +1.0
GTA SKKS SKKSac 10 00 24.8 -4.0
GTA SS SS 10 11 29.5 -2.3
GTA AMB AMB
comp=Z,370nm,9.5s
GTA LR LR
comp=N,240nm,24.7s
GTA LR LR
comp=E,210nm,18.5s
GTA LR LR
comp=Z,310nm,19.9s
STKA Stephens Creek 136.09 228 PKP PKPdf 09 51 07.3 -0.8
comp=Z,20nm,0.7s,baz=95,slow=2.8,SNR=40
STKA SKP 09 54 26.2
comp=Z,42nm,1.1s,baz=112,slow=4.7,SNR=19
STKA Stephens Creek 136.09 228 *e*PKPdf PKPdf 09 51 07.6 -0.5
CTA Charters Tower 136.68 246 PKP PKPdf 09 51 08.2 -1.3
comp=Z,6.4nm,0.6s,baz=96,slow=2.8,SNR=14
CTA pPKP pPKPdf 09 51 44.8 -0.5
comp=Z,12nm,1.0s,baz=80,slow=2.2,SNR=3.6
CTA SKP 09 54 28.4
comp=Z,61nm,1.0s,baz=108,slow=1.7,SNR=23
CTA Charters Tower 136.68 246 PKIKP PKPdf 09 51 08.2 -1.3
CTA pmax pmax
comp=Z,6.0nm,0.6s
CTA pmax pmax
comp=Z,12nm,1.0s
CTA pmax pmax
comp=N,61nm,1.0s
CTAO Charters Tower 136.68 246 *e*PKPdf PKPdf 09 51 08.9 -0.6
CTAO *ep*PKPdf pPKPdf 09 51 46.6 +1.2
CTAO Charters Tower 136.68 246 *e*PKIKP PKPdf 09 51 08.9 -0.6
NJ2 Nanjing 140.86 341 *e*PKP PKPdf 09 51 15.8 -1.1
NJ2 sPKP 09 51 53.0
NJ2 PP PP 09 54 19.0 +1.9
NJ2 PKS 09 54 48.0
NJ2 AMB AMB
comp=Z,1μm,5.0s
NJ2 LR LR
comp=N,1μm,24.4s
NJ2 LR LR
comp=E,600nm,26.7s
NJ2 LR LR
comp=Z,3μm,26.5s
DANN Dangsing 141.41 30 *e*P PKPdf 09 51 12.4 -5.6
KOLN Koldanda 141.81 31 *e*P PKPdf 09 51 12.5 -6.2
GKN Gorkha 142.13 29 *e*P PKPdf 09 51 13.7 -5.6
comp=Z,118nm,0.9s
KKN Kakani 142.62 29 *e*P PKPdf 09 51 15.1 -5.1
comp=Z,196nm,0.9s
DMN Daman 142.69 29 *e*P PKPdf 09 51 15.8 -4.5
comp=Z,330nm,0.7s
GUN Gumba 142.80 28 *e*P PKPdf 09 51 16.5 -4.0
comp=Z,698nm,1.0s
PKIN Phulchoki 142.85 29 *e*P PKPdf 09 51 16.3 -4.3
comp=Z,121nm,0.7s
PKI Pulchoki 142.87 29 *e*P PKPdf 09 51 16.0 -4.6
comp=Z,262nm,0.8s
LSA Lhasa 143.34 20 *e*PKPdf PKPdf 09 51 17.8 -3.6
LSA *ep*PKPdf pPKPdf 09 51 58.4 +1.2
LSA Lhasa 143.34 20 *e*PKIKP PKPdf 09 51 17.8 -3.6
LSA *e* 09 51 58.4
WHN Wuhan 143.58 346 PKP PKPdf 09 51 19.5 -2.3
TAPN Taplejung 144.11 26 *e*P PKPdf 09 51 20.3 -2.5
comp=Z,380nm,0.7s
ODAN Odare 144.39 27 *e*P PKPdf 09 51 20.9 -2.4
comp=Z,474nm,1.0s
CD2 Chengdu 144.44 1 *e*PKP PKPdf 09 51 21.1 -2.2
CD2 pPKP pPKPdf 09 51 47.5 -12
CD2 sPKP 09 51 58.4
CD2 PP PP 09 54 40.5 +2.0
CD2 SKS SKSdf 09 58 18.9 -1.7
CD2 SKKS SKKSac 10 01 18.3 -1.5
CD2 AMB AMB
comp=Z,670nm,10.2s
ENH Enshi 144.76 353 *e*PKPdf PKPdf 09 51 21.4 -2.4
ASAR Alice Springs 146.06 234 PKPbc PKPbc 09 51 25.2 -2.0
comp=Z,57nm,0.7s,baz=120,slow=3.4,SNR=492
ASAR *ep*PKPbc pPKPbc 09 52 02.2 -0.4
comp=Z,82nm,1.0s,baz=123,slow=3.4,SNR=8.4
ASAR SKP 09 54 46.4
comp=Z,6.5nm,0.8s,baz=119,slow=2.2,SNR=4.0
ASAR Alice Springs 146.06 234 PKIKP PKPdf 09 51 25.3 -0.9
ASAR 09 54 46.4
ASAR pmax pmax
comp=Z,57nm,0.7s
ASAR pmax pmax
comp=Z,82nm,1.0s
ASAR pmax pmax
comp=N,7.0nm,0.9s
HYB Hyderabad 146.14 49 *i* PKP PKPdf 09 51 25.5 -1.0
HYB *ep*PKP pPKPdf 09 52 02.0 -0.4
HYB *es*PKP 09 52 16.0
WB2 Warramunga Arr 147.32 240 *e*PKPdf PKPdf 09 51 27.4 -1.0
WB2 *e*PKPbc PKPbc 09 51 30.0 -0.9
WB2 *e*PKPab PKPab 09 51 32.1 -0.9
WRA Warramunga Arr 147.33 240 PKPbc PKPbc 09 51 27.5 -3.5
comp=N,33nm,0.7s,baz=106,slow=2.6,SNR=189
WRA pPKPbc pPKPbc 09 52 05.0 -1.4
comp=N,50nm,0.9s,baz=107,slow=2.7,SNR=5.7
WRA SKP 09 54 48.3
comp=N,10nm,0.9s,baz=111,slow=1.5,SNR=5.5
WRA Warramunga Arr 147.33 240 PKIKP PKPdf 09 51 27.5 -0.9
WRA pmax pmax
comp=Z,33nm,0.7s
WRA pmax pmax
comp=Z,50nm,0.9s
WRA pmax pmax
comp=N,10.0nm,0.9s
SSLB Suanglung 147.34 331 *e*PKPbc PKPbc 09 51 29.9 -1.0
TPUB Ta-pu 147.91 331 *e*PKPbc PKPbc 09 51 31.5 -0.9
GYA Guiyang 148.82 356 *i* PKPbc PKPdf 09 51 30.5 -0.2
GYA PKPab PKPab 09 51 39.8 +1.0
GYA pPKP pPKPdf 09 52 01.0 -5.6
GYA sPKP 09 52 13.8
GYA PP PP 09 55 08.3 +4.1
GYA SKKS SKKSac 10 01 42.6 -1.9
GYA SS SS 10 14 04.0 +1.2
GYA AMB AMB
comp=Z,230nm,8.0s
GYA LR LR
comp=N,240nm,22.9s
GYA LR LR
comp=E,190nm,24.0s
GYA LR LR
comp=Z,200nm,21.1s
NWAO Narrogin (SRO) 149.64 201 *e*PKPdf PKPdf 09 51 30.8 -1.0
NWAO *e*PKPbc PKPbc 09 51 35.6 -1.0
NWAO Narrogin (SRO) 149.64 201 *e*PKHKP PKPpre 09 51 30.8
KMI Kunming 150.16 3 PKPbc PKPbc 09 51 30.9 -7.2
KMI PKPab PKPab 09 51 43.5 -0.8
KMI pPKP pPKPdf 09 52 02.4 -6.4
KMI sPKP 09 52 15.1
KMI PP PP 09 55 11.3 -0.7
KMI AMB AMB
comp=Z,420nm,6.7s
KMI LR LR
comp=N,200nm,26.5s
KMI LR LR
comp=E,270nm,25.0s
KMI LR LR
comp=Z,330nm,29.3s
KAKA Kakadu 151.35 252 *e*PKP PKPbc 09 51 39.8 -1.3
comp=Z,87nm,0.7s
KAKA *ep*PKP pPKPbc 09 52 17.8 +1.0
KAKA Kakadu 151.35 252 *e*PKPdf PKPdf 09 51 34.0 -1.0
KAKA *e*PKPbc PKPbc 09 51 40.0 -1.1
PALK Pallekele 153.36 63 *e*PKPbc PKPbc 09 51 44.7 -0.9
PALK *e*PKPab PKPab 09 51 58.0 -0.2
PALK Pallekele 153.36 63 *e*PKIKP PKPbc 09 51 44.7 -1.0
PALK *e* 09 51 58.0
TGY Tagaytay City 155.11 319 PKPab PKPab 09 52 05.7 +0.3
comp=Z,126nm,0.3s,baz=45,slow=1.4,SNR=7.3
TGY Tagaytay City 155.11 319 PKP2 PKPab 09 52 05.7 +0.3
TGY pmax pmax
comp=Z,126nm,0.3s
FITZ Fitzroy Crossi 155.51 236 PKP PKPdf 09 51 39.4 -1.4
comp=Z,9.2nm,0.7s,baz=145,slow=0.6,SNR=18
FITZ PKPab PKPab 09 52 05.5 -1.6
comp=Z,9.8nm,0.8s,baz=155,slow=5.4,SNR=7.0
FITZ Fitzroy Crossi 155.51 236 *e*PKPdf PKPdf 09 51 39.5 -1.3
FITZ *e*PKPab PKPab 09 52 06.3 -0.9
FITZ *e*SKPdf SKPdf 09 54 59.9 -1.6
QIZ Qiongzhong 155.71 348 PKP PKPdf 09 51 39.6 -1.5
QIZ PP PP 09 55 45.6 +2.1
QIZ LR LR
comp=Z,380nm,45.2s
CHTO Chiang Mai 155.86 13 *e*PKPdf PKPdf 09 51 40.4 -0.9
CHTO *e*PKPab PKPab 09 52 06.8 -1.6
CHTO Chiang Mai 155.86 13 *e*PKIKP PKPdf 09 51 40.4 -0.9
CHTO *e* 09 52 06.8
CM31 Chiang Mai Arr 156.20 13 *e*PKPab PKPab 09 52 09.1 -0.8
CMAR Chiang Mai Arr 156.20 13 PKP PKPdf 09 51 41.0 -0.8
comp=Z,2.9nm,0.8s,baz=300,slow=2.3,SNR=17
CMAR PKPab PKPab 09 52 08.7 -1.2
comp=Z,33nm,0.7s,baz=331,slow=5.5,SNR=66
CMAR PP PP 09 55 41.7 -4.5
comp=Z,6.5nm,0.9s,baz=347,slow=6.4,SNR=5.9
CMAR Chiang Mai Arr 156.20 13 PKIKP PKPdf 09 51 41.0 -0.8
CMAR 09 52 08.7
CMAR 09 55 41.7
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CMAR pmax pmax
comp=Z,33nm,0.7s
CMAR pmax pmax
comp=Z,7.0nm,0.9s
MYLDM Lahad Datu 162.85 305 P PKPab 09 52 39.8 +0.6
comp=Z,59nm,1.4s
KKM Kota Kinabalu 164.09 313 P PKPab 09 52 44.3 -0.3
comp=Z,947nmcomp=Z,47nm,1.8s
SPSI Sidrap Palu 164.77 273 P PKPdf 09 51 50.4 -0.9
SBUM Sibu 169.43 313 P PKPdf 09 51 54.3 -0.4
comp=Z,0.1nmcomp=Z,407nmcomp=Z,11nm,2.8s
KSM Kuching 171.47 317 P PKPdf 09 51 55.0 -0.9
comp=Z,0.3nmcomp=Z,1μmcomp=Z,17nm,1.3s
MNSI Mandailing Nat 172.53 42 P PKPab 09 53 21.2 -0.7
PPI Padang Panjang 174.00 44 P PKPab 09 53 27.8 -0.6
PDSI Padang 174.37 46 P PKPab 09 53 30.4 +0.3
comp=Z,5μmcomp=Z,72nm,1.6s
MDSI Maura Dua 179.51 44 P pPKPdf 09 52 32.8 -1.2
comp=Z,17nm,1.6s

IDC 13 09:35:52.6±4.1, 1°.82S×140°.02E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/14, mbtmp3.7/4, ML3.4/1, MS3.8/1, Ms1 3.8/1, ms1mx2.7/28, Error ellipse: s-maj=171.6km s-min=24.7km az=88.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.85**	**197**	P	Pn	09 40 14.6	-0.2
	0.1nm,0.3s,baz=18,slow=12,SNR=7.4						
ASAR	**Alice Springs**	**22.51**	**195**	P	P	09 40 54.5	+0.5
	2.0nm,0.9s,baz=27,slow=10.0,SNR=10						
RPZ	**Rata Peaks**	**50.00**	**151**	LR	LR	10 03 15.4	
	comp=Z,84nm,18.1s,baz=71,slow=33						
MKAR	**Makanchi Array**	**69.90**	**322**	P	P	09 47 05.9	+0.3
	0.3nm,0.6s,baz=100,slow=7.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**71.84**	**329**	P	P	09 47 16.8	-0.4
	0.6nm,0.4s,baz=104,slow=6.1,SNR=2.3						

GUC 13 09:40:18.2±0.5, 42°.80S×72°.67W, h5km±15km, ML2.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUNY	**Huinay**	**0.46**	**25**	*e*S	Sg	09 40 34.0	+0.9
HUNY				AML	AML	09 40 35.2	
	comp=E,109nm,0.3s						
ILCA	**Isla Las Cabra**	**0.75**	**8**	*e*P	Pg	09 40 32.6	+0.1
ILCA				*e*S	Sg	09 40 42.7	+0.5
ILCA				AML	AML	09 40 43.9	
	comp=E,36nm,0.3s						
QLLN	**Quelln**	**0.76**	**246**	*e*P	Pg	09 40 32.5	-0.2
QLLN	**Quelln**	**0.76**	**246**	*e*P	Pg	09 40 32.5	-0.2
QLLN				*i* S	Sg	09 40 43.4	+0.8
QLLN				AML	AML	09 40 44.9	
	comp=N,379nm,0.1s						

IDC 13 09:41:18.5±7.6, 17°.73S×74°.39W, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.6/19, mbtmp3.5/4, ML1.3/1, Error ellipse: s-maj=322.4km s-min=27.3km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.56**	**34**	Pn	Pn	09 42 26.8	-1.9
	0.9nm,0.3s,baz=347,slow=17,SNR=10						
AFI				Sn	Sn	09 43 12.9	-9.5
	15nm,0.3s,baz=44,slow=22,SNR=9.8						
WRA	**Warramunga Arr**	**48.42**	**259**	P	P	09 50 02.7	-0.2
	0.2nm,0.5s,baz=98,slow=7.5,SNR=7.4						
ASAR	**Alice Springs**	**48.52**	**254**	P	P	09 50 03.2	-0.3
	0.6nm,0.7s,baz=83,slow=8.4,SNR=8.2						
ILAR	**Eielson Array**	**84.90**	**11**	P	P	09 53 55.8	+1.0
	0.3nm,0.9s,baz=213,slow=4.3,SNR=3.1						

NIED ***13*** *09:59:00, 30°.60N×142°.20E, h5km, Mw4.4 Best double couple: M0=5.06000×10^15 NP1:φ=170.00000°, δ=59.00000°, λ=88.00000°. NP2:φ=353.00000°, δ=31.00000°, λ=93.00000°.*
BJI ***13*** *09:59:18.7, 30°.52N×142°.02E, h10km, mB4.8/22, mb4.6/38, Ms4.5/25, Ms7 4.2/18*
IDC ***13*** *09:59:18.8±0.5, 30°.50N×142°.01E, h0km, mb4.3/15, mb1 4.4/19, mb1mx4.4/24, mbtmp4.3/19, ML3.9/4, MS3.7/1, Ms1 3.7/1, ms1mx2.7/35, Error ellipse: s-maj=18.2km s-min=13.5km az=80.0*
ISCJB ***13*** *09:59:19.2±1.0, 30°.62N±0°.03×142°.03E±0°.04, h9km±6km, mb4.5/56, MS4.2/5, Error ellipse: s-maj=6.3km s-min=4.3km az=160.8*
NEIC ***13*** *09:59:20.5±0.2, 30°.47N×142°.02E, h10km, mb4.7/26, MW4.4(NIED), Error ellipse: s-maj=6.2km s-min=5.9km az=50.0*
JMA ***13*** *09:59:20.0±0.2, 30°.56N×142°.19E, h45km, M4.5*
MOS ***13*** *09:59:22.1±1.0, 30°.55N×142°.02E, h33km, mb4.8/25, Error ellipse: s-maj=14.6km s-min=6.8km az=115.8*

ISC 13 09:59:20.8±1.2, 30°.58N±0°.03×142°.04E±0°.05, h10km±7km, h13km±1.2km: pP-P, n131, σ1s 08/158, mb4.5/56, MS4.2/5, 4C-3D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.16**	**324**	P	**Pn**	**10 00 10.0**	**-0.5**
JHJ2				S	**Sn**	**10 00 46.5**	**-1.7**
JHJ	**Hachijo jima 2**	**3.18**	**323**	Pn	**Pn**	**10 00 11.1**	**+0.3**
	21nm,0.3s,baz=24,slow=20,SNR=9.4						
JHJ				Sn	**Sn**	**10 00 45.0**	**-3.9**
	34nm,0.3s,baz=78,slow=20,SNR=4.6						
CBIJ	**Chichi jima**	**3.47**	**178**	Pn	**Pn**	**10 00 12.9**	**-1.9**
	34nm,0.3s,baz=276,slow=17,SNR=4.5						
CBIJ				Sn	**Sn**	**10 00 52.1**	**-3.8**
	59nm,0.3s,baz=267,slow=21,SNR=7.3						
CBIJ	**Chichi jima**	**3.47**	**178**	S	**Sn**	**10 00 51.3**	**-4.7**
BSO1	**Boso 1**	**4.16**	**348**	P	**Pn**	**10 00 23.2**	**-1.1**
BSO1				S	**Sn**	**10 01 10.6**	**-2.4**
BSO2	**Boso 2**	**4.30**	**346**	S	**Sn**	**10 01 17.1**	**+0.6**
JKO	**Kozu shima**	**4.36**	**326**	P	**Pn**	**10 00 27.6**	**+0.6**
JKO				S	**Sn**	**10 01 17.1**	**-0.8**
BSO3	**Boso 3**	**4.41**	**343**	P	**Pn**	**10 00 26.9**	**-0.8**
BSO4	**Boso 4**	**4.63**	**342**	P	**Pn**	**10 00 30.6**	**-0.1**
BSO4				S	**Sn**	**10 01 24.5**	**0.0**
JOD2	**Odawara 2**	**5.29**	**333**	P	**Pn**	**10 00 39.1**	**-0.8**
JOD2				S	**Sn**	**10 01 40.9**	**0.0**
JHU	**Hanno**	**5.75**	**337**	P	**Pn**	**10 00 45.8**	**-0.3**
JHU				S	**Sn**	**10 01 48.8**	**-3.3**
JYT	**Yasato**	**5.84**	**345**	P	**Pn**	**10 00 48.3**	**+0.9**
JYT				S	**Sn**	**10 01 52.0**	**-2.5**
JIE	**Ise**	**5.90**	**312**	P	**Pn**	**10 00 48.8**	**+0.6**
MJAR	**Matsushiro Arr**	**6.75**	**333**	Pn	**Pn**	**10 01 00.2**	**+0.3**
	12nm,0.3s,baz=157,slow=11,SNR=112						
MJAR				Sn	**Sn**	**10 02 15.9**	**-0.9**
	4.0nm,0.3s,baz=167,slow=19,SNR=7.1						
MJAR	**Matsushiro Arr**	**6.75**	**333**	P	**Pn**	**10 01 00.2**	**+0.3**
MJAR						10 02 15.9	
MJAR				pmax	pmax		
	comp=Z,12nm,0.3s						
MJAR				smax			
	comp=N,4.0nm,0.3s						
MAJO	**Matsushiro**	**6.75**	**333**	*e*Pn	**Pn**	**10 01 01.2**	**+1.3**
MAJO				*e*Sn	**Sn**	**10 02 17.2**	**+0.3**
MAJO	**Matsushiro**	**6.75**	**333**	*e*P	**Pn**	**10 01 01.3**	**+1.3**
MAJO				*e*		10 02 17.2	
MAT	**Matsushiro**	**6.75**	**333**	P	**Pn**	**10 01 00.9**	**+0.9**
MAT				S	**Sn**	**10 02 16.1**	**-0.8**
MAT	**Matsushiro**	**6.75**	**333**	P	**Pn**	**10 01 01.2**	**+1.2**
MAT				S	**Sn**	**10 02 17.4**	**+0.5**
JTO	**Tosashimizu**	**8.19**	**289**	P	**Pn**	**10 01 22.7**	**+3.0**
JMK	**Ichinoseki**	**8.38**	**356**	P	**Pn**	**10 01 20.2**	**-2.1**
JMK				S	**Sn**	**10 02 49.4**	**-7.6**
JNU	**Nakatsue**	**9.83**	**288**	*e*Pn	**Pn**	**10 01 47.0**	**+4.9**
ERM	**Erimo**	**11.45**	**4**	*e*Pn	**Pn**	**10 02 00.4**	**-3.9**
ERM				*e*Sn	**Sn**	**10 03 58.6**	**-14**
ERM	**Erimo**	**11.45**	**4**	*e*P	**Pn**	**10 02 00.4**	**-3.9**
ASAJ	**Asahikawa**	**13.52**	**2**	Pn	**Pn**	**10 02 29.8**	**-2.9**
	comp=N,1.3nm,0.3s,baz=197,slow=8.7,SNR=9.2						
ASAJ				Sn	**Sn**	**10 04 48.5**	**-14**
	comp=N,0.5nm,0.3s,baz=58,slow=19,SNR=2.9						
ASAJ	**Asahikawa**	**13.52**	**2**	*e*Pn	**Pn**	**10 02 29.1**	**-3.6**
ASAJ				*e*Sn	**Sn**	**10 04 50.2**	**-13**
ASAJ	**Asahikawa**	**13.52**	**2**	P	**Pn**	**10 02 29.8**	**-2.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**13.56**	**304**	Pn	**Pn**	**10 02 34.7**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=112,slow=14,SNR=4.1						
KSRS				LR	LR	10 07 40.3	
	comp=Z,295nm,20.4s,baz=156,slow=37						
KSRS	**Korea Array**	**13.56**	**304**	P	**Pn**	**10 02 34.7**	**+1.5**
KSRS				MLR	MLR		
	comp=Z,295nm,20.4s						
YSS	**Yuzh-Sakhalins**	**16.36**	**2**	*e*Pn	**Pn**	**10 03 11.6**	**+1.1**
	comp=Z,13nm,0.8s						
YSS	**Yuzh-Sakhalins**	**16.36**	**2**	*e*P	**Pn**	**10 03 11.0**	**+0.5**
MDJ	**Mudanjiang**	**17.11**	**328**	P	**Pn**	**10 03 21.0**	**+1.1**
MDJ				pP	pP	10 03 25.3	+0.8
MDJ				sP	sP	10 03 26.8	+1.0
MDJ				S	**Sn**	**10 06 32.3**	**+2.2**
MDJ				PcP	PcP	10 08 03.4	-1.0
MDJ				ScP	ScP	10 11 38.8	-0.6
MDJ				PcS	PcS	10 11 41.3	+1.0
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.1s						
MDJ				LR	LR		
	comp=N,170nm,15.4s						
MDJ				LR	LR		
	comp=E,240nm,16.4s						
MDJ	**Mudanjiang**	**17.11**	**328**	*e*Pn	**Pn**	**10 03 20.6**	**+0.7**
	comp=E,16nm,0.9s						
CN2	**Changchun**	**18.64**	**320**	*e*P	**Pn**	**10 03 37.8**	**-1.0**
CN2				*e*S	**Sn**	**10 07 08.5**	**+1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s						
CN2				LR	LR		
	comp=E,400nm,16.0s						
HABR	**Khabarovsk**	**18.65**	**345**	*e*P	**Pn**	**10 03 39.0**	**+0.1**
HABR				*e*S	**Sn**	**10 07 08.0**	**+0.6**
HABR				pmax	pmax		
	comp=E,8.0nm,0.8s						
HABR				pmax	pmax		
	comp=N,15nm,1.5s						
HABR				pmax	pmax		
	comp=Z,27nm,1.5s						
HABR				MLR	MLR		
	comp=Z,129nm,19.0s						
NJ2	**Nanjing**	**19.86**	**280**	*e*P	**Pn**	**10 03 53.8**	**+0.2**
NJ2				pP	pP	10 04 01.8	+6.9
NJ2				PP		10 04 13.8	
NJ2				S	**Sn**	**10 07 32.0**	**-4.9**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,640nm,5.1s						
NJ2				LR	LR		
	comp=N,1μm,15.4s						
NJ2				LR	LR		
	comp=E,730nm,15.4s						
NJ2				LR	LR		
	comp=Z,1μm,14.9s						
SSLB	**Suanglung**	**19.93**	**255**	*e*P	**Pn**	**10 03 53.4**	**-1.0**
	comp=Z,532nm,2.3s						
SSLB				*e*S	**Sn**	**10 07 33.5**	**-4.9**
KLR	**Kul'dur**	**20.20**	**340**	*e*P	**P**	**10 03 53.0**	**-2.5**
BJI	**Beijing**	**23.06**	**301**	P	**P**	**10 04 25.0**	**-1.3**
BJI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
BJI				LR	LR		
	comp=N,370nm,15.9s,MS4.1						
BJI				LR	LR		
	comp=E,350nm,12.2s,MS4.1						
HHC	**Hu-ho-hao-te**	**26.66**	**301**	*e*P	**P**	**10 05 01.3**	**+1.5**
HHC				sP	sP	10 05 08.3	+4.1
HHC				PP		10 05 46.3	
HHC				PcP	PcP	10 08 23.8	+0.4
HHC				S	**S**	**10 09 35.3**	**+0.4**
HHC				sS	sS	10 09 41.8	+1.8
HHC				SS		10 10 47.8	
HHC				ScP	ScP	10 12 02.3	-1.2
HHC				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.6						
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
HHC				LR	LR		
	comp=N,340nm,10.8s,MS4.4						
HHC				LR	LR		
	comp=E,500nm,10.1s,MS4.4						
HHC				LR	LR		
	comp=Z,330nm,12.2s,MS4.1						
XAN	**Xi'an**	**28.14**	**286**	P	**P**	**10 05 11.8**	**-1.2**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.8						
XAN				pmax	pmax		
	comp=Z,59nm,6.5s						
GYA	**Guiyang**	**31.27**	**271**	P	**P**	**10 05 41.3**	**+0.4**
GYA				PP	PP	10 06 44.3	-7.2
GYA				S	**S**	**10 10 47.9**	**+0.3**
GYA				SS	SS	10 12 32.3	-29
GYA				pmax	pmax		

comp=Z,10.0nm,0.8s,mb4.7
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,540nm,15.9s,MS4.4
GYA LR LR
comp=E,490nm,16.0s,MS4.4
GYA LR LR
comp=Z,500nm,15.1s,MS4.3
QIZ Qiongzhong 31.30 256 P **P** **10 05 41.6 +0.4**
QIZ S **S** **10 10 47.0 -1.1**
QIZ pmax pmax
comp=Z,8.0nm,1.4s,mb4.4
SONM Songino Array 32.20 313 P **P** **10 05 49.7 +0.9**
comp=Z,1.7nm,0.5s,mb4.1,baz=122,slow=7.4,SNR=7.0
SONM Songino Array 32.20 313 P **P** **10 05 49.7 +0.9**
SONM pmax pmax
comp=Z,2.0nm,0.5s
CD2 Chengdu 32.80 281 *e*P **P** **10 05 55.3 +1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CD2 pmax pmax
comp=Z,30nm,5.2s
SEY Seymchan 33.05 9⇑ *e*P **P** **10 05 54.5 -1.6**
ZAK Zakamensk 34.98 316 *e*P **P** **10 06 14.2 +1.2**
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
KMI Kunming 35.05 271 P **P** **10 06 14.8 +0.9**
KMI pP pP 10 06 18.1 +1.1
KMI sP sP 10 06 19.8 +1.5
KMI PP PP 10 07 33.8 +0.5
KMI S **S** **10 11 46.5 +0.3**
KMI SS SS 10 14 00.6 -18
KMI pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KMI pmax pmax
comp=Z,370nm,5.1s
KMI LR LR
comp=N,340nm,14.3s,MS4.3
KMI LR LR
comp=E,190nm,16.0s,MS4.3
KMI LR LR
comp=Z,160nm,13.4s,MS3.9
TLY Talaya 35.22 318 *e*P **P** **10 06 16.9 +1.8**
comp=Z,11nm,1.1s,mb4.7
TLY Talaya 35.22 318 *e*P **P** **10 06 16.2 +1.1**
TLY *e* 10 06 28.7
TLY pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GTA Gaotai 35.43 296 *e*P **P** **10 06 16.4 -0.6**
GTA pP pP 10 06 19.6 -0.6
GTA sP sP 10 06 22.4 +0.9
GTA S **S** **10 11 51.8 -0.1**
GTA sS sS 10 11 58.4 +1.3
GTA SS SS 10 14 10.3 -16
GTA pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
GTA pmax pmax
comp=Z,280nm,14.7s
GTA LR LR
comp=N,150nm,16.6s,MS4.1
GTA LR LR
comp=E,200nm,15.6s,MS4.1
BILL Bilibino 40.11 14 *e*P **P** **10 06 54.4 -1.8**
BILL *e* 10 08 29.5
BILL *e* 10 08 59.5
BILL pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
CMAR Chiang Mai Arr 40.80 263 P **P** **10 07 01.9 -0.7**
comp=Z,1.4nm,0.6s,mb3.8,baz=72,slow=5.8,SNR=7.8
CMAR Chiang Mai Arr 40.80 263 P **P** **10 07 01.9 -0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
KAKA Kakadu 44.02 194 *e*P **P** **10 07 27.8 -0.8**
comp=Z,24nm,0.7s,mb5.0
WMQ Urumqi 44.51 303 *e*P **P** **10 07 34.0 +1.6**
WMQ pmax pmax
comp=Z,14nm,1.0s,mb4.8
ZALV Zalesovo Beam 46.82 317 P **P** **10 07 50.7 +0.1**
comp=Z,0.5nm,0.3s,mb3.9,baz=106,slow=3.1,SNR=3.6
ZALV PcP PcP 10 09 22.7 -0.7
comp=Z,3.7nm,0.5s,baz=100,slow=3.3,SNR=9.9
ZALV Zalesovo Beam 46.82 317 P **P** **10 07 50.7 +0.2**
ZALV 10 09 22.7
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
NVS Novosibirsk 47.84 318 *e*P **P** **10 07 57.1 -1.3**
MK31 Makanchi Array 48.22 307 *e*P **P** **10 08 01.8 +0.3**
MK31 Makanchi Array 48.22 307 *e*P **P** **10 08 01.8 +0.3**
MKAR Makanchi Array 48.22 307 P **P** **10 08 01.4 -0.1**
comp=Z,3.0nm,0.6s,mb4.5,baz=91,slow=9.5,SNR=24
MKAR PcP PcP 10 09 28.3 -0.3
comp=Z,0.6nm,0.5s,baz=84,slow=5.2,SNR=1.9
MKAR Makanchi Array 48.22 307 P **P** **10 08 01.4 -0.1**
MKAR 10 09 28.3
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.5s
KURK Kurchatov 50.50 313 *e*P **P** **10 08 18.9 +0.1**
comp=Z,11nm,0.9s,mb4.8
KURK Kurchatov 50.50 313 *de*P **P** **10 08 18.7 -0.2**
KURK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
WB2 Warramunga Arr 50.77 189 *e*P **P** **10 08 19.8 -1.3**
WRA Warramunga Arr 50.77 189 P **P** **10 08 19.8 -1.3**
comp=Z,18nm,0.6s,mb5.2,baz=5.9,slow=7.5,SNR=248
WRA Warramunga Arr 50.77 189 P **P** **10 08 19.8 -1.3**
WRA pmax pmax
comp=Z,18nm,0.6s
PPLA Purkeypile 52.26 32 *e*P **P** **10 08 32.9 +1.0**
comp=Z,17nm,1.3s,mb4.8
TKM2 Tokmak 2 53.37 303 *e*P **P** **10 08 41.5 +1.1**
comp=Z,15nm,1.5s,mb4.7
TKM2 Tokmak 2 53.37 303 *e*P **P** **10 08 41.5 +1.1**
TKM2 pmax pmax
comp=Z,15nm,1.5s,mb4.7
KSH Kashi 53.74 299 *e*P **P** **10 08 47.8 +4.6**
KSH *e*pP pP 10 08 52.3 +5.9
KSH *e*sP sP 10 08 54.8 +7.1
KSH *e*PcP PcP 10 09 52.8 +3.6
KSH *e*PP PP 10 10 50.8 +6.8
KSH *e*ScP ScP 10 13 48.8 +1.6
KSH *e*PcS PcS 10 13 50.5 +2.2
KSH *e*S **S** **10 16 21.6 +4.1**
KSH *e*sS sS 10 16 29.3 +6.5
KSH *e*ScS ScS 10 18 33.3 +0.5
KSH *e*SS SS 10 20 02.3 +4.3
KSH pmax pmax
comp=Z,15nm,0.5s,mb5.2
KSH pmax pmax
comp=Z,200nm,5.7s
KSH LR LR
comp=N,330nm,8.5s
KSH LR LR
comp=E,160nm,5.4s
KSH LR LR
comp=Z,140nm,9.4s
KBK Karagaybulak 53.89 303 *e*P **P** **10 08 42.3 -1.8**
comp=Z,11nm,0.8s,mb4.8
AAK Ala-Archa 54.22 303 *e*P **P** **10 08 47.1 +0.4**
comp=Z,1.5nm,0.4s,mb4.3
AAK Ala-Archa 54.22 303 *e*P **P** **10 08 47.1 +0.5**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
ASAR Alice Springs 54.49 189 P **P** **10 08 47.2 -1.4**
comp=Z,3.6nm,0.5s,mb4.5,baz=2.1,slow=5.8,SNR=106
ASAR Alice Springs 54.49 189 P **P** **10 08 47.2 -1.5**
ASAR pmax pmax
comp=Z,4.0nm,0.5s
ILAR Eielson Array 54.75 30 P **P** **10 08 49.4 -0.7**
comp=Z,0.9nm,0.6s,mb4.0,baz=256,slow=6.3,SNR=22
ILAR Eielson Array 54.75 30 P **P** **10 08 49.4 -0.7**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
AML Almayashu 54.90 302 *e*P **P** **10 08 53.2 +1.6**
comp=Z,14nm,0.8s,mb5.0
BRVK Borovoye 55.49 316⇑ *e*P **P** **10 08 57.0 +1.3**
KKAR Karatay Array 56.99 304 *e*P **P** **10 09 07.0 +0.5**
comp=Z,4.2nm,0.5s,mb4.7
KKAR Karatay Array 56.99 304 *e*P **P** **10 09 07.1 +0.6**
KKAR pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
INK Inuvik 59.94 25 P **P** **10 09 28.6 +1.9**
comp=Z,1.5nm,0.6s,mb4.2,baz=285,slow=4.5,SNR=3.7
INK Inuvik 59.94 25 P **P** **10 09 28.6 +1.9**
INK pmax pmax
comp=Z,2.0nm,0.6s
KBL Kabul 60.41 295 *e*P **P** **10 09 30.8 +0.3**
comp=Z,14nm,1.0s,mb4.9
KBL Kabul 60.41 295 *e*P **P** **10 09 30.8 +0.4**
KBL pmax pmax
comp=Z,14nm,1.0s,mb5.0
SVE Sverdlovsk 60.42 321 *e*P **P** **10 09 30.8 +0.7**
SVE pmax pmax
comp=Z,13nm,1.0s,mb4.9
ARU Arti 61.62 321 *e*P **P** **10 09 38.6 +0.3**
comp=Z,12nm,1.0s,mb5.0
ARU Arti 61.62 321 *c i*P **P** **10 09 38.4 +0.1**
ARU *e* 10 11 50.4
ARU S **S** **10 18 00.1 -0.2**
ARU SS SS 10 22 02.0 +0.9
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.9
STKA Stephens Creek 62.11 180 P **P** **10 09 41.0 -0.8**
comp=Z,4.4nm,0.7s,mb4.7,baz=5.3,slow=9.0,SNR=12
ABKAR Akbulak array 62.61 313 *e*P **P** **10 09 44.7 -0.4**
comp=Z,2.1nm,0.5s,mb4.5
ARCES ARCESS Array B 70.23 340 P **P** **10 10 32.7 -0.7**
comp=Z,2.1nm,0.8s,mb4.1,baz=60,slow=8.9,SNR=7.9
ARCES ARCESS Array B 70.23 340 P **P** **10 10 32.7 -0.8**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
JOF Joensuu 71.92 333 *e*P **P** **10 10 43.6 -0.3**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
OBN Obninsk 73.61 325⇓ *e*P **P** **10 10 54.0 -0.1**
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
VSR Storozhevoye 74.18 320 *e*P **P** **10 10 56.4 -1.0**
VSR pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
VSR pmax pmax
comp=N,1.0nm,0.2s
VSR pmax pmax
comp=E,4.0nm,0.4s
KAF Kangasniemi 74.30 334 *e*P **P** **10 10 57.2 -0.7**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
FINES FINESS Array B 74.78 333 P **P** **10 11 00.0 -0.8**
comp=Z,2.7nm,0.5s,mb4.4,baz=57,slow=5.1,SNR=16
FINES FINESS Array B 74.78 333 P **P** **10 11 00.0 -0.8**
FINES pmax pmax
comp=Z,3.0nm,0.5s
KIV Kislovodsk 75.59 313⇓ *e*P **P** **10 11 07.0 +1.2**
KIV *i* 10 11 12.4
KIV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
WALA Waterton Lakes 75.91 41 *e*P **P** **10 11 07.9 +0.4**
comp=Z,0.1nm,0.8s
GNI Garni 76.05 308⇑ *e*P **P** **10 11 07.2 -1.3**
GNI pmax pmax
comp=Z,11nm,1.3s
CMB Columbia Colle 77.24 53 *e*P **P** **10 11 15.5 +0.2**
comp=Z,8.3nm,1.6s,mb4.4
CMB Columbia Colle 77.24 53 *e*P **P** **10 11 15.5 +0.2**
CMB pmax pmax
comp=Z,8.0nm,1.6s,mb4.4
LRM Limekiln Ridge 78.43 43 P **P** **10 11 13.0 -8.7**
comp=Z,23nm,0.7s,mb5.2
NVAR Mina Array Bea 78.48 52 P **P** **10 11 22.5 +0.4**
comp=Z,2.7nm,0.5s,mb4.4,baz=309,slow=5.7,SNR=22
DLMT Dillon 78.59 44 *e*P **P** **10 11 23.4 +0.8**
comp=Z,24nm,2.1s,mb4.8
NB2 NORSAR Subarra 80.34 338 P **P** **10 11 31.6 -0.2**
comp=Z,2.7nm,0.8s,mb4.2,baz=39,slow=5.3
NOA NORSAR Array B 80.34 338 P **P** **10 11 31.3 -0.6**
comp=Z,2.0nm,0.7s,mb4.2,baz=46,slow=4.7,SNR=5.9
NOA NORSAR Array B 80.34 338 P **P** **10 11 31.3 -0.5**
NOA pmax pmax
comp=Z,2.0nm,0.7s
IMW Indian Meadow 80.37 45 *e*P **P** **10 11 33.6 +1.2**
comp=Z,2.6nm,0.9s,mb4.2
RRI2 Red Ridge 80.44 45 *e*P **P** **10 11 34.6 +1.9**
comp=Z,3.6nm,0.8s,mb4.3
TPAW Teton Pass 80.59 45 *e*P **P** **10 11 34.9 +1.4**
comp=Z,2.8nm,0.6s,mb4.4
RLMT Red Lodge 80.69 43 *e*P **P** **10 11 34.5 +0.5**
comp=Z,2.7nm,0.6s,mb4.3
PDAR Pinedale Array 81.84 45 P **P** **10 11 39.8 -0.4**
comp=Z,1.2nm,0.6s,mb4.0,baz=318,slow=2.4,SNR=15
JLU Jordanelle 81.86 48 *e*P **P** **10 11 41.4 +1.1**
comp=Z,33nm,2.4s,mb4.8
DAU Daniels Canyon 82.09 48 *e*P **P** **10 11 41.8 +0.2**
DAU Daniels Canyon 82.09 48 *e*P **P** **10 11 41.8 +0.2**
SRU San Rafael 83.28 48 *e*P **P** **10 11 48.0 +0.2**
comp=Z,2.8nm,0.6s,mb4.5
SRU San Rafael 83.28 48 *e*P **P** **10 11 48.0 +0.2**
SRU pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BR131 Keskin Array S 83.56 313 *e*P **P** **10 11 49.6 +0.5**
comp=Z,3.3nm,0.8s,mb4.5
BRTR Keskin Array B 83.56 313 P **P** **10 11 49.2 0.0**
comp=Z,2.6nm,0.9s,mb4.4,baz=90,slow=4.3,SNR=12
BRTR Keskin Array B 83.56 313 P **P** **10 11 49.2 0.0**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
PV01 Paradox Valley 85.10 48 *e*P **P** **10 11 56.6 -0.4**
comp=Z,199nm,0.6s
SMCO Snowmass 85.50 47 *e*P **P** **10 11 59.8 +0.7**
comp=Z,2.5nm,0.9s,mb4.4
TXAR Lajitas Array 93.62 53 P **P** **10 12 38.4 +0.8**
comp=Z,1.2nm,0.6s,mb4.5,baz=318,slow=2.4,SNR=17
TXAR Lajitas Array 93.62 53 P **P** **10 12 38.4 +0.8**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
LPAZ La Paz 149.00 70 PKPbc PKPbc 10 19 10.8 +1.1
comp=Z,1.2nm,0.8s,baz=346,slow=4.2,SNR=4.6
PLCA Paso Flores 151.79 120 PKPbc PKPbc 10 19 17.1 +1.4
comp=Z,1.1nm,0.8s,baz=233,slow=4.4,SNR=3.5

NIED ***13*** *10:06:00,46°.50N×153°.10E,h47km,Mw4.6 Best double couple: M0=7.60000×10^15 NP1:φ=226.00000°,δ=68.00000°, λ=-152.00000°. NP2:φ=125.00000°,δ=64.00000°, λ=-25.00000°.*
JMA ***13*** *10:06:37.6±0.7,46°.51N×153°.12E,h30km,M5.3*
ISCJB ***13*** *10:06:39.4±0.5,46°.58N±0°.04×152°.65E±0°.03,h44km±4km, mb4.8/155,MS4.2/13,Error ellipse: s-maj=6.9km s-min=2.9km az=158.9*
SKHL ***13*** *10:06:40.7±2.3,46°.40N×152°.90E,h46km±14km,mb5.2/7, mbh5.2/1,mbv5.6/1,ms3.9/3*
MOS ***13*** *10:06:40.5±1.0,46°.67N×152°.60E,h52km,mb4.9/48,Error ellipse: s-maj=7.3km s-min=5.4km az=90.0*
IDC ***13*** *10:06:41.8±0.6,46°.68N×152°.54E,h51km±5km,mb4.2/23, mb1 4.4/25,mb1mx4.3/28,mbtmp4.2/25,MS3.7/3, Ms1 3.7/3,ms1mx3.1/35,Error ellipse: s-maj=15.5km s-min=10.3km az=144.0*
BJI ***13*** *10:06:41.3,46°.83N×152°.55E,h53km,mB5.0/26,mb4.8/40, Ms4.5/27,Ms7 4.1/25*
NEIC ***13*** *10:06:43.3±0.6,46°.68N×152°.57E,h62km±5km,mb4.8/80, Error ellipse: s-maj=6.7km s-min=3.3km az=163.0*
SZGRF ***13*** *10:06:50.2,48°.12N×152°.04E,h33km,mb5.1,Kuril Islands, Russia*
ISC 13 10:06:42.0±0.4,46°.60N±0°.04×152°.60E±0°.03,h49km±3km, h51km±1.9km:pP-P,n527,σ0°99/450,mb4.8/155,MS4.2/13, 89C-104D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.58**	**249**	*e*PN	**Pn**	**10 07 36.0**	**+1.2**
KUR				*e*S	**Sn**	**10 08 15.7**	**-0.1**
KUR				pmax	pmax		
	comp=N,490nm,0.4s						
KUR				pmax	pmax		
	comp=E,260nm,0.4s						
KUR				pmax	pmax		
	comp=Z,800nm,0.4s						
KUR				smax			
	comp=N,4μm,1.4s						
KUR				smax			
	comp=E,8μm,1.4s						
KUR				smax			
	comp=N,4μm,1.0s						
KUR				smax			
	comp=E,8μm,1.0s						
KUR	**Kuril'sk**	**3.58**	**249**	*e*P	**Pn**	**10 07 36.0**	**+1.2**
KUR				AMB	AMB	10 07 41.2	
	comp=E,370nm,0.4s						
KUR				AMB	AMB	10 07 41.2	
	comp=E,240nm,0.4s						
KUR				AMB	AMB	10 07 41.2	
	comp=E,770nm,0.4s						
KUR				*e*S	**Sn**	**10 08 15.7**	**-0.1**
KUR				A		10 08 35.0	
	comp=E,4μm,1.2s						
KUR				A		10 08 35.0	
	comp=E,8μm,1.2s						
KUR				A		10 08 35.5	
	comp=E,3μm,0.8s						
KUR				A		10 08 35.5	
	comp=E,4μm,0.8s						
SKR	**Severo-Kuril's**	**4.70**	**28**	*e*PN	**Pn**	**10 07 51.5**	**+1.2**
SKR				*i* S	**Sn**	**10 08 40.5**	**-2.9**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,160nm,0.5s						
SKR				smax			
	comp=N,230nm,0.5s						
SKR				smax			
	comp=E,540nm,0.5s						
SKR	**Severo-Kuril's**	**4.70**	**28**	*e*P	**Pn**	**10 07 51.5**	**+1.2**
SKR				AMB	AMB	10 07 57.5	
	comp=E,80nm,0.5s						
SKR				AMB	AMB	10 07 57.5	
	comp=E,160nm,0.5s						
SKR				*i* S	**Sn**	**10 08 40.5**	**-2.9**
SKR				A		10 09 01.5	
	comp=E,230nm,0.5s						
SKR				A		10 09 01.5	
	comp=E,540nm,0.5s						
SKR				A		10 09 01.5	
	comp=E,560nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**5.40**	**244⇑**	*i*PN	**Pn**	**10 08 01.2**	**+1.3**
YUK				*i* S	**Sn**	**10 09 03.3**	**+2.6**
YUK				pmax	pmax		
	comp=N,191nm,0.2s						
YUK				pmax	pmax		
	comp=E,196nm,0.2s						
YUK				pmax	pmax		
	comp=Z,549nm,0.2s						
YUK				pmax	pmax		
	comp=Z,282nm,0.4s						
YUK				smax			
	comp=N,1μm,1.0s						
YUK				smax			
	comp=E,3μm,0.9s						
YUK				smax			
	comp=N,680nm,0.6s						
YUK				smax			
	comp=E,2μm,0.6s						
YUK				MLR	MLR		
	comp=N,617nm,14.9s						
YUK				MLR	MLR		
	comp=Z,555nm,14.9s						
YUK				MLR	MLR		
	comp=E,116nm,3.7s						
YUK	**Yuzh-Kuril'sk**	**5.40**	**244⇑**	*i*P	**Pn**	**10 08 01.2**	**+1.3**
YUK				AMB	AMB	10 08 04.4	
	comp=E,310nm,0.5s						
YUK				AMB	AMB	10 08 04.4	
	comp=E,250nm,0.5s						
YUK				AMB	AMB	10 08 04.4	
	comp=E,580nm,0.5s						
YUK				*i* S	**Sn**	**10 09 03.3**	**+2.6**
YUK				A		10 09 24.1	
	comp=E,2μm,0.8s						
YUK				A		10 09 24.1	
	comp=E,5μm,1.0s						
YUK				A		10 09 24.4	
	comp=E,1μm,0.5s						
YUK				A		10 09 24.4	
	comp=E,2μm,0.5s						
YUK				AMS	AMS	10 10 09.2	
	comp=E,617nm,15.0s						
YUK				AMS	AMS	10 10 09.2	
	comp=E,555nm,15.0s						
NEM2	**Nemuro 2**	**5.84**	**239**	P	**Pn**	**10 08 05.1**	**-0.8**
NEM2				*e*S	**Sn**	**10 09 09.4**	**-2.1**
JRA	**Rausu**	**5.91**	**246**	P	**Pn**	**10 08 09.1**	**+2.2**
JNK	**Nakash**	**6.34**	**244**	P	**Pn**	**10 08 14.2**	**+1.4**
JNK				*e*S	**Sn**	**10 09 25.7**	**+1.9**
JTKR	**Abashiri--Toko**	**6.67**	**250**	P	**Pn**	**10 08 19.6**	**+2.3**
JAK	**Akkeshi**	**6.68**	**240**	P	**Pn**	**10 08 16.5**	**-0.9**
JAK				*e*S	**Sn**	**10 09 29.9**	**-2.2**
YSS	**Yuzh-Sakhalins**	**6.77**	**277**	*e*Pn	**Pn**	**10 08 21.6**	**+3.0**
YSS				*e*Sn	**Sn**	**10 09 36.6**	**+2.3**
YSS	**Yuzh-Sakhalins**	**6.77**	**277⇓**	*i*PN	**Pn**	**10 08 21.0**	**+2.4**
YSS				*e*S	**Sn**	**10 09 36.3**	**+2.0**
YSS				pmax	pmax		
	comp=Z,110nm,1.0s						
YSS				MLR	MLR		
	comp=Z,600nm,17.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.77**	**277⇓**	*i*P	**Pn**	**10 08 21.0**	**+2.4**
YSS				AMB	AMB	10 08 23.2	
	comp=E,110nm,1.0s						
YSS				*e*LQ		10 08 42.0	
YSS				*e*S	**Sn**	**10 09 36.3**	**+2.0**
YSS				AMS	AMS	10 10 50.0	
	comp=E,400nm,16.0s						
YSS				AMS	AMS	10 10 50.0	
	comp=E,500nm,16.0s						
YSS				AMS	AMS	10 10 50.0	
	comp=E,600nm,17.0s						
JMP	**Maruseppu**	**7.01**	**252**	P	**Pn**	**10 08 24.5**	**+2.5**
JAR	**Ashorobuto**	**7.08**	**245**	P	**Pn**	**10 08 24.3**	**+1.4**
JAR				*e*S	**Sn**	**10 09 43.5**	**+1.5**
JSE	**Soyaes**	**7.19**	**260**	P	**Pn**	**10 08 29.3**	**+4.9**
JOB	**Onbets**	**7.25**	**242**	P	**Pn**	**10 08 25.1**	**-0.1**
JOB				*e*S	**Sn**	**10 09 43.7**	**-2.5**
PETK	**Petropavlovsk-**	**7.30**	**25**	P	**Pn**	**10 08 25.9**	**+0.1**
	comp=E,1.7nm,0.3s,baz=199,slow=12,SNR=44						
PETK	**Petropavlovsk-**	**7.30**	**25**	PN	**Pn**	**10 08 25.9**	**+0.1**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JKK2	**Kamakawa 2**	**7.47**	**252**	P	**Pn**	**10 08 31.1**	**+2.9**
ASAJ	**Asahikawa**	**7.47**	**254**	P	**Pn**	**10 08 31.6**	**+3.4**
	comp=Z,6.1nm,0.3s,baz=78,slow=13,SNR=71						
ASAJ				S	**Sn**	**10 10 08.3**	**+17**
	comp=Z,1.9nm,0.3s,baz=96,slow=19,SNR=4.8						
ASAJ	**Asahikawa**	**7.47**	**254**	*e*Pn	**Pn**	**10 08 31.8**	**+3.5**
ASAJ				*e*Sn	**Sn**	**10 10 06.4**	**+15**
ASAJ	**Asahikawa**	**7.47**	**254**	PN	**Pn**	**10 08 31.6**	**+3.4**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ	**Asahikawa**	**7.47**	**254**	P	**Pn**	**10 08 31.7**	**+3.5**
UGL	**Uglegorsk**	**7.51**	**293**	*e*P	**Pn**	**10 08 32.5**	**+3.8**
UGL				AMB	AMB	10 08 33.5	
	comp=Z,140nm,0.8s						
PET	**Petropavlovsk**	**7.52**	**29**	*e*Pn	**Pn**	**10 08 24.9**	**-4.0**
PET				*e*Sn	**Sn**	**10 09 47.5**	**-5.2**
PET	**Petropavlovsk**	**7.52**	**29**	*e*PN	**Pn**	**10 08 28.6**	**-0.3**
PET				MLR	MLR		
	comp=Z,100nm,15.0s						
JWK2	**Keihoku**	**7.57**	**264**	P	**Pn**	**10 08 35.2**	**+5.6**
JCH	**Churui**	**7.70**	**242**	P	**Pn**	**10 08 31.3**	**-0.1**
JCH				*e*S	**Sn**	**10 09 54.8**	**-2.4**
JFR	**Furan**	**7.89**	**248**	P	**Pn**	**10 08 35.6**	**+1.6**
JAB	**Ashibetsu**	**7.97**	**251**	P	**Pn**	**10 08 38.2**	**+3.1**
JEM	**Erimo**	**8.18**	**239**	P	**Pn**	**10 08 38.2**	**+0.3**
JEM				*e*S	**Sn**	**10 10 06.6**	**-2.2**
ERM	**Erimo**	**8.18**	**239**	*e*Pn	**Pn**	**10 08 38.7**	**+0.8**
ERM				*e*Sn	**Sn**	**10 10 03.3**	**-5.6**
ERM	**Erimo**	**8.18**	**239**	*e*PN	**Pn**	**10 08 38.7**	**+0.8**
JBT2	**Biratori 2**	**8.23**	**246**	P	**Pn**	**10 08 38.9**	**+0.2**
JNBK	**Urakawa-nobuka**	**8.26**	**242**	P	**Pn**	**10 08 38.1**	**-1.0**
JEW	**Eniwo**	**8.78**	**249**	P	**Pn**	**10 08 47.9**	**+1.7**
JNB	**Noboribetsu**	**9.23**	**248**	P	**Pn**	**10 08 52.0**	**-0.3**
JNB				*e*S	**Sn**	**10 10 33.4**	**-1.3**
JKB	**Kayabe**	**9.54**	**245**	P	**Pn**	**10 08 55.3**	**-1.3**
JKB				*e*S	**Sn**	**10 10 36.7**	**-5.7**
JSH	**Shimam**	**9.79**	**251**	P	**Pn**	**10 09 01.4**	**+1.5**
JYM2	**Yakumo 2**	**9.84**	**247**	P	**Pn**	**10 09 00.2**	**-0.4**
NKL	**Nikolayevsk**	**10.10**	**315**	*e*P	**Pn**	**10 09 04.0**	**-0.1**

NKL AMB AMB 10 09 08.0
comp=Z,200nm,2.0s
NKL AMB AMB 10 09 08.0
comp=Z,300nm,2.0s
NKL AMB AMB 10 09 09.8
comp=Z,40nm,1.0s
NKL *e*L 10 12 04.0
NKL AMS AMS 10 13 37.0
comp=Z,500nm,16.0s
NKL AMS AMS 10 13 37.0
comp=Z,1μm,16.0s
JSR Shiriuchi 10.12 244 P **Pn 10 09 03.2 -1.4**
JSR *e*S **Sn 10 10 50.4 -6.2**
JTM Tenmabayashi 10.17 239 P **Pn 10 09 02.8 -2.4**
JTM *e*S **Sn 10 10 50.4 -7.3**
JANG Nango 10.17 236 P **Pn 10 09 01.9 -3.4**
JANG *e*S **Sn 10 10 48.3 -10**
JTH Tanohata 10.27 233 P **Pn 10 09 02.6 -4.0**
JTH *e*S **Sn 10 10 50.4 -10**
JOSM Okushiri--Mats 10.43 249 P **Pn 10 09 08.2 -0.5**
OFUJ Ofunato 10.99 231 P **Pn 10 09 12.4 -4.0**
TEY Ternei 11.28 268 *e*P **Pn 10 09 26.0 +5.7**
TEY AMB AMB 10 09 26.8
comp=Z,17nm,0.9s
TEY AMB AMB 10 09 26.8
comp=Z,17nm,0.9s
JRG Rokugo 11.33 235 P **Pn 10 09 18.1 -3.0**
JIO Ouri 11.62 230 P **Pn 10 09 21.4 -3.6**
JIO *e*S **Sn 10 11 22.8 -10**
HABR Khabarovsk 12.01 285 *ce*PN **Pn 10 09 36.4 +6.1**
HABR pmax pmax
comp=E,39nm,1.5s
HABR pmax pmax
comp=Z,34nm,1.1s
HABR pmax pmax
comp=N,10.0nm,0.7s
HABR MLR MLR
comp=Z,341nm,15.0s
JYA Atsumi 12.41 234 P **Pn 10 09 32.9 -2.8**
KLR Kul'dur 14.22 288 *e*P **Pn 10 10 00.0 -0.4**
FX1 Attu Island--F 14.68 57 *e*Pn **Pn 10 10 04.8 -1.6**
FX1 Attu Island--F 14.68 57 *e*P **Pn 10 10 04.8 -1.6**
MJAR Matsushiro Arr 14.71 232 P **Pn 10 10 08.1 +1.2**
comp=Z,0.6nm,0.3s,baz=35,slow=11,SNR=22
MJAR LR LR 10 16 10.6
comp=Z,152nm,18.4s,baz=55,slow=39
MJAR Matsushiro Arr 14.71 232 P **Pn 10 10 08.1 +1.2**
MJAR LR LR 10 16 10.6
MJAR Matsushiro Arr 14.71 232 P **Pn 10 10 08.1 +1.2**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR MLR MLR
comp=Z,152nm,18.4s
MAJO Matsushiro 14.71 232 *e*Pn **Pn 10 10 04.3 -2.5**
MAJO Matsushiro 14.71 232 *e*P **Pn 10 10 04.3 -2.6**
MAT Matsushiro 14.71 232 P **Pn 10 10 03.9 -3.0**
JNG Nsakai 14.87 232 P **Pn 10 10 06.6 -2.4**
MDJ Mudanjiang 16.21 271 P **Pn 10 10 26.1 -0.1**
MDJ pP pP 10 10 39.8 0.0
MDJ sP sP 10 10 46.8 +0.7
MDJ S **S 10 13 23.6 -12**
MDJ PcP PcP 10 15 19.1 +0.9
MDJ ScP ScP 10 18 48.8 +0.5
MDJ PcS PcS 10 18 54.6 +0.9
MDJ ScS ScS 10 22 28.3 +1.1
MDJ pmax pmax
comp=Z,12nm,1.3s
MDJ pmax pmax
comp=Z,190nm,8.8s
MDJ Mudanjiang 16.21 271 *e*Pn **Pn 10 10 26.1 -0.1**
comp=Z,28nm,0.9s
MDJ Mudanjiang 16.21 271 ScS PcP 10 15 18.8 +0.6
SEY Seymchan 16.37 360⇑ *e*P **Pn 10 10 30.3 +2.3**
CN2 Changchun 19.30 272 *e*P **Pn 10 11 03.0 -1.0**
CN2 *e*S **S 10 14 34.8 -3.5**
CN2 pmax pmax
comp=Z,20nm,0.5s
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,200nm,10.0s
CN2 LR LR
comp=E,200nm,10.0s
CN2 LR LR
comp=Z,400nm,13.0s
CLNS Chul'man 19.85 311 *e*P **Pn 10 11 10.6 +0.2**
CLNS pmax pmax
comp=Z,15nm,0.7s
CLNS pmax pmax
comp=N,9.0nm,0.7s
CLNS pmax pmax
comp=E,4.0nm,0.7s
CLNS pmax pmax
comp=Z,14nm,1.1s
CLNS pmax pmax
comp=E,3.0nm,0.7s
CLNS pmax pmax
comp=N,10.0nm,1.0s
CLNS MLR MLR
comp=E,350nm,14.0s
CLNS MLR MLR
comp=Z,315nm,18.0s
CLNS MLR MLR
comp=N,137nm,19.0s
YAK Yakutsk 20.26 328 *e*Pn **P 10 11 13.8 +1.0**
comp=N,86nm,0.7s
YAK Yakutsk 20.26 328 *e*P **P 10 11 13.7 +0.9**
YAK *e**PP 10 11 28.3
YAK *e* 10 11 35.0
YAK *e*S **S 10 14 59.5 +2.4**
YAK *e*SS 10 15 21.8
YAK pmax pmax
comp=E,18nm,1.0s
YAK pmax pmax
comp=Z,52nm,0.8s
YAK pmax pmax
comp=N,11nm,1.0s
YAK pmax pmax
comp=Z,51nm,1.0s
YAK pmax pmax
comp=N,25nm,1.6s
YAK pmax pmax
comp=E,30nm,1.7s
YAK smax
comp=N,73nm,3.8s
YAK smax
comp=E,70nm,3.0s
KSRS Korea Array 20.41 252 P **P 10 11 15.9 +1.2**
comp=E,10.0nm,0.7s,baz=56,slow=11,SNR=41
KSRS PcP PcP 10 15 25.6 +0.2
comp=E,1.1nm,0.8s,baz=75,slow=1.4,SNR=5.7
KSRS LR LR 10 18 13.3
comp=E,156nm,19.4s,MS3.4,baz=65,slow=34
KSRS Korea Array 20.41 252 P **P 10 11 16.0 +1.2**
KSRS 10 15 25.6
KSRS pmax pmax
comp=Z,10.0nm,0.7s
KSRS pmax pmax
comp=Z,1.0nm,0.8s
KSRS MLR MLR
comp=Z,156nm,19.4s,MS3.4
INCN Inchon 21.25 254 *e*P **P 10 11 23.2 -0.5**
comp=Z,32nm,0.7s,mb4.8
JTU Tsushima 21.27 244 P **P 10 11 24.2 +0.2**
JNU Nakatsue 21.34 239 *e*P **P 10 11 25.4 +0.6**
comp=Z,6.1nm,0.8s,mb4.0
BILL Bilibino 22.62 13⇓ *e*P **P 10 11 38.5 +0.5**
BILL *e* 10 12 00.4
BILL *e*SS 10 16 23.9
BILL pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
BILL MLR MLR
comp=Z,200nm,17.0s,MS3.6
BJI Beijing 27.12 269 P **P 10 12 24.5 +4.4**
BJI pmax pmax
comp=Z,18nm,0.7s,mb4.7
BJI LR LR
comp=N,220nm,11.6s,MS4.1
BJI LR LR
comp=E,310nm,15.3s,MS4.1
NJ2 Nanjing 29.61 253 *e*P **P 10 12 47.3 +4.9**
NJ2 PP PP 10 13 43.1 -6.7
NJ2 S **S 10 17 39.5 +5.3**
NJ2 pmax pmax
comp=Z,30nm,1.1s,mb4.9
NJ2 pmax pmax
comp=Z,740nm,4.5s
NJ2 LR LR
comp=N,880nm,15.3s,MS4.6
NJ2 LR LR
comp=E,820nm,15.1s,MS4.6
NJ2 LR LR
comp=Z,1μm,14.8s,MS4.6
HHC Hu-ho-hao-te 29.95 274 *e*P **P 10 12 46.8 +1.5**
HHC pP pP 10 12 58.8 +0.8
HHC sP sP 10 13 04.3 +0.4
HHC PP PP 10 13 45.1 -8.3
HHC PcP PcP 10 15 49.1 +2.4
HHC S **S 10 17 40.0 +0.7**
HHC sS sS 10 17 59.5 -1.3
HHC SS SS 10 19 16.0 -32
HHC ScP ScP 10 19 26.6 +2.1
HHC ScS ScS 10 23 20.8 +1.0
HHC pmax pmax
comp=Z,25nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,160nm,5.4s
HHC LR LR
comp=N,350nm,10.6s,MS4.4
HHC LR LR
comp=E,330nm,12.0s,MS4.4
HHC LR LR
comp=Z,200nm,11.8s,MS4.0
ULN Ulaanbaatar 30.61 289 *e*P **P 10 12 50.5 -0.5**
comp=Z,11nm,0.8s,mb4.7
ULN Ulaanbaatar 30.61 289 *e*P **P 10 12 50.5 -0.5**
ULN pmax pmax
comp=Z,11nm,0.8s,mb4.7
SONM Songino Array 31.05 289 P **P 10 12 53.8 -1.1**
comp=Z,1.9nm,0.8s,mb4.0,baz=74,slow=7.6,SNR=9.7
SONM PcP PcP 10 15 49.3 -0.1
comp=Z,0.6nm,0.6s,baz=112,slow=2.5,SNR=4.7
SONM Songino Array 31.05 289 P **P 10 12 53.8 -1.1**
SONM 10 15 49.3
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM pmax pmax
comp=Z,1.0nm,0.6s
TLY Talaya 31.93 297 *e*P **P 10 13 01.6 -1.0**
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
TLY MLR MLR
comp=Z,264nm,18.0s,MS4.0
ZAK Zakamensk 32.42 295 *e*P **P 10 13 05.8 -1.1**
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
WHN Wuhan 33.55 255 P **P 10 13 17.5 +0.5**
KDAK Kodiak Island 34.47 51 P **P 10 13 23.4 -1.2**
comp=Z,4.2nm,0.4s,mb4.7,baz=254,slow=4.8,SNR=6.0
KDAK Kodiak Island 34.47 51 *i*P **P 10 13 23.6 -1.0**
BPAW Bear Paw Mtn. 35.09 40 *e*P **P 10 13 30.2 +0.2**
comp=Z,7.6nm,1.1s,mb4.5
XAN Xi'an 35.15 265 P **P 10 13 30.9 +0.1**
XAN pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
XAN pmax pmax
comp=Z,62nm,4.4s
COLD Coldfoot 35.65 34 *e*P **P 10 13 34.5 -0.2**
comp=Z,5.6nm,0.9s,mb4.5
MCK McKinley 35.99 40 *e*P **P 10 13 36.6 -1.0**
comp=Z,29nm,1.8s,mb4.9
MCK McKinley 35.99 40 *e*P **P 10 13 36.6 -1.1**
MCK pmax pmax
comp=Z,29nm,1.8s,mb4.9
SML Sawmill 36.32 43 *e*P **P 10 13 40.4 0.0**
comp=Z,5.6nm,0.8s,mb4.5
SML Sawmill 36.32 43 *e*P **P 10 13 40.4 -0.1**
SML pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
COLA College 36.47 38 *e*P **P 10 13 42.0 +0.2**
comp=Z,11nm,0.8s,mb4.8
COLA College 36.47 38 *e*P **P 10 13 42.0 +0.3**
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.8
ILAR Eielson Array 36.88 38 P **P 10 13 43.9 -1.4**
comp=Z,3.7nm,1.0s,mb4.2,baz=267,slow=7.5,SNR=26
ILAR Eielson Array 36.88 38 P **P 10 13 43.9 -1.3**
ILAR pmax pmax
comp=Z,4.0nm,1.0s
LZH Lanzhou 37.54 272 *e*P **P 10 13 51.5 +0.4**
LZH pP pP 10 14 04.5 +0.4
LZH sP sP 10 14 09.8 -0.1
LZH PP PP 10 15 20.4 +3.0
LZH pmax pmax
comp=Z,23nm,1.3s,mb4.8
LZH pmax pmax
comp=Z,65nm,4.7s
LZH LR LR
comp=N,440nm,13.0s,MS4.6
LZH LR LR
comp=E,410nm,12.6s,MS4.6
LZH LR LR
comp=Z,540nm,18.0s
GTA Gaotai 38.64 279 P **P 10 14 03.0 +2.6**
GTA pP pP 10 14 16.1 +2.7
GTA sP sP 10 14 21.5 +2.3
GTA PcP PcP 10 16 12.9 +1.2
GTA S **S 10 19 58.5 +5.2**
GTA sS sS 10 20 19.4 +4.3
GTA pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
GTA pmax pmax
comp=Z,130nm,6.6s
GTA LR LR
comp=N,200nm,18.5s
GTA LR LR
comp=E,190nm,27.5s
GTA LR LR
comp=Z,230nm,22.3s,MS4.0
EGAK Eagle 39.34 38 *e*P **P 10 14 05.1 -0.8**
comp=Z,11nm,0.9s,mb4.6
CD2 Chengdu 40.51 265 *e*P **P 10 14 16.9 +0.9**
CD2 pP pP 10 14 29.3 +0.2
CD2 sP sP 10 14 33.8 -1.1
CD2 PP PP 10 15 54.4 +4.5
CD2 S **S 10 20 21.8 +0.3**
CD2 sS sS 10 20 42.3 -1.1
CD2 SS SS 10 23 16.8 -5.5
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.0
CD2 pmax pmax
comp=Z,100nm,4.2s
CD2 LR LR
comp=N,180nm,11.9s
CD2 LR LR
comp=Z,300nm,11.8s,MS4.4
GYA Guiyang 41.34 257 P **P 10 14 24.6 +1.7**
GYA pP pP 10 14 38.0 +2.0
GYA sP sP 10 14 43.3 +1.6
GYA PP PP 10 16 03.6 +4.7
GYA PcP PcP 10 16 22.8 +2.3
GYA ScP ScP 10 20 06.9 +0.8
GYA PcS PcS 10 20 14.4 +2.5
GYA S **S 10 20 34.9 +1.1**
GYA sS sS 10 20 57.8 +2.0
GYA SS SS 10 23 32.0 -6.8
GYA pmax pmax
comp=Z,20nm,0.8s,mb4.8
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=N,640nm,16.9s,MS4.7
GYA LR LR
comp=E,490nm,17.0s,MS4.7
GYA LR LR
comp=Z,500nm,17.1s,MS4.5
INK Inuvik 41.97 32 P **P 10 14 26.9 -0.6**
comp=Z,4.0nm,0.5s,mb4.3,baz=270,slow=5.3,SNR=15
INK Inuvik 41.97 32 *e*P **P 10 14 19.9 -7.6**
comp=Z,13nm,1.3s,mb4.4
INK P 10 14 26.9
INK Inuvik 41.97 32 *e*P **P 10 14 19.9 -7.6**
INK pmax pmax
comp=Z,13nm,1.3s
ZALV Zalesovo Beam 42.41 306 P **P 10 14 29.4 -1.9**
comp=Z,3.9nm,0.5s,mb4.3,baz=68,slow=6.7,SNR=12
ZALV PcP PcP 10 16 23.0 -0.6
comp=Z,6.5nm,0.8s,baz=75,slow=3.1,SNR=16
ZALV Zalesovo Beam 42.41 306 P **P 10 14 29.4 -1.9**
ZALV 10 16 23.0
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
ZALV pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
QIZ Qiongzhong 44.47 246 P **P 10 14 49.8 +1.6**
QIZ S **S 10 21 21.8 +2.0**
QIZ pmax pmax
comp=Z,11nm,1.6s,mb4.3
QIZ LR LR
comp=Z,310nm,24.6s,MS4.1
WMQ Urumqi 44.65 291 *e*P **P 10 14 51.0 +1.6**
WMQ pmax pmax
comp=Z,14nm,1.0s,mb4.8
KMI Kunming 44.87 259 P **P 10 14 52.3 +0.9**
KMI pP pP 10 15 06.0 +1.4
KMI sP sP 10 15 11.6 +1.3
KMI S **S 10 21 26.6 +1.1**
KMI pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
KMI pmax pmax
comp=Z,240nm,5.6s
KMI LR LR
comp=N,270nm,31.3s
KMI LR LR
comp=E,220nm,24.9s
KMI LR LR
comp=Z,240nm,24.9s
DLBC Dease Lake 45.95 46 P **P 10 15 00.7 +1.2**
comp=Z,5.5nm,0.8s,mb4.6,baz=307,slow=7.7,SNR=20
DLBC Dease Lake 45.95 46 *e*P **P 10 15 01.1 +1.6**
MK31 Makanchi Array 46.69 297 *e*P **P 10 15 04.7 -0.8**
MK31 *e*PcP PcP 10 16 38.1 -0.3
MK31 Makanchi Array 46.69 297 *e*P **P 10 15 04.7 -0.8**
MK31 *e* 10 16 38.1
MKAR Makanchi Array 46.69 297 P **P 10 15 03.9 -1.7**
comp=Z,5.4nm,0.6s,mb4.7,baz=66,slow=7.4,SNR=43
MKAR PcP PcP 10 16 37.8 -0.6
comp=Z,3.1nm,0.6s,baz=71,slow=2.5,SNR=9.7
MKAR Makanchi Array 46.69 297 *ce*P **P 10 15 04.5 -1.0**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
KURK Kurchatov 47.15 304 *e*P **P 10 15 07.3 -1.7**
comp=Z,20nm,1.3s,mb4.9
KURK Kurchatov 47.15 304 *d i*P **P 10 15 07.3 -1.7**
KURK pmax pmax
comp=Z,11nm,1.0s,mb4.7
LSA Lhasa 49.93 273 *e*P **P 10 15 33.0 +2.3**
comp=Z,32nm,0.9s,mb5.4
LSA Lhasa 49.93 273 *e*P **P 10 15 33.0 +2.3**
LSA pmax pmax
comp=Z,32nm,0.9s,mb5.3
VOSK Vostochnaya 50.50 309 P **P 10 15 33.0 -1.7**
VOSK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
BRVK Borovoye 50.72 309 *e*P **P 10 15 35.3 -1.0**
comp=Z,7.3nm,0.6s,mb4.8
BRVK Borovoye 50.72 309 *d i*P **P 10 15 35.5 -0.8**
BRVK pmax pmax
comp=Z,11nm,1.2s,mb4.7
YKA Yellowknife Ar 51.25 36 P **P 10 15 39.6 -0.6**
comp=Z,1.5nm,0.5s,mb4.1,baz=299,slow=7.1,SNR=5.7
YKA Yellowknife Ar 51.25 36 P **P 10 15 39.6 -0.6**
YKA pmax pmax
comp=Z,2.0nm,0.5s
ZRNK Zerenda 51.45 310 *i*P **P 10 15 40.0 -1.8**
ZRNK pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
CHTO Chiang Mai 51.74 256 *e*P **P 10 15 45.3 +0.9**
comp=Z,14nm,0.9s,mb4.9
CHTO Chiang Mai 51.74 256 *e*P **P 10 15 45.3 +0.9**
CHTO pmax pmax
comp=Z,14nm,0.9s,mb4.9
CMAR Chiang Mai Arr 51.99 256 P **P 10 15 46.9 +0.6**
comp=Z,8.4nm,0.8s,mb4.7,baz=38,slow=7.4,SNR=34
CMAR Chiang Mai Arr 51.99 256 P **P 10 15 46.9 +0.6**
CMAR pmax pmax
comp=Z,8.0nm,0.8s
SHL Shillong 52.01 268 *e*PKP **P 10 15 45.5 -0.9**
TKM2 Tokmak 2 52.74 296 *e*P **P 10 15 51.5 0.0**
comp=Z,4.3nm,0.8s,mb4.4
TKM2 Tokmak 2 52.74 296 *e*P **P 10 15 51.5 -0.1**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KBK Karagaybulak 53.29 296 *e*P **P 10 15 54.9 -0.7**
comp=Z,6.5nm,1.0s,mb4.5
TAPN Taplejung 53.75 273 *e*P **P 10 16 00.3 +1.1**
comp=Z,44nm,0.8s,mb5.5
ODAN Odare 54.28 273 *e*P **P 10 16 04.3 +1.2**
comp=Z,20nm,0.6s,mb5.2
KSH Kashi 54.38 292 *e*P **P 10 16 08.0 +4.4**
KSH *ep*P pP 10 16 20.6 +3.4
KSH *es*P sP 10 16 25.9 +3.1
KSH *e*PcP PcP 10 17 11.9 +5.0
KSH *e*PP PP 10 18 11.5 +5.8
KSH *e*ScP ScP 10 21 04.3 +3.5
KSH *e*PcS PcS 10 21 09.8 +3.4
KSH *e*S **S 10 23 40.3 +2.1**
KSH *e*ScS ScS 10 25 49.9 +1.5
KSH *e*SS SS 10 27 21.8 +1.4
KSH pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KSH LR LR
comp=N,230nm,4.6s
KSH LR LR
comp=E,230nm,4.8s
KSH LR LR
comp=Z,680nm,22.6s,MS4.7
GUN Gumba 54.66 275 *e*P **P 10 16 06.7 +0.9**
comp=Z,30nm,0.5s,mb5.6
ARU Arti 54.88 317 *e*P **P 10 16 05.4 -1.5**
comp=Z,6.9nm,0.6s,mb4.9
ARU Arti 54.88 317 *d i*P **P 10 16 05.3 -1.7**
ARU 10 17 07.6
ARU 10 18 10.6
ARU S **S 10 23 41.6 -2.8**
ARU pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KKN Kakani 55.15 275 *e*P **P 10 16 10.4 +1.1**
comp=Z,67nm,0.7s,mb5.8
PKI Pulchoki 55.20 275 *e*P **P 10 16 10.5 +0.8**
comp=Z,35nm,0.7s,mb5.5
PKIN Phulchoki 55.20 275 *e*P **P 10 16 10.4 +0.7**
comp=Z,19nm,0.5s,mb5.4
DMN Daman 55.38 275 *e*P **P 10 16 12.0 +1.0**
comp=Z,94nm,0.8s,mb5.9
GKN Gorkha 55.45 276 *e*P **P 10 16 12.4 +0.9**
comp=Z,139nm,0.8s,mb6.0
KKAR Karatay Array 55.76 299 *e*P **P 10 16 12.6 -0.9**
KKAR Karatay Array 55.76 299 *e*P **P 10 16 12.6 -0.9**
DANN Dangsing 55.84 277 *e*P **P 10 16 15.6 +1.3**
comp=Z,99nm,0.6s,mb6.0
ETW Entiat 56.15 54 *e*P **P 10 16 16.1 -0.1**
KOLN Koldanda 56.31 276 *e*P **P 10 16 18.7 +1.0**
comp=Z,74nm,0.7s,mb5.8
PRGR Permogore 57.30 327 *e*P **P 10 16 24.0 -0.1**
PRGR pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
KEV Kevo 57.36 340 *e*P **P 10 16 22.2 -2.3**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KEV Kevo 57.36 340 *e*p **P 10 16 22.2 -2.3**
comp=Z,1.8nm,0.4s,mb4.5
ARCES ARCESS Array B 57.88 341 P **P 10 16 27.1 -1.0**
comp=Z,1.5nm,0.4s,mb4.3,baz=32,slow=7.4,SNR=13
ARCES PcP PcP 10 17 19.4 -0.5
comp=Z,2.1nm,0.8s,baz=44,slow=4.4,SNR=6.2
ARCES ARCESS Array B 57.88 341 P **P 10 16 27.1 -1.0**
ARCES PcP PcP 10 17 19.4 -0.5
ARCES ARCESS Array B 57.88 341 P **P 10 16 27.1 -1.0**
ARCES 10 17 19.4
ARCES pmax pmax
comp=Z,2.0nm,0.4s
ARCES pmax pmax
comp=Z,2.0nm,0.8s
E09A Wood Farm, Sta 57.99 55 ⇓P **P 10 16 29.6 +0.3**
baz=58
AB31 Akbulak array 58.25 310 *ce*P **P 10 16 29.8 -1.2**
AB31 pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
ABKAR Akbulak array 58.25 310 *e*P **P 10 16 29.6 -1.4**
A13A Flathead Natio 58.62 50 ⇑P **P 10 16 32.4 -1.1**
baz=58
WALA Waterton Lakes 58.81 50 *e*P **P 10 16 34.8 -0.1**
comp=Z,0.2nm,0.8s
B13A Whitefish 58.92 51 ⇓P **P 10 16 36.3 +0.6**
baz=59

A14A **Double T Ranch** 59.12 50 ⇑P P 10 16 37.1 +0.1
baz=59
MOD **Modoc** 59.47 60 eP P 10 16 40.0 +0.5
comp=Z,2.8nm,0.8s,mb4.3
A15A **Johnson Ranch,** 59.48 50 ⇑P P 10 16 38.6 -0.9
baz=59
E12A **Beaver Dam Sad** 59.49 53 ⇑P P 10 16 39.2 -0.4
baz=59
B14A **Marquette Ranc** 59.56 50 ⇓P P 10 16 40.6 +0.5
baz=59
NDI **New Delhi** 60.08 281 ePKP P 10 16 42.0 -2.0
A16A **West Butte Ran** 60.09 49 ⇓P P 10 16 43.7 -0.1
baz=60
SLMT **Seeley Lake** 60.12 52 eP P 10 16 44.5 +0.5
MSO **Missoula** 60.13 52 ⇓P P 10 16 43.8 -0.2
baz=60
MSO **Missoula** 60.13 52 eP P 10 16 44.1 0.0
comp=Z,6.7nm,1.2s,mb4.5
WVOR **Wild Horse Val** 60.14 59 eP P 10 16 44.3 +0.1
comp=Z,6.6nm,1.0s,mb4.6
WVOR **Wild Horse Val** 60.14 59 eP P 10 16 44.3 +0.1
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
D14A **Greenough** 60.22 52 ⇓P P 10 16 44.9 +0.3
baz=60
E13A **Victor** 60.23 53 ⇑P P 10 16 45.3 +0.5
baz=60
C15A **Salmond Ranch,** 60.27 51 P P 10 16 45.8 +0.7
baz=60,SNR=8.7
B16A **M & M Farms, S** 60.36 50 ⇓P P 10 16 45.6 +0.1
baz=60
G12A **Big Creek, Yel** 60.40 54 ⇑P P 10 16 46.0 0.0
baz=60
A17A **Triple J Farms** 60.56 49 P P 10 16 46.7 -0.3
baz=60,SNR=5.6
C16A **Fuhringer Ranc** 60.72 50 P P 10 16 48.5 +0.5
baz=60,SNR=5.8
SUMG **Summit** 60.87 4 eP P 10 16 48.1 -0.6
comp=Z,23nm,1.1s,mb5.2
SUMG **Summit** 60.87 4 *i*P P 10 16 48.8 +0.1
comp=Z,13nm,0.9s,mb5.0
B17A **L&G Farms, Che** 60.91 49 P P 10 16 49.5 +0.2
baz=61,SNR=5.4
A18A **Metzger Ranch,** 61.02 48 ⇓P P 10 16 49.8 -0.2
baz=61
G13A **Cobalt** 61.04 54 ⇑P P 10 16 50.1 -0.1
baz=61
FFC **Flin Flon** 61.08 40 eP P 10 16 50.0 -0.4
comp=Z,11nm,0.9s,mb5.0
FFC **Flin Flon** 61.08 40 eP P 10 16 50.0 -0.4
FFC pmax pmax
comp=Z,11nm,0.9s,mb5.0
E15A **Deer Lodge** 61.09 52 ⇓P P 10 16 50.9 +0.3
baz=61
D16A **Dana Ranch, Ca** 61.30 51 ⇑P P 10 16 52.5 +0.5
baz=61
JOF **Joensuu** 61.31 334 eP P 10 16 50.3 -1.5
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
JOF **Joensuu** 61.31 334 ep P 10 16 50.3 -1.5
comp=Z,5.7nm,0.6s,mb4.9
I12A **Atlanta** 61.33 56 ⇓P P 10 16 52.7 +0.5
baz=61
C17A **Wharram Farm,** 61.34 50 P P 10 16 52.4 +0.1
baz=61,SNR=5.3
H13A **Challis** 61.35 54 ⇑P P 10 16 52.7 +0.3
baz=61
PAHR **Pah Rah Range** 61.36 61 eP P 10 16 52.8 +0.2
comp=Z,23nm,1.6s,mb5.1
B18A **Beardsley Farm** 61.38 49 P P 10 16 53.0 +0.5
baz=61,SNR=7.1
WCN **Washoe City** 61.39 62 eP P 10 16 52.6 -0.1
comp=Z,6.6nm,1.2s,mb4.6
WCN **Washoe City** 61.39 62 eP P 10 16 52.6 -0.1
WCN pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
F15A **Butte** 61.53 52 ⇑P P 10 16 54.2 +0.6
baz=61,SNR=5.4
LRM **Limekiln Ridge** 61.57 52 eP P 10 16 54.2 +0.4
A19A **Klindworth Far** 61.58 48 ⇑P P 10 16 54.1 +0.2
baz=61
EGMT **Eagleton** 61.62 49 ⇑P P 10 16 54.6 +0.5
baz=61
D17A **Six Diamond Ra** 61.68 50 ⇓P P 10 16 55.0 +0.4
baz=61
B19A **Brinkman Farms** 61.77 48 ⇓P P 10 16 55.5 +0.4
baz=62,SNR=8.4
CMB **Columbia Colle** 61.79 63 eP P 10 16 55.3 -0.1
comp=Z,5.2nm,1.1s,mb4.6
CMB **Columbia Colle** 61.79 63 eP P 10 16 55.3 -0.1
CMB pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
KBL **Kabul** 61.79 291 eP P 10 16 54.5 -1.0
comp=Z,10nm,0.6s,mb5.1
KBL **Kabul** 61.79 291 eP P 10 16 54.5 -1.0
KBL pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
A20A **Cobblestone Ra** 62.02 48 ⇓P P 10 16 57.1 +0.2
baz=62
E17A **Martinsdale** 62.03 51 ⇑P P 10 16 57.8 +0.9
baz=62
F16A **Kennard Place,** 62.04 52 ⇑P P 10 16 57.5 +0.5
baz=62
WAKR **Walker** 62.08 63 eP P 10 16 57.8 +0.4
BOZ **Bozeman (W)** 62.12 52 ⇓P P 10 16 58.2 +0.6
baz=62
BOZ **Bozeman (W)** 62.12 52 eP P 10 16 57.6 0.0
BOZ **Bozeman (W)** 62.12 52 eP P 10 16 57.6 0.0
C19A **Slack Wire Ran** 62.18 49 P P 10 16 58.5 +0.6
baz=62,SNR=7.5
I14A **Mackay** 62.20 55 ⇓P P 10 16 58.8 +0.7
baz=62
G16A **Moss Hill, Enn** 62.29 53 ⇑P P 10 16 58.8 +0.1
baz=62,SNR=6.5
J14A **Carey** 62.54 55 ⇓P P 10 17 01.5 +1.1
baz=62
C20A **Veseth Ranch,** 62.73 49 ⇓P P 10 17 02.4 +0.8
baz=62
NVAR **Mina Array Bea** 62.82 62 P P 10 17 02.5 +0.2
comp=Z,1.2nm,0.7s,mb4.1,baz=303,slow=7.4,SNR=12
NVAR pP pP 10 17 16.5 +0.4
comp=Z,2.7nm,0.7s,baz=294,slow=7.0,SNR=16
F18A **Big Timber** 62.99 51 ⇓P P 10 17 04.1 +0.7
baz=63
D20A **Manuel Ranch,** 63.06 49 P P 10 17 04.6 +0.8
baz=63,SNR=6.2
E19A **Rath Farm, Rou** 63.13 50 ⇑P P 10 17 04.6 +0.4
baz=63
KAF **Kangasniemi** 63.43 335 eP P 10 17 04.1 -1.8
KAF pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
KAF **Kangasniemi** 63.43 335 ep P 10 17 04.1 -1.8
comp=Z,7.9nm,0.6s,mb5.0
IMW **Indian Meadow** 63.62 53 eP P 10 17 08.5 +1.0
comp=Z,5.5nm,1.1s,mb4.5
D21A **La Casta Ranch** 63.67 49 ⇑P P 10 17 08.5 +0.7
baz=63,SNR=5.3
RLMT **Red Lodge** 63.74 51 ⇑P P 10 17 08.7 +0.4
baz=64
RLMT **Red Lodge** 63.74 51 eP P 10 17 09.2 +1.0
comp=Z,11nm,1.4s,mb4.7
RRI2 **Red Ridge** 63.76 54 eP P 10 17 09.9 +1.4
comp=Z,7.8nm,0.8s,mb4.8
MOOW **Moose Ponds** 63.82 53 eP P 10 17 09.5 +0.6
comp=Z,9.1nm,1.5s,mb4.6
TPAW **Teton Pass** 63.88 54 eP P 10 17 09.5 +0.3
comp=Z,8.3nm,1.1s,mb4.7
A24A **Westby** 63.96 46 ⇓P P 10 17 09.9 +0.2
baz=64
LOHW **Long Hollow** 63.99 53 eP P 10 17 09.8 -0.1
comp=Z,25nm,2.0s,mb4.9
LOHW epP pP 10 17 25.3 +1.5
SNOW **Snow King Moun** 64.00 54 eP P 10 17 11.6 +1.5
comp=Z,9.7nm,1.2s,mb4.7
REDW **Red Top Meadow** 64.01 54 eP P 10 17 11.5 +1.3
comp=Z,17nm,1.3s,mb4.9
FINES **FINESS Array B** 64.02 335 P P 10 17 08.4 -1.5
comp=Z,15nm,0.5s,mb5.3,baz=32,slow=8.2,SNR=97
FINES **FINESS Array B** 64.02 335 P P 10 17 08.4 -1.5
FINES pmax pmax
comp=Z,15nm,0.5s
J17A **Brown Place, J** 64.09 54 ⇓P P 10 17 10.5 -0.1
baz=64
PKM **Peak Mountain** 64.13 66 ⇑pP pP 10 17 26.3 +1.5
baz=64
DGMT **Dagmar** 64.17 46 ⇑P P 10 17 11.1 +0.1
baz=64
DGMT **Dagmar** 64.17 46 eP P 10 17 11.3 +0.2
comp=Z,11nm,0.8s,mb4.9
DGMT epP pP 10 17 20.4 -4.5
G20A **Bridger** 64.24 51 ⇓pP pP 10 17 25.6 +0.2
baz=64
ISA **Isabella** 64.47 64 ⇓pP pP 10 17 27.1 -0.1
baz=64
R11A **Troy Canyon, C** 64.51 61 ⇓pP pP 10 17 27.9 +0.6
baz=64
MPMC **Manual Prospec** 64.83 64 pP pP 10 17 30.2 +0.8
baz=65,SNR=5.4
FURC **Furnace Creek,** 64.95 63 pP pP 10 17 31.1 +0.9
baz=65,SNR=5.0
DUG **Dugway** 64.95 57 ⇓pP pP 10 17 31.0 +0.9
baz=65,SNR=5.2
LRMC **Laurel Mountai** 65.08 64 ⇑pP pP 10 17 31.0 -0.1
baz=65
PDAR **Pinedale Array** 65.12 54 P P 10 17 17.2 -0.2
comp=Z,1.7nm,0.9s,mb4.1,baz=292,slow=2.4,SNR=14
PDAR pP pP 10 17 31.7 +0.5
comp=Z,3.7nm,0.9s,baz=321,slow=3.8,SNR=11
P14A **Drum Mountains** 65.20 58 ⇓pP pP 10 17 32.5 +0.8
baz=65,SNR=5.1
EDW2 **Edwards Air Fo** 65.28 65 pP pP 10 17 33.1 +0.7
baz=65,SNR=5.3
S12A **Delamar Landin** 65.43 61 ⇓pP pP 10 17 34.6 +1.3
baz=65
T11A **Corn Creek, Al** 65.45 61 ⇓pP pP 10 17 34.1 +0.6
baz=65
Q14A **Sevier Lake (B** 65.47 59 ⇑pP pP 10 17 34.5 +1.0
baz=65
K19A **Absolon Red Bu** 65.47 53 ⇓pP pP 10 17 33.3 -0.2
baz=65
NLU **North Lily Min** 65.54 57 eP P 10 17 20.6 +0.5
comp=Z,6.1nm,1.0s,mb4.6
SHOC **Shoshone** 65.68 63 ⇓pP pP 10 17 35.3 +0.3
baz=66
GSC **Goldstone** 65.74 64 ⇓pP pP 10 17 36.1 +0.7
baz=66
BFSC **Mount Baldy Ra** 65.91 65 ⇑pP pP 10 17 37.2 +0.7
baz=66
Q15A **Fillmore** 65.99 58 ⇓pP pP 10 17 37.3 +0.4
baz=66
S13A **Holt Ranch, En** 66.05 60 ⇓pP pP 10 17 38.4 +1.1
baz=66
ARUT **Antelope Range** 66.16 60 eP P 10 17 24.3 +0.2
comp=Z,3.2nm,0.8s,mb4.4
ARUT **Antelope Range** 66.16 60 eP P 10 17 24.3 +0.2
ARUT pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TUQ **Turquoise Moun** 66.20 63 ⇓P pP 10 17 39.0 +0.6
baz=66
T13A **Saint George** 66.39 61 P pP 10 17 40.4 +0.9
baz=66,SNR=5.7
K21A **Alcova** 66.48 52 ⇑P pP 10 17 40.2 +0.2
baz=66
HYB **Hyderabad** 66.65 271 *i*P P 10 17 26.5 -1.0
Q16A **Castle Valley** 66.75 58 ⇓pP pP 10 17 42.3 +0.5
baz=66
U13A **Pakoon Wash** 66.75 61 ⇓pP pP 10 17 42.7 +0.9
baz=66
GMRC **Granite Mounta** 66.80 64 ⇓pP pP 10 17 42.7 +0.5
baz=67
P18A **Preston Nutter** 66.81 56 ⇓pP pP 10 17 43.2 +1.0
baz=66
T14A **Hurrmane** 66.85 60 ⇓pP pP 10 17 43.2 +0.8
baz=67,SNR=5.8
K22A **Casper** 66.86 52 ⇑pP pP 10 17 42.9 +0.5
baz=67
ULM **Lac du Bonnet** 66.86 40 P P 10 17 27.1 -1.3
comp=Z,2.6nm,0.6s,mb4.5,baz=315,slow=7.1,SNR=5.0
R16A **Teasdale** 66.99 58 ⇑pP pP 10 17 44.6 +1.3
baz=67,SNR=6.3
SRU **San Rafael** 67.00 57 ⇓pP pP 10 17 43.8 +0.5
baz=67
SRU **San Rafael** 67.00 57 eP P 10 17 29.9 +0.5
comp=Z,9.2nm,0.9s,mb4.8
SRU **San Rafael** 67.00 57 eP P 10 17 29.9 +0.5
SRU pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
O19A **Miners Draw (B** 67.00 55 ⇓pP pP 10 17 43.9 +0.6
baz=67
BELC **Belle Mtn. Jos** 67.10 64 ⇑pP pP 10 17 43.9 -0.2
baz=67
V13A **Grand Canyon W** 67.11 62 ⇓pP pP 10 17 45.0 +0.8
baz=67,SNR=5.7
N20A **Spence Gulch,** 67.13 54 ⇓pP pP 10 17 45.9 +1.7
baz=67
RSSD **Black Hills** 67.19 49 eP P 10 17 30.3 -0.3
comp=Z,5.7nm,0.8s,mb4.7
RSSD **Black Hills** 67.19 49 eP P 10 17 30.3 -0.3
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
U14A **Mt Trumbull** 67.22 61 ⇓pP pP 10 17 45.9 +1.1
baz=67,SNR=6.1
Q18A **Rafter H Ranch** 67.23 57 ⇓pP pP 10 17 45.5 +0.7
baz=67
S16A **Weppner Ranch,** 67.30 59 ⇑pP pP 10 17 46.0 +0.7
baz=67,SNR=6.6
T15A **Red Dirt Ranch** 67.30 60 ⇑pP pP 10 17 46.1 +0.8
baz=67
R17A **Hanksville Air** 67.35 58 ⇓pP pP 10 17 46.3 +0.7
baz=67
IRM **Iron Mountain** 67.52 64 pP pP 10 17 47.3 +0.6
baz=67,SNR=5.4
P19A **Cripple Cowboy** 67.53 56 ⇑pP pP 10 17 47.5 +0.8
baz=67
BC3 **Big Chuckawall** 67.67 64 ⇑pP pP 10 17 48.1 +0.4
baz=67
W13A **Hualapai Mount** 67.67 62 ⇓pP pP 10 17 48.1 +0.4
baz=67
U15A **North Rim** 67.75 60 ⇑pP pP 10 17 49.2 +1.0
baz=68,SNR=5.7
V14A **Boquillas Ranc** 67.79 61 ⇓pP pP 10 17 49.5 +1.0
baz=68,SNR=6.3
S17A **Black Ridge (B** 67.82 58 ⇑P pP 10 17 49.1 +0.5
baz=68
R18A **Canyonlands Na** 67.85 57 ⇑P pP 10 17 49.1 +0.4
baz=68
X13A **Yucca** 68.04 63 ⇓P pP 10 17 50.6 +0.5
baz=68
W14A **Seligman** 68.08 62 ⇓P pP 10 17 51.2 +0.9
baz=68,SNR=6.1
V15A **Kaibab Nationa** 68.23 61 ⇓P pP 10 17 52.4 +1.2
baz=68,SNR=6.0
NB2 **NORSAR Subarra** 68.25 341 P P 10 17 36.1 -0.9
comp=Z,12nm,0.6s,mb5.1,baz=28,slow=6.5
NB2 **NORSAR Subarra** 68.25 341 P P 10 17 36.1 -0.9
NOA **NORSAR Array B** 68.25 341 P P 10 17 35.8 -1.2
comp=Z,8.5nm,0.5s,mb5.0,baz=28,slow=6.3,SNR=50
NOA **NORSAR Array B** 68.25 341 P P 10 17 35.8 -1.2
NOA pmax pmax
comp=Z,9.0nm,0.5s
WRA **Warramunga Arr** 68.26 199 P P 10 17 36.8 -0.7
comp=Z,2.0nm,0.8s,mb4.2,baz=20,slow=6.8,SNR=12
WRA **Warramunga Arr** 68.26 199 P P 10 17 36.8 -0.6
WRA pmax pmax
comp=Z,2.0nm,0.8s
R19A **Curley Farm, L** 68.28 57 ⇑P pP 10 17 51.8 +0.3
baz=68
AGMN **Agassiz Nation** 68.28 42 eP P 10 17 36.4 -0.9
comp=Z,18nm,1.5s,mb4.9
O22A **Kremmling** 68.54 54 ⇑P pP 10 17 52.9 -0.3
baz=68
U16A **Tuba City** 68.63 60 ⇑P pP 10 17 54.8 +1.1
baz=68,SNR=6.3
T18A **Mexican Hat** 68.70 58 ⇑P pP 10 17 54.0 -0.2
baz=68,SNR=5.7
S19A **Harvey Farm, M** 68.72 57 ⇑P pP 10 17 54.9 +0.7
baz=68,SNR=7.0
FITZ **Fitzroy Crossi** 68.85 208 P P 10 17 40.1 -1.0
comp=Z,2.5nm,0.8s,mb4.2,baz=20,slow=2.1,SNR=5.8
Q21A **Lamborn Mesa,** 68.88 56 ⇑pP pP 10 17 56.0 +0.7
baz=69
SMCO **Snowmass** 68.98 55 eP P 10 17 41.9 0.0
comp=Z,5.6nm,0.8s,mb4.5
Z13A **Yuma Proving G** 69.09 64 ⇓pP pP 10 17 57.1 +0.5
baz=69
X15A **Humboldt** 69.09 62 ⇑pP pP 10 17 57.7 +1.1
baz=69,SNR=5.4
S20A **Disappointment** 69.11 57 ⇓pP pP 10 17 57.2 +0.5
baz=69
V17A **Tonalea, Kykot** 69.19 60 ⇑pP pP 10 17 58.4 +1.2
baz=69,SNR=7.2
R21A **Cimarron** 69.21 56 ⇑pP pP 10 17 58.3 +1.0
baz=69
ISCO **Idaho Springs** 69.31 54 eP P 10 17 44.1 +0.1
comp=Z,4.8nm,0.9s,mb4.4
ISCO **Idaho Springs** 69.31 54 eP P 10 17 44.1 +0.1
ISCO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
Y15A **Casa Rosa Ranc** 69.39 62 ⇑pP pP 10 17 59.3 +0.8
baz=69,SNR=5.6
X16A **Lo Mia Camp, P** 69.62 61 ⇑pP pP 10 18 01.2 +1.3
baz=69,SNR=5.9
V18A **Ganado** 69.64 59 ⇑pP pP 10 18 00.4 +0.4
baz=69
U19A **Dine' College,** 69.67 59 ⇓pP pP 10 18 00.8 +0.6
baz=69
114A **Black Gap (USA** 69.87 63 ⇓pP pP 10 18 02.1 +0.6
baz=70
S22A **4UR Ranch, Cre** 70.05 56 ⇓pP pP 10 18 03.7 +1.2
baz=70
X17A **Forest Lakes** 70.05 61 ⇓pP pP 10 18 04.3 +1.7
baz=70
115A **Sonoran Desert** 70.31 63 ⇓pP pP 10 18 04.9 +0.7
baz=70
Z16A **Peralta Trail,** 70.36 62 ⇓pP pP 10 18 05.6 +1.1
baz=70
W19A **Sanders** 70.37 60 ⇑pP pP 10 18 05.5 +1.0
baz=70
OGNE **Ogallala** 70.46 51 eP P 10 17 50.6 -0.4
comp=Z,21nm,0.9s,mb5.1
OGNE epP pP 10 18 05.4 +0.4
Y17A **Roosevelt** 70.47 62 pP pP 10 18 05.9 +0.7
baz=70,SNR=5.6
U21A **Nageezi** 70.48 57 ⇓pP pP 10 18 05.9 +0.7
baz=70
EYMN **Ely** 70.51 40 eP P 10 17 50.4 -0.7
comp=Z,7.0nm,1.0s,mb4.5
KIV **Kislovodsk** 70.65 314⇑eP P 10 17 52.9 +0.8
KIV pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
Q25A **Bedland, Calha** 70.69 54 ⇑pP pP 10 18 06.9 +0.5
baz=70
W20A **Ramah** 70.89 59 ⇓pP pP 10 18 08.7 +1.0
baz=71
X19A **St. Johns** 70.90 60 ⇓pP pP 10 18 08.8 +1.1
baz=71
Y18A **Canyon Day Jun** 70.90 61 ⇑pP pP 10 18 08.8 +1.0
baz=71
T23A **Casias Ranch,** 70.99 56 ⇓pP pP 10 18 09.1 +0.8
baz=71
ECSD **EROS Data Cent** 71.24 46 eP P 10 17 54.4 -1.3
comp=Z,7.1nm,0.9s,mb4.6
V22A **San Miguel Ran** 71.27 57 ⇑pP pP 10 18 11.0 +1.0
baz=71
X20A **Quemado** 71.29 59 ⇓pP pP 10 18 10.9 +0.7
baz=71
117A **Oracle** 71.31 62 ⇑pP pP 10 18 11.1 +0.8
baz=71
U23A **El Rito** 71.40 57 ⇓pP pP 10 18 12.1 +1.3
baz=71
KIEV **Kiev** 71.48 326 eP P 10 17 55.8 -1.2
comp=Z,18nm,0.6s,mb5.2
KIEV **Kiev** 71.48 326 eP P 10 17 55.8 -1.2
KIEV pmax pmax
comp=Z,18nm,0.6s,mb5.2
118A **Homack Ranch,** 71.73 62 ⇓pP pP 10 18 13.5 +0.7
baz=72
X21A **Alamocita Cree** 71.78 59 ⇑pP pP 10 18 14.7 +1.6
baz=72
Y20A **Horse Springs,** 71.81 60 ⇓pP pP 10 18 14.3 +1.0
baz=72
V23A **Ortiz Mt. (NFS** 71.81 57 ⇑pP pP 10 18 14.8 +1.5
baz=72
T25A **Trinidad** 71.85 55 ⇓pP pP 10 18 13.7 +0.2
baz=72
ASAR **Alice Springs** 71.96 198 P P 10 17 60.0 0.0
comp=Z,2.6nm,0.6s,mb4.3,baz=11,slow=5.6,SNR=50
ASAR **Alice Springs** 71.96 198 P P 10 18 00.0 0.0
ASAR pmax pmax
comp=Z,3.0nm,0.6s
U25A **Circle Dot Ran** 72.37 56 ⇓pP pP 10 18 17.0 +0.4
baz=72
318A **Bisbee** 72.55 63 ⇓pP pP 10 18 18.6 +0.8
baz=72
ANN **Anapa** 72.55 318 eP P 10 18 03.3 -0.2
ANN e*PP pP 10 18 17.5 0.0
ANN pmax pmax
comp=Z,71nm,6.6s
120A **U Bar Ranch, L** 72.60 61 ⇓pP pP 10 18 19.0 +0.9
baz=72
219A **White Tail Can** 72.60 62 ⇑pP pP 10 18 18.7 +0.6
baz=72
Z22A **Elephant Butte** 73.10 59 ⇓pP pP 10 18 21.8 +0.7
baz=73
220A **Playas Peak, P** 73.11 61 ⇓pP pP 10 18 21.6 +0.5
baz=73
121A **Cookes Peak, D** 73.12 60 ⇓pP pP 10 18 21.9 +0.7
baz=73
W25A **X Bar L Ranch,** 73.18 56 ⇑pP pP 10 18 22.0 +0.5
baz=73
SCHQ **Schefferville** 73.58 23 P P 10 18 08.4 -1.0
comp=Z,2.6nm,0.7s,mb4.3,baz=306,slow=8.7,SNR=5.2
SCIA **State Center** 74.27 45 eP P 10 18 13.0 -0.7
comp=Z,17nm,0.7s,mb5.1
KWP **Kalwaria Pacla** 74.77 329 eP P 10 18 16.7 +0.3
KWP **Kalwaria Pacla** 74.77 329 eP P 10 18 16.7 +0.3
KWP **Kalwaria Pacla** 74.77 329 ⇓*i*P P 10 18 16.6 +0.2
Z26A **Caprock** 74.85 58 ⇑pP pP 10 18 31.7 +0.4
baz=75
Y27A **Causey** 74.88 57 ⇓pP pP 10 18 31.6 +0.2
baz=75
125A **Gardner Draw,** 74.89 58 ⇓pP pP 10 18 32.0 +0.4
baz=75
AMTX **Amarillo** 75.00 55 eP P 10 18 18.1 0.0
comp=Z,12nm,0.9s,mb4.8
AMTX epP pP 10 18 32.5 +0.3
MSTX **Muleshoe** 75.04 56 ⇑pP pP 10 18 32.7 +0.3
baz=75
MNTX **Cornudas Mount** 75.15 60 ⇑pP pP 10 18 33.3 +0.2
baz=75
RUE **Ruedersdorf** 75.19 335 eP P 10 18 18.7 -0.1
comp=Z,24nm,0.9s,mb5.1
OJC **Ojcow** 75.28 331 eP P 10 18 18.7 -0.6
OJC **Ojcow** 75.28 331 eP P 10 18 18.4 -0.9
comp=Z,11nm,0.5s,mb5.0
OJC **Ojcow** 75.28 331 eP P 10 18 18.7 -0.6
BUR08 **Bucovina Ar. S** 75.50 326 eP P 10 18 20.4 -0.3
KOLS **Kolonicke sedl** 75.51 329 eP P 10 18 20.4 -0.3
comp=Z,9.2nm,0.9s,mb4.7
KOLS **Kolonicke sedl** 75.51 329 eP P 10 18 20.4 -0.3
KOLS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KOLS **Kolonicke sedl** 75.51 329 eP P 10 18 20.4 -0.3
BURAR **Bucovina Array** 75.52 326 ⇓P P 10 18 20.8 +0.1
BURAR **Bucovina Array** 75.52 326 ⇓*i*P P 10 18 20.8 +0.1
325A **Bean Ranch, Si** 75.63 60 ⇑pP pP 10 18 35.8 0.0
baz=75
CRVS **Cervenica-Dubn** 75.82 329 eP P 10 18 22.3 -0.2
comp=Z,6.1nm,1.0s,mb4.5
CRVS **Cervenica-Dubn** 75.82 329 eP P 10 18 22.3 -0.2
CRVS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CRVS **Cervenica-Dubn** 75.82 329 eP P 10 18 22.2 -0.3
GLMI **Grayling** 75.93 38 eP P 10 18 22.4 -0.8
comp=Z,31nm,0.8s,mb5.3
425A **Indio Mountain** 76.04 60 ⇑pP pP 10 18 38.3 +0.1
baz=76
TLCR 76.06 323 ⇑P P 10 18 23.9 0.0
TLCR 76.06 323 ⇑*i*P P 10 18 23.9 0.0
TRPA **Tarpa** 76.09 328 ⇓*i*P P 10 18 24.3 +0.3
UPC **Upice** 76.25 333 eP P 10 18 24.7 -0.2
UPC e pP 10 18 39.6 +0.5
UPC **Upice** 76.25 333 eP P 10 18 24.7 -0.2
UPC epP pP 10 18 39.6 +0.5
DPC **Dobruska-Polom** 76.30 333 eP P 10 18 25.4 +0.2
comp=Z,12nm,1.0s,mb4.8
DPC **Dobruska-Polom** 76.30 333 eP P 10 18 25.1 0.0
DPC e pP 10 18 35.6 -3.7
DPC **Dobruska-Polom** 76.30 333 eP P 10 18 25.1 0.0
DPC ePCP PcP 10 18 35.6 -1.3
VRI **Vrincioaia** 76.36 324 ⇑P P 10 18 26.1 +0.5
VRI **Vrincioaia** 76.36 324 ⇑*i*P P 10 18 26.0 +0.4
MORC **Moravsky Berou** 76.40 332 eP P 10 18 25.4 -0.4
comp=Z,14nm,0.9s,mb4.9
MORC **Moravsky Berou** 76.40 332 ⇓P P 10 18 25.3 -0.5
MORC **Moravsky Berou** 76.40 332 ⇓*i*P P 10 18 25.3 -0.5
CLL **Collm** 76.45 335 eP P 10 18 25.6 -0.4
comp=Z,22nm,0.7s,mb5.2
CLL **Collm** 76.45 335 ⇓*i*P P 10 18 25.4 -0.6
comp=Z,22nm,0.7s,mb5.2
CLL epP pP 10 18 42.0 +1.8
CLL **Collm** 76.45 335 ⇓*i*P P 10 18 25.4 -0.6

CLL *e*PP pP 10 18 42.0 +1.8
CLL pmax pmax
comp=Z,93nm,0.7s,mb5.8
CLL Collm 76.45 335 ↓*i*P **P 10 18 25.4 -0.6**
comp=Z,22nm,0.7s,mb5.2
CLL *e*pP pP 10 18 42.0 +1.8
CLL *e*sP sP 10 18 50.0 +4.3
KECS Kecovo 76.52 329 *e*P **P 10 18 26.3 -0.2**
comp=Z,4.6nm,0.9s,mb4.4
KECS Kecovo 76.52 329 *e*P **P 10 18 26.3 -0.2**
KECS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KECS Kecovo 76.52 329 *e*P **P 10 18 26.3 -0.2**
BRG Berggiesshubel 76.56 335 *e*P **P 10 18 25.9 -0.8**
comp=Z,9.4nm,1.2s,mb4.6
BRG Berggiesshubel 76.56 335 *e*P **P 10 18 25.9 -0.7**
BRG pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
FBE Freiberg 76.69 335 *e*P **P 10 18 27.4 0.0**
comp=Z,13nm,0.9s,mb4.9
CLZ Clausthal 76.71 337 *e*P **P 10 18 27.8 +0.4**
comp=Z,17nm,0.8s,mb5.0
CLZ Clausthal 76.71 337 *e*P **P 10 18 27.8 +0.4**
CLZ pmax pmax
comp=Z,17nm,0.8s,mb5.0
NEUB Neuenburg 76.89 336 *e*P **P 10 18 28.2 -0.3**
comp=Z,28nm,1.2s,mb5.1
328A Wristen Ranch, 76.89 58 ⇑pP pP 10 18 43.1 +0.1
baz=77
427A Hayter Ranch, 76.93 59 ⇓pP pP 10 18 43.5 +0.3
baz=77
IBBN Ibbenburen 76.96 339 *e*P **P 10 18 28.8 -0.1**
comp=Z,15nm,0.9s,mb4.9
MLR Muntele Rosu 76.98 325 ⇓P **P 10 18 29.8 +0.7**
MLR Muntele Rosu 76.98 325 ⇓*i*P **P 10 18 29.8 +0.7**
MALT Malatya 76.99 313 *e*P **P 10 18 30.6 +1.3**
comp=Z,9.6nm,0.7s,mb4.8
MALT Malatya 76.99 313 *e*P **P 10 18 30.6 +1.3**
MALT pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
MALT Malatya 76.99 313 ⇑*i*P **P 10 18 30.5 +1.2**
VYHS Vyhne 77.08 330 *e*P **P 10 18 29.6 0.0**
comp=Z,6.1nm,1.1s,mb4.4
VYHS Vyhne 77.08 330 *e*P **P 10 18 29.6 0.0**
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
VYHS Vyhne 77.08 330 *e*P **P 10 18 29.5 -0.1**
526A Mary Lane Ranc 77.09 60 ⇓pP pP 10 18 44.2 0.0
baz=77
VRAC Vranov 77.12 332 ⇓P **P 10 18 30.1 +0.3**
VRAC Vranov 77.12 332 ⇓*i*P **P 10 18 30.1 +0.3**
DRGR 77.15 327 ⇓P **P 10 18 29.3 -0.7**
DRGR 77.15 327 ⇓*i*P **P 10 18 29.3 -0.7**
PRU Pruhonice 77.16 334 *e*P **P 10 18 30.3 +0.3**
PRU Pruhonice 77.16 334 *e*P **P 10 18 30.3 +0.3**
HDIL Hopedale 77.20 44 *e*P **P 10 18 29.9 -0.6**
comp=Z,15nm,0.7s,mb5.0
PSZ Piszkesteto 77.21 330 *e*P **P 10 18 30.3 -0.1**
comp=Z,8.2nm,0.9s,mb4.7
PSZ Piszkesteto 77.21 330 ⇑P **P 10 18 30.2 -0.1**
PSZ Piszkesteto 77.21 330 ⇑*i*P **P 10 18 30.2 -0.1**
VOIR 77.38 325 ⇑P **P 10 18 31.7 +0.4**
VOIR 77.38 325 ⇑*i*P **P 10 18 31.7 +0.4**
TANN Tannenbergstha 77.40 335 *e*P **P 10 18 31.4 0.0**
comp=Z,4.0nm,0.8s,mb4.4
WERD Werda 77.42 335 *e*P **P 10 18 31.5 0.0**
comp=Z,6.0nm,0.8s,mb4.6
PLN Plauen 77.43 335 *e*P **P 10 18 31.5 0.0**
626A Big Bend Ranch 77.44 60 ⇓pP pP 10 18 46.2 +0.1
baz=77
MOX Moxa 77.44 336 *e*P **P 10 18 31.6 0.0**
comp=Z,12nm,1.0s,mb4.8
TREC Trest 77.48 333 *e*P **P 10 18 31.7 -0.1**
TREC Trest 77.48 333 *e*P **P 10 18 31.7 -0.1**
GUNZ Gunzen 77.49 335 *e*P **P 10 18 31.9 +0.1**
comp=Z,10.0nm,0.8s,mb4.8
WERN Wernitzgruen 77.54 335 *e*P **P 10 18 32.4 +0.2**
comp=Z,12nm,0.8s,mb4.9
NKC Novy Kostel 77.57 335 *e*P **P 10 18 31.8 -0.5**
NKC Novy Kostel 77.57 335 *e*P **P 10 18 31.8 -0.5**
UBBA Unterbreizbach 77.73 337 *e*P **P 10 18 33.0 -0.2**
comp=Z,16nm,1.6s,mb4.7
528A Cox Ranch, San 77.79 59 ⇑pP pP 10 18 47.8 -0.3
baz=78
TXAR Lajitas Array 77.87 60 P **P 10 18 33.9 -0.5**
comp=Z,2.1nm,0.6s,mb4.2,baz=302,slow=4.1,SNR=29
TXAR pP pP 10 18 48.1 -0.4
comp=Z,5.6nm,0.7s,baz=301,slow=4.2,SNR=20
TXAR PKKP PKKPbc 10 37 27.4 -5.4
comp=Z,0.2nm,0.8s,baz=117,slow=5.2,SNR=2.7
TXAR Lajitas Array 77.87 60 P **P 10 18 33.9 -0.5**
TXAR *PP pP 10 18 48.2 -0.4
TXAR pmax pmax
comp=Z,2.0nm,0.6s
TXAR pmax pmax
comp=Z,6.0nm,0.7s
BUG Bochum--Univer 77.88 339 *e*P **P 10 18 34.0 0.0**
comp=Z,26nm,1.2s,mb5.0
ZST Bratislava 77.92 331 *e*P **P 10 18 33.8 -0.5**
comp=Z,8.9nm,0.9s,mb4.7
ZST Bratislava 77.92 331 *e*P **P 10 18 33.8 -0.5**
ZST pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ZST Bratislava 77.92 331 *e*P **P 10 18 33.8 -0.5**
ROTZ Rotzenmuhle 78.06 335 *e*P **P 10 18 35.4 +0.4**
comp=Z,11nm,1.0s,mb4.7
KHC Kasperske Hory 78.22 334 *e*P **P 10 18 35.7 -0.2**
KHC *ex* x 10 18 40.0
BR131 Keskin Array S 78.25 316 *e*P **P 10 18 36.7 +0.4**
comp=Z,2.1nm,0.5s,mb4.3
BRTR Keskin Array B 78.25 316 P **P 10 18 36.2 -0.1**
comp=Z,7.0nm,0.8s,mb4.6,baz=68,slow=3.8,SNR=31
BRTR Keskin Array B 78.25 316 *ce*P **P 10 18 36.5 +0.2**
BRTR pmax pmax
comp=Z,7.0nm,0.8s
GRA1 Grafenberg Arr 78.41 336 *e*P **P 10 18 37.5 +0.5**
comp=Z,38nm,0.8s,mb5.4
GRF Grafenberg Arr 78.41 336 *e*P **P 10 18 37.5 +0.5**
comp=Z,38nm,0.8s,mb5.4
GRF Grafenberg Arr 78.41 336 *e*P **P 10 18 37.5 +0.5**
GRF pmax pmax
comp=Z,38nm,0.8s,mb5.4
GRF Grafenberg Arr 78.41 336 *e*P **P 10 18 37.5 +0.5**
GRF pmax pmax
comp=Z,38nm,0.8s,mb5.4
GRFO Grafenberg 78.41 336 *e*P **P 10 18 37.3 +0.3**
comp=Z,23nm,0.7s,mb5.2
GRFO Grafenberg 78.41 336 *e*P **P 10 18 37.3 +0.3**
GRFO pmax pmax
comp=Z,23nm,0.7s,mb5.2
WET Wettzell 78.42 334 *e*P **P 10 18 37.5 +0.5**
comp=Z,14nm,0.9s,mb4.9
WET Wettzell 78.42 334 *e*P **P 10 18 37.5 +0.5**
WET pmax pmax
comp=Z,14nm,0.9s,mb4.9
GEC2 GERESS Array S 78.43 334 *e*P **P 10 18 37.1 0.0**
comp=Z,6.0nm,0.8s,mb4.6
GEC2 GERESS Array S 78.43 334 *e*P **P 10 18 37.1 0.0**
GEC2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BZS Buzias 78.55 327 ⇓P **P 10 18 36.9 -0.9**
BZS Buzias 78.55 327 ⇓*i*P **P 10 18 36.8 -1.0**
CSNA Conrad Observa 78.56 332 ⇑*i*P **P 10 18 38.2 +0.3**
comp=Z,12nm,0.6s,mb5.0
TNS Taunus Mts 78.69 337 *e*P **P 10 18 38.8 +0.3**
comp=Z,25nm,0.7s,mb5.2
TNS Taunus Mts 78.69 337 *e*P **P 10 18 38.8 +0.3**
TNS pmax pmax
comp=Z,25nm,0.7s,mb5.2
MEM Membach 78.96 339 P **P 10 18 40.0 0.0**
comp=Z,13nm,0.9s,mb4.9
PKSM Moragy 79.11 329 ⇑P **P 10 18 39.7 -1.2**
PKSM Moragy 79.11 329 ⇑*i*P **P 10 18 39.7 -1.2**
JCT Junction City 79.31 57 ⇓pP pP 10 18 56.2 -0.2
baz=79
BCLA Clavier 79.31 339 AP **P 10 18 41.5 -0.4**
comp=Z,11nm,1.2s,mb4.7
BLO Bloomington 79.60 43 *e*P **P 10 18 43.0 -0.7**
comp=Z,70nm,2.1s,mb5.2
BLO Bloomington 79.60 43 *e*P **P 10 18 43.0 -0.7**
BLO pmax pmax
comp=Z,70nm,2.1s,mb5.2
RJOB Jochberg 79.69 334 *e*P **P 10 18 44.6 +0.6**
comp=Z,9.0nm,0.9s,mb4.7
STU Stuttgart 79.81 336 *e*P **P 10 18 44.8 +0.2**
comp=Z,18nm,0.9s,mb5.0
SOKA Soboth 79.93 332 ⇑*i*P **P 10 18 45.1 -0.2**
comp=Z,16nm,0.9s,mb5.0
PARMO Parma 80.02 46 *e*P **P 10 18 46.2 +0.2**
KBA Koelnbreinsper 80.11 333 ↓*i*P **P 10 18 47.1 +0.8**
comp=Z,26nm,0.6s,mb5.4
ACSO Alum Creek Sta 80.35 40 *e*P **P 10 18 46.8 -0.9**
comp=Z,10nm,0.6s,mb4.9
ALLY Alegheny Colle 80.40 37 *e*P **P 10 18 47.5 -0.5**
comp=Z,14nm,0.6s,mb5.1
WATA Walderalm 80.42 334 ↓*i*P **P 10 18 48.2 +0.2**
comp=Z,14nm,0.5s,mb5.2
BFO Black Forest 80.45 337 *e*P **P 10 18 48.1 0.0**
comp=Z,19nm,1.0s,mb5.0
BFO Black Forest 80.45 337 *e*P **P 10 18 48.1 0.0**
BFO pmax pmax
comp=Z,19nm,1.0s,mb5.0
WCI Wyandotte Cave 80.46 43 *e*P **P 10 18 47.5 -0.9**
comp=Z,11nm,1.0s,mb4.8
WCI Wyandotte Cave 80.46 43 *e*P **P 10 18 47.5 -0.8**
WCI pmax pmax
comp=Z,11nm,1.0s,mb4.7
WTTA Wattenberg 80.47 334 ⇑*i*P **P 10 18 48.7 +0.5**
comp=Z,26nm,0.5s,mb5.4
VTS Vitosha 80.49 325 ⇑P **P 10 18 48.2 -0.2**
VTS Vitosha 80.49 325 ⇑*i*P **P 10 18 48.2 -0.2**
RETA Reutte 80.53 335 ⇑*i*P **P 10 18 48.5 0.0**
comp=Z,10nm,0.8s,mb4.8
MOTA Moosalm 80.56 335 ⇑*i*P **P 10 18 48.8 +0.2**
comp=Z,12nm,0.6s,mb5.0
DAVA Damuels 80.97 335 ⇑*i*P **P 10 18 50.9 +0.1**
comp=Z,13nm,0.8s,mb4.9
WVT Waverly 81.39 45 *e*P **P 10 18 52.9 -0.4**
comp=Z,72nm,2.4s,mb5.2
WVT Waverly 81.39 45 *e*P **P 10 18 52.9 -0.4**
WVT pmax pmax
comp=Z,72nm,2.4s,mb5.2
FUORN Ofenpass-Fuorn 81.46 335 *e*P **P 10 18 54.3 +0.8**
comp=Z,14nm,1.1s,mb4.8
TUE Stuetta 81.86 335 *e*P **P 10 18 56.1 +0.5**
comp=Z,14nm,0.9s,mb4.9
CSS Prodhromos 82.17 314 *e*P **P 10 18 57.4 -0.1**
comp=Z,17nm,0.7s,mb5.1
PPT Papeete 82.36 125 LR LR 10 51 05.6
comp=Z,84nm,19.9s,MS4.1,baz=316,slow=32
SWET Sewanee 83.05 45 *e*P **P 10 19 01.3 -0.7**
ESDC Sonseca Array 91.59 342 P **P 10 19 41.9 -1.4**
comp=Z,0.5nm,0.5s,mb4.1,baz=13,slow=3.5,SNR=5.8
MAW Mawson 131.89 211 PKP PKPdf 10 25 46.8 -1.4
comp=Z,1.4nm,0.8s,baz=27,slow=4.5,SNR=4.1
MAW pPKP pPKPdf 10 26 03.6 +0.4
comp=Z,1.7nm,0.8s,baz=309,slow=6.9,SNR=3.4
MAW Mawson 131.89 211 PKIKP PKPdf 10 25 46.8 -1.5
MAW 10 26 03.6
MAW pmax pmax
comp=Z,1.0nm,0.8s
MAW pmax pmax
comp=Z,2.0nm,0.8s
BDFB Brasilia 144.67 36 PKP PKPdf 10 26 10.9 -2.3
comp=Z,5.5nm,0.7s,baz=220,slow=2.4,SNR=7.7
BDFB Brasilia 144.67 36 PKIKP PKPdf 10 26 10.9 -2.3
BDFB pmax pmax
comp=Z,6.0nm,0.7s
PLCA Paso Flores 148.55 95 PKPbc PKPbc 10 26 22.8 0.0
comp=Z,3.2nm,0.9s,baz=282,slow=2.5,SNR=7.1
PLCA Paso Flores 148.55 95 PKP2 PKPbc 10 26 22.8 +0.1
PLCA pmax pmax
comp=Z,3.0nm,0.9s

ISCJB ***13*** *10:15:19.1±1.4,27.°0N±0.°1×55.°8E±0.°1,h8km±21km, Error ellipse: s-maj=29.0km s-min=10.2km az=135.2*
CSEM ***13*** *10:15:19.4±2.0,26.°93N×55.°84E,h2km,ML3.7, Error ellipse: s-maj=58.1km s-min=10.6km az=151.0*
KISR ***13*** *10:15:20.6±1.1,28.°31N×55.°62E,h34km±999km,ML3.7*
TEH ***13*** *10:15:24.0,27.°07N×55.°92E,h14km*
ISC 13 10:15:21.7±1.4,27.°1N±0.°1×55.°8E±0.°1,h7km±19km,n17, σ1°27/25,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.47**	**43**	*e*Pg	**Pg**	**10 15 29.2**	**-1.7**
BNDS				*e*Sg	**Sg**	**10 15 37.9**	**+0.8**
IBND	**Bandar-abas**	**0.76**	**58**	*e*Pg	**Pg**	**10 15 35.7**	**-0.7**
IBND				*e*Sg	**Sg**	**10 15 45.5**	**-0.8**
IBND				*e*		10 15 53.5	
comp=Z,12μm,0.2s							
KRBR	**Kerman**	**3.04**	**16**	*e*Pn	**Pn**	**10 16 11.1**	**+0.9**
ISRV	**Sarvestan**	**3.32**	**315**	*e*Sn	**Sn**	**10 16 53.9**	**0.0**
IPAR	**Pars**	**3.69**	**319**	*e*Pn	**Pn**	**10 16 21.3**	**+2.1**
IPAR				*e*Sn	**Sn**	**10 17 03.3**	**+0.3**
IPAR				*e*		10 17 17.6	
comp=Z,207nm,0.3s							
IMEH	**Mehriz**	**4.45**	**347**	*e*Pn	**Pn**	**10 16 31.2**	**+1.6**
IMEH				*e*Sn	**Sn**	**10 17 20.3**	**-1.3**
IMEH				*e*		10 17 27.5	
comp=N,142nm,0.1s							
IBAF	**Bafgh**	**4.53**	**357**	*e*Pn	**Pn**	**10 16 31.4**	**+0.7**
IBAF				*e*		10 16 34.2	
comp=Z,177nm,0.1s							
IBAF				*e*Sn	**Sn**	**10 17 21.4**	**-2.2**
IGAR	**Gharneh**	**6.26**	**329**	*e*Pn	**Pn**	**10 16 56.0**	**+1.5**
NASN	**Na'in**	**6.29**	**336**	*e*Pn	**Pn**	**10 16 56.2**	**+1.3**
IZEF	**Zefreh**	**6.56**	**333**	*e*Pn	**Pn**	**10 16 59.7**	**+1.1**
IZEF				*e*		10 18 09.6	
comp=N,85nm,0.2s							
IPIR	**Pirpir**	**7.05**	**324**	*e*Pn	**Pn**	**10 17 06.4**	**+1.0**
IPIR				*e*		10 18 28.1	
comp=E,122nm,0.2s							
RDF	**Al-Radifah**	**7.54**	**286**	*e*P	**Pn**	**10 17 11.9**	**-0.2**
RDF				*e*S	**Sn**	**10 18 35.6**	**-2.2**
RDF				AML	AML	10 18 37.0	
comp=Z,13nm,0.4s							
RDF	**Al-Radifah**	**7.54**	**286**	*e*P	**Pn**	**10 17 11.9**	**-0.1**
RDF				*e*S	**Sn**	**10 18 35.6**	**-2.1**
UMR	**Umm Al-Rimmam**	**7.56**	**291**	*e*P	**Pn**	**10 17 11.1**	**-1.2**
UMR	**Umm Al-Rimmam**	**7.56**	**291**	*e*P	**Pn**	**10 17 11.1**	**-1.2**
NAY	**Al-Naaiem**	**7.87**	**288**	*e*P	**Pn**	**10 17 15.5**	**-1.2**
NAY				*e*S	**Sn**	**10 18 42.2**	**-3.8**
NAY				AML	AML	10 18 42.5	
comp=Z,10nm,0.8s							
NAY	**Al-Naaiem**	**7.87**	**288**	*e*P	**Pn**	**10 17 15.5**	**-1.2**

IDC 13 10:19:42.0±9.2,25.°27N×140.°15E,h0km,mb3.6/3, mb1 3.7/3,mb1mx3.3/20,mbtmp3.6/3,Error ellipse: s-maj=422.3km s-min=32.0km az=74.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.29**	**188**	P	P	10 28 01.9	+0.3
0.5nm,0.4s,baz=6.2,slow=7.6,SNR=8.0							
ASAR	**Alice Springs**	**49.02**	**188**	P	P	10 28 30.2	-0.5
0.2nm,0.6s,baz=357,slow=4.7,SNR=5.5							
ZALV	**Zalesovo Beam**	**49.70**	**320**	P	P	10 28 35.6	0.0
0.8nm,0.3s,baz=97,slow=6.1,SNR=3.8							

ISCJB ***13*** *10:41:50.9±0.6,22.°08S±0.°05×63.°74W±0.°08,h528km±9km, mb3.8/9,Error ellipse: s-maj=12.1km s-min=8.3km az=171.6*
IDC ***13*** *10:41:51.1±1.1,21.°99S×63.°62W,h516km±11km,mb3.4/11, mb1 3.5/16,mb1mx3.5/23,mbtmp3.4/16,Error ellipse: s-maj=16.2km s-min=11.2km az=85.0*
NEIC ***13*** *10:41:51.6±0.6,22.°04S×63.°68W,h535km±15km,mb3.8/1, Error ellipse: s-maj=14.7km s-min=11.0km az=88.0*
BJI ***13*** *10:41:55.5,22.°00S×63.°70W,h534km*
ISC 13 10:41:51.5±0.6,22.°00S±0.°06×63.°76W±0.°08,h519km±8km, n34,σ0°97/34,mb3.8/9,2C,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**5.57**	**267**	*e*P	**P**	**10 43 25.6**	**+1.0**
MACH				*e*S	**S**	**10 44 40.4**	**-0.4**
TOCH	**Tocopilla**	**5.98**	**268**	*e*P	**P**	**10 43 29.1**	**+0.7**
TOCH				*e*S	**S**	**10 44 45.6**	**-2.1**
MECH	**Mejillones**	**6.28**	**259**	*e*S	**S**	**10 44 52.1**	**-0.9**
ANCH	**Antofagasta**	**6.36**	**253**	*e*P	**P**	**10 43 32.7**	**+0.6**
ANCH	**Antofagasta**	**6.36**	**253**	*e*P	**P**	**10 43 32.7**	**+0.6**
ANCH				*e*S	**S**	**10 44 53.4**	**-1.1**
LPAZ	**La Paz**	**7.02**	**323**	P	**P**	**10 43 41.0**	**+2.4**
13nm,0.3s,baz=133,slow=5.9,SNR=264							
LPAZ				S	**S**	**10 45 06.0**	**-0.4**
0.4nm,0.3s,baz=308,slow=19,SNR=2.6							
LPAZ	**La Paz**	**7.02**	**323**	P	**P**	**10 43 41.0**	**+2.4**
LPAZ				S	**S**	**10 45 06.0**	**-0.4**
CPUP	**Villa Florida**	**7.28**	**128**	*e*Pn	**P**	**10 43 42.0**	**+0.9**
LCO	**Las Campanas**	**9.38**	**221**	*e*P	**P**	**10 44 03.7**	**+1.1**
35nm,0.4s							
TLL	**Tololo Astrono**	**10.31**	**216**	⇑*e*P	**P**	**10 44 13.3**	**+1.1**
TLL	**Tololo Astrono**	**10.31**	**216**	⇑*e*P	**P**	**10 44 13.3**	**+1.1**
CFAA	**Coronel Fontan**	**10.37**	**202**	P	**P**	**10 44 12.7**	**-0.1**
0.6nm,0.3s,baz=26,slow=12,SNR=30							
CFAA				S	**S**	**10 46 04.0**	**-5.0**
0.5nm,0.3s,baz=72,slow=19,SNR=9.0							
NNA	**Nana**	**15.98**	**306**	P	**P**	**10 45 12.7**	**+1.0**
0.8nm,0.3s,baz=131,slow=12,SNR=6.4							
TRQA	**Tornquist**	**16.08**	**175**	P	**P**	**10 45 08.8**	**-3.5**
2.0nm,0.7s							
BDFB	**Brasilia**	**16.18**	**70**	P	**P**	**10 45 12.9**	**-0.9**
2.1nm,0.3s,baz=242,slow=10,SNR=23							
PLCA	**Paso Flores**	**19.55**	**196**	P	**P**	**10 45 44.6**	**-0.2**
0.1nm,0.3s,baz=3.9,slow=13,SNR=4.6							
PCRV	**Puerto La Cruz**	**31.98**	**358**	P	**P**	**10 47 34.1**	**-0.9**
5.2nm,0.6s,mb4.2,baz=168,slow=5.4,SNR=3.2							
USHA	**Ushuaia**	**32.98**	**185**	P	**P**	**10 47 43.0**	**+0.2**
2.8nm,0.5s,mb4.0,baz=354,slow=12,SNR=4.7							
SJG	**San Juan**	**39.93**	**356**	P	**P**	**10 48 40.0**	**-0.7**
9.2nm,0.2s,baz=308,slow=9.5,SNR=3.1							
SJG	**San Juan**	**39.93**	**356**	P	**P**	**10 48 40.0**	**-0.7**
TXAR	**Lajitas Array**	**63.89**	**321**	P	**P**	**10 51 33.7**	**+0.4**
0.1nm,0.4s,baz=151,slow=6.2,SNR=6.2							
DBIC	**Dimbokro**	**64.33**	**71**	P	**P**	**10 51 35.3**	**-1.1**
6.4nm,0.7s,mb4.2,baz=229,slow=6.2,SNR=8.2							
TORD	**Torodi Ar. Bea**	**73.06**	**68**	P	**P**	**10 52 28.1**	**-0.9**
8.3nm,0.5s,mb4.4,baz=256,slow=4.5,SNR=160							
SCHQ	**Schefferville**	**76.56**	**358**	P	**P**	**10 52 47.5**	**-0.3**
2.9nm,0.5s,mb3.9,baz=187,slow=8.9,SNR=8.4							
PDAR	**Pinedale Array**	**77.03**	**327**	P	**P**	**10 52 51.6**	**+0.9**
0.8nm,0.6s,mb3.3,baz=129,slow=7.1,SNR=12							
NVAR	**Mina Array Bea**	**78.91**	**319**	P	**P**	**10 53 02.1**	**+1.1**
0.2nm,0.5s,mb2.7,baz=134,slow=6.4,SNR=3.6							
MAW	**Mawson**	**82.43**	**162**	P	**P**	**10 53 18.1**	**-0.7**
2.1nm,0.7s,mb3.7,baz=225,slow=10,SNR=7.2							
ESDC	**Sonseca Array**	**82.90**	**42**	P	**P**	**10 53 21.8**	**+0.2**
0.7nm,0.5s,mb3.4,baz=242,slow=5.6,SNR=6.2							
ASAR	**Alice Springs**	**131.47**	**202**	PKP	PKPdf	11 00 04.9	-0.7
0.5nm,0.5s,baz=143,slow=1.8,SNR=12							
ASAR				SKPbc	SKPbc	11 02 41.2	-1.3
0.5nm,0.6s,baz=150,slow=3.5,SNR=10							
BVAR	**Borovoye Array**	**133.41**	**37**	SKPab		11 02 48.7	
0.8nm,0.5s,baz=82,slow=3.1,SNR=4.0							
WRA	**Warramunga Arr**	**134.72**	**204**	PKP	PKPdf	11 00 11.4	-0.4
0.5nm,0.4s,baz=164,slow=1.7,SNR=18							
WRA				SKPbc	SKPbc	11 02 52.6	-0.7
0.8nm,0.5s,baz=155,slow=2.8,SNR=20							
ZALV	**Zalesovo Beam**	**140.22**	**29**	PKP	PKPdf	11 00 19.2	-1.6
2.4nm,0.5s,baz=244,slow=1.4,SNR=7.6							
MKAR	**Makanchi Array**	**143.08**	**40**	PKP	PKPdf	11 00 23.5	-2.6
2.5nm,0.7s,baz=310,slow=3.0,SNR=23							
SONM	**Songino Array**	**153.03**	**15**	PKPbc	PKPbc	11 00 50.1	+0.2
0.8nm,0.5s,baz=340,slow=1.3,SNR=4.3							
SONM				PKPab	PKPab	11 01 04.0	+0.1
0.2nm,0.5s,baz=319,slow=3.6,SNR=4.6							

ISCJB ***13*** *10:45:37.8±1.6,20.°9N±0.°1×38.°37E±0.°08,h10km,mb3.6/2, MS3.6/3,Error ellipse: s-maj=19.2km s-min=10.5km az=9.4*
IDC ***13*** *10:45:37.6±19.0,20.°48N×38.°68E,h0km,mb3.7/2, mb1 3.6/3,mb1mx3.4/23,mbtmp3.6/3,ML3.0/1,MS3.6/3, Ms1 3.6/3,ms1mx3.1/28,Error ellipse: s-maj=388.8km s-min=62.8km az=36.0*
SGS ***13*** *10:45:38.0,21.°08N×38.°19E,h21km*
CSEM ***13*** *10:45:38.0,21.°08N×38.°19E,h21km,ML3.7,After SNSN*
ISC 13 10:45:39.8±1.6,21.°0N±0.°1×38.°47E±0.°08,h10km,n14, σ1°05/14,mb3.6/2,MS3.6/3,Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHBS		**1.14**	**88**	P	**Pb**	**10 46 00.5**	**-1.1**
SHBS		**1.14**	**88**	P	**Pb**	**10 46 00.5**	**-1.0**
SHBS				S	**Sb**	**10 46 17.5**	**+1.1**
SHMS		**1.23**	**67**	P	**Pn**	**10 46 01.3**	**-1.8**
SHMS		**1.23**	**67**	P	**Pn**	**10 46 01.3**	**-1.8**
SHMS				S	**Sb**	**10 46 18.8**	**-0.4**
LBNS	**Jabal Laban**	**1.34**	**87**	P	**Pn**	**10 46 03.5**	**-1.1**
LBNS	**Jabal Laban**	**1.34**	**87**	P	**Pn**	**10 46 03.5**	**-1.1**
LBNS				S	**Sb**	**10 46 22.9**	**+0.6**
LTHS	**Al Lith**	**1.95**	**111**	S	**Sn**	**10 46 37.6**	**+0.2**
LTHS	**Al Lith**	**1.95**	**111**	S	**Sn**	**10 46 37.6**	**+0.1**
BRTR	**Keskin Array B**	**19.14**	**349**	P	**Pn**	**10 50 08.2**	**+4.2**
0.1nm,0.3s,baz=154,slow=12,SNR=5.1							
TORD	**Torodi Ar. Bea**	**35.94**	**264**	LR	LR	11 07 37.4	
comp=Z,102nm,18.7s,MS3.6,baz=85,slow=37							
MKAR	**Makanchi Array**	**43.80**	**43**	P	**P**	**10 53 47.0**	**+1.3**
0.7nm,0.7s,mb3.5,baz=246,slow=6.5,SNR=8.5							
DBIC	**Dimbokro**	**44.24**	**258**	LR	LR	11 13 06.0	
comp=Z,74nm,18.6s,MS3.6,baz=57,slow=37							
ZALV	**Zalesovo Beam**	**48.06**	**35**	LR	LR	11 17 04.4	
comp=Z,48nm,18.4s,MS3.5,baz=233,slow=39							
SONM	**Songino Array**	**60.03**	**46**	P	**P**	**10 55 47.4**	**+0.7**
0.4nm,0.4s,mb3.8,baz=261,slow=8.4,SNR=3.5							

IDC 13 10:47:09.3±1.2,32.°04N×85.°34E,h0km,mb3.4/4, mb1 3.5/5,mb1mx3.3/23,mbtmp3.4/5,ML2.4/1,Error ellipse: s-maj=51.9km s-min=25.8km az=62.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.93**	**352**	Pn	Pn	10 50 42.0	+0.5
0.0nm,0.3s,baz=181,slow=11,SNR=3.0							
ZALV	**Zalesovo Beam**	**21.91**	**359**	P	P	10 52 03.5	-0.3
0.8nm,0.5s,baz=183,slow=13,SNR=2.7							
WRA	**Warramunga Arr**	**69.80**	**131**	P	P	10 58 21.8	+0.1
0.2nm,0.4s,baz=326,slow=6.3,SNR=6.3							
ASAR	**Alice Springs**	**72.26**	**134**	P	P	10 58 36.8	+0.2
0.3nm,0.7s,baz=317,slow=5.3,SNR=6.1							
TORD	**Torodi Ar. Bea**	**77.83**	**278**	P	P	10 59 09.0	-0.1
0.2nm,0.5s,baz=54,slow=5.3,SNR=3.5							

IDC ***13*** *11:05:43.5±2.4,29.°24N×138.°07E,h517km±31km,mb2.8/5, mb1 3.0/6,mb1mx2.7/23,mbtmp2.8/6,Error ellipse: s-maj=61.4km s-min=18.5km az=78.0*
JMA ***13*** *11:05:46.1±0.6,29.°51N×138.°42E,h529km,M3.4*
ISCJB ***13*** *11:05:47.1±2.1,29.°8N±0.°2×138.°2E±0.°3,h552km±17km, mb3.2/5,Error ellipse: s-maj=44.3km s-min=29.4km az=30.3*
ISC 13 11:05:49.7±2.0,30.°0N±0.°2×138.°2E±0.°3,h555km±16km, n14,σ0°74/17,mb3.2/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**4.59**	**344**	P	**P**	**11 07 16.8**	**+0.6**
BSO3	**Boso 3**	**5.20**	**22**	*e*S	**S**	**11 08 36.9**	**+0.6**
BSO1	**Boso 1**	**5.23**	**26**	P	**P**	**11 07 20.0**	**-1.6**
BSO1				*e*S	**S**	**11 08 36.5**	**-0.3**
BSO4	**Boso 4**	**5.32**	**19**	*e*S	**S**	**11 08 38.2**	**-0.1**
JHU	**Hanno**	**5.94**	**9**	P	**P**	**11 07 28.7**	**+1.0**
JHU				*e*S	**S**	**11 08 47.7**	**-0.4**
JRY	**Ryogami san**	**6.06**	**5**	P	**P**	**11 07 29.4**	**+0.5**
JAG	**Ashikaga**	**6.53**	**9**	*e*S	**S**	**11 08 58.1**	**+0.1

az=155.0

ISC 13 11:15:58.9±5.1, 20°.7S±0°.2×168°.5E±0°.3, h27km±37km, n12, σ0893/9, mb3.8/5, MS3.4/5, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.07**	**226**	*eP*	**Pn**	**11 16 31.8**	**-0.1**
BAYA				*eS*	**Sn**	**11 16 57.2**	**+0.4**
DZM	**Mont Dzumac**	**2.34**	**234**	*e*Pn	**Pn**	**11 16 35.2**	**-0.3**
DZM				*e*Sn	**Sn**	**11 17 02.7**	**-0.7**
	244nm,0.2s						
AFI	**Afiamalu**	**20.01**	**73**	LR	LR	11 25 51.4	
	comp=Z,84nm,21.7s,MS3.0,baz=179,slow=29						
CTA	**Charters Tower**	**20.85**	**268**	LR	LR	11 26 12.5	
	comp=Z,102nm,18.5s,MS3.2,baz=222,slow=30						
RPZ	**Rata Peaks**	**23.04**	**175**	LR	LR	11 30 24.8	
	comp=Z,240nm,18.8s,MS3.7,baz=20,slow=34						
STKA	**Stephens Creek**	**26.48**	**240**	LR	LR	11 31 14.4	
	comp=Z,202nm,18.3s,MS3.7,baz=25,slow=34						
WRA	**Warramunga Arr**	**32.00**	**265**	P	**P**	**11 22 23.7**	**+0.6**
	0.9nm,1.0s,mb3.6,baz=90,slow=8.3,SNR=8.7						
WRA				LR	LR	11 35 20.8	
	comp=Z,80nm,20.4s,MS3.4,baz=295,slow=37						
ASAR	**Alice Springs**	**32.11**	**258**	P	**P**	**11 22 25.6**	**+1.5**
	5.3nm,0.9s,mb4.3,baz=82,slow=9.0,SNR=30						
PPT	**Papeete**	**39.67**	**93**	*e*LR	LR	11 34 28.8	
	127nm,29.0s						
CMAR	**Chiang Mai Arr**	**78.46**	**295**	P	**P**	**11 27 54.6**	**-3.3**
	0.6nm,0.7s,mb3.6,baz=122,slow=4.4,SNR=3.0						
NVAR	**Mina Array Bea**	**90.30**	**49**	P	**P**	**11 28 58.0**	**+0.5**
	1.0nm,0.9s,mb4.2,baz=231,slow=6.5,SNR=5.8						
ILAR	**Eielson Array**	**91.84**	**18**	P	**P**	**11 29 03.1**	**-0.8**
	0.2nm,0.7s,mb3.5,baz=236,slow=6.4,SNR=3.3						

IDC 13 11:35:17.5±6.7, 18°.34S×178°.04W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/17, mbtmp3.6/3, Error ellipse: s-maj=288.5km s-min=38.0km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.90**	**260**	P	P	11 43 34.4	+0.1
	0.3nm,0.3s,baz=96,slow=7.6,SNR=20						
ASAR	**Alice Springs**	**45.02**	**255**	P	P	11 43 34.9	-0.2
	0.8nm,0.7s,baz=91,slow=7.7,SNR=12						
ILAR	**Eielson Array**	**86.22**	**13**	P	P	11 48 00.5	0.0
	0.2nm,0.5s,baz=214,slow=6.2,SNR=4.7						

*IDC **13** 11:36:21.1±4.3, 35°.88N×27°.76E, h33km±37km, mb3.8/12, mb1 4.0/17, mb1mx3.8/31, mbtmp3.8/17, ML4.1/4, Error ellipse: s-maj=26.6km s-min=17.7km az=12.0*

*ISK **13** 11:36:22.7, 36°.02N×27°.77E, h15km, ML3.7*

*ISCJB **13** 11:36:22.3±0.2, 35°.74N±0°.02×27°.95E±0°.02, h68km±3km, mb3.7/13, Error ellipse: s-maj=3.0km s-min=2.2km az=30.4*

*CSEM **13** 11:36:23.9±0.1, 35°.76N×27°.93E, h66km±2km, ML3.7, Mw3.6, Error ellipse: s-maj=3.1km s-min=2.0km az=41.0*

*ATH **13** 11:36:23.7, 35°.87N×27°.82E, h61km±1km, ML3.7*

*HLW **13** 11:36:24.5, 35°.62N×28°.00E, h32km±49km, Md4.3, Ml4.3*

*NEIC **13** 11:36:24.3, 35°.77N×27°.95E, h32km, mb4.1/6, ML3.9(NIC), ML3.7(ATH), After ATH.*

*NIC **13** 11:36:25.4±0.2, 35°.58N×28°.04E, h34km, mb4.3, ML3.9, MW3.6*

*THE **13** 11:36:26.8, 35°.94N×27°.71E, h38km±2km, ML3.6/4, Error ellipse: s-maj=2.8km s-min=0.5km az=116.0*

*NSSC **13** 11:36:46, 35°.52N×29°.92E, h40km*

ISC 13 11:36:24.0±0.2, 35°.75N±0°.02×27°.92E±0°.02, h63km±3km, n369, σ1§12/417, mb3.8/13, 1C-16D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.49**	**20**	P	**Pn**	**11 36 35.6**	**-0.6**
ARG	**Arkhangelos**	**0.49**	**20**	*e*P	**Pn**	**11 36 36.1**	**-0.1**
ARG				*e*S	**Sn**	**11 36 44.5**	**-0.5**
ARG	**Arkhangelos**	**0.49**	**20**	P	**Pn**	**11 36 35.9**	**-0.3**
ARG				S	**Sn**	**11 36 43.6**	**-1.4**
ARG	**Arkhangelos**	**0.49**	**20**	*e*P	**Pn**	**11 36 36.1**	**-0.1**
ARG				*e*S	**Sn**	**11 36 44.5**	**-0.5**
KARP	**Karpathos**	**0.65**	**252**	P	**Pn**	**11 36 37.4**	**-0.5**
KARP	**Karpathos**	**0.65**	**252**	*e*P	**Pn**	**11 36 37.9**	**0.0**
KARP				*e*S	**Sn**	**11 36 47.4**	**-0.6**
KARP	**Karpathos**	**0.65**	**252**	*e*P	**Pn**	**11 36 37.9**	**0.0**
KARP				*e*S	**Sn**	**11 36 47.4**	**-0.6**
DAT	**Datca**	**1.01**	**344**	*e*PG	**Pn**	**11 36 38.4**	**-3.9**
NIS1	**Nisyros lsl.**	**1.04**	**325**	P	**Pn**	**11 36 41.2**	**-1.5**
NIS1				S	**Sn**	**11 36 51.8**	**-4.7**
NIS1	**Nisyros lsl.**	**1.04**	**325**	P	**Pn**	**11 36 41.2**	**-1.5**
BODT	**Bodrum**	**1.40**	**340**	*e*PN	**Pn**	**11 36 44.3**	**-3.0**
BODT	**Bodrum**	**1.40**	**340**	*e*Pn	**Pn**	**11 36 44.3**	**-3.1**
KSL	**Kastellorizon**	**1.41**	**73**	*e*P	**Pn**	**11 36 48.8**	**+1.3**
KSL	**Kastellorizon**	**1.41**	**73**	*e*P	**Pn**	**11 36 48.8**	**+1.3**
YER	**Yerkesik**	**1.41**	**12**	*e*PN	**Pn**	**11 36 46.0**	**-1.6**
YER	**Yerkesik**	**1.41**	**12**	*e*Pn	**Pn**	**11 36 46.0**	**-1.6**
ZKR	**Zakros**	**1.53**	**246**	*e*P	**Pn**	**11 36 50.5**	**+1.3**
ZKR	**Zakros**	**1.53**	**246**	P	**Pn**	**11 36 50.4**	**+1.2**
ZKR				S	**Sn**	**11 37 08.4**	**+0.3**
ZKR	**Zakros**	**1.53**	**246**	P	**Pn**	**11 36 50.4**	**+1.2**
ZKR				S	**Sn**	**11 37 08.4**	**+0.3**
MLSB	**Milas**	**1.54**	**356**	*e*PN	**Pn**	**11 36 46.6**	**-2.7**
MLSB	**Milas**	**1.54**	**356**	*e*Pn	**Pn**	**11 36 46.7**	**-2.7**
ELL	**Elmali**	**1.89**	**58**	*e*PN	**Pn**	**11 36 55.3**	**+1.3**
ELL	**Elmali**	**1.89**	**58**	*e*Pn	**Pn**	**11 36 55.3**	**+1.3**
GLHS	**Glhisar (BURDU**	**1.89**	**42**	*e*PN	**Pn**	**11 36 54.1**	**+0.1**
GLHS	**Glhisar (BURDU**	**1.89**	**42**	*e*Pn	**Pn**	**11 36 54.1**	**0.0**
NPS	**Neapolis**	**1.94**	**256**	P	**Pn**	**11 36 54.7**	**-0.1**
NPS	**Neapolis**	**1.94**	**256**	*e*P	**Pn**	**11 36 54.9**	**+0.1**
NPS				*e*S	**Sn**	**11 37 17.0**	**-1.1**
NPS	**Neapolis**	**1.94**	**256**	*e*P	**Pn**	**11 36 54.9**	**+0.1**
NPS				*e*S	**Sn**	**11 37 17.0**	**-1.1**
XRY	**Khrisi**	**2.02**	**245**	*e*P	**Pn**	**11 36 56.7**	**+0.9**
XRY	**Khrisi**	**2.02**	**245**	*e*P	**Pn**	**11 36 56.7**	**+0.9**
LAST	**Lasithi**	**2.08**	**254**	*e*P	**Pn**	**11 36 56.9**	**+0.3**
LAST	**Lasithi**	**2.08**	**254**	P	**Pn**	**11 36 56.7**	**+0.1**
LAST				S	**Sn**	**11 37 20.8**	**-0.6**
LAST	**Lasithi**	**2.08**	**254**	*e*P	**Pn**	**11 36 56.9**	**+0.3**
LAST				S	**Sn**	**11 37 20.8**	**-0.6**
THR1	**Thera Island**	**2.09**	**288**	P	**Pn**	**11 36 55.7**	**-1.0**
THR1				S	**Sn**	**11 37 18.6**	**-3.0**
THR1	**Thera Island**	**2.09**	**288**	P	**Pn**	**11 36 55.7**	**-1.0**
THR1				S	**Sn**	**11 37 18.6**	**-3.0**
THR2	**Thira island,**	**2.13**	**290**	P	**Pn**	**11 36 56.1**	**-1.1**
THR2	**Thira island,**	**2.13**	**290**	P	**Pn**	**11 36 56.1**	**-1.1**
THR6	**Thira Island,**	**2.13**	**287**	P	**Pn**	**11 36 56.4**	**-0.9**
THR6	**Thira Island,**	**2.13**	**287**	P	**Pn**	**11 36 56.4**	**-0.9**
THR3	**Thira Island,**	**2.14**	**288**	P	**Pn**	**11 36 56.5**	**-0.9**
THR3	**Thira Island,**	**2.14**	**288**	P	**Pn**	**11 36 56.5**	**-0.9**
THR5	**Thira Island,**	**2.19**	**288**	P	**Pn**	**11 36 57.2**	**-0.8**
THR5	**Thira Island,**	**2.19**	**288**	P	**Pn**	**11 36 57.2**	**-0.8**
DENT	**Denizli**	**2.19**	**24**	*e*PN	**Pn**	**11 36 57.1**	**-1.0**
DENT	**Denizli**	**2.19**	**24**	*e*Pn	**Pn**	**11 36 57.1**	**-1.0**
APE	**Apeiranthos**	**2.33**	**305**	*e*PN	**Pn**	**11 36 58.2**	**-1.8**
APE	**Apeiranthos**	**2.33**	**305**	P	**Pn**	**11 36 58.7**	**-1.3**
APE	**Apeiranthos**	**2.33**	**305**	*e*P	**Pn**	**11 36 59.2**	**-0.8**
APE				*e*S	**Sn**	**11 37 24.9**	**-2.6**
APE	**Apeiranthos**	**2.33**	**305**	P	**Pn**	**11 36 58.8**	**-1.2**
APE				S	**Sn**	**11 37 24.0**	**-3.5**
APE	**Apeiranthos**	**2.33**	**305**	*e*Pn	**Pn**	**11 36 58.2**	**-1.8**
APE	**Apeiranthos**	**2.33**	**305**	*e*P	**Pn**	**11 36 59.2**	**-0.8**
APE				S	**Sn**	**11 37 24.0**	**-3.5**
ANTB	**Antalya**	**2.49**	**62**	*e*PN	**Pn**	**11 37 03.8**	**+1.7**
ANTB	**Antalya**	**2.49**	**62**	*e*Pn	**Pn**	**11 37 03.8**	**+1.7**
SIVA	**Sivas**	**2.65**	**255**	*e*P	**Pn**	**11 37 05.9**	**+1.6**
SIVA	**Sivas**	**2.65**	**255**	P	**Pn**	**11 37 05.4**	**+1.1**
SIVA				S	**Sn**	**11 37 34.6**	**-0.6**
SIVA	**Sivas**	**2.65**	**255**	P	**Pn**	**11 37 05.4**	**+1.1**
SIVA				S	**Sn**	**11 37 34.6**	**-0.6**
IZM	**Izmir**	**2.69**	**349**	*e*PN	**Pn**	**11 37 02.6**	**-2.3**
IZM	**Izmir**	**2.69**	**349**	*e*Pn	**Pn**	**11 37 02.6**	**-2.3**
BLCB	**Balcova**	**2.72**	**345**	*e*PN	**Pn**	**11 37 03.0**	**-2.3**
BLCB	**Balcova**	**2.72**	**345**	P	**Pn**	**11 37 04.2**	**-1.1**
BLCB				S	**Sn**	**11 37 33.7**	**-3.3**
BLCB	**Balcova**	**2.72**	**345**	*e*Pn	**Pn**	**11 37 03.0**	**-2.3**
BLCB	**Balcova**	**2.72**	**345**	P	**Pn**	**11 37 04.2**	**-1.1**
BLCB				S	**Sn**	**11 37 33.7**	**-3.3**
KULA	**Kula-Manisa**	**2.82**	**12**	*e*PN	**Pn**	**11 37 05.4**	**-1.2**
KULA	**Kula-Manisa**	**2.82**	**12**	*e*Pn	**Pn**	**11 37 05.4**	**-1.3**
KHL	**Karahalli**	**2.87**	**26**	*e*PN	**Pn**	**11 37 06.9**	**-0.5**
KHL	**Karahalli**	**2.87**	**26**	*e*Pn	**Pn**	**11 37 06.9**	**-0.4**
SUTC	**Sutluce-Ispart**	**3.02**	**54**	*e*PN	**Pn**	**11 37 10.9**	**+1.6**
SUTC	**Sutluce-Ispart**	**3.02**	**54**	*e*Pn	**Pn**	**11 37 10.9**	**+1.6**
CHOS	**Chios island**	**3.02**	**331**	P	**Pn**	**11 37 08.5**	**-0.9**
CHOS				S	**Sn**	**11 37 40.8**	**-3.6**
CHOS	**Chios island**	**3.02**	**331**	P	**Pn**	**11 37 08.5**	**-0.9**
CHOS				S	**Sn**	**11 37 40.8**	**-3.6**
VAM	**Vamos**	**3.05**	**265**	P	**Pn**	**11 37 11.9**	**+2.1**
VAM	**Vamos**	**3.05**	**265**	*e*P	**Pn**	**11 37 10.2**	**+0.4**
VAM	**Vamos**	**3.05**	**265**	*e*P	**Pn**	**11 37 10.2**	**+0.4**
SHUT	**Suhut-Afyon**	**3.50**	**36**	*e*PN	**Pn**	**11 37 16.4**	**+0.5**
SHUT	**Suhut-Afyon**	**3.50**	**36**	*e*Pn	**Pn**	**11 37 16.4**	**+0.5**
PPCY	**Paphos**	**3.72**	**102**	P	**Pn**	**11 37 19.3**	**+0.3**
PPCY	**Paphos**	**3.72**	**102**	P	**Pn**	**11 37 19.3**	**+0.3**
PRK	**Paraskevi**	**3.72**	**340**	P	**Pn**	**11 37 18.6**	**-0.4**
PRK	**Paraskevi**	**3.72**	**340**	*e*P	**Pn**	**11 37 18.2**	**-0.8**
PRK	**Paraskevi**	**3.72**	**340**	P	**Pn**	**11 37 18.3**	**-0.7**
PRK				S	**Sn**	**11 37 58.1**	**-3.5**
PRK	**Paraskevi**	**3.72**	**340**	P	**Pn**	**11 37 18.6**	**-0.4**
PRK				S	**Sn**	**11 37 58.1**	**-3.5**
SIGR	**SIGRI**	**3.82**	**335**	P	**Pn**	**11 37 19.6**	**-0.8**
SIGR				S	**Sn**	**11 38 00.1**	**-3.9**
SIGR	**SIGRI**	**3.82**	**335**	P	**Pn**	**11 37 19.6**	**-0.8**
SIGR				S	**Sn**	**11 38 00.1**	**-3.9**
ALFC	**Alevga**	**3.87**	**98**	P	**Pn**	**11 37 21.5**	**+0.5**
	52nm,0.3s						
ALFC				S	**Sn**	**11 38 04.9**	**-0.2**
ALFC	**Alevga**	**3.87**	**98**	P	**Pn**	**11 37 21.5**	**+0.5**
	52nm,0.3s						
ALFC				S	**Sn**	**11 38 04.9**	**-0.2**
BALB	**Balikesir**	**3.88**	**360**	*e*PN	**Pn**	**11 37 19.8**	**-1.4**
BALB	**Balikesir**	**3.88**	**360**	*e*Pn	**Pn**	**11 37 19.8**	**-1.3**
HDMB	**Hadim**	**3.88**	**71**	*e*PN	**Pn**	**11 37 24.3**	**+3.2**
HDMB	**Hadim**	**3.88**	**71**	*e*Pn	**Pn**	**11 37 24.3**	**+3.2**
VLY	**Voula,Athens**	**3.92**	**304**	P	**Pn**	**11 37 21.6**	**-0.1**
VLY	**Voula,Athens**	**3.92**	**304**	P	**Pn**	**11 37 21.6**	**-0.1**
PTL	**Penteli**	**3.98**	**306**	P	**Pn**	**11 37 22.7**	**+0.2**
PTL	**Penteli**	**3.98**	**306**	*e*P	**Pn**	**11 37 22.7**	**+0.2**
PTL	**Penteli**	**3.98**	**306**	*e*P	**Pn**	**11 37 22.7**	**+0.2**
ATHU	**Athens Univers**	**3.98**	**305**	P	**Pn**	**11 37 24.2**	**+1.6**
ATHU	**Athens Univers**	**3.98**	**305**	P	**Pn**	**11 37 24.2**	**+1.6**
ATH	**Athens Observa**	**4.03**	**305**	P	**Pn**	**11 37 23.7**	**+0.5**
ATH	**Athens Observa**	**4.03**	**305**	*e*P	**Pn**	**11 37 23.7**	**+0.5**
ATH	**Athens Observa**	**4.03**	**305**	*e*P	**Pn**	**11 37 23.7**	**+0.5**
NAIG	**Nisos Aigina**	**4.08**	**301**	*e*P	**Pn**	**11 37 23.9**	**0.0**
NAIG	**Nisos Aigina**	**4.08**	**301**	*e*P	**Pn**	**11 37 23.9**	**0.0**
VLI	**Veliai**	**4.14**	**285**	P	**Pn**	**11 37 24.4**	**-0.3**
VLI	**Veliai**	**4.14**	**285**	P	**Pn**	**11 37 24.4**	**-0.3**
DID	**Didima**	**4.15**	**296**	*e*P	**Pn**	**11 37 25.0**	**+0.1**
DID	**Didima**	**4.15**	**296**	P	**Pn**	**11 37 25.0**	**+0.1**
DID	**Didima**	**4.15**	**296**	*e*P	**Pn**	**11 37 25.0**	**+0.1**
KONT	**Konya--Tatoy**	**4.18**	**57**	*e*PN	**Pn**	**11 37 27.6**	**+2.3**
KONT	**Konya--Tatoy**	**4.18**	**57**	*e*Pn	**Pn**	**11 37 27.6**	**+2.3**
SZAC	**Souni-Zanaja**	**4.18**	**102**	P	**Pn**	**11 37 25.8**	**+0.5**
SZAC	**Souni-Zanaja**	**4.18**	**102**	P	**Pn**	**11 37 25.8**	**+0.5**
EZN	**Ezine**	**4.26**	**343**	*e*PN	**Pn**	**11 37 25.2**	**-1.1**
EZN	**Ezine**	**4.26**	**343**	*e*Pn	**Pn**	**11 37 25.2**	**-1.1**
GONE	**Gonen-Balikesi**	**4.29**	**358**	*e*PN	**Pn**	**11 37 25.6**	**-1.1**
GONE	**Gonen-Balikesi**	**4.29**	**358**	*e*Pn	**Pn**	**11 37 25.7**	**-1.0**
MAMC	**Mammari**	**4.36**	**96**	P	**Pn**	**11 37 28.7**	**+0.9**
MAMC	**Mammari**	**4.36**	**96**	P	**Pn**	**11 37 28.7**	**+0.9**
KIZT	**Kizilcal**	**4.44**	**44**	*e*PN	**Pn**	**11 37 29.8**	**+1.0**
KIZT	**Kizilcal**	**4.44**	**44**	*e*Pn	**Pn**	**11 37 29.8**	**+1.0**
CSS	**Prodhromos**	**4.49**	**99**	P	**Pn**	**11 37 29.9**	**+0.3**
	0.2nm,0.3s						
CSS				S	**Sn**	**11 38 20.9**	**+0.4**
CSS	**Prodhromos**	**4.49**	**99**	P	**Pn**	**11 37 29.9**	**+0.3**
CSS	**Prodhromos**	**4.49**	**99**	P	**Pn**	**11 37 29.9**	**+0.3**
CSS				S	**Sn**	**11 38 20.9**	**+0.4**
KCTX	**Karacabey (Bur**	**4.52**	**4**	*e*PN	**Pn**	**11 37 29.0**	**-0.9**
KCTX	**Karacabey (Bur**	**4.52**	**4**	*e*Pn	**Pn**	**11 37 29.0**	**-0.9**
LTK	**Loutraki**	**4.57**	**301**	*e*P	**Pn**	**11 37 31.3**	**+0.7**
LTK	**Loutraki**	**4.57**	**301**	P	**Pn**	**11 37 31.3**	**+0.7**
LTK	**Loutraki**	**4.57**	**301**	*e*P	**Pn**	**11 37 31.3**	**+0.7**
SVRH	**Sivrihisar-ESK**	**4.67**	**37**	*e*PN	**Pn**	**11 37 32.7**	**+0.8**
SVRH	**Sivrihisar-ESK**	**4.67**	**37**	*e*Pn	**Pn**	**11 37 32.7**	**+0.8**
LIA	**Limnos Island**	**4.67**	**333**	P	**Pn**	**11 37 33.4**	**+1.5**
LIA	**Limnos Island**	**4.67**	**333**	P	**Pn**	**11 37 30.4**	**-1.5**
LIA	**Limnos Island**	**4.67**	**333**	P	**Pn**	**11 37 30.4**	**-1.5**
AOS	**Alonnisos**	**4.69**	**318**	P	**Pn**	**11 37 32.1**	**-0.1**
AOS	**Alonnisos**	**4.69**	**318**	P	**Pn**	**11 37 32.2**	**0.0**
AOS	**Alonnisos**	**4.69**	**318**	P	**Pn**	**11 37 32.2**	**0.0**
HMAT	**Matruh**	**4.70**	**189**	P	**Pn**	**11 37 32.9**	**+0.5**
	baz=190						
HMAT				AMP		11 38 00.0	
	comp=E,340μm,0.3s,logA/T=6.0,baz=190						
HMAT				S	**Sn**	**11 38 19.8**	**-5.8**
	baz=190						
HMAT	**Matruh**	**4.70**	**189**	P	**Pn**	**11 37 32.9**	**+0.5**
LPK	**Lapseki**	**4.70**	**349**	*e*PN	**Pn**	**11 37 30.9**	**-1.4**
LPK	**Lapseki**	**4.70**	**349**	*e*Pn	**Pn**	**11 37 30.9**	**-1.5**
GADA	**Gvkgeada**	**4.71**	**341**	*e*PN	**Pn**	**11 37 31.6**	**-0.9**
GADA	**Gvkgeada**	**4.71**	**341**	*e*Pn	**Pn**	**11 37 31.6**	**-0.9**
VLX	**Vlachokerasia**	**4.74**	**292**	*e*P	**Pn**	**11 37 34.1**	**+1.1**
VLX	**Vlachokerasia**	**4.74**	**292**	P	**Pn**	**11 37 34.1**	**+1.1**
VLX	**Vlachokerasia**	**4.74**	**292**	*e*P	**Pn**	**11 37 34.1**	**+1.1**
GELI	**Tayfur-Gelibol**	**4.77**	**347**	*e*PN	**Pn**	**11 37 31.9**	**-1.4**
GELI	**Tayfur-Gelibol**	**4.77**	**347**	*e*Pn	**Pn**	**11 37 32.0**	**-1.4**
SLUM		**4.81**	**209**	P	**Pn**	**11 37 33.9**	**0.0**
	baz=211						
SLUM				AMP		11 38 00.0	
	comp=E,710μm,0.2s,logA/T=6.5,baz=211						
SLUM				S	**Sn**	**11 38 22.1**	**-6.3**
	baz=211						
SLUM		**4.81**	**209**	P	**Pn**	**11 37 33.9**	**-0.1**
LKR	**Lokris**	**4.88**	**308**	P	**Pn**	**11 37 35.0**	**+0.2**
LKR	**Lokris**	**4.88**	**308**	*e*P	**Pn**	**11 37 35.1**	**+0.3**
LKR	**Lokris**	**4.88**	**308**	P	**Pn**	**11 37 35.1**	**+0.3**
LKR	**Lokris**	**4.88**	**308**	P	**Pn**	**11 37 35.0**	**+0.2**
ATAL	**Atalanti**	**4.89**	**308**	P	**Pn**	**11 37 35.3**	**+0.4**
ATAL	**Atalanti**	**4.89**	**308**	P	**Pn**	**11 37 35.3**	**+0.4**
RKY	**Sarkoy-Tekirda**	**4.96**	**353**	*e*PN	**Pn**	**11 37 35.1**	**-0.8**
RKY	**Sarkoy-Tekirda**	**4.96**	**353**	*e*Pn	**Pn**	**11 37 35.1**	**-0.8**
LTBQ	**Tobruq**	**4.97**	**223**	*i* P	**Pn**	**11 37 36.4**	**+0.4**
	SNR=43						
GUR	**Goura**	**4.97**	**298**	*e*P	**Pn**	**11 37 37.2**	**+1.1**
GUR	**Goura**	**4.97**	**298**	P	**Pn**	**11 37 37.2**	**+1.1**
GUR	**Goura**	**4.97**	**298**	*e*P	**Pn**	**11 37 37.2**	**+1.1**
ERIK	**Erikli-Kesan**	**5.03**	**348**	*e*PN	**Pn**	**11 37 36.2**	**-0.7**
ERIK	**Erikli-Kesan**	**5.03**	**348**	*e*Pn	**Pn**	**11 37 36.2**	**-0.7**
ITM	**Ithomi**	**5.04**	**288**	P	**Pn**	**11 37 39.5**	**+2.5**
ITM	**Ithomi**	**5.04**	**288**	*e*P	**Pn**	**11 37 39.0**	**+2.0**
ITM	**Ithomi**	**5.04**	**288**	P	**Pn**	**11 37 38.9**	**+1.9**
ITM	**Ithomi**	**5.04**	**288**	P	**Pn**	**11 37 38.9**	**+1.9**
MFT	**Murefte**	**5.05**	**354**	*e*PN	**Pn**	**11 37 36.3**	**-0.9**
MFT	**Murefte**	**5.05**	**354**	*e*Pn	**Pn**	**11 37 36.3**	**-0.8**
PHNC	**Paralimni**	**5.05**	**97**	P	**Pn**	**11 37 40.0**	**+2.8**
	comp=E,5.5nm,0.3s						
PHNC				S	**Sn**	**11 38 35.1**	**+0.9**
PHNC	**Paralimni**	**5.05**	**97**	P	**Pn**	**11 37 40.0**	**+2.8**
	comp=E,5.5nm,0.3s						
DSF	**Desfina**	**5.06**	**303**	P	**Pn**	**11 37 37.9**	**+0.6**
DSF	**Desfina**	**5.06**	**303**	P	**Pn**	**11 37 37.9**	**+0.6**
GULT	**Gulveren**	**5.10**	**23**	*e*PN	**Pn**	**11 37 38.0**	**+0.2**
GULT	**Gulveren**	**5.10**	**23**	*e*Pn	**Pn**	**11 37 38.0**	**+0.2**
NEO	**Neokhori**	**5.15**	**315**	P	**Pn**	**11 37 38.8**	**+0.3**
NEO	**Neokhori**	**5.15**	**315**	*e*P	**Pn**	**11 37 38.9**	**+0.4**
NEO	**Neokhori**	**5.15**	**315**	P	**Pn**	**11 37 38.8**	**+0.3**
KALE	**Kalithea**	**5.32**	**301**	P	**Pn**	**11 37 42.4**	**+1.6**
KALE	**Kalithea**	**5.32**	**301**	P	**Pn**	**11 37 42.4**	**+1.6**
ALN	**Alexandroupoli**	**5.34**	**345**	P	**Pn**	**11 37 41.0**	**-0.1**
ALN	**Alexandroupoli**	**5.34**	**345**	P	**Pn**	**11 37 40.6**	**-0.5**
ALN	**Alexandroupoli**	**5.34**	**345**	P	**Pn**	**11 37 41.0**	**-0.1**
PAIG	**Paliouri**	**5.35**	**322**	P	**Pn**	**11 37 41.6**	**+0.4**
PAIG	**Paliouri**	**5.35**	**322**	P	**Pn**	**11 37 41.1**	**-0.1**
PAIG	**Paliouri**	**5.35**	**322**	P	**Pn**	**11 37 41.1**	**-0.1**
TRIZ	**Trizonia**	**5.35**	**301**	P	**Pn**	**11 37 42.5**	**+1.2**
TRIZ	**Trizonia**	**5.35**	**301**	P	**Pn**	**11 37 42.5**	**+1.2**
LAKA	**Lakka**	**5.36**	**299**	P	**Pn**	**11 37 42.6**	**+1.2**
LAKA	**Lakka**	**5.36**	**299**	P	**Pn**	**11 37 42.6**	**+1.2**
EFP	**Efpalio**	**5.50**	**301**	*e*P	**Pn**	**11 37 44.8**	**+1.5**
EFP	**Efpalio**	**5.50**	**301**	P	**Pn**	**11 37 44.1**	**+0.8**
EFP	**Efpalio**	**5.50**	**301**	P	**Pn**	**11 37 44.1**	**+0.8**
AGG	**Agios Georgios**	**5.52**	**308**	P	**Pn**	**11 37 44.7**	**+1.1**
AGG	**Agios Georgios**	**5.52**	**308**	P	**Pn**	**11 37 44.8**	**+1.2**
AGG	**Agios Georgios**	**5.52**	**308**	P	**Pn**	**11 37 44.7**	**+1.1**
RLS	**Riolos of Patr**	**5.66**	**296**	P	**Pn**	**11 37 48.6**	**+3.1**
RLS	**Riolos of Patr**	**5.66**	**296**	*e*P	**Pn**	**11 37 47.1**	**+1.6**
RLS	**Riolos of Patr**	**5.66**	**296**	*e*P	**Pn**	**11 37 47.1**	**+1.6**
EVR	**Evrytania**	**5.80**	**305**	*e*P	**Pn**	**11 37 49.7**	**+2.2**
PLG	**Polygyros**	**5.81**	**324**	P	**Pn**	**11 37 49.6**	**+2.1**
PLG	**Polygyros**	**5.81**	**324**	P	**Pn**	**11 37 49.6**	**+2.1**
KAVA	**Kavala**	**5.88**	**334**	P	**Pn**	**11 37 48.2**	**-0.3**
KAVA	**Kavala**	**5.88**	**334**	P	**Pn**	**11 37 48.2**	**-0.3**
BR131	**Keskin Array S**	**6.02**	**47**	*e*Pn	**Pn**	**11 37 51.5**	**+1.0**
	comp=E,2.4nm,0.3s						
BR131				*e*Sn	**Sn**	**11 38 58.5**	**+0.6**
BR131	**Keskin Array S**	**6.02**	**47**	*e*Pn	**Pn**	**11 37 51.5**	**+1.1**
	comp=E,2.4nm,0.3s						
BR131				*e*Sn	**Sn**	**11 38 58.5**	**+0.6**
BRTR	**Keskin Array B**	**6.02**	**47**	Pn	**Pn**	**11 37 49.6**	**-0.8**
	comp=E,0.3nm,0.3s,baz=231,slow=91,SNR=6.2						
BRTR				Sn	**Sn**	**11 38 57.2**	**-0.7**
	comp=E,1.3nm,0.3s,baz=234,slow=21,SNR=8.7						
BRTR	**Keskin Array B**	**6.02**	**47**	Pn	**Pn**	**11 37 49.6**	**-0.8**
BRTR				Sn	**Sn**	**11 38 57.2**	**-0.7**
THL	**Klokotos Trika**	**6.03**	**311**	*e*P	**Pn**	**11 37 51.6**	**+1.0**
THL	**Klokotos Trika**	**6.03**	**311**	P	**Pn**	**11 37 51.6**	**+1.0**
THL	**Klokotos Trika**	**6.03**	**311**	*e*P	**Pn**	**11 37 51.6**	**+1.0**
LIT	**Litokhoron**	**6.10**	**317**	P	**Pn**	**11 37 52.1**	**+0.5**
LIT	**Litokhoron**	**6.10**	**317**	P	**Pn**	**11 37 52.1**	**+0.5**
HORT	**Hortiatis**	**6.15**	**323**	P	**Pn**	**11 37 54.3**	**+2.1**
HORT	**Hortiatis**	**6.15**	**323**	P	**Pn**	**11 37 54.3**	**+2.1**
VLS	**Valsamata**	**6.35**	**295**	*e*P	**Pn**	**11 37 55.7**	**+0.8**
VLS	**Valsamata**	**6.35**	**295**	P

VYHS	Vyhne	14.39	335	eP	Pn	11 39 49.9	+5.7
KEST	Kesra	15.09	275	Pn	Pn	11 39 49.0	-4.4
comp=E,0.1nm,0.3s,baz=98,slow=14,SNR=2.9							
KEST	Kesra	15.09	275	ePn	Pn	11 39 58.3	+4.9
OKC	Ostrava-Krasne	15.78	336	eP	Pn	11 40 05.9	+3.8
OKC	Ostrava-Krasne	15.78	336	P	Pn	11 40 05.3	+3.2
VRAC	Vranov	15.88	332	Pn	Pn	11 40 04.8	+1.4
comp=E,1.0nm,0.3s,baz=162,slow=12,SNR=7.9							
VRAC	Vranov	15.88	332	Pn	Pn	11 40 04.8	+1.3
VRAC	Vranov	15.88	332	eP	Pn	11 40 05.9	+2.4
MORC	Moravsky Berou	15.93	335	ePn	Pn	11 40 07.0	+3.0
comp=E,23nm,1.4s							
MORC	Moravsky Berou	15.93	335	eP	Pn	11 40 06.7	+2.7
DPC	Dobruska-Polom	16.84	334	eP	Pn	11 40 17.1	+1.7
DPC				epP	pP	11 40 26.5	-3.3
DPC	Dobruska-Polom	16.84	334	P	Pn	11 40 17.1	+1.7
KHC	Kasperske Hory	17.01	326	eP	Pn	11 40 18.1	+0.6
FETA	Feichten	17.08	316	∥ i Pn	Pn	11 40 20.1	+1.7
comp=E,30nm,1.1s							
FETA	Feichten	17.08	316	P	Pn	11 40 20.1	+1.7
comp=E,30nm,1.1s							
UPC	Upice	17.08	333	eP	Pn	11 40 20.1	+1.7
UPC	Upice	17.08	333	P	Pn	11 40 20.1	+1.7
PRU	Pruhonice	17.24	330	eP	Pn	11 40 21.2	+0.9
PRU	Pruhonice	17.24	330	P	Pn	11 40 21.2	+0.9
DAVOX	Davos/Dischmat	17.43	315	Pn	Pn	11 40 23.9	+1.2
comp=E,0.4nm,0.3s,baz=154,slow=18,SNR=3.5							
DAVOX	Davos/Dischmat	17.43	315	Pn	Pn	11 40 23.9	+1.2
PVCC	Panska Ves	17.65	331	eP	Pn	11 40 27.0	+1.6
PVCC	Panska Ves	17.65	331	P	Pn	11 40 27.0	+1.6
DAVA	Damuels	17.71	316	∥ i Pn	Pn	11 40 26.2	+0.1
comp=E,7.2nm,0.8s							
DAVA	Damuels	17.71	316	P	Pn	11 40 26.2	+0.1
comp=E,7.2nm,0.8s							
NKC	Novy Kostel	18.32	327	eP	Pn	11 40 32.6	-0.9
NKC	Novy Kostel	18.32	327	P	Pn	11 40 32.6	-0.9
GRA1	Grafenberg Arr	18.50	324	eP	Pn	11 40 34.5	-1.2
comp=E,12nm,0.9s							
GRA1	Grafenberg Arr	18.50	324	eP	Pn	11 40 34.5	-1.2
comp=E,12nm,0.9s							
GRF	Grafenberg Arr	18.50	324	eP	Pn	11 40 34.5	-1.2
comp=Z,12nm,0.9s							
GRF	Grafenberg Arr	18.50	324	eP	Pn	11 40 34.5	-1.2
comp=Z,12nm,0.9s							
MOX	Moxa	18.98	327	eP	Pn	11 40 40.1	-1.4
comp=Z,24nm,1.4s							
MOX	Moxa	18.98	327	eP	Pn	11 40 40.1	-1.4
comp=Z,24nm,1.4s							
BFO	Black Forest	19.16	317	eP	Pn	11 40 43.7	+0.2
comp=Z,4.6nm,0.4s							
BFO	Black Forest	19.16	317	eP	Pn	11 40 43.7	+0.1
comp=Z,4.6nm,0.4s							
ECH	Echery	19.75	315	eP	Pn	11 40 49.7	-1.0
comp=Z,6.1nm,1.0s							
ECH	Echery	19.75	315	eP	Pn	11 40 49.7	-0.9
comp=Z,6.1nm,1.0s							
ESDC	Sonseca Array	25.45	288	P	P	11 41 45.5	-0.4
comp=Z,2.3nm,0.5s,mb4.0,baz=82,slow=9.4,SNR=14							
ESDC	Sonseca Array	25.45	288	P	P	11 41 45.5	-0.4
FINES	FINESS Array B	25.74	358	P	P	11 41 46.6	-1.7
comp=Z,2.7nm,0.6s,mb4.0,baz=163,slow=10.0,SNR=6.5							
FINES	FINESS Array B	25.74	358	P	P	11 41 46.6	-1.7
HFS	Hagfors	26.07	344	P	P	11 41 49.6	-1.7
comp=Z,2.4nm,0.3s,mb4.1,baz=155,slow=11,SNR=28							
HFS	Hagfors	26.07	344	P	P	11 41 49.6	-1.7
AKTK	Aktyubinsk	26.20	47	P	P	11 41 52.3	-0.3
AKTK	Aktyubinsk	26.20	47	P	P	11 41 52.3	-0.3
AKTO	Aktyubinsk	26.20	47	P	P	11 41 52.3	-0.3
comp=Z,0.5nm,0.3s,mb3.5,baz=249,slow=8.6,SNR=4.9							
JOF	Joensuu	27.27	3	eP	P	11 42 00.9	-1.2
comp=Z,1.0nm,0.5s,mb3.6							
NB2	NORSAR Subarra	27.46	342	P	P	11 42 01.6	-2.2
comp=Z,1.4nm,0.7s,mb3.6,baz=148,slow=9.3							
NB2	NORSAR Subarra	27.46	342	P	P	11 42 01.6	-2.2
comp=Z,1.4nm,0.7s,mb3.6,baz=148,slow=9.0,SNR=5.3							
NOA	NORSAR Array B	27.46	342	P	P	11 42 01.7	-2.1
comp=Z,1.1nm,0.6s,mb3.6,baz=147,slow=9.6,SNR=5.3							
NOA	NORSAR Array B	27.46	342	P	P	11 42 01.6	-2.1
NOA	NORSAR Array B	27.46	342	P	P	11 42 01.6	-2.2
EKA	Eskdalemuir Ar	28.90	322	P	P	11 42 16.3	-0.4
comp=Z,1.1nm,0.7s,mb3.7,baz=125,slow=10,SNR=4.0							
EKA	Eskdalemuir Ar	28.90	322	P	P	11 42 16.3	-0.4
ARCES	ARCESS Array B	33.86	358	P	P	11 42 58.5	-1.6
comp=Z,0.5nm,0.3s,mb3.9,baz=174,slow=7.9,SNR=14							
ARCES				PcP	PcP	11 45 37.9	+0.5
comp=Z,0.7nm,0.8s,baz=169,slow=0.9,SNR=3.6							
ARCES	ARCESS Array B	33.86	358	P	P	11 42 58.5	-1.6
ARCES	ARCESS Array B	33.86	358	PcP	PcP	11 45 37.9	+0.5
KEV	Kevo	34.06	359	eP	P	11 43 01.4	-0.4
MKAR	Makanchi Array	41.56	57	P	P	11 44 07.0	+1.7
comp=Z,0.5nm,0.6s,mb3.3,baz=272,slow=7.3,SNR=7.3							
MKAR	Makanchi Array	41.56	57	P	P	11 44 07.0	+1.7
KSRS	Korea Array	76.12	54	P	P	11 48 06.2	+1.0
comp=Z,0.4nm,0.6s,mb3.5,baz=308,slow=6.0,SNR=2.8							
YKA	Yellowknife Ar	77.56	343	P	P	11 48 11.1	-1.6
comp=Z,1.0nm,0.6s,mb4.0,baz=22,slow=4.7,SNR=2.7							
YKA	Yellowknife Ar	77.56	343	P	P	11 48 11.1	-1.6
ILAR	Eielson Array	79.72	358	P	P	11 48 24.3	-0.3
comp=Z,0.5nm,0.6s,mb3.6,baz=343,slow=2.8,SNR=12							
ILAR	Eielson Array	79.72	358	P	P	11 48 24.3	-0.3
ULM	Lac du Bonnet	81.05	327	P	P	11 48 31.4	-0.6
comp=Z,2.3nm,0.4s,mb4.4,baz=27,slow=3.9,SNR=4.9							
ULM	Lac du Bonnet	81.05	327	P	P	11 48 31.4	-0.6

*KISR **13** 11:48:32.1±0.7, 29°.94N×52°.78E, h34km±999km, ML2.7*
*ISCJB **13** 11:48:33.7±1.0, 29°.53N±0°.07×53°.08E±0°.06, h10km, Error ellipse: s-maj=11.7km s-min=4.9km az=142.5*
*TEH **13** 11:48:37.0, 29°.41N×53°.17E, h33km*

ISC 13 11:48:35.0±1.0, 29°.53N±0°.07×53°.13E±0°.06, h10km, n13, σ0.99/20, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMEH	Mehriz	2.26	34	ePn	Pn	11 49 13.6	+1.2
IMEH				eSn	Sn	11 49 40.4	+0.1
IMEH				e		11 49 53.5	
comp=Z,718nm,0.3s							
ISAD	Sadrabad	2.42	11	ePn	Pn	11 49 16.4	+1.7
ISAD				eSn	Sn	11 49 44.3	-0.1
ISAD				e		11 49 57.0	
comp=Z,1μm,0.4s							
ICHK	Chekchek	2.92	22	ePn	Pn	11 49 21.4	-0.1
ICHK				e		11 49 27.8	
comp=Z,318nm,0.2s							
ICHK				eSn	Sn	11 49 55.5	-1.2
IBAF	Bafgh	2.94	45	ePn	Pn	11 49 21.9	+0.1
IBAF				e		11 49 30.2	
comp=Z,348nm,0.3s							
IBAF				eSn	Sn	11 49 55.2	-2.0
IGAR	Gharneh	3.01	342	ePn	Pn	11 49 23.9	+1.1
IGAR				e		11 49 32.8	
comp=Z,308nm,0.1s							
IGAR				eSn	Sn	11 49 59.1	+0.2
IZEF	Zefreh	3.42	349	ePn	Pn	11 49 30.0	+1.6
IZEF				eSn	Sn	11 50 07.4	-1.7
IZEF				e		11 50 42.2	
comp=N,215nm,0.1s							
IPIR	Pirpir	3.68	329	ePn	Pn	11 49 32.4	+0.4
IPIR				e		11 50 21.0	
comp=E,426nm,0.2s							
IKLH	Kolahrood	4.00	341	ePn	Pn	11 49 37.6	+1.2
IKLH				e		11 50 35.9	
comp=E,128nm,0.2s							
UMR	Umm Al-Rimmam	4.71	272	eP	Pn	11 49 45.2	-1.0
KBD	Kabd	4.75	267	eP	Pn	11 49 46.1	-0.6
RDF	Al-Radifah	4.91	264	eP	Pn	11 49 48.7	-0.2
RDF				eS	Sn	11 50 45.9	+0.1
RDF				AML	AML	11 50 46.8	
comp=Z,6.8nm,0.3s							
NAY	Al-Naaiem	5.14	268	eP	Pn	11 49 51.0	-1.1
IANJ	Anjilo	5.96	6	ePn	Pn	11 50 03.5	+0.2

WEL 13 12:03:51.5±0.5, 37°.46S×177°.83E, h96km±3km, ML3.8/8, Error ellipse: s-maj=3.1km s-min=2.7km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.39	105	PN	Pn	12 04 06.4	+0.3
MXZ				SN	Sn	12 04 16.9	-0.2
WIZ	White Island	0.52	262	PN	Pn	12 04 06.7	-0.2
WIZ				SN	Sn	12 04 16.8	-1.8
PUZ	Puketiti	0.70	151	PN	Pn	12 04 08.4	-0.1
PUZ				SN	Sn	12 04 20.5	-0.8
MWZ	Matawai	0.91	195	PN	Pn	12 04 10.6	0.0
MWZ				SN	Sn	12 04 24.2	-0.7
URZ	Urewera	0.98	215	PN	Pn	12 04 11.1	-0.3
MARZ	Manawahe	1.06	240	PN	Pn	12 04 12.4	+0.2
CNGZ	Carnagh Statio	1.06	164	PN	Pn	12 04 12.6	+0.3
OPRZ	Ohinepanea	1.08	249	PN	Pn	12 04 12.4	-0.1
LIRZ	Lichensteins R	1.27	244	PN	Pn	12 04 15.4	+0.8
TGRZ	Tauranga	1.28	257	PN	Pn	12 04 14.8	+0.1
RRRZ	Republican Roa	1.36	230	PN	Pn	12 04 16.4	+0.6
PRGZ	Paritu Road	1.46	178	PN	Pn	12 04 16.6	-0.4
PRRZ	Plateau Road	1.54	227	PN	Pn	12 04 18.4	+0.4
KNZ	Kokohu	1.56	185	PN	Pn	12 04 17.7	-0.5
RAHZ	Arahi	1.57	202	PN	Pn	12 04 18.7	+0.4
ALRZ	Allen Road	1.61	226	PN	Pn	12 04 19.6	+0.7
MHGZ	Mahia Peninsul	1.69	178	PN	Pn	12 04 19.7	-0.2
NMHZ	Naumai	1.82	206	PN	Pn	12 04 22.1	+0.5
KUZ	Kuaotunu	1.83	292	PN	Pn	12 04 22.6	+0.9
BKZ	Black Stump Fm	2.00	211	PN	Pn	12 04 23.8	-0.1
MKAZ	Moumakai	2.15	279	PN	Pn	12 04 27.3	+1.4
CKHZ	Cape Kidnapper	2.27	195	PN	Pn	12 04 26.3	-1.1
KRVZ	Karewarewa	2.37	226	PN	Pn	12 04 28.1	-0.6
KAHZ	Kahuranaki	2.45	198	PN	Pn	12 04 28.8	-0.9
NGZ	Ngauruhoe	2.45	225	PN	Pn	12 04 30.2	+0.5
BHHZ	Black Hill Sta	2.45	214	PN	Pn	12 04 29.4	-0.4
TWVZ	Taurewa	2.48	229	PN	Pn	12 04 30.9	+0.8
TUVZ	Tukino	2.49	223	PN	Pn	12 04 30.6	+0.3
WPVZ	Whakapapa	2.50	225	PN	Pn	12 04 31.1	+0.7
WNVZ	Wahianoa	2.56	223	PN	Pn	12 04 31.1	-0.1
MTVZ	Mangateitei	2.67	223	PN	Pn	12 04 30.8	-1.8
PXZ	Pawanui	2.68	196	PN	Pn	12 04 30.8	-2.0
PNHZ	Pukenui	2.76	207	PN	Pn	12 04 32.4	-1.5
WPHZ	Waipukurau	2.82	202	PN	Pn	12 04 33.7	-0.9
TSZ	Takapari Road	2.98	209	PN	Pn	12 04 35.0	-1.8
DVHZ	Dannevirke	3.12	204	PN	Pn	12 04 36.6	-2.1
BFZ	Birch Farm	3.44	201	PN	Pn	12 04 40.3	-2.7
MRZ	Mangatainoka R	3.65	208	PN	Pn	12 04 43.0	-2.8
TMWZ	Te Maipa	3.94	202	PN	Pn	12 04 46.7	-3.0
CAW	Cannon Point	4.23	210	PN	Pn	12 04 50.6	-3.0
PLWZ	Palliser	4.56	205	PN	Pn	12 04 54.5	-3.6
TUWZ	Tuamarina	4.98	216	PN	Pn	12 05 00.7	-3.1
QRZ	Quartz Range	5.32	229	PN	Pn	12 05 05.8	-2.6

IDC 13 12:34:45.4±58.0, 20°.04S×179°.90E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/16, mbtmp4.0/3, Error ellipse: s-maj=1046.0km s-min=157.1km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.22	243	P	P	12 41 49.2	-0.9
3.7nm,1.1s,baz=78,slow=12,SNR=3.6							
ASAR	Alice Springs	42.70	256	P	P	12 42 44.2	-0.1
1.0nm,0.4s,baz=90,slow=8.5,SNR=20							
WRA	Warramunga Arr	42.71	262	P	P	12 42 45.0	+0.6
0.6nm,0.3s,baz=95,slow=7.7,SNR=12							

IDC 13 12:49:13.4±2.1, 6°.67S×128°.90E, h0km, mb3.3/1, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, ML3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/11, Error ellipse: s-maj=82.2km s-min=28.6km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.80	195	Pn	Pn	12 52 02.9	-0.2
0.1nm,0.3s,baz=20,slow=11,SNR=3.2							
FITZ				Sn	Sn	12 53 56.8	-19
0.2nm,0.3s,baz=292,slow=19,SNR=4.3							
WRA	Warramunga Arr	14.21	159	Pn	Pn	12 52 37.1	+1.1
0.3nm,0.3s,baz=338,slow=12,SNR=17							
WRA				Sn	Sn	12 54 58.2	-16
0.5nm,0.3s,baz=330,slow=23,SNR=11							
ASAR	Alice Springs	17.57	165	P	Pn	12 53 19.4	-0.5
0.3nm,0.3s,baz=343,slow=11,SNR=17							
KSRS	Korea Array	43.90	359	LR	LR	13 17 33.6	
comp=Z,16nm,18.7s,baz=190,slow=39							
MKAR	Makanchi Array	67.35	327	P	P	13 00 10.4	+0.1
0.2nm,0.5s,baz=124,slow=8.9,SNR=4.3							

*ISCJB **13** 13:03:02.2±0.9, 31°.94N±0°.04×104°.71E±0°.07, h8km±7km, mb3.6/5, Error ellipse: s-maj=10.2km s-min=5.9km az=27.8*
*IDC **13** 13:03:03.4±0.9, 31°.92N×104°.60E, h0km, mb3.5/5, mb1 3.6/8, mb1mx3.5/24, mbtmp3.4/8, ML3.5/2, Error ellipse: s-maj=37.3km s-min=17.8km az=62.0*
*NEIC **13** 13:03:04.7±0.6, 31°.97N×104°.69E, h10km, Error ellipse: s-maj=15.3km s-min=9.4km az=68.0*
*BJI **13** 13:03:06.5, 31°.88N×104°.49E, h12km, ML3.7/14, Ms3.6/1, Ms7 3.5/1*

ISC 13 13:03:04.0±0.9, 31°.96N±0°.04×104°.65E±0°.06, h9km±7km, n15, σ1.05/24, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.29	216	Pn	Pn	13 03 27.0	-1.2
CD2				Pg	Pg	13 03 28.6	-0.2
CD2				Sn	Sn	13 03 43.8	-1.8
CD2				Sg	Sg	13 03 46.3	+0.8
CD2				smax			
comp=N,1μm,0.9s							
CD2				smax			
comp=E,2μm,0.7s							
XAN	Xi'an	4.15	59	Pn	Pn	13 04 16.3	+8.8
XAN				Pg	Pg	13 04 24.0	+0.5
XAN				Sn	Sn	13 05 02.3	+6.1
XAN				Sg	Sg	13 05 14.3	-3.0
XAN				smax			
comp=N,130nm,0.5s							
XAN				smax			
comp=E,72nm,0.6s							
LZH	Lanzhou	4.17	351	Pg	Pg	13 04 24.8	+0.8
LZH				Sn	Sn	13 05 04.5	+7.7
LZH				Sg	Sg	13 05 16.1	-2.0
LZH				smax			
comp=N,110nm,1.0s							
LZH				smax			
comp=E,220nm,1.0s							
LZH				LR	LR		
comp=N,350nm,7.6s							
LZH				LR	LR		
comp=E,480nm,4.8s							
LZH				LR	LR		
comp=Z,490nm,8.4s							
ENH	Enshi	4.48	111	ePn	Pn	13 04 12.0	-0.1
GYA	Guiyang	5.75	162	Pn	Pn	13 04 36.6	+7.0
GYA				Sn	Sn	13 05 35.3	-0.5
GYA				smax			
comp=N,90nm,0.8s							
GYA				smax			
comp=E,90nm,0.9s							
CM31	Chiang Mai Arr	14.39	202	eP	Pn	13 06 35.5	+7.5
comp=E,3.5nm,0.5s							
CMAR	Chiang Mai Arr	14.39	202	Pn	Pn	13 06 28.9	+0.9
comp=E,0.1nm,0.3s,baz=14,slow=12,SNR=4.9							
SONM	Songino Array	15.91	4	Pn	Pn	13 06 48.5	+0.4
comp=E,0.1nm,0.3s,baz=188,slow=8.7,SNR=3.5							
KSRS	Korea Array	19.89	68	P	Pn	13 07 36.7	-0.6
baz=252,slow=10,SNR=2.5							
MKAR	Makanchi Array	22.66	317	P	P	13 08 05.0	-0.3
comp=E,0.4nm,0.7s,mb3.0,baz=116,slow=9.6,SNR=5.1							
ZALV	Zalesovo Beam	26.17	333	P	P	13 08 39.2	+0.7
comp=E,0.6nm,0.5s,mb3.4,baz=142,slow=9.6,SNR=2.1							
ARCES	ARCESS Array B	56.68	336	P	P	13 12 49.1	+1.8
comp=E,0.5nm,0.8s,mb3.6,baz=81,slow=7.4,SNR=2.8							
WRA	Warramunga Arr	58.93	147	P	P	13 13 04.2	+0.5
comp=E,1.2nm,0.6s,mb4.1,baz=341,slow=7.9,SNR=20							
WRA	Warramunga Arr	58.93	147	P	P	13 13 04.2	+0.5
ASAR	Alice Springs	61.98	149	P	P	13 13 25.1	+0.6
comp=E,0.4nm,0.5s,mb3.8,baz=334,slow=6.6,SNR=14							

WEL 13 13:40:19.3±0.2, 45°.01S×167°.56E, h70km±2km, ML4.5/19, Error ellipse: s-maj=1.9km s-min=1.3km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.42	38	PN	Pn	13 40 31.1	-0.3
MSZ				SN	Sn	13 40 40.4	+0.1
MLZ	Mavora Lakes	0.55	128	PN	Pn	13 40 32.1	-0.5
MLZ				SN	Sn	13 40 42.0	-0.4
DCZ	Deep Cove	0.55	211	PN	Pn	13 40 32.4	-0.2
DCZ				SN	Sn	13 40 41.6	-0.8
WHZ	Wether Hill Ro	0.93	163	PN	Pn	13 40 36.7	-0.2
WHZ				SN	Sn	13 40 50.3	+0.4
WKZ	Wanaka	1.05	81	PN	Pn	13 40 38.7	+0.3
EAZ	Earnscleugh	1.26	101	PN	Pn	13 40 40.9	-0.1
JCZ	Jackson Bay	1.27	43	PN	Pn	13 40 41.3	+0.1
PYZ	Puysegur Point	1.31	208	PN	Pn	13 40 42.8	+1.0
TUZ	Tuapeka	1.74	124	PN	Pn	13 40 46.9	-0.5
APZ	The Paps	1.85	171	PN	Pn	13 40 49.0	+0.1
SYZ	Scrubby Hill	1.89	145	PN	Pn	13 40 49.1	-0.3
LBZ	Lake Benmore	1.97	73	PN	Pn	13 40 49.5	-1.0
FOZ	Fox Glacier	2.10	47	PN	Pn	13 40 52.3	+0.1
ODZ	Otahua Downs	2.19	92	PN	Pn	13 40 52.3	-1.2
RPZ	Rata Peaks	2.82	64	PN	Pn	13 41 00.2	-1.8
MQZ	McQueen's Vall	3.88	72	PN	Pn	13 41 14.0	-2.4
CRLZ	Canterbury Las	3.90	70	PN	Pn	13 41 14.6	-2.2
LTZ	Lake Taylor	4.07	58	PN	Pn	13 41 16.1	-2.9
DSZ	Denniston Nort	4.49	45	PN	Pn	13 41 23.5	-1.3
KHZ	Kahutara	5.05	61	PN	Pn	13 41 30.0	-2.4
THZ	Tophouse	5.07	52	PN	Pn	13 41 29.9	-2.8
QRZ	Quartz Range	5.54	43	PN	Pn	13 41 37.8	-1.5
BSWZ	Blackbirch Sta	5.66	57	PN	Pn	13 41 41.1	+0.4
NNZ	Nelson	5.70	50	PN	Pn	13 41 39.3	-2.0
DUWZ	D'Urville Isla	6.28	50	PN	Pn	13 41 49.3	0.0
KIW	Kapiti Island	6.80	55	PN	Pn	13 41 56.1	-0.3
NEZ	North Egmont	7.51	43	PN	Pn	13 42 06.2	+0.2
RAEZ	Rainy Point	7.64	44	PN	Pn	13 42 08.2	+0.3
WNVZ	Wahianoa	8.23	49	PN	Pn	13 42 18.4	+2.5

*IDC **13** 13:44:18.8±5.2, 13°.63N×88°.94W, h0km, mb3.4/3, mb1 4.0/3, mb1mx3.7/18, mbtmp3.5/3, Error ellipse: s-maj=268.8km s-min=65.3km az=38.0*
*CASC **13** 13:44:21.6±1.4, 12°.84N×90°.28W, h13km±13km, MD3.8, ML3.3*

ISC 13 13:44:20.1±1.9, 12°.80N±0°.08×90°.27W±0°.05, h4km±10km, n22, σ0.74/26, mb3.7/2, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	San Blas	1.21	31	eP	Pg	13 44 42.7	-0.6
SBLS				eS	Sg	13 44 59.3	+0.4
SBLS				AML	AML	13 45 01.7	
comp=Z,567nm,0.2s							
SNJE	San Jose	1.24	31	eP	Pg	13 44 43.5	-0.4
RTR	El Retiro	1.25	29	eP	Pg	13 44 43.7	-0.3
RTR				eS	Sg	13 45 00.4	+0.2
BOQS	Boqueron	1.34	46	eP	Pn	13 44 45.3	-0.3
BOQS				eP		13 44 45.3	
BOQS				eS	Sg	13 45 03.8	+0.7
SNET	Serv Nac Est T	1.34	49	eP	Pn	13 44 44.8	-0.8
RBDL	Robledal	1.42	23	eP	Pn	13 44 46.2	-0.5
RBDL				eS	Sb	13 45 05.4	-0.3
LFRS	El Faro	1.43	55	eP	Pn	13 44 46.2	-0.7
LFRS				eS	Sb	13 45 05.7	-0.2
LBRS	Las Brisas	1.51	52	eP	Pn	13 44 47.9	-0.1
SNVI	San Vicente	1.61	60	eP	Pn	13 44 49.0	-0.3
FUG	Fuego 3	1.73	341	eP	Pn	13 44 50.9	-0.1
NBG	Las Nubes	1.78	358	eP	Pn	13 44 52.6	+1.0
MTO2	Montecristo 2	1.82	29	eP	Pn	13 44 52.1	-0.1
FG6		1.85	341	eP	Pn	13 44 51.7	-0.8
VSM	San Miguel	2.04	72	eP	Pn	13 44 56.0	+0.8
TP2	Tecpan 2	2.10	340	eP	Pn	13 44 56.1	+0.1
CAHU	Cacacuatique	2.22	64	eP	Pn	13 44 57.9	+0.1
MRL	Marmol	2.32	14	eP	Pn	13 45 00.3	+1.2
CNCH	Conchagua	2.42	78	eP	Pn	13 45 01.3	+0.9
TXAR	Lajitas Array	20.63	325	P	P	13 49 01.3	+0.7
comp=Z,0.5nm,0.6s,baz=149,slow=13,SNR=8.2							
NVAR	Mina Array Bea	35.66	321	P	P	13 51 20.8	+1.4
comp=Z,1.2nm,1.7s,mb4.0,baz=138,slow=8.2,SNR=11							
ILAR	Eielson Array	64.60	337	P	P	13 54 55.9	-2.5
comp=Z,0.5nm,1.0s,mb3.5,baz=120,slow=5.3,SNR=4.9							
CMAR	Chiang Mai Arr	147.64	344	PKPbc	PKPbc	14 04 04.2	-2.5
comp=Z,0.2nm,0.3s,baz=338,slow=4.2,SNR=4.1							

JMA 13 13:52:55.9±0.1, 28°.70N×129°.47E, h3km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	Amami Oshima	0.31	158	P	Pg	13 53 02.1	+0.2
JAM				eS	Sg	13 53 06.3	+0.4
JZK	Kikaishima	0.58	131	P	Pg	13 53 07.7	+0.6
JZK				S	Sg	13 53 15.8	+1.1
JTK	Tokunoshima	1.02	207	P	Pg	13 53 16.2	+0.7
JTK				eS	Sg	13 53 30.4	+1.7
JNN	Nakanoshima	1.19	17	P	Pg	13 53 17.7	-1.1
JNN				eS	Sg	13 53 33.1	-1.1
JKC	Kuchinoerabu	1.87	20	P	Pn	13 53 27.4	-1.3
JKC				eS	Sn	13 53 49.7	-3.1
JIH	Iheya	2.13	219	P	Pn	13 53 33.1	+0.8
JIH				eS	Sn	13 54 00.4	+1.2
JOW	Kunigami	2.14	210	eS	Sn	13 53 59.3	-0.3
JTN	Tanegashima 3	2.

ESL	**Shilin**	**1.35 230**	*e*P	Pn	14 08 01.0 +0.1
	baz=229				
ESL			*e*S	Sn	14 08 19.0 -0.9
	baz=229				
EHY	**Hungye**	**1.64 224**	*e*P	Pn	14 08 04.6 +0.2
	baz=223				
EHY			*e*S	Sn	14 08 25.3 -0.6
	baz=223				
NSY	**Sanyi**	**1.67 261**	*e*P	Pn	14 08 05.2 +0.5
	baz=260				
NSY			*e*S	Sn	14 08 26.4 -0.2
	baz=260				
TWQ1	**Liyutan**	**1.67 259**	*e*P	Pn	14 08 05.3 +0.5
	baz=258				
TWQ1			*e*S	Sn	14 08 27.1 +0.4
	baz=258				
SMLT	**Sun Moon Lake**	**1.72 243**	*e*P	Pn	14 08 06.1 +0.7
	baz=242				
SMLT			*e*S	Sn	14 08 27.8 0.0
	baz=242				
TYC	**Yuchr**	**1.74 244**	*e*P	Pn	14 08 07.0 +1.3
	baz=243				
TYC			*e*S	Sn	14 08 28.1 -0.2
	baz=243				
TWF1	**Yuli**	**1.77 221**	*e*P	Pn	14 08 06.7 +0.7
	baz=220				
TWF1			*e*S	Sn	14 08 28.5 -0.3
	baz=220				
YUS	**Yu-Shan**	**1.90 231**	*e*P	Pn	14 08 08.2 +0.6
	baz=230				
YUS			*e*S	Sn	14 08 31.9 +0.1
	baz=230				
CHKT	**Chengkung**	**1.93 215**	*e*P	Pn	14 08 08.5 +0.5
	baz=214				
CHKT			*e*S	Sn	14 08 31.6 -0.8
	baz=214				
ALS	**Alishan**	**1.99 234**	*e*P	Pn	14 08 09.9 +1.1
	baz=233				
ALS			*e*S	Sn	14 08 34.0 +0.1
	baz=233				
CHN5	**Tsauling**	**2.04 238**	*e*P	Pn	14 08 09.7 +0.2
	baz=237				
ELDTW	**Lidau**	**2.06 224**	*e*P	Pn	14 08 11.0 +1.3
	baz=223				
ELDTW			*e*S	Sn	14 08 35.2 -0.2
	baz=223				
WGK	**Gukeng**	**2.08 242**	*e*P	Pn	14 08 10.4 +0.4
	baz=241				
WGK			*e*S	Sn	14 08 36.2 +0.2
	baz=241				
WTP	**Ta-pu**	**2.29 232**	*e*P	Pn	14 08 13.0 +0.3
	baz=231				
WTP			*e*S	Sn	14 08 40.8 +0.1
	baz=231				
TWG	**Pinlang**	**2.31 217**	*e*P	Pn	14 08 13.3 +0.4
	baz=216				
TWG			*e*S	Sn	14 08 40.8 -0.4
	baz=216				
CHN1	**Nanshi**	**2.39 232**	*e*P	Pn	14 08 14.2 +0.2
	baz=231				
CHN1			*e*S	Sn	14 08 42.2 -0.8
	baz=231				
SGST	**Jiashian**	**2.42 229**	*e*P	Pn	14 08 14.7 +0.3
	baz=228				
SGST			*e*S	Sn	14 08 43.8 0.0
	baz=228				

MEX 13 14:13:26.5±0.3, 15°98N×96°70W, h43km±9km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.60**	**110**	*i* P	Pn	14 13 37.2	-1.5
HUIG				*i* S	Sn	14 13 45.4	-2.0
VHO	**Vista Hermosa**	**1.09**	**358**	*i* P	Pn	14 13 43.7	-1.6
VHO				*i* S	Sn	14 13 57.5	-1.6
PNIG	**Pinotepa**	**1.44**	**287**	*e*P	Pn	14 13 48.5	-1.5
PNIG				*i* S	Sn	14 14 05.8	-1.9
PCIG		**3.36**	**94**	*i* P	Pn	14 14 16.1	-0.4
PCIG				*i* S	Sn	14 14 53.4	-1.7

*IDC **13** 14:26:02.5±0.7, 4°.07S×102°.95E, h0km, mb4.0/11, mb1 4.1/12, mb1mx4.0/20, mbtmp4.0/12, ML3.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/22, Error ellipse: s-maj=29.5km s-min=12.8km az=59.0*
*ISCJB **13** 14:26:07.3±0.6, 3°.93S±0°.06×102°.99E±0°.07, h53km±5km, mb4.1/18, Error ellipse: s-maj=13.7km s-min=6.1km az=140.6*
*DJA **13** 14:26:07, 3°.99S×103°.14E, h5km, MLv4.5/14*
*NEIC **13** 14:26:08.4±1.8, 3°.91S×103°.09E, h48km±16km, mb4.3/9, Error ellipse: s-maj=25.4km s-min=9.6km az=56.0*

ISC 13 14:26:08.2±0.6, 3°.98S±0°.06×102°.97E±0°.07, h42km±6km, n50, σ1°25/49, mb4.1/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.38**	**182**	P	**Pn**	**14 26 15.8**	**-1.8**
KSI	**Kapahiang**	**0.50**	**311**	P	**Pn**	**14 26 19.0**	**-0.1**
LHSI	**Lahat**	**0.57**	**74**	P	**Pn**	**14 26 19.5**	**-0.5**
MDSI	**Maura Dua**	**1.30**	**113**	P	**Pn**	**14 26 26.9**	**-3.1**
LWLI	**Liwa**	**1.50**	**134**	P	**Pn**	**14 26 33.1**	**+0.5**
KLSI		**1.89**	**112**	P	**Pn**	**14 26 36.9**	**-1.2**
KLSI				S	**Sn**	**14 27 00.8**	**+0.1**
KLI	**Kotabumi**	**2.07**	**115**	P	**Pn**	**14 26 40.9**	**+0.3**
KLI				S	**Sn**	**14 27 11.5**	**+6.3**
KASI	**Kota Agung**	**2.16**	**135**	P	**Pn**	**14 26 43.1**	**+1.4**
KASI				S	**Sn**	**14 27 11.7**	**+4.4**
KRJI	**Kerinci**	**2.41**	**321**	P	**Pn**	**14 26 51.2**	**+6.0**
BLSI	**Bandar Lampung**	**2.65**	**121**	P	**Pn**	**14 26 49.6**	**+1.1**
BLSI				S	**Sn**	**14 27 26.6**	**+7.1**
RBSI	**Rajabasa**	**3.32**	**124**	P	**Pn**	**14 27 06.2**	**+8.4**
SDSI	**Sungai Dareh**	**3.40**	**333**	P	**Pn**	**14 27 00.9**	**+2.1**
PPBI	**Pangkal Pinang**	**3.64**	**60**	P	**Pn**	**14 27 00.0**	**-2.1**
SBJI	**Serang**	**3.80**	**124**	P	**Pn**	**14 27 05.5**	**+1.2**
PDSI	**Padang**	**3.95**	**321**	P	**Pn**	**14 27 11.1**	**+4.8**
PPI	**Padang Panjang**	**4.34**	**324**	P	**Pn**	**14 27 18.7**	**+6.9**
DBJI	**Dramaga**	**4.55**	**124**	P	Px	14 27 24.8	
SISI	**Saibi**	**4.69**	**304**	P	**Pn**	**14 27 24.9**	**+8.4**
LEM	**Lembang**	**5.42**	**122**	P	Px	14 27 38.3	
MYKOM	**Kota Tinggi**	**5.80**	**9**	P	**Pn**	**14 27 33.1**	**+1.3**
MNSI	**Mandailing Nat**	**5.83**	**324**	P	Px	14 27 43.5	
PSI	**Prapat**	**7.86**	**329**	Pn	**Pn**	**14 27 58.8**	**-1.2**
	0.3nm,0.3s,baz=137,slow=18,SNR=1.7						
PSI				Lg		14 30 14.8	
	0.9nm,0.3s,baz=90,slow=18,SNR=2.2						
KULM	**Kulim**	**9.50**	**346**	*e*Pn	**Pn**	**14 28 22.9**	**+0.3**
CM31	**Chiang Mai Arr**	**22.65**	**350**	P	**P**	**14 31 02.9**	**-2.9**
CMAR	**Chiang Mai Arr**	**22.65**	**350**	P	**P**	**14 31 07.5**	**+1.7**
	4.1nm,0.8s,mb3.9,baz=184,slow=8.5,SNR=27						
CHTO	**Chiang Mai**	**23.00**	**350**	*e*P	**P**	**14 31 07.4**	**-2.2**
	6.2nm,1.0s,mb4.0						
QIZ	**Qiongzhong**	**23.84**	**16**	P	**P**	**14 31 21.6**	**+3.9**
	7.2nm,0.8s,mb4.2						
FITZ	**Fitzroy Crossi**	**26.25**	**124**	P	**P**	**14 31 38.6**	**-1.1**
	2.9nm,0.7s,mb3.9,baz=273,slow=7.6,SNR=7.6						
WRA	**Warramunga Arr**	**34.44**	**120**	P	**P**	**14 32 51.1**	**-1.0**
	0.7nm,0.5s,mb3.9,baz=302,slow=9.2,SNR=17						
WRA				PcP	PcP	14 35 27.9	+0.9
	0.6nm,0.5s,baz=307,slow=2.2,SNR=11						
WRA	**Warramunga Arr**	**34.44**	**120**	P	**P**	**14 32 51.1**	**-1.0**
WRA				PcP	PcP	14 35 27.9	+0.9
ASAR	**Alice Springs**	**35.70**	**126**	P	**P**	**14 33 03.0**	**+0.1**
	3.0nm,0.7s,mb4.4,baz=299,slow=7.8,SNR=47						
ASAR				PcP	PcP	14 35 32.1	+1.5
	0.8nm,0.4s,baz=306,slow=2.6,SNR=8.3						
STKA	**Stephens Creek**	**45.63**	**132**	P	**P**	**14 34 25.5**	**+0.8**
	3.0nm,0.5s,mb4.5,baz=294,slow=11,SNR=8.3						
STKA	**Stephens Creek**	**45.63**	**132**	*e*P	**P**	**14 34 25.1**	**+0.4**
	0.7nm,0.6s,mb3.8						
KSRS	**Korea Array**	**47.31**	**27**	P	**P**	**14 34 39.1**	**+1.3**
	0.6nm,0.7s,mb3.6,baz=237,slow=7.2,SNR=5.8						
SONM	**Songino Array**	**51.69**	**3**	P	**P**	**14 35 12.3**	**+1.3**
	1.6nm,0.8s,mb4.0,baz=185,slow=8.8,SNR=13						
TKM2	**Tokmak 2**	**52.84**	**335**	P	**P**	**14 35 19.6**	**-0.1**
	2.3nm,0.8s,mb4.2						
EKS2	**Erkin-Say**	**53.43**	**333**	*e*P	**P**	**14 35 23.4**	**-0.6**
	2.9nm,0.8s,mb4.3						
MK31	**Makanchi Array**	**53.76**	**342**	*e*P	**P**	**14 35 26.7**	**+0.4**
MKAR	**Makanchi Array**	**53.76**	**342**	P	**P**	**14 35 26.0**	**-0.3**
	0.7nm,0.8s,mb3.7,baz=145,slow=7.9,SNR=7.0						
ZAA0	**Zalesovo Array**	**59.69**	**348**	*e*P	**P**	**14 36 07.4**	**-0.9**
ZALV	**Zalesovo Beam**	**59.69**	**348**	P	**P**	**14 36 08.0**	**-0.2**
	0.9nm,0.3s,mb4.2,baz=163,slow=7.1,SNR=7.9						
ZALV				LR	LR	15 04 06.7	
	comp=Z,20nm,21.4s,baz=54,slow=38						
ZALV	**Zalesovo Beam**	**59.69**	**348**	P	**P**	**14 36 08.0**	**-0.2**
ZALV				LR	LR	15 04 06.7	
CASY	**Casey**	**62.41**	**177**	*e*P	**P**	**14 36 29.6**	**+3.1**
	3.4nm,0.9s,mb4.5						
ABKAR	**Abkulak array**	**64.80**	**330**	*e*P	**P**	**14 36 41.9**	**-0.7**
	23nm,1.1s,mb5.1						
MAW	**Mawson**	**69.14**	**195**	P	**P**	**14 37 10.0**	**+0.2**
	0.6nm,0.5s,mb3.8,baz=7.1,slow=8.1,SNR=1.8						
BRTR	**Keskin Array B**	**76.84**	**312**	P	**P**	**14 37 56.8**	**+0.8**
	2.6nm,0.8s,mb4.2,baz=132,slow=6.3,SNR=11						
BR131	**Keskin Array S**	**76.84**	**312**	*e*P	**P**	**14 37 57.0**	**+1.1**
	2.5nm,0.9s,mb4.1						
QSPA	**South Pole Qui**	**85.99**	**180**	*e*P	**P**	**14 38 41.0**	**-2.6**
	2.3nm,1.3s,mb4.2						
TXAR	**Lajitas Array**	**144.32**	**42**	PKP	PKPdf	14 45 39.3	-1.2
	0.2nm,0.4s,baz=174,slow=1.1,SNR=4.2						
BDFB	**Brasilia**	**145.29**	**235**	PKPbc	PKPbc	14 45 42.6	+0.3
	1.7nm,0.4s,baz=299,slow=26,SNR=3.1						

*ISCJB **13** 14:37:03.8±1.4, 3°.06N±0°.09×128°.5E±0°.1, h216km±16km, mb3.5/6, Error ellipse: s-maj=22.4km s-min=14.1km az=170.4*
*IDC **13** 14:37:04.4±2.9, 3°.02N×128°.36E, h206km±28km, mb3.0/5, mb1 3.2/5, mb1mx2.9/18, mbtmp3.0/5, Error ellipse: s-maj=44.1km s-min=13.3km az=87.0*
*DJA **13** 14:37:11, 2°.83N×128°.36E, h30km, MLv4.2/3*

ISC 13 14:37:04.9±1.4, 3°.03N±0°.09×128°.5E±0°.1, h208km±16km, n10, σ1°27/13, mb3.5/6, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.52**	**207**	P	**Pn**	**14 37 49.0**	**-0.5**
SGSI	**Sangihe**	**3.05**	**282**	P	**Pn**	**14 37 56.2**	**+0.7**
SGSI				S	**Sn**	**14 38 34.4**	**+4.0**
MNI	**Manado**	**3.99**	**247**	P	**Pn**	**14 38 07.4**	**+0.5**
MNI				S	**Sn**	**14 38 54.9**	**+2.0**
KMSI	**Cibinong**	**5.14**	**242**	P	**Pn**	**14 38 23.8**	**+2.5**
KMSI				S	**Sn**	**14 39 21.9**	**+1.6**
FITZ	**Fitzroy Crossi**	**21.18**	**188**	P	**P**	**14 41 33.1**	**-1.2**
	0.9nm,0.4s,mb3.6,baz=3.9,slow=11,SNR=8.2						
WRA	**Warramunga Arr**	**23.53**	**166**	P	**P**	**14 41 56.7**	**+0.3**
	0.6nm,0.3s,mb3.6,baz=344,slow=10,SNR=27						
ASAR	**Alice Springs**	**27.05**	**169**	P	**P**	**14 42 27.6**	**-0.5**
	0.3nm,0.5s,mb3.2,baz=352,slow=7.5,SNR=9.9						
ASAR				PcP	PcP	14 45 44.0	+0.2
	0.2nm,0.4s,baz=359,slow=2.3,SNR=5.2						
ASAR				ScP	ScP	14 49 02.9	-1.6
	0.4nm,0.8s,baz=349,slow=1.9,SNR=3.1						
MJAR	**Matsushiro Arr**	**34.53**	**14**	P	**P**	**14 43 33.0**	**-0.5**
	2.2nm,0.4s,mb4.1,baz=194,slow=9.9,SNR=13						
STKA	**Stephens Creek**	**36.87**	**161**	P	**P**	**14 43 54.1**	**+0.7**
	2.4nm,1.1s,mb3.7,baz=352,slow=7.1,SNR=3.7						
MKAR	**Makanchi Array**	**59.15**	**325**	P	**P**	**14 46 43.9**	**+0.1**
	0.1nm,0.3s,mb3.0,baz=112,slow=7.4,SNR=4.1						

*ISCJB **13** 14:43:04.5±0.3, 3°.68N±0°.02×29°.50E±0°.03, h0km, Error ellipse: s-maj=3.1km s-min=3.0km az=170.5*
*CSEM **13** 14:43:04.5±0.1, 39°.66N×29°.51E, h1km, MD2.8, Error ellipse: s-maj=3.1km s-min=2.8km az=91.0*
*ISK **13** 14:43:04.5, 39°.66N×29°.52E, h8km, MD2.8*

ISC 13 14:43:04.7±0.3, 39°.67N±0°.02×29°.51E±0°.03, h0km, n64, σ0°88/75, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.55**	**329**	*i* P	**Pg**	**14 43 13.3**	**-2.0**
ULDT	**Uludag**	**0.55**	**329**	*i* P	**Pg**	**14 43 13.3**	**-2.0**
ULDT				*i* S	**Sg**	**14 43 22.1**	**-0.4**
GDZ	**Gediz**	**0.58**	**182**	*i* P	**Pg**	**14 43 14.9**	**-0.9**
GDZ	**Gediz**	**0.58**	**182**	*i* P	**Pg**	**14 43 14.9**	**-0.9**
GDZ				*i* S	**Sg**	**14 43 24.2**	**+0.9**
CAVI	**Cavuskoy**	**0.59**	**26**	*e*PG	**Pg**	**14 43 16.5**	**+0.4**
CAVI				*e*SG	**Sg**	**14 43 25.4**	**+1.6**
CAVI	**Cavuskoy**	**0.59**	**26**	*e*Pg	**Pg**	**14 43 16.5**	**+0.4**
CAVI				*e*Sg	**Sg**	**14 43 25.4**	**+1.6**
BORA	**Eskisehir**	**0.76**	**74**	*i* P	**Pg**	**14 43 19.7**	**+0.4**
BORA	**Eskisehir**	**0.76**	**74**	*i* P	**Pg**	**14 43 19.7**	**+0.4**
ADVT	**Abdulvahap**	**0.78**	**13**	*e*PG	**Pg**	**14 43 20.0**	**+0.2**
ADVT	**Abdulvahap**	**0.78**	**13**	*e*Pg	**Pg**	**14 43 20.0**	**+0.2**
DURS	**Dursunbey**	**0.80**	**265**	*i* P	**Pg**	**14 43 19.2**	**-0.8**
DURS	**Dursunbey**	**0.80**	**265**	*i* P	**Pg**	**14 43 19.2**	**-0.8**
DURS				*e*S	**Sg**	**14 43 31.5**	**+1.1**
MDNY	**Mudanya-Bursa**	**0.85**	**326**	*e*PG	**Pg**	**14 43 21.5**	**+0.5**
MDNY	**Mudanya-Bursa**	**0.85**	**326**	*e*Pg	**Pg**	**14 43 21.5**	**+0.5**
DEMI	**Demirci**	**0.88**	**225**	*i* P	**Pg**	**14 43 21.2**	**-0.3**
DEMI	**Demirci**	**0.88**	**225**	*i* P	**Pg**	**14 43 21.2**	**-0.3**
DEMI				*i* S	**Sg**	**14 43 37.5**	**+4.7**
GPA	**Golpazari**	**0.88**	**45**	*e*PG	**Pg**	**14 43 21.3**	**-0.2**
GPA	**Golpazari**	**0.88**	**45**	*e*Pg	**Pg**	**14 43 21.3**	**-0.2**
ARMT	**Armutlu**	**1.02**	**331**	*e*PG	**Pg**	**14 43 24.6**	**+0.3**
ARMT	**Armutlu**	**1.02**	**331**	*e*Pg	**Pg**	**14 43 24.6**	**+0.3**
ESKT	**Eskisehir**	**1.05**	**98**	*i* P	**Pg**	**14 43 24.6**	**-0.2**
SEYT	**Eskypehyr**	**1.05**	**98**	*i* P	**Pg**	**14 43 24.6**	**-0.3**
SEYT				*i* S	**Sg**	**14 43 41.8**	**+3.3**
KCTX	**Karacabey (Bur**	**1.06**	**304**	*e*PN	**Pn**	**14 43 25.9**	**-1.0**
KCTX	**Karacabey (Bur**	**1.06**	**304**	*e*Pn	**Pn**	**14 43 25.9**	**-1.0**
GULT	**Gulveren**	**1.09**	**45**	*e*PN	**Pn**	**14 43 26.5**	**-0.7**
GULT	**Gulveren**	**1.09**	**45**	*e*Pn	**Pn**	**14 43 26.5**	**-0.7**
HRT	**Hereke**	**1.16**	**6**	*e*PN	**Pn**	**14 43 27.1**	**-1.1**
HRT	**Hereke**	**1.16**	**6**	*e*Pn	**Pn**	**14 43 27.1**	**-1.1**
BUY	**Buyukada**	**1.22**	**346**	*i* P	**Pg**	**14 43 28.2**	**+0.1**
BUY	**Buyukada**	**1.22**	**346**	*i* P	**Pg**	**14 43 28.2**	**+0.1**
BUY				*i* S	**Sg**	**14 43 46.6**	**+2.7**
BALB	**Balikesir**	**1.25**	**269**	*e*PN	**Pn**	**14 43 29.4**	**-0.1**
BALB	**Balikesir**	**1.25**	**269**	*e*Pn	**Pn**	**14 43 29.4**	**-0.1**
KHAL	**Karahalli**	**1.30**	**180**	*i* P	**Pg**	**14 43 29.9**	**+0.3**
KHAL	**Karahalli**	**1.30**	**180**	*i* P	**Pg**	**14 43 29.9**	**+0.3**
KULA	**Kula-Manisa**	**1.33**	**210**	*e*PN	**Pn**	**14 43 29.8**	**-0.7**
KULA	**Kula-Manisa**	**1.33**	**210**	*e*Pn	**Pn**	**14 43 29.8**	**-0.7**
KHL	**Karahalli**	**1.34**	**179**	*e*PN	**Pn**	**14 43 29.6**	**-1.1**
KHL	**Karahalli**	**1.34**	**179**	*e*Pn	**Pn**	**14 43 29.6**	**-1.1**
SHUT	**Suhut-Afyon**	**1.38**	**144**	*e*PN	**Pn**	**14 43 30.6**	**-0.6**
SHUT	**Suhut-Afyon**	**1.38**	**144**	*e*Pn	**Pn**	**14 43 30.6**	**-0.6**
ISK	**Istanbul-Kandi**	**1.44**	**346**	*e*PN	**Pn**	**14 43 31.7**	**-0.3**
ISK	**Istanbul-Kandi**	**1.44**	**346**	*e*Pn	**Pn**	**14 43 31.7**	**-0.3**
GONE	**Gonen-Balikesi**	**1.45**	**286**	*e*PN	**Pn**	**14 43 31.7**	**-0.5**
GONE	**Gonen-Balikesi**	**1.45**	**286**	*e*Pn	**Pn**	**14 43 31.7**	**-0.5**
BALY	**Balya**	**1.46**	**273**	*i* P	**Pn**	**14 43 31.8**	**-0.4**
BALY	**Balya**	**1.46**	**273**	*i* P	**Pn**	**14 43 31.8**	**-0.5**
BALY				*i* S	**Sg**	**14 43 53.0**	**+1.5**
BOLV	**Bolvadin**	**1.47**	**130**	*i* P	**Pn**	**14 43 32.6**	**+0.1**
BOLV	**Bolvadin**	**1.47**	**130**	*i* P	**Pn**	**14 43 32.6**	**+0.1**
BOLV				*i* S	**Sg**	**14 43 53.8**	**+1.8**
SILT	**Sile**	**1.49**	**4**	*e*PN	**Pn**	**14 43 32.3**	**-0.4**
SILT	**Sile**	**1.49**	**4**	*e*Pn	**Pn**	**14 43 32.3**	**-0.4**
AKHS	**Akhisar**	**1.53**	**240**	*i* P	**Pn**	**14 43 33.8**	**+0.4**
AKHS	**Akhisar**	**1.53**	**240**	*i* P	**Pn**	**14 43 33.8**	**+0.5**
AKHS				*i* S	**Sn**	**14 43 54.8**	**+0.9**
MDU	**Mudurnu**	**1.53**	**58**	*e*PN	**Pn**	**14 43 32.8**	**-0.5**
MDU	**Mudurnu**	**1.53**	**58**	*e*Pn	**Pn**	**14 43 32.8**	**-0.6**
SVRH	**Sivrihisar-ESK**	**1.58**	**97**	*e*PN	**Pn**	**14 43 33.5**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.58**	**97**	*e*Pn	**Pn**	**14 43 33.5**	**-0.4**
KLYT	**Kilyos**	**1.62**	**348**	*e*PN	**Pn**	**14 43 34.1**	**-0.5**
KLYT	**Kilyos**	**1.62**	**348**	*e*Pn	**Pn**	**14 43 34.1**	**-0.5**
CTKS	**Kestanelik-??a**	**1.74**	**334**	*e*PN	**Pn**	**14 43 36.0**	**-0.2**
CTKS	**Kestanelik-??a**	**1.74**	**334**	*e*Pn	**Pn**	**14 43 36.0**	**-0.2**
KIZT	**Kizilcal**	**2.00**	**112**	*e*PN	**Pn**	**14 43 39.6**	**-0.3**
KIZT	**Kizilcal**	**2.00**	**112**	*e*Pn	**Pn**	**14 43 39.6**	**-0.2**
MFT	**Murefte**	**2.04**	**304**	*e*PN	**Pn**	**14 43 41.2**	**+1.0**
MFT	**Murefte**	**2.04**	**304**	*e*Pn	**Pn**	**14 43 41.2**	**+1.0**

*NIED **13** 15:18:00, 28°.90N×129°.70E, h20km, Mw3.8 Best double couple: M=5.17000×10^14 NP1:φ=328.00000°, δ=60.00000°, λ=-90.00000°. NP2:φ=148.00000°, δ=30.00000°, λ=-90.00000°.*
*IDC **13** 15:18:21.0±1.1, 28°.59N×130°.20E, h0km, mb3.4/4, mb1 3.8/6, mb1mx3.5/24, mbtmp3.5/6, ML3.1/2, Error ellipse: s-maj=44.1km s-min=20.7km az=87.0*
*ISCJB **13** 15:18:23.6±0.5, 28°.87N±0°.04×129°.9E±0°.1, h41km±9km, mb3.4/4, Error ellipse: s-maj=16.4km s-min=5.0km az=13.9*
*JMA **13** 15:18:23.3±0.1, 28°.89N×129°.75E, h38km, M3.6*
*NEIC **13** 15:18:25.9±0.8, 28°.68N×130°.21E, h40km, MG3.6(JMA), Error ellipse: s-maj=26.7km s-min=12.1km az=112.0*

ISC 13 15:18:23.6±0.7, 28°.91N±0°.04×129°.8E±0°.1, h23km±7km, n16, σ1°08/21, mb3.4/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**0.53**	**198**	P	**Pb**	**15 18 33.5**	**-0.7**
JAM				*e*S	**Sb**	**15 18 41.2**	**-0.2**
JZK	**Kikaishima**	**0.62**	**165**	P	**Pb**	**15 18 35.2**	**-0.5**
JZK				*e*S	**Sb**	**15 18 45.0**	**+1.0**
JNN	**Nakanoshima**	**0.93**	**5**	P	**Pb**	**15 18 40.2**	**-0.8**
JNN				*e*S	**Sb**	**15 18 53.4**	**+0.5**
JTK	**Tokunoshima**	**1.34**	**214**	P	**Pn**	**15 18 46.9**	**0.0**
JKC	**Kuchinoerabu**	**1.58**	**13**	P	**Pn**	**15 18 49.3**	**-0.9**
JKC				S	**Sn**	**15 19 08.7**	**-1.2**
JTN	**Tanegashima 3**	**2.02**	**31**	P	**Pn**	**15 18 55.5**	**-0.7**
JTN				*e*S	**Sn**	**15 19 21.5**	**+0.8**
JOW	**Kunigami**	**2.47**	**213**	*e*Pn	**Pn**	**15 19 03.6**	**+1.2**
JOW	**Kunigami**	**2.47**	**213**	P	**Pn**	**15 19 03.5**	**+1.1**
JIH	**Iheya**	**2.47**	**221**	P	**Pn**	**15 19 03.0**	**+0.6**
JNU	**Nakatsue**	**4.30**	**12**	*e*Pn	**Pn**	**15 19 29.5**	**+2.0**
KSRS	**Korea Array**	**8.66**	**350**	Pn	**Pn**	**15 20 32.5**	**+5.1**
	0.1nm,0.3s,baz=164,slow=13,SNR=4.6						
MJAR	**Matsushiro Arr**	**10.39**	**41**	Pn	**Pn**	**15 20 51.1**	**-0.1**
	0.3nm,0.3s,baz=222,slow=17,SNR=6.0						
SONM	**Songino Array**	**26.16**	**323**	P	**P**	**15 24 01.3**	**+5.4**
	0.4nm,0.7s,mb3.1,baz=141,slow=9.3,SNR=2.7						
WRA	**Warramunga Arr**	**48.77**	**174**	P	**P**	**15 27 04.3**	**-2.4**
	0.6nm,0.7s,mb3.7,baz=354,slow=8.1,SNR=5.1						
ASAR	**Alice Springs**	**52.42**	**175**	P	**P**	**15 27 33.2**	**-1.0**
	0.4nm,0.6s,mb3.5,baz=12,slow=13,SNR=8.8						
ILAR	**Eielson Array**	**61.43**	**29**	P	**P**	**15 28 39.8**	**+2.2**
	0.2nm,0.8s,mb3.3,baz=270,slow=5.4,SNR=2.6						

*IDC **13** 15:30:05.0±0.8, 9°.86S×125°.50E, h0km, mb4.1/7, mb1 4.2/10, mb1mx4.0/18, mbtmp4.1/10, ML4.1/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/32, Error ellipse: s-maj=49.4km s-min=16.7km az=68.0*
*ISCJB **13** 15:30:08.9±2.2, 10°.11S±0°.10×125°.44E±0°.08, h52km±25km, mb4.0/9, MS3.3/3, Error ellipse: s-maj=16.9km s-min=12.8km az=19.6*
*NEIC **13** 15:30:10.6±1.4, 10°.09S×125°.34E, h46km±17km, mb4.3/4, Error ellipse: s-maj=17.1km s-min=11.9km az=58.0*

ISC 13 15:30:09.7±4.2, 10°.05±0°.1×125°.42E±0°.08, h34km±33km, n23, σ1°00/23, mb4.0/9, MS3.3/3, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.38**	**112**	*e*Pn	**Pn**	**15 31 58.2**	**+3.1**
	42nm,0.6s						
KAKA				*e*Sn	**Sn**	**15 33 17.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**8.03**	**178**	Pn	**Pn**	**15 32 04.6**	**+0.6**
	1.0nm,0.3s,baz=359,slow=11,SNR=62						
FITZ				Sn	Sx	15 33 28.6	
	5.8nm,0.3s,baz=129,slow=6.8,SNR=6.6						
MBWA	**Marble Bar**	**12.34**	**206**	*e*Pn	**Pn**	**15 33 02.5**	**-0.6**
MBWA				*e*Sn	Sx	15 35 11.4	
WRA	**Warramunga Arr**	**13.09**	**140**	Pn	**Pn**	**15 33 11.7**	**-1.5**
	1.7nm,0.3s,baz=315,slow=14,SNR=75						
WRA				Sn	Sx	15 35 31.4	
	2.5nm,0.3s,baz=312,slow=24,SNR=13						
WRA	**Warramunga Arr**	**13.09**	**140**	Pn	**Pn**	**15 33 11.7**	**-1.5**
WRA				Sn	Sx	15 35 31.4	
WB2	**Warramunga Arr**	**13.09**	**140**	*e*Pn	**Pn**	**15 33 12.9**	**-0.4**
WB2				*e*Sn	Sx	15 35 28.9	
ASAR	**Alice Springs**	**15.80**	**150**	Pn	**Pn**	**15 33 49.2**	**-0.4**
	0.5nm,0.3s,baz=319,slow=10,SNR=30						
ASAR				Sn	Sx	15 36 39.5	
	0.3nm,0.3s,baz=332,slow=26,SNR=6.4						
KKM	**Kota Kinabalu**	**18.41**	**330**	Pn	**Pn**	**15 34 24.5**	**+2.1**
STKA	**Stephens Creek**	**26.40**	**148**	P	**P**	**15 35 44.6**	**+1.5**
	6.1nm,1.2s,mb4.0,baz=331,slow=13,SNR=3.2						
STKA				LR	LR	15 47 20.2	
	comp=

mb4.7/33,MS4.7/25,Error ellipse: s-maj=11.7km s-min=9.3km az=15.2
MOS ***13*** *15:45:26.6±1.2,48.°47S×113.°08W,h10km,mb5.0/16, Error ellipse: s-maj=25.1km s-min=15.3km az=77.3*
NEIC ***13*** *15:45:26.1±0.2,48.°71S×113.°20W,h10km,mb4.8/24, MS4.9/1,Error ellipse: s-maj=11.8km s-min=8.7km az=120.0*
BJI ***13*** *15:45:28.1,48.°70S×113.°20W,h10km,mB5.3/6,Ms5.5/5, Ms7 5.0/5*
GCMT ***13*** *15:45:30.0±0.2,48.°83S×113.°44W,h21km±1km,MW5.2, Moment Tensor Solution. s57,c78; s88,c136; Moment tensor: Scale 10¹⁶Nm; M_{rr}0.05±.20; $M_{\theta\theta}$-6.59±.22; $M_{\phi\phi}$6.54±.19; $M_{r\theta}$-3.04±.42; $M_{\theta\phi}$-3.67±.17; $M_{\phi r}$-4.28±.47; Best double couple: $M_0$9.20000×10¹⁶ NP1:ϕ_s121.00000°, δ55.00000°,λ-179.00000°. NP2:ϕ_s30.00000°,δ89.00000°, λ-35.00000°. Principal axes: T 8.9400, Plg23.0000°, Azm81.0000°; N 0.4500, Plg55.0000°, Azm209.0000°; P -9.3900, Plg25.0000°, Azm340.0000°; Data Used: II IU IC G CN.*

ISC 13 15:45:27.1±0.3,48.°77S±0.°07×113.°1W±0.°1,h10km,n279, $_{\sigma}$0§66/149,mb4.7/33,MS4.7/25,49C-49D,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**21.81**	**9**	LR	LR	15 56 42.8	
	comp=Z,2μm,19.6s,MS4.5,baz=317,slow=31						
USHA	**Ushuaia**	**27.91**	**120**	LR	LR	16 00 29.1	
	comp=Z,1μm,18.1s,MS4.5,baz=248,slow=32						
RKT	**Rikitea**	**30.89**	**318**	*e*LR	LR	15 59 41.9	
	1μm,28.0s,baz=148						
PLCA	**Paso Flores**	**30.96**	**91**	P	**P**	**15 51 45.4**	**+1.2**
	3.9nm,1.0s,mb4.2,baz=252,slow=10,SNR=5.0						
PLCA				LR	LR	16 01 13.8	
	comp=Z,2μm,19.0s,MS4.7,baz=249,slow=30						
PLCA	**Paso Flores**	**30.96**	**91**	*e*P	**P**	**15 51 45.3**	**+1.2**
	15nm,1.4s,mb4.6						
PLCA	**Paso Flores**	**30.96**	**91**	*e*P	**P**	**15 51 45.3**	**+1.1**
PLCA				pmax	pmax		
	comp=Z,15nm,1.4s						
CFAA	**Coronel Fontan**	**37.73**	**80**	P	**P**	**15 52 42.6**	**-0.3**
	comp=Z,1.8nm,1.1s,mb3.7,baz=234,slow=8.2,SNR=8.4						
LCO	**Las Campanas**	**37.87**	**74**	*e*P	**P**	**15 52 42.3**	**-1.7**
	comp=Z,42nm,1.4s,mb5.0						
TBI	**Tubuai**	**38.24**	**298**	*e*LR	LR	16 02 52.5	
	comp=Z,1μm,28.5s,baz=148						
SBA	**Scott Base**	**40.81**	**199**	*e*P	**P**	**15 53 08.5**	**+0.4**
	comp=Z,66nm,1.8s,mb5.0						
SBA	**Scott Base**	**40.81**	**199**	*e*P	**P**	**15 53 08.5**	**+0.4**
SBA				pmax	pmax		
	comp=Z,66nm,1.8s,mb5.0						
QSPA	**South Pole Qui**	**41.44**	**180**	P	**P**	**15 53 14.7**	**+1.5**
	comp=Z,31nm,0.9s,mb4.9,baz=114,slow=4.8,SNR=50						
PPT	**Papeete**	**42.88**	**304**	*e*S	**S**	**15 59 47.2**	**-3.1**
	comp=Z,382nm,24.5s						
PPT				*e*LQ	LR	16 03 11.4	
	comp=Z,3μm,28.0s						
PPT				*e*LR	LR	16 05 13.7	
	comp=Z,1μm,24.2s,baz=142						
PPT	**Papeete**	**42.88**	**304**	LR	LR	16 05 53.2	
	comp=Z,657nm,19.2s,MS4.5,baz=141,slow=29						
NNA	**Nana**	**47.43**	**52**	*e*P	**P**	**15 54 00.0**	**-1.8**
NNA	**Nana**	**47.43**	**52**	*e*P	**P**	**15 54 00.0**	**-1.8**
CPUP	**Villa Florida**	**48.36**	**83**	LR	LR	16 11 36.9	
	comp=Z,1μm,18.4s,MS4.9,baz=341,slow=32						
LPAZ	**La Paz**	**48.84**	**64**	P	**P**	**15 54 13.5**	**+0.8**
	comp=Z,17nm,1.2s,mb4.9,baz=209,slow=6.0,SNR=20						
LPAZ				LR	LR	16 10 00.2	
	comp=Z,684nm,21.9s,MS4.6,baz=259,slow=30						
LPAZ	**La Paz**	**48.84**	**64**	*e*P	**P**	**15 54 12.9**	**+0.2**
	comp=Z,26nm,1.4s,mb5.1						
LPAZ	**La Paz**	**48.84**	**64**	*e*P	**P**	**15 54 12.9**	**+0.2**
LPAZ				pmax	pmax		
	comp=Z,26nm,1.4s						
RPZ	**Rata Peaks**	**50.65**	**245**	P	**P**	**15 54 25.5**	**-0.8**
	comp=Z,6.2nm,0.8s,mb4.6,baz=69,slow=14,SNR=3.8						
NVL	**N'lazarevskaya**	**54.42**	**160**	*e*P	**P**	**15 54 57.1**	**+3.3**
NVL				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
AFI	**Afiamalu**	**59.10**	**285**	P	**P**	**15 55 30.0**	**+2.2**
	comp=Z,118nm,1.2s						
AFI	**Afiamalu**	**59.10**	**285**	P	**P**	**15 55 30.0**	**+2.3**
AFI				pmax	pmax		
	comp=Z,118nm,1.2s						
CASY	**Casey**	**60.52**	**199**	*e*P	**P**	**15 55 36.4**	**-0.4**
	comp=Z,37nm,1.7s,mb5.2						
BDFB	**Brasilia**	**62.03**	**82**	P	**P**	**15 55 47.4**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.5,baz=183,slow=6.7,SNR=3.7						
BDFB				LR	LR	16 19 53.7	
	comp=Z,733nm,18.0s,MS4.9,baz=245,slow=33						
BDFB	**Brasilia**	**62.03**	**82**	P	**P**	**15 55 47.4**	**-0.3**
ROSC	**El Rosal**	**63.21**	**44**	P	**P**	**15 55 57.0**	**+1.4**
	comp=Z,4.7nm,0.4s,mb5.0,baz=248,slow=19,SNR=8.3						
ROSC				LR	LR	16 19 23.3	
	comp=Z,306nm,18.6s,MS4.5,baz=223,slow=32						
ROSC	**El Rosal**	**63.21**	**44**	*e*P	**P**	**15 55 56.7**	**+1.1**
JTS	**JuntasAbangare**	**63.84**	**31**	*e*P	**P**	**15 55 58.6**	**-1.1**
	comp=Z,31nm,1.2s,mb5.2						
JTS	**JuntasAbangare**	**63.84**	**31⇓**	*e*P	**P**	**15 56 00.8**	**+1.1**
MAW	**Mawson**	**63.92**	**178**	P	**P**	**15 55 59.1**	**-0.5**
	comp=Z,7.1nm,1.0s,mb4.7,baz=187,slow=7.8,SNR=9.2						
MAW	**Mawson**	**63.92**	**178**	*e*P	**P**	**15 55 57.5**	**-2.1**
	comp=Z,6.4nm,1.5s,mb4.4						
MAW	**Mawson**	**63.92**	**178**	*e*P	**P**	**15 55 57.5**	**-2.1**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.5s						
DZM	**Mont Dzumac**	**67.52**	**262**	*e*S	S	16 05 19.3	-0.7
	comp=Z,319nm,25.4s						
DZM				*e*SS	SS	16 09 42.7	+2.7
	comp=Z,227nm,27.4s						
DZM				*e*LR	LR	16 16 45.1	
	comp=Z,2μm,23.9s						
CMIG	**Matias Romero**	**67.55**	**19**	LR	LR	16 19 29.9	
	comp=Z,255nm,19.3s,MS4.5,baz=192,slow=30						
SDV	**Santo Domingo**	**68.47**	**46**	*e*P	**P**	**15 56 26.1**	**-3.3**
	comp=Z,7.7nm,1.1s,mb4.7						
EIDS	**Eidsvold**	**74.97**	**249**	*e*P	**P**	**15 57 07.4**	**-1.2**
	comp=Z,11nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**75.77**	**238**	LR	LR	16 25 03.1	
	comp=Z,768nm,18.6s,MS5.0,baz=204,slow=31						
TXAR	**Lajitas Array**	**78.21**	**8**	P	**P**	**15 57 25.9**	**-0.6**
	comp=Z,2.3nm,1.0s,mb4.0,baz=182,slow=8.5,SNR=13						
TXAR				LR	LR	16 25 48.4	
	comp=Z,298nm,19.9s,MS4.6,baz=65,slow=31						
TXAR	**Lajitas Array**	**78.21**	**8**	P	**P**	**15 57 25.9**	**-0.6**
627A	**Terlingua Ranc**	**78.35**	**9**	⇑P	**P**	**15 57 27.7**	**+0.5**
	baz=79						
626A	**Big Bend Ranch**	**78.38**	**8**	⇓P	**P**	**15 57 27.8**	**+0.3**
	baz=79						
527A	**Woodward Ranch**	**79.02**	**8**	⇑P	**P**	**15 57 31.0**	**+0.1**
	baz=79						
425A	**Indio Mountain**	**79.53**	**7**	⇑P	**P**	**15 57 33.3**	**-0.4**
	baz=80						
428A	**Kincaid Ranch,**	**79.68**	**9**	⇓P	**P**	**15 57 34.7**	**+0.1**
	baz=80						
JCT	**Junction City**	**79.78**	**12**	⇑P	**P**	**15 57 35.5**	**+0.4**
	baz=80						
JCT	**Junction City**	**79.78**	**12**	*e*P	**P**	**15 57 34.6**	**-0.5**
	comp=Z,17nm,1.2s,mb4.8						
JCT	**Junction City**	**79.78**	**12**	*e*P	**P**	**15 57 34.6**	**-0.5**
JCT				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
318A	**Bisbee**	**79.89**	**3**	⇓P	**P**	**15 57 36.4**	**+0.8**
	baz=80						
328A	**Wristen Ranch,**	**80.32**	**9**	⇑P	**P**	**15 57 37.9**	**-0.1**
	baz=81						
MNTX	**Cornudas Mount**	**80.40**	**7**	⇓P	**P**	**15 57 37.6**	**-0.8**
	baz=81						
TUC	**Tucson**	**80.74**	**2**	*e*P	**P**	**15 57 40.1**	**-0.1**
	comp=Z,6.1nm,1.1s,mb4.4						
TUC	**Tucson**	**80.74**	**2**	*e*P	**P**	**15 57 40.1**	**-0.1**
TUC				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
224A	**Cornudas Mount**	**80.77**	**7**	⇑P	**P**	**15 57 39.8**	**-0.6**
	baz=81						
HNR	**Honiara**	**80.95**	**266**	LR	LR	16 24 23.5	
	comp=Z,182nm,20.5s,MS4.4,baz=128,slow=29						
117A	**Oracle**	**81.00**	**2**	⇓P	**P**	**15 57 41.8**	**+0.2**
	baz=81						
121A	**Cookes Peak, D**	**81.07**	**5**	⇑P	**P**	**15 57 41.8**	**-0.2**
	baz=81						
118A	**Homack Ranch,**	**81.09**	**3**	⇓P	**P**	**15 57 42.2**	**+0.1**
	baz=81						
MONP	**Monument Peak**	**81.34**	**357**	⇓P	**P**	**15 57 43.7**	**+0.3**
	baz=82						
124A	**Stringfield Ra**	**81.39**	**7**	⇑P	**P**	**15 57 44.0**	**+0.3**
	baz=82						
125A	**Gardner Draw,**	**81.41**	**7**	⇑P	**P**	**15 57 43.2**	**-0.6**
	baz=82						
Z22A	**Elephant Butte**	**81.84**	**5**	⇑P	**P**	**15 57 46.1**	**+0.1**
	baz=82						
CTA	**Charters Tower**	**81.86**	**249**	LR	LR	16 30 20.1	
	comp=Z,267nm,20.1s,MS4.6,baz=327,slow=33						
Z25A	**Roswell**	**82.02**	**7**	⇓P	**P**	**15 57 47.4**	**+0.4**
	baz=82						
BC3	**Big Chuckawall**	**82.08**	**358**	⇓P	**P**	**15 57 47.7**	**+0.4**
	baz=82						
Y17A	**Roosevelt**	**82.12**	**2**	⇑P	**P**	**15 57 47.3**	**-0.2**
	baz=82						
Y18A	**Canyon Day Jun**	**82.22**	**3**	⇑P	**P**	**15 57 48.1**	**+0.1**
	baz=82						
Y16A	**Circle Bar Ran**	**82.29**	**1**	⇑P	**P**	**15 57 49.8**	**+1.4**
	baz=83						
Y20A	**Horse Springs,**	**82.42**	**4**	⇑P	**P**	**15 57 49.5**	**+0.5**
	baz=83						
Y19A	**Nutrioso**	**82.43**	**3**	⇑P	**P**	**15 57 49.0**	**-0.1**
	baz=83						
BELC	**Belle Mtn. Jos**	**82.44**	**358**	⇓P	**P**	**15 57 49.3**	**+0.1**
	baz=83						
Y22A	**Socorro**	**82.52**	**5**	⇑P	**P**	**15 57 49.8**	**+0.2**
	baz=83						
IRM	**Iron Mountain**	**82.58**	**358**	⇓P	**P**	**15 57 49.9**	**+0.1**
	baz=83,SNR=6.6						
Y24A	**Capitan**	**82.61**	**6**	⇑P	**P**	**15 57 50.0**	**-0.1**
	baz=83						
Y25A	**Mesa, Roswell**	**82.66**	**7**	⇓P	**P**	**15 57 50.1**	**-0.3**
	baz=83						
BFSC	**Mount Baldy Ra**	**82.73**	**356**	⇓P	**P**	**15 57 51.1**	**+0.4**
	baz=83						
Y27A	**Causey**	**82.76**	**8**	⇑P	**P**	**15 57 50.5**	**-0.3**
	baz=83						
X16A	**Lo Mia Camp, P**	**82.83**	**1**	⇑P	**P**	**15 57 51.7**	**+0.6**
	baz=83						
X15A	**Humboldt**	**82.89**	**1**	⇑P	**P**	**15 57 51.8**	**+0.3**
	baz=83						
X18A	**Snowflake**	**82.97**	**3**	⇓P	**P**	**15 57 52.7**	**+0.8**
	baz=83						
X13A	**Yucca**	**82.99**	**359**	⇑P	**P**	**15 57 52.4**	**+0.4**
	baz=83						
GMRC	**Granite Mounta**	**83.20**	**358**	⇓P	**P**	**15 57 53.6**	**+0.5**
	baz=84						
HEC	**Hector,Ludlow**	**83.27**	**357**	⇑P	**P**	**15 57 53.4**	**-0.1**
	baz=84,SNR=12						
EDW2	**Edwards Air Fo**	**83.39**	**356**	P	**P**	**15 57 54.0**	**0.0**
	baz=84,SNR=5.2						
LDFC	**Landfair**	**83.49**	**358**	*e*P	**P**	**15 57 54.4**	**-0.2**
	comp=Z,12nm,1.0s,mb4.9						
PKM	**Peak Mountain**	**83.50**	**354**	⇓P	**P**	**15 57 54.4**	**-0.3**
	baz=84						
ANMO	**Albuquerque**	**83.56**	**6**	*e*P	**P**	**15 57 54.5**	**-0.5**
	comp=Z,6.4nm,1.3s,mb4.6						
ANMO	**Albuquerque**	**83.56**	**6**	*e*P	**P**	**15 57 54.5**	**-0.4**
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
W19A	**Sanders**	**83.57**	**3**	⇓P	**P**	**15 57 55.2**	**+0.2**
	baz=84						
W14A	**Seligman**	**83.61**	**0**	⇓P	**P**	**15 57 55.7**	**+0.6**
	baz=84						
GSC	**Goldstone**	**83.76**	**357**	P	**P**	**15 57 56.0**	**0.0**
	baz=84,SNR=6.6						
GSC	**Goldstone**	**83.76**	**357**	*e*P	**P**	**15 57 55.5**	**-0.5**
	comp=Z,14nm,1.1s,mb5.0						
GSC	**Goldstone**	**83.76**	**357**	*e*P	**P**	**15 57 55.5**	**-0.4**
GSC				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0						
TUQ	**Turquoise Moun**	**83.86**	**358**	⇓P	**P**	**15 57 56.7**	**+0.2**
	baz=84,SNR=6.8						
LRMC	**Laurel Mountai**	**83.97**	**356**	⇓P	**P**	**15 57 56.5**	**-0.5**
	baz=84,SNR=8.4						
V14A	**Boquillas Ranc**	**84.03**	**0**	⇓P	**P**	**15 57 57.7**	**+0.4**
	baz=84,SNR=7.3						
V17A	**Tonalea, Kykot**	**84.04**	**2**	⇓P	**P**	**15 57 57.8**	**+0.4**
	baz=84						
V12A	**Nelson**	**84.13**	**359**	⇓P	**P**	**15 57 58.2**	**+0.4**
	baz=84						
ISA	**Isabella**	**84.19**	**356**	⇓P	**P**	**15 57 57.9**	**-0.2**
	baz=84,SNR=9.7						
ISA	**Isabella**	**84.19**	**356**	*e*P	**P**	**15 57 57.5**	**-0.7**
	comp=Z,9.2nm,1.0s,mb4.9						
ISA	**Isabella**	**84.19**	**356**	*e*P	**P**	**15 57 57.5**	**-0.6**
ISA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
V15A	**Kaibab Nationa**	**84.22**	**1**	⇓P	**P**	**15 57 58.4**	**+0.1**
	baz=84,SNR=6.1						
V13A	**Grand Canyon W**	**84.25**	**359**	P	**P**	**15 57 58.4**	**-0.1**
	baz=85,SNR=8.3						
V20A	**Brimhall**	**84.29**	**4**	⇓P	**P**	**15 57 58.8**	**+0.2**
	baz=85						
MPMC	**Manual Prospec**	**84.54**	**356**	⇓P	**P**	**15 57 60.0**	**+0.1**
	baz=85						
U16A	**Tuba City**	**84.55**	**2**	⇓P	**P**	**15 58 00.1**	**+0.1**
	baz=85						
V25A	**Rancho No Teng**	**84.57**	**7**	⇓P	**P**	**15 57 59.9**	**-0.2**
	baz=85						
U13A	**Pakoon Wash**	**84.81**	**359**	⇑P	**P**	**15 58 01.4**	**+0.2**
	baz=85,SNR=5.4						
U15A	**North Rim**	**84.82**	**1**	⇑P	**P**	**15 58 01.6**	**+0.3**
	baz=85,SNR=7.7						
U10A	**Ash Meadows, A**	**84.86**	**357**	⇓P	**P**	**15 58 01.8**	**+0.3**
	baz=85						
SHPR	**Sheep Range**	**84.92**	**358**	*e*P	**P**	**15 58 01.2**	**-0.5**
	comp=Z,10nm,1.2s,mb4.8						
FURC	**Furnace Creek,**	**84.92**	**357**	P	**P**	**15 58 01.9**	**0.0**
	baz=85,SNR=6.3						
U23A	**El Rito**	**84.94**	**6**	⇑P	**P**	**15 58 02.5**	**+0.6**
	baz=85						
T19A	**Beclabito**	**85.30**	**3**	⇓P	**P**	**15 58 03.4**	**-0.3**
	baz=86						
T15A	**Red Dirt Ranch**	**85.41**	**1**	P	**P**	**15 58 04.2**	**0.0**
	baz=86,SNR=5.2						
T13A	**Saint George**	**85.41**	**359**	P	**P**	**15 58 04.4**	**+0.2**
	baz=86,SNR=6.5						
T17A	**Navajo Res., N**	**85.41**	**2**	⇑P	**P**	**15 58 04.6**	**+0.3**
	baz=86						
T18A	**Mexican Hat**	**85.58**	**3**	⇑P	**P**	**15 58 04.9**	**-0.2**
	baz=86,SNR=6.6						
T22A	**Edith**	**85.58**	**5**	⇓P	**P**	**15 58 05.6**	**+0.4**
	baz=86,SNR=5.3						
T11A	**Corn Creek, Al**	**85.65**	**358**	⇓P	**P**	**15 58 05.9**	**+0.4**
	baz=86						
T24A	**Torres, Weston**	**85.77**	**6**	⇓P	**P**	**15 58 06.9**	**+0.9**
	baz=86						
S13A	**Holt Ranch, En**	**85.97**	**359**	⇑P	**P**	**15 58 07.1**	**+0.1**
	baz=86,SNR=6.5						
S21A	**Coal Bank Pass**	**86.18**	**4**	⇑P	**P**	**15 58 08.2**	**+0.2**
	baz=86,SNR=6.3						
S24A	**Houchin Ranch,**	**86.32**	**6**	⇓P	**P**	**15 58 09.5**	**+0.8**
	baz=87						
S20A	**Disappointment**	**86.32**	**4**	⇑P	**P**	**15 58 08.8**	**0.0**
	baz=87						
SDCO	**Great Sand Dun**	**86.40**	**6**	*e*P	**P**	**15 58 07.8**	**-1.3**
	comp=Z,3.3nm,1.2s,mb4.4						
R13A	**O'Grain Ranch,**	**86.57**	**359**	⇑P	**P**	**15 58 10.3**	**+0.3**
	baz=87						
PV01	**Paradox Valley**	**86.62**	**4**	*e*P	**P**	**15 58 09.6**	**-0.6**
	comp=Z,282nm,1.0s						
CMB	**Columbia Colle**	**86.66**	**354**	*e*P	**P**	**15 58 09.7**	**-0.7**
	comp=Z,7.1nm,1.4s,mb4.7						
CMB	**Columbia Colle**	**86.66**	**354**	*e*P	**P**	**15 58 09.7**	**-0.7**
CMB				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.7						
R11A	**Troy Canyon, C**	**86.76**	**358**	⇑P	**P**	**15 58 11.2**	**+0.3**
	baz=87,SNR=5.6						
R18A	**Canyonlands Na**	**86.82**	**3**	⇓P	**P**	**15 58 10.7**	**-0.5**
	baz=87						
R21A	**Cimarron**	**86.90**	**4**	⇑P	**P**	**15 58 12.3**	**+0.7**
	baz=87						
MSU	**Marysvale**	**86.90**	**1**	*e*P	**P**	**15 58 10.6**	**-1.0**
	comp=Z,6.0nm,1.4s,mb4.6						
MSU	**Marysvale**	**86.90**	**1**	*e*P	**P**	**15 58 10.6**	**-1.0**
MSU				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.6						
NVAR	**Mina Array Bea**	**86.94**	**356**	P	**P**	**15 58 11.4**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.4,baz=186,slow=6.4,SNR=10						
WAKR	**Walker**	**87.07**	**355**	*e*P	**P**	**15 58 12.5**	**+0.1**
	comp=Z,8.6nm,1.5s,mb4.8						
Q14A	**Sevier Lake (B**	**87.37**	**360**	⇓P	**P**	**15 58 14.0**	**+0.1**
	baz=88						
WVT	**Waverly**	**87.47**	**20**	*e*P	**P**	**15 58 10.7**	**-3.7**
	comp=Z,9.1nm,1.2s,mb4.9						
WVT	**Waverly**	**87.47**	**20**	*e*P	**P**	**15 58 10.7**	**-3.7**
WVT				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.9						
P14A	**Drum Mountains**	**87.98**	**0**	⇑P	**P**	**15 58 16.6**	**-0.1**
	baz=88						
TKL	**Tuckaleechee C**	**88.03**	**24**	LR	LR	16 31 57.7	
	comp=Z,142nm,18.8s,MS4.4,baz=307,slow=32						
WRA	**Warramunga Arr**	**89.09**	**240**	LR	LR	16 33 35.6	
	comp=Z,384nm,19.7s,MS4.8,baz=195,slow=32						
PMG	**Port Moresby**	**89.33**	**257⇑**	*e*P	**P**	**15 58 23.2**	**-0.7**
PMG				pmax	pmax		
	comp=Z,32nm,1.7s						
SUR	**Sutherland**	**89.37**	**142**	LR	LR	16 28 52.3	
	comp=Z,279nm,21.0s,MS4.7,baz=255,slow=29						
WVOR	**Wild Horse Val**	**90.95**	**356**	*e*P	**P**	**15 58 30.4**	**-0.1**
	comp=Z,9.7nm,1.2s,mb5.0						
WVOR	**Wild Horse Val**	**90.95**	**356**	*e*P	**P**	**15 58 30.4**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.0						
PDAR	**Pinedale Array**	**91.20**	**3**	P	**P**	**15 58 29.8**	**-2.0**
	comp=Z,0.4nm,0.3s,mb4.2,baz=181,slow=5.3,SNR=6.0						
PDAR				LR	LR	16 32 50.9	
	comp=Z,289nm,19.2s,MS4.7,baz=192,slow=31						
K16A	**Soda Springs**	**91.22**	**1**	⇑P	**P**	**15 58 32.0**	**+0.2**
	baz=92						
J14A	**Carey**	**91.71**	**360**	⇓P	**P**	**15 58 34.0**	**0.0**
	baz=92						
J13A	**Cove Ranch, Pi**	**91.78**	**359**	⇓P	**P**	**15 58 34.7**	**+0.2**
	baz=92						
HLID	**Hailey**	**91.95**	**359**	⇑P	**P**	**15 58 35.5**	**+0.2**
	baz=92						
IMW	**Indian Meadow**	**92.30**	**2**	*e*P	**P**	**15 58 36.1**	**-0.7**
	comp=Z,4.5nm,1.2s,mb4.7						
I13A	**Wildhorse Cree**	**92.30**	**359**	⇓P	**P**	**15 58 36.8**	**0.0**
	baz=93						
I07A	**Izee**	**92.63**	**355**	⇓P	**P**	**15 58 38.1**	**-0.3**
	baz=93						
H12A	**Diamond D Ranc**	**92.94**	**359**	⇓P	**P**	**15 58 39.5**	**-0.2**
	baz=93						
MCMT	**McKenzie Canyo**	**93.21**	**0**	*e*P	**P**	**15 58 40.6**	**-0.3**
	comp=Z,3.2nm,1.3s,mb4.6						
G13A	**Cobalt**	**93.48**	**359**	⇑P	**P**	**15 58 41.8**	**-0.4**
	baz=94						
G08A	**Pilot Rock**	**93.81**	**356**	⇑P	**P**	**15 58 43.6**	**-0.2**
	baz=94						
BOZ	**Bozeman (W)**	**94.04**	**1**	⇑P	**P**	**15 58 44.6**	**-0.2**
	baz=94						
FITZ	**Fitzroy Crossi**	**95.43**	**235**	LR	LR	16 39 11.0	
	comp=Z,382nm,18.2s,MS4.9,baz=154,slow=34						
D17A	**Six Diamond Ra**	**95.56**	**2**	⇓P	**P**	**15 58 52.4**	**+0.7**
	baz=96						
C17A	**Wharram Farm,**	**96.04**	**2**	⇓P	**P**	**15 58 54.3**	**+0.4**
	baz=96						
ULM	**Lac du Bonnet**	**99.75**	**11**	LR	LR	16 39 13.5	
	comp=Z,308nm,19.5s,MS4.8,baz=278,slow=32						
OHAK	**Old Harbor**	**110.74**	**338**	*e*PKPdf	PKiKP	16 03 54.1	-4.8
ILAR	**Eielson Array**	**116.21**	**345**	PKP	PKPdf	16 04 07.0	-2.1
	comp=Z,0.6nm,1.1s,baz=188,slow=4.1,SNR=3.2						
ILAR	**Eielson Array**	**116.21**	**345**	PKIKP	PKPdf	16 04 07.1	-2.1
KSRS	**Korea Array**	**135.14**	**279**	PKP	PKPdf	16 04 44.9	-1.3
	comp=Z,0.2nm,0.6s,baz=186,slow=4.3,SNR=2.9						
NJ2	**Nanjing**	**137.90**	**266**	*e*PKP	PKPdf	16 04 48.3	-3.2
CN2	**Changchun**	**140.07**	**286**	*e*PKP	PKPdf	16 04 56.9	+1.8
CN2				PP	PP	16 07 57.0	+4.0
CMAR	**Chiang Mai Arr**	**140.18**	**232**	PKP	PKPdf	16 04 54.7	-1.4
	comp=Z,0.7nm,0.7s,baz=197,slow=2.8,SNR=3.9						
CMAR	**Chiang Mai Arr**	**140.18**	**232**	PKIKP	PKPdf	16 04 54.7	-1.4
GYA	**Guiyang**	**141.99**	**249**	*e*PKP	PKPdf	16 04 58.0	-1.1
GYA				PP	PP	16 08 06.9	+2.3
GYA				AMB	AMB		
	comp=Z,90nm,7.8s						
KMI	**Kunming**	**143.37**	**243**	PKP	PKPdf	16 05 00.8	-0.8
KMI				pPKP	PKiKP	16 05 04.1	-0.8
KMI				sPKP		16 05 05.5	
KMI				PP	PP	16 08 16.3	+3.4
KMI				SS	SS	16 26 56.5	+3.0
KMI				AMB	AMB		
	comp=Z,190nm,5.3s						
KMI				LR	LR		
	comp=N,380nm,20.0s,MS5.2						
KMI				LR	LR		
	comp=E,180nm,20.8s,MS5.2						
KMI				LR	LR		
	comp=Z,300nm,27.3s						
YAK	**Yakutsk**	**143.49**	**315**	*e*PKPpre	PKPpre	16 04 55.5	
YAK	**Yakutsk**	**143.49**	**315**	*e*PKHKP	PKPpre	16 04 54.5	
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,19nm,1.1s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
KBS	**Kingsbay**	**144.02**	**16⇑**	*i*PKIKP	PKPdf	16 05 03.5	+2.3
TIXI	**Tiksi**	**144.06**	**332**	*e*PKPdf	PKPpre	16 04 55.3	
**

TREC				*e*pPKP	PKiKP	16 05 14.7	+3.4
CD2	**Chengdu**	**146.93**	**251**	*e*PKPbc	PKPdf	16 05 06.5	-1.1
UPC	**Upice**	**147.54**	**67**	*e*PKP2	PKPbc	16 05 10.0	-0.6
UPC	**Upice**	**147.54**	**67**	*e*PKP	PKPbc	16 05 10.0	-0.6
DPC	**Dobruska-Polom**	**147.69**	**68**	*e*PKP2	PKPbc	16 05 09.8	-1.2
DPC				MLR	MLR		
	comp=Z,200nm,20.5s,MS4.9						
DPC	**Dobruska-Polom**	**147.69**	**68**	*e*PKP	PKPbc	16 05 09.8	-1.2
DPC				*ep*PKP	PKPab	16 05 18.7	+5.4
DPC				AMS	AMS	17 09 20.0	
	comp=Z,200nm,20.5s						
HHC	**Hu-ho-hao-te**	**147.70**	**273**	*e*PKPbc	PKPbc	16 05 10.4	-0.9
HHC				PP	PP	16 08 44.3	+5.4
HHC				SKS	SKSdf	16 12 17.1	+0.3
HHC				SKKS	SKKSac	16 15 33.1	+3.3
HHC				SS	SS	16 27 48.1	+4.7
HHC				AMB	AMB		
	comp=Z,55nm,6.5s						
HHC				LR	LR		
	comp=N,190nm,18.9s,MS5.0						
HHC				LR	LR		
	comp=E,190nm,19.0s,MS5.0						
HHC				LR	LR		
	comp=Z,110nm,18.3s,MS4.7						
PKSM	**Moragy**	**147.75**	**76**	⇑PKP2	PKPbc	16 05 09.9	-1.4
MORC	**Moravsky Berou**	**148.27**	**69**	⇓PKP2	PKPbc	16 05 13.3	+0.8
KOLL	**Kolacno**	**148.43**	**72**	*e*PKP	PKPbc	16 05 12.8	-0.2
KOLL	**Kolacno**	**148.43**	**72**	*e*PKP2	PKPbc	16 05 12.8	-0.2
OKC	**Ostrava-Krasne**	**148.66**	**69**	*e*PKIKP	PKPdf	16 05 10.2	+0.4
OKC	**Ostrava-Krasne**	**148.66**	**69**	*e*PKP	PKPdf	16 05 10.2	+0.4
OKC				*ep*PKP	PKPab	16 05 19.9	+2.6
VYHS	**Vyhne**	**148.68**	**72**	*e*PKP	PKPbc	16 05 12.7	-0.9
VYHS	**Vyhne**	**148.68**	**72**	*e*PKP2	PKPbc	16 05 12.7	-0.9
VTS	**Vitosha**	**149.22**	**85**	⇓PKIKP	PKPbc	16 05 14.3	-0.9
BZS	**Buzias**	**149.44**	**79**	⇑PKP2	PKPbc	16 05 14.8	-0.9
KECS	**Kecovo**	**149.71**	**73**	*e*PKP	PKPbc	16 05 15.4	-0.8
KECS	**Kecovo**	**149.71**	**73**	*e*PKP2	PKPbc	16 05 15.4	-0.8
OJC	**Ojcow**	**149.79**	**69**	*e*PKP2	PKPbc	16 05 15.8	-0.6
NIE	**Niedzica**	**149.89**	**71**	*e*PKP2	PKPbc	16 05 16.5	-0.1
GZR	**Gura Zlata**	**150.11**	**80**	⇑PKP2	PKPbc	16 05 17.9	+0.6
LZH	**Lanzhou**	**150.21**	**259**	*e*PKPbc	PKPbc	16 05 17.5	-0.3
LZH				pPKP	PKPab	16 05 20.9	-3.1
LZH				sPKP		16 05 22.0	
LZH				PKPab	pPKPab	16 05 31.3	+3.9
LZH				LR	LR		
	comp=N,140nm,18.0s						
LZH				LR	LR		
	comp=Z,190nm,20.1s,MS4.9						
CRVS	**Cervenica-Dubn**	**150.46**	**72**	*e*PKP	PKPbc	16 05 17.4	-0.6
CRVS	**Cervenica-Dubn**	**150.46**	**72**	*e*PKIKP	PKPbc	16 05 17.4	-0.6
DRGR		**150.57**	**77**	⇓PKIKP	PKPbc	16 05 17.9	-0.5
ARCES	**ARCESS Array B**	**151.23**	**29**	PKPbc	PKPdf	16 05 14.3	+1.1
	comp=Z,3.9nm,1.1s,baz=243,slow=1.0,SNR=8.5						
ARCES	**ARCESS Array B**	**151.23**	**29**	PKIKP	PKPdf	16 05 14.4	+1.1
ARE0	**ARCESS Array S**	**151.23**	**29**	*e*PKPdf	PKPdf	16 05 14.4	+1.1
CSS	**Prodhromos**	**151.73**	**107**	*e*PKPdf	PKPdf	16 05 15.9	+0.8
CSS				*e*PKPbc	PKPbc	16 05 20.6	-0.9
MLR	**Muntele Rosu**	**152.21**	**81**	⇑PKIKP	PKPbc	16 05 20.7	-1.5
BURAR	**Bucovina Array**	**152.46**	**76**	⇑PKIKP	PKPbc	16 05 23.5	+0.8
LSA	**Lhasa**	**153.42**	**233**	*e*PKPbc	PKPbc	16 05 25.3	-0.1
LSA	**Lhasa**	**153.42**	**233**	*e*PKIKP	PKPbc	16 05 25.3	-0.1
ULN	**Ulaanbaatar**	**153.47**	**283**	*e*PKPbc	PKPbc	16 05 23.2	-1.7
ULN	**Ulaanbaatar**	**153.47**	**283**	*e*PKIKP	PKPbc	16 05 23.2	-1.7
SONM	**Songino Array**	**153.88**	**283**	PKPbc	PKPbc	16 05 23.8	-2.0
	comp=Z,0.9nm,0.7s,baz=125,slow=2.9,SNR=5.1						
SONM				PKPab	PKPab	16 05 37.0	-2.1
	comp=Z,2.7nm,0.7s,baz=125,slow=2.4,SNR=3.9						
SONM	**Songino Array**	**153.88**	**283**	PKIKP	PKPbc	16 05 23.8	-2.0
SONM						16 05 37.0	
BRTR	**Keskin Array B**	**154.71**	**98**	PKP	PKPdf	16 05 17.4	-1.8
	comp=Z,1.4nm,0.9s,baz=318,slow=1.7,SNR=4.3						
BRTR				PKPbc	PKPbc	16 05 24.5	-3.3
	comp=Z,1.3nm,0.9s,baz=175,slow=3.1,SNR=5.2						
BRTR				PKPab	PKPab	16 05 42.9	0.0
	comp=Z,5.3nm,1.2s,baz=197,slow=3.9,SNR=8.9						
BRTR	**Keskin Array B**	**154.71**	**98**	PKIKP	PKPdf	16 05 17.5	-1.8
BRTR						16 05 24.5	
BRTR						16 05 42.9	
GTA	**Gaotai**	**154.72**	**261**	PKPbc	PKPdf	16 05 18.9	-0.4
GTA				PKPab	PKPab	16 05 42.8	-0.1
GTA				PP	PP	16 09 21.3	+2.3
GTA				SKS	SKSdf	16 12 24.8	-0.9
ZAK	**Zakamensk**	**156.47**	**288**	*e*PKP2	PKPab	16 05 47.7	-2.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MALT	**Malatya**	**157.02**	**106**	*e*PKPdf	PKPdf	16 05 22.4	+0.1
MALT	**Malatya**	**157.02**	**106**	*e*PKIKP	PKPdf	16 05 22.5	+0.1
OBN	**Obninsk**	**160.38**	**60**	⇓*e*PKP2	PKPab	16 06 06.6	-0.3
OBN				pmax	pmax		
	comp=Z,17nm,1.3s						
GNI	**Garni**	**162.06**	**110**	*e*PKPdf	PKPdf	16 05 28.0	-0.1
GNI	**Garni**	**162.06**	**110**	*e*PKIKP	PKPdf	16 05 28.0	-0.1
PRGR	**Permogore**	**162.42**	**35**	PKIKP	PKPdf	16 05 28.6	+0.9
PRGR				*e*		16 06 13.0	
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KIV	**Kislovodsk**	**162.66**	**97**	*e*PKPdf	PKPdf	16 05 27.2	-1.3
KIV	**Kislovodsk**	**162.66**	**97**	*e*PKIKP	PKPdf	16 05 27.3	-1.3
WMQ	**Urumqi**	**164.79**	**259**	*e*PKP	PKPdf	16 05 32.0	+1.5
ZALV	**Zalesovo Beam**	**167.65**	**302**	PKP	PKPdf	16 05 29.8	-2.7
	comp=Z,0.3nm,0.3s,baz=132,slow=4.1,SNR=2.3						
ZALV				PKPab	PKPab	16 06 36.9	-1.9
	comp=Z,0.3nm,0.3s,baz=44,slow=4.4,SNR=2.2						
ZALV	**Zalesovo Beam**	**167.65**	**302**	PKIKP	PKPdf	16 05 29.8	-2.6
ZALV						16 06 36.9	
MKAR	**Makanchi Array**	**169.43**	**265**	PKP	PKPdf	16 05 31.9	-1.9
	comp=Z,0.5nm,1.0s,baz=11,slow=1.5,SNR=3.7						
MKAR				PKPab	PKPab	16 06 45.1	-1.9
	comp=Z,2.0nm,0.7s,baz=98,slow=6.2,SNR=17						
MKAR	**Makanchi Array**	**169.43**	**265**	PKP	PKPdf	16 05 31.9	-1.9
MKAR				PKPab	PKPab	16 06 45.1	-1.9
MKAR	**Makanchi Array**	**169.43**	**265**	PKIKP	PKPdf	16 05 31.9	-2.0
MKAR						16 06 45.1	
AAK	**Ala-Archa**	**171.87**	**224**	PKPab	PKPab	16 06 56.9	-0.9
	comp=Z,0.7nm,0.3s,baz=216,slow=7.5,SNR=3.6						

BJI ***13*** *15:48:55.4,4˙.50S×136˙.01E,h7km,mB4.9/16,mb4.8/25, Ms5.0/15,Ms7 4.6/14*

IDC ***13*** *15:48:57.7±0.5,4˙.37S×135˙.69E,h0km,mb4.4/17, mb1 4.5/19,mb1mx4.5/21,mbtmp4.5/19,ML4.9/2,MS3.6/7, Ms1 3.6/7,ms1mx3.2/28,Error ellipse: s-maj=20.4km s-min=12.3km az=80.0*

ISCJB ***13*** *15:48:58.9±1.7,4˙.43S±0˙.04×135˙.78E±0˙.04,h20km±12km, mb4.5/56,MS3.9/7,Error ellipse: s-maj=7.4km s-min=6.0km az=169.6*

NEIC ***13*** *15:48:59.4±0.2,4˙.32S×135˙.73E,h10km,mb4.7/32,Error ellipse: s-maj=8.5km s-min=5.4km az=70.0*

MOS ***13*** *15:49:01.1±1.1,4˙.32S×135˙.75E,h33km,mb4.8/21,Error ellipse: s-maj=13.7km s-min=7.0km az=117.7*

DJA ***13*** *15:49:02,4˙.40S×135˙.69E,h9km,mb4.9/14*

ISC 13 15:48:59.0±1.9,4˙33S±0˙.04×135˙.79E±0˙.04,h5km±12km, h14km±3.0km;pP-P,n152,σ1§19/160,mb4.5/56,MS4.0/6, 3C-3D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**3.13**	**6**	P	**Pn**	**15 49 51.0**	**+2.0**
BAKI				S	**Sn**	**15 50 32.1**	**+5.3**
TLE	**Tual**	**3.31**	**247**	P	**Pn**	**15 49 52.3**	**+0.8**
TLE				S	**Sn**	**15 50 34.0**	**+2.8**
BNDI	**Bandanaira**	**5.88**	**268**	P	**Pn**	**15 50 31.8**	**+5.0**
	3.9nm9μm479nm,0.9s						
BNDI				S	**Sn**	**15 51 34.4**	**-0.1**
	3.9nm9μm479nm,0.9s						
KAKA	**Kakadu**	**8.96**	**201**	*e*Pn	**Pn**	**15 51 08.4**	**-0.8**
KAKA				*e*Sn	**Sn**	**15 52 44.3**	**-6.3**
KAKA	**Kakadu**	**8.96**	**201**	P	**Pn**	**15 51 08.7**	**-0.5**
	226nm,0.6s						
COEN	**Coen**	**12.02**	**143**	*e*Pn	**Pn**	**15 51 50.7**	**-0.4**
COEN				*e*Sn	**Sn**	**15 53 54.5**	**-11**
COEN	**Coen**	**12.02**	**143**	P	**Pn**	**15 51 51.4**	**+0.3**
	151nm,0.7s						
PMG	**Port Moresby**	**12.36**	**115**	*e*Pn	**Pn**	**15 51 57.8**	**+2.1**
PMG				*e*Sn	**Sn**	**15 54 03.8**	**-10**
PMG	**Port Moresby**	**12.36**	**115**	*e*P	**Pn**	**15 51 57.8**	**+2.1**
PMG	**Port Moresby**	**12.36**	**115**	P	**Pn**	**15 51 57.1**	**+1.4**
	64nm,0.8s						
KMSI	**Cibinong**	**12.77**	**292**	P	**Pn**	**15 51 56.9**	**-4.4**
BBSI	**Bau Bau**	**13.22**	**264**	P	**Pn**	**15 52 10.7**	**+3.1**
	71nm,1.2s						
KNA	**Kununurra**	**13.29**	**211**	*e*P	**Pn**	**15 52 07.2**	**-1.2**
	83nm,0.7s						
KNA				*e*S	**Sn**	**15 54 27.6**	**-9.0**
KNA	**Kununurra**	**13.29**	**211**	P	**Pn**	**15 52 07.3**	**-1.1**
	3μm371nm,0.7s						
MRSI	**Marisa**	**14.64**	**289**	P	**Pn**	**15 52 25.5**	**-1.4**
	16nm,1.0s						
WB2	**Warramunga Arr**	**15.58**	**185**	*e*Pn	**Pn**	**15 52 35.1**	**-4.4**
WRA	**Warramunga Arr**	**15.58**	**185**	Pn	**Pn**	**15 52 35.1**	**-4.4**
	3.4nm,0.3s,baz=7.0,slow=13,SNR=40						
WRA				Sn	**Sn**	**15 55 19.8**	**-13**
	5.2nm,0.3s,baz=8.6,slow=23,SNR=9.2						
WRA				LR	LR	15 58 45.2	
	comp=Z,177nm,21.6s,baz=5.0,slow=38						
WRA	**Warramunga Arr**	**15.58**	**185**	P	**Pn**	**15 52 35.1**	**-4.4**
FITZ	**Fitzroy Crossi**	**16.91**	**215**	Pn	**Pn**	**15 52 54.1**	**-2.5**
	3.4nm,0.3s,baz=46,slow=11,SNR=44						
FITZ				Sn	**Sn**	**15 55 52.7**	**-12**
	2.6nm,0.3s,baz=209,slow=14,SNR=7.0						
FITZ				LR	LR	16 00 07.8	
	comp=Z,169nm,20.3s,baz=132,slow=40						
FITZ	**Fitzroy Crossi**	**16.91**	**215**	*e*P	**Pn**	**15 52 53.8**	**-2.8**
	32nm,0.7s						
FITZ				*e*S	**Sn**	**15 55 49.2**	**-16**
FITZ	**Fitzroy Crossi**	**16.91**	**215**	*e*Pn	**Pn**	**15 52 53.7**	**-2.8**
	17nm,0.7s						
FITZ				*e*Sn	**Sn**	**15 55 48.8**	**-16**
FITZ	**Fitzroy Crossi**	**16.91**	**215**	P	**Pn**	**15 52 54.4**	**-2.2**
	58nm,0.9s						
CTA	**Charters Tower**	**18.69**	**148**	P	**Pn**	**15 53 20.7**	**+2.2**
	1.8nm,0.3s,baz=326,slow=11,SNR=14						
CTA				LR	LR	15 59 23.9	
	comp=Z,142nm,21.8s,baz=139,slow=34						
CTA	**Charters Tower**	**18.69**	**148**	*e*P	**Pn**	**15 53 21.3**	**+2.8**
	14nm,0.7s						
CTA	**Charters Tower**	**18.69**	**148**	P	**Pn**	**15 53 20.7**	**+2.2**
CTAO	**Charters Tower**	**18.69**	**148**	P	**Pn**	**15 53 19.3**	**+0.8**
	22nm,0.8s						
CTAO				*e*Sn	**Sn**	**15 56 58.1**	**+10**
CTAO	**Charters Tower**	**18.69**	**148**	P	**Pn**	**15 53 19.3**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,22nm,0.8s						
CTAO	**Charters Tower**	**18.69**	**148**	P	**Pn**	**15 53 20.5**	**+2.0**
	comp=Z,32nm,0.9s						
ASAR	**Alice Springs**	**19.31**	**185**	P	**Pn**	**15 53 24.1**	**-1.9**
	comp=Z,2.7nm,0.3s,baz=8.1,slow=14,SNR=68						
ASAR				S	**Sn**	**15 56 51.4**	**-12**
	comp=Z,1.9nm,0.3s,baz=2.6,slow=28,SNR=4.8						
ASAR	**Alice Springs**	**19.31**	**185**	P	**Pn**	**15 53 24.2**	**-1.8**
ASAR				S	**Sn**	**15 56 51.4**	**-12**
MYLDM	**Lahad Datu**	**19.69**	**298**	P	**Pn**	**15 53 34.0**	**+3.4**
	comp=Z,24nm,1.6s						
GUMO	**Guam**	**19.95**	**27**	LR	LR	15 59 28.3	
	comp=Z,86nm,19.4s,baz=246,slow=32						
GUMO	**Guam**	**19.95**	**27**	P	**Pn**	**15 53 29.8**	**-4.0**
	comp=Z,120nm,1.1s						
GUMO	**Guam**	**19.95**	**27**	P	**Pn**	**15 53 29.8**	**-3.9**
GUMO				pmax	pmax		
	comp=Z,120nm,1.1s						
KHKI	**Kahang-Kahang**	**20.45**	**258**	P	**P**	**15 53 37.2**	**-0.4**
	comp=Z,42nm,1.1s						
KKM	**Kota Kinabalu**	**22.10**	**298**	*e*P	**P**	**15 53 54.9**	**-0.5**
	comp=Z,29nm,1.1s,mb4.6						
KKM	**Kota Kinabalu**	**22.10**	**298**	P	**P**	**15 53 56.1**	**+0.7**
	comp=Z,26nm,1.2s,mb4.5						
MBWA	**Marble Bar**	**22.88**	**222**	*e*P	**P**	**15 54 06.8**	**+3.2**
MBWA	**Marble Bar**	**22.88**	**222**	*e*P	**P**	**15 54 05.1**	**+1.5**
	comp=Z,61nm,1.3s,mb4.9						
MBWA	**Marble Bar**	**22.88**	**222**	P	**P**	**15 54 06.2**	**+2.6**
	comp=Z,48nm,1.3s,mb4.8						
QLP	**Quilpie**	**23.55**	**161**	*e*P	**P**	**15 54 11.7**	**+1.1**
SBUM	**Sibu**	**24.50**	**286**	P	**P**	**15 54 21.7**	**+2.2**
HNR	**Honiara**	**24.50**	**103**	P	**P**	**15 54 20.4**	**+0.9**
	comp=Z,14nm,0.5s,mb4.7,baz=213,slow=11,SNR=4.2						
HNR	**Honiara**	**24.50**	**103**	*e*P	**P**	**15 54 19.6**	**+0.1**
	comp=Z,39nm,0.8s,mb5.0						
HNR	**Honiara**	**24.50**	**103**	*e*P	**P**	**15 54 19.6**	**+0.1**
HNR				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.0						
KSM	**Kuching**	**26.11**	**282**	*e*P	**P**	**15 54 34.5**	**+0.4**
	comp=Z,14nm,0.8s,mb4.5						
FORT	**Forrest**	**27.30**	**195**	*e*P	**P**	**15 54 45.7**	**+1.1**
	comp=Z,42nm,0.7s,mb5.1						
STKA	**Stephens Creek**	**27.94**	**169**	P	**P**	**15 54 49.6**	**-0.8**
	comp=Z,5.2nm,0.7s,mb4.3,baz=344,slow=7.6,SNR=8.7						
STKA				LR	LR	16 07 04.1	
	comp=Z,244nm,19.0s,MS3.8,baz=204,slow=39						
STKA	**Stephens Creek**	**27.94**	**169**	*e*P	**P**	**15 54 49.9**	**-0.4**
	comp=Z,1.3nm,0.6s,mb3.7						
STKA	**Stephens Creek**	**27.94**	**169**	*e*P	**P**	**15 54 49.9**	**-0.4**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NWAO	**Narrogin (SRO)**	**33.32**	**209**	P	**P**	**15 55 36.7**	**-1.2**
	comp=Z,24nm,1.1s,mb5.0,baz=41,slow=9.3,SNR=2.3						
NWAO				LR	LR	16 08 07.9	
	comp=Z,170nm,20.6s,MS3.7,baz=19,slow=35						
NWAO	**Narrogin (SRO)**	**33.32**	**209**	P	**P**	**15 55 36.7**	**-1.2**
NWAO				LR	LR	16 08 07.9	
NWAO	**Narrogin (SRO)**	**33.32**	**209**	P	**P**	**15 55 36.7**	**-1.2**
QIZ	**Qiongzhong**	**34.52**	**313**	*e*P	**P**	**15 55 47.0**	**-1.4**
	comp=Z,20nm,1.3s,mb4.9						
PSI	**Prapat**	**37.52**	**280**	P	**P**	**15 56 11.8**	**-2.4**
	comp=Z,2.5nm,0.3s,mb4.5,baz=124,slow=3.6,SNR=2.4						
PSI	**Prapat**	**37.52**	**280**	P	**P**	**15 56 11.9**	**-2.4**
JNU	**Nakatsue**	**37.54**	**353**	*e*P	**P**	**15 56 13.1**	**-1.0**
	comp=Z,4.3nm,1.0s,mb4.1						
MJAR	**Matsushiro Arr**	**40.72**	**3**	P	**P**	**15 56 39.0**	**-1.7**
	comp=Z,1.7nm,0.3s,mb4.1,baz=184,slow=8.6,SNR=12						
MJAR				LR	LR	16 11 03.1	
	comp=Z,99nm,19.1s,MS3.7,baz=105,slow=32						
MJAR	**Matsushiro Arr**	**40.72**	**3**	P	**P**	**15 56 39.0**	**-1.7**
MAJO	**Matsushiro**	**40.72**	**3**	*e*P	**P**	**15 56 38.5**	**-2.3**
	comp=Z,4.4nm,1.0s,mb4.0						
MAJO	**Matsushiro**	**40.72**	**3**	*e*P	**P**	**15 56 38.5**	**-2.2**
MAJO				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
MAT	**Matsushiro**	**40.72**	**3**	P	**P**	**15 56 38.6**	**-2.1**
GYA	**Guiyang**	**41.61**	**319**	P	**P**	**15 56 48.9**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
KSRS	**Korea Array**	**42.21**	**351**	P	**P**	**15 56 52.6**	**-0.4**
	comp=Z,2.2nm,1.0s,mb3.8,baz=174,slow=9.4,SNR=11						
ENH	**Enshi**	**42.63**	**326**	*e*P	**P**	**15 56 56.4**	**-0.1**
	comp=Z,14nm,1.0s,mb4.6						
CMAR	**Chiang Mai Arr**	**42.79**	**303**	P	**P**	**15 56 57.5**	**-0.4**
	comp=Z,0.9nm,0.7s,mb3.6,baz=124,slow=7.3,SNR=6.9						
CMAR	**Chiang Mai Arr**	**42.79**	**303**	P	**P**	**15 56 57.6**	**-0.4**
CHTO	**Chiang Mai**	**42.96**	**304**	*e*P	**P**	**15 56 58.0**	**-1.4**
CHTO	**Chiang Mai**	**42.96**	**304**	*e*P	**P**	**15 56 58.0**	**-1.4**
KMI	**Kunming**	**43.45**	**314**	P	**P**	**15 57 04.3**	**+1.1**
KMI				pP	pP	15 57 07.0	+2.3
KMI				sP	sP	15 57 08.8	+3.4
KMI				PP	PP	15 58 47.3	+3.0
KMI				S	**S**	**16 03 33.3**	**+0.9**
KMI				SS	SS	16 06 40.5	-6.1
KMI				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
KMI				pmax	pmax		
	comp=Z,100nm,4.8s						
KMI				LR	LR		
	comp=N,220nm,6.6s						
KMI				LR	LR		
	comp=E,360nm,5.4s						
KMI				LR	LR		
	comp=Z,270nm,5.4s						
XAN	**Xi'an**	**45.82**	**328**	P	**P**	**15 57 21.6**	**-0.4**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
XAN				pmax	pmax		
	comp=Z,77nm,4.8s						
CD2	**Chengdu**	**46.51**	**321**	*e*P	**P**	**15 57 28.6**	**+1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
BJT	**Baijiatuau**	**47.68**	**340**	*e*P	**P**	**15 57 35.4**	**-1.1**
	comp=Z,6.1nm,0.6s,mb4.8						
BJT	**Baijiatuau**	**47.68**	**340**	*e*P	**P**	**15 57 35.4**	**-1.1**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJI	**Beijing**	**47.70**	**340**	P	**P**	**15 57 36.6**	**0.0**
BJI				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
ASAJ	**Asahikawa**	**48.61**	**7**	P	**P**	**15 57 43.5**	**-0.1**
	comp=Z,6.4nm,0.6s,mb4.8,baz=229,slow=12,SNR=10						
CN2	**Changchun**	**48.81**	**350**	*e*P	**P**	**15 57 47.9**	**+2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.2						
RPZ	**Rata Peaks**	**50.06**	**147**	P	**P**	**15 57 55.0**	**+0.3**
	comp=Z,5.7nm,0.8s,mb4.7,baz=349,slow=2.2,SNR=3.8						
LZH	**Lanzhou**	**50.10**	**326**	*e*P	**P**	**15 57 56.5**	**+1.3**
LZH				pP	pP	15 57 59.8	+3.1
LZH				sP	sP	15 58 01.3	+4.0
LZH				PP	PP	15 59 52.6	+2.2
LZH				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
LZH				pmax	pmax		
	comp=Z,59nm,5.4s						
LZH				LR	LR		
	comp=N,410nm,15.7s						
LZH				LR	LR		
	comp=Z,480nm,18.0s,MS4.5						
LZH	**Lanzhou**	**50.10**	**326**	*e*P	**P**	**15 57 56.3**	**+1.1**
LZH				pP	pP	15 58 03.5	+6.8
LZH				sP	sP	15 58 07.0	+10
LZH				pmax	pmax		
	comp=Z,24nm,1.8s,mb4.9						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
LZH				LR	LR		
	comp=N,410nm,15.7s						
LZH				LR	LR		
	comp=Z,480nm,18.0s,MS4.5						
HHC	**Hu-ho-hao-te**	**50.13**	**336**	*e*P	**P**	**15 57 57.4**	**+2.1**
HHC				sP	sP	15 58 04.6	+7.1
HHC				PcP	PcP	15 59 16.3	+1.5
HHC				PP	PP	15 59 53.8	+3.2
HHC				ScP	ScP	16 03 09.4	-2.1
HHC				S	**S**	**16 05 09.5**	**+2.0**
HHC				sS	sS	16 05 16.6	+6.5
HHC				ScS	ScS	16 07 44.8	-2.8
HHC				SS	SS	16 08 40.3	-0.7
HHC				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC				LR	LR		
	comp=N,220nm,12.4s,MS4.5						
HHC				LR	LR		
	comp=E,180nm,12.1s,MS4.5						
HHC				LR	LR		
	comp=Z,150nm,12.6s,MS4.2						
YSS	**Yuzh-Sakhalins**	**51.43**	**6**	*e*P	**P**	**15 58 04.4**	**-0.6**
	comp=Z,16nm,1.0s,mb4.9						
YSS	**Yuzh-Sakhalins**	**51.43**	**6**	*e*P	**P**	**15 58 04.4**	**-0.6**
YSS				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
LSA	**Lhasa**	**54.53**	**311**	P	**P**	**15 58 28.9**	**+0.7**
	comp=Z,8.5nm,1.3s,mb4.6						
LSA	**Lhasa**	**54.53**	**311**	P	**P**	**15 58 28.9**	**+0.7**
LSA				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
GTA	**Gaotai**	**54.71**	**326**	P	**P**	**15 58 30.3**	**+1.0**
GTA				pP	pP	15 58 34.3	+3.4
GTA				sP	sP	15 58 36.9	+5.4
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
ULN	**Ulaanbaatar**	**57.77**	**337**	*e*P	**P**	**15 58 51.3**	**+0.3**
	comp=Z,8.6nm,1.2s,mb4.7						
ULN	**Ulaanbaatar**	**57.77**	**337**	*e*P	**P**	**15 58 51.3**	**+0.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
SONM	**Songino Array**	**58.00**	**337**	P	**P**	**15 58 53.0**	**+0.4**
	comp=Z,1.4nm,0.6s,mb4.2,baz=152,slow=8.1,SNR=10						
SONM	**Songino Array**	**58.00**	**337**	P	**P**	**15 58 53.0**	**+0.4**
PETK	**Petropavlovsk-**	**60.13**	**15**	P	**P**	**15 59 07.8**	**+0.5**
	comp=Z,1.8nm,0.6s,mb4.3,baz=174,slow=5.7,SNR=14						
PETK	**Petropavlovsk-**	**60.13**	**15**	P	**P**	**15 59 07.8**	**+0.5**
ZAK	**Zakamensk**	**61.27**	**337**	*e*P	**P**	**15 59 15.3**	**+0.2**
ZAK				*e*		15 59 24.0	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.3						
TLY	**Talaya**	**62.16**	**338**	P	**P**	**15 59 19.2**	**-1.9**
	comp=Z,3.7nm,0.8s,mb4.6						
TLY	**Talaya**	**62.16**	**338**	P	**P**	**15 59 19.2**	**-1.9**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.

KURK Kurchatov 73.39 326⇑ eP P 16 00 31.7 -0.3
KURK pmax pmax
comp=Z,9.0nm,1.7s,mb4.4
KBL Kabul 73.58 308 *eP* **P 16 00 32.7 -0.8**
comp=Z,2.5nm,0.5s,mb4.4
KBL Kabul 73.58 308 *eP* **P 16 00 32.7 -0.8**
KBL pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
SBA Scott Base 75.26 174 *eP* **P 16 00 43.2 +0.8**
comp=Z,6.3nm,1.0s,mb4.5
SBA Scott Base 75.26 174 *eP* **P 16 00 43.2 +0.7**
SBA pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KKAR Karatay Array 75.27 317 *eP* **P 16 00 43.2 +0.1**
comp=Z,4.2nm,0.6s,mb4.5
KKAR Karatay Array 75.27 317 *eP* **P 16 00 43.2 +0.1**
KKAR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BILL Bilibino 75.30 11⇓ *eP* **P 16 00 41.9 -0.8**
BILL *e* 16 00 53.5
BILL *e* 16 03 27.9
BILL *e*SS SS 16 15 13.2 +0.8
BILL pmax pmax
comp=Z,15nm,2.5s,mb4.5
BRVK Borovoye 79.06 326 *eP* **P 16 01 04.1 -0.1**
comp=Z,3.2nm,0.5s,mb4.5
BRVK Borovoye 79.06 326⇓ *eP* **P 16 01 04.2 0.0**
BRVK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MAW Mawson 79.54 202 P **P 16 01 04.9 -1.7**
comp=Z,1.4nm,0.8s,mb4.0,baz=90,slow=4.0,SNR=3.1
MAW Mawson 79.54 202 *eP* **P 16 01 06.8 +0.2**
comp=Z,0.6nm,0.8s,mb3.6
MAW Mawson 79.54 202 *eP* **P 16 01 06.8 +0.2**
MAW pmax pmax
comp=Z,1.0nm,0.8s
ABKAR Akbulak array 84.08 320 *eP* **P 16 01 30.2 -0.7**
QSPA South Pole Qui 85.63 180 P **P 16 01 38.1 0.0**
comp=Z,6.7nm,1.0s,mb4.8,baz=345,slow=3.0,SNR=16
QSPA South Pole Qui 85.63 180 P **P 16 01 38.1 0.0**
ARU Arti 86.56 327 *eP* **P 16 01 41.2 -1.8**
comp=Z,5.6nm,1.2s,mb4.7
ARU Arti 86.56 327*c iP* **P 16 01 43.3 +0.2**
ARU 16 05 02.7
ARU S S 16 12 06.6 -14
ARU SS SS 16 17 53.7 -7.1
ARU pmax pmax
comp=Z,13nm,2.5s,mb4.7
MCK McKinley 87.38 26 *eP* **P 16 01 47.8 +0.8**
comp=Z,3.6nm,0.4s,mb5.0
MCK McKinley 87.38 26 *eP* **P 16 01 47.8 +0.9**
MCK pmax pmax
comp=Z,4.0nm,0.4s,mb5.0
ILAR Eielson Array 88.51 25 P **P 16 01 50.7 -1.6**
comp=Z,0.7nm,0.7s,mb4.1,baz=260,slow=4.6,SNR=7.5
ILAR Eielson Array 88.51 25 P **P 16 01 50.7 -1.6**
ARCES ARCESS Array B 101.06 340 P Pdif 16 02 48.2 -1.7
comp=Z,0.7nm,0.7s,baz=74,slow=6.7,SNR=5.2
ARCES ARCESS Array B 101.06 340 P Pdif 16 02 48.2 -1.7
PLCA Paso Flores 129.08 154 PKP PKPdf 16 08 10.4 +1.9
comp=Z,1.9nm,0.9s,baz=97,slow=1.2,SNR=3.9
PLCA Paso Flores 129.08 154 PKIKP PKPdf 16 08 10.4 +1.9
LPAZ La Paz 148.70 131 PKPbc PKPbc 16 08 47.4 -1.1
comp=Z,3.0nm,1.0s,baz=162,slow=0.9,SNR=8.4
LPAZ La Paz 148.70 131 *e*PKPdf PKPdf 16 08 45.8 +1.1
LPAZ La Paz 148.70 131 *e*PKIKP PKPdf 16 08 45.8 +1.1
SDV Santo Domingo 153.37 79 *e*PKPdf PKPdf 16 08 53.4 +1.5
SDV *e*PKPbc PKPbc 16 08 59.3 -0.2

IDC 13 16:03:01.1±2.3, 3°.53N×128°.45E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/19, mbtmp3.3/3, Error ellipse: s-maj=160.8km s-min=25.0km az=68.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.03**	**166**	P	P	16 08 18.2	+0.3
	0.3nm,0.6s,baz=347,slow=11,SNR=8.6						
ASAR	**Alice Springs**	**27.55**	**169**	P	P	16 08 50.0	+0.2
	1.0nm,1.1s,baz=211,slow=29,SNR=3.4						
MKAR	**Makanchi Array**	**58.70**	**325**	P	P	16 13 00.4	-0.2
	0.2nm,0.3s,baz=114,slow=8.1,SNR=7.9						

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*ISCJB **13** 16:10:01.8±6.1, 60°.07S±0°.10×27°.4W±0°.2, h41km±57km, mb4.2/14, MS3.8/5, Error ellipse: s-maj=18.5km s-min=13.5km az=43.9*
*IDC **13** 16:10:05.6±2.0, 60°.07S×27°.38W, h62km±15km, mb4.0/7, mb1 4.1/7, mb1mx3.9/14, mbtmp4.0/7, MS3.8/5, Ms1 3.8/5, ms1mx3.6/14, Error ellipse: s-maj=27.8km s-min=17.7km az=44.0*
*NEIC **13** 16:10:15.1±3.6, 60°.01S×27°.24W, h150km±33km, mb4.2/8, Error ellipse: s-maj=16.0km s-min=13.1km az=213.0*
ISC 13 16:10:04.8±4.4, 60°.10S±0°.10×27°.4W±0°.2, h52km±42km, n38, σ0°84/20, mb4.2/14, MS3.8/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**17.42**	**239**	P	**Pn**	**16 14 11.9**	**+8.2**
	1.4nm,0.3s,baz=83,slow=9.8,SNR=6.5						
MAIT	**Maitri**	**19.03**	**140**	*e*P	**Pn**	**16 14 22.2**	**-0.9**
MAIT				*e*S	**S**	**16 17 38.7**	**-16**
USHA	**Ushuaia**	**22.42**	**265**	LR	LR	16 20 35.4	
	comp=Z,283nm,18.3s,MS3.7,baz=129,slow=28						
QSPA	**South Pole Qui**	**30.14**	**180**	P	**P**	**16 16 10.3**	**+1.3**
	4.4nm,0.6s,mb4.4,baz=214,slow=5.4,SNR=40						
QSPA	**South Pole Qui**	**30.14**	**180**	P	**P**	**16 16 10.3**	**+1.3**
TRQA	**Tornquist**	**31.05**	**300**	P	**P**	**16 16 17.7**	**+0.3**
	4.9nm,0.9s,mb4.3						
PLCA	**Paso Flores**	**32.84**	**286**	LR	LR	16 28 17.6	
	comp=Z,179nm,18.7s,MS3.8,baz=71,slow=33						
MAW	**Mawson**	**37.01**	**140**	P	**P**	**16 17 08.1**	**-0.6**
	2.9nm,0.9s,mb4.1,baz=245,slow=8.0,SNR=8.4						
MAW				PcP	PcP	16 19 28.6	+0.3
	1.6nm,0.7s,baz=325,slow=8.2,SNR=4.8						
MAW	**Mawson**	**37.01**	**140**	*e*P	**P**	**16 17 07.9**	**-0.7**
	0.9nm,0.9s,mb3.6						
MAW				PcP	PcP	16 19 28.6	+0.3
CFAA	**Coronel Fontan**	**39.23**	**298**	P	**P**	**16 17 27.7**	**0.0**
	0.3nm,0.3s,mb3.5,baz=186,slow=8.7,SNR=3.6						
CPUP	**Villa Florida**	**39.53**	**315**	*e*P	**P**	**16 17 29.0**	**-1.3**
	11nm,0.6s,mb4.8						
SUR	**Sutherland**	**41.93**	**71**	P	**P**	**16 17 51.5**	**+1.5**
	22nm,1.2s,mb4.7						
SBA	**Scott Base**	**42.02**	**184**	*e*P	**P**	**16 17 51.5**	**+1.2**
	2.8nm,0.9s,mb3.9						
BDFB	**Brasilia**	**46.88**	**332**	LR	LR	16 36 39.9	
	comp=Z,80nm,20.2s,MS3.7,baz=32,slow=34						
BOSA	**Boshof**	**47.18**	**72**	P	**P**	**16 18 31.7**	**-0.1**
	3.8nm,0.5s,mb4.6,baz=212,slow=9.4,SNR=19						
CASY	**Casey**	**50.13**	**159**	P	**P**	**16 18 54.1**	**+0.1**
	2.8nm,0.8s,mb4.3						
LBTB	**Lobatse**	**50.38**	**70**	*e*P	**P**	**16 18 56.2**	**-0.2**
	6.8nm,0.7s,mb4.8						
TSUM	**Tsumeb**	**51.83**	**58**	P	**P**	**16 19 07.7**	**+0.4**
	1.8nm,1.3s,mb3.8						
LPAZ	**La Paz**	**52.72**	**308**	P	**P**	**16 19 14.4**	**+0.4**
	1.7nm,0.5s,mb4.2,baz=135,slow=6.3,SNR=11						
LPAZ				LR	LR	16 41 35.6	
	comp=Z,41nm,21.9s,MS3.4,baz=158,slow=36						
LPAZ	**La Paz**	**52.72**	**308**	P	**P**	**16 19 14.4**	**+0.4**
LPAZ				LR	LR	16 41 35.6	
KMBO	**Kilima Mbogo**	**76.61**	**68**	LR	LR	16 54 28.6	
	comp=Z,163nm,18.5s,MS4.4,baz=91,slow=35						
ASAR	**Alice Springs**	**95.14**	**163**	P	**P**	**16 23 20.9**	**-1.2**
	1.4nm,0.6s,mb4.6,baz=182,slow=3.8,SNR=36						
WRA	**Warramunga Arr**	**98.87**	**163**	P	**P**	**16 23 38.3**	**-0.8**
	0.3nm,0.8s,mb3.9,baz=190,slow=4.3,SNR=4.1						
PDAR	**Pinedale Array**	**122.37**	**300**	PKP	PKPdf	16 28 51.9	-1.1
	0.3nm,0.5s,baz=128,slow=2.8,SNR=3.5						
CMAR	**Chiang Mai Arr**	**123.64**	**113**	PKP	PKPdf	16 28 55.9	-0.2
	1.1nm,0.8s,baz=222,slow=4.1,SNR=5.5						
FINES	**FINESS Array B**	**127.99**	**29**	PKP	PKPdf	16 29 02.6	-0.5
	3.0nm,0.7s,baz=236,slow=0.7,SNR=10.0						
KAF	**Kangasniemi**	**128.62**	**29**	*e*p	PKPdf	16 29 02.9	-1.3
	2.5nm,0.7s						
JOF	**Joensuu**	**130.56**	**31**	*e*p	PKPdf	16 29 05.8	-2.1
	1.1nm,0.6s						
ARCES	**ARCESS Array B 134.73**	**23**		PKP	PKPdf	16 29 14.8	-0.7
	1.1nm,0.6s,baz=191,slow=1.3,SNR=11						
ARCES				SKPbc	SKPbc	16 32 37.2	-3.8
	0.5nm,0.8s,baz=160,slow=2.9,SNR=5.3						
ARCES	**ARCESS Array B 134.73**	**23**		PKP	PKPdf	16 29 14.8	-0.7
ARCES				SKPbc	SKPbc	16 32 37.2	-3.8
BVAR	**Borovoye Array**	**136.93**	**61**	PKP	PKPdf	16 29 21.4	+1.3
	0.7nm,0.5s,baz=115,slow=4.0,SNR=5.3						
BVAR				SKPbc	SKPbc	16 32 47.1	-1.2
	1.2nm,0.6s,baz=235,slow=3.4,SNR=8.4						
MKAR	**Makanchi Array**	**138.12**	**76**	PKP	PKPdf	16 29 23.2	+0.7
	0.2nm,0.4s,baz=257,slow=2.9,SNR=3.2						
MKAR				SKPbc	SKPbc	16 32 49.7	-2.3
	0.5nm,0.6s,baz=235,slow=3.7,SNR=6.5						
ZAA0	**Zalesovo Array**	**144.08**	**69**	*e*P	PKPdf	16 29 29.6	-3.4
ZALV	**Zalesovo Beam**	**144.08**	**69**	PKP	PKPdf	16 29 30.2	-2.8
	3.6nm,0.4s,baz=235,slow=3.8,SNR=18						
INK	**Inuvik**	**148.78**	**316**	PKPbc	PKPbc	16 29 43.5	-1.1
	1.7nm,0.6s,baz=67,slow=1.7,SNR=5.5						
SONM	**Songino Array**	**150.81**	**94**	PKPbc	PKPbc	16 29 49.8	-0.3
	4.6nm,0.5s,baz=213,slow=3.6,SNR=39						
SONM				PKPab	PKPab	16 29 56.9	-0.5
	1.5nm,0.5s,baz=227,slow=4.1,SNR=7.0						
KSRS	**Korea Array**	**152.41**	**134**	PKPbc	PKPbc	16 29 53.3	-0.8
	1.7nm,0.8s,baz=187,slow=2.1,SNR=9.0						
KSRS				PKPab	PKPab	16 30 04.2	-0.2
	1.3nm,0.8s,baz=209,slow=3.5,SNR=4.7						
ILAR	**Eielson Array**	**152.59**	**306**	PKPbc	PKPbc	16 29 52.5	-1.1
	1.5nm,0.8s,baz=154,slow=2.1,SNR=19						

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*ISCJB **13** 16:15:34.2±2.5, 31°.26N±0°.08×103°.6E±0°.2, h10km, mb3.5/2, Error ellipse: s-maj=24.4km s-min=7.1km az=21.4*
*BJI **13** 16:15:36.1, 30°.92N×103°.32E, h12km, ML3.2/9*
*IDC **13** 16:15:50.6±5.2, 29°.39N×106°.35E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.3/21, mbtmp3.3/4, ML3.4/2, MS4.1/1, Ms1 4.1/1, ms1mx2.5/25, Error ellipse: s-maj=126.4km s-min=36.3km az=129.0*
ISC 13 16:15:33.7±1.7, 31°.17N±0°.07×103°.4E±0°.1, h10km, n6, σ1°16/8, mb3.2/3, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.40**	**130⇓**	*i*Pg	**Pg**	**16 15 41.3**	**-0.3**
CD2				Sg	**Sg**	**16 15 47.3**	**+0.3**
CD2				smax			
	comp=N,4μm,0.8s						
CD2				smax			
	comp=E,6μm,1.1s						
XAN	**Xi'an**	**5.47**	**57**	Pg	**Pg**	**16 17 22.8**	**+4.3**
XAN				Sg	**Sg**	**16 18 28.6**	**-0.7**
XAN				smax			
	comp=N,25nm,0.8s						
XAN				smax			
	comp=E,15nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.28**	**199**	Pn	**Pn**	**16 18 53.6**	**+11**
	comp=E,0.1nm,0.3s,baz=29,slow=14,SNR=4.1						
KSRS	**Korea Array**	**21.18**	**66**	P	**P**	**16 20 20.9**	**+1.7**
	comp=E,0.1nm,0.3s,mb2.6,baz=243,slow=10,SNR=4.6						
WRA	**Warramunga Arr**	**58.87**	**146**	P	**P**	**16 25 30.5**	**-2.3**
	comp=E,0.3nm,0.7s,mb3.5,baz=337,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**61.86**	**148**	P	**P**	**16 25 53.1**	**-0.1**
	comp=E,0.5nm,0.9s,mb3.6,baz=335,slow=6.9,SNR=4.1						

CASC 13 16:16:58.5±1.4, 12°.24N×87°.47W, h41km±117km, MD3.5, ML3.4, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.80**	**71**	*e*P	Pn	16 17 13.4	+0.1
CNGN				*e*S	Sn	16 17 25.8	+1.7
CNGN				AML	AML	16 17 31.0	
	comp=E,1μm,0.1s						
COPN	**Copaltepe**	**0.86**	**94**	*e*P	Pn	16 17 14.0	-0.2
COPN				*e*S	Sn	16 17 25.5	-0.1
MOMN	**Momotombo**	**0.93**	**79**	*e*P	Pn	16 17 15.3	+0.2
CNCH	**Conchagua**	**1.09**	**341⇑**	*e*P	Pn	16 17 18.0	+0.6
CNCH				*e*S	Sn	16 17 32.5	+1.2
TICN	**Ticuantepe**	**1.23**	**99**	*e*P	Pn	16 17 19.6	+0.4
HUEN		**1.27**	**85**	*e*P	Pn	16 17 19.2	-0.6
BLLM	**Bellamira**	**1.42**	**328**	*e*P	Pn	16 17 22.2	+0.5
LFRS	**El Faro**	**2.08**	**312**	*e*P	Pn	16 17 31.5	+0.6
LFRS				*e*S	Sn	16 17 56.3	+0.8

ATH 13 16:19:07.7, 40°.24N×25°.16E, h4km, MD2.9/3, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.34**	**177**	*e*PG	Pg	16 19 14.7	+0.4
LIA				*e*SG	Sg	16 19 18.9	+0.2
BOZC	**Bozcaada**	**0.79**	**120**	*i* P	Pg	16 19 23.1	+0.2
BOZC				*i* S	Sg	16 19 32.8	-0.3
ALN	**Alexandroupoli**	**0.94**	**45**	*e*PG	Pg	16 19 25.9	+0.1
ALN				*e*SG	Sg	16 19 37.9	-0.1
NVR	**Nevrokopi**	**1.48**	**319**	*e*PN	Pn	16 19 35.4	+0.3

IDC 13 16:41:54.1±1.6, 2°.69S×128°.28E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.6/18, mbtmp3.6/5, ML3.3/2, MS3.6/2, Ms1 3.6/2, ms1mx2.8/25, Error ellipse: s-maj=109.4km s-min=21.9km az=73.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.54**	**189**	Pn	Pn	16 45 36.6	+1.9
	0.1nm,0.3s,baz=352,slow=15,SNR=3.1						
WRA	**Warramunga Arr**	**18.14**	**161**	P	Pn	16 46 07.9	+0.3
	0.1nm,0.3s,baz=342,slow=13,SNR=9.7						
ASAR	**Alice Springs**	**21.55**	**166**	P	P	16 46 44.9	-0.3
	0.7nm,0.3s,baz=344,slow=12,SNR=29						
KSRS	**Korea Array**	**39.94**	**360**	LR	LR	17 06 05.5	
	comp=Z,40nm,18.7s,baz=170,slow=36						
SONM	**Songino Array**	**53.84**	**342**	P	P	16 51 19.0	+0.3
	0.5nm,0.7s,baz=157,slow=8.0,SNR=3.9						
MKAR	**Makanchi Array**	**63.70**	**327**	P	P	16 52 27.3	-0.2
	0.5nm,0.7s,baz=128,slow=7.9,SNR=7.6						
SPITS	**Spitsbergen Ar**	**97.03**	**349**	LR	LR	17 41 44.3	
	comp=Z,43nm,19.1s,baz=150,slow=37						

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*ISK **13** 16:44:12.6, 38°.60N×31°.17E, h16km, MD2.8*
*DDA **13** 16:44:12.9, 38°.70N×31°.19E, h7km±3km, Md2.6*
*CSEM **13** 16:44:12.8±0.1, 38°.58N×31°.15E, h12km, MD2.6, Error ellipse: s-maj=3.3km s-min=3.0km az=14.0*
*ISCJB **13** 16:44:13.3±0.6, 38°.61N±0°.04×31°.13E±0°.05, h18km±8km, Error ellipse: s-maj=6.9km s-min=5.9km az=18.0*
ISC 13 16:44:13.2±0.6, 38°.62N±0°.04×31°.15E±0°.05, h16km±5km, n21, σ0°90/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	**Bolvadin**	**0.19**	**303**	*i* P	**Pg**	**16 44 17.9**	**+0.1**
BOLV				*i* S	**Sg**	**16 44 20.1**	**-0.8**
BOLV	**Bolvadin**	**0.19**	**303**	*i* P	**Pg**	**16 44 17.9**	**+0.1**
BOLV				*i* S	**Sg**	**16 44 20.1**	**-0.9**
SHUT	**Suhut-Afyon**	**0.47**	**263**	*e*PG	**Pg**	**16 44 22.8**	**0.0**
SHUT				*e*SG	**Sg**	**16 44 30.2**	**+1.0**
SHUT	**Suhut-Afyon**	**0.47**	**263**	*e*Pg	**Pg**	**16 44 22.8**	**0.0**
SHUT				*e*Sg	**Sg**	**16 44 30.2**	**+1.0**
KIZT	**Kizilcal**	**0.63**	**65**	*e*PG	**Pg**	**16 44 25.2**	**-0.4**
KIZT	**Kizilcal**	**0.63**	**65**	*e*Pg	**Pg**	**16 44 25.2**	**-0.4**
KDHN	**Kadinhani**	**0.76**	**97**	*i* P	**Pb**	**16 44 28.0**	**-0.1**
KDHN				*i* S	**Sb**	**16 44 38.5**	**+0.3**
KDHN	**Kadinhani**	**0.76**	**97**	*i* P	**Pb**	**16 44 28.0**	**0.0**
KDHN				*i* S	**Sb**	**16 44 38.5**	**+0.4**
SVRH	**Sivrihisar-ESK**	**0.88**	**19**	*e*PG	**Pg**	**16 44 30.9**	**+0.6**
SVRH				*e*SG	**Sg**	**16 44 42.8**	**+0.8**
SVRH	**Sivrihisar-ESK**	**0.88**	**19**	*e*Pg	**Pg**	**16 44 31.0**	**+0.7**
SVRH				*e*Sg	**Sg**	**16 44 42.8**	**+0.9**
ESKT	**Eskisehir**	**0.93**	**345**	*i* P	**Pb**	**16 44 28.8**	**-2.2**
ESKT				*i* S	**Sb**	**16 44 40.1**	**-3.0**
SUTC	**Sutluce-Ispart**	**1.14**	**186**	*e*PN	**Pn**	**16 44 34.3**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.14**	**186**	*e*Pn	**Pn**	**16 44 34.3**	**-0.2**
KONT	**Konya--Tatoy**	**1.16**	**125**	*e*PN	**Pn**	**16 44 34.3**	**-0.5**
KONT	**Konya--Tatoy**	**1.16**	**125**	*e*Pn	**Pn**	**16 44 34.3**	**-0.4**
BORA	**Eskisehir**	**1.38**	**337**	*i* P	**Pn**	**16 44 37.4**	**-0.3**
BORA				*i* S	**Sn**	**16 44 56.8**	**+1.3**
BORA	**Eskisehir**	**1.38**	**337**	*i* P	**Pn**	**16 44 37.4**	**-0.3**
BORA				*i* S	**Sn**	**16 44 56.8**	**+1.3**
MDU	**Mudurnu**	**1.85**	**1**	*e*PN	**Pn**	**16 44 44.7**	**+0.5**
MDU	**Mudurnu**	**1.85**	**1**	*e*Pn	**Pn**	**16 44 44.7**	**+0.5**
GULT	**Gulveren**	**1.88**	**345**	*e*PN	**Pn**	**16 44 45.0**	**+0.4**
GULT	**Gulveren**	**1.88**	**345**	*e*Pn	**Pn**	**16 44 45.0**	**+0.4**

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*IDC **13** 16:47:26.4±7.8, 28°.04S×68°.54W, h72km±62km, mb3.1/2, mb1 3.6/2, mb1mx3.3/14, mbtmp3.1/2, ML4.6/1, Error ellipse: s-maj=84.4km s-min=39.8km az=40.0*
NEIC 13 16:47:30.3±1.1, 27°.88S×68°.25W, h106km±13km, Error ellipse: s-maj=37.5km s-min=12.9km az=168.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**2.43**	**242**	*e*Pn	Pn	16 48 09.1	+0.4
LCO				*e*Sn	Sn	16 48 37.7	-0.5
CPUP	**Villa Florida**	**9.85**	**83**	P	Pn	16 49 48.9	-0.1
	1.2nm,0.3s,baz=245,slow=14,SNR=8.3						
TXAR	**Lajitas Array**	**66.22**	**326**	P	P	16 58 07.1	+0.2
	0.1nm,0.4s,baz=146,slow=6.6,SNR=2.0						
PDAR	**Pinedale Array**	**79.92**	**330**	P	P	16 59 27.2	-0.1
	0.2nm,0.4s,baz=151,slow=8.3,SNR=3.6						
WRA	**Warramunga Arr**	**127.67**	**207**	PKP	PKPdf	17 06 23.4	-0.4
	0.2nm,0.4s,baz=156,slow=1.9,SNR=9.0						
ZALV	**Zalesovo Beam**	**147.32**	**30**	PKPbc	PKPbc	17 07 01.8	+0.7
	2.7nm,0.8s,baz=291,slow=3.1,SNR=8.0						
MKAR	**Makanchi Array**	**150.18**	**43**	PKPbc	PKPbc	17 07 09.0	+0.4
	1.5nm,0.7s,baz=317,slow=2.1,SNR=18						
MKAR	**Makanchi Array**	**150.18**	**43**	PKPbc	PKPbc	17 07 09.0	+0.4

MAN 13 17:20:47, 9°.69N×121°.82E, h27km, mb4.6, ML3.4, MS3.4, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.20**	**39**	*e*P	Pn	17 21 08.1	+0.1
GUIM				*e*S	Sn	17 21 24.3	+0.9
CUYO	**Cuyo Island**	**1.39**	**326**	*e*P	Pn	17 21 11.6	+0.9
CUYO				*e*S	Sn	17 21 20.7	-7.5
SNPH	**Sibulan**	**1.44**	**104⇑**	*e*P	Pn	17 21 11.8	+0.5
SNPH				*e*S	Sn	17 21 34.8	+5.5
PAGZ	**Pagadian**	**2.40**	**140**	*e*P	Pn	17 21 25.6	+1.1
BUSP	**Coron**	**2.79**	**325**	*e*P	Pn	17 21 31.1	+1.1
ENPP	**El Nido**	**2.79**	**303**	*e*P	Pn	17 21 31.4	+1.5
MSLP	**Maasin**	**3.03**	**81**	*e*P	Pn	17 21 35.3	+2.2
CNP	**Catarman**	**3.95**	**45**	*e*P	Pn	17 21 53.1	+7.2

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*ISCJB **13** 17:29:44.1±1.0, 20°.8S±0°.1×114°.0W±0°.2, h10km, mb4.3/11, MS3.9/10, Error ellipse: s-maj=29.7km s-min=17.0km az=163.1*
*IDC **13** 17:29:44.6±1.3, 20°.74S×113°.99W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.8/4, MS3.9/11, Ms1 3.9/11, ms1mx3.7/26, Error ellipse: s-maj=43.1km s-min=38.4km az=14.0*
*NEIC **13** 17:29:45.9±0.5, 20°.80S×113°.94W, h10km, mb4.6/8, Error ellipse: s-maj=18.4km s-min=14.3km az=83.0*
ISC 13 17:29:46.5±1.0, 20°.8S±0°.1×113°.9W±0°.2, h10km, n36, σ0°84/13, mb4.3/11, MS3.9/10, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**7.58**	**147**	LR	LR	17 33 46.6	
	comp=Z,1μm,18.3s,baz=332,slow=32						
RKT	**Rikitea**	**19.67**	**259**	*e*LR	LR	17 38 50.8	
	746nm,26.0s						
TBI	**Tubuai**	**32.99**	**259**	*e*LR	LR	17 45 01.3	
	389nm,26.0s						
PPT	**Papeete**	**33.79**	**269**	*e*LR	LR	17 45 15.8	
	436nm,26.2s,baz=119						
PPT	**Papeete**	**33.79**	**269**	LR	LR	17 45 58.8	
	comp=Z,265nm,18.7s,MS4.0,baz=339,slow=29						
OTAV	**Otavalo**	**40.48**	**63**	P	**P**	**17 37 26.4**	**+0.7**
	5.1nm,1.2s,mb4.1						
PLCA	**Paso Flores**	**41.74**	**128**	LR	LR	17 50 16.7	
	comp=Z,324nm,21.3s,MS4.2,baz=5.0,slow=30						
CMIG	**Matias Romero**	**42.02**	**28**	P	**P**	**17 37 36.2**	**-2.0**
	2.7nm,0.8s,mb3.9,baz=222,slow=8.5,SNR=4.3						
CMIG	**Matias Romero**	**42.02**	**28**	P	**P**	**17 37 36.2**	**-2.0**
LPAZ	**La Paz**	**43.54**	**92**	P	**P**	**17 37 51.8**	**+1.0**
	0.9nm,1.0s,mb3.5,baz=232,slow=8.8,SNR=3.9						
LPAZ				LR	LR	17 53 04.9	
	comp=Z,151nm,18.1s,MS3.9,baz=302,slow=32						
LPAZ	**La Paz**	**43.54**	**92**	*e*P	**P**	**17 37 51.1**	**+0.4**
	7.8nm,1.4s,mb4.2						
LPAZ				LR	LR	17 53 04.9	
TRQA	**Tornquist**	**47.79**	**123**	P	**P**	**17 38 23.9**	**-0.2**
	31nm,1.6s,mb5.1						
TEIG	**Tepich**	**47.86**	**33**	P	**P**	**17 38 24.0**	**-0.7**
	66nm,1.4s,mb5.5						
TXAR	**Lajitas Array**	**50.79**	**12**	LR	LR	17 56 12.2	
	comp=Z,49nm,19.7s,MS3.5,baz=170,slow=31						
JCT	**Junction City**	**52.74**	**15**	*e*P	**P**	**17 39 02.0**	**+0.5**
	8.2nm,0.8s,mb4.7						
AFI	**Afiamalu**	**55.41**	**267**	LR	LR	17 56 39.9	
	comp=Z,127nm,19.6s,MS4.0,baz=81,slow=29						
SDCO	**Great Sand Dun**	**58.75**	**8**	P	**P**	**17 39 44.4**	**-0.2**
	2.4nm,1.2s,mb4.1						
NVAR	**Mina Array Bea**	**59.04**	**356**	P	**P**	**17 39 47.8**	**+1.3**
	1.0nm,0.8s,mb3.9,baz=180,slow=8.5,SNR=6.2						
BDFB	**Brasilia**	**62.45**	**97**	LR	LR	18 04 05.4	
	comp=Z,145nm,21.0s,MS4.1,baz=81,slow=33						
TKL	**Tuckaleechee C**	**62.98**	**27**	LR	LR	18 05 37.6	
	comp=Z,33nm,19.0s,MS3.5,baz=96,slow=34						
PDAR	**Pinedale Array**	**63.35**	**4**	P	**P**	**17 40 16.4**	**+0.6**
	0.5nm,0.8s,mb3.7,baz=163,slow=6.2,SNR=3.8						
IMW	**Indian Meadow**	**64.41**	**2**	*e*P	**P**	**17 40 22.2**	**-0.5**
	5.6nm,1.0s,mb4.5						
QSPA	**South Pole

	baz=1.5,SNR=51						
H21A			⇓S		Sn	18 04 55.9	+1.0
	baz=1.5						
J21A	**Lysite**	**1.63 256**	⇓P		**Pn**	**18 04 34.7**	**-0.8**
	baz=1.7						
L23A	**Garrett**	**1.67 191**	⇑P		**Pn**	**18 04 35.7**	**-0.4**
	baz=1.7						
L23A			⇓Sb		**Sb**	**18 04 58.7**	**-0.2**
	baz=1.7						
L24A	**Wheatland**	**1.74 171**	⇓P		**Pn**	**18 04 36.8**	**-0.1**
	baz=1.8						
K21A	**Alcova**	**1.83 233**	⇓Pb		**Pb**	**18 04 38.5**	**-1.4**
	baz=1.9						
K21A			⇑Sb		**Sb**	**18 05 02.9**	**-0.4**
	baz=1.9						
G21A	**Lodge Grass**	**2.01 317**	⇓Pn		**Pn**	**18 04 41.4**	**+0.6**
	baz=2.0						
I20A	**Worland**	**2.07 276**	⇓P		**Pn**	**18 04 42.2**	**+0.6**
	baz=2.1,SNR=133						
I20A			⇑Sb		**Sb**	**18 05 09.9**	**-0.3**
	baz=2.1						
J20A	**Shoshoni**	**2.08 260**	⇓Pb		**Pb**	**18 04 43.4**	**-0.8**
	baz=2.1,SNR=37						
J20A			⇑Sb		**Sb**	**18 05 10.7**	**+0.2**
	baz=2.1						
H20A	**Greybull**	**2.09 291**	⇑Pn		**Pn**	**18 04 42.0**	**+0.2**
	baz=2.1,SNR=24						
M23A	**Laramie**	**2.31 188**	⇓Pb		**Pb**	**18 04 46.7**	**-1.5**
	baz=2.4						
M23A			⇑Sb		**Sb**	**18 05 16.9**	**-0.5**
	baz=2.4						
M24A	**Cheyenne**	**2.32 171**	⇑Pb		**Pb**	**18 04 48.0**	**-0.3**
	baz=2.4						
M24A			⇑Sb		**Sb**	**18 05 18.2**	**+0.8**
	baz=2.4						
L21A	**Rawlins**	**2.36 221**	⇓Pb		**Pb**	**18 04 47.5**	**-1.6**
	baz=2.4						
F21A	**Absaloka Mine,**	**2.44 328**	⇑P		**Pn**	**18 04 46.7**	**0.0**
	baz=2.4						
PHWY	**Pilot Hill**	**2.46 183**	*e*Pn		**Pn**	**18 04 47.2**	**+0.2**
K20A	**Yellowstone Ra**	**2.50 245**	⇓Pb		**Pb**	**18 04 49.9**	**-1.4**
	baz=2.5,SNR=12						
K20A			⇑Sb		**Sb**	**18 05 21.8**	**-0.7**
	baz=2.5						
RWWY	**Rawlins**	**2.51 215**	*e*Pn		**Pn**	**18 04 49.0**	**+1.3**
M22A	**Cedar Creek Ra**	**2.55 203**	⇑Pb		**Pb**	**18 04 50.1**	**-2.1**
	baz=2.6						
G20A	**Bridger**	**2.56 306**	⇑Pn		**Pn**	**18 04 48.1**	**-0.2**
	baz=2.5						
M21A	**Separation Pea**	**2.64 216**	⇑Pb		**Pb**	**18 04 51.4**	**-2.4**
	baz=2.7						
M21A			⇓Sb		**Sb**	**18 05 27.0**	**+0.2**
	baz=2.7						
I19A	**Meeteetse**	**2.70 277**	⇑Pn		**Pn**	**18 04 51.2**	**+0.9**
	baz=2.7,SNR=74						
K19A	**Absolon Red Bu**	**2.77 251**	⇓Pb		**Pb**	**18 04 54.5**	**-1.4**
	baz=2.8,SNR=108						
J19A	**Crowheart**	**2.79 261**	⇓Pb		**Pb**	**18 04 53.3**	**-3.0**
	baz=2.8,SNR=12						
J19A			⇑Sb		**Sb**	**18 05 32.0**	**+1.0**
	baz=2.8						
H19A	**Powell**	**2.81 290**	⇓Pn		**Pn**	**18 04 52.8**	**+0.9**
	baz=2.8,SNR=29						
H19A			⇓Sb		**Sb**	**18 05 32.1**	**+0.4**
	baz=2.8						
L20A	**Wamsutter**	**2.85 233**	⇑Pb		**Pb**	**18 04 54.5**	**-2.9**
	baz=2.9						
F20A	**Billings**	**2.89 316**	⇑Pn		**Pn**	**18 04 52.7**	**-0.1**
	baz=2.9						
N23A	**Red Feather La**	**2.91 190**	⇑Pn		**Pn**	**18 04 54.3**	**+1.2**
	baz=3.0						
N23A			⇑Sb		**Sb**	**18 05 35.3**	**+0.9**
	baz=3.0						
LAO	**LASA Array**	**3.00 348**	*e*Pn		**Pn**	**18 04 51.9**	**-2.5**
N22A	**Wattenberg Ran**	**3.08 197**	⇓Pb		**Pb**	**18 05 00.2**	**-1.0**
	baz=3.1						
RLMT	**Red Lodge**	**3.16 297**	*e*Pn		**Pn**	**18 04 57.0**	**+0.3**
PDAR	**Pinedale Array**	**3.28 254**	Pn		**Pn**	**18 04 59.2**	**+1.0**
	3.3nm,0.3s,baz=72,slow=15,SNR=51						
PDAR			Pg		**Pg**	**18 05 06.8**	**-1.7**
	10nm,0.3s,baz=60,slow=20,SNR=34						
PDAR			Lg			18 05 44.1	
	12nm,0.3s,baz=141,slow=30,SNR=8.1						
H18A	**Shoshone NF, C**	**3.28 288**	⇓Pn		**Pn**	**18 04 58.5**	**+0.2**
	baz=3.3,SNR=29						
I18A	**Diamond G Ranc**	**3.29 271**	⇑Sb		**Sb**	**18 05 44.5**	**-0.9**
	baz=3.3						
F19A	**Roth Farm, Mol**	**3.34 310**	⇑Pn		**Pn**	**18 04 59.8**	**+0.7**
	baz=3.3						
G18A	**Lazy EL Ranch,**	**3.44 298**	⇓Pn		**Pn**	**18 05 00.8**	**+0.4**
	baz=3.4,SNR=38						
N20A	**Spence Gulch,**	**3.67 218**	⇑Pn		**Pn**	**18 05 04.5**	**+1.0**
	baz=3.7						
OGNE	**Ogallala**	**3.70 138**	*e*Pn		**Pn**	**18 05 04.6**	**+0.6**
O22A	**Kremmling**	**3.72 195**	⇑Sb		**Sb**	**18 05 59.1**	**+1.3**
	baz=3.8						
GCMT	**Greycliff**	**3.73 305**	*e*Pn		**Pn**	**18 05 04.8**	**+0.4**
LOHW	**Long Hollow**	**3.86 270**	*e*Pn		**Pn**	**18 05 06.8**	**+0.5**
FLWY	**Flagg Ranch**	**3.93 277**	*e*Pn		**Pn**	**18 05 07.7**	**+0.5**
MOOW	**Moose Ponds**	**3.96 272**	*e*Pn		**Pn**	**18 05 08.1**	**+0.6**
ISCO	**Idaho Springs**	**3.97 184**	*e*Pn		**Pn**	**18 05 08.5**	**+0.8**
SNOW	**Snow King Moun**	**3.99 268**	*e*Pn		**Pn**	**18 05 11.3**	**+3.3**
REDW	**Red Top Meadow**	**4.07 266**	*e*Pn		**Pn**	**18 05 09.0**	**-0.1**
IMW	**Indian Meadow**	**4.10 274**	*e*Pn		**Pn**	**18 05 10.8**	**+1.4**
TPAW	**Teton Pass**	**4.13 268**	*e*Pn		**Pn**	**18 05 09.6**	**-0.3**
RRI2	**Red Ridge**	**4.41 267**	*e*Pn		**Pn**	**18 05 14.2**	**+0.4**
SMCO	**Snowmass**	**4.75 196**	*e*Pn		**Pn**	**18 05 20.0**	**+1.5**
DGMT	**Dagmar**	**4.77 9**	*e*Pn		**Pn**	**18 05 19.3**	**+0.6**
BOZ	**Bozeman (W)**	**4.90 295**	*e*Pn		**Pn**	**18 05 19.7**	**-0.8**
HWUT	**Hardware Ranch**	**5.11 247**	*e*Pn		**Pn**	**18 05 23.6**	**+0.2**
	5.2nm,0.4s						
EGMT	**Eagleton**	**5.28 325**	*e*Pn		**Pn**	**18 05 25.3**	**-0.4**
	11nm,0.4s						
HRY	**Holter Researc**	**5.49 305**	*e*Pn		**Pn**	**18 05 29.0**	**+0.4**
	9.7nm,0.3s						
LRM	**Limekiln Ridge**	**5.50 294**	*e*Pn		**Pn**	**18 05 29.2**	**+0.4**
	12nm,0.3s						
MCMT	**McKenzie Canyo**	**5.54 284**	*e*Pn		**Pn**	**18 05 34.2**	**+4.9**
	1.3nm,0.4s						
DAU	**Daniels Canyon**	**5.56 235**	*e*Pn		**Pn**	**18 05 31.1**	**+1.5**
	7.2nm,0.4s						
PV04	**Paradox Valley**	**6.02 208**	*e*Pn		**Pn**	**18 05 36.6**	**+0.7**
SRU	**San Rafael**	**6.09 222**	*e*Pn		**Pn**	**18 05 36.5**	**-0.3**
	8.7nm,0.4s						
PV01	**Paradox Valley**	**6.15 205**	*e*Pn		**Pn**	**18 05 38.5**	**+0.9**
	219nm,0.4s						
ECSD	**EROS Data Cent**	**6.28 87**	*e*Pn		**Pn**	**18 05 39.0**	**-0.4**
	7.1nm,0.3s						
TMUT	**Trail Mountain**	**6.30 227**	*e*Pn		**Pn**	**18 05 40.5**	**+0.8**
	6.3nm,0.4s						
BGU	**Big Grassy Mou**	**6.40 246**	*e*Pn		**Pn**	**18 05 41.4**	**+0.2**
	2.0nm,0.3s						
CHMT	**Chamberlain Mo**	**6.44 302**	*e*Pn		**Pn**	**18 05 41.6**	**0.0**
	1.4nm,0.3s						
DUG	**Dugway**	**6.65 240**	*e*Pn		**Pn**	**18 05 44.9**	**+0.4**
	3.3nm,0.3s						
SWMT	**Swartz Lake**	**7.17 305**	*e*Pn		**Pn**	**18 05 51.7**	**+0.1**
	2.0nm,0.3s						
MSU	**Marysvale**	**7.39 227**	*e*Pn		**Pn**	**18 05 55.8**	**+1.1**
	1.8nm,0.4s						
AGMN	**Agassiz Nation**	**7.97 52**	*e*Pn		**Pn**	**18 05 59.6**	**-3.0**
	8.4nm,0.3s						
CCUT	**Cedar City**	**8.73 227**	*e*Pn		**Pn**	**18 06 14.0**	**+1.0**
	1.1nm,0.4s						
ULM	**Lac du Bonnet**	**9.13 41**	Pn		**Pn**	**18 06 17.9**	**-0.6**
	1.7nm,0.3s,baz=237,slow=13,SNR=8.6						
ULM			Lg			18 08 49.1	
	0.7nm,0.3s,baz=129,slow=16,SNR=2.2						
NVAR	**Mina Array Bea**	**11.17 246**	Pn		**Pn**	**18 06 47.2**	**+0.7**
	0.1nm,0.3s,baz=45,slow=18,SNR=2.9						
ARCES	**ARCESS Array B**	**61.40 18**	P		**P**	**18 14 21.9**	**-1.0**
	0.8nm,1.0s,baz=339,slow=7.2,SNR=4.8						
ARCES	**ARCESS Array B**	**61.40 18**	P		**P**	**18 14 21.9**	**-1.0**

*ISCJB **13** 18:18:41.8±0.6, 42°.52N±0°.04×74°.58E±0°.03, h11km±4km, Error ellipse: s-maj=6.0km s-min=4.3km az=173.8*
*KNET **13** 18:18:41.0±0.3, 42°.53N×74°.57E, h18km±2km, ml2.8, Error ellipse: s-maj=2.7km s-min=2.2km az=160.0*
*NNC **13** 18:18:43.4±1.9, 42°.88N×74°.53E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=29.1km s-min=8.9km az=5.0*

ISC 13 18:18:41.9±0.5, 42°.53N±0°.03×74°.55E±0°.03, h17km±4km, n15, σ0°81/27, 18C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**0.11 340**		⇑P	**Pg**	**18 18 45.0**	**-0.4**
	786nm,0.1s,SNR=2367						
AAK				⇑S	**Sg**	**18 18 47.4**	**-0.5**
	6μm,0.3s						
KBK	**Karagaybulak**	**0.32 66**		P	**Pg**	**18 18 48.7**	**0.0**
	917nm,0.1s,SNR=1281						
KBK				⇓S	**Sg**	**18 18 53.4**	**+0.1**
	2μm,0.2s						
CHMS	**Chumysh**	**0.49 18**		P	**Pg**	**18 18 51.9**	**+0.1**
	124nm,0.2s,SNR=127						
CHMS				⇑S	**Sg**	**18 18 58.8**	**+0.3**
	624nm,0.2s						
EKS2	**Erkin-Say**	**0.58 284**		⇑P	**Pg**	**18 18 53.7**	**+0.3**
	69nm,0.2s,SNR=455						
EKS2				⇑S	**Sg**	**18 19 02.8**	**+1.5**
	131nm,0.2s						
KZA	**Kyzart**	**0.69 130**		⇑P	**Pg**	**18 18 55.2**	**-0.2**
	92nm,0.3s,SNR=233						
KZA				⇓S	**Sg**	**18 19 04.5**	**0.0**
	234nm,0.1s						
USP	**Ospenovka**	**0.74 357**		P	**Pg**	**18 18 56.3**	**0.0**
	147nm,0.3s,SNR=342						
USP				⇑S	**Sg**	**18 19 06.5**	**+0.3**
	282nm,0.3s						
AML	**Almayashu**	**0.74 238**		P	**Pg**	**18 18 56.5**	**0.0**
	135nm,0.1s,SNR=92						
AML				⇑S	**Sg**	**18 19 06.6**	**+0.3**
	468nm,0.3s						
TKM2	**Tokmak 2**	**0.87 63**		⇑P	**Pb**	**18 18 58.1**	**-0.4**
	21nm,0.3s						
TKM2				⇑S	**Sb**	**18 19 09.4**	**-0.4**
	197nm,0.5s						
TKM2	**Tokmak 2**	**0.87 63**		P	**Pb**	**18 18 58.2**	**-0.3**
	63nm,0.1s,SNR=301						
TKM2				⇓S	**Sb**	**18 19 09.6**	**-0.2**
	268nm,0.1s						
ULHL	**Ulahol**	**1.29 102**		P	**Pn**	**18 19 05.3**	**+0.2**
	58nm,0.2s,SNR=335						
KNDC	**Almaty**	**1.91 68**		⇑Pn	**Pg**	**18 19 17.5**	**-1.0**
	35nm,0.5s						
KNDC				⇑Sn	**Sg**	**18 19 43.4**	**+0.2**
	92nm,0.3s						
KK31	**Karatay Array**	**3.02 282**		⇑Pg	**Pg**	**18 19 36.8**	**-3.0**
	2.1nm,0.2s,baz=101,slow=14,SNR=80						
KK31				⇑Lg		18 20 15.3	
	9.9nm,0.4s,baz=100,slow=32,SNR=24						
MK31	**Makanchi Array**	**6.98 50**		Pn	**Pn**	**18 20 26.7**	**+3.4**
	1.1nm,0.5s,baz=223,slow=12,SNR=29						
MK31				⇑Sn	**Sn**	**18 21 46.1**	**+4.0**
	0.2nm,0.2s,baz=236,slow=22,SNR=6.8						
MK31				⇑Lg		18 22 16.5	
	2.4nm,0.6s						
KURK	**Kurchatov**	**8.66 17**		⇓Pn	**Pn**	**18 20 46.7**	**+0.5**
	1.0nm,0.8s						
KURK				⇑Lg		18 23 11.8	
	8.6nm,1.3s						
AB31	**Akbulak array**	**12.19 309**		⇑Pn	**Pn**	**18 21 34.6**	**0.0**
	1.1nm,0.8s,baz=100,slow=18,SNR=9.0						
AB31				⇓Sn	**Sn**	**18 23 48.0**	**-2.0**
	0.4nm,0.5s,baz=100,slow=34,SNR=3.6						

*ISCJB **13** 18:22:16.0±1.4, 22°.62S±0°.07×172°.83E±0°.06, h39km±13km, mb4.5/26, MS3.7/8, Error ellipse: s-maj=12.9km s-min=7.4km az=154.5*
*NEIC **13** 18:22:18.9±1.5, 22°.53S×172°.85E, h53km±15km, mb4.8/11, Error ellipse: s-maj=10.8km s-min=9.6km az=144.0*
*IDC **13** 18:22:25.4±6.0, 22°.65S×172°.70E, h105km±54km, mb4.0/15, mb1 4.1/17, mb1mx4.0/22, mbtmp4.0/17, MS3.7/11, Ms1 3.7/11, ms1mx3.6/20, Error ellipse: s-maj=21.8km s-min=18.2km az=69.0*

ISC 13 18:22:19.3±1.1, 22°.61S±0°.07×172°.82E±0°.06, h51km±11km, n48, σ1°.05/42, mb4.5/26, MS3.7/8, 1C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.92 274**		*e*Pn	**Pn**	**18 23 44.0**	**-0.5**
	17nm,0.2s						
DZM				*e*Sn	**Sn**	**18 24 51.4**	**+0.4**
	93nm,0.3s						
DZM				*e*LR	LR	18 25 10.6	
	950nm,24.1s						
MSVF	**Nonsavu**	**6.90 46**		*e*Pn	**Pn**	**18 23 56.0**	**-1.9**
	37nm,1.0s						
MSVF				*e*Sn	**Sn**	**18 25 15.9**	**+0.8**
URZ	**Urewera**	**16.03 168**		P	**Pn**	**18 26 05.5**	**+4.2**
	0.3nm,0.3s,baz=34,slow=3.3,SNR=3.8						
URZ				LR	LR	18 30 51.7	
	comp=Z,381nm,18.4s,baz=317,slow=32						
AFI	**Afiamalu**	**16.98 62**		LR	LR	18 31 38.2	
	comp=Z,113nm,19.7s,baz=148,slow=32						
HNR	**Honiara**	**18.00 315**		P	**Pn**	**18 26 27.4**	**+1.5**
	1.9nm,0.3s,baz=106,slow=7.3,SNR=4.9						
HNR				LR	LR	18 32 19.9	
	comp=Z,162nm,19.2s,baz=206,slow=33						
HNR	**Honiara**	**18.00 315**		*e*P	**Pn**	**18 26 25.0**	**-0.9**
	92nm,1.0s						
HNR				LR	LR	18 32 19.9	
EIDS	**Eidsvold**	**20.05 258**		*e*P	**P**	**18 26 48.4**	**+0.2**
EIDS	**Eidsvold**	**20.05 258**		*e*P	**P**	**18 26 49.4**	**+1.1**
	12nm,0.7s						
RPZ	**Rata Peaks**	**21.11 184**		P	**P**	**18 27 00.4**	**+0.9**
	12nm,1.0s,mb4.2,baz=355,slow=15,SNR=5.5						
RPZ				LR	LR	18 34 26.6	
	comp=Z,394nm,19.1s,MS3.8,baz=154,slow=34						
RMQ	**Roma**	**22.21 255**		*e*P	**P**	**18 27 13.7**	**+2.2**
	20nm,0.8s,mb4.6						
CTA	**Charters Tower**	**24.86 271**		P	**P**	**18 27 38.1**	**+1.0**
	2.1nm,0.3s,mb4.1,baz=92,slow=8.9,SNR=4.8						
CTA				LR	LR	18 36 48.4	
	comp=Z,206nm,18.2s,MS3.7,baz=50,slow=35						
CTAO	**Charters Tower**	**24.86 271**		P	**P**	**18 27 37.6**	**+0.5**
	4.7nm,0.7s,mb4.1						
RAR	**Rarotonga**	**25.46 92**		LR	LR	18 36 41.3	
	comp=Z,83nm,18.2s,MS3.3,baz=309,slow=34						
CMSA	**Cobar Meteorol**	**25.69 244**		*e*P	**P**	**18 27 45.1**	**+0.5**
PMG	**Port Moresby**	**27.88 294**		*e*P	**P**	**18 28 02.9**	**-1.6**
	23nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**29.17 245**		P	**P**	**18 28 16.3**	**+0.5**
	3.7nm,0.8s,mb4.2,baz=55,slow=11,SNR=6.7						
STKA				LR	LR	18 37 54.9	
	comp=Z,249nm,19.9s,MS3.8,baz=30,slow=32						
TBI	**Tubai**	**34.67 99**		*e*LR	LR	18 38 11.3	
	118nm,24.2s						
PPT	**Papeete**	**35.61 89**		*e*LR	LR	18 38 30.2	
	116nm,26.0s						
PPT	**Papeete**	**35.61 89**		LR	LR	18 40 26.4	
	comp=Z,106nm,21.8s,MS3.6,baz=266,slow=30						
ASAR	**Alice Springs**	**35.73 261**		P	**P**	**18 29 12.7**	**-0.5**
	3.0nm,0.7s,mb4.3,baz=78,slow=8.8,SNR=34						
WRA	**Warramunga Arr**	**35.89 267**		P	**P**	**18 29 12.9**	**-1.8**
	1.2nm,0.6s,mb4.0,baz=96,slow=8.4,SNR=36						
WRA				LR	LR	18 43 32.5	
	comp=Z,177nm,19.6s,MS3.8,baz=140,slow=35						
KAKA	**Kakadu**	**39.60 277**		*e*P	**P**	**18 29 45.2**	**-0.9**
	4.4nm,0.6s,mb4.4						
FORT	**Forrest**	**40.59 249**		*e*P	**P**	**18 29 53.9**	**-0.2**
	27nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**44.32 267**		P	**P**	**18 30 24.3**	**-0.3**
	6.0nm,0.7s,mb4.4,baz=125,slow=6.0,SNR=16						
FITZ	**Fitzroy Crossi**	**44.32 267**		*e*P	**P**	**18 30 24.3**	**-0.3**
	10nm,0.7s,mb4.7						
MBWA	**Marble Bar**	**49.06 261**		*e*P	**P**	**18 31 00.7**	**-0.9**
	16nm,1.3s,mb4.9						
NWAO	**Narrogin (SRO)**	**49.76 245**		P	**P**	**18 31 07.0**	**+0.3**
	9.8nm,0.7s,mb4.9,baz=91,slow=6.5,SNR=4.6						
SBA	**Scott Base**	**55.38 182**		*e*P	**P**	**18 31 48.5**	**+0.8**
	20nm,1.0s,mb5.1						
CASY	**Casey**	**58.44 205**		*e*P	**P**	**18 32 08.3**	**-1.2**
CASY	**Casey**	**58.44 205**		*e*P	**P**	**18 32 08.6**	**-0.8**
	13nm,1.5s,mb4.7						
KSM	**Kuching**	**65.38 283**		*e*P	**P**	**18 32 56.8**	**-0.2**
	5.8nm,0.6s,mb4.8						
MJAR	**Matsushiro Arr**	**67.30 330**		P	**P**	**18 33 08.2**	**-0.5**
	2.1nm,1.0s,mb4.1,baz=170,slow=8.6,SNR=9.5						
MJAR				LR	LR	18 57 20.1	
	comp=Z,68nm,21.9s,MS3.8,baz=70,slow=31						
MAJO	**Matsushiro**	**67.30 330**		*e*P	**P**	**18 33 08.5**	**-0.2**
	4.5nm,1.0s,mb4.5						
QSPA	**South Pole Qui**	**67.47 180**		*e*P	**P**	**18 33 08.7**	**-0.5**
	16nm,0.8s,mb5.1						
ASAJ	**Asahikawa**	**71.94 338**		P	**P**	**18 33 38.5**	**+1.4**
	5.6nm,0.6s,mb4.7,baz=232,slow=13,SNR=7.7						
KSRS	**Korea Array**	**73.17 324**		P	**P**	**18 33 45.9**	**+1.3**
	0.4nm,0.8s,mb3.4,baz=138,slow=7.5,SNR=3.1						
KSRS				LR	LR	19 05 50.4	
	comp=Z,25nm,18.5s,MS3.5,baz=132,slow=36						
YSS	**Yuzh-Sakhalins**	**74.37 339**		*e*P	**P**	**18 33 53.1**	**+1.8**
	16nm,0.8s,mb5.0						
PETK	**Petropavlovsk-**	**76.53 351**		P	**P**	**18 34 03.4**	**-0.2**
	3.5nm,0.7s,mb4.4,baz=132,slow=9.9,SNR=6.8						
MAW	**Mawson**	**76.57 202**		P	**P**	**18 34 03.7**	**-0.2**
	3.3nm,0.9s,mb4.3,baz=116,slow=6.2,SNR=7.6						
MAW	**Mawson**	**76.57 202**		*e*P	**P**	**18 34 04.1**	**+0.2**
	4.2nm,0.8s,mb4.4						
SYO	**Syowa Base**	**82.62 195**		⇑*e*P	**P**	**18 34 34.0**	**-2.7**
NVAR	**Mina Array Bea**	**88.57 47**		P	**P**	**18 35 08.1**	**+1.5**
	0.7nm,0.7s,mb4.1,baz=225,slow=7.5,SNR=5.7						
ILAR	**Eielson Array**	**92.48 16**		P	**P**	**18 35 22.9**	**-1.3**
	0.5nm,0.8s,mb3.9,baz=231,slow=4.8,SNR=6.4						
ILAR	**Eielson Array**	**92.48 16**		P	**P**	**18 35 22.9**	**-1.3**
PLCA	**Paso Flores**	**93.81 137**		P	**P**	**18 35 30.9**	**-0.2**
	1.2nm,0.8s,mb4.4,baz=212,slow=5.0,SNR=3.6						
ARCES	**ARCESS Array B**	**129.15 346**		PKP	PKPdf	18 41 18.2	-2.7
	0.6nm,0.7s,baz=94,slow=1.6,SNR=6.1						
BRG	**Berggiesshubel**	**147.33 335**		*e*(P)	PKPbc	18 41 57.3	+0.3
	4.0nm,0.9s						
CLL	**Collm**	**147.34 336**		*e*PKPbc	PKPbc	18 41 56.0	-1.0
CLL				*i* PKiKP	PKiKP	18 41 57.8	-1.4
	comp=Z,4.0nm,0.7s						

IDC 13 18:43:43.9±3.2, 0°.67S×96°.21E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/19, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=124.3km s-min=22.6km az=59.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.20**	**8**	P	Pn	18 48 09.6	-0.7
	0.1nm,0.3s,baz=300,slow=46,SNR=3.1						
WRA	**Warramunga Arr**	**41.94**	**120**	P	P	18 51 36.5	-0.2
	0.6nm,1.0s,baz=293,slow=9.3,SNR=3.1						
ASAR	**Alice Springs**	**43.11**	**125**	P	P	18 51 46.4	+0.2
	0.5nm,0.9s,baz=301,slow=7.3,SNR=5.6						
MKAR	**Makanchi Array**	**48.82**	**347**	P	P	18 52 30.9	0.0
	0.6nm,0.7s,baz=158,slow=8.6,SNR=7.9						
ZALV	**Zalesovo Beam**	**55.24**	**352**	P	P	18 53 18.6	-0.1
	0.7nm,0.4s,baz=174,slow=5.5,SNR=4.3						

DJA 13 18:46:33, 8°.16S×110°.33E, h10km, MLv3.6/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**0.31**	**38**	P	Pg	18 46 38.5	-0.7
YOGI	**Yogyakarta**	**0.34**	**354**	P	Pg	18 46 39.5	-0.3
PCJI	**Pacitan**	**0.84**	**92**	P	Pg	18 46 48.9	-0.3
PCJI				S	Sg	18 47 00.2	0.0
BJII	**Banjamegara**	**1.03**	**323**	P	Pg	18 46 52.1	-0.7
BJII				S	Sg	18 47 04.1	-2.0
SMRI	**Semarang**	**1.11**	**6**	P	Pb	18 46 53.9	-0.4
SMRI				S	Sg	18 47 11.4	+2.6
NGJI	**Ngawi**	**1.37**	**55**	P	Pn	18 46 59.4	+1.2
PWJI	**Pagerwojo**	**1.47**	**85**	P	Pn	18 46 58.5	-1.0
PWJI				S	Sn	18 47 15.8	-3.0
SJI	**Sawahan**	**1.48**	**74**	P	Pn	18 46 58.9	-0.9
KRKI	**Karangkates**	**2.10**	**90**	P	Pn	18 47 11.4	+3.1
KRKI				S	Sn	18 47 36.3	+1.8
CISI	**Cisompet, Garu**	**2.56**	**283**	P	Pn	18 47 15.7	+1.1
CISI				S	Sn	18 47 24.4	-21

*SZGRF **13** 19:18:29.8, 21°.08S×177°.07W, h33km, Fiji Islands region*
*MOS **13** 19:19:10.6±2.4, 19°.66S×177°.98W, h332km, mb4.8/22, Error ellipse: s-maj=9.7km s-min=7.7km az=131.7*
*NEIC **13** 19:19:13.2±0.1, 20°.24S×177°.78W, mb4.7/64, Error ellipse: s-maj=7.2km s-min=4.0km az=138.0*
*ISCJB **13** 19:19:13.4±0.9, 20°.30S±0°.04×177°.86W±0°.04, h391km±9km, mb4.6/96, Error ellipse: s-maj=7.8km s-min=4.7km az=144.0*
*IDC **13** 19:19:14.3±0.8, 20°.29S×177°.83W, h391km±8km, mb4.2/15, mb1 4.4/16, mb1mx4.4/19, mbtmp4.2/16, Error ellipse: s-maj=13.3km s-min=8.5km az=126.0*
*DJA **13** 19:19:25, 20°.52S×178°.28W, h493km, mb5.1/16*

ISC 13 19:19:14.4±0.8, 20°.32S±0°.04×177°.80W±0°.04, h389km±8km, h384km±2.0km: pP-P, n470, σ0°.80/328, mb4.6/96, 82C-72D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.69**	**303**	*e*Pn	**Pn**	**19 20 32.6**	**-0.1**
AFI	**Afiamalu**	**8.59**	**43**	P	**Pn**	**19 21 08.1**	**-8.0**
	18nm,0.3s,baz=82,slow=5.0,SNR=22						
AFI				S	**S**	**19 22 40.1**	**-16**
	52nm,0.3s,baz=202,slow=21

STKA Stephens Creek 38.03 244 *e*P **P 19 25 57.5 +0.3**
comp=Z,28nm,1.3s,mb4.4
STKA Stephens Creek 38.03 244 *e*P **P 19 25 57.5 +0.3**
STKA pmax pmax
comp=Z,28nm,1.3s
BBOO Buckleboo 42.79 243 *e*P **P 19 26 35.5 -0.1**
comp=Z,214nm,0.9s,mb5.5
ASAR Alice Springs 44.74 257 P **P 19 26 50.9 -0.3**
comp=Z,61nm,0.5s,mb5.2,baz=98,slow=8.5,SNR=949
ASAR pP pP 19 28 07.0 -0.9
comp=Z,3.4nm,0.7s,baz=88,slow=8.3,SNR=1.3
ASAR PcP PcP 19 28 24.6 -1.1
comp=Z,4.1nm,0.8s,baz=88,slow=5.7,SNR=4.1
ASAR ScP ScP 19 31 43.0 +2.8
comp=Z,1.5nm,0.8s,baz=91,slow=5.4,SNR=4.0
ASAR S **S 19 32 57.8 -0.5**
comp=Z,3.0nm,0.8s,baz=90,slow=16,SNR=16
ASAR Alice Springs 44.74 257 P **P 19 26 50.9 -0.2**
ASAR 19 28 24.6
ASAR S **S 19 32 57.8 -0.5**
WB2 Warramunga Arr 44.80 262 *e*P **P 19 26 50.5 -1.1**
WRA Warramunga Arr 44.81 262 P **P 19 26 50.8 -0.9**
comp=Z,28nm,0.5s,mb4.8,baz=97,slow=8.7,SNR=435
WRA ScP ScP 19 31 43.2 +2.6
comp=Z,2.0nm,0.9s,baz=92,slow=4.0,SNR=4.8
WRA S **S 19 32 57.6 -1.8**
comp=Z,1.5nm,0.7s,baz=96,slow=13,SNR=5.0
WRA Warramunga Arr 44.81 262 P **P 19 26 50.8 -0.9**
WRA ScP ScP 19 31 43.2 +2.6
WRA S **S 19 32 57.6 -1.8**
WRA Warramunga Arr 44.81 262 P **P 19 26 50.8 -0.9**
WRA S **S 19 32 57.6 -1.8**
KAKA Kakadu 48.16 271 *e*P **P 19 27 16.6 -0.8**
comp=Z,24nm,0.6s,mb4.7
KAKA Kakadu 48.16 271 *e*P **P 19 27 16.6 -0.9**
comp=Z,69nm,0.6s,mb5.2
KAKA Kakadu 48.16 271 P **P 19 27 17.3 -0.1**
comp=Z,592nmcomp=Z,65nm,0.7s,mb5.1
FORT Forrest 49.53 246 *e*P **P 19 27 26.9 -0.7**
comp=Z,94nm,0.6s,mb5.3
FORT Forrest 49.53 246 *e*P **P 19 27 27.3 -0.3**
comp=Z,103nm,0.6s,mb5.3
KNA Kununurra 50.83 266 P **P 19 27 37.7 +0.3**
comp=Z,2µmcomp=Z,259nm,0.7s,mb5.6
FITZ Fitzroy Crossi 53.23 262 *e*P **P 19 27 54.6 -0.2**
comp=Z,30nm,0.6s,mb4.7
FITZ Fitzroy Crossi 53.23 262 *e*P **P 19 27 54.6 -0.2**
comp=Z,76nm,1.3s,mb4.8
FITZ Fitzroy Crossi 53.23 262 P **P 19 27 55.1 +0.3**
comp=Z,2µmcomp=Z,74nm,1.5s,mb4.7
TNTI Ternate 57.59 285 P **P 19 28 26.4 +0.8**
comp=Z,81nm,1.0s,mb5.0
SBA Scott Base 58.06 184 *e*P **P 19 28 29.6 +1.8**
SBA *e*pP pP 19 29 49.2 -0.2
SBA Scott Base 58.06 184 *e*P **P 19 28 29.6 +1.8**
SBA pmax pmax
comp=Z,23nm,0.9s,mb4.5
MBWA Marble Bar 58.07 257 *e*P **P 19 28 27.9 -0.9**
comp=Z,68nm,0.6s,mb5.2
MBWA Marble Bar 58.07 257 P **P 19 28 28.0 -0.8**
comp=Z,121nm,0.7s,mb5.3
KLBR Kellerberrin 58.30 245 *e*P **P 19 28 29.2 -1.0**
comp=Z,60nm,0.9s,mb4.9
NWAO Narrogin (SRO) 58.61 243 *e*P **P 19 28 32.5 +0.2**
comp=Z,28nm,0.9s,mb4.6
NWAO Narrogin (SRO) 58.61 243 *e*P **P 19 28 32.5 +0.2**
NWAO pmax pmax
comp=Z,28nm,0.9s
MMRI Maumere 58.93 272 P **P 19 28 34.7 -0.1**
comp=Z,69nm,0.9s,mb5.0
LUWI Luwuk 61.08 280 P **P 19 28 51.1 +1.9**
BKSI Bulukumba 62.00 275 P **P 19 28 55.4 +0.1**
comp=Z,18nm,0.9s,mb4.6
BMNI Bima 62.29 271 P **P 19 28 56.9 -0.3**
comp=Z,2µmcomp=Z,207nm,0.8s,mb5.7
SPSI Sidrap Palu 62.80 276 P **P 19 29 00.3 -0.2**
comp=Z,21nm,0.8s,mb4.7
CASY Casey 64.20 205 *e*P **P 19 29 08.6 -0.1**
CASY Casey 64.20 205 *e*P **P 19 29 08.4 -0.2**
comp=Z,38nm,0.9s,mb4.9
QSPA South Pole Qui 69.75 180 *e*P **P 19 29 43.8 +0.8**
comp=Z,35nm,1.0s,mb4.8
QSPA *e*pP pP 19 31 08.2 0.0
MJAR Matsushiro Arr 70.18 324 P **P 19 29 45.5 -0.7**
comp=Z,8.4nm,0.8s,mb4.3,baz=166,slow=6.4,SNR=53
MJAR Matsushiro Arr 70.18 324 P **P 19 29 45.5 -0.7**
MJAR Matsushiro Arr 70.18 324 P **P 19 29 45.5 -0.7**
MAJO Matsushiro 70.18 324 *e*P **P 19 29 45.0 -1.2**
comp=Z,7.9nm,0.8s,mb4.3
MAJO Matsushiro 70.18 324 *e*P **P 19 29 45.0 -1.2**
MAJO pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
MAT Matsushiro 70.18 324 P **P 19 29 45.3 -0.9**
MAT *e*S S 19 38 27.0 +1.6
MIR Mirnyy 71.23 205 *e*P **P 19 29 52.0 0.0**
MIR pmax pmax
comp=Z,62nm,1.0s,mb5.1
SBUM Sibu 72.16 280 P **P 19 30 00.3 +1.8**
LEM Lembang 73.23 269 P **P 19 30 04.1 -0.6**
comp=Z,56nm,1.1s,mb5.0
KSM Kuching 73.57 278 *e*P **P 19 30 06.9 +0.2**
comp=Z,33nm,0.8s,mb5.0
KSM Kuching 73.57 278 P **P 19 30 07.7 +1.0**
PETK Petropavlovsk- 76.15 345 P **P 19 30 19.8 -0.5**
comp=Z,40nm,0.9s,mb5.0,baz=123,slow=6.5,SNR=35
PETK Petropavlovsk- 76.15 345 P **P 19 30 19.8 -0.5**
PPBI Pangkal Pinang 76.18 273 P **P 19 30 20.7 -0.8**
comp=Z,26nm,1.2s,mb4.7
KSRS Korea Array 76.88 318 P **P 19 30 24.1 -0.6**
comp=Z,1.5nm,0.9s,mb3.6,baz=139,slow=6.1,SNR=7.6
MDSI Maura Dua 77.23 270 P **P 19 30 26.8 -0.5**
PKM Peak Mountain 77.74 46 ⇑P **P 19 30 30.3 +0.8**
baz=78,SNR=8.0
SAO San Andreas Ge 77.77 43 *e*P **P 19 30 29.5 -0.2**
comp=Z,20nm,1.2s,mb4.6
SAO San Andreas Ge 77.77 43 *e*P **P 19 30 29.5 -0.2**
SAO pmax pmax
comp=Z,20nm,1.2s,mb4.6
SMMC Simmler 77.86 45 ⇓P **P 19 30 30.4 +0.2**
baz=78,SNR=5.9
HOPS Hopland 78.11 41 *e*P **P 19 30 31.1 -0.4**
comp=Z,15nm,1.1s,mb4.5
ARVC Arvin 78.54 46 ⇑P **P 19 30 33.8 -0.1**
baz=79
MURC Murrieta 78.80 48 ⇓P **P 19 30 34.9 -0.4**
baz=79
BFSC Mount Baldy Ra 78.83 47 ⇑P **P 19 30 35.0 -0.5**
baz=79,SNR=5.6
MONP Monument Peak 78.95 49 ⇑P **P 19 30 36.6 +0.4**
baz=79
EDW2 Edwards Air Fo 78.96 46 ⇓P **P 19 30 36.2 0.0**
baz=79,SNR=22
DVTC Desert V Tower 79.06 49 ⇓P **P 19 30 36.3 -0.4**
baz=79
ISA Isabella 79.08 46 ⇓P **P 19 30 36.9 +0.1**
baz=79,SNR=15
ISA Isabella 79.08 46 *e*P **P 19 30 36.1 -0.7**
comp=Z,15nm,1.0s,mb4.6
ISA *e*PcP PcP 19 30 47.3 +3.6
ISA Isabella 79.08 46 *e*P **P 19 30 36.1 -0.7**
ISA *e* 19 30 47.3
ISA pmax pmax
comp=Z,15nm,1.0s,mb4.6
CMB Columbia Colle 79.21 43 *e*P **P 19 30 37.0 -0.4**
comp=Z,12nm,1.0s,mb4.5
CMB Columbia Colle 79.21 43 *e*P **P 19 30 37.0 -0.4**
CMB pmax pmax
comp=Z,12nm,1.0s,mb4.5
PFO Pinyon Flat Ob 79.32 48 ⇑P **P 19 30 38.1 0.0**
baz=79,SNR=5.9
LRMC Laurel Mountai 79.50 46 ⇓P **P 19 30 39.3 +0.2**
baz=80,SNR=5.3
BELC Belle Mtn. Jos 79.85 48 P **P 19 30 41.0 +0.1**
baz=80,SNR=12
MPMC Manual Prospec 79.96 46 P **P 19 30 41.5 +0.1**
baz=80,SNR=9.8
GSC Goldstone 80.00 47 ⇑P **P 19 30 41.7 0.0**
baz=80,SNR=6.8
GSC Goldstone 80.00 47 *e*P **P 19 30 41.8 0.0**
comp=Z,7.6nm,1.0s,mb4.3
GSC Goldstone 80.00 47 *e*P **P 19 30 41.8 +0.1**
GSC pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
YBH Yreka Blue Hor 80.04 39 *e*P **P 19 30 41.9 +0.1**
comp=Z,5.8nm,0.9s,mb4.2
YBH Yreka Blue Hor 80.04 39 *e*P **P 19 30 41.9 +0.2**
YBH pmax pmax
comp=Z,6.0nm,0.9s
BC3 Big Chuckawall 80.05 49 P **P 19 30 42.3 +0.3**
baz=80,SNR=7.1
HEC Hector,Ludlow 80.07 47 ⇑P **P 19 30 42.1 0.0**
baz=80
WAKR Walker 80.09 43 *e*P **P 19 30 41.4 -0.7**
comp=Z,15nm,1.1s,mb4.5
GLA Glamis 80.17 49 ⇓P **P 19 30 43.3 +0.6**
baz=80
GLA Glamis 80.17 49 *e*P **P 19 30 43.3 +0.7**
comp=Z,14nm,1.0s,mb4.5
GLA Glamis 80.17 49 *e*P **P 19 30 43.3 +0.6**
GLA pmax pmax
comp=Z,14nm,1.0s,mb4.5
HABR Khabarovsk 80.38 330 *e*P **P 19 30 42.6 -0.8**
HABR *e* 19 30 47.8
HABR 19 33 52.9
HABR PPP 19 35 44.1
HABR S S 19 40 17.6 +1.6
HABR *e* 19 40 33.0
HABR pmax pmax
comp=N,22nm,2.2s
HABR pmax pmax
comp=E,25nm,2.5s
HABR pmax pmax
comp=Z,30nm,2.2s,mb4.5
MDJ Mudanjiang 80.48 325 P **P 19 30 44.8 +0.8**
MDJ pP pP 19 32 09.3 -2.8
MDJ sP sP 19 32 51.6 -1.3
MDJ PP PP 19 33 53.6 -0.4
MDJ S S 19 40 20.5 +3.3
MDJ sS sS 19 42 53.9 +0.1
MDJ SS SS 19 45 40.4 +0.3
MDJ pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
MDJ pmax pmax
comp=Z,81nm,5.1s
GMRC Granite Mounta 80.51 48 ⇓P **P 19 30 44.5 +0.2**
baz=81,SNR=5.8
IRM Iron Mountain 80.53 48 ⇑P **P 19 30 44.9 +0.4**
baz=81,SNR=13
KDAK Kodiak Island 80.60 13 P **P 19 30 44.0 -0.3**
comp=Z,21nm,0.9s,mb4.9,baz=285,slow=5.4,SNR=5.3
KDAK Kodiak Island 80.60 13 *i* P **P 19 30 45.3 +1.0**
TUQ Turquoise Moun 80.68 47 ⇓P **P 19 30 45.4 +0.1**
baz=81,SNR=8.4
NVAR Mina Array Bea 80.77 43 P **P 19 30 45.4 -0.2**
comp=Z,3.9nm,0.6s,mb4.3,baz=221,slow=8.4,SNR=21
NVAR Mina Array Bea 80.77 43 P **P 19 30 45.4 -0.2**
LDFC Landfair 81.05 48 *e*P **P 19 30 47.8 +0.5**
comp=Z,31nm,0.9s,mb5.0
214A Organ Pipe Nat 81.06 51 ⇓P **P 19 30 47.9 +0.6**
baz=81
Z13A Yuma Proving G 81.08 50 P **P 19 30 47.6 +0.2**
baz=81,SNR=16
Y13A Salome 81.28 49 ⇑P **P 19 30 49.2 +0.7**
baz=81,SNR=9.2
PDMCI Parker Dam,Lak 81.31 49 ⇑P **P 19 30 48.8 +0.2**
baz=81
114A Black Gap (USA 81.41 51 ⇓P **P 19 30 49.6 +0.5**
baz=82,SNR=8.9
MOD Modoc 81.56 40 *e*P **P 19 30 49.0 -0.7**
comp=Z,7.2nm,1.1s,mb4.3
Z14A Wintersburg 81.68 50 ⇓P **P 19 30 51.2 +0.7**
baz=82,SNR=8.3
X13A Yucca 81.69 49 ⇓P **P 19 30 50.7 +0.2**
baz=82,SNR=6.5
MAW Mawson 81.79 200 P **P 19 30 51.0 +0.5**
comp=Z,14nm,0.9s,mb4.7,baz=109,slow=6.7,SNR=26
MAW pP pP 19 32 19.7 +0.8
comp=Z,3.6nm,0.8s,baz=115,slow=6.5,SNR=4.2
MAW Mawson 81.79 200 *e*P **P 19 30 50.6 +0.1**
comp=Z,8.5nm,0.8s,mb4.5
MAW Mawson 81.79 200 *e*P **P 19 30 50.6 +0.1**
comp=Z,2.3nm,0.8s,mb4.0
MAW *e*pP pP 19 32 18.6 -0.2
MAW Mawson 81.79 200 *e*P **P 19 30 50.6 +0.1**
MAW pmax pmax
comp=Z,2.0nm,0.8s
Y14A Wickenburg 81.93 49 ⇑P **P 19 30 51.8 0.0**
baz=82
216A Three Points, 82.08 52 ⇑P **P 19 30 53.6 +1.0**
baz=82
116A Eloy 82.17 51 ⇓P **P 19 30 53.9 +0.8**
baz=82,SNR=5.9
CN2 Changchun 82.27 322 *e*P **P 19 30 55.0 +1.7**
CN2 *e*S S 19 40 36.5 +1.0
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb4.9
CN2 pmax pmax
comp=Z,200nm,6.0s
X14A Yava 82.28 49 P **P 19 30 54.2 +0.6**
baz=82,SNR=9.3
Y15A Casa Rosa Ranc 82.42 50 P **P 19 30 54.8 +0.5**
baz=82,SNR=12
217A Green Valley 82.44 52 P **P 19 30 55.2 +0.7**
baz=82,SNR=21
W14A Seligman 82.53 48 ⇑P **P 19 30 55.6 +0.7**
baz=83,SNR=16
BMN Battle Mountai 82.60 42 *e*P **P 19 30 54.0 -1.1**
comp=Z,16nm,1.0s,mb4.7
BMN Battle Mountai 82.60 42 *e*P **P 19 30 54.0 -1.1**
BMN pmax pmax
comp=Z,16nm,1.0s,mb4.7
TUC Tucson 82.72 52 *e*P **P 19 30 56.0 0.0**
comp=Z,20nm,1.0s,mb4.8
TUC Tucson 82.72 52 *e*P **P 19 30 56.0 +0.1**
TUC pmax pmax
comp=Z,20nm,1.0s,mb4.8
V14A Boquillas Ranc 82.73 48 ⇓P **P 19 30 56.4 +0.6**
baz=83,SNR=14
X15A Humboldt 82.76 49 P **P 19 30 56.5 +0.4**
baz=83,SNR=22
Z16A Peralta Trail, 82.76 51 P **P 19 30 56.7 +0.6**
baz=83,SNR=5.9
WVOR Wild Horse Val 82.88 40 *e*P **P 19 30 55.3 -1.1**
comp=Z,11nm,1.0s,mb4.5
WVOR Wild Horse Val 82.88 40 *e*P **P 19 30 55.3 -1.1**
WVOR pmax pmax
comp=Z,11nm,1.0s,mb4.5
117A Oracle 82.89 52 ⇓P **P 19 30 57.5 +0.8**
baz=83,SNR=16
318A Bisbee 82.89 53 P **P 19 30 57.5 +0.7**
baz=83,SNR=24
Y16A Circle Bar Ran 83.00 50 ⇑P **P 19 30 57.7 +0.5**
baz=83,SNR=20
RSO Redoubt South 83.03 12 *e*P **P 19 30 55.8 -0.9**
218A Dragoon 83.11 52 ⇓P **P 19 30 59.0 +1.1**
baz=83
X16A Lo Mia Camp, P 83.29 50 ⇑P **P 19 30 59.6 +0.9**
baz=83,SNR=18
319A Douglas 83.39 53 ⇓P **P 19 31 00.0 +0.7**
baz=84,SNR=19
118A Homack Ranch, 83.49 52 ⇑P **P 19 31 00.6 +0.8**
baz=84
SLKM Skilak Lake 83.59 13 *e*P **P 19 30 57.8 -1.8**
SLKM Skilak Lake 83.59 13 *e*P **P 19 30 57.8 -1.8**
U15A North Rim 83.71 48 ⇓P **P 19 31 01.6 +0.9**
baz=84,SNR=9.3
X17A Forest Lakes 83.71 50 ⇑P **P 19 31 02.0 +1.2**
baz=84
219A White Tail Can 83.71 53 ⇑P **P 19 31 01.7 +0.9**
baz=84,SNR=16
320A Kipp Ranch, An 83.94 54 ⇓P **P 19 31 03.3 +1.3**
baz=84,SNR=20
Y18A Canyon Day Jun 83.99 51 P **P 19 31 03.1 +0.8**
baz=84,SNR=13
119A Ashpeak Ranch, 84.04 52 ⇓P **P 19 31 03.5 +1.0**
baz=84,SNR=5.6
220A Playas Peak, P 84.21 53 ⇓P **P 19 31 04.1 +0.7**
baz=84,SNR=13
V17A Tonalea, Kykot 84.35 49 ⇑P **P 19 31 04.4 +0.4**
baz=84
U16A Tuba City 84.37 48 P **P 19 31 04.9 +0.8**
baz=84,SNR=10
120A U Bar Ranch, L 84.43 52 ⇓P **P 19 31 05.0 +0.5**
baz=84,SNR=5.9
TTA Tatalina 84.74 10 *e*P **P 19 31 04.5 -0.7**
TTA Tatalina 84.74 10 *e*P **P 19 31 04.5 -0.7**
X19A St. Johns 84.84 51 ⇑P **P 19 31 07.7 +1.2**
baz=85,SNR=6.8
ETW Entiat 84.99 35 *e*P **P 19 31 05.8 -1.1**
comp=Z,7.4nm,0.9s,mb4.4
Y20A Horse Springs, 85.26 51 ⇓P **P 19 31 09.5 +0.9**
baz=85,SNR=10
X20A Quemado 85.47 51 ⇓P **P 19 31 10.3 +0.7**
baz=86,SNR=6.5
WRAK Wrangell Islan 85.48 23 *e*P **P 19 31 08.0 -1.0**
comp=Z,12nm,1.0s,mb4.6
Z21A St. Cloud Mine 85.50 52 ⇑P **P 19 31 10.8 +1.0**
baz=86,SNR=12
T18A Mexican Hat 85.74 48 ⇑P **P 19 31 11.1 +0.3**
baz=86,SNR=17
F10A Beach Ranch, E 85.75 38 ⇓P **P 19 31 09.9 -0.7**
baz=86,SNR=13
I12A Atlanta 85.76 40 ⇑P **P 19 31 10.5 -0.2**
baz=86,SNR=5.8
U19A Dine' College, 85.80 49 P **P 19 31 11.4 +0.3**
baz=86,SNR=7.6
Y21A Point of Rocks 85.83 52 ⇓P **P 19 31 12.2 +0.9**
baz=86,SNR=15
BJI Beijing 85.89 315 P **P 19 31 12.5 +1.0**
BJI pP pP 19 32 40.1 -0.8
BJI sP sP 19 33 19.6 -1.7
BJI S S 19 41 14.0 +2.7
BJI SS SS 19 47 04.4 +4.6
BJI pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
X21A Alamocita Cree 85.95 51 ⇓P **P 19 31 12.4 +0.5**
baz=86,SNR=6.2
HLID Hailey 86.07 41 *e*P **P 19 31 10.7 -1.5**
comp=Z,8.8nm,0.1s,mb5.4
J13A Cove Ranch, Pi 86.13 41 P **P 19 31 12.6 +0.1**
baz=86,SNR=6.4
SEY Seymchan 86.24 347 *de*P **P 19 31 11.5 -1.1**
SRU San Rafael 86.27 46 *e*P **P 19 31 12.3 -1.0**
comp=Z,12nm,1.1s,mb4.5
SRU San Rafael 86.27 46 *e*P **P 19 31 12.3 -1.0**
SRU pmax pmax
comp=Z,12nm,1.1s,mb4.5
324A Moseley Ranch, 86.31 55 ⇑P **P 19 31 14.0 +0.3**
baz=86,SNR=16
Y22A Socorro 86.32 52 ⇑P **P 19 31 13.8 +0.2**
baz=86
H12A Diamond D Ranc 86.34 40 P **P 19 31 13.1 -0.4**
baz=86,SNR=12
G12A Big Creek, Yel 86.38 39 ⇑P **P 19 31 13.3 -0.4**
baz=86,SNR=9.3
LAZ Ladron 86.40 51 *e*P **P 19 31 13.3 -0.8**
comp=Z,1.3nm,0.8s,mb3.7
425A Indio Mountain 86.40 55 ⇑P **P 19 31 14.7 +0.6**
baz=86,SNR=12
J14A Carey 86.50 41 P **P 19 31 14.6 +0.3**
baz=87,SNR=6.4
MNTX Cornudas Mount 86.50 54 P **P 19 31 14.7 +0.1**
baz=87,SNR=16
MNTX Cornudas Mount 86.50 54 *e*P **P 19 31 14.3 -0.3**
comp=Z,8.5nm,1.1s,mb4.4
626A Big Bend Ranch 86.53 57 ⇓P **P 19 31 15.0 +0.2**
baz=87,SNR=10
224A Cornudas Mount 86.56 54 ⇑P **P 19 31 15.6 +0.7**
baz=87,SNR=11
BNM Barren Site 86.66 52 *e*P **P 19 31 15.1 -0.2**
comp=Z,3.9nm,1.0s,mb4.1
O17A Robinson Place 86.66 45 ⇓P **P 19 31 15.5 +0.3**
baz=87,SNR=9.2
325A Bean Ranch, Si 86.67 55 ⇑P **P 19 31 15.6 +0.2**
baz=87,SNR=13
GYA Guiyang 86.72 300 P **P 19 31 16.0 +0.2**
GYA pP pP 19 32 45.8 +0.5
GYA sP sP 19 33 25.0 -0.8
GYA PP PP 19 34 48.3 +3.4
GYA SKS 19 41 03.0
GYA S S 19 41 20.3 +0.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
R19A Curley Farm, L 86.73 47 ⇑P **P 19 31 15.3 -0.2**
baz=87,SNR=7.3
LPM Los Pinos Moun 86.73 52 *e*P **P 19 31 14.7 -0.9**
comp=Z,11nm,1.2s,mb4.5
MCK McKinley 86.76 12 *e*P **P 19 31 12.7 -2.3**
comp=Z,20nm,0.9s,mb4.9
MCK McKinley 86.76 12 *e*P **P 19 31 12.7 -2.3**
MCK pmax pmax
comp=Z,21nm,0.9s,mb4.9
F12A Elk City 86.77 38 P **P 19 31 14.8 -0.6**
baz=87,SNR=27
526A Mary Lane Ranc 86.78 56 ⇑P **P 19 31 16.2 +0.2**
baz=87,SNR=9.4
TXAR Lajitas Array 86.81 57 P **P 19 31 16.4 +0.3**
comp=Z,6.3nm,0.9s,mb4.3,baz=218,slow=5.7,SNR=43
TXAR pP pP 19 32 44.5 -1.2
comp=Z,1.4nm,1.0s,baz=236,slow=8.1,SNR=2.9
TXAR Lajitas Array 86.81 57 P **P 19 31 16.4 +0.3**
I14A Mackay 86.86 41 P **P 19 31 16.9 +0.9**
baz=87,SNR=5.3
124A Stringfield Ra 86.89 54 ⇓P **P 19 31 16.8 +0.4**
baz=87,SNR=5.3
SYO Syowa Base 86.94 193 ⇑*e*P **P 19 31 14.0 -2.0**
U21A Nageezi 86.96 49 P **P 19 31 16.6 0.0**
baz=87,SNR=18
Y23A Lovelace Mesa, 86.99 52 ⇓P **P 19 31 17.0 +0.2**
baz=87
G13A Cobalt 87.01 39 P **P 19 31 16.3 -0.4**
baz=87,SNR=8.0
627A Terlingua Ranc 87.08 57 P **P 19 31 17.3 0.0**
baz=87,SNR=9.0
426A McDonald Obser 87.09 56 P **P 19 31 17.8 +0.3**
baz=87,SNR=16
225A Deer Hill, Car 87.11 54 P **P 19 31 17.7 +0.2**
baz=87,SNR=7.3
PV01 Paradox Valley 87.13 48 *e*P **P 19 31 16.8 -0.6**
comp=Z,656nm,1.1s
S20A Disappointment 87.13 48 ⇑P **P 19 31 17.1 -0.3**
baz=87,SNR=6.0
ANMO Albuquerque 87.15 51 *e*P **P 19 31 17.1 -0.4**
comp=Z,6.2nm,0.9s,mb4.3
ANMO Albuquerque 87.15 51 *e*P **P 19 31 17.1 -0.5**
ANMO pmax pmax
comp=Z,6.0nm,0.9s
527A Woodward Ranch 87.19 57 ⇓P **P 19 31 18.1 +0.2**
baz=87,SNR=5.6
J15A Blackfoot 87.21 42 P **P 19 31 18.0 +0.4**
baz=87,SNR=5.8
F13A Darby 87.33 39 P **P 19 31 17.4 -0.7**
baz=88,SNR=13
C11A Tepee Creek (N 87.36 36 ⇓P **P 19 31 18.2 -0.1**
baz=88
D12A Red Ives Fores 87.43 37 ⇑P **P 19 31 17.6 -1.0**
baz=88
Y24A Capitan 87.44 52 ⇓P **P 19 31 19.2 +0.2**
baz=88,SNR=9.9
S21A Coal Bank Pass 87.45 48 ⇓P **P 19 31 19.2 +0.2**
baz=88,SNR=9.0
125A Gardner Draw, 87.47 54 ⇑P **P 19 31 19.3 +0.1**
baz=88,SNR=5.8
628A Black Gap, Mar 87.48 57 ⇑P **P 19 31 19.1 -0.2**
baz=88
GDL2 Guadalupe Moun 87.50 54 *e*P **P 19 31 19.4 +0.1**
comp=Z,12nm,1.2s,mb4.5
226A Malaga, Loving 87.64 55 ⇓P **P 19 31 20.0 +0.1**
baz=88
J16A Bone 87.66 42 P **P 19 31 20.2 +0.5**
baz=88,SNR=5.7
427A Hayter Ranch, 87.66 56 ⇓P **P 19 31 20.3 +0.2**
baz=88,SNR=14
Q20A Ridgley Place, 87.71 47 ⇑P **P 19 31 19.9 -0.2**
baz=88
DLBC Dease Lake 87.82 23 P **P 19 31 19.2 -0.9**
comp=Z,1.6nm,0.7s,mb3.9,baz=151,slow=26,SNR=3.7
528A Cox Ranch, San 87.85 57 ⇓P **P 19 31 21.2 +0.2**
baz=88,SNR=5.0
RRI2 Red Ridge 87.88 42 *e*P **P 19 31 19.6 -1.2**
comp=Z,12nm,1.3s,mb4.5
RRI2 *e*pP pP 19 32 50.1 -0.5
P20A De Beque 87.90 46 ⇑P **P 19 31 20.3 -0.7**
baz=88
R21A Cimarron 87.95 48 ⇓P **P 19 31 21.2 -0.1**
baz=88,SNR=7.6
Y25A Mesa, Roswell 88.00 53 ⇓P **P 19 31 21.4 -0.2**
baz=88,SNR=6.7
W24A Lazy 6 Ranch, 88.04 51 ⇓P **P 19 31 21.5 -0.2**
baz=88
I16A Newdale 88.04 42 ⇑P **P 19 31 21.9 +0.4**
baz=88
G15A Dillon 88.09 40 P **P 19 31 21.8 0.0**
baz=88,SNR=13
ILAR Eielson Array 88.10 13 P **P 19 31 19.1 -2.2**
comp=Z,5.3nm,1.0s,mb4.2,baz=226,slow=5.4,SNR=34
ILAR PP PP 19 34 49.6 -5.4
comp=Z,0.6nm,0.7s,baz=225,slow=7.2,SNR=4.3
ILAR Eielson Array 88.10 13 P **P 19 31 19.1 -2.2**
ILAR PP PP 19 34 49.6 -5.4

ILAR Eielson Array 88.10 13 P P 19 31 19.2 -2.1
ILAR 19 34 49.6
DLMT Dillon 88.13 40 *eP* **P 19 31 21.7 -0.3**
comp=Z,10nm,1.1s,mb4.5
E14A Clinton 88.16 39 ⇑P **P 19 31 21.6 -0.4**
baz=88
S22A 4UR Ranch, Cre 88.16 49 ⇑P **P 19 31 22.6 +0.3**
baz=88,SNR=9.3
REDW Red Top Meadow 88.18 42 *eP* **P 19 31 20.9 -1.4**
comp=Z,8.2nm,1.1s,mb4.4
C13A Hot Springs 88.21 37 ⇑P **P 19 31 21.3 -1.0**
baz=88
CPRX Cap Rock 88.23 54 *eP* **P 19 31 22.5 -0.2**
comp=Z,9.6nm,0.9s,mb4.5
Z26A Caprock 88.25 54 ⇑P **P 19 31 22.5 -0.3**
baz=88,SNR=8.2
K18A Toltan Ranch, 88.33 43 ⇓P **P 19 31 23.3 +0.3**
baz=88
328A Wristen Ranch, 88.34 56 ⇑P **P 19 31 22.6 -0.7**
baz=88,SNR=6.2
IMW Indian Meadow 88.39 42 *eP* **P 19 31 23.3 +0.1**
comp=Z,8.2nm,1.1s,mb4.4
R22A Saguache, Gunn 88.44 48 ⇓P **P 19 31 23.9 +0.4**
baz=88,SNR=5.1
F15A Butte 88.44 39 ⇓P **P 19 31 23.2 -0.2**
baz=89,SNR=8.9
LRM Limekiln Ridge 88.46 39 *eP* **P 19 31 23.1 -0.4**
comp=Z,2.3nm,1.0s,mb4.8
LOHW Long Hollow 88.46 42 *eP* **P 19 31 22.9 -0.6**
comp=Z,3.6nm,1.0s,mb4.1
D14A Greenough 88.50 38 ⇓P **P 19 31 22.3 -1.4**
baz=89,SNR=6.1
L19A Farson 88.51 44 ⇑P **P 19 31 23.7 -0.1**
baz=89
G16A Moss Hill, Enn 88.54 40 ⇓P **P 19 31 23.9 0.0**
baz=89,SNR=6.0
CHMT Chamberlain Mo 88.56 38 *eP* **P 19 31 23.1 -0.9**
comp=Z,4.3nm,1.2s,mb4.0
CHMT *eP*P pP 19 32 54.8 +0.9
QLMT Earthquake Lak 88.56 41 *eP* **P 19 31 24.6 +0.6**
comp=Z,2.3nm,0.6s,mb4.1
H16A Russell Place, 88.61 41 ⇓P **P 19 31 24.9 +0.7**
baz=89,SNR=5.7
J18A Kendall Valley 88.63 43 ⇓P **P 19 31 24.3 -0.1**
baz=89,SNR=14
E15A Deer Lodge 88.66 39 ⇓P **P 19 31 23.9 -0.4**
baz=89
PDAR Pinedale Array 88.71 43 P **P 19 31 23.8 -0.9**
comp=Z,3.0nm,0.8s,mb4.1,baz=250,slow=3.0,SNR=18
PDAR PP PP 19 34 53.1 -7.2
comp=Z,0.4nm,0.9s,baz=272,slow=5.5,SNR=3.8
SMCO Snowmass 88.72 47 *eP* **P 19 31 24.6 -0.3**
comp=Z,3.4nm,1.0s,mb4.0
BOZ Bozeman (W) 88.86 40 P **P 19 31 25.4 +0.1**
baz=89,SNR=14
BOZ Bozeman (W) 88.86 40 *eP* **P 19 31 25.0 -0.3**
comp=Z,8.8nm,1.1s,mb4.4
BOZ Bozeman (W) 88.86 40 *eP* **P 19 31 25.0 -0.3**
BOZ pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
BILL Bilibino 88.88 354⇓*eP* **P 19 31 25.7 +0.8**
BILL *e* 19 34 57.8
BILL *e*S S 19 41 16.6 -22
BILL *e* 19 42 49.5
BILL pmax pmax
comp=Z,9.0nm,1.4s,mb4.3
F16A Kennard Place, 88.93 40 ⇓P **P 19 31 24.3 -1.3**
baz=89
D15A Lincoln 89.05 38 ⇑P **P 19 31 25.9 -0.3**
baz=89
N21A Black Mountain 89.08 46 ⇓P **P 19 31 26.8 +0.3**
baz=89
SDCO Great Sand Dun 89.10 49 ⇓P **P 19 31 26.5 -0.1**
baz=89
SDCO Great Sand Dun 89.10 49 *eP* **P 19 31 26.2 -0.5**
comp=Z,9.4nm,1.6s,mb4.3
DAWY Dawson 89.24 16 *eP* **P 19 31 25.1 -1.5**
HRY Holter Researc 89.29 39 *eP* **P 19 31 26.5 -0.8**
comp=Z,2.4nm,0.6s,mb4.1
HHC Hu-ho-hao-te 89.36 314 *eP* **P 19 31 29.5 +1.7**
HHC pP pP 19 32 58.5 +0.6
HHC sP sP 19 33 37.3 -0.9
HHC PP PP 19 35 09.3 +3.8
HHC SKS 19 41 20.8
HHC S S 19 41 44.5 +0.7
HHC sS sS 19 44 21.5 -2.6
HHC SS SS 19 47 54.4 +4.4
HHC pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
HHC pmax pmax
comp=Z,160nm,5.4s
HHC LR LR
comp=N,180nm,17.5s
HHC LR LR
comp=E,150nm,16.1s
HHC LR LR
comp=Z,120nm,16.1s
EGAK Eagle 89.39 15 *eP* **P 19 31 26.2 -1.1**
comp=Z,10nm,0.9s,mb4.5
KMI Kunming 89.43 297 P **P 19 31 31.1 +2.6**
KMI pP pP 19 33 00.0 +1.4
KMI sP sP 19 33 39.5 +0.6
KMI PP PP 19 35 09.1 +2.7
KMI S S 19 41 45.1 0.0
KMI SS SS 19 47 53.6 +2.0
KMI pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
KMI pmax pmax
comp=Z,170nm,4.9s
KMI LR LR
comp=Z,46nm,31.3s
MSTX Muleshoe 89.46 53 ⇓P **P 19 31 28.1 -0.4**
baz=90
O22A Kremmling 89.47 47 ⇑P **P 19 31 28.5 +0.2**
baz=90
F17A Fitzpatrick Pl 89.58 40 ⇑P **P 19 31 29.4 +0.8**
baz=90
COLD Coldfoot 89.67 10 *eP* **P 19 31 27.8 -0.8**
comp=Z,11nm,0.9s,mb4.7
I19A Meeteetse 89.68 42 ⇑P **P 19 31 28.9 -0.3**
baz=90
W27A Bowe Ranch, En 89.70 52 ⇓P **P 19 31 28.9 -0.6**
baz=90
G18A Lazy EL Ranch, 89.95 41 ⇓P **P 19 31 31.0 +0.6**
baz=90
RLMT Red Lodge 90.04 41 ⇑P **P 19 31 31.7 +0.8**
baz=90
RLMT Red Lodge 90.04 41 *eP* **P 19 31 30.4 -0.5**
comp=Z,7.8nm,1.2s,mb4.4
F18A Big Timber 90.15 40 ⇓P **P 19 31 31.5 +0.2**
baz=90
CMAR Chiang Mai Arr 90.23 290 P **P 19 31 33.4 +1.0**
comp=Z,1.5nm,0.7s,mb3.9,baz=117,slow=2.6,SNR=9.9
CMAR Chiang Mai Arr 90.23 290 P **P 19 31 33.4 +1.1**
CD2 Chengdu 90.85 303 *eP* **P 19 31 35.0 +0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CD2 pmax pmax
comp=Z,30nm,5.6s
L23A Garrett 90.92 45 ⇑P **P 19 31 35.1 +0.1**
baz=91
LZH Lanzhou 92.81 307 *eP* **P 19 31 45.0 +1.1**
LZH pP pP 19 33 14.1 -0.1
LZH sP sP 19 33 52.8 -1.6
LZH PP PP 19 35 36.3 +3.7
LZH pmax pmax
comp=Z,19nm,1.5s,mb4.8
LZH pmax pmax
comp=Z,54nm,8.4s
INK Inuvik 94.06 15 P **P 19 31 46.9 -1.9**
comp=Z,5.6nm,1.1s,mb4.5,baz=176,slow=6.3,SNR=4.0
INK Inuvik 94.06 15 P **P 19 31 46.9 -1.9**
INK Inuvik 94.06 15 P **P 19 31 46.9 -1.9**
SONM Songino Array 95.74 319 PP PP 19 35 51.2 -3.8
comp=Z,0.5nm,0.7s,baz=193,slow=6.1,SNR=3.6
ZALV Zalesovo Beam 110.47 321 PKiKP PKiKP 19 36 58.4 -2.4
comp=Z,0.7nm,0.6s,baz=90,slow=1.5,SNR=4.2
MKAR Makanchi Array 111.21 313 PKiKP PKiKP 19 37 00.9 -1.5
comp=Z,0.8nm,0.7s,baz=103,slow=0.2,SNR=9.9
MKAR Makanchi Array 111.21 313 PKiKP PKiKP 19 37 00.9 -1.5
KURK Kurchatov 113.99 317 *c i*PKiKP PKiKP 19 37 06.1 -1.5
KURK pmax pmax
comp=Z,5.0nm,2.5s
BVAR Borovoye Array 119.06 320 PKP PKPdf 19 37 16.1 -1.2
comp=Z,2.7nm,0.7s,baz=98,slow=3.0,SNR=15
BVAR Borovoye Array 119.06 320 PKIKP PKPdf 19 37 16.1 -1.1
BRVK Borovoye 119.12 320⇓*i*PKIKP PKPdf 19 37 15.4 -2.0
BRVK *i* 19 38 48.5
BRVK pmax pmax
comp=Z,3.0nm,1.0s
KBS Kingsbay 121.17 358⇓*i*PKIKP PKPdf 19 37 20.3 -0.4
ARU Arti 125.16 326 *e*PKPdf PKPdf 19 37 27.7 -1.1
ARU Arti 125.16 326 *i* PKIKP PKPdf 19 37 27.9 -0.9
ARU 19 39 22.6
ARU 19 43 54.1
ARU SS SS 19 55 48.6 -1.0
ABKAR Akbulak array 126.08 317 *e*PKPdf PKPdf 19 37 29.8 -1.1
AKTK Aktyubinsk 127.06 318 PKP PKPdf 19 37 32.2 -0.4
AKTO Aktyubinsk 127.06 318 PKP PKPdf 19 37 32.2 -0.4
comp=Z,1.6nm,0.7s,baz=67,slow=1.8,SNR=8.0
ARCES ARCESS Array B 128.78 350 PKP PKPdf 19 37 34.7 -0.7
comp=Z,3.3nm,0.9s,baz=10,slow=2.7,SNR=9.1
ARCES ARCESS Array B 128.78 350 PKP PKPdf 19 37 34.7 -0.7
ARCES ARCESS Array B 128.78 350 PKIKP PKPdf 19 37 34.7 -0.7
FINES FINESS Array B 135.66 344 PKP PKPdf 19 37 50.3 +1.8
comp=Z,0.8nm,0.7s,baz=349,slow=1.9,SNR=4.8
FINES FINESS Array B 135.66 344 PKIKP PKPdf 19 37 50.3 +1.7
MALT Malatya 143.97 308⇓PKIKP PKPdf 19 38 04.4 +0.1
MALT Malatya 143.97 308⇓*i*P PKPdf 19 38 04.3 0.0
MALT Malatya 143.97 308 P PKPdf 19 38 03.4 -0.9
GKP Gorka Klasztor 145.13 344 *e*PKP PKPdf 19 38 05.3 -0.5
GKP Gorka Klasztor 145.13 344 *e*PKIKP PKPdf 19 38 05.3 -0.5
LVV L'vov 145.83 335 *e*PKIKP PKPdf 19 38 07.6 +0.5
KWP Kalwaria Pacla 146.50 336 *e*PKPdf PKPdf 19 38 09.5 +1.2
KWP Kalwaria Pacla 146.50 336 *e*PKIKP PKPdf 19 38 09.5 +1.2
RUE Ruedersdorf 146.66 347 *e*PKPbc PKPbc 19 38 10.0 -0.8
ASF Jabal al Asfar 146.86 298 PKPbc PKPbc 19 38 12.5 +0.5
comp=Z,3.2nm,0.9s,baz=249,slow=2.2,SNR=5.8
ASF Jabal al Asfar 146.86 298 PKIKP PKPbc 19 38 12.5 +0.5
BR131 Keskin Array S 146.86 313 *e*PKPdf PKPdf 19 38 09.7 +0.5
BRTR Keskin Array B 146.86 313 PKPbc PKPbc 19 38 11.3 -0.4
comp=Z,3.5nm,0.8s,baz=130,slow=2.7,SNR=16
BRTR Keskin Array B 146.86 313 PKIKP PKPbc 19 38 11.4 -0.3
BURAR Bucovina Array 147.00 331 ⇑PKIKP PKPbc 19 38 11.9 0.0
BURAR Bucovina Array 147.00 331 ⇑*i*P PKPbc 19 38 11.9 0.0
OJC Ojcow 147.06 339 *e*PKP PKPbc 19 38 11.3 -0.6
OJC Ojcow 147.06 339 *e*PKIKP PKPbc 19 38 11.3 -0.6
KOLS Kolonicke sedl 147.23 335 *e*PKP PKPbc 19 38 12.5 +0.1
KOLS Kolonicke sedl 147.23 335 *e*PKIKP PKPbc 19 38 12.5 +0.1
KOLS Kolonicke sedl 147.23 335 *e*PKP PKPbc 19 38 12.5 +0.1
NRDL Niedersach Rie 147.31 351 *e*PKPbc PKPbc 19 38 11.8 -0.7
UZH Uzhgorod 147.46 335⇑*i*PKIKP PKPbc 19 38 12.8 -0.3
UZH *e* 19 38 20.0
VRI Vrincioaia 147.52 327 ⇑PKIKP PKPbc 19 38 13.1 -0.2
VRI Vrincioaia 147.52 327 ⇑*i*P PKPbc 19 38 13.1 -0.2
NIE Niedzica 147.56 338 *e*PKP PKPbc 19 38 13.3 0.0
NIE Niedzica 147.56 338 *e*PKIKP PKPbc 19 38 13.3 0.0
CRVS Cervenica-Dubn 147.57 336 *e*PKP PKPbc 19 38 13.4 +0.1
CRVS Cervenica-Dubn 147.57 336 *e*PKIKP PKPbc 19 38 13.4 +0.1
CRVS Cervenica-Dubn 147.57 336 *e*PKP PKPbc 19 38 13.4 +0.1
KSP Ksiaz 147.57 343 *e*PKP PKPbc 19 38 12.9 -0.4
TRPA Tarpa 147.76 334⇑*i*P PKPbc 19 38 13.7 -0.2
MMAI Mount Meron Ar 147.89 300 PKPbc PKPbc 19 38 15.3 +0.6
comp=Z,2.3nm,0.6s,baz=60,slow=5.0,SNR=6.2
CLZ Clausthal 147.90 350 *e*PKPbc PKPbc 19 38 13.5 -0.6
CLZ *e*PKPab PKPab 19 38 17.4 -0.5
CLZ Clausthal 147.90 350 *e*PKIKP PKPbc 19 38 13.5 -0.6
CLZ *e* 19 38 17.4
OKC Ostrava-Krasne 147.93 340 *e*PKIKP PKPbc 19 38 13.6 -0.6
OKC *e* 19 38 18.4
OKC Ostrava-Krasne 147.93 340⇑*e*PKP PKPbc 19 38 13.6 -0.6
OKC *e*PKPAB PKPab 19 38 18.4 +0.3
CLL Collm 147.93 347 *e*PKPbc PKPbc 19 38 13.6 -0.6
CLL Collm 147.93 347⇓*i*PKP PKPbc 19 38 13.4 -0.8
CLL *i* 19 38 17.4
CLL Collm 147.93 347⇓*i*PKIKP PKPbc 19 38 13.4 -0.8
CLL *i* 19 38 17.4
CLL Collm 147.93 347⇓*i*PKPbc PKPbc 19 38 13.4 -0.8
comp=Z,32nm,1.0s
CLL *i* PKPab PKPab 19 38 17.4 -0.6
comp=Z,18nm,1.0s
CLL *e*PP PP 19 41 44.0 -0.8
UPC Upice 147.96 343 *e*PKIKP PKPbc 19 38 14.0 -0.3
UPC Upice 147.96 343⇑*e*PKP PKPbc 19 38 14.0 -0.3
DPC Dobruska-Polom 148.01 343 *e*PKIKP PKPbc 19 38 14.3 -0.1
DPC *e* 19 38 18.6
DPC Dobruska-Polom 148.01 343⇑*e*PKP PKPbc 19 38 14.3 -0.1
DPC *e*PKPAB PKPab 19 38 18.6 +0.2
BRG Berggiesshubel 148.13 346 *e*PKPbc PKPbc 19 38 14.4 -0.3
BRG *e*PKPab PKPab 19 38 18.4 -0.5
BRG Berggiesshubel 148.13 346 *i* PKP PKPbc 19 38 14.4 -0.3
comp=Z,16nm,1.1s
BRG *e* 19 38 18.3
comp=Z,9.0nm,1.0s
BRG Berggiesshubel 148.13 346 *i* PKIKP PKPbc 19 38 14.4 -0.3
BRG *e* 19 38 18.3
BRG pmax pmax
comp=Z,10.0nm,1.1s
BRG pmax pmax
comp=Z,5.0nm,1.0s
MORC Moravsky Berou 148.17 341 ⇑PKIKP PKPbc 19 38 14.7 -0.2
MORC Moravsky Berou 148.17 341 ⇑*i*P PKPbc 19 38 14.7 -0.2
MLR Muntele Rosu 148.18 328 ⇑PKIKP PKPbc 19 38 14.3 -0.7
MLR Muntele Rosu 148.18 328 ⇑*i*P PKPbc 19 38 14.3 -0.7
FBE Freiberg 148.22 347 *e*PKPbc PKPbc 19 38 14.9 0.0
FBE *e*PKPab PKPab 19 38 19.0 -0.2
KECS Kecovo 148.28 337 *e*PKP PKPbc 19 38 15.0 -0.2
KECS Kecovo 148.28 337 *e*PKIKP PKPbc 19 38 15.0 -0.2
KECS Kecovo 148.28 337 *e*PKP PKPbc 19 38 15.0 -0.2
PVCC Panska Ves 148.31 345 *e*PKIKP PKPbc 19 38 14.8 -0.4
PVCC Panska Ves 148.31 345⇑*e*PKP PKPbc 19 38 14.8 -0.4
VOIR 148.66 328 ⇑PKIKP PKPbc 19 38 16.1 -0.1
VOIR 148.66 328 ⇑*i*P PKPbc 19 38 16.1 -0.1
BUG Bochum--Univer 148.69 354 *e*PKPbc PKPbc 19 38 15.4 -0.7
PRU Pruhonice 148.81 345 *e*PKIKP PKPbc 19 38 16.4 -0.1
PRU *e* 19 38 21.8
PRU Pruhonice 148.81 345⇑*e*PKP PKPbc 19 38 16.4 -0.1
PRU *e*PKPAB PKPab 19 38 21.8 +0.1
MOX Moxa 148.84 348 *e*PKP PKPbc 19 38 15.8 -0.7
comp=Z,19nm,1.3s
MOX Moxa 148.84 348 *e*PKPbc PKPbc 19 38 16.1 -0.4
MOX *e*PKPab PKPab 19 38 21.0 -0.8
MOX Moxa 148.84 348 *e*PKIKP PKPbc 19 38 15.8 -0.7
VYHS Vyhne 148.86 338 *e*PKP PKPbc 19 38 16.6 0.0
VYHS *e* 19 38 22.2
VYHS Vyhne 148.86 338 *e*PKIKP PKPbc 19 38 16.6 0.0
VYHS *e* 19 38 22.2
VYHS Vyhne 148.86 338 *e*PKP PKPbc 19 38 16.6 0.0
VYHS *e* 19 38 22.2
VRAC Vranov 148.87 342 PKPbc PKPbc 19 38 16.6 0.0
comp=Z,7.7nm,1.0s,baz=58,slow=2.5,SNR=6.3
VRAC Vranov 148.87 342 PKIKP PKPbc 19 38 16.6 0.0
VRAC Vranov 148.87 342⇓*i*P PKPbc 19 38 16.4 -0.2
PLN Plauen 148.88 348 *e*PKPbc PKPbc 19 38 16.2 -0.4
PLN *e*PKPab PKPab 19 38 21.3 -0.7
TANN Tannenbergstha 148.89 347 *e*PKPbc PKPbc 19 38 16.2 -0.4
TANN *e*PKPab PKPab 19 38 21.3 -0.7
WERD Werda 148.89 347 *e*PKPbc PKPbc 19 38 16.2 -0.4
WERD *e*PKPab PKPab 19 38 21.5 -0.5
KOLL Kolacno 148.94 339 *e*PKP PKPbc 19 38 17.1 +0.3
KOLL Kolacno 148.94 339 *e*PKIKP PKPbc 19 38 17.1 +0.3
KOLL Kolacno 148.94 339 *e*PKP PKPbc 19 38 17.1 +0.3
GUNZ Gunzen 148.97 347 *e*PKPbc PKPbc 19 38 16.5 -0.3
GUNZ *e*PKPab PKPab 19 38 22.0 -0.3
PSZ Piszkesteto 148.97 337 ⇑PKIKP PKPbc 19 38 16.8 -0.1
PSZ Piszkesteto 148.97 337 ⇑*i*P PKPbc 19 38 16.8 -0.1
PSZ Piszkesteto 148.97 337⇓*e*PKP PKPbc 19 38 16.3 -0.6
EIL Elat 148.98 294 PKPbc PKPbc 19 38 17.8 +0.2
comp=Z,5.1nm,0.7s,baz=356,slow=6.7,SNR=5.0
WERN Wernitzgruen 149.03 347 *e*PKPbc PKPbc 19 38 16.7 -0.3
WERN *e*PKPab PKPab 19 38 22.2 -0.3
NKC Novy Kostel 149.06 347 *e*PKHKP PKPbc 19 38 16.3 -0.8
NKC *e* 19 38 22.0
NKC Novy Kostel 149.06 347⇑*e*PKP PKPbc 19 38 16.3 -0.8
NKC *e*PKPAB PKPab 19 38 22.0 -0.7
TREC Trest 149.20 343 *e*PKHKP PKPbc 19 38 17.0 -0.4
TREC *e* 19 38 22.5
TREC Trest 149.20 343⇑*e*PKP PKPbc 19 38 17.0 -0.4
TREC *e*PKPAB PKPab 19 38 22.5 -0.8
ROTZ Rotzenmuhle 149.56 347 *e*PKPbc PKPbc 19 38 18.0 -0.3
ROTZ *e*PKPab PKPab 19 38 24.5 -0.2
MEM Membach 149.63 355 PKPbc PKPbc 19 38 17.9 -0.5
ZST Bratislava 149.70 340 *e*PKP PKPbc 19 38 19.1 +0.4
ZST Bratislava 149.70 340 *e*PKHKP PKPbc 19 38 19.1 +0.4
ZST Bratislava 149.70 340 *e*PKP PKPbc 19 38 19.1 +0.4
TNS Taunus Mts 149.75 352 *e*PKPbc PKPbc 19 38 18.2 -0.5
TNS *e*PKPab PKPab 19 38 25.0 -0.5
TNS Taunus Mts 149.75 352 *e*PKHKP PKPbc 19 38 18.2 -0.5
TNS *e* 19 38 25.0
GRA1 Grafenberg Arr 149.82 348 *e*PKPbc PKPbc 19 38 18.6 -0.3
GRA1 *e*PKPab PKPab 19 38 25.5 -0.4
GRF Grafenberg Arr 149.82 348 *e*PKPbc PKPbc 19 38 18.6 -0.3
GRF *e*PKPab PKPab 19 38 25.5 -0.4
GRF Grafenberg Arr 149.82 348 *e*PKHKP PKPbc 19 38 18.6 -0.3
GRF *e* 19 38 25.5
GRF Grafenberg Arr 149.82 348 *e*PKHKP PKPbc 19 38 18.6 -0.3
GRF *e* 19 38 25.5
GRFO Grafenberg 149.83 348 *e*PKPdf PKPdf 19 38 13.2 -0.5
GRFO Grafenberg 149.83 348 *e*PKIKP PKPdf 19 38 13.2 -0.5
SNF Seneffe 149.83 357 PKPbc PKPbc 19 38 19.5 +0.6
SNF PKPab PKPab 19 38 25.5 -0.4
KHC Kasperske Hory 149.84 345⇑*e*PKP PKPbc 19 38 18.5 -0.5
KHC *e*PKPAB PKPab 19 38 25.5 -0.5
BCLA Clavier 149.87 356 PKPab PKPab 19 38 25.5 -0.5
WET Wettzell 150.00 346 *e*PKPbc PKPbc 19 38 18.8 -0.5
WET Wettzell 150.00 346 *e*PKHKP PKPbc 19 38 18.8 -0.5
GEC2 GERESS Array S 150.08 345 *e*PKPbc PKPbc 19 38 19.1 -0.5
GEC2 *e*PKPab PKPab 19 38 26.6 -0.3
GEC2 GERESS Array S 150.08 345 *e*PKHKP PKPbc 19 38 19.1 -0.5
GEC2 *e* 19 38 26.6
BZS Buzias 150.13 332 ⇑PKHKP PKPbc 19 38 18.2 -1.6
BZS Buzias 150.13 332 ⇑*i*P PKPbc 19 38 18.2 -1.6
DOU Dourbes 150.23 357 PKPbc PKPbc 19 38 19.2 -0.7
CONA Conrad Observa 150.32 341 ⇑*i*PKiKP PKiKP 19 38 20.1 -0.7
comp=Z,15nm,1.0s
SOP Sopron 150.32 340⇓*e*PKP PKPbc 19 38 19.7 -0.5
WLF Walferdange 150.55 355 PKPbc PKPbc 19 38 20.8 +0.2
WLF Walferdange 150.55 355 *e*PKPbc PKPbc 19 38 20.7 +0.1
WLF Walferdange 150.55 355 *e*PKPdf PKPdf 19 38 12.4 -2.5
WLF *e*PKPbc PKPbc 19 38 20.3 -0.3
WLF Walferdange 150.55 355 *e*PKIKP PKPdf 19 38 12.4 -2.4
WLF *e* 19 38 20.3
PKSM Moragy 150.87 336 ⇓PKIKP PKPbc 19 38 20.2 -1.3
PKSM Moragy 150.87 336⇓*i*P PKPbc 19 38 20.2 -1.3
FUR Furstenfeldbru 151.27 347 *e*PKPbc PKPbc 19 38 21.6 -0.7
FUR *e*PKPab PKPab 19 38 31.6 -0.3
FUR Furstenfeldbru 151.27 347 *e*PKIKP PKPbc 19 38 21.6 -0.7
FUR *e* 19 38 31.6
RJOB Jochberg 151.33 345 *e*PKPbc PKPbc 19 38 22.5 0.0
RJOB *e*PKPab PKPab 19 38 32.4 +0.2
VTS Vitosha 151.62 326 ⇑PKIKP PKPbc 19 38 23.0 -0.3
VTS Vitosha 151.62 326 ⇑*i*P PKPbc 19 38 23.0 -0.3
BFO Black Forest 151.62 351 *e*PKPbc PKPbc 19 38 22.4 -0.7
BFO *e*PKPab PKPab 19 38 32.4 -1.0
BFO Black Forest 151.62 351 *e*PKPdf PKPdf 19 38 15.9 -0.6
BFO *e*PKPbc PKPbc 19 38 21.4 -1.7
BFO *e*PKPbc PKPbc 19 38 22.4 -0.7
BFO *e*PKPab PKPab 19 38 31.9 -1.5
BFO *e*PKPab PKPab 19 38 32.4 -1.0
BFO Black Forest 151.62 351 *e*PKIKP PKPdf 19 38 15.9 -0.6
BFO *e* 19 38 21.4
BFO *e* 19 38 32.4
WTTA Wattenberg 152.05 346 ⇑*i*PKiKP PKiKP 19 38 23.6 -0.8
comp=Z,10nm,0.8s
DAVA Damuels 152.38 349 ⇑*i*PKiKP PKiKP 19 38 24.5 -0.5
comp=Z,18nm,1.2s
ESDC Sonseca Array 160.00 14 PKPab PKPab 19 39 09.8 +0.1
comp=Z,1.6nm,0.9s,baz=347,slow=4.3,SNR=6.3
LIC Lamto 164.33 152 *eP* PKPab 19 39 30.8 +1.5
comp=Z,64nm,1.7s
KIC Kosan Boka 164.57 153 *eP* PKPab 19 39 31.9 +1.5
comp=Z,22nm,0.8s
TIC Toumodi 164.71 152 *eP* PKPab 19 39 32.7 +1.7
comp=Z,109nm,1.7s
DBIC Dimbokro 164.80 152 PKPab PKPab 19 39 32.5 +1.1
comp=Z,4.4nm,0.7s,baz=170,slow=9.8,SNR=5.8

ISCJB ***13*** *19:24:11.6±0.2, 36°.84N±0°.02×49°.80E±0°.02, h10km, mb3.9/21, Error ellipse: s-maj=3.4km s-min=2.5km az=19.5*
CSEM ***13*** *19:24:11.8±0.1, 36°.76N×49°.76E, h2km, mb4.0/12, Error ellipse: s-maj=4.8km s-min=3.1km az=23.0*
THR ***13*** *19:24:12.0±0.6, 36°.76N×49°.80E, h28km±4km, ML4.1*
NEIC ***13*** *19:24:13.0, 36°.79N×49°.72E, h1km, mb3.9/17, ML4.2(THR), MN4.2(TEH), After TEH.*
TEH ***13*** *19:24:14.0, 36°.79N×49°.76E, h7km*
BJI ***13*** *19:24:15.4, 37°.21N×49°.72E, h20km, mB4.6/1, mb4.0/5, Ms4.6/2, Ms7 4.2/2*
IDC ***13*** *19:24:17.0±4.5, 36°.85N×49°.64E, h35km±33km, mb3.6/7, mb1 3.7/11, mb1mx3.5/27, mbtmp3.6/11, ML3.1/1, MS2.7/2, Ms1 2.7/2, ms1mx2.3/31, Error ellipse: s-maj=37.3km s-min=16.5km az=180.0*
NNC ***13*** *19:24:23.4±9.3, 37°.58N×51°.02E, h0km, mb4.0, Error ellipse: s-maj=117.4km s-min=66.3km az=58.0*

ISC 13 19:24:13.1±0.2, 36.80N±0°.02×49.75E±0°.02, h10km, n231, σ1§26/248, mb3.9/22, 6C-9D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNJK	**Zanjan**	**0.86**	**262**	Pg	**Pg**	**19 24 28.0**	**-1.7**
ZNJK	**Zanjan**	**0.86**	**262**	*e*Pg	**Pg**	**19 24 29.0**	**-0.8**
ZNJK	**Zanjan**	**0.86**	**262**	*e*Pg	**Pg**	**19 24 29.0**	**-0.7**
THKV	**Tehran--Karaj**	**1.27**	**134**	Pg	**Pn**	**19 24 34.0**	**-2.8**
THKV	**Tehran--Karaj**	**1.27**	**134**	*e*Pg	**Pn**	**19 24 34.5**	**-2.3**
THKV	comp=N,6μm,0.3s			AML	AML	19 24 52.8	
THKV	comp=E,5μm,0.5s			AML	AML	19 24 53.2	
THKV	**Tehran--Karaj**	**1.27**	**134**	Pg	**Pn**	**19 24 34.0**	**-2.8**
IMHD	**Mahdasht**	**1.33**	**146**	Pg	**Pn**	**19 24 35.0**	**-2.8**
IMHD	**Mahdasht**	**1.33**	**146**	*e*Pg	**Pn**	**19 24 35.0**	**-2.8**
IMHD	comp=Z,69μm,0.1s			*e*		19 24 53.0	
IMHD	**Mahdasht**	**1.33**	**146**	*e*Pg	**Pn**	**19 24 35.0**	**-2.8**
IRAZ	**Razeghan**	**1.40**	**174**	Pg	**Pn**	**19 24 35.0**	**-3.6**
IRAZ	**Razeghan**	**1.40**	**174**	*e*Pn	**Pn**	**19 24 35.1**	**-3.5**
IRAZ	comp=Z,28μm,0.1s			*e*		19 24 53.6	
IRAZ	**Razeghan**	**1.40**	**174**	*e*Pn	**Pn**	**19 24 35.1**	**-3.5**
CHTH	**Charan**	**1.42**	**128**	*e*Pg	**Pn**	**19 24 37.2**	**-1.8**
CHTH	comp=E,1μm,0.3s			AML	AML	19 24 58.5	
CHTH	**Charan**	**1.42**	**128**	*e*Pg	**Pn**	**19 24 37.2**	**-1.8**
IR3	**Iran Long-Peri**	**1.67**	**142**	*e*Pn	**Pn**	**19 24 40.6**	**-1.8**
IAFJ	**Afjeh**	**1.84**	**120**	Pn	**Pn**	**19 24 45.4**	**+0.7**
IAFJ	**Afjeh**	**1.84**	**120**	*e*Pn	**Pn**	**19 24 46.0**	**+1.3**
IAFJ	comp=Z,182nm,0.0s			*e*		19 24 47.3	
IAFJ	**Afjeh**	**1.84**	**120**	*e*Pn	**Pn**	**19 24 46.0**	**+1.3**
ISRB	**Sarab**	**1.95**	**302**	Pn	**Pn**	**19 24 47.8**	**+1.5**
ISRB	**Sarab**	**1.95**	**302**	*e*Pn	**Pn**	**19 24 47.9**	**+1.6**
ISRB	comp=Z,25μm,0.3s			*e*Sg	**Sn**	**19 25 16.1**	**+5.3**
ISRB				*e*		19 25 19.6	
ISRB	**Sarab**	**1.95**	**302**	*e*Pn	**Pn**	**19 24 47.9**	**+1.6**
ISRB				*e*Sg	**Sn**	**19 25 16.1**	**+5.3**
DAMV	**Damavand**	**2.14**	**122**	Pn	**Pn**	**19 24 49.0**	**+0.2**
DAMV	**Damavand**	**2.14**	**122**	Pn	**Pn**	**19 24 49.0**	**+0.2**
IPRN	**Peran**	**2.16**	**104**	Pn	**Pn**	**19 24 49.8**	**+0.7**
IPRN	**Peran**	**2.16**	**104**	*e*Pn	**Pn**	**19 24 49.6**	**+0.5**
IPRN	comp=Z,79μm,0.1s			*e*		19 25 24.3	
IPRN	**Peran**	**2.16**	**104**	*e*Pn	**Pn**	**19 24 49.6**	**+0.5**
IDMV	**Damavand**	**2.21**	**123**	Pn	**Pn**	**19 24 50.6**	**+0.8**
IDMV				Sn	**Sn**	**19 25 19.5**	**+2.3**
IDMV	**Damavand**	**2.21**	**123**	*e*Pn	**Pn**	**19 24 50.7**	**+0.9**
IDMV	comp=Z,17μm,0.2s			*e*		19 25 21.0	
IDMV	**Damavand**	**2.21**	**123**	*e*Pn	**Pn**	**19 24 50.7**	**+0.9**
IDMV				Sn	**Sn**	**19 25 19.5**	**+2.3**
ASAO	**Ashtian**	**2.25**	**174**	Pg	**Pn**	**19 24 50.0**	**-0.4**
ASAO	**Ashtian**	**2.25**	**174**	*e*Pn	**Pn**	**19 24 49.2**	**-1.2**
ASAO				*e*Sg	**Sn**	**19 25 20.0**	**+1.7**
ASAO	**Ashtian**	**2.25**	**174**	*e*Pn	**Pn**	**19 24 49.2**	**-1.2**
SNGE	**Sanandaj**	**2.59**	**230**	Pn	**Pn**	**19 24 54.0**	**-1.0**
SNGE	**Sanandaj**	**2.59**	**230**	*e*Pn	**Pn**	**19 24 54.6**	**-0.4**
SNGE	**Sanandaj**	**2.59**	**230**	*e*Pn	**Pn**	**19 24 54.6**	**-0.4**
GHVR	**GHOM**	**2.63**	**151**	Pn	**Pn**	**19 24 54.0**	**-1.6**
GHVR	**GHOM**	**2.63**	**151**	Pn	**Pn**	**19 24 54.0**	**-1.6**
IHRS	**Heris**	**2.63**	**306**	Pn	**Pn**	**19 24 56.5**	**+0.9**
IHRS	

IFIR e 19 25 43.9
comp=Z,16μm,0.1s
IFIR Firoozkooh 2.69 114 *e*Pn **Pn 19 24 57.5 +1.1**
IFTB Fath-abad 2.94 296 *e*Pn **Pn 19 25 00.8 +1.0**
IFTB e 19 26 04.1
comp=Z,89μm,0.4s
ILIN Lien 2.94 231 Pn **Pn 19 25 01.5 +1.7**
ILIN Lien 2.94 231 *e*Pn **Pn 19 25 00.6 +0.8**
ILIN e 19 25 51.2
comp=Z,6μm,0.5s
ILIN Lien 2.94 231 *e*Pn **Pn 19 25 00.6 +0.8**
ILAS Lasjerd 2.96 118 Pn **Pn 19 25 01.1 +1.0**
ILAS Lasjerd 2.96 118 *e*Pn **Pn 19 25 01.0 +0.9**
ILAS e 19 25 55.3
comp=Z,6μm,0.2s
ILAS Lasjerd 2.96 118 *e*Pn **Pn 19 25 01.0 +0.9**
ISHM Shahmirzad 3.03 108 Pn **Pn 19 25 02.4 +1.4**
ISHM Shahmirzad 3.03 108 *e*Pn **Pn 19 25 02.1 +1.1**
ISHM *e*Sg **Sg 19 25 47.3 -3.0**
ISHM e 19 25 55.4
comp=Z,19μm,0.2s
ISHM Shahmirzad 3.03 108 *e*Pn **Pn 19 25 02.1 +1.1**
ISHM *e*Sg **Sg 19 25 47.3 -3.0**
IAZR Azarshahr 3.13 287 Pn **Pn 19 25 03.1 +0.6**
IAZR Lg 19 25 50.5
IAZR Azarshahr 3.13 287 *e*Pn **Pn 19 25 03.2 +0.7**
IAZR e 19 25 54.5
comp=Z,11μm,0.2s
IAZR Azarshahr 3.13 287 *e*Pn **Pn 19 25 03.2 +0.7**
IAZR Lg 19 25 50.5
ISFB Sefidab 3.17 139 Pn **Pn 19 25 02.7 -0.4**
ISFB Sefidab 3.17 139 *e*Pn **Pn 19 25 02.7 -0.4**
ISFB e 19 25 50.0
comp=Z,8μm,0.1s
ISFB Sefidab 3.17 139 *e*Pn **Pn 19 25 02.7 -0.4**
IKOM Komasi 3.19 216 Pn **Pn 19 25 03.7 +0.4**
IKOM Komasi 3.19 216 *e*Pn **Pn 19 25 03.7 +0.4**
IKOM e 19 26 04.1
comp=Z,3μm,0.3s
IKOM Komasi 3.19 216 *e*Pn **Pn 19 25 03.7 +0.4**
ITBZ Tabriz 3.20 298 Pn **Pn 19 25 04.5 +1.0**
ITBZ Tabriz 3.20 298 *e*Pn **Pn 19 25 04.5 +1.0**
ITBZ e 19 25 57.9
comp=Z,3μm,0.2s
IKIA Kiasar 3.22 99 Pn **Pn 19 25 04.7 +1.0**
IKIA Kiasar 3.22 99 *e* **Pg 19 25 13.2 -1.7**
comp=Z,6μm,0.2s
IKIA *e*Pn **Pn 19 25 04.7 +1.0**
IVIS Veis 3.27 227 Pn **Pb 19 25 09.8 -1.4**
IVIS Veis 3.27 227 *e*Pn **Pn 19 25 05.4 +1.0**
IVIS e 19 26 09.4
comp=Z,2μm,0.4s
IVIS Veis 3.27 227 *e*Pn **Pn 19 25 05.4 +1.0**
IGLO Ghaloghah 3.29 94 Pn **Pn 19 25 04.8 +0.1**
IGLO Ghaloghah 3.29 94 *e*Pn **Pn 19 25 04.9 +0.2**
IGLO e 19 26 03.0
comp=Z,17μm,0.3s
IGLO Ghaloghah 3.29 94 *e*Pn **Pn 19 25 04.9 +0.2**
IDHR Dehrash 3.44 234 Pn **Pb 19 25 12.6 -1.6**
IDHR Dehrash 3.44 234 *e* **Pg 19 25 22.4 +3.4**
comp=Z,2μm,0.3s
IDHR *e*Pn **Pn 19 25 07.1 +0.3**
IGHG Ghaleghazi 3.58 227 Pn **Pb 19 25 15.3 -1.1**
IGHG Sn **Sn 19 25 50.6 -0.3**
IGHG Ghaleghazi 3.58 227 *e*Pn **Pn 19 25 10.1 +1.5**
IGHG e 19 26 19.0
comp=Z,4μm,0.4s
IGHG Ghaleghazi 3.58 227 *e*Pn **Pn 19 25 10.1 +1.5**
IGHG Sn **Sn 19 25 50.6 -0.3**
ISHB Shabestar 3.60 296 Pn **Pn 19 25 09.6 +0.6**
ISHB Shabestar 3.60 296 *e*Pn **Pn 19 25 09.7 +0.7**
ISHB *e*Sg **Sg 19 26 06.6 -2.2**
ISHB e 19 26 13.9
comp=Z,7μm,0.2s
IANJ Anjilo 3.62 110 Pn **Pn 19 25 09.9 +0.7**
IANJ Anjilo 3.62 110 *e*Pn **Pn 19 25 10.0 +0.8**
IANJ e 19 26 12.5
comp=Z,3μm,0.2s
IANJ Anjilo 3.62 110 *e*Pn **Pn 19 25 10.0 +0.8**
IMRD Marand 3.73 302 Pn **Pn 19 25 12.2 +1.4**
IMRD Marand 3.73 302 *e*Pn **Pn 19 25 11.9 +1.1**
IMRD e 19 26 28.4
comp=Z,6μm,0.3s
IMRD Marand 3.73 302 *e*Pn **Pn 19 25 11.9 +1.1**
IKLH Kolahrood 3.78 156 Pn **Pn 19 25 12.0 +0.6**
IKLH Kolahrood 3.78 156 *e*Pn **Pn 19 25 12.1 +0.7**
IKLH e 19 26 05.1
comp=Z,5μm,0.2s
IKLH Kolahrood 3.78 156 *e*Pn **Pn 19 25 12.1 +0.7**
IPIR Pirpir 4.21 167 Pn **Pn 19 25 18.6 +1.3**
IPIR Pirpir 4.21 167 *e*Pn **Pn 19 25 18.0 +0.7**
IPIR e 19 26 35.7
comp=Z,1μm,0.3s
IPIR Pirpir 4.21 167 *e*Pn **Pn 19 25 18.0 +0.7**
IZEF Zefreh 4.43 151 Pn **Pn 19 25 21.1 +0.7**
IZEF Zefreh 4.43 151 *e*Pn **Pn 19 25 21.2 +0.8**
IZEF e 19 26 38.5
comp=Z,1μm,0.2s
IZEF Zefreh 4.43 151 *e*Pn **Pn 19 25 21.2 +0.8**
NASN Na'in 4.71 147 Pn **Pn 19 25 23.0 -1.3**
NASN Na'in 4.71 147 Pn **Pn 19 25 23.0 -1.3**
IGAR Gharneh 4.77 156 *e*Pn **Pn 19 25 26.8 +1.8**
IGAR e 19 25 53.4
comp=Z,481nm,0.2s
MRVT Maraveh tapeh 5.13 78 *e*Pn **Pn 19 25 28.6 -1.4**
MRVT Maraveh tapeh 5.13 78 *e*Pn **Pn 19 25 28.6 -1.4**
GNI Garni 5.16 312 Pn **Pn 19 25 35.4 +5.0**
comp=Z,1.0nm,0.3s,baz=54,slow=0.5,SNR=24
GNI Pg **Pg 19 25 50.5 -1.4**
comp=Z,4.0nm,0.3s,baz=172,slow=8.2,SNR=11
GNI Lg 19 27 00.2
comp=Z,3.6nm,0.3s,baz=167,slow=18,SNR=2.2
GNI Garni 5.16 312 *e*Pn **Pn 19 25 32.6 +2.2**
comp=Z,100nm,0.8s
GNI *e*Pg **Pg 19 25 49.4 -2.5**
GNI *e*Sg **Sg 19 27 02.0 +3.2**
GNI Garni 5.16 312 *e*Pn **Pn 19 25 32.6 +2.2**
comp=Z,100nm,0.8s
GNI Garni 5.16 312 *e*Pg **Pg 19 25 49.4 -2.6**
BHD Baghdad 5.64 233 *ex* x 19 25 43.0
BHD *ex* x 19 25 57.0
BHD *ex* x 19 26 34.0
BHD *ex* x 19 26 59.0
DGRG David-gareji 5.76 325 P **Pn 19 25 40.4 +1.9**
ISAD Sadrabad 5.86 145 Pn **Pn 19 25 40.6 +0.6**
ISAD Sadrabad 5.86 145 *e*Pn **Pn 19 25 40.7 +0.7**
ISAD e 19 27 21.5
comp=Z,1μm,0.3s
ISAD Sadrabad 5.86 145 *e*Pn **Pn 19 25 40.7 +0.7**
ICHK Chekchek 5.95 138 Pn **Pn 19 25 42.1 +0.9**
ICHK Chekchek 5.95 138 *e*Pn **Pn 19 25 41.5 +0.3**
ICHK e 19 27 30.5
comp=Z,681nm,0.2s
ICHK Chekchek 5.95 138 *e*Pn **Pn 19 25 41.5 +0.3**
MTA Mtatsminda 6.22 323 P **Pn 19 25 50.3 +5.3**
ISHV Shirvan 6.39 81 Pn **Pn 19 25 46.5 -0.8**
ISHV Shirvan 6.39 81 *e*Pn **Pn 19 25 46.6 -0.7**
ISHV e 19 25 49.1
comp=Z,1μm,0.1s
ISHV Shirvan 6.39 81 *e*Pn **Pn 19 25 46.6 -0.7**
ISFR Sfrayin 6.62 85 Pn **Pn 19 25 50.7 +0.4**
ISFR Sfrayin 6.62 85 *e*Pn **Pn 19 25 50.7 +0.4**
ISFR e 19 25 52.9
comp=Z,1μm,0.3s
ISFR Sfrayin 6.62 85 *e*Pn **Pn 19 25 50.7 +0.4**
IMEH Mehriz 6.73 142 Pn **Pn 19 25 52.6 +0.6**
IMEH Mehriz 6.73 142 *e*Pn **Pn 19 25 52.2 +0.2**
IMEH e 19 27 55.7
comp=Z,553nm,0.5s
IMEH Mehriz 6.73 142 *e*Pn **Pn 19 25 52.2 +0.2**
IKRD Kardeh 7.03 88 Pn **Pb 19 26 08.3 -7.0**
IKRD Kardeh 7.03 88 *e* **Pb 19 26 10.1 -5.2**
comp=Z,487nm,0.2s
IKRD *e*Pn **Pb 19 26 07.5 -7.8**
IBAF Bafgh 7.08 135 Pn **Pn 19 25 57.7 +0.9**
IBAF Bafgh 7.08 135 *e*Pn **Pn 19 25 57.7 +0.9**
IBAF e 19 26 07.7
comp=Z,269nm,0.1s
IBAF Bafgh 7.08 135 *e*Pn **Pn 19 25 57.7 +0.9**
IEMG Emamgholi 7.14 82 Pn **Pn 19 25 56.7 -0.9**
IEMG Emamgholi 7.14 82 *e*Pn **Pn 19 25 56.8 -0.8**
IEMG e 19 25 58.8
comp=Z,461nm,0.1s
IEMG Emamgholi 7.14 82 *e*Pn **Pn 19 25 56.8 -0.8**
IAKL Akhelmad 7.24 89 Pn **Pn 19 25 58.9 0.0**
IAKL Akhelmad 7.24 89 *e*Pn **Pn 19 25 59.2 +0.3**
IAKL e 19 26 11.4
comp=Z,320nm,0.2s
MIB Mutribah 7.26 197 *e*P **Pn 19 25 57.2 -2.0**
MIB AML AML 19 27 21.0
comp=Z,14nm,0.5s
MIB Mutribah 7.26 197 *e*P **Pn 19 25 57.2 -2.0**
IPAY Payeh 7.44 90 Pn **Pn 19 26 02.7 +1.0**
IPAY Payeh 7.44 90 *e* **Pb 19 26 13.2 -9.1**
comp=Z,337nm,0.1s
IPAY *e*Pn **Pn 19 26 02.0 +0.3**
IMOG Moghan 7.76 92 Pn **Pn 19 26 06.6 +0.5**
IMOG Moghan 7.76 92 *e* **Pn 19 26 07.9 +1.9**
comp=Z,238nm,0.2s
IMOG *e*Pn **Pn 19 26 06.3 +0.2**
NAY Al-Naaiem 7.81 196 *e*P **Pn 19 26 04.5 -2.4**
NAY Al-Naaiem 7.81 196 *e*P **Pn 19 26 04.5 -2.3**
ISRO Mashad 7.84 91 *e*Pn **Pn 19 26 07.3 +0.1**
ISRO Mashad 7.84 91 *e*Pn **Pn 19 26 07.3 +0.1**
RDF Al-Radifah 8.06 194 *e*P **Pn 19 26 06.6 -3.6**
RDF AML AML 19 27 43.2
comp=Z,6.2nm,0.4s
RDF Al-Radifah 8.06 194 *e*P **Pn 19 26 06.6 -3.6**
IMYA Miami 8.34 90 Pn **Pn 19 26 15.3 +1.2**
IMYA Miami 8.34 90 *e*Pn **Pn 19 26 14.4 +0.3**
IMYA e 19 26 16.5
comp=Z,203nm,0.2s
IMYA Miami 8.34 90 *e*Pn **Pn 19 26 14.4 +0.3**
IKOO Kooshah 8.79 117 *e*Pn **Pn 19 26 20.1 0.0**
IKOO e 19 26 40.5
comp=N,179nm,0.1s
IKOO Kooshah 8.79 117 *e*Pn **Pn 19 26 20.1 0.0**
IMON Monand 8.89 111 *e*Pn **Pn 19 26 21.7 +0.1**
IMON e 19 26 42.7
comp=Z,193nm,0.2s
IMON Monand 8.89 111 *e*Pn **Pn 19 26 21.7 +0.1**
SHRT Shahrakht 9.18 107 *e*Pn **Pn 19 26 24.3 -1.3**
SHRT Shahrakht 9.18 107 *e*Pn **Pn 19 26 24.3 -1.2**
MMAI Mount Meron Ar 12.37 256 LR LR 19 32 24.1
comp=Z,47nm,18.1s,baz=305,slow=40
BR131 Keskin Array S 13.00 288 *e*Pn **Pn 19 27 25.3 +7.5**
comp=Z,4.1nm,0.9s
BRTR Keskin Array B 13.00 288 Pn **Pn 19 27 17.6 -0.1**
comp=Z,0.1nm,0.3s,baz=292,slow=8.8,SNR=2.8
BRTR Keskin Array B 13.00 288 Pn **Pn 19 27 17.6 -0.1**
AB31 Akbulak array 14.49 28 Pn **Pn 19 27 32.8 -5.3**
comp=Z,1.0nm,0.4s,baz=214,slow=16,SNR=22
AB31 ⇑Sn Sx 19 30 06.8
comp=Z,0.8nm,0.2s,baz=205,slow=28
ABKAR Akbulak array 14.49 28 *e*Pn **Pn 19 27 32.6 -5.5**
comp=Z,1.7nm,0.4s
ABKAR *e*Sn Sx 19 29 57.1
AKTK Aktyubinsk 14.88 21 Pn **Pn 19 27 39.6 -3.7**
AKTO Aktyubinsk 14.88 21 Pn **Pn 19 27 38.4 -4.9**
comp=Z,0.8nm,0.7s
AKTO Aktyubinsk 14.88 21 Pn **Pn 19 27 39.6 -3.7**
comp=Z,0.9nm,0.3s,baz=185,slow=10,SNR=15
KBL Kabul 15.84 92 Pn **Pn 19 28 00.2 +4.1**
comp=Z,5.7nm,1.2s
KK31 Karatay Array 17.10 62 ⇑Pn **Pn 19 28 10.3 -1.8**
comp=Z,4.5nm,0.8s,baz=279,slow=7.6,SNR=20
KKAR Karatay Array 17.10 62 *e*Pn **Pn 19 28 09.9 -2.3**
comp=Z,3.1nm,0.7s
KKAR *e*Sn Sx 19 31 06.7
KKAR Karatay Array 17.10 62 *e*Pn **Pn 19 28 09.9 -2.2**
comp=Z,3.1nm,0.7s
AML Almayashu 19.21 67 *e*P **Pn 19 28 37.7 -0.4**
comp=Z,3.0nm,0.6s
AML Almayashu 19.21 67 *e*P **Pn 19 28 37.7 -0.4**
comp=Z,3.0nm,0.6s
EKS2 Erkin-Say 19.36 65 *e*P **Pn 19 28 38.5 -1.2**
comp=Z,2.9nm,0.9s
EKS2 Erkin-Say 19.36 65 *e*P **Pn 19 28 38.5 -1.3**
comp=Z,2.9nm,0.9s
AAK Ala-Archa 19.88 65 P **Pn 19 28 47.3 +1.3**
comp=Z,0.0nm,0.3s,baz=236,slow=7.7,SNR=5.5
AAK LR LR 19 36 42.6
comp=Z,17nm,19.1s,baz=20,slow=37
AAK Ala-Archa 19.88 65 *e*P **Pn 19 28 47.0 +1.1**
comp=Z,2.5nm,0.7s
AAK Ala-Archa 19.88 65 *e*P **Pn 19 28 47.0 +1.0**
comp=Z,2.5nm,0.7s
OBN Obninsk 20.42 338 *e*Pn **P 19 28 48.8 -1.4**
comp=Z,19nm,0.6s
VOIR 20.45 303 ⇑*i*P **P 19 28 52.3 +1.7**
ARU Arti 20.52 14 *e*P **P 19 28 50.7 -0.6**
comp=Z,12nm,0.6s
ARU *e*S Sx 19 32 28.9
ARU Arti 20.52 14 *e*P **P 19 28 50.7 -0.5**
comp=Z,12nm,0.6s
TKM2 Tokmak 2 20.72 65 ⇑Pn **P 19 28 53.8 +0.3**
comp=Z,4.6nm,0.9s
TKM2 Tokmak 2 20.72 65 *e*P **P 19 28 54.5 +0.9**
comp=Z,2.2nm,0.6s
TKM2 Tokmak 2 20.72 65 Pn **P 19 28 53.8 +0.3**
comp=Z,4.6nm,0.9s
TKM2 Tokmak 2 20.72 65 *e*P **P 19 28 54.5 +1.0**
comp=Z,2.2nm,0.6s
ZRNK Zerenda 21.04 34 ⇓Pn **P 19 28 56.0 -0.9**
comp=Z,3.7nm,0.7s,mb3.8
BURAR Bucovina Array 21.06 309 ⇓*i*P **P 19 28 57.5 +0.4**
BUR08 Bucovina Ar. S 21.08 309 *e*P **P 19 28 56.8 -0.6**
BUR08 Bucovina Ar. S 21.08 309 *e*P **P 19 28 56.8 -0.6**
BRVK Borovoye 21.69 35 ⇑Pn **P 19 29 03.0 -0.8**
comp=Z,16nm,0.9s,mb4.5
BRVK Borovoye 21.69 35 *e*P **P 19 29 03.4 -0.5**
comp=Z,11nm,0.9s,mb4.3
BRVK Borovoye 21.69 35 Pn **P 19 29 03.0 -0.9**
comp=Z,16nm,0.9s,mb4.5
BRVK Borovoye 21.69 35 *e*P **P 19 29 03.4 -0.5**
comp=Z,11nm,0.9s,mb4.3
BVAR Borovoye Array 21.71 35 P **P 19 29 04.1 0.0**
comp=Z,3.5nm,0.5s,mb4.0,baz=223,slow=11,SNR=36
BVAR Borovoye Array 21.71 35 P **P 19 29 04.1 -0.1**
VOSK Vostochnaya 21.80 36 ⇓P **P 19 29 04.5 -0.5**
comp=Z,6.4nm,0.8s,mb4.1
VOSK Vostochnaya 21.80 36 P **P 19 29 04.5 -0.6**
comp=Z,6.4nm,0.8s,mb4.1
KOLS Kolonicke sedl 23.37 310 *e*P **P 19 29 22.7 +0.9**
comp=Z,21nm,1.2s,mb4.4
KOLS Kolonicke sedl 23.37 310 *e*P **P 19 29 22.7 +0.9**
comp=Z,21nm,1.2s,mb4.4
CRVS Cervenica-Dubn 23.86 309 *e*P **P 19 29 26.8 +0.3**
comp=Z,11nm,1.4s,mb4.1
CRVS Cervenica-Dubn 23.86 309 *e*P **P 19 29 26.8 +0.3**
comp=Z,11nm,1.4s,mb4.1
KECS Kecovo 24.34 308 *e*P **P 19 29 30.9 0.0**
comp=Z,2.3nm,0.8s,mb3.7
PSZ Piszkesteto 24.55 306 P **P 19 29 32.4 -0.4**
comp=Z,3.6nm,0.8s,mb4.0
PSZ Piszkesteto 24.55 306 P **P 19 29 32.4 -0.4**
comp=Z,3.6nm,0.8s,mb4.0
KURK Kurchatov 24.88 47 *e*P **P 19 29 34.7 -1.0**
comp=Z,4.5nm,1.0s,mb4.0
KURK Kurchatov 24.88 47 *e*P **P 19 29 34.7 -1.0**
comp=Z,4.5nm,1.0s,mb4.0
PKSM Moragy 24.99 302 ⇓*i*P **P 19 29 37.0 +0.2**
VYHS Vyhne 25.39 307 *e*P **P 19 29 40.6 +0.2**
comp=Z,4.5nm,1.1s,mb3.9
VYHS Vyhne 25.39 307 *e*P **P 19 29 40.6 +0.2**
comp=Z,4.5nm,1.1s,mb3.9
KOLL Kolacno 25.69 307 *e*P **P 19 29 43.8 +0.6**
KOLL Kolacno 25.69 307 *e*P **P 19 29 43.8 +0.6**
MK31 Makanchi Array 26.07 57 ⇑P **P 19 29 46.9 +0.3**
comp=Z,2.3nm,0.8s,mb3.8,baz=252,slow=6.7,SNR=15
MK31 Makanchi Array 26.07 57 *e*P **P 19 29 47.1 +0.5**
MK31 Makanchi Array 26.07 57 P **P 19 29 46.9 +0.3**
comp=Z,2.3nm,0.8s,mb3.8,SNR=15
MKAR Makanchi Array 26.07 57 P **P 19 29 47.7 +1.1**
comp=Z,1.5nm,0.8s,mb3.6,baz=249,slow=7.6,SNR=15
MKAR Makanchi Array 26.07 57 P **P 19 29 47.7 +1.1**
MKAR Makanchi Array 26.07 57 P **P 19 29 47.7 +1.1**
MORC Moravsky Berou 26.57 309 P **P 19 29 48.3 -2.8**
WMQ Urumqi 29.58 64 *e*P **P 19 30 22.0 +4.0**
ZALV Zalesovo Beam 29.61 43 P **P 19 30 18.9 +0.7**
comp=Z,0.6nm,0.6s,mb3.5,baz=267,slow=8.5,SNR=4.3
NB2 NORSAR Subarra 34.25 327 P **P 19 30 57.7 -1.1**
comp=Z,0.5nm,0.6s,mb3.6,baz=119,slow=8.6
NB2 NORSAR Subarra 34.25 327 P **P 19 30 57.7 -1.1**
comp=Z,0.5nm,0.6s,mb3.6,baz=119,slow=8.4,SNR=4.6
NOA NORSAR Array B 34.25 327 P **P 19 30 57.5 -1.3**
comp=Z,0.6nm,0.6s,mb3.7,baz=118,slow=8.0,SNR=4.7
NOA NORSAR Array B 34.25 327 P **P 19 30 57.5 -1.3**
ARCES ARCESS Array B 35.34 346 P **P 19 31 08.0 -0.2**
comp=Z,0.7nm,1.0s,mb3.6,baz=144,slow=10,SNR=6.8
ARCES ARCESS Array B 35.34 346 P **P 19 31 08.0 -0.2**
ARCES ARCESS Array B 35.34 346 P **P 19 31 08.0 -0.2**
TAM Tamanrasset 40.49 262 P **P 19 31 52.1 -0.1**
comp=Z,1.5nm,0.7s,mb3.8
TAM Tamanrasset 40.49 262 P **P 19 31 52.1 -0.1**
comp=Z,1.5nm,0.7s,mb3.8
ESDC Sonseca Array 41.77 291 P **P 19 32 00.3 -2.2**
comp=Z,1.3nm,0.6s,mb3.7,baz=66,slow=8.7,SNR=9.4
ESDC Sonseca Array 41.77 291 P **P 19 32 00.3 -2.2**
ESLA Sonseca Array 41.77 291 P **P 19 32 00.5 -2.0**
comp=Z,0.5nm,0.8s,mb3.2
ESLA Sonseca Array 41.77 291 P **P 19 32 00.5 -2.0**
comp=Z,0.5nm,0.8s,mb3.2
KMI Kunming 46.38 89 P **P 19 32 42.4 +2.7**
KMI pmax pmax
comp=Z,4.0nm,1.6s,mb4.1
CMAR Chiang Mai Arr 46.72 99 P **P 19 32 45.0 +2.6**
comp=Z,0.3nm,0.6s,mb3.4,baz=300,slow=8.6,SNR=4.1
HHC Hu-ho-hao-te 47.45 65 *e*P **P 19 32 53.3 +5.4**
HHC PcP PcP 19 34 23.9 +5.7
HHC PP PP 19 34 45.1 +6.1
HHC ScP ScP 19 38 16.9 +4.6
HHC S **S 19 39 50.3 +8.0**
HHC pmax pmax
comp=Z,11nm,1.1s,mb4.7
HHC LR LR
comp=N,180nm,15.1s
HHC LR LR
comp=E,230nm,11.7s
HHC LR LR
comp=Z,89nm,11.7s
GYA Guiyang 48.92 85 *e*P **P 19 33 02.0 +2.6**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.9

IDC 13 19:39:14.9±9.0, 10°.57S×125°.42E, h144km±106km, mb2.7/1, mb1 2.7/4, mb1mx2.6/17, mbtmp2.6/4, ML2.9/3, Error ellipse: s-maj=76.9km s-min=41.7km az=20.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**7.49**	**178**	P	Pn	Pn	19 41 01.2	-0.3
0.1nm,0.3s,baz=346,slow=11,SNR=12								
FITZ				S	Sn	Sn	19 42 26.0	+0.9
0.8nm,0.3s,baz=304,slow=21,SNR=9.8								
WRA	**Warramunga Arr**	**12.68**	**138**	P	Pn	Pn	19 42 10.2	0.0
0.1nm,0.3s,baz=314,slow=14,SNR=9.7								
WRA				S	Sn	Sn	19 44 28.6	-1.7
0.4nm,0.3s,baz=206,slow=8.6,SNR=12								
ASAR	**Alice Springs**	**15.33**	**149**	P	Pn	Pn	19 42 45.5	+1.7
0.0nm,0.3s,baz=319,slow=10,SNR=5.4								
ASAR				S	S	S	19 45 34.4	-5.3
0.1nm,0.3s,baz=28,slow=21,SNR=5.3								
MKAR	**Makanchi Array**	**68.86**	**330**	P	P	P	19 50 03.9	+0.1
0.1nm,0.4s,baz=136,slow=7.0,SNR=2.5								

IDC 13 20:10:30.2±4.0, 4°.97S×104°.62E, h0km, mb3.2/5, mb1 3.4/5, mb1mx3.3/18, mbtmp3.3/5, Error ellipse: s-maj=169.5km s-min=21.5km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.94**	**347**	P	P	P	20 15 47.8	+1.6
0.6nm,0.7s,baz=178,slow=10.0,SNR=4.5								
WRA	**Warramunga Arr**	**32.52**	**120**	P	P	P	20 17 02.1	-1.0
0.2nm,0.9s,baz=305,slow=8.2,SNR=2.8								
ASAR	**Alice Springs**	**33.79**	**126**	P	P	P	20 17 15.0	+0.9
0.4nm,1.0s,baz=304,slow=7.5,SNR=3.4								
SONM	**Songino Array**	**52.60**	**2**	P	P	P	20 19 46.5	+0.8
0.3nm,0.7s,baz=169,slow=8.8,SNR=3.0								
MKAR	**Makanchi Array**	**55.20**	**341**	P	P	P	20 20 02.9	-1.9
0.2nm,0.4s,baz=151,slow=7.4,SNR=4.4								

NIED ***13*** *20:21:00, 29°.00N×129°.90E, h38km, Mw5.3 Best double couple: M0 1.03000×10^17 NP1:φs 58.00000°, δ66.00000°, λ94.00000°. NP2:φs 228.00000°, δ24.00000°, λ81.00000°.*
BJI ***13*** *20:21:29.6, 28°.74N×130°.58E, h45km, mB5.2/47, mb4.8/51, Ms5.0/61, Ms7 4.9/57*
IDC ***13*** *20:21:32.3±3.3, 29°.07N×130°.09E, h19km±20km, mb4.2/20, mb1 4.4/23, mb1mx4.4/29, mbtmp4.3/23, ML4.2/3, MS4.8/27, Ms1 4.8/27, ms1mx4.6/35, Error ellipse: s-maj=15.8km s-min=12.8km az=86.0*
MOS ***13*** *20:21:32.8±1.1, 29°.10N×130°.08E, h33km, mb5.1/49, MS4.9/31, Error ellipse: s-maj=8.5km s-min=5.6km az=108.8*
SZGRF ***13*** *20:21:33.3, 28°.97N×130°.82E, h33km, mb5.3, MS5.5, Ryukyu Islands, Japan*
DJA ***13*** *20:21:33, 29°.10N×130°.30E, h20km, mb5.1/23*
JMA ***13*** *20:21:33.4±0.3, 29°.02N×129°.86E, h82km±4km, M5.1*
JMA Felt III J1.
ISCJB ***13*** *20:21:34.6±0.3, 29°.02N±0°.02×130°.18E±0°.03, h49km±2km, mb4.9/139, MS5.0/55, Error ellipse: s-maj=4.2km s-min=2.6km az=27.8*
NEIC ***13*** *20:21:35.3±0.6, 29°.08N×130°.08E, h40km±5km, mb4.9/65, MW5.3(NIED), Error ellipse: s-maj=5.2km s-min=3.7km az=142.0*
NEIC Recorded [3 JMA] on Amami-oshima; [2 JMA] on Akuseki-jima, Kikaiga-shima and Toku-no-shima; [1 JMA] on Nakano-shima.
GCMT ***13*** *20:21:39.2±0.1, 28°.90N×130°.21E, h38km, MW5.3, Moment Tensor Solution. s81,c148; s92,c168; Moment tensor: Scale 10^17Nm; Mrr 0.00; Mθθ 0.00; Mφφ 0.00; Mrθ 0.00; Mφθ 0.00; Mφr 0.00; Best double couple: M0 1.10000×10^17 NP1:φs 212.00000°, δ34.00000°, λ74.00000°. NP2:φs 50.00000°, δ57.00000°, λ100.00000°. Principal axes: T 1.0700, Plg75.0000°, Azm350.0000°; N 0.0700, Plg9.0000°, Azm225.0000°; P -1.1400, Plg12.0000°, Azm133.0000°; Data Used: II IU IC G CN.*

ISC 13 20:21:36.4±0.3, 29.04N±0.02×130.15E±0.03, h50km±2km, h49km±1.7km:pP-P, n404, σ1º09/375, mb4.9/139, MS5.0/55, 36C-28D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.73**	**192**	P	Pn	Pn	20 21 49.3	-1.0
JZK				S	Sn	Sn	20 22 02.4	+1.5
JAM	**Amami Oshima**	**0.78**	**218**	P	Pn	Pn	20 21 48.6	-2.4
JAM				S	Sn	Sn	20 22 00.1	-1.9
JNN	**Nakanoshima**	**0.84**	**344**	P	Pn	Pn	20 21 50.4	-1.3
JNN				*e*S	Sn	Sn	20 22 03.5	+0.2
JKC	**Kuchinoerabu**	**1.42**	**2**	P	Pn	Pn	20 21 58.9	-0.9
JKC				S	Sn	Sn	20 22 18.4	+1.0
JTK	**Tokunoshima**	**1.63**	**221**	P	Pn	Pn	20 22 01.6	-1.0
JTK				S	Sn	Sn	20 22 23.7	+1.2
JTN	**Tanegashima 3**	**1.77**	**24**	P	Pn	Pn	20 22 03.8	-0.7
JTN				S	Sn	Sn	20 22 27.7	+1.9
JSU	**Suzuyama**	**2.48**	**6**	P	Pn	Pn	20 22 13.7	-0.5
JOW	**Kunigami**	**2.75**	**217**	*e*Pn	Pn	Pn	20 22 16.4	-1.6
JOW				*e*Sn	Sn	Sn	20 22 53.0	+3.0
JOW	**Kunigami**	**2.75**	**217**	P	Pn	Pn	20 22 16.8	-1.2
JOW				S	Sn	Sn	20 22 50.3	+0.3
JIH	**Iheya**	**2.77**	**225**	P	Pn	Pn	20 22 17.0	-1.3
JIH				*e*S	Sn	Sn	20 22 50.9	+0.4
JAGN	**Aguni-jima**	**3.54**	**227**	P	Pn	Pn	20 22 28.4	-0.5
JAGN				*e*S	Sn	Sn	20 23 10.0	+0.5
NAH1	**Naha**	**3.57**	**218**	P	Pn	Pn	20 22 29.5	+0.3
NAH1				*e*S	Sn	Sn	20 23 13.3	+3.2
JJT2	**Tamagusuku 2**	**3.59**	**217**	P	Pn	Pn	20 22 28.6	-0.9
JJT2				*e*S	Sn	Sn	20 23 09.4	-1.2
JKE	**Kume jima 2**	**4.02**	**229**	P	Pn	Pn	20 22 34.1	-1.3
JKE				*e*S	Sn	Sn	20 23 21.4	+0.1
JNU	**Nakatsue**	**4.12**	**9**	*e*Pn	Pn	Pn	20 22 37.3	+0.5
JNU				*e*Sn	Sn	Sn	20 23 24.4	+0.7
JFA	**Akaike**	**4.70**	**7**	P	Pn	Pn	20 22 45.2	+0.6
JWT	**Wachi**	**7.66**	**34**	P	Pn	Pn	20 23 24.4	-0.8
JFM	**Mihama**	**8.14**	**36**	P	Pn	Pn	20 23 31.6	-0.3
KSRS	**Korea Array**	**8.60**	**348**	Pn	Pn	Pn	20 23 40.8	+2.6
1.0nm,0.3s,baz=171,slow=13,SNR=62								
KSRS				LR	LR	LR	20 27 11.5	
comp=Z,7μm,19.8s,baz=158,slow=40								
KSRS	**Korea Array**	**8.60**	**348**	P	Pn	Pn	20 23 40.8	+2.6
KSRS				pmax	pmax			
comp=Z,1.0nm,0.3s								

KSRS MLR MLR
comp=Z,7μm,19.8s
HMMJ Hamamatsu 2 8.66 46 P Pn 20 23 38.9 -0.1
TATO Taipei 8.72 244 *e*Pn **Pn 20 23 40.7 +0.9**
INCN Inchon 8.92 342 *e*Pn **Pn 20 23 45.3 +2.7**
comp=Z,97nm,1.3s
NACB Ninganchiao 9.05 240 *e*Pn **Pn 20 23 43.0 -1.5**
JHJ Hachijo jima 2 9.21 61 LR LR 20 27 04.9
comp=Z,5μm,20.5s,baz=145,slow=36
JGN Niukaw 9.37 38 P **Pn 20 23 48.4 -0.3**
SSLB Suanglung 9.76 240 *e*Pn **Pn 20 23 56.2 +2.2**
comp=Z,73nm,0.7s
JOD2 Odawara 2 9.79 48 P **Pn 20 23 54.7 +0.2**
MAJO Matsushiro 10.10 40 *e*Pn **Pn 20 23 57.6 -1.1**
comp=Z,18nm,0.6s
MAJO Matsushiro 10.10 40 *e*P **Pn 20 23 57.6 -1.1**
MAJO pmax pmax
comp=Z,18nm,0.6s
MAT Matsushiro 10.10 40 P **Pn 20 23 58.2 -0.5**
MAT *e*S **Sn 20 25 59.8 +9.3**
MAT Matsushiro 10.10 40 P **Pn 20 23 58.5 -0.2**
MJAR Matsushiro Arr 10.10 40 Pn **Pn 20 23 57.7 -1.0**
comp=Z,0.6nm,0.3s,baz=224,slow=8.3,SNR=4.1
MJAR Matsushiro Arr 10.10 40 P **Pn 20 23 57.7 -1.0**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
NJ2 Nanjing 10.19 290 *e*P **Pn 20 24 02.3 +2.3**
NJ2 PP 20 24 12.3
NJ2 sP 20 24 16.4
NJ2 S **Sn 20 25 54.0 +1.2**
NJ2 pmax pmax
comp=Z,110nm,1.0s
NJ2 pmax pmax
comp=Z,870nm,6.6s
NJ2 LR LR
comp=N,4μm,13.3s
NJ2 LR LR
comp=E,6μm,15.2s
NJ2 LR LR
comp=Z,6μm,13.7s
CBIJ Chichi jima 10.81 97 Pn **Pn 20 24 06.9 -1.5**
comp=Z,13nm,0.3s,baz=280,slow=19,SNR=2.6
CBIJ LR LR 20 27 43.3
comp=Z,4μm,21.3s,baz=280,slow=34
DL2 Dalian 12.11 327 ⇑P **Pn 20 24 29.4 +3.2**
DL2 pP 20 24 37.3
DL2 S **Sn 20 26 47.3 +7.6**
DL2 pmax pmax
comp=Z,10.0nm,0.9s
DL2 pmax pmax
comp=Z,170nm,3.8s
DL2 LR LR
comp=N,3μm,13.0s
DL2 LR LR
comp=E,3μm,14.4s
DL2 LR LR
comp=Z,4μm,15.4s
TIA Tai'an 13.10 306 ⇓P **Pn 20 24 42.9 +3.3**
TIA pmax pmax
comp=Z,30nm,1.8s
TIA pmax pmax
comp=Z,410nm,4.9s
TIA LR LR
comp=N,5μm,12.9s
TIA LR LR
comp=E,6μm,16.2s
TIA LR LR
comp=Z,6μm,17.1s
SNY Shenyang 13.83 339 ⇑P **Pn 20 24 51.6 +2.0**
SNY S **Sn 20 27 25.3 +3.6**
SNY pmax pmax
comp=Z,510nm,5.7s
SNY LR LR
comp=N,7μm,12.7s
SNY LR LR
comp=E,3μm,11.3s
SNY LR LR
comp=Z,8μm,14.2s
CN2 Changchun 15.21 347 *e*P **Pn 20 25 11.8 +4.0**
CN2 *e*S **S 20 28 06.8 -2.9**
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,4μm,21.0s
CN2 LR LR
comp=E,3μm,21.0s
CN2 LR LR
comp=Z,5μm,19.0s
MDJ Mudanjiang 15.56 359 P **Pn 20 25 10.9 -1.4**
MDJ S **S 20 28 03.1 -14**
MDJ PcP PcP 20 30 10.8 -1.0
MDJ ScP ScP 20 33 41.0 -0.8
MDJ PcS PcS 20 33 47.8 +0.8
MDJ pmax pmax
comp=Z,920nm,8.4s
MDJ LR LR
comp=N,1μm,18.1s
MDJ LR LR
comp=E,1μm,16.9s
MDJ LR LR
comp=Z,2μm,19.2s
MDJ Mudanjiang 15.56 359 *e*Pn **Pn 20 25 10.5 -1.7**
comp=Z,54nm,1.5s
BJT Baijiatuau 15.88 317 *e*Pn **Pn 20 25 17.8 +1.4**
comp=Z,458nm,1.7s
BJT Baijiatuau 15.88 317 *e*P **Pn 20 25 17.8 +1.4**
BJT pmax pmax
comp=Z,458nm,1.7s
BJI Beijing 15.89 317 P **Pn 20 25 18.0 +1.5**
BJI S **S 20 28 15.1 -8.5**
BJI pmax pmax
comp=Z,35nm,1.7s
BJI pmax pmax
comp=Z,2μm,9.5s
BJI LR LR
comp=N,6μm,12.8s
BJI LR LR
comp=E,4μm,13.3s
BJI LR LR
comp=Z,3μm,19.9s
ENH Enshi 18.00 279 *e*Pn **Pn 20 25 43.1 +0.2**
comp=Z,188nm,1.5s
ASAJ Asahikawa 18.04 30 P **Pn 20 25 40.9 -2.3**
comp=Z,1.4nm,0.3s,baz=226,slow=13,SNR=15
ASAJ LR LR 20 32 47.2
comp=Z,4μm,21.3s,baz=228,slow=37
ASAJ Asahikawa 18.04 30 *e*Pn **Pn 20 25 40.7 -2.5**
comp=Z,10nm,0.8s
ASAJ Asahikawa 18.04 30 P **Pn 20 25 40.9 -2.3**
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,4μm,21.3s
XAN Xi'an 18.76 291 P **Pn 20 25 51.8 -0.3**
XAN pP pP 20 26 02.0 -0.7
XAN sP sP 20 26 08.4 -0.7
XAN S **S 20 29 29.8 +7.8**
XAN pmax pmax
comp=Z,150nm,5.5s
XAN LR LR
comp=N,1μm,16.7s
XAN LR LR
comp=E,710nm,15.8s
XAN LR LR
comp=Z,830nm,17.0s
HHC Hu-ho-hao-te 19.22 313 *e*P **Pn 20 25 58.3 +0.8**
HHC pP pP 20 26 08.3 +0.6
HHC PP 20 26 16.5
HHC S **S 20 29 27.1 -4.0**
HHC SS 20 29 54.3
HHC PcP PcP 20 30 19.6 +1.8
HHC pmax pmax
comp=Z,41nm,1.7s
HHC pmax pmax
comp=Z,2μm,7.5s
HHC LR LR
comp=N,3μm,12.7s
HHC LR LR
comp=E,3μm,14.3s
HHC LR LR
comp=Z,3μm,13.7s
MSLP Maasin 19.45 196 *e*P **Pn 20 26 00.3 -0.1**
MSLP *e*S pP 20 26 24.3 +14
YUK Yuzh-Kuril'sk 19.53 36⇑*i*P **Pn 20 25 53.0 -8.2**
YUK *i*S **S 20 29 23.6 -14**
YUK pmax pmax
comp=Z,2μm,4.4s
YUK pmax pmax
comp=N,162nm,1.4s
YUK pmax pmax
comp=E,236nm,1.4s
YUK pmax pmax
comp=Z,252nm,1.4s
YUK MLR MLR
comp=N,2μm,21.0s
YUK MLR MLR
comp=E,1μm,21.0s
YUK MLR MLR
comp=Z,1μm,21.0s
HABR Khabarovsk 19.77 10 P **Pn 20 25 58.3 -5.7**
HABR *e*S **S 20 29 35.6 -6.5**
HABR MLR MLR
comp=E,2μm,19.0s
HABR MLR MLR
comp=Z,3μm,17.0s
HABR MLR MLR
comp=N,2μm,19.0s
CUYO Cuyo Island 20.01 207 *e*P **P 20 26 06.1 +1.2**
CUYO *e*S 20 26 23.0
BTO Baotou 20.11 310 *e*P **P 20 26 08.4 +2.6**
TBP Tagbilaran 20.13 198 *e*P **P 20 26 04.7 -1.5**
KLR Kul'dur 20.20 3 *e*P **P 20 26 00.0 -6.8**
KLR *e* 20 26 23.0
KLR MLR MLR
comp=E,900nm,13.0s
KLR MLR MLR
comp=Z,2μm,13.0s,MS4.7
YSS Yuzh-Sakhalins 20.41 25 *e*Pn **P 20 26 09.5 +0.3**
comp=Z,67nm,1.1s
YSS Yuzh-Sakhalins 20.41 25 *c e*P **P 20 26 08.0 -1.1**
YSS *e* 20 26 17.0
YSS *e**SP sP 20 26 26.0 -1.1
YSS *e*S **S 20 29 50.0 -4.9**
YSS *e**SS sS 20 30 06.0 -7.7
YSS *e*SS 20 30 28.0
YSS MLR MLR
comp=Z,2μm,19.0s,MS4.5
YSS MLR MLR
comp=N,2μm,20.0s,MS4.6
YSS MLR MLR
comp=E,1μm,18.0s,MS4.6
GUMO Guam 20.56 135 LR LR 20 32 35.3
comp=E,2μm,20.2s,MS4.4,baz=151,slow=32
GUMO Guam 20.56 135 P **P 20 26 11.5 +0.5**
GUMO Guam 20.56 135 P **P 20 26 11.5 +0.5**
GYA Guiyang 20.94 269⇑*i*P **P 20 26 16.3 +1.3**
GYA pP 20 26 25.8
GYA sP sP 20 26 32.1 -0.8
GYA PP 20 26 39.5
GYA S **S 20 30 01.3 -4.3**
GYA sS sS 20 30 18.3 -6.1
GYA ScP ScP 20 33 53.4 -0.4
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,130nm,4.8s
GYA LR LR
comp=N,670nm,12.9s,MS4.3
GYA LR LR
comp=E,590nm,13.0s,MS4.3
GYA LR LR
comp=Z,580nm,12.1s,MS4.2
QIZ Qiongzhong 21.02 246 P **P 20 26 15.8 -0.1**
QIZ pP 20 26 24.6
QIZ sP sP 20 26 29.8 -4.1
QIZ S **S 20 30 06.8 -0.5**
QIZ sS sS 20 30 23.3 -2.9
QIZ pmax pmax
comp=Z,20nm,1.7s,mb4.2
QIZ LR LR
comp=N,2μm,18.4s,MS4.5
QIZ LR LR
comp=E,1μm,20.7s,MS4.5
QIZ LR LR
comp=Z,3μm,24.4s,MS4.6
QIZ Qiongzhong 21.02 246 *e*Pn **P 20 26 15.6 -0.3**
comp=Z,53nm,1.4s,mb4.7
BUKP Musuan 21.58 194 *e*P **P 20 26 21.7 -0.3**
CD2 Chengdu 22.92 281⇓*i*P **P 20 26 34.8 -1.3**
CD2 pP 20 26 46.3
CD2 sP sP 20 26 51.8 -2.4
CD2 PP 20 27 04.9
CD2 sS sS 20 30 55.3 -8.1
CD2 pmax pmax
comp=Z,70nm,1.2s,mb5.0
CD2 pmax pmax
comp=Z,680nm,5.9s
CD2 LR LR
comp=N,5μm,19.0s,MS5.1
CD2 LR LR
comp=E,3μm,14.2s,MS5.1
CD2 LR LR
comp=Z,3μm,17.8s,MS4.8
LZH Lanzhou 23.21 294 ⇑P **P 20 26 37.3 -1.8**
LZH PP 20 27 08.5
LZH S **S 20 30 44.0 -3.1**
LZH pmax pmax
comp=Z,190nm,1.5s,mb5.3
LZH pmax pmax
comp=Z,740nm,4.8s
LZH LR LR
comp=N,1μm,15.4s,MS4.8
LZH LR LR
comp=E,2μm,14.2s,MS4.8
LZH LR LR
comp=Z,3μm,18.0s,MS4.8
KMI Kunming 24.69 267 P **P 20 26 53.0 +0.3**
KMI pP 20 27 03.3
KMI sP sP 20 27 07.4 -4.2
KMI PP 20 27 31.0
KMI S **S 20 31 08.5 -2.6**
KMI sS sS 20 31 26.0 -6.8
KMI SS 20 32 05.8
KMI pmax pmax
comp=Z,35nm,0.8s,mb4.9
KMI pmax pmax
comp=Z,300nm,5.5s
KMI LR LR
comp=N,1μm,15.7s,MS4.8
KMI LR LR
comp=E,3μm,17.3s,MS4.8
KMI LR LR
comp=Z,3μm,17.7s,MS4.8
ULN Ulaanbaatar 25.92 323 *e*Pn **P 20 27 02.4 -1.3**
comp=Z,12nm,0.7s,mb4.5
ULN Ulaanbaatar 25.92 323 *e*P **P 20 27 02.4 -1.3**
ULN pmax pmax
comp=Z,12nm,0.7s,mb4.5
ULN Ulaanbaatar 25.92 323 P **P 20 27 04.5 +0.8**
comp=Z,508nmcomp=Z,19nm,1.9s,mb4.3
CIT Chita 26.07 336 *e*P **P 20 27 05.4 +0.4**
CIT *e* pP 20 27 20.0 +2.1
CIT *e* 20 27 51.7
MYLDM Lahad Datu 26.17 207 P **P 20 27 09.1 +2.9**
comp=Z,1μmcomp=Z,32nm,1.6s,mb4.6
SONM Songino Array 26.25 322 P **P 20 27 05.9 -0.7**
comp=Z,7.2nm,0.6s,mb4.3,baz=138,slow=9.6,SNR=26
SONM ScP ScP 20 34 10.6 +3.0
comp=Z,0.3nm,0.8s,baz=143,slow=2.3,SNR=3.7
SONM LR LR 20 38 51.7
comp=Z,4μm,19.4s,MS5.0,baz=124,slow=40
SONM Songino Array 26.25 322 P **P 20 27 05.9 -0.8**
SONM pmax pmax
comp=Z,7.0nm,0.6s
SONM MLR MLR
comp=Z,4μm,19.4s
KKM Kota Kinabalu 26.39 213 *e*Pn **P 20 27 09.2 +1.0**
comp=Z,23nm,1.0s,mb4.7
KKM Kota Kinabalu 26.39 213 P Px 20 27 19.3
GTA Gaotai 27.02 301 P **P 20 27 14.5 +0.8**
GTA pP pP 20 27 25.6 -1.0
GTA sP sP 20 27 31.1 -1.5
GTA PP 20 28 03.0
GTA S **S 20 31 50.3 +2.6**
GTA sS sS 20 32 09.9 +0.3
GTA pmax pmax
comp=Z,17nm,1.1s,mb4.5
GTA pmax pmax
comp=Z,230nm,8.5s
GTA LR LR
comp=N,2μm,14.2s,MS5.1
GTA LR LR
comp=E,4μm,19.0s,MS5.1
GTA LR LR
comp=Z,5μm,19.0s,MS5.1
MNI Manado 27.90 191 P **P 20 27 21.5 -0.2**
comp=Z,2μmcomp=Z,116nm,1.7s,mb5.2
TNTI Ternate 28.23 186 P **P 20 27 30.0 +5.3**
comp=Z,63nm,1.5s,mb5.0
ZAK Zakamensk 29.42 324 *e*P **P 20 27 37.5 +2.6**
ZAK pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.0
TLY Talaya 30.03 326 *e*P **P 20 27 40.0 -0.3**
comp=Z,21nm,1.4s,mb4.7
TLY Talaya 30.03 326 *e*P **P 20 27 49.1 +8.8**
TLY *e* 20 28 48.7
TLY pmax pmax
comp=Z,28nm,1.8s,mb4.7
TLY MLR MLR
comp=Z,3μm,16.0s,MS5.1
IRK Irkutsk 30.09 328 *e*P **P 20 27 49.0 +8.2**
IRK *e* 20 28 39.8
IRK pmax pmax
comp=Z,37nm,2.0s,mb4.8
CHTO Chiang Mai 30.20 257 *e*Pn **P 20 27 41.1 -1.0**
comp=Z,12nm,1.0s,mb4.6
CHTO Chiang Mai 30.20 257 *e*P **P 20 27 41.1 -1.1**
CHTO pmax pmax
comp=Z,12nm,1.0s,mb4.6
CHTO Chiang Mai 30.20 257 P **P 20 27 41.8 -0.4**
comp=Z,16nm,1.2s,mb4.6
CM31 Chiang Mai Arr 30.36 257 *e*P **P 20 27 36.4 -7.2**
CMAR Chiang Mai Arr 30.36 257 P **P 20 27 43.5 0.0**
comp=Z,1.1nm,0.5s,mb3.8,baz=54,slow=7.3,SNR=9.7
CMAR LR LR 20 40 40.2
comp=Z,2μm,20.5s,MS4.7,baz=70,slow=38
CMAR Chiang Mai Arr 30.36 257 P **P 20 27 43.6 +0.1**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR MLR MLR
comp=Z,2μm,20.5s
PETK Petropavlovsk- 31.43 32 P **P 20 27 53.1 +0.5**
comp=Z,2.5nm,0.8s,mb4.1,baz=239,slow=5.1,SNR=3.7
PETK LR LR 20 40 26.3
comp=Z,1μm,21.4s,MS4.6,baz=226,slow=36
PETK Petropavlovsk- 31.43 32 P **P 20 27 53.1 +0.5**
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
PETK MLR MLR
comp=Z,1μm,21.4s,MS4.6
SBUM Sibu 31.47 216 P **P 20 27 53.6 +0.3**
comp=Z,8.3nm,1.1s,mb4.5
PET Petropavlovsk 31.83 33 P **P 20 27 56.8 +0.7**
PET Petropavlovsk 31.83 33 *c i*P **P 20 27 57.1 +1.0**
PET *e* 20 28 56.2
PET *e*S **S 20 33 00.4 -2.5**
PET pmax pmax
comp=Z,100nm,12.5s
PET MLR MLR
comp=Z,1μm,19.0s,MS4.6
PET MLR MLR
comp=Z,1μm,20.0s
YAK Yakutsk 33.00 360 *e*P **P 20 28 14.2 +7.9**
YAK *e**PP pP 20 28 25.4 +6.1
YAK *e* 20 29 21.5
YAK *e*PPP 20 29 36.0
YAK *e* 20 30 54.4
YAK *e* 20 38 33.0
YAK pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
YAK pmax pmax
comp=N,3.0nm,1.3s
YAK pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
YAK pmax pmax
comp=N,13nm,1.3s
YAK MLR MLR
comp=Z,775nm,15.0s,MS4.5
YAK MLR MLR
comp=N,609nm,16.0s,MS4.5
YAK MLR MLR
comp=E,227nm,13.0s,MS4.5
KSM Kuching 33.30 218 *e*P **P 20 28 09.1 -0.3**
comp=E,11nm,1.1s,mb4.7
KSM Kuching 33.30 218 P **P 20 28 11.0 +1.6**
comp=E,455nmcomp=E,19nm,1.2s,mb4.9
KDI Kendari 33.59 194 P **P 20 28 12.6 +0.7**
comp=E,34nm,1.6s,mb5.0
LSA Lhasa 33.88 281 P **P 20 28 14.1 -0.3**
LSA pmax pmax
comp=Z,20nm,1.0s,mb5.0
LSA pmax pmax
comp=Z,340nm,6.0s
LSA LR LR
comp=N,1μm,18.0s,MS4.8
LSA LR LR
comp=E,2μm,22.0s,MS4.8
LSA LR LR
comp=Z,2μm,22.0s,MS4.8
LSA Lhasa 33.88 281 *e*P **P 20 28 14.5 +0.1**
comp=Z,5.3nm,0.6s,mb4.7
LSA Lhasa 33.88 281 *e*P **P 20 28 14.5 +0.1**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KBKI Kotabaru 34.84 205 P **P 20 28 23.0 +0.3**
comp=Z,27nm,1.5s,mb5.0
KAPI Kappang 35.30 198 P **P 20 28 24.4 -2.3**
comp=Z,7.9nm,1.5s,mb4.4
WMQ Urumqi 36.79 305 P **P 20 28 52.0 +13**
WMQ pmax pmax
comp=Z,18nm,1.0s,mb4.9
WMQ Urumqi 36.79 305 *e*P **P 20 28 40.0 +0.8**
WMQ pP pP 20 28 52.0 -0.4
WMQ sP sP 20 28 58.0 -0.3
WMQ PP PP 20 30 06.0 +2.4
WMQ S **S 20 34 20.0 +0.3**
WMQ SS SS 20 36 50.0 -12
WMQ pmax pmax
comp=Z,14nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,64nm,4.0s
WMQ LR LR
comp=N,2μm,15.0s,MS5.1
WMQ LR LR
comp=E,2μm,15.0s,MS5.1
WMQ LR LR
comp=Z,2μm,15.0s,MS5.0
SEY Seymchan 36.85 17⇑*i*P **P 20 28 39.2 -0.2**
TAPN Taplejung 37.30 278 *e*P **P 20 28 43.9 +0.2**
comp=Z,62nm,1.4s,mb5.2
ODAN Odare 37.69 277 *e*P **P 20 28 46.9 -0.1**
comp=Z,39nm,0.6s,mb5.3
GUN Gumba 38.76 279 *e*P **P 20 28 56.7 +0.7**
comp=Z,48nm,0.5s,mb5.5
BMNI Bima 38.95 198 P **P 20 28 57.6 -0.1**
comp=Z,801nmcomp=Z,43nm,1.9s,mb4.8
PKI Pulchoki 39.24 279 *e*P **P 20 29 00.2 +0.2**
comp=Z,29nm,0.6s,mb5.2
PKIN Phulchoki 39.25 279 *e*P **P 20 28 59.8 -0.3**
comp=Z,35nm,0.9s,mb5.1
KKN Kakani 39.30 279 *e*P **P 20 29 00.4 -0.2**
comp=Z,37nm,0.7s,mb5.2
DMN Daman 39.49 279 *e*P **P 20 29 02.6 +0.4**
comp=Z,77nm,1.2s,mb5.3
GKN Gorkha 39.81 280 *e*P **P 20 29 04.7 -0.1**
comp=Z,38nm,0.6s,mb5.3
BSI Banda Aceh 40.42 241 P **P 20 29 17.2 +7.3**
comp=Z,370nmcomp=Z,15nm,1.1s,mb4.7
NGJI Ngawi 40.42 209 P **P 20 29 13.1 +3.2**
comp=Z,68nm,1.6s,mb5.1
MNSI Mandailing Nat 40.48 232 P **P 20 29 11.4 +0.9**
comp=Z,23nm,0.8s,mb4.9
DANN Dangsing 40.49 281 *e*P **P 20 29 11.0 +0.6**
comp=Z,44nm,0.6s,mb5.4
SJI Sawahan 40.62 209 P **P 20 29 12.5 +1.0**
comp=Z,82nm,1.3s,mb5.2
KOLN Koldanda 40.76 280 *e*P **P 20 29 12.3 -0.3**
comp=Z,13nm,0.5s,mb4.9
MK31 Makanchi Array 41.01 309 *e*P **P 20 29 13.3 -1.2**
MK31 Makanchi Array 41.01 309 *e*P **P 20 29 13.3 -1.2**
MKAR Makanchi Array 41.01 309 P **P 20 29 12.9 -1.6**
comp=Z,0.7nm,0.5s,baz=91,slow=9.7,SNR=14
MKAR PcP PcP 20 31 13.5 -0.2
comp=Z,1.6nm,0.6s,baz=96,slow=2.1,SNR=3.8

MKAR ScP ScP 20 35 02.0 +2.8
comp=Z,0.4nm,0.9s,baz=107,slow=3.9,SNR=3.7
MKAR LR LR 20 48 07.9
comp=Z,1μm,18.2s,MS4.8,baz=92,slow=39
MKAR Makanchi Array 41.01 309 P **P** **20 29 12.9 -1.6**
MKAR 20 31 13.5
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR MLR MLR
comp=Z,1μm,18.2s
ZAA0 Zalesovo Array 41.12 320 *e*P **P** **20 29 14.5 -0.7**
ZALV Zalesovo Beam 41.12 320 P **P** **20 29 14.5 -0.7**
comp=Z,2.0nm,0.3s,mb4.2,baz=116,slow=8.7,SNR=18
ZALV PcP PcP 20 31 13.7 -0.1
comp=Z,2.4nm,0.8s,baz=98,slow=2.9,SNR=3.6
ZALV LR LR 20 47 55.1
comp=Z,1μm,18.1s,MS4.9,baz=115,slow=39
ZALV Zalesovo Beam 41.12 320 P **P** **20 29 14.5 -0.7**
ZALV 20 31 13.7
ZALV pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
ZALV MLR MLR
comp=Z,1μm,18.1s,MS4.9
KLSI 41.49 220 P pP 20 29 32.1 +0.1
MDSI Maura Dua 41.64 221 P **P** **20 29 22.5 +2.6**
comp=Z,26nm,1.6s,mb4.6
LEM Lembang 41.74 215 P **P** **20 29 22.8 +2.1**
comp=Z,120nm,1.1s,mb5.5
DBJI Dramaga 41.95 216 P **P** **20 29 24.0 +1.6**
comp=Z,107nm,1.1s,mb5.4
NVS Novosibirsk 42.28 321 *e*P **P** **20 29 21.9 -2.8**
TIXI Tiksi 42.67 359 *e*P **P** **20 29 25.2 -2.4**
TIXI pmax pmax
comp=Z,20nm,1.4s,mb4.7
TIXI MLR MLR
comp=Z,1μm,15.0s,MS4.9
KURK Kurchatov 44.02 314 *e*P **P** **20 29 37.9 -0.9**
comp=Z,9.3nm,0.9s,mb4.5
KURK Kurchatov 44.02 314⇓ *e*P **P** **20 29 38.3 -0.5**
KURK pmax pmax
comp=Z,18nm,1.6s,mb4.5
BILL Bilibino 44.48 18 P **P** **20 29 42.2 -0.1**
BILL Bilibino 44.48 18⇓ *e*P **P** **20 29 42.2 -0.1**
BILL *e* 20 31 25.3
BILL *e*S **S** **20 36 11.9 -1.6**
BILL pmax pmax
comp=Z,38nm,2.6s,mb4.7
BILL MLR MLR
comp=Z,2μm,23.0s,MS4.9
KNA Kununurra 44.54 182 *e*P **P** **20 29 42.7 -0.6**
comp=Z,42nm,1.0s,mb5.2
KNA Kununurra 44.54 182 P **P** **20 29 43.8 +0.5**
comp=Z,943nmcomp=Z,132nm,1.0s,mb5.7
KSH Kashi 45.37 298 *e*P **P** **20 29 53.9 +4.1**
KSH *e*pP pP 20 30 06.3 +3.0
KSH *e*sP sP 20 30 11.6 +2.5
KSH *e*PcP PcP 20 31 32.3 +3.8
KSH *e*PP PP 20 31 41.4 +4.9
KSH *e*ScP ScP 20 35 19.1 +2.1
KSH *e*PcS PcS 20 35 25.0 +2.6
KSH *e*S **S** **20 36 32.8 +5.6**
KSH *e*sS sS 20 36 53.3 +3.5
KSH *e*ScS ScS 20 39 43.6 +1.7
KSH *e*SS SS 20 39 48.3 -2.9
KSH pmax pmax
comp=Z,3.0nm,0.2s,mb4.8
KSH pmax pmax
comp=Z,280nm,7.0s
KSH LR LR
comp=N,520nm,6.5s
KSH LR LR
comp=E,510nm,6.9s
KSH LR LR
comp=Z,410nm,7.1s
TKM2 Tokmak 2 45.52 303 *e*P **P** **20 29 50.4 -0.5**
TKM2 Tokmak 2 45.52 303 *e*P **P** **20 29 50.4 -0.4**
FRU Bishkek 46.24 303 *e*P **P** **20 29 58.0 +1.5**
AAK Ala-Archa 46.33 303 P **P** **20 29 56.6 -0.7**
comp=Z,1.1nm,0.4s,mb4.1,baz=81,slow=5.7,SNR=5.1
AAK Ala-Archa 46.33 303 P **P** **20 29 56.6 -0.7**
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
EKS2 Erkin-Say 46.86 303 *e*P **P** **20 30 01.5 +0.1**
comp=Z,4.1nm,0.9s,mb4.4
AML Almayashu 46.95 302 *e*P **P** **20 30 01.2 -0.8**
FITZ Fitzroy Crossi 47.06 186 P **P** **20 30 03.2 +0.1**
comp=Z,6.9nm,0.7s,mb4.7,baz=8.8,slow=6.6,SNR=20
FITZ LR LR 20 48 58.6
comp=Z,410nm,19.5s,MS4.4,baz=17,slow=35
FITZ Fitzroy Crossi 47.06 186 *e*P **P** **20 30 03.1 0.0**
comp=Z,13nm,0.7s,mb5.0
FITZ Fitzroy Crossi 47.06 186 *e*P **P** **20 30 02.7 -0.4**
comp=Z,69nm,1.6s,mb5.3
FITZ Fitzroy Crossi 47.06 186 P **P** **20 30 05.9 +2.8**
comp=Z,41nm,1.5s,mb5.2
WRA Warramunga Arr 48.86 175 P **P** **20 30 16.4 -0.6**
comp=Z,9.5nm,0.6s,mb5.0,baz=354,slow=8.4,SNR=143
WRA LR LR 20 49 35.6
comp=Z,688nm,20.8s,MS4.6,baz=5.0,slow=34
WRA Warramunga Arr 48.86 175 P **P** **20 30 16.4 -0.6**
WRA LR LR 20 49 35.6
WRA Warramunga Arr 48.86 175 P **P** **20 30 16.4 -0.6**
WRA pmax pmax
comp=Z,10.0nm,0.6s
WRA MLR MLR
comp=Z,688nm,20.8s
WB2 Warramunga Arr 48.86 175 *e*P **P** **20 30 16.1 -0.9**
KKAR Karatay Array 49.23 303 *e*P **P** **20 30 18.5 -1.2**
comp=Z,3.3nm,0.6s,mb4.5
KKAR Karatay Array 49.23 303 *e*P **P** **20 30 18.5 -1.2**
KKAR pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BRVK Borovoye 49.43 317 *e*P **P** **20 30 20.4 -0.7**
BRVK Borovoye 49.43 317 *ce*P **P** **20 30 20.8 -0.3**
BRVK pmax pmax
comp=Z,22nm,0.8s,mb5.2
CTA Charters Tower 51.25 160 LR LR 20 51 11.4
comp=Z,975nm,18.5s,MS4.9,baz=349,slow=35
PALK Pallekele 51.28 255 P **P** **20 30 36.0 +0.4**
comp=Z,27nm,1.2s,mb5.1
PALK Pallekele 51.28 255 P **P** **20 30 36.0 +0.4**
PALK pmax pmax
comp=Z,27nm,1.2s,mb5.0
KBL Kabul 51.55 293 *e*P **P** **20 30 36.0 -1.4**
comp=Z,39nm,1.1s,mb5.2
KBL Kabul 51.55 293 *e*P **P** **20 30 36.0 -1.4**
KBL pmax pmax
comp=Z,39nm,1.1s,mb5.2
ASAR Alice Springs 52.52 176 P **P** **20 30 44.4 -0.1**
comp=Z,7.6nm,0.6s,mb4.8,baz=7.7,slow=14,SNR=112
ASAR Alice Springs 52.52 176 P **P** **20 30 44.4 -0.1**
ASAR pmax pmax
comp=Z,8.0nm,0.6s
TRD Trivandrum 53.84 259⇓ *e*PKP **P** **20 31 06.7 +12**
TRD *e*S **S** **20 38 36.7 +11**
SVE Sverdlovsk 55.12 321 *e*P **P** **20 31 03.0 -0.2**
SVE *e* 20 33 03.7
SVE *e*S **S** **20 38 45.0 +2.8**
SVE pmax pmax
comp=Z,12nm,1.0s,mb4.9
SVE MLR MLR
comp=Z,4μm,16.0s,MS5.6
ABKAR Akbulak array 56.01 312 *e*P **P** **20 31 09.2 -0.5**
comp=Z,5.7nm,0.6s,mb4.8
ARU Arti 56.28 321 *e*P **P** **20 31 10.6 -0.9**
comp=Z,7.2nm,0.7s,mb4.8
ARU Arti 56.28 321 *c i*P **P** **20 31 11.0 -0.5**
ARU *e* 20 32 06.8
ARU S **S** **20 38 55.3 -2.3**
ARU SS SS 20 42 37.9 -6.6
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,2μm,16.0s,MS5.2
SOKR Solikamsk 57.09 324 *c i*P **P** **20 31 17.8 +0.6**
SOKR pmax pmax
comp=Z,20nm,1.2s,mb5.0
SOKR MLR MLR
comp=Z,3μm,21.0s,MS5.3
RSO Redoubt South 58.92 34 *e*P **P** **20 31 30.8 +0.9**
KDAK Kodiak Island 59.26 37 P **P** **20 31 32.0 -0.4**
comp=Z,13nm,0.7s,mb5.1,baz=275,slow=3.7,SNR=5.0
KDAK LR LR 20 56 37.2
comp=Z,506nm,20.3s,MS4.6,baz=278,slow=36
KDAK Kodiak Island 59.26 37 *i* P **P** **20 31 35.0 +2.6**
MCK McKinley 60.40 30 *e*P **P** **20 31 39.9 -0.3**
comp=Z,16nm,1.1s,mb5.0
MCK McKinley 60.40 30 *e*P **P** **20 31 39.9 -0.2**
MCK pmax pmax
comp=Z,16nm,1.1s,mb5.0
PMR Palmer 60.55 33 *e*P **P** **20 31 39.8 -1.4**
comp=Z,19nm,1.1s,mb5.1
PMR Palmer 60.55 33 *e*P **P** **20 31 39.8 -1.4**
PMR pmax pmax
comp=Z,19nm,1.1s,mb5.1
ILAR Eielson Array 61.17 29 P **P** **20 31 44.9 -0.4**
comp=Z,1.0nm,0.7s,mb4.1,baz=266,slow=5.5,SNR=16
ILAR LR LR 20 58 50.9
comp=Z,546nm,21.4s,MS4.7,baz=126,slow=37
ILAR Eielson Array 61.17 29 P **P** **20 31 44.9 -0.4**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR MLR MLR
comp=Z,546nm,21.4s
STKA Stephens Creek 61.55 169 P **P** **20 31 47.1 -1.1**
comp=Z,4.9nm,1.1s,mb4.6,baz=334,slow=9.5,SNR=3.8
STKA LR LR 20 59 00.3
comp=Z,389nm,19.5s,MS4.6,baz=128,slow=36
STKA Stephens Creek 61.55 169 *e*P **P** **20 31 48.0 -0.2**
comp=Z,1.5nm,0.8s,mb4.2
DZM Mont Dzumac 61.69 141 *e*S **S** **20 40 14.0 +5.6**
comp=Z,613nm,27.1s
DZM *e*LR LR 20 50 14.6
comp=Z,924nm,24.6s
KLMR Klimovskoe 65.40 327 *e*P pP 20 32 24.1 -3.4
KLMR pmax pmax
comp=Z,21nm,1.7s,mb4.9
KLMR MLR MLR
comp=Z,2μm,17.0s,MS5.3
INK Inuvik 65.65 24 *e*P **P** **20 32 15.9 +1.0**
comp=Z,25nm,1.4s,mb5.0
INK Inuvik 65.65 24 *e*P **P** **20 32 15.9 +1.0**
INK pmax pmax
comp=Z,25nm,1.4s
MAK Makhachkala 65.78 307 *e*P **P** **20 32 14.5 -1.7**
MAK *e* 20 34 48.4
MAK *e*PPP 20 36 19.1
MAK S S 20 41 00.6 +1.6
MAK pmax pmax
comp=Z,65nm,0.9s,mb5.7
MAK MLR MLR
comp=Z,1μm,15.0s,MS5.2
APA Apatity 66.02 335⇑ *i*P **P** **20 32 17.0 -0.3**
APA *e* 20 41 35.0
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
APA MLR MLR
comp=Z,1μm,15.0s,MS5.3
KEV Kevo 67.46 338 *e*P **P** **20 32 24.1 -2.3**
KEV pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KEV Kevo 67.46 338 *e*p **P** **20 32 24.1 -2.3**
comp=Z,2.8nm,0.5s,mb4.5
ARCES ARCESS Array B 68.03 338 P **P** **20 32 28.7 -1.3**
comp=Z,1.0nm,0.5s,mb4.1,baz=73,slow=7.5,SNR=14
ARCES LR LR 21 07 33.3
comp=Z,1μm,18.5s,MS5.2,baz=240,slow=41
ARCES ARCESS Array B 68.03 338 P **P** **20 32 28.7 -1.3**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES MLR MLR
comp=Z,1μm,18.5s
ARE0 ARCESS Array S 68.03 338 *e*P **P** **20 32 28.1 -1.9**
ZEI Tsey 68.35 308 *e*P **P** **20 32 31.3 -1.2**
ZEI pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
JOF Joensuu 68.42 331 *e*P **P** **20 32 31.7 -0.9**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
JOF Joensuu 68.42 331 *e*p **P** **20 32 31.7 -0.9**
comp=Z,3.3nm,0.5s,mb4.6
VSR Storozhevoye 68.53 317 *e*P **P** **20 32 32.2 -1.3**
VSR pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,6.0nm,0.6s
VSR MLR MLR
comp=N,710nm,14.0s,MS5.4
VSR MLR MLR
comp=E,1μm,14.0s,MS5.4
VSR MLR MLR
comp=Z,2μm,14.0s,MS5.5
VORD Divnogorie 68.54 317 *e*P **P** **20 32 30.9 -2.6**
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
VORD MLR MLR
comp=N,430nm,14.0s,MS5.3
VORD MLR MLR
comp=E,1μm,14.0s,MS5.3
VORD MLR MLR
comp=Z,2μm,14.0s,MS5.4
GNI Garni 68.66 305 *e*P **P** **20 32 33.5 -1.0**
comp=Z,6.4nm,0.8s,mb4.6
GNI Garni 68.66 305 *de*P **P** **20 32 34.2 -0.3**
GNI pmax pmax
comp=Z,19nm,1.9s
OBN Obninsk 68.67 322⇑ *e*P **P** **20 32 34.6 +0.4**
OBN *e* pP 20 32 48.5 0.0
OBN *e*S S 20 41 37.5 +4.3
OBN pmax pmax
comp=Z,37nm,2.7s,mb4.8
OBN MLR MLR
comp=Z,2μm,19.0s,MS5.3
KIV Kislovodsk 68.78 309 *e*P **P** **20 32 34.4 -0.7**
comp=Z,21nm,1.0s,mb5.0
KIV Kislovodsk 68.78 309 *c i*P **P** **20 32 35.3 +0.2**
KIV *i* pP 20 32 47.1 -2.3
KIV *e*S S 20 41 39.9 +4.9
KIV pmax pmax
comp=Z,30nm,1.6s,mb5.0
MIB Mutribah 70.48 294 *e*P **P** **20 32 44.1 -1.8**
MIB AMb AMB 20 32 47.4
comp=Z,24nm,1.1s,mb5.0
DLBC Dease Lake 70.61 33 *e*P **P** **20 32 46.1 0.0**
RDF Al-Radifah 70.66 293 *e*P **P** **20 32 45.9 -1.0**
RDF AMb AMB 20 32 47.9
comp=Z,14nm,0.4s,mb5.2
NAY Al-Naaiem 70.78 293 *e*P **P** **20 32 45.9 -1.8**
NAY AMb AMB 20 32 50.2
comp=Z,18nm,1.5s,mb4.8
KAF Kangasniemi 70.87 331 *e*P **P** **20 32 47.3 -0.4**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KAF Kangasniemi 70.87 331 *e*p **P** **20 32 47.3 -0.4**
comp=Z,3.0nm,0.7s,mb4.3
FINES FINESS Array B 71.27 331 P **P** **20 32 49.0 -1.0**
comp=Z,2.5nm,0.3s,mb4.6,baz=62,slow=5.4,SNR=36
FINES LR LR 21 09 22.6
comp=Z,1μm,18.5s,MS5.2,baz=54,slow=40
FINES FINESS Array B 71.27 331 P **P** **20 32 49.0 -1.1**
FINES pmax pmax
comp=Z,3.0nm,0.3s
FINES MLR MLR
comp=Z,1μm,18.5s
ANN Anapa 71.97 312 *e*P **P** **20 32 53.3 -1.3**
ANN *e**PP pP 20 33 06.9 -2.0
ANN *e*PPP 20 37 15.8
ANN *e*S S 20 42 07.4 -4.7
ANN pmax pmax
comp=Z,87nm,5.8s
ANN MLR MLR
comp=Z,1μm,25.0s,MS5.2
RES Resolute Bay 72.48 11 *e*P **P** **20 32 56.7 -0.4**
comp=Z,15nm,0.7s,mb5.0
RES Resolute Bay 72.48 11 *e*P **P** **20 32 56.7 -0.4**
RES pmax pmax
comp=Z,15nm,0.7s,mb5.0
MALT Malatya 73.89 305 P **P** **20 33 06.4 +0.3**
comp=Z,61nm,1.8s,mb5.2
MALT Malatya 73.89 305 P **P** **20 33 06.4 +0.3**
MALT pmax pmax
comp=Z,61nm,1.8s,mb5.2
MALT Malatya 73.89 305 P **P** **20 33 07.7 +1.6**
YKA Yellowknife Ar 75.27 26 P **P** **20 33 13.6 0.0**
comp=Z,3.2nm,0.7s,mb4.4,baz=304,slow=6.2,SNR=7.0
YKA LR LR 21 12 59.8
comp=Z,21nm,18.1s,baz=230,slow=41
YKA Yellowknife Ar 75.27 26 P **P** **20 33 13.6 0.0**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA MLR MLR
comp=Z,21nm,18.1s
BR131 Keskin Array S 76.66 308 *e*P **P** **20 33 22.2 +0.2**
comp=Z,8.1nm,0.9s,mb4.7
BRTR Keskin Array B 76.66 308 P **P** **20 33 21.9 0.0**
comp=Z,3.7nm,0.7s,mb4.4,baz=93,slow=3.7,SNR=19
BRTR LR LR 21 12 23.7
comp=Z,410nm,20.5s,MS4.7,baz=44,slow=40
BRTR Keskin Array B 76.66 308 P **P** **20 33 22.0 0.0**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR MLR MLR
comp=Z,410nm,20.5s
NB2 NORSAR Subarra 77.55 334 P **P** **20 33 25.5 -1.1**
comp=Z,11nm,1.4s,mb4.6,baz=51,slow=5.9
NOA NORSAR Array B 77.55 334 P **P** **20 33 25.6 -0.9**
comp=Z,1.1nm,0.6s,mb4.0,baz=50,slow=5.4,SNR=6.4
NOA LR LR 21 10 56.8
comp=Z,513nm,20.1s,MS4.8,baz=50,slow=38
NOA NORSAR Array B 77.55 334 P **P** **20 33 25.6 -1.0**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,513nm,20.1s
BUR08 Bucovina Ar. S 78.29 318 *e*P **P** **20 33 30.5 -0.4**
SUMG Summit 78.36 357 *e*P **P** **20 33 31.4 +0.5**
comp=Z,9.0nm,0.7s,mb4.8
SUMG Summit 78.36 357 *i* P **P** **20 33 32.6 +1.7**
comp=Z,9.9nm,0.9s,mb4.7
KWP Kalwaria Pacla 78.69 321 *e*P **P** **20 33 33.6 +0.5**
comp=Z,32nm,1.1s,mb5.2
KWP Kalwaria Pacla 78.69 321 *e*P **P** **20 33 33.6 +0.5**
KWP pmax pmax
comp=Z,32nm,1.1s,mb5.2
KOLS Kolonicke sedl 79.30 320 *e*P **P** **20 33 36.1 -0.3**
KOLS Kolonicke sedl 79.30 320 *e*P **P** **20 33 36.1 -0.3**
KOLS Kolonicke sedl 79.30 320 *e*P **P** **20 33 36.1 -0.3**
CRVS Cervenica-Dubn 79.77 321 *e*P **P** **20 33 39.2 +0.2**
CRVS Cervenica-Dubn 79.77 321 *e*P **P** **20 33 39.2 +0.2**
CRVS Cervenica-Dubn 79.77 321 *e*P **P** **20 33 39.2 +0.2**
OJC Ojcow 79.95 322 *e*P **P** **20 33 40.0 0.0**
OJC Ojcow 79.95 322 *e*P **P** **20 33 40.0 0.0**
NIE Niedzica 80.12 321 *e*P **P** **20 33 41.7 +0.8**
NIE Niedzica 80.12 321 *e*P **P** **20 33 41.7 +0.8**
KECS Kecovo 80.54 321 *e*P **P** **20 33 44.8 +1.6**
KECS Kecovo 80.54 321 *e*P **P** **20 33 44.8 +1.6**
KECS Kecovo 80.54 321 *e*P **P** **20 33 44.8 +1.6**
ETW Entiat 80.94 40 *e*P **P** **20 33 45.7 +0.3**
comp=Z,16nm,1.1s,mb4.9
OKC Ostrava-Krasne 81.05 323 AMS AMS 21 13 00.0
comp=Z,1μm,17.8s
MORC Moravsky Berou 81.41 323 *e*P **P** **20 33 47.1 -0.7**
MORC Moravsky Berou 81.41 323 *e*P **P** **20 33 47.1 -0.7**
KSP Ksiaz 81.44 324 *e*P **P** **20 33 48.0 +0.1**
KSP LMZ 21 13 36.1
comp=Z,3μm,18.5s
VYHS Vyhne 81.44 321 *e*P **P** **20 33 48.7 +0.7**
VYHS *e*PP pP 20 34 02.2 -0.3
VYHS Vyhne 81.44 321 *e*P **P** **20 33 48.7 +0.7**
VYHS *e* pP 20 34 02.2 -0.3
VYHS Vyhne 81.44 321 *e*P **P** **20 33 48.7 +0.7**
VYHS *e*pP pP 20 34 02.1 -0.4
KOLL Kolacno 81.63 321 *e*P **P** **20 33 50.8 +1.8**
KOLL Kolacno 81.63 321 *e*P **P** **20 33 50.8 +1.8**
KOLL Kolacno 81.63 321 *e*P **P** **20 33 50.8 +1.8**
DPC Dobruska-Polom 81.71 324 *e*P **P** **20 33 48.6 -0.8**
DPC *e* pP 20 34 03.1 -0.8
DPC MLR MLR
comp=Z,2μm,16.6s,MS5.5
DPC Dobruska-Polom 81.71 324 *e*P **P** **20 33 48.6 -0.8**
DPC *e*pP pP 20 34 03.1 -0.8
DPC AMS AMS 21 13 20.0
comp=Z,2μm,16.6s
UPC Upice 81.78 324 *e*P **P** **20 33 49.5 -0.2**
UPC *e* pP 20 34 01.0 -3.3
UPC Upice 81.78 324 *e*P **P** **20 33 49.5 -0.2**
UPC *e*pP pP 20 34 01.0 -3.3
OD2 Odessa Site #2 81.97 40 *e*P **P** **20 33 51.2 +0.4**
comp=Z,3.7nm,0.7s,mb4.4
ATD Arta Tunnel 82.17 279 P **P** **20 33 54.0 +1.7**
comp=Z,4.2nm,0.6s,mb4.5,baz=94,slow=19,SNR=7.9
NEW Newport 82.35 38 *e*P **P** **20 33 51.1 -1.7**
comp=Z,6.4nm,1.0s,mb4.5
NEW Newport 82.35 38 *e*P **P** **20 33 51.1 -1.6**
NEW pmax pmax
comp=Z,6.0nm,1.0s
PVCC Panska Ves 82.51 325 *e*P **P** **20 33 52.2 -1.3**
PVCC *e* pP 20 34 08.3 +0.2
PVCC MLR MLR
comp=Z,2μm,16.4s,MS5.5
PVCC Panska Ves 82.51 325 *e*P **P** **20 33 52.2 -1.3**
PVCC *e*pP pP 20 34 08.3 +0.2
PVCC AMS AMS 21 14 40.0
comp=Z,2μm,16.4s
BRG Berggiesshubel 82.61 325 *e*P **P** **20 33 53.6 -0.5**
comp=Z,34nm,2.0s,mb5.0
BRG Berggiesshubel 82.61 325 *e*(P) **P** **20 33 54.8 +0.8**
comp=Z,34nm,1.9s,mb5.0
BRG
comp=Z,2μm,16.2s
BRG
comp=N,1μm,16.3s
BRG
comp=E,1μm,16.3s
BRG Berggiesshubel 82.61 325 *e*P **P** **20 33 54.8 +0.7**
BRG pmax pmax
comp=Z,203nm,2.0s,mb5.8
BRG MLR MLR
comp=Z,1μm,16.2s,MS5.3
BRG MLR MLR
comp=N,670nm,16.3s,MS5.3
BRG MLR MLR
comp=E,750nm,16.3s,MS5.3
TREC Trest 82.77 323 AMS AMS 21 14 00.0
comp=E,1μm,16.9s
CLL Collm 82.81 326 *e*P **P** **20 33 54.5 -0.6**
comp=Z,41nm,2.1s,mb5.1
CLL Collm 82.81 326 *e*P **P** **20 33 55.0 -0.1**
comp=Z,8.0nm,0.8s,mb4.8
CLL *e*pP pP 20 34 07.0 -2.7
CLL LR LR
comp=Z,3μm,18.2s,MS5.7
CLL Collm 82.81 326 *e*P **P** **20 33 55.0 -0.1**
CLL *e**PP pP 20 34 07.0 -2.7
CLL pmax pmax
comp=Z,32nm,0.8s,mb5.4
CLL MLR MLR
comp=Z,3μm,18.2s,MS5.7
CLL Collm 82.81 326 *e*P **P** **20 33 55.0 -0.1**
comp=Z,8.0nm,0.8s,mb4.8
CLL *e*pP pP 20 34 07.0 -2.7
CLL *e*(sP) sP 20 34 14.0 -1.3
CLL *e*PP PP 20 37 13.0 +7.9
CLL *e*PPPP 20 40 36.0
CLL *e*PPS 20 45 19.0
CLL *e*(SS) 20 50 14.0
CLL *e* 20 54 00.0
CLL Lm 21 14 00.0
comp=N,1μm,19.6s
CLL Lm 21 14 00.0
comp=E,2μm,19.3s
CLL Lm 21 14 00.0
comp=Z,3μm,18.2s
PRU Pruhonice 82.85 324 *e*P **P** **20 33 56.5 +1.2**
PRU *e* pP 20 34 08.8 -1.1
PRU MLR MLR
comp=Z,2μm,15.3s,MS5.5
PRU Pruhonice 82.85 324 *e*P **P** **20 33 56.5 +1.2**
PRU *e*pP pP 20 34 08.8 -1.1
PRU AMS AMS 21 14 10.0
comp=Z,2μm,15.3s
FBE Freiberg 82.88 325 *e*P **P** **20 33 55.7 +0.3**
comp=Z,76nm,1.9s,mb5.4
I07A Izee 83.38 43 ⇑PcP PcP 20 33 59.8 -2.7
baz=83
CONA Conrad Observa 83.39 322⇑ *i*PcP PcP 20 33 59.2 -3.3
comp=Z,27nm,2.1s

NRDL Niedersach Rie 83.45 328 *eP* **P 20 33 57.8 -0.6**
comp=Z,46nm,2.2s,mb5.1
NEUB Neuenburg 83.48 326 *eP* **P 20 33 58.5 0.0**
comp=Z,50nm,1.5s,mb5.3
WALA Waterton Lakes 83.59 37 *eP* **P 20 33 59.7 +0.6**
comp=Z,2.5nm,2.3s,mb3.9
TANN Tannenbergstha 83.64 325 *eP* **P 20 33 59.4 0.0**
comp=Z,34nm,2.0s,mb5.1
WERD Werda 83.70 325 *eP* **P 20 33 59.7 0.0**
comp=Z,37nm,1.9s,mb5.2
B13A Whitefish 83.71 37 ⇑PcP PcP 20 34 02.2 -1.6
baz=84
GUNZ Gunzen 83.74 325 *eP* **P 20 34 00.0 +0.1**
comp=Z,39nm,2.0s,mb5.2
PLN Plauen 83.75 325 *eP* **P 20 34 00.0 +0.1**
CLZ Clausthal 83.75 327 *eP* **P 20 34 00.2 +0.3**
comp=Z,57nm,1.8s,mb5.4
CLZ Clausthal 83.75 327 *eP* **P 20 34 00.2 +0.3**
CLZ pmax pmax
comp=Z,57nm,1.8s,mb5.4
NKC Novy Kostel 83.76 325 *eP* **P 20 34 00.3 +0.3**
NKC *e* pP 20 34 12.8 -1.8
NKC MLR MLR
comp=Z,3μm,16.2s,MS5.7
NKC Novy Kostel 83.76 325 *eP* **P 20 34 00.3 +0.3**
NKC *ep*P pP 20 34 12.8 -1.8
NKC AMS AMS 21 15 40.0
comp=Z,3μm,16.2s
WERN Wernitzgruen 83.76 325 *eP* **P 20 34 00.1 +0.1**
comp=Z,36nm,1.7s,mb5.2
BSMT Bassoo Peak 83.86 38 *eP* **P 20 34 00.3 -0.2**
comp=Z,9.4nm,1.2s,mb4.8
KHC Kasperske Hory 83.87 324 *eP* **P 20 33 59.7 -0.9**
KHC AMS AMS 21 16 00.0
comp=Z,2μm,15.6s
A14A Double T Ranch 83.89 36 ⇑PcP PcP 20 34 02.2 -2.4
baz=84,SNR=7.1
MOX Moxa 83.91 326 *eP* **P 20 34 00.5 -0.3**
comp=Z,44nm,2.1s,mb5.2
MOX
comp=Z,2μm,19.0s
MOX Moxa 83.91 326 *eP* **P 20 34 00.7 -0.1**
comp=Z,41nm,1.9s,mb5.2
MOX Moxa 83.91 326 *eP* **P 20 34 00.5 -0.3**
MOX pmax pmax
comp=Z,19nm,2.1s,mb4.9
MOX MLR MLR
comp=Z,44μm,19.0s
GEC2 GERESS Array S 83.98 324 *eP* **P 20 34 01.0 -0.2**
comp=Z,17nm,1.6s,mb4.9
GEC2 GERESS Array S 83.98 324 *eP* **P 20 34 01.0 -0.2**
GEC2 pmax pmax
comp=Z,17nm,1.6s,mb4.9
D12A Red Ives Fores 84.03 39 ⇑PcP PcP 20 34 02.6 -2.7
baz=84
C13A Hot Springs 84.08 38 ⇑PcP PcP 20 34 03.3 -2.2
baz=84
ROTZ Rotzenmuhle 84.17 325 *eP* **P 20 34 02.6 +0.5**
comp=Z,35nm,1.9s,mb5.2
WET Wettzell 84.22 324 *eP* **P 20 34 02.3 -0.1**
comp=Z,42nm,2.2s,mb5.2
WET Wettzell 84.22 324 *eP* **P 20 34 02.3 -0.1**
WET pmax pmax
comp=Z,42nm,2.2s,mb5.2
A15A Johnson Ranch, 84.25 36 ⇓PcP PcP 20 34 03.7 -2.5
baz=84
E12A Beaver Dam Sad 84.29 39 ⇑PcP PcP 20 34 03.5 -2.9
baz=84
B14A Marquette Ranc 84.35 37 ⇓PcP PcP 20 34 04.6 -2.1
baz=84,SNR=9.8
J08A Circle Bar Ran 84.41 43 ⇑PcP PcP 20 34 05.1 -1.9
baz=84
C14A Swan Lake 84.46 37 ⇑PcP PcP 20 34 05.3 -1.9
baz=84
SWMT Swartz Lake 84.49 38 *eP* **P 20 34 04.5 +0.7**
comp=Z,6.8nm,1.1s,mb4.7
SWMT *e* pP 20 34 19.8 +1.4
GRA1 Grafenberg Arr 84.72 325 *eP* **P 20 34 05.1 +0.2**
comp=Z,39nm,1.4s,mb5.3
GRA1 LR LR
comp=Z,2μm,19.2s,MS5.5
GRF Grafenberg Arr 84.72 325 *eP* **P 20 34 05.1 +0.2**
comp=Z,39nm,1.4s,mb5.3
GRF *eL* 21 15 39.0
comp=Z,2μm,19.2s
GRF Grafenberg Arr 84.72 325 *eP* **P 20 34 05.1 +0.2**
GRF pmax pmax
comp=Z,39nm,1.4s,mb5.3
GRF MLR MLR
comp=Z,2μm,19.2s,MS5.5
GRF Grafenberg Arr 84.72 325 *eP* **P 20 34 05.1 +0.2**
GRF pmax pmax
comp=Z,39nm,1.4s,mb5.3
GRF MLR MLR
comp=Z,2μm,19.2s,MS5.5
GRFO Grafenberg 84.72 325 *eP* **P 20 34 04.3 -0.6**
comp=Z,24nm,1.2s,mb5.2
GRFO Grafenberg 84.72 325 *eP* **P 20 34 04.3 -0.6**
GRFO pmax pmax
comp=Z,24nm,1.2s,mb5.2
B15A Bradely Ranch, 84.75 37 ⇓PcP PcP 20 34 06.4 -2.0
baz=84,SNR=6.0
A16A West Butte Ran 84.85 36 ⇓PcP PcP 20 34 06.6 -2.2
baz=85
F12A Elk City 84.86 40 ⇓PcP PcP 20 34 06.9 -2.0
baz=85,SNR=10
SLMT Seeley Lake 84.92 38 *eP* **P 20 34 06.1 +0.2**
comp=Z,16nm,1.2s,mb5.0
MSO Missoula 84.94 38 ⇓PcP PcP 20 34 07.5 -1.7
baz=85
D14A Greenough 85.02 38 ⇓PcP PcP 20 34 07.7 -2.0
baz=85
C15A Salmond Ranch, 85.06 37 ⇓PcP PcP 20 34 08.2 -1.7
baz=85,SNR=6.4
RJOB Jochberg 85.14 323 *eP* **P 20 34 07.2 +0.2**
comp=Z,34nm,2.0s,mb5.1
G12A Big Creek, Yel 85.20 40 ⇓PcP PcP 20 34 08.2 -2.2
baz=85
CHMT Chamberlain Mo 85.25 38 *eP* **P 20 34 08.4 +0.8**
comp=Z,2.4nm,1.4s,mb4.1
A17A Triple J Farms 85.31 35 ⇓PcP PcP 20 34 08.7 -2.1
baz=85,SNR=5.2
FFC Flin Flon 85.33 27 *eP* **P 20 34 08.4 +0.6**
comp=Z,10nm,0.9s,mb5.0
FFC Flin Flon 85.33 27 *eP* **P 20 34 08.4 +0.6**
FFC pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
C16A Fuhringer Ranc 85.50 37 ⇓PcP PcP 20 34 10.1 -1.6
baz=85
B17A L&G Farms, Che 85.68 36 ⇑PcP PcP 20 34 10.6 -1.9
baz=85
TNS Taunus Mts 85.73 327 *eP* **P 20 34 09.8 -0.1**
comp=Z,95nm,2.2s,mb5.6
TNS Taunus Mts 85.73 327 *eP* **P 20 34 09.8 -0.1**
TNS pmax pmax
comp=Z,95nm,2.2s,mb5.6
A18A Metzger Ranch, 85.75 35 ⇑PcP PcP 20 34 11.1 -1.8
baz=86
H12A Diamond D Ranc 85.81 41 ⇑PcP PcP 20 34 11.9 -1.3
baz=86,SNR=5.8
PAHR Pah Rah Range 85.93 46 *eP* **P 20 34 11.9 +0.8**
comp=Z,7.9nm,0.9s,mb4.9
C17A Wharram Farm, 86.12 36 ⇓PcP PcP 20 34 12.7 -1.8
baz=86
B18A Beardsley Farm 86.13 35 ⇑PcP PcP 20 34 13.3 -1.3
baz=86
HRY Holter Researc 86.14 38 *eP* **P 20 34 11.8 -0.3**
comp=Z,2.5nm,0.5s,mb4.7
H13A Challis 86.15 40 ⇑PcP PcP 20 34 13.3 -1.4
baz=86
CMB Columbia Colle 86.23 48 *eP* **P 20 34 12.7 0.0**
comp=Z,7.2nm,1.0s,mb4.9
CMB Columbia Colle 86.23 48 *eP* **P 20 34 12.7 +0.1**
CMB pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
FRB Frobisher Bay 86.36 8 LR LR 21 13 40.1
comp=Z,554nm,21.8s,MS4.9,baz=12,slow=36
LRM Limekiln Ridge 86.37 38 *eP* **P 20 34 13.6 +0.4**
comp=Z,365nm,2.3s
EGMT Eagleton 86.38 36 ⇑PcP PcP 20 34 14.8 -0.8
baz=86
EGMT Eagleton 86.38 36 *eP* **P 20 34 12.7 -0.5**
comp=Z,19nm,1.1s,mb5.2
D17A Six Diamond Ra 86.47 37 ⇑PcP PcP 20 34 14.9 -1.1
baz=86
B19A Brinkman Farms 86.51 35 ⇓PcP PcP 20 34 14.8 -1.3
baz=86

WAKR Walker 86.58 47 *eP* **P 20 34 15.3 +0.9**
DLMT Dillon 86.58 39 *eP* **P 20 34 15.3 +1.1**
comp=Z,7.0nm,1.1s,mb4.8
DLMT *e* pP 20 34 29.8 +0.9
I13A Wildhorse Cree 86.62 41 ⇓PcP PcP 20 34 16.6 -0.1
baz=86,SNR=7.1
HLID Hailey 86.67 41 ⇓PcP PcP 20 34 16.4 -0.6
baz=86
HLID Hailey 86.67 41 *eP* **P 20 34 15.9 +1.2**
comp=Z,5.7nm,1.0s,mb4.8
G15A Dillon 86.76 39 ⇓PcP PcP 20 34 16.5 -0.8
baz=86,SNR=6.4
E17A Martinsdale 86.82 37 ⇑PcP PcP 20 34 16.8 -0.8
baz=87
J13A Cove Ranch, Pi 86.91 41 ⇓PcP PcP 20 34 18.0 0.0
baz=87,SNR=5.8
BOZ Bozeman (W) 86.93 38 ⇓PcP PcP 20 34 17.2 -0.9
baz=87
BOZ Bozeman (W) 86.93 38 *eP* **P 20 34 16.7 +0.8**
comp=Z,5.5nm,1.1s,mb4.7
BOZ Bozeman (W) 86.93 38 *eP* **P 20 34 16.7 +0.8**
BOZ pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
C19A Slack Wire Ran 86.93 35 ⇑PcP PcP 20 34 17.0 -1.1
baz=87
I14A Mackay 86.99 40 ⇓PcP PcP 20 34 18.3 -0.1
baz=87,SNR=7.2
BFO Black Forest 87.05 325 *eP* **P 20 34 15.8 -0.6**
comp=Z,56nm,2.5s,mb5.3
BFO Black Forest 87.05 325 *eP* **P 20 34 15.8 -0.6**
BFO pmax pmax
comp=Z,56nm,2.5s,mb5.3
E18A Harlowton 87.25 37 ⇑PcP PcP 20 34 19.0 -0.4
baz=87
J14A Carey 87.33 41 ⇓PcP PcP 20 34 20.5 +0.6
baz=87
NVAR Mina Array Bea 87.35 47 P **P 20 34 19.4 +1.3**
comp=Z,0.6nm,0.5s,mb4.1,baz=278,slow=6.0,SNR=4.8
D19A Cripps Ranch, 87.39 36 ⇑PcP PcP 20 34 19.3 -0.8
baz=87
C20A Veseth Ranch, 87.47 35 ⇑PcP PcP 20 34 20.0 -0.5
baz=87
F18A Big Timber 87.79 37 ⇓PcP PcP 20 34 21.6 -0.2
baz=88
D20A Manuel Ranch, 87.82 36 ⇑PcP PcP 20 34 21.6 -0.4
baz=88
E19A Rath Farm, Rou 87.91 36 ⇓PcP PcP 20 34 22.2 -0.2
baz=88
IMW Indian Meadow 88.42 39 *eP* **P 20 34 24.5 +1.4**
comp=Z,6.7nm,1.1s,mb4.8
FLWY Flagg Ranch 88.44 39 *eP* **P 20 34 24.1 +0.9**
comp=Z,35nm,1.6s,mb5.3
RLMT Red Lodge 88.54 38 *eP* **P 20 34 23.8 +0.2**
comp=Z,44nm,2.2s,mb5.4
RLMT *e* pP 20 34 38.7 +0.4
BGU Big Grassy Mou 89.10 43 *eP* **P 20 34 28.3 +2.0**
comp=Z,27nm,2.1s,mb5.2
HWUT Hardware Ranch 89.53 41 *eP* **P 20 34 29.3 +1.0**
comp=Z,12nm,1.1s,mb5.1
HWUT *e* pP 20 34 44.6 +1.6
DUG Dugway 89.69 43 *eP* **P 20 34 28.8 -0.3**
comp=Z,63nm,2.3s,mb5.5
DUG Dugway 89.69 43 *eP* **P 20 34 28.8 -0.3**
DUG pmax pmax
comp=Z,63nm,2.3s,mb5.5
PDAR Pinedale Array 89.92 39 P **P 20 34 31.2 +1.1**
comp=Z,1.4nm,0.8s,mb4.3,baz=303,slow=3.0,SNR=9.1
PPT Papeete 90.22 110 *eS* S 20 45 22.4 +0.2
comp=Z,224nm,27.2s
PPT *eLR* LR 21 03 27.7
comp=Z,407nm,23.5s
PPT Papeete 90.22 110 LR LR 21 15 05.2
comp=Z,255nm,18.0s,MS4.7,baz=181,slow=36
SHPR Sheep Range 90.50 47 *eP* **P 20 34 33.9 +0.9**
comp=Z,4.7nm,1.2s,mb4.7
MSU Marysvale 91.13 44 *eP* **P 20 34 37.7 +1.8**
comp=Z,45nm,2.1s,mb5.4
MSU Marysvale 91.13 44 *eP* **P 20 34 37.7 +1.9**
MSU pmax pmax
comp=Z,45nm,2.1s,mb5.4
ULM Lac du Bonnet 91.16 28 LR LR 21 23 58.8
comp=Z,204nm,18.2s,MS4.6,baz=328,slow=41
RSSD Black Hills 91.95 36 *eP* **P 20 34 40.5 +0.9**
comp=Z,8.3nm,1.1s,mb5.0
RSSD Black Hills 91.95 36 *eP* **P 20 34 40.5 +0.9**
RSSD pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
KMBO Kilima Mbogo 93.08 270 LR LR 21 19 45.0
comp=Z,276nm,20.3s,MS4.7,baz=90,slow=38
PV04 Paradox Valley 93.17 42 *eP* **P 20 34 46.1 +0.9**
PV04 *e* pP 20 35 02.4 +2.4
TBI Tubuai 93.21 115 *eLR* LR 21 04 45.7
comp=Z,485nm,22.8s,baz=303
PV01 Paradox Valley 93.53 42 *eP* **P 20 34 47.8 +0.8**
comp=Z,262nm,1.0s
PV01 *e* pP 20 35 02.9 +1.2
TAOE Nuku Hiva Isla 93.98 98 *eLR* LR 21 04 37.8
comp=Z,419nm,24.9s
KEST Kesra 94.83 315 LR LR 21 25 22.4
comp=Z,244nm,18.3s,MS4.7,baz=331,slow=40
SCHQ Schefferville 95.21 10 LR LR 21 20 39.9
comp=Z,553nm,20.5s,MS5.0,baz=281,slow=37
ESDC Sonseca Array 99.40 326 LR LR 21 28 55.5
comp=Z,743nm,18.1s,MS5.2,baz=35,slow=41
TXAR Lajitas Array 102.48 46 P Pdif 20 35 28.3 +1.2
comp=Z,0.1nm,0.3s,baz=184,slow=0.8,SNR=4.1
TXAR Lajitas Array 102.48 46 P Pdif 20 35 28.3 +1.2
RKT Rikitea 104.90 108 *eLR* LR 21 10 01.2
comp=Z,299nm,25.0s
BDFB Brasilia 166.56 352 PKPab PKPab 20 42 39.5 +0.7
comp=Z,3.0nm,0.7s,baz=102,slow=15,SNR=4.3
BDFB Brasilia 166.56 352 PKP2 PKPab 20 42 39.5 +0.7
BDFB pmax pmax
comp=Z,3.0nm,0.7s

IDC ***13*** *20:27:49.5±3.2, 38°.67N×122°.97W, h0km, mb1 3.4/4, mb1mx3.2/25, mbtmp2.9/4, ML3.5/2, Error ellipse: s-maj=42.5km s-min=15.2km az=38.0*
ISCJB ***13*** *20:27:52.0±0.5, 38°.80N±0°.03×122°.71W±0°.05, h10km, Error ellipse: s-maj=6.3km s-min=4.3km az=150.4*
NEIC ***13*** *20:27:52.1, 38°.79N×122°.76W, h3km, MW3.6(BRK), After NCEDC.*
ISC 13 20:27:52.7±0.5,**38°.81N**±0°.04×**122°.78W**±0°.06,**h10km**,**n23**, σ1§**15**/26,**Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPS	**Hopland**	**0.29**	**308**	*eP*g	**Pg**	**20 27 58.6**	**0.0**
HOPS				*eS*g	**Sg**	**20 28 06.2**	**+3.6**
MCCM	**Marconi Confer**	**0.67**	**187**	*eP*g	**Pg**	**20 28 05.3**	**-0.3**
MCCM				*eS*g	**Sg**	**20 28 16.4**	**+2.1**
KCPM	**Cahto Peak**	**1.07**	**325**	*eP*g	**Pg**	**20 28 13.1**	**-0.3**
KIPM	**Iron Peak**	**1.14**	**331**	*eP*n	**Pn**	**20 28 14.6**	**-0.1**
SAC	**San Andreas**	**1.26**	**167**	*eP*n	**Pn**	**20 28 14.2**	**-2.1**
WDC	**Whiskeytown Da**	**1.78**	**6**	*eP*n	**Pn**	**20 28 22.6**	**-0.8**
CMB	**Columbia Colle**	**2.03**	**112**	*eP*n	**Pn**	**20 28 26.0**	**-0.9**
KHMM	**Horse Mountain**	**2.19**	**341**	*eP*n	**Pn**	**20 28 28.8**	**-0.3**
SAO	**San Andreas Ge**	**2.30**	**152**	*eP*n	**Pn**	**20 28 28.0**	**-2.6**
WCN	**Washoe City**	**2.40**	**77**	*eP*n	**Pn**	**20 28 32.5**	**+0.5**
WAKR	**Walker**	**2.63**	**96**	*eP*n	**Pn**	**20 28 36.1**	**+1.0**
PAHR	**Pah Rah Range**	**2.78**	**70**	*eP*n	**Pn**	**20 28 36.9**	**-0.3**
YBH	**Yreka Blue Hor**	**2.92**	**1**	Pn	**Pn**	**20 28 40.7**	**+1.6**
	0.2nm,0.3s,baz=188,slow=11,SNR=3.9						
YBH	**Yreka Blue Hor**	**2.92**	**1**	*eP*n	**Pn**	**20 28 40.1**	**+1.0**
NVAR	**Mina Array Bea**	**3.52**	**95**	Pn	**Pn**	**20 28 48.0**	**+0.5**
	1.6nm,0.3s,baz=266,slow=12,SNR=44						
NVAR				Lg		20 29 44.7	
	4.2nm,0.3s,baz=274,slow=29,SNR=5.0						
NVAR	**Mina Array Bea**	**3.52**	**95**	Pn	**Pn**	**20 28 48.0**	**+0.5**
NVAR				Lg		20 29 44.7	
MOD	**Modoc**	**3.62**	**31**	*eP*n	**Pn**	**20 28 49.5**	**+0.8**
HUMO	**Hull Mountain**	**3.79**	**358**	Pn	**Pn**	**20 28 51.8**	**+0.6**
ISA	**Isabella**	**4.65**	**131**	*eP*n	**Pn**	**20 29 03.2**	**+0.2**
ISA				*eS*n	**Sn**	**20 29 58.0**	**+1.0**
WVOR	**Wild Horse Val**	**4.80**	**40**	*eP*n	**Pn**	**20 29 03.3**	**-1.6**
MSU	**Marysvale**	**8.30**	**89**	*eP*n	**Pn**	**20 29 54.7**	**+1.7**
	1.2nm,0.6s						
PDAR	**Pinedale Array**	**10.77**	**64**	Pn	**Pn**	**20 30 31.1**	**+4.2**
	0.1nm,0.3s,baz=247,slow=12,SNR=7.0						
TXAR	**Lajitas Array**	**18.41**	**115**	P	**Pn**	**20 32 06.3**	**-1.6**
	baz=278,slow=8.8,SNR=2.1						

IDC ***13*** *20:37:03.4±1.4, 36°.45N×136°.41E, h254km±15km, mb3.1/4, mb1 3.6/5, mb1mx3.1/23, mbtmp3.4/5, Error ellipse: s-maj=27.7km s-min=16.2km az=96.0*
NEIC ***13*** *20:37:03.8±0.9, 36°.49N×136°.54E, h258km±9km, mb3.7/2, Error ellipse: s-maj=23.9km s-min=16.2km az=95.0*
ISCJB ***13*** *20:37:04.6±0.5, 36°.29N±0°.05×137°.10E±0°.08, h271km±3km, mb3.0/6, Error ellipse: s-maj=11.2km s-min=7.3km az=31.5*
JMA ***13*** *20:37:05.3±0.1, 36°.28N×137°.12E, h268km±1km, M3.3*
ISC 13 20:37:05.5±0.5,**36°.28N**±0°.05×**137°.10E**±0°.08,**h265**km±3km, **n26**, σ0§**61**/40,**mb3.0**/6,**Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.19**	**107**	P	**Pn**	**20 37 39.6**	**+0.1**
JGN				*eS*	**S**	**20 38 05.8**	**-0.5**
JKG	**Kaga**	**0.62**	**270**	P	**Pn**	**20 37 40.8**	**+0.3**
JGM	**Miyama**	**0.65**	**208**	P	**Pn**	**20 37 40.7**	**0.0**
JGM				S	**S**	**20 38 07.9**	**-0.5**
MAJO	**Matsushiro**	**0.94**	**73**	*eP*n	**Pn**	**20 37 41.8**	**0.0**
MAJO				*eS*n	**S**	**20 38 10.9**	**+0.6**
MAT	**Matsushiro**	**0.94**	**73**	P	**Pn**	**20 37 42.0**	**+0.2**
MAT				S	**S**	**20 38 10.4**	**0.0**
MAT	**Matsushiro**	**0.94**	**73**	P	**Pn**	**20 37 42.1**	**+0.3**
MAT				S	**S**	**20 38 10.6**	**+0.2**
MJAR	**Matsushiro Arr**	**0.94**	**73**	P	**Pn**	**20 37 42.4**	**+0.6**
	17nm,0.3s,baz=256,slow=8.0,SNR=166						
JSZ	**Suzu**	**1.19**	**10**	P	**Pn**	**20 37 43.1**	**0.0**
JSZ				S	**S**	**20 38 12.7**	**-0.2**
JYN	**Shimob**	**1.41**	**123**	P	**Pn**	**20 37 44.7**	**0.0**
JRY	**Ryogami san**	**1.48**	**100**	P	**Pn**	**20 37 45.3**	**+0.2**
JRY				S	**S**	**20 38 16.1**	**-0.3**
JHG	**Hegura jima**	**1.57**	**355**	P	**Pn**	**20 37 46.0**	**+0.3**
JHG				S	**S**	**20 38 18.4**	**+0.8**
JWT	**Wachi**	**1.70**	**235**	P	**Pn**	**20 37 46.5**	**-0.3**
JWT				S	**S**	**20 38 18.5**	**-0.8**
JAG	**Ashikaga**	**1.91**	**85**	P	**Pn**	**20 37 48.0**	**-0.4**
JAG				S	**S**	**20 38 20.8**	**-1.5**
JIE	**Ise**	**1.91**	**190**	P	**Pn**	**20 37 49.2**	**+0.7**
JIE				S	**S**	**20 38 22.7**	**+0.2**
JOD2	**Odawara 2**	**1.91**	**121**	P	**Pn**	**20 37 48.3**	**-0.2**
JOD2				S	**S**	**20 38 23.4**	**+0.9**
JSD	**Sado**	**1.99**	**28**	P	**Pn**	**20 37 49.2**	**+0.2**
JSD				S	**S**	**20 38 23.8**	**+0.3**
JWY	**Kouya**	**2.40**	**211**	P	**Pn**	**20 37 53.3**	**+0.4**
JWY				S	**S**	**20 38 30.2**	**-0.2**
ASAJ	**Asahikawa**	**8.89**	**27**	P	**Pn**	**20 39 07.3**	**-2.4**
	7.7nm,0.3s,baz=233,slow=9.5,SNR=80						
ASAJ	**Asahikawa**	**8.89**	**27**	*eP*n	**Pn**	**20 39 06.8**	**-3.0**
	10nm,0.4s						
MKAR	**Makanchi Array**	**41.58**	**302**	P	**P**	**20 44 21.8**	**-5.7**
	0.1nm,0.6s,mb2.2,baz=84,slow=9.9,SNR=1.9						
KURK	**Kurchatov**	**43.67**	**308**	P	**P**	**20 44 40.2**	**-4.0**
	0.8nm,0.6s,mb3.1						
ILAR	**Eielson Array**	**51.98**	**32**	P	**P**	**20 45 47.7**	**+0.3**
	0.3nm,0.8s,mb2.7,baz=266,slow=5.1,SNR=3.2						
WRA	**Warramunga Arr**	**55.97**	**183**	P	**P**	**20 46 16.3**	**-0.4**
	1.2nm,0.4s,mb3.7,baz=359,slow=7.7,SNR=20						
WRA	**Warramunga Arr**	**55.97**	**183**	P	**P**	**20 46 16.3**	**-0.4**
ASAR	**Alice Springs**	**59.70**	**183**	P	**P**	**20 46 42.4**	**+0.1**
	0.3nm,0.4s,mb3.2,baz=0.8,slow=6.4,SNR=6.1						
TXAR	**Lajitas Array**	**93.30**	**50**	P	**P**	**20 49 51.1**	**+0.7**
	0.3nm,0.9s,mb3.2,baz=318,slow=1.7,SNR=3.4						

NIED ***13*** *20:47:00.29°.00N×130°.00E, h32km, Mw4.1 Best double couple: M0 1.47000×10^15 NP1:φs 51.00000°, δ77.00000°, λ66.00000°. NP2:φs 293.00000°, δ27.00000°, λ149.00000°.*
IDC ***13*** *20:47:28.3±0.8, 29°.03N×130°.03E, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.8/23, mbtmp3.7/11, ML3.4/1, Error ellipse: s-maj=29.8km s-min=19.1km az=75.0*
ISCJB ***13*** *20:47:33.7±0.5, 28°.98N±0°.04×130°.15E±0°.07, h57km±4km, mb3.8/15, Error ellipse: s-maj=11.6km s-min=4.5km az=21.2*
JMA ***13*** *20:47:33.6±0.3, 29°.01N×130°.00E, h67km±4km, M4.0*
JMA Felt I J1.
NEIC ***13*** *20:47:35.2±0.8, 29°.00N×130°.16E, h52km±8km, mb4.1/5, Error ellipse: s-maj=11.2km s-min=7.7km az=122.0*
ISC 13 20:47:35.0±0.5,**28°.99N**±0°.04×**130°.12E**±0°.07,**h48**km±5km, **n32**, σ0§**85**/39,**mb3.8**/15,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.68**	**191**	P	**Pn**	**20 47 48.4**	**0.0**
JZK				*eS*	**Sn**	**20 47 59.2**	**+1.1**
JAM	**Amami Oshima**	**0.73**	**218**	P	**Pn**	**20 47 47.9**	**-1.1**
JAM				*eS*	**Sn**	**20 47 58.6**	**-0.6**
JNN	**Nakanoshima**	**0.88**	**346**	P	**Pn**	**20 47 49.9**	**-1.1**
JNN				*eS*	**Sn**	**20 48 02.7**	**0.0**
JKC	**Kuchinoerabu**	**1.47**	**3**	P	**Pn**	**20 47 58.4**	**-0.6**
JKC				*eS*	**Sn**	**20 48 17.9**	**+0.8**
JTK	**Tokunoshima**	**1.58**	**221**	P	**Pn**	**20 48 00.8**	**+0.3**
JTK				*eS*	**Sn**	**20 48 21.1**	**+1.3**
JTN	**Tanegashima 3**	**1.82**	**24**	P	**Pn**	**20 48 03.3**	**-0.5**
JOW	**Kunigami**	**2.70**	**218**	*eP*n	**Pn**	**20 48 15.6**	**-0.3**
JOW	**Kunigami**	**2.70**	**218**	P	**Pn**	**20 48 15.9**	**+0.1**
JIH	**Iheya**	**2.72**	**225**	P	**Pn**	**20 48 16.1**	**-0.1**
JAGN	**Aguni-jima**	**3.49**	**228**	P	**Pn**	**20 48 27.1**	**+0.3**
JAGN				*eS*	**Sn**	**20 49 05.0**	**-1.9**
JJT2	**Tamagusuku 2**	**3.53**	**217**	P	**Pn**	**20 48 28.0**	**+0.7**
JKE	**Kume jima 2**	**3.97**	**229**	P	**Pn**	**20 48 33.2**	**-0.1**
JKE				*eS*	**Sn**	**20 49 17.5**	**-1.1**
JNU	**Nakatsue**	**4.17**	**9**	*eP*n	**Pn**	**20 48 37.0**	**+0.9**
KSRS	**Korea Array**	**8.64**	**348**	Pn	**Pn**	**20 49 39.4**	**+2.0**
	0.2nm,0.3s,baz=166,slow=14,SNR=7.7						
MAJO	**Matsushiro**	**10.15**	**40**	*eP*n	**Pn**	**20 49 57.3**	**-0.7**
MJAR	**Matsushiro Arr**	**10.15**	**40**	Pn	**Pn**	**20 49 57.5**	**-0.5**
	0.3nm,0.3s,baz=253,slow=13,SNR=6.4						
ENH	**Enshi**	**17.98**	**279**	*eP*n	**Pn**	**20 51 43.8**	**+2.3**
	4.1nm,0.5s						
KMI	**Kunming**	**24.66**	**268**	P	**P**	**20 52 52.8**	**+1.5**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**25.95**	**323**	*eP*	**P**	**20 53 02.3**	**-0.4**
	comp=Z,1.3nm,0.6s,mb3.6						
SONM	**Songino Array**	**26.28**	**322**	P	**P**	**20 53 05.3**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.2,baz=140,slow=9.1,SNR=6.0						
MKAR	**Makanchi Array**	**41.02**	**309**	P	**P**	**20 55 13.2**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.1,baz=89,slow=9.8,SNR=6.0						
MKAR				PcP	PcP	20 57 12.2	-0.4
	comp=Z,0.4nm,0.7s,baz=79,slow=3.1,SNR=5.0						
ZALV	**Zalesovo Beam**	**41.14**	**320**	P	**P**	**20 55 13.7**	**-0.5**
	comp=Z,0.7nm,0.4s,mb3.7,baz=111,slow=8.7,SNR=4.4						
WRA	**Warramunga Arr**	**48.81**	**175**	P	**P**	**20 56 15.9**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.7,baz=354,slow=8.4,SNR=4.1						
BRVK	**Borovoye**	**49.45**	**317**	*eP*	**P**	**20 56 20.2**	**+0.2**
	comp=Z,5.6nm,0.7s,mb4.7						
KBL	**Kabul**	**51.55**	**293**	P	**P**	**20 56 36.3**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**52.48**	**176**	P	**P**	**20 56 43.6**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.5,baz=8.6,slow=14,SNR=7.8						
ABKAR	**Akbulak array**	**56.02**	**312**	*eP*	**P**	**20 57 08.2**	**-0.5**
	comp=Z,1.5nm,0.6s,mb4.2						
ILAR	**Eielson Array**	**61.22**	**29**	P	**P**	**20 57 44.4**	**-0.2**
	comp=Z,0.2nm,0.6s,mb3.5,baz=289,slow=7.7,SNR=4.1						
ARCES	**ARCESS Array B**	**68.06**	**338**	P	**P**	**20 58 29.8**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.7,baz=86,slow=6.3,SNR=3.5						
FINES	**FINESS Array B**	**71.30**	**331**	P	**P**	**20 58 48.1**	**-1.0**
	comp=Z,1.1nm,0.6s,mb4.0,baz=70,slow=4.9,SNR=11						
YKA	**Yellowknife Ar**	**75.33**	**26**	P	**P**	**20 59 12.7**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=292,slow=5.5,SNR=2.6						
BRTR	**Keskin Array B**	**76.67**	**308**	P	**P**	**20 59 20.1**	**-0.8**
	comp=Z,0.9nm,0.6s,mb3.9,baz=81,slow=4.8,SNR=6.0						

IDC ***13*** *20:48:54.9±1.2, 3°.68N×124°.57E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/20, mbtmp3.7/5, Error ellipse: s-maj=104.5km s-min=18.9km az=70.0*
ISCJB ***13*** *20:49:24.5±0.9, 3°.5N±0°.1×124°.79E±0°.10, h314km±8km, mb3.3/5, Error ellipse: s-maj=19.8km s-min=10.9km az=44.2*
DJA ***13*** *20:49:25, 3°.46N×124°.83E, h303km, MLv4.1/7*
ISC 13 20:49:25.6±0.9,**3°.4N**±0°.1×**124°.80E**±0°.10,**h307**km±7km, **n14**, σ0§**88**/17,

MRSI	Marisa	4.09 224	P	Pn	20 50 33.9	+0.7
LUWI	Luwuk	4.88 205	P	Pn	20 50 42.4	+0.4
MYLDM	Lahad Datu	6.52 286	P	Pn	20 50 59.9	-1.4
	0.1nm20nm,0.9s					
NLAI	Namlea	7.01 161	P	Pn	20 51 07.6	+0.3
	0.6nm2μm54nm,1.0s					
NLAI			S	S	20 52 27.9	-1.6
	0.6nm2μm54nm,1.0s					
TTSI	Tana Toraja	8.13 218	P	Pn	20 51 21.4	+0.5
STKI	Sintang	13.72 256	P	Pn	20 52 19.6	-9.2
FITZ	Fitzroy Crossi	21.41 178	P	P	20 53 47.9	-1.8
	1.1nm,0.5s,mb3.5,baz=353,slow=11,SNR=23					
WRA	Warramunga Arr	25.05 158	P	P	20 54 23.5	+0.8
	1.2nm,0.4s,mb3.7,baz=337,slow=10,SNR=19					
ASAR	Alice Springs	28.36 162	P	P	20 54 53.4	+1.3
	0.5nm,0.7s,mb3.0,baz=343,slow=7.6,SNR=7.3					
SONM	Songino Array	46.99 343	P	P	20 57 26.5	0.0
	0.7nm,1.0s,mb3.0,baz=166,slow=8.9,SNR=4.5					
MKAR	Makanchi Array	56.72 326	P	P	20 58 37.3	-0.5
	0.5nm,0.4s,mb3.3,baz=121,slow=8.3,SNR=13					

IDC 13 20:55:03.4±2.2, 4°.20S×129°.91E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.3/17, mbtmp3.3/4, ML3.0/2, Error ellipse: s-maj=106.0km s-min=27.3km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.44	197	Pn	Pn	20 58 29.1	0.0
	0.0nm,0.3s,baz=23,slow=15,SNR=2.1						
FITZ				Sn	Sn	21 00 53.9	-16
	0.1nm,0.3s,baz=0.0,slow=20,SNR=3.1						
WRA	Warramunga Arr	16.24	165	Pn	Pn	20 58 52.6	-0.4
	0.1nm,0.3s,baz=348,slow=13,SNR=4.6						
WRA				Sn	Sn	21 01 45.8	-8.1
	0.1nm,0.3s,baz=328,slow=24,SNR=4.5						
ASAR	Alice Springs	19.74	169	P	Pn	20 59 35.1	-1.1
	0.1nm,0.3s,baz=345,slow=11,SNR=5.7						
MKAR	Makanchi Array	65.85	326	P	P	21 05 50.8	+0.1
	0.1nm,0.4s,baz=124,slow=7.8,SNR=2.9						

*SOF **13** 21:02:49.4, 42°.04N×23°.77E, h9km, MD2.7*
*ISCJB **13** 21:02:49.6±0.5, 42°.05N±0°.02×23°.76E±0°.03, h4km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=174.6*
*CSEM **13** 21:02:50.0±0.1, 42°.03N×23°.75E, h2km, MD2.7, Error ellipse: s-maj=3.0km s-min=2.3km az=93.0*
*SKO **13** 21:02:50.8, 42°.05N×23°.71E, h0km*
*THE **13** 21:02:50.2, 42°.03N×23°.76E, h2km±1km, ML2.8/9, Error ellipse: s-maj=1.1km s-min=0.6km az=312.0*
*BEO **13** 21:02:50.9±0.4, 42°.04N×23°.77E, h4km±3km, ML2.7/7*

ISC 13 21:02:50.2±0.4, 42°.03N±0°.01×23°.76E±0°.03, h2km±3km, n89, σ0°93/137, 4C-10D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	Musomiste	0.44	183	*i* Pg	Pg	21 02 59.6	+0.9
MMB	Musomiste	0.44	183	*i* Pg	Pg	21 02 59.6	+0.9
MMB	Musomiste	0.44	183	*i* Pg	Pg	21 02 59.6	+0.9
KKB	Krupnik	0.53	252	*i* Pg	Pg	21 03 00.0	-0.3
KKB	Krupnik	0.53	252	*i* Pg	Pg	21 03 00.0	-0.3
KKB	Krupnik	0.53	252	*i* Pg	Pg	21 03 00.0	-0.3
PGB	Panagyurishte	0.60	30	*i* Pg	Pg	21 03 00.9	-0.8
PGB	Panagyurishte	0.60	30	*i* Pg	Pg	21 03 00.9	-0.8
PGB	Panagyurishte	0.60	30	*i* Pg	Pg	21 03 00.9	-0.8
VTS	Vitosha	0.69	324	*e*Pg	Pg	21 03 03.1	-0.3
VTS				*e*Sg	Sg	21 03 12.8	+0.4
VTS	Vitosha	0.69	324	P	Pg	21 03 03.0	-0.4
VTS				S	Sg	21 03 12.6	+0.2
VTS	Vitosha	0.69	324	||*i*P	Pg	21 03 03.0	-0.4
VTS				S	Sg	21 03 12.1	-0.3
VTS	Vitosha	0.69	324	*i* Pg	Pg	21 03 02.9	-0.5
VTS	Vitosha	0.69	324	*i* Pg	Pg	21 03 02.9	-0.5
VTS	Vitosha	0.69	324	*e*Pg	Pg	21 03 03.1	-0.3
VTS				S	Sg	21 03 12.6	+0.2
PLD	Plovdiv	0.71	84	*e*Pg	Pg	21 03 03.8	+0.1
PLD				*e*Sg	Sg	21 03 13.1	+0.2
PLD	Plovdiv	0.71	84	P	Pg	21 03 03.7	0.0
PLD				S	Sg	21 03 13.7	+0.8
PLD	Plovdiv	0.71	84	*i* Pg	Pg	21 03 03.9	+0.2
PLD	Plovdiv	0.71	84	*i* Pg	Pg	21 03 03.9	+0.2
PLD	Plovdiv	0.71	84	P	Pg	21 03 03.7	0.0
PLD				*e*Sg	Sg	21 03 13.1	+0.2
PLD				S	Sg	21 03 13.7	+0.8
RZN	Rozhen	0.80	115	*i* Pg	Pg	21 03 05.4	0.0
RZN	Rozhen	0.80	115	*i* Pg	Pg	21 03 05.4	0.0
RZN	Rozhen	0.80	115	*i* Pg	Pg	21 03 05.4	0.0
SRS	Serrai	0.92	188	P	Pg	21 03 07.7	-0.2
SRS				S	Sg	21 03 20.5	+0.7
SRS	Serrai	0.92	188	P	Pg	21 03 07.7	-0.2
SRS				S	Sg	21 03 20.5	+0.7
KNT	Kendrikon	1.08	217	P	Pg	21 03 10.2	-0.7
KNT				S	Sg	21 03 26.0	+1.1
KNT	Kendrikon	1.08	217	P	Pg	21 03 10.2	-0.7
KNT				S	Sg	21 03 26.0	+1.1
VAY	Valandovo	1.14	232	*e*Pg	Pg	21 03 11.1	-0.9
VAY				*e*Sg	Sg	21 03 27.6	+0.9
VAY	Valandovo	1.14	232	P	Pg	21 03 11.1	-0.9
VAY				S	Sg	21 03 27.6	+0.9
VAY	Valandovo	1.14	232	*i* Pn	Pn	21 03 11.4	-1.7
VAY	Valandovo	1.14	232	P	Pg	21 03 11.1	-0.9
VAY				S	Sg	21 03 27.6	+0.9
KAVA	Kavala	1.18	151	P	Pg	21 03 11.9	-0.9
KAVA				S	Sg	21 03 28.9	+0.8
KAVA	Kavala	1.18	151	P	Pg	21 03 11.9	-0.9
KAVA				S	Sg	21 03 28.9	+0.8
SOH	Sokhos	1.25	194	P	Pg	21 03 13.5	-0.6
SOH				S	Sg	21 03 30.9	+0.7
SOH	Sokhos	1.25	194	P	Pg	21 03 13.5	-0.6
SOH				S	Sg	21 03 30.9	+0.7
KDZ	Kurdzhali	1.30	107	*i* P	Pg	21 03 13.2	-1.8
KDZ	Kurdzhali	1.30	107	*i* P	Pg	21 03 13.2	-1.8
KDZ	Kurdzhali	1.30	107	*i* P	Pg	21 03 13.2	-1.8
GRG	Griva	1.48	224	P	Pn	21 03 17.4	-0.4
GRG				S	Sb	21 03 38.1	+0.4
GRG	Griva	1.48	224	P	Pn	21 03 17.4	-0.4
GRG				S	Sb	21 03 38.1	+0.4
ZAPS	Zavoj	1.49	327	*e*Pg	Pg	21 03 18.8	0.0
ZAPS				*e*Sg	Sg	21 03 39.7	+1.6
HORT	Hortiatis	1.52	199	P	Pn	21 03 17.7	-0.6
HORT				S	Sn	21 03 38.8	+0.1
HORT	Hortiatis	1.52	199	P	Pn	21 03 17.7	-0.6
HORT				S	Sn	21 03 38.8	+0.1
BARS	Barje	1.64	299	*e*Pn	Pn	21 03 20.6	+0.6
BARS				*e*Sn	Sn	21 03 41.7	0.0
BARS	Barje	1.64	299	*e*Pn	Pn	21 03 20.6	+0.6
BARS				*e*Sn	Sn	21 03 41.7	0.0
PVL	Pavlikeni	1.66	44	*i* P	Pn	21 03 18.8	-1.5
PVL	Pavlikeni	1.66	44	*i* P	Pn	21 03 18.8	-1.5
PVL	Pavlikeni	1.66	44	*i* P	Pn	21 03 18.8	-1.5
PLG	Polygyros	1.67	188	P	Pn	21 03 20.6	+0.1
PLG				S	Sn	21 03 42.8	+0.3
PLG	Polygyros	1.67	188	P	Pn	21 03 20.6	+0.1
PLG				S	Sn	21 03 42.8	+0.3
OUR	Ouranopolis	1.71	174	P	Pn	21 03 20.3	-0.6
OUR				S	Sn	21 03 42.8	-0.5
OUR	Ouranopolis	1.71	174	P	Pn	21 03 20.3	-0.6
OUR				S	Sn	21 03 42.8	-0.5
KRUS	Krusevo	1.99	251	*i* Pn	Pn	21 03 24.8	-0.1
ZIMR		2.01	36	||*i*P	Pn	21 03 28.3	+3.2
ZIMR		2.01	36	S	Sn	21 03 54.3	+3.5
SZH	Strazhica	2.02	52	P	Pn	21 03 26.7	+1.4
SZH	Strazhica	2.02	52	P	Pn	21 03 26.7	+1.4
SZH	Strazhica	2.02	52	P	Pn	21 03 26.7	+1.4
ALN	Alexandroupoli	2.06	123	P	Pn	21 03 25.9	+0.1
ALN				S	Sn	21 03 51.8	-0.3
ALN	Alexandroupoli	2.06	123	P	Pn	21 03 25.9	+0.1
ALN				S	Sn	21 03 51.8	-0.3
BIA	Bitola	2.09	242	*e*Pn	Pn	21 03 28.6	+2.4
PAIG	Paliouri	2.10	182	P	Pn	21 03 25.9	-0.5
PAIG				S	Sn	21 03 52.6	-0.6
PAIG	Paliouri	2.10	182	P	Pn	21 03 25.9	-0.5
PAIG				S	Sn	21 03 52.6	-0.6
JMB	Yambol	2.14	77	P	Pn	21 03 26.5	-0.4
JMB				S	Sn	21 03 54.2	+0.1
JMB	Yambol	2.14	77	*i* P	Pn	21 03 26.1	-0.8
JMB	Yambol	2.14	77	*i* P	Pn	21 03 26.1	-0.8
JMB	Yambol	2.14	77	P	Pn	21 03 26.5	-0.4
JMB				S	Sn	21 03 54.2	+0.1
LIT	Litokhoron	2.15	207	P	Pn	21 03 25.7	-1.4
LIT	Litokhoron	2.15	207	P	Pn	21 03 25.7	-1.4
BOLS	Boljevac	2.23	324	*e*Pn	Pn	21 03 29.5	+1.3
BOLS				*e*Sg	Sg	21 04 01.6	-0.2
BOLS	Boljevac	2.23	324	*e*Pn	Pn	21 03 29.5	+1.3
BOLS				*e*Sg	Sg	21 04 01.6	-0.2
LIA	Limnos Island	2.39	153	P	Pn	21 03 29.9	-0.5
LIA				S	Sn	21 04 00.7	+0.5
LIA	Limnos Island	2.39	153	P	Pn	21 03 29.9	-0.5
LIA				S	Sn	21 04 00.7	+0.5
GZR	Gura Zlata	3.43	348	||*i*P	Pn	21 03 44.5	-0.2
GZR	Gura Zlata	3.43	348	||*i*P	Pn	21 03 44.5	-0.2
GZR				S	Sn	21 04 25.1	-0.9
DIVS	Divibare	3.45	308	*e*Pn	Pn	21 03 45.5	+0.6
DIVS				*e*Sn	Sn	21 04 25.5	-0.8
DIVS	Divibare	3.45	308	*e*Pn	Pn	21 03 45.5	+0.6
DIVS				*e*Sn	Sn	21 04 25.5	-0.8
VOIR		3.53	15	⇑*i*P	Pn	21 03 46.9	+0.9
VOIR		3.53	15	⇑*i*P	Pn	21 03 46.9	+0.9
VOIR				S	Sn	21 04 28.4	+0.1
BZS	Buzias	3.90	337	*e*Pn	Pn	21 03 50.7	-0.4
BZS				*e*Sg	Sg	21 04 53.5	-2.0
BZS	Buzias	3.90	337	||*i*P	Pn	21 03 50.3	-0.8
BZS	Buzias	3.90	337	||*i*P	Pn	21 03 50.3	-0.8
BZS	Buzias	3.90	337	*e*Pn	Pn	21 03 50.7	-0.4
BZS				S	Sn	21 04 33.1	-4.4
BZS				*e*Sg	Sg	21 04 53.5	-2.0
PLOR	Plostina	4.35	28	⇑*i*P	Pn	21 03 59.2	+1.9
PLOR	Plostina	4.35	28	⇑*i*P	Pn	21 03 59.2	+1.9
VRI	Vrincioaia	4.39	28	||*i*P	Pn	21 03 59.9	+2.1
VRI	Vrincioaia	4.39	28	||*i*P	Pn	21 03 59.9	+2.1
DRGR		4.82	351	||*i*P	Pn	21 04 03.4	-0.3
DRGR		4.82	351	||*i*P	Pn	21 04 03.4	-0.3
DRGR				S	Sn	21 04 59.8	-0.2

IDC 13 21:28:44.0±8.3, 19°.58N×145°.31E, h219km±84km, mb3.1/6, mb1 3.5/7, mb1mx3.1/21, mbtmp3.2/7, Error ellipse: s-maj=45.4km s-min=14.9km az=97.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	18.01	341	P	P	21 32 37.5	-1.0
	0.4nm,0.3s,baz=165,slow=8.5,SNR=5.2						
KSRS	Korea Array	23.39	323	P	P	21 33 34.2	+1.1
	0.6nm,0.5s,baz=143,slow=8.2,SNR=6.3						
WRA	Warramunga Arr	40.73	196	P	P	21 36 03.5	0.0
	0.7nm,0.6s,baz=16,slow=8.9,SNR=12						
ASAR	Alice Springs	44.40	195	P	P	21 36 32.8	-0.2
	0.1nm,0.4s,baz=14,slow=6.6,SNR=4.9						
ILAR	Eielson Array	63.02	26	P	P	21 38 47.0	-0.3
	0.6nm,0.4s,baz=255,slow=5.8,SNR=11						
NVAR	Mina Array Bea	82.89	52	P	P	21 40 45.5	+1.3
	0.7nm,0.6s,baz=269,slow=5.4,SNR=5.4						
FINES	FINESS Array B	85.93	335	P	P	21 40 58.0	-1.0
	1.3nm,0.8s,baz=101,slow=9.9,SNR=4.4						

IDC 13 21:37:54.8±2.9, 7°.58S×118°.38E, h0km, mb3.0/2, mb1 3.3/3, mb1mx3.1/18, mbtmp3.1/3, ML3.1/1, Error ellipse: s-maj=271.4km s-min=26.2km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.76	130	P	Pn	21 42 27.4	-0.5
	0.1nm,0.3s,baz=305,slow=12,SNR=4.9						
ASAR	Alice Springs	21.86	139	P	P	21 42 48.8	-0.5
	0.2nm,0.4s,baz=319,slow=8.3,SNR=6.6						
MKAR	Makanchi Array	62.92	333	P	P	21 48 23.0	+0.1
	0.3nm,0.7s,baz=150,slow=7.1,SNR=3.0						

*ISCJB **13** 21:40:42.5±0.5, 26°.91N±0°.04×55°.64E±0°.03, h10km, mb3.4/12, Error ellipse: s-maj=5.3km s-min=4.0km az=3.2*
*IDC **13** 21:40:42.8±3.7, 27°.16N×55°.78E, h0km, mb3.5/10, mb1 3.6/12, mb1mx3.6/27, mbtmp3.5/12, ML3.5/2, Error ellipse: s-maj=80.7km s-min=21.6km az=175.0*
*KISR **13** 21:40:43.3±0.9, 27°.23N×55°.41E, h34km±999km, ML3.6*
*NEIC **13** 21:40:44.0, 26°.94N×55°.67E, h6km, mb3.6/4, ML3.3(THR), After THR.*
*CSEM **13** 21:40:45.0±0.3, 26°.86N×55°.80E, h20km, ML3.5, Error ellipse: s-maj=8.8km s-min=8.1km az=10.0*
*TEH **13** 21:40:48.7, 26°.91N×55°.50E, h18km*
*OMAN **13** 21:40:49.4±99.0, 26°.56N×55°.98E, h12km, Error ellipse: s-maj=138.8km s-min=11.4km az=19.0*

ISC 13 21:40:44.0±0.4, 26°.87N±0°.04×55°.72E±0°.03, h10km, n83, σ1°40/104, mb3.4/12, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.66	37	*e*Pg	Pg	21 40 56.6	-0.2
BNDS				*e*Sg	Sg	21 41 05.8	+0.3
IBND	Bandar-abas	0.93	51	*e*Pg	Pg	21 41 01.0	-0.9
IBND				*e*		21 41 32.2	
	comp=Z,22μm,0.2s						
IBND	Bandar-abas	0.93	51	*e*Pg	Pg	21 41 01.0	-0.9
BANOM	Banah	1.07	151	P	Pg	21 41 03.0	-1.6
	SNR=100						
BANOM	Banah	1.07	151	P	Pg	21 41 03.0	-1.6
	SNR=100						
ASHO	Ashiyiah	2.19	172	P	Pn	21 41 21.3	+0.8
	SNR=17						
ASHO	Ashiyiah	2.19	172	P	Pn	21 41 21.3	+0.8
	SNR=17						
ASUD	Al Ashush, Dub	2.26	189	P	Pn	21 41 23.3	+1.9
	SNR=10						
ASUD	Al Ashush, Dub	2.26	189	P	Pn	21 41 23.3	+1.9
	SNR=10						
KRBR	Kerman	3.24	16	*e*Pn	Pn	21 41 36.9	+2.1
ISRV	Sarvestan	3.41	318	*e*Pn	Pn	21 41 39.2	+2.1
ISRV				*e*Sn	Sn	21 42 16.0	-1.6
ISRV				*e*		21 42 33.2	
	comp=Z,597nm,0.1s						
ISRV	Sarvestan	3.41	318	*e*Pn	Pn	21 41 39.2	+2.1
ISRV				*e*Sn	Sn	21 42 16.0	-1.6
IPAR	Pars	3.79	322	*e*Pn	Pn	21 41 44.7	+2.3
IPAR				*e*Sn	Sn	21 42 24.4	-2.6
IPAR				*e*		21 42 32.9	
	comp=Z,517nm,0.2s						
IPAR	Pars	3.79	322	*e*Pn	Pn	21 41 44.7	+2.3
IPAR				*e*Sn	Sn	21 42 24.4	-2.6
IMEH	Mehriz	4.61	348	*e*Pn	Pn	21 41 56.0	+2.3
IMEH				*e*		21 41 58.9	
	comp=Z,366nm,0.2s						
IMEH				*e*Sn	Sn	21 42 45.7	-1.6
IMEH	Mehriz	4.61	348	*e*Pn	Pn	21 41 56.0	+2.3
IMEH				*e*Sn	Sn	21 42 45.7	-1.6
IBAF	Bafgh	4.71	358	*e*Pn	Pn	21 41 56.5	+1.4
IBAF				*e*		21 41 59.5	
	comp=Z,214nm,0.2s						
IBAF	Bafgh	4.71	358	*e*Pn	Pn	21 41 56.5	+1.4
ISAD	Sadrabad	5.33	341	*e*Pn	Pn	21 42 06.9	+3.2
ISAD				*e*		21 43 18.5	
	comp=Z,385nm,0.2s						
ISAD	Sadrabad	5.33	341	*e*Pn	Pn	21 42 06.9	+3.2
IKOO	Kooshah	6.23	26	*e*Pn	Pn	21 42 18.2	+2.2
IKOO				*e*		21 44 15.6	
	comp=N,115nm,0.2s						
IKOO	Kooshah	6.23	26	*e*Pn	Pn	21 42 18.2	+2.2
IGAR	Gharneh	6.38	331	*e*Pn	Pn	21 42 19.9	+1.9
IGAR				*e*		21 42 22.1	
	comp=Z,262nm,0.1s						
NASN	Na'in	6.43	338	*e*Pn	Pn	21 42 20.5	+1.8
IZEF	Zefreh	6.69	335	*e*Pn	Pn	21 42 23.4	+1.1
IZEF				*e*		21 42 25.3	
	comp=Z,105nm,0.2s						
IZEF				*e*Sn	Sn	21 43 34.3	-4.3
IZEF	Zefreh	6.69	335	*e*Pn	Pn	21 42 23.4	+1.1
IZEF				*e*Sn	Sn	21 43 34.3	-4.3
IPIR	Pirpir	7.16	325	*e*Pn	Pn	21 42 30.8	+2.1
IPIR				*e*		21 43 52.8	
	comp=Z,410nm,0.2s						
IPIR	Pirpir	7.16	325	*e*Pn	Pn	21 42 30.8	+2.1
IKLH	Kolahrood	7.37	332	*e*Pn	Pn	21 42 33.0	+1.5
IKLH				*e*		21 42 35.3	
	comp=Z,159nm,0.2s						
IKLH	Kolahrood	7.37	332	*e*Pn	Pn	21 42 33.0	+1.5
RDF	Al-Radifah	7.52	288	*e*P	Pn	21 42 35.1	+1.4
RDF				*e*S	Sn	21 43 58.8	-0.2
RDF				AML	AML	21 44 00.1	
	comp=Z,8.9nm,0.6s						
RDF	Al-Radifah	7.52	288	*e*P	Pn	21 42 35.1	+1.4
RDF				*e*S	Sn	21 43 58.8	-0.2
UMR	Umm Al-Rimmam	7.55	293	*e*P	Pn	21 42 35.1	+0.9
UMR				*e*S	Sn	21 43 59.1	-0.7
UMR	Umm Al-Rimmam	7.55	293	*e*P	Pn	21 42 35.1	+0.9
UMR				*e*S	Sn	21 43 59.2	-0.7
NAY	Al-Naaiem	7.86	290	*e*P	Pn	21 42 39.4	+1.1
NAY				*e*S	Sn	21 44 06.2	-1.2
NAY				AML	AML	21 44 06.3	
	comp=Z,4.4nm,0.6s						
NAY	Al-Naaiem	7.86	290	*e*P	Pn	21 42 39.4	+1.0
NAY				*e*S	Sn	21 44 06.2	-1.2
MIB	Mutribah	7.95	294	*e*P	Pn	21 42 40.5	+0.9
MIB				*e*S	Sn	21 44 08.5	-1.0
MIB				AML	AML	21 44 09.2	
	comp=Z,11nm,0.5s						
MIB	Mutribah	7.95	294	*e*P	Pn	21 42 40.5	+0.9
MIB				*e*S	Sn	21 44 08.5	-1.0
ISFB	Sefidab	8.04	339	*e*Pn	Pn	21 42 41.8	+1.0
ISFB				*e*		21 42 56.2	
	comp=Z,55nm,0.2s						
ISFB	Sefidab	8.04	339	*e*Pn	Pn	21 42 41.8	+1.0
ISHM	Shahmirzad	9.15	347	*e*Pn	Pn	21 42 58.0	+1.9
ISHM				*e*		21 43 02.5	
	comp=Z,122nm,0.3s						
ISHM	Shahmirzad	9.15	347	*e*Pn	Pn	21 42 58.0	+1.9
IPRN	Peran	9.78	344	*e*	Pn	21 43 12.1	+7.4
	comp=Z,139nm,0.2s						
IPRN				*e*Pn	Pn	21 43 07.7	+3.0
IKOM	Komasi	10.16	318	*e*	Pn	21 43 13.4	+3.6
	comp=Z,437nm,0.1s						
IKOM				*e*Pn	Pn	21 43 09.4	-0.4
IVIS	Veis	10.79	317	*e*Pn	Pn	21 43 18.2	-0.4
IVIS				*e*		21 43 21.0	
	comp=Z,302nm,0.2s						
IVIS				*e*Sn	Sn	21 45 10.5	-9.0
IVIS	Veis	10.79	317	*e*Pn	Pn	21 43 18.2	-0.4
IVIS				*e*Sn	Sn	21 45 10.5	-9.0
IGHG	Ghaleghazi	10.84	316	*e*Pn	Pn	21 43 19.2	0.0
IGHG				*e*		21 43 21.4	
	comp=Z,338nm,0.1s						
IGHG	Ghaleghazi	10.84	316	*e*Pn	Pn	21 43 19.2	0.0
ILIN	Lien	11.00	319	*e*Pn	Pn	21 43 20.8	-0.5
ILIN				*e*		21 43 22.6	
	comp=Z,438nm,0.1s						
ILIN	Lien	11.00	319	*e*Pn	Pn	21 43 20.8	-0.5
IDHR	Dehrash	11.19	316	*e*Pn	Pn	21 43 23.5	-0.5
IDHR				*e*		21 43 28.0	
	comp=Z,376nm,0.1s						
IDHR	Dehrash	11.19	316	*e*Pn	Pn	21 43 23.5	-0.5
GNI	Garni	16.09	328	*e*Pn	Pn	21 44 29.1	-1.1
GNI	Garni	16.09	328	*e*Pn	Pn	21 44 29.1	-1.1
ASF	Jabal al Asfar	17.21	292	P	Pn	21 44 43.9	-0.7
	comp=Z,0.2nm,0.3s,baz=128,slow=20,SNR=3.0						
MALT	Malatya	18.48	312	*e*P	Pn	21 45 00.4	+0.2
	comp=Z,6.1nm,1.1s						
MALT	Malatya	18.48	312	*e*P	Pn	21 45 00.4	+0.3
	comp=Z,6.1nm,1.1s						
MMAI	Mount Meron Ar	18.64	294	P	Pn	21 45 01.7	-0.4
	comp=Z,0.2nm,0.3s,baz=102,slow=14,SNR=3.7						
KIV	Kislovodsk	20.05	332	*e*P	P	21 45 15.6	-1.6
	comp=Z,5.0nm,0.7s						
KIV	Kislovodsk	20.05	332	*e*P	P	21 45 15.6	-1.5
	comp=Z,5.0nm,0.7s						
EKS2	Erkin-Say	21.57	38	*e*P	P	21 45 33.5	-0.1
	comp=Z,2.7nm,1.1s,mb3.6						
EKS2	Erkin-Say	21.57	38	*e*P	P	21 45 33.5	-0.1
	comp=Z,2.7nm,1.1s,mb3.6						
BRTR	Keskin Array B	22.41	310	P	P	21 45 42.3	-0.3
	comp=Z,0.9nm,0.8s,mb3.3,baz=130,slow=14,SNR=4.1						
BRTR	Keskin Array B	22.41	310	P	P	21 45 42.3	-0.3
ABKAR	Akbulak array	22.59	7	P	P	21 45 43.6	-0.9
	comp=Z,0.2nm,0.4s,mb2.9						
ABKAR	Akbulak array	22.59	7	P	P	21 45 43.6	-0.9
	comp=Z,0.2nm,0.4s,mb2.9						
BVAR	Borovoye Array	28.33	19	P	P	21 46 35.1	-2.7
	comp=Z,0.8nm,0.7s,mb3.5,baz=185,slow=10,SNR=4.0						
BVAR	Borovoye Array	28.33	19	P	P	21 46 35.1	-2.7
MKAR	Makanchi Array	28.89	39	P	P	21 46 41.9	-0.9
	comp=Z,0.1nm,0.6s,mb2.8,baz=221,slow=8.9,SNR=3.1						
MKAR	Makanchi Array	28.89	39	P	P	21 46 41.9	-0.9
ZALV	Zalesovo Beam	34.52	30	P	P	21 47 30.0	-2.2
	comp=Z,0.6nm,0.4s,mb3.8,baz=231,slow=9.4,SNR=4.4						
FINES	FINESS Array B	39.89	338	P	P	21 48 15.5	-2.2
	comp=Z,2.8nm,0.9s,mb4.0,baz=148,slow=11,SNR=9.0						
FINES	FINESS Array B	39.89	338	P	P	21 48 15.5	-2.2
FINES	FINESS Array B	39.89	338	P	P	21 48 15.5	-2.2
SONM	Songino Array	44.47	48	P	P	21 48 54.3	-1.0
	comp=Z,0.6nm,0.9s,mb3.3,baz=266,slow=8.1,SNR=3.9						
SONM	Songino Array	44.47	48	P	P	21 48 54.3	-1.0
NOA	NORSAR Array B	45.36	331	P	P	21 49 00.8	-1.2
	comp=Z,0.5nm,0.8s,mb3.4,baz=112,slow=7.8,SNR=2.4						
NOA	NORSAR Array B	45.36	331	P	P

MONP	Monument Peak baz=78	77.78	50	⇊P	P	21 56 44.9	-0.5
DVTC	Desert V Tower baz=78	77.91	50	⇊P	P	21 56 45.8	-0.2
PFO	Pinyon Flat Ob baz=78	78.11	50	⇊P	P	21 56 46.1	-1.0
LRMC	Laurel Mountai baz=78	78.14	47	⇊P	P	21 56 47.1	-0.1
SWSC	Sam W. Stewart baz=78	78.27	50	⇑P	P	21 56 47.5	-0.5
CWC	Cottonwood Cre baz=79	78.36	46	⇑P	P	21 56 48.2	-0.2
MPMC	Manual Prospec baz=79	78.58	47	⇑P	P	21 56 49.6	0.0
BELC	Belle Mtn. Jos baz=79	78.63	49	⇑P	P	21 56 49.8	-0.1
HEC	Hector,Ludlow baz=79	78.79	48	⇑P	P	21 56 50.3	-0.4
BC3	Big Chuckawall baz=79	78.86	50	⇊P	P	21 56 51.2	0.0
GLA	Glamis baz=79	79.04	51	⇊P	P	21 56 51.9	-0.1
GRAC	Grapevine Rang baz=79	79.13	46	⇊P	P	21 56 52.8	+0.4
FURC	Furnace Creek, baz=79	79.22	47	⇊P	P	21 56 52.5	-0.5
NVAR	Mina Array Bea 5.0nm,0.7s,mb4.0,baz=225,slow=8.7,SNR=28	79.22	44	P	P	21 56 52.8	-0.2
GMRC	Granite Mounta baz=79	79.25	49	⇊P	P	21 56 52.9	-0.3
IRM	Iron Mountain baz=80	79.32	50	⇊P	P	21 56 53.5	-0.1
U10A	Ash Meadows, A baz=80	79.57	47	⇊P	P	21 56 54.5	-0.3
MOD	Modoc	79.77	41	eP	P	21 56 55.5	-0.2
LDFC	Landfair 14nm,0.9s,mb4.3	79.79	49	eP	P	21 56 56.1	+0.1
K05A	Summer Lake baz=80	79.86	40	⇊P	P	21 56 56.6	+0.5
Z13A	Yuma Proving G baz=80	79.98	51	⇊P	P	21 56 57.0	0.0
X13A	Yucca baz=81	80.49	50	⇊P	P	21 56 59.9	+0.2
E03A	Lebam baz=81	80.49	35	⇑P	P	21 56 59.6	+0.2
T11A	Corn Creek, Al baz=81,SNR=9.8	80.75	47	⇊P	P	21 57 00.9	0.0
NLWA	Neilton Lookou 18nm,1.1s,mb4.4	80.83	35	eP	P	21 57 01.4	+0.3
V13A	Grand Canyon W baz=81	80.96	48	⇊P	P	21 57 01.8	-0.3
R11A	Troy Canyon, C baz=81,SNR=5.0	81.03	46	⇑P	P	21 57 02.1	-0.3
WVOR	Wild Horse Val 7.0nm,0.9s,mb4.1	81.10	41	eP	P	21 57 02.2	-0.4
S12A	Delamar Landin baz=81,SNR=11	81.18	47	P	P	21 57 03.7	+0.6
U13A	Pakoon Wash baz=81,SNR=10	81.24	48	⇑P	P	21 57 03.9	+0.4
W14A	Seligman baz=82,SNR=6.8	81.32	49	⇑P	P	21 57 04.5	+0.5
TTA	Tatalina	81.36	11	eP	P	21 57 03.1	-0.4
G06A	Carlson Farm, baz=82	81.41	38	⇊P	P	21 57 03.7	-0.5
I07A	Izee baz=82,SNR=11	81.45	39	⇑P	P	21 57 04.5	+0.1
V14A	Boquillas Ranc baz=82,SNR=7.2	81.50	49	⇊P	P	21 57 05.2	+0.4
217A	Green Valley baz=82,SNR=8.4	81.50	53	⇊P	P	21 57 05.4	+0.5
T13A	Saint George baz=82	81.56	47	⇑P	P	21 57 05.2	+0.1
PMR	Palmer	81.58	14	P	P	21 57 03.6	-0.9
X15A	Humboldt baz=82	81.61	50	⇑P	P	21 57 05.2	-0.3
J08A	Circle Bar Ran baz=82,SNR=5.8	81.69	40	⇑P	P	21 57 05.7	+0.1
TUC	Tucson 6.4nm,1.0s,mb4.0	81.75	53	eP	P	21 57 06.5	+0.2
U14A	Mt Trumbull baz=82,SNR=9.2	81.80	48	P	P	21 57 07.0	+0.6
S13A	Holt Ranch, En baz=82,SNR=6.7	81.86	47	P	P	21 57 06.8	+0.2
117A	Oracle baz=82,SNR=6.6	81.90	53	⇊P	P	21 57 07.1	+0.1
SML	Sawmill	81.95	14	P	P	21 57 06.0	-0.5
318A	Bisbee baz=82	81.99	54	⇊P	P	21 57 07.7	+0.2
R13A	O'Grain Ranch, baz=82	82.06	46	⇊P	P	21 57 08.1	+0.5
T14A	Hurricane baz=82,SNR=5.1	82.17	48	⇑P	P	21 57 08.5	+0.3
X16A	Lo Mia Camp, P baz=82,SNR=8.9	82.17	51	⇑P	P	21 57 08.9	+0.6
CCUT	Cedar City 4.7nm,0.9s,mb3.9	82.19	47	eP	P	21 57 09.0	+0.6
V15A	Kaibab Nationa baz=82	82.25	49	⇑P	P	21 57 09.4	+0.7
G08A	Pilot Rock baz=83,SNR=10.0	82.43	38	P	P	21 57 09.2	-0.2
U15A	North Rim baz=83,SNR=18	82.44	49	⇊P	P	21 57 10.1	+0.5
118A	Homack Ranch, baz=83,SNR=6.0	82.52	53	P	P	21 57 10.4	+0.4
319A	Douglas baz=83,SNR=6.0	82.52	54	⇑P	P	21 57 10.7	+0.6
X17A	Forest Lakes baz=83	82.61	51	⇑P	P	21 57 10.9	+0.4
T15A	Red Dirt Ranch baz=83,SNR=12	82.64	48	P	P	21 57 10.8	+0.1
219A	White Tail Can baz=83	82.79	54	⇑P	P	21 57 11.9	+0.4
ETW	Entiat	82.91	36	eP	P	21 57 11.2	-0.5
Q14A	Sevier Lake (B baz=83,SNR=20	82.92	46	P	P	21 57 12.1	+0.1
Y18A	Canyon Day Jun baz=83,SNR=8.0	82.95	52	⇊P	P	21 57 12.5	+0.3
320A	Kipp Ranch, An baz=83,SNR=6.0	83.09	55	⇑P	P	21 57 13.6	+0.6
V17A	Tonalea, Kykot baz=83,SNR=9.4	83.17	50	⇑P	P	21 57 13.3	0.0
P14A	Drum Mountains baz=84,SNR=6.0	83.35	46	⇊P	P	21 57 14.1	+0.1
MFID	Camas Ranch baz=84,SNR=5.7	83.38	41	P	P	21 57 14.1	-0.1
D08A	Wollman Farm, baz=84	83.41	37	⇊P	P	21 57 14.2	0.0
MSU	Marysvale	83.47	47	eP	P	21 57 15.4	+0.7
MCK	McKinley 5.8nm,0.7s,mb4.2	83.49	13	eP	P	21 57 13.2	-1.0
S16A	Weppner Ranch, baz=84	83.52	48	⇑P	P	21 57 14.9	0.0
Y19A	Nutrioso baz=84,SNR=8.1	83.61	52	⇊P	P	21 57 15.9	+0.4
Z20A	Nine Sixteen R baz=84	83.77	53	⇑P	P	21 57 16.8	+0.5
X19A	St. Johns baz=84	83.78	51	⇊P	P	21 57 16.6	+0.3
F10A	Beach Ranch, E baz=84,SNR=5.2	83.82	38	⇑P	P	21 57 15.6	-0.6
V18A	Ganado baz=84	83.84	50	⇑P	P	21 57 16.6	-0.1
R16A	Teasdale baz=84	83.85	47	⇑P	P	21 57 17.0	+0.4
B08A	Colville Reser baz=84,SNR=6.2	83.88	36	P	P	21 57 15.6	-0.9
I12A	Atlanta baz=84,SNR=9.4	84.00	41	⇑P	P	21 57 17.6	+0.4
HLID	Hailey baz=85,SNR=13	84.34	42	⇊P	P	21 57 19.3	+0.4
HLID	Hailey 4.6nm,0.8s,mb4.1	84.34	42	eP	P	21 57 19.4	+0.5
J13A	Cove Ranch, Pi baz=85,SNR=6.1	84.42	42	P	P	21 57 19.6	+0.4
T18A	Mexican Hat baz=85,SNR=10	84.50	49	P	P	21 57 19.9	+0.1
G12A	Big Creek, Yel baz=85	84.55	40	⇑P	P	21 57 19.7	-0.1
H12A	Diamond D Ranc baz=85,SNR=10	84.55	40	P	P	21 57 19.6	-0.3
U19A	Dine' College, baz=85	84.62	50	⇑P	P	21 57 20.6	+0.2
M15A	Larsen Ranch, baz=85,SNR=5.1	84.63	44	P	P	21 57 20.0	-0.4
W20A	Ramah baz=85	84.66	51	⇊P	P	21 57 20.9	+0.2
I13A	Wildhorse Cree baz=85	84.70	41	⇑P	P	21 57 20.8	+0.1
COLA	College 8.1nm,0.9s,mb4.2	84.72	13	eP	P	21 57 19.7	-0.5
J14A	Carey baz=85,SNR=6.4	84.80	42	⇊P	P	21 57 21.9	+0.8
ILAR	Eielson Array 4.2nm,0.8s,mb4.0,baz=224,slow=5.1,SNR=43	84.84	13	P	P	21 57 19.4	-1.4
F12A	Elk City baz=85,SNR=20	84.90	39	P	P	21 57 21.1	-0.5
H13A	Challis baz=85	84.93	41	⇑P	P	21 57 21.8	+0.1
DLBC	Dease Lake	85.05	24	eP	P	21 57 21.7	-0.2
NEW	Newport baz=85	85.08	36	⇑P	P	21 57 21.6	-0.7
NEW	Newport 2.9nm,0.7s,mb3.9	85.08	36	eP	P	21 57 21.4	-0.9
I14A	Mackay baz=85,SNR=7.9	85.13	42	P	P	21 57 23.5	+0.8
G13A	Cobalt baz=85,SNR=5.0	85.20	40	P	P	21 57 23.0	-0.1
O17A	Robinson Place baz=85	85.22	46	⇑P	P	21 57 23.8	+0.5
C11A	Tepee Creek (N baz=86	85.36	37	⇑P	P	21 57 23.6	-0.1
F13A	Darby baz=86,SNR=6.9	85.48	40	P	P	21 57 23.8	-0.6
D12A	Red Ives Fores baz=86	85.49	38	⇑P	P	21 57 24.0	-0.3
H14A	Leadore baz=86	85.51	41	⇊P	P	21 57 25.3	+0.7
324A	Moseley Ranch, baz=86	85.53	56	⇑P	P	21 57 24.5	-0.4
J15A	Blackfoot baz=86,SNR=5.0	85.54	42	P	P	21 57 25.6	+0.9
425A	Indio Mountain baz=86	85.67	56	⇊P	P	21 57 25.9	+0.3
MNTX	Cornudas Mount baz=86	85.70	55	⇊P	P	21 57 25.8	0.0
224A	Cornudas Mount baz=86	85.74	55	⇑P	P	21 57 26.2	+0.3
U21A	Nageezi baz=86,SNR=7.9	85.82	50	⇊P	P	21 57 26.4	+0.2
K16A	Soda Springs baz=86	85.83	43	⇊P	P	21 57 26.6	+0.5
626A	Big Bend Ranch baz=86	85.90	58	⇊P	P	21 57 27.5	+0.8
325A	Bean Ranch, Si baz=86	85.91	56	⇑P	P	21 57 26.5	-0.2
MCMT	McKenzie Canyo 2.1nm,0.9s,mb3.8	85.94	41	eP	P	21 57 27.1	+0.5
H15A	Lima baz=86,SNR=6.5	85.97	41	P	P	21 57 27.1	+0.3
J16A	Bone baz=86,SNR=8.6	86.01	43	P	P	21 57 27.4	+0.5
DAWY	Dawson	86.12	17	eP	P	21 57 26.8	-0.2
ANMO	Albuquerque 3.6nm,0.8s,mb4.0	86.12	52	eP	P	21 57 26.9	-0.8
TXAR	Lajitas Array 1.8nm,0.9s,mb3.7,baz=217,slow=7.3,SNR=13	86.20	58	P	P	21 57 28.6	+0.4
M18A	Lyman baz=86	86.22	45	⇊P	P	21 57 28.1	+0.1
BSMT	Bassoo Peak	86.22	38	eP	P	21 57 27.4	-0.5
RRI2	Red Ridge 10nm,0.8s,mb4.5	86.23	43	eP	P	21 57 28.4	+0.4
E14A	Clinton baz=86	86.29	39	⇑P	P	21 57 27.9	-0.3
G15A	Dillon baz=86	86.32	41	⇊P	P	21 57 28.5	+0.2
627A	Terlingua Ranc baz=87	86.47	58	⇑P	P	21 57 30.0	+0.5
Y24A	Capitan baz=87	86.51	53	⇑P	P	21 57 29.3	-0.2
527A	Woodward Ranch baz=87	86.54	57	⇑P	P	21 57 29.3	-0.5
REDW	Red Top Meadow 5.4nm,1.1s,mb4.1	86.55	43	eP	P	21 57 29.8	+0.3
P20A	De Beque baz=87	86.55	47	⇊P	P	21 57 29.6	0.0
J17A	Brown Place, J baz=87	86.64	43	⇊P	P	21 57 30.1	+0.2
CHMT	Chamberlain Mo	86.68	39	eP	P	21 57 29.5	-0.5
IMW	Indian Meadow 7.4nm,0.9s,mb4.3	86.73	42	eP	P	21 57 30.5	+0.2
K18A	Toltan Ranch, baz=87,SNR=6.8	86.76	44	P	P	21 57 31.1	+0.5
G16A	Moss Hill, Enn baz=87	86.78	41	⇑P	P	21 57 30.7	+0.2
226A	Malaga, Loving baz=87	86.85	55	⇊P	P	21 57 31.1	-0.1
H16A	Russell Place, baz=87	86.89	42	⇑P	P	21 57 32.0	+0.9
S22A	4UR Ranch, Cre baz=87	86.95	49	⇑P	P	21 57 31.5	0.0
427A	Hayter Ranch, baz=87	86.96	57	⇊P	P	21 57 31.3	-0.4
L19A	Farson baz=87,SNR=6.6	86.98	45	P	P	21 57 31.6	0.0
W24A	Lazy 6 Ranch, baz=87	87.02	52	⇑P	P	21 57 31.8	-0.1
J18A	Kendall Valley baz=87,SNR=19	87.03	43	P	P	21 57 31.8	0.0
BW06	Boulder Array baz=87	87.14	44	⇊P	P	21 57 31.9	-0.3
PDAR	Pinedale Array 4.0nm,0.6s,mb4.2,baz=217,slow=3.0,SNR=41	87.14	44	P	P	21 57 31.9	-0.4
F16A	Kennard Place, baz=87	87.15	40	⇑P	P	21 57 32.6	+0.4
D15A	Lincoln baz=87	87.18	39	⇊P	P	21 57 32.2	-0.2
N20A	Spence Gulch, baz=87	87.20	46	⇑P	P	21 57 32.5	-0.1
V24A	Rampart Ranch, baz=88	87.32	52	⇑P	P	21 57 33.3	0.0
B14A	Marquette Ranc baz=88,SNR=8.1	87.35	38	P	P	21 57 32.6	-0.6
C15A	Salmond Ranch, baz=88	87.47	38	⇑P	P	21 57 33.2	-0.6
A14A	Double T Ranch baz=88	87.56	37	⇊P	P	21 57 33.8	-0.3
L20A	Wamsutter baz=88,SNR=6.1	87.63	45	P	P	21 57 35.1	+0.5
K19A	Absolon Red Bu baz=88	87.64	44	⇑P	P	21 57 34.0	-0.6
J19A	Crowheart baz=88	87.69	44	⇑P	P	21 57 34.8	0.0
B15A	Bradely Ranch, baz=88	87.75	38	⇑P	P	21 57 34.1	-0.9
K20A	Yellowstone Ra baz=88	87.90	44	⇑P	P	21 57 35.3	-0.6
A15A	Johnson Ranch, baz=88	87.96	37	⇑P	P	21 57 35.4	-0.6
C16A	Fuhringer Ranc baz=88	88.00	39	⇊P	P	21 57 35.5	-0.6
I19A	Meeteetse baz=88	88.05	43	⇊P	P	21 57 36.5	0.0
O22A	Kremmling baz=88	88.12	47	⇊P	P	21 57 36.6	-0.3
D17A	Six Diamond Ra baz=89	88.34	40	⇊P	P	21 57 37.9	+0.1
N22A	Wattenberg Ran baz=89	88.44	47	⇑P	P	21 57 38.8	+0.4
C17A	Wharram Farm, baz=89	88.51	39	⇊P	P	21 57 38.3	-0.3
K21A	Alcova baz=89	88.63	45	⇑P	P	21 57 38.9	-0.3
Q24A	Divide baz=89	88.65	49	⇊P	P	21 57 39.7	+0.3
I21A	Big Trails, Te baz=89	89.08	44	⇑P	P	21 57 41.0	-0.3
A17A	Triple J Farms baz=89	89.14	38	⇑P	P	21 57 41.4	0.0
B18A	Beardsley Farm baz=90	89.44	39	⇊P	P	21 57 42.6	-0.3
L23A	Garrett baz=90	89.47	46	⇑P	P	21 57 43.1	-0.1
D20A	Manuel Ranch, baz=90	89.89	40	⇑P	P	21 57 45.2	+0.2
C20A	Veseth Ranch, baz=90	90.23	40	⇑P	P	21 57 46.9	+0.3
D21A	La Casta Ranch baz=91	90.59	41	⇊P	P	21 57 48.4	+0.2
A20A	Cobblestone Ra baz=91	90.76	39	⇊P	P	21 57 48.8	-0.2
SONM	Songino Array 0.3nm,0.5s,mb3.5,baz=133,slow=4.1,SNR=5.3	91.84	320	P	P	21 57 54.8	+0.8
C23A	Lambert baz=92	92.01	41	⇊P	P	21 57 55.2	+0.4
YKA	Yellowknife Ar 2.4nm,0.7s,mb4.5,baz=238,slow=4.5,SNR=6.8	93.58	25	P	P	21 57 59.9	-1.6
MKAR	Makanchi Array 0.2nm,0.6s,baz=113,slow=1.6,SNR=4.3	107.44	315	PKiKP	PKiKP	22 03 07.7	-1.1
BVAR	Borovoye Array 0.7nm,0.3s,baz=101,slow=1.3,SNR=6.4	115.14	321	PKP	PKPdf	22 03 22.5	-0.7
AKTO	Aktyubinsk 0.9nm,0.6s,baz=96,slow=2.9,SNR=5.1	123.16	320	PKP	PKPdf	22 03 38.3	-0.4
ARCES	ARCESS Array B 2.8nm,0.6s,baz=28,slow=1.1,SNR=33	124.82	350	PKP	PKPdf	22 03 41.2	-0.2
FINES	FINESS Array B 3.2nm,1.0s,baz=35,slow=4.7,SNR=9.3	131.62	344	PKP	PKPdf	22 03 53.7	-0.8
NB2	NORSAR Subarra comp=Z,0.2nm,0.3s,baz=27,slow=1.8	134.93	353	PKPdf	PKPdf	22 04 01.2	+0.5
NOA	NORSAR Array B comp=Z,0.7nm,0.5s,baz=14,slow=4.0,SNR=3.2	134.93	353	PKP	PKPdf	22 04 00.4	-0.4
NOA				PP	PP	22 06 45.0	+2.2
	comp=Z,1.2nm,0.8s,baz=13,slow=3.1,SNR=3.8						
BRTR	Keskin Array B comp=Z,4.2nm,0.9s,baz=85,slow=2.7,SNR=20	143.08	315	PKP	PKPdf	22 04 15.1	-1.2
NRDL	Niedersach Rie	143.36	350	ePKPbc	PKPdf	22 04 15.1	-1.2
OKC	Ostrava-Krasne	143.87	341	ePKP	PKPdf	22 04 16.8	-0.5
IBBN	Ibbenburen	143.89	352	ePKPbc	PKPdf	22 04 16.6	-0.6
UPC	Upice	143.91	343	ePKP	PKPdf	22 04 17.3	0.0
CLL	Collm	143.93	347	ePKPbc	PKPdf	22 04 16.8	-0.5
CLZ	Clausthal	143.94	350	ePKPbc	PKPdf	22 04 17.0	-0.3
DPC	Dobruska-Polom	143.97	343	ePKP	PKPdf	22 04 17.7	+0.3
BRG	Berggiesshubel	144.12	345	ePKPbc	PKPdf	22 04 17.7	0.0
BRG	Berggiesshubel comp=Z,16nm,1.4s	144.12	345	i,iPKP	PKPdf	22 04 17.7	0.0
FBE	Freiberg	144.21	346	ePKPbc	PKPdf	22 04 18.2	+0.4
PVCC	Panska Ves	144.28	345	ePKP	PKPdf	22 04 18.5	+0.5
NEUB	Neuenburg	144.29	348	ePKPbc	PKPdf	22 04 18.1	+0.2
PRU	Pruhonice	144.78	344	ePKP	PKPdf	22 04 20.4	+1.6
MOX	Moxa comp=Z,15nm,1.4s	144.85	348	ePKP	PKPdf	22 04 19.5	+0.6
MOX	Moxa	144.85	348	ePKPbc	PKPdf	22 04 19.8	+0.9
PLN	Plauen	144.89	347	ePKPbc	PKPdf	22 04 20.1	+1.1
TANN	Tannenbergstha	144.89	347	ePKPbc	PKPdf	22 04 20.2	+1.2
WERD	Werda	144.89	347	ePKPbc	PKPdf	22 04 20.1	+1.1
GUNZ	Gunzen	144.97	347	ePKPbc	PKPdf	22 04 20.5	+1.4
WERN	Wernitzgruen	145.03	347	ePKPbc	PKPbc	22 04 20.8	+0.8
NKC	Novy Kostel	145.06	347	ePKP	PKPdf	22 04 20.4	+1.1
TREC	Trest	145.16	343	ePKP	PKPdf	22 04 20.9	+1.4
ROTZ	Rotzenmuhle	145.55	347	ePKPbc	PKPbc	22 04 22.2	+0.6
KHC	Kasperske Hory	145.82	345	ePKP	PKPbc	22 04 22.9	+0.5
KHC				ex	x	22 04 25.4	
GRF	Grafenberg Arr	145.84	348	ePKPbc	PKPbc	22 04 23.0	+0.6
WET	Wettzell	145.98	345	ePKPbc	PKPbc	22 04 23.1	+0.3
GEC2	GERESS Array S	146.05	344	ePKPbc	PKPbc	22 04 23.5	+0.5
WLF	Walferdange	146.68	353	ePKPbc	PKPbc	22 04 25.6	+0.9
FUR	Furstenfeldbru	147.27	347	ePKPbc	PKPbc	22 04 26.9	+0.6
BFO	Black Forest	147.68	350	ePKPbc	PKPbc	22 04 27.7	+0.3
ESDC	Sonseca Array comp=Z,0.2nm,0.4s,baz=345,slow=2.6,SNR=6.1	156.67	9	PKPab	PKPab	22 05 09.2	-0.6

*IDC **13** 22:07:44.6±4.7,37°.60N×75°.82E,h101km±40km,mb3.3/7,*
mb1 3.4/12,mb1mx3.2/28,mbtmp3.3/12,Error ellipse:
s-maj=39.3km s-min=18.7km az=26.0
*ISCJB **13** 22:07:45.9±0.7,37°.78N±0°.04×75°.67E±0°.07,h119km±8km,*
mb3.5/7,Error ellipse: s-maj=9.5km s-min=5.8km az=18.8
*BJI **13** 22:07:45.9,37°.84N×75°.92E,h130km,mb4.1/3*
*NEIC **13** 22:07:46.1±1.4,37°.69N×75°.89E,h113km±9km,mb4.2/6,*
Error ellipse: s-maj=17.3km s-min=9.8km az=143.0
*NNC **13** 22:07:48.6±8.5,38°.60N×75°.74E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=99.7km s-min=35.3km az=12.0

ISC 13 22:07:47.1±0.6,37°.78N±0°.04×75°.69E±0°.07,h115km±8km,
n32,σ1°29/37,mb3.5/7,5C,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.75	7	⇑i P	Pn	22 08 14.3	-2.9
KSH				S	Sn	22 08 34.4	-5.8
KSH	comp=N,2μm,0.7s			smax			
KSH	comp=E,2μm,0.7s			smax			
KZA	Kyzart	4.31	356	ePn	Pn	22 08 51.6	+0.9
CHCP	Chirah Chowk	4.56	206	⇑P	Pn	22 08 55.9	+1.8
AML	Almayashu	4.61	341	ePn	Pn	22 08 55.2	+0.5
AAK	Ala-Archa comp=E,0.0nm,0.3s,baz=131,slow=5.7,SNR=6.5	4.94	350	P	Pn	22 08 59.5	+0.4
AAK	Ala-Archa comp=E,11nm,0.5s	4.94	350	ePn	Pn	22 09 01.1	+2.0
CEP	Cherat	5.00	219	⇑P	Pn	22 09 01.0	+1.0
CEP				S	Sn	22 09 55.0	-1.7
EKS2	Erkin-Say comp=E,3.9nm,0.6s	5.10	344	ePn	Pn	22 09 03.1	+1.9
TKM2	Tokmak 2 comp=E,11nm,0.5s	5.14	359	ePn	Pn	22 09 01.7	-0.1
CHMS	Chumysh	5.27	352	ePn	Pn	22 09 05.4	+1.9
THW	Thamme Wali	5.93	214	P	Pn	22 09 12.5	0.0
KBL	Kabul comp=E,8.5nm,0.4s	6.27	241	ePn	Pn	22 09 17.8	+0.6
KBL				eS	Sn	22 10 26.5	-1.0
KK31	Karatay Array comp=E,0.7nm,0.3s,baz=130,slow=14,SNR=70	6.63	325	Pn	Pn	22 09 21.7	-0.2
KK31				⇑Sn	Sn	22 10 34.4	-1.6
KKAR	Karatay Array comp=E,2.4nm,0.3s	6.63	325	ePn	Pn	22 09 21.6	-0.4
KKAR				eS	Sn	22 10 34.1	-1.8
MK31	Makanchi Array comp=E,0.8nm,0.5s,baz=207,slow=12,SNR=14	10.25	26	Pn	Pn	22 10 09.1	-1.8
MK31	Makanchi Array	10.25	26	ePn	Pn	22 10 08.6	-2.3
MKAR	Makanchi Array comp=E,0.2nm,0.3s,baz=201,slow=12,SNR=15	10.25	26	P	Pn	22 10 09.3	-1.6
BVAR	Borovoye Array comp=E,0.1nm,0.3s,baz=156,slow=11,SNR=2.0	15.69	348	P	Pn	22 11 23.2	+1.7
AB31	Akbulak array comp=E,0.5nm,0.5s,baz=105,slow=15,SNR=13	16.15	320	⇑Pn	Pn	22 11 28.6	+1.3
ABKAR	Akbulak array comp=E,0.7nm,0.4s	16.15	320	ePn	Pn	22 11 29.2	+1.9
ZALV	Zalesovo Beam comp=E,0.4nm,0.3s,baz=213,slow=9.2,SNR=5.7	17.35	18	P	Pn	22 11 41.1	-0.8
AKTK	Aktyubinsk	17.87	321	P	Pn	22 11 47.6	-0.5
AKTO	Aktyubinsk comp=E,1.1nm,0.3s,baz=114,slow=11,SNR=20	17.87	321	P	Pn	22 11 47.6	-0.5
GTA	Gaotai	18.92	78	eP	P	22 12 00.6	+1.8
GTA				pmax	pmax		
SONM	Songino Array comp=Z,0.4nm,0.6s,mb3.0,baz=248,slow=11,SNR=5.0	24.52	56	P	P	22 12 55.5	-0.2
BRTR	Keskin Array B comp=Z,0.8nm,0.8s,mb3.6,baz=64,slow=9.8,SNR=4.2	32.64	287	P	P	22 14 08.8	+0.9
FINES	FINESS Array B comp=Z,2.6nm,0.6s,mb4.3,baz=114,slow=9.0,SNR=17	38.59	324	P	P	22 14 58.8	+0.3
ARCES	ARCESS Array B comp=Z,0.6nm,1.0s,mb3.4,baz=115,slow=8.2,SNR=6.4	41.46	336	P	P	22 15 22.7	+0.6
NB2	NORSAR Subarra comp=Z,0.7nm,0.5s,mb3.6,baz=91,slow=7.9	45.65	322	P	P	22 15 55.3	-0.4
NOA	NORSAR Array B comp=Z,0.9nm,0.6s,mb3.7,baz=92,slow=7.8,SNR=5.8	45.65	322	P	P	22 15 55.6	-0.1
WRA	Warramunga Arr comp=Z,0.3nm,0.7s,mb3.2,baz=328,slow=5.1,SNR=2.9	79.57	125	P	P	22 19 39.6	-1.8
ASAR	Alice Springs comp=Z,0.4nm,0.7s,mb3.4,baz=313,slow=5.1,SNR=8.2	81.99	128	P	P	22 19 52.5	-1.9

ISC 13 22:51:23.3±1.1,41°.08N±0°.08×43°.89E±0°.08,h10km,n7,
σ0°44/11,Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	Delisi	0.91	44	P	Pg	22 51 40.6	-0.3
TBLG				S	Sg	22 51 53.2	+0.4
MTA	Mtatsminda	0.92	47	P	Pg	22 51 40.6	-0.3
MTA	

DZM	**Mont Dzumac**	**5.74**	**195**	*e*Pn	Pn	22 58 04.3	-4.9
	9.1nm,0.3s						
DZM				*e*Sn	Sn	22 59 02.7	-13
	20nm,0.2s						
DZM				*e*LR	LR	22 59 32.8	
	679nm,26.6s						
DZM	**Mont Dzumac**	**5.74**	**195**	*e*P	Pn	22 58 04.3	-4.9
DZM				*e*S	Sn	22 59 09.1	-6.7
HNR	**Honiara**	**10.58**	**311**	LR	LR	23 02 57.0	
	comp=Z,292nm,19.4s,baz=130,slow=35						
AFI	**Afiamalu**	**19.63**	**85**	LR	LR	23 06 45.2	
	comp=Z,378nm,20.0s,baz=89,slow=31						
CTA	**Charters Tower**	**21.00**	**257**	LR	LR	23 06 37.1	
	comp=Z,121nm,21.6s,baz=56,slow=28						
URZ	**Urewera**	**23.08**	**162**	LR	LR	23 08 32.6	
	comp=Z,330nm,20.4s,baz=193,slow=31						
RPZ	**Rata Peaks**	**27.23**	**175**	LR	LR	23 11 24.4	
	comp=Z,197nm,19.4s,baz=49,slow=32						
STKA	**Stephens Creek**	**28.47**	**233**	P	P	23 02 39.2	-0.5
	2.0nm,0.5s,baz=60,slow=9.3,SNR=2.8						
STKA				LR	LR	23 14 29.3	
	comp=Z,281nm,18.6s,baz=32,slow=38						
WRA	**Warramunga Arr**	**32.18**	**259**	P	P	23 03 13.1	+0.5
	0.4nm,0.7s,baz=88,slow=8.6,SNR=7.7						
WRA				LR	LR	23 15 15.7	
	comp=Z,184nm,20.8s,baz=125,slow=35						
ASAR	**Alice Springs**	**32.80**	**252**	P	P	23 03 17.9	-0.1
	3.5nm,0.7s,baz=82,slow=8.7,SNR=33						
TBI	**Tubuai**	**40.40**	**107**	*e*LR	LR	23 16 05.6	
	130nm,27.5s						
PPT	**Papeete**	**40.46**	**98**	*e*LR	LR	23 15 51.6	
	197nm,26.2s						
PPT	**Papeete**	**40.46**	**98**	LR	LR	23 15 48.6	
	comp=Z,88nm,20.1s,baz=181,slow=28						
TAOE	**Nuku Hiva Isla**	**50.98**	**88**	*e*LR	LR	23 20 16.4	
	243nm,26.9s						
KSRS	**Korea Array**	**65.63**	**326**	LR	LR	23 32 51.4	
	comp=Z,39nm,18.0s,baz=331,slow=33						
PETK	**Petropavlovsk-**	**69.91**	**353**	LR	LR	23 34 47.2	
	comp=Z,57nm,20.2s,baz=156,slow=33						
ILAR	**Eielson Array**	**87.98**	**18**	P	P	23 09 34.0	-0.2
	0.3nm,0.7s,baz=234,slow=4.5,SNR=4.2						
ARCES	**ARCESS Array B 122.16**	**345**		PKP	PKPdf	23 15 39.1	+0.3
	0.6nm,0.8s,baz=40,slow=6.4,SNR=3.5						

IDC 13 22:57:31.1±8.0, 14°.53S×171°.93W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.7/19, mbtmp3.8/3, Error ellipse: s-maj=353.3km s-min=34.1km az=138.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**51.42**	**256**	P	P	23 06 38.0	-0.3
	0.7nm,0.6s,baz=92,slow=7.0,SNR=17						
ASAR	**Alice Springs**	**51.73**	**251**	P	P	23 06 40.8	+0.3
	1.4nm,0.3s,baz=87,slow=8.1,SNR=30						
ILAR	**Eielson Array**	**81.33**	**11**	P	P	23 09 49.0	+0.1
	0.2nm,0.8s,baz=201,slow=4.8,SNR=3.3						

IDC 13 23:00:29.1±42.0, 24°.26S×177°.98W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/16, mbtmp3.6/3, Error ellipse: s-maj=775.0km s-min=150.7km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.30**	**249**	P	P	23 07 34.2	-0.4
	1.5nm,0.3s,baz=108,slow=3.2,SNR=3.0						
ASAR	**Alice Springs**	**43.79**	**261**	P	P	23 08 36.4	-0.5
	0.2nm,0.4s,baz=98,slow=7.8,SNR=6.7						
WRA	**Warramunga Arr**	**44.22**	**266**	P	P	23 08 41.0	+0.7
	0.2nm,0.3s,baz=103,slow=7.9,SNR=8.4						

*DDA **13** 23:17:36.7, 39°.62N×39°.83E, h4km±3km, Md3.1*
*ISK **13** 23:17:36.3, 39°.58N×39°.87E, h5km, MD3.1*
*ISCJB **13** 23:17:37.5±0.4, 39°.60N±0°.02×39°.86E±0°.03, h10km, Error ellipse: s-maj=3.9km s-min=3.2km az=38.6*
*CSEM **13** 23:17:37.0±0.2, 39°.59N×39°.86E, h2km, MD3.1, Error ellipse: s-maj=4.4km s-min=3.6km az=133.0*

ISC 13 23:17:37.5±0.4, 39°.59N±0°.02×39°.85E±0°.03, h5km±4km, n49, σ1.9±05/70, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.41**	**294**	*e*PG	**Pg**	**23 17 45.6**	**+0.1**
EZC	**Erzincan**	**0.41**	**294**	*e*Pg	**Pg**	**23 17 45.6**	**0.0**
KOPT	**Kop Dagi**	**0.66**	**49**	*i* P	**Pg**	**23 17 50.2**	**0.0**
KOPT				*i* S	**Sg**	**23 18 00.3**	**+1.5**
KOPT	**Kop Dagi**	**0.66**	**49**	*i* P	**Pg**	**23 17 50.2**	**0.0**
KOPT				*i* S	**Sg**	**23 18 00.3**	**+1.5**
KELT	**Kelkit**	**0.72**	**321**	*i* P	**Pg**	**23 17 50.0**	**-1.4**
KELT				*i* S	**Sg**	**23 17 60.0**	**-0.8**
KELT	**Kelkit**	**0.72**	**321**	*i* P	**Pg**	**23 17 50.0**	**-1.4**
KELT				*i* S	**Sg**	**23 18 00.0**	**-0.8**
PTK	**Pertek**	**0.78**	**207**	*e*PG	**Pg**	**23 17 51.7**	**-0.7**
PTK				*e*SG	**Sg**	**23 18 02.7**	**+0.1**
PTK	**Pertek**	**0.78**	**207**	*e*Pg	**Pg**	**23 17 51.7**	**-0.8**
PTK				*e*Sg	**Sg**	**23 18 02.7**	**+0.1**
BAYT	**Ayd¨–ntepe-Bay**	**0.84**	**16**	*e*PG	**Pg**	**23 17 52.7**	**-0.9**
BAYT				*e*SG	**Sg**	**23 18 04.5**	**+0.1**
BAYT	**Ayd¨–ntepe-Bay**	**0.84**	**16**	*e*Pg	**Pg**	**23 17 52.7**	**-0.9**
BAYT				*e*Sg	**Sg**	**23 18 04.6**	**+0.1**
BINT	**Bingol**	**0.87**	**145**	*e*PG	**Pg**	**23 17 53.5**	**-0.7**
BINT	**Bingol**	**0.87**	**145**	*e*Pg	**Pg**	**23 17 53.5**	**-0.7**
GUMT	**Gumushane**	**0.92**	**342**	*e*PG	**Pg**	**23 17 54.5**	**-0.6**
GUMT	**Gumushane**	**0.92**	**342**	*e*Pg	**Pg**	**23 17 54.5**	**-0.6**
KEMA	**Kemaliye**	**1.10**	**254**	*i* P	**Pg**	**23 17 58.3**	**-0.3**
KEMA				*i* S	**Sg**	**23 18 14.4**	**+1.7**
KEMA	**Kemaliye**	**1.10**	**254**	*i* P	**Pg**	**23 17 58.3**	**-0.2**
KEMA				*i* S	**Sg**	**23 18 14.4**	**+1.6**
BNGL	**BINGOL**	**1.19**	**122**	*i* P	**Pg**	**23 18 00.2**	**-0.2**
EZM	**Erzurum**	**1.21**	**74**	*e*PN	**Pn**	**23 17 59.6**	**-1.4**
ERZM	**Erzurum**	**1.21**	**74**	*i* P	**Pg**	**23 17 59.3**	**-1.5**
ERZM				*i* S	**Sg**	**23 18 18.5**	**+2.0**
ERZM	**Erzurum**	**1.21**	**74**	*i* P	**Pg**	**23 17 59.3**	**-1.5**
ERZM				*i* S	**Sg**	**23 18 18.5**	**+2.0**
ELZG	**Elazig**	**1.28**	**212**	*i* P	**Pn**	**23 18 00.9**	**-1.1**
ELZG				*i* S	**Sg**	**23 18 20.3**	**+1.7**
ELZG	**Elazig**	**1.28**	**212**	*i* P	**Pn**	**23 18 00.9**	**-1.1**
ELZG				*i* S	**Sg**	**23 18 20.3**	**+1.7**
SVRC	**Sivrice-ELAZID**	**1.28**	**199**	*e*PN	**Pn**	**23 18 01.0**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.28**	**199**	*e*Pn	**Pn**	**23 18 01.0**	**-1.0**
MACK	**Trabzon**	**1.36**	**357**	*i* P	**Pn**	**23 18 02.4**	**-0.7**
MACK				*i* S	**Sb**	**23 18 23.2**	**+2.2**
MACK	**Trabzon**	**1.36**	**357**	*i* P	**Pn**	**23 18 02.4**	**-0.7**
MACK				*i* S	**Sb**	**23 18 23.2**	**+2.2**
KTUT	**Trabzon**	**1.40**	**358**	*e*PN	**Pn**	**23 18 03.0**	**-0.7**
KTUT	**Trabzon**	**1.40**	**358**	*e*Pn	**Pn**	**23 18 03.0**	**-0.7**
SUSE	**Susehri**	**1.41**	**297**	*i* P	**Pn**	**23 18 03.0**	**-0.7**
SUSE				*i* S	**Sb**	**23 18 23.1**	**+0.6**
SUSE	**Susehri**	**1.41**	**297**	*i* P	**Pn**	**23 18 03.0**	**-0.8**
SUSE				*i* S	**Sb**	**23 18 23.1**	**+0.6**
ESPY	**Espiye-Giresun**	**1.58**	**328**	*e*PN	**Pn**	**23 18 06.1**	**-0.1**
ESPY	**Espiye-Giresun**	**1.58**	**328**	*e*Pn	**Pn**	**23 18 06.1**	**-0.1**
MALT	**Malatya**	**1.69**	**221**	*e*PN	**Pn**	**23 18 07.8**	**+0.2**
MALT	**Malatya**	**1.69**	**221**	*e*Pn	**Pn**	**23 18 07.8**	**+0.2**
GRSN	**GIRESUNGRSN**	**1.80**	**318**	*i* P	**Pn**	**23 18 09.6**	**+0.4**
GRSN				*i* S	**Sn**	**23 18 31.3**	**-1.0**
GRSN	**GIRESUNGRSN**	**1.80**	**318**	*i* P	**Pn**	**23 18 09.6**	**+0.4**
GRSN				*i* S	**Sn**	**23 18 31.3**	**-1.1**
DDEM	**Demirkent**	**1.96**	**48**	*i* P	**Pn**	**23 18 13.4**	**+2.1**
DDEM				*i* S	**Sn**	**23 18 41.4**	**+5.2**
DDEM	**Demirkent**	**1.96**	**48**	*i* P	**Pn**	**23 18 13.4**	**+2.1**
RSDY	**Resadiye-TOKAT**	**2.10**	**293**	*e*PN	**Pn**	**23 18 13.8**	**+0.6**
RSDY	**Resadiye-TOKAT**	**2.10**	**293**	*e*Pn	**Pn**	**23 18 13.8**	**+0.5**
SCER	**sogukcermik**	**2.12**	**278**	*i* P	**Pn**	**23 18 16.1**	**+2.6**
SCER	**sogukcermik**	**2.12**	**278**	*i* P	**Pn**	**23 18 16.1**	**+2.6**
SVSK	**Karacayir**	**2.22**	**279**	*e*PN	**Pn**	**23 18 15.2**	**+0.2**
SVSK	**Karacayir**	**2.22**	**279**	*e*Pn	**Pn**	**23 18 15.2**	**+0.3**
BCA	**Borcka**	**2.30**	**36**	*e*PN	**Pn**	**23 18 15.9**	**0.0**
BCA	**Borcka**	**2.30**	**36**	*e*Pn	**Pn**	**23 18 16.0**	**0.0**
AGRB	**Hanur-Agry**	**2.43**	**89**	*e*PN	**Pn**	**23 18 17.8**	**-0.1**
AGRB	**Hanur-Agry**	**2.43**	**89**	*e*Pn	**Pn**	**23 18 17.8**	**0.0**
SARI	**SarD1z-Kayseri**	**2.61**	**251**	*e*PN	**Pn**	**23 18 25.1**	**+4.8**

*DDA **13** 23:36:37.4, 39°.92N×39°.46E, h7km±1km, Md2.8*
*ISK **13** 23:36:37.2, 39°.92N×39°.57E, h7km, MD2.7*
CSEM 13 23:36:37.4±0.1, 39°.93N×39°.50E, h2km, MD2.8, Error ellipse: s-maj=3.8km s-min=2.7km az=107.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.21**	**212**	*e*PG	Pg	23 36 42.5	+1.1
EZC	**Erzincan**	**0.21**	**212**	*e*Pg	Pg	23 36 42.5	+1.2
KELT	**Kelkit**	**0.29**	**320**	*i* P	Pg	23 36 43.2	+0.3
KELT				*i* S	Sg	23 36 47.7	+1.0
KELT	**Kelkit**	**0.29**	**320**	*i* P	Pg	23 36 43.2	+0.3
KELT				*i* S	Sg	23 36 47.7	+1.0
GUMT	**Gumushane**	**0.53**	**359**	*e*PG	Pg	23 36 48.2	+0.6
GUMT	**Gumushane**	**0.53**	**359**	*e*Pg	Pg	23 36 48.2	+0.6
BAYT	**Ayd¨–ntepe-Bay**	**0.68**	**47**	*e*PG	Pg	23 36 50.2	-0.2
BAYT	**Ayd¨–ntepe-Bay**	**0.68**	**47**	*e*Pg	Pg	23 36 50.2	-0.2
KOPT	**Kop Dagi**	**0.78**	**83**	*i* P	Pg	23 36 53.1	+0.9
KOPT				*i* S	Sg	23 37 07.2	+4.9
KOPT	**Kop Dagi**	**0.78**	**83**	*i* P	Pg	23 36 53.1	+0.8
KEMA	**Kemaliye**	**1.01**	**230**	*i* P	Pg	23 36 56.3	-0.5
KEMA				*i* S	Sg	23 37 10.2	+0.2
KEMA	**Kemaliye**	**1.01**	**230**	*i* P	Pg	23 36 56.3	-0.6
KEMA				*i* S	Sg	23 37 10.2	+0.2
MACK	**Trabzon**	**1.04**	**12**	*i* P	Pg	23 36 57.1	-0.1
MACK				*i* S	Sg	23 37 10.8	+0.1
MACK	**Trabzon**	**1.04**	**12**	*i* P	Pg	23 36 57.1	-0.2
MACK				*i* S	Sg	23 37 10.8	+0.1
PTK	**Pertek**	**1.04**	**184**	*e*PG	Pg	23 36 57.4	+0.1
PTK	**Pertek**	**1.04**	**184**	*e*Pg	Pg	23 36 57.4	+0.1
SVSK	**Karacayir**	**1.92**	**271**	*e*PN	Pn	23 37 12.1	+1.0
SVSK	**Karacayir**	**1.92**	**271**	*e*Pn	Pn	23 37 12.1	+1.0

*BJI **14** 00:00:01.1, 9°.39S×127°.41E, h28km, mB5.7/38, mb5.7/68, Ms5.5/67, Ms7 5.3/64*
*ISCJB **14** 00:00:07.6±0.1, 8°.84S±0°.02×126°.84E±0°.02, h31km, mb5.7/177, MS5.5/216, Error ellipse: s-maj=3.3km s-min=2.8km az=11.1*
*MOS **14** 00:00:07.2±0.9, 8°.27S×126°.68E, h10km, mb5.8/63, MS5.4/61, Error ellipse: s-maj=10.4km s-min=6.5km az=103.0*
*IDC **14** 00:00:07.3±1.6, 8°.72S×126°.80E, h12km±9km, mb5.5/21, mb1 5.4/21, mb1mx5.4/22, mbtmp5.5/21, MS5.4/8, Ms1 5.3/8, ms1mx4.8/30, Error ellipse: s-maj=14.4km s-min=9.1km az=60.0*
*NEIC **14** 00:00:09.1±0.1, 8°.73S×126°.86E, h22km, mb5.7/78, ME5.2, MS5.5/182, MW5.5, Error ellipse: s-maj=5.9km s-min=3.8km az=49.0, Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt at Dili.
*TEH **14** 00:00:10.0, 8°.77S×126°.92E, h35km*
*DJA **14** 00:00:11, 9°.12S×126°.88E, h37km, Mw5.7/57*
*GCMT **14** 00:00:12.4±0.1, 9°.24S×127°.18E, h23km, MW5.6, Moment Tensor Solution. s96,c192; s43,c49; Moment tensor: Scale 10^{17}Nm; M_{rr}2.55±.05; $M_{\theta\theta}$-2.64±.04; $M_{\phi\phi}$0.09±.04; $M_{r\theta}$1.84±.07; $M_{\theta\phi}$-1.26±.03; $M_{\phi r}$1.55±.08; Best double couple: $M_0$3.70000×10^{17} NP1:ϕ_{ss}265.00000°, δ27.00000°, λ117.00000°. NP2:ϕ_{ss}55.00000°, δ66.00000°, λ77.00000°. Principal axes: T 3.5300, Plg67.0000°, Azm301.0000°; N 0.4100, Plg12.0000°, Azm61.0000°; P -3.9500, Plg20.0000°, Azm155.0000°; Data Used: II IU IC G CN. Surface waves: sta= 96, comp=199, per= 50.*

ISC 14 00:00:09.9±0.1, 8°.84S±0°.02×126°.83E±0°.02, h33km, h33km±1.6km; pP-P, n1145, σ1.22/513, mb5.7/177, MS5.5/216, 184C-165D, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**4.54**	**272**	P	**Pn**	**00 01 18.8**	**+2.4**
MMRI				S	**Sn**	**00 02 14.6**	**+6.5**
BNDI	**Bandanaira**	**5.26**	**36**	P	**Pn**	**00 01 28.4**	**+2.1**
	17nm2μm,1.2s						
BNDI				S	**Sn**	**00 02 35.8**	**+10**
	17nm2μm,1.2s						
MSAI	**Masohi**	**5.84**	**21**	P	**Pn**	**00 01 41.1**	**+6.9**
	2.2nm596nm,1.1s						
KDI	**Kendari**	**6.40**	**319**	P	**Pn**	**00 01 46.6**	**+4.7**
	2.9nm789nm,1.0s						
WSI	**Waingapu**	**6.50**	**262**	P	**Pn**	**00 01 44.4**	**+1.1**
TLE	**Tual**	**6.67**	**62**	P	**Pn**	**00 01 46.3**	**+0.7**
	12nm986nm,1.0s						
TLE				S	**Sn**	**00 03 03.4**	**+2.9**
	12nm986nm,1.0s						
KAKA	**Kakadu**	**6.72**	**125**	||*i* P	**Pn**	**00 01 43.7**	**-2.7**
	1μm,0.7s						
KAKA	**Kakadu**	**6.72**	**125**	*e*Pn	**Pn**	**00 01 43.8**	**-2.6**
KAKA	**Kakadu**	**6.72**	**125**	P	**Pn**	**00 01 44.2**	**-2.2**
	17nm6μm,0.7s						
KNA	**Kununurra**	**7.13**	**165**	P	**Pn**	**00 01 49.4**	**-2.5**
KAPI	**Kappang**	**7.99**	**298**	*e*Pn	**Pn**	**00 02 05.7**	**+2.0**
KAPI				*e*S	**Sn**	**00 03 39.1**	**+6.2**
KAPI	**Kappang**	**7.99**	**298**	Pn	**Pn**	**00 02 07.8**	**+4.1**
	2μm,0.9s,SNR=30						
KAPI	**Kappang**	**7.99**	**298**	P	**Pn**	**00 02 06.9**	**+3.2**
	4μm273nm,1.2s						
KAPI	**Kappang**	**7.99**	**298**	P	**Pn**	**00 02 07.4**	**+3.7**
	SNR=42						
BMNI	**Bima**	**8.05**	**271**	P	**Pn**	**00 02 06.7**	**+2.1**
	1μm,1.8s						
BMNI				S	**Sn**	**00 03 38.9**	**+4.4**
	1μm,1.8s						
LBMI	**Labuha**	**8.17**	**5**	P	**Pn**	**00 02 13.0**	**+6.7**
	2μm,1.4s						
LUWI	**Luwuk**	**8.73**	**332**	P	**Pn**	**00 02 19.4**	**+5.4**
	2μm,1.9s						
FITZ	**Fitzroy Crossi**	**9.28**	**187**	Pn	**Pn**	**00 02 17.7**	**-3.8**
	50nm,0.3s,baz=23,slow=11,SNR=392						
FITZ				Sn	**Sn**	**00 03 55.7**	**-9.1**
	94nm,0.3s,baz=253,slow=19,SNR=6.2						
FITZ				LR	LR	00 06 47.5	
	comp=Z,30μm,18.8s,baz=9.0,slow=43						
FITZ	**Fitzroy Crossi**	**9.28**	**187**	||*i* P	**Pn**	**00 02 17.6**	**-3.9**
	2μm,0.7s						
FITZ				*e*S	**Sn**	**00 03 48.2**	**-17**
FITZ	**Fitzroy Crossi**	**9.28**	**187**	*e*Pn	**Pn**	**00 02 17.8**	**-3.7**
FITZ				*e*S	**Sn**	**00 03 54.7**	**-10**
FITZ	**Fitzroy Crossi**	**9.28**	**187**	P	**Pn**	**00 02 18.0**	**-3.5**
	3μm,1.1s						
TNTI	**Ternate**	**9.56**	**3**	P	**Pn**	**00 02 31.5**	**+6.2**
	2μm,1.4s						
MNI	**Manado**	**10.40**	**349**	P	**Pn**	**00 02 43.4**	**+6.5**
MRSI	**Marisa**	**10.46**	**332**	P	**Pn**	**00 02 42.1**	**+4.5**
	7μm406nm,1.7s						
MTNI	**Mataram**	**10.54**	**270**	P	**Pn**	**00 02 37.6**	**-1.1**
	585nm,0.8s						
MTNI				S	**Sn**	**00 04 32.4**	**-3.3**
	585nm,0.8s						
KHKI	**Kahang-Kahang**	**11.11**	**272**	P	**Pn**	**00 02 47.4**	**+0.9**
	3μm234nm,1.4s						
IGBI	**Denpasar**	**11.55**	**269**	P	**Pn**	**00 02 53.6**	**+1.1**
	9μm986nm,0.9s						
IGBI				S	**Sn**	**00 04 57.8**	**-2.6**
	9μm986nm,0.9s						
TOLI	**Toli-Toli**	**11.58**	**328**	P	**Pn**	**00 02 58.6**	**+5.7**
	9μm743nm,1.1s						
BAKI	**Biak**	**11.96**	**51**	P	**Pn**	**00 02 58.3**	**+0.1**
	10μm998nm,1.1s						
BAKI				S	**Sn**	**00 05 07.6**	**-2.9**
	10μm998nm,1.1s						
NBBI	**Negara**	**12.08**	**271**	P	**Pn**	**00 03 01.7**	**+1.9**
	310nm,0.8s						
NBBI				S	**Sn**	**00 05 07.9**	**-5.6**
	310nm,0.8s						
SGSI	**Sangihe**	**12.51**	**354**	P	**Pn**	**00 03 10.1**	**+4.4**
	2μm,1.2s						
WAMI	**Wamena**	**12.79**	**68**	P	**Pn**	**00 03 13.6**	**+4.1**
	1μm,1.0s						
WAMI				S	**Sn**	**00 05 37.5**	**+6.6**
	1μm,1.0s						
KMMI	**Kalianget**	**12.86**	**277**	P	**Pn**	**00 03 11.4**	**+0.9**
	6μm247nm,2.0s						
WRA	**Warramunga Arr**	**13.22**	**147**	Pn	**Pn**	**00 03 07.9**	**-7.4**
	45nm,0.3s,baz=326,slow=13,SNR=598						
WRA				Sn	**Sn**	**00 05 29.1**	**-12**
	39nm,0.3s,baz=314,slow=23,SNR=12						
WRA				LR	LR	00 08 38.4	
	comp=Z,17μm,18.5s,baz=325,slow=38						
WRA	**Warramunga Arr**	**13.22**	**147**	P	**Pn**	**00 03 07.9**	**-7.4**
WRA				pmax	pmax		
	comp=Z,45nm,0.3s						
WRA				MLR	MLR		
	comp=Z,17μm,18.5s						
WB2	**Warramunga Arr**	**13.22**	**147**	*e*Pn	**Pn**	**00 03 08.2**	**-7.2**
WB2				*e*S	**Sn**	**00 05 28.6**	**-13**
MMPI	**Merauke**	**13.41**	**89**	P	**Pn**	**00 03 17.7**	**-0.3**
	comp=Z,698nm,0.6s						
MMPI				S	**Sn**	**00 05 38.4**	**-7.5**
	comp=Z,698nm,0.6s						
MBWA	**Marble Bar**	**14.03**	**208**	*e*Pn	**Pn**	**00 03 21.7**	**-4.8**
	comp=Z,330nm,0.8s						
MBWA				*e*S	**Sn**	**00 05 49.9**	**-11**
MBWA	**Marble Bar**	**14.03**	**208**	P	**Pn**	**00 03 21.7**	**-4.8**
	comp=Z,4μmcomp=Z,479nm,0.9s						
KRKI	**Karangkates**	**14.23**	**272**	P	**Pn**	**00 03 28.7**	**-0.6**
	comp=Z,840nm,0.8s						
KRKI				S	**Sn**	**00 06 04.2**	**-2.0**
	comp=Z,840nm,0.8s						
PLKI	**Palangkaraya**	**14.40**	**296**	P	**Pn**	**00 03 34.9**	**+3.4**
	comp=Z,9μmcomp=Z,565nm,1.2s						
PWJI	**Pagerwojo**	**14.88**	**272**	S	**Sn**	**00 06 19.9**	**-2.1**
SJI	**Sawahan**	**14.95**	**273**	P	**Pn**	**00 03 38.5**	**-0.4**
	comp=Z,397nm,0.8s						
MATI	**Mati**	**15.69**	**358**	*e*P	**Pn**	**00 03 54.5**	**+6.0**
KCP	**Kidapawan**	**15.84**	**354**	||*e*P	**Pn**	**00 03 52.8**	**+2.3**
CTBH	**Cotabato--PC H**	**16.16**	**351**	*e*P	**Pn**	**00 03 57.7**	**+3.0**
UGM	**Wanagama**	**16.16**	**272**	*e*Pn	**Pn**	**00 03 55.3**	**+0.6**
	comp=Z,939nm,1.3s						
UGM	**Wanagama**	**16.16**	**272**	P	**Pn**	**00 03 55.9**	**+1.2**
	comp=Z,564nm,1.1s						
UGM				S	**Sn**	**00 06 49.3**	**-3.7**
	comp=Z,564nm,1.1s						
MYLDM	**Lahad Datu**	**16.21**	**329**	P	**Pn**	**00 04 00.2**	**+4.9**
MYLDM	**Lahad Datu**	**16.21**	**329**	P	**Pn**	**00 04 00.4**	**+5.1**
	comp=Z,770nm,1.4s						
ASAR	**Alice Springs**	**16.23**	**156**	Pn	**Pn**	**00 03 48.8**	**-6.7**
	comp=Z,20nm,0.3s,baz=327,slow=11,SNR=391						
ASAR				Sn	**Sn**	**00 06 40.6**	**-14**
	comp=Z,16nm,0.3s,baz=327,slow=22,SNR=7.0						
ASAR				P3KPbc		00 39 23.2	
	comp=Z,0.1nm,0.3s,baz=149,slow=2.6,SNR=4.2						
ASAR	**Alice Springs**	**16.23**	**156**	Pn	**Pn**	**00 03 48.8**	**-6.7**
ASAR				Sn	**Sn**	**00 06 40.6**	**-14**
ASAR	**Alice Springs**	**16.23**	**156**	P	**Pn**	**00 03 48.8**	**-6.7**
ASAR				pmax	pmax		
	comp=Z,20nm,0.3s						
SMRI	**Semarang**	**16.33**	**275**	P	**Pn**	**00 03 55.8**	**-1.0**
	comp=Z,5μmcomp=Z,418nm,0.9s						
YOGI	**Yogyakarta**	**16.39**	**272**	P	**Pn**	**00 04 01.0**	**+3.4**
	comp=Z,827nm,1.1s						
BUKP	**Musuan**	**16.70**	**354**	*e*P	**Pn**	**00 04 03.5**	**+2.0**
COEN	**Coen**	**16.81**	**109**	*e*Pn	**Pn**	**00 03 57.6**	**-5.3**
	comp=Z,5μm,0.8s						
COEN				*e*S	**Sn**	**00 06 50.9**	**-18**
COEN	**Coen**	**16.81**	**109**	P	**Pn**	**00 03 57.8**	**-5.1**
	comp=Z,3μm,0.9s						
PAGZ	**Pagadian**	**16.93**	**348**	*e*P	**Pn**	**00 04 08.1**	**+3.7**
BJII	**Banjamegara**	**17.02**	**274**	P	**Pn**	**00 04 05.3**	**-0.2**
	comp=Z,4μmcomp=Z,286nm,1.1s						
SDKM	**Sandakan**	**17.29**	**326**	P	**Pn**	**00 04 13.1**	**+4.1**
CLJI	**Cilicap**	**17.66**	**272**	S	**Sn**	**00 07 34.7**	**+5.2**
STKI	**Sintang**	**17.66**	**299**	P	**Pn**	**00 04 16.5**	**+2.9**
	comp=Z,250nm,1.3s						
KKM	**Kota Kinabalu**	**18.18**	**324**	P	**Pn**	**00 04 22.9**	**+3.0**
KKM	**Kota Kinabalu**	**18.18**	**324**	*e*P	**Pn**	**00 04 22.2**	**+2.3**
	comp=Z,2μm,1.5s						
KKM	**Kota Kinabalu**	**18.18**	**324**	P	**Pn**	**00 04 22.5**	**+2.6**
	comp=Z,740nm,1.4s						
BTM	**Bintulu**	**18.19**	**311**	P	**Pn**	**00 04 23.7**	**+3.7**
SBUM	**Sibu**	**18.38**	**307**	P	**Pn**	**00 04 25.2**	**+2.8**
SBUM	**Sibu**	**18.38**	**307**	P	**Pn**	**00 04 24.7**	**+2.4**
	comp=Z,8μmcomp=Z,346nm,2.0s						
JCJI	**Jatiwangi**	**18.54**	**276**	P	Px	00 04 37.7	
JCJI				S	**Sn**	**00 07 50.1**	**-0.6**
SCPH	**Surigao**	**18.54**	**356**	||*e*P	**Pn**	**00 04 27.2**	**+2.9**
KDM	**Kudat**	**18.55**	**327**	P	**Pn**	**00 04 27.2**	**+2.8**
TBP	**Tagbilaran**	**18.64**	**351**	*e*P	**Pn**	**00 04 28.0**	**+2.5**
CISI	**Cisompet, Garu**	**18.86**	**272**	P	**Pn**	**00 04 27.8**	**-0.4**
	comp=Z,7μmcomp=Z,644nm,0.8s						
CISI				S	**Sn**	**00 07 51.1**	**-7.5**
	comp=Z,7μmcomp=Z,644nm,0.8s						
MSLP	**Maasin**	**18.95**	**354**	*e*P	**Pn**	**00 04 32.2**	**+3.0**
LEM	**Lembang**	**19.14**	**275**	P	**Pn**	**00 04 30.1**	**-1.4**
	comp=Z,7μmcomp=Z,615nm,1.0s					

AUQP	**San Andres**	**22.40 349**	*e*P	**P**	**00 05 09.3**	**+3.6**
BOAC	**Boac**	**22.70 347**	*e*P	**P**	**00 05 10.7**	**+1.9**
MDSI	**Maura Dua**	**22.90 279**	P	**P**	**00 05 09.1**	**-2.0**
	comp=Z,1μmcomp=Z,53nm,1.3s,mb4.8					
LWLI	**Liwa**	**22.91 278**	P	**P**	**00 05 11.3**	**+0.1**
	comp=Z,5μmcomp=Z,225nm,0.9s,mb5.6					
TGY	**Tagaytay City**	**23.53 346**	P	**P**	**00 05 17.6**	**+0.1**
	comp=Z,491nm,0.8s,mb6.0,baz=196,slow=4.8,SNR=12					
TGY	**Tagaytay City**	**23.53 346**	P	**P**	**00 05 17.6**	**+0.2**
TGY			pmax	pmax		
	comp=Z,491nm,0.8s					
POLP	**Polillo Island**	**23.91 348**	*e*P	**P**	**00 05 21.4**	**+0.5**
KLBR	**Kellerberrin**	**24.16 199**	*e*P	**P**	**00 05 22.6**	**-0.5**
	comp=Z,277nm,0.8s,mb5.7					
KLBR			*e*S	**S**	**00 09 41.6**	**+2.4**
KSI	**Kapahiang**	**24.63 281**	P	**P**	**00 05 27.0**	**-0.6**
	comp=Z,134nm,1.4s,mb5.3					
BALP	**Baler**	**24.97 348**	*e*P	**P**	**00 05 30.5**	**0.0**
MYKOM	**Kota Tinggi**	**25.22 294**	P	**P**	**00 05 34.2**	**+1.2**
MYKOM	**Kota Tinggi**	**25.22 294**	P	**P**	**00 05 33.5**	**+0.6**
	comp=Z,2μmcomp=Z,203nm,1.0s,mb5.6					
BBOO	**Buckleboo**	**25.34 162**	*e*P	**P**	**00 05 33.4**	**-0.4**
SCZP	**Santa Cruz**	**25.39 344**	*e*P	**P**	**00 05 33.1**	**-1.3**
NWAO	**Narrogin (SRO)**	**25.56 199**	P	**P**	**00 05 35.5**	**-0.4**
	comp=Z,55nm,0.7s,mb5.2,baz=19,slow=10.0,SNR=22					
NWAO			S	**S**	**00 10 12.7**	**+11**
	comp=Z,121nm,0.8s,baz=130,slow=20,SNR=4.8					
NWAO			LR	LR	00 17 20.6	
	comp=Z,16μm,18.1s,MS5.6,baz=211,slow=40					
NWAO	**Narrogin (SRO)**	**25.56 199**	*e*P	**P**	**00 05 35.5**	**-0.3**
NWAO			*e*S	**S**	**00 10 14.8**	**+13**
NWAO			LR	LR		
	comp=Z,14μm,20.0s,MS5.5					
NWAO	**Narrogin (SRO)**	**25.56 199**	P	**P**	**00 05 35.5**	**-0.4**
NWAO			S	**S**	**00 10 12.7**	**+11**
NWAO			pmax	pmax		
	comp=Z,55nm,0.7s					
NWAO			smax			
	comp=N,121nm,0.8s					
NWAO			MLR	MLR		
	comp=Z,16μm,18.2s					
KGM	**Kluang**	**25.79 294**	P	**P**	**00 05 39.3**	**+1.1**
RGRI	**Rengat**	**25.81 288**	P	**P**	**00 05 39.0**	**+0.7**
CAUP	**Cauayan**	**26.09 349**	*e*P	**P**	**00 05 41.3**	**+0.6**
STKA	**Stephens Creek**	**26.72 151**	P	**P**	**00 05 46.0**	**-0.3**
	comp=Z,212nm,0.8s,mb5.7,baz=321,slow=9.1,SNR=171					
STKA			S	**S**	**00 10 31.6**	**+12**
	comp=Z,25nm,0.8s,baz=0.0,slow=20,SNR=2.0					
STKA			LR	LR	00 17 07.0	
	comp=Z,9μm,18.3s,MS5.4,baz=198,slow=38					
STKA	**Stephens Creek**	**26.72 151** ⇓	*i*P	**P**	**00 05 46.0**	**-0.3**
	comp=Z,278nm,0.9s,mb5.8					
STKA	**Stephens Creek**	**26.72 151**	*e*P	**P**	**00 05 46.1**	**-0.2**
	comp=Z,1.9nm,1.3s					
STKA			*e*S	S	00 10 41.6	+22
APYP	**Conner**	**27.09 348**	*e*P	**P**	**00 05 48.3**	**-1.5**
BKNI	**Bangkinang**	**27.25 288**	P	**P**	**00 05 51.4**	**0.0**
	comp=Z,3μmcomp=Z,199nm,1.3s,mb5.5					
PDSI	**Padang**	**27.41 285**	P	pP	00 06 07.5	+5.3
KTGM	**Kuala Trenggan**	**27.50 300**	P	**P**	**00 05 55.1**	**+1.6**
PPI	**Padang Panjang**	**27.61 286**	P	**P**	**00 05 55.7**	**+1.2**
	comp=Z,9μmcomp=Z,46nm,1.0s,mb5.1					
EIDS	**Eidsvold**	**28.33 128**	*e*P	**P**	**00 05 59.2**	**-1.7**
	comp=Z,94nm,1.0s,mb5.4					
GUMO	**Guam**	**28.59 39**	P	**P**	**00 06 02.3**	**-0.8**
	comp=Z,89nm,0.9s,mb5.5,baz=184,slow=22,SNR=5.3					
GUMO	**Guam**	**28.59 39**	*e*P	**P**	**00 06 02.9**	**-0.3**
GUMO			LR	LR		
	comp=Z,4μm,22.0s,MS5.0					
GUMO	**Guam**	**28.59 39**	*e*P	**P**	**00 06 02.9**	**-0.3**
GUMO			MLR	MLR		
	comp=Z,4μm,22.0s,MS5.0					
MNSI	**Mandailing Nat**	**28.79 288**	P	**P**	**00 06 04.0**	**-1.1**
	comp=Z,1μmcomp=Z,141nm,0.9s,mb5.7					
IPM	**Ipoh**	**28.93 296**	P	**P**	**00 06 06.4**	**+0.1**
IPM	**Ipoh**	**28.93 296**	P	**P**	**00 06 05.9**	**-0.4**
	comp=Z,2μmcomp=Z,62nm,1.7s,mb5.1					
COCO	**West Island**	**29.67 261**	PFAKE		00 06 20.0	+7.1
COCO			LR	LR		
	comp=Z,5μm,22.0s,MS5.1					
COCO	**West Island**	**29.67 261**	P	pP	00 06 30.0	+7.7
COCO			MLR	MLR		
	comp=Z,5μm,22.0s,MS5.1					
ARMA	**Armidale**	**31.59 136** ⇓	*i*P	**P**	**00 06 30.7**	**+1.1**
ARMA	**Armidale**	**31.59 136**	*e*P	**P**	**00 06 30.8**	**+1.2**
	comp=Z,8.5nm,0.6s,mb4.8					
TPTI		**31.91 291**	P	**P**	**00 06 29.7**	**-2.9**
	comp=Z,69nm,1.6s,mb5.2					
TPTI			S	**S**	**00 11 36.0**	**-5.8**
	comp=Z,69nm,1.6s					
TWG	**Pinlang**	**31.96 350**	*e*P	**P**	**00 06 31.2**	**-1.7**
YNG	**Young**	**32.17 145** ⇓	*i*P	**P**	**00 06 35.3**	**+0.6**
	comp=Z,160nm,0.9s,mb5.8					
QIZ	**Qiongzhong**	**32.36 329**	P	**P**	**00 06 36.3**	**-0.2**
QIZ			S	**S**	**00 11 52.8**	**+4.2**
QIZ			pmax	pmax		
	comp=Z,68nm,1.5s,mb5.3					
QIZ			LR	LR		
	comp=N,5μm,16.8s					
QIZ			LR	LR		
	comp=Z,6μm,17.6s,MS5.3					
QIZ	**Qiongzhong**	**32.36 329**	*e*P	**P**	**00 06 36.2**	**-0.3**
QIZ			*e*ScP	ScP	00 13 07.8	+2.3
YULB	**Yu-li**	**32.48 351**	*e*P	**P**	**00 06 35.2**	**-2.3**
	comp=Z,46nm,0.8s,mb5.4					
TPUB	**Ta-pu**	**32.51 349**	*e*P	**P**	**00 06 37.0**	**-0.8**
	comp=Z,153nm,0.6s,mb6.1					
HNR	**Honiara**	**32.70 94**	P	**P**	**00 06 39.9**	**+0.3**
	comp=Z,112nm,0.9s,mb5.8,baz=216,slow=16,SNR=5.1					
HNR	**Honiara**	**32.70 94**	*e*P	**P**	**00 06 42.2**	**+2.6**
HNR	**Honiara**	**32.70 94**	*e*P	**P**	**00 06 42.2**	**+2.6**
SSLB	**Suanglung**	**32.93 350**	*e*P	**P**	**00 06 39.8**	**-1.6**
	comp=Z,87nm,0.8s,mb5.7					
TOO	**Toolangi**	**33.21 152** ⇓	*i*P	**P**	**00 06 45.4**	**+1.6**
CAN	**Canberra**	**33.25 146**	*e*P	**P**	**00 06 45.2**	**+1.1**
	comp=Z,16nm,1.7s,mb4.7					
CAN			LR	LR		
	comp=Z,6μm,21.0s,MS5.3					
CAN	**Canberra**	**33.25 146**	*e*P	**P**	**00 06 45.2**	**+1.0**
CAN			pmax	pmax		
	comp=Z,16nm,1.7s,mb4.7					
CAN			MLR	MLR		
	comp=Z,6μm,21.0s,MS5.3					
CNB	**Canberra Magne**	**33.45 145** ⇓	*i*P	**P**	**00 06 46.6**	**+0.7**
RIV	**Riverview**	**33.47 142**	*e*P	**P**	**00 06 47.6**	**+1.5**
TATO	**Taipei**	**34.01 351**	PFAKE		00 07 00.0	+9.2
TATO			LR	LR		
	comp=Z,4μm,20.0s,MS5.2					
GZH	**Guangzhou**	**34.36 338**	P	**P**	**00 06 57.8**	**+3.9**
GZH			S	**S**	**00 12 24.1**	**+4.5**
GZH			LR	LR		
	comp=N,4μm,16.9s,MS5.3					
GZH			LR	LR		
	comp=E,3μm,16.7s,MS5.3					
GZH			LR	LR		
	comp=Z,8μm,18.2s,MS5.5					
QZH	**Quanzhou**	**34.52 347** ⇓	*i*P	**P**	**00 06 54.3**	**-0.9**
QZH			S	**S**	**00 12 18.5**	**-3.5**
QZH			pmax	pmax		
	comp=Z,460nm,1.2s,mb6.3					
QZH			LR	LR		
	comp=Z,8μm,18.2s,MS5.5					
JOW	**Kunigami**	**35.48 2**	*e*P	**P**	**00 07 03.5**	**0.0**
	comp=Z,60nm,0.8s,mb5.6					
NST	**Nakhon Sawan**	**35.95 313** ⇑	P	**P**	**00 07 08.2**	**+0.5**
	comp=Z,92nm,1.0s,mb5.7					
BDT	**Bhumibol Dam**	**37.79 313**	P	**P**	**00 07 23.0**	**-0.3**
	comp=Z,96nm,1.0s,mb5.5					
CM31	**Chiang Mai Arr**	**38.64 315**	*e*P	**P**	**00 07 31.4**	**+1.0**
	comp=Z,79nm,0.8s,mb5.5					
CM31			LR	LR		
	comp=Z,3μm,19.0s,MS5.1					
CMAR	**Chiang Mai Arr**	**38.64 315**	P	**P**	**00 07 30.9**	**+0.4**
	comp=Z,84nm,0.9s,mb5.5,baz=143,slow=6.8,SNR=198					
CMAR			PcP	PcP	00 09 44.2	+1.8
	comp=Z,14nm,1.0s,baz=160,slow=3.7,SNR=4.5					
CMAR			ScP	ScP	00 13 31.4	+3.2
	comp=Z,4.2nm,0.7s,baz=180,slow=2.9,SNR=6.5					
CMAR	**Chiang Mai Arr**	**38.64 315**	P	**P**	**00 07 30.9**	**+0.5**
CMAR					00 09 44.2	
CMAR					00 13 31.4	
CMAR			pmax	pmax		
	comp=Z,84nm,0.9s					
CMAR			pmax	pmax		
	comp=Z,14nm,1.0s					
CMAR			pmax	pmax		
	comp=N,4.0nm,0.7s					
CBIJ	**Chichi jima**	**38.70 22**	P	**P**	**00 07 29.2**	**-1.6**
	comp=N,32nm,0.4s,mb5.4,baz=266,slow=19,SNR=3.4					
CHG	**Chiang Mai**	**38.87 315** ⇑	P	**P**	**00 07 32.9**	**+0.5**
	comp=N,205nm,1.0s,mb5.8					
CHTO	**Chiang Mai**	**38.87 315**	PFAKE		00 07 40.0	+7.6
CHTO			LR	LR		
	comp=Z,4μm,20.0s,MS5.2					
CHTO	**Chiang Mai**	**38.87 315**	P	**P**	**00 07 33.0**	**+0.6**
	comp=Z,2μmcomp=Z,243nm,1.2s,mb5.8					
CHTO	**Chiang Mai**	**38.87 315**	P	**P**	**00 07 33.0**	**+0.5**
	SNR=55					
CHRT	**Chiangrai**	**39.02 317** ⇑	P	**P**	**00 07 33.0**	**-0.7**
	comp=Z,2μm,1.3s,mb6.6					
SSE	**Sheshan**	**40.07 352**	P	**P**	**00 07 42.1**	**-0.1**
SSE			pP	pP	00 07 50.5	-1.4
SSE			S	**S**	**00 13 49.5**	**+3.3**
SSE			SS	SS	00 16 50.6	+6.0
SSE			pmax	pmax		
	comp=Z,110nm,1.0s,mb5.5					
SSE			pmax	pmax		
	comp=Z,870nm,5.7s					
SSE			LR	LR		
	comp=N,1μm,15.8s,MS4.9					
SSE			LR	LR		
	comp=E,1μm,15.8s,MS4.9					
SSE			LR	LR		
	comp=Z,2μm,21.4s					
NOUC	**Port Laguerre**	**40.13 114**	*e*P	**P**	**00 07 39.5**	**-3.5**
GYA	**Guiyang**	**40.18 331** ⇑	*i*P	**P**	**00 07 43.4**	**+0.2**
GYA			pP	pP	00 07 55.4	+2.5
GYA			sP	sP	00 08 01.3	+4.5
GYA			PP	PP	00 09 23.6	+7.5
GYA			ScP	ScP	00 13 34.5	+0.4
GYA			S	**S**	**00 13 50.8**	**+2.8**
GYA			pmax	pmax		
	comp=Z,140nm,1.0s,mb5.7					
GYA			pmax	pmax		
	comp=Z,820nm,6.5s					
GYA			LR	LR		
	comp=N,2μm,14.9s,MS5.2					
GYA			LR	LR		
	comp=E,2μm,17.7s,MS5.2					
GYA			LR	LR		
	comp=Z,3μm,16.7s,MS5.2					
DZM	**Mont Dzumac**	**40.25 114**	*e*P	**P**	**00 07 44.3**	**+0.3**
	comp=Z,149nm,1.1s,mb5.6					
DZM			*e*S	**S**	**00 13 47.9**	**-1.5**
	comp=Z,4μm,28.7s					
DZM			*e*LR	LR	00 18 51.2	
	comp=Z,18μm,23.6s					
NORM	**Noumea**	**40.32 114**	*e*P	**P**	**00 07 44.3**	**-0.3**
WHN	**Wuhan**	**40.95 343** ⇑	P	**P**	**00 07 50.1**	**+0.6**
WHN			pP	pP	00 07 59.3	+0.1
WHN			sP	sP	00 08 05.8	+2.7
WHN			S	**S**	**00 13 56.5**	**-2.8**
WHN			pmax	pmax		
	comp=Z,420nm,0.9s,mb6.1					
WHN			pmax	pmax		
	comp=Z,2μm,8.4s					
WHN			LR	LR		
	comp=N,6μm,8.4s					
WHN			LR	LR		
	comp=E,5μm,24.1s					
WHN			LR	LR		
	comp=Z,8μm,15.3s					
KMI	**Kunming**	**41.11 326**	P	**P**	**00 07 52.6**	**+1.7**
KMI			pP	pP	00 08 04.1	+3.5
KMI			sP	sP	00 08 09.3	+4.7
KMI			PP	PP	00 09 32.0	+5.7
KMI			PcS	PcS	00 13 41.4	0.0
KMI			S	**S**	**00 14 04.9**	**+2.9**
KMI			sS	sS	00 14 24.3	+6.4
KMI			SS	SS	00 17 07.0	+1.5
KMI			pmax	pmax		
	comp=Z,370nm,1.2s,mb5.9					
KMI			pmax	pmax		
	comp=Z,1μm,3.1s					
KMI			LR	LR		
	comp=N,2μm,16.0s,MS5.3					
KMI			LR	LR		
	comp=E,2μm,14.6s,MS5.3					
KMI			LR	LR		
	comp=Z,3μm,19.7s					
NJ2	**Nanjing**	**41.37 350**	*e*P	**P**	**00 07 53.0**	**+0.1**
NJ2			pP	pP	00 08 01.3	-1.3
NJ2			S	**S**	**00 14 03.0**	**-2.5**
NJ2			pmax	pmax		
	comp=Z,290nm,1.0s,mb5.9					
NJ2			pmax	pmax		
	comp=Z,1μm,5.0s					
NJ2			LR	LR		
	comp=N,2μm,19.9s					
NJ2			LR	LR		
	comp=E,2μm,12.1s					
NJ2			LR	LR		
	comp=Z,3μm,18.7s,MS5.2					
ENH	**Enshi**	**42.30 337**	*e*P	**P**	**00 08 00.4**	**-0.2**
	comp=Z,127nm,1.0s,mb5.5					
ENH			LR	LR		
	comp=Z,3μm,19.0s,MS5.2					
CD2	**Chengdu**	**45.29 332** ⇑	*i*P	**P**	**00 08 23.8**	**-0.8**
CD2			pP	pP	00 08 33.8	-0.6
CD2			sP	sP	00 08 37.6	-0.7
CD2			PP	PP	00 10 10.6	-0.5
CD2			PcS	PcS	00 13 55.1	-3.0
CD2			S	**S**	**00 15 03.3**	**+0.2**
CD2			sS	sS	00 15 19.1	-0.1
CD2			pmax	pmax		
	comp=Z,200nm,1.2s,mb5.8					
CD2			pmax	pmax		
	comp=Z,2μm,5.6s					
CD2			LR	LR		
	comp=N,4μm,17.8s,MS5.5					
CD2			LR	LR		
	comp=E,3μm,16.6s,MS5.5					
CD2			LR	LR		
	comp=Z,4μm,15.5s,MS5.5					
TIA	**Tai'an**	**45.73 349**	*e*P	**P**	**00 08 26.8**	**-1.2**
TIA			PP	PP	00 10 11.9	-3.7
TIA			S	**S**	**00 15 06.3**	**-2.9**
TIA			pmax	pmax		
	comp=Z,90nm,0.7s,mb5.8					
TIA			LR	LR		
	comp=N,2μm,17.6s,MS5.4					
TIA			LR	LR		
	comp=E,4μm,19.6s,MS5.4					
TIA			LR	LR		
	comp=Z,2μm,16.7s,MS5.2					
XAN	**Xi'an**	**45.90 339**	P	**P**	**00 08 28.3**	**-1.1**
XAN			pP	pP	00 08 37.6	-1.6
XAN			sP	sP	00 08 42.3	-0.8
XAN			S	**S**	**00 15 08.0**	**-3.8**
XAN			pmax	pmax		
	comp=Z,46nm,1.0s,mb5.4					
XAN			pmax	pmax		
	comp=Z,160nm,13.6s					
XAN			LR	LR		
	comp=N,2μm,19.7s,MS5.2					
XAN			LR	LR		
	comp=E,800nm,18.7s,MS5.2					
XAN			LR	LR		
	comp=Z,1μm,16.1s,MS4.9					
KSRS	**Korea Array**	**46.06 1**	P	**P**	**00 08 30.0**	**-0.6**
	comp=Z,37nm,0.8s,mb5.4,baz=176,slow=9.8,SNR=106					
KSRS			S	**S**	**00 15 19.1**	**+5.2**
	comp=Z,2.6nm,1.1s,baz=176,slow=16,SNR=4.9					
KSRS	**Korea Array**	**46.06 1**	P	**P**	**00 08 30.0**	**-0.6**
KSRS			S	**S**	**00 15 19.1**	**+5.2**
KSRS			pmax	pmax		
	comp=Z,37nm,0.8s,mb5.4					
KSRS			smax			
	comp=N,3.0nm,1.1s					
INCN	**Inchon**	**46.08 360**	*e*P	**P**	**00 08 30.2**	**-0.5**
	comp=N,46nm,1.0s,mb5.4					
INCN			LR	LR		
	comp=Z,2μm,20.0s,MS5.2					
MJAR	**Matsushiro Arr**	**46.39 13**	P	**P**	**00 08 31.1**	**-2.1**
	comp=Z,48nm,0.9s,mb5.5,baz=191,slow=9.6,SNR=141					
MJAR			ScP	ScP	00 14 01.4	+2.4
	comp=Z,13nm,1.1s,baz=201,slow=5.3,SNR=9.9					
MJAR	**Matsushiro Arr**	**46.39 13**	P	**P**	**00 08 31.1**	**-2.1**
MJAR			pmax	pmax		
	comp=Z,48nm,0.9s					
MJAR			pmax	pmax		
	comp=N,13nm,1.1s					
MAJO	**Matsushiro**	**46.39 13**	*e*P	**P**	**00 08 30.6**	**-2.6**
	comp=N,57nm,0.8s,mb5.5					
MAJO			*e*ScP	ScP	00 14 00.2	+1.2
MAJO			LR	LR		
	comp=Z,4μm,19.0s,MS5.4					
MAJO	**Matsushiro**	**46.39 13**	*e*P	**P**	**00 08 30.6**	**-2.6**
MAJO			pmax	pmax		
	comp=Z,57nm,0.8s,mb5.5					
MAJO			MLR	MLR		
	comp=Z,4μm,19.0s,MS5.4					
MAT	**Matsushiro**	**46.39 13**	P	**P**	**00 08 30.4**	**-2.8**
MAT			S	**S**	**00 15 18.0**	**-0.6**
AGT	**Agartala**	**47.60 314**	*ex*	**P**	**00 08 39.0**	**-3.9**
AGT			*ex*	x	00 08 58.0	
DL2	**Dalian**	**47.74 355** ⇑	P	**P**	**00 08 41.5**	**-2.2**
DL2			S	**S**	**00 15 36.5**	**-1.4**
DL2			pmax	pmax		
	comp=Z,60nm,1.1s,mb5.5					
DL2			pmax	pmax		
	comp=Z,430nm,8.4s					
DL2			LR	LR		
	comp=N,860nm,17.6s,MS5.0					
DL2			LR	LR		
	comp=E,1μm,13.8s,MS5.0					
DL2			LR	LR		
	comp=Z,860nm,17.9s,MS4.8					
WAKE	**Wake Island**	**48.17 54**	*e*P	**P**	**00 08 47.1**	**-0.3**
	comp=Z,304nm,1.0s,mb6.3					
WAKE			LR	LR		
	comp=Z,3μm,22.0s,MS5.2					
TIY	**Taiyuan**	**48.22 345**	*e*P	**P**	**00 08 46.6**	**-0.9**
TIY			pP	pP	00 08 55.0	-2.3
TIY			sP	sP	00 09 00.5	-0.7
TIY			S	**S**	**00 15 42.8**	**-2.0**
TIY			pmax	pmax		
	comp=Z,420nm,4.1s					
TIY			LR	LR		
	comp=N,2μm,15.2s,MS5.3					
TIY			LR	LR		
	comp=E,500nm,10.9s,MS5.3					
TIY			LR	LR		
	comp=Z,2μm,12.7s,MS5.2					
SHL	**Shillong**	**48.23 316** ⇑	*i*P	**P**	**00 08 47.5**	**-0.2**
SHL			*ex*	x	00 15 44.0	
PALK	**Pallekele**	**48.67 288**	*e*P	**P**	**00 08 50.9**	**-0.5**
	comp=Z,123nm,1.2s,mb5.8					
PALK	**Pallekele**	**48.67 288**	*e*P	**P**	**00 08 50.9**	**-0.5**
PALK			pmax	pmax		
	comp=Z,123nm,1.2s,mb5.8					
PALK	**Pallekele**	**48.67 288**	P	**P**	**00 08 49.8**	**-1.6**
	comp=Z,42nm,1.3s,mb5.3					
CAL	**Calcutta**	**48.93 310** ⇑	*i*P	**P**	**00 08 53.3**	**+0.1**
CAL			*ex*	x	00 10 14.7	
BJT	**Baijiatuau**	**49.60 349**	*e*P	**P**	**00 08 57.5**	**-0.5**
	comp=Z,67nm,0.8s,mb5.7					
BJT			LR	LR		
	comp=Z,2μm,20.0s,MS5.0					
BJT	**Baijiatuau**	**49.60 349**	*e*P	**P**	**00 08 57.5**	**-0.5**
BJT			pmax	pmax		
	comp=Z,67nm,0.8s					
BJT			MLR	MLR		
	comp=Z,2μm,20.0s					
BJI	**Beijing**	**49.62 349**	P	**P**	**00 08 57.0**	**-1.1**
BJI			pP	pP	00 09 09.3	+1.3
BJI			sP	sP	00 09 11.5	-0.4
BJI			S	**S**	**00 16 00.8**	**-3.5**
BJI			sS	sS	00 16 21.3	+0.8
BJI			pmax	pmax		
	comp=Z,91nm,0.9s,mb5.8					
BJI			pmax	pmax		
	comp=Z,530nm,5.4s					
BJI			LR	LR		
	comp=N,1μm,19.2s,MS5.2					
BJI			LR	LR		
	comp=E,2μm,17.8s,MS5.2					
BJI			LR	LR		
	comp=Z,1μm,22.6s,MS4.9					
LZH	**Lanzhou**	**49.65 335** ⇑	P	**P**	**00 08 59.0**	**+0.6**
LZH			pP	pP	00 09 09.3	+1.0
LZH			sP	sP	00 09 13.5	+1.3
LZH			PP	PP	00 10 54.3	+1.1
LZH			S	**S**	**00 16 05.1**	**+0.2**
LZH			sS	sS	00 16 22.5	+1.4
LZH			SS	SS	00 19 34.0	-3.7
LZH			pmax	pmax		
	comp=Z,540nm,1.5s,mb6.4					
LZH			pmax	pmax		
	comp=Z,1μm,6.1s					
LZH			LR	LR		
	comp=N,2μm,15.9s,MS5.5					
LZH			LR	LR		
	comp=E,3μm,15.4s,MS5.5					
LZH			LR	LR		
	comp=Z,3μm,18.0s,MS5.4					
OUZ	**Omahuta**	**50.07 129**	*e*P	**P**	**00 09 03.4**	**+1.7**
	comp=Z,70nm,1.2s,mb5.6					
VIS	**Vishakhapatnam**	**50.42 302**	*e*PKP	**P**	**00 09 04.9**	**+0.2**
VIS			AMb	AMB	00 09 06.7	
	comp=Z,197nm,1.7s,mb5.8					
VIS			*i* x	x	00 16 13.7	
MSVF	**Nonsavu**	**50.50 106**	*e*P	**P**	**00 09 06.5**	**+1.2**
	comp=Z,69nm,1.1s,mb5.6					
MSVF			LR	LR		
	comp=Z,6μm,19.0s,MS5.6					
SNY	**Shenyang**	**50.50 357** ⇑	P	**P**	**00 09 03.8**	**-1.0**
SNY			S	**S**	**00 16 15.4**	**-1.2**
SNY			pmax	pmax		
	comp=Z,47nm,0.8s,mb5.5					
SNY			pmax	pmax		
	comp=Z,540nm,5.8s					
SNY			LR	LR		
	comp=N,2μm,20.2s,MS5.3					
SNY			LR	LR		
	comp=E,1μm,20.6s,MS5.3					
SNY			LR	LR		
	comp=Z,3μm,20.9s,MS5.3					
MDRS	**Chennai**	**51.13 295** ⇓	*e*PKP	x	00 09 21.2	
MDRS			*e*PP	x	00 11 18.2	
MDRS			*e*S	x	00 16 39.2	
MDRS			*ex*	x	00 20 28.2	
MDRS			*ex*	x	00 25 20.2	
MDRS			*ex*	x	00 26 46.2	
MDRS			*ex*	x	00 31 31.2	
MDRS			*ex*	x	00 33 52.2	
MDRS			*ex*	x	00 37 01.2	
MDRS			*ex*	x	00 41 49.2	
HHC	**Hu-ho-hao-te**	**51.40 345** ⇑	P	**P**	**00 09 11.5**	**-0.1**
HHC			pP	pP	00 09 16.0	-5.5
HHC			PcP	PcP	00 10 24.5	-1.4
HHC			PP	PP	00 11 10.4	+1.3
HHC			ScP	ScP	00 14 19.5	-0.7
HHC			S	**S**	**00 16 30.3**	**+1.2**
HHC			ScS	ScS	00 18 57.4	-2.2
HHC			SS	SS	00 20 05.3	-0.2
HHC			pmax	pmax		
	comp=Z,80nm,1.1s,mb5.6					
HHC			pmax	pmax		
	comp=Z,560nm,6.5s					
HHC			LR	LR		
	comp=N,2μm,16.5s,MS5.3					
HHC			LR	LR		
	comp=E,1μm,14.8s,MS5.3					
HHC			LR	LR		
	comp=Z,2μm,15.5s,MS5.2					
LSA	**Lhasa**	**51.45 320**	*e*P	**P**	**00 09 13.1**	**+1.0**
	comp=Z,232nm,1.0s,mb6.1					
LSA			LR	LR		
	comp=Z,3μm,20.0s,MS5.3					
LSA	**Lhasa**	**51.45 320**	*e*P	**P**	**00 09 13.1**	**+1.0**
LSA			pmax	pmax		
	comp=Z,231nm,1.0s,mb6.1					
LSA			MLR	MLR		
	comp=Z,3μm,20.0s,MS5.3					
BTO	**Baotou**	**51.58 344**	*e*P	**P**	**00 09 11.0**	**-1.9**
FUNA	**Funafuti**	**51.73 94**	PFAKE		00 09 30.0	+15
FUNA			LR	LR		
	comp=Z,13μm,19.0s,MS6.0					
RPZ	**Rata Peaks**	**51.78 140**	*e*P	**P**	**00 09 15.5**	**+1.0**
	comp=Z,164nm,0.9s,mb6.0					
VLA	**Vladivostok**	**51.91 5** ⇓	*e*P	**P**	**00 09 12.6**	**-2.7**
VLA			*e*		00 10 25.0	
VLA					00 11 10.5	
VLA			S	**S**	**00 16 34.1**	**-1.9**
VLA			pmax	pmax		
	comp=Z,110nm,1.7s,mb5.5					

ODAN	**Odare**	**52.17**	**314**	*e*P	**P**	**00 09 17.5**	**-0.1**
	comp=Z,508nm,1.1s,mb6.4						
ODZ	**Otahua Downs**	**52.18**	**142**	*e*P	**P**	**00 09 17.7**	**+0.3**
	comp=Z,121nm,0.8s,mb5.9						
TAPN	**Taplejung**	**52.25**	**315**	*e*P	**P**	**00 09 18.4**	**+0.3**
	comp=Z,710nm,1.0s,mb6.5						
CN2	**Changchun**	**52.40**	**359**	*e*P	**P**	**00 09 17.6**	**-1.4**
CN2				*e*pP	pP	00 09 27.6	-1.3
CN2				*e*sP	sP	00 09 31.6	-1.2
CN2				*e*S	**S**	**00 16 40.3**	**-2.4**
CN2				*e*SS	SS	00 20 16.3	-4.9
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
CN2				pmax	pmax		
	comp=Z,400nm,9.0s						
CN2				LR	LR		
	comp=N,2μm,18.0s,MS5.2						
CN2				LR	LR		
	comp=E,1μm,18.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
TRD	**Trivandrum**	**52.58**	**288**⇑	*e*x	x	00 09 34.7	
TRD				*e*x	x	00 16 52.7	
KHZ	**Kahutara**	**52.82**	**137**	*e*P	**P**	**00 09 22.7**	**+0.5**
	comp=Z,106nm,1.0s,mb5.7						
SNZO	**South Karori**	**53.15**	**136**	PFAKE		00 09 40.0	+15
SNZO				LR	LR		
	comp=Z,11μm,19.0s,MS5.9						
MDJ	**Mudanjiang**	**53.26**	**2**	P	**P**	**00 09 24.8**	**-0.5**
MDJ				pP	pP	00 09 27.9	-7.3
MDJ				PcS	PcS	00 14 31.8	+0.3
MDJ				S	**S**	**00 16 55.9**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,44nm,1.5s,mb5.2						
MDJ				pmax	pmax		
	comp=Z,320nm,6.4s						
MDJ				LR	LR		
	comp=N,1μm,21.8s,MS5.0						
MDJ				LR	LR		
	comp=E,700nm,21.8s,MS5.0						
MDJ				LR	LR		
	comp=Z,2μm,21.8s,MS5.0						
MDJ	**Mudanjiang**	**53.26**	**2**	*e*P	**P**	**00 09 24.6**	**-0.7**
	comp=Z,101nm,1.3s,mb5.6						
MDJ				LR	LR		
	comp=Z,2μm,21.0s,MS5.1						
URZ	**Urewera**	**53.75**	**131**	*e*P	**P**	**00 09 29.2**	**+0.1**
	comp=Z,100nm,1.0s,mb5.7						
URZ				*e*	pP	00 09 39.8	+0.7
DGAR	**Diego Garcia**	**53.81**	**267**	*e*P	**P**	**00 09 31.1**	**+1.1**
	comp=Z,412nm,0.8s,mb6.4						
DGAR				LR	LR		
	comp=Z,4μm,21.0s,MS5.4						
DGAR	**Diego Garcia**	**53.81**	**267**	*d i*P	**P**	**00 09 31.1**	**+1.1**
GUN	**Gumba**	**53.88**	**314**	*e*P	**P**	**00 09 30.2**	**0.0**
	comp=Z,412nm,0.7s,mb6.5						
PKI	**Pulchoki**	**54.01**	**313**	*e*P	**P**	**00 09 30.8**	**-0.3**
	comp=Z,244nm,0.7s,mb6.2						
PKI	**Pulchoki**	**54.01**	**313**	*e*P	**P**	**00 09 31.4**	**+0.3**
	comp=Z,250nm,0.7s,mb6.2						
PKIN	**Phulchoki**	**54.02**	**313**	*e*P	**P**	**00 09 31.4**	**+0.2**
	comp=Z,250nm,0.7s,mb6.3						
GTA	**Gaotai**	**54.15**	**334**⇑	P	**P**	**00 09 32.4**	**+0.4**
GTA				pP	pP	00 09 42.8	+0.9
GTA				sP	sP	00 09 47.1	+1.3
GTA				S	**S**	**00 17 06.9**	**+0.2**
GTA				sS	sS	00 17 23.8	+0.7
GTA				SS	SS	00 20 48.5	-0.5
GTA				pmax	pmax		
	comp=Z,150nm,1.0s,mb5.9						
GTA				pmax	pmax		
	comp=Z,700nm,4.5s						
GTA				LR	LR		
	comp=N,2μm,19.0s,MS5.4						
GTA				LR	LR		
	comp=E,2μm,17.1s,MS5.4						
GTA				LR	LR		
	comp=Z,2μm,19.4s,MS5.2						
KKN	**Kakani**	**54.23**	**314**	*e*P	**P**	**00 09 32.6**	**-0.2**
	comp=Z,390nm,1.0s,mb6.3						
DMN	**Daman**	**54.25**	**313**	*e*P	**P**	**00 09 32.7**	**-0.2**
	comp=Z,632nm,1.1s,mb6.2						
HYB	**Hyderabad**	**54.37**	**299**⇑	*i*P	**P**	**00 09 32.5**	**-1.4**
	comp=Z,150nm,1.0s,mb5.9						
HYB				*e*pP	pP	00 09 40.5	-3.4
HYB				*e*PcP	PcP	00 10 37.0	-0.6
HYB				*e*S	**S**	**00 17 12.0**	**+1.7**
ASAJ	**Asahikawa**	**54.61**	**14**	P	**P**	**00 09 34.0**	**-1.1**
	comp=Z,32nm,0.8s,mb5.4,baz=233,slow=12,SNR=28						
ASAJ	**Asahikawa**	**54.61**	**14**	*e*P	**P**	**00 09 34.0**	**-1.1**
	comp=Z,20nm,0.9s,mb5.1						
ASAJ	**Asahikawa**	**54.61**	**14**	P	**P**	**00 09 34.0**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,32nm,0.8s						
GKN	**Gorkha**	**54.82**	**313**	*e*P	**P**	**00 09 36.8**	**-0.2**
	comp=Z,509nm,0.8s,mb6.6						
YUK	**Yuzh-Kuril'sk**	**55.38**	**17**⇑	*i*P	**P**	**00 09 32.2**	**-8.5**
YUK				*i* S	**S**	**00 17 19.4**	**-3.6**
YUK				*i* SS	SS	00 20 57.9	-10
YUK				pmax	pmax		
	comp=Z,203nm,0.9s,mb6.2						
YUK				pmax	pmax		
	comp=N,101nm,0.9s						
YUK				pmax	pmax		
	comp=E,78nm,0.9s						
YUK				pmax	pmax		
	comp=Z,180nm,0.8s,mb6.2						
YUK				smax			
	comp=N,920nm,3.2s						
YUK				smax			
	comp=E,60nm,0.8s						
YUK				MLR	MLR		
	comp=Z,1μm,24.0s,MS4.8						
YUK				MLR	MLR		
	comp=Z,790nm,19.0s						
KOLN	**Koldanda**	**55.43**	**313**	*e*P	**P**	**00 09 41.4**	**-0.1**
	comp=Z,784nm,0.9s,mb6.8						
NGP	**Nagpur**	**55.58**	**303**	*e*PKP	**P**	**00 09 41.4**	**-1.3**
NGP				AMb	AMB	00 09 44.5	
	comp=Z,200nm,0.7s,mb6.3						
DANN	**Dangsing**	**55.65**	**313**	*e*P	**P**	**00 09 42.9**	**-0.1**
	comp=Z,1μm,0.9s,mb7.0						
HMDM	**Hanimaadhoo**	**55.67**	**284**	P	**P**	**00 09 44.3**	**+0.8**
	comp=Z,129nm,2.2s,mb5.6						
MNGI	**Mangalore**	**56.00**	**292**	*e*x	x	00 10 28.5	
MNGI				*e*x	x	00 17 47.6	
LATR	**Latur**	**56.51**	**299**	*e*PKP	**P**	**00 09 47.9**	**-1.4**
LATR				*e*PKP		00 09 48.3	
LATR				AMb	AMB	00 09 51.2	
	comp=Z,146nm,1.6s,mb5.8						
AKL	**Akola**	**57.08**	**302**	*e*PKP	**P**	**00 09 52.3**	**-1.1**
AKL				AMb	AMB	00 09 54.5	
	comp=Z,233nm,0.4s,mb6.5						
YSS	**Yuzh-Sakhalins**	**57.33**	**13**	*e*P	**P**	**00 09 54.4**	**-0.2**
	comp=Z,35nm,0.7s,mb5.5						
YSS				LR	LR		
	comp=Z,676nm,21.0s,MS4.7						
YSS	**Yuzh-Sakhalins**	**57.33**	**13**	*j e*P	**P**	**00 09 54.0**	**-0.6**
YSS				*e*		00 10 51.5	
YSS				*e*S	**S**	**00 17 46.0**	**-2.7**
YSS				*e*SS	SS	00 21 36.0	-2.7
YSS				*e*SSS		00 23 46.0	
YSS				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.7						
YSS				pmax	pmax		
	comp=N,30nm,0.8s						
HABR	**Khabarovsk**	**57.52**	**6**	*i* P	**P**	**00 09 54.4**	**-1.5**
HABR				*e**PP	pP	00 10 03.3	-2.6
HABR				*e**SS	sS	00 18 05.7	-1.9
HABR				*e*		00 19 39.8	
HABR				*e*SS	SS	00 21 38.8	-2.9
HABR				pmax	pmax		
	comp=N,67nm,1.9s						
HABR				pmax	pmax		
	comp=Z,221nm,1.9s,mb5.9						
HABR				pmax	pmax		
	comp=E,78nm,1.8s						
HABR				pmax	pmax		
	comp=Z,265nm,1.9s,mb5.9						
HABR				MLR	MLR		
	comp=N,2μm,18.0s,MS5.5						
HABR				MLR	MLR		
	comp=Z,3μm,17.0s,MS5.4						
HABR				MLR	MLR		
	comp=E,2μm,15.0s,MS5.5						
BHPL	**Bhopal**	**57.88**	**304**	*e*PKP	**P**	**00 09 58.2**	**-0.7**
BHPL				AMb	AMB	00 09 59.9	
	comp=Z,183nm,1.4s,mb5.9						
KLR	**Kul'dur**	**57.98**	**4**	*e*P	**P**	**00 09 53.7**	**-5.4**
KLR				*e*S	**S**	**00 17 45.0**	**-12**
KLR				*e*SS	SS	00 21 46.5	-2.4
KLR				pmax	pmax		
	comp=Z,68nm,1.6s,mb5.4						
KLR				MLR	MLR		
	comp=Z,3μm,14.0s,MS5.5						
KAD	**Karad**	**58.15**	**297**	*e*PKP	**P**	**00 09 59.5**	**-1.4**
KAD				*e*PKP		00 10 00.1	
KAD				AMb	AMB	00 10 01.9	
	comp=Z,163nm,1.1s,mb6.0						
HIA	**Hailar**	**58.19**	**355**	*e*P	**P**	**00 10 00.6**	**+0.1**
	comp=Z,95nm,1.3s,mb5.7						
HIA				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
HIA	**Hailar**	**58.19**	**355**	*e*P	**P**	**00 10 00.6**	**0.0**
HIA				pmax	pmax		
	comp=Z,95nm,1.3s						
HIA				MLR	MLR		
	comp=Z,2μm,20.0s						
CASY	**Casey**	**58.45**	**188**	*e*P	**P**	**00 10 02.0**	**-0.2**
CASY	**Casey**	**58.45**	**188**	*e*P	**P**	**00 10 02.2**	**+0.1**
	comp=Z,17nm,0.9s,mb5.1						
CASY				LR	LR		
	comp=Z,5μm,20.0s,MS5.7						
DRV	**Dumont d'Urvil**	**58.45**	**174**	P	pP	00 10 19.0	+6.8
DRV				S	**S**	**00 18 09.0**	**+6.1**
DRV				SS	SS	00 22 01.0	+5.5
DRV				R		00 28 00.0	
POO	**Poona**	**58.91**	**298**	*e*PKP	**P**	**00 10 05.3**	**-0.9**
POO				AMb	AMB	00 10 06.0	
	comp=Z,167nm,1.1s,mb6.0						
ULN	**Ulaanbaatar**	**59.11**	**345**	*e*P	**P**	**00 10 07.3**	**+0.3**
	comp=Z,123nm,1.1s,mb5.8						
ULN				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
ULN	**Ulaanbaatar**	**59.11**	**345**	*e*P	**P**	**00 10 07.3**	**+0.3**
ULN				pmax	pmax		
	comp=Z,123nm,1.1s,mb5.8						
ULN				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.2						
ULN	**Ulaanbaatar**	**59.11**	**345**	P	**P**	**00 10 07.7**	**+0.7**
	comp=Z,1μmcomp=Z,109nm,1.2s,mb5.8						
ULN	**Ulaanbaatar**	**59.11**	**345**	P	**P**	**00 10 07.2**	**+0.2**
	SNR=51						
SONM	**Songino Array**	**59.26**	**344**	P	**P**	**00 10 08.2**	**+0.2**
	comp=Z,50nm,0.9s,mb5.5,baz=163,slow=7.9,SNR=196						
SONM				PKP2bc		00 39 45.6	
	comp=Z,1.7nm,1.0s,baz=248,slow=1.8,SNR=6.3						
SONM	**Songino Array**	**59.26**	**344**	P	**P**	**00 10 08.2**	**+0.2**
SONM				⇑*e*		00 39 45.6	
SONM	**Songino Array**	**59.26**	**344**	P	**P**	**00 10 08.2**	**+0.2**
SONM				pmax	pmax		
	comp=Z,50nm,0.9s						
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AGRA	**Agra**	**59.39**	**309**	*e*PKP	**P**	**00 10 07.9**	**-1.5**
AGRA				AMb	AMB	00 10 12.8	
	comp=Z,188nm,1.3s,mb6.0						
JOSI	**Joshimath**	**59.91**	**313**	*e*PKP	**P**	**00 10 13.0**	**+0.1**
AFI	**Afiamalu**	**60.27**	**101**	PFAKE		00 10 30.0	+14
AFI				LR	LR		
	comp=Z,2μm,19.0s,MS5.3						
AYAN	**Aya Nagar**	**60.64**	**310**	*e*PKP	**P**	**00 10 16.6**	**-1.3**
NDI	**New Delhi**	**60.67**	**310**	*e*PKP	**P**	**00 10 14.8**	**-3.4**
NDI				*e*S	**S**	**00 18 27.0**	**-5.8**
DDI	**Dehra Dun**	**60.89**	**312**	*e*x	**P**	**00 10 16.8**	**-2.8**
KUDL	**Kundal**	**60.96**	**309**	*e*x	x	00 10 04.8	
KLP	**Kalpa**	**61.39**	**313**	*e*PKP	**P**	**00 10 23.2**	**+0.2**
KLP				AMb	AMB	00 10 27.0	
	comp=Z,243nm,1.3s,mb6.2						
KHET	**Khetri**	**61.45**	**309**	*e*PKP	**P**	**00 10 22.2**	**-1.2**
KHET				AMb	AMB	00 10 24.9	
	comp=Z,134nm,1.3s,mb5.9						
AJM	**Ajmer**	**61.61**	**306**	*e*PKP	**P**	**00 10 23.7**	**-0.9**
AJM				AMb	AMB	00 10 27.4	
	comp=Z,172nm,1.6s,mb5.9						
KKR	**Kurukshetra**	**61.62**	**311**	*e*PKP	**P**	**00 10 24.4**	**-0.2**
CIT	**Chita**	**61.68**	**351**	*e*P	**P**	**00 10 24.8**	**+0.3**
CIT				*e*		00 10 31.1	
CIT				*e*		00 11 06.0	
PAF	**Port-aux-Franc**	**61.90**	**218**	PFAKE		00 10 40.0	+14
PAF				LR	LR		
	comp=Z,6μm,21.0s,MS5.7						
MIR	**Mirnyy**	**62.06**	**195**	*e*P	**P**	**00 10 28.0**	**+1.1**
MIR				pmax	pmax		
	comp=Z,99nm,2.0s,mb5.6						
MIR				pmax	pmax		
	comp=Z,800nm,7.0s						
MIR				MLR	MLR		
	comp=N,5μm,16.0s,MS5.9						
MIR				MLR	MLR		
	comp=E,4μm,16.0s,MS5.9						
MIR				MLR	MLR		
	comp=Z,9μm,16.0s,MS6.0						
SDNR	**Sundarnagar**	**62.30**	**312**	*e*PKP	**P**	**00 10 29.5**	**+0.4**
ZAK	**Zakamensk**	**62.43**	**343**	*e*P	**P**	**00 10 29.4**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.0						
BHK	**Bhakra**	**62.66**	**312**	*e*x	**P**	**00 10 28.4**	**-3.1**
WMQ	**Urumqi**	**63.28**	**329**	P	**P**	**00 10 35.0**	**-0.4**
WMQ				pP	pP	00 10 45.0	-0.5
WMQ				sP	sP	00 10 49.0	-0.3
WMQ				PP	PP	00 12 56.0	+1.0
WMQ				S	**S**	**00 19 03.0**	**-2.2**
WMQ				ScS	ScS	00 20 21.0	-5.0
WMQ				SS	SS	00 23 13.0	+0.7
WMQ				pmax	pmax		
	comp=Z,150nm,1.0s,mb6.1						
WMQ				pmax	pmax		
	comp=Z,2μm,6.0s						
WMQ				LR	LR		
	comp=N,2μm,20.0s,MS5.6						
WMQ				LR	LR		
	comp=E,3μm,20.0s,MS5.6						
WMQ				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
TLY	**Talaya**	**63.50**	**344**	*e*P	**P**	**00 10 36.6**	**0.0**
	comp=Z,53nm,1.3s,mb5.5						
TLY				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
TLY	**Talaya**	**63.50**	**344**	*c i*P	**P**	**00 10 36.7**	**+0.1**
TLY				*e*		00 11 19.8	
TLY				*e*		00 19 09.0	
TLY				*e*SS	SS	00 23 16.8	+1.4
TLY				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.4						
TLY	**Talaya**	**63.50**	**344**	P	**P**	**00 10 36.2**	**-0.4**
	comp=Z,152nm,1.0s,mb6.1,SNR=8.4						
TLY	**Talaya**	**63.50**	**344**	P	**P**	**00 10 37.2**	**+0.6**
	SNR=13						
IRK	**Irkutsk**	**63.84**	**345**⇑	*i*P	**P**	**00 10 38.6**	**-0.3**
IRK				*e*		00 11 13.0	
IRK				pmax	pmax		
	comp=Z,121nm,1.8s,mb5.6						
MOY	**Mondy**	**64.24**	**342**	*e*P	**P**	**00 10 41.7**	**+0.2**
MOY				pmax	pmax		
	comp=Z,166nm,2.7s,mb5.6						
SKR	**Severo-Kuril's**	**64.49**	**20**	*e*P	**P**	**00 10 43.5**	**+0.3**
SKR				*e*		00 19 30.0	
MIDW	**Midway**	**65.27**	**53**	PFAKE		00 11 00.0	+11
MIDW				LR	LR		
	comp=Z,3μm,20.0s,MS5.4						
CLNS	**Chul'man**	**65.46**	**359**	*e*P	**P**	**00 10 48.5**	**-0.8**
CLNS				*e*		00 11 18.9	
CLNS				*e*		00 13 14.7	
CLNS				*e*PPP		00 14 47.9	
CLNS				*e*S	S	00 19 34.1	+2.5
CLNS				pmax	pmax		
	comp=E,11nm,1.6s						
CLNS				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.1						
CLNS				pmax	pmax		
	comp=N,25nm,1.6s						
CLNS				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
CLNS				pmax	pmax		
	comp=N,18nm,1.5s						
CLNS				pmax	pmax		
	comp=E,11nm,0.8s						
CLNS				smax			
	comp=E,762nm,15.6s						
CLNS				smax			
	comp=N,629nm,17.3s						
CLNS				MLR	MLR		
	comp=E,645nm,17.0s,MS5.0						
CLNS				MLR	MLR		
	comp=N,585nm,18.0s,MS5.0						
CLNS				MLR	MLR		
	comp=Z,560nm,16.0s,MS4.9						
NIL	**Nilore**	**66.09**	**313**	PFAKE		00 11 00.0	+6.1
NIL				LR	LR		
	comp=Z,66nm,22.0s						
PETK	**Petropavlovsk-**	**67.07**	**20**	P	**P**	**00 11 00.0**	**+0.3**
	comp=Z,117nm,0.9s,mb5.9,baz=202,slow=3.5,SNR=105						
PETK	**Petropavlovsk-**	**67.07**	**20**	P	**P**	**00 11 00.0**	**+0.3**
PETK				pmax	pmax		
	comp=Z,117nm,0.9s,mb5.9						
KSH	**Kashi**	**67.30**	**319**	*e*P	**P**	**00 11 01.8**	**+0.3**
KSH				*e*pP	pP	00 11 06.4	-5.3
KSH				*e*PcP	PcP	00 11 30.5	+1.4
KSH				*e*PP	PP	00 13 30.8	+0.5
KSH				*e*ScP		00 15 32.0	
KSH				*e*PcS		00 15 33.8	
KSH				*e*S	S	00 19 52.4	-2.3
KSH				ScS	ScS	00 20 54.8	-2.4
KSH				pmax	pmax		
	comp=Z,94nm,1.3s,mb5.7						
KSH				LR	LR		
	comp=N,2μm,16.4s,MS5.6						
KSH				LR	LR		
	comp=E,2μm,12.3s,MS5.6						
KSH				LR	LR		
	comp=Z,5μm,22.1s						
PET	**Petropavlovsk**	**67.32**	**20**	*e*P	**P**	**00 11 01.4**	**+0.1**
	comp=Z,238nm,1.3s,mb6.1						
PET				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
PET	**Petropavlovsk**	**67.32**	**20**⇓	*i*P	**P**	**00 11 01.3**	**0.0**
PET				*e*		00 11 30.1	
PET				*e*S	S	00 19 54.1	-0.2
PET				*e*SP		00 20 13.3	
PET				*e*		00 20 54.0	
PET				pmax	pmax		
	comp=Z,700nm,12.9s						
PET				pmax	pmax		
	comp=Z,180nm,1.2s,mb6.0						
PET				pmax	pmax		
	comp=Z,400nm,11.3s						
PET				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.3						
PET				MLR	MLR		
	comp=Z,2μm,19.0s						
MRIV	**Mauritius Mete**	**67.66**	**252**	*e*P	**P**	**00 11 05.2**	**+0.9**
JOHN	**Johnston Islan**	**67.87**	**68**	PFAKE		00 11 20.0	+14
JOHN				LR	LR		
	comp=Z,3μm,20.0s,MS5.5						
MK31	**Makanchi Array**	**68.09**	**329**	*e*P	**P**	**00 11 06.2**	**-0.2**
MK31				S	S	00 20 04.1	+0.3
MK31	**Makanchi Array**	**68.09**	**329**	*e*P	**P**	**00 11 06.2**	**-0.2**
MK31				S	S	00 20 04.1	+0.3
MKAR	**Makanchi Array**	**68.09**	**329**	P	**P**	**00 11 06.1**	**-0.3**
	comp=Z,97nm,0.9s,mb5.8,baz=132,slow=7.1,SNR=517						
MKAR				S	S	00 20 04.3	+0.5
	comp=Z,2.2nm,1.0s,baz=138,slow=11,SNR=6.1						
MKAR				PKP2bc		00 39 34.5	
	comp=Z,0.9nm,0.8s,baz=346,slow=2.5,SNR=6.5						
MKAR	**Makanchi Array**	**68.09**	**329**	P	**P**	**00 11 06.1**	**-0.3**
MKAR				S	S	00 20 04.3	+0.5
MKAR				⇑*e*		00 39 34.5	
MKAR	**Makanchi Array**	**68.09**	**329**	P	**P**	**00 11 06.1**	**-0.3**
MKAR				S	S	00 20 04.3	+0.5
MKAR				pmax	pmax		
	comp=Z,97nm,0.9s						
MKAR				smax			
	comp=N,2.0nm,1.0s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULHL	**Ulahol**	**68.67**	**322**	P	**P**	**00 11 10.2**	**+0.2**
	SNR=13						
KZA	**Kyzart**	**69.19**	**321**	P	**P**	**00 11 14.0**	**+0.7**
	SNR=26						
KZA	**Kyzart**	**69.19**	**321**	*e*P	**P**	**00 11 14.0**	**+0.7**
	comp=Z,183nm,1.6s,mb5.8						
RER	**Riviere de l'E**	**69.28**	**251**	*e*P	**P**	**00 11 17.3**	**+3.0**
	comp=Z,213nm,0.9s,mb6.1						
RER				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
TKM2	**Tokmak 2**	**69.45**	**322**	P	**P**	**00 11 15.0**	**+0.1**
	SNR=17						
TKM2	**Tokmak 2**	**69.45**	**322**	*e*P	**P**	**00 11 14.8**	**-0.1**
	comp=Z,158nm,1.7s,mb5.7						
TKM2				LR	LR		
	comp=Z,3μm,21.0s,MS5.5						
TKM2	**Tokmak 2**	**69.45**	**322**	*e*P	**P**	**00 11 14.8**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,158nm,1.7s,mb5.7						
TKM2				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.5						
KBL	**Kabul**	**69.59**	**312**	*e*P	**P**	**00 11 15.4**	**-0.5**
	comp=Z,178nm,1.3s,mb5.8						
KBL				S	S	00 20 26.4	+4.3
KBL	**Kabul**	**69.59**	**312**	*e*P	**P**	**00 11 15.5**	**-0.4**
KBL				S	S	00 20 26.4	+4.3
KBL				pmax	pmax		
	comp=Z,178nm,1.3s,mb5.8						
KBK	**Karagaybulak**	**69.69**	**322**	P	**P**	**00 11 17.4**	**+1.0**
	SNR=34						
UCH	**Uchtor**	**69.72**	**321**	PFAKE		00 11 30.0	+13
UCH				LR	LR		
	comp=Z,32nm,20.0s						
AAK	**Ala-Archa**	**69.96**	**322**	P	**P**	**00 11 18.4**	**+0.3**
	SNR=36						
AAK	**Ala-Archa**	**69.96**	**322**	P	**P**	**00 11 18.4**	**+0.4**
	comp=Z,12nm,0.6s,mb5.0,baz=120,slow=5.5,SNR=58						
AAK	**Ala-Archa**	**69.96**	**322**	*e*P	**P**	**00 11 18.2**	**+0.1**
	comp=Z,37nm,0.9s,mb5.3						
AAK				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
AAK	**Ala-Archa**	**69.96**	**322**	*c i*P	**P**	**00 11 17.9**	**-0.2**
AAK				pmax	pmax		
	comp=Z,53nm,1.7s,mb5.2						
AAK	**Ala-Archa**	**69.96**	**322**	P	**P**	**00 11 18.6**	**+0.5**
	comp=Z,266nm,1.1s,mb6.1,SNR=20						
AAK	**Ala-Archa**	**69.96**	**322**	P	**P**	**00 11 18.7**	**+0.6**
	SNR=50						
FRU	**Bishkek**	**70.00**	**322**⇑	*e*P	**P**	**00 11 18.0**	**-0.3**
FRU				*e*S	S	00 20 27.0	+0.5
FRU				pmax	pmax		
	comp=Z,100nm,1.9s,mb5.4						
CHMS	**Chumysh**	**70.01**	**322**	P	**P**	**00 11 18.2**	**-0.2**
	SNR=7.2						
AML	**Almayashu**	**70.18**	**321**	P	**P**	**00 11 20.0**	**+0.6**
	SNR=49						
AML	**Almayashu**	**70.18**	**321**	*e*P	**P**	**00 11 19.8**	**+0.4**
	comp=Z,107nm,1.4s,mb5.6						
AML				*e*PP	PP	00 13 52.4	-2.8
AML				LR	LR		
	comp=Z,2μm,22.0s,MS5.3						
USP	**Ospenovka**	**70.31**	**322**	P	**P**	**00 11 20.0**	**-0.2**
	SNR=60						
EKS2	**Erkin-Say**	**70.42**	**321**	P	**P**	**00 11 21.2**	**+0.4**
	SNR=44						
EKS2	**Erkin-Say**	**70.42**	**321**	*e*P	**P**	**00 11 21.1**	**+0.3**
	comp=Z,104nm,1.4s,mb5.6						
EKS2				LR	LR		
	comp=Z,2μm,21.0s,MS5.4						
YAK	**Yakutsk**	**70.68**	**1**	*e*P	**P**	**00 11 21.6**	**-0.4**
	comp=Z,160nm,0.9s,mb6.0						
YAK				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
YAK	**Yakutsk**	**70.68**	**1**	*c i*P	**P**	**00 11 21.3**	**-0.7**
YAK				*e**PP	PcP	00 11 44.5	+1.7
YAK				*e*		00 14 00.8	
YAK				*e*PPP		00 15 46.3	
YAK				*e*S	S	00 20 32.2	-1.6
YAK				*e**SS	SKSac	00 21 15.8	-5.6
YAK				*e*		00 21

YAK smax
comp=N,115nm,1.8s
YAK smax
comp=E,133nm,1.5s
RAR Rarotonga 71.44 109 PKP2bc 00 39 25.2
comp=E,26nm,0.9s,baz=117,slow=13,SNR=3.2
ZALV Zalesovo Beam 71.88 335 P **P** **00 11 28.3 -1.2**
comp=E,181nm,0.8s,mb6.0,baz=127,slow=4.4,SNR=463
ZALV S S 00 20 39.7 -8.3
comp=E,2.8nm,0.9s,baz=120,slow=10,SNR=5.7
ZALV PKP2bc 00 39 22.6
comp=E,0.4nm,0.3s,baz=321,slow=3.7,SNR=4.3
ZALV Zalesovo Beam 71.88 335 P **P** **00 11 28.3 -1.2**
ZALV S S 00 20 39.7 -8.3
ZALV ⇑*e* 00 39 22.6
ZALV Zalesovo Beam 71.88 335 P **P** **00 11 28.3 -1.2**
ZALV S S 00 20 39.7 -8.3
ZALV pmax pmax
comp=Z,181nm,0.8s,mb6.0
ZALV smax
comp=N,3.0nm,0.9s
SBA Scott Base 71.96 172 *e*P **P** **00 11 31.4 +1.7**
comp=N,36nm,1.0s,mb5.2
SBA LR LR
comp=Z,4μm,19.0s,MS5.7
SBA Scott Base 71.96 172 *e*P **P** **00 11 31.4 +1.7**
SBA pmax pmax
comp=Z,36nm,1.0s,mb5.3
SBA MLR MLR
comp=Z,4μm,19.0s,MS5.7
MAW Mawson 72.11 201 P **P** **00 11 31.9 +1.2**
comp=Z,15nm,0.9s,mb4.9,baz=79,slow=7.8,SNR=24
MAW LR LR 00 43 00.1
comp=Z,3μm,18.9s,MS5.6,baz=61,slow=36
MAW Mawson 72.11 201 *e*P **P** **00 11 31.6 +0.9**
comp=Z,36nm,1.1s,mb5.2
MAW *e*S S 00 20 51.8 +1.5
MAW Mawson 72.11 201 *e*P **P** **00 11 32.2 +1.5**
comp=Z,16nm,1.2s,mb4.8
MAW LR LR
comp=Z,6μm,20.0s,MS5.8
MAW Mawson 72.11 201 P **P** **00 11 31.9 +1.2**
MAW pmax pmax
comp=Z,15nm,0.9s
MAW MLR MLR
comp=Z,3μm,18.9s
KURK Kurchatov 72.49 330 *e*P **P** **00 11 32.8 -0.4**
comp=Z,272nm,1.3s,mb6.0
KURK *e*S S 00 20 53.5 -1.6
KURK LR LR
comp=Z,2μm,21.0s,MS5.4
KURK Kurchatov 72.49 330 *e*P **P** **00 11 32.8 -0.4**
KURK *e*S S 00 20 53.5 -1.6
KURK pmax pmax
comp=Z,272nm,1.3s,mb6.0
KURK MLR MLR
comp=Z,2μm,21.0s,MS5.4
KURK Kurchatov 72.49 330 P **P** **00 11 32.8 -0.4**
SNR=138
KK31 Karatay Array 72.69 320 *i* P **P** **00 11 33.3 -1.2**
KK31 pmax pmax
comp=Z,28nm,1.0s,mb5.2
KKAR Karatay Array 72.69 320 *e*P **P** **00 11 34.2 -0.4**
comp=Z,22nm,1.0s,mb5.0
KKAR Karatay Array 72.69 320 *e*P **P** **00 11 34.2 -0.3**
KKAR pmax pmax
comp=Z,22nm,1.0s,mb5.0
NVS Novosibirsk 73.17 335 *i* P **P** **00 11 34.7 -2.4**
NVS *i* S S 00 20 54.2 -8.4
NVS pmax pmax
comp=N,138nm,1.2s
NVS pmax pmax
comp=E,147nm,1.2s
NVS pmax pmax
comp=Z,339nm,1.2s,mb6.2
NVS pmax pmax
comp=Z,109nm,2.3s,mb5.4
NVS pmax pmax
comp=N,37nm,1.9s
NVS pmax pmax
comp=E,86nm,2.4s
NVS smax
comp=N,38nm,1.6s
NVS smax
comp=E,89nm,1.6s
SEY Seymchan 74.20 12*c* *i*P **P** **00 11 42.7 -0.3**
SMDO Samad 74.33 297 P **P** **00 11 44.4 -0.3**
SNR=8.9
BSY Bisya 74.99 296 P **P** **00 11 48.9 +0.4**
SNR=14
HOQ Hoqain 75.13 297 P **P** **00 11 49.4 +0.1**
SNR=19
ARQ Araqi 75.76 297 P **P** **00 11 52.7 -0.2**
SNR=11
XMAS Kiritimati 76.22 86 PFAKE 00 12 10.0 +14
XMAS LR LR
comp=Z,2μm,19.0s,MS5.5
RBK Rabkut 76.35 290 P **P** **00 11 56.5 +0.2**
SNR=7.4
ASHO Ashiyiah 76.54 298 P **P** **00 11 57.5 +0.2**
SNR=16
BANOM Banah 76.69 299 P **P** **00 11 59.0 +0.9**
SNR=12
IBND Bandar-abas 76.92 301 *e*P **P** **00 12 01.1 +1.7**
NAZ Nazwa, Dubai 76.97 298 P **P** **00 11 59.6 -0.2**
SNR=14
ABTO Aybut 77.15 290 P **P** **00 12 01.3 +0.4**
SNR=10
ASUD Al Ashush, Dub 77.16 298 P **P** **00 12 01.8 +1.0**
SNR=8.2
ABPO Ambohimpanom 77.40 252 *e*P **P** **00 12 04.9 +2.6**
comp=Z,77nm,1.4s,mb5.4
ABPO LR LR
comp=Z,3μm,21.0s,MS5.6
ABPO Ambohimpanom 77.40 252 *e*P **P** **00 12 04.9 +2.6**
ABPO pmax pmax
comp=Z,77nm,1.4s,mb5.4
ABPO MLR MLR
comp=Z,3μm,21.0s,MS5.6
BVAR Borovoye Array 77.97 329 P **P** **00 12 04.2 -0.5**
comp=Z,84nm,1.0s,mb5.6,baz=134,slow=6.4,SNR=202
BVAR S S 00 21 52.2 -3.7
comp=Z,0.5nm,0.7s,baz=106,slow=11,SNR=2.2
BVAR Borovoye Array 77.97 329 P **P** **00 12 04.2 -0.5**
BVAR S S 00 21 52.2 -3.7
BVAR pmax pmax
comp=Z,84nm,1.0s
BVAR smax
comp=N,1.0nm,0.7s
BRVK Borovoye 78.04 329 *e*P **P** **00 12 04.7 -0.4**
comp=N,204nm,1.3s,mb5.9
BRVK *e*S S 00 21 58.4 +1.8
BRVK LR LR
comp=Z,2μm,20.0s,MS5.5
BRVK Borovoye 78.04 329 *e*P **P** **00 12 04.7 -0.4**
BRVK *e*S S 00 21 58.4 +1.8
BRVK pmax pmax
comp=Z,204nm,1.3s,mb5.9
BRVK MLR MLR
comp=Z,2μm,20.0s,MS5.5
BRVK Borovoye 78.04 329 P **P** **00 12 04.9 -0.2**
SNR=99
IAKL Akhelmad 78.09 310 *e*P **P** **00 12 05.9 +0.2**
IBAF Bafgh 78.97 305 *e*P **P** **00 12 10.4 -0.3**
ABKT Ailbek 79.03 311 P **P** **00 12 11.3 +0.4**
comp=Z,710nm,1.3s,mb6.4,SNR=65
KIP Kipapa 79.60 66 PFAKE 00 12 20.0 +5.6
KIP LR LR
comp=Z,3μm,22.0s,MS5.5
KIP Kipapa 79.60 66⇑*e*P **P** **00 12 15.3 +0.9**
ICHK Chekchek 80.10 305 *e*P **P** **00 12 16.7 -0.1**
TIXI Tiksi 80.32 1 *e*P **P** **00 12 16.5 -0.7**
comp=Z,54nm,1.0s,mb5.4
TIXI LR LR
comp=Z,1μm,19.0s,MS5.3
TIXI Tiksi 80.32 1 *e*P **P** **00 12 15.0 -2.2**
TIXI *e* 00 15 16.2
TIXI *e*S S 00 22 17.3 -2.9
TIXI *e* 00 22 37.2
TIXI pmax pmax
comp=Z,87nm,1.2s,mb5.6
TBI Tubuai 80.81 112 *e*S S 00 22 27.6 +0.3
comp=Z,812nm,25.8s
TBI *e*SS SS 00 27 41.7 +0.4
comp=Z,644nm,34.0s
TBI *e*LQ 00 34 05.4
comp=Z,3μm,35.2s
TBI *e*LR LR 00 37 25.3
comp=Z,4μm,25.5s
SYO Syowa Base 80.82 201⇑*e*P **P** **00 12 19.8 -0.2**
SYO Syowa Base 80.82 201⇓*e*pP pP 00 12 29.0 -1.4
QSPA South Pole Qui 81.15 180 *e*P **P** **00 12 22.8 +1.2**
comp=Z,68nm,1.0s,mb5.5
QSPA LR LR
comp=Z,5μm,19.0s,MS5.9
PPT Papeete 81.32 106 *e*PP PP 00 15 21.9 -7.8
comp=Z,179nm,25.0s
PPT *e*S S 00 22 27.5 -5.2
comp=Z,2μm,25.5s
PPT *e*SS SS 00 27 43.8 -5.3
comp=Z,858nm,24.5s
PPT *e*LQ 00 34 15.0
comp=Z,8μm,33.5s
PPT *e*LR LR 00 37 45.3
comp=Z,3μm,24.0s
IANJ Anjilo 81.44 308 *e*P **P** **00 12 23.6 -0.3**
POHA Pohakuloa 81.49 68 PFAKE 00 12 40.0 +15
POHA LR LR
comp=Z,3μm,22.0s,MS5.6
BILL Bilibino 81.62 14 *e*P **P** **00 12 23.7 -0.5**
BILL LR LR
comp=Z,1μm,19.0s,MS5.3
BILL Bilibino 81.62 14*ce*P **P** **00 12 23.3 -0.9**
BILL *e* 00 12 27.4
BILL 00 15 36.0
BILL *e*PPP 00 17 27.5
BILL *e* 00 22 36.2
BILL *e*PS 00 23 45.8
BILL *e*SS SS 00 27 54.7 +3.0
BILL pmax pmax
comp=Z,34nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,1μm,15.0s,MS5.4
AB31 Akbulak array 82.02 323 *i* P **P** **00 12 25.1 -1.5**
AB31 pmax pmax
comp=Z,69nm,1.2s,mb5.5
ABKAR Akbulak array 82.02 323 *e*P **P** **00 12 26.0 -0.7**
comp=Z,54nm,1.1s,mb5.4
AKTO Aktyubinsk 83.62 323 S S 00 22 52.8 -2.1
comp=Z,0.5nm,0.5s,baz=301,slow=21,SNR=8.5
SVE Sverdlovsk 84.73 330⇓*e*P **P** **00 12 40.0 -0.4**
SVE *e*S S 00 22 58.0 -7.8
SVE pmax pmax
comp=Z,127nm,1.5s,mb5.8
KBD Kabd 84.90 300 *e*P **P** **00 12 41.5 -0.4**
KBD AMb AMB 00 12 45.7
comp=Z,84nm,1.6s,mb5.6
UMR Umm Al-Rimmam 84.97 301 *e*P **P** **00 12 41.8 -0.5**
UMR AMb AMB 00 12 46.0
comp=Z,171nm,1.4s,mb6.0
RDF Al-Radifah 84.97 300 *e*P **P** **00 12 42.5 +0.2**
RDF AMb AMB 00 12 44.9
comp=Z,169nm,1.6s,mb5.9
NAY Al-Naaiem 85.30 300 *e*P **P** **00 12 43.2 -0.8**
NAY AMb AMB 00 12 45.0
comp=Z,92nm,1.1s,mb5.8
MIB Mutribah 85.34 301 *e*P **P** **00 12 43.5 -0.7**
MIB AMb AMB 00 12 45.9
comp=Z,213nm,1.2s,mb6.1
ARU Arti 85.62 329 *e*P **P** **00 12 44.4 -0.5**
comp=Z,156nm,1.5s,mb6.0
ARU *e*PP PP 00 16 05.0 +0.9
ARU LR LR
comp=Z,3μm,22.0s,MS5.6
ARU Arti 85.62 329*c* *i*P **P** **00 12 43.2 -1.7**
ARU *e* 00 15 58.9
ARU PPP 00 17 52.9
ARU S S 00 23 04.7 -10
ARU SS SS 00 28 45.7 -5.6
ARU SSS 00 32 11.8
ARU pmax pmax
comp=Z,128nm,1.7s,mb5.9
ARU Arti 85.62 329 P **P** **00 12 44.8 -0.1**
comp=Z,296nm,1.1s,mb6.4,SNR=32
GAMB Gambell 85.81 23 *e*P **P** **00 12 46.3 +0.6**
comp=Z,53nm,1.0s,mb5.7
SDPT Sand Point 87.56 33 *e*P **P** **00 12 54.3 -0.1**
comp=Z,307nm,1.7s,mb6.3
SOKR Solikamsk 87.68 331*c* *i*P **P** **00 12 53.2 -1.7**
SOKR S S 00 23 18.1 -16
SOKR pmax pmax
comp=Z,80nm,1.7s,mb5.7
MAK Makhachkala 88.24 314 *e*P **P** **00 12 55.0 -2.9**
MAK *i* 00 16 19.1
MAK *e*PPP 00 18 26.3
MAK *e*S S 00 23 20.0 -20
MAK *i* 00 23 39.0
MAK *e*SP 00 24 38.6
MAK *i* PS 00 24 44.8
MAK *e*SS SS 00 29 30.7 +0.4
MAK *e*SSS 00 33 07.0
MAK pmax pmax
comp=Z,243nm,1.9s,mb6.1
BHD Baghdad 88.54 304 *ex* x 00 12 57.0
BHD *ex* x 00 13 02.0
BHD *ex* x 00 16 27.0
BHD *ex* x 00 23 24.0
BHD *ex* x 00 23 42.0
BHD *ex* x 00 23 47.0
KMBO Kilima Mbogo 89.41 269 P **P** **00 13 06.4 +2.2**
comp=Z,27nm,1.0s,mb5.5,baz=360,slow=24,SNR=42
KMBO LR LR 00 50 20.1
comp=Z,1μm,21.1s,MS5.3,baz=91,slow=34
KMBO Kilima Mbogo 89.41 269 *e*P **P** **00 13 06.4 +2.2**
comp=Z,88nm,1.4s,mb5.9
KMBO *e* 00 14 35.5
KMBO LR LR
comp=Z,1μm,20.0s,MS5.3
KMBO Kilima Mbogo 89.41 269 P **P** **00 13 06.4 +2.2**
KMBO pmax pmax
comp=Z,27nm,1.0s
KMBO Kilima Mbogo 89.41 269 P **P** **00 13 06.8 +2.6**
SNR=23
DGRG David-gareji 89.44 312 P **P** **00 13 04.1 +0.4**
DGRG S S 00 23 53.8 +1.9
AAE Adis Abeba 89.47 279 *i* P **P** **00 13 07.0 +2.6**
AAE *e*S 00 21 50.2
GNI Garni 89.64 311 *e*P **P** **00 13 05.6 +1.0**
comp=Z,40nm,1.1s,mb5.7
GNI LR LR
comp=Z,1μm,22.0s,MS5.2
GNI Garni 89.64 311⇓*e*P **P** **00 13 05.4 +0.8**
GNI pmax pmax
comp=Z,40nm,1.7s
GNI Garni 89.64 311 P **P** **00 13 06.0 +1.4**
SNR=7.8
NVL N'lazarevskaya 89.68 197 *e*P **P** **00 13 06.4 +2.2**
NVL *e* 00 13 07.9
NVL *e**PP pP 00 13 12.3 -2.4
NVL *e*S S 00 23 33.5 -20
NVL *e* 00 23 54.5
NVL *e*PS PS 00 25 04.0 +1.5
NVL *e*SSS 00 33 36.7
NVL pmax pmax
comp=Z,26nm,1.5s,mb5.3
MAIT Maitri 89.70 197 *e*P **P** **00 13 06.1 +1.7**
MTA Mtatsminda 89.92 312 P **P** **00 13 06.1 +0.2**
MTA S S 00 23 57.2 +0.9
TBLG Delisi 89.97 312 P **P** **00 13 06.4 +0.3**
TBLG S S 00 23 58.4 +1.7
TBLG Delisi 89.97 312 P **P** **00 13 06.4 +0.3**
TBLG S S 00 23 58.4 +1.7
GOR Gori 90.48 312 P **P** **00 13 09.4 +1.0**
ZEI Tsey 90.78 313 *e*P **P** **00 13 08.7 -1.2**
ZEI pmax pmax
comp=Z,48nm,1.3s,mb5.7
ZEI pmax pmax
comp=N,15nm,0.7s
ZEI pmax pmax
comp=E,65nm,1.2s
ZEI pmax pmax
comp=Z,35nm,4.6s
TAOE Nuku Hiva Isla 91.61 99 *e*PS PS 00 25 21.7 -4.4
comp=Z,821nm,23.7s
TAOE *e*LR LR 00 42 32.6
comp=Z,1μm,21.3s
KIV Kislovodsk 91.87 314 *e*P **P** **00 13 15.3 +0.4**
comp=Z,23nm,1.1s,mb5.4
KIV *e*PP PP 00 16 54.5 +0.1
KIV LR LR
comp=Z,959nm,20.0s,MS5.2
KIV Kislovodsk 91.87 314 *e*P **P** **00 13 13.9 -1.0**
KIV *e* 00 16 48.6
KIV *e* 00 23 43.1
KIV *e*SS SS 00 30 18.9 -4.0
KIV *e*SSS 00 33 54.1
KIV pmax pmax
comp=Z,13nm,1.1s,mb5.2
TTA Tatalina 92.02 27 *e*P **P** **00 13 15.3 +0.2**
TTA Tatalina 92.02 27 *e*P **P** **00 13 15.3 +0.2**
KDAK Kodiak Island 92.42 32 PFAKE 00 13 30.0 +13
KDAK LR LR
comp=Z,1μm,21.0s,MS5.4
PRGR Permogore 93.55 332 *e*P **P** **00 13 15.9 -6.3**
PRGR *e* 00 24 17.8
PRGR pmax pmax
comp=Z,29nm,1.8s,mb5.4
PPLA Purkeypile 93.71 27 *e*P **P** **00 13 22.4 -0.5**
comp=Z,42nm,1.2s,mb5.7
SOC Sochi 93.94 313 *e*P **P** **00 13 20.9 -3.5**
SOC *e* 00 17 07.8
SOC *e*S SKSac 00 23 52.3 -4.7
SOC pmax pmax
comp=Z,34nm,1.1s,mb5.7
RKT Rikitea 94.02 114 *e*PS PS 00 25 51.0 -1.4
comp=Z,719nm,26.5s
RKT *e*SS SS 00 30 47.5 -6.8
comp=Z,647nm,26.5s
RKT *e*LR LR 00 43 40.0
comp=Z,2μm,27.0s
MALT Malatya 94.16 308 *e*P **P** **00 13 25.5 -0.1**
MALT LR LR
comp=Z,1μm,20.0s,MS5.3
MALT Malatya 94.16 308 *e*P **P** **00 13 25.5 -0.1**
MALT MLR MLR
comp=Z,1μm,20.0s,MS5.3
BPAW Bear Paw Mtn. 94.48 26 *e*P **P** **00 13 26.3 -0.1**
comp=Z,24nm,1.5s,mb5.4
RC01 Rabbit Creek A 94.50 29 *e*P **P** **00 13 26.3 -0.3**
comp=Z,16nm,0.8s,mb5.5
PMR Palmer 94.87 29 *e*P **P** **00 13 27.9 -0.4**
comp=Z,13nm,0.9s,mb5.4
PMR Palmer 94.87 29 *e*P **P** **00 13 27.9 -0.4**
PMR pmax pmax
comp=Z,13nm,0.9s,mb5.4
VORD Divnogorie 95.24 321 *e*P **P** **00 13 29.0 -1.2**
VORD pmax pmax
comp=N,6.0nm,1.0s
VORD pmax pmax
comp=Z,30nm,1.0s,mb5.7
VORD pmax pmax
comp=E,10.0nm,0.5s
MCK McKinley 95.31 26 *e*P **P** **00 13 28.9 -1.3**
comp=E,71nm,1.5s,mb5.9
MCK McKinley 95.31 26 *e*P **P** **00 13 28.9 -1.3**
MCK pmax pmax
comp=Z,71nm,1.5s,mb5.9
VSR Storozhevoye 95.35 321 *e*P **P** **00 13 29.0 -1.7**
VSR *e*S SKSac 00 24 01.4 -2.8
VSR *e*SS SS 00 31 12.7 +0.5
VSR *e*SSS 00 34 52.9
VSR pmax pmax
comp=N,9.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=Z,30nm,1.1s,mb5.6
VSR smax
comp=N,110nm,3.5s
VSR smax
comp=Z,50nm,3.5s
VSR smax
comp=E,10.0nm,0.9s
VSR MLR MLR
comp=N,780nm,25.0s,MS5.2
VSR MLR MLR
comp=E,620nm,25.0s,MS5.2
VSR MLR MLR
comp=Z,1μm,25.0s,MS5.4
COLD Coldfoot 95.36 23 *e*P **P** **00 13 30.4 -0.1**
comp=Z,8.9nm,0.8s,mb5.2
ANN Anapa 95.72 314 *e*P **P** **00 13 26.8 -5.8**
ANN *e*SP SP 00 26 03.3 -2.7
ANN pmax pmax
comp=Z,53nm,1.2s,mb5.8
ANN MLR MLR
comp=N,679nm,22.0s,MS5.3
ANN MLR MLR
comp=E,903nm,22.0s,MS5.3
ANN MLR MLR
comp=Z,809nm,22.0s,MS5.2
BOSA Boshof 95.83 240 P **P** **00 13 35.0 +1.5**
comp=Z,9.0nm,0.9s,mb5.2,baz=104,slow=5.4,SNR=9.9
BOSA Boshof 95.83 240 *e*P **P** **00 13 35.5 +1.9**
comp=Z,71nm,1.8s,mb5.8
BOSA LR LR
comp=Z,4μm,21.0s,MS5.8
BOSA Boshof 95.83 240 P **P** **00 13 35.0 +1.5**
BOSA pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
LSZ Lusaka 95.93 254 *e*P **P** **00 13 35.6 +1.4**
comp=Z,14nm,1.0s,mb5.4
LSZ LR LR
comp=Z,2μm,20.0s,MS5.5
LSZ Lusaka 95.93 254 *e*P **P** **00 13 35.6 +1.4**
LSZ pmax pmax
comp=Z,14nm,1.0s,mb5.3
LSZ MLR MLR
comp=Z,2μm,20.0s,MS5.5
COLA College 95.94 25 *e*P **P** **00 13 33.2 +0.1**
COLA LR LR
comp=Z,963nm,21.0s,MS5.2
COLA College 95.94 25 *e*P **P** **00 13 33.2 +0.1**
COLA MLR MLR
comp=Z,963nm,21.0s,MS5.2
KLMR Klimovskoe 96.34 331 *e*P **P** **00 13 31.4 -3.6**
KLMR *e* 00 17 23.0
KLMR pmax pmax
comp=Z,32nm,1.6s,mb5.5
KLMR pmax pmax
comp=Z,38nm,5.8s
ILAR Eielson Array 96.34 25 P **P** **00 13 32.1 -2.9**
comp=Z,2.6nm,0.8s,mb4.7,baz=273,slow=4.2,SNR=25
ILAR PKKP PKKPbc 00 30 22.5 -0.7
comp=Z,0.7nm,0.9s,baz=70,slow=2.1,SNR=5.3
ILAR LR LR 00 57 37.0
comp=Z,587nm,20.2s,MS5.1,baz=276,slow=36
ILAR Eielson Array 96.34 25 P **P** **00 13 32.1 -2.8**
ILAR pmax pmax
comp=Z,3.0nm,0.8s
ILAR pmax pmax
comp=Z,1.0nm,0.9s
ILAR MLR MLR
comp=Z,587nm,20.2s
LBTB Lobatse 96.34 244 *e*P **P** **00 13 37.7 +1.7**
comp=Z,31nm,1.3s,mb5.6
LBTB LR LR
comp=Z,5μm,20.0s,MS6.0
LBTB Lobatse 96.34 244 *e*P **P** **00 13 37.7 +1.8**
LBTB pmax pmax
comp=Z,31nm,1.3s,mb5.6
LBTB MLR MLR
comp=Z,5μm,20.0s,MS6.0
OBN Obninsk 97.32 325 *e*P **P** **00 13 38.5 -1.1**
OBN LR LR
comp=Z,2μm,21.0s,MS5.5
OBN Obninsk 97.32 325*be*P **P** **00 13 38.6 -1.0**
OBN *e* 00 13 42.6
OBN 00 17 34.0
OBN *e* 00 24 15.8
OBN *e*PS PS 00 26 25.1 -2.4
OBN *e*SS SS 00 31 35.5 -4.4
OBN pmax pmax
comp=Z,39nm,1.2s,mb5.7
OBN MLR MLR
comp=Z,900nm,21.0s,MS5.2
CSS Prodhromos 97.85 304 PFAKE 00 13 50.0 +7.5
CSS LR LR
comp=Z,3μm,20.0s,MS5.8
BR131 Keskin Array S 98.02 309 *e*P **P** **00 13 41.9 -1.2**
comp=Z,8.2nm,1.0s,mb5.2
BR131 LR LR
comp=Z,776nm,21.0s,MS5.2
BRTR Keskin Array B 98.02 309 P **P** **00 13 42.1 -1.0**
comp=Z,8.1nm,1.0s,mb5.2,baz=116,slow=4.0,SNR=25
BRTR PP PP 00 17 38.2 -4.2
comp=Z,4.0nm,1.0s,baz=100,slow=6.4,SNR=5.7

BRTR PKKP PKKPbc 00 30 16.8 -0.9
comp=Z,0.7nm,0.8s,baz=199,slow=7.3,SNR=3.9
BRTR LR LR 01 06 03.4
comp=Z,777nm,21.5s,MS5.2,baz=268,slow=40
BRTR Keskin Array B 98.02 309 P **P 00 13 42.2 -0.9**
BRTR 00 17 38.2
BRTR pmax pmax
comp=Z,8.0nm,1.0s
BRTR pmax pmax
comp=Z,4.0nm,1.0s
BRTR pmax pmax
comp=Z,1.0nm,0.8s
SUR Sutherland 98.59 235 PFAKE 00 14 00.0 +14
SUR LR LR
comp=Z,4μm,21.0s,MS5.8
EGAK Eagle 98.79 26 PFAKE 00 14 00.0 +14
EGAK LR LR
comp=Z,861nm,21.0s,MS5.2
APA Apatity 99.41 337⇓*i*P **P 00 13 41.0 -7.7**
APA *i* PS SKSac 00 24 25.0 +0.6
APA pmax pmax
comp=Z,13nm,1.3s,mb5.3
APA MLR MLR
comp=Z,400nm,15.0s,MS5.0
KIEV Kiev 101.60 320 PFAKE 00 14 10.0 +11
KIEV LR LR
comp=Z,1μm,22.0s,MS5.4
KEV Kevo 101.64 340 PFAKE 00 14 10.0 +11
KEV LR LR
comp=Z,1μm,22.0s,MS5.5
INK Inuvik 101.73 22 P Pdif 00 13 58.2 -1.2
comp=Z,3.7nm,0.8s,baz=0.2,slow=5.4,SNR=3.8
INK Inuvik 101.73 22 P Pdif 00 13 58.2 -1.2
INK Inuvik 101.73 22 P Pdif 00 13 58.2 -1.1
INK pmax pmax
comp=Z,4.0nm,0.8s
KIS Kishinev 101.86 316 *e*PKP PP 00 18 14.0 +2.7
KIS LRM 01 04 04.0
comp=Z,700nm,22.0s
ARCES ARCESS Array B 102.19 339 P Pdif 00 13 59.5 -1.9
comp=Z,8.5nm,0.9s,baz=46,slow=3.9,SNR=25
ARCES PP PP 00 18 11.4 -1.7
comp=Z,5.1nm,1.0s,baz=42,slow=3.8,SNR=4.8
ARCES PKKP PKKPbc 00 30 04.4 -2.4
comp=Z,0.4nm,0.4s,baz=247,slow=2.5,SNR=11
ARCES ARCESS Array B 102.19 339 P Pdif 00 13 59.5 -1.9
ARCES PP PP 00 18 11.4 -1.7
ARCES PKKP PKKPbc 00 30 04.4 -2.4
ARCES ARCESS Array B 102.19 339 P Pdif 00 13 59.5 -1.9
ARCES 00 18 11.4
ARCES pmax pmax
comp=Z,9.0nm,0.9s
ARCES pmax pmax
comp=Z,5.0nm,1.0s
ARE0 ARCESS Array S 102.19 339 *e*P Pdif 00 13 59.8 -1.6
FINES FINESS Array B 102.85 331 PKiKP PKiKP 00 18 22.4 -2.0
comp=Z,4.5nm,1.0s,baz=112,slow=1.5,SNR=3.6
WRAK Wrangell Islan 103.30 34 PFAKE 00 14 20.0 +14
WRAK LR LR
comp=Z,914nm,21.0s,MS5.3
KBS Kingsbay 103.31 350 PFAKE 00 14 20.0 +14
KBS LR LR
comp=Z,1μm,20.0s,MS5.4
VRI Vrincioaia 103.31 315⇓*i*P PKiKP 00 18 23.8 -1.9
PLOR Plostina 103.37 315⇑*i*P PKiKP 00 18 22.8 -3.0
MLR Muntele Rosu 103.87 315⇓*i*P PKiKP 00 18 25.9 -0.8
TSUM Tsumeb 104.95 247 PFAKE 00 18 40.0 +11
TSUM LR LR
comp=Z,2μm,22.0s,MS5.7
KWP Kalwaria Pacla 105.83 319 PFAKE 00 18 40.0 +10
KWP LR LR
comp=Z,981nm,20.0s,MS5.3
VTS Vitosha 105.95 312⇑*i*P PKiKP 00 18 32.4 +1.8
PMSA Palmer Station 106.14 175 PFAKE 00 18 40.0 +10
PMSA LR LR
comp=Z,4μm,19.0s,MS6.0
KOLS Kolonicke sedl 106.17 318 *e*P Pdif 00 14 20.7 +1.6
comp=Z,4.8nm,1.1s
KOLS *e* 00 14 26.6
KOLS *e*PP PP 00 18 46.9 +3.6
KOLS Kolonicke sedl 106.17 318 *e*P Pdif 00 14 20.7 +1.6
KOLS *e* 00 18 46.9
KOLS pmax pmax
comp=Z,5.0nm,1.1s
KOLS Kolonicke sedl 106.17 318 PDIF Pdif 00 14 20.7 +1.6
KOLS pPDIF 00 14 26.6
KOLS *e*PP PP 00 18 46.8 +3.5
UZH Uzhgorod 106.19 318 *e*P Pdif 00 14 27.0 +7.8
UZH *i* 00 24 55.0
UZH *i* PS PS 00 28 00.0 -1.9
CRVS Cervenica-Dubn 106.71 318 *e*P Pdif 00 14 22.5 +1.0
comp=Z,9.3nm,1.6s
CRVS *e*PP PP 00 18 43.6 -3.7
CRVS Cervenica-Dubn 106.71 318 *e*P Pdif 00 14 22.5 +1.0
CRVS pmax pmax
comp=Z,9.0nm,1.6s
CRVS Cervenica-Dubn 106.71 318 PDIF Pdif 00 14 22.5 +1.0
CRVS *e*PP PP 00 18 43.6 -3.7
KECS Kecovo 107.39 318 *e*P Pdif 00 14 31.7 +7.2
KECS *e*PP PP 00 18 56.4 +4.1
KECS Kecovo 107.39 318 *e*P Pdif 00 14 31.7 +7.2
KECS *e* 00 18 56.4
KECS Kecovo 107.39 318 PDIF Pdif 00 14 31.7 +7.2
KECS *e*PP PP 00 18 56.4 +4.1
PSZ Piszkesteto 107.85 317 PFAKE 00 18 40.0 +6.0
PSZ LR LR
comp=Z,1μm,20.0s,MS5.4
PSZ Piszkesteto 107.85 317⇑*i*P PP 00 18 57.9 +2.2
PSZ Piszkesteto 107.85 317⇑*e*PP PP 00 18 58.8 +3.1
VYHS Vyhne 108.48 318 *e*P Pdif 00 14 31.6 +2.2
comp=Z,3.1nm,1.7s
VYHS *e*PP PP 00 19 03.3 +3.0
VYHS Vyhne 108.48 318 *e*P Pdif 00 14 31.6 +2.2
VYHS pmax pmax
comp=Z,3.0nm,1.7s
VYHS Vyhne 108.48 318 PDIF Pdif 00 14 31.6 +2.2
VYHS *e*PP PP 00 19 03.3 +3.0
TIR Tirane 108.51 311 PFAKE 00 18 50.0 +15
TIR LR LR
comp=Z,1μm,21.0s,MS5.4
OKC Ostrava-Krasne 108.74 320 *e*PKP PKiKP 00 18 37.3 +1.7
OKC *e*PP PP 00 19 05.4 +3.3
OKC *e*SKS SKSac 00 25 06.3 -1.7
OKC AMS AMS 01 08 40.0
comp=Z,700nm,25.6s
PKSM Moragy 108.91 316⇓*i*P PKiKP 00 18 37.0 +1.0
MORC Moravsky Berou 109.14 320 *e*PKPdf PKiKP 00 18 37.2 +0.8
NLWA Neilton Lookou 109.51 43 PFAKE 00 18 50.0 +13
NLWA LR LR
comp=Z,607nm,20.0s,MS5.2
KRLC Kraliky 109.57 320 *e*PKP PKiKP 00 18 38.7 +1.5
DAG Danmarks Havn 109.64 352 *i* P PP 00 19 08.8 +1.1
BSD Bornholm Skovb 109.68 326 *i* P PP 00 19 15.0 +6.3
BSD
comp=Z,930nm,19.0s
DPC Dobruska-Polom 109.81 320 *e*PKP PKiKP 00 18 38.9 +1.3
DPC *e*SP SP 00 28 29.8 -4.3
DPC AMS AMS 01 11 10.0
comp=Z,1μm,23.8s
NOA NORSAR Array B 109.95 332 PKiKP PKiKP 00 18 37.9 +0.3
comp=Z,1.8nm,0.9s,baz=270,slow=3.7,SNR=11
UPC Upice 109.98 321 *e*PKP PKiKP 00 18 39.3 +1.4
UPC *e*PP PP 00 19 14.7 +3.6
SOP Sopron 110.11 318⇑*e*PP PP 00 19 14.6 +2.5
NAO01 NORSAR Array S 110.17 332 PFAKE 00 18 50.0 +12
NAO01 LR LR
comp=Z,2μm,22.0s,MS5.7
COR Corvallis 110.29 46 PFAKE 00 18 50.0 +11
COR LR LR
comp=Z,1μm,20.0s,MS5.5
TREC Trest 110.54 319 *e*PKP PKiKP 00 18 39.8 +0.8
TREC AMS AMS 01 05 50.0
comp=Z,1μm,24.5s
YKA Yellowknife Ar 110.77 26 PKiKP PKiKP 00 18 38.8 -0.3
comp=Z,1.5nm,0.8s,baz=312,slow=2.5,SNR=4.0
YKA Yellowknife Ar 110.77 26 PKPdf PKiKP 00 18 38.8 -0.3
YKA Yellowknife Ar 110.77 26 *i* PKIKP PKiKP 00 18 38.8 -0.3
YKA pmax pmax
comp=Z,2.0nm,0.9s
HUMO Hull Mountain 110.80 48 PFAKE 00 18 50.0 +10
HUMO LR LR
comp=Z,1μm,22.0s,MS5.5
PVCC Panska Ves 110.88 321 *e*PKIKP PKiKP 00 18 40.3 +0.7
PVCC MLR MLR
comp=Z,1μm,18.6s,MS5.5
PVCC Panska Ves 110.88 321 *e*PKP PKiKP 00 18 40.3 +0.7
PVCC *ex* x 00 28 20.9
PVCC AMS AMS 01 08 50.0
comp=Z,1μm,18.6s
RPW Rockport 110.90 41 *e*PKPdf PKiKP 00 18 37.1 -2.6
COP Copenhagen 110.91 326 *i* P PP 00 19 25.3 +7.7
COP
comp=Z,630nm,17.0s
RUE Ruedersdorf 110.94 323 *e*PKiKP PKiKP 00 18 41.0 +1.3
PRU Pruhonice 111.01 320 *e*PKIKP PKiKP 00 18 41.5 +1.6
PRU *e* 00 25 22.1
PRU MLR MLR
comp=Z,1μm,20.0s,MS5.5
PRU Pruhonice 111.01 320 *e*PKP PKiKP 00 18 41.5 +1.6
PRU *e*SKS SKSac 00 25 22.1 +4.6
PRU *ex* x 00 28 19.6
PRU AMS AMS 01 13 40.0
comp=Z,1μm,20.0s
PRA Prague 111.06 320 PKP PKiKP 00 18 40.0 0.0
PRA SKS SKSac 00 25 23.0 +5.3
PRA AMS AMS 01 14 00.0
YBH Yreka Blue Hor 111.09 49 PFAKE 00 18 50.0 +10
YBH LR LR
comp=Z,1μm,21.0s,MS5.5
HOPS Hopland 111.12 52 PFAKE 00 18 50.0 +10
HOPS LR LR
comp=Z,1μm,19.0s,MS5.5
KONO Kongsberg 111.17 331 PFAKE 00 18 50.0 +10
KONO LR LR
comp=Z,1μm,21.0s,MS5.5
BRG Berggiesshubel 111.20 321 *e*PKiKP PKiKP 00 18 41.5 +1.3
BRG Berggiesshubel 111.20 321 *e*PKP PKiKP 00 18 40.8 +0.6
comp=Z,7.2nm,1.0s
BRG PP PP 00 19 22.4 +2.6
comp=Z,32nm,1.7s
BRG SKS SKSac 00 25 29.0 +11
BRG SP SP 00 28 49.0 +2.0
BRG PKKP PKKPbc 00 29 54.8 +17
comp=Z,5.7nm,1.1s
BRG SS SS 00 35 05.0 +15
BRG
comp=Z,1μm,18.3s
BRG
comp=N,1μm,20.9s
BRG
comp=E,790nm,20.9s
BRG Berggiesshubel 111.20 321 *e*PKIKP PKiKP 00 18 40.8 +0.6
BRG 00 19 22.4
BRG SP SP 00 28 49.0 +2.0
BRG 00 29 54.8
BRG SS SS 00 35 05.0 +15
BRG pmax pmax
comp=Z,2.0nm,1.0s
BRG pmax pmax
comp=Z,4.0nm,1.7s
BRG pmax pmax
comp=Z,19nm,1.2s
BRG MLR MLR
comp=Z,3μm,18.3s,MS6.0
BRG MLR MLR
comp=N,665nm,20.9s,MS5.3
BRG MLR MLR
comp=E,641nm,20.9s,MS5.3
PERS Pernice 111.25 317 *i* PKiKP PKiKP 00 18 41.6 +1.1
PERS *i* PP PP 00 19 22.9 +2.5
BOJS Bojanci 111.35 315 *i* PKiKP PKiKP 00 18 42.2 +1.6
BOJS *i* PP PP 00 19 23.1 +2.0
MCCM Marconi Confer 111.35 53 PFAKE 00 18 50.0 +9.1
MCCM LR LR
comp=Z,1μm,20.0s,MS5.5
WDC Whiskeytown Da 111.35 50 PFAKE 00 18 50.0 +9.2
WDC LR LR
comp=Z,1μm,20.0s,MS5.5
FBE Freiberg 111.55 321 *e*PKiKP PKiKP 00 18 42.3 +1.4
VISS Visnje 111.59 316 *i* PKiKP PKiKP 00 18 42.9 +1.8
CLL Collm 111.68 322⇓*i*PKP PKiKP 00 18 42.0 +0.9
CLL *e*PP PP 00 19 25.0 +1.8
CLL *e*SKS SKSac 00 25 22.0 +1.8
CLL LR LR
comp=Z,1μm,21.6s,MS5.4
CLL Collm 111.68 322⇓*i*PKIKP PKiKP 00 18 42.0 +0.9
CLL *e* 00 19 25.0
CLL *e* 00 25 22.0
CLL pmax pmax
comp=Z,25nm,0.9s
CLL MLR MLR
comp=Z,1μm,21.6s,MS5.4
CLL Collm 111.68 322⇓*i*PKiKP PKiKP 00 18 42.0 +0.9
comp=Z,8.0nm,0.9s
CLL *e*PP PP 00 19 25.0 +1.8
CLL *e*PPP 00 21 49.0
CLL *e*PPPP 00 23 30.0
CLL *e*SKSac SKSac 00 25 22.0 +1.8
CLL *e*SKKSac SKKSac 00 26 18.0 -5.4
CLL *e*Sdif Sdif 00 27 00.0 -1.4
CLL *e*PS PS 00 28 54.0 -2.1
CLL *e*PPS 00 30 04.0
CLL *e*SS SS 00 35 18.0 +21
CLL *e* 00 40 36.0
CLL *e* 00 44 12.0
CLL LmV 01 09 00.0
comp=Z,1μm,21.6s
CUC Castrocucco 111.71 309 PFAKE 00 18 50.0 +8.5
CUC LR LR
comp=Z,859nm,22.0s,MS5.3
KHC Kasperske Hory 111.80 319 *e*PKP PKiKP 00 18 42.0 +0.6
KHC *e*SKS SKSac 00 25 21.4 +0.7
KHC *e*SP SP 00 28 51.4 -1.3
KHC AMS AMS 01 12 10.0
comp=Z,2μm,23.7s
ETW Entiat 111.84 42 *e*PKPdf PKiKP 00 18 42.8 +1.3
CEL Celeste 111.84 308 PFAKE 00 18 50.0 +8.2
CEL LR LR
comp=Z,784nm,21.0s,MS5.3
JAVS Javornik 112.10 316 *i* PKiKP PKiKP 00 18 44.0 +1.9
JAVS *i* PP PP 00 19 22.3 -4.2
TANN Tannenbergstha 112.22 321 *e*PKiKP PKiKP 00 18 43.3 +1.1
WET Wettzell 112.24 320 *e*PKiKP PKiKP 00 18 43.7 +1.4
WET Wettzell 112.24 320 *i* PKIKP PKiKP 00 18 43.7 +1.4
NKC Novy Kostel 112.27 321 *e*PKIKP PKiKP 00 18 42.3 0.0
NKC *e*SP SP 00 28 59.8 +2.9
NKC MLR MLR
comp=Z,1μm,21.5s,MS5.5
NKC Novy Kostel 112.27 321 *e*PKP PKiKP 00 18 42.3 0.0
NKC *e*SP SP 00 28 59.8 +2.9
NKC AMS AMS 01 17 40.0
comp=Z,1μm,21.5s
K05A Summer Lake 112.29 47⇑PKiKP PKiKP 00 18 44.4 +1.9
baz=112
WERD Werda 112.31 321 *e*PKiKP PKiKP 00 18 43.6 +1.3
GUNZ Gunzen 112.31 321 *e*PKiKP PKiKP 00 18 43.7 +1.4
PLN Plauen 112.39 321 *e*PKiKP PKiKP 00 18 43.7 +1.2
MUD Monsted U'grnd 112.43 328 *i* P PP 00 19 20.6 -7.8
MUD
comp=Z,1μm,20.0s
NEUB Neuenburg 112.45 322 *e*PKiKP PKiKP 00 18 43.9 +1.3
RSW Rattlesnake Hi 112.57 43 *e*PKPdf PKiKP 00 18 45.4 +2.4
HAWA Hanford 112.61 43 *e*PKPdf PKiKP 00 18 44.1 +1.0
HAWA LR LR
comp=Z,765nm,21.0s,MS5.3
SAO San Andreas Ge 112.62 54 PFAKE 00 18 50.0 +6.6
SAO LR LR
comp=Z,1μm,21.0s,MS5.5
MOX Moxa 112.69 321 *e*PKP PKiKP 00 18 43.4 +0.3
MOX *e* 00 19 34.7
MOX *e*S PS 00 29 13.0 +7.5
MOX
comp=Z,800nm,21.0s
MOX Moxa 112.69 321 *e*PKIKP PKiKP 00 18 43.4 +0.3
MOX *e* 00 19 34.7
MOX MLR MLR
comp=Z,15μm,21.0s,MS6.6
MOD Modoc 112.85 48 *e*PKPdf PKiKP 00 18 45.3 +1.7
MOD LR LR
comp=Z,591nm,22.0s,MS5.1
D08A Wollman Farm, 112.89 43⇓PKiKP PKiKP 00 18 44.4 +0.8
baz=113
NRDL Niedersach Rie 113.11 324 *e*PKiKP PKiKP 00 18 45.3 +1.5
CLZ Clausthal 113.13 323 *e*PKiKP PKiKP 00 18 45.4 +1.5
CLZ Clausthal 113.13 323 *i* PKIKP PKiKP 00 18 45.4 +1.5
GRA1 Grafenberg Arr 113.17 320 *e*PKPdf PKiKP 00 18 45.0 +1.0
GRA1 *e*PP PP 00 19 31.0 -2.9
GRF Grafenberg Arr 113.17 320 *e*PKiKP PKiKP 00 18 45.0 +1.0
GRF *e*PP PP 00 19 31.0 -2.9
GRF *e*L 01 17 16.1
comp=N,985nm,21.4s
GRF Grafenberg Arr 113.17 320 PKPdf PKiKP 00 18 45.0 +1.0
GRF *e*PP PP 00 19 31.0 -2.9
GRF Grafenberg Arr 113.17 320 *i* PKIKP PKiKP 00 18 45.0 +1.0
GRF *e* 00 19 31.0
GRF Grafenberg Arr 113.17 320 PKIKP PKiKP 00 18 45.0 +1.0
GRF *e* 00 19 31.0
AQU L'Aquila 113.18 312 PFAKE 00 19 00.0 +16
AQU LR LR
comp=Z,2μm,22.0s,MS5.5
WDD Wield Dalam 113.18 305 PFAKE 00 19 00.0 +16
WDD LR LR
comp=Z,693nm,22.0s,MS5.2
G08A Pilot Rock 113.22 44⇓PKiKP PKiKP 00 18 45.8 +1.6
baz=113
CMB Columbia Colle 113.32 52 *e*PKPdf PKiKP 00 18 41.4 -3.3
CMB LR LR
comp=Z,1μm,19.0s,MS5.6
CMB Columbia Colle 113.32 52 *e*PKIKP PKiKP 00 18 41.4 -3.3
CMB MLR MLR
comp=Z,1μm,19.0s,MS5.6
WTTA Wattenberg 113.47 318⇑*i*PKiKP PKiKP 00 18 45.5 +0.9
comp=Z,22nm,1.0s
WATA Walderalm 113.49 318⇓*i*PKiKP PKiKP 00 18 45.1 +0.4
comp=Z,18nm,1.2s
E09A Wood Farm, Sta 113.52 43⇑PKiKP PKiKP 00 18 46.2 +1.4
baz=113
LNOR Lincton Mounta 113.56 44 *e*P PKiKP 00 18 47.0 +2.1
LNOR Lincton Mounta 113.56 44 *e*PKIKP PKiKP 00 18 47.0 +2.1
WCN Washoe City 113.64 51 *e*PKPdf PKiKP 00 18 47.2 +2.0
WCN *e*PP PP 00 19 30.3 -7.4
WCN Washoe City 113.64 51 *e*PKIKP PKiKP 00 18 47.3 +2.1
NEW Newport 113.80 41 *e*PKPdf PKiKP 00 18 46.2 +1.0
NEW LR LR
comp=Z,982nm,20.0s,MS5.4
NEW Newport 113.80 41 *e*PKIKP PKiKP 00 18 46.2 +0.9
NEW MLR MLR
comp=Z,982nm,20.0s
MOTA Moosalm 113.80 318⇑*i*PKiKP PKiKP 00 18 45.8 +0.6
comp=Z,6.3nm,0.8s
PAHR Pah Rah Range 113.87 51 *e*PKPdf PKiKP 00 18 47.6 +1.9
WVOR Wild Horse Val 113.98 47 *e*PKPdf PKiKP 00 18 47.7 +1.9
WVOR LR LR
comp=Z,2μm,22.0s,MS5.5
WVOR Wild Horse Val 113.98 47 *e*PKIKP PKiKP 00 18 47.7 +1.9
WVOR MLR MLR
comp=Z,2μm,22.0s,MS5.5
WAKR Walker 114.00 52 *e*PKPdf PKiKP 00 18 48.2 +2.3
F10A Beach Ranch, E 114.26 43⇓PKiKP PKiKP 00 18 47.5 +1.3
baz=114
C11A Tepee Creek (N 114.47 41⇓PKiKP PKiKP 00 18 47.6 +1.1
baz=114
IBBN Ibbenburen 114.54 324 *e*PKiKP PKiKP 00 18 47.7 +1.2
DAVA Damuels 114.63 318⇑*i*PKiKP PKiKP 00 18 47.4 +0.5
comp=Z,21nm,1.1s
STU Stuttgart 114.69 320 *e*PKiKP PKiKP 00 18 48.0 +1.1
STU Stuttgart 114.69 320 *e*PKPdf PKiKP 00 18 48.1 +1.2
STU Stuttgart 114.69 320 *e*PKIKP PKiKP 00 18 48.1 +1.2
TNS Taunus Mts 114.75 322 *e*PKiKP PKiKP 00 18 48.2 +1.2
TNS Taunus Mts 114.75 322 *i* PKIKP PKiKP 00 18 48.2 +1.2
NVAR Mina Array Bea 114.89 52 Pdiff Pdif 00 14 58.5 +0.7
comp=Z,0.3nm,0.6s,baz=286,slow=5.5,SNR=3.8
NVAR PKP PKiKP 00 18 49.4 +1.8
comp=Z,3.2nm,0.8s,baz=255,slow=2.3,SNR=11
NVAR PP PP 00 19 43.4 -3.2
comp=Z,5.7nm,1.1s,baz=257,slow=9.5,SNR=5.4
NVAR PKKPbc PKKPbc 00 29 33.0 +7.7
comp=Z,2.1nm,1.0s,baz=148,slow=2.8,SNR=7.6
NVAR Mina Array Bea 114.89 52 Pdif Pdif 00 14 58.5 +0.7
NVAR PKP PKiKP 00 18 49.4 +1.8
NVAR PP PP 00 19 43.4 -3.2
NVAR PKKPbc PKKPbc 00 29 33.0 +7.7
VLC Villacollemand 115.00 315 PFAKE 00 19 00.0 +12
VLC LR LR
comp=Z,1μm,20.0s,MS5.5
BUG Bochum--Univer 115.10 323 *e*PKiKP PKiKP 00 18 48.8 +1.2
TUE Stuetta 115.18 317 PFAKE 00 19 00.0 +12
TUE LR LR
comp=Z,1μm,20.0s,MS5.4
D12A Red Ives Fores 115.26 42⇓PKiKP PKiKP 00 18 48.2 +0.1
baz=115
E12A Beaver Dam Sad 115.28 43⇑PKiKP PKiKP 00 18 48.7 +0.5
baz=115
SCO Scoresbysund 115.33 349 *i* P PP 00 19 56.6 +8.2
CWC Cottonwood Cre 115.35 54⇑PKiKP PKiKP 00 18 50.6 +2.0
baz=115
A13A Flathead Natio 115.36 40⇓PKiKP PKiKP 00 18 49.7 +1.5
baz=115
BFO Black Forest 115.36 320 PFAKE 00 19 00.0 +12
BFO LR LR
comp=Z,1μm,22.0s,MS5.5
BMN Battle Mountai 115.39 49 PFAKE 00 19 00.0 +11
BMN LR LR
comp=Z,829nm,19.0s,MS5.4
BSMT Bassoo Peak 115.42 41 *e*PKPdf PKPdf 00 18 49.2 +0.9
LANF Langenberg 115.51 320 *e*P PKiKP 00 18 49.7 +1.2
C13A Hot Springs 115.61 41⇓PKiKP PKiKP 00 18 49.4 +0.7
baz=116
EDW2 Edwards Air Fo 115.63 56⇓PKiKP PKiKP 00 18 51.1 +1.9
baz=116
F12A Elk City 115.65 43⇑PKiKP PKiKP 00 18 50.3 +1.4
baz=116
MWC Mount Wilson 115.66 56 *e*PKPdf PKPdf 00 18 49.1 -0.2
MWC Mount Wilson 115.66 56 *e*PKIKP PKPdf 00 18 49.1 -0.2
SUMG Summit 115.69 355 *i* P PP 00 19 53.3 +2.5
SUMG
comp=Z,870nm,14.0s
G12A Big Creek, Yel 115.76 44⇓PKiKP PKiKP 00 18 49.8 +0.7
baz=116
DAC Darwin (Calif) 115.77 54 PFAKE 00 19 00.0 +11
DAC LR LR
comp=Z,2μm,19.0s,MS5.6
TPH Tonopah 115.79 52 PFAKE 00 19 00.0 +11
TPH LR LR
comp=Z,959nm,19.0s,MS5.4
LRMC Laurel Mountai 115.80 55⇓PKiKP PKiKP 00 18 51.8 +2.3
baz=116
MFID Camas Ranch 115.81 46⇓PKiKP PKiKP 00 18 51.2 +1.9
baz=116
D13A Huson 115.84 42⇓PKiKP PKiKP 00 18 49.9 +0.7
baz=116
MPMC Manual Prospec 115.88 54⇑PKiKP PKiKP 00 18 51.2 +1.6
baz=116
SWMT Swartz Lake 116.03 41 *e*PKPdf PKPdf 00 18 50.4 +0.8
C14A Swan Lake 116.12 41⇑PKiKP PKiKP 00 18 50.5 +0.7
baz=116
MEM Membach 116.12 322 PKP PKPdf 00 18 51.1 +1.4
ECH Echery 116.14 320 PFAKE 00 19 00.0 +10
ECH LR LR
comp=Z,1μm,21.0s,MS5.4
E13A Victor 116.19 42⇑PKiKP PKiKP 00 18 51.0 +1.1
baz=116
I12A Atlanta 116.21 45⇑PKiKP PKiKP 00 18 52.1 +2.1
baz=116
H12A Diamond D Ranc 116.22 45⇓PKiKP PKiKP 00 18 51.3 +1.3
baz=116
B14A Marquette Ranc 116.25 40⇓PKiKP PKiKP 00 18 51.0 +1.1
baz=116
MSO Missoula 116.25 42⇓PKiKP PKiKP 00 18 50.8 +0.8
baz=116
MSO Missoula 116.25 42 *e*PKPdf PKPdf 00 18 50.9 +0.9
MSO LR LR
comp=Z,468nm,19.0s,MS5.1
F13A Darby 116.27 43⇑PKiKP PKiKP 00 18 50.7 +0.7
baz=116
FURC Furnace Creek, 116.32 54⇓PKiKP PKiKP 00 18 52.5 +2.0
baz=116
WLF Walferdange 116.33 321 PFAKE 00 19 00.0 +10
WLF LR LR
comp=Z,1μm,20.0s,MS5.5
A15A Johnson Ranch, 116.40 39⇑PKiKP PKiKP 00 18 50.8 +0.5
baz=116
SLMT Seeley Lake 116.43 41 *e*PKPdf PKPdf 00 18 51.0 +0.7
D14A Greenough 116.47 42⇑PKiKP PKiKP 00 18 51.1 +0.7
baz=116
G13A Cobalt 116.52 44⇑PKiKP PKiKP 00 18 51.9 +1.3
baz=116
GSC Goldstone 116.54 55⇓PKiKP PKiKP 00 18 52.7 +1.8
baz=116
GSC Goldstone 116.54 55 *e*PKPdf PKPdf 00 18 53.0 +2.1
GSC Goldstone 116.54 55 *e*PKIKP PKPdf 00 18 53.1 +2.2
BCLA Clavier 116.61 322 PKP PKPdf 00 18 51.7 +1.1
H13A Challis 116.64 44⇑PKiKP PKiKP 00 18 52.4 +1.6

baz=116
CHMT Chamberlain Mo 116.68 42 ePKPdf PKPdf 00 18 51.9 +1.0
VSL Villasalto 116.69 310 PFAKE 00 19 00.0 +8.9
VSL LR LR
comp=Z,560nm,20.0s,MS5.2
B15A Bradely Ranch, 116.72 40 ⇑PKiKP PKiKP 00 18 51.2 +0.4
baz=117
HLID Hailey 116.77 46 ⇓PKiKP PKiKP 00 18 53.5 +2.3
baz=117
HLID Hailey 116.77 46 ePKPdf PKPdf 00 18 53.0 +1.9
HLID LR LR
comp=Z,1μm,20.0s,MS5.5
C15A Salmond Ranch, 116.85 41 ⇑PKiKP PKiKP 00 18 51.8 +0.7
baz=117
THEF They Montfort 116.89 320 eP PKPdf 00 18 52.1 +0.9
I13A Wildhorse Cree 116.89 45 ⇓PKiKP PKiKP 00 18 53.7 +2.3
baz=117
J13A Cove Ranch, Pi 116.98 46 ⇓PKiKP PKiKP 00 18 53.9 +2.3
baz=117
HEC Hector,Ludlow 116.99 55 ⇑PKiKP PKiKP 00 18 54.1 +2.3
baz=117
R11A Troy Canyon, C 117.01 51 ⇓PKiKP PKiKP 00 18 53.9 +2.2
baz=117
PFO Pinyon Flat Ob 117.06 57 ⇑PKiKP PKiKP 00 18 54.0 +2.0
baz=117
PFO Pinyon Flat Ob 117.06 57 ePKPdf PKPdf 00 18 53.5 +1.5
PFO LR LR
comp=Z,1μm,19.0s,MS5.5
PFO Pinyon Flat Ob 117.06 57 ePKIKP PKPdf 00 18 53.5 +1.5
PFO MLR MLR
comp=Z,1μm,19.0s,MS5.6
A16A West Butte Ran 117.12 39 ⇓PKiKP PKiKP 00 18 52.0 +0.4
baz=117
D15A Lincoln 117.12 41 ⇑PKiKP PKiKP 00 18 53.0 +1.3
baz=117
DOU Dourbes 117.14 322 PKP PKPdf 00 18 52.2 +0.6
SNF Seneffe 117.19 323 PKP PKPdf 00 18 52.8 +1.1
E15A Deer Lodge 117.22 42 ⇑PKiKP PKiKP 00 18 53.2 +1.2
baz=117
TUQ Turquoise Moun 117.23 55 ⇓PKiKP PKiKP 00 18 54.6 +2.3
baz=117
BNI Bardonecchia 117.36 316 ePKPdf PKPdf 00 18 54.0 +1.8
BNI LR LR
comp=Z,1μm,20.0s,MS5.6
BNI Bardonecchia 117.36 316 ePKIKP PKPdf 00 18 54.0 +1.8
BNI MLR MLR
comp=Z,1μm,20.0s,MS5.6
I14A Mackay 117.36 45 ⇓PKiKP PKiKP 00 18 54.2 +1.9
baz=117
KEST Kesra 117.37 306 PKP PKPdf 00 18 53.9 +1.4
comp=Z,4.5nm,0.9s,baz=315,slow=6.6,SNR=7.4
KEST PP PP 00 20 01.6 -2.5
comp=Z,7.9nm,1.0s,baz=46,slow=5,2,SNR=5.1
BELC Belle Mtn. Jos 117.38 56 ⇑PKiKP PKiKP 00 18 54.3 +1.7
baz=117
C16A Fuhringer Ranc 117.39 40 ⇑PKiKP PKiKP 00 18 52.4 +0.2
baz=117
J14A Carey 117.46 46 ⇓PKiKP PKiKP 00 18 54.6 +2.1
baz=117
T11A Corn Creek, Al 117.49 53 ⇑PKiKP PKiKP 00 18 55.2 +2.4
baz=117
MCMT McKenzie Canyo 117.53 44 ePKPdf PKPdf 00 18 54.0 +1.5
GMRC Granite Mounta 117.54 55 ⇑PKiKP PKiKP 00 18 55.4 +2.5
baz=118
DLMT Dillon 117.56 43 ePKPdf PKPdf 00 18 54.5 +1.9
SHPR Sheep Range 117.67 53 ePKPdf PKPdf 00 18 55.5 +2.4
A17A Triple J Farms 117.68 39 ⇓PKiKP PKiKP 00 18 53.6 +0.9
baz=118,SNR=19
G15A Dillon 117.69 43 ⇓PKiKP PKiKP 00 18 54.2 +1.4
baz=118
S12A Delamar Landin 117.72 52 ⇑PKiKP PKiKP 00 18 55.7 +2.5
baz=118
H15A Lima 117.73 44 ⇑PKiKP PKiKP 00 18 55.2 +2.2
baz=118
D16A Dana Ranch, Ca 117.76 41 ⇑PKiKP PKiKP 00 18 54.1 +1.2
baz=118
B17A L&G Farms, Che 117.84 40 ⇓PKiKP PKiKP 00 18 53.7 +0.7
baz=118,SNR=5.4
BC3 Big Chuckawall 117.88 57 ⇓PKiKP PKiKP 00 18 55.8 +2.2
baz=118
K14A Jones Ranch, D 117.90 46 ⇑PKiKP PKiKP 00 18 55.5 +2.1
baz=118
LDFC Landfair 117.94 55 ePKPdf PKPdf 00 18 55.9 +2.3
L14A Malta 117.98 47 ⇓PKiKP PKiKP 00 18 55.1 +1.6
baz=118
V12A Nelson 118.05 54 ⇑PKiKP PKiKP 00 18 55.8 +1.9
baz=118
IRM Iron Mountain 118.05 56 ⇑PKiKP PKiKP 00 18 55.6 +1.7
baz=118
C17A Wharram Farm, 118.08 40 ⇓PKiKP PKiKP 00 18 53.9 +0.4
baz=118,SNR=7.6
F16A Kennard Place, 118.09 43 ⇓PKiKP PKiKP 00 18 55.2 +1.6
baz=118
BOZ Bozeman (W) 118.13 43 ⇑PKiKP PKiKP 00 18 55.3 +1.6
baz=118
BOZ Bozeman (W) 118.13 43 ePKPdf PKPdf 00 18 54.9 +1.2
BOZ LR LR
comp=Z,534nm,20.0s,MS5.2
BOZ Bozeman (W) 118.13 43 ePKIKP PKPdf 00 18 54.9 +1.2
BOZ MLR MLR
comp=Z,534nm,20.0s,MS5.2
G16A Moss Hill, Enn 118.13 43 ⇓PKiKP PKiKP 00 18 55.4 +1.7
baz=118
A18A Metzger Ranch, 118.22 39 PKiKP PKiKP 00 18 54.7 +1.0
baz=118,SNR=7.0
D17A Six Diamond Ra 118.28 41 ⇑PKiKP PKiKP 00 18 54.7 +0.7
baz=118
R13A O'Grain Ranch, 118.29 51 ⇑PKiKP PKiKP 00 18 56.8 +2.5
baz=118
K15A Arbon 118.33 46 ⇑PKiKP PKiKP 00 18 56.6 +2.4
baz=118
HVU Hansel Valley 118.38 47 ePKPdf PKPdf 00 18 55.6 +1.4
HVU Hansel Valley 118.38 47 ePKIKP PKPdf 00 18 55.7 +1.4
E17A Martinsdale 118.39 42 ⇓PKiKP PKiKP 00 18 55.4 +1.3
baz=118
BGU Big Grassy Mou 118.40 48 ePKPdf PKPdf 00 18 55.5 +1.2
B18A Beardsley Farm 118.44 39 ⇓PKiKP PKiKP 00 18 55.1 +0.8
baz=118,SNR=7.4
S13A Holt Ranch, En 118.49 52 ⇓PKiKP PKiKP 00 18 56.6 +2.0
baz=118
T13A Saint George 118.56 53 ⇑PKiKP PKiKP 00 18 56.8 +2.0
baz=118
EGMT Eagleton 118.59 40 ePKPdf PKPdf 00 18 55.6 +1.2
EGMT LR LR
comp=Z,572nm,20.0s,MS5.2
L15A Malad City 118.60 47 ⇓PKiKP PKiKP 00 18 56.2 +1.5
baz=118
U13A Pakoon Wash 118.63 53 ⇑PKiKP PKiKP 00 18 57.3 +2.4
baz=118
Q14A Sevier Lake (B 118.65 50 ⇑PKiKP PKiKP 00 18 56.7 +1.7
baz=118
H16A Russell Place, 118.66 44 ⇑PKiKP PKiKP 00 18 57.0 +2.3
baz=118
P14A Drum Mountains 118.68 50 ⇓PKiKP PKiKP 00 18 56.9 +2.0
baz=119
F17A Fitzpatrick Pl 118.69 42 ⇓PKiKP PKiKP 00 18 56.7 +1.9
baz=119,SNR=13
M15A Larsen Ranch, 118.70 47 ⇓PKiKP PKiKP 00 18 56.3 +1.3
baz=119
V13A Grand Canyon W 118.72 54 ⇓PKiKP PKiKP 00 18 57.3 +2.1
baz=119
DUG Dugway 118.73 49 ⇓PKiKP PKiKP 00 18 57.0 +2.0
baz=119
DUG Dugway 118.73 49 ePKPdf PKPdf 00 18 56.9 +1.9
DUG LR LR
comp=Z,904nm,19.0s,MS5.4
DUG Dugway 118.73 49 ePKIKP PKPdf 00 18 56.9 +1.9
DUG MLR MLR
comp=Z,904nm,19.0s,MS5.4
SPUT South Promonto 118.73 48 ePKPdf PKPdf 00 18 56.9 +1.9
I16A Newdale 118.74 45 ⇑PKiKP PKiKP 00 18 56.0 +1.1
baz=119
SSB Saint Sauveur 118.74 317 PFAKE 00 19 10.0 +15
SSB LR LR
comp=Z,707nm,20.0s,MS5.3
N15A Stansbury Isla 118.78 48 ⇓PKiKP PKiKP 00 18 56.7 +1.6
baz=119
J16A Bone 118.82 45 ⇓PKiKP PKiKP 00 18 57.0 +1.9
baz=119
G17A Pierce Place, 118.82 43 ⇑PKiKP PKiKP 00 18 57.2 +2.2
baz=119
CCUT Cedar City 118.89 52 ePKPdf PKPdf 00 18 57.3 +1.9
A19A Klindworth Far 118.90 38 ⇑PKiKP PKiKP 00 18 56.0 +0.9
baz=119
B19A Brinkman Farms 118.94 39 ⇑PKiKP PKiKP 00 18 56.3 +1.1
baz=119,SNR=6.8
K16A Soda Springs 118.96 46 ⇑PKiKP PKiKP 00 18 57.5 +2.1
baz=119
E18A Harlowton 118.97 41 ⇓PKiKP PKiKP 00 18 56.7 +1.4
baz=119
RRI2 Red Ridge 119.00 45 ePKPdf PKPdf 00 18 57.1 +1.6
YFT Old Faithful 119.02 44 ePKPdf PKPdf 00 18 58.7 +3.3
DCID1 Drake Creek 119.03 45 ePKPdf PKPdf 00 18 57.7 +2.2
X13A Yucca 119.06 55 ⇑PKiKP PKiKP 00 18 57.8 +1.9
baz=119
IMW Indian Meadow 119.11 44 ePKPdf PKPdf 00 18 57.8 +2.2
C19A Slack Wire Ran 119.13 40 PKiKP PKiKP 00 18 56.9 +1.3
baz=119,SNR=6.8
PLDF La Plantade 119.14 318 eP PKPdf 00 18 56.9 +1.3
NOQ North Oquirrh 119.14 48 ePKPdf PKPdf 00 18 57.8 +2.1
Y13A Salome 119.19 56 ⇑PKiKP PKiKP 00 18 58.0 +1.9
baz=119
T14A Hurricane 119.20 52 ⇑PKiKP PKiKP 00 18 58.3 +2.2
baz=119
TPAW Teton Pass 119.22 45 ePKPdf PKPdf 00 18 57.7 +1.9
ESK Eskdalemuir 119.25 330 PFAKE 00 19 10.0 +14
ESK LR LR
comp=Z,2μm,21.0s,MS5.6
U14A Mt Trumbull 119.25 53 ⇓PKiKP PKiKP 00 18 58.6 +2.4
baz=119
P15A Leamington 119.28 50 ⇓PKiKP PKiKP 00 18 58.0 +1.9
baz=119
LKWY Lake 119.28 44 PFAKE 00 19 10.0 +14
LKWY LR LR
comp=Z,1μm,22.0s,MS5.4
L16A Fish Haven 119.29 47 ⇑PKiKP PKiKP 00 18 57.4 +1.3
baz=119
MOOW Moose Ponds 119.29 45 ePKPdf PKPdf 00 18 57.5 +1.5
HWUT Hardware Ranch 119.30 47 ePKPdf PKPdf 00 18 57.1 +1.1
HWUT LR LR
comp=Z,1μm,19.0s,MS5.5
AHID Auburn Hatcher 119.32 46 PFAKE 00 19 10.0 +14
AHID LR LR
comp=Z,873nm,21.0s,MS5.4
F18A Big Timber 119.32 42 ⇓PKiKP PKiKP 00 18 57.5 +1.5
baz=119,SNR=12
REDW Red Top Meadow 119.33 45 ePKPdf PKPdf 00 18 57.7 +1.7
REDW eSKPdf 00 22 33.7
Q15A Fillmore 119.33 50 ⇓PKiKP PKiKP 00 18 58.5 +2.2
baz=119
NLU North Lily Min 119.34 49 ePKPdf PKPdf 00 18 57.3 +1.1
SNOW Snow King Moun 119.36 45 ePKPdf PKPdf 00 18 58.5 +2.3
GCMT Greycliff 119.39 42 ePKPdf PKPdf 00 18 57.2 +1.1
J17A Brown Place, J 119.42 45 ⇓PKiKP PKiKP 00 18 58.5 +2.3
baz=119
LOHW Long Hollow 119.43 45 ePKPdf PKPdf 00 18 58.0 +1.7
LOHW eSKPdf 00 22 33.2
AGO Saint Agoulin 119.43 318 eP PKPdf 00 18 57.4 +1.2
Z13A Yuma Proving G 119.43 57 ⇓PKiKP PKiKP 00 18 58.7 +2.0
baz=119
D19A Cripps Ranch, 119.44 40 ⇓PKiKP PKiKP 00 18 57.1 +0.9
baz=119,SNR=6.6
V14A Boquillas Ranc 119.46 54 ⇓PKiKP PKiKP 00 18 59.3 +2.7
baz=119
W14A Seligman 119.56 55 ⇑PKiKP PKiKP 00 18 59.4 +2.6
baz=120
MVU Marysvale 119.57 51 PFAKE 00 19 10.0 +13
MVU LR LR
comp=Z,941nm,22.0s,MS5.4
MSU Marysvale 119.60 51 ePKPdf PKPdf 00 18 58.8 +2.1
MSU Marysvale 119.60 51 ePKIKP PKPdf 00 18 58.8 +2.1
PYM Petit Puy Mans 119.61 318 eP PKPdf 00 18 58.0 +1.5
JLU Jordanelle 119.64 48 ePKPdf PKPdf 00 18 57.7 +0.9
MPU Maple Canyon 119.65 49 ePKPdf PKPdf 00 18 58.4 +1.6
E19A Rath Farm, Rou 119.74 41 ⇓PKiKP PKiKP 00 18 57.7 +0.9
baz=120,SNR=7.8
T15A Red Dirt Ranch 119.76 52 ⇓PKiKP PKiKP 00 18 59.2 +2.1
baz=120
C20A Veseth Ranch, 119.80 40 ⇓PKiKP PKiKP 00 18 57.9 +1.0
baz=120,SNR=8.0
F19A Roth Farm, Mol 119.85 42 ⇑PKiKP PKiKP 00 18 58.2 +1.2
baz=120,SNR=6.1
X14A Yava 119.85 55 ⇓PKiKP PKiKP 00 18 59.6 +2.2
baz=120
Y14A Wickenburg 119.85 56 ⇓PKiKP PKiKP 00 18 59.0 +1.6
baz=120
RLMT Red Lodge 119.87 43 ⇑PKiKP PKiKP 00 18 59.0 +1.9
baz=120
RLMT Red Lodge 119.87 43 ePKPdf PKPdf 00 18 59.0 +2.0
RLMT LR LR
comp=Z,842nm,22.0s,MS5.3
I18A Diamond G Ranc 119.94 44 ⇓PKiKP PKiKP 00 18 59.2 +1.9
baz=120
J18A Kendall Valley 119.95 45 ⇓PKiKP PKiKP 00 18 58.9 +1.5
baz=120
U15A North Rim 119.95 53 ⇑PKiKP PKiKP 00 19 00.1 +2.6
baz=120
VERF Verneugheol 119.96 318 eP PKPdf 00 18 58.4 +1.2
M17A Scullys Gap (B 119.98 47 ⇓PKiKP PKiKP 00 18 58.8 +1.3
baz=120
Z14A Wintersburg 119.99 57 ⇑PKiKP PKiKP 00 18 59.5 +1.8
baz=120
N17A Moffit Pass 120.01 48 ⇑PKiKP PKiKP 00 18 59.1 +1.6
baz=120
K18A Toltan Ranch, 120.10 46 ⇑PKiKP PKiKP 00 18 59.6 +1.9
baz=120
FFC Flin Flon 120.12 30 ePKPdf PKPdf 00 18 56.9 -0.3
FFC LR LR
comp=Z,1μm,22.0s,MS5.4
FFC Flin Flon 120.12 30 eiPKIKP PKPdf 00 18 58.5 +1.3
B21A Ellsworth Farm 120.14 38 ⇑PKiKP PKiKP 00 18 58.7 +1.2
baz=120
114A Black Gap (USA 120.15 57 ⇑PKiKP PKiKP 00 18 59.9 +1.9
baz=120
TMUT Trail Mountain 120.15 50 ePKPdf PKPdf 00 18 59.6 +1.9
V15A Kaibab Nationa 120.17 54 ⇓PKiKP PKiKP 00 19 00.4 +2.4
baz=120
R16A Teasdale 120.18 51 ⇑PKiKP PKiKP 00 19 00.1 +2.2
baz=120
H19A Powell 120.21 43 ⇓PKiKP PKiKP 00 18 59.8 +2.0
baz=120
S16A Weppner Ranch, 120.22 51 ⇑PKiKP PKiKP 00 18 59.8 +1.8
baz=120
Q16A Castle Valley 120.27 50 ⇓PKiKP PKiKP 00 19 00.3 +2.3
baz=120
O17A Robinson Place 120.27 48 ⇑PKiKP PKiKP 00 19 00.5 +2.4
baz=120
L18A Fontenelle, Gr 120.31 46 ⇑PKiKP PKiKP 00 19 00.3 +2.2
baz=120
C21A Desert Coulee 120.33 39 ⇓PKiKP PKiKP 00 18 59.2 +1.3
baz=120
214A Organ Pipe Nat 120.33 58 ⇑PKiKP PKiKP 00 19 00.1 +1.7
baz=120
X15A Humboldt 120.38 55 ⇓PKiKP PKiKP 00 18 60.0 +1.5
baz=120
Y15A Casa Rosa Ranc 120.39 56 ⇑PKiKP PKiKP 00 19 00.7 +2.2
baz=120
BW06 Boulder Array 120.41 45 ⇑PKiKP PKiKP 00 18 59.4 +1.1
baz=120,SNR=12
BW06 Boulder Array 120.41 45 PFAKE 00 19 10.0 +12
BW06 LR LR
comp=Z,852nm,19.0s,MS5.4
I19A Meeteetse 120.41 44 ⇓PKiKP PKiKP 00 19 00.2 +2.0
baz=120
PDAR Pinedale Array 120.41 45 PKP PKPdf 00 18 59.3 +1.1
comp=Z,5.4nm,0.7s,baz=228,slow=1.8,SNR=33
PDAR PKKPbc PKKPbc 00 29 06.8 +1.1
comp=Z,0.6nm,0.8s,baz=102,slow=5.0,SNR=4.0
TRIS Tristan da Cun 120.42 217 PFAKE 00 19 10.0 +12
TRIS LR LR
comp=Z,3μm,20.0s,MS5.9
P17A Butcher Ranch, 120.45 49 ⇑PKiKP PKiKP 00 19 00.1 +1.6
baz=120
G20A Bridger 120.54 42 ⇓PKiKP PKiKP 00 18 59.8 +1.4
baz=120,SNR=12
J19A Crowheart 120.61 45 ⇑PKiKP PKiKP 00 19 00.3 +1.7
baz=120,SNR=14
D21A La Casta Ranch 120.68 40 ⇑PKiKP PKiKP 00 18 59.8 +1.2
baz=120
115A Sonoran Desert 120.70 57 ⇓PKiKP PKiKP 00 19 00.9 +1.8
baz=121
SRU San Rafael 120.71 50 ⇑PKiKP PKiKP 00 19 00.4 +1.5
baz=121
SRU San Rafael 120.71 50 ePKPdf PKPdf 00 18 59.9 +1.0
SRU San Rafael 120.71 50 ePKIKP PKPdf 00 18 59.9 +1.1
R17A Hanksville Air 120.74 50 ⇓PKiKP PKiKP 00 19 01.1 +2.1
baz=121
L19A Farson 120.75 46 ⇓P PKPdf 00 19 00.5 +1.7
baz=121,SNR=9.3
P18A Preston Nutter 120.78 49 ⇑PKiKP PKiKP 00 19 00.5 +1.4
baz=121
O18A Roosevelt 120.79 48 ⇑PKiKP PKiKP 00 19 01.0 +1.9
baz=121
E21A Keefer Ranch, 120.82 41 ⇑PKiKP PKiKP 00 19 00.7 +1.8
baz=121
N18A Larsen Ranch, 120.84 47 ⇓PKiKP PKiKP 00 19 00.6 +1.5
baz=121
S17A Black Ridge (B 120.85 51 ⇓PKiKP PKiKP 00 19 01.0 +1.8
baz=121
K19A Absolon Red Bu 120.89 45 ⇓PKiKP PKiKP 00 19 00.3 +1.1
baz=121,SNR=16
U16A Tuba City 120.93 53 ⇓PKiKP PKiKP 00 19 01.9 +2.5
baz=121
H20A Greybull 120.93 43 PKiKP PKiKP 00 19 00.4 +1.2
baz=121,SNR=9.9
T17A Navajo Res., N 121.00 52 ⇑PKiKP PKiKP 00 19 01.9 +2.3
baz=121
Q18A Rafter H Ranch 121.00 50 ⇑PKiKP PKiKP 00 19 00.8 +1.3
baz=121
I20A Worland 121.03 44 ⇑PKiKP PKiKP 00 19 00.7 +1.3
baz=121,SNR=10
X16A Lo Mia Camp, P 121.03 55 ⇑PKiKP PKiKP 00 19 01.9 +2.2
baz=121
M19A Rock Springs 121.06 47 ⇑PKiKP PKiKP 00 19 01.2 +1.6
baz=121
C22A Vida 121.11 39 ⇓PKiKP PKiKP 00 19 00.7 +1.2
baz=121
116A Eloy 121.16 57 ⇑PKiKP PKiKP 00 19 02.0 +1.9
baz=121
D22A Cohagen 121.16 40 ⇓PKiKP PKiKP 00 19 01.3 +1.7
baz=121
U17A Shonto 121.20 53 ⇑PKiKP PKiKP 00 19 02.8 +2.8
baz=121
N19A John Jarvie Ra 121.23 47 ⇓PKiKP PKiKP 00 19 01.2 +1.3
baz=121
Z16A Peralta Trail, 121.25 56 ⇑PKiKP PKiKP 00 19 01.9 +1.7
baz=121
J20A Shoshoni 121.25 44 ⇓PKiKP PKiKP 00 19 01.2 +1.3
baz=121
K20A Yellowstone Ra 121.29 45 ⇓PKiKP PKiKP 00 19 01.0 +1.0
baz=121,SNR=7.0
LAO LASA Array 121.31 40 ⇓PKiKP PKiKP 00 19 02.1 +2.2
baz=121
LAO LASA Array 121.31 40 ePKPdf PKPdf 00 19 01.4 +1.6
LAO LR LR
comp=Z,907nm,21.0s,MS5.4
V17A Tonalea, Kykot 121.31 54 ⇓PKiKP PKiKP 00 19 02.4 +2.1
baz=121
R18A Canyonlands Na 121.37 50 ⇑PKiKP PKiKP 00 19 01.8 +1.5
baz=121
O19A Miners Draw (B 121.43 48 ⇑PKiKP PKiKP 00 19 01.8 +1.5
baz=121,SNR=9.3
216A Three Points, 121.46 58 ⇓PKiKP PKiKP 00 19 02.7 +2.0
baz=121
S18A Hurst Farm, Bl 121.46 51 ⇓PKiKP PKiKP 00 19 02.1 +1.7
baz=121
W17A Winslow 121.49 54 ⇓PKiKP PKiKP 00 19 03.0 +2.3
baz=121
L20A Wamsutter 121.50 46 ⇑PKiKP PKiKP 00 19 02.1 +1.7
baz=121,SNR=7.7
C23A Lambert 121.52 39 ⇑PKiKP PKiKP 00 19 02.0 +1.7
baz=121
H21A Big Horn, Sher 121.53 43 ⇑PKiKP PKiKP 00 19 01.4 +1.0
baz=121
X17A Forest Lakes 121.57 55 ⇓PKiKP PKiKP 00 19 03.2 +2.4
baz=122
I21A Big Trails, Te 121.64 44 PKiKP PKiKP 00 19 01.6 +0.9
baz=122,SNR=12
Y17A Roosevelt 121.66 56 ⇑PKiKP PKiKP 00 19 02.8 +1.8
baz=122
T18A Mexican Hat 121.69 52 ⇑PKiKP PKiKP 00 19 02.7 +1.8
baz=122
J21A Lysite 121.69 44 ⇑PKiKP PKiKP 00 19 02.2 +1.4
baz=122
Q19A Hogan Spring (121.70 50 PKiKP PKiKP 00 19 02.6 +1.7
baz=122,SNR=16
A24A Westby 121.76 37 ⇑PKiKP PKiKP 00 19 01.8 +1.1
baz=122
M20A Sweetwater, Wa 121.76 46 ⇓PKiKP PKiKP 00 19 02.8 +1.8
baz=122,SNR=5.2
DGMT Dagmar 121.84 38 ⇑PKiKP PKiKP 00 19 01.6 +0.7
baz=122
DGMT Dagmar 121.84 38 ePKPdf PKPdf 00 19 01.3 +0.5
DGMT LR LR
comp=Z,1μm,21.0s,MS5.5
SFJD Kangerlussuaq 121.89 359 PFAKE 00 19 10.0 +10
SFJD LR LR
comp=Z,1μm,22.0s,MS5.5
N20A Spence Gulch, 121.91 47 ⇑PKiKP PKiKP 00 19 03.2 +2.0
baz=122,SNR=23
117A Oracle 121.96 57 ⇑PKiKP PKiKP 00 19 03.5 +1.9
baz=122
TUC Tucson 121.97 57 ePKPdf PKPdf 00 19 03.1 +1.6
TUC LR LR
comp=Z,1μm,22.0s,MS5.5
TUC Tucson 121.97 57 ePKIKP PKPdf 00 19 03.1 +1.6
TUC MLR MLR
comp=Z,1μm,22.0s,MS5.5
V18A Ganado 121.97 53 ⇓PKiKP PKiKP 00 19 04.2 +2.6
baz=122
217A Green Valley 122.03 58 PKiKP PKiKP 00 19 03.9 +2.1
baz=122,SNR=9.1
K21A Alcova 122.06 45 ⇑PKiKP PKiKP 00 19 02.7 +1.2
baz=122,SNR=16
PV04 Paradox Valley 122.12 50 ePKPdf PKPdf 00 19 03.1 +1.5
O20A White River Ci 122.13 48 ⇑PKiKP PKiKP 00 19 03.7 +2.0
baz=122,SNR=23
TAM Tamanrasset 122.19 291 ePKPdf PKPdf 00 19 04.2 +2.1
TAM LR LR
comp=Z,943nm,20.0s,MS5.4
TAM Tamanrasset 122.19 291 ePKIKP PKPdf 00 19 04.2 +2.0
TAM MLR MLR
comp=Z,943nm,20.0s,MS5.4
L21A Rawlins 122.20 46 ⇑PKiKP PKiKP 00 19 03.1 +1.4
baz=122,SNR=10
P20A De Beque 122.20 49 PKiKP PKiKP 00 19 03.5 +1.6
baz=122,SNR=23
Y18A Canyon Day Jun 122.31 56 PKiKP PKiKP 00 19 04.5 +2.2
baz=122,SNR=6.6
M21A Separation Pea 122.31 46 PKiKP PKiKP 00 19 03.0 +1.0
baz=122,SNR=13
J22A Midwest 122.33 44 PKiKP PKiKP 00 19 02.4 +0.4
baz=122,SNR=39
RWWY Rawlins 122.40 46 ePKPdf PKPdf 00 19 03.3 +1.2
Q20A Ridgley Place, 122.42 49 ⇑PKiKP PKiKP 00 19 04.5 +2.2
baz=122,SNR=17
PV01 Paradox Valley 122.44 50 ePKPdf PKPdf 00 19 04.1 +1.9
N21A Black Mountain 122.47 47 ⇓PKiKP PKiKP 00 19 04.3 +1.9
baz=122,SNR=17
K22A Casper 122.56 45 ⇑PKiKP PKiKP 00 19 02.9 +0.4
baz=122,SNR=11
R20A Redvale 122.57 50 ⇓PKiKP PKiKP 00 19 04.7 +2.0
baz=122,SNR=16
118A Homack Ranch, 122.58 57 ⇓PKiKP PKiKP 00 19 04.7 +1.8
baz=122,SNR=7.2
O21A Pagoda 122.67 48 ⇓PKiKP PKiKP 00 19 04.6 +1.8
baz=122,SNR=6.9
S20A Disappointment 122.68 51 ⇑PKiKP PKiKP 00 19 04.9 +2.0
baz=123,SNR=16
X19A St. Johns 122.77 55 ⇑PKiKP PKiKP 00 19 05.2 +2.1
baz=123,SNR=5.9
318A Bisbee 122.79 58 PKiKP PKiKP 00 19 05.0 +1.7
baz=123,SNR=9.5
Y19A Nutrioso 122.90 55 ⇑PKiKP PKiKP 00 19 05.6 +2.2
baz=123,SNR=10.0
U20A Newcomb 122.93 52 ⇑PKiKP PKiKP 00 19 05.3 +1.9
baz=123
Q21A Lamborn Mesa, 123.00 49 ⇓PKiKP PKiKP 00 19 05.9 +2.4
baz=123,SNR=12
Z19A T-Link Ranch, 123.03 56 ⇑PKiKP PKiKP 00 19 06.0 +2.3
baz=123
119A Ashpeak Ranch, 123.11 57 ⇓PKiKP PKiKP 00 19 05.9 +2.0
baz=123
V20A Brimhall 123.11 53 ⇓PKiKP PKiKP 00 19 04.6 +0.8
baz=123
R21A Cimarron 123.15 50 ⇓PKiKP PKiKP 00 19 06.0 +2.3
baz=123,SNR=10
S21A Coal Bank Pass 123.16 51 PKiKP PKiKP 00 19 06.3 +2.4
baz=123,SNR=45
N22A Wattenberg Ran 123.22 47 ⇓PKiKP PKiKP 00 19 05.7 +1.9
baz=123,SNR=10
W20A Ramah 123.25 54 ⇑PKiKP PKiKP 00 19 06.0 +2.0
baz=123,SNR=10
219A White Tail Can 123.30 58 ⇓PKiKP PKiKP 00 19 06.0 +1.7
baz=123,SNR=13
SMCO Snowmass 123.34 49 PKPdf PKPdf 00 19 06.0 +2.1
O22A Kremmling 123.36 47 ⇑PKiKP PKiKP 00 19 05.3 +1.1
baz=123,SNR=6.6
P22A Eagle 123.38 48 ⇓PKiKP PKiKP 00 19 06.4 +2.2
baz=123,SNR=12
X20A Quemado 123.38 54 ⇑PKiKP PKiKP 00 19 06.6 +2.2

baz=123,SNR=6.1
319A Douglas 123.40 58 ⇓PKiKP PKiKP 00 19 06.5 +2.0
baz=123,SNR=11
Q22A Crested Butte, 123.49 49 ⇓PKiKP PKiKP 00 19 06.8 +2.4
baz=123,SNR=17
M23A Laramie 123.53 46 ⇓PKiKP PKiKP 00 19 06.0 +1.6
baz=123
T21A Navajo Lake 123.54 51 ⇑PKiKP PKiKP 00 19 07.0 +2.4
baz=123,SNR=7.6
N23A Red Feather La 123.56 46 ⇑PKiKP PKiKP 00 19 06.1 +1.6
baz=123,SNR=7.0
U21A Nageezi 123.59 52 PKiKP PKiKP 00 19 06.8 +2.0
baz=124,SNR=23
Z20A Nine Sixteen R 123.62 56 ⇓PKiKP PKiKP 00 19 07.0 +2.2
baz=124,SNR=11
120A U Bar Ranch, L 123.71 57 PKiKP PKiKP 00 19 07.3 +2.2
baz=124,SNR=11
RSSD Black Hills 123.72 42 *e*PKPdf PKPdf 00 19 05.3 +0.8
RSSD LR LR
comp=Z,627nm,20.0s,MS5.3
RSSD Black Hills 123.72 42 *e*PKIKP PKPdf 00 19 05.3 +0.8
RSSD MLR MLR
comp=Z,627nm,20.0s,MS5.3
PHWY Pilot Hill 123.77 46 PKPdf PKPdf 00 19 05.6 +0.9
R22A Saguache, Gunn 123.79 50 ⇑PKiKP PKiKP 00 19 07.8 +2.8
baz=124,SNR=12
O23A Lake Granby, G 123.80 47 ⇓PKiKP PKiKP 00 19 07.0 +2.0
baz=124,SNR=8.0
S22A 4UR Ranch, Cre 123.87 50 ⇑PKiKP PKiKP 00 19 07.7 +2.5
baz=124,SNR=27
220A Playas Peak, P 123.92 57 ⇓PKiKP PKiKP 00 19 07.7 +2.2
baz=124,SNR=12
X21A Alamocita Cree 123.98 54 ⇓PKiKP PKiKP 00 19 07.8 +2.3
baz=124,SNR=18
T22A Edith 124.02 51 ⇑PKiKP PKiKP 00 19 07.9 +2.3
baz=124,SNR=13
320A Kipp Ranch, An 124.03 58 PKiKP PKiKP 00 19 07.7 +1.9
baz=124,SNR=18
P23A Jefferson 124.12 48 ⇑PKiKP PKiKP 00 19 08.1 +2.4
baz=124
ISCO Idaho Springs 124.15 48 ⇓PKiKP PKiKP 00 19 07.3 +1.6
baz=124,SNR=13
ISCO Idaho Springs 124.15 48 PKPdf PKPdf 00 19 07.0 +1.5
ISCO LR LR
comp=Z,904nm,19.0s,MS5.5
ISCO Idaho Springs 124.15 48 PKIKP PKPdf 00 19 07.0 +1.6
ISCO MLR MLR
comp=Z,904nm,19.0s,MS5.5
Y21A Point of Rocks 124.17 55 PKiKP PKiKP 00 19 08.5 +2.6
baz=124,SNR=7.0
U22A Llaves 124.23 52 ⇑PKiKP PKiKP 00 19 08.5 +2.6
baz=124,SNR=18
Q23A Hartsel 124.27 49 PKiKP PKiKP 00 19 08.2 +2.2
baz=124,SNR=20
V22A San Miguel Ran 124.31 52 PKiKP PKiKP 00 19 08.4 +2.2
baz=124,SNR=17
Z21A St. Cloud Mine 124.33 56 ⇑PKiKP PKiKP 00 19 08.4 +2.1
baz=124,SNR=6.3
121A Cookes Peak, D 124.41 57 PKiKP PKiKP 00 19 08.7 +2.2
baz=124,SNR=14
LAZ Ladron 124.51 54 *e*PKPdf PKPdf 00 19 08.7 +2.4
X22A Bernardo 124.59 54 ⇑PKiKP PKiKP 00 19 09.5 +2.7
baz=124
T23A Casias Ranch, 124.68 51 ⇑PKiKP PKiKP 00 19 09.2 +2.3
baz=125,SNR=8.9
LENM Lemitar 124.70 54 PKPdf PKPdf 00 19 08.7 +2.0
U23A El Rito 124.76 52 ⇑PKiKP PKiKP 00 19 09.6 +2.6
baz=125,SNR=12
Y22A Socorro 124.76 55 ⇓PKiKP PKiKP 00 19 09.1 +2.0
baz=125,SNR=9.1
SDCO Great Sand Dun 124.88 50 ⇑PKiKP PKiKP 00 19 08.9 +1.7
baz=125
SDCO Great Sand Dun 124.88 50 PKPdf PKPdf 00 19 08.6 +1.7
SDCO LR LR
comp=Z,932nm,20.0s,MS5.5
ANMO Albuquerque 124.91 53 PKP PKPdf 00 19 09.0 +2.0
comp=Z,8.9nm,0.9s,baz=205,slow=2.2,SNR=23
ANMO Albuquerque 124.91 53 PKPdf PKPdf 00 19 09.2 +2.1
ANMO LR LR
comp=Z,1μm,20.0s,MS5.6
ANMO Albuquerque 124.91 53 PKIKP PKPdf 00 19 09.2 +2.2
ANMO MLR MLR
comp=Z,1μm,20.0s
V23A Ortiz Mt. (NFS 124.92 52 PKiKP PKiKP 00 19 10.4 +3.0
baz=125,SNR=14
Z22A Elephant Butte 124.92 56 PKiKP PKiKP 00 19 09.4 +2.0
baz=125,SNR=12
LPM Los Pinos Moun 124.94 54 PKPdf PKPdf 00 19 09.2 +2.1
BNM Barren Site 124.98 54 PKPdf PKPdf 00 19 09.2 +2.0
122A Conniff Cattle 125.02 56 ⇓PKiKP PKiKP 00 19 10.2 +2.6
baz=125
R24A Sanders Place, 125.02 49 ⇓PKiKP PKiKP 00 19 09.4 +1.9
baz=125
222A Williams Famil 125.07 57 ⇑PKiKP PKiKP 00 19 09.7 +1.9
baz=125
W23A Werner Place, 125.10 53 ⇑PKiKP PKiKP 00 19 09.9 +2.2
baz=125,SNR=5.8
S24A Houchin Ranch, 125.13 50 ⇑PKiKP PKiKP 00 19 10.2 +2.5
baz=125
O25A Wiggins 125.13 47 ⇑PKiKP PKiKP 00 19 09.3 +1.6
baz=125
X23A Hourglass Bar 125.22 54 ⇓PKiKP PKiKP 00 19 09.8 +1.8
baz=125
P25A Willow Gulch B 125.30 47 ⇓PKiKP PKiKP 00 19 10.1 +2.1
baz=125
T24A Torres, Weston 125.42 51 ⇑PKiKP PKiKP 00 19 10.7 +2.4
baz=125
Q25A Bedland, Calha 125.44 48 ⇓PKiKP PKiKP 00 19 09.6 +1.3
baz=125
Y23A Lovelace Mesa, 125.50 55 ⇑PKiKP PKiKP 00 19 10.5 +2.0
baz=125
Z23A Rita Site, Whi 125.52 55 ⇓PKiKP PKiKP 00 19 11.1 +2.5
baz=125
V24A Rampart Ranch, 125.64 52 ⇓PKiKP PKiKP 00 19 11.5 +2.7
baz=126
R25A Fountain Ranch 125.67 49 ⇓PKiKP PKiKP 00 19 10.2 +1.5
baz=126
W24A Lazy 6 Ranch, 125.68 53 ⇑PKiKP PKiKP 00 19 10.9 +2.0
baz=126
ULM Lac du Bonnet 125.68 32 PKP PKPdf 00 19 08.2 +0.2
comp=Z,8.6nm,0.8s,baz=133,slow=1.2,SNR=6.2
ULM Lac du Bonnet 125.68 32 PKPdf PKPdf 00 19 08.3 +0.3
ULM LR LR
comp=Z,827nm,19.0s,MS5.4
S25A Robets Cordova 125.71 50 ⇑PKiKP PKiKP 00 19 10.8 +1.9
baz=126
X24A Lazy VL Ranch, 125.83 54 ⇑PKiKP PKiKP 00 19 10.7 +1.5
baz=126
T25A Trinidad 125.89 50 ⇑PKiKP PKiKP 00 19 11.1 +1.8
baz=126
Y24A Capitan 126.00 54 ⇑PKiKP PKiKP 00 19 11.3 +1.7
baz=126
U25A Circle Dot Ran 126.11 51 ⇓PKiKP PKiKP 00 19 11.5 +1.7
baz=126
V25A Rancho No Teng 126.12 52 ⇓PKiKP PKiKP 00 19 11.7 +1.9
baz=126
Z24A Sheeppen Canyo 126.20 55 ⇑PKiKP PKiKP 00 19 12.0 +2.0
baz=126
124A Stringfield Ra 126.29 56 ⇑PKiKP PKiKP 00 19 12.1 +2.0
baz=126
OGNE Ogallala 126.31 45 PFAKE 00 19 20.0 +10
OGNE LR LR
comp=Z,825nm,20.0s,MS5.4
224A Cornudas Mount 126.38 57 ⇑PKiKP PKiKP 00 19 12.1 +1.7
baz=126
W25A X Bar L Ranch, 126.42 53 ⇓PKiKP PKiKP 00 19 12.3 +1.9
baz=126
ESDC Sonseca Array 126.54 313 PKP PKPdf 00 19 11.4 +1.4
comp=Z,6.7nm,1.0s,baz=25,slow=2.6,SNR=27
ESDC PP PP 00 21 03.1 -2.9
comp=Z,1.9nm,0.8s,baz=63,slow=6.4,SNR=4.4
ESLA Sonseca Array 126.54 313 PKPdf PKPdf 00 19 11.5 +1.5
ESLA LR LR
comp=Z,3μm,20.0s,MS6.0
324A Moseley Ranch, 126.56 57 ⇓PKiKP PKiKP 00 19 12.3 +1.6
baz=126
MNTX Cornudas Mount 126.58 57 ⇓PKiKP PKiKP 00 19 12.1 +1.3
baz=126
MNTX Cornudas Mount 126.58 57 PKPdf PKPdf 00 19 12.2 +1.8
MNTX LR LR
comp=Z,728nm,19.0s,MS5.4
Y25A Mesa, Roswell 126.59 54 ⇓PKiKP PKiKP 00 19 12.4 +1.6
baz=126
U26A Atchley Ranch, 126.63 51 ⇑PKiKP PKiKP 00 19 12.4 +1.6
baz=126
Z25A Roswell 126.74 55 ⇑PKiKP PKiKP 00 19 13.1 +2.0
baz=127
AGMN Agassiz Nation 126.78 34 PFAKE 00 19 20.0 +10
AGMN LR LR
comp=Z,1μm,21.0s,MS5.5
V26A Tequesquite Ra 126.78 52 ⇑PKiKP PKiKP 00 19 12.3 +1.2
baz=127
PAB San Pablo 126.86 313 PKPdf PKPdf 00 19 12.1 +1.4
PAB LR LR
comp=Z,700nm,21.0s,MS5.3
PAB San Pablo 126.86 313 PKIKP PKPdf 00 19 12.1 +1.5
PAB MLR MLR
comp=Z,700nm,21.0s,MS5.3
125A Gardner Draw, 126.95 56 ⇑PKiKP PKiKP 00 19 13.3 +1.8
baz=127
225A Deer Hill, Car 126.95 56 ⇓PKiKP PKiKP 00 19 13.7 +2.1
baz=127
SHEL Horse Pasture 126.98 242 PFAKE 00 19 20.0 +8.5
SHEL LR LR
comp=Z,2μm,20.0s,MS5.8
325A Bean Ranch, Si 127.00 57 ⇑PKiKP PKiKP 00 19 13.2 +1.5
baz=127
X26A CR and CF Fran 127.12 53 ⇑PKiKP PKiKP 00 19 13.2 +1.4
baz=127
425A Indio Mountain 127.12 58 ⇓PKiKP PKiKP 00 19 13.3 +1.4
baz=127
Z26A Caprock 127.34 55 ⇓PKiKP PKiKP 00 19 13.4 +1.2
baz=127
126A Clayton Basin, 127.47 56 ⇓PKiKP PKiKP 00 19 13.7 +1.2
baz=127
226A Malaga, Loving 127.55 56 ⇑PKiKP PKiKP 00 19 13.7 +1.0
baz=127
W27A Bowe Ranch, En 127.56 52 ⇓PKiKP PKiKP 00 19 14.2 +1.6
baz=127
Y27A Causey 127.83 54 ⇓PKiKP PKiKP 00 19 14.6 +1.4
baz=128
326A Caldwell Ranch 127.84 57 ⇓PKiKP PKiKP 00 19 14.6 +1.3
baz=128
Z27A Tatum 127.94 54 ⇓PKiKP PKiKP 00 19 15.1 +1.6
baz=128
426A McDonald Obser 127.95 58 ⇑PKiKP PKiKP 00 19 14.8 +1.3
baz=128
526A Mary Lane Ranc 128.04 59 ⇑PKiKP PKiKP 00 19 15.3 +1.6
baz=128
MVO Moncorvo 128.10 316 *e*PKPdf PKPdf 00 19 15.1 +2.1
MVO *e*SKP 00 22 27.8
MVO A 01 25 47.1
comp=Z,630nm,22.0s
MSTX Muleshoe 128.11 54 ⇓PKiKP PKiKP 00 19 15.2 +1.4
baz=128
626A Big Bend Ranch 128.12 59 ⇑PKiKP PKiKP 00 19 15.0 +1.1
baz=128
PLCA Paso Flores 128.14 163 PKP PKPdf 00 19 15.2 +2.0
comp=Z,8.6nm,1.0s,baz=159,slow=3.4,SNR=9.8
PLCA Paso Flores 128.14 163 PKPdf PKPdf 00 19 15.0 +1.9
PLCA LR LR
comp=Z,2μm,20.0s,MS5.9
PLCA Paso Flores 128.14 163 PKIKP PKPdf 00 19 15.2 +2.1
PLCA pmax pmax
comp=Z,9.0nm,1.0s
527A Woodward Ranch 128.42 58 ⇑PKiKP PKiKP 00 19 16.0 +1.5
baz=128
427A Hayter Ranch, 128.43 58 ⇓PKiKP PKiKP 00 19 15.7 +1.2
baz=128
PVRL Vila Real 128.52 317 *e*PKPdf PKPdf 00 19 16.4 +2.6
PCAB Cabril 128.54 317 *e*PKPdf PKPdf 00 19 16.3 +2.5
TXAR Lajitas Array 128.56 59 PKhKP PKPpre 00 19 07.5
comp=Z,0.8nm,1.0s,baz=205,slow=2.4,SNR=4.3
TXAR PKP PKPdf 00 19 15.2 +1.0
comp=Z,3.9nm,0.9s,baz=201,slow=1.1,SNR=20
TXAR PP PP 00 21 24.1 +4.2
comp=Z,3.6nm,1.1s,baz=289,slow=3.8,SNR=3.4
TXAR SKPbc 00 22 38.0
comp=Z,6.0nm,1.0s,baz=270,slow=2.5,SNR=7.5
TXAR Lajitas Array 128.56 59 *i* PKIKP PKPpre 00 19 07.5
TXAR 00 19 15.2
TXAR 00 21 24.1
TXAR pmax pmax
comp=Z,1.0nm,1.0s
TXAR pmax pmax
comp=Z,4.0nm,0.9s
TXAR pmax pmax
comp=Z,4.0nm,1.1s
TXAR pmax pmax
comp=N,6.0nm,1.0s
AMTX Amarillo 128.69 52 ⇑PKiKP PKiKP 00 19 15.9 +0.9
baz=129
AMTX Amarillo 128.69 52 PKPdf PKPdf 00 19 16.2 +1.9
AMTX LR LR
comp=Z,1μm,20.0s,MS5.6
ECSD EROS Data Cent 128.70 40 PKPdf PKPdf 00 19 14.6 +0.6
ECSD LR LR
comp=Z,951nm,20.0s,MS5.5
CBKS Cedar Bluff 128.76 47 PKPdf PKPdf 00 19 15.8 +1.6
CBKS LR LR
comp=Z,1μm,20.0s,MS5.5
CBKS Cedar Bluff 128.76 47 PKIKP PKPdf 00 19 15.9 +1.6
CBKS MLR MLR
comp=Z,1μm,20.0s,MS5.5
627A Terlingua Ranc 128.77 59 ⇑PKiKP PKiKP 00 19 16.2 +1.0
baz=129
MTE Manteigas 128.78 316 *e*PKPdf PKPdf 00 19 15.1 +0.8
MTE *e*SKP 00 22 39.6
MTE A 01 27 49.2
comp=Z,772nm,18.0s
MTE Manteigas 128.78 316 PFAKE 00 19 30.0 +16
MTE LR LR
comp=Z,1μm,20.0s,MS5.6
PVIS Viseu 128.89 316 *e*PKPdf PKPdf 00 19 16.5 +2.0
PCBR Castelo Branco 128.97 315 *e*PKPdf PKPdf 00 19 16.5 +1.9
428A Kincaid Ranch, 129.06 58 ⇓PKiKP PKiKP 00 19 17.3 +1.6
baz=129
PMRV Marv??o 129.08 314 *e*PKPdf PKPdf 00 19 16.7 +1.8
PMRV *e*SKP 00 22 36.3
PMRV A 01 28 02.2
comp=Z,596nm,20.0s
528A Cox Ranch, San 129.11 58 ⇓PKiKP PKiKP 00 19 17.3 +1.4
baz=129
628A Black Gap, Mar 129.19 59 ⇑PKiKP PKiKP 00 19 17.2 +1.1
baz=129
PBAR Barrancos 129.32 313 *e*PKPdf PKPdf 00 19 17.2 +1.8
PBAR Barrancos 129.32 313 *e*PP PP 00 21 25.6 +1.2
PBAR *e*SKP 00 22 41.4
PBAR A 01 29 06.0
comp=Z,744nm,18.0s
SFS San Fernando 129.34 310 PFAKE 00 19 30.0 +15
SFS LR LR
comp=Z,2μm,22.0s,MS5.7
EYMN Ely 129.36 33 PKPdf PKPdf 00 19 15.8 +0.6
EYMN LR LR
comp=Z,1μm,20.0s,MS5.7
PESTR Estremoz 129.45 314 *e*PKPdf PKPdf 00 19 17.1 +1.5
PESTR *e*SKP 00 22 39.1
PESTR A 01 21 59.9
comp=Z,672nm,20.0s
EVO Evora 129.88 314 *e*PKPdf PKPdf 00 19 19.3 +2.9
PBEJ Beja 129.98 313 *e*PKPdf PKPdf 00 19 19.7 +3.1
PVAQ Vaqueiros 130.12 312 *e*SKP 00 22 43.1
PVAQ A 01 29 45.2
comp=Z,732nm,20.0s
PCVE Castro Verde 130.26 312 *e*PKPdf PKPdf 00 19 19.3 +2.1
PCVE *e*SKP 00 22 46.9
PCVE A 01 33 19.5
comp=Z,708nm,20.0s
PBDV Barranco-do-Ve 130.34 312 *e*PKPdf PKPdf 00 19 20.6 +3.3
PBDV *e*SKP 00 22 47.3
PBDV A 01 26 35.5
comp=Z,539nm,20.0s
PMAFR Mafra 130.61 315 *e*SKP SKPdf 00 22 48.5 -2.3
PMAFR A 01 32 34.6
comp=Z,647nm,20.0s
MORF Marmelete 130.84 312 *e*SKP SKPdf 00 22 48.5 -2.8
MORF A 01 29 10.6
comp=Z,569nm,16.0s
KSU1 Kansas State U 130.86 45 PKPdf PKPdf 00 19 18.9 +0.6
KSU1 LR LR
comp=Z,1μm,22.0s,MS5.5
WMOK Wichita Mounta 130.99 51 PKPdf PKPdf 00 19 19.7 +1.0
WMOK LR LR
comp=Z,1μm,21.0s,MS5.5
WMOK Wichita Mounta 130.99 51 PKIKP PKPdf 00 19 19.7 +1.1
WMOK MLR MLR
comp=Z,1μm,21.0s,MS5.5
PFVI Vila Bisbo 131.04 312 *e*SKP 00 22 49.5
PFVI A 01 26 55.7
comp=Z,608nm,20.0s
JCT Junction City 131.52 57 ⇓PKiKP PKiKP 00 19 21.2 +0.5
baz=131
JCT Junction City 131.52 57 PKPdf PKPdf 00 19 21.0 +1.2
JCT LR LR
comp=Z,1μm,22.0s,MS5.6
JCT Junction City 131.52 57 PKIKP PKPdf 00 19 21.0 +1.2
JCT MLR MLR
comp=Z,1μm,22.0s,MS5.6
SCIA State Center 131.78 40 PFAKE 00 19 30.0 +10
SCIA LR LR
comp=Z,1μm,22.0s,MS5.5
KIC Kosan Boka 131.96 271 *e*PKP1 PKPdf 00 19 22.2 +1.1
comp=Z,43nm,0.9s
DBIC Dimbokro 132.10 271 PKP PKPdf 00 19 22.9 +1.5
comp=Z,16nm,0.8s,baz=83,slow=2.6,SNR=16
DBIC SKPbc SKPbc 00 22 49.0 +3.5
comp=Z,15nm,1.1s,baz=140,slow=19,SNR=8.2
DBIC Dimbokro 132.10 271 PKPdf PKPdf 00 19 22.7 +1.4
DBIC LR LR
comp=Z,1μm,20.0s,MS5.7
DBIC Dimbokro 132.10 271 PKIKP PKPdf 00 19 22.9 +1.6
DBIC pmax pmax
comp=Z,16nm,0.8s
DBIC pmax pmax
comp=N,15nm,1.1s
LIC Lamto 132.22 270 *e*PKP1 PKPdf 00 19 23.4 +1.8
comp=N,92nm,1.2s
TIC Toumodi 132.26 271 *e*PKP1 PKPdf 00 19 22.7 +1.1
comp=N,100nm,1.2s
TIC Toumodi 132.26 271 *e*PKIKP PKPdf 00 19 22.7 +1.1
SCHQ Schefferville 132.85 11 PKP PKPdf 00 19 23.6 +2.1
comp=N,5.1nm,0.5s,baz=214,slow=14,SNR=6.7
SCHQ SKPbc SKPbc 00 22 48.6 +1.9
comp=N,22nm,1.0s,baz=7.7,slow=2.6,SNR=10
SCHQ Schefferville 132.85 11 PKP PKPdf 00 19 23.6 +2.1
SCHQ SKPbc SKPbc 00 22 48.6 +1.9
SCHQ LR LR
comp=Z,1μm,21.0s,MS5.6
JFWS Jewell Farm 133.06 37 PKPdf PKPdf 00 19 22.4 +0.1
JFWS LR LR
comp=Z,946nm,20.0s,MS5.5
JFWS Jewell Farm 133.06 37 PKIKP PKPdf 00 19 22.4 +0.1
JFWS MLR MLR
comp=Z,946nm,20.0s,MS5.5
KVTX Kingsville 133.92 60 PFAKE 00 19 40.0 +16
KVTX LR LR
comp=Z,942nm,19.0s,MS5.5
HDIL Hopedale 135.00 39 PFAKE 00 19 40.0 +14
HDIL LR LR
comp=Z,958nm,21.0s,MS5.5
MIAR Mount Ida 135.02 49 PKPdf PKPdf 00 19 28.2 +1.9
MIAR LR LR
comp=Z,1μm,20.0s,MS5.6
MIAR Mount Ida 135.02 49 PKIKP PKPdf 00 19 28.2 +2.0
MIAR MLR MLR
comp=Z,1μm,20.0s,MS5.6
CCM Cathedral Cave 135.06 44 PKPdf PKPdf 00 19 27.1 +0.9
CCM LR LR
comp=Z,692nm,19.0s,MS5.4
CCM Cathedral Cave 135.06 44 PKIKP PKPdf 00 19 27.1 +0.9
CCM MLR MLR
comp=Z,692nm,19.0s,MS5.4
FVM French Village 135.65 43 PKPdf PKPdf 00 19 28.2 +0.9
FVM French Village 135.65 43 PKIKP PKPdf 00 19 28.2 +0.9
UALR University of 135.84 48 PKPdf PKPdf 00 19 28.8 +1.0
OLIL Olney 136.79 41 PKPdf PKPdf 00 19 28.9 -0.5
PARMO Parma 136.79 44 *e*PKPdf PKPdf 00 19 30.4 +1.0
GNAR Gosnell 136.96 45 *e*PKPdf PKPdf 00 19 30.6 +0.7
AAM Ann Arbor 137.24 34 PFAKE 00 19 40.0 +10
AAM LR LR
comp=Z,1μm,22.0s,MS5.6
GLAT Glass 137.31 45 PKPdf PKPdf 00 19 32.0 +1.5
BLO Bloomington 137.54 39 PKPdf PKPdf 00 19 31.8 +1.0
BLO Bloomington 137.54 39 PKIKP PKPdf 00 19 31.8 +1.0
OXF Oxford 138.10 47 PKPdf PKPdf 00 19 32.9 +0.9
OXF LR LR
comp=Z,1μm,22.0s,MS5.6
OXF Oxford 138.10 47 PKIKP PKPdf 00 19 32.9 +0.9
OXF MLR MLR
comp=Z,1μm,22.0s,MS5.6
WCI Wyandotte Cave 138.24 40 PKPdf PKPdf 00 19 34.6 +2.5
WCI LR LR
comp=Z,1μm,22.0s,MS5.5
WCI Wyandotte Cave 138.24 40 PKIKP PKPdf 00 19 34.6 +2.5
WCI MLR MLR
comp=Z,1μm,22.0s,MS5.5
VBMS Vicksburg 138.33 51 PFAKE 00 19 40.0 +7.6
VBMS LR LR
comp=Z,1μm,20.0s,MS5.7
WVT Waverly 138.39 44 PKPdf PKPdf 00 19 32.8 +0.3
WVT LR LR
comp=Z,773nm,20.0s,MS5.4
WVT Waverly 138.39 44 PKIKP PKPdf 00 19 32.8 +0.4
WVT MLR MLR
comp=Z,773nm,20.0s,MS5.4
LCO Las Campanas 138.75 156 PKPdf PKPdf 00 19 32.8 -0.5
LCO LR LR
comp=Z,2μm,19.0s,MS5.8
ACSO Alum Creek Sta 139.00 35 PKPdf PKPdf 00 19 34.1 +0.7
ACSO LR LR
comp=Z,1μm,20.0s,MS5.6
ERPA Erie 139.30 31 PFAKE 00 19 40.0 +6.1
ERPA LR LR
comp=Z,789nm,20.0s,MS5.5
MSNY Massena 139.38 24 PKPdf PKPdf 00 19 32.3 -1.7
LONY Lake Ozonia 139.81 24 *e*PKPdf PKPdf 00 19 30.0 -4.8
LONY LR LR
comp=Z,877nm,21.0s,MS5.5
SWET Sewanee 140.18 44 PKPdf PKPdf 00 19 37.8 +2.1
NCB Newcomb 140.49 24 PKPdf PKPdf 00 19 36.7 +0.7
NCB LR LR
comp=Z,910nm,20.0s,MS5.5
LRAL Lakeview Retre 140.57 47 PFAKE 00 19 50.0 +13
LRAL LR LR
comp=Z,1μm,20.0s,MS5.6
CPCT Cooper Cave 141.01 42 *e*PKPdf PKPdf 00 19 37.5 +0.2
PKME Peaks-Kenny Pk 141.13 18 PFAKE 00 19 50.0 +13
PKME LR LR
comp=Z,1μm,22.0s,MS5.6
LBNH Lisbon 141.15 22 PFAKE 00 19 50.0 +13
LBNH LR LR
comp=Z,1μm,20.0s,MS5.7
MCWV Mont Chateau 141.15 34 PKPdf PKPdf 00 19 31.0 -6.3
MCWV LR LR
comp=Z,1μm,20.0s,MS5.6
BINY Binghamton 141.17 27 PFAKE 00 19 50.0 +13
BINY LR LR
comp=Z,1μm,21.0s,MS5.7
TKL Tuckaleechee C 141.38 42 *e*PKPpre PKPpre 00 19 32.8
TKL *e*PKPdf PKPdf 00 19 39.8 +1.9
TKL Tuckaleechee C 141.38 42 *e*PKHKP PKPpre 00 19 32.8
TKL *e* 00 19 39.8
SSPA Standing Stone 141.46 31 *e*PKPpre PKPpre 00 19 32.8
SSPA *e*PKPdf PKPdf 00 19 40.1 +2.2
HNH Hanover 141.47 22 *e*PKPdf PKPdf 00 19 38.0 +0.2
BRAL Brewton 141.50 50 PFAKE 00 19 50.0 +12
BRAL LR LR
comp=Z,1μm,22.0s,MS5.6
WVL Waterville 141.64 19 *e*PKPdf PKPdf 00 19 35.7 -2.4
TRY Troy 141.75 25 *e*PKPdf PKPdf 00 19 35.6 -2.7
BLA Blacksburg 142.50 37 *e*PKPdf PKPdf 00 19 38.9 -0.9
BLA LR LR
comp=Z,1μm,21.0s,MS5.7
BLA Blacksburg 142.50 37 *e*PKIKP PKPdf 00 19 38.9 -0.9
BLA MLR MLR
comp=Z,1μm,21.0s,MS5.7
GOGA Godfrey 142.88 44 *e*PKPdf PKPdf 00 19 37.2 -3.5
GOGA LR LR
comp=Z,986nm,19.0s,MS5.6
GOGA Godfrey 142.88 44 *e*PKHKP PKPdf 00 19 37.2 -3.4
GOGA MLR MLR
comp=Z,986nm,19.0s,MS5.6
SDMD Soldier's Deli 142.91 31 *e*PKPdf PKPdf 00 19 36.8 -3.8
CBN Corbin 143.53 33 PFAKE 00 19 50.0 +8.4
CBN LR LR
comp=Z,1μm,21.0s,MS5.6
JSC Jenkinsville 143.85 41 *e*PKPdf PKPdf 00 19 41.9 -0.5
JSC Jenkinsville 143.85 41 *e*PKIKP PKPdf 00 19 41.9 -0.4
TEIG Tepich 144.26 68 *e*PKPdf PKPdf 00 19 43.1 -0.3
TEIG LR LR
comp=Z,830nm,19.0s,MS5.5
CPUP Villa Florida 144.81 174 PFAKE 00 20 00.0 +16
CPUP LR LR
comp=Z,587nm,19.0s,MS5.4
NHSC New Hope 145.29 42 *e*PKPdf PKPdf 00 19 45.0 +0.2
NHSC LR LR
comp=Z,898nm,20.0s,MS5.5
CNNC Cliffs of the 145.34 37 *e*PKPdf PKPdf 00 19 45.3 +0.4

CNNC LR LR
comp=Z,1μm,20.0s,MS5.6
DWPF Disney 147.19 51 *e*PKPdf PKPdf 00 19 49.6 +1.4
DWPF LR LR
comp=Z,278nm,20.0s,MS5.0
SPB Sao Paulo 147.29 190 *e*PKPdf PKPab 00 19 52.5 0.0
SPB LR LR
comp=Z,2μm,22.0s,MS5.8
CAM4 Nova Friburgo 147.30 198 *e*P PKPbc 00 19 50.6 -0.3
CAM4 *i* 00 19 52.8
CAM4 *i* 00 20 03.7
CAM4 *i* 00 20 08.1
CAM4 *i* 00 20 12.4
CAM4 *i* 00 20 20.5
CAM4 *i* 00 20 23.4
CAM4 *i* 00 20 32.0
CAM4 *i* 00 20 52.1
JTS JuntasAbangare 148.63 85 *e*PKPdf PKPdf 00 19 52.4 +1.4
JTS *e*PKPbc PKPbc 00 19 56.1 +1.4
JTS LR LR
comp=Z,1μm,20.0s,MS5.7
JTS JuntasAbangare 148.63 85 *e*PKIKP PKPdf 00 19 52.4 +1.4
JTS *e* 00 19 56.1
JTS MLR MLR
comp=Z,1μm,20.0s
NNA Nana 148.67 131 *e*PKPdf PKPdf 00 19 51.9 +0.9
NNA *e*PKPbc PKPbc 00 19 56.3 +1.6
NNA LR LR
comp=Z,2μm,19.0s,MS5.8
LPAZ La Paz 150.98 149 PKP PKPbc 00 19 56.7 -3.6
comp=Z,3.9nm,1.0s,baz=94,slow=4.0,SNR=7.6
LPAZ PKPbc PKPab 00 20 02.6 -5.0
comp=Z,44nm,0.9s,baz=130,slow=1.9,SNR=112
LPAZ La Paz 150.98 149 *e*PKPdf PKPbc 00 19 57.3 -3.0
LPAZ *e*PKPbc PKPab 00 20 02.8 -4.8
LPAZ LR LR
comp=Z,1μm,22.0s,MS5.7
LPAZ La Paz 150.98 149 *e*PKIKP PKPbc 00 19 57.3 -3.0
LPAZ *e* 00 20 02.8
LPAZ MLR MLR
comp=Z,1μm,22.0s
BBSR BB Station 154.26 23 PFAKE 00 20 10.0 +11
BBSR LR LR
comp=Z,748nm,20.0s,MS5.5
BDFB Brasilia 155.15 192 PKP PKPdf 00 20 01.2 +0.5
comp=Z,4.5nm,0.9s,baz=203,slow=8.5,SNR=5.5
BDFB Brasilia 155.15 192 PKIKP PKPdf 00 20 01.2 +0.5
BDFB pmax pmax
comp=Z,5.0nm,0.9s
RCBR Riachuelo 157.45 230 PFAKE 00 20 10.0 +6.2
RCBR LR LR
comp=Z,1μm,20.0s,MS5.7
ROSC El Rosal 158.63 99 PKP PKPdf 00 20 07.4 +2.1
comp=Z,4.1nm,0.5s,baz=116,slow=19,SNR=6.2
ROSC PKPab PKPab 00 20 41.5 +1.0
comp=Z,8.5nm,0.4s,baz=125,slow=11,SNR=6.6
SDV Santo Domingo 162.75 88 *e*PKPdf PKPdf 00 20 10.5 +0.8
SDV *e*PKPab PKPab 00 20 59.1 +0.6
SDV LR LR
comp=Z,570nm,19.0s
CELP Cerrillos 164.06 53 *e*PKPdf PKPdf 00 20 11.8 +1.0
CELP *e* 00 20 18.9
CELP *e*PKPab PKPab 00 21 04.5 +0.4
SJG San Juan 164.38 52 *e*PKPdf PKPdf 00 20 10.6 -0.5
SJG LR LR
comp=Z,1μm,20.0s
SJG San Juan 164.38 52 *e*PKIKP PKPdf 00 20 10.6 -0.5
SJG MLR MLR
comp=Z,1μm,20.0s
FDF Fort de France 170.24 52 PFAKE 00 20 30.0 +15
FDF LR LR
comp=Z,1μm,20.0s

IDC 14 00:18:09.3±1.5, 8°.85S×127°.15E, h0km, mb3.5/2, mb1 3.6/5, mb1mx3.5/17, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=96.3km s-min=25.3km az=72.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.31**	**189**	Pn	Pn	00 20 25.8	+1.0
	0.3nm,0.3s,baz=11,slow=14,SNR=7.4						
FITZ				Sn	Sn	00 22 02.1	-8.3
	0.6nm,0.3s,baz=95,slow=4.8,SNR=6.2						
WRA	**Warramunga Arr**	**13.04**	**149**	Pn	Pn	00 21 15.4	-0.5
	0.2nm,0.3s,baz=316,slow=14,SNR=7.2						
WRA				Sn	Sn	00 23 35.8	-6.0
	0.3nm,0.3s,baz=334,slow=21,SNR=7.5						
ASAR	**Alice Springs**	**16.09**	**157**	Pn	Pn	00 21 56.4	-0.6
	0.1nm,0.3s,baz=324,slow=10,SNR=5.4						
MKAR	**Makanchi Array**	**68.27**	**329**	P	P	00 29 11.8	-0.1
	0.1nm,0.4s,baz=119,slow=8.4,SNR=2.2						
ZALV	**Zalesovo Beam**	**72.03**	**335**	P	P	00 29 35.2	+0.3
	0.2nm,0.3s,baz=132,slow=2.1,SNR=2.6						

IDC 14 00:22:54.0±1.5, 8°.79S×127°.21E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.6/17, mbtmp3.6/5, ML3.7/3, Error ellipse: s-maj=95.9km s-min=25.3km az=72.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.38**	**189**	Pn	Pn	00 25 10.7	+0.2
	0.6nm,0.3s,baz=7.8,slow=10,SNR=6.4						
FITZ				Sn	Sn	00 26 48.0	-8.8
	1.0nm,0.3s,baz=267,slow=21,SNR=7.4						
WRA	**Warramunga Arr**	**13.05**	**149**	Pn	Pn	00 26 00.8	-0.1
	0.4nm,0.3s,baz=327,slow=14,SNR=7.2						
WRA				Sn	Sn	00 28 21.1	-5.8
	0.5nm,0.3s,baz=324,slow=24,SNR=6.1						
ASAR	**Alice Springs**	**16.12**	**157**	Pn	Pn	00 26 42.0	0.0
	0.3nm,0.3s,baz=321,slow=11,SNR=10.0						
MKAR	**Makanchi Array**	**68.25**	**329**	P	P	00 33 56.5	-0.1
	0.2nm,0.6s,baz=127,slow=9.2,SNR=2.5						
ZALV	**Zalesovo Beam**	**72.00**	**335**	P	P	00 34 19.8	+0.3
	0.2nm,0.3s,baz=142,slow=7.3,SNR=2.5						

IDC 14 00:34:19.9±19.0, 15°.96S×175°.50W, h232km±197km, mb3.2/5, mb1 3.5/5, mb1mx3.3/17, mbtmp3.2/5, Error ellipse: s-maj=159.2km s-min=33.1km az=154.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.75**	**257**	P	P	00 42 34.2	+0.1
	0.4nm,0.4s,baz=92,slow=7.1,SNR=6.6						
ASAR	**Alice Springs**	**48.02**	**252**	P	P	00 42 36.0	-0.2
	1.4nm,0.5s,baz=88,slow=8.2,SNR=17						
NVAR	**Mina Array Bea**	**76.10**	**43**	P	P	00 45 42.7	+0.5
	0.7nm,1.1s,baz=238,slow=8.5,SNR=3.8						
ILAR	**Eielson Array**	**83.39**	**12**	P	P	00 46 20.6	0.0
	0.6nm,0.6s,baz=226,slow=5.0,SNR=14						
PDAR	**Pinedale Array**	**84.03**	**43**	P	P	00 46 24.7	+0.2
	0.3nm,0.6s,baz=222,slow=1.2,SNR=3.4						
BRTR	**Keskin Array B**	**145.28**	**319**	PKPbc	PKPbc	00 53 29.9	-0.6
	0.7nm,0.9s,baz=133,slow=4.9,SNR=4.6						

IDC 14 00:36:60.0±1.7, 9°.02S×124°.12E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/17, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=124.7km s-min=26.8km az=63.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.15**	**171**	Pn	Pn	00 39 13.4	0.0
	0.3nm,0.3s,baz=0.4,slow=13,SNR=4.4						
FITZ				Sn	Sn	00 40 46.6	-11
	1.1nm,0.3s,baz=116,slow=5.4,SNR=14						
WRA	**Warramunga Arr**	**14.69**	**139**	Pn	Pn	00 40 28.4	-0.7
	0.1nm,0.3s,baz=313,slow=15,SNR=3.9						
WRA				Sn	Sn	00 43 07.3	-5.4
	0.2nm,0.3s,baz=311,slow=25,SNR=5.2						
ASAR	**Alice Springs**	**17.32**	**148**	P	Pn	00 41 03.9	+0.6
	0.2nm,0.3s,baz=330,slow=12,SNR=11						
ASAR				S	Sn	00 44 10.4	-6.2
	0.1nm,0.3s,baz=311,slow=21,SNR=6.4						
MKAR	**Makanchi Array**	**66.88**	**330**	P	P	00 47 54.0	+0.1
	0.1nm,0.3s,baz=128,slow=6.3,SNR=2.8						

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*IDC **14** 00:58:54.6±11.0, 52°.27N×176°.29W, h84km±111km, mb3.5/5, mb1 3.9/7, mb1mx3.4/26, mbtmp3.5/7, ML4.1/2, Error ellipse: s-maj=93.4km s-min=29.1km az=164.0*
*ISCJB **14** 00:59:01.9±0.6, 52°.0N±0°.2×175°.9W±0°.1, h155km±6km, mb3.6/6, Error ellipse: s-maj=34.6km s-min=7.7km az=164.9*
*NEIC **14** 00:59:04.3, 51°.79N×175°.90W, h149km, mb3.9/1, After AEIC.*

ISC 14 00:59:02.9±0.6, 51°.9N±0°.2×175°.9W±0°.1, h150km±6km, n14, σ0°99/16, mb3.6/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.10**	**75**	P	**Pn**	**00 59 29.2**	**+0.7**
ATKA				S	**Sn**	**00 59 48.8**	**+0.8**
AMKA	**Amchitka**	**3.03**	**261**	*e*Pn	**Pn**	**00 59 51.1**	**+0.6**
AMKA				S	**Sn**	**01 00 25.8**	**-1.6**
UNV	**Unalaska Valle**	**6.02**	**68**	P	**Pn**	**01 00 29.9**	**+0.2**
UNV				S	**Sn**	**01 01 35.6**	**-2.0**
KDAK	**Kodiak Island**	**14.62**	**57**	P	**Pn**	**01 02 16.9**	**-5.4**
	3.4nm,0.3s,baz=254,slow=6.9,SNR=10.0						
ILAR	**Eielson Array**	**19.70**	**38**	P	**P**	**01 03 15.7**	**-4.4**
	0.1nm,0.3s,baz=254,slow=11,SNR=7.0						
ILAR	**Eielson Array**	**19.70**	**38**	P	**P**	**01 03 15.7**	**-4.5**
COLD	**Coldfoot**	**19.88**	**30**	P	**P**	**01 03 22.7**	**+0.7**
	4.1nm,0.9s						
MDJ	**Mudanjiang**	**36.24**	**280**	P	**P**	**01 05 52.5**	**+1.3**
MDJ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
MDJ				pmax	pmax		
	comp=Z,66nm,4.4s						
NVAR	**Mina Array Bea**	**41.71**	**85**	P	**P**	**01 06 37.9**	**+1.1**
	comp=Z,0.3nm,0.6s,mb3.1,baz=289,slow=6.6,SNR=3.2						
PDAR	**Pinedale Array**	**44.44**	**74**	P	**P**	**01 06 57.6**	**-0.9**
	comp=Z,2.5nm,0.7s,mb4.0,baz=312,slow=3.8,SNR=19						
TXAR	**Lajitas Array**	**56.80**	**84**	P	**P**	**01 08 30.9**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.3,baz=293,slow=4.4,SNR=4.7						
TXAR				pP	pP	01 09 06.4	+0.2
	comp=Z,0.2nm,0.6s,baz=297,slow=5.5,SNR=3.6						
WRA	**Warramunga Arr**	**83.67**	**226**	P	**P**	**01 11 13.6**	**-0.9**
	comp=Z,0.9nm,0.7s,mb3.6,baz=34,slow=5.8,SNR=21						
ASAR	**Alice Springs**	**87.12**	**225**	P	**P**	**01 11 31.9**	**+0.4**
	comp=Z,1.4nm,0.6s,mb3.9,baz=23,slow=5.2,SNR=13						
MAW	**Mawson**	**148.02**	**218**	PKPbc	PKPbc	01 18 28.6	-0.4
	comp=Z,0.7nm,0.5s,baz=79,slow=7.4,SNR=3.7						

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*CSEM **14** 01:18:37.9±0.3, 38°.94N×26°.65E, h10km, MD2.8, Error ellipse: s-maj=8.2km s-min=3.4km az=88.0*
*DDA **14** 01:18:37.8, 38°.94N×26°.58E, h7km±3km, Md2.8*
*ISK **14** 01:18:37.6, 38°.95N×26°.68E, h6km, MD2.7*
*ISCJB **14** 01:18:38.1±0.9, 38°.93N±0°.03×26°.6E±0°.1, h19km±11km, Error ellipse: s-maj=14.2km s-min=5.3km az=1.4*

ISC 14 01:18:38.0±0.9, 38°.93N±0°.03×26°.6E±0°.1, h16km±7km, n16, σ0°66/26, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.39**	**12**	*i* P	**Pg**	**01 18 45.6**	**-0.3**
AYVA				*i* S	**Sg**	**01 18 51.6**	**+0.4**
AYVA	**Ayvalik**	**0.39**	**12**	*i* P	**Pg**	**01 18 45.6**	**-0.3**
AYVA				*i* S	**Sg**	**01 18 51.6**	**+0.4**
URLA	**Izmir**	**0.57**	**180**	*i* P	**Pg**	**01 18 48.7**	**-0.5**
URLA				*i* S	**Sg**	**01 18 58.3**	**+1.4**
URLA	**Izmir**	**0.57**	**180**	*i* P	**Pg**	**01 18 48.7**	**-0.5**
URLA				*i* S	**Sg**	**01 18 58.3**	**+1.5**
BLCB	**Balcova**	**0.65**	**147**	*e*PG	**Pg**	**01 18 50.5**	**-0.2**
BLCB				*e*SG	**Sg**	**01 18 59.2**	**-0.1**
BLCB	**Balcova**	**0.65**	**147**	*e*Pg	**Pg**	**01 18 50.5**	**-0.2**
BLCB				*e*Sg	**Sg**	**01 18 59.2**	**-0.1**
IZM	**Izmir**	**0.75**	**135**	*e*PG	**Pg**	**01 18 51.8**	**-0.8**
IZM	**Izmir**	**0.75**	**135**	*e*Pg	**Pg**	**01 18 51.8**	**-0.8**
EZN	**Ezine**	**0.92**	**347**	*e*PG	**Pg**	**01 18 55.6**	**-0.2**
EZN	**Ezine**	**0.92**	**347**	*e*Pg	**Pg**	**01 18 55.6**	**-0.2**
BALY	**Balya**	**1.14**	**44**	*i* P	**Pn**	**01 18 58.3**	**-0.9**
BALY				*i* S	**Sb**	**01 19 14.6**	**+0.9**
BALY	**Balya**	**1.14**	**44**	*i* P	**Pn**	**01 18 58.3**	**-0.9**
BALY				*i* S	**Sb**	**01 19 14.6**	**+0.9**
BALB	**Balikesir**	**1.23**	**54**	*e*PN	**Pn**	**01 18 59.8**	**-0.6**
BALB				*e*SN	**Sn**	**01 19 16.8**	**+0.1**
BALB	**Balikesir**	**1.23**	**54**	*e*Pn	**Pn**	**01 18 59.8**	**-0.6**
BALB				*e*Sn	**Sn**	**01 19 16.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.40**	**37**	*e*PN	**Pn**	**01 19 03.5**	**+0.7**
GONE	**Gonen-Balikesi**	**1.40**	**37**	*e*Pn	**Pn**	**01 19 03.5**	**+0.7**

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*ISK **14** 01:20:33.2, 38°.97N×40°.02E, h5km, MD2.7*

CSEM 14 01:20:33.2, 38°.97N×40°.02E, h5km, MD2.7, After ISK, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.38**	**104**	PG	Pg	01 20 41.2	+0.7
BINT				SG	Sg	01 20 46.7	+1.2
BINT	**Bingol**	**0.38**	**104**	*i* Pg	Pg	01 20 41.2	+0.7
BINT				*i* Sg	Sg	01 20 46.7	+1.2
PTK	**Pertek**	**0.49**	**261**	*e*PG	Pg	01 20 42.4	-0.3
PTK				*e*SG	Sg	01 20 50.2	+1.0
PTK	**Pertek**	**0.49**	**261**	*e*Pg	Pg	01 20 42.4	-0.3
PTK				*e*Sg	Sg	01 20 50.2	+1.1
SVRC	**Sivrice-ELAZID**	**0.81**	**223**	*e*PG	Pg	01 20 49.6	+0.9
SVRC				*e*SG	Sg	01 21 00.9	+1.6
SVRC	**Sivrice-ELAZID**	**0.81**	**223**	*e*Pg	Pg	01 20 49.6	+0.8
SVRC				*e*Sg	Sg	01 21 00.9	+1.6
EZC	**Erzincan**	**0.94**	**327**	*e*PG	Pg	01 20 51.5	+0.3
EZC	**Erzincan**	**0.94**	**327**	*e*Pg	Pg	01 20 51.5	+0.4
EZM	**Erzurum**	**1.40**	**48**	PN	Pn	01 20 59.8	+0.5
MALT	**Malatya**	**1.41**	**243**	*e*PN	Pn	01 21 00.3	+0.8
MALT	**Malatya**	**1.41**	**243**	*e*Pn	Pn	01 21 00.3	+0.8
BAYT	**Ayd¨–ntepe-Bay**	**1.42**	**4**	*e*PN	Pn	01 21 00.3	+0.6
BAYT	**Ayd¨–ntepe-Bay**	**1.42**	**4**	*e*Pn	Pn	01 21 00.3	+0.6
GUMT	**Gumushane**	**1.54**	**345**	*e*PN	Pn	01 21 02.1	+0.8
GUMT	**Gumushane**	**1.54**	**345**	*e*Pn	Pn	01 21 02.1	+0.7

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*BJI **14** 01:20:35.8, 50°.25N×156°.05E, h148km, mB4.6/4, mb4.3/7*
*MOS **14** 01:20:35.7±1.2, 50°.14N×155°.78E, h131km, mb4.1/14, Error ellipse: s-maj=14.5km s-min=8.3km az=73.4*
*ISCJB **14** 01:20:36.0±0.6, 50°.12N±0°.07×155°.8E±0°.1, h133km±4km, mb3.9/28, Error ellipse: s-maj=14.2km s-min=6.8km az=44.8*
*KRSC **14** 01:20:35.3±0.8, 49°.85N×156°.87E, h50km±50km, ML4.1*
*NEIC **14** 01:20:36.8±0.5, 50°.18N×155°.64E, mb4.3/10, Error ellipse: s-maj=12.8km s-min=7.7km az=135.0*
*IDC **14** 01:20:37.0±0.7, 50°.17N×155°.71E, h123km±7km, mb3.4/14, mb1 3.7/17, mb1mx3.6/26, mbtmp3.5/17, Error ellipse: s-maj=19.0km s-min=12.0km az=139.0*

ISC 14 01:20:37.4±0.6, 50°.14N±0°.07×155°.8E±0°.1, h128km±4km, h125km±5.1km: pP-P, n73, σ0°95/83, mb3.9/28, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.59**	**22**	*e*PN	**Pn**	**01 20 56.4**	**-0.4**
SKR				*i* S	**Sn**	**01 21 10.0**	**-1.4**
SKR				pmax	pmax		
	comp=N,220nm,0.3s						
SKR				pmax	pmax		
	comp=E,120nm,0.3s						
SKR				pmax	pmax		
	comp=Z,510nm,0.3s						
SKR				smax			
	comp=E,3μm,0.3s						
SKR				smax			
	comp=N,2μm,0.5s						
SKR				smax			
	comp=E,5μm,2.0s						
ALID	**Alaid**	**0.74**	**349**	*e*P	**Pn**	**01 20 58.4**	**+0.5**
ALID				*i* S	**Sn**	**01 21 14.6**	**+1.2**
GRL	**Gorelyy**	**2.81**	**30**	*e*P	**Pn**	**01 21 20.7**	**-0.7**
GRL				*i* S	**Sn**	**01 21 53.3**	**-2.1**
PETK	**Petropavlovsk-**	**3.21**	**21**	P	**Pn**	**01 21 27.8**	**+1.2**
	comp=E,3.0nm,0.3s,baz=215,slow=13,SNR=19						
PETK	**Petropavlovsk-**	**3.21**	**21**	*e*PN	**Pn**	**01 21 28.1**	**+1.6**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PET	**Petropavlovsk**	**3.40**	**31**	*e*P	**Pn**	**01 21 29.2**	**+0.1**
PET				*i* S	**Sn**	**01 22 09.6**	**+0.5**
PET	**Petropavlovsk**	**3.40**	**31**	*e*PN	**Pn**	**01 21 29.5**	**+0.4**
PET				*e*S	**Sn**	**01 22 10.3**	**+1.2**
PET				pmax	pmax		
	comp=Z,46nm,1.2s						
PET				smax			
	comp=E,63nm,0.6s						
AVH	**Avacha**	**3.63**	**29**	*e*P	**Pn**	**01 21 34.1**	**+2.0**
GNL	**Ganaly**	**3.80**	**20**	*e*P	**Pn**	**01 21 36.2**	**+1.8**
SPN	**Mys Shipunski**	**3.97**	**40**	*e*P	**Pn**	**01 21 34.0**	**-2.7**
SPN				*i* S	**Sn**	**01 22 17.4**	**-5.2**
SPN	**Mys Shipunski**	**3.97**	**40**	PN	**Pn**	**01 21 34.0**	**-2.7**
SPN				S	**Sn**	**01 22 17.4**	**-5.2**
MKZ	**Mys Kozlova**	**5.73**	**37**	*e*P	**Pn**	**01 21 58.3**	**-1.9**
MKZ				*i* S	**Sn**	**01 22 58.4**	**-6.3**
MKZ	**Mys Kozlova**	**5.73**	**37**	PN	**Pn**	**01 21 58.3**	**-1.9**
MKZ				S	**Sn**	**01 22 58.4**	**-6.3**
KBTR	**Krutoberegovo**	**7.40**	**32**	*e*P	**Pn**	**01 22 23.3**	**+0.6**
KBTR	**Krutoberegovo**	**7.40**	**32**	PN	**Pn**	**01 22 23.3**	**+0.6**
ASAJ	**Asahikawa**	**10.80**	**241**	P	**Pn**	**01 23 08.0**	**-0.4**
	comp=E,0.8nm,0.3s,baz=87,slow=15,SNR=7.7						
ASAJ	**Asahikawa**	**10.80**	**241**	PN	**Pn**	**01 23 08.0**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SEY	**Seymchan**	**12.96**	**353**	*e*PN	**Pn**	**01 23 37.6**	**+1.2**
MAJO	**Matsushiro**	**18.59**	**230**	*e*P	**P**	**01 24 44.2**	**-0.3**
	comp=Z,10.0nm,0.4s						
MAJO	**Matsushiro**	**18.59**	**230**	*e*P	**P**	**01 24 44.2**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MAT	**Matsushiro**	**18.59**	**230**	P	**P**	**01 24 44.0**	**-0.5**
MJAR	**Matsushiro Arr**	**18.59**	**230**	P	**P**	**01 24 44.1**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=26,slow=8.4,SNR=21						
MJAR	**Matsushiro Arr**	**18.59**	**230**	P	**P**	**01 24 44.1**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS	**Korea Array**	**23.61**	**248**	P	**P**	**01 25 37.3**	**+0.9**
	comp=Z,1.7nm,0.6s,mb3.8,baz=44,slow=10.0,SNR=17						
KSRS	**Korea Array**	**23.61**	**248**	*e*P	**P**	**01 25 37.9**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
JNU	**Nakatsue**	**25.03**	**237**	*e*P	**P**	**01 25 50.3**	**+0.9**
	comp=Z,7.4nm,0.8s,mb4.3						
COLD	**Coldfoot**	**31.54**	**37**	*e*P	**P**	**01 26 47.2**	**+0.3**
	comp=Z,1.4nm,0.7s,mb3.8						
SONM	**Songino Array**	**32.01**	**285**	P	**P**	**01 26 50.9**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.4,baz=74,slow=7.9,SNR=2.9						
SONM	**Songino Array**	**32.01**	**285**	P	**P**	**01 26 50.9**	**-0.3**
TLY	**Talaya**	**32.33**	**293**	*e*P	**P**	**01 26 54.0**	**0.0**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ILAR	**Eielson Array**	**32.81**	**42**	P	**P**	**01 26 58.4**	**+0.3**
	comp=Z,0.6nm,0.8s,mb3.4,baz=257,slow=8.0,SNR=6.4						
ILAR	**Eielson Array**	**32.81**	**42**	P	**P**	**01 26 58.4**	**+0.4**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZAK	**Zakamensk**	**32.98**	**291**	*e*P	**P**	**01 26 59.8**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
ZALV	**Zalesovo Beam**	**42.13**	**304**	P	**P**	**01 28 15.8**	**-0.7**
	comp=Z,0.9nm,0.3s,mb3.8,baz=63,slow=7.2,SNR=6.8						
ZALV				PcP	PcP	01 30 08.2	-0.3
	comp=Z,0.6nm,0.4s,baz=128,slow=2.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**42.13**	**304**	P	**P**	**01 28 15.9**	**-0.7**
ZALV						01 30 08.2	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
MK31	**Makanchi Array**	**47.01**	**296**	*e*P	**P**	**01 28 54.5**	**-0.8**
MK31	**Makanchi Array**	**47.01**	**296**	*e*P	**P**	**01 28 54.5**	**-0.8**
MKAR	**Makanchi Array**	**47.01**	**296**	P	**P**	**01 28 55.0**	**-0.3**
	comp=Z,1.7nm,0.5s,mb3.9,baz=64,slow=7.7,SNR=31						
MKAR				PcP	PcP	01 30 25.5	0.0
	comp=Z,0.3nm,0.7s,baz=59,slow=5.6,SNR=2.5						
MKAR	**Makanchi Array**	**47.01**	**296**	P	**P**	**01 28 55.0**	**-0.3**
MKAR				PcP	PcP	01 30 25.4	0.0
MKAR	**Makanchi Array**	**47.01**	**296**	P	**P**	**01 28 55.0**	**-0.3**
MKAR						01 30 25.5	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURK	**Kurchatov**	**47.01**	**302**	*e*P	**P**	**01 28 55.2**	**-0.1**
	comp=Z,12nm,1.0s,mb4.5						
KURK	**Kurchatov**	**47.01**	**302**	*e*P	**P**	**01 28 55.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.5						
BRVK	**Borovoye**	**50.14**	**308**	*e*P	**P**	**01 29 18.5**	**-0.7**
	comp=Z,4.0nm,0.7s,mb4.2						
BRVK	**Borovoye**	**50.14**	**308**	*c i*P	**P**	**01 29 18.5**	**-0.7**
BRVK				*i* *PP	pP	01 29 51.6	+2.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
ARU	**Arti**	**53.73**	**317**	*e*P	**P**	**01 29 44.6**	**-1.1**
	comp=Z,2.0nm,0.6s,mb4.0						
ARU	**Arti**	**53.73**	**317**	*d i*P	**P**	**01 29 44.8**	**-0.9**
ARU				*e*		01 30 47.1	
ARU				*e*		01 31 45.3	
ARU				PPP		01 32 57.0	
ARU				S	**S**	**01 37 09.7**	**+0.2**
ARU				SS	SS	01 40 47.4	-3.8
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**53.94**	**296**	*e*P	**P**	**01 29 47.7**	**+0.3**
	comp=Z,2.0nm,0.6s,mb4.0						
AAK	**Ala-Archa**	**53.94**	**296**	*e*P	**P**	**01 29 47.7**	**+0.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
EKS2	**Erkin-Say**	**54.34**	**296**	*e*P	**P**	**01 29 50.3**	**0.0**
	comp=Z,2.9nm,0.6s,mb4.2						
CHTO	**Chiang Mai**	**54.63**	**256**	*e*P	**P**	**01 29 53.9**	**+1.2**
	comp=Z,6.6nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**54.63**	**256**	*e*P	**P**	**01 29 53.9**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**54.90**	**256**	P	**P**	**01 29 56.3**	**+1.7**
	comp=Z,4.3nm,0.7s,mb4.3,baz=31,slow=6.9,SNR=18						
CMAR	**Chiang Mai Arr**	**54.90**	**256**	P	**P**	**01 29 56.3**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ABKAR	**Akbulak array**	**57.62**	**309**	*e*P	**P**	**01 30 13.0**	**-0.6**
	comp=Z,1.7nm,0.4s,mb4.2						
PDAR	**Pinedale Array**	**61.36**	**57**	P	**P**	**01 30 40.6**	**+1.3**
	comp=Z,0.3nm,0.7s,mb3.2,baz=341,slow=3.1,SNR=3.5						
PDAR				pP	pP	01 31 09.9	-0.2
	comp=Z,0.7nm,0.8s,baz=327,slow=3.3,SNR=5.3						
FINES	**FINESS Array B**	**61.71**	**335**	P	**P**	**01 30 40.0**	**-1.4**
	comp=Z,1.7nm,0.9s,mb3.9,baz=

IDC 14 01:39:22.8±1.5, 8°.86S×127°.16E, h0km, mb3.6/2, mb1 3.7/5, mb1mx3.5/17, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=94.8km s-min=25.0km az=72.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.30	189	Pn	Pn	01 41 38.1	-0.2
	0.3nm,0.3s,baz=24,slow=10,SNR=8.7						
FITZ				Sn	Sn	01 43 15.9	-7.8
	0.7nm,0.3s,baz=233,slow=22,SNR=7.4						
WRA	Warramunga Arr	13.02	149	Pn	Pn	01 42 29.0	-0.3
	0.2nm,0.3s,baz=326,slow=14,SNR=15						
WRA				Sn	Sn	01 44 48.6	-6.4
	0.3nm,0.3s,baz=322,slow=25,SNR=7.5						
ASAR	Alice Springs	16.08	157	Pn	Pn	01 43 11.1	+0.7
	0.1nm,0.3s,baz=318,slow=11,SNR=13						
MKAR	Makanchi Array	68.28	329	P	P	01 50 26.2	+0.6
	0.2nm,0.5s,baz=138,slow=6.7,SNR=3.3						
ZALV	Zalesovo Beam	72.04	335	P	P	01 50 48.1	-0.4
	0.6nm,0.5s,baz=128,slow=4.2,SNR=2.8						

KRSC 14 01:46:06.0±0.9, 50°.81N×158°.71E, h55km±54km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	1.79	347	eP	Pn	01 46 36.6	+2.1
GRL				eS	Sn	01 46 58.7	+2.7
ALID	Alaid	2.00	273	S	Sn	01 46 59.9	-1.4
PET	Petropavlovsk	2.22	359	eP	Pn	01 46 42.8	+2.5
PET				eS	Sn	01 47 10.0	+3.5
SPN	Mys Shipunski	2.43	19	eS	Sn	01 47 16.0	+4.3
AVH	Avacha	2.46	0	eP	Pn	01 46 45.7	+2.1
GNL	Ganaly	2.93	351	eP	Pn	01 46 53.3	+3.3
MKZ	Mys Kozlova	4.18	25	eP	Pn	01 47 08.8	+1.7
MKZ				S	Sn	01 47 54.3	-0.3
KBTR	Krutoberegovo	5.94	23	eP	Pn	01 47 34.2	+3.0

IDC 14 02:03:14.8±25.0, 17°.10S×178°.59W, h550km±245km, mb3.2/3, mb1 3.5/3, mb1mx3.0/17, mbtmp3.2/3, Error ellipse: s-maj=279.6km s-min=61.6km az=132.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.61	259	P	P	02 10 38.8	+0.1
	1.4nm,0.5s,baz=93,slow=7.2,SNR=36						
ASAR	Alice Springs	44.85	253	P	P	02 10 40.2	-0.2
	8.6nm,0.6s,baz=88,slow=8.4,SNR=158						
ILAR	Eielson Array	85.14	13	P	P	02 14 52.5	0.0
	0.2nm,0.4s,baz=223,slow=5.4,SNR=6.2						
BRTR	Keskin Array B	144.09	315	PKP	PKPdf	02 21 47.8	-0.4
	0.4nm,0.5s,baz=137,slow=5.4,SNR=3.9						

NEIC 14 02:07:59.6±0.6, 8°.93S×127°.28E, h35km, Error ellipse: s-maj=29.7km s-min=8.7km az=66.0

IDC 14 02:07:54.6±1.4, 8°.82S×127°.29E, h0km, mb4.0/3, mb1 4.2/6, mb1mx3.9/18, mbtmp4.1/6, ML4.0/3, Error ellipse: s-maj=89.3km s-min=24.6km az=72.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.36	128	ePn	Pn	02 09 36.3	+6.6
	38nm,0.6s						
FITZ	Fitzroy Crossi	9.36	190	Pn	Pn	02 10 10.5	-0.4
	0.9nm,0.3s,baz=35,slow=9.9,SNR=16						
FITZ				Sn	Sn	02 11 47.2	-10
	2.0nm,0.3s,baz=88,slow=21,SNR=6.7						
WRA	Warramunga Arr	12.99	149	Pn	Pn	02 11 00.8	+0.3
	1.3nm,0.3s,baz=323,slow=13,SNR=30						
WRA				Sn	Sn	02 13 20.3	-5.6
	1.1nm,0.3s,baz=324,slow=26,SNR=6.9						
WRA	Warramunga Arr	12.99	149	Pn	Pn	02 11 00.8	+0.3
WRA				Sn	Sn	02 13 20.3	-5.6
WB2	Warramunga Arr	12.99	149	ePn	Pn	02 11 00.4	-0.2
WB2				eSn	Sn	02 13 20.3	-5.7
ASAR	Alice Springs	16.06	158	Pn	Pn	02 11 41.8	-0.1
	0.5nm,0.3s,baz=320,slow=12,SNR=24						
ASAR				Sn	Sn	02 14 33.6	-7.2
	0.3nm,0.3s,baz=330,slow=19,SNR=5.2						
MK31	Makanchi Array	68.32	328	eP	P	02 18 57.8	+0.2
MKAR	Makanchi Array	68.32	328	P	P	02 18 57.2	-0.4
	0.7nm,0.6s,baz=127,slow=7.6,SNR=8.9						
ZALV	Zalesovo Beam	72.06	335	P	P	02 19 20.2	-0.2
	1.4nm,0.6s,baz=123,slow=5.5,SNR=6.4						
ZALV	Zalesovo Beam	72.06	335	P	P	02 19 20.2	-0.2
AKTK	Aktyubinsk	83.89	323	P	P	02 20 27.3	+1.1
AKTO	Aktyubinsk	83.89	323	P	P	02 20 27.3	+1.1
	0.6nm,0.5s,baz=84,slow=5.2,SNR=3.5						

BJI 14 02:23:05.1, 22°.60N×99°.79E, h15km, ML3.4/5, 1D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHRT	Chiangrai	2.72	180	⇓PN	Pn	02 23 52.5	+4.3
CHRT	Chiangrai	2.72	180	PG	Pg	02 23 56.5	-0.7
CHRT				SG	Sg	02 24 29.0	-3.4
KMI	Kunming	3.69	46	Pg	Pg	02 24 11.4	-4.4
KMI				Sg	Sg	02 24 57.8	-5.8
KMI				smax			
	comp=N,43nm,0.8s						
KMI				smax			
	comp=E,32nm,0.9s						
CHG	Chiang Mai	3.85	192	PG	Pg	02 24 15.7	-3.2
CHG				SG	Sg	02 25 08.6	-0.2
BDT	Bhumibol Dam	5.38	188	P	Pg	02 24 47.0	-1.2

ATH 14 02:29:12.4, 35°.68N×21°.32E, h10km±1km, ML3.4
IDC 14 02:29:13.2±1.1, 35°.78N×21°.78E, h0km, mb3.7/10, mb1 3.7/12, mb1mx3.6/30, mbtmp3.7/12, ML3.2/2, Error ellipse: s-maj=26.7km s-min=17.8km az=139.0
CSEM 14 02:29:16.2±0.2, 35°.79N×21°.49E, h10km, ML3.2/3, Error ellipse: s-maj=5.9km s-min=4.8km az=36.0
NEIC 14 02:29:18.9±0.5, 35°.83N×21°.61E, h35km, ML3.2(THE), Error ellipse: s-maj=8.3km s-min=7.6km az=212.0
THE 14 02:29:18.5, 35°.84N×21°.45E, h76km±8km, ML3.2/3, Error ellipse: s-maj=8.4km s-min=1.2km az=45.0

ISC 14 02:29:16.8±1.1, 35°.81N±0°.03×21°.47E±0°.04, h15km±7km, n147, σ1°03/176, mb3.6/9, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	Kithira	1.35	69	ePB	Pb	02 29 41.1	-0.7
KYTH	Kithira	1.35	69	ePb	Pb	02 29 41.1	-0.7
ITM	Ithomi	1.42	15	P	Pn	02 29 42.0	0.0
ITM				S	Sn	02 30 00.1	-0.3
ITM	Ithomi	1.42	15	ePB	Pb	02 29 41.9	-1.0
ITM				eSB	Sb	02 30 03.0	+2.2
ITM	Ithomi	1.42	15	P	Pn	02 29 42.0	0.0
ITM				S	Sn	02 30 00.1	-0.3
ITM	Ithomi	1.42	15	P	Pn	02 29 42.0	0.0
ITM				S	Sn	02 30 00.1	-0.3
ITM				eSb	Sb	02 30 03.0	+2.2
VLI	Veliai	1.49	52	ePB	Pb	02 29 43.9	-0.3
VLI				eSB	Sb	02 30 07.0	+4.1
VLI	Veliai	1.49	52	ePb	Pb	02 29 43.9	-0.3
VLI				eSb	Sb	02 30 07.0	+4.1
VLX	Vlachokerasia	1.72	25	ePG	Pg	02 29 47.8	-2.0
VLX				eSN	Sn	02 30 11.9	+4.0
VLX	Vlachokerasia	1.72	25	P	Pn	02 29 46.8	+0.6
VLX				S	Sn	02 30 08.0	+0.1
VLX	Vlachokerasia	1.72	25	P	Pn	02 29 46.8	+0.6
VLX	Vlachokerasia	1.72	25	ePg	Pg	02 29 47.8	-2.0
VLX				S	Sn	02 30 08.0	+0.1
VLX				eSn	Sn	02 30 11.9	+4.0
KARN	Karanos	2.03	101	ePN	Pn	02 29 50.5	0.0
KARN	Karanos	2.03	101	P	Pn	02 29 50.4	-0.1
KARN	Karanos	2.03	101	ePn	Pn	02 29 50.5	0.0
DID	Didima	2.21	39	ePB	Pn	02 29 53.3	+0.4
DID	Didima	2.21	39	P	Pn	02 29 53.3	+0.4
DID				S	Sn	02 30 20.8	+0.8
DID	Didima	2.21	39	ePb	Pn	02 29 53.3	+0.4
DID				S	Sn	02 30 20.8	+0.8
GUR	Goura	2.23	18	P	Pn	02 29 54.3	+1.0
GUR				S	Sn	02 30 19.8	-0.8
GUR	Goura	2.23	18	ePn	Pn	02 29 54.2	+0.9
GUR				S	Sn	02 30 19.8	-0.8
VAM	Vamos	2.26	99	ePN	Pn	02 29 53.5	-0.1
VAM	Vamos	2.26	99	ePn	Pn	02 29 53.5	-0.1
KFL	Anninata	2.36	347	P	Pn	02 29 54.8	-0.2
KFL	Anninata	2.36	347	P	Pn	02 29 54.8	-0.2
LAKA	Lakka	2.46	9	P	Pn	02 29 57.3	+0.9
LAKA	Lakka	2.46	9	P	Pn	02 29 57.3	+0.9
LAKA	Lakka	2.46	9	P	Pn	02 29 57.3	+0.9
VLS	Valsamata	2.47	344	P	Pn	02 29 56.7	+0.2
VLS	Valsamata	2.47	344	ePN	Pn	02 29 56.8	+0.3
VLS	Valsamata	2.47	344	P	Pn	02 29 56.7	+0.2
VLS				S	Sn	02 30 25.8	-0.6
VLS	Valsamata	2.47	344	P	Pn	02 29 56.7	+0.2
VLS				S	Sn	02 30 25.8	-0.6
LTK	Loutraki	2.51	28	ePN	Pn	02 29 58.5	+1.4
LTK	Loutraki	2.51	28	P	Pn	02 29 57.4	+0.3
LTK	Loutraki	2.51	28	P	Pn	02 29 57.4	+0.3
LTK	Loutraki	2.51	28	ePn	Pn	02 29 58.5	+1.4
NAIG	Nisos Aigina	2.53	39	ePN	Pn	02 29 58.6	+1.3
NAIG	Nisos Aigina	2.53	39	ePn	Pn	02 29 58.6	+1.3
TRIZ	Trizonia	2.60	10	P	Pn	02 30 00.0	+1.8
TRIZ	Trizonia	2.60	10	P	Pn	02 30 00.0	+1.8
KALE	Kalithea	2.63	11	P	Pn	02 30 00.1	+1.4
KALE	Kalithea	2.63	11	P	Pn	02 30 00.1	+1.4
EFP	Efpalio	2.64	7	P	Pn	02 30 00.8	+2.0
EFP	Efpalio	2.64	7	P	Pn	02 30 00.8	+2.0
EFP	Efpalio	2.64	7	ePn	Pn	02 30 01.1	+2.3
DSF	Desfina	2.73	18	P	Pn	02 30 00.3	+0.2
DSF	Desfina	2.73	18	P	Pn	02 30 00.3	+0.2
VLY	Voula,Athens	2.76	42	ePN	Pn	02 30 00.7	+0.2
VLY	Voula,Athens	2.76	42	ePn	Pn	02 30 00.7	+0.2
ATH	Athens Observa	2.81	39	ePN	Pn	02 30 01.9	+0.7
ATH	Athens Observa	2.81	39	ePn	Pn	02 30 01.9	+0.7
SIVA	Sivas	2.84	105	P	Pn	02 30 02.0	+0.4
SIVA				S	Sn	02 30 36.2	+0.7
SIVA	Sivas	2.84	105	P	Pn	02 30 02.0	+0.4
SIVA				S	Sn	02 30 36.2	+0.7
ATHU	Athens Univers	2.84	40	P	Pn	02 30 02.4	+0.8
ATHU	Athens Univers	2.84	40	P	Pn	02 30 02.4	+0.8
PTL	Penteli	2.94	40	ePN	Pn	02 30 03.2	+0.2
PTL	Penteli	2.94	40	ePn	Pn	02 30 03.2	+0.2
LKR	Lokris	3.09	23	ePN	Pn	02 30 05.8	+0.8
LKR	Lokris	3.09	23	P	Pn	02 30 04.7	-0.3
LKR	Lokris	3.09	23	P	Pn	02 30 04.7	-0.3
LKR	Lokris	3.09	23	ePn	Pn	02 30 05.8	+0.8
EVR	Evrytania	3.11	5	ePb	Pb	02 30 07.9	-3.9
ATAL	Atalanti	3.13	23	P	Pn	02 30 06.0	+0.4
ATAL	Atalanti	3.13	23	P	Pn	02 30 06.0	+0.4
AGG	Agios Georgios	3.28	12	P	Pn	02 30 06.8	-0.8
AGG	Agios Georgios	3.28	12	ePB	Pb	02 30 09.4	-5.3
AGG	Agios Georgios	3.28	12	P	Pn	02 30 06.8	-0.8
AGG	Agios Georgios	3.28	12	P	Pn	02 30 06.8	-0.8
AGG	Agios Georgios	3.28	12	ePb	Pb	02 30 09.4	-5.3
LAST	Lasithi	3.33	100	P	Pn	02 30 08.9	+0.5
LAST	Lasithi	3.33	100	ePN	Pn	02 30 08.7	+0.3
LAST	Lasithi	3.33	100	P	Pn	02 30 08.9	+0.5
LAST	Lasithi	3.33	100	ePn	Pn	02 30 08.7	+0.3
APE	Apeiranthos	3.50	68	P	Pn	02 30 10.2	-0.5
APE	Apeiranthos	3.50	68	P	Pn	02 30 10.2	-0.5
APE				S	Sn	02 30 52.1	+0.1
APE	Apeiranthos	3.50	68	P	Pn	02 30 10.2	-0.5
APE	Apeiranthos	3.50	68	ePn	Pn	02 30 10.5	-0.2
APE				S	Sn	02 30 52.1	+0.1
NEO	Neokhori	3.76	21	ePN	Pn	02 30 15.0	+0.8
NEO	Neokhori	3.76	21	ePn	Pn	02 30 15.0	+0.8
THL	Klokotos Trika	3.77	6	ePN	Pn	02 30 15.2	+0.8
THL	Klokotos Trika	3.77	6	P	Pn	02 30 15.4	+1.0
THL	Klokotos Trika	3.77	6	ePn	Pn	02 30 15.2	+0.8
IGT	Igoumenitsa	3.83	347	P	Pn	02 30 15.1	0.0
IGT	Igoumenitsa	3.83	347	P	Pn	02 30 15.1	0.0
IGT	Igoumenitsa	3.83	347	P	Pn	02 30 15.1	0.0
AOS	Alonnisos	3.86	29	P	Pn	02 30 15.8	+0.1
AOS	Alonnisos	3.86	29	P	Pn	02 30 15.8	+0.1
KEK	Kerkira	4.12	342	P	Pn	02 30 18.9	-0.2
KEK				S	Sn	02 31 05.3	-1.7
KEK	Kerkira	4.12	342	P	Pn	02 30 18.9	-0.2
KEK				S	Sn	02 31 05.3	-1.7
LIT	Litokhoron	4.36	10	ePN	Pn	02 30 23.4	+0.9
LIT	Litokhoron	4.36	10	P	Pn	02 30 23.1	+0.6
LIT	Litokhoron	4.36	10	P	Pn	02 30 23.1	+0.6
LIT	Litokhoron	4.36	10	ePn	Pn	02 30 23.4	+0.9
NEST	Nestorio	4.61	356	P	Pn	02 30 27.1	+1.2
NEST	Nestorio	4.61	356	P	Pn	02 30 27.1	+1.2
KARP	Karpathos	4.64	92	ePN	Pn	02 30 26.5	+0.2
KARP	Karpathos	4.64	92	ePn	Pn	02 30 26.5	+0.2
PLG	Polygyros	4.81	18	ePN	Pn	02 30 28.5	-0.2
PLG	Polygyros	4.81	18	P	Pn	02 30 28.4	-0.3
PLG	Polygyros	4.81	18	ePn	Pn	02 30 28.5	-0.2
OUR	Ouranopolis	4.93	23	P	Pn	02 30 29.9	-0.4
OUR	Ouranopolis	4.93	23	P	Pn	02 30 29.9	-0.4
OUR	Ouranopolis	4.93	23	P	Pn	02 30 29.9	-0.4
HORT	Hortiatis	4.95	15	P	Pn	02 30 30.4	-0.2
HORT	Hortiatis	4.95	15	P	Pn	02 30 30.4	-0.2
FNA	Florina	4.97	359	P	Pn	02 30 30.7	-0.1
FNA	Florina	4.97	359	P	Pn	02 30 30.7	-0.1
BIA	Bitola	5.20	359	ePn	Pn	02 30 34.2	+0.1
KNT	Kendrikon	5.46	11	P	Pn	02 30 38.2	+0.6
KNT				S	Sn	02 31 39.0	-1.1
KNT	Kendrikon	5.46	11	P	Pn	02 30 38.2	+0.6
KNT				S	Sn	02 31 39.0	-1.1
KRUS	Krusevo	5.55	358	ePn	Pn	02 30 38.0	-0.9
SRS	Serrai	5.55	17	P	Pn	02 30 38.8	-0.1
SRS	Serrai	5.55	17	P	Pn	02 30 38.8	-0.1
SRS	Serrai	5.55	17	P	Pn	02 30 38.8	-0.1
VAY	Valandovo	5.57	9	ePn	Pn	02 30 38.5	-0.6
VAE	Valguarnera	5.92	288	Pn	Pn	02 30 46.4	+2.5
	2.1nm,0.3s,baz=91,slow=16,SNR=8.5						
VAE				Sn	Sn	02 31 52.6	+1.1
	0.7nm,0.3s,baz=90,slow=7.1,SNR=2.5						
VAE	Valguarnera	5.92	288	Pn	Pn	02 30 46.4	+2.5
VAE				Sn	Sn	02 31 52.6	+1.2
BARS	Barje	7.00	2	ePn	Pn	02 30 57.9	-0.9
STON	Ston	7.63	339	ePn	Pn	02 31 04.6	-2.8
STON				Sn	Sn	02 32 25.3	-8.4
NVLJ	Novalja	10.09	332	i Pn	Pn	02 31 41.1	0.0
NVLJ				Sn	Sn	02 33 25.2	-8.8
NVLJ	Novalja	10.09	332	i Pn	Pn	02 31 41.1	0.0
BRTR	Keskin Array B	10.39	64	Pn	Pn	02 31 39.5	-5.7
	0.1nm,0.3s,baz=247,slow=14,SNR=2.9						
EIL	Elat	12.89	115	Pn	Pn	02 32 17.3	-2.2
	0.2nm,0.3s,baz=324,slow=19,SNR=3.0						
EIL	Elat	12.89	115	Pn	Pn	02 32 17.3	-2.2
EIL	Elat	12.89	115	Pn	Pn	02 32 17.3	-2.1
MORC	Moravsky Berou	14.25	350	ePn	Pn	02 32 36.4	-1.6
MORC	Moravsky Berou	14.25	350	ePn	Pn	02 32 36.4	-1.5
ESDC	Sonseca Array	20.46	288	P	P	02 33 55.6	+1.8
	0.4nm,0.7s,baz=90,slow=14,SNR=4.1						
ESDC	Sonseca Array	20.46	288	P	P	02 33 55.6	+1.8
HFS	Hagfors	24.86	351	P	P	02 34 36.9	-1.5
	0.6nm,0.4s,mb3.5,baz=170,slow=9.9,SNR=5.0						
HFS	Hagfors	24.86	351	P	P	02 34 36.9	-1.5
EKA	Eskdalemuir Ar	25.81	327	P	P	02 34 48.0	+0.8
	0.9nm,0.8s,mb3.4,baz=134,slow=7.1,SNR=3.6						
EKA	Eskdalemuir Ar	25.81	327	P	P	02 34 48.0	+0.8
EKA	Eskdalemuir Ar	25.81	327	P	P	02 34 48.0	+0.8
FINES	FINESS Array B	25.82	5	P	P	02 34 44.8	-2.3
	2.1nm,0.9s,mb3.7,baz=163,slow=10,SNR=3.0						
NOA	NORSAR Array B	26.09	349	P	P	02 34 49.5	-0.1
	0.7nm,1.0s,mb3.2,baz=137,slow=9.7,SNR=3.3						
NOA	NORSAR Array B	26.09	349	P	P	02 34 49.5	-0.1
NOA	NORSAR Array B	26.09	349	P	P	02 34 49.5	-0.1
TORD	Torodi Ar. Bea	28.75	223	P	P	02 35 14.2	+0.3
	0.9nm,0.7s,mb3.6,baz=27,slow=9.0,SNR=8.4						
ARCES	ARCESS Array B	33.85	3	P	P	02 35 57.2	-1.1
	0.9nm,0.8s,mb3.8,baz=186,slow=9.8,SNR=5.3						
ARCES	ARCESS Array B	33.85	3	P	P	02 35 57.2	-1.1
ARCES	ARCESS Array B	33.85	3	P	P	02 35 57.2	-1.1
DBIC	Dimbokro	37.73	226	P	P	02 36 31.1	-1.0
	2.4nm,0.9s,mb4.0,baz=0.0,slow=6.1,SNR=3.2						
DBIC	Dimbokro	37.73	226	P	P	02 36 31.1	-1.0
MKAR	Makanchi Array	45.93	57	P	P	02 37 37.0	-1.9
	0.4nm,0.4s,mb3.7,baz=268,slow=7.7,SNR=9.4						
MKAR	Makanchi Array	45.93	57	P	P	02 37 37.0	-1.8
ZALV	Zalesovo Beam	46.73	47	P	P	02 37 42.4	-2.7
	0.8nm,0.3s,mb4.1,baz=267,slow=10,SNR=5.1						

IDC 14 02:38:01.4±0.8, 6°.87N×125°.99E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/21, mbtmp3.8/8, Error ellipse: s-maj=63.7km s-min=16.9km az=74.0
NEIC 14 02:38:06.8±0.6, 6°.84N×125°.97E, h35km, mb4.8/1, Error ellipse: s-maj=50.4km s-min=11.7km az=73.0
ISCJB 14 02:38:09.6±0.7, 6°.66N±0°.09×126°.15E±0°.08, h69km±7km, mb3.7/8, Error ellipse: s-maj=16.6km s-min=10.2km az=35.6
MAN 14 02:38:10, 6°.52N×126°.04E, h36km, mb4.6, ML3.5, MS3.4

ISC 14 02:38:10.8±0.6, 6.71N±0°.09×126°.15E±0°.08, h65km±7km, n14, σ1°01/17, mb3.7/8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.26	24	eP	Pn	02 38 22.2	+1.0
MATI				eS	Sn	02 38 27.1	-1.7
KCP	Kidapawan	1.09	286	⇓eP	Pn	02 38 29.6	-0.6
KCP				/ S	Sn	02 38 43.6	-1.1
BUKP	Musuan	1.59	317	eP	Pn	02 38 37.7	+1.0
BUKP				eS	Sn	02 38 58.1	+1.7
PAGZ	Pagadian	2.97	293	eP	Pn	02 38 55.8	+0.2
SCPH	Surigao	3.12	348	⇑eP	Pn	02 39 01.4	+3.8
KAKA	Kakadu	20.28	162	eP	P	02 42 41.5	+0.3
	23nm,0.6s						
FITZ	Fitzroy Crossi	24.66	181	P	P	02 43 26.3	+0.8
	1.7nm,0.6s,mb3.7,baz=344,slow=6.7,SNR=12						
WRA	Warramunga Arr	27.68	163	P	P	02 43 52.4	-0.4
	0.7nm,0.5s,mb3.5,baz=343,slow=10,SNR=16						
ASAR	Alice Springs	31.12	166	P	P	02 44 23.7	+0.4
	0.7nm,0.4s,mb3.8,baz=349,slow=6.9,SNR=11						
ASAR		PcP		PcP	PcP	02 47 17.3	-0.1
	0.6nm,0.9s,baz=329,slow=1.6,SNR=3.8						
STKA	Stephens Creek	41.10	160	P	P	02 45 48.8	+0.5
	1.8nm,0.4s,mb4.2,baz=327,slow=11,SNR=3.8						
MKAR	Makanchi Array	54.80	324	P	P	02 47 32.8	-1.2
	0.2nm,0.4s,mb3.5,baz=115,slow=7.6,SNR=4.9						
ZALV	Zalesovo Beam	57.69	332	P	P	02 47 50.6	-3.8
	0.4nm,0.4s,mb3.8,baz=137,slow=5.7,SNR=2.3						
ILAR	Eielson Array	82.68	26	P	P	02 50 27.0	0.0
	0.3nm,0.6s,mb3.3,baz=245,slow=4.6,SNR=8.1						
ARCES	ARCESS Array B	87.47	340	P	P	02 50 49.6	-1.2
	0.7nm,0.8s,mb3.6,baz=79,slow=6.8,SNR=2.7						

IDC 14 02:50:39.6±1.6, 1°.82N×127°.16E, h0km, mb4.2/4, mb1 4.3/5, mb1mx3.9/18, mbtmp4.2/5, MS3.3/1, Ms1 3.3/1, ms1mx2.9/21, Error ellipse: s-maj=101.3km s-min=20.9km az=68.0
NEIC 14 02:50:44.1±0.8, 1°.95N×127°.52E, h35km, mb4.3/1, Error ellipse: s-maj=55.6km s-min=9.4km az=69.0

ISC 14 02:50:44.2±1.1, 2°.0N±0°.2×127°.5E±0°.5, h35km, n10, σ0°21/9, mb4.2/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.01	185	P	P	02 55 14.0	0.0
	0.2nm,0.3s,baz=17,slow=8.3,SNR=9.2						
WRA	Warramunga Arr	22.76	163	P	P	02 55 43.6	+0.1
	4.1nm,0.3s,mb4.3,baz=338,slow=11,SNR=112						
WB2	Warramunga Arr	22.77	163	eP	P	02 55 43.7	+0.1
ASAR	Alice Springs	26.21	167	P	P	02 56 15.5	-0.3
	2.0nm,0.5s,mb3.9,baz=349,slow=7.4,SNR=31						
STKA	Stephens Creek	36.20	159	P	P	02 57 43.7	+0.1
	3.3nm,0.5s,mb4.5,baz=320,slow=8.2,SNR=8.7						
STKA	Stephens Creek	36.20	159	P	P	02 57 43.7	+0.1
PETK	Petropavlovsk-	56.78	21	LR	LR	03 22 02.5	
	comp=Z,26nm,21.5s,baz=264,slow=33						
MK31	Makanchi Array	59.46	326	eP	P	03 00 43.6	+0.1
MKAR	Makanchi Array	59.46	326	P	P	03 00 43.8	+0.3
	1.1nm,0.5s,mb4.2,baz=118,slow=8.8,SNR=18						
KURK	Kurchatov	63.65	328	eP	P	03 01 11.4	-0.4
	1.6nm,0.6s,mb4.2						

ISCJB 14 02:54:50.5±0.5, 1°.61N±0°.07×99°.53E±0°.08, h180km±5km, mb3.7/6, Error ellipse: s-maj=15.5km s-min=7.3km az=142.8
IDC 14 02:54:51.5±1.2, 1°.73N×99°.81E, h167km±21km, mb3.5/5, mb1 3.6/5, mb1mx3.3/21, mbtmp3.5/5, Error ellipse: s-maj=122.1km s-min=16.2km az=57.0
NEIC 14 02:54:51.7±1.0, 1°.63N×99°.68E, h174km±7km, mb3.6/1, Error ellipse: s-maj=24.9km s-min=12.0km az=54.0
DJA 14 02:54:51, 1°.57N×99°.49E, h174km, MLv3.7/8

ISC 14 02:54:51.5±0.5, 1°.61N±0°.07×99°.53E±0°.08, h174km±5km, n19, σ0°68/23, mb3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.81	177	P	Pn	02 55 17.9	+0.6
MNSI				S	Sn	02 55 38.2	+1.1
PSI	Prapat	1.33	333	P	Pn	02 55 21.4	0.0
	2.5nm,0.3s,baz=125,slow=7.6,SNR=8.3						
PSI				S	Sn	02 55 43.1	-1.4
	1.8nm,0.3s,baz=340,slow=23,SNR=24						
PSI	Prapat	1.33	333

IDC **14** *04:09:45.7±0.5,28°.27N×139°.71E,h421km±5km,mb3.7/19, mb1 3.9/24,mb1mx3.8/29,mbtmp3.7/24,Error ellipse: s-maj=11.0km s-min=8.6km az=72.0*
JMA **14** *04:09:46.2±0.3,28°.34N×140°.12E,h439km±4km,M4.5*
NEIC **14** *04:09:47.7±0.6,28°.29N×139°.64E,h440km±6km,mb4.1/44, Error ellipse: s-maj=5.7km s-min=5.1km az=162.0*
BJI **14** *04:09:47.0,28°.32N×139°.49E,h425km,mB4.5/19, mb4.3/27*
ISC 14 04:09:46.5±0.3,28°.28N±0°.03×139°.66E±0°.03,h420km±3km, h415km±9.7km:pP-P,n310,σ0°82/310,mb4.2/89,47C-55D,
Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.53**	**117**	P			**P**	**04 10 46.3**	**-1.5**
	457nm,0.3s,baz=37,slow=2.3,SNR=75								
CBIJ				S			**S**	**04 11 35.7**	**-1.7**
	192nm,0.3s,baz=250,slow=22,SNR=12								
CBIJ	**Chichi jima**	**2.53**	**117**	P			**P**	**04 10 47.3**	**-0.5**
CBIJ				*e*S			**S**	**04 11 35.2**	**-2.2**
JHHJ	**Haha-jima-NKT**	**2.78**	**126**	P			**P**	**04 10 49.2**	**-0.4**
JHHJ				S			**S**	**04 11 39.6**	**-1.1**
JHJ2	**Mitsune**	**4.82**	**2**	P			**P**	**04 11 08.8**	**+1.3**
JHJ2				*e*S			**S**	**04 12 12.0**	**-1.5**
JHJ	**Hachijo jima 2**	**4.83**	**1**	P			**P**	**04 11 08.9**	**+1.3**
	110nm,0.3s,baz=126,slow=2.8,SNR=29								
JHJ				S			**S**	**04 12 11.4**	**-2.3**
	99nm,0.3s,baz=73,slow=23,SNR=7.4								
JMY	**Miyakejima3**	**5.78**	**359**	P			**P**	**04 11 18.9**	**+1.6**
JWZ	**Kozaga**	**6.23**	**328**	P			**P**	**04 11 25.1**	**+3.0**
BSO1	**Boso 1**	**6.45**	**10**	P			**P**	**04 11 24.7**	**+0.2**
BSO1				*e*S			**S**	**04 12 42.3**	**-2.3**
JIE	**Ise**	**6.59**	**338**	P			**P**	**04 11 29.1**	**+3.1**
JOD2	**Odawara 2**	**6.98**	**356**	P			**P**	**04 11 30.3**	**+0.1**
JOD2				*e*S			**S**	**04 12 52.3**	**-2.8**
JTO	**Tosashimizu**	**7.47**	**309**	P			**P**	**04 11 39.2**	**+3.6**
JTO				*e*S			**S**	**04 13 10.6**	**+5.6**
JRY	**Ryogami san**	**7.74**	**355**	P			**P**	**04 11 39.1**	**+0.6**
JRY				*e*S			**S**	**04 13 07.7**	**-2.8**
MJAR	**Matsushiro Arr**	**8.33**	**352**	P			**P**	**04 11 44.9**	**-0.2**
	8.6nm,0.3s,baz=175,slow=11,SNR=114								
MJAR	**Matsushiro Arr**	**8.33**	**352**	P			**P**	**04 11 44.9**	**-0.1**
MAJO	**Matsushiro**	**8.33**	**352**	*e*P			**P**	**04 11 44.5**	**-0.5**
MAJO	**Matsushiro**	**8.33**	**352**	*e*P			**P**	**04 11 44.5**	**-0.5**
MAT	**Matsushiro**	**8.33**	**352**	P			**P**	**04 11 45.0**	**0.0**
MAT				S			**S**	**04 13 14.0**	**-8.4**
MAT	**Matsushiro**	**8.33**	**352**	P			**P**	**04 11 45.1**	**+0.1**
MAT				*e*S			**S**	**04 13 19.5**	**-2.9**
JHS	**Saijyo**	**8.71**	**322**	P			**P**	**04 11 52.6**	**+3.3**
JHS				S			**S**	**04 13 34.7**	**+4.5**
JNU	**Nakatsue**	**8.96**	**305**	*e*P			**P**	**04 11 55.6**	**+3.5**
	7.9nm,0.8s								
JSJ	**Shimokoshiki**	**9.26**	**294**	P			**P**	**04 11 58.8**	**+3.4**
JMK	**Ichinoseki**	**10.72**	**7**	P			**P**	**04 12 12.7**	**+1.2**
JMK				*e*S			**S**	**04 14 11.3**	**+0.3**
KSRS	**Korea Array**	**13.44**	**316**	P			**P**	**04 12 42.3**	**+1.0**
	0.3nm,0.3s,baz=128,slow=12,SNR=16								
KSRS				PcP			PcP	04 17 34.0	-1.4
	0.1nm,0.3s,baz=166,slow=1.0,SNR=5.7								
KSRS				ScP			ScP	04 20 26.4	-2.1
	0.1nm,0.3s,baz=224,slow=0.8,SNR=7.3								
KSRS	**Korea Array**	**13.44**	**316**	P			**P**	**04 12 42.3**	**+1.0**
JKB	**Kayabe**	**13.62**	**4**	P			**P**	**04 12 44.8**	**+1.6**
JOSM	**Okushiri--Mats**	**13.77**	**359**	P			**P**	**04 12 46.5**	**+1.7**
GUMO	**Guam**	**15.40**	**161**	P			**P**	**04 13 03.4**	**+0.7**
	20nm,0.3s,baz=356,slow=2.8,SNR=7.0								
GUMO	**Guam**	**15.40**	**161**	P			**P**	**04 13 03.4**	**+0.7**
ASAJ	**Asahikawa**	**15.98**	**8**	P			**P**	**04 13 09.3**	**+0.8**
	0.5nm,0.3s,baz=120,slow=14,SNR=2.9								
ASAJ	**Asahikawa**	**15.98**	**8**	P			**P**	**04 13 09.4**	**+0.8**
ASAJ				pmax			pmax		
	comp=Z,1.0nm,0.3s								
VLA	**Vladivostok**	**16.08**	**339**	*i*P			**P**	**04 13 11.5**	**+1.8**
VLA				pmax			pmax		
	comp=Z,1.0nm,71.9s								
YULB	**Yu-li**	**17.23**	**258**	*e*P			**P**	**04 13 24.1**	**+2.0**
	comp=Z,143nm,1.8s								
MDJ	**Mudanjiang**	**18.18**	**336**	P			**P**	**04 13 32.1**	**+0.3**
MDJ				S			**S**	**04 16 37.8**	**0.0**
MDJ				ScP			ScP	04 20 35.3	-2.1
MDJ				PcS			PcS	04 21 19.3	+0.1
MDJ				ScS			ScS	04 24 16.3	-2.0
MDJ				pmax			pmax		
	comp=Z,3.0nm,0.9s								
MDJ				pmax			pmax		
	comp=Z,67nm,4.7s								
YSS	**Yuzh-Sakhalins**	**18.80**	**7**	*e*P			**P**	**04 13 38.5**	**+0.3**
HABR	**Khabarovsk**	**20.48**	**351**	*e*P			**P**	**04 13 53.2**	**-0.4**
HABR				*SP			sP	04 15 49.9	+1.3
HABR				S			**S**	**04 17 13.8**	**-1.4**
HABR				*e*				04 24 23.1	
HABR				MLR			MLR		
	comp=Z,117nm,19.0s								
HHC	**Hu-ho-hao-te**	**26.19**	**306**	*e*P			**P**	**04 14 47.1**	**+1.9**
HHC				PcP			PcP	04 18 01.0	+2.0
HHC				S			**S**	**04 18 47.8**	**+1.8**
HHC				ScS			ScS	04 24 46.8	-2.0
HHC				pmax			pmax		
	comp=Z,12nm,1.1s,mb4.2								
HHC				pmax			pmax		
	comp=Z,130nm,6.7s								
ENH	**Enshi**	**26.36**	**282**	*e*P			**P**	**04 14 46.3**	**-0.4**
	comp=Z,31nm,1.0s,mb4.7								
GYA	**Guiyang**	**29.31**	**274**	*e*P			**P**	**04 15 13.8**	**+1.0**
GYA				pP				04 16 32.0	
GYA				PcP			PcP	04 18 07.8	+0.8
GYA				S			**S**	**04 19 34.0**	**-1.1**
GYA				ScP			ScP	04 21 05.4	-2.8
GYA				PcS			PcS	04 21 49.0	-1.6
GYA				ScS			ScS	04 25 01.6	-2.0
GYA				pmax			pmax		
	comp=Z,10.0nm,0.8s,mb4.2								
LZH	**Lanzhou**	**31.16**	**294**	P			**P**	**04 15 28.5**	**-0.3**
LZH				pP			pP	04 16 48.6	+3.8
LZH				PP			PP	04 16 55.3	+4.8
LZH				sP			sP	04 17 39.3	+5.6
LZH				pmax			pmax		
	comp=Z,15nm,1.0s,mb4.3								
LZH				pmax			pmax		
	comp=Z,46nm,4.1s								
CD2	**Chengdu**	**31.24**	**284**	*e*P			**P**	**04 15 30.3**	**+0.7**
CD2				pmax			pmax		
	comp=Z,10.0nm,0.6s,mb4.3								
CD2				pmax			pmax		
	comp=Z,30nm,5.2s								
ULN	**Ulaanbaatar**	**31.93**	**317**	*e*P			**P**	**04 15 35.9**	**+0.7**
	comp=Z,6.6nm,0.9s,mb4.0								
ULN				*e*PcP			PcP	04 18 13.4	-0.2
ULN	**Ulaanbaatar**	**31.93**	**317**	*e*P			**P**	**04 15 35.9**	**+0.7**
ULN				*e*				04 18 13.4	
ULN				pmax			pmax		
	comp=Z,7.0nm,0.9s,mb4.0								
SONM	**Songino Array**	**32.31**	**316**	P			**P**	**04 15 38.8**	**+0.2**
	comp=Z,2.5nm,0.5s,mb3.8,baz=126,slow=8.4,SNR=10								
SONM				PcP			PcP	04 18 14.1	-0.6
	comp=Z,1.2nm,0.4s,baz=117,slow=2.5,SNR=6.0								
SONM				ScP			ScP	04 21 15.8	-2.0
	comp=Z,2.0nm,0.6s,baz=141,slow=3.3,SNR=8.8								
SONM	**Songino Array**	**32.31**	**316**	P			**P**	**04 15 38.8**	**+0.3**
SONM				pP				04 18 14.1	
GTA	**Gaotai**	**34.65**	**299**	P			**P**	**04 15 58.9**	**+0.3**
GTA				pmax			pmax		
	comp=Z,9.0nm,0.9s,mb4.1								
ZAK	**Zakamensk**	**35.25**	**319**	*e*P			**P**	**04 16 03.6**	**+0.2**
ZAK				pmax			pmax		
	comp=Z,3.0nm,1.2s,mb3.5								
SEY	**Seymchan**	**35.64**	**10**	⇓*e*P			**P**	**04 16 07.2**	**+0.6**
CHTO	**Chiang Mai**	**38.34**	**265**	*e*P			**P**	**04 16 29.6**	**+0.1**
	comp=Z,6.6nm,0.8s,mb4.0								
CHTO	**Chiang Mai**	**38.34**	**265**	*e*P			**P**	**04 16 29.7**	**+0.1**
CHTO				pmax			pmax		
	comp=Z,7.0nm,0.8s,mb4.0								
CMAR	**Chiang Mai Arr**	**38.48**	**264**	P			**P**	**04 16 31.1**	**+0.5**
	comp=Z,2.1nm,0.6s,mb3.6,baz=84,slow=4.8,SNR=11								
CMAR	**Chiang Mai Arr**	**38.48**	**264**	P			**P**	**04 16 31.2**	**+0.5**
BILL	**Bilibino**	**42.84**	**14**	⇑*e*P			**P**	**04 17 05.9**	**+0.9**
BILL				pmax			pmax		
	comp=Z,30nm,1.4s,mb4.4								
KULM	**Kulim**	**43.48**	**246**	*e*P			**P**	**04 17 11.0**	**+0.1**
	comp=Z,12nm,0.7s,mb4.3								
WMQ	**Urumqi**	**44.06**	**305**	*e*P			**P**	**04 17 16.0**	**+0.9**
TAPN	**Taplejung**	**45.66**	**282**	*e*P			**P**	**04 17 27.3**	**-0.4**
	comp=Z,11nm,0.5s,mb4.5								
ODAN	**Odare**	**46.05**	**281**	*e*P			**P**	**04 17 30.9**	**+0.1**
	comp=Z,15nm,0.4s,mb4.7								
PSI	**Prapat**	**46.34**	**244**	P			**P**	**04 17 33.0**	**-0.1**
	comp=Z,3.7nm,0.3s,mb4.2,baz=59,slow=4.3,SNR=11								
PSI	**Prapat**	**46.34**	**244**	P			**P**	**04 17 33.0**	**-0.1**
GUN	**Gumba**	**47.10**	**283**	*e*P			**P**	**04 17 39.5**	**+0.7**
ZALV	**Zalesovo Beam**	**47.13**	**319**	P			**P**	**04 17 37.0**	**-1.5**
	comp=Z,1.0nm,0.3s,mb3.6,baz=93,slow=7.4,SNR=4.7								
ZALV				PcP			PcP	04 19 01.0	-1.3
	comp=Z,5.6nm,0.5s,baz=116,slow=2.8,SNR=15								
ZALV				ScP			ScP	04 22 12.2	-3.1
	comp=Z,2.1nm,0.4s,baz=106,slow=1.5,SNR=2.6								
ZALV	**Zalesovo Beam**	**47.13**	**319**	P			**P**	**04 17 37.0**	**-1.5**
ZALV				PcP			PcP	04 19 01.0	-1.3
ZALV				ScP			ScP	04 22 12.2	-3.1
ZALV	**Zalesovo Beam**	**47.13**	**319**	P			**P**	**04 17 37.1**	**-1.4**
ZALV				pP			pP	04 19 01.0	-0.1
PKI	**Pulchoki**	**47.59**	**283**	*e*P			**P**	**04 17 42.2**	**-0.3**
	comp=Z,13nm,0.6s,mb4.4								
DMN	**Daman**	**47.84**	**283**	*e*P			**P**	**04 17 44.4**	**0.0**
	comp=Z,11nm,0.5s,mb4.4								
MK31	**Makanchi Array**	**47.99**	**309**	*e*P			**P**	**04 17 44.8**	**-0.4**
MK31				*e*PcP			PcP	04 19 04.5	-1.1
MK31	**Makanchi Array**	**47.99**	**309**	*e*P			**P**	**04 17 44.8**	**-0.4**
MK31				*e*			pP	04 19 04.5	-3.7
MKAR	**Makanchi Array**	**47.99**	**309**	P			**P**	**04 17 44.5**	**-0.7**
	comp=Z,3.3nm,0.8s,mb3.7,baz=93,slow=9.4,SNR=16								
MKAR				PcP			PcP	04 19 04.8	-0.8
	comp=Z,3.9nm,0.7s,baz=83,slow=5.9,SNR=20								
MKAR				ScP			ScP	04 22 15.8	-3.4
	comp=Z,0.8nm,0.5s,baz=85,slow=6.2,SNR=8.5								
MKAR	**Makanchi Array**	**47.99**	**309**	P			**P**	**04 17 44.5**	**-0.7**
MKAR				pP			pP	04 19 04.8	-3.4
WRA	**Warramunga Arr**	**48.21**	**187**	PcP			PcP	04 19 05.8	-0.9
	comp=Z,0.3nm,0.3s,baz=1.0,slow=3.8,SNR=5.3								
WRA				ScP			ScP	04 22 16.6	-3.7
	comp=Z,2.7nm,0.8s,baz=2.6,slow=4.5,SNR=5.2								
CTA	**Charters Tower**	**48.50**	**172**	P			**P**	**04 17 48.4**	**-0.9**
	comp=Z,2.3nm,0.6s,mb3.7,baz=351,slow=8.4,SNR=4.0								
CTA	**Charters Tower**	**48.50**	**172**	P			**P**	**04 17 48.4**	**-0.9**
CTA	**Charters Tower**	**48.50**	**172**	P			**P**	**04 17 48.4**	**-0.9**
DANN	**Dangsing**	**48.81**	**284**	*e*P			**P**	**04 17 52.3**	**+0.6**
	comp=Z,16nm,0.4s,mb4.7								
KOLN	**Koldanda**	**49.09**	**283**	*e*P			**P**	**04 17 53.5**	**-0.3**
	comp=Z,7.5nm,0.4s,mb4.3								
KURK	**Kurchatov**	**50.56**	**314**	*e*P			**P**	**04 18 03.8**	**-0.4**
	comp=Z,8.9nm,0.9s,mb4.0								
KURK	**Kurchatov**	**50.56**	**314**	*de*P			**P**	**04 18 03.6**	**-0.6**
KURK				pmax			pmax		
	comp=Z,12nm,1.0s,mb4.1								
ASAR	**Alice Springs**	**51.94**	**187**	P			**P**	**04 18 13.5**	**-1.1**
	comp=Z,0.4nm,0.3s,mb3.1,baz=14,slow=8.6,SNR=13								
ASAR	**Alice Springs**	**51.94**	**187**	P			**P**	**04 18 13.5**	**-1.1**
TKM2	**Tokmak 2**	**52.90**	**304**	*e*P			**P**	**04 18 22.2**	**+0.7**
	comp=Z,1.9nm,0.3s,mb3.8								
TKM2	**Tokmak 2**	**52.90**	**304**	*e*P			**P**	**04 18 22.2**	**+0.8**
TKM2				pmax			pmax		
	comp=Z,2.0nm,0.3s,mb3.8								
KBK	**Karagaybulak**	**53.41**	**304**	*e*P			**P**	**04 18 25.8**	**+0.7**
AAK	**Ala-Archa**	**53.74**	**304**	P			**P**	**04 18 27.4**	**0.0**
	comp=Z,0.8nm,0.3s,mb3.4,baz=196,slow=10,SNR=4.5								
AAK	**Ala-Archa**	**53.74**	**304**	*e*P			**P**	**04 18 27.7**	**+0.2**
	comp=Z,1.9nm,0.5s,mb3.6								
AAK	**Ala-Archa**	**53.74**	**304**	⇑*i*P			**P**	**04 18 27.4**	**-0.1**
AAK				pmax			pmax		
	comp=Z,3.0nm,1.7s,mb3.2								
EKS2	**Erkin-Say**	**54.26**	**304**	*e*P			**P**	**04 18 31.1**	**0.0**
	comp=Z,2.0nm,0.8s,mb3.4								
AML	**Almayashu**	**54.39**	**303**	*e*P			**P**	**04 18 33.3**	**+1.2**
	comp=Z,4.0nm,0.4s,mb4.0								
KDAK	**Kodiak Island**	**54.77**	**37**	P			**P**	**04 18 33.9**	**-0.6**
	comp=Z,12nm,0.9s,mb4.1,baz=122,slow=6.0,SNR=3.6								
KDAK	**Kodiak Island**	**54.77**	**37**	P			**P**	**04 18 33.9**	**-0.6**
BVAR	**Borovoye Array**	**55.65**	**317**	P			**P**	**04 18 40.6**	**-0.2**
	comp=Z,7.7nm,0.6s,mb4.2,baz=91,slow=8.9,SNR=44								
BVAR				PcP			PcP	04 19 33.4	-1.0
	comp=Z,2.9nm,0.6s,baz=90,slow=4.4,SNR=6.4								
BVAR				ScP			ScP	04 22 49.2	-3.0
	comp=Z,0.8nm,0.6s,baz=73,slow=4.8,SNR=3.6								
BVAR	**Borovoye Array**	**55.65**	**317**	P			**P**	**04 18 40.6**	**-0.2**
BVAR								04 19 33.4	
BRVK	**Borovoye**	**55.72**	**317**	*e*P			**P**	**04 18 40.9**	**-0.3**
	comp=Z,14nm,0.9s,mb4.3								
BRVK	**Borovoye**	**55.72**	**317**	⇓*e*P			**P**	**04 18 40.6**	**-0.6**
BRVK				pmax			pmax		
	comp=Z,19nm,1.1s,mb4.3								
KKAR	**Karatay Array**	**56.58**	**305**	*e*P			**P**	**04 18 47.3**	**-0.1**
	comp=Z,14nm,0.9s,mb4.3								
KKAR	**Karatay Array**	**56.58**	**305**	*e*P			**P**	**04 18 47.3**	**-0.1**
KKAR				pmax			pmax		
	comp=Z,14nm,0.9s,mb4.3								
COLD	**Coldfoot**	**56.58**	**26**	*e*P			**P**	**04 18 47.8**	**+0.7**
MCK	**McKinley**	**56.83**	**30**	*e*P			**P**	**04 18 48.6**	**-0.2**
	comp=Z,7.7nm,0.8s,mb4.1								
MCK	**McKinley**	**56.83**	**30**	*e*P			**P**	**04 18 48.6**	**-0.2**
MCK				pmax			pmax		
	comp=Z,8.0nm,0.8s,mb4.1								
COLA	**College**	**57.35**	**29**	*e*P			**P**	**04 18 52.6**	**+0.2**
	comp=Z,2.3nm,0.6s,mb3.7								
COLA	**College**	**57.35**	**29**	*e*P			**P**	**04 18 52.6**	**+0.2**
COLA				pmax			pmax		
	comp=Z,2.0nm,0.6s,mb3.6								
ILAR	**Eielson Array**	**57.76**	**29**	P			**P**	**04 18 54.1**	**-1.1**
	comp=Z,1.8nm,0.6s,mb3.6,baz=291,slow=8.1,SNR=30								
ILAR	**Eielson Array**	**57.76**	**29**	P			**P**	**04 18 54.1**	**-1.1**
ILAR	**Eielson Array**	**57.76**	**29**	P			**P**	**04 18 54.1**	**-1.1**
KBL	**Kabul**	**59.49**	**295**	*e*P			**P**	**04 19 07.4**	**-0.1**
	comp=Z,3.3nm,0.5s,mb3.9								
KBL	**Kabul**	**59.49**	**295**	*e*P			**P**	**04 19 07.4**	**-0.1**
KBL				pmax			pmax		
	comp=Z,3.0nm,0.5s,mb3.9								
STKA	**Stephens Creek**	**59.85**	**178**	P			**P**	**04 19 09.1**	**-0.7**
	comp=Z,3.7nm,0.8s,mb3.9,baz=295,slow=8.3,SNR=3.6								
STKA	**Stephens Creek**	**59.85**	**178**	P			**P**	**04 19 09.1**	**-0.7**
EGAK	**Eagle**	**60.22**	**29**	*e*P			**P**	**04 19 11.5**	**-0.3**
	comp=Z,3.0nm,0.6s,mb3.9								
SVE	**Sverdlovsk**	**60.92**	**322**	⇓*e*P			**P**	**04 19 16.8**	**+0.2**
SVE				pmax			pmax		
	comp=Z,16nm,0.8s,mb4.5								
DAWY	**Dawson**	**61.04**	**30**	*e*P			**P**	**04 19 17.2**	**-0.1**
ARU	**Arti**	**62.11**	**322**	*e*P			**P**	**04 19 23.7**	**-0.8**
	comp=Z,17nm,0.6s,mb4.8								
ARU				*e*PcP			PcP	04 19 58.7	-1.5
ARU	**Arti**	**62.11**	**322**	*d i*P			**P**	**04 19 23.8**	**-0.7**
ARU				*e*				04 19 58.1	
ARU				*e*				04 21 43.3	
ARU				S			**S**	**04 27 14.8**	**-0.8**
ARU				SS			SS	04 31 30.8	+4.0
ARU				pmax			pmax		
	comp=Z,23nm,1.0s,mb4.7								
ABKAR	**Akbulak array**	**62.66**	**313**	*e*P			**P**	**04 19 27.5**	**-0.8**
	comp=Z,6.1nm,0.5s,mb4.4								
INK	**Inuvik**	**62.89**	**25**	*e*P			**P**	**04 19 28.6**	**-0.8**
	comp=Z,2.5nm,0.5s,mb4.0								
INK	**Inuvik**	**62.89**	**25**	*e*P			**P**	**04 19 28.6**	**-0.8**
INK				pmax			pmax		
	comp=Z,3.0nm,0.5s								
PRGR	**Permogore**	**67.39**	**329**	*e*P			**P**	**04 19 56.6**	**-1.4**
PRGR				pmax			pmax		
	comp=Z,19nm,0.7s,mb4.8								
KLMR	**Klimovskoe**	**70.43**	**329**	*e*P			**P**	**04 20 14.6**	**-1.9**
KLMR				pmax			pmax		
	comp=Z,17nm,0.9s,mb4.6								
KEV	**Kevo**	**71.12**	**340**	*e*P			**P**	**04 20 20.1**	**-0.4**
	comp=Z,16nm,0.9s,mb4.6								
KEV	**Kevo**	**71.12**	**340**	*e*P			**P**	**04 20 20.1**	**-0.3**
KEV				pmax			pmax		
	comp=Z,11nm,0.6s,mb4.6								
KEV	**Kevo**	**71.12**	**340**	*e*p			**P**	**04 20 20.1**	**-0.3**
	comp=Z,11nm,0.6s,mb4.6								
RES	**Resolute Bay**	**71.43**	**13**	*e*P			**P**	**04 20 22.2**	**0.0**
	comp=Z,21nm,0.8s,mb4.7								
RES	**Resolute Bay**	**71.43**	**13**	*e*P			**P**	**04 20 22.2**	**0.0**
RES				pmax			pmax		
	comp=Z,21nm,0.8s,mb4.7								
ARCES	**ARCESS Array B**	**71.68**	**340**	P			**P**	**04 20 23.7**	**-0.1**
	comp=Z,10nm,0.4s,mb4.7,baz=75,slow=8.8,SNR=254								
ARCES	**ARCESS Array B**	**71.68**	**340**	P			**P**	**04 20 23.7**	**-0.1**
ARCES	**ARCESS Array B**	**71.68**	**340**	P			**P**	**04 20 23.7**	**0.0**
ARE0	**ARCESS Array S**	**71.68**	**340**	*e*P			**P**	**04 20 23.5**	**-0.2**
YKA	**Yellowknife Ar**	**72.16**	**28**	P			**P**	**04 20 26.0**	**-0.7**
	comp=Z,4.2nm,0.6s,mb4.2,baz=298,slow=6.1,SNR=17								
YKA	**Yellowknife Ar**	**72.16**	**28**	P			**P**	**04 20 26.0**	**-0.7**
KTK1	**Kautokeino**	**72.65**	**340**	*e*P			**P**	**04 20 29.0**	**-0.4**
JOF	**Joensuu**	**73.02**	**333**	*e*P			**P**	**04 20 30.9**	**-0.8**
JOF				pmax			pmax		
	comp=Z,25nm,0.5s,mb5.0								
JOF	**Joensuu**	**73.02**	**333**	*e*p			**P**	**04 20 30.9**	**-0.8**
	comp=Z,25nm,0.5s,mb5.0								
TRO	**Tromso**	**73.52**	**342**	*e*P			**P**	**04 20 33.3**	**-1.1**
TRO				AMb			AMB	04 20 35.0	
	comp=Z,13nm,0.7s,mb4.7								
TRO	**Tromso**	**73.52**	**342**	*e*P			**P**	**04 20 33.3**	**-1.1**
	comp=Z,13nm,0.7s,mb4.7								
TRO	**Tromso**	**73.52**	**342**	*e*P			**P**	**04 20 33.3**	**-1.1**
TRO				pmax			pmax		
	comp=Z,13nm,0.7s,mb4.7								
OBN	**Obninsk**	**74.28**	**324**	*oe*P			**P**	**04 20 38.5**	**-0.5**
OBN				pmax			pmax		
	comp=Z,17nm,0.7s,mb4.8								
VSR	**Storozhevoye**	**74.61**	**320**	*e*P			**P**	**04 20 39.6**	**-1.4**
VSR				pmax			pmax		
	comp=N,3.0nm,0.6s								
VSR				pmax			pmax		
	comp=E,3.0nm,0.6s								
VSR				pmax			pmax		
	comp=Z,10.0nm,0.6s,mb4.6								
VORD	**Divnogorie**	**74.65**	**320**	*e*P			**P**	**04 20 40.0**	**-1.2**
VORD				pmax			pmax		
	comp=N,5.0nm,0.6s								
VORD				pmax			pmax		
	comp=E,3.0nm,0.6s								
VORD				pmax			pmax		
	comp=Z,7.0nm,0.6s,mb4.5								
ZEI	**Tsey**	**75.30**	**311**	*e*P			**P**	**04 20 43.3**	**-1.8**
ZEI				pmax			pmax		
	comp=Z,10.0nm,0.9s,mb4.5								
KAF	**Kangasniemi**	**75.43**	**334**	*e*P			**P**	**04 20 44.5**	**-0.9**
KAF				pmax			pmax		
	comp=Z,11nm,0.4s,mb4.8								
KAF	**Kangasniemi**	**75.43**	**334**	*e*p			**P**	**04 20 44.5**	**-0.9**
	comp=Z,11nm,0.4s,mb4.8								
KIV	**Kislovodsk**	**75.60**	**312**	*e*P			**P**	**04 20 47.8**	**+1.1**
KIV				pmax			pmax		
	comp=Z,12nm,1.0s,mb4.5								
GNI	**Garni**	**75.83**	**308**	*ce*P			**P**	**04 20 48.5**	**+0.4**
GNI				pmax			pmax		
	comp=Z,8.0nm,1.2s								
FINES	**FINESS Array B**	**75.89**	**333**	P			**P**	**04 20 47.2**	**-0.8**
	comp=Z,17nm,0.3s,mb5.2,baz=71,slow=4.8,SNR=367								
FINES	**FINESS Array B**	**75.89**	**333**	P			**P**	**04 20 47.2**	**-0.8**
B08A	**Colville Reser**	**76.18**	**42**	⇑P			**P**	**04 20 49.8**	**-0.1**
	baz=76								
D08A	**Wollman Farm,**	**77.03**	**43**	⇑P			**P**	**04 20 54.2**	**-0.4**
	baz=77								
C09A	**Chrisman Ranch**	**77.07**	**43**	⇓P			**P**	**04 20 55.0**	**+0.2**
	baz=77								
VSU	**Vasula**	**77.27**	**330**	*ce*P			**P**	**04 20 55.1**	**-0.5**
VSU				pmax			pmax		
	comp=Z,38nm,1.2s,mb4.9								
NEW	**Newport**	**77.53**	**42**	*e*P			**P**	**04 20 57.4**	**+0.1**
	comp=Z,2.5nm,0.7s,mb4.0								
NEW	**Newport**	**77.53**	**42**	*e*P			**P**	**04 20 57.4**	**+0.1**
NEW				pmax			pmax		
	comp=Z,3.0nm,0.7s								

A19A	Klindworth Far	81.94	38	⇓P		P	04 21 20.9 +0.2
	baz=82						
BOZ	Bozeman (W)	82.10	42	⇓P		P	04 21 21.7 +0.1
	baz=82						
BOZ	Bozeman (W)	82.10	42	*e*P		P	04 21 21.6 +0.1
	comp=Z,0.9nm,0.6s,mb3.7						
BOZ	Bozeman (W)	82.10	42	*e*P		P	04 21 21.6 +0.1
BOZ					pmax	pmax	
	comp=Z,1.0nm,0.6s,mb3.7						
E17A	Martinsdale	82.12	41	⇑P		P	04 21 22.1 +0.5
	baz=82						
J14A	Carey	82.19	45	⇓P		P	04 21 22.8 +0.8
	baz=82,SNR=5.4						
G16A	Moss Hill, Enn	82.22	43	⇓P		P	04 21 21.8 -0.4
	baz=82						
D18A	Linhart Farms,	82.32	40	⇓P		P	04 21 22.9 +0.3
	baz=82						
C19A	Slack Wire Ran	82.44	39	⇓P		P	04 21 23.4 +0.2
	baz=82,SNR=5.4						
E18A	Harlowton	82.60	41	P		P	04 21 24.9 +0.8
	baz=82,SNR=8.7						
OSL	Oslo	82.64	337	*e*P		P	04 21 23.1 -0.9
K14A	Jones Ranch, D	82.81	45	⇑P		P	04 21 26.4 +1.1
	baz=83						
J15A	Blackfoot	82.82	44	⇓P		P	04 21 26.2 +1.0
	baz=83						
D19A	Cripps Ranch,	82.86	40	⇓P		P	04 21 25.8 +0.4
	baz=83,SNR=5.3						
GRAC	Grapevine Rang	82.88	52	⇓P		P	04 21 25.9 +0.2
	baz=83						
C20A	Veseth Ranch,	83.04	39	⇓P		P	04 21 26.6 +0.4
	baz=83						
L14A	Malta	83.04	46	⇓P		P	04 21 27.4 +1.0
	baz=83,SNR=5.5						
F18A	Big Timber	83.08	41	⇑P		P	04 21 27.0 +0.5
	baz=83						
B21A	Ellsworth Farm	83.17	38	⇑P		P	04 21 26.9 0.0
	baz=83						
E19A	Rath Farm, Rou	83.31	40	⇑P		P	04 21 28.0 +0.4
	baz=83						
D20A	Manuel Ranch,	83.32	40	⇓P		P	04 21 27.9 +0.3
	baz=83,SNR=5.3						
J16A	Bone	83.39	44	⇓P		P	04 21 29.2 +1.1
	baz=83,SNR=5.1						
R11A	Troy Canyon, C	83.42	50	⇓P		P	04 21 28.8 +0.4
	baz=83						
IMW	Indian Meadow	83.47	43	*e*P		P	04 21 29.6 +1.1
	comp=Z,3.4nm,0.8s,mb4.1						
C21A	Desert Coulee	83.48	39	⇓P		P	04 21 28.7 +0.2
	baz=83,SNR=5.7						
FURC	Furnace Creek,	83.50	52	⇓P		P	04 21 29.3 +0.5
	baz=83						
RRI2	Red Ridge	83.53	44	*e*P		P	04 21 29.6 +0.7
	comp=Z,3.3nm,0.8s,mb4.1						
BRTR	Keskin Array B	83.55	312	P		P	04 21 28.2 -0.8
	comp=Z,3.7nm,0.6s,mb4.3,baz=101,slow=3.6,SNR=15						
BRTR	Keskin Array B	83.55	312	P		P	04 21 28.3 -0.7
F19A	Roth Farm, Mol	83.56	41	⇑P		P	04 21 29.0 +0.1
	baz=83						
L15A	Malad City	83.60	46	⇑P		P	04 21 29.6 +0.5
	baz=83,SNR=5.5						
K16A	Soda Springs	83.65	44	⇑P		P	04 21 30.5 +1.1
	baz=83,SNR=6.6						
TPAW	Teton Pass	83.68	44	*e*P		P	04 21 30.1 +0.6
	comp=Z,2.4nm,0.6s,mb4.1						
RLMT	Red Lodge	83.78	42	⇓P		P	04 21 30.9 +0.8
	baz=84						
LOHW	Long Hollow	83.83	43	*e*P		P	04 21 30.7 +0.4
	comp=Z,1.0nm,0.8s,mb3.6						
M15A	Larsen Ranch,	83.85	46	⇓P		P	04 21 30.9 +0.4
	baz=84						
U10A	Ash Meadows, A	83.90	52	⇑P		P	04 21 31.6 +0.8
	baz=84						
N15A	Stansbury Isla	84.11	47	⇑P		P	04 21 32.1 +0.3
	baz=84						
GSC	Goldstone	84.13	53	⇓P		P	04 21 31.7 -0.3
	baz=84						
L16A	Fish Haven	84.19	45	⇓P		P	04 21 32.8 +0.7
	baz=84,SNR=5.2						
T11A	Corn Creek, Al	84.24	51	⇓P		P	04 21 32.3 -0.2
	baz=84						
BUR08	Bucovina Ar. S	84.24	322	*e*P		P	04 21 31.3 -1.0
DUG	Dugway	84.29	47	⇑P		P	04 21 32.7 +0.1
	baz=84,SNR=5.3						
DUG	Dugway	84.29	47	*e*P		P	04 21 32.3 -0.4
	comp=Z,1.1nm,0.6s,mb3.8						
DUG	Dugway	84.29	47	*e*P		P	04 21 32.3 -0.4
DUG					pmax	pmax	
	comp=Z,1.0nm,0.6s,mb3.7						
HWUT	Hardware Ranch	84.33	46	*e*P		P	04 21 33.1 +0.3
	comp=Z,5.7nm,0.9s,mb4.3						
G20A	Bridger	84.34	41	⇓P		P	04 21 32.5 -0.3
	baz=84						
J18A	Kendall Valley	84.40	44	⇑P		P	04 21 33.8 +0.6
	baz=84,SNR=6.1						
P14A	Drum Mountains	84.45	48	⇓P		P	04 21 33.6 +0.1
	baz=84,SNR=5.9						
Q14A	Sevier Lake (B	84.63	48	⇑P		P	04 21 34.6 +0.2
	baz=84						
TUQ	Turquoise Moun	84.68	53	⇑P		P	04 21 34.9 +0.1
	baz=84						
HEC	Hector,Ludlow	84.71	53	⇓P		P	04 21 34.9 +0.1
	baz=84						
K18A	Toltan Ranch,	84.71	44	⇓P		P	04 21 35.1 +0.4
	baz=84						
H20A	Greybull	84.89	42	⇑P		P	04 21 36.1 +0.6
	baz=85						
BW06	Boulder Array	84.93	44	⇓P		P	04 21 35.7 -0.1
	baz=85						
BW06	Boulder Array	84.93	44	*e*P		P	04 21 35.6 -0.1
	comp=Z,1.2nm,0.8s,mb3.7						
PDAR	Pinedale Array	84.93	44	P		P	04 21 35.6 -0.2
	comp=Z,1.0nm,0.6s,mb3.7,baz=273,slow=2.0,SNR=13						
J19A	Crowheart	84.96	43	⇑P		P	04 21 36.2 +0.3
	baz=85						
S13A	Holt Ranch, En	84.99	50	⇑P		P	04 21 36.5 +0.3
	baz=85						
L18A	Fontenelle, Gr	85.11	45	⇓P		P	04 21 36.9 +0.2
	baz=85						
I20A	Worland	85.12	42	⇑P		P	04 21 36.9 +0.2
	baz=85						
H21A	Big Horn, Sher	85.36	41	⇓P		P	04 21 37.7 -0.1
	baz=85						
BELC	Belle Mtn. Jos	85.37	54	⇓P		P	04 21 37.4 -0.7
	baz=85						
L19A	Farson	85.43	44	⇓P		P	04 21 38.2 0.0
	baz=85						
J21A	Lysite	85.87	42	⇑P		P	04 21 41.0 +0.6
	baz=86						
SRU	San Rafael	86.36	47	⇓P		P	04 21 42.4 -0.4
	baz=86						
K21A	Alcova	86.40	43	⇑P		P	04 21 42.6 -0.3
	baz=86						
J22A	Midwest	86.41	42	⇓P		P	04 21 42.5 -0.4
	baz=86						
MORC	Moravsky Berou	86.86	327	*e*P		P	04 21 43.6 -1.3
	comp=Z,2.5nm,0.8s,mb4.0						
MORC	Moravsky Berou	86.86	327	*e*P		P	04 21 43.6 -1.3
MORC					pmax	pmax	
	comp=Z,2.0nm,0.8s,mb3.9						
R18A	Canyonlands Na	87.18	47	⇓P		P	04 21 46.3 -0.4
	baz=87						
RSSD	Black Hills	87.40	40	*e*P		P	04 21 47.6 0.0
	comp=Z,1.9nm,0.8s,mb3.9						
RSSD	Black Hills	87.40	40	*e*P		P	04 21 47.6 0.0
RSSD					pmax	pmax	
	comp=Z,2.0nm,0.8s,mb3.9						
CLL	Collm	87.92	330	*i* P		P	04 21 48.2 -1.7
	comp=Z,4.0nm,0.8s,mb4.2						
CLL	Collm	87.92	330	*i* P		P	04 21 48.2 -1.7
CLL					pmax	pmax	
	comp=Z,8.0nm,0.8s,mb4.5						
CLL	Collm	87.92	330	*i* P		P	04 21 48.2 -1.7
	comp=Z,4.0nm,0.8s,mb4.2						
GRA1	Grafenberg Arr	89.87	329	*e*P		P	04 21 57.9 -1.1
	comp=Z,4.0nm,0.9s,mb4.2						
GRF	Grafenberg Arr	89.87	329	*e*P		P	04 21 57.9 -1.1
	comp=Z,4.0nm,0.9s,mb4.2						
GRF	Grafenberg Arr	89.87	329	*e*P		P	04 21 57.9 -1.1
GRF					pmax	pmax	
	comp=Z,4.0nm,0.9s,mb4.2						
GRF	Grafenberg Arr	89.87	329	*e*P		P	04 21 57.9 -1.1
GRF					pmax	pmax	
	comp=Z,4.0nm,0.9s,mb4.2						
SDCO	Great Sand Dun	90.37	46	*e*P		P	04 22 01.6 +0.1
	comp=Z,1.2nm,0.8s,mb3.8						
Y20A	Horse Springs,	90.73	50	⇓P		P	04 22 03.8 +0.4
	baz=90						
X21A	Alamocita Cree	90.82	50	⇓P		P	04 22 04.4 +0.6
	baz=91						
Z20A	Nine Sixteen R	91.03	51	⇑P		P	04 22 05.3 +0.5
	baz=91						
ANMO	Albuquerque	91.41	49	*e*P		P	04 22 06.8 +0.4
	comp=Z,1.8nm,0.9s,mb3.9						
ANMO	Albuquerque	91.41	49	*e*P		P	04 22 06.8 +0.4
ANMO					pmax	pmax	
	comp=Z,2.0nm,0.9s						
Z21A	St. Cloud Mine	91.55	51	⇑P		P	04 22 07.0 -0.1
	baz=91						
U25A	Circle Dot Ran	91.88	47	⇑P		P	04 22 08.4 -0.1
	baz=92						
W24A	Lazy 6 Ranch,	91.95	48	⇓P		P	04 22 09.1 +0.2
	baz=92						
TXAR	Lajitas Array	96.66	52	P		P	04 22 30.5 0.0
	comp=Z,0.7nm,0.7s,mb3.9,baz=325,slow=2.3,SNR=9.6						
TXAR	Lajitas Array	96.66	52	P		P	04 22 30.5 0.0
TXAR	Lajitas Array	96.66	52	P		P	04 22 30.5 0.0
BOSA	Boshof	123.02	253	PKP		PKPdf	04 27 52.7 -1.5
	comp=Z,4.3nm,1.0s,baz=44,slow=5.0,SNR=5.2						
BOSA	Boshof	123.02	253	PKIKP		PKPdf	04 27 52.7 -1.5
DBIC	Dimbokro	131.22	310	PKP		PKPdf	04 28 09.0 -1.3
	comp=Z,1.3nm,0.3s,baz=333,slow=16,SNR=9.5						
DBIC				SKPbc		SKPbc	04 30 52.9 -2.3
	comp=Z,3.2nm,0.5s,baz=34,slow=4.7,SNR=11						
DBIC	Dimbokro	131.22	310	PKIKP		PKPdf	04 28 09.0 -1.3
TIC	Toumodi	131.35	310	*e*PKIKP		PKPdf	04 28 09.8 -0.7
	comp=Z,6.8nm,0.3s						
TIC	Toumodi	131.35	310	*e*PKP1		SKPbc	04 30 52.4 -3.3
	comp=Z,84nm,1.8s						
TIC	Toumodi	131.35	310	*e*PKIKP		PKPdf	04 28 09.8 -0.7
KIC	Kosan Boka	131.37	310	*e*PKIKP		PKPdf	04 28 10.0 -0.6
	comp=Z,93nm,1.8s						
KIC	Kosan Boka	131.37	310	*e*PKP1		SKPbc	04 30 52.6 -3.1
	comp=Z,81nm,1.7s						
LIC	Lamto	131.66	310	*e*PKIKP		PKPdf	04 28 10.4 -0.7
	comp=Z,79nm,2.0s						
LIC	Lamto	131.66	310	*e*PKP1		SKPbc	04 30 53.4 -3.4
	comp=Z,34nm,1.3s						
LPAZ	La Paz	151.73	71	PKPbc		PKPbc	04 28 53.0 +0.1
	comp=Z,1.7nm,0.5s,baz=295,slow=6.4,SNR=18						
LPAZ	La Paz	151.73	71	*e*PKPbc		PKPbc	04 28 52.9 +0.1
LPAZ	La Paz	151.73	71	PKIKP		PKPbc	04 28 53.0 +0.1
LPAZ					pmax	pmax	
	comp=Z,2.0nm,0.5s						
PLCA	Paso Flores	152.32	125	PKPbc		PKPbc	04 28 53.1 -0.4
	comp=Z,1.8nm,0.7s,baz=258,slow=5.1,SNR=7.1						
PLCA	Paso Flores	152.32	125	*e*PKPbc		PKPbc	04 28 53.1 -0.4
PLCA	Paso Flores	152.32	125	*e*PKIKP		PKPbc	04 28 53.1 -0.4

NEIC ***14*** *04:14:34.5±0.7, 9°.04S×126°.99E, h35km, mb4.4/1, Error ellipse: s-maj=15.8km s-min=9.9km az=59.0*

IDC 14 04:14:30.5±1.3, 8°.92S×126°.68E, h0km, mb4.3/4, mb1 4.3/5, mb1mx3.9/16, mbtmp4.3/5, ML4.3/1, Error ellipse: s-maj=100.1km s-min=24.0km az=70.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.80	124	*e*Pn	Pn	04 16 09.4	-2.1
	49nm,0.6s						
FITZ	Fitzroy Crossi	9.18	186	Pn	Pn	04 16 44.0	-0.3
	2.6nm,0.3s,baz=17,slow=12,SNR=56						
FITZ				Sn	Sn	04 18 21.9	-6.4
	4.1nm,0.3s,baz=266,slow=22,SNR=5.9						
WRA	Warramunga Arr	13.22	147	Pn	Pn	04 17 35.4	-4.3
	1.7nm,0.3s,baz=319,slow=14,SNR=62						
WRA				Sn	Sn	04 19 53.9	-14
	1.8nm,0.3s,baz=316,slow=25,SNR=8.3						
WB2	Warramunga Arr	13.23	147	*e*Pn	Pn	04 17 34.9	-4.8
MBWA	Marble Bar	13.88	208	*e*Pn	Pn	04 17 50.0	+1.4
ASAR	Alice Springs	16.21	156	Pn	Pn	04 18 16.2	-3.5
	0.8nm,0.3s,baz=319,slow=11,SNR=32						
ASAR				Sn	Sn	04 21 07.8	-12
	0.6nm,0.3s,baz=326,slow=21,SNR=6.5						
ASAR	Alice Springs	16.21	156	Pn	Pn	04 18 16.2	-3.5
ASAR				Sn	Sn	04 21 07.8	-12
COEN	Coen	16.92	109	*e*P	Pn	04 18 24.1	-4.8
	16nm,0.4s						
STKA	Stephens Creek	26.71	151	P	P	04 20 11.8	+0.1
	7.1nm,1.1s,baz=340,slow=8.9,SNR=4.3						
MK31	Makanchi Array	68.09	329	*e*P	P	04 25 32.3	+0.3
MKAR	Makanchi Array	68.09	329	P	P	04 25 32.6	+0.6
	1.2nm,0.5s,baz=126,slow=8.1,SNR=12						
ZALV	Zalesovo Beam	71.90	335	P	P	04 25 54.8	-0.5
	2.1nm,0.5s,baz=135,slow=5.1,SNR=5.8						
BVAR	Borovoye Array	77.97	329	P	P	04 26 30.5	+0.1
	0.6nm,0.4s,baz=129,slow=5.7,SNR=2.7						

DJA 14 04:15:24, 2°.64N×126°.56E, h8km, MLv3.7/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.46	315	P	Pn	04 15 49.6	-1.1
SGSI				S	Sn	04 16 10.0	-0.1
TNTI	Ternate	2.02	156	P	Pn	04 15 58.9	+0.5
MNI	Manado	2.09	235	P	Pn	04 16 00.1	+0.8
MNI				S	Sn	04 16 26.8	+1.2

ISCJB ***14*** *04:30:23.8±3.1, 5°.55N±0°.05×125°.59E±0°.08, h14km±21km, mb3.4/3, Error ellipse: s-maj=14.0km s-min=7.8km az=169.2*

MAN ***14*** *04:30:25, 5°.49N×125°.62E, h34km, mb4.8, ML3.7, MS3.7*

IDC ***14*** *04:30:35.8±1.9, 4°.20N×125°.83E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.4/4, Error ellipse: s-maj=116.4km s-min=23.7km az=69.0*

ISC 14 04:30:25.3±3.4, 5°.59N±0°.06×125°.60E±0°.09, h17km±22km, n9, σ0°96/12, mb3.4/3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	1.50	26	*e*P	Pn	04 30 52.2	+0.6
MATI				*e*S	Sn	04 31 10.1	-0.7
KCP	Kidapawan	1.50	340	⇑*e*P	Pn	04 30 51.8	+0.2
KCP				*i* S	Sn	04 31 09.6	-1.3
CTBH	Cotabato--PC H	2.11	320	*e*P	Pn	04 30 58.4	-1.6
CTBH				*i* S	Sn	04 31 27.2	+1.4
BUKP	Musuan	2.34	347	*e*P	Pn	04 31 04.7	+1.6
BUKP				*e*S	Sn	04 31 32.1	+0.5
PAGZ	Pagadian	3.15	316	*e*P	Pn	04 31 13.4	-0.8
FITZ	Fitzroy Crossi	23.54	180	P	P	04 35 34.6	-0.5
	1.2nm,0.8s,mb3.4,baz=342,slow=9.6,SNR=3.1						
WRA	Warramunga Arr	26.78	162	P	P	04 36 04.5	-0.2
	0.5nm,0.4s,mb3.4,baz=338,slow=10,SNR=10						
ASAR	Alice Springs	30.18	165	P	P	04 36 35.6	+0.7
	0.3nm,0.5s,mb3.3,baz=343,slow=7.1,SNR=6.8						
MKAR	Makanchi Array	55.40	325	P	Px	04 40 21.0	
	0.1nm,0.3s,baz=111,slow=8.0,SNR=4.9						

IDC 14 04:36:34.1±6.3, 21°.67N×143°.14E, h361km±67km, mb2.9/7, mb1 3.2/8, mb1mx3.0/23, mbtmp3.0/8, Error ellipse: s-maj=35.8km s-min=19.7km az=92.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	15.43	345	P	P	04 39 53.4	+0.6
	0.3nm,0.3s,baz=168,slow=10,SNR=4.5						
KSRS	Korea Array	20.51	323	P	P	04 40 45.5	-0.3
	1.5nm,0.7s,baz=145,slow=9.3,SNR=9.2						
WRA	Warramunga Arr	42.24	192	P	P	04 43 53.1	-0.2
	0.2nm,0.3s,baz=14,slow=9.1,SNR=6.5						
MKAR	Makanchi Array	54.69	313	P	P	04 45 27.7	+0.7
	0.3nm,0.4s,baz=98,slow=8.9,SNR=2.9						
ILAR	Eielson Array	62.09	27	P	P	04 46 17.1	-0.2
	0.3nm,0.6s,baz=266,slow=4.9,SNR=6.1						
YKA	Yellowknife Ar	76.50	28	P	P	04 47 44.0	-0.8
	0.6nm,0.7s,baz=296,slow=5.6,SNR=2.4						
FINES	FINESS Array B	83.19	334	P	P	04 48 20.2	-0.2
	2.7nm,1.0s,baz=64,slow=4.4,SNR=5.4						
NVAR	Mina Array Bea	83.20	51	P	P	04 48 22.5	+1.7
	0.2nm,0.5s,baz=303,slow=4.2,SNR=3.4						

ISCJB ***14*** *04:51:33.8±1.1, 37°.80N±0°.04×20°.30E±0°.05, h2km±6km, Error ellipse: s-maj=8.3km s-min=6.3km az=43.1*

ATH ***14*** *04:51:33.0, 37°.75N×20°.26E, h17km±2km, MD3.1/5*

CSEM ***14*** *04:51:34.1±0.5, 37°.78N×20°.30E, h2km, ML2.3/11, Error ellipse: s-maj=9.2km s-min=6.9km az=51.0*

THE ***14*** *04:51:36.4, 37°.87N×20°.38E, h5km±1km, ML2.3/11, Error ellipse: s-maj=2.1km s-min=1.3km az=235.0*

ISC 14 04:51:34.2±1.2, 37°.78N±0°.05×20°.30E±0°.06, h2km±5km, n44, σ0°73/75, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.46	30	*e*PB	Pg	04 51 43.0	-0.1
VLS				*e*SB	Sg	04 51 50.5	+1.5
VLS	Valsamata	0.46	30	*e*Pb	Pg	04 51 43.0	-0.1
VLS				*e*Sb	Sg	04 51 50.5	+1.5
KFL	Anninata	0.51	49	P	Pg	04 51 43.9	-0.1
KFL				S	Sg	04 51 50.2	-0.4
KFL	Anninata	0.51	49	P	Pg	04 51 43.9	-0.1
KFL				S	Sg	04 51 50.2	-0.4
RLS	Riolos of Patr	0.96	73	*e*PN	Pg	04 51 52.3	-0.4
RLS	Riolos of Patr	0.96	73	*e*Pn	Pg	04 51 52.3	-0.4
LAKA	Lakka	1.40	70	P	Pn	04 52 01.2	+0.5
LAKA				S	Sg	04 52 18.9	-0.4
LAKA	Lakka	1.40	70	P	Pn	04 52 01.2	+0.5
LAKA				S	Sg	04 52 18.9	-0.4
EFP	Efpalio	1.42	62	*e*PN	Pn	04 52 00.5	-0.5
EFP	Efpalio	1.42	62	P	Pn	04 52 00.4	-0.6
EFP				S	Sg	04 52 19.9	0.0
EFP	Efpalio	1.42	62	P	Pn	04 52 00.4	-0.6
EFP				S	Sg	04 52 19.9	0.0
ITM	Ithomi	1.42	114	*e*PN	Pn	04 51 59.8	-1.2
ITM	Ithomi	1.42	114	*e*Pn	Pn	04 51 59.8	-1.2
TRIZ	Trizonia	1.52	67	P	Pn	04 52 01.9	-0.4
TRIZ				S	Sn	04 52 22.0	-0.6
TRIZ	Trizonia	1.52	67	P	Pn	04 52 01.9	-0.4
TRIZ				S	Sn	04 52 22.0	-0.6
KALE	Kalithea	1.57	67	P	Pn	04 52 03.3	+0.2
KALE				S	Sn	04 52 22.8	-1.2
KALE	Kalithea	1.57	67	P	Pn	04 52 03.3	+0.2
KALE				S	Sn	04 52 22.8	-1.2
GUR	Goura	1.62	84	*e*PN	Pn	04 52 03.7	-0.1
GUR	Goura	1.62	84	P	Pn	04 52 03.5	-0.3
GUR				S	Sn	04 52 26.0	+0.8
GUR	Goura	1.62	84	*e*Pn	Pn	04 52 03.7	-0.1
GUR				S	Sn	04 52 26.0	+0.8
EVR	Evrytania	1.64	46	*e*Pn	Pn	04 52 05.5	+1.5
VLX	Vlachokerasia	1.70	103	P	Pn	04 52 07.1	+2.3
VLX				S	Sn	04 52 27.8	+0.7
VLX	Vlachokerasia	1.70	103	P	Pn	04 52 07.1	+2.3
VLX				S	Sn	04 52 27.8	+0.7
DSF	Desfina	1.87	69	P	Pn	04 52 07.0	-0.1
DSF				S	Sn	04 52 30.9	-0.3
DSF	Desfina	1.87	69	P	Pn	04 52 07.0	-0.1
DSF				S	Sn	04 52 30.9	-0.3
KEK	Kerkira	1.97	349	P	Pn	04 52 08.1	-0.5
KEK				S	Sn	04 52 34.0	+0.1
KEK	Kerkira	1.97	349	P	Pn	04 52 08.1	-0.5
KEK				S	Sn	04 52 34.0	+0.1
AGG	Agios Georgios	2.02	51	P	Pn	04 52 09.5	+0.2
AGG				S	Sn	04 52 34.4	-0.7
AGG	Agios Georgios	2.02	51	P	Pn	04 52 09.5	+0.2
AGG				S	Sn	04 52 34.4	-0.7
LTK	Loutraki	2.12	83	*e*PN	Pn	04 52 10.2	-0.4
LTK	Loutraki	2.12	83	P	Pn	04 52 10.2	-0.4
LTK				S	Sn	04 52 38.2	+0.7
LTK	Loutraki	2.12	83	*e*Pb	Pn	04 52 10.2	-0.4
LTK				S	Sn	04 52 38.2	+0.7
THL	Klokotos Trika	2.23	36	P	Pn	04 52 12.6	+0.4
THL				S	Sn	04 52 40.0	-0.3
THL	Klokotos Trika	2.23	36	P	Pn	04 52 12.6	+0.4
THL				S	Sn	04 52 40.0	-0.3
LKR	Lokris	2.30	67	*e*PB	Pn	04 52 12.4	-0.6
LKR	Lokris	2.30	67	P	Pn	04 52 12.4	-0.6
LKR				S	Sn	04 52 42.3	+0.5
LKR	Lokris	2.30	67	P	Pn	04 52 12.4	-0.6
LKR				S	Sn	04 52 42.3	+0.5
DID	Didima	2.35	96	*e*PN	Pn	04 52 13.5	-0.2
DID	Didima	2.35	96	P	Pn	04 52 14.0	+0.3
DID				S	Sn	04 52 43.3	+0.3
DID	Didima	2.35	96	*e*Pb	Pn	04 52 13.5	-0.2
DID	Didima	2.35	96	P	Pn	04 52 14.0	+0.3
DID				S	Sn	04 52 43.3	+0.3
KYTH	Kithira	2.65	123	*e*PB	Pb	04 52 18.4	-3.9
KYTH	Kithira	2.65	123	*e*Pb	Pb	04 52 18.4	-3.9
STON	Ston	5.46	339	*e*Pn	Pn	04 52 52.5	-4.0
STON				Sn	Sn	04 53 52.5	-7.4

IDC 14 04:53:13.5±3.1, 4°.72S×152°.71E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/17, mbtmp3.8/5, Error ellipse: s-maj=85.0km s-min=31.6km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.43	228	P	P	04 58 25.5	+0.9
	1.8nm,0.5s,baz=52,slow=9.6,SNR=12						
ASAR	Alice Springs	26.15	222	P	P	04 58 49.6	0.0
	0.3nm,0.4s,baz=58,slow=8.0,SNR=5.3						
FITZ	Fitzroy Crossi	29.62	241	P	P	04 59 19.9	-0.8
	0.9nm,0.3s,baz=61,slow=8.9,SNR=9.1						
CMAR	Chiang Mai Arr	57.76	295	P	P	05 03 07.4	+0.6
	1.0nm,0.6s,baz=129,slow=6.6,SNR=5.9						
MKAR	Makanchi Array	80.21	319	P	P	05 05 25.9	0.0
	0.1nm,0.5s,baz=80,slow=8.9,SNR=2.5						
TORD	Torodi Ar. Bea	150.20	288	PKPbc	PKPbc	05 13 06.7	-0.8
	1.5nm,0.6s,baz=75,slow=3.1,SNR=20						

DJA 14 05:12:50, 1°.33S×121°.82E, h4km, MLv3.7/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	Ampana	0.45	338	P	Pg	05 12 59.1	+0.4
LUWI	Luwuk	0.99	73	P	Pg	05 13 09.6

BNDS Bandar-Abbas 0.64 29 *e*Pg **Pg 05 22 00.1 -0.1**
BNDS *e*Sg **Sg 05 22 07.1 -1.5**
BNDS AML AML 05 22 21.7
comp=N,14μm,0.6s
BNDS AML AML 05 22 26.1
comp=E,16μm,0.4s
BNDS Bandar-Abbas 0.64 29 *e*Pg **Pg 05 22 00.1 -0.1**
BNDS *e*Sg **Sg 05 22 07.1 -1.5**
IBND Bandar-abas 0.88 46 *e*Sg **Sg 05 22 18.1 +1.8**
IBND *e*Pg **Pg 05 22 05.0 +0.2**
IBND *e* 05 22 45.5
comp=Z,45μm,0.3s
ASHO Ashiyiah 2.16 174 P **Pn 05 22 25.2 +1.4**
SNR=420
ASHO Ashiyiah 2.16 174 P **Pn 05 22 25.2 +1.4**
SNR=420
ASHO P 05 22 25.3
SNR=144
KRBR Kerman 3.24 15 *e*Pn **Pn 05 22 40.0 +1.3**
KRBR Kerman 3.24 15 *e*Pn **Pn 05 22 41.1 +2.4**
KRBR AML AML 05 23 25.2
comp=N,701nm,0.5s
KRBR AML AML 05 23 39.0
comp=E,679nm,0.5s
KRBR Kerman 3.24 15 *e*Pn **Pn 05 22 41.1 +2.4**
ISRV Sarvestan 3.48 317 Pn **Pn 05 22 44.5 +2.4**
ISRV Sarvestan 3.48 317 *e*Pn **Pn 05 22 44.6 +2.5**
ISRV *e* 05 24 05.7
comp=Z,10μm,0.6s
ISRV Sarvestan 3.48 317 *e*Pn **Pn 05 22 44.6 +2.5**
ARQ Araqi 3.54 170 P **Pn 05 22 44.1 +1.2**
SNR=24
ARQ Araqi 3.54 170 P **Pn 05 22 44.1 +1.2**
SNR=24
IPAR Pars 3.86 321 Pn **Pn 05 22 49.6 +2.3**
IPAR Pars 3.86 321 *e*Pn **Pn 05 22 49.7 +2.4**
IPAR *e* 05 23 38.2
comp=Z,5μm,0.4s
IPAR Pars 3.86 321 *e*Pn **Pn 05 22 49.7 +2.4**
BSY Bisya 4.26 163 P **Pn 05 22 54.1 +1.3**
SNR=14
BSYO Bisya 4.29 162 P **Pn 05 22 54.2 +1.1**
SNR=14
IMEH Mehriz 4.66 347 Pn **Pn 05 23 00.4 +2.2**
IMEH Mehriz 4.66 347 *e*Pn **Pn 05 23 00.5 +2.3**
IMEH *e* 05 23 10.3
comp=Z,2μm,0.2s
IMEH Mehriz 4.66 347 *e*Pn **Pn 05 23 00.5 +2.3**
IBAF Bafgh 4.74 357 Pn **Pn 05 23 01.0 +1.7**
IBAF Bafgh 4.74 357 *e*Pn **Pn 05 23 01.0 +1.7**
IBAF *e* 05 23 11.7
comp=Z,1μm,0.2s
IBAF Bafgh 4.74 357 *e*Pn **Pn 05 23 01.0 +1.7**
JMDO Jabal Madar 4.91 154 P **Pn 05 23 02.8 +1.1**
SNR=16
JMDO Jabal Madar 4.91 154 P **Pn 05 23 02.7 +1.1**
SNR=11
JMDO P 05 23 02.8
SNR=16
SLWS 5.09 248 P **Pn 05 23 05.1 +0.9**
SLWS 5.09 248 P **Pn 05 23 05.1 +0.9**
SLWS S **Sn 05 24 03.2 +0.2**
WBK Wadi Bani Khal 5.09 145 P **Pn 05 23 04.2 +0.1**
SNR=9.7
ZHSF Zahedan 5.17 57 *e*Pn **Pn 05 23 09.0 +3.8**
ZHSF Zahedan 5.17 57 *e*Pn **Pn 05 23 09.3 +4.1**
ZHSF Zahedan 5.17 57 *e*Pn **Pn 05 23 09.3 +4.1**
BTHS 5.29 239 P **Pn 05 23 07.2 +0.3**
BTHS 5.29 239 P **Pn 05 23 07.2 +0.3**
ISAD Sadrabad 5.39 340 Pn **Pn 05 23 11.3 +3.1**
ISAD Sadrabad 5.39 340 *e*Pn **Pn 05 23 11.4 +3.2**
ISAD *e* 05 24 37.3
comp=Z,1μm,0.4s
ISAD Sadrabad 5.39 340 *e*Pn **Pn 05 23 11.4 +3.2**
ICHK Chekchek 5.53 347 Pn **Pn 05 23 12.3 +2.2**
ICHK Chekchek 5.53 347 *e*Pn **Pn 05 23 12.3 +2.2**
ICHK *e* 05 23 23.6
comp=Z,1μm,0.3s
ICHK Chekchek 5.53 347 *e*Pn **Pn 05 23 12.3 +2.2**
BOQSS 5.86 262 S **Sn 05 24 22.4 +0.3**
BOQSS 5.86 262 P **Pn 05 23 14.4 -0.3**
IKOO Kooshah 6.22 26 *e*Pn **Pn 05 23 21.4 +1.8**
IKOO *e* 05 25 16.7
comp=Z,899nm,0.5s
IKOO Kooshah 6.22 26 *e*Pn **Pn 05 23 21.4 +1.8**
IGAR Gharneh 6.45 330 *e*Pn **Pn 05 23 25.4 +2.6**
IGAR *e* 05 23 29.9
comp=Z,901nm,0.1s
NASN Na'in 6.49 337 *e*Pn **Pn 05 23 25.0 +1.6**
NASN Na'in 6.49 337 *e*Pn **Pn 05 23 25.7 +2.3**
NASN Na'in 6.49 337 *e*Pn **Pn 05 23 25.7 +2.3**
IZEF Zefreh 6.75 334 Pn **Pn 05 23 28.4 +1.4**
IZEF Zefreh 6.75 334 *e*Pn **Pn 05 23 28.4 +1.4**
IZEF *e* 05 23 32.8
comp=Z,592nm,0.2s
IZEF Zefreh 6.75 334 *e*Pn **Pn 05 23 28.4 +1.4**
HRDDS 6.96 237 S **Sn 05 24 47.0 -2.3**
HRDDS 6.96 237 P **Pn 05 23 29.7 -0.2**
IMON Monand 7.15 27 *e*Pn **Pn 05 23 35.6 +3.1**
IMON *e* 05 26 04.6
comp=E,1μm,0.3s
IMON Monand 7.15 27 *e*Pn **Pn 05 23 35.6 +3.1**
IPIR Pirpir 7.23 325 Pn **Pn 05 23 35.8 +2.3**
IPIR Pirpir 7.23 325 *e*Pn **Pn 05 23 35.9 +2.4**
IPIR *e* 05 24 58.0
comp=Z,1μm,0.4s
IPIR Pirpir 7.23 325 *e*Pn **Pn 05 23 35.9 +2.4**
QRN Al-Qurain 7.25 287 *e*P **Pn 05 23 34.8 +0.9**
IKLH Kolahrood 7.43 331 Pn **Pn 05 23 38.1 +1.8**
IKLH Kolahrood 7.43 331 *e*Pn **Pn 05 23 38.2 +1.9**
IKLH *e* 05 23 43.4
comp=Z,490nm,0.2s
IKLH Kolahrood 7.43 331 *e*Pn **Pn 05 23 38.2 +1.9**
UMR Umm Al-Rimmam 7.65 293 *e*P **Pn 05 23 40.1 +0.8**
UMR AML AML 05 25 05.4
comp=Z,32nm,0.4s
UMR Umm Al-Rimmam 7.65 293 *e*P **Pn 05 23 40.1 +0.8**
NAY Al-Naaiem 7.95 290 *e*P **Pn 05 23 43.9 +0.4**
NAY AML AML 05 25 14.9
comp=Z,30nm,0.7s
NAY Al-Naaiem 7.95 290 *e*P **Pn 05 23 43.9 +0.4**
MIB Mutribah 8.04 294 *e*P **Pn 05 23 45.4 +0.7**
MIB AML AML 05 25 14.7
comp=Z,33nm,0.5s
MIB Mutribah 8.04 294 *e*P **Pn 05 23 45.4 +0.8**
ASAO Ashtian 9.16 328 *e*Pn **Pn 05 24 01.0 +1.0**
ASAO Ashtian 9.16 328 *e*Pn **Pn 05 24 01.0 +1.0**
RBK Rabkut 9.41 189 P **Pn 05 24 04.8 +1.3**
SNR=6.5
RBK Rabkut 9.41 189 P **Pn 05 24 04.8 +1.2**
SNR=6.5
ASYS 10.25 276 P **Pn 05 24 13.7 -1.3**
KBL Kabul 13.71 53 Pn **Pn 05 25 01.9 -0.5**
KBL Kabul 13.71 53 P **Pn 05 25 01.9 -0.4**
KBL Kabul 13.71 53 Pn **Pn 05 25 01.9 -0.4**
GNI Garni 16.16 328 Pn **Pn 05 25 38.9 +4.0**
comp=Z,0.7nm,0.3s,baz=188,slow=3.9,SNR=7.0
GNI LR LR 05 31 31.5
comp=Z,52nm,20.4s,baz=133,slow=36
GNI Garni 16.16 328 *e*Pn **Pn 05 25 33.1 -1.8**
comp=Z,42nm,1.0s
GNI LR LR 05 31 31.5
GNI Garni 16.16 328⇑ *e*P **Pn 05 25 36.6 +1.7**
GNI pmax pmax
comp=Z,17nm,0.9s
GNI Garni 16.16 328 *e*P **Pn 05 25 36.6 +1.7**
comp=Z,17nm,0.9s
DGRG David-gareji 16.93 332 P **Pn 05 25 45.9 +1.2**
ASF Jabal al Asfar 17.30 292 P **Pn 05 25 48.6 -0.9**
comp=Z,0.4nm,0.3s,baz=327,slow=4.6,SNR=8.9
ASF Jabal al Asfar 17.30 292 P **Pn 05 25 48.6 -0.9**
MALT Malatya 18.56 312 *e*Pn **Pn 05 26 05.6 +0.6**
comp=Z,20nm,0.9s
MALT Malatya 18.56 312 *e*P **Pn 05 26 05.6 +0.6**
MALT pmax pmax
comp=Z,20nm,0.9s
MALT Malatya 18.56 312 *e*P **Pn 05 26 05.6 +0.6**
comp=Z,20nm,0.9s
EIL Elat 18.60 284 P **Pn 05 26 03.8 -1.7**
comp=Z,0.4nm,0.3s,baz=61,slow=7.2,SNR=5.5
EIL LR LR 05 33 31.9
comp=Z,21nm,20.4s,baz=102,slow=38
EIL Elat 18.60 284 P **Pn 05 26 03.8 -1.7**
ZEI Tsey 18.63 332 *e*P **Pn 05 26 08.8 +3.0**
ZEI pmax pmax
comp=Z,56nm,1.3s
MMAI Mount Meron Ar 18.73 294 P **Pn 05 26 06.7 -0.3**
comp=Z,1.8nm,0.3s,baz=100,slow=19,SNR=8.8
ATD Arta Tunnel 19.52 221 LR LR 05 34 25.0
comp=Z,83nm,20.6s,baz=272,slow=39
KIV Kislovodsk 20.11 331 *e*Pn **P 05 26 23.7 +2.0**
comp=Z,111nm,1.4s
KIV Kislovodsk 20.11 331 *e*P **P 05 26 23.5 +1.8**
KIV *e*S **S 05 30 06.5 -1.0**
KIV pmax pmax
comp=Z,53nm,1.2s
KIV MLR MLR
comp=Z,26nm,11.0s,MS2.8
KIV Kislovodsk 20.11 331 *e*Pn **P 05 26 23.7 +2.0**
comp=Z,111nm,1.4s
KIV *e*S **S 05 30 06.5 -1.0**
comp=Z,26nm,11.0s
KK31 Karatay Array 20.15 33 *ce*P **P 05 26 21.3 -0.8**
KK31 pmax pmax
comp=Z,5.0nm,0.6s
KK31 Karatay Array 20.15 33 *e*P **P 05 26 21.3 -0.8**
comp=Z,5.0nm,0.6s
KKAR Karatay Array 20.15 33 *e*P **P 05 26 22.0 -0.1**
KKAR Karatay Array 20.15 33 *e*P **P 05 26 22.0 -0.1**
KKAR Karatay Array 20.15 33 *e*P **P 05 26 22.0 -0.1**
CSS Prodhromos 20.90 298 *e*P **P 05 26 31.6 +1.3**
comp=Z,17nm,1.0s
CSS Prodhromos 20.90 298 *e*P **P 05 26 31.6 +1.3**
comp=Z,17nm,1.0s
KSH Kashi 21.02 48 *e*P **P 05 26 23.8 -7.8**
KSH *e*PP 05 26 42.3
KSH *e*S S 05 30 02.1 -24
KSH pmax pmax
comp=Z,20nm,1.2s,mb4.3
KSH LR LR
comp=N,480nm,9.8s
KSH LR LR
comp=E,370nm,6.2s
KSH LR LR
comp=Z,440nm,14.8s,MS4.0
AML Almayashu 21.14 39 *e*P **P 05 26 32.3 -0.6**
comp=Z,18nm,0.8s,mb4.5
AML Almayashu 21.14 39 *e*P **P 05 26 32.3 -0.6**
comp=Z,18nm,0.8s,mb4.5
EKS2 Erkin-Say 21.54 38 *e*P **P 05 26 37.2 +0.2**
comp=Z,14nm,0.8s,mb4.4
EKS2 Erkin-Say 21.54 38 *e*P **P 05 26 37.2 +0.1**
comp=Z,14nm,0.8s,mb4.4
AAK Ala-Archa 21.92 39 P **P 05 26 41.4 +0.2**
comp=Z,4.2nm,0.7s,mb4.0,baz=185,slow=6.7,SNR=12
AAK LR LR 05 36 15.9
comp=Z,102nm,18.4s,MS3.3,baz=209,slow=40
AAK Ala-Archa 21.92 39 *e*P **P 05 26 41.4 +0.2**
comp=Z,13nm,0.9s,mb4.4
AAK Ala-Archa 21.92 39⇓ *e*P **P 05 26 41.2 0.0**
AAK pmax pmax
comp=Z,6.0nm,1.2s,mb3.9
AAK Ala-Archa 21.92 39 *e*P **P 05 26 41.2 0.0**
comp=Z,6.0nm,1.2s,mb3.9
KZA Kyzart 22.01 41 *e*P **P 05 26 41.6 -0.5**
comp=Z,26nm,1.0s,mb4.6
KZA Kyzart 22.01 41 *e*P **P 05 26 41.6 -0.6**
comp=Z,26nm,1.0s,mb4.6
FRU Bishkek 22.12 39 *e*P **P 05 26 50.0 +6.7**
FRU *e* 05 26 56.0
FRU *e* 05 27 13.0
KBK Karagaybulak 22.19 40 *e*P **P 05 26 43.8 -0.3**
comp=Z,26nm,1.3s,mb4.5
KBK Karagaybulak 22.19 40 *e*P **P 05 26 43.8 -0.3**
comp=Z,26nm,1.3s,mb4.5
BR131 Keskin Array S 22.49 310 *e*P **P 05 26 47.2 -0.1**
comp=Z,4.8nm,0.7s,mb4.0
BR131 Keskin Array S 22.49 310 *e*P **P 05 26 47.2 -0.1**
comp=Z,4.8nm,0.7s,mb4.0
BRTR Keskin Array B 22.49 310 P **P 05 26 48.0 +0.7**
comp=Z,6.2nm,1.1s,mb4.0,baz=134,slow=13,SNR=15
BRTR Keskin Array B 22.49 310 P **P 05 26 48.0 +0.7**
BRTR Keskin Array B 22.49 310 P **P 05 26 48.0 +0.7**
AB31 Akbulak array 22.61 7 *ce*P **P 05 26 47.0 -1.5**
AB31 Akbulak array 22.61 7 *e*P **P 05 26 47.0 -1.5**
ABKAR Akbulak array 22.61 7 *e*P **P 05 26 47.1 -1.4**
ABKAR Akbulak array 22.61 7 *e*P **P 05 26 47.1 -1.4**
TKM2 Tokmak 2 22.73 40 *e*P **P 05 26 48.8 -1.1**
comp=Z,8.7nm,1.0s,mb4.1
TKM2 Tokmak 2 22.73 40 *e*P **P 05 26 48.8 -1.0**
TKM2 pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
TKM2 Tokmak 2 22.73 40 *e*P **P 05 26 48.8 -1.0**
comp=Z,9.0nm,1.0s,mb4.2
AKTK Aktyubinsk 23.62 4 P **P 05 26 58.6 -0.4**
AKTK LR LR 05 38 35.1
AKTK Aktyubinsk 23.62 4 P **P 05 26 58.7 -0.3**
AKTO Aktyubinsk 23.62 4 P **P 05 26 58.6 -0.4**
comp=Z,3.3nm,0.5s,mb4.0,baz=179,slow=10,SNR=8.7
AKTO LR LR 05 38 35.1
comp=Z,124nm,21.2s,MS3.4,baz=331,slow=43
AKTO Aktyubinsk 23.62 4 P **P 05 26 58.7 -0.3**
VOSK Vostochnaya 28.24 20 P **P 05 27 39.6 -1.2**
VOSK pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
BRVK Borovoye 28.33 19 *e*P **P 05 27 39.8 -1.7**
comp=Z,4.6nm,0.7s,mb4.2
BRVK Borovoye 28.33 19 *de*P **P 05 27 40.6 -1.0**
BRVK pmax pmax
comp=Z,9.0nm,1.4s,mb4.2
BRVK Borovoye 28.33 19 *e*P **P 05 27 39.8 -1.8**
comp=Z,4.6nm,0.7s,mb4.2
BVAR Borovoye Array 28.33 19 P **P 05 27 40.8 -0.8**
comp=Z,7.0nm,0.8s,mb4.4,baz=198,slow=9.3,SNR=26
BVAR Borovoye Array 28.33 19 P **P 05 27 40.8 -0.8**
BVAR Borovoye Array 28.33 19 P **P 05 27 40.8 -0.8**
MK31 Makanchi Array 28.86 39 *e*P **P 05 27 46.4 0.0**
MK31 Makanchi Array 28.86 39 *ce*P **P 05 27 45.3 -1.1**
MK31 pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
MK31 Makanchi Array 28.86 39 *e*P **P 05 27 46.3 -0.1**
MKAR Makanchi Array 28.86 39 P **P 05 27 45.6 -0.8**
comp=Z,0.8nm,0.4s,mb3.8,baz=223,slow=8.2,SNR=16
MKAR Makanchi Array 28.86 39 *ce*P **P 05 27 46.2 -0.2**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 28.86 39 P **P 05 27 45.6 -0.8**
KURK Kurchatov 29.51 30 *e*P **P 05 27 51.9 -0.2**
comp=Z,2.1nm,0.7s,mb4.0
KURK Kurchatov 29.51 30 *ce*P **P 05 27 49.7 -2.4**
KURK pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
KURK Kurchatov 29.51 30 *e*P **P 05 27 51.8 -0.3**
comp=Z,2.1nm,0.7s,mb4.0
ARU Arti 29.63 3 *d i*P **P 05 27 53.8 +0.7**
ARU *e* 05 28 49.4
ARU S **S 05 32 45.6 -2.8**
ARU SS SS 05 34 16.2 -38
ARU pmax pmax
comp=Z,5.0nm,1.7s,mb4.0
MLR Muntele Rosu 30.21 316 ⇓P **P 05 28 01.5 +3.1**
MLR Muntele Rosu 30.21 316 ⇓*i*P **P 05 28 01.5 +3.1**
TESR 30.28 318⇑*i*P **P 05 27 58.6 -0.4**
VOIR 30.75 315 ⇑P **P 05 28 03.8 +0.7**
VOIR 30.75 315⇑*i*P **P 05 28 03.8 +0.7**
WMQ Urumqi 30.79 48 *e*P **P 05 28 07.0 +3.5**
WMQ PP PP 05 29 07.0 -5.9
WMQ S **S 05 33 10.0 +3.2**
WMQ pmax pmax
comp=Z,14nm,0.8s,mb4.8
WMQ LR LR
comp=N,82nm,14.0s,MS3.7
WMQ LR LR
comp=E,90nm,14.0s,MS3.7
WMQ LR LR
comp=Z,76nm,14.0s,MS3.5
VTS Vitosha 30.84 309 ⇑P **P 05 28 04.7 +0.7**
VTS Vitosha 30.84 309⇑*i*P **P 05 28 04.7 +0.7**
KIEV Kiev 31.28 327 *e*P **P 05 28 06.3 -1.5**
comp=Z,3.4nm,0.6s,mb4.3
KIEV Kiev 31.28 327 *e*P **P 05 28 06.3 -1.5**
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
KIEV Kiev 31.28 327 *e*P **P 05 28 06.3 -1.5**
comp=Z,3.4nm,0.6s,mb4.3
OBN Obninsk 31.55 339⇓ *e*P **P 05 28 09.8 -0.3**
OBN *e* 05 28 18.4
OBN *e* 05 28 25.9
OBN pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
BURAR Bucovina Array 31.68 319⇑P **P 05 28 10.2 -1.1**
BURAR Bucovina Array 31.68 319⇑*i*P **P 05 28 10.2 -1.1**
BZS Buzias 33.02 314⇑P **P 05 28 22.7 -0.4**
BZS Buzias 33.02 314⇑*i*P **P 05 28 22.7 -0.4**
KMBO Kilima Mbogo 33.06 216 P **P 05 28 24.8 +1.0**
comp=Z,1.7nm,0.7s,mb4.1,baz=0.1,slow=24,SNR=4.8
KMBO Kilima Mbogo 33.06 216 P **P 05 28 24.8 +1.0**
KMBO Kilima Mbogo 33.06 216 P **P 05 28 24.8 +1.0**
UZH Uzhgorod 33.89 319 *e*P **P 05 28 27.6 -3.0**
UZH *i* 05 28 43.6
KOLS Kolonicke sedl 34.04 319 *e*P **P 05 28 32.4 +0.5**
comp=Z,6.7nm,0.9s,mb4.6
KOLS Kolonicke sedl 34.04 319 *e*P **P 05 28 32.4 +0.5**
KOLS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KOLS Kolonicke sedl 34.04 319 *e*P **P 05 28 32.4 +0.5**
KOLS Kolonicke sedl 34.04 319 *e*P **P 05 28 32.4 +0.5**
comp=Z,6.7nm,0.9s,mb4.6
NVS Novosibirsk 34.40 28 *i*P **P 05 28 33.4 -1.6**
ZAA0 Zalesovo Array 34.50 30 *e*P **P 05 28 34.5 -1.3**
ZAA0 Zalesovo Array 34.50 30 *e*P **P 05 28 34.5 -1.3**
ZALV Zalesovo Beam 34.50 30 P **P 05 28 34.8 -1.1**
comp=Z,5.4nm,0.3s,mb4.9,baz=243,slow=9.5,SNR=16
ZALV Zalesovo Beam 34.50 30 P **P 05 28 34.8 -1.0**
CRVS Cervenica-Dubn 34.50 319 *e*P **P 05 28 35.8 -0.1**
comp=Z,4.4nm,1.0s,mb4.3
CRVS Cervenica-Dubn 34.50 319 *e*P **P 05 28 35.8 -0.1**
CRVS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CRVS Cervenica-Dubn 34.50 319 *e*P **P 05 28 35.8 -0.1**
CRVS Cervenica-Dubn 34.50 319 *e*P **P 05 28 35.8 -0.1**
comp=Z,4.4nm,1.0s,mb4.3
KECS Kecovo 34.89 318 *e*P **P 05 28 39.9 +0.6**
comp=Z,3.3nm,0.8s,mb4.3
KECS Kecovo 34.89 318 *e*P **P 05 28 39.9 +0.6**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KECS Kecovo 34.89 318 *e*P **P 05 28 39.9 +0.6**
PKSM Moragy 35.17 313 ⇓P **P 05 28 40.4 -1.3**
PKSM Moragy 35.17 313 ⇓*i*P **P 05 28 40.4 -1.3**
KLMR Klimovskoe 35.77 346 *e*P **P 05 28 44.3 -2.4**
KLMR pmax pmax
comp=Z,20nm,1.7s,mb4.8
VYHS Vyhne 35.90 317 *e*P **P 05 28 47.4 -0.6**
comp=Z,1.6nm,1.0s,mb3.9
VYHS Vyhne 35.90 317 *e*P **P 05 28 47.4 -0.6**
VYHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
VYHS Vyhne 35.90 317 *e*P **P 05 28 47.4 -0.6**
VYHS Vyhne 35.90 317 *e*P **P 05 28 47.4 -0.6**
comp=Z,1.6nm,1.0s,mb3.9
OJC Ojcow 36.06 320 *e*P **P 05 28 48.8 -0.6**
OJC Ojcow 36.06 320 *e*P **P 05 28 48.8 -0.6**
MORC Moravsky Berou 37.19 318 ⇑P **P 05 28 58.4 -0.6**
MORC Moravsky Berou 37.19 318⇑*i*P **P 05 28 58.4 -0.6**
VRAC Vranov 37.58 317 ⇑P **P 05 29 02.4 +0.1**
VRAC Vranov 37.58 317⇑*i*P **P 05 29 02.4 +0.1**
VSU Vasula 37.59 335⇑ *e*P **P 05 29 03.7 +1.5**
VSU pmax pmax
comp=Z,21nm,1.2s,mb4.7
DPC Dobruska-Polom 38.14 319 *e*P **P 05 29 06.5 -0.5**
DPC Dobruska-Polom 38.14 319 *e*P **P 05 29 06.5 -0.5**
DPC *e*pP pP 05 29 10.2 +0.1
UPC Upice 38.38 319 *e*P **P 05 29 07.6 -1.5**
UPC Upice 38.38 319 *e*P **P 05 29 07.6 -1.5**
GTA Gaotai 38.56 60 *e*P **P 05 29 11.3 +0.6**
GTA pP pP 05 29 13.3 -0.5
GTA sP sP 05 29 15.8 +0.7
GTA pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KHC Kasperske Hory 39.37 316 *e*P **P 05 29 16.5 -0.8**
KHC *e*pP pP 05 29 20.5 0.0
JOF Joensuu 39.52 343 *e*P **P 05 29 17.2 -1.2**
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
JOF Joensuu 39.52 343 *e*p **P 05 29 17.2 -1.2**
comp=Z,2.5nm,0.7s,mb4.0
JOF Joensuu 39.52 343 *e*P **P 05 29 17.2 -1.2**
comp=Z,3.0nm,0.7s,mb4.1
BRG Berggiesshubel 39.74 319 *e*(P) **P 05 29 19.9 -0.5**
comp=Z,3.8nm,1.0s,mb4.1
BRG Berggiesshubel 39.74 319 *e*P **P 05 29 19.9 -0.5**
BRG pmax pmax
comp=Z,1.0nm,1.0s,mb3.5
BRG Berggiesshubel 39.74 319 *e*P **P 05 29 19.9 -0.5**
comp=Z,1.0nm,1.0s,mb3.5
FINES FINESS Array B 39.95 338 P **P 05 29 21.1 -0.9**
comp=Z,2.0nm,0.5s,mb4.1,baz=146,slow=9.9,SNR=29
FINES FINESS Array B 39.95 338 P **P 05 29 21.1 -0.9**
FINES FINESS Array B 39.95 338 P **P 05 29 21.1 -0.9**
KAF Kangasniemi 40.37 339 *e*P **P 05 29 13.8 -12**
KAF pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KAF Kangasniemi 40.37 339 *e*p **P 05 29 13.8 -12**
comp=Z,2.2nm,0.8s,mb3.9
KEST Kesra 40.38 294 P **P 05 29 25.5 -0.5**
comp=Z,2.5nm,0.8s,mb4.0,baz=70,slow=2.0,SNR=5.3
MOTA Moosalm 40.45 312⇑*i*P **P 05 29 24.9 -1.4**
comp=Z,4.4nm,0.7s,mb4.3
MOTA Moosalm 40.45 312 P **P 05 29 24.9 -1.4**
comp=Z,4.4nm,0.7s,mb4.3
CLL Collm 40.45 319 *e*P **P 05 29 26.0 -0.3**
comp=Z,4.0nm,1.1s,mb4.1
CLL Collm 40.45 319 *e*P **P 05 29 26.0 -0.3**
CLL pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
CLL Collm 40.45 319 *e*P **P 05 29 26.0 -0.3**
comp=Z,4.0nm,1.1s,mb4.1
CLL *e*PP PP 05 30 59.0 -0.3
CLL Collm 40.45 319 *e*P **P 05 29 26.0 -0.3**
comp=Z,4.0nm,1.1s,mb4.1
FETA Feichten 40.62 312⇑*i*P **P 05 29 27.0 -0.8**
comp=Z,9.9nm,0.7s,mb4.5
FETA Feichten 40.62 312 P **P 05 29 27.0 -0.8**
comp=Z,9.9nm,0.7s,mb4.5
DAVA Damuels 41.24 312⇑*i*P **P 05 29 31.8 -1.1**
comp=Z,16nm,0.5s,mb4.9
DAVA Damuels 41.24 312 P **P 05 29 31.8 -1.1**
comp=Z,16nm,0.5s,mb4.9
LZH Lanzhou 41.63 65 *e*P **P 05 29 36.5 +0.2**
LZH pP pP 05 29 39.8 +0.4
LZH sP sP 05 29 41.3 +0.7
LZH *e*PP PP 05 31 16.0 +3.6
LZH pmax pmax
comp=Z,16nm,1.3s,mb4.5
LZH pmax pmax
comp=Z,47nm,5.6s
LZH LR LR
comp=E,230nm,13.7s
LZH LR LR
comp=Z,320nm,17.9s,MS4.2
CD2 Chengdu 41.92 73 *e*P **P 05 29 39.3 +0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
CD2 pmax pmax
comp=Z,30nm,5.2s
KMI Kunming 42.03 81 P **P 05 29 40.0 +0.4**
KMI pP pP 05 29 44.8 +2.0
KMI sP sP 05 29 47.3 +3.3
KMI pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
KMI pmax pmax
comp=Z,220nm,4.8s
KMI LR LR
comp=Z,74nm,17.4s,MS3.6
SONM Songino Array 44.42 48 P **P 05 29 58.9 +0.2**
comp=Z,2.7nm,0.9s,mb4.0,baz=255,slow=8.7,SNR=13
SONM Songino Array 44.42 48 P **P 05 29 58.9 +0.2**
SONM Songino Array 44.42 48 P **P 05 29 58.9 +0.2**
ULN Ulaanbaatar 44.87 48 *e*P **P 05 30 02.1 -0.2**
comp=Z,7.1nm,0.8s,mb4.5
ULN Ulaanbaatar 44.87 48 *e*P **P 05 30 02.1 -0.1**
ULN pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
ULN Ulaanbaatar 44.87 48 *e*P **P 05 30 02.1 -0.1**
comp=Z,7.0nm,0.8s,mb4.5
GYA Guiyang 45.19 78 *e*P **P 05 30 06.8 +1.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
NB2 NORSAR Subarra 45.42 331 P **P 05 30 04.9 -1.5**
comp=Z,1.9nm,0.7s,mb4.0,baz=117,slow=7.9
NB2 NORSAR Subarra 45.42 331 P **P 05 30 04.9 -1.5**
comp=Z,1.9nm,0.7s,mb4.0,SNR=7.7
NOA NORSAR Array B 45.42 331 P **P 05 30 04.9 -1.5**

comp=Z,1.1nm,0.8s,mb3.8,baz=118,slow=7.8,SNR=2.9
NOA LR LR 05 53 11.6
comp=Z,19nm,19.8s,MS3.0,baz=270,slow=41
NOA NORSAR Array B 45.42 331 P **P 05 30 04.9 -1.5**
NOA NORSAR Array B 45.42 331 P **P 05 30 04.9 -1.5**
TAM Tamanrasset 45.60 276 *e*P **P 05 30 08.3 -0.1**
comp=Z,8.9nm,1.1s,mb4.6
TAM Tamanrasset 45.60 276 *e*P **P 05 30 08.3 -0.1**
TAM pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TAM Tamanrasset 45.60 276 *e*P **P 05 30 08.3 -0.1**
comp=Z,9.0nm,1.1s,mb4.6
KEV Kevo 46.09 347 *e*P **P 05 30 10.1 -1.5**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KEV Kevo 46.09 347 *e*p **P 05 30 10.1 -1.5**
comp=Z,3.5nm,0.6s,mb4.5
KEV Kevo 46.09 347 *e*P **P 05 30 10.1 -1.5**
comp=Z,4.0nm,0.6s,mb4.5
ARCES ARCESS Array B 46.24 346 P **P 05 30 12.2 -0.6**
comp=Z,0.9nm,0.6s,mb3.9,baz=137,slow=8.4,SNR=10
ARCES ARCESS Array B 46.24 346 P **P 05 30 12.2 -0.6**
ARCES ARCESS Array B 46.24 346 P **P 05 30 12.2 -0.6**
HHC Hu-ho-hao-te 47.61 58 *e*P **P 05 30 26.0 +2.0**
HHC pP pP 05 30 30.5 +3.4
HHC sP sP 05 30 33.1 +4.8
HHC PcP PcP 05 31 56.3 +2.7
HHC PP PP 05 32 16.8 +1.4
HHC ScP ScP 05 35 49.8 +1.8
HHC S **S 05 37 18.8 -0.7**
HHC sS sS 05 37 26.8 +2.2
HHC ScS ScS 05 40 16.3 -1.6
HHC SS SS 05 40 39.8 -7.6
HHC pmax pmax
comp=Z,23nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,80nm,5.1s
HHC LR LR
comp=N,190nm,13.2s,MS4.5
HHC LR LR
comp=E,310nm,14.9s,MS4.5
HHC LR LR
comp=Z,170nm,10.7s,MS4.3
ESDC Sonseca Array 50.76 301 P **P 05 30 47.3 -0.7**
comp=Z,1.2nm,0.5s,mb4.1,baz=68,slow=7.5,SNR=15
ESDC Sonseca Array 50.76 301 P **P 05 30 47.3 -0.8**
BJI Beijing 51.17 59 P **P 05 30 54.1 +3.0**
BJI pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TORD Torodi Ar. Bea 52.30 266 LR LR 05 55 58.2
comp=Z,71nm,18.0s,MS3.8,baz=50,slow=39
MVO Moncorvo 52.97 303 *e*P **P 05 31 04.8 +0.3**
comp=Z,18nm,2.2s,mb4.6
MVO Moncorvo 52.97 303 *e*P **P 05 31 04.8 +0.3**
comp=Z,18nm,2.2s,mb4.6
PBAR Barrancos 53.30 299 *e*P **P 05 31 06.3 -0.7**
comp=Z,21nm,1.8s,mb4.8
PBAR Barrancos 53.30 299 *e*P **P 05 31 06.3 -0.7**
comp=Z,21nm,1.8s,mb4.8
EVO Evora 54.01 300 *e*P **P 05 31 11.7 -0.6**
comp=Z,25nm,1.7s,mb4.9
EVO Evora 54.01 300 *e*P **P 05 31 11.7 -0.6**
comp=Z,25nm,1.7s,mb4.9
CN2 Changchun 57.66 53 *e*P **P 05 31 37.3 -1.0**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
MDJ Mudanjiang 60.48 52 P **P 05 31 57.8 -0.1**
MDJ pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
MDJ pmax pmax
comp=Z,20nm,3.6s
KSRS Korea Array 60.63 60 P **P 05 31 57.1 -1.9**
comp=Z,4.5nm,0.7s,mb4.7,baz=274,slow=6.6,SNR=14
KSRS Korea Array 60.63 60 P **P 05 31 57.2 -1.8**
KSRS pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
KSRS Korea Array 60.63 60 P **P 05 31 57.2 -1.8**
comp=Z,5.0nm,0.7s,mb4.8
DBIC Dimbokro 60.89 262 P **P 05 31 60.0 -1.2**
comp=Z,4.1nm,1.0s,mb4.5,baz=48,slow=10,SNR=5.0
DBIC Dimbokro 60.89 262 P **P 05 31 60.0 -1.2**
DBIC Dimbokro 60.89 262 P **P 05 32 00.0 -1.1**
DBIC Dimbokro 60.89 262 P **P 05 32 00.0 -1.1**
KLR Kul'dur 61.22 47 *e*P **P 05 31 56.7 -6.1**
BOSA Boshof 62.45 210 P **P 05 32 10.8 -0.5**
comp=Z,3.6nm,0.5s,mb4.7,baz=12,slow=7.0,SNR=12
BOSA LR LR 05 58 41.3
comp=Z,48nm,20.8s,MS3.6,baz=165,slow=36
BOSA Boshof 62.45 210 P **P 05 32 10.8 -0.5**
BOSA pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
BOSA Boshof 62.45 210 P **P 05 32 10.8 -0.5**
comp=Z,4.0nm,0.5s,mb4.8
MJAR Matsushiro Arr 68.81 59 P **P 05 32 54.0 +1.6**
comp=Z,1.8nm,0.9s,mb4.0,baz=279,slow=8.7,SNR=5.9
MJAR Matsushiro Arr 68.81 59 P **P 05 32 54.0 +1.6**
YSS Yuzh-Sakhalins 68.91 47 *e*P **P 05 32 50.0 -2.8**
YSS Yuzh-Sakhalins 68.91 47 *e*P **P 05 32 50.0 -2.8**
SEY Seymchan 69.35 29 ||*e*P **P 05 32 54.8 -0.5**
SEY Seymchan 69.35 29 *e*P **P 05 32 54.8 -0.5**
ILAR Eielson Array 86.99 10 P **P 05 34 31.4 -1.6**
comp=Z,1.3nm,0.7s,mb4.3,baz=322,slow=4.5,SNR=17
ILAR Eielson Array 86.99 10 P **P 05 34 31.4 -1.6**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 89.14 113 P **P 05 34 42.6 -1.3**
comp=Z,1.1nm,1.0s,mb4.1,baz=310,slow=3.5,SNR=4.5
WRA Warramunga Arr 89.14 113 P **P 05 34 42.6 -1.3**
WRA pmax pmax
comp=Z,1.0nm,1.0s
ASAR Alice Springs 90.58 116 P **P 05 34 47.1 -3.5**
comp=Z,0.2nm,0.5s,mb3.8,baz=308,slow=5.6,SNR=5.8
ASAR Alice Springs 90.58 116 P **P 05 34 47.1 -3.5**
TXAR Lajitas Array 120.79 339 PKP PKPdf 05 40 38.4 -2.3
comp=Z,0.3nm,0.6s,baz=129,slow=1.8,SNR=5.2
TXAR Lajitas Array 120.79 339 PKIKP PKPdf 05 40 38.4 -2.3

IDC 14 05:33:10.1±1.8, 10°.08N×93°.29E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/23, mbtmp3.5/6, ML3.7/1, Error ellipse: s-maj=68.3km s-min=24.2km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.96**	**33**	Pn	Pn	05 35 35.2	+0.6
	0.2nm,0.3s,baz=214,slow=14,SNR=5.5						
MKAR	**Makanchi Array**	**37.76**	**348**	P	P	05 40 27.2	-0.6
	0.4nm,0.7s,baz=170,slow=7.4,SNR=4.9						
ZALV	**Zalesovo Beam**	**44.27**	**353**	P	P	05 41 20.7	-0.6
	0.8nm,0.3s,baz=177,slow=8.3,SNR=3.5						
WRA	**Warramunga Arr**	**50.23**	**127**	P	P	05 42 08.7	+0.4
	0.4nm,0.8s,baz=307,slow=8.2,SNR=3.5						
ASAR	**Alice Springs**	**51.98**	**131**	P	P	05 42 20.7	-0.6
	0.2nm,0.8s,baz=311,slow=6.0,SNR=3.0						
ARCES	**ARCESS Array B**	**72.92**	**340**	P	P	05 44 41.7	+0.9
	0.3nm,0.6s,baz=90,slow=5.2,SNR=4.7						

ISK 14 05:43:20.6, 37°.44N×36°.90E, h2km, MD2.8
ISCJB 14 05:43:21.6±0.7, 37°.44N±0°.05×36°.89E±0°.05, h7km±11km, Error ellipse: s-maj=9.6km s-min=5.1km az=30.8
DDA 14 05:43:21.6, 37°.46N×36°.90E, h7km±3km, Md2.8
CSEM 14 05:43:21.6±0.1, 37°.43N×36°.91E, h5km, MD2.8, Error ellipse: s-maj=3.1km s-min=2.1km az=170.0
ISC 14 05:43:21.9±0.5, 37°.45N±0°.04×36°.91E±0°.04, h5km±8km**, n23,** σ0**°78/33, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.37**	**139**	*e*PG	**Pg**	**05 43 28.6**	**-0.4**
GAZ				*e*SG	**Sg**	**05 43 34.4**	**+0.6**
GAZ	**Gaziantep**	**0.37**	**139**	*e*Pg	**Pg**	**05 43 28.6**	**-0.4**
GAZ				*e*Sg	**Sg**	**05 43 34.4**	**+0.6**
ANDN	**Andirin**	**0.47**	**286**	*i* P	**Pg**	**05 43 30.9**	**0.0**
ANDN				*i* S	**Sg**	**05 43 37.5**	**+0.6**
ANDN	**Andirin**	**0.47**	**286**	*i* P	**Pg**	**05 43 30.9**	**0.0**
ANDN				*i* S	**Sg**	**05 43 37.5**	**+0.5**
KUZU	**Kuzuini**	**0.69**	**169**	*i* P	**Pg**	**05 43 34.5**	**-0.6**
KUZU				*i* S	**Sg**	**05 43 45.8**	**+1.8**
KUZU	**Kuzuini**	**0.69**	**169**	*i* P	**Pg**	**05 43 34.5**	**-0.7**
KUZU				*i* S	**Sg**	**05 43 45.8**	**+1.7**
KOZT	**Kozan**	**0.86**	**272**	*e*PG	**Pg**	**05 43 37.9**	**-0.6**
KOZT	**Kozan**	**0.86**	**272**	*e*Pg	**Pg**	**05 43 37.9**	**-0.5**
CEYT	**Ceyhan**	**1.02**	**245**	*e*PG	**Pg**	**05 43 41.0**	**-0.6**
CEYT	**Ceyhan**	**1.02**	**245**	*e*Pg	**Pg**	**05 43 41.0**	**-0.6**
ATAB	**Bozova**	**1.10**	**89**	*i* P	**Pg**	**05 43 42.4**	**-0.7**
ATAB				*i* S	**Sg**	**05 43 56.0**	**-1.4**
ATAB	**Bozova**	**1.10**	**89**	*i* P	**Pg**	**05 43 42.4**	**-0.7**
ATAB				*i* S	**Sg**	**05 43 56.0**	**-1.4**
AKCD	**Akcadag**	**1.17**	**43**	*i* P	**Pg**	**05 43 44.3**	**0.0**
AKCD				*i* S	**Sg**	**05 44 00.8**	**+1.4**
AKCD	**Akcadag**	**1.17**	**43**	*i* P	**Pg**	**05 43 44.3**	**0.0**
AKCD				*i* S	**Sg**	**05 44 00.8**	**+1.4**
SARI	**SarD1z-Kayseri**	**1.24**	**352**	*e*PG	**Pg**	**05 43 41.0**	**-4.6**
MALT	**Malatya**	**1.48**	**54**	*e*PN	**Pn**	**05 43 49.3**	**+0.2**
MALT	**Malatya**	**1.48**	**54**	*e*Pn	**Pn**	**05 43 49.3**	**+0.1**
MYA	**Malataya**	**1.48**	**53**	*e*PN	**Pn**	**05 43 49.1**	**-0.2**
MYA	**Malataya**	**1.48**	**53**	*e*Pn	**Pn**	**05 43 49.1**	**-0.2**
KRTS	**Karatas**	**1.51**	**235**	*e*PN	**Pn**	**05 43 49.3**	**-0.2**
KRTS	**Karatas**	**1.51**	**235**	*e*Pn	**Pn**	**05 43 49.3**	**-0.2**
PTK	**Pertek**	**2.43**	**53**	*e*PN	**Pn**	**05 44 02.8**	**+0.6**
PTK	**Pertek**	**2.43**	**53**	*e*Pn	**Pn**	**05 44 02.8**	**+0.6**

ISCJB 14 05:49:31.6±0.8, 26°.82N±0°.07×55°.72E±0°.06, h10km, Error ellipse: s-maj=11.2km s-min=4.1km az=144.6
CSEM 14 05:49:33.9±0.8, 26°.99N×55°.70E, h2km, ML3.1, Error ellipse: s-maj=27.3km s-min=10.4km az=152.0
SGS 14 05:49:34.9, 27°.03N×55°.85E, h17km
TEH 14 05:49:34.7, 26°.75N×55°.92E, h17km
KISR 14 05:49:35.3±0.8, 27°.48N×55°.35E, h1km±999km, ML3.4
ISC 14 05:49:33.8±0.8, 26°.81N±0°.06×55°.77E±0°.06, h10km**, n25,** σ1°**47/35, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.69**	**31**	*e*Pg	**Pg**	**05 49 44.1**	**-3.0**
BNDS				*e*Sg	**Sg**	**05 49 52.0**	**-4.1**
IBND	**Bandar-abas**	**0.94**	**47**	*e*Pg	**Pg**	**05 49 50.8**	**-1.0**
IBND				*e*Sg	**Sg**	**05 50 02.7**	**-1.3**
IBND				*e*		05 50 14.1	
	comp=Z,27μm,0.2s						
KRBR	**Kerman**	**3.28**	**15**	*e*Pn	**Pn**	**05 50 25.8**	**+0.6**
ISRV	**Sarvestan**	**3.47**	**318**	*e*Pn	**Pn**	**05 50 29.7**	**+1.8**
ISRV				*e*		05 51 50.8	
	comp=Z,845nm,0.4s						
IPAR	**Pars**	**3.85**	**322**	*e*Pn	**Pn**	**05 50 35.4**	**+2.3**
IPAR				*e*		05 51 22.8	
	comp=Z,655nm,0.5s						
IMEH	**Mehriz**	**4.67**	**348**	*e*Pn	**Pn**	**05 50 45.6**	**+1.2**
IMEH				*e*		05 51 43.4	
	comp=Z,178nm,0.1s						
IBAF	**Bafgh**	**4.76**	**358**	*e*Pn	**Pn**	**05 50 46.1**	**+0.5**
IBAF				*e*		05 50 48.7	
	comp=Z,152nm,0.1s						
BTHS		**5.23**	**239**	P	**Pn**	**05 50 54.0**	**+1.9**
BTHS		**5.23**	**239**	P	**Pn**	**05 50 54.0**	**+1.9**
BTHS				S	**Sn**	**05 51 53.2**	**+0.7**
ISAD	**Sadrabad**	**5.40**	**341**	*e*Pn	**Pn**	**05 50 55.8**	**+1.4**
ISAD				*e*		05 52 03.2	
	comp=Z,256nm,0.4s						
NASN	**Na'in**	**6.50**	**337**	*e*Pn	**Pn**	**05 51 12.1**	**+2.7**
IZEF	**Zefreh**	**6.76**	**335**	*e*Pn	**Pn**	**05 51 13.2**	**+0.2**
IZEF				*e*		05 51 16.8	
	comp=Z,77nm,0.2s						
HRDDS		**6.91**	**237**	S	**Sn**	**05 52 32.7**	**-1.2**
HRDDS		**6.91**	**237**	P	**Pn**	**05 51 14.1**	**-1.1**
KFJS		**7.08**	**283**	S	**Sn**	**05 52 33.7**	**-4.4**
KFJS		**7.08**	**283**	S	**Sn**	**05 52 33.7**	**-4.4**
IKLH	**Kolahrood**	**7.43**	**332**	*e*Pn	**Pn**	**05 51 22.8**	**+0.5**
IKLH				*e*		05 51 27.4	
	comp=Z,98nm,0.2s						
RDF	**Al-Radifah**	**7.57**	**288**	*e*P	**Pn**	**05 51 25.5**	**+1.2**
RDF				*e*S	**Sn**	**05 52 47.2**	**-3.0**
RDF				AML	AML	05 52 49.7	
	comp=Z,7.2nm,0.4s						
RDF	**Al-Radifah**	**7.57**	**288**	*e*P	**Pn**	**05 51 25.5**	**+1.3**
RDF				*e*S	**Sn**	**05 52 47.2**	**-3.0**
NAY	**Al-Naaiem**	**7.92**	**290**	*e*P	**Pn**	**05 51 29.4**	**+0.4**
NAY				*e*S	**Sn**	**05 52 55.7**	**-2.9**
NAY				AML	AML	05 52 58.5	
	comp=Z,4.5nm,0.5s						
NAY	**Al-Naaiem**	**7.92**	**290**	*e*P	**Pn**	**05 51 29.4**	**+0.5**
NAY				*e*S	**Sn**	**05 52 55.7**	**-2.9**
MIB	**Mutribah**	**8.01**	**294**	*e*P	**Pn**	**05 51 30.4**	**+0.2**
MIB				*e*S	**Sn**	**05 52 56.8**	**-4.0**
MIB				AML	AML	05 53 00.2	
	comp=Z,5.4nm,0.5s						
MIB	**Mutribah**	**8.01**	**294**	*e*P	**Pn**	**05 51 30.4**	**+0.2**
MIB				*e*S	**Sn**	**05 52 56.8**	**-4.0**
	comp=Z,5.0nm,0.5s						
ASYS		**10.20**	**276**	P	**Pn**	**05 51 58.7**	**-1.6**
ASYS		**10.20**	**276**	P	**Pn**	**05 51 58.7**	**-1.6**
ASYS				S	**Sn**	**05 53 50.5**	**-4.3**

IDC 14 05:58:23.5±2.1, 21°.80S×170°.90E, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.9/16, mbtmp4.1/5, MS3.5/2, Ms1 3.5/2, ms1mx2.9/28, Error ellipse: s-maj=112.5km s-min=27.2km az=156.0
NOU 14 05:58:28.6±1.4, 20°.14S×170°.79E, h10km, MD3.3, ML3.8
ISCJB 14 05:58:29.0±1.5, 22°.55S±0°.2×171°.11E±0°.07, h62km±15km, mb4.2/8, Error ellipse: s-maj=32.3km s-min=9.4km az=170.3
NEIC 14 05:58:31.7±1.6, 22°.77S×171°.40E, h79km±17km, mb4.0/5, Error ellipse: s-maj=22.9km s-min=10.7km az=158.0
ISC 14 05:58:30.4±1.3, 22°.65±0°.2×171°.13E±0°.07, h56km±13km**, n22,** σ1°**09/24, mb4.2/8, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.95**	**275**	*e*P	**Pn**	**05 59 29.1**	**+0.6**
BAYA				*e*S	**Sn**	**06 00 13.2**	**-0.4**
BAYA				AMP		06 00 20.7	
	comp=Z,43nm,0.7s						
PLUM	**Mont Dore**	**4.17**	**273**	*e*P	**Pn**	**05 59 31.7**	**+0.3**
PLUM				*e*S	**Sn**	**06 00 19.9**	**+1.1**
NORM	**Noumea**	**4.31**	**274**	*e*P	**Pn**	**05 59 33.7**	**+0.2**
NORM				*e*S	**Sn**	**06 00 21.6**	**-0.9**
DZM	**Mont Dzumac**	**4.37**	**276**	*e*P	**Pn**	**05 59 34.2**	**0.0**
DZM				*e*S	**Sn**	**06 00 22.8**	**-1.0**
DZM				AMP		06 00 28.9	
	comp=Z,4μm,3.0s						
NOUC	**Port Laguerre**	**4.49**	**275**	*i* Pg	**Pn**	**05 59 36.2**	**+0.3**
NOUC				*e*S	**Sn**	**06 00 25.6**	**-1.3**
NOUC				AMP		06 00 30.7	
	comp=Z,147nm,6.8s						
MSVF	**Nonsavu**	**8.10**	**55**	*e*Pn	**Pn**	**06 00 25.2**	**-0.2**
	comp=Z,22nm,0.9s						
URZ	**Urewera**	**16.45**	**163**	LR	LR	06 07 05.3	
	comp=Z,145nm,20.0s,baz=13,slow=30						
EIDS	**Eidsvold**	**18.53**	**257**	*e*P	**Pn**	**06 02 45.2**	**+2.1**
	comp=Z,2.7nm,0.5s						
ARMA	**Armidale**	**19.10**	**242**	*e*P	**Pn**	**06 02 50.3**	**+0.4**
	comp=Z,5.6nm,0.7s						
RPZ	**Rata Peaks**	**21.07**	**180**	LR	LR	06 10 02.0	
	comp=Z,106nm,18.6s,baz=293,slow=32						
CTA	**Charters Tower**	**23.30**	**271**	P	**P**	**06 03 35.3**	**+1.7**
	comp=Z,1.9nm,0.5s,mb3.8,baz=89,slow=7.8,SNR=3.8						
CTAO	**Charters Tower**	**23.30**	**271**	*e*P	**P**	**06 03 35.8**	**+2.2**
	comp=Z,4.0nm,0.7s,mb4.0						
PMG	**Port Moresby**	**26.45**	**296**	*e*P	**P**	**06 04 04.8**	**+2.5**
	comp=Z,22nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**27.77**	**244**	P	**P**	**06 04 14.5**	**+0.5**
	comp=Z,2.5nm,0.7s,mb4.0,baz=90,slow=7.1,SNR=4.3						
STKA	**Stephens Creek**	**27.77**	**244**	P	**P**	**06 04 14.5**	**+0.5**
ASAR	**Alice Springs**	**34.19**	**261**	P	**P**	**06 05 10.3**	**-0.3**
	comp=Z,5.2nm,0.7s,mb4.6,baz=78,slow=9.6,SNR=68						
WRA	**Warramunga Arr**	**34.33**	**267**	P	**P**	**06 05 10.0**	**-1.9**
	comp=Z,1.1nm,0.4s,mb4.2,baz=97,slow=8.5,SNR=57						
WRA	**Warramunga Arr**	**34.33**	**267**	P	**P**	**06 05 10.0**	**-1.9**
FITZ	**Fitzroy Crossi**	**42.76**	**267**	P	**P**	**06 06 22.6**	**-0.1**
	comp=Z,1.9nm,0.6s,mb4.0,baz=90,slow=7.1,SNR=6.3						
QSPA	**South Pole Qui**	**67.49**	**180**	P	**P**	**06 09 18.1**	**-1.7**
	comp=Z,4.4nm,1.2s,mb4.4						
NVAR	**Mina Array Bea**	**89.71**	**48**	P	**P**	**06 11 21.6**	**-0.9**
	comp=Z,0.2nm,0.5s,mb3.7,baz=219,slow=4.2,SNR=2.4						
GERES	**GERESS Array B**	**148.26**	**331**	PKPbc	PKPbc	06 18 09.8	-0.3
	comp=Z,0.3nm,0.3s,baz=342,slow=6.2,SNR=2.5						

IDC 14 06:18:25.6±2.5, 20°.80S×68°.49W, h96km±31km**, mb3.3/1, mb1 3.1/4, mb1mx3.0/18, mbtmp2.9/4, Error ellipse: s-maj=90.1km s-min=23.2km az=99.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.50**	**4**	P	Pn	06 19 32.5	+0.9
	1.6nm,0.3s,baz=192,slow=8.1,SNR=48						
CFAA	**Coronel Fontan**	**10.77**	**179**	P	Pn	06 20 55.5	-1.2
	0.0nm,0.3s,baz=352,slow=15,SNR=4.1						
PLCA	**Paso Flores**	**19.95**	**185**	P	Pn	06 22 51.4	-1.2
	0.1nm,0.3s,baz=18,slow=13,SNR=3.5						
TORD	**Torodi Ar. Bea**	**76.75**	**70**	P	P	06 30 07.1	+0.1
	0.5nm,0.7s,baz=248,slow=6.0,SNR=4.0						
MKAR	**Makanchi Array**	**144.84**	**36**	PKP	PKPdf	06 37 50.3	-1.0
	0.5nm,0.6s,baz=333,slow=2.2,SNR=6.7						

ISCJB 14 06:22:32.9±0.6, 9°.32S±0°.05×123°.27E±0°.05, h108km±8km, mb4.0/7, Error ellipse: s-maj=9.7km s-min=5.3km az=139.2
NEIC 14 06:22:34.0±1.1, 9°.19S×123°.36E, h97km±14km, mb4.6/1, Error ellipse: s-maj=18.2km s-min=9.4km az=48.0
IDC 14 06:22:33.4±3.8, 8°.84S×123°.44E, h75km±31km, mb3.8/6, mb1 4.0/7, mb1mx3.7/16, mbtmp3.8/7, MS3.8/1, Ms1 3.7/1, ms1mx2.5/22, Error ellipse: s-maj=67.6km s-min=18.6km az=65.0
DJA 14 06:22:35, 9°.37S×123°.14E, h56km, mb4.8/7
ISC 14 06:22:34.1±0.5, 9°.44S±0°.04×123°.19E±0°.05, h109km±7km**, n35,** σ1°**25/49, mb4.0/7, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.24**	**310**	P	**Pn**	**06 22 55.9**	**-1.9**
MMRI				S	**Sn**	**06 23 10.7**	**-5.0**
BMNI	**Bima**	**4.53**	**281**	P	**Pn**	**06 23 41.7**	**+1.1**
BMNI				S	**Sn**	**06 24 33.4**	**+1.1**
BKSI	**Bulukumba**	**5.10**	**323**	P	**Pn**	**06 23 46.8**	**-1.5**
	0.4nm1μm107nm,0.8s						
KAPI	**Kappang**	**5.57**	**322**	*e*Pn	**Pn**	**06 23 53.5**	**-1.2**
	56nm,0.7s						
KAPI	**Kappang**	**5.57**	**322**	P	**Pn**	**06 23 53.5**	**-1.2**
	0.1nm362nm42nm,0.8s						
TTSI	**Tana Toraja**	**7.18**	**332**	P	**Pn**	**06 24 17.2**	**+0.6**
	0.1nm2μm32nm,0.8s						
NLAI	**Namlea**	**7.29**	**32**	P	**Pn**	**06 24 19.7**	**+1.7**
	0.3nm4μm88nm,0.9s						
KNA	**Kununurra**	**8.30**	**140**	*e*P	**Pn**	**06 24 33.1**	**+1.4**
	18nm,0.2s						
KNA				*e*S	**Sn**	**06 26 02.6**	**-1.2**
KNA	**Kununurra**	**8.30**	**140**	P	**Pn**	**06 24 33.2**	**+1.5**
	2μm155nm,0.6s						
KNA				S	**Sn**	**06 26 05.1**	**+1.3**
	2μm155nm,0.6s						
FITZ	**Fitzroy Crossi**	**8.93**	**165**	P	**Pn**	**06 24 42.1**	**+1.9**
	1.4nm,0.3s,baz=3.5,slow=8.1,SNR=69						
FITZ				S	**Sn**	**06 26 19.2**	**+0.1**
	13nm,0.3s,baz=74,slow=18,SNR=22						
FITZ	**Fitzroy Crossi**	**8.93**	**165**	*e*P	**Pn**	**06 24 42.2**	**+1.9**
	15nm,0.3s						
FITZ				*e*S	**Sn**	**06 26 14.0**	**-5.1**
FITZ	**Fitzroy Crossi**	**8.93**	**165**	P	**Pn**	**06 24 43.7**	**+3.4**
	29nm,0.8s						
FITZ				S	**Sn**	**06 26 19.8**	**+0.7**
	29nm,0.8s						
KAKA	**Kakadu**	**9.64**	**111**	*e*P	**Pn**	**06 24 50.2**	**+0.2**
	41nm,0.6s						
KAKA				*e*S	**Sn**	**06 26 33.1**	**-3.3**
KAKA	**Kakadu**	**9.64**	**111**	*e*Pn	**Pn**	**06 24 49.6**	**-0.3**
	90nm,0.6s						
KAKA				*e*Sn	**Sn**	**06 26 32.2**	**-4.2**
KAKA	**Kakadu**	**9.64**	**111**	P	**Pn**	**06 24 50.3**	**+0.3**
KAKA				S	**Sn**	**06 26 35.8**	**-0.6**
SWI	**Sorong**	**11.71**	**44**	P	**Pn**	**06 25 17.8**	**0.0**
MBWA	**Marble Bar**	**12.12**	**196**	*e*P	**Pn**	**06 25 28.0**	**+4.9**
MBWA				*e*S	**Sn**	**06 27 30.3**	**-6.1**
MBWA	**Marble Bar**	**12.12**	**196**	*e*Pn	**Pn**	**06 25 27.5**	**+4.4**
MBWA				*e*Sn	**Sn**	**06 27 34.8**	**-1.6**
WRA	**Warramunga Arr**	**15.00**	**135**	P	**Pn**	**06 26 00.1**	**-0.4**
	1.6nm,0.3s,baz=315,slow=15,SNR=42						
WRA				S	**Sn**	**06 28 36.1**	**-10**
	3.3nm,0.3s,baz=314,slow=25,SNR=11						
WB2	**Warramunga Arr**	**15.01**	**135**	*e*Pn	**Pn**	**06 26 00.6**	**0.0**
WB2				*e*Sn	**Sn**	**06 28 34.2**	**-12**
ASAR	**Alice Springs**	**17.46**	**145**	P	**Pn**	**06 26 34.8**	**+3.9**
	1.5nm,0.3s,baz=324,slow=12,SNR=105						
ASAR				S	**S**	**06 29 41.8**	**-3.9**
	2.0nm,0.3s,baz=322,slow=24,SNR=14						
ASAR				ScP	ScP	06 34 36.8	+5.6
	baz=339,slow=2.0,SNR=5.5						
MEEK	**Meekatharra**	**17.64**	**194**	*e*P	**Pn**	**06 26 39.2**	**+6.2**
MEEK				*e*S	**S**	**06 29 48.1**	**-1.7**
COEN	**Coen**	**20.07**	**105**	*e*P	**P**	**06 26 59.4**	**+0.3**
	26nm,0.3s						
COEN				*e*S	**S**	**06 30 30.0**	**-8.9**
KULM	**Kulim**	**26.81**	**302**	*e*P	**P**	**06 28 05.7**	**+1.3**
	36nm,1.9s,mb4.6						
STKA	**Stephens Creek**	**28.10**	**145**	P	**P**	**06 28 21.0**	**+5.3**
	3.0nm,1.0s,mb3.8,baz=309,slow=8.3,SNR=3.7						
STKA				LR	LR	06 40 33.4	
	comp=Z,180nm,21.4s,baz=207,slow=38						
STKA	**Stephens Creek**	**28.10**	**145**	P	**P**	**06 28 21.0**	**+5.3**
STKA				LR	LR	06 40 33.4	
MJAR	**Matsushiro Arr**	**47.87**	**16**	P	**P**	**06 30 59.2**	**-2.0**
	2.2nm,0.4s,mb4.4,baz=189,slow=8.8,SNR=4.8						
SONM	**Songino Array**	**58.94**	**347**	P	**P**	**06 32 21.6**	**-0.3**
	0.4nm,0.6s,mb3.6,baz=167,slow=8.9,SNR=2.6						
MK31	**Makanchi Array**	**66.80**	**331**	*e*P	**P**	**06 33 14.2**	**+0.2**
MKAR	**Makanchi Array**	**66.80**	**331**	P	**P**	**06 33 14.0**	**0.0**
	1.5nm,0.5s,mb4.1,baz=141,slow=7.8,SNR=12						
ZALV	**Zalesovo Beam**	**70.99**	**337**	P	**P**	**06 33 38.5**	**-1.3**
	0.8nm,0.3s,mb4.0,baz=151,slow=6.6,SNR=2.0						
BVAR	**Borovoye Array**	**76.68**	**330**	P	**P**	**06 34 15.2**	**+2.2**
	0.5nm,0.7s,mb3.4,baz=126,slow=6.2,SNR=3.8						
DBIC	**Dimbokro**	**128.52**	**271**	SKPbc		06 44 42.8	
	3.2nm,1.0s,baz=180,slow=4.0,SNR=3.0						
TXAR	**Lajitas Array**	**131.96**	**59**	SKPbc

PGC Sidney 3.48 76 ePn Pn 06 34 40.7 -1.5
PGC Sidney 3.48 76 ⇑Pn Pn 06 34 40.9 -1.4
GOBB Galiano Island 3.50 71 ⇓Pn Pn 06 34 42.3 -0.3
SHB Sechelt 3.52 60 ⇑Pn Pn 06 34 43.5 +0.7
VGZ Gonzales 3.53 80 ⇑Pn Pn 06 34 41.1 -1.9
SNB Saturna Island 3.68 75 P Pn 06 34 43.0 -2.0
SNB Saturna Island 3.68 75 ⇑Pn Pn 06 34 43.0 -2.0
HDW Hoodsport 3.71 92 P Pn 06 34 43.8 -1.6
BIB Bowen Island 3.78 65 ⇑Pn Pn 06 34 46.5 +0.2
GNW Green Mountain 3.87 93 ePn Pn 06 34 46.1 -1.5
GNW eSn Sn 06 35 36.1 +2.4
MCW Mount Constitu 3.89 77 P Pn 06 34 47.1 -0.8
BMW Boistfort Moun 3.90 110 ePn Pn 06 34 41.9 -6.2
WPB Watts Point 3.93 62 ⇑Pn Pn 06 34 48.9 +0.4
HNB Haney 4.18 69 Pn Pn 06 34 51.6 -0.3
HEBO Mount Hebo 4.27 128 ePn Pn 06 34 49.1 -3.9
HEBO eSn Sn 06 35 38.6 -4.8
BBB Bella Bella 4.28 4 Pn Pn 06 34 54.3 +1.0
68nm,0.3s,baz=17,slow=12,SNR=924
BBB Sn Sn 06 35 44.7 +0.8
baz=214,slow=18,SNR=0.9
BBB LR LR 06 36 27.8
comp=Z,929nm,20.7s,baz=13,slow=36
BBB Bella Bella 4.28 4 ⇑Pn Pn 06 34 54.1 +0.8
WSLR Whistler 4.31 57 ⇑Pn Pn 06 34 55.0 +1.3
VDB Vedder Mountai 4.42 73 P Pn 06 34 54.8 -0.5
VDB Vedder Mountai 4.42 73 ⇑Pn Pn 06 34 54.8 -0.5
JCW Jim Creek 4.44 84 ePn Pn 06 34 54.7 -0.8
LON Longmire 4.72 102 ePn Pn 06 34 58.3 -1.0
RPW Rockport 4.73 81 ePn Pn 06 34 59.3 -0.1
RPW eSn Sn 06 35 52.1 -2.8
COR Corvallis 4.93 131 ePn Pn 06 34 59.3 -2.9
COR eSn Sn 06 35 55.2 -4.5
HOOD Mount Hood Mea 5.41 116 ePn Pn 06 35 08.0 -0.8
ETW Entiat 5.54 90 ePn Pn 06 35 10.1 -0.6
DIB Dawson Inlet, 5.86 336 Pn Pn 06 35 13.1 -1.8
RSW Rattlesnake Hi 6.29 101 ePn Pn 06 35 20.9 0.0
HAWA Hanford 6.33 101 ePn Pn 06 35 20.8 -0.6
HUMO Hull Mountain 6.61 141 ePn Pn 06 35 25.0 -0.2
OD2 Odessa Site #2 6.66 91 ePn Pn 06 35 24.2 -1.7
17nm,0.7s
KRMB Red Mountain 7.19 151 ePn Pn 06 35 31.7 -1.6
68nm,1.4s
LNOR Lincton Mounta 7.32 102 ePn Pn 06 35 34.7 -0.3
YBH Yreka Blue Hor 7.44 144 Pn Pn 06 35 37.3 +0.6
0.7nm,0.3s,baz=342,slow=13,SNR=15
YBH Yreka Blue Hor 7.44 144 ePn Pn 06 35 36.9 +0.3
NEW Newport 7.66 83 ePn Pn 06 35 38.6 -1.0
KHMM Horse Mountain 7.83 152 ePn Pn 06 35 40.9 -1.2
MOD Modoc 8.38 133 ePn Pn 06 35 52.5 +2.9
WDC Whiskeytown Da 8.50 147 ePn Pn 06 35 51.6 +0.4
WVOR Wild Horse Val 8.88 124 ePn Pn 06 35 56.0 -0.4
8.0nm,0.8s
KIPM Iron Peak 8.89 154 ePn Pn 06 35 56.1 -0.4
43nm,1.1s
KCPM Cahto Peak 8.97 155 ePn Pn 06 35 56.0 -1.7
BSMT Bassoo Peak 9.25 85 ePn Pn 06 35 59.9 -1.5
JTMT Jette 9.60 86 ePn Pn 06 36 04.5 -1.7
HOPS Hopland 9.76 154 ePn Pn 06 36 06.9 -1.6
YBMT Yellow Bay 9.76 85 ePn Pn 06 36 10.7 +2.2
WALA Waterton Lakes 9.78 78 ePn Pn 06 36 09.3 +0.5
SWMT Swartz Lake 9.81 87 ePn Pn 06 36 07.5 -1.7
MSO Missoula 9.97 91 ePn Pn 06 36 10.8 -0.5
OHCM Honcut 9.98 147 ePn Pn 06 36 07.6 -3.9
SLMT Seeley Lake 10.19 88 ePn Pn 06 36 11.9 -2.5
CHMT Chamberlain Mo 10.41 90 ePn Pn 06 36 16.8 -0.7
PAHR Pah Rah Range 10.53 138 ePn Pn 06 36 20.1 +1.0
DLBC Dease Lake 10.58 356 Pn Pn 06 36 23.6 +4.0
0.2nm,0.3s,baz=189,slow=12,SNR=13
DLBC LR LR 06 40 15.1
comp=Z,842nm,19.4s,baz=114,slow=36
DLBC Dease Lake 10.58 356 ePn Pn 06 36 24.2 +4.6
WCN Washoe City 10.70 140 ePn Pn 06 36 22.2 +0.8
HLID Hailey 10.79 109 ePn Pn 06 36 22.4 -0.1
BMN Battle Mountai 11.04 129 ePn Pn 06 36 27.9 +2.0
LRM Limekiln Ridge 11.21 95 ePn Pn 06 36 27.5 -0.9
MCMT McKenzie Canyo 11.27 100 ePn Pn 06 36 28.9 -0.3
6.4nm,0.8s
HRY Holter Researc 11.41 90 ePn Pn 06 36 32.2 +1.1
WAKR Walker 11.51 142 ePn Pn 06 36 32.8 +0.4
CMB Columbia Colle 11.53 146 ePn Pn 06 36 31.5 -1.3
10nm,0.9s
BOZ Bozeman (W) 11.82 95 ePn Pn 06 36 36.2 -0.4
NVAR Mina Array Bea 12.06 138 Pn Pn 06 36 40.9 +0.9
0.1nm,0.3s,baz=314,slow=10,SNR=28
SAO San Andreas Ge 12.31 152 ePn Pn 06 36 43.8 +0.4
YMR Madison River 12.58 98 ePn Pn 06 36 49.2 +2.2
12nm,0.9s
EGMT Eagleton 12.59 83 ePn Pn 06 36 50.4 +3.2
HVU Hansel Valley 12.75 113 ePn Pn 06 36 50.8 +1.5
YNR Norris Junctio 12.76 98 ePn Pn 06 36 49.5 +0.1
MTUM Tungsten Hills 12.85 142 ePn Pn 06 36 51.3 +0.6
DCID1 Drake Creek 12.86 103 ePn Pn 06 36 52.4 +1.5
RRI2 Red Ridge 12.88 104 ePn Pn 06 36 52.8 +1.6
IMW Indian Meadow 12.90 102 ePn Pn 06 36 52.7 +1.3
FLWY Flagg Ranch 12.98 101 ePn Pn 06 36 54.3 +1.8
LKWY Lake 12.99 98 ePn Pn 06 36 55.7 +3.0
TPAW Teton Pass 13.06 103 ePn Pn 06 36 55.5 +1.9
MOOW Moose Ponds 13.09 102 ePn Pn 06 36 56.2 +2.3
BGU Big Grassy Mou 13.09 117 ePn Pn 06 36 55.7 +1.6
16nm,1.3s
GCMT Greycliff 13.09 92 ePn Pn 06 36 55.0 +1.0
19nm,1.1s
REDW Red Top Meadow 13.18 104 ePn Pn 06 36 57.0 +1.7
SNOW Snow King Moun 13.20 103 ePn Pn 06 36 58.5 +3.0
SPUT South Promonto 13.22 114 ePn Pn 06 36 56.5 +0.8
25nm,1.4s
LOHW Long Hollow 13.24 102 ePn Pn 06 36 57.9 +1.9
RLMT Red Lodge 13.56 95 ePn Pn 06 37 00.9 +0.5
HWUT Hardware Ranch 13.60 111 ePn Pn 06 37 03.2 +2.3
DUG Dugway 13.68 119 ePn Pn 06 37 02.8 +0.8
JLU Jordanelle 14.25 115 ePn Pn 06 37 10.2 +0.4
NLU North Lily Min 14.27 118 ePn Pn 06 37 10.7 +0.6
BW06 Boulder Array 14.30 104 ePn Pn 06 37 13.4 +2.9
PDAR Pinedale Array 14.30 104 Pn Pn 06 37 13.3 +2.8
0.1nm,0.3s,baz=300,slow=12,SNR=31
PDAR LR LR 06 42 51.2
comp=Z,523nm,18.8s,baz=317,slow=38
PDAR Pinedale Array 14.30 104 Pn Pn 06 37 13.3 +2.8
PDAR LR LR 06 42 51.2
ISA Isabella 14.34 145 ePn Pn 06 37 10.2 -0.9
DAU Daniels Canyon 14.48 115 ePn Pn 06 37 14.0 +1.1
ARUT Antelope Range 14.98 127 ePn Pn 06 37 19.1 -0.7
7.7nm,0.9s
SHPR Sheep Range 15.08 134 ePn Pn 06 37 21.8 +0.6
MSU Marysvale 15.16 122 ePn Pn 06 37 22.0 -0.2
LAO LASA Array 15.19 86 ePn Pn 06 37 25.1 +2.6
59nm,1.4s
CCUT Cedar City 15.19 127 ePn Pn 06 37 22.0 -0.6
22nm,1.5s
GSC Goldstone 15.33 141 ePn Pn 06 37 24.1 -0.5
13nm,1.1s
SRU San Rafael 15.73 117 ePn Pn 06 37 30.1 +0.5
10nm,0.8s
MWC Mount Wilson 15.78 146 eP Pn 06 37 32.5 +2.2
24nm,1.3s
PASC Pasadena Art C 15.78 147 eP Pn 06 37 34.5 +4.2
9.8nm,0.8s
DGMT Dagmar 16.23 79 ePn Pn 06 37 36.2 +0.1
338nm,2.5s
LDFC Landfair 16.27 137 ePn Pn 06 37 36.0 -0.7
45nm,1.3s
RWWY Rawlins 16.34 105 ePn Pn 06 37 37.6 0.0
241nm,2.7s
YKA Yellowknife Ar 16.57 23 Pn Pn 06 37 43.1 +2.8
0.1nm,0.3s,baz=221,slow=11,SNR=7.6
YKA LR LR 06 43 50.4
comp=Z,29nm,21.3s,baz=110,slow=36
PFO Pinyon Flat Ob 16.94 143 ePn Pn 06 37 43.5 -1.7
27nm,1.6s
PV04 Paradox Valley 17.16 116 ePn Pn 06 37 48.7 +0.8
DAWY Dawson 17.24 344 ePn Pn 06 37 49.8 +0.9
RSSD Black Hills 17.41 93 eP Pn 06 37 53.9 +2.8
30nm,1.9s
PV01 Paradox Valley 17.53 117 ePn Pn 06 37 52.3 -0.2
15μm,1.9s
BAR Barrett 17.67 145 ePn Pn 06 37 54.1 -0.3
6.1nm,1.0s
PHWY Pilot Hill 17.68 103 ePn Pn 06 37 54.0 -0.4
24nm,0.9s
SMCO Snowmass 17.86 111 ePn Pn 06 37 57.5 +0.9
12nm,1.3s
FFC Flin Flon 17.87 58 ePn Pn 06 37 55.6 -1.2
68nm,1.0s
EGAK Eagle 18.23 343 ePn Pn 06 38 02.2 +1.3
19nm,1.2s
ISCO Idaho Springs 18.37 108 ePn Pn 06 38 04.0 +1.1
5.8nm,0.8s
ILAR Eielson Array 19.58 336 P Pn 06 38 16.0 -1.4
0.0nm,0.3s,baz=150,slow=9.7,SNR=16
SDCO Great Sand Dun 19.65 113 ePn Pn 06 38 17.7 -0.7
32nm,2.3s
COLA College 19.93 336 eP Pn 06 38 21.2 -0.3
4.1nm,0.8s
PPLA Purkeypile 19.95 327 eP Pn 06 38 18.3 -3.5
75nm,1.8s
OGNE Ogallala 20.11 100 eP P 06 38 21.2 -0.8
95nm,1.6s
TUC Tucson 20.60 133 eP P 06 38 31.1 +3.7
4.8nm,1.0s
INK Inuvik 20.61 355 LR LR 06 46 28.7
comp=Z,416nm,20.6s,MS3.8,baz=141,slow=37
ANMO Albuquerque 20.93 120 P P 06 38 29.2 -1.8
4.4nm,0.9s,baz=321,slow=11,SNR=15
ANMO Albuquerque 20.93 120 eP P 06 38 30.6 -0.4
18nm,1.3s
LAZ Ladron 20.93 122 eP P 06 38 30.9 -0.1
10nm,1.5s
LENM Lemitar 21.20 123 eP P 06 38 35.3 +1.4
LPM Los Pinos Moun 21.29 122 eP P 06 38 35.7 +0.9
BNM Barren Site 21.40 122 eP P 06 38 36.2 +0.1
49nm,1.8s,mb4.5
TTA Tatalina 21.41 325 eP P 06 38 33.9 -2.0
26nm,1.2s,mb4.4
ULM Lac du Bonnet 21.43 72 P P 06 38 35.9 -0.4
11nm,0.9s,mb4.2,baz=285,slow=11,SNR=8.5
ULM LR LR 06 47 38.5
comp=Z,132nm,21.2s,MS3.3,baz=260,slow=39
AGMN Agassiz Nation 21.74 77 eP P 06 38 41.0 +1.4
131nm,2.1s,mb5.0
COLD Coldfoot 22.34 338 eP P 06 38 46.2 +0.3
8.8nm,1.1s,mb4.1
ECSD EROS Data Cent 22.55 89 eP P 06 38 47.0 -1.3
22nm,1.1s,mb4.6
CBKS Cedar Bluff 22.72 103 eP P 06 38 51.9 +1.7
202nm,2.1s,mb5.3
AMTX Amarillo 23.85 113 eP P 06 39 01.0 -0.7
44nm,1.5s,mb4.8
MNTX Cornudas Mount 23.92 124 eP P 06 39 00.7 -1.7
32nm,2.0s,mb4.5
KSU1 Kansas State U 24.63 99 eP P 06 39 09.7 +0.8
18nm,0.8s,mb4.9
EYMN Ely 24.67 76 eP P 06 39 09.4 +0.3
120nm,2.0s,mb5.3
WMOK Wichita Mounta 25.76 110 eP P 06 39 18.2 -0.9
10nm,1.2s,mb4.3
TXAR Lajitas Array 26.68 125 P P 06 39 26.0 -1.5
0.9nm,0.9s,mb3.5,baz=297,slow=8.3,SNR=8.6
TXAR LR LR 06 50 05.7
comp=Z,160nm,19.2s,MS3.6,baz=185,slow=37
JCT Junction City 28.04 118 eP P 06 39 38.6 -1.1
45nm,1.9s,mb5.0
RES Resolute Bay 30.44 17 LR LR 06 52 51.8
comp=Z,262nm,18.9s,MS3.9,baz=202,slow=37
FRB Frobisher Bay 35.68 41 LR LR 06 55 04.7
comp=Z,132nm,20.8s,MS3.7,baz=327,slow=36
SCHQ Schefferville 38.00 56 LR LR 06 56 53.2
comp=Z,239nm,18.0s,MS4.0,baz=60,slow=36
SPITS Spitsbergen Ar 52.38 9 LR LR 07 05 50.7
comp=Z,39nm,19.2s,MS3.5,baz=55,slow=37
MJAR Matsushiro Arr 65.93 298 LR LR 07 14 06.7
comp=Z,22nm,18.4s,MS3.4,baz=205,slow=37
NOA NORSAR Array B 66.64 20 LR LR 07 11 40.9
comp=Z,50nm,19.2s,MS3.8,baz=350,slow=34
PPT Papeete 67.85 202 LR LR 07 09 14.1
comp=Z,82nm,19.3s,MS4.0,baz=99,slow=31
FINES FINESS Array B 69.09 13 LR LR 07 15 49.7
comp=Z,101nm,18.7s,MS4.1,baz=317,slow=36
ZALV Zalesovo Beam 74.65 340 LR LR 07 18 35.4
comp=Z,30nm,18.9s,MS3.6,baz=38,slow=36
HHC Hu-ho-hao-te 76.84 318 eP P 06 45 39.0 -1.4
HHC pP 06 45 43.8
HHC sP sP 06 45 46.1 +5.2
HHC PcP PcP 06 45 51.1 -0.5
HHC PP PP 06 48 32.3 -0.2
HHC S S 06 55 24.3 -4.4
HHC ScS ScS 06 55 50.9 -7.0
HHC SS SS 07 00 19.8 -3.8
HHC pmax pmax
comp=Z,11nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,100nm,6.4s
HHC LR LR
comp=N,200nm,12.1s,MS4.9
HHC LR LR
comp=E,340nm,16.2s,MS4.9
HHC LR LR
comp=Z,140nm,17.0s,MS4.3
BVAR Borovoye Array 78.16 348 P P 06 45 48.1 +0.5
comp=Z,0.4nm,0.4s,mb3.9,baz=21,slow=4.9,SNR=3.9
MKAR Makanchi Array 81.91 339 P P 06 46 07.0 -1.0
comp=Z,0.2nm,0.3s,mb3.7,baz=29,slow=3.3,SNR=3.8
MKAR LR LR 07 25 21.2
comp=Z,47nm,18.6s,MS3.9,baz=3.5,slow=38
WMQ Urumqi 83.24 334 eP P 06 46 17.0 +2.1
LZH Lanzhou 84.19 320 eP P 06 46 19.6 -0.3
LZH pP 06 46 22.8
LZH sP sP 06 46 24.3 +3.9
LZH ePP PP 06 49 35.8 +2.4
LZH pmax pmax
comp=Z,16nm,1.5s,mb5.0
LZH pmax pmax
comp=Z,45nm,8.6s
LZH LR LR
comp=N,200nm,17.0s
LZH LR LR
comp=Z,240nm,19.5s,MS4.6
CD2 Chengdu 88.59 317 eP P 06 46 42.3 +0.7
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
CD2 pmax pmax
comp=Z,30nm,4.8s
GYA Guiyang 90.93 313 eP P 06 46 53.3 +0.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
KMI Kunming 93.96 315 P P 06 47 07.6 +0.9
KMI pP 06 47 11.6
KMI sP sP 06 47 13.1 +5.9
KMI pmax pmax
comp=Z,3.0nm,1.0s,mb4.6

*NEIC **14** 07:19:19.2, 31.°61S×71.°78W, h22km, ML2.9(GUC), After GUC.*

GUC 14 07:19:19.2±0.7, 31.°61S×71.°78W, h22km±3km, MD3.8, ML2.9, 5C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	0.80	57	⇑iP	Pb	07 19 33.8	-0.5
CMCH				i S	Sb	07 19 45.0	+0.3
CMCH	Combarbala	0.80	57	⇑iP	Pb	07 19 33.8	-0.5
CMCH				i S	Sb	07 19 45.0	+0.3
CMCH				AML	AML	07 19 45.8	
comp=E,1μm,0.7s							
ROCH	El Roble	1.50	155	⇑iP	Pn	07 19 45.4	+0.6
ROCH				i S	Sn	07 20 05.5	+1.8
ROCH				AML	AML	07 20 10.3	
comp=N,286nm,0.3s							
TLL	Tololo Astrono	1.67	30	eP	Pn	07 19 47.7	+0.6
TLL				eS	Sn	07 20 09.8	+2.0
TLL	Tololo Astrono	1.67	30	eP	Pn	07 19 47.7	+0.6
TLL				eS	Sn	07 20 09.8	+2.0
TLL				AML	AML	07 20 14.6	
comp=N,161nm,0.7s							
PEL	Peldehue	1.79	149	⇑iP	Pn	07 19 49.6	+0.9
PEL				i S	Sn	07 20 12.9	+2.1
PEL				AML	AML	07 20 17.1	
comp=N,276nm,0.4s							
CLCH	Cerro Calan	2.06	150	eP	Pn	07 19 54.3	+1.7
CLCH				i S	Sn	07 20 20.3	+2.6
CLCH				AML	AML	07 20 24.6	
comp=N,160nm,0.6s							
FCH	Farellones	2.12	144	⇑iP	Pn	07 19 53.7	+0.3
FCH				i S	Sn	07 20 21.1	+2.1
FCH				AML	AML	07 20 23.7	
comp=E,64nm,0.2s							
TACH	Talagante	2.15	161	eP	Pn	07 19 55.1	+1.3
TACH				i S	Sn	07 20 22.1	+2.3
TACH	Talagante	2.15	161	eP	Pn	07 19 55.1	+1.3
TACH				i S	Sn	07 20 22.1	+2.3
ANTU	Antumapu	2.18	154	eS	Sn	07 20 22.7	+2.3
ANTU				AML	AML	07 20 32.4	
comp=E,113nm,0.3s							
LMEL	Las Melosas	2.59	150	eP	Pn	07 20 01.4	+1.5
LMEL				i S	Sn	07 20 33.1	+2.4
LMEL	Las Melosas	2.59	150	eP	Pn	07 20 01.4	+1.5
LMEL				i S	Sn	07 20 33.1	+2.4
LMEL				AML	AML	07 20 41.2	
comp=N,80nm,0.3s							
LCO	Las Campanas	2.76	20	eP	Pn	07 20 03.6	+1.6
LCO				eS	Sn	07 20 38.3	+3.7
LCO	Las Campanas	2.76	20	eP	Pn	07 20 03.6	+1.6
LCO				eS	Sn	07 20 38.3	+3.7

*NEIC **14** 07:28:44.2, 31.°61S×71.°75W, h31km, ML3.0(GUC), After GUC.*

GUC 14 07:28:44.2±0.7, 31.°61S×71.°75W, h31km±2km, MD3.6, ML3.0, 5C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	Los Chungos	0.35	141	⇑iP	Pb	07 28 48.2	-4.2
CHNG				i S	Sb	07 28 54.2	-3.7
CMCH	Combarbala	0.78	56	⇑iP	Pn	07 28 58.8	-0.2
CMCH				i S	Sb	07 29 10.1	+0.6
CMCH	Combarbala	0.78	56	⇑iP	Pn	07 28 58.8	-0.2
CMCH				i S	Sb	07 29 10.1	+0.6
CMCH				AML	AML	07 29 10.8	
comp=E,2μm,0.4s							
JACH	Jahuel	1.45	138	eP	Pn	07 29 10.8	+2.6
JACH				eS	Sn	07 29 30.1	+3.9
JACH	Jahuel	1.45	138	eP	Pn	07 29 10.8	+2.6
JACH				eS	Sn	07 29 30.1	+3.9
ROCH	El Roble	1.49	155	eP	Pn	07 29 10.6	+1.7
ROCH				eS	Sn	07 29 30.3	+3.0
ROCH	El Roble	1.49	155	⇑iP	Pn	07 29 10.2	+1.3
ROCH				eP		07 29 10.6	
ROCH				i S	Sn	07 29 30.2	+2.9
ROCH				eS	Sn	07 29 30.3	+3.0
ROCH				AML	AML	07 29 35.2	
comp=N,379nm,0.4s							
TLL	Tololo Astrono	1.66	30	eP	Pn	07 29 13.3	+2.2
TLL				eS	Sn	07 29 34.5	+3.2
TLL	Tololo Astrono	1.66	30	eP	Pn	07 29 13.3	+2.2
TLL				eS	Sn	07 29 34.5	+3.2
TLL				AML	AML	07 29 40.1	
comp=N,178nm,0.5s							
PEL	Peldehue	1.77	150	⇑iP	Pn	07 29 14.3	+1.5
PEL				i S	Sn	07 29 37.2	+2.9
PEL				AML	AML	07 29 42.0	
comp=N,333nm,0.5s							
CLCH	Cerro Calan	2.05	150	eP	Pn	07 29 18.4	+1.9
CLCH				eS	Sn	07 29 43.8	+2.7
CLCH				AML	AML	07 29 49.6	
comp=N,170nm,0.6s							
FCH	Farellones	2.11	145	eP	Pn	07 29 19.3	+2.0
FCH				i S	Sn	07 29 46.5	+3.9
FCH				AML	AML	07 29 50.5	
comp=E,96nm,0.3s							
TACH	Talagante	2.15	162	eP	Pn	07 29 19.4	+1.5
TACH				eS	Sn	07 29 46.1	+2.6
TACH	Talagante	2.15	162	eP	Pn	07 29 19.4	+1.5
TACH				eS	Sn	07 29 46.1	+2.6
ANTU	Antumapu	2.17	154	eP	Pn	07 29 19.5	+1.4
ANTU				eS	Sn	07 29 46.4	+2.4
ANTU	Antumapu	2.17	154	eP	Pn	07 29 19.5	+1.4
ANTU				eS	Sn	07 29 46.4	+2.4
ANTU				AML	AML	07 29 57.4	
comp=E,138nm,0.6s							
PCH	Pirque	2.26	153	eP	Pn	07 29 20.6	+1.2
PCH				eS	Sn	07 29 49.2	+3.0
PCH	Pirque	2.26	153	eP	Pn	07 29 20.6	+1.2
PCH				eS	Sn	07 29 49.2	+3.0
LMEL	Las Melosas	2.58	150	eP	Pn	07 29 25.9	+2.1
LMEL				i S	Sn	07 29 57.0	+2.8
LMEL	Las Melosas	2.58	150	eP	Pn	07 29 25.9	+2.1
LMEL				i S	Sn	07 29 57.0	+2.8
LMEL				AML	AML	07 30 08.1	
comp=N,137nm,0.3s							
LCO	Las Campanas	2.75	20	eP	Pn	07 29 27.0	+0.9
LCO				eS	Sn	07 29 59.7	+1.5
LCO	Las Campanas	2.75	20	eP	Pn	07 29 27.0	+0.9
LCO				eS	Sn	07 29 59.7	+1.5
LCO				AML	AML	07 30 11.8	
comp=E,54nm,0.9s							

*IDC **14** 07:36:02.7±0.7, 8.°84S×126.°81E, h0km, mb4.3/11, mb1 4.4/12, mb1mx4.3/17, mbtmp4.3/12, ML4.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/25, Error ellipse: s-maj=33.7km s-min=15.9km az=69.0*

*NEIC **14** 07:36:07.1±0.4, 9.°01S×126.°98E, h35km, mb4.3/4, Error ellipse: s-maj=14.5km s-min=7.7km az=62.0*

ISC 14 07:36:05.0±3.2, 8.°96S±0.°05×126.°98E±0.°07, h19km±20km, n37, σ1°24/44, mb4.2/15, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.53	125	ePn	Pn	07 37 42.5	+2.3
37nm,0.7s							
KAKA	Kakadu	6.53	125	ePn	Pn	07 37 42.3	+2.1
118nm,0.5s							
KAKA				eSn	Sn	07 38 53.9	-0.4
KNA	Kununurra	6.97	166	eP	Pn	07 37 48.5	+2.3
52nm,0.8s							
KNA				eS	Sn	07 39 04.0	-1.1
FITZ	Fitzroy Crossi	9.18	188	Pn	Pn	07 38 16.3	-0.3
1.6nm,0.3s,baz=25,slow=11,SNR=48							
FITZ				Sn	Sn	07 39 54.3	-5.2
4.5nm,0.3s,baz=82,slow=8.0,SNR=9.1							
FITZ				LR	LR	07 42 03.1	
comp=Z,135nm,21.5s,baz=171,slow=39							
FITZ	Fitzroy Crossi	9.18	188	eP	Pn	07 38 17.2	+0.7
28nm,0.6s							
FITZ				eS	Sn	07 39 55.1	-4.3
WRA	Warramunga Arr	13.03	148	Pn	Pn	07 39 07.5	-1.9
1.6nm,0.3s,baz=317,slow=12,SNR=94							
WRA				Sn	Sn	07 41 25.8	-8.1
5.6nm,0.3s,baz=318,slow=24,SNR=12							
WB2	Warramunga Arr	13.04	148	ePn	Pn	07 39 07.6	-1.8
WB2				eSn	Sn	07 41 21.7	-12
MBWA	Marble Bar	14.00	209	eP	Pn	07 39 22.7	+0.2
MBWA				eS	Sn	07 41 47.7	-10
MBWA	Marble Bar	14.00	209	ePn	Pn	07 39 22.6	+0.1
MBWA				eSn	Sn	07 41 47.7	-10
ASAR	Alice Springs	16.06	156	Pn	Pn	07 39 49.0	-0.9
0.7nm,0.3s,baz=319,slow=11,SNR=47							
ASAR				Sn	Sn	07 42 40.4	-7.2
1.2nm,0.3s,baz=327,slow=21,SNR=9.7							
COEN	Coen	16.63	109	eP	Pn	07 39 56.5	-0.8
COEN				eS	Sn	07 42 51.0	-11
COEN	Coen	16.63	109	ePn	Pn	07 39 56.4	-0.9
132nm,1.0s							
COEN				eSn	Sn	07 42 49.6	-12
KSM	Kuching	19.58	301	eP	Pn	07 40 31.9	-1.6
5.5nm,0.8s							
CTA	Charters Tower	21.67	123	P	P	07 40 58.0	+3.2
5.6nm,0.8s,mb4.1,baz=308,slow=12,SNR=6.0							
CTA	Charters Tower	21.67	123	P	P	07 40 58.0	+3.2
QLP	Quilpie	23.97	139	eP	P	07 41 21.7	+3.2
STKA	Stephens Creek	26.54	151	P	P	07 41 43.7	+2.0
5.0nm,0.8s,mb4.1,baz=334,slow=6.3,SNR=4.7							
CMAR	Chiang Mai Arr	38.83	315	P	P	07 43 28.6	-0.5
1.1nm,0.3s,mb4.0,baz=143,slow=6.9,SNR=10							
KMI	Kunming	41.30	326	P	P	07 43 50.8	+1.3
KMI				pmax	pmax		
comp=Z,9.0nm,1.2s,mb4.3							
KSRS	Korea Array	46.18	1	P	P	07 44 27.4	-1.2
comp=Z,2.7nm,1.1s,mb4.1,baz=175,slow=12,SNR=5.4							
MJAR	Matsushiro Arr	46.47	12	P	P	07 44 30.4	-0.6
comp=Z,2.7nm,0.3s,mb4.6,baz=187,slow=8.7,SNR=6.2							
LSA	Lhasa	51.63	319	eP	P	07 45 13.7	+3.1
comp=Z,6.6nm,0.7s,mb4.7							
GTA	Gaotai	54.33	334	eP	P	07 45 31.0	+0.6
GTA				pP	pP	07 45 36.4	+0.1
GTA				sP	sP	07 45 39.5	+0.9
GTA				pmax	pmax		
comp=Z,6.0nm,0.5s,mb4.8							
SONM	Songino Array	59.41	344	P	P	07 46 05.7	-0.6
comp=Z,0.8nm,0.5s,mb4.0,baz=148,slow=8.7,SNR=4.2							

PETK	Petropavlovsk-	67.13	20	P	P	07 46 58.3 +0.9
	comp=Z,3.7nm,0.5s,mb4.7,baz=192,slow=4.2,SNR=4.7					
MK31	Makanchi Array	68.27	329	P	P	07 47 04.6 -0.1
MKAR	Makanchi Array	68.27	329	P	P	07 47 04.7 0.0
	comp=Z,3.2nm,0.6s,mb4.5,baz=129,slow=8.0,SNR=36					
ZAA0	Zalesovo Array	72.05	335	eP	P	07 47 27.1 -0.6
ZALV	Zalesovo Beam	72.05	335	P	P	07 47 27.4 -0.3
	comp=Z,6.6nm,0.6s,mb4.7,baz=132,slow=4.7,SNR=14					
KURK	Kurchatov	72.67	330	eP	P	07 47 31.3 -0.1
	comp=Z,0.8nm,0.6s,mb3.8					
QSPA	South Pole Qui	81.03	180	P	P	07 48 19.5 +1.3
	comp=Z,1.1nm,0.7s,mb3.9,baz=37,slow=1.7,SNR=4.9					
QSPA	South Pole Qui	81.03	180	P	P	07 48 19.5 +1.3
ILAR	Eielson Array	96.39	25	P	P	07 49 32.0 -0.4
	comp=Z,0.1nm,0.7s,mb3.4,baz=238,slow=6.1,SNR=4.6					
PDAR	Pinedale Array	120.39	45	PKP	PKPdf	07 54 56.2 +0.8
	comp=Z,0.3nm,0.6s,baz=218,slow=5.5,SNR=3.3					
TXAR	Lajitas Array	128.50	60	PKP	PKPdf	07 55 14.1 +2.7
	comp=Z,0.1nm,0.6s,baz=245,slow=3.9,SNR=2.7					
CPUP	Villa Florida	144.67	173	PKP	PKPdf	07 55 41.1 -0.2
	comp=Z,1.2nm,0.7s,baz=72,slow=6.0,SNR=4.6					
LPAZ	La Paz	150.80	149	PKPbc	PKPbc	07 56 00.3 +3.0
	comp=Z,1.8nm,0.9s,baz=219,slow=1.5,SNR=8.1					

*IDC **14** 07:44:59.9±0.8, 9.53S×107.99E, 0^{km}, mb4.1/8, mb1 4.2/9, mb1mx4.0/19, mbtmp4.1/9, ML3.6/1, Error ellipse: s-maj=38.3km s-min=16.2km az=57.0*
*ISCJB **14** 07:45:01.7±1.0, 9.70S±0.06×108.12E±0.04, 34^{km}±10^{km}, mb4.0/9, Error ellipse: s-maj=10.9km s-min=7.2km az=11.8*
*DJA **14** 07:45:02, 9.86S×108.05E, 54^{km}, MLv4.6/13*
*NEIC **14** 07:45:05.1±0.6, 9.50S×108.05E, 35^{km}, mb4.2/1, Error ellipse: s-maj=16.9km s-min=8.9km az=46.0*

ISC 14 07:45:03.6±2.2, 9.68S±0.05×108.14E±0.05, h31^{km}±17^{km}, n27, σ1°34/33, mb4.0/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	Cimerak	1.91	9	P	Px	07 45 20.7	
CLJI	Cilicap	2.13	24	P	Pn	07 45 39.9	+2.8
CLJI				S	Sn	07 46 06.5	+3.9
CISI	Cisompet, Garu	2.13	351	P	Pn	07 45 35.3	-1.9
CISI				S	Sn	07 46 05.9	+3.3
XMIS	Christmas Isla	2.57	252	P	Pn	07 45 39.3	-3.9
BJII	Banjamegara	2.80	34	P	Pn	07 45 47.2	+0.9
LEM	Lembang	2.88	350	P	Pn	07 45 47.7	+0.3
UGM	Wanagama	2.94	54	P	Pn	07 45 48.4	+0.2
UGM				S	Sn	07 46 21.7	-0.8
SKJI	Sukabumi	3.08	329	P	Sn	07 46 24.6	-1.4
PCJI	Pacitan	3.35	64	P	Pn	07 45 53.1	-0.7
PCJI				S	Sn	07 46 31.4	-1.1
DBJI	Dramaga	3.40	336	P	Pn	07 45 54.5	0.0
SMRI	Semarang	3.47	41	P	Pn	07 45 56.0	+0.5
PWJI	Pagerwojo	3.98	66	P	Pn	07 46 02.6	+0.1
PWJI				S	Sn	07 46 46.2	-2.0
NGJI	Ngawi	4.01	55	P	Pn	07 46 03.1	+0.1
KAPI	Kappang	12.41	69	ePn	Pn	07 47 59.4	+1.1
MBWA	Marble Bar	15.96	137	ePn	Pn	07 48 43.2	-2.8
MBWA				eSn	Sn	07 51 23.5	-19
FITZ	Fitzroy Crossi	18.93	118	P	Pn	07 49 25.9	+3.0
	0.1nm,0.3s,baz=184,slow=3.3,SNR=5.7						
FITZ				S	Sn	07 52 37.8	-16
	0.2nm,0.3s,baz=229,slow=20,SNR=4.3						
WRA	Warramunga Arr	27.27	115	P	P	07 50 46.5	+1.1
	1.4nm,0.7s,mb3.6,baz=286,slow=11,SNR=5.9						
WRA				PcP	PcP	07 54 07.1	+2.2
	0.4nm,0.6s,baz=289,slow=1.8,SNR=4.4						
WB2	Warramunga Arr	27.28	115	eP	P	07 50 47.9	+2.4
ASAR	Alice Springs	28.26	123	P	P	07 50 57.7	+3.5
	1.8nm,0.8s,mb3.8,baz=300,slow=9.0,SNR=13						
ASAR				PcP	PcP	07 54 09.4	+2.2
	0.5nm,0.6s,baz=306,slow=1.7,SNR=7.0						
CMAR	Chiang Mai Arr	29.39	342	P	P	07 51 04.4	+0.1
	2.0nm,0.5s,mb4.1,baz=176,slow=8.9,SNR=12						
STKA	Stephens Creek	38.04	130	P	P	07 52 21.7	+2.4
	4.3nm,0.8s,mb4.2,baz=291,slow=11,SNR=5.4						
SONM	Songino Array	57.28	359	P	P	07 54 47.1	-1.1
	0.7nm,0.5s,mb4.0,baz=183,slow=5.9,SNR=3.9						
MK31	Makanchi Array	60.77	340	eP	P	07 55 12.2	-0.2
MKAR	Makanchi Array	60.77	340	P	P	07 55 12.5	+0.1
	2.0nm,0.6s,mb4.4,baz=148,slow=8.0,SNR=21						
MAW	Mawson	65.15	197	P	P	07 55 42.7	+1.4
	1.0nm,0.5s,mb4.1,baz=41,slow=6.5,SNR=6.8						
ZALV	Zalesovo Beam	66.39	345	P	P	07 55 48.5	-1.0
	0.4nm,0.3s,mb3.9,baz=131,slow=5.9,SNR=2.8						
ABKAR	Akbulak array	72.28	329	eP	P	07 56 25.9	0.0
	1.8nm,0.7s,mb4.1						

*CSEM **14** 08:00:07.2±0.2, 37.38N×54.50E, 2^{km}, ML3.6, Error ellipse: s-maj=9.2km s-min=3.8km az=153.0*

TEH 14 08:00:08.0, 37.39N×54.52E, h5^{km}, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGLO	Ghaloghah	1.04	212	ePg	Pg	08 00 27.1	-0.9
IGLO				e		08 00 45.0	
	comp=Z,55μm,0.2s						
IGLO	Ghaloghah	1.04	212	ePg	Pg	08 00 27.1	-0.9
MRVT	Maraveh tapeh	1.28	77	ePg	Pg	08 00 31.9	-0.6
IKIA	Kiasar	1.36	210	ePg	Pg	08 00 32.4	-1.6
IKIA				e		08 00 58.4	
	comp=Z,5μm,0.2s						
IKIA	Kiasar	1.36	210	ePg	Pg	08 00 32.4	-1.6
ISHM	Shahmirzad	1.86	212	ePn	Pn	08 00 40.5	0.0
ISHM				eSg	Sg	08 01 05.7	-2.1
ISHM				e		08 01 08.2	
	comp=Z,11μm,0.1s						
ISHM	Shahmirzad	1.86	212	ePn	Pn	08 00 40.5	0.0
ISHM				eSg	Sg	08 01 05.7	-2.1
IANJ	Anjilo	1.98	194	ePn	Pn	08 00 41.9	-0.2
IANJ				e		08 01 11.9	
	comp=Z,4μm,0.1s						
IANJ	Anjilo	1.98	194	ePn	Pn	08 00 41.9	-0.2
IFIR	Firoozkooh	2.25	220	ePn	Pn	08 00 46.2	+0.3
IFIR				e		08 01 22.9	
	comp=Z,5μm,0.1s						
IFIR	Firoozkooh	2.25	220	ePn	Pn	08 00 46.2	+0.3
BJRD	Bojnurd	2.32	81	ePn	Pn	08 00 47.8	+1.0
ILAS	Lasjerd	2.37	213	ePn	Pn	08 00 47.7	+0.2
ILAS				e		08 01 27.6	
	comp=N,5μm,0.2s						
ILAS	Lasjerd	2.37	213	ePn	Pn	08 00 47.7	+0.2
ISHV	Shirvan	2.54	86	ePn	Pn	08 00 49.8	0.0
ISHV				e		08 01 46.2	
	comp=Z,2μm,0.4s						
ISHV	Shirvan	2.54	86	ePn	Pn	08 00 49.8	0.0
IDMV	Damavand	2.70	229	ePn	Pn	08 00 52.7	+0.7
IDMV				e		08 01 37.1	
	comp=Z,1μm,0.2s						
IDMV	Damavand	2.70	229	ePn	Pn	08 00 52.7	+0.7
DAMV	Damavand	2.70	230	ePn	Pn	08 00 53.0	+0.9
DAMV				eSg	Sg	08 01 31.9	-2.8
ISFR	Sfrayin	2.80	96	ePn	Pn	08 00 53.2	-0.2
ISFR				e		08 01 44.9	
	comp=Z,1μm,0.3s						
ISFR	Sfrayin	2.80	96	ePn	Pn	08 00 53.2	-0.2
IVRN	Varamin	3.29	224	ePn	Pn	08 00 59.6	-0.5
IVRN				e		08 01 56.2	
	comp=Z,867nm,0.2s						
IVRN	Varamin	3.29	224	ePn	Pn	08 00 59.6	-0.5
IEMG	Emamgholi	3.29	88	ePn	Pn	08 00 59.3	-0.9
IEMG				e		08 01 18.7	
	comp=Z,307nm,0.2s						
IEMG	Emamgholi	3.29	88	ePn	Pn	08 00 59.3	-0.9
IAKL	Akhelmad	3.48	102	ePn	Pn	08 01 03.3	+0.5
IAKL				e		08 01 36.2	
	comp=Z,276nm,0.3s						
ISFB	Sefidab	3.55	212	ePn	Pn	08 01 02.9	-0.9
ISFB	Sefidab	3.55	212	ePn	Pn	08 01 02.9	-0.9
NASN	Na'in	4.79	198	ePn	Pn	08 01 20.9	+0.1
ISRB	Sarab	5.46	277	ePn	Pn	08 01 29.4	-0.5
ISRB				e		08 01 30.0	
	comp=Z,829nm,0.1s						
ISRB	Sarab	5.46	277	ePn	Pn	08 01 29.4	-0.5
IHRS	Heris	5.99	281	ePn	Pn	08 01 36.1	-1.1
IHRS				e		08 02 48.3	
	comp=N,309nm,0.2s						

*IDC **14** 08:01:35.5±1.1, 30.51N×83.16E, 0^{km}, mb3.8/8, mb1 3.9/10, mb1mx3.7/28, mbtmp3.8/10, ML3.7/2, MS3.5/1, Ms1 3.5/1, ms1mx2.4/27, Error ellipse: s-maj=31.8km s-min=19.7km az=52.0*
*ISCJB **14** 08:01:36.3±2.8, 30.54N±0.08×83.09E±0.06, h15^{km}±24^{km}, mb3.7/8, Error ellipse: s-maj=14.3km s-min=8.3km az=175.4*
*NDI **14** 08:01:37.4±3.2, 30.40N×83.14E, h10^{km}, ML3.4, mb3.6(NEIC)*
*NEIC **14** 08:01:37.2±0.6, 30.55N×83.05E, h10^{km}, mb3.6/1, Error ellipse: s-maj=13.6km s-min=8.0km az=214.0*

ISC 14 08:01:38.9±2.8, 30.57N±0.08×83.08E±0.06, h20^{km}±24^{km}, n22, σ0°81/26, mb3.8/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	Pithoragarh	2.68	249	ePKP	Pn	08 02 22.5	+1.6
PTH				ex	x	08 03 04.5	
JOSI	Joshimath	3.04	271	ePKP	Pn	08 02 26.2	+0.4
JOSI				eS	Sn	08 03 01.9	+0.3
JOSI				AML	AML	08 03 27.4	
	comp=E,182nm,0.9s						
JOSI				AML	AML	08 03 36.8	
	comp=N,177nm,0.9s						
DDI	Dehra Dun	4.35	268	ex	Pn	08 02 49.5	+5.7
NDI	New Delhi	5.44	251	ePKP	Pn	08 02 57.0	-1.8
AYAN	Aya Nagar	5.59	250	ePKP	Pn	08 03 00.4	-0.5
SONA	Sohna	5.72	248	ePKP	Pn	08 03 03.2	+0.5
SONA				eS	Sn	08 04 02.8	-4.9
SONA				eS	Sn	08 04 20.8	+13
KHET	Khetri	6.82	250	ePKP	Pn	08 03 18.0	+0.2
KHET				eS	Sn	08 04 30.3	-4.5
LSA	Lhasa	7.04	95	ePn	Pn	08 03 22.3	+1.5
KBL	Kabul	12.49	292	ePn	Pn	08 04 34.4	-1.0
MKAR	Makanchi Array	16.22	358	Pn	Pn	08 05 24.5	-0.9
	comp=N,0.1nm,0.3s,baz=186,slow=13,SNR=2.5						
CMAR	Chiang Mai Arr	18.78	126	P	Pn	08 05 56.4	-1.0
	comp=N,0.2nm,0.3s,baz=330,slow=12,SNR=3.4						
CMAR	Chiang Mai Arr	18.78	126	P	Pn	08 05 56.4	-1.0
KURK	Kurchatov	20.41	352	eP	P	08 06 14.4	0.0
	comp=N,2.7nm,0.9s						
ZALV	Zalesovo Beam	23.40	3	P	P	08 06 46.4	0.0
	comp=N,1.2nm,0.3s,mb3.8,baz=198,slow=9.1,SNR=3.0						
BVAR	Borovoye Array	24.28	341	P	P	08 06 55.4	+0.8
	comp=N,0.6nm,0.3s,mb3.5,baz=120,slow=8.7,SNR=4.0						
BVAR				LR	LR	08 18 18.8	
	comp=N,113nm,20.2s,baz=296,slow=41						
SONM	Songino Array	24.82	39	P	P	08 06 59.6	+0.1
	comp=N,0.7nm,0.8s,mb3.3,baz=218,slow=11,SNR=2.9						
SONM	Songino Array	24.82	39	P	P	08 06 59.6	+0.1
EIL	Elat	41.39	281	P	P	08 09 24.3	+0.5
	comp=N,4.6nm,0.4s,mb4.4,baz=45,slow=2.9,SNR=4.7						
FINES	FINESS Array B	47.98	327	P	P	08 10 16.0	+0.1
	comp=N,1.8nm,0.9s,mb4.1,baz=96,slow=13,SNR=3.8						
ARCES	ARCESS Array B	50.48	337	P	P	08 10 35.4	+0.4
	comp=N,0.9nm,0.9s,mb3.8,baz=138,slow=8.5,SNR=4.1						
WRA	Warramunga Arr	70.35	129	P	P	08 12 50.6	-0.7
	comp=N,1.1nm,0.6s,mb4.0,baz=325,slow=6.3,SNR=23						
ILAR	Eielson Array	77.33	20	P	P	08 13 31.2	-0.4
	comp=N,0.3nm,0.9s,mb3.2,baz=304,slow=6.4,SNR=3.8						

IDC 14 08:10:15.2±45.0, 15.58S×175.29W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.8/17, mbtmp4.2/3, Error ellipse: s-maj=859.2km s-min=177.3km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.38	240	P	P	08 18 11.2	-0.2
	2.0nm,0.8s,baz=96,slow=11,SNR=4.4						
WRA	Warramunga Arr	48.03	257	P	P	08 18 56.5	-0.1
	0.6nm,0.5s,baz=91,slow=7.5,SNR=6.1						
ASAR	Alice Springs	48.33	252	P	P	08 18 58.9	0.0
	6.9nm,0.5s,baz=88,slow=8.2,SNR=112						

*IDC **14** 08:30:32.3±1.6, 5.48S×104.38E, 0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.7/5, MS3.5/1, Ms1 3.5/1, ms1mx2.6/26, Error ellipse: s-maj=80.5km s-min=19.5km az=59.0*
*ISCJB **14** 08:30:39.4±1.1, 5.9S±0.1×104.1E±0.1, h73^{km}±9^{km}, mb3.8/6, Error ellipse: s-maj=25.0km s-min=9.9km az=142.1*
*DJA **14** 08:30:40, 5.89S×104.09E, h27^{km}, MLv3.7/7*

ISC 14 08:30:40.3±1.2, 5.8S±0.1×104.1E±0.1, h67^{km}±10^{km}, n16, σ1°03/17, mb3.8/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	0.51	51	P	Pn	08 30 51.8	-1.2
KASI				S	Sn	08 31 00.7	-1.5
LWLI	Liwa	0.82	357	P	Pn	08 30 56.0	-0.5
LWLI				S	Sn	08 31 08.7	+0.3
KLI	Kotabumi	1.23	38	P	Pn	08 31 02.3	+0.6
KLSI		1.30	29	P	Pn	08 31 03.6	+0.9
MDSI	Maura Dua	1.35	3	P	Pn	08 31 04.1	+0.9
MDSI				S	Sn	08 31 21.7	+1.3
RBSI	Rajabasa	1.63	90	P	Pn	08 31 07.2	+0.2
CGJI	Cibinong	1.76	116	P	Pn	08 31 08.8	+0.1
MNAI	Manna	1.86	322	P	Pn	08 31 10.1	0.0
FITZ	Fitzroy Crossi	24.30	122	LR	LR	08 45 56.6	
	comp=Z,116nm,18.9s,baz=176,slow=38						
CMAR	Chiang Mai Arr	24.68	348	P	P	08 35 53.9	-1.2
	0.6nm,0.3s,mb3.5,baz=180,slow=9.0,SNR=4.3						
NWAO	Narrogin (SRO)	29.59	157	P	P	08 36 41.6	+2.5
	14nm,0.6s,mb4.8,baz=288,slow=3.2,SNR=6.6						
WRA	Warramunga Arr	32.55	118	P	P	08 37 04.7	-0.7
	0.2nm,0.4s,mb3.3,baz=286,slow=9.7,SNR=9.5						
ASAR	Alice Springs	33.71	125	P	P	08 37 15.3	0.0
	0.5nm,0.6s,mb3.5,baz=294,slow=7.1,SNR=11						
STKA	Stephens Creek	43.56	131	P	P	08 38 38.5	+0.7
	1.8nm,0.6s,mb4.0,baz=303,slow=9.3,SNR=5.9						
MKAR	Makanchi Array	55.86	342	P	P	08 40 09.0	-1.9
	0.3nm,0.4s,mb3.7,baz=133,slow=10.0,SNR=7.4						
TXAR	Lajitas Array	144.88	45	PKP	PKPdf	08 50 09.7	-0.8
	0.3nm,0.8s,baz=212,slow=3.2,SNR=4.9						

*TEH **14** 09:04:59.6, 26.67N×55.84E, h6^{km}*
*ISCJB **14** 09:05:00.3±0.6, 26.95N±0.05×55.67E±0.04, h10^{km}, Error ellipse: s-maj=7.3km s-min=5.3km az=2.2*
*OMAN **14** 09:05:02.0, 26.87N×56.05E, h6^{km}*
*KISR **14** 09:05:01.7±0.8, 27.26N×55.34E, h34^{km}±999^{km}, ML3.8*
*CSEM **14** 09:05:03.2±1.5, 26.98N×55.90E, h40^{km}, ML3.8, Error ellipse: s-maj=60.5km s-min=11.1km az=47.0*

ISC 14 09:05:01.6±0.6, 26.90N±0.05×55.74E±0.04, h10^{km}, n16, σ1°28/24, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.90	52	ePg	Pg	09 05 17.1	-1.9
IBND				ePg	Pg	09 05 17.8	-1.2
IBND				eSg	Sg	09 05 30.6	-0.2
IBND				e		09 05 48.6	
	comp=Z,11μm,0.2s						
IBND				e		09 05 55.7	
	comp=Z,12μm,0.2s						
BANOM	Banah	1.09	152	P	Pb	09 05 20.6	-2.0
	SNR=73						
BANOM	Banah	1.09	152	P	Pb	09 05 20.6	-2.1
	SNR=73						
ASHO	Ashiyiah	2.22	172	P	Pn	09 05 38.8	+0.2
	SNR=8.7						
ASHO	Ashiyiah	2.22	172	P	Pn	09 05 38.8	+0.2
	SNR=8.7						
ASUD	Al Ashush, Dub	2.29	189	P	Pn	09 05 40.9	+1.4
	SNR=5.4						
ASUD	Al Ashush, Dub	2.29	189	P	Pn	09 05 40.9	+1.4
	SNR=5.4						
ISRV	Sarvestan	3.39	317	ePn	Pn	09 05 55.7	+1.1
ISRV				e		09 07 42.3	
	comp=Z,452nm,0.4s						
IPAR	Pars	3.77	322	ePn	Pn	09 06 01.4	+1.6
IPAR				e		09 06 49.8	
	comp=Z,312nm,0.4s						
IBAF	Bafgh	4.68	358	ePn	Pn	09 06 13.2	+0.9
IBAF				e		09 06 14.1	
	comp=Z,155nm,0.1s						
RDF	Al-Radifah	7.52	287	eP	Pn	09 06 52.5	+1.1
RDF				eS	Sn	09 08 15.7	-1.1
RDF				AML	AML	09 08 18.5	
	comp=Z,25nm,0.5s						
RDF	Al-Radifah	7.52	287	eP	Pn	09 06 52.5	+1.1
RDF				eS	Sn	09 08 15.6	-1.1
	comp=Z,25nm,0.5s						
NAY	Al-Naaiem	7.86	289	eP	Pn	09 06 56.8	+0.8
NAY				eS	Sn	09 08 23.2	-1.9
NAY				AML	AML	09 08 24.0	
	comp=Z,4.5nm,0.3s						
NAY	Al-Naaiem	7.86	289	eP	Pn	09 06 56.8	+0.7
NAY				eS	Sn	09 08 23.2	-1.9
	comp=Z,15nm,0.5s						
MIB	Mutribah	7.95	293	eP	Pn	09 06 58.2	+0.9
MIB				eS	Sn	09 08 25.4	-1.8
MIB				AML	AML	09 08 27.0	
	comp=Z,15nm,0.5s						
MIB	Mutribah	7.95	293	eP	Pn	09 06 58.2	+1.0
MIB				eS	Sn	09 08 25.4	-1.8

*IDC **14** 09:18:17.5±0.7, 4.95N×103.40W, h0^{km}, mb4.4/12, mb1 4.6/12, mb1mx4.5/19, mbtmp4.4/12, MS3.8/10, Ms1 3.7/10, ms1mx3.6/21, Error ellipse: s-maj=29.4km s-min=14.0km az=63.0*
*ISCJB **14** 09:18:18.6±0.6, 5.07N±0.08×103.09W±0.08, h10^{km}, mb4.4/87, MS3.8/10, Error ellipse: s-maj=14.1km s-min=7.1km az=136.2*
*NEIC **14** 09:18:19.9±0.5, 5.03N×103.13W, h10^{km}, mb4.4/78, Error ellipse: s-maj=12.6km s-min=6.0km az=224.0*

ISC 14 09:18:20.5±0.6, 5.07N±0.08×103.08W±0.08, h10^{km}, n126, σ0°96/105, mb4.4/87, MS3.8/10, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	14.39	33	LR	LR	09 26 02.7	
	comp=Z,559nm,19.6s,baz=16,slow=32						
JTS	JuntasAbangare	18.69	73	eP	Pn	09 22 37.6	-1.8
	15nm,1.2s						
TXAR	Lajitas Array	24.14	359	P	P	09 23 37.3	+0.6
	6.2nm,0.8s,mb4.1,baz=187,slow=11,SNR=36						
TXAR				PcP	PcP	09 27 16.8	-1.1
	0.3nm,0.7s,baz=179,slow=5.3,SNR=3.9						
TXAR				LR	LR	09 32 24.0	
	comp=Z,467nm,18.3s,MS4.0,baz=180,slow=35						
TXAR	Lajitas Array	24.14	359	P	P	09 23 37.3	+0.6
TXAR				PcP	PcP	09 27 16.8	-1.1
TXAR				LR	LR	09 32 24.0	
OTAV	Otavalo	25.06	100	eP	P	09 23 46.8	+1.5
	22nm,0.9s,mb4.7						
JCT	Junction City	25.46	7	eP	P	09 23 50.4	+1.6
	17nm,1.3s,mb4.4						
MNTX	Cornudas Mount	26.58	356	eP	P	09 23 59.3	+0.4
	12nm,1.1s,mb4.3						
GDL2	Guadalupe Moun	27.02	358	eP	P	09 24 03.8	+1.0
	32nm,0.7s,mb5.0						
TUC	Tucson	28.05	346	eP	P	09 24 12.7	+0.7
	4.9nm,1.0s,mb4.1						
ROSC	El Rosal	28.64	89	P	P	09 24 20.3	+2.7
	1.3nm,0.4s,mb4.1,baz=270,slow=20,SNR=3.3						
BNM	Barren Site	29.12	354	eP	P	09 24 23.1	+1.6
	2.3nm,0.8s,mb4.0						
LAZ	Ladron	29.43	353	eP	P	09 24 26.2	+1.9
	3.3nm,0.9s,mb4.1						
ANMO	Albuquerque	29.90	354	P	P	09 24 29.8	+1.3
	1.9nm,0.8s,mb3.9,baz=177,slow=6.0,SNR=6.8						
ANMO				LR	LR	09 35 20.9	
	comp=Z,187nm,20.9s,MS3.7,baz=350,slow=34						
ANMO	Albuquerque	29.90	354	eP	P	09 24 29.3	+0.9
	2.0nm,0.9s,mb3.9						
MIAR	Mount Ida	30.63	16	eP	P	09 24 36.1	+1.2
	13nm,1.1s,mb4.7						
PFO	Pinyon Flat Ob	31.01	338	eP	P	09 24 38.4	+0.1
	4.1nm,1.1s,mb4.2						
SDV	Santo Domingo	32.42	81	eP	P	09 24 51.2	+0.2
	7.5nm,0.9s,mb4.5						
RPN	Rapa Nui	32.57	190	LR	LR	09 34 49.4	
	comp=Z,252nm,19.9s,MS3.9,baz=193,slow=31						
SDCO	Great Sand Dun	32.60	356	eP	P	09 24 54.4	+2.2
	5.8nm,1.1s,mb4.4						
GSC	Goldstone	32.65	339	eP	P	09 24 53.2	+0.5
	4.4nm,0.8s,mb4.4						
SHPR	Sheep Range	33.20	342	eP	P	09 24 58.2	+0.7
	1.9nm,0.9s,mb4.0						
PV01	Paradox Valley	33.29	352	eP	P	09 24 59.0	+0.8
ISA	Isabella	33.59	337	eP	P	09 25 01.4	+0.5
	4.9nm,1.1s,mb4.3						
PV04	Paradox Valley	33.59	352	eP	P	09 25 01.6	+0.7
PV10	Paradox Valley	33.59	352	eP	P	09 25 00.1	-0.8
CCUT	Cedar City	33.67	345	eP	P	09 25 02.3	+0.7
	1.7nm,0.9s,mb4.0						
ARUT	Antelope Range	33.91	345	eP	P	09 25 04.7	+1.0
	2.0nm,0.7s,mb4.2						
WVT	Waverly	33.95	22	eP	P	09 25 02.1	-1.9
	6.1nm,0.7s,mb4.6						
SMCO	Snowmass	34.14	355	eP	P	09 25 06.6	+1.0
	5.6nm,1.0s,mb4.5						
SRU	San Rafael	34.55	350	eP	P	09 25 08.8	-0.5
	5.9nm,1.1s,mb4.4						
CCM	Cathedral Cave	34.56	17	eP	P	09 25 07.8	-1.5
	1.7nm,0.7s,mb4.1						
ISCO	Idaho Springs	34.65	357	eP	P	09 25 11.9	+1.8
	4.5nm,1.0s,mb4.3						
CPCT	Cooper Cave	34.74	27	eP	P	09 25 10.9	-0.1
TMUT	Trail Mountain	34.86	349	eP	P	09 25 13.1	+1.2
	4.1nm,0.9s,mb4.4						
TKL	Tuckaleechee C	35.26	28	P	P	09 25 16.9	+1.5
	5.4nm,0.9s,mb4.5,baz=192,slow=11,SNR=9.1						
TKL	Tuckaleechee C	35.26	28	eP	P	09 25 16.6	+1.2
MPU	Maple Canyon	35.64	349	eP	P	09 25 18.5	0.0
	9.4nm,0.9s,mb4.7						
OGNE	Ogallala	35.73	1	eP	P	09 25 20.1	+0.7
	11nm,0.8s,mb4.8						
DAU	Daniels Canyon	35.95	349

FLWY	Flagg Ranch	39.43	351	eP	P		09 25 49.8	-0.8
	11nm,0.9s,mb4.6							
TAOE	Nuku Hiva Isla	39.46	250	eT			10 07 30.6	
	37nm,0.2s							
HLID	Hailey	39.62	347	eP	P		09 25 52.5	+0.3
	2.9nm,0.9s,mb4.0							
WVOR	Wild Horse Val	39.70	342	eP	P		09 25 52.6	-0.3
	3.4nm,0.9s,mb4.1							
RLMT	Red Lodge	40.26	353	eP	P		09 25 57.5	-0.1
	7.7nm,1.2s,mb4.3							
MCWV	Mont Chateau	40.32	28	eP	P		09 25 57.6	-0.5
	15nm,1.1s,mb4.6							
MCMT	McKenzie Canyo	40.52	349	eP	P		09 26 00.4	+0.7
	4.4nm,1.0s,mb4.0							
LPAZ	La Paz	40.56	122	P	P		09 26 01.6	+1.2
	3.7nm,0.8s,mb4.1,baz=304,slow=6.3,SNR=19							
LPAZ				PcP	PcP		09 28 02.8	0.0
	2.5nm,0.9s,baz=306,slow=3.4,SNR=6.8							
LPAZ	La Paz	40.56	122	eP	P		09 26 01.8	+1.3
	5.4nm,0.9s,mb4.2							
GCMT	Greycliff	40.97	353	eP	P		09 26 03.1	-0.3
	8.2nm,1.0s,mb4.3							
DLMT	Dillon	40.99	350	eP	P		09 26 03.4	-0.1
	5.6nm,1.0s,mb4.2							
LRM	Limekiln Ridge	41.41	350	eP	P		09 26 06.8	-0.2
LAO	LASA Array	41.55	357	eP	P		09 26 08.8	+0.7
	3.6nm,0.7s,mb4.1							
RKT	Rikitea	41.90	227	eLR	LR		09 37 42.5	
	232nm,28.8s							
RKT				eT			10 10 39.0	
	3.3nm,0.3s							
SSPA	Standing Stone	42.02	29	eP	P		09 26 11.0	-1.1
	10nm,1.0s,mb4.4							
MVL	Millersville	42.30	31	eP	P		09 26 14.2	-0.2
	14nm,0.9s,mb4.6							
CHMT	Chamberlain Mo	42.60	350	eP	P		09 26 15.7	-1.0
	12nm,1.8s,mb4.3							
MSO	Missoula	42.65	349	eP	P		09 26 15.8	-1.3
	2.8nm,1.0s,mb4.0							
SLMT	Seeley Lake	42.96	350	eP	P		09 26 19.2	-0.5
	4.2nm,0.8s,mb4.2							
EGMT	Eagleton	43.18	353	eP	P		09 26 20.0	-1.4
	13nm,1.1s,mb4.6							
HOOD	Mount Hood Mea	43.25	341	eP	P		09 26 21.1	-0.9
	9.7nm,0.9s,mb4.5							
DGMT	Dagmar	43.26	359	eP	P		09 26 21.9	-0.1
	31nm,1.1s,mb5.0							
AGMN	Agassiz Nation	43.51	7	eP	P		09 26 23.3	-0.8
	13nm,0.9s,mb4.7							
HAWA	Hanford	43.57	343	eP	P		09 26 24.3	-0.2
	9.6nm,1.0s,mb4.5							
RSW	Rattlesnake Hi	43.59	343	eP	P		09 26 24.5	-0.2
EYMN	Ely	43.86	11	eP	P		09 26 25.2	-1.6
	16nm,0.9s,mb4.7							
BINY	Binghamton	44.13	29	eP	P		09 26 28.6	-0.6
	14nm,0.9s,mb4.7							
OD2	Odessa Site #2	44.26	345	eP	P		09 26 29.3	-0.8
LON	Longmire	44.57	342	eP	P		09 26 32.0	-0.5
	7.9nm,1.0s,mb4.5							
NEW	Newport	44.68	347	eP	P		09 26 32.5	-0.9
	6.1nm,0.8s,mb4.5							
WALA	Waterton Lakes	44.79	350	eP	P		09 26 33.2	-1.1
ETW	Entiat	44.90	343	eP	P		09 26 34.8	-0.4
ULM	Lac du Bonnet	45.43	6	P	P		09 26 38.2	-1.2
	9.3nm,1.0s,mb4.6,baz=186,slow=7.2,SNR=5.0							
ULM				LR	LR		09 44 50.2	
	comp=Z,82nm,21.9s,MS3.6,baz=17,slow=35							
ULM	Lac du Bonnet	45.43	6	eP	P		09 26 38.8	-0.6
	5.1nm,1.0s,mb4.3							
NLWA	Neilton Lookou	45.80	340	eP	P		09 26 41.9	-0.5
	8.1nm,0.9s,mb4.7							
JCW	Jim Creek	45.89	342	eP	P		09 26 41.6	-1.5
PMOR	Pomariorio Ree	48.68	245	eT			10 19 02.4	
	3.1nm,0.2s							
CFAA	Coronel Fontan	49.32	140	P	P		09 27 10.5	+0.5
	0.7nm,0.9s,mb3.7,baz=313,slow=5.8,SNR=12							
PPT	Papeete	51.11	243	eLR	LR		09 41 59.1	
	109nm,27.5s							
TBI	Tubuai	53.35	236	eT			10 24 54.3	
	2.8nm,0.3s							
CPUP	Villa Florida	54.19	128	eP	P		09 27 46.1	-0.3
	39nm,1.1s,mb5.2							
PLCA	Paso Flores	54.46	150	PcP	PcP		09 28 49.8	-1.9
	2.4nm,1.0s,baz=225,slow=5.8,SNR=3.0							
PLCA				LR	LR		09 45 01.2	
	comp=Z,189nm,21.1s,MS4.1,baz=301,slow=29							
DLBC	Dease Lake	57.20	344	eP	P		09 28 06.8	-0.8
SCHQ	Schefferville	57.56	24	LR	LR		09 52 45.6	
	comp=Z,56nm,21.7s,MS3.6,baz=22,slow=36							
YKA	Yellowknife Ar	57.93	354	P	P		09 28 09.9	-2.7
	4.0nm,1.0s,mb4.4,baz=163,slow=7.1,SNR=7.5							
YKA				LR	LR		09 52 21.6	
	comp=Z,18nm,21.3s,MS3.2,baz=310,slow=35							
BDFB	Brasília	58.26	112	P	P		09 28 14.4	-1.3
	5.3nm,0.8s,mb4.6,baz=287,slow=9.9,SNR=7.3							
INK	Inuvik	66.37	348	eP	P		09 29 07.4	-1.8
	6.7nm,1.1s,mb4.6							
ILAR	Eielson Array	67.21	341	P	P		09 29 12.2	-2.4
	11nm,1.1s,mb4.8,baz=154,slow=5.3,SNR=58							
COLA	College	67.59	341	eP	P		09 29 16.3	-0.7
	5.9nm,1.1s,mb4.5							
QSPA	South Pole Qui	95.06	180	P	P		09 31 43.2	+0.2
	1.7nm,1.0s,mb4.4,baz=101,slow=5.2,SNR=4.2							
NOA	NORSAR Array B	97.05	27	LR	LR		10 14 13.3	
	comp=Z,30nm,19.8s,MS3.8,baz=270,slow=34							
ASAR	Alice Springs	122.19	245	PKP	PKPdf		09 37 14.3	-2.2
	0.6nm,0.7s,baz=111,slow=1.5,SNR=4.5							
WRA	Warramunga Arr	122.31	250	PKP	PKPdf		09 37 14.8	-1.9
	1.5nm,0.9s,baz=93,slow=2.5,SNR=6.6							
HHC	Hu-ho-hao-te	124.37	329	ePKP	PKPdf		09 37 20.8	+0.6
HHC				PP	PP		09 39 11.6	+6.7
HHC				PKS			09 40 56.0	
HHC				SKS	SKSdf		09 44 30.8	-1.6
HHC				SKKS	SKKSac		09 46 03.0	-1.7
HHC				SS	SS		09 56 01.3	+4.6
HHC				AMB	AMB			
	comp=Z,84nm,8.2s							
HHC				LR	LR			
	comp=N,97nm,21.4s,MS4.7							
HHC				LR	LR			
	comp=E,130nm,21.6s,MS4.7							
HHC				LR	LR			
	comp=Z,74nm,20.8s,MS4.3							
BOSA	Boshof	125.81	122	PKP	PKPdf		09 37 22.4	-0.9
	comp=Z,4.1nm,0.9s,baz=256,slow=4.2,SNR=3.0							
ASF	Jabal al Asfar	126.90	43	PKP	PKPdf		09 37 24.7	-0.6
	comp=Z,1.7nm,0.6s,baz=261,slow=2.1,SNR=3.0							
MKAR	Makanchi Array	128.15	355	PKP	PKPdf		09 37 25.5	-1.7
	comp=Z,0.6nm,0.7s,baz=318,slow=1.6,SNR=6.6							
LZH	Lanzhou	131.91	330	ePKP	PKPdf		09 37 33.5	-1.2
LZH				sPKP			09 37 38.3	
CD2	Chengdu	135.98	326	ePKP	PKPdf		09 37 39.9	-2.6
KMI	Kunming	140.88	321	PKP	PKPdf		09 37 46.4	-5.2
KSM	Kuching	146.02	280	ePKPdf	PKPdf		09 37 59.6	-1.4
CMAR	Chiang Mai Arr	148.10	318	PKPbc	PKPdf		09 38 04.1	-0.1
	comp=Z,3.8nm,1.0s,baz=57,slow=1.0,SNR=16							

ISCJB ***14*** *09:25:11.0±0.2, 40°.29S±0°.02×174°.54E±0°.03, h96km±3km, mb4.5/18, Error ellipse: s-maj=4.5km s-min=2.7km az=25.0*

NEIC ***14*** *09:25:11.3±0.7, 40°.27S×174°.58E, h82km±6km, mb4.7/11, ML5.2(WEL), Error ellipse: s-maj=11.8km s-min=8.6km az=98.0*

NEIC Felt [IV] at Hawera, Karori, New Plymouth, Paraparaumu, Wanganui, Wellington, Westown and Whitby. Felt in the southern part of the North Island and the northern part of the South Island.

IDC ***14*** *09:25:12.5±0.7, 40°.12S×174°.57E, h90km±5km, mb4.3/10, mb1 4.4/11, mb1mx4.3/15, mbtmp4.3/11, MS2.7/1, Ms1 2.7/1, ms1mx2.4/17, Error ellipse: s-maj=15.2km s-min=9.9km az=151.0*

WEL ***14*** *09:25:12.2±0.1, 40°.28S×174°.53E, h93km±1km, ML5.1/24, Error ellipse: s-maj=0.7km s-min=0.3km az=90.0, 6.*

WEL Felt from Northland to Hawke''s Bay, maximum reported intensity MM.

ISC 14 09:25:11.9±0.2, 40°.29S±0°.02×174°.53E±0°.03, h88km±3km, h88km±1.4km:pP-P,n176,σ0=94/165, mb4.5/18, 24C-2D, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	0.64	33	PN	Pn	09 25 28.4	+0.7
WAZ				SN	Sn	09 25 40.0	+0.7

KIW	Kapiti Island	0.64	153	PN	Pn		09 25 28.3	+0.6
DUWZ	D'Urville Isla	0.69	222	⇑PN	Pn		09 25 28.3	+0.2
DUWZ				SN	Sn		09 25 40.6	+0.4
OGWZ	Otaki Gorge	0.72	138	⇑PN	Pn		09 25 29.2	+0.8
MRZ	Mangatainoka R	0.88	115	⇑PN	Pn		09 25 30.7	+0.7
CAW	Cannon Point	0.91	154	⇑PN	Pn		09 25 31.3	+0.9
TCW	Tory Channel	0.94	192	⇑PN	Pn		09 25 31.5	+0.7
POWZ	Post Office Ro	0.95	97	PN	Pn		09 25 31.4	+0.5
HOWZ	Holdsworth Sta	0.96	129	⇑PN	Pn		09 25 31.6	+0.5
RAEZ	Rainy Point	1.01	354	PN	Pn		09 25 32.2	+0.6
WEL	Wellington	1.01	170	PN	Pn		09 25 32.4	+0.9
DFE	Dawson Falls	1.02	341	PN	Pn		09 25 32.1	+0.4
SNZO	South Karori	1.03	173	⇑PN	Pn		09 25 32.6	+0.8
SNZO	South Karori	1.03	173	ePn	Pn		09 25 32.5	+0.7
SNZO				eSn	Sn		09 25 47.4	+0.7
NRZ	Ngariki Road	1.06	334	PN	Pn		09 25 32.3	+0.2
NEZ	North Egmont	1.07	342	PN	Pn		09 25 32.4	+0.1
TSZ	Takapari Road	1.12	79	⇑PN	Pn		09 25 33.2	+0.4
DREZ	Durham Road	1.13	347	⇑PN	Pn		09 25 33.4	+0.5
NWEZ	Newall Road	1.14	333	⇑PN	Pn		09 25 33.3	+0.2
MTW	Mount Morrison	1.14	140	PN	Pn		09 25 33.6	+0.6
TIWZ	Tintock	1.14	116	PN	Pn		09 25 33.6	+0.5
TIWZ				SN	Sn		09 25 48.8	-0.2
BHW	Baring Head	1.15	167	⇑PN	Pn		09 25 33.9	+0.7
MTVZ	Mangateitei	1.16	39	⇑PN	Pn		09 25 33.7	+0.4
PKE	Pukeiti	1.17	339	⇑PN	Pn		09 25 33.5	0.0
VRZ	Vera Road	1.18	9	⇑ePN	Pn		09 25 34.1	+0.5
PKVZ	Pokaka	1.18	32	PN	Pn		09 25 33.9	+0.4
MHEZ	Mangahewa	1.22	352	⇑PN	Pn		09 25 34.8	+0.7
TUWZ	Tuamarina	1.22	201	⇑PN	Pn		09 25 34.4	+0.3
MSWZ	Moikau Station	1.25	154	PN	Pn		09 25 35.1	+0.7
DVHZ	Dannevirke	1.25	91	PN	Pn		09 25 34.7	+0.3
TRVZ	Turoa	1.26	39	PN	Pn		09 25 35.0	+0.5
WNVZ	Wahianoa	1.26	41	PN	Pn		09 25 35.1	+0.5
NNZ	Nelson	1.27	223	PN	Pn		09 25 35.0	+0.3
NNZ				SN	Sn		09 25 51.4	-0.5
PAWZ	Paruwai Farm	1.28	148	PN	Pn		09 25 35.5	+0.7
DRZ	Dome Shelter	1.29	38	PN	Pn		09 25 35.4	+0.5
MOVZ	Moawhango	1.29	47	PN	Pn		09 25 35.3	+0.5
FWVZ	Far West T-bar	1.30	38	PN	Pn		09 25 35.4	+0.4
TMWZ	Te Maipa	1.32	129	PN	Pn		09 25 35.7	+0.5
PNHZ	Pukenui	1.33	74	PN	Pn		09 25 35.5	+0.1
WPVZ	Whakapapa	1.34	36	PN	Pn		09 25 35.8	+0.3
TUVZ	Tukino	1.34	41	PN	Pn		09 25 36.1	+0.6
BFZ	Birch Farm	1.36	107	⇑PN	Pn		09 25 36.0	+0.2
NGZ	Ngauruhoe	1.39	37	PN	Pn		09 25 36.4	+0.3
PLWZ	Palliser	1.39	157	⇑PN	Pn		09 25 36.7	+0.6
TWVZ	Taurewa	1.40	30	PN	Pn		09 25 36.5	+0.2
TRWZ	Traveller	1.41	142	PN	Pn		09 25 36.7	+0.3
BHHZ	Black Hill Sta	1.42	56	⇑PN	Pn		09 25 36.8	+0.2
OTVZ	Oturere	1.42	38	PN	Pn		09 25 37.2	+0.6
WTVZ	West Tongariro	1.43	35	PN	Pn		09 25 36.9	+0.3
KRVZ	Karewarewa	1.47	36	PN	Pn		09 25 37.4	+0.2
CMWZ	Cape Campbell	1.48	189	⇑PN	Pn		09 25 38.6	+1.4
WPHZ	Waipukurau	1.48	82	PN	Pn		09 25 37.5	+0.2
BSWZ	Blackbirch Sta	1.51	199	⇑PN	Pn		09 25 38.4	+0.8
KATZ	Kakaramea	1.59	35	PN	Pn		09 25 39.0	+0.4
PRHZ	Porangahau	1.61	90	PN	Pn		09 25 39.1	+0.2
QRZ	Quartz Range	1.62	250	⇓PN	Pn		09 25 38.5	-0.5
RITZ	Rihia Road	1.66	38	PN	Pn		09 25 40.0	+0.4
RATZ	Rangitukua	1.71	34	PN	Pn		09 25 40.5	+0.2
HIZ	Hauiti	1.79	8	PN	Pn		09 25 41.7	+0.4
PXZ	Pawanui	1.80	83	PN	Pn		09 25 41.1	-0.3
WATZ	Wairara	1.83	31	PN	Pn		09 25 42.2	+0.4
HATZ	Hinemaiaia	1.84	41	PN	Pn		09 25 41.5	-0.4
KAHZ	Kahuranaki	1.87	75	PN	Pn		09 25 42.1	-0.1
MCHZ	McNeill Hill	1.87	64	PN	Pn		09 25 42.3	0.0
BKZ	Black Stump Fm	1.88	54	PN	Pn		09 25 42.0	-0.5
THZ	Tophouse	1.92	219	PN	Pn		09 25 43.4	+0.4
WHTZ	Whakaora	1.96	35	PN	Pn		09 25 44.0	+0.5
CKHZ	Cape Kidnapper	2.06	73	PN	Pn		09 25 44.6	-0.1
NMHZ	Naumai	2.12	57	⇑PN	Pn		09 25 45.5	-0.1
ALRZ	Allen Road	2.22	40	PN	Pn		09 25 46.4	-0.5
KHZ	Kahutara	2.25	199	ePn	Pn		09 25 47.5	+0.2
KHZ				eSn	Sn		09 26 10.5	-3.9
PRRZ	Plateau Road	2.30	39	PN	Pn		09 25 47.4	-0.5
HRRZ	Handcock Road	2.33	36	PN	Pn		09 25 48.4	-0.1
RAHZ	Arahi	2.40	56	PN	Pn		09 25 48.4	-0.9
UTU	Utuhina	2.47	32	PN	Pn		09 25 50.5	+0.2
RRRZ	Republican Roa	2.48	39	PN	Pn		09 25 49.7	-0.7
DSZ	Denniston Nort	2.53	234	PN	Pn		09 25 50.7	-0.3
TARZ	Mount Tarawera	2.56	37	PN	Pn		09 25 51.1	-0.3
OMRZ	Omania	2.61	34	PN	Pn		09 25 51.9	-0.1
KARZ	Kaharoa	2.63	31	PN	Pn		09 25 52.4	+0.1
TOZ	Tahuroa Road	2.67	17	PN	Pn		09 25 52.9	0.0
KNZ	Kokoha	2.74	63	PN	Pn		09 25 52.1	-1.7
EDRZ	Edgecumbe	2.77	39	PN	Pn		09 25 53.3	-1.0
MHGZ	Mahia Peninsul	2.84	68	PN	Pn		09 25 53.8	-1.3
MARZ	Manawahe	2.84	37	PN	Pn		09 25 54.4	-0.8
URZ	Urewera	2.85	45	PN	Pn		09 25 53.4	-1.9
URZ	Urewera	2.85	45	P	Pn		09 25 53.4	-1.9
	20nm,0.3s,baz=236,slow=8.1,SNR=230							
URZ				S	Sn		09 26 27.0	-1.8
	423nm,0.3s,baz=90,slow=19,SNR=7.4							
URZ	Urewera	2.85	45	ePn	Pn		09 25 53.4	-1.9
URZ				eSn	Sn		09 26 27.1	-1.7
TGRZ	Tauranga	2.89	28	PN	Pn		09 25 56.1	+0.2
OPRZ	Ohinepanea	2.91	33	PN	Pn		09 25 55.4	-0.7
PRGZ	Paritu Road	2.93	63	PN	Pn		09 25 54.6	-1.7
LTZ	Lake Taylor	3.01	214	⇑PN	Pn		09 25 56.9	-0.6
MWZ	Matawai	3.04	51	PN	Pn		09 25 55.8	-2.0
MKAZ	Moumakai	3.21	9	PN	Pn		09 26 00.4	+0.2
MYRZ	Mayor Island	3.29	24	PN	Pn		09 26 01.9	+0.7
WTAZ	Waiatarua	3.35	1	PN	Pn		09 26 02.8	+0.7
CNGZ	Carnagh Statio	3.37	59	PN	Pn		09 26 00.6	-1.8
KAAZ	Kauri Point	3.46	2	PN	Pn		09 26 04.3	+0.6
MTAZ	Motutapu	3.51	5	PN	Pn		09 26 04.7	+0.5
RVAZ	Riverhead Bore	3.51	1	PN	Pn		09 26 04.6	+0.3
CRLZ	Canterbury Las	3.58	203	PN	Pn		09 26 03.3	-1.9
PUZ	Puketiti	3.64	54	PN	Pn		09 26 03.5	-2.6
KUZ	Kuaotunu	3.66	15	PN	Pn		09 26 05.8	-0.5
MQZ	McQueen's Vall	3.69	202	PN	Pn		09 26 04.4	-2.2
MXZ	Matakaoa Point	4.01	48	PN	Pn		09 26 08.6	-2.4
RPZ	Rata Peaks	4.29	216	P	Pn		09 26 12.5	-2.3
	42nm,0.3s,baz=48,slow=1.7,SNR=114							
RPZ				S	Sn		09 26 58.6	-5.0
	78nm,0.3s,baz=176,slow=23,SNR=16							
RPZ	Rata Peaks	4.29	216	ePn	Pn		09 26 12.8	-2.0
RPZ				eSn	Sn		09 27 02.5	-1.1
WCZ	Waipu Caves	4.35	358	PN	Pn		09 26 15.2	-0.4
FOZ	Fox Glacier	4.87	226	PN	Pn		09 26 19.6	-3.1
OUZ	Omahuta	5.12	351	PN	Pn		09 26 26.0	0.0
OUZ	Omahuta	5.12	351	ePn	Pn		09 26 25.8	-0.2
	1μm,1.0s							
OUZ				eSn	Sn		09 27 21.7	-2.1
LBZ	Lake Benmore	5.21	217	PN	Pn		09 26 25.3	-2.0
ODZ	Otahua Downs	5.55	210	PN	Pn		09 26 29.5	-2.4
ODZ	Otahua Downs	5.55	210	ePn	Pn		09 26 29.8	-2.1
	1μm,0.5s							
ODZ				eSn	Sn		09 27 27.4	-6.8
JCZ	Jackson Bay	5.72	227	PN	Pn		09 26 31.9	-2.2
MSZ	Milford Sound	6.56	226	PN	Pn		09 26 42.9	-2.7
TUZ	Tuapeka	6.70	211	PN	Pn		09 26 45.3	-2.3
SYZ	Scrubby Hill	7.38	210	PN	Pn		09 26 54.9	-1.8
CTZ	Chatham Island	7.43	120	PN	Pn		09 26 57.1	-0.4
MSVF	Nonsavu	22.68	9	eP	P		09 30 05.4	-0.7
	13nm,0.4s,mb4.6							
EIDS	Eidsvold	24.59	300	eP	P		09 30 25.3	+1.5
EIDS				e			09 30 45.4	
EIDS	Eidsvold	24.59	300	eP	P		09 30 25.1	+1.3
	9.4nm,0.9s,mb4.2							
EIDS				e			09 30 45.1	
STKA	Stephens Creek	27.79	277	P	P		09 30 53.9	+1.4
	0.8nm,0.4s,mb3.6,baz=93,slow=9.6,SNR=3.2							
STKA	Stephens Creek	27.79	277	P	P		09 30 53.9	+1.4
CTA	Charters Tower	31.45	301	P	P		09 31 26.8	+1.8
	5.1nm,0.9s,mb4.2,baz=120,slow=17,SNR=6.6							
CTAO	Charters Tower	31.45	301	eP	P		09 31 26.9	+1.9
	6.6nm,0.9s,mb4.4							
CTAO				e	pP		09 31 48.0	+2.9
SBA	Scott Base	37.81	183	eP	P		09 32 23.0	+3.8
	9.8nm,1.2s,mb4.5							
ASAR	Alice Springs	37.87	283	P	P		09 32 20.6	+0.3
	4.3nm,0.5s,mb4.5,baz=126,slow=6.9,SNR=92							
ASAR				pP	pP		09 32 41.3	+0.4
	3.7nm,0.5s,baz=127,slow=7.7,SNR=7.7							
ASAR				PcP	PcP		09 34 33.7	-1.2
	1.4nm,0.4s,baz=122,slow=3.7,SNR=5.5							
COEN	Coen	37.95	305	eP	P		09 32 20.5	-0.5
COEN	Coen	37.95	305	eP	P		09 32 21.8	+0.8
	55nm,0.7s,mb5.5							

PPT	Papeete	38.34	64	LR	LR		09 44 31.7	
	comp=Z,10nm,19.9s,baz=81,slow=30							
WB2	Warramunga Arr	39.81	289	eP	P		09 32 36.9	+0.4
WB2				e	pP		09 32 58.0	+0.7
WRA	Warramunga Arr	39.82	289	P	P		09 32 37.0	+0.4
	4.3nm,0.5s,mb4.5,baz=126,slow=8.3,SNR=78							
WRA				pP	pP		09 32 57.8	+0.5
	10nm,0.7s,baz=126,slow=8.2,SNR=12							
WRA				PcP	PcP		09 34 39.9	-1.1
	0.5nm,0.4s,baz=129,slow=2.9,SNR=3.5							
WRA	Warramunga Arr	39.82	289	P	P		09 32 37.0	+0.4
WRA				pP	pP		09 32 57.8	+0.5
WRA				PcP	PcP		09 34 39.9	-1.1
CASY	Casey	43.55	212	eP	P		09 33 06.7	+0.2
CASY	Casey	43.55	212	eP	P		09 33 06.5	+0.1
	7.5nm,0.5s,mb4.7							
KAKA	Kakadu	46.00	295	eP	P		09 33 26.6	+0.1
	5.7nm,0.6s,mb4.5							
KAKA	Kakadu	46.00	295	eP	P		09 33 27.1	+0.6
FITZ	Fitzroy Crossi	47.37	283	eP	P		09 33 37.5	+0.3
	11nm,0.4s,mb4.9							
FITZ	Fitzroy Crossi	47.37	283	eP	P		09 33 37.5	+0.2
	7.4nm,0.5s,mb4.7							
QSPA	South Pole Qui	49.84	180	P	P		09 33 58.6	+3.2
	12nm,0.5s,mb5.1,baz=327,slow=0.3,SNR=220							
QSPA				PcP	PcP		09 35 16.4	+1.9
	8.6nm,0.7s,baz=314,slow=1.5,SNR=4.7							
QSPA	South Pole Qui	49.84	180	eP	P		09 33 58.9	+3.5
	29nm,0.9s,mb5.2							
QSPA				PcP	PcP		09 35 16.4	+1.9
MBWA	Marble Bar	50.01	275	eP	P		09 33 56.7	-0.7
	13nm,0.8s,mb4.9							
MAW	Mawson	60.87	204	P	P		09 35 15.5	+0.9
	6.3nm,0.7s,mb4.7,baz=128,slow=9.2,SNR=18							
MAW	Mawson	60.87	204	⇓iP	P		09 35 15.4	+0.8
	5.5nm,1.1s,mb4.5							
MAW	Mawson	60.87	204	eP	P		09 35 15.3	+0.6
	1.5nm,0.8s,mb4.1							
MAW				e			09 35 48.3	
SYO	Syowa Base	66.04	196	⇑eP	P		09 35 47.6	-1.0
MAIT	Maitri	68.55	186	eP	P		09 36 06.1	+1.7
PLCA	Paso Flores	79.99	136	P	P		09 37 14.2	+2.8
	5.0nm,0.9s,mb4.4,baz=221,slow=6.2,SNR=12							
PLCA	Paso Flores	79.99	136	eP	P		09 37 14.1	+2.7
	5.3nm,0.9s,mb4.4							
MJAR	Matsushiro Arr	83.43	331	P	P		09 37 30.6	+1.3
	0.8nm,0.7s,mb3.6,baz=170,slow=9.9,SNR=5.1							
MJAR				pP	pP		09 37 52.6	+0.1
	1.2nm,0.8s,baz=184,slow=5.7,SNR=3.1							
KSRS	Korea Array	88.39	325	P	P		09 37 54.8	+1.1
	3.6nm,0.8s,mb4.5,baz=146,slow=5.6,SNR=13							
KSRS				pP	pP		09 38 17.0	-0.2
	4.4nm,1.0s,baz=147,slow=5.4,SNR=6.0							
CMAR	Chiang Mai Arr	91.26	293	P	P		09 38 07.7	+0.1
	2.1nm,0.8s,mb4.3,baz=144,slow=3.3,SNR=16							
CMAR				pP	pP		09 38 31.2	+0.2
	1.0nm,0.6s,baz=137,slow=3.1,SNR=2.4							
CMAR	Chiang Mai Arr	91.26	293	P	P		09 38 07.7	+0.1
CMAR				pP	pP		09 38 31.2	+0.2
ILAR	Eielson Array	109.01	16	PKiKP	PKiKP		09 43 28.9	-1.1
	0.2nm,0.6s,baz=288,slow=2.

MAT			S	Sn	10 11 53.6	+1.5
MJAR	**Matsushiro Arr**	**3.28 221**	Pn	**Pn**	**10 11 13.1**	**+0.4**
	0.5nm,0.3s,baz=13,slow=20,SNR=13					
MJAR			Pg	**Pg**	**10 11 18.8**	**-4.7**
	1.0nm,0.3s,baz=21,slow=14,SNR=9.2					
MJAR			Lg		10 12 04.6	
	0.2nm,0.3s,baz=14,slow=25,SNR=6.2					
ASAJ	**Asahikawa**	**5.22 14**	Pn	**Pn**	**10 11 39.9**	**+0.6**
	0.3nm,0.3s,baz=211,slow=13,SNR=3.9					
KSRS	**Korea Array**	**10.31 265**	Pn	**Pn**	**10 12 51.8**	**+2.6**
	0.2nm,0.3s,baz=73,slow=14,SNR=3.6					
MKAR	**Makanchi Array**	**42.71 300**	P	**P**	**10 18 17.1**	**-1.3**
	0.2nm,0.7s,mb3.0,baz=86,slow=8.8,SNR=2.9					
ILAR	**Eielson Array**	**48.03 33**	P	**P**	**10 18 58.2**	**-2.1**
	0.3nm,0.8s,mb3.4,baz=281,slow=9.1,SNR=4.0					
WRA	**Warramunga Arr**	**59.01 187**	P	**P**	**10 20 19.9**	**-1.4**
	0.3nm,0.4s,mb3.7,baz=3.7,slow=7.1,SNR=13					

IDC 14 10:13:45.8±7.2, 30°.56S×178°.28W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/15, mbtmp3.5/2, Error ellipse: s-maj=293.3km s-min=59.8km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.57**	**205**	Sn	Sn	10 17 03.5	-25
	0.7nm,0.3s,baz=165,slow=19,SNR=7.5						
ASAR	**Alice Springs**	**42.86**	**267**	P	P	10 21 45.3	-0.6
	0.3nm,0.5s,baz=104,slow=7.4,SNR=7.8						
WRA	**Warramunga Arr**	**43.87**	**272**	P	P	10 21 54.5	+0.4
	0.7nm,0.5s,baz=111,slow=8.1,SNR=14						
FINES	**FINESS Array B**	**145.22**	**340**	PKPbc	PKPbc	10 33 23.4	-0.8
	1.2nm,0.7s,baz=34,slow=4.1,SNR=4.2						

*ISCJB **14** 10:26:04.0±1.9, 19°.1S±0°.4×169°.5E±0°.2, h260km±24km, mb3.7/8, Error ellipse: s-maj=68.9km s-min=22.2km az=152.0*
*IDC **14** 10:26:05.9±16.0, 19°.05S×169°.42E, h264km±155km, mb3.5/8, mb1 3.7/8, mb1mx3.5/17, mbtmp3.5/8, Error ellipse: s-maj=65.1km s-min=41.8km az=117.0*
*NEIC **14** 10:26:09.2±6.3, 19°.08S×169°.38E, h296km±61km, mb3.9/3, Error ellipse: s-maj=42.3km s-min=26.7km az=146.0*
ISC 14 10:26:04.3±1.9, 19°.0S±0°.4×169°.5E±0°.3, h247km±25km, n15, σ0s51/15, mb3.8/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.16**	**222**	*e*P	**Pn**	**10 27 09.7**	**0.0**
DZM				*e*S	**S**	**10 28 14.7**	**+13**
NOUC	**Port Laguerre**	**4.27**	**223**	*e*P	**Pn**	**10 27 10.9**	**-0.1**
EIDS	**Eidsvold**	**18.16**	**246**	*e*P	**P**	**10 29 59.8**	**+1.0**
	2.9nm,0.4s						
CTA	**Charters Tower**	**21.90**	**263**	P	**P**	**10 30 38.1**	**+0.4**
	1.3nm,0.4s,mb3.8,baz=82,slow=11,SNR=4.5						
CTAO	**Charters Tower**	**21.90**	**263**	*e*P	**P**	**10 30 38.2**	**+0.5**
	4.3nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**28.15**	**237**	P	**P**	**10 31 33.9**	**0.0**
	3.6nm,0.7s,mb4.1,baz=98,slow=7.5,SNR=6.4						
WRA	**Warramunga Arr**	**33.10**	**262**	P	**P**	**10 32 16.3**	**-1.1**
	1.1nm,0.4s,mb3.8,baz=93,slow=8.9,SNR=27						
WRA	**Warramunga Arr**	**33.10**	**262**	P	**P**	**10 32 16.3**	**-1.1**
ASAR	**Alice Springs**	**33.39**	**256**	P	**P**	**10 32 19.2**	**-0.6**
	13nm,0.6s,mb4.6,baz=82,slow=9.2,SNR=197						
FITZ	**Fitzroy Crossi**	**41.48**	**264**	P	**P**	**10 33 27.9**	**+0.3**
	4.0nm,0.6s,mb4.0,baz=124,slow=5.3,SNR=5.5						
FITZ	**Fitzroy Crossi**	**41.48**	**264**	*e*P	**P**	**10 33 27.8**	**+0.2**
	3.3nm,0.5s,mb4.0						
PETK	**Petropavlovsk-**	**72.54**	**353**	P	**P**	**10 37 04.3**	**+0.2**
	2.9nm,1.0s,mb3.9,baz=188,slow=8.7,SNR=3.2						
NVAR	**Mina Array Bea**	**88.49**	**48**	P	**P**	**10 38 29.0**	**+0.1**
	0.1nm,0.5s,mb2.9,baz=232,slow=8.7,SNR=4.0						
ILAR	**Eielson Array**	**89.95**	**17**	P	**P**	**10 38 34.9**	**-0.2**
	0.3nm,0.7s,mb3.2,baz=240,slow=5.4,SNR=4.6						
ARCES	**ARCESS Array B**	**124.91**	**345**	PKP	PKPdf	10 44 33.7	-0.5
	1.8nm,1.1s,baz=49,slow=2.7,SNR=4.6						

*ATH **14** 10:26:22.4, 34°.44N×26°.50E, h24km±6km, MD3.3/6*
*CSEM **14** 10:26:23.4, 34°.51N×26°.48E, h25km, MD3.3, After ATH*
*IDC **14** 10:26:25.1±4.9, 35°.07N×25°.93E, h40km±46km, mb3.6/7, mb1 3.6/8, mb1mx3.4/24, mbtmp3.6/8, ML2.7/1, Error ellipse: s-maj=39.4km s-min=21.4km az=143.0*
ISC 14 10:26:20.5±2.7, 34°.4N±0°.1×26°.65E±0°.10, h2km±14km, n30, σ1s09/31, mb3.8/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.79**	**334**	*e*PB	**Pg**	**10 26 35.8**	**+0.1**
ZKR	**Zakros**	**0.79**	**334**	*e*Pb	**Pg**	**10 26 35.8**	**+0.1**
XRY	**Khrisi**	**0.91**	**301**	*e*PN	**Pg**	**10 26 37.7**	**-0.3**
XRY	**Khrisi**	**0.91**	**301**	*e*Pn	**Pg**	**10 26 37.7**	**-0.3**
NPS	**Neapolis**	**1.20**	**315**	*e*PN	**Pg**	**10 26 43.7**	**+0.1**
NPS	**Neapolis**	**1.20**	**315**	*e*Pn	**Pg**	**10 26 43.7**	**+0.1**
KARP	**Karpathos**	**1.21**	**20**	*e*PN	**Pn**	**10 26 46.2**	**+1.7**
KARP	**Karpathos**	**1.21**	**20**	*e*Pn	**Pn**	**10 26 46.2**	**+1.7**
LAST	**Lasithi**	**1.22**	**308**	*e*PN	**Pg**	**10 26 43.0**	**-0.9**
LAST	**Lasithi**	**1.22**	**308**	*e*Pn	**Pg**	**10 26 43.0**	**-0.9**
SIVA	**Sivas**	**1.63**	**292**	*e*PN	**Pn**	**10 26 50.4**	**+0.1**
SIVA	**Sivas**	**1.63**	**292**	*e*Pn	**Pn**	**10 26 50.4**	**+0.1**
ARG	**Arkhangelos**	**2.17**	**33**	*e*PN	**Pn**	**10 26 59.9**	**+2.2**
ARG	**Arkhangelos**	**2.17**	**33**	*e*Pn	**Pn**	**10 26 59.9**	**+2.2**
VAM	**Vamos**	**2.24**	**297**	*e*PN	**Pn**	**10 26 59.5**	**+0.8**
VAM	**Vamos**	**2.24**	**297**	*e*Pn	**Pn**	**10 26 59.5**	**+0.8**
KARN	**Karanos**	**2.45**	**295**	*e*Pb	**Pn**	**10 27 03.3**	**+1.7**
APE	**Apeiranthos**	**2.81**	**341**	*e*Pb	**Pb**	**10 27 09.5**	**-1.9**
KYTH	**Kithira**	**3.49**	**303**	*e*PN	**Pn**	**10 27 15.9**	**0.0**
KYTH	**Kithira**	**3.49**	**303**	*e*Pn	**Pn**	**10 27 15.9**	**0.0**
VLI	**Veliai**	**3.80**	**308**	*e*PN	**Pn**	**10 27 20.0**	**-0.1**
VLI	**Veliai**	**3.80**	**308**	*e*Pn	**Pn**	**10 27 20.0**	**-0.1**
BRTR	**Keskin Array B**	**7.71**	**44**	P	**Pn**	**10 28 14.8**	**+1.1**
	0.1nm,0.3s,baz=259,slow=13,SNR=3.2						
BRTR				S	**Sn**	**10 29 40.2**	**-1.4**
	0.1nm,0.3s,baz=214,slow=26,SNR=3.0						
FINES	**FINESS Array B**	**27.05**	**359**	P	**P**	**10 31 57.2**	**-6.9**
	3.0nm,1.0s,mb3.8,baz=194,slow=11,SNR=2.6						
TORD	**Torodi Ar. Bea**	**30.98**	**233**	P	**P**	**10 32 38.3**	**-1.0**
	0.4nm,0.5s,mb3.5,baz=35,slow=7.9,SNR=6.2						
ARCES	**ARCESS Array B**	**35.19**	**359**	P	**P**	**10 33 10.5**	**-5.0**
	0.3nm,0.4s,mb3.6,baz=169,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**43.17**	**56**	P	**P**	**10 34 22.5**	**-0.1**
	0.6nm,0.6s,mb3.5,baz=276,slow=6.7,SNR=6.2						
ZALV	**Zalesovo Beam**	**44.65**	**46**	P	**P**	**10 34 32.6**	**-1.8**
	1.1nm,0.5s,mb4.0,baz=261,slow=9.2,SNR=3.9						
SONM	**Songino Array**	**59.02**	**51**	P	**P**	**10 36 21.6**	**-0.1**
	0.7nm,0.6s,mb3.9,baz=310,slow=11,SNR=3.8						
SCHQ	**Schefferville**	**64.55**	**320**	P	**P**	**10 36 50.4**	**-8.4**
	3.7nm,0.9s,mb4.4,baz=66,slow=10.0,SNR=2.7						

IDC 14 10:27:15.4±1.8, 8°.84S×124°.01E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/17, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=124.2km s-min=27.4km az=63.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.34**	**170**	Pn	Pn	10 29 31.1	-0.2
	0.5nm,0.3s,baz=356,slow=11,SNR=14						
FITZ				Sn	Sn	10 31 04.2	-13
	2.2nm,0.3s,baz=277,slow=23,SNR=16						
WRA	**Warramunga Arr**	**14.89**	**139**	Pn	Pn	10 30 46.5	-0.7
	0.2nm,0.3s,baz=316,slow=14,SNR=12						
WRA				Sn	Sn	10 33 20.8	-12
	0.4nm,0.3s,baz=315,slow=24,SNR=7.1						
ASAR	**Alice Springs**	**17.52**	**148**	P	Pn	10 31 22.1	+0.8
	0.2nm,0.3s,baz=326,slow=12,SNR=20						
ASAR				S	Sn	10 34 23.7	-13
	0.1nm,0.3s,baz=325,slow=24,SNR=4.5						
MKAR	**Makanchi Array**	**66.68**	**330**	P	P	10 38 08.1	+0.1
	0.2nm,0.3s,baz=144,slow=6.2,SNR=4.4						

*JMA **14** 10:43:38.7±0.1, 34°.46N×140°.63E, h54km±2km, M2.4*
*ISCJB **14** 10:43:39.0±0.7, 34°.44N±0°.03×140°.61E±0°.05, h51km±6km, mb3.1/2, Error ellipse: s-maj=7.4km s-min=5.4km az=169.4*
*IDC **14** 10:43:41.2±3.3, 34°.40N×140°.48E, h49km±26km, mb2.9/2, mb1 3.2/3, mb1mx3.0/24, mbtmp3.0/3, ML3.0/1, Error ellipse: s-maj=45.9km s-min=7.6km az=82.0*
ISC 14 10:43:39.9±0.6, 34°.44N±0°.03×140°.60E±0°.05, h41km±9km, n18, σ0s66/31, mb3.1/2, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.37**	**349**	P	**Pn**	**10 43 48.8**	**-0.3**
BSO3				S	**Sn**	**10 43 56.4**	**+0.9**
BSO1	**Boso 1**	**0.38**	**55**	P	**Pn**	**10 43 48.4**	**-0.8**
BSO1				S	**Sn**	**10 43 55.3**	**-0.4**
BSO4	**Boso 4**	**0.59**	**339**	P	**Pn**	**10 43 51.8**	**-0.1**
BSO4				*e*S	**Sn**	**10 44 01.1**	**+0.7**
KTR	**Katsuura**	**0.75**	**342**	*e*S	**Sn**	**10 44 03.4**	**-0.8**
TATJ	**Tateyama 2**	**0.83**	**316**	P	**Pn**	**10 43 55.0**	**-0.2**
TATJ				S	**Sn**	**10 44 06.8**	**+0.6**
JMY	**Miyakejima3**	**0.97**	**248**	P	**Pn**	**10 43 57.4**	**+0.4**
JIM2	**Oshima 3**	**1.00**	**287**	P	**Pn**	**10 43 56.8**	**-0.7**
JIM2				*e*S	**Sn**	**10 44 09.7**	**-0.7**
JCN	**Nagara**	**1.03**	**342**	S	**Sn**	**10 44 11.9**	**+0.8**
JKO	**Kozu shima**	**1.23**	**259**	P	**Pn**	**10 44 01.1**	**+0.4**
JKO				*e*S	**Sn**	**10 44 16.4**	**+0.3**
KTJJ	**Kamata 2**	**1.35**	**292**	P	**Pn**	**10 44 01.5**	**-0.8**
KTJJ				*e*S	**Sn**	**10 44 18.5**	**-0.6**
JIZS	**Izushimoda**	**1.45**	**282**	P	**Pn**	**10 44 03.5**	**-0.1**
JIZS				S	**Sn**	**10 44 21.2**	**-0.1**
JHJ2	**Mitsune**	**1.47**	**206**	P	**Pn**	**10 44 04.5**	**+0.5**
JHJ2				*e*S	**Sn**	**10 44 22.9**	**+0.9**
JHJ	**Hachijo jima 2**	**1.48**	**207**	P	**Pn**	**10 44 04.5**	**+0.4**
	9.4nm,0.3s,baz=21,slow=17,SNR=15						
JHJ				S	**Sn**	**10 44 21.5**	**-0.6**
	30nm,0.3s,baz=88,slow=23,SNR=12						
JOD2	**Odawara 2**	**1.49**	**304**	P	**Pn**	**10 44 03.4**	**-0.8**
JOD2				S	**Sn**	**10 44 20.8**	**-1.6**
MJAR	**Matsushiro Arr**	**2.87**	**318**	P	**Pn**	**10 44 23.5**	**+0.4**
	2.1nm,0.3s,baz=149,slow=13,SNR=22						
MJAR				S	**Sn**	**10 44 56.5**	**+0.2**
	1.4nm,0.3s,baz=135,slow=25,SNR=6.2						
MAT	**Matsushiro**	**2.87**	**318**	P	**Pn**	**10 44 23.9**	**+0.8**
MAT				S	**Sn**	**10 44 57.2**	**+0.9**
MKAR	**Makanchi Array**	**44.98**	**304**	P	**P**	**10 51 51.7**	**+0.7**
	0.1nm,0.4s,mb3.0,baz=81,slow=8.0,SNR=2.4						
WRA	**Warramunga Arr**	**54.40**	**187**	P	**P**	**10 53 02.2**	**-0.6**
	0.1nm,0.3s,mb3.2,baz=3.8,slow=7.6,SNR=3.6						

IDC 14 10:49:51.3±2.8, 6°.94N×125°.22E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.4/20, mbtmp3.4/3, Error ellipse: s-maj=270.7km s-min=25.7km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.18**	**162**	P	P	10 55 45.1	-0.6
	0.2nm,0.7s,baz=342,slow=8.8,SNR=3.0						
ASAR	**Alice Springs**	**31.58**	**165**	P	P	10 56 16.4	+0.6
	0.2nm,0.4s,baz=341,slow=7.4,SNR=11						
MKAR	**Makanchi Array**	**54.08**	**325**	P	P	10 59 17.8	0.0
	0.6nm,0.5s,baz=120,slow=8.7,SNR=7.4						

*NEIC **14** 11:05:10.5, 40°.23N×20°.65E, h5km, ML2.9(ATH), After ATH.*
*ATH **14** 11:05:12.1, 40°.20N×20°.79E, h7km±5km, MD2.9/5*
*ISCJB **14** 11:05:12.7±0.4, 40°.23N±0°.02×20°.71E±0°.03, h10km, Error ellipse: s-maj=3.9km s-min=2.5km az=22.0*
*THE **14** 11:05:12.9, 40°.21N×20°.76E, h0km±2km, ML2.8/7, Error ellipse: s-maj=2.4km s-min=0.8km az=244.0*
*SKO **14** 11:05:13.7, 40°.17N×20°.79E, h11km, M2.3, ML2.7*
*CSEM **14** 11:05:13.3±0.2, 40°.19N×20°.82E, h2km, ML2.8/7, Error ellipse: s-maj=6.0km s-min=3.7km az=102.0*
ISC 14 11:05:12.9±0.4, 40°.20N±0°.02×20°.76E±0°.03, h1km±4km, n84, σ1s14/110, 2C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.31**	**45**	P	**Pg**	**11 05 19.2**	**+0.3**
NEST				S	**Sg**	**11 05 23.2**	**+0.3**
NEST	**Nestorio**	**0.31**	**45**	P	**Pg**	**11 05 19.2**	**+0.3**
NEST				S	**Sg**	**11 05 23.2**	**+0.3**
JAN	**Janina**	**0.54**	**173**	*e*PB	**Pg**	**11 05 21.9**	**-1.4**
JAN				*e*SB	**Sg**	**11 05 30.7**	**+0.4**
JAN	**Janina**	**0.54**	**173**	*e*Pb	**Pg**	**11 05 21.9**	**-1.4**
JAN				*e*Sb	**Sg**	**11 05 30.7**	**+0.4**
IGT	**Igoumenitsa**	**0.74**	**207**	P	**Pg**	**11 05 26.0**	**-1.1**
IGT				S	**Sg**	**11 05 37.8**	**+1.1**
IGT	**Igoumenitsa**	**0.74**	**207**	P	**Pg**	**11 05 26.0**	**-1.1**
IGT				S	**Sg**	**11 05 37.8**	**+1.1**
FNA	**Florina**	**0.75**	**38**	P	**Pg**	**11 05 26.6**	**-0.8**
FNA	**Florina**	**0.75**	**38**	P	**Pg**	**11 05 26.6**	**-0.8**
FNA				S	**Sg**	**11 05 38.4**	**+1.3**
FNA	**Florina**	**0.75**	**38**	P	**Pg**	**11 05 26.6**	**-0.8**
FNA				S	**Sg**	**11 05 38.4**	**+1.3**
KZN	**Kozani**	**0.78**	**81**	P	**Pg**	**11 05 27.0**	**-0.9**
KZN	**Kozani**	**0.78**	**81**	*e*PB	**Pb**	**11 05 26.9**	**-2.4**
KZN	**Kozani**	**0.78**	**81**	P	**Pg**	**11 05 27.0**	**-0.8**
KZN				S	**Sg**	**11 05 40.1**	**+2.1**
KZN	**Kozani**	**0.78**	**81**	P	**Pg**	**11 05 27.1**	**-0.8**
KEK	**Kerkira**	**0.88**	**237**	P	**Pg**	**11 05 29.0**	**-0.8**
KEK				S	**Sg**	**11 05 42.4**	**+1.1**
BIA	**Bitola**	**0.93**	**27**	P	**Pg**	**11 05 29.0**	**-1.7**
BIA				S	**Sg**	**11 05 43.2**	**+0.4**
BIA	**Bitola**	**0.93**	**27**	*e*Pg	**Pg**	**11 05 30.2**	**-0.5**
BIA				*e*Sg	**Sg**	**11 05 44.2**	**+1.4**
BIA	**Bitola**	**0.93**	**27**	P	**Pg**	**11 05 29.0**	**-1.7**
BIA				S	**Sg**	**11 05 43.2**	**+0.4**
THL	**Klokotos Trika**	**1.15**	**123**	*e*PG	**Pg**	**11 05 32.8**	**-2.2**
THL	**Klokotos Trika**	**1.15**	**123**	P	**Pg**	**11 05 34.2**	**-0.8**
THL				S	**Sg**	**11 05 51.3**	**+1.4**
THL	**Klokotos Trika**	**1.15**	**123**	*e*Pn	**Pg**	**11 05 32.8**	**-2.2**
THL	**Klokotos Trika**	**1.15**	**123**	P	**Pg**	**11 05 34.2**	**-0.8**
KRUS	**Krusevo**	**1.23**	**17**	*e*Pg	**Pg**	**11 05 35.4**	**-1.1**
LIT	**Litokhoron**	**1.33**	**93**	P	**Pg**	**11 05 37.5**	**-0.9**
LIT	**Litokhoron**	**1.33**	**93**	*e*PB	**Pg**	**11 05 37.5**	**-0.9**
LIT	**Litokhoron**	**1.33**	**93**	P	**Pg**	**11 05 37.7**	**-0.7**
LIT				S	**Sg**	**11 05 57.0**	**+1.4**
LIT	**Litokhoron**	**1.33**	**93**	*e*Pb	**Pg**	**11 05 37.5**	**-0.9**
TIR	**Tirane**	**1.34**	**330**	P	**Pg**	**11 05 41.6**	**+3.0**
TIR	**Tirane**	**1.34**	**330**	P	**Pg**	**11 05 38.8**	**+0.2**
TIR				S	**Sg**	**11 05 57.9**	**+2.0**
TIR	**Tirane**	**1.34**	**330**	P	**Pg**	**11 05 38.8**	**+0.2**
TIR				S	**Sg**	**11 05 57.9**	**+2.0**
GRG	**Griva**	**1.46**	**58**	P	**Pn**	**11 05 39.7**	**-0.7**
GRG	**Griva**	**1.46**	**58**	P	**Pn**	**11 05 39.8**	**-0.6**
GRG				S	**Sg**	**11 05 59.3**	**-0.6**
GRG	**Griva**	**1.46**	**58**	P	**Pn**	**11 05 39.8**	**-0.6**
GRG				S	**Sg**	**11 05 59.3**	**-0.6**
EVR	**Evrytania**	**1.51**	**147**	P	**Pn**	**11 05 40.6**	**-0.5**
EVR	**Evrytania**	**1.51**	**147**	*e*PG	**Pg**	**11 05 39.4**	**-2.5**
EVR	**Evrytania**	**1.51**	**147**	*e*Pg	**Pg**	**11 05 39.4**	**-2.5**
EVR	**Evrytania**	**1.51**	**147**	P	**Pn**	**11 05 40.6**	**-0.5**
AGG	**Agios Georgios**	**1.69**	**134**	P	**Pn**	**11 05 43.6**	**+0.1**
AGG	**Agios Georgios**	**1.69**	**134**	*e*PB	**Pn**	**11 05 43.6**	**+0.1**
AGG	**Agios Georgios**	**1.69**	**134**	P	**Pn**	**11 05 43.4**	**-0.1**
AGG				S	**Sn**	**11 06 06.0**	**+0.3**
AGG	**Agios Georgios**	**1.69**	**134**	P	**Pn**	**11 05 43.4**	**-0.1**
AGG				S	**Sn**	**11 06 06.0**	**+0.3**
VAY	**Valandovo**	**1.78**	**50**	P	**Pn**	**11 05 44.6**	**-0.1**
VAY				S	**Sn**	**11 06 07.5**	**-0.4**
VAY	**Valandovo**	**1.78**	**50**	*e*Pn	**Pn**	**11 05 44.1**	**-0.6**
VAY				*e*Sg	**Sg**	**11 06 09.6**	**-0.4**
VAY				*e*Lg		11 06 11.7	
	comp=E,44nm,0.7s						
VAY				*e*Lg		11 06 16.1	
	comp=N,40nm,0.5s						
VAY	**Valandovo**	**1.78**	**50**	P	**Pn**	**11 05 44.6**	**-0.1**
VAY				S	**Sn**	**11 06 07.5**	**-0.4**
HORT	**Hortiatis**	**1.83**	**77**	P	**Pn**	**11 05 44.8**	**-0.7**
HORT	**Hortiatis**	**1.83**	**77**	P	**Pn**	**11 05 44.8**	**-0.7**
SKO	**Skopje**	**1.85**	**16**	*e*Pn	**Pn**	**11 05 45.8**	**+0.1**
SKO				*e*Sg	**Sg**	**11 06 13.6**	**+1.3**
SKO				*e*Lg		11 06 15.7	
	comp=N,83nm,0.3s						
SKO				*e*Lg		11 06 15.9	
	comp=E,66nm,0.5s						
KNT	**Kendrikon**	**1.89**	**59**	P	**Pn**	**11 05 45.5**	**-0.8**
KNT	**Kendrikon**	**1.89**	**59**	P	**Pn**	**11 05 45.5**	**-0.8**
VLS	**Valsamata**	**2.02**	**184**	P	**Pn**	**11 05 50.3**	**+2.2**
VLS	**Valsamata**	**2.02**	**184**	*e*PN	**Pn**	**11 05 49.0**	**+0.9**
VLS	**Valsamata**	**2.02**	**184**	*e*Pn	**Pn**	**11 05 49.0**	**+0.9**
VLS	**Valsamata**	**2.02**	**184**	P	**Pn**	**11 05 50.3**	**+2.2**
PLG	**Polygyros**	**2.06**	**84**	P	**Pn**	**11 05 49.2**	**+0.6**
PLG	**Polygyros**	**2.06**	**84**	*e*PN	**Pn**	**11 05 48.2**	**-0.4**
PLG	**Polygyros**	**2.06**	**84**	*e*Pn	**Pn**	**11 05 48.2**	**-0.4**
PLG	**Polygyros**	**2.06**	**84**	P	**Pn**	**11 05 49.2**	**+0.6**
SOH	**Sokhos**	**2.07**	**72**	P	**Pn**	**11 05 49.2**	**+0.4**
SOH	**Sokhos**	**2.07**	**72**	P	**Pn**	**11 05 49.2**	**+0.4**
TRIZ	**Trizonia**	**2.09**	**150**	P	**Pn**	**11 05 50.1**	**+1.1**
TRIZ	**Trizonia**	**2.09**	**150**	P	**Pn**	**11 05 50.1**	**+1.1**
KALE	**Kalithea**	**2.10**	**149**	P	**Pn**	**11 05 49.4**	**+0.3**
KALE	**Kalithea**	**2.10**	**149**	P	**Pn**	**11 05 49.4**	**+0.3**
LAKA	**Lakka**	**2.17**	**154**	P	**Pn**	**11 05 50.9**	**+0.8**
LAKA	**Lakka**	**2.17**	**154**	P	**Pn**	**11 05 50.9**	**+0.8**
RLS	**Riolos of Patr**	**2.20**	**165**	P	**Pn**	**11 05 55.1**	**+4.5**
RLS	**Riolos of Patr**	**2.20**	**165**	*e*PG	**Pg**	**11 05 52.3**	**-2.9**
RLS	**Riolos of Patr**	**2.20**	**165**	*e*Pg	**Pg**	**11 05 52.3**	**-2.9**
RLS	**Riolos of Patr**	**2.20**	**165**	P	**Pn**	**11 05 55.1**	**+4.5**
DSF	**Desfina**	**2.25**	**142**	P	**Pn**	**11 05 51.4**	**+0.2**
DSF	**Desfina**	**2.25**	**142**	P	**Pn**	**11 05 51.4**	**+0.2**
LKR	**Lokris**	**2.32**	**131**	P	**Pn**	**11 05 53.8**	**+1.6**
LKR	**Lokris**	**2.32**	**131**	*e*PN	**Pn**	**11 05 52.5**	**+0.3**
LKR	**Lokris**	**2.32**	**131**	P	**Pn**	**11 05 52.1**	**-0.1**
LKR	**Lokris**	**2.32**	**131**	P	**Pn**	**11 05 52.1**	**-0.1**
LKR	**Lokris**	**2.32**	**131**	*e*Pn	**Pn**	**11 05 52.5**	**+0.3**
GUR	**Goura**	**2.57**	**151**	*e*Pn	**Pn**	**11 05 58.0**	**+2.4**
AOS	**Alonnisos**	**2.62**	**112**	P	**Pn**	**11 05 55.5**	**-0.8**
AOS	**Alonnisos**	**2.62**	**112**	P	**Pn**	**11 05 55.5**	**-0.8**
PE1	**Pezze di Greco**	**2.62**	**285**	*e*Pn	**Pn**	**11 06 00.9**	**+4.6**
BARS	**Barje**	**2.74**	**16⇑**	*i*Pn	**Pn**	**11 05 57.9**	**0.0**
VLI	**Veliai**	**3.87**	**153**	P	**Pn**	**11 06 14.2**	**+0.7**
VLI	**Veliai**	**3.87**	**153**	P	**Pn**	**11 06 14.2**	**+0.7**
DIVS	**Divibare**	**3.94**	**352⇑**	*i*Pn	**Pn**	**11 06 15.7**	**+1.2**
NVLJ	**Novalja**	**6.17**	**317**	*e*Pn	**Pn**	**11 06 44.2**	**-0.9**
NVLJ				Sn	**Sn**	**11 07 53.7**	**-2.6**

IDC 14 11:07:31.0±3.3, 19°.31N×146°.55E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.5/4, MS3.6/1, Ms1 3.6/1, ms1mx2.4/23, Error ellipse: s-maj=145.0km s-min=29.1km az=84.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**34.83**	**12**	LR	LR	11 25 20.7	
	comp=Z,110nm,22.0s,baz=66,slow=31						
WRA	**Warramunga Arr**	**40.80**	**198**	P	P	11 15 14.1	-0.2
	0.1nm,0.3s,baz=17,slow=8.1,SNR=6.2						
ASAR	**Alice Springs**	**44.46**	**197**	P	P	11 15 44.0	0.0
	0.2nm,0.6s,baz=15,slow=7.7,SNR=3.8						
MKAR	**Makanchi Array**	**58.62**	**314**	P	P	11 17 30.8	+0.9
	0.3nm,0.5s,baz=96,slow=9.3,SNR=3.5						
FINES	**FINESS Array B**	**86.67**	**335**	P	P	11 20 15.8	-0.6
	0.4nm,0.4s,baz=65,slow=7.8,SNR=5.0						

IDC 14 11:15:41.2±0.9, 10°.42N×145°.79E, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.7/21, mbtmp3.6/8, ML4.2/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/23, Error ellipse: s-maj=31.9km s-min=20.9km az=96.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.28**	**344**	Pn	Pn	11 16 32.1	-1.7
	26nm,0.3s,baz=163,slow=11,SNR=12						
GUMO				Sn	Sn	11 17 08.1	-5.4
	43nm,0.3s,baz=158,slow=23,SNR=13						
CTA	**Charters Tower**	**30.32**	**179**	LR	LR	11 31 38.8	
	comp=Z,83nm,19.4s,baz=50,slow=32						
WRA	**Warramunga Arr**	**32.21**	**201

ROSC El Rosal 2.38 213 P Pn 12 47 43.1 +1.2
7.9nm,0.3s,baz=270,slow=20,SNR=12
ROSC S Sn 12 48 11.7 -1.6
33nm,0.3s,baz=107,slow=14,SNR=12
VIGV El Vigia 2.57 40 eP Pn 12 47 45.0 +0.9
VIGV eS Sn 12 48 16.7 -0.6
SOCV Socops 2.58 57 eP Pn 12 47 45.4 +1.1
SOCV eS Sn 12 48 16.9 -0.7
ELOV Elorza 3.54 88 eP Pn 12 47 56.2 +0.1
VIRV Villa del Rosa 3.66 10⇑eP Pn 12 47 57.5 -0.2
VIRV eS Sn 12 48 39.4 -2.3
QARV Quebrada Arrib 4.14 37 eP Pn 12 48 05.0 +1.1
CURV Curarigua 4.36 44 eP Pn 12 48 07.3 +0.6
BAUV El Baul 5.36 67 eP Pn 12 48 18.9 -0.9
MAPV Macapo 5.41 57 eP Pn 12 48 20.1 -0.3
MONV Montecano 5.89 31 eP Pn 12 48 26.6 -0.1
CAOV Caicara del Or 6.69 86 eP Pn 12 48 36.2 -1.0
ASAR Alice Springs 149.20 234 PKPbc PKPbc 13 06 30.9 +0.2
0.2nm,0.5s,baz=116,slow=3.7,SNR=4.3
WRA Warramunga Arr 150.43 241 PKPbc PKPbc 13 06 34.0 +0.2
0.1nm,0.5s,baz=105,slow=2.9,SNR=8.2

IDC 14 12:52:28.5±5.2,21.40S×70.55W,h40km±47km,mb3.4/3, mb1 3.7/5,mb1mx3.5/17,mbtmp3.4/5,ML3.7/2,Error ellipse: s-maj=43.3km s-min=30.5km az=81.0,Near coast of northern Chile

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LPAZ La Paz 5.57 25 Pn Pn 12 53 48.4 -0.6
0.7nm,0.3s,baz=234,slow=5.3,SNR=23
PLCA Paso Flores 19.27 180 P Pn 12 56 49.8 -1.2
0.1nm,0.3s,baz=15,slow=12,SNR=2.4
BDFB Brasilia 22.11 79 P P 12 57 22.0 +1.4
1.7nm,0.4s,baz=218,slow=12,SNR=2.9
PDAR Pinedale Array 73.27 331 P P 13 03 56.3 +0.7
0.2nm,0.4s,baz=130,slow=9.5,SNR=2.6
NVAR Mina Array Bea 74.48 323 P P 13 04 03.8 +1.0
0.4nm,0.7s,baz=133,slow=7.7,SNR=4.2
WRA Warramunga Arr 132.25 212 PKP PKPdf 13 11 38.5 -0.6
0.3nm,0.6s,baz=163,slow=2.1,SNR=6.4
MKAR Makanchi Array 146.43 35 PKPbc PKPbc 13 12 03.0 -2.2
0.2nm,0.5s,baz=321,slow=3.3,SNR=3.9
MKAR pPKPbc pPKPbc 13 12 16.4 -1.4
0.7nm,0.8s,baz=309,slow=5.8,SNR=5.7

ISCJB 14 13:43:49.5±1.5,21.2S±0.1×68.5W±0.3,h118km,mb3.3/1, Error ellipse: s-maj=37.6km s-min=17.9km az=7.0
IDC 14 13:43:51.1±1.2,21.12S×68.54W,h118km±14km,mb3.4/2, mb1 3.3/4,mb1mx3.1/17,mbtmp3.2/4,MS3.4/1,Ms1 3.4/1, ms1mx2.6/12,Error ellipse: s-maj=24.6km s-min=13.7km az=105.0
ISC 14 13:43:51.3±1.5,21.1S±0.1×68.5W±0.3,h118km,n6, σ0.77/4,mb3.3/1,Chile-Bolivia border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LPAZ La Paz 4.84 5 P Pn 13 45 02.3 +0.2
0.8nm,0.3s,baz=206,slow=8.0,SNR=30
PLCA Paso Flores 19.61 185 P P 13 48 10.4 +0.2
0.1nm,0.3s,baz=356,slow=13,SNR=3.9
BDFB Brasilia 20.23 78 P P 13 48 17.5 +0.3
2.7nm,0.5s,baz=260,slow=14,SNR=4.8
CMIG Matias Romero 45.94 324 LR LR 14 08 48.2
comp=Z,41nm,18.6s,baz=11,slow=33
TORD Torodi Ar. Bea 76.91 70 P P 13 55 30.4 -0.7
0.4nm,0.7s,mb3.3,baz=248,slow=7.6,SNR=2.4
MKAR Makanchi Array 145.14 36 PKPbc PKPbc 14 03 14.6 +0.1
0.3nm,0.5s,baz=318,slow=1.6,SNR=3.9

NEIC 14 13:51:44.3,17.86N×103.17W,h3km,MD4.1(MEX),After MEX.
MEX 14 13:51:44.3±0.4,17.85N×103.17W,h3km±3km,MD4.1, Near coast of Michoacan

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MMIG Aquila 0.46 339 iP Pg 13 51 52.8 -0.5
MMIG iS Sg 13 51 59.6 +0.3
ZIIG Zihuatanejo 1.64 98 iP Pn 13 52 10.6 -3.6
ZIIG iS Sn 13 52 30.9 -4.9
ZIIG Zihuatanejo 1.64 98 iP Pn 13 52 10.6 -3.6
ZIIG iS Sn 13 52 30.9 -4.9
EZ5V 1.67 346 eP Pn 13 52 11.3 -3.1
EZ5V iS Sn 13 52 31.8 -4.6
MOIG Morelia 2.61 46 eP Pn 13 52 24.7 -2.7
MOIG iS Sn 13 52 56.1 -3.6
MOIG Morelia 2.61 46 eP Pn 13 52 24.7 -2.7
MOIG iS Sn 13 52 56.1 -3.6
SFJM Santa Fe 2.62 3 iP Pn 13 52 24.5 -3.1
SFJM Santa Fe 2.62 3 iP Pn 13 52 24.5 -3.1
CAIG El Cayaco 2.88 106 eP Pn 13 52 28.1 -3.1
CAIG iS Sn 13 53 02.1 -4.3
CAIG El Cayaco 2.88 106 eP Pn 13 52 28.1 -3.1
CAIG iS Sn 13 53 02.1 -4.3
MEIG Mezcala 3.38 88 iP Pn 13 52 36.9 -1.2
MEIG iS Sn 13 53 15.4 -3.3
PLIG Platanillo 3.53 81 iP Pn 13 52 37.5 -2.6
PLIG iS Sn 13 53 18.0 -4.4
PLIG Platanillo 3.53 81 iP Pn 13 52 37.5 -2.6
PLIG iS Sn 13 53 18.0 -4.4
PNIG Pinotepa 5.04 106 eP Pn 13 52 58.1 -2.7
PNIG iS Sn 13 53 57.1 -2.4
PNIG Pinotepa 5.04 106 eP Pn 13 52 58.1 -2.7
PNIG iS Sn 13 53 57.1 -2.4
VHO Vista Hermosa 6.19 96 iP Pn 13 53 14.5 -2.2
VHO iS Sn 13 54 24.8 -3.3
VHO Vista Hermosa 6.19 96 iP Pn 13 53 14.5 -2.2
VHO iS Sn 13 54 24.8 -3.3

IDC 14 14:00:01.9±4.1,12.75N×143.50E,h154km±219km, mb3.5/3,mb1 3.7/3,mb1mx3.0/21,mbtmp3.5/3,Error ellipse: s-maj=371.5km s-min=98.7km az=1.0,South of Mariana Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
GUMO Guam 1.57 58 P Pn 14 00 32.9 +0.4
9.5nm,0.3s,baz=180,slow=17,SNR=11
GUMO S Sn 14 00 56.0 0.0
42nm,0.3s,baz=177,slow=9.3,SNR=12
WRA Warramunga Arr 33.72 196 P P 14 06 28.6 -0.1
2.3nm,0.5s,baz=17,slow=9.5,SNR=48
ASAR Alice Springs 37.39 195 P P 14 07 00.0 0.0
0.8nm,0.5s,baz=21,slow=12,SNR=21
STKA Stephens Creek 44.41 182 P P 14 07 57.1 -0.2
2.5nm,1.0s,baz=356,slow=15,SNR=3.9

INMG 14 14:03:36.9±1.7,38.20N×0.63W,h22km±4km,ML3.8,Error ellipse: s-maj=5.7km s-min=2.3km az=113.0
ISCJB 14 14:03:36.4±0.3,38.41N±0.01×1.06W±0.01,h1km±1km, Error ellipse: s-maj=2.2km s-min=1.6km az=141.2
CSEM 14 14:03:38.1±0.1,38.32N×0.97W,h2km,ML4.0/58,Error ellipse: s-maj=2.1km s-min=1.5km az=135.0
CRAAG 14 14:03:39.6,39.20N×0.90W,Ml3.5
NEIC 14 14:03:39.1,38.27N×0.88W,h0km,ML3.8(LDG), ML3.6(STR),MN3.5(MDD),After MDD.
NEIC Felt at Aspe, Crevillent, Molina de Segura, Santomera and Yecla.
SFS 14 14:03:39.0,38.26N×0.87W,h4km,ML3.5
IGIL 14 14:03:39.4,38.27N×0.88W,h4km,ML3.5
LDG 14 14:03:39.5±0.1,38.25N×0.87W,h2km,Ml3.8/14,Error ellipse: s-maj=2.8km s-min=1.3km az=138.0
MDD 14 14:03:40.0±0.2,38.27N×0.89W,h11km,mbLg3.5/46, Error ellipse: s-maj=2.9km s-min=1.8km az=131.0,PRIMO FRAILES III ELDA ELCHE ASPE PETRER MURCIA ABANILLA FORTUNA SANTOMERA II NOVELDA ALICANTE
MDD EMS: IV CREVILLENTE ALBATERA HOND DE LOS.
CNRM 14 14:03:41.7,38.22N×0.68W,h30km,MD3.8
STR 14 14:03:46.2±0.4,38.75N×0.85W,h10km,Ml3.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
ISC 14 14:03:38.7±0.3,38.34N±0.01×0.98W±0.01,h8km±1km, n550,σ1.21/961,20C-20D,Spain

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
ETOB Tobarra 0.54 304 Pg Pg 14 03 51.5 +2.3
ETOB Lg 14 04 01.5
ETOB Tobarra 0.54 304 ⇑Pg Pg 14 03 51.5 +2.3
703nm,0.1s,SNR=18
ETOB Lg 14 04 01.5
2μm,0.4s,SNR=5.0
ETOB Tobarra 0.54 304 ⇑Pg Pg 14 03 51.5 +2.3
703nm,0.1s,SNR=18
ETOB Lg 14 04 01.5
2μm,0.4s,SNR=5.0
ETOB Tobarra 0.54 304 Pg Pg 14 03 51.5 +2.3
703nm,0.1s,SNR=18
ETOB Lg 14 04 01.5
2μm,0.4s,SNR=5.0
EMUR La Murta 0.54 202 Pg Pg 14 03 48.5 -0.7
EMUR Lg 14 03 55.4
EMUR La Murta 0.54 202 ⇓Pg Pg 14 03 48.5 -0.7
3μm,0.2s,SNR=18
EMUR Lg 14 03 55.4
6μm,0.4s
EMUR La Murta 0.54 202 ⇓Pg Pg 14 03 48.5 -0.7
3μm,0.2s,SNR=18
EMUR Lg 14 03 55.4
6μm,0.4s
EMUR La Murta 0.54 202 Pg Pg 14 03 48.5 -0.7
3μm,0.2s,SNR=18
EMUR Lg 14 03 55.4
6μm,0.4s
EBEN Beniarda 0.69 58 Pg Pg 14 03 51.9 -0.2
EBEN Lg 14 04 00.2
EBEN Beniarda 0.69 58 ⇓Pg Pg 14 03 51.9 -0.2
210nm,0.3s,SNR=18
EBEN Lg 14 04 00.2
1μm,0.6s
EBEN Beniarda 0.69 58 ⇓Pg Pg 14 03 51.9 -0.2
210nm,0.3s,SNR=18
EBEN Lg 14 04 00.2
1μm,0.6s
EBEN Beniarda 0.69 58 Pg Pg 14 03 51.9 -0.2
210nm,0.3s,SNR=18
EBEN Lg 14 04 00.2
1μm,0.6s
CART Cartagena 0.75 181 ePg Pg 14 03 51.7 -1.6
CART eSg Sg 14 04 01.7 -1.3
CART Cartagena 0.75 181 Pg Pg 14 03 51.9 -1.4
CART Lg 14 03 59.2
CART Cartagena 0.75 181 Pg Pg 14 03 51.9 -1.4
CART Lg 14 03 59.2
CART Cartagena 0.75 181 eP Pg 14 03 51.9 -1.3
CART eS Sg 14 03 59.2 -3.9
CART eSg Sg 14 04 01.7 -1.4
EVIA Vianos 1.23 284 Pg Pg 14 04 02.6 +0.3
EVIA Lg 14 04 23.4
EVIA Vianos 1.23 284 ⇑Pg Pg 14 04 02.6 +0.3
426nm,0.3s,SNR=18
EVIA Lg 14 04 23.4
808nm,0.4s,SNR=6.4
EVIA Vianos 1.23 284 ⇑Pg Pg 14 04 02.6 +0.3
426nm,0.3s,SNR=18
EVIA Lg 14 04 23.4
808nm,0.4s,SNR=6.4
EVIA Vianos 1.23 284 Pg Pg 14 04 02.6 +0.2
426nm,0.3s,SNR=18
EVIA Lg 14 04 23.4
808nm,0.4s,SNR=6.4
ECHE Chera 1.25 0 Pg Pg 14 04 02.6 -0.1
ECHE Lg 14 04 21.4
ECHE Chera 1.25 0 Pg Pg 14 04 02.6 -0.1
430nm,0.4s,SNR=214
ECHE Lg 14 04 21.4
350nm,0.3s,SNR=7.2
ECHE Chera 1.25 0 Pg Pg 14 04 02.6 -0.1
430nm,0.4s,SNR=214
ECHE Lg 14 04 21.4
350nm,0.3s,SNR=7.2
ECHE Chera 1.25 0 Pg Pg 14 04 02.6 -0.1
430nm,0.4s,SNR=214
ECHE Lg 14 04 21.4
350nm,0.3s,SNR=7.2
EHUE Huescar 1.38 248 Pg Pg 14 04 05.8 +0.6
EHUE Lg 14 04 25.6
EHUE Huescar 1.38 248 ⇑Pg Pg 14 04 05.6 +0.4
303nm,0.3s,SNR=18
EHUE Lg 14 04 25.6
363nm,0.3s,SNR=7.9
EHUE Huescar 1.38 248 ⇑Pg Pg 14 04 05.6 +0.4
303nm,0.3s,SNR=18
EHUE Lg 14 04 25.6
363nm,0.3s,SNR=7.9
EHUE Huescar 1.38 248 Pg Pg 14 04 05.6 +0.4
303nm,0.3s,SNR=18
EHUE Lg 14 04 25.6
363nm,0.3s,SNR=7.9
EQES Quesada 1.74 253 Pg Pn 14 04 10.4 +1.2
EQES Lg 14 04 36.8
EQES Quesada 1.74 253 ⇑Pn Pn 14 04 10.4 +1.2
128nm,0.4s,SNR=18
EQES Pg Pg 14 04 13.0 +0.9
1μm,0.4s,SNR=12
EQES Lg 14 04 36.8
4μm,0.7s,SNR=61
EQES Quesada 1.74 253 ⇑Pn Pn 14 04 10.4 +1.2
128nm,0.4s,SNR=18
EQES Pg Pg 14 04 13.0 +0.9
1μm,0.4s,SNR=12
EQES Lg 14 04 36.8
4μm,0.7s,SNR=61
EQES Quesada 1.74 253 Pn Pn 14 04 10.4 +1.2
128nm,0.4s,SNR=18
EQES Quesada 1.74 253 Pg Pg 14 04 13.0 +1.0
1μm,0.4s,SNR=12
EQES Lg 14 04 36.8
4μm,0.7s,SNR=61
EIBI Ibiza 1.94 69 Pn Pn 14 04 10.5 -1.5
EIBI Sn Sn 14 04 35.6 -1.0
EIBI Ibiza 1.94 69 Pn Pn 14 04 09.9 -2.1
15nm,0.1s,SNR=30
EIBI Sn Sn 14 04 35.6 -1.0
166nm,0.3s,SNR=6.0
EIBI Ibiza 1.94 69 Pn Pn 14 04 09.9 -2.1
15nm,0.1s,SNR=30
EIBI Sn Sn 14 04 35.6 -1.0
166nm,0.3s,SNR=6.0
EIBI Ibiza 1.94 69 Pn Pn 14 04 10.5 -1.5
EIBI Sn Sn 14 04 35.6 -1.0
166nm,0.3s,SNR=6.0
EMOS Mosqueruela 2.06 11 Pn Pn 14 04 14.0 +0.5
EMOS Sn Sn 14 04 39.5 0.0
EMOS Lg 14 04 48.2
EMOS Mosqueruela 2.06 11 Pn Pn 14 04 14.0 +0.5
47nm,0.3s,SNR=140
EMOS Pg Pg 14 04 19.5 +1.3
199nm,0.7s,SNR=22
EMOS Sn Sn 14 04 39.4 0.0
56nm,0.2s
EMOS Lg 14 04 48.2
291nm,0.6s,SNR=7.9
EMOS Mosqueruela 2.06 11 Pn Pn 14 04 14.0 +0.5
47nm,0.3s,SNR=140
EMOS Pg Pg 14 04 19.5 +1.3
199nm,0.7s,SNR=22
EMOS Sn Sn 14 04 39.4 0.0
56nm,0.2s
EMOS Lg 14 04 48.2
291nm,0.6s,SNR=7.9
EMOS Mosqueruela 2.06 11 Pn Pn 14 04 14.0 +0.4
47nm,0.3s,SNR=140
EBER Berja 2.09 227 Pn Pn 14 04 13.6 -0.4
EBER Lg 14 04 46.9
EBER Berja 2.09 227 ⇓Pn Pn 14 04 13.6 -0.4
128nm,0.4s,SNR=18
EBER Lg 14 04 46.8
276nm,0.5s
EBER Berja 2.09 227 ⇓Pn Pn 14 04 13.6 -0.4
128nm,0.4s,SNR=18
EBER Lg 14 04 46.8
276nm,0.5s
EBER Berja 2.09 227 Pn Pn 14 04 13.6 -0.5
128nm,0.4s,SNR=18
EBER Lg 14 04 46.8
276nm,0.5s
EBAN Banos Encina 2.22 266 Pn Pn 14 04 16.0 +0.2
EBAN Sn Sn 14 04 45.0 +1.6
EBAN Lg 14 04 52.2
EBAN Banos Encina 2.22 266 ⇑Pn Pn 14 04 16.0 +0.2
73nm,0.2s,SNR=18
EBAN Pg Pg 14 04 21.4 +0.2
SNR=7.9
EBAN Sn Sn 14 04 45.0 +1.6
92nm,0.2s,SNR=7.9
EBAN Lg 14 04 52.2
215nm,0.3s
EBAN Banos Encina 2.22 266 ⇑Pn Pn 14 04 16.0 +0.2
73nm,0.2s,SNR=18
EBAN Pg Pg 14 04 21.4 +0.2
SNR=7.9
EBAN Sn Sn 14 04 45.0 +1.6
92nm,0.2s,SNR=7.9
EBAN Lg 14 04 52.2
215nm,0.3s
EBAN Banos Encina 2.22 266 Pn Pn 14 04 16.0 +0.2
73nm,0.2s,SNR=18
EBAN Sn Sn 14 04 45.0 +1.7
92nm,0.2s,SNR=7.9
EBAN Lg 14 04 52.2
215nm,0.3s
EQUE Quentar 2.26 241 ⇑Pn Pn 14 04 17.4 +1.1
69nm,0.5s,SNR=18
EQUE Pg Pg 14 04 21.8 -0.1
103nm,0.4s,SNR=16
EQUE Lg 14 04 51.3
309nm,0.5s
EQUE Quentar 2.26 241 ⇑Pn Pn 14 04 17.4 +1.1
69nm,0.5s,SNR=18
EQUE Pg Pg 14 04 21.8 -0.1
103nm,0.4s,SNR=16
EQUE Lg 14 04 51.3
309nm,0.5s
EQUE Quentar 2.26 241 Pn Pn 14 04 17.4 +1.1
69nm,0.5s,SNR=18
ECOG Cogollos-Vega 2.31 243 Pn Pn 14 04 18.6 +1.6
ECOG Lg 14 04 53.8
ECOG Cogollos-Vega 2.31 243 Pn Pn 14 04 18.5 +1.4
13nm,0.2s,SNR=37
ECOG Lg 14 04 53.8
308nm,0.5s,SNR=13
ECOG Cogollos-Vega 2.31 243 Pn Pn 14 04 18.5 +1.4
13nm,0.2s,SNR=37
ECOG Lg 14 04 53.8
308nm,0.5s,SNR=13
ECOG Cogollos-Vega 2.31 243 Pn Pn 14 04 18.5 +1.5
13nm,0.2s,SNR=37
ECOG Lg 14 04 53.8
308nm,0.5s,SNR=13
EGUA Guajares 2.55 235 Pn Pn 14 04 21.5 +1.2
EGUA Pg Pg 14 04 26.8 -0.8
EGUA Sn Sn 14 04 51.9 +0.4
EGUA Lg 14 05 01.9
EGUA Guajares 2.55 235 Pn Pn 14 04 21.3 +1.0
91nm,0.2s,SNR=7.9
EGUA Pg Pg 14 04 26.8 -0.8
178nm,0.4s,SNR=7.9
EGUA Sn Sn 14 04 51.9 +0.4
163nm,0.4s,SNR=7.9
EGUA Lg 14 05 01.9
268nm,0.4s,SNR=7.9
EGUA Guajares 2.55 235 Pn Pn 14 04 21.3 +1.0
91nm,0.2s,SNR=7.9
EGUA Pg Pg 14 04 26.8 -0.8
178nm,0.4s,SNR=7.9
EGUA Sn Sn 14 04 51.9 +0.4
163nm,0.4s,SNR=7.9
EGUA Lg 14 05 01.9
268nm,0.4s,SNR=7.9
EGUA Guajares 2.55 235 Pn Pn 14 04 21.3 +1.0
91nm,0.2s,SNR=7.9
ERON Agron 2.60 240 Pn Pn 14 04 23.4 +2.3
ERON Pg Pg 14 04 29.0 +0.4
ERON Sn Sn 14 04 54.1 +1.2
ERON Agron 2.60 240 Pn Pn 14 04 23.4 +2.3
19nm,0.3s,SNR=7.9
ERON Pg Pg 14 04 29.0 +0.4
139nm,0.5s,SNR=7.9
ERON Sn Sn 14 04 54.1 +1.2
68nm,0.4s,SNR=7.9
ERON Agron 2.60 240 Pn Pn 14 04 23.4 +2.3
19nm,0.3s,SNR=7.9
ERON Pg Pg 14 04 29.0 +0.4
139nm,0.5s,SNR=7.9
ERON Sn Sn 14 04 54.1 +1.2
68nm,0.4s,SNR=7.9
ERON Agron 2.60 240 Pn Pn 14 04 23.4 +2.3
19nm,0.3s,SNR=7.9
USTO Oran 2.63 172 P Pg 14 04 38.0 +8.9
OKGL Djebel Kef Gue 2.64 150 P Pn 14 04 23.0 +1.4
OKGL Djebel Kef Gue 2.64 150 Pn Pn 14 04 23.0 +1.4
OKGL Djebel Kef Gue 2.64 150 Pn Pn 14 04 23.0 +1.4
OKGL Djebel Kef Gue 2.64 150 P Pn 14 04 23.0 +1.4
ESDC Sonseca Array 2.68 301 Pn Pn 14 04 22.4 +0.3
ESDC Pg Pg 14 04 30.7 +0.6
ESDC Sn Sn 14 04 57.4 +2.7
ESDC Lg 14 05 07.9
ESDC Sonseca Array 2.68 301 ⇑Pn Pn 14 04 22.4 +0.3
29nm,0.2s,baz=114,slow=14,SNR=18
ESDC Pg Pg 14 04 30.7 +0.6
34nm,0.2s,baz=113,slow=18,SNR=22
ESDC Sn Sn 14 04 57.4 +2.7
37nm,0.3s,baz=291,slow=28,SNR=7.9
ESDC Lg 14 05 07.9
105nm,0.3s,baz=116,slow=30,SNR=30
ESDC Sonseca Array 2.68 301 ⇑Pn Pn 14 04 22.4 +0.3
29nm,0.2s,baz=114,slow=14,SNR=18
ESDC Pg Pg 14 04 30.7 +0.6
34nm,0.2s,baz=113,slow=18,SNR=22
ESDC Sn Sn 14 04 57.4 +2.7
37nm,0.3s,baz=291,slow=28,SNR=7.9
ESDC Lg 14 05 07.9
105nm,0.3s,baz=116,slow=30,SNR=30
ESDC Sonseca Array 2.68 301 Pn Pn 14 04 22.4 +0.3
29nm,0.2s,SNR=18
ESDC Sonseca Array 2.68 301 Pg Pg 14 04 30.7 +0.6
34nm,0.2s,SNR=22
ESDC Sn Sn 14 04 57.4 +2.7
37nm,0.3s,SNR=7.9
ESDC Lg 14 05 07.9
105nm,0.3s,SNR=30
ESLA Sonseca Array 2.68 301 ePn Pn 14 04 22.2 +0.1
ESLA ePg Pg 14 04 30.6 +0.5
ESLA eSg Sg 14 05 05.3 +0.5
ESLA Sonseca Array 2.68 301 ePn Pn 14 04 22.2 +0.1
ELUQ Luque 2.71 254 Pn Pn 14 04 23.9 +1.3
ELUQ Pg Pg 14 04 31.1 +0.4
ELUQ Sn Sn 14 04 55.9 +0.3
ELUQ Lg 14 05 08.7
ELUQ Luque 2.71 254 ⇑Pn Pn 14 04 23.6 +1.0
192nm,0.5s,SNR=18
ELUQ Pg Pg 14 04 31.1 +0.4
176nm,0.3s,SNR=7.9
ELUQ Sn Sn 14 04 55.9 +0.3
72nm,0.4s,SNR=7.9
ELUQ Lg 14 05 08.7
86nm,0.2s,SNR=7.9
ELUQ Luque 2.71 254 ⇑Pn Pn 14 04 23.6 +1.0
192nm,0.5s,SNR=18
ELUQ Pg Pg 14 04 31.1 +0.4
176nm,0.3s,SNR=7.9
ELUQ Sn Sn 14 04 55.9 +0.3
72nm,0.4s,SNR=7.9
ELUQ Lg 14 05 08.7
86nm,0.2s,SNR=7.9
ELUQ Luque 2.71 254 Pn Pn 14 04 23.6 +1.0
192nm,0.5s,SNR=18
ELUQ Luque 2.71 254 Pg Pg 14 04 31.1 +0.4
176nm,0.3s,SNR=7.9
ELUQ Sn Sn 14 04 55.9 +0.3
72nm,0.4s,SNR=7.9
ELUQ Lg 14 05 08.7
86nm,0.2s,SNR=7.9
ELOJ Sierra Loja 2.78 246 Pn Pn 14 04 25.1 +1.5
ELOJ Pg Pg 14 04 31.5 -0.6
ELOJ Sn Sn 14 04 59.3 +2.0
ELOJ Lg 14 05 08.9
ELOJ Sierra Loja 2.78 246 Pn Pn 14 04 25.1 +1.5
78nm,0.4s,SNR=95
ELOJ Pg Pg 14 04 31.5 -0.6
52nm,0.3s,SNR=9.2
ELOJ Sn Sn 14 04 56.8 -0.5
46nm,0.4s,SNR=4.8
ELOJ Lg 14 05 08.9
109nm,0.5s
ELOJ Sierra Loja 2.78 246 Pn Pn 14 04 25.1 +1.5

78nm,0.4s,SNR=95
ELOJ Pg **Pg** **14 04 31.5 -0.6**
52nm,0.3s,SNR=9.2
ELOJ Sn **Sn** **14 04 56.8 -0.5**
46nm,0.4s,SNR=4.8
ELOJ Lg 14 05 08.9
109nm,0.5s
ELOJ Sierra Loja 2.78 246 Pn **Pn** **14 04 25.1 +1.5**
78nm,0.4s,SNR=95
ELOJ Sierra Loja 2.78 246 Pg **Pg** **14 04 31.5 -0.6**
52nm,0.3s,SNR=9.2
ELOJ Sn **Sn** **14 04 59.3 +2.0**
46nm,0.4s,SNR=4.8
ELOJ Lg 14 05 08.9
109nm,0.5s
ERTA Horta de San J 2.80 21 Pn **Pn** **14 04 24.5 +0.7**
ERTA Pg **Pg** **14 04 31.6 -0.9**
ERTA Sn **Sn** **14 04 57.3 -0.5**
ERTA Lg 14 05 09.8
ERTA Horta de San J 2.80 21 ⇓Pn **Pn** **14 04 24.5 +0.7**
53nm,0.3s,SNR=18
ERTA Pg **Pg** **14 04 31.6 -0.9**
49nm,0.3s,SNR=14
ERTA Sn **Sn** **14 04 57.3 -0.5**
106nm,0.4s,SNR=6.7
ERTA Lg 14 05 09.8
61nm,0.4s
ERTA Horta de San J 2.80 21 ⇓Pn **Pn** **14 04 24.5 +0.7**
53nm,0.3s,SNR=18
ERTA Pg **Pg** **14 04 31.6 -0.9**
49nm,0.3s,SNR=14
ERTA Sn **Sn** **14 04 57.3 -0.5**
106nm,0.4s,SNR=6.7
ERTA Lg 14 05 09.8
61nm,0.4s
ERTA Horta de San J 2.80 21 Pn **Pn** **14 04 24.5 +0.7**
53nm,0.3s,SNR=18
EADA Adamuz 2.84 268 Pn **Pn** **14 04 24.1 -0.2**
EADA Pg **Pg** **14 04 32.8 -0.3**
EADA Sn **Sn** **14 05 00.7 +2.1**
EADA Lg 14 05 11.9
EADA Adamuz 2.84 268 ⇑Pn **Pn** **14 04 24.1 -0.3**
24nm,0.1s,SNR=18
EADA Pg **Pg** **14 04 32.8 -0.3**
53nm,0.2s,SNR=13
EADA Sn **Sn** **14 04 59.1 +0.4**
32nm,0.2s,SNR=6.3
EADA Lg 14 05 11.9
182nm,0.5s
EADA Adamuz 2.84 268 ⇑Pn **Pn** **14 04 24.1 -0.3**
24nm,0.1s,SNR=18
EADA Pg **Pg** **14 04 32.8 -0.3**
53nm,0.2s,SNR=13
EADA Sn **Sn** **14 04 59.1 +0.4**
32nm,0.2s,SNR=6.3
EADA Lg 14 05 11.9
182nm,0.5s
EADA Adamuz 2.84 268 Pn **Pn** **14 04 24.1 -0.2**
24nm,0.1s,SNR=18
EADA Adamuz 2.84 268 Pg **Pg** **14 04 32.8 -0.3**
53nm,0.2s,SNR=13
EADA Sn **Sn** **14 05 00.7 +2.0**
32nm,0.2s,SNR=6.3
EADA Lg 14 05 11.9
182nm,0.5s
ECHF Ech Chlef 2.86 139 Pn **Pn** **14 04 24.5 -0.1**
ECHF Ech Chlef 2.86 139 Pn **Pn** **14 04 24.5 -0.1**
EBNR Beni Rached 2.86 135 P **Pn** **14 04 28.0 +3.3**
EBNR Beni Rached 2.86 135 P **Pn** **14 04 28.0 +3.3**
ECHA Ech Chlef 2.88 139 P **Pn** **14 04 24.5 -0.4**
ECHA Ech Chlef 2.88 139 P **Pn** **14 04 24.5 -0.4**
PAB San Pablo 2.89 296 *e*Pn **Pn** **14 04 25.0 0.0**
PAB *e*Pg **Pg** **14 04 34.3 +0.2**
PAB *e*Sg **Sg** **14 05 14.0 +2.5**
PAB San Pablo 2.89 296 *e*Pn **Pn** **14 04 25.0 0.0**
EALB Alboran 2.91 215 Pn **Pn** **14 04 25.9 +0.6**
EALB Pg **Pg** **14 04 31.9 -2.5**
EALB Sn **Sn** **14 04 58.5 -1.8**
EALB Lg 14 05 11.1
EALB Alboran 2.91 215 Pn **Pn** **14 04 25.9 +0.6**
5.7nm,0.1s,SNR=7.9
EALB Pg **Pg** **14 04 31.9 -2.5**
4.2nm,0.3s,SNR=7.9
EALB Sn **Sn** **14 04 58.5 -1.8**
44nm,0.5s,SNR=7.9
EALB Lg 14 05 11.1
44nm,0.4s,SNR=7.9
EALB Alboran 2.91 215 Pn **Pn** **14 04 25.9 +0.6**
5.7nm,0.1s,SNR=7.9
EALB Pg **Pg** **14 04 31.9 -2.5**
4.2nm,0.3s,SNR=7.9
EALB Sn **Sn** **14 04 58.5 -1.8**
44nm,0.5s,SNR=7.9
EALB Lg 14 05 11.1
44nm,0.4s,SNR=7.9
EALB Alboran 2.91 215 Pn **Pn** **14 04 25.9 +0.6**
5.7nm,0.1s,SNR=7.9
EALB Alboran 2.91 215 Pg **Pg** **14 04 31.9 -2.5**
4.2nm,0.3s,SNR=7.9
EALB Sn **Sn** **14 04 58.5 -1.8**
44nm,0.5s,SNR=7.9
EALB Lg 14 05 11.1
44nm,0.4s,SNR=7.9
EANR 'Ain N'Sour 2.91 145 P **Pn** **14 04 23.8 -1.5**
EANR 'Ain N'Sour 2.91 145 Pn **Pn** **14 04 23.8 -1.5**
EANR 'Ain N'Sour 2.91 145 Pn **Pn** **14 04 23.8 -1.5**
EANR 'Ain N'Sour 2.91 145 P **Pn** **14 04 23.8 -1.5**
OJBR Djebel Berber 2.95 159 P **Pn** **14 04 25.0 -0.9**
OJBR Djebel Berber 2.95 159 Pn **Pn** **14 04 25.0 -0.9**
OJBR Djebel Berber 2.95 159 Pn **Pn** **14 04 25.0 -0.9**
OJBR Djebel Berber 2.95 159 P **Pn** **14 04 25.0 -0.9**
ODZI Dzioua 3.05 184 P **Pn** **14 04 27.0 -0.3**
ODZI Dzioua 3.05 184 Pn **Pn** **14 04 27.0 -0.3**
ODZI Dzioua 3.05 184 Pn **Pn** **14 04 27.0 -0.3**
ODZI Dzioua 3.05 184 P **Pn** **14 04 27.0 -0.3**
ODJA Bouhanifia 3.08 167 P **Pn** **14 04 28.0 +0.4**
ODJA Bouhanifia 3.08 167 Pn **Pn** **14 04 28.0 +0.4**
ODJA Bouhanifia 3.08 167 Pn **Pn** **14 04 28.0 +0.4**
OLHC Oulhaca 3.11 187 P **Pn** **14 04 28.0 0.0**
OLHC Oulhaca 3.11 187 Pn **Pn** **14 04 28.0 0.0**
OLHC Oulhaca 3.11 187 Pn **Pn** **14 04 28.0 0.0**
OLHC Oulhaca 3.11 187 P **Pn** **14 04 28.0 0.0**
OJGS Djebel Guires 3.15 153 P **Pn** **14 04 26.0 -2.7**
OJGS Djebel Guires 3.15 153 Pn **Pn** **14 04 26.0 -2.7**
OJGS Djebel Guires 3.15 153 Pn **Pn** **14 04 26.0 -2.7**
OJGS Djebel Guires 3.15 153 P **Pn** **14 04 26.0 -2.7**
EMAL Malaga-Limoner 3.16 241 ⇓Pn **Pn** **14 04 30.0 +1.3**
EMAL Lg 14 05 19.2
EMAL Malaga-Limoner 3.16 241 ⇓Pn **Pn** **14 04 30.0 +1.3**
EMAL Lg 14 05 19.2
EMAL Malaga-Limoner 3.16 241 *i* P **Pn** **14 04 30.0 +1.2**
ETOS Mallorca 3.28 63 Pn **Pn** **14 04 29.1 -1.3**
ETOS Pg **Pg** **14 04 37.6 -3.9**
ETOS Sn **Sn** **14 05 07.1 -2.4**
ETOS Mallorca 3.28 63 Pn **Pn** **14 04 29.1 -1.3**
22nm,0.4s,SNR=23
ETOS Pg **Pg** **14 04 37.6 -3.9**
34nm,0.4s,SNR=107
ETOS Sn **Sn** **14 05 07.1 -2.4**
8.2nm,0.2s
ETOS Mallorca 3.28 63 Pn **Pn** **14 04 29.1 -1.3**
22nm,0.4s,SNR=23
ETOS Pg **Pg** **14 04 37.6 -3.9**
34nm,0.4s,SNR=107
ETOS Sn **Sn** **14 05 07.1 -2.4**
8.2nm,0.2s
ETOS Mallorca 3.28 63 Pn **Pn** **14 04 29.1 -1.3**
22nm,0.4s,SNR=23
GUD Guadarrama 3.36 314 Pn **Pn** **14 04 32.7 +1.1**
GUD Pg **Pg** **14 04 43.4 +0.3**
GUD Sn **Sn** **14 05 13.3 +1.7**
GUD Lg 14 05 28.3
GUD Guadarrama 3.36 314 ⇓Pn **Pn** **14 04 32.2 +0.7**
7.6nm,0.3s,SNR=18
GUD Pg **Pg** **14 04 43.4 +0.3**
41nm,0.2s,SNR=7.9
GUD Sn **Sn** **14 05 13.3 +1.7**
46nm,0.3s,SNR=7.9
GUD Lg 14 05 28.3
271nm,0.3s,SNR=7.9
GUD Guadarrama 3.36 314 ⇓Pn **Pn** **14 04 32.2 +0.7**
7.6nm,0.3s,SNR=18
GUD Pg **Pg** **14 04 43.4 +0.3**
41nm,0.2s,SNR=7.9
GUD Sn **Sn** **14 05 13.3 +1.7**
46nm,0.3s,SNR=7.9
GUD Lg 14 05 28.3
271nm,0.3s,SNR=7.9
GUD Guadarrama 3.36 314 Pn **Pn** **14 04 32.2 +0.7**
7.6nm,0.3s,SNR=18
ESAC San Caprasio 3.40 6 Pn **Pn** **14 04 34.0 +2.0**
ESAC Pg **Pg** **14 04 43.2 -0.7**
ESAC Sn **Sn** **14 05 13.7 +1.2**
ESAC Lg 14 05 29.0
ESAC San Caprasio 3.40 6 Pn **Pn** **14 04 34.0 +2.0**
88nm,0.2s,SNR=49
ESAC Pg **Pg** **14 04 43.2 -0.7**
119nm,0.3s,SNR=19
ESAC Sn **Sn** **14 05 13.6 +1.2**
293nm,0.4s,SNR=5.0
ESAC Lg 14 05 29.0
479nm,0.4s,SNR=4.7
ESAC San Caprasio 3.40 6 Pn **Pn** **14 04 34.0 +2.0**
88nm,0.2s,SNR=49
ESAC Pg **Pg** **14 04 43.2 -0.7**
119nm,0.3s,SNR=19
ESAC Sn **Sn** **14 05 13.6 +1.2**
293nm,0.4s,SNR=5.0
ESAC Lg 14 05 29.0
479nm,0.4s,SNR=4.7
ESAC San Caprasio 3.40 6 Pn **Pn** **14 04 34.0 +2.0**
88nm,0.2s,SNR=49
ESAC San Caprasio 3.40 6 Pg **Pg** **14 04 43.2 -0.6**
119nm,0.3s,SNR=19
ESAC Sn **Sn** **14 05 13.6 +1.1**
293nm,0.4s,SNR=5.0
ESAC Lg 14 05 29.0
479nm,0.4s,SNR=4.7
EPOB Poblet 3.40 27 Pn **Pn** **14 04 32.3 +0.3**
EPOB Pg **Pg** **14 04 41.6 -2.2**
EPOB Sn **Sn** **14 05 10.2 -2.3**
EPOB Lg 14 05 25.2
EPOB Poblet 3.40 27 ⇓Pn **Pn** **14 04 32.3 +0.3**
31nm,0.2s,SNR=18
EPOB Pg **Pg** **14 04 41.6 -2.2**
18nm,0.2s,SNR=5.9
EPOB Sn **Sn** **14 05 10.2 -2.3**
26nm,0.4s,SNR=5.0
EPOB Lg 14 05 25.2
31nm,0.3s
EPOB Poblet 3.40 27 ⇓Pn **Pn** **14 04 32.3 +0.3**
31nm,0.2s,SNR=18
EPOB Pg **Pg** **14 04 41.6 -2.2**
18nm,0.2s,SNR=5.9
EPOB Sn **Sn** **14 05 10.2 -2.3**
26nm,0.4s,SNR=5.0
EPOB Lg 14 05 25.2
31nm,0.3s
EPOB Poblet 3.40 27 Pn **Pn** **14 04 32.3 +0.3**
31nm,0.2s,SNR=18
ETRT Tiaret 3.47 147 P **Pn** **14 04 32.0 -1.0**
ETRT Tiaret 3.47 147 Pn **Pn** **14 04 32.0 -1.0**
ETRT Tiaret 3.47 147 Pn **Pn** **14 04 32.0 -1.0**
ETRT Tiaret 3.47 147 P **Pn** **14 04 32.0 -1.0**
EMIJ Mijas 3.50 241 Pn **Pn** **14 04 34.6 +1.2**
EMIJ Pg **Pg** **14 04 44.9 -0.9**
EMIJ Sn **Sn** **14 05 14.2 -0.9**
EMIJ Lg 14 05 31.8
EMIJ Mijas 3.50 241 Pn **Pn** **14 04 34.2 +0.7**
31nm,0.4s,SNR=46
EMIJ Pg **Pg** **14 04 44.9 -0.9**
49nm,0.6s,SNR=9.2
EMIJ Sn **Sn** **14 05 14.2 -0.9**
40nm,0.4s,SNR=4.8
EMIJ Lg 14 05 31.8
41nm,0.5s
EMIJ Mijas 3.50 241 Pn **Pn** **14 04 34.2 +0.7**
31nm,0.4s,SNR=46
EMIJ Pg **Pg** **14 04 44.9 -0.9**
49nm,0.6s,SNR=9.2
EMIJ Sn **Sn** **14 05 14.2 -0.9**
40nm,0.4s,SNR=4.8
EMIJ Lg 14 05 31.8
41nm,0.5s
EMIJ Mijas 3.50 241 Pn **Pn** **14 04 34.2 +0.8**
31nm,0.4s,SNR=46
ECAB El Cabril 3.51 267 Pn **Pn** **14 04 33.3 -0.2**
ECAB Pg **Pg** **14 04 45.3 -0.7**
ECAB Sn **Sn** **14 05 15.1 -0.1**
ECAB Lg 14 05 32.7
ECAB El Cabril 3.51 267 Pn **Pn** **14 04 33.3 -0.2**
SNR=7.9
ECAB Pg **Pg** **14 04 45.3 -0.7**
SNR=7.9
ECAB Sn **Sn** **14 05 15.1 -0.1**
35nm,0.2s,SNR=7.9
ECAB Lg 14 05 32.7
SNR=7.9
ECAB El Cabril 3.51 267 Pn **Pn** **14 04 33.3 -0.2**
SNR=7.9
ECAB Pg **Pg** **14 04 45.3 -0.7**
SNR=7.9
ECAB Sn **Sn** **14 05 15.1 -0.1**
35nm,0.2s,SNR=7.9
ECAB Lg 14 05 32.7
SNR=7.9
ECAB El Cabril 3.51 267 Pn **Pn** **14 04 33.3 -0.2**
SNR=7.9
ZAI Zaio 3.65 203 Pn **Pn** **14 04 35.0 -0.5**
ZAI Sn **Sn** **14 05 14.0 -4.8**
ZAI Zaio 3.65 203 Pn **Pn** **14 04 35.0 -0.5**
ZAI Sn **Sn** **14 05 14.0 -4.8**
ZAI Zaio 3.65 203 *i* P **Pn** **14 04 35.0 -0.5**
ZAI *i* S **Sn** **14 05 14.0 -4.8**
LIJA Lijar 3.79 249 Pn **Pn** **14 04 38.0 +0.5**
LIJA Lg 14 05 42.0
LIJA Lijar 3.79 249 Pn **Pn** **14 04 38.0 +0.5**
LIJA Lg 14 05 42.0
LIJA Lijar 3.79 249 *i* P **Pn** **14 04 38.0 +0.5**
EMHD Djebel Mahouad 3.80 123 P **Pn** **14 04 39.2 +1.7**
EMHD Djebel Mahouad 3.80 123 Pn **Pn** **14 04 39.2 +1.7**
EMHD Djebel Mahouad 3.80 123 Pn **Pn** **14 04 39.2 +1.7**
EMHD Djebel Mahouad 3.80 123 P **Pn** **14 04 39.2 +1.7**
EJIF Jimena Fronter 4.04 244 Pn **Pn** **14 04 42.1 +1.2**
EJIF Pg **Pg** **14 04 54.0 -2.1**
EJIF Sn **Sn** **14 05 28.8 +0.4**
EJIF Lg 14 05 48.8
EJIF Jimena Fronter 4.04 244 Pn **Pn** **14 04 42.1 +1.2**
1.2nm,0.1s,SNR=7.9
EJIF Pg **Pg** **14 04 54.0 -2.1**
10nm,0.4s,SNR=7.9
EJIF Sn **Sn** **14 05 26.5 -1.8**
29nm,0.6s,SNR=7.9
EJIF Lg 14 05 48.8
SNR=7.9
EJIF Jimena Fronter 4.04 244 Pn **Pn** **14 04 42.1 +1.2**
1.2nm,0.1s,SNR=7.9
EJIF Pg **Pg** **14 04 54.0 -2.1**
10nm,0.4s,SNR=7.9
EJIF Sn **Sn** **14 05 26.5 -1.8**
29nm,0.6s,SNR=7.9
EJIF Lg 14 05 48.8
SNR=7.9
EJIF Jimena Fronter 4.04 244 Pn **Pn** **14 04 42.1 +1.2**
1.2nm,0.1s,SNR=7.9
EJIF Jimena Fronter 4.04 244 Pg **Pg** **14 04 54.0 -2.2**
10nm,0.4s,SNR=7.9
EJIF Sn **Sn** **14 05 28.8 +0.4**
29nm,0.6s,SNR=7.9
EJIF Lg 14 05 48.8
SNR=7.9
TOU Touzarine 4.04 214 Pn **Pn** **14 04 42.0 +1.1**
TOU Sn **Sn** **14 05 24.0 -4.4**
TOU Touzarine 4.04 214 Pn **Pn** **14 04 42.0 +1.1**
TOU Sn **Sn** **14 05 24.0 -4.4**
TOU Touzarine 4.04 214 *i* P **Pn** **14 04 42.0 +1.1**
TOU *i* S **Sn** **14 05 24.0 -4.4**
EMIR Miracle 4.05 28 Pn **Pn** **14 04 41.7 +0.7**
EMIR Pg **Pg** **14 04 55.1 -1.3**
EMIR Sn **Sn** **14 05 28.2 -0.4**
EMIR Lg 14 05 48.8
EMIR Miracle 4.05 28 Pn **Pn** **14 04 41.7 +0.7**
64nm,0.4s,SNR=41
EMIR Pg **Pg** **14 04 55.1 -1.3**
22nm,0.3s,SNR=6.5
EMIR Sn **Sn** **14 05 28.2 -0.4**
33nm,0.3s,SNR=7.0
EMIR Lg 14 05 48.8
48nm,0.6s
EMIR Miracle 4.05 28 Pn **Pn** **14 04 41.7 +0.7**
64nm,0.4s,SNR=41
EMIR Pg **Pg** **14 04 55.1 -1.3**
22nm,0.3s,SNR=6.5
EMIR Sn **Sn** **14 05 28.2 -0.4**
33nm,0.3s,SNR=7.0
EMIR Lg 14 05 48.8
48nm,0.6s
ESPR Espera 4.14 251 Pn **Pn** **14 04 42.9 +0.6**
ESPR Pg **Pg** **14 04 56.5 -1.6**
ESPR Sn **Sn** **14 05 29.2 -1.6**
ESPR Lg 14 05 52.1
ESPR Espera 4.14 251 Pn **Pn** **14 04 42.6 +0.4**
8.8nm,0.4s,SNR=34
ESPR Pg **Pg** **14 04 56.5 -1.6**
26nm,0.5s,SNR=6.9
ESPR Sn **Sn** **14 05 29.2 -1.6**
40nm,0.4s,SNR=4.8
ESPR Lg 14 05 52.1
150nm,0.8s
ESPR Espera 4.14 251 Pn **Pn** **14 04 42.6 +0.4**
8.8nm,0.4s,SNR=34
ESPR Pg **Pg** **14 04 56.5 -1.6**
26nm,0.5s,SNR=6.9
ESPR Sn **Sn** **14 05 29.2 -1.6**
40nm,0.4s,SNR=4.8
ESPR Lg 14 05 52.1
150nm,0.8s
ESPR Espera 4.14 251 Pn **Pn** **14 04 42.6 +0.3**
8.8nm,0.4s,SNR=34
CFON Fontmartina 4.30 36 Pn **Pn** **14 04 44.3 -0.2**
CFON Sn **Sn** **14 05 31.8 -3.1**
CFON Lg 14 05 57.7
CFON Fontmartina 4.30 36 ⇓Pn **Pn** **14 04 44.3 -0.2**
33nm,0.4s,SNR=18
CFON Sn **Sn** **14 05 31.8 -3.1**
52nm,0.3s,SNR=5.7
CFON Lg 14 05 57.7
12nm,0.3s
CFON Fontmartina 4.30 36 ⇓Pn **Pn** **14 04 44.3 -0.2**
33nm,0.4s,SNR=18
CFON Sn **Sn** **14 05 31.8 -3.1**
52nm,0.3s,SNR=5.7
CFON Lg 14 05 57.7
12nm,0.3s
CFON Fontmartina 4.30 36 Pn **Pn** **14 04 44.3 -0.2**
33nm,0.4s,SNR=18
CFON Sn **Sn** **14 05 31.8 -3.1**
52nm,0.3s,SNR=5.7
CFON Lg 14 05 57.7
12nm,0.3s
EPLA Plasencia 4.32 295 Pn **Pn** **14 04 43.9 -0.7**
EPLA Pg **Pg** **14 04 58.3 -3.2**
EPLA Sn **Sn** **14 05 35.4 +0.2**
EPLA Lg 14 05 58.0
EPLA Plasencia 4.32 295 Pn **Pn** **14 04 43.9 -0.7**
6.9nm,0.1s,SNR=35
EPLA Pg **Pg** **14 04 58.3 -3.2**
33nm,0.3s,SNR=20
EPLA Sn **Sn** **14 05 35.4 +0.2**
11nm,0.2s,SNR=8.8
EPLA Lg 14 05 58.0
67nm,0.4s,SNR=8.8
EPLA Plasencia 4.32 295 Pn **Pn** **14 04 43.9 -0.7**
6.9nm,0.1s,SNR=35
EPLA Pg **Pg** **14 04 58.3 -3.2**
33nm,0.3s,SNR=20
EPLA Sn **Sn** **14 05 35.4 +0.2**
11nm,0.2s,SNR=8.8
EPLA Lg 14 05 58.0
67nm,0.4s,SNR=8.8
EPLA Plasencia 4.32 295 Pn **Pn** **14 04 43.9 -0.8**
6.9nm,0.1s,SNR=35
EPLA Plasencia 4.32 295 Pg **Pg** **14 04 58.3 -3.2**
33nm,0.3s,SNR=20
EPLA Sn **Sn** **14 05 35.4 +0.2**
11nm,0.2s,SNR=8.8
EPLA Lg 14 05 58.0
67nm,0.4s,SNR=8.8
CSOR Sort 4.34 21 Pn **Pn** **14 04 46.1 +1.2**
CSOR Pg **Pg** **14 04 57.9 -4.0**
CSOR Sn **Sn** **14 05 35.1 -0.6**
CSOR Lg 14 05 58.4
CSOR Sort 4.34 21 Pn **Pn** **14 04 46.0 +1.0**
7.3nm,0.2s,SNR=61
CSOR Pg **Pg** **14 04 57.9 -4.0**
28nm,0.4s,SNR=9.2
CSOR Sn **Sn** **14 05 35.1 -0.6**
27nm,0.4s,SNR=7.9
CSOR Lg 14 05 58.4
43nm,0.4s
CSOR Sort 4.34 21 Pn **Pn** **14 04 46.0 +1.0**
7.3nm,0.2s,SNR=61
CSOR Pg **Pg** **14 04 57.9 -4.0**
28nm,0.4s,SNR=9.2
CSOR Sn **Sn** **14 05 35.1 -0.6**
27nm,0.4s,SNR=7.9
CSOR Lg 14 05 58.4
43nm,0.4s
CSOR Sort 4.34 21 Pn **Pn** **14 04 46.0 +1.0**
7.3nm,0.2s,SNR=61
ECRI Cripan 4.42 345 Pn **Pn** **14 04 49.0 +3.0**
ECRI Pg **Pg** **14 05 00.4 -3.0**
ECRI Sn **Sn** **14 05 36.9 -0.8**
ECRI Lg 14 06 04.1
ECRI Cripan 4.42 345 Pn **Pn** **14 04 48.9 +2.9**
10nm,0.2s,SNR=7.9
ECRI Pg **Pg** **14 05 00.4 -3.0**
11nm,0.2s,SNR=7.9
ECRI Sn **Sn** **14 05 36.9 -0.8**
18nm,0.4s,SNR=7.9
ECRI Lg 14 06 04.1
18nm,0.3s,SNR=7.9
ECRI Cripan 4.42 345 Pn **Pn** **14 04 48.9 +2.9**
10nm,0.2s,SNR=7.9
ECRI Pg **Pg** **14 05 00.4 -3.0**
11nm,0.2s,SNR=7.9
ECRI Sn **Sn** **14 05 36.9 -0.8**
18nm,0.4s,SNR=7.9
ECRI Lg 14 06 04.1
18nm,0.3s,SNR=7.9
ECRI Cripan 4.42 345 Pn **Pn** **14 04 48.9 +2.9**
10nm,0.2s,SNR=7.9
EBIE Bielsa 4.42 11 Pn **Pn** **14 04 48.1 +2.0**
EBIE Pg **Pg** **14 05 00.2 -3.3**
EBIE Sn **Sn** **14 05 36.9 -0.9**
EBIE Lg 14 06 01.3
EBIE Bielsa 4.42 11 Pn **Pn** **14 04 48.1 +2.0**
3.1nm,0.2s,SNR=28
EBIE Pg **Pg** **14 05 00.2 -3.3**
14nm,0.4s,SNR=11
EBIE Sn **Sn** **14 05 36.9 -0.9**
17nm,0.5s,SNR=5.0
EBIE Lg 14 06 01.3
35nm,0.7s,SNR=4.8
EBIE Bielsa 4.42 11 Pn **Pn** **14 04 48.1 +2.0**
3.1nm,0.2s,SNR=28
EBIE Pg **Pg** **14 05 00.2 -3.3**
14nm,0.4s,SNR=11
EBIE Sn **Sn** **14 05 36.9 -0.9**
17nm,0.5s,SNR=5.0
EBIE Lg 14 06 01.3
35nm,0.7s,SNR=4.8
EBIE Bielsa 4.42 11 Pn **Pn** **14 04 48.1 +2.0**
3.1nm,0.2s,SNR=28
EBIE Bielsa 4.42 11 Pg **Pg** **14 05 00.2 -3.2**
14nm,0.4s,SNR=11
EBIE Sn **Sn** **14 05 36.9 -0.8**
17nm,0.5s,SNR=5.0
EBIE Lg 14 06 01.3
35nm,0.7s,SNR=4.8
IUNC Unciti 4.43 355 Pn **Pn** **14 04 48.6 +2.5**
27nm,0.5s,SNR=5.9
IUNC Pg **Pg** **14 05 01.3 -2.2**
14nm,0.4s,SNR=4.8
IUNC Sn **Sn** **14 05 38.0 +0.1**
19nm,0.3s,SNR=5.1
IUNC Lg 14 06 02.6
17nm,0.3s,SNR=4.2
IUNC Unciti 4.43 355 Pn **Pn** **14 04 48.6 +2.5**
27nm,0.5s,SNR=5.9

IUNC			Pg	Pg	14 05 01.3	-2.2
	14nm,0.4s,SNR=4.8					
IUNC			Sn	Sn	14 05 38.0	+0.1
	19nm,0.3s,SNR=5.1					
IUNC			Lg		14 06 02.6	
	17nm,0.3s,SNR=4.2					
IUNC	**Unciti**	**4.43 355**	Pn	Pn	14 04 48.7	+2.6
	27nm,0.5s,SNR=5.9					
IUNC	**Unciti**	**4.43 355**	Pg	Pg	14 05 01.3	-2.2
	14nm,0.4s,SNR=4.8					
IUNC			Sn	Sn	14 05 38.8	+1.0
	19nm,0.3s,SNR=5.1					
IUNC			Lg		14 06 02.7	
	17nm,0.3s,SNR=4.2					
EARA	**Aranguren**	**4.45 354**	Pn	Pn	14 04 49.0	+2.6
	9.2nm,0.2s,SNR=8.2					
EARA			Pg	Pg	14 05 03.0	-1.0
	10nm,0.3s,SNR=4.7					
EARA			Sn	Sn	14 05 37.3	-1.1
	19nm,0.4s,SNR=7.9					
EARA			Lg		14 06 03.7	
	35nm,0.5s,SNR=6.1					
EARA	**Aranguren**	**4.45 354**	Pn	Pn	14 04 49.0	+2.6
	9.2nm,0.2s,SNR=8.2					
EARA			Pg	Pg	14 05 03.0	-1.0
	10nm,0.3s,SNR=4.7					
EARA			Sn	Sn	14 05 37.3	-1.1
	19nm,0.4s,SNR=7.9					
EARA			Lg		14 06 03.7	
	35nm,0.5s,SNR=6.1					
EARA	**Aranguren**	**4.45 354**	Pn	Pn	14 04 49.0	+2.5
	9.2nm,0.2s,SNR=8.2					
IZUN	**Zunzarren**	**4.53 356**	Pn	Pn	14 04 50.0	+2.4
	5.2nm,0.2s,SNR=7.9					
IZUN			Pg	Pg	14 05 04.0	-1.4
	8.0nm,0.3s,SNR=7.9					
IZUN			Sn	Sn	14 05 41.2	+0.8
	15nm,0.4s,SNR=7.9					
IZUN			Lg		14 06 06.2	
	17nm,0.4s,SNR=7.9					
IZUN	**Zunzarren**	**4.53 356**	Pn	Pn	14 04 50.0	+2.4
	5.2nm,0.2s,SNR=7.9					
IZUN			Pg	Pg	14 05 04.0	-1.4
	8.0nm,0.3s,SNR=7.9					
IZUN			Sn	Sn	14 05 41.2	+0.8
	15nm,0.4s,SNR=7.9					
IZUN			Lg		14 06 06.2	
	17nm,0.4s,SNR=7.9					
IZUN	**Zunzarren**	**4.53 356**	Pn	Pn	14 04 50.0	+2.5
	5.2nm,0.2s,SNR=7.9					
EMIN	**Mina Concepcio**	**4.53 264**	Pn	Pn	14 04 47.2	-0.4
EMIN			Pg	Pg	14 05 02.6	-2.9
EMIN			Sn	Sn	14 05 39.2	-1.2
EMIN			Lg		14 06 04.8	
EMIN	**Mina Concepcio**	**4.53 264**	Pn	Pn	14 04 46.8	-0.8
	10.0nm,0.5s,SNR=42					
EMIN			Pg	Pg	14 05 02.6	-2.9
	10nm,0.4s,SNR=6.9					
EMIN			Sn	Sn	14 05 39.2	-1.2
	15nm,0.4s,SNR=10					
EMIN			Lg		14 06 04.8	
	63nm,0.5s					
EMIN	**Mina Concepcio**	**4.53 264**	Pn	Pn	14 04 46.8	-0.8
	10.0nm,0.5s,SNR=42					
EMIN			Pg	Pg	14 05 02.6	-2.9
	10nm,0.4s,SNR=6.9					
EMIN			Sn	Sn	14 05 39.2	-1.2
	15nm,0.4s,SNR=10					
EMIN			Lg		14 06 04.8	
	63nm,0.5s					
EMIN	**Mina Concepcio**	**4.53 264**	Pn	Pn	14 04 47.2	-0.4
EORO	**Oroz-Betelu**	**4.55 357**	Pn	Pn	14 04 49.6	+1.8
	14nm,0.2s,SNR=7.9					
EORO			Pg	Pg	14 05 05.2	-0.7
	40nm,0.5s,SNR=7.9					
EORO			Lg		14 06 03.4	
	89nm,0.5s,SNR=7.9					
EORO	**Oroz-Betelu**	**4.55 357**	Pn	Pn	14 04 49.6	+1.8
	14nm,0.2s,SNR=7.9					
EORO			Pg	Pg	14 05 05.2	-0.7
	40nm,0.5s,SNR=7.9					
EORO			Lg		14 06 03.4	
	89nm,0.5s,SNR=7.9					
EORO	**Oroz-Betelu**	**4.55 357**	Pn	Pn	14 04 49.6	+1.7
	14nm,0.2s,SNR=7.9					
ETSF	**Etsaut**	**4.56 4**	Pn	Pn	14 04 49.6	+1.6
	SNR=1.0					
ETSF			*e*Sn	Sn	14 05 40.1	-1.1
ETSF	**Etsaut**	**4.56 4**	Pn	Pn	14 04 49.6	+1.6
ETSF			Sn	Sn	14 05 40.1	-1.1
ETSF	**Etsaut**	**4.56 4**	Pn	Pn	14 04 49.6	+1.6
ETSF			Sn	Sn	14 05 40.1	-1.1
ETSF	**Etsaut**	**4.56 4**	Pn	Pn	14 04 49.6	+1.6
	SNR=1.0					
ETSF			*e*Sn	Sn	14 05 40.1	-1.1
RESF	**Ens**	**4.57 12**	P	Pn	14 04 49.4	+1.3
RESF			S	Sn	14 05 41.9	+0.5
RESF	**Ens**	**4.57 12**	P	Pn	14 04 49.4	+1.3
RESF			S	Sn	14 05 41.9	+0.5
VIEF	**Viey**	**4.60 9**	P	Pn	14 04 50.1	+1.6
VIEF	**Viey**	**4.60 9**	P	Pn	14 04 50.1	+1.6
IUSE	**Utxeti**	**4.62 355**	Pn	Pn	14 04 51.5	+2.7
	7.3nm,0.3s,SNR=7.5					
IUSE			Pg	Pg	14 05 06.1	-1.2
	13nm,0.2s,SNR=7.3					
IUSE			Sn	Sn	14 05 41.3	-1.3
	2.4nm,0.4s,SNR=4.8					
IUSE			Lg		14 06 09.8	
	22nm,0.5s,SNR=8.0					
IUSE	**Utxeti**	**4.62 355**	Pn	Pn	14 04 51.5	+2.7
	7.3nm,0.3s,SNR=7.5					
IUSE			Pg	Pg	14 05 06.1	-1.2
	13nm,0.2s,SNR=7.3					
IUSE			Sn	Sn	14 05 41.3	-1.3
	2.4nm,0.4s,SNR=4.8					
IUSE			Lg		14 06 09.8	
	22nm,0.5s,SNR=8.0					
IUSE	**Utxeti**	**4.62 355**	Pn	Pn	14 04 51.5	+2.7
	7.3nm,0.3s,SNR=7.5					
IUSE	**Utxeti**	**4.62 355**	Pg	Pg	14 05 06.1	-1.1
	13nm,0.2s,SNR=7.3					
IUSE			Sn	Sn	14 05 41.3	-1.3
	2.4nm,0.4s,SNR=4.8					
IUSE			Lg		14 06 11.5	
	22nm,0.5s,SNR=8.0					
VALF	**Valcebollere**	**4.66 28**	P	Pn	14 04 50.1	+0.8
VALF			S	Sn	14 05 45.0	+1.5
VALF	**Valcebollere**	**4.66 28**	P	Pn	14 04 50.1	+0.8
VALF			S	Sn	14 05 45.0	+1.5
CLLI	**Llivia**	**4.71 28**	Pn	Pn	14 04 51.5	+1.5
CLLI			Pg	Pg	14 05 04.3	-4.6
CLLI			Sn	Sn	14 05 42.0	-2.8
CLLI			Lg		14 06 09.3	
CLLI	**Llivia**	**4.71 28**	Pn	Pn	14 04 51.3	+1.3
	18nm,0.5s,SNR=67					
CLLI			Pg	Pg	14 05 04.3	-4.6
	9.4nm,0.3s,SNR=6.7					
CLLI			Sn	Sn	14 05 42.0	-2.8
	22nm,0.5s,SNR=7.9					
CLLI			Lg		14 06 09.3	
	13nm,0.5s					
CLLI	**Llivia**	**4.71 28**	Pn	Pn	14 04 51.3	+1.3
	18nm,0.5s,SNR=67					
CLLI			Pg	Pg	14 05 04.3	-4.6
	9.4nm,0.3s,SNR=6.7					
CLLI			Sn	Sn	14 05 42.0	-2.8
	22nm,0.5s,SNR=7.9					
CLLI			Lg		14 06 09.3	
	13nm,0.5s					
CLLI	**Llivia**	**4.71 28**	Pn	Pn	14 04 51.3	+1.3
	18nm,0.5s,SNR=67					
CLLI	**Llivia**	**4.71 28**	Pg	Pg	14 05 04.3	-4.6
	9.4nm,0.3s,SNR=6.7					
CLLI			Sn	Sn	14 05 42.0	-2.8
	22nm,0.5s,SNR=7.9					
CLLI			Lg		14 06 09.3	
	13nm,0.5s					
SALF	**Salau**	**4.71 20**	P	Pn	14 04 51.1	+1.0
SALF	**Salau**	**4.71 20**	P	Pn	14 04 51.1	+1.0
ATE	**Arette**	**4.74 2**	P	Pn	14 04 52.2	+1.7
ATE	**Arette**	**4.74 2**	P	Pn	14 04 52.2	+1.7
REYF	**Montagne du Re**	**4.74 5**	P	Pn	14 04 52.2	+1.7
REYF			S	Sn	14 05 46.0	+0.3
REYF	**Montagne du Re**	**4.74 5**	P	Pn	14 04 52.2	+1.7
REYF			S	Sn	14 05 46.0	+0.3
EBAD	**Badajoz**	**4.75 277**	Pn	Pn	14 04 50.2	-0.4

EBAD			Pg	Pg	14 05 08.5	-1.2
EBAD			Sn	Sn	14 05 45.7	-0.1
EBAD			Lg		14 06 13.1	
EBAD	**Badajoz**	**4.75 277**	Pn	Pn	14 04 50.2	-0.4
	3.0nm,0.1s,SNR=26					
EBAD			Pg	Pg	14 05 08.5	-1.2
	12nm,0.2s,SNR=12					
EBAD			Sn	Sn	14 05 45.7	-0.1
	33nm,0.2s,SNR=5.3					
EBAD			Lg		14 06 13.1	
	51nm,0.4s					
EBAD	**Badajoz**	**4.75 277**	Pn	Pn	14 04 50.2	-0.4
	3.0nm,0.1s,SNR=26					
EBAD			Pg	Pg	14 05 08.5	-1.2
	12nm,0.2s,SNR=12					
EBAD			Sn	Sn	14 05 45.7	-0.1
	33nm,0.2s,SNR=5.3					
EBAD			Lg		14 06 13.1	
	51nm,0.4s					
EBAD	**Badajoz**	**4.75 277**	Pn	Pn	14 04 50.2	-0.4
	3.0nm,0.1s,SNR=26					
EBAD	**Badajoz**	**4.75 277**	Pg	Pg	14 05 08.5	-1.2
	12nm,0.2s,SNR=12					
EBAD			Sn	Sn	14 05 45.7	-0.1
	33nm,0.2s,SNR=5.3					
EBAD			Lg		14 06 13.1	
	51nm,0.4s					
LABF	**Labassere**	**4.77 9**	P	Pn	14 04 52.2	+1.4
LABF	**Labassere**	**4.77 9**	P	Pn	14 04 52.2	+1.4
SJPF	**Ste Jean**	**4.77 358**	Pn	Pn	14 04 52.8	+1.9
	SNR=1.0					
SJPF			*e*Sn	Sn	14 05 44.3	-2.0
SJPF			Sg	Sg	14 06 08.9	-3.0
	70nm,0.7s,SNR=1.0					
SJPF	**Ste Jean**	**4.77 358**	Pn	Pn	14 04 52.8	+1.9
SJPF			Sn	Sn	14 05 44.3	-2.0
SJPF			Lg		14 06 08.9	
	35nm,0.7s					
SJPF	**Ste Jean**	**4.77 358**	Pn	Pn	14 04 52.8	+1.9
SJPF			Sn	Sn	14 05 44.3	-2.0
SJPF			Lg		14 06 08.9	
	35nm,0.7s					
SJPF	**Ste Jean**	**4.77 358**	Pn	Pn	14 04 52.8	+1.9
	SNR=1.0					
SJPF			*e*Sn	Sn	14 05 44.3	-2.0
SJPF			Sg	Sg	14 06 08.9	-3.0
	35nm,0.7s,SNR=1.0					
PBAR	**Barrancos**	**4.77 270**	*e*Pn	Pn	14 04 50.4	-0.5
PBAR			*e*Sn	Sn	14 05 46.5	+0.1
PBAR			*e*Sg	Sg	14 06 12.1	+0.1
PBAR			A		14 06 18.9	
	102nm,0.6s					
PBAR	**Barrancos**	**4.77 270**	Pn	Pn	14 04 50.4	-0.5
PBAR			Sn	Sn	14 05 46.5	+0.1
PBAR			Lg		14 06 12.1	
	102nm,0.6s					
PBAR	**Barrancos**	**4.77 270**	Pn	Pn	14 04 50.4	-0.5
PBAR			Sn	Sn	14 05 46.5	+0.1
PBAR			Lg		14 06 12.1	
	102nm,0.6s					
PBAR	**Barrancos**	**4.77 270**	*e*Pn	Pn	14 04 50.4	-0.5
PBAR			*e*Sn	Sn	14 05 46.5	+0.1
PBAR			*e*Sg	Sg	14 06 12.1	+0.1
	102nm,0.6s					
EPF	**Esparros**	**4.79 12**	Pn	Pn	14 04 52.1	+1.0
	SNR=1.0					
EPF			Sn	Sn	14 05 45.1	-1.7
	68nm,0.5s,SNR=1.0					
EPF			Sg	Sg	14 06 11.5	-1.0
	59nm,0.5s,SNR=1.0					
EPF	**Esparros**	**4.79 12**	Pn	Pn	14 04 52.1	+1.0
EPF			Sn	Sn	14 05 45.1	-1.7
	34nm,0.5s					
EPF			Lg		14 06 11.5	
	30nm,0.5s					
EPF	**Esparros**	**4.79 12**	Pn	Pn	14 04 52.1	+1.0
EPF			Sn	Sn	14 05 45.1	-1.7
	34nm,0.5s					
EPF			Lg		14 06 11.5	
	30nm,0.5s					
EPF	**Esparros**	**4.79 12**	Pn	Pn	14 04 52.1	+1.0
	SNR=1.0					
EPF			Sn	Sn	14 05 45.1	-1.7
	34nm,0.5s,SNR=1.0					
EPF			Sg	Sg	14 06 11.5	-1.0
	30nm,0.5s,SNR=1.0					
ELIZ	**Elizondo**	**4.83 355**	Pn	Pn	14 04 54.0	+2.3
ELIZ			Pg	Pg	14 05 12.7	+1.3
ELIZ			Sn	Sn	14 05 48.4	+0.5
ELIZ			Lg		14 06 15.3	
ELIZ	**Elizondo**	**4.83 355**	Pn	Pn	14 04 54.0	+2.3
	18nm,0.3s,SNR=27					
ELIZ			Pg	Pg	14 05 09.4	-2.0
	24nm,0.3s,SNR=11					
ELIZ			Sn	Sn	14 05 48.4	+0.5
	14nm,0.3s,SNR=7.9					
ELIZ			Lg		14 06 15.3	
	21nm,0.4s					
ELIZ	**Elizondo**	**4.83 355**	Pn	Pn	14 04 54.0	+2.2
	18nm,0.3s,SNR=27					
ELIZ	**Elizondo**	**4.83 355**	Pg	Pg	14 05 12.7	+1.4
	24nm,0.3s,SNR=11					
ELIZ			Sn	Sn	14 05 48.4	+0.5
	14nm,0.3s,SNR=7.9					
ELIZ			Lg		14 06 15.3	
	21nm,0.4s					
ORDF	**Ordiarp**	**4.87 0**	P	Pn	14 04 54.1	+1.9
ORDF	**Ordiarp**	**4.87 0**	P	Pn	14 04 54.1	+1.9
MLS	**Moulis**	**4.87 18**	P	Pn	14 04 54.4	+2.1
MLS	**Moulis**	**4.87 18**	P	Pn	14 04 54.4	+2.1
EALK	**Alkurruntz**	**4.89 355**	Pn	Pn	14 04 55.6	+3.1
EALK			Pg	Pg	14 05 12.7	+0.3
EALK			Sn	Sn	14 05 46.6	-2.6
EALK			Lg		14 06 15.8	
EALK	**Alkurruntz**	**4.89 355**	Pn	Pn	14 04 55.6	+3.1
	13nm,0.2s,SNR=19					
EALK			Pg	Pg	14 05 12.7	+0.3
	20nm,0.6s,SNR=6.2					
EALK			Sn	Sn	14 05 46.6	-2.6
	23nm,0.4s,SNR=5.2					
EALK			Lg		14 06 15.8	
	45nm,0.4s,SNR=8.1					
EALK	**Alkurruntz**	**4.89 355**	Pn	Pn	14 04 55.6	+3.1
	13nm,0.2s,SNR=19					
EALK	**Alkurruntz**	**4.89 355**	Pg	Pg	14 05 12.7	+0.3
	20nm,0.6s,SNR=6.2					
EALK			Sn	Sn	14 05 46.6	-2.6
	23nm,0.4s,SNR=5.2					
EALK			Lg		14 06 15.9	
	45nm,0.4s,SNR=8.1					
OSSF	**Osses**	**4.91 358**	P	Pn	14 04 54.6	+1.8
OSSF	**Osses**	**4.91 358**	P	Pn	14 04 54.6	+1.8
CARF	**Carcanieres**	**4.96 27**	P	Pn	14 04 54.8	+1.3
CARF	**Carcanieres**	**4.96 27**	P	Pn	14 04 54.8	+1.3
TZK	**Tazeka**	**4.97 212**	Pn	Pn	14 04 54.0	+0.3
TZK			Sn	Sn	14 05 48.0	-3.3
TZK	**Tazeka**	**4.97 212**	Pn	Pn	14 04 54.0	+0.3
TZK			Sn	Sn	14 05 48.0	-3.3
TZK	**Tazeka**	**4.97 212**	*i* P	Pn	14 04 54.0	+0.3
TZK			*i* S	Sn	14 05 48.0	-3.3
EJON	**La Jonquera**	**5.05 35**	Pn	Pn	14 04 56.5	+1.7
EJON			Pg	Pg	14 05 10.8	-4.8
EJON			Sn	Sn	14 05 51.9	-1.4
EJON			Lg		14 06 20.0	
EJON	**La Jonquera**	**5.05 35**	Pn	Pn	14 04 56.5	+1.7
	6.7nm,0.3s,SNR=12					
EJON			Pg	Pg	14 05 10.7	-4.8
	10nm,0.4s,SNR=9.4					
EJON			Sn	Sn	14 05 51.9	-1.4
	16nm,0.3s,SNR=7.9					

EJON			Lg		14 06 20.0	
	12nm,0.4s					
EJON	**La Jonquera**	**5.05 35**	Pn	Pn	14 04 56.5	+1.7
	6.7nm,0.3s,SNR=12					
EJON			Pg	Pg	14 05 10.7	-4.8
	10nm,0.4s,SNR=9.4					
EJON			Sn	Sn	14 05 51.9	-1.4
	16nm,0.3s,SNR=7.9					
EJON			Lg		14 06 20.0	
	12nm,0.4s					
EJON	**La Jonquera**	**5.05 35**	Pn	Pn	14 04 56.5	+1.7
	6.7nm,0.3s,SNR=12					
PMRV	**Marv??o**	**5.12 284**	*e*Pn	Pn	14 04 56.2	+0.5
PMRV			*e*Sg	Sg	14 06 24.3	+1.2
PMRV			A		14 06 34.9	
	106nm,0.5s					
PMRV	**Marv??o**	**5.12 284**	Pn	Pn	14 04 56.2	+0.5
PMRV			Lg		14 06 24.3	
	106nm,0.5s					
PMRV	**Marv??o**	**5.12 284**	Pn	Pn	14 04 56.2	+0.5
PMRV			Lg		14 06 24.3	
	106nm,0.5s					
PMRV	**Marv??o**	**5.12 284**	*e*Pn	Pn	14 04 56.2	+0.5
PMRV			*e*Sg	Sg	14 06 24.3	+1.2
	106nm,0.5s					
EGRO	**El Granado**	**5.20 263**	Pn	Pn	14 04 56.3	-0.5
EGRO			Pg	Pg	14 05 14.2	-4.2
EGRO			Sn	Sn	14 05 55.1	-2.0
EGRO			Lg		14 06 26.3	
EGRO	**El Granado**	**5.20 263**	Pn	Pn	14 04 56.0	-0.8
	14nm,0.4s,SNR=31					
EGRO			Pg	Pg	14 05 14.2	-4.2
	9.7nm,0.4s,SNR=5.9					
EGRO			Sn	Sn	14 05 55.1	-2.0
	7.4nm,0.2s,SNR=7.8					
EGRO			Lg		14 06 26.3	
	21nm,0.4s					
EGRO	**El Granado**	**5.20 263**	Pn	Pn	14 04 56.0	-0.8
	14nm,0.4s,SNR=31					
EGRO			Pg	Pg	14 05 14.2	-4.2
	9.7nm,0.4s,SNR=5.9					
EGRO			Sn	Sn	14 05 55.1	-2.0
	7.4nm,0.2s,SNR=7.8					
EGRO			Lg		14 06 26.3	
	21nm,0.4s					
EGRO	**El Granado**	**5.20 263**	Pn	Pn	14 04 56.3	-0.5
EGRO	**El Granado**	**5.20 263**	Pg	Pg	14 05 14.2	-4.2
	9.7nm,0.4s,SNR=5.9					
EGRO			Sn	Sn	14 05 55.1	-1.9
	7.4nm,0.2s,SNR=7.8					
EGRO			Lg		14 06 26.3	
	21nm,0.4s					
PESTR	**Estremoz**	**5.21 278**	*e*Pn	Pn	14 04 56.3	-0.5
PESTR			*e*Sg	Sg	14 06 26.1	+0.3
PESTR			A		14 06 36.2	
	85nm,0.8s					
PESTR	**Estremoz**	**5.21 278**	Pn	Pn	14 04 56.3	-0.5
PESTR			Lg		14 06 26.1	
	85nm,0.8s					
PESTR	**Estremoz**	**5.21 278**	Pn	Pn	14 04 56.3	-0.5
PESTR			Lg		14 06 26.1	
	85nm,0.8s					
PESTR	**Estremoz**	**5.21 278**	*e*Pn	Pn	14 04 56.3	-0.5
PESTR			*e*Sg	Sg	14 06 26.1	+0.3
	85nm,0.8s					
ELAN	**Lanestosa**	**5.23 340**	Pn	Pn	14 04 59.1	+2.0
ELAN			Sn	Sn	14 05 56.3	-1.2
ELAN			Lg		14 06 27.6	
ELAN	**Lanestosa**	**5.23 340**	Pn	Pn	14 04 58.9	+1.8
	1.6nm,0.2s,SNR=37					
ELAN			Sn	Sn	14 05 56.3	-1.2
	18nm,0.5s,SNR=5.2					
ELAN			Lg		14 06 27.6	
	21nm,0.4s					
ELAN	**Lanestosa**	**5.23 340**	Pn	Pn	14 04 58.9	+1.8
	1.6nm,0.2s,SNR=37					
ELAN			Sn	Sn	14 05 56.3	-1.2
	18nm,0.5s,SNR=5.2					
ELAN			Lg		14 06 27.6	
	21nm,0.4s					
ELAN	**Lanestosa**	**5.23 340**	Pn	Pn	14 04 58.9	+1.8
	1.6nm,0.2s,SNR=37					
ELAN			Sn	Sn	14 05 56.3	-1.3
	18nm,0.5s,SNR=5.2					
ELAN			Lg		14 06 27.6	
	21nm,0.4s					
PCBR	**Castelo Branco**	**5.27 289**	*e*Pn	Pn	14 04 58.4	+0.6
PCBR			*e*Sg	Sg	14 06 28.2	+0.2
PCBR			A		14 06 37.9	
	82nm,0.6s					
PCBR	**Castelo Branco**	**5.27 289**	Pn	Pn	14 04 58.4	+0.6
PCBR			Lg		14 06 28.2	
	41nm,0.6s					
PCBR	**Castelo Branco**	**5.27 289**	Pn	Pn	14 04 58.4	+0.6
PCBR			Lg		14 06 28.2	
	41nm,0.6s					
PCBR	**Castelo Branco**	**5.27 289**	*e*Pn	Pn	14 04 58.4	+0.6
PCBR			*e*Sg	Sg	14 06 28.2	+0.2
	82nm,0.6s					
PVAQ	**Vaqueiros**	**5.41 262**	*e*Pn	Pn	14 04 58.9	-0.8
PVAQ			*e*Sn	Sn	14 06 01.8	-0.4
PVAQ			A		14 06 39.3	
	49nm,0.8s					
PVAQ	**Vaqueiros**	**5.41 262**	Pn	Pn	14 04 58.9	-0.8
PVAQ			Sn	Sn	14 06 01.8	-0.4
	49nm,0.8s					
PVAQ	**Vaqueiros**	**5.41 262**	Pn	Pn	14 04 58.9	-0.8
PVAQ			Sn	Sn	14 06 01.8	-0.4
	49nm,0.8s					
PVAQ	**Vaqueiros**	**5.41 262**	*e*Pn	Pn	14 04 58.9	-0.8
PVAQ			*e*Sn	Sn	14 06 01.8	-0.4
	49nm,0.8s					
PBEJ	**Beja**	**5.43 269**	*e*Pn	Pn	14 04 59.9	-0.1
PBEJ			*e*Sg	Sg	14 06 32.7	-0.5
PBEJ			A		14 06 42.6	
	37nm,0.4s					
PBEJ	**Beja**	**5.43 269**	Pn	Pn	14 04 59.9	-0.1
PBEJ			Lg		14 06 32.7	
	18nm,0.4s					
PBEJ	**Beja**	**5.43 269**	Pn	Pn	14 04 59.9	-0.1
PBEJ			Lg		14 06 32.7	
	18nm,0.4s					
PBEJ	**Beja**	**5.43 269**	*e*Pn	Pn	14 04 59.9	-0.1
PBEJ			*e*Sg	Sg	14 06 32.7	-0.5
	37nm,0.4s					
MVO	**Moncorvo**	**5.45 303**	*e*Pn	Pn	14 05 00.5	+0.3
MVO			*e*Sg	Sg	14 06 33.3	-0.3
MVO			A		14 06 49.0	
	180nm,0.7s					
MVO	**Moncorvo**	**5.45 303**	Pn	Pn	14 05 00.4	+0.2
MVO			Pg	Pg	14 05 19.2	-3.8
MVO			Sn	Sn	14 06 00.6	-2.4
MVO			Lg		14 06 34.5	
MVO	**Moncorvo**	**5.45 303**	Pn	Pn	14 05 00.4	+0.2
	17nm,0.2s,SNR=60					
MVO			Pg	Pg	14 05 19.2	-3.8
	9.1nm,0.3s,SNR=12					
MVO			Sn	Sn	14 06 00.6	-2.4
	11nm,0.3s,SNR=7.9					
MVO			Lg		14 06 34.5	
	61nm,0.5s,SNR=9.5					
MVO	**Moncorvo**	**5.45 303**	Pn	Pn	14 05 00.4	+0.2
	17nm,0.2s,SNR=60					
MVO			Pg	Pg	14 05 19.2	-3.8
	9.1nm,0.3s,SNR=12					
MVO			Sn	Sn	14 06 00.6	-2.4
	11nm,0.3s,SNR=7.9					
MVO			Lg		14 06 34.5	
	61nm,0.5s,SNR=9.5					
MVO	**Moncorvo**	**5.45 303**	*e*Pn	Pn	14 05 00.5	+0.3
MVO	**Moncorvo**	**5.45 303**	Pg	Pg	14 05 19.2	-3.9
	9.1nm,0.3s,SNR=12					
MVO			Sn	Sn	14 06 00.6	-2.4
	11nm,0.3s,SNR=7.9					
MVO			*e*Sg	Sg	14 06 33.3	-0.3
	180nm,0.7s					
MVO			Lg		14 06 34.5	
	61nm,0.5s,SNR=9.5					
MTE	**Manteigas**	**5.49 294**	*e*Pn	Pn	14 05 01.1	+0.4
MTE			*e*Sg	Sg	14 06 33.7	-1.1
MTE			A		14 06 48.6	
	106nm,0.6s					
MTE	**Manteigas**	**5.49 294**	*e*Pn	Pn	14 05 01.1	+0.4
	22nm,0.6s					
MTE			*e*Pg	Pg	14 05 23.6	-0.2
MTE			*e*Sg	Sg	14 06 33.6	-1.3

MTE Manteigas 5.49 294 Pn **Pn 14 05 01.1 +0.4**
MTE Lg 14 06 33.7
53nm,0.6s
MTE Manteigas 5.49 294 Pn **Pn 14 05 01.1 +0.4**
MTE Lg 14 06 33.7
53nm,0.6s
MTE Manteigas 5.49 294 *e*Pn **Pn 14 05 01.1 +0.4**
MTE Manteigas 5.49 294 *e*Pg **Pg 14 05 23.6 -0.2**
MTE *e*Sg **Sg 14 06 33.7 -1.1**
106nm,0.6s
EVO Evora 5.53 274 *e*Pn **Pn 14 05 01.9 +0.6**
EVO Evora 5.53 274 *e*Pg **Pg 14 05 26.4 +1.8**
EVO *e*Sn **Sn 14 06 02.8 -2.1**
EVO *e*Sg **Sg 14 06 38.8 +2.7**
156nm,0.4s
EVO Evora 5.53 274 *e*Pn **Pn 14 05 01.3 0.0**
EVO *e*Sg **Sg 14 06 34.3 -1.8**
EVO A 14 06 46.9
61nm,0.4s
EVO Evora 5.53 274 Pn **Pn 14 05 01.3 0.0**
EVO Lg 14 06 34.3
61nm,0.4s
EVO Evora 5.53 274 Pn **Pn 14 05 01.3 0.0**
EVO Lg 14 06 34.3
61nm,0.4s
EVO Evora 5.53 274 *e*Pn **Pn 14 05 01.3 0.0**
EVO *e*Sg **Sg 14 06 34.3 -1.8**
61nm,0.4s
MTLF Montolieu 5.55 25 Pn **Pn 14 05 02.0 +0.4**
SNR=1.0
MTLF *e*Sn **Sn 14 06 02.0 -3.5**
MTLF *e*Sg **Sg 14 06 34.3 -2.6**
21nm,0.6s
MTLF Montolieu 5.55 25 Pn **Pn 14 05 02.0 +0.4**
MTLF Sn **Sn 14 06 02.0 -3.5**
MTLF Lg 14 06 34.3
11nm,0.6s
MTLF Montolieu 5.55 25 Pn **Pn 14 05 02.0 +0.4**
MTLF Sn **Sn 14 06 02.0 -3.5**
MTLF Lg 14 06 34.3
11nm,0.6s
MTLF Montolieu 5.55 25 Pn **Pn 14 05 02.0 +0.4**
SNR=1.0
MTLF *e*Sg **Sg 14 06 34.3 -2.6**
11nm,0.6s
PBRG Braganca 5.61 310 *e*Pn **Pn 14 05 02.8 +0.4**
PBRG *e*Sg **Sg 14 06 40.1 +1.3**
PBRG A 14 06 48.0
130nm,0.6s
PBRG Braganca 5.61 310 Pn **Pn 14 05 02.8 +0.4**
PBRG Lg 14 06 40.1
65nm,0.6s
PBRG Braganca 5.61 310 Pn **Pn 14 05 02.8 +0.4**
PBRG Lg 14 06 40.1
65nm,0.6s
PBRG Braganca 5.61 310 *e*Pn **Pn 14 05 02.8 +0.4**
PBRG *e*Sg **Sg 14 06 40.1 +1.3**
130nm,0.6s
EVOP Sao Brissos 5.61 274 *e*Pn **Pn 14 05 01.9 -0.5**
EVOP Sao Brissos 5.61 274 *e*Pg **Pg 14 05 26.4 +0.2**
EVOP *e*Sg **Sg 14 06 38.8 -0.1**
78nm,0.4s
PBDV Barranco-do-Ve 5.61 261 *e*Pn **Pn 14 05 02.0 -0.5**
PBDV *e*Sn **Sn 14 06 06.4 -0.7**
PBDV *e*Sg **Sg 14 06 40.1 +1.1**
PBDV A 14 06 49.0
49nm,0.5s
PBDV Barranco-do-Ve 5.61 261 Pn **Pn 14 05 02.0 -0.5**
PBDV Sn **Sn 14 06 06.4 -0.7**
PBDV Lg 14 06 40.1
49nm,0.5s
PBDV Barranco-do-Ve 5.61 261 Pn **Pn 14 05 02.0 -0.5**
PBDV Sn **Sn 14 06 06.4 -0.7**
PBDV Lg 14 06 40.1
49nm,0.5s
PBDV Barranco-do-Ve 5.61 261 *e*Pn **Pn 14 05 02.0 -0.5**
PBDV *e*Sn **Sn 14 06 06.4 -0.7**
PBDV *e*Sg **Sg 14 06 40.1 +1.1**
49nm,0.5s
PCVE Castro Verde 5.62 265 *e*Pn **Pn 14 05 02.4 -0.2**
PCVE *e*Sn **Sn 14 06 05.9 -1.4**
PCVE *e*Sg **Sg 14 06 39.3 +0.1**
PCVE A 14 06 52.8
52nm,0.5s
PCVE Castro Verde 5.62 265 Pn **Pn 14 05 02.4 -0.2**
PCVE Sn **Sn 14 06 05.9 -1.4**
PCVE Lg 14 06 39.3
52nm,0.5s
PCVE Castro Verde 5.62 265 Pn **Pn 14 05 02.4 -0.2**
PCVE Sn **Sn 14 06 05.9 -1.4**
PCVE Lg 14 06 39.3
52nm,0.5s
PCVE Castro Verde 5.62 265 *e*Pn **Pn 14 05 02.4 -0.2**
PCVE *e*Sn **Sn 14 06 05.9 -1.4**
PCVE *e*Sg **Sg 14 06 39.3 +0.1**
52nm,0.5s
ECAL Calabor 5.69 311 Pn **Pn 14 05 04.0 +0.5**
ECAL Sn **Sn 14 06 05.6 -3.4**
ECAL Lg 14 06 43.7
ECAL Calabor 5.69 311 ⇓Pn **Pn 14 05 04.0 +0.5**
34nm,0.4s,SNR=18
ECAL Sn **Sn 14 06 05.6 -3.4**
18nm,0.3s,SNR=5.1
ECAL Lg 14 06 43.7
41nm,0.3s
ECAL Calabor 5.69 311 ⇓Pn **Pn 14 05 04.0 +0.5**
34nm,0.4s,SNR=18
ECAL Sn **Sn 14 06 05.6 -3.4**
18nm,0.3s,SNR=5.1
ECAL Lg 14 06 43.7
41nm,0.3s
ECAL Calabor 5.69 311 Pn **Pn 14 05 04.0 +0.5**
34nm,0.4s,SNR=18
ECAL Sn **Sn 14 06 05.6 -3.4**
18nm,0.3s,SNR=5.1
ECAL Lg 14 06 43.7
41nm,0.3s
MESJ Messejana 5.73 267 *e*P **Pn 14 05 03.6 -0.5**
MESJ *e*S **Sn 14 06 06.2 -3.9**
MESJ *e*S **Sn 14 06 06.2 -3.8**
MESJ Messejana 5.73 267 Pn **Pn 14 05 03.6 -0.5**
MESJ Sn **Sn 14 06 06.2 -3.9**
MESJ Messejana 5.73 267 Pn **Pn 14 05 03.6 -0.5**
MESJ Sn **Sn 14 06 06.2 -3.9**
MESJ Messejana 5.73 267 *e*P **Pn 14 05 03.6 -0.5**
DFRA Djebel Bou Aff 5.74 106 P **Pn 14 05 04.4 +0.2**
DFRA Djebel Bou Aff 5.74 106 Pn **Pn 14 05 04.4 +0.2**
DFRA Djebel Bou Aff 5.74 106 Pn **Pn 14 05 04.4 +0.2**
DFRA Djebel Bou Aff 5.74 106 P **Pn 14 05 04.4 +0.2**
MOE Montemor 5.79 274 *e*Sg **Sg 14 06 45.2 +0.6**
MOE Montemor 5.79 274 Lg 14 06 45.2
MOE Montemor 5.79 274 Lg 14 06 45.2
MOE Montemor 5.79 274 *e*Sg **Sg 14 06 45.2 +0.6**
PVIS Viseu 5.85 296 *e*Pn **Pn 14 05 05.8 +0.1**
PVIS *e*Sg **Sg 14 06 47.4 +1.0**
PVIS A 14 06 59.6
72nm,0.6s
PVIS Viseu 5.85 296 ⇓Pn **Pn 14 05 05.8 +0.1**
PVIS Lg 14 06 47.4
36nm,0.6s
PVIS Viseu 5.85 296 ⇓Pn **Pn 14 05 05.8 +0.1**
PVIS Lg 14 06 47.4
36nm,0.6s
EARI Arriondas 5.90 328 Pn **Pn 14 05 08.4 +2.0**
EARI Pg **Pg 14 05 31.7 0.0**
EARI Sn **Sn 14 06 13.6 -0.6**
EARI Lg 14 06 48.4
EARI Arriondas 5.90 328 Pn **Pn 14 05 08.4 +2.0**
4.2nm,0.2s,SNR=35
EARI Pg **Pg 14 05 31.7 0.0**
9.0nm,0.5s,SNR=8.8
EARI Sn **Sn 14 06 13.6 -0.6**
14nm,0.5s,SNR=4.0
EARI Lg 14 06 48.4
27nm,0.5s,SNR=4.6
EARI Arriondas 5.90 328 Pn **Pn 14 05 08.4 +2.0**
4.2nm,0.2s,SNR=35
EARI Pg **Pg 14 05 31.7 0.0**
9.0nm,0.5s,SNR=8.8
EARI Sn **Sn 14 06 13.6 -0.6**
14nm,0.5s,SNR=4.0
EARI Lg 14 06 48.4
27nm,0.5s,SNR=4.6
EARI Arriondas 5.90 328 Pn **Pn 14 05 08.4 +2.0**
4.2nm,0.2s,SNR=35
PTOM Tomar 5.93 285 *e*Pn **Pn 14 05 07.5 +0.7**
PTOM *e*Sg **Sg 14 06 47.1 -1.9**
PTOM A 14 07 06.5
127nm,0.6s
PTOM Tomar 5.93 285 Pn **Pn 14 05 07.5 +0.7**
PTOM Lg 14 06 47.1
63nm,0.6s
PTOM Tomar 5.93 285 Pn **Pn 14 05 07.5 +0.7**
PTOM Lg 14 06 47.1
63nm,0.6s
PTOM Tomar 5.93 285 *e*Pn **Pn 14 05 07.5 +0.7**
PTOM *e*Sg **Sg 14 06 47.1 -1.9**
127nm,0.6s
PVRL Vila Real 5.96 302 *e*Pn **Pn 14 05 07.1 -0.1**
PVRL *e*Sg **Sg 14 06 48.8 -1.1**
PVRL A 14 07 03.3
55nm,0.6s
PVRL Vila Real 5.96 302 Pn **Pn 14 05 07.1 -0.1**
PVRL Lg 14 06 48.8
28nm,0.6s
PVRL Vila Real 5.96 302 Pn **Pn 14 05 07.1 -0.1**
PVRL Lg 14 06 48.8
28nm,0.6s
PVRL Vila Real 5.96 302 *e*Pn **Pn 14 05 07.1 -0.1**
PVRL *e*Sg **Sg 14 06 48.8 -1.1**
55nm,0.6s
ALMR Almeirim 5.99 280 *e*P **Pn 14 05 07.6 -0.1**
ALMR AML AML 14 06 14.5
comp=N,49nm,0.7s
ALMR Almeirim 5.99 280 Pn **Pn 14 05 07.6 -0.1**
ALMR Almeirim 5.99 280 Pn **Pn 14 05 07.6 -0.1**
ALMR Almeirim 5.99 280 *e*P **Pn 14 05 07.6 -0.1**
MORF Marmelete 6.16 263 *e*Pn **Pn 14 05 09.9 -0.1**
MORF *e*Sn **Sn 14 06 19.6 -1.0**
MORF A 14 07 07.4
comp=N,21nm,0.6s
MORF Marmelete 6.16 263 ⇑Pn **Pn 14 05 09.9 -0.1**
MORF Sn **Sn 14 06 19.6 -1.0**
comp=N,21nm,0.6s
MORF Marmelete 6.16 263 ⇑Pn **Pn 14 05 09.9 -0.1**
MORF Sn **Sn 14 06 19.6 -1.0**
comp=N,21nm,0.6s
PTEO Sao Teotonio 6.17 265 *e*Pn **Pn 14 05 09.8 -0.3**
PTEO *e*Sg **Sg 14 06 56.9 0.0**
PTEO A 14 07 01.5
comp=N,46nm,0.6s
PTEO Sao Teotonio 6.17 265 Pn **Pn 14 05 09.8 -0.3**
PTEO Lg 14 06 56.9
comp=N,23nm,0.6s
PTEO Sao Teotonio 6.17 265 Pn **Pn 14 05 09.8 -0.3**
PTEO Lg 14 06 56.9
comp=N,23nm,0.6s
PTEO Sao Teotonio 6.17 265 *e*Pn **Pn 14 05 09.8 -0.3**
PTEO *e*Sg **Sg 14 06 56.9 0.0**
comp=N,46nm,0.6s
ERUA La Rua 6.21 313 Pn **Pn 14 05 10.4 -0.2**
ERUA Pg **Pg 14 05 36.3 -1.3**
ERUA Sn **Sn 14 06 20.2 -1.5**
ERUA Lg 14 06 59.2
ERUA La Rua 6.21 313 Pn **Pn 14 05 10.8 +0.2**
comp=N,5.1nm,0.2s,SNR=7.9
ERUA Pg **Pg 14 05 36.3 -1.3**
comp=N,4.9nm,0.2s,SNR=7.9
ERUA Sn **Sn 14 06 20.2 -1.5**
comp=N,3.5nm,0.2s,SNR=7.9
ERUA Lg 14 06 59.2
comp=N,40nm,0.6s,SNR=7.9
ERUA La Rua 6.21 313 Pn **Pn 14 05 10.8 +0.2**
comp=N,5.1nm,0.2s,SNR=7.9
ERUA Pg **Pg 14 05 36.3 -1.3**
comp=N,4.9nm,0.2s,SNR=7.9
ERUA Sn **Sn 14 06 20.2 -1.5**
comp=N,3.5nm,0.2s,SNR=7.9
ERUA Lg 14 06 59.2
comp=N,40nm,0.6s,SNR=7.9
ERUA La Rua 6.21 313 Pn **Pn 14 05 10.8 +0.2**
comp=N,5.1nm,0.2s,SNR=7.9
CZD Col de Zad 6.24 213 Pn **Pn 14 05 11.0 -0.1**
CZD Sn **Sn 14 06 20.0 -2.7**
CZD Col de Zad 6.24 213 Pn **Pn 14 05 11.0 -0.1**
CZD Sn **Sn 14 06 20.0 -2.7**
CZD Col de Zad 6.24 213 *i*P **Pn 14 05 11.0 -0.1**
PFVI Vila Bisbo 6.33 261 *e*Pn **Pn 14 05 11.9 -0.5**
PFVI *e*Sg **Sg 14 07 03.6 +1.5**
PFVI A 14 07 18.6
comp=N,28nm,0.7s
PFVI Vila Bisbo 6.33 261 Pn **Pn 14 05 11.9 -0.5**
PFVI Sn **Sn 14 06 21.0 -3.9**
PFVI Lg 14 07 02.1
PFVI Vila Bisbo 6.33 261 Pn **Pn 14 05 11.9 -0.5**
comp=N,38nm,0.8s,SNR=23
PFVI Sn **Sn 14 06 21.0 -3.9**
SNR=7.9
PFVI Lg 14 07 02.1
SNR=7.9
PFVI Vila Bisbo 6.33 261 Pn **Pn 14 05 11.9 -0.5**
comp=N,38nm,0.8s,SNR=23
PFVI Sn **Sn 14 06 21.0 -3.9**
SNR=7.9
PFVI Lg 14 07 02.1
SNR=7.9
PFVI Vila Bisbo 6.33 261 Pn **Pn 14 05 11.9 -0.5**
comp=N,38nm,0.8s,SNR=23
PFVI Sn **Sn 14 06 21.0 -3.9**
SNR=7.9
PFVI Lg 14 07 02.1
SNR=7.9
PFVI *e*Sg **Sg 14 07 03.6 +1.5**
comp=N,28nm,0.7s
PCAB Cabril 6.37 304 *e*Pn **Pn 14 05 13.1 +0.3**
PCAB *e*Sg **Sg 14 07 04.3 +1.2**
PCAB A 14 07 14.3
comp=N,119nm,0.7s
PCAB Cabril 6.37 304 Pn **Pn 14 05 13.1 +0.3**
PCAB Lg 14 07 04.3
comp=N,59nm,0.7s
PCAB Cabril 6.37 304 Pn **Pn 14 05 13.1 +0.3**
PCAB Lg 14 07 04.3
comp=N,59nm,0.7s
PCAB Cabril 6.37 304 *e*Pn **Pn 14 05 13.1 +0.3**
PCAB *e*Sg **Sg 14 07 04.3 +1.2**
comp=N,119nm,0.7s
ELOB Lobios 6.47 305 Pn **Pn 14 05 14.4 +0.2**
ELOB Sn **Sn 14 06 27.8 -0.4**
ELOB Lg 14 07 07.3
ELOB Lobios 6.47 305 Pn **Pn 14 05 14.4 +0.2**
comp=N,5.2nm,0.2s,SNR=36
ELOB Sn **Sn 14 06 27.8 -0.4**
comp=N,20nm,0.5s,SNR=5.0
ELOB Lg 14 07 07.3
comp=N,99nm,1.0s,SNR=6.7
ELOB Lobios 6.47 305 Pn **Pn 14 05 14.4 +0.2**
comp=N,5.2nm,0.2s,SNR=36
ELOB Sn **Sn 14 06 27.8 -0.4**
comp=N,20nm,0.5s,SNR=5.0
ELOB Lg 14 07 07.3
comp=N,99nm,1.0s,SNR=6.7
ELOB Lobios 6.47 305 Pn **Pn 14 05 14.4 +0.2**
comp=N,5.2nm,0.2s,SNR=36
ELOB Sn **Sn 14 06 27.8 -0.4**
comp=N,20nm,0.5s,SNR=5.0
ELOB Lg 14 07 07.3
comp=N,99nm,1.0s,SNR=6.7
PTO Porto 6.50 298 *e*Pn **Pn 14 05 14.9 +0.2**
PTO *e*Sg **Sg 14 07 08.3 +0.8**
PTO Porto 6.50 298 Pn **Pn 14 05 14.9 +0.2**
PTO Lg 14 07 08.3
PTO Porto 6.50 298 Pn **Pn 14 05 14.9 +0.2**
PTO Lg 14 07 08.3
PTO Porto 6.50 298 *e*Pn **Pn 14 05 14.9 +0.2**
PTO *e*Sg **Sg 14 07 08.3 +0.8**
PMAFR Mafra 6.53 278 *e*Pn **Pn 14 05 15.2 +0.2**
PMAFR *e*Sg **Sg 14 07 05.2 -3.1**
PMAFR A 14 07 25.7
comp=N,74nm,0.6s
PMAFR Mafra 6.53 278 Pn **Pn 14 05 14.2 -0.8**
comp=N,3.1nm,0.1s,SNR=7.9
PMAFR Sn **Sn 14 06 26.4 -3.3**
comp=N,11nm,0.2s,SNR=7.9
PMAFR Lg 14 07 10.1
comp=N,88nm,0.5s,SNR=7.9
PMAFR Mafra 6.53 278 Pn **Pn 14 05 14.2 -0.8**
comp=N,3.1nm,0.1s,SNR=7.9
PMAFR Sn **Sn 14 06 26.4 -3.3**
comp=N,11nm,0.2s,SNR=7.9
PMAFR Lg 14 07 10.1
comp=N,88nm,0.5s,SNR=7.9
PMAFR Mafra 6.53 278 *e*Pn **Pn 14 05 15.2 +0.2**
PMAFR Sn **Sn 14 06 26.4 -3.2**
comp=N,11nm,0.2s,SNR=7.9
PMAFR Lg 14 07 10.1
comp=N,88nm,0.5s,SNR=7.9
LFF La Frestale 6.72 11 Pn **Pn 14 05 18.5 +0.9**
SNR=1.0
LFF Sn **Sn 14 06 31.0 -3.2**
comp=N,18nm,0.4s,SNR=1.0
LFF La Frestale 6.72 11 Pn **Pn 14 05 18.5 +0.9**
LFF Sn **Sn 14 06 31.0 -3.2**
comp=N,9.1nm,0.4s
LFF La Frestale 6.72 11 Pn **Pn 14 05 18.5 +0.9**
LFF Sn **Sn 14 06 31.0 -3.2**
comp=N,9.1nm,0.4s
LFF La Frestale 6.72 11 Pn **Pn 14 05 18.5 +0.9**
SNR=1.0
LASF Ste Croix 6.79 31 Pn **Pn 14 05 18.9 +0.3**
SNR=1.0
LASF Sg **Sg 14 07 11.3 -5.3**
comp=N,13nm,0.6s,SNR=1.0
LASF Ste Croix 6.79 31 Pn **Pn 14 05 18.9 +0.3**
LASF Lg 14 07 11.3
comp=N,6.6nm,0.6s
LASF Ste Croix 6.79 31 Pn **Pn 14 05 18.9 +0.3**
LASF Lg 14 07 11.3
comp=N,6.6nm,0.6s
LASF Ste Croix 6.79 31 Pn **Pn 14 05 18.9 +0.3**
SNR=1.0
EPON Pontenova 6.83 319 Pn **Pn 14 05 20.3 +1.2**
EPON Sn **Sn 14 06 34.5 -2.5**
EPON Lg 14 07 17.7
EPON Pontenova 6.83 319 Pn **Pn 14 05 20.3 +1.2**
comp=N,4.7nm,0.3s,SNR=7.9
EPON Sn **Sn 14 06 34.5 -2.5**
comp=N,12nm,0.4s,SNR=7.9
EPON Lg 14 07 17.7
comp=N,18nm,0.4s,SNR=7.9
EPON Pontenova 6.83 319 Pn **Pn 14 05 20.3 +1.2**
comp=N,4.7nm,0.3s,SNR=7.9
EPON Sn **Sn 14 06 34.5 -2.5**
comp=N,12nm,0.4s,SNR=7.9
EPON Lg 14 07 17.7
comp=N,18nm,0.4s,SNR=7.9
EPON Pontenova 6.83 319 Pn **Pn 14 05 20.3 +1.1**
comp=N,4.7nm,0.3s,SNR=7.9
EPON Sn **Sn 14 06 34.5 -2.6**
comp=N,12nm,0.4s,SNR=7.9
EPON Lg 14 07 17.7
comp=N,18nm,0.4s,SNR=7.9
ZFT Errachidia 6.87 205 Pn **Pn 14 05 20.0 +0.2**
ZFT Sn **Sn 14 06 33.0 -5.1**
ZFT Errachidia 6.87 205 Pn **Pn 14 05 20.0 +0.2**
ZFT Sn **Sn 14 06 33.0 -5.1**
ZFT Errachidia 6.87 205 *e*P **Pn 14 05 20.0 +0.2**
CMAH Djebel Manchou 6.89 102 P **Pn 14 05 20.1 0.0**
CMAH Djebel Manchou 6.89 102 Pn **Pn 14 05 20.1 0.0**
CMAH Djebel Manchou 6.89 102 Pn **Pn 14 05 20.1 0.0**
CMAH Djebel Manchou 6.89 102 P **Pn 14 05 20.1 0.0**
CAF Calviac 6.96 18 Pn **Pn 14 05 21.1 +0.2**
SNR=1.0
CAF *e*Sn **Sn 14 06 36.4 -3.9**
comp=N,9.7nm,0.4s
CAF Calviac 6.96 18 Pn **Pn 14 05 21.1 +0.2**
CAF Sn **Sn 14 06 36.4 -3.9**
comp=N,4.8nm,0.4s
CAF Calviac 6.96 18 Pn **Pn 14 05 21.1 +0.2**
CAF Sn **Sn 14 06 36.4 -3.9**
comp=N,4.8nm,0.4s
CAF Calviac 6.96 18 Pn **Pn 14 05 21.1 +0.2**
SNR=1.0
EZAM Zamans 7.02 305 Pn **Pn 14 05 21.3 -0.4**
EZAM Sn **Sn 14 06 38.5 -3.2**
EZAM Lg 14 07 23.7
EZAM Zamans 7.02 305 Pn **Pn 14 05 21.3 -0.4**
comp=N,4.9nm,0.2s,SNR=7.9
EZAM Sn **Sn 14 06 38.5 -3.2**
comp=N,6.0nm,0.2s,SNR=7.9
EZAM Lg 14 07 23.7
comp=N,45nm,0.5s,SNR=7.9
EZAM Zamans 7.02 305 Pn **Pn 14 05 21.3 -0.4**
comp=N,4.9nm,0.2s,SNR=7.9
EZAM Sn **Sn 14 06 38.5 -3.2**
comp=N,6.0nm,0.2s,SNR=7.9
EZAM Lg 14 07 23.7
comp=N,45nm,0.5s,SNR=7.9
EZAM Zamans 7.02 305 Pn **Pn 14 05 21.3 -0.5**
comp=N,4.9nm,0.2s,SNR=7.9
EZAM Sn **Sn 14 06 38.5 -3.2**
comp=N,6.0nm,0.2s,SNR=7.9
EZAM Lg 14 07 23.7
comp=N,45nm,0.5s,SNR=7.9
ABSA Djebel Ababsia 7.05 104 P **Pn 14 05 24.0 +1.8**
ABSA Djebel Ababsia 7.05 104 P **Pn 14 05 24.0 +1.8**
CABS Djebel Ababsia 7.05 104 Pn **Pn 14 05 24.0 +1.8**
CABS Djebel Ababsia 7.05 104 Pn **Pn 14 05 24.0 +1.8**
RJF Les Rejaudoux 7.20 14 Pn **Pn 14 05 24.6 +0.4**
SNR=1.0
RJF *e*Sn **Sn 14 06 42.5 -3.7**
comp=N,20nm,0.7s
RJF Les Rejaudoux 7.20 14 Pn **Pn 14 05 24.6 +0.4**
RJF Sn **Sn 14 06 42.5 -3.7**
comp=N,9.9nm,0.7s
RJF Les Rejaudoux 7.20 14 Pn **Pn 14 05 24.6 +0.4**
RJF Sn **Sn 14 06 42.5 -3.7**
comp=N,9.9nm,0.7s
RJF Les Rejaudoux 7.20 14 Pn **Pn 14 05 24.6 +0.4**
SNR=1.0
STS Santiago 7.33 311 Pn **Pn 14 05 26.5 +0.5**
STS Sn **Sn 14 06 45.5 -3.8**
STS Lg 14 07 35.4
STS Santiago 7.33 311 Pn **Pn 14 05 26.5 +0.5**
comp=N,9.3nm,0.3s,SNR=8.9
STS Sn **Sn 14 06 45.5 -3.8**
comp=N,1.9nm,0.2s,SNR=7.9
STS Lg 14 07 35.4
comp=N,38nm,0.6s,SNR=6.4
STS Santiago 7.33 311 Pn **Pn 14 05 26.5 +0.5**
comp=N,9.3nm,0.3s,SNR=8.9
STS Sn **Sn 14 06 45.5 -3.9**
comp=N,1.9nm,0.2s,SNR=7.9
STS Lg 14 07 35.4
comp=N,38nm,0.6s,SNR=6.4
STS Santiago 7.33 311 Pn **Pn 14 05 26.5 +0.5**
comp=N,9.3nm,0.3s,SNR=8.9
STS Sn **Sn 14 06 45.5 -3.9**
comp=N,1.9nm,0.2s,SNR=7.9
STS Lg 14 07 35.4
comp=N,38nm,0.6s,SNR=6.4
SMRF Simiane la Rot 7.49 39 *e*Pn **Pn 14 05 27.4 -0.8**
SMRF Simiane la Rot 7.49 39 Pn **Pn 14 05 27.4 -0.8**
SMRF Simiane la Rot 7.49 39 Pn **Pn 14 05 27.4 -0.8**
SMRF Simiane la Rot 7.49 39 *e*Pn **Pn 14 05 27.4 -0.8**
LMR La Mourre 7.55 46 Pn **Pn 14 05 29.0 -0.1**
SNR=1.0
LMR *e*Sn **Sn 14 06 49.5 -5.4**
comp=N,28nm,0.9s
LMR La Mourre 7.55 46 Pn **Pn 14 05 29.0 -0.1**
LMR Sn **Sn 14 06 49.5 -5.4**
comp=N,14nm,0.9s
LMR La Mourre 7.55 46 Pn **Pn 14 05 29.0 -0.1**
LMR Sn **Sn 14 06 49.5 -5.4**
comp=N,14nm,0.9s
LMR La Mourre 7.55 46 Pn **Pn 14 05 29.0 -0.1**
SNR=1.0
EMAZ Mazaricos 7.62 310 Pn **Pn 14 05 30.7 +0.7**
EMAZ Sn **Sn 14 06 53.6 -3.0**
EMAZ Lg 14 07 43.1
EMAZ Mazaricos 7.62 310 Pn **Pn 14 05 30.7 +0.7**
comp=N,12nm,0.2s,SNR=18
EMAZ Sn **Sn 14 06 53.6 -3.0**
comp=N,3.6nm,0.2s,SNR=7.9
EMAZ Lg 14 07 43.1
comp=N,23nm,0.6s,SNR=7.9
EMAZ Mazaricos 7.62 310 Pn **Pn 14 05 30.7 +0.7**
comp=N,12nm,0.2s,SNR=18
EMAZ Sn **Sn 14 06 53.6 -3.0**
comp=N,3.6nm,0.2s,SNR=7.9
EMAZ Lg 14 07 43.1
comp=N,23nm,0.6s,SNR=7.9
EMAZ Mazaricos 7.62 310 Pn **Pn 14 05 30.7 +0.7**
comp=N,12nm,0.2s,SNR=18
EMAZ Sn **Sn 14 06 53.6 -3.0**

comp=N,3.6nm,0.2s,SNR=7.9
EMAZ Lg 14 07 43.1
comp=N,23nm,0.6s,SNR=7.9
VIVF Saint-Julien-I 7.76 31 *e*Pn **Pn 14 05 31.1 -0.8**
VIVF Saint-Julien-I 7.76 31 Pn **Pn 14 05 31.1 -0.8**
VIVF Saint-Julien-I 7.76 31 Pn **Pn 14 05 31.1 -0.8**
VIVF Saint-Julien-I 7.76 31 *e*Pn **Pn 14 05 31.1 -0.8**
FRF La Foret Royal 7.78 45 Pn **Pn 14 05 32.2 +0.1**
SNR=1.0
FRF La Foret Royal 7.78 45 Pn **Pn 14 05 32.2 +0.1**
FRF La Foret Royal 7.78 45 Pn **Pn 14 05 32.2 +0.1**
FRF La Foret Royal 7.78 45 Pn **Pn 14 05 32.2 +0.1**
SNR=1.0
MFF Saint Martin d 8.28 4 Pn **Pn 14 05 39.4 +0.4**
SNR=1.0
MFF Sn **Sn 14 07 08.6 -4.0**
comp=N,4.3nm,0.4s,SNR=1.0
MFF Saint Martin d 8.28 4 Pn **Pn 14 05 39.4 +0.4**
MFF Sn **Sn 14 07 08.6 -4.0**
comp=N,2.2nm,0.4s
MFF Saint Martin d 8.28 4 Pn **Pn 14 05 39.4 +0.4**
MFF Sn **Sn 14 07 08.6 -4.0**
comp=N,2.2nm,0.4s
MFF Saint Martin d 8.28 4 Pn **Pn 14 05 39.4 +0.4**
SNR=1.0
TCF Toulx Ste Croi 8.28 16 Pn **Pn 14 05 39.5 +0.4**
SNR=1.0
TCF Toulx Ste Croi 8.28 16 Pn **Pn 14 05 39.5 +0.4**
TCF Toulx Ste Croi 8.28 16 Pn **Pn 14 05 39.5 +0.4**
TCF Toulx Ste Croi 8.28 16 Pn **Pn 14 05 39.5 +0.4**
SNR=1.0
SBF Sospel 8.41 46 *e*Pn **Pn 14 05 40.5 -0.3**
SBF Sospel 8.41 46 Pn **Pn 14 05 40.5 -0.3**
SBF Sospel 8.41 46 Pn **Pn 14 05 40.5 -0.3**
SBF Sospel 8.41 46 *e*Pn **Pn 14 05 40.5 -0.3**
BGF Bois d'Agland 8.68 18 *e*Pn **Pn 14 05 45.0 +0.5**
BGF Bois d'Agland 8.68 18 Pn **Pn 14 05 45.0 +0.5**
BGF Bois d'Agland 8.68 18 Pn **Pn 14 05 45.0 +0.5**
BGF Bois d'Agland 8.68 18 *e*Pn **Pn 14 05 45.0 +0.5**
AVF Avril sur Loir 9.03 19 *e*Pn **Pn 14 05 48.2 -1.1**
AVF Avril sur Loir 9.03 19 P **Pn 14 05 55.1 +5.8**
SNR=1.0
AVF Avril sur Loir 9.03 19 Pn **Pn 14 05 48.2 -1.1**
AVF Avril sur Loir 9.03 19 Pn **Pn 14 05 48.2 -1.1**
AVF Avril sur Loir 9.03 19 *e*Pn **Pn 14 05 48.2 -1.1**
SMF Signal de Mont 9.03 22 Pn **Pn 14 05 49.4 +0.1**
SNR=1.0
SMF Signal de Mont 9.03 22 Pn **Pn 14 05 49.4 +0.1**
SMF Signal de Mont 9.03 22 Pn **Pn 14 05 49.4 +0.1**
SMF Signal de Mont 9.03 22 Pn **Pn 14 05 49.4 +0.1**
SNR=1.0
LPG La Plagne 9.18 36 *e*P **Pn 14 05 56.1 +4.7**
LPG La Plagne 9.18 36 Pn **Pn 14 05 56.1 +4.7**
LPG La Plagne 9.18 36 Pn **Pn 14 05 56.1 +4.7**
LOR Lormes 9.60 20 *e*Pn **Pn 14 05 57.6 +0.5**
LOR Lormes 9.60 20 Pn **Pn 14 05 57.6 +0.5**
LOR Lormes 9.60 20 Pn **Pn 14 05 57.6 +0.5**
LOR Lormes 9.60 20 *e*Pn **Pn 14 05 57.6 +0.5**
QUIF Quistinic 9.70 351 Pn **Pn 14 05 59.1 +0.6**
SNR=1.0
QUIF Sn **Sn 14 07 41.7 -5.9**
comp=N,10nm,0.7s,SNR=1.0
QUIF Quistinic 9.70 351 Pn **Pn 14 05 59.1 +0.6**
QUIF Sn **Sn 14 07 41.7 -5.9**
comp=N,5.1nm,0.7s
QUIF Quistinic 9.70 351 Pn **Pn 14 05 59.1 +0.6**
QUIF Sn **Sn 14 07 41.7 -5.9**
comp=N,5.1nm,0.7s
QUIF Quistinic 9.70 351 Pn **Pn 14 05 59.1 +0.6**
SNR=1.0
CABF La Chapelle 9.77 30 Pn **Pn 14 05 59.8 +0.4**
SNR=1.0
CABF La Chapelle 9.77 30 Pn **Pn 14 05 59.8 +0.4**
CABF La Chapelle 9.77 30 Pn **Pn 14 05 59.8 +0.4**
CABF La Chapelle 9.77 30 Pn **Pn 14 05 59.8 +0.4**
SNR=1.0
SGMF Saint Gilles 9.97 354 Pn **Pn 14 06 02.6 +0.4**
SNR=1.0
SGMF Saint Gilles 9.97 354 Pn **Pn 14 06 02.6 +0.4**
SGMF Saint Gilles 9.97 354 Pn **Pn 14 06 02.6 +0.4**
SGMF Saint Gilles 9.97 354 Pn **Pn 14 06 02.6 +0.4**
SNR=1.0
GRR Gorron 10.04 0 Pn **Pn 14 06 02.9 -0.3**
SNR=1.0
GRR Sn **Sn 14 07 51.4 -4.6**
comp=N,4.1nm,0.4s,SNR=1.0
GRR Gorron 10.04 0 Pn **Pn 14 06 02.9 -0.3**
GRR Sn **Sn 14 07 51.4 -4.6**
comp=N,2.0nm,0.4s
GRR Gorron 10.04 0 Pn **Pn 14 06 02.9 -0.3**
GRR Sn **Sn 14 07 51.4 -4.6**
comp=N,2.0nm,0.4s
GRR Gorron 10.04 0 Pn **Pn 14 06 02.9 -0.3**
SNR=1.0
ROSF Rostrenen 10.13 351 Pn **Pn 14 06 04.7 +0.3**
SNR=1.0
ROSF Rostrenen 10.13 351 Pn **Pn 14 06 04.7 +0.3**
ROSF Rostrenen 10.13 351 Pn **Pn 14 06 04.7 +0.3**
ROSF Rostrenen 10.13 351 Pn **Pn 14 06 04.7 +0.3**
SNR=1.0
LDF La Druitiere 10.27 3 Pn **Pn 14 06 06.1 -0.1**
SNR=1.0
LDF La Druitiere 10.27 3 Pn **Pn 14 06 06.1 -0.1**
SNR=1.0
FLN La Foliniere 10.42 2 Pn **Pn 14 06 08.0 -0.4**
SNR=1.0
FLN La Foliniere 10.42 2 Pn **Pn 14 06 08.0 -0.4**
FLN La Foliniere 10.42 2 Pn **Pn 14 06 08.0 -0.4**
FLN La Foliniere 10.42 2 Pn **Pn 14 06 08.0 -0.4**
SNR=1.0

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*IDC **14** 14:05:39.2±5.6, 21°.05S×178°.80W, h596km±65km, mb3.4/7, mb1 3.6/8, mb1mx3.3/18, mbtmp3.4/8, Error ellipse: s-maj=36.5km s-min=32.8km az=44.0*
*ISCJB **14** 14:05:41.5±1.5, 21°.3S±0°.2×178°.9W±0°.2, h645km±15km, mb3.7/7, Error ellipse: s-maj=32.9km s-min=22.1km az=20.1*
*NEIC **14** 14:05:42.4±1.4, 21°.17S×178°.93W, h637km±13km, mb4.3/1, Error ellipse: s-maj=25.4km s-min=18.4km az=118.0*
ISC 14 14:05:42.5±1.6, 21°.2S±0°.2×178°.9W±0°.2, h638km±15km, n19, σ0°93/17, mb3.7/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.48**	**320**	*e*P	**P**	**14 07 14.5**	**+0.5**
URZ	**Urewera**	**17.36**	**191**	P	**P**	**14 09 10.1**	**-0.4**
1.0nm,0.3s,baz=348,slow=14,SNR=5.6							
URZ	**Urewera**	**17.36**	**191**	P	**P**	**14 09 09.5**	**-1.1**
HNR	**Honiara**	**23.47**	**297**	*e*P	**P**	**14 10 02.8**	**-2.8**
EIDS	**Eidsvold**	**27.86**	**256**	*e*P	**P**	**14 10 44.4**	**+0.5**
CTA	**Charters Tower**	**32.59**	**266**	P	**P**	**14 11 24.7**	**+0.3**
4.0nm,0.4s,mb4.3,baz=100,slow=11,SNR=11							
CTA	**Charters Tower**	**32.59**	**266**	P	**P**	**14 11 24.7**	**+0.3**
CTAO	**Charters Tower**	**32.59**	**266**	*e*P	**P**	**14 11 24.2**	**-0.2**
3.7nm,0.4s,mb4.3							
STKA	**Stephens Creek**	**36.73**	**245**	P	**P**	**14 11 59.2**	**+0.8**
4.9nm,1.0s,mb4.0,baz=97,slow=12,SNR=8.1							
STKA	**Stephens Creek**	**36.73**	**245**	*e*P	**P**	**14 11 59.1**	**+0.7**
ASAR	**Alice Springs**	**43.55**	**258**	P	**P**	**14 12 52.7**	**+0.2**
3.5nm,0.5s,mb3.9,baz=94,slow=7.6,SNR=74							
ASAR				PcP	PcP	14 14 25.9	+0.6
0.4nm,0.6s,baz=93,slow=3.8,SNR=4.7							
WB2	**Warramunga Arr**	**43.66**	**263**	*e*P	**P**	**14 12 52.9**	**-0.5**
WRA	**Warramunga Arr**	**43.68**	**263**	P	**P**	**14 12 53.0**	**-0.5**
2.0nm,0.3s,mb3.9,baz=97,slow=7.4,SNR=162							
WRA	**Warramunga Arr**	**43.68**	**263**	P	**P**	**14 12 53.0**	**-0.5**
MJAR	**Matsushiro Arr**	**70.26**	**324**	P	**P**	**14 15 53.0**	**-0.5**
0.8nm,0.5s,mb3.4,baz=156,slow=5.8,SNR=6.0							
ILAR	**Eielson Array**	**89.17**	**13**	P	**P**	**14 17 31.2**	**0.0**
0.2nm,0.4s,mb3.2,baz=215,slow=5.6,SNR=9.2							
CMAR	**Chiang Mai Arr**	**89.55**	**290**	P	**P**	**14 17 36.0**	**+1.8**
0.2nm,0.5s,mb3.2,baz=160,slow=5.6,SNR=4.1							
ARCES	**ARCESS Array B**	**129.43**	**349**	PKP	PKPdf	14 23 39.7	+0.3
1.1nm,0.8s,baz=75,slow=1.4,SNR=7.4							
BRTR	**Keskin Array B**	**146.66**	**311**	PKPbc	PKPbc	14 24 14.4	0.0
0.7nm,0.6s,baz=117,slow=2.0,SNR=3.6							

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*ISCJB **14** 14:21:44.7±0.8, 7°.95N±0°.06×126°.3E±0°.1, h162km±5km, mb3.7/11, Error ellipse: s-maj=20.6km s-min=9.3km az=167.2*
*NEIC **14** 14:21:44.7±0.8, 8°.08N×126°.56E, h150km, mb4.1/2, Error ellipse: s-maj=40.2km s-min=10.4km az=63.0*
*MAN **14** 14:21:45, 7°.96N×126°.20E, h153km, mb4.3, ML3.2, MS3.0*
*IDC **14** 14:21:47.2±7.3, 8°.03N×126°.46E, h170km±66km, mb3.4/9, mb1 3.5/9, mb1mx3.3/21, mbtmp3.4/9, Error ellipse: s-maj=64.7km s-min=13.7km az=64.0*
ISC 14 14:21:45.7±0.8, 7°.96N±0°.06×126°.3E±0°.1, h154km±6km, n20, σ0°86/23, mb3.7/11, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.01**	**184**	*e*P	**Pn**	**14 22 11.7**	**+0.8**
BUTP	**Butuan**	**1.22**	**325**	*e*P	**Pn**	**14 22 04.0**	**-8.7**
BUTP				*e*S	**Sn**	**14 22 19.4**	**-14**
BUKP	**Musuan**	**1.25**	**266**	*e*P	**Pn**	**14 22 13.5**	**+0.5**
KCP	**Kidapawan**	**1.54**	**232**	↓*i*P	**Pn**	**14 22 14.8**	**-1.2**
KCP				*i* S	**Sn**	**14 22 39.0**	**-0.1**
SCPH	**Surigao**	**1.99**	**336**	↓*e*P	**Pn**	**14 22 20.7**	**-0.2**
SCPH				*e*S	**Sn**	**14 22 47.9**	**-0.1**
PAGZ	**Pagadian**	**2.91**	**268**	*e*P	**Pn**	**14 22 31.6**	**-0.4**
QIZ	**Qiongzhong**	**19.42**	**306**	*e*P	**P**	**14 26 00.7**	**+0.5**
6.6nm,0.7s							
FITZ	**Fitzroy Crossi**	**25.90**	**181**	P	**P**	**14 27 04.2**	**+0.6**
6.1nm,1.1s,mb4.1,baz=49,slow=8.5,SNR=7.0							
KMI	**Kunming**	**28.24**	**310**	P	**P**	**14 27 25.5**	**+1.1**
KMI				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.3							
CMAR	**Chiang Mai Arr**	**28.58**	**294**	P	**P**	**14 27 29.7**	**+2.2**
comp=Z,0.4nm,0.3s,mb3.6,baz=114,slow=9.0,SNR=2.7							
WRA	**Warramunga Arr**	**28.83**	**164**	P	**P**	**14 27 29.2**	**-0.4**
comp=Z,0.3nm,0.6s,mb3.2,baz=349,slow=9.3,SNR=5.4							
WRA				PcP	PcP	14 30 35.6	0.0
comp=Z,0.6nm,0.8s,baz=333,slow=2.7,SNR=4.1							
WRA	**Warramunga Arr**	**28.83**	**164**	P	**P**	**14 27 29.2**	**-0.4**
WRA				PcP	PcP	14 30 35.6	0.0
ASAR	**Alice Springs**	**32.29**	**167**	P	**P**	**14 28 00.3**	**+0.3**
comp=Z,0.3nm,0.3s,mb3.5,baz=352,slow=7.6,SNR=9.5							
ASAR				PcP	PcP	14 30 45.1	+0.4
comp=Z,0.4nm,0.6s,baz=346,slow=1.9,SNR=6.4							
STKA	**Stephens Creek**	**42.22**	**161**	P	**P**	**14 29 23.6**	**0.0**
comp=Z,5.7nm,1.2s,mb4.1,baz=350,slow=7.5,SNR=5.0							
SONM	**Songino Array**	**43.19**	**340**	P	**P**	**14 29 32.6**	**+1.3**
comp=Z,0.2nm,0.5s,mb3.0,baz=147,slow=11,SNR=3.0							
MK31	**Makanchi Array**	**53.90**	**324**	*e*P	**P**	**14 30 52.5**	**-0.6**
MKAR	**Makanchi Array**	**53.90**	**324**	P	**P**	**14 30 52.5**	**-0.6**
comp=Z,1.3nm,0.5s,mb3.9,baz=118,slow=6.7,SNR=38							
MKAR				PcP	PcP	14 31 56.3	-0.3
comp=Z,0.9nm,0.7s,baz=112,slow=3.8,SNR=11							
KKAR	**Karatay Array**	**59.91**	**316**	*e*P	**P**	**14 31 34.5**	**-1.0**
comp=Z,2.5nm,0.8s,mb4.1							
BRTR	**Keskin Array B**	**87.03**	**310**	P	**P**	**14 34 12.8**	**-1.3**
comp=Z,0.5nm,0.8s,mb3.4,baz=160,slow=3.8,SNR=4.3							
FINES	**FINESS Array B**	**87.94**	**332**	P	**P**	**14 34 16.8**	**-1.1**
comp=Z,1.1nm,0.6s,mb3.9,baz=80,slow=4.6,SNR=7.4							

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*NEIC **14** 14:42:09.6±3.6, 31°.66S×179°.81E, h459km±37km, Error ellipse: s-maj=69.8km s-min=24.7km az=204.0*
*IDC **14** 14:42:10.5±25.0, 31°.15S×179°.58E, h446km±222km, mb3.0/4, mb1 3.2/4, mb1mx2.9/17, mbtmp3.0/4, Error ellipse: s-maj=175.5km s-min=54.8km az=119.0*
ISC 14 14:42:11.5±2.0, 32°.0S±0°.2×179°.7E±0°.3, h480km±22km, n22, σ0°68/22, mb3.4/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.70**	**191**	*e*PN	**P**	**14 43 43.9**	**+0.1**
OUZ	**Omahuta**	**6.05**	**236**	*e*P	**P**	**14 43 47.9**	**+0.6**
PUZ	**Puketiti**	**6.21**	**191**	*e*PN	**P**	**14 43 48.2**	**-0.6**
MWZ	**Matawai**	**6.60**	**195**	*e*PN	**P**	**14 43 53.0**	**+0.2**
MWZ				*e*SN	**S**	**14 45 16.0**	**+0.2**
URZ	**Urewera**	**6.63**	**198**	S	**S**	**14 45 16.1**	**-0.2**
4.7nm,0.3s,baz=94,slow=23,SNR=18							
URZ	**Urewera**	**6.63**	**198**	*e*P	**P**	**14 43 53.1**	**0.0**
67nm,0.6s							
URZ	**Urewera**	**6.63**	**198**	*e*PN	**P**	**14 43 52.5**	**-0.5**
BKZ	**Black Stump Fm**	**7.65**	**199**	*e*PN	**P**	**14 44 02.7**	**-0.8**
KAHZ	**Kahuranaki**	**8.14**	**196**	*e*PN	**P**	**14 44 09.9**	**+1.2**
PXZ	**Pawanui**	**8.37**	**195**	*e*PN	**P**	**14 44 11.8**	**+0.7**
PXZ				*e*SN	**S**	**14 45 49.2**	**-0.3**
MRZ	**Mangatainoka R**	**9.30**	**200**	*e*PN	**P**	**14 44 19.6**	**-1.4**
KHZ	**Kahutara**	**11.53**	**204**	*e*PN	**P**	**14 44 45.8**	**+0.9**
CTA	**Charters Tower**	**32.19**	**283**	P	**P**	**14 47 58.2**	**-0.7**
3.4nm,0.9s,mb3.8,baz=135,slow=8.6,SNR=4.7							
CTA	**Charters Tower**	**32.19**	**283**	P	**P**	**14 47 58.2**	**-0.8**
CTAO	**Charters Tower**	**32.19**	**283**	*e*P	**P**	**14 47 58.0**	**-1.0**
ASAR	**Alice Springs**	**41.11**	**270**	P	**P**	**14 49 13.2**	**+0.4**
0.3nm,0.4s,mb3.0,baz=107,slow=7.4,SNR=13							
WB2	**Warramunga Arr**	**42.24**	**275**	*e*P	**P**	**14 49 21.2**	**-0.5**
WRA	**Warramunga Arr**	**42.25**	**275**	P	**P**	**14 49 21.5**	**-0.3**
0.4nm,0.3s,mb3.3,baz=111,slow=7.9,SNR=11							
WRA	**Warramunga Arr**	**42.25**	**275**	P	**P**	**14 49 21.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**50.44**	**272**	P	**P**	**14 50 25.1**	**+0.9**
1.9nm,0.9s,mb3.4,baz=72,slow=3.2,SNR=4.5							
FINES	**FINESS Array B**	**145.90**	**338**	PKPbc	PKPbc	15 00 55.1	-0.6
1.0nm,0.5s,baz=58,slow=2.9,SNR=10							
BRTR	**Keskin Array B**	**151.56**	**295**	PKPbc	PKPbc	15 01 11.5	+0.9
0.3nm,0.5s,baz=111,slow=3.9,SNR=2.9							

IDC 14 14:44:26.3±6.5, 15°.16S×172°.89W, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.4/3, Error ellipse: s-maj=310.7km s-min=22.8km az=142.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.64**	**41**	Pn	Pn	14 44 55.4	-1.0
184nm,0.3s,baz=124,slow=1.0,SNR=348							
AFI				Sn	Sn	14 45 11.4	-6.8
407nm,0.3s,baz=89,slow=23,SNR=19							
WRA	**Warramunga Arr**	**50.38**	**257**	P	P	14 53 25.0	-0.7
0.4nm,0.7s,baz=90,slow=7.3,SNR=6.9							
ASAR	**Alice Springs**	**50.66**	**252**	P	P	14 53 27.7	0.0
0.5nm,0.5s,baz=87,slow=8.2,SNR=13							
ILAR	**Eielson Array**	**82.11**	**11**	P	P	14 56 49.6	+1.3
0.1nm,0.5s,baz=236,slow=6.4,SNR=4.8							

KRSC 14 15:02:20.2±0.9, 55°.30N×160°.48E, h177km±36km, ML3.8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLY	**Klyuchi**	**1.02**	**5**	*e*P	Pn	15 02 48.9	+1.3
KLY				*i* S	Sn	15 03 10.1	+1.2
MKZ	**Mys Kozlova**	**1.04**	**135**	*e*P	Pn	15 02 48.9	+1.1
MKZ				*i* S	Sn	15 03 09.9	+0.9
SRDR	**Sredinnyy**	**1.11**	**337**	P	Pn	15 02 49.5	+1.2
KBTR	**Krutoberegovo**	**1.60**	**54**	*e*P	Pn	15 02 53.9	+1.1
KBTR				*i* S	Sn	15 03 18.1	0.0
GNL	**Ganaly**	**2.19**	**224**	*e*P	Pn	15 03 00.7	+1.6
SPN	**Mys Shipunski**	**2.22**	**187**	P	Pn	15 03 00.1	+0.6
SPN				*i* S	Sn	15 03 29.0	-0.9
AVH	**Avacha**	**2.28**	**207**	*e*P	Pn	15 03 02.6	+2.5
PET	**Petropavlovsk**	**2.52**	**206**	*e*P	Pn	15 03 04.7	+1.8
PET				*i* S	Sn	15 03 37.4	+1.4
BKI	**Bering**	**3.15**	**90**	*e*P	Pn	15 03 12.6	+2.2
BKI				*i* S	Sn	15 03 50.7	+1.3

IDC 14 15:04:30.4±5.2, 30°.34S×178°.29W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, MS3.9/2, Ms1 4.0/2, ms1mx3.0/26, Error ellipse: s-maj=185.8km s-min=56.0km az=150.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.77**	**204**	Sn	Sn	15 07 48.5	-29
0.7nm,0.3s,baz=164,slow=17,SNR=12							
CTA	**Charters Tower**	**33.54**	**279**	LR	LR	15 20 53.6	
comp=Z,91nm,20.9s,baz=224,slow=29							
STKA	**Stephens Creek**	**34.25**	**257**	P	P	15 11 17.5	-0.5
2.6nm,0.9s,baz=111,slow=14,SNR=3.2							
ASAR	**Alice Springs**	**42.86**	**267**	P	P	15 12 30.0	-0.5
0.4nm,0.5s,baz=100,slow=7.2,SNR=14							
WRA	**Warramunga Arr**	**43.84**	**272**	P	P	15 12 39.3	+0.8
1.8nm,0.7s,baz=112,slow=7.9,SNR=16							
PLCA	**Paso Flores**	**82.73**	**133**	LR	LR	15 43 09.2	
comp=Z,183nm,20.9s,baz=269,slow=28							
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	15 24 07.3	-0.9
1.9nm,0.9s,baz=41,slow=2.8,SNR=3.6							

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*CRAAG **14** 15:12:46.5, 36°.82N×3°.31E, Ml3.5*
*MDD **14** 15:12:47.9±0.9, 36°.91N×3°.38E, h3km±11km, mb4.1/6, Error ellipse: s-maj=9.5km s-min=6.5km az=8.0, PRIMO*
*CSEM **14** 15:12:47.2±0.3, 36°.93N×3°.39E, h2km, ML3.5, Error ellipse: s-maj=9.4km s-min=5.1km az=82.0*
*NEIC **14** 15:12:51.6, 37°.12N×3°.10E, h0km, MG3.8(MDD), After MDD.*
ISC 14 15:12:48.8±0.9, 37°.01N±0°.06×3°.20E±0°.09, h8km±13km, n98, σ1°47/146, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.25**	**213**	P	**Pg**	**15 12 53.3**	**-0.4**
ABA	**Alger-Bouzarea**	**0.25**	**213**	P	**Pg**	**15 12 53.3**	**-0.4**
ABA	**Alger-Bouzarea**	**0.25**	**213**	P	**Pg**	**15 12 53.3**	**-0.4**
ABA	**Alger-Bouzarea**	**0.25**	**213**	P	**Pg**	**15 12 53.3**	**-0.4**
ABMS	**Boumerdes**	**0.34**	**140**	P	**Pg**	**15 12 50.7**	**-4.7**
ABMS	**Boumerdes**	**0.34**	**140**	P	**Pg**	**15 12 50.7**	**-4.7**
ABMS	**Boumerdes**	**0.34**	**140**	P	**Pg**	**15 12 50.7**	**-4.7**
ABMS	**Boumerdes**	**0.34**	**140**	P	**Pg**	**15 12 50.7**	**-4.7**
EMHD	**Djebel Mahouad**	**0.83**	**194**	P	**Pg**	**15 13 02.0**	**-2.8**
EMHD	**Djebel Mahouad**	**0.83**	**194**	P	**Pg**	**15 13 02.0**	**-2.8**
EMHD	**Djebel Mahouad**	**0.83**	**194**	P	**Pg**	**15 13 02.0**	**-2.8**
EMHD	**Djebel Mahouad**	**0.83**	**194**	P	**Pg**	**15 13 02.0**	**-2.8**
ADJB	**Djebel Djouab**	**0.87**	**167**	P	**Pg**	**15 13 02.1**	**-3.4**
ADJB	**Djebel Djouab**	**0.87**	**167**	P	**Pg**	**15 13 02.1**	**-3.4**
ADJB	**Djebel Djouab**	**0.87**	**167**	P	**Pg**	**15 13 02.1**	**-3.4**
ADJB	**Djebel Djouab**	**0.87**	**167**	P	**Pg**	**15 13 02.1**	**-3.4**
AKET	**Djebel Ketaf**	**1.11**	**150**	P	**Pg**	**15 13 06.0**	**-4.0**
AKET	**Djebel Ketaf**	**1.11**	**150**	P	**Pg**	**15 13 06.0**	**-4.0**
AKET	**Djebel Ketaf**	**1.11**	**150**	P	**Pg**	**15 13 06.0**	**-4.0**
AKET	**Djebel Ketaf**	**1.11**	**150**	P	**Pg**	**15 13 06.0**	**-4.0**
EBNR	**Beni Rached**	**1.53**	**242**	P	**Pn**	**15 13 18.0**	**+1.7**
EBNR	**Beni Rached**	**1.53**	**242**	P	**Pn**	**15 13 18.0**	**+1.7**
ECHA	**Ech Chlef**	**1.71**	**240**	P	**Pn**	**15 13 20.5**	**+1.7**
ECHA	**Ech Chlef**	**1.71**	**240**	P	**Pn**	**15 13 20.5**	**+1.7**
ECHF	**Ech Chlef**	**1.73**	**241**	P	**Pn**	**15 13 20.5**	**+1.5**
ECHF	**Ech Chlef**	**1.73**	**241**	P	**Pn**	**15 13 20.5**	**+1.5**
EANR	**'Ain N'Sour**	**2.00**	**239**	P	**Pb**	**15 13 29.5**	**+4.2**
EANR	**'Ain N'Sour**	**2.00**	**239**	P	**Pb**	**15 13 29.5**	**+4.2**
EANR	**'Ain N'Sour**	**2.00**	**239**	P	**Pb**	**15 13 29.5**	**+4.2**
EIBI	**Ibiza**	**2.49**	**324**	P	**Pn**	**15 13 30.0**	**+0.4**
EIBI				S	**Sn**	**15 13 59.4**	**-0.7**
EIBI	**Ibiza**	**2.49**	**324**	P	**Pn**	**15 13 30.0**	**+0.4**
4.5nm,0.1s,SNR=14							
EIBI				S	**Sn**	**15 14 00.2**	**+0.1**
6.9nm,0.1s,SNR=12							
EIBI	**Ibiza**	**2.49**	**324**	P	**Pn**	**15 13 30.0**	**+0.4**
4.5nm,0.1s,SNR=14							
EIBI				S	**Sn**	**15 14 00.2**	**+0.1**
6.9nm,0.1s,SNR=12							
EIBI	**Ibiza**	**2.49**	**324**	P	**Pn**	**15 13 30.0**	**+0.4**
4.5nm,0.1s,SNR=14							
EIBI				S	**Sn**	**15 13 59.4**	**-0.8**
6.9nm,0.1s,SNR=12							
ETOS	**Mallorca**	**2.77**	**354**	P	**Pn**	**15 13 33.7**	**+0.3**
ETOS				S	**Sn**	**15 14 05.8**	**-1.2**
ETOS	**Mallorca**	**2.77**	**354**	P	**Pn**	**15 13 33.7**	**+0.3**
1.8nm,0.1s,SNR=16							
ETOS				S	**Sn**	**15 14 05.8**	**-1.2**
1.5nm,0.1s,SNR=7.9							
ETOS	**Mallorca**	**2.77**	**354**	P	**Pn**	**15 13 33.7**	**+0.3**
1.8nm,0.1s,SNR=16							
ETOS				S	**Sn**	**15 14 05.8**	**-1.2**
1.5nm,0.1s,SNR=7.9							
EBEN	**Beniarda**	**3.20**	**303**	P	**Pn**	**15 13 39.5**	**+0.2**
EBEN				S	**Sn**	**15 14 15.3**	**-2.3**
EBEN	**Beniarda**	**3.20**	**303**	P	**Pn**	**15 13 39.5**	**+0.2**
0.2nm,0.1s,SNR=7.7							
EBEN				S	**Sn**	**15 14 17.7**	**+0.1**
0.6nm,0.1s							
EBEN	**Beniarda**	**3.20**	**303**	P	**Pn**	**15 13 39.5**	**+0.2**
0.2nm,0.1s,SNR=7.7							
EBEN				S	**Sn**	**15 14 17.7**	**+0.1**
0.6nm,0.1s							
EBEN	**Beniarda**	**3.20**	**303**	P	**Pn**	**15 13 39.5**	**+0.2**
0.2nm,0.1s,SNR=7.7							
EBEN				S	**Sn**	**15 14 15.3**	**-2.3**
0.6nm,0.1s							
EMUR	**La Murta**	**3.63**	**285**	P	**Pn**	**15 13 48.3**	**+3.1**
EMUR				S	**Sn**	**15 14 25.9**	**-2.5**
EMUR	**La Murta**	**3.63**	**285**	P	**Pn**	**15 13 45.9**	**+0.6**
0.4nm,0.2s,SNR=4.0							
EMUR				S	**Sn**	**15 14 27.4**	**-1.0**
0.8nm,0.2s,SNR=7.9							
EMUR	**La Murta**	**3.63**	**285**	P	**Pn**	**15 13 45.9**	**+0.6**
0.4nm,0.2s,SNR=4.0							
EMUR				S	**Sn**	**15 14 27.4**	**-1.0**
0.8nm,0.2s,SNR=7.9							
EMUR	**La Murta**	**3.63**	**285**	P	**Pn**	**15 13 48.3**	**+3.0**
0.4nm,0.2s,SNR=4.0							
EMUR				S	**Sn**	**15 14 25.9**	**-2.4**
0.8nm,0.2s,SNR=7.9							
ETOB	**Tobarra**	**4.10**	**295**	P	**Pn**	**15 13 53.0**	**+1.3**
ETOB				S	**Sn**	**15 14 37.5**	**-2.3**
ETOB	**Tobarra**	**4.10**	**295**	P	**Pn**	**15 13 53.0**	**+1.3**
0.8nm,0.1s,SNR=7.9							
ETOB			

0.8nm,0.1s,SNR=7.9
EQES Quesada 5.06 281 P **Pn 15 14 05.6 +0.8**
EQES S **Sn 15 15 03.4 -0.1**
EQES Quesada 5.06 281 P **Pn 15 14 05.6 +0.8**
0.4nm,0.1s,SNR=7.9
EQES S **Sn 15 15 03.4 -0.1**
2.4nm,0.2s,SNR=7.9
EQES Quesada 5.06 281 P **Pn 15 14 05.6 +0.8**
0.4nm,0.1s,SNR=7.9
EQES S **Sn 15 15 03.4 -0.1**
2.4nm,0.2s,SNR=7.9
EQES Quesada 5.06 281 P **Pn 15 14 05.6 +0.7**
0.4nm,0.1s,SNR=7.9
EQES S **Sn 15 15 03.4 -0.1**
2.4nm,0.2s,SNR=7.9
EMIR Miracle 5.07 346 P **Pn 15 14 06.6 +1.6**
EMIR S **Sn 15 15 02.1 -1.5**
EMIR Miracle 5.07 346 P **Pn 15 14 06.6 +1.6**
4.1nm,0.2s,SNR=9.3
EMIR S **Sn 15 15 02.1 -1.5**
1.6nm,0.1s,SNR=4.0
EMIR Miracle 5.07 346 P **Pn 15 14 06.6 +1.6**
4.1nm,0.2s,SNR=9.3
EMIR S **Sn 15 15 02.1 -1.5**
1.6nm,0.1s,SNR=4.0
EMIR Miracle 5.07 346 P **Pn 15 14 06.6 +1.6**
4.1nm,0.2s,SNR=9.3
EMIR S **Sn 15 15 02.1 -1.5**
1.6nm,0.1s,SNR=4.0
EQUE Quentar 5.31 274 S **Sn 15 15 07.9 -1.9**
0.2nm,0.2s,SNR=7.9
EQUE Quentar 5.31 274 S **Sn 15 15 07.9 -1.9**
0.2nm,0.2s,SNR=7.9
EQUE Quentar 5.31 274 S **Sn 15 15 07.9 -1.9**
0.2nm,0.2s,SNR=7.9
EJON La Jonquera 5.44 358 P **Pn 15 14 11.2 +1.2**
EJON La Jonquera 5.44 358 P **Pn 15 14 11.2 +1.2**
1.0nm,0.1s,SNR=7.9
EJON La Jonquera 5.44 358 P **Pn 15 14 11.2 +1.2**
1.0nm,0.1s,SNR=7.9
EJON La Jonquera 5.44 358 P **Pn 15 14 11.2 +1.2**
1.0nm,0.1s,SNR=7.9
CLLI Llivia 5.54 351 P **Pn 15 14 13.5 +2.0**
CLLI S **Sn 15 15 13.1 -2.3**
CLLI Llivia 5.54 351 P **Pn 15 14 13.5 +2.0**
0.5nm,0.2s,SNR=7.9
CLLI S **Sn 15 15 13.1 -2.3**
0.2nm,0.1s,SNR=4.0
CLLI Llivia 5.54 351 P **Pn 15 14 13.5 +2.0**
0.5nm,0.2s,SNR=7.9
CLLI S **Sn 15 15 13.1 -2.3**
0.2nm,0.1s,SNR=4.0
CLLI Llivia 5.54 351 P **Pn 15 14 13.5 +2.0**
0.5nm,0.2s,SNR=7.9
CLLI S **Sn 15 15 13.1 -2.3**
0.2nm,0.1s,SNR=4.0
CSOR Sort 5.59 344 P **Pn 15 14 13.8 +1.6**
CSOR S **Sn 15 15 14.9 -1.7**
CSOR Sort 5.59 344 P **Pn 15 14 13.8 +1.6**
2.0nm,0.2s,SNR=7.7
CSOR S **Sn 15 15 14.9 -1.7**
0.8nm,0.2s,SNR=7.9
CSOR Sort 5.59 344 P **Pn 15 14 13.8 +1.6**
2.0nm,0.2s,SNR=7.7
CSOR S **Sn 15 15 14.9 -1.7**
0.8nm,0.2s,SNR=7.9
CSOR Sort 5.59 344 P **Pn 15 14 13.8 +1.6**
2.0nm,0.2s,SNR=7.7
CSOR S **Sn 15 15 14.9 -1.7**
0.8nm,0.2s,SNR=7.9
ESDC Sonseca Array 6.23 297 P **Pn 15 14 23.8 +2.8**
ESDC Sonseca Array 6.23 297 P **Pn 15 14 23.8 +2.8**
0.7nm,0.2s,baz=108,slow=14,SNR=3.8
ESDC Sonseca Array 6.23 297 P **Pn 15 14 23.8 +2.8**
0.7nm,0.2s,baz=108,slow=14,SNR=3.8
ESDC Sonseca Array 6.23 297 P **Pn 15 14 23.8 +2.9**
0.7nm,0.2s,slow=14,SNR=3.8
PAB San Pablo 6.46 295 *e*Pn **Pn 15 14 25.1 +1.1**
PAB San Pablo 6.46 295 *e*Pn **Pn 15 14 25.1 +1.0**

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*IDC **14** 15:35:19.9±0.7,39.°06S×92.°42W,h0km,mb4.2/9,*
mb1 4.4/9,mb1mx4.3/16,mbtmp4.2/9,MS3.9/10,
Ms1 3.9/10,ms1mx3.8/20,Error ellipse: s-maj=25.1km
s-min=18.7km az=105.0
*ISCJB **14** 15:35:20.7±0.4,39.°11S±0.°08×92.°2W±0.°1,h10km,*
mb4.5/34,MS3.9/10,Error ellipse: s-maj=13.0km
s-min=10.0km az=143.0
*NEIC **14** 15:35:21.7±0.4,38.°99S×92.°50W,h10km,mb4.7/29,Error*
ellipse: s-maj=13.4km s-min=10.2km az=215.0
ISC 14 15:35:22.5±0.4,39.°12S±0.°08×92.°3W±0.°1,h10km,n164,
σ0996/151,mb4.5/34,MS3.9/10,48C-61D,Southeast of
Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**16.73 102**		Pn	**Pn**	**15 39 20.9**	**+4.0**
	0.0nm,0.3s,baz=283,slow=15,SNR=6.5						
PLCA	**Paso Flores**	**16.73 102**		P	**Pn**	**15 39 21.6**	**+4.7**
	40nm,1.7s						
LCO	**Las Campanas**	**20.47**	**67**	*e*P	**P**	**15 40 00.7**	**+0.3**
	25nm,1.1s						
CFAA	**Coronel Fontan**	**20.94**	**76**	P	**P**	**15 40 05.6**	**+0.1**
	3.5nm,1.0s,baz=251,slow=9.1,SNR=15						
CFAA				LR	LR	15 46 22.4	
	comp=Z,35nm,18.5s,MS2.8,baz=250,slow=32						
CFAA	**Coronel Fontan**	**20.94**	**76**	P	**P**	**15 40 05.6**	**+0.1**
CFAA				LR	LR	15 46 22.4	
USHA	**Ushuaia**	**22.45**	**142**	LR	LR	15 47 30.4	
	comp=Z,446nm,18.9s,MS3.9,baz=173,slow=32						
TRQA	**Tornquist**	**23.65**	**97**	*e*P	**P**	**15 40 34.9**	**+0.8**
LPAZ	**La Paz**	**31.03**	**50**	P	**P**	**15 41 40.9**	**+0.5**
	7.8nm,1.2s,mb4.4,baz=206,slow=7.1,SNR=16						
LPAZ				LR	LR	15 51 25.7	
	comp=Z,224nm,21.6s,MS3.8,baz=257,slow=31						
LPAZ	**La Paz**	**31.03**	**50**	*e*P	**P**	**15 41 40.8**	**+0.4**
	7.9nm,1.0s,mb4.5						
ATAH	**Atahualpa**	**34.21**	**25**	P	**P**	**15 42 08.7**	**+0.3**
	6.2nm,0.8s,mb4.6,baz=175,slow=14,SNR=4.6						
OTAV	**Otavalo**	**41.17**	**21**	*e*P	**P**	**15 43 06.1**	**-1.1**
	9.0nm,1.4s,mb4.2						
BDFB	**Brasilia**	**45.15**	**71**	P	**P**	**15 43 37.8**	**-1.6**
	6.9nm,1.1s,mb4.4,baz=307,slow=6.8,SNR=5.6						
BDFB				LR	LR	16 01 47.4	
	comp=Z,272nm,18.6s,MS4.2,baz=87,slow=35						
JTS	**JuntasAbangare**	**49.62**	**9**	LR	LR	15 59 09.7	
	comp=Z,38nm,20.1s,MS3.4,slow=29						
QSPA	**South Pole Qui**	**51.11**	**180**	P	**P**	**15 44 25.1**	**+0.3**
	2.1nm,0.7s,mb4.2,baz=122,slow=4.9,SNR=11						
SBA	**Scott Base**	**54.36**	**195**	*e*P	**P**	**15 44 49.1**	**+0.3**
	4.4nm,0.9s,mb4.4						
SYO	**Syowa Base**	**66.47**	**163**	⇓*e*P	**P**	**15 46 10.0**	**-1.7**
TXAR	**Lajitas Array**	**68.93**	**349**	P	**P**	**15 46 26.0**	**-1.5**
	2.3nm,1.0s,mb4.0,baz=167,slow=9.3,SNR=12						
628A	**Black Gap, Mar**	**68.97**	**350**	⇓P	**P**	**15 46 26.8**	**-1.0**
	baz=69						
627A	**Terlingua Ranc**	**69.00**	**350**	⇑P	**P**	**15 46 26.9**	**-1.1**
	baz=69						
JCT	**Junction City**	**69.60**	**353**	⇓P	**P**	**15 46 30.7**	**-1.0**
	baz=70						
JCT	**Junction City**	**69.60**	**353**	*e*P	**P**	**15 46 29.4**	**-2.2**
	15nm,1.0s,mb4.9						
526A	**Mary Lane Ranc**	**69.70**	**349**	⇑P	**P**	**15 46 31.2**	**-1.1**
	baz=70						
527A	**Woodward Ranch**	**69.72**	**350**	⇓P	**P**	**15 46 31.3**	**-1.1**
	baz=70						
426A	**McDonald Obser**	**70.29**	**349**	⇓P	**P**	**15 46 34.5**	**-1.4**
	baz=70						
427A	**Hayter Ranch,**	**70.38**	**350**	⇑P	**P**	**15 46 35.4**	**-1.0**
	baz=71						
425A	**Indio Mountain**	**70.55**	**348**	⇑P	**P**	**15 46 36.7**	**-0.8**
	baz=71						
328A	**Wristen Ranch,**	**70.83**	**350**	⇓P	**P**	**15 46 38.6**	**-0.6**
	baz=71						
320A	**Kipp Ranch, An**	**71.71**	**345**	⇑P	**P**	**15 46 44.6**	**+0.1**
	baz=72						
MAW	**Mawson**	**71.94**	**170**	P	**P**	**15 46 44.7**	**-0.9**
	4.1nm,0.9s,mb4.3,baz=206,slow=6.9,SNR=11						
MAW				LR	LR	16 15 06.3	
	comp=Z,67nm,19.0s,MS3.9,baz=171,slow=33						
318A	**Bisbee**	**72.11**	**344**	⇑P	**P**	**15 46 45.8**	**-1.1**
	baz=72						
124A	**Stringfield Ra**	**72.50**	**348**	⇓P	**P**	**15 46 48.9**	**-0.3**
	baz=73						
219A	**White Tail Can**	**72.50**	**345**	⇓P	**P**	**15 46 48.9**	**-0.3**
	baz=73						
218A	**Dragoon**	**72.64**	**344**	⇓P	**P**	**15 46 49.2**	**-0.9**
	baz=73						
Z27A	**Tatum**	**72.78**	**350**	⇑P	**P**	**15 46 50.1**	**-0.8**
	baz=73						
TUC	**Tucson**	**73.12**	**344**	*e*P	**P**	**15 46 50.2**	**-2.7**
	6.2nm,1.0s,mb4.5						
118A	**Homack Ranch,**	**73.27**	**344**	⇓P	**P**	**15 46 53.1**	**-0.6**
	baz=73						
117A	**Oracle**	**73.36**	**344**	⇑P	**P**	**15 46 54.0**	**-0.4**
	baz=74						
Y24A	**Capitan**	**73.70**	**349**	⇓P	**P**	**15 46 56.5**	**+0.3**
	baz=74						
X26A	**CR and CF Fran**	**74.08**	**350**	⇑P	**P**	**15 46 58.0**	**-0.5**
	baz=74						
Y20A	**Horse Springs,**	**74.18**	**346**	⇓P	**P**	**15 46 59.5**	**+0.4**
	baz=74						
Y19A	**Nutrioso**	**74.40**	**345**	⇑P	**P**	**15 47 00.5**	**+0.2**
	baz=75						
X21A	**Alamocita Cree**	**74.60**	**347**	⇓P	**P**	**15 47 01.6**	**+0.1**
	baz=75						
Y16A	**Circle Bar Ran**	**74.79**	**344**	⇓P	**P**	**15 47 02.3**	**-0.3**
	baz=75						
ANMO	**Albuquerque**	**74.86**	**348**	*e*P	**P**	**15 47 01.5**	**-1.6**
	4.8nm,0.9s,mb4.4						
W24A	**Lazy 6 Ranch,**	**74.95**	**349**	⇑P	**P**	**15 47 03.5**	**0.0**
	baz=75						
X18A	**Snowflake**	**75.09**	**345**	⇑P	**P**	**15 47 04.9**	**+0.5**
	baz=75						
X16A	**Lo Mia Camp, P**	**75.30**	**344**	⇓P	**P**	**15 47 05.4**	**-0.2**
	baz=76						
W20A	**Ramah**	**75.39**	**346**	⇓P	**P**	**15 47 06.4**	**+0.3**
	baz=76						
V25A	**Rancho No Teng**	**75.46**	**350**	⇓P	**P**	**15 47 06.0**	**-0.4**
	baz=76						
BC3	**Big Chuckawall**	**75.53**	**340**	⇓P	**P**	**15 47 07.2**	**+0.3**
	baz=76						
U25A	**Circle Dot Ran**	**75.98**	**350**	⇓P	**P**	**15 47 09.4**	**-0.1**
	baz=76						
U23A	**El Rito**	**76.17**	**348**	⇑P	**P**	**15 47 10.5**	**0.0**
	baz=76						
V17A	**Tonalea, Kykot**	**76.32**	**345**	⇓P	**P**	**15 47 11.0**	**-0.4**
	baz=76						
W14A	**Seligman**	**76.43**	**343**	⇑P	**P**	**15 47 12.0**	**0.0**
	baz=77						
W13A	**Hualapai Mount**	**76.51**	**342**	⇓P	**P**	**15 47 12.4**	**-0.1**
	baz=77						
BFSC	**Mount Baldy Ra**	**76.69**	**339**	⇑P	**P**	**15 47 13.8**	**+0.3**
	baz=77						
T24A	**Torres, Weston**	**76.73**	**350**	⇓P	**P**	**15 47 14.4**	**+0.7**
	baz=77						
V14A	**Boquillas Ranc**	**76.84**	**343**	⇑P	**P**	**15 47 14.9**	**+0.6**
	baz=77						
U16A	**Tuba City**	**76.89**	**344**	⇓P	**P**	**15 47 14.8**	**+0.2**
	baz=77						
S25A	**Robets Cordova**	**77.22**	**350**	⇑P	**P**	**15 47 17.1**	**+0.7**
	baz=77						
V13A	**Grand Canyon W**	**77.25**	**342**	⇓P	**P**	**15 47 16.4**	**-0.3**
	baz=77						
S24A	**Houchin Ranch,**	**77.31**	**349**	⇑P	**P**	**15 47 17.0**	**0.0**
	baz=78						
TUQ	**Turquoise Moun**	**77.34**	**340**	⇑P	**P**	**15 47 17.6**	**+0.4**
	baz=78,SNR=6.1						
V12A	**Nelson**	**77.34**	**341**	⇓P	**P**	**15 47 17.1**	**-0.1**
	baz=78,SNR=5.4						
U15A	**North Rim**	**77.41**	**344**	⇑P	**P**	**15 47 18.1**	**+0.6**
	baz=78						
GSC	**Goldstone**	**77.45**	**340**	⇑P	**P**	**15 47 18.0**	**+0.2**
	baz=78						
SDCO	**Great Sand Dun**	**77.45**	**349**	⇓P	**P**	**15 47 17.5**	**-0.2**
	baz=78						
SDCO	**Great Sand Dun**	**77.45**	**349**	P	**P**	**15 47 16.3**	**-1.5**
	4.4nm,1.6s,mb4.1						
SDCO				*e*		15 47 22.8	
T18A	**Mexican Hat**	**77.60**	**346**	⇑P	**P**	**15 47 19.1**	**+0.6**
	baz=78						
U14A	**Mt Trumbull**	**77.60**	**343**	⇓P	**P**	**15 47 18.3**	**-0.3**
	baz=78						
T17A	**Navajo Res., N**	**77.65**	**345**	⇑P	**P**	**15 47 18.9**	**+0.1**
	baz=78						
S22A	**4UR Ranch, Cre**	**77.66**	**348**	⇑P	**P**	**15 47 18.8**	**-0.1**
	baz=78						
S21A	**Coal Bank Pass**	**77.73**	**347**	⇓P	**P**	**15 47 19.9**	**+0.6**
	baz=78						
U13A	**Pakoon Wash**	**77.78**	**342**	⇑P	**P**	**15 47 20.1**	**+0.5**
	baz=78						
SHOC	**Shoshone**	**77.88**	**340**	⇓P	**P**	**15 47 20.0**	**-0.1**
	baz=78,SNR=5.3						
PKM	**Peak Mountain**	**77.94**	**337**	⇓P	**P**	**15 47 20.6**	**+0.1**
	baz=78						
S19A	**Harvey Farm, M**	**78.05**	**346**	⇑P	**P**	**15 47 20.5**	**-0.5**
	baz=78						
S18A	**Hurst Farm, Bl**	**78.16**	**346**	⇓P	**P**	**15 47 21.7**	**+0.1**
	baz=78						
SHPR	**Sheep Range**	**78.16**	**341**	*e*P	**P**	**15 47 21.2**	**-0.5**
	10nm,1.2s,mb4.6						
ISA	**Isabella**	**78.25**	**338**	⇑P	**P**	**15 47 22.4**	**+0.2**
	baz=78						
ISA	**Isabella**	**78.25**	**338**	P	**P**	**15 47 18.4**	**-3.8**
	6.6nm,1.1s,mb4.5						
PV01	**Paradox Valley**	**78.33**	**347**	P	**P**	**15 47 21.4**	**-1.2**
	4.12nm,1.0s						
T13A	**Saint George**	**78.35**	**342**	⇓P	**P**	**15 47 23.1**	**+0.4**
	baz=78						
MPMC	**Manual Prospec**	**78.35**	**339**	⇓P	**P**	**15 47 22.7**	**0.0**
	baz=78						
U10A	**Ash Meadows, A**	**78.38**	**340**	⇓P	**P**	**15 47 22.2**	**-0.7**
	baz=78						
CCUT	**Cedar City**	**78.73**	**343**	*e*P	**P**	**15 47 24.1**	**-0.7**
	9.7nm,0.9s,mb4.7						
S13A	**Holt Ranch, En**	**78.87**	**343**	⇑P	**P**	**15 47 25.6**	**0.0**
	baz=79,SNR=6.9						
T11A	**Corn Creek, Al**	**78.87**	**342**	⇓P	**P**	**15 47 25.3**	**-0.3**
	baz=79						
ARUT	**Antelope Range**	**78.97**	**343**	P	**P**	**15 47 25.6**	**-0.6**
	4.1nm,1.0s,mb4.3						
SMCO	**Snowmass**	**79.08**	**348**	*e*P	**P**	**15 47 29.7**	**+3.0**
	15nm,1.2s,mb4.8						
S12A	**Delamar Landin**	**79.13**	**342**	⇓P	**P**	**15 47 27.9**	**+0.9**
	baz=79,SNR=6.2						
Q19A	**Hogan Spring (**	**79.25**	**347**	⇓P	**P**	**15 47 28.1**	**+0.5**
	baz=80						
Q18A	**Rafter H Ranch**	**79.55**	**346**	⇓P	**P**	**15 47 31.0**	**+1.8**
	baz=80						
Q16A	**Castle Valley**	**79.58**	**345**	⇓P	**P**	**15 47 29.2**	**-0.2**
	baz=80						
P20A	**De Beque**	**79.63**	**347**	⇑P	**P**	**15 47 30.2**	**+0.5**
	baz=80						
R11A	**Troy Canyon, C**	**80.02**	**342**	⇑P	**P**	**15 47 31.8**	**0.0**
	baz=80,SNR=5.5						
P18A	**Preston Nutter**	**80.08**	**346**	⇓P	**P**	**15 47 33.5**	**+1.4**
	baz=80,SNR=5.5						
Q14A	**Sevier Lake (B**	**80.09**	**344**	⇓P	**P**	**15 47 32.1**	**-0.1**
	baz=80						
O19A	**Miners Draw (B**	**80.53**	**347**	⇑P	**P**	**15 47 35.4**	**+0.9**
	baz=81						
N23A	**Red Feather La**	**80.61**	**350**	⇓P	**P**	**15 47 35.7**	**+0.7**
	baz=81						
P14A	**Drum Mountains**	**80.62**	**344**	⇑P	**P**	**15 47 35.1**	**+0.1**
	baz=81						
O18A	**Roosevelt**	**80.66**	**346**	⇓P	**P**	**15 47 36.3**	**+1.1**
	baz=81,SNR=5.7						
O17A	**Robinson Place**	**80.72**	**346**	⇑P	**P**	**15 47 35.8**	**+0.2**
	baz=81						
NVAR	**Mina Array Bea**	**80.80**	**340**	P	**P**	**15 47 35.1**	**-0.9**
	1.7nm,0.9s,mb4.0,baz=169,slow=6.2,SNR=12						
N20A	**Spence Gulch,**	**80.91**	**348**	⇓P	**P**	**15 47 37.1**	**+0.6**
	baz=81						
CMB	**Columbia Colle**	**81.02**	**338**	*e*P	**P**	**15 47 36.2**	**-1.0**
	7.8nm,1.2s,mb4.5						
DAU	**Daniels Canyon**	**81.03**	**345**	*e*P	**P**	**15 47 36.5**	**-0.8**
	17nm,1.0s,mb4.9						
N19A	**John Jarvie Ra**	**81.12**	**347**	⇓P	**P**	**15 47 39.1**	**+1.5**
	baz=81,SNR=8.4						
DUG	**Dugway**	**81.14**	**344**	⇓P	**P**	**15 47 37.6**	**-0.2**
	baz=81,SNR=6.0						
DUG	**Dugway**	**81.14**	**344**	*e*P	**P**	**15 47 36.8**	**-1.0**
	9.0nm,1.0s,mb4.7						
M17A	**Scullys Gap (B**	**81.95**	**346**	⇓P	**P**	**15 47 46.4**	**+4.4**
	baz=82						
HWUT	**Hardware Ranch**	**82.25**	**346**	*e*P	**P**	**15 47 39.3**	**-4.3**
	2.4nm,0.8s,mb4.2						
M15A	**Larsen Ranch,**	**82.29**	**345**	⇓P	**P**	**15 47 48.6**	**+4.8**
	baz=82,SNR=5.7						
L16A	**Fish Haven**	**82.62**	**346**	⇓P	**P**	**15 47 47.7**	**+2.2**
	baz=83,SNR=6.9						
K20A	**Yellowstone Ra**	**82.70**	**348**	⇑P	**P**	**15 47 48.6**	**+2.7**
	baz=83,SNR=5.8						
K19A	**Absolon Red Bu**	**82.94**	**348**	⇓P	**P**	**15 47 49.9**	**+2.8**
	baz=83,SNR=6.1						
BW06	**Boulder Array**	**83.00**	**347**	⇑P	**P**	**15 47 50.8**	**+3.2**
	baz=83,SNR=9.0						
PDAR	**Pinedale Array**	**83.00**	**347**	P	**P**	**15 47 46.6**	**-0.9**
	5.8nm,0.9s,mb4.6,baz=167,slow=7.0,SNR=6.4						
J21A	**Lysite**	**83.23**	**349**	⇑P	**P**	**15 47 49.7**	**+1.1**
	baz=83						
J20A	**Shoshoni**	**83.33**	**348**	⇑P	**P**	**15 47 51.1**	**+1.9**
	baz=84						
K16A	**Soda Springs**	**83.44**	**346**	⇑P	**P**	**15 47 52.3**	**+2.5**
	baz=84,SNR=5.2						
I21A	**Big Trails, Te**	**83.66**	**349**	⇑P	**P**	**15 47 52.2**	**+1.3**
	baz=84						
J17A	**Brown Place, J**	**83.79**	**347**	⇓P	**P**	**15 47 56.6**	**+5.1**
	baz=84						
REDW	**Red Top Meadow**	**83.81**	**346**	*e*P	**P**	**15 47 51.2**	**-0.5**
	9.0nm,1.1s,mb4.8						
J16A	**Bone**	**83.87**	**346**	⇓P	**P**	**15 47 55.5**	**+3.6**
	baz=84						
I20A	**Worland**	**83.92**	**349**	⇓P	**P**	**15 47 53.5**	**+1.3**
	baz=84						
TPAW	**Teton Pass**	**83.95**	**346**	*e*P	**P**	**15 47 50.2**	**-2.2**
	13nm,1.0s,mb5.0						
J15A	**Blackfoot**	**84.15**	**345**	⇓P	**P**	**15 47 53.2**	**-0.2**
	baz=84						
MOOW	**Moose Ponds**	**84.17**	**347**	*e*P	**P**	**15 47 55.4**	**+1.9**
	3.4nm,1.1s,mb4.4						
J14A	**Carey**	**84.29**	**345**	⇑P	**P**	**15 47 55.0**	**+0.9**
	baz=84						
IMW	**Indian Meadow**	**84.34**	**347**	*e*P	**P**	**15 47 51.3**	**-3.1**
	8.2nm,1.2s,mb4.7						
FLWY	**Flagg Ranch**	**84.48**	**347**	*e*P	**P**	**15 47 54.4**	**-0.6**
	13nm,1.1s,mb5.0						
MOD	**Modoc**	**84.58**	**339**	*e*P	**P**	**15 47 54.6**	**-1.1**
	3.5nm,1.2s,mb4.4						
WVOR	**Wild Horse Val**	**84.64**	**341**	*e*P	**P**	**15 47 54.9**	**-1.0**
	4.4nm,1.1s,mb4.5						
HLID	**Hailey**	**84.71**	**344**	⇓P	**P**	**15 47 56.5**	**+0.2**
	baz=85						
HLID	**Hailey**	**84.71**	**344**	P	**P**	**15 47 56.0**	**-0.2**
	10nm,1.1s,mb4.9						
I14A	**Mackay**	**84.86**	**345**	⇓P	**P**	**15 47 57.1**	**+0.2**
	baz=85						
I13A	**Wildhorse Cree**	**84.98**	**344**	⇑P	**P**	**15 47 58.1**	**+0.5**
	baz=85						
MCMT	**McKenzie Canyo**	**85.60**	**345**	*e*P	**P**	**15 48 02.7**	**+2.0**
	0.7nm,0.9s,mb3.9						
F17A	**Fitzpatrick Pl**	**86.24**	**347**	⇑P	**P**	**15 48 09.7**	**+6.0**
	baz=86						
E19A	**Rath Farm, Rou**	**86.48**	**349**	⇑P	**P**	**15 48 11.0**	**+6.1**
	baz=87						
LRM	**Limekiln Ridge**	**86.48**	**346**	*e*P	**P**	**15 48 04.6**	**-0.4**
	38nm,1.1s,mb5.5						
F15A	**Butte**	**86.51**	**346**	⇑P	**P**	**15 48 11.3**	**+6.2**
	baz=87						
F12A	**Elk City**	**86.98**	**344**	⇓P	**P**	**15 48 12.6**	**+5.2**
	baz=87						
E15A	**Deer Lodge**	**87.10**	**346**	⇑P	**P**	**15 48 13.8**	**+5.8**
	baz=87						
D18A	**Linhart Farms,**	**87.35**	**348**	⇑P	**P**	**15 48 15.6**	**+6.5**
	baz=88						
G08A	**Pilot Rock**	**87.39**	**341**	⇑P	**P**	**15 48 15.4**	**+5.9**
	baz=88						
D17A	**Six Diamond Ra**	**87.45**	**348**	⇓P	**P**	**15 48 16.1**	**+6.4**
	baz=88						
D16A	**Dana Ranch, Ca**	**87.48**	**347**	⇓P	**P**	**15 48 15.8**	**+6.0**
	baz=88						
C19A	**Slack Wire Ran**	**87.76**	**349**	⇑P	**P**	**15 48 10.7**	**-0.4**
	baz=88						
D14A	**Greenough**	**87.89**	**346**	⇓P	**P**	**15 48 11.7**	**-0.1**
	baz=88						
C17A	**Wharram Farm,**	**87.93**	**348**	⇓P	**P**	**15 48 12.3**	**+0.3**
	baz=88						
SLMT	**Seeley Lake**	**88.05**	**346**	P	**P**	**15 48 14.9**	**+2.4**
	10nm,1.3s,mb4.9						
BOSA	**Boshof**	**90.95**	**129**	LR	LR	16 22 47.9	
	comp=Z,89nm,19.2s,MS4.2,baz=166,slow=31						
DBIC	**Dimbokro**	**92.15**	**83**	LR	LR	16 30 02.0	
	comp=Z,57nm,19.0s,MS4.0,baz=206,slow=36						
STKA	**Stephens Creek**	**93.44**	**223**	LR	LR	16 20 00.6	
	comp=Z,214nm,21.7s,MS4.6,baz=31,slow=29						
CTA	**Charters Tower**	**99.63**	**234**	LR	LR	16 25 07.7	
	comp=Z,120nm,19.3s,MS4.4,baz=324,slow=30						
YAK	**Yakutsk**	**145.79**	**326**	*e*PKPdf	PKPdf	15 54 58.0	-2.3
KSRS	**Korea Array**	**148.59**	**280**	PKPbc	PKPdf	15 55 07.5	+1.6
	2.4nm,0.9s,baz=110,slow=4.3,SNR=8.0						
MDJ	**Mudanjiang**	**148.61**	**294**	*e*PKPbc	PKPdf	15 55 06.6	+1.0
CMAR	**Chiang Mai Arr**	**157.23**	**208**	PKPab	PKPab	15 55 48.7	-1.0
	0.5nm,0.8s,baz=180,slow=3.6,SNR=3.6						
SONM	**Songino Array**	**163.93**	**309**	PKPab	PKPab	15 56 15.1	-3.2
	1.2nm,1.1s,baz=90,slow=1.6,SNR=5.3						
ZALV	**Zalesovo Beam**	**165.03**	**7**	PKP	PKPdf	15 55 23.3	-2.9
	0.5nm,0.5s,baz=275,slow=3.7,SNR=3.5						
MKAR	**Makanchi Array**	**171.36**	**26**	PKP	PKPdf	15 55 31.7	+1.0
	1.0nm,1.1s,baz=266,slow=1.9,SNR=4.8						

GUC 14 15:56:42.8±0.5,31.°29S×68.°09W,h150km,ML3.6,1C-1D,
San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**2.50**	**272**	⇓*i*P	Pn	15 57 24.2	+0.4
CMCH				*i* S	Sn	15 57 56.1	+0.7
CMCH				AML	AML	15 57 57.7	
	comp=E,1μm,0.7s						
TLL	**Tololo Astrono**	**2.59**	**295**	*e*P	Pn	15 57 26.2	+1.2
TLL				*i* S	Sn	15 57 59.3	+1.8
TLL				AML	AML	15 58 17.6	
	comp=N,127nm,0.5s						
FCH	**Farellones**	**2.76**	**222**	*e*P	Pn	15 57 28.3	+1.2
FCH				*i* S	Sn	15 58 03.2	+1.9
FCH				AML	AML	15 58 12.3	
	comp=E,53nm,0.2s						
PEL	**Peldehue**	**2.87**	**229**	*e*P	Pn	15 57 29.6	+1.1
PEL				*i* S	Sn	15 58 04.6	+0.7
PEL				AML	AML	15 58 20.0	
	comp=E,121nm,0.6s						
LCO	**Las Campanas**	**3.20**	**314**	⇑*i*

ISC 14 16:05:50.4±0.5, 38°90N±0°03×140°94E±0°04, h8km±3km, n30, σ1°11/39, mb3.9/12, 2C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.22	75	⇑P	Pg	16 05 55.0	+0.2
JMK				S	Sg	16 05 58.2	+0.3
JYK	Kaneyama	0.46	273	P	Pg	16 05 59.2	0.0
JYK				S	Sg	16 06 05.1	-0.1
JIO	Ouri	0.54	144	⇓P	Pg	16 06 00.5	-0.3
JIO				S	Sg	16 06 07.8	-0.1
JOU	Okura	0.57	202	⇓P	Pg	16 06 01.4	0.0
JOU				S	Sg	16 06 09.1	+0.3
JOM	Ohasama	0.64	25	⇓P	Pg	16 06 02.3	-0.4
JOM				S	Sg	16 06 10.9	-0.1
JYS	Shiratake	0.96	226	P	Pg	16 06 08.2	-0.6
JYS				S	Sg	16 06 21.1	-0.2
JYA	Atsumi	1.01	253	⇑P	Pg	16 06 09.0	-0.7
JYA				S	Sg	16 06 23.0	+0.3
MAJO	Matsushiro	3.20	224	ePn	Pn	16 06 41.5	+0.6
MAT	Matsushiro	3.20	224	P	Pn	16 06 41.9	+1.0
MAT				S	Sn	16 07 21.2	+2.0
MJAR	Matsushiro Arr	3.20	224	P	Pn	16 06 42.5	+1.6
	1.3nm,0.3s,baz=59,slow=19,SNR=18						
MJAR				S	Sn	16 07 26.4	+7.2
	3.7nm,0.3s,baz=33,slow=31,SNR=7.3						
ERM	Erimo	3.54	28	eP	Pn	16 06 48.5	+2.8
ASAJ	Asahikawa	5.36	13	P	Pn	16 07 13.2	+2.5
	1.1nm,0.3s,baz=205,slow=15,SNR=12						
ASAJ				S	Sn	16 08 14.6	+2.0
	0.7nm,0.3s,baz=330,slow=14,SNR=4.3						
ASAJ	Asahikawa	5.36	13	eP	Pn	16 07 12.7	+2.0
	2.9nm,0.6s						
KSRS	Korea Array	10.35	266	P	Pn	16 08 21.6	+2.5
	0.3nm,0.3s,baz=75,slow=13,SNR=9.5						
KSRS				S	Sn	16 10 21.3	+6.0
	0.1nm,0.3s,baz=74,slow=24,SNR=4.1						
ZALV	Zalesovo Beam	40.40	311	P	P	16 13 28.1	-0.6
	1.2nm,0.7s,mb3.8,baz=79,slow=7.7,SNR=6.1						
MKAR	Makanchi Array	42.84	300	P	P	16 13 47.6	-1.1
	0.4nm,0.6s,mb3.3,baz=91,slow=9.6,SNR=6.1						
KURK	Kurchatov	44.51	307	eP	P	16 14 01.0	-1.1
	2.7nm,0.8s,mb4.1						
ILAR	Eielson Array	48.13	33	P	P	16 14 30.1	-0.4
	0.6nm,0.7s,mb3.8,baz=264,slow=6.4,SNR=9.6						
ABKAR	Akbulak array	56.47	309	eP	P	16 15 31.3	-1.2
	3.0nm,0.5s,mb4.6						
WRA	Warramunga Arr	58.85	187	P	P	16 15 47.8	-1.8
	1.8nm,0.5s,mb4.3,baz=4.3,slow=7.3,SNR=50						
ARCES	ARCESS Array B	62.13	339	P	P	16 16 09.6	-1.8
	0.6nm,0.7s,mb3.8,baz=51,slow=8.3,SNR=6.1						
ASAR	Alice Springs	62.58	187	P	P	16 16 14.2	-0.6
	1.1nm,0.7s,mb4.1,baz=5.1,slow=4.6,SNR=22						
DZM	Mont Dzumac	65.18	154	eLR	LR	16 14 53.9	
	220nm,28.2s						
FINES	FINESS Array B	67.00	332	P	P	16 16 42.2	-1.1
	4.1nm,1.1s,mb4.4,baz=21,slow=6.5,SNR=3.9						
FINES	FINESS Array B	67.00	332	P	P	16 16 42.2	-1.1
NOA	NORSAR Array B	72.33	337	P	P	16 17 14.4	-1.8
	0.8nm,0.8s,mb3.7,baz=40,slow=5.9,SNR=3.8						
NVAR	Mina Array Bea	74.17	53	P	P	16 17 28.5	+1.0
	0.4nm,0.5s,mb3.6,baz=303,slow=5.4,SNR=6.1						
NVAR	Mina Array Bea	74.17	53	P	P	16 17 28.5	+1.0
PDAR	Pinedale Array	76.63	46	P	P	16 17 41.4	-0.2
	0.4nm,0.3s,mb3.8,baz=307,slow=1.8,SNR=3.7						
LPAZ	La Paz	146.03	57	PKPbc	PKPbc	16 25 31.4	+0.3
	1.4nm,0.6s,baz=332,slow=1.4,SNR=10						

NIED 14 16:25:00, 41°70N×144°30E, h20km, Mw3.8 Best double couple: M0=6.47000×10^14 NP1:φ=11.00000°, δ=68.00000°, λ=51.00000°. NP2:φ=256.00000°, δ=44.00000°, λ=147.00000°.
IDC 14 16:25:09.7±1.9, 41°80N×144°90E, h0km, mb3.7/6, mb1 3.8/9, mb1mx3.6/25, mbtmp3.7/9, ML3.0/3, MS2.4/1, Ms1 2.4/1, ms1mx2.2/24, Error ellipse: s-maj=40.1km s-min=20.8km az=82.0
ISCJB 14 16:25:11.7±1.8, 41°62N±0°05×144°6E±0°1, h17km±11km, mb3.7/7, Error ellipse: s-maj=16.6km s-min=8.4km az=15.1
NEIC 14 16:25:12.9±6.7, 41°75N×144°51E, h12km±35km, mb3.8/1, Error ellipse: s-maj=36.2km s-min=11.1km az=88.0
JMA 14 16:25:15.5±0.3, 41°73N×144°30E, h28km±3km, M3.9
ISC 14 16:25:12.9±2.1, 41°74N±0°06×144°5E±0°1, h8km±10km, n21, σ0°88/24, mb3.7/7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	1.02	286	eP	Pg	16 25 32.9	+0.4
JEM	Erimo	1.02	286	P	Pg	16 25 32.8	+0.3
JCH	Churui	1.20	317	P	Pg	16 25 35.5	-0.5
JCH				eS	Sg	16 25 50.7	-0.9
JOB	Onbets	1.26	338	P	Pn	16 25 36.9	+0.2
JAK	Akkeshi	1.27	7	P	Pn	16 25 37.4	+0.6
JAK				eS	Sg	16 25 53.9	+0.3
JNBK	Urakawa-nobuka	1.39	293	P	Pn	16 25 38.6	+0.1
ASAJ	Asahikawa	2.75	330	Pn	Pn	16 25 57.9	+0.7
	1.5nm,0.3s,baz=188,slow=17,SNR=28						
ASAJ				Sn	Sn	16 26 34.8	+4.3
	4.8nm,0.3s,baz=60,slow=23,SNR=3.6						
ASAJ	Asahikawa	2.75	330	eP	Pn	16 25 57.6	+0.4
MAJO	Matsushiro	7.12	225	eP	Pn	16 26 57.0	-0.2
MJAR	Matsushiro Arr	7.12	225	Pn	Pn	16 26 57.1	0.0
	0.5nm,0.3s,baz=26,slow=14,SNR=14						
MJAR				Sn	Sn	16 28 27.2	+9.1
	0.3nm,0.3s,baz=223,slow=47,SNR=3.5						
KSRS	Korea Array	13.46	257	Pn	Pn	16 28 27.2	+3.2
	0.1nm,0.3s,baz=55,slow=14,SNR=2.8						
HIA	Hailar	18.84	302	eP	Pn	16 29 30.8	-2.7
ULN	Ulaanbaatar	27.06	296	eP	P	16 30 56.2	+0.7
	2.0nm,0.8s,mb3.7						
SONM	Songino Array	27.50	296	P	P	16 31 00.4	+1.0
	0.9nm,0.7s,mb3.4,baz=84,slow=9.0,SNR=7.1						
TGY	Tagaytay City	34.28	223	LR	LR	16 44 35.2	
	comp=Z,6.4nm,20.1s,baz=164,slow=34						
ZALV	Zalesovo Beam	40.67	308	P	P	16 32 52.2	-1.0
	1.3nm,0.6s,mb3.8,baz=99,slow=9.6,SNR=6.7						
MK31	Makanchi Array	43.79	299	eP	P	16 33 18.3	-0.6
MKAR	Makanchi Array	43.79	299	P	P	16 33 18.0	-0.8
	1.0nm,0.8s,mb3.6,baz=81,slow=11,SNR=7.0						
CMAR	Chiang Mai Arr	45.06	253	P	P	16 33 30.1	+0.8
	0.3nm,0.3s,mb3.6,baz=56,slow=6.7,SNR=3.2						
WRA	Warramunga Arr	62.08	191	P	P	16 35 33.3	-0.6
	0.6nm,1.1s,mb3.6,baz=7.6,slow=6.8,SNR=3.4						
FINES	FINESS Array B	65.76	332	P	P	16 35 56.9	-0.9
	1.3nm,0.8s,mb4.0,baz=38,slow=9.6,SNR=3.6						

ISCJB 14 16:29:57.9±0.3, 61°82N±0°02×150°96W±0°06, h71km±3km, mb3.9/23, Error ellipse: s-maj=5.1km s-min=3.9km az=6.1
IDC 14 16:29:59.2±0.7, 61°94N×151°05W, h66km±6km, mb3.7/13, mb1 3.9/17, mb1mx3.8/26, mbtmp3.7/17, MS3.0/4, Ms1 3.0/4, ms1mx2.7/23, Error ellipse: s-maj=11.8km s-min=8.7km az=100.0
NEIC 14 16:29:59.8, 61°76N×150°95W, h61km, mb4.0/10, ML4.2(PMR), ML3.9(AEIC), After AEIC.
NEIC Felt [II] at Anchorage. Also felt at Wasilla.
ISC 14 16:29:59.2±0.3, 61°81N±0°02×150°96W±0°06, h64km±3km, h71km±1.5km: pP-P, n80, σ0°97/85, mb4.0/23, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	Skwentna	0.32	302	P	Pn	16 30 09.4	-0.5
SKT				S	Sn	16 30 18.0	+0.4
SUA	Susitna One	0.37	163	P	Pn	16 30 09.8	-0.5
SUA				S	Sn	16 30 18.0	-0.3
FIB	Fire Island	0.75	150	P	Pn	16 30 14.2	-0.1
FIB				S	Sn	16 30 26.5	+1.1
PMR	Palmer	0.90	104	eP	Pn	16 30 15.0	-1.1
RC01	Rabbit Creek A	0.94	141	P	Pn	16 30 15.3	-1.3
RC01				S	Sn	16 30 28.6	-0.7
PPLA	Purkeypile	1.23	333	P	Pn	16 30 21.0	+0.7
SML	Sawmill	1.25	89	P	Pn	16 30 20.1	-0.5
SLKM	Skilak Lake	1.36	164	P	Pn	16 30 20.7	-1.4
RSO	Redoubt South	1.61	213	eP	Pn	16 30 25.4	0.0
TRF	Thorofare Moun	1.67	10	P	Pn	16 30 27.3	+1.1
SCM	Sheep Creek Mo	1.72	88	P	Pn	16 30 26.5	-0.5
RND	Reindeer	1.87	30	P	Pn	16 30 29.5	+0.6
BRLK	Bradley Lake	2.06	179	P	Pn	16 30 30.3	-1.1
DHY	Denali Highway	2.09	51	P	Pn	16 30 32.2	+0.3
MCK	McKinley	2.14	25	P	Pn	16 30 33.4	+0.9
CHUM	Lake Minchumin	2.17	344	P	Pn	16 30 34.0	+1.1
BPAW	Bear Paw Mtn.	2.29	360	P	Pn	16 30 35.3	+0.6
CNPM	China Poot	2.30	183	P	Pn	16 30 33.4	-1.4
SVW2	Sparrevohn	2.33	254	eP	Pn	16 30 34.7	-0.5
TT01	Tatalina	2.60	297	P	Pn	16 30 39.0	+0.3
TTA	Tatalina	2.61	298	eP	Pn	16 30 39.0	+0.1
PAX	Paxson	2.81	63	P	Pn	16 30 42.1	+0.5
HDA	Harding Lake	3.17	33	P	Pn	16 30 47.5	+0.9
COLA	College	3.38	23	P	Pn	16 30 49.8	+0.5
MDM	Murphy Dome	3.39	20	P	Pn	16 30 50.0	+0.5
IL1	Eielson Array	3.49	30	P	Pn	16 30 51.5	+0.6
ILAR	Eielson Array	3.49	30	P	Pn	16 30 50.6	-0.3
	6.2nm,0.3s,baz=217,slow=14,SNR=420						
ILAR				S	Sn	16 31 29.1	-1.8
	21nm,0.3s,baz=223,slow=16,SNR=8.3						
MENT	Mentasta	3.56	68	eP	Pn	16 30 52.1	+0.3
DOT	Dot Lake	3.67	57	P	Pn	16 30 53.4	0.0
KDAK	Kodiak Island	4.13	192	P	Pn	16 31 01.3	+1.7
	3.4nm,0.3s,baz=31,slow=8.0,SNR=44						
KDAK				S	Sn	16 31 48.6	+2.1
	25nm,0.3s,baz=328,slow=12,SNR=5.2						
KDAK	Kodiak Island	4.13	192	P	Pn	16 30 59.1	-0.5
IM3	Indian Mountai	4.36	345	P	Pn	16 31 03.6	+0.8
BCA3	Beaver Creek A	4.44	70	P	Pn	16 31 04.0	0.0
OHAK	Old Harbor	4.76	195	eP	Pn	16 31 09.8	+1.6
EGAK	Eagle	5.33	52	P	Pn	16 31 16.2	+0.2
COLD	Coldfoot	5.45	3	P	Pn	16 31 18.6	+1.0
DAWY	Dawson	5.74	62	P	Pn	16 31 21.8	+0.1
BM3	Burnt Mountain	6.25	23	P	Pn	16 31 29.6	+0.9
CHGN	Chignik	6.73	218	eP	Pn	16 31 34.6	-0.6
WHY	Whitehorse	7.84	91	P	Pn	16 31 49.2	-1.2
SDPT	Sand Point	8.16	222	P	Pn	16 31 53.3	-1.5
INK	Inuvik	9.80	41	P	Pn	16 32 15.3	-1.7
	0.3nm,0.3s,baz=305,slow=25,SNR=18						
INK				S	Sn	16 34 04.8	-0.4
	0.3nm,0.3s,baz=207,slow=32,SNR=2.3						
INK				LR	LR	16 36 00.7	
	comp=Z,78nm,19.7s,baz=126,slow=37						
INK	Inuvik	9.80	41	P	Pn	16 32 15.3	-1.7
INK				S	Sn	16 34 04.8	-0.4
INK				LR	LR	16 36 00.7	
DLBC	Dease Lake	10.96	99	P	Pn	16 32 31.6	-1.3
	0.2nm,0.3s,baz=235,slow=6.5,SNR=3.5						
DLBC				LR	LR	16 36 57.8	
	comp=Z,104nm,19.2s,baz=346,slow=38						
BBB	Bella Bella	15.66	118	P	Pn	16 33 39.4	+3.9
	0.1nm,0.3s,baz=147,slow=12,SNR=4.1						
BBB				LR	LR	16 39 34.4	
	comp=Z,41nm,18.5s,baz=347,slow=36						
BBB	Bella Bella	15.66	118	P	Pn	16 33 39.4	+3.9
BBB				LR	LR	16 39 34.4	
YKA	Yellowknife Ar	16.86	72	P	Pn	16 33 50.1	-0.4
	0.3nm,0.3s,baz=281,slow=10,SNR=6.6						
ETW	Entiat	22.42	115	eP	P	16 34 53.0	+0.9
	4.7nm,0.7s,mb4.0						
OD2	Odessa Site #2	23.28	113	eP	P	16 35 01.0	0.0
	4.3nm,0.7s,mb4.0						
YBH	Yreka Blue Hor	26.27	127	P	P	16 35 29.9	+1.7
	0.8nm,0.7s,mb3.4,baz=291,slow=4.6,SNR=4.3						
YBH				LR	LR	16 43 22.5	
	comp=Z,44nm,19.8s,baz=337,slow=30						
EGMT	Eagleton	26.86	102	eP	P	16 35 33.3	-0.1
	5.1nm,0.7s,mb4.2						
IMW	Indian Meadow	29.43	109	eP	P	16 35 58.5	+2.2
	1.5nm,0.7s,mb3.8						
LAO	LASA Array	29.48	100	eP	P	16 35 56.2	-0.5
RRI2	Red Ridge	29.69	110	eP	P	16 35 59.8	+1.1
	2.8nm,0.7s,mb4.1						
TPAW	Teton Pass	29.75	109	eP	P	16 36 00.5	+1.4
	2.0nm,0.6s,mb4.0						
NVAR	Mina Array Bea	30.83	124	P	P	16 36 09.9	+1.2
	1.4nm,0.7s,mb3.9,baz=322,slow=9.2,SNR=16						
NVAR				pP	pP	16 36 25.6	+1.3
	0.9nm,0.7s,baz=313,slow=9.4,SNR=5.5						
NVAR				PcP	PcP	16 39 04.5	+0.3
	0.3nm,0.5s,baz=293,slow=2.6,SNR=3.6						
PDAR	Pinedale Array	30.94	109	P	P	16 36 10.2	+0.5
	0.6nm,0.5s,mb3.7,baz=323,slow=5.1,SNR=5.7						
PDAR				pP	pP	16 36 26.9	+1.7
	0.4nm,0.4s,baz=166,slow=1.5,SNR=2.2						
ARUT	Antelope Range	33.35	119	eP	P	16 36 31.8	+1.0
	1.1nm,0.8s,mb3.8						
CCUT	Cedar City	33.58	119	eP	P	16 36 34.0	+1.2
	2.5nm,0.7s,mb4.2						
SCHQ	Schefferville	41.76	60	P	P	16 37 41.3	-0.3
	1.9nm,0.4s,mb4.1,baz=348,slow=8.9,SNR=5.9						
TXAR	Lajitas Array	44.75	114	P	P	16 38 06.8	+0.8
	1.1nm,0.5s,mb3.9,baz=312,slow=5.6,SNR=16						
JCT	Junction City	45.47	109	eP	P	16 38 11.5	-0.1
	3.5nm,0.5s,mb4.5						
BINY	Binghamton	47.12	78	eP	P	16 38 23.9	-0.5
ARCES	ARCESS Array B	48.91	2	P	P	16 38 36.6	-1.3
	0.6nm,0.5s,mb3.9,baz=10,slow=7.4,SNR=13						
ARCES				PcP	PcP	16 39 59.4	-1.7
	1.0nm,0.7s,baz=0.0,slow=6.6,SNR=3.8						
ARCES	ARCESS Array B	48.91	2	P	P	16 38 36.6	-1.3
ARCES				PcP	PcP	16 39 59.4	-1.8
JSC	Jenkinsville	50.96	89	eP	P	16 38 52.7	-1.2
KSRS	Korea Array	53.75	283	P	P	16 39 15.3	+0.8
	0.5nm,0.7s,mb3.6,baz=28,slow=5.8,SNR=5.1						
SONM	Songino Array	54.53	306	P	P	16 39 20.0	0.0
	1.2nm,0.6s,mb4.1,baz=38,slow=6.6,SNR=8.9						
ZALV	Zalesovo Beam	56.49	324	P	P	16 39 32.5	-1.5
	1.1nm,0.5s,mb4.2,baz=18,slow=7.0,SNR=6.5						
ZALV				pP	pP	16 39 50.7	0.0
	1.4nm,0.6s,baz=32,slow=7.2,SNR=3.8						
ZALV	Zalesovo Beam	56.49	324	P	P	16 39 32.5	-1.5
ZALV				pP	pP	16 39 50.7	0.0
NB2	NORSAR Subarra	56.71	10	P	P	16 39 33.9	-1.6
	comp=Z,1.3nm,0.6s,mb4.1,baz=350,slow=7.4						
NOA	NORSAR Array B	56.71	10	P	P	16 39 34.3	-1.2
	comp=Z,2.1nm,0.7s,mb4.3,baz=351,slow=6.9,SNR=10						
FINES	FINESS Array B	57.05	2	P	P	16 39 36.0	-1.8
	comp=Z,2.5nm,0.7s,mb4.3,baz=5.7,slow=9.6,SNR=10						
MKAR	Makanchi Array	63.62	322	P	P	16 40 20.8	-2.1
	comp=Z,1.3nm,0.5s,mb4.2,baz=41,slow=6.8,SNR=24						
MKAR				pP	pP	16 40 39.3	-0.6
	comp=Z,0.8nm,0.5s,baz=42,slow=6.9,SNR=6.3						
MKAR	Makanchi Array	63.62	322	P	P	16 40 20.8	-2.1
MKAR				pP	pP	16 40 39.3	-0.6
ABKAR	Akbulak array	66.55	338	eP	P	16 40 40.6	-1.2
	comp=Z,0.8nm,0.5s,mb4.0						
ESDC	Sonseca Array	75.39	26	P	P	16 41 35.3	-0.2
	comp=Z,0.8nm,0.5s,mb3.9,baz=347,slow=5.4,SNR=8.9						
PMSA	Palmer Station	141.65	136	PKP	PKPdf	16 49 22.5	+1.2
	comp=Z,6.5nm,0.6s,baz=21,slow=18,SNR=7.6						
BOSA	Boshof	146.70	6	PKPbc	PKPbc	16 49 32.4	-0.7
	comp=Z,4.7nm,1.0s,baz=139,slow=5.1,SNR=7.9						
QSPA	South Pole Qui	151.62	180	ePKPbc	PKPbc	16 49 43.1	-0.9

IDC 14 16:33:41.2±1.3, 9°72N×126°37E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/21, mbtmp3.8/8, Error ellipse: s-maj=130.7km s-min=16.7km az=71.0
NEIC 14 16:33:42.7±0.7, 9°73N×126°43E, h10km, Error ellipse: s-maj=64.1km s-min=8.1km az=70.0
MAN 14 16:33:44, 9°65N×126°41E, h1km, mb4.8, ML3.7, MS3.7
ISC 14 16:33:42.7±1.5, 9°69N±0°05×126°54E±0°05, h1km±8km, n25, σ1°57/31, mb3.8/8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.04	275	⇓eP	Pg	16 34 02.5	-0.2
SCPH				eS	Sg	16 34 14.1	-2.0
BUTP	Butuan	1.15	232	eP	Pg	16 34 04.8	0.0
BUTP				eS	Sg	16 34 16.9	-2.8
MSLP	Maasin	1.71	285	eP	Pn	16 34 13.9	+0.2
MSLP				eS	Sn	16 34 27.8	-8.4
BESP	Borongan	2.19	331	eP	Pn	16 34 22.7	+2.5
BUKP	Musuan	2.31	219	eP	Pn	16 34 24.0	+2.1
OCLP	Ormoc	2.33	306	eP	Pn	16 34 24.4	+2.1
LLP	Lapu-Lapu	2.61	284	⇑iP	Pn	16 34 27.4	+1.4
LLP				i S	Sn	16 34 59.1	+0.7
TBP	Tagbilaran	2.64	270	eP	Pn	16 34 26.9	+0.4
TBP				eS	Sn	16 34 56.4	-2.7
MATI	Mati	2.74	186	eP	Pn	16 34 29.7	+1.9
KCP	Kidapawan	3.02	208	⇓eP	Pn	16 34 34.0	+2.2
KCP				i S	Sn	16 35 09.7	+1.1
CNP	Catarman	3.35	327	eP	Pn	16 34 38.2	+1.9
PAGZ	Pagadian	3.61	240	eP	Pn	16 34 41.2	+1.3
GUIM	Jordan	4.00	284	eP	Pn	16 34 46.6	+1.4
IPIL	Ipil	4.35	245	eP	Pn	16 34 51.6	+1.6
KAKA	Kakadu	23.01	165	eP	P	16 38 48.2	-1.1
FITZ	Fitzroy Crossi	27.63	182	P	P	16 39 31.0	-1.0
	1.0nm,0.5s,mb3.9,baz=4.3,slow=11,SNR=3.6						
FITZ	Fitzroy Crossi	27.63	182	eP	P	16 39 31.1	-0.8
WRA	Warramunga Arr	30.43	165	P	P	16 39 55.9	-1.0
	0.3nm,0.6s,mb3.3,baz=349,slow=9.7,SNR=5.8						
ASAR	Alice Springs	33.92	168	P	P	16 40 26.7	-0.9
	0.2nm,0.3s,mb3.5,baz=346,slow=7.2,SNR=15						
STKA	Stephens Creek	43.77	161	P	P	16 41 49.6	-0.4
	0.7nm,0.6s,mb3.6,baz=320,slow=7.9,SNR=2.3						
MK31	Makanchi Array	52.65	323	eP	P	16 42 56.5	-2.0
MKAR	Makanchi Array	52.65	323	P	P	16 42 56.3	-2.2
	0.5nm,0.5s,mb3.7,baz=118,slow=8.0,SNR=6.0						
ZALV	Zalesovo Beam	55.26	331	P	P	16 43 15.3	-2.2
	0.3nm,0.3s,mb3.8,baz=115,slow=9.9,SNR=2.5						
ARCES	ARCESS Array B	84.83	340	P	P	16 46 17.1	-1.6
	0.8nm,0.7s,mb4.0,baz=75,slow=9.3,SNR=6.4						
FINES	FINESS Array B	86.53	332	P	P	16 46 25.3	-2.0
	1.0nm,0.5s,mb4.3,baz=82,slow=4.2,SNR=8.3						

IDC 14 16:34:53.4±4.8, 19°34S×176°05W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, Error ellipse: s-maj=147.5km s-min=94.2km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.94	243	P	P	16 42 29.1	-0.4
	2.5nm,1.0s,baz=100,slow=6.1,SNR=3.2						
ASAR	Alice Springs	46.58	255	P	P	16 43 23.2	-0.1
	0.8nm,0.5s,baz=92,slow=8.2,SNR=22						
ASAR				PcP	PcP	16 44 57.1	-0.5
	0.2nm,0.6s,baz=87,slow=4.1,SNR=5.5						
WRA	Warramunga Arr	46.59	261	P	P	16 43 22.9	-0.5
	0.2nm,0.3s,baz=96,slow=7.6,SNR=21						
FITZ	Fitzroy Crossi	55.01	261	P	P	16 44 27.9	+0.9
	3.7nm,1.2s,baz=105,slow=6.0,SNR=5.2						

PGC 14 16:41:42.3±9.6, 63°07N×142°98W, h15km, ML2.9/3, 207km Wsw of Dawson, Yt Central Alaska
NEIC 14 16:41:38.3, 63°12N×143°44W, h2km, ML2.9(PGC), ML2.5(AEIC), 3D, After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MENT	Mentasta	0.22	216	P	Pg	16 41 42.8	+0.3
DOT	Dot Lake	0.60	333	P	Pg	16 41 50.1	+0.2
DOT				S	Sg	16 41 58.3	+0.6
BCA3	Beaver Creek A	0.75	93	P	Pg	16 41 51.1	-1.6
PAX	Paxson	0.94	262	P	Pg	16 41 55.6	-0.7
PAX				S	Sg	16 42 08.2	-0.2
DDM	Donnelly Dome	1.28	303	P	Pg	16 42 02.6	-0.3
DHY	Denali Highway	1.79	270	P	Pn	16 42 10.4	+0.2
DHY				S	Sn	16 42 35.5	+2.1
EGAK	Eagle	1.95	30	ePn	Pn	16 42 11.7	-0.7
HDA	Harding Lake	2.03	311	P	Pn	16 42 11.8	-1.7
DAWY	Dawson	2.04	60	ePn	Pn	16 42 14.5	+0.8
DAWY	Dawson	2.04	60	⇓Pn	Pn	16 42 14.5	+0.8
DAWY				⇑Sg	Sg	16 42 40.8	-3.1
SCM	Sheep Creek Mo	2.22	236	P	Pn	16 42 17.0	+1.0
IL1	Eielson Array	2.25	319	P	Pn	16 42 15.0	-1.5
RND	Reindeer	2.46	279	P	Pn	16 42 20.9	+1.5
MCK	McKinley	2.55	286	ePg	Pg	16 42 25.4	-1.6
COLA	College	2.62	314	ePg	Pg	16 42 26.3	-2.3
MDM	Murphy Dome	2.80	313	P	Pn	16 42 22.8	-1.3
TRF	Thorofare Moun	3.11	279	ePn	Pn	16 42 29.6	+1.3
RC01	Rabbit Creek A	3.59	238	eP	Pn	16 42 41.0	+6.1
HYT	Haines Junctio	3.62	127	⇓Pn	Pn	16 42 33.9	-1.5
HYT				⇓Pg	Pg	16 42 42.5	-5.2
HYT				⇑Sg	Sg	16 43 29.3	-5.3
BM3	Burnt Mountain	4.35	354	P	Pn	16 42 45.0	-0.3
WHY	Whitehorse	4.74	117	⇑Pn	Pn	16 42 49.2	-1.5
WHY				⇑Sn	Sn	16 43 41.8	-4.3
WHY				⇑Sg	Sg	16 44 03.3	-7.0

ISCJB 14 16:45:30.1±0.5, 22°72S±0°04×69°44W±0°06, h65km±4km, mb4.1/14, Error ellipse: s-maj=9.1km s-min=6.2km az=165.4
GUC 14 16:45:30.9±1.2, 22°67S×69°53W, h65km±15km, MD4.2, ML4.5
NEIC 14 16:45:30.9, 22°67S×69°53W, h65km, mb4.2/7, MD4.2(GUC), After GUC.
NEIC Felt [III] at Chuquicamata.
*IDC 14 16:45:31.7

125A	Gardner Draw,	64.54	327	⇑P	P	16 56 01.4	-0.8
	baz=65						
MSTX	Muleshoe	64.70	330	⇑P	P	16 56 02.2	-1.0
	baz=65						
Z26A	Caprock	64.70	328	⇑P	P	16 56 02.4	-0.9
	baz=65						
124A	Stringfield Ra	64.97	327	⇑P	P	16 56 04.1	-0.9
	baz=65						
Z25A	Roswell	65.07	328	⇑P	P	16 56 04.2	-1.5
	baz=65						
Z24A	Sheeppen Canyo	65.43	327	⇓P	P	16 56 07.9	-0.1
	baz=66						
X26A	CR and CF Fran	65.66	329	⇓P	P	16 56 08.9	-0.5
	baz=66						
318A	Bisbee	66.41	323	⇓P	P	16 56 14.6	+0.3
	baz=66						
W25A	X Bar L Ranch,	66.51	329	⇑P	P	16 56 14.5	-0.5
	baz=67						
W24A	Lazy 6 Ranch,	66.96	328	⇑P	P	16 56 17.9	+0.1
	baz=67						
V25A	Rancho No Teng	67.09	329	⇑P	P	16 56 18.0	-0.6
	baz=67						
217A	Green Valley	67.12	322	⇓P	P	16 56 18.9	0.0
	baz=67						
Y21A	Point of Rocks	67.14	326	⇑P	P	16 56 19.1	+0.2
	baz=67						
U26A	Atchley Ranch,	67.14	330	⇑P	P	16 56 18.7	-0.2
	baz=67						
ANMO	Albuquerque	67.27	328	eP	P	16 56 19.2	-0.5
	comp=E,3.7nm,1.0s,mb4.4						
V24A	Rampart Ranch,	67.31	329	⇑P	P	16 56 19.8	-0.2
	baz=68						
U25A	Circle Dot Ran	67.45	330	⇑P	P	16 56 20.4	-0.5
	baz=68						
QSPA	South Pole Qui	67.46	180	eP	P	16 56 21.2	+0.8
	comp=E,6.5nm,1.1s,mb4.6						
QSPA				epP	pP	16 56 38.6	+2.5
X21A	Alamocita Cree	67.53	326	⇑P	P	16 56 21.5	+0.1
	baz=68						
117A	Oracle	67.68	323	⇓P	P	16 56 22.2	-0.1
	baz=68						
W20A	Ramah	68.43	326	⇑P	P	16 56 27.4	+0.3
	baz=69						
S25A	Robets Cordova	68.50	331	⇑P	P	16 56 26.4	-1.0
	baz=69						
U22A	Llaves	68.60	328	⇑P	P	16 56 28.7	+0.6
	baz=69						
S24A	Houchin Ranch,	68.84	330	⇓P	P	16 56 29.8	+0.3
	baz=69						
SDCO	Great Sand Dun	69.06	330	⇑P	P	16 56 30.9	0.0
	baz=69						
SDCO	Great Sand Dun	69.06	330	eP	P	16 56 31.2	+0.3
	comp=E,4.5nm,1.1s,mb4.3						
SDCO				epP	pP	16 56 48.4	+1.8
V19A	Window Rock	69.17	326	⇓P	P	16 56 32.0	+0.4
	baz=69						
DBIC	Dimbokro	69.56	73	LR	LR	17 27 39.1	
	comp=E,36nm,18.9s,MS3.6,baz=150,slow=36						
DBIC	Dimbokro	69.56	73	eP	P	16 56 34.3	-0.2
P25A	Willow Gulch B	69.91	332	⇓P	P	16 56 36.3	+0.2
	baz=70						
X15A	Humboldt	69.94	323	⇓P	P	16 56 37.1	+0.7
	baz=70						
V17A	Tonalea, Kykot	70.01	325	⇑P	P	16 56 37.9	+1.1
	baz=70						
S21A	Coal Bank Pass	70.07	328	⇑P	P	16 56 37.7	+0.6
	baz=70						
S20A	Disappointment	70.48	328	⇓P	P	16 56 40.4	+0.8
	baz=71						
T18A	Mexican Hat	70.69	327	⇑P	P	16 56 40.8	-0.1
	baz=71,SNR=6.1						
S19A	Harvey Farm, M	70.79	328	⇓P	P	16 56 41.8	+0.2
	baz=71,SNR=6.1						
SMCO	Snowmass	70.89	330	eP	P	16 56 42.8	+0.7
	comp=E,2.6nm,0.9s,mb4.2						
V15A	Kaibab Nationa	70.89	324	⇑P	P	16 56 43.1	+0.9
	baz=71						
X13A	Yucca	70.90	322	⇑P	P	16 56 43.1	+0.8
	baz=71						
S18A	Hurst Farm, Bl	71.18	327	P	P	16 56 45.1	+1.3
	baz=71,SNR=7.7						
V14A	Boquillas Ranc	71.26	324	⇑P	P	16 56 45.8	+1.4
	baz=71						
IRM	Iron Mountain	71.34	321	⇓P	P	16 56 44.2	-0.7
	baz=72						
U15A	North Rim	71.41	325	⇑P	P	16 56 46.6	+1.3
	baz=72						
O22A	Kremmling	71.49	331	⇑P	P	16 56 45.7	0.0
	baz=72						
R18A	Canyonlands Na	71.67	328	⇑P	P	16 56 46.4	-0.4
	baz=72						
U14A	Mt Trumbull	71.88	324	⇑P	P	16 56 48.7	+0.6
	baz=72						
T15A	Red Dirt Ranch	71.90	325	⇑P	P	16 56 48.4	+0.1
	baz=72						
V13A	Grand Canyon W	71.91	323	⇑P	P	16 56 48.5	+0.2
	baz=72						
R17A	Hanksville Air	72.10	327	⇑P	P	16 56 49.7	+0.3
	baz=72,SNR=5.5						
P19A	Cripple Cowboy	72.20	329	⇑P	P	16 56 50.7	+0.8
	baz=72						
O20A	White River Ci	72.24	330	⇑P	P	16 56 50.1	-0.2
	baz=72						
SRU	San Rafael	72.54	328	⇓P	P	16 56 51.9	-0.1
	baz=73,SNR=5.4						
P18A	Preston Nutter	72.80	328	⇓P	P	16 56 53.7	+0.2
	baz=73,SNR=11						
S13A	Holt Ranch, En	73.11	324	⇑P	P	16 56 56.8	+1.4
	baz=73						
O17A	Robinson Place	73.48	328	⇓P	P	16 56 58.4	+0.9
	baz=74						
P14A	Drum Mountains	74.18	326	⇑P	P	16 57 02.7	+1.0
	baz=74						
K20A	Yellowstone Ra	74.30	331	⇑P	P	16 57 02.0	-0.3
	baz=74						
PDAR	Pinedale Array	74.93	331	P	P	16 57 05.5	-0.4
	comp=E,0.7nm,0.3s,mb4.0,baz=104,slow=9.4,SNR=4.3						
SYO	Syowa Base	75.53	159	⇓eP	P	16 57 08.0	-1.1
K16A	Soda Springs	75.92	329	⇑P	P	16 57 12.1	+0.5
	baz=76						
NVAR	Mina Array Bea	76.16	322	P	P	16 57 13.3	+0.2
	comp=E,0.8nm,0.9s,mb3.6,baz=156,slow=7.4,SNR=5.1						
NVAR				pP	pP	16 57 31.1	+2.1
	comp=E,0.5nm,0.8s,baz=153,slow=6.1,SNR=3.0						
NVAR	Mina Array Bea	76.16	322	P	P	16 57 13.3	+0.2
NVAR				pP	pP	16 57 31.1	+2.1
E19A	Rath Farm, Rou	77.53	333	⇓P	P	16 57 20.0	-0.6
	baz=78						
HLID	Hailey	77.82	328	⇓P	P	16 57 23.2	+0.9
	baz=78,SNR=6.4						
HLID	Hailey	77.82	328	eP	P	16 57 23.1	+0.8
	comp=E,3.5nm,1.1s,mb4.2						
TORD	Torodi Ar. Bea	78.24	70	P	P	16 57 24.5	-0.7
	comp=E,5.2nm,0.8s,mb4.5,baz=251,slow=5.3,SNR=22						
TORD				pP	pP	16 57 42.8	+1.5
	comp=E,4.4nm,0.6s,baz=253,slow=5.4,SNR=12						
H13A	Challis	78.49	329	⇓P	P	16 57 26.9	+0.9
	baz=79,SNR=5.5						
H12A	Diamond D Ranc	78.77	329	⇓P	P	16 57 27.7	+0.3
	baz=79						
G13A	Cobalt	78.88	329	⇑P	P	16 57 28.2	+0.1
	baz=79,SNR=12						
F13A	Darby	79.44	330	⇑P	P	16 57 31.5	+0.4
	baz=80,SNR=8.7						
C15A	Salmond Ranch,	80.18	332	⇓P	P	16 57 34.6	-0.5
	baz=80						
D13A	Huson	80.48	331	⇓P	P	16 57 36.7	0.0
	baz=81						
E12A	Beaver Dam Sad	80.49	330	⇓P	P	16 57 36.5	-0.3
	baz=81						
A16A	West Butte Ran	80.66	333	⇑P	P	16 57 37.3	-0.3
	baz=81						
C14A	Swan Lake	80.67	331	⇓P	P	16 57 37.9	+0.2
	baz=81						
I07A	Izee	80.75	326	⇑P	P	16 57 38.6	+0.4
	baz=81						
D12A	Red Ives Fores	80.86	330	⇑P	P	16 57 38.6	-0.1
	baz=81						
A14A	Double T Ranch	81.44	332	⇑P	P	16 57 41.7	-0.1
	baz=82						
A13A	Flathead Natio	81.84	332	⇓P	P	16 57 44.4	+0.5
	baz=82						
C11A	Tepee Creek (N	81.85	330	⇓P	P	16 57 43.2	-0.8
	baz=82						
MAW	Mawson	83.30	163	P	P	16 57 51.3	-0.1
	comp=E,2.4nm,0.8s,mb4.3,baz=230,slow=8.5,SNR=6.6						
MAW				pP	pP	16 58 10.0	+2.5
	comp=E,4.0nm,0.8s,baz=212,slow=7.2,SNR=7.3						
BOSA	Boshof	83.31	118	P	P	16 57 51.6	-0.6
	comp=E,5.1nm,1.1s,mb4.5,baz=264,slow=19,SNR=3.9						
BOSA				pP	pP	16 58 10.5	+2.1
	comp=E,2.5nm,0.7s,baz=295,slow=8.3,SNR=2.5						
ESDC	Sonseca Array	87.06	45	pP	pP	16 58 29.6	+2.8
	comp=E,0.3nm,0.3s,baz=216,slow=6.3,SNR=5.1						
YKA	Yellowknife Ar	92.18	341	P	P	16 58 33.0	-0.9
	comp=E,1.4nm,0.7s,mb4.4,baz=130,slow=4.1,SNR=5.8						
YKA				pP	pP	16 58 52.4	+2.1
	comp=E,1.2nm,0.8s,baz=228,slow=5.5,SNR=2.9						
YKA	Yellowknife Ar	92.18	341	P	P	16 58 33.0	-0.9
YKA				pP	pP	16 58 52.4	+2.1
ASAR	Alice Springs	128.59	208	PKP	PKPdf	17 04 31.6	-0.8
	comp=E,1.4nm,0.8s,baz=124,slow=1.9,SNR=10						
ASAR				pPKP	pPKPdf	17 04 50.5	+1.2
	comp=E,1.3nm,1.2s,baz=129,slow=1.1,SNR=1.9						
WRA	Warramunga Arr	131.65	211	PKP	PKPdf	17 04 37.6	-0.7
	comp=E,0.7nm,0.6s,baz=152,slow=1.6,SNR=11						
WRA				pPKP	pPKPdf	17 04 57.2	+2.0
	comp=E,0.7nm,0.7s,baz=146,slow=1.6,SNR=5.0						
WRA	Warramunga Arr	131.65	211	PKP	PKPdf	17 04 37.6	-0.7
WRA				pPKP	pPKPdf	17 04 57.2	+2.0
ZALV	Zalesovo Beam	143.28	25	PKP	PKPdf	17 04 55.2	-3.4
	comp=E,1.4nm,0.6s,baz=292,slow=4.7,SNR=8.5						
ZALV				pPKP	pPKPdf	17 05 17.4	+1.8
	comp=E,1.2nm,0.6s,baz=288,slow=2.4,SNR=3.8						
ZALV	Zalesovo Beam	143.28	25	PKP	PKPdf	17 04 55.2	-3.4
ZALV				pPKP	pPKPdf	17 05 17.4	+1.8
AAK	Ala-Archa	144.10	48	eP	PKPdf	17 04 59.5	-0.9
KZA	Kyzart	144.83	48	eP	PKPdf	17 05 02.5	+0.8
MK31	Makanchi Array	146.92	37	ePKPbc	PKPbc	17 05 04.9	-2.2
MK31				epPKP	pPKPdf	17 05 23.8	+1.7
MKAR	Makanchi Array	146.92	37	PKPbc	PKPbc	17 05 05.0	-2.1
	comp=E,3.8nm,0.8s,baz=327,slow=2.1,SNR=33						
MKAR				pPKPbc	pPKPbc	17 05 23.9	0.0
	comp=E,2.1nm,0.7s,baz=332,slow=3.0,SNR=7.3						
MKAR	Makanchi Array	146.92	37	PKPbc	PKPbc	17 05 05.0	-2.1
MKAR				pPKPbc	pPKPbc	17 05 23.9	0.0
MJAR	Matsushiro Arr	152.42	306	PKPbc	PKPbc	17 05 20.3	-0.8
	comp=E,1.2nm,0.8s,baz=82,slow=0.4,SNR=5.4						
MJAR				PKPab	PKPab	17 05 31.0	-0.4
	comp=E,1.4nm,0.9s,baz=83,slow=1.8,SNR=5.4						
MJAR				pPKPbc	pPKPbc	17 05 39.2	+1.2
	comp=E,1.0nm,0.7s,baz=121,slow=0.2,SNR=3.7						
MJAR				pPKPab	pPKPab	17 05 49.3	+1.4
	comp=E,0.4nm,0.4s,baz=350,slow=6.0,SNR=2.6						
MJAR	Matsushiro Arr	152.42	306	PKPbc	PKPbc	17 05 20.3	-0.8
MJAR				PKPab	PKPab	17 05 31.0	-0.4
MJAR				pPKPbc	pPKPbc	17 05 39.2	+1.2
MJAR				pPKPab	pPKPab	17 05 49.3	+1.4
SONM	Songino Array	154.73	7	PKP	PKPdf	17 05 16.3	-0.8
	comp=E,0.3nm,0.6s,baz=70,slow=1.7,SNR=2.6						
SONM				pPKP	pPKPdf	17 05 36.3	+2.3
	comp=E,0.7nm,0.7s,baz=318,slow=1.9,SNR=1.8						

*IDC **14** 16:52:18.9±9.2, 33°.51S×178°.91W, h81km±87km, mb3.2/2, mb1 3.4/3, mb1mx3.2/15, mbtmp3.2/3, ML3.6/1, Error ellipse: s-maj=81.5km s-min=57.8km az=155.0*

ISC 14 16:52:18.8±2.4, 33°.65S±0°.1×178.7W±0°.4, h100km, n9, σ0°87/10, mb3.3/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.67	211	ePN	Pn	16 53 26.1	-0.8
PUZ	Puketiti	5.12	208	ePN	Pn	16 53 32.2	-0.8
PUZ				eSN	Sn	16 54 32.6	+1.7
CNGZ	Carnagh Statio	5.50	207	ePN	Pn	16 53 39.2	+1.1
MWZ	Matawai	5.65	212	ePN	Pn	16 53 39.7	-0.5
URZ	Urewera	5.78	215	P	Pn	16 53 42.0	0.0
	1.6nm,0.3s,baz=228,slow=3.9,SNR=8.6						
URZ				S	Sn	16 54 45.9	-1.0
	0.5nm,0.3s,baz=38,slow=22,SNR=2.8						
URZ	Urewera	5.78	215	ePN	Pn	16 53 41.7	-0.3
ASAR	Alice Springs	42.48	271	P	P	17 00 04.7	+0.5
	0.4nm,0.6s,mb3.3,baz=106,slow=7.4,SNR=7.4						
WRA	Warramunga Arr	43.76	276	P	P	17 00 14.6	+0.1
	0.3nm,0.4s,mb3.3,baz=114,slow=7.6,SNR=6.1						
FINES	FINESS Array B	147.92	338	PKPbc	PKPbc	17 11 52.6	+1.1
	1.2nm,0.9s,baz=58,slow=4.7,SNR=4.2						

*TEH **14** 16:53:07.8, 26°.52N×56°.00E, h16km*
*ISCJB **14** 16:53:07.8±0.5, 26°.87N±0°.04×55°.64E±0°.03, h10km, Error ellipse: s-maj=5.8km s-min=3.6km az=150.9*
*SGS **14** 16:53:08.3, 26°.81N×56°.09E, h18km*
*CSEM **14** 16:53:08.6±0.3, 26°.91N×55°.70E, h2km, ML3.0, Error ellipse: s-maj=7.6km s-min=7.2km az=126.0*
*KISR **14** 16:53:10.4±0.9, 27°.41N×55°.37E, h34km±999km, ML3.3*
*OMAN **14** 16:53:12.8±99.0, 26°.70N×55°.99E, h10km, Error ellipse: s-maj=99.6km s-min=12.6km az=25.0*

ISC 14 16:53:09.7±0.5, 26°.85N±0°.04×55.71E±0°.03, h10km, n31, σ1°38/39, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.69	37	ePg	Pg	16 53 20.4	-2.6
BNDS				eSg	Sg	16 53 30.5	-1.5
IBND	Bandar-abas	0.95	51	ePg	Pg	16 53 26.7	-1.4
IBND				e		16 53 28.4	
	comp=Z,20μm,0.1s						
IBND				eSg	Sg	16 53 40.6	+0.1
BANOM	Banah	1.06	150	P	Pg	16 53 28.7	-1.4
	SNR=221						
BANOM	Banah	1.06	150	P	Pg	16 53 28.7	-1.4
	SNR=221						
ASHO	Ashiyiah	2.17	172	P	Pn	16 53 46.8	+0.8
	SNR=24						
ASHO	Ashiyiah	2.17	172	P	Pn	16 53 46.9	+0.9
	SNR=24						
ASUD	Al Ashush, Dub	2.24	189	P	Pn	16 53 48.8	+2.0
	SNR=18						
ASUD	Al Ashush, Dub	2.24	189	P	Pn	16 53 48.8	+1.9
	SNR=18						
KRBR	Kerman	3.26	16	ePn	Pn	16 54 00.2	-0.7
ISRV	Sarvestan	3.41	318	ePn	Pn	16 54 05.8	+2.8
ISRV				e		16 54 52.6	
	comp=Z,417nm,0.2s						
IMEH	Mehriz	4.63	348	ePn	Pn	16 54 21.8	+2.1
IMEH				e		16 54 24.5	
	comp=Z,196nm,0.1s						
IBAF	Bafgh	4.73	359	ePn	Pn	16 54 22.2	+1.1
IBAF				e		16 54 23.7	
	comp=Z,286nm,0.1s						
BTHS		5.21	239	P	Pn	16 54 27.7	0.0
BTHS		5.21	239	P	Pn	16 54 27.7	0.0
BTHS				S	Sn	16 55 27.0	-0.8
ZHSF	Zahedan	5.25	57	ePn	Pn	16 54 29.0	+0.8
ISAD	Sadrabad	5.35	341	ePn	Pn	16 54 32.6	+3.0
ISAD				e		16 54 37.4	
	comp=Z,132nm,0.1s						
IGAR	Gharneh	6.39	331	ePn	Pn	16 54 45.9	+1.9
IGAR				e		16 54 49.1	
	comp=Z,278nm,0.1s						
NASN	Na'in	6.45	338	ePn	Pn	16 54 43.4	-1.3
IZEF	Zefreh	6.71	335	ePn	Pn	16 54 48.9	+0.7
IZEF				e		16 54 52.4	
	comp=Z,88nm,0.2s						
HRDDS		6.88	237	S	Sn	16 56 08.0	-1.2
HRDDS		6.88	237	P	Pn	16 54 50.4	-0.3
IPIR	Pirpir	7.17	325	ePn	Pn	16 54 55.5	+0.9
IPIR				e		16 56 18.6	
	comp=Z,151nm,0.3s						
RDF	Al-Radifah	7.51	288	eP	Pn	16 55 01.3	+2.0
RDF				eS	Sn	16 56 23.9	-0.8
NAY	Al-Naaiem	7.86	290	eP	Pn	16 55 05.2	+1.2
NAY				eS	Sn	16 56 31.5	-1.6
NAY				AML	AML	16 56 31.9	
	comp=Z,2.8nm,0.6s						
NAY	Al-Naaiem	7.86	290	eP	Pn	16 55 05.2	+1.1
NAY				eS	Sn	16 56 31.5	-1.6
MIB	Mutribah	7.95	294	eP	Pn	16 55 06.2	+0.9
MIB				eS	Sn	16 56 33.5	-1.7
MIB				AML	AML	16 56 35.2	
	comp=Z,4.4nm,0.6s						
MIB	Mutribah	7.95	294	eP	Pn	16 55 06.2	+0.9
MIB				eS	Sn	16 56 33.5	-1.7
ASYS		10.15	276	S	Sn	16 57 24.6	-4.7
ASYS		10.15	276	P	Pn	16 55 34.3	-1.2
ASYS		10.15	276	P	Pn	16 55 34.3	-1.2
SNGE	Sanandaj	10.91	321	ePn	Pn	16 55 44.7	-1.2

*IDC **14** 17:45:37.2±3.7, 2°.70S×100°.21E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/20, mbtmp3.7/5, Error ellipse: s-maj=163.2km s-min=20.1km az=56.0*
*NEIC **14** 17:45:41.5±1.1, 2°.86S×100°.04E, h35km, Error ellipse: s-maj=39.9km s-min=10.4km az=62.0*
*DJA **14** 17:45:45, 2°.27S×100°.93E, h97km, MLv3.5/5*
*ISCJB **14** 17:45:46.2±1.2, 2°.3S±0°.1×100°.7E±0°.1, h72km±9km, mb3.9/4, Error ellipse: s-maj=23.0km s-min=9.4km az=44.0*

ISC 14 17:45:47.1±1.3, 2°.3S±0°.1×100°.73E±0°.10, h62km±10km, n15, σ0°73/16, mb3.8/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	0.77	71	P	Pn	17 46 01.9	-0.3
KRJI				S	Sn	17 46 13.8	+0.4
PDSI	Padang	1.45	349	P	Pn	17 46 10.2	-0.9
PDSI				S	Sn	17 46 27.2	-2.0
SDSI	Sungai Dareh	1.56	26	P	Pn	17 46 12.8	+0.1
PPI	Padang Panjang	1.90	350	P	Pn	17 46 18.1	+0.8
PPI				S	Sn	17 46 41.3	+1.1
SISI	Saibi	1.93	302	P	Pn	17 46 18.0	+0.4
IPM	Ipoh	6.78	2	eP	Pn	17 47 28.4	+4.3
CMAR	Chiang Mai Arr	20.74	355	P	P	17 50 23.6	+0.8
	0.3nm,0.5s,baz=216,slow=12,SNR=3.1						
WRA	Warramunga Arr	37.19	121	P	P	17 52 52.1	-0.4
	0.3nm,0.4s,mb3.5,baz=309,slow=9.7,SNR=6.8						
WB2	Warramunga Arr	37.20	121	eP	P	17 52 52.4	-0.3
ASAR	Alice Springs	38.46	126	P	P	17 53 03.5	+0.3
	0.8nm,0.6s,mb3.6,baz=302,slow=7.7,SNR=18						
MK31	Makanchi Array	51.56	344	eP	P	17 54 46.8	0.0
MKAR	Makanchi Array	51.56	344	P	P	17 54 46.9	+0.1
	1.4nm,0.6s,mb4.1,baz=157,slow=9.0,SNR=18						
ZALV	Zalesovo Beam	57.64	349	P	P	17 55 30.2	-0.5
	1.2nm,0.6s,mb4.1,baz=180,slow=4.3,SNR=8.6						
TXAR	Lajitas Array	144.52	38	PKPbc	PKPdf	18 05 16.0	-1.2
	0.3nm,0.6s,baz=298,slow=1.6,SNR=4.0						
TXAR	Lajitas Array	144.52	38	PKPbc	PKPdf	18 05 16.0	-1.2

*TAP **14** 17:45:49.6, 23°.87N×121°.29E, h11km, ML3.7, B*
*IDC **14** 17:45:49.2±1.2, 23°.42N×121°.00E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.3/24, mbtmp3.4/6, ML3.1/1, Error ellipse: s-maj=74.3km s-min=19.8km az=68.0*
*NEIC **14** 17:45:49.5±0.7, 23°.80N×121°.39E, h10km, Error ellipse: s-maj=12.3km s-min=6.8km az=108.0*
*ISCJB **14** 17:45:50.0±0.3, 23°.85N±0°.01×121°.30E±0°.02, h2km±3km, mb3.2/5, Error ellipse: s-maj=3.0km s-min=2.0km az=38.3*

ISC 14 17:45:50.4±0.2, 23°.84N±0°.01×121°.32E±0°.02, h5km±3km, n59, σ0°99/90, mb3.2/5, 10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESL	Shilin	0.11	105	iP	Pg	17 45 53.4	+0.7
	baz=111						
ESL				iS	Sg	17 45 55.5	+1.2
	baz=111						
ESF	Shoufeng Towns	0.18	81	iP	Pg	17 45 54.3	+0.4
	baz=95						
ESF				iS	Sg	17 45 57.3	+0.9
	baz=95						
TEGC	Jichi Village	0.25	123	eP	Pg	17 45 56.5	+1.3
	baz=124						
HWA	Hwalien	0.30	63	iP	Pg	17 45 56.7	+0.5
	baz=79						
HWA				iS	Sg	17 46 01.5	+1.4
	baz=79						
WHF	Hehuan Shan	0.30	351	⇓iP	Pg	17 45 55.7	-0.6
	baz=357						
WHF				S	Sg	17 45 59.6	-0.7
	baz=357						
SSLB	Suanglung	0.34	261	ePg	Pg	17 45 56.0	-0.9
SSLB				eSg	Sg	17 45 59.2	-2.0
EHY	Hungye	0.34	179	⇓iP	Pg	17 45 56.9	-0.1
	baz=174						
EHY				eS	Sg	17 46 01.4	+0.1
	baz=174						
TWD	Chiawan	0.35	47	⇓iP	Pg	17 45 57.0	-0.1
	baz=54						
TWD				iS	Sg	17 46 01.8	+0.1
	baz=54						
SMLT	Sun Moon Lake	0.38	276	⇓iP	Pg	17 45 57.3	-0.5
	baz=273						
SMLT				iS	Sg	17 46 02.2	-0.5
	baz=273						
NACB	Ninganchiao	0.42	38	ePg	Pg	17 45 57.6	-0.9
NACB				eSg	Sg	17 46 03.6	-0.4
TYC	Yuchr	0.42	278	⇓iP	Pg	17 45 58.0	-0.6
	baz=276						
TYC				iS	Sg	17 46 03.2	-0.9
	baz=276						
YULB	Yu-li	0.45	182	ePg	Pg	17 45 58.1	-0.9
YUS	Yu-Shan	0.48	223	eP	Pg	17 45 58.9	-0.8
	baz=227						
TWF1	Yuli	0.49	182	⇓iP	Pg	17 45 59.6	-0.2
	baz=177						
TWF1				eS	Sg	17 46 06.4	+0.2
	baz=177						
ALS	Alishan	0.57	235	iP	Pg	17 46 01.0	-0.4
	baz=239						
WNT	Mingjian	0.58	274	P	Pg	17 46 01.9	+0.4
	baz=274						
WNT				S	Sg	17 46 10.5	+1.4
	baz=274						
NNS	Nan Shan	0.60	5	⇓iP	Pg	17 46 01.3	-0.6
	baz=9.0						
NNS				S	Sg	17 46 09.0	-0.7
	baz=9.0						
TCU	Taichung	0.66	298	eP	Pg	17 46 03.9	+0.8
	baz=298						
ENA	Nanau	0.70	34	iP	Pg	17 46 03.1	-0.8
	baz=48						
ENA				eS	Sg	17 46 12.6	-0.4
	baz=48						
TWQ1	Liyutan	0.70	316	eP	Pg	17 46 06.0	+2.0
	baz=317						
ELDTW	Lidau	0.71	203	eP	Pg	17 46 02.6	-1.4
	baz=189						
WGK	Gukeng	0.71	257	⇓iP	Pg	17 46 04.9	+0.9
	baz=255						
NSY	Sanyi	0.76	319	eP	Pg	17 46 06.8	+1.8
	baz=319						
NSY				eS	Sg	17 46 15.9	+1.0
	baz=319						
ENTT	Nioudou	0.83	16	iP	Pg	17 46 05.7	-0.6
	baz=13						
ENTT				S	Sg	17

baz=189
NCU National Centr 1.13 354 *e*P **Pg 17 46 13.3 +1.2**
baz=9.0
NCU *e*S **Sg 17 46 28.8 +2.0**
baz=9.0
TATO Taipei 1.14 8 *e*P **Pg 17 46 11.6 -0.7**
TATO *e*S **Sg 17 46 26.2 -0.8**
TWA Mucha 1.16 12 *e*P **Pg 17 46 12.0 -0.7**
baz=15
TWA *e*S **Sg 17 46 26.9 -0.8**
baz=15
CHN3 Shinhua 1.16 229 P **Pg 17 46 13.2 +0.6**
baz=237
CHN3 *e*S **Sg 17 46 31.7 +4.0**
baz=237
TAP1 Taipei 1.21 9 *e*P **Pg 17 46 12.8 -0.8**
baz=10.0
SCLT Jiali 1.23 237 *e*P **Pg 17 46 13.5 -0.4**
baz=249
TWS1 Kuangyinshan 1.25 4 *e*P **Pg 17 46 14.8 +0.3**
baz=7.0
TWS1 *e*S **Sg 17 46 31.7 +0.9**
baz=7.0
NWF Wu-fen Shan 1.29 19 P **Pn 17 46 14.8 -0.3**
baz=21
NWF S **Sg 17 46 31.4 -0.6**
baz=21
TWM1 Shoushan 1.30 219 *i* P **Pn 17 46 16.8 +1.5**
baz=205
TWY Chenhua 1.45 10 *e*P **Pn 17 46 18.2 +1.0**
baz=11
TAW Tawu 1.53 195 *e*P **Pn 17 46 17.8 -0.5**
baz=191
SCZT Fangliau 1.60 204 *e*P **Pn 17 46 20.4 +1.1**
baz=192
SCZT *e*S **Sn 17 46 43.7 +3.5**
baz=192
PNG Penghu 1.64 261 *e*P **Pn 17 46 18.6 -1.2**
baz=260
PNG *e*S **Sn 17 46 39.9 -1.4**
baz=260
KNM Kinmen 2.69 283 *e*P **Pn 17 46 38.1 +3.8**
baz=281
QZH Quanzhou 2.71 294 Pn **Pn 17 46 41.4 +6.8**
QZH Sn **Sn 17 47 13.1 +5.3**
QZH smax
comp=N,120nm,0.7s
QZH smax
comp=E,110nm,0.7s
KSRS Korea Array 14.70 21 Pn **Pn 17 49 24.6 +5.7**
comp=E,0.1nm,0.3s,baz=204,slow=11,SNR=5.8
SONM Songino Array 26.73 337 P **P 17 51 33.7 +3.1**
comp=E,0.4nm,0.8s,mb3.0,baz=148,slow=8.7,SNR=3.5
MKAR Makanchi Array 38.66 316 P **P 17 53 15.4 +0.6**
comp=E,0.6nm,0.8s,mb3.4,baz=114,slow=8.5,SNR=5.9
ZALV Zalesovo Beam 40.59 327 P **P 17 53 31.3 +0.5**
comp=E,0.3nm,0.4s,mb3.3,baz=114,slow=7.1,SNR=2.6
WRA Warramunga Arr 45.33 163 P **P 17 54 06.0 -3.5**
comp=E,0.3nm,0.9s,mb3.1,baz=344,slow=7.9,SNR=2.6
ASAR Alice Springs 48.78 165 P **P 17 54 34.1 -2.3**
comp=E,0.4nm,1.1s,mb3.4,baz=344,slow=6.9,SNR=3.7

MOS 14 17:53:21.0±0.7, 43.47N×44.20E, h19km, mb3.8/1, 2C-2D, Error ellipse: s-maj=13.7km s-min=9.4km az=101.2, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTKR	**Batakoyurt**	**0.27**	**112**	*e*PG	Pg	17 53 29.0	+1.9
BTKR				*e*S	Sg	17 53 34.5	+3.2
PRTR	**Priterechnaya**	**0.29**	**12**	*i*PG	Pg	17 53 28.0	+0.6
PRTR				*e*S	Sg	17 53 33.0	+1.3
ARNR	**Ardon**	**0.29**	**168**	*e*PG	Pg	17 53 29.2	+1.8
ARNR				*e*S	Sg	17 53 34.8	+3.0
LSNR	**Lesken**	**0.34**	**235**	*e*PG	Pg	17 53 28.3	0.0
LSNR				*e*S	Sg	17 53 33.9	+0.7
KORR	**Kora**	**0.40**	**194**	*e*PG	Pg	17 53 30.4	+1.1
KORR				*e*S	Sg	17 53 37.3	+2.5
VLKR	**Vladikavkaz**	**0.55**	**140**	*e*PG	Pg	17 53 33.3	+1.3
VLKR				*e*S	Sg	17 53 42.5	+3.1
DIGR	**Digorskoe uzhe**	**0.73**	**218**	*e*PG	Pg	17 53 35.4	+0.1
DIGR				*e*S	Sb	17 53 45.8	+1.2
ZEI	**Tsey**	**0.73**	**197**	*e*PG	Pg	17 53 35.8	+0.4
ZEI				*e*S	Sb	17 53 46.3	+1.5
PYA	**Pyatigorsk**	**1.00**	**305**	*e*PG	Pg	17 53 39.6	-0.8
PYA				*e*S	Sb	17 53 52.8	+0.4
BEYR	**Belyy Ugol+**	**1.14**	**299**	*e*PG	Pg	17 53 42.1	-0.9
BEYR				*e*S	Sb	17 53 58.9	+2.5
SHAR	**Shatzhatmas**	**1.14**	**284**	*e*PG	Pg	17 53 42.3	-0.8
SHAR				*i* S	Sb	17 53 58.2	+1.6
KIV	**Kislovodsk**	**1.20**	**294**	*e*PG	Pg	17 53 43.4	-0.8
KIV				*e*S	Sb	17 53 59.9	+1.8

MEX 14 17:56:31.7±0.7, 17.73N×103.27W, h10km, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**1.73**	**94**	*i* P	Pn	17 56 59.1	-2.7
ZIIG				*e*S	Sn	17 57 18.8	-5.1
EZ5V		**1.77**	**350**	*e*P	Pn	17 56 58.8	-3.6
EZ5V				*i* S	Sn	17 57 20.9	-4.0
MOIG	**Morelia**	**2.77**	**45**	*i* P	Pn	17 57 09.5	-6.6
CAIG	**El Cayaco**	**2.95**	**103**	*i* P	Pn	17 57 14.8	-3.8
CAIG				*i* S	Sn	17 57 49.0	-5.0
MEIG	**Mezcala**	**3.48**	**86**	*i* P	Pn	17 57 23.9	-2.0
MEIG				*i* S	Sn	17 58 03.4	-3.9

*IDC **14** 18:05:18.9±1.1, 32.73N×105.87E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/23, mbtmp3.5/5, Error ellipse: s-maj=160.8km s-min=20.3km az=57.0*
*BJI **14** 18:05:22.8, 32.37N×104.91E, h12km, ML3.1/10*
ISC 14 18:05:20.6±0.8, 32.36N±0.04×105.00E±0.06, h6km±7km, n9, σ1°17/17, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.79**	**216**	Pn	**Pn**	**18 05 51.9**	**-0.2**
CD2				Pg	**Pg**	**18 05 54.3**	**-0.6**
CD2				Sn	**Sn**	**18 06 15.8**	**+0.7**
CD2				Sg	**Sg**	**18 06 18.1**	**-0.1**
CD2				smax			
comp=N,1μm,0.7s
CD2 smax
comp=E,910nm,0.7s
XAN Xi'an 3.69 62 Pn **Pn 18 06 19.9 +1.7**
XAN Pg **Pg 18 06 32.8 +1.5**
XAN Sn **Sn 18 07 10.9 +8.8**
XAN Sg **Sg 18 07 18.3 -0.9**
XAN smax
comp=N,43nm,0.5s
XAN smax
comp=E,21nm,0.6s
LZH Lanzhou 3.84 346 Pg **Pg 18 06 33.8 -0.3**
LZH Sn **Sn 18 07 14.0 +8.4**
LZH Sg **Sg 18 07 22.0 -1.8**
LZH smax
comp=N,120nm,1.0s
LZH smax
comp=E,210nm,1.0s
GTA Gaotai 8.19 331 *e*P **Pg 18 07 59.4 +2.0**
GTA pP 18 08 04.5
GTA pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 22.56 316 P **P 18 10 23.5 +2.1**
comp=Z,0.2nm,0.5s,mb2.8,baz=107,slow=9.4,SNR=5.3
ARCES ARCESS Array B 56.43 335 P **P 18 15 02.1 -0.5**
comp=Z,1.0nm,0.8s,mb3.9,baz=81,slow=7.7,SNR=6.4
FINES FINESS Array B 56.95 326 P **P 18 15 05.7 -0.8**
comp=Z,2.5nm,0.9s,mb4.2,baz=92,slow=4.6,SNR=4.4
WRA Warramunga Arr 59.11 148 P **P 18 15 20.7 -1.3**
comp=Z,0.5nm,0.6s,mb3.7,baz=342,slow=7.6,SNR=7.5
ASAR Alice Springs 62.18 150 P **P 18 15 42.0 -1.0**
comp=Z,0.3nm,0.8s,mb3.5,baz=329,slow=6.5,SNR=9.4

*ISCJB **14** 18:29:24.8±0.5, 2.89N±0.06×76.05W±0.06, h10km, mb3.9/12, MS3.8/2, Error ellipse: s-maj=10.7km s-min=6.5km az=40.6*
*IDC **14** 18:29:24.3±0.8, 2.91N×76.08W, h0km, mb3.7/7, mb1 4.2/11, mb1mx4.0/24, mbtmp4.0/11, ML4.0/2, MS3.8/2, Ms1 3.8/2, ms1mx3.0/25, Error ellipse: s-maj=20.1km s-min=14.2km az=129.0*
*NEIC **14** 18:29:29.0±3.4, 2.88N×76.00W, h31km±26km, mb4.1/6, Error ellipse: s-maj=14.4km s-min=11.4km az=112.0*
ISC 14 18:29:26.9±0.5, 2.92N±0.06×76.08W±0.06, h10km, n29, σ1°14/29, mb3.9/12, MS3.8/2, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.60**	**42**	Pn	**Pn**	**18 30 07.8**	**-1.2**
36nm,0.3s,baz=262,slow=1.4,SNR=36
ROSC Pg **Pg 18 30 11.8 -5.0**
56nm,0.3s,baz=344,slow=1.0,SNR=83
ROSC Sn **Sn 18 30 41.1 +0.5**
97nm,0.3s,baz=86,slow=19,SNR=3.9
ROSC Lg 18 30 48.0
353nm,0.3s,baz=104,slow=19,SNR=15
ROSC El Rosal 2.60 42 *e*P **Pn 18 30 08.5 -0.5**
ROSC Pg **Pg 18 30 11.8 -5.0**
ROSC Sn **Sn 18 30 41.1 +0.5**
ROSC *e*S **Sn 18 30 45.0 +4.3**
ROSC Lg 18 30 48.0
OTAV Otavalo 3.56 222 *e*Pn **Pn 18 30 22.6 +0.3**
SDV Santo Domingo 8.03 42 *e*Pn **Pn 18 31 22.7 -1.0**
33nm,0.8s
SDV *e*S **Sn 18 32 56.8 +2.2**
ATAH Atahualpa 10.25 193 Pn **Pn 18 31 54.8 +0.7**
0.7nm,0.3s,baz=11,slow=6.9,SNR=16
PCRV Puerto La Cruz 13.46 57 Pn **Pn 18 32 38.2 +0.1**
1.1nm,0.3s,baz=325,slow=4.4,SNR=5.0
SJG San Juan 17.96 32 P **Pn 18 33 35.3 -1.6**
1.0nm,0.3s,baz=7.4,slow=21,SNR=2.5
SJG San Juan 17.96 32 P **Pn 18 33 35.3 -1.6**
LPAZ La Paz 20.64 158 P **P 18 34 06.7 0.0**
1.0nm,0.8s,baz=330,slow=11,SNR=4.5
LPAZ La Paz 20.64 158 *e*P **P 18 34 06.7 -0.1**
BDFB Brasilia 33.33 124 P **P 18 36 05.0 -0.3**
0.8nm,0.3s,mb4.1,baz=281,slow=27,SNR=2.2
TXAR Lajitas Array 37.10 318 P **P 18 36 37.8 +0.1**
0.4nm,0.6s,mb3.4,baz=149,slow=9.9,SNR=4.0
MNTX Cornudas Mount 39.75 319 P **P 18 36 57.5 -2.4**
4.4nm,1.1s,mb4.1
ANMO Albuquerque 42.56 322 *e*P **P 18 37 22.1 -0.9**
4.2nm,1.1s,mb4.1
ANMO *e* 18 37 38.5
LAZ Ladron 42.62 321 *e*P **P 18 37 25.6 +2.1**
2.6nm,1.2s,mb3.8
PLCA Paso Flores 43.73 174 LR LR 18 55 58.0
comp=Z,91nm,18.2s,MS3.7,baz=346,slow=36
SDCO Great Sand Dun 43.91 326 *e*P **P 18 37 34.8 +0.9**
1.5nm,1.0s,mb3.7
RSSD Black Hills 47.90 333 P **P 18 38 06.5 +1.2**
4.4nm,1.0s,mb4.4
PDAR Pinedale Array 49.63 328 P **P 18 38 18.0 -0.7**
0.1nm,0.3s,mb3.4,baz=88,slow=13,SNR=3.6
NVAR Mina Array Bea 52.25 318 P **P 18 38 37.7 -0.7**
1.3nm,0.8s,mb3.9,baz=124,slow=6.5,SNR=9.8
NVAR Mina Array Bea 52.25 318 P **P 18 38 37.7 -0.7**
LRM Limekiln Ridge 53.24 329 *e*P **P 18 38 48.1 +2.5**
9.2nm,0.8s,mb4.8
YKA Yellowknife Ar 65.95 342 P **P 18 40 12.4 -0.6**
1.0nm,0.6s,mb4.0,baz=133,slow=6.4,SNR=5.9
ILAR Eielson Array 79.26 336 P **P 18 41 31.8 -0.3**
0.4nm,0.7s,mb3.5,baz=129,slow=3.5,SNR=6.5
NOA NORSAR Array B 86.15 29 LR LR 19 19 27.5
comp=Z,45nm,18.1s,MS3.9,baz=265,slow=35
MKAR Makanchi Array 126.95 18 PKP PKPdf 18 48 28.7 -2.6
0.3nm,0.7s,baz=45,slow=2.6,SNR=2.9
SONM Songino Array 129.41 358 PKP PKPdf 18 48 34.4 -1.6
0.7nm,1.0s,baz=48,slow=2.1,SNR=3.0
ASAR Alice Springs 144.42 232 PKhKP PKPpre 18 48 59.6
1.3nm,0.7s,baz=120,slow=3.8,SNR=21
WRA Warramunga Arr 145.83 238 PKPbc PKPbc 18 49 04.5 -2.8
0.8nm,0.7s,baz=114,slow=2.9,SNR=8.5

IDC 14 18:29:33.1±1.2, 2.01N×123.99E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, Error ellipse: s-maj=63.5km s-min=20.2km az=72.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.07**	**156**	P	P	18 34 50.7	+0.4
0.8nm,0.5s,baz=331,slow=11,SNR=12
ASAR Alice Springs 27.29 160 P P 18 35 20.1 +0.6
0.5nm,1.0s,baz=341,slow=7.3,SNR=3.4
MJAR Matsushiro Ar 36.79 19 P P 18 36 41.9 -0.8
0.8nm,0.6s,baz=198,slow=9.9,SNR=4.9
SONM Songino Array 48.12 344 P P 18 38 15.5 +0.8
0.4nm,0.7s,baz=163,slow=10,SNR=3.4
MKAR Makanchi Array 57.45 327 P P 18 39 23.4 -0.5
0.3nm,0.4s,baz=126,slow=8.0,SNR=11

*BJI **14** 18:51:00.8, 7.97S×128.68E, h141km, mB5.2/29, mb5.2/54*
*ISCJB **14** 18:51:05.3±0.2, 7.52S±0.03×128.31E±0.03, h139km, mb5.0/110, Error ellipse: s-maj=4.7km s-min=3.4km az=160.4*
*MOS **14** 18:51:06.6±1.3, 7.32S×128.13E, h141km, mb5.1/31, Error ellipse: s-maj=12.2km s-min=6.3km az=109.2*
*IDC **14** 18:51:07.3±0.4, 7.41S×128.26E, h135km±3km, mb4.6/19, mb1 4.7/20, mb1mx4.7/22, mbtmp4.7/20, MS4.0/6, Ms1 4.0/6, ms1mx3.6/20, Error ellipse: s-maj=14.5km s-min=7.7km az=70.0*
*NEIC **14** 18:51:07.3±0.1, 7.41S×128.26E, mb5.1/47, Error ellipse: s-maj=6.1km s-min=3.6km az=55.0*
*DJA **14** 18:51:09, 7.69S×128.19E, h164km, mb5.1/45*
*GCMT **14** 18:51:09.9±0.2, 7.57S×128.17E, h144km±1km, MW5.2, Moment Tensor Solution. s67,c93; s99,c186; Moment tensor: Scale 10^{16}Nm; M_{rr}6.13±.12; $M_{\theta\theta}$-5.66±.15; $M_{\phi\phi}$-0.48±.15; $M_{r\theta}$4.34±.11; $M_{\theta\phi}$2.62±.14; $M_{\phi r}$0.26±.12; Best double couple: $M_0$7.80000×10^{16} NP1:ϕ_s308.00000°, δ31.00000°, λ116.00000°. NP2:ϕ_s98.00000°, δ62.00000°, λ75.00000°. Principal axes: T 7.7000, Plg69.0000°, Azm338.0000°; N 0.1700, Plg13.0000°, Azm105.0000°; P -7.8800, Plg16.0000°, Azm199.0000°; Data Used: II IU IC G CN. Surface waves from 103 sta.*
ISC 14 18:51:07.2±0.2, 7.57S±0.03×128.28E±0.03, h141km, h141km±1.5km: pP-P, n447, σ1°26/315, mb5.0/110, 41C-36D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**3.43**	**28**	P	**Pn**	**18 52 01.5**	**+1.7**
NLAI	**Namlea**	**4.46**	**345**	P	**Pn**	**18 52 16.6**	**+3.3**
TLE	**Tual**	**4.83**	**67**	P	**Pn**	**18 52 20.2**	**+2.0**
BBSI	**Bau Bau**	**6.04**	**290**	P	**Pn**	**18 52 38.0**	**+3.6**
1.0nm3μm205nm,0.9s
MMRI Maumere 6.08 260 P **Pn 18 52 36.0 +1.1**
2.7nm10μm459nm,0.8s
KAKA Kakadu 6.55 142 *i*P **Pn 18 52 41.5 +0.2**
522nm,0.3s
KAKA *e*S **Sn 18 53 48.6 -6.2**
KAKA Kakadu 6.55 142 *e*P **Pn 18 52 41.8 +0.5**
2μm,0.7s
KAKA *e*S **Sn 18 53 51.7 -3.1**
KAKA Kakadu 6.55 142 P **Pn 18 52 42.0 +0.7**
2μm,0.6s
KDI Kendari 6.67 302 P **Pn 18 52 45.0 +2.1**
0.3nm898nm106nm,0.8s
KNA Kununurra 8.15 177 P **Pn 18 53 02.9 +0.2**
6μm,0.8s
WSI Waingapu 8.16 255 P **Pn 18 53 01.9 -1.0**
1μm,0.5s
TNTI Ternate 8.33 354 P **Pn 18 53 07.1 +1.9**
3μm268nm,1.0s
BKSI Bulukumba 8.41 285 P **Pn 18 53 07.3 +1.1**
850nm73nm,0.9s
LUWI Luwuk 8.49 319 P **Pn 18 53 10.8 +3.5**
3μm329nm,0.9s
KAPI Kappang 8.85 286 *e*P **Pn 18 53 12.6 +0.5**
63nm,1.0s
KAPI Kappang 8.85 286 P **Pn 18 53 13.3 +1.2**
335nm23nm,1.0s
KMSI Cibinong 9.15 332 P **Pn 18 53 19.4 +3.3**
SPSI Sidrap Palu 9.19 292 P **Pn 18 53 18.0 +1.3**
890nm52nm,0.9s
BMNI Bima 9.54 264 P **Pn 18 53 22.5 +1.1**
1μm76nm,0.7s
TTSI Tana Toraja 9.54 298 P **Pn 18 53 23.7 +2.3**
632nm55nm,0.9s
MNI Manado 9.58 339 P **Pn 18 53 25.3 +3.4**
3μm299nm,0.9s
BAKI Biak 10.05 51 P **Pn 18 53 29.4 +1.3**
2μm214nm,0.9s
FITZ Fitzroy Crossi 10.79 194 P **Pn 18 53 35.0 -2.8**
41nm,0.3s,baz=27,slow=9.7,SNR=754
FITZ S **Sn 18 55 28.2 -8.7**
62nm,0.3s,baz=301,slow=21,SNR=13
FITZ LR LR 18 58 39.8
comp=Z,1μm,19.0s,baz=9.6,slow=41
FITZ Fitzroy Crossi 10.79 194 *i*P **Pn 18 53 34.9 -2.9**
432nm,0.6s
FITZ *e*S **Sn 18 55 27.5 -9.5**
FITZ Fitzroy Crossi 10.79 194 *e*P **Pn 18 53 35.0 -2.8**
345nm,0.9s
FITZ Fitzroy Crossi 10.79 194 P **Pn 18 53 34.9 -2.9**
6μm667nm,1.0s
WAMI Wamena 11.00 71 P **Pn 18 53 45.8 +5.0**
2μm227nm,0.7s
TOLI Toli-Toli 11.41 319 P **Pn 18 53 50.6 +4.5**
104nm,1.5s
KBKI Kotabaru 12.78 289 P **Pn 18 54 11.0 +7.0**
WRA Warramunga Arr 13.63 155 P **Pn 18 54 11.2 -3.7**
21nm,0.3s,baz=320,slow=14,SNR=312
WRA S **Sn 18 56 33.0 -13**
60nm,0.3s,baz=325,slow=23,SNR=16
WRA LR LR 18 59 42.3
comp=Z,311nm,19.4s,baz=345,slow=37
WRA Warramunga Arr 13.63 155 P **Pn 18 54 11.2 -3.7**
WRA S **Sn 18 56 33.0 -13**
WRA LR LR 18 59 42.3
WRA Warramunga Arr 13.63 155 P **Pn 18 54 11.3 -3.6**
WB2 Warramunga Arr 13.64 155 *e*P **Pn 18 54 12.5 -2.5**
MATI Mati 14.55 352 *e*P **Pn 18 54 30.9 +4.3**
BUKP Musuan 15.67 348 *e*P **Pn 18 54 43.7 +3.2**
TSM Tawau 15.70 318 P **Pn 18 54 44.5 +3.6**
MBWA Marble Bar 15.84 211 *e*P **Pn 18 54 40.4 -2.1**
MBWA *e*S **S 18 57 23.5 -16**
MBWA Marble Bar 15.84 211 *e*P **Pn 18 54 40.8 -1.7**
88nm,0.4s
MBWA Marble Bar 15.84 211 P **Pn 18 54 41.8 -0.7**
203nm,0.9s
MBWA Marble Bar 15.84 211 P **Pn 18 54 42.7 +0.2**
SNR=9.3
COEN Coen 15.95 115 *e*P **Pn 18 54 44.6 +0.7**
274nm,0.6s
COEN Coen 15.95 115 P **Pn 18 54 48.0 +4.1**
216nm,0.8s
MYLDM Lahad Datu 15.98 322 P **Pn 18 54 49.7 +5.3**
MYLDM Lahad Datu 15.98 322 P **Pn 18 54 48.1 +3.8**
2μm186nm,1.2s
PAGZ Pagadian 16.07 342 *e*P **Pn 18 54 48.0 +2.7**
PWJI Pagerwojo 16.33 267 P **Pn 18 54 48.9 +0.3**
49nm,0.9s
SJI Sawahan 16.37 268 P **Pn 18 54 50.4 +1.3**
67nm,0.9s
BUTP Butuan 16.64 351 *e*P **Pn 18 54 56.3 +4.0**
NGJI Ngawi 16.68 270 P **Pn 18 54 50.7 -2.1**
70nm,2.2s
ASAR Alice Springs 16.89 162 P **Pn 18 54 57.0 +1.6**
9.5nm,0.3s,baz=338,slow=8.6,SNR=192
ASAR S **S 18 57 57.1 -6.4**
11nm,0.3s,baz=342,slow=21,SNR=8.3
ASAR Alice Springs 16.89 162 P **Pn 18 54 57.0 +1.6**
ASAR S **S 18 57 57.1 -6.4**
SDKM Sandakan 17.16 320 P **Pn 18 55 02.1 +3.5**
SCPH Surigao 17.45 351 *e*P **Pn 18 55 03.9 +1.7**
TBP Tagbilaran 17.70 346 *e*P **Pn 18 55 05.5 +0.4**
MSLP Maasin 17.91 349 *e*P **Pn 18 55 07.7 +0.1**
KKM Kota Kinabalu 18.10 318 P **P 18 55 11.4 +3.0**
KKM Kota Kinabalu 18.10 318 P **P 18 55 08.0 -0.4**
356nm,1.3s
KKM Kota Kinabalu 18.10 318 P **P 18 55 11.6 +3.2**
2μm181nm,1.4s
LLP Lapu-Lapu 18.27 346 *e*P **P 18 55 11.3 +1.0**
KDM Kudat 18.36 321 P **P 18 55 14.7 +3.4**
STKI Sintang 18.39 294 P **P 18 55 13.6 +2.0**
246nm,0.8s
BTM Bintulu 18.55 305 P **P 18 55 16.2 +2.8**
PMG Port Moresby 18.76 97 *e*P **P 18 55 19.7 +4.1**
69nm,0.8s
PMG Port Moresby 18.76 97 *e*P **P 18 55 19.7 +4.1**
PMG pmax pmax
comp=Z,69nm,0.8s
PMG Port Moresby 18.76 97 P **P 18 55 20.2 +4.6**
comp=Z,89nm,0.9s
SBUM Sibu 18.86 301 P **P 18 55 19.2 +2.5**
SBUM Sibu 18.86 301 P **P 18 55 18.7 +2.0**
comp=Z,2μmcomp=Z,177nm,0.9s
GUIM Jordan 18.94 343 *e*P **P 18 55 17.9 +0.4**
BATP Bataraza 19.32 327 *e*P **P 18 55 23.9 +2.2**
CUYO Cuyo Island 19.67 338 *e*P **P 18 55 25.4 0.0**
KSM Kuching 20.05 296 P **P 18 55 30.3 +0.8**
KSM Kuching 20.05 296 *e*P **P 18 55 28.8 -0.7**
comp=Z,272nm,0.9s
KSM Kuching 20.05 296 P **P 18 55 29.9 +0.3**
comp=Z,2μmcomp=Z,287nm,0.9s
CISI Cisompet, Garu 20.29 269 P **P 18 55 27.1 -5.0**
comp=Z,128nm,0.8s
LEM Lembang 20.51 271 P **P 18 55 33.3 -1.2**
comp=Z,85nm,1.1s
ENPP El Nido 20.62 335 *e*P **P 18 55 36.8 +1.1**
BUSP Coron 21.03 337 *e*P **P 18 55 42.2 +2.2**
TPI Tanjungpandan 21.09 282 P **P 18 55 39.4 -1.3**
comp=Z,70nm,1.2s,mb4.9
CBJI Citeko 21.30 272 P **P 18 55 40.4 -2.6**
comp=Z,305nm,0.9s,mb5.6
DBJI Dramaga 21.39 271 P **P 18 55 40.8 -3.1**
comp=Z,71nm,1.1s,mb4.9
CTA Charters Tower 21.41 127 P **P 18 55 45.9 +1.9**
comp=Z,15nm,0.9s,mb4.3,baz=305,slow=12,SNR=14
CTA S **S 18 59 34.3 +0.6**
comp=Z,6.4nm,0.7s,baz=64,slow=22,SNR=2.7
CTA Charters Tower 21.41 127 *e*P **P 18 55 46.3 +2.3**
comp=Z,6.3nm,0.6s,mb4.1
CTA *e*S **S 18 59 37.4 +3.7**
CTA Charters Tower 21.41 127 P **P 18 55 45.9 +1.9**
CTA S **S 18 59 34.3 +0.6**
CTAO Charters Tower 21.41 127 *e*P **P 18 55 46.4 +2.3**
comp=Z,78nm,1.1s,mb5.0
CTAO Charters Tower 21.41 127 *e*P **P 18 55 46.4 +2.4**
CTAO pmax pmax
comp=Z,78nm,1.1s,mb5.0
CTAO Charters Tower 21.41 127 P **P 18 55 45.4 +1.4**
comp=Z,32nm,1.4s,mb4.5
AUQP San Andres 21.48 345 *e*P **P 18 55 47.0 +2.1**
SKJI Sukabumi 21.55 270 P **P 18 55 45.5 -0.2**
comp=Z,143nm,0.9s,mb5.4
BOAC Boac 21.84 343 *e*P **P 18 55 49.1 +0.5**
CGJI Cibinong 22.43 271 P **P 18 55 49.1 -5.7**
comp=Z,162nm,0.9s,mb5.4
LUBP Lubang 22.61 339 *e*P **P 18 55 56.6 +0.2**
PPBI Pangkal Pinang 22.70 283 P **P 18 55 58.0 +0.7**
comp=Z,991nmcomp=Z,94nm,1.1s,mb5.2
TGY Tagaytay City 22.73 341 P **P 18 55 56.7 -0.7**
comp=Z,270nm,0.5s,mb5.9,baz=172,slow=2.2,SNR=18
TGY Tagaytay City 22.73 341 P **P 18 55 56.7 -0.7**
FORT Forrest 23.10 180 *e*P **P 18 56 02.4 +1.7**
comp=Z,120nm,0.7s,mb5.4
FORT Forrest 23.10 180 *e*P **P 18 56 02.4 +1.7**
comp=Z,183nm,0.8s,mb5.6
BALP Baler 24.09 344 *e*P **P 18 56 08.9 -1.0**
CAUP Cauayan 25.17 345 *e*P **P 18 56 19.1 -0.6**
KLBR Kellerberrin 25.84 201 *e*P **P 18 56 27.1 +1.5**
comp=Z,51nm,0.7s,mb5.3
KLBR *e*S S 19 01 16.1 +31
MYKOM Kota Tinggi 26.08 290 P **P 18 56 28.3 +0.3**
MYKOM Kota Tinggi 26.08 290 P **P 18 56 27.8 -0.2**
comp=Z,562nmcomp=Z,48nm,1.4s,mb5.0
BBOO Buckleboo 26.14 165 *e*P **P 18 56 29.7 +1.4**
comp=Z,84nm,0.6s,mb5.5
APYP Conner 26.20 345 *e*P **P 18 56 26.6 -2.4**
KGM Kluang 26.66 290 P **P 18 56 33.6 +0.4**
GUMO Guam 26.70 38 P **P 18 56 33.1 -0.4**
comp=Z,85nm,0.9s,mb5.4,baz=199,slow=7.7,SNR=5.9
GUMO Guam 26.70 38 P **P 18 56 33.1 -0.4**
STKA Stephens Creek 27.19 155 P **P 18 56 39.8 +2.1**
comp=Z,33nm,0.7s,mb5.1,baz=320,slow=8.7,SNR=29
STKA S S 19 01 49.3 +43
comp=Z,25nm,0.9s,baz=11,slow=2.9,SNR=3.8
STKA Stephens Creek 27.19 155 *e*P **P 18 56 39.3 +1.6**
comp=Z,23nm,0.7s,mb4.9
STKA *e*S S 19 01 55.6 +49
STKA Stephens Creek 27.19 155 *e*P **P 18 56 39.4 +1.7**
comp=Z,0.1nm,0.5s
NWAO Narrogin (SRO) 27.24 201 P **P 18 56 39.5 +1.3**
comp=Z,19nm,0.6s,mb4.9,baz=42,slow=8.1,SNR=12
NWAO pP pP 18 57 10.3 +2.4

comp=Z,23nm,0.5s,baz=19,slow=12,SNR=2.1
NWAO S S 19 01 48.6 +42
comp=Z,33nm,0.8s,baz=113,slow=21,SNR=2.0
NWAO LR LR 19 08 14.0
comp=Z,564nm,21.5s,baz=358,slow=38
NWAO Narrogin (SRO) 27.24 201 P P 18 56 39.5 +1.3
NWAO pP pP 18 57 10.3 +2.4
NWAO S S 19 01 48.6 +42
NWAO LR LR 19 08 14.0
NWAO Narrogin (SRO) 27.24 201 P P 18 56 39.5 +1.4
NWAO *PP pP 18 57 10.3 +2.4
SDSI Sungai Dareh 27.56 283 P P 18 56 39.4 -1.9
comp=Z,29nm,0.9s,mb5.0
KTGM Kuala Trenggan 28.17 296 P P 18 56 47.8 +1.2
PPI Padang Panjang 28.68 283 P P 18 56 50.0 -1.2
comp=Z,6μmcomp=Z,47nm,0.9s,mb5.2
IPM Ipoh 29.71 293 P P 18 57 00.5 +0.2
IPM Ipoh 29.71 293 *eP* **P 18 57 00.0 -0.3**
comp=Z,36nm,0.7s,mb5.2
IPM Ipoh 29.71 293 P P 18 56 59.3 -1.0
comp=Z,519nmcomp=Z,51nm,0.8s,mb5.3
MNSI Mandailing Nat 29.80 285 P P 18 56 59.4 -1.8
comp=Z,53nm,0.8s,mb5.3
KULM Kulim 30.38 294 P P 18 57 06.5 +0.3
KULM Kulim 30.38 294 *eP* **P 18 57 05.8 -0.4**
comp=Z,24nm,0.7s,mb5.0
KULM Kulim 30.38 294 P P 18 57 05.3 -0.9
SNG Songkhla 31.23 297 P P 18 57 14.0 +0.3
HNR Honiara 31.37 96 LR LR 19 10 38.0
comp=Z,184nm,19.1s,baz=288,slow=37
QIZ Qiongzhong 32.07 326 P P 18 57 20.8 -0.2
QIZ sP sP 18 58 05.3 -2.0
QIZ S **S 19 02 22.8 -0.1**
QIZ pmax pmax
comp=Z,23nm,1.1s,mb4.8
QIZ LR LR
comp=N,270nm,11.6s
QIZ LR LR
comp=Z,330nm,16.1s
QIZ Qiongzhong 32.07 326 *eP* **P 18 57 19.6 -1.4**
comp=Z,12nm,0.9s,mb4.6
UBT Ubonrachathani 32.33 315 ⇓P **P 18 57 24.5 +1.2**
YNG Young 32.43 148 *eP* **P 18 57 26.9 +2.9**
comp=Z,16nm,0.8s,mb4.8
QZH Quanzhou 33.66 344 P P 18 57 33.3 -1.4
QZH pmax pmax
comp=Z,130nm,0.8s,mb5.7
TOO Toolangi 33.71 155 *eP* **P 18 57 38.7 +3.7**
CNB Canberra Magne 33.72 148 *eP* **P 18 57 36.6 +1.5**
BDT Bhumibol Dam 38.01 311 P P 18 58 12.0 0.0
comp=Z,22nm,0.9s,mb4.8
CM31 Chiang Mai Arr 38.81 312 *eP* **P 18 58 18.6 0.0**
comp=Z,10nm,0.6s,mb4.6
CMAR Chiang Mai Arr 38.81 312 P P 18 58 18.6 0.0
comp=Z,13nm,0.6s,mb4.7,baz=140,slow=6.6,SNR=98
CMAR pP pP 18 58 47.9 -1.7
comp=Z,3.2nm,0.8s,baz=146,slow=7.5,SNR=1.8
CMAR PcP PcP 19 00 28.1 +0.9
comp=Z,3.3nm,0.8s,baz=171,slow=2.4,SNR=6.4
CMAR Chiang Mai Arr 38.81 312 P P 18 58 18.6 0.0
CMAR *PP pP 18 58 47.9 -1.6
CMAR 19 00 28.1
CHG Chiang Mai 39.04 313 ⇑P **P 18 58 20.4 -0.1**
comp=Z,31nm,1.0s,mb4.9
CHTO Chiang Mai 39.04 313 *eP* **P 18 58 20.4 -0.1**
comp=Z,33nm,1.0s,mb4.9
CHTO Chiang Mai 39.04 313 *eP* **P 18 58 20.4 -0.1**
CHTO pmax pmax
comp=Z,33nm,1.0s,mb4.9
CHTO Chiang Mai 39.04 313 P P 18 58 21.3 +0.8
SNR=5.9
CHRT Chiangrai 39.12 315 ⇑*iP* **P 18 58 20.5 -0.6**
comp=Z,334nm,0.9s,mb6.0
GYA Guiyang 39.80 329⇑*iP* **P 18 58 26.5 -0.2**
GYA pP pP 18 58 58.8 +1.1
GYA sP sP 18 59 15.3 +1.6
GYA PP PP 19 00 05.6 +4.4
GYA PcP PcP 19 00 31.8 +1.6
GYA ScP ScP 19 04 05.9 -0.2
GYA S **S 19 04 21.3 +0.7**
GYA sS sS 19 05 15.8 +1.2
GYA SS SS 19 07 17.1 -5.5
GYA pmax pmax
comp=Z,40nm,0.8s,mb5.1
GYA pmax pmax
comp=Z,130nm,5.3s
GYA LR LR
comp=N,670nm,15.9s
GYA LR LR
comp=E,460nm,16.7s
GYA LR LR
comp=Z,540nm,17.7s
WHN Wuhan 40.18 341 P P 18 58 30.3 +0.5
JNU Nakatsue 40.53 3 *eP* **P 18 58 32.1 -0.6**
comp=Z,18nm,1.0s,mb4.7
KMI Kunming 40.92 323 P P 18 58 37.1 +1.2
KMI pP pP 18 59 06.9 -0.2
KMI sP sP 18 59 22.3 -0.7
KMI S **S 19 04 38.3 +1.1**
KMI sS sS 19 05 31.8 +0.3
KMI pmax pmax
comp=Z,50nm,1.4s,mb5.0
KMI pmax pmax
comp=Z,360nm,5.1s
KMI LR LR
comp=N,290nm,17.3s
KMI LR LR
comp=E,290nm,20.0s
KMI LR LR
comp=Z,210nm,19.3s
ENH Enshi 41.72 335 *eP* **P 18 58 41.6 -0.8**
comp=Z,23nm,0.8s,mb4.9
KSRS Korea Array 44.78 360 P P 18 59 07.2 +0.3
comp=Z,15nm,0.6s,mb4.8,baz=178,slow=9.4,SNR=136
KSRS pP pP 18 59 36.0 -2.5
comp=Z,2.0nm,0.6s,baz=178,slow=9.5,SNR=1.3
KSRS PcP PcP 19 00 46.4 -0.2
comp=Z,3.4nm,0.8s,baz=184,slow=4.6,SNR=5.0
KSRS LR LR 19 18 32.4
comp=Z,86nm,18.6s,baz=160,slow=37
TIA Tai'an 44.79 347 *eP* **P 18 59 05.6 -1.3**
INCN Inchon 44.84 358 *eP* **P 18 59 07.0 -0.3**
comp=Z,35nm,1.1s,mb4.9
MAJO Matsushiro 44.85 11 *eP* **P 18 59 05.2 -2.2**
comp=Z,35nm,0.9s,mb5.0
MAJO Matsushiro 44.85 11 *eP* **P 18 59 05.2 -2.2**
MAJO pmax pmax
comp=Z,35nm,0.9s,mb5.0
MJAR Matsushiro Arr 44.85 11 P P 18 59 05.8 -1.6
comp=Z,20nm,0.8s,mb4.8,baz=191,slow=9.7,SNR=81
MJAR pP pP 18 59 35.8 -3.3
comp=Z,3.5nm,1.0s,baz=322,slow=9.1,SNR=1.5
MJAR Matsushiro Arr 44.85 11 P P 18 59 05.8 -1.6
MJAR *PP pP 18 59 35.8 -3.3
CD2 Chengdu 44.89 330 P P 18 59 07.8 -0.1
CD2 pP pP 18 59 39.3 -0.2
CD2 sP sP 18 59 55.5 +0.2
CD2 PP PP 19 00 55.6 -0.1
CD2 S **S 19 05 34.8 -0.4**
CD2 sS sS 19 06 30.3 +0.1
CD2 SS SS 19 08 52.3 -7.8
CD2 pmax pmax
comp=Z,80nm,0.8s,mb5.4
CD2 LR LR
comp=N,340nm,14.2s
CD2 LR LR
comp=Z,300nm,13.2s
XAN Xi'an 45.26 337 P P 18 59 09.6 -1.1
XAN pmax pmax
comp=Z,24nm,0.9s,mb4.8
XAN pmax pmax
comp=Z,160nm,13.6s
SHL Shillong 48.34 314 *e*PKP **P 18 59 34.0 -0.8**
BJT Baijiatuau 48.65 348 *eP* **P 18 59 35.8 -1.1**
comp=Z,151nm,1.3s,mb5.5
BJT Baijiatuau 48.65 348 *eP* **P 18 59 35.8 -1.1**
BJT pmax pmax
comp=Z,151nm,1.3s
BJI Beijing 48.67 348 P P 18 59 36.1 -0.9
BJI sP sP 19 00 22.9 -1.9
BJI S **S 19 06 32.1 +3.5**
BJI sS sS 19 07 25.1 +0.9
BJI pmax pmax
comp=Z,90nm,1.3s,mb5.2
LZH Lanzhou 49.12 334 ⇑P **P 18 59 40.8 +0.2**
LZH pP pP 19 00 12.8 0.0
LZH sP sP 19 00 29.0 +0.6
LZH PP PP 19 01 36.5 +0.8
LZH S **S 19 06 34.0 -1.1**
LZH sS sS 19 07 31.3 +0.5
LZH pmax pmax
comp=Z,93nm,1.1s,mb5.3
LZH pmax pmax
comp=Z,320nm,4.2s
VLA Vladivostok 50.55 3 *iP* **P 18 59 52.5 +1.3**
HHC Hu-ho-hao-te 50.57 344 ⇑P **P 18 59 51.3 -0.1**
HHC pP pP 19 00 23.9 +0.1
HHC sP sP 19 00 39.4 0.0
HHC PcP PcP 19 01 06.8 -0.4
HHC PP PP 19 01 51.5 +2.7
HHC ScP ScP 19 04 47.5 -2.8
HHC S **S 19 06 53.8 -1.3**
HHC sS sS 19 07 51.3 +0.2
HHC ScS ScS 19 09 25.1 -3.0
HHC SS SS 19 10 28.8 -2.5
HHC pmax pmax
comp=Z,47nm,1.2s,mb5.0
HHC pmax pmax
comp=Z,98nm,7.9s
HHC LR LR
comp=N,170nm,14.5s
HHC LR LR
comp=E,190nm,14.7s
HHC LR LR
comp=Z,220nm,12.7s
CN2 Changchun 51.19 357 *eP* **P 18 59 55.5 -0.5**
CN2 *e*pP pP 19 00 27.9 -0.5
CN2 *e*sP sP 19 00 43.9 -0.1
CN2 *e*PP PP 19 01 54.6 +0.3
CN2 *e*S **S 19 07 02.8 -0.6**
CN2 *e*SS SS 19 10 38.8 -2.1
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.8
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,22.0s
CN2 LR LR
comp=E,200nm,22.0s
CN2 LR LR
comp=Z,200nm,23.0s
LSA Lhasa 51.45 318 *eP* **P 18 59 59.0 +0.8**
comp=Z,69nm,0.9s,mb5.3
LSA Lhasa 51.45 318 *eP* **P 18 59 59.0 +0.8**
LSA pmax pmax
comp=Z,69nm,0.9s,mb5.3
RPZ Rata Peaks 51.85 141 P P 19 00 04.0 +3.0
comp=Z,45nm,0.8s,mb5.1,baz=7.8,slow=3.5,SNR=18
RPZ pP pP 19 00 33.8 +0.3
comp=Z,13nm,0.9s,baz=123,slow=9.3,SNR=1.5
RPZ Rata Peaks 51.85 141 *eP* **P 19 00 03.6 +2.6**
comp=Z,52nm,0.9s,mb5.2
MDJ Mudanjiang 51.95 1 P P 19 00 01.3 -0.3
MDJ pP pP 19 00 31.5 -2.7
MDJ sP sP 19 00 46.1 -3.6
MDJ ScP ScP 19 04 56.8 +0.7
MDJ PcS PcS 19 05 10.5 +0.1
MDJ S **S 19 07 13.8 -0.1**
MDJ sS sS 19 08 06.1 -4.0
MDJ pmax pmax
comp=Z,22nm,1.5s,mb4.6
MDJ pmax pmax
comp=Z,100nm,3.1s
MDJ LR LR
comp=N,61nm,27.0s
MDJ LR LR
comp=E,110nm,38.8s
MDJ LR LR
comp=Z,160nm,44.4s
MDJ Mudanjiang 51.95 1 *eP* **P 19 00 01.2 -0.4**
comp=Z,95nm,1.5s,mb5.2
ODAN Odare 52.35 312 *eP* **P 19 00 04.6 -0.4**
comp=Z,75nm,0.5s,mb5.5
TAPN Taplejung 52.40 313 *eP* **P 19 00 05.1 -0.2**
comp=Z,298nm,1.2s,mb5.8
KHZ Kahutara 52.80 139 *eP* **P 19 00 10.5 +2.5**
comp=Z,16nm,0.8s,mb4.8
ASAJ Asahikawa 53.05 13 *eP* **P 19 00 10.0 +0.3**
comp=Z,7.3nm,0.9s,mb4.4
ASAJ *e*pP pP 19 00 42.8 +0.4
GTA Gaotai 53.66 333 ⇑P **P 19 00 14.8 +0.5**
GTA pP pP 19 00 48.6 +1.6
GTA sP sP 19 01 03.4 +0.8
GTA PcP PcP 19 01 19.3 +0.4
GTA S **S 19 07 37.8 +0.5**
GTA sS sS 19 08 35.1 +1.2
GTA ScS ScS 19 09 46.5 -3.3
GTA pmax pmax
comp=Z,48nm,1.0s,mb5.2
GTA pmax pmax
comp=Z,190nm,3.8s
GTA LR LR
comp=N,210nm,20.4s
GTA LR LR
comp=E,220nm,21.3s
GTA LR LR
comp=Z,140nm,22.8s
GUN Gumba 54.05 313 *eP* **P 19 00 17.2 -0.2**
comp=Z,200nm,0.8s,mb5.9
PKI Pulchoki 54.21 312 *eP* **P 19 00 17.9 -0.7**
PKIN Phulchoki 54.22 312 *eP* **P 19 00 18.1 -0.5**
KKN Kakani 54.43 312 *eP* **P 19 00 19.5 -0.6**
DMN Daman 54.46 312 *eP* **P 19 00 20.1 -0.2**
comp=Z,198nm,1.1s,mb5.8
GKN Gorkha 55.02 312 *eP* **P 19 00 23.7 -0.7**
HYB Hyderabad 55.04 297 *iP* **P 19 00 23.0 -1.7**
KOLN Koldanda 55.66 311 *eP* **P 19 00 28.7 -0.3**
comp=Z,140nm,0.8s,mb5.8
YSS Yuzh-Sakhalins 55.78 12 *eP* **P 19 00 28.7 -0.8**
comp=Z,13nm,0.6s,mb5.0
YSS Yuzh-Sakhalins 55.78 12 *eP* **P 19 00 28.5 -0.9**
YSS *e* 19 01 16.0
DANN Dangsing 55.86 312 *eP* **P 19 00 29.4 -1.0**
comp=Z,119nm,0.8s,mb5.8
HABR Khabarovsk 56.11 5*diP* **P 19 00 30.2 -1.6**
HABR *e**SP sP 19 01 28.3 +8.1
HABR *e* 19 02 37.1
HABR PPP 19 03 54.4
HABR *e*S **S 19 08 07.1 -2.6**
HABR *e* 19 10 01.9
HABR SS SS 19 11 57.4 -1.1
HABR pmax pmax
comp=Z,60nm,1.8s,mb5.1
HABR pmax pmax
comp=E,17nm,1.5s
HABR pmax pmax
comp=N,16nm,1.8s
HABR MLR MLR
comp=Z,83nm,19.0s
KLR Kul'dur 56.63 3 *eP* **P 19 00 30.9 -4.5**
KLR pmax pmax
comp=Z,48nm,1.4s,mb5.1
HIA Hailar 57.08 353 *eP* **P 19 00 39.6 +1.0**
comp=Z,13nm,0.8s,mb4.8
HIA Hailar 57.08 353 *eP* **P 19 00 39.6 +1.0**
HIA pmax pmax
comp=Z,13nm,0.8s
ULN Ulaanbaatar 58.29 343 *eP* **P 19 00 47.5 +0.4**
comp=Z,92nm,1.1s,mb5.5
ULN Ulaanbaatar 58.29 343 *eP* **P 19 00 47.5 +0.4**
ULN pmax pmax
comp=Z,91nm,1.1s,mb5.5
ULN Ulaanbaatar 58.29 343 P P 19 00 47.7 +0.6
SNR=26
SONM Songino Array 58.45 343 P P 19 00 48.6 +0.4
comp=Z,29nm,0.7s,mb5.2,baz=167,slow=6.7,SNR=187
SONM pP pP 19 01 21.3 -0.1
comp=Z,5.8nm,0.8s,baz=165,slow=7.2,SNR=2.2
SONM Songino Array 58.45 343 P P 19 00 48.6 +0.4
SONM *PP pP 19 01 21.3 -0.1
CASY Casey 59.89 188 *eP* **P 19 01 00.0 +2.1**
CIT Chita 60.68 350 *eP* **P 19 01 04.0 +0.6**
CIT *e* pP 19 01 38.6 +1.8
CIT *e* 19 01 54.7
CIT pmax pmax
comp=Z,74nm,1.8s,mb5.2
NDI New Delhi 60.99 309 *ex* x 19 01 02.5
ZAK Zakamensk 61.65 342 *eP* **P 19 01 09.6 -0.4**
ZAK *e* pP 19 01 44.0 +0.5
ZAK pmax pmax
comp=Z,9.0nm,1.3s,mb4.4
SDNR Sundarnagar 62.52 311 *ex* x 19 02 16.5
TLY Talaya 62.69 343 *eP* **P 19 01 17.5 +0.6**
comp=Z,17nm,0.9s,mb4.9
TLY Talaya 62.69 343 *eP* **P 19 01 16.6 -0.3**
TLY pmax pmax
comp=Z,18nm,0.9s,mb4.9
TLY Talaya 62.69 343 P P 19 01 18.0 +1.1
SNR=6.0
WMQ Urumqi 62.95 328 P P 19 01 18.6 -0.2
WMQ pP pP 19 01 52.6 +0.2
WMQ sP sP 19 02 08.6 +0.9
WMQ PP PP 19 03 40.6 +1.5
WMQ S **S 19 09 34.6 -3.1**
WMQ ScS ScS 19 10 53.6 -4.4
WMQ SS SS 19 13 44.6 -1.3
WMQ pmax pmax
comp=Z,47nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,130nm,6.0s
WMQ LR LR
comp=N,270nm,20.0s
WMQ LR LR
comp=E,220nm,20.0s
WMQ LR LR
comp=Z,150nm,20.0s
IRK Irkutsk 63.02 344 *eP* **P 19 01 19.0 0.0**
IRK *e* pP 19 01 53.5 +0.8
IRK pmax pmax
comp=Z,59nm,1.3s,mb5.3
MOY Mondy 63.48 341 *eP* **P 19 01 23.2 +1.1**
MOY pmax pmax
comp=Z,88nm,2.2s,mb5.2
CLNS Chul'man 64.23 358 *eP* **P 19 01 26.8 -0.1**
CLNS pmax pmax
comp=Z,12nm,1.1s,mb4.6
CLNS pmax pmax
comp=E,4.0nm,1.1s
CLNS pmax pmax
comp=N,8.0nm,1.1s
PETK Petropavlovsk- 65.40 19 P P 19 01 34.5 0.0
comp=N,12nm,0.9s,mb4.8,baz=183,slow=8.7,SNR=13
PETK Petropavlovsk- 65.40 19 P P 19 01 34.5 0.0
PET Petropavlovsk 65.64 20 *eP* **P 19 01 34.1 -2.0**
PET *e* 19 02 21.4
PET MLR MLR
comp=Z,100nm,18.0s
KSH Kashi 67.29 318 *eP* **P 19 01 47.3 +0.4**
KSH *e*PcP PcP 19 02 15.3 +1.7
KSH *e*pP pP 19 02 21.3 +0.4
KSH *e*sP sP 19 02 36.6 +0.5
KSH *e*PP PP 19 04 17.5 +0.3
KSH *e*ScP 19 06 03.4
KSH *e*PcS 19 06 18.4
KSH *e*S S 19 10 25.3 -5.6
KSH *e*ScS ScS 19 11 26.8 -4.9
KSH pmax pmax
comp=Z,17nm,0.8s,mb4.9
KSH LR LR
comp=N,170nm,6.6s
KSH LR LR
comp=E,210nm,4.3s
KSH LR LR
comp=Z,180nm,6.5s
MK31 Makanchi Array 67.77 328 *eP* **P 19 01 49.4 -0.4**
MK31 Makanchi Array 67.77 328 *eP* **P 19 01 49.4 -0.3**
MKAR Makanchi Array 67.77 328 P P 19 01 49.5 -0.3
comp=Z,13nm,0.6s,mb4.8,baz=119,slow=7.4,SNR=201
MKAR Makanchi Array 67.77 328 P P 19 01 49.5 -0.3
MKAR Makanchi Array 67.77 328 P P 19 01 49.5 -0.2
KZA Kyzart 69.11 320 P P 19 01 59.7 +1.5
SNR=9.7
KZA Kyzart 69.11 320 *eP* **P 19 01 59.4 +1.2**
comp=Z,63nm,1.5s,mb5.1
TKM2 Tokmak 2 69.34 321 P P 19 01 59.9 +0.3
SNR=17
TKM2 Tokmak 2 69.34 321 *eP* **P 19 01 59.6 0.0**
comp=Z,7.2nm,0.6s,mb4.6
TKM2 Tokmak 2 69.34 321 *eP* **P 19 01 59.6 0.0**
TKM2 pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
YAK Yakutsk 69.39 1 *eP* **P 19 01 58.7 -0.8**
comp=Z,119nm,0.9s,mb5.6
YAK Yakutsk 69.39 1*c iP* **P 19 01 58.8 -0.7**
YAK *e* 19 02 20.1
YAK *e**PP pP 19 02 45.1 +11
YAK *e* 19 04 33.3
YAK *e*PPP 19 06 18.3
YAK *e*S S 19 10 51.1 -3.8
YAK *e* 19 11 40.2
YAK *e*SS SS 19 15 23.1 -2.0
YAK pmax pmax
comp=Z,73nm,0.9s,mb5.4
YAK pmax pmax
comp=N,14nm,1.0s
YAK pmax pmax
comp=Z,44nm,2.7s,mb4.7
YAK pmax pmax
comp=N,55nm,3.7s
YAK pmax pmax
comp=E,48nm,3.3s
YAK smax
comp=E,10.0nm,1.2s
YAK smax
comp=N,12nm,1.6s
KBK Karagaybulak 69.61 321 P P 19 02 02.0 +0.8
SNR=5.0
KBL Kabul 69.83 311 *eP* **P 19 02 01.5 -1.3**
comp=N,12nm,0.8s,mb4.7
KBL Kabul 69.83 311 *eP* **P 19 02 01.5 -1.3**
KBL pmax pmax
comp=Z,11nm,0.8s,mb4.6
AAK Ala-Archa 69.88 321 P P 19 02 03.4 +0.5
SNR=9.6
AAK Ala-Archa 69.88 321 P P 19 02 03.1 +0.2
comp=Z,4.6nm,0.6s,mb4.4,baz=130,slow=7.2,SNR=21
AAK Ala-Archa 69.88 321 *eP* **P 19 02 02.8 0.0**
comp=Z,25nm,1.3s,mb4.8
AAK Ala-Archa 69.88 321 *eP* **P 19 02 02.8 -0.1**
AAK pmax pmax
comp=Z,25nm,1.3s,mb4.8
AAK Ala-Archa 69.88 321 P P 19 02 03.3 +0.4
comp=Z,74nm,1.2s,mb5.3,SNR=6.1
AAK Ala-Archa 69.88 321 P P 19 02 03.6 +0.7
SNR=12
FRU Bishkek 69.91 321⇑*eP* **P 19 02 02.0 -1.0**
FRU *e* pP 19 02 35.0 -2.3
FRU pmax pmax
comp=Z,40nm,2.0s,mb4.8
AML Almayashu 70.13 320 P P 19 02 05.6 +1.2
SNR=10
AML Almayashu 70.13 320 P P 19 02 04.5 +0.1
USP Ospenovka 70.21 321 P P 19 02 04.9 0.0
SNR=14
EKS2 Erkin-Say 70.34 320 P P 19 02 06.3 +0.6
SNR=23
EKS2 Erkin-Say 70.34 320 *eP* **P 19 02 05.9 +0.2**
comp=Z,37nm,1.4s,mb4.9
ZALV Zalesovo Beam 71.34 335 P P 19 02 10.4 -1.0
comp=Z,18nm,0.6s,mb5.0,baz=127,slow=4.8,SNR=98
ZALV pP pP 19 02 44.9 -1.0
comp=Z,6.6nm,0.7s,baz=121,slow=4.8,SNR=2.4
ZALV PKKP 19 21 56.8
comp=Z,0.4nm,0.3s,baz=252,slow=3.0,SNR=4.4
ZALV Zalesovo Beam 71.34 335 P P 19 02 10.5 -1.0
ZALV *PP pP 19 02 44.9 -1.0
KURK Kurchatov 72.12 329 *eP* **P 19 02 15.6 -0.6**
comp=Z,72nm,1.0s,mb5.4
KURK Kurchatov 72.12 329 *eP* **P 19 02 15.6 -0.6**
KURK pmax pmax
comp=Z,72nm,1.0s,mb5.4
KURK Kurchatov 72.12 329 P P 19 02 15.4 -0.8
comp=Z,376nm,0.9s,mb6.1,SNR=55
KURK Kurchatov 72.12 329 P P 19 02 16.2 0.0
SNR=40
NVS Novosibirsk 72.63 335⇑*iP* **P 19 02 16.5 -2.6**
NVS *e* pP 19 02 50.7 -3.0
NVS *e*S S 19 11 27.2 -5.3
NVS pmax pmax
comp=N,27nm,1.5s
NVS pmax pmax
comp=E,25nm,1.5s
NVS pmax pmax
comp=Z,53nm,1.5s,mb5.0
NVS smax
comp=N,6.0nm,2.0s

NVS smax
comp=E,9.0nm,2.0s
KK31 Karatay Array 72.65 320 *i* P **P 19 02 18.4 -1.1**
KK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
KKAR Karatay Array 72.65 320 *eP* **P 19 02 18.6 -0.9**
comp=Z,3.5nm,0.5s,mb4.3
KKAR Karatay Array 72.65 320 *eP* **P 19 02 18.6 -0.9**
KKAR pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
SEY Seymchan 72.68 11 ⇓*iP* **P 19 02 18.6 -0.7**
MAW Mawson 73.81 201 P **P 19 02 27.2 +1.3**
comp=Z,3.8nm,0.8s,mb4.2,baz=61,slow=6.8,SNR=12
MAW pP pP 19 03 00.4 -0.1
comp=Z,2.4nm,0.6s,baz=60,slow=13,SNR=3.0
MAW LR LR 19 32 49.2
comp=Z,186nm,18.6s,baz=219,slow=34
MAW Mawson 73.81 201 *eP* **P 19 02 27.7 +1.8**
comp=Z,3.1nm,0.8s,mb4.1
MAW Mawson 73.81 201 *eP* **P 19 02 27.6 +1.8**
comp=Z,1.3nm,0.8s,mb3.7
MAW Mawson 73.81 201 *eP* **P 19 02 27.7 +1.8**
MAW pmax pmax
comp=Z,1.0nm,0.8s
BRVK Borovoye 77.71 328 *eP* **P 19 02 47.7 -0.6**
comp=Z,33nm,0.9s,mb5.0
BRVK Borovoye 77.71 328 *eP* **P 19 02 47.7 -0.6**
BRVK pmax pmax
comp=Z,33nm,0.9s,mb5.0
BRVK Borovoye 77.71 328 P **P 19 02 47.3 -1.0**
comp=Z,205nm,1.1s,mb5.7,SNR=27
BRVK Borovoye 77.71 328 P **P 19 02 48.2 0.0**
SNR=21
ZRNK Zerenda 78.32 328 *i* P **P 19 02 50.6 -1.1**
ZRNK pmax pmax
comp=Z,32nm,0.6s,mb5.1
TIXI Tiksi 79.05 0 *eP* **P 19 02 53.4 -1.8**
comp=Z,23nm,0.8s,mb4.9
TIXI Tiksi 79.05 0 *eP* **P 19 02 54.3 -1.0**
TIXI pmax pmax
comp=Z,26nm,0.9s,mb4.9
ABKT Ailbek 79.28 311 P **P 19 02 57.3 0.0**
comp=Z,49nm,0.7s,mb5.2,SNR=5.9
BILL Bilibino 80.05 14 P **P 19 02 51.0 -10**
BILL *e* 19 03 10.9
BILL pmax pmax
comp=Z,10.0nm,1.8s,mb4.1
AB31 Akbulak array 81.89 322 *i* P **P 19 03 09.9 -1.0**
AB31 pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
ABKAR Akbulak array 81.89 322 *eP* **P 19 03 10.0 -0.9**
comp=Z,7.5nm,0.6s,mb4.5
QSPA South Pole Qui 82.42 180 P **P 19 03 14.8 +1.7**
comp=Z,3.0nm,0.6s,mb4.1,baz=346,slow=1.9,SNR=26
QSPA pP pP 19 03 48.4 -0.1
comp=Z,9.1nm,0.7s,baz=346,slow=1.9,SNR=7.8
QSPA South Pole Qui 82.42 180 *eP* **P 19 03 14.1 +0.9**
comp=Z,9.9nm,0.8s,mb4.5
SYO Syowa Base 82.52 201⇓*eP* **P 19 03 14.0 +0.1**
SVE Sverdlovsk 84.37 329⇑*eP* **P 19 03 23.3 -0.2**
SVE pmax pmax
comp=Z,51nm,0.9s,mb5.2
ARU Arti 85.29 328 *eP* **P 19 03 26.5 -1.5**
comp=Z,43nm,0.9s,mb5.2
ARU Arti 85.29 328*c i*P **P 19 03 26.5 -1.5**
ARU *PP pP 19 04 04.9 +1.3
ARU 19 06 45.5
ARU PPP 19 08 37.2
ARU S S 19 13 34.9 -12
ARU SS SS 19 19 22.6 -1.8
ARU pmax pmax
comp=Z,35nm,0.8s,mb5.1
ARU Arti 85.29 328 P **P 19 03 27.8 -0.2**
comp=Z,246nm,0.6s,mb6.1,SNR=17
RDF Al-Radifah 85.58 300 *eP* **P 19 03 30.4 +0.2**
RDF AMb AMB 19 03 31.5
comp=Z,31nm,0.8s,mb5.1
SDPT Sand Point 85.71 33 *eP* **P 19 03 28.7 -1.5**
comp=Z,44nm,0.7s,mb5.3
NAY Al-Naaiem 85.91 300 *eP* **P 19 03 30.4 -1.4**
NAY AMb AMB 19 03 32.7
comp=Z,25nm,0.7s,mb5.1
MIB Mutribah 85.93 301 *eP* **P 19 03 30.6 -1.2**
MIB AMb AMB 19 03 32.5
comp=Z,43nm,0.8s,mb5.2
SOKR Solikamsk 87.27 331⇑*iP* **P 19 03 36.1 -1.6**
SOKR pmax pmax
comp=Z,20nm,1.1s,mb4.9
DGRG David-gareji 89.67 312 P **P 19 03 49.2 -0.2**
KDAK Kodiak Island 90.59 32 P **P 19 03 53.2 -0.1**
comp=Z,13nm,0.9s,mb5.0,baz=200,slow=6.6,SNR=4.5
KDAK Kodiak Island 90.59 32 P **P 19 03 53.2 -0.1**
KDAK Kodiak Island 90.59 32 *iP* **P 19 03 56.0 +2.7**
KMBO Kilima Mbogo 90.87 269 P **P 19 03 55.8 +0.1**
comp=Z,2.3nm,0.9s,mb4.2,baz=179,slow=24,SNR=5.4
KMBO Kilima Mbogo 90.87 269 *eP* **P 19 03 56.2 +0.6**
comp=Z,2.6nm,0.9s,mb4.3
KMBO Kilima Mbogo 90.87 269 *eP* **P 19 03 56.2 +0.5**
KMBO pmax pmax
comp=Z,3.0nm,0.9s
ZEI Tsey 90.97 313 *eP* **P 19 03 53.9 -1.6**
ZEI pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
MCK McKinley 93.54 26 *eP* **P 19 04 05.0 -1.8**
comp=Z,12nm,1.1s,mb4.9
MCK McKinley 93.54 26 *eP* **P 19 04 05.0 -1.8**
MCK pmax pmax
comp=Z,11nm,1.1s,mb4.9
COLD Coldfoot 93.64 23 *eP* **P 19 04 06.6 -0.6**
comp=Z,2.6nm,0.6s,mb4.5
ILAR Eielson Array 94.58 25 P **P 19 04 09.1 -2.5**
comp=Z,2.0nm,1.0s,mb4.3,baz=280,slow=4.4,SNR=14
ILAR PKKP PKKPbc 19 21 12.3 0.0
comp=Z,0.4nm,0.9s,baz=13,slow=1.2,SNR=19
ILAR Eielson Array 94.58 25 P **P 19 04 09.1 -2.5**
VSR Storozhevoye 95.28 321 *eP* **P 19 04 13.0 -2.1**
VSR pmax pmax
comp=N,5.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
KLMR Klimovskoe 95.94 331 *eP* **P 19 04 14.3 -3.6**
KLMR pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
OBN Obninsk 97.13 325*ceP* **P 19 04 21.5 -1.8**
OBN *PP pP 19 05 03.0 +3.7
OBN pmax pmax
comp=Z,20nm,1.6s,mb5.2
OBN MLR MLR 19 05 44.1
comp=Z,100nm,17.0s
LSZ Lusaka 97.67 253 P **P 19 04 26.3 -0.4**
comp=Z,1.8nm,0.8s,mb4.5
LSZ Lusaka 97.67 253 P **P 19 04 26.3 -0.4**
LSZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
BRTR Keskin Array B 98.34 309 P **P 19 04 28.0 -1.2**
comp=Z,0.7nm,0.9s,mb4.1,baz=102,slow=5.5,SNR=5.1
BRTR Keskin Array B 98.34 309 P **P 19 04 28.0 -1.2**
ARCES ARCESS Array B 101.51 340 P Pdif 19 04 40.9 -2.1
comp=Z,3.1nm,0.9s,baz=88,slow=6.3,SNR=22
ARCES PKiKP PKiKP 19 09 05.0 -0.8
comp=Z,0.5nm,0.6s,baz=121,slow=1.6,SNR=6.9
ARCES PKKPbc PKKPbc 19 20 50.5 -2.6
comp=Z,1.5nm,1.1s,baz=249,slow=2.3,SNR=6.6
ARCES ARCESS Array B 101.51 340 P Pdif 19 04 40.9 -2.1
FINES FINESS Array B 102.44 331 P Pdif 19 04 45.2 -1.9
comp=Z,2.0nm,0.8s,baz=56,slow=4.8,SNR=5.4
FINES PKiKP PKiKP 19 09 08.3 +0.7
comp=Z,3.2nm,0.9s,baz=105,slow=1.6,SNR=6.4
FINES FINESS Array B 102.44 331 P Pdif 19 04 45.2 -2.0
FINES FINESS Array B 102.44 331 P Pdif 19 04 45.2 -1.9
YKA Yellowknife Ar 109.00 26 PKiKP PKiKP 19 09 19.3 -0.5
comp=Z,1.0nm,0.6s,baz=296,slow=1.8,SNR=7.1
YKA PP PP 19 09 49.7 +0.3
comp=Z,0.9nm,0.8s,baz=296,slow=1.7,SNR=3.8
YKA Yellowknife Ar 109.00 26 PKPdf PKiKP 19 09 19.3 -0.4
YKA PP PP 19 09 49.7 +0.3
NOA NORSAR Array B 109.50 333 PKiKP PKiKP 19 09 20.0 -0.7
comp=Z,1.4nm,0.9s,baz=67,slow=5.9,SNR=3.6
NOA NORSAR Array B 109.50 333 PKPdf PKiKP 19 09 20.0 -0.7
CLL Collm 111.56 322 *e*PKP PKiKP 19 09 24.0 -0.9
CLL Collm 111.56 322 *e*PKiKP PKiKP 19 09 24.0 -0.9
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 111.56 322 *e*PKiKP PKiKP 19 09 24.0 -0.9
comp=Z,4.0nm,1.0s
CLL *e*PP PP 19 10 07.0 -1.2
NVAR Mina Array Bea 112.98 52 PKiKP PKiKP 19 09 29.5 +1.4
comp=Z,2.1nm,0.9s,baz=252,slow=2.0,SNR=10
NVAR PKKPbc PKKPbc 19 20 16.7 +0.4
comp=Z,0.5nm,0.8s,baz=134,slow=6.4,SNR=4.3
NVAR Mina Array Bea 112.98 52 PKPdf PKiKP 19 09 29.5 +1.4
NVAR PKKPbc PKKPbc 19 20 16.7 +0.4
BSMT Bassoo Peak 113.52 41 *e*PKPdf PKiKP 19 09 29.1 +0.3
SWMT Swartz Lake 114.13 41 *e*PKPdf PKiKP 19 09 30.6 +0.7
HLID Hailey 114.86 45 *e*PKiKP PKiKP 19 09 32.7 +1.2
A17A Triple J Farms 115.80 39 ⇑PKiKP PKiKP 19 09 33.4 +0.3
baz=116,SNR=7.6
C17A Wharram Farm, 116.19 40 ⇑PKiKP PKiKP 19 09 33.7 -0.2
baz=116,SNR=6.1
DUG Dugway 116.82 49 *e*PKPdf PKPdf 19 09 36.3 +0.9
DUG Dugway 116.82 49 *e*PKIKP PKPdf 19 09 36.3 +0.9
RRI2 Red Ridge 117.09 45 *e*PKPdf PKPdf 19 09 36.5 +0.7
IMW Indian Meadow 117.20 44 *e*PKPdf PKPdf 19 09 37.6 +1.6
TPAW Teton Pass 117.31 45 *e*PKPdf PKPdf 19 09 37.2 +1.0
MOOW Moose Ponds 117.38 44 *e*PKPdf PKPdf 19 09 37.3 +1.0
HWUT Hardware Ranch 117.39 47 *e*PKPdf PKPdf 19 09 36.9 +0.5
REDW Red Top Meadow 117.42 45 *e*PKPdf PKPdf 19 09 37.6 +1.2
F18A Big Timber 117.42 42 PKiKP PKiKP 19 09 37.6 +1.3
baz=117,SNR=5.3
SNOW Snow King Moun 117.46 45 *e*PKPdf PKPdf 19 09 37.9 +1.4
LOHW Long Hollow 117.52 45 *e*PKPdf PKPdf 19 09 37.4 +0.9
MSU Marysvale 117.69 50 *e*PKPdf PKPdf 19 09 38.6 +1.5
MSU Marysvale 117.69 50 *e*PKIKP PKPdf 19 09 38.6 +1.5
KEST Kesra 117.79 306 PKP PKPdf 19 09 37.7 +0.4
comp=Z,1.0nm,0.6s,baz=346,slow=16,SNR=6.2
PDAR Pinedale Array 118.50 45 PKP PKPdf 19 09 38.9 +0.4
comp=Z,2.4nm,0.7s,baz=208,slow=0.6,SNR=19
PDAR pPKP pPKPdf 19 10 17.0 +1.1
comp=Z,0.9nm,0.7s,baz=308,slow=2.6,SNR=2.9
PDAR PKKPbc PKKPbc 19 19 56.8 -0.4
comp=Z,1.4nm,0.9s,baz=120,slow=5.1,SNR=8.2
G20A Bridger 118.64 42 ⇓PKiKP PKiKP 19 09 39.8 +1.0
baz=118,SNR=6.2
SRU San Rafael 118.80 49 *e*PKPdf PKPdf 19 09 39.8 +0.6
SRU San Rafael 118.80 49 *e*PKIKP PKPdf 19 09 39.8 +0.6
K19A Absolon Red Bu 118.98 45 ⇑PKiKP PKiKP 19 09 40.2 +0.8
baz=119,SNR=9.6
I20A Worland 119.12 44 ⇓PKiKP PKiKP 19 09 40.2 +0.5
baz=119,SNR=9.3
J20A Shoshoni 119.34 44 PKiKP PKiKP 19 09 41.1 +1.0
baz=119,SNR=10
K20A Yellowstone Ra 119.38 45 PKiKP PKiKP 19 09 40.8 +0.5
baz=119,SNR=10
I21A Big Trails, Te 119.74 43 ⇑PKiKP PKiKP 19 09 41.2 +0.3
baz=120,SNR=7.3
J21A Lysite 119.79 44 ⇑PKiKP PKiKP 19 09 41.6 +0.6
baz=120,SNR=7.7
N20A Spence Gulch, 120.00 47 PKiKP PKiKP 19 09 42.8 +1.3
baz=120,SNR=10.0
K21A Alcova 120.16 45 PKiKP PKiKP 19 09 42.3 +0.5
baz=120,SNR=15
O20A White River Ci 120.22 48 ⇑PKiKP PKiKP 19 09 43.5 +1.5
baz=120,SNR=14
P20A De Beque 120.29 48 ⇑PKiKP PKiKP 19 09 43.3 +1.1
baz=120,SNR=9.8
M21A Separation Pea 120.41 46 ⇑PKiKP PKiKP 19 09 43.2 +0.9
baz=120,SNR=6.9
RWWY Rawlins 120.49 46 *e*PKPdf PKPdf 19 09 42.8 +0.4
Q20A Ridgley Place, 120.51 49 ⇓PKiKP PKiKP 19 09 43.9 +1.3
baz=120,SNR=9.9
PV01 Paradox Valley 120.53 50 *e*PKPdf PKPdf 19 09 43.7 +1.1
N21A Black Mountain 120.56 47 ⇑PKiKP PKiKP 19 09 43.7 +1.1
baz=120,SNR=9.5
R20A Redvale 120.66 50 PKiKP PKiKP 19 09 44.2 +1.3
baz=121,SNR=7.0
218A Dragoon 120.75 57 PKiKP PKiKP 19 09 44.5 +1.2
baz=121,SNR=5.9
S20A Disappointment 120.77 50 ⇓PKiKP PKiKP 19 09 44.7 +1.6
baz=121,SNR=7.1
318A Bisbee 120.90 58 PKiKP PKiKP 19 09 44.7 +1.1
baz=121,SNR=7.5
Q21A Lamborn Mesa, 121.08 49 ⇓PKiKP PKiKP 19 09 45.3 +1.6
baz=121,SNR=9.8
S21A Coal Bank Pass 121.25 50 PKiKP PKiKP 19 09 46.1 +2.0
baz=121,SNR=25
W20A Ramah 121.34 53 ⇑PKiKP PKiKP 19 09 45.9 +1.6
baz=121,SNR=9.5
219A White Tail Can 121.41 57 ⇑PKiKP PKiKP 19 09 45.9 +1.3
baz=121,SNR=5.7
SMCO Snowmass 121.43 48 *e*PKPdf PKPdf 19 09 45.7 +1.4
319A Douglas 121.51 58 ⇑PKiKP PKiKP 19 09 46.3 +1.5
baz=121,SNR=11
Q22A Crested Butte, 121.57 49 ⇑PKiKP PKiKP 19 09 46.3 +1.6
baz=122,SNR=12
U21A Nageezi 121.68 52 ⇑PKiKP PKiKP 19 09 46.8 +1.8
baz=122,SNR=12
120A U Bar Ranch, L 121.81 56 ⇓PKiKP PKiKP 19 09 47.1 +1.8
baz=122,SNR=6.0
RSSD Black Hills 121.82 42 *e*PKPdf PKPdf 19 09 44.6 -0.3
RSSD Black Hills 121.82 42 *e*PKIKP PKPdf 19 09 44.6 -0.2
R22A Saguache, Gunn 121.87 49 ⇓PKiKP PKiKP 19 09 47.6 +2.3
baz=122,SNR=5.3
S22A 4UR Ranch, Cre 121.96 50 ⇓PKiKP PKiKP 19 09 47.5 +2.0
baz=122,SNR=17
220A Playas Peak, P 122.03 57 ⇓PKiKP PKiKP 19 09 47.1 +1.3
baz=122,SNR=5.8
X21A Alamocita Cree 122.08 54 ⇑PKiKP PKiKP 19 09 47.7 +1.9
baz=122,SNR=10
320A Kipp Ranch, An 122.15 58 ⇓PKiKP PKiKP 19 09 47.9 +1.8
baz=122,SNR=9.4
ISCO Idaho Springs 122.24 47 *e*PKPdf PKPdf 19 09 46.7 +0.9
ISCO Idaho Springs 122.24 47 *e*PKIKP PKPdf 19 09 46.7 +0.9
Y21A Point of Rocks 122.27 54 ⇓PKiKP PKiKP 19 09 48.2 +1.9
baz=122,SNR=5.3
LAZ Ladron 122.60 54 *e*PKPdf PKPdf 19 09 48.4 +1.7
SDCO Great Sand Dun 122.96 50 *e*PKPdf PKPdf 19 09 48.4 +1.1
ANMO Albuquerque 123.01 53 PKP PKPdf 19 09 49.1 +1.7
comp=Z,5.5nm,0.9s,baz=200,slow=3.6,SNR=15
ANMO Albuquerque 123.01 53 *e*PKPdf PKPdf 19 09 48.4 +1.0
ANMO Albuquerque 123.01 53 *e*PKIKP PKPdf 19 09 48.4 +1.0
BNM Barren Site 123.08 54 *e*PKPdf PKPdf 19 09 48.6 +1.0
V24A Rampart Ranch, 123.73 52 ⇑PKiKP PKiKP 19 09 50.6 +1.6
baz=124
W24A Lazy 6 Ranch, 123.77 53 ⇑PKiKP PKiKP 19 09 50.8 +1.6
baz=124
ULM Lac du Bonnet 123.84 33 PKP PKPdf 19 09 48.2 -0.3
comp=Z,4.5nm,0.6s,baz=336,slow=2.1,SNR=6.0
T25A Trinidad 123.97 50 ⇓PKiKP PKiKP 19 09 50.8 +1.3
baz=124
Y24A Capitan 124.09 54 ⇓PKiKP PKiKP 19 09 50.9 +1.0
baz=124
U25A Circle Dot Ran 124.20 51 ⇓PKiKP PKiKP 19 09 51.3 +1.3
baz=124
V25A Rancho No Teng 124.21 52 ⇓PKiKP PKiKP 19 09 51.4 +1.4
baz=124
Z24A Sheeppen Canyo 124.30 55 ⇑PKiKP PKiKP 19 09 51.9 +1.7
baz=124
124A Stringfield Ra 124.39 55 ⇑PKiKP PKiKP 19 09 52.0 +1.6
baz=124
224A Cornudas Mount 124.48 56 ⇓PKiKP PKiKP 19 09 51.9 +1.3
baz=125
W25A X Bar L Ranch, 124.51 52 ⇑PKiKP PKiKP 19 09 51.6 +1.0
baz=125
324A Moseley Ranch, 124.67 57 ⇓PKiKP PKiKP 19 09 51.3 +0.3
baz=125
Y25A Mesa, Roswell 124.69 54 ⇓PKiKP PKiKP 19 09 52.0 +1.0
baz=125
MNTX Cornudas Mount 124.69 57 ⇓PKiKP PKiKP 19 09 52.0 +0.9
baz=125
MNTX Cornudas Mount 124.69 57 *e*PKPdf PKPdf 19 09 51.5 +0.8
Z25A Roswell 124.84 55 ⇓PKiKP PKiKP 19 09 52.5 +1.2
baz=125
125A Gardner Draw, 125.05 55 ⇓PKiKP PKiKP 19 09 53.1 +1.3
baz=125
225A Deer Hill, Car 125.05 56 ⇓PKiKP PKiKP 19 09 53.1 +1.3
baz=125
325A Bean Ranch, Si 125.11 57 ⇓PKiKP PKiKP 19 09 52.9 +1.0
baz=125
X26A CR and CF Fran 125.21 53 ⇓PKiKP PKiKP 19 09 52.5 +0.5
baz=125
425A Indio Mountain 125.23 58 ⇑PKiKP PKiKP 19 09 52.7 +0.5
baz=125
GDL2 Guadalupe Moun 125.41 56 *e*PKPdf PKPdf 19 09 53.4 +1.3
W27A Bowe Ranch, En 125.65 52 ⇓PKiKP PKiKP 19 09 53.0 +0.1
baz=126
226A Malaga, Loving 125.66 56 ⇓PKiKP PKiKP 19 09 54.0 +1.0
baz=126
Z27A Tatum 126.04 54 ⇑PKiKP PKiKP 19 09 54.0 +0.3
baz=126
526A Mary Lane Ranc 126.16 58 ⇓PKiKP PKiKP 19 09 55.3 +1.2
baz=126
MSTX Muleshoe 126.20 53 ⇑PKiKP PKiKP 19 09 54.4 +0.4
baz=126
527A Woodward Ranch 126.54 58 ⇓PKiKP PKiKP 19 09 56.1 +1.3
baz=127
427A Hayter Ranch, 126.54 57 ⇑PKiKP PKiKP 19 09 55.4 +0.6
baz=127
TXAR Lajitas Array 126.68 59 PKP PKPdf 19 09 55.9 +1.3
comp=Z,1.8nm,0.7s,baz=244,slow=1.7,SNR=9.1
TXAR Lajitas Array 126.68 59 PKIKP PKPdf 19 09 55.9 +1.3
ESDC Sonseca Array 126.69 315 PKP PKPdf 19 09 54.8 +0.4
comp=Z,1.1nm,0.7s,baz=18,slow=3.9,SNR=9.1
ECSD EROS Data Cent 126.81 40 *e*PKPdf PKPdf 19 09 54.4 0.0
627A Terlingua Ranc 126.89 59 ⇓PKiKP PKiKP 19 09 56.3 +0.8
baz=127
328A Wristen Ranch, 126.89 56 ⇑PKiKP PKiKP 19 09 56.0 +0.5
baz=127
428A Kincaid Ranch, 127.17 57 ⇑PKiKP PKiKP 19 09 57.3 +1.2
baz=127
TORD Torodi Ar. Bea 127.24 281 PKP PKPdf 19 09 55.9 -0.2
comp=Z,6.2nm,0.9s,baz=62,slow=1.6,SNR=26
TORD pPKP pPKPdf 19 10 32.6 -0.9
comp=Z,1.3nm,0.8s,baz=52,slow=1.5,SNR=2.5
628A Black Gap, Mar 127.31 59 ⇑PKiKP PKiKP 19 09 57.0 +0.7
baz=127
PLCA Paso Flores 128.91 162 PKP PKPdf 19 10 00.5 +1.9
comp=Z,4.6nm,1.0s,baz=227,slow=7.1,SNR=7.3
PLCA pPKP pPKPdf 19 10 35.1 -0.9
comp=Z,2.0nm,0.7s,baz=227,slow=6.6,SNR=3.0
PLCA Paso Flores 128.91 162 PKIKP PKPdf 19 10 00.5 +1.9
PLCA 19 10 35.2
JCT Junction City 129.63 57 ⇑PKiKP PKiKP 19 10 01.2 +0.2
baz=130
JCT Junction City 129.63 57 *e*PKPdf PKPdf 19 10 01.0 +0.8
JCT Junction City 129.63 57 *e*PKIKP PKPdf 19 10 01.0 +0.8
SCHQ Schefferville 131.33 12 PKP PKPdf 19 10 03.6 +1.0
comp=Z,4.2nm,0.7s,baz=231,slow=3.4,SNR=5.8
SCHQ Schefferville 131.33 12 *e*PKPdf PKPdf 19 10 03.0 +0.3
MIAR Mount Ida 133.11 49 *e*PKPdf PKPdf 19 10 08.0 +1.3
MIAR Mount Ida 133.11 49 *e*PKIKP PKPdf 19 10 08.0 +1.3
KIC Kosan Boka 133.37 272 *eP* PKPdf 19 10 08.9 +1.2
comp=Z,23nm,1.1s
DBIC Dimbokro 133.50 272 PKP PKPdf 19 10 08.2 +0.2
comp=Z,8.9nm,0.9s,baz=105,slow=4.2,SNR=6.9
DBIC Dimbokro 133.50 272 PKIKP PKPdf 19 10 08.3 +0.3
LIC Lamto 133.64 271 *eP* PKPdf 19 10 07.5 -0.8
comp=Z,43nm,1.1s
TIC Toumodi 133.67 272 *eP* PKPdf 19 10 08.5 +0.2
comp=Z,5.6nm,0.2s
TIC Toumodi 133.67 272 *e*PKIKP PKPdf 19 10 08.5 +0.2
WVT Waverly 136.49 44 PKPdf PKPdf 19 10 12.2 -0.7
WVT Waverly 136.49 44 PKIKP PKPdf 19 10 12.2 -0.7
LRAL Lakeview Retre 138.66 47 *e*PKPdf PKPdf 19 10 16.2 -0.9
TKL Tuckaleechee C 139.48 42 *e*PKPdf PKPdf 19 10 18.3 -0.1
TKL Tuckaleechee C 139.48 42 *e*PKIKP PKPdf 19 10 18.3 -0.2
SSPA Standing Stone 139.64 31 *e*PKPdf PKPdf 19 10 19.0 +0.4
GOGA Godfrey 140.97 44 *e*PKPdf PKPdf 19 10 21.7 +0.4
GOGA Godfrey 140.97 44 *e*PKIKP PKPdf 19 10 21.7 +0.5
COW Cow Castle Cre 142.87 42 PKPdf PKPdf 19 10 24.6 0.0
DWPF Disney 145.28 50 *e*PKPdf PKPdf 19 10 29.1 +0.1
CPUP Villa Florida 145.87 171 PKPbc PKPbc 19 10 31.4 +0.6
comp=Z,8.4nm,0.7s,baz=197,slow=2.4,SNR=16
CPUP Villa Florida 145.87 171 PKP2 PKPab 19 10 31.5 +0.1
JTS JuntasAbangare 147.07 83 *e*PKPbc PKPbc 19 10 35.7 +1.1
JTS JuntasAbangare 147.07 83 *e*PKP2 PKPab 19 10 35.7 -0.8
NNA Nana 148.36 128 *e*PKPbc PKPbc 19 10 39.3 +1.2
LPAZ La Paz 151.27 146 PKP PKPdf 19 10 42.0 +2.9
comp=Z,11nm,0.9s,baz=353,slow=1.5,SNR=10
LPAZ PKPbc PKPbc 19 10 47.3 +2.2
comp=Z,11nm,0.5s,baz=39,slow=0.8,SNR=81
LPAZ PKPab PKPab 19 10 56.9 +3.5
comp=Z,4.1nm,0.5s,baz=231,slow=5.3,SNR=5.0
LPAZ pPKPbc pPKPbc 19 11 22.2 -0.2
comp=Z,5.0nm,0.5s,baz=351,slow=2.8,SNR=1.9
LPAZ La Paz 151.27 146 *e*PKPdf PKPdf 19 10 40.9 +1.9
LPAZ *e*PKPbc PKPbc 19 10 46.9 +1.8
LPAZ La Paz 151.27 146 *e*PKIKP PKPdf 19 10 40.9 +1.9
SDV Santo Domingo 161.24 85 *e*PKPdf PKPdf 19 10 52.1 0.0

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*SZGRF **14** 18:54:31.8, 21.°45S×177.°36W, h33km, Fiji Islands region*
*BJI **14** 18:55:31.9, 20.°50S×177.°90W, h553km, mB4.7/14, mb4.5/19*
*IDC **14** 18:55:32.0±2.4, 20.°27S×178.°01W, h532km±20km, mb3.7/11, mb1 4.0/12, mb1mx3.8/19, mbtmp3.7/12, Error ellipse: s-maj=36.2km s-min=16.6km az=168.0*
*BGS **14** 18:55:32.2±6.4, 20.°51S×177.°95W, h553km, mb4.3(NEIC)*
*NEIC **14** 18:55:33.0±1.2, 20.°51S×177.°95W, h553km±9km, mb4.3/15, Error ellipse: s-maj=25.7km s-min=10.5km az=163.0*
*ISCJB **14** 18:55:36.2±1.6, 19.°7S±0.°3×178.°0W±0.°1, h561km±10km, mb4.2/31, Error ellipse: s-maj=40.8km s-min=11.9km az=167.0*

ISC 14 18:55:36.8±1.6, 19.°7S±0.°3×177.°9W±0.°1, h554km±10km, h539km±2.2km: pP-P, n150, o0.°77/39, mb4.2/31, 13C-16D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.27**	**296**	*eP*	**P**	**18 57 01.5**	**+0.5**
AFI	**Afiamalu**	**8.24**	**47**	P	**P**	**18 57 37.1**	**+0.1**
	3.8nm,0.3s,baz=228,slow=22,SNR=5.8						
AFI				S	**S**	**18 59 15.0**	**-0.7**
	21nm,0.3s,baz=199,slow=20,SNR=10						
AFI	**Afiamalu**	**8.24**	**47**	*eP*	**P**	**18 57 37.2**	**+0.1**
WRA	**Warramunga Arr**	**44.77**	**261**	P	**P**	**19 02 57.2**	**-4.5**
	8.0nm,0.9s,mb4.2,baz=96,slow=7.5,SNR=3.4						
MJAR	**Matsushiro Arr**	**69.59**	**323**	P	**P**	**19 05 50.0**	**-0.6**
	7.9nm,0.6s,mb4.4,baz=161,slow=6.6,SNR=27						
MAT	**Matsushiro**	**69.59**	**323**	P	**P**	**19 05 49.9**	**-0.7**
NIKO	**Nikolski**	**72.78**	**6**	*eP*	**P**	**19 06 08.7**	**-0.2**
ASAJ	**Asahikawa**	**73.04**	**331**	*eP*	**P**	**19 06 12.0**	**+1.4**
	10nm,0.9s,mb4.3						
YSS	**Yuzh-Sakhalins**	**75.20**	**333**	*eP*	**P**	**19 06 23.5**	**+0.8**
	26nm,0.9s,mb4.7						
PETK	**Petropavlovsk-**	**75.50**	**345**	P	**P**	**19 06 24.5**	**+0.2**
	9.7nm,0.7s,mb4.3,baz=136,slow=8.8,SNR=12						
KSRS	**Korea Array**	**76.32**	**318**	P	**P**	**19 06 29.2**	**+0.1**
	2.4nm,0.7s,mb3.8,baz=127,slow=6.0,SNR=17						
YBH	**Yreka Blue Hor**	**79.62**	**39**	P	**P**	**19 06 48.0**	**+1.2**
	6.4nm,0.7s,mb4.1,baz=137,slow=0.6,SNR=15						
WAKR	**Walker**	**79.71**	**43**	*eP*	**P**	**19 06 48.1**	**+0.7**
	5.8nm,1.0s,mb3.9						
MDJ	**Mudanjiang**	**79.89**	**325**	P	**P**	**19 06 48.3**	**+0.2**
MDJ				pP	pP	19 08 43.6	-2.5
MDJ				PP	PP	19 10 01.1	+0.9
MDJ				S	S	19 16 11.1	+4.8
MDJ				sS	sS	19 19 37.6	+1.0
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,64nm,4.2s						
MDJ	**Mudanjiang**	**79.89**	**325**	*eP*	**P**	**19 06 48.6**	**+0.5**
	comp=Z,8.8nm,0.9s,mb4.1						
NVAR	**Mina Array Bea**	**80.40**	**43**	P	**P**	**19 06 51.3**	**+0.4**
	comp=Z,2.8nm,0.8s,mb3.7,baz=225,slow=9.1,SNR=21						
MOD	**Modoc**	**81.16**	**40**	*eP*	**P**	**19 06 54.7**	**0.0**
	comp=Z,2.3nm,0.8s,mb3.7						
ETW	**Entiat**	**84.55**	**35**	*eP*	**P**	**19 07 11.9**	**+0.3**
	comp=Z,4.3nm,0.7s,mb4.1						
ENH	**Enshi**	**85.63**	**304**	*eP*	**P**	**19 07 16.1**	**-1.1**
	comp=Z,58nm,1.8s,mb4.9						
TRF	**Thorofare Moun**	**85.65**	**12**	*eP*	**P**	**19 07 15.8**	**-0.7**
	comp=Z,15nm,0.8s,mb4.7						
HLID	**Hailey**	**85.68**	**41**	*eP*	**P**	**19 07 17.6**	**+0.4**
	comp=Z,3.4nm,1.1s,mb3.9						
SRU	**San Rafael**	**85.92**	**46**	*eP*	**P**	**19 07 18.1**	**-0.4**
	comp=Z,1.8nm,0.9s,mb3.7						
GYA	**Guiyang**	**86.30**	**300**	*eP*	**P**	**19 07 18.8**	**-1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
TXAR	**Lajitas Array**	**86.57**	**57**	P	**P**	**19 07 21.9**	**+0.2**
	comp=Z,1.1nm,0.6s,mb3.7,baz=222,slow=6.2,SNR=8.2						
ANMO	**Albuquerque**	**86.86**	**51**	P	**P**	**19 07 22.6**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.4,baz=225,slow=8.6,SNR=3.7						
MCMT	**McKenzie Canyo**	**87.30**	**40**	*eP*	**P**	**19 07 25.2**	**+0.4**
	comp=Z,4.2nm,1.1s,mb4.0						
RRI2	**Red Ridge**	**87.50**	**42**	*eP*	**P**	**19 07 26.1**	**+0.4**
	comp=Z,2.9nm,0.7s,mb4.0						
ILAR	**Eielson Array**	**87.52**	**13**	P	**P**	**19 07 24.2**	**-1.1**
	comp=Z,5.2nm,0.7s,mb4.3,baz=215,slow=5.4,SNR=49						
REDW	**Red Top Meadow**	**87.80**	**42**	*eP*	**P**	**19 07 26.8**	**-0.3**
	comp=Z,1.8

EGAK	Eagle	88.81	15	*e*P		P	19 07 30.9	-0.4
	comp=Z,9.4nm,0.9s,mb4.6							
HHC	Hu-ho-hao-te	88.83	314	*e*P		P	19 07 33.8	+1.8
HHC				pP		pP	19 09 32.8	-0.5
HHC				sP		sP	19 10 26.4	-2.6
HHC				PP		PP	19 11 18.5	+6.7
HHC				SKS			19 17 12.6	
HHC				S		S	19 17 37.1	+4.1
HHC				sS		sS	19 21 09.4	+0.2
HHC				SS		SS	19 23 53.8	+11
HHC				pmax		pmax		
	comp=Z,8.0nm,1.1s,mb4.5							
HHC				pmax		pmax		
	comp=Z,110nm,6.4s							
KMI	Kunming	89.03	297	P		P	19 07 33.4	0.0
KMI				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.4							
CMAR	Chiang Mai Arr	89.90	290	P		P	19 07 36.6	-0.8
	comp=Z,4.6nm,0.9s,mb4.3,baz=113,slow=2.8,SNR=20							
CHTO	Chiang Mai	90.02	290	*e*P		P	19 07 36.9	-1.2
	comp=Z,21nm,1.5s,mb4.8							
CD2	Chengdu	90.40	303	*e*P		P	19 07 39.5	-0.1
CD2				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb4.8							
LZH	Lanzhou	92.32	307	P		P	19 07 50.0	+1.7
LZH				pP		pP	19 09 50.1	+0.1
LZH				sP		sP	19 10 42.9	-2.6
LZH				PP		PP	19 11 45.3	+6.1
LZH				pmax		pmax		
	comp=Z,15nm,1.4s,mb4.8							
LZH				pmax		pmax		
	comp=Z,47nm,9.3s							
ZALV	Zalesovo Beam	109.90	321	PKiKP		PKiKP	19 13 01.3	-3.7
	comp=Z,1.1nm,0.6s,baz=148,slow=2.2,SNR=7.4							
MK31	Makanchi Array	110.68	314	*e*PKiKP		PKiKP	19 13 03.1	-3.6
MKAR	Makanchi Array	110.68	314	PKiKP		PKiKP	19 13 03.2	-3.5
	comp=Z,1.2nm,0.6s,baz=94,slow=0.5,SNR=14							
MKAR	Makanchi Array	110.68	314	PKdf		PKiKP	19 13 03.2	-3.5
KURK	Kurchatov	113.44	318	*e*PKiKP		PKiKP	19 13 07.7	-4.1
BRVK	Borovoye	118.56	320	*e*PKPdf		PKPdf	19 13 18.3	-3.2
KKAR	Karatay Array	118.78	309	*e*PKPdf		PKPdf	19 13 18.9	-3.4
KBL	Kabul	119.55	299	*e*PKPdf		PKPdf	19 13 21.4	-2.7
ABKAR	Abkulak array	125.54	317	*e*PKPdf		PKPdf	19 13 32.0	-3.1
ARCES	ARCESS Array B	128.14	350	PKPdf		PKPdf	19 13 37.0	-2.5
	comp=Z,2.1nm,0.6s,baz=51,slow=1.5,SNR=19							
FINES	FINESS Array B	135.01	344	PKP		PKPdf	19 13 48.6	-4.0
	comp=Z,1.9nm,0.8s,baz=86,slow=3.8,SNR=9.5							
FINES				SKPbc		SKPbc	19 16 31.3	-0.3
	comp=Z,1.0nm,0.6s,baz=26,slow=3.5,SNR=3.5							
NOA	NORSAR Array B	138.19	353	PKhKP		PKPpre	19 13 45.5	
	comp=Z,0.9nm,0.7s,baz=15,slow=4.4,SNR=5.4							
NOA				PKP		PKPdf	19 13 56.5	-2.0
	comp=Z,1.0nm,0.7s,baz=13,slow=4.0,SNR=3.7							
MVH1	Achvaich	141.54	5	P		PKPdf	19 13 57.2	-7.5
MVH1	Achvaich	141.54	5	*e*P		PKPdf	19 13 57.2	-7.5
KAC	Achnashellach	141.85	6	P		PKPdf	19 13 59.9	-5.4
KAC	Achnashellach	141.85	6	*e*P		PKPdf	19 13 59.9	-5.4
MCD	Coleburn Disti	141.96	5	P		PKPdf	19 13 59.6	-5.8
MCD	Coleburn Disti	141.96	5	*e*P		PKPdf	19 13 59.6	-5.8
KPL	Plockton	141.97	7	P		PKPdf	19 14 00.1	-5.3
KPL	Plockton	141.97	7	*e*P		PKPdf	19 14 00.1	-5.3
MDO	Dochfour	142.00	6	P		PKPdf	19 13 59.1	-6.4
MDO	Dochfour	142.00	6	*e*P		PKPdf	19 13 59.1	-6.4
KIEV	Kiev	142.34	332	*e*PKPpre		PKPdf	19 14 00.7	-5.7
KAR1	Arisaig	142.36	7	P		PKPdf	19 14 01.3	-4.9
KAR1	Arisaig	142.36	7	*e*P		PKPdf	19 14 01.3	-4.9
EAB	Aberfoyle	143.24	6	P		PKPdf	19 14 04.1	-3.7
EAB	Aberfoyle	143.24	6	*e*P		PKPdf	19 14 04.1	-3.7
EBH	Black Hill	143.26	5	P		PKPdf	19 14 03.9	-3.9
EBH	Black Hill	143.26	5	*e*P		PKPdf	19 14 03.9	-3.9
MALT	Malatya	143.48	308	*e*PKP		PKPdf	19 14 06.1	-2.6
MALT	Malatya	143.48	308	⇓*i*P		PKPdf	19 14 06.2	-2.5
PGBU	Glenifferbraes	143.60	6	P		PKPdf	19 14 05.3	-3.1
PGBU	Glenifferbraes	143.60	6	*e*P		PKPdf	19 14 05.3	-3.1
EAU	Auchinoon	143.66	5	P		PKPdf	19 14 05.4	-3.1
EAU	Auchinoon	143.66	5	*e*P		PKPdf	19 14 05.4	-3.1
EBL	Broad Law	143.77	5	P		PKPdf	19 14 05.5	-3.2
EBL	Broad Law	143.77	5	*e*P		PKPdf	19 14 05.5	-3.2
GAL1	Galloway	144.51	7	P		PKPdf	19 14 08.7	-1.3
GAL1	Galloway	144.51	7	*e*P		PKPdf	19 14 08.7	-1.3
KWP	Kalwaria Pacla	145.87	336	⇑*i*P		PKPdf	19 14 12.5	0.0
TLCR		146.28	325	⇓*i*P		PKPdf	19 14 13.8	+0.5
BR131	Keskin Array S	146.33	313	*e*PKPdf		PKPdf	19 14 11.1	-2.5
BR131				*e*PKPbc		PKPbc	19 14 13.6	-2.3
BRTR	Keskin Array B	146.33	313	PKPbc		PKPbc	19 14 13.6	-2.4
	comp=Z,4.7nm,0.8s,baz=54,slow=6.3,SNR=25							
BUR08	Bucovina Ar. S	146.37	331	*e*PKPbc		PKPbc	19 14 14.5	-1.2
BURAR	Bucovina Array	146.38	331	⇑*i*P		PKPdf	19 14 14.6	+1.2
OJC	Ojcow	146.43	339	*e*PKP		PKPdf	19 14 13.9	+0.5
GHRR		146.44	327	⇑*i*P		PKPdf	19 14 15.2	+1.6
TESR		146.51	329	⇓*i*P		PKPdf	19 14 13.3	-0.3
KOLS	Kolonicke sedl	146.60	336	*e*PKP		PKPdf	19 14 15.1	+1.4
KOLS				*e*			19 14 18.5	
KOLS	Kolonicke sedl	146.60	336	*e*PKP		PKPdf	19 14 15.1	+1.4
KOLS				*e*			19 14 18.5	
NRDL	Niedersach Rie	146.66	351	*e*PKPbc		PKPbc	19 14 14.7	-1.7
VRI	Vrincioaia	146.92	328	⇑*i*P		PKPdf	19 14 14.3	-0.1
NIE	Niedzica	146.93	338	*e*PKP		PKPdf	19 14 15.8	+1.5
CRVS	Cervenica-Dubn	146.94	336	*e*PKP		PKPdf	19 14 16.0	+1.7
CRVS				*e*			19 14 20.1	
CRVS	Cervenica-Dubn	146.94	336	*e*PKP		PKPdf	19 14 16.0	+1.7
CRVS				*e*			19 14 20.1	
PLOR	Plostina	146.97	328	⇑*i*P		PKPdf	19 14 14.5	+0.1
IBBN	Ibbenburen	147.14	354	*e*PKPbc		PKPbc	19 14 16.1	-1.6
IBBN				*e*PKPab		PKPab	19 14 20.3	-0.8
CLZ	Clausthal	147.26	350	*e*PKPbc		PKPbc	19 14 16.7	-1.3
CLL	Collm	147.29	347	*e*PKPbc		PKPbc	19 14 16.5	-1.6
CLL				*e*PKPab		PKPab	19 14 20.7	-1.0
CLL	Collm	147.29	347	⇓*i*PKP		PKPdf	19 14 16.4	+1.6
CLL				⇑*i*PKP		PKPdf	19 14 20.6	+5.8
CLL	Collm	147.29	347	⇓*i*PKPbc		PKPbc	19 14 16.4	-1.7
	comp=Z,29nm,0.8s							
CLL				⇑*i*PKPab		PKPab	19 14 20.6	-1.1
	comp=Z,9.0nm,0.9s							
OKC	Ostrava-Krasne	147.29	341	⇓*e*PKPBC		PKPbc	19 14 16.7	-1.4
UPC	Upice	147.31	343	⇓*e*PKPBC		PKPbc	19 14 16.7	-1.5
DPC	Dobruska-Polom	147.37	343	⇑*e*PKP		PKPbc	19 14 17.2	-1.1
DPC				*e*PKPAB		PKPab	19 14 22.1	0.0
BRG	Berggiesshubel	147.49	346	*e*PKPbc		PKPbc	19 14 17.1	-1.5
BRG				*e*PKPab		PKPab	19 14 21.9	-0.7
BRG	Berggiesshubel	147.49	346	⇓*i*PKP		PKPbc	19 14 17.1	-1.5
	comp=Z,12nm,0.7s							
BRG				*i*			19 14 21.8	
	comp=Z,7.2nm,0.7s							
DOPR	Dopca	147.51	329	⇓*i*P		PKPbc	19 14 17.8	-1.0
MORC	Moravsky Berou	147.53	341	⇑*i*P		PKPdf	19 14 12.9	-2.3
MLR	Muntele Rosu	147.57	328	⇓*i*P		PKPbc	19 14 17.1	-1.9
FBE	Freiberg	147.58	347	*e*PKPbc		PKPbc	19 14 17.7	-1.1
FBE				*e*PKPab		PKPab	19 14 22.6	-0.3
NEUB	Neuenburg	147.63	349	*e*PKPbc		PKPbc	19 14 17.6	-1.3
NEUB				*e*PKPab		PKPab	19 14 22.3	-0.8
KECS	Kecovo	147.65	337	*e*PKP		PKPbc	19 14 17.7	-1.4
KECS	Kecovo	147.65	337	*e*PKP		PKPbc	19 14 17.7	-1.4
PVCC	Panska Ves	147.66	345	⇓*e*PKPBC		PKPbc	19 14 17.8	-1.3
HGH	Gray Hill	147.89	6	P		PKPdf	19 14 16.9	+1.2
HGH	Gray Hill	147.89	6	*e*P		PKPdf	19 14 16.9	+1.2
VOIR		148.06	329	⇑*i*P		PKPdf	19 14 17.4	+1.2
DRGR		148.12	333	⇑*i*P		PKPdf	19 14 14.3	-2.0
PRU	Pruhonice	148.17	345	⇓*e*PKPBC		PKPbc	19 14 19.4	-1.0
PRU				*e*PKPAB		PKPab	19 14 25.5	+0.1
MOX	Moxa	148.19	348	*e*PKP		PKPbc	19 14 18.9	-1.5
	comp=Z,17nm,1.2s							
MOX	Moxa	148.19	348	*e*PKPbc		PKPbc	19 14 18.8	-1.6
MOX				*e*PKPab		PKPab	19 14 24.4	-1.0
VYHS	Vyhne	148.23	339	*e*PKP		PKPbc	19 14 18.9	-1.7
VYHS				*e*			19 14 25.4	
VYHS	Vyhne	148.23	339	*e*PKP		PKPbc	19 14 18.9	-1.7
VYHS				*e*			19 14 25.4	
PLN	Plauen	148.24	348	*e*PKPbc		PKPbc	19 14 19.0	-1.5
TANN	Tannenbergstha	148.25	347	*e*PKPbc		PKPbc	19 14 19.1	-1.4
TANN				*e*PKPab		PKPab	19 14 25.0	-0.7
WERD	Werda	148.25	348	*e*PKPbc		PKPbc	19 14 19.1	-1.4
KOLL	Kolacno	148.31	339	*e*PKP		PKPbc	19 14 19.7	-1.0
KOLL	Kolacno	148.31	339	*e*PKP		PKPbc	19 14 19.7	-1.0
GUNZ	Gunzen	148.32	347	*e*PKPbc		PKPbc	19 14 19.4	-1.3
WERN	Wernitzgruen	148.38	347	*e*PKPbc		PKPbc	19 14 19.6	-1.3
WERN				*e*PKPab		PKPab	19 14 25.9	-0.3
NKC	Novy Kostel	148.42	347	⇓*e*PKPBC		PKPbc	19 14 19.3	-1.7
NKC				*e*PKPAB		PKPab	19 14 24.9	-1.5
TREC	Trest	148.56	343	⇓*e*PKPBC		PKPbc	19 14 19.4	-1.9
TREC				*e*PKPAB		PKPab	19 14 26.0	-1.0
ROTZ	Rotzenmuhle	148.91	347	*e*PKPbc		PKPbc	19 14 20.7	-1.5
MEM	Membach	148.99	355	PKPbc		PKPbc	19 14 20.8	-1.5
TNS	Taunus Mts	149.11	352	*e*PKPbc		PKPbc	19 14 21.2	-1.5
TNS				*e*PKPab		PKPab	19 14 28.5	-0.7
GZR	Gura Zlata	149.16	331	⇑*i*P		PKPbc	19 14 20.8	-2.1
GRA1	Grafenberg Arr	149.18	348	*e*PKPbc		PKPbc	19 14 21.5	-1.3
GRF	Grafenberg Arr	149.18	348	*e*PKPbc		PKPbc	19 14 21.5	-1.3
SNF	Seneffe	149.20	357	PKPbc		PKPbc	19 14 20.9	-2.0
SNF				PKPab		PKPab	19 14 28.8	-0.8
KHC	Kasperske Hory	149.20	345	⇓*i*PKPBC		PKPbc	19 14 21.3	-1.6
KHC				*e*PKPAB		PKPab	19 14 29.3	-0.4
BCLA	Clavier	149.23	356	PKPbc		PKPbc	19 14 21.2	-1.8
BCLA				PKPab		PKPab	19 14 28.4	-1.3
WET	Wettzell	149.35	346	*e*PKPab		PKPab	19 14 29.9	-0.4
GEC2	GERESS Array S	149.44	345	*e*PKPbc		PKPbc	19 14 21.7	-1.8
BZS	Buzias	149.51	332	⇑*i*P		PKPbc	19 14 21.8	-2.0
DOU	Dourbes	149.59	357	PKPbc		PKPbc	19 14 22.3	-1.5
CONA	Conrad Observa	149.69	341	⇓*i*PKiKP		PKPbc	19 14 22.6	-1.5
	comp=Z,8.5nm,0.6s							
WLF	Walferdange	149.91	355	PKPbc		PKPbc	19 14 22.6	-2.0
WLF				PKPab		PKPab	19 14 32.1	-0.5
STU	Stuttgart	150.42	350	*e*PKPbc		PKPbc	19 14 24.0	-1.8
FUR	Furstenfeldbru	150.63	347	*e*PKPab		PKPab	19 14 35.3	-0.3
RJOB	Jochberg	150.69	345	*e*PKPab		PKPab	19 14 35.9	0.0
ESDC	Sonseca Array	159.42	13	PKPab		PKPab	19 15 12.5	-1.1
	comp=Z,0.2nm,0.4s,baz=342,slow=3.3,SNR=4.8							
TORD	Torodi Ar. Bea	173.49	177	PKP		PKPdf	19 14 39.6	-4.0
	comp=Z,1.1nm,0.8s,baz=26,slow=0.4,SNR=5.0							

*ISCJB **14** 19:07:07.8±0.9, 54°.79N±0°.03×162°.46E±0°.07, h24km±8km, Error ellipse: s-maj=6.8km s-min=4.5km az=30.0*
*KRSC **14** 19:07:07.2±0.2, 54°.79N×162°.45E, h25km±24km, ML4.1*
*MOS **14** 19:07:08.5±1.1, 54°.77N×162°.45E, h32km, mb4.2/1, Error ellipse: s-maj=26.6km s-min=14.4km az=74.9*

ISC 14 19:07:07.9±1.0, 54°.81N±0°.03×162°.46E±0°.07, h18km±6km, n24, σ0°63/43, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.49	239	*e*P	Pg	19 07 17.6	-0.2
MKZ				*i*S	Sg	19 07 24.5	0.0
MKZ	Mys Kozlova	0.49	239	PN	Pg	19 07 17.6	-0.2
MKZ				S	Sg	19 07 24.5	0.0
KBTR	Krutoberegovo	1.42	8	*e*P	Pn	19 07 33.1	+0.3
KBTR				*i*S	Sn	19 07 52.4	+1.4
KBTR	Krutoberegovo	1.42	8	PN	Pn	19 07 33.1	+0.3
KBTR				S	Sn	19 07 52.4	+1.4
ZLN	Zelenaya	1.53	323	*e*P	Pn	19 07 34.1	-0.3
ZLN				*i*S	Sn	19 07 54.0	+0.1
BZMR	Bezymyannaya	1.59	316	*e*P	Pn	19 07 34.9	-0.3
KPT	Kopyto	1.72	313	*e*P	Pn	19 07 37.3	+0.3
KRSR	Krestovskiy	1.77	323	*e*P	Pn	19 07 37.4	-0.3
KLY	Klyuchi	1.82	326	*e*P	Pn	19 07 37.2	-1.2
KLY				*i*S	Sn	19 07 59.9	-1.1
KLY	Klyuchi	1.82	326	PN	Pn	19 07 37.2	-1.2
KLY				S	Sn	19 07 59.9	-1.1
KII	Karymskiy	1.92	247	*e*P	Pn	19 07 39.6	-0.1
KII				*e*S	Sn	19 08 03.7	+0.3
KOZR	Kozyr	1.93	312	PN	Pn	19 07 40.2	+0.4
KOZR				S	Sn	19 08 03.5	-0.1
KOZ	Kozyrevsk	1.93	311	*e*P	Pn	19 07 40.2	+0.3
KOZ				*i*S	Sn	19 08 03.5	-0.2
BKI	Bering	2.06	78	*e*P	Pn	19 07 41.5	-0.2
BKI				*i*S	Sn	19 08 06.5	-0.4
BKI	Bering	2.06	78	PN	Pn	19 07 41.5	-0.2
BKI				S	Sn	19 08 06.5	-0.4
SRDR	Sredinnyy	2.17	315	*e*P	Pn	19 07 43.3	+0.2
SPN	Mys Shipunski	2.24	221	*e*P	Pn	19 07 43.8	-0.3
SPN				*i*S	Sn	19 08 10.2	-1.1
SPN	Mys Shipunski	2.24	221	PN	Pn	19 07 43.8	-0.3
SPN				S	Sn	19 08 10.2	-1.1
NLC	Nalytchevo	2.46	229	P	Pn	19 07 47.5	+0.3
NLC				*i*S	Sn	19 08 16.5	-0.3
NLC	Nalytchevo	2.46	229	PN	Pn	19 07 47.5	+0.3
NLC				S	Sn	19 08 16.5	-0.3
AVH	Avacha	2.69	236	*e*P	Pn	19 07 50.6	+0.4
AVH				*i*S	Sn	19 08 23.0	+0.8
GNL	Ganaly	2.88	249	*e*P	Pn	19 07 53.7	+0.9
PET	Petropavlovsk	2.88	233	*e*P	Pn	19 07 52.7	-0.1
PET				*i*S	Sn	19 08 25.4	-1.5
PET	Petropavlovsk	2.88	233	*e*PN	Pn	19 07 53.5	+0.7
PET				*e*S	Sn	19 08 29.0	+2.1
PET				smax			
	comp=N,128nm,0.5s						

*ISCJB **14** 19:39:22.9±1.5, 20°.09N±0°.10×70°.7W±0°.1, h40km±16km, mb3.7/10, MS3.6/2, Error ellipse: s-maj=23.1km s-min=10.4km az=143.5*
*IDC **14** 19:39:25.0±4.3, 20°.09N×70°.77W, h38km±41km, mb3.4/8, mb1 3.8/11, mb1mx3.6/25, mbtmp3.6/11, ML4.4/3, MS3.2/5, Ms1 3.2/5, ms1mx2.9/33, Error ellipse: s-maj=30.7km s-min=17.2km az=45.0*
*NEIC **14** 19:39:24.7±1.3, 20°.15N×70°.71W, h36km±15km, mb4.0/2, Error ellipse: s-maj=19.4km s-min=11.0km az=222.0*

ISC 14 19:39:25.0±1.3, 20°.19N±0°.09×70°.6W±0°.1, h41km±15km, n23, σ1°00/25, mb3.7/10, MS3.6/2, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	3.74	117	*e*P	Pn	19 40 19.9	-0.3
LSP	Las Mesas	3.90	120	*e*P	Pn	19 40 23.1	+0.6
CRPR	Cabo Rojo, PR	3.97	123	*e*P	Pn	19 40 23.7	+0.3
LRS	Lares	4.04	117	*e*P	Pn	19 40 24.9	+0.5
OBIP	Obispado Ponce	4.36	119	*e*P	Pn	19 40 28.0	-0.8
CELP	Cerrillos	4.37	118	P	Pn	19 40 28.8	-0.1
ICM	Isla Caja Muer	4.51	120	*e*P	Pn	19 40 32.2	+1.4
SJG	San Juan	4.71	115	Pn	Pn	19 40 33.0	-0.6
	2.0nm,0.3s,baz=319,slow=17,SNR=4.0						
SJG				Sn	Sn	19 41 24.9	-2.1
	2.3nm,0.3s,baz=339,slow=20,SNR=2.4						
SJG				LR	LR	19 42 10.5	
	comp=Z,70nm,18.4s,baz=108,slow=34						
SJG	San Juan	4.71	115	Pn	Pn	19 40 33.0	-0.6
SJG				Sn	Sn	19 41 24.9	-2.1
SJG				LR	LR	19 42 10.5	
PCRV	Puerto La Cruz	11.51	149	Pn	Pn	19 42 08.5	+1.6
	1.3nm,0.3s,baz=197,slow=1.7,SNR=6.1						
PCRV				Sn	Sn	19 44 13.4	-0.8
	0.4nm,0.3s,baz=45,slow=15,SNR=2.8						
PCRV				LR	LR	19 46 35.9	
	comp=Z,67nm,19.4s,baz=86,slow=37						
TKL	Tuckaleechee C	19.27	326	P	Pn	19 43 47.8	+0.4
	0.3nm,0.3s,baz=128,slow=16,SNR=4.7						
TKL				S	S	19 47 07.7	-15
	0.2nm,0.3s,baz=51,slow=6.2,SNR=3.6						
TKL				LR	LR	19 51 28.8	
	comp=Z,74nm,20.4s,baz=91,slow=38						
TXAR	Lajitas Array	31.27	293	P	P	19 45 41.0	-0.1
	1.6nm,1.1s,mb3.8,baz=59,slow=15,SNR=4.1						
MNTX	Cornudas Mount	33.15	297	*e*P	P	19 45 56.4	-1.3
	3.4nm,1.2s,mb4.2						
LPAZ	La Paz	36.33	176	P	P	19 46 26.4	+1.2
	0.3nm,0.3s,mb3.6,baz=21,slow=6.5,SNR=3.8						
MOOW	Moose Ponds	40.80	314	*e*P	P	19 47 02.1	-0.4
	2.5nm,1.1s,mb3.8						
BDFB	Brasilia	41.97	146	P	P	19 47 11.3	-1.0
	2.9nm,0.8s,mb4.0,baz=300,slow=5.9,SNR=3.8						
FRB	Frobisher Bay	43.55	1	LR	LR	20 04 06.6	
	comp=Z,68nm,19.1s,MS3.6,baz=248,slow=34						
NVAR	Mina Array Bea	44.84	305	P	P	19 47 34.9	-0.4
	1.4nm,1.1s,mb3.7,baz=89,slow=12,SNR=6.3						
YKA	Yellowknife Ar	51.85	336	P	P	19 48 27.9	-1.0
	0.6nm,0.8s,mb3.6,baz=121,slow=6.7,SNR=3.0						
ESDC	Sonseca Array	59.65	55	P	P	19 49 27.9	+2.8
	0.5nm,0.7s,mb3.6,baz=275,slow=7.4,SNR=4.2						
INK	Inuvik	61.47	338	LR	LR	20 15 55.1	
	comp=Z,50nm,19.4s,MS3.7,baz=102,slow=36						
ILAR	Eielson Array	66.07	333	P	P	19 50 07.5	0.0
	0.4nm,0.9s,mb3.5,baz=94,slow=3.9,SNR=3.9						
TORD	Torodi Ar. Bea	69.18	83	P	P	19 50 29.2	+1.2
	0.5nm,0.8s,mb3.5,baz=289,slow=4.4,SNR=3.4						

IDC 14 19:41:47.9±11.0, 5°.88S×149°.00E, h86km±96km, mb3.6/4, mb1 3.9/5, mb1mx3.5/16, mbtmp3.7/5, Error ellipse: s-maj=94.8km s-min=26.2km az=102.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.97	224	P	Pn	19 46 14.2	-1.6
	0.6nm,0.3s,baz=50,slow=11,SNR=53						
ASAR	Alice Springs	22.89	218	P	P	19 46 45.2	+0.7
	1.4nm,0.4s,baz=51,slow=9.4,SNR=24						
FITZ	Fitzroy Crossi	25.84	240	P	P	19 47 11.0	-0.5
	6.3nm,0.5s,baz=61,slow=9.3,SNR=55						
KSRS	Korea Array	47.38	337	P	P	19 50 13.4	0.0
	1.1nm,0.6s,baz=154,slow=8.7,SNR=9.2						
SONM	Songino Array	65.28	330	P	P	19 52 21.3	+0.8
	0.2nm,0.4s,baz=154,slow=7.1,SNR=3.9						
TORD	Torodi Ar. Bea	146.99	285	PKPbc	PKPbc	20 01 19.8	-1.9
	0.3nm,0.3s,baz=82,slow=2.8,SNR=20						

IDC 14 19:46:19.4±14.0, 6°.84S×129°.42E, h140km±152km, mb2.9/1, mb1 3.1/4, mb1mx2.9/18, mbtmp3.0/4, ML3.4/3, Error ellipse: s-maj=98.6km s-min=58.4km az=33.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.78	198	P	Pn	19 49 03.8	+0.6
	0.1nm,0.3s,baz=29,slow=10,SNR=3.3						
FITZ				S	Sn	19 51 07.9	-5.4
	0.1nm,0.3s,baz=94,slow=16,SNR=3.1						
WRA	Warramunga Arr	13.87	160	P	Pn	19 49 29.2	-0.9
	0.2nm,0.3s,baz=338,slow=12,SNR=10.0						
WRA				S	Sn	19 51 53.4	-10
	0.2nm,0.3s,baz=337,slow=22,SNR=6.1						
ASAR	Alice Springs	17.27	166	P	Pn	19 50 11.8	-0.4
	0.1nm,0.3s,baz=342,slow=9.1,SNR=11						
MKAR	Makanchi Array	67.78	327	P	P	19 57 02.2	+0.1
	0.2nm,0.3s,baz=110,slow=10,SNR=2.1						

*IDC **14** 19:49:57.6±2.8, 43°.19N×105°.19W, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.4/25, mbtmp3.7/3, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/41, Error ellipse: s-maj=63.3km s-min=9.5km az=157.0*
*ISCJB **14** 19:49:59.5±0.4, 43°.61N±0°.02×105°.25W±0°.04, h0km, Error ellipse: s-maj=4.0km s-min=2.4km az=166.5*
*NEIC **14** 19:50:01.0±0.5, 43°.62N×105°.25W, h0km, ML3.0, Error ellipse: s-maj=6.8km s-min=5.8km az=163.0, Suspected Mining explosion.*
NEIC 75 km [50 miles] SSE of Gillette.

ISC 14 19:50:00.6±0.4, 43°.58N±0°.02×105°.29W±0°.04, h0km, n61, σ1°03/78, 20C-28D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J22A	Midwest	0.88	259	P	Pg	19 50 16.4	-1.0
	baz=0.9,SNR=261						
RSSD	Black Hills	1.06	59	*e*Pg	Pg	19 50 20.2	-0.6
K22A	Casper	1.30	224	⇑P	Pg	19 50 24.0	-1.5
	baz=1.3,SNR=208						
K22A				⇑S	Sg	19 50 42.1	-0.1
	baz=1.3						
I21A	Big Trails, Te	1.47	280	⇑P	Pn	19 50 26.7	-1.6
	baz=1.5,SNR=492						
L23A	Garrett	1.50	192	⇓P	Pn	19 50 27.6	-1.1
	baz=1.5						
L23A				⇓S	Sg	19 50 48.2	-0.6
	baz=1.5						
L24A	Wheatland	1.56	170	⇓P	Pn	19 50 29.0	-0.5
	baz=1.6						
L24A

baz=3.5,SNR=13
OGNE Ogallala 3.58 136 *e*Pn **Pn 19 50 58.3 +1.0**
ISCO Idaho Springs 3.79 184 *e*Pn **Pn 19 51 01.6 +1.4**
LKWY Lake 3.81 287 Pg **Pg 19 51 08.4 -5.2**
GCMT Greycliff 3.82 307 *e*Pn **Pn 19 51 01.4 +0.8**
LOHW Long Hollow 3.86 272 *e*Pn **Pn 19 51 02.3 +1.2**
FLWY Flagg Ranch 3.94 279 Pn **Pn 19 51 06.1 +3.8**
MOOW Moose Ponds 3.96 274 *e*Pn **Pn 19 51 03.5 +0.9**
SNOW Snow King Moun 3.98 270 *e*Pn **Pn 19 51 03.9 +1.1**
REDW Red Top Meadow 4.05 269 *e*Pn **Pn 19 51 04.0 +0.2**
IMW Indian Meadow 4.10 276 *e*Pn **Pn 19 51 05.6 +1.1**
TPAW Teton Pass 4.12 271 *e*Pn **Pn 19 51 05.9 +1.3**
RRI2 Red Ridge 4.39 269 *e*Pn **Pn 19 51 09.0 +0.5**
SMCO Snowmass 4.58 197 *e*Pn **Pn 19 51 13.9 +2.9**
HWUT Hardware Ranch 5.03 249 *e*Pn **Pn 19 51 17.8 +0.5**
7.0nm,0.5s
SPUT South Promonto 5.76 249 Pn **Pn 19 51 27.6 +0.3**
ULM Lac du Bonnet 9.27 41 Pn **Pn 19 52 14.6 -0.8**
0.9nm,0.3s,baz=223,slow=13,SNR=5.5
ULM Lg 19 54 48.6
0.4nm,0.3s,baz=156,slow=12,SNR=3.3
YBH Yreka Blue Hor 12.96 268 LR LR 19 58 22.3
comp=Z,57nm,20.2s,baz=121,slow=39
ARCES ARCESS Array B 61.57 18 P **P 20 00 17.5 -1.6**
0.8nm,0.7s,baz=340,slow=6.6,SNR=6.3

NEIC ***14*** *19:50:12.6±0.9, 35°.14S×108°.52W, h10km, mb4.4/4, Error ellipse: s-maj=31.0km s-min=21.6km az=53.0*
IDC ***14*** *19:50:13.4±0.9, 34°.72S×108°.23W, h0km, mb4.1/7, mb1 4.3/7, mb1mx4.1/18, mbtmp4.1/7, MS3.8/7, Ms1 3.8/7, ms1mx3.6/20, Error ellipse: s-maj=28.0km s-min=26.2km az=38.0*

ISC 14 19:50:12.4±1.2, 35°.1S±0°.2×108°.6W±0°.2, h10km, n21, σ0°71/12, mb4.1/9, MS3.8/7, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.02**	**355**	T		20 00 01.1	
	19nm,0.3s,baz=21,slow=18,SNR=5.7						
PLCA	**Paso Flores**	**30.37**	**112**	P	**P**	**19 56 25.7**	**+1.3**
	3.9nm,0.9s,mb4.2,baz=270,slow=8.7,SNR=8.5						
PLCA				LR	LR	20 04 55.9	
	comp=Z,144nm,20.1s,MS3.6,baz=227,slow=29						
PLCA	**Paso Flores**	**30.37**	**112**	*e*P	**P**	**19 56 25.1**	**+0.7**
	6.8nm,1.0s,mb4.3						
PLCA				LR	LR	20 04 55.9	
USHA	**Ushuaia**	**33.94**	**138**	LR	LR	20 07 20.4	
	comp=Z,288nm,21.1s,MS4.0,baz=234,slow=30						
TBI	**Tubuai**	**37.28**	**277**	*e*LQ		20 06 07.6	
	357nm,30.8s						
TBI				*e*LR	LR	20 07 31.4	
	195nm,27.2s						
TAOE	**Nuku Hiva Isla**	**38.92**	**305**	*e*LR	LR	20 08 02.2	
	103nm,28.4s						
ATAH	**Atahualpa**	**39.34**	**52**	P	**P**	**19 57 41.6**	**-0.4**
	5.2nm,0.9s,mb4.3,baz=116,slow=5.6,SNR=2.8						
ATAH				LR	LR	20 07 48.0	
	comp=Z,50nm,21.5s,MS3.3,baz=56,slow=27						
PPT	**Papeete**	**40.33**	**285**	*e*LQ		20 07 08.8	
	462nm,30.0s						
PPT				*e*LR	LR	20 08 48.4	
	106nm,23.8s						
LPAZ	**La Paz**	**40.69**	**73**	P	**P**	**19 57 53.3**	**+0.1**
	3.0nm,0.8s,mb4.0,baz=242,slow=4.5,SNR=20						
LPAZ				LR	LR	20 09 07.5	
	comp=Z,59nm,21.7s,MS3.4,baz=49,slow=28						
LPAZ	**La Paz**	**40.69**	**73**	*e*P	**P**	**19 57 53.5**	**+0.3**
	13nm,1.4s,mb4.4						
LPAZ				LR	LR	20 09 07.5	
ROSC	**El Rosal**	**51.21**	**46**	LR	LR	20 17 12.0	
	comp=Z,42nm,18.7s,MS3.5,baz=219,slow=32						
QSPA	**South Pole Qui**	**55.06**	**180**	P	**P**	**19 59 49.5**	**+5.7**
	2.8nm,1.0s,mb4.2,baz=144,slow=4.8,SNR=5.7						
QSPA	**South Pole Qui**	**55.06**	**180**	*e*P	**P**	**19 59 43.1**	**-0.7**
BDFB	**Brasilia**	**57.25**	**86**	P	**P**	**19 59 59.3**	**-1.0**
	1.3nm,0.5s,mb4.2,baz=204,slow=8.7,SNR=3.2						
BDFB				LR	LR	20 21 39.5	
	comp=Z,115nm,18.3s,MS4.0,baz=185,slow=33						
NVAR	**Mina Array Bea**	**73.75**	**352**	P	**P**	**20 01 47.4**	**+0.9**
	0.8nm,0.8s,mb3.7,baz=181,slow=7.0,SNR=7.7						
BW06	**Boulder Array**	**77.54**	**359**	P	**P**	**20 02 08.4**	**+0.4**
	2.5nm,1.1s,mb4.1						
PDAR	**Pinedale Array**	**77.54**	**359**	P	**P**	**20 02 07.1**	**-0.9**
	0.5nm,0.8s,mb3.5,baz=180,slow=2.8,SNR=3.7						
HLID	**Hailey**	**78.51**	**356**	*e*P	**P**	**20 02 13.4**	**+0.1**
	4.2nm,1.0s,mb4.3						
CTA	**Charters Tower**	**90.30**	**245**	LR	LR	20 41 53.2	
	comp=Z,309nm,18.1s,MS4.8,baz=128,slow=34						
CMAR	**Chiang Mai Arr**	**150.45**	**243**	PKPbc	PKPbc	20 10 09.3	+4.7
	0.6nm,0.8s,baz=192,slow=1.9,SNR=3.3						
SONM	**Songino Array**	**151.12**	**307**	PKPbc	PKPbc	20 10 08.4	+3.1
	1.2nm,0.8s,baz=40,slow=0.8,SNR=7.6						

IDC 14 19:58:18.4±2.1, 5°.99S×130°.21E, h0km, mb3.9/2, mb1 4.0/5, mb1mx3.6/16, mbtmp3.9/5, ML4.0/3, Error ellipse: s-maj=78.4km s-min=24.9km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.84**	**200**	Pn	Pn	20 01 21.9	-0.4
	0.6nm,0.3s,baz=35,slow=8.6,SNR=30						
FITZ				Sn	Sn	20 03 30.4	-16
	2.1nm,0.3s,baz=270,slow=17,SNR=7.4						
WRA	**Warramunga Arr**	**14.44**	**164**	Pn	Pn	20 01 44.7	+0.5
	1.0nm,0.3s,baz=347,slow=14,SNR=40						
WRA				Sn	Sn	20 04 13.9	-11
	1.6nm,0.3s,baz=338,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.94**	**169**	P	Pn	20 02 29.5	+0.1
	0.2nm,0.3s,baz=346,slow=9.9,SNR=25						
ASAR				S	Sn	20 05 40.1	-10
	0.4nm,0.3s,baz=357,slow=28,SNR=6.5						
CMAR	**Chiang Mai Arr**	**39.25**	**309**	P	P	20 05 49.3	+0.3
	0.5nm,0.6s,baz=138,slow=7.3,SNR=5.5						
MKAR	**Makanchi Array**	**67.50**	**326**	P	P	20 09 16.2	-0.1
	2.1nm,0.5s,baz=118,slow=8.3,SNR=25						

ATH ***14*** *20:03:24.3, 36°.27N×21°.58E, h34km±4km, MD3.5/5*
ISCJB ***14*** *20:03:26.0±0.9, 36°.36N±0°.04×21°.97E±0°.07, h10km, Error ellipse: s-maj=7.9km s-min=5.5km az=157.9*
CSEM ***14*** *20:03:26.3±0.6, 36°.38N×21°.87E, h10km, ML2.4/6, Error ellipse: s-maj=14.4km s-min=9.3km az=64.0*
THE ***14*** *20:03:28.6, 36°.38N×22°.01E, h24km±3km, ML2.4/6, Error ellipse: s-maj=4.8km s-min=1.9km az=245.0*
NEIC ***14*** *20:03:36.4, 36°.86N×22°.32E, h13km, ML2.7(ATH), After ATH.*

ISC 14 20:03:26.7±0.9, 36°.36N±0°.04×22°.01E±0°.07, h10km, n44, σ1°11/73, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.82**	**355**	*e*PN	**Pg**	**20 03 42.5**	**-0.1**
ITM				*e*SN	**Sn**	20 03 55.7	-0.9
ITM	**Ithomi**	**0.82**	**355**	P	**Pg**	20 03 42.3	-0.3
ITM				S	**Sg**	20 03 55.3	+2.0
ITM	**Ithomi**	**0.82**	**355**	*e*Pn	**Pg**	20 03 42.5	-0.1
ITM				S	**Sg**	20 03 55.3	+2.0
ITM				*e*Sn	**Sn**	20 03 55.7	-0.9
VLI	**Veliai**	**0.83**	**64**	P	**Pg**	**20 03 46.9**	**+4.3**
VLI	**Veliai**	**0.83**	**64**	*e*PN	**Pg**	**20 03 46.7**	**+4.1**
VLI				*e*SN	**Sg**	20 04 02.5	+9.1
VLI	**Veliai**	**0.83**	**64**	*e*Pn	**Pg**	20 03 46.7	+4.1
VLI				*e*Sn	**Sg**	20 04 02.5	+9.1
VLX	**Vlachokerasia**	**1.05**	**16**	*e*PN	**Pg**	20 03 47.5	+0.6
VLX				*e*SN	**Sn**	20 04 04.5	+2.3
VLX	**Vlachokerasia**	**1.05**	**16**	P	**Pg**	20 03 47.4	+0.5
VLX				S	**Sg**	20 04 00.6	0.0
VLX	**Vlachokerasia**	**1.05**	**16**	*e*Pn	**Pg**	20 03 47.5	+0.6
VLX				S	**Sg**	20 04 00.6	0.0
VLX				*e*Sn	**Sn**	20 04 04.5	+2.3
DID	**Didima**	**1.51**	**40**	*e*PN	**Pn**	20 03 54.5	+0.8
DID	**Didima**	**1.51**	**40**	P	**Pn**	20 03 54.5	+0.8
DID				S	**Sn**	20 04 13.9	+0.5
DID	**Didima**	**1.51**	**40**	*e*Pn	**Pn**	20 03 54.5	+0.8
DID				S	**Sn**	20 04 13.9	+0.5
GUR	**Goura**	**1.60**	**9**	*e*PB	**Pn**	20 03 55.4	+0.4
GUR				*e*SN	**Sn**	20 04 16.7	+1.1
GUR	**Goura**	**1.60**	**9**	P	**Pn**	20 03 55.5	+0.5
GUR				S	**Sn**	20 04 15.6	0.0
GUR	**Goura**	**1.60**	**9**	*e*Pb	**Pn**	20 03 55.4	+0.4
GUR				S	**Sn**	20 04 15.6	0.0
GUR				*e*Sn	**Sn**	20 04 16.7	+1.1
RLS	**Riolos of Patr**	**1.75**	**346**	P	**Pg**	20 04 01.3	+1.0
RLS	**Riolos of Patr**	**1.75**	**346**	*e*PB	**Pn**	20 03 55.0	-2.1
RLS	**Riolos of Patr**	**1.75**	**346**	*e*Pb	**Pn**	20 03 55.0	-2.1
RLS	**Riolos of Patr**	**1.75**	**346**	P	**Pg**	20 04 01.3	+1.0
KARN	**Karanos**	**1.82**	**121**	P	**Pn**	20 03 58.6	+0.6
KARN				S	**Sn**	20 04 20.1	-0.9
KARN	**Karanos**	**1.82**	**121**	P	**Pn**	20 03 58.6	+0.6
KARN				S	**Sn**	20 04 20.1	-0.9
LTK	**Loutraki**	**1.83**	**24**	*e*PN	**Pn**	20 03 58.3	+0.2
LTK	**Loutraki**	**1.83**	**24**	P	**Pn**	20 03 58.4	+0.3
LTK				S	**Sn**	20 04 20.2	-1.1
LTK	**Loutraki**	**1.83**	**24**	*e*Pn	**Pn**	20 03 58.3	+0.2
LTK				S	**Sn**	20 04 20.2	-1.1
VAM	**Vamos**	**2.01**	**117**	P	**Pg**	20 04 12.8	+7.6
DSF	**Desfina**	**2.09**	**11**	P	**Pg**	20 04 00.6	-1.1
DSF				S	**Sn**	20 04 26.1	-1.7
DSF	**Desfina**	**2.09**	**11**	P	**Pn**	20 04 00.6	-1.1
DSF				S	**Sn**	20 04 26.1	-1.7
VLS	**Valsamata**	**2.14**	**328**	P	**Pn**	20 04 02.0	-0.5
VLS				S	**Sn**	20 04 29.0	-0.1
VLS	**Valsamata**	**2.14**	**328**	P	**Pn**	20 04 02.0	-0.5
VLS				S	**Sn**	20 04 29.0	-0.1
LKR	**Lokris**	**2.42**	**19**	P	**Pn**	20 04 06.9	+0.6
LKR	**Lokris**	**2.42**	**19**	*e*PN	**Pn**	20 04 05.6	-0.7
LKR	**Lokris**	**2.42**	**19**	P	**Pn**	20 04 05.2	-1.1
LKR				S	**Sn**	20 04 34.0	-1.9
LKR	**Lokris**	**2.42**	**19**	*e*Pn	**Pn**	20 04 05.6	-0.7
LKR	**Lokris**	**2.42**	**19**	P	**Pn**	20 04 06.9	+0.6
LKR				S	**Sn**	20 04 34.0	-1.9
AGG	**Agios Georgios**	**2.67**	**5**	P	**Pn**	20 04 12.0	+2.3
AGG	**Agios Georgios**	**2.67**	**5**	P	**Pn**	20 04 09.3	-0.4
AGG				S	**Sn**	20 04 40.5	-1.6
AGG	**Agios Georgios**	**2.67**	**5**	P	**Pn**	20 04 09.3	-0.4
AGG				S	**Sn**	20 04 40.5	-1.6
HORT	**Hortiatis**	**4.32**	**11**	P	**Pn**	20 04 32.9	+0.5
HORT	**Hortiatis**	**4.32**	**11**	P	**Pn**	20 04 32.9	+0.5
SOH	**Sokhos**	**4.58**	**13**	P	**Pn**	20 04 37.0	+1.1
SOH	**Sokhos**	**4.58**	**13**	P	**Pn**	20 04 37.0	+1.1
GRG	**Griva**	**4.60**	**4**	P	**Pn**	20 04 37.3	+1.0
GRG	**Griva**	**4.60**	**4**	P	**Pn**	20 04 37.3	+1.0
STON	**Ston**	**7.31**	**334**	*e*Pn	**Pn**	20 05 05.8	-7.6
STON				Sn	**Sn**	20 06 22.9	-13

DDA ***14*** *20:04:41.8, 34°.83N×26°.79E, h26km, Md4.0*
IDC ***14*** *20:04:45.3±0.7, 35°.40N×26°.99E, h0km, mb3.9/14, mb1 3.9/18, mb1mx3.9/28, mbtmp3.9/18, ML3.8/4, MS3.2/3, Ms1 3.3/3, ms1mx2.6/34, Error ellipse: s-maj=18.4km s-min=14.3km az=176.0*
ISCJB ***14*** *20:04:46.9±0.2, 35°.14N±0°.02×27°.25E±0°.02, h10km, mb3.8/16, MS3.4/2, Error ellipse: s-maj=2.9km s-min=2.3km az=9.2*
ISK ***14*** *20:04:48.0, 35°.18N×27°.11E, h19km, ML3.9*
NEIC ***14*** *20:04:51.7±0.5, 35°.30N×27°.12E, h49km±5km, mb3.7/1, Error ellipse: s-maj=8.1km s-min=5.4km az=175.0*
CSEM ***14*** *20:04:51.6±0.1, 35°.20N×27°.18E, h40km, ML3.4, Error ellipse: s-maj=3.2km s-min=2.3km az=26.0*
THE ***14*** *20:04:52.2, 35°.42N×27°.02E, h2km±1km, ML3.6/10, Error ellipse: s-maj=2.0km s-min=0.6km az=139.0*
ATH ***14*** *20:04:52.8, 35°.57N×26°.95E, h26km±2km, ML3.7*
SGS ***14*** *20:04:53.7, 34°.92N×27°.35E, h19km*
HLW ***14*** *20:04:57.0, 34°.65N×27°.53E, h32km±35km, Md3.5, Ml2.9*

ISC 14 20:04:48.6±0.2, 35°.19N±0°.02×27°.18E±0°.02, h10km, n275, σ1°39/350, mb3.8/16, MS3.4/2, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.36**	**358**	P	**Pg**	**20 04 57.7**	**+2.0**
KARP	**Karpathos**	**0.36**	**358**	*e*PB	**Pg**	20 04 58.3	+2.6
KARP	**Karpathos**	**0.36**	**358**	P	**Pg**	20 04 57.7	+2.0
KARP	**Karpathos**	**0.36**	**358**	*e*Pb	**Pg**	20 04 58.3	+2.6
KARP				*e*Sb	**Sg**	20 05 05.3	+4.8
ZKR	**Zakros**	**0.79**	**265**	P	**Pg**	20 05 05.5	+1.7
ZKR				S	**Sg**	20 05 16.9	+2.8
ZKR	**Zakros**	**0.79**	**265**	P	**Pg**	20 05 05.5	+1.7
ZKR				S	**Sg**	20 05 16.9	+2.8
ZKR	**Zakros**	**0.79**	**265**	P	**Pg**	20 05 05.5	+1.7
ZKR				S	**Sg**	20 05 16.9	+2.8
NPS	**Neapolis**	**1.28**	**274**	P	**Pn**	20 05 13.7	+1.1
NPS	**Neapolis**	**1.28**	**274**	*e*PN	**Pn**	20 05 14.2	+1.6
NPS				*e*SN	**Sn**	20 05 29.9	+0.1
NPS	**Neapolis**	**1.28**	**274**	P	**Pn**	20 05 13.7	+1.1
NPS	**Neapolis**	**1.28**	**274**	*e*Pn	**Pn**	20 05 14.2	+1.6
NPS				*e*Sn	**Sn**	20 05 29.9	+0.1
ARG	**Arkhangelos**	**1.28**	**37**	P	**Pn**	20 05 14.0	+1.4
ARG	**Arkhangelos**	**1.28**	**37**	*e*PN	**Pb**	20 05 14.3	+1.4
ARG				*e*SN	**Sn**	20 05 31.8	+1.9
ARG	**Arkhangelos**	**1.28**	**37**	P	**Pn**	20 05 14.1	+1.5
ARG				S	**Sb**	20 05 31.3	+1.9
ARG	**Arkhangelos**	**1.28**	**37**	P	**Pn**	20 05 14.0	+1.4
ARG	**Arkhangelos**	**1.28**	**37**	*e*Pb	**Pb**	20 05 14.3	+1.4
ARG				S	**Sb**	20 05 31.3	+1.9
ARG				*e*Sn	**Sn**	20 05 31.8	+1.9
LAST	**Lasithi**	**1.39**	**269**	P	**Pn**	20 05 15.9	+1.8
LAST				S	**Sb**	20 05 33.8	+1.3
LAST	**Lasithi**	**1.39**	**269**	P	**Pn**	20 05 15.9	+1.8
LAST				S	**Sb**	20 05 33.8	+1.3
LAST	**Lasithi**	**1.39**	**269**	P	**Pn**	20 05 15.9	+1.8
LAST				S	**Sb**	20 05 33.8	+1.3
NIS1	**Nisyros Isl.**	**1.41**	**0**	P	**Pn**	20 05 16.9	+2.5
NIS1				S	**Sn**	20 05 30.8	-2.2
NIS1	**Nisyros Isl.**	**1.41**	**0**	P	**Pn**	20 05 13.7	-0.7
NIS1				S	**Sn**	20 05 30.8	-2.2
NIS1	**Nisyros Isl.**	**1.41**	**0**	P	**Pn**	20 05 13.7	-0.7
NIS1				S	**Sn**	20 05 30.8	-2.2
DAT	**Datca**	**1.57**	**12**	PN	**Pn**	20 05 16.1	-0.4
DAT				PN	**Pn**	20 05 16.3	-0.3
DAT				*e*SN	**Sn**	20 05 33.8	-3.2
DAT				*e*SN	**Sn**	20 05 36.3	-0.6
DAT	**Datca**	**1.57**	**12**	*i* Pn	**Pn**	20 05 16.3	-0.3
DAT				*e*Sn	**Sn**	20 05 36.3	-0.7
THR1	**Thera Island**	**1.83**	**311**	P	**Pn**	20 05 19.5	-0.6
THR1	**Thera Island**	**1.83**	**311**	P	**Pn**	20 05 19.5	-0.6
BODT	**Bodrum**	**1.87**	**3**	*e*PN	**Pn**	20 05 19.2	-1.5
BODT	**Bodrum**	**1.87**	**3**	*e*PN	**Pn**	20 05 19.6	-1.1
BODT	**Bodrum**	**1.87**	**3**	Pn	**Pn**	20 05 19.6	-1.1
BODT	**Bodrum**	**1.87**	**3**	*e*Pn	**Pn**	20 05 19.6	-1.1
BDRM	**Kayabasi**	**1.89**	**7**	P	**Pn**	20 05 20.0	-0.9
BDRM				S	**Sn**	20 05 44.8	+0.1
BDRM	**Kayabasi**	**1.89**	**7**	*i* P	**Pn**	20 05 20.1	-0.8
BDRM				*i* S	**Sn**	20 05 44.8	+0.1
BDRM	**Kayabasi**	**1.89**	**7**	*i* P	**Pn**	20 05 20.0	-0.9
BDRM				*i* S	**Sn**	20 05 44.8	+0.1
THR3	**Thira Island,**	**1.89**	**311**	P	**Pn**	20 05 20.5	-0.4
THR3	**Thira Island,**	**1.89**	**311**	P	**Pn**	20 05 20.5	-0.4
THR2	**Thira Island,**	**1.89**	**312**	P	**Pn**	20 05 20.6	-0.4
THR2	**Thira Island,**	**1.89**	**312**	P	**Pn**	20 05 20.6	-0.4
THR5	**Thira Island,**	**1.93**	**310**	P	**Pn**	20 05 21.0	-0.4
THR5	**Thira Island,**	**1.93**	**310**	P	**Pn**	20 05 21.0	-0.4
SIVA	**Sivas**	**1.95**	**266**	P	**Pn**	20 05 23.6	+1.9
SIVA				S	**Sn**	20 05 47.8	+1.6
SIVA	**Sivas**	**1.95**	**266**	P	**Pn**	20 05 23.6	+1.9
SIVA				S	**Sn**	20 05 47.8	+1.6
YER	**Yerkesik**	**2.14**	**24**	*e*PN	**Pn**	20 05 24.4	+0.1
YER	**Yerkesik**	**2.14**	**24**	*e*PN	**Pn**	20 05 24.8	+0.4
YER	**Yerkesik**	**2.14**	**24**	*e*Pn	**Pn**	20 05 24.4	0.0
MLSB	**Milas**	**2.16**	**13**	*e*PN	**Pn**	20 05 24.2	-0.4
MLSB	**Milas**	**2.16**	**13**	*e*PN	**Pn**	20 05 24.6	-0.1
MLSB	**Milas**	**2.16**	**13**	*e*Pn	**Pn**	20 05 24.2	-0.4
AKAS	**Kas**	**2.23**	**61**	*i* P	**Pn**	20 05 25.9	+0.2
AKAS				*i* S	**Sg**	20 06 08.2	+7.7
AKAS	**Kas**	**2.23**	**61**	*i* P	**Pn**	20 05 25.9	+0.2
APE	**Apeiranthos**	**2.30**	**325**	*e*PN	**Pn**	20 05 25.8	-0.8
APE	**Apeiranthos**	**2.30**	**325**	*e*PN	**Pn**	20 05 25.9	-0.7
APE	**Apeiranthos**	**2.30**	**325**	P	**Pn**	20 05 25.6	-1.0
APE				S	**Sn**	20 05 51.8	-3.2
APE	**Apeiranthos**	**2.30**	**325**	*e*PN	**Pn**	20 05 25.7	-0.9
APE				*e*SN	**Sn**	20 05 49.8	-5.2
APE	**Apeiranthos**	**2.30**	**325**	P	**Pn**	20 05 25.6	-1.0
APE				S	**Sn**	20 05 51.8	-3.2
APE	**Apeiranthos**	**2.30**	**325**	*e*Pn	**Pn**	20 05 25.7	-0.9
APE				*e*Sn	**Sn**	20 05 49.8	-5.2
APE				S	**Sn**	20 05 51.8	-3.2
VAM	**Vamos**	**2.44**	**276**	P	**Pn**	20 05 31.0	+2.5
VAM	**Vamos**	**2.44**	**276**	*e*PN	**Pn**	20 05 29.8	+1.2
VAM	**Vamos**	**2.44**	**276**	*e*Pn	**Pn**	20 05 29.8	+1.2
VAM	**Vamos**	**2.44**	**276**	P	**Pn**	20 05 31.0	+2.5
SMG	**Samos**	**2.53**	**354**	*e*PN	**Pn**	20 05 28.7	-1.0
SMG	**Samos**	**2.53**	**354**	*e*Pn	**Pn**	20 05 28.7	-1.0
KARN	**Karanos**	**2.67**	**276**	*e*PN	**Pn**	20 05 34.0	+2.3
KARN	**Karanos**	**2.67**	**276**	P	**Pn**	20 05 33.6	+1.9
KARN				S	**Sn**	20 06 04.7	+0.6
KARN	**Karanos**	**2.67**	**276**	P	**Pn**	20 05 33.6	+1.9
KARN	**Karanos**	**2.67**	**276**	*e*Pn	**Pn**	20 05 34.0	+2.3
KARN				S	**Sn**	20 06 04.7	+0.6
ELL	**Elmali**	**2.71**	**54**	*e*PN	**Pn**	20 05 32.6	+0.4
ELL	**Elmali**	**2.71**	**54**	*e*PN	**Pn**	20 05 34.5	+2.3
ELL	**Elmali**	**2.71**	**54**	*e*Pn	**Pn**	20 05 32.6	+0.4
GLHS	**Glhisar (BURDU**	**2.72**	**43**	*e*PN	**Pn**	20 05 32.6	+0.3
GLHS	**Glhisar (BURDU**	**2.72**	**43**	*e*PN	**Pn**	20 05 33.7	+1.4
GLHS	**Glhisar (BURDU**	**2.72**	**43**	*e*Pn	**Pn**	20 05 32.6	+0.3
GOLH	**Golhisar**	**2.81**	**43**	*i* P	**Pn**	20 05 34.3	+0.7
GOLH				*i* S	**Sg**	20 06 18.8	-0.1
GOLH	**Golhisar**	**2.81**	**43**	*i* S	**Sg**	20 06 18.8	-0.1
GOLH	**Golhisar**	**2.81**	**43**	*i* Pn	**Pn**	20 05 34.3	+0.7
DNZL	**Cakiroluk**	**2.92**	**31**	*i* P	**Pn**	20 05 35.4	+0.3
DNZL				*i* S	**Sg**	20 06 21.4	-0.9
DNZL	**Cakiroluk**	**2.92**	**31**	*i* P	**Pn**	20 05 35.4	+0.4
DENT	**Denizli**	**2.97**	**30**	*e*PN	**Pn**	20 05 36.4	+0.7
DENT	**Denizli**	**2.97**	**30**	*e*PN	**Pn**	20 05 36.5	+0.8
DENT	**Denizli**	**2.97**	**30**	*e*Pn	**Pn**	20 05 36.5	+0.8
BLCB	**Balcova**	**3.19**	**358**	*e*PN	**Pn**	20 05 38.0	-0.9
BLCB	**Balcova**	**3.19**	**358**	*e*PN	**Pn**	20 05 39.0	+0.1
BLCB	**Balcova**	**3.19**	**358**	P	**Pn**	20 05 39.2	+0.4
BLCB	**Balcova**	**3.19**	**358**	*e*Pn	**Pn**	20 05 39.0	+0.2
IZM	**Izmir**	**3.20**	**1**	*e*PN	**Pn**	20 05 38.7	-0.3
IZM	**Izmir**	**3.20**	**1**	*e*PN	**Pn**	20 05 39.0	0.0
IZM	**Izmir**	**3.20**	**1**	*e*Pn	**Pn**	20 05 39.0	0.0
ANTB	**Antalya**	**3.29**	**58**	*e*PN	**Pn**	20 05 41.1	+0.9
ANTB	**Antalya**	**3.29**	**58**	*e*PN	**Pn**	20 05 43.1	+2.8
ANTB	**Antalya**	**3.29**	**58**	*e*Pn	**Pn**	20 05 41.1	+0.8
CHOS	**Chios island**	**3.32**	**345**	P	**Pn**	20 05 40.0	-0.5
CHOS				S	**Sn**	20 06 17.2	-2.8
CHOS	**Chios island**	**3.32**	**345**	P	**Pn**	20 05 40.0	-0.5
CHOS				S	**Sn**	20 06 17.2	-2.8
KULA	**Kula-Manisa**	**3.53**	**19**	*e*PN	**Pn**	20 05 43.7	+0.3
KULA	**Kula-Manisa**	**3.53**	**19**	*e*PN	**Pn**	20 05 44.0	+0.5
KULA	**Kula-Manisa**	**3.53**	**19**	*e*Pn	**Pn**	20 05 44.0	+0.6
BCK	**Bucak**	**3.57**	**50**	*e*PN	**Pn**	20 05 45.0	+1.0
BCK	**Bucak**	**3.57**	**50**	*e*PN	**Pn**	20 05 46.4	+2.4
BCK	**Bucak**	**3.57**	**50**	*e*Pn	**Pn**	20 05 45.0	+1.0
KHL	**Karahalli**	**3.65**	**30**	*e*PN	**Pn**	20 05 45.8	+0.6
KHL	**Karahalli**	**3.65**	**30**	*e*PN	**Pn**	20 05 46.3	+1.2
KHL	**Karahalli**	**3.65**	**30**	*e*Pn	**Pn**	20 05 45.8	+0.6
AKHS	**Akhisar**	**3.72**	**8**	*i* P	**Pn**	20 05 46.2	+0.1
AKHS				*i* S	**Sg**	20 06 50.1	+2.1
AKHS	**Akhisar**	**3.72**	**8**	*i* P	**Pn**	20 05 46.2	+0.1
AKS	**Akhisar**	**3.72**	**8**	*e*PN	**Pn**	20 05 46.0	-0.1
VLI	**Veliai**	**3.76**	**295**	P	**Pn**	20 05 48.1	+1.4
VLI	**Veliai**	**3.76**	**295**	*e*PN	**Pn**	20 05 46.8	+0.1
VLI				*e*SN	**Sn**	20 06 26.4	-4.6
VLI	**Veliai**	**3.76**	**295**	*e*Pn	**Pn**	20 05 46.8	+0.1
VLI	**Veliai**

AGG Agios Georgios 5.44 316 *e*PN **Pn 20 06 10.9 +1.1**
AGG Agios Georgios 5.44 316 P **Pn 20 06 11.4 +1.6**
AGG S **Sn 20 07 10.8 -1.6**
AGG Agios Georgios 5.44 316 *e*Pn **Pn 20 06 10.9 +1.1**
AGG Agios Georgios 5.44 316 P **Pn 20 06 11.4 +1.6**
AGG S **Sn 20 07 10.8 -1.6**
ALN Alexandroupoli 5.77 351 P **Pn 20 06 19.5 +5.3**
SULT Sultanhani-AKS 5.91 58 *e*PN **Pn 20 06 18.2 +2.0**
SULT Sultanhani-AKS 5.91 58 *e*Pn **Pn 20 06 18.2 +2.0**
THL Klokotos Trika 6.00 318 P **Pn 20 06 18.6 +1.2**
THL S **Sn 20 07 24.4 -1.7**
THL Klokotos Trika 6.00 318 P **Pn 20 06 18.6 +1.2**
THL S **Sn 20 07 24.4 -1.7**
VLS Valsamata 6.08 301 P **Pn 20 06 18.3 -0.1**
VLS S **Sn 20 07 23.8 -4.2**
VLS Valsamata 6.08 301 P **Pn 20 06 18.3 -0.1**
VLS S **Sn 20 07 23.8 -4.2**
VLS Valsamata 6.08 301 P **Pn 20 06 18.3 -0.1**
VLS S **Sn 20 07 23.8 -4.2**
SWA2 6.10 194 P **Pn 20 06 20.0 +1.2**
baz=199
SWA2 AMP 20 07 00.0
comp=N,10μm,0.9s,logA/T=4.1,baz=199
SWA2 S **Sn 20 07 17.8 -11**
baz=199
SWA2 6.10 194 P **Pn 20 06 20.0 +1.1**
SWA2 S **Sn 20 07 17.8 -11**
AFSR Af̄ar-Bala (A 6.33 46 *e*PN **Pn 20 06 23.3 +1.3**
AFSR Af̄ar-Bala (A 6.33 46 *e*Pn **Pn 20 06 23.3 +1.3**
GULE Gulek 6.49 69 *i* P **Pn 20 06 27.5 +3.4**
GULE *i* S **Sn 20 07 34.9 -3.3**
GULE Gulek 6.49 69 *i* P **Pn 20 06 27.5 +3.4**
AMAG Maghara 6.80 130 P **Pn 20 06 27.5 -0.9**
baz=128
AMAG S **Sn 20 07 31.5 -14**
baz=128
AMAG Maghara 6.80 130 P **Pn 20 06 27.5 -0.9**
AMAG S **Sn 20 07 31.5 -14**
BR131 Keskin Array S 6.85 47 *e*P **Pn 20 06 28.4 -0.7**
comp=N,3.7nm,0.7s
BR131 Keskin Array S 6.85 47 *e*P **Pn 20 06 28.4 -0.7**
comp=N,3.7nm,0.7s
BRTR Keskin Array B 6.85 47 Pn **Pn 20 06 29.9 +0.9**
comp=N,0.2nm,0.3s,baz=220,slow=14,SNR=7.4
BRTR Sn **Sn 20 07 43.7 -3.3**
comp=N,0.2nm,0.3s,baz=210,slow=20,SNR=4.4
BRTR Keskin Array B 6.85 47 Pn **Pn 20 06 30.0 +0.9**
BRTR Sn **Sn 20 07 43.8 -3.3**
GRG Griva 6.88 328 P **Pn 20 06 31.2 +1.7**
GRG Griva 6.88 328 P **Pn 20 06 31.2 +1.7**
VAY Valandovo 7.11 331 *e*Pn **Pn 20 06 33.9 +1.2**
SUZ 7.16 137 P **Pn 20 06 32.3 -1.0**
baz=135
SUZ 7.16 137 P **Pn 20 06 32.3 -1.0**
MMAI Mount Meron Ar 7.16 105 Pn **Pn 20 06 32.7 -0.6**
comp=N,2.7nm,0.3s,baz=305,slow=12,SNR=14
MMAI Sn **Sn 20 07 51.0 -3.8**
comp=N,3.2nm,0.3s,baz=297,slow=26,SNR=3.8
ZAF 7.44 141 P **Pn 20 06 35.6 -1.6**
baz=140
ZAF 7.44 141 P **Pn 20 06 35.6 -1.6**
ZNM 7.54 139 P **Pn 20 06 36.5 -2.1**
baz=137
ZNM 7.54 139 P **Pn 20 06 36.5 -2.1**
KRUS Krusevo 7.73 325 *e*Pn **Pn 20 06 44.2 +3.1**
HNKL Nakhl 7.78 131 P **Pn 20 06 41.3 -0.5**
baz=129
HNKL Nakhl 7.78 131 P **Pn 20 06 41.3 -0.5**
EIL Elat 8.57 128 Pn **Pn 20 06 53.4 +0.7**
comp=N,1.4nm,0.3s,baz=340,slow=14,SNR=23
EIL Sn **Sn 20 08 22.8 -6.6**
comp=N,2.8nm,0.3s,baz=318,slow=12,SNR=9.1
EIL Elat 8.57 128 Pn **Pn 20 06 53.4 +0.7**
EIL Sn **Sn 20 08 22.8 -6.6**
EIL Elat 8.57 128 Pn **Pn 20 06 53.4 +0.7**
ASF Jabal al Asfar 8.64 108 Pn **Pn 20 06 55.1 +1.4**
comp=N,0.4nm,0.3s,baz=225,slow=1.4,SNR=3.5
ASF Sn **Sn 20 08 29.1 -2.1**
comp=N,0.4nm,0.3s,baz=186,slow=18,SNR=2.6
TR2 8.78 139 P **Pn 20 06 54.0 -1.6**
baz=138
TR2 8.78 139 P **Pn 20 06 53.9 -1.6**
HQLS 8.89 129 P **Pn 20 06 56.3 -0.8**
HQLS S **Sn 20 08 28.0 -9.3**
HAQS Haql 8.97 131 P **Pn 20 06 57.8 -0.5**
TR1 9.20 139 P **Pn 20 07 00.2 -1.2**
baz=138
TR1 9.20 139 P **Pn 20 07 00.2 -1.1**
JLOS 9.55 130 P **Pn 20 07 05.3 -0.8**
JLOS 9.55 130 P **Pn 20 07 05.3 -0.9**
JLOS S **Sn 20 08 44.3 -9.3**
STON Ston 10.63 319 *e*Pn **Pn 20 07 15.1 -5.8**
STON Sn **Sn 20 09 06.8 -13**
KEST Kesra 14.55 277 Pn **Pn 20 08 19.1 +4.7**
comp=N,0.2nm,0.3s,baz=295,slow=16,SNR=8.4
GNI Garni 14.76 65 LR LR 20 15 20.4
comp=N,51nm,21.3s,baz=84,slow=43
GERES GERESS Array B 16.89 328 Pn **Pn 20 08 41.8 -3.1**
comp=N,0.1nm,0.3s,baz=134,slow=11,SNR=6.8
GERES GERESS Array B 16.89 328 Pn **Pn 20 08 41.8 -3.1**
CLL Collm 19.08 332 *i* P **Pn 20 09 09.7 -2.2**
CLL Collm 19.08 332 *i* P **Pn 20 09 09.7 -2.2**
CLL *ep*P pP 20 09 19.0 +5.1
CLL *e*(PPP) 20 09 36.0
CLL Collm 19.08 332 *i* P **Pn 20 09 09.7 -2.2**
ESDC Sonseca Array 25.06 290 P **P 20 10 10.3 -2.8**
comp=N,0.6nm,0.4s,mb3.5,baz=83,slow=9.7,SNR=12
ESDC Sonseca Array 25.06 290 P **P 20 10 10.3 -2.8**
ESDC Sonseca Array 25.06 290 P **P 20 10 10.3 -2.8**
FINES FINESS Array B 26.28 359 P **P 20 10 20.2 -3.6**
comp=N,1.7nm,0.8s,mb3.6,baz=171,slow=10,SNR=6.0
HFS Hagfors 26.45 345 P **P 20 10 20.8 -4.6**
comp=N,1.9nm,0.9s,mb3.6,baz=162,slow=12,SNR=8.4
AKTK Aktyubinsk 27.03 46 P **P 20 10 28.9 -1.8**
AKTK Aktyubinsk 27.03 46 P **P 20 10 29.0 -1.8**
AKTO Aktyubinsk 27.03 46 P **P 20 10 28.9 -1.8**
comp=N,0.6nm,0.5s,mb3.4,baz=264,slow=9.2,SNR=2.8
ATD Arta Tunnel 27.52 145 LR LR 20 23 07.1
comp=N,22nm,18.3s,MS2.8,baz=358,slow=40
TORD Torodi Ar. Bea 31.80 233 P **P 20 11 12.2 -1.2**
comp=N,1.5nm,0.4s,mb4.1,baz=34,slow=8.7,SNR=65
ARCES ARCESS Array B 34.41 359 P **P 20 11 31.6 -4.1**
comp=N,0.7nm,0.8s,mb3.6,baz=170,slow=8.1,SNR=6.0
KURK Kurchatov 39.88 51 P **P 20 12 20.9 -1.4**
comp=N,0.8nm,0.6s,mb3.6
KURK Kurchatov 39.88 51 P **P 20 12 20.9 -1.4**
comp=N,0.8nm,0.6s,mb3.6
DBIC Dimbokro 40.89 234 P **P 20 12 29.1 -2.0**
comp=N,1.5nm,0.7s,mb3.7,baz=73,slow=11,SNR=4.4
DBIC Dimbokro 40.89 234 P **P 20 12 29.1 -2.0**
MK31 Makanchi Array 42.38 57 *e*P **P 20 12 41.9 -1.1**
MK31 Makanchi Array 42.38 57 *e*P **P 20 12 41.8 -1.2**
MKAR Makanchi Array 42.38 57 P **P 20 12 42.1 -0.8**
comp=N,2.3nm,0.5s,mb4.0,baz=279,slow=6.7,SNR=19
MKAR Makanchi Array 42.38 57 P **P 20 12 42.2 -0.8**
DDI Dehra Dun 42.69 82 *ex* x 20 12 18.0
ZALV Zalesovo Beam 43.79 46 P **P 20 12 52.4 -1.9**
comp=N,1.2nm,0.6s,mb3.8,baz=266,slow=9.0,SNR=5.9
SONM Songino Array 58.19 51 P **P 20 14 42.1 -0.6**
comp=N,1.0nm,0.6s,mb4.0,baz=286,slow=7.8,SNR=13
SONM Songino Array 58.19 51 P **P 20 14 42.1 -0.6**
BOSA Boshof 63.48 182 LR LR 20 42 44.9
comp=N,100nm,19.7s,MS4.0,baz=2.6,slow=36
SCHQ Schefferville 64.23 320 P **P 20 15 19.7 -3.8**
comp=N,3.6nm,0.8s,mb4.4,baz=65,slow=12,SNR=3.3
CMAR Chiang Mai Arr 64.93 84 P **P 20 15 26.9 -1.8**
comp=N,0.5nm,0.6s,mb3.7,baz=298,slow=9.2,SNR=4.2
CMAR Chiang Mai Arr 64.93 84 P **P 20 15 26.9 -1.7**
KSRS Korea Array 76.95 53 P **P 20 16 39.7 -1.7**
comp=N,0.9nm,0.6s,mb3.9,baz=317,slow=5.4,SNR=7.1
YKA Yellowknife Ar 77.92 343 P **P 20 16 42.1 -4.3**
comp=N,0.3nm,0.6s,mb3.4,baz=14,slow=5.3,SNR=4.1
MJAR Matsushiro Arr 84.07 49 P **P 20 17 18.1 -1.6**
comp=N,0.6nm,0.7s,mb3.9,baz=313,slow=4.5,SNR=3.9
MJAR Matsushiro Arr 84.07 49 P **P 20 17 18.1 -1.5**

IDC 14 20:11:49.1±3.6, 5°.14S×151°.87E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.5/3, Error ellipse: s-maj=122.1km s-min=49.9km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.53**	**228**	P	P	20 16 50.7	0.0
0.4nm,0.7s,baz=53,slow=10,SNR=3.7							
ASAR	**Alice Springs**	**25.28**	**221**	P	P	20 17 17.3	0.0
0.4nm,0.6s,baz=58,slow=8.9,SNR=10							
FITZ	**Fitzroy Crossi**	**28.68**	**241**	P	P	20 17 48.1	0.0
2.8nm,1.0s,baz=76,slow=12,SNR=3.9							
TORD	**Torodi Ar. Bea**	**149.52**	**287**	PKPbc	PKPbc	20 31 41.2	-0.4
0.2nm,0.4s,baz=55,slow=2.3,SNR=4.0							

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*NEIC **14** 20:15:21.5, 18°.34N×69°.16W, h97km, MD3.6(RSPR), After RSPR.*

RSPR 14 20:15:21.5, 18°.34N×69°.16W, h97km±6km, MD3.6/10, 8C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMN1	**Samana, DR**	**0.85**	**353**	*e*P	Pn	20 15 39.5	-0.7
CRPR	**Cabo Rojo, PR**	**1.97**	**99**	*e*P	Pn	20 15 53.5	-0.1
CRPR				*e*S	Sn	20 16 17.9	-0.2
LSP	**Las Mesas**	**1.97**	**94**	‖*i*P	Pn	20 15 53.6	0.0
GBPR	**Guanica, Bosqu**	**2.19**	**99**	‖*i*P	Pn	20 15 56.0	-0.5
GBPR				*e*S	Sn	20 16 22.8	-0.5
AOPR	**Arecibo Observ**	**2.28**	**89**	‖*e*P	Pn	20 15 57.8	+0.1
OBIP	**Obispado Ponce**	**2.44**	**96**	‖*e*P	Pn	20 15 59.3	-0.5
OBIP				*e*S	Sn	20 16 29.2	+0.1
CELP	**Cerrillos**	**2.46**	**96**	‖*e*P	Pn	20 15 59.6	-0.4
CELP				*e*S	Sn	20 16 30.1	+0.5
ICM	**Isla Caja Muer**	**2.54**	**100**	‖*e*P	Pn	20 16 00.3	-0.8
SJG	**San Juan**	**2.87**	**94**	‖*e*P	Pn	20 16 04.8	-0.6
SJG				*e*S	Sn	20 16 38.9	-0.4
HUMP	**Col San Antoni**	**3.15**	**93**	‖*e*P	Pn	20 16 09.6	+0.4
HUMP				*e*S	Sn	20 16 45.8	-0.2

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*ISCJB **14** 20:18:47.1±1.4, 23°.69S±0°.05×177°.38W±0°.04, h154km±13km, mb5.1/113, Error ellipse: s-maj=8.4km s-min=5.9km az=150.8*
*IDC **14** 20:18:48.7±1.4, 23°.55S×177°.30W, h154km±10km, mb4.6/19, mb1 4.7/21, mb1mx4.7/22, mbtmp4.6/21, MS4.2/12, Ms1 4.2/12, ms1mx3.9/25, Error ellipse: s-maj=13.2km s-min=11.7km az=150.0*
*MOS **14** 20:18:48.2±1.1, 23°.48S×177°.37W, h155km, mb5.1/10, Error ellipse: s-maj=11.1km s-min=10.2km az=25.3*
*BJI **14** 20:18:52.2, 23°.24S×176°.88W, h200km, mB5.2/25, mb5.0/37*
*SZGRF **14** 20:18:52.7, 23°.26S×173°.85W, h188km, Tonga Islands region*
*GCMT **14** 20:18:53.5±0.1, 23°.73S×176°.87W, h190km, MW5.5, Moment Tensor Solution. s89,c159; s99,c191; Moment tensor: Scale 10^{17}Nm; M_{rr}0.61±.02; $M_{\theta\theta}$-1.90±.03; $M_{\phi\phi}$1.28±.03; $M_{r\theta}$0.31±.02; $M_{r\phi}$0.40±.03; $M_{\theta\phi}$0.85±.02; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s317.00000°, δ63.00000°, λ158.00000°. NP2:ϕ_s57.00000°, δ70.00000°, λ29.00000°. Principal axes: T 1.9300, Plg34.0000°, Azm279.0000°; N 0.0400, Plg55.0000°, Azm88.0000°; P -1.9700, Plg5.0000°, Azm186.0000°; Data Used: II IU IC G CN. Surface waves from 100 sta.*
*NEIC **14** 20:18:53.6±0.9, 23°.61S×177°.33W, h199km±7km, mb4.9/59 Error ellipse: s-maj=7.0km s-min=4.7km az=146.0*
*BGS **14** 20:18:56.2±4.8, 23°.61S×177°.33W, h199km, mb4.9(NEIC)*
*DJA **14** 20:19:05, 23°.76S×177°.72W, h292km, mb5.5/44*

ISC 14 20:18:51.7±1.2, 23°.73S±0°.04×177°.32W±0°.04, h183km±10km, h196km±3.9km: pP-P, n624, σ1.9/00/238, mb5.1/113, 67C-20D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.37**	**323**	*e*P	**Pn**	**20 20 39.0**	**+2.3**
317nm,0.8s							
MSVF				*e*S	**Sn**	**20 22 05.0**	**+5.1**
AFI	**Afiamalu**	**11.08**	**29**	P	**Pn**	**20 21 13.5**	**-12**
236nm,0.3s,baz=33,slow=3.3,SNR=133							
AFI				S	Sx	20 23 07.1	
22nm,0.3s,baz=24,slow=19,SNR=5.4							
AFI	**Afiamalu**	**11.08**	**29**	*e*P	**Pn**	**20 21 13.9**	**-11**
AFI				*e*S	Sx	20 23 08.9	
AFI	**Afiamalu**	**11.08**	**29**	*e*P	**Pn**	**20 21 13.9**	**-11**
OUZ	**Omahuta**	**13.91**	**213**	*e*P	**Pn**	**20 22 04.4**	**+3.3**
728nm,1.7s							
PUZ	**Puketiti**	**14.79**	**194**	*e*PN	**Pn**	**20 22 02.0**	**-10**
PUZ				SN	Sx	20 24 40.4	
DZM	**Mont Dzumac**	**15.06**	**273**	*e*Pn	**Pn**	**20 22 20.1**	**+4.7**
2μm,1.4s							
DZM	**Mont Dzumac**	**15.06**	**273**	*e*P	**Pn**	**20 22 18.8**	**+3.4**
NOUC	**Port Laguerre**	**15.18**	**273**	*e*P	**Pn**	**20 22 21.2**	**+4.3**
MWZ	**Matawai**	**15.21**	**196**	*e*PN	**Pn**	**20 22 07.2**	**-10**
MWZ				SN	Sx	20 24 49.3	
URZ	**Urewera**	**15.25**	**197**	P	**Pn**	**20 22 16.3**	**-1.3**
27nm,0.3s,baz=266,slow=2.2,SNR=56							
URZ				S	Sx	20 24 51.4	
5.0nm,0.3s,baz=17,slow=20,SNR=3.7							
URZ				LR	LR	20 27 30.1	
comp=Z,611nm,18.8s,baz=213,slow=34							
URZ	**Urewera**	**15.25**	**197**	*e*PN	**Pn**	**20 22 07.7**	**-10**
URZ				SN	Sx	20 24 52.5	
FUNA	**Funafuti**	**15.48**	**347**	*e*P	**Pn**	**20 22 18.8**	**-1.8**
242nm,1.1s							
RAR	**Rarotonga**	**16.41**	**85**	P	**Pn**	**20 22 29.7**	**-2.1**
1.0nm,0.3s,baz=243,slow=9.0,SNR=3.8							
RAR				S	**S**	**20 25 21.1**	**-13**
5.5nm,0.3s,baz=55,slow=18,SNR=5.7							
RAR				T		20 38 38.2	
29nm,0.3s,baz=66,slow=14,SNR=6.4							
RAR	**Rarotonga**	**16.41**	**85**	*e*P	**Pn**	**20 22 30.1**	**-1.8**
100nm,0.9s							
RAR	**Rarotonga**	**16.41**	**85**	*e*P	**Pn**	**20 22 30.1**	**-1.7**
RAR				pmax	pmax		
comp=Z,100nm,0.9s							
PXZ	**Pawanui**	**16.98**	**195**	*e*PN	**Pn**	**20 22 31.4**	**-7.1**
PXZ				*e*SN	Sx	20 25 25.6	
PNHZ	**Pukenui**	**17.04**	**197**	*e*PN	**Pn**	**20 22 32.6**	**-6.6**
TSZ	**Takapari Road**	**17.25**	**198**	*e*PN	**Pn**	**20 22 33.5**	**-8.1**
TSZ				*e*SN	Sx	20 25 35.0	
ANWZ	**Angora Road**	**17.48**	**196**	PN	**Pn**	**20 22 38.5**	**-5.9**
BFZ	**Birch Farm**	**17.75**	**196**	*e*PN	**Pn**	**20 22 39.9**	**-7.6**
MRZ	**Mangatainoka R**	**17.91**	**198**	*e*PN	**Pn**	**20 22 41.9**	**-7.6**
MRZ				*e*SN	Sx	20 25 46.5	
QRZ	**Quartz Range**	**19.06**	**204**	*e*PN	**P**	**20 22 57.0**	**-3.1**
THZ	**Tophouse**	**19.75**	**202**	*e*PN	**P**	**20 23 03.2**	**-4.2**
CTZ	**Chatham Island**	**19.96**	**179**	*e*PN	**P**	**20 23 11.5**	**+1.7**
CTZ				SN	**S**	**20 26 43.9**	**-0.3**
KHZ	**Kahutara**	**20.13**	**200**	*e*P	**P**	**20 23 08.1**	**-3.4**
comp=Z,20nm,0.6s							
KHZ				*e*S	**S**	**20 26 36.1**	**-11**
KHZ	**Kahutara**	**20.13**	**200**	*e*PN	**P**	**20 23 07.9**	**-3.6**
KHZ				*e*SN	**S**	**20 26 38.9**	**-8.4**
RPZ	**Rata Peaks**	**22.12**	**203**	P	**P**	**20 23 27.2**	**-5.1**
comp=Z,14nm,0.5s,mb4.6,baz=90,slow=1.2,SNR=10.0							
RPZ				S	**S**	**20 27 20.5**	**-2.0**
comp=Z,9.3nm,0.4s,baz=6.8,slow=20,SNR=9.2							
RPZ				LR	LR	20 31 25.4	
comp=Z,456nm,21.0s,baz=188,slow=34							
RPZ	**Rata Peaks**	**22.12**	**203**	*e*P	**P**	**20 23 28.9**	**-3.4**
comp=Z,19nm,0.7s,mb4.6							
FOZ	**Fox Glacier**	**22.50**	**205**	*e*PN	**P**	**20 23 33.9**	**-1.9**
TBI	**Tubuai**	**25.53**	**95**	*e*LQ		20 29 07.4	
comp=Z,918nm,24.8s							
TBI				*e*LR	LR	20 30 36.1	
comp=Z,1μm,26.0s							
HNR	**Honiara**	**25.96**	**299**	P	**P**	**20 24 06.2**	**-1.3**
comp=Z,131nm,0.9s,mb5.6,baz=227,slow=3.4,SNR=14							
HNR				LR	LR	20 31 30.6	
comp=Z,487nm,18.9s,baz=302,slow=29							
HNR	**Honiara**	**25.96**	**299**	*e*P	**P**	**20 24 06.7**	**-0.7**
comp=Z,646nm,1.5s,mb6.0							
HNR	**Honiara**	**25.96**	**299**	*e*P	**P**	**20 24 06.7**	**-0.8**
HNR				pmax	pmax		
comp=Z,646nm,1.5s,mb6.0							
PPT	**Papeete**	**26.64**	**82**	*e*LQ		20 29 41.8	
comp=Z,5μm,25.5s							
PPT				*e*LR	LR	20 31 04.2	
comp=Z,1μm,23.8s							
PPT	**Papeete**	**26.64**	**82**	LR	LR	20 32 31.0	
comp=Z,648nm,18.3s,baz=257,slow=31							
ARMA	**Armidale**	**28.38**	**250**	*e*P	**P**	**20 24 31.6**	**+2.6**
ARMA				*e*S	ScP	20 30 57.6	-3.1
ARMA	**Armidale**	**28.38**	**250**	*e*P	**P**	**20 24 31.6**	**+2.7**
comp=Z,46nm,0.9s,mb5.2							
EIDS	**Eidsvold**	**28.76**	**260**	*e*P	**P**	**20 24 32.9**	**+0.5**
comp=Z,144nm,1.0s,mb5.7							
CNB	**Canberra Magne**	**31.07**	**241**	*e*P	**P**	**20 24 55.2**	**+2.6**
CTA	**Charters Tower**	**33.93**	**269**	P	**P**	**20 25 18.8**	**+1.1**
comp=Z,148nm,0.4s,mb6.1,baz=95,slow=10,SNR=344							
CTA	**Charters Tower**	**33.93**	**269**	*e*P	**P**	**20 25 18.7**	**+1.0**
comp=Z,131nm,0.4s,mb6.0							
CTA	**Charters Tower**	**33.93**	**269**	P	**P**	**20 25 18.8**	**+1.1**
CTAO	**Charters Tower**	**33.93**	**269**	*e*P	**P**	**20 25 18.8**	**+1.1**
comp=Z,178nm,0.6s,mb6.0							
CTAO	**Charters Tower**	**33.93**	**269**	*e*P	**P**	**20 25 18.8**	**+1.1**
CTAO				pmax	pmax		
comp=Z,178nm,0.6s,mb6.0							
CTAO	**Charters Tower**	**33.93**	**269**	P	**P**	**20 25 19.0**	**+1.3**
comp=Z,3μmcomp=Z,306nm,0.6s,mb6.2							
TOO	**Toolangi**	**34.61**	**238**	*e*P	**P**	**20 25 25.3**	**+2.0**
PMG	**Port Moresby**	**36.78**	**287**	*e*P	**P**	**20 25 42.3**	**+0.3**
comp=Z,719nm,0.9s,mb6.3							
PMG	**Port Moresby**	**36.78**	**287**	*c*eP	**P**	**20 25 42.5**	**+0.5**
PMG				pmax	pmax		
comp=Z,1μm,1.4s							
PMG	**Port Moresby**	**36.78**	**287**	P	**P**	**20 25 42.7**	**+0.7**
comp=Z,6μmcomp=Z,827nm,1.0s,mb6.3							
STKA	**Stephens Creek**	**37.07**	**248**	P	**P**	**20 25 45.4**	**+1.1**
comp=Z,21nm,0.6s,mb4.9,baz=88,slow=9.4,SNR=45							
STKA				PcP	PcP	20 28 01.8	+0.8
comp=Z,6.3nm,0.7s,baz=4.5,slow=6.0,SNR=3.5							
STKA				LR	LR	20 38 58.3	
comp=Z,624nm,19.1s,baz=257,slow=33							
STKA	**Stephens Creek**	**37.07**	**248**	*e*P	**P**	**20 25 45.1**	**+0.8**
comp=Z,20nm,0.6s,mb4.9							
STKA	**Stephens Creek**	**37.07**	**248**	*e*P	**P**	**20 25 45.2**	**+1.0**
comp=Z,4.9nm,0.7s,mb4.2							
STKA	**Stephens Creek**	**37.07**	**248**	*e*P	**P**	**20 25 45.2**	**+0.9**
STKA				pmax	pmax		
comp=Z,5.0nm,0.7s							
TAOE	**Nuku Hiva Isla**	**38.47**	**74**	*e*LR	LR	20 36 32.4	
comp=Z,624nm,24.1s							
COEN	**Coen**	**38.52**	**277**	*e*P	**P**	**20 25 57.9**	**+1.3**
comp=Z,1μm,1.1s							
COEN	**Coen**	**38.52**	**277**	P	**P**	**20 25 56.8**	**+0.2**
comp=Z,422nm,1.1s,mb6.0							
RKT	**Rikitea**	**38.76**	**98**	*e*LR	LR	20 36 42.3	
comp=Z,594nm,24.0s							
BBOO	**Buckleboo**	**41.77**	**247**	*e*P	**P**	**20 26 22.4**	**-0.8**
comp=Z,151nm,0.8s,mb5.7							
MMPI	**Merauke**	**43.19**	**283**	P	**P**	**20 26 35.2**	**+0.4**
comp=Z,1μm,0.7s							
ASAR	**Alice Springs**	**44.48**	**260**	P	**P**	**20 26 44.9**	**-0.2**
comp=Z,66nm,0.8s,mb5.3,baz=98,slow=7.3,SNR=249							
ASAR				PcP	PcP	20 28 26.1	+0.9
comp=Z,8.0nm,0.8s,baz=109,slow=4.4,SNR=6.4							
ASAR				ScP	ScP	20 32 03.7	+3.6
comp=Z,3.2nm,0.9s,baz=110,slow=4.0,SNR=4.5							
ASAR				S	**S**	**20 33 05.0**	**-1.5**
comp=Z,3.0nm,0.8s,baz=98,slow=17,SNR=6.1							
ASAR	**Alice Springs**	**44.48**	**260**	P	**P**	**20 26 44.9**	**-0.1**
ASAR						20 28 26.2	
ASAR				S	**S**	**20 33 05.0**	**-1.5**
WB2	**Warramunga Arr**	**44.86**	**265**	*e*P	**P**	**20 26 47.4**	**-0.7**
WB2				*e*PcP	PcP	20 28 27.8	+1.2
WRA	**Warramunga Arr**	**44.87**	**265**	P	**P**	**20 26 47.2**	**-0.9**
comp=Z,48nm,0.8s,mb5.2,baz=103,slow=8.4,SNR=433							
WRA				PcP	PcP	20 28 27.4	+0.7
comp=Z,26nm,1.0s,baz=100,slow=3.7,SNR=13							
WRA				ScP	ScP	20 32 05.3	+3.6
comp=Z,2.5nm,0.7s,baz=99,slow=3.7,SNR=6.0							
WRA				S	**S**	**20 33 09.3**	**-2.8**
comp=Z,6.0nm,1.0s,baz=101,slow=14,SNR=9.8							
WRA				ScS	ScS	20 36 28.4	+2.0
comp=Z,3.1nm,1.3s,baz=100,slow=5.5,SNR=6.1							
WRA	**Warramunga Arr**	**44.87**	**265**	P	**P**	**20 26 47.3**	**-0.8**
WRA						20 28 27.4	
WRA				S	**S**	**20 33 09.4**	**-2.7**
WRA						20 36 28.4	
KIP	**Kipapa**	**48.65**	**24**	*e*P	**P**	**20 27 16.1**	**-1.2**
comp=Z,68nm,1.1s,mb5.2							
KIP	**Kipapa**	**48.65**	**24**	*c i*P	**P**	**20 27 16.8**	**-0.5**
FORT	**Forrest**	**48.67**	**249**	‖*i*P	**P**	**20 27 17.0**	**-0.5**
comp=Z,117nm,0.6s,mb5.7							
FORT	**Forrest**	**48.67**	**249**	*e*P	**P**	**20 27 16.7**	**-0.8**
comp=Z,144nm,0.7s,mb5.7							
BAKI	**Biak**	**50.35**	**289**	P	**P**	**20 27 31.1**	**+0.7**
comp=Z,173nm,1.4s,mb5.5							
KNA	**Kununurra**	**51.12**	**269**	*e*P	**P**	**20 27 36.2**	**+0.1**
comp=Z,84nm,0.7s,mb5.5							
KNA	**Kununurra**	**51.12**	**269**	P	**P**	**20 27 36.7**	**+0.6**
comp=Z,4μmcomp=Z,445nm,0.8s,mb6.2							
TLE	**Tual**	**51.24**	**282**	P	**P**	**20 27 37.1**	**0.0**
comp=Z,356nm,1.0s,mb6.0							
GUMO	**Guam**	**52.37**	**311**	P	**P**	**20 27 43.7**	**-1.6**
comp=Z,86nm,0.9s,mb5.4,baz=354,slow=10,SNR=8.1							
GUMO				LR	LR	20 45 28.5	
comp=Z,165nm,18.7s,baz=304,slow=31							
GUMO	**Guam**	**52.37**	**311**	*e*P	**P**	**20 27 45.3**	**0.0**
comp=Z,413nm,1.5s,mb5.8							
GUMO	**Guam**	**52.37**	**311**	*e*P	**P**	**20 27 45.3**	**0.0**
GUMO				pmax	pmax		
comp=Z,413nm,1.5s,mb5.8							
GUMO	**Guam**	**52.37**	**311**	P	**P**	**20 27 45.9**	**+0.6**
comp=Z,198nm,1.9s,mb5.4							
FITZ	**Fitzroy Crossi**	**53.29**	**265**	P	**P**	**20 27 52.2**	**+0.1**
comp=Z,66nm,0.9s,mb5.3,baz=113,slow=5.9,SNR=75							
FITZ				PcP	PcP	20 28 58.5	+1.2
comp=Z,8.1nm,0.8s,baz=90,slow=3.0,SNR=3.8							
FITZ				LR	LR	20 50 29.8	
comp=Z,368nm,19.8s,baz=110,slow=36							
FITZ	**Fitzroy Crossi**	**53.29**	**265**	*e*P	**P**	**20 27 51.9**	**-0.2**
comp=Z,65nm,0.6s,mb5.5							
FITZ	**Fitzroy Crossi**	**53.29**	**265**	*e*P	**P**	**20 27 52.0**	**-0.1**
comp=Z,68nm,0.9s,mb5.4							
FITZ	**Fitzroy Crossi**	**53.29**	**265**	P	**P**	**20 27 52.2**	**+0.1**
comp=Z,140nm,2.1s,mb5.3							
BNDI	**Bandanaira**	**54.27**	**282**	P	**P**	**20 27 58.9**	**-0.3**
comp=Z,4μmcomp=Z,494nm,1.0s,mb6.2				

comp=Z,317nm,1.1s,mb6.0
SRBI Singaraja 66.20 271 P P 20 29 19.5 -0.8
comp=Z,100nm,1.4s,mb5.4
QSPA South Pole Qui 66.36 180 P P 20 29 21.8 +1.6
comp=Z,6.8nm,0.6s,mb4.6,baz=36,slow=0.9,SNR=21
QSPA South Pole Qui 66.36 180 *eP* **P 20 29 21.9 +1.7**
comp=Z,10.0nm,0.8s,mb4.7
MIR Mirnyy 68.36 206 ⇓*iP* **P 20 29 34.6 +1.7**
MIR pmax pmax
comp=Z,126nm,1.8s,mb5.3
MYLDM Lahad Datu 68.80 286 P P 20 29 37.4 +0.8
MYLDM Lahad Datu 68.80 286 P P 20 29 37.8 +1.2
comp=Z,45nm,1.1s,mb5.1
TSM Tawau 68.95 285 P P 20 29 37.8 +0.3
PWJI Pagerwojo 69.34 270 P P 20 29 38.4 -1.5
comp=Z,110nm,1.1s,mb5.5
SJI Sawahan 69.48 270 P P 20 29 41.0 +0.2
comp=Z,67nm,0.9s,mb5.4
PCJI Pacitan 69.85 270 P P 20 29 43.1 0.0
comp=Z,271nm,0.7s,mb6.1
SDKM Sandakan 70.16 286 P P 20 29 45.7 +0.8
KDM Kudat 71.07 287 P P 20 29 51.5 +1.1
KKM Kota Kinabalu 71.21 286 P P 20 29 51.9 +0.7
BJII Banjamegara 71.52 270 P P 20 29 54.4 +1.2
comp=Z,52nm,1.2s,mb5.2
BTM Bintulu 72.73 281 P P 20 30 00.8 +0.5
STKI Sintang 72.85 278 P P 20 30 01.4 +0.3
comp=Z,59nm,1.1s,mb5.2
MJAR Matsushiro Arr 73.17 324 P P 20 30 00.9 -1.4
comp=Z,13nm,0.8s,mb4.7,baz=167,slow=6.3,SNR=57
MJAR Matsushiro Arr 73.17 324 P P 20 30 01.0 -1.4
MAJO Matsushiro 73.18 324 *eP* **P 20 30 01.2 -1.1**
comp=Z,17nm,0.8s,mb4.8
MAJO Matsushiro 73.18 324 *eP* **P 20 30 01.2 -1.2**
MAJO pmax pmax
comp=Z,17nm,0.8s,mb4.8
MAT Matsushiro 73.18 324 P P 20 30 01.0 -1.4
MAT S S 20 39 12.0 -3.3
SBUM Sibu 73.19 280 P P 20 30 03.4 +0.4
LEM Lembang 73.63 270 P P 20 30 05.0 -0.6
comp=Z,144nm,0.8s,mb5.8
KSM Kuching 74.50 279 P P 20 30 11.0 +0.3
KSM Kuching 74.50 279 *eP* **P 20 30 10.7 +0.1**
comp=Z,67nm,0.9s,mb5.3
KSM Kuching 74.50 279 P P 20 30 10.6 -0.1
comp=Z,79nm,1.2s,mb5.2
DBJI Dramaga 74.53 270 P P 20 30 10.4 -0.4
YUK Yuzh-Kuril'sk 75.41 333 ⇓*iP* **P 20 30 14.3 -0.8**
YUK *i* *PP pP 20 30 56.7 -2.4
YUK *i* 20 33 04.7
YUK pmax pmax
comp=N,10.0nm,1.5s
YUK pmax pmax
comp=E,10.0nm,1.5s
YUK pmax pmax
comp=Z,20nm,1.5s,mb4.5
NIKO Nikolski 76.73 5 *eP* **P 20 30 21.4 -0.9**
comp=Z,41nm,0.7s,mb5.2
ASAJ Asahikawa 76.85 332 *eP* **P 20 30 23.2 0.0**
comp=Z,15nm,1.0s,mb4.6
UNV Unalaska Valle 77.81 7 *eP* **P 20 30 27.4 -0.9**
comp=Z,17nm,0.7s,mb4.8
MAW Mawson 78.76 200 P P 20 30 35.0 +1.5
comp=Z,31nm,1.0s,mb4.9,baz=126,slow=6.7,SNR=47
MAW LR LR 21 03 54.4
comp=Z,68nm,18.1s,baz=19,slow=34
MAW Mawson 78.76 200 *eP* **P 20 30 34.8 +1.3**
comp=Z,16nm,0.8s,mb4.7
MAW Mawson 78.76 200 *eP* **P 20 30 34.8 +1.2**
comp=Z,11nm,1.2s,mb4.4
MAW Mawson 78.76 200 *eP* **P 20 30 34.8 +1.3**
MAW pmax pmax
comp=Z,11nm,1.2s
YSS Yuzh-Sakhalins 79.05 333 *eP* **P 20 30 35.5 +0.2**
comp=Z,18nm,0.8s,mb4.7
YSS Yuzh-Sakhalins 79.05 333⇑*eP* **P 20 30 35.0 -0.3**
YSS pmax pmax
comp=Z,50nm,1.0s,mb5.1
PETK Petropavlovsk- 79.54 345 P P 20 30 37.3 -0.4
comp=Z,19nm,0.7s,mb4.8,baz=134,slow=6.5,SNR=29
PETK LR LR 20 58 31.6
comp=Z,77nm,20.1s,baz=157,slow=30
PETK Petropavlovsk- 79.54 345 P P 20 30 37.3 -0.5
KSRS Korea Array 79.72 319 P P 20 30 38.9 -0.2
comp=Z,8.2nm,0.9s,mb4.4,baz=138,slow=5.6,SNR=19
MYKOM Kota Tinggi 80.50 276 P P 20 30 44.3 +0.4
INCN Inchon 80.52 318 *eP* **P 20 30 43.9 +0.5**
comp=Z,26nm,1.1s,mb4.8
KGM Kluang 81.08 276 P P 20 30 47.6 +0.6
ISA Isabella 81.15 45 *eP* **P 20 30 46.0 -0.8**
comp=Z,4.3nm,0.8s,mb4.1
ISA Isabella 81.15 45 *eP* **P 20 30 46.0 -0.8**
ISA pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
CMB Columbia Colle 81.41 42 *eP* **P 20 30 48.8 +0.7**
comp=Z,3.5nm,0.9s,mb4.0
CMB Columbia Colle 81.41 42 *eP* **P 20 30 48.8 +0.7**
CMB pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
WAKR Walker 82.28 42 *eP* **P 20 30 53.0 +0.3**
comp=Z,7.5nm,1.0s,mb4.3
YBH Yreka Blue Hor 82.42 38 P P 20 30 54.8 +1.5
comp=Z,5.0nm,1.0s,mb4.1,baz=68,slow=1.5,SNR=6.3
YBH Yreka Blue Hor 82.42 38 P P 20 30 54.8 +1.5
KTGM Kuala Trenggan 82.61 279 P P 20 30 56.2 +1.2
QIZ Qiongzhong 82.75 294 P P 20 30 53.8 -1.7
QIZ S S 20 40 57.9 -0.5
QIZ pmax pmax
comp=Z,160nm,8.7s
NVAR Mina Array Bea 82.94 43 P P 20 30 56.3 +0.3
comp=Z,2.3nm,0.8s,mb4.0,baz=224,slow=8.6,SNR=17
NVAR PKKPbc PKKPbc 20 49 19.8 +0.7
comp=Z,0.5nm,0.7s,baz=90,slow=2.1,SNR=4.2
NVAR PKPPKP 20 57 28.3
comp=Z,0.3nm,0.6s,baz=138,slow=4.3,SNR=3.4
NVAR Mina Array Bea 82.94 43 P P 20 30 56.3 +0.3
NVAR PKKPbc PKKPbc 20 49 19.8 +0.7
NVAR P'P' 20 57 28.3
MDJ Mudanjiang 83.51 325 P P 20 30 58.9 +0.1
MDJ pP pP 20 31 45.4 +1.7
MDJ sP sP 20 32 05.0 +2.1
MDJ S S 20 41 03.3 -1.7
MDJ sS sS 20 42 24.8 +1.8
MDJ SS SS 20 46 33.0 -3.0
MDJ pmax pmax
comp=Z,17nm,1.4s,mb4.6
MDJ pmax pmax
comp=Z,130nm,5.7s
SYO Syowa Base 83.73 193⇓*eP* **P 20 30 58.4 -1.3**
MOD Modoc 83.90 39 *eP* **P 20 31 00.7 -0.2**
comp=Z,5.9nm,1.1s,mb4.2
IPM Ipoh 84.17 277 P P 20 31 03.0 0.0
TUC Tucson 84.48 51 *eP* **P 20 31 04.3 +0.2**
comp=Z,4.6nm,0.8s,mb4.3
TUC Tucson 84.48 51 *eP* **P 20 31 04.3 +0.3**
TUC pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KULM Kulim 84.84 278 P P 20 31 06.9 +0.6
KULM Kulim 84.84 278 *eP* **P 20 31 06.0 -0.3**
comp=Z,23nm,0.8s,mb5.0
WHN Wuhan 84.86 306 P P 20 31 05.5 -0.5
WVOR Wild Horse Val 85.20 39 *eP* **P 20 31 05.5 -1.8**
comp=Z,90nm,1.1s,mb5.4
WVOR Wild Horse Val 85.20 39 *eP* **P 20 31 05.6 -1.8**
WVOR pmax pmax
comp=Z,90nm,1.1s,mb5.4
CN2 Changchun 85.23 322 *eP* **P 20 31 07.4 -0.1**
CN2 *e*pP pP 20 31 54.3 +1.8
CN2 *e*sP sP 20 32 14.4 +2.7
CN2 *e*PP PP 20 34 29.8 +1.7
CN2 *e*S S 20 41 20.4 -1.7
CN2 *e*SS SS 20 47 02.9 +1.6
CN2 pmax pmax
comp=Z,30nm,1.2s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,23.0s
CN2 LR LR
comp=E,200nm,23.0s
CN2 LR LR
comp=Z,200nm,24.0s
CCUT Cedar City 85.58 46 *eP* **P 20 31 10.0 +0.6**
comp=Z,3.5nm,0.8s,mb4.1
KLR Kul'dur 85.61 329 *eP* **P 20 31 05.2 -4.0**
KLR pmax pmax
comp=Z,32nm,1.2s,mb4.9
TIA Tai'an 85.91 312 P P 20 31 11.5 +0.5
TIA pmax pmax
comp=Z,50nm,0.9s,mb5.2
PLCA Paso Flores 86.61 133 P P 20 31 14.6 0.0
comp=Z,3.5nm,1.0s,mb4.1,baz=260,slow=3.5,SNR=4.8
PLCA PKKPbc PKKPbc 20 49 09.1 -0.2
comp=Z,0.9nm,0.8s,baz=177,slow=8.8,SNR=3.3
PLCA LR LR 21 01 30.9
comp=Z,191nm,20.0s,baz=49,slow=30
PLCA Paso Flores 86.61 133 P P 20 31 14.6 0.0
MSU Marysvale 86.90 45 *eP* **P 20 31 16.3 +0.5**
comp=Z,2.1nm,0.8s,mb4.0
MSU Marysvale 86.90 45 *eP* **P 20 31 16.3 +0.5**
MSU pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
ETW Entiat 87.52 35 *eP* **P 20 31 18.4 -0.1**
comp=Z,13nm,0.8s,mb4.8
TMUT Trail Mountain 87.96 45 *eP* **P 20 31 21.4 +0.6**
comp=Z,12nm,0.7s,mb4.8
MNTX Cornudas Mount 88.11 54 *eP* **P 20 31 21.2 -0.6**
comp=Z,8.4nm,1.3s,mb4.4
TXAR Lajitas Array 88.27 57 P P 20 31 22.2 -0.3
comp=Z,1.0nm,0.8s,baz=218,slow=7.9,SNR=4.7
TXAR Lajitas Array 88.27 57 P P 20 31 22.2 -0.3
BJI Beijing 88.62 315 P P 20 31 24.0 +0.1
BJI pmax pmax
comp=Z,22nm,2.0s,mb4.7
BJI LR LR
comp=Z,90nm,26.4s
GYA Guiyang 88.79 300 *eP* **P 20 31 26.0 +1.0**
GYA pP pP 20 32 15.4 +5.0
GYA sP sP 20 32 36.8 +7.3
GYA PP PP 20 35 01.0 +3.9
GYA SKS 20 41 34.6
GYA S S 20 41 54.5 -2.4
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,110nm,6.2s
ANMO Albuquerque 88.93 51 *eP* **P 20 31 26.1 +0.6**
comp=Z,3.0nm,1.0s,mb4.2
ANMO Albuquerque 88.93 51 *eP* **P 20 31 26.1 +0.6**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
GDL2 Guadalupe Moun 89.11 54 *eP* **P 20 31 27.1 +0.7**
comp=Z,2.5nm,0.8s,mb4.2
SEY Seymchan 89.64 347 *ceP* **P 20 31 27.0 -1.1**
MCK McKinley 89.97 12 *eP* **P 20 31 32.2 +2.5**
comp=Z,22nm,0.9s,mb5.1
MCK McKinley 89.97 12 *eP* **P 20 31 32.2 +2.5**
MCK pmax pmax
comp=Z,22nm,0.9s,mb5.1
MCMT McKenzie Canyo 90.00 40 *eP* **P 20 31 30.5 +0.2**
comp=Z,3.9nm,1.1s,mb4.2
RRI2 Red Ridge 90.10 42 *eP* **P 20 31 31.0 +0.2**
comp=Z,6.3nm,1.1s,mb4.5
REDW Red Top Meadow 90.39 42 *eP* **P 20 31 32.7 +0.6**
comp=Z,11nm,1.4s,mb4.6
DLMT Dillon 90.45 40 P P 20 31 32.2 -0.1
comp=Z,7.4nm,1.2s,mb4.5
XAN Xi'an 90.58 307 P P 20 31 34.3 +1.1
XAN pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
XAN pmax pmax
comp=Z,160nm,13.6s
IMW Indian Meadow 90.63 41 *eP* **P 20 31 34.1 +0.9**
comp=Z,9.0nm,1.2s,mb4.7
LOHW Long Hollow 90.68 42 *eP* **P 20 31 33.4 0.0**
comp=Z,7.8nm,1.4s,mb4.5
LRM Limekiln Ridge 90.79 39 P P 20 31 34.3 +0.4
comp=Z,38nm,1.3s,mb5.3
PDAR Pinedale Array 90.87 43 P P 20 31 34.2 -0.2
comp=Z,2.4nm,0.9s,mb4.2,baz=209,slow=2.7,SNR=11
PDAR PKKP PKKPbc 20 48 58.5 -1.3
comp=Z,0.6nm,0.6s,baz=81,slow=2.2,SNR=4.6
FLWY Flagg Ranch 90.88 41 *eP* **P 20 31 35.4 +1.0**
comp=Z,7.4nm,0.9s,mb4.7
BOZ Bozeman (W) 91.17 40 *eP* **P 20 31 35.7 0.0**
comp=Z,4.8nm,0.7s,mb4.6
BOZ Bozeman (W) 91.17 40 *eP* **P 20 31 35.7 0.0**
BOZ pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
BDT Bhumibol Dam 91.23 288 P P 20 31 38.0 +1.4
ILAR Eielson Array 91.31 13 P P 20 31 34.4 -1.4
comp=Z,18nm,1.2s,mb5.0,baz=226,slow=5.4,SNR=6.3
ILAR Eielson Array 91.31 13 P P 20 31 34.4 -1.4
KMI Kunming 91.37 297 P P 20 31 38.5 +1.4
KMI pP pP 20 32 30.3 +7.7
KMI sP sP 20 32 52.3 +11
KMI PP PP 20 35 21.9 +4.4
KMI SKS 20 41 52.1
KMI S S 20 42 17.4 -3.3
KMI sS sS 20 43 48.4 +8.3
KMI SS SS 20 48 35.0 +3.9
KMI pmax pmax
comp=Z,19nm,1.3s,mb5.0
KMI pmax pmax
comp=Z,150nm,5.6s
KMI LR LR
comp=N,250nm,25.4s
KMI LR LR
comp=E,210nm,33.9s
KMI LR LR
comp=Z,150nm,29.8s
CHRT Chiangrai 91.64 291 ⇓*P* **P 20 31 38.0 -0.4**
comp=Z,210nm,1.0s,mb6.1
CM31 Chiang Mai Arr 91.78 289 *eP* **P 20 31 41.0 +1.8**
comp=Z,35nm,1.0s,mb5.3
CMAR Chiang Mai Arr 91.78 289 P P 20 31 40.2 +1.1
comp=Z,22nm,0.9s,mb5.2,baz=132,slow=3.1,SNR=76
CMAR PP PP 20 35 16.9 -3.9
comp=Z,1.3nm,0.9s,baz=128,slow=5.4,SNR=4.1
CMAR LR LR 21 13 44.7
comp=Z,65nm,20.1s,baz=130,slow=36
CMAR Chiang Mai Arr 91.78 289 P P 20 31 40.3 +1.2
CMAR 20 35 17.0
CHG Chiang Mai 91.92 290 ⇑*P* **P 20 31 41.0 +1.2**
comp=Z,39nm,0.9s,mb5.4
CHTO Chiang Mai 91.92 290 *eP* **P 20 31 40.7 +0.9**
comp=Z,39nm,1.0s,mb5.4
CHTO *e*PP PP 20 35 22.6 +0.6
CHTO Chiang Mai 91.92 290 *eP* **P 20 31 40.7 +0.9**
CHTO *e* 20 35 22.6
CHTO pmax pmax
comp=Z,39nm,1.0s,mb5.4
HHC Hu-ho-hao-te 92.05 314 *eP* **P 20 31 40.4 +0.6**
HHC pP pP 20 32 27.9 +2.6
HHC sP sP 20 32 48.5 +4.1
HHC PP PP 20 35 26.0 +3.4
HHC SKS 20 41 54.3
HHC S S 20 42 23.5 -2.5
HHC sS sS 20 43 47.3 +1.7
HHC pmax pmax
comp=Z,21nm,1.1s,mb5.1
HHC pmax pmax
comp=Z,79nm,6.1s
HHC LR LR
comp=N,210nm,16.0s
HHC LR LR
comp=E,150nm,15.0s
HHC LR LR
comp=Z,140nm,16.0s
BILL Bilibino 92.30 354 *eP* **P 20 31 40.4 0.0**
comp=Z,22nm,1.0s,mb5.1
BILL Bilibino 92.30 354 *ceP* **P 20 31 40.3 0.0**
BILL S S 20 42 20.0 -7.1
BILL pmax pmax
comp=Z,36nm,1.0s,mb5.4
CD2 Chengdu 93.05 302 *eP* **P 20 31 47.0 +2.3**
CD2 pP pP 20 32 34.4 +4.2
CD2 sP sP 20 32 54.3 +5.0
CD2 PP PP 20 35 35.3 +4.7
CD2 SKS 20 42 01.0
CD2 S S 20 42 33.4 -2.0
CD2 sS sS 20 43 56.8 +1.7
CD2 SS SS 20 48 56.6 +1.5
CD2 pmax pmax
comp=Z,20nm,1.4s,mb5.0
CD2 pmax pmax
comp=Z,40nm,4.2s
RSSD Black Hills 95.03 44 *eP* **P 20 31 53.5 0.0**
comp=Z,3.4nm,1.1s,mb4.5
RSSD Black Hills 95.03 44 *eP* **P 20 31 53.5 0.0**
RSSD pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
LZH Lanzhou 95.22 307 ⇑*P* **P 20 31 54.5 0.0**
LZH pP pP 20 32 45.6 +5.5
LZH sP sP 20 33 06.8 +7.7
LZH PP PP 20 35 49.6 +2.2
LZH SKS 20 42 09.8
LZH S S 20 42 48.5 -5.5
LZH pmax pmax
comp=Z,21nm,1.3s,mb5.2
LZH pmax pmax
comp=Z,85nm,9.0s
ATAH Atahualpa 95.26 100 LR LR 21 05 59.2
comp=Z,158nm,21.4s,baz=203,slow=30
YAK Yakutsk 95.33 338 *eP* **P 20 31 53.3 -1.1**
comp=Z,7.2nm,0.6s,mb5.1
YAK Yakutsk 95.33 338 *eP* **P 20 31 53.2 -1.2**
YAK *e*S SKSac 20 42 09.9 -2.4
YAK *e**SS S 20 42 57.8 +4.0
YAK pmax pmax
comp=Z,29nm,0.9s,mb5.5
YAK pmax pmax
comp=N,6.0nm,1.2s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK pmax pmax
comp=Z,33nm,3.0s
YAK pmax pmax
comp=N,70nm,3.6s
YAK pmax pmax
comp=E,55nm,2.8s
YAK smax
comp=N,185nm,1.7s
YAK smax
comp=E,164nm,2.0s
CIT Chita 96.48 324 *eP* **P 20 31 58.2 -1.6**
ULN Ulaanbaatar 98.20 319 *eP* **P 20 32 07.0 -0.7**
comp=E,3.4nm,0.9s,mb4.8
ULN Ulaanbaatar 98.20 319 *eP* **P 20 32 07.0 -0.7**
ULN pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
SONM Songino Array 98.59 319 P P 20 32 08.5 -0.9
comp=Z,1.0nm,0.8s,mb4.3,baz=133,slow=2.6,SNR=6.4
SONM PP PP 20 36 04.6 -8.4
comp=Z,1.7nm,0.9s,baz=167,slow=7.4,SNR=3.7
SONM S SKSac 20 42 30.6 +0.9
comp=Z,1.0nm,1.0s,baz=177,slow=2.8,SNR=7.3
SONM Songino Array 98.59 319 P P 20 32 08.5 -0.9
SONM S SKSac 20 42 30.6 +0.9
YKA Yellowknife Ar 99.17 25 PKKPbc PKKPbc 20 48 36.1 -2.3
comp=Z,0.8nm,0.7s,baz=52,slow=2.6,SNR=4.4
GTA Gaotai 99.49 309 *eP* Pdif 20 32 14.1 +0.5
GTA pP pP 20 33 02.8 +3.4
GTA sP sP 20 33 25.0 +6.6
GTA PP PP 20 36 19.0 -1.0
GTA SKS 20 42 32.8
GTA S Sdif 20 43 24.3 -5.8
GTA sS sS 20 44 49.8 -0.8
GTA pmax pmax
comp=Z,6.0nm,1.4s,mb4.8
GTA pmax pmax
comp=Z,110nm,7.1s
LPAZ La Paz 100.24 113 PKKPbc PKKPbc 20 48 34.5 +1.0
comp=Z,1.5nm,0.8s,baz=65,slow=2.9,SNR=7.3
ZAK Zakamensk 101.50 320 *eP* Pdif 20 32 20.8 -1.8
ZAK pmax pmax
comp=Z,1.0nm,1.0s
ZALV Zalesovo Beam 113.38 320 PKiKP PKiKP 20 37 06.0 -1.3
comp=Z,3.8nm,0.6s,baz=154,slow=1.0,SNR=23
ZALV Zalesovo Beam 113.38 320 PKIKP PKiKP 20 37 06.1 -1.2
MK31 Makanchi Array 113.85 312 *e*PKiKP PKiKP 20 37 07.5 -0.9
MK31 Makanchi Array 113.85 312 *c i*PKIKP PKiKP 20 37 07.5 -1.0
MK31 pmax pmax
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 113.85 312 Pdiff Pdif 20 33 18.9 +1.5
comp=Z,0.2nm,0.5s,baz=103,slow=5.2,SNR=5.2
MKAR PKIKP PKiKP 20 37 07.9 -0.6
comp=Z,3.3nm,0.6s,baz=183,slow=0.4,SNR=10
MKAR Makanchi Array 113.85 312 Pdif Pdif 20 33 18.9 +1.5
MKAR PKPdf PKiKP 20 37 07.9 -0.6
MKAR Makanchi Array 113.85 312 *c i*PKIKP PKiKP 20 37 07.9 -0.6
MKAR pmax pmax
comp=Z,3.0nm,0.6s
NVS Novosibirsk 114.42 321 *e*PKIKP PKiKP 20 37 07.1 -2.2
NVS *e*S SKSac 20 43 37.9 -1.2
NVS pmax pmax
comp=N,1.0nm,0.7s
NVS pmax pmax
comp=E,3.0nm,0.7s
NVS pmax pmax
comp=Z,5.0nm,0.7s
NVS smax
comp=N,6.0nm,1.3s
NVS smax
comp=E,26nm,2.1s
KURK Kurchatov 116.77 316 *e*PKPdf PKPdf 20 37 13.2 -0.8
KURK Kurchatov 116.77 316 *e*PKIKP PKPdf 20 37 13.2 -0.8
BDFB Brasilia 116.88 123 PKKPbc PKKPbc 20 47 41.1 0.0
comp=E,3.2nm,0.6s,baz=244,slow=3.2,SNR=6.4
KSH Kashi 117.22 304 *e*PKP PKPdf 20 37 16.0 +0.8
KSH *e*PKS 20 40 51.5
KSH *e*SKS SKSac 20 44 05.0 +15
KSH AMB AMB
comp=Z,260nm,5.8s
KSH LR LR
comp=N,100nm,3.9s
KSH LR LR
comp=E,150nm,5.2s
KSH LR LR
comp=Z,160nm,6.8s
ULHL Ulahol 117.43 307 P PKPdf 20 37 16.1 +0.6
SNR=9.2
TKM2 Tokmak 2 117.99 307 P PKPdf 20 37 16.5 -0.1
SNR=12
TKM2 Tokmak 2 117.99 307 *e*PKPdf PKPdf 20 37 16.0 -0.5
TKM2 Tokmak 2 117.99 307 *e*PKIKP PKPdf 20 37 16.0 -0.6
KZA Kyzart 118.14 306 *e*PKPdf PKPdf 20 37 17.4 +0.5
KZA Kyzart 118.14 306 *e*PKIKP PKPdf 20 37 17.4 +0.5
CHMS Chumysh 118.61 307 P PKPdf 20 37 17.5 -0.3
SNR=5.8
AAK Ala-Archa 118.76 307 *e*PKPdf PKPdf 20 37 17.8 -0.3
AAK Ala-Archa 118.76 307 *e*PKIKP PKPdf 20 37 17.8 -0.3
USP Ospenovka 118.83 308 P PKPdf 20 37 17.9 -0.3
SNR=12
EKS2 Erkin-Say 119.29 307 P PKPdf 20 37 19.4 +0.3
SNR=9.3
EKS2 Erkin-Say 119.29 307 *e*PKPdf PKPdf 20 37 18.4 -0.7
EKS2 Erkin-Say 119.29 307 *e*PKIKP PKPdf 20 37 18.4 -0.7
AML Almayashu 119.29 306 P PKPdf 20 37 19.5 +0.4
SNR=9.8
AML Almayashu 119.29 306 *e*PKPdf PKPdf 20 37 19.2 +0.2
AML Almayashu 119.29 306 *e*PKIKP PKPdf 20 37 19.3 +0.2
VOSK Vostochnaya 121.58 318 PKIKP PKPdf 20 37 21.3 -1.9
VOSK pmax pmax
comp=Z,22nm,1.0s
KK31 Karatay Array 121.72 307 *c i*PKIKP PKPdf 20 37 23.0 -0.7
KK31 pmax pmax
comp=Z,13nm,0.8s
KKAR Karatay Array 121.72 307 *e*PKPdf PKPdf 20 37 23.1 -0.7
KKAR Karatay Array 121.72 307 *e*PKIKP PKPdf 20 37 23.1 -0.6
KBL Kabul 121.95 297 *e*PKPdf PKPdf 20 37 24.8 +0.3
KBL Kabul 121.95 297 *e*PKIKP PKPdf 20 37 24.8 +0.3
BRVK Borovoye 121.99 319 *e*PKPdf PKPdf 20 37 23.0 -0.9
BRVK Borovoye 121.99 319 *e*PKIKP PKPdf 20 37 23.0 -0.9
ZRNK Zerenda 122.77 319 PKIKP PKPdf 20 37 24.1 -1.3
ZRNK pmax pmax
comp=Z,15nm,0.8s
BOSA Boshof 123.60 204 PKP PKPdf 20 37 28.8 +0.9
comp=Z,6.1nm,0.9s,baz=152,slow=6.2,SNR=6.1
BOSA Boshof 123.60 204 PKIKP PKPdf 20 37 28.8 +0.9
DAG Danmarks Havn 125.87 6⇑*i*PKIKP PKPdf 20 37 29.7 -1.1
DAG Danmarks Havn 125.87 6⇑*iP* PKPdf 20 37 29.7 -1.1
DAG *i* 20 37 37.9
SUMG Summit 126.12 14 *i* P PKPdf 20 37 40.4 +9.1
SUMG Summit 126.12 14 *i* P PKPdf 20 37 40.9 +10
comp=Z,11nm,0.9s
SVE Sverdlovsk 126.98 324 *e*PKIKP PKPdf 20 37 33.3 -0.1
SVE pmax pmax
comp=Z,20nm,1.1s
SOKR Solikamsk 128.16 328 *d i*PKIKP PKPdf 20 37 35.4 -0.1
SOKR pmax pmax
comp=Z,40nm,1.4s
ARU Arti 128.19 324 *e*PKPdf PKPdf 20 37 35.5 -0.2
ARU Arti 128.19 324 *i* PKIKP PKPdf 20 37 35.3 -0.4
ARU 20 44 21.0
AB31 Akbulak array 128.83 315 *c i*PKIKP PKPdf 20 37 36.0 -1.1
AB31 pmax pmax

comp=Z,1.0nm,0.4s
ABKAR **Akbulak array** 128.83 315 *e*PKPdf PKPdf 20 37 36.9 -0.2
KEV **Kevo** 131.74 349 *e*PKIKP PKPdf 20 37 38.4 -3.7
KEV **Kevo** 131.74 349 *e*pkp PKPdf 20 37 38.4 -3.7
ARCES **ARCESS Array B** 132.19 349 PKhKP PKPpre 20 37 33.6
comp=Z,0.6nm,0.7s,baz=83,slow=3.8,SNR=3.7
ARCES PKP PKPdf 20 37 42.4 -0.5
comp=Z,6.5nm,0.8s,baz=122,slow=1.6,SNR=5.5
ARCES SKPbc SKPbc 20 40 54.6 +2.3
comp=Z,11nm,1.0s,baz=15,slow=5.0,SNR=18
ARCES **ARCESS Array B** 132.19 349 PKHKP PKPpre 20 37 33.7
ARCES 20 37 42.4
ARE0 **ARCESS Array S** 132.19 349 *e*PKPdf PKPdf 20 37 42.4 -0.6
PRGR **Permogore** 132.22 334 *e*PKIKP PKPdf 20 37 41.1 -2.1
PRGR pmax pmax
comp=Z,4.0nm,0.5s
LSZ **Lusaka** 133.91 215 *e*PKPdf PKPdf 20 37 48.5 +0.7
LSZ **Lusaka** 133.91 215 *e*PKIKP PKPdf 20 37 48.5 +0.7
KLMR **Klimovskoe** 135.07 335 *e*PKIKP PKPpre 20 37 42.2
KLMR *e* 20 40 22.7
KLMR pmax pmax
comp=Z,23nm,1.4s
JOF **Joensuu** 136.38 341 *e*PKHKP PKPpre 20 37 37.6
JOF **Joensuu** 136.38 341 *e*pkp PKPpre 20 37 37.6
KMBO **Kilima Mbogo** 138.31 239 PKP PKPdf 20 37 56.6 +0.6
comp=Z,5.1nm,0.9s,baz=0.3,slow=24,SNR=8.2
KMBO SKPbc SKPbc 20 41 16.9 +3.5
comp=Z,2.4nm,0.9s,baz=179,slow=24,SNR=3.8
KMBO **Kilima Mbogo** 138.31 239 *e*PKPdf PKPdf 20 37 56.8 +0.7
KMBO **Kilima Mbogo** 138.31 239 *e*PKIKP PKPdf 20 37 56.8 +0.7
KAF **Kangasniemi** 138.41 344 *e*PKHKP PKPpre 20 37 39.8
KAF **Kangasniemi** 138.41 344 *e*pkp PKPpre 20 37 39.8
FINES **FINESS Array B** 139.03 343 PKhKP PKPpre 20 37 46.0
comp=Z,3.2nm,0.8s,baz=43,slow=4.0,SNR=19
FINES PKP PKPdf 20 37 54.5 -1.4
comp=Z,9.2nm,0.6s,baz=104,slow=5.9,SNR=13
FINES SKPbc SKPbc 20 41 15.6 +1.9
comp=Z,11nm,0.9s,baz=93,slow=4.2,SNR=8.8
FINES **FINESS Array B** 139.03 343 PKP PKPpre 20 37 46.0
FINES PKP PKPdf 20 37 54.5 -1.4
FINES SKPbc SKPbc 20 41 15.6 +1.9
FINES **FINESS Array B** 139.03 343 PKHKP PKPpre 20 37 46.0
FINES 20 37 54.5
RDF **Al-Radifah** 139.63 287 *e*P PKPpre 20 37 50.1
RDF AMb AMB 20 37 53.2
comp=Z,38nm,1.1s
MIB **Mutribah** 139.86 289 *e*P PKPpre 20 37 49.8
MIB AMb AMB 20 37 51.9
comp=Z,25nm,0.6s
OBN **Obninsk** 139.87 330 ⇓PKHKP PKPpre 20 37 50.0
OBN *i* 20 37 57.3
OBN 20 40 58.0
OBN pmax pmax
comp=Z,12nm,0.6s
OBN pmax pmax
comp=Z,15nm,0.7s
NAY **Al-Naaiem** 139.92 288 *e*P PKPpre 20 37 49.9
NAY AMb AMB 20 37 54.5
comp=Z,8.7nm,0.9s
VSR **Storozhevoye** 140.76 324 *e*PKHKP PKPpre 20 37 52.7
VSR *e* 20 38 01.6
VSR pmax pmax
comp=N,1.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s
VORD **Divnogorie** 140.82 323 *e*PKHKP PKPpre 20 37 52.2
VORD *e* 20 38 01.6
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,5.0nm,0.5s
ZEI **Tsey** 141.11 309 *i* PKHKP PKPpre 20 37 51.6
ZEI pmax pmax
comp=Z,18nm,1.3s
GNI **Garni** 141.13 305 *e*P PKPpre 20 37 55.6
GNI **Garni** 141.13 305 *e*PKPpre PKPpre 20 37 54.4
GNI **Garni** 141.13 305 *e*PKHKP PKPpre 20 37 54.4
KIV **Kislovodsk** 141.61 312 *e*PKPpre PKPpre 20 37 55.2
KIV **Kislovodsk** 141.61 312 *e*PKHKP PKPpre 20 37 55.2
NOA **NORSAR Array B** 142.25 353 PKhKP PKPpre 20 37 56.6
comp=Z,3.5nm,0.7s,baz=21,slow=3.8,SNR=27
NOA SKPbc SKPbc 20 41 24.6 +2.4
comp=Z,3.9nm,0.9s,baz=14,slow=4.3,SNR=4.8
NOA **NORSAR Array B** 142.25 353 PKHKP PKPpre 20 37 56.6
HAKT **HAKKARI** 142.41 301 *i* P PKPpre 20 37 55.6
NAO01 **NORSAR Array S** 142.47 353 *e*PKPpre PKPpre 20 37 57.6
CUKT **Cukurca** 142.53 301 *e*P PKPpre 20 37 58.2
AGRB **Hanur-Agry** 142.56 305 *e*P PKPdf 20 37 59.9 -3.1
BCA **Borcka** 143.11 308 *e*P PKPdf 20 37 59.0 -4.8
DDEM **Demirkent** 143.16 307 *i* P PKPdf 20 38 00.4 -3.5
IZAR **Zarasai** 143.61 338 *e*P PKPdf 20 38 02.2 -2.0
ERZM **Erzurum** 143.71 306 *i* P PKPdf 20 38 02.5 -2.4
EZM **Erzurum** 143.71 306 *e*P PKPdf 20 38 03.7 -1.2
IDID **Didziasalis** 143.77 337 *e*P PKPdf 20 38 02.6 -1.9
IDID AMB AMB 20 38 03.9
comp=Z,10.0nm,0.9s
KONO **Kongsberg** 143.78 354 *e*PKPpre PKPpre 20 38 01.6
KONO **Kongsberg** 143.78 354 *e*PKIKP PKPdf 20 38 01.6 -2.8
ISAL **Salakas** 143.79 338 *e*P PKPdf 20 38 02.6 -1.9
ISAL AMB AMB 20 38 04.2
comp=Z,21nm,1.1s
IIGN **Ignalina** 143.93 337 *e*P PKPdf 20 38 03.0 -1.8
IIGN AMB AMB 20 38 04.6
comp=Z,29nm,1.0s
MNK **Minsk** 143.99 335 *e*PKIKP PKPdf 20 38 02.0 -2.9
MNK pmax pmax
comp=E,120nm,1.6s
MNK pmax pmax
comp=N,120nm,1.5s
MNK pmax pmax
comp=Z,320nm,1.3s
NACGM **Naroch** 144.08 336 *e* PKPdf 20 38 01.0 -4.1
BNGL **BINGOL** 144.10 304 *i* P PKPdf 20 38 03.9 -1.8
BEST **Besiri** 144.24 302 *i* P PKPdf 20 38 05.5 -0.4
BAYT **Ayd¨–ntepe-Bay** 144.48 307 *e*P PKPdf 20 38 05.0 -1.2
MACK **Trabzon** 144.59 308 *i* P PKPdf 20 38 05.3 -1.2
SINT **Bingol** 144.62 304 *e*P PKPdf 20 38 06.3 -0.2
MARD **Mardin** 144.74 302 *i* P PKPdf 20 38 04.2 -2.6
ANN **Anapa** 144.79 315*c* *i*PKIKP PKPdf 20 38 05.6 -1.1
ANN pmax pmax
comp=Z,666nm,1.2s
GUMT **Gumushane** 144.94 307 *e*P PKPdf 20 38 08.0 +1.0
RSC **Scourie** 144.96 7 *e*P PKPdf 20 38 05.4 -1.1
RRH **Rhenigidale** 145.18 9 *e*P PKPdf 20 38 06.2 -0.7
KELT **Kelkit** 145.20 307 *i* P PKPdf 20 38 07.1 -0.4
KELT *i* P 20 38 07.8
EZC **Erzincan** 145.24 306 *e*P PKPdf 20 38 09.5 +1.9
RRR **Rubha Reidh** 145.36 8 *e*P PKPdf 20 38 07.0 -0.2
PTK **Pertek** 145.44 305 *e*P PKPdf 20 38 08.7 +0.7
MVH1 **Achvaich** 145.48 6 *e*P PKPdf 20 38 06.9 -0.5
SVRC **Sivrice-ELAZID** 145.64 304 *e*P PKPdf 20 38 10.6 +2.2
KAC **Achnashellach** 145.77 8 *e*P PKPdf 20 38 08.0 +0.1
ELZG **Elazig** 145.85 304 *i* P PKPab 20 38 10.8 +0.5
KPL **Plockton** 145.88 8 *e*P PKPdf 20 38 08.4 +0.3
MCD **Coleburn Disti** 145.91 6 *e*P PKPdf 20 38 09.6 +1.4
MDO **Dochfour** 145.94 7 *e*P PKPdf 20 38 08.3 +0.1
KEMA **Kemaliye** 146.01 306 *i* P PKPdf 20 38 10.3 +1.3
SUW **Suwalki** 146.06 338 *e*PKP PKPdf 20 38 09.1 +0.6
SUW *e* 20 38 10.4
SUW **Suwalki** 146.06 338 *e*PKPbc PKPdf 20 38 09.6 +1.1
SUW **Suwalki** 146.06 338 *e*PKP2 PKPdf 20 38 09.1 +0.6
KIEV **Kiev** 146.13 329 *e*PKPbc PKPdf 20 38 09.6 +0.8
KIEV **Kiev** 146.13 329 *e*PKP2 PKPdf 20 38 09.6 +0.9
MYA **Malataya** 146.32 304 *e*P PKPdf 20 38 11.0 +1.6
MALT **Malatya** 146.32 304 *e*P PKPab 20 38 11.9 -0.3
MALT **Malatya** 146.32 304 *e*PKPdf PKPdf 20 38 09.8 +0.3
MALT **Malatya** 146.32 304 ⇑PKP2 PKPab 20 38 11.7 -0.5
MALT **Malatya** 146.32 304 ⇑*i*P PKPab 20 38 11.7 -0.5
RSDY **Resadiye-TOKAT** 146.52 308 *e*P PKPab 20 38 12.7 -0.3
ATAB **Bozova** 146.63 303 *i* P PKPab 20 38 10.3 +0.2
AKCD **Akcadag** 146.71 304 *i* P PKPdf 20 38 11.7 +1.6
SIM **Simferopol'** 146.82 317 *e*PKIKP PKPdf 20 38 10.1 0.0
SIM pmax pmax
comp=Z,117nm,1.1s
ERBA **Erbaa** 146.84 309 *i* P PKPbc 20 38 12.3 -0.1
SCER **sogukcermik** 146.84 307 *i* P PKPdf 20 38 12.0 +1.7
SVSK **Karacayir** 146.92 307 *e*P PKPab 20 38 14.0 -0.5
MUD **Monsted U'grnd** 146.96 353 ⇑*i*PKP2 PKPbc 20 38 11.8 -0.4
MUD **Monsted U'grnd** 146.96 353 ⇑*i*P PKPbc 20 38 11.8 -0.4
MUD *i* 20 38 58.8
EAB **Aberfoyle** 147.17 7 *e*P PKPdf 20 38 07.8 -2.5

EBH **Black Hill** 147.20 6 *e*P PKPbc 20 38 12.4 -0.5
KVT **Kavak** 147.20 310 *e*P PKPdf 20 38 09.3 -1.6
GZT **Gaziantep** 147.23 303 *i* P PKPbc 20 38 12.8 -0.8
COP **Copenhagen** 147.28 350 *i* PKP2 PKPbc 20 38 14.0 +0.9
COP **Copenhagen** 147.28 350 *i* P PKPbc 20 38 14.0 +0.9
BSD **Bornholm Skovb** 147.36 347⇑*e*PKP2 PKPbc 20 38 12.8 -0.6
BSD pmax pmax
comp=Z,71nm,0.9s
BSD **Bornholm Skovb** 147.36 347 *i* P PKPdf 20 38 12.1 +1.4
BSD **Bornholm Skovb** 147.36 347⇑*i*P PKPbc 20 38 12.8 -0.6
comp=Z,71nm,0.9s
PGBU **Glenifferbraes** 147.52 8 *e*P PKPbc 20 38 13.0 -0.8
SARI **SarD1z-Kayseri** 147.52 305 *e*P PKPbc 20 38 15.3 +1.0
GAZ **Gaziantep** 147.54 302 *e*P PKPbc 20 38 15.4 +1.0
EDI **Edinburgh** 147.55 6 *e*P PKPdf 20 38 11.6 +0.6
EAU **Auchinoon** 147.60 6 *e*P PKPbc 20 38 13.5 -0.5
ESY **Stoneypath** 147.61 6 *e*P PKPbc 20 38 13.1 -0.9
KMRS **Kahramanmaras** 147.70 303 *e*P PKPbc 20 38 15.5 +0.7
EBL **Broad Law** 147.71 6 *e*P PKPbc 20 38 13.1 -1.2
PINB **Pinarbasi** 147.75 305 *i* P PKPbc 20 38 15.1 +0.2
KUZU **Kuzuini** 147.75 302 *i* P PKPbc 20 38 14.5 -0.5
BYBT **Boyabat** 147.94 311 *e*P PKPbc 20 38 16.7 +1.3
ANDN **Andirin** 148.10 304 *i* P PKPbc 20 38 15.5 -0.5
ESK **Eskdalemuir** 148.15 6 *e*P PKPdf 20 38 13.6 +1.7
ESK **Eskdalemuir** 148.15 6 *i* PKP2 PKPbc 20 38 15.8 +0.4
WAR **Warsaw** 148.26 338 *e*PKP PKPbc 20 38 16.8 +1.0
WAR *e* 20 38 20.5
WAR **Warsaw** 148.26 338 *e*PKP2 PKPbc 20 38 16.8 +1.0
ECK **Cauldkaine Hil** 148.29 6 *e*P PKPbc 20 38 15.2 -0.6
GAL1 **Galloway** 148.42 8 *e*P PKPbc 20 38 15.7 -0.4
GKP **Gorka Klasztor** 148.51 343 *e*PKP PKPbc 20 38 16.6 +0.2
GKP *e* 20 38 18.8
GKP **Gorka Klasztor** 148.51 343 *e*PKP2 PKPbc 20 38 16.6 +0.2
GCD **Castle Douglas** 148.51 7 *e*P PKPbc 20 38 15.0 -1.4
KOZT **Kozan** 148.53 304 *e*P PKPbc 20 38 17.6 +0.5
CORM **Corum** 148.53 309 *e*P PKPbc 20 38 18.3 +1.4
HTY **Hatay** 148.64 301 *e*P PKPbc 20 38 15.5 -1.8
XAL **Allendale** 148.69 5 *e*P PKPbc 20 38 15.8 -1.0
CEYT **Ceyhan** 148.72 303 *e*P PKPbc 20 38 16.2 -1.3
KIS **Kishinev** 148.75 324⇑*i*PKP PKPbc 20 38 16.0 -1.2
KIS M 20 38 16.5
comp=Z,300nm,1.5s
KIS **Kishinev** 148.75 324α *i*PKIKP PKPbc 20 38 16.0 -1.2
KIS *e* 20 39 02.0
KIS pmax pmax
comp=Z,300nm,1.5s
KIS pmax pmax
comp=Z,400nm,2.0s
GMM **Mts of Mourne** 148.85 10 *e*P PKPbc 20 38 16.8 -0.4
AVNT **Avonos** 148.86 306 *i* P PKPdf 20 38 12.5 -1.2
XDE **Dent Fell** 148.92 7 *e*P PKPbc 20 38 16.6 -0.8
LVV **L'vov** 149.06 333 *e*PKP2 PKPbc 20 38 17.9 0.0
KARA **Karaisali** 149.18 304 *e*P PKPdf 20 38 14.1 -0.2
IAS **Iasi** 149.28 326 PKP2 PKPbc 20 38 19.0 +0.4
GULE **Gulek** 149.38 304 *i* P PKPbc 20 38 19.6 +0.5
BR131 **Keskin Array S** 149.41 309 *e*PKPdf PKPdf 20 38 14.3 -0.2
BR131 *e*PKPbc PKPbc 20 38 19.1 0.0
BRTR **Keskin Array B** 149.41 309 PKP PKPdf 20 38 13.7 -0.9
comp=Z,14nm,1.3s,baz=127,slow=3.3,SNR=12
BRTR PKPbc PKPbc 20 38 19.4 +0.2
comp=Z,17nm,0.7s,baz=132,slow=4.1,SNR=58
BRTR **Keskin Array B** 149.41 309 PKIKP PKPdf 20 38 13.7 -0.8
HPK **Haverah Park** 149.64 5 *e*P PKPbc 20 38 17.9 -1.3
KWP **Kalwaria Pacla** 149.75 334 *e*PKP PKPbc 20 38 19.5 -0.2
KWP *e* 20 38 25.9
KWP **Kalwaria Pacla** 149.75 334 *e*PKPbc PKPbc 20 38 19.7 0.0
KWP **Kalwaria Pacla** 149.75 334 *e*PKP2 PKPbc 20 38 19.5 -0.1
KWP **Kalwaria Pacla** 149.75 334 ⇓*i*P PKPbc 20 38 20.5 +0.9
BBAL **Bala** 149.85 309 *i* P PKPbc 20 38 19.0 -1.2
TLCR 149.85 322 ⇑PKP2 PKPbc 20 38 20.3 +0.3
TLCR 149.85 322 ⇑*i*P PKPbc 20 38 20.3 +0.3
RUE **Ruedersdorf** 150.07 346 *e*PKPbc PKPbc 20 38 21.0 +0.7
GHRR 150.09 324 ⇑*i*P PKPbc 20 38 21.8 +1.2
BUR08 **Bucovina Ar. S** 150.14 329 PKPdf PKPdf 20 38 16.3 +0.9
BUR08 *e*PKPbc PKPbc 20 38 21.4 +0.7
BURAR **Bucovina Array** 150.15 329 ⇑PKP2 PKPbc 20 38 22.0 +1.3
BURAR **Bucovina Array** 150.15 329 ⇑*i*P PKPbc 20 38 22.0 +1.3
SGKT **Sivrigoynuk** 150.18 311 *i* P PKPbc 20 38 20.5 -0.4
TESR 150.20 326 ⇓*i*P PKPbc 20 38 21.2 +0.4
CFR **Carcaliu** 150.24 322 ⇑PKIKP PKPbc 20 38 21.6 +0.6
CFR **Carcaliu** 150.24 322 ⇑*i*P PKPbc 20 38 21.6 +0.6
OJC **Ojcow** 150.38 338 *e*PKPdf PKPdf 20 38 15.8 +0.1
OJC *e*PKiKP PKiKP 20 38 20.8 -1.0
OJC **Ojcow** 150.38 338 *e*PKIKP PKPdf 20 38 15.8 +0.1
PETR 150.40 324 ⇓*i*P PKPbc 20 38 22.2 +0.9
STNC **Stoke** 150.44 6 *e*P PKPbc 20 38 21.0 -0.2
KOLS **Kolonicke sedl** 150.48 333 *e*PKP PKPdf 20 38 16.0 +0.1
KOLS *e* 20 38 22.5
KOLS **Kolonicke sedl** 150.48 333 *e*PKIKP PKPdf 20 38 16.0 +0.1
KOLS **Kolonicke sedl** 150.48 333 *e*PKP PKPdf 20 38 16.0 +0.1
KOLS *e* 20 38 22.5
TIRR **Tirgusor** 150.52 321 *e*PKPbc PKPbc 20 38 21.7 +0.1
TIRR **Tirgusor** 150.52 321 ⇑PKIKP PKPbc 20 38 21.9 +0.3
TIRR **Tirgusor** 150.52 321 ⇑*i*P PKPbc 20 38 21.9 +0.3
PHNC **Paralimni** 150.57 300 P PKPbc 20 38 21.8 -0.3
comp=Z,2.0nm,0.9s
VRI **Vrincioaia** 150.58 325 ⇑PKIKP PKPbc 20 38 21.8 +0.1
VRI **Vrincioaia** 150.58 325 ⇑*i*P PKPbc 20 38 21.8 +0.1
PLOR **Plostina** 150.63 325 ⇑PKIKP PKPbc 20 38 21.8 -0.1
PLOR **Plostina** 150.63 325 ⇑*i*P PKPbc 20 38 21.8 -0.1
NRDL **Niedersach Rie** 150.72 351 *e*PKPdf PKPdf 20 38 16.3 +0.1
NRDL *e*PKPbc PKPbc 20 38 22.3 +0.4
NRDL *e*pPKPbc pPKPbc 20 39 10.9 +1.6
CRVS **Cervenica-Dubn** 150.83 334 *e*PKP PKPdf 20 38 16.1 -0.3
CRVS *e* 20 38 22.9
CRVS *e* 20 38 31.2
CRVS **Cervenica-Dubn** 150.83 334 *e*PKIKP PKPdf 20 38 16.1 -0.3
CRVS **Cervenica-Dubn** 150.83 334 *e*PKP PKPdf 20 38 16.1 -0.3
CRVS *e* 20 38 22.9
CRVS *e* 20 38 31.2
NIE **Niedzica** 150.86 336 *e*PKPdf PKPdf 20 38 17.2 +0.7
NIE *e* 20 38 23.3
NIE **Niedzica** 150.86 336 *e*PKIKP PKPdf 20 38 17.2 +0.7
CWF **Charnwood Fore** 150.87 5 *e*P PKPbc 20 38 20.1 -2.1
BMR **Baia Mare** 150.91 330 ⇑PKIKP PKPbc 20 38 23.2 +0.7
BMR **Baia Mare** 150.91 330 ⇑*i*P PKPbc 20 38 23.2 +0.7
KSP **Ksiaz** 150.94 342 *e*PKP PKPbc 20 38 22.7 +0.3
KSP *e* 20 38 29.6
TRPA **Tarpa** 150.99 332 ⇑*i*P PKPbc 20 38 22.8 +0.2
ERMK **Ermenek** 151.00 303 *i* P PKPdf 20 38 17.0 -0.1
AMRR **Amara** 151.04 322 ⇑*i*P PKPbc 20 38 24.0 +1.1
PSN **Preselentsi** 151.10 320 P PKPbc 20 38 22.7 -0.3
CSS **Prodhromos** 151.14 300 P PKPbc 20 38 22.6 -0.8
comp=Z,1.1nm,0.7s
MAMC **Mammari** 151.18 300 P PKPbc 20 38 22.8 -0.7
IBBN **Ibbenburen** 151.20 354 *e*PKPbc PKPbc 20 38 23.4 +0.4
IBBN *e* 20 38 30.7
IBBN *e*pPKPbc pPKPab 20 39 12.1 -5.4
DOPR **Dopca** 151.21 326 ⇑*i*P PKPbc 20 38 23.5 +0.3
MLR **Muntele Rosu** 151.24 325 ⇑PKIKP PKPbc 20 38 23.8 +0.5
MLR **Muntele Rosu** 151.24 325 ⇑*i*P PKPbc 20 38 23.8 +0.5
OKC **Ostrava-Krasne** 151.26 339 *e*PKIKP PKPdf 20 38 17.5 +0.4
OKC *e* 20 38 30.0
OKC **Ostrava-Krasne** 151.26 339 *e*PKPDF PKPdf 20 38 17.5 +0.4
OKC ⇑*e*PKP PKPbc 20 38 23.5 +0.3
OKC *e*PKPAB PKPab 20 38 30.0 -1.8
CLZ **Clausthal** 151.31 350 *e*PKPdf PKPdf 20 38 17.6 +0.5
CLZ *e*PKPbc PKPbc 20 38 24.1 +0.9
CLZ *e* 20 38 31.0
CLZ *e*pPKPbc pPKPab 20 39 12.8 -5.1
CLZ **Clausthal** 151.31 350 *e*PKPdf PKPdf 20 38 17.6 +0.5
CLZ *e*PKPbc PKPbc 20 38 24.1 +0.9
CLZ *e* 20 38 31.0
CLZ *e*pPKPbc pPKPab 20 39 12.8 -5.1
CLZ **Clausthal** 151.31 350 *e*PKIKP PKPdf 20 38 17.6 +0.5
CLZ *e* 20 38 31.0
CLZ *e* 20 39 12.8
UPC **Upice** 151.32 342 *e*PKIKP PKPdf 20 38 17.7 +0.6
UPC **Upice** 151.32 342 *e*PKPDF PKPdf 20 38 17.7 +0.6
UPC ⇑*e*PKP PKPdf 20 38 23.9 +6.8
CLL **Collm** 151.33 346 *e*PKPdf PKPdf 20 38 17.2 +0.1
CLL *e*PKPbc PKPbc 20 38 23.9 +0.6
CLL *e*pPKPbc pPKPab 20 39 12.7 -5.3
CLL **Collm** 151.33 346 *e*PKP PKPdf 20 38 17.0 -0.1
CLL ⇑*i*PKP PKPbc 20 38 23.6 +0.3
CLL ⇓*i*PKP PKPab 20 38 30.3 -1.7
CLL *i* pPKP pPKPab 20 39 12.7 -5.3
CLL **Collm** 151.33 346 *e*PKIKP PKPdf 20 38 17.0 -0.1
CLL *i* 20 38 30.3
CLL *i* 20 39 12.7

CLL **Collm** 151.33 346 *e*PKPdf PKPdf 20 38 17.0 -0.1
CLL ⇑*i*PKPbc PKPbc 20 38 23.6 +0.3
comp=Z,83nm,1.0s
CLL ⇓*i*PKPab PKPab 20 38 30.3 -1.7
comp=Z,117nm,0.8s
CLL *e* 20 38 45.0
CLL *e*pPKPdf pPKPbc 20 39 09.0 -1.7
CLL *i* pPKPbc pPKPab 20 39 12.7 -5.3
CLL *e*PKSdf 20 41 50.0
CLL *i* 20 41 54.1
CLL *e*PP PP 20 42 03.0 0.0
DPC **Dobruska-Polom** 151.38 342 *e*PKIKP PKPdf 20 38 17.7 +0.5
DPC *e* 20 38 30.6
DPC **Dobruska-Polom** 151.38 342 *e*PKPDF PKPdf 20 38 17.7 +0.5
DPC ⇑*e*PKP PKPbc 20 38 24.2 +0.8
DPC *e*PKPAB PKPab 20 38 30.6 -1.7
MCH1 **Michaelchurch** 151.44 7 *e*P PKPbc 20 38 23.2 -0.4
ESKT **Eskisehir** 151.47 310 *i* P PKPbc 20 38 22.8 -1.2
MORC **Moravsky Berou** 151.51 340 *e*PKPdf PKPdf 20 38 17.9 +0.4
MORC *e*PKPbc PKPbc 20 38 24.1 +0.4
MORC **Moravsky Berou** 151.51 340 ⇑PKIKP PKPbc 20 38 24.2 +0.4
MORC **Moravsky Berou** 151.51 340 ⇑*i*P PKPbc 20 38 24.2 +0.4
BRG **Berggiesshubel** 151.53 345 *e*PKPdf PKPdf 20 38 17.7 +0.3
BRG *e*PKPbc PKPbc 20 38 24.5 +0.7
BRG *e* 20 38 31.1
BRG *e*pPKPbc pPKPab 20 39 13.3 -5.6
BRG **Berggiesshubel** 151.53 345 *i* PKP PKPdf 20 38 17.2 -0.3
comp=Z,13nm,1.3s
BRG *i* 20 38 24.1
comp=Z,74nm,1.2s
BRG *i* 20 38 31.1
comp=Z,76nm,0.8s
BRG *e* 20 38 59.5
comp=Z,76nm,2.1s
BRG pPKP pPKPab 20 39 13.3 -5.6
comp=Z,17nm,0.9s
BRG **Berggiesshubel** 151.53 345 *i* PKIKP PKPdf 20 38 17.2 -0.2
BRG *i* 20 38 31.1
BRG *e* 20 38 59.5
BRG 20 39 13.3
BRG pmax pmax
comp=Z,4.0nm,1.3s
BRG pmax pmax
comp=Z,8.0nm,1.2s
BRG pmax pmax
comp=Z,44nm,0.8s
BRG pmax pmax
comp=Z,46nm,2.2s
BRG pmax pmax
comp=Z,46nm,0.9s
KECS **Kecovo** 151.55 335 *e*PKP PKPbc 20 38 24.8 +0.9
KECS *e* 20 38 31.6
KECS **Kecovo** 151.55 335 *e*PKIKP PKPbc 20 38 24.8 +0.9
KECS *e* 20 38 31.6
KECS **Kecovo** 151.55 335 *e*PKP PKPbc 20 38 24.8 +0.9
KECS *e* 20 38 31.6
FBE **Freiberg** 151.62 346 *e*PKPdf PKPdf 20 38 18.2 +0.6
FBE *e*PKPbc PKPbc 20 38 25.0 +1.0
FBE *e* 20 38 31.7
FBE *e*pPKPbc pPKPab 20 39 13.9 -5.3
ALFC **Alevga** 151.67 301 P PKPbc 20 38 23.5 -1.1
comp=Z,1.5nm,0.5s
NEUB **Neuenburg** 151.68 348 *e*PKPdf PKPdf 20 38 17.9 +0.3
NEUB *e*PKPbc PKPbc 20 38 24.7 +0.6
NEUB *e* 20 38 31.6
NEUB *e*PKPab PKPab 20 38 33.7 +0.2
NEUB *e*pPKPbc pPKPab 20 39 13.6 -5.9
PVCC **Panska Ves** 151.69 344 *e*PKIKP PKPdf 20 38 18.2 +0.5
PVCC **Panska Ves** 151.69 344 *e*PKPDF PKPdf 20 38 18.2 +0.5
PVCC ⇑*e*PKP PKPdf 20 38 24.8 +7.1
VOIR 151.75 326 ⇓PKIKP PKPbc 20 38 23.2 -1.2
VOIR 151.75 326 ⇓*i*P PKPbc 20 38 23.2 -1.2
HGH **Gray Hill** 151.82 7 *e*P PKPbc 20 38 23.6 -0.8
DRGR 151.93 330 ⇑PKIKP PKPbc 20 38 25.0 +0.2
DRGR 151.93 330 ⇑*i*P PKPbc 20 38 25.0 +0.2
PPCY **Paphos** 151.95 300 P PKPbc 20 38 23.8 -1.5
BUG **Bochum--Univer** 152.11 354 *e*PKPdf PKPdf 20 38 18.4 +0.1
BUG *e*PKPbc PKPbc 20 38 25.3 +0.2
BUG *e* 20 38 32.5
VYHS **Vyhne** 152.17 337 *e*PKP PKPdf 20 38 17.8 -0.7
VYHS *e* 20 38 25.6
VYHS *e* 20 38 36.8
VYHS **Vyhne** 152.17 337 *e*PKIKP PKPdf 20 38 17.8 -0.7
VYHS **Vyhne** 152.17 337 *e*PKP PKPdf 20 38 17.8 -0.7
VYHS *e* 20 38 25.6
VYHS *e* 20 38 36.8
PRU **Pruhonice** 152.19 343 *e*PKIKP PKPdf 20 38 19.0 +0.5
PRU *e* 20 38 32.9
PRU **Pruhonice** 152.19 343 *e*PKPDF PKPdf 20 38 19.0 +0.5
PRU ⇑*e*PKP PKPbc 20 38 26.4 +1.1
PRU *e*PKPAB PKPab 20 38 32.9 -2.8
VRAC **Vranov** 152.22 340 PKIKP PKPbc 20 38 26.2 +0.8
VRAC **Vranov** 152.22 340 ⇑*i*P PKPab 20 38 32.6 -3.2
PSZ **Piszkesteto** 152.24 335 *e*PKPbc PKPbc 20 38 25.6 +0.1
PSZ **Piszkesteto** 152.24 335 *e*PKIKP PKPbc 20 38 25.6 +0.1
PSZ **Piszkesteto** 152.24 335 ⇑*i*P PKPbc 20 38 26.1 +0.6
PSZ **Piszkesteto** 152.24 335 ⇓*e*PKP PKPbc 20 38 26.1 +0.6
MOX **Moxa** 152.25 348 *e*PKP PKPbc 20 38 25.7 +0.3
comp=Z,46nm,1.3s
MOX *e* 20 38 32.7
comp=Z,86nm,1.3s
MOX **Moxa** 152.25 348 *e*PKPdf PKPdf 20 38 18.5 0.0
MOX *e*PKPbc PKPbc 20 38 25.9 +0.5
MOX *e* 20 38 32.9
MOX *e*PKPab PKPab 20 38 35.9 0.0
MOX **Moxa** 152.25 348 *e*PKIKP PKPbc 20 38 25.7 +0.3
MOX *e* 20 38 32.7
HEX **Exmoor** 152.25 9 *e*P PKPbc 20 38 23.8 -1.6
KOLL **Kolacno** 152.25 337 *e*PKP PKPbc 20 38 26.0 +0.5
KOLL *e* 20 38 37.1
KOLL **Kolacno** 152.25 337 *e*PKIKP PKPbc 20 38 26.0 +0.5
KOLL **Kolacno** 152.25 337 *e*PKP PKPbc 20 38 26.0 +0.5
KOLL *e* 20 38 37.1
PLN **Plauen** 152.29 347 *e*PKPdf PKPdf 20 38 18.9 +0.3
PLN *e*PKPbc PKPbc 20 38 26.1 +0.6
PLN *e* 20 38 33.0
PLN *e*PKPab PKPab 20 38 36.3 +0.2
TANN **Tannenbergstha** 152.29 346 *e*PKPdf PKPdf 20 38 18.9 +0.3
TANN *e*PKPbc PKPbc 20 38 26.2 +0.7
TANN *e* 20 38 33.1
TANN *e*PKPab PKPab 20 38 36.4 +0.3
WERD **Werda** 152.29 347 *e*PKPdf PKPdf 20 38 18.8 +0.2
WERD *e*PKPbc PKPbc 20 38 26.1 +0.6
WERD *e* 20 38 33.0
WERD *e*PKPab PKPab 20 38 36.4 +0.3
UBBA **Unterbreizbach** 152.37 350 *e*PKPbc PKPbc 20 38 25.8 +0.1
UBBA *e* 20 38 32.8
GUNZ **Gunzen** 152.37 347 *e*PKPdf PKPdf 20 38 19.0 +0.3
GUNZ *e*PKPbc PKPbc 20 38 26.5 +0.8
GUNZ *e* 20 38 33.3
GUNZ *e*PKPab PKPab 20 38 36.7 +0.3
WERN **Wernitzgruen** 152.43 347 *e*PKPdf PKPdf 20 38 19.3 +0.5
WERN *e*PKPbc PKPbc 20 38 26.7 +0.9
WERN *e* 20 38 33.5
WERN *e*PKPab PKPab 20 38 37.0 +0.3
NKC **Novy Kostel** 152.47 346 *e*PKIKP PKPdf 20 38 18.9 0.0
NKC *e* 20 38 33.0
NKC **Novy Kostel** 152.47 346 *e*PKPDF PKPdf 20 38 18.9 0.0
NKC ⇑*e*PKP PKPbc 20 38 26.4 +0.5
NKC *e*PKPAB PKPab 20 38 33.0 -3.8
TREC **Trest** 152.56 342 *e*PKIKP PKPdf 20 38 19.0 0.0
TREC **Trest** 152.56 342 *e*PKPDF PKPdf 20 38 19.0 0.0
TREC ⇑*e*PKP PKPbc 20 38 26.2 +0.1
SZH **Strazhica** 152.67 321 P PKPbc 20 38 25.5 -1.1
MODS **Modra-Piesok** 152.82 338 *e*PKP PKPbc 20 38 27.5 +0.8
MODS *e* 20 38 39.5
MODS **Modra-Piesok** 152.82 338 *e*PKIKP PKPbc 20 38 27.5 +0.8
MODS **Modra-Piesok** 152.82 338 *e*PKP PKPbc 20 38 27.5 +0.8
MODS *e* 20 38 39.5
KORT **Korkueli** 152.82 306 *i* P PKPdf 20 38 18.3 -1.5
BEBN **Eben Emael** 152.88 356 PKPab PKPab 20 38 34.7 -3.8
GZR **Gura Zlata** 152.92 328 ⇑PKIKP PKPbc 20 38 26.8 -0.3
GZR **Gura Zlata** 152.92 328 ⇑*i*P PKPbc 20 38 26.8 -0.3
ROTZ **Rotzenmuhle** 152.96 346 *e*PKPdf PKPdf 20 38 19.7 +0.1
ROTZ *e*PKPbc PKPbc 20 38 27.7 +0.7
ROTZ *e* 20 38 34.5
ROTZ *e*PKPab PKPab 20 38 39.5 +0.6
ZST **Bratislava** 153.03 338 *e*PKP PKPbc 20 38 28.8 +1.6
ZST *e* 20 38 40.4
ZST **Bratislava** 153.03 338 *e*PKIKP PKPbc 20 38 28.8 +1.6
ZST **Bratislava** 153.03 338 *e*PKP PKPbc 20 38 28.8 +1.6

ZST						20 38 40.4	
MEM	**Membach**	**153.04 355**		PKPbc	PKPbc	20 38 26.9	-0.2
MEM				PKPab	PKPab	20 38 35.2	-4.1
TNS	**Taunus Mts**	**153.17 352**	*e*	PKPbc	PKPbc	20 38 28.0	+0.5
TNS			*e*			20 38 35.1	
TNS			*e*	PKPab	PKPab	20 38 39.7	-0.1
TNS	**Taunus Mts**	**153.17 352**	*e*	PKPbc	PKPbc	20 38 28.0	+0.5
TNS			*e*			20 38 35.1	
TNS			*e*	PKPab	PKPab	20 38 39.7	-0.1
TNS	**Taunus Mts**	**153.17 352**	*e*	PKIKP	PKPbc	20 38 28.0	+0.5
TNS			*e*			20 38 39.7	
KHC	**Kasperske Hory**	**153.23 344**	*e*	PKPDF	PKPdf	20 38 20.0	0.0
KHC			⇑*e*	PKP	PKPbc	20 38 28.0	+0.4
KHC			*ex*		x	20 38 34.6	
KHC			*e*	PKPAB	PKPab	20 38 40.7	+0.6
GRA1	**Grafenberg Arr**	**153.23 348**	*e*	PKPdf	PKPdf	20 38 20.3	+0.3
GRA1			*e*	PKPbc	PKPbc	20 38 28.3	+0.7
GRA1			*e*			20 38 35.1	
GRA1			*e*	PKPab	PKPab	20 38 40.6	+0.5
GRF	**Grafenberg Arr**	**153.23 348**	*e*	PKPdf	PKPdf	20 38 20.3	+0.3
GRF			*e*	PKPbc	PKPbc	20 38 28.3	+0.7
GRF			*e*			20 38 35.1	
GRF			*e*	PKPab	PKPab	20 38 40.6	+0.5
GRF	**Grafenberg Arr**	**153.23 348**	*e*	PKIKP	PKPdf	20 38 20.3	+0.3
GRFO	**Grafenberg**	**153.23 348**	*e*	PKPab	PKPab	20 38 40.4	+0.3
GRFO	**Grafenberg**	**153.23 348**	*e*	PKP2	PKPab	20 38 40.4	+0.3
SNF	**Seneffe**	**153.24 358**		PKPbc	PKPbc	20 38 27.8	+0.2
SNF				PKPab	PKPab	20 38 35.3	-4.8
BCLA	**Clavier**	**153.28 356**		PKPbc	PKPbc	20 38 28.1	+0.4
BCLA				PKPab	PKPab	20 38 40.4	+0.1
BZS	**Buzias**	**153.31 330**	⇑	PKIKP	PKPbc	20 38 27.7	-0.2
BZS	**Buzias**	**153.31 330**	⇑	*i*P	PKPbc	20 38 27.7	-0.2
WET	**Wettzell**	**153.39 345**	*e*	PKPdf	PKPdf	20 38 20.2	0.0
WET			*e*	PKPbc	PKPbc	20 38 28.5	+0.5
WET			*e*			20 38 35.3	
WET			*e*	PKPab	PKPab	20 38 41.4	+0.6
WET	**Wettzell**	**153.39 345**	*e*	PKPdf	PKPdf	20 38 20.2	0.0
WET			*e*	PKPbc	PKPbc	20 38 28.5	+0.5
WET			*e*			20 38 35.3	
WET			*e*	PKPab	PKPab	20 38 41.4	+0.6
WET	**Wettzell**	**153.39 345**	*e*	PKIKP	PKPdf	20 38 20.2	0.0
GEC2	**GERESS Array S**	**153.46 344**	*e*	PKPdf	PKPdf	20 38 20.2	-0.1
GEC2			*e*	PKPbc	PKPbc	20 38 28.6	+0.5
GEC2			*e*			20 38 35.4	
GEC2			*e*	PKPab	PKPab	20 38 41.5	+0.4
GEC2	**GERESS Array S**	**153.46 344**	*e*	PKPdf	PKPdf	20 38 20.2	-0.1
GEC2			*e*	PKPbc	PKPbc	20 38 28.6	+0.5
GEC2			*e*			20 38 35.4	
GEC2			*e*	PKPab	PKPab	20 38 41.5	+0.4
GEC2	**GERESS Array S**	**153.46 344**	*e*	PKIKP	PKPdf	20 38 20.2	-0.1
GEC2			*e*			20 38 41.5	
GERES	**GERESS Array B**	**153.46 344**		PKP	PKPdf	20 38 19.9	-0.4
	comp=Z,3.0nm,1.0s,baz=354,slow=1.3,SNR=16						
GERES				PKPbc	PKPbc	20 38 28.3	+0.1
	comp=Z,6.3nm,0.9s,baz=48,slow=2.0,SNR=20						
GERES	**GERESS Array B**	**153.46 344**		PKP	PKPdf	20 38 19.9	-0.4
GERES				PKPbc	PKPbc	20 38 28.3	+0.1
GERES	**GERESS Array B**	**153.46 344**		PKIKP	PKPdf	20 38 19.9	-0.4
DOU	**Dourbes**	**153.64 357**		PKPbc	PKPbc	20 38 28.9	+0.4
DOU				PKPab	PKPab	20 38 36.4	-5.4
SOP	**Sopron**	**153.66 339**	⇑	*e*PKP	PKPbc	20 38 28.7	+0.1
CONA	**Conrad Observa**	**153.67 340**	⇑	*i*PKPdf	PKPdf	20 38 21.2	+0.5
	comp=Z,7.4nm,1.5s,SNR=8.3						
WLF	**Walferdange**	**153.97 355**		PKPbc	PKPbc	20 38 30.1	+0.9
WLF				PKPab	PKPab	20 38 37.5	-5.7
WLF	**Walferdange**	**153.97 355**	*e*	PKPbc	PKPbc	20 38 30.2	+1.0
WLF			*e*			20 38 37.4	
WLF			*e*	PKPab	PKPab	20 38 43.3	+0.1
WLF	**Walferdange**	**153.97 355**	*e*	PKPbc	PKPbc	20 38 29.6	+0.4
WLF	**Walferdange**	**153.97 355**	*e*	PKIKP	PKPbc	20 38 29.6	+0.4
PGB	**Panagyurishte**	**154.13 322**		P	PKPab	20 38 48.2	+4.0
PKSM	**Moragy**	**154.13 334**	⇓	PKIKP	PKPdf	20 38 20.6	-0.8
PKSM	**Moragy**	**154.13 334**	⇓	*i*P	PKPdf	20 38 20.6	-0.8
RZN	**Rozhen**	**154.34 320**		P	PKPab	20 38 45.5	+0.4
LANF	**Langenberg**	**154.47 352**		PKP	PKPbc	20 38 30.9	+0.6
STU	**Stuttgart**	**154.48 350**	*e*	PKPdf	PKPdf	20 38 22.1	+0.3
STU			*e*	PKPbc	PKPbc	20 38 30.7	+0.4
STU			*e*			20 38 37.9	
STU			*e*	PKPab	PKPab	20 38 45.5	+0.1
STU	**Stuttgart**	**154.48 350**	*e*	PKPbc	PKPbc	20 38 30.6	+0.3
STU	**Stuttgart**	**154.48 350**	*e*	PKIKP	PKPbc	20 38 30.6	+0.3
VTS	**Vitosha**	**154.64 323**		P	PKPab	20 38 46.0	-0.3
FUR	**Furstenfeldbru**	**154.67 346**	*e*	PKPdf	PKPdf	20 38 22.0	-0.1
FUR			*e*			20 38 38.1	
FUR			*e*	PKPab	PKPab	20 38 46.8	+0.6
FUR	**Furstenfeldbru**	**154.67 346**	*e*	PKPdf	PKPdf	20 38 22.0	-0.1
FUR			*e*			20 38 38.1	
FUR			*e*	PKPab	PKPab	20 38 46.8	+0.6
FUR	**Furstenfeldbru**	**154.67 346**	*e*	PKIKP	PKPdf	20 38 22.0	-0.1
RJOB	**Jochberg**	**154.72 344**	*e*	PKPdf	PKPdf	20 38 21.6	-0.5
RJOB			*e*	PKPbc	PKPbc	20 38 31.0	+0.2
RJOB			*e*	PKPab	PKPab	20 38 47.4	+0.9
MMB	**Musomiste**	**154.99 320**		P	PKPab	20 38 47.8	-0.1
BFO	**Black Forest**	**155.04 351**	*e*	PKPbc	PKPdf	20 38 31.7	+9.1
BFO			*e*			20 38 38.9	
BFO			*e*	PKPab	PKPab	20 38 47.7	-0.1
BFO	**Black Forest**	**155.04 351**	*e*	PKPbc	PKPdf	20 38 31.7	+9.1
BFO			*e*			20 38 38.9	
BFO			*e*	PKPab	PKPab	20 38 47.8	0.0
BFO	**Black Forest**	**155.04 351**	*e*	PKP2	PKPab	20 38 47.7	-0.1
KKB	**Krupnik**	**155.18 322**		P	PKPab	20 38 47.1	-1.6
ECH	**Echery**	**155.30 353**		PKP	PKPdf	20 38 32.2	+9.3
ECH	**Echery**	**155.30 353**	*e*	PKPab	PKPab	20 38 48.6	-0.3
ECH	**Echery**	**155.30 353**	*e*	PKP2	PKPab	20 38 48.7	-0.2
THEF	**They Montfort**	**155.41 355**		PKP	PKPdf	20 38 32.8	+10
WTTA	**Wattenberg**	**155.44 345**	⇓	*i*PKPdf	PKPdf	20 38 23.2	0.0
	comp=Z,8.2nm,1.2s						
MOTA	**Moosalm**	**155.49 346**	⇑	*i*PKPdf	PKPdf	20 38 22.3	-0.9
	comp=Z,6.3nm,0.9s						
MOF	**Molkenrain**	**155.67 353**		PKP	PKPdf	20 38 32.2	+8.8
VAY	**Valandovo**	**155.83 321**	*e*	PKP	PKPab	20 38 51.1	-0.3
FETA	**Feichten**	**155.88 346**	⇑	*i*PKPdf	PKPdf	20 38 23.0	-0.8
	comp=Z,16nm,1.2s						
KRUS	**Krusevo**	**156.54 323**	*e*	PKPab	PKPab	20 38 54.2	-0.4
AQU	**L'Aquila**	**159.40 337**	⇓	PKIKP	PKPdf	20 38 35.5	+7.3
AQU	**L'Aquila**	**159.40 337**	⇓	*i*P	PKPdf	20 38 35.5	+7.3
LIC	**Lamto**	**161.08 156**	*e*	PKP2	PKPdf	20 38 41.9	+11
	comp=Z,78nm,1.2s						
KIC	**Kosan Boka**	**161.31 156**	*e*	PKP2	PKPdf	20 38 41.1	+10
	comp=Z,40nm,1.0s						
TIC	**Toumodi**	**161.47 155**	*e*	PKP2	PKPdf	20 38 42.4	+11
	comp=Z,40nm,0.9s						
TIC	**Toumodi**	**161.47 155**	*e*	PKIKP	PKPdf	20 38 42.4	+11
DBIC	**Dimbokro**	**161.56 156**		PKP	PKPdf	20 38 31.2	-0.3
	comp=Z,4.0nm,1.0s,baz=236,slow=7.3,SNR=3.2						
DBIC	**Dimbokro**	**161.56 156**		PKIKP	PKPdf	20 38 31.2	-0.3
ESDC	**Sonseca Array**	**163.13 18**		PKP	PKPdf	20 38 32.7	+0.4
	comp=Z,0.9nm,0.9s,baz=333,slow=1.7,SNR=7.6						
ESDC				PKPab	PKPab	20 39 23.2	0.0
	comp=Z,1.4nm,0.9s,baz=333,slow=4.5,SNR=6.8						
ESDC	**Sonseca Array**	**163.13 18**		PKP	PKPdf	20 38 32.7	+0.4
ESDC				PKPab	PKPab	20 39 23.2	0.0
KEST	**Kesra**	**166.72 336**		PKPab	PKPab	20 39 39.7	+0.6
	comp=Z,7.1nm,0.9s,baz=301,slow=3.3,SNR=10.0						
TORD	**Torodi Ar. Bea**	**169.44 175**		PKP	PKPdf	20 38 37.3	-0.6
	comp=Z,3.3nm,0.9s,baz=266,slow=1.8,SNR=17						
TORD				PKPab	PKPab	20 39 52.2	+0.7
	comp=Z,4.4nm,1.0s,baz=178,slow=3.8,SNR=8.1						
TAM	**Tamanrasset**	**177.23 251**	*e*	PKPdf	PKPdf	20 38 41.0	+0.4
TAM	**Tamanrasset**	**177.23 251**	*e*	PKIKP	PKPdf	20 38 41.0	+0.3

DJA 14 20:24:29, 1°.37S×101°.60E, h50km, MLv3.7/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDSI	**Sungai Dareh**	**0.47**	**338**	P	Sn	20 24 51.6	+3.9
KRJI	**Kerinci**	**0.73**	**191**	P	Pn	20 24 42.7	-0.5
KRJI				S	Sn	20 24 54.4	+1.0
PDSI	**Padang**	**1.23**	**292**	P	Pn	20 24 47.2	-2.6
PDSI				S	Sn	20 25 04.1	-1.2
RGRI	**Rengat**	**1.25**	**36**	P	Pn	20 24 43.4	-6.7
PPI	**Padang Panjang**	**1.51**	**307**	P	Pn	20 24 55.1	+1.5
KSI	**Kapahiang**	**2.47**	**156**	P	Pn	20 25 10.8	+3.9
MNSI	**Mandailing Nat**	**2.95**	**317**	P	Pn	20 25 14.9	+1.5

IDC 14 20:25:28.3±3.6, 6°.48S×148°.65E, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=108.6km s-min=47.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.29**	**225**	P	Pn	20 29 54.5	-1.4
	0.4nm,0.3s,baz=51,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**22.20**	**218**	P	P	20 30 27.4	+1.0
	1.9nm,0.5s,baz=53,slow=9.1,SNR=6.1						
FITZ	**Fitzroy Crossi**	**25.23**	**241**	P	P	20 30 55.4	-0.7
	2.2nm,0.4s,baz=53,slow=12,SNR=3.7						
TORD	**Torodi Ar. Bea**	**146.79**	**284**	PKPbc	PKPbc	20 45 13.0	-0.4
	0.7nm,0.6s,baz=65,slow=3.7,SNR=5.6						

KRSC 14 20:32:07.8±1.2, 50°.46N×157°.73E, h56km±56km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.45**	**287**	*e*P	Pn	20 32 32.0	+0.4
ALID				*i*S	Sn	20 32 49.3	-0.2
AVH	**Avacha**	**2.88**	**12**	*e*P	Pn	20 32 53.9	+2.8
GNL	**Ganaly**	**3.24**	**2**	*e*P	Pn	20 32 58.7	+2.6
MKZ	**Mys Kozlova**	**4.78**	**29**	*e*P	Pn	20 33 17.8	+0.7

*ISCJB **14** 20:37:40.5±0.7, 35°.68N±0°.03×27°.08E±0°.04, h3km±6km, Error ellipse: s-maj=7.2km s-min=3.8km az=42.5*
*ATH **14** 20:37:40.3, 35°.66N×27°.11E, h12km±12km, MD3.2/3*
*CSEM **14** 20:37:40.9±0.2, 35°.66N×27°.09E, h5km, MD3.2, Error ellipse: s-maj=5.8km s-min=3.6km az=140.0*
*ISK **14** 20:37:42.5, 35°.82N×27°.00E, h13km, MD3.3*
*THE **14** 20:37:42.5, 35°.58N×27°.21E, h19km±7km, ML2.4/1, Error ellipse: s-maj=10.2km s-min=1.6km az=121.0*

ISC 14 20:37:41.1±0.5, 35°.63N±0°.04×27°.14E±0°.04, h11km±4km, n44, σ0°.90/65, 1C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.09**	**166**	*e*PG	**Pg**	**20 37 43.7**	**+0.1**
KARP				*e*SG	**Sg**	**20 37 45.5**	**+0.1**
KARP	**Karpathos**	**0.09**	**166**	*e*Pg	**Pg**	**20 37 43.7**	**+0.1**
KARP				*e*Sg	**Sg**	**20 37 45.5**	**+0.1**
ZKR	**Zakros**	**0.91**	**236**	*e*PN	**Pn**	**20 37 58.3**	**-1.5**
ZKR				*e*SB	**Sb**	**20 38 10.8**	**-0.2**
ZKR	**Zakros**	**0.91**	**236**	P	**Pg**	**20 37 58.2**	**-0.4**
ZKR				S	**Sg**	**20 38 11.0**	**+0.5**
ZKR	**Zakros**	**0.91**	**236**	P	**Pg**	**20 37 58.2**	**-0.4**
ZKR				*e*Sb	**Sb**	**20 38 10.8**	**-0.2**
NIS1	**Nisyros Isl.**	**0.97**	**2**	P	**Pg**	**20 38 00.3**	**+0.5**
NIS1				S	**Sg**	**20 38 14.6**	**+2.1**
NIS1	**Nisyros Isl.**	**0.97**	**2**	P	**Pg**	**20 38 00.3**	**+0.5**
NIS1				S	**Sg**	**20 38 14.6**	**+2.1**
ARG	**Arkhangelos**	**0.99**	**54**	*e*PN	**Pn**	**20 38 00.4**	**-0.6**
ARG				*e*SB	**Sb**	**20 38 12.8**	**-0.7**
ARG	**Arkhangelos**	**0.99**	**54**	*e*Pn	**Pn**	**20 38 00.4**	**-0.6**
ARG				*e*Sb	**Sb**	**20 38 12.8**	**-0.7**
DAT	**Datca**	**1.15**	**18**	*e*PG	**Pg**	**20 38 02.5**	**-0.8**
DAT				*e*SG	**Sg**	**20 38 17.2**	**-1.1**
DAT	**Datca**	**1.15**	**18**	*e*Pg	**Pg**	**20 38 02.6**	**-0.7**
DAT				*e*Sg	**Sg**	**20 38 17.2**	**-1.1**
NPS	**Neapolis**	**1.30**	**254**	*e*PG	**Pg**	**20 38 05.2**	**-0.8**
NPS	**Neapolis**	**1.30**	**254**	*e*Pg	**Pg**	**20 38 05.2**	**-0.8**
LAST	**Lasithi**	**1.43**	**251**	*e*PB	**Pb**	**20 38 07.3**	**-0.5**
LAST				*e*SB	**Sb**	**20 38 26.4**	**+0.4**
LAST	**Lasithi**	**1.43**	**251**	P	**Pn**	**20 38 07.2**	**+0.2**
LAST				S	**Sn**	**20 38 25.8**	**0.0**
LAST	**Lasithi**	**1.43**	**251**	*e*Pb	**Pb**	**20 38 07.3**	**-0.5**
LAST				S	**Sn**	**20 38 25.8**	**0.0**
LAST				*e*Sb	**Sb**	**20 38 26.4**	**+0.4**
BODT	**Bodrum**	**1.44**	**6**	*e*PN	**Pn**	**20 38 06.3**	**-0.8**
BODT	**Bodrum**	**1.44**	**6**	*e*Pn	**Pn**	**20 38 06.3**	**-0.8**
BDRM	**Kayabasi**	**1.45**	**10**	*i*P	**Pn**	**20 38 05.6**	**-1.7**
BDRM	**Kayabasi**	**1.45**	**10**	*i*P	**Pn**	**20 38 05.6**	**-1.7**
THR1	**Thera Island**	**1.55**	**299**	P	**Pn**	**20 38 08.9**	**+0.3**
THR1	**Thera Island**	**1.55**	**299**	P	**Pn**	**20 38 08.9**	**+0.3**
THR3	**Thira Island,**	**1.61**	**299**	P	**Pn**	**20 38 09.9**	**+0.5**
THR3	**Thira Island,**	**1.61**	**299**	P	**Pn**	**20 38 09.9**	**+0.5**
THR5	**Thira Island,**	**1.65**	**299**	P	**Pn**	**20 38 11.0**	**+1.0**
THR5	**Thira Island,**	**1.65**	**299**	P	**Pn**	**20 38 11.0**	**+1.0**
MLSB	**Milas**	**1.74**	**17**	*e*PN	**Pn**	**20 38 11.3**	**0.0**
MLSB	**Milas**	**1.74**	**17**	*e*Pn	**Pn**	**20 38 11.3**	**0.0**
YER	**Yerkesik**	**1.77**	**31**	*e*PN	**Pn**	**20 38 12.1**	**+0.5**
YER	**Yerkesik**	**1.77**	**31**	*e*Pn	**Pn**	**20 38 12.1**	**+0.5**
APE	**Apeiranthos**	**1.93**	**318**	*e*PN	**Pn**	**20 38 13.1**	**-0.8**
APE	**Apeiranthos**	**1.93**	**318**	*e*PN	**Pn**	**20 38 14.2**	**+0.3**
APE	**Apeiranthos**	**1.93**	**318**	P	**Pn**	**20 38 14.0**	**+0.1**
APE				S	**Sn**	**20 38 37.6**	**-0.6**
APE	**Apeiranthos**	**1.93**	**318**	⇑*i*P	**Sn**	**20 38 37.4**	**-0.8**
APE	**Apeiranthos**	**1.93**	**318**	P	**Pn**	**20 38 14.0**	**+0.1**
APE				S	**Sn**	**20 38 37.6**	**-0.6**
SIVA	**Sivas**	**2.00**	**253**	P	**Pn**	**20 38 14.8**	**0.0**
SIVA				S	**Sn**	**20 38 40.6**	**+0.8**
SIVA	**Sivas**	**2.00**	**253**	P	**Pn**	**20 38 14.8**	**0.0**
SIVA				S	**Sn**	**20 38 40.6**	**+0.8**
GLHS	**Glhisar (BURDU**	**2.44**	**51**	*e*PN	**Pn**	**20 38 23.0**	**+2.1**
GLHS	**Glhisar (BURDU**	**2.44**	**51**	*e*Pn	**Pn**	**20 38 23.0**	**+2.1**
ELL	**Elmali**	**2.51**	**63**	*e*PN	**Pn**	**20 38 24.5**	**+2.7**
ELL	**Elmali**	**2.51**	**63**	*e*Pn	**Pn**	**20 38 24.5**	**+2.7**
DNZL	**Cakiroluk**	**2.57**	**36**	*i*P	**Pn**	**20 38 28.0**	**+5.4**
KARN	**Karanos**	**2.63**	**266**	P	**Pn**	**20 38 23.0**	**-0.6**
KARN				S	**Sn**	**20 38 55.8**	**+0.3**
KARN	**Karanos**	**2.63**	**266**	P	**Pn**	**20 38 23.0**	**-0.6**
KARN				S	**Sn**	**20 38 55.8**	**+0.3**

MAN 14 20:54:57, 6°.23N×124°.07E, h68km, mb4.8, ML3.7, MS3.7, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**1.00**	**10**	⇑*i*P	Pn	20 55 16.3	+0.8
CTBH				*i*S	Sn	20 55 31.6	+2.5
KCP	**Kidapawan**	**1.28**	**52**	⇑*e*P	Pn	20 55 20.8	+1.8
KCP				*i*S	Sn	20 55 41.5	+6.0
PAGZ	**Pagadian**	**1.75**	**337**	*e*P	Pn	20 55 27.4	+2.1
PAGZ				*e*S	Sn	20 55 39.4	-7.3
BUKP	**Musuan**	**1.91**	**31**	*e*P	Pn	20 55 29.6	+2.1
IPIL	**Ipil**	**2.15**	**316**	*e*P	Pn	20 55 32.7	+2.1

MEX 14 21:30:31.5±0.9, 15°.77N×99°.21W, h18km±44km, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.21**	**59**	*i*P	Pn	21 30 50.5	-3.1
PNIG				*e*S	Sb	21 31 03.9	-5.4
CAIG	**El Cayaco**	**1.63**	**322**	*i*P	Pn	21 30 54.9	-4.3
CAIG				*e*S	Sn	21 31 17.2	-2.5
MEIG	**Mezcala**	**2.18**	**350**	*i*P	Pn	21 31 04.8	-2.1
MEIG				*e*S	Sn	21 31 29.0	-4.4
PLIG	**Platanillo**	**2.63**	**354**	*i*P	Pn	21 31 10.7	-2.3
PLIG				*e*S	Sn	21 31 41.6	-2.8

*SOF **14** 21:34:28.3, 41°.44N×23°.24E, h20km, MD2.5*
*SKO **14** 21:34:28.3, 41°.42N×23°.19E, h15km, M1.9, ML2.1*
*CSEM **14** 21:34:28.7±0.1, 41°.41N×23°.20E, h2km, ML2.3/9, Error ellipse: s-maj=2.6km s-min=2.1km az=114.0*
*BEO **14** 21:34:29.7±0.6, 41°.37N×23°.13E, h3km±3km, ML2.2/4*
*THE **14** 21:34:29.0, 41°.39N×23°.20E, h2km±1km, ML2.3/9, Error ellipse: s-maj=1.9km s-min=0.7km az=237.0*

ISC 14 21:34:29.0±0.3, 41°.40N±0°.02×23°.19E±0°.02, h3km±4km, n48, σ0°.71/85, 2C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNT	**Kendrikon**	**0.32**	**224**	P	**Pg**	**21 34 35.6**	**+0.4**
KNT				S	**Sg**	**21 34 39.8**	**+0.5**
KNT	**Kendrikon**	**0.32**	**224**	P	**Pg**	**21 34 35.6**	**+0.4**
KNT				S	**Sg**	**21 34 39.8**	**+0.5**
SRS	**Serrai**	**0.41**	**133**	P	**Pg**	**21 34 36.7**	**-0.1**
SRS				S	**Sg**	**21 34 42.5**	**+0.3**
SRS	**Serrai**	**0.41**	**133**	P	**Pg**	**21 34 36.7**	**-0.1**
SRS				S	**Sg**	**21 34 42.5**	**+0.3**
MMB	**Musomiste**	**0.45**	**64**	Pg	**Pg**	**21 34 37.3**	**-0.2**
MMB	**Musomiste**	**0.45**	**64**	Pg	**Pg**	**21 34 37.3**	**-0.2**
VAY	**Valandovo**	**0.47**	**261**	*i*Pg	**Pg**	**21 34 38.2**	**+0.1**
VAY				*e*Sg	**Sg**	**21 34 43.4**	**-0.8**
VAY	**Valandovo**	**0.47**	**261**	P	**Pg**	**21 34 38.1**	**0.0**
VAY				S	**Sg**	**21 34 44.5**	**+0.3**
VAY	**Valandovo**	**0.47**	**261**	*i*Pg	**Pg**	**21 34 38.3**	**+0.2**
VAY				*e*Sg	**Sg**	**21 34 45.3**	**+1.1**
VAY				*e*Lg		21 34 45.6	
	comp=E,61nm,0.3s						
VAY				*e*Lg		21 34 47.6	
	comp=N,99nm,0.2s						
VAY	**Valandovo**	**0.47**	**261**	P	**Pg**	**21 34 38.1**	**0.0**
VAY				*e*Sg	**Sg**	**21 34 43.4**	**-0.8**
VAY				S	**Sg**	**21 34 44.5**	**+0.3**
KKB	**Krupnik**	**0.48**	**350**	Pg	**Pg**	**21 34 37.6**	**-0.5**
KKB	**Krupnik**	**0.48**	**350**	Pg	**Pg**	**21 34 37.6**	**-0.5**
SOH	**Sokhos**	**0.59**	**168**	P	**Pg**	**21 34 40.3**	**+0.1**
SOH				S	**Sg**	**21 34 48.0**	**+0.2**
SOH	**Sokhos**	**0.59**	**168**	P	**Pg**	**21 34 40.3**	**+0.1**
SOH				S	**Sg**	**21 34 48.0**	**+0.2**
GRG	**Griva**	**0.74**	**234**	P	**Pg**	**21 34 43.2**	**0.0**
GRG				S	**Sg**	**21 34 53.4**	**+0.6**
GRG	**Griva**	**0.74**	**234**	P	**Pg**	**21 34 43.2**	**0.0**
GRG				S	**Sg**	**21 34 53.4**	**+0.6**
THE	**Thessaloniki**	**0.78**	**193**	P	**Pg**	**21 34 44.0**	**0.0**
THE				S	**Sg**	**21 34 54.8**	**+0.7**
THE	**Thessaloniki**	**0.78**	**193**	P	**Pg**	**21 34 44.0**	**0.0**
THE				S	**Sg**	**21 34 54.8**	**+0.7**
HORT	**Hortiatis**	**0.80**	**185**	P	**Pg**	**21 34 44.4**	**+0.1**
HORT				S	**Sg**	**21 34 55.1**	**+0.4**
HORT	**Hortiatis**	**0.80**	**185**	P	**Pg**	**21 34 44.4**	**+0.1**
HORT				S	**Sg**	**21 34 55.1**	**+0.4**
KAVA	**Kavala**	**1.07**	**111**	P	**Pg**	**21 34 49.7**	**+0.2**
KAVA				S	**Sg**	**21 35 03.9**	**+0.4**
KAVA	**Kavala**	**1.07**	**111**	P	**Pg**	**21 34 49.7**	**+0.2**
KAVA				S	**Sg**	**21 35 03.9**	**+0.4**
RZN	**Rozhen**	**1.18**	**75**	Pg	**Pg**	**21 34 51.4**	**-0.2**
RZN	**Rozhen**	**1.18**	**75**	Pg	**Pg**	**21 34 51.4**	**-0.2**
VTS	**Vitosha**	**1.20**	**1**	⇑*i*Pg	**Pg**	**21 34 51.7**	**-0.2**
VTS				*e*Sg	**Sg**	**21 35 08.3**	**+0.9**
VTS	**Vitosha**	**1.20**	**1**	P	**Pg**	**21 34 51.5**	**-0.4**
VTS				S	**Sg**	**21 35 08.0**	**+0.6**
VTS	**Vitosha**	**1.20**	**1**	Pg	**Pg**	**21 34 51.6**	**-0.3**
VTS	**Vitosha**	**1.20**	**1**	⇑*i*Pg	**Pg**	**21 34 51.7**	**-0.2**
VTS				S	**Sg**	**21 35 08.0**	**+0.6**
VTS				*e*Sg	**Sg**	**21 35 08.3**	**+0.9**
OUR	**Ouranopolis**	**1.22**	**150**	P	**Pg**	**21 34 51.9**	**-0.4**
OUR				S	**Sg**	**21 35 07.9**	**-0.2**
OUR	**Ouranopolis**	**1.22**	**150**	P	**Pg**	**21 34 51.9**	**-0.4**
OUR				S	**Sg**	**21 35 07.9**	**-0.2**
PLD	**Plovdiv**	**1.33**	**57**	*e*Pn	**Pn**	**21 34 55.2**	**+0.7**
PLD				*e*Sg	**Sg**	**21 35 14.2**	**+2.4**
PLD	**Plovdiv**	**1.33**	**57**	P	**Pn**	**21 34 53.9**	**-0.6**
PLD				S	**Sg**	**21 35 13.4**	**+1.6**
PLD	**Plovdiv**	**1.33**	**57**	Pg	**Pg**	**21 34 55.1**	**+0.6**
PLD	**Plovdiv**	**1.33**	**57**	P	**Pn**	**21 34 53.9**	**-0.6**
PLD	**Plovdiv**	**1.33**	**57**	Pg	**Pg**	**21 34 55.1**	**+0.6**
PLD				S	**Sg**	**21 35 13.4**	**+1.6**
PLD				*e*Sg	**Sg**	**21 35 14.2**	**+2.4**
PGB	**Panagyurishte**	**1.36**	**32**	Pg	**Pg**	**21 34 53.6**	**-1.5**
PGB	**Panagyurishte**	**1.36**	**32**	Pg	**Pg**	**21 34 53.6**	**-1.5**
SKO	**Skopje**	**1.43**	**294**	*e*Pn	**Pn**	**21 34 55.4**	**-0.4**
SKO				*e*Sg	**Sg**	**21 35

SMLA			*i* S	Sn	22 12 20.4	+3.1
SMLA			⇓		22 12 21.9	
	comp=N,16μm,0.2s					
SMLA					22 12 22.1	
	comp=E,27μm,0.2s					
KLP	**Kalpa**	**1.92**	**122** *e*PKP	**Pn**	**22 12 05.2**	**+3.8**
KLP			*e*S	**Sn**	**22 12 30.1**	**+4.7**
KLP			AML	AML	22 12 36.2	
	comp=E,2μm,0.6s					
KLP			AML	AML	22 12 36.7	
	comp=N,2μm,0.3s					
DDI	**Dehra Dun**	**2.67**	**146** *ex*	**Pg**	**22 12 19.0**	**-1.1**
DDI			*ex*	x	22 12 55.0	
JOSI	**Joshimath**	**3.40**	**125** *e*PKP	**Pn**	**22 12 24.6**	**+2.9**
JOSI			*e*S	**Sn**	**22 13 01.1**	**-0.7**
JOSI			AML	AML	22 13 22.9	
	comp=N,525nm,0.9s					
JOSI			AML	AML	22 13 23.2	
	comp=E,675nm,0.7s					
NDI	**New Delhi**	**3.94**	**169** *ex*	**Pg**	**22 12 44.5**	**+0.1**
NDI			*e*S	**Sn**	**22 13 14.5**	**-0.6**
BISR	**Bishrakh**	**4.09**	**166** *e*PKP	**Pg**	**22 12 51.5**	**+4.3**
BISR			*e*S	x	22 13 36.2	
KUDL	**Kundal**	**4.40**	**178** *ex*	**Pn**	**22 12 33.8**	**-1.7**
KUDL			*e*S	**Sn**	**22 13 24.9**	**-1.7**
PTH	**Pithoragarh**	**4.48**	**131** *ex*	**Pg**	**22 12 53.5**	**-1.3**
PTH			*ex*	x	22 13 32.2	
KHET	**Khetri**	**4.49**	**186** *e*PKP	**Pn**	**22 12 38.2**	**+1.5**
KHET			*ex*	x	22 13 37.5	
AGRA	**Agra**	**5.49**	**165** *ex*	x	22 12 59.0	
AGRA			*e*S	**Sn**	**22 13 50.4**	**-3.1**
AGRA			AML	AML	22 14 30.8	
	comp=N,60nm,0.7s					
AGRA			AML	AML	22 14 31.6	
	comp=E,91nm,0.7s					
KBL	**Kabul**	**6.40**	**290** *e*Pn	**Pn**	**22 13 03.4**	**+0.5**
	comp=E,19nm,0.9s					
KBL			Sn	**Sn**	**22 14 15.0**	**-0.8**
KSH	**Kashi**	**6.95**	**358** Pn	**Pn**	**22 13 12.3**	**+1.9**
KSH			Sn	**Sn**	**22 14 17.4**	**-12**
KSH			smax			
	comp=N,28nm,0.4s					
KSH			smax			
	comp=E,20nm,0.4s					
AML	**Almayashu**	**9.78**	**348** *e*Pn	**Pn**	**22 13 49.2**	**0.0**
	comp=E,3.3nm,0.5s					
AML			*e*Sn	**Sn**	**22 15 39.9**	**+0.9**
AAK	**Ala-Archa**	**10.16**	**352** Pn	**Pn**	**22 14 00.7**	**+6.3**
	comp=E,0.0nm,0.3s,baz=190,slow=5.3,SNR=5.4					
AAK	**Ala-Archa**	**10.16**	**352** *e*Pn	**Pn**	**22 13 55.9**	**+1.4**
EKS2	**Erkin-Say**	**10.29**	**349** *e*Pn	**Pn**	**22 13 56.4**	**+0.3**
EKS2			*e*Sn	**Sn**	**22 15 51.2**	**0.0**
TKM2	**Tokmak 2**	**10.36**	**357** *e*Pn	**Pn**	**22 13 57.0**	**-0.2**
KK31	**Karatay Array**	**11.48**	**338** ⇑P	**Pn**	**22 14 11.1**	**-1.5**
	comp=E,0.9nm,0.3s,baz=155,slow=12,SNR=37					
KK31			⇓S	**Sn**	**22 16 09.2**	**-11**
	comp=E,3.4nm,0.6s,baz=157,slow=20,SNR=11					
KKAR	**Karatay Array**	**11.48**	**338** *e*Pn	**Pn**	**22 14 11.8**	**-0.7**
	comp=E,2.1nm,0.3s					
KKAR			*e*Sn	**Sn**	**22 16 10.3**	**-10**
MK31	**Makanchi Array**	**14.93**	**16** ⇓P	**Pn**	**22 15 00.5**	**+0.9**
	comp=E,0.8nm,0.6s,baz=197,slow=12,SNR=10					
MK31			⇑S	**Sn**	**22 17 37.0**	**-7.7**
	comp=E,3.9nm,1.1s,baz=196,slow=24,SNR=6.9					
MK31	**Makanchi Array**	**14.93**	**16** *e*Pn	**Pn**	**22 14 58.9**	**-0.6**
MK31			*e*Sn	**Sn**	**22 17 37.0**	**-7.7**
MKAR	**Makanchi Array**	**14.93**	**16** Pn	**Pn**	**22 14 57.6**	**-1.9**
	comp=E,0.1nm,0.3s,baz=191,slow=11,SNR=5.3					
MKAR			Sn	**Sn**	**22 17 37.6**	**-7.1**
	comp=E,0.4nm,0.3s,baz=191,slow=24,SNR=5.0					
KURK	**Kurchatov**	**18.22**	**5** *e*Pn	**Pn**	**22 15 41.1**	**-0.2**
AB31	**Akbulak array**	**20.70**	**328** ⇑P	**P**	**22 16 10.2**	**+1.5**
	comp=E,1.3nm,0.8s,baz=119,slow=14,SNR=14					
ABKAR	**Akbulak array**	**20.70**	**328** *e*P	**P**	**22 16 08.3**	**-0.4**
	comp=E,0.7nm,0.4s					
BVAR	**Borovoye Array**	**20.90**	**350** P	**P**	**22 16 12.5**	**+1.7**
	comp=E,2.0nm,0.6s,baz=145,slow=10,SNR=3.2					
BRVK	**Borovoye**	**20.95**	**350** *e*P	**P**	**22 16 11.4**	**0.0**
	comp=E,2.6nm,0.6s					
ZALV	**Zalesovo Beam**	**22.22**	**13** P	**P**	**22 16 23.9**	**-1.1**
	comp=E,0.5nm,0.4s,mb3.3,baz=183,slow=7.4,SNR=3.9					
AKTK	**Aktyubinsk**	**22.42**	**328** P	**P**	**22 16 27.6**	**+0.6**
AKTO	**Aktyubinsk**	**22.42**	**328** P	**P**	**22 16 27.6**	**+0.6**
	comp=E,1.8nm,0.5s,mb3.8,baz=125,slow=7.5,SNR=6.3					
CHTO	**Chiang Mai**	**24.48**	**118** *e*P	**P**	**22 16 47.8**	**0.0**
	comp=E,3.9nm,0.7s,mb4.0					
CM31	**Chiang Mai Arr**	**24.70**	**119** *e*P	**P**	**22 16 49.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**24.70**	**119** P	**P**	**22 16 50.7**	**+0.9**
	comp=E,2.9nm,0.6s,mb4.0,baz=301,slow=8.8,SNR=20					
GNI	**Garni**	**26.45**	**296** *e*P	**P**	**22 17 06.0**	**+0.5**
	comp=E,2.3nm,0.6s,mb3.9					
ARU	**Arti**	**26.86**	**338** *e*P	**P**	**22 17 08.4**	**-0.6**
SONM	**Songino Array**	**27.35**	**47** P	**P**	**22 17 14.5**	**+0.9**
	comp=E,0.4nm,0.4s,mb3.3,baz=235,slow=10.0,SNR=4.4					
SONM	**Songino Array**	**27.35**	**47** P	**P**	**22 17 14.5**	**+0.9**
KIV	**Kislovodsk**	**28.58**	**303** *e*P	**P**	**22 17 24.6**	**0.0**
BRTR	**Keskin Array B**	**34.95**	**294** P	**P**	**22 18 21.3**	**+0.7**
	comp=E,0.8nm,0.7s,mb3.8,baz=97,slow=8.8,SNR=4.5					
PSZ	**Piszkesteto**	**44.74**	**307** P	**P**	**22 19 42.1**	**+0.2**
YAK	**Yakutsk**	**44.76**	**32** *e*P	**P**	**22 19 40.9**	**-0.9**
	comp=E,39nm,0.3s					
KEV	**Kevo**	**46.08**	**338** *e*P	**P**	**22 19 51.6**	**-0.5**
ARCES	**ARCESS Array B**	**46.45**	**338** P	**P**	**22 19 55.0**	**-0.1**
	comp=E,0.6nm,0.7s,mb3.6,baz=108,slow=7.8,SNR=4.6					
ARCES	**ARCESS Array B**	**46.45**	**338** P	**P**	**22 19 55.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**70.19**	**273** P	**P**	**22 22 40.0**	**-1.8**
	comp=E,0.8nm,0.6s,mb3.9,baz=46,slow=5.6,SNR=18					
WRA	**Warramunga Arr**	**76.15**	**125** P	**P**	**22 23 16.1**	**-0.7**
	comp=E,0.4nm,0.4s,mb3.7,baz=322,slow=6.0,SNR=20					
ASAR	**Alice Springs**	**78.38**	**128** P	**P**	**22 23 27.9**	**-1.4**
	comp=E,0.7nm,0.9s,mb3.6,baz=292,slow=5.7,SNR=4.6					

ISCJB ***14*** *22:31:20.0±0.4,46°.77N±0°.02×11°.13E±0°.03,h10km, Error ellipse: s-maj=3.3km s-min=2.6km az=158.7*
ZUR ***14*** *22:31:20.6,46°.80N×11°.10E,h9km,ML1.7/3*
CSEM ***14*** *22:31:20.5±0.1,46°.77N×11°.12E,h10km,ML2.6/8, Error ellipse: s-maj=1.2km s-min=0.9km az=156.0*
VIE ***14*** *22:31:20.3±0.3,46°.79N×11°.12E,h13km±3km,mb1.3/4, ML2.3/11, Error ellipse: s-maj=1.3km s-min=1.0km az=164.0 8 km W of St.Martin im Passeiertal*
ROM ***14*** *22:31:21.2±0.2,46°.72N×11°.07E,h32km±3km,Md2.1/5, Ml1.9/2, Error ellipse: s-maj=2.7km s-min=1.7km az=40.0*

ISC 14 22:31:20.6±1.1, 46°.77N±0°.03×11°.13E±0°.03, h15km±25km, n30, σ0°28/54, 6C-5D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETA	**Feichten**	**0.37**	**313**	⇑*e*Pg	**Pg**	**22 31 28.3**	**+0.2**
	SNR=39						
FETA				⇑*i*Sg	**Sg**	**22 31 33.0**	**-0.2**
	16nm,0.1s						
FETA	**Feichten**	**0.37**	**313**	Pg	**Pg**	**22 31 28.3**	**+0.2**
	SNR=39						
FETA				Sg	**Sg**	**22 31 33.0**	**-0.2**
	16nm,0.1s						
MOTA	**Moosalm**	**0.57**	**358**	⇑*e*Pg	**Pg**	**22 31 32.0**	**+0.1**
	SNR=60						
MOTA				⇓*i*Sg	**Sg**	**22 31 39.2**	**-0.3**
	12nm,0.1s						
MOTA	**Moosalm**	**0.57**	**358**	Pg	**Pg**	**22 31 32.0**	**+0.1**
	SNR=60						
MOTA				Sg	**Sg**	**22 31 39.2**	**-0.3**
	12nm,0.1s						
BRMO	**Bormio**	**0.60**	**241**	Pg	**Pg**	**22 31 32.4**	**+0.1**
BRMO				Sg	**Sg**	**22 31 40.3**	**0.0**
BRMO	**Bormio**	**0.60**	**241**	Pg	**Pg**	**22 31 32.4**	**+0.1**
BRMO				Sg	**Sg**	**22 31 40.3**	**0.0**
WTTA	**Wattenberg**	**0.60**	**35**	⇑*e*Pg	**Pg**	**22 31 32.4**	**0.0**
	SNR=8.5						
WTTA				⇓*i*Sg	**Sg**	**22 31 40.4**	**0.0**
	10nm,0.2s						
WTTA	**Wattenberg**	**0.60**	**35**	Pg	**Pg**	**22 31 32.4**	**0.0**
	SNR=8.5						
WTTA				Sg	**Sg**	**22 31 40.4**	**0.0**
	10nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**0.61**	**256**	*e*Pg	**Pg**	**22 31 32.7**	**+0.1**
	54nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**0.61**	**256**	Pg	**Pg**	**22 31 32.9**	**+0.3**
FUORN				Sg	**Sg**	**22 31 41.1**	**+0.4**
FUORN	**Ofenpass-Fuorn**	**0.61**	**256**	*e*Pg	**Pg**	**22 31 32.7**	**+0.1**
	54nm,0.2s						
FUORN				Sg	**Sg**	**22 31 41.1**	**+0.4**
WATA	**Walderalm**	**0.64**	**28**	⇑*i*Pg	**Pg**	**22 31 33.6**	**+0.4**
WATA				⇑*i*Sg	**Sg**	**22 31 41.8**	**+0.2**
	7.9nm,0.1s						
WATA	**Walderalm**	**0.64**	**28**	Pg	**Pg**	**22 31 33.6**	**+0.4**
WATA				Sg	**Sg**	**22 31 41.8**	**+0.1**
	7.9nm,0.1s						
CTI	**Castel Tesino**	**0.81**	**153**	Pg	**Pg**	**22 31 36.6**	**+0.3**
CTI				Sg	**Sg**	**22 31 47.5**	**+0.6**
	42nm,0.2s						
CTI	**Castel Tesino**	**0.81**	**153**	Pg	**Pg**	**22 31 36.6**	**+0.3**
CTI				Sg	**Sg**	**22 31 47.5**	**+0.6**
	42nm,0.2s						
MABI	**Malga Bissina**	**0.83**	**211**	Pg	**Pg**	**22 31 36.8**	**+0.1**
MABI				Sg	**Sg**	**22 31 47.2**	**-0.5**
MABI	**Malga Bissina**	**0.83**	**211**	Pg	**Pg**	**22 31 36.8**	**+0.1**
MABI				Sg	**Sg**	**22 31 47.2**	**-0.5**
BERNI	**Berninapass**	**0.84**	**245**	*e*Pg	**Pg**	**22 31 36.8**	**-0.1**
	40nm,0.2s						
BERNI	**Berninapass**	**0.84**	**245**	Pg	**Pg**	**22 31 37.2**	**+0.3**
BERNI				Sg	**Sg**	**22 31 47.5**	**-0.5**
BERNI	**Berninapass**	**0.84**	**245**	*e*Pg	**Pg**	**22 31 36.8**	**-0.1**
	40nm,0.2s						
BERNI				Sg	**Sg**	**22 31 47.5**	**-0.5**
DAVOX	**Davos/Dischmat**	**0.86**	**271**	*e*Pg	**Pg**	**22 31 36.8**	**-0.4**
	47nm,0.2s						
DAVOX	**Davos/Dischmat**	**0.86**	**271**	Pg	**Pg**	**22 31 36.9**	**-0.3**
DAVOX				Sg	**Sg**	**22 31 48.6**	**+0.1**
DAVOX	**Davos/Dischmat**	**0.86**	**271**	Pg	**Pg**	**22 31 36.9**	**-0.3**
DAVOX				Sg	**Sg**	**22 31 48.6**	**+0.1**
ABTA	**Abfaltersbach**	**0.95**	**91**	⇓*e*Pg	**Pg**	**22 31 39.0**	**0.0**
	SNR=6.4						
ABTA				⇓*i*Sg	**Sg**	**22 31 51.4**	**-0.1**
	6.0nm,0.1s						
ABTA	**Abfaltersbach**	**0.95**	**91**	Pg	**Pg**	**22 31 39.0**	**0.0**
	SNR=6.4						
ABTA				Sg	**Sg**	**22 31 51.4**	**-0.1**
	6.0nm,0.1s						
DAVA	**Damuels**	**1.00**	**302**	⇓*i*Sg	**Sg**	**22 31 53.0**	**+0.1**
	29nm,0.2s						
DAVA	**Damuels**	**1.00**	**302**	Sg	**Sg**	**22 31 53.0**	**+0.1**
	29nm,0.2s						
FVI	**Forni Avoltri**	**1.15**	**98**	Pg	**Pg**	**22 31 42.5**	**-0.3**
FVI				Sg	**Sg**	**22 31 57.3**	**-0.5**
	12nm,0.2s						
FVI	**Forni Avoltri**	**1.15**	**98**	Pg	**Pg**	**22 31 42.5**	**-0.3**
FVI				Sg	**Sg**	**22 31 57.3**	**-0.5**
	12nm,0.2s						
VDL	**Val di Lei**	**1.19**	**257**	*e*Pg	**Pg**	**22 31 43.4**	**-0.1**
	22nm,0.7s						

NEIC ***14*** *22:41:50.8,40°.23N×20°.64E,h10km,MD3.2(ATH), After ATH.*
ATH ***14*** *22:41:50.8,40°.23N×20°.64E,h10km±2km,MD3.2/6*
ISCJB ***14*** *22:41:51.8±0.5,40°.20N±0°.02×20°.68E±0°.03,h0km±5km, Error ellipse: s-maj=4.3km s-min=3.5km az=34.1*
CSEM ***14*** *22:41:52.7±0.2,40°.17N×20°.72E,h2km,ML2.6/6, Error ellipse: s-maj=4.2km s-min=4.0km az=109.0*
THE ***14*** *22:41:52.6,40°.16N×20°.76E,h0km±1km,ML2.6/6, Error ellipse: s-maj=1.9km s-min=0.7km az=264.0*
SKO ***14*** *22:41:57.5,40°.28N×21°.04E,h17km*

ISC 14 22:41:52.7±0.5, 40°.18N±0°.02×20°.73E±0°.03, h1km±4km, n60, σ1°05/91, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.34**	**46**	P	**Pg**	**22 41 59.3**	**+0.1**
NEST				S	**Sg**	**22 42 05.0**	**+1.4**
NEST	**Nestorio**	**0.34**	**46**	P	**Pg**	**22 41 59.3**	**+0.1**
NEST				S	**Sg**	**22 42 05.0**	**+1.4**
JAN	**Janina**	**0.53**	**170**	*e*PB	**Pg**	**22 42 02.1**	**-0.8**
JAN				*e*SB	**Sg**	**22 42 10.1**	**+0.4**
JAN	**Janina**	**0.53**	**170**	*e*Pb	**Pg**	**22 42 02.1**	**-0.8**
JAN				*e*Sb	**Sg**	**22 42 10.1**	**+0.4**
IGT	**Igoumenitsa**	**0.71**	**205**	P	**Pg**	**22 42 05.9**	**-0.5**
IGT				S	**Sg**	**22 42 16.9**	**+1.3**
IGT	**Igoumenitsa**	**0.71**	**205**	P	**Pg**	**22 42 05.9**	**-0.5**
IGT				S	**Sg**	**22 42 16.9**	**+1.3**
KZN	**Kozani**	**0.81**	**81**	P	**Pg**	**22 42 07.2**	**-1.0**
KZN	**Kozani**	**0.81**	**81**	*e*PG	**Pg**	**22 42 07.1**	**-1.1**
KZN				*e*SB	**Sb**	**22 42 20.4**	**-0.6**
KZN	**Kozani**	**0.81**	**81**	P	**Pg**	**22 42 06.9**	**-1.3**
KZN				S	**Sg**	**22 42 18.9**	**+0.2**
KZN	**Kozani**	**0.81**	**81**	P	**Pg**	**22 42 07.2**	**-1.0**
KZN				S	**Sg**	**22 42 18.9**	**+0.2**
KZN				*e*Sb	**Sb**	**22 42 20.4**	**-0.6**
KEK	**Kerkira**	**0.85**	**237**	P	**Pg**	**22 42 08.6**	**-0.5**
KEK				S	**Sg**	**22 42 21.1**	**+1.0**
KEK	**Kerkira**	**0.85**	**237**	P	**Pg**	**22 42 08.6**	**-0.5**
KEK				S	**Sg**	**22 42 21.1**	**+1.0**
BIA	**Bitola**	**0.95**	**28**	P	**Pg**	**22 42 10.2**	**-0.8**
BIA				S	**Sg**	**22 42 24.5**	**+1.1**
BIA	**Bitola**	**0.95**	**28**	*i* Pg	**Pg**	**22 42 10.2**	**-0.8**
BIA				*i* Sg	**Sg**	**22 42 24.0**	**+0.6**
BIA	**Bitola**	**0.95**	**28**	P	**Pg**	**22 42 10.2**	**-0.8**
BIA				S	**Sg**	**22 42 24.5**	**+1.1**
THL	**Klokotos Trika**	**1.17**	**121**	*e*PN	**Pn**	**22 42 13.6**	**-2.6**
THL				*e*SB	**Sb**	**22 42 31.5**	**+0.2**
THL	**Klokotos Trika**	**1.17**	**121**	P	**Pg**	**22 42 13.2**	**-1.8**
THL				S	**Sg**	**22 42 29.4**	**-0.7**
THL	**Klokotos Trika**	**1.17**	**121**	P	**Pg**	**22 42 13.2**	**-1.8**
THL	**Klokotos Trika**	**1.17**	**121**	*e*Pn	**Pn**	**22 42 13.6**	**-2.6**
THL				S	**Sg**	**22 42 29.4**	**-0.7**
THL				*e*Sb	**Sb**	**22 42 31.5**	**+0.2**
KRUS	**Krusevo**	**1.25**	**18**	*i* Pg	**Pg**	**22 42 15.9**	**-0.9**
TIR	**Tirane**	**1.34**	**331**	P	**Pg**	**22 42 22.1**	**+3.7**
TIR	**Tirane**	**1.34**	**331**	P	**Pg**	**22 42 18.1**	**-0.3**
TIR				S	**Sg**	**22 42 38.3**	**+2.6**
TIR	**Tirane**	**1.34**	**331**	P	**Pg**	**22 42 18.1**	**-0.3**
LIT	**Litokhoron**	**1.35**	**93**	P	**Pg**	**22 42 18.0**	**-0.6**
LIT	**Litokhoron**	**1.35**	**93**	*e*PG	**Pg**	**22 42 16.9**	**-1.7**
LIT				*e*SB	**Sb**	**22 42 37.5**	**+0.8**
LIT	**Litokhoron**	**1.35**	**93**	P	**Pn**	**22 42 16.8**	**-2.0**
LIT				S	**Sg**	**22 42 36.8**	**+0.6**
LIT	**Litokhoron**	**1.35**	**93**	*e*Pg	**Pg**	**22 42 16.9**	**-1.7**
LIT	**Litokhoron**	**1.35**	**93**	P	**Pg**	**22 42 18.0**	**-0.6**
LIT				S	**Sg**	**22 42 36.8**	**+0.6**
LIT				*e*Sb	**Sb**	**22 42 37.5**	**+0.8**
GRG	**Griva**	**1.49**	**58**	P	**Pn**	**22 42 19.9**	**-0.8**
GRG	**Griva**	**1.49**	**58**	P	**Pn**	**22 42 20.0**	**-0.7**
GRG				S	**Sg**	**22 42 41.0**	**+0.3**
GRG	**Griva**	**1.49**	**58**	P	**Pn**	**22 42 20.0**	**-0.7**
GRG				S	**Sg**	**22 42 41.0**	**+0.3**
EVR	**Evrytania**	**1.51**	**146**	P	**Pn**	**22 42 20.8**	**-0.1**
EVR	**Evrytania**	**1.51**	**146**	*e*PG	**Pn**	**22 42 20.4**	**-0.6**
EVR	**Evrytania**	**1.51**	**146**	*e*Pg	**Pn**	**22 42 20.4**	**-0.6**
EVR	**Evrytania**	**1.51**	**146**	P	**Pn**	**22 42 20.8**	**-0.1**
AGG	**Agios Georgios**	**1.69**	**133**	P	**Pn**	**22 42 23.9**	**+0.5**
AGG	**Agios Georgios**	**1.69**	**133**	*e*PN	**Pn**	**22 42 23.5**	**+0.1**
AGG				*e*SN	**Sn**	**22 42 47.3**	**+1.5**
AGG	**Agios Georgios**	**1.69**	**133**	*e*Pn	**Pn**	**22 42 23.5**	**+0.1**
AGG	**Agios Georgios**	**1.69**	**133**	P	**Pn**	**22 42 23.9**	**+0.5**
AGG				*e*Sn	**Sn**	**22 42 47.3**	**+1.5**
THE	**Thessaloniki**	**1.77**	**74**	P	**Pn**	**22 42 26.0**	**+1.5**
THE	**Thessaloniki**	**1.77**	**74**	P	**Pn**	**22 42 26.0**	**+1.5**
VAY	**Valandovo**	**1.81**	**50**	*e*Pn	**Pn**	**22 42 24.4**	**-0.6**
HORT	**Hortiatis**	**1.86**	**76**	P	**Pn**	**22 42 27.4**	**+1.7**
HORT	**Hortiatis**	**1.86**	**76**	P	**Pn**	**22 42 27.4**	**+1.7**
VLS	**Valsamata**	**2.00**	**183**	P	**Pg**	**22 42 31.4**	**+0.3**
VLS	**Valsamata**	**2.00**	**183**	*e*PN	**Pn**	**22 42 28.2**	**+0.5**
VLS	**Valsamata**	**2.00**	**183**	*e*Pn	**Pn**	**22 42 28.2**	**+0.5**
VLS	**Valsamata**	**2.00**	**183**	P	**Pg**	**22 42 31.4**	**+0.3**
SOH	**Sokhos**	**2.10**	**71**	P	**Pn**	**22 42 29.4**	**+0.3**
SOH	**Sokhos**	**2.10**	**71**	P	**Pn**	**22 42 29.4**	**+0.3**
LKR	**Lokris**	**2.33**	**130**	P	**Pn**	**22 42 33.5**	**+1.3**
LKR	**Lokris**	**2.33**	**130**	*e*PN	**Pn**	**22 42 32.7**	**+0.5**
LKR	**Lokris**	**2.33**	**130**	*e*Pn	**Pn**	**22 42 32.7**	**+0.5**
LKR	**Lokris**	**2.33**	**130**	P	**Pn**	**22 42 33.5**	**+1.3**
BARS	**Barje**	**2.76**	**17**	*e*Pn	**Pn**	**22 42 38.5**	**+0.4**
STON	**Ston**	**3.52**	**321**	*e*Pn	**Pn**	**22 42 47.7**	**-0.9**
STON				Sn	**Sn**	**22 43 29.4**	**-1.5**
STON	**Ston**	**3.52**	**321**	*e*Pn	**Pn**	**22 42 47.6**	**-1.0**
STON				Sn	**Sn**	**22 43 29.3**	**-1.6**
DIVS	**Divibare**	**3.95**	**352**	*e*Pn	**Pn**	**22 42 55.6**	**+1.1**
NVLJ	**Novalja**	**6.16**	**317**	*e*Pn	**Pn**	**22 43 24.0**	**-0.9**
NVLJ				Sn	**Sn**	**22 44 31.4**	**-4.6**
NVLJ	**Novalja**	**6.16**	**317**	*e*Pn	**Pn**	**22 43 23.9**	**-1.0**

IDC 14 23:26:55.6±7.7, 17°.06S×174°.21W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.4/18, mbtmp3.4/2, Error ellipse: s-maj=414.7km s-min=50.1km az=146.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.73**	**258**	P	P	23 35 42.5	+0.2
	0.2nm,0.5s,baz=94,slow=7.0,SNR=6.4						
ASAR	**Alice Springs**	**48.87**	**253**	P	P	23 35 43.2	-0.3
	0.4nm,0.4s,baz=97,slow=7.6,SNR=3.6						
GERES	**GERESS Array B**	**147.64**	**350**	PKPbc	PKPbc	23 46 41.5	-0.5
	1.3nm,0.8s,baz=0.0,slow=4.0,SNR=7.4						

ISCJB ***14*** *23:32:28.2±0.3,39°.03N±0°.03×50°.28E±0°.03,h10km, mb3.6/8, Error ellipse: s-maj=4.1km s-min=3.2km az=21.4*
IDC ***14*** *23:32:28.8±1.7,39°.16N×50°.19E,h0km,mb3.7/6, mb1 3.9/10,mb1mx3.6/28,mbtmp3.8/10,ML3.0/1, Error ellipse: s-maj=29.2km s-min=11.2km az=167.0*
MOS ***14*** *23:32:32.2±1.0,39°.43N×50°.28E,h27km,mb4.1/2, Error ellipse: s-maj=10.2km s-min=9.5km az=96.9*
NEIC ***14*** *23:32:33.4±3.1,39°.32N×50°.27E,h29km±23km,mb3.7/8, Error ellipse: s-maj=15.1km s-min=6.0km az=186.0*
THR ***14*** *23:32:34.3±0.5,38°.68N×49°.82E,h14km±5km,ML3.7*
CSEM ***14*** *23:32:34.2±0.3,39°.05N×50°.20E,h52km±3km,mb4.3/5, Error ellipse: s-maj=7.9km s-min=5.3km az=26.0*

ISC 14 23:32:29.8±0.3, 39°.03N±0°.03×50°.27E±0°.03, h10km, n105, σ1°26/126, mb3.6/8, 5D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIB	**Äli-Bayra**	**1.35**	**314**	P	**Pg**	**23 32 57.5**	**+1.8**
	SNR=21						
ALIB				S	**Sg**	**23 33 13.9**	**+0.7**
GOBA	**Gobu**	**1.44**	**343**	P	**Pg**	**23 32 59.8**	**+2.5**
GOBA				S	**Sg**	**23 33 20.7**	**+4.7**
GLBA	**Clilabad**	**1.48**	**279**	P	**Pn**	**23 32 56.5**	**+0.1**
	SNR=7.3						
GLBA				S	**Sn**	**23 33 13.9**	**-1.8**
NDR	**Nardaran**	**1.57**	**352**	P	**Pg**	**23 33 00.7**	**+0.8**
	SNR=6.4						
NDR				S	**Sg**	**23 33 22.4**	**+2.2**
GRMI	**Germi**	**1.86**	**264**	*e*Pg	**Pn**	**23 33 02.0**	**+0.3**
GRMI				*e*Sg	**Sn**	**23 33 22.6**	**-2.7**
GRMI				AML	AML	23 33 23.8	
	comp=E,900nm,0.5s						
GRMI				AML	AML	23 33 25.1	
	comp=N,714nm,0.2s						
PQL	**Pirkuli**	**2.18**	**324**	P	**Pn**	**23 33 08.0**	**+1.9**
	SNR=4.0						
PQL				S	**Sn**	**23 33 34.0**	**+0.8**
SIZA	**Siyzn**	**2.30**	**333**	P	**Pn**	**23 33 09.8**	**+2.1**
	SNR=6.4						
SIZA				S	**Sn**	**23 33 37.5**	**+1.4**
IML	**Ismayilli**	**2.39**	**318**	P	**Pn**	**23 33 09.6**	**+0.7**
	SNR=205						
ZNJK	**Zanjan**	**2.66**	**209**	*e*Pg	**Pn**	**23 33 14.3**	**+1.6**
ZNJK				*e*Sg	**Sn**	**23 33 43.6**	**-1.4**
BRDA	**Brd**	**2.69**	**298**	P	**Pn**	**23 33 14.2**	**+1.2**
	SNR=72						
BRDA				S	**Sn**	**23 33 45.2**	**-0.4**
THKV	**Tehran--Karaj**	**3.14**	**171**	*e*Pn	**Pn**	**23 33 22.1**	**+2.9**
THKV				Sn	**Sn**	**23 33 57.1**	**+0.3**
THKV				AML	AML	23 34 00.3	
	comp=N,273nm,0.2s						
THKV				AML	AML	23 34 01.2	
	comp=E,350nm,0.3s						
THKV	**Tehran--Karaj**	**3.14**	**171**	*e*Pn	**Pn**	**23 33 22.1**	**+2.8**
SEKA	**Sheki**	**3.21**	**314**	P	**Pn**	**23 33 20.7**	**+0.5**
	SNR=30						
SEKA				S	**Sn**	**23 33 57.0**	**-1.5**
GANJ	**Ganja**	**3.44**	**299**	P	**Pn**	**23 33 23.0**	**-0.4**
	SNR=155						
GANJ				S	**Sn**	**23 33 59.7**	**-4.6**
DAMV	**Damavand**	**3.65**	**158**	*e*Pn	**Pn**	**23 33 30.3**	**+4.1**
DAMV				AML	AML	23 34 14.2	
	comp=E,109nm,0.6s						
DAMV				AML	AML	23 34 14.3	
	comp=N,216nm,0.6s						
DAMV	**Damavand**	**3.65**	**158**	*e*Pn	**Pn**	**23 33 30.

BVAR	**Borovoye Array**	**19.68**	**38**	P	**Pn**	**23 36 59.3**	**-0.9**
VOIR		**19.70**	**297**	‖P	**Pn**	**23 37 00.2**	**-0.3**
VOIR		**19.70**	**297**	P	**Pn**	**23 37 00.2**	**-0.3**
BURAR	**Bucovina Array**	**20.08**	**303**	‖P	**P**	**23 37 02.4**	**-0.8**
BURAR	**Bucovina Array**	**20.08**	**303**	‖*i*P	**P**	**23 37 02.4**	**-0.8**
BUR08	**Bucovina Ar. S**	**20.10**	**304**	*e*P	**P**	**23 37 02.6**	**-0.8**
BUR08	**Bucovina Ar. S**	**20.10**	**304**	*e*P	**P**	**23 37 02.6**	**-0.8**
DRGR		**21.55**	**300**	‖P	**P**	**23 37 19.1**	**0.0**
DRGR		**21.55**	**300**	P	**P**	**23 37 19.1**	**0.0**
KURK	**Kurchatov**	**23.09**	**50**	*e*P	**P**	**23 37 35.5**	**-0.1**
	comp=Z,3.2nm,0.8s,mb3.8						
KURK	**Kurchatov**	**23.09**	**50**	*e*P	**P**	**23 37 35.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
KURK	**Kurchatov**	**23.09**	**50**	*e*P	**P**	**23 37 35.5**	**0.0**
	comp=Z,3.2nm,0.8s,mb3.8						
MK31	**Makanchi Array**	**24.58**	**61**	*e*P	**P**	**23 37 50.0**	**+0.3**
MK31	**Makanchi Array**	**24.58**	**61**	*e*P	**P**	**23 37 50.0**	**+0.3**
MK31	**Makanchi Array**	**24.58**	**61**	*e*P	**P**	**23 37 50.0**	**+0.3**
MKAR	**Makanchi Array**	**24.58**	**61**	P	**P**	**23 37 50.8**	**+1.1**
	comp=Z,0.8nm,0.5s,mb3.5,baz=252,slow=10,SNR=11						
MKAR	**Makanchi Array**	**24.58**	**61**	P	**P**	**23 37 50.8**	**+1.1**
MKAR	**Makanchi Array**	**24.58**	**61**	P	**P**	**23 37 50.8**	**+1.1**
JOF	**Joensuu**	**26.52**	**341**	*e*P	**P**	**23 38 06.3**	**-0.9**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
JOF	**Joensuu**	**26.52**	**341**	*e*P	**P**	**23 38 06.3**	**-0.9**
	comp=Z,2.0nm,0.5s,mb3.9						
FINES	**FINESS Array B**	**26.95**	**334**	P	**P**	**23 38 10.3**	**-0.8**
	comp=Z,0.8nm,0.4s,mb3.6,baz=139,slow=12,SNR=11						
FINES	**FINESS Array B**	**26.95**	**334**	P	**P**	**23 38 10.3**	**-0.8**
FINES	**FINESS Array B**	**26.95**	**334**	P	**P**	**23 38 10.3**	**-0.8**
FINES	**FINESS Array B**	**26.95**	**334**	P	**P**	**23 38 10.3**	**-0.8**
ZALV	**Zalesovo Beam**	**27.74**	**46**	P	**P**	**23 38 18.3**	**0.0**
	comp=Z,0.5nm,0.3s,mb3.5,baz=258,slow=13,SNR=3.3						
ZALV	**Zalesovo Beam**	**27.74**	**46**	P	**P**	**23 38 18.3**	**0.0**
ZALV	**Zalesovo Beam**	**27.74**	**46**	P	**P**	**23 38 18.3**	**+0.1**
NB2	**NORSAR Subarra**	**32.63**	**325**	P	**P**	**23 38 59.8**	**-1.5**
	comp=Z,0.5nm,0.6s,mb3.6,baz=120,slow=8.6						
NB2	**NORSAR Subarra**	**32.63**	**325**	P	**P**	**23 38 59.8**	**-1.5**
	comp=Z,0.5nm,0.6s,mb3.6,SNR=3.7						
NOA	**NORSAR Array B**	**32.63**	**325**	P	**P**	**23 38 59.1**	**-2.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=108,slow=9.8,SNR=5.2						
NOA	**NORSAR Array B**	**32.63**	**325**	P	**P**	**23 38 59.1**	**-2.2**
NOA	**NORSAR Array B**	**32.63**	**325**	P	**P**	**23 38 59.1**	**-2.2**
ARCES	**ARCESS Array B**	**33.30**	**344**	P	**P**	**23 39 07.0**	**-0.1**
	comp=Z,1.6nm,1.1s,mb3.9,baz=148,slow=6.9,SNR=3.1						
ARCES	**ARCESS Array B**	**33.30**	**344**	P	**P**	**23 39 07.0**	**-0.1**
ARCES	**ARCESS Array B**	**33.30**	**344**	P	**P**	**23 39 07.0**	**-0.1**
ULN	**Ulaanbaatar**	**41.33**	**59**	P	**P**	**23 40 15.2**	**-0.3**
ULN	**Ulaanbaatar**	**41.33**	**59**	P	**P**	**23 40 15.2**	**-0.2**
ULN	**Ulaanbaatar**	**41.33**	**59**	P	**P**	**23 40 15.2**	**-0.2**
ESDC	**Sonseca Array**	**41.40**	**289**	P	**P**	**23 40 14.4**	**-1.7**
	comp=Z,0.1nm,0.4s,mb2.8,baz=64,slow=8.4,SNR=4.5						
ESLA	**Sonseca Array**	**41.40**	**289**	P	**P**	**23 40 14.8**	**-1.3**
ESLA	**Sonseca Array**	**41.40**	**289**	*e*P	**P**	**23 40 14.8**	**-1.3**
CM31	**Chiang Mai Arr**	**46.72**	**102**	*e*P	**P**	**23 40 59.3**	**+0.3**
	comp=Z,19nm,0.8s						
CM31	**Chiang Mai Arr**	**46.72**	**102**	*e*P	**P**	**23 40 59.3**	**+0.3**
	comp=Z,19nm,0.8s						
QIZ	**Qiongzhong**	**54.80**	**93**	*e*P	**P**	**23 42 01.0**	**+1.0**
	comp=Z,34nm,1.0s						
QIZ	**Qiongzhong**	**54.80**	**93**	*e*P	**P**	**23 42 01.0**	**+1.0**
	comp=Z,34nm,1.0s						

BJI ***14*** *23:37:43.4, 23.°48N× 102.°71E, h15km, ML3.6/8*
PLV ***14*** *23:37:53.1± 1.0, 23.°76N× 105.°33E, h0km± 7km, MD3.9*
ISC 14 23:37:43.3±0.7,**23.°47N**±0.°04×**102.°76E**±0.°06,**h10**km,**n8,**
σ1§25/20,1D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.65**	**360**	Pg	**Pn**	**23 38 12.1**	**-0.2**
KMI				Sg	**Sn**	**23 38 34.0**	**+0.5**
KMI				smax			
	comp=N,390nm,0.7s						
KMI				smax			
	comp=E,280nm,0.8s						
BVV	**Ba Vi**	**3.38**	**134**	*e*Pn	**Pn**	**23 38 37.2**	**+1.1**
BVV				*e*Pg	**Pb**	**23 38 43.7**	**+0.5**
BVV				*e*Sg	**Sn**	**23 39 18.6**	**+2.3**
BGV	**Bac-Giang**	**3.88**	**123**	*e*Pn	**Pn**	**23 38 36.6**	**-6.3**
BGV				*e*Pg	**Pb**	**23 38 42.3**	**-9.5**
BGV				*e*Sg	**Sn**	**23 39 16.8**	**-12**
DSV	**Doi Son**	**4.14**	**133**	*e*Pn	**Pn**	**23 38 45.1**	**-1.5**
DSV				*e*Pg	**Pb**	**23 38 54.5**	**-1.7**
DSV				*e*Sg	**Sn**	**23 39 36.4**	**+1.3**
PLV	**Phu-Lien**	**4.46**	**126**	*e*Pn	**Pn**	**23 38 44.2**	**-6.8**
PLV				*e*Pg	**Pb**	**23 38 53.6**	**-8.2**
PLV				*e*Sg	**Sn**	**23 39 36.0**	**-7.0**
CHRT	**Chiangrai**	**4.52**	**218**	‖PN	**Pg**	**23 39 06.5**	**-3.5**
CHRT	**Chiangrai**	**4.52**	**218**	PG	**Pg**	**23 39 08.5**	**-1.5**
CHRT				SG	**Sg**	**23 40 09.5**	**+0.9**
GYA	**Guiyang**	**4.63**	**49**	Pn	**Pn**	**23 38 54.0**	**+0.7**
GYA				Sn	**Sn**	**23 39 50.8**	**+3.7**
GYA				Sg	**Sg**	**23 40 11.4**	**-0.6**
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,90nm,0.7s						

WEL 14 23:37:48.4±0.6,**37.°19S**×**176.°52E, h214**km±6km,**ML3.7**/15,
Error ellipse: s-maj=10.7km s-min=7.7km az=90.0,
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.17**	**156**	PN	Pn	23 38 20.8	+0.1
URZ				SN	S	23 38 46.4	+0.4
MWZ	**Matawai**	**1.39**	**145**	PN	Pn	23 38 22.5	+0.1
MWZ				SN	S	23 38 49.0	-0.1
MXZ	**Matakaoa Point**	**1.47**	**105**	PN	Pn	23 38 22.8	-0.3
RAHZ	**Arahi**	**1.78**	**166**	PN	Pn	23 38 26.7	+0.9
CNGZ	**Carnagh Statio**	**1.86**	**135**	PN	Pn	23 38 27.3	+0.8
NMHZ	**Naumai**	**1.92**	**173**	PN	Pn	23 38 27.9	+0.8
BKZ	**Black Stump Fm**	**1.97**	**181**	PN	Pn	23 38 27.5	-0.2
BKZ				SN	S	23 38 57.6	-0.9
PRGZ	**Paritu Road**	**2.04**	**148**	*e*PN	Pn	23 38 28.7	+0.4
KNZ	**Kokohu**	**2.04**	**154**	PN	Pn	23 38 28.3	0.0
TUVZ	**Tukino**	**2.18**	**198**	PN	Pn	23 38 30.4	+0.6
MHGZ	**Mahia Peninsul**	**2.24**	**151**	PN	Pn	23 38 30.7	+0.3
MCHZ	**McNeill Hill**	**2.25**	**176**	PN	Pn	23 38 30.8	+0.3
WNVZ	**Wahianoa**	**2.25**	**198**	PN	Pn	23 38 30.9	+0.4
BHHZ	**Black Hill Sta**	**2.32**	**189**	PN	Pn	23 38 31.0	-0.2
CKHZ	**Cape Kidnapper**	**2.50**	**170**	PN	Pn	23 38 32.8	-0.4
KAHZ	**Kahuranaki**	**2.62**	**174**	PN	Pn	23 38 34.0	-0.4
PNHZ	**Pukenui**	**2.73**	**185**	PN	Pn	23 38 34.8	-0.8
WAZ	**Wanganui**	**2.83**	**205**	PN	Pn	23 38 37.2	+0.4
PXZ	**Pawanui**	**2.85**	**175**	PN	Pn	23 38 36.0	-1.0
TSZ	**Takapari Road**	**2.90**	**188**	PN	Pn	23 38 36.4	-1.1
PRHZ	**Porangahau**	**3.07**	**178**	PN	Pn	23 38 38.2	-1.3
DVHZ	**Dannevirke**	**3.12**	**185**	PN	Pn	23 38 38.7	-1.3
BFZ	**Birch Farm**	**3.49**	**183**	PN	Pn	23 38 42.3	-2.1
MRZ	**Mangatainoka R**	**3.54**	**192**	PN	Pn	23 38 43.1	-1.9
MRZ				SN	S	23 39 27.4	-2.4
TIWZ	**Tintock**	**3.61**	**188**	PN	Pn	23 38 44.2	-1.8
OGWZ	**Otaki Gorge**	**3.77**	**196**	PN	Pn	23 38 45.9	-1.9
HOWZ	**Holdsworth Sta**	**3.78**	**192**	PN	Pn	23 38 45.8	-2.2
KIW	**Kapiti Island**	**3.87**	**198**	PN	Pn	23 38 46.9	-2.2
TMWZ	**Te Maipa**	**3.94**	**187**	PN	Pn	23 38 48.3	-1.6
MTW	**Mount Morrison**	**4.04**	**191**	PN	Pn	23 38 48.3	-2.7
CAW	**Cannon Point**	**4.07**	**196**	PN	Pn	23 38 49.0	-2.5
DUWZ	**D'Urville Isla**	**4.13**	**208**	PN	Pn	23 38 50.1	-2.2
TRWZ	**Traveller**	**4.25**	**188**	PN	Pn	23 38 51.4	-2.2
MSWZ	**Moikau Station**	**4.33**	**193**	PN	Pn	23 38 51.6	-3.1
TCW	**Tory Channel**	**4.38**	**203**	PN	Pn	23 38 52.8	-2.5
PLWZ	**Palliser**	**4.48**	**192**	PN	Pn	23 38 53.4	-3.2
NNZ	**Nelson**	**4.70**	**210**	PN	Pn	23 38 56.5	-2.8
THZ	**Tophouse**	**5.35**	**210**	*e*PN	Pn	23 39 04.5	-3.1

ISCJB ***14*** *23:57:21.5± 0.5, 61.°16S± 0.°06× 67.°7W± 0.°3, h10km, mb4.4/17, MS3.5/7, Error ellipse: s-maj=19.2km s-min=8.0km az=175.3*
IDC ***14*** *23:57:21.4± 0.6, 61.°22S× 67.°80W, h0km, mb4.4/12, mb1 4.5/14, mb1mx4.4/20, mbtmp4.4/14, ML4.2/2, MS3.5/9, Ms1 3.5/9, ms1mx3.4/19, Error ellipse: s-maj=25.2km s-min=14.1km az=89.0*
NEIC ***14*** *23:57:25.1± 2.2, 61.°17S× 67.°71W, h24km± 15km, mb4.6/12, Error ellipse: s-maj=13.1km s-min=5.8km az=86.0*
ISC 14 23:57:23.3±5.0,**61.°18S**±0.°06×**67.°6W**±0.°3,**h10**km±31km,
n52,σ0§94/33, mb4.4/17,**MS3.5/7, Drake Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**3.95**	**157**	Pn	**Pn**	**23 58 22.7**	**-1.2**
	3.5nm,0.3s,baz=343,slow=11,SNR=16						
PMSA				Sn	**Sn**	**23 59 03.4**	**-6.9**
	6.2nm,0.3s,baz=188,slow=16,SNR=13						
PMSA				LR	LR	23 59 41.2	
	comp=Z,572nm,20.1s,baz=329,slow=35						
PMSA	**Palmer Station**	**3.95**	**157**	*e*Pn	**Pn**	**23 58 23.9**	**-0.1**
PMSA				*e*Sn	**Sn**	**23 59 05.1**	**-5.2**
PMSA				LR	LR	23 59 41.2	
USHA	**Ushuaia**	**6.38**	**356**	Pn	**Pn**	**23 58 56.9**	**-0.4**
	2.8nm,0.3s,baz=162,slow=12,SNR=31						
USHA				Sn	**Sn**	**00 00 05.4**	**-4.7**
	3.4nm,0.3s,baz=7.1,slow=16,SNR=4.2						
USHA				LR	LR	00 00 07.5	
	comp=Z,661nm,21.4s,baz=181,slow=26						
PLCA	**Paso Flores**	**20.56**	**354**	P	**P**	**00 02 03.4**	**+1.6**
	3.6nm,0.8s,baz=162,slow=7.0,SNR=8.3						
PLCA				LR	LR	00 10 33.7	
	comp=Z,300nm,18.9s,MS3.7,baz=226,slow=38						
PLCA	**Paso Flores**	**20.56**	**354**	*e*P	**P**	**00 02 01.6**	**-0.2**
	5.2nm,0.9s						
PLCA				LR	LR	00 10 33.7	
TRQA	**Tornquist**	**23.41**	**11**	*e*P	**P**	**00 02 32.6**	**+0.3**
	6.5nm,0.8s,mb4.1						
QSPA	**South Pole Qui**	**29.04**	**180**	P	**P**	**00 03 23.7**	**+0.8**
	2.3nm,0.7s,mb4.0,baz=154,slow=3.2,SNR=16						
QSPA				PcP	PcP	00 06 31.2	+0.6
	2.1nm,1.1s,baz=109,slow=6.9,SNR=2.6						
QSPA				LR	LR	00 13 55.0	
	comp=Z,68nm,19.7s,MS3.3,baz=325,slow=34						
QSPA	**South Pole Qui**	**29.04**	**180**	*e*P	**P**	**00 03 23.4**	**+0.4**
	75nm,2.2s,mb5.0						
QSPA				PP	PP	00 04 27.9	-0.4
QSPA				LR	LR	00 13 55.0	
CFAA	**Coronel Fontan**	**29.59**	**359**	P	**P**	**00 03 27.1**	**-1.1**
	0.4nm,0.6s,mb3.3,baz=146,slow=7.1,SNR=7.5						
CFAA				LR	LR	00 16 32.4	
	comp=Z,16nm,18.9s,MS2.7,baz=177,slow=39						
CPUP	**Villa Florida**	**35.53**	**16**	P	**P**	**00 04 20.2**	**0.0**
	11nm,0.8s,mb4.9,baz=177,slow=7.0,SNR=28						
CPUP				LR	LR	00 21 15.5	
	comp=Z,60nm,18.1s,MS3.4,baz=173,slow=40						
CPUP	**Villa Florida**	**35.53**	**16**	*e*P	**P**	**00 04 21.7**	**+1.5**
	15nm,1.4s,mb4.7						
CPUP				LR	LR	00 21 15.5	
SBA	**Scott Base**	**37.33**	**196**	*e*P	**P**	**00 04 37.1**	**+2.0**
	3.8nm,0.6s,mb4.4						
LPAZ	**La Paz**	**44.84**	**359**	P	**P**	**00 05 38.6**	**+1.2**
	5.6nm,0.6s,mb4.6,baz=165,slow=5.6,SNR=32						
LPAZ				PcP	PcP	00 07 20.5	+1.4
	1.8nm,0.8s,baz=190,slow=3.5,SNR=3.9						
LPAZ	**La Paz**	**44.84**	**359**	*e*P	**P**	**00 05 38.4**	**+1.0**
	4.5nm,0.8s,mb4.3						
LPAZ				*e*PcP	PcP	00 07 20.4	+1.3
MAW	**Mawson**	**46.57**	**156**	LR	LR	00 25 51.0	
	comp=Z,107nm,18.7s,MS3.8,baz=359,slow=37						
BDFB	**Brasilia**	**47.61**	**26**	P	**P**	**00 05 59.3**	**+0.1**
	8.5nm,0.8s,mb4.8,baz=187,slow=5.2,SNR=12						
NNA	**Nana**	**49.57**	**348**	P	**P**	**00 06 13.7**	**-0.7**
CASY	**Casey**	**52.84**	**179**	*e*P	**P**	**00 06 38.2**	**0.0**
	16nm,1.7s,mb4.7						
OTAV	**Otavalo**	**61.82**	**348**	*e*P	**P**	**00 07 43.5**	**+1.3**
	7.4nm,0.9s,mb4.8						
OTAV				*e*PcP	PcP	00 08 23.1	-0.1
TBI	**Tubuai**	**65.93**	**265**	*e*LR	LR	00 27 43.1	
	192nm,31.0s						
BOSA	**Boshof**	**66.70**	**107**	P	**P**	**00 08 14.1**	**-0.1**
	5.2nm,0.8s,mb4.6,baz=200,slow=4.3,SNR=5.3						
BOSA				LR	LR	00 33 05.1	
	comp=Z,35nm,20.8s,MS3.5,baz=347,slow=32						
BOSA	**Boshof**	**66.70**	**107**	*e*P	**P**	**00 08 14.3**	**+0.1**
	9.4nm,1.0s,mb4.8						
BOSA				LR	LR	00 33 05.1	
SDV	**Santo Domingo**	**69.89**	**357**	*e*P	**P**	**00 08 33.5**	**-0.6**
	3.6nm,0.9s,mb4.3						
LBTB	**Lobatse**	**69.92**	**105**	P	**P**	**00 08 34.0**	**-0.4**
	4.1nm,0.8s,mb4.4,baz=356,slow=20,SNR=7.9						
LBTB	**Lobatse**	**69.92**	**105**	*e*P	**P**	**00 08 34.6**	**+0.2**
	4.0nm,0.7s,mb4.5						
PPT	**Papeete**	**70.92**	**268**	*e*LR	LR	00 30 01.5	
	142nm,28.5s						
PPT	**Papeete**	**70.92**	**268**	LR	LR	00 31 00.3	
	comp=Z,106nm,21.4s,MS4.1,baz=357,slow=28						
RAR	**Rarotonga**	**72.69**	**258**	P	**P**	**00 08 48.9**	**-2.3**
	17nm,0.6s,mb5.1,baz=91,slow=5.7,SNR=3.0						
TAOE	**Nuku Hiva Isla**	**73.89**	**281**	*e*S	S	00 18 17.8	-12
	69nm,31.4s						
TAOE				*e*LR	LR	00 31 20.6	
	116nm,34.2s						
LSZ	**Lusaka**	**79.52**	**102**	P	**P**	**00 09 29.7**	**-0.4**
DBIC	**Dimbokro**	**83.14**	**63**	P	**P**	**00 09 46.9**	**-2.4**
	1.5nm,0.6s,mb4.2,baz=153,slow=3.9,SNR=4.2						
DBIC	**Dimbokro**	**83.14**	**63**	*e*P	**P**	**00 09 49.2**	**-0.1**
	1.4nm,0.5s,mb4.2						
DZM	**Mont Dzumac**	**86.39**	**229**	*e*LR	LR	00 37 30.5	
	89nm,25.0s						
TORD	**Torodi Ar. Bea**	**91.77**	**66**	P	**P**	**00 10 31.6**	**+0.6**
	1.9nm,0.8s,mb4.5,baz=199,slow=3.9,SNR=8.5						
ASAR	**Alice Springs**	**93.68**	**200**	P	**P**	**00 10 39.6**	**-0.3**
	0.5nm,0.8s,mb4.0,baz=142,slow=6.6,SNR=4.5						
WRA	**Warramunga Arr**	**97.25**	**201**	P	**P**	**00 10 56.4**	**+0.1**
	0.7nm,0.7s,mb4.2,baz=174,slow=4.0,SNR=6.9						
GERES	**GERESS Array B**	**127.47**	**55**	PKP	PKPdf	00 16 27.0	-0.1
	0.9nm,0.8s,baz=230,slow=3.3,SNR=5.9						
GERES	**GERESS Array B**	**127.47**	**55**	PKP	PKPdf	00 16 27.0	-0.1
YKA	**Yellowknife Ar**	**128.41**	**334**	PKP	PKPdf	00 16 27.7	-0.8
	0.7nm,0.7s,baz=199,slow=1.7,SNR=4.0						
YKA	**Yellowknife Ar**	**128.41**	**334**	PKP	PKPdf	00 16 27.7	-0.8
BRTR	**Keskin Array B**	**129.03**	**77**	PKP	PKPdf	00 16 30.0	-0.4
	1.2nm,1.0s,baz=270,slow=1.4,SNR=4.3						
ILAR	**Eielson Array**	**138.74**	**320**	PKP	PKPdf	00 16 47.0	-0.7
	1.0nm,0.8s,baz=169,slow=2.0,SNR=12						
ARCES	**ARCESS Array B**	**145.91**	**39**	PKPbc	PKPbc	00 17 00.6	-0.6
	6.0nm,0.7s,baz=229,slow=1.9,SNR=89						
KEV	**Kevo**	**146.47**	**39**	*e*PKPdf	PKPdf	00 17 01.1	-0.2
ABKAR	**Akbulak array**	**148.68**	**88**	PKPdf	PKPdf	00 17 05.2	-0.4
KKAR	**Karatay Array**	**149.29**	**107**	*e*PKPbc	PKPbc	00 17 10.5	-0.7
AML	**Almayashu**	**149.99**	**112**	*e*PKPdf	PKPdf	00 17 07.3	-0.6
AML				*e*PKPbc	PKPbc	00 17 13.3	+0.3
EKS2	**Erkin-Say**	**150.45**	**111**	*e*PKPdf	PKPdf	00 17 08.3	-0.4
EKS2				*e*PKPbc	PKPbc	00 17 14.0	0.0
AAK	**Ala-Archa**	**150.75**	**112**	*e*PKPdf	PKPdf	00 17 08.9	-0.2
AAK				*e*PKPbc	PKPbc	00 17 15.3	+0.6
TKM2	**Tokmak 2**	**151.47**	**113**	*e*PKPdf	PKPdf	00 17 10.1	-0.1
TKM2				PKPbc	PKPbc	00 17 15.8	-0.6
MKAR	**Makanchi Array**	**157.46**	**116**	PKPab	PKPab	00 17 50.5	+0.3
	1.4nm,0.6s,baz=226,slow=5.9,SNR=7.9						
SONM	**Songino Array**	**166.19**	**163**	PKPab	PKPab	00 18 27.2	-1.1
	0.6nm,0.9s,baz=194,slow=5.5,SNR=4.2						

CSEM ***15*** *00:05:23.9± 0.7, 39.°19N× 17.°47E, h2km, ML3.7/5, Error ellipse: s-maj=13.9km s-min=4.8km az=108.0*
ISCJB ***15*** *00:05:26.6± 1.4, 39.°19N± 0.°04× 17.°41E± 0.°10, h16km± 10km, Error ellipse: s-maj=13.5km s-min=5.5km az=21.7*
ROM ***15*** *00:05:27.1± 0.4, 39.°20N× 17.°34E, h19km± 5km, Md2.9/20, Ml3.0/20, Error ellipse: s-maj=4.3km s-min=2.5km az=93.0*
ISC 15 00:05:26.3±1.4,**39.°18N**±0.°04×**17.°40E**±0.°09,**h10**km±7km,
n49,σ0§63/59, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SERS	**Sersale**	**0.57**	**256**	Pg	**Pg**	**00 05 36.7**	**-0.7**
SERS				Sg	**Sg**	**00 05 44.6**	**-0.3**
	670nm,0.5s						
SERS	**Sersale**	**0.57**	**256**	Pg	**Pg**	**00 05 36.7**	**-0.7**
SERS				Sg	**Sg**	**00 05 44.6**	**-0.3**
	670nm,0.5s						
GRI	**Girifalco**	**0.84**	**245**	Pg	**Pg**	**00 05 42.1**	**-0.4**
GRI				Sg	**Sg**	**00 05 53.4**	**-0.1**
	584nm,0.7s						
GRI	**Girifalco**	**0.84**	**245**	Pg	**Pg**	**00 05 42.1**	**-0.4**
GRI				Sg	**Sg**	**00 05 53.4**	**-0.1**
	584nm,0.7s						
CARO	**Carolei**	**0.92**	**275**	Pg	**Pg**	**00 05 43.0**	**-1.0**
CARO				Sg	**Sg**	**00 05 56.9**	**+0.9**
	570nm,0.7s						
CARO	**Carolei**	**0.92**	**275**	Pg	**Pg**	**00 05 43.0**	**-1.0**
CARO				Sg	**Sg**	**00 05 56.9**	**+0.9**
	570nm,0.7s						
PLAC	**Placanica**	**1.05**	**226**	Pg	**Pg**	**00 05 46.6**	**+0.2**
PLAC				Sg	**Sg**	**00 06 01.6**	**+1.6**
	215nm,0.8s						
PLAC	**Placanica**	**1.05**	**226**	Pg	**Pg**	**00 05 46.6**	**+0.2**
PLAC				Sg	**Sg**	**00 06 01.6**	**+1.6**
	215nm,0.8s						
ORI	**Oriolo Calabro**	**1.15**	**321**	Pg	**Pg**	**00 05 48.0**	**-0.3**
	581nm,0.4s						
ORI	**Oriolo Calabro**	**1.15**	**321**	Pg	**Pg**	**00 05 48.0**	**-0.3**
	581nm,0.4s						
JOPP	**Joppolo**	**1.31**	**245**	Pg	**Pn**	**00 05 49.9**	**-0.8**
JOPP				Sg	**Sn**	**00 06 07.6**	**-0.7**
	151nm,0.9s						
JOPP	**Joppolo**	**1.31**	**245**	Pg	**Pn**	**00 05 49.9**	**-0.8**
JOPP				Sg	**Sn**	**00 06 07.6**	**-0.7**
	151nm,0.9s						
CRAC	**Craco**	**1.40**	**328**	Pg	**Pn**	**00 05 52.4**	**+0.5**
	808nm,0.8s						
CRAC	**Craco**	**1.40**	**328**	Pg	**Pn**	**00 05 52.4**	**+0.5**
	808nm,0.8s						
SCHR	**S. Chirico Rap**	**1.44**	**315**	Pg	**Pn**	**00 05 52.9**	**+0.4**
	93nm,0.5s						
SCHR	**S. Chirico Rap**	**1.44**	**315**	Pg	**Pn**	**00 05 52.9**	**+0.4**
	93nm,0.5s						
CUC	**Castrocucco**	**1.47**	**304**	Pg	**Pn**	**00 05 52.6**	**-0.3**
	241nm,1.0s						
CUC	**Castrocucco**	**1.47**	**304**	Pg	**Pn**	**00 05 52.6**	**-0.3**
	241nm,1.0s						
CEL	**Celeste**	**1.50**	**232**	Pg	**Pn**	**00 05 53.6**	**+0.4**
	227nm,1.2s						
CEL	**Celeste**	**1.50**	**232**	Pg	**Pn**	**00 05 53.6**	**+0.4**
	227nm,1.2s						
SOI	**Samo**	**1.53**	**224**	Pg	**Pn**	**00 05 53.8**	**+0.1**
	85nm,1.0s						
SOI	**Samo**	**1.53**	**224**	Pg	**Pn**	**00 05 53.8**	**+0.1**
	85nm,1.0s						
SIRI	**Monte Sirino -**	**1.55**	**311**	Pg	**Pn**	**00 05 54.2**	**+0.2**
	215nm,1.0s						
SIRI	**Monte Sirino -**	**1.55**	**311**	Pg	**Pn**	**00 05 54.2**	**+0.2**
	215nm,1.0s						
MATE	**Matera**	**1.56**	**340**	Pg	**Pn**	**00 05 53.8**	**-0.3**
	377nm,0.6s						
MATE	**Matera**	**1.56**	**340**	Pg	**Pn**	**00 05 53.8**	**-0.3**
	377nm,0.6s						
MIGL	**Miglionico**	**1.60**	**333**	Pg	**Pn**	**00 05 54.3**	**-0.4**
	775nm,0.6s						
MIGL	**Miglionico**	**1.60**	**333**	Pg	**Pn**	**00 05 54.3**	**-0.4**
	775nm,0.6s						
SCLL	**Scilla**	**1.61**	**236**	Pg	**Pn**	**00 05 54.6**	**-0.2**
	9.0nm,0.4s						
SCLL	**Scilla**	**1.61**	**236**	Pg	**Pn**	**00 05 54.6**	**-0.2**
	9.0nm,0.4s						
PE1	**Pezze di Greco**	**1.62**	**1**	*e*Pn	**Pn**	**00 05 55.2**	**+0.2**
NOCI	**Noci**	**1.63**	**351**	Pg	**Pn**	**00 05 54.9**	**-0.1**
	269nm,0.4s						
NOCI	**Noci**	**1.63**	**351**	Pg	**Pn**	**00 05 54.9**	**-0.1**
	269nm,0.4s						
MPAZ	**Palizzi**	**1.64**	**222**	Pg	**Pn**	**00 05 55.2**	**0.0**
	258nm,1.5s						
MPAZ	**Palizzi**	**1.64**	**222**	Pg	**Pn**	**00 05 55.2**	**0.0**
	258nm,1.5s						
MCEL	**Monticello**	**1.68**	**313**	Pg	**Pn**	**00 05 55.8**	**0.0**
	122nm,0.6s						
MCEL	**Monticello

MARD				*i* S	**Sg**	**00 20 00.4**	**-1.3**
BEST	**Besiri**	**1.55**	**7**	*i* P	**Pn**	**00 19 58.7**	**+1.0**
BEST				*i* S	**Sn**	**00 20 19.3**	**+1.4**
DIYA	**Diyarbakir**	**1.73**	**336**	*i* P	**Pn**	**00 20 00.1**	**-0.1**
DIYA				*i* S	**Sn**	**00 20 23.9**	**+1.7**
DIYA	**Diyarbakir**	**1.73**	**336**	*i* P	**Pn**	**00 20 00.1**	**0.0**
DIYA				*i* S	**Sn**	**00 20 23.9**	**+1.7**
CUKT	**Cukurca**	**2.26**	**66**	*e*PN	**Pn**	**00 20 08.1**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.44**	**326**	*e*PN	**Pn**	**00 20 09.5**	**-0.5**
ATAB	**Bozova**	**2.45**	**298**	*i* P	**Pn**	**00 20 07.8**	**-2.4**
ATAB				*i* S	**Sg**	**00 20 43.4**	**-5.5**
ATAB	**Bozova**	**2.45**	**298**	*i* P	**Pn**	**00 20 07.8**	**-2.4**
ATAB				*i* S	**Sg**	**00 20 43.4**	**-5.5**
HAKT	**HAKKARI**	**2.46**	**60**	*i* P	**Pn**	**00 20 10.9**	**+0.6**
HAKT				*i* S	**Sg**	**00 20 47.1**	**-2.1**
HAKT	**HAKKARI**	**2.46**	**60**	*i* P	**Pn**	**00 20 10.9**	**+0.6**
HAKT				*i* S	**Sg**	**00 20 47.1**	**-2.1**
BINT	**Bingol**	**2.55**	**351**	*e*PN	**Pn**	**00 20 11.4**	**-0.2**
PTK	**Pertek**	**2.85**	**333**	*e*PN	**Pn**	**00 20 15.6**	**0.0**
MALT	**Malatya**	**2.85**	**314**	*e*PN	**Pn**	**00 20 16.3**	**+0.7**
MYA	**Malataya**	**2.86**	**314**	*e*PN	**Pn**	**00 20 15.2**	**-0.5**
AKCD	**Akcadag**	**3.14**	**309**	*i* P	**Pn**	**00 20 24.0**	**+4.4**
AKCD				*i* S	**Sn**	**00 21 03.4**	**+6.3**
AKCD	**Akcadag**	**3.14**	**309**	*i* P	**Pn**	**00 20 24.0**	**+4.4**
AKCD				*i* S	**Sn**	**00 21 03.4**	**+6.2**
GAZ	**Gaziantep**	**3.17**	**286**	*e*PN	**Pn**	**00 20 19.9**	**-0.1**
KUZU	**Kuzuini**	**3.21**	**279**	*i* P	**Pn**	**00 20 18.7**	**-1.8**
KUZU				*i* S	**Sn**	**00 21 03.1**	**+4.3**
KUZU	**Kuzuini**	**3.21**	**279**	*i* P	**Pn**	**00 20 18.7**	**-1.8**
KUZU				*i* S	**Sn**	**00 21 03.1**	**+4.3**
KMRS	**Kahramanmaras**	**3.50**	**290**	*e*PN	**Pn**	**00 20 24.8**	**+0.3**
EZM	**Erzurum**	**3.56**	**4**	*e*PN	**Pn**	**00 20 25.8**	**+0.5**
AGRB	**Hanur-Agry**	**3.57**	**25**	*e*P	**Pn**	**00 20 26.6**	**+1.0**
SARI	**SarD1z-Kayseri**	**4.15**	**305**	*e*P	**Pn**	**00 20 34.7**	**+1.2**
KOZT	**Kozan**	**4.31**	**287**	*e*P	**Pn**	**00 20 36.3**	**+0.6**

KRSC 15 00:23:07.8±0.5, 54°.33N×161°.89E, h35km±24km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.24**	**338**	*i* P	Pn	00 23 14.4	-0.7
MKZ				*i* S	Sn	00 23 19.0	-1.0
KII	**Karymskiy**	**1.47**	**259**	*e*P	Pn	00 23 32.7	+1.0
KII				*i* S	Sn	00 23 50.1	+0.5
SPN	**Mys Shipunski**	**1.66**	**223**	P	Pn	00 23 34.4	+0.1
SPN				*i* S	Sn	00 23 53.5	-0.9
BZMR	**Bezymyannaya**	**1.80**	**334**	P	Pn	00 23 37.4	+1.1
BZMR				*i* S	Sn	00 23 58.5	+0.7
KPT	**Kopyto**	**1.90**	**330**	P	Pn	00 23 39.5	+1.9
NLC	**Nalytchevo**	**1.91**	**233**	P	Pn	00 23 39.3	+1.6
NLC				*i* S	Sn	00 24 02.1	+1.6
KBTR	**Krutoberegovo**	**1.96**	**15**	*e*P	Pn	00 23 39.9	+1.5
KBTR				*i* S	Sn	00 24 03.4	+1.7
KOZ	**Kozyrevsk**	**2.08**	**327**	P	Pn	00 23 42.6	+2.4
KOZ				*i* S	Sn	00 24 08.0	+3.2
KLY	**Klyuchi**	**2.11**	**341**	P	Pn	00 23 41.4	+0.9
KLY				*i* S	Sn	00 24 05.2	-0.3
AVH	**Avacha**	**2.15**	**242**	*e*P	Pn	00 23 43.3	+2.2
AVH				*i* S	Sn	00 24 08.6	+2.1
PET	**Petropavlovsk**	**2.33**	**237**	P	Pn	00 23 45.1	+1.6
PET				*i* S	Sn	00 24 12.5	+1.6
SRDR	**Sredinnyy**	**2.35**	**329**	*e*P	Pn	00 23 45.2	+1.4
GNL	**Ganaly**	**2.42**	**256**	*e*P	Pn	00 23 46.9	+2.2
BKI	**Bering**	**2.52**	**68**	*e*P	Pn	00 23 47.0	+0.8
BKI				*i* S	Sn	00 24 15.4	-0.2

IDC 15 00:59:36.6±1.7, 2°.28S×141°.85E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.6/16, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=112.9km s-min=27.7km az=117.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.03**	**202**	P	Pn	01 04 00.4	-0.5
	0.2nm,0.3s,baz=28,slow=11,SNR=17						
FITZ	**Fitzroy Crossi**	**22.36**	**224**	P	P	01 04 36.5	+0.1
	1.4nm,0.6s,baz=38,slow=14,SNR=5.6						
ASAR	**Alice Springs**	**22.61**	**199**	P	P	01 04 39.0	0.0
	1.0nm,0.8s,baz=28,slow=9.9,SNR=6.1						
ILAR	**Eielson Array**	**84.15**	**24**	P	P	01 12 09.4	+0.1
	0.4nm,0.8s,baz=247,slow=5.1,SNR=5.0						

ISCJB ***15*** *01:06:57.5±0.3, 3°.04S±0°.03×128°.27E±0°.03, h29km, mb4.7/51, MS4.0/13, Error ellipse: s-maj=5.2km s-min=4.1km az=150.6*
MOS ***15*** *01:06:57.8±1.0, 3°.08S×128°.10E, h33km, mb5.0/17, Error ellipse: s-maj=23.4km s-min=8.5km az=114.9*
IDC ***15*** *01:06:58.9±0.6, 3°.09S×128°.16E, h26km±4km, mb4.3/13, mb1 4.5/15, mb1mx4.5/19, mbtmp4.3/15, ML4.5/2, MS4.0/10, Ms1 4.0/10, ms1mx3.6/26, Error ellipse: s-maj=29.5km s-min=9.1km az=74.0*
NEIC ***15*** *01:06:59.2±0.3, 3°.00S×128°.27E, mb4.6/15, Error ellipse: s-maj=10.8km s-min=5.7km az=65.0*
DJA ***15*** *01:07:00, 2°.92S×128°.18E, h13km, mb5.2/18*
GCMT ***15*** *01:07:02.2±0.4, 3°.00S×128°.08E, h30km±1km, MW4.9, Moment Tensor Solution. s27,c33; s54,c76; Moment tensor: Scale 10^16^Nm; Mrr2.09±.19; Mθθ-2.56±.12; Mφφ0.47±.15; Mrθ0.22±.15; Mθφ1.18±.11; Mφr1.14±.19; Best double couple: M0 2.90000×10^16^ NP1:φs82.00000°, δ51.00000°, λ48.00000°. NP2:φs316.00000°, δ54.00000°, λ129.00000°. Principal axes: T 2.7900, Plg59.0000°, Azm286.0000°; N 0.1900, Plg31.0000°, Azm111.0000°; P -2.9700, Plg2.0000°, Azm20.0000°; Data Used: IC IU CN II G.*
BJI ***15*** *01:07:04.4, 3°.00S×128°.30E, h87km, mB5.0/20, mb4.8/34, Ms4.6/16, Ms7 4.2/15*
ISC 15 01:07:00.1±0.2, 3°.01S±0°.03×128°.24E±0°.03, h30km, h30km±1.0km: pP-P, n136, σ1.9±15/143, mb4.7/51, MS4.0/13, 4C-3D, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.77**	**116**	P	**Pn**	**01 07 17.1**	**+2.2**
NLAI	**Namlea**	**1.16**	**259**	P	**Pn**	**01 07 19.9**	**-0.3**
NLAI				S	**Sn**	**01 07 35.2**	**+0.2**
BNDI	**Bandanaira**	**2.24**	**132**	P	**Pn**	**01 07 38.0**	**+2.8**
BNDI				S	**Sn**	**01 08 10.5**	**+8.7**
LBMI	**Labuha**	**2.47**	**343**	P	**Pn**	**01 07 40.0**	**+1.7**
TNTI	**Ternate**	**3.85**	**347**	P	**Pn**	**01 07 58.2**	**+0.8**
TLE	**Tual**	**5.19**	**120**	P	**Pn**	**01 08 19.7**	**+3.9**
	1.1nm306nm,0.8s						
KMSI	**Cibinong**	**5.55**	**310**	P	**Pn**	**01 08 19.9**	**-0.7**
	9.4nm715nm,1.0s						
MNI	**Manado**	**5.58**	**322**	P	**Pn**	**01 08 22.2**	**+1.2**
	2.4nm6μm320nm,0.5s						
KDI	**Kendari**	**5.68**	**260**	P	**Pn**	**01 08 23.1**	**+0.6**
	0.4nm2μm110nm,0.7s						
LUWI	**Luwuk**	**5.80**	**290**	P	**Pn**	**01 08 23.9**	**-0.2**
	1.4nm5μm450nm,0.8s						
BBSI	**Bau Bau**	**6.16**	**246**	P	**Pn**	**01 08 32.9**	**+3.8**
	5μm242nm,1.1s						
SGSI	**Sangihe**	**7.18**	**338**	P	**Pn**	**01 08 40.9**	**-2.2**
	239nm,0.4s						
MRSI	**Marisa**	**7.18**	**299**	P	**Pn**	**01 08 42.9**	**-0.2**
	2μm128nm,0.8s						
BAKI	**Biak**	**8.07**	**77**	P	**Pn**	**01 08 57.7**	**+2.4**
	3μm316nm,1.3s						
MMRI	**Maumere**	**8.17**	**227**	P	**Pn**	**01 09 00.1**	**+3.4**
	2μm95nm,1.6s						
TTSI	**Tana Toraja**	**8.40**	**270**	P	**Pn**	**01 09 02.0**	**+2.1**
	3μm76nm,0.8s						
BKSI	**Bulukumba**	**8.41**	**254**	P	**Pn**	**01 09 00.3**	**+0.3**
	3μm172nm,1.8s						
SPSI	**Sidrap Palu**	**8.50**	**263**	P	**Pn**	**01 09 04.9**	**+3.6**
	1μm86nm,1.5s						
KAPI	**Kappang**	**8.69**	**256**	*e*Pn	**Pn**	**01 09 05.0**	**+1.1**
KAPI				*e*S	**Sn**	**01 10 40.7**	**-0.2**
KAPI	**Kappang**	**8.69**	**256**	P	**Pn**	**01 09 06.1**	**+2.2**
	890nm73nm,1.4s						
KAKA	**Kakadu**	**10.50**	**157**	*e*P	**Pn**	**01 09 29.8**	**+1.2**
	48nm,0.6s						
KAKA	**Kakadu**	**10.50**	**157**	*e*Pn	**Pn**	**01 09 29.8**	**+1.2**
KAKA				*e*S	**Sn**	**01 11 25.6**	**+0.3**
KNA	**Kununurra**	**12.67**	**178**	*e*P	**Pn**	**01 09 58.9**	**+0.6**
	87nm,1.0s						
KNA	**Kununurra**	**12.67**	**178**	P	**Pn**	**01 09 59.9**	**+1.6**
	2μm238nm,0.9s						
PLKI	**Palangkaraya**	**14.30**	**273**	P	**Pn**	**01 10 21.5**	**+0.9**
	605nm,0.4s						
FITZ	**Fitzroy Crossi**	**15.21**	**189**	Pn	**Pn**	**01 10 30.4**	**-2.4**
	0.5nm,0.3s,baz=24,slow=11,SNR=22						
FITZ				LR	LR	01 17 00.6	
	comp=Z,794nm,20.8s,baz=23,slow=40						
FITZ	**Fitzroy Crossi**	**15.21**	**189**	*e*P	**Pn**	**01 10 32.6**	**-0.2**
	50nm,1.6s						
FITZ	**Fitzroy Crossi**	**15.21**	**189**	*e*Pn	**Pn**	**01 10 33.4**	**+0.6**
	32nm,1.2s						
FITZ	**Fitzroy Crossi**	**15.21**	**189**	P	**Pn**	**01 10 31.8**	**-1.0**
	55nm,2.3s						
WRA	**Warramunga Arr**	**17.85**	**161**	P	**Pn**	**01 11 04.3**	**-2.0**
	3.4nm,0.3s,baz=340,slow=11,SNR=159						
WRA				S	**Sn**	**01 14 25.1**	**+0.5**
	0.4nm,0.3s,baz=348,slow=23,SNR=4.2						
WRA				LR	LR	01 18 37.6	
	comp=Z,1000nm,19.6s,baz=335,slow=39						
WRA	**Warramunga Arr**	**17.85**	**161**	P	**Pn**	**01 11 04.3**	**-2.0**
WRA				S	**Sn**	**01 14 25.1**	**+0.5**
WRA				LR	LR	01 18 37.6	
WRA	**Warramunga Arr**	**17.85**	**161**	P	**Pn**	**01 11 04.3**	**-2.0**
WRA				S	**Sn**	**01 14 25.1**	**+0.5**
WB2	**Warramunga Arr**	**17.86**	**161**	*e*P	**Pn**	**01 11 05.5**	**-0.9**
COEN	**Coen**	**18.33**	**127**	*e*P	**Pn**	**01 11 11.0**	**-1.2**
COEN	**Coen**	**18.33**	**127**	*e*P	**Pn**	**01 11 11.8**	**-0.4**
	222nm,1.0s						
COEN	**Coen**	**18.33**	**127**	P	**Pn**	**01 11 11.8**	**-0.4**
KSM	**Kuching**	**18.47**	**284**	*e*P	**Pn**	**01 11 14.3**	**+0.4**
	28nm,1.0s						
MBWA	**Marble Bar**	**19.85**	**204**	*e*P	**Pn**	**01 11 27.4**	**-3.0**
	36nm,1.3s						
ASAR	**Alice Springs**	**21.25**	**166**	P	**P**	**01 11 42.4**	**-1.5**
	59nm,0.8s,mb4.9,baz=345,slow=11,SNR=176						
ASAR				S	**S**	**01 15 37.9**	**-0.7**
	14nm,1.0s,baz=344,slow=20,SNR=8.9						
ASAR	**Alice Springs**	**21.25**	**166**	P	**P**	**01 11 42.4**	**-1.5**
ASAR				S	**S**	**01 15 37.9**	**-0.7**
GUMO	**Guam**	**23.33**	**45**	LR	LR	01 20 49.0	
	comp=Z,171nm,18.1s,MS3.5,baz=268,slow=35						
CTA	**Charters Tower**	**24.44**	**135**	*e*P	**P**	**01 12 18.1**	**+1.8**
	7.8nm,0.8s,mb4.2						
CTAO	**Charters Tower**	**24.44**	**135**	*e*P	**P**	**01 12 17.3**	**+1.0**
	68nm,1.8s,mb4.8						
CTAO	**Charters Tower**	**24.44**	**135**	*e*P	**P**	**01 12 17.3**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,68nm,1.8s,mb4.8						
QIZ	**Qiongzhong**	**28.41**	**321**	P	**P**	**01 12 52.3**	**+0.2**
QIZ				S	**S**	**01 17 37.0**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,180nm,4.3s						
QIZ				LR	LR		
	comp=N,150nm,7.2s						
QIZ				LR	LR		
	comp=Z,100nm,5.3s						
STKA	**Stephens Creek**	**31.35**	**158**	P	**P**	**01 13 16.4**	**-1.6**
	comp=Z,8.5nm,0.9s,mb4.6,baz=308,slow=9.7,SNR=5.5						
STKA				LR	LR	01 27 23.5	
	comp=Z,428nm,21.4s,MS4.1,baz=131,slow=39						
STKA	**Stephens Creek**	**31.35**	**158**	*e*P	**P**	**01 13 17.6**	**-0.4**
STKA	**Stephens Creek**	**31.35**	**158**	*e*P	**P**	**01 13 17.7**	**-0.3**
CBIJ	**Chichi jima**	**32.82**	**23**	LR	LR	01 23 51.5	
	comp=Z,170nm,21.0s,MS3.7,baz=146,slow=31						
CMAR	**Chiang Mai Arr**	**35.88**	**308**	P	**P**	**01 13 58.0**	**+0.4**
	comp=Z,0.9nm,0.4s,mb4.0,baz=140,slow=8.2,SNR=6.2						
CMAR				LR	LR	01 29 27.8	
	comp=Z,141nm,21.5s,MS3.7,baz=142,slow=38						
CMAR	**Chiang Mai Arr**	**35.88**	**308**	P	**P**	**01 13 58.0**	**+0.4**
GYA	**Guiyang**	**35.96**	**326**	P	**P**	**01 14 00.9**	**+2.7**
GYA				pP	pP	01 14 20.0	+13
GYA				sP	sP	01 14 29.8	+19
GYA				PP	PP	01 15 24.8	+4.4
GYA				S	**S**	**01 19 33.3**	**-1.7**
GYA				ScP	ScP	01 20 02.3	-6.7
GYA				ScS	ScS	01 24 06.9	-7.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
NJ2	**Nanjing**	**35.99**	**346**	*e*P	**P**	**01 14 03.8**	**+5.4**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
CHTO	**Chiang Mai**	**36.07**	**308**	*e*P	**P**	**01 13 59.9**	**+0.6**
	comp=Z,11nm,1.3s,mb4.6						
CHTO	**Chiang Mai**	**36.07**	**308**	*e*P	**P**	**01 13 59.9**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
KMI	**Kunming**	**37.34**	**320**	P	**P**	**01 14 12.1**	**+2.1**
KMI				pP	pP	01 14 33.8	+15
KMI				sP	sP	01 14 43.8	+21
KMI				S	**S**	**01 19 58.9**	**+2.9**
KMI				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.9						
KMI				pmax	pmax		
	comp=Z,64nm,3.1s						
KMI				LR	LR		
	comp=N,150nm,21.1s,MS3.9						
KMI				LR	LR		
	comp=E,110nm,17.9s,MS3.9						
KSRS	**Korea Array**	**40.26**	**360**	P	**P**	**01 14 35.2**	**+0.9**
	comp=E,1.0nm,0.8s,mb3.6,baz=172,slow=10,SNR=5.5						
KSRS				LR	LR	01 30 41.1	
	comp=E,173nm,19.4s,MS3.9,baz=178,slow=35						
MAJO	**Matsushiro**	**40.43**	**12**	*e*P	**P**	**01 14 40.9**	**+5.1**
MAJO	**Matsushiro**	**40.43**	**12**	*e*P	**P**	**01 14 40.9**	**+5.2**
MJAR	**Matsushiro Arr**	**40.43**	**12**	P	**P**	**01 14 36.2**	**+0.5**
	comp=E,0.5nm,0.3s,mb3.6,baz=196,slow=7.5,SNR=3.5						
MJAR				LR	LR	01 29 34.9	
	comp=E,169nm,21.1s,MS3.9,baz=185,slow=34						
MJAR	**Matsushiro Arr**	**40.43**	**12**	P	**P**	**01 14 36.2**	**+0.5**
MJAR				LR	LR	01 29 34.9	
MJAR	**Matsushiro Arr**	**40.43**	**12**	P	**P**	**01 14 36.2**	**+0.5**
CD2	**Chengdu**	**41.02**	**327**	*e*P	**P**	**01 14 41.8**	**+1.1**
CD2				pP	pP	01 15 00.3	+11
CD2				sP	sP	01 15 09.3	+16
CD2				PP	PP	01 16 21.3	+5.6
CD2				S	**S**	**01 20 50.9**	**-0.3**
CD2				SS	SS	01 23 51.3	-2.9
CD2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
XAN	**Xi'an**	**41.10**	**335**	P	**P**	**01 14 41.5**	**+0.2**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.8						
XAN				pmax	pmax		
	comp=Z,36nm,4.1s						
BJI	**Beijing**	**44.25**	**347**	P	**P**	**01 15 06.0**	**-0.7**
BJI				pP	pP	01 15 28.5	+13
BJI				sP	sP	01 15 38.5	+19
BJI				S	**S**	**01 21 39.1**	**+0.6**
BJI				SS	SS	01 24 50.4	-7.1
BJI				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.3						
BJI				LR	LR		
	comp=N,37nm,4.9s						
BJI				LR	LR		
	comp=E,190nm,4.6s						
LZH	**Lanzhou**	**45.08**	**332**	⇑P	**P**	**01 15 14.5**	**+1.0**
LZH				PP	PP	01 17 00.3	+1.0
LZH				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,97nm,5.4s						
LZH				LR	LR		
	comp=E,400nm,14.9s						
LZH				LR	LR		
	comp=Z,430nm,18.0s,MS4.4						
SHL	**Shillong**	**45.25**	**311**	*e*PKP	**P**	**01 15 15.0**	**0.0**
HHC	**Hu-ho-hao-te**	**46.23**	**342**	*e*P	**P**	**01 15 26.3**	**+3.8**
HHC				pP	pP	01 15 49.5	+18
HHC				PcP	PcP	01 16 58.4	+0.6
HHC				PP	PP	01 17 17.3	+5.9
HHC				ScP	ScP	01 20 41.6	-7.5
HHC				S	**S**	**01 22 08.1**	**+1.0**
HHC				ScS	ScS	01 25 09.1	-6.7
HHC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
HHC				pmax	pmax		
	comp=Z,130nm,7.7s						
HHC				LR	LR		
	comp=N,150nm,15.9s,MS4.2						
HHC				LR	LR		
	comp=E,190nm,16.3s,MS4.2						
HHC				LR	LR		
	comp=Z,170nm,15.1s,MS4.1						
CN2	**Changchun**	**46.67**	**357**	*e*P	**P**	**01 15 33.9**	**+8.1**
CN2				*e*S	**S**	**01 22 18.9**	**+5.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=Z,200nm,17.0s,MS4.1						
LSA	**Lhasa**	**48.13**	**315**	*e*P	**P**	**01 15 47.1**	**+10**
ODAN	**Odare**	**49.35**	**310**	*e*P	**P**	**01 15 47.0**	**+0.1**
	comp=Z,22nm,0.5s,mb5.4						
TAPN	**Taplejung**	**49.36**	**310**	*e*P	**P**	**01 15 47.2**	**+0.2**
	comp=Z,19nm,0.5s,mb5.4						
GTA	**Gaotai**	**49.65**	**331**	P	**P**	**01 15 49.6**	**+0.6**
GTA				pP	pP	01 16 09.8	+12
GTA				sP	sP	01 16 18.9	+17
GTA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
GUN	**Gumba**	**51.04**	**310**	*e*P	**P**	**01 15 59.7**	**0.0**
KKN	**Kakani**	**51.44**	**309**	*e*P	**P**	**01 16 02.5**	**-0.2**
	comp=Z,15nm,0.6s,mb5.1						
DMN	**Daman**	**51.48**	**309**	*e*P	**P**	**01 16 03.0**	**-0.1**
	comp=Z,45nm,1.1s,mb5.3						
GKN	**Gorkha**	**52.04**	**309**	*e*P	**P**	**01 16 06.9**	**-0.3**
	comp=Z,16nm,0.6s,mb5.2						
KLR	**Kul'dur**	**52.12**	**3**	*e*P	**P**	**01 16 03.8**	**-3.6**
KLR				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.0						
KOLN	**Koldanda**	**52.73**	**309**	*e*P	**P**	**01 16 12.5**	**+0.1**
	comp=Z,38nm,0.7s,mb5.4						
DANN	**Dangsing**	**52.88**	**309**	*e*P	**P**	**01 16 13.4**	**-0.1**
	comp=Z,36nm,0.7s,mb5.4						
SONM	**Songino Array**	**54.13**	**342**	P	**P**	**01 16 22.4**	**+0.2**
	comp=Z,5.5nm,1.0s,mb4.4,baz=162,slow=8.0,SNR=26						
SONM				pP	pP	01 16 31.1	-0.4
	comp=Z,4.3nm,1.0s,baz=159,slow=7.8,SNR=8.1						
SONM	**Songino Array**	**54.13**	**342**	P	**P**	**01 16 22.4**	**+0.2**
SONM				*PP	pP	01 16 31.1	-0.4
ZAK	**Zakamensk**	**57.34**	**341**	*e*P	**P**	**01 16 45.0**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
WMQ	**Urumqi**	**59.11**	**327**	P	**P**	**01 16 58.0**	**+0.2**
WMQ				pP	pP	01 17 17.0	+10
WMQ				sP	sP	01 17 26.0	+15
WMQ				PP	PP	01 19 11.0	+2.3
WMQ				S	**S**	**01 24 58.0**	**-5.0**
WMQ				ScS	ScS	01 26 38.0	-7.7
WMQ				SS	SS	01 28 54.0	-3.7
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,64nm,5.0s						
WMQ				LR	LR		
	comp=N,120nm,17.0s,MS4.2						
WMQ				LR	LR		
	comp=E,100nm,17.0s,MS4.2						
PETK	**Petropavlovsk-**	**61.15**	**20**	P	**P**	**01 17 11.2**	**-0.3**
	comp=E,3.9nm,0.8s,mb4.6,baz=202,slow=3.2,SNR=4.7						
PETK	**Petropavlovsk-**	**61.15**	**20**	P	**P**	**01 17 11.2**	**-0.3**
BOD	**Bodaibo**	**61.71**	**351**	*e*P	**P**	**01 17 14.7**	**-0.5**
BOD				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9						
KSH	**Kashi**	**63.91**	**317**	*e*P	**P**	**01 17 30.4**	**+0.1**
KSH				*e*pP	pP	01 17 50.0	+10
KSH				*e*PcP	PcP	01 18 06.4	+0.7
KSH				*e*PP	PP	01 19 52.3	+1.1
KSH				*e*ScP		01 22 00.5	
KSH				*e*PcS		01 22 08.6	
KSH				*e*S	**S**	**01 25 54.9**	**-9.2**
KSH				*e*ScS	ScS	01 27 12.8	-9.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
KSH				pmax	pmax		
	comp=Z,70nm,3.0s						
KSH				LR	LR		
	comp=N,85nm,3.7s						
KSH				LR	LR		
	comp=E,87nm,3.8s						
KSH				LR	LR		
	comp=Z,340nm,5.0s						
MKAR	**Makanchi Array**	**63.95**	**327**	P	**P**	**01 17 30.0**	**-0.4**
	comp=Z,3.5nm,0.8s,mb4.5,baz=123,slow=8.8,SNR=20						
MKAR				pP	pP	01 17 38.5	-1.3
	comp=Z,3.7nm,0.7s,baz=118,slow=8.2,SNR=12						
MKAR	**Makanchi Array**	**63.95**	**327**	P	**P**	**01 17 30.0**	**-0.3**
MKAR				pP	pP	01 17 38.5	-1.3
MKAR	**Makanchi Array**	**63.95**	**327**	P	**P**	**01 17 30.0**	**-0.3**
MKAR				*PP	pP	01 17 38.5	-1.3
CASY	**Casey**	**64.37**	**188**	*e*P	**P**	**01 17 25.2**	**-7.5**
YAK	**Yakutsk**	**64.87**	**1**	*e*P	**P**	**01 17 35.4**	**-0.7**
YAK				*e*		01 17 48.0	
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=N,12nm,1.3s						
TKM2	**Tokmak 2**	**65.81**	**320**	*e*P	**P**	**01 17 42.2**	**-0.3**
	comp=N,3.7nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**65.81**	**320**	*e*P	**P**	**01 17 42.3**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
AAK	**Ala-Archa**	**66.38**	**319**	*e*P	**P**	**01 17 46.3**	**0.0**
AAK	**Ala-Archa**	**66.38**	**319**	‖*i*P	**P**	**01 17 44.9**	**-1.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
AML	**Almayashu**	**66.67**	**319**	*e*P	**P**	**01 17 48.3**	**+0.2**
	comp=Z,11nm,1.2s,mb4.8						
AML	**Almayashu**	**66.67**	**319**	*e*P	**P**	**01 17 48.3**	**+0.2**
AML

ARU				SS	SS	01 34 36.6	-3.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
ZEI	**Tsey**	**87.86**	**313**	*e*P	**P**	**01 19 45.5**	**-1.3**
ZEI				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.1						
PRGR	**Permogore**	**89.11**	**332**	*e*P	**P**	**01 19 49.4**	**-2.9**
PRGR				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
ILAR	**Eielson Array**	**90.51**	**25**	P	**P**	**01 19 57.8**	**-1.0**
	comp=Z,0.9nm,0.8s,mb4.2,baz=242,slow=4.8,SNR=14						
ILAR				pP	pP	01 20 06.5	-2.0
	comp=Z,0.7nm,0.6s,baz=242,slow=5.4,SNR=6.1						
ILAR	**Eielson Array**	**90.51**	**25**	P	**P**	**01 19 57.8**	**-0.9**
ILAR				*PP	pP	01 20 06.6	-1.9
OBN	**Obninsk**	**93.40**	**325**	*e*P	**P**	**01 20 10.5**	**-1.9**
OBN				*e*PP	pP	01 20 20.7	-1.4
OBN				*e*PS	PS	01 32 37.0	+2.0
OBN				*e*SS	SS	01 37 34.9	+0.1
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
BRTR	**Keskin Array B**	**95.45**	**309**	P	P	**01 20 20.6**	**-1.5**
	comp=Z,0.8nm,0.8s,mb4.2,baz=84,slow=4.5,SNR=4.4						
BRTR	**Keskin Array B**	**95.45**	**309**	P	**P**	**01 20 20.6**	**-1.5**
ARCES	**ARCESS Array B**	**97.25**	**340**	P	**P**	**01 20 28.4**	**-1.2**
	comp=Z,3.9nm,1.1s,mb4.8,baz=86,slow=5.9,SNR=11						
ARCES	**ARCESS Array B**	**97.25**	**340**	P	**P**	**01 20 28.5**	**-1.1**
BOSA	**Boshof**	**99.92**	**240**	LR	LR	02 00 45.4	
	comp=Z,81nm,20.2s,MS4.2,baz=167,slow=32						
TXAR	**Lajitas Array**	**124.29**	**56**	PKP	PKPdf	01 25 55.8	-0.9
	comp=Z,0.7nm,0.9s,baz=252,slow=1.2,SNR=4.4						
TXAR	**Lajitas Array**	**124.29**	**56**	PKIKP	PKPdf	01 25 55.8	-0.9
TORD	**Torodi Ar. Bea**	**126.23**	**284**	PKP	PKPdf	01 25 59.8	-1.0
	comp=Z,2.3nm,0.9s,baz=65,slow=1.5,SNR=16						
CPUP	**Villa Florida**	**150.34**	**170**	PKPbc	PKPbc	01 26 48.6	-0.6
	comp=Z,10nm,1.0s,baz=210,slow=2.8,SNR=9.2						
CPUP	**Villa Florida**	**150.34**	**170**	PKIKP	PKPbc	01 26 48.6	-0.6
LPAZ	**La Paz**	**154.91**	**140**	PKP	PKPdf	01 26 52.3	+1.3
	comp=Z,0.4nm,0.5s,baz=221,slow=4.0,SNR=3.6						
LPAZ				PKPbc	PKPbc	01 26 59.7	0.0
	comp=Z,0.6nm,0.6s,baz=236,slow=2.5,SNR=3.5						
LPAZ	**La Paz**	**154.91**	**140**	PKP	PKPdf	01 26 52.3	+1.3
LPAZ				PKPbc	PKPbc	01 26 59.7	0.0
LPAZ	**La Paz**	**154.91**	**140**	PKIKP	PKPdf	01 26 52.3	+1.3
LPAZ						01 26 59.7	

*IDC **15** 01:31:34.1±3.1, 7.°00S×129.°92E, h89km±30km, mb4.0/11, mb1 4.1/14, mb1mx4.1/18, mbtmp4.0/14, Error ellipse: s-maj=27.3km s-min=13.2km az=74.0*
*NEIC **15** 01:31:37.3±1.6, 7.°05S×129.°87E, h121km±16km, mb4.3/10, Error ellipse: s-maj=13.6km s-min=10.8km az=64.0*
*ISCJB **15** 01:31:38.8±0.6, 7.°17S±0.°04×129.°98E±0.°07, h158km±7km, mb4.1/19, Error ellipse: s-maj=11.2km s-min=5.3km az=161.5*
*DJA **15** 01:31:41, 7.°10S×129.°87E, h129km, mb4.9/6*
ISC 15 01:31:39.6±0.6, 7.°17S±0.°04×129.°93E±0.°08, h148km±6km, n47, σ1°16/54, mb4.1/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.63**	**360**	P		**Pn**	**01 32 22.2**	**-0.1**
TLE	**Tual**	**3.18**	**62**	P		**Pn**	**01 32 31.1**	**+1.8**
NLAI	**Namlea**	**4.81**	**324**	P		**Pn**	**01 32 51.3**	**+0.7**
KAKA	**Kakadu**	**6.04**	**156**	*e*P		**Pn**	**01 33 08.5**	**+1.7**
	373nm,0.8s							
KAKA				*e*S		**Sn**	**01 34 14.3**	**-0.8**
KAKA	**Kakadu**	**6.04**	**156**	*e*Pn		**Pn**	**01 33 08.7**	**+1.9**
	606nm,0.7s							
KAKA				*e*S		**Sn**	**01 34 13.6**	**-1.5**
KAKA	**Kakadu**	**6.04**	**156**	P		**Pn**	**01 33 08.6**	**+1.8**
	306nm,0.6s							
SWI	**Sorong**	**6.41**	**12**	P		**Pn**	**01 33 10.0**	**-1.8**
	6μm38nm,0.7s							
LBMI	**Labuha**	**6.92**	**339**	P		**Pn**	**01 33 18.5**	**-0.2**
	0.3nm939nm73nm,0.8s							
KNA	**Kununurra**	**8.60**	**187**	*e*P		**Pn**	**01 33 41.8**	**+0.7**
	19nm,0.3s							
KNA				*e*S		**Sn**	**01 35 12.2**	**-4.5**
KNA	**Kununurra**	**8.60**	**187**	P		**Pn**	**01 33 42.4**	**+1.3**
	3μm193nm,0.6s							
FITZ	**Fitzroy Crossi**	**11.64**	**201**	P		**Pn**	**01 34 20.5**	**-0.8**
	1.7nm,0.3s,baz=41,slow=11,SNR=23							
FITZ				S		**Sn**	**01 36 21.8**	**-8.2**
	6.2nm,0.3s,baz=102,slow=22,SNR=9.8							
FITZ	**Fitzroy Crossi**	**11.64**	**201**	*e*P		**Pn**	**01 34 20.8**	**-0.5**
	7.9nm,0.3s							
FITZ				*e*S		**Sn**	**01 36 21.1**	**-8.9**
FITZ	**Fitzroy Crossi**	**11.64**	**201**	*e*Pn		**Pn**	**01 34 19.8**	**-1.5**
FITZ				*e*S		**Sn**	**01 36 19.7**	**-10**
FITZ	**Fitzroy Crossi**	**11.64**	**201**	P		**Pn**	**01 34 22.6**	**+1.3**
	28nm,0.7s							
WRA	**Warramunga Arr**	**13.40**	**162**	P		**Pn**	**01 34 43.0**	**-1.0**
	3.5nm,0.3s,baz=347,slow=13,SNR=89							
WRA				S		**Sn**	**01 37 07.0**	**-5.4**
	9.4nm,0.3s,baz=332,slow=23,SNR=17							
WB2	**Warramunga Arr**	**13.40**	**162**	*e*Pn		**Pn**	**01 34 42.9**	**-1.2**
WB2				*e*S		**Sn**	**01 37 05.8**	**-6.7**
COEN	**Coen**	**14.66**	**118**	*e*Pn		**Pn**	**01 35 00.2**	**+0.1**
	144nm,0.8s							
COEN				*e*S		**Sn**	**01 37 36.1**	**-6.7**
COEN	**Coen**	**14.66**	**118**	P		**Pn**	**01 35 03.1**	**+3.1**
ASAR	**Alice Springs**	**16.84**	**167**	P		**Pn**	**01 35 27.8**	**+1.0**
	3.1nm,0.3s,baz=344,slow=8.9,SNR=101							
ASAR				S		**S**	**01 38 32.2**	**-2.0**
	2.4nm,0.3s,baz=353,slow=26,SNR=12							
MBWA	**Marble Bar**	**17.05**	**214**	*e*Pn		**Pn**	**01 35 28.9**	**-0.4**
CTA	**Charters Tower**	**20.39**	**131**	P		**P**	**01 36 06.0**	**+1.0**
	1.9nm,0.5s,baz=301,slow=12,SNR=2.3							
CTA	**Charters Tower**	**20.39**	**131**	P		**P**	**01 36 06.0**	**+1.0**
STKA	**Stephens Creek**	**26.89**	**158**	P		**P**	**01 37 08.1**	**+1.4**
	3.8nm,0.5s,mb4.3,baz=322,slow=14,SNR=5.4							
STKA	**Stephens Creek**	**26.89**	**158**	*e*P		**P**	**01 37 09.5**	**+2.8**
	2.8nm,0.4s,mb4.2							
CMAR	**Chiang Mai Arr**	**39.78**	**310**	P		**P**	**01 38 57.3**	**-1.1**
	1.7nm,0.4s,mb4.0,baz=140,slow=7.4,SNR=8.9							
MJAR	**Matsushiro Arr**	**44.17**	**10**	P		**P**	**01 39 32.2**	**-1.5**
	3.1nm,0.7s,mb4.0,baz=189,slow=11,SNR=9.0							
MAJO	**Matsushiro**	**44.17**	**10**	*e*P		**P**	**01 39 32.3**	**-1.4**
	6.4nm,0.9s,mb4.2							
MAT	**Matsushiro**	**44.17**	**10**	P		**P**	**01 39 32.2**	**-1.5**
KSRS	**Korea Array**	**44.43**	**358**	P		**P**	**01 39 35.1**	**-0.7**
	0.7nm,0.6s,mb3.5,baz=173,slow=8.4,SNR=6.4							
SONM	**Songino Array**	**58.58**	**342**	P		**P**	**01 41 20.3**	**-0.4**
	1.6nm,0.4s,mb4.2,baz=159,slow=6.6,SNR=14							
PETK	**Petropavlovsk-**	**64.51**	**18**	P		**P**	**01 42 00.9**	**+0.5**
	3.7nm,0.6s,mb4.4,baz=168,slow=6.1,SNR=12							
MK31	**Makanchi Array**	**68.33**	**327**	*e*P		**P**	**01 42 25.6**	**+0.7**
MKAR	**Makanchi Array**	**68.33**	**327**	P		**P**	**01 42 25.3**	**+0.5**
	9.8nm,0.4s,mb4.9,baz=122,slow=8.0,SNR=92							
TKM2	**Tokmak 2**	**70.07**	**321**	*e*P		**P**	**01 42 35.3**	**-0.4**
	4.4nm,0.7s,mb4.3							
AAK	**Ala-Archa**	**70.62**	**320**	*e*P		**P**	**01 42 40.0**	**+1.0**
	1.6nm,0.6s,mb3.9							
AML	**Almayashu**	**70.89**	**319**	*e*P		**P**	**01 42 41.5**	**+0.8**
	6.2nm,0.7s,mb4.5							
EKS2	**Erkin-Say**	**71.09**	**320**	*e*P		**P**	**01 42 43.0**	**+1.1**
	4.4nm,0.7s,mb4.3							
ZALV	**Zalesovo Beam**	**71.70**	**334**	P		**P**	**01 42 44.7**	**-0.6**
	2.9nm,0.6s,mb4.2,baz=118,slow=5.6,SNR=12							
KURK	**Kurchatov**	**72.62**	**329**	*e*P		**P**	**01 42 50.7**	**-0.1**
	3.1nm,0.8s,mb4.1							
KKAR	**Karatay Array**	**73.42**	**319**	*e*P		**P**	**01 42 56.1**	**+0.4**
	1.4nm,0.6s,mb3.9							
MAW	**Mawson**	**74.77**	**201**	P		**P**	**01 43 06.0**	**+2.9**
	0.7nm,0.5s,mb3.6,baz=45,slow=2.9,SNR=4.7							
ABKAR	**Akbulak array**	**82.59**	**322**	*e*P		**P**	**01 43 46.1**	**-0.1**
	0.6nm,0.4s,mb3.7							
COLD	**Coldfoot**	**92.65**	**23**	*e*P		**P**	**01 44 36.2**	**+1.9**
	4.0nm,0.3s,mb5.0							
ILAR	**Eielson Array**	**93.53**	**25**	P		**P**	**01 44 37.2**	**-1.1**
	0.5nm,0.7s,mb3.7,baz=286,slow=4.1,SNR=5.6							
TORD	**Torodi Ar. Bea**	**128.77**	**281**	PKP		PKPdf	01 50 30.7	+0.2
	0.4nm,0.6s,baz=73,slow=3.0,SNR=5.7							
CPUP	**Villa Florida**	**145.96**	**168**	PKPbc		PKPbc	01 51 03.4	+0.7
	0.8nm,0.3s,baz=199,slow=1.1,SNR=6.7							
LPAZ	**La Paz**	**150.63**	**143**	PKPbc		PKPbc	01 51 18.5	+3.3
	0.9nm,0.3s,baz=167,slow=0.5,SNR=14							

*ISCJB **15** 01:34:46.3±0.5, 38.°73N±0.°03×122.°77W±0.°06, h10km, Error ellipse: s-maj=7.0km s-min=4.0km az=148.4*
*NEIC **15** 01:34:46.3, 38.°79N×122.°77W, h3km, MW3.5(BRK), After NCEDC.*

*IDC **15** 01:34:50.5±4.7, 38.°82N×122.°55W, h20km±21km, mb1 3.4/4, mb1mx3.2/27, mbtmp3.0/4, ML3.5/4, Error ellipse: s-maj=45.3km s-min=15.9km az=44.0*
ISC 15 01:34:47.0±0.5, 38.°75N±0.°03×122.°77W±0.°06, h10km, n21, σ1°29/31, Northern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPS	**Hopland**	**0.34**	**316**	*e*Pg		**Pg**	**01 34 53.1**	**-0.7**
MCCM	**Marconi Confer**	**0.61**	**188**	*e*Pg		**Pg**	**01 34 59.6**	**+0.9**
KCPM	**Cahto Peak**	**1.13**	**326**	*e*Pg		**Pg**	**01 35 07.7**	**-1.1**
SAC	**San Andreas**	**1.19**	**166**	*e*Pn		**Pn**	**01 35 08.6**	**-1.1**
SAC				*e*Sg		**Sg**	**01 35 25.9**	**+0.5**
KIPM	**Iron Peak**	**1.20**	**333**	*e*Pg		**Pg**	**01 35 08.8**	**-1.2**
WDC	**Whiskeytown Da**	**1.84**	**5**	*e*Pn		**Pn**	**01 35 18.1**	**-0.6**
CMB	**Columbia Colle**	**2.00**	**110**	*e*Pn		**Pn**	**01 35 20.2**	**-0.6**
CMB				*e*S		**Sn**	**01 35 47.0**	**+1.1**
SAO	**San Andreas Ge**	**2.24**	**152**	*e*Pn		**Pn**	**01 35 22.9**	**-1.1**
KHMM	**Horse Mountain**	**2.25**	**341**	Pn		**Pn**	**01 35 26.0**	**+1.7**
KHMM				*e*Pg		**Pg**	**01 35 32.9**	**+2.7**
WCN	**Washoe City**	**2.41**	**76**	*e*Pn		**Pn**	**01 35 26.8**	**+0.3**
WCN				*e*S		**Sn**	**01 35 59.6**	**+3.6**
WAKR	**Walker**	**2.62**	**94**	*e*Pn		**Pn**	**01 35 30.4**	**+1.1**
WAKR				*e*S		**Sn**	**01 35 60.0**	**-1.2**
PAHR	**Pah Rah Range**	**2.80**	**69**	*e*Pn		**Pn**	**01 35 31.3**	**-0.5**
PAHR				*e*S		**Sn**	**01 36 11.3**	**+5.7**
KRMB	**Red Mountain**	**2.91**	**343**	*e*Pn		**Pn**	**01 35 34.4**	**+1.2**
YBH	**Yreka Blue Hor**	**2.98**	**1**	Pn		**Pn**	**01 35 37.1**	**+2.8**
	0.4nm,0.3s,baz=173,slow=6.9,SNR=8.2							
YBH	**Yreka Blue Hor**	**2.98**	**1**	*e*Pn		**Pn**	**01 35 35.4**	**+1.1**
NVAR	**Mina Array Bea**	**3.51**	**94**	Pn		**Pn**	**01 35 41.8**	**+0.1**
	0.8nm,0.3s,baz=271,slow=15,SNR=23							
NVAR				Pg		**Pg**	**01 35 48.9**	**-5.4**
	3.5nm,0.3s,baz=270,slow=16,SNR=48							
NVAR				Lg			01 36 36.0	
	2.3nm,0.3s,baz=274,slow=26,SNR=3.7							
MOD	**Modoc**	**3.67**	**30**	*e*Pn		**Pn**	**01 35 41.9**	**-2.0**
MOD				*e*Pg		**Pg**	**01 35 52.7**	**-4.6**
HUMO	**Hull Mountain**	**3.86**	**358**	*e*Pn		**Pn**	**01 35 47.3**	**+0.9**
HUMO				*e*Pg		**Pg**	**01 35 58.7**	**-2.2**
ISA	**Isabella**	**4.61**	**131**	*e*Pn		**Pn**	**01 35 56.7**	**+0.1**
ISA				*e*S		**Sn**	**01 36 48.2**	**-2.0**
PDAR	**Pinedale Array**	**10.80**	**64**	Pn		**Pn**	**01 37 25.0**	**+3.5**
	0.2nm,0.3s,baz=243,slow=14,SNR=4.9							
TXAR	**Lajitas Array**	**18.38**	**115**	P		**Pn**	**01 39 03.3**	**+1.4**
	0.0nm,0.3s,baz=295,slow=11,SNR=5.3							

IDC 15 01:37:12.5±2.1, 56.°38S×27.°47W, h0km, mb4.0/2, mb1 4.1/2, mb1mx3.7/15, mbtmp4.0/2, Error ellipse: s-maj=80.4km s-min=44.1km az=180.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**50.44**	**306**	P		P	01 46 12.6	+0.8
	1.0nm,0.5s,baz=162,slow=6.4,SNR=6.2							
TORD	**Torodi Ar. Bea**	**73.42**	**30**	P		P	01 48 46.4	+0.1
	0.6nm,0.4s,baz=201,slow=6.5,SNR=23							
ILAR	**Eielson Array**	**150.22**	**311**	PKPbc		PKPbc	01 57 03.2	-0.5
	1.1nm,0.7s,baz=120,slow=2.7,SNR=23							
SONM	**Songino Array**	**150.90**	**87**	PKPbc		PKPbc	01 57 06.0	+0.1
	0.4nm,0.5s,baz=247,slow=1.1,SNR=2.8							

IDC 15 01:41:15.5±1.5, 8.°49S×157.°61E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML4.2/1, Error ellipse: s-maj=41.2km s-min=23.8km az=177.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.49**	**112**	Pn		Pn	01 41 58.0	+0.7
	51nm,0.3s,baz=230,slow=13,SNR=15							
HNR				Sn		Sn	01 42 27.6	-0.9
	98nm,0.3s,baz=236,slow=21,SNR=15							
WRA	**Warramunga Arr**	**25.23**	**241**	P		P	01 46 42.2	-1.2
	0.9nm,0.7s,baz=67,slow=9.8,SNR=4.9							
ASAR	**Alice Springs**	**27.26**	**234**	P		P	01 47 02.9	+1.2
	0.4nm,0.7s,baz=65,slow=8.2,SNR=2.7							
ILAR	**Eielson Array**	**83.82**	**21**	P		P	01 53 46.7	+0.2
	0.2nm,0.6s,baz=230,slow=5.6,SNR=4.8							

DDA 15 01:56:57.6, 38.°00N×29.°09E, h7km±1km, Md2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DNZL	**Cakiroluk**	**0.32**	**186**	*i* P		Pg	01 57 04.5	+0.7
DNZL				*i* S		Sg	01 57 08.9	+0.9
KHAL	**Karahalli**	**0.48**	**41**	*i* P		Pg	01 57 07.4	+0.4
KHAL				*i* S		Sg	01 57 14.4	+1.1

IDC 15 02:09:26.1±2.1, 5.°00N×127.°68E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/20, mbtmp3.7/4, Error ellipse: s-maj=114.7km s-min=23.9km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.04**	**185**	P		P	02 14 33.7	+0.7
	1.3nm,0.4s,baz=14,slow=11,SNR=8.4							
WRA	**Warramunga Arr**	**25.63**	**165**	P		P	02 14 57.1	-0.4
	1.2nm,0.3s,baz=343,slow=10,SNR=32							
ASAR	**Alice Springs**	**29.13**	**168**	P		P	02 15 28.9	+0.1
	0.4nm,0.6s,baz=360,slow=9.0,SNR=5.5							
MKAR	**Makanchi Array**	**57.07**	**324**	P		P	02 19 14.1	0.0
	0.3nm,0.5s,baz=125,slow=7.4,SNR=3.6							

*ISCJB **15** 02:23:48.9±0.5, 40.°68N±0.°03×32.°78E±0.°03, h0km±6km, Error ellipse: s-maj=4.8km s-min=4.2km az=2.1*
*ISK **15** 02:23:48.6, 40.°66N×32.°77E, h5km, MD3.0*
*DDA **15** 02:23:49.1, 40.°69N×32.°79E, h7km±4km, Md2.8*
*CSEM **15** 02:23:49.2±0.2, 40.°69N×32.°78E, h8km, MD2.8, Error ellipse: s-maj=3.5km s-min=3.1km az=158.0*
ISC 15 02:23:49.6±0.5, 40.°68N±0.°03×32.°78E±0.°03, h6km±5km, n34, σ0°93/51, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.53**	**111**	*i* P		**Pg**	**02 23 59.2**	**-0.7**
ELDT				*i* S		**Sg**	**02 24 06.4**	**-0.4**
ELDT	**Eldivan**	**0.53**	**111**	*i* P		**Pg**	**02 23 59.2**	**-0.7**
ELDT				*i* S		**Sg**	**02 24 06.4**	**-0.4**
SGKT	**Sivrigoynuk**	**0.56**	**259**	*i* P		**Pg**	**02 24 00.3**	**-0.1**
SGKT				*i* S		**Sg**	**02 24 09.0**	**+1.4**
SGKT	**Sivrigoynuk**	**0.56**	**259**	*i* P		**Pg**	**02 24 00.3**	**-0.1**
SGKT				*i* S		**Sg**	**02 24 09.0**	**+1.4**
SAFT	**Safranbolu**	**0.56**	**353**	*e*PG		**Pg**	**02 24 00.7**	**+0.3**
SAFT				*e*SG		**Sg**	**02 24 09.1**	**+1.4**
SAFT	**Safranbolu**	**0.56**	**353**	*e*Pg		**Pg**	**02 24 00.7**	**+0.3**
SAFT				*e*Sg		**Sg**	**02 24 09.1**	**+1.4**
CANT	**Cankiri**	**0.65**	**97**	*e*PG		**Pg**	**02 24 01.9**	**-0.2**
CANT				*e*SG		**Sg**	**02 24 10.9**	**+0.4**
LOD	**Lodumlu**	**0.79**	**181**	*e*PG		**Pg**	**02 24 03.5**	**-1.3**
LOD				*e*SG		**Sg**	**02 24 15.2**	**+0.1**
LOD	**Lodumlu**	**0.79**	**181**	*e*Pg		**Pg**	**02 24 03.5**	**-1.4**
LOD				*e*Sg		**Sg**	**02 24 15.2**	**0.0**
ILGA	**Ilgaz**	**0.80**	**62**	*i* P		**Pg**	**02 24 04.5**	**-0.6**
ILGA				*i* S		**Sg**	**02 24 16.5**	**+1.0**
ILGA	**Ilgaz**	**0.80**	**62**	*i* P		**Pg**	**02 24 04.5**	**-0.6**
ILGA				*i* S		**Sg**	**02 24 16.5**	**+1.0**
BALT	**Daday**	**0.97**	**28**	*i* P		**Pg**	**02 24 07.0**	**-1.2**
BALT				*i* S		**Sg**	**02 24 25.0**	**+4.2**
BALT	**Daday**	**0.97**	**28**	*i* P		**Pg**	**02 24 07.0**	**-1.2**
TOS	**Tosya**	**1.01**	**69**	*e*PG		**Pg**	**02 24 08.0**	**-1.0**
TOS	**Tosya**	**1.01**	**69**	*e*Pg		**Pg**	**02 24 08.0**	**-1.0**
BBAL	**Bala**	**1.17**	**167**	*i* P		**Pg**	**02 24 12.7**	**+0.6**
BBAL				*i* S		**Sg**	**02 24 28.2**	**+1.0**
BBAL	**Bala**	**1.17**	**167**	*i* P		**Pg**	**02 24 12.7**	**+0.6**
BBAL				*i* S		**Sg**	**02 24 28.2**	**+0.9**
MDU	**Mudurnu**	**1.21**	**260**	*e*PN		**Pn**	**02 24 11.8**	**-1.3**
MDU	**Mudurnu**	**1.21**	**260**	*e*Pn		**Pn**	**02 24 11.8**	**-1.3**
AFSR	**Af´ar-Bala (A**	**1.26**	**169**	*e*PN		**Pn**	**02 24 12.7**	**-1.0**
AFSR	**Af´ar-Bala (A**	**1.26**	**169**	*e*Pn		**Pn**	**02 24 12.7**	**-1.0**
KAMT	**Kaman**	**1.50**	**151**	*e*PN		**Pn**	**02 24 16.6**	**-0.5**
KAMT	**Kaman**	**1.50**	**151**	*e*Pn		**Pn**	**02 24 16.6**	**-0.5**
CORM	**Corum**	**1.50**	**109**	*e*PN		**Pn**	**02 24 17.1**	**-0.1**
CORM	**Corum**	**1.50**	**109**	*e*Pn		**Pn**	**02 24 17.1**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.56**	**218**	*e*PN		**Pn**	**02 24 17.6**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.56**	**218**	*e*Pn		**Pn**	**02 24 17.6**	**-0.4**
CDAG	**Cicekdag**	**1.62**	**130**	*i* P		**Pn**	**02 24 18.5**	**-0.2**
CDAG				*i* S		**Sn**	**02 24 40.2**	**+0.3**
CDAG	**Cicekdag**	**1.62**	**130**	*i* P		**Pn**	**02 24 18.5**	**-0.2**
CDAG				*i* S		**Sn**	**02 24 40.2**	**+0.3**
GULT	**Gulveren**	**1.74**	**262**	*e*PN		**Pn**	**02 24 20.1**	**-0.3**
GULT	**Gulveren**	**1.74**	**262**	*e*Pn		**Pn**	**02 24 20.1**	**-0.3**
YOZ	**Yozgat**	**2.21**	**117**	*e*PN		**Pn**	**02 24 27.1**	**+0.2**
YOZ	**Yozgat**	**2.21**	**117**	*e*Pn		**Pn**	**02 24 27.1**	**+0.2**
AVNT	**Avonos**	**2.49**	**139**	*i* P		**Pn**	**02 24 33.9**	**+3.2**
AVNT				*i* S		**Sn**	**02 25 03.7**	**+2.3**

*DDA **15** 02:27:08.3, 36.°95N×29.°11E, h7km±3km, Md2.8*
*CSEM **15** 02:27:10.6±0.1, 37.°20N×29.°09E, h16km±1km, MD2.9, Error ellipse: s-maj=4.0km s-min=2.8km az=2.0*
*ISK **15** 02:27:10.2, 37.°19N×29.°08E, h17km, MD2.9*
*ISCJB **15** 02:27:11.2±0.4, 37.°20N±0.°04×29.°10E±0.°04, h22km±6km, Error ellipse: s-maj=6.8km s-min=4.7km az=6.4*
ISC 15 02:27:11.0±0.4, 37.°20N±0.°04×29.°09E±0.°03, h18km±4km, n30, σ0°63/45, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**97**	*e*PG		**Pg**	**02 27 17.6**	**-0.5**
GLHS				*e*SG		**Sg**	**02 27 23.8**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.33**	**97**	*e*Pg		**Pg**	**02 27 17.6**	**-0.4**
GLHS				*e*Sg		**Sg**	**02 27 23.8**	**+1.0**
GOLH	**Golhisar**	**0.38**	**83**	*i* P		**Pg**	**02 27 17.6**	**-1.3**
GOLH				*i* S		**Sg**	**02 27 24.7**	**+0.5**
GOLH	**Golhisar**	**0.38**	**83**	*i* P		**Pg**	**02 27 17.6**	**-1.3**
GOLH				*i* S		**Sg**	**02 27 24.7**	**+0.5**
DNZL	**Cakiroluk**	**0.49**	**356**	*i* P		**Pg**	**02 27 20.9**	**-0.1**
DNZL				*i* S		**Sg**	**02 27 33.5**	**+5.8**
DNZL	**Cakiroluk**	**0.49**	**356**	*i* P		**Pg**	**02 27 20.9**	**-0.1**
TURN	**Turunc**	**0.50**	**231**	*i* P		**Pg**	**02 27 21.8**	**+0.7**
TURN				*i* S		**Sg**	**02 27 35.4**	**+7.5**
TURN	**Turunc**	**0.50**	**231**	*i* P		**Pg**	**02 27 21.8**	**+0.7**
DENT	**Denizli**	**0.56**	**356**	*e*PG		**Pg**	**02 27 21.9**	**-0.3**
DENT				*e*SG		**Sg**	**02 27 30.5**	**+0.7**
DENT	**Denizli**	**0.56**	**356**	*e*Pg		**Pg**	**02 27 21.9**	**-0.3**
DENT				*e*Sg		**Sg**	**02 27 30.5**	**+0.8**
YER	**Yerkesik**	**0.65**	**265**	*e*PG		**Pg**	**02 27 22.9**	**-0.8**
YER				*e*SG		**Sg**	**02 27 32.8**	**+0.5**
YER	**Yerkesik**	**0.65**	**265**	*e*Pg		**Pg**	**02 27 22.9**	**-0.8**
YER				*e*Sg		**Sg**	**02 27 32.8**	**+0.4**
ELL	**Elmali**	**0.79**	**124**	*e*PG		**Pg**	**02 27 26.0**	**-0.5**
ELL				*e*SG		**Sg**	**02 27 37.5**	**+0.5**
ELL	**Elmali**	**0.79**	**124**	*e*Pg		**Pg**	**02 27 26.0**	**-0.5**
ELL				*e*Sg		**Sg**	**02 27 37.5**	**+0.5**
AKAS	**Kas**	**1.04**	**156**	*i* P		**Pb**	**02 27 30.4**	**-0.2**
AKAS				*i* S		**Sb**	**02 27 49.8**	**+5.9**
AKAS	**Kas**	**1.04**	**156**	*i* P		**Pb**	**02 27 30.4**	**-0.2**
MLSB	**Milas**	**1.05**	**276**	*e*PG		**Pg**	**02 27 30.6**	**-0.8**
MLSB	**Milas**	**1.05**	**276**	*e*Pg		**Pg**	**02 27 30.6**	**-0.8**
KHL	**Karahalli**	**1.18**	**

URZ S **S** **02 38 22.3 -4.3**
1.4nm,0.3s,baz=55,slow=23,SNR=8.4
URZ Urewera 18.63 193 *eP* **P** **02 35 20.2 -2.3**
44nm,0.7s
URZ *eS* **S** **02 38 22.3 -4.3**
SNZO South Karori 22.09 195 *eP* **P** **02 35 53.4 -0.5**
KHZ Kahutara 23.43 196 *eP* **P** **02 36 04.4 -1.5**
24nm,0.8s,mb4.7
RPZ Rata Peaks 25.33 199 P **P** **02 36 22.3 -0.5**
7.6nm,0.5s,mb4.4,baz=3.2,slow=7.7,SNR=6.0
RPZ Rata Peaks 25.33 199 *eP* **P** **02 36 22.6 -0.2**
5.2nm,0.6s,mb4.1
EIDS Eidsvold 29.14 254 *eP* **P** **02 36 56.9 +0.3**
7.0nm,0.6s,mb4.3
ARMA Armidale 29.42 243 ⇓*iP* **P** **02 37 00.1 +1.2**
CTA Charters Tower 33.73 264 P **P** **02 37 36.5 +0.6**
31nm,0.5s,mb5.0,baz=95,slow=10,SNR=51
CTA PcP PcP 02 40 01.4 +0.2
3.5nm,0.5s,baz=94,slow=0.4,SNR=4.4
CTA Charters Tower 33.73 264 ⇓*iP* **P** **02 37 36.3 +0.4**
20nm,0.6s,mb4.7
CTA Charters Tower 33.73 264 P **P** **02 37 36.6 +0.7**
CTA 02 40 01.4
CTAO Charters Tower 33.73 264 *eP* **P** **02 37 36.6 +0.6**
31nm,0.6s,mb4.9
CTAO *e* 02 40 01.5
CTAO Charters Tower 33.73 264 *eP* **P** **02 37 36.6 +0.7**
CTAO *e* 02 40 01.5
CTAO pmax pmax
comp=Z,31nm,0.6s,mb4.9
CTAO Charters Tower 33.73 264 P **P** **02 37 36.3 +0.4**
comp=Z,43nm,1.1s,mb4.8
STKA Stephens Creek 38.14 244 P **P** **02 38 13.1 +0.7**
comp=Z,8.5nm,0.7s,mb4.3,baz=100,slow=13,SNR=13
STKA PcP PcP 02 40 14.8 +0.3
comp=Z,5.0nm,0.5s,baz=83,slow=5.2,SNR=6.5
STKA Stephens Creek 38.14 244 *eP* **P** **02 38 13.0 +0.6**
comp=Z,5.3nm,0.5s,mb4.2
STKA Stephens Creek 38.14 244 *eP* **P** **02 38 13.2 +0.8**
STKA *ePcP* PcP 02 40 15.2 +0.8
STKA Stephens Creek 38.14 244 *eP* **P** **02 38 13.2 +0.8**
STKA *e* 02 40 15.2
ASAR Alice Springs 44.80 256 P **P** **02 39 05.5 +0.1**
comp=Z,30nm,0.8s,mb4.8,baz=97,slow=7.9,SNR=156
ASAR PcP PcP 02 40 36.9 0.0
comp=Z,10.0nm,0.7s,baz=105,slow=4.1,SNR=20
ASAR S **S** **02 45 05.2 -0.5**
comp=Z,1.1nm,1.0s,baz=91,slow=15,SNR=3.9
ASAR Alice Springs 44.80 256 P **P** **02 39 05.6 +0.2**
ASAR pP 02 40 36.9 -1.9
ASAR S **S** **02 45 05.2 -0.5**
WB2 Warramunga Arr 44.84 262 *eP* **P** **02 39 04.9 -0.9**
WRA Warramunga Arr 44.85 262 P **P** **02 39 05.2 -0.6**
comp=Z,8.8nm,0.4s,mb4.6,baz=96,slow=7.4,SNR=488
WRA PcP PcP 02 40 37.2 +0.2
comp=Z,6.6nm,0.8s,baz=93,slow=3.7,SNR=12
WRA S **S** **02 45 05.7 -0.8**
comp=Z,1.2nm,0.9s,baz=96,slow=13,SNR=5.0
WRA Warramunga Arr 44.85 262 P **P** **02 39 05.2 -0.6**
WRA PcP PcP 02 40 37.2 +0.1
WRA S **S** **02 45 05.7 -0.8**
WRA Warramunga Arr 44.85 262 P **P** **02 39 05.3 -0.5**
WRA pP 02 40 37.2 -2.0
WRA S **S** **02 45 05.7 -0.8**
KAKA Kakadu 48.16 271 ⇓*iP* **P** **02 39 30.6 -0.5**
comp=Z,26nm,0.7s,mb4.7
KAKA Kakadu 48.16 271 *eP* **P** **02 39 30.6 -0.4**
comp=Z,105nm,0.6s,mb5.3
KAKA Kakadu 48.16 271 P **P** **02 39 30.8 -0.3**
comp=Z,772nmcomp=Z,73nm,0.7s,mb5.1
KAKA Kakadu 48.16 271 P **P** **02 39 30.9 -0.2**
comp=Z,771nmcomp=Z,73nm,0.7s,mb5.1
FORT Forrest 49.63 246 *eP* **P** **02 39 41.6 -0.2**
comp=Z,48nm,0.6s,mb5.0
FORT Forrest 49.63 246 *eP* **P** **02 39 40.9 -0.8**
comp=Z,49nm,0.6s,mb5.0
GUMO Guam 49.70 309 P **P** **02 39 42.5 +0.2**
comp=Z,70nm,0.6s,mb5.2,baz=174,slow=20,SNR=6.1
GUMO Guam 49.70 309 *eP* **P** **02 39 42.4 0.0**
comp=Z,36nm,0.6s,mb4.9
GUMO Guam 49.70 309 *eP* **P** **02 39 42.4 0.0**
GUMO pmax pmax
comp=Z,36nm,0.6s,mb4.9
KNA Kununurra 50.86 266 P **P** **02 39 51.1 +0.1**
comp=Z,2μcomp=Z,161nm,0.7s,mb5.5
KNA Kununurra 50.86 266 P **P** **02 39 51.1 +0.1**
comp=Z,2μcomp=Z,161nm,0.7s,mb5.5
FITZ Fitzroy Crossi 53.27 262 P **P** **02 40 08.5 +0.2**
comp=Z,9.9nm,0.5s,mb4.4,baz=122,slow=3.9,SNR=96
FITZ Fitzroy Crossi 53.27 262 ⇓*iP* **P** **02 40 08.4 0.0**
comp=Z,22nm,0.5s,mb4.8
FITZ Fitzroy Crossi 53.27 262 *eP* **P** **02 40 08.6 +0.2**
comp=Z,9.2nm,0.5s,mb4.4
FITZ Fitzroy Crossi 53.27 262 P **P** **02 40 08.6 +0.2**
comp=Z,41nm,1.4s,mb4.6
FITZ Fitzroy Crossi 53.27 262 P **P** **02 40 09.1 +0.7**
comp=Z,41nm,1.4s,mb4.6
SWI Sorong 53.33 285 P **P** **02 40 09.3 +0.5**
comp=Z,132nm,0.8s,mb5.3
SWI Sorong 53.33 285 P **P** **02 40 09.3 +0.5**
comp=Z,132nm,0.8s,mb5.3
NLAI Namlea 56.22 280 P **P** **02 40 29.5 +0.4**
comp=Z,40nm,0.7s,mb4.9
NLAI Namlea 56.22 280 P **P** **02 40 30.7 +1.6**
comp=Z,40nm,0.7s,mb4.9
TNTI Ternate 57.55 284 P **P** **02 40 38.7 +0.5**
comp=Z,90nm,0.9s,mb5.1
TNTI Ternate 57.55 284 P **P** **02 40 39.1 +0.9**
comp=Z,90nm,0.9s,mb5.1
MBWA Marble Bar 58.13 257 *eP* **P** **02 40 42.0 -0.1**
SBA Scott Base 58.28 184 *eP* **P** **02 40 44.0 +1.9**
comp=Z,6.5nm,0.8s,mb4.0
SBA Scott Base 58.28 184 *eP* **P** **02 40 44.1 +1.9**
SBA pmax pmax
comp=Z,6.0nm,0.8s,mb4.0
KLBR Kellerberrin 58.40 245 *eP* **P** **02 40 43.3 -0.5**
comp=Z,12nm,0.5s,mb4.5
NWAO Narrogin (SRO) 58.72 243 P **P** **02 40 46.5 +0.6**
comp=Z,14nm,0.8s,mb4.3,baz=99,slow=8.0,SNR=3.6
NWAO Narrogin (SRO) 58.72 243 P **P** **02 40 46.6 +0.7**
KDI Kendari 60.13 277 P **P** **02 40 55.4 -0.2**
comp=Z,16nm,0.8s,mb4.5
KDI Kendari 60.13 277 P **P** **02 40 56.2 +0.6**
comp=Z,16nm,0.8s,mb4.5
BMNI Bima 62.29 271 P **P** **02 41 09.5 -0.4**
comp=Z,1μcomp=Z,131nm,0.8s,mb5.4
BMNI Bima 62.29 271 P **P** **02 41 09.1 -0.8**
comp=Z,1μcomp=Z,131nm,0.8s,mb5.4
CASY Casey 64.41 205 ⇓*iP* **P** **02 41 22.7 +0.2**
CASY Casey 64.41 205 *eP* **P** **02 41 22.6 +0.1**
comp=Z,16nm,0.9s,mb4.5
QSPA South Pole Qui 69.97 180 P **P** **02 41 57.5 +1.0**
comp=Z,19nm,0.8s,mb4.7,baz=16,slow=1.2,SNR=99
QSPA South Pole Qui 69.97 180 *eP* **P** **02 41 57.4 +0.8**
comp=Z,20nm,0.8s,mb4.7
MJAR Matsushiro Arr 70.00 323 P **P** **02 41 56.8 -0.6**
comp=Z,14nm,0.5s,mb4.7,baz=165,slow=6.7,SNR=44
MJAR Matsushiro Arr 70.00 323 P **P** **02 41 56.8 -0.6**
MAJO Matsushiro 70.00 323 *eP* **P** **02 41 57.0 -0.4**
comp=Z,16nm,0.6s,mb4.7
MAJO Matsushiro 70.00 323 *eP* **P** **02 41 57.0 -0.4**
MAJO pmax pmax
comp=Z,17nm,0.6s,mb4.8
MAT Matsushiro 70.00 323 P **P** **02 41 56.6 -0.8**
FX1 Attu Island--F 73.09 354 *eP* **P** **02 42 13.9 -1.1**
FX1 Attu Island--F 73.09 354 *eP* **P** **02 42 14.0 -1.1**
ASAJ Asahikawa 73.47 331 *eP* **P** **02 42 18.2 +0.8**
comp=Z,13nm,0.8s,mb4.5
KSM Kuching 73.55 278 *eP* **P** **02 42 19.0 +0.4**
comp=Z,13nm,0.7s,mb4.6
KSM Kuching 73.55 278 P **P** **02 42 20.2 +1.6**
comp=Z,25nm,1.2s,mb4.6
YSS Yuzh-Sakhalins 75.62 333 *eP* **P** **02 42 30.2 +0.7**
comp=Z,43nm,1.0s,mb4.9
YSS Yuzh-Sakhalins 75.62 333 *eP* **P** **02 42 29.9 +0.4**
YSS pmax pmax
comp=Z,40nm,1.0s,mb4.9
PETK Petropavlovsk- 75.93 345 P **P** **02 42 30.4 -0.7**
comp=Z,22nm,0.8s,mb4.7,baz=134,slow=8.5,SNR=17
PETK Petropavlovsk- 75.93 345 P **P** **02 42 30.4 -0.7**
KASI Kota Agung 76.60 269 P **P** **02 42 36.2 +0.5**
comp=Z,56nm,1.0s,mb5.1
KASI Kota Agung 76.60 269 P **P** **02 42 37.0 +1.3**
comp=Z,56nm,1.0s,mb5.1
KSRS Korea Array 76.72 318 P **P** **02 42 36.3 +0.5**
comp=Z,2.4nm,0.7s,mb3.9,baz=129,slow=6.0,SNR=14

MDSI Maura Dua 77.24 270 P **P** **02 42 38.2 -1.0**
comp=Z,771nmcomp=Z,22nm,1.0s,mb4.7
MDSI Maura Dua 77.24 270 P **P** **02 42 38.7 -0.5**
comp=Z,771nmcomp=Z,22nm,1.0s,mb4.7
SAO San Andreas Ge 77.60 43 *eP* **P** **02 42 39.9 -0.7**
comp=Z,5.3nm,0.8s,mb4.0
SAO San Andreas Ge 77.60 43 *eP* **P** **02 42 39.9 -0.7**
SAO pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
VES Vestal, Richgr 78.61 45 ⇓P **P** **02 42 45.7 -0.4**
baz=79
BFSC Mount Baldy Ra 78.67 47 ⇓P **P** **02 42 46.3 -0.2**
baz=79
EDW2 Edwards Air Fo 78.80 46 ⇓P **P** **02 42 47.0 -0.1**
baz=79
ISA Isabella 78.92 46 ⇓P **P** **02 42 47.8 +0.1**
baz=79
ISA Isabella 78.92 46 *eP* **P** **02 42 47.5 -0.3**
comp=Z,3.0nm,0.8s,mb3.9
ISA Isabella 78.92 46 *eP* **P** **02 42 47.5 -0.2**
ISA pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
CMB Columbia Colle 79.03 43 *eP* **P** **02 42 47.8 -0.5**
comp=Z,6.3nm,0.9s,mb4.2
CMB Columbia Colle 79.03 43 *eP* **P** **02 42 47.8 -0.5**
CMB pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
LRMC Laurel Mountai 79.34 46 ⇑P **P** **02 42 49.4 -0.6**
baz=80
BELC Belle Mtn. Jos 79.69 48 ⇑P **P** **02 42 52.0 +0.1**
baz=80
MPMC Manual Prospec 79.80 46 ⇓P **P** **02 42 52.2 -0.2**
baz=80
MTUM Tungsten Hills 79.82 44 *eP* **P** **02 42 52.9 +0.5**
GSC Goldstone 79.84 47 ⇓P **P** **02 42 52.4 -0.3**
baz=80
YBH Yreka Blue Hor 79.85 39 *eP* **P** **02 42 53.1 +0.5**
comp=Z,5.7nm,0.8s,mb4.2
YBH Yreka Blue Hor 79.85 39 *eP* **P** **02 42 53.1 +0.6**
YBH pmax pmax
comp=Z,6.0nm,0.8s
BC3 Big Chuckawall 79.89 49 ⇓P **P** **02 42 53.1 +0.1**
baz=80
WAKR Walker 79.92 43 *eP* **P** **02 42 53.0 0.0**
112A Yuma 79.92 50 ⇑P **P** **02 42 53.7 +0.6**
baz=80
WCN Washoe City 80.18 42 ⇑P **P** **02 42 54.0 -0.3**
baz=80
WCN Washoe City 80.18 42 *eP* **P** **02 42 53.9 -0.5**
comp=Z,6.7nm,1.1s,mb4.1
WCN Washoe City 80.18 42 *eP* **P** **02 42 53.9 -0.4**
WCN pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
MDJ Mudanjiang 80.30 325 P **P** **02 42 55.6 +0.8**
MDJ pmax pmax
comp=Z,25nm,0.8s,mb4.8
MDJ pmax pmax
comp=Z,98nm,5.2s
MDJ Mudanjiang 80.30 325 *eP* **P** **02 42 55.8 +1.0**
comp=Z,20nm,0.8s,mb4.7
IRM Iron Mountain 80.37 48 ⇑P **P** **02 42 55.7 +0.3**
baz=80,SNR=6.3
FURC Furnace Creek, 80.45 46 ⇑P **P** **02 42 55.4 -0.4**
baz=81
TUQ Turquoise Moun 80.52 47 ⇑P **P** **02 42 56.1 -0.1**
baz=81
NVAR Mina Array Bea 80.60 43 P **P** **02 42 56.3 -0.2**
comp=Z,2.7nm,0.7s,mb3.9,baz=224,slow=8.0,SNR=25
NVAR PKKPbc PKKPbc 03 01 33.3 -0.6
comp=Z,0.3nm,0.5s,baz=46,slow=6.4,SNR=3.8
NVAR PKPPKP 03 09 39.1
comp=Z,0.5nm,0.9s,baz=121,slow=2.1,SNR=3.9
Y12C Blythe 80.60 49 ⇓P **P** **02 42 56.7 +0.1**
baz=81
113A Mohawk Valley, 80.63 50 P **P** **02 42 56.9 0.0**
baz=81,SNR=5.9
U10A Ash Meadows, A 80.78 46 ⇓P **P** **02 42 57.5 0.0**
baz=81
LDFC Landfair 80.89 48 *eP* **P** **02 42 58.5 +0.4**
comp=Z,24nm,1.0s,mb4.7
Z13A Yuma Proving G 80.93 50 P **P** **02 42 58.6 +0.2**
baz=81,SNR=7.6
Y13A Salome 81.13 49 ⇑P **P** **02 42 59.5 +0.1**
baz=81
PDMCI Parker Dam,Lak 81.16 49 ⇓P **P** **02 42 59.8 +0.3**
baz=81
114A Black Gap (USA 81.26 51 ⇑P **P** **02 43 00.2 +0.2**
baz=81,SNR=5.8
MOD Modoc 81.38 40 *eP* **P** **02 43 00.7 +0.2**
comp=Z,3.1nm,0.8s,mb3.9
V12A Nelson 81.41 47 ⇑P **P** **02 43 00.9 +0.1**
baz=82
K05A Summer Lake 81.53 39 ⇓P **P** **02 43 01.6 +0.4**
baz=82,SNR=7.3
X13A Yucca 81.53 49 ⇑P **P** **02 43 01.8 +0.4**
baz=82,SNR=5.0
SHPR Sheep Range 81.62 46 *eP* **P** **02 43 01.8 0.0**
W13A Hualapai Mount 81.75 48 ⇑P **P** **02 43 02.8 +0.2**
baz=82
Y14A Wickenburg 81.78 49 ⇓P **P** **02 43 02.9 +0.1**
baz=82,SNR=5.2
T11A Corn Creek, Al 81.97 46 ⇑P **P** **02 43 04.0 +0.4**
baz=82,SNR=11
U12A Valley of Fire 82.00 47 ⇓P **P** **02 43 03.8 0.0**
baz=82,SNR=6.0
MAW Mawson 82.01 200 P **P** **02 43 03.4 +0.1**
comp=Z,4.6nm,0.6s,mb4.2,baz=135,slow=6.4,SNR=32
MAW Mawson 82.01 200 ⇓*iP* **P** **02 43 03.3 0.0**
comp=Z,3.8nm,0.5s,mb4.2
MAW Mawson 82.01 200 *eP* **P** **02 43 03.4 0.0**
comp=Z,3.3nm,1.4s,mb3.7
MAW Mawson 82.01 200 *eP* **P** **02 43 03.4 +0.1**
MAW pmax pmax
comp=Z,3.0nm,1.4s
116A Eloy 82.03 51 ⇑P **P** **02 43 04.6 +0.6**
baz=82,SNR=5.7
V13A Grand Canyon W 82.08 47 ⇓P **P** **02 43 04.1 -0.1**
baz=82,SNR=6.1
CN2 Changchun 82.10 322 *eP* **P** **02 43 04.8 +0.7**
CN2 *eS* S 02 52 38.0 +1.2
CN2 pmax pmax
comp=Z,20nm,0.8s,mb4.7
CN2 pmax pmax
comp=Z,200nm,4.0s
X14A Yava 82.13 49 ⇑P **P** **02 43 04.9 +0.4**
baz=82
Y15A Casa Rosa Ranc 82.27 50 ⇑P **P** **02 43 05.7 +0.5**
baz=82,SNR=14
KLR Kul'dur 82.28 329 *eP* **P** **02 43 00.0 -4.9**
217A Green Valley 82.29 52 ⇓P **P** **02 43 05.3 -0.1**
baz=82,SNR=11
R11A Troy Canyon, C 82.33 45 ⇑P **P** **02 43 05.1 -0.3**
baz=82,SNR=5.1
W14A Seligman 82.37 48 ⇑P **P** **02 43 06.1 +0.3**
baz=82,SNR=8.0
U13A Pakoon Wash 82.39 47 ⇑P **P** **02 43 06.3 +0.5**
baz=82
S12A Delamar Landin 82.42 46 ⇓P **P** **02 43 06.7 +0.8**
baz=83,SNR=10
V14A Boquillas Ranc 82.58 48 ⇓P **P** **02 43 06.8 +0.1**
baz=83,SNR=8.3
TUC Tucson 82.58 52 *eP* **P** **02 43 07.4 +0.6**
comp=Z,10nm,0.9s,mb4.3
TUC Tucson 82.58 52 *eP* **P** **02 43 07.4 +0.6**
TUC pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
X15A Humboldt 82.60 49 ⇑P **P** **02 43 07.1 +0.2**
baz=83,SNR=11
WVOR Wild Horse Val 82.70 40 *eP* **P** **02 43 06.9 -0.2**
comp=Z,6.2nm,0.9s,mb4.1
WVOR Wild Horse Val 82.70 40 *eP* **P** **02 43 06.9 -0.3**
WVOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
117A Oracle 82.74 52 ⇓P **P** **02 43 08.2 +0.5**
baz=83,SNR=9.2
T13A Saint George 82.74 46 ⇓P **P** **02 43 07.9 +0.4**
baz=83,SNR=6.3
318A Bisbee 82.75 53 ⇑P **P** **02 43 08.3 +0.6**
baz=83,SNR=8.8
Y16A Circle Bar Ran 82.84 50 P **P** **02 43 08.8 +0.6**
baz=83,SNR=7.9
U14A Mt Trumbull 82.93 47 ⇓P **P** **02 43 09.2 +0.7**
baz=83,SNR=21
S13A Holt Ranch, En 83.07 46 ⇑P **P** **02 43 09.5 +0.4**
baz=83,SNR=10.0
X16A Lo Mia Camp, P 83.14 50 ⇓P **P** **02 43 10.1 +0.5**
baz=83,SNR=16
I07A Izee 83.15 38 ⇓P **P** **02 43 09.7 +0.2**
baz=83,SNR=9.6
319A Douglas 83.25 53 ⇑P **P** **02 43 10.9 +0.6**
baz=83,SNR=8.4
IPM Ipoh 83.27 277 *eP* **P** **02 43 11.6 +0.8**
comp=Z,21nm,0.6s,mb4.8
IPM Ipoh 83.27 277 P **P** **02 43 11.5 +0.7**
comp=Z,43nm,1.3s,mb4.8
IPM Ipoh 83.27 277 P **P** **02 43 11.5 +0.7**
comp=Z,43nm,1.3s,mb4.8
V15A Kaibab Nationa 83.32 48 ⇓P **P** **02 43 11.0 +0.5**
baz=84,SNR=8.4
118A Homack Ranch, 83.34 52 ⇑P **P** **02 43 11.0 +0.3**
baz=84,SNR=8.6
CCUT Cedar City 83.39 46 *eP* **P** **02 43 11.5 +0.7**
comp=Z,7.1nm,0.9s,mb4.2
W16A Flagstaff 83.41 49 ⇑P **P** **02 43 11.6 +0.7**
baz=84,SNR=6.1
U15A North Rim 83.55 48 ⇓P **P** **02 43 12.2 +0.6**
baz=84,SNR=19
X17A Forest Lakes 83.55 50 ⇑P **P** **02 43 12.4 +0.7**
baz=84,SNR=8.4
219A White Tail Can 83.56 53 ⇓P **P** **02 43 12.0 +0.3**
baz=84,SNR=9.0
T15A Red Dirt Ranch 83.78 47 ⇓P **P** **02 43 13.2 +0.4**
baz=84,SNR=6.6
320A Kipp Ranch, An 83.80 54 ⇓P **P** **02 43 13.7 +0.7**
baz=84,SNR=8.4
Y18A Canyon Day Jun 83.84 51 ⇑P **P** **02 43 13.4 +0.3**
baz=84,SNR=11
KULM Kulim 83.91 278 *eP* **P** **02 43 14.7 +0.8**
comp=Z,11nm,0.9s,mb4.4
220A Playas Peak, P 84.07 53 ⇑P **P** **02 43 14.7 +0.4**
baz=84,SNR=7.5
G08A Pilot Rock 84.18 37 ⇑P **P** **02 43 14.6 +0.1**
baz=84
V17A Tonalea, Kykot 84.19 49 ⇑P **P** **02 43 14.8 0.0**
baz=84,SNR=8.6
Q14A Sevier Lake (B 84.20 45 ⇑P **P** **02 43 15.0 +0.3**
baz=84,SNR=13
U16A Tuba City 84.22 48 ⇓P **P** **02 43 15.4 +0.5**
baz=84,SNR=8.5
X18A Snowflake 84.27 50 ⇑P **P** **02 43 15.7 +0.5**
baz=84
120A U Bar Ranch, L 84.29 52 ⇓P **P** **02 43 16.1 +0.8**
baz=84
T16A Glen Canyon Da 84.37 47 ⇑P **P** **02 43 16.1 +0.5**
baz=84
E07A Sunnyside 84.43 36 ⇓P **P** **02 43 15.8 +0.1**
baz=85
Y19A Nutrioso 84.50 51 ⇓P **P** **02 43 16.9 +0.6**
baz=85
HAWA Hanford 84.51 36 *eP* **P** **02 43 16.2 +0.1**
comp=Z,7.7nm,1.1s,mb4.2
TTA Tatalina 84.52 10 *eP* **P** **02 43 15.1 -0.6**
comp=Z,7.4nm,0.7s,mb4.4
TTA Tatalina 84.52 10 *eP* **P** **02 43 15.1 -0.6**
TTA pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
PMR Palmer 84.58 13 *eP* **P** **02 43 14.7 -1.4**
comp=Z,5.6nm,0.4s,mb4.5
PMR Palmer 84.58 13 *eP* **P** **02 43 14.7 -1.4**
PMR pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
Z20A Nine Sixteen R 84.58 52 P **P** **02 43 17.4 +0.6**
baz=85,SNR=6.4
P14A Drum Mountains 84.65 45 ⇑P **P** **02 43 16.8 -0.1**
baz=85
MSU Marysvale 84.69 46 *eP* **P** **02 43 17.5 +0.3**
comp=Z,2.6nm,1.1s,mb3.8
MSU Marysvale 84.69 46 *eP* **P** **02 43 17.5 +0.3**
MSU pmax pmax
comp=Z,3.0nm,1.1s,mb3.8
Q15A Fillmore 84.80 45 ⇑P **P** **02 43 17.9 +0.1**
baz=85
ETW Entiat 84.80 35 *eP* **P** **02 43 17.1 -0.4**
V18A Ganado 84.85 49 ⇑P **P** **02 43 18.3 +0.2**
baz=85
T17A Navajo Res., N 84.87 48 P **P** **02 43 18.8 +0.7**
baz=85,SNR=8.1
121A Cookes Peak, D 84.92 53 ⇑P **P** **02 43 18.9 +0.5**
baz=85,SNR=5.2
MFID Camas Ranch 84.95 40 ⇑P **P** **02 43 18.0 -0.3**
baz=85
R16A Teasale 85.04 46 ⇓P **P** **02 43 19.1 +0.2**
baz=85
Y20A Horse Springs, 85.12 51 ⇓P **P** **02 43 20.0 +0.7**
baz=85,SNR=9.6
S17A Black Ridge (B 85.18 47 ⇑P **P** **02 43 19.3 -0.4**
baz=85,SNR=6.5
D08A Wollman Farm, 85.24 36 ⇑P **P** **02 43 19.7 0.0**
baz=85
X20A Quemado 85.32 51 P **P** **02 43 20.9 +0.5**
baz=86,SNR=5.8
E09A Wood Farm, Sta 85.36 37 ⇑P **P** **02 43 19.7 -0.5**
baz=86,SNR=5.0
Z21A St. Cloud Mine 85.36 52 ⇑P **P** **02 43 21.3 +0.7**
baz=86,SNR=7.7
F10A Beach Ranch, E 85.56 38 ⇑P **P** **02 43 20.8 -0.4**
baz=86,SNR=15
T18A Mexican Hat 85.58 48 ⇑P **P** **02 43 21.6 0.0**
baz=86,SNR=20
I12A Atlanta 85.58 40 ⇑P **P** **02 43 21.6 +0.2**
baz=86,SNR=5.3
R17A Hanksville Air 85.63 47 ⇓P **P** **02 43 21.6 -0.2**
baz=86
U19A Dine' College, 85.64 49 ⇓P **P** **02 43 21.9 0.0**
baz=86,SNR=6.5
Y21A Point of Rocks 85.68 52 P **P** **02 43 23.2 +1.1**
baz=86,SNR=9.1
TMUT Trail Mountain 85.73 46 *eP* **P** **02 43 21.7 -0.5**
comp=Z,4.4nm,0.6s,mb4.3
BJT Baijiatuau 85.74 315 *eP* **P** **02 43 22.8 +0.6**
comp=Z,9.7nm,0.6s,mb4.6
BJT Baijiatuau 85.74 315 *eP* **P** **02 43 22.8 +0.6**
BJT pmax pmax
comp=Z,10.0nm,0.6s
BJI Beijing 85.74 315 P **P** **02 43 22.5 +0.2**
BJI pP pP 02 45 14.3 +1.1
BJI sP sP 02 46 05.4 +0.9
B08A Colville Reser 85.79 35 ⇑P **P** **02 43 21.5 -0.8**
baz=86,SNR=5.4
X21A Alamocita Cree 85.80 51 ⇓P **P** **02 43 23.1 +0.5**
baz=86,SNR=7.3
Z22A Elephant Butte 85.86 53 ⇓P **P** **02 43 23.2 +0.2**
baz=86,SNR=5.0
HLID Hailey 85.89 41 P **P** **02 43 23.0 +0.1**
baz=86,SNR=6.7
HLID Hailey 85.89 41 *eP* **P** **02 43 22.9 0.0**
comp=Z,3.4nm,0.9s,mb4.0
ENH Enshi 85.97 304 *eP* **P** **02 43 24.4 +0.8**
comp=Z,7.5nm,0.3s,mb4.8
TRF Thorofare Moun 86.02 12 *eP* **P** **02 43 21.4 -1.6**
comp=Z,19nm,0.9s,mb4.7
M15A Larsen Ranch, 86.02 43 ⇑P **P** **02 43 23.1 -0.5**
baz=86
SEY Seymchan 86.03 347 ⇓*iP* **P** **02 43 21.2 -1.8**
SRU San Rafael 86.10 46 ⇓P **P** **02 43 23.9 -0.1**
baz=86
SRU San Rafael 86.10 46 *eP* **P** **02 43 24.1 +0.1**
comp=Z,5.6nm,0.8s,mb4.2
SRU San Rafael 86.10 46 *eP* **P** **02 43 24.1 +0.1**
SRU pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
H12A Diamond D Ranc 86.16 40 ⇑P **P** **02 43 24.1 0.0**
baz=86,SNR=10
324A Moseley Ranch, 86.17 55 ⇓P **P** **02 43 24.3 -0.2**
baz=86,SNR=12
R18A Canyonlands Na 86.18 47 ⇑P **P** **02 43 24.2 -0.2**
baz=86,SNR=9.0
G12A Big Creek, Yel 86.20 39 ⇑P **P** **02 43 24.3 0.0**
baz=86
LAZ Ladron 86.25 51 *eP* **P** **02 43 24.8 -0.1**
comp=Z,1.0nm,0.7s,mb3.5
425A Indio Mountain 86.27 55 ⇑P **P** **02 43 25.3 +0.3**
baz=86,SNR=7.2
J14A Carey 86.32 41 ⇑P **P** **02 43 25.2 +0.3**
baz=86,SNR=6.4
MNTX Cornudas Mount 86.36 55 ⇓P **P** **02 43 25.3 -0.1**
baz=86,SNR=13
MNTX Cornudas Mount 86.36 55 *eP* **P** **02 43 25.2 -0.2**
comp=Z,3.6nm,0.8s,mb4.0
Q18A Rafter H Ranch 86.36 46 ⇑P **P** **02 43 24.9 -0.3**
baz=86,SNR=5.6
S19A Harvey Farm, M 86.39 48 ⇑P **P** **02 43 25.3 -0.1**
baz=86,SNR=5.0
626A Big Bend Ranch 86.40 57 ⇓P **P** **02 43 26.0 +0.4**
baz=86,SNR=7.2
224A Cornudas Mount 86.42 54 ⇓P **P** **02 43 26.2 +0.5**

baz=86,SNR=9.8
O17A Robinson Place 86.50 45 ⇑P P 02 43 26.2 +0.4
baz=87,SNR=11
MCK McKinley 86.54 12 eP P 02 43 23.9 -1.5
comp=Z,16nm,0.8s,mb4.8
MCK McKinley 86.54 12 eP P 02 43 23.9 -1.6
MCK pmax pmax
comp=Z,16nm,0.8s,mb4.8
R19A Curley Farm, L 86.57 47 ⇑P P 02 43 26.0 -0.3
baz=87,SNR=7.4
F12A Elk City 86.59 38 ⇓P P 02 43 25.9 -0.2
baz=87,SNR=30
526A Mary Lane Ranc 86.65 56 ⇓P P 02 43 26.8 0.0
baz=87,SNR=7.2
TXAR Lajitas Array 86.67 57 P P 02 43 27.1 +0.2
comp=Z,4.6nm,0.8s,mb4.3,baz=218,slow=6.2,SNR=30
TXAR Lajitas Array 86.67 57 P P 02 43 27.1 +0.2
I14A Mackay 86.68 41 ⇑P P 02 43 27.6 +1.0
baz=87,SNR=8.3
124A Stringfield Ra 86.75 54 ⇑P P 02 43 26.7 -0.5
baz=87,SNR=5.0
PV10 Paradox Valley 86.76 47 eP P 02 43 26.7 -0.4
comp=Z,57nm,0.8s,mb5.3
E12A Beaver Dam Sad 86.77 38 ⇑P P 02 43 26.1 -0.8
baz=87,SNR=5.4
U21A Nageezi 86.81 49 ⇓P P 02 43 27.6 +0.1
baz=87,SNR=18
G13A Cobalt 86.83 39 ⇑P P 02 43 26.9 -0.4
baz=87,SNR=7.0
Y23A Lovelace Mesa, 86.84 52 ⇑P P 02 43 27.3 -0.3
baz=87
Q19A Hogan Spring (86.89 47 ⇓P P 02 43 27.3 -0.4
baz=87
627A Terlingua Ranc 86.94 57 ⇑P P 02 43 28.4 +0.2
baz=87
426A McDonald Obser 86.96 56 P P 02 43 28.5 +0.3
baz=87,SNR=13
L16A Fish Haven 86.96 43 ⇓P P 02 43 27.2 -0.7
baz=87
225A Deer Hill, Car 86.97 54 ⇑P P 02 43 28.7 +0.4
baz=87,SNR=7.0
PV01 Paradox Valley 86.97 48 eP P 02 43 27.5 -0.6
comp=Z,441nm,1.1s
ANMO Albuquerque 87.00 51 eP P 02 43 28.2 -0.2
comp=Z,4.0nm,0.9s,mb4.2
ANMO Albuquerque 87.00 51 eP P 02 43 28.2 -0.1
ANMO pmax pmax
comp=Z,4.0nm,0.9s
J15A Blackfoot 87.03 42 ⇑P P 02 43 28.8 +0.6
baz=87,SNR=7.4
527A Woodward Ranch 87.06 57 ⇓P P 02 43 28.6 -0.1
baz=87,SNR=9.3
F13A Darby 87.14 39 ⇑P P 02 43 28.4 -0.4
baz=87,SNR=15
SYO Syowa Base 87.16 193⇑eP P 02 43 26.2 -2.3
C11A Tepee Creek (N 87.17 36 ⇑P P 02 43 28.6 -0.2
baz=87,SNR=14
K16A Soda Springs 87.27 42 ⇑P P 02 43 29.7 +0.2
baz=87
S21A Coal Bank Pass 87.29 48 ⇓P P 02 43 29.7 0.0
baz=87,SNR=6.2
Y24A Capitan 87.30 52 P P 02 43 29.8 0.0
baz=87,SNR=8.1
628A Black Gap, Mar 87.36 57 ⇑P P 02 43 30.0 -0.2
baz=88
GDL2 Guadalupe Moun 87.36 54 eP P 02 43 30.5 +0.4
G14A Jackson 87.37 40 ⇓P P 02 43 29.9 0.0
baz=88
J16A Bone 87.48 42 ⇓P P 02 43 30.8 +0.4
baz=88,SNR=5.8
226A Malaga, Loving 87.50 55 ⇑P P 02 43 30.7 0.0
baz=88,SNR=6.4
MCMT McKenzie Canyo 87.52 40 eP P 02 43 31.1 +0.5
comp=Z,5.3nm,1.1s,mb4.2
427A Hayter Ranch, 87.52 56 P P 02 43 31.1 +0.2
baz=88,SNR=17
H15A Lima 87.53 40 ⇓P P 02 43 30.9 +0.3
baz=88
V23A Ortiz Mt. (NFS 87.56 51 ⇓P P 02 43 31.2 +0.2
baz=88
RRI2 Red Ridge 87.70 42 eP P 02 43 31.5 0.0
comp=Z,6.7nm,0.9s,mb4.4
528A Cox Ranch, San 87.72 57 ⇓P P 02 43 31.7 -0.1
baz=88
P20A De Beque 87.74 46 ⇑P P 02 43 31.5 -0.2
baz=88
CLNB Carlsbad 87.75 55 eP P 02 43 31.6 -0.4
comp=Z,1.2nm,0.8s,mb3.7
COLA College 87.77 12 eP P 02 43 29.5 -1.7
comp=Z,14nm,0.7s,mb4.8
COLA College 87.77 12 eP P 02 43 29.5 -1.7
COLA pmax pmax
comp=Z,14nm,0.7s,mb4.8
R21A Cimarron 87.79 48 ⇑P P 02 43 32.1 +0.2
baz=88,SNR=8.8
U23A El Rito 87.82 50 ⇓P P 02 43 32.1 0.0
baz=88
Y25A Mesa, Roswell 87.85 53 ⇑P P 02 43 32.2 -0.2
baz=88,SNR=5.8
I16A Newdale 87.87 42 ⇓P P 02 43 32.9 +0.7
baz=88,SNR=7.9
ILAR Eielson Array 87.88 13 P P 02 43 30.0 -1.7
comp=Z,3.4nm,0.6s,mb4.2,baz=220,slow=5.9,SNR=43
ILAR pP pP 02 45 17.6 -5.9
comp=Z,1.2nm,1.0s,baz=226,slow=6.3,SNR=3.0
ILAR PKKPbc PKKPbc 03 01 13.9 -4.1
comp=Z,0.3nm,0.9s,baz=13,slow=1.2,SNR=4.8
ILAR Eielson Array 87.88 13 P P 02 43 30.0 -1.7
ILAR *PP pP 02 45 17.6 -5.8
W24A Lazy 6 Ranch, 87.89 51 ⇑P P 02 43 32.1 -0.4
baz=88
G15A Dillon 87.92 40 ⇓P P 02 43 32.7 +0.3
baz=88,SNR=12
DLMT Dillon 87.95 40 eP P 02 43 32.6 +0.1
comp=Z,12nm,1.1s,mb4.6
E14A Clinton 87.97 39 ⇑P P 02 43 32.4 -0.2
baz=88
BSMT Bassoo Peak 88.00 37 eP P 02 43 31.9 -0.8
REDW Red Top Meadow 88.01 42 eP P 02 43 32.7 -0.2
comp=Z,9.4nm,1.3s,mb4.4
S22A 4UR Ranch, Cre 88.01 49 ⇑P P 02 43 33.3 +0.3
baz=88,SNR=8.6
TPAW Teton Pass 88.01 42 eP P 02 43 33.0 +0.1
comp=Z,5.1nm,1.0s,mb4.2
428A Kincaid Ranch, 88.03 56 ⇑P P 02 43 33.5 +0.3
baz=88
XAN Xi'an 88.04 307 P P 02 43 34.1 +0.8
XAN pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
XAN pmax pmax
comp=Z,12nm,5.1s
J17A Brown Place, J 88.09 42 P P 02 43 33.3 0.0
baz=88,SNR=7.3
Z26A Caprock 88.11 54 ⇓P P 02 43 33.5 -0.1
baz=88,SNR=7.4
SNOW Snow King Moun 88.12 42 eP P 02 43 33.6 +0.2
comp=Z,3.0nm,0.7s,mb4.1
K18A Toltan Ranch, 88.16 43 ⇓P P 02 43 33.9 +0.3
baz=88,SNR=7.1
328A Wristen Ranch, 88.21 56 ⇑P P 02 43 33.6 -0.5
baz=88
IMW Indian Meadow 88.22 42 eP P 02 43 34.1 +0.3
comp=Z,8.2nm,1.0s,mb4.4
F15A Butte 88.26 39 ⇑P P 02 43 34.0 0.0
baz=88,SNR=5.8
MOOW Moose Ponds 88.27 42 eP P 02 43 34.2 +0.2
comp=Z,12nm,1.8s,mb4.3
R22A Saguache, Gunn 88.28 48 ⇑P P 02 43 34.6 +0.3
baz=88
LRM Limekiln Ridge 88.28 39 eP P 02 43 34.0 -0.1
LOHW Long Hollow 88.29 42 eP P 02 43 33.8 -0.4
comp=Z,15nm,1.6s,mb4.5
L19A Farson 88.34 44 ⇑P P 02 43 33.9 -0.5
baz=88,SNR=5.7
G16A Moss Hill, Enn 88.36 40 ⇓P P 02 43 34.6 +0.2
baz=88,SNR=7.4
CHMT Chamberlain Mo 88.38 38 eP P 02 43 33.8 -0.7
H16A Russell Place, 88.44 41 P P 02 43 35.6 +0.8
baz=89,SNR=13
N20A Spence Gulch, 88.46 45 ⇑P P 02 43 35.0 0.0
baz=89,SNR=5.8
J18A Kendall Valley 88.46 43 P P 02 43 35.0 0.0
baz=89,SNR=20
Q22A Crested Butte, 88.46 48 ⇓P P 02 43 35.1 0.0
baz=89,SNR=5.2
FLWY Flagg Ranch 88.46 42 eP P 02 43 34.6 -0.3
comp=Z,11nm,0.9s,mb4.6
E15A Deer Lodge 88.48 39 ⇓P P 02 43 34.4 -0.6
baz=89
BW06 Boulder Array 88.54 43 ⇑P P 02 43 34.7 -0.7
baz=89,SNR=6.5
BW06 Boulder Array 88.54 43 eP P 02 43 34.9 -0.4
comp=Z,3.2nm,0.8s,mb4.2
PDAR Pinedale Array 88.54 43 P P 02 43 34.7 -0.7
comp=Z,0.6nm,0.6s,mb3.6,baz=197,slow=4.6,SNR=3.8
PDAR PKKPbc PKKPbc 03 01 14.1 -1.3
comp=Z,0.6nm,0.8s,baz=69,slow=4.9,SNR=3.6
SMCO Snowmass 88.56 47 eP P 02 43 35.6 +0.1
comp=Z,9.9nm,1.5s,mb4.4
W25A X Bar L Ranch, 88.59 52 ⇓P P 02 43 35.1 -0.7
baz=89,SNR=6.5
BILL Bilibino 88.66 354 eP P 02 43 34.2 -1.1
BILL pmax pmax
comp=Z,19nm,1.7s,mb4.7
BOZ Bozeman (W) 88.68 40 ⇑P P 02 43 36.1 +0.1
baz=89,SNR=9.6
BOZ Bozeman (W) 88.68 40 eP P 02 43 35.7 -0.2
comp=Z,6.3nm,0.9s,mb4.5
BOZ Bozeman (W) 88.68 40 eP P 02 43 35.7 -0.2
BOZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
F16A Kennard Place, 88.75 40 ⇓P P 02 43 36.3 0.0
baz=89
I18A Diamond G Ranc 88.83 42 ⇑P P 02 43 36.8 +0.1
baz=89
N21A Black Mountain 88.92 46 ⇓P P 02 43 37.3 +0.1
baz=89,SNR=5.7
L20A Wamsutter 88.96 44 ⇑P P 02 43 37.6 +0.3
baz=89,SNR=5.3
Y27A Causey 88.99 53 ⇓P P 02 43 36.9 -0.7
baz=89
DAWY Dawson 89.02 16 eP P 02 43 36.5 -0.6
K19A Absolon Red Bu 89.02 43 ⇓P P 02 43 36.9 -0.7
baz=89
J19A Crowheart 89.10 43 ⇑P P 02 43 37.8 -0.2
baz=89,SNR=7.5
HRY Holter Researc 89.11 39 eP P 02 43 37.9 0.0
E16A East Helena 89.11 39 ⇓P P 02 43 37.7 -0.1
baz=89
NVL N'lazarevskaya 89.13 183 eP P 02 43 36.6 -1.1
NVL pmax pmax
comp=Z,12nm,0.7s,mb4.8
B14A Marquette Ranc 89.13 37 ⇑P P 02 43 37.4 -0.5
baz=89,SNR=13
EGAK Eagle 89.17 15 eP P 02 43 37.2 -0.6
comp=Z,11nm,0.8s,mb4.7
HHC Hu-ho-hao-te 89.21 314 eP P 02 43 38.9 +0.4
HHC pP pP 02 45 32.0 +1.5
HHC sP sP 02 46 23.3 +1.7
HHC PP PP 02 47 20.8 +2.5
HHC SKS 02 53 19.8
HHC S S 02 53 42.9 -2.0
HHC sS sS 02 57 04.8 +0.1
HHC SS SS 03 00 01.6 +7.0
HHC pmax pmax
comp=Z,11nm,1.1s,mb4.6
HHC pmax pmax
comp=Z,75nm,6.4s
KMI Kunming 89.34 297 P P 02 43 40.8 +1.3
KMI pmax pmax
comp=Z,16nm,1.3s,mb4.7
A14A Double T Ranch 89.37 36 ⇓P P 02 43 38.7 -0.4
baz=90,SNR=6.2
F17A Fitzpatrick Pl 89.40 40 ⇑P P 02 43 39.6 +0.3
baz=90,SNR=5.8
PLCA Paso Flores 89.41 133 P P 02 43 39.4 -0.2
comp=Z,3.4nm,1.0s,mb4.1,baz=220,slow=7.6,SNR=4.9
PLCA Paso Flores 89.41 133 P P 02 43 39.4 -0.2
D16A Dana Ranch, Ca 89.44 39 P P 02 43 39.5 +0.1
baz=90,SNR=5.7
I19A Meeteetse 89.51 42 ⇑P P 02 43 39.9 +0.1
baz=90,SNR=6.7
U26A Atchley Ranch, 89.62 51 ⇓P P 02 43 40.0 -0.6
baz=90,SNR=5.0
N22A Wattenberg Ran 89.66 46 ⇑P P 02 43 40.9 +0.3
baz=90,SNR=5.6
J20A Shoshoni 89.77 43 ⇑P P 02 43 41.1 +0.1
baz=90,SNR=9.2
G18A Lazy EL Ranch, 89.78 41 ⇓P P 02 43 41.1 0.0
baz=90
H19A Powell 89.82 42 ⇓P P 02 43 41.5 +0.3
baz=90
RLMT Red Lodge 89.86 41 ⇓P P 02 43 41.8 +0.4
baz=90
RLMT Red Lodge 89.86 41 eP P 02 43 41.5 +0.1
comp=Z,5.0nm,0.9s,mb4.3
K21A Alcova 89.97 44 ⇑P P 02 43 41.6 -0.4
baz=90,SNR=5.9
F18A Big Timber 89.97 40 ⇑P P 02 43 41.8 -0.1
baz=90
D17A Six Diamond Ra 90.00 39 ⇑P P 02 43 42.3 +0.2
baz=90,SNR=7.4
CMAR Chiang Mai Arr 90.16 289 P P 02 43 44.5 +1.0
comp=Z,8.2nm,0.9s,mb4.6,baz=118,slow=2.8,SNR=28
CMAR pP pP 02 45 32.1 -3.4
comp=Z,0.6nm,0.3s,baz=123,slow=3.3,SNR=1.4
CMAR Chiang Mai Arr 90.16 289 P P 02 43 44.5 +1.0
CMAR *PP pP 02 45 32.2 -3.4
J21A Lysite 90.17 43 ⇓P P 02 43 43.0 0.0
baz=90,SNR=11
C17A Wharram Farm, 90.20 39 ⇓P P 02 43 42.8 -0.2
baz=90,SNR=9.9
JCT Junction City 90.20 58 ⇓P P 02 43 43.0 -0.4
baz=90
CHTO Chiang Mai 90.29 290 eP P 02 43 44.6 +0.6
comp=Z,12nm,0.8s,mb4.8
CHTO Chiang Mai 90.29 290 eP P 02 43 44.7 +0.7
CHTO pmax pmax
comp=Z,12nm,0.8s,mb4.8
CHTO Chiang Mai 90.29 290 P P 02 43 45.5 +1.5
CHTO Chiang Mai 90.29 290 P P 02 43 45.3 +1.3
H20A Greybull 90.35 42 ⇓P P 02 43 43.0 -0.7
baz=90,SNR=6.0
A16A West Butte Ran 90.39 37 ⇑P P 02 43 43.5 -0.3
baz=91,SNR=8.4
I21A Big Trails, Te 90.49 43 ⇑P P 02 43 43.9 -0.5
baz=91,SNR=7.3
B17A L&G Farms, Che 90.51 38 ⇓P P 02 43 43.9 -0.4
baz=91
AMTX Amarillo 90.52 53 ⇑P P 02 43 43.9 -0.8
baz=91
CD2 Chengdu 90.74 303 eP P 02 45 43.3 -0.5
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
L23A Garrett 90.75 45 ⇓P P 02 43 45.4 -0.2
baz=91,SNR=5.9
J22A Midwest 90.83 44 ⇓P P 02 43 45.4 -0.5
baz=91,SNR=6.4
A17A Triple J Farms 90.90 37 ⇓P P 02 43 45.5 -0.6
baz=91,SNR=7.0
B18A Beardsley Farm 91.15 38 ⇑P P 02 43 46.8 -0.5
baz=91
C19A Slack Wire Ran 91.26 39 ⇓P P 02 43 48.1 +0.3
baz=91
A18A Metzger Ranch, 91.37 38 ⇓P P 02 43 47.9 -0.4
baz=92
D20A Manuel Ranch, 91.50 40 ⇓P P 02 43 49.2 +0.2
baz=92
C20A Veseth Ranch, 91.87 39 ⇓P P 02 43 51.0 +0.3
baz=92
A20A Cobblestone Ra 92.47 38 ⇓P P 02 43 53.2 -0.1
baz=93
LZH Lanzhou 92.68 307 P P 02 43 54.0 -0.7
LZH pP pP 02 45 48.1 +1.1
LZH sP sP 02 46 39.3 +1.4
LZH PP PP 02 47 47.8 +2.3
LZH pmax pmax
comp=Z,16nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,75nm,5.7s
RSSD Black Hills 92.73 44 eP P 02 43 53.9 -0.8
comp=Z,8.2nm,1.1s,mb4.7
RSSD Black Hills 92.73 44 eP P 02 43 53.9 -0.8
RSSD pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
B21A Ellsworth Farm 92.79 39 ⇓P P 02 43 54.9 +0.1
baz=93
B22A Reddig Ranch S 93.34 39 ⇑P P 02 43 57.3 0.0
baz=94
INK Inuvik 93.83 15 eP P 02 43 57.5 -1.7
comp=Z,2.5nm,0.6s,mb4.4
INK Inuvik 93.83 15 eP P 02 43 57.5 -1.7
INK pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 95.58 319 P P 02 44 07.6 0.0
comp=Z,0.5nm,0.5s,mb3.9,baz=135,slow=4.6,SNR=4.4
SONM Songino Array 95.58 319 P P 02 44 07.6 0.0
YKA Yellowknife Ar 96.07 25 P P 02 44 07.9 -1.5
comp=Z,0.9nm,0.8s,mb3.9,baz=231,slow=4.4,SNR=5.3
YKA Yellowknife Ar 96.07 25 P P 02 44 07.9 -1.5
ZALV Zalesovo Beam 110.30 321 PKiKP PKiKP 02 49 09.2 -1.7
comp=Z,3.0nm,0.5s,baz=142,slow=0.9,SNR=12
ZALV PKKPbc PKKPbc 03 00 14.7 +0.2
comp=Z,0.9nm,0.4s,baz=242,slow=3.1,SNR=2.6
ZALV Zalesovo Beam 110.30 321 PKIKP PKiKP 02 49 09.2 -1.7
MK31 Makanchi Array 111.06 314 ePKPdf PKiKP 02 49 11.1 -1.5
MK31 Makanchi Array 111.06 314 ePKIKP PKiKP 02 49 11.1 -1.5
MKAR Makanchi Array 111.06 314 PKiKP PKiKP 02 49 11.2 -1.3
comp=Z,3.0nm,0.6s,baz=125,slow=0.3,SNR=19
MKAR PKKPbc PKKPbc 03 00 10.0 -1.9
comp=Z,0.7nm,0.6s,baz=266,slow=5.6,SNR=3.7
MKAR Makanchi Array 111.06 314 PKIKP PKiKP 02 49 11.2 -1.4
KURK Kurchatov 113.83 318 ePKPdf PKiKP 02 49 16.3 -1.5
KURK Kurchatov 113.83 318 ePKIKP PKiKP 02 49 16.3 -1.4
TKM2 Tokmak 2 115.41 309 PKIKP PKPdf 02 49 19.8 -1.2
TKM2 pmax pmax
comp=Z,4.0nm,0.7s
KK31 Karatay Array 119.15 309 *i* PKIKP PKPdf 02 49 26.9 -1.3
KK31 pmax pmax
comp=Z,4.0nm,0.6s
KKAR Karatay Array 119.15 309 ePKPdf PKPdf 02 49 27.1 -1.2
KKAR Karatay Array 119.15 309 ePKIKP PKPdf 02 49 27.1 -1.1
DAG Danmarks Havn 122.32 6 ePKIKP PKPpre 02 49 28.2
DAG pmax pmax
comp=Z,12nm,0.8s
DAG Danmarks Havn 122.32 6 *i* P PKPpre 02 49 28.2
comp=Z,122nm,0.8s
SUMG Summit 122.72 13 *i* P PKPdf 02 49 33.4 -0.8
comp=Z,4.0nm,0.8s
ARU Arti 124.98 326 ePKPdf PKPdf 02 49 38.5 -0.5
ARU Arti 124.98 326 *i* PKIKP PKPdf 02 49 38.3 -0.7
ARU 02 51 37.7
AB31 Akbulak array 125.93 317 *i* PKIKP PKPdf 02 49 40.2 -0.8
AB31 pmax pmax
comp=Z,1.0nm,0.4s
ABKAR Akbulak array 125.93 317 ePKPdf PKPdf 02 49 40.0 -1.0
BOSA Boshof 126.70 205 PKP PKPdf 02 49 43.6 +0.4
comp=Z,3.9nm,0.9s,baz=189,slow=3.6,SNR=4.8
BOSA Boshof 126.70 205 PKIKP PKPdf 02 49 43.7 +0.4
SCO Scoresbysund 127.58 10 *i* PKHKP PKPpre 02 49 32.5
SCO pmax pmax
comp=Z,25nm,0.9s
SCO Scoresbysund 127.58 10 *i* P PKPpre 02 49 32.5
comp=Z,25nm,0.9s
KEV Kevo 128.11 349 ePKIKP PKPpre 02 49 38.3
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 128.11 349 *ep* PKPpre 02 49 38.3
comp=Z,0.6nm,0.4s
ARCES ARCESS Array B 128.56 350 PKP PKPdf 02 49 43.9 -1.6
comp=Z,4.6nm,0.6s,baz=72,slow=1.0,SNR=37
ARCES ARCESS Array B 128.56 350 PKIKP PKPdf 02 49 43.9 -1.6
JOF Joensuu 132.81 342 ePKIKP PKPdf 02 49 50.8 -2.9
JOF pmax pmax
comp=Z,3.0nm,0.4s
JOF Joensuu 132.81 342 *ep* PKPdf 02 49 50.8 -2.9
comp=Z,2.6nm,0.4s
KAF Kangasniemi 134.82 344 ePKHKP PKPpre 02 49 45.9
KAF pmax pmax
comp=Z,1.0nm,0.4s
KAF Kangasniemi 134.82 344 *ep* PKPpre 02 49 45.9
comp=Z,1.4nm,0.4s
FINES FINESS Array B 135.44 344 PKhKP PKPpre 02 49 46.0
comp=Z,1.6nm,0.8s,baz=39,slow=4.3,SNR=6.5
FINES PKP PKPdf 02 49 58.7 +0.1
comp=Z,3.2nm,0.6s,baz=50,slow=2.2,SNR=13
FINES FINESS Array B 135.44 344 PKHKP PKPpre 02 49 46.0
FINES 02 49 58.7
OBN Obninsk 136.50 332 ePKIKP PKPdf 02 49 59.5 -1.3
OBN *e* 02 56 16.0
OBN *ePS* 03 03 21.8
OBN pmax pmax
comp=Z,7.0nm,0.8s
VSR Storozhevoye 137.55 326 ePKIKP PKPdf 02 50 00.9 -2.0
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=E,5.0nm,0.5s
VORD Divnogorie 137.62 326 ePKIKP PKPdf 02 50 01.8 -1.2
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,40nm,1.0s
VORD pmax pmax
comp=Z,10.0nm,1.0s
NOA NORSAR Array B 138.61 353 PKhKP PKPpre 02 49 53.9
comp=Z,1.9nm,0.6s,baz=16,slow=5.0,SNR=13
NOA PKP PKPdf 02 50 04.5 +0.1
comp=Z,2.3nm,0.6s,baz=18,slow=3.9,SNR=8.5
NOA NORSAR Array B 138.61 353 PKP PKPpre 02 49 53.9
NOA PKP PKPdf 02 50 04.5 +0.1
NOA NORSAR Array B 138.61 353 PKHKP PKPpre 02 49 53.9
NOA 02 50 04.6
HFS Hagfors 139.17 351 PKhKP PKPpre 02 49 55.8
comp=Z,4.3nm,0.4s,baz=64,slow=3.4,SNR=21
HFS Hagfors 139.17 351 PKHKP PKPpre 02 49 55.8
MVH1 Achvaich 141.93 6 eP PKPdf 02 50 05.6 -5.0
KAC Achnashellach 142.24 7 eP PKPdf 02 50 06.6 -4.5
MCD Coleburn Disti 142.35 5 eP PKPdf 02 50 06.1 -5.2
KPL Plockton 142.36 7 eP PKPdf 02 50 06.3 -5.0
MDO Dochfour 142.39 6 eP PKPdf 02 50 06.6 -4.8
KIEV Kiev 142.77 331 ePKPdf PKPdf 02 50 07.9 -4.3
KIEV Kiev 142.77 331 ePKIKP PKPpre 02 50 07.9
MUD Monsted U'grnd 143.32 354 *i* PKHKP PKPpre 02 50 09.7
MUD pmax pmax
comp=Z,21nm,1.0s
MUD Monsted U'grnd 143.32 354 *i* P PKPdf 02 50 09.7 -3.4
comp=Z,21nm,1.0s
EAB Aberfoyle 143.63 6 eP PKPdf 02 50 10.6 -3.0
EBH Black Hill 143.65 5 eP PKPdf 02 50 10.1 -3.6
BSD Bornholm Skovb 143.74 348 ePKHKP PKPpre 02 50 05.6
BSD pmax pmax
comp=Z,30nm,1.0s
BSD Bornholm Skovb 143.74 348 *i* P PKPpre 02 50 05.6
comp=Z,30nm,1.0s
SIM Simferopol' 143.81 321 *i* PKIKP PKPdf 02 50 13.3 -1.0
SIM pmax pmax
comp=Z,53nm,0.7s
MALT Malatya 143.84 308 ePKPdf PKPdf 02 50 13.9 -0.6
MALT Malatya 143.84 308 ⇓PKIKP PKPdf 02 50 14.1 -0.5
MALT Malatya 143.84 308 ⇓*i* P PKPdf 02 50 14.1 -0.5
MALT Malatya 143.84 308 PKP PKPdf 02 50 13.9 -0.7
PGBU Glenifferbraes 143.99 6 eP PKPdf 02 50 11.1 -3.2
ESY Stoneypath 144.05 5 eP PKPdf 02 50 11.7 -2.7
EAU Auchinoon 144.06 5 eP PKPdf 02 50 12.0 -2.4
EBL Broad Law 144.16 5 eP PKPdf 02 50 12.4 -2.1
EKA Eskdalemuir Ar 144.59 5 PKP PKPdf 02 50 14.1 -1.2
comp=Z,5.9nm,0.6s,baz=321,slow=2.9,SNR=26
EKA Eskdalemuir Ar 144.59 5 PKIKP PKPdf 02 50 14.1 -1.2
ESK Eskdalemuir 144.60 5 eP PKPdf 02 50 12.0 -3.3
ECK Cauldkaine Hil 144.74 5 eP PKPdf 02 50 15.1 -0.5
GAL1 Galloway 144.89 7 eP PKPdf 02 50 14.6 -1.2
GKP Gorka Klasztor 144.91 344 ePKPdf PKPdf 02 50 15.7 -0.2
GKP Gorka Klasztor 144.91 344⇓ePKIKP PKPdf 02 50 15.7 -0.2
GCD Castle Douglas 144.98 6 eP PKPdf 02 50 15.8 -0.1
KESW Keswick, Cumbr 145.33 5 eP PKPdf 02 50 15.7 -0.9
XDE Dent Fell 145.38 6 eP PKPdf 02 50 16.0 -0.7
LVV L'vov 145.63 335 *i* PKIKP PKPdf 02 50 17.8 +0.6
HPK Haverah Park 146.07 4 eP PKPdf 02 50 17.9 0.0
KWP Kalwaria Pacla 146.30 336 *i* PKPdf PKPbc 02 50 20.1 -0.4
KWP Kalwaria Pacla 146.30 336 ePKPdf PKPdf 02 50 17.9 -0.5
KWP ePKPbc PKPbc 02 50 20.2 -0.3
KWP Kalwaria Pacla 146.30 336⇓*i* PKP2 PKPbc 02 50 20.1 -0.4
KWP Kalwaria Pacla 146.30 336⇑*i* P PKPdf 02 50 20.1 +1.7
BR131 Keskin Array S 146.71 313 ePKPdf PKPdf 02 50 18.8 -0.6
BR131 ePKPbc PKPbc 02 50 21.5 -0.5
BRTR Keskin Array B 146.71 313 PKPbc PKPbc 02 50 21.3 -0.7
comp=Z,15nm,0.6s,baz=103,slow=1.9,SNR=76
BRTR pPKPbc pPKPdf 02 52 14.6 -4.4
comp=Z,0.8nm,0.9s,baz=127,slow=2.2,SNR=1.5
BRTR Keskin Array B 146.71 313 PKIKP PKPbc 02 50 21.3 -0.7
BRTR 02 52 14.6
BUR08 Bucovina Ar. S 146.79 331 ePKPbc PKPbc 02 50 22.2 +0.2
BURAR Bucovina Array 146.81 331 ⇓PKP2 PKPbc 02 50 22.1 +0.1
BURAR Bucovina Array 146.81 331 ⇓*i* P PKPbc 02 50 22.0 0.0
OJC Ojcow 146.86 339 *i* PKPbc PKPbc 02 50 21.6 -0.4
OJC Ojcow 146.86 339 *i* PKP2 PKPbc 02 50 21.6 -0.4

TESR		146.93 328	⇓*i*P	PKPbc	02 50 21.7	-0.7
KOLS	Kolonicke sedl	147.03 335	*e*PKP	PKPdf	02 50 19.6	0.0
KOLS			*e*		02 50 22.7	
KOLS	Kolonicke sedl	147.03 335	*e*PKIKP	PKPdf	02 50 19.6	0.0
KOLS			*e*		02 50 22.7	
KOLS	Kolonicke sedl	147.03 335	*e*PKP	PKPdf	02 50 19.6	0.0
KOLS			*e*		02 50 22.7	
NRDL	Niedersach Rie	147.09 351	*e*PKPbc	PKPbc	02 50 22.0	-0.6
UZH	Uzhgorod	147.26 335	⇓*i*PKP2	PKPbc	02 50 22.8	-0.4
CWF	Charnwood Fore	147.31 4	*e*P	PKPdf	02 50 20.1	+0.1
VRI	Vrincioaia	147.34 328	⇓PKP2	PKPbc	02 50 23.3	-0.2
VRI	Vrincioaia	147.34 328	⇓*i*P	PKPbc	02 50 22.8	-0.7
VRI	Vrincioaia	147.34 328	⇓*i*P	PKPbc	02 50 23.3	-0.2
NIE	Niedzica	147.36 338	*i*PKPbc	PKPbc	02 50 23.6	+0.2
NIE	Niedzica	147.36 338	*i*PKP2	PKPbc	02 50 23.6	+0.2
KSP	Ksiaz	147.36 343	*i*PKPdf	PKPbc	02 50 23.4	0.0
CRVS	Cervenica-Dubn	147.37 336	*e*PKP	PKPdf	02 50 19.2	-1.0
CRVS			*e*		02 50 23.1	
CRVS	Cervenica-Dubn	147.37 336	*e*PKIKP	PKPdf	02 50 19.2	-1.0
CRVS			*e*		02 50 23.1	
CRVS	Cervenica-Dubn	147.37 336	*e*PKP	PKPdf	02 50 19.2	-1.0
CRVS			*e*		02 50 23.1	
PLOR	Plostina	147.38 328	⇑PKP2	PKPbc	02 50 23.0	-0.6
PLOR	Plostina	147.38 328	⇑*i*P	PKPbc	02 50 23.0	-0.6
BMR	Baia Mare	147.52 333	PKP2	PKPbc	02 50 24.0	+0.1
GRER		147.54 327	⇑*i*P	PKPbc	02 50 24.7	+0.7
IBBN	Ibbenburen	147.56 354	*e*PKPbc	PKPbc	02 50 23.4	-0.4
IBBN			*e*PKPab	PKPab	02 50 27.0	-0.7
TRPA	Tarpa	147.56 334	⇓*i*P	PKPbc	02 50 23.5	-0.5
CLZ	Clausthal	147.68 351	*e*PKPbc	PKPbc	02 50 24.0	-0.2
CLZ			*e*PKPab	PKPab	02 50 27.8	-0.3
CLZ	Clausthal	147.68 351	*e*PKPbc	PKPbc	02 50 24.0	-0.2
CLZ			*e*PKPab	PKPab	02 50 27.8	-0.3
CLZ	Clausthal	147.68 351	*e*PKP2	PKPab	02 50 27.8	-0.3
CLL	Collm	147.72 347	*e*PKP	PKPdf	02 50 21.0	+0.3
CLL			⇓*i*PKP	PKPbc	02 50 23.8	-0.5
CLL			*i*PKP	PKPab	02 50 27.5	-0.8
CLL			*e*pPKP	pPKPbc	02 52 22.0	-0.1
CLL	Collm	147.72 347	*e*PKIKP	PKPdf	02 50 21.0	+0.3
CLL			*i*		02 50 27.5	
CLL	Collm	147.72 347	*e*PKPdf	PKPdf	02 50 21.0	+0.3
CLL			⇓*i*PKPbc	PKPbc	02 50 23.8	-0.5
	comp=Z,61nm,0.8s					
CLL			*i*PKPab	PKPab	02 50 27.5	-0.8
	comp=Z,22nm,1.0s					
CLL			*e*pPKPbc	pPKPbc	02 52 22.0	-0.1
OKC	Ostrava-Krasne	147.72 341	*e*PKP2	PKPbc	02 50 24.0	-0.3
OKC	Ostrava-Krasne	147.72 341	⇑*e*PKP	PKPbc	02 50 24.0	-0.3
OKC			*e*PKPAB	PKPab	02 50 28.4	0.0
UPC	Upice	147.74 343	*e*PKP2	PKPbc	02 50 24.2	-0.2
UPC	Upice	147.74 343	⇑*e*PKP	PKPbc	02 50 24.2	-0.2
UPC			*e*PKPAB	PKPab	02 50 28.6	+0.1
UPC			*e*pPKP	pPKPdf	02 52 21.1	+0.8
MMAI	Mount Meron Ar	147.78 300	PKPbc	PKPbc	02 50 25.5	+0.4
	comp=Z,29nm,0.6s,baz=63,slow=3.5,SNR=68					
MMAI			pPKPbc	pPKPdf	02 52 18.2	-2.8
	comp=Z,0.4nm,0.3s,baz=57,slow=5.3,SNR=1.9					
DPC	Dobruska-Polom	147.80 343	*e*PKP2	PKPbc	02 50 24.7	+0.2
DPC	Dobruska-Polom	147.80 343	⇑*e*PKP	PKPbc	02 50 24.7	+0.2
DPC			*e*PKPAB	PKPab	02 50 28.9	+0.2
DPC			*e*pPKP	pPKPdf	02 52 21.0	+0.5
MCH1	Michaelchurch	147.90 6	*e*P	PKPbc	02 50 23.1	-1.6
BRG	Berggiesshubel	147.92 346	*e*PKPbc	PKPbc	02 50 24.6	-0.2
BRG	Berggiesshubel	147.92 346	*e*PKP	PKPdf	02 50 20.8	-0.2
	comp=Z,4.8nm,0.9s					
BRG			*i*		02 50 24.6	
	comp=Z,35nm,1.0s					
BRG			*i*		02 50 28.6	
	comp=Z,13nm,0.7s					
BRG	Berggiesshubel	147.92 346	*e*PKIKP	PKPdf	02 50 20.8	-0.2
BRG			*i*		02 50 28.6	
BRG			pmax	pmax		
	comp=Z,2.0nm,0.9s					
BRG			pmax	pmax		
	comp=Z,3.0nm,1.0s					
BRG			pmax	pmax		
	comp=Z,21nm,0.7s					
DOPR	Dopca	147.93 329	⇓*i*P	PKPbc	02 50 25.4	+0.4
MORC	Moravsky Berou	147.96 341	*e*PKPdf	PKPdf	02 50 20.9	-0.2
MORC			*e*PKPbc	PKPbc	02 50 24.7	-0.2
MORC	Moravsky Berou	147.96 341	⇓PKP2	PKPbc	02 50 24.8	-0.1
MORC	Moravsky Berou	147.96 341	⇓*i*P	PKPbc	02 50 24.8	-0.1
MLR	Muntele Rosu	147.99 328	⇑PKHKP	PKPbc	02 50 24.4	-0.8
MLR	Muntele Rosu	147.99 328	⇑*i*P	PKPbc	02 50 24.4	-0.8
WTSB	Winterswijk	147.99 355	⇓*e*PKP	PKPbc	02 50 24.1	-0.8
	comp=Z,58nm,0.9s					
PSN	Preselentsi	148.00 323	P	PKPbc	02 50 25.2	-0.1
FBE	Freiberg	148.01 347	*e*PKPbc	PKPbc	02 50 25.2	+0.2
NEUB	Neuenburg	148.05 349	*e*PKPbc	PKPbc	02 50 24.9	-0.2
KECS	Kecovo	148.08 337	*e*PKP	PKPbc	02 50 25.2	-0.1
KECS	Kecovo	148.08 337	*e*PKP2	PKPbc	02 50 25.2	-0.1
KECS	Kecovo	148.08 337	*e*PKP	PKPbc	02 50 25.2	-0.1
PVCC	Panska Ves	148.09 345	*e*PKP2	PKPbc	02 50 25.3	+0.1
PVCC	Panska Ves	148.09 345	⇑*e*PKP	PKPbc	02 50 25.3	+0.1
BUG	Bochum--Univer	148.47 354	*e*PKPbc	PKPbc	02 50 25.5	-0.7
VOIR		148.47 328	⇓PKHKP	PKPbc	02 50 25.9	-0.5
VOIR		148.47 328	⇓*i*P	PKPbc	02 50 25.9	-0.5
DRGR		148.54 333	⇓PKHKP	PKPbc	02 50 25.9	-0.6
DRGR		148.54 333	⇓*i*P	PKPbc	02 50 25.9	-0.6
PRU	Pruhonice	148.60 345	*e*PKP2	PKPbc	02 50 27.0	+0.5
PRU	Pruhonice	148.60 345	⇑*e*PKP	PKPbc	02 50 27.0	+0.5
MOX	Moxa	148.62 348	*e*PKP	PKPbc	02 50 26.0	-0.6
	comp=Z,41nm,1.2s					
MOX	Moxa	148.62 348	*e*PKPbc	PKPbc	02 50 26.2	-0.4
MOX	Moxa	148.62 348	*e*PKHKP	PKPbc	02 50 26.0	-0.6
VYHS	Vyhne	148.66 339	*e*PKP	PKPdf	02 50 20.4	-1.9
VYHS			*e*		02 50 26.4	
VYHS	Vyhne	148.66 339	*e*PKIKP	PKPdf	02 50 20.4	-1.9
VYHS	Vyhne	148.66 339	*e*PKP	PKPdf	02 50 20.4	-1.9
VYHS			*e*		02 50 26.4	
VRAC	Vranov	148.66 342	PKPbc	PKPbc	02 50 26.5	-0.2
	comp=Z,15nm,0.9s,baz=60,slow=1.5,SNR=19					
VRAC	Vranov	148.66 342	PKP2	PKPbc	02 50 26.5	-0.2
VRAC	Vranov	148.66 342	⇑*i*P	PKPbc	02 50 26.5	-0.2
PLN	Plauen	148.67 347	*e*PKPbc	PKPbc	02 50 26.5	-0.2
TANN	Tannenbergstha	148.67 347	*e*PKPbc	PKPbc	02 50 26.6	-0.1
TANN			*e*PKPab	PKPab	02 50 31.8	-0.5
WERD	Werda	148.67 348	*e*PKPbc	PKPbc	02 50 26.6	-0.1
UBBA	Unterbreizbach	148.73 350	*e*PKPbc	PKPbc	02 50 26.2	-0.6
WOL	Wolverton	148.73 4	*e*P	PKPbc	02 50 25.4	-1.4
KOLL	Kolacno	148.73 339	*e*PKP	PKPbc	02 50 27.2	+0.3
KOLL	Kolacno	148.73 339	*e*PKP2	PKPbc	02 50 27.2	+0.3
KOLL	Kolacno	148.73 339	*e*PKP	PKPbc	02 50 27.2	+0.3
GUNZ	Gunzen	148.75 347	*e*PKPbc	PKPbc	02 50 26.9	0.0
GUNZ			*e*PKPab	PKPab	02 50 32.2	-0.4
PSZ	Piszkesteto	148.77 337	*e*PKPdf	PKPdf	02 50 22.5	0.0
PSZ			*e*PKPbc	PKPbc	02 50 26.8	-0.2
PSZ	Piszkesteto	148.77 337	⇓PKHKP	PKPbc	02 50 26.7	-0.3
PSZ	Piszkesteto	148.77 337	⇓*i*P	PKPbc	02 50 26.7	-0.3
PSZ	Piszkesteto	148.77 337	⇓*e*PKP	PKPbc	02 50 26.5	-0.5
WERN	Wernitzgruen	148.81 347	*e*PKPbc	PKPbc	02 50 27.0	0.0
WERN			*e*PKPab	PKPab	02 50 32.6	-0.2
CSS	Prodhromos	148.83 305	*e*PKPbc	PKPbc	02 50 27.0	-0.6
NKC	Novy Kostel	148.85 347	*e*PKP2	PKPbc	02 50 26.9	-0.2
NKC	Novy Kostel	148.85 347	⇑*e*PKP	PKPbc	02 50 26.9	-0.2
NKC			*e*PKPAB	PKPab	02 50 32.3	-0.7
TREC	Trest	148.99 343	*e*PKHKP	PKPbc	02 50 27.2	-0.3
TREC	Trest	148.99 343	⇑*e*PKP	PKPbc	02 50 27.2	-0.3
BEBN	Eben Emael	149.24 356	PKPbc	PKPbc	02 50 27.7	-0.3
BEBN			PKPab	PKPab	02 50 33.9	-0.7
HGN	Heimansgroeve	149.26 355	*e*PKP	PKPbc	02 50 27.4	-0.7
	comp=Z,23nm,0.9s					
ROTZ	Rotzenmuhle	149.34 347	*e*PKPbc	PKPbc	02 50 28.3	0.0
CCA1	Carnmenellis	149.40 9	*e*P	PKPbc	02 50 26.1	-2.3
MEM	Membach	149.41 355	PKPbc	PKPbc	02 50 28.0	-0.5
ZST	Bratislava	149.49 340	*e*PKP	PKPbc	02 50 28.8	0.0
ZST	Bratislava	149.49 340	*e*PKHKP	PKPbc	02 50 28.8	0.0
ZST	Bratislava	149.49 340	*e*PKP	PKPbc	02 50 28.8	0.0
TNS	Taunus Mts	149.53 352	*e*PKPbc	PKPbc	02 50 28.5	-0.3
TNS	Taunus Mts	149.53 352	*e*PKPbc	PKPbc	02 50 28.5	-0.3
TNS	Taunus Mts	149.53 352	*e*PKHKP	PKPbc	02 50 28.5	-0.3
GZR	Gura Zlata	149.59 331	⇑PKIKP	PKPbc	02 50 28.5	-0.6
GZR	Gura Zlata	149.59 331	⇑*i*P	PKPbc	02 50 28.5	-0.6
GRA1	Grafenberg Arr	149.61 348	*e*PKPbc	PKPbc	02 50 28.9	-0.1
GRA1			*e*PKPab	PKPab	02 50 35.7	-0.4
GRF	Grafenberg Arr	149.61 348	*e*PKPbc	PKPbc	02 50 28.9	-0.1
GRF			*e*PKPab	PKPab	02 50 35.7	-0.4
GRF	Grafenberg Arr	149.61 348	*e*PKP2	PKPab	02 50 35.7	-0.4
SNF	Seneffe	149.61 357	PKPbc	PKPbc	02 50 28.4	-0.5
SNF			PKPab	PKPab	02 50 35.3	-0.8
KHC	Kasperske Hory	149.63 345	*e*PKPDF	PKPdf	02 50 22.9	-0.9
KHC			⇑*e*PKP	PKPbc	02 50 28.9	-0.2
KHC			*e*PKPAB	PKPab	02 50 35.9	-0.4
BCLA	Clavier	149.64 356	PKPbc	PKPbc	02 50 28.5	-0.5
BCLA			PKPab	PKPab	02 50 35.3	-1.0
WET	Wettzell	149.78 346	*e*PKPbc	PKPbc	02 50 29.0	-0.4
WET	Wettzell	149.78 346	*e*PKPbc	PKPbc	02 50 29.0	-0.4
WET	Wettzell	149.78 346	*e*PKHKP	PKPbc	02 50 29.0	-0.4
GEC2	GERESS Array S	149.87 345	*e*PKPbc	PKPbc	02 50 29.3	-0.3
GEC2			*e*PKPab	PKPab	02 50 37.0	-0.2
GEC2	GERESS Array S	149.87 345	*e*PKPbc	PKPbc	02 50 29.3	-0.3
GEC2			*e*PKPab	PKPab	02 50 37.0	-0.2
GEC2	GERESS Array S	149.87 345	*e*PKP2	PKPab	02 50 37.0	-0.2
GERES	GERESS Array B	149.87 345	PKPbc	PKPbc	02 50 29.2	-0.4
	comp=Z,20nm,0.8s,baz=29,slow=3.0,SNR=126					
GERES	GERESS Array B	149.87 345	PKHKP	PKPbc	02 50 29.2	-0.4
BZS	Buzias	149.94 332	⇑PKHKP	PKPbc	02 50 29.2	-0.7
BZS	Buzias	149.94 332	⇑*i*P	PKPbc	02 50 29.2	-0.7
DOU	Dourbes	150.01 357	PKPbc	PKPbc	02 50 29.5	-0.4
DOU			PKPab	PKPab	02 50 36.8	-1.0
CONA	Conrad Observa	150.11 341	⇓*i*PKPbc	PKPbc	02 50 30.0	-0.3
SOP	Sopron	150.12 340	⇓*e*PKP	PKPbc	02 50 29.9	-0.4
WLF	Walferdange	150.33 355	PKPbc	PKPbc	02 50 30.4	-0.3
WLF			PKPab	PKPab	02 50 38.6	-0.5
WLF	Walferdange	150.33 355	*e*PKPbc	PKPbc	02 50 30.9	+0.2
WLF	Walferdange	150.33 355	*e*PKIKP	PKPbc	02 50 30.9	+0.2
DIM	Dimitrovgrad	150.54 323	P	PKPbc	02 50 31.0	-0.4
MOA	Molln	150.64 343	⇓*i*PKPbc	PKPbc	02 50 30.8	-0.7
	comp=Z,9.1nm,0.6s					
PKSM	Moragy	150.67 336	⇓PKIKP	PKPbc	02 50 30.7	-0.9
PKSM	Moragy	150.67 336	⇓*i*P	PKPbc	02 50 30.7	-0.9
STU	Stuttgart	150.84 350	*e*PKPbc	PKPbc	02 50 31.6	-0.3
STU			*e*PKPab	PKPab	02 50 40.6	-0.7
KDZ	Kurdzhali	150.87 323	P	PKPbc	02 50 31.3	-0.9
PGB	Panagyurishte	150.96 325	P	PKPbc	02 50 31.5	-0.9
FUR	Furstenfeldbru	151.05 347	*e*PKPbc	PKPbc	02 50 31.9	-0.5
FUR			*e*PKPab	PKPab	02 50 42.0	-0.2
FUR	Furstenfeldbru	151.05 347	*e*PKPbc	PKPbc	02 50 31.9	-0.5
FUR			*e*PKPab	PKPab	02 50 42.0	-0.2
FUR	Furstenfeldbru	151.05 347	*e*PKIKP	PKPbc	02 50 31.9	-0.5
FUR			*e*		02 50 42.0	
RJOB	Jochberg	151.12 345	*e*PKPbc	PKPbc	02 50 31.8	-0.8
RJOB			*e*PKPab	PKPab	02 50 42.6	+0.1
KOGS	Kog	151.31 340	*i*PKPbc	PKPbc	02 50 31.9	-1.1
BFO	Black Forest	151.40 351	*e*PKPbc	PKPbc	02 50 32.6	-0.6
BFO			*e*PKPab	PKPab	02 50 42.8	-0.9
BFO	Black Forest	151.40 351	*e*PKPdf	PKPdf	02 50 28.2	+1.6
BFO			*e*PKPbc	PKPbc	02 50 32.5	-0.7
BFO			*e*PKPab	PKPab	02 50 42.8	-0.9
BFO	Black Forest	151.40 351	*e*PKIKP	PKPdf	02 50 28.2	+1.6
BFO			*e*		02 50 32.5	
BFO			*e*		02 50 42.8	
VTS	Vitosha	151.43 326	⇓PKIKP	PKPbc	02 50 33.0	-0.5
VTS	Vitosha	151.43 326	⇓*i*P	PKPbc	02 50 33.0	-0.5
VTS	Vitosha	151.43 326	P	PKPbc	02 50 32.8	-0.7
PERS	Pernice	151.50 341	*e*PKPbc	PKPbc	02 50 32.2	-1.2
WATA	Walderalm	151.78 346	⇓*i*PKPbc	PKPbc	02 50 33.2	-0.9
	comp=Z,7.8nm,0.5s					
WTTA	Wattenberg	151.83 346	⇑*i*PKPbc	PKPbc	02 50 33.5	-0.7
	comp=Z,20nm,0.8s					
MMB	Musomiste	151.85 324	P	PKPbc	02 50 33.4	-1.0
MOTA	Moosalm	151.87 347	⇑*i*PKPbc	PKPbc	02 50 33.1	-1.1
	comp=Z,9.2nm,0.8s					
KKB	Krupnik	152.01 325	P	PKPbc	02 50 33.8	-1.0
ABTA	Abfaltersbach	152.11 345	⇑*i*PKPbc	PKPbc	02 50 33.5	-1.3
DAVA	Damuels	152.17 349	⇓*i*PKPbc	PKPbc	02 50 34.4	-0.5
	comp=Z,21nm,1.2s					
LJU	Ljubljana	152.21 341	*i*PKPbc	PKPbc	02 50 34.3	-0.7
FETA	Feichten	152.26 347	⇓*i*PKPbc	PKPbc	02 50 34.8	-0.3
	comp=Z,8.7nm,0.7s					
CEY	Cerknica	152.51 341	*i*PKPbc	PKPbc	02 50 34.9	-0.9
ESDC	Sonseca Array	159.78 14	PKP	PKPdf	02 50 37.5	-0.4
	comp=Z,0.3nm,0.5s,baz=355,slow=2.3,SNR=5.5					
ESDC			PKPab	PKPab	02 51 18.7	-1.3
	comp=Z,0.4nm,0.6s,baz=345,slow=4.8,SNR=5.5					
ESDC	Sonseca Array	159.78 14	PKP	PKPdf	02 50 37.5	-0.4
ESDC			PKPab	PKPab	02 51 18.7	-1.3
KEST	Kesra	163.21 340	PKPab	PKPab	02 51 34.8	-0.4
	comp=Z,0.7nm,0.5s,baz=15,slow=23,SNR=4.1					
LIC	Lamto	164.52 152	*e*PKIKP	PKPdf	02 50 41.8	-1.6
	comp=Z,71nm,1.8s					
LIC	Lamto	164.52 152	*e*PKP1	PKPab	02 51 41.9	+0.4
	comp=Z,53nm,1.6s					
LIC	Lamto	164.52 152	*e*PKPdf	PKPdf	02 50 41.8	-1.6
KIC	Kosan Boka	164.77 153	*e*PKIKP	PKPdf	02 50 42.1	-1.5
	comp=Z,28nm,1.0s					
KIC	Kosan Boka	164.77 153	*e*PKP1	PKPab	02 51 42.3	-0.3
	comp=Z,22nm,0.9s					
KIC	Kosan Boka	164.77 153	*e*PKPdf	PKPdf	02 50 42.1	-1.5
TIC	Toumodi	164.90 151	*e*PKIKP	PKPdf	02 50 42.1	-1.6
	comp=Z,4.3nm,0.2s					
TIC	Toumodi	164.90 151	*e*PKP1	PKPab	02 51 43.1	0.0
	comp=Z,6.0nm,0.2s					
TIC	Toumodi	164.90 151	*e*PKPdf	PKPdf	02 50 42.1	-1.6
TIC	Toumodi	164.90 151	*e*PKIKP	PKPdf	02 50 42.1	-1.6
DBIC	Dimbokro	165.00 152	PKP	PKPdf	02 50 42.6	-1.2
	comp=Z,4.9nm,0.9s,baz=180,slow=7.7,SNR=3.9					
DBIC			PKPab	PKPab	02 51 42.9	-0.7
	comp=Z,6.0nm,1.0s,baz=157,slow=1.0,SNR=4.0					
DBIC	Dimbokro	165.00 152	PKIKP	PKPdf	02 50 42.6	-1.2
DBIC					02 51 42.9	
TORD	Torodi Ar. Bea	173.07 176	PKP	PKPdf	02 50 47.1	-1.5
	comp=Z,4.5nm,0.9s,baz=151,slow=3.3,SNR=21					
TORD			PKPab	PKPab	02 52 18.9	-0.3
	comp=Z,1.2nm,0.7s,baz=170,slow=3.9,SNR=10					

CSEM ***15*** *02:33:35.3, 41°.21N×43°.71E, h0km, ML2.6, After TIF*
TIF 15 02:33:35.3, 41°.58N×43°.20E, h10km,
Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOR	Gori	0.79	59	P	Pg	02 33 53.2	+2.5
GOR				S	Sg	02 34 05.5	+4.5
GOR	Gori	0.79	59	P	Pg	02 33 53.2	+2.6
GOR				S	Sg	02 34 05.5	+4.5
TBLG	Delisi	1.17	82	P	Pb	02 33 53.1	-4.4
TBLG				S	Sb	02 34 05.8	-6.9
TBLG	Delisi	1.17	82	P	Pb	02 33 53.1	-4.4
TBLG				S	Sb	02 34 05.8	-6.9
DBOC	Borcka	1.17	259	*i* P	Pb	02 34 06.1	+8.4
MTA	Mtatsminda	1.20	84	P	Pb	02 33 53.0	-5.1
MTA				S	Sb	02 34 05.7	-8.1
MTA	Mtatsminda	1.20	84	P	Pb	02 33 53.0	-5.2
MTA				S	Sb	02 34 05.7	-8.0
DBAD	Bademkaya	1.26	244	*i* P	Pn	02 34 06.0	+7.0
DDEM	Demirkent	1.29	238	*i* P	Pn	02 34 05.2	+5.9
DGRG	David-gareji	1.64	94	P	Pn	02 33 58.2	-6.0
DGRG				S	Sn	02 34 16.0	-9.3
DGRG	David-gareji	1.64	94	P	Pn	02 33 58.2	-6.0
DGRG				S	Sn	02 34 16.0	-9.3

NEIC ***15*** *02:49:05.4, 16°.44N×98°.24W, h12km, MD3.8(MEX), After MEX.*
MEX 15 02:49:05.4±0.8, 16°.44N×98°.24W, h12km±5km, MD3.8,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.11	113	*i* P	Pg	02 49 07.2	-1.3
PNIG				*e*S	Sg	02 49 10.1	-0.5
PNIG	Pinotepa	0.11	113	*i* P	Pg	02 49 07.2	-1.3
PNIG				*e*S	Sg	02 49 10.1	-0.5
VHO	Vista Hermosa	1.57	66	*i* P	Pn	02 49 30.1	-3.0
VHO				*e*S	Sn	02 49 48.4	-5.0
VHO	Vista Hermosa	1.57	66	*i* P	Pn	02 49 30.1	-3.0
VHO				*e*S	Sn	02 49 48.4	-5.0
ACX	Acapulco	1.61	286	*i* P	Pn	02 49 31.7	-2.0
ACX				*e*S	Sn	02 49 50.0	-4.5
ACX	Acapulco	1.61	286	*i* P	Pn	02 49 31.7	-2.0
ACX				*e*S	Sn	02 49 50.0	-4.5
CAIG	El Cayaco	2.04	288	*i* P	Pn	02 49 36.2	-3.4
CAIG				*e*S	Sn	02 50 01.1	-3.9
CAIG	El Cayaco	2.04	288	*i* P	Pn	02 49 36.2	-3.4
CAIG				*e*S	Sn	02 50 01.1	-3.9
HUIG	Huatulco	2.15	108	*i* P	Pn	02 49 38.0	-3.0
HUIG				*e*S	Sn	02 50 03.0	-4.8
HUIG	Huatulco	2.15	108	*i* P	Pn	02 49 38.0	-3.0
HUIG				*e*S	Sn	02 50 03.0	-4.8
PLIG	Platanillo	2.29	328	*i* P	Pn	02 49 39.2	-3.8
PLIG				*e*S	Sn	02 50 07.1	-4.0
PLIG	Platanillo	2.29	328	*i* P	Pn	02 49 39.2	-3.8
PLIG				*e*S	Sn	02 50 07.1	-4.0
CMIG	Matias Romero	3.28	78	*i* P	Pn	02 49 53.4	-3.2
CMIG	Matias Romero	3.28	78	*i* P	Pn	02 49 53.4	-3.2

ISK ***15*** *02:54:15.2, 38°.11N×38°.78E, h5km, MD3.2*
ISCJB ***15*** *02:54:16.4±0.4, 38°.08N±0°.03×38°.77E±0°.03, h10km, Error ellipse: s-maj=4.1km s-min=3.0km az=155.2*
CSEM ***15*** *02:54:16.6±0.2, 38°.09N×38°.79E, h2km, MD3.2, Error ellipse: s-maj=6.1km s-min=4.1km az=154.0*
DDA ***15*** *02:54:16.5, 38°.09N×38°.78E, h7km±4km, Md2.7*
ISC 15 02:54:16.9±0.5, 38°.08N±0°.03×38°.78E±0°.03, h6km±5km,
n31, σ0°80/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	Malatya	0.36	310	*e*PG	Pg	02 54 23.5	-0.4
MALT				*e*SG	Sg	02 54 29.4	+0.8
MALT	Malatya	0.36	310	*e*Pg	Pg	02 54 23.5	-0.4
MALT				*e*Sg	Sg	02 54 29.4	+0.8
ELZG	Elazig	0.45	22	*i* P	Pg	02 54 25.1	-0.4
ELZG				*i* S	Sg	02 54 31.5	+0.2
ELZG	Elazig	0.45	22	*i* P	Pg	02 54 25.1	-0.4
ELZG				*i* S	Sg	02 54 31.5	+0.1
SVRC	Sivrice-ELAZID	0.51	55	*e*PG	Pg	02 54 26.0	-0.8
SVRC				*e*SG	Sg	02 54 33.8	+0.4
SVRC	Sivrice-ELAZID	0.51	55	*e*Pg	Pg	02 54 26.0	-0.8
SVRC				*e*Sg	Sg	02 54 33.8	+0.4
AKCD	Akcadag	0.71	288	*i* P	Pg	02 54 30.1	-0.4
AKCD				*i* S	Sg	02 54 41.0	+1.4
AKCD	Akcadag	0.71	288	*i* P	Pg	02 54 30.1	-0.4
AKCD				*i* S	Sg	02 54 41.0	+1.3
ATAB	Bozova	0.72	212	*i* P	Pg	02 54 30.1	-0.7
ATAB				*i* S	Sg	02 54 39.6	-0.5
ATAB	Bozova	0.72	212	*i* P	Pg	02 54 30.1	-0.7
ATAB				*i* S	Sg	02 54 39.6	-0.6
PTK	Pertek	0.94	31	*e*PG	Pg	02 54 33.4	-1.6
PTK	Pertek	0.94	31	*e*Pg	Pg	02 54 33.4	-1.6
DIYA	Diyarbakir	1.07	98	*i* P	Pg	02 54 37.5	-0.1
DIYA				*i* S	Sg	02 54 53.6	+2.1
DIYA	Diyarbakir	1.07	98	*i* P	Pg	02 54 37.5	0.0
DIYA				*i* S	Sg	02 54 53.6	+2.1
GZT	Gaziantep	1.21	233	*i* P	Pn	02 54 39.0	-1.4
GZT				*i* S	Sg	02 54 57.1	+1.4
GAZ	Gaziantep	1.54	234	*e*PN	Pn	02 54 45.3	+0.4
GAZ	Gaziantep	1.54	234	*e*Pn	Pn	02 54 45.3	+0.4
BINT	Bingol	1.56	59	*e*PN	Pn	02 54 45.5	+0.3
BINT	Bingol	1.56	59	*e*Pn	Pn	02 54 45.5	+0.3
KMRS	Kahramanmaras	1.59	249	*e*PN	Pn	02 54 45.7	0.0
KMRS	Kahramanmaras	1.59	249	*e*Pn	Pn	02 54 45.7	0.0
EZC	Erzincan	1.73	15	*e*PN	Pn	02 54 47.0	-0.5

comp=N,4μm,0.0s
LPAZ La Paz 4.89 10 P **Pn 03 24 37.4 +0.9**
comp=N,6.2nm,0.3s,baz=197,slow=6.8,SNR=88
LPAZ LR LR 03 25 53.5
comp=N,152nm,18.6s,baz=195,slow=31
LPAZ La Paz 4.89 10 *e*Pn **Pn 03 24 38.0 +1.6**
LCO Las Campanas 7.99 191 *e*Pn **Pn 03 25 14.5 -4.0**
LCO *e*S **Sn 03 26 39.4 -7.8**
CFAA Coronel Fontan 10.46 176 P **Pn 03 25 47.5 -4.5**
comp=N,0.4nm,0.3s,baz=350,slow=13,SNR=50
CFAA S **Sn 03 27 39.0 -8.1**
comp=N,0.4nm,0.3s,baz=222,slow=18,SNR=6.5
CPUP Villa Florida 11.91 118 P **Pn 03 26 08.4 -2.9**
baz=283,slow=13
CPUP Villa Florida 11.91 118 *e*Pn **Pn 03 26 08.5 -2.8**
TRQA Tornquist 17.94 162 *e*Pn **Pn 03 27 26.2 -1.3**
comp=N,18nm,0.9s
PLCA Paso Flores 19.59 183 P **P 03 27 45.2 +0.7**
comp=N,0.5nm,0.3s,baz=3.8,slow=12,SNR=33
PLCA LR LR 03 35 00.2
comp=N,129nm,19.2s,baz=275,slow=35
PLCA Paso Flores 19.59 183 *e*P **P 03 27 45.0 +0.5**
comp=N,33nm,0.8s
SPB Sao Paulo 20.14 101 *e*P **P 03 27 49.1 -1.6**
comp=N,34nm,0.6s
BDFB Brasilia 20.68 78 P **P 03 27 54.1 -2.4**
comp=N,59nm,0.5s,baz=249,slow=10,SNR=110
BDFB LR LR 03 37 39.2
comp=N,88nm,20.9s,baz=253,slow=42
ILCA Isla Las Cabra 21.08 187 *e*P **P 03 28 03.0 +2.5**
USHA Ushuaia 33.66 179 P **P 03 29 56.5 +1.3**
comp=N,8.1nm,0.8s,mb4.6,baz=359,slow=7.4,SNR=5.1
USHA LR LR 03 44 08.4
comp=N,169nm,18.7s,baz=316,slow=37
RCBR Riachuelo 35.52 69 P **P 03 30 10.3 -1.5**
comp=N,49nm,0.6s,mb5.6,baz=230,slow=9.1,SNR=39
RCBR LR LR 03 46 18.7
comp=N,75nm,18.6s,baz=220,slow=39
RCBR Riachuelo 35.52 69 P **P 03 30 11.5 -0.3**
SJG San Juan 39.10 4 P **P 03 30 39.9 -1.9**
comp=N,16nm,0.6s,mb5.0,baz=155,slow=3.9,SNR=8.2
SJG San Juan 39.10 4 *e*P **P 03 30 39.6 -2.2**
comp=N,12nm,0.6s,mb4.9
TKL Tuckaleechee C 58.17 346 P **P 03 33 07.2 -0.4**
comp=N,2.5nm,0.8s,mb4.3,baz=120,slow=5.4,SNR=5.0
TKL pP pP 03 33 33.7 -0.3
comp=N,4.6nm,0.7s,baz=154,slow=9.6,SNR=5.0
TKL Tuckaleechee C 58.17 346 P **P 03 33 07.2 -0.4**
TKL pP pP 03 33 33.7 -0.3
TXAR Lajitas Array 60.25 325 P **P 03 33 22.9 +0.9**
comp=N,0.5nm,0.7s,mb3.7,baz=148,slow=7.5,SNR=3.6
TXAR pP pP 03 33 50.5 +1.8
comp=N,0.4nm,0.5s,baz=134,slow=8.9,SNR=2.9
SNAA Sanae 62.67 161 P **P 03 33 38.3 +0.5**
comp=N,1.8nm,0.7s,mb4.1,baz=275,slow=5.7,SNR=24
LIC Lamto 68.40 74 *e*P **P 03 34 14.6 -1.0**
comp=N,64nm,1.7s,mb5.2
TIC Toumodi 68.59 74 *e*P **P 03 34 15.8 -1.0**
comp=N,19nm,0.9s,mb4.9
KIC Kosan Boka 68.72 74 *e*P **P 03 34 16.7 -0.9**
comp=N,36nm,0.8s,mb5.3
DBIC Dimbokro 68.75 74 P **P 03 34 17.1 -0.7**
comp=N,13nm,0.7s,mb4.9,baz=226,slow=6.9,SNR=25
DBIC Dimbokro 68.75 74 *e*P **P 03 34 17.0 -0.8**
comp=N,16nm,0.8s,mb4.9
QSPA South Pole Qui 69.06 180 P **P 03 34 20.7 +2.0**
comp=N,6.7nm,0.7s,mb4.6,baz=156,slow=1.9,SNR=58
QSPA pP pP 03 34 47.5 +1.6
comp=N,7.5nm,1.0s,baz=149,slow=3.7,SNR=5.2
QSPA South Pole Qui 69.06 180 *e*P **P 03 34 20.4 +1.8**
comp=N,4.6nm,0.6s,mb4.5
QSPA *e* pP 03 34 47.4 +1.6
PDAR Pinedale Array 73.72 330 P **P 03 34 48.8 +1.7**
comp=N,0.2nm,0.5s,baz=117,slow=5.3,SNR=2.9
PDAR pP pP 03 35 15.2 +0.7
comp=N,0.9nm,0.8s,baz=145,slow=6.5,SNR=5.5
HWUT Hardware Ranch 73.80 328 *e*P **P 03 34 48.7 +1.2**
comp=N,2.9nm,0.9s,mb4.0
ULM Lac du Bonnet 74.92 343 P **P 03 34 53.9 0.0**
comp=N,1.3nm,0.5s,mb3.9,baz=173,slow=8.1,SNR=3.7
NVAR Mina Array Bea 75.12 322 P **P 03 34 57.7 +2.5**
comp=N,0.8nm,0.8s,mb3.5,baz=150,slow=6.2,SNR=5.6
NVAR pP pP 03 35 23.9 +1.1
comp=N,1.3nm,0.7s,baz=154,slow=6.0,SNR=6.4
SYO Syowa Base 76.89 159 *e*P **P 03 35 04.5 -0.4**
TORD Torodi Ar. Bea 77.35 70 P **P 03 35 07.3 -1.0**
comp=N,6.5nm,0.6s,mb4.5,baz=256,slow=5.4,SNR=130
TORD pP pP 03 35 35.6 -0.5
comp=N,9.9nm,0.8s,baz=256,slow=5.6,SNR=4.8
TSUM Tsumeb 80.27 107 P **P 03 35 25.3 +1.0**
comp=N,10nm,0.8s,mb4.7,baz=236,slow=6.4,SNR=16
TSUM Tsumeb 80.27 107 P **P 03 35 25.7 +1.3**
comp=N,4.1nm,1.1s,mb4.2
MDT Midelt 81.60 50 P **P 03 35 32.0 +0.9**
comp=N,1.6nm,0.8s,mb3.9,baz=270,slow=3.6,SNR=3.6
BOSA Boshof 83.73 118 P **P 03 35 42.9 +0.5**
comp=N,3.7nm,0.9s,mb4.2,baz=276,slow=4.9,SNR=4.3
MAW Mawson 84.72 163 P **P 03 35 47.9 +1.3**
comp=N,2.5nm,0.6s,mb4.3,baz=222,slow=7.3,SNR=14
MAW Mawson 84.72 163 *e*P **P 03 35 46.2 -0.4**
comp=N,0.4nm,0.7s,mb3.5
TAM Tamanrasset 84.76 63 *e*P **P 03 35 48.4 +0.9**
comp=N,4.5nm,1.1s,mb4.3
LBTB Lobatse 85.29 115 P **P 03 35 51.5 +1.3**
comp=N,4.2nm,0.8s,mb4.4,baz=268,slow=13,SNR=6.1
ESDC Sonseca Array 85.65 45 P **P 03 35 52.4 +0.7**
comp=N,0.7nm,0.7s,mb3.7,baz=243,slow=5.5,SNR=7.3
YKA Yellowknife Ar 90.79 341 P **P 03 36 16.2 +0.7**
comp=N,1.5nm,0.8s,mb4.2,baz=129,slow=4.4,SNR=8.9
YKA pP pP 03 36 44.6 +0.7
comp=N,5.3nm,0.8s,baz=121,slow=4.8,SNR=13
WRA Warramunga Arr 133.21 211 PKP PKPdf 03 42 30.4 +1.5
comp=N,0.6nm,0.6s,baz=146,slow=1.9,SNR=10
WRA pPKP pPKPdf 03 42 57.9 -0.7
comp=N,0.4nm,0.7s,baz=159,slow=1.7,SNR=2.1
BVAR Borovoye Array 135.56 34 pPKP pPKPdf 03 43 02.0 +0.1
comp=N,0.9nm,0.7s,baz=186,slow=1.3,SNR=3.9
ZALV Zalesovo Beam 141.67 25 PKP PKPdf 03 42 43.8 +0.4
comp=N,0.5nm,0.4s,baz=323,slow=4.5,SNR=2.1
ZALV pPKP pPKPdf 03 43 14.1 +1.0
comp=N,1.6nm,0.5s,baz=270,slow=2.9,SNR=2.8
ASAJ Asahikawa 145.19 319 PKPbc PKPbc 03 42 51.1 +1.4
comp=N,6.4nm,1.0s,baz=123,slow=7.8,SNR=4.0
MK31 Makanchi Array 145.40 35 *e*PKPbc PKPbc 03 42 51.4 +1.1
MKAR Makanchi Array 145.40 35 PKPbc PKPbc 03 42 51.1 +0.8
comp=N,3.7nm,0.9s,baz=298,slow=2.6,SNR=14
MKAR pPKPbc pPKPbc 03 43 20.1 +0.6
comp=N,3.8nm,0.6s,baz=317,slow=4.2,SNR=6.1
SONM Songino Array 153.10 7 PKPbc PKPbc 03 43 10.4 +0.6
comp=N,0.4nm,0.6s,baz=264,slow=4.3,SNR=3.2
SONM pPKPbc pPKPbc 03 43 39.8 +0.4
comp=N,3.4nm,0.6s,baz=321,slow=1.8,SNR=10

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*ISCJB **15** 03:25:01.9±2.8, 4°.6S±0°.1×144°.5E±0°.1, h74km±28km, mb3.8/9, Error ellipse: s-maj=19.9km s-min=17.4km az=1.9*
*NEIC **15** 03:25:04.7±1.9, 4°.62S×144°.46E, h85km±19km, mb4.0/1, Error ellipse: s-maj=17.1km s-min=12.6km az=143.0*
*IDC **15** 03:25:06.6±1.1, 4°.64S×144°.59E, h108km±8km, mb3.5/8, mb1 3.6/9, mb1mx3.6/18, mbtmp3.5/9, Error ellipse: s-maj=38.0km s-min=15.0km az=104.0*
ISC 15 03:25:04.2±2.4, 4°.6S±0°.1×144°.5E±0°.1, h81km±26km, n16, σ0°60/18, mb3.8/9, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 54nm,0.6s	**5.45**	**151**	*e*Pn	**Pn**	**03 26 23.9**	**+0.9**
PMG				*e*S	**Sn**	**03 27 23.9**	**-0.5**
KAKA	**Kakadu** 7.9nm,0.4s	**14.37**	**235**	*e*P	**Pn**	**03 28 23.8**	**+0.1**
KAKA	**Kakadu** 24nm,0.5s	**14.37**	**235**	*e*Pn	**Pn**	**03 28 23.6**	**-0.1**
KAKA				*e*S	**Sn**	**03 30 50.3**	**-12**
CTA	**Charters Tower** 0.6nm,0.2s	**15.48**	**174**	*e*P	**Pn**	**03 28 44.7**	**+6.8**
WB2	**Warramunga Arr**	**18.16**	**212**	*e*Pn	**Pn**	**03 29 10.5**	**-0.5**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=35,slow=12,SNR=16	**18.16**	**212**	P	**Pn**	**03 29 10.7**	**-0.4**
ASAR	**Alice Springs** 4.3nm,0.8s,mb3.8,baz=32,slow=13,SNR=19	**21.52**	**207**	P	**P**	**03 29 47.2**	**+0.4**
ASAR				pP		03 30 08.6	
FITZ	**Fitzroy Crossi** 2.2nm,0.7s,mb3.6,baz=45,slow=10.0,SNR=11	**22.79**	**232**	P	**P**	**03 30 00.3**	**0.0**
FITZ	**Fitzroy Crossi** 17nm,2.0s,mb4.0	**22.79**	**232**	*e*P	**P**	**03 30 00.0**	**-0.3**
KSRS	**Korea Array** 1.2nm,0.9s,mb3.6,baz=169,slow=9.7,SNR=5.6	**44.60**	**341**	P	**P**	**03 33 07.3**	**-1.2**
KSRS				pP	pP	03 33 34.7	+6.6
SONM	**Songino Array** 0.3nm,0.5s,mb3.6,baz=154,slow=8.0,SNR=2.5	**62.00**	**332**	P	**P**	**03 35 15.8**	**0.0**
MKAR	**Makanchi Array** 1.1nm,0.5s,mb3.8,baz=100,slow=7.8,SNR=8.2	**74.85**	**321**	P	**P**	**03 36 36.5**	**+0.5**
TKM2	**Tokmak 2** 1.8nm,0.7s,mb3.9	**77.91**	**316**	*e*P	**P**	**03 36 54.2**	**+0.8**
BVAR	**Borovoye Array** 1.8nm,0.7s,mb4.0,baz=91,slow=7.4,SNR=8.1	**84.19**	**324**	P	**P**	**03 37 27.1**	**+0.6**
ILAR	**Eielson Array** 1.1nm,0.8s,mb3.9,baz=259,slow=5.0,SNR=15	**85.21**	**24**	P	**P**	**03 37 30.6**	**-0.8**
ILAR				pP	pP	03 37 57.6	+4.5
QSPA	**South Pole Qui** 0.8nm,0.5s,mb3.9,baz=302,slow=1.4,SNR=6.3	**85.34**	**180**	P	**P**	**03 37 32.1**	**+0.2**

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*IDC **15** 03:35:33.5±3.4, 13°.83N×91°.74W, h35km±24km, mb3.8/12, mb1 4.1/15, mb1mx3.9/28, mbtmp3.9/15, ML3.8/3, MS3.4/7, Ms1 3.5/7, ms1mx3.1/28, Error ellipse: s-maj=25.9km s-min=15.4km az=37.0*
*CASC **15** 03:35:34.7±2.2, 13°.83N×91°.87W, h21km±22km, MD3.9, mb4.2(NEIC)*
*ISCJB **15** 03:35:37.6±0.7, 14°.01N±0°.06×91°.69W±0°.05, h76km±6km, mb4. 1/32, Error ellipse: s-maj=11.4km s-min=6.1km az=37.6*
*NEIC **15** 03:35:37.6±1.3, 14°.02N×91°.81W, h55km±12km, mb4.2/23, Error ellipse: s-maj=15.4km s-min=8.9km az=222.0*
ISC 15 03:35:37.5±0.7, 13°.99N±0°.06×91°.80W±0°.05, h52km±6km, n180, σ0°86/178, mb4.2/32, MS3.7/6, 51C-53D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.36**	**25**	*i*P	**Pn**	**03 35 47.4**	**0.0**
FUG	**Fuego 3**	**1.03**	**64**	*e*P	**Pn**	**03 35 55.9**	**+0.2**
FG6		**1.05**	**57**	*e*P	**Pn**	**03 35 56.5**	**+0.5**
TP2	**Tecpan 2**	**1.09**	**43**	*e*P	**Pn**	**03 35 57.3**	**+0.8**
PCG	**Pacaya**	**1.22**	**71**	*e*P	**Pn**	**03 35 58.7**	**+0.5**
NBG	**Las Nubes**	**1.53**	**67**	*e*P	**Pn**	**03 36 04.4**	**+2.0**
APG	**El Apazote** 64nm,0.3s,baz=214,slow=8.9,SNR=534	**1.64**	**52**	Pg	**Pn**	**03 36 04.9**	**+1.0**
APG				Lg		03 36 31.4	
RBDL	**Robledal** 108nm,0.3s,baz=300,slow=11,SNR=20	**2.05**	**86**	*e*P	**Pn**	**03 36 09.2**	**-0.4**
RBDL				*e*S	**Sn**	**03 36 35.8**	**+1.8**
RTR	**El Retiro**	**2.09**	**92**	*e*P	**Pn**	**03 36 10.0**	**-0.1**
SBLS	**San Blas**	**2.12**	**94**	*e*P	**Pn**	**03 36 09.9**	**-0.5**
SNJE	**San Jose**	**2.13**	**93**	*e*P	**Pn**	**03 36 10.0**	**-0.6**
MRL	**Marmol**	**2.30**	**62**	*e*P	**Pn**	**03 36 15.2**	**+2.2**
BOQS	**Boqueron**	**2.46**	**96**	*e*P	**Pn**	**03 36 14.5**	**-0.6**
LFRS	**El Faro**	**2.68**	**97**	*e*P	**Pn**	**03 36 17.4**	**-0.7**
LBRS	**Las Brisas**	**2.69**	**95**	*e*P	**Pn**	**03 36 17.8**	**-0.4**
SNVI	**San Vicente**	**2.90**	**97**	*e*P	**Pn**	**03 36 21.1**	**0.0**
CAHU	**Cacaotique**	**3.49**	**93**	*e*P	**Pn**	**03 36 29.2**	**-0.1**
CMIG	**Matias Romero** 6.4nm,0.3s,baz=134,slow=11,SNR=44	**4.29**	**316**	Pn	**Pn**	**03 36 38.4**	**-1.8**
CMIG				Sn	**Sn**	**03 37 28.1**	**-0.8**
CMIG	19nm,0.3s,baz=76,slow=21,SNR=6.3			LR	LR	03 38 34.5	
TEIG	**Tepich** comp=Z,134nm,20.5s,baz=135,slow=41	**7.06**	**28**	*e*Pn	**Pn**	**03 37 19.1**	**+0.9**
TEIG				*e*S	**Sn**	**03 38 36.8**	**-0.3**
JTS	**JuntasAbangare** 0.2nm,0.3s,baz=305,slow=19,SNR=1.8	**7.63**	**118**	Pn	**Pn**	**03 37 21.4**	**-4.8**
JTS				Sn	**Sn**	**03 38 48.4**	**-3.0**
JTS	baz=288,slow=20,SNR=1.3			Lg		03 39 28.9	
JTS	0.8nm,0.3s,baz=150,slow=16,SNR=6.6			LR	LR	03 40 28.4	
JTS	**JuntasAbangare** comp=Z,204nm,19.4s,baz=295,slow=39	**7.63**	**118**	*e*Pn	**Pn**	**03 37 26.9**	**+0.8**
JTS				*e*S	**Sn**	**03 38 50.4**	**-0.9**
JTS				Lg		03 39 28.9	
JTS				LR	LR	03 40 28.4	
DWPF	**Disney**	**17.04**	**33**	*e*Pn	**Pn**	**03 39 29.5**	**-2.7**
628A	**Black Gap, Mar** baz=18	**18.53**	**328**	P	**Pn**	**03 39 50.5**	**+0.1**
627A	**Terlingua Ranc** baz=19	**18.76**	**327**	P	**Pn**	**03 39 53.3**	**+0.1**
TXAR	**Lajitas Array** 0.2nm,0.3s,baz=156,slow=12,SNR=20	**18.82**	**326**	P	**Pn**	**03 39 52.4**	**-1.4**
528A	**Cox Ranch, San** baz=19	**19.02**	**330**	P	**Pn**	**03 39 55.6**	**-0.7**
626A	**Big Bend Ranch** baz=19,SNR=13	**19.24**	**326**	P	**Pn**	**03 39 58.3**	**-0.6**
527A	**Woodward Ranch** baz=19	**19.43**	**328**	P	**Pn**	**03 40 00.2**	**-0.9**
428A	**Kincaid Ranch,** baz=19,SNR=9.2	**19.44**	**331**	P	**Pn**	**03 40 01.5**	**+0.2**
LRAL	**Lakeview Retre** 10nm,1.2s	**19.46**	**12**	*e*P	**Pn**	**03 39 59.8**	**-1.7**
ROSC	**El Rosal**	**19.46**	**116**	*e*P	**Pn**	**03 40 02.6**	**+1.0**
526A	**Mary Lane Ranc** baz=20	**19.61**	**327**	P	**Pn**	**03 40 02.3**	**-1.0**
427A	**Hayter Ranch,** baz=20,SNR=5.5	**19.89**	**329**	P	**Pn**	**03 40 04.5**	**-2.1**
328A	**Wristen Ranch,** baz=20,SNR=14	**20.05**	**332**	P	**P**	**03 40 06.4**	**+0.1**
426A	**McDonald Obser** baz=20	**20.06**	**328**	P	**P**	**03 40 06.6**	**+0.2**
MIAR	**Mount Ida** 6.5nm,0.8s	**20.53**	**356**	*e*P	**P**	**03 40 11.8**	**+0.3**
OXF	**Oxford**	**20.55**	**6**	*e*P	**P**	**03 40 12.4**	**+0.8**
326A	**Caldwell Ranch** baz=20,SNR=17	**20.56**	**329**	P	**P**	**03 40 12.0**	**+0.1**
425A	**Indio Mountain** baz=21,SNR=13	**20.66**	**326**	P	**P**	**03 40 12.9**	**0.0**
227A	**Bennet, Jal** baz=21,SNR=5.9	**20.80**	**332**	P	**P**	**03 40 14.7**	**+0.3**
325A	**Bean Ranch, Si** baz=21,SNR=13	**21.11**	**327**	P	**P**	**03 40 17.7**	**-0.1**
226A	**Malaga, Loving** baz=21,SNR=8.7	**21.22**	**330**	P	**P**	**03 40 19.3**	**+0.3**
CLNB	**Carlsbad**	**21.28**	**331**	*e*P	**P**	**03 40 19.4**	**-0.2**
324A	**Moseley Ranch,** baz=21,SNR=23	**21.44**	**326**	P	**P**	**03 40 20.8**	**-0.5**
GDL2	**Guadalupe Moun**	**21.46**	**330**	*e*P	**P**	**03 40 21.8**	**+0.2**
MNTX	**Cornudas Mount** baz=22,SNR=20	**21.58**	**327**	P	**P**	**03 40 22.0**	**-0.8**
MNTX	**Cornudas Mount** 5.5nm,0.9s,mb4.0	**21.58**	**327**	*e*P	**P**	**03 40 21.6**	**-1.3**
WMOK	**Wichita Mounta** 5.2nm,0.8s,mb4.0	**21.60**	**344**	*e*P	**P**	**03 40 20.9**	**-2.1**
225A	**Deer Hill, Car** baz=22	**21.62**	**329**	P	**P**	**03 40 23.2**	**0.0**
126A	**Clayton Basin,** baz=22	**21.67**	**331**	P	**P**	**03 40 23.3**	**-0.4**
Z27A	**Tatum** baz=22,SNR=14	**21.86**	**334**	P	**P**	**03 40 24.6**	**-1.2**
CPRX	**Cap Rock** 6.2nm,0.6s,mb4.2	**21.91**	**332**	*e*P	**P**	**03 40 25.9**	**-0.5**
224A	**Cornudas Mount** baz=22	**21.95**	**327**	P	**P**	**03 40 26.6**	**-0.1**
125A	**Gardner Draw,** baz=22,SNR=20	**21.98**	**330**	P	**P**	**03 40 26.4**	**-0.7**
Z26A	**Caprock** baz=22,SNR=9.6	**22.17**	**332**	P	**P**	**03 40 28.4**	**-0.6**
MSTX	**Muleshoe** baz=22,SNR=7.3	**22.25**	**335**	P	**P**	**03 40 28.4**	**-1.5**
Y27A	**Causey** baz=22,SNR=7.0	**22.33**	**334**	P	**P**	**03 40 29.7**	**-1.1**
WVT	**Waverly** 3.2nm,0.7s,mb3.9	**22.33**	**8**	*e*P	**P**	**03 40 29.1**	**-1.6**
CPCT	**Cooper Cave**	**22.35**	**16**	*e*P	**P**	**03 40 32.3**	**+1.3**
124A	**Stringfield Ra** baz=22	**22.41**	**329**	P	**P**	**03 40 31.9**	**+0.3**
Z25A	**Roswell** baz=22,SNR=10.0	**22.52**	**331**	P	**P**	**03 40 32.0**	**-0.8**
AMTX	**Amarillo** baz=23,SNR=8.9	**22.64**	**338**	P	**P**	**03 40 32.6**	**-1.5**
AMTX	**Amarillo** 21nm,0.5s,mb4.8	**22.64**	**338**	*e*P	**P**	**03 40 31.9**	**-2.2**
TKL	**Tuckaleechee C** 2.3nm,0.8s,mb3.7,baz=196,slow=12,SNR=4.2	**22.75**	**17**	P	**P**	**03 40 33.7**	**-1.6**
TKL	comp=Z,83nm,19.5s,MS3.2,baz=215,slow=40			LR	LR	03 50 40.2	
TKL	**Tuckaleechee C**	**22.75**	**17**	P	**P**	**03 40 33.7**	**-1.6**
TKL				LR	LR	03 50 40.1	
Z24A	**Sheeppen Canyo**	**22.87**	**330**	P	**P**	**03 40 36.4**	**-0.2**
Y25A	**Mesa, Roswell** baz=23,SNR=14	**23.04**	**332**	P	**P**	**03 40 37.8**	**-0.5**
X26A	**CR and CF Fran** baz=23,SNR=5.6	**23.18**	**334**	P	**P**	**03 40 39.8**	**+0.1**
Z23A	**Rita Site, Whi** baz=23,SNR=24	**23.25**	**328**	P	**P**	**03 40 40.9**	**+0.4**
Y24A	**Capitan** baz=23,SNR=13	**23.39**	**330**	P	**P**	**03 40 41.4**	**-0.3**
220A	**Playas Peak, P** baz=24,SNR=7.4	**23.51**	**322**	P	**P**	**03 40 43.6**	**+0.7**
121A	**Cookes Peak, D** baz=24,SNR=7.6	**23.53**	**324**	P	**P**	**03 40 43.8**	**+0.8**
Y23A	**Lovelace Mesa,** baz=24,SNR=23	**23.70**	**329**	P	**P**	**03 40 45.7**	**+1.2**
SIUC	**Southern Illin** 28nm,0.7s,mb4.8	**23.74**	**5**	*e*P	**P**	**03 40 42.9**	**-2.0**
219A	**White Tail Can** baz=24,SNR=7.0	**24.02**	**321**	P	**P**	**03 40 48.2**	**+0.7**
W25A	**X Bar L Ranch,** baz=24,SNR=6.5	**24.02**	**334**	P	**P**	**03 40 47.7**	**+0.2**
120A	**U Bar Ranch, L** baz=24,SNR=6.9	**24.03**	**323**	P	**P**	**03 40 47.7**	**+0.1**
BNM	**Barren Site**	**24.16**	**329**	*e*P	**P**	**03 40 48.9**	**+0.2**
Y22A	**Socorro** baz=24,SNR=11	**24.16**	**328**	P	**P**	**03 40 50.2**	**+1.4**
V26A	**Tequesquite Ra** baz=24	**24.24**	**336**	P	**P**	**03 40 49.7**	**+0.2**
W24A	**Lazy 6 Ranch,** baz=24,SNR=8.6	**24.43**	**332**	P	**P**	**03 40 52.1**	**+0.8**
LAZ	**Ladron** 6.5nm,1.3s,mb4.0	**24.61**	**328**	*e*P	**P**	**03 40 53.7**	**+0.8**
V25A	**Rancho No Teng** baz=25,SNR=6.5	**24.62**	**334**	P	**P**	**03 40 53.2**	**+0.2**
ANMO	**Albuquerque** 4.7nm,0.7s,mb4.2,baz=143,slow=12,SNR=22	**24.71**	**330**	P	**P**	**03 40 53.9**	**+0.1**
ANMO	**Albuquerque** 4.9nm,0.6s,mb4.2	**24.71**	**330**	*e*P	**P**	**03 40 53.9**	**+0.1**
U26A	**Atchley Ranch,** baz=25,SNR=9.4	**24.75**	**336**	P	**P**	**03 40 54.4**	**+0.3**
V24A	**Rampart Ranch,** baz=25	**24.80**	**333**	P	**P**	**03 40 55.0**	**+0.3**
217A	**Green Valley** baz=25	**24.84**	**319**	P	**P**	**03 40 55.1**	**+0.1**
118A	**Homack Ranch,** baz=25	**24.89**	**321**	P	**P**	**03 40 56.2**	**+0.7**
X21A	**Alamocita Cree** baz=25,SNR=12	**24.98**	**327**	P	**P**	**03 40 57.3**	**+1.0**
V23A	**Ortiz Mt. (NFS** baz=25,SNR=7.6	**25.23**	**332**	P	**P**	**03 40 59.7**	**+1.2**
X20A	**Quemado** baz=25,SNR=5.2	**25.43**	**326**	P	**P**	**03 41 01.6**	**+1.2**
U23A	**El Rito** baz=26,SNR=8.8	**25.72**	**332**	P	**P**	**03 41 03.7**	**+0.8**
Y18A	**Canyon Day Jun** baz=26	**25.73**	**323**	P	**P**	**03 41 03.6**	**+0.6**
T24A	**Torres, Weston** baz=26	**25.86**	**335**	P	**P**	**03 41 04.9**	**+0.8**
U22A	**Llaves** baz=26	**26.06**	**331**	P	**P**	**03 41 07.0**	**+1.0**
V20A	**Brimhall** baz=26	**26.38**	**328**	P	**P**	**03 41 09.2**	**+0.3**
R25A	**Fountain Ranch** baz=26	**26.49**	**338**	P	**P**	**03 41 09.8**	**0.0**
114A	**Black Gap (USA** baz=27	**26.80**	**318**	P	**P**	**03 41 12.2**	**-0.5**
X16A	**Lo Mia Camp, P** baz=27	**27.01**	**322**	P	**P**	**03 41 15.1**	**+0.5**
U19A	**Dine' College,** baz=27,SNR=6.2	**27.14**	**328**	P	**P**	**03 41 16.2**	**+0.4**
S22A	**4UR Ranch, Cre** baz=27	**27.18**	**333**	P	**P**	**03 41 16.6**	**+0.6**
V17A	**Tonalea, Kykot** baz=28	**27.49**	**325**	P	**P**	**03 41 19.1**	**+0.2**
V15A	**Kaibab Nationa** baz=28	**28.41**	**324**	P	**P**	**03 41 27.7**	**+0.6**
T17A	**Navajo Res., N** baz=28,SNR=5.5	**28.51**	**327**	P	**P**	**03 41 28.6**	**+0.6**
PV04	**Paradox Valley**	**28.65**	**331**	*e*P	**P**	**03 41 31.1**	**+2.0**
R19A	**Curley Farm, L** baz=29	**28.73**	**331**	P	**P**	**03 41 30.3**	**+0.4**
U15A	**North Rim** baz=29	**28.91**	**324**	P	**P**	**03 41 32.1**	**+0.5**
S17A	**Black Ridge (B** baz=29	**28.99**	**328**	P	**P**	**03 41 32.8**	**+0.6**
R18A	**Canyonlands Na** baz=29	**29.11**	**330**	P	**P**	**03 41 33.4**	**+0.1**
Q19A	**Hogan Spring (** baz=29	**29.26**	**331**	P	**P**	**03 41 34.9**	**+0.2**
U14A	**Mt Trumbull** baz=29	**29.42**	**323**	P	**P**	**03 41 36.9**	**+0.9**
S16A	**Weppner Ranch,** baz=29	**29.47**	**327**	P	**P**	**03 41 37.1**	**+0.6**
V13A	**Grand Canyon W** baz=30	**29.51**	**321**	P	**P**	**03 41 36.9**	**+0.1**
R16A	**Teasdale** baz=30,SNR=9.1	**29.83**	**328**	P	**P**	**03 41 40.7**	**+1.0**
V12A	**Nelson** baz=30	**29.96**	**320**	P	**P**	**03 41 41.1**	**+0.3**
U12A	**Valley of Fire** baz=30	**30.23**	**322**	P	**P**	**03 41 43.8**	**+0.6**
CCUT	**Cedar City** 3.3nm,0.8s,mb4.1	**30.31**	**325**	*e*P	**P**	**03 41 45.6**	**+1.7**
MSU	**Marysvale**	**30.36**	**327**	*e*P	**P**	**03 41 45.4**	**+1.0**
Q14A	**Sevier Lake (B** baz=31,SNR=5.7	**31.30**	**327**	P	**P**	**03 41 53.7**	**+1.1**
M16A	**Huntsville** baz=32	**32.24**	**331**	P	**P**	**03 42 01.1**	**+0.3**
PDAR	**Pinedale Array** 0.5nm,0.6s,mb3.7,baz=141,slow=9.4,SNR=5.8	**32.51**	**335**	P	**P**	**03 42 02.7**	**-0.5**
PDAR				PcP	PcP	03 44 47.4	-1.7
PDAR	**Pinedale Array** 0.2nm,0.4s,baz=177,slow=5.9,SNR=3.5	**32.51**	**335**	P	**P**	**03 42 02.7**	**-0.5**
PDAR				PcP	PcP	03 44 47.4	-1.7
BGU	**Big Grassy Mou** 1.8nm,0.7s,mb4.1	**32.61**	**329**	*e*P	**P**	**03 42 04.4**	**+0.3**
L16A	**Fish Haven** baz=33	**32.70**	**332**	P	**P**	**03 42 04.9**	**0.0**
I20A	**Worland** baz=33	**32.97**	**338**	P	**P**	**03 42 07.1**	**-0.1**
L15A	**Malad City** baz=33,SNR=5.2	**33.13**	**331**	P	**P**	**03 42 08.8**	**+0.2**
J17A	**Brown Place, J** baz=33,SNR=7.0	**33.48**	**335**	P	**P**	**03 42 11.7**	**+0.1**
REDW	**Red Top Meadow** 3.5nm,0.6s,mb4.5	**33.54**	**334**	*e*P	**P**	**03 42 12.2**	**0.0**
L14A	**Malta** baz=34,SNR=13	**33.56**	**330**	P	**P**	**03 42 12.7**	**+0.3**
SNOW	**Snow King Moun** 4.0nm,0.5s,mb4.6	**33.58**	**335**	*e*P	**P**	**03 42 12.7**	**+0.2**
LOHW	**Long Hollow** 1.1nm,0.6s,mb4.0	**33.64**	**335**	*e*P	**P**	**03 42 13.0**	**0.0**
TPAW	**Teton Pass** 2.3nm,0.7s,mb4.2	**33.68**	**334**	*e*P	**P**	**03 42 13.6**	**+0.2**
K15A	**Arbon** baz=34	**33.73**	**332**	P	**P**	**03 42 14.1**	**+0.2**
NVAR	**Mina Array Bea** 3.2nm,0.8s,mb4.3,baz=135,slow=8.3,SNR=29	**33.80**	**321**	P	**P**	**03 42 15.6**	**+1.0**
NVAR	**Mina Array Bea**	**33.80**	**321**	P	**P**	**03 42 15.6**	**+1.0**
K14A	**Jones Ranch, D** baz=34,SNR=8.8	**33.92**	**331**	P	**P**	**03 42 15.7**	**+0.2**
H18A	**Shoshone NF, C** baz=34,SNR=7.1	**34.16**	**337**	P	**P**	**03 42 17.7**	**+0.1**
J14A	**Carey** baz=35,SNR=6.7	**34.68**	**332**	P	**P**	**03 42 22.0**	**0

baz=36
WVOR Wild Horse Val 36.61 326 *e*P **P 03 42 38.4 -0.3**
3.5nm,0.7s,mb4.3
F13A Darby 36.97 334 ⇓P **P 03 42 41.4 -0.2**
baz=37
EGMT Eagleton 37.07 340 *e*P **P 03 42 41.0 -1.4**
3.5nm,0.5s,mb4.5
J08A Circle Bar Ran 37.16 327 P **P 03 42 43.8 +0.5**
baz=37,SNR=5.8
F12A Elk City 37.35 333 ⇓P **P 03 42 44.8 0.0**
baz=37,SNR=9.2
E13A Victor 37.42 334 ⇑P **P 03 42 45.1 -0.3**
baz=37
E12A Beaver Dam Sad 38.00 333 ⇓P **P 03 42 49.5 -0.8**
baz=38,SNR=6.0
LPAZ La Paz 38.10 141 P **P 03 42 49.4 -2.1**
0.8nm,0.7s,mb3.6,baz=298,slow=9.7,SNR=5.1
LPAZ LR LR 03 58 46.9
comp=Z,41nm,20.9s,MS3.2,baz=242,slow=37
LPAZ La Paz 38.10 141 P **P 03 42 49.4 -2.1**
LPAZ LR LR 03 58 46.9
D12A Red Ives Fores 38.40 334 ⇓P **P 03 42 52.8 -0.8**
baz=38
F10A Beach Ranch, E 38.41 331 ⇓P **P 03 42 53.5 -0.4**
baz=38,SNR=12
C11A Tepee Creek (N 39.40 334 ⇓P **P 03 43 01.6 -0.4**
baz=39,SNR=5.3
OD2 Odessa Site #2 40.15 332 *e*P **P 03 43 07.4 -0.9**
4.5nm,0.6s,mb4.4
LON Longmire 41.20 329 *e*P **P 03 43 16.8 -0.2**
4.0nm,0.8s,mb4.1
YKA Yellowknife Ar 51.08 347 P **P 03 44 32.6 -1.7**
2.3nm,0.6s,mb4.3,baz=148,slow=7.6,SNR=25
YKA PcP PcP 03 45 48.6 -0.9
0.8nm,0.6s,baz=153,slow=3.7,SNR=6.3
DLBC Dease Lake 52.74 336 P **P 03 44 46.5 -0.3**
3.2nm,0.9s,mb4.2,baz=164,slow=4.4,SNR=5.1
RCBR Riachuelo 58.85 106 LR LR 04 13 05.0
comp=Z,52nm,18.4s,MS3.7,baz=238,slow=38
INK Inuvik 60.51 343 P **P 03 45 40.6 -1.1**
3.0nm,0.7s,mb4.5,baz=110,slow=3.2,SNR=5.7
ILAR Eielson Array 62.93 337 P **P 03 45 57.2 -0.9**
3.3nm,1.0s,mb4.4,baz=126,slow=4.9,SNR=22
ILAR LR LR 04 15 20.8
comp=Z,37nm,20.1s,MS3.5,baz=284,slow=38
TRF Thorofare Moun 63.73 335 *e*P **P 03 46 03.3 -0.1**
16nm,1.4s,mb4.8
EKA Eskdalemuir Ar 77.86 36 P **P 03 47 26.5 -2.9**
1.5nm,0.6s,mb4.1,baz=268,slow=5.4,SNR=8.9
NOA NORSAR Array B 84.06 28 LR LR 04 24 38.6
comp=Z,70nm,18.4s,MS4.1,baz=40,slow=35
ARCES ARCESS Array B 86.09 18 P **P 03 48 10.1 -2.2**
0.5nm,0.5s,mb4.0,baz=310,slow=4.6,SNR=7.2
TORD Torodi Ar. Bea 90.19 76 P **P 03 48 29.9 -3.1**
0.3nm,0.8s,mb3.6,baz=289,slow=4.5,SNR=4.5
CN2 Changchun 113.19 332 *e*PKP PKiKP 03 54 10.8 +1.4
CN2 PP PP 03 55 04.5 +5.6
HHC Hu-ho-hao-te 121.30 339 *e*PKP PKPdf 03 54 23.4 -1.7
HHC PKS 03 57 58.8
HHC SKS SKSdf 04 01 24.3 -8.6
HHC SKKS SKKSac 04 02 50.3 -1.1
HHC AMB AMB
comp=Z,59nm,7.8s
HHC LR LR
comp=N,75nm,20.7s,MS4.6
HHC LR LR
comp=E,120nm,21.5s,MS4.6
HHC LR LR
comp=Z,130nm,20.8s,MS4.6
LZH Lanzhou 128.05 344 *e*PKP PKPdf 03 54 40.1 +1.9
LZH sPKP 03 55 00.6
KMI Kunming 138.62 340 PKP PKPdf 03 54 57.9 -0.4
CMAR Chiang Mai Arr 146.07 342 PKPbc PKPbc 03 55 11.8 -0.8
comp=Z,4.4nm,0.7s,baz=332,slow=3.5,SNR=16

IDC 15 03:47:15.8±8.8, 23°.36S×179°.30E, h560km±116km, mb3.3/5, mb1 3.5/6, mb1mx3.2/17, mbtmp3.2/6, Error ellipse: s-maj=87.8km s-min=28.9km az=4.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.97**	**187**	P	P	03 50 23.4	-1.1
	0.5nm,0.3s,baz=38,slow=3.8,SNR=3.6						
CTA	**Charters Tower**	**30.83**	**270**	P	P	03 52 47.6	+0.7
	13nm,0.4s,baz=95,slow=10,SNR=20						
ASAR	**Alice Springs**	**41.49**	**260**	P	P	03 54 14.7	0.0
	1.3nm,0.5s,baz=100,slow=6.4,SNR=16						
WRA	**Warramunga Arr**	**41.80**	**266**	P	P	03 54 16.5	-0.7
	1.9nm,0.3s,baz=96,slow=8.4,SNR=185						
NVAR	**Mina Array Bea**	**84.81**	**44**	P	P	03 58 51.7	+0.1
	0.3nm,0.6s,baz=212,slow=9.2,SNR=4.2						
TXAR	**Lajitas Array**	**90.69**	**58**	P	P	03 59 20.1	+0.7
	0.4nm,0.7s,baz=210,slow=7.2,SNR=3.6						
ARCES	**ARCESS Array B**	**131.23**	**348**	PKP	PKPdf	04 05 22.9	-0.9
	0.9nm,0.7s,baz=77,slow=1.2,SNR=5.5						

*ISCJB **15** 04:03:10.8±0.5, 51°.48S±0°.07×0°.6W±0°.2, h10km, mb4.4/20, MS3.6/6, Error ellipse: s-maj=13.6km s-min=10.7km az=7.3*
*IDC **15** 04:03:10.9±0.5, 51°.49S×0°.63W, h0km, mb4.2/15, mb1 4.3/15, mb1mx4.2/20, mbtmp4.2/15, MS3.6/6, Ms1 3.6/6, ms1mx3.4/24, Error ellipse: s-maj=18.1km s-min=15.9km az=104.0*
*NEIC **15** 04:03:12.3±0.4, 51°.49S×0°.56W, h10km, mb4.6/7, Error ellipse: s-maj=12.6km s-min=10.1km az=98.0*
ISC 15 04:03:12.8±0.5, 51°.49S±0°.07×0°.6W±0°.2, h10km, n36, σ0°90/23, mb4.4/20, MS3.6/6, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.28**	**182**	P	P	**04 07 48.9**	**+0.8**
	2.6nm,0.8s,baz=358,slow=9.4,SNR=24						
SNAA				LR	LR	04 13 53.3	
	comp=Z,54nm,19.1s,MS2.9,baz=132,slow=32						
BOSA	**Boshof**	**29.93**	**50**	P	P	**04 09 20.3**	**-0.5**
	4.7nm,1.0s,mb4.2,baz=345,slow=8.4,SNR=4.0						
BOSA				LR	LR	04 19 42.2	
	comp=Z,111nm,20.9s,MS3.5,baz=58,slow=33						
MAW	**Mawson**	**34.10**	**142**	P	P	**04 09 57.1**	**0.0**
	2.0nm,0.9s,mb4.0,baz=278,slow=18,SNR=3.9						
MAW				LR	LR	04 21 35.9	
	comp=Z,114nm,18.8s,MS3.6,baz=76,slow=32						
TSUM	**Tsumeb**	**35.25**	**31**	P	P	**04 10 08.6**	**+1.1**
	7.1nm,0.9s,mb4.6,baz=187,slow=9.5,SNR=9.1						
TSUM	**Tsumeb**	**35.25**	**31**	*e*P	P	**04 10 06.3**	**-1.2**
	1.5nm,0.8s,mb4.0						
QSPA	**South Pole Qui**	**38.76**	**180**	P	P	**04 10 37.4**	**+0.7**
	5.0nm,0.5s,mb4.5,baz=234,slow=2.5,SNR=75						
QSPA				PcP	PcP	04 12 46.6	-1.2
	3.2nm,1.0s,baz=222,slow=3.0,SNR=5.1						
QSPA	**South Pole Qui**	**38.76**	**180**	*e*P	P	**04 10 35.9**	**-0.8**
	4.3nm,0.6s,mb4.4						
QSPA				PcP	PcP	04 12 46.6	-1.2
TRQA	**Tornquist**	**44.34**	**263**	*e*P	P	**04 11 22.5**	**-0.4**
	5.4nm,0.7s,mb4.4						
PLCA	**Paso Flores**	**47.94**	**254**	P	P	**04 11 48.9**	**-2.3**
	1.5nm,0.9s,mb4.0,baz=141,slow=6.5,SNR=2.8						
CPUP	**Villa Florida**	**49.32**	**278**	P	P	**04 12 01.6**	**-0.3**
	2.1nm,0.8s,mb4.2,baz=240,slow=20						
CPUP				PcP	PcP	04 13 22.4	-2.2
	1.1nm,0.7s,baz=140,slow=7.7,SNR=3.8						
SBA	**Scott Base**	**50.69**	**177**	*e*P	P	**04 12 12.7**	**+1.0**
	7.3nm,1.1s,mb4.5						
BDFB	**Brasilia**	**51.94**	**296**	P	P	**04 12 22.1**	**+0.2**
	4.1nm,0.6s,mb4.5,baz=92,slow=4.5,SNR=6.9						
BDFB				LR	LR	04 30 31.3	
	comp=Z,127nm,19.0s,MS4.0,baz=73,slow=32						
CFAA	**Coronel Fontan**	**52.44**	**265**	P	P	**04 12 25.1**	**-0.3**
	1.1nm,0.7s,mb3.9,baz=139,slow=5.8,SNR=24						
LIC	**Lamto**	**57.61**	**355**	*e*P	P	**04 13 03.3**	**+0.4**
	35nm,0.9s,mb5.4						
KIC	**Kosan Boka**	**57.73**	**355**	*e*P	P	**04 13 04.9**	**+1.2**
	13nm,1.0s,mb4.9						
TIC	**Toumodi**	**58.03**	**355**	*e*P	P	**04 13 06.2**	**+0.4**
	21nm,0.8s,mb5.2						
DBIC	**Dimbokro**	**58.05**	**355**	P	P	**04 13 05.3**	**-0.6**
	4.7nm,0.6s,mb4.7,baz=164,slow=6.8,SNR=13						
LPAZ	**La Paz**	**63.47**	**277**	P	P	**04 13 43.5**	**+0.5**
	2.7nm,0.7s,mb4.5,baz=184,slow=5.4,SNR=15						
LPAZ				LR	LR	04 39 46.5	
	comp=Z,58nm,20.9s,MS3.7,baz=167,slow=35						
TORD	**Torodi Ar. Bea**	**64.39**	**2**	P	P	**04 13 48.6**	**-0.2**
	2.3nm,0.8s,mb4.3,baz=183,slow=6.1,SNR=14						
OTAV	**Otavalo**	**82.65**	**280**	*e*P	P	**04 15 38.1**	**+1.7**
	6.5nm,1.1s,mb4.6						
ROSC	**El Rosal**	**83.77**	**286**	LR	LR	04 50 47.0	
	comp=Z,60nm,21.8s,MS3.9,baz=17,slow=34						
ESDC	**Sonseca Array**	**90.84**	**357**	P	P	**04 16 15.2**	**-0.5**
	0.3nm,0.5s,mb3.9,baz=186,slow=3.6,SNR=6.2						
ASAR	**Alice Springs**	**95.17**	**139**	P	P	**04 16 34.6**	**-1.8**
	0.5nm,1.0s,mb3.9,baz=196,slow=4.7,SNR=4.8						
BRTR	**Keskin Array B**	**95.62**	**26**	P	P	**04 16 38.2**	**+0.3**
	0.4nm,0.6s,mb4.0,baz=180,slow=8.0,SNR=3.1						
TXAR	**Lajitas Array**	**120.28**	**280**	PKP	PKPdf	04 22 03.7	-0.1
	0.5nm,0.8s,baz=99,slow=3.2,SNR=4.9						
TXAR	**Lajitas Array**	**120.28**	**280**	PKP	PKPdf	04 22 03.7	-0.1
ARCES	**ARCESS Array B**	**122.21**	**11**	PKP	PKPdf	04 22 05.5	-0.7
	1.5nm,0.7s,baz=149,slow=2.8,SNR=12						
ARCES	**ARCESS Array B**	**122.21**	**11**	PKP	PKPdf	04 22 05.5	-0.7
PDAR	**Pinedale Array**	**132.68**	**289**	PKP	PKPdf	04 22 25.8	-1.2
	0.5nm,0.7s,baz=104,slow=4.4,SNR=5.4						
HWUT	**Hardware Ranch**	**133.18**	**286**	*e*PKPdf	PKPdf	04 22 27.6	-0.4
SONM	**Songino Array**	**134.39**	**64**	PKP	PKPdf	04 22 29.8	-0.2
	0.7nm,0.8s,baz=144,slow=2.8,SNR=3.6						
NVAR	**Mina Array Bea**	**135.37**	**278**	PKhKP	PKPpre	04 22 25.1	
	0.2nm,0.6s,baz=145,slow=5.1,SNR=2.7						
NVAR				PKP	PKPdf	04 22 33.0	+0.8
	0.6nm,0.7s,baz=114,slow=4.1,SNR=4.8						
YKA	**Yellowknife Ar**	**144.05**	**314**	PKP	PKPdf	04 22 43.7	-3.4
	2.9nm,0.8s,baz=107,slow=3.6,SNR=16						
YKA	**Yellowknife Ar**	**144.05**	**314**	PKP	PKPdf	04 22 43.7	-3.4
MJAR	**Matsushiro Arr**	**147.28**	**101**	PKPbc	PKPbc	04 22 56.2	+0.2
	1.8nm,0.9s,baz=216,slow=5.3,SNR=6.0						
ILAR	**Eielson Array**	**158.15**	**320**	PKPab	PKPab	04 23 42.5	0.0
	0.8nm,0.9s,baz=49,slow=4.5,SNR=9.3						

*BJI **15** 04:21:53.6, 3°.55S×101°.43E, h64km, mb4.7/6*
*MOS **15** 04:21:57.2±1.1, 2°.55S×101°.45E, h33km, mb4.8/15, Error ellipse: s-maj=20.4km s-min=9.2km az=113.6*
*ISCJB **15** 04:22:00.3±0.4, 2°.82S±0°.05×101°.07E±0°.06, h64km, mb4.4/33, Error ellipse: s-maj=10.0km s-min=4.9km az=140.8*
*NEIC **15** 04:22:02.1±0.4, 2°.79S×101°.25E, mb4.6/5, Error ellipse: s-maj=14.9km s-min=7.2km az=58.0*
*IDC **15** 04:22:02.4±0.6, 2°.71S×101°.38E, h64km±5km, mb4.1/14, mb1 4.2/14, mb1mx4.1/20, mbtmp4.1/14, MS3.4/6, Ms1 3.4/6, ms1mx3.1/27, Error ellipse: s-maj=20.1km s-min=12.2km az=62.0*
*DJA **15** 04:22:04, 2°.82S×101°.19E, h37km, MLv4.8/16*
ISC 15 04:22:02.4±0.4, 2°.83S±0°.05×101°.15E±0°.06, h66km, h66km±1.6km: pP-P, n96, σ1°22/83, mb4.4/33, 6C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.80**	**23**	P	Pn	**04 22 18.3**	**+0.1**
KSI	**Kapahiang**	**1.66**	**120**	P	Pn	**04 22 29.9**	**+0.5**
SDSI	**Sungai Dareh**	**1.90**	**8**	P	Pn	**04 22 33.8**	**+1.1**
PDSI	**Padang**	**2.02**	**340**	P	Pn	**04 22 35.7**	**+1.4**
MNAI	**Manna**	**2.36**	**130**	P	Pn	**04 22 39.5**	**+0.6**
PPI	**Padang Panjang**	**2.47**	**342**	P	Pn	**04 22 41.9**	**+1.5**
SISI	**Saibi**	**2.54**	**306**	P	Pn	**04 22 42.2**	**+0.9**
RGRI	**Rengat**	**2.73**	**26**	P	Pn	**04 22 45.0**	**+1.1**
BKNI	**Bangkinang**	**3.13**	**358**	P	Pn	**04 22 51.7**	**+2.3**
MDSI	**Maura Dua**	**3.44**	**119**	P	Pn	**04 22 54.9**	**+1.2**
LWLI	**Liwa**	**3.63**	**127**	P	Pn	**04 22 58.5**	**+2.3**
MNSI	**Mandailing Nat**	**3.92**	**336**	P	Pn	**04 23 03.5**	**+3.3**
KLSI		**4.03**	**117**	P	Pn	**04 23 03.6**	**+2.0**
KLI	**Kotabumi**	**4.22**	**119**	P	Pn	**04 23 08.7**	**+4.5**
KASI	**Kota Agung**	**4.28**	**129**	P	Pn	**04 23 05.9**	**+0.8**
MYKOM	**Kota Tinggi**	**5.32**	**31**	P	Pn	**04 23 20.6**	**+1.2**
	0.9nm2μm75nm,1.2s						
RBSI	**Rajabasa**	**5.47**	**123**	P	Pn	**04 23 30.5**	**+9.1**
IPM	**Ipoh**	**7.26**	**359**	*e*Pn	Pn	**04 23 47.5**	**+1.7**
	22nm,0.6s						
IPM	**Ipoh**	**7.26**	**359**	P	Pn	**04 23 49.6**	**+3.7**
	0.1nm534nm31nm,0.9s						
KULM	**Kulim**	**8.08**	**356**	*e*Pn	Pn	**04 23 55.8**	**-1.3**
	11nm,0.4s						
KULM	**Kulim**	**8.08**	**356**	P	Pn	**04 23 58.1**	**+1.0**
	26nm,1.3s						
SPSI	**Sidrap Palu**	**18.62**	**94**	P	Pn	**04 26 06.4**	**-9.4**
TTSI	**Tana Toraja**	**18.65**	**91**	P	Pn	**04 26 16.2**	**+0.1**
	33nm,1.1s						
KAPI	**Kappang**	**18.69**	**97**	*e*P	Pn	**04 26 16.6**	**+0.1**
	35nm,1.0s						
BKSI	**Bulukumba**	**19.09**	**98**	P	Pn	**04 26 20.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**21.26**	**354**	P	P	**04 26 44.4**	**+1.1**
	2.3nm,0.7s,mb3.6,baz=186,slow=9.0,SNR=12						
CMAR				LR	LR	04 36 40.0	
	comp=Z,55nm,18.4s,baz=138,slow=42						
CMAR	**Chiang Mai Arr**	**21.26**	**354**	P	P	**04 26 44.4**	**+1.1**
QIZ	**Qiongzhong**	**23.34**	**21**	P	P	**04 27 02.5**	**-2.6**
QIZ				S	S	**04 31 06.9**	**-6.0**
FITZ	**Fitzroy Crossi**	**28.40**	**124**	P	P	**04 27 50.0**	**-0.8**
	2.2nm,0.9s,mb3.7,baz=219,slow=1.4,SNR=3.6						
WRA	**Warramunga Arr**	**36.59**	**120**	P	P	**04 29 00.9**	**-1.5**
	1.4nm,0.3s,mb4.3,baz=303,slow=9.0,SNR=15						
WRA	**Warramunga Arr**	**36.59**	**120**	P	P	**04 29 00.9**	**-1.4**
WB2	**Warramunga Arr**	**36.60**	**120**	*e*P	P	**04 29 01.3**	**-1.2**
WB2				*e*S	PP	04 30 18.6	-8.3
XAN	**Xi'an**	**37.39**	**11**	P	P	**04 29 07.4**	**-1.5**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**37.84**	**126**	P	P	**04 29 12.5**	**-0.4**
	comp=Z,5.8nm,0.8s,mb4.5,baz=302,slow=8.1,SNR=34						
ASAR	**Alice Springs**	**37.84**	**126**	P	P	**04 29 12.5**	**-0.4**
JNU	**Nakatsue**	**45.48**	**36**	*e*P	P	**04 30 15.2**	**+0.1**
	comp=Z,5.5nm,0.9s,mb4.3						
KSRS	**Korea Array**	**47.16**	**29**	P	P	**04 30 27.4**	**-0.8**
	comp=Z,1.6nm,0.9s,mb3.8,baz=224,slow=7.6,SNR=5.7						
KSRS				pP	pP	04 30 43.8	-1.4
	comp=Z,7.0nm,1.0s,baz=215,slow=8.9,SNR=13						
KSRS				LR	LR	04 55 23.0	
	comp=Z,19nm,18.1s,baz=357,slow=43						
STKA	**Stephens Creek**	**47.75**	**132**	P	P	**04 30 33.3**	**+0.3**
	comp=Z,6.3nm,0.6s,mb4.6,baz=325,slow=2.9,SNR=4.0						
STKA	**Stephens Creek**	**47.75**	**132**	P	P	**04 30 33.3**	**+0.3**
SONM	**Songino Array**	**50.66**	**5**	P	P	**04 30 55.1**	**+0.2**
	comp=Z,7.8nm,0.8s,mb4.8,baz=185,slow=8.9,SNR=44						
SONM	**Songino Array**	**50.66**	**5**	P	P	**04 30 55.1**	**+0.2**
TKM2	**Tokmak 2**	**51.05**	**336**	*e*P	P	**04 30 57.9**	**0.0**
	comp=Z,3.3nm,0.5s,mb4.6						
TKM2	**Tokmak 2**	**51.05**	**336**	*e*P	P	**04 30 57.9**	**0.0**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
AAK	**Ala-Archa**	**51.27**	**335**	*e*P	P	**04 31 00.8**	**+1.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.8						
EKS2	**Erkin-Say**	**51.60**	**334**	*e*P	P	**04 31 02.8**	**+0.8**
	comp=Z,4.0nm,0.7s,mb4.6						
EKS2				*e*pP	pP	04 31 18.9	-0.2
EKS2	**Erkin-Say**	**51.60**	**334**	*e*P	P	**04 31 02.8**	**+0.8**
EKS2				*e**PP	pP	04 31 18.9	-0.2
EKS2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MK31	**Makanchi Array**	**52.13**	**344**	*e*P	P	**04 31 05.6**	**-0.3**
MK31	**Makanchi Array**	**52.13**	**344**	*c e*P	P	**04 31 05.5**	**-0.4**
MK31				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
MKAR	**Makanchi Array**	**52.13**	**344**	P	P	**04 31 05.7**	**-0.2**
	comp=Z,12nm,0.7s,mb5.0,baz=147,slow=8.0,SNR=65						
MKAR	**Makanchi Array**	**52.13**	**344**	*c e*P	P	**04 31 05.6**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,12nm,0.7s						
MJAR	**Matsushiro Arr**	**52.20**	**38**	P	P	**04 31 04.8**	**-1.8**
	comp=Z,1.1nm,0.7s,mb4.0,baz=219,slow=9.1,SNR=4.5						
MJAR				pP	pP	04 31 21.1	-2.7
	comp=Z,2.2nm,0.7s,baz=220,slow=7.9,SNR=4.9						
MJAR				LR	LR	04 51 39.0	
	comp=Z,67nm,20.8s,baz=50,slow=34						
MJAR	**Matsushiro Arr**	**52.20**	**38**	P	P	**04 31 04.8**	**-1.8**
MJAR				pP	pP	04 31 21.1	-2.7
MJAR				LR	LR	04 51 39.0	
MJAR	**Matsushiro Arr**	**52.20**	**38**	P	P	**04 31 04.8**	**-1.9**
MJAR				*PP	pP	04 31 21.1	-2.7
TLY	**Talaya**	**54.34**	**2**	*e*P	P	**04 31 21.1**	**-0.9**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
KURK	**Kurchatov**	**56.72**	**343**	*e*P	P	**04 31 38.5**	**-0.6**
	comp=Z,26nm,1.0s,mb5.2						
KURK	**Kurchatov**	**56.72**	**343**	*c i*P	P	**04 31 38.5**	**-0.6**
KURK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
KURK				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.1						
ZALV	**Zalesovo Beam**	**58.19**	**349**	P	P	**04 31 48.5**	**-0.9**
	comp=Z,31nm,0.8s,mb5.4,baz=166,slow=5.2,SNR=114						
ZALV				LR	LR	05 00 06.4	
	comp=Z,25nm,18.4s,baz=110,slow=39						
ZALV	**Zalesovo Beam**	**58.19**	**349**	P	P	**04 31 48.6**	**-0.8**
KLR	**Kul'dur**	**58.23**	**23**	*e*P	P	**04 31 44.6**	**-5.1**
HNR	**Honiara**	**58.77**	**99**	P	P	**04 31 51.3**	**-2.9**
	comp=Z,42nm,0.3s,baz=262,slow=5.2,SNR=3.2						
HNR	**Honiara**	**58.77**	**99**	P	P	**04 31 51.3**	**-2.9**
NVS	**Novosibirsk**	**59.35**	**348**	*e*P	P	**04 31 54.7**	**-2.7**
NVS				*e*S	S	**04 39 56.5**	**-4.4**
NVS				pmax	pmax		
	comp=N,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
NVS				smax			
	comp=N,4.0nm,1.2s						
NVS				smax			
	comp=E,3.0nm,1.2s						
BOD	**Bodaibo**	**61.33**	**8**	*e*P	P	**04 32 08.3**	**-2.6**
BOD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	**61.42**	**339**	*c e*P	P	**04 32 11.0**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
AB31	**Akbulak array**	**62.91**	**331**	*c e*P	P	**04 32 20.4**	**-1.3**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ABKAR	**Akbulak array**	**62.91**	**331**	*e*P	P	**04 32 21.0**	**-0.7**
	comp=Z,3.9nm,0.7s,mb4.5						
ABKAR				*e*pP	pP	04 32 38.3	-0.9
ARU	**Arti**	**68.42**	**336**	*d i*P	P	**04 32 57.0**	**0.0**
ARU						04 35 25.7	
ARU				S	S	04 41 46.5	-6.8
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.3						
ZEI	**Tsey**	**68.61**	**318**	*e*P	P	**04 32 59.6**	**+1.1**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
MAW	**Mawson**	**69.77**	**195**	P	P	**04 33 07.1**	**+1.9**
	comp=Z,1.3nm,0.9s,mb3.8,baz=44,slow=12,SNR=4.2						
MAW				pP	pP	04 33 25.8	+2.8
	comp=Z,1.9nm,0.8s,baz=32,slow=12,SNR=4.1						
MAW				LR	LR	04 55 44.0	
	comp=Z,46nm,20.4s,baz=144,slow=29						
MAW	**Mawson**	**69.77**	**195**	P	P	**04 33 07.1**	**+1.9**
MAW				*PP	pP	04 33 25.8	+2.7
VRHR	**Novokhopersk**	**73.66**	**326**	*e*P	P	**04 33 27.6**	**-1.2**
VRHR				pmax	pmax		
	comp=N,8.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
BRTR	**Keskin Array B**	**74.72**	**312**	P	P	**04 33 35.1**	**-0.1**
	comp=Z,1.0nm,0.5s,mb3.8,baz=134,slow=6.9,SNR=7.4						
BRTR				pP	pP	04 33 52.8	-0.6
	comp=Z,1.6nm,0.8s,baz=125,slow=7.9,SNR=5.0						
BRTR	**Keskin Array B**	**74.72**	**312**	P	P	**04 33 35.2**	**-0.1**
BRTR				*PP	pP	04 33 52.8	-0.5
VORD	**Divnogorie**	**74.93**	**325**	*e*P	P	**04 33 35.8**	**-0.4**
VORD				pmax	pmax		
	comp=N,7.0nm,0.8s						
VORD				pmax	pmax		
	comp=E,9.0nm,0.8s						
VORD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
VSR	**Storozhevoye**	**75.11**	**325**	*e*P	P	**04 33 36.7**	**-0.5**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
VSR				pmax	pmax		
	comp=N,8.0nm,1.1s						
VSR				pmax	pmax		
	comp=E,9.0nm,1.1s						
SEY	**Seymchan**	**75.96**	**22**	*e*P	P	**04 33 39.4**	**-2.5**
BOSA	**Boshof**	**76.27**	**241**	LR	LR	05 01 38.4	
	comp=E,35nm,18.9s,baz=176,slow=31						
SYO	**Syowa Base**	**77.46**	**199**	*e*P	PcP	04 34 01.0	+0.6
OBN	**Obninsk**	**78.10**	**328**	*e*P	P	**04 33 53.5**	**-0.5**
OBN				*e*SS	SS	04 48 43.1	-2.8
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
ARCES	**ARCESS Array B**	**87.64**	**340**	P	P	**04 34 43.2**	**+0.1**
	comp=Z,1.5nm,0.9s,mb4.0,baz=108,slow=4.0,SNR=6.6						
ARCES	**ARCESS Array B**	**87.64**	**340**	P	P	**04 34 43.2**	**+0.1**
GERES	**GERESS Array B**	**90.42**	**319**	P	P	**04 34 58.3**	**+1.7**
	comp=Z,0.5nm,0.6s,mb3.8,baz=92,slow=4.0,SNR=4.4						
GERES	**GERESS Array B**	**90.42**	**319**	P	P	**04 34 58.3**	**+1.7**
CPUP	**Villa Florida**	**144.31**	**214**	PKP	PKPdf	04 41 31.4	-0.3
	comp=Z,3.2nm,0.7s,baz=132,slow=3.0,SNR=11						
CPUP				pPKP	pPKPdf	04 41 49.8	-1.2
	comp=Z,3.8nm,0.8s,baz=115,slow=3.5,SNR=4.8						
CPUP	**Villa Florida**	**144.31**	**214**	PKP	PKPdf	04 41 31.4	-0.3
CPUP				pPKP	pPKPdf	04 41 49.8	-1.2
CPUP	**Villa Florida**	**144.31**	**214**	PKIKP	PKPdf	04 41 31.4	-0.3
BDFB	**Brasilia**	**144.40**	**238**	PKP	PKPdf	04 41 32.4	+0.3
	comp=Z,3.2nm,0.6s,baz=252,slow=20,SNR=5.7						
BDFB				pPKP	pPKPdf	04 41 50.3	-1.0
	comp=Z,3.2nm,0.5s,baz=160,slow=4.9,

KBL	Kabul	2.80	226	*e*Pn		Pn	04 58 33.8 +1.5
KBL				*e*S		Sn	04 59 05.2 -0.9
KBL	Kabul	2.80	226	*e*PN		Pn	04 58 33.8 +1.5
CHCP	Chirah Chowk	3.22	152	P		Pn	04 58 40.2 +2.4
THW	Thamme Wali	3.73	176	P		Pn	04 58 45.5 +0.9
KSH	Kashi	4.64	49	P		Pn	04 58 53.9 -2.7
KSH				S		Sn	04 59 39.8 -10
KSH				smax			
	comp=N,740nm,1.0s						
KSH				smax			
	comp=E,570nm,0.6s						
AML	Almayashu	5.85	16	P		Pn	04 59 13.3 +0.5
	SNR=170						
AML	Almayashu	5.85	16	*e*Pn		Pn	04 59 13.3 +0.5
	comp=E,54nm,0.4s						
AML				*e*S		Sn	05 00 13.1 -5.6
CHM	Chimkent	5.96	347	*e*Pn		Px	04 59 25.7
CHM	Chimkent	5.96	347	*e*PN		Px	04 59 25.7
KZA	Kyzart	6.27	27	P		Pn	04 59 19.0 +0.6
	SNR=13						
KZA	Kyzart	6.27	27	*e*Pn		Pn	04 59 18.8 +0.3
	comp=E,11nm,0.5s						
KZA				*e*S		Sn	05 00 29.4 +0.7
EKS2	Erkin-Say	6.38	16	P		Pn	04 59 20.5 +0.6
	SNR=21						
EKS2	Erkin-Say	6.38	16	*e*Pn		Pn	04 59 20.0 +0.1
	comp=E,8.8nm,0.3s						
EKS2				*e*S		Sn	05 00 30.6 -0.7
AAK	Ala-Archa	6.53	20	P		Pn	04 59 22.7 +0.8
	SNR=14						
AAK	Ala-Archa	6.53	20	P		Pn	04 59 22.3 +0.4
	comp=E,0.1nm,0.3s,baz=142,slow=5,3,SNR=24						
AAK				S		Sn	05 00 33.0 -2.0
	comp=E,0.1nm,0.3s,baz=120,slow=22,SNR=21						
AAK	Ala-Archa	6.53	20	*e*Pn		Pn	04 59 22.2 +0.2
	comp=E,12nm,0.5s						
AAK				*e*S		Sn	05 00 32.4 -2.6
AAK	Ala-Archa	6.53	20	*d i*PN		Pn	04 59 22.9 +1.0
KK31	Karatay Array	6.61	354	P		Pn	04 59 22.3 -0.7
	comp=E,13nm,0.3s,baz=182,slow=13,SNR=211						
KK31				⇓S		Sn	05 00 30.5 -6.3
	comp=E,23nm,0.5s,baz=184,slow=24,SNR=8.6						
KKAR	Karatay Array	6.61	354	*e*Pn		Pn	04 59 22.2 -0.8
	comp=E,33nm,0.3s						
KKAR				*e*S		Sn	05 00 31.1 -5.7
KKAR	Karatay Array	6.61	354	*e*PN		Pn	04 59 22.2 -0.8
KKAR				pmax		pmax	
	comp=Z,33nm,0.3s						
SDNR	Sundarnagar	6.79	136	*e*x		x	04 59 47.5
SDNR				*e*S		Sn	05 00 35.5 -5.9
CHMS	Chumysh	6.94	20	P		Pn	04 59 28.3 +0.9
	SNR=9.9						
USP	Ospenovka	7.12	18	P		Pn	04 59 30.4 +0.5
	SNR=11						
TKM2	Tokmak 2	7.13	25	⇓P		Pn	04 59 30.5 +0.5
	comp=Z,3.5nm,0.4s						
TKM2				⇓S		Sn	05 00 50.1 +0.5
	comp=Z,19nm,0.8s						
TKM2	Tokmak 2	7.13	25	P		Pn	04 59 30.8 +0.7
	SNR=11						
TKM2	Tokmak 2	7.13	25	*e*Pn		Pn	04 59 30.5 +0.4
	comp=Z,6.2nm,0.4s						
TKM2				*e*S		Sn	05 00 53.6 +4.1
TKM2	Tokmak 2	7.13	25	*e*PN		Pn	04 59 30.5 +0.4
TKM2				pmax		pmax	
	comp=Z,6.0nm,0.4s						
SMLA	Simla	7.18	137	*e*PKP		Pn	04 59 30.1 -0.7
SMLA				*e*S		Sn	05 00 45.4 -5.4
JOSI	Joshimath	9.00	129	*e*PKP		Pn	04 59 53.3 -2.2
JOSI				*e*x		x	05 01 23.0
KHET	Khetri	9.20	155	*e*PKP		Pn	04 59 57.4 -0.6
KHET				AMb		AMB	04 59 58.2
	comp=Z,4.8nm,0.5s						
KHET				*e*S		Sn	05 01 32.8 -6.9
MK31	Makanchi Array	13.05	35	*e*Pn		Pn	05 00 50.5 +1.6
MK31	Makanchi Array	13.05	35	*e*P		Pn	05 00 50.5 +1.6
MKAR	Makanchi Array	13.05	35	P		Pn	05 00 48.9 0.0
	comp=Z,0.2nm,0.3s,baz=219,slow=10,SNR=5.8						
MKAR	Makanchi Array	13.05	35	*e*P		Pn	05 00 48.8 -0.1
DANN	Dangsing	13.20	125	*e*P		Pn	05 00 50.4 -0.5
	comp=Z,13nm,0.3s						
KOLN	Koldanda	13.48	127	*e*P		Pn	05 00 53.8 -0.8
	comp=Z,9.9nm,0.3s						
GKN	Gorkha	14.01	124	*e*P		Pn	05 01 00.4 -0.9
	comp=Z,10nm,0.2s						
DMN	Daman	14.58	124	*e*P		Pn	05 01 07.8 -0.8
KKN	Kakani	14.58	123	*e*P		Pn	05 01 07.5 -1.1
PKI	Pulchoki	14.80	123	*e*P		Pn	05 01 11.3 -0.2
GUN	Gumba	14.91	121	*e*P		Pn	05 01 11.3 -1.5
KURK	Kurchatov	15.09	18	*e*P		Pn	05 01 16.3 +1.6
KURK				pmax		pmax	
	comp=Z,5.0nm,0.9s						
AB31	Akbulak array	15.24	330	⇑P		Pn	05 01 15.3 -1.4
	comp=Z,0.7nm,0.3s,baz=179,slow=10,SNR=33						
ABKAR	Akbulak array	15.24	330	*e*Pn		Pn	05 01 14.9 -1.8
	comp=Z,2.2nm,0.3s						
ABKAR				*e*S		Sn	05 03 49.3 -16
BVAR	Borovoye Array	16.51	358	P		Pn	05 01 31.7 -0.6
	comp=Z,0.5nm,0.3s,baz=167,slow=14,SNR=8.4						
BVAR				S		S	05 04 26.1 -10
	comp=Z,0.4nm,0.3s,baz=166,slow=24,SNR=3.7						
BVAR	Borovoye Array	16.51	358	P		Pn	05 01 31.7 -0.6
BVAR				S		S	05 04 26.1 -10
TAPN	Taplejung	16.53	119	*e*P		Pn	05 01 32.3 -0.5
	comp=Z,6.5nm,0.3s						
BRVK	Borovoye	16.55	357	*e*P		Pn	05 01 33.4 +0.6
BRVK				pmax		pmax	
	comp=Z,5.0nm,1.2s						
ODAN	Odare	16.61	121	*e*P		Pn	05 01 34.6 +0.8
AKTK	Aktyubinsk	16.94	329	P		Pn	05 01 37.2 -0.4
AKTK				S		S	05 04 34.0 -12
AKTO	Aktyubinsk	16.94	329	P		Pn	05 01 37.2 -0.4
	comp=Z,0.8nm,0.3s,baz=151,slow=9.9,SNR=13						
AKTO				S		S	05 04 34.0 -12
	comp=Z,0.3nm,0.3s,baz=0.0,slow=20,SNR=5.5						
AKTO	Aktyubinsk	16.94	329	P		Pn	05 01 37.3 -0.3
AKTO				S		S	05 04 34.1 -12
ZAA0	Zalesovo Array	19.73	24	*e*Pn		Pn	05 02 07.9 -2.7
ZALV	Zalesovo Beam	19.73	24	P		P	05 02 08.2 +0.3
	comp=Z,1.5nm,0.3s,baz=213,slow=11,SNR=23						
ZALV	Zalesovo Beam	19.73	24	*e*P		P	05 02 08.2 +0.3
ZALV				pmax		pmax	
	comp=Z,5.0nm,0.4s						
GNI	Garni	21.24	288	*e*P		P	05 02 20.7 -3.6
GNI				pmax		pmax	
	comp=Z,8.0nm,1.6s						
ARU	Arti	21.73	340	*c i*P		P	05 02 31.1 +1.9
ARU				*e*			05 02 54.7
ARU				S		S	05 06 31.5 +10
ARU				SS			05 07 01.8
ARU				pmax		pmax	
	comp=Z,9.0nm,1.7s,mb3.8						
GTA	Gaotai	22.50	74	*e*P		P	05 02 41.0 +3.5
GTA				pmax		pmax	
	comp=Z,5.0nm,0.7s,mb4.0						
SONM	Songino Array	28.01	55	P		P	05 03 29.3 +2.1
	comp=Z,0.4nm,0.4s,mb3.3,baz=266,slow=10.0,SNR=3.1						
SONM	Songino Array	28.01	55	P		P	05 03 29.3 +2.0
FINES	FINESS Array B	37.67	326	P		P	05 04 51.7 +0.8
	comp=Z,2.8nm,0.8s,mb4.1,baz=120,slow=12,SNR=4.7						
FINES	FINESS Array B	37.67	326	P		P	05 04 51.7 +0.8
ARCES	ARCESS Array B	41.26	337	P		P	05 05 21.7 +1.1
	comp=Z,0.7nm,0.5s,mb3.7,baz=116,slow=8.9,SNR=14						
ARCES	ARCESS Array B	41.26	337	P		P	05 05 21.7 +1.1
KSRS	Korea Array	44.52	71	P		P	05 05 49.4 +2.1
	comp=Z,0.7nm,0.7s,mb3.5,baz=281,slow=6.1,SNR=3.3						
KSRS	Korea Array	44.52	71	P		P	05 05 49.4 +2.1
KSRS				pmax		pmax	
	comp=Z,1.0nm,0.7s,mb3.6						
NB2	NORSAR Subarra	44.58	323	P		P	05 05 47.5 0.0
	comp=Z,1.3nm,0.5s,mb3.9,baz=97,slow=7.9						
NOA	NORSAR Array B	44.58	323	P		P	05 05 46.6 -0.9
	comp=Z,1.4nm,0.6s,mb3.9,baz=96,slow=7.7,SNR=8.2						
NOA	NORSAR Array B	44.58	323	P		P	05 05 46.6 -0.9
BILL	Bilibino	58.42	26	*e*P		P	05 07 31.0 +0.8
BILL				*e*			05 08 17.6
BILL				pmax		pmax	
	comp=Z,5.0nm,1.2s,mb4.4						
TORD	Torodi Ar. Bea	66.09	269	P		P	05 08 20.0 -2.2
	comp=Z,0.4nm,0.4s,mb3.6,baz=47,slow=5.7,SNR=21						
ILAR	Eielson Array	74.65	16	P		P	05 09 13.6 +0.2
	comp=Z,0.6nm,0.9s,mb3.3,baz=302,slow=3.8,SNR=7.1						
ILAR	Eielson Array	74.65	16	P		P	05 09 13.6 +0.2
YKA	Yellowknife Ar	81.20	3	P		P	05 09 50.4 +0.8
	comp=Z,1.3nm,0.6s,mb4.0,baz=351,slow=5.4,SNR=11						
YKA	Yellowknife Ar	81.20	3	P		P	05 09 50.4 +0.8
YKA	Yellowknife Ar	81.20	3	P		P	05 09 50.4 +0.8
WRA	Warramunga Arr	81.69	122	P		P	05 09 52.6 -0.3
	comp=Z,0.3nm,0.7s,mb3.2,baz=328,slow=4.9,SNR=3.8						
WRA	Warramunga Arr	81.69	122	P		P	05 09 52.6 -0.2

IDC 15 05:14:09.2±9.5, 9°.56S×126°.99E, h136km±110km, mb3.2/1, mb1 3.4/4, mb1mx3.1/17, mbtmp3.2/4, ML3.7/3, Error ellipse: s-maj=71.9km s-min=41.8km az=16.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.59	189	P	Pn	05 16 10.7	+0.1
	0.5nm,0.3s,baz=19,slow=10,SNR=18						
FITZ				S	Sn	05 17 47.3	+1.4
	0.3nm,0.3s,baz=319,slow=9.3,SNR=3.5						
WRA	Warramunga Arr	12.53	146	P	Pn	05 17 00.9	-1.8
	0.7nm,0.3s,baz=319,slow=13,SNR=40						
WRA				S	Sn	05 19 20.5	-0.6
	0.4nm,0.3s,baz=320,slow=26,SNR=5.3						
ASAR	Alice Springs	15.51	156	P	Pn	05 17 42.2	+1.6
	0.3nm,0.3s,baz=328,slow=10,SNR=17						
ASAR				S	S	05 20 35.2	-3.2
	0.1nm,0.3s,baz=321,slow=19,SNR=4.0						
MKAR	Makanchi Array	68.79	329	P	P	05 24 58.6	+0.1
	0.3nm,0.5s,baz=130,slow=6.4,SNR=2.8						

TAP 15 05:21:38.2, 22°.19N×121°.78E, h152km, ML3.7, 1C-1D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.26	236	*e*P	Pn	05 21 58.8	-0.1
	baz=235						
TAW	Tawu	0.84	282	*e*P	Pn	05 22 01.3	-0.6
	baz=284						
TAW				*e*S	Sn	05 22 19.2	-0.7
	baz=284						
TSEB	Hengchuen, Pin	0.87	251	*e*P	Pn	05 22 02.8	+0.7
	baz=254						
TSEB				*e*S	Sn	05 22 21.6	+1.3
	baz=254						
TWG	Pinlang	0.91	314	P	Pn	05 22 02.2	-0.2
	baz=312						
TWG				S	Sn	05 22 19.9	-1.0
	baz=312						
TWK1	Hengchun	0.94	255	P	Pn	05 22 03.1	+0.5
	baz=255						
TWK1				S	Sn	05 22 21.7	+0.5
	baz=255						
CHKT	Chengkung	0.99	337	*e*P	Pn	05 22 02.7	-0.3
	baz=337						
CHKT				*e*S	Sn	05 22 23.0	+1.0
	baz=337						
HEN	Hengchun	0.99	260	*e*P	Pn	05 22 03.5	+0.5
	baz=268						
HEN				*e*S	Sn	05 22 22.6	+0.7
	baz=268						
SCZT	Fangliau	1.09	280	⇑*i*P	Pn	05 22 04.0	0.0
	baz=276						
SCZT				*e*S	Sn	05 22 22.9	-0.6
	baz=276						
ELDTW	Lidau	1.22	325	P	Pn	05 22 05.5	+0.4
	baz=321						
TWF1	Yuli	1.24	339	P	Pn	05 22 05.3	-0.1
	baz=339						
TWP	Hsiaoliuchiu	1.33	277	*e*P	Pn	05 22 05.1	-1.0
	baz=268						
TWP				*e*S	Sn	05 22 30.3	+2.8
	baz=268						
STYT	Tauyuan	1.36	316	*e*P	Pn	05 22 06.6	+0.2
	baz=316						
STYT				*e*S	Sn	05 22 28.1	+0.1
	baz=316						
EHY	Hungye	1.38	342	P	Pn	05 22 06.4	-0.3
	baz=342						
TWM1	Shoushan	1.41	297	*e*P	Pn	05 22 08.5	+1.6
	baz=303						
TWM1				*e*S	Sn	05 22 30.6	+1.6
	baz=303						
SGST	Jiashian	1.42	309	*e*S	Sn	05 22 28.0	-1.2
	baz=317						
YUS	Yu-Shan	1.51	330	*e*P	Pn	05 22 09.4	+1.4
	baz=329						
YUS				*e*S	Sn	05 22 32.8	+2.0
	baz=329						
WTP	Ta-pu	1.51	315	⇓*i*P	Pn	05 22 08.3	+0.3
	baz=314						
WTP				*e*S	Sn	05 22 30.8	0.0
	baz=314						
CHN1	Nanshi	1.53	311	P	Pn	05 22 08.5	+0.3
	baz=311						
CHN1				*e*S	Sn	05 22 31.0	-0.2
	baz=311						
CHN3	Shinhua	1.58	304	*e*P	Pn	05 22 09.9	+1.2
	baz=304						
CHN3				*e*S	Sn	05 22 32.4	+0.2
	baz=304						
ALS	Alishan	1.60	326	P	Pn	05 22 09.5	+0.6
	baz=318						
ALS				*e*S	Sn	05 22 33.4	+0.8
	baz=318						
ESL	Shilin	1.65	349	*e*S	Sn	05 22 34.0	+0.4
	baz=344						
WGK	Gukeng	1.87	323	*e*P	Pn	05 22 12.1	+0.1
	baz=323						
WGK				*e*S	Sn	05 22 37.7	-0.1
	baz=323						
SMLT	Sun Moon Lake	1.87	334	*e*P	Pn	05 22 12.2	+0.2
	baz=326						
TYC	Yuchr	1.91	334	*e*P	Pn	05 22 12.7	+0.3
	baz=326						
TYC				*e*S	Sn	05 22 39.2	+0.5
	baz=326						
WNT	Mingjian	1.96	329	*e*P	Pn	05 22 13.4	+0.4
	baz=323						
WNT				*e*S	Sn	05 22 39.8	0.0
	baz=323						
WHF	Hehuan Shan	2.01	346	*e*P	Pn	05 22 14.0	+0.5
	baz=350						
WHF				*e*S	Sn	05 22 42.1	+1.4
	baz=350						
NNS	Nan Shan	2.27	351	*e*P	Pn	05 22 16.9	+0.2
	baz=353						
PNG	Penghu	2.47	304	*e*P	Pn	05 22 17.9	-1.1
	baz=309						
PNG				*e*S	Sn	05 22 48.5	-2.1
	baz=309						

ISCJB ***15*** *05:34:24.5±1.4, 23°.58S±0°.09×179°.27E±0°.09, h409km±17km, mb3.9/14, Error ellipse: s-maj=16.1km s-min=9.5km az=138.0*
IDC ***15*** *05:34:27.6±1.6, 23°.59S×179°.29E, h431km±16km, mb3.7/12, mb1 3.9/14, mb1mx3.8/19, mbtmp3.7/14, Error ellipse: s-maj=16.2km s-min=11.5km az=170.0*
NEIC ***15*** *05:34:33.2±1.2, 23°.83S×179°.07E, h493km±14km, mb4.2/3, Error ellipse: s-maj=16.7km s-min=15.0km az=117.0*

ISC 15 05:34:28.9±1.4, 23°.65±0°.1×179°.2E±0°.1, h445km±17km, n31, σ1°19/27, mb4.0/14, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.92	350	*e*Pn	P	05 36 11.5	+9.2
OUZ	Omahuta	12.56	201	*e*Pn	P	05 37 12.8	-1.0
AFI	Afiamalu	12.89	43	P	P	05 37 16.9	-0.7
	4.0nm,0.3s,baz=186,slow=18,SNR=4.3						
AFI				S	S	05 39 30.7	-6.2
	3.0nm,0.3s,baz=204,slow=20,SNR=4.4						
URZ	Urewera	14.73	186	P	P	05 37 38.3	+1.2
	5.5nm,0.3s,baz=45,slow=1.6,SNR=14						
URZ				S	S	05 40 06.2	-6.4
	0.8nm,0.3s,baz=270,slow=20,SNR=8.1						
EIDS	Eidsvold	25.60	260	*e*P	P	05 39 22.3	+1.2
	1.6nm,0.3s,mb3.9						
CTA	Charters Tower	30.71	270	P	P	05 40 08.1	+2.2
	9.3nm,0.3s,mb4.6,baz=92,slow=11,SNR=16						
CTAO	Charters Tower	30.71	270	*e*P	P	05 40 08.1	+2.1
	2.5nm,0.3s,mb4.1						
STKA	Stephens Creek	34.13	248	P	P	05 40 36.4	+1.3
	2.9nm,0.7s,mb3.8,baz=17,slow=1.9,SNR=2.1						
ASAR	Alice Springs	41.33	260	P	P	05 41 34.0	-0.5
	1.4nm,0.5s,mb3.6,baz=93,slow=7.4,SNR=18						
ASAR				ScP	ScP	05 46 29.3	-0.6
	2.9nm,0.8s,baz=109,slow=3.9,SNR=12						
ASAR				S	S	05 47 20.7	+5.0
	0.7nm,0.7s,baz=94,slow=15,SNR=5.8						
WB2	Warramunga Arr	41.65	266	*e*P	P	05 41 36.4	-0.7
WRA	Warramunga Arr	41.66	266	P	P	05 41 36.5	-0.6
	3.9nm,0.5s,mb4.1,baz=97,slow=8.3,SNR=92						
WRA				ScP	ScP	05 46 31.4	+0.1
	2.4nm,0.7s,baz=98,slow=3.9,SNR=14						
WRA				S	S	05 47 25.9	+5.2
	2.0nm,1.1s,baz=103,slow=14,SNR=5.1						
KAKA	Kakadu	45.52	275	*e*P	P	05 42 06.5	-0.9
	7.0nm,0.3s,mb4.6						
QSPA	South Pole Qui	66.49	180	P	P	05 44 32.7	+0.2
	8.3nm,0.6s,mb4.5,baz=15,slow=1.2,SNR=64						
QSPA	South Pole Qui	66.49	180	*e*P	P	05 44 32.7	+0.3
	19nm,0.8s,mb4.8						
MJAR	Matsushiro Arr	71.21	326	P	P	05 45 00.2	-1.5
	1.5nm,0.7s,mb3.6,baz=160,slow=6.1,SNR=4.3						
KSRS	Korea Array	77.52	321	P	P	05 45 36.3	-1.2
	0.6nm,0.6s,mb3.2,baz=134,slow=7.3,SNR=5.4						
MAW	Mawson	77.77	201	P	P	05 45 38.3	-0.2
	3.0nm,0.6s,mb3.9,baz=118,slow=5.6,SNR=14						
SYO	Syowa Base	83.13	194	⇓*e*P	P	05 46 04.3	-2.2
NVAR	Mina Array Bea	85.06	44	P	P	05 46 18.1	+1.6
	1.6nm,0.7s,mb3.7,baz=225,slow=7.7,SNR=15						
PLCA	Paso Flores	89.03	135	P	P	05 46 34.3	-1.1
	0.6nm,0.5s,mb3.7,baz=35,slow=3.7,SNR=4.2						
TXAR	Lajitas Array	90.92	58	P	P	05 46 45.2	+0.9
	3.1nm,0.7s,mb4.3,baz=211,slow=6.6,SNR=31						
TXAR	Lajitas Array	90.92	58	P	P	05 46 45.2	+0.9
PDAR	Pinedale Array	93.00	44	P	P	05 46 55.2	+1.7
	0.8nm,0.8s,mb3.8,baz=241,slow=3.0,SNR=8.6						
BOSA	Boshof	122.33	207	PKP	PKPdf	05 52 33.1	+0.2
	5.3nm,1.0s,baz=225,slow=2.9,SNR=2.6						
BOSA	Boshof	122.33	207	PKP	PKPdf	05 52 33.1	+0.2
NOA	NORSAR Array B	141.65	351	PKhKP	PKPpre	05 53 05.1	
	2.9nm,0.8s,baz=8.5,slow=2.8,SNR=6.0						
NOA	NORSAR Array B	141.65	351	PKP	PKPpre	05 53 05.1	
BRTR	Keskin Array B	146.78	307	PKPbc	PKPbc	05 53 19.0	-1.2
	0.8nm,0.6s,baz=152,slow=3.5,SNR=3.7						
BRTR	Keskin Array B	146.78	307	PKPbc	PKPbc	05 53 19.0	-1.2
TORD	Torodi Ar. Bea	169.34	193	PKP	PKPdf	05 53 44.5	-0.5
	0.9nm,0.9s,baz=356,slow=1.2,SNR=4.6						
TORD				PKPab	PKPab	05 54 59.9	-0.3
	1.4nm,0.7s,baz=184,slow=3.4,SNR=9.0						
TORD	Torodi Ar. Bea	169.34	193	PKP	PKPdf	05 53 44.5	-0.5
TORD				PKPab	PKPab	05 54 59.9	-0.3

ISCJB ***15*** *05:34:38.3±1.2, 24°.01S±0°.09×179°.77E±0°.09, h528km±14km, mb4.3/27, Error ellipse: s-maj=15.7km s-min=10.8km az=137.7*
IDC ***15*** *05:34:38.2±21.0, 23°.99S×179°.75E, h506km±179km, mb3.9/8, mb1 4.0/8, mb1mx3.8/17, mbtmp3.9/8, Error ellipse: s-maj=184.3km s-min=34.3km az=107.0*
NEIC ***15*** *05:34:39.1±0.9, 24°.01S×179°.83E, h531km±10km, mb4.5/24, Error ellipse: s-maj=10.9km s-min=7.7km az=136.0*

ISC 15 05:34:39.0±1.2, 24°.01S±0°.09×179°.81E±0°.09, h525km±13km, n41, σ0°73/41, mb4.3/27, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.46	345	*e*Pn	P	05 36 20.4	-0.5
	21nm,0.4s						
OUZ	Omahuta	12.41	204	*e*Pn	P	05 37 22.0	+0.4
KHZ	Kahutara	19.09	194	*e*P	P	05 38 28.9	+1.1
	20nm,0.7s						
HNR	Honiara	23.87	304	P	P	05 39 10.8	-0.4
	50nm,0.4s,baz=203,slow=5.8,SNR=3.8						
ARMA	Armidale	25.82	249	*e*P	P	05 39 29.5	+1.1
ARMA	Armidale	25.82	249	*e*P	P	05 39 29.5	+1.1
	12nm,0.9s,mb4.5						
EIDS	Eidsvold	26.12	261	*e*P	P	05 39 31.4	+0.4
	18nm,0.6s,mb4.9						
CTA	Charters Tower	31.30	271	P	P	05 40 17.0	+0.8
	30nm,0.4s,mb5.1,baz=93,slow=11,SNR=41						
CTA	Charters Tower	31.30	271	*e*P	P	05 40 16.9	+0.7
	22nm,0.4s,mb5.0						
CTA	Charters Tower	31.30	271	P	P	05 40 17.0	+0.8
CTAO	Charters Tower	31.30	271	*e*P	P	05 40 16.9	+0.6
	32nm,0.5s,mb5.1						
STKA	Stephens Creek	34.52	248	P	P	05 40 43.5	+0.1
	5.3nm,0.7s,mb4.2,baz=100,slow=8.0,SNR=5.1						
STKA	Stephens Creek	34.52	248	*e*P	P	05 40 43.2	-0.1
	2.7nm,0.8s,mb3.8						
COEN	Coen	35.96	279	*e*P	P	05 40 56.6	+1.1
	138nm,0.9s						
ASAR	Alice Springs	41.85	261	P	P	05 41 42.9	-0.2
	7.3nm,0.8s,mb4.2,baz=95,slow=8.2,SNR=35						
ASAR	Alice Springs	41.85	261	P	P	05 41 42.9	-0.2
WB2	Warramunga Arr	42.22	266	*e*P	P	05 41 45.1	-0.9
WRA	Warramunga Arr	42.23	266	P	P	05 41 45.5	-0.6
	14nm,0.6s,mb4.7,baz=103,slow=8.3,SNR=73						
WRA	Warramunga Arr	42.23	266	P	P	05 41 45.5	-0.6
FORT	Forrest	46.11	250	*e*P	P	05 42 15.0	-1.0
	41nm,0.7s,mb5.1						
KAKA	Kakadu	46.15	275	*e*P	P	05 42 15.5	-1.0
	34nm,0.6s,mb5.1						
SBA	Scott Base	54.26	183	*e*P	P	05 43 15.3	+0.4
	12nm,1.0s,mb4.2						
CASY	Casey	59.94	206	*e*P	P	05 43 51.9	-2.1
	5.3nm,0.6s,mb4.0						
MJAR	Matsushiro Arr	71.89	326	P	P	05 45 08.7	-0.1
	1.8nm,0.7s,mb3.6,baz=168,slow=6.2,SNR=5.7						
MJAR	Matsushiro Arr	71.89	326	P	P	05 45 08.7	-0.1
MAW	Mawson	77.59	200	*e*P	P	05 45 39.3	-1.1
	1.1nm,0.6s,mb3.4						
KSRS	Korea Array	78.22	320	P	P	05 45 45.4	+1.2
	1.1nm,0.7s,mb3.3,baz=122,slow=4.8,SNR=6.0						
ISA	Isabella	83.22	46	*e*P	P	05 46 10.3	+0.2
	8.6nm,0.8s,mb4.3						
CMB	Columbia Colle	83.40	43	*e*P	P	05 46 10.7	-0.3
	9.8nm,1.0s,mb4.3						
WAKR	Walker	84.28	43	*e*P	P	05 46 15.5	+0.2
	8.4nm,1.3s

λ73.00000°. Principal axes: T 7.3200, Plg69.0000°, Azm288.0000°; N 0.4300, Plg15.0000°, Azm62.0000°; P -7.7500, Plg15.0000°, Azm156.0000°; Data Used: II IU IC G CN.

SZGRF **15** 05:41:49.6, 51.′76N×177.′98W, h33km, mb5.1, MS4.6, Andreanof Islands, Aleutian Islands, United States

DJA **15** 05:42:09, 51.′42N×178.′80W, h230km, mb4.9/15

ISC 15 05:41:46.9±0.1, 51.′45N±0.′03×178.′37W±0.′02, h36km, h36km±.9km: pP-P, n983, σ0.73/968, mb5.1/278, MS4.5/58, 164C-155D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.46**	**268**	*e*P	**Pn**	**05 42 10.3**	**-0.5**
ATKA	**Atka Island**	**2.69**	**72**	P	**Pn**	**05 42 27.1**	**-0.6**
ATKA				S	**Sn**	**05 43 00.9**	**+1.9**
SMY	**Shemya**	**4.82**	**288**	*e*Pn	**Pn**	**05 42 58.7**	**+1.9**
SMY	**Shemya**	**4.82**	**288**	*e*P	**Pn**	**05 42 58.7**	**+1.8**
FX1	**Attu Island--F**	**5.41**	**289**	P	**Pn**	**05 43 07.1**	**+2.2**
FX1				S	**Sn**	**05 44 16.1**	**+10**
FX1	**Attu Island--F**	**5.41**	**289**	P	**Pn**	**05 43 07.1**	**+2.2**
FX1				S	**Sn**	**05 44 16.1**	**+10**
NIKO	**Nikolski**	**6.04**	**72**	*e*Pn	**Pn**	**05 43 14.3**	**+0.6**
SPIA	**Saint Paul Isl**	**7.44**	**36**	*e*Pn	**Pn**	**05 43 37.5**	**+4.6**
UNV	**Unalaska Valle**	**7.60**	**67**	*e*Pn	**Pn**	**05 43 38.0**	**+3.0**
AKUT	**Akutan**	**8.09**	**66**	*e*Pn	**Pn**	**05 43 44.8**	**+3.0**
	314nm,0.8s						
FALS	**False Pass**	**9.61**	**63**	*e*Pn	**Pn**	**05 44 05.0**	**+2.5**
	198nm,0.4s						
SDPT	**Sand Point**	**11.36**	**63**	*e*Pn	**Pn**	**05 44 27.2**	**+0.7**
CHGN	**Chignik**	**12.72**	**60**	*e*Pn	**Pn**	**05 44 45.6**	**+0.6**
GAMB	**Gambell**	**12.85**	**13**	*e*Pn	**Pn**	**05 44 52.8**	**+6.0**
	232nm,1.6s						
PET	**Petropavlovsk**	**14.16**	**285**	*e*P	**Pn**	**05 45 04.7**	**0.0**
PET				*e*S	**Sn**	**05 47 43.2**	**+2.9**
PET				pmax	pmax		
	comp=Z,300nm,17.9s						
PET				pmax	pmax		
	comp=Z,700nm,4.3s						
PET				MLR	MLR		
	comp=Z,2μm,20.0s						
PET				MLR	MLR		
	comp=Z,900nm,15.0s						
PETK	**Petropavlovsk-**	**14.73**	**286**	Pn	**Pn**	**05 45 12.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=93,slow=15,SNR=5.2						
PETK				LR	LR	05 50 32.2	
	comp=Z,2μm,21.4s,baz=159,slow=36						
PETK	**Petropavlovsk-**	**14.73**	**286**	P	**Pn**	**05 45 12.9**	**+0.5**
TNA	**Tin City**	**15.13**	**17**	*e*P	**Pn**	**05 45 22.2**	**+4.6**
	comp=Z,92nm,1.3s						
OHAK	**Old Harbor**	**15.67**	**59**	*e*Pn	**Pn**	**05 45 21.3**	**-3.4**
	comp=Z,126nm,0.6s						
SVW2	**Sparrevohn**	**15.83**	**44**	*e*P	**Pn**	**05 45 28.7**	**+2.0**
	comp=Z,105nm,1.0s						
SKR	**Severo-Kuril's**	**16.04**	**277**	*e*P	pP	05 45 45.8	+4.0
SKR				pmax	pmax		
	comp=Z,160nm,0.9s						
KDAK	**Kodiak Island**	**16.16**	**57**	Pn	**Pn**	**05 45 27.1**	**-3.8**
	comp=Z,9.1nm,0.3s,baz=260,slow=6.2,SNR=30						
KDAK				Sn	**Sn**	**05 48 25.1**	**-3.7**
	comp=Z,0.5nm,0.3s,baz=292,slow=19,SNR=3.5						
KDAK	**Kodiak Island**	**16.16**	**57**	*c e*P	**Pn**	**05 45 27.5**	**-3.4**
KDAK	**Kodiak Island**	**16.16**	**57**	Pn	**Pn**	**05 45 29.3**	**-1.6**
	comp=Z,603nm,1.0s,SNR=11						
TTA	**Tatalina**	**16.59**	**38**	*e*P	**Pn**	**05 45 39.2**	**+2.8**
TTA	**Tatalina**	**16.59**	**38**	*e*P	**Pn**	**05 45 39.2**	**+2.8**
RSO	**Redoubt South**	**16.84**	**48**	*e*P	**Pn**	**05 45 42.0**	**+2.5**
SLKM	**Skilak Lake**	**18.04**	**49**	*e*P	**Pn**	**05 45 54.6**	**+0.2**
SLKM	**Skilak Lake**	**18.04**	**49**	*e*P	**Pn**	**05 45 54.6**	**+0.3**
PPLA	**Purkeypile**	**18.08**	**41**	*e*Pn	**Pn**	**05 45 57.0**	**+2.1**
	comp=Z,202nm,1.1s						
BILL	**Bilibino**	**18.25**	**341**	*e*P	**Pn**	**05 46 01.1**	**+4.2**
	comp=Z,45nm,0.8s						
BILL	**Bilibino**	**18.25**	**341**	*c i*P	**Pn**	**05 45 59.5**	**+2.6**
BILL				pmax	pmax		
	comp=Z,82nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2μm,20.0s						
PMR	**Palmer**	**18.88**	**46**	*e*P	**Pn**	**05 46 04.0**	**-0.6**
	comp=Z,39nm,0.9s						
PMR	**Palmer**	**18.88**	**46**	*e*P	**Pn**	**05 46 04.0**	**-0.6**
PMR				pmax	pmax		
	comp=Z,39nm,0.9s						
TRF	**Thorofare Moun**	**19.10**	**40**	*e*P	**Pn**	**05 46 07.1**	**-0.1**
	comp=Z,213nm,1.0s						
BPAW	**Bear Paw Mtn.**	**19.12**	**38**	*e*P	**Pn**	**05 46 07.7**	**+0.2**
	comp=Z,192nm,1.4s						
SML	**Sawmill**	**19.31**	**46**	*e*P	**Pn**	**05 46 08.5**	**-1.2**
	comp=Z,24nm,0.9s						
SML	**Sawmill**	**19.31**	**46**	*e*P	**Pn**	**05 46 08.5**	**-1.3**
SML				pmax	pmax		
	comp=Z,23nm,0.9s						
SEY	**Seymchan**	**19.37**	**318**	⇑*i*P	**Pn**	**05 46 11.1**	**+0.6**
MCK	**McKinley**	**19.77**	**40**	*e*P	**Pn**	**05 46 13.4**	**-1.7**
	comp=Z,76nm,0.8s						
MCK	**McKinley**	**19.77**	**40**	*e*P	**Pn**	**05 46 13.5**	**-1.7**
MCK				pmax	pmax		
	comp=Z,76nm,0.8s						
COLA	**College**	**20.69**	**38**	*e*P	**P**	**05 46 23.5**	**0.0**
	comp=Z,81nm,1.0s						
COLA	**College**	**20.69**	**38**	*e*P	**P**	**05 46 23.5**	**+0.1**
COLA				pmax	pmax		
	comp=Z,81nm,1.0s						
PAX	**Paxson**	**20.95**	**44**	*e*P	**P**	**05 46 26.1**	**-0.2**
	comp=Z,115nm,1.0s						
PAX	**Paxson**	**20.95**	**44**	*e*P	**P**	**05 46 26.1**	**-0.2**
PAX				pmax	pmax		
	comp=Z,115nm,1.0s						
ILAR	**Eielson Array**	**21.02**	**39**	P	**P**	**05 46 25.1**	**-1.9**
	comp=Z,4.9nm,0.7s,baz=242,slow=9.8,SNR=39						
ILAR				PcP	PcP	05 50 30.6	-2.0
	comp=Z,2.6nm,0.7s,baz=297,slow=3.5,SNR=5.9						
ILAR				ScP	ScP	05 54 04.8	-1.5
	comp=Z,0.9nm,0.7s,baz=275,slow=3.2,SNR=6.6						
ILAR				LR	LR	05 55 37.0	
	comp=Z,1μm,20.2s,baz=335,slow=40						
ILAR	**Eielson Array**	**21.02**	**39**	P	**P**	**05 46 25.1**	**-1.9**
ILAR						05 50 30.6	
COLD	**Coldfoot**	**21.05**	**31**	*e*P	**P**	**05 46 28.4**	**+1.0**
	comp=Z,74nm,1.1s,mb4.9						
MENT	**Mentasta**	**21.70**	**45**	*e*P	**P**	**05 46 35.4**	**+1.0**
DOT	**Dot Lake**	**21.76**	**43**	*e*P	**P**	**05 46 34.9**	**-0.1**
	comp=Z,158nm,0.8s,mb5.5						
EGAK	**Eagle**	**23.31**	**41**	*e*P	**P**	**05 46 50.3**	**-1.1**
	comp=Z,373nm,1.9s,mb5.5						
DAWY	**Dawson**	**23.87**	**43**	*e*P	**P**	**05 46 55.6**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**24.98**	**267**	⇓*i*P	**P**	**05 47 05.4**	**-1.5**
YUK				*i*		05 47 52.2	
YUK				*i* SS		05 52 38.3	
YUK				pmax	pmax		
	comp=Z,1μm,1.5s,mb6.1						
YUK				pmax	pmax		
	comp=N,540nm,1.4s						
YUK				pmax	pmax		
	comp=E,1.0nm,1.4s						
YUK				pmax	pmax		
	comp=Z,730nm,1.4s,mb6.0						
YUK				MLR	MLR		
	comp=N,340nm,20.0s						
YUK				MLR	MLR		
	comp=Z,440nm,20.0s,MS4.0						
YSS	**Yuzh-Sakhalins**	**25.58**	**275**	*e*P	**P**	**05 47 14.3**	**+2.0**
	comp=Z,127nm,0.9s,mb5.5						
YSS	**Yuzh-Sakhalins**	**25.58**	**275**	*oe*P	**P**	**05 47 13.2**	**+0.8**
YSS				*e**PP	pP	05 47 25.0	+2.6
YSS				*e*S	**S**	**05 51 33.0**	**-4.6**
YSS				*e*SSS		05 53 02.0	
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=E,110nm,1.0s						
YSS				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.4						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.0						
YSS				MLR	MLR		
	comp=E,600nm,20.0s						
ASAJ	**Asahikawa**	**26.98**	**270**	P	**P**	**05 47 25.1**	**+0.1**
	comp=E,96nm,1.0s,mb5.3,baz=27,slow=6.8,SNR=43						
ASAJ				LR	LR	05 57 06.8	
	comp=E,424nm,19.7s,MS4.0,baz=177,slow=34						
ASAJ	**Asahikawa**	**26.98**	**270**	*e*P	**P**	**05 47 26.1**	**+1.1**
	comp=E,58nm,1.1s,mb5.0						
ASAJ	**Asahikawa**	**26.98**	**270**	P	**P**	**05 47 25.1**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,96nm,1.0s						
ASAJ				MLR	MLR		
	comp=Z,424nm,19.7s						
INK	**Inuvik**	**27.24**	**35**	P	**P**	**05 47 26.4**	**-0.8**
	comp=Z,4.4nm,0.9s,mb4.0,baz=260,slow=11,SNR=18						
INK				PcP	PcP	05 50 45.6	-0.4
	comp=Z,11nm,0.8s,baz=263,slow=2.5,SNR=5.5						
INK				ScP	ScP	05 54 21.2	-2.1
	comp=Z,6.1nm,1.1s,baz=264,slow=5.4,SNR=5.4						
INK				LR	LR	05 59 36.2	
	comp=Z,644nm,18.7s,MS4.2,baz=237,slow=39						
INK	**Inuvik**	**27.24**	**35**	*e*P	**P**	**05 47 26.5**	**-0.6**
	comp=Z,9.9nm,1.1s,mb4.2						
INK	**Inuvik**	**27.24**	**35**	P	**P**	**05 47 26.4**	**-0.7**
INK						05 50 45.6	
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK				pmax	pmax		
	comp=Z,11nm,0.9s						
INK				pmax	pmax		
	comp=N,6.0nm,1.1s						
INK				MLR	MLR		
	comp=Z,644nm,18.7s						
ERM	**Erimo**	**27.72**	**265**	*e*P	**P**	**05 47 33.0**	**+1.4**
	comp=Z,50nm,1.2s,mb5.0						
ERM	**Erimo**	**27.72**	**265**	*d i*P	**P**	**05 47 31.2**	**-0.5**
ERM				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.0						
ERM				MLR	MLR		
	comp=Z,430nm,20.0s,MS4.0						
DLBC	**Dease Lake**	**28.09**	**57**	P	**P**	**05 47 32.9**	**-1.9**
	comp=Z,1.4nm,0.8s,baz=255,slow=12,SNR=3.1						
DLBC				LR	LR	05 58 56.1	
	comp=Z,459nm,20.9s,baz=277,slow=37						
YAK	**Yakutsk**	**29.57**	**311**	*e*P	**P**	**05 47 49.7**	**+1.8**
YAK				*e**PP	pP	05 47 58.8	+0.7
YAK				*e*		05 48 44.1	
YAK				*e*PPP		05 48 52.8	
YAK				*e*		05 50 50.2	
YAK				*e*S	**S**	**05 52 42.0**	**+1.8**
YAK				*e*SS	SS	05 54 11.9	-34
YAK				*e*		05 54 37.3	
YAK				*e*		05 58 19.8	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.9						
YAK				pmax	pmax		
	comp=E,19nm,1.1s						
YAK				smax			
	comp=E,217nm,15.0s						
YAK				smax			
	comp=N,62nm,15.6s						
YAK				MLR	MLR		
	comp=Z,2μm,24.0s,MS4.6						
YAK				MLR	MLR		
	comp=E,1μm,22.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,342nm,20.0s,MS4.5						
HABR	**Khabarovsk**	**29.72**	**283**	*e*P	**P**	**05 47 48.8**	**-0.6**
HABR				*e**PP	pP	05 48 01.7	+2.2
HABR				*e*		05 50 50.3	
HABR				*e*S	**S**	**05 52 43.5**	**+0.7**
HABR				SS	SS	05 54 18.5	-31
HABR				*e*		05 54 33.7	
HABR				*e*		05 58 23.5	
HABR				pmax	pmax		
	comp=N,17nm,0.8s						
HABR				pmax	pmax		
	comp=E,42nm,1.0s						
HABR				pmax	pmax		
	comp=Z,159nm,2.8s,mb5.2						
HABR				MLR	MLR		
	comp=Z,682nm,18.0s,MS4.3						
TIXI	**Tiksi**	**30.71**	**330**	*e*P	**P**	**05 47 59.3**	**+1.5**
TIXI				*e*		05 49 00.8	
TIXI				pmax	pmax		
	comp=Z,34nm,1.9s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,1μm,15.0s,MS4.7						
KLR	**Kul'dur**	**31.42**	**286**	*e*P	**P**	**05 48 00.0**	**-4.3**
KLR				*e*		05 49 10.5	
KLR				pmax	pmax		
	comp=E,50nm,1.6s						
KLR				pmax	pmax		
	comp=Z,120nm,1.6s,mb5.5						
KLR				MLR	MLR		
	comp=E,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,1μm,14.0s,MS4.6						
KIP	**Kipapa**	**33.91**	**144**	*e*P	**P**	**05 48 26.4**	**0.0**
	comp=Z,48nm,0.8s,mb5.5						
KIP				*e*	pP	05 48 35.5	-1.1
KIP	**Kipapa**	**33.91**	**144**	⇑*i*P	**P**	**05 48 26.3**	**-0.1**
MJAR	**Matsushiro Arr**	**34.06**	**261**	P	**P**	**05 48 27.7**	**+0.1**
	comp=Z,18nm,0.8s,mb5.0,baz=53,slow=7.2,SNR=40						
MJAR				PcP	PcP	05 51 03.3	-1.2
	comp=Z,7.1nm,0.9s,baz=240,slow=1.4,SNR=8.1						
MJAR				LR	LR	06 00 26.6	
	comp=Z,644nm,21.8s,MS4.3,baz=80,slow=33						
MJAR	**Matsushiro Arr**	**34.06**	**261**	P	**P**	**05 48 27.7**	**+0.1**
MJAR						05 51 03.3	
MAJO	**Matsushiro**	**34.07**	**261**	*e*P	**P**	**05 48 28.6**	**+1.0**
	comp=Z,48nm,0.9s,mb5.4						
MAJO				*e*	pP	05 48 41.0	+3.1
MAJO	**Matsushiro**	**34.07**	**261**	*e*P	**P**	**05 48 28.6**	**+1.0**
MAJO				*e*	pP	05 48 41.0	+3.2
MAJO				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.4						
MAT	**Matsushiro**	**34.07**	**261**	P	**P**	**05 48 28.3**	**+0.7**
MAT				S	**S**	**05 53 50.0**	**-0.7**
PGC	**Sidney**	**34.68**	**73**	*e*P	**P**	**05 48 33.5**	**+0.7**
	comp=Z,11nm,2.2s,mb4.4						
MDJ	**Mudanjiang**	**34.83**	**280**	P	**P**	**05 48 34.1**	**0.0**
MDJ				pP	pP	05 48 42.5	-1.9
MDJ				sP	sP	05 48 47.3	-1.4
MDJ				PP	PP	05 49 53.5	+0.2
MDJ				PcP	PcP	05 51 05.8	-0.8
MDJ				S	**S**	**05 54 02.8**	**+0.5**
MDJ				sS	sS	05 54 20.1	+0.9
MDJ				ScP	ScP	05 54 47.9	-1.0
MDJ				PcS	PcS	05 54 51.4	-1.7
MDJ				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
MDJ				pmax	pmax		
	comp=Z,74nm,4.6s						
MDJ				LR	LR		
	comp=N,170nm,24.1s						
MDJ				LR	LR		
	comp=E,500nm,18.4s						
MDJ				LR	LR		
	comp=Z,630nm,22.7s,MS4.3						
MDJ	**Mudanjiang**	**34.83**	**280**	*e*P	**P**	**05 48 34.0**	**-0.1**
	comp=Z,19nm,0.8s,mb5.1						
YKA	**Yellowknife Ar**	**34.98**	**47**	P	**P**	**05 48 33.8**	**-1.4**
	comp=Z,9.2nm,0.9s,mb4.7,baz=282,slow=8.4,SNR=22						
YKA				PcP	PcP	05 51 06.2	-0.4
	comp=Z,8.1nm,0.8s,baz=281,slow=3.0,SNR=12						
YKA				LR	LR	06 04 32.5	
	comp=Z,65nm,19.8s,MS3.4,baz=5.0,slow=39						
YKA	**Yellowknife Ar**	**34.98**	**47**	P	**P**	**05 48 33.8**	**-1.4**
YKA				PcP	PcP	05 51 06.2	-0.4
YKA				LR	LR	06 04 32.5	
YKA	**Yellowknife Ar**	**34.98**	**47**	P	**P**	**05 48 33.8**	**-1.4**
YKA						05 51 06.2	
NLWA	**Neilton Lookou**	**34.99**	**75**	*e*P	**P**	**05 48 36.9**	**+1.4**
	comp=Z,79nm,1.3s,mb5.5						
A05A	**Maple Falls**	**35.34**	**71**	⇓P	**P**	**05 48 38.9**	**+0.4**
	baz=35,SNR=28						
GNW	**Green Mountain**	**35.54**	**74**	*e*P	**P**	**05 48 41.4**	**+1.2**
	comp=Z,28nm,1.0s,mb5.1						
GNW				*e*	pP	05 48 51.4	+0.9
CMW	**Cultus Mountai**	**35.57**	**72**	P	**P**	**05 48 41.8**	**+1.3**
E03A	**Lebam**	**35.57**	**76**	⇓P	**P**	**05 48 41.3**	**+0.8**
	baz=35						
JCW	**Jim Creek**	**35.79**	**72**	*e*P	**P**	**05 48 43.0**	**+0.6**
JCW				*e*	pP	05 48 52.1	-0.4
B06A	**Marblemount**	**35.91**	**72**	P	**P**	**05 48 43.8**	**+0.4**
	baz=36,SNR=8.0						
RPW	**Rockport**	**35.92**	**72**	*e*P	**P**	**05 48 44.0**	**+0.5**
D05A	**Enumclaw**	**36.22**	**74**	⇑P	**P**	**05 48 47.3**	**+1.3**
	baz=36,SNR=20						
LON	**Longmire**	**36.53**	**75**	*e*P	**P**	**05 48 49.4**	**+0.7**
	comp=Z,24nm,0.8s,mb5.1						
LON	**Longmire**	**36.53**	**75**	*e*P	**P**	**05 48 49.4**	**+0.7**
LON				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.1						
F04A	**Amboy**	**36.56**	**76**	⇓P	**P**	**05 48 49.9**	**+0.9**
	baz=36,SNR=10						
WRW	**Wenatchee Ridg**	**36.57**	**72**	P	**P**	**05 48 49.7**	**+0.7**
COR	**Corvallis**	**36.70**	**79**	*e*P	**P**	**05 48 51.7**	**+1.6**
	comp=Z,67nm,1.0s,mb5.4						
COR	**Corvallis**	**36.70**	**79**	*e*P	**P**	**05 48 51.7**	**+1.5**
COR				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.4						
G04A	**Mulino**	**36.89**	**77**	⇑P	**P**	**05 48 52.8**	**+1.0**
	baz=37,SNR=15						
KEBM	**Edson Butte**	**36.97**	**82**	*e*P	**P**	**05 48 53.1**	**+0.6**
	comp=Z,27nm,0.9s,mb5.1						
ETW	**Entiat**	**37.02**	**72**	*e*P	**P**	**05 48 52.8**	**+0.1**
TBM	**Table Mountain**	**37.06**	**73**	P	**P**	**05 48 53.3**	**+0.7**
EBG	**Ellensburg**	**37.20**	**74**	P	**P**	**05 48 55.3**	**+0.9**
VLL	**Laurance Lake**	**37.25**	**76**	P	**P**	**05 48 55.9**	**+1.1**
B08A	**Colville Reser**	**37.26**	**71**	P	**P**	**05 48 54.9**	**0.0**
	baz=37,SNR=88						
H04A	**Detroit Lake**	**37.34**	**78**	⇑P	**P**	**05 48 56.5**	**+0.9**
	baz=37,SNR=28						
HOOD	**Mount Hood Mea**	**37.34**	**77**	*e*P	**P**	**05 48 56.5**	**+1.0**
	comp=Z,73nm,1.1s,mb5.4						
BROR	**Big Rock Looko**	**37.39**	**78**	P	**P**	**05 48 57.1**	**+1.1**
VFP	**Flag Point**	**37.45**	**76**	P	**P**	**05 48 57.5**	**+1.0**
CN2	**Changchun**	**37.80**	**281**	*e*P	**P**	**05 48 58.9**	**-0.6**
CN2				*es*P	sP	05 49 16.5	+2.4
CN2				PP	PP	05 50 29.3	+3.3
CN2				PcP	PcP	05 51 15.3	-0.2
CN2				*e*S	**S**	**05 54 46.0**	**-1.7**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,19.0s,MS4.5						
CN2				LR	LR		
	comp=E,500nm,19.0s,MS4.5						
CN2				LR	LR		
	comp=Z,600nm,25.0s						
E07A	**Sunnyside**	**37.80**	**74**	⇓P	**P**	**05 48 59.9**	**+0.4**
	baz=38,SNR=13						
HUMO	**Hull Mountain**	**37.96**	**81**	*e*P	**P**	**05 49 01.6**	**+0.7**
	comp=Z,9.0nm,0.8s,mb4.5						
G06A	**Carlson Farm,**	**38.00**	**76**	⇑P	**P**	**05 49 01.6**	**+0.5**
	baz=38,SNR=8.4						
RSW	**Rattlesnake Hi**	**38.04**	**74**	*e*P	**P**	**05 49 02.4**	**+0.9**
RSW				*e*	pP	05 49 12.4	+0.6
HAWA	**Hanford**	**38.08**	**74**	*e*P	**P**	**05 49 01.8**	**0.0**
	comp=Z,62nm,0.8s,mb5.4						
OD2	**Odessa Site #2**	**38.08**	**72**	P	**P**	**05 49 01.8**	**0.0**
F07A	**Phinny Hill Vi**	**38.09**	**75**	⇑P	**P**	**05 49 02.7**	**+0.8**
	baz=38,SNR=15						
D08A	**Wollman Farm,**	**38.12**	**73**	⇑P	**P**	**05 49 02.2**	**0.0**
	baz=38,SNR=25						
C09A	**Chrisman Ranch**	**38.15**	**71**	⇑P	**P**	**05 49 02.5**	**+0.2**
	baz=38,SNR=17						
BOD	**Bodaibo**	**38.15**	**307**	*e*P	**P**	**05 49 00.1**	**-2.2**
BOD				*e*S	**S**	**05 55 01.8**	**+9.1**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BOD				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
KHMM	**Horse Mountain**	**38.45**	**84**	*e*P	**P**	**05 49 06.5**	**+1.5**
	comp=Z,14nm,1.1s,mb4.6						
YBH	**Yreka Blue Hor**	**38.60**	**82**	*e*P	**P**	**05 49 07.2**	**+1.0**
	comp=Z,15nm,0.8s,mb4.8						
YBH	**Yreka Blue Hor**	**38.60**	**82**	*e*P	**P**	**05 49 07.2**	**+1.0**
YBH				pmax	pmax		
	comp=Z,15nm,0.8s						
NEW	**Newport**	**38.60**	**70**	⇑P	**P**	**05 49 06.3**	**+0.1**
	baz=38,SNR=84						
NEW	**Newport**	**38.60**	**70**	*e*P	**P**	**05 49 06.2**	**0.0**
	comp=Z,75nm,0.9s,mb5.4						
NEW				*e*	pP	05 49 15.1	-1.4
NEW	**Newport**	**38.60**	**70**	*e*P	**P**	**05 49 06.2**	**0.0**
NEW				*e*	pP	05 49 15.1	-1.4
NEW				pmax	pmax		
	comp=Z,75nm,0.9s						
E09A	**Wood Farm, Sta**	**38.85**	**73**	⇑P	**P**	**05 49 08.4**	**+0.1**
	baz=39,SNR=38						
G08A	**Pilot Rock**	**38.98**	**75**	⇑P	**P**	**05 49 09.7**	**+0.2**
	baz=39,SNR=9.1						
LNOR	**Lincton Mounta**	**39.09**	**74**	*e*P	**P**	**05 49 10.7**	**+0.4**
LNOR				*e*	pP	05 49 19.9	-0.8
LNOR	**Lincton Mounta**	**39.09**	**74**	*e*P	**P**	**05 49 10.7**	**+0.4**
LNOR				*e*	pP	05 49 19.9	-0.8
A12A	**Yaak River Ran**	**39.14**	**68**	P	**P**	**05 49 11.2**	**+0.5**
	baz=39,SNR=6.3						
K05A	**Summer Lake**	**39.17**	**80**	⇓P	**P**	**05 49 12.1**	**+1.1**
	baz=39,SNR=29						
KIPM	**Iron Peak**	**39.23**	**85**	*e*P	**P**	**05 49 12.2**	**+0.7**
	comp=Z,37nm,1.1s,mb5.0						
KCPM	**Cahto Peak**	**39.23**	**85**	*e*P	**P**	**05 49 12.7**	**+1.2**
I07A	**Izee**	**39.29**	**77**	⇓P	**P**	**05 49 12.6**	**+0.6**
	baz=39,SNR=38						
C11A	**Tepee Creek (N**	**39.32**	**70**	⇓P	**P**	**05 49 12.0**	**-0.1**
	baz=39,SNR=14						
WDC	**Whiskeytown Da**	**39.36**	**84**	*e*P	**P**	**05 49 13.0**	**+0.4**
	comp=Z,13nm,0.8s,mb4.7						
WDC	**Whiskeytown Da**	**39.36**	**84**	*e*P	**P**	**05 49 13.0**	**+0.4**
WDC				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
B12A	**Libby**	**39.40**	**69**	⇑P	**P**	**05 49 13.2**	**+0.4**
	baz=39,SNR=9.7						
F10A	**Beach Ranch, E**	**39.67**	**73**	⇓P	**P**	**05 49 15.3**	**+0.2**
	baz=40,SNR=14						
C12B	**Naegeli Ranch,**	**39.84**	**70**	P	**P**	**05 49 16.8**	**+0.3**
	baz=40,SNR=34						
A13A	**Flathead Natio**	**39.86**	**68**	⇓P	**P**	**05 49 16.3**	**-0.4**
	baz=40						
KSRS	**Korea Array**	**39.91**	**271**	P	**P**	**05 49 18.6**	**+1.4**
	comp=Z,21nm,1.0s,mb4.8,baz=58,slow=8.2,SNR=56						
KSRS				PcP	PcP	05 51 21.6	-0.5
	comp=Z,3.0nm,0.9s,baz=63,slow=3.9,SNR=4.5						
KSRS				LR	LR	06 04 56.5	
	com

SWMT **Swartz Lake** 40.80 69 eP P 05 49 24.3 -0.2
A15A **Johnson Ranch,** 40.81 67 ⇑P P 05 49 23.5 -1.0
baz=41,SNR=18
C14A **Swan Lake** 40.82 69 ⇑P P 05 49 24.5 -0.1
baz=41
JNU **Nakatsue** 40.85 264 eP P 05 49 26.2 +1.2
comp=Z,37nm,1.1s,mb4.9
F12A **Elk City** 40.97 72 P P 05 49 25.5 -0.3
baz=41,SNR=66
MSO **Missoula** 41.19 70 P P 05 49 27.6 0.0
baz=41,SNR=29
MSO **Missoula** 41.19 70 eP P 05 49 27.3 -0.4
comp=Z,39nm,1.0s,mb5.0
B15A **Bradely Ranch,** 41.24 67 P P 05 49 27.6 -0.5
baz=41,SNR=33
SLMT **Seeley Lake** 41.24 69 eP P 05 49 27.6 -0.4
comp=Z,47nm,1.0s,mb5.1
E13A **Victor** 41.24 71 ⇓P P 05 49 27.6 -0.5
baz=41,SNR=33
G12A **Big Creek, Yel** 41.26 73 ⇑P P 05 49 27.9 -0.4
baz=41,SNR=38
D14A **Greenough** 41.31 70 ⇑P P 05 49 28.2 -0.4
baz=41,SNR=80
A16A **West Butte Ran** 41.48 66 ⇑P P 05 49 28.8 -1.1
baz=41,SNR=22
C15A **Salmond Ranch,** 41.48 68 P P 05 49 29.9 -0.1
baz=41,SNR=70
F13A **Darby** 41.50 72 ⇓P P 05 49 29.8 -0.4
baz=41,SNR=29
CHMT **Chamberlain Mo** 41.55 70 eP P 05 49 30.2 -0.4
E14A **Clinton** 41.66 70 ⇓P P 05 49 31.1 -0.4
baz=42,SNR=20
B16A **M & M Farms, S** 41.68 67 ⇑P P 05 49 30.8 -0.8
baz=42
PAHR **Pah Rah Range** 41.83 82 eP P 05 49 33.4 +0.4
comp=Z,25nm,0.7s,mb5.0
WCN **Washoe City** 41.84 83 P P 05 49 33.3 +0.2
baz=42,SNR=27
WCN **Washoe City** 41.84 83 eP P 05 49 33.6 +0.5
comp=Z,24nm,1.1s,mb4.7
WCN **Washoe City** 41.84 83 eP P 05 49 33.6 +0.5
WCN pmax pmax
comp=Z,24nm,1.1s,mb4.7
H12A **Diamond D Ranc** 41.85 74 ⇑P P 05 49 33.0 -0.1
baz=42,SNR=22
MFID **Camas Ranch** 41.89 76 ⇓P P 05 49 33.5 +0.1
baz=42,SNR=14
D15A **Lincoln** 41.91 69 ⇑P P 05 49 33.4 -0.2
baz=42,SNR=28
G13A **Cobalt** 41.93 73 ⇓P P 05 49 33.4 -0.3
baz=42,SNR=54
C16A **Fuhringer Ranc** 41.97 68 ⇓P P 05 49 33.6 -0.4
baz=42
A17A **Triple J Farms** 41.99 66 ⇓P P 05 49 33.4 -0.8
baz=42,SNR=34
F14A **Wisdom** 42.06 71 ⇑P P 05 49 35.0 +0.2
baz=42,SNR=22
I12A **Atlanta** 42.10 75 ⇓P P 05 49 35.4 +0.3
baz=42,SNR=38
E15A **Deer Lodge** 42.16 70 P P 05 49 35.5 -0.1
baz=42,SNR=31
H13A **Challis** 42.20 73 P P 05 49 35.5 -0.5
baz=42,SNR=17
CMB **Columbia Colle** 42.22 85 eP P 05 49 36.1 -0.1
comp=Z,21nm,1.1s,mb4.7
CMB **Columbia Colle** 42.22 85 eP P 05 49 36.1 -0.1
CMB pmax pmax
comp=Z,21nm,1.1s,mb4.7
B17A **L&G Farms, Che** 42.26 67 ⇑P P 05 49 35.8 -0.6
baz=42,SNR=29
G14A **Jackson** 42.31 72 P P 05 49 36.5 -0.3
baz=42,SNR=13
SAO **San Andreas Ge** 42.34 87 eP P 05 49 36.7 -0.5
comp=Z,30nm,1.4s,mb4.7
SAO **San Andreas Ge** 42.34 87 eP P 05 49 36.7 -0.5
SAO pmax pmax
comp=Z,30nm,1.4s,mb4.7
D16A **Dana Ranch, Ca** 42.48 69 ⇑P P 05 49 37.9 -0.3
baz=42,SNR=15
HRY **Holter Researc** 42.48 69 eP P 05 49 38.2 -0.1
A18A **Metzger Ranch,** 42.49 65 ⇑P P 05 49 36.9 -1.4
baz=42,SNR=7.6
WAKR **Walker** 42.52 84 eP P 05 49 39.1 +0.5
F15A **Butte** 42.56 71 ⇓P P 05 49 38.3 -0.5
baz=42,SNR=12
LRM **Limekiln Ridge** 42.59 71 eP P 05 49 38.4 -0.8
comp=Z,73nm,0.9s,mb5.4
C17A **Wharram Farm,** 42.62 67 P P 05 49 38.8 -0.5
baz=42,SNR=29
I13A **Wildhorse Cree** 42.64 74 ⇓P P 05 49 39.4 -0.2
baz=42,SNR=38
HLID **Hailey** 42.66 75 P P 05 49 39.8 +0.1
baz=42,SNR=43
HLID **Hailey** 42.66 75 eP P 05 49 39.7 0.0
comp=Z,30nm,1.0s,mb5.0
E16A **East Helena** 42.67 69 ⇓P P 05 49 39.7 -0.1
baz=42
H14A **Leadore** 42.70 73 ⇓P P 05 49 40.2 +0.2
baz=42,SNR=27
BMN **Battle Mountai** 42.74 80 eP P 05 49 40.6 +0.2
comp=Z,15nm,0.6s,mb4.9
BMN **Battle Mountai** 42.74 80 eP P 05 49 40.6 +0.2
BMN pmax pmax
comp=Z,15nm,0.6s,mb4.9
DLMT **Dillon** 42.76 71 eP P 05 49 40.2 -0.3
B18A **Beardsley Farm** 42.80 66 P P 05 49 40.1 -0.6
baz=43,SNR=18
J13A **Cove Ranch, Pi** 42.90 75 ⇑P P 05 49 41.6 0.0
baz=43,SNR=14
MCMT **McKenzie Canyo** 42.90 72 eP P 05 49 41.4 -0.3
comp=Z,11nm,0.6s,mb4.8
D17A **Six Diamond Ra** 42.92 68 ⇓P P 05 49 41.5 -0.3
baz=43,SNR=22
G15A **Dillon** 42.93 71 ⇓P P 05 49 41.4 -0.4
baz=43,SNR=36
EGMT **Eagleton** 43.00 66 ⇓P P 05 49 41.5 -0.9
baz=43,SNR=17
EGMT **Eagleton** 43.00 66 eP P 05 49 41.4 -1.0
comp=Z,36nm,0.9s,mb5.1
I14A **Mackay** 43.03 74 P P 05 49 43.0 +0.2
baz=43,SNR=31
F16A **Kennard Place,** 43.10 70 P P 05 49 43.0 -0.2
baz=43,SNR=13
A19A **Klindworth Far** 43.11 65 P P 05 49 42.5 -0.7
baz=43,SNR=15
H15A **Lima** 43.13 72 P P 05 49 43.6 0.0
baz=43,SNR=15
BOZ **Bozeman (W)** 43.17 70 P P 05 49 44.1 +0.3
baz=43,SNR=59
BOZ **Bozeman (W)** 43.17 70 eP P 05 49 43.6 -0.3
comp=Z,43nm,0.9s,mb5.2
BOZ **Bozeman (W)** 43.17 70 eP P 05 49 43.6 -0.2
BOZ pmax pmax
comp=Z,43nm,0.9s,mb5.2
E17A **Martinsdale** 43.19 69 ⇓P P 05 49 44.2 +0.2
baz=43,SNR=26
B19A **Brinkman Farms** 43.24 65 ⇓P P 05 49 43.6 -0.7
baz=43,SNR=18
NVAR **Mina Array Bea** 43.27 83 P P 05 49 45.2 +0.5
comp=Z,10nm,0.8s,mb4.6,baz=292,slow=8.3,SNR=80
NVAR PcP PcP 05 51 33.0 -0.2
comp=Z,4.4nm,0.8s,baz=288,slow=3.6,SNR=3.8
NVAR ScP ScP 05 55 23.6 +2.2
comp=Z,0.4nm,0.7s,baz=296,slow=4.7,SNR=2.5
NVAR **Mina Array Bea** 43.27 83 P P 05 49 45.2 +0.5
NVAR PcP PcP 05 51 33.0 -0.2
NVAR ScP ScP 05 55 23.6 +2.2
G16A **Moss Hill, Enn** 43.30 71 P P 05 49 44.4 -0.4
baz=43,SNR=37
J14A **Carey** 43.33 74 ⇓P P 05 49 45.9 +0.8
baz=43,SNR=26
D18A **Linhart Farms,** 43.41 67 ⇓P P 05 49 45.9 +0.2
baz=43,SNR=34
C19A **Slack Wire Ran** 43.56 66 ⇓P P 05 49 47.0 +0.1
baz=43,SNR=65
I15A **Monteview** 43.57 73 ⇓P P 05 49 47.4 +0.3
baz=43,SNR=8.3
A20A **Cobblestone Ra** 43.60 64 ⇑P P 05 49 46.8 -0.4
baz=43
F17A **Fitzpatrick Pl** 43.60 70 ⇓P P 05 49 47.3 0.0
baz=43,SNR=21
E18A **Harlowton** 43.68 68 ⇓P P 05 49 48.4 +0.5
baz=44,SNR=40
QLMT **Earthquake Lak** 43.74 71 eP P 05 49 48.7 +0.3
comp=Z,10nm,1.0s,mb4.5
MTUM **Tungsten Hills** 43.77 85 eP P 05 49 49.6 +0.8
G17A **Pierce Place,** 43.88 70 ⇑P P 05 49 49.9 +0.4
baz=44,SNR=23

H16A **Russell Place,** 43.92 71 ⇑P P 05 49 50.0 +0.2
baz=44,SNR=54
J15A **Blackfoot** 43.94 74 ⇓P P 05 49 50.2 +0.1
baz=44,SNR=24
D19A **Cripps Ranch,** 43.96 67 ⇑P P 05 49 49.6 -0.5
baz=44,SNR=39
K14A **Jones Ranch, D** 43.98 75 ⇑P P 05 49 50.8 +0.4
baz=44,SNR=12
YMR **Madison River** 44.10 71 eP P 05 49 51.5 +0.1
comp=Z,93nm,1.0s,mb5.5
YMR e pP 05 50 00.8 -1.0
F18A **Big Timber** 44.16 69 ⇓P P 05 49 51.7 -0.1
baz=44,SNR=25
C20A **Veseth Ranch,** 44.17 66 P P 05 49 51.7 -0.1
baz=44,SNR=17
TIN **Tinemaha** 44.17 85 ⇓P P 05 49 52.4 +0.4
baz=44,SNR=7.9
I16A **Newdale** 44.24 72 ⇓P P 05 49 52.7 +0.3
baz=44,SNR=16
L14A **Malta** 44.24 76 ⇓P P 05 49 52.6 +0.2
baz=44,SNR=79
GCMT **Greycliff** 44.25 69 eP P 05 49 52.3 -0.1
comp=Z,27nm,1.0s,mb4.9
GCMT e pP 05 50 01.9 -1.1
YNR **Norris Junctio** 44.25 71 eP P 05 49 53.2 +0.7
comp=Z,90nm,1.0s,mb5.5
YNR e pP 05 50 02.4 -0.6
K15A **Arbon** 44.29 74 P P 05 49 53.3 +0.5
baz=44,SNR=52
YFT **Old Faithful** 44.30 71 eP P 05 49 54.2 +1.2
comp=Z,44nm,0.9s,mb5.2
YFT e pP 05 50 03.4 0.0
B21A **Ellsworth Farm** 44.35 65 ⇑P P 05 49 52.5 -0.7
baz=44,SNR=23
E19A **Rath Farm, Rou** 44.39 68 P P 05 49 53.7 +0.1
baz=44,SNR=36
VES **Vestal, Richgr** 44.40 87 ⇓P P 05 49 53.7 -0.1
baz=44,SNR=6.2
D20A **Manuel Ranch,** 44.42 67 ⇑P P 05 49 53.7 -0.2
baz=44,SNR=19
H17A **Grant Village** 44.49 71 P P 05 49 55.5 +1.1
baz=44,SNR=59
LKWY **Lake** 44.50 71 eP P 05 49 55.7 +1.2
comp=Z,44nm,0.9s,mb5.2
LKWY e pP 05 50 05.1 +0.1
LKWY **Lake** 44.50 71 eP P 05 49 55.7 +1.2
LKWY e pP 05 50 05.1 +0.2
LKWY pmax pmax
comp=Z,44nm,0.9s,mb5.2
J16A **Bone** 44.51 73 P P 05 49 55.2 +0.7
baz=44,SNR=44
IMW **Indian Meadow** 44.55 72 eP P 05 49 55.4 +0.5
comp=Z,41nm,1.1s,mb5.2
G18A **Lazy EL Ranch,** 44.57 70 ⇓P P 05 49 54.7 -0.4
baz=44,SNR=8.7
DCID1 **Drake Creek** 44.58 73 eP P 05 49 56.1 +1.0
comp=Z,22nm,1.1s,mb4.9
FLWY **Flagg Ranch** 44.59 72 eP P 05 49 55.8 +0.6
comp=Z,107nm,1.4s,mb5.5
FLWY e pP 05 50 05.4 -0.3
C21A **Desert Coulee** 44.62 65 P P 05 49 55.1 -0.4
baz=44,SNR=22
F19A **Roth Farm, Mol** 44.63 69 ⇑P P 05 49 55.0 -0.6
baz=44,SNR=19
RRI2 **Red Ridge** 44.64 73 eP P 05 49 56.0 +0.4
comp=Z,86nm,1.3s,mb5.4
HVU **Hansel Valley** 44.67 76 eP P 05 49 56.1 +0.2
comp=Z,30nm,0.8s,mb5.2
HVU **Hansel Valley** 44.67 76 eP P 05 49 56.1 +0.2
HVU pmax pmax
comp=Z,30nm,0.8s,mb5.2
GRAC **Grapevine Rang** 44.74 84 ⇑P P 05 49 56.6 +0.1
baz=45,SNR=12
E20A **Meyer Farm, Mu** 44.75 67 P P 05 49 56.4 -0.1
baz=45,SNR=15
MOOW **Moose Ponds** 44.75 72 eP P 05 49 56.4 -0.2
comp=Z,22nm,1.3s,mb4.8
I17A **Pilgrim Ck.** 44.76 72 ⇑P P 05 49 56.1 -0.5
baz=45,SNR=5.1
K16A **Soda Springs** 44.77 74 ⇑P P 05 49 58.0 +1.2
baz=45,SNR=57
L15A **Malad City** 44.77 75 ⇑P P 05 49 57.0 +0.3
baz=45,SNR=17
TPAW **Teton Pass** 44.78 73 eP P 05 49 56.8 +0.1
comp=Z,14nm,0.8s,mb4.8
RLMT **Red Lodge** 44.85 70 P P 05 49 57.1 -0.2
baz=45,SNR=63
RLMT **Red Lodge** 44.85 70 eP P 05 49 57.3 0.0
comp=Z,30nm,1.3s,mb5.0
RLMT e pP 05 50 06.6 -1.2
H18A **Shoshone NF, C** 44.87 70 ⇓P P 05 49 57.7 +0.3
baz=45,SNR=16
ISA **Isabella** 44.90 86 ⇓P P 05 49 57.2 -0.6
baz=45,SNR=11
ISA **Isabella** 44.90 86 eP P 05 49 57.1 -0.7
comp=Z,14nm,1.0s,mb4.8
ISA **Isabella** 44.90 86 eP P 05 49 57.1 -0.7
ISA pmax pmax
comp=Z,14nm,1.0s,mb4.8
REDW **Red Top Meadow** 44.91 73 eP P 05 49 58.0 +0.2
comp=Z,24nm,1.0s,mb5.0
REDW e pP 05 50 07.8 -0.4
SNOW **Snow King Moun** 44.91 72 eP P 05 49 58.4 +0.6
comp=Z,39nm,1.2s,mb5.1
LOHW **Long Hollow** 44.91 72 eP P 05 49 58.1 +0.3
comp=Z,33nm,1.4s,mb5.0
B22A **Reddig Ranch S** 44.99 64 ⇑P P 05 49 57.7 -0.6
baz=45
J17A **Brown Place, J** 44.99 73 P P 05 49 59.3 +0.8
baz=45,SNR=11
R11A **Troy Canyon, C** 45.01 81 P P 05 49 58.4 -0.3
baz=45,SNR=40
BGU **Big Grassy Mou** 45.02 77 eP P 05 49 58.9 +0.2
comp=Z,28nm,1.1s,mb5.0
M15A **Larsen Ranch,** 45.05 76 P P 05 49 59.5 +0.5
baz=45,SNR=38
D21A **La Casta Ranch** 45.09 66 P P 05 49 59.1 -0.1
baz=45,SNR=11
AHID **Auburn Hatcher** 45.10 73 eP P 05 49 59.8 +0.5
comp=Z,41nm,1.2s,mb5.1
F20A **Billings** 45.13 68 ⇑P P 05 49 59.3 -0.2
baz=45
SPUT **South Promonto** 45.14 76 eP P 05 49 59.8 +0.2
comp=Z,47nm,1.2s,mb5.2
K17A **Gardner Place,** 45.22 73 ⇑P P 05 50 00.3 +0.1
baz=45,SNR=8.5
MPMC **Manual Prospec** 45.26 85 ⇑P P 05 50 00.8 +0.1
baz=45,SNR=7.8
H19A **Powell** 45.27 70 ⇑P P 05 50 01.1 +0.5
baz=45,SNR=31
E21A **Keefer Ranch,** 45.34 67 P P 05 50 01.3 +0.2
baz=45,SNR=10
L16A **Fish Haven** 45.34 75 ⇑P P 05 50 01.9 +0.6
baz=45,SNR=31
S11A **Rachel** 45.34 82 ⇓P P 05 50 01.5 +0.2
baz=45,SNR=18
N15A **Stansbury Isla** 45.35 77 P P 05 50 01.2 -0.1
baz=45,SNR=73
FURC **Furnace Creek,** 45.39 84 P P 05 50 01.9 +0.2
baz=45,SNR=20
G20A **Bridger** 45.41 69 P P 05 50 01.5 -0.2
baz=45,SNR=61
OSI **Osito Adit** 45.42 88 eP P 05 50 02.0 0.0
comp=Z,18nm,0.8s,mb5.0
J18A **Kendall Valley** 45.49 72 ⇑P P 05 50 02.6 +0.2
baz=45,SNR=47
HWUT **Hardware Ranch** 45.50 75 eP P 05 50 02.4 -0.1
comp=Z,19nm,0.9s,mb5.0
LRMC **Laurel Mountai** 45.51 86 ⇑P P 05 50 02.2 -0.4
baz=45,SNR=7.1
DUG **Dugway** 45.59 77 P P 05 50 03.2 0.0
baz=45,SNR=98
DUG **Dugway** 45.59 77 eP P 05 50 03.2 0.0
comp=Z,70nm,1.1s,mb5.5
DUG **Dugway** 45.59 77 eP P 05 50 03.2 0.0
DUG pmax pmax
comp=Z,70nm,1.1s,mb5.5
BJI **Beijing** 45.62 282 P P 05 50 03.6 +0.1
BJI pP pP 05 50 14.4 +0.4
BJI sP sP 05 50 18.6 +0.4
BJI S S 05 56 34.1 -9.4
BJI pmax pmax
comp=Z,33nm,1.0s,mb5.2
BJI LR LR
comp=N,280nm,24.1s,MS4.4
BJI LR LR
comp=E,430nm,23.2s,MS4.4

BJI LR LR
comp=Z,560nm,26.1s,MS4.4
I19A **Meeteetse** 45.63 71 ⇓P P 05 50 03.5 0.0
baz=45,SNR=15
L17A **Cokeville** 45.63 74 ⇓P P 05 50 03.8 +0.3
baz=45,SNR=10
M16A **Huntsville** 45.64 75 ⇓P P 05 50 03.9 +0.3
baz=46,SNR=54
BJT **Baijiatuau** 45.64 282 eP P 05 50 04.6 +0.9
comp=Z,19nm,0.8s,mb5.1
BJT **Baijiatuau** 45.64 282 eP P 05 50 04.6 +1.0
BJT pmax pmax
comp=Z,19nm,0.8s
EDW2 **Edwards Air Fo** 45.70 87 ⇓P P 05 50 03.7 -0.5
baz=46
F21A **Absaloka Mine,** 45.71 68 ⇓P P 05 50 04.0 0.0
baz=46,SNR=12
NOQ **North Oquirrh** 45.73 77 eP P 05 50 04.6 +0.3
comp=Z,59nm,1.0s,mb5.5
LAO **LASA Array** 45.74 66 ⇑P P 05 50 04.5 +0.1
baz=46,SNR=18
LAO **LASA Array** 45.74 66 eP P 05 50 04.2 -0.2
comp=Z,21nm,1.0s,mb5.0
O15A **The Old Anders** 45.75 77 P P 05 50 05.2 +0.8
baz=46,SNR=9.8
U10A **Ash Meadows, A** 45.75 84 ⇑P P 05 50 04.9 +0.3
baz=46,SNR=7.0
P14A **Drum Mountains** 45.80 78 P P 05 50 04.8 -0.1
baz=46,SNR=74
K18A **Toltan Ranch,** 45.81 73 P P 05 50 05.8 +0.8
baz=46,SNR=55
DGMT **Dagmar** 45.91 63 ⇑P P 05 50 04.4 -1.2
baz=46,SNR=6.2
DGMT **Dagmar** 45.91 63 eP P 05 50 04.8 -0.8
comp=Z,53nm,1.1s,mb5.4
DGMT e pP 05 50 14.5 -1.6
S12A **Delamar Landin** 45.92 82 ⇑P P 05 50 05.9 0.0
baz=46,SNR=25
T11A **Corn Creek, Al** 45.92 82 P P 05 50 05.8 -0.1
baz=46,SNR=61
CTU **Camp Tracy** 45.94 76 eP P 05 50 06.2 +0.3
comp=Z,29nm,1.0s,mb5.2
H20A **Greybull** 45.95 70 ⇓P P 05 50 05.3 -0.7
baz=46,SNR=15
G21A **Lodge Grass** 46.00 68 ⇓P P 05 50 05.9 -0.5
baz=46,SNR=12
N16A **Rees Ranch, Co** 46.01 76 ⇓P P 05 50 06.9 +0.4
baz=46,SNR=8.4
BW06 **Boulder Array** 46.03 73 P P 05 50 06.2 -0.5
baz=46,SNR=100
BW06 **Boulder Array** 46.03 73 eP P 05 50 06.1 -0.5
comp=Z,91nm,1.2s,mb5.6
PDAR **Pinedale Array** 46.03 73 P P 05 50 06.1 -0.5
comp=Z,45nm,1.0s,mb5.3,baz=302,slow=3.3,SNR=150
PDAR LR LR 06 06 52.5
comp=Z,396nm,21.0s,MS4.3,baz=308,slow=33
J19A **Crowheart** 46.04 72 ⇓P P 05 50 07.1 +0.4
baz=46,SNR=30
Q14A **Sevier Lake (B** 46.04 79 P P 05 50 06.8 0.0
baz=46,SNR=65
MWC **Mount Wilson** 46.09 88 eP P 05 50 07.0 -0.2
comp=Z,37nm,1.0s,mb5.3
MWC **Mount Wilson** 46.09 88 eP P 05 50 07.0 -0.2
MWC pmax pmax
comp=Z,37nm,1.0s,mb5.3
R13A **O'Grain Ranch,** 46.11 80 ⇑P P 05 50 07.7 +0.4
baz=46,SNR=23
SHOC **Shoshone** 46.12 85 ⇓P P 05 50 07.4 0.0
baz=46,SNR=14
M17A **Scullys Gap (B** 46.13 75 ⇓P P 05 50 07.4 0.0
baz=46,SNR=16
GSC **Goldstone** 46.17 86 P P 05 50 08.0 +0.1
baz=46,SNR=18
GSC **Goldstone** 46.17 86 eP P 05 50 07.8 0.0
comp=Z,35nm,0.9s,mb5.3
GSC **Goldstone** 46.17 86 eP P 05 50 07.8 -0.1
GSC pmax pmax
comp=Z,35nm,0.9s,mb5.3
JLU **Jordanelle** 46.17 76 eP P 05 50 07.8 0.0
comp=Z,30nm,0.9s,mb5.2
NLU **North Lily Min** 46.18 77 eP P 05 50 08.2 +0.3
comp=Z,32nm,0.9s,mb5.2
I20A **Worland** 46.19 70 ⇑P P 05 50 08.2 +0.3
baz=46,SNR=28
L18A **Fontenelle, Gr** 46.24 74 ⇑P P 05 50 08.2 -0.1
baz=46,SNR=21
TLY **Talaya** 46.25 303 eP P 05 50 14.4 +6.1
TLY e 05 51 43.7
TLY eS S 05 57 11.7 +19
TLY pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TLY MLR MLR
comp=Z,315nm,19.0s,MS4.3
P15A **Leamington** 46.29 78 ⇓P P 05 50 08.7 -0.1
baz=46,SNR=32
BFSC **Mount Baldy Ra** 46.33 87 P P 05 50 09.1 0.0
baz=46,SNR=5.1
N17A **Moffit Pass** 46.34 75 P P 05 50 08.9 -0.3
baz=46,SNR=19
DAU **Daniels Canyon** 46.41 76 eP P 05 50 10.3 +0.7
comp=Z,44nm,1.0s,mb5.3
DAU **Daniels Canyon** 46.41 76 eP P 05 50 10.3 +0.7
DAU pmax pmax
comp=Z,44nm,1.0s,mb5.3
MPU **Maple Canyon** 46.42 77 eP P 05 50 10.1 +0.4
comp=Z,24nm,0.8s,mb5.2
K19A **Absolon Red Bu** 46.42 72 ⇑P P 05 50 09.4 -0.3
baz=46,SNR=56
SHPR **Sheep Range** 46.43 83 eP P 05 50 09.4 -0.5
comp=Z,7.4nm,0.9s,mb4.6
H21A **Big Horn, Sher** 46.43 69 P P 05 50 09.6 -0.2
baz=46,SNR=20
ULN **Ulaanbaatar** 46.47 296 eP P 05 50 11.6 +1.6
comp=Z,13nm,0.8s,mb4.9
ULN **Ulaanbaatar** 46.47 296 eP P 05 50 11.6 +1.5
ULN pmax pmax
comp=Z,13nm,0.8s,mb4.9
ULN **Ulaanbaatar** 46.47 296 P P 05 50 11.2 +1.1
comp=Z,251nmcomp=Z,22nm,0.9s,mb5.1
M18A **Lyman** 46.52 74 ⇓P P 05 50 10.1 -0.4
baz=46,SNR=9.3
L19A **Farson** 46.54 73 ⇓P P 05 50 10.1 -0.6
baz=46,SNR=24
S13A **Holt Ranch, En** 46.55 81 ⇑P P 05 50 10.9 +0.1
baz=46,SNR=27
J20A **Shoshoni** 46.56 71 P P 05 50 10.9 +0.1
baz=46,SNR=31
Q15A **Fillmore** 46.58 78 ⇑P P 05 50 11.4 +0.4
baz=46,SNR=22
TUQ **Turquoise Moun** 46.63 85 ⇓P P 05 50 11.3 -0.2
baz=46,SNR=5.6
P16A **Fountain Green** 46.65 77 ⇑P P 05 50 12.4 +0.9
baz=46,SNR=7.2
ARUT **Antelope Range** 46.68 81 eP P 05 50 12.0 +0.2
comp=Z,17nm,1.0s,mb4.9
ARUT **Antelope Range** 46.68 81 eP P 05 50 12.0 +0.2
ARUT pmax pmax
comp=Z,17nm,1.0s,mb4.9
V11A **Goodsprings** 46.68 84 ⇓P P 05 50 11.8 -0.1
baz=46,SNR=8.6
I21A **Big Trails, Te** 46.76 70 P P 05 50 12.1 -0.3
baz=47,SNR=32
K20A **Yellowstone Ra** 46.82 72 ⇑P P 05 50 12.2 -0.7
baz=47,SNR=33
O17A **Robinson Place** 46.85 76 P P 05 50 13.8 +0.7
baz=47,SNR=18
SONM **Songino Array** 46.86 297 P P 05 50 13.6 +0.5
comp=Z,8.7nm,1.0s,mb4.7,baz=52,slow=8.9,SNR=44
SONM PcP PcP 05 51 45.6 +0.2
comp=Z,7.0nm,1.1s,baz=113,slow=0.6,SNR=5.2
SONM ScP ScP 05 55 39.0 +2.9
comp=Z,0.9nm,0.8s,baz=25,slow=4.8,SNR=3.4
SONM LR LR 06 10 52.2
comp=Z,1µm,19.8s,MS4.9,baz=62,slow=37
SONM **Songino Array** 46.86 297 P P 05 50 13.6 +0.5
SONM PcP PcP 05 51 45.6 +0.2
SONM ScP ScP 05 55 39.0 +2.9
SONM LR LR 06 10 52.2
SONM **Songino Array** 46.86 297 P P 05 50 13.6 +0.5
SONM 05 51 45.6
U12A **Valley of Fire** 46.86 83 ⇑P P 05 50 13.3 0.0
baz=47,SNR=7.5
S14A **Cedar City** 46.87 80 ⇑P P 05 50 13.6 +0.3
baz=47,SNR=5.0
T13A **Saint George** 46.88 82 ⇓P P 05 50 13.9 +0.5
baz=47,SNR=19
CCUT **Cedar City** 46.88 81 eP P 05 50 13.7 +0.3
comp=Z,11nm,0.7s,mb4.9

J21A	Lysite	46.94	71	⇑P	P	05 50 13.4	-0.4
	baz=47,SNR=29						
MSU	Marysvale	47.01	79	eP	P	05 50 14.6	+0.2
	comp=Z,17nm,0.7s,mb5.1						
MSU	Marysvale	47.01	79	eP	P	05 50 14.6	+0.2
MSU				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
N18A	Larsen Ranch,	47.02	75	⇓P	P	05 50 14.0	-0.4
	baz=47,SNR=14						
TMUT	Trail Mountain	47.12	77	eP	P	05 50 15.8	+0.6
	comp=Z,57nm,1.0s,mb5.5						
V12A	Nelson	47.12	84	⇓P	P	05 50 15.3	+0.1
	baz=47						
R15A	Junction	47.13	79	⇓P	P	05 50 15.6	+0.3
	baz=47,SNR=15						
ZAK	Zakamensk	47.15	301	⇓iP	P	05 50 16.6	+1.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
L20A	Wamsutter	47.20	73	⇑P	P	05 50 15.6	-0.3
	baz=47,SNR=9.5						
GMRC	Granite Mounta	47.23	85	⇓P	P	05 50 15.8	-0.3
	baz=47,SNR=7.3						
U13A	Pakoon Wash	47.23	82	⇓P	P	05 50 16.1	0.0
	baz=47,SNR=31						
O18A	Roosevelt	47.25	76	⇓P	P	05 50 16.6	+0.4
	baz=47,SNR=25						
P17A	Butcher Ranch,	47.29	77	P	P	05 50 17.1	+0.6
	baz=47,SNR=16						
T14A	Hurricane	47.36	81	⇑P	P	05 50 17.5	+0.3
	baz=47,SNR=9.9						
N19A	John Jarvie Ra	47.37	74	⇓P	P	05 50 16.9	-0.3
	baz=47,SNR=15						
Q16A	Castle Valley	47.37	78	P	P	05 50 18.0	+0.8
	baz=47,SNR=34						
LDFC	Landfair	47.37	85	eP	P	05 50 16.9	-0.4
	comp=Z,37nm,0.8s,mb5.4						
S15A	Panguitch	47.42	80	⇓P	P	05 50 18.2	+0.6
	baz=47,SNR=15						
J22A	Midwest	47.47	70	⇓P	P	05 50 17.9	-0.1
	baz=47,SNR=83						
K21A	Alcova	47.48	71	P	P	05 50 17.1	-0.9
	baz=47,SNR=34						
P18A	Preston Nutter	47.50	76	⇑P	P	05 50 18.6	+0.5
	baz=47						
BELC	Belle Mtn. Jos	47.52	86	⇓P	P	05 50 17.6	-0.9
	baz=47,SNR=5.2						
V13A	Grand Canyon W	47.57	83	⇓P	P	05 50 19.0	+0.2
	baz=47,SNR=21						
R16A	Teasdale	47.58	79	P	P	05 50 19.4	+0.6
	baz=47,SNR=86						
M20A	Sweetwater, Wa	47.61	73	⇓P	P	05 50 19.2	+0.2
	baz=47,SNR=13						
SRU	San Rafael	47.65	77	⇓P	P	05 50 19.4	0.0
	baz=48,SNR=63						
MOY	Mondy	47.65	304	eP	P	05 50 20.7	+1.5
U14A	Mt Trumbull	47.71	82	⇑P	P	05 50 20.0	+0.1
	baz=48,SNR=18						
O19A	Miners Draw (B	47.77	75	P	P	05 50 20.5	+0.3
	baz=48,SNR=85						
L21A	Rawlins	47.81	72	⇑P	P	05 50 20.4	-0.2
	baz=48,SNR=54						
T15A	Red Dirt Ranch	47.82	81	⇑P	P	05 50 20.6	-0.1
	baz=48,SNR=35						
S16A	Weppner Ranch,	47.86	79	P	P	05 50 21.2	+0.2
	baz=48,SNR=61						
Q18A	Rafter H Ranch	47.89	77	⇓P	P	05 50 21.2	0.0
	baz=48,SNR=52						
K22A	Casper	47.90	71	⇑P	P	05 50 20.6	-0.6
	baz=48,SNR=18						
HHC	Hu-ho-hao-te	47.93	286	eP	P	05 50 22.4	+0.9
HHC				pP	pP	05 50 37.9	+5.8
HHC				PcP	PcP	05 51 49.3	-0.1
HHC				PP	PP	05 52 15.0	+1.6
HHC				ScP	ScP	05 55 37.3	-3.5
HHC				S	S	05 57 14.0	-2.4
HHC				ScS	ScS	06 00 06.8	-4.8
HHC				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.5						
HHC				pmax	pmax		
	comp=Z,190nm,5.6s						
HHC				LR	LR		
	comp=N,530nm,15.3s,MS4.8						
HHC				LR	LR		
	comp=E,710nm,18.5s,MS4.8						
HHC				LR	LR		
	comp=Z,780nm,17.1s,MS4.8						
IRM	Iron Mountain	47.95	86	P	P	05 50 21.4	-0.3
	baz=48,SNR=8.1						
N20A	Spence Gulch,	47.96	74	⇑P	P	05 50 22.0	+0.2
	baz=48,SNR=17						
R17A	Hanksville Air	47.97	78	P	P	05 50 21.4	-0.4
	baz=48,SNR=62						
GUMO	Guam	47.97	232	LR	LR	06 07 11.6	
	comp=Z,133nm,19.4s,baz=164,slow=32						
BAR	Barrett	47.98	88	eP	P	05 50 21.7	-0.2
	comp=Z,16nm,1.0s,mb5.0						
M21A	Separation Pea	48.03	73	⇓P	P	05 50 21.8	-0.5
	baz=48,SNR=14						
RWWY	Rawlins	48.07	72	eP	P	05 50 22.2	-0.4
	comp=Z,69nm,1.3s,mb5.5						
BC3	Big Chuckawall	48.09	86	⇑P	P	05 50 22.0	-0.9
	baz=48						
W13A	Hualapai Mount	48.12	84	⇑P	P	05 50 22.7	-0.3
	baz=48						
U15A	North Rim	48.25	81	P	P	05 50 24.3	+0.2
	baz=48,SNR=60						
V14A	Boquillas Ranc	48.26	83	P	P	05 50 23.9	-0.2
	baz=48,SNR=22						
P19A	Cripple Cowboy	48.26	76	⇑P	P	05 50 24.3	+0.2
	baz=48,SNR=84						
SSE	Sheshan	48.27	269	P	P	05 50 21.3	-3.0
SSE				PcP	PcP	05 51 45.8	-5.0
SSE				S	S	05 57 20.4	-1.0
SSE				sS	sS	05 57 44.5	+5.7
SSE				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.5						
SSE				pmax	pmax		
	comp=Z,440nm,4.5s						
SSE				LR	LR		
	comp=N,420nm,4.9s						
SSE				LR	LR		
	comp=E,340nm,4.9s						
SSE				LR	LR		
	comp=Z,650nm,4.6s						
T16A	Glen Canyon Da	48.38	80	⇓P	P	05 50 24.0	-1.0
	baz=48						
O20A	White River Ci	48.40	75	⇓P	P	05 50 25.1	0.0
	baz=48,SNR=48						
S17A	Black Ridge (B	48.40	79	⇑P	P	05 50 25.1	-0.1
	baz=48,SNR=92						
N21A	Black Mountain	48.45	74	⇑P	P	05 50 25.3	-0.2
	baz=48,SNR=9.9						
RSSD	Black Hills	48.48	68	eP	P	05 50 24.9	-0.8
	comp=Z,27nm,0.9s,mb5.3						
RSSD	Black Hills	48.48	68	eP	P	05 50 24.9	-0.8
RSSD				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
R18A	Canyonlands Na	48.48	78	P	P	05 50 25.1	-0.7
	baz=48,SNR=31						
PDMCI	Parker Dam,Lak	48.49	85	⇓P	P	05 50 25.4	-0.5
	baz=48,SNR=7.5						
X13A	Yucca	48.49	84	⇑P	P	05 50 25.4	-0.5
	baz=48,SNR=9.5						
Q19A	Hogan Spring (	48.51	77	⇓P	P	05 50 25.6	-0.4
	baz=48,SNR=52						
W14A	Seligman	48.55	83	⇓P	P	05 50 26.3	0.0
	baz=48,SNR=11						
Y12C	Blythe	48.61	85	⇑P	P	05 50 26.8	0.0
	baz=48,SNR=6.9						
M22A	Cedar Creek Ra	48.61	72	⇓P	P	05 50 26.3	-0.5
	baz=48,SNR=18						
P20A	De Beque	48.70	75	⇑P	P	05 50 27.3	-0.2
	baz=48						
L23A	Garrett	48.71	71	P	P	05 50 27.2	-0.3
	baz=48,SNR=54						
V15A	Kaibab Nationa	48.72	82	P	P	05 50 28.3	+0.7
	baz=48,SNR=40						
T17A	Navajo Res., N	48.81	80	P	P	05 50 27.7	-0.6
	baz=49,SNR=26						
O21A	Pagoda	48.81	74	⇑P	P	05 50 28.5	+0.2
	baz=49,SNR=18						
S18A	Hurst Farm, Bl	48.86	78	P	P	05 50 28.7	0.0
	baz=49,SNR=96						
GLA	Glamis	48.88	86	eP	P	05 50 28.4	-0.5
	comp=Z,16nm,0.8s,mb5.1						
GLA	Glamis	48.88	86	eP	P	05 50 28.4	-0.6
GLA				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
R19A	Curley Farm, L	48.93	77	P	P	05 50 29.0	-0.2
	baz=49,SNR=44						
Y13A	Salome	49.00	85	⇑P	P	05 50 29.4	-0.4
	baz=49						
BTO	Baotou	49.01	287	eP	P	05 50 30.3	+0.5
PV10	Paradox Valley	49.01	77	eP	P	05 50 30.0	+0.1
	comp=Z,1μm,0.8s						
N22A	Wattenberg Ran	49.06	73	⇑P	P	05 50 30.4	+0.1
	baz=49,SNR=14						
W15A	Williams	49.08	82	⇑P	P	05 50 30.0	-0.4
	baz=49,SNR=5.7						
NJ2	Nanjing	49.08	272	eP	P	05 50 30.1	-0.4
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
PV04	Paradox Valley	49.08	77	eP	P	05 50 30.3	-0.1
Q20A	Ridgley Place,	49.10	76	P	P	05 50 30.1	-0.4
	baz=49,SNR=30						
X14A	Yava	49.15	84	P	P	05 50 31.2	+0.2
	baz=49,SNR=15						
U16A	Tuba City	49.15	81	⇓P	P	05 50 31.1	+0.1
	baz=49,SNR=14						
L24A	Wheatland	49.21	71	P	P	05 50 31.2	-0.1
	baz=49,SNR=10						
P21A	Newcastle	49.26	75	⇑P	P	05 50 31.7	0.0
	baz=49						
T18A	Mexican Hat	49.29	79	P	P	05 50 31.4	-0.6
	baz=49,SNR=68						
N23A	Red Feather La	49.31	72	P	P	05 50 32.5	+0.3
	baz=49,SNR=22						
PHWY	Pilot Hill	49.35	72	eP	P	05 50 31.7	-0.7
	comp=Z,21nm,1.2s,mb5.0						
S19A	Harvey Farm, M	49.35	78	P	P	05 50 32.4	-0.1
	baz=49,SNR=78						
O22A	Kremmling	49.40	74	⇓P	P	05 50 32.8	0.0
	baz=49,SNR=22						
ULM	Lac du Bonnet	49.41	57	P	P	05 50 31.9	-0.8
	comp=Z,2.3nm,0.3s,mb4.6,baz=294,slow=9.8,SNR=5.3						
ULM				LR	LR	06 13 52.2	
	comp=Z,333nm,18.1s,MS4.4,baz=304,slow=39						
Y14A	Wickenburg	49.43	84	⇑P	P	05 50 32.5	-0.6
	baz=49,SNR=11						
PV01	Paradox Valley	49.45	77	eP	P	05 50 33.0	-0.2
	comp=Z,5μm,0.8s						
Z13A	Yuma Proving G	49.52	85	P	P	05 50 33.5	-0.3
	baz=49,SNR=8.6						
R20A	Redvale	49.53	77	P	P	05 50 33.6	-0.3
	baz=49,SNR=36						
X15A	Humboldt	49.55	83	⇓P	P	05 50 34.1	+0.1
	baz=49,SNR=17						
W16A	Flagstaff	49.59	82	⇓P	P	05 50 34.9	+0.7
	baz=49,SNR=14						
Q21A	Lamborn Mesa,	49.61	76	⇑P	P	05 50 34.4	0.0
	baz=49,SNR=9.4						
M24A	Cheyenne	49.62	71	⇑P	P	05 50 34.7	+0.2
	baz=49,SNR=9.2						
P22A	Eagle	49.63	74	⇓P	P	05 50 33.9	-0.7
	baz=49,SNR=14						
V17A	Tonalea, Kykot	49.70	81	⇑P	P	05 50 35.5	+0.3
	baz=50,SNR=42						
O23A	Lake Granby, G	49.75	73	⇓P	P	05 50 35.9	+0.5
	baz=50,SNR=12						
SMCO	Snowmass	49.76	75	eP	P	05 50 35.4	-0.1
	comp=Z,12nm,0.7s,mb5.0						
S20A	Disappointment	49.77	77	⇓P	P	05 50 35.6	-0.1
	baz=50,SNR=65						
Y15A	Casa Rosa Ranc	49.84	84	⇑P	P	05 50 36.1	-0.1
	baz=50,SNR=14						
R21A	Cimarron	49.92	76	⇓P	P	05 50 36.5	-0.3
	baz=50,SNR=28						
Q22A	Crested Butte,	50.00	75	⇑P	P	05 50 37.6	+0.2
	baz=50,SNR=34						
T19A	Beclabito	50.01	79	P	P	05 50 36.8	-0.7
	baz=50,SNR=125						
X16A	Lo Nia Camp, P	50.09	83	⇓P	P	05 50 38.4	+0.3
	baz=50,SNR=16						
V18A	Ganado	50.17	80	⇓P	P	05 50 39.0	+0.3
	baz=50,SNR=12						
ISCO	Idaho Springs	50.19	73	⇑P	P	05 50 39.1	+0.3
	baz=50,SNR=19						
ISCO	Idaho Springs	50.19	73	eP	P	05 50 39.2	+0.4
	comp=Z,50nm,1.4s,mb5.3						
ISCO	Idaho Springs	50.19	73	eP	P	05 50 39.2	+0.4
ISCO				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.3						
S21A	Coal Bank Pass	50.23	77	P	P	05 50 39.0	-0.1
	baz=50,SNR=59						
U19A	Dine' College,	50.24	79	P	P	05 50 39.2	-0.1
	baz=50,SNR=25						
O24A	Longmont	50.31	73	⇓P	P	05 50 40.6	+0.8
	baz=50,SNR=7.3						
Y16A	Circle Bar Ran	50.42	83	⇓P	P	05 50 40.6	-0.1
	baz=50,SNR=12						
R22A	Saguache, Gunn	50.49	76	⇓P	P	05 50 42.0	+0.9
	baz=50,SNR=31						
X17A	Forest Lakes	50.53	82	⇑P	P	05 50 42.0	+0.5
	baz=50,SNR=6.1						
AGMN	Agassiz Nation	50.57	59	eP	P	05 50 39.9	-1.6
	comp=Z,7.6nm,0.6s,mb4.8						
Q23A	Hartsel	50.62	74	P	P	05 50 43.0	+0.9
	baz=50,SNR=70						
W18A	Petrified Fore	50.68	81	P	P	05 50 43.1	+0.5
	baz=50,SNR=13						
V19A	Window Rock	50.72	80	⇓P	P	05 50 42.8	0.0
	baz=50,SNR=7.1						
115A	Sonoran Desert	50.74	85	⇓P	P	05 50 43.1	0.0
	baz=51						
S22A	4UR Ranch, Cre	50.76	76	P	P	05 50 43.5	+0.4
	baz=51,SNR=46						
Z16A	Peralta Trail,	50.81	84	⇑P	P	05 50 42.9	-0.7
	baz=51						
T21A	Navajo Lake	50.81	77	P	P	05 50 44.1	+0.6
	baz=51,SNR=14						
214A	Organ Pipe Nat	50.88	86	⇓P	P	05 50 43.4	-0.7
	baz=51						
W19A	Sanders	50.90	80	⇓P	P	05 50 44.8	+0.5
	baz=51,SNR=7.9						
Y17A	Roosevelt	50.94	83	⇑P	P	05 50 44.6	+0.1
	baz=51,SNR=16						
X18A	Snowflake	50.94	81	P	P	05 50 45.0	+0.5
	baz=51,SNR=16						
Q24A	Divide	51.00	74	⇓P	P	05 50 45.3	+0.4
	baz=51,SNR=11						
V20A	Brimhall	51.02	79	P	P	05 50 45.1	0.0
	baz=51,SNR=12						
U21A	Nageezi	51.10	78	P	P	05 50 45.7	-0.1
	baz=51,SNR=59						
T22A	Edith	51.19	77	P	P	05 50 46.5	+0.1
	baz=51,SNR=53						
P25A	Willow Gulch B	51.23	73	P	P	05 50 47.6	+1.0
	baz=51,SNR=27						
S23A	Nye Farm, Mont	51.29	76	⇑P	P	05 50 47.9	+0.8
	baz=51,SNR=6.7						
Y18A	Canyon Day Jun	51.38	82	P	P	05 50 47.9	0.0
	baz=51,SNR=19						
X19A	St. Johns	51.41	81	P	P	05 50 48.5	+0.4
	baz=51,SNR=18						
W20A	Ramah	51.44	80	⇑P	P	05 50 48.4	+0.1
	baz=51,SNR=15						
R24A	Sanders Place,	51.49	75	⇑P	P	05 50 49.1	+0.5
	baz=51,SNR=31						
V21A	Milan	51.52	79	⇑P	P	05 50 48.7	-0.2
	baz=51,SNR=13						
SDCO	Great Sand Dun	51.56	75	P	P	05 50 49.2	0.0
	baz=51,SNR=40						
SDCO	Great Sand Dun	51.56	75	eP	P	05 50 49.1	-0.1
	comp=Z,25nm,1.0s,mb5.1						
Q25A	Bedland, Calha	51.57	73	⇓P	P	05 50 49.5	+0.3
	baz=51,SNR=20						
OGNE	Ogallala	51.59	70	P	P	05 50 49.2	-0.1
	baz=51,SNR=15						
OGNE	Ogallala	51.59	70	eP	P	05 50 49.2	-0.1
	comp=Z,153nm,1.4s,mb5.7						
U22A	Llaves	51.63	77	⇓P	P	05 50 50.0	+0.4
	baz=51,SNR=34						
T23A	Casias Ranch,	51.70	76	P	P	05 50 50.8	+0.6
	baz=52,SNR=21						
Y19A	Nutrioso	51.75	81	⇓P	P	05 50 51.0	+0.4
	baz=52,SNR=9.7						
117A	Oracle	51.75	84	P	P	05 50 50.8	+0.1
	baz=52,SNR=10						
S24A	Houchin Ranch,	51.81	75	⇑P	P	05 50 51.7	+0.7
	baz=52,SNR=24						
X20A	Quemado	51.83	80	P	P	05 50 51.9	+0.7
	baz=52,SNR=38						
V22A	San Miguel Ran	51.90	78	⇓P	P	05 50 51.6	-0.1
	baz=52,SNR=30						
TUC	Tucson	51.90	84	eP	P	05 50 51.4	-0.3
	comp=Z,15nm,0.9s,mb4.9						
TUC	Tucson	51.90	84	eP	P	05 50 51.4	-0.4
TUC				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
R25A	Fountain Ranch	52.04	74	⇑P	P	05 50 53.0	+0.3
	baz=52,SNR=6.6						
U23A	El Rito	52.06	77	P	P	05 50 53.0	0.0
	baz=52,SNR=89						
118A	Homack Ranch,	52.19	83	⇑P	P	05 50 53.5	-0.4
	baz=52,SNR=20						
S25A	Robets Cordova	52.26	75	P	P	05 50 54.2	-0.2
	baz=52,SNR=25						
T24A	Torres, Weston	52.27	76	⇑P	P	05 50 55.4	+0.9
	baz=52,SNR=28						
Y20A	Horse Springs,	52.32	81	⇓P	P	05 50 55.6	+0.8
	baz=52,SNR=32						
X21A	Alamocita Cree	52.33	80	⇑P	P	05 50 55.7	+0.8
	baz=52,SNR=33						
V23A	Ortiz Mt. (NFS	52.45	78	P	P	05 50 56.8	+1.0
	baz=52,SNR=34						
W22A	Albuquerque	52.48	79	⇑P	P	05 50 56.7	+0.7
	baz=52,SNR=5.8						
119A	Ashpeak Ranch,	52.52	83	⇑P	P	05 50 56.8	+0.5
	baz=52,SNR=8.7						
U24A	Moreno Valley	52.57	76	⇓P	P	05 50 57.2	+0.5
	baz=52,SNR=18						
T25A	Trinidad	52.62	75	⇓P	P	05 50 57.3	+0.3
	baz=52,SNR=50						
Y21A	Point of Rocks	52.69	80	⇓P	P	05 50 58.3	+0.7
	baz=52,SNR=8.9						
Z20A	Nine Sixteen R	52.72	82	⇓P	P	05 50 58.0	+0.2
	baz=53,SNR=18						
LAZ	Ladron	52.76	80	eP	P	05 50 58.5	+0.4
	comp=Z,15nm,0.9s,mb4.9						
ANMO	Albuquerque	52.81	79	eP	P	05 50 58.4	-0.1
	comp=Z,12nm,0.9s,mb4.8						
ANMO	Albuquerque	52.81	79	eP	P	05 50 58.4	-0.1
ANMO				pmax	pmax		
	comp=Z,12nm,0.9s						
W23A	Werner Place,	52.86	78	⇓P	P	05 50 59.0	+0.2
	baz=53,SNR=14						
WHN	Wuhan	52.92	274	P	P	05 50 59.5	+0.1
ECSD	EROS Data Cent	52.96	64	eP	P	05 50 57.4	-2.1
	comp=Z,18nm,1.0s,mb5.0						
318A	Bisbee	52.99	84	⇓P	P	05 50 59.5	-0.3
	baz=53,SNR=8.5						
LENM	Lemitar	53.02	80	eP	P	05 51 00.3	+0.3
	comp=Z,39nm,1.3s,mb5.2						
V24A	Rampart Ranch,	53.02	77	P	P	05 51 00.3	+0.3
	baz=53,SNR=41						
219A	White Tail Can	53.06	83	⇑P	P	05 51 00.2	-0.2
	baz=53,SNR=8.3						
120A	U Bar Ranch, L	53.08	82	⇓P	P	05 51 00.5	0.0
	baz=53,SNR=13						
U25A	Circle Dot Ran	53.10	76	P	P	05 51 00.5	-0.2
	baz=53,SNR=37						
LPM	Los Pinos Moun	53.13	79	eP	P	05 51 01.2	+0.4
	comp=Z,13nm,0.9s,mb4.9						
SUMG	Summit	53.16	14	eP	P	05 51 01.8	+1.3
	comp=Z,16nm,0.9s,mb4.9						
Z21A	St. Cloud Mine	53.16	81	⇓P	P	05 51 01.4	+0.3
	baz=53,SNR=19						
Y22A	Socorro	53.17	80	P	P	05 51 01.8	+0.6
	baz=53,SNR=31						
BNM	Barren Site	53.24	79	eP	P	05 51 01.8	+0.2
	comp=Z,18nm,1.0s,mb4.9						
W24A	Lazy 6 Ranch,	53.28	78	⇑P	P	05 51 01.9	0.0
	baz=53,SNR=38						
V25A	Rancho No Teng	53.35	76	⇑P	P	05 51 02.8	+0.4
	baz=53,SNR=30						
319A	Douglas	53.47	84	P	P	05 51 03.4	-0.1
	baz=53,SNR=6.3						
U26A	Atchley Ranch,	53.51	75	⇑P	P	05 51 03.7	+0.1
	baz=53,SNR=38						
220A	Playas Peak, P	53.58	83	⇑P	P	05 51 04.0	-0.1
	baz=53,SNR=30						
121A	Cookes Peak, D	53.61	82	P	P	05 51 04.6	+0.2
	baz=53,SNR=15						
Z22A	Elephant Butte	53.63	80	⇓P	P	05 51 04.6	+0.1
	baz=54,SNR=14						
YULB	Yu-li	53.67	262	eP	P	05 51 06.2	+1.3
	comp=Z,46nm,1.1s,mb5.3						
Y23A	Lovelace Mesa,	53.74	79	P	P	05 51 05.8	+0.4
	baz=54,SNR=50						
W25A	X Bar L Ranch,	53.85	77	P	P	05 51 06.2	+0.1
	baz=54,SNR=21						
V26A	Tequesquite Ra	53.88	76	⇑P	P	05 51 06.2	-0.1
	baz=54,SNR=37						
XAN	Xi'an	53.91	281	P	P	05 51 06.5	-0.1
XAN				pP	pP	05 51 19.8	+2.5
XAN				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
XAN				pmax	pmax		
	comp=Z,37nm,5.8s						
320A	Kipp Ranch, An	53.97	83	⇓P	P	05 51 07.0	0.0
	baz=54,SNR=16						
122A	Conniff Cattle	53.99	81	⇑P	P	05 51 07.8	+0.6
	baz=54,SNR=22						
Z23A	Rita Site, Whi	54.08	80	⇓P	P	05 51 08.1	+0.3
	baz=54,SNR=13						
Y24A	Capitan	54.12	79	⇑P	P	05 51 08.3	+0.2
	baz=54,SNR=109						
ZALV	Zalesovo Beam	54.18	314	P	P	05 51 08.7	+0.5
	comp=Z,0.6nm,0.3s,mb4.0,baz=75,slow=6.1,SNR=3.5						
ZALV				PcP	PcP	05 52 11.9	-0.4
	comp=Z,4.6nm,0.5s,baz=30,slow=4.5,SNR=8.3						
ZALV				LR	LR	06 15 25.7	
	comp=Z,314nm,20.4s,MS4.4,baz=64,slow=37						
ZALV	Zalesovo Beam	54.18	314	P	P	05 51 08.7	+0.5
ZALV						05 52 12.0	
X25A	Clemmons Ranch	54.19	78	⇑P	P	05 51 09.0	+0.4
	baz=54,SNR=5.5						
NVS	Novosibirsk	54.31	315	eP	P	05 51 07.3	-1.9
CBKS	Cedar Bluff	54.32	71	⇓P	P	05 51 09.4	-0.1
	baz=54,SNR=11						
CBKS	Cedar Bluff	54.32	71	eP	P	05 51 09.2	-0.3
	comp=Z,106nm,1.0s,mb5.7						
CBKS	Cedar Bluff	54.32	71	eP	P	05 51 09.2	-0.3
CBKS				pmax	pmax		
	comp=Z,106nm,1.0s,mb5.7						
222A	Williams Famil	54.33	82	⇑P	P	05 51 09.7	0.0
	baz=54,SNR=8.8						
W26A	Owens Ranch, T	54.36	77	⇑P	P	05 51 10.0	+0.1
	baz=54,SNR=5.6						
123A	Bell Site, Whi	54.49	81	P	P	05 51 11.3	+0.5
	baz=54,SNR=11						
Z24A	Sheeppen Canyo	54.57	79	P	P	05 51 11.6	+0.2
	baz=54,SNR=24						
Y25A	Mesa, Roswell	54.58	78	⇑P	P	05 51 11.4	-0.1
	baz=54,SNR=23						
X26A	CR and CF Fran	54.70	77	⇑P	P	05 51 11.6	-0.7
	baz=54,SNR=15						
W27A	Bowe Ranch, En	54.81	76	⇓P	P	05 51 11.7	-1.3
	baz=55,SNR=11						
124A	Stringfield Ra	54.94	80

MNTX e pP 05 51 27.8 -2.3
CPRX Cap Rock 55.69 79 eP **P 05 51 19.0 -0.4**
comp=Z,27nm,0.8s,mb5.3
CPRX e pP 05 51 28.2 -2.0
MSTX Muleshoe 55.72 77 P **P 05 51 19.2 -0.4**
baz=56,SNR=19
225A Deer Hill, Car 55.73 80 P **P 05 51 19.9 +0.1**
baz=56,SNR=11
AMTX Amarillo 55.77 75 P **P 05 51 19.8 -0.2**
baz=56,SNR=8.5
AMTX Amarillo 55.77 75 eP **P 05 51 19.4 -0.6**
comp=Z,17nm,0.8s,mb5.1
AMTX e pP 05 51 28.9 -1.8
324A Moseley Ranch, 55.78 81 P **P 05 51 19.8 -0.3**
baz=56,SNR=15
GTA Gaotai 55.79 292⇑eP **P 05 51 20.5 +0.4**
GTA pP pP 05 51 33.0 +2.2
GTA sP sP 05 51 39.8 +4.8
GTA S **S 05 59 03.0 -1.4**
GTA sS sS 05 59 26.8 +4.7
GTA SS SS 06 02 48.0 -1.7
GTA pmax pmax
comp=Z,65nm,1.0s,mb5.6
GTA pmax pmax
comp=Z,370nm,4.0s
GTA LR LR
comp=N,580nm,20.4s,MS4.8
GTA LR LR
comp=E,560nm,19.4s,MS4.8
GTA LR LR
comp=Z,870nm,19.4s,MS4.8
126A Clayton Basin, 55.86 79⇑P **P 05 51 20.1 -0.6**
baz=56,SNR=8.8
Z27A Tatum 55.90 78 P **P 05 51 20.2 -0.7**
baz=56,SNR=10
GDL2 Guadalupe Moun 55.95 80 eP **P 05 51 21.0 -0.4**
comp=Z,7.0nm,0.8s,mb4.7
GDL2 e pP 05 51 30.2 -1.8
KSU1 Kansas State U 55.96 68 eP **P 05 51 19.9 -1.4**
comp=Z,91nm,0.9s,mb5.8
ENH Enshi 56.14 277 eP **P 05 51 22.4 -0.3**
comp=Z,10nm,0.5s,mb5.1
325A Bean Ranch, Si 56.15 81⇓P **P 05 51 22.2 -0.6**
baz=56,SNR=31
226A Malaga, Loving 56.21 80 P **P 05 51 22.9 -0.3**
baz=56,SNR=20
425A Indio Mountain 56.54 81⇓P **P 05 51 24.9 -0.7**
baz=56,SNR=34
227A Bennet, Jal 56.74 79⇑P **P 05 51 26.2 -0.7**
baz=57
326A Caldwell Ranch 56.80 80 P **P 05 51 27.1 -0.3**
baz=57,SNR=29
426A McDonald Obser 57.22 81⇑P **P 05 51 29.8 -0.5**
baz=57,SNR=19
328A Wristen Ranch, 57.47 79 P **P 05 51 31.4 -0.8**
baz=57,SNR=25
427A Hayter Ranch, 57.48 80 P **P 05 51 31.4 -0.8**
baz=57,SNR=13
526A Mary Lane Ranc 57.60 81⇓P **P 05 51 32.8 -0.3**
baz=57,SNR=21
WMOK Wichita Mounta 57.61 74 eP **P 05 51 32.5 -0.6**
comp=Z,20nm,0.8s,mb5.2
WMOK e pP 05 51 42.1 -1.8
WMOK Wichita Mounta 57.61 74 eP **P 05 51 32.5 -0.6**
WMOK e pP 05 51 42.1 -1.8
WMOK pmax pmax
comp=Z,20nm,0.8s,mb5.2
KEV Kevo 57.69 350 eP **P 05 51 32.1 -1.0**
comp=Z,11nm,1.2s,mb4.8
KEV Kevo 57.69 350 eP **P 05 51 32.2 -0.9**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KEV Kevo 57.69 350 ep **P 05 51 32.2 -0.9**
comp=Z,0.9nm,0.3s,mb4.3
527A Woodward Ranch 57.84 81 P **P 05 51 34.1 -0.7**
baz=58,SNR=11
626A Big Bend Ranch 57.93 82 P **P 05 51 34.9 -0.5**
baz=58,SNR=26
428A Kincaid Ranch, 58.01 80⇑P **P 05 51 35.6 -0.3**
baz=58,SNR=24
ARCES ARCESS Array B 58.06 350 P **P 05 51 34.5 -1.3**
comp=Z,2.2nm,0.4s,mb4.6,baz=19,slow=8.0,SNR=56
ARCES PcP PcP 05 52 26.3 -0.9
comp=Z,8.0nm,0.8s,baz=15,slow=5.3,SNR=7.3
ARCES LR LR 06 19 09.2
comp=Z,299nm,20.5s,MS4.4,baz=200,slow=39
ARCES ARCESS Array B 58.06 350 P **P 05 51 34.5 -1.2**
ARCES 05 52 26.3
ARE0 ARCESS Array S 58.06 350 eP **P 05 51 34.7 -1.0**
528A Cox Ranch, San 58.34 80 P **P 05 51 37.9 -0.3**
baz=58,SNR=19
TXAR Lajitas Array 58.37 82 P **P 05 51 37.4 -1.1**
comp=Z,12nm,0.9s,mb4.9,baz=300,slow=4.7,SNR=79
TXAR LR LR 06 13 26.4
comp=Z,231nm,21.9s,MS4.3,baz=345,slow=33
TXAR Lajitas Array 58.37 82 P **P 05 51 37.4 -1.1**
LVZ Lovozero 58.43 346c iP **P 05 51 37.0 -1.3**
LVZ pmax pmax
comp=Z,22nm,1.2s,mb5.1
LVZ MLR MLR
comp=Z,513nm,22.0s,MS4.6
627A Terlingua Ranc 58.46 81⇑P **P 05 51 38.5 -0.6**
baz=58
628A Black Gap, Mar 58.75 81⇓P **P 05 51 40.5 -0.6**
baz=59
APA Apatity 58.92 346⇑iP **P 05 51 40.0 -1.8**
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
APA MLR MLR
comp=Z,400nm,18.0s,MS4.6
HDIL Hopedale 59.14 63 eP **P 05 51 42.5 -1.1**
comp=Z,46nm,0.8s,mb5.6
KURK Kurchatov 59.17 314 eP **P 05 51 42.6 -1.0**
comp=Z,15nm,1.0s,mb5.0
KURK Kurchatov 59.17 314d iP **P 05 51 45.4 +1.7**
KURK pmax pmax
comp=Z,14nm,1.2s,mb4.9
CD2 Chengdu 59.23 282⇓iP **P 05 51 45.3 +0.9**
CD2 pP pP 05 51 57.9 +2.7
CD2 sP sP 05 52 03.3 +3.9
CD2 PP PP 05 53 58.0 +2.8
CD2 S **S 05 59 47.9 -1.8**
CD2 sS sS 06 00 09.4 +2.0
CD2 SS SS 06 03 44.3 +0.3
CD2 pmax pmax
comp=Z,50nm,0.8s,mb5.6
CD2 pmax pmax
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,490nm,16.6s,MS4.8
CD2 LR LR
comp=E,460nm,19.0s,MS4.8
CD2 LR LR
comp=Z,490nm,16.7s,MS4.7
WMQ Urumqi 59.53 303 P **P 05 51 47.0 +0.7**
WMQ pP pP 05 52 00.0 +2.9
WMQ sP sP 05 52 05.0 +3.7
WMQ PP PP 05 54 01.0 +3.5
WMQ ScP ScP 05 56 29.0 -2.2
WMQ S **S 05 59 52.0 -1.2**
WMQ ScS ScS 06 01 30.0 -3.4
WMQ SS SS 06 03 50.0 +1.9
WMQ pmax pmax
comp=Z,18nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,94nm,5.0s
WMQ LR LR
comp=N,460nm,18.0s,MS4.9
WMQ LR LR
comp=E,570nm,18.0s,MS4.9
WMQ LR LR
comp=Z,680nm,18.0s,MS4.8
SCHQ Schefferville 59.78 39 P **P 05 51 46.8 -1.1**
comp=Z,3.0nm,0.8s,mb4.4,baz=7.6,slow=15,SNR=2.4
SCHQ LR LR 06 19 33.9
comp=Z,588nm,18.1s,MS4.8,baz=37,slow=38
SLM Saint Louis 59.93 65 eP **P 05 51 48.1 -1.1**
comp=Z,64nm,1.1s,mb5.6
SLM Saint Louis 59.93 65 eP **P 05 51 48.1 -1.1**
SLM pmax pmax
comp=Z,64nm,1.1s,mb5.6
JCT Junction City 59.95 78⇑P **P 05 51 48.1 -1.3**
baz=60,SNR=19
JCT Junction City 59.95 78 eP **P 05 51 47.9 -1.5**
comp=Z,19nm,0.8s,mb5.2
JCT Junction City 59.95 78 eP **P 05 51 47.9 -1.5**
JCT pmax pmax
comp=Z,19nm,0.8s,mb5.2
MK31 Makanchi Array 60.20 309 eP **P 05 51 49.8 -1.1**
MK31 Makanchi Array 60.20 309ce **P 05 51 51.1 +0.2**
MK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
MKAR Makanchi Array 60.20 309 P **P 05 51 49.5 -1.4**
comp=Z,6.9nm,1.0s,mb4.7,baz=46,slow=5.2,SNR=18
MKAR LR LR 06 17 35.7
comp=Z,297nm,21.4s,MS4.4,baz=33,slow=36
MKAR Makanchi Array 60.20 309 P **P 05 51 49.5 -1.4**
MKAR LR LR 06 17 35.7
MKAR Makanchi Array 60.20 309 P **P 05 51 49.5 -1.4**
FVM French Village 60.27 65 eP **P 05 51 50.0 -1.6**
comp=Z,23nm,0.7s,mb5.3
FVM e pP 05 52 02.1 -0.2
FVM French Village 60.27 65 eP **P 05 51 50.0 -1.5**
FVM e pP 05 52 02.1 -0.2
FVM pmax pmax
comp=Z,23nm,0.7s,mb5.3
GYA Guiyang 60.59 276⇓iP **P 05 51 53.9 +0.1**
GYA pP pP 05 52 06.8 +2.2
GYA sP sP 05 52 15.0 +6.2
GYA PP PP 05 54 08.8 +1.5
GYA ScP ScP 05 56 34.0 -2.2
GYA S **S 06 00 02.8 -4.4**
GYA sS sS 06 00 24.1 -1.0
GYA SS SS 06 04 01.3 -4.2
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,540nm,18.1s,MS4.8
GYA LR LR
comp=E,420nm,19.2s,MS4.8
GYA LR LR
comp=Z,570nm,17.4s,MS4.8
BVAR Borovoye Array 61.01 320 PKP2ab 06 21 31.9
comp=Z,0.6nm,0.4s,baz=225,slow=1.9,SNR=4.8
BRVK Borovoye 61.03 320 eP **P 05 51 56.8 +0.4**
BRVK pmax pmax
comp=Z,12nm,2.0s,mb4.7
BRVK MLR MLR
comp=Z,963nm,19.0s,MS5.0
OLIL Olney 61.07 63 eP **P 05 51 55.9 -1.0**
comp=Z,129nm,0.9s,mb6.1
SIUC Southern Illin 61.15 65 eP **P 05 51 56.2 -1.3**
comp=Z,89nm,1.3s,mb5.7
UALR University of 61.41 69 eP **P 05 51 58.3 -1.0**
comp=Z,41nm,1.1s,mb5.5
BLO Bloomington 61.64 62 eP **P 05 51 59.6 -1.1**
comp=Z,94nm,1.0s,mb5.9
BLO Bloomington 61.64 62 eP **P 05 51 59.6 -1.1**
BLO pmax pmax
comp=Z,93nm,1.0s,mb5.9
SVE Sverdlovsk 61.68 328⇓eP **P 05 52 01.5 +0.8**
SVE e 05 52 41.6
SVE eS **S 06 00 29.9 +10**
SVE eSSS 06 07 10.6
SVE pmax pmax
comp=Z,13nm,0.7s,mb5.2
SVE MLR MLR
comp=Z,1μm,20.0s,MS5.1
HBAR Harrisburg 61.84 68 eP **P 05 52 00.8 -1.4**
PRGR Permogore 61.94 338 eP **P 05 52 01.2 -1.2**
PRGR e*PP pP 05 52 15.2 +1.9
PRGR e 05 52 39.0
PRGR pmax pmax
comp=Z,21nm,1.0s,mb5.2
GLAT Glass 62.12 66 eP **P 05 52 03.7 -0.4**
UTMT University of 62.31 66 eP **P 05 52 04.6 -0.8**
comp=Z,190nm,1.1s,mb6.1
HALT Halls 62.35 66 eP **P 05 52 04.8 -0.8**
ARU Arti 62.68 328 eP **P 05 52 06.9 -0.5**
comp=Z,11nm,0.6s,mb5.2
ARU Arti 62.68 328d iP **P 05 52 07.2 -0.3**
ARU S **S 06 00 34.0 +1.0**
ARU SS SS 06 04 39.6 +2.7
ARU pmax pmax
comp=Z,25nm,1.7s,mb5.1
ARU MLR MLR
comp=Z,428nm,19.0s,MS4.6
ACSO Alum Creek Sta 62.81 59 eP **P 05 52 08.0 -0.6**
comp=Z,34nm,0.8s,mb5.5
ACSO e pP 05 52 17.2 -2.2
WVT Waverly 63.05 65 eP **P 05 52 09.6 -0.7**
comp=Z,69nm,1.3s,mb5.6
WVT Waverly 63.05 65 eP **P 05 52 09.6 -0.7**
WVT pmax pmax
comp=Z,69nm,1.3s,mb5.6
OXF Oxford 63.30 68 eP **P 05 52 11.1 -0.8**
comp=Z,254nm,1.2s
OXF e pP 05 52 20.6 -2.2
OXF Oxford 63.30 68 eP **P 05 52 11.1 -0.8**
OXF e pP 05 52 20.6 -2.2
OXF pmax pmax
comp=Z,254nm,1.2s
JOF Joensuu 63.59 345 eP **P 05 52 12.2 -1.2**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
JOF Joensuu 63.59 345 ep **P 05 52 12.2 -1.2**
comp=Z,2.1nm,0.3s,mb4.7
KMI Kunming 63.98 278 P **P 05 52 17.1 +0.5**
KMI pP pP 05 52 30.3 +2.9
KMI sP sP 05 52 35.8 +4.2
KMI PP PP 05 54 40.9 +3.6
KMI S **S 06 00 48.8 -1.3**
KMI sS sS 06 01 12.1 +4.1
KMI SS SS 06 04 59.4 +0.7
KMI pmax pmax
comp=Z,26nm,1.0s,mb5.2
KMI pmax pmax
comp=Z,180nm,4.5s
KMI LR LR
comp=N,360nm,29.5s,MS4.5
KMI LR LR
comp=E,250nm,30.4s,MS4.5
KMI LR LR
comp=Z,270nm,31.3s,MS4.2
KLMR Klimovskoe 64.00 340 eP **P 05 52 14.5 -1.6**
KLMR pmax pmax
comp=Z,17nm,1.1s,mb5.0
KLMR MLR MLR
comp=Z,650nm,17.0s,MS4.9
QIZ Qiongzhong 64.04 268 P **P 05 52 17.8 +0.8**
QIZ pP pP 05 52 29.1 +1.3
QIZ sP sP 05 52 34.0 +2.0
QIZ PP PP 05 54 38.0 +0.1
QIZ S **S 06 00 51.3 +0.5**
QIZ sS sS 06 01 09.8 +1.0
QIZ pmax pmax
comp=Z,19nm,1.3s,mb5.0
QIZ pmax pmax
comp=Z,140nm,8.0s
QIZ LR LR
comp=N,200nm,17.8s
QIZ LR LR
comp=Z,210nm,23.3s
QIZ Qiongzhong 64.04 268 eP **P 05 52 17.4 +0.4**
comp=Z,6.2nm,1.0s,mb4.6
VBMS Vicksburg 64.29 70 eP **P 05 52 18.3 -0.2**
comp=Z,72nm,1.0s,mb5.7
MCWV Mont Chateau 64.89 57 eP **P 05 52 24.8 +2.5**
comp=Z,24nm,0.8s,mb5.3
KAF Kangasniemi 65.10 348 eP **P 05 52 21.9 -1.3**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KAF Kangasniemi 65.10 348 ep **P 05 52 21.9 -1.3**
comp=Z,1.2nm,0.4s,mb4.3
SSPA Standing Stone 65.20 56 eP **P 05 52 23.3 -1.0**
comp=Z,12nm,0.6s,mb5.1
AFI Afiamalu 65.34 173 LR LR 06 16 30.6
comp=Z,169nm,18.7s,MS4.3,baz=329,slow=32
CPCT Cooper Cave 65.41 64 eP **P 05 52 24.5 -1.2**
TKL Tuckaleechee C 65.67 63 eP **P 05 52 26.7 -0.7**
TKL e pP 05 52 36.8 -1.6
TKL Tuckaleechee C 65.67 63 eP **P 05 52 26.7 -0.7**
TKL e pP 05 52 36.8 -1.5
LRAL Lakeview Retre 65.75 67 eP **P 05 52 26.0 -1.9**
comp=Z,34nm,1.1s,mb5.3
FINES FINESS Array B 65.77 347 P **P 05 52 26.4 -1.2**
comp=Z,4.9nm,0.8s,mb4.6,baz=23,slow=10,SNR=9.6
FINES LR LR 06 20 10.5
comp=Z,267nm,21.5s,MS4.4,baz=190,slow=35
FINES FINESS Array B 65.77 347 P **P 05 52 26.4 -1.2**
FINES LR LR 06 20 10.5
FINES FINESS Array B 65.77 347 P **P 05 52 26.4 -1.2**
TKM2 Tokmak 2 66.28 310 eP **P 05 52 33.4 +2.2**
comp=Z,17nm,1.3s,mb4.9
TKM2 Tokmak 2 66.28 310 eP **P 05 52 33.4 +2.2**
TKM2 pmax pmax
comp=Z,17nm,1.3s,mb4.9
BLA Blacksburg 66.38 60 eP **P 05 52 31.6 -0.3**
comp=Z,59nm,1.2s,mb5.5
BLA Blacksburg 66.38 60 eP **P 05 52 31.6 -0.3**
BLA pmax pmax
comp=Z,59nm,1.2s,mb5.5
AAK Ala-Archa 67.03 310 LR LR 06 24 55.5
comp=Z,475nm,18.9s,MS4.7,baz=356,slow=39
AAK Ala-Archa 67.03 310 eP **P 05 52 37.7 +1.8**
comp=Z,7.7nm,0.8s,mb4.8
AAK Ala-Archa 67.03 310⇑iP **P 05 52 36.3 +0.3**
AAK pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
AAK MLR MLR
comp=Z,259nm,20.0s,MS4.4
AAK Ala-Archa 67.03 310 P **P 05 52 36.1 +0.1**
comp=Z,2.6nm,1.4s,mb4.1
BRAL Brewton 67.19 69 eP **P 05 52 36.1 -1.0**
comp=Z,137nm,1.1s,mb5.9
BRAL e pP 05 52 45.7 -2.4
EKS2 Erkin-Say 67.35 310 eP **P 05 52 38.1 +0.1**
comp=Z,8.2nm,0.8s,mb4.8
GOGA Godfrey 67.49 64 eP **P 05 52 37.8 -1.2**
comp=Z,100nm,1.0s,mb5.8
GOGA e pP 05 52 46.9 -3.1
GOGA Godfrey 67.49 64 eP **P 05 52 37.8 -1.2**
GOGA e pP 05 52 46.9 -3.1
GOGA pmax pmax
comp=Z,100nm,1.0s,mb5.8
PMG Port Moresby 67.52 217⇑iP **P 05 52 37.5 -1.8**
PMG pmax pmax
comp=Z,43nm,1.5s
NB2 NORSAR Subarra 67.60 355 P **P 05 52 38.2 -1.0**
comp=Z,6.4nm,1.0s,mb4.6,baz=3.8,slow=6.2
NOA NORSAR Array B 67.60 355 P **P 05 52 38.1 -1.1**
comp=Z,3.4nm,0.9s,mb4.4,baz=5.5,slow=6.3,SNR=11
NOA NORSAR Array B 67.60 355 P **P 05 52 38.1 -1.1**
LSA Lhasa 67.67 290 P **P 05 52 42.0 +1.8**
LSA pmax pmax
comp=Z,40nm,1.0s,mb5.4
LSA Lhasa 67.67 290 eP **P 05 52 41.9 +1.6**
comp=Z,123nm,1.0s,mb5.9
LSA e 05 52 55.5
LSA Lhasa 67.67 290 eP **P 05 52 41.9 +1.7**
LSA e 05 52 55.5
LSA pmax pmax
comp=Z,123nm,1.0s,mb5.9
AKTO Aktyubinsk 67.78 325 LR LR 06 24 27.6
comp=Z,579nm,21.0s,MS4.8,baz=221,slow=38
AB31 Akbulak array 68.04 323ce **P 05 52 41.8 -0.5**
AB31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
ABKAR Akbulak array 68.04 323 eP **P 05 52 41.9 -0.4**
comp=Z,3.4nm,0.5s,mb4.6
JSC Jenkinsville 68.08 62 eP **P 05 52 42.1 -0.6**
JSC e pP 05 52 52.2 -1.5
JSC Jenkinsville 68.08 62 eP **P 05 52 42.2 -0.6**
JSC e pP 05 52 52.2 -1.5
TAOE Nuku Hiva Isla 68.50 139 eS S 06 01 47.7 +2.8
comp=Z,545nm,27.9s
TAOE eLR LR 06 13 29.1
comp=Z,1μm,23.2s,baz=341
KK31 Karatay Array 68.53 313ce **P 05 52 45.3 -0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KKAR Karatay Array 68.53 313 eP **P 05 52 45.6 +0.2**
comp=Z,3.7nm,0.6s,mb4.5
KKAR Karatay Array 68.53 313 eP **P 05 52 45.6 +0.2**
KKAR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
VSU Vasula 68.55 346⇑iP **P 05 52 44.8 -0.4**
VSU pmax pmax
comp=Z,23nm,0.9s,mb5.1
VSU MLR MLR
comp=Z,369nm,22.0s,MS4.6
KSH Kashi 68.67 307 eP **P 05 52 50.6 +4.2**
KSH epP pP 05 53 03.6 +6.3
KSH esP sP 05 53 08.9 +7.4
KSH ePcP PcP 05 53 15.1 +4.0
KSH ePP PP 05 55 25.1 +7.4
KSH eScP 05 57 13.8
KSH ePcS 05 57 18.8
KSH eS S 06 01 49.0 +2.4
KSH esS sS 06 02 11.5 +6.8
KSH eScS ScS 06 02 43.3 -0.1
KSH eSS SS 06 06 16.8 +6.2
KSH pmax pmax
comp=Z,4.0nm,0.3s,mb4.8
KSH LR LR
comp=N,250nm,5.2s
KSH LR LR
comp=E,420nm,5.6s
KSH LR LR
comp=Z,260nm,8.9s
COW Cow Castle Cre 69.06 63 eP **P 05 52 49.0 +0.1**
COW e pP 05 52 58.5 -1.4
CNNC Cliffs of the 69.21 59 eP **P 05 52 48.9 -0.9**
comp=Z,6.0nm,0.5s,mb4.8
CNNC e pP 05 52 58.9 -1.9
MYLDM Lahad Datu 69.42 252 P **P 05 52 52.9 +1.6**
comp=Z,39nm,1.3s,mb5.2
NHSC New Hope 69.56 62 eP **P 05 52 51.9 0.0**
comp=Z,252nm,1.0s,mb6.1
NHSC e pP 05 53 02.1 -0.8
CHRT Chiangrai 69.69 277⇓P **P 05 52 53.0 0.0**
comp=Z,105nm,1.0s,mb5.7
OBN Obninsk 69.90 339c iP **P 05 52 52.6 -1.1**
OBN e pP 05 53 03.8 -0.8
OBN e 05 53 13.8
OBN eSS SS 06 06 30.5 +1.9
OBN pmax pmax
comp=Z,49nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,400nm,23.0s,MS4.6
KKM Kota Kinabalu 70.10 254 eP **P 05 52 55.9 +0.4**
comp=Z,48nm,1.3s,mb5.3
SHL Shillong 70.29 286⇑iP **P 05 52 56.5 -0.1**
SHL i x x 05 53 10.0
CHG Chiang Mai 71.01 276⇑P **P 05 53 00.4 -0.6**
comp=Z,15nm,0.9s,mb4.9
CHTO Chiang Mai 71.01 276 eP **P 05 53 00.5 -0.5**
comp=Z,19nm,1.1s,mb4.9
CHTO Chiang Mai 71.01 276 eP **P 05 53 00.5 -0.5**
CHTO pmax pmax
comp=Z,19nm,1.1s,mb4.9
CHTO Chiang Mai 71.01 276 P **P 05 53 00.9 -0.1**
comp=Z,16nm,1.3s,mb4.8
MRSI Marisa 71.20 246 P **P 05 53 01.5 -0.7**
comp=Z,518nmcomp=Z,37nm,1.1s,mb5.2
CMAR Chiang Mai Arr 71.28 276 P **P 05 53 02.5 -0.1**
comp=Z,9.7nm,0.8s,mb4.8,baz=26,slow=6.7,SNR=31
CMAR LR LR 06 28 03.9
comp=Z,225nm,18.1s,MS4.5,baz=32,slow=39
CMAR Chiang Mai Arr 71.28 276 P **P 05 53 02.5 -0.1**
TAPN Taplejung 71.44 291 eP **P 05 53 04.3 +0.8**
comp=Z,590nm,1.1s
ODAN Odare 71.99 290 eP **P 05 53 07.3 +0.5**
comp=Z,169nm,0.9s,mb6.0
GUN Gumba 72.08 292 eP **P 05 53 08.1 +0.7**
comp=Z,610nm,0.9s
VRHR Novokhopersk 72.36 335 eP **P 05 53 06.1 -2.5**
VRHR pmax pmax
comp=N,2.0nm,0.3s
VRHR pmax pmax
comp=E,6.0nm,0.3s
VRHR pmax pmax
comp=Z,5.0nm,0.3s,mb4.9
KKN Kakani 72.52 293 eP **P 05 53 10.4 +0.4**
comp=Z,228nm,0.9s,mb6.1
DWPF Disney 72.61 67 eP **P 05 53 10.2 -0.3**
comp=Z,80nm,1.0s,mb5.6
DWPF e pP 05 53 19.9 -1.6
PKI Pulchoki 72.61 292 eP **P 05 53 11.1 +0.6**
comp=Z,302nm,1.1s
GKN Gorkha 72.73 293 eP **P 05 53 11.4 +0.2**
comp=Z,301nm,1.1s
DMN Daman 72.75 293 eP **P 05 53 12.0 +0.6**
VSR Storozhevoye 72.88 336 eP **P 05 53 10.5 -1.2**

VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,2.0nm,0.5s
VSR pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
VSR MLR MLR
comp=N,270nm,19.0s,MS5.0
VSR MLR MLR
comp=E,710nm,19.0s,MS5.0
VSR MLR MLR
comp=Z,890nm,19.0s,MS5.1
DANN Dangsing 72.97 294 *e*P **P 05 53 13.2 +0.6**
comp=Z,291nm,0.9s
VORD Divnogorie 73.08 336 *e*P **P 05 53 11.5 -1.4**
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,30nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VORD MLR MLR
comp=N,430nm,17.0s,MS4.9
VORD MLR MLR
comp=E,330nm,17.0s,MS4.9
VORD MLR MLR
comp=Z,670nm,17.0s,MS5.0
PPT Papeete 73.19 151 *e*S S 06 02 42.5 +3.3
comp=Z,838nm,28.8s
PPT *e*SS SS 06 07 24.6 +2.9
comp=Z,160nm,27.0s
PPT *e*LR LR 06 15 41.7
comp=Z,817nm,28.0s,baz=344
PPT Papeete 73.19 151 LR LR 06 16 38.8
comp=Z,290nm,20.7s,MS4.5,baz=327,slow=29
COEN Coen 73.22 219 *e*P **P 05 53 13.3 -0.7**
comp=Z,147nm,1.0s,mb5.9
COEN Coen 73.22 219 P **P 05 53 14.2 +0.1**
comp=Z,75nm,1.4s,mb5.4
KOLN Koldanda 73.50 294 *e*P **P 05 53 16.1 +0.3**
comp=Z,123nm,1.0s,mb5.8
PYUN Piuthan 73.60 294 *e*P **P 05 53 17.3 +1.0**
comp=Z,97nm,0.2s
JOSI Joshimath 73.64 298 *e*PKP **P 05 53 15.6 -1.0**
DZM Mont Dzumac 74.41 195 *e*S S 06 02 54.5 +1.7
comp=Z,140nm,27.2s
DZM *e*LR LR 06 16 13.6
comp=Z,680nm,25.4s
TEIG Tepich 74.50 77 *e*P **P 05 53 22.0 +0.3**
comp=Z,75nm,1.6s,mb5.4
HLG Helgoland 74.60 356 *e*P **P 05 53 22.2 +0.4**
comp=Z,219nm,1.5s,mb5.9
TTSI Tana Toraja 75.29 246 P **P 05 53 26.3 0.0**
comp=Z,31nm,1.2s,mb5.1
SBUM Sibu 75.35 255 P **P 05 53 27.2 +0.5**
comp=Z,17nm,1.9s,mb4.7
KIEV Kiev 75.57 342 *e*P **P 05 53 26.1 -1.3**
comp=Z,11nm,0.8s,mb4.8
KIEV Kiev 75.57 342 *e*P **P 05 53 26.1 -1.3**
KIEV pmax pmax
comp=Z,11nm,0.8s,mb4.8
KBL Kabul 76.01 308 *e*P **P 05 53 29.4 -0.7**
comp=Z,18nm,1.0s,mb5.0
KBL Kabul 76.01 308 *e*P **P 05 53 29.5 -0.7**
KBL pmax pmax
comp=Z,19nm,1.0s,mb5.0
NRDL Niedersach Rie 76.18 355 *e*P **P 05 53 30.7 -0.2**
comp=Z,15nm,1.3s,mb4.8
AYAN Aya Nagar 76.58 299 *e*x x 05 53 25.8
KAKA Kakadu 76.79 229 *e*P **P 05 53 34.0 -0.7**
comp=Z,23nm,0.8s,mb5.2
KAKA Kakadu 76.79 229 *e*P **P 05 53 33.7 -1.0**
comp=Z,98nm,1.0s,mb5.7
KAKA *e* pP 05 53 44.4 -1.5
CLZ Clausthal 76.82 354 *e*P **P 05 53 34.7 +0.2**
comp=Z,51nm,1.7s,mb5.2
CLZ Clausthal 76.82 354 *e*P **P 05 53 34.7 +0.2**
CLZ pmax pmax
comp=Z,51nm,1.7s,mb5.2
BKSI Bulukumba 76.98 244 P **P 05 53 35.6 -0.3**
comp=Z,39nm,1.2s,mb5.2
CLL Collm 77.16 353 *e*P **P 05 53 36.2 -0.2**
comp=Z,13nm,1.2s,mb4.7
CLL Collm 77.16 353 *i* P **P 05 53 31.6 -4.8**
comp=Z,10.0nm,0.7s,mb4.8
CLL *e*S S 06 03 42.0 +19
CLL LR LR
comp=Z,300nm,21.7s,MS4.6
CLL Collm 77.16 353 *i* P **P 05 53 31.6 -4.8**
CLL *i* 05 53 46.2
CLL *e*S S 06 03 42.0 +19
CLL pmax pmax
comp=Z,22nm,0.7s,mb5.2
CLL MLR MLR
comp=Z,300nm,21.7s,MS4.6
CLL Collm 77.16 353 *i* PKPbc **P 05 53 31.6 -4.8**
comp=Z,10.0nm,0.7s,mb4.8
CLL Collm 77.16 353 *i* P **P 05 53 36.2 -0.2**
CLL *i* pP pP 05 53 46.2 -1.3
CLL *e*sS sS 06 03 42.0 +0.9
CLL *e*PS 06 04 14.0
CLL *e*sSS 06 08 46.0
CLL *e*(SSSS) 06 14 36.0
CLL Lm 06 31 00.0
comp=Z,300nm,21.7s
KUDL Kundal 77.19 299 *e*x x 05 53 20.2
KUDL AMb AMB 05 53 33.4
comp=Z,32nm,1.1s,mb5.2
NEUB Neuenburg 77.36 353 *e*P **P 05 53 37.4 -0.1**
comp=Z,68nm,1.8s,mb5.3
BUG Bochum--Univer 77.37 356 *e*P **P 05 53 37.3 -0.3**
comp=Z,16nm,1.1s,mb4.9
BRG Berggiesshubel 77.52 352 *e*P **P 05 53 38.2 -0.2**
comp=Z,8.0nm,1.0s,mb4.6
BRG Berggiesshubel 77.52 352 *i* P **P 05 53 32.1 -6.3**
comp=Z,5.3nm,0.6s,mb4.7
BRG *i* 05 53 38.3
comp=Z,8.0nm,1.0s
BRG Berggiesshubel 77.52 352 *i* P **P 05 53 32.1 -6.3**
BRG *i* 05 53 38.3
BRG pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
FBE Freiberg 77.52 352 *e*P **P 05 53 38.5 +0.1**
comp=Z,64nm,1.8s,mb5.2
KHET Khetri 77.62 299 *e*PKP **P 05 53 39.0 -0.4**
KHET AMb AMB 05 53 42.5
comp=Z,15nm,1.1s,mb4.8
CTA Charters Tower 77.69 214 P **P 05 53 38.6 -1.0**
comp=Z,15nm,0.9s,mb4.9,baz=23,slow=5.8,SNR=12
CTA LR LR 06 24 27.9
comp=Z,217nm,19.7s,MS4.5,baz=143,slow=33
CTA Charters Tower 77.69 214 *e*P **P 05 53 39.3 -0.3**
comp=Z,12nm,1.0s,mb4.8
CTA Charters Tower 77.69 214 P **P 05 53 38.6 -1.0**
CTAO Charters Tower 77.69 214 *e*P **P 05 53 38.5 -1.2**
comp=Z,22nm,1.0s,mb5.0
CTAO *e* pP 05 53 49.9 -0.9
CTAO Charters Tower 77.69 214 *e*P **P 05 53 38.5 -1.1**
CTAO *e* pP 05 53 49.9 -0.8
CTAO pmax pmax
comp=Z,22nm,1.0s,mb5.0
CTAO Charters Tower 77.69 214 P **P 05 53 39.6 0.0**
comp=Z,22nm,1.1s,mb5.0
KWP Kalwaria Pacla 77.70 346 ⇑*i*P **P 05 53 39.7 +0.2**
KWP Kalwaria Pacla 77.70 346 ⇑*i*P **P 05 53 39.7 +0.2**
PVCC Panska Ves 77.80 352 AMS AMS 06 25 40.0
comp=Z,300nm,19.9s
DPC Dobruska-Polom 77.81 350 *e*P **P 05 53 39.8 -0.2**
DPC MLR MLR
comp=Z,300nm,22.3s,MS4.6
DPC Dobruska-Polom 77.81 350 *e*P **P 05 53 39.8 -0.2**
DPC AMS AMS 06 34 50.0
comp=Z,300nm,22.3s
MOX Moxa 77.93 354 *e*P **P 05 53 40.9 +0.2**
comp=Z,27nm,1.6s,mb4.9
MOX Moxa 77.93 354 *e*P **P 05 53 40.5 -0.2**
comp=Z,26nm,1.7s,mb4.9
MOX Moxa 77.93 354 *e*P **P 05 53 40.9 +0.2**
MOX pmax pmax
comp=Z,41nm,1.6s,mb5.1
BEBN Eben Emael 78.07 357 P **P 05 53 41.5 0.0**
WERD Werda 78.07 353 *e*P **P 05 53 41.5 0.0**
comp=Z,13nm,1.4s,mb4.7
TANN Tannenbergstha 78.09 353 *e*P **P 05 53 41.5 -0.1**
comp=Z,27nm,1.8s,mb4.9

OKC Ostrava-Krasne 78.11 349 *e*P **P 05 53 41.5 -0.2**
OKC MLR MLR
comp=Z,300nm,20.0s,MS4.6
OKC Ostrava-Krasne 78.11 349 *e*P **P 05 53 41.5 -0.2**
OKC AMS AMS 06 29 30.0
comp=Z,300nm,20.0s
GUNZ Gunzen 78.15 353 *e*P **P 05 53 42.0 0.0**
comp=Z,19nm,1.3s,mb4.9
WERN Wernitzgruen 78.23 353 *e*P **P 05 53 42.5 +0.1**
comp=Z,18nm,1.2s,mb4.9
MORC Moravsky Berou 78.24 350 *e*P **P 05 53 42.7 +0.3**
comp=Z,5.3nm,1.1s,mb4.4
MORC Moravsky Berou 78.24 350 *e*P **P 05 53 42.7 +0.2**
MORC pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MEM Membach 78.25 357 P **P 05 53 42.1 -0.3**
comp=Z,12nm,1.6s,mb4.6
NKC Novy Kostel 78.28 353 *e*P **P 05 53 42.1 -0.5**
NKC Novy Kostel 78.28 353 *e*P **P 05 53 42.1 -0.5**
PRU Pruhonice 78.34 352 *e*P **P 05 53 43.7 +0.7**
PRU MLR MLR
comp=Z,300nm,21.0s,MS4.6
PRU Pruhonice 78.34 352 *e*P **P 05 53 43.7 +0.7**
PRU AMS AMS 06 23 40.0
comp=Z,300nm,21.0s
KOLS Kolonicke sedl 78.45 346 *e*P **P 05 53 44.4 +0.8**
comp=Z,7.3nm,0.9s,mb4.6
KOLS Kolonicke sedl 78.45 346 *e*P **P 05 53 44.4 +0.8**
KOLS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KOLS Kolonicke sedl 78.45 346 *e*P **P 05 53 44.4 +0.8**
BCLA Clavier 78.46 358 P **P 05 53 44.1 +0.5**
comp=Z,10nm,1.8s,mb4.5
KIV Kislovodsk 78.54 331 *e*P **P 05 53 43.9 -0.3**
KIV pmax pmax
comp=Z,24nm,1.2s,mb5.0
KIV MLR MLR
comp=Z,511nm,21.0s,MS4.8
TNS Taunus Mts 78.54 356 *e*P **P 05 53 44.0 -0.1**
comp=Z,19nm,0.9s,mb5.0
TNS Taunus Mts 78.54 356 *e*P **P 05 53 44.0 -0.1**
TNS pmax pmax
comp=Z,19nm,0.9s,mb5.0
CRVS Cervenica-Dubn 78.60 347 *e*P **P 05 53 45.1 +0.7**
comp=Z,9.0nm,1.3s,mb4.5
CRVS Cervenica-Dubn 78.60 347 *e*P **P 05 53 45.1 +0.7**
CRVS pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
CRVS Cervenica-Dubn 78.60 347 *e*P **P 05 53 45.1 +0.7**
CRVS *e* 06 19 57.2
TBI Tubuai 78.69 153 *e*S S 06 03 40.8 +1.2
comp=Z,368nm,32.8s
TBI *e*LR LR 06 18 06.6
comp=Z,696nm,29.8s,baz=335
UZH Uzhgorod 78.74 346 *e*P **P 05 53 42.4 -2.8**
ROTZ Rotzenmuhle 78.76 353 *e*P **P 05 53 45.5 +0.2**
comp=Z,13nm,1.3s,mb4.7
DOU Dourbes 78.80 358 P **P 05 53 45.5 -0.1**
comp=Z,16nm,1.9s,mb4.6
GRA1 Grafenberg Arr 78.90 354 *e*P **P 05 53 46.4 +0.3**
comp=Z,34nm,1.1s,mb5.2
GRF Grafenberg Arr 78.90 354 *e*P **P 05 53 46.4 +0.3**
comp=Z,34nm,1.1s,mb5.2
GRF *e*L 06 32 42.0
comp=N,322nm,21.9s
GRF Grafenberg Arr 78.90 354 *e*P **P 05 53 46.4 +0.3**
GRF pmax pmax
comp=Z,34nm,1.1s,mb5.2
GRF MLR MLR
comp=N,300nm,21.9s
GRF Grafenberg Arr 78.90 354 *e*P **P 05 53 46.4 +0.3**
GRF pmax pmax
comp=Z,34nm,1.1s,mb5.2
KECS Kecovo 79.14 347 *e*P **P 05 53 48.1 +0.7**
comp=Z,6.1nm,1.0s,mb4.5
KECS Kecovo 79.14 347 *e*P **P 05 53 48.1 +0.7**
KECS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KECS Kecovo 79.14 347 *e*P **P 05 53 48.1 +0.7**
KIS Kishinev 79.18 341 *e*P **P 05 53 47.0 -0.7**
KIS LRM 06 33 40.0
comp=Z,600nm,18.0s
KIS Kishinev 79.18 341 *e*P **P 05 53 47.0 -0.7**
KIS *e* 06 04 03.0
KIS MLR MLR
comp=Z,400nm,17.0s,MS4.8
KIS MLR MLR
comp=N,300nm,18.0s
TRPA Tarpa 79.19 346 ⇑*i*P **P 05 53 48.2 +0.5**
BUR08 Bucovina Ar. S 79.23 344 *e*P **P 05 53 47.9 -0.1**
ZEI Tsey 79.23 330 *e*P **P 05 53 44.6 -3.4**
ZEI pmax pmax
comp=Z,34nm,1.1s,mb5.2
BURAR Bucovina Array 79.26 344 ⇓*i*P **P 05 53 48.1 0.0**
BURAR Bucovina Array 79.26 344 ⇓*i*P **P 05 53 48.1 0.0**
KHC Kasperske Hory 79.28 352 *e*P **P 05 53 47.8 -0.4**
KHC *e*x x 05 53 52.0
KHC AMS AMS 06 24 20.0
comp=Z,200nm,19.5s
WET Wettzell 79.32 353 *e*P **P 05 53 48.4 0.0**
comp=Z,28nm,1.8s,mb4.9
WET Wettzell 79.32 353 *e*P **P 05 53 48.4 0.0**
WET pmax pmax
comp=Z,28nm,1.8s,mb4.9
VYHS Vyhne 79.35 348 *e*P **P 05 53 48.0 -0.6**
comp=Z,12nm,1.8s,mb4.5
VYHS Vyhne 79.35 348 *e*P **P 05 53 48.0 -0.6**
VYHS pmax pmax
comp=Z,12nm,1.8s,mb4.5
VYHS Vyhne 79.35 348 *e*P **P 05 53 48.0 -0.6**
GEC2 GERESS Array S 79.55 352 *e*P **P 05 53 49.4 -0.2**
comp=Z,14nm,1.2s,mb4.8
GEC2 GERESS Array S 79.55 352 *e*P **P 05 53 49.4 -0.2**
GEC2 pmax pmax
comp=Z,14nm,1.2s,mb4.8
GERES GERESS Array B 79.55 352 P **P 05 53 49.1 -0.5**
comp=Z,2.4nm,0.6s,mb4.3,baz=28,slow=6.0,SNR=16
GERES GERESS Array B 79.55 352 P **P 05 53 49.2 -0.4**
PSZ Piszkesteto 79.78 348 *e*P **P 05 53 51.8 +0.9**
comp=Z,11nm,1.1s,mb4.7
PSZ Piszkesteto 79.78 348 ⇓*i*P **P 05 53 50.7 -0.2**
PSZ Piszkesteto 79.78 348 ⇓*i*P **P 05 53 50.7 -0.2**
PSZ Piszkesteto 79.78 348 ⇓*e*P **P 05 53 50.6 -0.3**
ZST Bratislava 79.85 350 *e*P **P 05 53 53.6 +2.3**
ZST Bratislava 79.85 350 *e*P **P 05 53 53.6 +2.3**
ZST Bratislava 79.85 350 *e*P **P 05 53 53.6 +2.3**
STU Stuttgart 79.94 355 *e*P **P 05 53 51.6 -0.2**
comp=Z,23nm,1.2s,mb5.0
TESR 80.07 343 ⇓*i*P **P 05 53 53.3 +0.8**
CONA Conrad Observa 80.25 350 ⇓*i*P **P 05 53 54.4 +1.0**
comp=Z,21nm,1.6s,mb4.8
BFO Black Forest 80.43 355 *e*P **P 05 53 54.2 -0.2**
comp=Z,20nm,1.4s,mb4.8
BFO Black Forest 80.43 355 *e*P **P 05 53 54.2 -0.2**
BFO pmax pmax
comp=Z,20nm,1.4s,mb4.8
DRGR 80.47 345 ⇓P **P 05 53 55.7 +1.0**
DRGR 80.47 345 ⇓*i*P **P 05 53 55.7 +1.0**
BHPL Bhopal 80.52 295 *e*PKP **P 05 53 55.2 -0.1**
BHPL AMb AMB 05 54 11.1
comp=Z,55nm,1.1s,mb5.4
VRI Vrincioaia 80.67 343 ⇓*i*P **P 05 53 55.5 -0.3**
PLOR Plostina 80.70 343 ⇑P **P 05 53 57.0 +1.1**
PLOR Plostina 80.70 343 ⇑*i*P **P 05 53 57.0 +1.1**
RJOB Jochberg 80.73 352 *e*P **P 05 53 56.1 +0.1**
comp=Z,105nm,3.0s
CFR Carcaliu 81.06 341 ⇑P **P 05 53 59.2 +1.3**
CFR Carcaliu 81.06 341 ⇑*i*P **P 05 53 59.2 +1.3**
EIDS Eidsvold 81.08 208 *e*P **P 05 53 57.2 -0.8**
comp=Z,9.0nm,0.9s,mb4.7
GRER 81.09 342 ⇑*i*P **P 05 53 58.3 +0.3**
MLR Muntele Rosu 81.18 343 ⇓P **P 05 54 00.1 +1.6**
MLR Muntele Rosu 81.18 343 ⇓*i*P **P 05 54 00.1 +1.6**
KNA Kununurra 81.18 231 P **P 05 53 58.4 -0.3**
comp=Z,61nm,1.0s,mb5.5
WTTA Wattenberg 81.29 353 ⇑*i*P **P 05 53 59.9 +0.8**
comp=Z,40nm,1.7s,mb5.1
GNI Garni 81.33 328 LR LR 06 34 11.6
comp=Z,432nm,21.5s,MS4.8,baz=24,slow=39
GNI Garni 81.33 328 *e*P **P 05 54 00.5 +1.1**
comp=Z,18nm,1.1s,mb4.9
GNI *e* pP 05 54 11.4 +0.9
GNI Garni 81.33 328*c i*P **P 05 53 59.9 +0.6**
GNI pmax pmax
comp=Z,21nm,1.5s

GNI MLR MLR
comp=Z,402nm,20.0s
KBA Koelnbreinsper 81.33 352 ⇑*i*P **P 05 54 00.6 +1.4**
comp=Z,37nm,0.9s,mb5.3
VOIR 81.39 344 ⇓P **P 05 54 00.6 +1.0**
VOIR 81.39 344 ⇓*i*P **P 05 54 00.6 +1.0**
PGOR Pogoanele 81.55 342 ⇑*i*P **P 05 54 02.4 +2.0**
SOKA Soboth 81.57 351 ⇑*i*P **P 05 54 01.0 +0.4**
comp=Z,28nm,1.0s,mb5.1
FETA Feichten 81.59 354 ⇑*i*P **P 05 54 01.4 +0.8**
comp=Z,20nm,1.3s,mb4.9
PKSM Moragy 81.62 348 ⇑P **P 05 54 01.6 +0.8**
PKSM Moragy 81.62 348 ⇑*i*P **P 05 54 01.6 +0.8**
ABTA Abfaltersbach 81.73 352 ⇑*i*P **P 05 54 01.8 +0.5**
comp=Z,23nm,1.4s,mb4.9
GZR Gura Zlata 81.82 345 ⇓P **P 05 54 02.0 +0.1**
GZR Gura Zlata 81.82 345 ⇓*i*P **P 05 54 02.0 +0.1**
WRA Warramunga Arr 82.25 224 P **P 05 54 02.6 -1.7**
comp=Z,7.3nm,0.9s,mb4.6,baz=38,slow=6.3,SNR=30
WRA LR LR 06 27 55.5
comp=Z,141nm,20.7s,MS4.3,baz=15,slow=34
WRA Warramunga Arr 82.25 224 P **P 05 54 02.7 -1.6**
BOJS Bojanci 82.71 350 *i* P **P 05 54 06.0 -0.5**
RKT Rikitea 83.45 140 *e*S S 06 04 29.8 +0.7
comp=Z,129nm,30.8s
RKT *e*LR LR 06 20 27.9
comp=Z,792nm,30.5s,baz=332
BNI Bardonecchia 83.78 356 *e*P **P 05 54 13.2 +1.2**
comp=Z,23nm,1.1s,mb5.2
BNI Bardonecchia 83.78 356 *e*P **P 05 54 13.2 +1.2**
BNI pmax pmax
comp=Z,23nm,1.1s,mb5.2
HYB Hyderabad 84.44 291 ⇓*i*P **P 05 54 15.5 -0.3**
comp=Z,100nm,1.0s,mb5.9
HYB *e*pP pP 05 54 25.0 -2.0
VTS Vitosha 84.47 344 ⇓P **P 05 54 15.9 +0.3**
VTS Vitosha 84.47 344 ⇓*i*P **P 05 54 15.9 +0.3**
FITZ Fitzroy Crossi 84.72 232 *e*P **P 05 54 17.0 0.0**
comp=Z,46nm,0.9s,mb5.6
FITZ Fitzroy Crossi 84.72 232 *e*P **P 05 54 16.9 -0.1**
comp=Z,32nm,0.9s,mb5.5
MALT Malatya 84.98 332 *e*P **P 05 54 19.0 +0.7**
comp=Z,33nm,1.3s,mb5.3
MALT Malatya 84.98 332 ⇓P **P 05 54 19.4 +1.1**
MALT Malatya 84.98 332 ⇓*i*P **P 05 54 19.4 +1.1**
MALT Malatya 84.98 332 P **P 05 54 19.2 +0.9**
comp=Z,24nm,1.3s,mb5.2
BR131 Keskin Array S 84.99 336 *e*P **P 05 54 18.2 -0.1**
comp=Z,13nm,0.9s,mb5.0
BRTR Keskin Array B 84.99 336 P **P 05 54 18.1 -0.1**
comp=Z,13nm,0.9s,mb5.0,baz=56,slow=3.1,SNR=42
BRTR LR LR 06 37 28.6
comp=Z,145nm,19.7s,MS4.4,baz=38,slow=39
BRTR Keskin Array B 84.99 336 P **P 05 54 18.2 -0.1**
SKO Skopje 85.37 345 *e*P **P 05 54 20.8 +0.7**
KLSI 85.53 257 P **P 05 54 19.9 -1.4**
comp=Z,48nm,1.2s,mb5.6
ARMA Armidale 85.69 206 *e*P **P 05 54 22.5 +0.9**
ARMA Armidale 85.69 206 *e*P **P 05 54 22.2 +0.6**
comp=Z,14nm,0.8s,mb5.2
ARMA *e* pP 05 54 32.8 0.0
MDSI Maura Dua 85.71 257 P **P 05 54 20.6 -1.5**
ASAR Alice Springs 85.72 223 P **P 05 54 21.6 -0.4**
comp=Z,11nm,0.8s,mb5.1,baz=29,slow=4.9,SNR=58
ASAR Alice Springs 85.72 223 P **P 05 54 21.6 -0.3**
VAY Valandovo 85.82 344 *e*P **P 05 54 22.3 0.0**
KRUS Krusevo 85.99 345 *e*P **P 05 54 21.6 -1.6**
AQU L'Aquila 86.01 351 ⇑P **P 05 54 22.4 -0.9**
AQU L'Aquila 86.01 351 ⇑*i*P **P 05 54 22.4 -0.9**
POO Poona 86.27 295 *e*PKP **P 05 54 24.5 -0.5**
POO AMb AMB 05 54 33.3
comp=Z,66nm,1.8s,mb5.6
KAD Karad 87.06 294 *e*PKP **P 05 54 27.7 -1.1**
KAD AMb AMB 05 54 40.2
comp=Z,40nm,0.8s,mb5.7
PVRL Vila Real 87.29 7 *e*P **P 05 54 28.6 -1.0**
MVO Moncorvo 87.45 7 *e*P **P 05 54 29.8 -0.6**
comp=Z,19nm,1.2s,mb5.2
PVIS Viseu 87.83 7 *e*P **P 05 54 31.5 -0.7**
comp=Z,18nm,1.2s,mb5.2
MTE Manteigas 88.17 7 *e*P **P 05 54 33.2 -0.6**
comp=Z,28nm,1.1s,mb5.4
LRS Lares 88.55 62 *e*P **P 05 54 35.5 -0.5**
PCBR Castelo Branco 88.74 7 *e*P **P 05 54 35.5 -1.0**
CELP Cerrillos 88.88 62 *e*P **P 05 54 36.7 -0.7**
CELP *e* pP 05 54 47.0 -1.8
PTOM Tomar 88.88 8 *e*P **P 05 54 36.3 -0.9**
comp=Z,28nm,0.8s,mb5.6
OBIP Obispado Ponce 88.89 62 *e*P **P 05 54 37.2 -0.3**
comp=Z,84nm,1.5s,mb5.8
OBIP *e* pP 05 54 47.0 -1.8
SJG San Juan 89.08 62 *e*P **P 05 54 38.5 +0.1**
comp=Z,47nm,1.3s,mb5.7
SJG *e* pP 05 54 48.4 -1.3
SJG San Juan 89.08 62 *e*P **P 05 54 38.5 +0.1**
SJG *e* pP 05 54 48.4 -1.3
SJG pmax pmax
comp=Z,47nm,1.3s
ESDC Sonseca Array 89.12 4 P **P 05 54 36.5 -1.8**
comp=Z,3.4nm,0.7s,mb4.8,baz=349,slow=4.3,SNR=16
STVI Saint Thomas 89.54 61 *e*P **P 05 54 40.1 -0.5**
comp=Z,72nm,1.4s,mb5.8
STVI *e* pP 05 54 49.8 -2.1
PESTR Estremoz 89.69 7 *e*P **P 05 54 39.3 -1.7**
comp=Z,26nm,1.7s,mb5.3
EVO Evora 89.99 8 *e*P **P 05 54 41.1 -1.3**
STKA Stephens Creek 90.14 213 P **P 05 54 43.2 +0.4**
comp=Z,20nm,0.9s,mb5.5,baz=6.4,slow=6.7,SNR=12
STKA LR LR 06 32 55.7
comp=Z,339nm,20.1s,MS4.8,baz=22,slow=34
STKA Stephens Creek 90.14 213 *e*P **P 05 54 43.0 +0.2**
comp=Z,15nm,0.9s,mb5.3
STKA Stephens Creek 90.14 213 *e*P **P 05 54 42.9 0.0**
comp=Z,6.3nm,1.0s,mb4.9
STKA *e* pP 05 54 51.9 -2.3
STKA LR LR 06 32 55.7
PBAR Barrancos 90.42 7 *e*P **P 05 54 43.2 -1.2**
comp=Z,25nm,1.5s,mb5.3
SDV Santo Domingo 93.93 71 *e*P **P 05 55 00.9 -0.1**
comp=Z,4.2nm,0.7s,mb5.0
SDV *e* pP 05 55 09.6 -2.6
TORD Torodi Ar. Bea 115.67 360 PKP PKPdf 06 00 23.8 -1.6
comp=Z,2.5nm,0.6s,baz=355,slow=2.4,SNR=17
TORD PKKPab PKKPab 06 11 01.2 -4.4
comp=Z,2.2nm,0.9s,baz=176,slow=3.6,SNR=9.4
KMBO Kilima Mbogo 121.59 317 PKP PKPdf 06 00 37.2 +0.4
comp=Z,3.0nm,0.9s,baz=180,slow=24,SNR=5.0
KMBO Kilima Mbogo 121.59 317 PKIKP PKPdf 06 00 37.3 +0.5
DBIC Dimbokro 121.84 8 PKP PKPdf 06 00 35.7 -1.7
comp=Z,4.9nm,0.6s,baz=47,slow=3.6,SNR=24
DBIC Dimbokro 121.84 8 PKP PKPdf 06 00 35.7 -1.7
DBIC Dimbokro 121.84 8 PKIKP PKPdf 06 00 35.7 -1.6
TIC Toumodi 121.85 8 *e*PKP1 PKPdf 06 00 35.9 -1.5
comp=Z,12nm,0.3s
TIC Toumodi 121.85 8 *e*PKIKP PKPdf 06 00 35.9 -1.5
KIC Kosan Boka 122.16 7 *e*PKP1 PKPdf 06 00 36.5 -1.5
comp=Z,49nm,1.2s
LIC Lamto 122.27 8 *e*PKP1 PKPdf 06 00 36.9 -1.3
comp=Z,64nm,1.2s
CPUP Villa Florida 129.32 84 PKP PKPdf 06 00 49.1 -2.1
baz=58,slow=9.5
CPUP Villa Florida 129.32 84 PKIKP PKPdf 06 00 49.1 -2.1
SBA Scott Base 129.36 184 *e*PKPdf PKPdf 06 00 49.5 -0.3
SBA Scott Base 129.36 184 *e*PKIKP PKPdf 06 00 49.5 -0.2
PLCA Paso Flores 130.73 107 PKP PKPdf 06 00 53.2 -0.1
comp=Z,4.8nm,1.1s,baz=258,slow=4.6,SNR=4.7
PLCA Paso Flores 130.73 107 PKIKP PKPdf 06 00 53.3 -0.1
QSPA South Pole Qui 141.21 180 *e*PKPpre PKPpre 06 01 05.1
QSPA *e*PKPdf PKPdf 06 01 11.4 -0.3
PMSA Palmer Station 144.61 138 *e*PKPdf PKPdf 06 01 16.0 -2.1
TSUM Tsumeb 145.45 333 *e*PKPdf PKPdf 06 01 20.5 -0.4
MAW Mawson 146.71 218 PKPbc PKPbc 06 01 21.0 -2.4
comp=Z,40nm,1.0s,baz=71,slow=2.9,SNR=51
MAW Mawson 146.71 218 *e*PKPdf PKPdf 06 01 21.0 -0.6
MAW *e*PKPbc PKPbc 06 01 23.0 -0.3
MAW Mawson 146.71 218 *e*PKIKP PKPdf 06 01 21.0 -0.6
MAW *e* 06 01 23.0
BOSA Boshof 151.12 313 PKPbc PKPbc 06 01 35.4 -0.5
comp=Z,29nm,0.8s,baz=12,slow=2.0,SNR=32
BOSA Boshof 151.12 313 PKIKP PKPbc 06 01 35.4 -0.5

IDC 15 05:44:43.4±29.0, 18°.80S×177°.52W, h542km±272km,
mb3.0/4, mb1 3.2/4, mb1mx2.9/18, mbtmp3.0/4, Error

ellipse: s-maj=296.8km s-min=60.7km az=131.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.15**	**262**	P	P	05 50 43.8	0.0
	1.7nm,0.5s,baz=80,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**45.31**	**260**	P	P	05 52 13.0	-0.3
	0.7nm,0.4s,baz=97,slow=7.0,SNR=31						
ASAR	**Alice Springs**	**45.38**	**255**	P	P	05 52 13.9	+0.1
	0.8nm,0.3s,baz=89,slow=8.3,SNR=18						
ILAR	**Eielson Array**	**86.56**	**13**	P	P	05 56 28.6	0.0
	0.2nm,0.4s,baz=219,slow=5.2,SNR=7.6						
ARCES	**ARCESS Array B**	**127.34**	**350**	PKP	PKPdf	06 02 45.7	-0.2
	0.2nm,0.4s,baz=45,slow=0.9,SNR=5.2						

*IDC **15** 05:48:05.1±5.2, 10.°69S×161.°77E, h78km±38km, mb3.4/7, mb1 3.6/8, mb1mx3.6/18, mbtmp3.5/8, ML4.5/1, Error ellipse: s-maj=41.3km s-min=26.0km az=122.0*
*ISCJB **15** 05:48:06.3±2.4, 10.°7S±0.°1×161.°6E±0.°2, h100km±19km, mb3.6/8, Error ellipse: s-maj=30.6km s-min=22.0km az=178.8*
*NEIC **15** 05:48:06.4±2.0, 10.°56S×161.°64E, h85km±17km, mb4.4/1, Error ellipse: s-maj=22.8km s-min=17.4km az=102.0*
ISC 15 05:48:06.6±2.5, 10.°6S±0.°1×161.°7E±0.°2, h87km±20km, n11, σ0s83/12, mb3.6/8, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.09**	**304**	P	**Pn**	**05 48 38.6**	**-1.4**
	127nm,0.3s,baz=154,slow=5.1,SNR=16						
HNR				S	**Sn**	**05 49 06.5**	**+1.1**
	413nm,0.3s,baz=340,slow=23,SNR=5.5						
WRA	**Warramunga Arr**	**27.93**	**247**	P	**P**	**05 53 48.3**	**-0.6**
	0.6nm,0.6s,mb3.3,baz=77,slow=8.9,SNR=8.3						
ASAR	**Alice Springs**	**29.49**	**240**	P	**P**	**05 54 02.7**	**0.0**
	0.4nm,0.8s,mb3.1,baz=64,slow=9.7,SNR=3.2						
KHZ	**Kahutara**	**33.33**	**164**	*e*P	**P**	**05 54 36.8**	**+0.7**
	2.7nm,0.4s,mb4.4						
KSRS	**Korea Array**	**57.36**	**328**	P	**P**	**05 57 45.9**	**0.0**
	0.8nm,0.8s,mb3.8,baz=149,slow=8.0,SNR=4.3						
SONM	**Songino Array**	**76.01**	**325**	P	**P**	**05 59 44.7**	**+0.4**
	0.8nm,0.7s,mb3.6,baz=124,slow=6.6,SNR=4.6						
ILAR	**Eielson Array**	**84.41**	**20**	P	**P**	**06 00 27.8**	**-1.3**
	0.4nm,0.9s,mb3.3,baz=257,slow=5.2,SNR=4.1						
NVAR	**Mina Array Bea**	**88.81**	**51**	P	**P**	**06 00 52.2**	**+1.1**
	0.4nm,0.7s,mb3.6,baz=242,slow=6.0,SNR=4.9						
NVAR	**Mina Array Bea**	**88.81**	**51**	P	**P**	**06 00 52.2**	**+1.1**
MKAR	**Makanchi Array**	**90.51**	**318**	P	**P**	**06 00 58.6**	**-0.2**
	0.2nm,0.5s,mb3.5,baz=97,slow=5.8,SNR=2.9						
MKAR	**Makanchi Array**	**90.51**	**318**	P	**P**	**06 00 58.6**	**-0.2**

*ISCJB **15** 06:03:42.5±1.0, 25.°08N±0.°04×122.°29E±0.°04, h8km±4km, mb4.0/2, Error ellipse: s-maj=7.2km s-min=6.0km az=27.1*
*TAP **15** 06:03:42.9, 25.°05N×122.°24E, h12km, ML3.6, D*
*IDC **15** 06:03:46.5±7.0, 24.°31N×122.°73E, h0km, mb4.0/2, mb1 4.1/3, mb1mx3.5/23, mbtmp3.8/3, ML3.1/1, Error ellipse: s-maj=351.8km s-min=41.1km az=96.0*
ISC 15 06:03:42.9±0.9, 25.°07N±0.°04×122.°29E±0.°04, h12km±4km, n31, σ0s84/48, mb4.0/2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.28**	**257**	*e*P	**Pg**	**06 03 48.4**	**-0.3**
	baz=259						
TWB1				S	**Sg**	**06 03 52.6**	**0.0**
	baz=259						
NWF	**Wu-fen Shan**	**0.46**	**270**	*i* P	**Pg**	**06 03 51.6**	**-0.4**
	baz=273						
NWF				S	**Sg**	**06 03 58.1**	**-0.1**
	baz=273						
ILA	**Ilan**	**0.58**	**238**	*e*P	**Pg**	**06 03 54.6**	**+0.4**
	baz=237						
ILA				*e*S	**Sg**	**06 04 02.3**	**+0.5**
	baz=237						
TWC	**Suao**	**0.61**	**221**	P	**Pg**	**06 03 54.5**	**-0.3**
	baz=218						
TWC				*e*S	**Sg**	**06 04 03.1**	**+0.2**
	baz=218						
TWA	**Mucha**	**0.65**	**262**	P	**Pg**	**06 03 55.1**	**-0.4**
	baz=263						
TWA				*e*S	**Sg**	**06 04 05.1**	**+1.1**
	baz=263						
TWY	**Chenhua**	**0.66**	**288**	*i* P	**Pg**	**06 03 55.1**	**-0.6**
	baz=291						
TWY				*i* S	**Sg**	**06 04 04.8**	**+0.4**
	baz=291						
TWE	**Neicheng**	**0.67**	**239**	P	**Pg**	**06 03 55.3**	**-0.5**
	baz=236						
TWE				S	**Sg**	**06 04 03.7**	**-0.9**
	baz=236						
TAP1	**Taipei**	**0.70**	**268**	*e*P	**Pg**	**06 03 56.4**	**0.0**
	baz=269						
TAP1				*e*S	**Sg**	**06 04 06.9**	**+1.3**
	baz=269						
ENTT	**Nioudou**	**0.79**	**237**	P	**Pg**	**06 03 57.6**	**-0.5**
	baz=235						
ENTT				*e*S	**Sg**	**06 04 08.0**	**-0.4**
	baz=235						
TWS1	**Kuangyinshan**	**0.79**	**272**	*i* P	**Pg**	**06 03 58.1**	**-0.2**
	baz=274						
TWS1				*e*S	**Sg**	**06 04 09.7**	**+1.1**
	baz=274						
ENA	**Nanau**	**0.81**	**218**	P	**Pg**	**06 03 58.3**	**-0.3**
	baz=215						
ENA				S	**Sg**	**06 04 09.0**	**-0.3**
	baz=215						
NCU	**National Centr**	**1.01**	**265**	*e*P	**Pg**	**06 04 02.3**	**-0.1**
	baz=265						
NCU				*e*S	**Sg**	**06 04 15.2**	**-0.3**
	baz=265						
NNS	**Nan Shan**	**1.04**	**233**	*e*P	**Pb**	**06 04 02.3**	**-0.7**
	baz=232						
NNS				*e*S	**Sb**	**06 04 16.3**	**-0.4**
	baz=232						
TWD	**Chiawan**	**1.17**	**213**	*e*P	**Pb**	**06 04 04.2**	**-0.9**
	baz=210						
TWD				*e*S	**Sb**	**06 04 20.9**	**+0.6**
	baz=210						
HSN	**Hsinchu**	**1.23**	**258**	*e*S	**Sb**	**06 04 21.4**	**-0.6**
	baz=258						
NSTT	**Nanjuang**	**1.25**	**250**	*e*P	**Pn**	**06 04 05.3**	**-1.0**
	baz=249						
NSTT				*e*S	**Sb**	**06 04 21.6**	**-1.0**
	baz=249						
HWA	**Hwalien**	**1.25**	**210**	*e*P	**Pn**	**06 04 08.1**	**+1.8**
	baz=207						
WHF	**Hehuan Shan**	**1.31**	**226**	*e*P	**Pn**	**06 04 06.9**	**-0.2**
	baz=224						
WHF				*e*S	**Sb**	**06 04 24.0**	**-0.4**
	baz=224						
ESL	**Shilin**	**1.48**	**212**	*e*P	**Pn**	**06 04 10.1**	**+0.8**
	baz=210						
NSY	**Sanyi**	**1.54**	**245**	*e*P	**Pn**	**06 04 08.4**	**-1.8**
	baz=244						
NSY				*e*S	**Sn**	**06 04 29.9**	**-0.2**
	baz=244						
TWQ1	**Liyutan**	**1.56**	**243**	*e*P	**Pn**	**06 04 10.5**	**0.0**
	baz=242						
TWQ1				*e*S	**Sn**	**06 04 30.2**	**-0.5**
	baz=242						
SMLT	**Sun Moon Lake**	**1.73**	**227**	*e*P	**Pn**	**06 04 13.7**	**+0.8**
	baz=226						
TYC	**Yuchr**	**1.75**	**229**	*e*P	**Pn**	**06 04 14.3**	**+1.1**
	baz=227						
EHY	**Hungye**	**1.79**	**210**	*e*P	**Pn**	**06 04 14.7**	**+1.0**
	baz=208						
TWF1	**Yuli**	**1.94**	**208**	*e*P	**Pn**	**06 04 15.8**	**+0.1**
	baz=206						
YUS	**Yu-Shan**	**1.99**	**218**	*e*P	**Pn**	**06 04 17.9**	**+1.4**
	baz=216						
ALS	**Alishan**	**2.06**	**221**	*e*P	**Pn**	**06 04 19.5**	**+2.0**
	baz=220						
WTP	**Ta-pu**	**2.38**	**220**	*e*P	**Pn**	**06 04 24.7**	**+2.9**
	baz=219						
KSRS	**Korea Array**	**13.25**	**20**	Pn	Px	06 07 03.6	
	0.1nm,0.3s,baz=196,slow=13,SNR=4.4						
WRA	**Warramunga Arr**	**46.25**	**164**	P	**P**	**06 12 06.9**	**-1.4**
	3.2nm,0.7s,mb4.3,baz=346,slow=8.6,SNR=29						
ASAR	**Alice Springs**	**49.74**	**166**	P	**P**	**06 12 34.4**	**-0.9**
	0.6nm,0.7s,mb3.7,baz=348,slow=11,SNR=6.5						

*IDC **15** 06:15:55.4±0.6, 10.°31N×92.°92E, h0km, mb4.3/15, mb1 4.4/16, mb1mx4.2/27, mbtmp4.2/16, ML4.0/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/25, Error ellipse: s-maj=27.2km s-min=14.0km az=60.0*
*BJI **15** 06:15:56.8, 10.°31N×93.°02E, h20km, mb4.7/11*
*ISCJB **15** 06:16:01.2±3.9, 10.°3N±0.°1×92.°9E±0.°2, h59km±32km, mb4.3/21, MS3.2/1, Error ellipse: s-maj=30.2km s-min=12.6km az=142.4*
*NEIC **15** 06:16:03.2±2.5, 10.°33N×92.°97E, h57km±20km, mb4.3/6, Error ellipse: s-maj=23.8km s-min=9.0km az=55.0*
ISC 15 06:16:04.2±2.9, 10.°3N±0.°1×93.°0E±0.°2, h69km±23km, n37, σ0s58/31, mb4.2/21, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**9.95**	**35**	*e*Pn	**Pn**	**06 18 25.5**	**+1.1**
	3.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**9.95**	**35**	Pn	**Pn**	**06 18 20.7**	**-3.7**
	0.4nm,0.3s,baz=228,slow=15,SNR=3.6						
CHTO	**Chiang Mai**	**10.23**	**34**	*e*Pn	**Pn**	**06 18 28.2**	**-0.2**
	5.9nm,0.9s						
LSA	**Lhasa**	**19.36**	**355**	*e*P	**Pn**	**06 20 24.5**	**-1.5**
LSA	**Lhasa**	**19.36**	**355**	*e*P	**Pn**	**06 20 24.8**	**-1.3**
	5.8nm,0.4s						
ENH	**Enshi**	**25.12**	**35**	*e*P	**P**	**06 21 22.6**	**-0.2**
	22nm,0.7s,mb4.7						
LZH	**Lanzhou**	**27.49**	**19**	*e*P	**P**	**06 21 44.5**	**+0.5**
LZH				pP	pP	06 21 49.0	-11
LZH				sP	sP	06 21 52.3	-16
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.4						
GTA	**Gaotai**	**29.61**	**11**	*e*P	**P**	**06 22 03.8**	**+0.9**
GTA				pP	pP	06 22 07.5	-12
GTA				sP	sP	06 22 10.5	-17
GTA				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.6						
AAK	**Ala-Archa**	**36.02**	**337**	P	**P**	**06 22 59.2**	**+0.5**
	comp=Z,0.8nm,0.3s,mb4.1,baz=206,slow=8.7,SNR=4.1						
EKS2	**Erkin-Say**	**36.32**	**336**	*e*P	**P**	**06 23 02.0**	**+0.6**
	comp=Z,3.2nm,0.9s,mb4.2						
MKAR	**Makanchi Array**	**37.47**	**348**	P	**P**	**06 23 10.8**	**-0.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=164,slow=8.3,SNR=13						
MKAR				PcP	PcP	06 25 29.1	+0.9
	comp=Z,1.0nm,0.5s,baz=201,slow=3.2,SNR=7.3						
SONM	**Songino Array**	**39.07**	**14**	P	**P**	**06 23 24.9**	**+0.5**
	comp=Z,3.8nm,0.8s,mb4.3,baz=199,slow=8.5,SNR=16						
SONM				PcP	PcP	06 25 34.8	+1.7
	comp=Z,0.8nm,0.6s,baz=134,slow=5.0,SNR=4.1						
KSRS	**Korea Array**	**41.44**	**44**	P	**P**	**06 23 43.8**	**-0.5**
	comp=Z,1.0nm,0.4s,mb4.0,baz=242,slow=8.2,SNR=15						
KSRS				LR	LR	06 44 03.6	
	comp=Z,32nm,18.3s,baz=25,slow=41						
FITZ	**Fitzroy Crossi**	**42.87**	**131**	*e*P	**P**	**06 23 55.7**	**-0.3**
	comp=Z,3.2nm,0.5s,mb4.3						
BVAR	**Borovoye Array**	**46.32**	**341**	P	**P**	**06 24 23.2**	**+0.1**
	comp=Z,2.5nm,0.9s,mb3.9,baz=140,slow=7.7,SNR=7.3						
ABKAR	**Akbulak array**	**47.54**	**331**	*e*P	**P**	**06 24 33.1**	**+0.4**
	comp=Z,1.2nm,0.3s,mb4.2						
AKTK	**Aktyubinsk**	**49.26**	**331**	P	**P**	**06 24 45.7**	**-0.2**
AKTO	**Aktyubinsk**	**49.26**	**331**	P	**P**	**06 24 45.7**	**-0.2**
	comp=Z,1.9nm,0.6s,mb4.2,baz=114,slow=8.8,SNR=6.9						
WRA	**Warramunga Arr**	**50.62**	**126**	P	**P**	**06 24 56.7**	**0.0**
	comp=Z,4.2nm,0.5s,mb4.8,baz=304,slow=8.9,SNR=155						
WRA				PcP	PcP	06 26 13.7	+0.2
	comp=Z,0.8nm,0.6s,baz=314,slow=2.9,SNR=5.5						
WRA	**Warramunga Arr**	**50.62**	**126**	P	**P**	**06 24 56.7**	**0.0**
WRA				PcP	PcP	06 26 13.7	+0.2
ASAR	**Alice Springs**	**52.37**	**131**	P	**P**	**06 25 09.6**	**0.0**
	comp=Z,10nm,0.6s,mb5.0,baz=305,slow=6.7,SNR=121						
ASAR				PcP	PcP	06 26 20.9	+1.1
	comp=Z,1.3nm,0.8s,baz=318,slow=3.7,SNR=3.2						
STKA	**Stephens Creek**	**62.62**	**134**	P	**P**	**06 26 22.4**	**+0.7**
	comp=Z,4.9nm,0.6s,mb4.6,baz=299,slow=7.9,SNR=9.3						
STKA	**Stephens Creek**	**62.62**	**134**	*e*P	**P**	**06 26 22.0**	**+0.4**
	comp=Z,1.2nm,0.7s,mb3.9						
FINES	**FINESS Array B**	**70.02**	**332**	P	**P**	**06 27 08.2**	**-0.2**
	comp=Z,2.1nm,0.7s,mb4.1,baz=133,slow=12,SNR=2.6						
ARCES	**ARCESS Array B**	**72.59**	**340**	P	**P**	**06 27 24.0**	**+0.2**
	comp=Z,1.0nm,0.5s,mb4.0,baz=98,slow=6.6,SNR=15						
GERES	**GERESS Array B**	**75.25**	**318**	P	**P**	**06 27 39.7**	**0.0**
	comp=Z,1.3nm,0.5s,mb3.9,baz=88,slow=6.8,SNR=8.1						
GERES	**GERESS Array B**	**75.25**	**318**	P	**P**	**06 27 39.7**	**0.0**
NOA	**NORSAR Array B**	**77.05**	**330**	P	**P**	**06 27 49.1**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.4,baz=95,slow=5.0,SNR=3.0						
ILAR	**Eielson Array**	**92.92**	**22**	P	**P**	**06 29 08.9**	**-0.5**
	comp=Z,1.1nm,0.7s,mb4.3,baz=301,slow=4.4,SNR=19						
INK	**Inuvik**	**94.97**	**16**	P	**P**	**06 29 18.4**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.4,baz=324,slow=9.5,SNR=5.3						
INK	**Inuvik**	**94.97**	**16**	P	**P**	**06 29 18.4**	**-0.4**
PDAR	**Pinedale Array**	**123.30**	**20**	PKP	PKPdf	06 34 54.4	+0.7
	comp=Z,0.4nm,0.6s,baz=229,slow=1.6,SNR=3.7						
NVAR	**Mina Array Bea**	**123.40**	**29**	PKP	PKPdf	06 34 55.9	+2.0
	comp=Z,0.6nm,0.7s,baz=330,slow=2.6,SNR=4.9						
ANMO	**Albuquerque**	**131.36**	**21**	PKP	PKPdf	06 35 11.4	+2.1
	comp=Z,0.7nm,0.6s,baz=346,slow=6.4,SNR=3.5						
TXAR	**Lajitas Array**	**137.44**	**22**	PKP	PKPdf	06 35 21.9	+1.2
	comp=Z,0.3nm,0.5s,baz=196,slow=0.7,SNR=7.8						
PLCA	**Paso Flores**	**146.38**	**203**	PKPbc	PKPbc	06 35 38.5	+0.9
	comp=Z,1.5nm,0.8s,baz=43,slow=22,SNR=4.2						
CPUP	**Villa Florida**	**147.74**	**236**	PKPbc	PKPbc	06 35 42.5	+0.6
	baz=108,slow=3.2						

*ISCJB **15** 06:19:14.3±0.5, 49.°86N±0.°03×18.°47E±0.°03, h0km, Error ellipse: s-maj=4.9km s-min=2.8km az=5.8*
*CSEM **15** 06:19:15.1±0.2, 49.°86N×18.°47E, h1km, ML2.3/5, Error ellipse: s-maj=5.7km s-min=3.1km az=2.0*
*IPEC **15** 06:19:15.0±0.2, 49.°80N×18.°54E, h2km±3km, ML1.6/4, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*PRU **15** 06:19:15.8, 49.°86N×18.°47E, h0km*
ISC 15 06:19:15.4±0.5, 49.°82N±0.°04×18.°47E±0.°03, h0km, n23, σ0s98/39, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.21**	**274**	*e*PG	**Pg**	**06 19 20.4**	**+1.0**
OKC				*e*SG	**Sg**	**06 19 23.6**	**+1.5**
	comp=Z,52nm,0.4s						
OKC	**Ostrava-Krasne**	**0.21**	**274**	*e*Pg	**Pg**	**06 19 20.1**	**+0.7**
	baz=99						
OKC				Sg	**Sg**	**06 19 23.6**	**+1.5**
	comp=Z,52nm,0.4s						
MORC	**Moravsky Berou**	**0.60**	**266**	*e*Pg	**Pg**	**06 19 27.6**	**+0.7**
	baz=88						
MORC				*e*Sg	**Sg**	**06 19 35.4**	**+0.7**
	comp=Z,9.8nm,0.2s,baz=88						
OJC	**Ojcow**	**0.94**	**65**	*e*Pg	**Pg**	**06 19 32.8**	**-0.6**
OJC				*e*Sg	**Sg**	**06 19 45.2**	**-0.5**
OJC	**Ojcow**	**0.94**	**65**	*e*Pg	**Pg**	**06 19 32.7**	**-0.7**
	baz=243						
OJC				*e*Sg	**Sg**	**06 19 45.2**	**-0.5**
JAVC	**Velka Javorina**	**1.10**	**209**	*e*Pg	**Pg**	**06 19 37.6**	**+1.2**
JAVC				*e*Sg	**Sg**	**06 19 54.0**	**+3.4**
	comp=Z,10nm,0.3s						
KOLL	**Kolacno**	**1.25**	**182**	*e*	**Pg**	**06 19 39.8**	**+0.6**
KOLL	**Kolacno**	**1.25**	**182**	*e*SN	**Sn**	**06 19 56.5**	**-0.9**
KOLL	**Kolacno**	**1.25**	**182**	*e*Sn	**Sn**	**06 19 56.5**	**-0.9**
NIE	**Niedzica**	**1.26**	**108**	*e*Pg	**Pg**	**06 19 39.0**	**-0.6**
NIE				*e*Sg	**Sg**	**06 19 58.1**	**+2.2**
NIE	**Niedzica**	**1.26**	**108**	*e*Pg	**Pg**	**06 19 39.0**	**-0.6**
NIE				*e*Sg	**Sg**	**06 19 58.1**	**+2.2**
VRAC	**Vranov**	**1.33**	**248**	*e*Pg	**Pg**	**06 19 40.3**	**-0.5**
	baz=68						
VRAC				*e*Sg	**Sg**	**06 19 57.6**	**-0.3**
	comp=Z,12nm,0.4s,baz=68						
VYHS	**Vyhne**	**1.35**	**170**	*e*PN	**Pn**	**06 19 40.7**	**-0.7**
VYHS				*e*SN	**Sn**	**06 19 59.0**	**-1.0**
VYHS	**Vyhne**	**1.35**	**170**	*e*Pn	**Pn**	**06 19 40.7**	**-0.7**
VYHS				*e*Sn	**Sn**	**06 19 59.0**	**-1.0**
DPC	**Dobruska-Polom**	**1.48**	**292**	*e*PG	**Pg**	**06 19 42.9**	**-0.9**
DPC				*e*SG	**Sg**	**06 20 03.1**	**+0.1**
	comp=Z,4.3nm,0.3s						
DPC	**Dobruska-Polom**	**1.48**	**292**	Pg	**Pg**	**06 19 42.9**	**-0.9**
DPC				*e*Sg	**Sg**	**06 20 02.8**	**-0.2**
	baz=110						
KRUC	**Moravsky**	**1.55**	**241**	*e*Pg	**Pg**	**06 19 43.6**	**-1.5**
	baz=62						
KRUC				*e*Sg	**Sg**	**06 20 04.5**	**-0.8**
	comp=Z,4.9nm,0.2s,baz=62						
UPC	**Upice**	**1.72**	**294**	*e*SG	**Sg**	**06 20 10.3**	**-0.4**
UPC	**Upice**	**1.72**	**294**	Sg	**Sg**	**06 20 10.3**	**-0.4**
KECS	**Kecovo**	**1.88**	**135**	*e*PN	**Pn**	**06 19 49.2**	**+0.5**
KECS				*e*SN	**Sn**	**06 20 12.2**	**-0.9**
CRVS	**Cervenica-Dubn**	**2.16**	**114**	*e*SN	**Sn**	**06 20 21.2**	**+1.2**
CRVS	**Cervenica-Dubn**	**2.16**	**114**	*e*Sn	**Sn**	**06 20 21.2**	**+1.2**
CRVS	**Cervenica-Dubn**	**2.16**	**114**	*e*	**Pn**	**06 19 57.2**	**+4.6**
CRVS				*e*Sn	**Sn**	**06 20 21.2**	**+1.2**

*NIED **15** 06:22:00, 30.°50N×142.°10E, h5km, Mw3.9 Best double couple: M07.66000×10^14 NP1:φs38.00000°, δ77.00000°, λ109.00000°. NP2:φs160.00000°, δ23.00000°, λ34.00000°.*
*IDC **15** 06:22:52.7±1.1, 30.°50N×142.°16E, h0km, mb3.8/5, mb1 3.9/8, mb1mx3.8/24, mbtmp3.8/8, ML3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/31, Error ellipse: s-maj=36.9km s-min=17.8km az=74.0*
*JMA **15** 06:22:54.3±0.3, 30.°52N×142.°11E, h46km, M4.1*
*ISCJB **15** 06:22:55.4±0.8, 30.°68N±0.°06×142.°3E±0.°2, h33km, mb3.9/5, Error ellipse: s-maj=20.5km s-min=6.7km az=162.9*
ISC 15 06:22:57.5±0.8, 30.°67N±0.°06×142.°3E±0.°2, h35km, n18, σ1s05/26, mb3.9/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.26**	**319**	Pn	**Pn**	**06 23 44.6**	**-1.5**
	13nm,0.3s,baz=246,slow=20,SNR=3.7						
JHJ				Sn	**Sn**	**06 24 17.6**	**-6.0**
	16nm,0.3s,baz=217,slow=20,SNR=2.7						
JHJ				LR	LR	06 24 34.9	
	comp=Z,260nm,18.5s,baz=120,slow=31						
CBIJ	**Chichi jima**	**3.56**	**182**	*e*S	**Sn**	**06 24 25.7**	**-5.4**
BSO1	**Boso 1**	**4.13**	**345**	*e*S	**Sn**	**06 24 45.6**	**+0.4**
BSO4	**Boso 4**	**4.62**	**339**	P	**Pn**	**06 24 05.6**	**+0.8**
JOD2	**Odawara 2**	**5.33**	**330**	P	**Pn**	**06 24 15.8**	**+1.3**
JHU	**Hanno**	**5.76**	**335**	P	**Pn**	**06 24 20.3**	**-0.2**
JHU				*e*S	**Sn**	**06 25 23.9**	**-1.4**
JRY	**Ryogami san**	**6.05**	**333**	P	**Pn**	**06 24 25.1**	**+0.6**
JRY				*e*S	**Sn**	**06 25 33.0**	**+0.5**
JHO	**Hitachi**	**6.10**	**347**	P	**Pn**	**06 24 24.5**	**-0.7**
JHO				*e*S	**Sn**	**06 25 31.5**	**-2.3**
JAG	**Ashikaga**	**6.22**	**338**	P	**Pn**	**06 24 27.9**	**+1.1**
JAG				*e*S	**Sn**	**06 25 35.3**	**-1.3**
MJAR	**Matsushiro Arr**	**6.79**	**331**	Pn	**Pn**	**06 24 34.4**	**-0.1**
	2.8nm,0.3s,baz=164,slow=11,SNR=23						
MJAR				Sn	**Sn**	**06 25 51.9**	**+1.3**
	0.6nm,0.3s,baz=167,slow=17,SNR=4.3						
MAT	**Matsushiro**	**6.79**	**331**	P	**Pn**	**06 24 34.9**	**+0.3**
MAT				S	**Sn**	**06 25 50.9**	**+0.3**
JFK	**Kawauchi**	**6.79**	**350**	P	**Pn**	**06 24 33.7**	**-0.9**
JFK				*e*S	**Sn**	**06 25 45.9**	**-4.7**
KSRS	**Korea Array**	**13.71**	**303**	Pn	**Pn**	**06 26 09.8**	**+0.4**
	0.1nm,0.3s,baz=111,slow=12,SNR=3.8						
SONM	**Songino Array**	**32.31**	**312**	P	**P**	**06 29 24.2**	**+1.2**
	0.9nm,0.6s,mb3.8,baz=120,slow=8.9,SNR=5.7						
MKAR	**Makanchi Array**	**48.35**	**307**	P	**P**	**06 31 35.8**	**+0.1**
	0.8nm,0.4s,mb4.1,baz=92,slow=9.5,SNR=9.0						
WRA	**Warramunga Arr**	**50.90**	**190**	P	**P**	**06 31 54.0**	**-1.2**
	3.0nm,0.5s,mb4.5,baz=6.3,slow=7.6,SNR=54						
ILAR	**Eielson Array**	**54.55**	**30**	P	**P**	**06 32 23.8**	**+2.1**
	0.2nm,0.7s,mb3.3,baz=282,slow=5.4,SNR=3.3						
ASAR	**Alice Springs**	**54.62**	**189**	P	**P**	**06 32 21.6**	**-1.0**
	0.6nm,0.5s,mb3.9,baz=0.5,slow=5.2,SNR=14						

*IDC **15** 06:30:51.1±3.8, 18.°12N×106.°45W, h0km, mb3.8/5, mb1 4.1/8, mb1mx3.8/26, mbtmp3.8/8, ML3.4/3, MS3.9/16, Ms1 4.0/16, ms1mx3.8/26, Error ellipse: s-maj=71.1km s-min=31.4km az=23.0*
*GCMT **15** 06:30:55.8±0.5, 18.°52N×106.°24W, h19km±1km, MW4.9, Moment Tensor Solution. s17,c17; s60,c86; Moment tensor: Scale 10^16Nm; Mrr-0.94±.15; Mθθ-0.56±.10; Mφφ1.50±.13; Mrθ0.72±.23; Mθφ-1.92±.08; Mφr0.25±.22; Best double couple: M0 2.40000×10^16 NP1:φs190.00000°, δ66.00000°, λ-22.00000°. NP2:φs289.00000°, δ70.00000°, λ-155.00000°. Principal axes: T 2.6600, Plg3.0000°, Azm59.0000°; N -0.4900, Plg58.0000°, Azm325.0000°; P -2.1700, Plg32.0000°, Azm150.0000°; Data Used: IU II CN G.*
*ISCJB **15** 06:30:57.7±4.0, 18.°4N±0.°1×106.°01W±0.°09, h20km±25km, mb4.3/22, MS4.0/12 Error ellipse: s-maj=24.4km s-min=9.3km az=31.4*
*NEIC **15** 06:30:59.8±1.4, 18.°35N×106.°15W, h35km, mb4.3/27, Error ellipse: s-maj=23.6km s-min=11.6km az=216.0*
ISC 15 06:31:02.1±1.9, 18.°5N±0.°1×106.°00W±0.°09, h38km±11km, n104, σ1s12/89, mb4.2/21, MS4.0/12, 25C-22D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**10.68**	**96**	Pn	**Pn**	**06 33 32.2**	**-0.4**
	1.0nm,0.3s,baz=286,slow=9.0,SNR=19						
CMIG				LR	LR	06 37 10.9	
	comp=Z,464nm,19.8s,baz=272,slow=34						
TXAR	**Lajitas Array**	**11.03**	**11**	Pn	**Pn**	**06 33 37.0**	**-0.3**
	0.1nm,0.3s,baz=185,slow=13,SNR=8.6						
TXAR				LR	LR	06 37 45.0	
	comp=Z,812

	baz=16						
W20A	Ramah	16.74	353	⇑P		Pn	06 34 54.1 +0.4
	baz=16						
AMTX	Amarillo	16.80	12	*e*P		Pn	06 34 52.2 -2.2
	11nm,0.9s						
W19A	Sanders	16.85	350	⇑P		Pn	06 34 54.6 -0.5
	baz=16						
X15A	Humboldt	16.90	342	⇑P		Pn	06 34 55.0 -0.7
	baz=16						
V22A	San Miguel Ran	17.40	358	⇑P		Pn	06 35 01.2 -0.6
	baz=17						
WMOK	Wichita Mounta	17.43	20	*e*P		Pn	06 35 00.4 -2.0
	25nm,1.7s						
T18A	Mexican Hat	18.91	350	⇓P		Pn	06 35 19.5 -0.9
	baz=19						
SDCO	Great Sand Dun	19.21	1	⇑P		Pn	06 35 24.0 0.0
	baz=19						
SDCO	Great Sand Dun	19.21	1	*e*P		Pn	06 35 23.1 -0.9
	20nm,1.7s						
S22A	4UR Ranch, Cre	19.22	358	⇓P		Pn	06 35 24.5 +0.4
	baz=19						
S18A	Hurst Farm, Bl	19.47	350	⇑P		Pn	06 35 26.7 -0.4
	baz=19						
S17A	Black Ridge (B	19.56	349	⇓P		Pn	06 35 27.3 -0.7
	baz=19						
T13A	Saint George	19.75	341	⇓P		Pn	06 35 29.0 -1.3
	baz=19						
PV10	Paradox Valley	20.02	353	*e*P		P	06 35 31.5 0.0
	78nm,0.8s						
U10A	Ash Meadows, A	20.07	335	⇑P		P	06 35 32.8 +0.6
	baz=20						
R18A	Canyonlands Na	20.14	351	⇑P		P	06 35 34.1 +1.2
	baz=20						
MPMC	Manual Prospec	20.25	332	⇑P		P	06 35 35.4 +1.2
	baz=20						
R17A	Hanksville Air	20.30	349	⇑P		P	06 35 35.4 +0.7
	baz=20						
ISA	Isabella	20.38	330	⇑P		P	06 35 37.5 +1.9
	baz=20						
SMCO	Snowmass	20.66	358	*e*P		P	06 35 38.2 -0.3
	4.2nm,1.0s						
MSU	Marysvale	20.69	346	*e*P		P	06 35 34.2 -4.6
	13nm,1.5s						
R13A	O'Grain Ranch,	20.84	342	⇑P		P	06 35 40.6 +0.1
	baz=20,SNR=5.7						
Q16A	Castle Valley	20.87	349	⇓P		P	06 35 41.0 +0.2
	baz=20,SNR=5.8						
CBKS	Cedar Bluff	20.99	14	*e*P		P	06 35 40.0 -2.1
	40nm,1.3s						
P22A	Eagle	21.07	358	⇑P		P	06 35 44.4 +1.5
	baz=21						
ISCO	Idaho Springs	21.26	1	⇑P		P	06 35 46.4 +1.4
	baz=21						
Q14A	Sevier Lake (B	21.41	344	⇓P		P	06 35 46.2 -0.4
	baz=21,SNR=7.5						
P14A	Drum Mountains	21.92	345	⇑P		P	06 35 51.7 -0.5
	baz=22,SNR=8.7						
DAU	Daniels Canyon	22.34	349	*e*P		P	06 35 56.1 -0.4
	24nm,1.4s,mb4.4						
LRAL	Lakeview Retre	22.38	46	*e*P		P	06 35 57.5 +0.5
	23nm,1.3s,mb4.5						
DUG	Dugway	22.44	346	*e*P		P	06 35 57.5 0.0
	13nm,1.4s,mb4.2						
NVAR	Mina Array Bea	22.60	334	P		P	06 35 55.6 -3.7
	2.3nm,1.1s,mb3.5,baz=160,slow=9.4,SNR=10						
WAKR	Walker	23.15	332	*e*P		P	06 36 02.8 -2.2
	11nm,1.6s,mb4.0						
PDAR	Pinedale Array	24.41	354	P		P	06 36 14.6 -2.3
	0.2nm,0.5s,baz=157,slow=13,SNR=2.8						
DWPF	Disney	24.48	62	*e*P		P	06 36 17.4 -0.3
	69nm,1.3s,mb4.9						
J18A	Kendall Valley	24.90	353	⇓P		P	06 36 22.8 +1.4
	baz=25						
GOGA	Godfrey	25.06	49	*e*P		P	06 36 21.4 -1.6
	37nm,1.4s,mb4.7						
REDW	Red Top Meadow	25.16	352	*e*P		P	06 36 21.4 -2.3
	15nm,1.4s,mb4.3						
RRI2	Red Ridge	25.21	351	*e*P		P	06 36 25.2 +1.0
	10nm,1.3s,mb4.2						
SNOW	Snow King Moun	25.24	352	*e*P		P	06 36 23.7 -0.7
	13nm,1.2s,mb4.3						
TPAW	Teton Pass	25.30	352	*e*P		P	06 36 26.0 +1.1
	12nm,1.3s,mb4.2						
LOHW	Long Hollow	25.37	352	*e*P		P	06 36 24.1 -1.5
	17nm,1.4s,mb4.4						
J15A	Blackfoot	25.44	349	⇑P		P	06 36 28.1 +1.8
	baz=25						
I20A	Worland	25.47	356	⇓P		P	06 36 28.6 +2.1
	baz=25						
OLIL	Olney	25.50	34	*e*P		P	06 36 28.9 +2.0
	11nm,0.9s,mb4.4						
MOOW	Moose Ponds	25.52	352	*e*P		P	06 36 27.2 +0.2
	7.1nm,1.3s,mb4.0						
IMW	Indian Meadow	25.69	352	*e*P		P	06 36 30.2 +1.7
	2.5nm,0.9s,mb3.7						
TKL	Tuckaleechee C	26.07	44	P		P	06 36 30.8 -1.3
	5.0nm,0.9s,mb4.0,baz=156,slow=10,SNR=4.8						
TKL				LR		LR	06 49 14.9
	comp=Z,275nm,21.3s,MS3.8,baz=154,slow=42						
WVOR	Wild Horse Val	26.20	338	*e*P		P	06 36 30.0 -3.1
	4.0nm,1.2s,mb3.8						
YBH	Yreka Blue Hor	27.23	332	LR		LR	06 46 59.1
	comp=Z,406nm,19.9s,MS4.0,baz=160,slow=35						
OTAV	Otavalo	32.56	121	*e*P		P	06 37 32.4 +2.5
	16nm,1.4s,mb4.8						
ULM	Lac du Bonnet	32.73	12	LR		LR	06 51 07.5
	comp=Z,359nm,19.1s,MS4.1,baz=132,slow=37						
SDV	Santo Domingo	35.59	101	*e*P		P	06 37 56.1 -0.2
	15nm,1.1s,mb4.8						
TAOE	Nuku Hiva Isla	43.27	234	*e*LR		LR	06 50 42.4
	508nm,27.6s						
YKA	Yellowknife Ar	44.39	354	LR		LR	06 58 17.4
	comp=Z,28nm,19.5s,MS3.2,baz=275,slow=37						
SCHQ	Schefferville	46.96	30	LR		LR	06 58 49.3
	comp=Z,181nm,18.7s,MS4.1,baz=65,slow=35						
RKT	Rikitea	50.09	216	*e*LR		LR	06 53 52.5
	401nm,26.2s,baz=25						
LPAZ	La Paz	50.81	130	LR		LR	06 58 26.5
	comp=Z,148nm,21.4s,MS4.0,baz=312,slow=32						
INK	Inuvik	52.76	348	P		P	06 40 08.4 -4.4
	1.7nm,1.0s,mb3.9,baz=135,slow=10.0,SNR=2.5						
ILAR	Eielson Array	53.70	340	P		P	06 40 15.8 -4.1
	1.4nm,1.2s,mb3.8,baz=154,slow=5.3,SNR=7.2						
ILAR				LR		LR	07 03 54.2
	comp=Z,101nm,18.4s,MS3.9,baz=142,slow=37						
PPT	Papeete	55.84	233	*e*S		S	06 48 07.8 -13
	70nm,25.5s						
PPT				*e*LR		LR	06 56 32.5
	465nm,26.5s,baz=50						
PPT	Papeete	55.84	233	LR		LR	06 57 13.1
	comp=Z,296nm,19.6s,MS4.4,baz=44,slow=29						
TBI	Tubuai	59.40	227	*e*LR		LR	06 58 10.7
	385nm,25.8s,baz=45						
PLCA	Paso Flores	67.48	152	LR		LR	07 04 53.4
	comp=Z,233nm,19.4s,MS4.4,baz=181,slow=30						
PETK	Petropavlovsk-	79.14	322	LR		LR	07 13 09.7
	comp=Z,74nm,19.1s,MS4.0,baz=245,slow=32						
NOA	NORSAR Array B	86.34	26	LR		LR	07 25 00.2
	comp=Z,66nm,18.2s,MS4.1,baz=295,slow=37						
FINES	FINESS Array B	91.69	21	LR		LR	07 25 52.5
	comp=Z,146nm,18.9s,MS4.5,baz=138,slow=36						
DZM	Mont Dzumac	94.59	248	*e*LR		LR	07 14 38.9
	336nm,26.6s						

JMA 15 06:31:02.9±0.2, 32°.00N×140°.09E, h167km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.13	348	P		Pn	06 31 31.0 +0.7
BSO1	Boso 1	2.75	15	P		Pn	06 31 48.1 +0.3
BSO1				*e*S		Sn	06 32 23.6 +0.9
BSO3	Boso 3	2.82	7	P		Pn	06 31 49.1 +0.5
BSO3				S		Sn	06 32 25.0 +0.8
BSO4	Boso 4	2.99	4	P		Pn	06 31 51.5 +0.7
BSO4				*e*S		Sn	06 32 29.0 +1.0
JOD2	Odawara 2	3.36	346	P		Pn	06 31 56.3 +0.9
JOD2				*e*S		Sn	06 32 37.3 +1.0
JRY	Ryogami san	4.13	346	P		Pn	06 32 05.6 +0.4
JYT	Yasato	4.22	1	*e*S		Sn	06 32 53.3 -2.6
JAG	Ashikaga	4.45	353	P		Pn	06 32 08.3 -1.0
JAG				*e*S		Sn	06 33 00.0 -1.2
JHO	Hitachi	4.62	5	P		Pn	06 32 10.1 -1.4
JHO				*e*S		Sn	06 33 02.1 -3.1
JFK	Kawauchi	5.39	7	*e*S		Sn	06 33 19.4 -4.0

IDC 15 06:42:14.7±1.8, 10°.94N×91°.95E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/23, mbtmp3.8/8, Error ellipse: s-maj=86.0km s-min=17.6km az=62.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	36.67	349	P		P	06 49 23.3 +0.2
	1.3nm,0.6s,baz=169,slow=8.0,SNR=13						
SONM	Songino Array	38.74	16	P		P	06 49 41.1 +0.5
	0.6nm,0.6s,baz=190,slow=10,SNR=4.2						
ZALV	Zalesovo Beam	43.28	354	P		P	06 50 17.2 -0.6
	0.5nm,0.3s,baz=170,slow=11,SNR=3.8						
FITZ	Fitzroy Crossi	44.03	131	P		P	06 50 23.7 -0.7
	0.7nm,0.4s,baz=326,slow=7.3,SNR=6.6						
WRA	Warramunga Arr	51.79	126	P		P	06 51 24.2 -0.4
	0.3nm,0.3s,baz=300,slow=10.0,SNR=13						
ASAR	Alice Springs	53.53	130	P		P	06 51 38.2 +0.8
	0.7nm,0.6s,baz=303,slow=6.4,SNR=8.4						
ASAR				PcP		PcP	06 52 44.3 -0.1
	0.5nm,0.7s,baz=308,slow=4.0,SNR=3.6						
ARCES	ARCESS Array B	71.67	340	P		P	06 53 37.8 -0.2
	0.7nm,0.5s,baz=99,slow=7.5,SNR=8.7						
ILAR	Eielson Array	92.72	22	P		P	06 55 27.9 -0.6
	0.2nm,0.7s,baz=294,slow=4.5,SNR=4.1						
NVAR	Mina Array Bea	123.34	28	PKP		PKPdf	07 01 15.2 +1.1
	0.3nm,0.6s,baz=294,slow=2.5,SNR=3.3						

IDC 15 06:46:02.8±1.5, 2°.98N×30°.94W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/24, mbtmp3.7/4, Error ellipse: s-maj=80.1km s-min=26.1km az=160.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	33.81	71	P		P	06 52 47.4 +0.4
	2.4nm,1.0s,baz=257,slow=8.4,SNR=8.1						
LPAZ	La Paz	41.44	241	P		P	06 53 52.1 +0.5
	0.5nm,0.8s,baz=69,slow=7.1,SNR=4.3						
BRTR	Keskin Array B	68.69	48	P		P	06 57 08.1 -0.3
	0.2nm,0.5s,baz=270,slow=5.8,SNR=4.5						
TXAR	Lajitas Array	73.50	300	P		P	06 57 38.3 +0.5
	0.3nm,0.9s,baz=123,slow=6.7,SNR=3.9						

IDC 15 07:24:26.2±0.8, 54°.99N×162°.00E, h0km, mb3.8/10, mb1 4.0/12, mb1mx3.9/25, mbtmp3.8/12, ML3.6/2, Error ellipse: s-maj=27.0km s-min=17.4km az=137.0
ISCJB 15 07:24:28.7±0.9, 54°.77N±0°.03×162°.52E±0°.06, h25km±7km, mb3.8/11, Error ellipse: s-maj=6.1km s-min=4.1km az=32.4
KRSC 15 07:24:28.7±0.5, 54°.80N×162°.45E, h25km±25km, ML4.6
MOS 15 07:24:29.0±0.8, 54°.76N×162°.44E, h28km, mb4.4/4, Error ellipse: s-maj=17.7km s-min=8.7km az=66.3
ISC 15 07:24:28.8±0.9, 54°.80N±0°.03×162°.50E±0°.06, h16km±5km, n56, σ0s95/73, mb3.8/11, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.51	242	*e*P		Pg	07 24 38.9 +0.1
MKZ				*i* S		Sg	07 24 45.7 +0.1
MKZ	Mys Kozlova	0.51	242	PN		Pg	07 24 38.9 +0.1
MKZ				S		Sg	07 24 45.7 +0.1
KBTR	Krutoberegovo	1.43	7	*e*P		Pn	07 24 54.3 +0.4
KBTR				*i* S		Sn	07 25 13.2 +0.9
KBTR	Krutoberegovo	1.43	7	PN		Pn	07 24 54.3 +0.4
KBTR				S		Sn	07 25 13.2 +0.9
ZLN	Zelenaya	1.56	322	*e*P		Pn	07 24 55.5 -0.2
ZLN				*i* S		Sn	07 25 15.4 -0.2
BZMR	Bezymyannaya	1.62	316	*e*P		Pn	07 24 56.2 -0.4
CIRR	Tsirk	1.66	324	*e*P		Pn	07 24 57.0 -0.1
KPT	Kopyto	1.75	313	*e*P		Pn	07 24 58.2 -0.2
KRSR	Krestovskiy	1.80	323	*e*P		Pn	07 24 58.5 -0.5
KLY	Klyuchi	1.85	326	*e*P		Pn	07 24 58.6 -1.1
KLY	Klyuchi	1.85	326	PN		Pn	07 24 58.6 -1.1
SMKR	Semkarok	1.88	342	*e*P		Pn	07 25 00.1 -0.1
BDR	Baidarnaya	1.92	338	*e*P		Pn	07 25 01.0 +0.3
KII	Karymskiy	1.94	248	*e*P		Pn	07 25 01.5 +0.6
KII				*i* S		Sn	07 25 25.4 +0.5
KOZR	Kozyr	1.95	312	PN		Pn	07 25 01.7 +0.5
KOZR				S		Sn	07 25 25.8 +0.5
KOZ	Kozyrevsk	1.96	311	*e*P		Pn	07 25 01.7 +0.5
KOZ				*i* S		Sn	07 25 25.8 +0.4
SRKR	Sorokina	2.01	339	*e*P		Pn	07 25 02.1 +0.2
BKI	Bering	2.04	77	*e*P		Pn	07 25 02.4 0.0
BKI				*i* S		Sn	07 25 26.8 -0.7
BKI	Bering	2.04	77	PN		Pn	07 25 02.4 0.0
BKI				S		Sn	07 25 26.8 -0.7
SRDR	Sredinnyy	2.19	315	*e*P		Pn	07 25 04.5 0.0
SPN	Mys Shipunski	2.24	222	*e*P		Pn	07 25 05.2 +0.1
SPN				*i* S		Sn	07 25 31.5 -1.0
SPN	Mys Shipunski	2.24	222	PN		Pn	07 25 05.2 +0.1
SPN				S		Sn	07 25 31.5 -1.0
NLC	Nalytchevo	2.47	230	*e*P		Pn	07 25 08.7 +0.4
NLC				*i* S		Sn	07 25 38.8 +0.7
NLC	Nalytchevo	2.47	230	PN		Pn	07 25 08.7 +0.4
NLC				S		Sn	07 25 38.8 +0.7
AVH	Avacha	2.70	237	*e*P		Pn	07 25 11.9 +0.5
AVH				*i* S		Sn	07 25 44.3 +0.7
PET	Petropavlovsk	2.88	234	*e*P		Pn	07 25 14.1 +0.1
PET				*i* S		Sn	07 25 46.6 -1.7
PET	Petropavlovsk	2.88	234	*e*PN		Pn	07 25 15.1 +1.1
PET				*e*S		Sn	07 25 48.9 +0.6
PET				pmax	pmax		
	comp=Z,120nm,0.7s						
PET				smax			
	comp=E,531nm,0.4s						
PET				smax			
	comp=N,650nm,0.5s						
GNL	Ganaly	2.89	249	*e*P		Pn	07 25 14.9 +0.8
PETK	Petropavlovsk-	3.30	241	Pn		Pn	07 25 18.1 -1.5
	comp=N,4.8nm,0.3s,baz=59,slow=16,SNR=34						
PETK				Sn		Sn	07 26 02.3 +3.8
	comp=N,15nm,0.3s,baz=38,slow=10,SNR=9.6						
PETK	Petropavlovsk-	3.30	241	PN		Pn	07 25 18.1 -1.6
PETK							07 26 02.3
PETK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
PETK				smax			
	comp=N,15nm,0.3s						
SKR	Severo-Kuril's	5.66	226	*e*PN		Pn	07 25 54.9 +2.9
ASAJ	Asahikawa	16.72	238	Pn		Pn	07 28 20.7 -1.3
	comp=N,0.5nm,0.3s,baz=106,slow=7.4,SNR=3.3						
ASAJ	Asahikawa	16.72	238	P		Pn	07 28 20.7 -1.3
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	Erimo	18.04	233	*i* P		Pn	07 28 36.7 -1.8
MJAR	Matsushiro Arr	24.72	232	P		P	07 29 48.2 -0.8
	comp=Z,5.0nm,0.9s,mb4.1,baz=29,slow=8.0,SNR=9.9						
MJAR	Matsushiro Arr	24.72	232	P		P	07 29 48.2 -0.8
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ILAR	Eielson Array	26.61	48	P		P	07 30 06.6 +0.7
	comp=Z,0.5nm,0.7s,mb3.1,baz=257,slow=9.4,SNR=5.9						
ILAR	Eielson Array	26.61	48	P		P	07 30 06.6 +0.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	34.91	282	PcP		PcP	07 33 51.0 -0.5
	comp=Z,0.6nm,0.5s,baz=56,slow=3.6,SNR=4.6						
MKAR	Makanchi Array	48.70	296	P		P	07 33 08.8 -3.1
	comp=Z,0.6nm,0.7s,mb3.8,baz=54,slow=8.2,SNR=7.1						
MKAR	Makanchi Array	48.70	296	*e*P		P	07 33 09.9 -2.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	Mina Array Bea	53.85	73	P		P	07 33 53.0 +2.4
	comp=Z,0.2nm,0.5s,mb3.3,baz=289,slow=7.7,SNR=3.6						
FINES	FINESS Array B	59.11	337	P		P	07 34 25.7 -2.1
	comp=Z,0.4nm,0.3s,mb3.9,baz=38,slow=7.0,SNR=3.1						
FINES	FINESS Array B	59.11	337	P		P	07 34 25.7 -2.0
OBN	Obninsk	61.83	328	*e*P		P	07 34 47.4 +1.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
NB2	NORSAR Subarra	62.29	345	P		P	07 34 47.2 -2.2
	comp=Z,0.8nm,0.7s,mb4.0,baz=19,slow=6.9						
NOA	NORSAR Array B	62.29	345	P		P	07 34 47.2 -2.2
	comp=Z,1.1nm,0.7s,mb4.1,baz=19,slow=6.8,SNR=5.4						
NOA	NORSAR Array B	62.29	345	P		P	07 34 47.2 -2.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	68.68	69	P		P	07 35 32.6 +1.4
	comp=Z,0.2nm,0.6s,mb3.2,baz=328,slow=4.7,SNR=3.5						
TXAR	Lajitas Array	68.68	69	P		P	07 35 32.6 +1.4
BRTR	Keskin Array B	76.19	322	P		P	07 36 14.9 -0.8
	comp=Z,1.4nm,0.7s,mb4.0,baz=67,slow=3.5,SNR=5.4						
BRTR	Keskin Array B	76.19	322	*e*P		P	07 36 15.9 +0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	78.23	207	P		P	07 36 27.3 0.0
	comp=Z,0.2nm,0.5s,mb3.4,baz=20,slow=6.0,SNR=5.3						
WRA	Warramunga Arr	78.23	207	P		P	07 36 27.3 0.0
ASAR	Alice Springs	81.91	206	P		P	07 36 47.2 +0.2
	comp=Z,1.1nm,0.6s,mb3.9,baz=334,slow=11,SNR=13						
ASAR	Alice Springs	81.91	206	P		P	07 36 47.3 +0.2
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

BJI 15 07:41:39.3, 39°.66N×73°.37E, h10km, ML3.4/5
IDC 15 07:41:41.5±2.1, 39°.20N×74°.01E, h0km, mb3.6/3, mb1 3.5/7, mb1mx3.4/28, mbtmp3.5/7, ML3.1/4, MS2.7/1, Ms1 2.7/1, ms1mx1.8/36, Error ellipse: s-maj=36.7km s-min=17.9km az=135.0
ISCJB 15 07:41:43.3±2.6, 39°.14N±0°.07×73°.51E±0°.10, h15km±22km, mb3.5/3, Error ellipse: s-maj=13.0km s-min=11.3km az=5.4
NEIC 15 07:41:43.7±1.9, 39°.12N×73°.77E, h10km, Error ellipse: s-maj=28.7km s-min=14.0km az=144.0
NNC 15 07:41:50.5±2.9, 39°.76N×73°.58E, h10km±10km, mb3.9, mpv3.5, Error ellipse: s-maj=21.9km s-min=14.6km az=2.0
ISC 15 07:41:43.9±2.6, 39°.20N±0°.07×73°.53E±0°.10, h0km±19km, n31, σ0s77/33, mb3.6/3, 4C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.92	80	Pg		Pn	07 42 11.4 -6.4
KSH				Sg		Sn	07 42 26.4 -16
KSH				smax			
	comp=N,640nm,0.5s						
KSH				smax			
	comp=E,500nm,0.6s						
AML	Almayashu	2.93	2	P		Pn	07 42 32.1 +0.4
	SNR=32						
AML	Almayashu	2.93	2	*e*Pn		Pn	07 42 31.7 0.0
AML				*e*Sn		Sn	07 43 07.0 -0.5
KZA	Kyzart	3.16	24	P		Pn	07 42 34.8 0.0
	SNR=38						
KZA	Kyzart	3.16	24	*e*Pn		Pn	07 42 34.8 0.0
EKS2	Erkin-Say	3.47	3	P		Pn	07 42 39.4 +0.4
	SNR=30						
EKS2	Erkin-Say	3.47	3	*e*Pn		Pn	07 42 39.2 +0.2
EKS2				*e*Sn		Sn	07 43 21.0 +0.3
AAK	Ala-Archa	3.51	12	P		Pn	07 42 39.5 -0.1
	SNR=24						
AAK	Ala-Archa	3.51	12	Pn		Pn	07 42 40.1 +0.4
	comp=E,0.1nm,0.3s,baz=158,slow=7.0,SNR=40						
AAK				Lg			07 43 24.2
	comp=E,0.2nm,0.3s,baz=87,slow=19,SNR=4.5						
AAK	Ala-Archa	3.51	12	Pn		Pn	07 42 40.1 +0.4
AAK				Lg			07 43 24.2
KBK	Karagaybulak	3.62	17	P		Pn	07 42 41.2 +0.1
	SNR=29						
CHMS	Chumysh	3.91	13	P		Pn	07 42 45.5 +0.4
	SNR=5.3						
TKM2	Tokmak 2	4.04	22	⇑Pn		Pn	07 42 46.6 -0.2
	comp=E,17nm,0.6s						
TKM2				⇓Lg			07 43 41.9
	comp=E,67nm,0.8s						
TKM2	Tokmak 2	4.04	22	P		Pn	07 42 47.0 +0.2
	SNR=11						
TKM2	Tokmak 2	4.04	22	*e*Pn		Pn	07 42 46.5 -0.3
TKM2				*e*Sn		Sn	07 43 38.9 +4.1
USP	Ospenovka	4.13	10	P		Pn	07 42 48.2 0.0
	SNR=7.4						
KK31	Karatay Array	4.52	331	⇑Pn		Pn	07 42 54.4 +0.9
	comp=E,0.9nm,0.2s,baz=142,slow=16,SNR=110						
KK31				⇓Pg		Pg	07 43 04.3 -6.2
	comp=E,10nm,0.5s,baz=140,slow=16,SNR=18						
KK31				⇓Sn		Sn	07 43 47.0 +0.3
	comp=E,11nm,0.5s,baz=142,slow=25,SNR=3.5						
KK31				Lg			07 44 01.5
	comp=E,18nm,0.5s,baz=137,slow=26,SNR=3.7						
KKAR	Karatay Array	4.52	331	*e*Pn		Pn	07 42 54.7 +1.2
MK31	Makanchi Array	9.94	37	⇑Lg			07 46 52.3
	comp=E,4.3nm,0.8s,baz=230,slow=29,SNR=4.8						
MKAR	Makanchi Array	9.94	37	Pn		Pn	07 44 03.6 -4.2
	comp=E,0.1nm,0.3s,baz=220,slow=20,SNR=3.3						
MKAR				Lg			07 46 50.9
	comp=E,0.1nm,0.3s,baz=224,slow=30,SNR=4.6						
KURK	Kurchatov	12.06	16	⇓Lg			07 47 58.6
	comp=E,28nm,1.6s						
VOSK	Vostochnaya	13.64	353	⇑Lg			07 48 48.4
	comp=E,5.1nm,1.2s						
AB31	Akbulak array	13.98	320	⇓P		Pn	07 45 02.3 -0.7
	comp=E,1.3nm,0.7s,baz=125,slow=14,SNR=9.0						
BVAR	Borovoye Array	14.00	352	Pn		Pn	07 44 59.5 -3.8
	comp=E,0.2nm,0.3s,baz=153,slow=16,SNR=3.8						
BVAR				Lg			07 49 07.6
	comp=E,0.2nm,0.3s,baz=174,slow=30,SNR=5.2						
AKTK	Aktyubinsk	15.69	321	Pn		Pn	07 45 24.8 -1.3
AKTO	Aktyubinsk	15.69	321	Pn		Pn	07 45 24.8 -1.3
	comp=E,0.2nm,0.3s,baz=132,slow=15,SNR=4.3						
ZALV	Zalesovo Beam	16.64	24	LR		LR	07 51 39.4
	comp=E,26nm,19.6s,baz=43,slow=36						
GTA	Gaotai	20.32	81	*e*P		P	07 46 21.3 -0.1
GTA				pP			07 46 26.3
GTA				sP		sP	07 46 28.8 +7.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRTR	Keskin Array B	30.63	284	P		P	07 48 01.1 +1.4
	comp=Z,0.4nm,0.5s,mb3.6,baz=95,slow=9.6,SNR=3.6						
ARCES	ARCESS Array B	39.47	336	P		P	07 49 14.

JEM	**Erimo**	**0.72 289**	⇑P	**Pb**	**07 53 17.1**	**+2.2**
JCH	**Churui**	**0.99 328**	⇑P	**Pn**	**07 53 20.1**	**+0.7**
JCH			*e*S	**Sb**	**07 53 35.1**	**+3.1**
JNBK	**Urakawa-nobuka**	**1.10 297**	P	**Pn**	**07 53 22.8**	**+1.8**
JOB	**Onbets**	**1.14 351**	⇑P	**Pn**	**07 53 21.6**	**+0.1**
JAK	**Akkeshi**	**1.30 21**	⇑P	**Pn**	**07 53 22.4**	**-1.3**
JAR	**Ashorobuto**	**1.53 352**	P	**Pn**	**07 53 26.6**	**-0.3**
ASAJ	**Asahikawa**	**2.57 336**	Pn	**Pn**	**07 53 42.1**	**+0.9**
	68nm,0.3s,baz=191,slow=11,SNR=296					
ASAJ			LR	LR	07 55 04.6	
	comp=Z,6μm,18.7s,baz=164,slow=48					
ASAJ	**Asahikawa**	**2.57 336**	*e*Pn	**Pn**	**07 53 42.2**	**+0.9**
ASAJ	**Asahikawa**	**2.57 336**	PN	**Pn**	**07 53 42.2**	**+1.0**
ASAJ			pmax	pmax		
	comp=Z,68nm,0.3s					
ASAJ			MLR	MLR		
	comp=Z,6μm,18.7s					
YUK	**Yuzh-Kuril'sk**	**2.61 30**	⇓*i*PN	**Pn**	**07 53 40.8**	**-0.9**
YUK			pmax	pmax		
	comp=Z,790nm,0.5s					
YUK			pmax	pmax		
	comp=N,240nm,0.5s					
YUK			pmax	pmax		
	comp=Z,1μm,0.5s					
YUK			pmax	pmax		
	comp=E,190nm,0.2s					
YUK			MLR	MLR		
	comp=N,6μm,14.0s					
YUK			MLR	MLR		
	comp=E,6μm,14.0s					
YUK			MLR	MLR		
	comp=Z,5μm,14.0s					
KUR	**Kuril'sk**	**4.42 37**	*e*PN	**Pn**	**07 54 05.0**	**-1.6**
KUR			pmax	pmax		
	comp=Z,2μm,1.2s					
KUR			pmax	pmax		
	comp=N,370nm,0.8s					
KUR			pmax	pmax		
	comp=E,320nm,0.8s					
KUR			pmax	pmax		
	comp=Z,760nm,0.8s					
KUR			MLR	MLR		
	comp=N,5μm,14.0s					
KUR			MLR	MLR		
	comp=E,6μm,14.0s					
KUR			MLR	MLR		
	comp=Z,5μm,14.0s					
YSS	**Yuzh-Sakhalins**	**5.26 350**	*e*Pn	**Pn**	**07 54 19.3**	**+1.2**
YSS	**Yuzh-Sakhalins**	**5.26 350**	*e*PN	**Pn**	**07 54 18.0**	**-0.1**
YSS			*e*S	**Sn**	**07 55 17.9**	**0.0**
YSS			pmax	pmax		
	comp=Z,40nm,1.0s					
YSS			smax			
	comp=N,190nm,1.0s					
YSS			MLR	MLR		
	comp=Z,3μm,14.0s					
YSS			MLR	MLR		
	comp=N,3μm,13.0s					
MAJO	**Matsushiro**	**6.93 223**	*e*Pn	**Pn**	**07 54 40.9**	**-0.2**
MAJO	**Matsushiro**	**6.93 223**	*e*PN	**Pn**	**07 54 40.9**	**-0.3**
MAT	**Matsushiro**	**6.93 223**	P	**Pn**	**07 54 40.9**	**-0.3**
MAT			S	**Sn**	**07 55 59.5**	**+0.2**
MJAR	**Matsushiro Arr**	**6.93 223**	Pn	**Pn**	**07 54 40.5**	**-0.6**
	comp=N,8.8nm,0.3s,baz=26,slow=14,SNR=83					
MJAR	**Matsushiro Arr**	**6.93 223**	PN	**Pn**	**07 54 40.5**	**-0.7**
VLA	**Vladivostok**	**9.10 283**	*i* PN	**Pn**	**07 55 14.3**	**+3.4**
HABR	**Khabarovsk**	**9.24 319**	PN	**Pn**	**07 55 10.8**	**-1.9**
HABR			MLR	MLR		
	comp=Z,1μm,16.0s					
JHJ	**Hachijo jima 2**	**9.29 203**	Sn	**Sn**	**07 56 47.3**	**-10**
	comp=Z,52nm,0.3s,baz=44,slow=23,SNR=6.7					
MDJ	**Mudanjiang**	**10.94 290**	P	**Pn**	**07 55 37.5**	**+1.4**
MDJ			pmax	pmax		
	comp=Z,60nm,0.9s					
MDJ			pmax	pmax		
	comp=Z,200nm,4.8s					
MDJ			LR	LR		
	comp=N,880nm,12.2s					
MDJ			LR	LR		
	comp=E,2μm,17.7s					
MDJ			LR	LR		
	comp=Z,3μm,15.2s					
MDJ	**Mudanjiang**	**10.94 290**	*e*Pn	**Pn**	**07 55 39.1**	**+3.0**
	comp=Z,58nm,0.9s					
KLR	**Kul'dur**	**11.40 315**	*e*PN	**Pn**	**07 55 39.8**	**-2.5**
KLR			pmax	pmax		
	comp=E,48nm,1.4s					
KLR			pmax	pmax		
	comp=Z,67nm,1.4s					
KLR			MLR	MLR		
	comp=E,1μm,12.5s					
KLR			MLR	MLR		
	comp=Z,9μm,12.5s					
SKR	**Severo-Kuril's**	**12.19 39**	*e*PN	**Pn**	**07 55 49.4**	**-3.6**
SKR			pmax	pmax		
	comp=Z,160nm,0.9s					
KSRS	**Korea Array**	**13.18 256**	Pn	**Pn**	**07 56 07.6**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=70,slow=13,SNR=54					
KSRS			LR	LR	08 01 12.8	
	comp=Z,908nm,19.2s,baz=293,slow=37					
KSRS			PcP	PcP	08 01 37.3	+0.4
	baz=73,slow=0.9,SNR=4.3					
KSRS	**Korea Array**	**13.18 256**	PN	**Pn**	**07 56 07.6**	**+1.0**
KSRS			pmax	pmax		
	comp=Z,1.0nm,0.3s					
KSRS			MLR	MLR		
	comp=Z,908nm,19.2s					
JNU	**Nakatsue**	**13.57 235**	*e*Pn	**Pn**	**07 56 10.3**	**-1.8**
CN2	**Changchun**	**13.83 285**	*e*P	**Pn**	**07 56 15.9**	**+0.4**
CN2			*e*pP		07 56 23.3	
CN2			*e*sP		07 56 28.0	
CN2			*e*S	**Sn**	**07 58 49.1**	**+1.0**
CN2			pmax	pmax		
	comp=Z,30nm,0.6s					
CN2			pmax	pmax		
	comp=Z,200nm,4.0s					
CN2			LR	LR		
	comp=N,3μm,15.0s					
CN2			LR	LR		
	comp=E,2μm,15.0s					
CN2			LR	LR		
	comp=Z,4μm,15.0s					
PETK	**Petropavlovsk-**	**14.58 34**	Pn	**Pn**	**07 56 24.0**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=186,slow=12,SNR=9.7					
PETK	**Petropavlovsk-**	**14.58 34**	P	**Pn**	**07 56 24.0**	**-1.6**
CBIJ	**Chichi jima**	**14.73 187**	LR	LR	08 02 08.1	
	comp=Z,387nm,18.1s,baz=358,slow=38					
SNY	**Shenyang**	**15.29 277**	⇓P	**Pn**	**07 56 35.5**	**+0.3**
SNY			pmax	pmax		
	comp=Z,530nm,1.2s					
DL2	**Dalian**	**17.34 268**	P	**Pn**	**07 57 00.9**	**-0.5**
DL2			*e*S	**Sn**	**08 00 06.8**	**-6.8**
DL2			pmax	pmax		
	comp=Z,50nm,0.8s					
DL2			pmax	pmax		
	comp=Z,220nm,5.9s					
DL2			LR	LR		
	comp=N,480nm,12.8s					
DL2			LR	LR		
	comp=E,400nm,14.9s					
DL2			LR	LR		
	comp=Z,580nm,14.1s					
HIA	**Hailar**	**18.56 302**	*e*P	**Pn**	**07 57 14.4**	**-2.0**
	comp=Z,215nm,0.9s					
HIA	**Hailar**	**18.56 302**	*e*P	**Pn**	**07 57 14.4**	**-2.0**
HIA			pmax	pmax		
	comp=Z,215nm,0.9s					
CLNS	**Chul'man**	**19.47 327**	*e*P	**Pn**	**07 57 24.3**	**-3.0**
CLNS			pmax	pmax		
	comp=E,16nm,1.0s					
CLNS			pmax	pmax		
	comp=N,49nm,0.8s					
CLNS			pmax	pmax		
	comp=Z,96nm,0.8s					
CLNS			MLR	MLR		
	comp=E,848nm,13.0s					
CLNS			MLR	MLR		
	comp=Z,784nm,14.0s					
CLNS			MLR	MLR		
	comp=N,806nm,13.0s					
BJI	**Beijing**	**21.12 275**	P	**P**	**07 57 41.5**	**-2.5**
BJI			pmax	pmax		
	comp=Z,79nm,0.9s,mb5.0					
BJI			pmax	pmax		
	comp=Z,190nm,4.0s					
BJI			LR	LR		
	comp=N,970nm,15.6s,MS4.8					
BJI			LR	LR		
	comp=E,3μm,13.7s,MS4.8					
BJI			LR	LR		
	comp=Z,1μm,14.7s,MS4.4					
BJT	**Baijiatuau**	**21.13 275**	*e*P	**P**	**07 57 42.3**	**-1.8**
	comp=Z,40nm,0.6s,mb4.9					
BJT	**Baijiatuau**	**21.13 275**	*e*P	**P**	**07 57 42.3**	**-1.8**
BJT			pmax	pmax		
	comp=Z,40nm,0.6s					
SSE	**Sheshan**	**21.21 247**	P	**P**	**07 57 45.3**	**+0.2**
SSE			pP		07 57 53.6	
SSE			sP	sP	07 57 58.5	+3.9
SSE			S	**S**	**08 01 40.8**	**+1.1**
SSE			pmax	pmax		
	comp=Z,27nm,0.7s,mb4.7					
SSE			pmax	pmax		
	comp=Z,500nm,4.1s					
SSE			LR	LR		
	comp=N,480nm,17.2s,MS4.1					
SSE			LR	LR		
	comp=E,410nm,17.2s,MS4.1					
SSE			LR	LR		
	comp=Z,370nm,24.1s					
TIA	**Tai'an**	**21.62 264**	P	**P**	**07 57 46.9**	**-2.5**
SEY	**Seymchan**	**21.75 10**	*d i*P	**P**	**07 57 47.5**	**-3.0**
YAK	**Yakutsk**	**22.04 342**	*e*P	**P**	**07 57 49.3**	**-4.3**
	comp=Z,232nm,0.8s,mb5.7					
YAK	**Yakutsk**	**22.04 342**	*d i*P	**P**	**07 57 49.1**	**-4.5**
YAK			*e**PP		07 57 58.2	
YAK			*e*		07 58 10.6	
YAK			*e*S	**S**	**08 01 46.6**	**-8.7**
YAK			*e*		08 01 54.3	
YAK			*e**SS	sS	08 02 02.8	-3.0
YAK			*e*SS		08 02 14.9	
YAK			*e*		08 09 10.2	
YAK			pmax	pmax		
	comp=Z,179nm,0.9s,mb5.5					
YAK			pmax	pmax		
	comp=N,47nm,0.9s					
YAK			pmax	pmax		
	comp=E,18nm,0.9s					
YAK			pmax	pmax		
	comp=Z,75nm,0.9s,mb5.1					
YAK			pmax	pmax		
	comp=N,39nm,0.8s					
YAK			pmax	pmax		
	comp=E,23nm,0.9s					
YAK			smax			
	comp=N,627nm,1.8s					
YAK			smax			
	comp=E,335nm,1.6s					
YAK			MLR	MLR		
	comp=Z,878nm,15.0s,MS4.3					
YAK			MLR	MLR		
	comp=E,512nm,13.0s,MS4.3					
YAK			MLR	MLR		
	comp=N,592nm,16.0s,MS4.3					
NJ2	**Nanjing**	**22.31 252**	*e*P	**P**	**07 57 56.3**	**-0.5**
NJ2			pmax	pmax		
	comp=Z,50nm,0.8s,mb5.0					
FX1	**Attu Island--F**	**22.47 50**	*e*P	**P**	**07 57 59.0**	**+0.7**
FX1	**Attu Island--F**	**22.47 50**	*e*P	**P**	**07 57 59.0**	**+0.7**
CIT	**Chita**	**23.07 307**	*e*P	**P**	**07 58 02.1**	**-2.5**
CIT			*e*		07 58 14.9	
CIT			*e*		07 58 25.0	
CIT			pmax	pmax		
	comp=Z,264nm,1.5s,mb5.5					
HHC	**Hu-ho-hao-te**	**24.36 279**	*e*P	**P**	**07 58 17.4**	**+0.3**
HHC			pP		07 58 26.8	
HHC			sP	sP	07 58 30.8	+3.9
HHC			PP		07 58 53.3	
HHC			PcP	PcP	08 01 58.3	+2.3
HHC			S	**S**	**08 02 32.3**	**-2.8**
HHC			sS	sS	08 02 48.3	+1.7
HHC			SS		08 03 26.5	
HHC			pmax	pmax		
	comp=Z,21nm,1.0s,mb4.5					
HHC			pmax	pmax		
	comp=Z,230nm,5.7s					
HHC			LR	LR		
	comp=N,750nm,13.9s,MS4.5					
HHC			LR	LR		
	comp=E,950nm,14.6s,MS4.5					
HHC			LR	LR		
	comp=Z,1μm,14.5s,MS4.5					
BOD	**Bodaibo**	**24.89 320**	*e*P	**P**	**07 58 18.2**	**-3.5**
BOD			pmax	pmax		
	comp=Z,34nm,1.0s,mb4.8					
WHN	**Wuhan**	**26.36 254**	P	**P**	**07 58 35.5**	**+0.2**
WHN			S	**S**	**08 03 09.8**	**+2.7**
WHN			pmax	pmax		
	comp=Z,170nm,0.7s,mb5.7					
WHN			LR	LR		
	comp=N,3μm,16.3s,MS5.2					
WHN			LR	LR		
	comp=E,3μm,13.6s,MS5.2					
WHN			LR	LR		
	comp=Z,5μm,14.5s,MS5.2					
ULN	**Ulaanbaatar**	**26.77 296**	*e*P	**P**	**07 58 39.1**	**+0.3**
	comp=Z,90nm,1.0s,mb5.3					
ULN	**Ulaanbaatar**	**26.77 296**	*e*P	**P**	**07 58 39.1**	**+0.3**
ULN			pmax	pmax		
	comp=Z,90nm,1.0s,mb5.2					
ULN	**Ulaanbaatar**	**26.77 296**	P	**P**	**07 58 39.0**	**+0.2**
	comp=Z,1μmcomp=Z,96nm,1.2s,mb5.2					
ULN	**Ulaanbaatar**	**26.77 296**	P	**P**	**07 58 38.8**	**0.0**
	SNR=46					
SONM	**Songino Array**	**27.21 296**	P	**P**	**07 58 42.9**	**+0.1**
	comp=Z,92nm,1.2s,mb5.2,baz=96,slow=8.1,SNR=102					
SONM			LR	LR	08 10 53.2	
	comp=Z,1μm,18.9s,MS4.4,baz=140,slow=39					
SONM	**Songino Array**	**27.21 296**	P	**P**	**07 58 42.9**	**+0.1**
GUMO	**Guam**	**28.10 178**	LR	LR	08 07 43.5	
	comp=Z,132nm,21.3s,MS3.5,baz=357,slow=32					
XAN	**Xi'an**	**28.64 266**	P	**P**	**07 58 55.8**	**+0.1**
XAN			pP	pP	07 59 05.3	+2.6
XAN			sP	sP	07 59 09.3	+3.7
XAN			pmax	pmax		
	comp=Z,19nm,3.9s					
XAN			LR	LR		
	comp=N,340nm,15.4s,MS4.1					
XAN			LR	LR		
	comp=E,170nm,15.9s,MS4.1					
XAN			LR	LR		
	comp=Z,240nm,14.9s,MS3.9					
BILL	**Bilibino**	**28.89 17**	⇑*i*P	**P**	**07 58 55.1**	**-2.5**
BILL			*e*	pP	07 59 02.7	-1.9
BILL			*e*		07 59 44.6	
BILL			*e*		08 02 06.4	
BILL			pmax	pmax		
	comp=Z,21nm,1.6s,mb4.6					
BILL			MLR	MLR		
	comp=Z,700nm,17.0s,MS4.3					
TLY	**Talaya**	**29.08 304**	*e*P	**P**	**07 59 00.0**	**+0.6**
	comp=Z,74nm,0.9s,mb5.4					
TLY	**Talaya**	**29.08 304**	*e*P	**P**	**07 58 59.9**	**+0.4**
TLY			pmax	pmax		
	comp=Z,66nm,0.8s,mb5.4					
TLY			MLR	MLR		
	comp=Z,761nm,19.0s,MS4.3					
TLY	**Talaya**	**29.08 304**	P	**P**	**07 59 00.8**	**+1.3**
	SNR=13					
ZAK	**Zakamensk**	**29.26 301**	*e*P	**P**	**07 59 00.8**	**-0.2**
ZAK			pmax	pmax		
	comp=Z,27nm,1.0s,mb4.9					
ENH	**Enshi**	**30.04 259**	*e*P	**P**	**07 59 08.1**	**-0.1**
	comp=Z,54nm,0.8s,mb5.3					
MOY	**Mondy**	**30.73 304**	*e*P	**P**	**07 59 14.9**	**+0.8**
MOY			pmax	pmax		
	comp=Z,78nm,1.6s,mb5.3					
TIXI	**Tiksi**	**30.88 351**	*e*P	**P**	**07 59 11.1**	**-4.1**
TIXI			pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9					
TIXI			MLR	MLR		
	comp=Z,397nm,17.0s,MS4.1					
LZH	**Lanzhou**	**31.59 273**	⇑P	**P**	**07 59 23.1**	**+1.3**
LZH			pP	pP	07 59 32.8	+4.0
LZH			sP	sP	07 59 36.5	+4.8
LZH			PP	PP	08 00 27.6	-5.6
LZH			*e*S	**S**	**08 04 28.3**	**-1.0**
LZH			sS	sS	08 04 45.0	+4.2
LZH			SS	SS	08 06 16.3	-28
LZH			pmax	pmax		
	comp=Z,62nm,1.1s,mb5.3					
LZH			pmax	pmax		
	comp=Z,310nm,4.7s					
LZH			LR	LR		
	comp=N,1μm,14.3s,MS4.9					
LZH			LR	LR		
	comp=E,2μm,17.0s,MS4.9					
LZH			LR	LR		
	comp=Z,2μm,17.0s,MS4.8					
GTA	**Gaotai**	**33.41 281**	⇑P	**P**	**07 59 38.8**	**+1.1**
GTA			pP	pP	07 59 48.5	+3.7
GTA			sP	sP	07 59 52.4	+4.7
GTA			PcP	PcP	08 02 20.0	+1.2
GTA			S	**S**	**08 04 57.4**	**-0.1**
GTA			sS	sS	08 05 13.8	+4.7
GTA			SS	SS	08 07 03.8	-18
GTA			pmax	pmax		
	comp=Z,29nm,0.7s,mb5.3					
GTA			pmax	pmax		
	comp=Z,170nm,4.7s					
GTA			LR	LR		
	comp=N,580nm,16.4s,MS4.8					
GTA			LR	LR		
	comp=E,1μm,16.4s,MS4.8					
GTA			LR	LR		
	comp=Z,2μm,15.2s,MS4.9					
GYA	**Guiyang**	**34.23 255**	P	**P**	**07 59 43.8**	**-1.2**
GYA			pP	pP	07 59 53.4	+1.4
GYA			sP	sP	07 59 57.3	+2.4
GYA			PP	PP	08 00 57.3	-5.3
GYA			PcP	PcP	08 02 22.6	+1.3
GYA			S	**S**	**08 05 10.3**	**-0.2**
GYA			sS	sS	08 05 20.3	-1.8
GYA			pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1					
GYA			pmax	pmax		
	comp=Z,100nm,3.7s					
GYA			LR	LR		
	comp=N,820nm,15.5s,MS4.7					
GYA			LR	LR		
	comp=E,870nm,16.7s,MS4.7					
GYA			LR	LR		
	comp=Z,1μm,17.0s,MS4.8					
QIZ	**Qiongzhong**	**36.86 243**	P	**P**	**08 00 08.6**	**+1.0**
QIZ			pP	pP	08 00 17.0	+2.4
QIZ			PP	PP	08 01 31.4	-0.3
QIZ			S	**S**	**08 05 51.1**	**+0.3**
QIZ			sS	sS	08 06 04.8	+2.3
QIZ			pmax	pmax		
	comp=Z,17nm,1.8s,mb4.6					
QIZ			pmax	pmax		
	comp=Z,240nm,4.0s					
QIZ			LR	LR		
	comp=N,480nm,18.9s					
QIZ			LR	LR		
	comp=Z,620nm,17.1s,MS4.5					
QIZ	**Qiongzhong**	**36.86 243**	*e*P	**P**	**08 00 07.5**	**-0.1**
	comp=Z,9.8nm,1.1s,mb4.5					
KMI	**Kunming**	**37.87 257**	P	**P**	**08 00 16.9**	**+0.7**
KMI			pP	pP	08 00 21.8	-1.4
KMI			PP	PP	08 01 43.0	+0.2
KMI			S	**S**	**08 06 01.3**	**-4.9**
KMI			pmax	pmax		
	comp=Z,44nm,0.8s,mb5.2					
KMI			pmax	pmax		
	comp=Z,120nm,3.4s					
KMI			LR	LR		
	comp=N,850nm,16.6s,MS4.6					
KMI			LR	LR		
	comp=E,370nm,19.9s,MS4.6					
KMI			LR	LR		
	comp=Z,810nm,17.2s,MS4.6					
TTA	**Tatalina**	**40.38 38**	*e*P	pP	08 00 47.0	+3.2
ZAA0	**Zalesovo Array**	**40.41 308**	*e*P	**P**	**08 00 36.4**	**-0.6**
ZALV	**Zalesovo Beam**	**40.41 308**	P	**P**	**08 00 36.7**	**-0.3**
	comp=Z,30nm,0.5s,mb5.3,baz=87,slow=7.6,SNR=76					
ZALV			PcP	PcP	08 02 39.5	-0.1
	comp=Z,5.8nm,0.5s,baz=64,slow=3.8,SNR=4.0					
ZALV			LR	LR	08 18 52.8	
	comp=Z,360nm,18.1s,MS4.3,baz=72,slow=38					
ZALV	**Zalesovo Beam**	**40.41 308**	P	**P**	**08 00 36.7**	**-0.3**
ZALV			PcP	PcP	08 02 39.5	-0.1
ZALV			LR	LR	08 18 52.8	
ZALV	**Zalesovo Beam**	**40.41 308**	P	**P**	**08 00 36.7**	**-0.3**
ZALV					08 02 39.5	
WMQ	**Urumqi**	**40.73 293**	P	**P**	**08 00 40.0**	**+0.2**
WMQ			pP	pP	08 00 50.0	+3.0
WMQ			sP	sP	08 00 54.0	+4.2
WMQ			PP	PP	08 02 18.0	+4.3
WMQ			S	**S**	**08 06 48.0**	**-0.8**
WMQ			sS	sS	08 07 05.0	+4.5
WMQ			SS	SS	08 09 45.0	-4.5
WMQ			pmax	pmax		
	comp=Z,54nm,1.0s,mb5.1					
WMQ			pmax	pmax		
	comp=Z,170nm,4.0s					
WMQ			LR	LR		
	comp=N,580nm,15.0s,MS4.8					
WMQ			LR	LR		
	comp=E,950nm,15.0s,MS4.8					
WMQ			LR	LR		
	comp=Z,1μm,15.0s,MS4.8					
NVS	**Novosibirsk**	**41.21 310**	*e*P	**P**	**08 00 41.9**	**-1.7**
NVS			pmax	pmax		
	comp=Z,26nm,0.8s,mb4.9					
NVS			pmax	pmax		
	comp=N,6.0nm,0.7s					
NVS			pmax	pmax		
	comp=E,19nm,0.8s					
RSO	**Redoubt South**	**41.94 41**	*e*P	**P**	**08 00 49.9**	**+0.3**
RSO			*e*	pP	08 00 56.7	0.0
PPLA	**Purkeypile**	**42.13 38**	*e*P	**P**	**08 00 51.6**	**+0.6**
	comp=E,71nm,1.3s,mb5.1					
PPLA			*e*		08 01 01.0	
KDAK	**Kodiak Island**	**42.25 45**	P	**P**	**08 00 51.8**	**-0.2**
	comp=E,5.8nm,0.7s,mb4.3,baz=303,slow=9.0,SNR=6.3					
KDAK	**Kodiak Island**	**42.25 45**	*ce*P	**P**	**08 00 52.5**	**+0.4**
BPAW	**Bear Paw Mtn.**	**42.66 36**	*e*P	**P**	**08 00 55.4**	**+0.1**
	comp=E,12nm,1.1s,mb4.6					
TRF	**Thorofare Moun**	**42.98 37**	*e*P	**P**	**08 00 58.2**	**+0.2**
	comp=E,112nm,2.3s,mb5.2					
COLD	**Coldfoot**	**43.02 31**	*e*P	**P**	**08 00 57.6**	**-0.6**
	comp=E,9.2nm,0.9s,mb4.5					
CHRT	**Chiangrai**	**43.27 254**	P	**P**	**08 01 00.0**	**-0.8**
	comp=E,105nm,1.0s,mb5.5					
MK31	**Makanchi Array**	**43.51 298**	*e*P	**P**	**08 01 02.4**	**0.0**
MK31	**Makanchi Array**	**43.51 298**	*ce*P	**P**	**08 01 02.4**	**0.0**
MK31			pmax	pmax		
	comp=Z,40nm,0.5s,mb5.4					
MKAR	**Makanchi Array**	**43.51 298**	P	**P**	**08 01 02.4**	**0.0**
	comp=Z,22nm,0.7s,mb5.0,baz=80,slow=9.4,SNR=136					
MKAR			LR	LR	08 20 27.1	
	comp=Z,404nm,19.4s,MS4.3,baz=8.1,slow=38					
MKAR	**Makanchi Array**	**43.51 298**	P	**P**	**08 01 02.4**	**0.0**
MKAR			LR	LR	08 20 27.1	
MKAR	**Makanchi Array**	**43.51 298**	*ce*P	**P**	**08 01 02.4**	**0.0**
MKAR			pmax	pmax		
	comp=Z,23nm,0.7s					
MCK	**McKinley**	**43.57 36**	*e*P	**P**	**08 01 02.7**	**0.0**
	comp=Z,37nm,1.1s,mb5.0					
MCK			*e*		08 01 12.1	
MCK	**McKinley**	**43.57 36**	*e*P	**P**	**08 01 02.7**	**0.0**
MCK			*e*		08 01 12.1	
MCK			pmax	pmax		
	comp=Z,37nm,1.1s,mb5.0					
PMR	**Palmer**	**43.63 40**	*e*P	**P**	**08 01 01.6**	**-1.6**
	comp=Z,23nm,1.1s,mb4.8					
PMR			*e*		08 01 12.2	
PMR	**Palmer**	**43.63 40**	*e*P	**P**	**08 01 01.6**	**-1.6**
PMR			*e*		08 01 12.3	
PMR			pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8					
LSA	**Lhasa**	**43.98 272**	P	**P**	**08 01 08.8**	**+2.3**
LSA			pmax	pmax		
	comp=Z,50nm,0.9s,mb5.2					
LSA	**Lhasa**	**43.98 272**	*e*P	**P**	**08 01 08.6**	**+2.1**
	comp=Z,43nm,0.8s,mb5.2					
LSA	**Lhasa**	**43.98 272**	*e*P	**P**	**08 01 08.6**	**+2.1**
LSA			pmax	pmax		
	comp=Z,43nm,0.8s,mb5.2					
SML	**Sawmill**	**43.98 39**	*e*P	**P**	**08 01 07.2**	**+1.2**
	comp=Z,12nm,1.0s,mb4.6					
SML			*e*	pP	08 01 15.2	+2.0
SML	**Sawmill**	**43.98 39**	*e*P	**P**	**08 01 07.2**	**+1.2**
SML			*e*	pP	08 01 15.2	+2.0
SML			pmax	pmax		

comp=Z,12nm,1.0s,mb4.6
COLA College 43.99 35 *e*P **P 08 01 05.3 -0.8**
comp=Z,27nm,0.9s,mb5.0
COLA *e* 08 01 15.3
COLA College 43.99 35 *e*P **P 08 01 05.3 -0.7**
COLA *e* 08 01 15.3
COLA pmax pmax
comp=Z,27nm,0.9s,mb5.0
ILAR Eielson Array 44.41 35 P **P 08 01 08.6 -0.8**
comp=Z,6.0nm,0.6s,mb4.5,baz=262,slow=6.1,SNR=48
ILAR LR LR 08 21 20.2
comp=Z,228nm,18.7s,MS4.1,baz=317,slow=38
ILAR Eielson Array 44.41 35 P **P 08 01 08.6 -0.8**
CHG Chiang Mai 44.55 253 ⇑P **P 08 01 11.6 +0.5**
comp=Z,36nm,0.9s,mb5.2
CHTO Chiang Mai 44.55 253 *e*P **P 08 01 11.7 +0.6**
comp=Z,28nm,0.8s,mb5.2
CHTO Chiang Mai 44.55 253 *e*P **P 08 01 11.7 +0.6**
CHTO pmax pmax
comp=Z,28nm,0.8s,mb5.1
CHTO Chiang Mai 44.55 253 P **P 08 01 11.6 +0.5**
comp=Z,51nm,0.9s,mb5.3
KURK Kurchatov 44.77 305 *e*P **P 08 01 11.9 -0.6**
comp=Z,49nm,0.4s,mb5.7
KURK Kurchatov 44.77 305*c i*P **P 08 01 12.1 -0.4**
KURK pmax pmax
comp=Z,51nm,0.8s,mb5.4
KURK MLR MLR
comp=Z,230nm,16.0s,MS4.2
KURK Kurchatov 44.77 305 P **P 08 01 12.6 +0.1**
SNR=18
CM31 Chiang Mai Arr 44.78 253 *e*P **P 08 01 13.6 +0.6**
comp=Z,12nm,0.6s,mb4.9
CMAR Chiang Mai Arr 44.78 253 P **P 08 01 13.8 +0.8**
comp=Z,14nm,0.8s,mb4.8,baz=43,slow=7.1,SNR=35
CMAR LR LR 08 21 36.4
comp=Z,193nm,18.6s,MS4.1,baz=56,slow=38
CMAR Chiang Mai Arr 44.78 253 P **P 08 01 13.8 +0.8**
SHL Shillong 45.65 266 *e*PKP **P 08 01 20.0 +0.2**
MRSI Marisa 45.71 212 P **P 08 01 20.2 -0.1**
DOT Dot Lake 45.74 36 *e*P **P 08 01 19.7 -0.3**
comp=Z,40nm,0.6s,mb5.5
DOT *e* 08 01 29.2
EGAK Eagle 46.85 35 *e*P **P 08 01 28.1 -0.6**
comp=Z,13nm,0.8s,mb4.9
DAWY Dawson 47.72 35 *e*P **P 08 01 35.3 -0.2**
TAPN Taplejung 47.79 271 *e*P **P 08 01 37.8 +1.3**
comp=Z,112nm,0.8s,mb6.0
ODAN Odare 48.29 271 *e*P **P 08 01 41.3 +0.9**
comp=Z,82nm,0.8s,mb5.8
VOSK Vostochnaya 48.76 309 P **P 08 01 43.4 -0.3**
VOSK pmax pmax
comp=Z,40nm,0.9s,mb5.5
GUN Gumba 48.86 273 *e*P **P 08 01 45.7 +1.0**
comp=Z,390nm,0.7s
BVAR Borovoye Array 49.01 310 P **P 08 01 45.7 +0.1**
comp=Z,21nm,0.4s,mb5.5,baz=70,slow=8.9,SNR=101
BVAR PcP PcP 08 03 09.6 +0.4
comp=Z,6.5nm,0.8s,baz=79,slow=3.1,SNR=2.8
BVAR Borovoye Array 49.01 310 P **P 08 01 45.7 +0.1**
BVAR 08 03 09.6
BRVK Borovoye 49.06 310 *e*P **P 08 01 46.1 +0.2**
comp=Z,127nm,1.7s,mb5.7
BRVK Borovoye 49.06 310*c i*P **P 08 01 46.0 0.0**
BRVK pmax pmax
comp=Z,54nm,1.2s,mb5.5
BRVK MLR MLR
comp=Z,476nm,16.0s,MS4.6
BRVK Borovoye 49.06 310 P **P 08 01 46.4 +0.5**
SNR=25
INK Inuvik 49.24 29 P **P 08 01 46.8 -0.4**
comp=Z,18nm,0.5s,mb5.4,baz=302,slow=6.9,SNR=156
INK Inuvik 49.24 29 *e*P **P 08 01 46.8 -0.3**
comp=Z,49nm,1.2s,mb5.4
INK Inuvik 49.24 29 *e*P **P 08 01 46.8 -0.3**
INK pmax pmax
comp=Z,49nm,1.2s
TKM2 Tokmak 2 49.31 296 P **P 08 01 48.8 +0.8**
SNR=78
TKM2 Tokmak 2 49.31 296 *e*P **P 08 01 48.8 +0.7**
comp=Z,56nm,0.8s,mb5.6
TKM2 Tokmak 2 49.31 296 *e*P **P 08 01 48.8 +0.8**
TKM2 pmax pmax
comp=Z,55nm,0.8s,mb5.6
KKN Kakani 49.37 273 *e*P **P 08 01 49.4 +0.7**
comp=Z,186nm,0.8s,mb6.2
PKI Pulchoki 49.39 273 *e*P **P 08 01 49.4 +0.6**
comp=Z,98nm,0.9s,mb5.8
DMN Daman 49.59 273 *e*P **P 08 01 51.2 +0.8**
comp=Z,153nm,0.8s,mb6.1
GKN Gorkha 49.73 274 *e*P **P 08 01 52.0 +0.5**
comp=Z,84nm,0.8s,mb5.8
CHMS Chumysh 49.85 296 P **P 08 01 52.2 +0.1**
SNR=5.5
KBK Karagaybulak 49.85 296 P **P 08 01 52.8 +0.6**
SNR=32
KBK Karagaybulak 49.85 296 *e*P **P 08 01 52.6 +0.5**
comp=Z,58nm,0.8s,mb5.7
KZA Kyzart 49.88 295 P **P 08 01 54.0 +1.6**
SNR=22
KZA Kyzart 49.88 295 *e*P **P 08 01 53.6 +1.2**
comp=Z,16nm,0.5s,mb5.3
USP Ospenovka 49.91 297 P **P 08 01 52.8 +0.2**
SNR=21
AAK Ala-Archa 50.17 296 P **P 08 01 54.8 +0.3**
SNR=9.4
AAK Ala-Archa 50.17 296 P **P 08 01 54.8 +0.2**
comp=Z,7.1nm,0.5s,mb5.0,baz=108,slow=6.8,SNR=19
AAK Ala-Archa 50.17 296 *e*P **P 08 01 54.7 +0.2**
comp=Z,11nm,0.7s,mb5.0
AAK Ala-Archa 50.17 296*c i*P **P 08 01 54.6 +0.1**
AAK pmax pmax
comp=Z,13nm,1.7s,mb4.7
AAK MLR MLR
comp=Z,527nm,18.0s,MS4.6
AAK Ala-Archa 50.17 296 P **P 08 01 54.3 -0.2**
comp=Z,4.3nm,1.2s,mb4.3
AAK Ala-Archa 50.17 296 P **P 08 01 55.0 +0.5**
SNR=7.3
DANN Dangsing 50.20 275 *e*P **P 08 01 56.2 +1.2**
comp=Z,421nm,0.8s
KSH Kashi 50.47 291 *e*P **P 08 02 00.9 +4.0**
KSH *ep*P pP 08 02 10.8 +6.6
KSH *es*P sP 08 02 14.8 +7.8
KSH *e*PcP PcP 08 03 19.3 +4.5
KSH *e*PP PP 08 03 57.4 +5.0
KSH *e*ScP ScP 08 07 11.1 +1.9
KSH *e*PcS PcS 08 07 15.0 +3.0
KSH *e*S **S 08 09 10.9 +1.7**
KSH *es*S sS 08 09 27.3 +6.2
KSH *e*ScS ScS 08 11 46.3 0.0
KSH *e*SS SS 08 12 41.6 -1.3
KSH pmax pmax
comp=Z,16nm,0.7s,mb5.2
KSH pmax pmax
comp=Z,200nm,3.1s
KSH LR LR
comp=N,370nm,6.4s
KSH LR LR
comp=E,420nm,7.4s
KSH LR LR
comp=Z,510nm,18.7s,MS4.6
KOLN Koldanda 50.63 274 *e*P **P 08 01 58.9 +0.6**
comp=Z,96nm,0.8s,mb5.8
EKS2 Erkin-Say 50.64 296 P **P 08 01 58.4 +0.3**
SNR=20
EKS2 Erkin-Say 50.64 296 *e*P **P 08 01 57.8 -0.3**
comp=Z,20nm,0.7s,mb5.2
AML Almayashu 50.91 295 *e*P **P 08 02 00.6 +0.4**
comp=Z,13nm,0.7s,mb5.0
JOSI Joshimath 52.16 280 *e*PKP **P 08 02 10.4 +0.7**
KK31 Karatay Array 52.63 298*ce*P **P 08 02 12.6 -0.4**
KK31 pmax pmax
comp=Z,29nm,0.6s,mb5.4
KKAR Karatay Array 52.63 298 *e*P **P 08 02 12.8 -0.1**
comp=Z,38nm,0.7s,mb5.4
KKAR Karatay Array 52.63 298 *e*P **P 08 02 12.8 -0.2**
KKAR pmax pmax
comp=Z,38nm,0.7s,mb5.4
KULM Kulim 53.00 239 *e*P **P 08 02 16.6 +0.6**
comp=Z,22nm,0.9s,mb5.1
KULM Kulim 53.00 239 P **P 08 02 17.0 +0.9**
comp=Z,28nm,1.0s,mb5.2
HNR Honiara 53.01 160 LR LR 08 21 38.5
comp=Z,235nm,21.0s,MS4.2,baz=97,slow=33
SVE Sverdlovsk 53.02 317⇓*e*P **P 08 02 15.9 +0.2**
SVE *e* 08 04 17.8
SVE *e*S **S 08 09 42.8 -1.0**
SVE pmax pmax
comp=Z,100nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,732nm,14.0s,MS4.9
IPM Ipoh 53.38 238 P **P 08 02 19.2 +0.3**
comp=Z,14nm,0.9s,mb4.9
DDI Dehra Dun 53.39 280 *ex* **P 08 02 15.0 -3.8**
DLBC Dease Lake 53.66 41 *e*P **P 08 02 22.9 +2.6**
SOKR Solikamsk 53.88 321⇑*i*P **P 08 02 21.5 -0.4**
SOKR pmax pmax
comp=Z,60nm,1.2s,mb5.4
SOKR MLR MLR
comp=Z,590nm,16.0s,MS4.7
ARU Arti 54.23 317 *e*P **P 08 02 24.4 -0.2**
comp=Z,55nm,0.8s,mb5.5
ARU Arti 54.23 317*c i*P **P 08 02 24.1 -0.5**
ARU *e* 08 03 26.9
ARU *e* 08 04 22.5
ARU PPP 08 05 32.2
ARU S **S 08 10 00.8 +0.6**
ARU SS SS 08 13 38.5 -3.1
ARU pmax pmax
comp=Z,77nm,1.0s,mb5.6
ARU MLR MLR
comp=Z,601nm,16.0s,MS4.8
AGRA Agra 55.14 277 *e*PKP **P 08 02 31.2 -0.3**
SONA Sohna 55.22 279 *e*PKP **P 08 02 32.0 0.0**
ALE Alert 55.25 4 P **P 08 02 30.3 -1.3**
comp=Z,75nm,0.5s,mb6.0,SNR=5.3
KAKA Kakadu 55.27 194 P **P 08 02 31.5 -0.9**
comp=Z,253nmcomp=Z,34nm,0.6s,mb5.5
KUDL Kundal 55.71 279 *ex* x 08 02 19.3
KUDL AMb AMB 08 02 21.9
comp=Z,32nm,1.0s,mb5.3
KHET Khetri 56.26 279 *e*PKP **P 08 02 39.6 0.0**
KHET AMb AMB 08 02 41.5
comp=Z,24nm,0.8s,mb5.3
SPITS Spitsbergen Ar 56.28 349 P **P 08 02 37.7 -1.2**
comp=Z,14nm,0.7s,mb5.1,baz=91,slow=9.7,SNR=10.0
SPITS Spitsbergen Ar 56.28 349 P **P 08 02 37.7 -1.3**
SPITS pmax pmax
comp=Z,14nm,0.7s
AB31 Akbulak array 56.52 309*ce*P **P 08 02 41.2 +0.1**
AB31 pmax pmax
comp=Z,17nm,0.4s,mb5.4
ABKAR Akbulak array 56.52 309 *e*P **P 08 02 41.0 -0.1**
comp=Z,30nm,0.6s,mb5.5
AKTK Aktyubinsk 57.10 311 P **P 08 02 45.0 -0.2**
AKTO Aktyubinsk 57.10 311 P **P 08 02 45.0 -0.2**
comp=Z,12nm,0.8s,mb5.0,baz=69,slow=8.2,SNR=38
AKTO Aktyubinsk 57.10 311 P **P 08 02 45.0 -0.2**
RES Resolute Bay 57.49 16 P **P 08 02 46.5 -1.1**
comp=Z,47nm,0.8s,mb5.5,baz=322,slow=8.1,SNR=7.6
RES LR LR 08 30 54.5
comp=Z,186nm,20.2s,MS4.2,baz=277,slow=40
RES Resolute Bay 57.49 16 *e*P **P 08 02 46.4 -1.2**
RES LR LR 08 30 54.5
RES Resolute Bay 57.49 16 *e*P **P 08 02 46.4 -1.2**
PPI Padang Panjang 57.61 235 P **P 08 02 48.4 -0.8**
comp=Z,32nm,1.1s,mb5.3
PWJI Pagerwojo 57.70 219 P **P 08 02 48.4 -1.4**
comp=Z,54nm,0.8s,mb5.6
KBL Kabul 57.71 289 *e*P **P 08 02 49.1 -0.7**
comp=Z,20nm,0.8s,mb5.2
KBL Kabul 57.71 289 *e*P **P 08 02 49.1 -0.7**
KBL pmax pmax
comp=Z,20nm,0.8s,mb5.2
NGP Nagpur 57.80 270 *ex* **P 08 02 46.7 -3.9**
PRGR Permogore 57.94 326⇑*i*P **P 08 02 50.5 -0.5**
PRGR *e* 08 03 41.6
PRGR pmax pmax
comp=Z,29nm,0.5s,mb5.6
MDSI Maura Dua 58.63 228 P **P 08 02 56.1 -0.3**
comp=Z,15nm,1.6s,mb4.8
LVZ Lovozero 58.65 335*c i*P **P 08 02 54.2 -1.6**
LVZ pmax pmax
comp=Z,22nm,1.0s,mb5.1
LVZ MLR MLR
comp=Z,370nm,17.0s,MS4.6
YKA Yellowknife Ar 58.69 32 P **P 08 02 55.5 -0.6**
comp=Z,1.0nm,0.6s,baz=66,slow=8.5,SNR=4.8
YKA LR LR 08 32 15.3
comp=Z,15nm,20.0s,baz=275,slow=40
YKA Yellowknife Ar 58.69 32 P **P 08 02 55.5 -0.6**
YKA LR LR 08 32 15.3
YKA Yellowknife Ar 58.69 32 P **P 08 02 55.5 -0.7**
KNA Kununurra 58.96 197 P **P 08 02 57.3 -1.2**
comp=Z,38nm,0.8s,mb5.5
APA Apatity 59.23 335⇑*i*P **P 08 02 59.0 -0.8**
APA pmax pmax
comp=Z,14nm,0.8s,mb5.0
APA MLR MLR
comp=Z,500nm,17.0s,MS4.7
AKL Akola 59.59 271 *e*PKP **P 08 03 03.1 +0.1**
AKL AMb AMB 08 03 04.1
comp=Z,68nm,0.0s
KEV Kevo 59.75 339 *e*P **P 08 03 03.0 -0.4**
comp=Z,26nm,0.6s,mb5.4
KEV Kevo 59.75 339 *e*P **P 08 03 02.0 -1.4**
KEV pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KEV Kevo 59.75 339 *ep* P **P 08 03 02.0 -1.4**
comp=Z,6.5nm,0.4s,mb5.0
ARCES ARCESS Array B 60.29 339 P **P 08 03 06.4 -0.7**
comp=Z,5.8nm,0.5s,mb4.9,baz=58,slow=7.5,SNR=91
ARCES ARCESS Array B 60.29 339 P **P 08 03 06.4 -0.7**
ARE0 ARCESS Array S 60.29 339 *e*P **P 08 03 06.9 -0.2**
HYB Hyderabad 60.44 267 *i* P **P 08 03 09.0 +0.1**
KLMR Klimovskoe 60.87 327 *e*P **P 08 03 10.1 -1.1**
KLMR pmax pmax
comp=Z,68nm,1.4s,mb5.6
KLMR pmax pmax
comp=Z,81nm,6.9s
KLMR MLR MLR
comp=Z,890nm,17.0s,MS5.0
DAG Danmarks Havn 61.22 356 *i* P **P 08 03 11.7 -1.7**
DAG pmax pmax
comp=Z,16nm,0.9s,mb5.2
DAG Danmarks Havn 61.22 356 *i* P **P 08 03 11.7 -1.7**
comp=Z,155nm,0.9s,mb6.1
KTK1 Kautokeino 61.24 339 *e*P **P 08 03 12.8 -0.8**
KTK1 AMb AMB 08 03 15.7
comp=Z,72nm,0.6s,mb6.0
KTK1 *ep*P pP 08 03 21.8 +0.7
KTK1 Kautokeino 61.24 339 *e*P **P 08 03 12.8 -0.8**
comp=Z,72nm,0.6s,mb6.0
LATR Latur 61.31 270 *e*PKP **P 08 03 14.5 -0.3**
LATR AMb AMB 08 03 28.2
comp=Z,64nm,1.6s,mb5.5
TRO Tromso 61.90 341 *e*P **P 08 03 17.2 -0.8**
TRO AMb AMB 08 03 19.9
comp=Z,36nm,0.8s,mb5.5
TRO *ep*P pP 08 03 27.9 +2.5
TRO Tromso 61.90 341 *e*P **P 08 03 17.2 -0.8**
comp=Z,36nm,0.8s,mb5.6
TRO Tromso 61.90 341 *e*P **P 08 03 17.2 -0.8**
TRO pmax pmax
comp=Z,36nm,0.8s,mb5.5
FITZ Fitzroy Crossi 61.97 200 *e*P **P 08 03 18.4 -0.7**
comp=Z,15nm,1.3s,mb5.0
WB2 Warramunga Arr 62.06 190 *e*P **P 08 03 17.6 -2.1**
WRA Warramunga Arr 62.07 190 P **P 08 03 17.7 -2.0**
comp=Z,5.8nm,0.6s,mb4.9,baz=8.1,slow=6.8,SNR=84
WRA Warramunga Arr 62.07 190 P **P 08 03 17.7 -2.0**
WRA Warramunga Arr 62.07 190 P **P 08 03 17.7 -2.0**
JCW Jim Creek 62.72 49 *e*P **P 08 03 23.1 -0.8**
JOF Joensuu 62.76 332 *e*P **P 08 03 23.0 -0.9**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
JOF Joensuu 62.76 332 *ep* **P 08 03 23.0 -0.9**
comp=Z,4.2nm,0.4s,mb4.9
POO Poona 63.27 271 *e*PKP **P 08 03 27.3 -0.6**
POO AMb AMB 08 03 28.6
comp=Z,44nm,0.9s,mb5.6
KAD Karad 63.77 270 *e*PKP **P 08 03 30.3 -0.9**
ETW Entiat 63.94 49 *e*P **P 08 03 34.0 +2.1**
MOS Moscow 64.68 323 *e*P **P 08 03 35.6 -1.0**
MOS *e* 08 03 46.3
MOS pmax pmax
comp=Z,54nm,0.9s,mb5.6
KAF Kangasniemi 65.04 333 *e*P **P 08 03 36.4 -2.5**
KAF pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
KAF Kangasniemi 65.04 333 *ep* **P 08 03 36.4 -2.5**
comp=Z,5.6nm,0.4s,mb5.0
HAWA Hanford 65.08 49 *e*P **P 08 03 41.4 +2.0**
comp=Z,13nm,1.3s,mb4.8
NEW Newport 65.33 47 *e*P **P 08 03 40.8 -0.2**
comp=Z,12nm,1.0s,mb4.9
NEW *e* pP 08 03 49.1 +0.6
NEW Newport 65.33 47 *e*P **P 08 03 40.8 -0.2**
NEW *e* pP 08 03 49.1 +0.6
NEW pmax pmax
comp=Z,12nm,1.0s
OBN Obninsk 65.54 323*c i*P **P 08 03 41.6 -0.6**
OBN *e* 08 04 12.5
OBN *e* 08 06 03.0
OBN pmax pmax
comp=Z,70nm,1.5s,mb5.5
OBN MLR MLR
comp=Z,700nm,19.0s,MS4.9
VRHR Novokhopersk 65.57 317 *e*P **P 08 03 41.0 -1.5**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.3
FINES FINESS Array B 65.58 332 P **P 08 03 41.6 -0.8**
comp=Z,27nm,0.5s,mb5.5,baz=52,slow=6.9,SNR=95
FINES LR LR 08 35 38.8
comp=Z,811nm,18.4s,MS5.0,baz=217,slow=39
FINES FINESS Array B 65.58 332 P **P 08 03 41.6 -0.8**
ASAR Alice Springs 65.79 190 P **P 08 03 42.5 -1.6**
comp=Z,2.9nm,0.7s,mb4.4,baz=1.4,slow=4.9,SNR=28
ASAR Alice Springs 65.79 190 P **P 08 03 42.5 -1.6**
STOK Stokkvaagen 65.86 341 *e*P **P 08 03 44.9 +0.8**
YBH Yreka Blue Hor 65.87 55 *e*P **P 08 03 46.6 +2.0**
comp=Z,12nm,1.4s,mb4.7
YBH Yreka Blue Hor 65.87 55 *e*P **P 08 03 46.7 +2.1**
YBH pmax pmax
comp=Z,12nm,1.4s
SUMG Summit 65.93 1 *e*P **P 08 03 44.8 +0.3**
comp=Z,61nm,0.6s,mb5.8
SUMG Summit 65.93 1 *i* P **P 08 03 44.0 -0.5**
comp=Z,48nm,0.7s,mb5.6
SUMG *e*S S 08 12 45.3 +15
MBWA Marble Bar 66.55 205 *e*P **P 08 03 47.7 -1.3**
comp=Z,10nm,0.8s,mb4.9
WALA Waterton Lakes 66.58 45 *e*P **P 08 03 48.5 -0.5**
comp=Z,0.3nm,1.0s
WDC Whiskeytown Da 66.64 56 *e*P **P 08 03 50.6 +1.0**
comp=Z,11nm,1.3s,mb4.7
WDC *e* pP 08 03 57.9 +0.8
WDC Whiskeytown Da 66.64 56 *e*P **P 08 03 50.6 +1.0**
WDC *e* pP 08 03 57.9 +0.8
WDC pmax pmax
comp=Z,11nm,1.3s,mb4.7
VSR Storozhevoye 66.73 319 *e*P **P 08 03 49.2 -0.7**
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.3
VSR MLR MLR
comp=N,440nm,16.0s,MS4.9
VSR MLR MLR
comp=E,370nm,16.0s,MS4.9
VSR MLR MLR
comp=Z,670nm,16.0s,MS5.0
VORD Divnogorie 66.82 318 *e*P **P 08 03 50.4 -0.1**
VORD pmax pmax
comp=N,30nm,0.5s
VORD pmax pmax
comp=E,50nm,0.5s
VORD pmax pmax
comp=Z,20nm,0.5s,mb5.4
VORD MLR MLR
comp=N,140nm,17.0s,MS4.6
VORD MLR MLR
comp=E,310nm,17.0s,MS4.6
VORD MLR MLR
comp=Z,540nm,17.0s,MS4.8
DZM Mont Dzumac 66.82 157 *e*S S 08 12 43.4 +1.6
comp=Z,119nm,24.1s
DZM *e*LR LR 08 24 02.6
comp=Z,210nm,22.2s
VSU Vasula 67.41 330 *i* P **P 08 03 53.6 -0.5**
VSU pmax pmax
comp=Z,62nm,1.2s,mb5.5
VSU MLR MLR
comp=Z,493nm,21.0s,MS4.7
WVOR Wild Horse Val 67.92 52 *e*P **P 08 03 58.8 +1.1**
comp=Z,8.5nm,1.3s,mb4.6
WVOR Wild Horse Val 67.92 52 *e*P **P 08 03 58.8 +1.2**
WVOR pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
MSO Missoula 67.92 46 *e*P **P 08 03 57.6 +0.1**
comp=Z,6.4nm,1.0s,mb4.6
MSO *e* pP 08 04 05.5 +0.5
PAHR Pah Rah Range 69.11 55 *e*P **P 08 04 05.6 +0.5**
comp=Z,20nm,1.5s,mb4.8
PAHR *e* pP 08 04 14.2 +1.6
WCN Washoe City 69.12 56 *e*P **P 08 04 06.5 +1.3**
comp=Z,4.2nm,1.0s,mb4.3
WCN Washoe City 69.12 56 *e*P **P 08 04 06.5 +1.3**
WCN pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
HRY Holter Researc 69.13 46 *e*P **P 08 04 04.9 -0.2**
LRM Limekiln Ridge 69.36 47 *e*P **P 08 04 06.7 +0.1**
LRM *e* 08 04 17.6
KIV Kislovodsk 69.36 311 *e*P **P 08 04 08.3 +1.7**
comp=Z,92nm,0.8s,mb5.8
KIV Kislovodsk 69.36 311 *e*P **P 08 04 07.7 +1.1**
KIV *e* 08 04 31.3
KIV *e*S S 08 13 11.9 0.0
KIV pmax pmax
comp=Z,110nm,0.9s,mb5.8
KIV pmax pmax
comp=Z,35nm,5.4s
KIV MLR MLR
comp=Z,381nm,19.0s,MS4.7
KIV Kislovodsk 69.36 311 P **P 08 04 07.6 +1.0**
SNR=15
EGMT Eagleton 69.38 44 *e*P **P 08 04 08.6 +1.9**
comp=Z,12nm,0.9s,mb4.8
ZEI Tsey 69.40 309 *e*P **P 08 04 06.1 -0.8**
ZEI pmax pmax
comp=Z,34nm,0.9s,mb5.3
CMB Columbia Colle 69.50 57 *e*P **P 08 04 08.5 +0.9**
comp=Z,3.8nm,0.9s,mb4.3
CMB Columbia Colle 69.50 57 *e*P **P 08 04 08.5 +0.9**
CMB pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
DLMT Dillon 69.56 47 *e*P **P 08 04 08.1 +0.2**
comp=Z,13nm,1.0s,mb4.8
HLID Hailey 69.68 49 *e*P **P 08 04 08.8 +0.3**
comp=Z,4.0nm,1.0s,mb4.3
HLID *e* 08 04 18.3
MNK Minsk 69.74 326 *e*P **P 08 04 07.0 -1.7**
WAKR Walker 69.81 56 *e*P **P 08 04 10.5 +1.0**
comp=Z,3.0nm,0.8s,mb4.3
BOZ Bozeman (W) 69.91 46 *e*P **P 08 04 10.2 +0.2**
comp=Z,16nm,1.2s,mb4.8
BOZ *e* 08 04 20.9
BOZ Bozeman (W) 69.91 46 *e*P **P 08 04 10.2 +0.2**
BOZ *e* 08 04 20.9
BOZ pmax pmax
comp=Z,16nm,1.2s,mb4.8
GNI Garni 70.53 307 *e*P **P 08 04 15.5 +1.6**
comp=Z,24nm,0.9s,mb5.1
GNI Garni 70.53 307*c i*P **P 08 04 15.3 +1.5**
GNI pmax pmax
comp=Z,32nm,1.6s
NVAR Mina Array Bea 70.56 56 P **P 08 04 15.0 +0.9**
comp=Z,1.9nm,0.7s,mb4.1,baz=284,slow=6.3,SNR=16
NB2 NORSAR Subarra 70.59 338 P **P 08 04 13.2 -0.7**
comp=Z,12nm,0.6s,mb5.0,baz=34,slow=6.5
NB2 NORSAR Subarra 70.59 338 P **P 08 04 13.2 -0.7**
NOA NORSAR Array B 70.59 338 P **P 08 04 13.2 -0.7**
comp=Z,9.0nm,0.6s,mb4.9,baz=36,slow=6.1,SNR=39
NOA LR LR 08 39 25.7
comp=Z,315nm,18.9s,MS4.6,baz=0.0,slow=40
NOA NORSAR Array B 70.59 338 P **P 08 04 13.2 -0.7**
HFS Hagfors 70.60 336 P **P 08 04 13.4 -0.6**
comp=Z,23nm,0.5s,mb5.3,baz=53,slow=5.7,SNR=27
HFS Hagfors 70.60 336 P **P 08 04 13.4 -0.5**
NAO01 NORSAR Array S 70.85 338 *e*P **P 08 04 14.5 -0.9**
comp=Z,7.1nm,0.6s,mb4.8

IMW **Indian Meadow 71.41 47** *e*P **P 08 04 20.1 +0.9**
comp=Z,6.8nm,0.8s,mb4.6
FLWY **Flagg Ranch 71.42 47** *e*P **P 08 04 19.6 +0.4**
comp=Z,7.7nm,1.0s,mb4.6
RRI2 **Red Ridge 71.56 48** *e*P **P 08 04 21.0 +1.0**
comp=Z,11nm,0.9s,mb4.8
MOOW **Moose Ponds 71.61 47** *e*P **P 08 04 21.1 +0.7**
comp=Z,11nm,1.1s,mb4.7
MOOW *e* pP 08 04 29.8 +1.9
TPAW **Teton Pass 71.67 48** *e*P **P 08 04 21.6 +0.9**
comp=Z,12nm,1.1s,mb4.7
ANN **Anapa 71.72 314** *e*P **P 08 04 19.4 -1.6**
ANN pmax pmax
comp=Z,42nm,1.0s,mb5.3
LOHW **Long Hollow 71.78 48** *e*P **P 08 04 22.0 +0.7**
comp=Z,7.6nm,1.2s,mb4.5
SNOW **Snow King Moun 71.80 48** *e*P **P 08 04 22.8 +1.3**
comp=Z,10nm,1.1s,mb4.7
SNOW *e* pP 08 04 30.6 +1.6
REDW **Red Top Meadow 71.81 48** *e*P **P 08 04 22.1 +0.6**
comp=Z,9.7nm,1.2s,mb4.6
KIEV **Kiev 71.81 323** *e*P **P 08 04 20.6 -0.8**
comp=Z,27nm,0.8s,mb5.2
KIEV **Kiev 71.81 323** *e*P **P 08 04 20.6 -0.8**
KIEV pmax pmax
comp=Z,27nm,0.8s,mb5.2
DDEM **Demirkent 71.83 309** *i*P **P 08 04 22.6 +1.0**
SPUT **South Promonto 72.23 50** *e*P **P 08 04 24.8 +0.7**
comp=Z,18nm,1.8s,mb4.7
HOQ **Hoqain 72.37 286** P **P 08 04 25.6 +0.4**
SNR=7.7
HATD **Hatta, Dubai 72.45 288** P **P 08 04 26.5 +0.8**
SNR=6.4
HWUT **Hardware Ranch 72.55 50** *e*P **P 08 04 25.4 -0.5**
comp=Z,17nm,1.5s,mb4.8
ASHO **Ashiyiah 72.59 288** P **P 08 04 26.6 +0.1**
SNR=6.6
DUG **Dugway 72.74 51** *e*P **P 08 04 28.0 +0.8**
comp=Z,6.5nm,0.9s,mb4.6
DUG **Dugway 72.74 51** *e*P **P 08 04 28.0 +0.8**
DUG pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BW06 **Boulder Array 72.91 48** *e*P **P 08 04 27.8 -0.3**
comp=Z,3.1nm,0.7s,mb4.3
PDAR **Pinedale Array 72.91 48** P **P 08 04 27.8 -0.4**
comp=Z,1.0nm,0.5s,baz=293,slow=1.7,SNR=10
BSY **Bisya 72.97 285** P **P 08 04 29.4 +0.6**
SNR=6.4
ARQ **Araqi 73.09 286** P **P 08 04 30.4 +0.9**
SNR=5.5
STKA **Stephens Creek 73.33 182** P **P 08 04 29.3 -1.2**
comp=Z,3.1nm,0.9s,mb4.3,baz=53,slow=10,SNR=2.2
STKA **Stephens Creek 73.33 182** P **P 08 04 29.3 -1.2**
DAU **Daniels Canyon 73.50 50** *e*P **P 08 04 32.3 +0.7**
DAU **Daniels Canyon 73.50 50** *e*P **P 08 04 32.3 +0.6**
MPU **Maple Canyon 73.55 51** *e*P **P 08 04 32.6 +0.7**
comp=Z,12nm,1.3s,mb4.7
SHPR **Sheep Range 73.71 56** *e*P **P 08 04 34.1 +1.1**
CCUT **Cedar City 74.13 54** *e*P **P 08 04 36.3 +0.9**
comp=Z,31nm,2.4s,mb4.8
MSU **Marysvale 74.21 52** *e*P **P 08 04 36.6 +0.8**
MSU **Marysvale 74.21 52** *e*P **P 08 04 36.6 +0.8**
BSD **Bornholm Skovb 74.22 332** *e*P **P 08 04 34.7 -0.9**
BSD pmax pmax
comp=Z,44nm,0.9s,mb5.4
BSD MLR MLR
comp=Z,530nm,17.0s,MS4.9
BSD **Bornholm Skovb 74.22 332** *i*P **P 08 04 34.7 -0.9**
comp=Z,44nm,0.9s,mb5.4
BSD
comp=Z,530nm,17.0s
ULM **Lac du Bonnet 74.43 35** P **P 08 04 35.4 -1.5**
comp=Z,1.1nm,0.3s,mb4.2,baz=301,slow=5.2,SNR=3.1
ULM LR LR 08 39 55.7
comp=Z,136nm,21.0s,MS4.2,baz=339,slow=38
ULM **Lac du Bonnet 74.43 35** P **P 08 04 35.4 -1.5**
ULM LR LR 08 39 55.7
KIS **Kishinev 74.60 320** *e*P **P 08 04 36.0 -2.0**
KIS LRM 08 42 10.0
comp=Z,600nm,16.0s
KIS **Kishinev 74.60 320** *e*P **P 08 04 36.0 -2.0**
KIS MLR MLR
comp=Z,500nm,15.0s,MS4.9
LVV **L'vov 74.74 324** *e*P **P 08 04 38.5 -0.2**
LVV MLR MLR
comp=Z,300nm,16.0s,MS4.7
LVV MLR MLR
comp=N,200nm,14.0s,MS4.9
LVV MLR MLR
comp=E,400nm,16.0s,MS4.9
KEMA **Kemaliye 74.78 309** *i*P **P 08 04 39.9 +0.8**
SRU **San Rafael 74.78 51** *e*P **P 08 04 39.2 0.0**
comp=E,10.0nm,1.0s,mb4.7
SRU **San Rafael 74.78 51** *e*P **P 08 04 39.2 0.0**
SRU pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
RSSD **Black Hills 74.95 44** *e*P **P 08 04 39.5 -0.5**
comp=Z,3.2nm,0.7s,mb4.4
RSSD **Black Hills 74.95 44** *e*P **P 08 04 39.5 -0.5**
RSSD pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
MIB **Mutribah 75.40 297** *e*P **P 08 04 42.1 -0.8**
MIB AMb AMB 08 04 42.9
comp=Z,62nm,0.9s,mb5.5
MALT **Malatya 75.45 308** *e*P **P 08 04 44.5 +1.4**
comp=Z,37nm,1.2s,mb5.2
MALT **Malatya 75.45 308** *e*P **P 08 04 44.5 +1.5**
MALT pmax pmax
comp=Z,37nm,1.2s,mb5.2
MALT **Malatya 75.45 308**⇓*i*P **P 08 04 44.3 +1.3**
MALT **Malatya 75.45 308** P **P 08 04 44.2 +1.2**
comp=Z,265nmcomp=Z,25nm,1.1s,mb5.1
QRN **Al-Qurain 75.69 296** *e*P **P 08 04 43.9 -0.6**
QRN AMb AMB 08 04 44.7
comp=Z,74nm,0.8s,mb5.7
NAY **Al-Naaiem 75.82 296** *e*P **P 08 04 44.5 -0.8**
NAY AMb AMB 08 04 47.1
comp=Z,26nm,1.6s,mb4.9
BUR08 **Bucovina Ar. S 75.83 322** *e*P **P 08 04 45.1 +0.1**
TLCR **75.90 319**⇑*i*P **P 08 04 45.8 +0.3**
CTKT **Corum 75.97 312** *i*P **P 08 04 45.7 -0.2**
TESR **75.99 321**⇑*i*P **P 08 04 45.8 -0.1**
BALT **Daday 76.11 314** *i*P **P 08 04 45.3 -1.4**
PV10 **Paradox Valley 76.14 51** *e*P **P 08 04 47.7 +0.8**
comp=Z,327nm,0.9s,mb6.3
PV10 *e* 08 04 59.4
KOLS **Kolonicke sedl 76.17 325** *e*P **P 08 04 46.9 0.0**
comp=Z,8.8nm,0.9s,mb4.7
KOLS **Kolonicke sedl 76.17 325** *e*P **P 08 04 46.9 0.0**
KOLS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KOLS **Kolonicke sedl 76.17 325** *e*P **P 08 04 46.9 0.0**
PV04 **Paradox Valley 76.20 51** *e*P **P 08 04 48.0 +0.6**
PV04 *e* pP 08 04 56.9 +2.0
OJC **Ojcow 76.22 327** *e*P **P 08 04 47.4 +0.2**
OJC **Ojcow 76.22 327** *e*P **P 08 04 47.4 +0.2**
VRI **Vrincioaia 76.42 320**⇓*i*P **P 08 04 49.1 +0.7**
CRVS **Cervenica-Dubn 76.54 325** *e*P **P 08 04 49.1 +0.1**
comp=Z,9.9nm,1.0s,mb4.7
CRVS **Cervenica-Dubn 76.54 325** *e*P **P 08 04 49.1 +0.1**
CRVS pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CRVS **Cervenica-Dubn 76.54 325** *e*P **P 08 04 49.1 +0.1**
PV01 **Paradox Valley 76.57 51** *e*P **P 08 04 49.5 +0.1**
comp=Z,658nm,1.3s
GZT **Gaziantep 76.60 308** *i*P **P 08 04 49.4 -0.2**
NIE **Niedzica 76.63 326** *e*P **P 08 04 50.3 +0.8**
NIE **Niedzica 76.63 326** *e*P **P 08 04 50.3 +0.8**
TRPA **Tarpa 76.66 324**⇓*i*P **P 08 04 50.1 +0.4**
SMCO **Snowmass 76.78 49** *e*P **P 08 04 50.8 +0.3**
comp=Z,8.3nm,1.4s,mb4.5
MLR **Muntele Rosu 77.07 320**⇓*i*P **P 08 04 52.6 +0.5**
ISCO **Idaho Springs 77.11 48** *e*P **P 08 04 52.9 +0.5**
comp=Z,5.8nm,1.2s,mb4.4
ISCO **Idaho Springs 77.11 48** *e*P **P 08 04 52.9 +0.5**
ISCO pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
OKC **Ostrava-Krasne 77.19 327** *e*P **P 08 04 53.4 +0.7**
OKC MLR MLR
comp=Z,300nm,21.5s,MS4.6
OKC **Ostrava-Krasne 77.19 327** *e*P **P 08 04 53.4 +0.7**
OKC AMS AMS 08 43 20.0
comp=Z,300nm,21.5s
AVNT **Avonos 77.19 311** *i*P **P 08 04 53.4 +0.4**
BR131 **Keskin Array S 77.22 312** *e*P **P 08 04 53.0 0.0**
comp=Z,3.7nm,0.6s,mb4.5
BRTR **Keskin Array B 77.22 312** P **P 08 04 53.4 +0.3**
comp=Z,6.8nm,0.7s,mb4.7,baz=80,slow=4.0,SNR=25
BRTR PP PP 08 07 49.1 +2.6
comp=Z,3.4nm,0.9s,baz=64,slow=5.6,SNR=5.4
BRTR LR LR 08 47 52.7
comp=Z,116nm,18.3s,MS4.2,baz=220,slow=43
BRTR **Keskin Array B 77.22 312** P **P 08 04 53.4 +0.3**
BRTR 08 07 49.2
KECS **Kecovo 77.28 325** *e*P **P 08 04 52.8 -0.4**
comp=Z,3.2nm,1.1s,mb4.2
KECS **Kecovo 77.28 325** *e*P **P 08 04 52.8 -0.4**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KECS **Kecovo 77.28 325** *e*P **P 08 04 52.8 -0.4**
MORC **Moravsky Berou 77.48 328** *e*P **P 08 04 54.8 +0.5**
comp=Z,25nm,0.9s,mb5.2
MORC **Moravsky Berou 77.48 328** *e*P **P 08 04 54.8 +0.5**
MORC pmax pmax
comp=Z,25nm,0.9s,mb5.1
MORC **Moravsky Berou 77.48 328**⇓*i*P **P 08 04 54.9 +0.6**
SGKT **Sivrigoynuk 77.50 314** *i*P **P 08 04 53.8 -0.8**
UPC **Upice 77.50 329** *e*P **P 08 04 54.8 +0.4**
UPC **Upice 77.50 329** *e*P **P 08 04 54.8 +0.4**
DPC **Dobruska-Polom 77.51 329** *e*P **P 08 04 55.0 +0.6**
comp=Z,95nm,1.6s,mb5.5
DPC **Dobruska-Polom 77.51 329** *e*P **P 08 04 55.1 +0.7**
DPC *e* pP 08 05 02.0 0.0
DPC MLR MLR
comp=Z,300nm,21.0s,MS4.6
DPC **Dobruska-Polom 77.51 329** *e*P **P 08 04 55.1 +0.7**
DPC *e*pP pP 08 05 02.0 0.0
DPC AMS AMS 08 41 40.0
comp=Z,300nm,21.0s
VOIR **77.53 321**⇑*i*P **P 08 04 55.3 +0.6**
DRGR **77.59 323**⇓*i*P **P 08 04 54.4 -0.6**
VYHS **Vyhne 77.96 326** *e*P **P 08 04 57.6 +0.6**
comp=Z,6.8nm,1.0s,mb4.5
VYHS **Vyhne 77.96 326** *e*P **P 08 04 57.6 +0.6**
VYHS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
VYHS **Vyhne 77.96 326** *e*P **P 08 04 57.5 +0.5**
PSZ **Piszkesteto 77.96 325** *e*P **P 08 04 57.5 +0.5**
comp=Z,10nm,0.8s,mb4.8
PSZ **Piszkesteto 77.96 325** *e*P **P 08 04 57.5 +0.5**
PSZ pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
PSZ **Piszkesteto 77.96 325**⇓*i*P **P 08 04 57.6 +0.6**
PSZ **Piszkesteto 77.96 325**⇑*e*P **P 08 04 57.4 +0.4**
PSZ **Piszkesteto 77.96 325**⇑*e*P **P 08 04 57.5 +0.5**
CLL **Collm 77.98 331** *e*P **P 08 04 56.8 -0.2**
comp=Z,44nm,0.8s,mb5.4
CLL **Collm 77.98 331**⇑*i*P **P 08 04 56.7 -0.3**
comp=Z,44nm,0.8s,mb5.4
CLL LR LR
comp=Z,600nm,19.5s,MS4.9
CLL **Collm 77.98 331**⇑*i*P **P 08 04 56.7 -0.3**
CLL pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CLL MLR MLR
comp=Z,600nm,19.5s,MS4.9
CLL **Collm 77.98 331**⇑*i*P **P 08 04 56.7 -0.3**
CLL
comp=Z,44nm,0.8s,mb5.4
CLL *e*(sP) sP 08 05 13.0 +5.6
CLL *e* 08 21 12.0
CLL *e* 08 24 48.0
CLL LmH 08 39 00.0
comp=N,300nm,18.4s
CLL LmH 08 39 00.0
comp=E,800nm,20.1s
CLL LmV 08 42 00.0
comp=Z,600nm,19.5s
BRG **Berggiesshubel 77.99 330** *e*P **P 08 04 57.0 -0.1**
comp=Z,16nm,1.0s,mb4.9
BRG **Berggiesshubel 77.99 330** *i*P **P 08 04 57.0 -0.1**
comp=Z,16nm,1.0s,mb4.9
BRG
comp=Z,857nm,19.0s
BRG
comp=N,449nm,16.7s
BRG
comp=E,453nm,16.7s
BRG **Berggiesshubel 77.99 330** *i*P **P 08 04 57.0 -0.1**
BRG pmax pmax
comp=Z,1.0nm,1.0s,mb3.7
BRG MLR MLR
comp=Z,9μm,19.0s
BRG MLR MLR
comp=N,513nm,16.7s,MS5.0
BRG MLR MLR
comp=E,269nm,16.7s,MS5.0
NRDL **Niedersach Rie 78.01 333** *e*P **P 08 04 57.0 -0.2**
comp=Z,13nm,0.8s,mb4.9
PVCC **Panska Ves 78.03 330** *e*P **P 08 04 57.6 +0.2**
PVCC MLR MLR
comp=Z,600nm,17.8s,MS5.0
PVCC **Panska Ves 78.03 330** *e*P **P 08 04 57.6 +0.2**
PVCC AMS AMS 08 43 50.0
comp=Z,600nm,17.8s
KOLL **Kolacno 78.07 327** *e*P **P 08 04 58.2 +0.6**
KOLL **Kolacno 78.07 327** *e*P **P 08 04 58.2 +0.6**
KOLL **Kolacno 78.07 327** *e*P **P 08 04 58.2 +0.6**
FBE **Freiberg 78.17 331** *e*P **P 08 04 58.2 +0.1**
comp=Z,28nm,0.8s,mb5.2
VRAC **Vranov 78.23 328** P **P 08 04 59.0 +0.5**
comp=Z,18nm,0.9s,mb5.0,baz=40,slow=4.5,SNR=20
VRAC **Vranov 78.23 328** P **P 08 04 59.0 +0.5**
VRAC **Vranov 78.23 328**⇑*i*P **P 08 04 59.0 +0.5**
CLZ **Clausthal 78.46 333** *e*P **P 08 05 00.0 +0.3**
comp=Z,35nm,0.8s,mb5.3
CLZ **Clausthal 78.46 333** *e*P **P 08 05 00.0 +0.3**
CLZ pmax pmax
comp=Z,35nm,0.8s,mb5.3
PRU **Pruhonice 78.48 329** *e*P **P 08 05 00.9 +1.1**
PRU MLR MLR
comp=Z,600nm,17.1s,MS5.0
PRU **Pruhonice 78.48 329** *e*P **P 08 05 00.9 +1.1**
PRU AMS AMS 08 44 00.0
comp=Z,600nm,17.1s
NEUB **Neuenburg 78.50 332** *e*P **P 08 05 00.0 +0.1**
comp=Z,41nm,0.8s,mb5.4
GZR **Gura Zlata 78.62 322**⇓P **P 08 05 00.8 +0.1**
GZR **Gura Zlata 78.62 322**⇓*i*P **P 08 05 00.8 +0.1**
TREC **Trest 78.68 329** *e*P **P 08 05 01.4 +0.5**
TREC **Trest 78.68 329** *e*P **P 08 05 01.4 +0.5**
TANN **Tannenbergstha 78.91 331** *e*P **P 08 05 02.0 -0.2**
comp=Z,9.0nm,1.0s,mb4.7
ZST **Bratislava 78.91 327** *e*P **P 08 05 03.2 +1.0**
comp=Z,4.9nm,0.8s,mb4.5
ZST **Bratislava 78.91 327** *e*P **P 08 05 03.2 +1.0**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ZST **Bratislava 78.91 327** *e*P **P 08 05 03.1 +0.9**
WERD **Werda 78.94 331** *e*P **P 08 05 02.4 +0.1**
comp=Z,11nm,0.8s,mb4.8
IBBN **Ibbenburen 78.94 334** *e*P **P 08 05 02.2 -0.1**
comp=Z,42nm,1.0s,mb5.3
PLN **Plauen 78.96 331** *e*P **P 08 05 02.4 -0.1**
comp=Z,17nm,0.9s,mb5.0
GUNZ **Gunzen 79.00 331** *e*P **P 08 05 02.7 0.0**
comp=Z,13nm,0.8s,mb4.9
MOX **Moxa 79.02 331** *e*P **P 08 05 02.5 -0.3**
comp=Z,30nm,1.2s,mb5.1
MOX
comp=Z,500nm,19.0s
MOX **Moxa 79.02 331** *e*P **P 08 05 02.8 0.0**
comp=Z,17nm,0.9s,mb5.0
MOX **Moxa 79.02 331** *e*P **P 08 05 02.5 -0.3**
MOX pmax pmax
comp=Z,27nm,1.2s,mb5.0
MOX MLR MLR
comp=Z,30μm,19.0s
WERN **Wernitzgruen 79.04 331** *e*P **P 08 05 03.2 +0.3**
comp=Z,17nm,0.8s,mb5.0
NKC **Novy Kostel 79.06 331** *e*P **P 08 05 03.3 +0.3**
NKC **Novy Kostel 79.06 331** *e*P **P 08 05 03.3 +0.3**
TUC **Tucson 79.19 56** *e*P **P 08 05 05.1 +1.0**
comp=Z,5.0nm,1.2s,mb4.3
TUC **Tucson 79.19 56** *e*P **P 08 05 05.1 +1.0**
TUC pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
EKA **Eskdalemuir Ar 79.32 342** P **P 08 05 03.9 -0.5**
comp=Z,7.4nm,0.7s,mb4.7,baz=22,slow=5.1,SNR=20
EKA **Eskdalemuir Ar 79.32 342** P **P 08 05 03.9 -0.4**
ROTZ **Rotzenmuhle 79.53 331** *e*P **P 08 05 06.0 +0.4**
comp=Z,21nm,1.0s,mb5.0
SOP **Sopron 79.54 327**⇓*e*P **P 08 05 06.9 +1.2**
WTSB **Winterswijk 79.54 335**⇑*i*P **P 08 05 04.9 -0.7**
comp=Z,33nm,0.9s,mb5.2
KHC **Kasperske Hory 79.54 329** *i*P **P 08 05 05.8 +0.1**
CONA **Conrad Observa 79.62 328**⇑*i*P **P 08 05 07.0 +0.8**
comp=Z,15nm,0.9s,mb4.9
GEC2 **GERESS Array S 79.73 329** *e*P **P 08 05 06.7 0.0**
comp=Z,13nm,1.1s,mb4.8
GEC2 **GERESS Array S 79.73 329** *e*P **P 08 05 06.7 0.0**
GEC2 pmax pmax
comp=Z,13nm,1.1s,mb4.8
GERES **GERESS Array B 79.73 329** P **P 08 05 06.7 -0.1**
comp=Z,6.5nm,0.8s,mb4.6,baz=34,slow=5.0,SNR=39
GERES **GERESS Array B 79.73 329** P **P 08 05 06.7 0.0**
WET **Wettzell 79.80 330** *e*P **P 08 05 07.5 +0.4**
comp=Z,24nm,0.9s,mb5.1
WET **Wettzell 79.80 330** *e*P **P 08 05 07.5 +0.4**
WET pmax pmax
comp=Z,24nm,0.9s,mb5.1
PKSM **Moragy 79.83 325**⇑P **P 08 05 07.3 0.0**
PKSM **Moragy 79.83 325**⇑*i*P **P 08 05 07.3 0.0**
BUG **Bochum--Univer 79.84 334** *e*P **P 08 05 06.9 -0.3**
comp=Z,32nm,1.1s,mb5.2
GRA1 **Grafenberg Arr 79.95 331** *e*P **P 08 05 08.4 +0.5**
comp=Z,67nm,0.9s,mb5.6
GRF **Grafenberg Arr 79.95 331** *e*P **P 08 05 08.4 +0.5**
comp=Z,67nm,0.9s,mb5.6
GRF *e*L 08 43 15.8
comp=N,364nm,21.3s
GRF **Grafenberg Arr 79.95 331** *e*P **P 08 05 08.4 +0.5**
GRF pmax pmax
comp=Z,67nm,0.9s,mb5.6
GRF MLR MLR
comp=N,400nm,21.3s
GRF **Grafenberg Arr 79.95 331** *e*P **P 08 05 08.4 +0.5**
GRF pmax pmax
comp=Z,67nm,0.9s,mb5.6
GRFO **Grafenberg 79.96 331** *e*P **P 08 05 08.8 +0.9**
comp=Z,40nm,0.8s,mb5.4
GRFO **Grafenberg 79.96 331** *e*P **P 08 05 08.8 +0.9**
GRFO pmax pmax
comp=Z,40nm,0.8s,mb5.4
LAZ **Ladron 79.97 53** *e*P **P 08 05 08.5 +0.2**
comp=Z,3.4nm,1.3s,mb4.1
ANMO **Albuquerque 79.99 52** *e*P **P 08 05 08.9 +0.5**
comp=Z,3.7nm,1.0s,mb4.3
ANMO **Albuquerque 79.99 52** *e*P **P 08 05 08.9 +0.5**
ANMO pmax pmax
comp=Z,4.0nm,1.0s
SCHQ **Schefferville 80.21 18** P **P 08 05 08.4 -0.8**
comp=Z,7.1nm,0.8s,mb4.6,baz=319,slow=6.0,SNR=4.8
BNM **Barren Site 80.45 53** *e*P **P 08 05 11.2 +0.3**
comp=Z,2.8nm,0.9s,mb4.2
TNS **Taunus Mts 80.48 333** *e*P **P 08 05 10.6 -0.1**
comp=Z,28nm,0.9s,mb5.2
TNS **Taunus Mts 80.48 333** *e*P **P 08 05 10.6 -0.1**
TNS pmax pmax
comp=Z,28nm,0.9s,mb5.2
VTS **Vitosha 80.55 320**⇑P **P 08 05 11.3 +0.1**
VTS **Vitosha 80.55 320**⇑*i*P **P 08 05 11.3 +0.1**
HGN **Heimansgroeve 80.85 335**⇑*i*P **P 08 05 12.0 -0.7**
comp=Z,23nm,0.9s,mb5.1
MMAI **Mount Meron Ar 80.86 306** P **P 08 05 13.1 0.0**
comp=Z,22nm,0.8s,mb5.1,baz=40,slow=7.6,SNR=14
TOD **Tromm 80.88 332** *e*P **P 08 05 13.0 +0.1**
TOD **Tromm 80.88 332** *e*P **P 08 05 13.0 +0.1**
BEBN **Eben Emael 80.91 335** P **P 08 05 13.0 0.0**
comp=Z,12nm,1.0s,mb4.8
GROS **Grobnik 80.95 327** *i*P **P 08 05 13.2 -0.1**
MEM **Membach 80.96 334** P **P 08 05 13.1 -0.2**
comp=Z,14nm,1.1s,mb4.8
PERS **Pernice 80.97 327** *i*P **P 08 05 13.5 +0.1**
SOKA **Soboth 80.97 327**⇑*i*P **P 08 05 13.5 +0.1**
comp=Z,32nm,1.0s,mb5.2
RJOB **Jochberg 80.98 329** *e*P **P 08 05 14.1 +0.6**
comp=Z,27nm,0.8s,mb5.2
ABH **Alteburg 81.08 333** *e*P **P 08 05 14.0 +0.1**
FUR **Furstenfeldbru 81.20 330** *e*P **P 08 05 15.0 +0.4**
comp=Z,44nm,0.8s,mb5.4
FUR **Furstenfeldbru 81.20 330** *e*P **P 08 05 15.0 +0.4**
FUR pmax pmax
comp=Z,44nm,0.8s,mb5.4
BCLA **Clavier 81.35 335** P **P 08 05 15.3 -0.1**
GCIS **Gornji Cirnik 81.38 326** *i*P **P 08 05 15.4 -0.2**
RUP **Ruppelstein 81.40 333** *e*P **P 08 05 15.5 -0.1**
RUP **Ruppelstein 81.40 333** *e*P **P 08 05 15.5 -0.1**
LEGS **Legarje 81.44 327** *i*P **P 08 05 15.6 -0.3**
STU **Stuttgart 81.45 332** *e*P **P 08 05 16.8 +0.8**
comp=Z,28nm,0.7s,mb5.3
STU **Stuttgart 81.45 332** *e*P **P 08 05 16.8 +0.9**
STU pmax pmax
comp=Z,28nm,0.7s,mb5.3
SNF **Seneffe 81.60 335** P **P 08 05 16.0 -0.7**
WLF **Walferdange 81.73 334** P **P 08 05 16.4 -1.0**
LANF **Langenberg 81.76 333** *e*P **P 08 05 17.7 +0.1**
LANF **Langenberg 81.76 333** *e*P **P 08 05 17.7 +0.1**
WTTA **Wattenberg 81.82 329**⇑*i*P **P 08 05 18.3 +0.4**
comp=Z,29nm,0.9s,mb5.2
VAY **Valandovo 81.82 320** *e*P **P 08 05 17.5 -0.5**
AYDN **Tasoluk 81.84 314** *i*P **P 08 05 19.0 +0.7**
DOU **Dourbes 81.86 335** P **P 08 05 17.8 -0.3**
comp=Z,9.4nm,1.4s,mb4.5
MOTA **Moosalm 81.95 330**⇑*i*P **P 08 05 18.8 +0.2**
comp=Z,44nm,0.8s,mb5.4
SCIA **State Center 81.95 39** *e*P **P 08 05 18.0 -0.8**
comp=Z,7.7nm,0.5s,mb4.9
SCIA *e* 08 05 28.1
RETA **Reutte 81.96 330**⇑*i*P **P 08 05 18.9 +0.2**
comp=Z,30nm,0.9s,mb5.2
BFO **Black Forest 82.13 332** *e*P **P 08 05 19.2 -0.3**
comp=Z,16nm,1.0s,mb4.9
BFO **Black Forest 82.13 332** *e*P **P 08 05 19.4 -0.1**
comp=Z,13nm,0.8s,mb4.9
BFO **Black Forest 82.13 332** *e*P **P 08 05 19.4 -0.1**
BFO pmax pmax
comp=Z,13nm,0.8s,mb4.9
SPAK **Spaichingen-Ko 82.17 332** *e*P **P 08 05 19.6 -0.1**
FETA **Feichten 82.36 330**⇑*i*P **P 08 05 20.5 -0.3**
comp=Z,23nm,1.0s,mb5.1
KRUS **Krusevo 82.42 320** *e*P **P 08 05 20.4 -0.8**
DAVA **Damuels 82.46 331**⇑*i*P **P 08 05 21.3 +0.1**
comp=Z,36nm,1.1s,mb5.2
BDRM **Kayabasi 82.52 314** *i*P **P 08 05 21.5 -0.2**
FELD **Feldberg im Sc 82.63 332** *e*P **P 08 05 21.9 -0.3**
ECH **Echery 82.64 333** *e*P **P 08 05 21.5 -0.7**
ECH **Echery 82.64 333** *e*P **P 08 05 21.5 -0.7**
FUORN **Ofenpass-Fuorn 82.88 330** *e*P **P 08 05 24.4 +0.9**
comp=Z,33nm,0.8s,mb5.4
DAVOX **Davos/Dischmat 82.88 330** P **P 08 05 23.7 +0.2**
comp=Z,6.8nm,0.7s,mb4.8,baz=53,slow=5.9,SNR=8.8
DAVOX **Davos/Dischmat 82.88 330** P **P 08 05 23.7 +0.2**
MNTX **Cornudas Mount 82.92 54** *e*P **P 08 05 25.9 +1.9**
comp=Z,12nm,1.6s,mb4.7
MOF **Molkenrain 82.96 332** *e*P **P 08 05 23.3 -0.6**
MOF **Molkenrain 82.96 332** *e*P **P 08 05 23.3 -0.6**
THEF **They Montfort 83.03 333** *e*P **P 08 05 23.9 -0.3**
THEF **They Montfort 83.03 333** *e*P **P 08 05 23.9 -0.3**
BBS **Basel-Blauen 83.16 332** *e*P **P 08 05 24.7 -0.2**
BBS **Basel-Blauen 83.16 332** *e*P **P 08 05 24.7 -0.2**
TUE **Stuetta 83.34 330** *e*P **P 08 05 26.3 +0.4**
comp=Z,10nm,0.8s,mb4.8
LOMF **Lomont 83.50 332** *e*P **P 08 05 26.4 -0.2**
LOMF **Lomont 83.50 332** *e*P **P 08 05 26.4 -0.2**
SENIN **Lac Senin/Sane 84.18 332** *e*P **P 08 05 30.4 +0.3**
comp=Z,12nm,1.0s,mb5.0
WMOK **Wichita Mounta 84.52 47** *e*P **P 08 05 31.3 -0.8**
comp=Z,21nm,2.0s,mb4.9
WMOK **Wichita Mounta 84.52 47** *e*P **P 08 05 31.3 -0.8**
WMOK pmax pmax
comp=Z,21nm,2.0s,mb4.9
PPT **Papeete 85.01 119** *e*LR LR 08 32 17.9
comp=Z,221nm,24.5s
PPT **Papeete 85.01 119** LR LR 08 42 24.6
comp=Z,147nm,18.1s,MS4.4,baz=277,slow=35
TAOE **Nuku Hiva Isla 85.41 106** *e*LR LR 08 32 43.7
comp=Z,334nm,23.4s
BNI **Bardonecchia 85.53 331** *e*P **P 08 05 37.3 +0.4**
comp=Z,15nm,0.9s,mb5.2
BNI **Bardonecchia 85.53 331** *e*P **P 08 05 37.3 +0.3**
BNI pmax pmax
comp=Z,15nm,0.9s,mb5.2
TXAR **Lajitas Array 85.64 54** P **P 08 05 37.5 -0.3**
comp=Z,4.7nm,0.8s,mb4.8,baz=295,slow=3.3,SNR=45
TXAR **Lajitas Array 85.64 54** P **P 08 05 37.5 -0.3**
TXAR **Lajitas Array 85.64 54** P **P 08 05 37.5 -0.3**
PLDF **La Plantade 85.79 334** *e*P **P 08 05 39.3 +1.1**

PLDF	**La Plantade**	**85.79**	**334**	*e*P	**P**	**08 05 39.3**	**+1.1**
AGO	**Saint Agoulin**	**85.88**	**334**	*e*P	**P**	**08 05 40.0**	**+1.3**
COLF	**Collangettes**	**86.16**	**333**	*e*P	**P**	**08 05 40.4**	**+0.3**
PYM	**Petit Puy Mans**	**86.18**	**334**	*e*P	**P**	**08 05 41.4**	**+1.2**
PYM	**Petit Puy Mans**	**86.18**	**334**	*e*P	**P**	**08 05 41.4**	**+1.2**
SIUC	**Southern Illin**	**87.15**	**40**	*e*P	**P**	**08 05 44.6**	**-0.5**
	comp=Z,32nm,1.0s,mb5.5						
TBI	**Tubuai**	**89.26**	**123**	*e*LR	LR	08 34 22.2	
	comp=Z,184nm,23.0s						
KEST	**Kesra**	**92.42**	**325**	LR	LR	08 52 55.8	
	comp=Z,178nm,19.3s,MS4.5,baz=265,slow=39						
ESDC	**Sonseca Array**	**93.88**	**336**	P	**P**	**08 06 15.8**	**-0.7**
	comp=Z,0.4nm,0.5s,mb4.1,baz=14,slow=2.7,SNR=4.5						
ESDC				LR	LR	08 54 58.8	
	comp=Z,269nm,18.2s,MS4.8,baz=30,slow=40						
TORD	**Torodi Ar. Bea**	**115.28**	**319**	PKP	PKPdf	08 11 39.5	-1.5
	comp=Z,0.2nm,0.6s,baz=359,slow=3.6,SNR=5.1						
TORD				PP	PP	08 12 33.7	-7.0
	comp=Z,6.0nm,1.1s,baz=26,slow=6.3,SNR=14						
TORD	**Torodi Ar. Bea**	**115.28**	**319**	PKP	PKPdf	08 11 39.5	-1.5
TORD				PP	PP	08 12 33.7	-7.0
DBIC	**Dimbokro**	**124.04**	**322**	PKP	PKPdf	08 11 54.8	-3.1
	comp=Z,3.2nm,0.9s,baz=45,slow=1.4,SNR=2.5						
DBIC	**Dimbokro**	**124.04**	**322**	PKIKP	PKPdf	08 11 54.8	-3.1
MAW	**Mawson**	**124.70**	**207**	PKIKP	PKPdf	08 11 54.7	-2.6
	comp=Z,1.3nm,0.8s,baz=36,slow=4.9,SNR=4.5						
MAW	**Mawson**	**124.70**	**207**	PKIKP	PKPdf	08 11 54.7	-2.6
LPAZ	**La Paz**	**142.45**	**57**	PKP	PKPdf	08 12 32.5	+0.4
	comp=Z,1.0nm,0.8s,baz=243,slow=2.8,SNR=4.2						
LPAZ	**La Paz**	**142.45**	**57**	*e*PKPdf	PKPdf	08 12 33.3	+1.2
LPAZ	**La Paz**	**142.45**	**57**	PKIKP	PKPdf	08 12 32.5	+0.4
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SNAA	**Sanae**	**145.89**	**198**	PKPbc	PKPbc	08 12 35.6	-1.5
	comp=Z,3.6nm,0.9s,baz=155,slow=2.9,SNR=32						
SNAA	**Sanae**	**145.89**	**198**	PKHKP	PKPbc	08 12 35.6	-1.5
BDFB	**Brasilia**	**151.94**	**25**	PKPbc	PKPbc	08 12 53.8	-0.6
	comp=Z,4.7nm,1.1s,baz=296,slow=22,SNR=5.1						
BDFB	**Brasilia**	**151.94**	**25**	PKIKP	PKPbc	08 12 53.8	-0.6
PLCA	**Paso Flores**	**154.05**	**99**	PKPbc	PKPbc	08 12 57.5	-0.8
	comp=Z,1.2nm,0.9s,baz=121,slow=5.1,SNR=3.1						
PLCA				PKPab	PKPab	08 13 11.7	-0.3
	comp=Z,2.0nm,0.8s,baz=270,slow=2.0,SNR=4.5						
PLCA	**Paso Flores**	**154.05**	**99**	PKIKP	PKPbc	08 12 57.5	-0.8
PLCA						08 13 11.7	

THR ***15*** *08:01:36.3±0.5, 34°.70N×60°.15E, h6km, ML3.6*
ISCJB ***15*** *08:01:37.5±0.8, 34°.80N±0°.03×60°.2E±0°.1, h10km, Error ellipse: s-maj=15.4km s-min=3.6km az=175.6*
CSEM ***15*** *08:01:37.1±0.4, 34°.76N×60°.23E, h2km, ML3.5, Error ellipse: s-maj=16.7km s-min=4.4km az=82.0*
TEH ***15*** *08:01:38.8, 34°.77N×60°.11E, h10km*
ISC 15 08:01:38.1±0.8, 34°.79N±0°.03×60°.3E±0°.1, h10km, n27, σ1§18/37, 2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHRT	**Shahrakht**	**1.14**	**178**	*e*Pg	**Pg**	**08 01 56.6**	**-3.4**
SHRT				*e*Sg	**Sg**	**08 02 11.9**	**-2.8**
SHRT				AML	AML	08 02 14.8	
	comp=E,2μm,0.3s						
SHRT	**Shahrakht**	**1.14**	**178**	*e*Pg	**Pg**	**08 01 56.6**	**-3.4**
SHRT				*e*Sg	**Sg**	**08 02 11.9**	**-2.8**
IMOG	**Moghan**	**1.51**	**331**	*e*	**Pg**	**08 02 08.4**	**+1.3**
	comp=Z,6μm,0.2s						
IMOG				*e*Pn	**Pn**	**08 02 04.8**	**-0.4**
IMOG				*e*Sg	**Sg**	**08 02 26.1**	**-0.7**
IMYA	**Miami**	**1.56**	**356**	*e*Sg	**Sg**	**08 02 27.3**	**-0.8**
IMYA				*e*Pn	**Pn**	**08 02 06.5**	**+0.7**
IMYA				*e*		08 02 33.5	
	comp=Z,6μm,0.1s						
ISRO	**Mashad**	**1.65**	**338**	*e*Sg	**Sg**	**08 02 29.8**	**-1.2**
ISRO				*e*Pn	**Pn**	**08 02 07.5**	**+0.5**
ISRO				*e*		08 02 30.5	
	comp=Z,6μm,0.3s						
MHI	**Mashad**	**1.65**	**338**	*e*	**Pg**	**08 02 13.5**	**+3.8**
	comp=Z,3μm,0.0s						
MHI				*e*Pn	**Pn**	**08 02 07.7**	**+0.7**
IMON	**Monand**	**1.66**	**197**	*e*	**Sg**	**08 02 34.2**	**+2.7**
	comp=Z,17μm,0.1s						
IMON				*e*Pn	**Pn**	**08 02 07.4**	**+0.1**
IPAY	**Payeh**	**1.95**	**329**	*e*Pn	**Pn**	**08 02 11.9**	**+0.7**
IPAY				*e*		08 02 15.3	
	comp=Z,3μm,0.2s						
IPAY				*e*Sg	**Sg**	**08 02 37.9**	**-2.8**
IPAY	**Payeh**	**1.95**	**329**	*e*Pn	**Pn**	**08 02 11.9**	**+0.7**
IPAY				*e*Sg	**Sg**	**08 02 37.9**	**-2.8**
IDAH	**Dahanechah**	**2.07**	**189**	⇓*e*Pn	**Pn**	**08 02 13.2**	**+0.4**
IDAH				*e*		08 02 45.7	
	comp=Z,8μm,0.3s						
IDAH	**Dahanechah**	**2.07**	**189**	⇓*e*Pn	**Pn**	**08 02 13.2**	**+0.4**
IAKL	**Akhelmad**	**2.18**	**327**	*e*	**Sg**	**08 02 54.5**	**+6.4**
	comp=Z,2μm,0.2s						
ITEG	**Tejag**	**2.26**	**214**	*e*Pn	**Pn**	**08 02 16.1**	**+0.6**
ITEG				*e*		08 02 21.2	
	comp=Z,4μm,0.2s						
ITEG	**Tejag**	**2.26**	**214**	*e*Pn	**Pn**	**08 02 16.1**	**+0.6**
IKRD	**Kardeh**	**2.44**	**325**	*e*Pn	**Pn**	**08 02 14.1**	**-3.8**
IKRD				*e*		08 02 47.7	
	comp=Z,3μm,0.3s						
IKOO	**Kooshah**	**2.58**	**204**	*e*Pn	**Pn**	**08 02 19.5**	**-0.3**
IKOO				*e*		08 03 06.9	
	comp=Z,2μm,0.2s						
IKOO	**Kooshah**	**2.58**	**204**	*e*Pn	**Pn**	**08 02 19.5**	**-0.3**
TABS	**Tabas**	**2.83**	**247**	*e*Pn	**Pn**	**08 02 22.3**	**-1.0**
TABS				AML	AML	08 03 12.5	
	comp=N,163nm,0.5s						
TABS	**Tabas**	**2.83**	**247**	*e*Pn	**Pn**	**08 02 22.3**	**-1.0**
IEMG	**Emamgholi**	**2.92**	**334**	*e*Pn	**Pn**	**08 02 25.5**	**+0.9**
IEMG				*e*		08 03 19.6	
	comp=Z,1μm,0.2s						
IEMG	**Emamgholi**	**2.92**	**334**	*e*Pn	**Pn**	**08 02 25.5**	**+0.9**
BJRD	**Bojnurd**	**3.71**	**323**	*e*Pn	**Pn**	**08 02 36.6**	**+1.3**
BJRD	**Bojnurd**	**3.71**	**323**	*e*Pn	**Pn**	**08 02 36.6**	**+1.3**
MRVT	**Maraveh tapeh**	**4.42**	**312**	*e*Pn	**Pn**	**08 02 45.7**	**+0.5**
MRVT	**Maraveh tapeh**	**4.42**	**312**	*e*Pn	**Pn**	**08 02 45.7**	**+0.5**
ZHSF	**Zahedan**	**5.18**	**175**	*e*Pn	**Pn**	**08 02 55.4**	**-0.3**
ZHSF	**Zahedan**	**5.18**	**175**	*e*Pn	**Pn**	**08 02 55.3**	**-0.3**

NIED ***15*** *08:02:00, 41°.70N×144°.30E, h23km, Mw4.0 Best double couple: M0:1.04000×10^15 NP1:φ1=16.00000°, δ1=76.00000°, λ1=48.00000°. NP2:φ2=270.00000°, δ2=44.00000°, λ2=159.00000°.*
IDC ***15*** *08:02:41.9±1.0, 41°.65N×144°.07E, h0km, mb3.9/12, mb1 3.9/15, mb1mx3.9/28, mbtmp3.9/15, ML3.3/3, Error ellipse: s-maj=24.2km s-min=18.7km az=107.0*
ISCJB ***15*** *08:02:44.4±0.9, 41°.61N±0°.05×144°.34E±0°.08, h36km±7km, mb3.9/15, Error ellipse: s-maj=11.8km s-min=6.2km az=36.7*
MOS ***15*** *08:02:44.4±1.0, 41°.63N×144°.26E, h35km, mb4.3/4, Error ellipse: s-maj=15.2km s-min=9.6km az=93.0*
JMA ***15*** *08:02:45.9±0.2, 41°.71N×144°.27E, h27km±3km, M4.0*
NEIC ***15*** *08:02:47.2±1.4, 41°.66N×144°.14E, h37km±11km, mb4.4/3, Error ellipse: s-maj=16.9km s-min=9.6km az=95.0*
ISC 15 08:02:45.0±2.1, 41°.67N±0°.04×144°.25E±0°.08, h22km±15km, n54, σ1§01/59, mb3.9/15, 1C-1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.89**	**294**	*e*Pn	**Pn**	**08 03 02.9**	**+0.8**
ERM	**Erimo**	**0.89**	**294**	*e*P	**Pn**	**08 03 02.9**	**+0.8**
JEM	**Erimo**	**0.89**	**294**	P	**Pn**	**08 03 02.8**	**+0.7**
JCH	**Churui**	**1.15**	**326**	P	**Pn**	**08 03 05.7**	**-0.1**
JCH				*e*S	**Sn**	**08 03 20.9**	**0.0**
JNBK	**Urakawa-nobuka**	**1.27**	**299**	P	**Pn**	**08 03 08.5**	**+1.1**
JOB	**Onbets**	**1.27**	**346**	P	**Pn**	**08 03 07.9**	**+0.5**
JAK	**Akkeshi**	**1.37**	**14**	P	**Pn**	**08 03 07.8**	**-1.0**
JAK				*e*S	**Sn**	**08 03 25.0**	**-1.2**
JAR	**Ashorobuto**	**1.67**	**348**	P	**Pn**	**08 03 12.2**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**2.65**	**26**	⇓*i*P	**Pn**	**08 03 25.4**	**-0.9**
YUK				*i* S	**Sn**	**08 03 59.1**	**+1.4**
YUK				pmax	pmax		
	comp=N,60nm,0.3s						
YUK				pmax	pmax		
	comp=Z,180nm,0.3s						
YUK				pmax	pmax		
	comp=E,50nm,0.2s						
YUK				smax			
	comp=N,360nm,0.7s						
YUK				smax			
	comp=E,230nm,0.7s						
YUK				smax			
	comp=N,470nm,0.5s						
YUK				smax			
	comp=E,180nm,0.5s						
ASAJ	**Asahikawa**	**2.73**	**334**	Pn	**Pn**	**08 03 27.3**	**-0.2**
	comp=E,4.7nm,0.3s,baz=193,slow=11,SNR=21						
ASAJ	**Asahikawa**	**2.73**	**334**	*e*Pn	**Pn**	**08 03 27.6**	**+0.1**
ASAJ	**Asahikawa**	**2.73**	**334**	P	**Pn**	**08 03 27.3**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KUR	**Kuril'sk**	**4.43**	**35**	P	**Pn**	**08 03 42.0**	**-8.9**
KUR				*e*S	**Sn**	**08 04 41.4**	**-0.3**
KUR				smax			
	comp=N,110nm,0.4s						
KUR				smax			
	comp=E,50nm,0.4s						
MJAR	**Matsushiro Arr**	**6.94**	**224**	Pn	**Pn**	**08 04 24.4**	**-1.0**
	comp=E,0.9nm,0.3s,baz=27,slow=13,SNR=14						
MJAR	**Matsushiro Arr**	**6.94**	**224**	P	**Pn**	**08 04 24.4**	**-0.9**
MAJO	**Matsushiro**	**6.94**	**225**	*e*Pn	**Pn**	**08 04 26.6**	**+1.3**
MAJO	**Matsushiro**	**6.94**	**225**	*e*P	**Pn**	**08 04 26.6**	**+1.3**
MAT	**Matsushiro**	**6.94**	**225**	P	**Pn**	**08 04 26.7**	**+1.4**
MAT				S	**Sn**	**08 05 41.0**	**-2.6**
KSRS	**Korea Array**	**13.28**	**257**	Pn	**Pn**	**08 05 49.6**	**-2.4**
	comp=E,0.0nm,0.3s,baz=63,slow=14,SNR=2.6						
KSRS	**Korea Array**	**13.28**	**257**	P	**Pn**	**08 05 49.6**	**-2.5**
SEY	**Seymchan**	**21.84**	**10**	⇑*e*P	**P**	**08 07 34.7**	**-0.9**
SONM	**Songino Array**	**27.38**	**296**	P	**P**	**08 08 28.1**	**-0.3**
	comp=E,1.9nm,0.7s,mb3.7,baz=96,slow=9.1,SNR=10						
SONM	**Songino Array**	**27.38**	**296**	P	**P**	**08 08 28.1**	**-0.3**
ZAK	**Zakamensk**	**29.43**	**301**	*e*P	**P**	**08 08 48.1**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
ZALV	**Zalesovo Beam**	**40.58**	**309**	P	**P**	**08 10 20.1**	**-2.5**
	comp=Z,1.4nm,0.3s,mb4.0,baz=98,slow=10,SNR=3.0						
ZALV	**Zalesovo Beam**	**40.58**	**309**	P	**P**	**08 10 20.1**	**-2.5**
MK31	**Makanchi Array**	**43.68**	**299**	*e*P	**P**	**08 10 47.9**	**0.0**
MK31	**Makanchi Array**	**43.68**	**299**	*e*P	**P**	**08 10 47.9**	**0.0**
MKAR	**Makanchi Array**	**43.68**	**299**	P	**P**	**08 10 48.4**	**+0.5**
	comp=Z,1.5nm,0.7s,mb3.8,baz=84,slow=9.1,SNR=8.4						
MKAR	**Makanchi Array**	**43.68**	**299**	*e*P	**P**	**08 10 48.3**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**44.43**	**35**	P	**P**	**08 10 54.4**	**+0.8**
	comp=Z,0.4nm,0.8s,mb3.2,baz=262,slow=5.1,SNR=7.2						
ILAR	**Eielson Array**	**44.43**	**35**	P	**P**	**08 10 54.4**	**+0.8**
KURK	**Kurchatov**	**44.95**	**305**	*e*P	**P**	**08 10 57.7**	**-0.2**
	comp=Z,2.6nm,0.4s,mb4.4						
KURK	**Kurchatov**	**44.95**	**305**	*e*P	**P**	**08 10 57.7**	**-0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
BVAR	**Borovoye Array**	**49.19**	**310**	P	**P**	**08 11 30.6**	**-0.4**
	comp=Z,1.1nm,0.4s,mb4.2,baz=77,slow=10,SNR=6.7						
BVAR	**Borovoye Array**	**49.19**	**310**	P	**P**	**08 11 30.6**	**-0.4**
INK	**Inuvik**	**49.27**	**29**	P	**P**	**08 11 32.7**	**+1.2**
	comp=Z,1.0nm,0.4s,mb4.2,baz=299,slow=5.7,SNR=13						
INK	**Inuvik**	**49.27**	**29**	*e*P	**P**	**08 11 31.8**	**+0.3**
	comp=Z,2.3nm,0.6s,mb4.4						
INK	**Inuvik**	**49.27**	**29**	*e*P	**P**	**08 11 31.8**	**+0.3**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	**56.70**	**309**	*e*P	**P**	**08 12 26.9**	**+0.5**
	comp=Z,1.2nm,0.4s,mb4.3						
ARCES	**ARCESS Array B**	**60.45**	**339**	P	**P**	**08 12 53.3**	**+1.0**
	comp=Z,0.5nm,0.5s,mb3.8,baz=39,slow=8.3,SNR=5.6						
ARCES	**ARCESS Array B**	**60.45**	**339**	P	**P**	**08 12 53.3**	**+1.0**
WRA	**Warramunga Arr**	**61.98**	**191**	P	**P**	**08 13 03.1**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.8,baz=8.0,slow=6.7,SNR=3.2						
WRA	**Warramunga Arr**	**61.98**	**191**	P	**P**	**08 13 03.1**	**-0.1**
ASAR	**Alice Springs**	**65.70**	**190**	P	**P**	**08 13 28.1**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.6,baz=14,slow=9.5,SNR=3.3						
ASAR	**Alice Springs**	**65.70**	**190**	P	**P**	**08 13 28.1**	**+0.5**
FINES	**FINESS Array B**	**65.74**	**332**	P	**P**	**08 13 26.9**	**-0.6**
	comp=Z,1.8nm,0.6s,mb4.3,baz=57,slow=6.9,SNR=12						
FINES	**FINESS Array B**	**65.74**	**332**	P	**P**	**08 13 26.9**	**-0.6**
FINES	**FINESS Array B**	**65.74**	**332**	P	**P**	**08 13 26.9**	**-0.6**
NB2	**NORSAR Subarra**	**70.75**	**338**	P	**P**	**08 14 02.5**	**+3.6**
	comp=Z,0.9nm,0.6s,mb3.9,baz=35,slow=6.2						
NOA	**NORSAR Array B**	**70.75**	**338**	P	**P**	**08 14 00.6**	**+1.7**
	comp=Z,0.8nm,0.6s,mb3.8,baz=37,slow=6.2,SNR=3.8						
NOA	**NORSAR Array B**	**70.75**	**338**	P	**P**	**08 14 00.6**	**+1.7**
HFS	**Hagfors**	**70.76**	**336**	P	**P**	**08 13 58.5**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.1,baz=44,slow=6.6,SNR=5.4						
HFS	**Hagfors**	**70.76**	**336**	P	**P**	**08 13 58.5**	**-0.5**

BJI 15 08:12:50.7, 43°.50N×84°.42E, h17km, ML2.8/6, 1C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.40**	**81**	Pn	Pn	08 13 31.5	+2.4
WMQ				Sn	Sn	08 14 04.8	+6.7
WMQ				smax			
	comp=N,32nm,0.5s						
WMQ				smax			
	comp=E,41nm,0.5s						
MK31	**Makanchi Array**	**3.62**	**336**	⇓Pn	Pn	08 13 46.3	+0.3
	comp=E,0.3nm,0.3s,baz=151,slow=13,SNR=25						
MK31				Pg	Pg	08 13 55.0	-5.0
	comp=E,0.8nm,0.3s,baz=145,slow=17,SNR=16						
MK31				Lg		08 14 43.8	
	comp=E,2.4nm,0.3s,baz=152,slow=28,SNR=6.9						
TKM2	**Tokmak 2**	**6.47**	**268**	⇓Sn	Pn	08 15 05.7	+41
	comp=E,0.8nm,0.2s						
TKM2				⇑Lg		08 15 31.9	
	comp=E,2.4nm,0.3s						

IDC ***15*** *08:38:12.0±1.8, 53°.62N×87°.89E, h0km, mb1 3.6/3, mb1mx3.3/28, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=16.1km s-min=11.8km az=64.0*
NNC ***15*** *08:38:17.0±1.5, 53°.30N×87°.18E, h4km±10km, mb4.1, mpv3.8, Error ellipse: s-maj=14.2km s-min=7.5km az=54.0*
ISC 15 08:38:15.0±3.5, 53°.67N±0°.08×87°.7E±0°.2, h21km±39km, n8, σ0§86/13, 4C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.72**	**280**	Pn	**Pn**	**08 38 44.4**	**+0.8**
	20nm,0.3s,baz=100,slow=14,SNR=147						
ZALV				Lg		08 39 09.6	
	31nm,0.3s,baz=101,slow=22,SNR=19						
KURK	**Kurchatov**	**6.31**	**246**	⇓Pn	**Pn**	**08 39 44.6**	**-2.0**
	9.0nm,0.6s						
KURK				⇓Sn	**Sn**	**08 40 54.5**	**-3.5**
	12nm,0.9s						
KURK				⇓Lg		08 41 23.6	
	44nm,0.8s						
MK31	**Makanchi Array**	**7.71**	**209**	⇑Pn	**Pn**	**08 40 06.4**	**+0.7**
	2.1nm,0.5s,baz=26,slow=11,SNR=60						
MK31				⇓Sn	**Sn**	**08 41 32.3**	**0.0**
	8.3nm,0.8s,baz=31,slow=25,SNR=6.9						
MK31				⇓Lg		08 42 03.4	
	20nm,0.8s,baz=37,slow=29,SNR=7.6						
MKAR	**Makanchi Array**	**7.71**	**209**	Pn	**Pn**	**08 40 06.7**	**+0.9**
	1.4nm,0.3s,baz=28,slow=13,SNR=66						
MKAR				Sn	**Sn**	**08 41 32.4**	**+0.1**
	0.5nm,0.3s,baz=30,slow=26,SNR=13						
MKAR				Lg		08 42 10.8	
	0.6nm,0.3s,baz=35,slow=30,SNR=8.2						
VOSK	**Vostochnaya**	**10.07**	**271**	⇑Pn	**Pn**	**08 40 37.3**	**-0.9**
	1.8nm,0.6s						
VOSK				⇑Sn	**Sn**	**08 42 30.1**	**-0.2**
	8.4nm,0.7s						
BVAR	**Borovoye Array**	**10.36**	**273**	Pn	**Pn**	**08 40 42.8**	**+0.6**
	0.4nm,0.3s,baz=72,slow=14,SNR=4.6						
BVAR				Sn	**Sn**	**08 42 37.9**	**+0.4**
	1.0nm,0.3s,baz=79,slow=23,SNR=8.0						
ZRNK	**Zerenda**	**11.20**	**274**	⇑Sn	**Sn**	**08 42 58.3**	**+0.3**
	13nm,1.1s						
SONM	**Songino Array**	**13.19**	**109**	Pn	**Pn**	**08 41 20.5**	**-0.3**
	baz=300,slow=14,SNR=4.4						
SONM				Lg		08 45 04.6	
	0.1nm,0.3s,baz=304,slow=24,SNR=8.2						

NEIC ***15*** *08:55:00.8±0.7, 3°.78N×95°.96E, h35km, mb4.4/1, Error ellipse: s-maj=18.2km s-min=11.6km az=45.0*
ISCJB ***15*** *08:55:03.0±0.6, 3°.99N±0°.09×96°.32E±0°.06, h65km, mb4.1/12, Error ellipse: s-maj=12.4km s-min=7.9km az=9.1*
IDC ***15*** *08:55:04.7±0.8, 4°.02N×96°.32E, h66km±6km, mb3.8/12, mb1 3.9/13, mb1mx3.8/24, mbtmp3.8/13, MS3.7/2, Ms1 3.8/2, ms1mx2.9/31, Error ellipse: s-maj=32.5km s-min=12.3km az=54.0*
ISC 15 08:55:05.1±0.6, 3°.99N±0°.09×96°.33E±0°.06, h67km, h67km±1.6km: pP-P, n21, σ1§05/21, mb4.1/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**4.50**	**73**	*e*Pn	**Pn**	**08 56 13.1**	**+2.3**
KULM				*e*Sn	**Sn**	**08 57 01.1**	**-0.7**
IPM	**Ipoh**	**4.71**	**84**	*e*Pn	**Pn**	**08 56 16.1**	**+2.4**
	66nm,0.5s						
IPM				*e*Sn	**Sn**	**08 57 05.9**	**-1.2**
CMAR	**Chiang Mai Arr**	**14.60**	**10**	P	**Pn**	**08 58 29.5**	**+1.3**
	0.8nm,0.3s,baz=196,slow=9.4,SNR=4.2						
FITZ	**Fitzroy Crossi**	**36.29**	**128**	P	**P**	**09 02 00.8**	**-1.6**
	2.4nm,0.6s,mb4.3,baz=282,slow=5.0,SNR=8.1						
KSRS	**Korea Array**	**44.10**	**37**	P	**P**	**09 03 06.8**	**0.0**
	0.5nm,0.7s,mb3.3,baz=218,slow=8.3,SNR=3.7						
WRA	**Warramunga Arr**	**44.28**	**124**	P	**P**	**09 03 08.5**	**+0.1**
	9.4nm,0.6s,mb4.7,baz=302,slow=9.2,SNR=111						
WRA				pP	pP	09 03 25.6	+0.3
	2.2nm,0.5s,baz=302,slow=9.3,SNR=4.6						
WB2	**Warramunga Arr**	**44.29**	**124**	*e*P	**P**	**09 03 08.7**	**+0.1**
MKAR	**Makanchi Array**	**44.34**	**346**	P	**P**	**09 03 07.1**	**-1.4**
	0.7nm,0.4s,mb3.7,baz=158,slow=7.8,SNR=12						
MKAR				pP	pP	09 03 24.3	-1.1
	0.8nm,0.6s,baz=162,slow=7.8,SNR=3.7						
MKAR				LR	LR	09 24 00.1	
	comp=Z,72nm,19.2s,baz=174,slow=39						
MKAR	**Makanchi Array**	**44.34**	**346**	P	**P**	**09 03 07.1**	**-1.4**
MKAR				pP	pP	09 03 24.3	-1.1
MKAR				LR	LR	09 24 00.1	
SONM	**Songino Array**	**44.53**	**10**	P	**P**	**09 03 09.9**	**-0.1**
	1.4nm,0.6s,mb3.9,baz=192,slow=8.7,SNR=10						
ASAR	**Alice Springs**	**45.79**	**129**	P	**P**	**09 03 20.4**	**+0.1**
	2.0nm,0.6s,mb4.0,baz=299,slow=8.0,SNR=34						
ZALV	**Zalesovo Beam**	**50.68**	**351**	P	**P**	**09 03 57.1**	**-0.5**
	2.4nm,0.3s,mb4.7,baz=163,slow=5.4,SNR=1.6						
BVAR	**Borovoye Array**	**53.34**	**341**	P	**P**	**09 04 15.9**	**-1.4**
	1.3nm,0.5s,mb4.2,baz=139,slow=9.9,SNR=7.8						
STKA	**Stephens Creek**	**55.88**	**133**	P	**P**	**09 04 36.2**	**+0.1**
	9.3nm,1.2s,mb4.7,baz=319,slow=16,SNR=4.5						
STKA	**Stephens Creek**	**55.88**	**133**	*e*P	**P**	**09 04 37.1**	**+1.0**
	6.9nm,1.6s,mb4.4						
BRTR	**Keskin Array B**	**66.61**	**312**	P	**P**	**09 05 49.0**	**+0.4**
	1.0nm,0.6s,mb3.8,baz=122,slow=6.8,SNR=6.0						
BRTR				pP	pP	09 06 06.0	-0.5
	1.7nm,0.7s,baz=134,slow=6.8,SNR=4.9						
ARCES	**ARCESS Array B**	**79.63**	**340**	P	**P**	**09 07 04.9**	**+0.1**
	0.6nm,0.6s,mb3.6,baz=103,slow=5.5,SNR=7.6						
ARCES				pP	pP	09 07 22.4	-0.7
	0.5nm,0.5s,baz=101,slow=6.3,SNR=2.3						
GERES	**GERESS Array B**	**82.15**	**319**	pP	pP	09 07 37.9	+0.8
	0.4nm,0.4s,baz=108,slow=8.7,SNR=2.3						
NOA	**NORSAR Array B**	**84.16**	**331**	LR	LR	09 49 00.4	
	comp=Z,52nm,18.6s,baz=65,slow=38						
TORD	**Torodi Ar. Bea**	**93.60**	**283**	P	**P**	**09 08 15.3**	**+0.6**
	0.4nm,0.6s,mb4.0,baz=83,slow=5.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**93.60**	**283**	P	**P**	**09 08 15.3**	**+0.6**

ISCJB ***15*** *09:18:05.3±1.2, 59°.34N±0°.04×27°.6E±0°.2, h10km, Error ellipse: s-maj=12.6km s-min=6.4km az=3.9*
CSEM ***15*** *09:18:08.1±0.6, 59°.32N×27°.32E, h2km, ML2.2, Error ellipse: s-maj=17.7km s-min=7.0km az=93.0*
NAO ***15*** *09:18:09.6±0.9, 59°.28N×26°.69E, ML2.2*
BER ***15*** *09:18:10.9±3.0, 59°.28N×26°.74E, h0km±14km, ML2.2(NAO)*
IDC ***15*** *09:18:11.1±2.2, 59°.39N×27°.00E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.0/4, ML2.7/4, Error ellipse: s-maj=21.5km s-min=12.4km az=120.0*
ISC 15 09:18:08.7±1.1, 59°.27N±0°.04×27°.3E±0°.2, h10km, n17, σ1§14/25, Baltic States - Belarus - Northwestern Russia

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

baz=48
OKC Sg Sg 09 25 03.1 +1.5
comp=Z,117nm,0.5s
OJC Ojcow 0.67 93 *e*Pg Pg 09 24 56.1 +0.2
OJC *e*Sg Sg 09 25 04.9 +0.4
OJC Ojcow 0.67 93 *e*Pg Pg 09 24 56.1 +0.2
OJC *e*Sg Sg 09 25 04.9 +0.4
MORC Moravsky Berou 0.92 239 *e*Pg Pg 09 25 01.8 +1.1
SNR=22
MORC *e*Sg Sg 09 25 14.1 +1.5
MORC Moravsky Berou 0.92 239⇑*i*P Pg 09 25 02.0 +1.3
MORC S Sg 09 25 14.0 +1.4
MORC Moravsky Berou 0.92 239 *e*Pg Pg 09 25 01.7 +1.0
baz=60
MORC Moravsky Berou 0.92 239⇑*i*P Pg 09 25 02.0 +1.3
MORC *e*Sg Sg 09 25 13.3 +0.7
comp=Z,152nm,0.3s,baz=60
MORC S Sg 09 25 14.0 +1.4
LIKS Likavka 1.24 169 *e*PN Pn 09 25 07.6 +0.1
LIKS *e*SN Sn 09 25 24.8 -0.1
LIKS Likavka 1.24 169 *e*Pn Pn 09 25 07.7 +0.2
LIKS *e*Sn Sn 09 25 24.8 -0.1
NIE Niedzica 1.32 129 *e*Pg Pg 09 25 08.2 0.0
NIE *e*Sg Sg 09 25 26.3 +1.1
NIE Niedzica 1.32 129 *e*Pg Pg 09 25 08.2 0.0
NIE *e*Sg Sg 09 25 26.3 +1.1
DPC Dobruska-Polom 1.56 274 *e*Pg Pn 09 25 12.6 +0.6
SNR=27
DPC *e*Sg Sn 09 25 33.5 +0.5
DPC Dobruska-Polom 1.56 274 *e*PG Pn 09 25 12.6 +0.6
DPC *e*SG Sn 09 25 33.4 +0.5
comp=Z,61nm,0.5s
DPC Dobruska-Polom 1.56 274 Pg Pn 09 25 12.6 +0.6
SNR=27
DPC Sg Sn 09 25 33.4 +0.5
comp=Z,61nm,0.5s
JAVC Velka Javorina 1.57 207 *e*Pn Pn 09 25 12.3 +0.2
JAVC *e*Sg Sg 09 25 34.3 +0.8
comp=Z,39nm,0.4s
KSP Ksiaz 1.68 291 *e*Pg Pg 09 25 16.0 +0.9
KSP *e*Sg Sg 09 25 38.8 +2.0
KSP Ksiaz 1.68 291 *i*Pg Pg 09 25 16.0 +0.9
KSP *e*Sg Sg 09 25 38.0 +1.2
KSP Ksiaz 1.68 291⇓*i*Pg Pg 09 25 16.0 +0.9
KSP *e*Sg Sg 09 25 38.0 +1.2
VRAC Vranov 1.70 237 *e*Pn Pn 09 25 14.1 +0.3
VRAC *e*Sg Sg 09 25 37.8 +0.3
comp=Z,71nm,0.3s,baz=56
KOLL Kolacno 1.70 188 *e*PN Pn 09 25 14.9 +1.0
KOLL *e* 09 25 17.6
KOLL Kolacno 1.70 188 *e*Pn Pn 09 25 14.9 +1.0
KOLL *e*Sn Sn 09 25 37.3 +0.9
VYHS Vyhne 1.77 178 *e*PN Pn 09 25 14.8 -0.1
VYHS *e* 09 25 17.7
VYHS Vyhne 1.77 178 *e*Pn Pn 09 25 14.8 -0.1
VYHS *e*Sn Sn 09 25 39.0 +0.9
UPC Upice 1.77 279 *e*PG Pn 09 25 16.5 +1.6
UPC *e*SG Sn 09 25 39.5 +1.4
UPC Upice 1.77 279 Pg Pn 09 25 16.5 +1.6
UPC Sg Sn 09 25 39.5 +1.4
KRUC Moravsky 1.95 233 *e*Pn Pn 09 25 17.5 +0.2
baz=52
KRUC *e*Sn Sn 09 25 44.1 +1.6
comp=Z,18nm,0.2s,baz=52
KECS Kecovo 2.11 147 *e*PN Pn 09 25 19.2 -0.3
KECS *e* 09 25 23.6
KECS Kecovo 2.11 147 *e*SN Sn 09 25 44.7 -1.7
CRVS Cervenica-Dubn 2.23 127 *e*PN Pn 09 25 22.2 +1.1
CRVS *e* 09 25 25.2
CRVS Cervenica-Dubn 2.23 127 *e*Pn Pn 09 25 22.2 +1.1
CRVS *e*Sg Sg 09 25 52.4 -2.1
ZST Bratislava 2.34 208 *e* Pn 09 25 27.9 +5.3
ZST Bratislava 2.34 208 *e*SN Sn 09 25 52.2 +0.2
ZST Bratislava 2.34 208 *e*Sn Sn 09 25 52.2 +0.2
PSZ Piszkesteto 2.46 162⇑*i*P Pn 09 25 23.2 -1.2
PSZ Piszkesteto 2.46 162 *e*P Pn 09 25 28.0 +3.6
PSZ Piszkesteto 2.46 162 *e*P Pn 09 25 28.0 +3.6
PSZ Piszkesteto 2.46 162⇑*i*P Pn 09 25 23.2 -1.2
PSZ S Sn 09 25 50.9 -4.2
KOLS Kolonicke sedl 2.65 119 *e*PN Pn 09 25 27.1 +0.2
KOLS *e* 09 25 32.3
KOLS Kolonicke sedl 2.65 119 *e*Pn Pn 09 25 27.1 +0.2
KOLS *e*Sg Sg 09 26 06.4 -1.6
PRU Pruhonice 2.73 266 *e*Sg Sg 09 26 09.3 -1.3
PRU Pruhonice 2.73 266 *e*SG Sg 09 26 10.1 -0.5
comp=Z,25nm,0.5s
PRU Pruhonice 2.73 266 Sg Sg 09 26 10.1 -0.5
comp=Z,25nm,0.5s
CONA Conrad Observa 3.01 220⇑*i*Pn Pn 09 25 31.4 -0.6
CONA ⇓*i*Sn Sn 09 26 04.2 -4.5
CONA Conrad Observa 3.01 220 Pn Pn 09 25 31.4 -0.5
CONA Sn Sn 09 26 04.2 -4.5
BRG Berggiesshubel 3.13 283 PG Pg 09 25 42.6 -0.4
comp=Z,8.7nm,0.4s
BRG SG Sg 09 26 23.6 +0.1
comp=Z,17nm,0.7s
FBE Freiberg 3.50 283 *e*Sg Sg 09 26 34.6 -1.0
FBE Freiberg 3.50 283 Sg Sg 09 26 34.6 -0.9
KHC Kasperske Hory 3.55 253 *e*PN Pn 09 25 39.6 +0.3
KHC *e*PG Pg 09 25 48.4 -2.6
KHC *e*SG Sg 09 26 35.9 -1.0
comp=Z,34nm,0.6s
GEC2 GERESS Array S 3.58 249 *e*Sg Sg 09 26 33.4 -4.7
CLL Collm 3.80 288 *e*Pg Pg 09 25 57.0 +1.2
CLL *e*Sg Sg 09 26 45.0 0.0
CLL Collm 3.80 288 *e*Pg Pg 09 25 57.0 +1.2
CLL *e*Sg Sg 09 26 45.0 0.0
comp=Z,40nm,1.6s
CLL Collm 3.80 288 Pg Pg 09 25 57.0 +1.2
CLL Sg Sg 09 26 45.0 0.0
MOA Molln 3.81 232⇑*i*Pg Pg 09 25 54.7 -1.4
MOA ⇑*i*Sg Sg 09 26 42.9 -2.6
comp=Z,17nm,0.4s
MOA Molln 3.81 232 Pg Pg 09 25 54.7 -1.4
MOA Sg Sg 09 26 42.9 -2.6
comp=Z,17nm,0.4s
WET Wettzell 3.98 256 *e*Sg Sg 09 26 49.6 -1.1
WET Wettzell 3.98 256 Sg Sg 09 26 49.6 -1.1
NKC Novy Kostel 4.05 272 *e*Sg Sg 09 26 50.3 -2.7
NKC Novy Kostel 4.05 272 *e*SG Sg 09 26 51.5 -1.5
comp=Z,17nm,0.4s
NKC Novy Kostel 4.05 272 Sg Sg 09 26 51.5 -1.5
comp=Z,17nm,0.4s
PKSM Moragy 4.06 181⇓*i*P Pn 09 25 44.5 -1.8
PKSM Moragy 4.06 181⇓*i*P Pn 09 25 44.5 -1.8
WERN Wernitzgruen 4.09 273 *e*Sg Sg 09 26 51.5 -2.9
PLN Plauen 4.23 276 *e*Sg Sg 09 26 57.5 -1.3
PLN Plauen 4.23 276 Sg Sg 09 26 57.5 -1.3
ROTZ Rotzenmuhle 4.25 266 *e*Sg Sg 09 26 56.0 -3.5
DRGR 4.36 141⇓*i*P Pn 09 25 51.2 +0.8
DRGR 4.36 141⇓*i*P Pn 09 25 51.2 +0.8
DRGR S Sn 09 26 39.1 -2.7
MOX Moxa 4.58 278 *e*Sg Sg 09 27 09.7 -0.3
MOX Moxa 4.58 278 Sg Sg 09 27 09.7 -0.3
GRF Grafenberg Arr 4.90 266 *e*Sg Sg 09 27 16.0 -4.2
BURAR Bucovina Array 5.01 119⇓*i*P Pn 09 25 59.9 +0.5
BURAR Bucovina Array 5.01 119⇓*i*P Pn 09 25 59.9 +0.5
BSD Bornholm Skovb 5.39 336 *i*P Pn 09 26 04.3 -0.3
BSD *i*S Sn 09 27 03.3 -4.0
BSD Bornholm Skovb 5.39 336 *i*P Pn 09 26 04.3 -0.3
BSD *i*S Sn 09 27 03.3 -4.0
GZR Gura Zlata 5.57 149⇓*i*P Pn 09 26 07.5 +0.4
GZR Gura Zlata 5.57 149⇓*i*P Pn 09 26 07.5 +0.4

SZGRF ***15*** *09:25:23.8, 21°.74S×177°.23W, h33km, Fiji Islands region*
ISCJB ***15*** *09:26:16.8±1.1, 20°.22S±0°.05×177°.76W±0°.08, h473km±12km, mb4.2/26, Error ellipse: s-maj=11.5km s-min=7.6km az=8.5*
NEIC ***15*** *09:26:17.8±0.8, 20°.12S×177°.71W, h474km±8km, mb4.4/10, Error ellipse: s-maj=12.3km s-min=8.5km az=136.0*
IDC ***15*** *09:26:19.2±2.3, 20°.21S×177°.85W, h484km±24km, mb3.6/15, mb1 3.9/15, mb1mx3.8/18, mbtmp3.6/15, Error ellipse: s-maj=14.1km s-min=10.8km az=146.0*
ISC 15 09:26:19.3±0.8, 20°.31S±0°.05×177.74W±0°.08, h491km±8km, n109, σ1º05/68, mb4.2/26, 10C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.73**	**302**	*e*P	**P**	**09 27 42.5**	**-0.9**
MSVF				*e*S	**S**	**09 28 53.2**	**+1.2**
AFI	**Afiamalu**	**8.54**	**43**	P	**P**	**09 28 15.2**	**-6.0**
	18nm,0.3s,baz=57,slow=2.9,SNR=42						
AFI				S	**S**	**09 29 47.6**	**-14**
	25nm,0.3s,baz=26,slow=23,SNR=13						
AFI	**Afiamalu**	**8.54**	**43**	P	**P**	**09 28 15.2**	**-6.0**
AFI				S	**S**	**09 29 47.6**	**-14**
OUZ	**Omahuta**	**16.71**	**205**	*e*P	**P**	**09 29 48.7**	**+1.4**
MXZ	**Matakaoa Point**	**17.54**	**190**	*e*PN	**P**	**09 29 53.7**	**-2.0**
PUZ	**Puketiti**	**18.04**	**190**	*e*PN	**P**	**09 29 58.3**	**-2.0**
PUZ				SN	**S**	**09 32 57.4**	**-3.3**
MWZ	**Matawai**	**18.43**	**192**	*e*PN	**P**	**09 30 02.8**	**-1.1**
MWZ				SN	**S**	**09 33 09.4**	**+2.3**
URZ	**Urewera**	**18.44**	**193**	P	**P**	**09 29 59.7**	**-4.2**
	8.7nm,0.3s,baz=350,slow=4.6,SNR=50						
URZ				S	**S**	**09 33 07.0**	**-0.2**
	1.7nm,0.3s,baz=102,slow=23,SNR=8.5						
URZ	**Urewera**	**18.44**	**193**	*e*PN	**P**	**09 30 01.3**	**-2.7**
URZ				SN	**S**	**09 33 06.7**	**-0.5**
KNZ	**Kokohu**	**19.07**	**191**	*e*PN	**P**	**09 30 09.7**	**+0.1**
NMHZ	**Naumai**	**19.31**	**193**	*e*PN	**P**	**09 30 11.2**	**-0.7**
KAHZ	**Kahuranaki**	**19.97**	**192**	*e*PN	**P**	**09 30 17.6**	**-0.3**
PXZ	**Pawanui**	**20.20**	**192**	*e*PN	**P**	**09 30 19.4**	**-0.5**
PXZ				*e*SN	**S**	**09 33 41.1**	**+5.4**
QRZ	**Quartz Range**	**22.08**	**200**	*e*PN	**P**	**09 30 37.4**	**+0.5**
THZ	**Tophouse**	**22.82**	**198**	*e*PN	**P**	**09 30 43.0**	**-0.6**
RPZ	**Rata Peaks**	**25.15**	**199**	P	**P**	**09 31 03.8**	**-0.6**
	5.2nm,0.6s,mb4.2,baz=350,slow=6.1,SNR=3.4						
RPZ	**Rata Peaks**	**25.15**	**199**	*e*P	**P**	**09 31 05.4**	**+1.0**
ARMA	**Armidale**	**29.37**	**244**	*e*P	**P**	**09 31 43.4**	**+1.7**
CNB	**Canberra Magne**	**32.54**	**236**	*e*P	**P**	**09 32 10.4**	**+1.5**
CTA	**Charters Tower**	**33.75**	**264**⇓*i*P		**P**	**09 32 19.7**	**+0.3**
	13nm,0.6s,mb4.5						
CTAO	**Charters Tower**	**33.75**	**264**	*e*P	**P**	**09 32 19.5**	**+0.1**
	21nm,0.7s,mb4.7						
PMG	**Port Moresby**	**35.54**	**283**	*e*P	**P**	**09 32 33.7**	**-0.7**
	13nm,0.6s,mb4.5						
COEN	**Coen**	**37.81**	**273**	*e*P	**P**	**09 32 53.4**	**+0.1**
	78nm,0.7s,mb5.2						
STKA	**Stephens Creek**	**38.09**	**244**	P	**P**	**09 32 55.7**	**+0.4**
	14nm,0.9s,mb4.3,baz=63,slow=7.9,SNR=7.6						
STKA				PcP	PcP	09 34 59.1	+1.2
	2.3nm,0.4s,baz=159,slow=21,SNR=7.4						
STKA	**Stephens Creek**	**38.09**	**244**	*e*P	**P**	**09 32 55.7**	**+0.4**
	9.8nm,1.0s,mb4.2						
STKA	**Stephens Creek**	**38.09**	**244**	P	**P**	**09 32 55.7**	**+0.4**
STKA				PcP	PcP	09 34 59.1	+1.2
ASAR	**Alice Springs**	**44.80**	**257**	P	**P**	**09 33 48.8**	**0.0**
	15nm,0.6s,mb4.6,baz=93,slow=7.6,SNR=161						
ASAR				PcP	PcP	09 35 21.1	+0.7
	4.2nm,0.5s,baz=103,slow=3.9,SNR=17						
ASAR				S	**S**	**09 39 49.1**	**-0.6**
	1.1nm,1.0s,baz=95,slow=16,SNR=6.4						
WB2	**Warramunga Arr**	**44.86**	**262**	*e*P	**P**	**09 33 48.5**	**-0.7**
WRA	**Warramunga Arr**	**44.87**	**262**	P	**P**	**09 33 48.6**	**-0.7**
	5.8nm,0.3s,mb4.5,baz=94,slow=6.7,SNR=405						
WRA				PcP	PcP	09 35 21.7	+0.9
	2.2nm,0.7s,baz=89,slow=3.3,SNR=6.2						
WRA				S	**S**	**09 39 49.5**	**-1.3**
	0.3nm,0.9s,baz=91,slow=16,SNR=3.8						
WRA	**Warramunga Arr**	**44.87**	**262**	P	**P**	**09 33 48.6**	**-0.7**
WRA				PcP	PcP	09 35 21.7	+0.9
WRA				S	**S**	**09 39 49.5**	**-1.3**
KAKA	**Kakadu**	**48.21**	**271**⇓*i*P		**P**	**09 34 14.3**	**-0.5**
	13nm,0.3s,mb4.7						
KAKA	**Kakadu**	**48.21**	**271**	*e*P	**P**	**09 34 14.2**	**-0.6**
	47nm,0.4s,mb5.2						
FITZ	**Fitzroy Crossi**	**53.30**	**262**	*e*P	**P**	**09 34 52.3**	**+0.4**
	9.5nm,0.5s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.30**	**262**	*e*P	**P**	**09 34 52.5**	**+0.6**
	4.9nm,0.5s,mb4.1						
SBA	**Scott Base**	**58.08**	**184**	*e*P	**P**	**09 35 27.5**	**+3.3**
	5.3nm,0.8s,mb3.9						
KLBR	**Kellerberrin**	**58.36**	**245**	*e*P	**P**	**09 35 26.4**	**-0.5**
	50nm,1.4s,mb4.7						
CASY	**Casey**	**64.24**	**205**	*e*P	**P**	**09 36 05.8**	**+0.9**
CASY	**Casey**	**64.24**	**205**	*e*P	**P**	**09 36 05.7**	**+0.8**
	16nm,1.0s,mb4.5						
QSPA	**South Pole Qui**	**69.76**	**180**	P	**P**	**09 36 40.9**	**+2.1**
	23nm,0.8s,mb4.8,baz=32,slow=3.1,SNR=71						
MJAR	**Matsushiro Arr**	**70.20**	**323**	P	**P**	**09 36 41.2**	**-0.8**
	2.5nm,0.5s,mb4.0,baz=157,slow=6.1,SNR=15						
MAT	**Matsushiro**	**70.20**	**323**	P	**P**	**09 36 41.7**	**-0.3**
PETK	**Petropavlovsk-**	**76.14**	**345**	P	**P**	**09 37 16.2**	**+0.4**
	3.0nm,0.6s,mb4.0,baz=130,slow=7.5,SNR=7.6						
KSRS	**Korea Array**	**76.90**	**318**	P	**P**	**09 37 20.1**	**-0.2**
	0.7nm,0.6s,mb3.4,baz=132,slow=6.4,SNR=4.7						
NVAR	**Mina Array Bea**	**80.72**	**43**	P	**P**	**09 37 42.0**	**+1.3**
	1.6nm,0.9s,mb3.5,baz=226,slow=8.4,SNR=10						
NVAR	**Mina Array Bea**	**80.72**	**43**	P	**P**	**09 37 42.0**	**+1.3**
MAW	**Mawson**	**81.83**	**200**	P	**P**	**09 37 46.6**	**+0.6**
	4.4nm,0.9s,mb4.0,baz=140,slow=4.9,SNR=11						
MAW	**Mawson**	**81.83**	**200**	*e*P	**P**	**09 37 46.7**	**+0.7**
	2.9nm,0.6s,mb4.0						
TUC	**Tucson**	**82.67**	**52**	*e*P	**P**	**09 37 51.1**	**+0.3**
	5.4nm,1.5s,mb3.9						
WVOR	**Wild Horse Val**	**82.82**	**40**	*e*P	**P**	**09 37 51.9**	**+0.5**
	0.9nm,0.4s,mb3.6						
MCK	**McKinley**	**86.73**	**12**	*e*P	**P**	**09 38 09.6**	**-0.4**
	6.4nm,1.0s,mb4.3						
TXAR	**Lajitas Array**	**86.75**	**57**	P	**P**	**09 38 11.1**	**+0.2**
	0.8nm,0.8s,mb3.5,baz=212,slow=4.4,SNR=7.2						
SYO	**Syowa Base**	**86.97**	**193**⇑*e*P		**P**	**09 38 09.9**	**-1.3**
ILAR	**Eielson Array**	**88.07**	**13**	P	**P**	**09 38 15.4**	**-0.8**
	0.7nm,0.4s,mb3.7,baz=220,slow=5.4,SNR=30						
PDAR	**Pinedale Array**	**88.65**	**43**	P	**P**	**09 38 18.4**	**-1.0**
	0.7nm,0.7s,mb3.6,baz=227,slow=4.4,SNR=6.4						
PLCA	**Paso Flores**	**89.23**	**133**	P	**P**	**09 38 23.4**	**+1.1**
	1.6nm,0.8s,mb3.9,baz=314,slow=8.9,SNR=3.0						
EGAK	**Eagle**	**89.35**	**15**	*e*P	**P**	**09 38 21.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**90.28**	**289**	P	**P**	**09 38 29.4**	**+1.8**
	0.6nm,0.3s,mb3.9,baz=119,slow=3.2,SNR=4.8						
MKAR	**Makanchi Array**	**111.24**	**313**	PKiKP	PKiKP	09 43 56.0	-0.6
	1.3nm,0.6s,baz=224,slow=1.0,SNR=14						
BVAR	**Borovoye Array**	**119.09**	**320**	PKP	PKPdf	09 44 11.1	-0.4
	3.3nm,0.4s,baz=148,slow=1.9,SNR=16						
KEV	**Kevo**	**128.32**	**349**	*ep*	PKPpre	09 44 19.1	
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**128.77**	**350**	PKP	PKPdf	09 44 29.9	+0.3
	1.3nm,0.5s,baz=83,slow=0.7,SNR=20						
JOF	**Joensuu**	**133.02**	**342**	*ep*	PKPpre	09 44 18.6	
	1.8nm,0.4s						
KAF	**Kangasniemi**	**135.03**	**344**	*ep*	PKPpre	09 44 37.5	
	0.9nm,0.3s						
FINES	**FINESS Array B**	**135.65**	**344**	PKhKP	PKPpre	09 44 31.5	
	0.7nm,0.6s,baz=48,slow=2.1,SNR=2.3						
FINES				PKP	PKPdf	09 44 41.3	-1.4
	1.2nm,0.5s,baz=48,slow=2.8,SNR=5.5						
FINES	**FINESS Array B**	**135.65**	**344**	PKP	PKPdf	09 44 41.3	-1.4
NOA	**NORSAR Array B**	**138.82**	**353**	PKhKP	PKPpre	09 44 41.6	
	0.4nm,0.5s,baz=21,slow=3.9,SNR=4.8						
NOA				PKP	PKPdf	09 44 51.0	+2.5
	0.6nm,0.6s,baz=45,slow=5.6,SNR=3.7						
MALT	**Malatya**	**144.00**	**308**	*e*PKPbc	PKPdf	09 44 58.2	-0.3
MALT	**Malatya**	**144.00**	**308**⇑*i*P		PKPdf	09 44 59.2	+0.7
BR131	**Keskin Array S**	**146.89**	**313**	*e*PKPbc	PKPbc	09 45 06.4	+0.3
BRTR	**Keskin Array B**	**146.89**	**313**	PKPbc	PKPbc	09 45 06.3	+0.1
	4.5nm,0.5s,baz=140,slow=4.8,SNR=25						
TLCR		**146.89**	**325**⇓*i*P		PKPbc	09 45 06.7	+0.7
ASF	**Jabal al Asfar**	**146.90**	**298**	PKPbc	PKPbc	09 45 06.8	+0.3
	2.0nm,0.3s,baz=351,slow=5.8,SNR=5.5						
BURAR	**Bucovina Array**	**147.01**	**331**⇑*i*P		PKPbc	09 45 07.3	+1.1
TESR		**147.13**	**328**⇓*i*P		PKPbc	09 45 06.9	+0.3
KOLS	**Kolonicke sedl**	**147.24**	**335**	*e*PKP	PKPbc	09 45 07.7	+0.9
KOLS	**Kolonicke sedl**	**147.24**	**335**	*e*PKP	PKPbc	09 45 07.7	+0.9
CRVS	**Cervenica-Dubn**	**147.57**	**336**	*e*PKP	PKPbc	09 45 08.2	+0.5
CLZ	**Clausthal**	**147.89**	**351**	*e*PKPbc	PKPbc	09 45 09.2	+0.8
CLL	**Collm**	**147.93**	**347**	*e*PKPbc	PKPbc	09 45 09.0	+0.5
CLL	**Collm**	**147.93**	**347**⇓*i*PKPbc		PKPbc	09 45 09.0	+0.5
	comp=Z,15nm,0.6s						
MMAI	**Mount Meron Ar**	**147.93**	**300**	PKPbc	PKPbc	09 45 10.4	+1.3
	comp=Z,8.0nm,0.5s,baz=72,slow=5.5,SNR=18						
UPC	**Upice**	**147.96**	**343**⇑*e*PKP		PKPbc	09 45 09.4	+0.8
DPC	**Dobruska-Polom**	**148.01**	**343**⇑*e*PKP		PKPbc	09 45 09.7	+1.0
BRG	**Berggiesshubel**	**148.13**	**346**	*e*PKPbc	PKPbc	09 45 09.6	+0.6
BRG	**Berggiesshubel**	**148.13**	**346**	*i* (P)	PKPbc	09 45 09.7	+0.7
	comp=Z,7.8nm,0.6s						
FBE	**Freiberg**	**148.22**	**347**	*e*PKPbc	PKPbc	09 45 10.2	+1.0
KECS	**Kecovo**	**148.29**	**337**	*e*PKP	PKPbc	09 45 10.2	+0.7
PVCC	**Panska Ves**	**148.31**	**345**⇑*e*PKP		PKPbc	09 45 10.2	+0.7
PRU	**Pruhonice**	**148.81**	**345**⇑*e*PKP		PKPbc	09 45 11.9	+1.2
MOX	**Moxa**	**148.83**	**348**	*e*PKPbc	PKPbc	09 45 11.4	+0.6
VYHS	**Vyhne**	**148.87**	**338**	*e*PKP	PKPbc	09 45 11.4	+0.5
PLN	**Plauen**	**148.88**	**348**	*e*PKPbc	PKPbc	09 45 11.6	+0.7
TANN	**Tannenbergstha**	**148.88**	**347**	*e*PKPbc	PKPbc	09 45 11.6	+0.7
WERD	**Werda**	**148.88**	**348**	*e*PKPbc	PKPbc	09 45 11.6	+0.7
KOLL	**Kolacno**	**148.94**	**339**	*e*PKP	PKPbc	09 45 12.2	+1.1
GUNZ	**Gunzen**	**148.96**	**347**	*e*PKPbc	PKPbc	09 45 12.0	+0.9
WERN	**Wernitzgruen**	**149.02**	**347**	*e*PKPbc	PKPbc	09 45 12.2	+1.0
NKC	**Novy Kostel**	**149.06**	**347**⇑*e*PKP		PKPbc	09 45 11.1	-0.2
TREC	**Trest**	**149.20**	**343**⇑*e*PKP		PKPbc	09 45 12.3	+0.6
ROTZ	**Rotzenmuhle**	**149.55**	**347**	*e*PKPbc	PKPbc	09 45 13.4	+0.9
TNS	**Taunus Mts**	**149.75**	**352**	*e*PKPbc	PKPbc	09 45 13.7	+0.7
GRA1	**Grafenberg Arr**	**149.82**	**348**	*e*PKPbc	PKPbc	09 45 13.9	+0.7
GRF	**Grafenberg Arr**	**149.82**	**348**	*e*PKPbc	PKPbc	09 45 13.9	+0.7
KHC	**Kasperske Hory**	**149.84**	**345**⇑*e*PKP		PKPbc	09 45 14.0	+0.8
KHC				*e*PKPAB	PKPab	09 45 21.9	+1.1
GEC2	**GERESS Array S**	**150.08**	**345**	*e*PKPbc	PKPbc	09 45 14.4	+0.6
GERES	**GERESS Array B**	**150.08**	**345**	PKPbc	PKPbc	09 45 14.2	+0.4
	comp=Z,3.2nm,0.6s,baz=32,slow=3.4,SNR=18						
WLF	**Walferdange**	**150.54**	**355**	*e*PKPbc	PKPbc	09 45 15.9	+1.0
DBIC	**Dimbokro**	**164.79**	**152**	PKPab	PKPab	09 46 27.1	+0.9
	comp=Z,5.3nm,0.9s,baz=69,slow=8.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**172.86**	**176**	PKP	PKPdf	09 45 30.9	-1.4
	comp=Z,2.3nm,1.0s,baz=298,slow=1.5,SNR=10.0						
TORD				PKPab	PKPab	09 47 02.6	+0.8
	comp=Z,1.1nm,0.7s,baz=197,slow=3.3,SNR=5.8						

BUC 15 09:39:02.9±0.2, 43°.96N×28°.99E, h5km, MD2.7/2, 4C-4D, Error ellipse: s-maj=1.8km s-min=1.2km az=27.0, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIRR	**Tirgusor**	**0.65**	**320**⇓*i*P		Pg	09 39 16.0	+0.6
TIRR				*i*S	Sg	09 39 25.5	+1.7
TIRR	**Tirgusor**	**0.65**	**320**⇓*i*P		Pg	09 39 16.0	+0.6
TIRR				S	Sg	09 39 25.5	+1.7
TLCR		**1.23**	**354**⇑*i*P		Pg	09 39 26.8	+0.3
TLCR				*i*S	Sg	09 39 44.2	+1.7
TLCR		**1.23**	**354**⇑*i*P		Pg	09 39 26.8	+0.3
TLCR		**1.23**	**354**	S	Sg	09 39 44.2	+1.7
CFR	**Carcaliu**	**1.36**	**334**⇓*i*P		Pn	09 39 28.9	+0.3
CFR				*i*S	Sb	09 39 47.9	+1.3
CFR	**Carcaliu**	**1.36**	**334**⇓*i*P		Pn	09 39 28.9	+0.3
CFR	**Carcaliu**	**1.36**	**334**	S	Sb	09 39 47.9	+1.3
MLR	**Muntele Rosu**	**2.66**	**306**⇑*i*P		Pn	09 39 48.9	+2.6
MLR	**Muntele Rosu**	**2.66**	**306**⇑*i*P		Pn	09 39 48.9	+2.6

ISK ***15*** *09:48:15.4, 40°.68N×32°.82E, h5km, MD3.0*
ISCJB ***15*** *09:48:16.6±0.6, 40°.68N±0°.03×32°.80E±0°.03, h3km±5km, Error ellipse: s-maj=5.2km s-min=3.8km az=0.6*
DDA ***15*** *09:48:16.2, 40°.68N×32°.80E, h11km±4km, Md2.9*
CSEM ***15*** *09:48:16.4±0.1, 40°.68N×32°.81E, h2km, MD2.9, Error ellipse: s-maj=3.3km s-min=2.7km az=173.0*
ISC 15 09:48:17.0±0.6, 40°.67N±0°.04×32°.79E±0°.03, h5km±6km, n27, σ0º83/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.52**	**111**	*i*P	**Pg**	**09 48 26.5**	**-0.4**
ELDT				*i*S	**Sg**	**09 48 34.1**	**+0.5**
ELDT	**Eldivan**	**0.52**	**111**	*i*P	**Pg**	**09 48 26.5**	**-0.4**
ELDT				*i*S	**Sg**	**09 48 34.1**	**+0.5**
SGKT	**Sivrigoynuk**	**0.57**	**260**	*i*P	**Pg**	**09 48 27.7**	**-0.3**
SGKT				*i*S	**Sg**	**09 48 36.2**	**+0.8**
SGKT	**Sivrigoynuk**	**0.57**	**260**	*i*P	**Pg**	**09 48 27.7**	**-0.3**
SGKT				*i*S	**Sg**	**09 48 36.2**	**+0.8**
SAFT	**Safranbolu**	**0.57**	**352**	*e*PG	**Pg**	**09 48 27.6**	**-0.5**
SAFT				*e*SG	**Sg**	**09 48 36.2**	**+0.7**
SAFT	**Safranbolu**	**0.57**	**352**	*e*Pg	**Pg**	**09 48 27.6**	**-0.4**
SAFT				*e*Sg	**Sg**	**09 48 36.2**	**+0.7**
CANT	**Cankiri**	**0.63**	**96**	*e*PG	**Pg**	**09 48 27.9**	**-1.2**
CANT				*e*SG	**Sg**	**09 48 38.1**	**+0.7**
ILGA	**Ilgaz**	**0.80**	**61**	*i*P	**Pg**	**09 48 31.6**	**-0.7**
ILGA				*i*S	**Sg**	**09 48 44.3**	**+1.7**
ILGA	**Ilgaz**	**0.80**	**61**	*i*P	**Pg**	**09 48 31.6**	**-0.7**
BALT	**Daday**	**0.97**	**27**	*i*P	**Pg**	**09 48 34.4**	**-1.2**
BALT				*i*S	**Sg**	**09 48 47.8**	**-0.5**
BALT	**Daday**	**0.97**	**27**	*i*P	**Pg**	**09 48 34.4**	**-1.2**
BALT				*i*S	**Sg**	**09 48 47.8**	**-0.4**
TOS	**Tosya**	**1.00**	**68**	*e*PG	**Pg**	**09 48 35.6**	**-0.6**
TOS				*e*SG	**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HUMP				eS	Sn	09 59 20.1	-0.6
HUMP	Col San Antoni	1.44	233	⇑eP	Pn	09 59 02.5	-0.1
HUMP				eS	Sn	09 59 20.1	-0.6
SJG	San Juan	1.69	238	⇑eP	Pn	09 59 06.0	0.0
SJG				eS	Sn	09 59 27.5	+0.6
SJG	San Juan	1.69	238	⇑eP	Pn	09 59 06.3	+0.2
SJG				eS	Sn	09 59 27.4	+0.5
SJG				eS	Sn	09 59 27.5	+0.6
SMRT	St. Maarten	1.77	123	⇑eP	Pn	09 59 06.8	-0.4
SMRT				eS	Sn	09 59 28.8	-0.2
SMRT	St. Maarten	1.77	123	⇑eP	Pn	09 59 06.8	-0.4
SMRT				eS	Sn	09 59 28.8	-0.2
SABA	Saba	1.93	136	⇑eP	Pn	09 59 09.0	-0.3
SABA				eS	Sn	09 59 32.7	-0.1
SABA	Saba	1.93	136	⇑eP	Pn	09 59 09.0	-0.3
SABA				eS	Sn	09 59 32.7	-0.1
CELP	Cerrillos	2.06	243	⇑eP	Pn	09 59 11.3	+0.1
CELP				eS	Sn	09 59 35.6	-0.6
CELP	Cerrillos	2.06	243	⇑eP	Pn	09 59 11.3	+0.1
CELP				eS	Sn	09 59 35.6	-0.6
OBIP	Obispado Ponce	2.10	243	eS	Sn	09 59 37.0	-0.1
OBIP	Obispado Ponce	2.10	243	eS	Sn	09 59 37.0	-0.1
ICM	Isla Caja Muer	2.10	238	⇑eP	Pn	09 59 12.4	+0.6
ICM				eS	Sn	09 59 36.9	-0.3
ICM	Isla Caja Muer	2.10	238	⇑eP	Pn	09 59 12.4	+0.6
ICM				eS	Sn	09 59 36.9	-0.3
AOPR	Arecibo Observ	2.11	252	⇑eP	Pn	09 59 12.5	+0.6
AOPR				eS	Sn	09 59 36.6	-0.6
AOPR	Arecibo Observ	2.11	252	⇑eP	Pn	09 59 12.5	+0.6
AOPR				eS	Sn	09 59 36.6	-0.6
LRS	Lares	2.21	251	⇑eP	Pn	09 59 13.8	+0.6
LRS	Lares	2.21	251	⇑eP	Pn	09 59 13.8	+0.6
CRPR	Cabo Rojo, PR	2.55	247	⇑eP	Pn	09 59 18.8	+1.0
CRPR				eS	Sn	09 59 47.3	-0.8
CRPR	Cabo Rojo, PR	2.55	247	⇑eP	Pn	09 59 18.8	+1.0
CRPR				eS	Sn	09 59 47.3	-0.8

PRE 15 10:03:27.0±0.9, 26°.42S×27°.42E, h2km, ML2.7, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	Parys	0.51	186	eP	Pg	10 03 36.8	0.0
PRYS				eS	Sg	10 03 44.0	+0.6
PRYS				AML	AML	10 03 46.2	
	comp=Z,205nm,0.2s						
BFSD	Buffelsfontein	0.72	232	eP	Pg	10 03 42.8	+2.0
BFSD				eS	Sg	10 03 50.4	+0.1
BFSD				AML	AML	10 03 59.8	
	comp=Z,128nm,0.1s						
KSR	Koster	0.73	320	eP	Pg	10 03 44.2	+3.2
KSR				eS	Sg	10 03 53.4	+2.8
KSR				AML	AML	10 04 01.4	
	comp=Z,177nm,0.3s						
ERPM	east rand prop	0.74	85	eP	Pg	10 03 41.8	+0.6
ERPM				eS	Sg	10 03 51.6	+0.8
ERPM				AML	AML	10 03 59.5	
	comp=Z,54nm,0.3s						
MOAB	Moab Khotsong	0.79	224	eP	Pg	10 03 42.8	+0.5
MOAB				eS	Sg	10 03 53.0	+0.4
MOAB				AML	AML	10 04 02.2	
	comp=Z,153nm,0.2s						
TAUL	Tau Lekoa	0.93	231	eP	Pg	10 03 45.9	+1.1
TAUL				eS	Sg	10 03 58.3	+1.5
TAUL				AML	AML	10 04 03.7	
	comp=Z,87nm,0.2s						
SLR	Silverton	1.03	49	eP	Pg	10 03 46.4	-0.4
SLR				eS	Sg	10 04 01.2	+1.1
SLR				AML	AML	10 04 05.7	
	comp=Z,113nm,0.2s						
SWZ	Schweizer	2.02	247	eP	Pn	10 04 03.1	+1.1
SWZ				eS	Sn	10 04 28.3	+0.5
SWZ				AML	AML	10 04 37.6	
	comp=Z,32nm,0.3s						
POGA	Pongola	3.86	105	eP	Pn	10 04 29.7	+2.3
POGA				eS	Sn	10 05 14.3	+0.9
POGA				AML	AML	10 05 32.3	
	comp=Z,14nm,0.5s						
PKA	Prieska	5.24	231	eP	Pn	10 04 46.8	+0.4
PKA				eS	Sn	10 05 45.5	-2.0
PKA				AML	AML	10 06 24.6	
	comp=Z,9.9nm,0.3s						

JMA 15 10:10:02.6±0.2, 27°.39N×140°.71E, h406km, M3.6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.34	102	P	Pn	10 10 55.7	0.0
CBIJ				S	S	10 11 37.6	-0.9
JHHJ	Haha-jima-NKT	1.51	120	P	Pn	10 10 56.8	+0.3
JHHJ				S	S	10 11 39.3	-0.6
BSO1	Boso 1	7.24	2	eS	S	10 13 16.0	-0.1
BSO3	Boso 3	7.39	359	P	P	10 11 51.9	+1.0
BSO3				S	S	10 13 16.5	-2.6
JRY	Ryogami san	8.74	350	P	P	10 12 06.9	+1.1
JAG	Ashikaga	9.07	354	P	P	10 12 10.2	+0.7

CRAAG 15 10:34:52.7, 37°.00N×4°.07E, Ml4.0
ISCJB 15 10:34:53.0±0.3, 37°.06N±0°.02×4°.18E±0°.03, h10km, Error ellipse: s-maj=3.7km s-min=2.9km az=139.4
CSEM 15 10:34:53.3±0.2, 36°.94N×4°.26E, h2km, ML4.0, Error ellipse: s-maj=5.0km s-min=4.0km az=37.0
NEIC 15 10:34:54.5±0.8, 36°.97N×4°.32E, h10km, MG4.0(MDD), Error ellipse: s-maj=9.3km s-min=5.8km az=165.0
MDD 15 10:34:55.5±1.3, 36°.96N×4°.11E, h30km±14km, mb4.3/12, Error ellipse: s-maj=7.6km s-min=6.4km az=25.0, PRIMO MDD EMS: IV INTENSIDAD MAXIMA-CRAAG.
LDG 15 10:34:57.1±0.3, 37°.00N×3°.96E, h30km, Ml3.2/3, Error ellipse: s-maj=7.7km s-min=5.0km az=129.0
ISC 15 10:34:54.2±0.3, 36°.98N±0°.02×4°.17E±0°.03, h10km, n201, σ1§55/270, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.60	247	P	Pg	10 35 05.0	-0.7
ABMS	Boumerdes	0.60	247	P	Pg	10 35 05.0	-0.7
ABMS	Boumerdes	0.60	247	P	Pg	10 35 05.0	-0.7
ABMS	Boumerdes	0.60	247	P	Pg	10 35 05.0	-0.7
ABA	Alger-Bouzarea	0.92	259	P	Pg	10 35 10.9	-1.0
ABA	Alger-Bouzarea	0.92	259	P	Pg	10 35 10.9	-1.0
ABA	Alger-Bouzarea	0.92	259	P	Pg	10 35 10.9	-1.0
ABA	Alger-Bouzarea	0.92	259	P	Pg	10 35 10.9	-1.0
AKET	Djebel Ketaf	0.96	194	P	Pg	10 35 11.8	-0.9
AKET	Djebel Ketaf	0.96	194	P	Pg	10 35 11.8	-0.9
AKET	Djebel Ketaf	0.96	194	P	Pg	10 35 11.8	-0.9
AKET	Djebel Ketaf	0.96	194	P	Pg	10 35 11.8	-0.9
ADJB	Djebel Djouab	1.01	216	P	Pg	10 35 12.9	-0.7
ADJB	Djebel Djouab	1.01	216	P	Pg	10 35 12.9	-0.7
ADJB	Djebel Djouab	1.01	216	P	Pg	10 35 12.9	-0.7
ADJB	Djebel Djouab	1.01	216	P	Pg	10 35 12.9	-0.7
EMHD	Djebel Mahouad	1.25	232	P	Pn	10 35 16.5	-1.2
EMHD	Djebel Mahouad	1.25	232	P	Pn	10 35 16.5	-1.2
EMHD	Djebel Mahouad	1.25	232	P	Pn	10 35 16.5	-1.2
EMHD	Djebel Mahouad	1.25	232	P	Pn	10 35 16.5	-1.2
SET	Setif	1.27	128	P	Pn	10 35 16.0	-1.9
SET	Setif	1.27	128	P	Pn	10 35 16.0	-1.9
DFRA	Djebel Bou Aff	1.44	107	P	Pn	10 35 18.5	-1.8
DFRA	Djebel Bou Aff	1.44	107	P	Pn	10 35 18.5	-1.8
DFRA	Djebel Bou Aff	1.44	107	P	Pn	10 35 18.5	-1.8
DFRA	Djebel Bou Aff	1.44	107	P	Pn	10 35 18.5	-1.8
CKHR	Kef el Ahmar	1.45	131	P	Pn	10 35 19.1	-1.3
CKHR	Kef el Ahmar	1.45	131	P	Pn	10 35 19.1	-1.3
CKHR	Kef el Ahmar	1.45	131	P	Pn	10 35 19.1	-1.3
CKHR	Kef el Ahmar	1.45	131	P	Pn	10 35 19.1	-1.3
CASM	Ain Smara	2.00	110	P	Pn	10 35 29.2	+1.2
CASM	Ain Smara	2.00	110	P	Pn	10 35 29.2	+1.2
CASM	Ain Smara	2.00	110	P	Pn	10 35 29.2	+1.2
CASM	Ain Smara	2.00	110	P	Pn	10 35 29.2	+1.2
CTEI	Djebel Teioual	2.03	116	P	Pn	10 35 30.0	+1.7
CTEI	Djebel Teioual	2.03	116	P	Pn	10 35 30.0	+1.7
CTEI	Djebel Teioual	2.03	116	P	Pn	10 35 30.0	+1.7
CTEI	Djebel Teioual	2.03	116	P	Pn	10 35 30.0	+1.7
CKFL	Kef-Lekhel	2.13	105	P	Pn	10 35 29.8	0.0
CKFL	Kef-Lekhel	2.13	105	P	Pn	10 35 29.8	0.0
CKFL	Kef-Lekhel	2.13	105	P	Pn	10 35 29.8	0.0
CKFL	Kef-Lekhel	2.13	105	P	Pn	10 35 29.8	0.0
CAEH	'Ain El Ouahch	2.16	95	P	Pn	10 35 28.0	-2.2
CAEH	'Ain El Ouahch	2.16	95	P	Pn	10 35 28.0	-2.2
CAEH	'Ain El Ouahch	2.16	95	P	Pn	10 35 28.0	-2.2
CAEH	'Ain El Ouahch	2.16	95	P	Pn	10 35 28.0	-2.2
EBNR	Beni Rached	2.23	253	P	Pg	10 35 35.7	-1.2
EBNR	Beni Rached	2.23	253	P	Pg	10 35 35.7	-1.2
ECHA	Ech Chlef	2.40	251	P	Pg	10 35 45.0	+4.8
ECHA	Ech Chlef	2.40	251	P	Pg	10 35 45.0	+4.8
ECHF	Ech Chlef	2.42	251	P	Pg	10 35 45.0	+4.5
ECHF	Ech Chlef	2.42	251	P	Pg	10 35 45.0	+4.5
CMAH	Djebel Manchou	2.64	97	P	Pn	10 35 34.0	-2.7
CMAH	Djebel Manchou	2.64	97	P	Pn	10 35 34.0	-2.7
CMAH	Djebel Manchou	2.64	97	P	Pn	10 35 34.0	-2.7
CMAH	Djebel Manchou	2.64	97	P	Pn	10 35 34.0	-2.7
EANR	'Ain N'Sour	2.68	248	P	Pg	10 35 46.0	+0.5
EANR	'Ain N'Sour	2.68	248	P	Pg	10 35 46.0	+0.5
EANR	'Ain N'Sour	2.68	248	P	Pg	10 35 46.0	+0.5
EANR	'Ain N'Sour	2.68	248	P	Pg	10 35 46.0	+0.5
ABSA	Djebel Ababsia	2.76	104	P	Pn	10 35 36.1	-2.3
ABSA	Djebel Ababsia	2.76	104	P	Pn	10 35 36.1	-2.3
CABS	Djebel Ababsia	2.76	104	P	Pn	10 35 36.1	-2.3
CABS	Djebel Ababsia	2.76	104	P	Pn	10 35 36.1	-2.3
ETRT	Tiaret	2.81	236	P	Pn	10 35 40.6	+1.5
ETRT	Tiaret	2.81	236	P	Pn	10 35 40.6	+1.5
ETRT	Tiaret	2.81	236	P	Pn	10 35 40.6	+1.5
ETRT	Tiaret	2.81	236	P	Pn	10 35 40.6	+1.5
ETOS	Mallorca	2.98	340	P	Pn	10 35 42.8	+1.4
ETOS				S	Sn	10 36 16.4	-0.7
ETOS	Mallorca	2.98	340	P	Pn	10 35 42.8	+1.4
	35nm,0.8s,SNR=27						
ETOS				S	Sn	10 36 16.4	-0.7
	18nm,0.8s,SNR=4.8						
ETOS	Mallorca	2.98	340	P	Pn	10 35 42.8	+1.4
	35nm,0.8s,SNR=27						
ETOS				S	Sn	10 36 16.4	-0.7
	18nm,0.8s,SNR=4.8						
ETOS	Mallorca	2.98	340	P	Pn	10 35 42.8	+1.4
	35nm,0.8s,SNR=27						
ETOS				S	Sn	10 36 16.4	-0.7
	18nm,0.8s,SNR=4.8						
EIBI	Ibiza	3.02	313	P	Pn	10 35 43.2	+1.2
EIBI				S	Sn	10 36 18.3	+0.1
EIBI	Ibiza	3.02	313	P	Pn	10 35 43.2	+1.2
	6.5nm,0.5s,SNR=8.8						
EIBI				S	Sn	10 36 18.3	+0.1
	12nm,0.7s,SNR=6.2						
EIBI	Ibiza	3.02	313	P	Pn	10 35 43.2	+1.2
	6.5nm,0.5s,SNR=8.8						
EIBI				S	Sn	10 36 18.3	+0.1
	12nm,0.7s,SNR=6.2						
EIBI	Ibiza	3.02	313	P	Pn	10 35 43.2	+1.2
	6.5nm,0.5s,SNR=8.8						
EIBI				S	Sn	10 36 18.3	0.0
	12nm,0.7s,SNR=6.2						
EBEN	Beniarda	3.88	298	P	Pn	10 35 54.6	+0.9
EBEN				S	Sn	10 36 38.5	-0.8
EBEN	Beniarda	3.88	298	P	Pn	10 35 54.6	+0.9
	0.4nm,0.1s,SNR=7.9						
EBEN				S	Sn	10 36 38.5	-0.8
	3.5nm,0.4s,SNR=7.9						
EBEN	Beniarda	3.88	298	P	Pn	10 35 54.6	+0.9
	0.4nm,0.1s,SNR=7.9						
EBEN				S	Sn	10 36 38.5	-0.8
	3.5nm,0.4s,SNR=7.9						
EBEN	Beniarda	3.88	298	P	Pn	10 35 54.7	+0.9
EBEN				S	Sn	10 36 38.5	-0.8
	3.5nm,0.4s,SNR=7.9						
KEST	Kesra	4.36	105	ePn	Pn	10 35 59.6	-0.9
KEST	Kesra	4.36	105	ePn	Pn	10 35 59.6	-0.9
EMUR	La Murta	4.39	283	S	Sn	10 36 51.3	-0.6
	5.8nm,0.3s,SNR=7.9						
EMUR	La Murta	4.39	283	S	Sn	10 36 51.3	-0.6
	5.8nm,0.3s,SNR=7.9						
EMUR	La Murta	4.39	283	S	Sn	10 36 51.3	-0.7
	5.8nm,0.3s,SNR=7.9						
ECHE	Chera	4.80	304	P	Pn	10 36 08.4	+1.9
ECHE				S	Sn	10 37 00.3	-2.0
ECHE	Chera	4.80	304	P	Pn	10 36 08.4	+1.9
	13nm,0.4s,SNR=9.8						
ECHE				S	Sn	10 37 00.3	-2.0
	9.3nm,0.4s,SNR=4.0						
ECHE	Chera	4.80	304	P	Pn	10 36 08.4	+1.9
	13nm,0.4s,SNR=9.8						
ECHE				S	Sn	10 37 00.3	-2.0
	9.3nm,0.4s,SNR=4.0						
ECHE	Chera	4.80	304	P	Pn	10 36 08.4	+1.9
	13nm,0.4s,SNR=9.8						
ECHE				S	Sn	10 37 00.3	-1.9
	9.3nm,0.4s,SNR=4.6						
ETOB	Tobarra	4.82	292	P	Pn	10 36 09.0	+2.2
ETOB				S	Sn	10 37 01.0	-1.6
ETOB	Tobarra	4.82	292	P	Pn	10 36 09.0	+2.2
	3.4nm,0.3s,SNR=11						
ETOB				S	Sn	10 37 01.0	-1.6
	9.3nm,0.6s,SNR=4.7						
ETOB	Tobarra	4.82	292	P	Pn	10 36 09.0	+2.2
	3.4nm,0.3s,SNR=11						
ETOB				S	Sn	10 37 01.0	-1.6
	9.3nm,0.6s,SNR=4.7						
ETOB	Tobarra	4.82	292	P	Pn	10 36 09.0	+2.3
	3.4nm,0.3s,SNR=11						
ETOB				S	Sn	10 37 01.0	-1.6
	9.3nm,0.6s,SNR=4.7						
EMOS	Mosqueruela	4.96	314	P	Pn	10 36 10.7	+2.0
EMOS				S	Sn	10 37 04.8	-1.1
EMOS	Mosqueruela	4.96	314	P	Pn	10 36 10.6	+2.0
	0.5nm,0.1s,SNR=7.9						
EMOS				S	Sn	10 37 04.8	-1.1
	1.7nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.96	314	P	Pn	10 36 10.6	+2.0
	0.5nm,0.1s,SNR=7.9						
EMOS				S	Sn	10 37 04.8	-1.1
	1.7nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.96	314	P	Pn	10 36 10.6	+2.0
	0.5nm,0.1s,SNR=7.9						
EMOS				S	Sn	10 37 04.8	-1.1
	1.7nm,0.4s,SNR=7.9						
CFON	Fontmartina	4.96	345	P	Pn	10 36 09.9	+1.3
CFON				S	Sn	10 37 04.2	-1.8
CFON	Fontmartina	4.96	345	P	Pn	10 36 09.9	+1.3
	6.9nm,0.3s,SNR=21						
CFON				S	Sn	10 37 04.2	-1.8
	8.3nm,0.5s,SNR=8.4						
CFON	Fontmartina	4.96	345	P	Pn	10 36 09.9	+1.3
	6.9nm,0.3s,SNR=21						
CFON				S	Sn	10 37 04.2	-1.8
	8.3nm,0.5s,SNR=8.4						
CFON	Fontmartina	4.96	345	P	Pn	10 36 09.9	+1.3
	6.9nm,0.3s,SNR=21						
CFON				S	Sn	10 37 04.2	-1.8
	8.3nm,0.5s,SNR=8.4						
ERTA	Horta de San J	4.96	324	P	Pn	10 36 10.1	+1.3
ERTA				S	Sn	10 37 04.5	-1.7
ERTA	Horta de San J	4.96	324	P	Pn	10 36 10.1	+1.3
	1.6nm,0.2s,SNR=7.9						
ERTA				S	Sn	10 37 04.5	-1.7
	11nm,0.5s,SNR=7.9						
ERTA	Horta de San J	4.96	324	P	Pn	10 36 10.1	+1.3
	1.6nm,0.2s,SNR=7.9						
ERTA				S	Sn	10 37 04.5	-1.7
	11nm,0.5s,SNR=7.9						
ERTA	Horta de San J	4.96	324	P	Pn	10 36 10.1	+1.4
	1.6nm,0.2s,SNR=7.9						
ERTA				S	Sn	10 37 04.5	-1.7
	11nm,0.5s,SNR=7.9						
EPOB	Poblet	4.98	332	P	Pn	10 36 09.7	+0.8
EPOB				S	Sn	10 37 03.8	-2.8
EPOB	Poblet	4.98	332	P	Pn	10 36 09.7	+0.8
	0.3nm,0.1s,SNR=11						
EPOB				S	Sn	10 37 03.8	-2.8
	4.9nm,0.4s,SNR=7.9						
EPOB	Poblet	4.98	332	P	Pn	10 36 09.7	+0.8
	0.3nm,0.1s,SNR=11						
EPOB				S	Sn	10 37 03.8	-2.8
	4.9nm,0.4s,SNR=7.9						
EPOB	Poblet	4.98	332	P	Pn	10 36 09.7	+0.8
	0.3nm,0.1s,SNR=11						
EPOB				S	Sn	10 37 03.8	-2.7
	4.9nm,0.4s,SNR=7.9						
EMIR	Miracle	5.33	338	P	Pn	10 36 16.0	+2.3
EMIR				S	Sn	10 37 13.7	-1.5
EMIR	Miracle	5.33	338	P	Pn	10 36 16.0	+2.3
	2.2nm,0.1s,SNR=6.1						
EMIR				S	Sn	10 37 13.6	-1.5
	17nm,0.7s						
EMIR	Miracle	5.33	338	P	Pn	10 36 16.0	+2.3
	2.2nm,0.1s,SNR=6.1						
EMIR				S	Sn	10 37 13.6	-1.5
	17nm,0.7s						
EMIR	Miracle	5.33	338	P	Pn	10 36 16.0	+2.2
	2.2nm,0.1s,SNR=6.1						
EMIR				S	Sn	10 37 13.6	-1.6
	17nm,0.7s						
EHUE	Huescar	5.44	281	P	Pn	10 36 17.7	+2.3
EHUE	Huescar	5.44	281	P	Pn	10 36 17.7	+2.3
	0.8nm,0.2s,SNR=7.9						
EHUE	Huescar	5.44	281	P	Pn	10 36 17.7	+2.3
	0.8nm,0.2s,SNR=7.9						
EHUE	Huescar	5.44	281	P	Pn	10 36 17.7	+2.4
	0.8nm,0.2s,SNR=7.9						
EVIA	Vianos	5.53	289	P	Pn	10 36 18.0	+1.4
EVIA	Vianos	5.53	289	P	Pn	10 36 18.0	+1.4
	0.9nm,0.2s,SNR=7.9						
EVIA	Vianos	5.53	289	P	Pn	10 36 18.0	+1.4
	0.9nm,0.2s,SNR=7.9						
EVIA	Vianos	5.53	289	P	Pn	10 36 18.0	+1.5
	0.9nm,0.2s,SNR=7.9						
EJON	La Jonquera	5.55	350	P	Pn	10 36 18.5	+1.8
EJON				S	Sn	10 37 18.6	-1.9
EJON	La Jonquera	5.55	350	P	Pn	10 36 18.5	+1.8
	14nm,0.3s,SNR=18						
EJON				S	Sn	10 37 18.5	-1.9
	6.7nm,0.5s,SNR=7.9						
EJON	La Jonquera	5.55	350	P	Pn	10 36 18.5	+1.8
	14nm,0.3s,SNR=18						
EJON				S	Sn	10 37 18.5	-1.9
	6.7nm,0.5s,SNR=7.9						
EJON	La Jonquera	5.55	350	P	Pn	10 36 18.5	+1.8
	14nm,0.3s,SNR=18						
EJON				S	Sn	10 37 18.5	-2.0
	6.7nm,0.5s,SNR=7.9						
EBER	Berja	5.65	271	S	Sn	10 37 21.8	-1.3
	3.0nm,0.4s,SNR=7.9						
EBER	Berja	5.65	271	S	Sn	10 37 21.8	-1.3
	3.0nm,0.4s,SNR=7.9						
CLLI	Llivia	5.74	344	P	Pn	10 36 21.9	+2.5
CLLI				S	Sn	10 37 23.3	-2.0
CLLI	Llivia	5.74	344	P	Pn	10 36 21.9	+2.5
	5.6nm,0.5s,SNR=16						
CLLI				S	Sn	10 37 23.3	-2.0
	6.5nm,0.5s,SNR=7.7						
CLLI	Llivia	5.74	344	P	Pn	10 36 21.9	+2.5
	5.6nm,0.5s,SNR=16						
CLLI				S	Sn	10 37 23.3	-2.0
	6.5nm,0.5s,SNR=7.7						
CLLI	Llivia	5.74	344	P	Pn	10 36 21.9	+2.5
	5.6nm,0.5s,SNR=16						
EQES	Quesada	5.82	280	P	Pn	10 36 22.4	+1.9
EQES				S	Sn	10 37 25.8	-1.4
EQES	Quesada	5.82	280	P	Pn	10 36 22.4	+1.9
	0.4nm,0.1s,SNR=7.9						
EQES				S	Sn	10 37 25.8	-1.4
	2.4nm,0.4s,SNR=7.9						
EQES	Quesada	5.82	280	P	Pn	10 36 22.4	+1.9
	0.4nm,0.1s,SNR=7.9						
EQES				S	Sn	10 37 25.8	-1.4
	2.4nm,0.4s,SNR=7.9						
EQES	Quesada	5.82	280	P	Pn	10 36 22.4	+1.9
	0.4nm,0.1s,SNR=7.9						
CSOR	Sort	5.87	337	P	Pn	10 36 21.9	+0.7
CSOR				S	Sn	10 37 26.4	-2.1
CSOR	Sort	5.87	337	P	Pn	10 36 24.0	+2.9
	4.9nm,0.6s,SNR=5.9						
CSOR				S	Sn	10 37 26.4	-2.1
	11nm,0.4s,SNR=9.3						
CSOR	Sort	5.87	337	P	Pn	10 36 24.0	+2.9
	4.9nm,0.6s,SNR=5.9						
CSOR				S	Sn	10 37 26.4	-2.1
	11nm,0.4s,SNR=9.3						
CSOR	Sort	5.87	337	P	Pn	10 36 21.9	+0.7
	4.9nm,0.6s,SNR=5.9						
ESAC	San Caprasio	5.94	324	P	Pn	10 36 23.8	+1.7
ESAC				S	Sn	10 37 28.1	-2.1
ESAC	San Caprasio	5.94	324	P	Pn	10 36 23.8	+1.7
	0.3nm,0.1s,SNR=7.9						
ESAC				S	Sn	10 37 28.1	-2.1
	10nm,0.5s,SNR=4.9						
ESAC	San Caprasio	5.94	324	P	Pn	10 36 23.8	+1.7
	0.3nm,0.1s,SNR=7.9						
ESAC				S	Sn	10 37 28.1	-2.1
	10nm,0.5s,SNR=4.9						
ESAC	San Caprasio	5.94	324	P	Pn	10 36 23.8	+1.7
	0.3nm,0.1s,SNR=7.9						
EBIE	Bielsa	6.48	333	P	Pn	10 36 31.3	+1.8
EBIE				S	Sn	10 37 40.7	-2.8
EBIE	Bielsa	6.48	333	P	Pn	10 36 31.3	+1.8
	2.2nm,0.4s,SNR=5.6						
EBIE				S	Sn	10 37 40.7	-2.8
	2.0nm,0.4s,SNR=4.0						
EBIE	Bielsa	6.48	333	P	Pn	10 36 31.3	+1.8
	2.2nm,0.4s,SNR=5.6						
EBIE				S	Sn	10 37 40.7	-2.8
	2.0nm,0.4s,SNR=4.0						
EBIE	Bielsa	6.48	333	P	Pn	10 36 31.3	+1.7
	2.2nm,0.4s,SNR=5.6						
MTLF	Montolieu	6.52	347	eP	Pn	10 36 32.0	+1.9
MTLF				eSn	Sn	10 37 36.6	-7.9
	5.4nm,0.6s						
MTLF	Montolieu	6.52	347	ePn	Pn	10 36 28.6	-1.5
MTLF				eSn	Sn	10 37 36.6	-7.9
MTLF	Montolieu	6.52	347	P	Pn	10 36 32.0	+1.9
MTLF				S	Sn	10 37 36.6	-7.9
	2.7nm,0.6s						
MTLF	Montolieu	6.52	347	P	Pn	10 36 32.0	+1.9
MTLF				S	Sn	10 37 36.6	-7.9
	2.7nm,0.6s						
MTLF	Montolieu	6.52	347	ePn	Pn	10 36 28.6	-1.5
MTLF	Montolieu	6.52	347	eP	Pn	10 36 32.0	+1.9
LMR	La Mourre	6.59	15	ePn	Pn	10 36 30.6	-0.5
LMR				eSn	Sn	10 37 40.8	-5.4
	2.3nm,0.2s						
LMR	La Mourre	6.59	15	P	Pn	10 36 30.6	-0.5
LMR				S	Sn	10 37 40.8	-5.4
	1.2nm,0.2s						
LMR	La Mourre	6.59	15	P	Pn	10 36 30.6	-0.5
LMR				S	Sn	10 37 40.8	-5.4
	1.2nm,0.2s						
LMR	La Mourre	6.59	15	ePn	Pn	10 36 30.6	-0.5
EPF	Esparros	6.71	335	eP	Pn	10 36 34.7	+1.9
EPF	Esparros	6.71	335	P	Pn	10 36 34.7	+1.9
EPF	Esparros	6.71	335	P	Pn	10 36 34.7	+1.9
EPF	Esparros	6.71	335	eP	Pn	10 36 34.7	+1.9
FRF	La Foret Royal	6.84	15	ePn	Pn	10 36 34.3	-0.1
FRF				eSn	Sn	10 37 46.6	-5.7
	2.1nm,0.2s						
FRF	La Foret Royal	6.84	15	P	Pn	10 36 34.3	-0.1
FRF				S	Sn	10 37 46.6	-5.7
	1.1nm,0.2s						
FRF	La Foret Royal	6.84	15	P	Pn	10 36 34.3	-0.1
FRF				S	Sn	10 37 46.6	-5.7
	1.1nm,0.2s						
FRF	La Foret Royal	6.84	15	ePn	Pn	10 36 34.3	-0.1
SMRF	Simiane la Rot	7.07	8	ePn	Pn	10 36 38.4	+0.8
SMRF	Simiane la Rot	7.07	8	P	Pn	10 36 38.4	+0.8
SMRF	Simiane la Rot	7.07	8	P	Pn	10 36 38.4	+0.8
SMRF	Simiane la Rot	7.07	8	ePn	Pn	10 36 38.4	+0.8
LASF	Ste Croix	7.09	358	ePn	Pn	10 36 37.8	-0.1
LASF	Ste Croix	7.09	358	P	Pn	10 36 37.8	-0.1
LASF	Ste Croix	7.09	358	P	Pn	10 36 37.8	-0.1
LASF	Ste Croix	7.09	358	ePn	Pn	10 36 37.8	-0.1
SBF	Sospel	7.31	19	ePn	Pn	10 36 40.6	-0.3
SBF	Sospel	7.31	19	P	Pn	10 36 40.6	-0.3
SBF	Sospel	7.31	19	P	Pn	10 36 40.6	-0.3
SBF	Sospel	7.31	19	ePn	Pn	10 36 40.6	-0.3
SJPF	Ste Jean	7.39	328	eP	Pn	10 36 44.1	+2.1
SJPF	Ste Jean	7.39	328	P	Pn	10 36 44.1	+2.1
SJPF	Ste Jean	7.39	328	P	Pn	10 36 44.1	+2.1
SJPF	Ste Jean	7.39	328	eP	Pn	10 36 44.1	+2.1
EALK	Alkurruntz	7.59	327	P	Pn	10 36 47.0	+2.2
EALK	Alkurruntz	7.59	327	P	Pn	10 36 47.0	+2.2
	1.1nm,0.1s,SNR=7.9						
EALK	Alkurruntz	7.59	327	P	Pn	10 36 47.0	+2.2
	1.1nm,0.1s,SNR=7.9						
EALK	Alkurruntz	7.59	327	P	Pn	10 36 47.0	+2.2
	1.1nm,0.1s,SNR=7.9						
VIVF	Saint-Julien-l	7.87	3	ePn	Pn	10 36 48.3	-0.4
VIVF	Saint-Julien-l	7.87	3	P	Pn	10 36 48.3	-0.4
VIVF	Saint-Julien-l	7.87	3	P	Pn	10 36 48.3	-0.4
VIVF	Saint-Julien-l	7.87	3	ePn	Pn	10 36 48.3	-0.4
CAF	Calviac	8.09	349	eP	Pn	10 36 53.8	+2.2
CAF	Calviac	8.09	349	P	Pn	10 36 53.8	+2.2
CAF	Calviac	8.09	349	P	Pn	10 36 53.8	+2.2

CAF	Calviac	8.09	349	*e*P	Pn	10 36 53.8	+2.2
LPG	La Plagne	8.73	12	*e*Pn	Pn	10 37 01.1	+0.8
LPG	La Plagne	8.73	12	P	Pn	10 37 01.1	+0.8
LPG	La Plagne	8.73	12	P	Pn	10 37 01.1	+0.8
LPG	La Plagne	8.73	12	*e*Pn	Pn	10 37 01.1	+0.8
ECAL	Calabor	9.77	304	P	Pn	10 37 16.9	+2.2
ECAL	Calabor	9.77	304	P	Pn	10 37 16.9	+2.2
	0.2nm,0.2s,SNR=7.0						
ECAL	Calabor	9.77	304	P	Pn	10 37 16.9	+2.2
	0.2nm,0.2s,SNR=7.0						
ECAL	Calabor	9.77	304	P	Pn	10 37 16.9	+2.2
	0.2nm,0.2s,SNR=7.0						

DDA ***15*** *10:40:10.7, 39°.45N×28°.24E, h7km±5km, Md2.9*
CSEM ***15*** *10:40:10.7, 39°.45N×28°.24E, h7km, MD2.9, After DDA*
ISCJB ***15*** *10:40:11.4±0.8, 39°.51N±0°.09×28°.23E±0°.07, h24km±16km, Error ellipse: s-maj=15.5km s-min=8.7km az=18.7*

ISC 15 10:40:11.5±0.8, 39°.51N±0°.09×28°.23E±0°.07, h22km±15km, n11, σ0s56/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.21**	**65**	*i* P	**Pb**	**10 40 16.9**	**0.0**
DURS	**Dursunbey**	**0.21**	**65**	*i* P	**Pb**	**10 40 16.9**	**0.0**
BALB	**Balikesir**	**0.30**	**295**	PG	**Pb**	**10 40 17.4**	**-0.8**
BALB				SG	**Sb**	**10 40 23.5**	**+0.7**
BALY	**Balya**	**0.52**	**296**	*i* P	**Pb**	**10 40 20.8**	**-1.1**
BALY				*i* S	**Sb**	**10 40 29.6**	**+0.5**
BALY	**Balya**	**0.52**	**296**	*i* P	**Pb**	**10 40 20.8**	**-1.1**
BALY				*i* S	**Sb**	**10 40 29.6**	**+0.5**
GONE	**Gonen-Balikesi**	**0.68**	**322**	*e*PG	**Pb**	**10 40 24.8**	**+0.2**
ULDT	**Uludag**	**0.94**	**48**	*i* P	**Pb**	**10 40 29.2**	**+0.2**
ULDT	**Uludag**	**0.94**	**48**	*i* P	**Pb**	**10 40 29.2**	**+0.1**
KULA	**Kula-Manisa**	**1.05**	**161**	*e*PG	**Pb**	**10 40 31.2**	**+0.2**
KHAL	**Karahalli**	**1.51**	**139**	*i* P	**Pn**	**10 40 37.3**	**+0.1**
KHAL	**Karahalli**	**1.51**	**139**	*i* P	**Pn**	**10 40 37.3**	**+0.1**

WEL 15 11:04:00.2±0.7, 36°.08S×178°.39E, h133km±8km, ML3.5/9, Error ellipse: s-maj=10.3km s-min=8.5km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.48**	**183**	PN	Pn	11 04 28.1	-0.2
MXZ				*e*SN	Sn	11 04 50.0	+0.3
PUZ	**Puketiti**	**1.99**	**183**	PN	Pn	11 04 34.2	0.0
PUZ				*e*SN	Sn	11 04 59.2	-1.1
MWZ	**Matawai**	**2.35**	**197**	PN	Pn	11 04 39.2	+0.6
MWZ				*e*SN	Sn	11 05 08.1	-0.2
URZ	**Urewera**	**2.41**	**205**	PN	Pn	11 04 39.4	+0.1
URZ				*e*SN	Sn	11 05 10.1	+0.7
CNGZ	**Carnagh Statio**	**2.41**	**183**	PN	Pn	11 04 39.6	+0.2
KNZ	**Kokohu**	**2.99**	**191**	PN	Pn	11 04 46.0	-0.8
RAHZ	**Arahi**	**3.02**	**200**	PN	Pn	11 04 47.0	-0.1
MHGZ	**Mahia Peninsul**	**3.09**	**187**	PN	Pn	11 04 47.6	-0.5
NMHZ	**Naumai**	**3.27**	**202**	PN	Pn	11 04 50.2	-0.1
BKZ	**Black Stump Fm**	**3.43**	**205**	PN	Pn	11 04 51.6	-0.9
MCHZ	**McNeill Hill**	**3.62**	**201**	*e*PN	Pn	11 04 53.7	-1.3
BHHZ	**Black Hill Sta**	**3.87**	**208**	PN	Pn	11 04 57.4	-0.9
KAHZ	**Kahuranaki**	**3.90**	**197**	PN	Pn	11 04 57.1	-1.5
PXZ	**Pawanui**	**4.13**	**197**	PN	Pn	11 04 59.0	-2.7
TSZ	**Takapari Road**	**4.41**	**205**	*e*PN	Pn	11 05 02.7	-2.8
BFZ	**Birch Farm**	**4.89**	**199**	PN	Pn	11 05 08.8	-3.0
MRZ	**Mangatainoka R**	**5.08**	**205**	*e*PN	Pn	11 05 10.7	-3.6
CTZ	**Chatham Island**	**8.55**	**155**	*e*PN	Pn	11 06 03.6	+2.5

DJA 15 12:05:16, 2°.30S×127°.75E, h11km, MLv3.5/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.14**	**215**	P	Pb	12 05 36.1	-1.6
LBMI	**Labuha**	**1.67**	**351**	P	Pn	12 05 44.7	-0.5
LBMI				S	Sn	12 06 06.8	+0.2

WEL 15 12:13:48.4±0.4, 37°.32S×176°.77E, h209km±3km, ML4.2/21, Error ellipse: s-maj=3.5km s-min=3.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.55**	**198**	PN	Pn	12 14 16.3	-0.4
MARZ	**Manawahe**	**0.67**	**186**	PN	Pn	12 14 17.4	+0.3
EDRZ	**Edgecumbe**	**0.78**	**182**	*e*PN	Pn	12 14 18.6	+0.8
TARZ	**Mount Tarawera**	**0.93**	**193**	PN	Pn	12 14 19.3	+0.7
URZ	**Urewera**	**0.97**	**164**	PN	Pn	12 14 18.6	-0.3
URZ				SN	Sn	12 14 42.0	-0.8
RRRZ	**Republican Roa**	**1.03**	**191**	PN	Pn	12 14 19.5	+0.2
MWZ	**Matawai**	**1.18**	**149**	PN	Pn	12 14 20.2	-0.1
PRRZ	**Plateau Road**	**1.21**	**194**	PN	Pn	12 14 20.8	+0.3
MXZ	**Matakaoa Point**	**1.25**	**102**	PN	Pn	12 14 21.0	+0.1
ALRZ	**Allen Road**	**1.28**	**195**	PN	Pn	12 14 21.1	+0.1
PUZ	**Puketiti**	**1.40**	**123**	PN	Pn	12 14 22.2	+0.2
PUZ				SN	Sn	12 14 48.1	-0.1
RAHZ	**Arahi**	**1.61**	**171**	PN	Pn	12 14 24.2	+0.4
RAHZ				*e*SN	Sn	12 14 51.7	+0.1
NMHZ	**Naumai**	**1.77**	**179**	PN	Pn	12 14 25.9	+0.6
PRGZ	**Paritu Road**	**1.82**	**151**	PN	Pn	12 14 25.8	0.0
KNZ	**Kokohu**	**1.84**	**157**	PN	Pn	12 14 26.1	+0.2
KNZ				SN	Sn	12 14 54.7	-0.8
BKZ	**Black Stump Fm**	**1.85**	**187**	PN	Pn	12 14 25.5	-0.6
BKZ				SN	Sn	12 14 54.1	-1.6
KATZ	**Kakaramea**	**1.85**	**207**	PN	Pn	12 14 26.7	+0.6
KRVZ	**Karewarewa**	**1.98**	**206**	PN	Pn	12 14 27.4	+0.1
WTVZ	**West Tongariro**	**2.02**	**207**	PN	Pn	12 14 27.7	0.0
OTVZ	**Oturere**	**2.03**	**205**	PN	Pn	12 14 28.0	+0.2
TWVZ	**Taurewa**	**2.04**	**211**	PN	Pn	12 14 27.8	0.0
MHGZ	**Mahia Peninsul**	**2.04**	**154**	PN	Pn	12 14 28.1	+0.2
NGZ	**Ngauruhoe**	**2.06**	**206**	PN	Pn	12 14 28.2	+0.1
WPVZ	**Whakapapa**	**2.11**	**207**	PN	Pn	12 14 28.4	-0.2
MCHZ	**McNeill Hill**	**2.12**	**181**	PN	Pn	12 14 29.0	+0.3
TUVZ	**Tukino**	**2.13**	**204**	PN	Pn	12 14 28.6	-0.2
WNVZ	**Wahianoa**	**2.20**	**204**	PN	Pn	12 14 29.2	-0.4
MOVZ	**Moawhango**	**2.23**	**201**	PN	Pn	12 14 29.0	-0.9
BHHZ	**Black Hill Sta**	**2.23**	**194**	PN	Pn	12 14 29.1	-0.8
PKVZ	**Pokaka**	**2.26**	**209**	PN	Pn	12 14 29.8	-0.4
MTVZ	**Mangateitei**	**2.30**	**206**	PN	Pn	12 14 30.1	-0.5
CKHZ	**Cape Kidnapper**	**2.35**	**174**	PN	Pn	12 14 31.0	-0.1
VRZ	**Vera Road**	**2.40**	**221**	PN	Pn	12 14 31.9	+0.3
KAHZ	**Kahuranaki**	**2.47**	**178**	PN	Pn	12 14 32.2	-0.3
PNHZ	**Pukenui**	**2.63**	**190**	PN	Pn	12 14 33.1	-1.1
PXZ	**Pawanui**	**2.71**	**178**	PN	Pn	12 14 34.1	-0.9
WPHZ	**Waipukurau**	**2.75**	**185**	PN	Pn	12 14 34.5	-1.1
WAZ	**Wanganui**	**2.80**	**209**	PN	Pn	12 14 35.1	-1.0
TSZ	**Takapari Road**	**2.80**	**193**	PN	Pn	12 14 34.8	-1.4
NEZ	**North Egmont**	**2.86**	**226**	*e*PN	Pn	12 14 37.5	+0.7
PKE	**Pukeiti**	**2.88**	**229**	*e*PN	Pn	12 14 37.5	+0.5
PRHZ	**Porangahau**	**2.94**	**182**	PN	Pn	12 14 36.7	-1.0
DVHZ	**Dannevirke**	**3.01**	**189**	PN	Pn	12 14 36.9	-1.6
POWZ	**Post Office Ro**	**3.16**	**194**	PN	Pn	12 14 38.6	-1.7
BFZ	**Birch Farm**	**3.38**	**187**	PN	Pn	12 14 41.1	-1.8
MRZ	**Mangatainoka R**	**3.46**	**195**	PN	Pn	12 14 41.4	-2.4
TIWZ	**Tintock**	**3.52**	**191**	PN	Pn	12 14 42.5	-2.0
HOWZ	**Holdsworth Sta**	**3.70**	**195**	PN	Pn	12 14 44.0	-2.7
OGWZ	**Otaki Gorge**	**3.70**	**199**	PN	Pn	12 14 44.3	-2.5
KIW	**Kapiti Island**	**3.82**	**202**	PN	Pn	12 14 45.3	-2.9
TMWZ	**Te Maipa**	**3.84**	**190**	PN	Pn	12 14 46.2	-2.2
MTW	**Mount Morrison**	**3.95**	**194**	PN	Pn	12 14 46.7	-3.1
CAW	**Cannon Point**	**4.00**	**199**	PN	Pn	12 14 47.3	-3.1
DUWZ	**D'Urville Isla**	**4.12**	**212**	PN	Pn	12 14 48.6	-3.3
TRWZ	**Traveller**	**4.16**	**191**	PN	Pn	12 14 49.6	-2.7
PAWZ	**Paruwai Farm**	**4.18**	**194**	PN	Pn	12 14 49.6	-3.1
WEL	**Wellington**	**4.25**	**201**	PN	Pn	12 14 50.3	-3.2
MSWZ	**Moikau Station**	**4.25**	**196**	PN	Pn	12 14 50.0	-3.5
SNZO	**South Karori**	**4.29**	**201**	PN	Pn	12 14 50.5	-3.5
BHW	**Baring Head**	**4.34**	**199**	PN	Pn	12 14 51.1	-3.5
TCW	**Tory Channel**	**4.34**	**206**	PN	Pn	12 14 51.6	-3.0
PLWZ	**Palliser**	**4.40**	**195**	PN	Pn	12 14 51.9	-3.4
TUWZ	**Tuamarina**	**4.65**	**207**	PN	Pn	12 14 55.0	-3.5
NNZ	**Nelson**	**4.69**	**213**	PN	Pn	12 14 55.1	-4.0
QRZ	**Quartz Range**	**4.81**	**222**	PN	Pn	12 14 56.7	-3.8
BSWZ	**Blackbirch Sta**	**4.92**	**206**	PN	Pn	12 14 59.0	-2.9
THZ	**Tophouse**	**5.34**	**213**	PN	Pn	12 15 03.6	-3.7
KHZ	**Kahutara**	**5.66**	**205**	PN	Pn	12 15 07.5	-3.8
DSZ	**Dunniston Nort**	**5.85**	**219**	PN	Pn	12 15 09.0	-4.7
CRLZ	**Canterbury Las**	**7.00**	**206**	PN	Pn	12 15 24.0	-4.5
MQZ	**McQueen's Vall**	**7.11**	**205**	PN	Pn	12 15 24.7	-5.2
CTZ	**Chatham Island**	**8.15**	**144**	*e*PN	Pn	12 15 47.6	+4.2
FOZ	**Fox Glacier**	**8.24**	**219**	*e*PN	Pn	12 15 38.8	-5.8
LBZ	**Lake Benmore**	**8.64**	**213**	PN	Pn	12 15 44.9	-4.8
ODZ	**Otahua Downs**	**8.99**	**209**	PN	Pn	12 15 50.1	-4.1

CSEM ***15*** *13:07:49.7, 42°.74N×12°.75E, h7km, After ROM*

ROM 15 13:07:49.7±0.2, 42°.74N×12°.75E, h7km±1km, Ml2.5/1, Error ellipse: s-maj=2.7km s-min=1.3km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.26**	**123**	Pg	Pg	13 07 55.7	+1.0
LNSS				Sg	Sg	13 07 59.6	+1.5
LNSS	**Leonessa**	**0.26**	**123**	Pg	Pg	13 07 55.7	+1.0
LNSS				Sg	Sg	13 07 59.6	+1.5
NRCA	**Norcia**	**0.28**	**71**	Pg	Pg	13 07 56.2	+1.0
NRCA				Sg	Sg	13 08 01.3	+2.4
NRCA	**Norcia**	**0.28**	**71**	Pg	Pg	13 07 56.2	+1.0
NRCA				Sg	Sg	13 08 01.3	+2.4
CESI	**CESI - Serrava**	**0.28**	**23**	Pg	Pg	13 07 56.2	+0.9
CESI				Sg	Sg	13 08 01.2	+2.1
CESI	**CESI - Serrava**	**0.28**	**23**	Pg	Pg	13 07 56.2	+0.9
CESI				Sg	Sg	13 08 01.2	+2.1
ASS	**Assisi**	**0.33**	**347**	Pg	Pg	13 07 57.1	+1.0
ASS				Sg	Sg	13 08 02.6	+2.2
ASS	**Assisi**	**0.33**	**347**	Pg	Pg	13 07 57.1	+1.0
ASS				Sg	Sg	13 08 02.6	+2.2
FDMO	**Fiordimonte**	**0.38**	**40**	Pg	Pg	13 07 57.9	+0.8
FDMO				Sg	Sg	13 08 04.6	+2.4
FDMO	**Fiordimonte**	**0.38**	**40**	Pg	Pg	13 07 57.9	+0.8
FDMO				Sg	Sg	13 08 04.6	+2.4
CAMP	**Campotosto**	**0.53**	**113**	Pg	Pg	13 08 00.5	+0.6
CAMP				Sg	Sg	13 08 09.7	+3.0
CAMP	**Campotosto**	**0.53**	**113**	Pg	Pg	13 08 00.5	+0.6
CAMP				Sg	Sg	13 08 09.7	+3.0
SNTG	**Esanatoglia**	**0.53**	**15**	Pg	Pg	13 08 00.5	+0.6
SNTG				Sg	Sg	13 08 08.4	+1.5
SNTG	**Esanatoglia**	**0.53**	**15**	Pg	Pg	13 08 00.5	+0.6
SNTG				Sg	Sg	13 08 08.4	+1.5
MURB	**Monte Urbino**	**0.55**	**342**	Pg	Pg	13 08 01.8	+1.6
MURB				Sg	Sg	13 08 09.9	+2.5
	241nm,0.3s						
MURB	**Monte Urbino**	**0.55**	**342**	Pg	Pg	13 08 01.8	+1.6
MURB				Sg	Sg	13 08 09.9	+2.5
	241nm,0.3s						

IDC ***15*** *13:10:31.3±1.1, 27°.69N×129°.40E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/23, mbtmp3.6/6, ML3.0/1, Error ellipse: s-maj=56.3km s-min=21.6km az=85.0*
NEIC ***15*** *13:10:32.8±8.2, 27°.71N×129°.51E, h8km±53km, MG3.7(JMA), Error ellipse: s-maj=34.0km s-min=13.6km az=109.0*
ISCJB ***15*** *13:10:35.6±0.4, 28°.02N±0°.05×129°.10E±0°.08, h57km±6km, mb3.6/5, Error ellipse: s-maj=13.8km s-min=3.7km az=37.6*
JMA ***15*** *13:10:35.6±0.1, 28°.14N×128°.98E, h49km±2km, M3.4*
JMA Felt I J1.

ISC 15 13:10:36.5±0.4, 28°.02N±0°.06×129°.09E±0°.08, h49km±6km, n22, σ0s85/32, mb3.6/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.27**	**208**	P	**Pn**	**13 10 45.0**	**-0.3**
JTK				S	**Sn**	**13 10 51.8**	**+0.3**
JAM	**Amami Oshima**	**0.59**	**49**	P	**Pn**	**13 10 48.0**	**-0.8**
JAM				S	**Sn**	**13 10 57.0**	**-0.8**
JZK	**Kikaishima**	**0.83**	**69**	P	**Pn**	**13 10 52.0**	**+0.1**
JZK				S	**Sn**	**13 11 04.6**	**+1.5**
JOW	**Kunigami**	**1.39**	**212**	*e*Pn	**Pn**	**13 10 59.3**	**-0.2**
JOW	**Kunigami**	**1.39**	**212**	P	**Pn**	**13 10 59.4**	**-0.1**
JOW				S	**Sn**	**13 11 17.2**	**+0.5**
JIH	**Iheya**	**1.40**	**226**	P	**Pn**	**13 10 59.4**	**-0.2**
JIH				S	**Sn**	**13 11 16.7**	**-0.3**
JNN	**Nakanoshima**	**1.94**	**21**	P	**Pn**	**13 11 06.4**	**-0.6**
JNN				*e*S	**Sn**	**13 11 29.6**	**-0.5**
JAGN	**Aguni-jima**	**2.18**	**230**	P	**Pn**	**13 11 10.7**	**+0.4**
JAGN				S	**Sn**	**13 11 36.7**	**+0.6**
NAH1	**Naha**	**2.20**	**215**	S	**Sn**	**13 11 36.3**	**-0.3**
JJT2	**Tamagusuku 2**	**2.23**	**213**	P	**Pn**	**13 11 11.1**	**+0.2**
JJT2				*e*S	**Sn**	**13 11 37.1**	**-0.1**
JKC	**Kuchinoerabu**	**2.62**	**21**	P	**Pn**	**13 11 16.3**	**+0.1**
JKC				S	**Sn**	**13 11 45.9**	**-0.8**
JKE	**Kume jima 2**	**2.66**	**231**	P	**Pn**	**13 11 16.9**	**0.0**
JKE				*e*S	**Sn**	**13 11 47.6**	**-0.3**
JTN	**Tanegashima 3**	**3.10**	**32**	P	**Pn**	**13 11 22.4**	**-0.4**
JNU	**Nakatsue**	**5.31**	**16**	*e*P	**Pn**	**13 11 55.3**	**+2.1**
	14nm,1.0s						
KSRS	**Korea Array**	**9.46**	**354**	Pn	**Pn**	**13 12 53.8**	**+3.8**
	0.1nm,0.3s,baz=178,slow=14,SNR=8.2						
SONM	**Songino Array**	**26.51**	**324**	P	**P**	**13 16 14.4**	**+5.2**
	0.5nm,0.5s,mb3.3,baz=128,slow=9.6,SNR=3.8						
WRA	**Warramunga Arr**	**47.95**	**173**	P	**P**	**13 19 08.1**	**-2.1**
	1.1nm,0.8s,mb3.9,baz=355,slow=8.5,SNR=7.3						
WRA	**Warramunga Arr**	**47.95**	**173**	P	**P**	**13 19 08.1**	**-2.1**
ASAR	**Alice Springs**	**51.60**	**174**	P	**P**	**13 19 37.5**	**-0.4**
	0.3nm,0.7s,mb3.3,baz=6.0,slow=14,SNR=5.8						
ILAR	**Eielson Array**	**62.50**	**29**	P	**P**	**13 20 56.5**	**+1.9**
	0.2nm,0.8s,mb3.3,baz=284,slow=9.0,SNR=6.5						
PDAR	**Pinedale Array**	**91.29**	**39**	P	**P**	**13 23 41.3**	**+4.5**
	0.3nm,0.3s,mb4.0,baz=306,slow=2.1,SNR=3.7						
PDAR	**Pinedale Array**	**91.29**	**39**	P	**P**	**13 23 41.3**	**+4.5**

CSEM ***15*** *13:10:54.7±0.4, 37°.05N×9°.11W, h15km, ML3.4/11, Error ellipse: s-maj=7.0km s-min=4.3km az=50.0*
IGIL ***15*** *13:10:56.6, 36°.93N×9°.18W, h30km, ML3.0*
INMG ***15*** *13:10:56.3±1.3, 36°.94N×9°.19W, h27km±3km, ML2.4, Error ellipse: s-maj=5.2km s-min=3.0km az=64.0*
NEIC ***15*** *13:10:58.6, 37°.44N×8°.92W, h4km, MN2.5(MDD), After MDD.*

MDD 15 13:10:55.2±1.1, 37°.01N×9°.20W, h44km±3km, mb4.2/8, 7C, Error ellipse: s-maj=7.4km s-min=5.0km az=51.0, PRIMO, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.32**	**67**	*i* Pg	Pn	13 11 04.2	+0.2
PFVI				*e*Sg	Sn	13 11 09.9	-0.3
PFVI				A		13 11 10.3	
	251nm,0.1s						
PFVI	**Vila Bisbo**	**0.32**	**67**	⇑Pg	Pn	13 11 04.2	+0.2
PFVI				Lg		13 11 09.8	
PFVI	**Vila Bisbo**	**0.32**	**67**	⇑P	Pn	13 11 04.2	+0.2
	210nm,0.1s,SNR=18						
PFVI				S	Sn	13 11 09.8	-0.4
	271nm,0.1s,SNR=28						
PFVI	**Vila Bisbo**	**0.32**	**67**	⇑P	Pn	13 11 04.2	+0.2
	210nm,0.1s,SNR=18						
PFVI				S	Sn	13 11 09.8	-0.4
	271nm,0.1s,SNR=28						
PFVI	**Vila Bisbo**	**0.32**	**67**	Pg	Pn	13 11 04.2	+0.2
	210nm,0.1s,SNR=18						
PFVI				Lg		13 11 09.8	
	271nm,0.1s,SNR=28						
PFVI				*e*Sg	Sn	13 11 09.9	-0.3
	251nm,0.1s						
MORF	**Marmelete**	**0.53**	**55**	*i* Pg	Pn	13 11 07.1	+0.6
MORF				*e*Sg	Sn	13 11 15.0	+0.5
MORF				A		13 11 15.2	
	259nm,0.2s						
MORF	**Marmelete**	**0.53**	**55**	⇑P	Pn	13 11 07.1	+0.6
MORF				S	Sn	13 11 15.0	+0.5
	259nm,0.2s						
MORF	**Marmelete**	**0.53**	**55**	⇑P	Pn	13 11 07.1	+0.6
MORF				S	Sn	13 11 15.0	+0.5
	259nm,0.2s						
PTEO	**Sao Teotonio**	**0.66**	**35**	*e*Pg	Pn	13 11 09.2	+1.0
PTEO				*e*Sg	Sn	13 11 18.7	+1.2
PTEO				A		13 11 19.7	
	154nm,0.2s						
PTEO	**Sao Teotonio**	**0.66**	**35**	P	Pn	13 11 09.2	+1.0
PTEO				S	Sn	13 11 18.7	+1.2
	77nm,0.2s						
PTEO	**Sao Teotonio**	**0.66**	**35**	P	Pn	13 11 09.2	+1.0
PTEO				S	Sn	13 11 18.7	+1.2
	77nm,0.2s						
PTEO	**Sao Teotonio**	**0.66**	**35**	*e*Pg	Pn	13 11 09.2	+1.0
PTEO				*e*Sg	Sn	13 11 18.7	+1.2
	154nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.04**	**77**	*i* P	Pn	13 11 13.8	+0.5
PBDV				*e*S	Sn	13 11 27.3	+0.6
PBDV				A		13 11 29.0	
	13nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.04**	**77**	⇑P	Pn	13 11 13.8	+0.5
PBDV				S	Sn	13 11 27.3	+0.6
	13nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.04**	**77**	⇑P	Pn	13 11 13.8	+0.5
PBDV				S	Sn	13 11 27.3	+0.6
	13nm,0.1s						
PCVE	**Castro Verde**	**1.11**	**56**	*e*P	Pn	13 11 15.3	+0.9
PCVE				*e*S	Sn	13 11 29.6	+1.1
PCVE				A		13 11 31.0	
	25nm,0.3s						
PCVE	**Castro Verde**	**1.11**	**56**	P	Pn	13 11 15.3	+0.9
PCVE				S	Sn	13 11 29.6	+1.1
	25nm,0.3s						
PCVE	**Castro Verde**	**1.11**	**56**	P	Pn	13 11 15.3	+0.9
PCVE				S	Sn	13 11 29.6	+1.1
	25nm,0.3s						
PCVE	**Castro Verde**	**1.11**	**56**	*e*P	Pn	13 11 15.3	+0.9
PCVE				*e*S	Sn	13 11 29.6	+1.1
	25nm,0.3s						
MESJ	**Messejana**	**1.14**	**43**	*e*P	Pn	13 11 15.7	+1.0
MESJ				*e*S	Sn	13 11 29.9	+0.7
MESJ				*e*S	Sn	13 11 29.9	+0.7
MESJ	**Messejana**	**1.14**	**43**	P	Pn	13 11 15.7	+1.0
MESJ				S	Sn	13 11 29.9	+0.8
MESJ	**Messejana**	**1.14**	**43**	P	Pn	13 11 15.7	+1.0
MESJ				S	Sn	13 11 29.9	+0.8
MESJ	**Messejana**	**1.14**	**43**	*e*P	Pn	13 11 15.7	+1.0
MESJ				*e*S	Sn	13 11 29.9	+0.8
PVAQ	**Vaqueiros**	**1.25**	**71**	*e*P	Pn	13 11 16.7	+0.5
PVAQ				*e*S	Sn	13 11 32.2	+0.4
PVAQ				A		13 11 38.1	
	24nm,0.1s						
PVAQ	**Vaqueiros**	**1.25**	**71**	P	Pn	13 11 16.7	+0.5
PVAQ				S	Sn	13 11 32.2	+0.4
	24nm,0.1s						
PVAQ	**Vaqueiros**	**1.25**	**71**	P	Pn	13 11 16.7	+0.5
PVAQ				S	Sn	13 11 32.2	+0.4
	24nm,0.1s						
PVAQ	**Vaqueiros**	**1.25**	**71**	*e*P	Pn	13 11 16.7	+0.5
PVAQ				*e*S	Sn	13 11 32.2	+0.4
	24nm,0.1s						
EGRO	**El Granado**	**1.47**	**68**	Pg	Pn	13 11 19.6	+0.4
EGRO				Lg		13 11 35.4	
EGRO	**El Granado**	**1.47**	**68**	P	Pn	13 11 19.6	+0.4
	2.6nm,0.1s,SNR=30						
EGRO				S	Sn	13 11 37.0	-0.1
	2.7nm,0.1s,SNR=6.0						
EGRO	**El Granado**	**1.47**	**68**	P	Pn	13 11 19.6	+0.4
	2.6nm,0.1s,SNR=30						
EGRO				S	Sn	13 11 37.0	-0.1
	2.7nm,0.1s,SNR=6.0						
EGRO	**El Granado**	**1.47**	**68**	Pg	Pn	13 11 19.6	+0.4
	2.6nm,0.1s,SNR=30						
EGRO				Lg		13 11 35.4	
	2.7nm,0.1s,SNR=6.0						
PBEJ	**Beja**	**1.47**	**46**	*e*P	Pn	13 11 19.9	+0.7
PBEJ				*e*S	Sn	13 11 37.8	+0.6
PBEJ				A		13 11 45.8	
	8.3nm,0.2s						
PBEJ	**Beja**	**1.47**	**46**	P	Pn	13 11 19.9	+0.7
PBEJ				S	Sn	13 11 37.8	+0.6
	4.2nm,0.2s						
PBEJ	**Beja**	**1.47**	**46**	P	Pn	13 11 19.9	+0.7
PBEJ				S	Sn	13 11 37.8	+0.6
	4.2nm,0.2s						
PBEJ	**Beja**	**1.47**	**46**	*e*P	Pn	13 11 19.9	+0.7
PBEJ				*e*S	Sn	13 11 37.8	+0.6
	8.3nm,0.2s						
MOE	**Montemor**	**1.66**	**24**	*e*Sn	Sn	13 11 42.5	+0.7
MOE	**Montemor**	**1.66**	**24**	S	Sn	13 11 42.5	+0.7
MOE	**Montemor**	**1.66**	**24**	S	Sn	13 11 42.5	+0.7
MOE	**Montemor**	**1.66**	**24**	*e*Sn	Sn	13 11 42.5	+0.7
EVO	**Evora**	**1.79**	**31**	*e*Pn	Pn	13 11 24.4	+0.8
EVO				*e*Sn	Sn	13 11 45.7	+0.6
EVO				A		13 11 46.4	
	119nm,0.1s						
EVO	**Evora**	**1.79**	**31**	P	Pn	13 11 24.4	+0.8
EVO				S	Sn	13 11 45.7	+0.6
	119nm,0

PTOM				S	Sn	13 12 08.1	+1.1
	6.9nm,0.3s						
PTOM	**Tomar**	**2.68**	**13**	P	Pn	13 11 37.2	+1.4
PTOM				S	Sn	13 12 08.1	+1.1
	6.9nm,0.3s						
PTOM	**Tomar**	**2.68**	**13**	*e*Pn	Pn	13 11 37.2	+1.4
PTOM				*e*Sn	Sn	13 12 08.1	+1.1
	14nm,0.3s						
PMRV	**Marv??o**	**2.81**	**30**	*e*Pn	Pn	13 11 38.4	+0.8
PMRV				*e*Sn	Sn	13 12 09.9	-0.2
PMRV				A		13 12 12.0	
	33nm,0.2s						
PMRV	**Marv??o**	**2.81**	**30**	P	Pn	13 11 38.4	+0.8
PMRV				S	Sn	13 12 09.9	-0.2
	33nm,0.2s						
PMRV	**Marv??o**	**2.81**	**30**	P	Pn	13 11 38.4	+0.8
PMRV				S	Sn	13 12 09.9	-0.2
	33nm,0.2s						
PMRV	**Marv??o**	**2.81**	**30**	*e*Pn	Pn	13 11 38.4	+0.8
PMRV				*e*Sn	Sn	13 12 09.9	-0.2
	33nm,0.2s						
PCBR	**Castelo Branco**	**3.13**	**25**	*e*Sn	Sn	13 12 18.3	0.0
PCBR				A		13 12 19.8	
	14nm,0.2s						
PCBR	**Castelo Branco**	**3.13**	**25**	S	Sn	13 12 18.3	0.0
	7.1nm,0.2s						
PCBR	**Castelo Branco**	**3.13**	**25**	S	Sn	13 12 18.3	0.0
	7.1nm,0.2s						
PCBR	**Castelo Branco**	**3.13**	**25**	*e*Sn	Sn	13 12 18.3	0.0
	14nm,0.2s						
ECAB	**El Cabril**	**3.19**	**69**	Pn	Pn	13 11 43.0	+0.2
ECAB				Sn	Sn	13 12 17.9	-1.6
ECAB	**El Cabril**	**3.19**	**69**	P	Pn	13 11 43.0	+0.2
	2.0nm,0.0s,SNR=7.9						
ECAB				S	Sn	13 12 18.7	-0.8
	0.7nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**3.19**	**69**	P	Pn	13 11 43.0	+0.2
	2.0nm,0.0s,SNR=7.9						
ECAB				S	Sn	13 12 18.7	-0.8
	0.7nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**3.19**	**69**	Pn	Pn	13 11 43.0	+0.2
	2.0nm,0.0s,SNR=7.9						
ECAB				Sn	Sn	13 12 17.9	-1.7
	0.7nm,0.1s,SNR=7.9						
MTE	**Manteigas**	**3.63**	**20**	*e*Sn	Sn	13 12 30.2	-0.2
MTE				A		13 12 32.9	
	7.7nm,0.2s						
MTE	**Manteigas**	**3.63**	**20**	S	Sn	13 12 30.2	-0.2
	3.8nm,0.2s						
MTE	**Manteigas**	**3.63**	**20**	S	Sn	13 12 30.2	-0.2
	3.8nm,0.2s						
MTE	**Manteigas**	**3.63**	**20**	*e*Sn	Sn	13 12 30.2	-0.2
	7.7nm,0.2s						
PVIS	**Viseu**	**3.84**	**15**	*e*Sn	Sn	13 12 35.1	-0.5
PVIS				A		13 12 37.7	
	7.8nm,0.1s						
PVIS	**Viseu**	**3.84**	**15**	S	Sn	13 12 35.1	-0.5
	3.9nm,0.1s						
PVIS	**Viseu**	**3.84**	**15**	S	Sn	13 12 35.1	-0.5
	3.9nm,0.1s						
PVIS	**Viseu**	**3.84**	**15**	*e*Sn	Sn	13 12 35.1	-0.5
	7.8nm,0.1s						
EADA	**Adamuz**	**3.85**	**71**	Pn	Pn	13 11 52.3	+0.4
EADA				Sn	Sn	13 12 33.6	-2.2
EADA	**Adamuz**	**3.85**	**71**	P	Pn	13 11 52.3	+0.4
	1.8nm,0.1s,SNR=35						
EADA				S	Sn	13 12 33.6	-2.2
	0.8nm,0.1s						
EADA	**Adamuz**	**3.85**	**71**	P	Pn	13 11 52.3	+0.4
	1.8nm,0.1s,SNR=35						
EADA				S	Sn	13 12 33.6	-2.2
	0.8nm,0.1s						
EADA	**Adamuz**	**3.85**	**71**	Pn	Pn	13 11 52.3	+0.4
	1.8nm,0.1s,SNR=35						
EADA				Sn	Sn	13 12 33.6	-2.2
	0.8nm,0.1s						
EPLA	**Plasencia**	**3.91**	**38**	Pn	Pn	13 11 52.8	+0.1
EPLA				Sn	Sn	13 12 29.9	-7.5
EPLA	**Plasencia**	**3.91**	**38**	P	Pn	13 11 52.5	-0.2
	0.3nm,0.0s,SNR=7.9						
EPLA				S	Sn	13 12 36.1	-1.2
	0.5nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**3.91**	**38**	P	Pn	13 11 52.5	-0.2
	0.3nm,0.0s,SNR=7.9						
EPLA				S	Sn	13 12 36.1	-1.2
	0.5nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**3.91**	**38**	Pn	Pn	13 11 52.8	+0.1
	0.3nm,0.0s,SNR=7.9						
EPLA				Sn	Sn	13 12 29.9	-7.5
	0.5nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**4.45**	**73**	Pn	Pn	13 11 59.9	-0.2
EBAN				Sn	Sn	13 12 48.7	-2.0
EBAN	**Banos Encina**	**4.45**	**73**	P	Pn	13 11 59.9	-0.2
	1.8nm,0.2s,SNR=7.9						
EBAN				S	Sn	13 12 46.9	-3.8
	0.8nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**4.45**	**73**	P	Pn	13 11 59.9	-0.2
	1.8nm,0.2s,SNR=7.9						
EBAN				S	Sn	13 12 46.9	-3.8
	0.8nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**4.45**	**73**	Pn	Pn	13 11 59.9	-0.3
	1.8nm,0.2s,SNR=7.9						
EBAN				Sn	Sn	13 12 48.7	-2.0
	0.8nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**4.48**	**21**	*e*Sn	Sn	13 12 50.5	-0.9
MVO				A		13 12 52.3	
	3.7nm,0.2s						
MVO	**Moncorvo**	**4.48**	**21**	S	Sn	13 12 51.1	-0.3
	0.8nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**4.48**	**21**	S	Sn	13 12 51.1	-0.3
	0.8nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**4.48**	**21**	*e*Sn	Sn	13 12 50.5	-0.9
	3.7nm,0.2s						
EGUA	**Guajares**	**4.52**	**91**	Pn	Pn	13 12 02.5	+1.4
EGUA				Sn	Sn	13 12 52.9	+0.6
EGUA	**Guajares**	**4.52**	**91**	P	Pn	13 12 02.5	+1.4
	1.4nm,0.2s,SNR=7.9						
EGUA				S	Sn	13 12 53.3	+1.0
	10nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**4.52**	**91**	P	Pn	13 12 02.5	+1.4
	1.4nm,0.2s,SNR=7.9						
EGUA				S	Sn	13 12 53.3	+1.0
	10nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**4.52**	**91**	Pn	Pn	13 12 02.5	+1.4
	1.4nm,0.2s,SNR=7.9						
EGUA				Sn	Sn	13 12 52.9	+0.6
	1.9nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.61**	**86**	P	Pn	13 12 02.9	+0.6
	0.5nm,0.1s,SNR=7.9						
EQUE				S	Sn	13 12 53.8	-0.7
	0.7nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.61**	**86**	P	Pn	13 12 02.9	+0.6
	0.5nm,0.1s,SNR=7.9						
EQUE				S	Sn	13 12 53.8	-0.7
	0.7nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.61**	**86**	Pn	Pn	13 12 02.9	+0.6
	0.5nm,0.1s,SNR=7.9						
EQUE				Sn	Sn	13 12 52.6	-1.9
	0.7nm,0.2s,SNR=7.9						
PCAB	**Cabril**	**4.78**	**11**	*e*Sn	Sn	13 12 57.6	-1.2
PCAB				A		13 12 59.4	
	4.0nm,0.2s						
PCAB	**Cabril**	**4.78**	**11**	S	Sn	13 12 57.6	-1.2
	2.0nm,0.2s						
PCAB	**Cabril**	**4.78**	**11**	S	Sn	13 12 57.6	-1.2
	2.0nm,0.2s						
PCAB	**Cabril**	**4.78**	**11**	*e*Sn	Sn	13 12 57.6	-1.2
	4.0nm,0.2s						
ESDC	**Sonseca Array**	**4.90**	**55**	Pn	Pn	13 12 06.8	+0.4
ESDC				Sn	Sn	13 13 00.8	-1.0
ESDC	**Sonseca Array**	**4.90**	**55**	P	Pn	13 12 06.8	+0.4
	9.5nm,0.1s,baz=243,slow=13,SNR=14						
ESDC				S	Sn	13 13 01.6	-0.2
	0.7nm,0.2s,baz=242,slow=23,SNR=5.7						
ESDC	**Sonseca Array**	**4.90**	**55**	P	Pn	13 12 06.8	+0.4
	9.5nm,0.1s,baz=243,slow=13,SNR=14						
ESDC				S	Sn	13 13 01.6	-0.2
	0.7nm,0.2s,baz=242,slow=23,SNR=5.7						
ESDC	**Sonseca Array**	**4.90**	**55**	Pn	Pn	13 12 06.8	+0.5
	9.5nm,0.1s,SNR=14						
ESDC				Sn	Sn	13 13 00.8	-1.0
	0.7nm,0.2s,baz=242,slow=23,SNR=5.7						
ELOB	**Lobios**	**4.93**	**10**	Pn	Pn	13 12 07.5	+0.7
ELOB				Sn	Sn	13 13 02.0	-0.5
	0.9nm,0.1s,SNR=8.9						
ELOB	**Lobios**	**4.93**	**10**	P	Pn	13 12 07.5	+0.7
	0.2nm,0.1s,SNR=7.9						
ELOB				S	Sn	13 13 02.0	-0.5
	0.9nm,0.1s,SNR=8.9						
ELOB	**Lobios**	**4.93**	**10**	Pn	Pn	13 12 07.5	+0.7
	0.2nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	13 12 59.7	-2.8
	0.9nm,0.1s,SNR=8.9						
EQES	**Quesada**	**4.94**	**79**	Pn	Pn	13 12 06.9	0.0
EQES				Sn	Sn	13 12 59.5	-3.3
EQES	**Quesada**	**4.94**	**79**	P	Pn	13 12 06.9	0.0
	0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	13 13 01.0	-1.8
	0.4nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.94**	**79**	P	Pn	13 12 06.9	0.0
	0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	13 13 01.0	-1.8
	0.4nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.94**	**79**	Pn	Pn	13 12 06.9	0.0
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	Sn	13 12 59.5	-3.3
	0.4nm,0.1s,SNR=7.9						
EBER	**Berja**	**5.05**	**89**	Pn	Pn	13 12 09.3	+0.8
EBER				Sn	Sn	13 13 04.1	-1.4
EBER	**Berja**	**5.05**	**89**	P	Pn	13 12 09.3	+0.8
	0.1nm,0.1s,SNR=7.9						
EBER				S	Sn	13 13 05.8	+0.3
	0.1nm,0.1s,SNR=7.9						
EBER	**Berja**	**5.05**	**89**	P	Pn	13 12 09.3	+0.8
	0.1nm,0.1s,SNR=7.9						
EBER				S	Sn	13 13 05.8	+0.3
	0.1nm,0.1s,SNR=7.9						
EBER	**Berja**	**5.05**	**89**	Pn	Pn	13 12 09.3	+0.9
	0.1nm,0.1s,SNR=7.9						
EBER				Sn	Sn	13 13 04.1	-1.4
	0.1nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**5.16**	**21**	*e*Sn	Sn	13 13 06.8	-1.2
PBRG				A		13 13 07.5	
	3.6nm,0.3s						
PBRG	**Braganca**	**5.16**	**21**	S	Sn	13 13 06.8	-1.2
	1.8nm,0.3s						
PBRG	**Braganca**	**5.16**	**21**	S	Sn	13 13 06.8	-1.2
	1.8nm,0.3s						
PBRG	**Braganca**	**5.16**	**21**	*e*Sn	Sn	13 13 06.8	-1.2
	3.6nm,0.3s						
ECAL	**Calabor**	**5.28**	**20**	S	Sn	13 13 10.1	-1.0
	0.6nm,0.2s,SNR=4.8						
ECAL	**Calabor**	**5.28**	**20**	S	Sn	13 13 10.1	-1.0
	0.6nm,0.2s,SNR=4.8						
ECAL	**Calabor**	**5.28**	**20**	Sn	Sn	13 13 08.7	-2.4
	0.6nm,0.2s,SNR=4.8						
EHUE	**Huescar**	**5.32**	**79**	Pn	Pn	13 12 12.3	+0.2
EHUE				Sn	Sn	13 13 09.4	-2.7
EHUE	**Huescar**	**5.32**	**79**	P	Pn	13 12 12.3	+0.2
	0.5nm,0.1s,SNR=7.9						
EHUE				S	Sn	13 13 09.4	-2.7
	0.5nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**5.32**	**79**	P	Pn	13 12 12.3	+0.2
	0.5nm,0.1s,SNR=7.9						
EHUE				S	Sn	13 13 09.4	-2.7
	0.5nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**5.32**	**79**	Pn	Pn	13 12 12.3	+0.2
	0.5nm,0.1s,SNR=7.9						
EHUE				Sn	Sn	13 13 09.4	-2.7
	0.5nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**5.36**	**46**	Pn	Pn	13 12 13.2	+0.6
GUD				Sn	Sn	13 13 08.8	-4.1
GUD	**Guadarrama**	**5.36**	**46**	P	Pn	13 12 13.2	+0.6
	0.5nm,0.2s,SNR=7.9						
GUD				S	Sn	13 13 11.7	-1.3
	0.2nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**5.36**	**46**	P	Pn	13 12 13.2	+0.6
	0.5nm,0.2s,SNR=7.9						
GUD				S	Sn	13 13 11.7	-1.3
	0.2nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**5.36**	**46**	Pn	Pn	13 12 13.2	+0.6
	0.5nm,0.2s,SNR=7.9						
GUD				Sn	Sn	13 13 08.8	-4.1
	0.2nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**5.54**	**71**	Pn	Pn	13 12 15.0	-0.2
EVIA				Sn	Sn	13 13 14.5	-3.1
EVIA	**Vianos**	**5.54**	**71**	P	Pn	13 12 15.0	-0.2
	2.1nm,0.1s,SNR=7.4						
EVIA				S	Sn	13 13 17.3	-0.3
	0.4nm,0.1s						
EVIA	**Vianos**	**5.54**	**71**	P	Pn	13 12 15.0	-0.2
	2.1nm,0.1s,SNR=7.4						
EVIA				S	Sn	13 13 17.3	-0.3
	0.4nm,0.1s						
EVIA	**Vianos**	**5.54**	**71**	Pn	Pn	13 12 15.0	-0.2
	2.1nm,0.1s,SNR=7.4						
EVIA				Sn	Sn	13 13 14.5	-3.1
	0.4nm,0.1s						
EMAZ	**Mazaricos**	**5.94**	**2**	Pn	Pn	13 12 20.9	+0.4
EMAZ				Sn	Sn	13 13 21.6	-5.7
EMAZ	**Mazaricos**	**5.94**	**2**	P	Pn	13 12 20.9	+0.4
	0.2nm,0.1s,SNR=7.9						
EMAZ				S	Sn	13 13 26.6	-0.7
	1.8nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**5.94**	**2**	P	Pn	13 12 20.9	+0.4
	0.2nm,0.1s,SNR=7.9						
EMAZ				S	Sn	13 13 26.6	-0.7
	1.8nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**5.94**	**2**	Pn	Pn	13 12 20.9	+0.3
	0.2nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	13 13 21.5	-5.7
	1.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**6.27**	**73**	Pn	Pn	13 12 22.9	-2.3
ETOB				Sn	Sn	13 13 30.0	-5.5
ETOB	**Tobarra**	**6.27**	**73**	P	Pn	13 12 25.0	-0.1
	0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	13 13 33.9	-1.6
	0.2nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**6.27**	**73**	P	Pn	13 12 25.0	-0.1
	0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	13 13 33.9	-1.6
	0.2nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**6.27**	**73**	Pn	Pn	13 12 22.9	-2.3
	0.2nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	13 13 30.0	-5.5
	0.2nm,0.1s,SNR=7.9						

DJA ***15*** *13:10:52,0.′86N×127.′22E,h75km,MLv3.9/6*
IDC ***15*** *13:10:52.4±1.9,0.′38N×126.′30E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.5/18,mbtmp3.6/3,Error ellipse: s-maj=171.0km s-min=24.6km az=65.0*
ISCJB ***15*** *13:10:55.9±0.8,0.′78N±0.′09×127.′02E±0.′06,h52km±8km, mb3.5/3,Error ellipse: s-maj=15.5km s-min=8.8km az=24.9*
ISC 15 13:10:57.1±0.8,**0.′77N**±0.′08×**127.′03E**±0.′06,**h43**km±10km, **n10**,σ0°**65**/13,**mb3.5**/3,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.34**	**89**	P	**Pn**	**13 11 05.7**	**-0.3**
TNTI				S	**Sn**	**13 11 12.5**	**+0.2**
LBMI	**Labuha**	**1.47**	**161**	P	**Pn**	**13 11 21.2**	**0.0**
LBMI				S	**Sn**	**13 11 40.0**	**+0.8**
MNI	**Manado**	**2.29**	**287**	P	**Pn**	**13 11 32.1**	**-0.3**
KMSI	**Cibinong**	**3.05**	**266**	P	**Pn**	**13 11 42.8**	**-0.1**
KMSI				S	**Sn**	**13 12 19.1**	**+0.9**
SGSI	**Sangihe**	**3.27**	**333**	P	**Pn**	**13 11 41.1**	**-4.7**
NLAI	**Namlea**	**3.98**	**179**	P	**Pn**	**13 11 46.5**	**-9.1**
LUWI	**Luwuk**	**4.62**	**247**	P	**Pn**	**13 12 03.2**	**-1.2**
WRA	**Warramunga Arr**	**21.79**	**161**	P	**P**	**13 15 44.9**	**-0.6**
	0.9nm,0.5s,mb3.5,baz=338,slow=10,SNR=15						
ASAR	**Alice Springs**	**25.19**	**165**	P	**P**	**13 16 18.3**	**-0.4**
	0.4nm,0.4s,mb3.3,baz=342,slow=11,SNR=17						
MKAR	**Makanchi Array**	**60.16**	**326**	P	**P**	**13 21 01.4**	**+1.0**
	0.4nm,0.5s,mb3.7,baz=125,slow=6.3,SNR=3.6						

IDC ***15*** *13:30:22.7±0.9,14.°95S×173.°87W,h0km,mb4.1/5, mb1 4.3/6,mb1mx3.9/19,mbtmp4.1/6,ML2.3/1,MS3.3/2, Ms1 3.3/2,ms1mx2.8/17,Error ellipse: s-maj=40.0km s-min=21.1km az=137.0*
NEIC ***15*** *13:30:23.9±0.4,15.°02S×173.°79W,h10km,mb4.2/1,Error ellipse: s-maj=19.0km s-min=10.6km az=132.0*
ISCJB ***15*** *13:30:25.7±0.7,15.°0S±0.°1×173.°8W±0.°1,h33km,mb4.1/6, MS3.3/2,Error ellipse: s-maj=26.3km s-min=13.7km az=136.8*
ISC 15 13:30:27.4±0.7,**15.°0S**±0.°1×**173.°7W**±0.°1,**h35**km,**n16**,
σ1§**11**/13,**mb4.1**/6,**MS3.3**/2,**Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.12**	**60**	Pn	**Pn**	**13 31 01.2**	**+0.8**
	50nm,0.3s,baz=86,slow=1.8,SNR=74						
AFI				Sn	**Sn**	**13 31 22.9**	**-2.6**
	87nm,0.3s,baz=76,slow=21,SNR=17						
AFI	**Afiamalu**	**2.12**	**60**	*e*Pn	**Pn**	**13 31 00.8**	**+0.4**
AFI				Sn	**Sn**	**13 31 22.9**	**-2.6**
URZ	**Urewera**	**24.59**	**198**	P	**P**	**13 35 45.8**	**+1.6**
	2.1nm,0.5s,mb4.0,baz=27,slow=2.3,SNR=3.5						
URZ	**Urewera**	**24.59**	**198**	*e*P	**P**	**13 35 44.5**	**+0.3**
HNR	**Honiara**	**26.35**	**279**	LR	LR	13 45 20.3	
	comp=Z,74nm,18.4s,MS3.3,baz=197,slow=34						
WRA	**Warramunga Arr**	**49.68**	**256**	P	**P**	**13 39 15.2**	**-1.0**
	0.8nm,0.4s,mb4.1,baz=91,slow=7.3,SNR=47						
ASAR	**Alice Springs**	**49.99**	**252**	P	**P**	**13 39 17.4**	**-1.2**
	5.6nm,0.7s,mb4.7,baz=86,slow=8.1,SNR=77						
SBA	**Scott Base**	**63.66**	**185**	*e*P	**P**	**13 40 54.9**	**+0.3**
	1.3nm,0.7s,mb4.1						
QSPA	**South Pole Qui**	**75.07**	**180**	*e*P	**P**	**13 42 05.1**	**0.0**
KSRS	**Korea Array**	**75.66**	**316**	LR	LR	14 13 00.8	
	comp=Z,17nm,18.0s,MS3.4,baz=127,slow=34						
COLA	**College**	**81.99**	**11**	*e*P	**P**	**13 42 44.6**	**+1.4**
ILAR	**Eielson Array**	**82.08**	**11**	P	**P**	**13 42 44.6**	**+0.9**
	0.3nm,0.5s,mb3.5,baz=224,slow=5.5,SNR=9.7						
MAW	**Mawson**	**88.11**	**199**	P	**P**	**13 43 13.3**	**-0.8**
	1.2nm,0.7s,mb4.3,baz=124,slow=7.3,SNR=4.1						
ARCES	**ARCESS Array B**	**124.15**	**352**	PKP	PKPdf	13 49 21.8	+0.2
	1.1nm,1.0s,baz=20,slow=1.1,SNR=3.8						
BRTR	**Keskin Array B**	**145.66**	**321**	PKPbc	PKPbc	13 50 04.2	+1.5
	1.0nm,0.7s,baz=105,slow=3.2,SNR=3.5						
GERES	**GERESS Array B**	**145.68**	**351**	PKPbc	PKPbc	13 50 03.6	+1.2
	0.8nm,0.6s,baz=354,slow=4.0,SNR=4.9						

BJI ***15*** *13:35:33.3,34.′20N×93.′81E,h15km,ML3.4/5,Ms7 3.1/2*
IDC ***15*** *13:35:35.5±1.1,34.′28N×94.′43E,h0km,mb3.5/5, mb1 3.6/7,mb1mx3.5/24,mbtmp3.4/7,ML3.3/2,MS2.7/2, Ms1 2.7/2,ms1mx2.4/20,Error ellipse: s-maj=42.2km s-min=22.8km az=60.0*
ISCJB ***15*** *13:35:40.5±1.4,34.′37N±0.′07×94.′2E±0.′1,h52km±17km, mb3.6/4,MS2.6/2,Error ellipse: s-maj=16.4km s-min=12.0km az=10.6*
NEIC ***15*** *13:35:40.7±0.7,34.′37N×94.′22E,h35km,Error ellipse: s-maj=18.8km s-min=10.9km az=85.0*
ISC 15 13:35:42.5±1.2,**34.′37N**±0.′07×**94.′2E**±0.′1,**h53**km±14km, **n14**,σ1§**19**/14,**mb3.6**/4,**MS2.6**/2,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.31**	**210**	Pg	**Pn**	**13 37 01.1**	**+1.8**
LSA				smax			
	comp=N,10.0nm,1.0s						
LSA				smax			
	comp=E,30nm,1.0s						
LSA	**Lhasa**	**5.31**	**210**	P	**Pn**	**13 36 57.4**	**-1.9**
	comp=E,5.8nm,0.5s						
GTA	**Gaotai**	**6.77**	**40**	*e*Pn	**Pn**	**13 37 20.0**	**+0.8**
GTA				Sn	**Sn**	**13 38 40.6**	**+5.8**
GTA				LR	LR		
	comp=Z,130nm,12.8s						
LZH	**Lanzhou**	**8.11**	**75**	*e*P	**Pn**	**13 37 38.0**	**+0.5**
LZH				pP		13 37 42.3	
LZH				sP		13 37 44.8	
MKAR	**Makanchi Array**	**15.31**	**328**	Pn	**Pn**	**13 39 13.0**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=139,slow=9.5,SNR=2.8						
MKAR	**Makanchi Array**	**15.31**	**328**	Pn	**Pn**	**13 39 13.0**	**-2.1**
SONM	**Songino Array**	**16.28**	**31**	Pn	**Pn**	**13 39 26.1**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=207,slow=9.3,SNR=3.0						
CMAR	**Chiang Mai Arr**	**16.41**	**164**	Pn	**Pn**	**13 39 29.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=339,slow=9.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**20.65**	**344**	P	**P**	**13 40 18.7**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=178,slow=9.5,SNR=2.1						
ZALV				LR	LR	13 48 44.9	
	comp=Z,15nm,21.6s,MS2.3,baz=117,slow=38						
KSRS	**Korea Array**	**27.43**	**74**	LR	LR	13 53 16.8	
	comp=Z,24nm,19.5s,MS2.8,baz=220,slow=39						
BRTR	**Keskin Array B**	**47.80**	**295**	P	**P**	**13 44 16.6**	**+1.9**
	comp=Z,1.6nm,0.9s,mb4.1,baz=72,slow=9.3,SNR=5.2						
WRA	**Warramunga Arr**	**66.17**	**138**	P	**P**	**13 46 24.3**	**-0.4**
	comp=Z,1.0nm,1.0s,mb3.8,baz=331,slow=5.8,SNR=4.0						
ASAR	**Alice Springs**	**68.97**	**141**	P	**P**	**13 46 41.2**	**-1.0**
	comp=Z,0.5nm,0.7s,mb3.6,baz=329,slow=6.9,SNR=6.7						
ILAR	**Eielson Array**	**70.36**	**23**	P	**P**	**13 46 50.3**	**0.0**
	comp=Z,0.2nm,0.9s,mb3.1,baz=297,slow=4.0,SNR=3.3						

THE ***15*** *14:16:01.2,35.′38N×21.′80E,h0km±6km,ML3.2/4,Error ellipse: s-maj=13.2km s-min=2.0km az=226.0*
ISCJB ***15*** *14:16:03.6±0.9,35.′62N±0.′04×22.′03E±0.′06,h10km,Error ellipse: s-maj=8.4km s-min=3.8km az=139.8*
ATH ***15*** *14:16:03.3,35.′67N×22.′01E,h2km,MD3.5/11*
CSEM ***15*** *14:16:05.8±0.7,35.′74N×22.′12E,h2km,MD3.5,Error ellipse: s-maj=16.7km s-min=7.5km az=48.0*
ISC 15 14:16:04.4±0.9,**35.′68N**±0.′04×**22.′03E**±0.′06,**h10**km,**n53**,
σ1§**41**/75,**Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.01**	**54**	*e*PG	**Pg**	**14 16 22.8**	**-1.1**
KYTH	**Kithira**	**1.01**	**54**	*e*Pg	**Pg**	**14 16 22.8**	**-1.1**
VLI	**Veliai**	**1.27**	**35**	*e*PB	**Pb**	**14

VLS	Valsamata	2.74	336	P	Pn	14 16 48.8	+0.4
VLS	Valsamata	2.74	336	P	Pn	14 16 48.8	+0.4
DSF	Desfina	2.75	8	P	Pn	14 16 50.8	+2.2
DSF	Desfina	2.75	8	P	Pn	14 16 50.8	+2.2
LAST	Lasithi	2.87	99	*e*PN	Pn	14 16 51.7	+1.5
LAST	Lasithi	2.87	99	*e*Pn	Pn	14 16 51.7	+1.5
LKR	Lokris	3.06	14	P	Pn	14 16 54.4	+1.6
LKR	Lokris	3.06	14	P	Pn	14 16 54.4	+1.6
ATAL	Atalanti	3.11	15	P	Pn	14 16 54.9	+1.4
ATAL	Atalanti	3.11	15	P	Pn	14 16 54.9	+1.4
APE	Apeiranthos	3.15	63	*e*PB	Pb	14 16 57.7	-2.7
APE	Apeiranthos	3.15	63	*e*Pb	Pb	14 16 57.7	-2.7
AGG	Agios Georgios	3.34	4	P	Pn	14 16 59.2	+2.5
AGG	Agios Georgios	3.34	4	P	Pn	14 16 59.2	+2.5

IDC 15 14:24:29.5±4.9, 16°.43N×122°.72E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=270.0km s-min=30.7km az=91.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.91	162	P	P	14 31 48.7	+0.1
	0.3nm,0.6s,baz=342,slow=9.1,SNR=5.7						
ASAR	Alice Springs	41.32	164	P	P	14 32 17.0	-0.1
	0.2nm,0.4s,baz=344,slow=6.9,SNR=17						
ILAR	Eielson Array	75.45	26	P	P	14 36 15.2	+0.1
	0.3nm,0.7s,baz=257,slow=5.9,SNR=4.8						

*ISCJB **15** 14:33:37.2±0.8, 31°.28N±0°.08×139°.8E±0°.1, h225km±9km, mb3.1/5, Error ellipse: s-maj=19.7km s-min=12.7km az=177.5*
*IDC **15** 14:33:37.3±1.2, 31°.14N×139°.29E, h196km±12km, mb3.0/5, mb1 3.1/8, mb1mx2.9/25, mbtmp3.0/8, Error ellipse: s-maj=33.9km s-min=16.5km az=88.0*
*NEIC **15** 14:33:37.8±1.7, 31°.14N×139°.40E, h204km±18km, MG3.7(JMA), Error ellipse: s-maj=34.1km s-min=16.6km az=93.0*
*JMA **15** 14:33:39.2±0.4, 31°.33N×139°.58E, h212km±4km, M3.7*
ISC 15 14:33:38.2±0.9, 31°.29N±0°.08×139°.8E±0°.1, h217km±10km, n26, σ0°96/39, mb3.1/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.83	1	P	Pn	14 34 17.4	+1.1
	11nm,0.3s,baz=72,slow=22,SNR=23						
JHJ				S	S	14 34 45.7	-0.6
	36nm,0.3s,baz=71,slow=19,SNR=9.1						
JIM2	Oshima 3	3.43	356	P	Pn	14 34 34.8	+1.1
JIM2				S	S	14 35 17.5	-0.1
BSO1	Boso 1	3.51	17	P	Pn	14 34 35.2	+0.5
BSO1				S	S	14 35 18.8	-0.5
BSO3	Boso 3	3.56	10	P	Pn	14 34 35.8	+0.5
BSO3				S	S	14 35 20.1	-0.3
BSO4	Boso 4	3.73	7	P	Pn	14 34 37.3	+0.1
BSO4				S	S	14 35 23.1	-0.8
JOD2	Odawara 2	4.01	352	P	Pn	14 34 41.8	+1.2
JOD2				S	S	14 35 30.9	+0.9
JWZ	Kozaga	4.08	304	P	Pn	14 34 40.1	-1.5
JYN	Shimob	4.32	347	P	Pn	14 34 45.7	+1.2
JYN				S	S	14 35 44.1	+7.1
JHU	Hanno	4.57	355	P	Pn	14 34 47.6	0.0
JHU				*e*S	S	14 35 40.4	-2.2
JRY	Ryogami san	4.77	352	P	Pn	14 34 50.8	+0.7
JRY				S	S	14 35 48.3	+1.2
JYT	Yasato	4.94	4	P	Pn	14 34 51.2	-1.0
JYT				S	S	14 35 45.5	-5.4
JAG	Ashikaga	5.13	357	P	Pn	14 34 53.6	-1.0
JAG				S	S	14 35 51.9	-3.4
JHO	Hitachi	5.36	7	P	Pn	14 34 56.3	-1.1
JHO				S	S	14 35 55.6	-4.7
MJAR	Matsushiro Arr	5.40	347	P	Pn	14 34 57.9	-0.1
	1.0nm,0.3s,baz=164,slow=12,SNR=14						
MJAR				S	S	14 35 57.6	-3.7
	0.1nm,0.3s,baz=168,slow=19,SNR=2.3						
MAJO	Matsushiro	5.40	347	*e*P	Pn	14 34 59.5	+1.5
MAT	Matsushiro	5.40	347	P	Pn	14 34 58.3	+0.3
ASAJ	Asahikawa	13.00	9	P	Pn	14 36 35.6	+0.6
	0.4nm,0.3s,baz=222,slow=12,SNR=3.8						
ASAJ	Asahikawa	13.00	9	*e*P	Pn	14 36 35.6	+0.6
PETK	Petropavlovsk-	25.40	26	P	P	14 38 49.9	+4.4
	1.1nm,0.8s,mb3.5,baz=203,slow=14,SNR=2.9						
MKAR	Makanchi Array	46.23	307	P	P	14 41 41.1	-0.4
	0.2nm,0.5s,mb2.7,baz=97,slow=5.8,SNR=2.6						
WB2	Warramunga Arr	51.20	187	P	P	14 42 18.9	-0.6
WRA	Warramunga Arr	51.20	187	P	P	14 42 18.8	-0.7
	0.6nm,0.9s,mb3.0,baz=2.1,slow=7.7,SNR=7.1						
WRA	Warramunga Arr	51.20	187	P	P	14 42 18.8	-0.7
ASAR	Alice Springs	54.92	187	P	P	14 42 46.6	0.0
	0.3nm,0.8s,mb2.9,baz=1.4,slow=6.9,SNR=5.9						
FINES	FINESS Array B	73.26	333	P	P	14 44 46.1	+0.8
	0.4nm,0.4s,mb3.4,baz=58,slow=8.5,SNR=3.1						
FINES	FINESS Array B	73.26	333	P	P	14 44 46.1	+0.8

*IDC **15** 15:07:34.9±2.0, 1°.11N×126°.63E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.5/3, Error ellipse: s-maj=170.9km s-min=24.8km az=66.0*
*ISCJB **15** 15:07:40.7±0.8, 0°.9N±0°.1×126°.24E±0°.05, h59km±12km, mb3.5/3, Error ellipse: s-maj=24.0km s-min=7.7km az=10.0*
*DJA **15** 15:07:41, 0°.91N×126°.21E, h34km, MLv3.8/3*
ISC 15 15:07:41.6±0.8, 0°.9N±0°.1×126°.23E±0°.05, h46km±14km, n6, σ0°63/9, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.14	97	P	Pn	15 08 00.8	-0.3
TNTI				S	Sn	15 08 16.2	+0.6
MNI	Manado	1.49	291	P	Pn	15 08 05.5	-0.5
MNI				S	Sn	15 08 24.2	-0.1
KMSI	Cibinong	2.28	262	P	Pn	15 08 16.3	-0.4
KMSI				S	Sn	15 08 44.4	+0.8
WRA	Warramunga Arr	22.19	159	P	P	15 12 32.8	-1.2
	0.9nm,0.5s,mb3.5,baz=339,slow=11,SNR=15						
ASAR	Alice Springs	25.54	164	P	P	15 13 06.8	+0.8
	0.3nm,0.3s,mb3.3,baz=346,slow=12,SNR=14						
MKAR	Makanchi Array	59.60	326	P	P	15 17 41.0	+0.3
	0.2nm,0.3s,mb3.6,baz=122,slow=7.7,SNR=7.0						

*NIED **15** 15:08:00, 24°.20N×122°.30E, h95km, Mw4.2 Best double couple: M0=2.46000×10^15 NP1:φ=354.00000°, δ90.00000°, λ170.00000°. NP2:φ=84.00000°, δ80.00000°, λ0.00000°.*
*IDC **15** 15:08:22.6±1.1, 23°.94N×122°.03E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.8/23, mbtmp4.0/7, ML3.4/1, MS3.2/3, Ms1 3.2/3, ms1mx2.6/51, Error ellipse: s-maj=65.5km s-min=18.2km az=67.0*
*TAP **15** 15:08:24.9, 23°.97N×122°.28E, h5km, ML3.9, D*
*ISCJB **15** 15:08:24.5±0.7, 23°.93N±0°.02×122°.37E±0°.02, h10km±4km, mb3.9/8, MS3.1/2, Error ellipse: s-maj=2.9km s-min=2.3km az=147.3*
*JMA **15** 15:08:27.2±0.1, 24°.16N×122°.32E, h44km, M3.7*
*NEIC **15** 15:08:27.2±2.3, 24°.02N×122°.25E, h36km±19km, mb3.9/2, Error ellipse: s-maj=28.8km s-min=10.1km az=79.0*
ISC 15 15:08:24.9±0.4, 23°.96N±0°.02×122°.36E±0°.02, h10km±2km, n73, σ0°80/121, mb3.9/8, MS3.1/2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.69	272	*i* P	Pg	15 08 37.8	-0.4
	baz=270						
HWA				*i* S	Sg	15 08 47.1	0.0
	baz=270						
TWD	Chiawan	0.70	280	*i* P	Pg	15 08 38.6	+0.1
	baz=280						
TWD				*i* S	Sg	15 08 48.5	+0.8
	baz=280						
NACB	Ninganchiao	0.73	287	*e*Pg	Pg	15 08 38.7	-0.3
ENA	Nanau	0.73	310	*i* P	Pg	15 08 39.0	0.0
	baz=313						
ENA				*i* S	Sg	15 08 49.2	+0.6
	baz=313						
YOJ	Yonaguni jima	0.78	50	P	Pg	15 08 40.8	+0.8
YOJ				S	Sg	15 08 50.6	+0.4
TWC	Suao	0.80	325	*i* P	Pg	15 08 39.8	-0.5
	baz=329						
ESL	Shilin	0.86	261	P	Pg	15 08 41.0	-0.4
	baz=258						
ESL				S	Sg	15 08 52.8	+0.3
	baz=258						
ILA	Ilan	0.98	326	P	Pg	15 08 44.1	+0.3
	baz=328						
ILA				S	Sg	15 08 57.3	+0.9
	baz=328						
TWE	Neicheng	0.99	321	P	Pg	15 08 43.6	-0.3
	baz=323						
TWE				S	Sg	15 08 57.2	+0.4
	baz=323						
ENTT	Nioudou	0.99	314	P	Pg	15 08 43.8	-0.2
	baz=316						
ENTT				S	Sg	15 08 57.0	+0.1
	baz=316						
EHY	Hungye	1.05	245	P	Pg	15 08 44.4	-0.6
	baz=242						
EHY				S	Sg	15 08 57.2	-1.5
	baz=242						
TWB1	Santiao Chiao	1.10	342	P	Pb	15 08 45.4	-0.6
	baz=346						
TWB1				*e*S	Sg	15 09 00.6	+0.2
	baz=346						
YULB	Yu-li	1.12	240	*e*Pg	Pg	15 08 45.0	-1.4
TWF1	Yuli	1.14	238	P	Pb	15 08 45.8	-0.9
	baz=235						
TWF1				*e*S	Sb	15 09 00.8	-0.7
	baz=235						
NWF	Wu-fen Shan	1.23	335	*e*P	Pn	15 08 47.5	-0.6
	baz=337						
NWF				*e*S	Sb	15 09 03.9	-0.2
	baz=337						
TWA	Mucha	1.24	326	*i* P	Pn	15 08 48.6	+0.3
	baz=328						
TWA				*e*S	Sb	15 09 05.5	+1.1
	baz=328						
CHKT	Chengkung	1.25	227	*e*P	Pn	15 08 48.1	-0.2
	baz=223						
TATO	Taipei	1.29	322	*e*P	Pn	15 08 48.3	-0.6
SSLB	Suanglung	1.29	263	*e*P	Pn	15 08 47.8	-1.2
TAP1	Taipei	1.32	325	*e*P	Pn	15 08 49.3	-0.1
	baz=326						
TAP1				*e*S	Sb	15 09 07.1	+0.4
	baz=326						
SMLT	Sun Moon Lake	1.33	267	*e*P	Pn	15 08 49.0	-0.6
	baz=266						
SMLT				*e*S	Sb	15 09 05.8	-1.4
	baz=266						
YUS	Yu-Shan	1.37	250	*e*P	Pn	15 08 50.2	+0.2
	baz=248						
YUS				*e*S	Sb	15 09 07.2	-0.9
	baz=248						
TYC	Yuchr	1.37	268	*e*P	Pn	15 08 49.2	-0.9
	baz=267						
TYC				*e*S	Sb	15 09 08.3	0.0
	baz=267						
NSTT	Nanjuang	1.41	299	P	Pn	15 08 51.0	+0.4
	baz=299						
NSTT				*e*S	Sn	15 09 08.9	-0.2
	baz=299						
TWS1	Kuangyinshan	1.42	323	*e*P	Pn	15 08 50.9	+0.1
	baz=325						
TWS1				*e*S	Sn	15 09 10.3	+0.7
	baz=325						
ELDTW	Lidau	1.45	238	*e*P	Pn	15 08 50.2	-0.9
	baz=236						
NCU	National Centr	1.47	314	*e*P	Pn	15 08 51.8	+0.4
	baz=315						
NCU				*e*S	Sn	15 09 10.2	-0.4
	baz=315						
TWY	Chenhua	1.48	333	*e*P	Pn	15 08 52.2	+0.6
	baz=334						
TWY				*e*S	Sn	15 09 11.5	+0.4
	baz=334						
ALS	Alishan	1.49	253	*e*P	Pn	15 08 51.5	-0.1
	baz=251						
ALS				*e*S	Sn	15 09 11.0	-0.2
	baz=251						
TWQ1	Liyutan	1.50	285	P	Pn	15 08 52.4	+0.6
	baz=285						
TWQ1				*e*S	Sn	15 09 11.2	-0.2
	baz=285						
HSN	Hsinchu	1.52	304	*e*P	Pn	15 08 51.6	-0.5
	baz=306						
HSN				*e*S	Sn	15 09 11.7	-0.2
	baz=306						
NSY	Sanyi	1.53	288	*e*P	Pn	15 08 52.8	+0.6
	baz=287						
NSY				*e*S	Sn	15 09 12.4	+0.3
	baz=287						
WNT	Mingjian	1.53	267	*e*P	Pn	15 08 52.4	+0.1
	baz=266						
WNT				*e*S	Sn	15 09 12.2	0.0
	baz=266						
JKRS	Kuro-shima	1.54	79	P	Pn	15 08 53.2	+0.9
JKRS				*e*S	Sn	15 09 11.9	-0.5
TCU	Taichung	1.55	277	*e*P	Pn	15 08 52.8	+0.3
	baz=277						
TCU				*e*S	Sn	15 09 12.8	+0.2
	baz=277						
TTN	Taitung	1.63	223	*e*P	Pn	15 08 53.7	0.0
	baz=220						
TTN				*e*S	Sn	15 09 14.8	+0.1
	baz=220						
TWG	Pinlang	1.63	226	*e*P	Pn	15 08 51.9	-1.8
TWG	Pinlang	1.63	226	*e*P	Pn	15 08 52.7	-0.9
	baz=223						
TWG				*e*S	Sn	15 09 14.9	+0.2
	baz=223						
WGK	Gukeng	1.67	261	*e*P	Pn	15 08 54.2	+0.1
	baz=259						
WGK				*e*S	Sn	15 09 15.2	-0.3
	baz=259						
STYT	Tauyuan	1.67	242	*e*P	Pn	15 08 54.4	+0.2
	baz=240						
STYT				*e*S	Sn	15 09 15.1	-0.4
	baz=240						
JIJ	Ishigaki jima	1.68	76	P	Pn	15 08 54.5	+0.2
JIJ				*e*S	Sn	15 09 15.0	-0.9
TPUB	Ta-pu	1.71	248	Pn	Pn	15 08 55.6	+0.8
WTP	Ta-pu	1.75	246	*e*P	Pn	15 08 55.7	+0.4
	baz=244						
WTP				*e*S	Sn	15 09 18.0	+0.5
	baz=244						
CHY	Chiayi	1.83	256	*e*P	Pn	15 08 56.3	-0.1
	baz=254						
CHY				*e*S	Sn	15 09 20.0	+0.5
	baz=254						
CHN1	Nanshi	1.84	246	*e*P	Pn	15 08 56.9	+0.4
	baz=244						
CHN1				*e*S	Sn	15 09 19.6	-0.3
	baz=244						
SGST	Jiashian	1.84	242	*e*P	Pn	15 08 57.8	+1.2
	baz=240						
SGST				*e*S	Sn	15 09 20.9	+0.9
	baz=240						
WTCT	Ta-ch'eng	1.90	268	*e*P	Pn	15 08 57.2	-0.1
	baz=266						
WTCT				*e*S	Sn	15 09 21.5	+0.2
	baz=266						
WSF	Szhu	1.98	261	*e*P	Pn	15 08 59.4	+1.0
	baz=260						
WSF				*e*S	Sn	15 09 24.0	+0.7
	baz=260						
CHN3	Shinhua	2.03	245	*e*P	Pn	15 08 59.6	+0.6
	baz=243						
CHN3				*e*S	Sn	15 09 25.1	+0.6
	baz=243						
EAST	Anshuo	2.09	222	*e*P	Pn	15 08 58.5	-1.5
	baz=219						
TWM1	Shoushan	2.10	238	*e*P	Pn	15 09 00.7	+0.6
	baz=236						
TWM1				*e*S	Sn	15 09 26.4	0.0
	baz=236						
SGLT	Jiouru	2.11	235	*e*P	Pn	15 09 00.9	+0.7
	baz=232						
SGLT				*e*S	Sn	15 09 26.4	-0.1
	baz=232						
SCLT	Jiali	2.13	249	*e*S	Sn	15 09 28.1	+1.1
	baz=247						
SCZT	Fangliau	2.25	226	*e*P	Pn	15 09 02.8	+0.8
	baz=223						
SCZT				*e*S	Sn	15 09 29.8	-0.1
	baz=223						
JTJ	Tarama	2.25	72	P	Pn	15 09 03.1	+1.0
JTJ				*e*S	Sn	15 09 28.7	-1.2
HEN	Hengchun	2.45	218	*e*P	Pn	15 09 06.2	+1.3
	baz=215						
HEN				*e*S	Sn	15 09 36.0	+1.1
	baz=215						
TSEB	Hengchuen, Pin	2.45	214	*e*P	Pn	15 09 06.3	+1.4
	baz=212						
TSEB				*e*S	Sn	15 09 36.2	+1.3
	baz=212						
TWK1	Hengchun	2.46	216	*e*P	Pn	15 09 06.3	+1.2
	baz=213						
TWK1				*e*S	Sn	15 09 36.0	+0.8
	baz=213						
PNG	Penghu	2.59	262	*e*P	Pn	15 09 06.6	-0.3
	baz=260						
PNG				*e*S	Sn	15 09 38.0	-0.4
	baz=260						
JMJ	Miyako jima 2	2.81	72	*e*S	Sn	15 09 44.1	+0.3
JOGS	Gusukube	2.90	73	*e*S	Sn	15 09 45.9	0.0
JKE	Kume jima 2	4.66	59	P	Pn	15 09 37.0	+1.7
KSRS	Korea Array	14.28	18	Pn	Pn	15 11 48.6	+1.6
	0.2nm,0.3s,baz=196,slow=11,SNR=13						
KSRS				LR	LR	15 17 47.5	
	comp=Z,71nm,18.2s,baz=195,slow=39						
ULN	Ulaanbaatar	26.79	337	*e*P	P	15 14 02.6	-2.3
	2.0nm,0.8s,mb3.7						
SONM	Songino Array	27.00	336	P	P	15 14 05.0	-1.9
	5.7nm,0.8s,mb4.2,baz=149,slow=9.7,SNR=36						
SONM				LR	LR	15 25 10.3	
	comp=Z,48nm,18.6s,MS3.1,baz=73,slow=38						
MK31	Makanchi Array	39.25	316	*e*P	P	15 15 50.7	-2.8
MKAR	Makanchi Array	39.25	316	P	P	15 15 51.7	-1.7
	0.9nm,0.5s,mb3.8,baz=102,slow=9.9,SNR=14						
ZAA0	Zalesovo Array	41.02	327	*e*P	P	15 16 04.7	-3.4
ZALV	Zalesovo Beam	41.02	327	P	P	15 16 05.0	-3.0
	2.9nm,0.6s,mb4.1,baz=110,slow=7.8,SNR=16						
ZALV				LR	LR	15 34 24.2	
	comp=Z,30nm,19.3s,MS3.2,baz=41,slow=38						
TKM2	Tokmak 2	42.75	308	*e*P	P	15 16 21.7	-0.6
	2.3nm,0.7s,mb4.0						
WRA	Warramunga Arr	45.17	164	P	P	15 16 41.1	-0.9
	0.8nm,0.6s,mb3.7,baz=346,slow=9.1,SNR=7.5						
ASAR	Alice Springs	48.65	166	P	P	15 17 09.3	+0.2
	0.4nm,0.5s,mb3.7,baz=354,slow=13,SNR=9.9						
BRTR	Keskin Array B	74.17	307	P	P	15 20 00.5	-1.4
	1.3nm,0.8s,mb3.9,baz=111,slow=6.8,SNR=6.3						

*IDC **15** 15:15:09.6±1.1, 14°.28N×93°.26W, h0km, mb3.9/8, mb1 4.2/11, mb1mx4.0/25, mbtmp4.0/11, ML4.3/2, MS3.2/7, Ms1 3.2/7, ms1mx2.9/47, Error ellipse: s-maj=35.0km s-min=16.4km az=41.0*
*CASC **15** 15:15:12.6±1.6, 14°.46N×93°.33W, h20km±999km, MD4.0, mb3.9(NEIC)*
*ISCJB **15** 15:15:14.0±1.5, 14°.34N±0°.05×93°.27W±0°.03, h28km±12km, mb3.9/11, MS3.2/6, Error ellipse: s-maj=8.3km s-min=4.0km az=12.7*
*NEIC **15** 15:15:14.6±0.7, 14°.25N×93°.21W, h35km, mb3.9/10, MD4.4(MEX), Error ellipse: s-maj=13.8km s-min=7.6km az=206.0*
*MEX **15** 15:15:15.0±1.1, 14°.33N×93°.32W, h11km±24km, MD4.4*
ISC 15 15:15:13.1±1.2, 14°.35N±0°.05×93°.23W±0°.03, h8km±7km, n102, σ1°25/111, mb3.9/11, MS3.2/6, 22C-26D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.08	59	*i* P	Pg	15 15 32.7	-1.2
THIG				*e*S	Sg	15 15 48.2	+0.2
PCIG		1.34	0	*i* P	Pn	15 15 35.1	-3.0
PCIG				*e*S	Sb	15 15 52.5	-3.4
JAT	Jato	1.54	91	⇓*e*P	Pn	15 15 40.7	-0.2
TP2	Tecpan 2	2.18	78	*e*P	Pn	15 15 50.0	+0.4
TP2				*e*S	Sn	15 16 18.1	+1.3
CCIG	Comitan	2.19	29	*i* P	Pn	15 15 50.5	+0.7
CCIG				*e*S	Sn	15 16 15.7	-1.4
CCIG	Comitan	2.19	29	*e*P	Pn	15 15 50.2	+0.5
CCIG				*e*S	Sn	15 16 15.7	-1.4
FG6		2.28	85	*e*P	Pn	15 15 51.1	0.0
FG6				*e*S	Sn	15 16 21.8	+2.4
FUG	Fuego 3	2.31	87	*e*P	Pn	15 15 50.6	-0.9
TGIG		2.41	2	*i* P	Pn	15 15 52.4	-0.5
TGIG				*e*S	Sn	15 16 21.2	-1.4
PCG	Pacaya	2.54	89	*e*P	Pn	15 15 54.0	-0.6
APG	El Apazote	2.75	76	Pn	Pn	15 15 57.2	-0.3
	44nm,0.3s,baz=270,slow=11,SNR=154						
APG				Sn	Sn	15 16 32.1	+1.2
	47nm,0.3s,baz=230,slow=24,SNR=7.2						
APG	El Apazote	2.75	76	Pn	Pn	15 15 57.2	-0.3
APG				Sn	Sn	15 16 32.1	+1.2
NBG	Las Nubes	2.80	85	*e*P	Pn	15 15 59.5	+1.3
HUIG	Huatulco	3.12	297	*i* P	Pn	15 16 01.3	-1.3
HUIG				*e*S	Sn	15 16 37.5	-2.5
HUIG	Huatulco	3.12	297	*i* P	Pn	15 16 01.3	-1.3
HUIG				*i* S	Sn	15 16 34.9	-5.1
CMIG	Matias Romero	3.16	330	Pn	Pn	15 16 01.3	-1.8
	33nm,0.3s,baz=139,slow=13,SNR=288						
CMIG				Sn	Sn	15 16 41.5	+0.5
	50nm,0.3s,baz=356,slow=15,SNR=12						
CMIG	Matias Romero	3.16	330	Pn	Pn	15 16 01.3	-1.8
CMIG				Sn	Sn	15 16 41.5	+0.5
MRL	Marmol	3.50	78	⇑*e*P	Pn	15 16 08.1	+0.4
VHO	Vista Hermosa	4.33	309	*i* P	Pn	15 16 18.5	-0.7
VHO				*e*S	Sn	15 17 06.9	-2.9
VHO	Vista Hermosa	4.33	309	*i* P	Pn	15 16 18.5	-0.7
VHO				*e*S	Sn	15 17 06.9	-2.9
PNIG	Pinotepa	5.14	294	*i* P	Pn	15 16 28.9	-1.5
PNIG				*e*S	Sn	15 17 26.9	-3.1
PNIG	Pinotepa	5.14	294	*i* P	Pn	15 16 28.9	-1.5
PNIG				*e*S	Sn	15 17 26.9	-3.1
TEIG	Tepich	7.51	38	*e*P	Pn	15 17 01.0	-2.0
JTS	JuntasAbangare	9.04	116	Pn	Pn	15 17 22.0	-1.9
	0.7nm,0.3s,baz=310,slow=16,SNR=3.0						
JTS				Lg		15 19 38.8	
	baz=55,slow=23,SNR=7.7						
JTS	JuntasAbangare	9.04	116	Pn	Pn	15 17 21.9	-2.1
	25nm,0.8s						
JTS				Lg		15 19 38.8	
JCT	Junction City	17.16	340	*e*P	Pn	15 19 15.4	+2.2
	5.7nm,0.8s						
628A	Black Gap, Mar	17.51	331	⇑P	Pn	15 19 18.9	+1.2
	baz=18,SNR=5.7						
627A	Terlingua Ranc	17.72	330	⇓P	Pn	15 19 22.1	+1.8
	baz=18						
TXAR	Lajitas Array	17.76	329	P	Pn	15 19 22.5	+1.7
	0.2nm,0.3s,baz=156,slow=14,SNR=14						
TXAR				LR	LR	15 27 12.4	
	comp=Z,32nm,19.9s,baz=180,slow=41						
528A	Cox Ranch, San	18.03	332	⇓P	Pn	15 19 26.1	+1.9
	baz=18						
626A	Big Bend Ranch	18.18	328	⇓P	Pn	15 19 28.6	+2.7
	baz=18,SNR=13						
527A	Woodward Ranch	18.40	330	⇑P	Pn	15 19 29.7	+1.0
	baz=18						
428A	Kincaid Ranch,	18.47	333	⇑P	Pn	15 19 31.3	+1.8
	baz=18						
526A	Mary Lane Ranc	18.57	329	⇑P	Pn	15 19 32.2	+1.5
	baz=19,SNR=10						
427A	Hayter Ranch,	18.90	332	⇓P	Pn	15 19 36.5	+1.9
	baz=19						
426A	McDonald Obser	19.04	330	⇓P	Pn	15 19 37.5	+1.1
	baz=19,SNR=12						
328A	Wristen Ranch,	19.09	334	⇓P	Pn	15 19 37.3	+0.3
	baz=19,SNR=7.9						
425A	Indio Mountain	19.61	328	⇓P	Pn	15 19 42.7	-0.5
	baz=20,SNR=5.2						
325A	Bean Ranch, Si	20.07	330	⇑P	P	15 19 47.7	+0.7
	baz=20						
CLNB	Carlsbad	20.31	333	*e*P	P	15 19 49.2	-0.3

CPRX	Cap Rock	20.96	334	eP	P	15 19 54.9	-1.7
	28nm,0.9s						
125A	Gardner Draw,	20.99	332	⇓P	P	15 19 56.9	0.0
	baz=21,SNR=11						
Z26A	Caprock	21.22	334	⇓P	P	15 19 59.2	-0.2
	baz=21,SNR=15						
124A	Stringfield Ra	21.40	331	⇓P	P	15 20 02.3	+1.0
	baz=21,SNR=8.3						
Y27A	Causey	21.43	337	⇑P	P	15 20 00.8	-0.8
	baz=21						
Z25A	Roswell	21.54	333	⇓P	P	15 20 02.6	-0.3
	baz=22						
AMTX	Amarillo	21.82	341	⇑P	P	15 20 04.8	-1.0
	baz=22,SNR=12						
AMTX	Amarillo	21.82	341	eP	P	15 20 04.2	-1.6
	15nm,0.6s,mb4.6						
Z24A	Sheeppen Canyo	21.88	332	⇓P	P	15 20 07.1	+0.6
	baz=22,SNR=8.7						
320A	Kipp Ranch, An	21.97	323	⇑P	P	15 20 08.8	+1.3
	baz=22						
Y25A	Mesa, Roswell	22.08	334	⇑P	P	15 20 08.8	+0.2
	baz=22,SNR=10						
Z23A	Rita Site, Whi	22.23	330	⇓P	P	15 20 10.5	+0.3
	baz=22,SNR=8.9						
X26A	CR and CF Fran	22.27	336	⇓P	P	15 20 09.7	-0.9
	baz=22,SNR=5.7						
220A	Playas Peak, P	22.38	324	⇓P	P	15 20 13.5	+1.6
	baz=22						
Y24A	Capitan	22.41	333	⇑P	P	15 20 12.4	+0.3
	baz=22,SNR=9.6						
121A	Cookes Peak, D	22.45	326	⇑P	P	15 20 13.8	+1.3
	baz=22,SNR=6.3						
W27A	Bowe Ranch, En	22.45	338	⇓P	P	15 20 11.3	-1.3
	baz=22,SNR=6.4						
Y23A	Lovelace Mesa,	22.70	331	⇓P	P	15 20 16.7	+1.6
	baz=23,SNR=6.2						
TKL	Tuckaleechee C	22.85	20	LR	LR	15 30 28.6	
	comp=Z,53nm,18.0s,MS3.0,baz=224,slow=40						
219A	White Tail Can	22.88	323	⇑P	P	15 20 18.0	+0.9
	baz=23						
W25A	X Bar L Ranch,	23.11	336	⇓P	P	15 20 19.3	-0.3
	baz=23,SNR=8.9						
BNM	Barren Site	23.14	331	P	P	15 20 20.4	+0.4
	3.4nm,0.9s,mb3.8						
218A	Dragoon	23.33	322	⇓P	P	15 20 22.8	+0.9
	baz=23,SNR=5.4						
W24A	Lazy 6 Ranch,	23.49	334	⇑P	P	15 20 23.4	-0.1
	baz=23						
V25A	Rancho No Teng	23.71	336	⇓P	P	15 20 25.4	-0.2
	baz=24,SNR=7.0						
ANMO	Albuquerque	23.73	332	P	P	15 20 22.9	-2.9
	1.7nm,0.7s,mb3.6,baz=130,slow=8.3,SNR=4.1						
ANMO	Albuquerque	23.73	332	eP	P	15 20 22.8	-3.0
118A	Homack Ranch,	23.75	323	⇓P	P	15 20 26.7	+0.6
	baz=24,SNR=6.0						
Y20A	Horse Springs,	23.82	327	P	P	15 20 27.7	+1.0
	baz=24,SNR=9.9						
V24A	Rampart Ranch,	23.87	335	⇑P	P	15 20 27.5	+0.4
	baz=24,SNR=6.4						
U25A	Circle Dot Ran	24.13	337	⇑P	P	15 20 29.4	0.0
	baz=24						
X20A	Quemado	24.38	328	⇓P	P	15 20 33.1	+1.4
	baz=24,SNR=6.3						
T25A	Trinidad	24.79	338	⇑P	P	15 20 36.2	+0.7
	baz=25						
T24A	Torres, Weston	24.96	337	⇑P	P	15 20 37.8	+0.7
	baz=25						
S25A	Robets Cordova	25.26	339	⇓P	P	15 20 39.8	+0.1
	baz=25,SNR=6.7						
SDCO	Great Sand Dun	25.72	337	⇑P	P	15 20 44.0	0.0
	baz=26,SNR=6.3						
SDCO	Great Sand Dun	25.72	337	eP	P	15 20 43.8	-0.2
	3.5nm,1.1s,mb3.8						
ATAH	Atahualpa	25.93	144	LR	LR	15 27 49.9	
	comp=Z,29nm,20.2s,MS2.8,baz=116,slow=29						
SJG	San Juan	26.25	78	LR	LR	15 30 54.6	
	comp=Z,40nm,21.0s,MS2.9,baz=258,slow=36						
PDAR	Pinedale Array	31.62	337	P	P	15 21 35.9	-0.6
	0.3nm,0.3s,mb3.6,baz=154,slow=15,SNR=3.6						
REDW	Red Top Meadow	32.63	336	eP	P	15 21 44.6	-0.7
NVAR	Mina Array Bea	32.66	322	P	P	15 21 45.5	-0.2
	2.3nm,0.7s,mb4.2,baz=137,slow=8.7,SNR=23						
NVAR				PcP	PcP	15 24 29.9	-1.7
	0.4nm,0.6s,baz=138,slow=4.2,SNR=3.8						
HLID	Hailey	34.30	332	eP	P	15 21 59.2	-0.7
LPAZ	La Paz	39.26	140	P	P	15 22 40.7	-1.8
	0.3nm,0.4s,mb3.3,baz=0.0,slow=6.1,SNR=2.6						
SCHQ	Schefferville	45.32	21	LR	LR	15 43 47.5	
	comp=Z,46nm,20.1s,MS3.4,baz=106,slow=38						
YKA	Yellowknife Ar	50.42	347	P	P	15 24 09.0	-1.7
	3.4nm,0.7s,mb4.5,baz=148,slow=7.4,SNR=6.5						
PLCA	Paso Flores	58.70	160	LR	LR	15 45 50.0	
	comp=Z,66nm,18.4s,MS3.8,baz=257,slow=31						
RES	Resolute Bay	60.34	359	LR	LR	15 54 31.7	
	comp=Z,30nm,18.8s,MS3.5,baz=142,slow=39						
ILAR	Eielson Array	62.05	337	P	P	15 25 31.9	-2.0
	0.9nm,0.6s,mb4.1,baz=166,slow=5.1,SNR=15						
NOA	NORSAR Array B	84.40	28	P	P	15 27 42.8	-3.1
	0.6nm,0.7s,mb3.8,baz=286,slow=5.1,SNR=3.0						
ARCES	ARCESS Array B	86.17	18	P	P	15 27 52.1	-2.5
	1.1nm,0.9s,mb4.1,baz=272,slow=6.1,SNR=3.7						
MKAR	Makanchi Array	119.01	4	PKP	PKPdf	15 33 59.4	-3.2
	0.2nm,0.6s,baz=318,slow=1.9,SNR=2.6						
CMAR	Chiang Mai Arr	145.26	339	PKPbc	PKPbc	15 34 49.7	-2.3
	1.9nm,0.7s,baz=331,slow=3.3,SNR=14						

IDC ***15*** *15:39:51.6±1.3, 8.91S×125.29E, h0km, mb3.7/3, mb1 3.9/6, mb1mx3.7/17, mbtmp3.8/6, ML3.6/3, Error ellipse: s-maj=82.3km s-min=21.6km az=72.0*

NEIC ***15*** *15:39:56.5±0.5, 8.85S×125.61E, h35km, mb4.6/1, Error ellipse: s-maj=31.5km s-min=7.9km az=64.0*

ISCJB ***15*** *15:39:57.3±2.9, 9.0S±0.1×125.6E±0.1, h67km±30km, mb3.9/4, Error ellipse: s-maj=27.7km s-min=12.0km az=148.0*

ISC 15 15:39:59.9±3.5, 9.0S±0.2×125.7E±0.1, h74km±39km, n11, σ0=75/15, mb3.9/4, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	9.00	180		Pn	15 42 06.7	-0.5
	0.8nm,0.3s,baz=5.3,slow=9.2,SNR=28						
FITZ				Sn	Sn	15 43 47.2	+0.2
	1.7nm,0.3s,baz=127,slow=15,SNR=5.9						
FITZ	Fitzroy Crossi	9.00	180	eP	Pn	15 42 06.8	-0.4
FITZ				Sn	Sn	15 43 47.2	+0.2
WRA	Warramunga Arr	13.69	143	Pn	Pn	15 43 10.2	-0.5
	0.3nm,0.3s,baz=317,slow=13,SNR=24						
WRA				Sn	Sn	15 45 41.1	-0.1
	0.2nm,0.3s,baz=319,slow=24,SNR=5.5						
WB2	Warramunga Arr	13.70	143	eP	Pn	15 43 11.2	+0.4
ASAR	Alice Springs	16.53	153	Pn	Pn	15 43 49.2	+2.1
	0.1nm,0.3s,baz=320,slow=10.0,SNR=12						
ASAR				Sn	Sn	15 46 49.3	-0.8
	0.1nm,0.3s,baz=330,slow=24,SNR=3.8						
SONM	Songino Array	59.15	345	P	P	15 49 53.4	+0.6
	0.2nm,0.2s,mb3.7,baz=146,slow=8.0,SNR=2.5						
SONM	Songino Array	59.15	345	P	P	15 49 53.4	+0.6
MK31	Makanchi Array	67.69	329	eP	P	15 50 48.5	-0.7
MKAR	Makanchi Array	67.69	329	P	P	15 50 48.4	-0.8
	1.0nm,0.6s,mb3.8,baz=133,slow=7.5,SNR=12						
AML	Almayashu	69.63	321	eP	P	15 51 01.9	+0.5
	5.4nm,0.9s,mb4.4						
ZALV	Zalesovo Beam	71.60	336	P	P	15 51 12.9	-0.2
	0.6nm,0.5s,mb3.7,baz=125,slow=9.0,SNR=3.3						

ISCJB ***15*** *15:49:11.4±0.5, 30.64N±0.07×83.17E±0.05, h10km, mb3.7/9, Error ellipse: s-maj=10.3km s-min=5.8km az=165.9*

IDC ***15*** *15:49:11.5±1.2, 30.70N×83.27E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/24, mbtmp3.7/8, MS3.9/1, Ms1 3.9/1, ms1mx2.4/39, Error ellipse: s-maj=47.4km s-min=21.1km az=59.0*

NEIC ***15*** *15:49:12.8±0.7, 30.63N×83.13E, h10km, mb3.7/2, Error ellipse: s-maj=17.1km s-min=8.4km az=50.0*

NDI ***15*** *15:49:28.4±2.6, 31.29N×82.22E, h10km, ML3.4, mb3.7(NEIC)*

ISC 15 15:49:13.0±0.5, 30.66N±0.07×83.13E±0.05, h10km, n24, σ0=92/24, mb3.7/9, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTH	Pithoragarh	2.76	247	ePKP	Pg	15 50 10.0	+4.1
PTH				ex	x	15 50 56.1	
JOSI	Joshimath	3.08	269	ePKP	Pb	15 50 07.4	-0.5
JOSI				eS	Sn	15 50 38.1	-0.6
JOSI				AML	AML	15 50 57.9	
	comp=E,239nm,0.8s						
JOSI				AML	AML	15 50 59.5	
	comp=N,266nm,0.8s						
KLP	Kalpa	4.28	283	ePKP	Pn	15 50 22.1	+3.9
KLP				ex	x	15 50 51.5	
DDI	Dehra Dun	4.39	267	ex	Pb	15 50 29.0	-1.3
SONA	Sohna	5.79	247	ePKP	Pn	15 50 47.9	+8.8
SONA				eS	Sn	15 51 47.1	+1.5
KHET	Khetri	6.89	250	ex	x	15 51 50.1	
LSA	Lhasa	7.01	96	eP	Pn	15 50 56.8	+1.0
	comp=N,6.4nm,0.8s						
MK31	Makanchi Array	16.12	358	P	Pn	15 53 01.4	+1.8
MKAR	Makanchi Array	16.12	358	Pn	Pn	15 53 01.1	+1.4
	comp=N,0.2nm,0.3s,baz=189,slow=12,SNR=6.9						
CMAR	Chiang Mai Arr	18.80	127	P	Pn	15 53 37.5	+4.3
	comp=N,0.0nm,0.3s,baz=304,slow=8.4,SNR=3.3						
KURK	Kurchatov	20.32	352	eP	P	15 53 49.2	+0.2
	comp=N,5.7nm,1.3s						
ENH	Enshi	22.71	84	eP	P	15 54 14.3	-0.6
ZAA0	Zalesovo Array	23.30	3	eP	P	15 54 19.4	-1.6
ZALV	Zalesovo Beam	23.30	3	P	P	15 54 21.1	+0.1
	comp=N,0.6nm,0.5s,mb3.3,baz=205,slow=12,SNR=3.3						
SONM	Songino Array	24.73	40	P	P	15 54 33.6	-0.8
	comp=N,0.9nm,0.8s,mb3.4,baz=227,slow=10.0,SNR=5.5						
ABKAR	Akbulak array	25.54	323	eP	P	15 54 41.5	-0.2
	comp=N,0.9nm,0.6s,mb3.5						
FINES	FINESS Array B	47.92	327	P	P	15 57 51.5	+0.3
	comp=N,2.8nm,0.9s,mb4.3,baz=138,slow=8.5,SNR=3.3						
ARCES	ARCESS Array B	50.41	337	P	P	15 58 09.8	-0.4
	comp=N,1.3nm,0.8s,mb4.0,baz=115,slow=5.5,SNR=3.9						
HFS	Hagfors	53.79	324	LR	LR	16 22 02.9	
	comp=N,98nm,18.6s,baz=66,slow=37						
NOA	NORSAR Array B	55.01	326	P	P	15 58 44.7	+0.4
	comp=N,0.9nm,0.8s,mb3.8,baz=87,slow=7.4,SNR=2.7						
WRA	Warramunga Arr	70.38	129	P	P	16 00 27.5	+0.1
	comp=N,1.2nm,0.8s,mb3.9,baz=324,slow=6.3,SNR=12						
WB2	Warramunga Arr	70.39	129	eP	P	16 00 27.3	-0.1
ASAR	Alice Springs	72.72	132	P	P	16 00 41.0	-0.4
	comp=N,0.4nm,0.7s,mb3.5,baz=312,slow=6.1,SNR=5.7						
ILAR	Eielson Array	77.22	20	P	P	16 01 06.0	-0.9
	comp=N,0.8nm,1.1s,mb3.6,baz=308,slow=6.2,SNR=4.9						

MOS ***15*** *15:50:49.6±0.9, 4.94S×30.15E, h10km, mb4.9/34, MS4.4/10, Error ellipse: s-maj=11.9km s-min=5.6km az=87.6*

ISCJB ***15*** *15:50:49.5±0.2, 4.95S±0.03×30.09E±0.05, h10km, mb4.7/100, MS4.5/39, Error ellipse: s-maj=7.5km s-min=3.8km az=5.8*

IDC ***15*** *15:50:49.8±0.4, 4.97S×30.07E, h0km, mb4.3/28, mb1 4.4/29, mb1mx4.4/34, mbtmp4.3/29, ML4.7/1, MS4.4/23, Ms1 4.4/23, ms1mx4.2/33, Error ellipse: s-maj=18.4km s-min=9.3km az=94.0*

BJI ***15*** *15:50:49.0, 5.00S×30.10E, h10km, mB5.0/16, mb5.1/20, Ms5.1/18, Ms7 4.7/20*

NEIC ***15*** *15:50:51.5±0.2, 4.98S×30.15E, h10km, mb4.8/33, Error ellipse: s-maj=7.1km s-min=5.0km az=80.0*

NEIC Felt at Kigoma. Also felt at Bujumbura, Burundi and Kigali, Rwanda.

GCMT ***15*** *15:50:58.4±0.3, 4.93S×29.90E, h29km±1km, MW5.2, Moment Tensor Solution. s40,c58; s81,c120; Moment tensor: Scale 10^16Nm; Mrr0.01±.20; Mθθ-6.50±.17; Mφφ6.49±.19; Mrθ-0.08±.30; Mθφ0.76±.16; Mφr-1.20±.32; Best double couple: M0=6.70000×10^16 NP1:φs138.00000°, δ83.00000°, λ173.00000°. NP2:φs229.00000°, δ83.00000°, λ7.00000°. Principal axes: T 6.7500, Plg10.0000°, Azm93.0000°; N -0.2000, Plg80.0000°, Azm273.0000°; P -6.5500, Plg0.0000°, Azm3.0000°; Data Used: II IU G IC CN.*

DJA ***15*** *15:51:00, 5.81S×31.38E, h10km, mb5.3/7*

SZGRF ***15*** *15:51:15.0, 2.07S×30.37E, h38km, mb4.8, MS4.3, Lake Tanganyika region*

ISC 15 15:50:51.6±2.4, 4.98S±0.03×30.13E±0.05, h10km±14km, h33km±2.1km: pP-P, n250, σ0=85/237, mb4.7/99, MS4.5/39, 19C-8D, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	Kilima Mbogo	8.08	62	Pn	Pn	15 52 47.6	-1.5
	9.9nm,0.3s,baz=181,slow=24,SNR=202						
KMBO				Sn	Sn	15 54 15.5	-5.0
	163nm,0.3s,baz=297,slow=10.0,SNR=10						
KMBO				Lg		15 55 02.7	
	160nm,0.3s,baz=181,slow=19,SNR=7.2						
KMBO	Kilima Mbogo	8.08	62	eP	Pn	15 52 47.6	-1.4
	144nm,0.6s						
KMBO				eSn	Sn	15 54 14.1	-6.4
KMBO	Kilima Mbogo	8.08	62	eP	Pn	15 52 47.6	-1.4
KMBO				e		15 54 14.1	
KMBO				pmax	pmax		
	comp=Z,144nm,0.6s						
MSNA	Messina	17.26	180	eP	Pn	15 54 50.1	-2.8
MSNA				AMB	AMB	15 54 56.0	
	comp=Z,97nm,2.5s						
TSUM	Tsumeb	18.69	220	P	Pn	15 55 06.9	-3.6
	comp=Z,2.2nm,0.3s,baz=27,slow=9.8,SNR=9.2						
TSUM				S	Sn	15 58 22.4	-17
	comp=Z,3.6nm,0.3s,baz=264,slow=9.2,SNR=2.8						
TSUM				Lg		16 00 40.0	
	comp=Z,3.5nm,0.3s,baz=85,slow=19,SNR=3.0						
TSUM				LR	LR	16 02 07.2	
	comp=Z,528nm,21.4s,baz=80,slow=36						
TSUM	Tsumeb	18.69	220	eP	Pn	15 55 06.5	-4.0
	comp=Z,25nm,0.7s						
TSUM				eS	Sn	15 58 34.7	-5.1
LBTB	Lobatse	20.39	192	P	P	15 55 28.6	-0.1
	comp=Z,21nm,0.6s,baz=18,slow=11,SNR=36						
LBTB				S	S	15 59 18.6	+1.4
	comp=Z,73nm,1.0s,baz=280,slow=17,SNR=3.4						
LBTB				Lg		16 01 37.0	
	comp=Z,77nm,0.7s,baz=294,slow=23,SNR=5.9						
LBTB				LR	LR	16 03 37.6	
	comp=Z,2μm,20.3s,MS4.4,baz=26,slow=38						
LBTB	Lobatse	20.39	192	eP	P	15 55 28.3	-0.4
	comp=Z,0.6nm,0.6s						
LBTB	Lobatse	20.39	192	eP	P	15 55 28.3	-0.4
LBTB				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SLR	Silverton	20.71	185	⇑iP	P	15 55 33.3	+1.1
SLR				AMB	AMB	15 55 44.8	
	comp=Z,190nm,2.8s						
ATD	Arta Tunnel	20.72	38	Lg		16 01 45.9	
	comp=Z,19nm,0.9s,baz=212,slow=16,SNR=4.3						
ATD				LR	LR	16 03 55.2	
	comp=Z,530nm,18.9s,MS3.9,baz=201,slow=38						
KSR	Koster	20.98	188	⇑iP	P	15 55 36.0	+0.9
KSR				AMB	AMB	15 55 47.7	
	comp=Z,119nm,1.2s						
ERPM	east rand prop	21.32	185	⇑iP	P	15 55 38.5	-0.2
ERPM				AMB	AMB	15 55 40.1	
	comp=Z,127nm,2.1s,mb4.9						
KLOF	Kloof	21.38	186	eP	P	15 55 40.5	+1.0
KLOF				AMB	AMB	15 55 41.0	
	comp=Z,106nm,1.4s,mb5.0						
ABPO	Ambohimpanom	21.75	131	P	P	15 55 42.9	-0.5
	comp=Z,40nm,1.1s,mb4.8						
ABPO	Ambohimpanom	21.75	131	P	P	15 55 42.9	-0.5
ABPO				pmax	pmax		
	comp=Z,39nm,1.1s,mb4.8						
PRYS	Parys	21.98	187	⇑iP	P	15 55 46.2	+0.4
PRYS				AMB	AMB	15 55 47.1	
	comp=Z,149nm,1.3s,mb5.3						
POGA	Pongola	22.31	177	eP	P	15 55 50.1	+0.8
POGA				AMB	AMB	15 56 12.9	
	comp=Z,117nm,5.1s						
SWZ	Schweizer	22.55	191	⇑iP	P	15 55 51.5	-0.3
SWZ				AML	AML	15 56 09.1	
	comp=Z,146nm,6.5s						
SEK	Senekal	23.34	186	⇑iP	P	15 55 59.5	-0.7
SEK				AMB	AMB	15 56 16.7	
	comp=Z,218nm,1.2s,mb5.5						
BOSA	Boshof	23.95	191	P	P	15 56 05.8	-0.3
	comp=Z,59nm,0.6s,mb5.2,baz=10,slow=9.4,SNR=134						
BOSA				S	S	16 00 21.4	-1.3
	comp=Z,9.3nm,0.6s,baz=13,slow=18,SNR=1.4						
BOSA				Lg		16 03 24.6	
	comp=Z,88nm,1.0s,baz=104,slow=19,SNR=2.1						
BOSA				LR	LR	16 05 34.7	
	comp=Z,2μm,18.1s,MS4.5,baz=14,slow=37						
BOSA	Boshof	23.95	191	eP	P	15 56 05.2	-0.9
	comp=Z,0.9nm,0.2s,mb3.9						
BOSA	Boshof	23.95	191	eP	P	15 56 05.2	-0.9
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb3.9						
UPI	Upington	24.73	199	eP	P	15 56 12.4	-0.8
UPI				AMB	AMB	15 56 52.0	
	comp=Z,125nm,3.3s						
KSD	Kokstad	25.43	181	eP	P	15 56 18.8	-0.7
KSD				AMB	AMB	15 56 46.9	
	comp=Z,461nm,4.1s						
PKA	Prieska	25.53	195	⇑iP	P	15 56 19.4	-1.0
PKA				AMB	AMB	15 56 20.6	
	comp=Z,16nm,2.6s,mb4.1						
HVD	Gariep Dam	25.86	189	eP	P	15 56 22.7	-0.8
HVD				AMB	AMB	15 56 26.3	
	comp=Z,165nm,5.0s						
KOMG	Komaggas	27.42	204	eP	P	15 56 37.5	0.0
KOMG				AMB	AMB	15 56 51.1	
	comp=Z,85nm,2.5s,mb4.8						
SOE	Somerset East	27.92	188	eP	P	15 56 47.8	+5.9
SOE				AMB	AMB	15 56 59.2	
	comp=Z,116nm,4.4s						
CVNA	Calvinia	28.10	199	eP	P	15 56 42.1	-1.5
CVNA				AML	AML	15 56 45.5	
	comp=Z,219nm,6.6s						
GRM	Grahamstown	28.39	186	eP	P	15 56 48.2	+2.0
GRM				AMB	AMB	15 57 09.5	
	comp=Z,130nm,2.2s,mb5.2						
SUR	Sutherland	28.62	197	P	P	15 56 48.0	-0.2
	comp=Z,29nm,1.0s,mb5.0,baz=108,slow=1.6,SNR=5.9						
SUR				Lg		16 05 49.1	
	comp=Z,74nm,1.1s,baz=129,slow=18,SNR=2.9						
SUR				LR	LR	16 08 38.4	
	comp=Z,2μm,19.0s,MS4.7,baz=27,slow=37						
SUR	Sutherland	28.62	197	eP	P	15 56 48.2	0.0
TORD	Torodi Ar. Bea	33.50	303	P	P	15 57 30.3	-1.2
	comp=Z,3.5nm,0.7s,mb4.4,baz=113,slow=7.7,SNR=19						
TORD				LR	LR	16 11 52.4	
	comp=Z,696nm,21.3s,MS4.3,baz=120,slow=38						
TORD	Torodi Ar. Bea	33.50	303	P	P	15 57 30.3	-1.2
TORD				LR	LR	16 11 52.4	
KIC	Kosan Boka	36.59	288	eP	P	15 58 03.4	+5.2
	comp=Z,71nm,0.9s,mb5.5						
TAM	Tamanrasset	36.61	320	eP	pP	15 58 08.3	+6.9
	comp=Z,6.2nm,1.0s						
TAM	Tamanrasset	36.61	320	eP	pP	15 58 08.3	+6.9
TAM				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
DBIC	Dimbokro	36.79	288	P	P	15 58 05.1	+5.2
	comp=Z,16nm,0.9s,mb4.9,baz=88,slow=9.3,SNR=14						
DBIC				LR	LR	16 13 02.1	
	comp=Z,701nm,18.0s,MS4.5,baz=83,slow=36						
DBIC	Dimbokro	36.79	288	P	P	15 58 01.1	+1.2
	comp=Z,81nm,1.6s,mb5.3						
DBIC				LR	LR	16 13 02.1	
DBIC	Dimbokro	36.79	288	P	P	15 58 01.1	+1.2
DBIC				pmax	pmax		
	comp=Z,81nm,1.6s						
LIC	Lamto	36.82	287	eP	P	15 58 05.2	+5.0
	comp=Z,91nm,1.1s,mb5.5						
TIC	Toumodi	36.94	288	eP	P	15 58 06.4	+5.2
	comp=Z,40nm,0.2s						
TIC	Toumodi	36.94	288	eP	P	15 58 06.4	+5.2
TIC				pmax	pmax		
	comp=Z,40nm,0.2s						
ASF	Jabal al Asfar	37.51	9	P	P	15 58 06.6	+1.0
	comp=Z,1.6nm,0.5s,mb4.0,baz=112,slow=1.1,SNR=4.9						
ASF	Jabal al Asfar	37.51	9	P	P	15 58 06.6	+0.9
MALT	Malatya	43.76	9	eP	P	15 58 58.4	+1.1
	comp=Z,24nm,1.4s,mb4.7						
MALT	Malatya	43.76	9	eP	P	15 58 58.4	+1.1
MALT				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.7						
MALT	Malatya	43.76	9	⇑iP	P	15 58 58.7	+1.4
MALT	Malatya	43.76	9	P	P	15 58 59.0	+1.7
BR131	Keskin Array S	44.60	4	eP	P	15 59 03.9	-0.1
	comp=Z,8.2nm,0.8s,mb4.6						
BRTR	Keskin Array B	44.60	4	P	P	15 59 04.6	+0.6
	comp=Z,7.6nm,1.0s,mb4.5,baz=181,slow=9.4,SNR=28						
BRTR	Keskin Array B	44.60	4	iP	P	15 59 04.8	+0.8
BRTR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KEST	Kesra	44.95	336	P	P	15 59 06.8	-0.1
	comp=Z,1.7nm,0.9s,mb3.9,baz=94,slow=19,SNR=3.8						
GNI	Garni	46.88	15	eP	P	15 59 20.0	-2.0
GNI				pmax	pmax		
	comp=Z,12nm,2.3s						
GNI				MLR	MLR		
	comp=Z,293nm,16.0s						
ZEI	Tsey	49.14	13	eP	P	15 59 39.7	+0.2
ZEI				e		16 01 33.9	
ZEI				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.1						
ZEI				MLR	MLR		
	comp=Z,764nm,14.0s,MS4.8						
MDT	Midelt	50.00	321	P	P	15 59 45.5	-0.7
	comp=Z,1.7nm,0.9s,mb4.1,baz=169,slow=10,SNR=2.6						
KIV	Kislovodsk	50.01	12	eP	P	15 59 45.9	-0.2
KIV				eS	S	16 06 54.7	-2.2
KIV				eSS	SS	16 10 30.9	+0.7
KIV				eSSS		16 11 53.5	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
BBTS	Babate	50.20	294	P	P	15 59 54.6	+6.5
	comp=Z,20nm,0.8s,mb5.2,baz=296,slow=3.2,SNR=4.3						
BBTS				LR	LR	16 20 43.9	
	comp=Z,753nm,18.7s,MS4.7,baz=277,slow=36						
MLR	Muntele Rosu	50.38	356	⇓P	P	15 59 50.0	+1.1
MLR	Muntele Rosu	50.38	356	⇓iP	P	15 59 50.0	+1.1
GZR	Gura Zlata	50.58	353	⇓P	P	15 59 50.8	+0.4
GZR	Gura Zlata	50.58	353	⇓iP	P	15 59 50.8	+0.4
BZS	Buzias	50.94	352	⇓P	P	15 59 54.2	+1.1
BZS	Buzias	50.94	352	⇓iP	P	15 59 54.2	+1.1

comp=Z,4.9nm,1.0s,mb4.5
DAVOX **Davos/Dischmat 54.57 343** P **P** **16 00 19.9 -0.1**
comp=Z,1.8nm,0.5s,mb4.4,baz=133,slow=19
DAVOX **Davos/Dischmat 54.57 343** P **P** **16 00 19.9 0.0**
DAVA **Damuels 55.03 343** ⇑ *i*P **P** **16 00 22.9 -0.3**
comp=Z,15nm,0.8s,mb5.1
VRAC **Vranov 55.34 349** P **P** **16 00 24.3 -1.1**
comp=Z,1.3nm,0.3s,mb4.4,baz=167,slow=18,SNR=4.2
VRAC **Vranov 55.34 349** P **P** **16 00 24.3 -1.1**
KIEV **Kiev 55.46 359** *e*P **P** **16 00 25.5 -0.8**
comp=Z,12nm,1.2s,mb4.8
KIEV **Kiev 55.46 359** *e*P **P** **16 00 25.5 -0.8**
KIEV pmax pmax
comp=Z,13nm,1.2s,mb4.8
GEC2 **GERESS Array S 55.49 347** *e*P **P** **16 00 26.7 +0.1**
comp=Z,18nm,1.6s,mb4.8
GEC2 **GERESS Array S 55.49 347** *e*P **P** **16 00 26.7 +0.1**
comp=Z,18nm,1.6s,mb4.8
GEC2 **GERESS Array S 55.49 347** *e*P **P** **16 00 26.7 +0.1**
GEC2 pmax pmax
comp=Z,18nm,1.6s,mb4.8
GERES **GERESS Array B 55.49 347** P **P** **16 00 26.5 -0.1**
comp=Z,1.5nm,0.9s,mb4.0,baz=170,slow=9.2,SNR=13
GERES **GERESS Array B 55.49 347** P **P** **16 00 26.5 -0.1**
KHC **Kasperske Hory 55.79 347** *e*P **P** **16 00 27.8 -0.9**
KHC *e*pP pP 16 00 36.1 +4.2
KHC AMS AMS 16 27 00.0
comp=Z,400nm,16.4s
BBS **Basel-Blauen 55.90 342** *e*P **P** **16 00 29.5 0.0**
BBS **Basel-Blauen 55.90 342** *e*P **P** **16 00 29.5 0.0**
WET **Wettzell 55.96 346** *e*P **P** **16 00 29.7 -0.2**
comp=Z,10.0nm,1.5s,mb4.6
WET *e*pP pP 16 00 40.2 +7.0
WET **Wettzell 55.96 346** *e*P **P** **16 00 29.7 -0.2**
comp=Z,10.0nm,1.5s,mb4.6
WET *e*pP pP 16 00 40.2 +7.0
WET **Wettzell 55.96 346** *e*P **P** **16 00 29.7 -0.2**
WET pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
PYM **Petit Puy Mans 55.99 337** *e*P **P** **16 00 31.7 +1.5**
PYM **Petit Puy Mans 55.99 337** *e*P **P** **16 00 31.7 +1.5**
SPAK **Spaichingen-Ko 56.08 343** *e*P **P** **16 00 30.7 -0.1**
FELD **Feldberg im Sc 56.11 342** *e*P **P** **16 00 31.0 -0.1**
AGO **Saint Agoulin 56.20 338** *e*P **P** **16 00 33.1 +1.4**
DPC **Dobruska-Polom 56.39 349** *e*P **P** **16 00 32.5 -0.5**
DPC *e* 16 00 39.9
DPC MLR MLR
comp=Z,200nm,17.0s,MS4.3
DPC **Dobruska-Polom 56.39 349** *e*P **P** **16 00 32.5 -0.5**
DPC *e*pP pP 16 00 39.9 +3.7
DPC AMS AMS 16 29 40.0
comp=Z,200nm,17.0s
PRU **Pruhonice 56.39 348** AMS AMS 16 25 50.0
comp=Z,200nm,15.9s
BFO **Black Forest 56.42 343** *e*P **P** **16 00 33.5 +0.2**
comp=Z,14nm,1.5s,mb4.8
BFO **Black Forest 56.42 343** *e*P **P** **16 00 33.5 +0.2**
comp=Z,14nm,1.5s,mb4.8
BFO **Black Forest 56.42 343** *e*P **P** **16 00 33.5 +0.2**
BFO pmax pmax
comp=Z,14nm,1.5s,mb4.8
VSR **Storozhevoye 56.51 7** *e*P **P** **16 00 40.3 +6.5**
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,1.0nm,0.4s
ROTZ **Rotzenmuhle 56.70 346** *e*P **P** **16 00 35.2 0.0**
comp=Z,5.0nm,1.1s,mb4.5
ROTZ *e*pP pP 16 00 45.6 +7.1
GRA1 **Grafenberg Arr 56.87 345** *e*P **P** **16 00 36.4 0.0**
comp=Z,29nm,1.5s,mb5.1
GRA1 *e*pP pP 16 00 47.0 +7.3
GRA1 LR LR
comp=Z,300nm,22.0s,MS4.3
GRF **Grafenberg Arr 56.87 345** *e*P **P** **16 00 36.4 0.0**
comp=Z,29nm,1.5s,mb5.1
GRF *e*pP pP 16 00 47.0 +7.3
GRF *e*L 16 24 25.4
comp=Z,266nm,22.0s
GRF **Grafenberg Arr 56.87 345** *e*P **P** **16 00 36.4 0.0**
comp=Z,29nm,1.5s,mb5.1
GRF *e*pP pP 16 00 47.0 +7.3
GRF LR LR
comp=Z,300nm,22.0s,MS4.3
GRF **Grafenberg Arr 56.87 345** *e*P **P** **16 00 36.4 0.0**
GRF pmax pmax
comp=Z,29nm,1.5s,mb5.1
GRF MLR MLR
comp=Z,300nm,22.0s,MS4.3
GRF **Grafenberg Arr 56.87 345** *e*P **P** **16 00 36.4 0.0**
GRF pmax pmax
comp=Z,29nm,1.5s,mb5.1
GRF MLR MLR
comp=Z,300nm,22.0s,MS4.3
THEF **They Montfort 57.06 341** *e*P **P** **16 00 37.6 -0.2**
THEF **They Montfort 57.06 341** *e*P **P** **16 00 37.6 -0.2**
NKC **Novy Kostel 57.08 347** *e*P **P** **16 00 37.9 0.0**
NKC *e* 16 00 46.1
NKC **Novy Kostel 57.08 347** *e*P **P** **16 00 37.9 0.0**
NKC *e*x x 16 00 46.1
GUNZ **Gunzen 57.23 347** *e*P **P** **16 00 39.0 +0.1**
comp=Z,18nm,1.7s,mb4.8
GUNZ *e*pP pP 16 00 49.8 +7.6
TANN **Tannenbergstha 57.25 347** *e*P **P** **16 00 39.1 0.0**
comp=Z,8.0nm,1.3s,mb4.6
WERD **Werda 57.31 347** *e*pP pP 16 00 50.2 +7.4
BRG **Berggiesshubel 57.35 348** *e*P **P** **16 00 39.3 -0.5**
comp=Z,6.0nm,1.3s,mb4.5
BRG **Berggiesshubel 57.35 348** *e*(P) **P** **16 00 48.6 +8.8**
BRG
comp=Z,1.2nm,0.6s,mb4.1
BRG
comp=Z,434nm,16.8s
BRG
comp=N,169nm,20.5s
BRG
comp=E,229nm,20.5s
BRG **Berggiesshubel 57.35 348** *e*P **P** **16 00 48.6 +8.8**
BRG pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
BRG MLR MLR
comp=Z,700nm,16.8s,MS4.8
BRG MLR MLR
comp=N,260nm,20.5s,MS4.3
BRG MLR MLR
comp=E,101nm,20.5s,MS4.3
MOX **Moxa 57.66 346** *e*P **P** **16 00 42.2 +0.2**
comp=E,19nm,1.6s,mb4.9
MOX **Moxa 57.66 346** *e*P **P** **16 00 42.1 +0.1**
comp=Z,8.0nm,1.3s,mb4.6
MOX *e*pP pP 16 00 52.4 +7.2
MOX **Moxa 57.66 346** *e*P **P** **16 00 42.2 +0.2**
comp=Z,19nm,1.6s,mb4.9
MOX **Moxa 57.66 346** *e*P **P** **16 00 42.2 +0.2**
MOX pmax pmax
comp=Z,19nm,1.6s,mb4.9
CLL **Collm 57.96 347** *e*P **P** **16 00 43.7 -0.4**
comp=Z,12nm,1.5s,mb4.7
CLL **Collm 57.96 347** *e*P **P** **16 00 51.0 +6.9**
comp=Z,7.0nm,1.3s,mb4.5
CLL *e* 16 01 01.0
CLL LR LR
comp=Z,200nm,21.7s,MS4.2
CLL **Collm 57.96 347** *e*P **P** **16 00 51.0 +6.9**
CLL pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
CLL MLR MLR
comp=Z,200nm,21.7s,MS4.2
CLL **Collm 57.96 347** *e*P **P** **16 00 44.0 -0.1**
comp=Z,12nm,1.6s,mb4.7
CLL *e*(sP) sP 16 00 51.0 +2.4
comp=Z,7.0nm,1.3s
CLL *e* 16 01 01.0
CLL *e*SS SS 16 12 42.0 +6.4
CLL Lm 16 26 00.0
comp=Z,200nm,21.7s
RUP **Ruppelstein 58.02 343** *e*P **P** **16 00 44.3 -0.3**
RUP **Ruppelstein 58.02 343** *e*P **P** **16 00 44.3 -0.3**
TNS **Taunus Mts 58.09 344** *e*P **P** **16 00 45.4 +0.4**
comp=Z,17nm,0.9s,mb5.1
TNS *e*pP pP 16 00 55.9 +7.6
TNS **Taunus Mts 58.09 344** *e*P **P** **16 00 45.4 +0.4**
comp=Z,17nm,0.9s,mb5.1
TNS *e*pP pP 16 00 55.9 +7.6
TNS **Taunus Mts 58.09 344** *e*P **P** **16 00 45.4 +0.4**
TNS pmax pmax
comp=Z,17nm,0.9s,mb5.1
UBBA **Unterbreizbach 58.22 345** *e*P **P** **16 00 46.1 +0.2**
comp=Z,13nm,1.4s,mb4.8
CLZ **Clausthal 59.06 346** *e*P **P** **16 00 52.1 +0.3**
comp=Z,14nm,1.6s,mb4.7
CLZ **Clausthal 59.06 346** *e*P **P** **16 00 52.1 +0.3**
comp=Z,14nm,1.6s,mb4.7
CLZ **Clausthal 59.06 346** *e*P **P** **16 00 52.1 +0.3**
CLZ pmax pmax
comp=Z,14nm,1.6s,mb4.7
BUG **Bochum--Univer 59.52 344** *e*P **P** **16 00 55.7 +0.8**
comp=Z,26nm,1.3s,mb5.1
BUG *e*pP pP 16 01 06.3 +8.1
comp=Z,28nm,1.1s
NRDL **Niedersach Rie 59.73 346** *e*P **P** **16 00 57.3 +0.9**
comp=Z,38nm,1.6s,mb5.2
NRDL *e*pP pP 16 01 07.8 +8.2
comp=Z,43nm,1.1s
ABKAR **Akbulak array 59.92 22** *e*P **P** **16 00 56.6 -1.1**
OBN **Obninsk 60.12 4** *e*P **P** **16 00 56.7 -2.3**
OBN *e* 16 01 41.7
OBN *e*SS SS 16 13 13.2 +3.9
OBN pmax pmax
comp=Z,11nm,0.7s,mb5.0
KK31 **Karatay Array 60.19 33** Pn **P** **16 00 59.5 -0.3**
comp=Z,7.9nm,1.1s,mb4.7,baz=220,slow=12,SNR=10
KK31 ⇓Sn tx 16 01 35.3
comp=Z,0.9nm,0.3s,baz=221,slow=28,SNR=9.5
KKAR **Karatay Array 60.19 33** P **P** **16 00 59.6 -0.2**
comp=Z,3.1nm,0.3s,mb4.8
KKAR **Karatay Array 60.19 33** P **P** **16 00 59.6 -0.1**
KKAR pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
AKTK **Aktyubinsk 60.21 20** P **P** **16 00 58.8 -0.9**
AKTO **Aktyubinsk 60.21 20** P **P** **16 00 58.8 -0.9**
comp=Z,1.2nm,0.7s,mb4.0,baz=181,slow=7.6,SNR=4.5
MOS **Moscow 60.82 5** *e*P **P** **16 01 02.8 -1.0**
MOS *e* 16 01 09.7
MOS pmax pmax
comp=Z,40nm,1.1s,mb5.5
DANN **Dangsing 61.32 54** *e*P **P** **16 01 08.0 +0.3**
comp=Z,35nm,0.9s,mb5.5
AML **Almayashu 61.36 36** *e*P **P** **16 01 08.7 +1.0**
comp=Z,4.4nm,0.6s,mb4.8
AML **Almayashu 61.36 36** *e*P **P** **16 01 08.7 +1.0**
AML pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
EKS2 **Erkin-Say 61.74 35** *e*P **P** **16 01 10.6 +0.3**
comp=Z,4.2nm,1.0s,mb4.5
EKS2 **Erkin-Say 61.74 35** *e*P **P** **16 01 10.6 +0.3**
EKS2 pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
GKN **Gorkha 61.89 55** *e*P **P** **16 01 11.2 -0.4**
comp=Z,26nm,0.7s,mb5.5
DMN **Daman 62.12 55** *e*P **P** **16 01 13.4 +0.3**
comp=Z,26nm,0.9s,mb5.4
AAK **Ala-Archa 62.13 36** P **P** **16 01 12.2 -0.7**
comp=Z,0.8nm,0.3s,mb4.3,baz=231,slow=6.5,SNR=2.4
AAK **Ala-Archa 62.13 36** P **P** **16 01 12.4 -0.5**
comp=Z,1.6nm,0.8s,mb4.2
AAK **Ala-Archa 62.13 36** P **P** **16 01 12.5 -0.4**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
AAK **Ala-Archa 62.13 36** P **P** **16 01 22.4 +9.5**
KZA **Kyzart 62.24 37** *e*P **P** **16 01 14.8 +1.2**
comp=Z,10nm,0.4s,mb5.3
KZA **Kyzart 62.24 37** *e*P **P** **16 01 14.9 +1.2**
KZA pmax pmax
comp=Z,10.0nm,0.4s,mb5.3
KKN **Kakani 62.33 55** *e*P **P** **16 01 14.7 +0.1**
comp=Z,32nm,1.0s,mb5.4
PKI **Pulchoki 62.35 55** *e*P **P** **16 01 15.2 +0.5**
GUN **Gumba 62.87 55** *e*P **P** **16 01 18.8 +0.7**
comp=Z,45nm,0.8s,mb5.7
TKM2 **Tokmak 2 62.95 36** *e*P **P** **16 01 19.0 +0.6**
comp=Z,13nm,1.3s,mb4.9
TKM2 *e* 16 01 25.5
TKM2 **Tokmak 2 62.95 36** *e*P **P** **16 01 19.0 +0.6**
TKM2 *e* 16 01 25.5
TKM2 pmax pmax
comp=Z,13nm,1.3s,mb4.9
VSU **Vasula 63.30 358** *e*P **P** **16 01 21.8 +1.5**
VSU pmax pmax
comp=Z,18nm,1.5s,mb5.0
ODAN **Odare 63.73 57** *e*P **P** **16 01 24.4 +0.5**
comp=Z,30nm,1.1s,mb5.2
TAPN **Taplejung 64.17 57** *e*P **P** **16 01 26.8 0.0**
SYO **Syowa Base 64.24 176** ⇑ *e*P **P** **16 01 26.0 -0.5**
ARU **Arti 65.48 17** *d i*P **P** **16 01 34.3 -0.4**
ARU 16 03 54.2
ARU PPP 16 05 29.1
ARU S S 16 10 20.8 +1.5
ARU SS SS 16 14 32.5 -0.6
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.7
ARU MLR MLR
comp=Z,312nm,16.0s,MS4.6
KLMR **Klimovskoe 66.05 5** *e*P **P** **16 01 36.9 -1.4**
KLMR pmax pmax
comp=Z,24nm,1.3s,mb5.1
EKA **Eskdalemuir Ar 66.10 340** P **P** **16 01 38.6 -0.1**
comp=Z,1.9nm,0.9s,mb4.1,baz=92,slow=11,SNR=3.6
EKA **Eskdalemuir Ar 66.10 340** P **P** **16 01 38.6 -0.1**
FINES **FINESS Array B 66.31 358** P **P** **16 01 39.9 0.0**
comp=Z,1.1nm,0.6s,mb4.1,baz=159,slow=5.9,SNR=6.0
FINES **FINESS Array B 66.31 358** P **P** **16 01 39.9 0.0**
MAW **Mawson 66.37 167** P **P** **16 01 41.8 +1.5**
comp=Z,3.3nm,0.7s,mb4.5,baz=334,slow=11,SNR=13
MAW LR LR 16 27 44.1
comp=Z,199nm,18.2s,MS4.4,baz=328,slow=33
MAW **Mawson 66.37 167** *e*P **P** **16 01 41.6 +1.3**
comp=Z,1.0nm,0.6s,mb4.0
MAW **Mawson 66.37 167** *e*P **P** **16 01 41.6 +1.3**
MAW pmax pmax
comp=Z,1.0nm,0.6s
BRVK **Borovoye 66.99 25** *e*P **P** **16 01 43.2 -1.3**
BRVK pmax pmax
comp=Z,1.0nm,0.9s,mb3.9
BRVK MLR MLR
comp=Z,260nm,16.0s,MS4.5
BVAR **Borovoye Array 67.01 25** P **P** **16 01 43.9 -0.7**
comp=Z,0.8nm,0.6s,mb3.9,baz=226,slow=8.1,SNR=5.0
BVAR **Borovoye Array 67.01 25** P **P** **16 01 43.9 -0.7**
NAO01 **NORSAR Array S 67.33 350** P **P** **16 01 45.4 -1.1**
comp=Z,11nm,0.9s,mb4.9
NAO01 *e* 16 01 53.7
NB2 **NORSAR Subarra 67.46 350** P **P** **16 01 47.1 -0.2**
comp=Z,16nm,1.1s,mb5.0,baz=161,slow=6.5
NOA **NORSAR Array B 67.46 350** P **P** **16 01 46.9 -0.4**
comp=Z,2.9nm,1.0s,mb4.2,baz=164,slow=6.0,SNR=3.3
NOA LR LR 16 34 11.1
comp=Z,113nm,21.1s,MS4.1,baz=180,slow=39
NOA **NORSAR Array B 67.46 350** P **P** **16 01 46.9 -0.4**
PRGR **Permogore 67.50 8** *e*P **P** **16 01 53.7 +6.2**
PRGR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MK31 **Makanchi Array 69.07 36** *e*P **P** **16 01 57.1 -0.6**
MK31 **Makanchi Array 69.07 36** *e*P **P** **16 01 57.1 -0.6**
MKAR **Makanchi Array 69.07 36** P **P** **16 01 57.6 0.0**
comp=Z,2.6nm,0.6s,mb4.3,baz=243,slow=5.8,SNR=29
MKAR LR LR 16 31 10.2
comp=Z,335nm,21.4s,MS4.5,baz=66,slow=35
MKAR **Makanchi Array 69.07 36** P **P** **16 01 57.7 0.0**
KURK **Kurchatov 69.32 31** *e*P **P** **16 01 58.8 -0.3**
comp=Z,11nm,1.1s,mb4.7
KURK **Kurchatov 69.32 31** *e*P **P** **16 01 58.8 -0.3**
KURK pmax pmax
comp=Z,11nm,1.1s,mb4.7
SNAA **Sanae 69.74 191** P **P** **16 02 02.0 +0.6**
comp=Z,0.4nm,0.9s,baz=43,slow=7.2,SNR=4.0
SNAA **Sanae 69.74 191** P **P** **16 02 02.0 +0.6**
WMQ **Urumqi 70.90 40** P **P** **16 02 09.0 0.0**
WMQ sP sP 16 02 16.0 +2.5
WMQ PP PP 16 04 49.0 +2.7
WMQ S S 16 11 23.0 -1.5
WMQ ScS ScS 16 12 09.0 -4.1
WMQ SS SS 16 15 58.0 +0.5
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,87nm,7.0s
WMQ LR LR
comp=N,860nm,20.0s,MS5.0
WMQ LR LR
comp=E,390nm,20.0s,MS5.0
WMQ LR LR
comp=Z,300nm,20.0s,MS4.5
CMAR **Chiang Mai Arr 71.66 69** P **P** **16 02 14.8 +0.6**
comp=Z,6.4nm,0.8s,mb4.6,baz=262,slow=7.0,SNR=37
CMAR LR LR 16 33 44.7
comp=Z,123nm,18.9s,MS4.2,baz=53,slow=36
CMAR **Chiang Mai Arr 71.66 69** P **P** **16 02 14.8 +0.7**
NVS **Novosibirsk 74.00 29** *e*P **P** **16 02 25.5 -1.7**
NVS pmax pmax
comp=Z,22nm,1.7s,mb4.8
ZALV **Zalesovo Beam 74.29 30** P **P** **16 02 28.2 -0.7**
comp=Z,1.2nm,0.6s,mb4.0,baz=256,slow=4.2,SNR=6.3
ZALV LR LR 16 36 50.4
comp=Z,188nm,21.0s,MS4.4,baz=54,slow=37
ZALV **Zalesovo Beam 74.29 30** P **P** **16 02 28.2 -0.7**
ZALV LR LR 16 36 50.4
ZALV **Zalesovo Beam 74.29 30** P **P** **16 02 28.3 -0.6**
ARCES **ARCESS Array B 74.42 358** P **P** **16 02 29.3 -0.2**
comp=Z,1.6nm,0.8s,mb4.0,baz=174,slow=4.9,SNR=8.4
ARCES **ARCESS Array B 74.42 358** P **P** **16 02 29.3 -0.2**
ARCES **ARCESS Array B 74.42 358** P **P** **16 02 29.3 -0.1**
KMI **Kunming 76.50 63** P **P** **16 02 43.0 +0.7**
KMI pP pP 16 02 46.1 +0.5
KMI sP sP 16 02 47.1 +0.2
KMI PP PP 16 05 36.3 +1.9
KMI S S 16 12 27.5 -1.0
KMI SKS 16 12 49.1
KMI SS SS 16 17 23.8 +0.2
KMI pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KMI pmax pmax
comp=Z,130nm,4.3s
KMI LR LR
comp=N,180nm,21.7s,MS4.6
KMI LR LR
comp=E,220nm,20.1s,MS4.6
KMI LR LR
comp=Z,240nm,28.4s
GTA **Gaotai 77.68 48** *e*P **P** **16 02 50.3 +1.7**
GTA pP pP 16 02 54.3 +2.3
GTA sP sP 16 02 56.5 +3.3
GTA PcP PcP 16 03 02.0 +3.3
GTA S S 16 12 43.3 +2.5
GTA sS sS 16 12 50.9 +4.5
GTA SKS 16 12 59.9
GTA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
GTA pmax pmax
comp=Z,57nm,6.2s
GTA LR LR
comp=N,220nm,17.6s,MS4.7
GTA LR LR
comp=E,240nm,20.4s,MS4.7
GTA LR LR
comp=Z,390nm,19.4s,MS4.7
LZH **Lanzhou 79.88 52** *e*P **P** **16 03 01.5 +0.7**
LZH pP pP 16 03 04.8 +0.6
LZH sP sP 16 03 06.3 +0.9
LZH PP PP 16 06 04.6 +2.1
LZH pmax pmax
comp=Z,21nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,75nm,7.0s
LZH LR LR
comp=N,360nm,16.1s,MS4.9
LZH LR LR
comp=E,300nm,17.0s,MS4.9
LZH LR LR
comp=Z,410nm,18.3s,MS4.8
GYA **Guiyang 80.23 62** *e*P **P** **16 03 03.5 +0.6**
GYA PP PP 16 06 06.9 +1.3
GYA S S 16 13 05.8 -2.8
GYA SKS 16 13 16.9
GYA SS SS 16 18 19.4 -0.4
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,90nm,5.4s
GYA LR LR
comp=N,420nm,19.5s,MS4.9
GYA LR LR
comp=E,370nm,20.7s,MS4.9
GYA LR LR
comp=Z,1μm,18.0s,MS5.4
QIZ **Qiongzhong 81.93 70** P **P** **16 03 11.3 -0.8**
QIZ S S 16 13 20.0 -6.6
QIZ LR LR
comp=Z,140nm,15.8s,MS4.4
TLY **Talaya 83.77 37** *e*P **P** **16 03 22.3 +1.3**
TLY pmax pmax
comp=Z,6.0nm,1.4s,mb4.5
TLY MLR MLR
comp=Z,248nm,22.0s,MS4.5
SONM **Songino Array 84.51 41** P **P** **16 03 26.0 +1.1**
comp=Z,1.4nm,0.6s,mb4.2,baz=258,slow=5.8,SNR=7.8
SONM LR LR 16 43 38.0
comp=Z,235nm,18.3s,MS4.6,baz=267,slow=38
SONM **Songino Array 84.51 41** P **P** **16 03 26.0 +1.2**
NWAO **Narrogin (SRO) 84.89 123** P **P** **16 03 27.1 0.0**
comp=Z,9.7nm,0.9s,mb4.9,baz=207,slow=3.2,SNR=3.3
NWAO LR LR 16 34 39.6
comp=Z,203nm,20.0s,MS4.5,baz=267,slow=31
NWAO **Narrogin (SRO) 84.89 123** P **P** **16 03 27.2 0.0**
ULN **Ulaanbaatar 84.95 41** *e*P **P** **16 03 27.7 +0.7**
comp=Z,9.1nm,1.3s,mb4.8
ULN **Ulaanbaatar 84.95 41** *e*P **P** **16 03 27.7 +0.7**
ULN pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
QSPA **South Pole Qui 85.08 180** P **P** **16 03 28.0 +0.8**
comp=Z,1.0nm,0.6s,mb4.2,baz=249,slow=1.3,SNR=18
CPUP **Villa Florida 85.54 244** LR LR 16 36 26.1
comp=Z,148nm,18.6s,MS4.4,baz=90,slow=32
HHC **Hu-ho-hao-te 86.77 49** *e*P **P** **16 03 36.1 -0.1**
HHC pP pP 16 03 40.9 +1.3
HHC sP sP 16 03 43.1 +2.3
HHC PP PP 16 07 00.4 +1.6
HHC SKS 16 13 59.8
HHC S S 16 14 11.9 -2.2
HHC sS sS 16 14 19.6 -0.1
HHC SS SS 16 19 56.5 +0.5
HHC pmax pmax
comp=Z,24nm,1.0s,mb5.4
HHC pmax pmax
comp=Z,130nm,5.3s
HHC LR LR
comp=N,280nm,17.6s,MS4.8
HHC LR LR
comp=E,220nm,17.8s,MS4.8
HHC LR LR
comp=Z,260nm,17.2s,MS4.7
KAPI **Kappang 89.20 95** LR LR 16 40 46.2
comp=Z,284nm,19.6s,MS4.7,baz=192,slow=34
BJI **Beijing 90.15 50** P **P** **16 03 51.6 -0.7**
BJI pmax pmax
comp=Z,7.0nm,0.5s,mb5.2
BJI pmax pmax
comp=Z,83nm,5.8s
BJI LR LR
comp=N,540nm,22.6s,MS4.9
BJI LR LR
comp=E,160nm,22.6s,MS4.9
BJI LR LR
comp=Z,200nm,21.5s,MS4.5
FITZ **Fitzroy Crossi 93.69 108** P **P** **16 04 09.6 +0.4**
comp=Z,2.9nm,0.7s,mb4.8,baz=246,slow=4.8,SNR=4.8
FITZ LR LR 16 40 24.7
comp=Z,231nm,21.4s,MS4.6,baz=261,slow=32
PLCA **Paso Flores 94.83 229** LR LR 16 45 35.3
comp=Z,133nm,18.5s,MS4.4,baz=47,slow=35
LPAZ **La Paz 96.51 253** LR LR 16 45 04.1
comp=Z,111nm,20.0s,MS4.3,baz=117,slow=34
CN2 **Changchun 97.26 47** *e*P **P** **16 04 19.8 -5.1**
CN2 *e*S S 16 15 39.0 -10
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.4
CN2 LR LR
comp=N,300nm,16.0s,MS5.0
CN2 LR LR
comp=E,300nm,16.0s,MS5.0
CN2 LR LR
comp=Z,400nm,19.0s,MS4.9
SCHQ **Schefferville 98.06 325** LR LR 16 47 51.5
comp=Z,169nm,20.0s,MS4.5,baz=101,slow=35
KSRS **Korea Array 99.19 53** P **P** **16 04 33.2 -0.5**
comp=Z,0.7nm,0.8s,mb4.2,baz=271,slow=5.8,SNR=2.7
KSRS LR LR 16 50 14.9

comp=Z,154nm,20.8s,MS4.5,baz=114,slow=36
WRA Warramunga Arr 101.59 111 P Pdif 16 04 45.1 +1.1
comp=Z,0.4nm,0.7s,baz=281,slow=6.0,SNR=4.3
WRA Warramunga Arr 101.59 111 P Pdif 16 04 45.1 +1.1
ILAR Eielson Array 120.29 359 PKP PKPdf 16 09 41.0 -1.7
comp=Z,0.3nm,0.8s,baz=319,slow=3.6,SNR=3.3
ILAR Eielson Array 120.29 359 PKIKP PKPdf 16 09 41.0 -1.7
DZM Mont Dzumac 129.50 124 eLR LR 16 50 45.3
comp=Z,188nm,22.5s
NVAR Mina Array Bea 136.06 324 PKP PKPdf 16 10 14.8 +1.3
comp=Z,0.2nm,0.5s,baz=76,slow=3.8,SNR=2.4
NVAR Mina Array Bea 136.06 324 PKP PKPdf 16 10 14.8 +1.3
TBI Tubuai 151.84 181 eLR LR 17 01 18.3
comp=Z,137nm,26.0s
PPT Papeete 157.59 181 eLR LR 17 03 56.0
comp=Z,166nm,27.8s
TAOE Nuku Hiva Isla 163.18 215 eLR LR 17 06 19.4
comp=Z,161nm,23.4s

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*CRAAG **15** 15:50:58.7, 37.°02N×4.°23E, Ml4.4*
*CSEM **15** 15:51:00.9±0.2, 36.°96N×4.°29E, h2km, ML4.4, Error ellipse: s-maj=6.3km s-min=5.2km az=33.0*
*MDD **15** 15:51:00.3±0.6, 36.°81N×4.°17E, h0km, mb4.4/13, Error ellipse: s-maj=10.4km s-min=8.1km az=23.0, PRIMO*
*NEIC **15** 15:51:02.4±1.2, 36.°95N×4.°34E, h10km, MG4.4(MDD), Error ellipse: s-maj=15.1km s-min=9.2km az=158.0*
*LDG **15** 15:51:03.7±0.2, 36.°95N×4.°09E, h30km, Ml3.4/4, Error ellipse: s-maj=5.4km s-min=4.4km az=130.0*
ISC 15 15:51:01.9±0.7, 36.°96N±0.°03×4.°20E±0.°03, h13km±5km, n201, σ1§64/278, 2C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABMS	**Boumerdes**	**0.61**	**250**	P	**Pg**	**15 51 13.3**	**-0.6**
ABMS	**Boumerdes**	**0.61**	**250**	Pn	**Pg**	**15 51 13.3**	**-0.6**
ABMS	**Boumerdes**	**0.61**	**250**	Pn	**Pg**	**15 51 13.3**	**-0.6**
ABMS	**Boumerdes**	**0.61**	**250**	P	**Pg**	**15 51 13.3**	**-0.6**
ABA	**Alger-Bouzarea**	**0.94**	**261**	P	**Pg**	**15 51 19.3**	**-0.9**
ABA	**Alger-Bouzarea**	**0.94**	**261**	Pn	**Pg**	**15 51 19.3**	**-0.9**
ABA	**Alger-Bouzarea**	**0.94**	**261**	Pn	**Pg**	**15 51 19.3**	**-0.9**
ABA	**Alger-Bouzarea**	**0.94**	**261**	P	**Pg**	**15 51 19.3**	**-0.9**
AKET	**Djebel Ketaf**	**0.95**	**196**	P	**Pg**	**15 51 19.7**	**-0.5**
AKET	**Djebel Ketaf**	**0.95**	**196**	Pn	**Pg**	**15 51 19.7**	**-0.5**
AKET	**Djebel Ketaf**	**0.95**	**196**	Pn	**Pg**	**15 51 19.7**	**-0.5**
AKET	**Djebel Ketaf**	**0.95**	**196**	P	**Pg**	**15 51 19.7**	**-0.5**
ADJB	**Djebel Djouab**	**1.01**	**218**	P	**Pg**	**15 51 19.6**	**-1.8**
ADJB	**Djebel Djouab**	**1.01**	**218**	Pn	**Pg**	**15 51 19.6**	**-1.8**
ADJB	**Djebel Djouab**	**1.01**	**218**	Pn	**Pg**	**15 51 19.6**	**-1.8**
ADJB	**Djebel Djouab**	**1.01**	**218**	P	**Pg**	**15 51 19.6**	**-1.8**
SET	**Setif**	**1.23**	**128**	P	**Pn**	**15 51 25.0**	**+0.2**
SET	**Setif**	**1.23**	**128**	Pn	**Pn**	**15 51 25.0**	**+0.2**
SET	**Setif**	**1.23**	**128**	Pn	**Pn**	**15 51 25.0**	**+0.2**
SET	**Setif**	**1.23**	**128**	P	**Pn**	**15 51 25.0**	**+0.2**
EMHD	**Djebel Mahouad**	**1.26**	**233**	P	**Pn**	**15 51 24.2**	**-1.0**
EMHD	**Djebel Mahouad**	**1.26**	**233**	Pn	**Pn**	**15 51 24.2**	**-1.0**
EMHD	**Djebel Mahouad**	**1.26**	**233**	Pn	**Pn**	**15 51 24.2**	**-1.0**
EMHD	**Djebel Mahouad**	**1.26**	**233**	P	**Pn**	**15 51 24.2**	**-1.0**
DFRA	**Djebel Bou Aff**	**1.41**	**107**	P	**Pn**	**15 51 26.5**	**-0.8**
DFRA	**Djebel Bou Aff**	**1.41**	**107**	Pn	**Pn**	**15 51 26.5**	**-0.8**
DFRA	**Djebel Bou Aff**	**1.41**	**107**	Pn	**Pn**	**15 51 26.5**	**-0.8**
DFRA	**Djebel Bou Aff**	**1.41**	**107**	P	**Pn**	**15 51 26.5**	**-0.8**
CKHR	**Kef el Ahmar**	**1.42**	**131**	P	**Pn**	**15 51 27.3**	**-0.1**
CKHR	**Kef el Ahmar**	**1.42**	**131**	Pn	**Pn**	**15 51 27.3**	**-0.1**
CKHR	**Kef el Ahmar**	**1.42**	**131**	Pn	**Pn**	**15 51 27.3**	**-0.1**
CKHR	**Kef el Ahmar**	**1.42**	**131**	P	**Pn**	**15 51 27.3**	**-0.1**
CASM	**Ain Smara**	**1.97**	**110**	P	**Pn**	**15 51 33.7**	**-1.3**
CASM	**Ain Smara**	**1.97**	**110**	Pn	**Pn**	**15 51 33.7**	**-1.3**
CASM	**Ain Smara**	**1.97**	**110**	Pn	**Pn**	**15 51 33.7**	**-1.3**
CASM	**Ain Smara**	**1.97**	**110**	P	**Pn**	**15 51 33.7**	**-1.3**
CTEI	**Djebel Teioual**	**1.99**	**116**	P	**Pn**	**15 51 34.3**	**-1.0**
CTEI	**Djebel Teioual**	**1.99**	**116**	Pn	**Pn**	**15 51 34.3**	**-1.0**
CTEI	**Djebel Teioual**	**1.99**	**116**	Pn	**Pn**	**15 51 34.3**	**-1.0**
CTEI	**Djebel Teioual**	**1.99**	**116**	P	**Pn**	**15 51 34.3**	**-1.0**
CKFL	**Kef-Lekhel**	**2.10**	**105**	P	**Pn**	**15 51 38.0**	**+1.2**
CKFL	**Kef-Lekhel**	**2.10**	**105**	Pn	**Pn**	**15 51 38.0**	**+1.2**
CKFL	**Kef-Lekhel**	**2.10**	**105**	Pn	**Pn**	**15 51 38.0**	**+1.2**
CKFL	**Kef-Lekhel**	**2.10**	**105**	P	**Pn**	**15 51 38.0**	**+1.2**
EBNR	**Beni Rached**	**2.25**	**254**	P	**Pg**	**15 51 45.0**	**0.0**
EBNR	**Beni Rached**	**2.25**	**254**	P	**Pg**	**15 51 45.0**	**0.0**
ECHA	**Ech Chlef**	**2.42**	**251**	P	**Pg**	**15 51 46.0**	**-2.3**
ECHA	**Ech Chlef**	**2.42**	**251**	P	**Pg**	**15 51 46.0**	**-2.3**
ECHF	**Ech Chlef**	**2.44**	**252**	Pn	**Pg**	**15 51 46.0**	**-2.6**
ECHF	**Ech Chlef**	**2.44**	**252**	Pn	**Pg**	**15 51 46.0**	**-2.6**
CMAH	**Djebel Manchou**	**2.61**	**96**	P	**Pn**	**15 51 42.8**	**-1.0**
CMAH	**Djebel Manchou**	**2.61**	**96**	Pn	**Pn**	**15 51 42.8**	**-1.0**
CMAH	**Djebel Manchou**	**2.61**	**96**	Pn	**Pn**	**15 51 42.8**	**-1.0**
CMAH	**Djebel Manchou**	**2.61**	**96**	P	**Pn**	**15 51 42.8**	**-1.0**
EANR	**'Ain N'Sour**	**2.69**	**249**	P	**Pg**	**15 51 53.0**	**-0.6**
EANR	**'Ain N'Sour**	**2.69**	**249**	Pn	**Pg**	**15 51 53.0**	**-0.6**
EANR	**'Ain N'Sour**	**2.69**	**249**	Pn	**Pg**	**15 51 53.0**	**-0.6**
EANR	**'Ain N'Sour**	**2.69**	**249**	P	**Pg**	**15 51 53.0**	**-0.6**
ABSA	**Djebel Ababsia**	**2.73**	**104**	P	**Pn**	**15 51 44.5**	**-0.9**
ABSA	**Djebel Ababsia**	**2.73**	**104**	P	**Pn**	**15 51 44.5**	**-0.9**
CABS	**Djebel Ababsia**	**2.73**	**104**	Pn	**Pn**	**15 51 44.5**	**-0.9**
CABS	**Djebel Ababsia**	**2.73**	**104**	Pn	**Pn**	**15 51 44.5**	**-0.9**
ETRT	**Tiaret**	**2.82**	**237**	P	**Pn**	**15 51 47.7**	**+1.0**
ETRT	**Tiaret**	**2.82**	**237**	Pn	**Pn**	**15 51 47.7**	**+1.0**
ETRT	**Tiaret**	**2.82**	**237**	Pn	**Pn**	**15 51 47.7**	**+1.0**
ETRT	**Tiaret**	**2.82**	**237**	P	**Pn**	**15 51 47.7**	**+1.0**
ETOS	**Mallorca**	**3.01**	**339**	P	**Pn**	**15 51 51.1**	**+1.9**
ETOS				S	**Sn**	**15 52 23.9**	**-1.2**
ETOS	**Mallorca**	**3.01**	**339**	Pn	**Pn**	**15 51 51.1**	**+1.9**
24nm,0.4s,SNR=31							
ETOS				Sn	**Sn**	**15 52 23.9**	**-1.2**
5.0nm,0.2s,SNR=6.5							
ETOS	**Mallorca**	**3.01**	**339**	Pn	**Pn**	**15 51 51.1**	**+1.9**
24nm,0.4s,SNR=31							
ETOS				Sn	**Sn**	**15 52 23.9**	**-1.2**
5.0nm,0.2s,SNR=6.5							
ETOS	**Mallorca**	**3.01**	**339**	P	**Pn**	**15 51 51.1**	**+1.9**
24nm,0.4s,SNR=31							
ETOS				S	**Sn**	**15 52 24.0**	**-1.1**
EIBI	**Ibiza**	**3.06**	**313**	P	**Pn**	**15 51 51.7**	**+1.8**
EIBI				S	**Sn**	**15 52 24.8**	**-1.6**
EIBI	**Ibiza**	**3.06**	**313**	Pn	**Pn**	**15 51 51.7**	**+1.8**
12nm,0.4s,SNR=6.9							
EIBI				Sn	**Sn**	**15 52 24.8**	**-1.6**
4.3nm,0.2s,SNR=5.8							
EIBI	**Ibiza**	**3.06**	**313**	Pn	**Pn**	**15 51 51.7**	**+1.8**
12nm,0.4s,SNR=6.9							
EIBI				Sn	**Sn**	**15 52 24.8**	**-1.6**
4.3nm,0.2s,SNR=5.8							
EIBI	**Ibiza**	**3.06**	**313**	P	**Pn**	**15 51 51.7**	**+1.8**
12nm,0.4s,SNR=6.9							
EIBI				S	**Sn**	**15 52 24.8**	**-1.5**
4.3nm,0.2s,SNR=5.8							
EBEN	**Beniarda**	**3.91**	**298**	P	**Pn**	**15 52 03.0**	**+1.3**
EBEN				S	**Sn**	**15 52 45.2**	**-2.2**
EBEN	**Beniarda**	**3.91**	**298**	Pn	**Pn**	**15 52 03.0**	**+1.3**
0.6nm,0.1s,SNR=7.0							
EBEN				Sn	**Sn**	**15 52 45.2**	**-2.2**
2.8nm,0.3s,SNR=7.9							
EBEN	**Beniarda**	**3.91**	**298**	Pn	**Pn**	**15 52 03.0**	**+1.3**
0.6nm,0.1s,SNR=7.0							
EBEN				Sn	**Sn**	**15 52 45.2**	**-2.2**
2.8nm,0.3s,SNR=7.9							
EBEN	**Beniarda**	**3.91**	**298**	P	**Pn**	**15 52 03.0**	**+1.3**
0.6nm,0.1s,SNR=7.0							
EBEN				S	**Sn**	**15 52 45.2**	**-2.2**
2.8nm,0.3s,SNR=7.9							
KEST	**Kesra**	**4.33**	**105**	*e*Pn	**Pn**	**15 52 07.3**	**-0.2**
KEST	**Kesra**	**4.33**	**105**	*e*Pn	**Pn**	**15 52 07.3**	**-0.2**
ECHE	**Chera**	**4.84**	**304**	P	**Pn**	**15 52 16.8**	**+2.3**
ECHE	**Chera**	**4.84**	**304**	Pn	**Pn**	**15 52 16.8**	**+2.3**
13nm,0.3s,SNR=16							
ECHE	**Chera**	**4.84**	**304**	Pn	**Pn**	**15 52 16.8**	**+2.3**
13nm,0.3s,SNR=16							
ECHE	**Chera**	**4.84**	**304**	P	**Pn**	**15 52 16.8**	**+2.4**
13nm,0.3s,SNR=16							
ETOB	**Tobarra**	**4.85**	**292**	P	**Pn**	**15 52 16.7**	**+2.1**
ETOB				S	**Sn**	**15 53 08.8**	**-1.8**
ETOB	**Tobarra**	**4.85**	**292**	Pn	**Pn**	**15 52 16.7**	**+2.1**
2.7nm,0.2s,SNR=48							
ETOB				Sn	**Sn**	**15 53 08.8**	**-1.8**
2.0nm,0.3s,SNR=7.9							
ETOB	**Tobarra**	**4.85**	**292**	Pn	**Pn**	**15 52 16.7**	**+2.1**
2.7nm,0.2s,SNR=48							
ETOB				Sn	**Sn**	**15 53 08.8**	**-1.8**
2.0nm,0.3s,SNR=7.9							
ETOB	**Tobarra**	**4.85**	**292**	P	**Pn**	**15 52 16.7**	**+2.1**
2.7nm,0.2s,SNR=48							
ETOB				S	**Sn**	**15 53 08.8**	**-1.8**
2.0nm,0.3s,SNR=7.9							
CFON	**Fontmartina**	**4.99**	**345**	P	**Pn**	**15 52 18.2**	**+1.7**
CFON				S	**Sn**	**15 53 11.5**	**-2.5**
CFON	**Fontmartina**	**4.99**	**345**	⇑Pn	**Pn**	**15 52 18.2**	**+1.8**
10nm,0.2s,SNR=18							
CFON				Sn	**Sn**	**15 53 11.5**	**-2.5**
4.7nm,0.3s,SNR=8.4							
CFON	**Fontmartina**	**4.99**	**345**	⇑Pn	**Pn**	**15 52 18.2**	**+1.8**
10nm,0.2s,SNR=18							
CFON				Sn	**Sn**	**15 53 11.5**	**-2.5**
4.7nm,0.3s,SNR=8.4							
CFON	**Fontmartina**	**4.99**	**345**	S	**Sn**	**15 53 11.5**	**-2.4**
4.7nm,0.3s,SNR=8.4							
EMOS	**Mosqueruela**	**4.99**	**314**	P	**Pn**	**15 52 18.7**	**+2.2**
EMOS				S	**Sn**	**15 53 11.6**	**-2.4**
EMOS	**Mosqueruela**	**4.99**	**314**	Pn	**Pn**	**15 52 18.7**	**+2.2**
2.2nm,0.2s,SNR=7.9							
EMOS				Sn	**Sn**	**15 53 11.6**	**-2.4**
1.6nm,0.3s,SNR=7.9							
EMOS	**Mosqueruela**	**4.99**	**314**	Pn	**Pn**	**15 52 18.7**	**+2.2**
2.2nm,0.2s,SNR=7.9							
EMOS				Sn	**Sn**	**15 53 11.6**	**-2.4**
1.6nm,0.3s,SNR=7.9							
EMOS	**Mosqueruela**	**4.99**	**314**	P	**Pn**	**15 52 18.7**	**+2.2**
2.2nm,0.2s,SNR=7.9							
EMOS				S	**Sn**	**15 53 11.6**	**-2.4**
1.6nm,0.3s,SNR=7.9							
ERTA	**Horta de San J**	**5.00**	**324**	P	**Pn**	**15 52 18.1**	**+1.5**
ERTA				S	**Sn**	**15 53 13.9**	**-0.3**
ERTA	**Horta de San J**	**5.00**	**324**	Pn	**Pn**	**15 52 18.1**	**+1.5**
0.9nm,0.2s,SNR=7.9							
ERTA				Sn	**Sn**	**15 53 13.9**	**-0.3**
0.7nm,0.2s,SNR=7.9							
ERTA	**Horta de San J**	**5.00**	**324**	Pn	**Pn**	**15 52 18.1**	**+1.5**
0.9nm,0.2s,SNR=7.9							
ERTA				Sn	**Sn**	**15 53 13.9**	**-0.3**
0.7nm,0.2s,SNR=7.9							
ERTA	**Horta de San J**	**5.00**	**324**	P	**Pn**	**15 52 18.1**	**+1.5**
0.9nm,0.2s,SNR=7.9							
ERTA				S	**Sn**	**15 53 13.9**	**-0.3**
0.7nm,0.2s,SNR=7.9							
EPOB	**Poblet**	**5.01**	**332**	P	**Pn**	**15 52 18.3**	**+1.5**
EPOB				S	**Sn**	**15 53 12.4**	**-2.1**
EPOB	**Poblet**	**5.01**	**332**	Pn	**Pn**	**15 52 18.3**	**+1.5**
5.1nm,0.3s,SNR=6.5							
EPOB				Sn	**Sn**	**15 53 12.4**	**-2.1**
3.8nm,0.3s,SNR=7.9							
EPOB	**Poblet**	**5.01**	**332**	Pn	**Pn**	**15 52 18.3**	**+1.5**
5.1nm,0.3s,SNR=6.5							
EPOB				Sn	**Sn**	**15 53 12.4**	**-2.1**
3.8nm,0.3s,SNR=7.9							
EPOB	**Poblet**	**5.01**	**332**	P	**Pn**	**15 52 18.3**	**+1.5**
5.1nm,0.3s,SNR=6.5							
EPOB				S	**Sn**	**15 53 12.4**	**-2.1**
3.8nm,0.3s,SNR=7.9							
EMIR	**Miracle**	**5.36**	**338**	P	**Pn**	**15 52 24.4**	**+2.8**
EMIR				S	**Sn**	**15 53 23.1**	**-0.1**
EMIR	**Miracle**	**5.36**	**338**	Pn	**Pn**	**15 52 24.4**	**+2.8**
8.1nm,0.3s,SNR=9.0							
EMIR				Sn	**Sn**	**15 53 23.1**	**-0.1**
4.9nm,0.2s,SNR=7.0							
EMIR	**Miracle**	**5.36**	**338**	Pn	**Pn**	**15 52 24.4**	**+2.8**
8.1nm,0.3s,SNR=9.0							
EMIR				Sn	**Sn**	**15 53 23.1**	**-0.1**
4.9nm,0.2s,SNR=7.0							
EMIR	**Miracle**	**5.36**	**338**	P	**Pn**	**15 52 24.4**	**+2.8**
8.1nm,0.3s,SNR=9.0							
EMIR				S	**Sn**	**15 53 23.1**	**-0.1**
4.9nm,0.2s,SNR=7.0							
EHUE	**Huescar**	**5.47**	**281**	P	**Pn**	**15 52 25.1**	**+2.0**
EHUE				S	**Sn**	**15 53 25.9**	**0.0**
EHUE	**Huescar**	**5.47**	**281**	Pn	**Pn**	**15 52 25.1**	**+2.0**
0.6nm,0.2s,SNR=7.9							
EHUE				Sn	**Sn**	**15 53 25.9**	**0.0**
0.5nm,0.2s,SNR=7.9							
EHUE	**Huescar**	**5.47**	**281**	Pn	**Pn**	**15 52 25.1**	**+2.0**
0.6nm,0.2s,SNR=7.9							
EHUE				Sn	**Sn**	**15 53 25.9**	**0.0**
0.5nm,0.2s,SNR=7.9							
EHUE	**Huescar**	**5.47**	**281**	P	**Pn**	**15 52 25.1**	**+2.0**
0.6nm,0.2s,SNR=7.9							
EHUE				S	**Sn**	**15 53 25.9**	**-0.1**
0.5nm,0.2s,SNR=7.9							
EVIA	**Vianos**	**5.56**	**290**	P	**Pn**	**15 52 25.9**	**+1.5**
EVIA				S	**Sn**	**15 53 27.4**	**-0.8**
EVIA	**Vianos**	**5.56**	**290**	Pn	**Pn**	**15 52 25.9**	**+1.5**
12nm,0.5s,SNR=5.4							
EVIA				Sn	**Sn**	**15 53 27.4**	**-0.8**
1.6nm,0.3s,SNR=7.9							
EVIA	**Vianos**	**5.56**	**290**	Pn	**Pn**	**15 52 25.9**	**+1.5**
12nm,0.5s,SNR=5.4							
EVIA				Sn	**Sn**	**15 53 27.4**	**-0.8**
1.6nm,0.3s,SNR=7.9							
EVIA	**Vianos**	**5.56**	**290**	P	**Pn**	**15 52 25.9**	**+1.5**
12nm,0.5s,SNR=5.4							
EJON	**La Jonquera**	**5.57**	**350**	P	**Pn**	**15 52 26.7**	**+2.2**
EJON				S	**Sn**	**15 53 25.3**	**-3.1**
EJON	**La Jonquera**	**5.57**	**350**	Pn	**Pn**	**15 52 26.7**	**+2.2**
18nm,0.3s,SNR=39							
EJON				Sn	**Sn**	**15 53 25.3**	**-3.1**
SNR=7.9							
EJON	**La Jonquera**	**5.57**	**350**	Pn	**Pn**	**15 52 26.7**	**+2.2**
18nm,0.3s,SNR=39							
EJON				Sn	**Sn**	**15 53 25.3**	**-3.1**
SNR=7.9							
EJON	**La Jonquera**	**5.57**	**350**	P	**Pn**	**15 52 26.7**	**+2.2**
18nm,0.3s,SNR=39							
EJON				S	**Sn**	**15 53 25.3**	**-3.1**
SNR=7.9							
EBER	**Berja**	**5.68**	**271**	P	**Pn**	**15 52 29.6**	**+3.6**
EBER				S	**Sn**	**15 53 31.2**	**+0.2**
EBER	**Berja**	**5.68**	**271**	Pn	**Pn**	**15 52 29.6**	**+3.6**
0.3nm,0.2s,SNR=4.0							
EBER				Sn	**Sn**	**15 53 31.2**	**+0.2**
3.7nm,0.4s,SNR=4.0							
EBER	**Berja**	**5.68**	**271**	Pn	**Pn**	**15 52 29.6**	**+3.6**
0.3nm,0.2s,SNR=4.0							
EBER				Sn	**Sn**	**15 53 31.2**	**+0.2**
3.7nm,0.4s,SNR=4.0							
EBER	**Berja**	**5.68**	**271**	P	**Pn**	**15 52 29.6**	**+3.6**
0.3nm,0.2s,SNR=7.9							
EBER				S	**Sn**	**15 53 31.2**	**+0.2**
3.7nm,0.4s,SNR=7.9							
CLLI	**Llivia**	**5.77**	**343**	P	**Pn**	**15 52 30.9**	**+3.7**
CLLI				S	**Sn**	**15 53 31.2**	**-2.1**
CLLI	**Llivia**	**5.77**	**343**	Pn	**Pn**	**15 52 30.9**	**+3.7**
4.7nm,0.2s,SNR=12							
CLLI				Sn	**Sn**	**15 53 31.2**	**-2.1**
8.9nm,0.5s,SNR=7.6							
CLLI	**Llivia**	**5.77**	**343**	Pn	**Pn**	**15 52 30.9**	**+3.7**
4.7nm,0.2s,SNR=12							
CLLI				Sn	**Sn**	**15 53 31.2**	**-2.1**
8.9nm,0.5s,SNR=7.6							
CLLI	**Llivia**	**5.77**	**343**	S	**Sn**	**15 53 31.2**	**-2.1**
8.9nm,0.5s,SNR=7.6							
EQES	**Quesada**	**5.85**	**280**	P	**Pn**	**15 52 30.8**	**+2.5**
EQES				S	**Sn**	**15 53 37.2**	**+2.0**
EQES	**Quesada**	**5.85**	**280**	Pn	**Pn**	**15 52 30.8**	**+2.5**
4.9nm,0.3s,SNR=5.2							
EQES				Sn	**Sn**	**15 53 37.2**	**+2.0**
1.0nm,0.2s,SNR=4.0							
EQES	**Quesada**	**5.85**	**280**	Pn	**Pn**	**15 52 30.8**	**+2.5**
4.9nm,0.3s,SNR=5.2							
EQES				Sn	**Sn**	**15 53 37.2**	**+2.0**
1.0nm,0.2s,SNR=4.0							
EQES	**Quesada**	**5.85**	**280**	P	**Pn**	**15 52 30.8**	**+2.5**
4.9nm,0.3s,SNR=5.2							
EQES				S	**Sn**	**15 53 37.2**	**+2.0**
1.0nm,0.2s,SNR=7.9							
CSOR	**Sort**	**5.90**	**337**	P	**Pn**	**15 52 31.9**	**+2.9**
CSOR				S	**Sn**	**15 53 36.4**	**-0.1**
CSOR	**Sort**	**5.90**	**337**	Pn	**Pn**	**15 52 31.9**	**+2.9**
3.7nm,0.3s,SNR=7.3							
CSOR				Sn	**Sn**	**15 53 36.4**	**-0.1**
9.6nm,0.3s,SNR=6.4							
CSOR	**Sort**	**5.90**	**337**	Pn	**Pn**	**15 52 31.9**	**+2.9**
3.7nm,0.3s,SNR=7.3							
CSOR				Sn	**Sn**	**15 53 36.4**	**-0.1**
9.6nm,0.3s,SNR=6.4							
CSOR	**Sort**	**5.90**	**337**	S	**Sn**	**15 53 36.4**	**-0.1**
9.6nm,0.3s,SNR=6.4							
EBIE	**Bielsa**	**6.51**	**333**	P	**Pn**	**15 52 40.7**	**+3.3**
EBIE				S	**Sn**	**15 53 50.3**	**-1.2**
EBIE	**Bielsa**	**6.51**	**333**	Pn	**Pn**	**15 52 39.9**	**+2.5**
3.6nm,0.4s,SNR=7.1							
EBIE				Sn	**Sn**	**15 53 50.3**	**-1.2**
0.7nm,0.2s,SNR=9.8							
EBIE	**Bielsa**	**6.51**	**333**	Pn	**Pn**	**15 52 39.9**	**+2.5**
3.6nm,0.4s,SNR=7.1							
EBIE				Sn	**Sn**	**15 53 50.3**	**-1.2**
0.7nm,0.2s,SNR=9.8							
EBIE	**Bielsa**	**6.51**	**333**	S	**Sn**	**15 53 50.3**	**-1.2**
0.7nm,0.2s,SNR=9.8							
MTLF	**Montolieu**	**6.55**	**347**	*e*Pn	**Pn**	**15 52 35.6**	**-2.3**
MTLF	**Montolieu**	**6.55**	**347**	*e*P	**Pn**	**15 52 40.1**	**+2.2**
MTLF				*e*Sn	**Sn**	**15 53 44.6**	**-7.9**
1.5nm,0.2s							
MTLF	**Montolieu**	**6.55**	**347**	*e*P	**Pn**	**15 52 40.1**	**+2.2**
MTLF				*e*Sn	**Sn**	**15 53 44.6**	**-7.9**
MTLF	**Montolieu**	**6.55**	**347**	Pn	**Pn**	**15 52 35.6**	**-2.3**
MTLF				Sn	**Sn**	**15 53 44.6**	**-7.9**
0.8nm,0.2s							
MTLF	**Montolieu**	**6.55**	**347**	Pn	**Pn**	**15 52 35.6**	**-2.3**
MTLF				Sn	**Sn**	**15 53 44.6**	**-7.9**
0.8nm,0.2s							
MTLF	**Montolieu**	**6.55**	**347**	*e*Pn	**Pn**	**15 52 35.6**	**-2.3**
MTLF	**Montolieu**	**6.55**	**347**	*e*P	**Pn**	**15 52 40.1**	**+2.2**
LMR	**La Mourre**	**6.61**	**15**	*e*Pn	**Pn**	**15 52 37.6**	**-1.1**
LMR				*e*Sn	**Sn**	**15 53 48.3**	**-5.5**
2.9nm,0.2s							
LMR	**La Mourre**	**6.61**	**15**	Pn	**Pn**	**15 52 37.6**	**-1.1**
LMR				Sn	**Sn**	**15 53 48.3**	**-5.5**
1.4nm,0.2s							
LMR	**La Mourre**	**6.61**	**15**	Pn	**Pn**	**15 52 37.6**	**-1.1**
LMR				Sn	**Sn**	**15 53 48.3**	**-5.5**
1.4nm,0.2s							
LMR	**La Mourre**	**6.61**	**15**	*e*Pn	**Pn**	**15 52 37.6**	**-1.1**
LMR				*e*Sn	**Sn**	**15 53 48.3**	**-5.5**
1.5nm,0.2s							
EPF	**Esparros**	**6.75**	**335**	*e*Pn	**Pn**	**15 52 37.9**	**-2.7**
EPF	**Esparros**	**6.75**	**335**	*e*P	**Pn**	**15 52 43.5**	**+2.9**
EPF	**Esparros**	**6.75**	**335**	*e*P	**Pn**	**15 52 43.5**	**+2.9**
EPF	**Esparros**	**6.75**	**335**	Pn	**Pn**	**15 52 37.9**	**-2.7**
EPF	**Esparros**	**6.75**	**335**	Pn	**Pn**	**15 52 37.9**	**-2.7**
EPF	**Esparros**	**6.75**	**335**	*e*P	**Pn**	**15 52 43.5**	**+2.9**
FRF	**La Foret Royal**	**6.85**	**15**	*e*Pn	**Pn**	**15 52 41.7**	**-0.4**
FRF				*e*Sn	**Sn**	**15 53 53.0**	**-6.9**
8.1nm,0.3s							
FRF	**La Foret Royal**	**6.85**	**15**	Pn	**Pn**	**15 52 41.7**	**-0.4**
FRF				Sn	**Sn**	**15 53 53.0**	**-6.9**
4.1nm,0.3s							
FRF	**La Foret Royal**	**6.85**	**15**	Pn	**Pn**	**15 52 41.7**	**-0.4**
FRF				Sn	**Sn**	**15 53 53.0**	**-6.9**
4.1nm,0.3s							
FRF	**La Foret Royal**	**6.85**	**15**	*e*Pn	**Pn**	**15 52 41.7**	**-0.4**
ETSF	**Etsaut**	**6.97**	**330**	*e*P	**Pn**	**15 52 45.6**	**+2.0**
ETSF	**Etsaut**	**6.97**	**330**	Pn	**Pn**	**15 52 45.6**	**+2.0**
ETSF	**Etsaut**	**6.97**	**330**	Pn	**Pn**	**15 52 45.6**	**+2.0**
SMRF	**Simiane la Rot**	**7.09**	**8**	*e*Pn	**Pn**	**15 52 44.9**	**-0.4**
SMRF	**Simiane la Rot**	**7.09**	**8**	Pn	**Pn**	**15 52 44.9**	**-0.4**
SMRF	**Simiane la Rot**	**7.09**	**8**	Pn	**Pn**	**15 52 44.9**	**-0.4**
SMRF	**Simiane la Rot**	**7.09**	**8**	*e*Pn	**Pn**	**15 52 44.9**	**-0.4**
LASF	**Ste Croix**	**7.11**	**358**	*e*Pn	**Pn**	**15 52 44.5**	**-1.1

0.3nm,0.3s,baz=315,slow=20,SNR=3.6
TXAR Lajitas Array 17.77 329 P **Pn 15 58 13.2 +1.5**
0.0nm,0.3s,baz=148,slow=14,SNR=3.2
CPRX Cap Rock 20.98 335 *e*P **P 15 58 48.9 +1.4**
12nm,1.0s
AMTX Amarillo 21.84 341 *e*P **P 15 58 58.0 +1.1**
4.6nm,0.5s,mb4.2
TKL Tuckaleechee C 22.95 20 LR LR 16 09 23.6
comp=Z,12nm,18.8s,MS2.4,baz=169,slow=40
NVAR Mina Array Bea 32.64 322 P **P 16 00 39.2 +3.1**
0.8nm,0.8s,mb3.7,baz=140,slow=9.1,SNR=6.6
YBH Yreka Blue Hor 37.35 323 LR LR 16 17 45.7
comp=Z,28nm,19.5s,MS3.1,baz=328,slow=38
INK Inuvik 59.80 344 P **P 16 04 08.9 0.0**
1.3nm,0.7s,mb4.1,baz=132,slow=14,SNR=2.8
ILAR Eielson Array 62.07 337 P **P 16 04 25.6 +1.2**
0.4nm,0.8s,mb3.6,baz=152,slow=6.1,SNR=5.4
WRA Warramunga Arr 134.21 256 PKP PKPdf 16 13 23.6 +0.9
0.3nm,0.9s,baz=85,slow=3.2,SNR=3.2

IDC 15 15:54:35.2±4.1, 17°.49S×179°.00W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/17, mbtmp4.0/4, Error ellipse: s-maj=174.1km s-min=35.6km az=139.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.35**	**241**	P	P	16 01 58.1	+0.1
	2.6nm,1.0s,baz=100,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**44.16**	**259**	P	P	16 02 45.8	-0.2
	0.7nm,0.4s,baz=95,slow=7.3,SNR=18						
ASAR	**Alice Springs**	**44.37**	**254**	P	P	16 02 47.6	-0.1
	2.6nm,0.6s,baz=87,slow=8.8,SNR=47						
ILAR	**Eielson Array**	**85.60**	**13**	P	P	16 07 15.1	+0.1
	0.7nm,1.0s,baz=227,slow=6.1,SNR=4.1						

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*ISCJB **15** 16:00:17.5±1.9, 35°.75N±0°.09×77°.9E±0°.2, h33km, Error ellipse: s-maj=22.2km s-min=8.9km az=29.6*
*BJI **15** 16:00:18.3, 35°.80N×78°.28E, h13km, ML3.3/4*
ISC 15 16:00:19.6±1.9, 35°.75N±0°.10×77°.9E±0°.2, h35km, n4, σ0°86/7, 1C-1D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.07**	**338**	*e*Pn	**Pn**	**16 01 20.8**	**+1.5**
KSH				Sn	**Sn**	**16 02 05.6**	**-0.1**
KSH				smax			
	comp=N,99nm,0.8s						
KSH				smax			
	comp=E,60nm,0.7s						
CHCP	**Chirah Chowk**	**4.37**	**243**	⇑P	**Pn**	**16 01 24.1**	**+0.6**
CEP	**Cherat**	**5.32**	**251**	P	**Pn**	**16 01 35.9**	**-0.6**
CEP				S	**Sn**	**16 02 36.0**	**-0.5**
MK31	**Makanchi Array**	**11.51**	**15**	⇓Pn	**Pn**	**16 03 01.2**	**-0.1**
	comp=E,3.3nm,0.7s,baz=198,slow=12,SNR=52						
MK31				Sn	**Sn**	**16 05 04.8**	**-3.6**
	comp=E,1.6nm,0.4s,baz=201,slow=25,SNR=16						

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*ISCJB **15** 16:16:44.4±0.6, 35°.35N±0°.04×140°.37E±0°.06, h69km±5km, mb3.4/2, Error ellipse: s-maj=8.6km s-min=5.3km az=154.1*
*IDC **15** 16:16:44.3±1.4, 34°.62N×138°.11E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/25, mbtmp3.4/3, Error ellipse: s-maj=43.9km s-min=19.2km az=82.0*
*JMA **15** 16:16:45.4±0.1, 35°.41N×140°.40E, h56km±2km, M2.6*
ISC 15 16:16:45.3±0.6, 35°.36N±0°.04×140°.36E±0°.06, h61km±5km, n15, σ0°63/25, mb3.4/2, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.14**	**293**	P	**Pn**	**16 16 54.8**	**+0.1**
KTR	**Katsuura**	**0.22**	**191**	P	**Pn**	**16 16 54.9**	**-0.1**
KTR				S	**Sn**	**16 17 01.8**	**-0.2**
BSO4	**Boso 4**	**0.37**	**183**	P	**Pn**	**16 16 56.3**	**+0.1**
BSO4				*e*S	**Sn**	**16 17 05.4**	**+1.4**
CHOJ	**Chosi**	**0.53**	**50**	P	**Pn**	**16 16 57.2**	**-0.5**
BSO3	**Boso 3**	**0.57**	**168**	P	**Pn**	**16 16 58.1**	**-0.1**
BSO3				S	**Sn**	**16 17 08.7**	**+1.2**
BSO1	**Boso 1**	**0.87**	**144**	P	**Pn**	**16 17 01.0**	**-0.7**
BSO1				*e*S	**Sn**	**16 17 13.8**	**0.0**
JYT	**Yasato**	**0.88**	**351**	P	**Pn**	**16 17 01.3**	**-0.5**
JYT				*e*S	**Sn**	**16 17 13.2**	**-0.8**
JIM2	**Oshima 3**	**1.00**	**230**	P	**Pn**	**16 17 03.0**	**-0.4**
JIM2				*e*S	**Sn**	**16 17 16.0**	**-0.8**
JOD2	**Odawara 2**	**1.05**	**265**	P	**Pn**	**16 17 04.1**	**+0.1**
JOD2				*e*S	**Sn**	**16 17 17.4**	**-0.5**
JAG	**Ashikaga**	**1.29**	**325**	P	**Pn**	**16 17 07.3**	**0.0**
MJAR	**Matsushiro Arr**	**2.11**	**305**	Pn	**Pn**	**16 17 18.1**	**-0.2**
	2.5nm,0.3s,baz=102,slow=11,SNR=33						
MJAR				Sn	**Sn**	**16 17 44.0**	**+0.6**
	2.4nm,0.3s,baz=211,slow=47,SNR=7.4						
MAT	**Matsushiro**	**2.11**	**305**	P	**Pn**	**16 17 18.8**	**+0.5**
MAT				S	**Sn**	**16 17 44.2**	**+0.8**
JHJ	**Hachijo jima 2**	**2.29**	**192**	Pn	**Pn**	**16 17 20.9**	**+0.2**
	7.1nm,0.3s,baz=231,slow=21,SNR=9.1						
JHJ				Sn	**Sn**	**16 17 46.4**	**-1.4**
	baz=73,slow=19						
WRA	**Warramunga Arr**	**55.30**	**187**	P	**P**	**16 26 12.8**	**+0.3**
	0.2nm,0.4s,mb3.5,baz=3.4,slow=7.6,SNR=6.5						
ASAR	**Alice Springs**	**59.02**	**187**	P	**P**	**16 26 39.6**	**+0.8**
	0.3nm,0.9s,mb3.3,baz=360,slow=6.0,SNR=4.2						

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*MAN **15** 16:53:08, 13°.35N×125°.78E, h46km, mb4.8, ML3.7, MS3.8*
*ISCJB **15** 16:53:10.8±0.4, 13°.26N±0°.04×125°.65E±0°.04, h45km, mb4.1/25, Error ellipse: s-maj=6.2km s-min=5.2km az=177.1*
*BJI **15** 16:53:10.7, 13°.58N×125°.61E, h17km, mB4.3/1, mb4.2/5*
*NEIC **15** 16:53:12.5±0.3, 13°.25N×125°.80E, mb4.4/7, Error ellipse: s-maj=13.1km s-min=6.5km az=62.0*
*IDC **15** 16:53:13.1±0.7, 13°.24N×125°.67E, h45km±6km, mb3.9/15, mb1 4.0/15, mb1mx3.9/22, mbtmp3.9/15, MS3.1/2, Ms1 3.2/2, ms1mx2.5/25, Error ellipse: s-maj=22.2km s-min=11.2km az=70.0*
ISC 15 16:53:12.9±0.4, 13°.22N±0°.04×125°.61E±0°.05, h47km, h47km±1.8km; pP-P, n53, σ0°91/53, mb4.1/25, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataran**	**1.16**	**233**	*e*P	**Pn**	**16 53 31.9**	**-0.7**
BESP	**Borongan**	**1.61**	**186**	*e*P	**Pn**	**16 53 38.0**	**-1.0**
MMPH	**Masbate**	**2.11**	**246**	⇑*i*P	**Pn**	**16 53 45.3**	**-0.5**
MMPH				*i* S	**Sn**	**16 54 10.5**	**-0.4**
OCLP	**Ormoc**	**2.36**	**204**	*e*P	**Pn**	**16 53 50.6**	**+1.3**
AUQP	**San Andres**	**2.85**	**272**	*e*P	**Pn**	**16 53 56.5**	**+0.6**
MSLP	**Maasin**	**3.15**	**194**	*e*P	**Pn**	**16 54 00.4**	**+0.4**
LLP	**Lapu-Lapu**	**3.30**	**209**	*e*P	**Pn**	**16 54 01.2**	**-0.9**
LLP				*e*S	**Sn**	**16 54 33.1**	**-6.9**
SCPH	**Surigao**	**3.42**	**182**	⇓*e*P	**Pn**	**16 54 04.8**	**+1.1**
OTRP	**Odiongan**	**3.60**	**257**	*e*P	**Pn**	**16 54 06.4**	**+0.2**
BOAC	**Boac**	**3.67**	**274**	*e*P	**Pn**	**16 54 06.3**	**-0.8**
POLP	**Polillo Island**	**3.86**	**293**	*e*P	**Pn**	**16 54 08.0**	**-1.8**
GUIM	**Jordan**	**3.92**	**229**	*e*P	**Pn**	**16 54 10.9**	**+0.3**
TGY	**Tagaytay City**	**4.62**	**282**	P	**Pn**	**16 54 24.5**	**+4.3**
	29nm,0.3s,baz=133,slow=5.2,SNR=4.1						
TGY				S	**Sn**	**16 55 15.8**	**+3.1**
	17nm,0.3s,baz=173,slow=11,SNR=2.4						
BALP	**Baler**	**4.64**	**303**	*e*P	**Pn**	**16 54 16.6**	**-3.9**
PALP	**Palanan**	**4.90**	**322**	*e*P	**Pn**	**16 54 20.9**	**-3.2**
CUYO	**Cuyo Island**	**5.07**	**243**	*e*P	**Pn**	**16 54 26.2**	**-0.1**
CAUP	**Cauayan**	**5.20**	**316**	*e*P	**Pn**	**16 54 25.6**	**-2.6**
LUBP	**Lubang**	**5.24**	**276**	*e*P	**Pn**	**16 54 29.6**	**+0.9**
BCPH	**Baguio City Da**	**5.79**	**304**	⇓*e*P	Px	16 54 52.8	
APYP	**Conner**	**6.25**	**318**	*e*P	**Pn**	**16 54 42.1**	**-0.4**
ABRA	**Dolores**	**6.46**	**314**	*e*P	**Pn**	**16 54 44.0**	**-1.4**
GUMO	**Guam**	**18.74**	**87**	LR	LR	17 03 22.4	
	comp=Z,72nm,20.7s,baz=289,slow=33						
KSRS	**Korea Array**	**24.23**	**4**	P	**P**	**16 58 25.4**	**+0.1**
	3.5nm,0.9s,mb3.8,baz=184,slow=11,SNR=14						
KSRS				pP		16 58 37.2	
	3.3nm,1.1s,baz=186,slow=12,SNR=5.5						
XAN	**Xi'an**	**25.68**	**327**	P	**P**	**16 58 38.3**	**-0.2**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
XAN				pmax	pmax		
	comp=Z,33nm,4.0s						
CMAR	**Chiang Mai Arr**	**26.16**	**285**	P	**P**	**16 58 43.5**	**+0.5**
	comp=Z,2.3nm,0.7s,mb3.8,baz=98,slow=7.5,SNR=15						
CMAR				pP	pP	16 58 55.4	+0.1
	comp=Z,2.5nm,0.8s,baz=99,slow=7.3,SNR=7.9						
CMAR				LR	LR	17 10 58.0	
	comp=Z,28nm,18.7s,baz=185,slow=41						
FITZ	**Fitzroy Crossi**	**31.12**	**180**	*e*P	**P**	**16 59 26.9**	**-0.2**
WRA	**Warramunga Arr**	**34.05**	**165**	P	**P**	**16 59 51.7**	**-1.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=342,slow=9.6,SNR=8.1						
WRA				pP	pP	17 00 06.5	+1.2
	comp=Z,0.5nm,0.6s,baz=344,slow=9.6,SNR=3.3						
WRA				PcP	PcP	17 02 30.4	+0.6
	comp=Z,0.8nm,0.7s,baz=341,slow=3.2,SNR=8.1						
WRA	**Warramunga Arr**	**34.05**	**165**	P	**P**	**16 59 51.7**	**-1.1**
WRA				pP	pP	17 00 06.5	+1.2
WRA				PcP	PcP	17 02 30.4	+0.6
WB2	**Warramunga Arr**	**34.06**	**165**	*e*P	**P**	**16 59 51.9**	**-0.9**
LSA	**Lhasa**	**35.84**	**303**	P	**P**	**17 00 09.8**	**+1.6**
	comp=Z,3.1nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**37.54**	**167**	P	**P**	**17 00 22.9**	**+0.3**
	comp=Z,2.3nm,0.6s,mb4.1,baz=347,slow=7.2,SNR=58						
ASAR				PcP	PcP	17 02 40.9	+0.8
	comp=Z,0.8nm,0.8s,baz=348,slow=3.1,SNR=5.5						
ULN	**Ulaanbaatar**	**37.85**	**340**	*e*P	**P**	**17 00 25.5**	**+0.5**
	comp=Z,2.7nm,0.8s,mb4.0						
SONM	**Songino Array**	**38.05**	**339**	P	**P**	**17 00 27.5**	**+0.8**
	comp=Z,1.6nm,0.5s,mb4.0,baz=156,slow=9.7,SNR=12						
SONM				pP	pP	17 00 39.7	+0.4
	comp=Z,1.8nm,0.9s,baz=149,slow=8.6,SNR=6.0						
CTA	**Charters Tower**	**38.83**	**148**	P	**P**	**17 00 33.8**	**+0.2**
	comp=Z,2.6nm,0.9s,mb4.0,baz=316,slow=19,SNR=3.4						
PETK	**Petropavlovsk-**	**47.26**	**26**	P	**P**	**17 01 41.0**	**-0.3**
	comp=Z,3.0nm,0.8s,mb4.2,baz=224,slow=4.0,SNR=5.1						
STKA	**Stephens Creek**	**47.38**	**161**	P	**P**	**17 01 42.5**	**-0.1**
	comp=Z,5.3nm,0.8s,mb4.5,baz=118,slow=13,SNR=3.8						
MK31	**Makanchi Array**	**49.31**	**322**	*e*P	**P**	**17 01 58.5**	**+1.2**
MK31				*e*pP	pP	17 02 10.9	+0.7
MKAR	**Makanchi Array**	**49.31**	**322**	P	**P**	**17 01 58.5**	**+1.2**
	comp=Z,4.3nm,0.7s,mb4.6,baz=113,slow=9.0,SNR=43						
MKAR				pP	pP	17 02 10.8	+0.6
	comp=Z,2.3nm,0.8s,baz=112,slow=8.2,SNR=7.2						
MKAR				PcP	PcP	17 03 20.3	+0.8
	comp=Z,0.8nm,0.7s,baz=76,slow=5.1,SNR=3.7						
MKAR	**Makanchi Array**	**49.31**	**322**	P	**P**	**17 01 58.5**	**+1.2**
MKAR				pP	pP	17 02 10.8	+0.6
MKAR				PcP	PcP	17 03 20.3	+0.8
ZALV	**Zalesovo Beam**	**51.75**	**331**	P	**P**	**17 02 15.0**	**-0.5**
	comp=Z,1.3nm,0.5s,mb4.1,baz=119,slow=7.5,SNR=6.9						
KURK	**Kurchatov**	**53.29**	**325**	*e*P	**P**	**17 02 27.5**	**+0.5**
	comp=Z,9.9nm,0.9s,mb4.7						
KURK				*e*pP	pP	17 02 40.0	-0.1
KBL	**Kabul**	**55.17**	**303**	*e*P	**P**	**17 02 41.4**	**+0.4**
	comp=Z,3.5nm,0.5s,mb4.7						
KBL				*e*pP	pP	17 02 53.6	-0.4
KKAR	**Karatay Array**	**55.75**	**313**	*e*P	**P**	**17 02 45.8**	**+0.9**
	comp=Z,2.1nm,0.8s,mb4.2						
KKAR				*e*pP	pP	17 02 58.2	+0.1
BVAR	**Borovoye Array**	**58.89**	**325**	P	**P**	**17 03 07.5**	**+0.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=119,slow=8.6,SNR=8.3						
BRVK	**Borovoye**	**58.97**	**325**	P	**P**	**17 03 07.3**	**-0.1**
	comp=Z,4.3nm,1.0s,mb4.4						
ABKAR	**Akbulak array**	**64.24**	**318**	*e*P	**P**	**17 03 43.4**	**+0.3**
	comp=Z,1.3nm,0.8s,mb4.0						
ABKAR				*e*pP	pP	17 03 55.8	-0.7
ILAR	**Eielson Array**	**77.09**	**26**	P	**P**	**17 05 01.1**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=237,slow=5.6,SNR=11						
ILAR				pP	pP	17 05 13.6	-1.1
	comp=Z,0.3nm,0.7s,baz=293,slow=14,SNR=3.3						
JOF	**Joensuu**	**80.29**	**332**	*e*p	**P**	**17 05 17.3**	**-1.3**
	comp=Z,0.8nm,0.4s,mb4.0						
KEV	**Kevo**	**80.66**	**340**	*e*p	**P**	**17 05 14.8**	**-5.7**
	comp=Z,0.1nm,0.3s,mb3.2						
ARCES	**ARCESS Array B**	**81.22**	**339**	P	**P**	**17 05 23.9**	**+0.4**
	comp=Z,1.4nm,0.6s,mb4.0,baz=84,slow=6.4,SNR=12						
FINES	**FINESS Array B**	**83.01**	**331**	P	**P**	**17 05 33.2**	**+0.2**
	comp=Z,1.2nm,0.5s,mb4.2,baz=98,slow=3.9,SNR=6.9						
NOA	**NORSAR Array B**	**89.84**	**334**	P	**P**	**17 06 05.9**	**-0.6**
	comp=Z,0.9nm,0.8s,mb4.2,baz=62,slow=4.6,SNR=3.7						
PLCA	**Paso Flores**	**149.15**	**156**	PKPbc	PKPbc	17 12 57.9	+1.4
	comp=Z,2.2nm,1.0s,baz=73,slow=3.6,SNR=3.0						

WEL 15 17:09:39.4±0.5, 41°.21S×172°.61E, h206km±3km, ML3.6/12, 1D, Error ellipse: s-maj=3.1km s-min=2.8km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.39**	**351**	PN	Pn	17 10 06.8	-0.2
QRZ				SN	Sn	17 10 26.9	-1.3
NNZ	**Nelson**	**0.58**	**91**	PN	Pn	17 10 07.4	-0.2
NNZ				SN	Sn	17 10 28.3	-1.0
THZ	**Tophouse**	**0.60**	**158**	PN	Pn	17 10 07.9	+0.4
THZ				SN	Sn	17 10 29.1	-0.5
DSZ	**Denniston Nort**	**0.81**	**228**	⇓PN	Pn	17 10 08.3	-0.3
DSZ				SN	Sn	17 10 29.7	-1.6
TUWZ	**Tuamarina**	**1.03**	**103**	PN	Pn	17 10 10.0	0.0
DUWZ	**D'Urville Isla**	**1.08**	**68**	PN	Pn	17 10 10.3	-0.1
BSWZ	**Blackbirch Sta**	**1.08**	**118**	PN	Pn	17 10 10.5	+0.2
TCW	**Tory Channel**	**1.26**	**91**	PN	Pn	17 10 11.6	0.0
KHZ	**Kahutara**	**1.39**	**150**	PN	Pn	17 10 12.6	-0.1
LTZ	**Lake Taylor**	**1.59**	**189**	PN	Pn	17 10 14.3	-0.1
BHW	**Baring Head**	**1.72**	**97**	PN	Pn	17 10 15.0	-0.6
KIW	**Kapiti Island**	**1.78**	**79**	PN	Pn	17 10 15.8	-0.3
CAW	**Cannon Point**	**1.86**	**88**	PN	Pn	17 10 16.6	-0.4
OGWZ	**Otaki Gorge**	**1.98**	**79**	PN	Pn	17 10 17.9	-0.3
MSWZ	**Moikau Station**	**2.00**	**97**	PN	Pn	17 10 17.9	-0.4
PLWZ	**Palliser**	**2.02**	**101**	PN	Pn	17 10 18.2	-0.4
MTW	**Mount Morrison**	**2.19**	**90**	PN	Pn	17 10 19.9	-0.4
HOWZ	**Holdsworth Sta**	**2.22**	**83**	PN	Pn	17 10 20.3	-0.4
MRZ	**Mangatainoka R**	**2.32**	**77**	PN	Pn	17 10 21.0	-0.7
WAZ	**Wanganui**	**2.33**	**52**	PN	Pn	17 10 21.5	-0.3
MQZ	**McQueen's Vall**	**2.50**	**179**	PN	Pn	17 10 22.4	-1.2
TSZ	**Takapari Road**	**2.80**	**67**	PN	Pn	17 10 26.2	-0.9
BFZ	**Birch Farm**	**2.81**	**80**	PN	Pn	17 10 26.7	-0.5
WPHZ	**Waipukurau**	**3.13**	**70**	PN	Pn	17 10 30.2	-0.7
KAHZ	**Kahuranaki**	**3.55**	**68**	PN	Pn	17 10 35.3	-0.6
LBZ	**Lake Benmore**	**3.64**	**208**	PN	Pn	17 10 35.5	-1.3
ODZ	**Otahua Downs**	**4.09**	**200**	PN	Pn	17 10 41.7	-0.7

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*BJI **15** 17:09:43.7, 30°.09N×82°.77E, h21km, mb4.2/10, Ms3.6/2, Ms7 3.5/3*
*DMN **15** 17:09:44.6±0.7, 31°.59N×82°.80E, h60km, Ml4.6/3, Error ellipse: s-maj=15.0km s-min=10.4km az=128.0*
*IDC **15** 17:09:49.8±0.7, 30°.73N×83°.37E, h0km, mb4.1/16, mb1 4.2/18, mb1mx4.1/29, mbtmp4.1/18, ML4.0/1, MS3.5/7, Ms1 3.5/7, ms1mx3.1/30, Error ellipse: s-maj=20.6km s-min=14.9km az=49.0*
*NEIC **15** 17:09:51.6±0.5, 30°.74N×83°.27E, h10km, mb4.1/7, Error ellipse: s-maj=12.1km s-min=7.5km az=216.0*
*NDI **15** 17:09:54.6±3.3, 31°.10N×83°.39E, h10km, ML3.9, mb4.1(NEIC)*
ISC 15 17:09:54.4±1.1, 30°.91N±0°.03×83°.45E±0°.03, h24km±9km, n66, σ1°25/73, mb4.1/20, MS3.5/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.56**	**174**	*e*Pn	**Pn**	**17 10 34.6**	**+0.2**
DANN				*e*Sn	**Sb**	**17 11 11.1**	**+0.4**
	1μm,0.7s						
PYUN	**Piuthan**	**2.83**	**188**	*e*P	**Pn**	**17 10 37.9**	**-0.1**
GKN	**Gorkha**	**3.07**	**160**	*e*Pn	**Pn**	**17 10 42.0**	**+0.6**
GKN				*e*Sn	**Sb**	**17 11 24.7**	**-0.7**
	391nm,0.5s						
PTH	**Pithoragarh**	**3.10**	**245**	*e*PKP	**Pn**	**17 10 45.8**	**+4.0**
PTH				*ex*	**Sb**	**17 11 26.0**	**-0.3**
KOLN	**Koldanda**	**3.13**	**178**	*e*Pn	**Pn**	**17 10 42.1**	**-0.1**
KOLN				*e*Sn	**Sb**	**17 11 24.8**	**-2.2**
	420nm,0.5s						
JOSI	**Joshimath**	**3.37**	**265**	*e*PKP	**Pn**	**17 10 47.9**	**+2.4**
JOSI				*e*S	**Sn**	**17 11 25.4**	**+0.7**
JOSI				AML	AML	17 11 45.0	
	comp=E,597nm,0.9s						
JOSI				AML	AML	17 11 45.4	
	comp=N,573nm,0.7s						
KKN	**Kakani**	**3.49**	**152**	*e*Pn	**Pn**	**17 10 47.8**	**+0.6**
KKN	**Kakani**	**3.49**	**152**	*e*Pn	**Pn**	**17 10 47.9**	**+0.7**
DMN	**Daman**	**3.59**	**156**	*e*Pn	**Pn**	**17 10 49.3**	**+0.8**
GUN	**Gumba**	**3.66**	**144**	*e*Pn	**Pn**	**17 10 50.2**	**+0.7**
PKIN	**Phulchoki**	**3.73**	**152**	*e*Pn	**Pn**	**17 10 51.2**	**+0.8**
PKI	**Pulchoki**	**3.74**	**152**	*e*Pn	**Pn**	**17 10 51.0**	**+0.4**
DDI	**Dehra Dun**	**4.68**	**264**	*e*PKP	**Pn**	**17 11 04.0**	**+0.5**
DDI				*ex*	x	17 12 23.8	
TAPN	**Taplejung**	**5.14**	**132**	*e*Pn	**Pn**	**17 11 11.3**	**+1.4**
ODAN	**Odare**	**5.31**	**138**	*e*Pn	**Pn**	**17 11 13.1**	**+0.9**
SMLA	**Simla**	**5.39**	**274**	*i* P	**Pn**	**17 11 15.2**	**+1.9**
SDNR	**Sundarnagar**	**5.58**	**278**	*ex*	**Pb**	**17 11 35.5**	**+4.5**
NDI	**New Delhi**	**5.85**	**249**	*ex*	**Pn**	**17 11 17.5**	**-2.1**
NDI				*e*S	**Sn**	**17 12 24.0**	**-1.9**
AGRA	**Agra**	**6.05**	**234**	*ex*	**Pb**	**17 11 41.9**	**+2.9**
LSA	**Lhasa**	**6.77**	**98**	P	**Pn**	**17 11 36.1**	**+3.9**
LSA				pmax	pmax		
	comp=Z,20nm,1.0s						
LSA	**Lhasa**	**6.77**	**98**	*e*P	**Pn**	**17 11 36.0**	**+3.9**
	comp=Z,20nm,0.7s						
KHET	**Khetri**	**7.23**	**249**	*e*PKP	**Pn**	**17 11 39.5**	**+0.9**
KHET				*ex*	**Sn**	**17 13 01.2**	**+1.2**
SHL	**Shillong**	**9.14**	**124**	*ex*	**Pn**	**17 12 04.0**	**-0.8**
SHL				*ex*	**Sn**	**17 13 48.0**	**+1.0**
KBL	**Kabul**	**12.66**	**290**	*e*P	**Pn**	**17 12 51.7**	**-1.2**
	comp=Z,5.6nm,0.5s						
KZA	**Kyzart**	**12.94**	**332**	*e*P	**Pn**	**17 12 54.3**	**-2.4**
	comp=Z,5.2nm,0.7s						
TKM2	**Tokmak 2**	**13.53**	**335**	*e*P	**Pn**	**17 13 03.0**	**-1.7**
	comp=Z,1.7nm,0.6s						
AML	**Almayashu**	**13.66**	**328**	*e*P	**Pn**	**17 13 04.8**	**-1.7**
	comp=Z,3.7nm,0.6s						
AAK	**Ala-Archa**	**13.72**	**331**	*e*P	**Pn**	**17 13 09.1**	**+1.8**
	comp=Z,2.4nm,0.6s						
GTA	**Gaotai**	**15.83**	**53**	*e*P	**Pn**	**17 13 40.6**	**+5.0**
GTA				pP	pP	17 13 44.3	-1.5
GTA				sP	sP	17 13 46.5	-2.4
GTA				S	**Sn**	**17 16 36.8**	**+6.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				LR	LR		
	comp=N,200nm,16.1s						
GTA				LR	LR		
	comp=E,120nm,17.1s						
GTA				LR	LR		
	comp=Z,110nm,18.5s						
MKAR	**Makanchi Array**	**15.89**	**357**	Pn	**Pn**	**17 13 35.6**	**-0.6**
	baz=180,slow=16,SNR=1.0						
KKAR	**Karatay Array**	**15.94**	**323**	*e*P	**Pn**	**17 13 33.4**	**-3.6**
	comp=Z,2.3nm,0.6s						
LZH	**Lanzhou**	**17.77**	**68**	*e*P	**Pn**	**17 13 56.3**	**-3.8**
LZH				pP	pP	17 14 01.0	-6.3
LZH				sP	sP	17 14 04.8	-5.6
LZH				PP		17 14 11.0	
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,48nm,4.0s						
LZH				LR	LR		
	comp=N,240nm,9.2s						
LZH				LR	LR		
	comp=E,360nm,10.0s						
LZH				LR	LR		
	comp=Z,380nm,12.6s						
KMI	**Kunming**	**17.98**	**104**	P	**Pn**	**17 14 00.3**	**-2.4**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMI				LR	LR		
	comp=Z,250nm,22.4s						
CHTO	**Chiang Mai**	**18.49**	**127**	*e*P	**Pn**	**17 14 06.2**	**-2.8**
	comp=Z,3.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.73**	**128**	P	**Pn**	**17 14 10.0**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=307,slow=12,SNR=13						
CMAR				LR	LR	17 23 06.1	
	comp=Z,76nm,19.6s,baz=185,slow=43						
KURK	**Kurchatov**	**20.11**	**351**	*e*P	**P**	**17 14 25.0**	**-1.3**
	comp=Z,6.5nm,0.8s						
ENH	**Enshi**	**22.41**	**85**	*e*P	**P**	**17 14 52.4**	**+1.2**
ZAA0	**Zalesovo Array**	**23.05**	**2**	*e*P	**P**	**17 14 58.5**	**+0.8**
ZALV	**Zalesovo Beam**	**23.05**	**2**	P	**P**	**17 14 57.9**	**+0.1**
	comp=Z,2.4nm,0.6s,mb3.8,baz=187,slow=10,SNR=9.0						
BVAR	**Borovoye Array**	**24.06**	**340**	P	**P**	**17 15 07.3**	**-0.3**
	comp=Z,1.9nm,0.5s,mb3.8,baz=150,slow=10,SNR=15						
BRVK	**Borovoye**	**24.12**	**340**	P	**P**	**17 15 07.8**	**-0.3**
SONM	**Songino Array**	**24.36**	**40**	P	**P**	**17 15 12.7**	**+2.4**
	comp=Z,2.9nm,0.8s,mb3.8,baz=230,slow=10,SNR=15						
SONM				LR	LR	17 25 38.9	
	comp=Z,85nm,20.9s,MS3.2,baz=67,slow=39						
ULN	**Ulaanbaatar**	**24.74**	**40**	*e*P	**P**	**17 15 15.6**	**+1.8**
	comp=Z,3.8nm,0.9s,mb3.9						
ABKAR	**Akbulak array**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
ETRT	Tiaret	0.97	115	P	Pg	17 44 14.9	-1.0
ETRT	Tiaret	0.97	115	P	Pg	17 44 14.9	-1.0
ECHF	Ech Chlef	0.98	69	P	Pg	17 44 16.6	+0.7
ECHF	Ech Chlef	0.98	69	P	Pg	17 44 16.6	+0.7
ECHA	Ech Chlef	0.99	69	P	Pg	17 44 16.6	+0.3
ECHA	Ech Chlef	0.99	69	P	Pg	17 44 16.6	+0.3
EBNR	Beni Rached	1.17	65	P	Pb	17 44 20.4	+1.0
EBNR	Beni Rached	1.17	65	P	Pb	17 44 20.4	+1.0
EMHD	Djebel Mahouad	2.25	79	P	Pn	17 44 32.0	-2.5
EMHD	Djebel Mahouad	2.25	79	P	Pn	17 44 32.0	-2.5
EMHD	Djebel Mahouad	2.25	79	P	Pn	17 44 32.0	-2.5
EMHD	Djebel Mahouad	2.25	79	P	Pn	17 44 32.0	-2.5
EMUR	La Murta	2.35	331	P	Pn	17 44 36.5	+0.8
EMUR				S	Sn	17 45 03.3	-1.3
EMUR	La Murta	2.35	331	P	Pn	17 44 36.5	+0.8
	4.9nm,0.2s,SNR=8.1						
EMUR				S	Sn	17 45 03.3	-1.3
	5.0nm,0.2s						
EMUR	La Murta	2.35	331	P	Pn	17 44 36.5	+0.8
	4.9nm,0.2s,SNR=8.1						
EMUR				S	Sn	17 45 03.3	-1.3
	5.0nm,0.2s						
EMUR	La Murta	2.35	331	P	Pn	17 44 36.5	+0.8
	4.9nm,0.2s,SNR=8.1						
EMUR				S	Sn	17 45 03.3	-1.3
	5.0nm,0.2s						
EALB	Alboran	2.65	274	P	Pn	17 44 38.2	-1.7
EALB				S	Sn	17 45 10.6	-1.4
EALB	Alboran	2.65	274	P	Pn	17 44 38.2	-1.7
	1.2nm,0.1s,SNR=7.9						
EALB				S	Sn	17 45 10.6	-1.4
	9.1nm,0.2s,SNR=7.9						
EALB	Alboran	2.65	274	P	Pn	17 44 38.2	-1.7
	1.2nm,0.1s,SNR=7.9						
EALB				S	Sn	17 45 10.6	-1.4
	9.1nm,0.2s,SNR=7.9						
EALB	Alboran	2.65	274	P	Pn	17 44 38.2	-1.6
	1.2nm,0.1s,SNR=7.9						
EALB				S	Sn	17 45 10.6	-1.4
	9.1nm,0.2s,SNR=7.9						
EBER	Berja	2.73	294	P	Pn	17 44 40.2	-0.9
EBER				S	Sn	17 45 13.7	-0.5
EBER	Berja	2.73	294	P	Pn	17 44 40.2	-0.9
	0.9nm,0.1s,SNR=17						
EBER				S	Sn	17 45 13.7	-0.5
	5.1nm,0.2s						
EBER	Berja	2.73	294	P	Pn	17 44 40.2	-0.9
	0.9nm,0.1s,SNR=17						
EBER				S	Sn	17 45 13.7	-0.5
	5.1nm,0.2s						
EBER	Berja	2.73	294	P	Pn	17 44 40.2	-0.9
	0.9nm,0.1s,SNR=17						
EBER				S	Sn	17 45 13.7	-0.5
	5.1nm,0.2s						
EBEN	Beniarda	2.92	353	P	Pn	17 44 45.5	+1.9
EBEN				S	Sn	17 45 18.1	-0.5
EBEN	Beniarda	2.92	353	P	Pn	17 44 44.4	+0.9
	0.4nm,0.1s,SNR=17						
EBEN				S	Sn	17 45 18.1	-0.5
	1.3nm,0.3s						
EBEN	Beniarda	2.92	353	P	Pn	17 44 44.4	+0.9
	0.4nm,0.1s,SNR=17						
EBEN				S	Sn	17 45 18.1	-0.5
	1.3nm,0.3s						
EBEN	Beniarda	2.92	353	P	Pn	17 44 45.5	+1.9
EBEN				S	Sn	17 45 18.1	-0.5
	1.3nm,0.3s						
EHUE	Huescar	3.02	312	P	Pn	17 44 46.2	+1.2
EHUE				S	Sn	17 45 22.6	+1.5
EHUE	Huescar	3.02	312	P	Pn	17 44 46.2	+1.2
	0.3nm,0.1s,SNR=7.9						
EHUE				S	Sn	17 45 22.6	+1.5
	0.4nm,0.1s,SNR=7.9						
EHUE	Huescar	3.02	312	P	Pn	17 44 46.2	+1.2
	0.3nm,0.1s,SNR=7.9						
EHUE				S	Sn	17 45 22.6	+1.5
	0.4nm,0.1s,SNR=7.9						
EHUE	Huescar	3.02	312	P	Pn	17 44 46.2	+1.2
	0.3nm,0.1s,SNR=7.9						
EHUE				S	Sn	17 45 22.6	+1.4
	0.4nm,0.1s,SNR=7.9						
ETOB	Tobarra	3.17	334	P	Pn	17 44 48.4	+1.3
ETOB				S	Sn	17 45 24.8	0.0
ETOB	Tobarra	3.17	334	P	Pn	17 44 48.3	+1.3
	2.1nm,0.1s,SNR=17						
ETOB				S	Sn	17 45 24.8	0.0
	4.5nm,0.2s						
ETOB	Tobarra	3.17	334	P	Pn	17 44 48.3	+1.3
	2.1nm,0.1s,SNR=17						
ETOB				S	Sn	17 45 24.8	0.0
	4.5nm,0.2s						
ETOB	Tobarra	3.17	334	P	Pn	17 44 48.3	+1.3
	2.1nm,0.1s,SNR=17						
ETOB				S	Sn	17 45 24.8	0.0
	4.5nm,0.2s						
EGUA	Guajares	3.22	290	P	Pn	17 44 48.6	+0.8
EGUA				S	Sn	17 45 25.0	-1.3
EGUA	Guajares	3.22	290	P	Pn	17 44 46.8	-1.0
	11nm,0.2s,SNR=7.9						
EGUA				S	Sn	17 45 25.0	-1.3
	7.0nm,0.3s,SNR=7.9						
EGUA	Guajares	3.22	290	P	Pn	17 44 46.8	-1.0
	11nm,0.2s,SNR=7.9						
EGUA				S	Sn	17 45 25.0	-1.3
	7.0nm,0.3s,SNR=7.9						
EGUA	Guajares	3.22	290	P	Pn	17 44 48.6	+0.8
	SNR=7.9						
EGUA				S	Sn	17 45 25.0	-1.2
	7.0nm,0.3s,SNR=7.9						
EQUE	Quentar	3.26	296	P	Pn	17 44 49.0	+0.7
	1.7nm,0.2s,SNR=22						
EQUE				S	Sn	17 45 26.2	-1.0
	0.6nm,0.1s						
EQUE	Quentar	3.26	296	P	Pn	17 44 49.0	+0.7
	1.7nm,0.2s,SNR=22						
EQUE				S	Sn	17 45 26.2	-1.0
	0.6nm,0.1s						
EQUE	Quentar	3.26	296	P	Pn	17 44 49.0	+0.7
	1.7nm,0.2s,SNR=22						
EQUE				S	Sn	17 45 26.2	-1.0
	0.6nm,0.1s						
EQES	Quesada	3.31	308	P	Pn	17 44 50.5	+1.5
EQES				S	Sn	17 45 29.1	+0.7
EQES	Quesada	3.31	308	P	Pn	17 44 49.3	+0.3
	1.4nm,0.1s,SNR=16						
EQES				S	Sn	17 45 29.1	+0.7
	1.0nm,0.1s,SNR=8.6						
EQES	Quesada	3.31	308	P	Pn	17 44 49.3	+0.3
	1.4nm,0.1s,SNR=16						
EQES				S	Sn	17 45 29.1	+0.7
	1.0nm,0.1s,SNR=8.6						
EQES	Quesada	3.31	308	P	Pn	17 44 50.5	+1.5
	1.4nm,0.1s,SNR=16						
EQES				S	Sn	17 45 29.1	+0.8
	1.0nm,0.1s,SNR=8.6						
EIBI	Ibiza	3.34	15	P	Pn	17 44 50.8	+1.4
EIBI				S	Sn	17 45 28.1	-1.0
EIBI	Ibiza	3.34	15	P	Pn	17 44 50.7	+1.4
	2.0nm,0.1s,SNR=7.8						
EIBI				S	Sn	17 45 28.1	-1.0
	4.0nm,0.2s						
EIBI	Ibiza	3.34	15	P	Pn	17 44 50.7	+1.4
	2.0nm,0.1s,SNR=7.8						
EIBI				S	Sn	17 45 28.1	-1.0
	4.0nm,0.2s						
EIBI	Ibiza	3.34	15	P	Pn	17 44 50.7	+1.3
	2.0nm,0.1s,SNR=7.8						
EIBI				S	Sn	17 45 28.1	-1.0
	4.0nm,0.2s						
ECOG	Cogollos-Vega	3.38	297	P	Pn	17 44 51.1	+1.1
ECOG				S	Sn	17 45 30.9	+0.7
ECOG	Cogollos-Vega	3.38	297	P	Pn	17 44 51.1	+1.1
	1.5nm,0.1s,SNR=7.9						
ECOG				S	Sn	17 45 30.9	+0.7
	1.8nm,0.2s,SNR=7.9						
ECOG	Cogollos-Vega	3.38	297	P	Pn	17 44 51.1	+1.1
	1.5nm,0.1s,SNR=7.9						
ECOG				S	Sn	17 45 30.9	+0.7
	1.8nm,0.2s,SNR=7.9						
ECOG	Cogollos-Vega	3.38	297	P	Pn	17 44 51.1	+1.1
	1.5nm,0.1s,SNR=7.9						
ECOG				S	Sn	17 45 30.9	+0.7
	1.8nm,0.2s,SNR=7.9						
EVIA	Vianos	3.57	323	P	Pn	17 44 53.5	+1.0
EVIA				S	Sn	17 45 34.8	+0.2
EVIA	Vianos	3.57	323	P	Pn	17 44 53.5	+1.0
	0.6nm,0.1s,SNR=7.6						
EVIA				S	Sn	17 45 34.8	+0.2
	1.9nm,0.2s,SNR=17						
EVIA	Vianos	3.57	323	P	Pn	17 44 53.5	+1.0
	0.6nm,0.1s,SNR=7.6						
EVIA				S	Sn	17 45 34.8	+0.2
	1.9nm,0.2s,SNR=17						
EVIA	Vianos	3.57	323	P	Pn	17 44 53.5	+1.0
	0.6nm,0.1s,SNR=7.6						
EVIA				S	Sn	17 45 34.8	+0.1
	1.9nm,0.2s,SNR=17						
ECHE	Chera	3.90	346	P	Pn	17 44 59.4	+2.4
ECHE				S	Sn	17 45 43.4	+0.6
ECHE	Chera	3.90	346	P	Pn	17 44 59.4	+2.4
	SNR=7.9						
ECHE				S	Sn	17 45 43.4	+0.6
	2.9nm,0.3s,SNR=4.8						
ECHE	Chera	3.90	346	P	Pn	17 44 59.4	+2.4
	SNR=7.9						
ECHE				S	Sn	17 45 43.4	+0.6
	2.9nm,0.3s,SNR=4.8						
ECHE	Chera	3.90	346	P	Pn	17 44 59.4	+2.4
	SNR=7.9						
ECHE				S	Sn	17 45 43.4	+0.6
	2.9nm,0.3s,SNR=4.8						
EBAN	Banos Encina	3.98	307	P	Pn	17 44 58.6	+0.4
EBAN				S	Sn	17 45 42.6	-2.2
EBAN	Banos Encina	3.98	307	P	Pn	17 44 58.6	+0.4
	0.9nm,0.1s,SNR=7.9						
EBAN				S	Sn	17 45 46.1	+1.2
	SNR=7.9						
EBAN	Banos Encina	3.98	307	P	Pn	17 44 58.6	+0.4
	0.9nm,0.1s,SNR=7.9						
EBAN				S	Sn	17 45 46.1	+1.2
	SNR=7.9						
EBAN	Banos Encina	3.98	307	P	Pn	17 44 58.6	+0.4
	0.9nm,0.1s,SNR=7.9						
EBAN				S	Sn	17 45 42.6	-2.2
	SNR=7.9						
EMIJ	Mijas	4.11	282	P	Pn	17 44 57.9	-2.1
EMIJ				S	Sn	17 45 44.7	-3.3
EMIJ	Mijas	4.11	282	P	Pn	17 44 57.9	-2.1
	0.6nm,0.1s,SNR=7.9						
EMIJ				S	Sn	17 45 44.7	-3.3
	1.5nm,0.2s,SNR=7.9						
EMIJ	Mijas	4.11	282	P	Pn	17 44 57.9	-2.1
	0.6nm,0.1s,SNR=7.9						
EMIJ				S	Sn	17 45 44.7	-3.3
	1.5nm,0.2s,SNR=7.9						
EMIJ	Mijas	4.11	282	P	Pn	17 44 57.9	-2.1
	0.6nm,0.1s,SNR=7.9						
EMIJ				S	Sn	17 45 44.7	-3.4
	1.5nm,0.2s,SNR=7.9						
ETOS	Mallorca	4.46	27	P	Pn	17 45 04.2	-0.6
ETOS				S	Sn	17 45 54.7	-2.0
ETOS	Mallorca	4.46	27	P	Pn	17 45 04.2	-0.6
	SNR=7.9						
ETOS				S	Sn	17 45 54.7	-2.0
	0.5nm,0.2s,SNR=7.9						
ETOS	Mallorca	4.46	27	P	Pn	17 45 04.2	-0.6
	SNR=7.9						
ETOS				S	Sn	17 45 54.7	-2.0
	0.5nm,0.2s,SNR=7.9						
ETOS	Mallorca	4.46	27	P	Pn	17 45 04.2	-0.6
	SNR=7.9						
ETOS				S	Sn	17 45 54.7	-2.0
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.58	353	P	Pn	17 45 09.1	+2.6
EMOS				S	Sn	17 45 58.9	-0.9
EMOS	Mosqueruela	4.58	353	P	Pn	17 45 08.3	+1.8
	1.0nm,0.1s,SNR=10						
EMOS				S	Sn	17 45 58.9	-0.9
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.58	353	P	Pn	17 45 08.3	+1.8
	1.0nm,0.1s,SNR=10						
EMOS				S	Sn	17 45 58.9	-0.9
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.58	353	P	Pn	17 45 09.1	+2.6
	1.0nm,0.1s,SNR=10						
EMOS				S	Sn	17 45 58.9	-0.9
	0.5nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.09	321	P	Pn	17 45 15.4	+2.0
ESDC	Sonseca Array	5.09	321	P	Pn	17 45 15.4	+2.0
	0.5nm,0.3s,baz=145,slow=13,SNR=3.9						
ESDC	Sonseca Array	5.09	321	P	Pn	17 45 15.4	+2.0
	0.5nm,0.3s,baz=145,slow=13,SNR=3.9						
ESDC	Sonseca Array	5.09	321	P	Pn	17 45 15.4	+2.0
	0.5nm,0.3s,SNR=3.9						
ERTA	Horta de San J	5.14	1	P	Pn	17 45 14.7	+0.5
ERTA				S	Sn	17 46 12.1	-1.5
ERTA	Horta de San J	5.14	1	P	Pn	17 45 14.7	+0.5
	0.6nm,0.1s,SNR=4.0						
ERTA				S	Sn	17 46 12.1	-1.5
	0.5nm,0.2s,SNR=7.9						
ERTA	Horta de San J	5.14	1	P	Pn	17 45 14.7	+0.5
	0.6nm,0.1s,SNR=4.0						
ERTA				S	Sn	17 46 12.1	-1.5
	0.5nm,0.2s,SNR=7.9						
ERTA	Horta de San J	5.14	1	P	Pn	17 45 14.7	+0.5
	0.6nm,0.1s,SNR=7.9						
ERTA				S	Sn	17 46 12.1	-1.5
	0.5nm,0.2s,SNR=7.9						
EPOB	Poblet	5.58	7	P	Pn	17 45 20.7	+0.6
EPOB				S	Sn	17 46 22.7	-1.6
EPOB	Poblet	5.58	7	P	Pn	17 45 20.7	+0.6
	1.0nm,0.2s,SNR=7.9						
EPOB				S	Sn	17 46 22.7	-1.6
	0.2nm,0.2s,SNR=7.9						
EPOB	Poblet	5.58	7	P	Pn	17 45 20.7	+0.6
	1.0nm,0.2s,SNR=7.9						
EPOB				S	Sn	17 46 22.7	-1.6
	0.2nm,0.2s,SNR=7.9						
EPOB	Poblet	5.58	7	P	Pn	17 45 20.7	+0.5
	1.0nm,0.2s,SNR=7.9						
EPOB				S	Sn	17 46 22.7	-1.6
	0.2nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	5.87	292	P	Pn	17 45 23.4	-0.7
EMIN	Mina Concepcio	5.87	292	P	Pn	17 45 23.4	-0.7
	0.2nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.87	292	P	Pn	17 45 23.4	-0.7
	0.2nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.87	292	P	Pn	17 45 23.4	-0.7
	0.2nm,0.1s,SNR=7.9						

IDC 15 17:50:46.5±3.4, 5°.86S×149°.63E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, Error ellipse: s-maj=97.9km s-min=27.7km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
WRA	Warramunga Arr	20.42	225	P	P	17 55 26.6	+1.1
	2.1nm,0.6s,baz=50,slow=11,SNR=16						
ASAR	Alice Springs	23.30	219	P	P	17 55 57.2	+1.0
	0.4nm,0.4s,baz=55,slow=8.7,SNR=15						
FITZ	Fitzroy Crossi	26.39	240	P	P	17 56 23.1	-1.8
	2.2nm,0.4s,baz=68,slow=8.3,SNR=31						
KSRS	Korea Array	47.61	337	P	P	17 59 25.5	+1.2
	0.8nm,0.6s,baz=155,slow=8.5,SNR=5.1						
TORD	Torodi Ar. Bea	147.59	285	PKPbc	PKPbc	18 10 32.5	-1.4
	0.2nm,0.3s,baz=76,slow=3.0,SNR=5.5						

NEIC 15 18:04:35.9, 16°.86N×100°.03W, h13km, MD3.6(MEX), After MEX.

MEX 15 18:04:36.1±0.5, 16°.87N×100°.03W, h13km±7km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
CAIG	El Cayaco	0.28	308	*i* P	Pg	18 04 41.3	-0.7
CAIG				*e*S	Sg	18 04 46.0	+0.1
CAIG	El Cayaco	0.28	308	*i* P	Pg	18 04 41.3	-0.7
CAIG				*e*S	Sg	18 04 46.0	+0.1
MEIG	Mezcala	1.12	21	*i* P	Pb	18 04 53.1	-4.2
MEIG				*e*S	Sb	18 05 07.4	-4.5
ZIIG	Zihuatanejo	1.55	298	*i* P	Pn	18 05 00.6	-2.8
ZIIG				*e*S	Sn	18 05 18.0	-5.4
ZIIG	Zihuatanejo	1.55	298	*i* P	Pn	18 05 00.6	-2.8
ZIIG				*e*S	Sn	18 05 18.0	-5.4
PLIG	Platanillo	1.59	18	*i* P	Pn	18 05 00.8	-3.2
PLIG				*e*S	Sn	18 05 20.0	-4.6
PLIG	Platanillo	1.59	18	*i* P	Pn	18 05 00.8	-3.2
PLIG				*e*S	Sn	18 05 20.0	-4.6
PNIG	Pinotepa	1.89	104	*i* P	Pn	18 05 04.1	-4.0
PNIG				*i* S	Sn	18 05 30.2	-1.6
PNIG	Pinotepa	1.89	104	*i* P	Pn	18 05 04.1	-4.0
PNIG				*i* S	Sn	18 05 27.9	-3.9

WEL 15 18:55:01.7±0.4, 38°.34S×175°.93E, h168km±3km, ML3.5/8, 1D, Error ellipse: s-maj=3.2km s-min=2.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
KATZ	Kakaramea	0.66	196	PN	Pn	18 55 26.6	+0.7
KRVZ	Karewarewa	0.78	196	PN	Pn	18 55 27.1	+0.5
WTVZ	West Tongariro	0.81	199	PN	Pn	18 55 27.2	+0.4
TWVZ	Taurewa	0.82	208	PN	Pn	18 55 27.3	+0.4
NGZ	Ngauruhoe	0.87	197	PN	Pn	18 55 27.7	+0.5
WPVZ	Whakapapa	0.91	199	PN	Pn	18 55 27.9	+0.4
BKZ	Black Stump Fm	0.93	152	PN	Pn	18 55 27.9	+0.1
BKZ				SN	Sn	18 55 47.4	-0.3
URZ	Urewera	0.94	85	PN	Pn	18 55 27.4	-0.3
URZ				SN	Sn	18 55 47.0	-0.7
TUVZ	Tukino	0.95	193	PN	Pn	18 55 28.2	+0.4
FWVZ	Far West T-bar	0.96	198	PN	Pn	18 55 28.3	+0.4
WNVZ	Wahianoa	1.02	194	PN	Pn	18 55 28.6	+0.2
NMHZ	Naumai	1.02	138	PN	Pn	18 55 29.4	+1.0
NMHZ				SN	Sn	18 55 49.9	+1.0
PKVZ	Pokaka	1.05	205	⇓PN	Pn	18 55 28.7	+0.1
MOVZ	Moawhango	1.07	187	PN	Pn	18 55 28.6	-0.2
MOVZ				SN	Sn	18 55 48.5	-1.2
RAHZ	Arahi	1.07	123	SN	Sn	18 55 50.6	+1.0
MTVZ	Mangateitei	1.10	199	PN	Pn	18 55 29.2	+0.1
BHHZ	Black Hill Sta	1.15	175	PN	Pn	18 55 29.2	-0.2
BHHZ				SN	Sn	18 55 49.5	-1.3
VRZ	Vera Road	1.20	229	PN	Pn	18 55 29.9	0.0
MCHZ	McNeill Hill	1.25	151	PN	Pn	18 55 31.0	+0.7
MWZ	Matawai	1.26	90	PN	Pn	18 55 30.3	-0.1
MWZ				SN	Sn	18 55 51.6	-0.9
KNZ	Kokohu	1.53	117	PN	Pn	18 55 32.9	0.0
PNHZ	Pukenui	1.58	172	PN	Pn	18 55 33.0	-0.5
WAZ	Wanganui	1.59	207	PN	Pn	18 55 33.1	-0.5
CKHZ	Cape Kidnapper	1.59	146	PN	Pn	18 55 33.8	+0.2
KAHZ	Kahuranaki	1.63	153	PN	Pn	18 55 34.1	+0.1
PRGZ	Paritu Road	1.64	111	PN	Pn	18 55 34.6	+0.5
NEZ	North Egmont	1.70	236	PN	Pn	18 55 34.9	+0.2
TSZ	Takapari Road	1.71	179	PN	Pn	18 55 34.2	-0.6
MHGZ	Mahia Peninsul	1.75	118	PN	Pn	18 55 35.5	+0.3
WPHZ	Waipukurau	1.77	167	PN	Pn	18 55 34.8	-0.5
CNGZ	Carnagh Statio	1.80	95	PN	Pn	18 55 36.1	+0.3
PXZ	Pawanui	1.84	157	PN	Pn	18 55 35.3	-0.9
PUZ	Puketiti	1.86	82	PN	Pn	18 55 35.8	-0.6
DVHZ	Dannevirke	1.96	175	PN	Pn	18 55 36.3	-1.2
PRHZ	Porangahau	2.00	164	PN	Pn	18 55 37.0	-0.9
MXZ	Matakaoa Point	2.04	68	PN	Pn	18 55 37.9	-0.5
MRZ	Mangatainoka R	2.33	186	PN	Pn	18 55 39.8	-1.9
BFZ	Birch Farm	2.35	174	PN	Pn	18 55 40.2	-1.7
TIWZ	Tintock	2.43	181	PN	Pn	18 55 41.1	-1.8
OGWZ	Otaki Gorge	2.54	193	PN	Pn	18 55 42.3	-1.9
HOWZ	Holdsworth Sta	2.57	187	PN	Pn	18 55 42.4	-2.2
KIW	Kapiti Island	2.63	197	PN	Pn	18 55 43.0	-2.3
TMWZ	Te Maipa	2.76	181	PN	Pn	18 55 44.8	-2.0
MTW	Mount Morrison	2.83	186	PN	Pn	18 55 44.9	-2.8
CAW	Cannon Point	2.84	193	PN	Pn	18 55 45.3	-2.5
DUWZ	D'Urville Isla	2.90	212	PN	Pn	18 55 45.9	-2.6
TRWZ	Traveller	3.06	183	PN	Pn	18 55 47.8	-2.7
MSWZ	Moikau Station	3.11	189	PN	Pn	18 55 48.0	-3.1
TCW	Tory Channel	3.13	203	PN	Pn	18 55 48.6	-2.8
PLWZ	Palliser	3.26	189	PN	Pn	18 55 49.6	-3.4
TUWZ	Tuamarina	3.44	206	PN	Pn	18 55 51.9	-3.4
NNZ	Nelson	3.48	214	PN	Pn	18 55 52.3	-3.4
QRZ	Quartz Range	3.61	226	PN	Pn	18 55 53.3	-4.1
BSWZ	Blackbirch Sta	3.72	204	PN	Pn	18 55 55.7	-3.1
THZ	Tophouse	4.13	213	PN	Pn	18 56 01.0	-3.1
KHZ	Kahutara	4.46	203	PN	Pn	18 56 04.8	-3.5

IDC 15 19:24:25.9±0.8, 53°.79N×163°.07W, h0km, mb4.1/17, mb1 4.2/19, mb1mx4.0/32, mbtmp4.0/19, ML3.4/2, MS3.3/9, Ms1 3.3/9, ms1mx3.1/37, Error ellipse: s-maj=20.8km s-min=12.6km az=173.0

BJI 15 19:24:25.3, 54°.47N×162°.94W, h7km, mB5.0/4, mb4.8/6

ISCJB 15 19:24:29.4±1.0, 53°.88N±0°.08×162°.93W±0°.07, h34km±8km, mb4.2/32, MS3.3/9, Error ellipse: s-maj=14.0km s-min=6.0km az=167.9

NEIC 15 19:24:29.4±1.7, 53°.74N×163°.05W, h23km±12km, ML3.7(AEIC), ML3.5(PMR), Error ellipse: s-maj=9.3km s-min=4.7km az=172.0

ISC 15 19:24:29.6±2.1, 53°.83N±0°.08×162°.98W±0°.06, h23km±15km, n54, σ1°.06/56, mb4.2/32, MS3.3/9, South of Alaska

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
AKUT	Akutan	1.68	282	*e*P	Pn	19 24 57.1	-0.4
UNV	Unalaska Valle	2.08	272	P	Pn	19 25 02.9	-0.3
UNV				S	Sn	19 25 29.4	+1.1
SDPT	Sand Point	2.11	43	*e*P	Pn	19 25 04.3	+0.8
CHGN	Chignik	3.61	45	*e*Pn	Pn	19 25 24.8	+0.7
NIKO	Nikolski	3.62	259	*e*Pn	Pn	19 25 21.7	-2.5
OHAK	Old Harbor	6.47	54	P	Pn	19 26 01.4	-1.9
KDAK	Kodiak Island	7.07	52	Pn	Pn	19 26 10.3	-1.3
	0.7nm,0.3s,baz=327,slow=14,SNR=7.6						
KDAK				Sn	Sn	19 27 28.1	-3.1
	1.6nm,0.3s,baz=316,slow=22,SNR=9.2						
KDAK	Kodiak Island	7.07	52	Pn	Pn	19 26 10.3	-1.3
KDAK				Sn	Sn	19 27 28.1	-3.1
RC01	Rabbit Creek A	10.18	39	*e*P	Pn	19 26 55.6	+1.5
TRF	Thorofare Moun	11.67	29	*e*P	Pn	19 27 15.3	+0.8
	17nm,1.2s						
BPAW	Bear Paw Mtn.	11.99	26	*e*P	Pn	19 27 20.9	+2.1
	3.4nm,0.9s						
ILAR	Eielson Array	13.65	30	Pn	Pn	19 27 39.8	-1.8
	0.1nm,0.3s,baz=222,slow=13,SNR=4.7						
ILAR				Sn	Sn	19 30 08.3	-4.0
	0.1nm,0.3s,baz=198,slow=7.6,SNR=5.1						
COLD	Coldfoot	14.79	20	*e*P	Pn	19 27 58.2	+1.2
	2.9nm,0.5s						
EGAK	Eagle	15.53	37	*e*P	Pn	19 28 11.3	+4.4
	2.8nm,0.6s						
DAWY	Dawson	15.80	40	*e*P	Pn	19 28 16.4	+6.0
INK	Inuvik	20.03	32	P	P	19 28 60.0	-0.5
	2.3nm,0.4s,baz=234,slow=8.7,SNR=3.4						
INK	Inuvik	20.03	32	P	P	19 28 60.0	-0.5
BBB	Bella Bella	20.92	80	LR	LR	19 35 34.9	
	comp=Z,70nm,20.2s,MS3.0,baz=307,slow=32						
PETK	Petropavlovsk-	23.22	284	P	P	19 29 34.8	+0.1
	4.4nm,0.5s,mb4.1,baz=82,slow=14,SNR=7.7						
PETK				LR	LR	19 38 07.1	
	comp=Z,86nm,18.7s,MS3.2,baz=70,slow=35						
YKA	Yellowknife Ar	26.35	51	P	P	19 30 05.4	+1.9
	1.3nm,0.6s,mb3.6,baz=276,slow=10.0,SNR=5.8						
YKA				LR	LR	19 40 47.7	
	comp=Z,8.1nm,20.8s,MS2.2,baz=220,slow=37						
ETW	Entiat	27.38	86	P	P	19 30 13.2	+0.3
	6.2nm,0.9s,mb4.1						
YBH	Yreka Blue Hor	29.24	98	P	P	19 30 29.2	-0.3
	1.8nm,0.6s,mb4.0,baz=244,slow=8.1,SNR=5.7						
YBH				LR	LR	19 39 10.1	
	comp=Z,95nm,18.6s,MS3.4,baz=345,slow=30						
YBH	Yreka Blue Hor	29.24	98	P	P	19 30 29.2	-0.3
YBH				LR	LR	19 39 10.1	
WVOR	Wild Horse Val	31.21	93	*e*P	P	19 30 47.8	+0.8
	3.9nm,1.0s,mb4.2						
NVAR	Mina Array Bea	33.95	99	P	P	19 31 11.7	+0.8
	3.1nm,0.8s,mb4.3,baz=296,slow=8.9,SNR=18						
ASAJ	Asahikawa	36.19	277	P	P	19 31 29.4	-0.8
	4.9nm,0.8s,mb4.5,baz=223,slow=18,SNR=3.5						
ARUT	Antelope Range	37.24	95	*e*P	P	19 31 39.2	+0.1
	40nm,1.0s,mb5.2						
LDFC	Landfair	38.11	100	*e*P	P	19 31 46.0	-0.5
	3.6nm,0.6s,mb4.3						
ULM	Lac du Bonnet	40.05	67	LR	LR	19 48 38.3	
	comp=Z,83nm,19.1s,MS3.6,baz=1.9,slow=36						
MAJO	Matsushiro	43.56	271	*e*P	P	19 32 32.0	+0.5
	3.5nm,0.6s,mb4.3						
MAT	Matsushiro	43.56	271	P	P	19 32 31.2	-0.3
CN2	Changchun	46.28	288	*e*P	P	19 32 53.0	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
DAG	Danmarks Havn	47.72	10	*i* P	P	19 33 03.8	-0.1
	comp=Z,23nm,0.7s,mb5.3						
SUMG	Summit	48.19	19	*i* P	P	19 33 09.5	+2.0
	comp=Z,4.7nm,0.8s,mb4.6						

TXAR Lajitas Array 48.95 95 P **P 19 33 13.8 -0.2**
comp=Z,1.7nm,0.7s,mb4.2,baz=299,slow=5.7,SNR=20
TXAR LR LR 19 52 02.0
comp=Z,33nm,18.7s,MS3.4,baz=185,slow=34
KSRS Korea Array 49.00 280 P **P 19 33 14.6 +0.3**
comp=Z,1.0nm,0.5s,mb4.1,baz=49,slow=7.4,SNR=7.6
KSRS LR LR 19 55 14.3
comp=Z,25nm,18.6s,MS3.2,baz=21,slow=38
SONM Songino Array 53.79 303 P **P 19 33 50.3 +0.4**
comp=Z,1.6nm,0.8s,mb4.0,baz=52,slow=7.5,SNR=11
KEV Kevo 56.51 356 *eP* **P 19 34 05.8 -3.5**
comp=Z,0.9nm,0.4s,mb4.2
ARCES ARCESS Array B 56.79 356 P **P 19 34 10.5 -0.8**
comp=Z,1.1nm,0.6s,mb4.0,baz=15,slow=8.0,SNR=10
ZALV Zalesovo Beam 58.86 320 P **P 19 34 24.4 -1.6**
comp=Z,0.5nm,0.3s,mb4.0,baz=23,slow=5.3,SNR=4.4
ZALV LR LR 20 02 03.6
comp=Z,36nm,18.8s,MS3.5,baz=47,slow=38
JOF Joensuu 63.06 353 *ep* **P 19 34 53.2 -1.1**
comp=Z,0.4nm,0.4s,mb3.9
KURK Kurchatov 63.74 321 *eP* **P 19 34 58.8 -0.2**
comp=Z,3.1nm,0.8s,mb4.4
KAF Kangasniemi 64.17 355 *ep* **P 19 35 00.2 -1.5**
comp=Z,0.6nm,0.4s,mb4.0
BVAR Borovoye Array 64.65 328 P **P 19 35 05.4 +0.4**
comp=Z,1.6nm,0.5s,mb4.3,baz=45,slow=6.5,SNR=12
FINES FINESS Array B 64.85 355 P **P 19 35 05.1 -1.1**
comp=Z,1.3nm,0.5s,mb4.2,baz=18,slow=8.1,SNR=10
FINES FINESS Array B 64.85 355 P **P 19 35 05.1 -1.1**
MKAR Makanchi Array 65.49 317 P **P 19 35 09.9 -0.7**
comp=Z,0.8nm,0.6s,mb3.9,baz=44,slow=6.9,SNR=10
EKS2 Erkin-Say 72.30 320 *eP* **P 19 35 53.6 +0.7**
comp=Z,2.2nm,0.7s,mb4.2
AML Almayashu 72.78 319 *eP* **P 19 35 57.1 +1.3**
comp=Z,2.4nm,0.5s,mb4.4
KKAR Karatay Array 73.14 322 *eP* **P 19 35 57.7 -0.3**
comp=Z,1.3nm,0.6s,mb4.0
LSA Lhasa 75.17 300 *eP* **P 19 36 10.9 +0.9**
comp=Z,1.3nm,0.6s,mb4.0
GERES GERESS Array B 77.66 2 P **P 19 36 24.5 +0.7**
comp=Z,0.6nm,0.6s,mb3.7,baz=32,slow=5.2,SNR=4.4
CMAR Chiang Mai Arr 79.96 287 P **P 19 36 36.8 -0.1**
comp=Z,2.6nm,1.0s,mb4.1,baz=13,slow=4.6,SNR=9.7
CMAR LR LR 20 14 01.1
comp=Z,50nm,18.6s,MS3.9,baz=345,slow=37
BRTR Keskin Array B 85.72 347 P **P 19 37 07.2 +0.7**
comp=Z,1.7nm,0.7s,mb4.4,baz=34,slow=4.6,SNR=6.6

CSEM ***15*** *19:35:44.0, 38°.14N×23°.50E, h27km, MD3.0, After ATH*
ATH 15 19:35:44.0, 38°.14N×23°.50E, h27km±2km, MD3.0/8, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAIG	**Nisos Aigina**	**0.38**	**181**	*eP*B	Pb	19 35 52.7	+0.3
NAIG	**Nisos Aigina**	**0.38**	**181**	*eP*b	Pb	19 35 52.7	+0.3
LTK	**Loutraki**	**0.44**	**255**	*eP*B	Pb	19 35 53.2	0.0
LTK	**Loutraki**	**0.44**	**255**	*eP*b	Pb	19 35 53.2	0.0
LKR	**Lokris**	**0.64**	**323**	*eP*N	Pn	19 35 56.9	-0.4
LKR				*eS*N	Sn	19 36 07.1	+0.4
LKR	**Lokris**	**0.64**	**323**	*eP*n	Pn	19 35 56.9	-0.4
LKR				*eS*n	Sn	19 36 07.1	+0.4
DID	**Didima**	**0.67**	**198**	*eP*N	Pn	19 35 57.3	-0.3
DID				*eS*N	Sn	19 36 07.6	+0.4
DID	**Didima**	**0.67**	**198**	*eP*n	Pn	19 35 57.3	-0.3
DID				*eS*n	Sn	19 36 07.6	+0.4
GUR	**Goura**	**0.94**	**258**	*eP*B	Pb	19 36 01.4	-0.2
GUR	**Goura**	**0.94**	**258**	*eP*b	Pb	19 36 01.4	-0.2
NEO	**Neokhori**	**1.19**	**350**	*eP*N	Pn	19 36 06.1	+1.3
NEO	**Neokhori**	**1.19**	**350**	*eP*n	Pn	19 36 06.1	+1.3
AGG	**Agios Georgios**	**1.27**	**314**	*eP*N	Pn	19 36 08.4	+2.4
AGG	**Agios Georgios**	**1.27**	**314**	*eP*n	Pn	19 36 08.4	+2.4
EFP	**Efpalio**	**1.29**	**283**	*eP*N	Pn	19 36 08.4	+2.2
EFP	**Efpalio**	**1.29**	**283**	*eP*n	Pn	19 36 08.4	+2.2

ISCJB ***15*** *20:07:33.2±1.4, 36°.0N±0°.1×27°.3E±0°.1, h12km±16km, Error ellipse: s-maj=27.8km s-min=8.2km az=138.1*
ATH ***15*** *20:07:34.3, 35°.82N×27°.29E, h5km±3km, MD3.3/5*
CSEM ***15*** *20:07:34.3, 35°.82N×27°.29E, h5km, MD3.3, After ATH*
ISC 15 20:07:32.2±1.0, 36°.04N±0°.08×27°.17E±0°.09, h1km±12km, n17, σ1°35/17, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.49**	**180**	*eP*G	Pg	20 07 40.5	-1.1
KARP	**Karpathos**	**0.49**	**180**	*eP*g	Pg	20 07 40.5	-1.1
ARG	**Arkhangelos**	**0.80**	**77**	*eP*B	Pg	20 07 49.6	+2.1
ARG	**Arkhangelos**	**0.80**	**77**	*eP*b	Pg	20 07 49.6	+2.1
BDRM	**Kayabasi**	**1.05**	**12**	*i P*	Pg	20 07 52.2	-0.1
ZKR	**Zakros**	**1.20**	**220**	*eP*N	Pn	20 07 55.5	-0.7
ZKR	**Zakros**	**1.20**	**220**	*eP*n	Pn	20 07 55.5	-0.7
TURN	**Turunc**	**1.43**	**54**	*i P*	Pn	20 07 59.1	-0.1
NPS	**Neapolis**	**1.48**	**239**	*eP*B	Pb	20 08 02.2	+1.6
NPS	**Neapolis**	**1.48**	**239**	*eP*b	Pb	20 08 02.2	+1.6
LAST	**Lasithi**	**1.63**	**238**	*eP*B	Pb	20 08 04.9	+1.8
LAST	**Lasithi**	**1.63**	**238**	*eP*b	Pb	20 08 04.9	+1.8
AYDN	**Tasoluk**	**1.72**	**19**	*i P*	Pn	20 08 09.4	+6.1
AKAS	**Kas**	**1.98**	**84**	*i P*	Pn	20 07 59.1	-7.8
GOLH	**Golhisar**	**2.27**	**57**	*i P*	Pn	20 08 09.5	-1.3
KARN	**Karanos**	**2.72**	**257**	*eP*N	Pg	20 08 22.5	-1.8
KARN	**Karanos**	**2.72**	**257**	*eP*n	Pg	20 08 22.5	-1.8

NIED ***15*** *20:24:00, 34°.90N×140°.20E, h80km, Mw3.6 Best double couple: M0=3.29000×10^14 NP1:φ=126.00000°, δ=53.00000°, λ=-105.00000°. NP2:φ=330.00000°, δ=40.00000°, λ=-71.00000°.*
ISCJB ***15*** *20:24:40.5±0.4, 34°.91N±0°.03×140°.27E±0°.04, h95km±3km, mb3.3/7, Error ellipse: s-maj=6.4km s-min=5.0km az=136.8*
JMA ***15*** *20:24:40.9±0.1, 34°.92N×140°.24E, h91km±2km, M3.5*
IDC ***15*** *20:24:41.1±1.5, 34°.89N×140°.33E, h83km±13km, mb3.2/6, mb1 3.5/8, mb1mx3.3/26, mbtmp3.3/8, Error ellipse: s-maj=23.7km s-min=7.2km az=76.0*
NEIC ***15*** *20:24:42.5±1.7, 34°.89N×140°.16E, h92km±15km, MG3.5(JMA), Error ellipse: s-maj=32.1km s-min=14.7km az=69.0*
ISC 15 20:24:41.7±0.4, 34°.91N±0°.03×140°.25E±0°.04, h89km±3km, n29, σ0°79/45, mb3.3/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO4	**Boso 4**	**0.11**	**41**	P	Pn	20 24 54.2	-0.1
BSO4				*eS*	Sn	20 25 03.6	0.0
BSO3	**Boso 3**	**0.24**	**116**	P	Pn	20 24 54.4	-0.3
BSO3				*eS*	Sn	20 25 04.9	+0.6
KTR	**Katsuura**	**0.25**	**13**	P	Pn	20 24 54.4	-0.3
KTR				*eS*	Sn	20 25 03.9	-0.5
TATJ	**Tateyama 2**	**0.32**	**293**	P	Pn	20 24 55.3	+0.2
TATJ				*eS*	Sn	20 25 06.2	+1.2
BSO2	**Boso 2**	**0.44**	**110**	*eS*	Sn	20 25 07.4	+1.0
BSO1	**Boso 1**	**0.65**	**113**	P	Pn	20 24 57.1	-0.5
BSO1				*eS*	Sn	20 25 10.0	+0.5
JIM2	**Oshima 3**	**0.70**	**255**	P	Pn	20 24 57.5	-0.6
JIM2				S	Sn	20 25 09.4	-0.9
JOD2	**Odawara 2**	**1.02**	**291**	P	Pn	20 25 00.7	-0.8
JOD2				S	Sn	20 25 15.3	-1.0
JMY	**Miyakejima3**	**1.03**	**216**	P	Pn	20 25 01.5	-0.2
JMY				S	Sn	20 25 16.4	-0.2
JIZS	**Izushimoda**	**1.14**	**261**	P	Pn	20 25 02.7	-0.2
JIZS				S	Sn	20 25 18.8	-0.2
JYN	**Shimob**	**1.52**	**293**	P	Pn	20 25 07.6	+0.1
JYN				*eS*	Sn	20 25 27.8	+0.7
JRY	**Ryogami san**	**1.56**	**316**	P	Pn	20 25 08.0	-0.1
JRY				*eS*	Sn	20 25 27.9	-0.3
JAG	**Ashikaga**	**1.65**	**337**	P	Pn	20 25 08.8	-0.4
SHZ3	**Shizuoka 3**	**1.68**	**276**	P	Pn	20 25 10.1	+0.4
SHZ3				*eS*	Sn	20 25 32.3	+1.4
JHJ	**Hachijo jima 2**	**1.82**	**192**	P	Pn	20 25 11.2	-0.4
71nm,0.3s,baz=74,slow=23,SNR=108							
JHJ				S	Sn	20 25 33.6	-0.6
119nm,0.3s,baz=290,slow=24,SNR=5.0							
MJAR	**Matsushiro Arr**	**2.33**	**315**	P	Pn	20 25 17.4	-0.7
12nm,0.3s,baz=54,slow=30,SNR=53							
MJAR				S	Sn	20 25 46.7	+0.6
9.5nm,0.3s,baz=192,slow=19,SNR=8.1							
MJAR	**Matsushiro Arr**	**2.33**	**315**	P	Pn	20 25 17.4	-0.7
MJAR				S	Sn	20 25 46.7	+0.6
MAJO	**Matsushiro Arr**	**2.33**	**315**	*eP*	Pn	20 25 19.1	+1.0
MAT	**Matsushiro**	**2.33**	**315**	P	Pn	20 25 18.3	+0.1
MAT				S	Sn	20 25 46.4	+0.3
ASAJ	**Asahikawa**	**9.37**	**10**	P	Pn	20 26 51.4	-2.4
0.9nm,0.3s,baz=277,slow=14,SNR=6.4							
ASAJ				S	Sn	20 28 37.1	-0.2
1.4nm,0.3s,baz=59,slow=29,SNR=5.2							
GUMO Guam		**21.63**	**168**	*eP*	P	20 29 27.1	+2.3
SONM Songino Array		**28.26**	**308**	P	P	20 30 27.9	+1.6
0.4nm,0.9s,mb3.0,baz=120,slow=10,SNR=2.9							
MKAR Makanchi Array		**44.48**	**304**	P	P	20 32 44.4	+0.4
0.3nm,0.8s,mb3.1,baz=86,slow=11,SNR=2.8							
WRA Warramunga Arr		**54.83**	**187**	P	P	20 34 02.1	-0.6
0.2nm,0.4s,mb3.5,baz=22,slow=7.3,SNR=11							
ASAR Alice Springs		**58.56**	**187**	P	P	20 34 28.1	-0.8
0.2nm,0.5s,mb3.4,baz=5.6,slow=6.7,SNR=6.4							
JOF Joensuu		**67.39**	**332**	*ep*	P	20 35 25.7	-1.4
0.2nm,0.3s,mb3.4							
FINES FINESS Array B		**70.25**	**332**	P	P	20 35 45.0	+0.1
0.8nm,0.7s,mb3.6,baz=57,slow=7.0,SNR=5.3							
NVAR Mina Array Bea		**77.03**	**52**	P	P	20 36 26.0	+1.1
0.2nm,0.4s,mb3.2,baz=305,slow=3.2,SNR=2.9							
LPAZ La Paz		**148.56**	**61**	PKPbc	PKPbc	20 44 20.2	+1.5
1.0nm,0.6s,baz=334,slow=4.4,SNR=4.5							

IDC ***15*** *20:36:44.2±2.1, 11°.26N×87°.32W, h0km, mb3.7/3, mb1 4.1/4, mb1mx3.7/23, mbtmp3.7/4, ML3.7/1, MS2.9/3, Ms1 2.9/3, ms1mx2.5/27, Error ellipse: s-maj=94.4km s-min=13.8km az=31.0*
ISCJB ***15*** *20:36:51.1±0.5, 11°.57N±0°.06×86°.97W±0°.06, h60km±9km, mb3.8/4, Error ellipse: s-maj=12.5km s-min=4.4km az=136.3*
CASC ***15*** *20:36:51.6±3.5, 11°.60N×86°.99W, h30km±11km, MD3.9, ML3.4, mb4.3(NEIC)*
NEIC ***15*** *20:36:52.0±1.1, 11°.49N×86°.96W, h59km±10km, mb4.3/1, Error ellipse: s-maj=38.9km s-min=10.7km az=221.0*
ISC 15 20:36:52.0±0.5, 11°.58N±0°.05×86°.94W±0°.05, h55km±9km, n41, σ0°98/46, mb3.8/4, MS2.7/2, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.69**	**29**	*i P*	Pn	20 37 05.1	-0.8
COPN				*eS*	Sn	20 37 17.3	+1.3
CRUN	**El Crucero**	**0.74**	**57**	*eP*	Pn	20 37 06.2	-0.4
CSAN		**0.79**	**40**	*eP*	Pn	20 37 06.2	-1.0
XAVN	**Gruta Xavier**	**0.83**	**46**	*eP*	Pn	20 37 06.7	-0.9
TICN	**Ticuantepe**	**0.83**	**57**	*eP*	Pn	20 37 07.3	-0.4
TISN	**Laguna Tiscapa**	**0.86**	**49**	*eP*	Pn	20 37 07.3	-0.9
MGAN	**Managua**	**0.88**	**50**	*eP*	Pn	20 37 07.5	-0.8
MGAN				*eS*	Sn	20 37 21.9	+1.5
MOMN	**Momotombo**	**0.92**	**25**	*eP*	Pn	20 37 08.5	-0.3
CNGN	**Cerro Negro**	**0.95**	**14**	*eP*	Pn	20 37 08.3	-1.0
CNGN				*eS*	Sn	20 37 22.5	+0.6
CNGN				AML	AML	20 37 24.6	
comp=N,1μm,0.2s							
HUEN		**1.07**	**45**	*eP*	Pn	20 37 10.4	-0.4
NY14 Universidad de		**1.66**	**124**	*i P*	Pn	20 37 18.5	-0.3
NY14				*i S*	Sn	20 37 44.9	+5.9
GB1A Borinquen Arri		**1.69**	**116**	*i P*	Pn	20 37 18.8	-0.4
BUEV Buena Vista		**1.69**	**117**	*i P*	Pn	20 37 18.6	-0.6
BUEV				*i S*	Sn	20 37 41.5	+1.7
LIM1 Limonal		**1.87**	**118**	*i P*	Pn	20 37 21.9	+0.3
MESS Mesas		**1.90**	**116**	*i P*	Pn	20 37 22.1	0.0
CNCH Conchagua		**1.90**	**333**	*eP*	Pn	20 37 21.3	-0.8
CNCH				*eS*	Sn	20 37 47.1	+2.1
VCR Vista de Mar		**1.93**	**138**	*eP*	Pn	20 37 24.3	+1.8
VCR				*eS*	Sn	20 37 55.4	+10
CUI Cuipilapa		**1.97**	**117**	*i P*	Pn	20 37 23.0	0.0
PTEN Parque Tenorio		**2.10**	**114**	*i P*	Pn	20 37 24.1	-0.6
BLLM Bellamira		**2.25**	**326**	*eP*	Pn	20 37 26.4	-0.5
VSM San Miguel		**2.26**	**325**	*eP*	Pn	20 37 27.0	+0.1
JTS JuntasAbangare		**2.33**	**123**	Pn	Pn	20 37 27.6	-0.4
comp=N,17nm,0.3s,baz=305,slow=21,SNR=27							
JTS				Pg	Pn	20 37 30.3	+2.3
comp=N,17nm,0.3s,baz=316,slow=19,SNR=26							
JTS				Lg		20 38 04.1	
comp=N,35nm,0.3s,baz=293,slow=20,SNR=11							
JTS				LR	LR	20 38 41.5	
comp=N,230nm,18.9s,baz=315,slow=47							
JTS JuntasAbangare		**2.33**	**123**	Pn	Pn	20 37 27.6	-0.4
JTS				Pg	Pn	20 37 30.3	+2.3
JTS				Lg		20 38 04.1	
JTS				LR	LR	20 38 41.5	
CAHU Cacacuatique		**2.51**	**330**	*eP*	Pn	20 37 30.5	0.0
CGA2 Cerro Gallo 2		**2.88**	**122**	*eP*	Pn	20 37 40.6	+5.1
LFRS El Faro		**2.91**	**315**	*eP*	Pn	20 37 34.9	-1.0
LFRS				*eS*	Sn	20 38 09.2	-0.3
PRS1 Puriscal		**3.03**	**121**	*eP*	Pn	20 37 41.4	+3.9
BOQS Boqueron		**3.13**	**313**	*eS*	Sn	20 38 16.2	+0.9
LAJ Bijagual		**3.25**	**121**	*eP*	Pn	20 37 38.5	-2.0
URSC Urasca		**3.56**	**119**	*eP*	Pn	20 37 46.7	+1.9
ACR Cerro Adams		**4.71**	**128**	*eP*	Pn	20 37 57.1	-3.6
CMIG Matias Romero		**9.45**	**306**	Pn	Pn	20 39 06.1	+0.5
comp=N,0.2nm,0.3s,baz=111,slow=8.6,SNR=3.5							
SJG San Juan		**21.11**	**70**	LR	LR	20 48 58.3	
comp=N,30nm,18.6s,MS2.7,baz=30,slow=34							
TXAR Lajitas Array		**23.56**	**321**	P	P	20 41 58.4	+0.6
comp=N,1.9nm,0.7s,mb3.6,baz=144,slow=9.8,SNR=12							
TXAR				LR	LR	20 52 01.8	
comp=N,25nm,20.6s,MS2.7,baz=5.0,slow=39							
WMOK Wichita Mounta		**25.45**	**337**	*eP*	P	20 42 15.1	+0.2
comp=N,10nm,0.9s,mb4.4							
PDAR Pinedale Array		**36.77**	**332**	P	P	20 43 54.9	+0.5
comp=N,0.9nm,0.6s,mb3.8,baz=129,slow=10,SNR=4.7							
ILAR Eielson Array		**67.02**	**336**	P	P	20 47 38.3	-0.7
comp=N,0.3nm,0.5s,mb3.6,baz=130,slow=5.0,SNR=5.1							
SONM Songino Array		**119.68**	**350**	PKP	PKPdf	20 55 35.9	-0.1
comp=N,0.2nm,0.5s,baz=48,slow=2.1,SNR=2.4							
ASAR Alice Springs		**139.40**	**247**	PKP	PKPdf	20 56 14.1	+0.1
comp=N,0.2nm,0.5s,baz=76,slow=2.4,SNR=3.3							
WRA Warramunga Arr		**139.50**	**253**	PKP	PKPdf	20 56 12.7	-1.6
comp=N,0.2nm,0.5s,baz=90,slow=2.6,SNR=2.2							
CMAR Chiang Mai Arr		**149.60**	**349**	PKPbc	PKPbc	20 56 37.0	+0.6
comp=N,0.7nm,0.6s,baz=314,slow=3.1,SNR=4.9							

ISCJB ***15*** *20:57:43.4±1.7, 6°.1N±0°.1×127°.2E±0°.2, h107km±13km, mb3.9/10, Error ellipse: s-maj=37.8km s-min=12.8km az=154.2*
IDC ***15*** *20:57:43.6±5.1, 6°.06N×127°.23E, h91km±42km, mb3.7/9, mb1 3.8/9, mb1mx3.5/22, mbtmp3.7/9, Error ellipse: s-maj=84.9km s-min=12.3km az=65.0*
NEIC ***15*** *20:57:44.2±3.1, 6°.03N×127°.12E, h96km±23km, mb4.3/1, Error ellipse: s-maj=75.2km s-min=9.1km az=68.0*
MAN ***15*** *20:57:49, 6°.72N×127°.17E, h45km, mb5.1, ML4.1, MS4.2*
ISC 15 20:57:44.2±1.6, 6°.1N±0°.1×127°.2E±0°.2, h98km±13km, n18, σ0°73/22, mb3.9/10, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.27**	**314**	*eP*	Pn	20 58 07.5	-0.1
MATI				*eS*	Sn	20 58 20.0	-5.3
DAV	**Davao City (W)**	**1.88**	**302**	P	Pn	20 58 14.6	-0.6
165nm,0.3s,baz=34,slow=2.3,SNR=8.1							
DAV				S	Sn	20 58 39.0	+0.2
78nm,0.3s,baz=260,slow=23,SNR=15							
KCP Kidapawan		**2.28**	**295**	*eP*	Pn	20 58 22.2	+1.8
KCP				*eS*	Sn	20 58 48.3	+0.2
BUKP Musuan		**2.78**	**311**	*eP*	Pn	20 58 27.2	+0.3
BUKP				*eS*	Sn	20 58 50.7	-9.1
PAGZ Pagadian		**4.17**	**296**	*eP*	Pn	20 58 43.7	-2.0
FITZ Fitzroy Crossi		**24.05**	**184**	P	P	21 02 50.6	+0.2
3.7nm,0.9s,mb3.7,baz=18,slow=10,SNR=6.9							
WRA Warramunga Arr		**26.78**	**165**	P	P	21 03 14.9	-0.2
1.6nm,0.5s,mb3.8,baz=347,slow=10,SNR=18							
ASAR Alice Springs		**30.26**	**168**	P	P	21 03 45.6	-0.4
0.3nm,0.3s,mb3.3,baz=340,slow=7.3,SNR=10							
STKA Stephens Creek		**40.15**	**161**	P	P	21 05 11.1	+0.4
2.5nm,0.5s,mb4.3,baz=304,slow=14,SNR=6.3							
STKA Stephens Creek		**40.15**	**161**	*eP*	P	21 05 11.4	+0.6
MKAR Makanchi Array		**55.93**	**324**	P	P	21 07 12.2	0.0
0.8nm,0.4s,mb4.1,baz=116,slow=7.2,SNR=14							
MKAR				PcP	PcP	21 08 10.2	+0.6
0.5nm,0.6s,baz=123,slow=3.2,SNR=4.1							
ZALV Zalesovo Beam		**58.74**	**332**	P	P	21 07 32.2	+0.5
0.4nm,0.3s,mb3.9,baz=114,slow=8.0,SNR=3.3							
KURK Kurchatov		**60.05**	**327**	*eP*	P	21 07 40.0	-0.8
1.4nm,0.6s,mb4.2							
AKTK Aktyubinsk		**72.14**	**321**	P	P	21 08 58.0	-0.2
AKTO Aktyubinsk		**72.14**	**321**	P	P	21 08 58.0	-0.2
1.2nm,0.8s,mb3.8,baz=93,slow=9.6,SNR=4.3							
ARCES ARCESS Array B		**88.44**	**340**	P	P	21 10 24.9	-0.2
1.4nm,0.8s,mb4.0,baz=81,slow=7.5,SNR=4.7							
FINES FINESS Array B		**90.01**	**332**	P	P	21 10 33.7	+1.0
1.9nm,0.9s,mb4.2,baz=84,slow=5.9,SNR=4.9							
FINES FINESS Array B		**90.01**	**332**	P	P	21 10 33.7	+1.0

IDC ***15*** *22:26:05.0±0.9, 6°.68S×129°.28E, h0km, mb3.9/7, mb1 4.3/10, mb1mx4.1/19, mbtmp4.1/10, ML4.4/3, Error ellipse: s-maj=53.5km s-min=16.6km az=64.0*
NEIC ***15*** *22:26:10.4±2.0, 6°.82S×129°.27E, h41km±21km, mb3.8/5, Error ellipse: s-maj=14.2km s-min=11.4km az=204.0*
ISC 15 22:26:12.4±2.6, 6°.9S±0°.1×129°.4E±0°.1, h67km±29km, n27, σ0°87/32, mb3.8/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.69**	**198**	Pn	Pn	22 28 56.5	+0.1
1.7nm,0.3s,baz=30,slow=10,SNR=27							
FITZ				Sn	Sn	22 30 56.1	-9.2
3.6nm,0.3s,baz=88,slow=22,SNR=8.4							
FITZ	**Fitzroy Crossi**	**11.69**	**198**	*eP*n	Pn	22 28 56.8	+0.4
FITZ				Sn	Sn	22 30 56.1	-9.2
WRA	**Warramunga Arr**	**13.81**	**160**	Pn	Pn	22 29 24.8	-0.3
2.0nm,0.3s,baz=338,slow=12,SNR=6.7							
WRA				Sn	Sn	22 31 47.1	-10
3.0nm,0.3s,baz=330,slow=22,SNR=13							
WB2	**Warramunga Arr**	**13.81**	**160**	*eP*n	Pn	22 29 24.7	-0.4
WB2				*eS*n	Sn	22 31 47.7	-9.3
MBWA	**Marble Bar**	**16.94**	**212**	*eP*n	Pn	22 30 05.3	+0.1
5.9nm,0.8s							
ASAR	**Alice Springs**	**17.20**	**166**	P	Pn	22 30 09.2	+0.8
2.1nm,0.3s,baz=343,slow=8.3,SNR=85							
ASAR				S	S	22 33 11.4	-13
0.6nm,0.3s,baz=354,slow=28,SNR=5.2							
PMG	**Port Moresby**	**17.78**	**99**	*eP*n	Pn	22 30 14.5	-1.0
4.8nm,0.5s							
CTA	**Charters Tower**	**20.96**	**130**	P	P	22 30 54.1	+3.9
3.3nm,0.9s,baz=314,slow=13,SNR=4.4							
CTAO	**Charters Tower**	**20.96**	**130**	*eP*	P	22 30 52.4	+2.3
2.6nm,0.5s							
STKA	**Stephens Creek**	**27.32**	**157**	P	P	22 31 53.7	+2.7
2.5nm,0.5s,mb4.0,baz=342,slow=12,SNR=9.0							
STKA	**Stephens Creek**	**27.32**	**157**	*eP*	P	22 31 53.4	+2.4
0.4nm,0.3s,mb3.4							
NWAO	**Narrogin (SRO)**	**28.22**	**202**	P	P	22 31 58.2	-0.8
CMAR	**Chiang Mai Arr**	**39.20**	**310**	P	P	22 33 35.0	+0.7
0.7nm,0.3s,mb4.0,baz=136,slow=7.9,SNR=5.6							
CHTO	**Chiang Mai**	**39.42**	**311**	*eP*	P	22 33 35.7	-0.5
1.8nm,0.7s,mb4.0							
MAJO	**Matsushiro**	**44.03**	**10**	P	P	22 34 14.8	+1.3
LSA	**Lhasa**	**51.71**	**317**	P	P	22 35 13.7	+0.6
HIA	**Hailar**	**56.59**	**352**	P	P	22 35 48.4	+0.3
SONM	**Songino Array**	**58.17**	**342**	P	P	22 36 00.3	+0.9
0.3nm,0.5s,mb3.6,baz=133,slow=6.1,SNR=2.6							
NIL	**Nilore**	**66.69**	**311**	*eP*	P	22 36 56.0	-0.5
32nm,1.0s							
MK31	**Makanchi Array**	**67.82**	**327**	*eP*	P	22 37 03.3	-0.1
MKAR	**Makanchi Array**	**67.82**	**327**	P	P	22 37 02.8	-0.6
0.9nm,0.4s,mb3.9,baz=116,slow=8.5,SNR=19							
AAK	**Ala-Archa**	**70.08**	**320**	*eP*	P	22 37 17.4	-0.1
KBL	**Kabul**	**70.24**	**310**	*eP*	P	22 37 18.7	0.0
ZALV	**Zalesovo Beam**	**71.24**	**334**	P	P	22 37 23.0	-1.3
1.0nm,0.6s,mb3.8,baz=117,slow=5.3,SNR=4.5							
KURK	**Kurchatov**	**72.13**	**329**	*eP*	P	22 37 28.6	-1.1
BVAR	**Borovoye Array**	**77.67**	**328**	P	P	22 38 01.4	-0.2
0.3nm,0.4s,mb3.4,baz=127,slow=9.5,SNR=3.2							
GNI	**Garni**	**90.33**	**310**	*eP*	P	22 39 07.2	+0.8

ISCJB ***15*** *22:27:01.4±0.4, 35°.00N±0°.03×52°.66E±0°.04, h10km, Error ellipse: s-maj=4.6km s-min=4.1km az=150.6*
THR ***15*** *22:27:01.2±1.8, 34°.92N×52°.64E, h15km, ML3.5*
TEH ***15*** *22:27:02.3, 34°.94N×52°.65E, h4km*
CSEM ***15*** *22:27:02.3, 34°.95N×52°.62E, h24km, ML3.5, After THR*
ISC 15 22:27:02.3±0.4, 35°.00N±0°.03×52°.63E±0°.04, h10km, n32, σ0°95/36, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAS	**Lasjerd**	**0.47**	**35**	*eP*g	Pg	22 27 11.6	+0.1

IMEH Mehriz 3.96 155 ePn Pn 22 28 03.0 -0.2
IMEH e 22 29 17.6
comp=Z,478nm,0.2s
IBAF Bafgh 4.20 143 ePn Pn 22 28 06.2 -0.2
IBAF e 22 29 17.8
comp=Z,384nm,0.4s
ISFR Sfrayin 4.81 63 ePn Pn 22 28 15.7 +0.9
ISFR e 22 29 40.4
comp=Z,190nm,0.2s
IPAY Payeh 5.38 73 ePn Pn 22 28 22.7 +0.1
IPAY e 22 30 14.7
comp=Z,78nm,0.3s

IDC 15 22:32:35.7±1.3, 6°.77S×129°.41E, h0km, mb3.7/3, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, ML4.1/3, Error ellipse: s-maj=60.5km s-min=25.2km az=79.0
NEIC 15 22:32:47.2±2.9, 7°.20S×129°.18E, h109km±32km, mb3.6/2, Error ellipse: s-maj=25.3km s-min=15.3km az=206.0
ISC 15 22:32:51.6±1.8, 7°.50S±0°.09×129°.28E±0°.10, h157km±20km, n16, σ1s.30/22, mb3.4/3, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAKA Kakadu 6.04 149 ePn Pn 22 34 19.3 +0.4
55nm,0.4s
KAKA eSn Sn 22 35 26.6 -0.9
FITZ Fitzroy Crossi 11.12 198 Pn Pn 22 35 27.7 +1.4
0.4nm,0.3s,baz=24,slow=9.9,SNR=6.2
FITZ Sn Sn 22 37 27.7 -1.7
1.2nm,0.3s,baz=130,slow=23,SNR=7.6
FITZ Fitzroy Crossi 11.12 198 ePn Pn 22 35 26.7 +0.4
FITZ eSn Sn 22 37 29.3 -0.1
WRA Warramunga Arr 13.31 159 Pn Pn 22 35 54.0 -0.5
1.9nm,0.3s,baz=337,slow=13,SNR=6.5
WRA Sn Sn 22 38 17.5 -4.5
0.9nm,0.3s,baz=338,slow=22,SNR=5.8
WB2 Warramunga Arr 13.31 159 ePn Pn 22 35 55.3 +0.8
WB2 eSn Sn 22 38 20.7 -1.5
MBWA Marble Bar 16.42 213 ePn Pn 22 36 34.5 +1.3
1.6nm,0.6s
ASAR Alice Springs 16.68 165 P Pn 22 36 38.4 +2.1
0.3nm,0.3s,baz=344,slow=8.7,SNR=6.3
ASAR S S 22 39 41.1 -0.6
0.2nm,0.3s,baz=318,slow=15,SNR=4.4
CTAO Charters Tower 20.67 129 P P 22 37 21.6 +2.2
2.9nm,0.8s
KSM Kuching 20.92 294 eP P 22 37 17.9 -4.2
ULN Ulaanbaatar 58.52 343 P P 22 42 29.3 -2.0
MK31 Makanchi Array 68.25 327 eP P 22 43 33.7 -1.7
MKAR Makanchi Array 68.25 327 P P 22 43 36.2 +0.8
0.3nm,0.3s,mb3.4,baz=119,slow=8.2,SNR=14
MKAR Makanchi Array 68.25 327 P P 22 43 36.2 +0.8
KBL Kabul 70.54 311 P P 22 43 50.6 +0.9
ZALV Zalesovo Beam 71.71 334 P P 22 43 54.4 -1.9
0.2nm,0.3s,mb3.3,baz=127,slow=4.3,SNR=2.4
ILAR Eielson Array 94.10 25 P P 22 45 52.6 +0.7
0.2nm,0.5s,mb3.5,baz=269,slow=6.0,SNR=4.4

MEX 15 22:46:57.4±0.7, 16°.64N×99°.45W, h13km±138km, MD3.8
IDC 15 22:46:57.2±5.8, 16°.79N×99°.33W, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.6/24, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=110.3km s-min=21.9km az=14.0
NEIC 15 22:46:57.4, 16°.63N×99°.45W, h12km, MD3.8(MEX), After MEX.
ISC 15 22:46:52.8±2.5, 16°.3N±0°.2×99°.59W±0°.09, h7km±11km, n12, σ1s.02/21, mb3.3/2, Near coast of Guerrero

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ACX Acapulco 0.62 336 iP Pg 22 47 06.3 +1.4
ACX eS Sg 22 47 13.0 0.0
ACX Acapulco 0.62 336 iP Pg 22 47 06.3 +1.4
ACX eS Sg 22 47 13.0 0.0
CAIG El Cayaco 0.99 319 iP Pg 22 47 11.2 -0.7
CAIG eS Sg 22 47 23.8 -0.9
CAIG El Cayaco 0.99 319 iP Pg 22 47 11.2 -0.7
CAIG eS Sg 22 47 23.8 -0.9
PNIG Pinotepa 1.41 86 iP Pn 22 47 18.2 -0.6
PNIG eS Sb 22 47 32.9 -4.5
PNIG Pinotepa 1.41 86 iP Pn 22 47 18.2 -0.6
PNIG eS Sb 22 47 32.9 -4.5
ZIIG Zihuatanejo 2.22 306 iP Pn 22 47 30.3 +0.4
ZIIG eS Sn 22 47 56.6 -1.0
ZIIG Zihuatanejo 2.22 306 iP Pn 22 47 30.3 +0.4
ZIIG eS Sn 22 47 56.6 -1.0
CMIG Matias Romero 4.58 79 Pn Pn 22 48 02.3 -0.1
1.1nm,0.3s,baz=250,slow=10.0,SNR=11
CMIG Pg Pg 22 48 20.4 -0.1
1.6nm,0.3s,baz=274,slow=14,SNR=6.9
CMIG Lg 22 49 13.9
3.4nm,0.3s,baz=330,slow=8.7,SNR=7.2
TXAR Lajitas Array 13.51 345 Pn Pn 22 50 05.0 +0.1
0.0nm,0.3s,baz=162,slow=18,SNR=2.7
NVAR Mina Array Bea 27.50 327 P P 22 52 43.1 +3.4
0.3nm,0.5s,mb3.2,baz=142,slow=12,SNR=2.4
PDAR Pinedale Array 27.73 344 P P 22 52 44.7 +3.0
1.0nm,0.8s,mb3.5,baz=144,slow=14,SNR=7.7

CRAAG 15 22:47:57.3, 37°.00N×4°.27E, Ml4.1
CSEM 15 22:48:01.4±0.2, 36°.88N×4°.22E, h2km, ML4.1, Error ellipse: s-maj=5.2km s-min=4.5km az=28.0
MDD 15 22:48:01.4±0.8, 36°.96N×4°.20E, h0km, mb4.2/10, Error ellipse: s-maj=9.3km s-min=8.8km az=34.0, PRIMO
NEIC 15 22:48:04.4, 36°.89N×4°.14E, h30km, ML3.9(ALG), After CSEM.
SFS 15 22:48:05.0, 37°.04N×4°.02E, h0km, ML4.2
ISC 15 22:48:03.2±0.8, 36°.94N±0°.04×4°.09E±0°.04, h18km±6km, n131, σ1s.58/184, 2D, Northern Algeria

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ABMS Boumerdes 0.53 250 P Pg 22 48 12.9 -0.8
ABMS Boumerdes 0.53 250 P Pg 22 48 12.9 -0.8
ABMS Boumerdes 0.53 250 P Pg 22 48 12.9 -0.8
ABMS Boumerdes 0.53 250 P Pg 22 48 12.9 -0.8
ABA Alger-Bouzarea 0.86 261 P Pb 22 48 19.1 -0.5
ABA Alger-Bouzarea 0.86 261 P Pb 22 48 19.1 -0.5
ABA Alger-Bouzarea 0.86 261 P Pb 22 48 19.1 -0.5
ABA Alger-Bouzarea 0.86 261 P Pb 22 48 19.1 -0.5
AKET Djebel Ketaf 0.90 191 P Pb 22 48 19.0 -1.3
AKET Djebel Ketaf 0.90 191 P Pb 22 48 19.8 -0.5
AKET Djebel Ketaf 0.90 191 P Pb 22 48 19.0 -1.3
AKET Djebel Ketaf 0.90 191 P Pb 22 48 19.0 -1.3
AKET Djebel Ketaf 0.90 191 P Pb 22 48 19.0 -1.3
ADJB Djebel Djouab 0.94 214 P Pb 22 48 20.9 0.0
ADJB Djebel Djouab 0.94 214 P Pb 22 48 19.6 -1.3
ADJB Djebel Djouab 0.94 214 P Pb 22 48 20.9 0.0
ADJB Djebel Djouab 0.94 214 P Pb 22 48 20.9 0.0
ADJB Djebel Djouab 0.94 214 P Pb 22 48 20.9 0.0
EMHD Djebel Mahouad 1.17 232 P Pn 22 48 23.4 -1.3
EMHD Djebel Mahouad 1.17 232 P Pn 22 48 23.4 -1.3
EMHD Djebel Mahouad 1.17 232 P Pn 22 48 23.4 -1.3
EMHD Djebel Mahouad 1.17 232 P Pn 22 48 23.4 -1.3
SET Setif 1.28 124 P Pn 22 48 25.0 -1.2
SET Setif 1.28 124 P Pn 22 48 25.0 -1.2
SET Setif 1.28 124 P Pn 22 48 25.0 -1.2
SET Setif 1.28 124 P Pn 22 48 25.0 -1.2
DFRA Djebel Bou Aff 1.48 105 P Pn 22 48 26.3 -2.7
DFRA Djebel Bou Aff 1.48 105 P Pn 22 48 26.3 -2.7
DFRA Djebel Bou Aff 1.48 105 P Pn 22 48 26.3 -2.7
DFRA Djebel Bou Aff 1.48 105 P Pn 22 48 26.3 -2.7
CASM Ain Smara 2.04 109 P Pn 22 48 36.6 -0.1
CASM Ain Smara 2.04 109 P Pn 22 48 36.6 -0.1
CASM Ain Smara 2.04 109 P Pn 22 48 36.6 -0.1
CASM Ain Smara 2.04 109 P Pn 22 48 36.6 -0.1
EBNR Beni Rached 2.16 253 P Pg 22 48 44.0 -0.7
ECHA Ech Chlef 2.33 251 P Pg 22 48 45.6 -2.3
ECHF Ech Chlef 2.35 252 P Pg 22 48 45.6 -2.7
ECHF Ech Chlef 2.35 252 P Pg 22 48 45.6 -2.7
EANR 'Ain N'Sour 2.60 249 P Pg 22 48 52.5 -0.7
EANR 'Ain N'Sour 2.60 249 P Pg 22 48 52.5 -0.7
EANR 'Ain N'Sour 2.60 249 P Pg 22 48 52.5 -0.7
CMAH Djebel Manchou 2.69 96 P Pn 22 48 42.6 -3.0
CMAH Djebel Manchou 2.69 96 P Pn 22 48 42.6 -3.0
CMAH Djebel Manchou 2.69 96 P Pn 22 48 42.6 -3.0
CMAH Djebel Manchou 2.69 96 P Pn 22 48 42.6 -3.0
ETRT Tiaret 2.73 237 P Pn 22 48 46.5 +0.3
ETRT Tiaret 2.73 237 P Pn 22 48 46.5 +0.3
ETRT Tiaret 2.73 237 P Pn 22 48 46.5 +0.3
ETRT Tiaret 2.73 237 P Pn 22 48 46.5 +0.3
MAHO Mahon 2.96 3 ⇓P Pn 22 48 48.1 -1.2
MAHO Mahon 2.96 3 ⇓P Pn 22 48 48.1 -1.2
MAHO Mahon 2.96 3 iP Pn 22 48 48.1 -1.2
ETOS Mallorca 3.00 341 P Pn 22 48 50.8 +0.9
ETOS S Sn 22 49 24.3 -1.1
ETOS Mallorca 3.00 341 P Pn 22 48 50.8 +0.9
3.0nm,0.1s,SNR=30
ETOS S Sn 22 49 24.3 -1.1
6.3nm,0.2s
ETOS Mallorca 3.00 341 P Pn 22 48 50.8 +0.9
3.0nm,0.1s,SNR=30
ETOS S Sn 22 49 24.3 -1.1
6.3nm,0.2s
ETOS Mallorca 3.00 341 P Pn 22 48 50.8 +0.9
3.0nm,0.1s,SNR=30
ETOS S Sn 22 49 24.3 -1.1
6.3nm,0.2s
EIBI Ibiza 3.01 315 P Pn 22 48 51.5 +1.4
EIBI S Sn 22 49 25.5 -0.2
EIBI Ibiza 3.01 315 P Pn 22 48 51.5 +1.4
2.5nm,0.2s,SNR=8.0
EIBI S Sn 22 49 25.5 -0.2
12nm,0.2s,SNR=9.7
EIBI Ibiza 3.01 315 P Pn 22 48 51.5 +1.4
2.5nm,0.2s,SNR=8.0
EIBI S Sn 22 49 25.5 -0.2
12nm,0.2s,SNR=9.7
EIBI Ibiza 3.01 315 P Pn 22 48 51.5 +1.5
2.5nm,0.2s,SNR=8.0
EIBI S Sn 22 49 25.5 -0.2
12nm,0.2s,SNR=9.7
EBEN Beniarda 3.85 299 P Pn 22 49 04.5 +3.0
EBEN S Sn 22 49 45.3 -1.0
EBEN Beniarda 3.85 299 P Pn 22 49 03.3 +1.8
1.1nm,0.2s,SNR=9.1
EBEN S Sn 22 49 45.3 -1.0
5.8nm,0.5s
EBEN Beniarda 3.85 299 P Pn 22 49 03.3 +1.8
1.1nm,0.2s,SNR=9.1
EBEN S Sn 22 49 45.3 -1.0
5.8nm,0.5s
EBEN Beniarda 3.85 299 P Pn 22 49 04.5 +3.0
1.1nm,0.2s,SNR=9.1
EBEN S Sn 22 49 45.3 -1.0
5.8nm,0.5s
KEST Kesra 4.41 104 ePn Pn 22 49 07.9 -1.3
KEST eSn Sn 22 50 02.0 +1.9
KEST Kesra 4.41 104 ePn Pn 22 49 07.9 -1.3
KEST eSn Sn 22 50 02.0 +1.9
ETOB Tobarra 4.78 293 P Pn 22 49 16.5 +2.2
ETOB S Sn 22 50 08.1 -1.2
ETOB Tobarra 4.78 293 P Pn 22 49 16.5 +2.2
9.9nm,0.4s,SNR=33
ETOB S Sn 22 50 08.1 -1.2
0.3nm,0.1s
ETOB Tobarra 4.78 293 P Pn 22 49 16.5 +2.2
9.9nm,0.4s,SNR=33
ETOB S Sn 22 50 08.1 -1.2
0.3nm,0.1s
ETOB Tobarra 4.78 293 P Pn 22 49 16.5 +2.1
9.9nm,0.4s,SNR=33
ECHE Chera 4.78 305 P Pn 22 49 15.8 +1.4
ECHE Chera 4.78 305 P Pn 22 49 15.8 +1.4
3.3nm,0.2s,SNR=5.7
ECHE Chera 4.78 305 P Pn 22 49 15.8 +1.4
3.3nm,0.2s,SNR=5.7
ECHE Chera 4.78 305 P Pn 22 49 15.8 +1.4
3.3nm,0.2s,SNR=5.7
EMOS Mosqueruela 4.95 315 P Pn 22 49 18.3 +1.7
EMOS S Sn 22 50 11.5 -1.9
EMOS Mosqueruela 4.95 315 P Pn 22 49 18.3 +1.7
SNR=7.9
EMOS S Sn 22 50 11.5 -1.9
1.0nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.95 315 P Pn 22 49 18.3 +1.7
SNR=7.9
EMOS S Sn 22 50 11.5 -1.9
1.0nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.95 315 P Pn 22 49 18.3 +1.7
SNR=7.9
ERTA Horta de San J 4.97 325 P Pn 22 49 18.9 +1.9
ERTA S Sn 22 50 12.6 -1.3
ERTA Horta de San J 4.97 325 P Pn 22 49 18.9 +1.9
SNR=7.9
ERTA S Sn 22 50 12.6 -1.3
0.9nm,0.2s,SNR=7.9
ERTA Horta de San J 4.97 325 P Pn 22 49 18.9 +1.9
SNR=7.9
ERTA S Sn 22 50 12.6 -1.3
0.9nm,0.2s,SNR=7.9
ERTA Horta de San J 4.97 325 P Pn 22 49 18.9 +2.0
SNR=7.9
ERTA S Sn 22 50 12.6 -1.3
0.9nm,0.2s,SNR=7.9
CFON Fontmartina 4.99 346 P Pn 22 49 17.9 +0.7
CFON S Sn 22 50 12.8 -1.6
CFON Fontmartina 4.99 346 P Pn 22 49 17.9 +0.7
6.7nm,0.2s,SNR=22
CFON S Sn 22 50 12.8 -1.6
6.9nm,0.2s
CFON Fontmartina 4.99 346 P Pn 22 49 17.9 +0.7
6.7nm,0.2s,SNR=22
CFON S Sn 22 50 12.8 -1.6
6.9nm,0.2s
CFON Fontmartina 4.99 346 P Pn 22 49 17.9 +0.7
6.7nm,0.2s,SNR=22
CFON S Sn 22 50 12.8 -1.6
6.9nm,0.2s
EPOB Poblet 5.00 333 P Pn 22 49 18.1 +0.8
EPOB S Sn 22 50 11.5 -3.0
EPOB Poblet 5.00 333 P Pn 22 49 17.6 +0.4
SNR=7.9
EPOB S Sn 22 50 11.5 -3.0
3.9nm,0.3s,SNR=7.9
EPOB Poblet 5.00 333 P Pn 22 49 17.6 +0.4
SNR=7.9
EPOB S Sn 22 50 11.5 -3.0
3.9nm,0.3s,SNR=7.9
EPOB Poblet 5.00 333 P Pn 22 49 18.0 +0.7
SNR=7.9
EMIR Miracle 5.36 339 P Pn 22 49 24.1 +1.9
EMIR S Sn 22 50 22.5 -0.9
EMIR Miracle 5.36 339 P Pn 22 49 24.1 +1.9
2.2nm,0.1s,SNR=13
EMIR S Sn 22 50 22.5 -0.9
4.1nm,0.2s
EMIR Miracle 5.36 339 P Pn 22 49 24.1 +1.9
2.2nm,0.1s,SNR=13
EMIR S Sn 22 50 22.5 -0.9
4.1nm,0.2s
EMIR Miracle 5.36 339 P Pn 22 49 24.1 +1.9
2.2nm,0.1s,SNR=13
EHUE Huescar 5.40 281 P Pn 22 49 24.5 +1.7
EHUE Huescar 5.40 281 P Pn 22 49 24.5 +1.7
0.7nm,0.3s,SNR=7.9
EHUE Huescar 5.40 281 P Pn 22 49 24.5 +1.7
0.7nm,0.3s,SNR=7.9
EHUE Huescar 5.40 281 P Pn 22 49 24.5 +1.7
0.7nm,0.3s,SNR=7.9
EVIA Vianos 5.49 290 P Pn 22 49 25.4 +1.3
EVIA Vianos 5.49 290 P Pn 22 49 25.4 +1.3
1.0nm,0.1s,SNR=7.9
EVIA Vianos 5.49 290 P Pn 22 49 25.4 +1.3
1.0nm,0.1s,SNR=7.9
EVIA Vianos 5.49 290 P Pn 22 49 25.5 +1.4
1.0nm,0.1s,SNR=7.9
EJON La Jonquera 5.58 351 P Pn 22 49 26.5 +1.1
EJON S Sn 22 50 26.0 -3.0
EJON La Jonquera 5.58 351 P Pn 22 49 26.5 +1.1
11nm,0.3s,SNR=26
EJON S Sn 22 50 26.0 -3.0
SNR=7.9
EJON La Jonquera 5.58 351 P Pn 22 49 26.5 +1.1
11nm,0.3s,SNR=26
EJON S Sn 22 50 26.0 -3.0
SNR=7.9
EJON La Jonquera 5.58 351 P Pn 22 49 26.5 +1.1
11nm,0.3s,SNR=26
EQES Quesada 5.77 281 P Pn 22 49 30.3 +2.3
EQES S Sn 22 50 35.3 +1.6
EQES Quesada 5.77 281 P Pn 22 49 30.3 +2.3
5.4nm,0.4s,SNR=18
EQES S Sn 22 50 35.3 +1.6
1.6nm,0.3s
EQES Quesada 5.77 281 P Pn 22 49 30.3 +2.3
5.4nm,0.4s,SNR=18
EQES S Sn 22 50 35.3 +1.6
1.6nm,0.3s
EQES Quesada 5.77 281 P Pn 22 49 30.3 +2.4
5.4nm,0.4s,SNR=18
EQES S Sn 22 50 35.3 +1.6
1.6nm,0.3s
CLLI Llivia 5.77 344 P Pn 22 49 30.6 +2.6
CLLI S Sn 22 50 31.4 -2.3
CLLI Llivia 5.77 344 P Pn 22 49 30.5 +2.6
2.0nm,0.1s,SNR=34
CLLI S Sn 22 50 31.4 -2.3
67nm,1.7s
CLLI Llivia 5.77 344 P Pn 22 49 30.5 +2.6
2.0nm,0.1s,SNR=34
CLLI S Sn 22 50 31.4 -2.3
67nm,1.7s
CLLI Llivia 5.77 344 P Pn 22 49 30.5 +2.5
2.0nm,0.1s,SNR=34
CSOR Sort 5.89 338 P Pn 22 49 32.9 +3.2
CSOR S Sn 22 50 34.6 -2.1
CSOR Sort 5.89 338 P Pn 22 49 31.7 +2.1
0.6nm,0.2s,SNR=8.2
CSOR S Sn 22 50 34.6 -2.1
7.9nm,0.3s
CSOR Sort 5.89 338 P Pn 22 49 31.7 +2.1
0.6nm,0.2s,SNR=8.2
CSOR S Sn 22 50 34.6 -2.1
7.9nm,0.3s
CSOR Sort 5.89 338 P Pn 22 49 32.8 +3.2
0.6nm,0.2s,SNR=8.2
EQUE Quentar 6.03 275 P Pn 22 49 33.3 +1.8
SNR=7.9
EBIE Bielsa 6.50 333 P Pn 22 49 39.8 +1.9
EBIE S Sn 22 50 50.7 -0.8
EBIE Bielsa 6.50 333 P Pn 22 49 39.8 +1.9
SNR=7.9
EBIE S Sn 22 50 50.7 -0.8
SNR=7.9
EBIE Bielsa 6.50 333 P Pn 22 49 39.8 +1.9
SNR=7.9
EBIE S Sn 22 50 50.7 -0.8
SNR=7.9
EBIE Bielsa 6.50 333 P Pn 22 49 39.8 +1.9
SNR=7.9
ESDC Sonseca Array 6.90 296 P Pn 22 49 45.5 +2.0
ESDC S Sn 22 51 00.0 -1.4
ESDC Sonseca Array 6.90 296 P Pn 22 49 45.5 +2.0
0.4nm,0.2s,baz=112,slow=13,SNR=10
ESDC S Sn 22 51 00.0 -1.4
0.5nm,0.2s,baz=110,slow=24,SNR=4.7
ESDC Sonseca Array 6.90 296 P Pn 22 49 45.5 +2.0
0.4nm,0.2s,baz=112,slow=13,SNR=10
ESDC S Sn 22 51 00.0 -1.4
0.5nm,0.2s,baz=110,slow=24,SNR=4.7
ESDC Sonseca Array 6.90 296 P Pn 22 49 45.5 +2.1
0.4nm,0.2s,slow=13,SNR=10
EALK Alkurruntz 7.60 327 P Pn 22 49 55.3 +2.2
EALK Alkurruntz 7.60 327 P Pn 22 49 55.3 +2.2
0.5nm,0.1s,SNR=5.8
EALK Alkurruntz 7.60 327 P Pn 22 49 55.3 +2.2
0.5nm,0.1s,SNR=5.8
EALK Alkurruntz 7.60 327 P Pn 22 49 55.3 +2.2
0.5nm,0.1s,SNR=5.8

IDC 15 22:57:34.1±4.8, 30°.88N×83°.86E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.3/26, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=139.8km s-min=38.4km az=84.0, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 15.94 356 Pn Pn 23 01 17.7 -2.0
0.1nm,0.3s,baz=178,slow=11,SNR=4.1
SONM Songino Array 24.16 39 P P 23 02 52.3 +0.5
0.6nm,0.8s,baz=236,slow=10,SNR=3.1
WRA Warramunga Arr 70.03 129 P P 23 08 48.0 0.0
0.7nm,0.5s,baz=325,slow=6.5,SNR=5.8

NIED 15 23:07:00, 38°.00N×142°.80E, h8km, Mw4.2 Best double couple: M0 2.06000×10^15 NP1:φs192.00000°, δ47.00000°, λ106.00000°. NP2:φs349.00000°, δ46.00000°, λ74.00000°.
IDC 15 23:07:43.8±0.7, 37°.92N×142°.86E, h0km, mb4.0/16, mb1 4.1/19, mb1mx4.1/29, mbtmp4.0/19, ML3.6/1, MS3.1/5, Ms1 3.1/5, ms1mx2.7/32, Error ellipse: s-maj=17.7km s-min=17.3km az=135.0
JMA 15 23:07:44.8±0.2, 37°.99N×142°.84E, h27km±3km, M4.6
JMA Felt I J1.
ISCJB 15 23:07:45.9±0.9, 37°.99N±0°.04×142°.87E±0°.06, h36km±7km, mb4.1/25, MS3.4/2, Error ellipse: s-maj=8.5km s-min=5.5km az=29.3
NEIC 15 23:07:48.6±1.1, 38°.04N×142°.49E, h38km±9km, mb4.3/8, Error ellipse: s-maj=11.2km s-min=7.7km az=130.0
NEIC Recorded [1 JMA] in Miyagi.
BJI 15 23:07:49.5, 38°.72N×142°.51E, h6km, mB4.6/1, mb4.4/9, Ms4.0/3, Ms7 3.7/3
ISC 15 23:07:46.6±1.6, 38°.00N±0°.03×142°.80E±0°.05, h25km±12km, n59, σ1s.39/69, mb4.1/25, MS3.4/2, Off east coast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JIO Ouri 1.23 292 P Pn 23 08 06.9 -1.2
JIO eS Sn 23 08 23.4 -0.5
OFUJ Ofunato 1.40 321 P Pn 23 08 09.3 -1.2
JMK Ichinoseki 1.56 308 P Pn 23 08 12.0 -0.7
JMK eS Sn 23 08 31.9 -0.3
JMM Marumori 1.59 266 P Pn 23 08 12.0 -1.1
JFK Kawauchi 1.65 248 P Pn 23 08 13.0 -0.9
JFK eS Sn 23 08 33.3 -1.0
JOU Okura 1.72 283 P Pn 23 08 15.2 +0.3
JOU eS Sn 23 08 37.3 +1.2
JOM Ohasama 1.88 322 P Pn 23 08 16.8 -0.4
JOM eS Sn 23 08 40.1 0.0
JFT Otama 2.01 257 P Pn 23 08 19.3 +0.4
JYK Kaneyama 2.12 296 P Pn 23 08 20.5 +0.1
JYK eS Sn 23 08 46.4 +0.4
JYS Shirataka 2.17 277 P Pn 23 08 21.7 +0.7
JYS eS Sn 23 08 49.0 +1.9
JANG Nango 2.57 338 P Pn 23 08 27.0 +0.4
JANG eS Sn 23 08 57.4 +0.3
JAW Awa shima 2.83 280 P Pn 23 08 31.3 +1.1
MJAR Matsushiro Arr 3.94 250 Pn Pn 23 08 47.1 +1.7
4.0nm,0.3s,baz=59,slow=14,SNR=15
MAJO Matsushiro 3.94 250 ePn Pn 23 08 44.9 -0.6
MAT Matsushiro 3.94 250 P Pn 23 08 47.3 +1.9
MAT S Sn 23 09 34.9 +4.1
ERM Erimo 4.02 4 ePn Pn 23 08 47.2 +0.6
ERM eSn Sn 23 09 32.0 -0.9
JHJ Hachijo jima 2 5.45 208 LR LR 23 11 36.0
comp=Z,164nm,18.2s,baz=340,slow=43
ASAJ Asahikawa 6.11 359 Pn Pn 23 09 17.0 +1.7
1.2nm,0.3s,baz=232,slow=11,SNR=4.2
ASAJ Sn Sn 23 10 25.2 +0.8
1.4nm,0.3s,baz=120,slow=20,SNR=2.3
ASAJ LR LR 23 12 24.6
comp=Z,202nm,19.6s,baz=355,slow=45
ASAJ Asahikawa 6.11 359 ePn Pn 23 09 15.7 +0.4
ASAJ eSn Sn 23 10 22.2 -2.2
KSRS Korea Array 11.79 272 Pn Pn 23 10 35.5 +2.3
0.1nm,0.3s,baz=88,slow=13,SNR=10
KSRS LR LR 23 15 03.7
comp=Z,81nm,18.9s,baz=80,slow=37
MDJ Mudanjiang 11.92 308 ePn Pn 23 10 32.7 -2.2
PETK Petropavlovsk- 18.30 30 LR LR 23 17 58.6
comp=Z,32nm,20.0s,baz=37,slow=34
HIA Hailar 20.05 312 Pn P 23 12 15.6 -2.0
YULB Yu-li 23.45 238 eP P 23 12 53.0 -1.3
SONM Songino Array 28.18 302 P P 23 13 38.9 +2.0
1.1nm,0.7s,mb3.6,baz=116,slow=7.8,SNR=6.5
SONM LR LR 23 23 38.7
comp=Z,39nm,20.1s,MS3.0,baz=84,slow=34
ENH Enshi 28.52 264 eP P 23 13 39.1 -0.9
12nm,0.6s,mb4.8
GTA Gaotai 33.34 286 eP P 23 14 25.3 +2.8
GTA pP pP 23 14 28.6 -1.3
GTA sP sP 23 14 31.8 -1.1
GTA S S 23 19 47.3 +5.5
GTA sS sS 23 19 53.8 -0.1
GTA pmax pmax
comp=Z,4.0nm,1.1s,mb4.3

GTA pmax pmax
comp=Z,63nm,6.2s
GTA LR LR
comp=N,140nm,15.6s,MS3.9
GTA LR LR
comp=E,94nm,14.2s,MS3.9
GTA LR LR
comp=Z,110nm,13.7s,MS3.7
ZAA0 Zalesovo Array 42.09 312 *e*P **P 23 15 33.9 -2.3**
ZALV Zalesovo Beam 42.09 312 P **P 23 15 37.8 +1.6**
comp=Z,2.8nm,0.7s,mb4.0,baz=88,slow=7.8,SNR=12
ZALV PcP PcP 23 17 32.2 +1.7
comp=Z,0.7nm,0.4s,baz=108,slow=4.7,SNR=4.1
MK31 Makanchi Array 44.55 302 *e*P **P 23 15 55.9 -0.3**
MKAR Makanchi Array 44.55 302 P **P 23 15 58.1 +1.9**
comp=Z,1.9nm,0.8s,mb4.0,baz=89,slow=9.7,SNR=15
MKAR PcP PcP 23 17 40.5 +1.6
comp=Z,0.7nm,0.8s,baz=78,slow=4.4,SNR=2.5
KDAK Kodiak Island 45.65 43 P **P 23 16 05.5 +0.8**
comp=Z,8.5nm,0.9s,mb4.7,baz=153,slow=4.5,SNR=2.9
KURK Kurchatov 46.21 308 *e*P **P 23 16 08.3 -1.0**
comp=Z,5.3nm,0.7s,mb4.6
ILAR Eielson Array 48.09 33 P **P 23 16 25.1 +1.4**
comp=Z,1.1nm,0.9s,mb3.9,baz=276,slow=5.2,SNR=11
TKM2 Tokmak 2 50.14 298 *e*P **P 23 16 37.7 -2.0**
comp=Z,3.9nm,0.8s,mb4.5
BVAR Borovoye Array 50.74 312 P **P 23 16 46.0 +1.9**
comp=Z,0.8nm,0.6s,mb3.8,baz=77,slow=7.8,SNR=6.8
BRVK Borovoye 50.80 312 *e*P **P 23 16 42.6 -1.9**
comp=Z,1.0nm,0.5s,mb4.0
AML Almayashu 51.73 298 *e*P **P 23 16 49.1 -2.7**
comp=Z,3.6nm,1.1s,mb4.2
KKAR Karatay Array 53.59 300 *e*P **P 23 17 04.1 -1.4**
comp=Z,4.3nm,1.2s,mb4.2
ARU Arti 56.37 318 *e*P **P 23 17 23.8 -1.5**
comp=Z,2.1nm,0.7s,mb4.3
DLBC Dease Lake 57.19 39 *e*P **P 23 17 29.2 -2.0**
FITZ Fitzroy Crossi 58.09 199 *e*P **P 23 17 36.1 -1.7**
ABKAR Akbulak array 58.16 310 *e*P **P 23 17 36.9 -1.2**
comp=Z,0.8nm,0.5s,mb4.0
WB2 Warramunga Arr 58.17 189 *e*P **P 23 17 35.9 -2.5**
WRA Warramunga Arr 58.18 189 P **P 23 17 38.8 +0.4**
comp=Z,3.9nm,0.7s,mb4.5,baz=7.4,slow=7.2,SNR=17
AKTK Aktyubinsk 58.85 312 P **P 23 17 42.8 -0.1**
AKTO Aktyubinsk 58.85 312 P **P 23 17 42.8 -0.1**
comp=Z,1.1nm,0.7s,mb4.0,baz=62,slow=11,SNR=5.8
ASAR Alice Springs 61.90 189 P **P 23 18 04.2 +0.3**
comp=Z,1.1nm,0.7s,mb4.1,baz=13,slow=7.1,SNR=9.7
FINES FINESS Array B 68.47 333 P **P 23 18 48.0 +1.8**
comp=Z,3.2nm,0.9s,mb4.4,baz=61,slow=14,SNR=5.6
WALA Waterton Lakes 69.98 43 *e*P **P 23 18 53.8 -2.0**
KIV Kislovodsk 71.10 311 P **P 23 19 01.1 -1.6**
NVAR Mina Array Bea 73.53 54 P **P 23 19 18.7 +1.4**
comp=Z,0.7nm,0.9s,mb3.6,baz=282,slow=8.6,SNR=4.0
NB2 NORSAR Subarra 73.72 338 P **P 23 19 19.4 +1.4**
comp=Z,1.5nm,0.6s,mb4.1,baz=39,slow=6.2
NOA NORSAR Array B 73.72 338 P **P 23 19 19.6 +1.7**
comp=Z,1.5nm,0.7s,mb4.0,baz=39,slow=5.8,SNR=7.5
AKASG Malin Array Be 74.20 323 P **P 23 19 22.4 +1.4**
comp=Z,1.1nm,0.5s,mb4.0,baz=45,slow=5.9,SNR=5.3
PDAR Pinedale Array 76.21 46 P **P 23 19 34.6 +2.0**
comp=Z,0.4nm,0.5s,mb3.6,baz=331,slow=3.4,SNR=3.2
GERES GERESS Array B 82.47 329 P **P 23 20 08.6 +1.9**
comp=Z,0.3nm,0.5s,mb3.5,baz=356,slow=5.4,SNR=4.0
TXAR Lajitas Array 88.67 53 P **P 23 20 39.8 +1.9**
comp=Z,0.2nm,0.5s,mb3.7,baz=275,slow=3.7,SNR=3.4
LPAZ La Paz 145.26 60 PKPbc PKPbc 23 27 24.6 +2.3
comp=Z,1.1nm,0.7s,baz=135,slow=3.7,SNR=5.2

IDC 15 23:08:51.9±1.8, 21°.33S×176°.21W, h0km, mb4.2/5, mb1 4.3/6, mb1mx4.0/18, mbtmp4.2/6, ML4.4/1, Error ellipse: s-maj=44.8km s-min=36.8km az=97.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.83**	**197**	P	Pn	23 13 02.7	+1.3
	1.2nm,0.3s,baz=315,slow=4.3,SNR=5.8						
RPZ	**Rata Peaks**	**24.71**	**202**	P	P	23 14 14.6	-0.1
	8.1nm,0.6s,baz=252,slow=2.1,SNR=5.2						
STKA	**Stephens Creek**	**38.95**	**245**	P	P	23 16 19.9	+0.1
	0.9nm,0.4s,baz=86,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**45.97**	**257**	P	P	23 17 16.9	-0.2
	3.7nm,0.8s,baz=95,slow=8.6,SNR=30						
WRA	**Warramunga Arr**	**46.15**	**262**	P	P	23 17 18.4	-0.1
	1.2nm,0.4s,baz=96,slow=8.4,SNR=12						
MAW	**Mawson**	**81.35**	**199**	P	P	23 21 09.6	-0.4
	1.2nm,0.6s,baz=139,slow=9.3,SNR=3.5						
HFS	**Hagfors**	**140.60**	**352**	PKhKP	PKPpre	23 28 14.8	
	2.0nm,0.8s,baz=57,slow=5.5,SNR=5.3						
AKASG	**Malin Array Be**	**144.54**	**332**	PKP	PKPdf	23 28 28.1	-2.0
	1.1nm,0.4s,baz=44,slow=4.6,SNR=5.2						
GERES	**GERESS Array B**	**151.43**	**346**	PKPbc	PKPbc	23 28 48.5	+0.9
	0.3nm,0.4s,baz=64,slow=3.1,SNR=4.0						

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*CSEM **15** 23:22:14.1, 13°.70N×45°.86E, h8km, ML3.7, After DHMR*
*DHMR **15** 23:22:14.1±1.1, 13°.70N×45°.86E, h8km±4km, ML3.7*
*SGS **15** 23:22:15.9, 12°.96N×46°.32E, h29km*
ISC 15 23:22:08.6±1.8, 13°.98N±0°.06×46°.18E±0°.08, h7km±8km, n14, σ1°.20/23, 3C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDHA	**Al Bayda'**	**0.60**	**269**	⇑*i*P	**Pg**	**23 22 21.7**	**+1.6**
BDHA				*i* S	**Sg**	**23 22 28.0**	**+0.1**
BDHA				AML	AML	23 22 28.4	
	comp=N,18μm,0.4s						
BDHA	**Al Bayda'**	**0.60**	**269**	⇑*i*P	**Pg**	**23 22 21.7**	**+1.6**
BDHA				*i* S	**Sg**	**23 22 28.0**	**+0.1**
	comp=N,9μm,0.4s						
LBOS		**0.91**	**263**	⇑*i*P	**Pg**	**23 22 25.9**	**-0.2**
LBOS				*i* S	**Sg**	**23 22 34.6**	**-3.4**
ADEN	**Aden**	**1.68**	**224**	*i* P	**Pn**	**23 22 37.4**	**-0.9**
ADEN				*i* S	**Sn**	**23 22 55.2**	**-4.8**
ADEN				AML	AML	23 22 58.4	
	comp=N,348nm,0.2s						
ADEN	**Aden**	**1.68**	**224**	*i* P	**Pn**	**23 22 37.4**	**-0.9**
ADEN				*i* S	**Sn**	**23 22 55.2**	**-4.8**
	comp=N,174nm,0.2s						
TRBA	**At Turbah**	**2.15**	**250**	*i* P	**Pn**	**23 22 44.8**	**0.0**
TRBA				*i* S	**Sn**	**23 23 10.6**	**-1.1**
TRBA				AML	AML	23 23 13.1	
	comp=Z,2μm,0.5s						
TRBA	**At Turbah**	**2.15**	**250**	*i* P	**Pn**	**23 22 44.8**	**0.0**
TRBA				*i* S	**Sn**	**23 23 10.6**	**-1.0**
	comp=Z,754nm,0.5s						
UDYN	**Al 'Udayn**	**2.15**	**270**	*i* P	**Pn**	**23 22 47.0**	**+2.2**
UDYN				*i* S	**Sn**	**23 23 12.5**	**+0.8**
UDYN				AML	AML	23 23 16.0	
	comp=N,822nm,0.7s						
SANA	**San'a**	**2.37**	**306**	*i* P	**Pg**	**23 22 54.9**	**+0.9**
SANA				*i* S	**Sg**	**23 23 26.6**	**+1.8**
JAZS	**Jizan**	**4.39**	**315**	S	**Sg**	**23 24 27.7**	**-2.1**
JAZS	**Jizan**	**4.39**	**315**	P	**Pg**	**23 23 31.9**	**-0.9**
DJNS	**Zahran al Janu**	**4.48**	**326**	S	**Sg**	**23 24 32.6**	**-0.1**
DJNS	**Zahran al Janu**	**4.48**	**326**	P	**Pg**	**23 23 33.2**	**-1.3**
WBHS	**Wadi 'Ibn Hash**	**5.67**	**325**	P	**Pg**	**23 23 57.7**	**+0.5**

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*BJI **15** 23:36:45.7, 24°.81S×67°.76W, h105km, mB5.0/19*
*MOS **15** 23:36:50.4±1.2, 24°.09S×66°.90W, h147km, mb5.1/33, Error ellipse: s-maj=13.8km s-min=7.7km az=115.6*
*ISCJB **15** 23:36:50.9±0.5, 24°.17S±0°.03×66°.79W±0°.04, h151km±4km, mb5.0/144, Error ellipse: s-maj=6.6km s-min=4.3km az=146.2*
*NEIC **15** 23:36:52.1±0.1, 24°.17S×66°.80W, mb5.1/128, Error ellipse: s-maj=5.3km s-min=3.8km az=63.0*
*IDC **15** 23:36:54.0±1.1, 24°.22S×66°.87W, h170km±8km, mb4.6/13, mb1 4.7/18, mb1mx4.7/20, mbtmp4.6/18, Error ellipse: s-maj=13.9km s-min=9.4km az=68.0*
*GUC **15** 23:36:56.3±1.2, 24°.04S×67°.49W, h218km±11km, ML5.5*
*GCMT **15** 23:36:59.9±0.3, 24°.34S×67°.22W, h202km±2km, MW5.1, Moment Tensor Solution. s36,c44; s77,c111; Moment tensor: Scale 10^{16}Nm; M_{rr}-4.51±.16; $M_{\theta\theta}$-1.21±.20; $M_{\phi\phi}$5.72±.23; $M_{r\theta}$-0.14±.15; $M_{\theta\phi}$0.24±.18; $M_{\phi r}$-3.40±.17; Best double couple: $M_0$6.20000×10^{16} NP1:ϕ_s182.00000°, δ28.00000°, λ-91.00000°. NP2:ϕ_s2.00000°, δ62.00000°, λ-90.00000°. Principal axes: T 6.7600, Plg17.0000°, Azm92.0000°; N -1.2200, Plg0.0000°, Azm182.0000°; P -5.5400, Plg73.0000°, Azm273.0000°; Data Used: II IU IC G CN.*

ISC 15 23:36:51.7±0.5, 24°.18S±0°.03×66°.75W±0°.04, h143km±3km, h156km±3.1km; pP-P, n707, c0%75/656, mb5.0/144, 175C-175D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.83**	**313**	*e*P	**Pn**	**23 37 31.3**	**+6.8**
SPCH				*i* S	**Sn**	**23 37 58.5**	**+9.0**
SPCH	**San Pedro de A**	**1.83**	**313**	*e*P	**Pn**	**23 37 31.3**	**+6.8**
SPCH				*i* S	**Sn**	**23 37 58.5**	**+9.0**
SPCH				AML	AML	23 37 59.8	
	comp=N,6μm,0.4s						
ANCH	**Antofagasta**	**3.38**	**278**	⇑*i*P	**Pn**	**23 37 45.1**	**+1.4**
ANCH				*i* S	**Sn**	**23 38 21.9**	**-2.1**
ANCH	**Antofagasta**	**3.38**	**278**	⇑*i*P	**Pn**	**23 37 45.1**	**+1.4**
ANCH				*i* S	**Sn**	**23 38 21.9**	**-2.1**
ANCH				AML	AML	23 38 25.3	
	comp=N,14μm,0.7s						
MACH	**Maria Elena**	**3.40**	**305**	⇑*i*P	**Pn**	**23 37 46.6**	**+2.7**
MACH				*i* S	**Sn**	**23 38 24.8**	**+0.4**
MECH	**Mejillones**	**3.56**	**287**	⇑*i*P	**Pn**	**23 37 47.6**	**+1.7**
MECH				*i* S	**Sn**	**23 38 27.2**	**-0.8**
MECH				AML	AML	23 38 36.5	
	comp=N,13μm,0.5s						
TOCH	**Tocopilla**	**3.79**	**302**	⇑*i*P	**Pn**	**23 37 50.6**	**+1.5**
TOCH				*i* S	**Sn**	**23 38 31.9**	**-1.6**
TOCH				AML	AML	23 38 37.2	
	comp=N,6μm,0.7s						
HMBC	**Humberston**	**4.85**	**323**	⇑*i*P	**Pn**	**23 38 03.4**	**+0.3**
HMBC				*e*S	**Sn**	**23 38 56.8**	**-1.7**
PSGC	**Pisagua**	**5.53**	**325**	⇑*i*P	**Pn**	**23 38 11.5**	**-0.6**
PSGC				*e*S	**Sn**	**23 39 10.7**	**-4.1**
MNMC	**Miæe Miæ**	**5.68**	**332**	⇑*i*P	**Pn**	**23 38 15.3**	**+1.3**
MNMC				*i* S	**Sn**	**23 39 18.3**	**-0.1**
LCO	**Las Campanas**	**5.97**	**215**	*e*Pn	**Pn**	**23 38 16.7**	**-1.3**
LCO				*e*Sn	**Sn**	**23 39 12.5**	**-13**
CFAA	**Coronel Fontan**	**7.51**	**190**	P	**Pn**	**23 38 39.1**	**+0.5**
	comp=N,1.4nm,0.3s,baz=356,slow=12,SNR=70						
CFAA				S	**Sn**	**23 39 58.6**	**-3.8**
	comp=N,3.9nm,0.3s,baz=229,slow=16,SNR=10						
LPAZ	**La Paz**	**7.96**	**350**	P	**Pn**	**23 38 48.3**	**+3.7**
	comp=N,9.9nm,0.3s,baz=162,slow=7.6,SNR=282						
LPAZ				S	**Sn**	**23 40 14.7**	**+1.5**
	comp=N,2.0nm,0.3s,baz=270,slow=20,SNR=2.9						
LPAZ	**La Paz**	**7.96**	**350**	⇑*e*Pn	**Pn**	**23 38 48.7**	**+4.1**
LPAZ				*e*Sn	**Sn**	**23 40 14.8**	**+1.7**
LPAZ	**La Paz**	**7.96**	**350**	⇑*e*P	**Pn**	**23 38 48.7**	**+4.1**
LPAZ				*e*		23 40 14.9	
CPUP	**Villa Florida**	**8.79**	**106**	P	**Pn**	**23 38 59.6**	**+3.9**
	comp=N,3.6nm,0.3s,baz=277,slow=12,SNR=111						
CPUP	**Villa Florida**	**8.79**	**106**	*e*Pn	**Pn**	**23 38 57.6**	**+1.9**
CPUP	**Villa Florida**	**8.79**	**106**	*e*P	**Pn**	**23 38 57.6**	**+1.9**
TRQA	**Tornquist**	**14.42**	**165**	*e*Pn	**Pn**	**23 40 08.7**	**-0.4**
	comp=N,74nm,0.6s						
TRQA				*e*Sn	**Sn**	**23 42 53.5**	**+4.7**
NNA	**Nana**	**15.45**	**320**	P	**Pn**	**23 40 23.2**	**+1.1**
	comp=N,1.2nm,0.3s,baz=152,slow=12,SNR=11						
NNA				S	**S**	**23 43 11.2**	**-7.8**
	comp=N,1.6nm,0.3s,baz=179,slow=14,SNR=3.1						
NNA	**Nana**	**15.45**	**320**	*e*Pn	**Pn**	**23 40 22.5**	**+0.4**
	comp=N,48nm,1.0s						
NNA				*e*Sn	**Sn**	**23 43 13.6**	**-0.2**
PLCA	**Paso Flores**	**16.81**	**190**	P	**Pn**	**23 40 38.1**	**-0.4**
	comp=N,1.3nm,0.3s,baz=8.4,slow=13,SNR=68						
PLCA				PcP	PcP	23 45 17.1	-0.6
	comp=N,0.3nm,0.3s,baz=34,slow=0.7,SNR=5.6						
PLCA				ScP	ScP	23 48 34.1	-5.1
	comp=N,0.1nm,0.3s,baz=327,slow=7.3,SNR=4.4						
PLCA	**Paso Flores**	**16.81**	**190**	*e*P	**Pn**	**23 40 38.3**	**-0.2**
	comp=N,53nm,0.7s						
PLCA				*e*		23 40 45.9	
PLCA				*e*PcP	PcP	23 45 17.2	-0.5
PLCA	**Paso Flores**	**16.81**	**190**	*e*P	**Pn**	**23 40 38.3**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,53nm,0.7s						
ILCA	**Isla Las Cabra**	**18.47**	**194**	⇓*i*P	**P**	**23 40 55.6**	**-0.8**
BDFB	**Brasilia**	**19.54**	**68**	P	**P**	**23 41 11.2**	**+2.9**
	comp=Z,20nm,0.3s,baz=241,slow=11,SNR=291						
BDFB	**Brasilia**	**19.54**	**68**	P	**P**	**23 41 11.2**	**+2.9**
ATAH	**Atahualpa**	**20.29**	**325**	P	**P**	**23 41 18.3**	**+1.9**
	comp=Z,6.8nm,0.8s,baz=164,slow=16,SNR=7.7						
COYC	**Coyhaique**	**21.78**	**190**	*i* P	**P**	**23 41 30.8**	**-1.2**
COYC	**Coyhaique**	**21.78**	**190**	*i* P	**P**	**23 41 30.8**	**-1.2**
CAM4	**Nova Friburgo**	**22.29**	**90**	⇓*i*P	**P**	**23 41 38.0**	**+0.5**
CAM4				*i*		23 41 39.8	
CAM4				*i*		23 41 41.8	
CAM4				*i*		23 41 52.5	
CAM4				*i*		23 41 56.9	
CAM4				*i*		23 42 23.7	
OTAV	**Otavalo**	**26.79**	**333**	*e*P	**P**	**23 42 18.6**	**+0.1**
	comp=Z,19nm,1.3s,mb4.6						
OTAV				*e*PcP	PcP	23 45 37.9	0.0
USHA	**Ushuaia**	**30.64**	**182**	P	**P**	**23 42 50.9**	**-1.3**
	comp=Z,15nm,0.7s,mb4.8,baz=342,slow=7.4,SNR=11						
SDV	**Santo Domingo**	**33.08**	**353**	*e*P	**P**	**23 43 12.4**	**-1.5**
	comp=Z,24nm,1.0s,mb4.9						
SDV				*e*pP	pP	23 43 49.1	+4.4
SDV				*e*sP	sP	23 44 04.1	+3.1
RCBR	**Riachuelo**	**34.80**	**63**	*e*P	**P**	**23 43 29.2**	**+0.3**
	comp=Z,62nm,0.9s,mb5.2						
RCBR				*e*pP	pP	23 44 02.6	+2.8
GRGR	**Grenville**	**36.43**	**8**	*e*P	**P**	**23 43 42.4**	**-0.3**
	comp=Z,70nm,0.5s,mb5.5						
JTS	**JuntasAbangare**	**38.60**	**330**	*e*P	**P**	**23 44 01.6**	**+0.6**
	comp=Z,68nm,1.1s,mb5.2						
JTS				*e*PcP	PcP	23 46 09.2	-1.4
JTS	**JuntasAbangare**	**38.60**	**330**	*e*P	**P**	**23 44 01.6**	**+0.6**
JTS				*e*		23 46 09.2	
JTS				pmax	pmax		
	comp=Z,68nm,1.1s						
JTS	**JuntasAbangare**	**38.60**	**330**	P	**P**	**23 44 02.7**	**+1.7**
	comp=Z,288nm,1.1s,mb5.8,SNR=5.1						
BIM	**Bigot**	**38.85**	**9**	*e*P	**P**	**23 44 02.0**	**-1.1**
FDF	**Fort de France**	**39.06**	**9**	*e*P	**P**	**23 44 03.9**	**-0.8**
PMSA	**Palmer Station**	**40.63**	**178**	P	**P**	**23 44 16.5**	**-0.7**
	comp=Z,20nm,0.7s,mb4.9,baz=4.1,slow=8.8,SNR=7.9						
ANWB	**Willy Bob**	**41.87**	**7**	*e*P	**P**	**23 44 24.8**	**-3.1**
	comp=Z,45nm,0.6s,mb5.3						
CRPR	**Cabo Rojo, PR**	**41.93**	**359**	*e*P	**P**	**23 44 26.9**	**-1.4**
	comp=Z,26nm,0.8s,mb4.9						
OBIP	**Obispado Ponce**	**41.96**	**0**	*e*P	**P**	**23 44 26.6**	**-2.0**
	comp=Z,59nm,0.6s,mb5.4						
CELP	**Cerrillos**	**41.99**	**0**	*e*P	**P**	**23 44 26.8**	**-2.1**
SJG	**San Juan**	**42.03**	**1**	*e*P	**P**	**23 44 27.0**	**-2.2**
	comp=Z,43nm,0.8s,mb5.1						
SJG	**San Juan**	**42.03**	**1**	*e*P	**P**	**23 44 27.0**	**-2.2**
SJG				pmax	pmax		
	comp=Z,43nm,0.8s						
LSP	**Las Mesas**	**42.10**	**360**	*e*P	**P**	**23 44 27.4**	**-2.3**
MPR	**Mayaguez**	**42.13**	**359**	*e*P	**P**	**23 44 27.9**	**-2.1**
	comp=Z,49nm,0.8s,mb5.2						
AOPR	**Arecibo Observ**	**42.26**	**360**	*e*P	**P**	**23 44 28.4**	**-2.6**
	comp=Z,43nm,1.3s,mb4.9						
TGUH	**Tegucigalpa,Un**	**42.97**	**330**	*e*P	**P**	**23 44 35.7**	**-1.1**
	comp=Z,76nm,0.9s,mb5.3						
TEIG	**Tepich**	**48.86**	**333**	*e*P	**P**	**23 45 21.9**	**-1.0**
	comp=Z,33nm,0.4s,mb5.3						
DWPF	**Disney**	**53.88**	**344**	*e*P	**P**	**23 45 59.7**	**-0.4**
	comp=Z,51nm,1.3s,mb5.1						
DWPF				*e*PcP	PcP	23 47 03.0	-0.8
BRAL	**Brewton**	**58.22**	**339**	*e*P	**P**	**23 46 30.9**	**0.0**
	comp=Z,206nm,1.4s,mb5.8						
COW	**Cow Castle Cre**	**58.76**	**346**	*e*P	**P**	**23 46 33.9**	**-0.7**
GOGA	**Godfrey**	**59.44**	**344**	*e*P	**P**	**23 46 37.6**	**-1.7**
	comp=Z,29nm,0.8s,mb5.2						
GOGA				*e*PcP	PcP	23 47 24.0	-1.5
GOGA	**Godfrey**	**59.44**	**344**	*e*P	**P**	**23 46 37.6**	**-1.7**
GOGA				*e*		23 47 24.0	
GOGA				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.2						
JSC	**Jenkinsville**	**59.75**	**346**	*e*P	**P**	**23 46 40.7**	**-0.7**
JSC	**Jenkinsville**	**59.75**	**346**	*e*P	**P**	**23 46 40.7**	**-0.7**
LRAL	**Lakeview Retre**	**60.08**	**340**	*e*P	**P**	**23 46 41.8**	**-1.9**
	comp=Z,24nm,1.0s,mb5.0						
CPCT	**Cooper Cave**	**61.64**	**344**	*e*P	**P**	**23 46 53.0**	**-1.3**
TKL	**Tuckaleechee C**	**61.65**	**344**	*e*P	**P**	**23 46 53.0**	**-1.3**
TKL	**Tuckaleechee C**	**61.65**	**344**	*e*P	**P**	**23 46 53.0**	**-1.3**
SWET	**Sewanee**	**61.80**	**342**	*e*P	**P**	**23 46 53.8**	**-1.4**
OXF	**Oxford**	**62.21**	**339**	*e*P	**P**	**23 46 55.5**	**-2.5**
	comp=Z,104nm,1.1s,mb5.6						
OXF	**Oxford**	**62.21**	**339**	*e*P	**P**	**23 46 55.5**	**-2.5**
OXF				pmax	pmax		
	comp=Z,104nm,1.1s,mb5.6						
VWCC	**Virginia Weste**	**62.35**	**348**	*e*P	**P**	**23 46 58.7**	**-0.2**
JCT	**Junction City**	**62.91**	**328**	*e*P	**P**	**23 47 01.6**	**-1.1**
	comp=Z,53nm,0.8s,mb5.4						
JCT	**Junction City**	**62.91**	**328**	*e*P	**P**	**23 47 01.7**	**-1.1**
JCT				pmax	pmax		
	comp=Z,53nm,0.8s,mb5.4						
WVT	**Waverly**	**63.20**	**341**	*e*P	**P**	**23 47 02.6**	**-1.9**
	comp=Z,73nm,0.8s,mb5.6						
WVT	**Waverly**	**63.20**	**341**	*e*P	**P**	**23 47 02.6**	**-2.0**
WVT				pmax	pmax		
	comp=Z,73nm,0.8s,mb5.6						
UALR	**University of**	**63.46**	**337**	*e*P	**P**	**23 47 04.9**	**-1.3**
	comp=Z,40nm,1.3s,mb5.1						
MAIT	**Maitri**	**63.60**	**159**	*e*P	**P**	**23 47 07.2**	**+0.5**
NVL	**N'lazarevskaya**	**63.63**	**159**	⇑*i*P	**P**	**23 47 07.1**	**+0.1**
NVL				pmax	pmax		
	comp=Z,36nm,0.6s,mb5.4						
628A	**Black Gap, Mar**	**63.66**	**325**	⇓P	**P**	**23 47 07.5**	**-0.2**
	baz=64,SNR=38						
UTMT	**University of**	**63.71**	**340**	*e*P	**P**	**23 47 07.0**	**-0.9**
	comp=Z,291nm,1.1s,mb6.0						
627A	**Terlingua Ranc**	**63.90**	**325**	⇑P	**P**	**23 47 08.5**	**-0.7**
	baz=64						
TXAR	**Lajitas Array**	**63.95**	**324**	P	**P**	**23 47 08.8**	**-0.8**
	comp=Z,8.1nm,0.9s,mb4.6,baz=153,slow=8.3,SNR=73						
TXAR	**Lajitas Array**	**63.95**	**324**	P	**P**	**23 47 08.8**	**-0.8**
PVMO	**Portageville**	**64.04**	**340**	*e*P	**P**	**23 47 09.2**	**-0.8**
528A	**Cox Ranch, San**	**64.15**	**326**	⇓P	**P**	**23 47 10.1**	**-0.8**
	baz=64,SNR=40						
626A	**Big Bend Ranch**	**64.38**	**324**	⇑P	**P**	**23 47 11.8**	**-0.6**
	baz=65,SNR=98						
428A	**Kincaid Ranch,**	**64.55**	**326**	⇓P	**P**	**23 47 13.2**	**-0.3**
	baz=65,SNR=17						
527A	**Woodward Ranch**	**64.57**	**325**	⇓P	**P**	**23 47 12.9**	**-0.8**
	baz=65,SNR=44						
MCWV	**Mont Chateau**	**64.67**	**349**	*e*P	**P**	**23 47 13.7**	**-0.4**
	comp=Z,14nm,0.7s,mb4.9						
526A	**Mary Lane Ranc**	**64.75**	**324**	⇓P	**P**	**23 47 14.6**	**-0.2**
	baz=65,SNR=67						
427A	**Hayter Ranch,**	**65.02**	**326**	⇓P	**P**	**23 47 16.1**	**-0.4**
	baz=65,SNR=20						
SIUC	**Southern Illin**	**65.09**	**340**	*e*P	**P**	**23 47 14.4**	**-2.4**
	comp=Z,75nm,1.4s,mb5.3						
328A	**Wristen Ranch,**	**65.14**	**326**	⇓P	**P**	**23 47 16.7**	**-0.6**
	baz=65,SNR=43						
426A	**McDonald Obser**	**65.20**	**325**	⇓P	**P**	**23 47 17.5**	**-0.2**
	baz=65,SNR=43						
326A	**Caldwell Ranch**	**65.69**	**325**	P	**P**	**23 47 20.4**	**-0.5**
	baz=66,SNR=19						
OLIL	**Olney**	**65.70**	**342**	*e*P	**P**	**23 47 18.4**	**-2.3**
	comp=Z,18nm,0.8s,mb5.0						
FVM	**French Village**	**65.71**	**340**	*e*P	**P**	**23 47 19.4**	**-1.4**
	comp=Z,118nm,1.2s,mb5.6						
FVM	**French Village**	**65.71**	**340**	*e*P	**P**	**23 47 19.4**	**-1.4**
FVM				pmax	pmax		
	comp=Z,118nm,1.2s,mb5.6						
425A	**Indio Mountain**	**65.80**	**324**	⇑P	**P**	**23 47 21.1**	**-0.5**
	baz=66,SNR=53						
227A	**Bennet, Jal**	**65.89**	**326**	P	**P**	**23 47 21.9**	**-0.2**
	baz=66,SNR=14						
WMOK	**Wichita Mounta**	**66.00**	**331**	*e*P	**P**	**23 47 21.0**	**-1.8**
	comp=Z,55nm,1.8s,mb5.1						
WMOK	**Wichita Mounta**	**66.00**	**331**	*e*P	**P**	**23 47 21.0**	**-1.8**
WMOK				pmax	pmax		
	comp=Z,55nm,1.8s,mb5.1						
QSPA	**South Pole Qui**	**66.03**	**180**	*e*P	**P**	**23 47 22.2**	**-0.1**
	comp=Z,46nm,0.7s,mb5.4						
325A	**Bean Ranch, Si**	**66.25**	**325**	⇓P	**P**	**23 47 23.9**	**-0.5**
	baz=66,SNR=14						
226A	**Malaga, Loving**	**66.34**	**326**	⇓P	**P**	**23 47 24.8**	**-0.2**
	baz=67,SNR=35						
CLNB	**Carlsbad**	**66.39**	**326**	*e*P	**P**	**23 47 24.6**	**-0.7**
	comp=Z,2.9nm,0.5s,mb4.4						
127A	**Arkansas Junct**	**66.45**	**327**	⇓P	**P**	**23 47 25.0**	**-0.7**
	baz=67,SNR=9.1						
324A	**Moseley Ranch,**	**66.58**	**324**	⇓P	**P**	**23 47 25.2**	**-1.3**
	baz=67,SNR=65						
GDL2	**Guadalupe Moun**	**66.58**	**326**	*e*P	**P**	**23 47 26.1**	**-0.4**
BINY	**Binghamton**	**66.59**	**353**	*e*P	**P**	**23 47 26.5**	**+0.1**
	comp=Z,34nm,1.0s,mb5.1						
ALLY	**Alegheny Colle**	**66.66**	**349**	*e*P	**P**	**23 47 26.3**	**-0.5**
	comp=Z,42nm,0.9s,mb5.3						
MNTX	**Cornudas Mount**	**66.72**	**325**	*e*P	**P**	**23 47 25.9**	**-1.5**
	comp=Z,22nm,0.9s,mb5.0						
**

V26A **Tequesquite Ra** 69.17 328 ⇑P P 23 47 42.3 -0.3
baz=69,SNR=9.0
Z21A **St. Cloud Mine** 69.19 324 ⇑P P 23 47 43.5 +0.7
baz=69,SNR=40
BNM **Barren Site** 69.29 325 eP P 23 47 43.2 -0.2
comp=Z,47nm,1.4s,mb5.0
Y22A **Socorro** 69.30 325 ⇑P P 23 47 43.8 +0.3
baz=70,SNR=6.6
X23A **Hourglass Bar** 69.40 326 ⇓P P 23 47 44.5 +0.5
baz=70,SNR=15
LPM **Los Pinos Moun** 69.41 325 eP P 23 47 44.2 +0.1
LENM **Lemitar** 69.48 325 eP P 23 47 44.7 +0.1
218A **Dragoon** 69.49 322 ⇓P P 23 47 45.1 +0.4
baz=70,SNR=38
W24A **Lazy 6 Ranch,** 69.50 327 ⇑P P 23 47 44.4 -0.2
baz=70,SNR=21
Z20A **Nine Sixteen R** 69.54 323 ⇑P P 23 47 45.6 +0.7
baz=70,SNR=28
V25A **Rancho No Teng** 69.61 328 ⇑P P 23 47 45.1 -0.2
baz=70
U26A **Atchley Ranch,** 69.64 329 ⇓P P 23 47 45.4 -0.1
baz=70,SNR=35
119A **Ashpeak Ranch,** 69.67 323 P P 23 47 46.2 +0.5
baz=70,SNR=12
Y21A **Point of Rocks** 69.73 325 P P 23 47 46.9 +0.8
baz=70,SNR=22
LAZ **Ladron** 69.75 325 eP P 23 47 46.2 0.0
comp=Z,5.9nm,0.8s,mb4.4
217A **Green Valley** 69.79 321 ⇓P P 23 47 46.9 +0.3
baz=70,SNR=45
ANMO **Albuquerque** 69.82 326 eP P 23 47 46.5 -0.2
comp=Z,43nm,1.0s,mb5.1
ANMO **Albuquerque** 69.82 326 eP P 23 47 46.5 -0.2
ANMO pmax pmax
comp=Z,43nm,1.0s
W23A **Werner Place,** 69.83 326 ⇑P P 23 47 47.2 +0.5
baz=70,SNR=16
V24A **Rampart Ranch,** 69.84 327 ⇓P P 23 47 47.1 +0.3
baz=70,SNR=36
CBKS **Cedar Bluff** 69.86 333 eP P 23 47 46.1 -0.7
comp=Z,87nm,1.0s,mb5.4
CBKS **Cedar Bluff** 69.86 333 eP P 23 47 46.1 -0.7
CBKS pmax pmax
comp=Z,87nm,1.0s,mb5.4
118A **Homack Ranch,** 69.94 322 ⇓P P 23 47 47.7 +0.2
baz=70,SNR=16
U25A **Circle Dot Ran** 69.96 328 ⇑P P 23 47 47.5 0.0
baz=70,SNR=30
Y20A **Horse Springs,** 70.02 324 ⇑P P 23 47 48.6 +0.7
baz=70,SNR=34
Z19A **T-Link Ranch,** 70.04 323 P P 23 47 48.8 +0.7
baz=70,SNR=6.4
X21A **Alamocita Cree** 70.12 325 ⇓P P 23 47 49.4 +0.9
baz=70,SNR=33
W22A **Albuquerque** 70.13 326 ⇓P P 23 47 49.5 +0.9
baz=70,SNR=9.7
TUC **Tucson** 70.16 321 eP P 23 47 47.9 -0.9
comp=Z,39nm,1.2s,mb5.0
TUC **Tucson** 70.16 321 eP P 23 47 47.9 -0.9
TUC pmax pmax
comp=Z,39nm,1.2s,mb5.0
JFWS **Jewell Farm** 70.18 342 eP P 23 47 47.1 -1.6
comp=Z,94nm,0.6s,mb5.7
JFWS **Jewell Farm** 70.18 342 eP P 23 47 47.1 -1.6
JFWS pmax pmax
comp=Z,94nm,0.6s,mb5.7
V23A **Ortiz Mt. (NFS** 70.31 327 P P 23 47 50.0 +0.5
baz=70,SNR=14
216A **Three Points,** 70.32 321 P P 23 47 49.9 +0.1
baz=70,SNR=13
117A **Oracle** 70.33 321 ⇓P P 23 47 50.0 +0.2
baz=70,SNR=12
U24A **Moreno Valley** 70.39 328 ⇓P P 23 47 50.6 +0.5
baz=71,SNR=6.0
Y19A **Nutrioso** 70.53 323 ⇓P P 23 47 51.9 +0.9
baz=71,SNR=41
T25A **Trinidad** 70.55 329 ⇑P P 23 47 51.6 +0.5
baz=71,SNR=17
W21A **San Fidel** 70.56 325 ⇑P P 23 47 52.0 +0.8
baz=71,SNR=5.6
X20A **Quemado** 70.57 324 ⇓P P 23 47 52.0 +0.7
baz=71,SNR=15
U23A **El Rito** 70.77 327 P P 23 47 52.8 +0.4
baz=71,SNR=16
V22A **San Miguel Ran** 70.80 326 ⇓P P 23 47 53.5 +0.9
baz=71,SNR=29
T24A **Torres, Weston** 70.81 328 ⇓P P 23 47 53.4 +0.8
baz=71,SNR=25
Y18A **Canyon Day Jun** 70.83 323 ⇓P P 23 47 53.1 +0.3
baz=71,SNR=5.8
116A **Eloy** 70.87 321 ⇑P P 23 47 53.4 +0.3
baz=71,SNR=6.4
X19A **St. Johns** 70.91 324 ⇑P P 23 47 53.5 +0.3
baz=71,SNR=9.2
S25A **Robets Cordova** 70.98 329 ⇑P P 23 47 54.1 +0.4
baz=71,SNR=43
W20A **Ramah** 71.02 325 ⇑P P 23 47 54.6 +0.7
baz=71,SNR=31
214A **Organ Pipe Nat** 71.08 320 ⇓P P 23 47 54.8 +0.4
baz=71,SNR=16
V21A **Milan** 71.09 326 ⇓P P 23 47 55.2 +0.8
baz=71,SNR=11
U22A **Llaves** 71.14 327 ⇑P P 23 47 55.6 +1.0
baz=71,SNR=23
Y17A **Roosevelt** 71.22 322 ⇓P P 23 47 55.6 +0.5
baz=71,SNR=36
115A **Sonoran Desert** 71.28 321 ⇓P P 23 47 56.0 +0.5
baz=72,SNR=6.5
S24A **Houchin Ranch,** 71.33 329 ⇓P P 23 47 56.6 +0.8
baz=72,SNR=39
X18A **Snowflake** 71.34 323 ⇓P P 23 47 56.5 +0.6
baz=72,SNR=9.0
W19A **Sanders** 71.48 324 ⇓P P 23 47 57.0 +0.3
baz=72,SNR=6.7
V20A **Brimhall** 71.52 325 ⇑P P 23 47 57.3 +0.4
baz=72,SNR=19
SDCO **Great Sand Dun** 71.56 328 eP P 23 47 57.1 0.0
comp=Z,35nm,1.0s,mb5.0
U21A **Nageezi** 71.58 326 ⇓P P 23 47 57.8 +0.5
baz=72,SNR=29
T22A **Edith** 71.66 327 ⇑P P 23 47 58.6 +0.8
baz=72,SNR=31
Z15A **Gila River Ind** 71.66 321 ⇓P P 23 47 58.1 +0.2
baz=72
W18A **Petrified Fore** 71.67 324 ⇓P P 23 47 58.4 +0.5
baz=72
X17A **Forest Lakes** 71.67 323 ⇑P P 23 47 58.8 +0.9
baz=72,SNR=13
114A **Black Gap (USA** 71.69 320 ⇓P P 23 47 58.3 +0.2
baz=72,SNR=14
Y16A **Circle Bar Ran** 71.71 322 ⇑P P 23 47 58.8 +0.7
baz=72,SNR=24
V19A **Window Rock** 71.75 325 ⇑P P 23 47 59.1 +0.7
baz=72,SNR=21
R24A **Sanders Place,** 71.76 329 ⇑P P 23 47 58.9 +0.6
baz=72,SNR=17
Q25A **Bedland, Calha** 71.91 330 ⇓P P 23 47 59.0 -0.2
baz=72,SNR=5.6
T21A **Navajo Lake** 71.96 327 ⇓P P 23 47 60.0 +0.5
baz=72,SNR=13
U20A **Newcomb** 71.99 326 ⇓P P 23 47 60.0 +0.3
baz=72,SNR=14
X16A **Lo Mia Camp, P** 72.08 322 ⇑P P 23 48 01.0 +0.7
baz=72,SNR=37
W17A **Winslow** 72.17 323 ⇓P P 23 48 01.4 +0.5
baz=72,SNR=8.9
S22A **4UR Ranch, Cre** 72.20 328 ⇑P P 23 48 01.4 +0.4
baz=72,SNR=20
V18A **Ganado** 72.22 324 ⇓P P 23 48 01.3 +0.2
baz=72,SNR=5.9
113A **Mohawk Valley,** 72.23 320 ⇓P P 23 48 01.0 -0.2
baz=72
Y15A **Casa Rosa Ranc** 72.25 321 ⇓P P 23 48 01.7 +0.4
baz=72,SNR=25
U19A **Dine' College,** 72.28 325 ⇑P P 23 48 01.3 -0.2
baz=72
P25A **Willow Gulch B** 72.36 330 ⇓P P 23 48 02.5 +0.6
baz=73,SNR=11
Q24A **Divide** 72.36 329 ⇑P P 23 48 02.5 +0.7
baz=73,SNR=24
Z13A **Yuma Proving G** 72.47 320 ⇑P P 23 48 02.8 +0.2
baz=73,SNR=16
R22A **Saguache, Gunn** 72.54 328 ⇓P P 23 48 03.6 +0.7
baz=73,SNR=13
X15A **Humboldt** 72.58 322 ⇑P P 23 48 03.9 +0.6
baz=73,SNR=27
T19A **Beclabito** 72.59 326 ⇓P P 23 48 03.5 +0.2
baz=73,SNR=49

OGNE **Ogallala** 72.61 333 eP P 23 48 03.5 +0.2
comp=Z,32nm,0.8s,mb5.1
S21A **Coal Bank Pass** 72.61 327 ⇓P P 23 48 03.9 +0.5
baz=73,SNR=26
V17A **Tonalea, Kykot** 72.62 324 ⇓P P 23 48 04.2 +0.7
baz=73,SNR=47
Y14A **Wickenburg** 72.62 321 ⇓P P 23 48 03.7 +0.2
baz=73,SNR=15
W16A **Flagstaff** 72.63 323 ⇓P P 23 48 04.7 +1.1
baz=73,SNR=46
Q23A **Hartsel** 72.64 329 ⇓P P 23 48 03.9 +0.4
baz=73,SNR=7.8
P24A **Kohler Place,** 72.70 330 ⇑P P 23 48 04.6 +0.7
baz=73
U18A **Rough Rock, Ch** 72.72 325 ⇓P P 23 48 04.7 +0.6
baz=73
COWI **Conover** 72.84 344 eP P 23 48 03.6 -0.9
comp=Z,27nm,1.0s,mb4.9
COWI ePcP PcP 23 48 20.3 -0.5
ECSD **EROS Data Cent** 72.93 338 eP P 23 48 03.9 -1.2
comp=Z,58nm,1.1s,mb5.2
X14A **Yava** 72.94 321 ⇑P P 23 48 06.0 +0.6
baz=73,SNR=18
Y13A **Salome** 73.01 320 ⇓P P 23 48 06.3 +0.5
baz=73,SNR=9.6
S20A **Disappointment** 73.02 327 ⇓P P 23 48 06.8 +1.0
baz=73,SNR=32
R21A **Cibron** 73.04 328 ⇑P P 23 48 06.5 +0.7
baz=73,SNR=16
GLA **Glamis** 73.06 319 ⇑P P 23 48 06.4 +0.3
baz=73,SNR=8.0
GLA **Glamis** 73.06 319 eP P 23 48 05.6 -0.5
comp=Z,26nm,0.8s,mb5.0
GLA **Glamis** 73.06 319 eP P 23 48 05.6 -0.5
GLA pmax pmax
comp=Z,26nm,0.8s,mb5.0
W15A **Williams** 73.10 322 ⇓P P 23 48 07.1 +0.8
baz=73
Q22A **Crested Butte,** 73.11 328 ⇑P P 23 48 07.1 +0.7
baz=73
U16A **Tuba City** 73.19 324 ⇑P P 23 48 07.5 +0.7
baz=73,SNR=15
ISCO **Idaho Springs** 73.25 330 eP P 23 48 07.2 +0.1
comp=Z,27nm,1.0s,mb4.9
ISCO **Idaho Springs** 73.25 330 eP P 23 48 07.2 +0.1
ISCO pmax pmax
comp=Z,27nm,1.0s,mb4.9
T18A **Mexican Hat** 73.27 325 ⇑P P 23 48 07.5 +0.2
baz=74,SNR=52
SYO **Syowa Base** 73.30 159⇑iP P 23 48 05.5 -1.6
R20A **Redvale** 73.31 327 ⇓P P 23 48 08.4 +1.0
baz=74,SNR=30
S19A **Harvey Farm, M** 73.35 326 ⇑P P 23 48 08.1 +0.4
baz=74,SNR=47
PV01 **Paradox Valley** 73.36 327 eP P 23 48 07.9 +0.1
comp=Z,3μm,1.2s
Y12C **Blythe** 73.37 320 ⇑P P 23 48 08.4 +0.4
baz=74,SNR=19
SMCO **Snowmass** 73.39 328 eP P 23 48 08.0 +0.1
comp=Z,42nm,1.0s,mb5.1
Q21A **Lamborn Mesa,** 73.41 328 ⇑P P 23 48 08.6 +0.5
baz=74,SNR=7.9
V15A **Kaibab Nationa** 73.52 323 ⇓P P 23 48 09.7 +1.0
baz=74,SNR=23
SWSC **Sam W. Stewart** 73.56 319 ⇑P P 23 48 09.4 +0.3
baz=74
SBA **Scott Base** 73.56 190 eP P 23 48 08.5 0.0
comp=Z,22nm,1.2s,mb4.8
SBA **Scott Base** 73.56 190 eP P 23 48 08.5 0.0
SBA pmax pmax
comp=Z,22nm,1.2s,mb4.8
X13A **Yucca** 73.56 321 ⇑P P 23 48 09.4 +0.4
baz=74,SNR=29
W14A **Seligman** 73.58 322 ⇓P P 23 48 10.0 +0.8
baz=74,SNR=24
P22A **Eagle** 73.62 329 ⇓P P 23 48 09.9 +0.6
baz=74
T17A **Navajo Res., N** 73.65 325 ⇓P P 23 48 10.6 +1.0
baz=74,SNR=30
O23A **Lake Granby, G** 73.72 330 ⇑P P 23 48 10.5 +0.7
baz=74,SNR=9.0
PV04 **Paradox Valley** 73.73 327 eP P 23 48 09.8 -0.1
S18A **Hurst Farm, Bl** 73.75 326 ⇑P P 23 48 10.9 +0.8
baz=74,SNR=72
R19A **Culey Farm, L** 73.83 326 ⇑P P 23 48 10.8 +0.3
baz=74,SNR=18
BC3 **Big Chuckawall** 73.85 319 ⇓P P 23 48 11.0 +0.3
baz=74,SNR=29
Q20A **Ridgley Place,** 73.86 327 ⇑P P 23 48 10.8 +0.1
baz=74,SNR=7.8
P21A **Newcastle** 73.89 328 ⇑P P 23 48 11.7 +0.8
baz=74
V14A **Boquillas Ranc** 73.90 322 ⇓P P 23 48 11.7 +0.7
baz=74,SNR=49
MONP **Monument Peak** 73.91 318 ⇑P P 23 48 11.6 +0.5
baz=74,SNR=6.2
BAR **Barrett** 73.92 318 eP P 23 48 11.0 -0.2
comp=Z,25nm,0.8s,mb5.0
W13A **Hualapai Mount** 73.96 321 ⇓P P 23 48 12.0 +0.6
baz=74
O22A **Kremmling** 73.97 329 P P 23 48 11.4 +0.1
baz=74,SNR=21
T16A **Glen Canyon Da** 74.02 324 ⇓P P 23 48 12.5 +0.8
baz=74,SNR=9.4
IRM **Iron Mountain** 74.03 320 ⇑P P 23 48 12.1 +0.3
baz=74,SNR=26
U15A **North Rim** 74.03 323 ⇓P P 23 48 12.7 +0.9
baz=74,SNR=52
S17A **Black Ridge (B** 74.13 325 ⇑P P 23 48 12.8 +0.6
baz=74,SNR=12
R18A **Canyonlands Na** 74.22 326 ⇓P P 23 48 12.9 +0.1
baz=74,SNR=14
M24A **Cheyenne** 74.24 331 ⇓P P 23 48 13.7 +0.9
baz=74,SNR=12
N23A **Red Feather La** 74.28 330 ⇑P P 23 48 14.0 +0.9
baz=74
Q19A **Hogan Spring (** 74.34 327 ⇓P P 23 48 13.8 +0.4
baz=75,SNR=19
PHWY **Pilot Hill** 74.38 331 eP P 23 48 14.1 +0.4
comp=Z,26nm,1.1s,mb4.9
BELC **Belle Mtn. Jos** 74.42 319 ⇓P P 23 48 14.5 +0.5
baz=75,SNR=13
PFO **Pinyon Flat Ob** 74.42 319 ⇑P P 23 48 14.6 +0.5
baz=75,SNR=9.2
PFO **Pinyon Flat Ob** 74.42 319 eP P 23 48 14.4 +0.3
comp=Z,19nm,0.9s,mb4.8
PFO **Pinyon Flat Ob** 74.42 319 eP P 23 48 14.4 +0.3
PFO pmax pmax
comp=Z,19nm,0.9s,mb4.8
PFO **Pinyon Flat Ob** 74.42 319 P P 23 48 14.9 +0.8
comp=Z,128nm,0.8s,mb5.7,SNR=6.5
N22A **Wattenberg Ran** 74.44 330 ⇑P P 23 48 14.9 +1.0
baz=75
O21A **Pagoda** 74.45 329 ⇑P P 23 48 15.1 +1.1
baz=75
U14A **Mt Trumbull** 74.51 323 ⇓P P 23 48 15.5 +1.0
baz=75,SNR=56
T15A **Red Dirt Ranch** 74.51 324 ⇓P P 23 48 15.5 +1.0
baz=75,SNR=18
V13A **Grand Canyon W** 74.55 322 ⇑P P 23 48 15.3 +0.5
baz=75
S16A **Weppner Ranch,** 74.61 325 ⇓P P 23 48 15.3 +0.3
baz=75,SNR=13
M23A **Laramie** 74.64 331 ⇓P P 23 48 15.5 +0.4
baz=75,SNR=7.1
LDFC **Landfair** 74.65 321 eP P 23 48 16.2 +0.9
comp=Z,43nm,0.9s,mb5.1
W12A **Cal Nev Ari** 74.67 321 ⇓P P 23 48 15.7 +0.3
baz=75,SNR=5.2
R17A **Hanksville Air** 74.67 326 ⇑P P 23 48 15.7 +0.3
baz=75,SNR=55
P19A **Cripple Cowboy** 74.72 327 ⇓P P 23 48 16.5 +0.8
baz=75,SNR=39
O20A **White River Ci** 74.75 328 ⇓P P 23 48 16.4 +0.6
baz=75,SNR=24
GMRC **Granite Mounta** 74.76 320 ⇑P P 23 48 16.7 +0.7
baz=75,SNR=46
MURC **Murrieta** 74.87 318 ⇓P P 23 48 16.7 +0.1
baz=75,SNR=6.7
Q18A **Rafter H Ranch** 74.89 326 ⇑P P 23 48 17.0 +0.3
baz=75,SNR=18
T14A **Hurricane** 74.93 323 ⇓P P 23 48 17.7 +0.8
baz=75,SNR=26
U13A **Pakoon Wash** 74.95 322 ⇑P P 23 48 17.6 +0.6
baz=75,SNR=14
V12A **Nelson** 74.96 321 ⇑P P 23 48 17.3 +0.2
baz=75,SNR=17
R16A **Teasdale** 74.97 325 ⇑P P 23 48 17.5 +0.4
baz=75,SNR=11
SRU **San Rafael** 75.09 326 eP P 23 48 17.8 0.0
comp=Z,40nm,0.8s,mb5.1
SRU **San Rafael** 75.09 326 eP P 23 48 17.8 0.0
SRU pmax pmax
comp=Z,40nm,0.8s,mb5.1
L23A **Garrett** 75.14 331 ⇑P P 23 48 18.1 +0.1
baz=75,SNR=6.4
EYMN **Ely** 75.16 343 eP P 23 48 16.5 -1.4
HEC **Hector,Ludlow** 75.19 320 P P 23 48 19.1 +0.7
baz=75,SNR=9.1
Q16A **Castle Valley** 75.28 326 ⇓P P 23 48 19.4 +0.5
baz=76,SNR=12
U12A **Valley of Fire** 75.28 322 ⇓P P 23 48 19.6 +0.6
baz=76,SNR=18
O19A **Miners Draw (B** 75.30 328 ⇓P P 23 48 19.3 +0.3
baz=76,SNR=18
N20A **Spence Gulch,** 75.31 329 ⇑P P 23 48 19.1 +0.2
baz=76,SNR=13
R15A **Junction** 75.33 324 ⇓P P 23 48 20.0 +0.8
baz=76,SNR=8.1
P18A **Preston Nutter** 75.35 327 ⇑P P 23 48 20.0 +0.8
baz=76,SNR=39
T13A **Saint George** 75.35 323 ⇓P P 23 48 20.1 +0.8
baz=76,SNR=20
V11A **Goodsprings** 75.37 321 ⇑P P 23 48 19.8 +0.4
baz=76,SNR=9.9
TUQ **Turquoise Moun** 75.37 320 ⇑P P 23 48 19.9 +0.4
baz=76,SNR=9.0
CCUT **Cedar City** 75.44 323 eP P 23 48 20.7 +0.9
comp=Z,57nm,0.9s,mb5.2
P17A **Butcher Ranch,** 75.48 326 ⇓P P 23 48 20.4 +0.4
baz=76,SNR=25
S14A **Cedar City** 75.48 324 ⇑P P 23 48 20.7 +0.7
baz=76,SNR=5.4
RWWY **Rawlins** 75.48 330 eP P 23 48 20.0 0.0
comp=Z,34nm,1.0s,mb4.9
M21A **Separation Pea** 75.49 330 ⇓P P 23 48 20.4 +0.4
baz=76,SNR=7.7
MSU **Marysvale** 75.50 325 eP P 23 48 20.6 +0.4
MSU **Marysvale** 75.50 325 eP P 23 48 20.6 +0.4
BFSC **Mount Baldy Ra** 75.58 318 ⇑P P 23 48 20.8 +0.1
baz=76,SNR=5.5
TMUT **Trail Mountain** 75.58 326 eP P 23 48 21.2 +0.6
comp=Z,85nm,2.0s,mb5.0
ARUT **Antelope Range** 75.65 323 eP P 23 48 21.3 +0.3
comp=Z,45nm,1.0s,mb5.0
ARUT **Antelope Range** 75.65 323 eP P 23 48 21.3 +0.3
ARUT pmax pmax
comp=Z,45nm,1.0s,mb5.0
SHPR **Sheep Range** 75.69 322 eP P 23 48 21.5 +0.2
S13A **Holt Ranch, En** 75.73 323 ⇓P P 23 48 22.3 +0.8
baz=76,SNR=11
L21A **Rawlins** 75.78 330 ⇓P P 23 48 21.9 +0.3
baz=76,SNR=18
M20A **Sweetwater, Wa** 75.78 329 ⇑P P 23 48 22.1 +0.4
baz=76,SNR=5.6
N19A **John Jarvie Ra** 75.79 328 ⇑P P 23 48 21.9 +0.2
baz=76,SNR=20
R14A **James Farms, M** 75.80 324 ⇑P P 23 48 22.4 +0.5
baz=76
GSC **Goldstone** 75.80 320 ⇓P P 23 48 22.2 +0.3
baz=76,SNR=14
GSC **Goldstone** 75.80 320 eP P 23 48 22.2 +0.3
comp=Z,51nm,1.4s,mb5.0
GSC **Goldstone** 75.80 320 eP P 23 48 22.2 +0.3
GSC pmax pmax
comp=Z,51nm,1.4s,mb5.0
MWC **Mount Wilson** 75.81 318 eP P 23 48 22.1 0.0
comp=Z,62nm,1.5s,mb5.0
MWC **Mount Wilson** 75.81 318 eP P 23 48 22.1 +0.1
MWC pmax pmax
comp=Z,63nm,1.5s,mb5.0
SHOC **Shoshone** 75.90 320 ⇓P P 23 48 22.5 0.0
baz=76
K22A **Casper** 75.94 331 ⇓P P 23 48 22.8 +0.3
baz=76
Q15A **Fillmore** 75.97 325 ⇓P P 23 48 23.5 +0.7
baz=76,SNR=6.3
O17A **Robinson Place** 76.02 327 ⇑P P 23 48 24.0 +0.9
baz=76,SNR=77
N18A **Larsen Ranch,** 76.09 328 ⇓P P 23 48 23.2 -0.2
baz=76,SNR=12
EDW2 **Edwards Air Fo** 76.22 319 ⇑P P 23 48 24.1 -0.2
baz=76,SNR=8.9
R13A **O'Grain Ranch,** 76.22 323 ⇑P P 23 48 25.3 +1.1
baz=76,SNR=32
T11A **Corn Creek, Al** 76.24 322 ⇑P P 23 48 25.3 +0.9
baz=76,SNR=44
K21A **Alcova** 76.25 330 ⇓P P 23 48 24.8 +0.5
baz=76,SNR=30
M19A **Rock Springs** 76.25 329 ⇑P P 23 48 24.9 +0.6
baz=76,SNR=7.0
L20A **Wamsutter** 76.26 329 ⇑P P 23 48 24.8 +0.5
baz=76,SNR=8.0
S12A **Delamar Landin** 76.29 323 ⇓P P 23 48 25.6 +0.9
baz=76,SNR=11
U10A **Ash Meadows, A** 76.30 321 P P 23 48 25.3 +0.6
baz=76,SNR=14
MPU **Maple Canyon** 76.34 326 eP P 23 48 25.4 +0.5
comp=Z,43nm,1.1s,mb5.0
TORD **Torodi Ar. Bea** 76.42 69 P P 23 48 25.4 -0.5
comp=Z,14nm,0.5s,mb4.8,baz=256,slow=5.6,SNR=223
Q14A **Sevier Lake (B** 76.44 324 ⇓P P 23 48 26.3 +0.9
baz=77,SNR=54
LRMC **Laurel Mountai** 76.44 319 ⇑P P 23 48 25.7 +0.2
baz=77,SNR=5.3
DAU **Daniels Canyon** 76.45 327 eP P 23 48 25.8 +0.4
DAU **Daniels Canyon** 76.45 327 eP P 23 48 25.8 +0.3
NLU **North Lily Min** 76.52 326 eP P 23 48 26.5 +0.6
J22A **Midwest** 76.53 331 ⇓P P 23 48 25.7 -0.2
baz=77,SNR=6.0
M18A **Lyman** 76.63 328 ⇑P P 23 48 26.4 -0.1
baz=77,SNR=14
N17A **Moffit Pass** 76.64 327 ⇑P P 23 48 27.3 +0.8
baz=77,SNR=50
FURC **Furnace Creek,** 76.64 321 ⇑P P 23 48 27.1 +0.5
baz=77,SNR=16
JLU **Jordanelle** 76.69 327 eP P 23 48 27.2 +0.4
comp=Z,68nm,1.4s,mb5.1
AGMN **Agassiz Nation** 76.72 341 eP P 23 48 25.8 -1.1
comp=Z,44nm,1.0s,mb5.0
MPMC **Manual Prospec** 76.72 320 P P 23 48 27.0 -0.1
baz=77,SNR=16
K20A **Yellowstone Ra** 76.77 330 P P 23 48 27.0 -0.2
baz=77,SNR=11
P14A **Drum Mountains** 76.77 325 ⇓P P 23 48 28.1 +0.8
baz=77,SNR=54
L19A **Farson** 76.81 329 ⇓P P 23 48 27.7 +0.2
baz=77,SNR=13
J21A **Lysite** 76.90 331 ⇑P P 23 48 28.2 +0.2
baz=77,SNR=11
M17A **Scullys Gap (B** 76.95 328 ⇓P P 23 48 28.1 -0.2
baz=77,SNR=6.8
O15A **The Old Anders** 76.97 326 ⇓P P 23 48 29.0 +0.6
baz=77,SNR=6.6
L18A **Fontenelle, Gr** 76.99 328 ⇓P P 23 48 28.8 +0.3
baz=77,SNR=13
ISA **Isabella** 77.04 319 P P 23 48 29.2 +0.3
baz=77,SNR=18
ISA **Isabella** 77.04 319 eP P 23 48 29.1 +0.2
comp=Z,32nm,1.0s,mb4.9
ISA **Isabella** 77.04 319 eP P 23 48 29.1 +0.2
ISA pmax pmax
comp=Z,33nm,1.0s,mb4.9
DUG **Dugway** 77.08 326 eP P 23 48 29.0 0.0
comp=Z,33nm,1.1s,mb4.9
DUG **Dugway** 77.08 326 eP P 23 48 29.0 0.0
DUG pmax pmax
comp=Z,33nm,1.1s,mb4.9
K19A **Absolon Red Bu** 77.13 330 ⇑P P 23 48 29.1 -0.1
baz=77,SNR=10
J20A **Shoshoni** 77.19 330 P P 23 48 29.9 +0.3
baz=77,SNR=9.5
I21A **Big Trails, Te** 77.20 331 ⇓P P 23 48 29.4 -0.2
baz=77,SNR=24
R11A **Troy Canyon, C** 77.23 323 ⇑P P 23 48 30.6 +0.7
baz=77,SNR=54
M16A **Huntsville** 77.31 327 ⇓P P 23 48 30.3 +0.1
baz=78
CWC **Cottonwood Cre** 77.33 320 ⇓P P 23 48 31.0 +0.5
baz=78,SNR=8.8
PKM **Peak Mountain** 77.34 318 ⇓P P 23 48 31.1 +0.5
baz=78,SNR=13
TSUM **Tsumeb** 77.39 105 eP P 23 48 31.2 -0.1
comp=Z,2.3nm,0.6s,mb4.0
PDAR **Pinedale Array** 77.42 329 P P 23 48 30.3 -0.5
comp=Z,6.0nm,0.7s,mb4.3,baz=138,slow=9.1,SNR=17

N15A **Stansbury Isla** 77.44 326 ⇓P P 23 48 31.0 0.0
baz=78,SNR=19
HWUT **Hardware Ranch** 77.50 327 eP P 23 48 30.9 -0.4
comp=Z,29nm,1.0s,mb4.9
VES **Vestal, Richgr** 77.52 319 ⇓P P 23 48 31.7 +0.1
baz=78,SNR=10
K18A **Toltan Ranch,** 77.54 329 ⇑P P 23 48 32.1 +0.5
baz=78,SNR=22
J19A **Crowheart** 77.57 330 ⇓P P 23 48 31.8 +0.2
baz=78,SNR=17
I20A **Worland** 77.68 331 ⇓P P 23 48 32.2 -0.1
baz=78,SNR=11
SPUT **South Promonto** 77.72 327 eP P 23 48 32.6 0.0
comp=Z,58nm,1.2s,mb5.1
BGU **Big Grassy Mou** 77.73 326 eP P 23 48 32.0 -0.6
comp=Z,39nm,1.3s,mb4.9
BGU ePcP PcP 23 48 42.1 0.0
L16A **Fish Haven** 77.74 328 ⇓P P 23 48 32.7 +0.1
baz=78,SNR=28
H21A **Big Horn, Sher** 77.74 332 ⇑P P 23 48 32.2 -0.4
baz=78,SNR=14
M15A **Larsen Ranch,** 77.83 327 ⇑P P 23 48 33.1 0.0
baz=78,SNR=41
J18A **Kendall Valley** 77.97 329 ⇓P P 23 48 34.0 +0.1
baz=78,SNR=24
H20A **Greybull** 78.05 331 ⇓P P 23 48 33.9 -0.4
baz=78,SNR=16
K17A **Gardner Place,** 78.05 328 ⇓P P 23 48 34.5 +0.2
baz=78,SNR=18
I19A **Meeteetse** 78.14 330 P P 23 48 34.9 +0.1
baz=78,SNR=14
AHID **Auburn Hatcher** 78.15 328 eP P 23 48 35.1 +0.2
comp=Z,65nm,1.0s,mb5.2
L15A **Malad City** 78.20 327 ⇑P P 23 48 35.0 -0.2
baz=78,SNR=35
I18A **Diamond G Ranc** 78.26 330 ⇓P P 23 48 36.0 +0.6
baz=78,SNR=16
G21A **Lodge Grass** 78.29 332 ⇓P P 23 48 35.5 -0.1
baz=78,SNR=8.7
J17A **Brown Place, J** 78.41 329 ⇓P P 23 48 36.8 +0.4
baz=79,SNR=14
K16A **Soda Springs** 78.43 328 ⇑P P 23 48 37.2 +0.7
baz=79,SNR=55
ULM **Lac du Bonnet** 78.47 341 P P 23 48 35.2 -1.3
comp=Z,30nm,0.6s,mb5.1,baz=156,slow=6.2,SNR=35
ULM **Lac du Bonnet** 78.47 341 eP P 23 48 35.5 -1.0
comp=Z,74nm,1.4s,mb5.1
REDW **Red Top Meadow** 78.48 329 eP P 23 48 35.8 -0.9
comp=Z,75nm,1.6s,mb5.1
REDW ePcP PcP 23 48 43.9 -1.4
SNOW **Snow King Moun** 78.51 329 eP P 23 48 36.7 -0.2
comp=Z,26nm,0.8s,mb4.9
TPAW **Teton Pass** 78.62 329 eP P 23 48 37.0 -0.5
comp=Z,28nm,0.9s,mb4.9
H19A **Powell** 78.63 331 P P 23 48 37.4 0.0
baz=79,SNR=6.6
L14A **Malta** 78.65 327 ⇓P P 23 48 37.5 -0.1
baz=79,SNR=35
SCHQ **Schefferville** 78.68 360 P P 23 48 36.7 -0.8
comp=Z,5.4nm,0.5s,mb4.4,baz=200,slow=8.0,SNR=15
SCHQ **Schefferville** 78.68 360 P P 23 48 36.7 -0.8
RRI2 **Red Ridge** 78.69 329 eP P 23 48 37.8 0.0
comp=Z,72nm,1.3s,mb5.1
G20A **Bridger** 78.72 331 ⇓P P 23 48 37.6 -0.3
baz=79,SNR=21
MOOW **Moose Ponds** 78.72 329 eP P 23 48 37.4 -0.6
comp=Z,11nm,1.1s,mb4.4
J16A **Bone** 78.78 328 ⇑P P 23 48 38.5 +0.2
baz=79,SNR=12
I17A **Pilgrim Ck.** 78.78 329 P P 23 48 38.9 +0.6
baz=79,SNR=22
K15A **Arbon** 78.78 327 ⇓P P 23 48 38.5 +0.2
baz=79,SNR=33
NVAR **Mina Array Bea** 78.82 321 P P 23 48 38.5 -0.1
comp=Z,6.5nm,0.6s,mb4.4,baz=151,slow=6.4,SNR=49
IMW **Indian Meadow** 78.93 329 eP P 23 48 39.3 +0.1
comp=Z,40nm,1.0s,mb5.0
H18A **Shoshone NF, C** 78.94 330 ⇑P P 23 48 39.2 +0.1
baz=79,SNR=8.4
FLWY **Flagg Ranch** 78.96 329 eP P 23 48 39.8 +0.5
comp=Z,46nm,1.0s,mb5.1
K14A **Jones Ranch, D** 79.00 327 ⇑P P 23 48 39.4 -0.2
baz=79,SNR=7.5
RLMT **Red Lodge** 79.11 331 eP P 23 48 39.9 -0.2
comp=Z,175nm,1.9s,mb5.4
H17A **Grant Village** 79.14 330 ⇑P P 23 48 41.0 +0.7
baz=79,SNR=5.8
I16A **Newdale** 79.17 329 ⇓P P 23 48 40.7 +0.3
baz=79,SNR=7.1
J15A **Blackfoot** 79.27 328 ⇓P P 23 48 41.5 +0.5
baz=80,SNR=27
E21A **Keefer Ranch,** 79.28 333 ⇓P P 23 48 40.9 -0.1
baz=80,SNR=11
YFT **Old Faithful** 79.30 330 eP P 23 48 42.8 +1.7
comp=Z,24nm,1.0s,mb4.8
G18A **Lazy EL Ranch,** 79.39 331 P P 23 48 41.3 -0.3
baz=80,SNR=14
D22A **Cohagen** 79.41 334 ⇓P P 23 48 41.8 +0.2
baz=80
WAKR **Walker** 79.52 321 eP P 23 48 42.9 +0.4
YMR **Madison River** 79.53 330 eP P 23 48 42.4 0.0
comp=Z,138nm,1.4s,mb5.4
F19A **Roth Farm, Mol** 79.53 331 ⇓P P 23 48 42.2 -0.1
baz=80,SNR=24
C23A **Lambert** 79.54 335 ⇑P P 23 48 42.3 0.0
baz=80
D21A **La Casta Ranch** 79.67 333 ⇓P P 23 48 43.1 0.0
baz=80,SNR=15
E20A **Meyer Farm, Mu** 79.70 332 ⇑P P 23 48 43.2 0.0
baz=80,SNR=22
DGMT **Dagmar** 79.71 336 eP P 23 48 43.4 +0.1
comp=Z,129nm,1.0s,mb5.5
J14A **Carey** 79.74 327 ⇑P P 23 48 44.3 +0.7
baz=80,SNR=24
CMB **Columbia Colle** 79.76 320 eP P 23 48 43.0 -0.8
comp=Z,113nm,2.6s,mb5.0
CMB **Columbia Colle** 79.76 320 eP P 23 48 43.0 -0.8
CMB pmax pmax
comp=Z,113nm,2.6s,mb5.0
C22A **Vida** 79.77 334 ⇓P P 23 48 43.2 -0.4
baz=80
GCMT **Greycliff** 79.80 331 eP P 23 48 43.3 -0.5
comp=Z,26nm,1.0s,mb4.8
F18A **Big Timber** 79.91 331 ⇑P P 23 48 44.5 +0.1
baz=80,SNR=22
E19A **Rath Farm, Rou** 79.94 332 ⇑P P 23 48 44.5 -0.1
baz=80,SNR=29
A24A **Westby** 80.02 336 ⇓P P 23 48 45.2 +0.3
baz=80
J13A **Cove Ranch, Pi** 80.12 327 ⇑P P 23 48 46.0 +0.4
baz=80,SNR=19
I14A **Mackay** 80.15 328 ⇑P P 23 48 46.7 +0.9
baz=80,SNR=34
D20A **Manuel Ranch,** 80.16 333 ⇑P P 23 48 45.5 -0.2
baz=80,SNR=12
WCN **Washoe City** 80.24 321 ⇓P P 23 48 46.8 +0.4
baz=80,SNR=6.9
H15A **Lima** 80.28 329 ⇑P P 23 48 47.2 +0.8
baz=80,SNR=9.1
PAHR **Pah Rah Range** 80.30 322 eP P 23 48 46.8 +0.1
comp=Z,66nm,1.0s,mb5.2
C21A **Desert Coulee** 80.32 334 ⇑P P 23 48 46.2 -0.3
baz=81,SNR=20
F17A **Fitzpatrick Pl** 80.33 331 ⇑P P 23 48 46.8 +0.1
baz=81,SNR=19
G16A **Moss Hill, Enn** 80.34 330 ⇑P P 23 48 46.7 0.0
baz=81,SNR=12
HLID **Hailey** 80.36 327 eP P 23 48 47.2 +0.4
comp=Z,54nm,0.9s,mb5.2
BOSA **Boshof** 80.45 117 P P 23 48 47.9 0.0
comp=Z,6.4nm,0.4s,mb4.6,baz=236,slow=5.0,SNR=34
BOSA **Boshof** 80.45 117 P P 23 48 47.9 0.0
I13A **Wildhorse Cree** 80.47 327 ⇑P P 23 48 48.3 +0.9
baz=81,SNR=50
E18A **Harlowton** 80.51 331 P P 23 48 47.6 0.0
baz=81,SNR=11
MCMT **McKenzie Canyo** 80.53 329 eP P 23 48 47.9 +0.1
D19A **Cripps Ranch,** 80.53 332 ⇓P P 23 48 47.4 -0.3
baz=81,SNR=22
BOZ **Bozeman (W)** 80.58 330 eP P 23 48 47.3 -0.6
comp=Z,38nm,1.8s,mb4.7
BOZ **Bozeman (W)** 80.58 330 eP P 23 48 47.3 -0.7
BOZ pmax pmax
comp=Z,38nm,1.8s,mb4.7
C20A **Veseth Ranch,** 80.60 333 ⇑P P 23 48 47.5 -0.6
baz=81,SNR=13
G15A **Dillon** 80.61 329 ⇑P P 23 48 48.4 +0.3
baz=81,SNR=25

H14A **Leadore** 80.62 328 ⇓P P 23 48 49.0 +0.7
baz=81,SNR=16
F16A **Kennard Place,** 80.68 330 ⇓P P 23 48 48.3 -0.2
baz=81,SNR=6.0
B21A **Ellsworth Farm** 80.77 334 ⇓P P 23 48 48.9 0.0
baz=81,SNR=18
DLMT **Dillon** 80.81 329 eP P 23 48 49.4 +0.1
comp=Z,52nm,1.3s,mb5.0
E17A **Martinsdale** 80.85 331 P P 23 48 49.1 -0.3
baz=81,SNR=22
I12A **Atlanta** 80.89 327 ⇓P P 23 48 50.2 +0.5
baz=81,SNR=38
D18A **Linhart Farms,** 80.95 332 ⇑P P 23 48 49.8 -0.1
baz=81,SNR=7.2
MFID **Camas Ranch** 80.97 326 ⇑P P 23 48 50.3 +0.2
baz=81,SNR=12
H13A **Challis** 81.01 328 ⇓P P 23 48 51.0 +0.7
baz=81
C19A **Slack Wire Ran** 81.05 333 ⇑P P 23 48 50.1 -0.4
baz=81,SNR=20
LRM **Limekiln Ridge** 81.09 330 eP P 23 48 50.8 +0.1
F15A **Butte** 81.12 330 ⇑P P 23 48 51.2 +0.3
baz=81,SNR=24
B20A **Solberg Farm,** 81.18 334 ⇑P P 23 48 50.8 -0.3
baz=81
MAW **Mawson** 81.20 163 P P 23 48 50.7 -0.4
comp=Z,28nm,0.6s,mb5.1,baz=221,slow=8.8,SNR=106
MAW **Mawson** 81.20 163 eP P 23 48 50.5 -0.6
comp=Z,6.2nm,0.7s,mb4.3
MAW **Mawson** 81.20 163 eP P 23 48 50.5 -0.6
MAW pmax pmax
comp=Z,6.0nm,0.7s
E16A **East Helena** 81.27 330 ⇑P P 23 48 51.7 +0.1
baz=82,SNR=15
H12A **Diamond D Ranc** 81.30 327 ⇓P P 23 48 52.1 +0.3
baz=82,SNR=31
D17A **Six Diamond Ra** 81.30 331 ⇓P P 23 48 51.7 -0.1
baz=82,SNR=37
G13A **Cobalt** 81.39 328 ⇑P P 23 48 53.0 +0.7
baz=82,SNR=137
HRY **Holter Researc** 81.47 330 eP P 23 48 52.6 -0.1
A20A **Cobblestone Ra** 81.49 334 ⇑P P 23 48 52.4 -0.4
baz=82
F14A **Wisdom** 81.51 329 ⇓P P 23 48 53.7 +0.8
baz=82,SNR=10
B19A **Brinkman Farms** 81.57 333 ⇑P P 23 48 52.8 -0.4
baz=82,SNR=7.7
EGMT **Eagleton** 81.58 332 eP P 23 48 52.3 -0.9
comp=Z,44nm,1.0s,mb5.0
D16A **Dana Ranch, Ca** 81.59 331 ⇓P P 23 48 53.7 +0.4
baz=82,SNR=50
E15A **Deer Lodge** 81.63 330 ⇓P P 23 48 53.7 +0.2
baz=82,SNR=15
C17A **Wharram Farm,** 81.70 332 ⇑P P 23 48 53.4 -0.5
baz=82,SNR=20
WVOR **Wild Horse Val** 81.75 324 eP P 23 48 53.2 -1.0
comp=Z,7.0nm,1.0s,mb4.2
WVOR epP pP 23 49 31.8 +1.7
WVOR **Wild Horse Val** 81.75 324 eP P 23 48 53.2 -1.0
WVOR e*PP pP 23 49 31.8 +1.7
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
A19A **Klindworth Far** 81.86 334 ⇑P P 23 48 54.1 -0.6
baz=82,SNR=6.0
B18A **Beardsley Farm** 81.87 333 ⇑P P 23 48 54.4 -0.4
baz=82,SNR=26
G12A **Big Creek, Yel** 81.94 328 ⇑P P 23 48 55.1 -0.1
baz=82
F13A **Darby** 81.95 329 ⇑P P 23 48 55.5 +0.3
baz=82,SNR=84
HOPS **Hopland** 81.98 319 eP P 23 48 55.6 0.0
comp=Z,36nm,1.6s,mb4.8
E14A **Clinton** 82.01 329 ⇑P P 23 48 56.0 +0.5
baz=82,SNR=8.7
D15A **Lincoln** 82.03 330 ⇓P P 23 48 56.0 +0.4
baz=82,SNR=16
LBTB **Lobatse** 82.11 114 eP P 23 48 57.0 +0.3
comp=Z,226nm,2.6s,mb5.3
LBTB **Lobatse** 82.11 114 eP P 23 48 57.0 +0.3
LBTB pmax pmax
comp=Z,226nm,2.6s,mb5.3
B17A **L&G Farms, Che** 82.23 332 ⇑P P 23 48 55.9 -0.7
baz=82,SNR=14
C16A **Fuhringer Ranc** 82.26 331 ⇓P P 23 48 56.4 -0.4
baz=82,SNR=22
CHMT **Chamberlain Mo** 82.27 330 eP P 23 48 56.6 -0.3
MOD **Modoc** 82.30 323 eP P 23 48 57.1 0.0
comp=Z,18nm,1.0s,mb4.7
J08A **Circle Bar Ran** 82.30 325 ⇓P P 23 48 57.3 +0.2
baz=82,SNR=17
A18A **Metzger Ranch,** 82.31 333 ⇑P P 23 48 56.2 -0.8
baz=83,SNR=15
E13A **Victor** 82.36 329 ⇑P P 23 48 57.7 +0.4
baz=83,SNR=42
F12A **Elk City** 82.36 328 ⇓P P 23 48 57.2 -0.2
baz=83,SNR=16
D14A **Greenough** 82.51 330 ⇓P P 23 48 58.0 -0.1
baz=83,SNR=14
MSO **Missoula** 82.53 329 eP P 23 48 58.0 -0.2
comp=Z,7.7nm,0.8s,mb4.5
PCVE **Castro Verde** 82.59 43 eP P 23 49 00.1 +1.3
C15A **Salmond Ranch,** 82.62 331 ⇓P P 23 48 58.8 +0.2
baz=83,SNR=54
SLMT **Seeley Lake** 82.62 330 eP P 23 48 58.3 -0.4
A17A **Triple J Farms** 82.69 333 ⇑P P 23 48 58.5 -0.5
baz=83,SNR=17
WDC **Whiskeytown Da** 82.69 321 eP P 23 48 56.9 -2.3
comp=Z,13nm,0.7s,mb4.8
WDC **Whiskeytown Da** 82.69 321 eP P 23 48 56.9 -2.3
WDC pmax pmax
comp=Z,13nm,0.7s,mb4.8
B16A **M & M Farms, S** 82.71 332 ⇓P P 23 48 58.2 -0.9
baz=83,SNR=8.9
KCPM **Cahto Peak** 82.73 319 eP P 23 48 59.3 -0.1
comp=Z,58nm,1.9s,mb5.0
KIPM **Iron Peak** 82.75 320 eP P 23 48 60.0 +0.5
comp=Z,16nm,1.1s,mb4.7
KIPM epP pP 23 49 38.5 +3.1
EGRO **El Granado** 82.88 44 P P 23 49 02.0 +1.7
comp=Z,138nm,2.5s,mb5.2
PBEJ **Beja** 82.94 43 eP P 23 49 00.1 -0.5
comp=Z,21nm,1.9s,mb4.5
D13A **Huson** 82.96 329 ⇓P P 23 49 00.4 -0.1
baz=83,SNR=29
E12A **Beaver Dam Sad** 82.99 328 ⇓P P 23 49 00.3 -0.3
baz=83
B15A **Bradely Ranch,** 83.01 331 ⇓P P 23 48 59.7 -1.0
baz=83,SNR=15
SWMT **Swartz Lake** 83.06 330 eP P 23 49 00.8 -0.1
A16A **West Butte Ran** 83.07 332 ⇑P P 23 49 00.6 -0.3
baz=83
C14A **Swan Lake** 83.13 330 ⇑P P 23 49 01.2 -0.1
baz=83
K05A **Summer Lake** 83.17 323 ⇓P P 23 49 01.9 +0.3
baz=83,SNR=41
YBMT **Yellow Bay** 83.32 330 eP P 23 49 01.9 -0.3
I07A **Izee** 83.34 325 ⇑P P 23 49 02.5 +0.1
baz=84,SNR=22
D12A **Red Ives Fores** 83.35 329 ⇑P P 23 49 02.2 -0.2
baz=84
B14A **Marquette Ranc** 83.36 331 ⇑P P 23 49 01.6 -0.8
baz=84,SNR=6.4
JTMT **Jette** 83.36 330 eP P 23 49 02.1 -0.3
C13A **Hot Springs** 83.44 330 ⇓P P 23 49 02.8 0.0
baz=84,SNR=21
F10A **Beach Ranch, E** 83.48 327 ⇑P P 23 49 02.9 -0.3
baz=84,SNR=18
ESPR **Espera** 83.51 45 P P 23 49 05.1 +1.5
comp=Z,91nm,3.4s
EMIN **Mina Concepcio** 83.53 44 P P 23 49 03.7 +0.1
comp=Z,54nm,2.0s,mb4.9
YBH **Yreka Blue Hor** 83.53 321 eP P 23 49 01.8 -1.8
comp=Z,8.6nm,0.9s,mb4.5
YBH **Yreka Blue Hor** 83.53 321 eP P 23 49 01.8 -1.7
YBH pmax pmax
comp=Z,9.0nm,0.9s
KHMM **Horse Mountain** 83.57 320 eP P 23 49 03.8 +0.1
comp=Z,11nm,1.1s,mb4.5
A15A **Johnson Ranch,** 83.58 332 ⇑P P 23 49 02.1 -1.4
baz=84
BLMT **Blacktail Moun** 83.59 330 eP P 23 49 03.3 -0.3
PTOM **Tomar** 83.59 41 eP P 23 49 04.8 +0.9
comp=Z,28nm,1.6s,mb4.7
BSMT **Bassoo Peak** 83.67 330 eP P 23 49 03.7 -0.4
A14A **Double T Ranch** 83.88 331 ⇑P P 23 49 04.2 -0.9
baz=84,SNR=7.7
G08A **Pilot Rock** 83.88 326 ⇑P P 23 49 04.8 -0.3

baz=84,SNR=13
C12B **Naegeli Ranch,** 83.88 329 ⇑P P 23 49 04.8 -0.4
baz=84,SNR=6.0
B13A **Whitefish** 83.90 330 ⇑P P 23 49 04.9 -0.3
baz=84,SNR=14
EMIJ **Mijas** 84.04 46 P P 23 49 08.5 +2.3
comp=Z,29nm,2.5s,mb4.6
KRMB **Red Mountain** 84.09 321 eP P 23 49 05.6 -0.7
comp=Z,29nm,1.2s,mb4.9
KRMB epP pP 23 49 43.0 +0.7
KRMB esP sP 23 50 00.2 +2.8
PMRV **Marv??o** 84.09 42 eP P 23 49 07.3 +0.9
comp=Z,12nm,2.1s,mb4.3
WALA **Waterton Lakes** 84.16 331 eP P 23 49 06.0 -0.5
comp=Z,0.6nm,0.8s
FFC **Flin Flon** 84.20 340 eP P 23 49 05.1 -1.5
comp=Z,20nm,1.1s,mb4.8
FFC **Flin Flon** 84.20 340 eP P 23 49 05.1 -1.5
FFC pmax pmax
comp=Z,20nm,1.1s,mb4.8
VIPM **Ingram Point** 84.21 324 P P 23 49 06.6 -0.3
VIPM **Ingram Point** 84.21 324 P P 23 49 06.6 -0.3
HUMO **Hull Mountain** 84.24 322 eP P 23 49 05.8 -1.3
comp=Z,12nm,1.3s,mb4.5
A13A **Flathead Natio** 84.29 331 ⇑P P 23 49 07.2 +0.1
baz=84
PCBR **Castelo Branco** 84.29 42 eP P 23 49 07.5 +0.1
comp=Z,17nm,2.0s,mb4.4
E09A **Wood Farm, Sta** 84.32 327 ⇑P P 23 49 06.4 -0.9
baz=84
C11A **Tepee Creek (N** 84.34 329 ⇑P P 23 49 06.9 -0.6
baz=85
B12A **Libby** 84.49 330 ⇑P P 23 49 08.0 -0.1
baz=85,SNR=11
MTE **Manteigas** 84.60 41 eP P 23 49 09.5 +0.6
comp=Z,39nm,1.7s,mb4.9
KBO **Bosley Butte** 84.71 321 eP P 23 49 09.1 -0.3
comp=Z,118nm,2.0s,mb5.3
ELOJ **Sierra Loja** 84.78 45 P P 23 49 10.7 +0.8
comp=Z,4.7nm,0.7s,mb4.3
ELOJ **Sierra Loja** 84.78 45 P P 23 49 10.7 +0.8
ELOJ pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
A12A **Yaak River Ran** 84.85 330 ⇑P P 23 49 09.7 -0.3
baz=85,SNR=7.3
HAWA **Hanford** 84.93 326 eP P 23 49 09.4 -1.0
comp=Z,32nm,1.0s,mb5.0
RSW **Rattlesnake Hi** 84.96 326 eP P 23 49 10.3 -0.2
PVRL **Vila Real** 85.03 40 eP P 23 49 12.0 +0.9
comp=Z,35nm,1.4s,mb4.9
NEW **Newport** 85.05 329 eP P 23 49 09.7 -1.3
comp=Z,25nm,1.5s,mb4.7
NEW **Newport** 85.05 329 eP P 23 49 09.7 -1.3
NEW pmax pmax
comp=Z,25nm,1.5s
D08A **Wollman Farm,** 85.08 327 ⇓P P 23 49 10.7 -0.5
baz=85,SNR=7.2
EADA **Adamuz** 85.10 44 P P 23 49 10.9 -0.6
comp=Z,82nm,3.8s
H04A **Detroit Lake** 85.17 324 ⇑P P 23 49 10.6 -1.0
baz=85,SNR=12
KEBM **Edson Butte** 85.19 321 eP P 23 49 12.3 +0.5
comp=Z,67nm,1.1s,mb5.3
ELOB **Lobios** 85.20 40 P P 23 49 12.5 +0.6
comp=Z,125nm,4.2s
OD2 **Odessa Site #2** 85.21 328 eP P 23 49 11.1 -0.7
C09A **Chrisman Ranch** 85.28 328 ⇑P P 23 49 11.8 -0.3
baz=86,SNR=19
EPLA **Plasencia** 85.28 42 P P 23 49 11.3 -1.0
comp=Z,152nm,3.0s
EPLA **Plasencia** 85.28 42 P P 23 49 11.4 -1.0
EPLA pmax pmax
comp=Z,152nm,3.0s
HOOD **Mount Hood Mea** 85.30 325 eP P 23 49 11.6 -0.7
MVO **Moncorvo** 85.38 41 eP P 23 49 13.4 +0.6
comp=Z,18nm,2.2s,mb4.4
MVO **Moncorvo** 85.38 41 P P 23 49 13.0 +0.2
EBER **Berja** 85.46 46 P P 23 49 13.6 +0.2
comp=Z,28nm,2.1s,mb4.6
EBAN **Banos Encina** 85.61 45 P P 23 49 14.2 +0.2
comp=Z,21nm,0.9s,mb4.9
EBAN **Banos Encina** 85.61 45 P P 23 49 14.2 +0.2
EBAN pmax pmax
comp=Z,21nm,0.9s,mb4.9
G04A **Mulino** 85.67 324 ⇑P P 23 49 13.5 -0.6
baz=86,SNR=6.2
COR **Corvallis** 85.71 323 eP P 23 49 14.3 -0.1
comp=Z,45nm,0.9s,mb5.2
COR **Corvallis** 85.71 323 eP P 23 49 14.3 -0.1
COR pmax pmax
comp=Z,45nm,0.9s,mb5.2
EQES **Quesada** 85.86 45 P P 23 49 14.8 -0.5
comp=Z,9.1nm,0.8s,mb4.6
WTV **Waterville** 86.03 327 P P 23 49 15.2 -0.6
F04A **Amboy** 86.11 325 ⇑P P 23 49 15.5 -0.8
baz=86
B08A **Colville Reser** 86.18 328 ⇓P P 23 49 15.4 -1.1
baz=86,SNR=7.0
EHUE **Huescar** 86.18 46 P P 23 49 16.4 -0.4
comp=Z,2.6nm,0.7s,mb4.1
EHUE **Huescar** 86.18 46 P P 23 49 16.4 -0.4
EHUE pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
ESDC **Sonseca Array** 86.37 43 P P 23 49 18.1 +0.4
comp=Z,2.7nm,0.7s,mb4.1,baz=244,slow=4.5,SNR=11
ESDC **Sonseca Array** 86.37 43 P P 23 49 18.3 +0.6
comp=Z,2.4nm,1.2s,mb3.8
EVIA **Vianos** 86.70 45 P P 23 49 23.2 +3.9
comp=Z,16nm,0.8s,mb4.9
EVIA **Vianos** 86.70 45 P P 23 49 23.2 +3.8
EVIA pmax pmax
comp=Z,16nm,0.8s,mb4.9
D05A **Enumclaw** 86.71 326 ⇑P P 23 49 18.3 -0.9
baz=87
E03A **Lebam** 87.11 325 ⇑P P 23 49 20.6 -0.5
baz=87
ETOB **Tobarra** 87.33 45 P P 23 49 25.2 +2.8
comp=Z,17nm,2.6s,mb4.4
B06A **Marblemount** 87.34 327 ⇓P P 23 49 20.8 -1.4
baz=88
GNW **Green Mountain** 87.39 326 eP P 23 49 21.2 -1.2
comp=Z,4.4nm,0.9s,mb4.3
HDW **Hoodsport** 87.56 326 P P 23 49 22.5 -0.7
CMW **Cultus Mountai** 87.59 327 P P 23 49 22.3 -1.1
OSR **Olympics--Salm** 87.94 325 P P 23 49 24.7 -0.4
A05A **Maple Falls** 87.96 327 ⇓P P 23 49 24.2 -0.9
baz=88
OSD **Olympics--Snow** 88.01 326 P P 23 49 25.3 0.0
LSZ **Lusaka** 88.24 106 eP P 23 49 28.1 +0.8
comp=Z,14nm,1.2s,mb4.7
LSZ **Lusaka** 88.24 106 eP P 23 49 28.2 +0.9
LSZ pmax pmax
comp=Z,14nm,1.2s,mb4.7
CASY **Casey** 89.81 179 eP P 23 49 33.4 -0.2
comp=Z,37nm,1.0s,mb5.3
CASY epP pP 23 50 11.3 +1.2
KEST **Kesra** 93.34 52 P P 23 49 52.8 +2.3
comp=Z,1.3nm,0.8s,mb4.1,baz=231,slow=8.6,SNR=5.3
YKA **Yellowknife Ar** 94.37 340 P P 23 49 53.4 -1.1
comp=Z,8.5nm,0.5s,mb5.1,baz=132,slow=4.6,SNR=41
YKA **Yellowknife Ar** 94.37 340 P P 23 49 53.4 -1.1
GERES **GERESS Array B** 101.87 42 PKKPbc PKKPbc 00 06 32.4 -2.5
comp=Z,0.6nm,0.6s,baz=300,slow=5.4,SNR=4.1
ILAR **Eielson Array** 107.51 334 Pdiff Pdif 23 50 51.6 -2.3
comp=Z,0.3nm,0.7s,baz=61,slow=0.9,SNR=4.1
ILAR PP PP 23 55 10.7 -12
comp=Z,0.3nm,0.6s,baz=103,slow=6.4,SNR=4.2
ILAR **Eielson Array** 107.51 334 P Pdif 23 50 51.6 -2.3
BRTR **Keskin Array B** 112.72 55 PKiKP PKiKP 23 55 10.2 -1.2
comp=Z,0.3nm,0.3s,baz=198,slow=3.6,SNR=3.8
BRTR PKKPab PKKPab 00 06 07.0 0.0
comp=Z,1.1nm,0.7s,baz=106,slow=4.1,SNR=6.3
BRTR **Keskin Array B** 112.72 55 PKIKP PKiKP 23 55 10.2 -1.2
BHD **Baghdad** 119.88 64 ex x 23 51 47.0
BHD ex x 00 02 10.0
ZEI **Tsey** 120.84 53 ePKIKP PKPdf 23 55 25.6 -1.3
ZEI pmax pmax
comp=Z,9.0nm,1.2s
PRGR **Permogore** 121.59 31 ePKIKP PKPdf 23 55 25.8 -1.9
PRGR pmax pmax
comp=Z,16nm,1.2s
CTA **Charters Tower** 125.51 219 eP PKPdf 23 55 35.0 -1.6
comp=Z,5.1nm,0.8s
ASAR **Alice Springs** 128.39 204 PKhKP PKPpre 23 55 34.7
comp=Z,12nm,0.8s,baz=138,slow=1.2,SNR=4.7
ASAR PKP PKPdf 23 55 40.0 -2.0
comp=Z,9.8nm,0.7s,baz=136,slow=1.9,SNR=87

ASAR	**Alice Springs**	**128.39**	**204**	PKIKP	PKPpre	23 55 34.7	
ARU	**Arti**	**129.19**	**36**	PKIKP	PKPdf	23 55 42.0	-0.4
AKTK	**Aktyubinsk**	**130.25**	**43**	PKP	PKPdf	23 55 44.5	-0.1
AKTK				SKPbc	SKPbc	23 58 50.9	-3.6
AKTO	**Aktyubinsk**	**130.25**	**43**	PKP	PKPdf	23 55 44.5	-0.1
	comp=Z,4.9nm,0.8s,baz=265,slow=0.8,SNR=17						
AKTO				SKPbc	SKPbc	23 58 50.9	-3.6
	comp=Z,3.3nm,0.7s,baz=268,slow=3.4,SNR=18						
AKTO	**Aktyubinsk**	**130.25**	**43**	PKIKP	PKPdf	23 55 44.5	-0.1
WB2	**Warramunga Arr**	**131.57**	**207**	*e*PKPdf	PKPdf	23 55 46.4	-1.7
WRA	**Warramunga Arr**	**131.57**	**207**	PKhKP	PKPpre	23 55 43.0	
	comp=Z,5.9nm,0.5s,baz=159,slow=1.7,SNR=36						
WRA				PKP	PKPdf	23 55 46.7	-1.4
	comp=Z,5.9nm,0.5s,baz=159,slow=1.7,SNR=37						
WRA				SKPbc	SKPbc	23 58 54.5	-5.9
	comp=Z,4.4nm,0.9s,baz=150,slow=3.6,SNR=14						
WRA	**Warramunga Arr**	**131.57**	**207**	PKIKP	PKPpre	23 55 43.0	
PETK	**Petropavlovsk-**	**135.89**	**323**	PKIKP	PKPdf	23 55 54.8	-0.4
	comp=Z,6.0nm,0.8s,baz=112,slow=6.6,SNR=6.2						
PETK	**Petropavlovsk-**	**135.89**	**323**	PKIKP	PKPdf	23 55 54.8	-0.3
FITZ	**Fitzroy Crossi**	**136.28**	**197**	*e*P	PKPdf	23 55 47.4	-10
	comp=Z,10.0nm,0.7s						
BVAR	**Borovoye Array**	**136.80**	**37**	PKP	PKPdf	23 55 56.9	+0.1
	comp=Z,4.0nm,0.7s,baz=276,slow=4.3,SNR=15						
BVAR	**Borovoye Array**	**136.80**	**37**	PKIKP	PKPdf	23 55 56.9	+0.1
NVS	**Novosibirsk**	**142.16**	**28**	*e*PKHKP	PKPpre	23 56 01.3	
KURK	**Kurchatov**	**142.38**	**36**	*e*PKPdf	PKPdf	23 56 02.7	-4.4
KURK	**Kurchatov**	**142.38**	**36**	*e*PKIKP	PKPdf	23 56 02.7	-4.4
AAK	**Ala-Archa**	**143.17**	**50**	*e*PKPdf	PKPdf	23 56 06.5	-2.2
AAK	**Ala-Archa**	**143.17**	**50**	*e*PKIKP	PKPdf	23 56 06.5	-2.2
ZAA0	**Zalesovo Array**	**143.44**	**28**	*e*PKPdf	PKPdf	23 56 05.1	-3.7
ZALV	**Zalesovo Beam**	**143.44**	**28**	PKP	PKPdf	23 56 05.9	-2.9
	comp=Z,21nm,0.6s,baz=301,slow=4.3,SNR=121						
ZALV				SKPbc	SKPbc	23 59 30.2	-3.8
	comp=Z,2.0nm,0.7s,baz=300,slow=3.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**143.44**	**28**	PKIKP	PKPdf	23 56 05.9	-2.9
ZALV						23 59 30.2	
KSH	**Kashi**	**145.11**	**55**	*e*PKPbc	PKPbc	23 56 11.4	-0.6
KSH				*ep*PKP	pPKPdf	23 56 38.3	-12
KSH				*es*PKP		23 56 48.8	
KSH				*e*PKS		23 59 44.3	
KSH				*e*SKS	SKSdf	00 03 06.5	-1.6
KSH				AMB	AMB		
	comp=Z,64nm,6.5s						
KSH				LR	LR		
	comp=N,230nm,4.3s						
KSH				LR	LR		
	comp=E,220nm,6.6s						
KSH				LR	LR		
	comp=Z,400nm,4.7s						
CLNS	**Chul'man**	**146.29**	**348**	*e*PKP2	PKPdf	23 56 13.1	-0.5
CLNS				pmax	pmax		
	comp=Z,33nm,1.0s						
CLNS				pmax	pmax		
	comp=N,12nm,1.0s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
BOD	**Bodaibo**	**146.38**	**359**	*e*PKIKP	PKPdf	23 56 11.9	-1.9
BOD				pmax	pmax		
	comp=Z,32nm,1.2s						
MK31	**Makanchi Array**	**146.51**	**40**	*e*PKPdf	PKPbc	23 56 14.2	-1.8
MK31	**Makanchi Array**	**146.51**	**40**	*e*PKP2	PKPbc	23 56 14.2	-1.8
MKAR	**Makanchi Array**	**146.51**	**40**	PKPbc	PKPbc	23 56 14.0	-2.0
	comp=Z,24nm,0.5s,baz=314,slow=2.1,SNR=173						
MKAR				SKPbc	SKPbc	23 59 37.5	-3.9
	comp=Z,0.9nm,0.7s,baz=300,slow=2.4,SNR=3.7						
MKAR	**Makanchi Array**	**146.51**	**40**	PKP2	PKPbc	23 56 14.0	-2.0
MKAR						23 59 37.5	
HYB	**Hyderabad**	**146.94**	**95**	*i* PKP	PKPbc	23 56 18.0	-0.1
YSS	**Yuzh-Sakhalins**	**147.27**	**321**	*e*PKIKP	PKPdf	23 56 14.4	-1.2
NDI	**New Delhi**	**147.50**	**74**	*e*PKP	PKPdf	23 56 14.5	-2.1
DDI	**Dehra Dun**	**148.21**	**71**	*ex*	x	23 56 18.0	
KAPI	**Kappang**	**150.30**	**193**	*e*PKPbc	PKPbc	23 56 24.9	-1.9
KAPI				*e*PKPab	PKPab	23 56 32.0	-1.4
MOY	**Mondy**	**150.98**	**16**	*e*PKIKP	PKPbc	23 56 27.5	+0.2
MOY				pmax	pmax		
	comp=Z,50nm,2.2s						
KLR	**Kul'dur**	**151.08**	**335**	*e*PKIKP	PKPdf	23 56 16.8	-4.8
KLR				pmax	pmax		
	comp=Z,44nm,1.0s						
WMQ	**Urumqi**	**151.33**	**41**	PKPbc	PKPbc	23 56 26.0	-2.3
WMQ				PP	PP	00 00 14.0	+5.8
WMQ				SKS	SKSdf	00 03 22.0	+5.6
WMQ				SKKS	SKKSac	00 06 52.0	+6.9
WMQ				AMB	AMB		
	comp=Z,57nm,11.0s						
WMQ				LR	LR		
	comp=N,56nm,26.0s						
WMQ				LR	LR		
	comp=E,46nm,26.0s						
WMQ				LR	LR		
	comp=Z,45nm,26.0s						
ZAK	**Zakamensk**	**152.72**	**14**	*e*PKIKP	PKPdf	23 56 19.4	-4.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MJAR	**Matsushiro Arr**	**155.27**	**306**	PKPab	PKPab	23 56 52.8	-1.1
	comp=Z,17nm,0.9s,baz=85,slow=1.4,SNR=21						
MJAR	**Matsushiro Arr**	**155.27**	**306**	PKP2	PKPab	23 56 52.8	-1.1
MAJO	**Matsushiro**	**155.27**	**306**	*e*PKPbc	PKPdf	23 56 36.1	+8.0
MAJO				*e*PKPab	PKPab	23 56 52.7	-1.2
MAJO	**Matsushiro**	**155.27**	**306**	*e*PKIKP	PKPdf	23 56 36.1	+8.0
MAJO				*e*		23 56 52.7	
MAT	**Matsushiro**	**155.27**	**306**	PKP	PKPdf	23 56 35.6	+7.5
MDJ	**Mudanjiang**	**155.64**	**331**	PKP	PKPdf	23 56 27.3	-1.0
SONM	**Songino Array**	**155.77**	**11**	PKP	PKPdf	23 56 28.3	-0.1
	comp=Z,2.5nm,0.8s,baz=342,slow=0.9,SNR=14						
SONM				PKPbc	PKPdf	23 56 37.4	+9.0
	comp=Z,2.7nm,0.8s,baz=303,slow=1.6,SNR=8.2						
SONM				PKPab	PKPab	23 56 54.9	-0.7
	comp=Z,3.8nm,0.7s,baz=322,slow=4.7,SNR=10						
SONM	**Songino Array**	**155.77**	**11**	PKIKP	PKPdf	23 56 28.3	-0.1
SONM						23 56 54.9	
ULN	**Ulaanbaatar**	**155.85**	**10**	*e*PKPdf	PKPdf	23 56 28.3	-0.2
ULN				*e*PKPab	PKPab	23 56 55.8	-0.1
ULN	**Ulaanbaatar**	**155.85**	**10**	*e*PKIKP	PKPdf	23 56 28.3	-0.2
ULN				*e*		23 56 55.8	
CN2	**Changchun**	**158.01**	**336**	*e*PKP	PKPdf	23 56 29.8	-1.6
CN2				PP	PP	00 00 46.3	+1.3
GTA	**Gaotai**	**161.03**	**34**	*e*PKP	PKPdf	23 56 34.8	-0.2
GTA				sPKP		23 57 13.0	
GTA				SKS	SKSdf	00 03 28.6	+1.8
GTA				AMB	AMB		
	comp=Z,120nm,6.6s						
GTA				LR	LR		
	comp=N,56nm,16.1s						
GTA				LR	LR		
	comp=E,60nm,13.8s						
GTA				LR	LR		
	comp=Z,67nm,18.5s						
KSRS	**Korea Array**	**161.76**	**320**	PKP	PKPdf	23 56 34.6	-1.2
	comp=Z,3.4nm,1.0s,baz=46,slow=1.2,SNR=13						
KSRS				PKPab	PKPab	23 57 21.2	-0.7
	comp=Z,3.1nm,0.7s,baz=49,slow=4.0,SNR=13						
HHC	**Hu-ho-hao-te**	**163.31**	**4**	*e*PKP	PKPdf	23 56 38.4	+1.2
HHC				pPKP	pPKPdf	23 57 05.3	-10
HHC				sPKP		23 57 16.3	
HHC				PKPab	PKPab	23 57 31.6	+3.1
HHC				PKS		00 00 10.8	
HHC				PP	PP	00 01 17.0	+4.0
HHC				SKS	SKSdf	00 03 31.5	+3.0
HHC				SKKS	SKKSac	00 07 54.5	+6.5
HHC				SS	SS	00 21 32.4	+6.0
HHC				AMB	AMB		
	comp=Z,58nm,9.8s						
HHC				LR	LR		
	comp=N,120nm,17.7s						
HHC				LR	LR		
	comp=E,180nm,17.9s						
HHC				LR	LR		
	comp=Z,170nm,19.8s						
BJI	**Beijing**	**163.99**	**352**	PKP	PKPdf	23 56 37.3	-0.6
BJI				SKS	SKSdf	00 03 28.9	-0.1
BJI				AMB	AMB		
	comp=Z,130nm,4.5s						
BJI				LR	LR		
	comp=N,360nm,16.0s						
BJI				LR	LR		
	comp=E,300nm,16.8s						
BJI				LR	LR		
	comp=Z,260nm,24.8s						
CMAR	**Chiang Mai Arr**	**165.51**	**110**	PKPdf	PKPdf	23 56 39.4	-0.5
	comp=Z,3.1nm,1.1s,baz=280,slow=1.8,SNR=9.5						
CMAR				PKPab	PKPab	23 57 39.0	-0.1
	comp=Z,3.4nm,0.8s,baz=254,slow=4.6,SNR=11						
CMAR	**Chiang Mai Arr**	**165.51**	**110**	PKIKP	PKPdf	23 56 39.4	-0.4
CMAR						23 57 39.0	
LZH	**Lanzhou**	**165.62**	**32**	*e*PKPbc	PKPdf	23 56 35.0	-4.4
LZH				pPKP	pPKPdf	23 57 05.4	-12
LZH				sPKP		23 57 17.3	
LZH				AMB	AMB		
	comp=Z,130nm,8.5s						
LZH				LR	LR		
	comp=N,190nm,18.0s						
LZH				LR	LR		
	comp=E,140nm,17.8s						
LZH				LR	LR		
	comp=Z,310nm,20.3s						
CD2	**Chengdu**	**169.24**	**49**	*e*PKP	PKPdf	23 56 42.8	+0.6
CD2				pPKP	pPKPdf	23 57 09.8	-11
CD2				sPKP		23 57 20.3	
CD2				AMB	AMB		
	comp=Z,120nm,10.8s						
KMI	**Kunming**	**170.39**	**82**	PKP	PKPdf	23 56 42.9	-0.1
KMI				pPKP	pPKPdf	23 57 06.4	-15
GYA	**Guiyang**	**173.62**	**68**	*e*PKP	PKPdf	23 56 42.8	-1.7
GYA				pPKP	pPKPdf	23 57 14.0	-8.9
GYA				sPKP		23 57 25.8	
GYA				PKPab	PKPab	23 58 15.9	+1.1
GYA				PKS		00 00 13.4	
GYA				PP	PP	00 02 07.6	+0.4
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						

NNC ***15*** *23:41:26.1±1.8, 40.°47N×77.°33E, h6km±5km, mb4.0, mpv3.7, Error ellipse: s-maj=14.8km s-min=10.6km az=11.0*
ISCJB ***15*** *23:41:27.3±0.7, 40.°59N±0.°05×77.°66E±0.°06, h10km, mb4.0/4, Error ellipse: s-maj=7.9km s-min=5.2km az=44.7*
BJI ***15*** *23:41:27.0, 40.°60N×77.°29E, h15km, ML3.4/8*
NEIC ***15*** *23:41:28.8±0.7, 40.°55N×77.°42E, h10km, mb3.8/1, Error ellipse: s-maj=14.4km s-min=7.5km az=139.0*
IDC ***15*** *23:41:29.6±3.7, 40.°81N×77.°11E, h0km, mb3.7/2, mb1 3.5/4, mb1mx3.3/28, mbtmp3.4/4, ML3.1/2, Error ellipse: s-maj=88.9km s-min=22.0km az=137.0*

ISC 15 23:41:29.7±0.7, 40.°64N±0.°04×77.°50E±0.°06, h10km, n30, σ1§13/32, mb4.0/4, 7C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.62**	**227**	Pg	**Pg**	**23 42 01.8**	**+1.0**
KSH				*e*Sg	**Sg**	**23 42 24.0**	**+2.2**
KSH				smax			
	comp=N,290nm,0.4s						
KSH				smax			
	comp=E,380nm,0.5s						
KZA	**Kyzart**	**2.22**	**311**	P	**Pn**	**23 42 07.7**	**+1.2**
	SNR=253						
KNDC	**Almaty**	**2.60**	**351**	⇓Pg	**Pb**	**23 42 17.3**	**+0.9**
	comp=E,92nm,0.6s						
KNDC				⇑Lg		23 42 53.9	
	comp=E,982nm,0.8s						
TKM2	**Tokmak 2**	**2.68**	**329**	⇑Pg	**Pb**	**23 42 17.2**	**-0.6**
	comp=E,78nm,0.8s						
TKM2				⇑Lg		23 42 53.1	
	comp=E,127nm,0.7s						
TKM2	**Tokmak 2**	**2.68**	**329**	P	**Pb**	**23 42 17.5**	**-0.3**
	SNR=8.7						
KBK	**Karagaybulak**	**2.77**	**317**	P	**Pb**	**23 42 18.3**	**-1.0**
	SNR=52						
AAK	**Ala-Archa**	**3.00**	**312**	P	**Pb**	**23 42 21.8**	**-1.4**
	SNR=14						
AAK	**Ala-Archa**	**3.00**	**312**	*e*Pn	**Pn**	**23 42 17.0**	**-0.3**
AAK				S	**Sb**	**23 43 01.2**	**+1.2**
CHMS	**Chumysh**	**3.12**	**320**	P	**Pb**	**23 42 24.7**	**-0.6**
	SNR=13						
AML	**Almayashu**	**3.22**	**299**	P	**Pn**	**23 42 22.6**	**+2.3**
	SNR=11						
EKS2	**Erkin-Say**	**3.44**	**307**	P	**Pb**	**23 42 30.5**	**-0.2**
	SNR=7.7						
USP	**Ospenovka**	**3.45**	**321**	P	**Pb**	**23 42 29.9**	**-0.9**
	SNR=47						
KK31	**Karatay Array**	**5.76**	**298**	Pg	**Pb**	**23 43 11.0**	**+0.7**
	comp=E,1.9nm,0.4s,baz=122,slow=15,SNR=28						
KK31				⇑Lg		23 44 24.0	
	comp=E,33nm,1.0s,baz=113,slow=26,SNR=13						
MK31	**Makanchi Array**	**7.06**	**28**	⇓Pn	**Pn**	**23 43 15.0**	**+2.0**
	comp=E,1.7nm,0.8s,baz=200,slow=15,SNR=9.0						
MK31				⇑Pg	**Pg**	**23 43 39.4**	**-5.4**
	comp=E,0.7nm,0.4s,baz=210,slow=20,SNR=3.6						
MK31				⇑Lg		23 45 15.2	
	comp=E,3.9nm,0.7s,baz=213,slow=30,SNR=4.0						
MK31	**Makanchi Array**	**7.06**	**28**	*e*Pn	**Pn**	**23 43 14.7**	**+1.6**
MK31				*e*Sn	**Sn**	**23 44 34.5**	**+1.2**
MKAR	**Makanchi Array**	**7.06**	**28**	Pn	**Pn**	**23 43 14.5**	**+1.5**
	comp=E,0.2nm,0.3s,baz=218,slow=13,SNR=11						
MKAR				Lg		23 45 15.8	
	comp=E,0.6nm,0.3s,baz=214,slow=26,SNR=6.2						
MKAR	**Makanchi Array**	**7.06**	**28**	Pn	**Pn**	**23 43 14.5**	**+1.5**
MKAR				Lg		23 45 15.8	
KBL	**Kabul**	**9.06**	**230**	*e*Pn	**Pn**	**23 43 37.9**	**-2.6**
KURK	**Kurchatov**	**10.11**	**4**	⇑Lg		23 46 50.6	
	comp=E,10nm,1.3s						
KURK	**Kurchatov**	**10.11**	**4**	*e*Pn	**Pn**	**23 43 54.2**	**-0.5**
BVAR	**Borovoye Array**	**13.30**	**341**	Lg		23 48 29.8	
	comp=E,0.1nm,0.3s,baz=162,slow=24,SNR=3.7						
ZALV	**Zalesovo Beam**	**14.20**	**18**	Pn	**Pn**	**23 44 50.2**	**-0.4**
	comp=E,0.1nm,0.3s,baz=205,slow=12,SNR=2.3						
GNI	**Garni**	**24.88**	**280**	*e*P	**P**	**23 46 51.5**	**-0.9**
KIV	**Kislovodsk**	**25.84**	**289**	*e*P	**P**	**23 47 00.3**	**-0.9**
BJT	**Baijiatuau**	**29.33**	**78**	P	**P**	**23 47 31.6**	**-0.9**
	comp=E,7.1nm,0.3s,mb4.9						
OBN	**Obninsk**	**30.53**	**312**	*e*P	**P**	**23 47 41.9**	**-1.0**
BR131	**Keskin Array S**	**33.26**	**283**	*e*P	**P**	**23 48 06.5**	**-0.5**
	comp=E,0.9nm,0.7s,mb3.8						
FINES	**FINESS Array B**	**37.15**	**322**	P	**P**	**23 48 38.8**	**-1.5**
	comp=E,2.1nm,1.0s,mb3.9,baz=113,slow=14,SNR=2.6						
KEV	**Kevo**	**39.04**	**335**	P	**P**	**23 48 56.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**70.83**	**271**	P	**P**	**23 52 46.9**	**+0.1**
	comp=E,0.5nm,1.0s,mb3.4,baz=48,slow=4.6,SNR=4.4						

NEIC ***16*** *00:14:13.1, 15.°62N×95.°89W, h10km, MD3.9(MEX), After MEX.*

MEX 16 00:14:12.5±0.6, 15.°56N×95.°91W, h9km±6km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.28**	**317**	*i* P	Pg	00 14 17.1	-0.9
HUIG				*e*S	Sg	00 14 21.9	+0.1
HUIG	**Huatulco**	**0.28**	**317**	*i* P	Pg	00 14 17.1	-0.9
HUIG				*e*S	Sg	00 14 21.9	+0.1
VHO	**Vista Hermosa**	**1.69**	**332**	*i* P	Pn	00 14 39.8	-2.5
VHO				*e*S	Sn	00 14 57.4	-6.7
VHO	**Vista Hermosa**	**1.69**	**332**	*i* P	Pn	00 14 39.8	-2.5
VHO				*i* S	Sn	00 14 59.8	-4.3
OXX	**Oaxaca**	**1.70**	**333**	*i* P	Pn	00 14 38.7	-3.7
OXX				*e*S	Sn	00 14 59.3	-4.9
OXX	**Oaxaca**	**1.70**	**333**	*i* P	Pn	00 14 38.7	-3.7
OXX				*e*S	Sn	00 14 59.3	-4.9
PNIG	**Pinotepa**	**2.29**	**291**	*i* P	Pn	00 14 48.1	-2.3
PNIG				*e*S	Sn	00 15 14.0	-4.7
PNIG	**Pinotepa**	**2.29**	**291**	*i* P	Pn	00 14 48.1	-2.3
PNIG				*e*S	Sn	00 15 14.0	-4.7
TGIG		**2.94**	**65**	*i* P	Pn	00 14 56.4	-3.0
TGIG				*e*S	Sn	00 15 30.3	-4.6

ISCJB ***16*** *00:29:35.2±0.4, 23.°83S±0.°08×69.°51E±0.°10, h10km, mb4.0/19, MS3.8/5, Error ellipse: s-maj=13.0km s-min=11.0km az=165.3*
IDC ***16*** *00:29:35.5±0.5, 23.°85S×69.°48E, h0km, mb4.0/15, mb1 4.2/15, mb1mx4.1/24, mbtmp4.0/15, MS3.8/5, Ms1 3.8/5, ms1mx3.4/22, Error ellipse: s-maj=19.9km s-min=15.8km az=65.0*
NEIC ***16*** *00:29:36.9±0.3, 23.°84S×69.°45E, h10km, mb4.1/6, Error ellipse: s-maj=9.0km s-min=7.6km az=59.0*

ISC 16 00:29:37.1±0.4, 23.°82S±0.°08×69.°49E±0.°10, h10km, n35, σ0§65/28, mb4.0/19, MS3.8/5, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**16.56**	**10**	Pn	**Pn**	**00 33 28.5**	**-1.0**
COCO	**West Island**	**28.40**	**71**	*e*P	**P**	**00 35 33.4**	**+1.4**
KMBO	**Kilima Mbogo**	**38.52**	**301**	P	**P**	**00 37 00.2**	**+0.2**
	1.7nm,0.9s,mb3.8,baz=359,slow=24,SNR=5.2						
KMBO	**Kilima Mbogo**	**38.52**	**301**	*e*P	**P**	**00 37 00.2**	**+0.2**
	1.4nm,0.7s,mb3.8						
LSZ	**Lusaka**	**39.72**	**275**	*e*P	**P**	**00 37 10.2**	**+0.2**
	4.4nm,1.0s,mb4.1						
BOSA	**Boshof**	**39.80**	**253**	LR	LR	00 50 18.2	
	comp=Z,241nm,18.4s,MS4.1,baz=176,slow=31						
MAW	**Mawson**	**43.99**	**184**	P	**P**	**00 37 44.0**	**-0.2**
	1.8nm,0.8s,mb3.8,baz=15,slow=11,SNR=4.8						
MAW				LR	LR	00 50 10.9	
	comp=Z,37nm,20.8s,MS3.3,baz=116,slow=28						
MAW	**Mawson**	**43.99**	**184**	*e*P	**P**	**00 37 44.0**	**-0.3**
	0.3nm,0.6s,mb3.2						
MBWA	**Marble Bar**	**46.31**	**97**	P	**P**	**00 38 03.0**	**-0.3**
CASY	**Casey**	**49.71**	**160**	*e*P	**P**	**00 38 28.9**	**-0.2**
	1.9nm,0.8s,mb4.2						
CMAR	**Chiang Mai Arr**	**50.91**	**37**	P	**P**	**00 38 39.8**	**+1.2**
	1.4nm,0.6s,mb4.1,baz=230,slow=7.8,SNR=6.5						
CMAR				LR	LR	00 55 45.7	
	comp=Z,103nm,19.1s,MS3.9,baz=201,slow=31						
ASAR	**Alice Springs**	**58.48**	**104**	P	**P**	**00 39 33.5**	**-0.1**
	2.6nm,0.6s,mb4.4,baz=252,slow=6.3,SNR=29						
ASAR				PcP	PcP	00 40 24.2	-0.1
	1.0nm,0.9s,baz=255,slow=3.5,SNR=4.9						
WRA	**Warramunga Arr**	**59.85**	**100**	P	**P**	**00 39 43.3**	**0.0**
	3.7nm,0.7s,mb4.5,baz=255,slow=7.0,SNR=15						
SNAA	**Sanae**	**62.04**	**200**	P	**P**	**00 39 57.7**	**+0.4**
	0.8nm,0.8s,mb3.9,baz=113,slow=5.0,SNR=6.5						
STKA	**Stephens Creek**	**63.23**	**115**	P	**P**	**00 40 05.4**	**-0.6**
	1.5nm,0.6s,mb4.3,baz=343,slow=16,SNR=3.0						
STKA	**Stephens Creek**	**63.23**	**115**	P	**P**	**00 40 05.4**	**-0.6**
QSPA	**South Pole Qui**	**66.31**	**180**	P	**P**	**00 40 25.2**	**-0.1**
	3.2nm,1.0s,mb4.3,baz=280,slow=3.5,SNR=8.4						
QSPA	**South Pole Qui**	**66.31**	**180**	*e*P	**P**	**00 40 24.7**	**-0.5**
	4.9nm,0.9s,mb4.5						
GTA	**Gaotai**	**68.99**	**25**	*e*P	**P**	**00 40 40.9**	**-1.7**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
MK31	**Makanchi Array**	**71.22**	**9**	*e*P	**P**	**00 40 56.5**	**+0.4**
MKAR	**Makanchi Array**	**71.22**	**9**	P	**P**	**00 40 56.4**	**+0.2**
	comp=Z,2.3nm,0.8s,mb4.1,baz=204,slow=6.1,SNR=16						
BRTR	**Keskin Array B**	**71.52**	**332**	P	**P**	**00 40 58.1**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=156,slow=9.3,SNR=6.4						
KURK	**Kurchatov**	**74.64**	**6**	*e*P	**P**	**00 41 16.0**	**-0.3**
	comp=Z,1.4nm,1.0s,mb3.9						
TORD	**Torodi Ar. Bea**	**75.73**	**291**	P	**P**	**00 41 24.1**	**+0.7**
	comp=Z,0.4nm,1.0s,mb3.3,baz=103,slow=5.9,SNR=3.6						
TORD				LR	LR	01 14 44.8	
	comp=Z,54nm,19.3s,MS3.9,baz=140,slow=36						
DBIC	**Dimbokro**	**78.51**	**283**	LR	LR	01 13 24.2	
	comp=Z,58nm,19.8s,MS3.9,baz=108,slow=34						
ZALV	**Zalesovo Beam**	**78.56**	**9**	P	**P**	**00 41 38.8**	**+0.4**
	comp=Z,1.5nm,0.7s,mb4.0,baz=201,slow=4.4,SNR=6.5						
SONM	**Songino Array**	**78.66**	**24**	P	**P**	**00 41 39.7**	**+0.7**
	comp=Z,1.0nm,0.4s,mb4.1,baz=188,slow=7.0,SNR=6.7						
AKASG	**Malin Array Be**	**82.27**	**335**	P	**P**	**00 41 57.8**	**-0.6**
	comp=Z,1.8nm,0.6s,mb4.2,baz=134,slow=4.4,SNR=5.9						
GERES	**GERESS Array B**	**87.78**	**327**	P	**P**	**00 42 25.7**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.9,baz=134,slow=9.5,SNR=5.2						
GERES	**GERESS Array B**	**87.78**	**327**	P	**P**	**00 42 25.7**	**-0.5**
ULM	**Lac du Bonnet**	**151.25**	**340**	PKPbc	PKPbc	00 49 30.0	-0.6
	comp=Z,2.7nm,0.5s,baz=99,slow=0.8,SNR=5.4						
ULM	**Lac du Bonnet**	**151.25**	**340**	PKPbc	PKPbc	00 49 30.0	-0.6
EYMN	**Ely**	**151.56**	**333**	PKPbc	PKPbc	00 49 31.5	+0.1
NVAR	**Mina Array Bea**	**163.99**	**23**	PKPab	PKPab	00 50 34.4	+0.8
	comp=Z,0.3nm,0.6s,baz=318,slow=3.6,SNR=3.4						
TXAR	**Lajitas Array**	**171.77**	**313**	PKPab	PKPab	00 51 09.4	+1.0
	comp=Z,0.4nm,0.8s,baz=52,slow=3.5,SNR=4.7						

MAN 16 00:29:44, 11.°05N×125.°53E, h32km, mb3.9, ML2.6, MS2.3, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.13**	**216**	*e*P	Pn	00 30 05.8	+2.2
MSLP				*e*S	Sn	00 30 19.1	+1.1
SCPH	**Surigao**	**1.26**	**182**	⇑*e*P	Pn	00 30 05.9	+0.5
CNP	**Catarman**	**1.68**	**330**	*e*P	Pn	00 30 12.0	+0.8
CNP				*e*S	Sn	00 30 28.3	-3.3

BJI ***16*** *01:12:45.5, 2.°97S×128.°37E, h35km, mB5.3/39, mb5.0/57, Ms4.9/51, Ms7 4.7/50*
IDC ***16*** *01:12:47.3±0.4, 2.°44S×127.°98E, h0km, mb4.8/22, mb1 4.8/24, mb1mx4.8/26, mbtmp4.8/24, ML5.0/3, MS4.5/18, Ms1 4.5/18, ms1mx4.4/22, Error ellipse: s-maj=19.3km s-min=8.5km az=75.0*
ISCJB ***16*** *01:12:51.1±0.5, 2.°35S±0.°02×128.°07E±0.°03, h38km±4km, mb5.2/120, MS4.6/44, Error ellipse: s-maj=4.8km s-min=3.7km az=165.9*
MOS ***16*** *01:12:51.0±1.4, 2.°37S×127.°86E, h33km, mb5.3/36

KAKA	Kakadu	11.16 157	eP	Pn	01 15 30.3	-0.2
	66nm,0.6s					
KAKA	Kakadu	11.16 157	ePn	Pn	01 15 30.4	-0.1
KAKA			eS	Sn	01 17 29.6	-4.3
KAKA	Kakadu	11.16 157	P	Pn	01 15 30.8	+0.3
	2μm238nm,0.6s					
BMNI	Bima	11.18 236	P	Pn	01 15 31.3	+0.5
	161nm,0.9s					
MYLDM	Lahad Datu	12.15 308	P	Pn	01 15 45.0	+0.9
	3μm199nm,1.2s					
KNA	Kununurra	13.32 177	P	Pn	01 15 58.4	-1.7
	6μm706nm,0.9s					
MTNI	Mataram	13.39 242	P	Pn	01 16 04.0	+3.0
	148nm,1.6s					
KHKI	Kahang-Kahang	13.77 244	P	Pn	01 16 08.4	+2.2
	3μm204nm,1.2s					
SRBI	Singaraja	14.02 246	P	Pn	01 16 17.7	+8.1
PLKI	Palangkaraya	14.12 270	P	Pn	01 16 19.3	+8.2
KKM	Kota Kinabalu	14.49 305	P	Pn	01 16 17.8	+1.7
	1μm84nm,1.6s					
NBBI	Negara	14.67 245	P	Px	01 16 28.4	
KMMI	Kalianget	14.81 251	P	Pn	01 16 27.7	+7.4
JAGI	Jajag, Banyuwa	15.13 246	P	Pn	01 16 25.9	+1.5
	4μm286nm,1.1s					
GMJI	Gumukmas	15.71 247	P	Pn	01 16 31.9	0.0
	5μm282nm,1.2s					
FITZ	Fitzroy Crossi	15.83 189	Pn	Pn	01 16 30.9	-2.6
	0.9nm,0.3s,baz=15,slow=11,SNR=19					
FITZ			Sn	Sn	01 19 29.0	+1.1
	0.1nm,0.3s,baz=85,slow=19,SNR=1.6					
FITZ			LR	LR	01 23 46.8	
	comp=Z,4μm,18.2s,baz=7.6,slow=42					
FITZ	Fitzroy Crossi	15.83 189	⇑iP	Pn	01 16 30.2	-3.2
	195nm,1.4s					
FITZ	Fitzroy Crossi	15.83 189	ePn	Pn	01 16 30.4	-3.1
FITZ	Fitzroy Crossi	15.83 189	P	Pn	01 16 35.4	+2.0
	333nm,1.4s					
KRKI	Karangkates	16.59 249	P	Pn	01 16 44.7	+1.6
	489nm,1.0s					
STKI	Sintang	16.77 278	P	Pn	01 16 47.9	+2.5
	69nm,0.7s					
SJI	Sawahan	17.10 251	P	Pn	01 16 50.6	+1.1
	368nm,2.0s					
PWJI	Pagerwojo	17.15 250	P	Pn	01 16 50.9	+0.7
	7μm204nm,1.7s					
NGJI	Ngawi	17.29 253	P	Pn	01 16 54.4	+2.6
	256nm,1.2s					
LUBP	Lubang	17.77 334	eP	Pn	01 16 56.1	-1.7
PCJI	Pacitan	17.80 250	P	Pn	01 16 58.1	0.0
	7μm498nm,1.8s					
TGY	Tagaytay City	17.82 337	P	Pn	01 16 56.5	-1.9
	24nm,0.3s,baz=224,slow=4.9,SNR=9.2					
TGY	Tagaytay City	17.82 337	P	Pn	01 16 56.5	-1.9
KSM	Kuching	18.17 282	P	Pn	01 17 01.7	-1.0
	2μm105nm,1.0s					
SMRI	Semarang	18.18 255	P	Pn	01 17 03.8	+0.9
	405nm,1.3s					
WRA	Warramunga Arr	18.52 161	P	Pn	01 17 03.6	-3.2
	7.5nm,0.3s,baz=343,slow=12,SNR=93					
WRA			S	S	01 20 32.0	-3.5
	1.2nm,0.3s,baz=341,slow=19,SNR=3.4					
WRA	Warramunga Arr	18.52 161	P	Pn	01 17 03.6	-3.2
WRA			S	S	01 20 32.0	-3.5
WB2	Warramunga Arr	18.52 161	eP	Pn	01 17 03.2	-3.7
WB2			eS	S	01 20 27.3	-8.2
COEN	Coen	18.85 129	eP	Pn	01 17 09.6	-1.4
	2μm,1.4s					
COEN			eS	S	01 20 26.4	-16
COEN	Coen	18.85 129	P	Pn	01 17 10.7	-0.2
	604nm,1.0s					
BJII	Banjamegara	18.95 254	P	Pn	01 17 12.7	+0.5
	681nm,1.9s					
BALP	Baler	19.10 341	eP	Pn	01 17 11.4	-2.4
SCZP	Santa Cruz	19.75 336	eP	Pn	01 17 17.6	-3.9
BCPH	Baguio City Da	20.04 339	⇑iP	P	01 17 05.7	-17
CAUP	Cauayan	20.15 342	eP	P	01 17 23.8	-0.4
JCJI	Jatiwangi	20.17 258	P	P	01 17 25.5	+1.0
	7μm287nm,0.9s					
PMG	Port Moresby	20.22 111	eP	P	01 17 26.2	+1.2
	93nm,1.0s					
PMG	Port Moresby	20.22 111	eP	P	01 17 26.2	+1.2
PMG			pmax	pmax		
	comp=Z,93nm,1.0s					
PMG	Port Moresby	20.22 111	P	P	01 17 30.6	+5.6
	comp=Z,1μmcomp=Z,102nm,1.1s					
BOLP	Bolinao	20.29 337	eP	P	01 17 24.4	-1.3
MBWA	Marble Bar	20.38 203	eP	P	01 17 23.6	-3.1
	comp=Z,307nm,1.4s					
MBWA	Marble Bar	20.38 203	P	P	01 17 24.0	-2.7
	comp=Z,166nm,1.2s					
MBWA	Marble Bar	20.38 203	P	P	01 17 24.5	-2.2
	SNR=16					
TPI	Tanjungpandan	20.41 268	P	P	01 17 26.8	-0.3
	comp=Z,2μmcomp=Z,157nm,1.2s					
CISI	Cisompet, Garu	20.83 255	P	P	01 17 29.9	-1.8
	comp=Z,6μmcomp=Z,414nm,1.4s					
LEM	Lembang	20.87 257	P	P	01 17 31.9	-0.2
	comp=Z,4μmcomp=Z,239nm,1.5s					
APYP	Conner	21.19 342	eP	P	01 17 34.0	-1.5
CBJI	Citeko	21.55 259	P	P	01 17 39.8	+0.4
	comp=Z,634nm,1.0s,mb6.0					
DBJI	Dramaga	21.67 258	P	P	01 17 41.1	+0.4
	comp=Z,160nm,1.3s,mb5.3					
ASAR	Alice Springs	21.92 166	P	P	01 17 41.5	-1.8
	comp=Z,81nm,0.7s,mb5.3,baz=345,slow=12,SNR=480					
ASAR			S	S	01 21 38.7	-4.3
	comp=Z,33nm,0.8s,baz=347,slow=20,SNR=12					
ASAR	Alice Springs	21.92 166	P	P	01 17 41.5	-1.8
ASAR			S	S	01 21 38.7	-4.3
PPBI	Pangkal Pinang	21.93 270	P	P	01 17 43.1	-0.4
	comp=Z,90nm,1.2s,mb5.1					
RBSI	Rajabasa	22.55 260	P	P	01 17 49.6	-0.5
	comp=Z,2μmcomp=Z,150nm,0.9s,mb5.4					
CGJI	Cibinong	22.71 259	P	P	01 17 49.4	-2.4
GUMO	Guam	22.98 46	P	P	01 17 56.4	+1.8
	comp=Z,17nm,0.4s,mb4.8,baz=240,slow=20,SNR=2.6					
GUMO			LR	LR	01 24 12.9	
	comp=Z,1μm,21.5s,MS4.3,baz=23,slow=30					
GUMO	Guam	22.98 46	P	P	01 17 56.4	+1.8
KLI	Kotabumi	23.31 263	P	P	01 17 58.6	+0.5
	comp=Z,711nm,1.6s,mb5.8					
KLSI		23.42 264	P	P	01 17 59.1	0.0
	comp=Z,1μm,1.8s,mb6.1					
XMIS	Christmas Isla	23.69 249	P	pP	01 18 11.6	-1.1
	comp=Z,1μm,1.1s					
KASI	Kota Agung	23.73 262	P	P	01 17 56.5	-5.5
	comp=Z,110nm,1.3s,mb5.1					
MDSI	Maura Dua	23.95 264	P	P	01 18 04.4	+0.4
	comp=Z,699nm,1.7s,mb5.8					
LWLI	Liwa	24.11 263	P	P	01 18 07.3	+1.8
	comp=Z,9μmcomp=Z,416nm,1.6s,mb5.6					
MYKOM	Kota Tinggi	24.57 279	P	P	01 18 10.7	+1.0
MYKOM	Kota Tinggi	24.57 279	P	P	01 18 10.6	+0.9
	comp=Z,4μmcomp=Z,226nm,1.6s,mb5.5					
CTA	Charters Tower	25.01 136	P	P	01 18 14.3	+0.8
	comp=Z,18nm,0.9s,mb4.6,baz=319,slow=11,SNR=16					
CTA	Charters Tower	25.01 136	eP	P	01 18 14.0	+0.4
	comp=Z,25nm,0.8s,mb4.8					
CTA			eS	S	01 22 39.2	+4.4
CTA	Charters Tower	25.01 136	P	P	01 18 14.3	+0.8
CTA	Charters Tower	25.01 136	P	P	01 18 14.3	+0.7
CTAO	Charters Tower	25.01 136	eP	P	01 18 14.4	+0.9
	comp=Z,402nm,2.1s,mb5.6					
CTAO	Charters Tower	25.01 136	eP	P	01 18 14.4	+0.8
CTAO			pmax	pmax		
	comp=Z,402nm,2.1s,mb5.6					
CTAO	Charters Tower	25.01 136	P	P	01 18 15.3	+1.7
	comp=Z,69nm,1.3s,mb5.0					
KGM	Kluang	25.13 280	P	P	01 18 16.4	+1.6
KSI	Kapahiang	25.48 266	P	P	01 18 18.6	+0.6
	comp=Z,8μmcomp=Z,318nm,1.5s,mb5.6					
KTGM	Kuala Trenggan	26.06 287	P	P	01 18 23.9	+0.7
FRIM	Kepong	27.02 282	P	P	01 18 33.8	+1.9
BKNI	Bangkinang	27.16 275	P	P	01 18 35.2	+2.0
	comp=Z,2μmcomp=Z,184nm,1.6s,mb5.4					
PDSI	Padang	27.64 273	P	P	01 18 37.3	-0.2
	comp=Z,166nm,1.2s,mb5.5					
PPI	Padang Panjang	27.74 273	P	P	01 18 39.3	+1.0
	comp=Z,7μmcomp=Z,92nm,1.5s,mb5.2					
QIZ	Qiongzhong	27.81 321	P	P	01 18 40.4	+1.6
QIZ			pP	pP	01 18 50.9	+0.6
QIZ			sP	sP	01 18 56.3	+0.8
QIZ			S	S	01 23 20.9	+1.8
QIZ			sS	sS	01 23 39.3	+0.9
QIZ			pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.3					
QIZ			pmax	pmax		
	comp=Z,240nm,8.3s					
QIZ			LR	LR		
	comp=N,790nm,24.1s					
QIZ			LR	LR		
	comp=E,160nm,12.6s					
QIZ			LR	LR		
	comp=Z,980nm,21.1s,MS4.4					
QIZ	Qiongzhong	27.81 321	eP	P	01 18 39.3	+0.5
	comp=Z,76nm,1.4s,mb5.1					
IPM	Ipoh	27.87 284	P	P	01 18 40.5	+1.0
IPM	Ipoh	27.87 284	P	P	01 18 40.4	+0.9
	comp=Z,2μmcomp=Z,116nm,1.4s,mb5.3					
FORT	Forrest	28.27 180	eP	P	01 18 39.3	-3.5
	comp=Z,62nm,0.8s,mb5.3					
FORT	Forrest	28.27 180	eP	P	01 18 40.5	-2.2
	comp=Z,90nm,0.7s,mb5.5					
KULM	Kulim	28.43 286	P	P	01 18 45.6	+1.1
KULM	Kulim	28.43 286	P	P	01 18 45.3	+0.8
	comp=Z,905nmcomp=Z,53nm,1.6s,mb4.9					
QZH	Quanzhou	28.66 342	⇓iP	P	01 18 45.0	-1.3
QZH			S	S	01 23 33.6	+1.3
QZH			pmax	pmax		
	comp=Z,100nm,0.7s,mb5.7					
QZH			LR	LR		
	comp=Z,4μm,31.8s,MS4.8					
MNSI	Mandailing Nat	28.67 276	P	P	01 18 47.3	+0.7
	comp=Z,56nm,0.8s,mb5.4					
SISI	Saibi	28.99 272	P	P	01 18 49.9	+0.4
	comp=Z,166nm,1.3s,mb5.6					
GZH	Guangzhou	29.09 331	P	P	01 18 54.4	+4.3
GZH			S	S	01 23 42.6	+3.5
GZH			LR	LR		
	comp=Z,2μm,24.9s,MS4.7					
KLBR	Kellerberrin	30.67 197	eP	P	01 19 01.9	-2.1
	comp=Z,232nm,1.9s,mb5.7					
TPTI		31.39 280	P	P	01 19 10.5	-0.2
	comp=Z,23nm,0.8s,mb5.1					
STKA	Stephens Creek	32.01 158	P	P	01 19 14.7	-1.2
	comp=Z,29nm,0.7s,mb5.2,baz=337,slow=8.9,SNR=23					
STKA			LR	LR	01 33 14.4	
	comp=Z,3μm,21.9s,MS4.9,baz=342,slow=38					
STKA	Stephens Creek	32.01 158	eP	P	01 19 14.3	-1.5
	comp=Z,24nm,0.7s,mb5.1					
STKA	Stephens Creek	32.01 158	eP	P	01 19 14.4	-1.4
	comp=Z,7.3nm,0.8s,mb4.6					
NWAO	Narrogin (SRO)	32.07 197	P	P	01 19 15.2	-1.1
	comp=Z,9.6nm,0.8s,mb4.7,baz=7.2,slow=8.4,SNR=4.1					
NWAO			LR	LR	01 33 38.8	
	comp=Z,2μm,19.5s,MS4.8,baz=16,slow=39					
NWAO	Narrogin (SRO)	32.07 197	eP	P	01 19 15.7	-0.6
NWAO	Narrogin (SRO)	32.07 197	eP	P	01 19 15.7	-0.7
CBIJ	Chichi jima	32.29 24	LR	LR	01 30 44.4	
	comp=Z,879nm,19.8s,MS4.5,baz=188,slow=33					
SSE	Sheshan	33.91 349	P	P	01 19 31.8	-0.6
SSE			pP	pP	01 19 44.8	+0.7
SSE			sP	sP	01 19 51.3	+2.1
SSE			S	S	01 24 53.9	-0.3
SSE			sS	sS	01 25 16.6	+2.9
SSE			pmax	pmax		
	comp=Z,22nm,0.6s,mb5.3					
SSE			pmax	pmax		
	comp=Z,540nm,4.9s					
SSE			LR	LR		
	comp=N,130nm,26.4s,MS4.3					
SSE			LR	LR		
	comp=E,700nm,26.4s,MS4.3					
SSE			LR	LR		
	comp=Z,420nm,31.5s					
BDT	Bhumibol Dam	34.67 305	P	P	01 19 40.0	+0.8
	comp=Z,18nm,1.0s,mb5.0					
WHN	Wuhan	35.24 339	⇓P	P	01 19 44.8	+0.8
WHN			pP	pP	01 19 54.9	-0.8
WHN			pmax	pmax		
	comp=Z,230nm,1.6s,mb5.9					
WHN			LR	LR		
	comp=N,1μm,27.2s,MS4.8					
WHN			LR	LR		
	comp=E,2μm,23.6s,MS4.8					
WHN			LR	LR		
	comp=Z,2μm,23.0s,MS4.7					
NJ2	Nanjing	35.32 346	eP	P	01 19 46.3	+1.6
NJ2			pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1					
GYA	Guiyang	35.34 326	P	P	01 19 45.6	+0.7
GYA			pP	pP	01 19 57.8	+1.2
GYA			sP	sP	01 20 03.1	+1.4
GYA			PP	PP	01 21 07.6	+1.9
GYA			PcP	PcP	01 22 12.8	-1.8
GYA			S	S	01 25 19.3	+2.9
GYA			sS	sS	01 25 39.4	+3.5
GYA			ScP	ScP	01 25 53.9	-3.3
GYA			SS	SS	01 27 41.8	-10
GYA			pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3					
GYA			pmax	pmax		
	comp=Z,240nm,5.0s					
GYA			LR	LR		
	comp=N,1μm,13.3s,MS5.0					
GYA			LR	LR		
	comp=E,1μm,15.8s,MS5.0					
GYA			LR	LR		
	comp=Z,2μm,14.7s,MS5.0					
CMAR	Chiang Mai Arr	35.36 307	P	P	01 19 46.0	+0.8
	comp=Z,4.3nm,0.6s,mb4.5,baz=126,slow=7.2,SNR=18					
CMAR	Chiang Mai Arr	35.36 307	P	P	01 19 46.0	+0.8
CHRT	Chiangrai	35.49 310	⇓P	P	01 19 46.0	-0.3
	comp=Z,105nm,1.0s,mb5.7					
CHG	Chiang Mai	35.55 308	⇓P	P	01 19 47.6	+0.8
	comp=Z,56nm,0.7s,mb5.6					
CHTO	Chiang Mai	35.55 308	eP	P	01 19 47.0	+0.2
	comp=Z,51nm,1.0s,mb5.4					
CHTO	Chiang Mai	35.55 308	eP	P	01 19 47.0	+0.2
CHTO			pmax	pmax		
	comp=Z,51nm,1.0s,mb5.4					
CHTO	Chiang Mai	35.55 308	P	P	01 19 47.4	+0.6
	comp=Z,636nmcomp=Z,66nm,1.1s,mb5.5					
CHTO	Chiang Mai	35.55 308	P	P	01 19 48.0	+1.1
	SNR=6.8					
CHTO	Chiang Mai	35.55 308	P	PcP	01 22 11.8	-3.6
	comp=Z,636nmcomp=Z,66nm,1.1s					
ARMA	Armidale	35.73 144	eP	P	01 19 48.5	+0.3
ARMA	Armidale	35.73 144	eP	P	01 19 48.7	+0.6
	comp=Z,69nm,1.1s,mb5.5					
ARPS	Mount Arapiles	36.52 161	eP	P	01 19 53.5	-1.4
	comp=Z,217nm,1.2s,mb5.9					
KMI	Kunming	36.74 320	P	P	01 19 59.4	+2.5
KMI			pP	pP	01 20 10.3	+1.6
KMI			sP	sP	01 20 15.1	+1.4
KMI			PP	PP	01 21 23.6	+2.4
KMI			PcP	PcP	01 22 20.4	+1.6
KMI			S	S	01 25 39.3	+1.4
KMI			sS	sS	01 25 57.8	+0.3
KMI			ScP	ScP	01 26 03.6	+1.2
KMI			SS	SS	01 28 10.1	-10
KMI			pmax	pmax		
	comp=Z,13nm,1.1s,mb4.7					
KMI			pmax	pmax		
	comp=Z,280nm,5.0s					
KMI			LR	LR		
	comp=N,590nm,15.6s,MS4.6					
KMI			LR	LR		
	comp=E,620nm,18.9s,MS4.6					
KMI			LR	LR		
	comp=Z,920nm,20.6s,MS4.5					
ENH	Enshi	36.99 333	eP	P	01 19 59.8	+0.8
	comp=Z,31nm,0.8s,mb5.2					
KSRS	Korea Array	39.61 360	P	P	01 20 20.9	+0.1
	comp=Z,14nm,0.8s,mb4.7,baz=178,slow=9.3,SNR=36					
KSRS			LR	LR	01 35 15.1	
	comp=Z,551nm,21.2s,MS4.4,baz=184,slow=34					
KSRS	Korea Array	39.61 360	P	P	01 20 21.0	+0.1
KSRS			pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7					
MJAR	Matsushiro Arr	39.83 13	P	P	01 20 21.9	-0.8
	comp=Z,20nm,0.9s,mb4.9,baz=189,slow=10,SNR=29					
MJAR			LR	LR	01 34 19.7	
	comp=Z,926nm,22.0s,MS4.6,baz=205,slow=32					
MJAR	Matsushiro Arr	39.83 13	P	P	01 20 22.0	-0.8
MAJO	Matsushiro	39.84 13	eP	P	01 20 22.4	-0.4
	comp=Z,44nm,1.0s,mb5.1					
MAJO	Matsushiro	39.84 13	eP	P	01 20 22.4	-0.4
MAJO			pmax	pmax		
	comp=Z,44nm,1.0s,mb5.1					
MAT	Matsushiro	39.84 13	P	P	01 20 21.8	-1.0
MAT			S	S	01 26 30.0	+5.7
CD2	Chengdu	40.39 327	P	P	01 20 27.4	-0.1
CD2			pP	pP	01 20 39.8	+0.5
CD2			sP	sP	01 20 45.1	+0.7
CD2			S	S	01 26 32.3	-0.5
CD2			sS	sS	01 26 52.8	+0.3
CD2			pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0					
CD2			pmax	pmax		
	comp=Z,120nm,4.8s					
CD2			LR	LR		
	comp=N,920nm,19.0s,MS4.8					
CD2			LR	LR		
	comp=E,920nm,17.8s,MS4.8					
CD2			LR	LR		
	comp=Z,710nm,17.8s,MS4.6					
XAN	Xi'an	40.45 335	P	P	01 20 26.9	-1.0
XAN			pP	pP	01 20 38.3	-1.4
XAN			sP	sP	01 20 43.8	-1.0
XAN			pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3					
XAN			pmax	pmax		
	comp=Z,39nm,5.2s					
XAN			LR	LR		
	comp=N,520nm,21.9s					
XAN			LR	LR		
	comp=Z,240nm,38.0s					
DL2	Dalian	41.49 352	P	P	01 20 37.0	+0.6
DL2			eS	S	01 26 48.9	0.0
DL2			sS	sS	01 27 08.6	-0.1
DL2			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5					
DL2			LR	LR		
	comp=N,270nm,20.4s,MS4.5					
DL2			LR	LR		
	comp=E,530nm,20.0s,MS4.5					
DL2			LR	LR		
	comp=Z,530nm,24.8s,MS4.3					
DZM	Mont Dzumac	42.10 121	eP	P	01 20 45.9	+4.2
	comp=Z,81nm,1.2s,mb5.2					
DZM			eS	S	01 27 02.7	+4.2
	comp=Z,230nm,29.1s					
DZM			eLR	LR	01 32 22.7	
	comp=Z,1μm,22.4s					
BJT	Baijiatuau	43.56 347	eP	P	01 20 52.5	-0.7
	comp=Z,31nm,0.6s,mb5.2					
BJT	Baijiatuau	43.56 347	eP	P	01 20 52.5	-0.7
BJT			pmax	pmax		
	comp=Z,31nm,0.6s					
BJI	Beijing	43.58 347	P	P	01 20 52.3	-1.1
BJI			pP	pP	01 21 06.8	+1.5
BJI			sP	sP	01 21 10.8	+0.5
BJI			PP	PP	01 22 37.0	+1.6
BJI			PcS	PcS	01 26 34.5	+1.4
BJI			S	S	01 27 14.9	-4.8
BJI			sS	sS	01 27 45.3	+5.8
BJI			SS	SS	01 30 36.8	+0.9
BJI			pmax	pmax		
	comp=Z,34nm,0.8s,mb5.1					
BJI			pmax	pmax		
	comp=Z,85nm,3.6s					
BJI			LR	LR		
	comp=N,330nm,17.8s,MS4.4					
BJI			LR	LR		
	comp=E,240nm,18.9s,MS4.4					
BJI			LR	LR		
	comp=Z,310nm,19.7s,MS4.2					
SNY	Shenyang	44.17 355	⇓P	P	01 20 57.9	-0.1
SNY			S	S	01 27 25.6	-2.6
SNY			pmax	pmax		
	comp=Z,22nm,0.7s,mb5.0					
SNY			LR	LR		
	comp=N,390nm,25.8s					
SNY			LR	LR		
	comp=E,770nm,20.1s					
SNY			LR	LR		
	comp=Z,620nm,22.8s,MS4.5					
LZH	Lanzhou	44.44 332	eP	P	01 21 00.6	+0.3
LZH			pP	pP	01 21 11.6	-0.6
LZH			sP	sP	01 21 17.0	-0.3
LZH			PcP	PcP	01 22 42.4	-1.0
LZH			eS	S	01 27 33.3	+1.0
LZH			sS	sS	01 27 52.3	+0.1
LZH			pmax	pmax		
	comp=Z,43nm,1.5s,mb5.0					
LZH			pmax	pmax		
	comp=Z,230nm,5.2s					
LZH			LR	LR		
	comp=N,520nm,14.9s,MS4.9					
LZH			LR	LR		
	comp=E,940nm,17.2s,MS4.9					
LZH			LR	LR		
	comp=Z,1μm,19.2s,MS4.8					
CN2	Changchun	46.01 357	eP	P	01 21 17.3	+4.7
CN2			eS	S	01 28 00.3	+5.5
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9					
CN2			pmax	pmax		
	comp=Z,200nm,4.0s					
CN2			LR	LR		
	comp=N,700nm,19.0s,MS4.8					
CN2			LR	LR		
	comp=E,600nm,19.0s,MS4.8					
CN2			LR	LR		
	comp=Z,1μm,21.0s,MS4.8					
MDJ	Mudanjiang	46.78 1	P	P	01 21 19.6	+0.9
MDJ			pP	pP	01 21 30.8	+0.1
MDJ			sP	sP	01 21 35.6	-0.1
MDJ			PP	PP	01 23 10.5	+1.2
MDJ			S	S	01 28 10.3	+4.5
MDJ			sS	sS	01 28 27.1	+1.3
MDJ			pmax	pmax		
	comp=Z,25nm,1.3s,mb5.0					
MDJ			pmax	pmax		
	comp=Z,130nm,5.1s					
MDJ			LR	LR		
	comp=N,580nm,28.3s					
MDJ			LR	LR		
	comp=E,350nm,16.6s					
MDJ			LR	LR		
	comp=Z,660nm,28.3s,MS4.4					
MDJ	Mudanjiang	46.78 1	eP	P	01 21 19.5	+0.8
	comp=Z,83nm,1.3s,mb5.5					
LSA	Lhasa	47.56 315	P	P	01 21 25.5	+0.4
LSA	Lhasa	47.56 315	eP	P	01 21 26.4	+1.3
	comp=Z,40nm,0.7s,mb5.5					
LSA	Lhasa	47.56 315	eP	P	01 21 26.4	+1.3
LSA			pmax	pmax		
	comp=Z,40nm,0.7s,mb5.6					
ASAJ	Asahikawa	48.06 14	P	P	01 21 30.4	+1.8
	comp=Z,15nm,0.8s,mb5.1,baz=262,slow=7.8,SNR=6.0					
ASAJ	Asahikawa	48.06 14	P	P	01 21 30.4	+1.8
ASAJ			pmax	pmax		
	comp=Z,15nm,0.8s					
ODAN	Odare	48.82 309	eP	P	01 21 35.3	+0.5
	comp=Z,63nm,0.7s,mb5.8					
TAPN	Taplejung	48.82 310	eP	P	01 21 34.5	-0.3
	comp=Z,51nm,0.7s,mb5.7					
YUK	Yuzh-Kuril'sk	48.86 17	eP	P	01 21 22.1	-13
YUK			i		01 23 05.8	
YUK			i SS	SS	01 31 56.8	-10
YUK			MLR	MLR		
	comp=N,420nm,17.0s,MS4.7					
YUK			MLR	MLR		
	comp=E,420nm,17.0s,MS4.7					
YUK			MLR	MLR		
	comp=Z,330nm,17.0s,MS4.4					
GTA	Gaotai	49.01 331	⇑P	P	01 21 36.3	+0.3
GTA			pP	pP	01 21 48.6	+0.5
GTA			sP	sP	01 21 54.3	+1.2
GTA			S	S	01 28 36.9	-0.7
GTA			sS	sS	01 28 57.3	-0.4
GTA			pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1					
GTA			pmax	pmax		
	comp=Z,160nm,4.7s					
GTA			LR	LR		
	comp=N,770nm,21.8s,MS4.7					
GTA			LR	LR		
	comp=E,540nm,23.2s,MS4.7					
GTA			LR	LR		
	comp=Z,950nm,24.7s,MS4.7					
GUN	Gumba	50.51 310	eP	P	01 21 47.4	-0.2
	comp=Z,60nm,0.6s,mb5.7					
YSS	Yuzh-Sakhalins	50.77 13	eP	P	01 21 52.0	+2.7
YSS			e	pP	01 22 06.0	+4.6
YSS			eS	S	01 29 08.0	+6.1

YSS MLR MLR
comp=Z,400nm,18.0s,MS4.5
KKN Kakani 50.91 309 *e*P **P 01 21 50.7 0.0**
comp=Z,31nm,0.8s,mb5.3
KKN Kakani 50.91 309 *e*P **P 01 21 50.7 0.0**
KKN pmax pmax
comp=Z,31nm,0.8s,mb5.3
DMN Daman 50.96 309 *e*P **P 01 21 51.2 +0.2**
comp=Z,24nm,0.5s,mb5.4
HABR Khabarovsk 50.99 6 P **P 01 21 51.6 +0.8**
HABR *e**PP pP 01 22 03.8 +0.8
HABR *e* 01 23 05.7
HABR S **S 01 29 06.1 +1.3**
HABR *e**SS sS 01 29 27.1 +2.1
HABR *e* 01 31 36.1
HABR *e*SS SS 01 32 40.3 -0.1
HABR *e*SSS 01 34 17.1
HABR pmax pmax
comp=Z,50nm,1.0s,mb5.4
HABR MLR MLR
comp=Z,264nm,17.0s,MS4.3
MSVF Nonsavu 51.33 111 *e*P **P 01 21 57.4 +3.4**
comp=Z,589nm,3.0s
KLR Kul'dur 51.48 3 *e*P **P 01 21 55.7 +1.2**
KLR *e*S **S 01 29 07.0 -4.6**
KLR *e*SSS 01 34 27.5
GKN Gorkha 51.51 309 *e*P **P 01 21 55.1 -0.1**
comp=Z,69nm,0.9s,mb5.6
TRD Trivandrum 52.10 283 *e*PKP **P 01 21 56.4 -3.4**
TRD AMb AMB 01 22 01.5
comp=Z,68nm,0.9s,mb5.6
KOLN Koldanda 52.21 308 *e*P **P 01 22 00.7 +0.3**
comp=Z,87nm,0.7s,mb5.8
DANN Dangsing 52.35 309 *e*P **P 01 22 01.1 -0.4**
comp=Z,71nm,0.6s,mb5.8
HYB Hyderabad 52.62 294 *i*P **P 01 22 03.0 -0.6**
ULN Ulaanbaatar 53.29 342 *e*P **P 01 22 08.4 +0.5**
comp=Z,26nm,0.7s,mb5.3
ULN *e* pP 01 22 18.8 -1.4
ULN Ulaanbaatar 53.29 342 *e*P **P 01 22 08.4 +0.4**
ULN *e* pP 01 22 18.8 -1.4
ULN pmax pmax
comp=Z,26nm,0.7s,mb5.3
ULN Ulaanbaatar 53.29 342 P **P 01 22 08.1 +0.1**
comp=Z,564nmcomp=Z,45nm,0.8s,mb5.5
ULN Ulaanbaatar 53.29 342 P **P 01 22 07.7 -0.2**
SNR=21
NGP Nagpur 53.35 299 *ex* **P 01 22 13.1 +4.1**
SONM Songino Array 53.46 342 P **P 01 22 09.2 0.0**
comp=Z,11nm,0.8s,mb4.8,baz=152,slow=8.4,SNR=28
SONM LR LR 01 48 16.6
comp=Z,239nm,19.1s,MS4.3,baz=151,slow=40
SONM Songino Array 53.46 342 P **P 01 22 09.2 0.0**
LATR Latur 54.73 294 *ex* **P 01 22 24.4 +5.4**
BHPL Bhopal 55.48 300 *e*PKP **P 01 22 23.0 -1.5**
BHPL AMb AMB 01 22 24.6
comp=Z,26nm,1.4s,mb5.1
BHPL *ex* x 01 24 07.4
CIT Chita 55.56 349 *e*P pP 01 22 34.7 -1.9
CIT *e* 01 23 26.7
DGAR Diego Garcia 55.62 263 *c i*P **P 01 22 25.3 -0.3**
RPZ Rata Peaks 56.07 143 *e*P **P 01 22 30.1 +1.9**
comp=Z,101nm,1.2s,mb5.7
JOSI Joshimath 56.62 309 *e*PKP **P 01 22 32.2 -0.2**
JOSI AMb AMB 01 22 33.4
comp=Z,226nm,1.0s,mb6.2
ZAK Zakamensk 56.68 341 *e*P **P 01 22 31.6 -0.8**
ZAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
URZ Urewera 57.25 135 *e*P **P 01 22 37.5 +0.7**
comp=Z,56nm,1.4s,mb5.4
SONA Sohna 57.62 306 *e*PKP **P 01 22 38.4 -1.2**
SONA AMb AMB 01 22 39.2
comp=Z,28nm,0.8s,mb5.3
NDI New Delhi 57.68 306 *ex* **P 01 22 36.0 -4.0**
DDI Dehra Dun 57.69 308 *ex* **P 01 22 37.0 -3.0**
KLP Kalpa 58.06 310 *e*PKP **P 01 22 42.5 -0.1**
WMQ Urumqi 58.49 327 P **P 01 22 46.0 +0.7**
WMQ pP pP 01 22 59.0 +1.4
WMQ sP sP 01 23 04.0 +1.4
WMQ PP PP 01 24 57.0 +1.9
WMQ S **S 01 30 44.0 -1.7**
WMQ ScS ScS 01 32 28.0 -3.6
WMQ pmax pmax
comp=Z,32nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,110nm,5.0s
WMQ LR LR
comp=N,2μm,18.0s,MS5.2
WMQ LR LR
comp=E,690nm,18.0s,MS5.2
WMQ LR LR
comp=Z,880nm,18.0s,MS4.9
MOY Mondy 58.53 341 *e*P **P 01 22 45.8 +0.4**
MOY pmax pmax
comp=Z,43nm,2.3s,mb5.1
KHET Khetri 58.59 305 *e*PKP **P 01 22 45.4 -0.9**
SMLA Simla 58.72 309 *e*PKP **P 01 22 45.9 -1.3**
SMLA AMb AMB 01 22 47.2
SMLA *ex* x 01 25 05.2
SDNR Sundarnagar 59.03 309 *e*PKP **P 01 22 49.5 +0.2**
PETK Petropavlovsk- 60.59 20 P **P 01 23 00.9 +1.4**
comp=Z,5.4nm,0.7s,mb4.8,baz=192,slow=4.6,SNR=8.3
PETK LR LR 01 48 09.1
comp=Z,156nm,18.5s,MS4.2,baz=313,slow=35
PETK Petropavlovsk- 60.59 20 P **P 01 23 00.9 +1.3**
PET Petropavlovsk 60.85 21 *e*P **P 01 23 04.6 +3.2**
comp=Z,55nm,1.1s,mb5.6
PET Petropavlovsk 60.85 21 *e*P **P 01 23 05.0 +3.6**
PET *e*S **S 01 31 19.5 +3.7**
PET pmax pmax
comp=Z,200nm,14.7s
PET pmax pmax
comp=Z,49nm,1.0s,mb5.6
PET MLR MLR
comp=Z,300nm,19.0s,MS4.5
BOD Bodaibo 61.04 351 *e*P **P 01 23 02.4 -0.2**
BOD *e* pP 01 23 13.3 -1.7
BOD pmax pmax
comp=Z,11nm,0.9s,mb5.0
BOD pmax pmax
comp=Z,24nm,1.6s,mb5.1
MK31 Makanchi Array 63.32 327 *e*P **P 01 23 17.3 -0.7**
MK31 Makanchi Array 63.32 327 *c e*P **P 01 23 17.3 -0.8**
MK31 pmax pmax
comp=Z,13nm,0.6s,mb5.2
MKAR Makanchi Array 63.32 327 P **P 01 23 17.4 -0.7**
comp=Z,8.9nm,0.7s,mb5.0,baz=124,slow=7.8,SNR=79
MKAR LR LR 01 52 56.7
comp=Z,316nm,19.7s,MS4.5,baz=230,slow=38
MKAR Makanchi Array 63.32 327 P **P 01 23 17.4 -0.7**
KSH Kashi 63.33 317 *e*P **P 01 23 18.6 +0.3**
KSH *e*pP pP 01 23 31.5 +0.7
KSH *e*sP sP 01 23 36.8 +1.1
KSH *e*PcP PcP 01 23 56.0 +0.9
KSH *e*PP PP 01 25 38.9 +0.8
KSH *e*ScP ScP 01 27 52.9 -1.4
KSH *e*PcS PcS 01 27 58.0 -0.7
KSH *e*S **S 01 31 43.4 -4.3**
KSH *e*sS sS 01 32 05.6 -2.8
KSH *e*ScS ScS 01 33 03.6 -4.5
KSH pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
KSH pmax pmax
comp=Z,350nm,4.8s
KSH LR LR
comp=N,370nm,6.1s
KSH LR LR
comp=E,290nm,4.8s
KSH LR LR
comp=Z,860nm,16.6s,MS5.0
YAK Yakutsk 64.22 1 *e*P **P 01 23 24.1 +0.4**
comp=Z,93nm,0.6s,mb6.0
YAK Yakutsk 64.22 1 *e*P **P 01 23 25.6 +1.9**
YAK *e**PP pP 01 23 36.1 -0.1
YAK *e* 01 23 57.5
YAK *e* 01 25 46.1
YAK *e*S **S 01 32 00.2 +2.3**
YAK *e* 01 33 19.1
YAK *e*SS SS 01 36 13.6 +5.5
YAK pmax pmax
comp=Z,18nm,1.1s,mb5.0
YAK pmax pmax
comp=E,7.0nm,0.8s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=N,3.0nm,0.6s
YAK pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
YAK pmax pmax
comp=E,6.0nm,0.6s
YAK smax
comp=N,106nm,3.0s
YAK smax
comp=E,219nm,5.4s
YAK MLR MLR
comp=Z,582nm,26.0s,MS4.7
YAK MLR MLR
comp=N,474nm,22.0s,MS4.6
YAK MLR MLR
comp=E,203nm,27.0s,MS4.6
CASY Casey 64.99 188 ⇓ *i*P **P 01 23 27.0 -1.7**
CASY Casey 64.99 188 *e*P **P 01 23 27.0 -1.7**
comp=E,21nm,1.1s,mb5.1
TKM2 Tokmak 2 65.21 320 P **P 01 23 30.1 -0.5**
TKM2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
AAK Ala-Archa 65.79 319 *e*P **P 01 23 34.2 0.0**
comp=Z,11nm,0.9s,mb4.9
AAK Ala-Archa 65.79 319 ⇓ *i*P **P 01 23 34.6 +0.3**
AAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
AAK MLR MLR
comp=Z,407nm,26.0s,MS4.5
AAK Ala-Archa 65.79 319 P **P 01 23 35.0 +0.7**
comp=Z,3.8nm,1.6s,mb4.2
AAK Ala-Archa 65.79 319 P **P 01 23 35.4 +1.1**
SNR=6.9
FRU Bishkek 65.80 320 *e*P **P 01 23 42.0 +7.6**
FRU MLR MLR
comp=E,1μm,20.0s
KBL Kabul 66.34 309 *e*P **P 01 23 37.3 -0.7**
comp=E,20nm,1.1s,mb5.1
KBL *e* pP 01 23 47.1 -3.4
KBL Kabul 66.34 309 *e*P **P 01 23 37.3 -0.7**
KBL *e* pP 01 23 47.1 -3.4
KBL pmax pmax
comp=Z,20nm,1.1s,mb5.1
ZAA0 Zalesovo Array 66.60 334 *e*P **P 01 23 37.9 -1.4**
ZALV Zalesovo Beam 66.60 334 P **P 01 23 37.9 -1.4**
comp=Z,2.4nm,0.6s,mb4.4,baz=110,slow=6.6,SNR=10
ZALV LR LR 01 54 10.4
comp=Z,172nm,20.8s,MS4.2,baz=267,slow=37
ZALV Zalesovo Beam 66.60 334 P **P 01 23 37.9 -1.3**
KURK Kurchatov 67.58 328 *e*P **P 01 23 44.5 -1.0**
comp=Z,31nm,0.7s,mb5.4
KURK Kurchatov 67.58 328 *c i*P **P 01 23 44.6 -1.0**
KURK pmax pmax
comp=Z,20nm,1.0s,mb5.1
KURK MLR MLR
comp=Z,245nm,23.0s,MS4.4
KURK Kurchatov 67.58 328 P **P 01 23 45.1 -0.4**
SNR=17
NVS Novosibirsk 67.89 334 *e*P **P 01 23 45.8 -1.6**
NVS *e*S S 01 32 40.3 -2.4
NVS pmax pmax
comp=Z,101nm,2.6s,mb5.4
NVS pmax pmax
comp=N,42nm,2.4s
NVS pmax pmax
comp=E,39nm,2.2s
NVS smax
comp=E,23nm,2.1s
MIR Mirnyy 68.61 194 ⇑ *i*P **P 01 23 50.8 -0.9**
MIR pmax pmax
comp=Z,70nm,1.8s,mb5.3
KK31 Karatay Array 68.61 318 *c e*P **P 01 23 51.4 -0.8**
KK31 pmax pmax
comp=Z,21nm,1.1s,mb5.0
VOSK Vostochnaya 72.68 328 P **P 01 24 15.4 -1.3**
VOSK pmax pmax
comp=Z,13nm,0.7s,mb5.0
BRVK Borovoye 73.21 328 *e*P **P 01 24 19.1 -0.8**
comp=Z,19nm,0.8s,mb5.1
BRVK *e* pP 01 24 31.5 -1.1
BRVK Borovoye 73.21 328 *c i*P **P 01 24 19.0 -0.9**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
BRVK MLR MLR
comp=Z,261nm,20.0s,MS4.5
BRVK Borovoye 73.21 328 P **P 01 24 19.6 -0.3**
SNR=7.0
IKOO Kooshah 73.74 305 *e*P **P 01 24 23.3 -0.2**
IMYA Miami 73.84 309 *e*P **P 01 24 23.9 0.0**
TIXI Tiksi 73.88 0 *e*P **P 01 24 23.1 -0.4**
comp=Z,18nm,0.5s,mb5.3
TIXI *e* pP 01 24 33.9 -2.3
TIXI Tiksi 73.88 0 *e*P **P 01 24 23.0 -0.4**
TIXI *e*S S 01 33 52.3 +0.6
TIXI pmax pmax
comp=Z,29nm,1.3s,mb5.0
TIXI MLR MLR
comp=Z,826nm,18.0s,MS5.1
IPAY Payeh 74.73 309 *e*P **P 01 24 29.5 +0.4**
BILL Bilibino 75.08 14 ⇓ *e*P **P 01 24 26.4 -4.1**
BILL *e* 01 27 25.3
BILL *e*S S 01 34 05.8 +0.6
BILL pmax pmax
comp=Z,24nm,2.0s,mb4.8
IKRD Kardeh 75.18 309 *e*P **P 01 24 28.1 -3.6**
IBAF Bafgh 76.41 303 *e*P **P 01 24 37.8 -1.1**
AB31 Akbulak array 77.71 322 *c e*P **P 01 24 44.3 -1.4**
AB31 pmax pmax
comp=Z,13nm,0.7s,mb5.0
SBA Scott Base 78.16 172 *e*P **P 01 24 48.6 +0.8**
comp=Z,14nm,0.9s,mb4.9
SBA *e* pP 01 24 59.0 -1.5
SBA Scott Base 78.16 172 *e*P **P 01 24 48.6 +0.8**
SBA *e* pP 01 24 59.0 -1.6
SBA pmax pmax
comp=Z,14nm,0.9s,mb4.9
IPAR Pars 78.23 301 *e*P **P 01 24 48.5 -0.6**
MAW Mawson 78.56 201 P **P 01 24 49.2 -0.9**
comp=Z,1.8nm,0.6s,mb4.2,baz=48,slow=4.1,SNR=4.4
MAW LR LR 01 54 28.1
comp=Z,281nm,20.9s,MS4.6,baz=60,slow=32
MAW Mawson 78.56 201 *e*P **P 01 24 48.5 -1.6**
comp=Z,8.3nm,0.9s,mb4.7
MAW Mawson 78.56 201 *e*P **P 01 24 49.3 -0.8**
comp=Z,3.3nm,1.0s,mb4.2
MAW Mawson 78.56 201 *e*P **P 01 24 49.3 -0.8**
MAW pmax pmax
comp=Z,3.0nm,1.0s
AKTK Aktyubinsk 79.25 322 P **P 01 24 53.2 -1.0**
AKTO Aktyubinsk 79.25 322 P **P 01 24 53.2 -1.0**
comp=Z,2.9nm,0.6s,mb4.4,baz=108,slow=7.9,SNR=16
AKTO Aktyubinsk 79.25 322 P **P 01 24 53.3 -1.0**
IKLH Kolahrood 80.04 304 *e*P **P 01 24 59.3 +0.4**
IPIR Pirpir 80.51 304 *e*P **P 01 25 01.0 -0.5**
ARU Arti 80.78 328 *d i*P **P 01 25 04.1 +1.7**
ARU 01 28 11.2
ARU S S 01 35 11.1 +4.0
ARU SS SS 01 40 19.5 -1.7
ARU pmax pmax
comp=Z,14nm,2.5s,mb4.5
SDPT Sand Point 81.48 33 *e*P **P 01 25 07.0 +0.8**
comp=Z,54nm,0.8s,mb5.5
PPT Papeete 82.00 107 *e*LR LR 01 50 58.0
comp=Z,564nm,24.5s
PPT Papeete 82.00 107 LR LR 01 57 54.5
comp=Z,328nm,20.8s,MS4.7,baz=17,slow=33
TBI Tubuai 82.15 113 *e*S S 01 35 22.9 +0.3
comp=Z,86nm,25.2s
TBI *e*LR LR 01 51 02.7
comp=Z,533nm,27.8s
SOKR Solikamsk 82.65 331 ⇑ *i*P pP 01 25 23.2 -1.8
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.1
SOKR MLR MLR
comp=Z,300nm,23.0s,MS4.6
IKOM Komasi 83.52 305 *e*P **P 01 25 15.9 -1.3**
ISRB Sarab 83.87 308 *e*P **P 01 25 19.3 +0.4**
IGHG Ghaleghazi 84.31 305 *e*P **P 01 25 19.4 -1.9**
MAK Makhachkala 84.70 313 *e*P **P 01 25 21.7 -1.3**
MAK *i**PP pP 01 25 36.3 +0.3
MAK *e* 01 28 39.5
MAK *e*S S 01 35 40.5 -7.1
MAK pmax pmax
comp=Z,168nm,1.4s,mb6.0
ISHB Shabestar 85.53 309 *e*P **P 01 25 26.0 -1.3**
TTA Tatalina 85.70 26 *e*P **P 01 25 29.9 +2.3**
comp=Z,10.0nm,0.9s,mb5.0
TTA *e* pP 01 25 40.8 +0.3
TTA Tatalina 85.70 26 *e*P **P 01 25 29.9 +2.3**
TTA *e* pP 01 25 40.8 +0.3
TTA pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
ATD Arta Tunnel 85.80 282 P **P 01 25 29.6 +0.4**
comp=Z,8.3nm,0.6s,mb5.2,baz=261,slow=21,SNR=11
KDAK Kodiak Island 86.30 32 *e*P **P 01 25 32.0 +1.3**
comp=Z,20nm,0.8s,mb5.4
KDAK Kodiak Island 86.30 32 *c e*P **P 01 25 33.7 +3.0**
GNI Garni 86.41 310 ⇑ *i*P **P 01 25 29.8 -1.8**
GNI pmax pmax
comp=Z,6.0nm,1.3s
SYO Syowa Base 87.27 201 ⇓ *e*P **P 01 25 33.0 -2.2**
SYO Syowa Base 87.27 201 ⇓ *e*P **P 01 25 51.6 +16**
ZEI Tsey 87.31 313 *e*P **P 01 25 35.6 -0.3**
ZEI pmax pmax
comp=Z,20nm,1.3s,mb5.2
QSPA South Pole Qui 87.59 180 *e*P **P 01 25 36.4 -0.2**
comp=Z,30nm,1.1s,mb5.4
KIV Kislovodsk 88.30 314 *e*P **P 01 25 41.4 +0.8**
KIV *e* 01 36 04.8
KIV *e*SS SS 01 42 17.6 +4.9
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
PRGR Permogore 88.47 332 *e*P **P 01 25 48.5 +7.5**
PRGR pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
ILAR Eielson Array 89.99 25 P **P 01 25 47.2 -0.9**
comp=Z,0.8nm,0.8s,mb4.1,baz=262,slow=5.0,SNR=8.7
ILAR PP PP 01 29 25.5 +4.1
comp=Z,1.1nm,0.9s,baz=258,slow=6.3,SNR=5.8
ILAR PKKP PKKPbc 01 43 19.6 -2.5
comp=Z,0.4nm,0.9s,baz=215,slow=1.2,SNR=4.8
ILAR Eielson Array 89.99 25 P **P 01 25 47.2 -0.9**
ILAR PP PP 01 29 25.5 +4.1
ILAR PKKP PKKPbc 01 43 19.6 -2.5
ILAR Eielson Array 89.99 25 P **P 01 25 47.2 -0.9**
ILAR 01 29 25.5
KMBO Kilima Mbogo 90.78 269 P **P 01 25 53.5 +0.5**
comp=Z,3.2nm,0.8s,mb4.7,baz=0.2,slow=24,SNR=9.3
KMBO Kilima Mbogo 90.78 269 *e*P **P 01 25 53.5 +0.5**
comp=Z,49nm,1.9s,mb5.5
KMBO Kilima Mbogo 90.78 269 *e*P **P 01 25 53.5 +0.5**
KMBO pmax pmax
comp=Z,49nm,1.9s
KLMR Klimovskoe 91.34 331 *e*P pP 01 26 05.6 -1.8
KLMR pmax pmax
comp=Z,16nm,1.4s,mb5.2
ANN Anapa 92.11 315 *e*P **P 01 25 48.0 -10**
ANN pmax pmax
comp=Z,44nm,1.5s,mb5.6
EGAK Eagle 92.44 25 *e*P **P 01 26 00.7 +1.3**
comp=Z,5.7nm,0.7s,mb5.0
EGAK *e* pP 01 26 10.8 -1.7
OBN Obninsk 92.78 325 ⇑ *e*P **P 01 26 02.1 +0.8**
OBN *e* 01 29 43.8
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
OBN MLR MLR
comp=Z,400nm,24.0s,MS4.8
DAWY Dawson 93.22 26 *e*P **P 01 26 04.6 +1.5**
BRTR Keskin Array B 94.92 309 P **P 01 26 13.5 +2.1**
comp=Z,0.8nm,0.8s,mb4.2,baz=53,slow=5.6,SNR=2.8
BRTR Keskin Array B 94.92 309 P **P 01 26 13.5 +2.1**
RKT Rikitea 95.47 113 *e*LR LR 01 57 16.9
comp=Z,332nm,27.8s
ARCES ARCESS Array B 96.59 340 P **P 01 26 20.4 +2.0**
comp=Z,1.1nm,0.6s,mb4.5,baz=96,slow=3.8,SNR=7.2
ARCES PKKPbc PKKPbc 01 43 10.9 +5.9
comp=Z,1.9nm,0.9s,baz=306,slow=4.2,SNR=4.4
ARCES LR LR 02 16 21.6
comp=Z,228nm,21.6s,MS4.6,baz=259,slow=40
ARCES ARCESS Array B 96.59 340 P **P 01 26 20.4 +2.0**
AKASG Malin Array Be 97.43 321 LR LR 02 16 48.7
comp=Z,217nm,21.7s,MS4.6,baz=60,slow=39
FINES FINESS Array B 97.80 332 P **P 01 26 22.7 -1.3**
comp=Z,1.0nm,0.7s,mb4.5,baz=188,slow=5.6,SNR=3.7
FINES LR LR 02 17 05.5
comp=Z,315nm,20.2s,MS4.8,baz=227,slow=39
FINES FINESS Array B 97.80 332 P **P 01 26 22.7 -1.3**
BOSA Boshof 100.11 241 P Pdif 01 26 34.6 +0.1
comp=Z,5.0nm,0.9s,baz=111,slow=10,SNR=5.9
BOSA LR LR 02 08 56.3
comp=Z,315nm,18.7s,MS4.8,baz=166,slow=34
BOSA Boshof 100.11 241 P Pdif 01 26 34.6 +0.1
NB2 NORSAR Subarra 104.80 333 P Pdif 01 27 06.5 +11
comp=Z,1.5nm,0.8s,baz=68,slow=4.4
NB2 NORSAR Subarra 104.80 333 P Pdif 01 27 06.5 +11
NOA NORSAR Array B 104.80 333 Pdiff Pdif 01 27 03.9 +8.5
comp=Z,0.9nm,0.7s,baz=69,slow=4.5,SNR=6.4
NOA NORSAR Array B 104.80 333 P Pdif 01 27 03.9 +8.6
DPC Dobruska-Polom 105.58 322 AMS AMS 02 16 50.0
comp=Z,300nm,19.7s
TREC Trest 106.39 321 AMS AMS 02 24 50.0
comp=Z,300nm,23.0s
PVCC Panska Ves 106.61 322 AMS AMS 02 26 00.0
comp=Z,200nm,17.3s
PRU Pruhonice 106.78 322 AMS AMS 02 17 20.0
comp=Z,300nm,21.7s
CLL Collm 107.32 323 *e*PP PP 01 31 27.0 -7.0
CLL *e*PPS 01 41 50.0
CLL *e*SS SS 01 46 57.0 +18
CLL *e*SSS 01 50 38.0
CLL *e*SSSS 01 54 18.0
CLL *e* 01 56 44.0
KHC Kasperske Hory 107.64 321 AMS AMS 02 17 50.0
comp=Z,200nm,16.9s
GERES GERESS Array B 107.65 321 PKiKP PKiKP 01 31 17.0 +1.0
comp=Z,0.9nm,0.6s,baz=83,slow=4.2,SNR=6.7
WTTA Wattenberg 109.45 320 ⇑ *i*PKiKP PKiKP 01 31 20.0 +0.7
comp=Z,7.0nm,0.6s
MOTA Moosalm 109.77 320 ⇑ *i*PKiKP PKiKP 01 31 20.9 +0.9
comp=Z,2.6nm,0.7s
NVAR Mina Array Bea 109.86 50 PKiKP PKiKP 01 31 22.5 +2.1
comp=Z,0.4nm,0.6s,baz=264,slow=0.9,SNR=3.4
NVAR PP PP 01 32 06.1 +13
comp=Z,0.5nm,0.8s,baz=269,slow=9.2,SNR=4.1
NVAR PKKPbc PKKPbc 01 42 25.0 +0.5
comp=Z,0.4nm,0.7s,baz=134,slow=2.6,SNR=3.8
NVAR Mina Array Bea 109.86 50 PKPdf PKiKP 01 31 22.5 +2.1
NVAR PP PP 01 32 06.1 +13
NVAR PKKPbc PKKPbc 01 42 25.0 +0.5
REDW Red Top Meadow 113.83 43 *e*PKPdf PKiKP 01 31 29.6 +1.8
PDAR Pinedale Array 114.93 43 PKP PKiKP 01 31 30.2 +0.2
comp=Z,1.0nm,1.0s,baz=180,slow=0.9,SNR=6.4
PDAR PKKPbc PKKPbc 01 42 06.8 -1.1
comp=Z,1.0nm,0.8s,baz=122,slow=5.4,SNR=6.8
ULM Lac du Bonnet 119.55 31 PKP PKPdf 01 31 38.7 +0.1
comp=Z,4.4nm,0.6s,baz=285,slow=3.9,SNR=6.3
ULM Lac du Bonnet 119.55 31 PKP PKPdf 01 31 38.7 +0.1
ANMO Albuquerque 119.96 51 *e*PKPdf PKPdf 01 31 42.5 +2.6
ANMO Albuquerque 119.96 51 *e*PKiKP PKPdf 01 31 42.5 +2.6
BNM Barren Site 120.10 51 *e*PKPdf PKPdf 01 31 42.5 +2.4
MNTX Cornudas Mount 121.90 54 *e*PKPdf PKPdf 01 31 45.4 +1.7
ESDC Sonseca Array 122.85 317 PKP PKPdf 01 31 45.6 +0.3
comp=Z,0.8nm,0.7s,baz=8.7,slow=5.8,SNR=5.2
ECSD EROS Data Cent 122.89 37 *e*PKPdf PKPdf 01 31 46.2 +1.0
ECSD *e* 01 31 56.8
MVO Moncorvo 124.14 320 *e*PKPdf PKPdf 01 31 49.7 +2.0
PVRL Vila Real 124.52 320 *e*PKPdf PKPdf 01 31 50.2 +1.7
PCBR Castelo Branco 125.12 319 *e*PKPdf PKPdf 01 31 51.6 +1.9
PMRV Marv??o 125.28 318 *e*PKPdf PKPdf 01 31 51.6 +1.6
PBAR Barrancos 125.67 317 *e*PKPdf PKPdf 01 31 52.6 +1.8
TORD Torodi Ar. Bea 125.92 284 PKP PKPdf 01 31 52.7 +0.8
comp=Z,7.2nm,0.9s,baz=61,slow=2.3,SNR=32
TORD Torodi Ar. Bea 125.92 284 PKP PKPdf 01 31 52.7 +0.8
SCHQ Schefferville 126.30 11 PKP PKPdf 01 31 52.5 +1.0
comp=Z,7.0nm,1.0s,baz=247,slow=13,SNR=4.4
SCHQ Schefferville 126.30 11 PKP PKPdf 01 31 52.5 +1.0
JCT Junction City 126.81 53 *e*PKPdf PKPdf 01 31 54.9 +1.8
JCT *e* 01 32 06.0
JCT Junction City 126.81 53 *e*PKiKP PKPdf 01 31 54.9 +1.7
JCT *e* 01 32 06.0
MORF Marmelete 127.21 317 *e*PKPdf PKPdf 01 31 56.3 +2.6
OLIL Olney 131.01 38 *e*PKPdf PKPdf 01 32 02.2 +1.3
OLIL *e* 01 32 13.5
LRAL Lakeview Retre 135.16 43 *e*PKPdf PKPdf 01 32 10.6 +1.7
LCO Las Campanas 143.99 151 *e*PKPdf PKPdf 01 32 24.1 -0.9
JTS JuntasAbangare 146.26 75 *e*PKPbc PKPbc 01 32 32.3 +1.8
JTS JuntasAbangare 146.26 75 *e*PKP2 PKPab 01 32 32.3 +1.0
CPUP Villa Florida 151.00 170 PKP PKPdf 01 32 37.9 +1.1

comp=Z,2.5nm,0.8s,baz=24,slow=4.4,SNR=4.8
CPUP PKPbc PKPbc 01 32 43.7 +1.2
comp=Z,10nm,0.6s,baz=157,slow=1.7,SNR=36
CPUP Villa Florida 151.00 170 PKIKP PKPdf 01 32 37.9 +1.1
CPUP 01 32 43.7
LPAZ La Paz 155.51 140 PKP PKPdf 01 32 46.5 +3.0
comp=Z,3.6nm,1.2s,baz=184,slow=1.4,SNR=5.1
LPAZ PKPab PKPab 01 33 10.8 +1.6
comp=Z,6.3nm,1.0s,baz=38,slow=6.2,SNR=7.5
LPAZ La Paz 155.51 140 *e*PKPdf PKPdf 01 32 46.1 +2.7
LPAZ La Paz 155.51 140 PKIKP PKPdf 01 32 46.5 +3.0
LPAZ 01 33 10.8
LPAZ pmax pmax
comp=Z,4.0nm,1.2s
LPAZ pmax pmax
comp=Z,6.0nm,1.0s
SDV Santo Domingo 160.29 70 *e*PKPdf PKPdf 01 32 50.5 +1.1
BDFB Brasilia 161.70 192 PKP PKPdf 01 32 52.1 +1.2
comp=Z,1.9nm,0.5s,baz=94,slow=6.3,SNR=5.1
BDFB Brasilia 161.70 192 PKIKP PKPdf 01 32 52.1 +1.2

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*IDC **16** 01:19:58.9±0.8, 13°.40N×92°.71E, h0km, mb4.4/14, mb1 4.5/15, mb1mx4.3/25, mbtmp4.4/15, ML4.6/1, Error ellipse: s-maj=27.7km s-min=14.1km az=53.0*
*ISCJB **16** 01:19:59.4±2.2, 13°.55N±0°.05×92°.79E±0°.04, h15km±16km, mb4.3/18, Error ellipse: s-maj=9.3km s-min=6.9km az=167.7*
*NEIC **16** 01:20:00.6±0.4, 13°.49N×92°.72E, h10km, mb4.9/9, Error ellipse: s-maj=7.4km s-min=5.6km az=49.0*
*BJI **16** 01:20:02.7, 13°.44N×93°.35E, h20km, mB4.6/5, mb4.5/13*
ISC 16 01:20:03.1±2.0, 13°.58N±0°.05×92°.74E±0°.04, h24km±15km, n44, σ1§03/50, mb4.3/18, 2C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.91**	**180**	*e*PKP	**Pn**	**01 20 36.5**	**+2.3**
PBA				*e*S	**Sn**	**01 21 02.6**	**+5.2**
PBA				AML	x	01 21 12.4	
CM31	**Chiang Mai Arr**	**7.69**	**50**	*e*Pn	**Pn**	**01 21 53.9**	**+0.2**
14nm,0.4s							
CM31				*e*S	**Sn**	**01 23 19.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**7.69**	**50**	Pn	**Pn**	**01 21 53.9**	**+0.2**
2.4nm,0.3s,baz=240,slow=15,SNR=28							
CMAR				Sn	**Sn**	**01 23 19.6**	**-0.5**
2.1nm,0.3s,baz=239,slow=28,SNR=4.4							
CHTO	**Chiang Mai**	**7.91**	**48**	*e*Pn	**Pn**	**01 21 57.3**	**+0.5**
CHRT	**Chiangrai**	**9.20**	**46**	⇑P	**Pn**	**01 22 15.5**	**+1.1**
BWNR	**Bhubaneshwar**	**9.41**	**316**	*e*x	**Pn**	**01 22 12.0**	**-5.3**
BWNR				*e*x	x	01 23 17.0	
VIS	**Vishakhapatnam**	**9.95**	**296**	*e*PKP	**Pn**	**01 22 23.9**	**-0.8**
VIS				*e*S	**Sn**	**01 24 07.8**	**-7.9**
BOK	**Bokaro**	**12.05**	**328**	*e*x	**Pn**	**01 22 48.1**	**-5.4**
BOK				*e*S	**Sn**	**01 24 58.0**	**-9.3**
PALK	**Pallekele**	**13.39**	**243**	*e*Pn	**Pn**	**01 23 11.0**	**-0.8**
PALK				*e*S	**Sn**	**01 25 24.4**	**-16**
ODAN	**Odare**	**14.13**	**340**	*e*P	**Pn**	**01 23 20.7**	**-1.1**
49nm,0.3s							
TAPN	**Taplejung**	**14.49**	**342**	*e*P	**Pn**	**01 23 23.9**	**-2.8**
19nm,0.4s							
PKI	**Pulchoki**	**15.51**	**335**	*e*P	**Pn**	**01 23 40.6**	**+0.2**
51nm,0.6s							
PKIN	**Phulchoki**	**15.52**	**335**	*e*P	**Pn**	**01 23 40.5**	**0.0**
64nm,0.4s							
GUN	**Gumba**	**15.63**	**337**	*e*P	**Pn**	**01 23 40.8**	**-1.1**
18nm,0.3s							
DMN	**Daman**	**15.67**	**334**	*e*P	**Pn**	**01 23 42.9**	**+0.4**
50nm,0.5s							
KKN	**Kakani**	**15.76**	**335**	*e*P	**Pn**	**01 23 43.3**	**-0.3**
58nm,0.8s							
LSA	**Lhasa**	**16.11**	**355**	*e*Pn	**Pn**	**01 23 52.3**	**+4.2**
7.5nm,0.6s							
LSA				*e*S	**Sn**	**01 26 42.7**	**-3.4**
GKN	**Gorkha**	**16.22**	**334**	*e*P	**Pn**	**01 23 49.2**	**-0.3**
44nm,0.3s							
LATR	**Latur**	**16.28**	**289**	*e*PKP	**Pn**	**01 23 50.2**	**-0.1**
LATR				*e*x	x	01 26 37.7	
KOLN	**Koldanda**	**16.50**	**330**	*e*P	**Pn**	**01 23 53.6**	**+0.6**
52nm,0.5s							
DANN	**Dangsing**	**16.91**	**332**	*e*P	**Pn**	**01 23 57.8**	**-0.4**
30nm,0.5s							
BHPL	**Bhopal**	**17.41**	**306**	*e*PKP	**Pn**	**01 24 04.7**	**+0.2**
BHPL				AMb	AMB	01 24 12.4	
comp=Z,30nm,0.9s							
ENH	**Enshi**	**22.70**	**40**	*e*P	**P**	**01 25 02.8**	**-0.3**
comp=Z,28nm,0.8s,mb4.7							
LZH	**Lanzhou**	**24.54**	**22**	*e*P	**P**	**01 25 23.4**	**+2.5**
LZH				pP		01 25 33.8	
LZH				pmax	pmax		
comp=Z,31nm,1.0s,mb4.8							
LZH				pmax	pmax		
comp=Z,170nm,4.6s							
XAN	**Xi'an**	**25.11**	**33**	P	**P**	**01 25 25.9**	**-0.3**
XAN				pP	pP	01 25 32.5	-0.8
XAN				pmax	pmax		
comp=Z,6.0nm,1.1s,mb4.0							
XAN				pmax	pmax		
comp=Z,31nm,11.7s							
GTA	**Gaotai**	**26.48**	**12**	⇑P	**P**	**01 25 40.6**	**+2.1**
GTA				pP	pP	01 25 50.9	+5.3
GTA				sP	sP	01 25 55.0	+6.5
GTA				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.1							
MKAR	**Makanchi Array**	**34.26**	**347**	P	**P**	**01 26 48.5**	**+1.3**
comp=Z,4.1nm,0.7s,mb4.5,baz=161,slow=8.7,SNR=7.6							
SONM	**Songino Array**	**36.00**	**16**	P	**P**	**01 27 04.4**	**+2.2**
comp=Z,5.0nm,1.0s,mb4.4,baz=198,slow=8.8,SNR=10.0							
KSRS	**Korea Array**	**39.31**	**46**	P	**P**	**01 27 30.3**	**0.0**
comp=Z,3.7nm,0.7s,mb4.2,baz=243,slow=8.7,SNR=18							
ZAA0	**Zalesovo Array**	**40.76**	**353**	*e*P	**P**	**01 27 42.8**	**+0.7**
ZALV	**Zalesovo Beam**	**40.76**	**353**	P	**P**	**01 27 42.9**	**+0.8**
comp=Z,9.1nm,0.6s,mb4.6,baz=180,slow=8.4,SNR=25							
FITZ	**Fitzroy Crossi**	**45.21**	**133**	P	**P**	**01 28 17.0**	**-1.6**
comp=Z,4.9nm,0.7s,mb4.5,baz=324,slow=8.7,SNR=11							
WRA	**Warramunga Arr**	**52.77**	**128**	P	**P**	**01 29 15.3**	**-1.2**
comp=Z,6.9nm,0.6s,mb4.8,baz=310,slow=7.8,SNR=24							
WB2	**Warramunga Arr**	**52.78**	**128**	*e*P	**P**	**01 29 15.4**	**-1.2**
ASAR	**Alice Springs**	**54.68**	**132**	P	**P**	**01 29 29.6**	**-0.9**
comp=Z,2.6nm,0.4s,mb4.6,baz=309,slow=6.8,SNR=36							
BRTR	**Keskin Array B**	**57.75**	**309**	P	**P**	**01 29 52.8**	**+0.5**
comp=Z,2.0nm,0.7s,mb4.2,baz=123,slow=8.0,SNR=9.7							
STKA	**Stephens Creek**	**65.06**	**135**	P	**P**	**01 30 40.9**	**-0.9**
comp=Z,1.9nm,0.7s,mb4.2,baz=304,slow=14,SNR=3.0							
FINES	**FINESS Array B**	**67.06**	**331**	P	**P**	**01 30 54.2**	**+0.1**
comp=Z,3.8nm,0.9s,mb4.5,baz=102,slow=4.5,SNR=6.7							
ARCES	**ARCESS Array B**	**69.47**	**340**	P	**P**	**01 31 09.8**	**+0.7**
comp=Z,1.3nm,0.5s,mb4.1,baz=94,slow=7.5,SNR=14							
GERES	**GERESS Array B**	**72.70**	**317**	P	**P**	**01 31 30.3**	**+1.2**
comp=Z,1.5nm,0.7s,mb4.0,baz=86,slow=4.4,SNR=7.7							
NB2	**NORSAR Subarra**	**74.12**	**330**	P	**P**	**01 31 37.0**	**-0.2**
comp=Z,1.0nm,0.6s,mb3.9,baz=91,slow=5.9							
NOA	**NORSAR Array B**	**74.12**	**330**	P	**P**	**01 31 37.1**	**-0.1**
comp=Z,1.7nm,0.8s,mb4.0,baz=90,slow=5.7,SNR=7.0							
ILAR	**Eielson Array**	**90.00**	**22**	P	**P**	**01 32 59.9**	**-0.5**
comp=Z,0.7nm,0.6s,mb4.1,baz=304,slow=4.4,SNR=11							
NVAR	**Mina Array Bea**	**120.66**	**28**	PKP	PKPdf	01 38 54.0	+0.6
comp=Z,0.8nm,0.9s,baz=264,slow=2.7,SNR=4.7							

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*BJI **16** 01:59:53.0, 5°.70S×110°.30E, h503km, mB4.6/10, mb4.5/30*
*ISCJB **16** 01:59:56.4±0.2, 5°.84S±0°.04×110°.21E±0°.03, h573km±2km, mb4.5/55, Error ellipse: s-maj=6.8km s-min=4.3km az=21.7*
*IDC **16** 01:59:58.0±1.5, 5°.66S×110°.35E, h571km±17km, mb3.7/16, mb1 3.7/18, mb1mx3.7/22, mbtmp3.7/18, Error ellipse: s-maj=18.1km s-min=8.1km az=56.0*
*NEIC **16** 01:59:57.0±0.5, 5°.70S×110°.30E, h563km±6km, mb4.4/17, Error ellipse: s-maj=12.2km s-min=5.9km az=49.0*
*DJA **16** 01:59:58, 5°.81S×110°.24E, h558km, MLv4.6/28*
ISC 16 01:59:57.2±0.2, 5°.82S±0°.04×110°.22E±0°.03, h565km±2km, n183, σ1§04/159, mb4.5/54, 1D, Java Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRI	**Semarang**	**1.24**	**170**	P	**P**	**02 01 06.3**	**+0.7**
BJII	**Banjamegara**	**1.58**	**198**	P	**S**	**02 02 15.9**	**+13**
BJII	**Banjamegara**	**1.58**	**198**	P	**P**	**02 00 57.4**	**-9.3**
NGJI	**Ngawi**	**1.97**	**141**	P	**P**	**02 01 09.5**	**+1.3**
YOGI	**Yogyakarta**	**1.98**	**178**	P	**S**	**02 02 14.5**	**+8.5**
YOGI	**Yogyakarta**	**1.98**	**178**	P	**P**	**02 01 06.3**	**-2.0**
YOGI				S	**S**	**02 02 05.4**	**-0.6**
JCJI	**Jatiwangi**	**2.04**	**251**	P	**P**	**02 01 09.6**	**+1.1**
UGM	**Wanagama**	**2.10**	**172**	*e*P	**P**	**02 01 08.4**	**-0.4**
UGM	**Wanagama**	**2.10**	**172**	P	**S**	**02 02 09.9**	**+2.9**
UGM	**Wanagama**	**2.10**	**172**	P	**P**	**02 01 08.5**	**-0.3**
UGM				S	**S**	**02 02 06.2**	**-0.8**
SJI	**Sawahan**	**2.45**	**141**	P	**P**	**02 01 10.6**	**+0.2**
PCJI	**Pacitan**	**2.54**	**158**	P	**S**	**02 02 09.1**	**-1.8**
PCJI	**Pacitan**	**2.54**	**158**	P	**P**	**02 01 10.3**	**-0.7**
CMJI	**Cimerak**	**2.62**	**222**	P	**P**	**02 01 11.0**	**-0.4**
PWJI	**Pagerwojo**	**2.70**	**144**	P	**S**	**02 02 13.3**	**+0.9**
PWJI	**Pagerwojo**	**2.70**	**144**	P	**P**	**02 01 11.2**	**-0.6**
LEM	**Lembang**	**2.77**	**249**	P	**S**	**02 02 14.4**	**+1.3**
LEM	**Lembang**	**2.77**	**249**	P	**P**	**02 01 13.0**	**+0.8**
CISI	**Cisompet, Garu**	**2.94**	**234**	P	**P**	**02 01 12.6**	**-0.6**
KRKI	**Karangkates**	**3.21**	**136**	P	**P**	**02 01 13.9**	**-0.9**
CBJI	**Citeko**	**3.40**	**260**	P	**P**	**02 01 16.5**	**+0.5**
PBKI	**Pangkalan Bun**	**3.42**	**25**	P	**P**	**02 01 16.2**	**0.0**
DBJI	**Dramaga**	**3.52**	**258**	P	**S**	**02 02 20.1**	**-1.6**
DBJI	**Dramaga**	**3.52**	**258**	P	**P**	**02 01 16.9**	**+0.1**
SKJI	**Sukabumi**	**3.82**	**252**	P	**S**	**02 02 21.4**	**-4.0**
SKJI	**Sukabumi**	**3.82**	**252**	P	**P**	**02 01 19.4**	**+0.5**
KMMI	**Kalianget**	**3.92**	**108**	P	**P**	**02 01 20.2**	**+0.6**
TPI	**Tanjungpandan**	**3.97**	**320**	P	**P**	**02 01 20.3**	**+0.3**
GMJI	**Gumukmas**	**4.03**	**127**	P	**P**	**02 01 19.6**	**-0.8**
SBJI	**Serang**	**4.07**	**266**	P	**S**	**02 02 27.6**	**-1.2**
CGJI	**Cibinong**	**4.56**	**260**	P	**P**	**02 01 23.7**	**-0.8**
JAGI	**Jajag, Banyuwa**	**4.71**	**124**	P	**P**	**02 01 24.8**	**-0.8**
NBBI	**Negara**	**5.05**	**120**	P	**P**	**02 01 28.6**	**+0.2**
1.5nm6μm326nm,0.9s							
SRBI	**Singaraja**	**5.45**	**115**	P	**P**	**02 01 32.2**	**+0.4**
0.7nm211nm,1.1s							
PPBI	**Pangkal Pinang**	**5.46**	**312**	P	**P**	**02 01 32.4**	**+0.5**
0.6nm114nm,0.8s							
KLSI		**5.58**	**281**	P	**P**	**02 01 33.8**	**+0.9**
48nm,1.2s							
KASI	**Kota Agung**	**5.70**	**273**	P	**S**	**02 02 48.5**	**-4.5**
1.8nm6μm533nm,0.9s							
KASI	**Kota Agung**	**5.70**	**273**	P	**P**	**02 01 33.5**	**-0.5**
1.8nm6μm115nm,0.9s							
IGBI	**Denpasar**	**5.73**	**122**	P	**S**	**02 03 06.3**	**+13**
KHKI	**Kahang-Kahang**	**5.92**	**116**	P	**P**	**02 01 35.7**	**-0.2**
0.3nm72nm,1.4s							
STKI	**Sintang**	**5.98**	**12**	P	**P**	**02 01 37.0**	**+0.5**
2.1nm177nm,0.9s							
MDSI	**Maura Dua**	**6.16**	**282**	P	**S**	**02 03 02.1**	**+1.7**
0.2nm70nm,0.9s							
MDSI	**Maura Dua**	**6.16**	**282**	P	**P**	**02 01 38.2**	**+0.2**
0.2nm26nm,1.1s							
LWLI	**Liwa**	**6.18**	**277**	P	**S**	**02 02 59.5**	**-1.3**
2.8nm9μm909nm,0.7s							
MTNI	**Mataram**	**6.54**	**116**	P	**P**	**02 01 40.7**	**-0.8**
1.6nm83nm,0.7s							
KSM	**Kuching**	**7.25**	**1**	P	**P**	**02 01 48.1**	**-0.1**
KSM	**Kuching**	**7.25**	**1**	P	**P**	**02 01 47.9**	**-0.3**
0.3nm1μm96nm,1.4s							
MNAI	**Manna**	**7.37**	**281**	P	**S**	**02 03 23.3**	**+2.0**
KSI	**Kapahiang**	**7.89**	**285**	P	**S**	**02 03 28.9**	**-1.6**
1.7nm5μm556nm,0.8s							
KSI	**Kapahiang**	**7.89**	**285**	P	**P**	**02 01 58.7**	**+4.2**
1.7nm150nm,0.3s							
SBUM	**Sibu**	**8.46**	**14**	P	**P**	**02 02 00.2**	**+0.3**
SBUM	**Sibu**	**8.46**	**14**	P	**P**	**02 01 59.9**	**-0.1**
1.0nm3μm315nm,0.8s							
BMNI	**Bima**	**8.84**	**108**	P	**S**	**02 03 44.1**	**-3.4**
BTM	**Bintulu**	**9.41**	**18**	P	**P**	**02 02 09.7**	**+0.2**
KAPI	**Kappang**	**9.53**	**86**	P	**P**	**02 02 08.8**	**-1.9**
2.1nm,0.3s,baz=284,slow=11,SNR=6.1							
KAPI	**Kappang**	**9.53**	**86**	P	**P**	**02 02 08.8**	**-1.9**
MYKOM	**Kota Tinggi**	**9.88**	**320**	P	**P**	**02 02 16.5**	**+2.3**
TTSI	**Tana Toraja**	**9.96**	**74**	P	**P**	**02 02 16.3**	**+1.2**
1μm29nm,1.3s							
MSSI	**Masamba**	**10.59**	**73**	P	**P**	**02 02 22.9**	**+1.4**
249nm,0.9s							
FRIM	**Kepong**	**12.43**	**316**	P	**P**	**02 02 43.5**	**+3.2**
KDI	**Kendari**	**12.50**	**82**	P	**P**	**02 02 42.3**	**+1.3**
13nm,1.0s							
TSM	**Tawau**	**12.63**	**37**	P	**P**	**02 02 42.3**	**0.0**
KTGM	**Kuala Trenggan**	**13.14**	**327**	P	**P**	**02 02 51.0**	**+3.4**
KKM	**Kota Kinabalu**	**13.22**	**27**	P	**P**	**02 02 47.0**	**-1.4**
KKM	**Kota Kinabalu**	**13.22**	**27**	P	**P**	**02 02 47.0**	**-1.4**
1μm116nm,1.1s							
SDKM	**Sandakan**	**13.35**	**32**	P	**P**	**02 02 47.6**	**-2.1**
LUWI	**Luwuk**	**13.40**	**70**	P	**P**	**02 02 50.2**	**-0.1**
117nm,1.1s							
MYLDM	**Lahad Datu**	**13.71**	**37**	P	**P**	**02 02 54.8**	**+1.4**
MYLDM	**Lahad Datu**	**13.71**	**37**	P	**P**	**02 02 54.7**	**+1.3**
2μm146nm,1.2s							
IPM	**Ipoh**	**13.74**	**318**	P	**P**	**02 02 54.0**	**+0.2**
IPM	**Ipoh**	**13.74**	**318**	P	**P**	**02 02 54.3**	**+0.5**
48nm,0.9s							
KDM	**Kudat**	**14.27**	**28**	P	**P**	**02 02 58.1**	**-1.0**
KULM	**Kulim**	**14.59**	**319**	P	**P**	**02 03 02.0**	**-0.5**
KULM	**Kulim**	**14.59**	**319**	P	**P**	**02 03 01.8**	**-0.7**
35nm,0.7s							
TPTI		**15.84**	**304**	P	**P**	**02 03 14.4**	**-0.3**
26nm,0.9s							
MBWA	**Marble Bar**	**17.82**	**150**	P	**P**	**02 03 33.9**	**+1.1**
19nm,2.0s							
LBMI	**Labuha**	**18.00**	**74**	P	**P**	**02 03 36.6**	**+2.0**
85nm,0.9s							
TNTI	**Ternate**	**18.34**	**70**	P	**P**	**02 03 37.9**	**+0.3**
135nm,0.9s							
FITZ	**Fitzroy Crossi**	**19.39**	**130**	P	**P**	**02 03 47.4**	**+0.4**
0.3nm,0.3s,baz=319,slow=7.8,SNR=11							
FITZ	**Fitzroy Crossi**	**19.39**	**130**	*e*P	**P**	**02 03 47.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.39**	**130**	P	**P**	**02 03 48.1**	**+1.0**
KAKA	**Kakadu**	**22.97**	**109**	P	**P**	**02 04 17.8**	**-1.5**
CM31	**Chiang Mai Arr**	**26.56**	**335**	*e*P	**P**	**02 04 51.7**	**+0.7**
10nm,0.8s,mb4.5							
CMAR	**Chiang Mai Arr**	**26.56**	**335**	P	**P**	**02 04 51.7**	**+0.7**
15nm,0.8s,mb4.7,baz=171,slow=8.1,SNR=57							
CMAR				PcP	PcP	02 07 56.5	+0.1
2.4nm,0.7s,baz=198,slow=3.4,SNR=7.4							
CHTO	**Chiang Mai**	**26.88**	**336**	*e*P	**P**	**02 04 54.2**	**+0.4**
7.0nm,0.7s,mb4.4							
WRA	**Warramunga Arr**	**27.33**	**123**	P	**P**	**02 04 58.2**	**+0.5**
1.8nm,0.5s,mb3.9,baz=300,slow=9.7,SNR=9.5							
WRA				PcP	PcP	02 07 58.4	0.0
0.3nm,0.3s,baz=295,slow=2.5,SNR=8.0							
WB2	**Warramunga Arr**	**27.34**	**123**	*e*P	**P**	**02 04 58.1**	**+0.2**
ASAR	**Alice Springs**	**28.89**	**130**	P	**P**	**02 05 11.9**	**+0.7**
1.5nm,0.3s,mb4.1,baz=307,slow=7.7,SNR=25							
ASAR				PcP	PcP	02 08 02.9	+0.6
2.5nm,0.9s,baz=329,slow=1.8,SNR=16							
ASAR				S	**S**	**02 09 19.7**	**-3.0**
0.6nm,0.7s,baz=296,slow=15,SNR=4.4							
ASAR				ScP	ScP	02 10 51.5	+0.8
1.5nm,0.9s,baz=311,slow=2.3,SNR=8.0							
KMI	**Kunming**	**31.60**	**347**	P	**P**	**02 05 37.1**	**+2.5**
KMI				pmax	pmax		
comp=Z,11nm,1.2s,mb4.3							
GYA	**Guiyang**	**32.27**	**354**	*e*P	**P**	**02 05 41.4**	**+1.2**
GYA				PcP	PcP	02 08 11.0	-0.3
GYA				S	**S**	**02 10 17.5**	**+3.1**
GYA				PcS	PcS	02 11 56.3	-0.9
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.4							
CD2	**Chengdu**	**37.04**	**351**	*e*P	**P**	**02 06 19.5**	**-0.4**
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.5							
STKA	**Stephens Creek**	**39.14**	**135**	P	**P**	**02 06 38.1**	**+1.1**
comp=Z,7.3nm,0.4s,mb4.6,baz=320,slow=8.0,SNR=32							
STKA	**Stephens Creek**	**39.14**	**135**	*e*P	**P**	**02 06 37.8**	**+0.8**
comp=Z,1.5nm,0.5s,mb3.8							
ODAN	**Odare**	**39.29**	**327**	*e*P	**P**	**02 06 38.2**	**0.0**
comp=Z,111nm,0.8s,mb5.4							
TAPN	**Taplejung**	**39.51**	**328**	*e*P	**P**	**02 06 40.5**	**+0.5**
comp=Z,94nm,0.8s,mb5.4							
XAN	**Xi'an**	**39.66**	**358**	P	**P**	**02 06 40.5**	**-0.6**
XAN				pP		02 08 17.8	
XAN				S	**S**	**02 12 01.6**	**-2.7**
XAN				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.2							
LSA	**Lhasa**	**39.78**	**334**	*e*P	**P**	**02 06 43.0**	**+0.9**
comp=Z,22nm,0.6s,mb4.9							
GUN	**Gumba**	**40.94**	**326**	*e*P	**P**	**02 06 51.7**	**+0.3**
comp=Z,62nm,0.5s,mb5.4							
PKI	**Pulchoki**	**40.95**	**325**	*e*P	**P**	**02 06 51.1**	**-0.3**
comp=Z,31nm,0.9s,mb4.8							
PKIN	**Phulchoki**	**40.96**	**325**	*e*P	**P**	**02 06 51.0**	**-0.5**
comp=Z,52nm,0.7s,mb5.2							
DMN	**Daman**	**41.15**	**325**	*e*P	**P**	**02 06 52.5**	**-0.5**
comp=Z,55nm,0.6s,mb5.3							
KKN	**Kakani**	**41.19**	**325**	*e*P	**P**	**02 06 52.8**	**-0.5**
comp=Z,24nm,0.7s,mb4.8							
GKN	**Gorkha**	**41.71**	**325**	*e*P	**P**	**02 06 57.2**	**-0.3**
comp=Z,40nm,0.5s,mb5.2							
LZH	**Lanzhou**	**42.11**	**352**	*e*P	**P**	**02 07 01.6**	**+1.2**
LZH				pmax	pmax		
comp=Z,41nm,1.2s,mb4.8							
LZH				pmax	pmax		
comp=Z,120nm,4.2s							
DANN	**Dangsing**	**42.48**	**324**	*e*P	**P**	**02 07 03.2**	**-0.3**
comp=Z,86nm,0.7s,mb5.4							
BJI	**Beijing**	**45.96**	**6**	P	**P**	**02 07 29.3**	**-0.8**
BJI				pmax	pmax		
comp=Z,16nm,0.6s,mb4.7							
GTA	**Gaotai**	**46.02**	**349**	⇓P	**P**	**02 07 31.5**	**+1.0**
GTA				pmax	pmax		
comp=Z,11nm,0.9s,mb4.4							
HHC	**Hu-ho-hao-te**	**46.46**	**1**	*e*P	**P**	**02 07 36.9**	**+3.1**
HHC				PcP	PcP	02 09 00.4	+3.6
HHC				PP	PP	02 09 35.0	+3.7
HHC				ScP	ScP	02 12 02.8	+6.1
HHC				S	**S**	**02 13 46.3**	**+5.5**
HHC				ScS	ScS	02 16 30.9	+4.0
HHC				SS	SS	02 17 20.3	+3.6
HHC				pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.2							
HHC				pmax	pmax		
comp=Z,83nm,5.5s							
CN2	**Changchun**	**51.27**	**14**	*e*P	**P**	**02 08 13.8**	**+4.4**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.3							
WMQ	**Urumqi**	**53.44**	**340**	*e*P	**P**	**02 08 27.0**	**+2.2**
ULN	**Ulaanbaatar**	**53.53**	**357**	*e*P	**P**	**02 08 24.9**	**-0.4**
comp=Z,5.2nm,0.7s,mb4.0							
SONM	**Songino Array**	**53.53**	**357**	P	**P**	**02 08 25.1**	**-0.3**
comp=Z,3.5nm,0.6s,mb3.9,baz=180,slow=7.8,SNR=16							
SONM				PcP	PcP	02 09 22.9	-0.1
comp=Z,2.1nm,0.7s,baz=191,slow=3.7,SNR=6.1							
KSH	**Kashi**	**55.08**	**328**	*e*P	**P**	**02 08 35.1**	**-1.4**
KSH				*e*PcP	PcP	02 09 31.6	+2.4
KSH				*e*pP	pP	02 10 19.6	-4.9
KSH				*e*PP	PP	02 10 46.8	-1.6
KSH				*e*PcS	PcS	02 13 30.3	+0.3
KSH				*e*sS	sS	02 18 35.0	-16
KSH				pmax	pmax		
comp=Z,20nm,0.6s,mb4.5							
KBL	**Kabul**	**55.85**	**319**	*e*P	**P**	**02 08 40.7**	**-1.1**
comp=Z,10nm,0.8s,mb4.1							
TKM2	**Tokmak 2**	**57.78**	**330**	P	**P**	**02 08 54.9**	**0.0**
SNR=16							
KBK	**Karagaybulak**	**57.91**	**330**	P	**P**	**02 08 55.7**	**-0.1**
SNR=7.7							
MK31	**Makanchi Array**	**57.94**	**338**	*e*P	**P**	**02 08 55.5**	**-0.4**
MKAR	**Makanchi Array**	**57.94**	**338**	P	**P**	**02 08 55.5**	**-0.4**
comp=Z,17nm,0.5s,mb4.5,baz=151,slow=7.6,SNR=214							
MKAR				PcP	PcP	02 09 40.2	-0.1
comp=Z,2.1nm,0.7s,baz=126,slow=6.2,SNR=3.9							
MKAR	**Makanchi Array**	**57.94**	**338**	P	**P**	**02 08 55.5**	**-0.4**
MKAR				PcP	PcP	02 09 40.2	-0.1
AAK	**Ala-Archa**	**58.12**	**330**	P	**P**	**02 08 57.5**	**+0.3**
SNR=9.2							
AAK	**Ala-Archa**	**58.12**	**330**	*e*P	**P**	**02 08 57.4**	**+0.2**
comp=Z,9.1nm,0.8s,mb4.1							
AML	**Almayashu**	**58.17**	**329**	P	**P**	**02 08 57.8**	**+0.3**
SNR=36							
EKS2	**Erkin-Say**	**58.51**	**329**	P	**P**	**02 09 00.1**	**+0.3**
SNR=27							
USP	**Ospenovka**	**58.58**	**330**	P	**P**	**02 08 59.9**	**-0.4**
SNR=8.0							
KURK	**Kurchatov**	**62.55**	**338**	*e*P	**P**	**02 09 25.6**	**-0.7**
comp=Z,13nm,0.8s,mb4.4							
ZALV	**Zalesovo Beam**	**63.25**	**344**	P	**P**	**02 09 29.6**	**-1.1**
comp=Z,11nm,0.5s,mb4.5,baz=154,slow=4.7,SNR=59							
BRVK	**Borovoye**	**67.66**	**335**	*e*P	**P**	**02 09 57.4**	**-0.8**
comp=Z,5.8nm,0.6s,mb4.3							
MAW	**Mawson**	**69.43**	**198**	P	**P**	**02 10 10.4**	**+1.7**
comp=Z,1.5nm,0.7s,mb3.7,baz=34,slow=3.6,SNR=5.1							
UMR	**Umm Al-Rimmam**	**69.46**	**304**	*

GOGA	**Godfrey**	**149.74**	**23**	*e*PKPdf	PKPdf	02 18 39.4	+0.5
GOGA				*e*PKPbc	PKPbc	02 18 44.3	0.0
LPAZ	**La Paz**	**157.97**	**184**	PKPab	PKPab	02 19 30.0	+2.6
	comp=Z,1.3nm,1.0s,baz=144,slow=6.2,SNR=3.9						

IDC ***16*** *02:31:02.3±1.9, 1°.99S×128°.38E, h0km, mb3.6/2, mb1 4.0/5, mb1mx3.7/20, mbtmp3.8/5, ML3.7/3, Error ellipse: s-maj=52.1km s-min=26.1km az=66.0*
ISCJB ***16*** *02:31:10.1±1.0, 2°.41S±0°.06×127°.76E±0°.09, h73km±11km, mb3.6/2, Error ellipse: s-maj=15.4km s-min=9.2km az=177.7*
DJA ***16*** *02:31:12, 2°.36S×127°.66E, h50km, MLv3.8/4*
ISC 16 02:31:10.6±1.0, 2°.42S±0°.05×127°.82E±0°.10, h63km±13km, n8, σ0s81/12, mb3.7/2, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.08**	**222**	P	**Pn**	**02 31 30.0**	**+0.1**
NLAI				S	**Sn**	**02 31 44.3**	**+0.1**
LBMI	**Labuha**	**1.80**	**350**	P	**Pn**	**02 31 38.9**	**-0.5**
LBMI				S	**Sn**	**02 32 01.8**	**+0.5**
LUWI	**Luwuk**	**5.23**	**285**	P	**Pn**	**02 32 24.5**	**-1.8**
LUWI				S	**Sn**	**02 33 26.0**	**+0.7**
KAPI	**Kappang**	**8.45**	**252**	Pn	**Pn**	**02 33 14.9**	**+4.5**
	2.3nm,0.3s,baz=102,slow=7.0,SNR=12						
FITZ	**Fitzroy Crossi**	**15.73**	**188**	Pn	**Pn**	**02 34 53.3**	**+5.0**
	0.1nm,0.3s,baz=13,slow=15,SNR=3.3						
WRA	**Warramunga Arr**	**18.54**	**160**	P	**Pn**	**02 35 23.1**	**0.0**
	0.2nm,0.3s,baz=342,slow=12,SNR=6.0						
ASAR	**Alice Springs**	**21.92**	**165**	P	**P**	**02 36 00.0**	**+1.1**
	2.3nm,0.5s,mb3.9,baz=343,slow=11,SNR=36						
ASAR				S	**S**	**02 39 56.4**	**-1.1**
	0.3nm,0.2s,baz=356,slow=23,SNR=3.4						
MKAR	**Makanchi Array**	**63.23**	**327**	P	**P**	**02 41 32.5**	**+0.1**
	0.3nm,0.6s,mb3.6,baz=116,slow=8.2,SNR=3.8						

ISCJB ***16*** *02:46:46.2±0.9, 19°.3S±0°.1×177°.4W±0°.1, h577km±12km, mb4.2/19, Error ellipse: s-maj=23.2km s-min=11.5km az=149.4*
IDC ***16*** *02:46:46.4±1.4, 19°.29S×177°.44W, h562km±17km, mb3.5/10, mb1 3.8/12, mb1mx3.6/21, mbtmp3.6/12, Error ellipse: s-maj=22.6km s-min=11.1km az=147.0*
NEIC ***16*** *02:46:46.7±0.8, 19°.31S×177°.39W, h572km±9km, mb4.5/7, Error ellipse: s-maj=19.2km s-min=10.4km az=149.0*
ISC 16 02:46:47.0±0.9, 19°.3S±0°.1×177°.4W±0°.1, h572km±11km, n31, σ0s82/30, mb4.2/19, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.58**	**289**	*e*P	**P**	**02 48 16.4**	**+1.5**
AFI	**Afiamalu**	**7.62**	**46**	P	**P**	**02 48 40.3**	**-1.6**
	26nm,0.3s,baz=105,slow=1.7,SNR=22						
AFI	**Afiamalu**	**7.62**	**46**	*e*P	**P**	**02 48 40.1**	**-1.7**
	92nm,0.5s						
URZ	**Urewera**	**19.46**	**193**	P	**P**	**02 50 35.8**	**-1.1**
	4.2nm,0.3s,baz=351,slow=2.0,SNR=14						
CTA	**Charters Tower**	**34.17**	**262**	P	**P**	**02 52 45.5**	**-0.3**
	10nm,0.7s,mb4.5,baz=90,slow=9.4,SNR=14						
CTA	**Charters Tower**	**34.17**	**262**	*e*P	**P**	**02 52 45.7**	**0.0**
	6.5nm,0.7s,mb4.4						
CTAO	**Charters Tower**	**34.17**	**262**	*e*P	**P**	**02 52 45.3**	**-0.5**
	8.8nm,0.8s,mb4.4						
PMG	**Port Moresby**	**35.64**	**281**	*e*P	**P**	**02 52 58.6**	**+0.6**
	17nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**38.80**	**243**	P	**P**	**02 53 24.7**	**+1.1**
	8.7nm,0.4s,mb4.6,baz=90,slow=9.0,SNR=25						
STKA	**Stephens Creek**	**38.80**	**243**	*e*P	**P**	**02 53 24.7**	**+1.1**
	10nm,1.1s,mb4.3						
BBOO	**Buckleboo**	**43.57**	**242**	⇓*i*P	**P**	**02 54 01.7**	**+0.4**
	16nm,0.4s,mb4.9						
WB2	**Warramunga Arr**	**45.31**	**261**	*e*P	**P**	**02 54 14.0**	**-0.8**
WRA	**Warramunga Arr**	**45.32**	**261**	P	**P**	**02 54 14.4**	**-0.5**
	7.5nm,0.5s,mb4.5,baz=96,slow=8.2,SNR=57						
ASAR	**Alice Springs**	**45.34**	**256**	P	**P**	**02 54 15.1**	**+0.1**
	17nm,0.7s,mb4.7,baz=89,slow=7.7,SNR=207						
ASAR				PcP	PcP	02 55 42.3	0.0
	1.7nm,0.7s,baz=99,slow=3.9,SNR=5.2						
ASAR				ScP	ScP	02 58 42.5	+1.6
	0.6nm,0.8s,baz=99,slow=4.8,SNR=3.2						
ASAR				S	**S**	**03 00 13.1**	**-1.6**
	1.2nm,0.7s,baz=88,slow=15,SNR=9.6						
KAKA	**Kakadu**	**48.51**	**270**	*e*P	**P**	**02 54 38.1**	**-0.9**
	15nm,0.4s,mb4.8						
KAKA	**Kakadu**	**48.51**	**270**	*e*P	**P**	**02 54 37.9**	**-1.0**
	48nm,0.6s,mb5.1						
KAKA				*e*		02 56 40.4	
FORT	**Forrest**	**50.27**	**246**	*e*P	**P**	**02 54 51.4**	**-0.3**
	16nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.74**	**261**	*e*P	**P**	**02 55 16.5**	**-0.2**
	14nm,0.5s,mb4.5						
MBWA	**Marble Bar**	**58.66**	**257**	⇓*i*P	**P**	**02 55 49.9**	**-0.6**
MBWA	**Marble Bar**	**58.66**	**257**	*e*P	**P**	**02 55 50.0**	**-0.5**
	7.5nm,0.3s,mb4.3						
KLBR	**Kellerberrin**	**59.06**	**244**	*e*P	**P**	**02 55 53.0**	**0.0**
	64nm,1.6s,mb4.5						
CASY	**Casey**	**65.26**	**205**	*e*P	**P**	**02 56 33.1**	**+0.6**
	3.1nm,0.8s,mb3.8						
CMB	**Columbia Colle**	**78.22**	**43**	*e*P	**P**	**02 57 48.7**	**+0.6**
	2.8nm,1.2s,mb3.6						
NVAR	**Mina Array Bea**	**79.79**	**43**	P	**P**	**02 57 57.3**	**+0.9**
	1.0nm,0.6s,mb3.3,baz=223,slow=8.7,SNR=11						
MAW	**Mawson**	**82.86**	**200**	P	**P**	**02 58 12.7**	**+1.0**
	1.4nm,0.8s,mb3.5,baz=105,slow=12,SNR=4.1						
ANMO	**Albuquerque**	**86.24**	**51**	P	**P**	**02 58 28.8**	**+0.1**
	0.7nm,0.5s,mb3.5,baz=210,slow=5.5,SNR=5.8						
ILAR	**Eielson Array**	**87.05**	**13**	P	**P**	**02 58 30.6**	**-1.1**
	0.3nm,0.4s,mb3.4,baz=237,slow=4.9,SNR=9.3						
PDAR	**Pinedale Array**	**87.73**	**43**	P	**P**	**02 58 35.9**	**+0.4**
	0.7nm,0.7s,mb3.5,baz=223,slow=3.4,SNR=6.9						
CMAR	**Chiang Mai Arr**	**90.24**	**289**	P	**P**	**02 58 48.5**	**+0.8**
	0.9nm,0.3s,mb4.0,baz=122,slow=1.7,SNR=7.3						
BRTR	**Keskin Array B**	**146.44**	**314**	PKPbc	PKPbc	03 05 24.3	-0.3
	0.7nm,0.5s,baz=113,slow=2.9,SNR=3.5						
MMAI	**Mount Meron Ar**	**147.69**	**302**	PKPbc	PKPbc	03 05 28.6	+0.4
	1.3nm,0.4s,baz=64,slow=6.6,SNR=3.9						

CASC ***16*** *02:53:24.5±2.5, 13°.48N×91°.44W, h37km±18km, MD4.1, mb4.7(NEIC)*
MEX ***16*** *02:53:26.7±0.6, 13°.46N×91°.65W, h5km±96km, MD4.5*
ISCJB ***16*** *02:53:27.4±0.6, 13°.67N±0°.05×91°.19W±0°.04, h55km±4km, mb4.6/76, MS4.0/12, Error ellipse: s-maj=9.4km s-min=3.7km az=36.5*
NEIC ***16*** *02:53:29.8±0.8, 13°.78N×91°.19W, h57km±7km, mb4.7/74, MD4.5(MEX), Error ellipse: s-maj=9.3km s-min=5.4km az=209.0*
IDC ***16*** *02:53:37.2±1.5, 14°.57N×90°.83W, h96km±10km, mb4.1/9, mb1 4.4/10, mb1mx4.0/24, mbtmp4.1/10, MS4.0/15, Ms1 4.0/15, ms1mx3.8/28, Error ellipse: s-maj=38.1km s-min=18.9km az=55.0*
ISC 16 02:53:28.7±0.5, 13°.78N±0°.04×91°.17W±0°.03, h42km±4km, n413, σ0s87/407, mb4.6/75, MS4.0/12, 98C-89D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.70**	**320**	⇓*i*P	**Pn**	**02 53 41.3**	**-0.9**
FUG	**Fuego 3**	**0.74**	**26**	*e*P	**Pn**	**02 53 43.8**	**+1.0**
PCG	**Pacaya**	**0.82**	**42**	*e*P	**Pn**	**02 53 45.3**	**+1.4**
FG6		**0.83**	**20**	*e*P	**Pn**	**02 53 45.0**	**+1.0**
TP2	**Tecpan 2**	**1.01**	**8**	⇓*e*P	**Pn**	**02 53 48.2**	**+1.7**
NBG	**Las Nubes**	**1.14**	**45**	*e*P	**Pn**	**02 53 50.6**	**+2.4**
APG	**El Apazote**	**1.40**	**29**	P	**Pn**	**02 53 53.9**	**+2.1**
	270nm,0.3s,baz=202,slow=6.7,SNR=1279						
APG				S	**Sn**	**02 54 17.8**	**+8.7**
	127nm,0.3s,baz=93,slow=23,SNR=5.9						
RBDL	**Robledal**	**1.48**	**77**	*e*P	**Pn**	**02 53 53.4**	**+0.4**
RTR	**El Retiro**	**1.49**	**85**	*e*P	**Pn**	**02 53 52.8**	**-0.2**
SBLS	**San Blas**	**1.51**	**87**	*e*P	**Pn**	**02 53 52.9**	**-0.3**
SBLS				*e*S	**Sn**	**02 54 17.5**	**+5.7**
SNJE	**San Jose**	**1.53**	**86**	*i* P	**Pn**	**02 53 53.2**	**-0.4**
THIG		**1.54**	**317**	*i* P	**Pn**	**02 53 50.5**	**-3.2**
THIG				*e*S	**Sn**	**02 54 10.8**	**-1.8**
BOQS	**Boqueron**	**1.84**	**91**	*i* P	**Pn**	**02 53 58.1**	**+0.2**
BOQS				*e*S	**Sn**	**02 54 24.8**	**+4.8**
MTO2	**Montecristo 2**	**1.86**	**70**	*i* P	**Pn**	**02 53 59.1**	**+0.9**
MRL	**Marmol**	**1.93**	**48**	*e*P	**Pn**	**02 54 01.9**	**+2.9**
LFRS	**El Faro**	**2.06**	**94**	*i* P	**Pn**	**02 54 00.4**	**-0.4**
LBRS	**Las Brisas**	**2.07**	**91**	*i* P	**Pn**	**02 54 00.9**	**-0.1**
SNVI	**San Vicente**	**2.27**	**94**	*i* P	**Pn**	**02 54 04.4**	**+0.6**
SNVI				*e*S	**Sn**	**02 54 35.2**	**+4.5**
CCIG	**Comitan**	**2.66**	**340**	*i* P	**Pn**	**02 54 10.5**	**+1.5**
CCIG				*e*S	**Sn**	**02 54 43.5**	**+3.4**
CCIG	**Comitan**	**2.66**	**340**	*i* P	**Pn**	**02 54 10.5**	**+1.5**
CCIG				*e*S	**Sn**	**02 54 43.5**	**+3.4**
PCIG		**2.75**	**314**	*i* P	**Pn**	**02 54 07.3**	**-3.1**
PCIG				*e*S	**Sn**	**02 54 40.7**	**-1.8**
VSM	**San Miguel**	**2.84**	**97**	*e*P	**Pn**	**02 54 13.6**	**+2.1**
BLLM	**Bellamira**	**2.87**	**96**	*e*P	**Pn**	**02 54 13.1**	**+1.0**
TGIG		**3.53**	**328**	*i* P	**Pn**	**02 54 21.7**	**+0.7**
TGIG				*e*S	**Sn**	**02 55 01.8**	**+0.3**
TGUH	**Tegucigalpa,Un**	**3.80**	**85**	*e*Pn	**Pn**	**02 54 25.4**	**+0.6**
CRIN	**San Cristobal**	**4.16**	**104**	*e*P	**Pn**	**02 54 29.6**	**-0.1**
CNGN	**Cerro Negro**	**4.54**	**106**	*e*P	**Pn**	**02 54 34.8**	**-0.2**
CNGN				*e*S	**Sn**	**02 55 25.5**	**-1.0**
MOMN	**Momotombo**	**4.72**	**106**	*e*P	**Pn**	**02 54 37.6**	**+0.2**
COPN	**Copaltepe**	**4.74**	**109**	*e*P	**Pn**	**02 54 36.5**	**-1.2**
CMIG	**Matias Romero**	**4.86**	**313**	P	**Pn**	**02 54 34.9**	**-4.5**
	9.8nm,0.3s,baz=131,slow=11,SNR=64						
CMIG				S	**Sn**	**02 55 32.8**	**-1.7**
	31nm,0.3s,baz=196,slow=19,SNR=5.9						
CMIG				LR	LR	02 56 55.3	
	comp=Z,2μm,21.4s,baz=333,slow=43						
CMIG	**Matias Romero**	**4.86**	**313**	*i* P	**Pn**	**02 54 37.9**	**-1.6**
CMIG				*e*S	**Sn**	**02 55 32.6**	**-1.8**
CMIG				LR	LR	02 56 55.2	
CMIG	**Matias Romero**	**4.86**	**313**	*i* P	**Pn**	**02 54 37.9**	**-1.6**
CMIG				*e*S	**Sn**	**02 55 32.6**	**-1.8**
CSAN		**4.89**	**108**	*e*P	**Pn**	**02 54 38.6**	**-1.2**
XAVN	**Gruta Xavier**	**5.00**	**108**	*e*P	**Pn**	**02 54 38.8**	**-2.5**
TISN	**Laguna Tiscapa**	**5.05**	**108**	*e*P	**Pn**	**02 54 44.5**	**+2.5**
MGAN	**Managua**	**5.07**	**108**	*e*P	**Pn**	**02 54 41.6**	**-0.6**
CRUN	**El Crucero**	**5.08**	**110**	*e*P	**Pn**	**02 54 40.0**	**-2.4**
HUEN		**5.08**	**106**	*e*P	**Pn**	**02 54 40.3**	**-2.1**
HUIG	**Huatulco**	**5.17**	**293**	*i* P	**Pn**	**02 54 38.7**	**-4.9**
HUIG				*e*S	**Sn**	**02 55 33.9**	**-8.1**
HUIG	**Huatulco**	**5.17**	**293**	*i* P	**Pn**	**02 54 38.7**	**-4.9**
HUIG				*e*S	**Sn**	**02 55 33.9**	**-8.1**
BOAB	**BOACO BROADBAN**	**5.53**	**103**	*e*P	**Pn**	**02 54 46.2**	**-2.3**
TEIG	**Tepich**	**6.99**	**23**	*e*Pn	**Pn**	**02 55 10.8**	**+2.2**
TEIG				*e*S	**Sn**	**02 56 25.7**	**-1.0**
JTS	**JuntasAbangare**	**7.00**	**119**	LR	LR	02 57 59.6	
	comp=Z,1μm,19.9s,baz=128,slow=37						
JTS	**JuntasAbangare**	**7.00**	**119**	*e*Pn	**Pn**	**02 55 10.0**	**+1.2**
	52nm,0.8s						
DWPF	**Disney**	**16.90**	**31**	*e*Pn	**Pn**	**02 57 23.0**	**+0.8**
	60nm,1.4s						
VBMS	**Vicksburg**	**18.37**	**2**	*e*P	**Pn**	**02 57 40.7**	**+0.4**
	53nm,0.8s						
JCT	**Junction City**	**18.43**	**336**	*e*Pn	**Pn**	**02 57 41.7**	**+0.6**
	110nm,2.1s						
JCT				*e*S	**S**	**03 01 04.5**	**-4.5**
ROSC	**El Rosal**	**18.82**	**117**	*e*P	**Pn**	**02 57 45.0**	**-1.0**
628A	**Black Gap, Mar**	**19.03**	**327**	P	**Pn**	**02 57 48.0**	**-0.3**
	baz=19,SNR=42						
627A	**Terlingua Ranc**	**19.27**	**326**	⇓P	**Pn**	**02 57 50.9**	**-0.3**
	baz=19						
TXAR	**Lajitas Array**	**19.33**	**325**	P	**Pn**	**02 57 51.1**	**-0.8**
	0.4nm,0.3s,baz=153,slow=11,SNR=146						
TXAR				LR	LR	03 06 38.9	
	comp=Z,213nm,19.4s,baz=0.0,slow=41						
528A	**Cox Ranch, San**	**19.52**	**329**	⇑P	**Pn**	**02 57 53.5**	**-0.7**
	baz=20,SNR=26						
LRAL	**Lakeview Retre**	**19.55**	**11**	*e*P	**Pn**	**02 57 53.8**	**-0.7**
	31nm,0.9s						
626A	**Big Bend Ranch**	**19.76**	**325**	P	**Pn**	**02 57 56.0**	**-1.0**
	baz=20,SNR=49						
428A	**Kincaid Ranch,**	**19.92**	**330**	P	**Pn**	**02 57 58.4**	**-0.5**
	baz=20,SNR=23						
527A	**Woodward Ranch**	**19.93**	**327**	⇑P	**Pn**	**02 57 58.0**	**-1.0**
	baz=20,SNR=62						
526A	**Mary Lane Ranc**	**20.12**	**326**	P	**P**	**02 58 00.2**	**+1.0**
	baz=20,SNR=41						
427A	**Hayter Ranch,**	**20.38**	**328**	⇓P	**P**	**02 58 02.3**	**+0.2**
	baz=20,SNR=10.0						
328A	**Wristen Ranch,**	**20.52**	**331**	P	**P**	**02 58 04.1**	**+0.5**
	baz=21,SNR=97						
426A	**McDonald Obser**	**20.56**	**327**	P	**P**	**02 58 04.8**	**+0.8**
	baz=21,SNR=36						
OXF	**Oxford**	**20.70**	**4**	*e*P	**P**	**02 58 01.8**	**-3.6**
	58nm,1.0s						
GOGA	**Godfrey**	**20.77**	**18**	*e*P	**P**	**02 58 06.3**	**+0.2**
	27nm,0.9s						
GOGA				*e*		02 58 19.6	
327A	**Balmorhea Ranc**	**20.85**	**329**	⇑P	**P**	**02 58 07.5**	**+0.4**
	baz=21,SNR=5.3						
UALR	**University of**	**20.93**	**357**	*e*P	**P**	**02 58 07.1**	**-0.8**
	37nm,0.8s						
326A	**Caldwell Ranch**	**21.05**	**328**	⇓P	**P**	**02 58 09.5**	**+0.3**
	baz=21,SNR=141						
425A	**Indio Mountain**	**21.17**	**325**	⇓P	**P**	**02 58 10.7**	**+0.1**
	baz=21,SNR=111						
227A	**Bennet, Jal**	**21.27**	**331**	P	**P**	**02 58 11.8**	**+0.1**
	baz=21,SNR=18						
325A	**Bean Ranch, Si**	**21.61**	**326**	⇓P	**P**	**02 58 14.7**	**-0.6**
	baz=22,SNR=65						
NHSC	**New Hope**	**21.70**	**26**	*e*P	**P**	**02 58 18.2**	**+2.1**
	166nm,1.4s,mb5.3						
226A	**Malaga, Loving**	**21.71**	**329**	⇓P	**P**	**02 58 16.3**	**0.0**
	baz=22,SNR=34						
CLNB	**Carlsbad**	**21.77**	**330**	*e*P	**P**	**02 58 16.0**	**-0.9**
	8.2nm,0.8s,mb4.2						
127A	**Arkansas Junct**	**21.86**	**331**	P	**P**	**02 58 16.7**	**-1.1**
	baz=22,SNR=11						
SWET	**Sewanee**	**21.86**	**12**	*e*P	**P**	**02 58 17.6**	**-0.3**
324A	**Moseley Ranch,**	**21.95**	**326**	⇓P	**P**	**02 58 17.9**	**-0.9**
	baz=22,SNR=56						
GDL2	**Guadalupe Moun**	**21.95**	**329**	*e*P	**P**	**02 58 18.4**	**-0.5**
WMOK	**Wichita Mounta**	**21.97**	**343**	*e*P	**P**	**02 58 16.7**	**-2.3**
	9.3nm,0.9s,mb4.2						
MNTX	**Cornudas Mount**	**22.09**	**326**	*e*P	**P**	**02 58 18.9**	**-1.4**
	52nm,0.9s,mb5.0						
225A	**Deer Hill, Car**	**22.12**	**328**	⇑P	**P**	**02 58 20.4**	**-0.3**
	baz=22						
126A	**Clayton Basin,**	**22.14**	**330**	⇓P	**P**	**02 58 19.9**	**-1.1**
	baz=22,SNR=17						
JSC	**Jenkinsville**	**22.30**	**22**	*e*P	**P**	**02 58 22.1**	**-0.5**
Z27A	**Tatum**	**22.33**	**333**	⇓P	**P**	**02 58 21.6**	**-1.3**
	baz=22,SNR=33						
CPRX	**Cap Rock**	**22.39**	**331**	*e*P	**P**	**02 58 22.2**	**-1.3**
	26nm,0.7s,mb4.8						
CPCT	**Cooper Cave**	**22.40**	**14**	*e*P	**P**	**02 58 24.0**	**+0.5**
224A	**Cornudas Mount**	**22.46**	**327**	⇑P	**P**	**02 58 23.7**	**-0.6**
	baz=22						
WVT	**Waverly**	**22.46**	**7**	*e*P	**P**	**02 58 22.5**	**-1.7**
	11nm,0.8s,mb4.3						
GLAT	**Glass**	**22.46**	**4**	*e*P	**P**	**02 58 23.8**	**-0.5**
125A	**Gardner Draw,**	**22.47**	**329**	⇓P	**P**	**02 58 23.2**	**-1.1**
	baz=22,SNR=34						
Z26A	**Caprock**	**22.64**	**331**	⇑P	**P**	**02 58 25.1**	**-1.1**
	baz=23,SNR=28						
MSTX	**Muleshoe**	**22.69**	**334**	⇓P	**P**	**02 58 26.0**	**-0.7**
	baz=23,SNR=9.8						
TKL	**Tuckaleechee C**	**22.78**	**16**	P	**P**	**02 58 27.1**	**-0.5**
	10nm,0.6s,mb4.4,baz=185,slow=11,SNR=17						
TKL				LR	LR	03 08 14.8	
	comp=Z,482nm,21.2s,MS3.9,baz=192,slow=40						
TKL	**Tuckaleechee C**	**22.78**	**16**	*e*P	**P**	**02 58 26.9**	**-0.7**
Y27A	**Causey**	**22.79**	**333**	⇓P	**P**	**02 58 27.2**	**-0.5**
	baz=23,SNR=20						
124A	**Stringfield Ra**	**22.91**	**328**	⇓P	**P**	**02 58 28.8**	**-0.3**
	baz=23,SNR=128						
Z25A	**Roswell**	**23.00**	**330**	⇓P	**P**	**02 58 28.7**	**-1.3**
	baz=23,SNR=30						
AMTX	**Amarillo**	**23.06**	**337**	*e*P	**P**	**02 58 28.5**	**-2.1**
	45nm,0.8s,mb5.0						
Y26A	**Elida**	**23.11**	**332**	⇓P	**P**	**02 58 31.5**	**+0.3**
	baz=23,SNR=8.6						
123A	**Bell Site, Whi**	**23.29**	**326**	⇑P	**P**	**02 58 33.2**	**+0.2**
	baz=23,SNR=12						
222A	**Williams Famil**	**23.35**	**324**	⇓P	**P**	**02 58 33.7**	**+0.1**
	baz=23,SNR=33						
Z24A	**Sheeppen Canyo**	**23.36**	**329**	P	**P**	**02 58 33.4**	**-0.4**
	baz=23,SNR=31						
X27A	**F and S Farms,**	**23.41**	**335**	P	**P**	**02 58 32.2**	**-2.0**
	baz=24,SNR=6.7						
Y25A	**Mesa, Roswell**	**23.51**	**331**	⇓P	**P**	**02 58 34.4**	**-0.7**
	baz=24,SNR=21						
320A	**Kipp Ranch, An**	**23.65**	**320**	⇑P	**P**	**02 58 36.7**	**+0.3**
	baz=24,SNR=10						
221A	**Mesquite Ranch**	**23.68**	**323**	⇑P	**P**	**02 58 37.7**	**+1.0**
	baz=24,SNR=14						
122A	**Conniff Cattle**	**23.74**	**325**	⇑P	**P**	**02 58 38.4**	**+1.1**
	baz=24,SNR=24						
Z23A	**Rita Site, Whi**	**23.75**	**327**	⇑P	**P**	**02 58 37.4**	**+0.1**
	baz=24,SNR=29						
W27A	**Bowe Ranch, En**	**23.76**	**335**	P	**P**	**02 58 35.6**	**-1.7**
	baz=24,SNR=9.0						
Y24A	**Capitan**	**23.87**	**330**	⇓P	**P**	**02 58 38.1**	**-0.4**
	baz=24,SNR=10						
SIUC	**Southern Illin**	**23.90**	**4**	*e*P	**P**	**02 58 37.7**	**-0.9**
	35nm,0.8s,mb4.8						
220A	**Playas Peak, P**	**24.05**	**321**	⇑P	**P**	**02 58 40.6**	**+0.5**
	baz=24,SNR=16						
121A	**Cookes Peak, D**	**24.06**	**324**	⇓P	**P**	**02 58 40.8**	**+0.7**
	baz=24,SNR=20						
FVM	**French Village**	**24.12**	**1**	*e*P	**P**	**02 58 40.3**	**-0.3**
	8.9nm,0.9s,mb4.2						
Z22A	**Elephant Butte**	**24.14**	**326**	P	**P**	**02 58 41.4**	**+0.5**
	baz=24,SNR=18						
319A	**Douglas**	**24.15**	**319**	⇑P	**P**	**02 58 41.5**	**+0.5**
	baz=24,SNR=10						
Y23A	**Lovelace Mesa,**	**24.19**	**329**	⇑P	**P**	**02 58 41.5**	**+0.2**
	baz=24,SNR=49						
ATAH	**Atahualpa**	**24.34**	**148**	LR	LR	03 06 56.7	
	comp=Z,564nm,18.0s,MS4.1,baz=99,slow=32						
X24A	**Lazy VL Ranch,**	**24.39**	**331**	⇓P	**P**	**02 58 42.9**	**-0.2**
	baz=24,SNR=15						
W25A	**X Bar L Ranch,**	**24.48**	**333**	⇓P	**P**	**02 58 43.6**	**-0.4**
	baz=25,SNR=11						
219A	**White Tail Can**	**24.56**	**321**	⇑P	**P**	**02 58 45.2**	**+0.5**
	baz=25,SNR=28						
120A	**U Bar Ranch, L**	**24.56**	**322**	⇑P	**P**	**02 58 46.2**	**+1.5**
	baz=25,SNR=13						
Z21A	**St. Cloud Mine**	**24.57**	**325**	⇓P	**P**	**02 58 45.5**	**+0.8**
	baz=25,SNR=17						
318A	**Bisbee**	**24.64**	**319**	⇓P	**P**	**02 58 45.9**	**+0.4**
	baz=25,SNR=25						
BNM	**Barren Site**	**24.65**	**328**	*e*P	**P**	**02 58 45.7**	**+0.2**
	42nm,1.2s,mb4.8						
Y22A	**Socorro**	**24.66**	**327**	⇑P	**P**	**02 58 46.3**	**+0.7**
	baz=25,SNR=28						
V26A	**Tequesquite Ra**	**24.68**	**335**	⇑P	**P**	**02 58 46.3**	**+0.5**
	baz=25						
Y22D	**IRIS PASSCAL I**	**24.74**	**327**	⇑P	**P**	**02 58 47.8**	**+1.4**
	baz=25						
X23A	**Hourglass Bar**	**24.77**	**329**	⇓P	**P**	**02 58 46.5**	**-0.1**
	baz=25,SNR=6.5						
SLM	**Saint Louis**	**24.77**	**2**	*e*P	**P**	**02 58 46.1**	**-0.5**
	30nm,0.7s,mb4.9						
LPM	**Los Pinos Moun**	**24.78**	**328**	*e*P	**P**	**02 58 46.7**	**0.0**
LENM	**Lemitar**	**24.84**	**327**	*e*P	**P**	**02 58 48.0**	**+0.7**
W24A	**Lazy 6 Ranch,**	**24.90**	**331**	P	**P**	**02 58 47.8**	**-0.1**
	baz=25,SNR=16						
Z20A	**Nine Sixteen R**	**24.95**	**323**	⇑P	**P**	**02 58 49.0**	**+0.8**
	baz=25,SNR=10						
OLIL	**Olney**	**25.01**	**6**	*e*P	**P**	**02 58 49.3**	**+0.6**
	20nm,0.7s,mb4.8						
218A	**Dragoon**	**25.03**	**319**	⇑P	**P**	**02 58 49.6**	**+0.5**
	baz=25,SNR=9.4						
V25A	**Rancho No Teng**	**25.07**	**334**	⇓P	**P**	**02 58 49.4**	**+0.1**
	baz=25						
Y21A	**Point of Rocks**	**25.09**	**326**	P	**P**	**02 58 51.0**	**+1.4**
	baz=25,SNR=56						
LAZ	**Ladron**	**25.11**	**328**	*e*P	**P**	**02 58 50.2**	**+0.5**
	8.0nm,0.9s,mb4.2						
119A	**Ashpeak Ranch,**	**25.12**	**322**	P	**P**	**02 58 50.4**	**+0.6**
	baz=25,SNR=22						
U26A	**Atchley Ranch,**	**25.18**	**336**	⇓P	**P**	**02 58 49.2**	**-1.1**
	baz=25,SNR=9.8						
ANMO	**Albuquerque**	**25.20**	**329**	P	**P**	**02 58 50.4**	**-0.1**
	5.6nm,0.7s,mb4.2,baz=150,slow=11,SNR=21						
ANMO	**Albuquerque**	**25.20**

X14A	Yava	28.47 320	⇑P	P	02 59 20.0	+0.1
	baz=28					
U16A	Tuba City	28.58 325	⇓P	P	02 59 21.8	+0.9
	baz=29,SNR=12					
U17A	Shonto	28.65 326	⇑P	P	02 59 22.6	+1.1
	baz=29					
S19A	Harvey Farm, M	28.73 329	⇑P	P	02 59 22.8	+0.6
	baz=29					
GLA	Glamis	28.85 316	eP	P	02 59 23.1	-0.2
	19nm,1.3s,mb4.7					
ISCO	Idaho Springs	28.87 337	eP	P	02 59 23.9	+0.6
	75nm,3.0s					
ISCO			ePcP	PcP	03 02 31.9	-0.2
V15A	Kaibab Nationa	28.95 323	⇑P	P	02 59 25.1	+0.9
	baz=29,SNR=19					
T17A	Navajo Res., N	29.02 326	⇑P	P	02 59 25.3	+0.5
	baz=29,SNR=17					
W14A	Seligman	29.08 321	⇑P	P	02 59 25.5	+0.2
	baz=29					
PV04	Paradox Valley	29.12 331	eP	P	02 59 26.1	+0.4
X13A	Yucca	29.14 319	⇑P	P	02 59 25.9	0.0
	baz=29					
R19A	Curley Farm, L	29.21 330	⇓P	P	02 59 26.4	-0.1
	baz=29					
V14A	Boquillas Ranc	29.37 322	⇓P	P	02 59 28.7	+0.8
	baz=29,SNR=9.4					
T16A	Glen Canyon Da	29.39 325	⇓P	P	02 59 29.3	+1.2
	baz=30					
U15A	North Rim	29.44 324	⇑P	P	02 59 29.4	+0.8
	baz=30,SNR=11					
S17A	Black Ridge (B	29.49 327	P	P	02 59 29.5	+0.5
	baz=30,SNR=7.9					
O22A	Kremmling	29.54 336	⇓P	P	02 59 29.5	+0.1
	baz=30					
R18A	Canyonlands Na	29.60 329	⇓P	P	02 59 30.1	+0.2
	baz=30					
BC3	Big Chuckawall	29.63 316	⇓P	P	02 59 29.9	-0.4
	baz=30,SNR=6.8					
T15A	Red Dirt Ranch	29.91 324	⇓P	P	02 59 33.7	+1.0
	baz=30,SNR=10					
U14A	Mt Trumbull	29.95 323	⇑P	P	02 59 34.2	+1.2
	baz=30,SNR=10.0					
S16A	Weppner Ranch,	29.98 326	⇑P	P	02 59 33.8	+0.5
	baz=30,SNR=14					
R17A	Hanksville Air	30.04 328	⇓P	P	02 59 33.8	0.0
	baz=30					
V13A	Grand Canyon W	30.05 321	⇓P	P	02 59 34.5	+0.5
	baz=30					
N22A	Wattenberg Ran	30.05 336	⇑P	P	02 59 34.1	+0.2
	baz=30					
O20A	White River Ci	30.23 333	⇑P	P	02 59 35.9	+0.4
	baz=30					
LDFC	Landfair	30.26 319	eP	P	02 59 35.4	-0.4
	15nm,1.1s,mb4.6					
R16A	Teasdale	30.33 327	P	P	02 59 37.3	+0.9
	baz=30,SNR=27					
T14A	Hurricane	30.34 324	⇓P	P	02 59 37.4	+1.0
	baz=30,SNR=11					
S15A	Panguitch	30.36 325	⇓P	P	02 59 38.1	+1.4
	baz=30,SNR=7.9					
U13A	Pakoon Wash	30.41 322	⇓P	P	02 59 37.9	+0.7
	baz=30					
GMRC	Granite Mounta	30.43 318	⇑P	P	02 59 38.0	+0.7
	baz=30					
V12A	Nelson	30.51 320	⇑P	P	02 59 38.5	+0.5
	baz=31,SNR=14					
R15A	Junction	30.70 326	⇓P	P	02 59 40.9	+1.2
	baz=31,SNR=6.3					
U12A	Valley of Fire	30.77 321	⇑P	P	02 59 40.6	+0.4
	baz=31,SNR=7.6					
T13A	Saint George	30.79 323	⇓P	P	02 59 41.5	+1.0
	baz=31,SNR=7.1					
N20A	Spence Gulch,	30.82 334	⇓P	P	02 59 40.8	+0.1
	baz=31,SNR=9.0					
CCUT	Cedar City	30.84 324	eP	P	02 59 41.4	+0.6
	20nm,0.9s,mb4.9					
P17A	Butcher Ranch,	30.86 330	⇑P	P	02 59 41.3	+0.3
	baz=31,SNR=6.7					
MSU	Marysvale	30.87 327	eP	P	02 59 41.9	+0.7
MSU			ePcP	PcP	03 02 37.3	0.0
S14A	Cedar City	30.87 325	P	P	02 59 42.4	+1.2
	baz=31,SNR=20					
TMUT	Trail Mountain	30.95 329	eP	P	02 59 42.5	+0.6
	7.1nm,0.8s,mb4.5					
ARUT	Antelope Range	31.05 324	eP	P	02 59 43.3	+0.6
	28nm,0.9s,mb5.1					
RWWY	Rawlins	31.11 336	eP	P	02 59 43.2	0.0
	14nm,1.1s,mb4.7					
S13A	Holt Ranch, En	31.14 324	P	P	02 59 44.9	+1.4
	baz=31,SNR=46					
SHPR	Sheep Range	31.20 321	eP	P	02 59 44.7	+0.6
Q15A	Fillmore	31.34 327	⇑P	P	02 59 45.8	+0.6
	baz=31,SNR=11					
O17A	Robinson Place	31.42 331	P	P	02 59 46.5	+0.6
	baz=32,SNR=7.3					
P16A	Fountain Green	31.42 329	⇓P	P	02 59 47.2	+1.3
	baz=32					
R13A	O'Grain Ranch,	31.62 324	⇑P	P	02 59 50.0	+2.3
	baz=32,SNR=17					
P15A	Leamington	31.71 328	⇑P	P	02 59 48.8	+0.3
	baz=32,SNR=12					
MPU	Maple Canyon	31.71 329	eP	P	02 59 48.4	-0.2
	10nm,0.9s,mb4.7					
Q14A	Sevier Lake (B	31.81 326	⇑P	P	02 59 50.3	+0.9
	baz=32,SNR=24					
DAU	Daniels Canyon	31.84 330	eP	P	02 59 49.7	+0.1
NLU	North Lily Min	31.89 329	eP	P	02 59 50.7	+0.6
	6.7nm,1.1s,mb4.4					
N17A	Moffit Pass	32.05 331	⇓P	P	02 59 51.9	+0.4
	baz=32					
JLU	Jordanelle	32.08 330	eP	P	02 59 52.2	+0.5
	4.7nm,1.0s,mb4.3					
P14A	Drum Mountains	32.13 327	⇓P	P	02 59 53.0	+0.8
	baz=32,SNR=17					
LRMC	Laurel Mountai	32.19 317	⇑P	P	02 59 52.7	-0.1
	baz=32					
FURC	Furnace Creek,	32.24 319	⇑P	P	02 59 53.9	+0.7
	baz=32					
O15A	The Old Anders	32.33 329	⇑P	P	02 59 54.3	+0.3
	baz=32					
M17A	Scullys Gap (B	32.39 332	⇑P	P	02 59 54.2	-0.3
	baz=32					
MPMC	Manual Prospec	32.40 318	P	P	02 59 54.6	0.0
	baz=32,SNR=7.8					
NOQ	North Oquirrh	32.44 330	eP	P	02 59 55.6	+0.6
	20nm,0.7s,mb5.0					
DUG	Dugway	32.45 328	eP	P	02 59 55.5	+0.5
	5.8nm,0.9s,mb4.4					
SADO	Sadowa	32.55 16	P	P	02 59 52.5	-3.2
	6.2nm,0.8s,mb4.6,baz=220,slow=7.9,SNR=3.5					
J21A	Lysite	32.62 338	⇑P	P	02 59 56.0	-0.5
	baz=33					
R11A	Troy Canyon, C	32.66 323	⇑P	P	02 59 57.7	+0.8
	baz=33,SNR=12					
K19A	Absolon Red Bu	32.72 336	⇑P	P	02 59 56.8	-0.5
	baz=33					
N15A	Stansbury Isla	32.82 329	P	P	02 59 58.5	+0.3
	baz=33,SNR=11					
GRAC	Grapevine Rang	32.89 319	⇓P	P	02 59 59.4	+0.5
	baz=33,SNR=8.0					
HWUT	Hardware Ranch	32.91 331	eP	P	02 59 58.9	-0.2
	9.8nm,0.8s,mb4.8					
HWUT			ePcP	PcP	03 02 41.5	-1.3
PDAR	Pinedale Array	32.96 335	P	P	02 59 57.6	-1.8
	1.4nm,0.7s,mb4.0,baz=124,slow=10,SNR=10					
K18A	Toltan Ranch,	33.05 334	⇓P	P	03 00 00.5	+0.2
	baz=33,SNR=7.2					
BGU	Big Grassy Mou	33.10 329	eP	P	03 00 00.4	-0.3
	7.5nm,0.9s,mb4.6					
BGU			ePcP	PcP	03 02 42.8	-0.5
SPUT	South Promonto	33.10 330	eP	P	03 00 01.2	+0.5
	17nm,1.2s,mb4.9					
L16A	Fish Haven	33.17 332	⇑P	P	03 00 01.0	-0.3
	baz=33,SNR=16					
M15A	Larsen Ranch,	33.22 330	⇓P	P	03 00 01.7	0.0
	baz=33,SNR=12					
I20A	Worland	33.39 337	⇑P	P	03 00 02.5	-0.7
	baz=34					
J18A	Kendall Valley	33.52 335	⇑P	P	03 00 03.8	-0.5
	baz=34,SNR=5.7					
K17A	Gardner Place,	33.53 333	⇑P	P	03 00 04.4	+0.1
	baz=34,SNR=6.0					
L15A	Malad City	33.60 331	⇑P	P	03 00 04.8	-0.2
	baz=34,SNR=21					
HVU	Hansel Valley	33.62 330	eP	P	03 00 04.6	-0.6
	23nm,1.2s,mb5.0					
I19A	Meeteetse	33.79 337	⇑P	P	03 00 06.9	+0.2
	baz=34					
I18A	Diamond G Ranc	33.84 335	⇑P	P	03 00 06.8	-0.3
	baz=34					
K16A	Soda Springs	33.89 333	⇓P	P	03 00 07.8	+0.3
	baz=34					
J17A	Brown Place, J	33.93 334	⇓P	P	03 00 07.8	-0.1
	baz=34,SNR=20					
REDW	Red Top Meadow	33.99 334	eP	P	03 00 07.8	-0.6
	24nm,1.0s,mb5.1					
SNOW	Snow King Moun	34.03 334	eP	P	03 00 08.7	0.0
	22nm,0.8s,mb5.1					
L14A	Malta	34.04 330	P	P	03 00 09.0	+0.2
	baz=34,SNR=23					
LOHW	Long Hollow	34.09 334	eP	P	03 00 08.8	-0.4
	8.4nm,0.9s,mb4.7					
TPAW	Teton Pass	34.14 334	eP	P	03 00 09.1	-0.6
	7.3nm,0.8s,mb4.7					
RRI2	Red Ridge	34.18 333	eP	P	03 00 10.2	+0.2
	16nm,1.3s,mb4.8					
K15A	Arbon	34.20 331	P	P	03 00 10.0	-0.3
	baz=34,SNR=16					
J16A	Bone	34.25 333	⇑P	P	03 00 10.9	+0.3
	baz=34,SNR=5.6					
MOOW	Moose Ponds	34.26 334	eP	P	03 00 10.5	-0.3
	4.6nm,1.0s,mb4.4					
NVAR	Mina Array Bea	34.35 321	P	P	03 00 12.3	+0.7
	10nm,0.8s,mb4.8,baz=137,slow=8.5,SNR=67					
NVAR			PcP	PcP	03 02 46.4	-0.5
	2.3nm,0.8s,baz=130,slow=4.1,SNR=5.9					
NVAR	Mina Array Bea	34.35 321	P	P	03 00 12.3	+0.7
NVAR			PcP	PcP	03 02 46.4	-0.5
K14A	Jones Ranch, D	34.40 331	P	P	03 00 11.6	-0.3
	baz=34,SNR=26					
IMW	Indian Meadow	34.46 334	eP	P	03 00 11.9	-0.6
	4.2nm,0.9s,mb4.4					
IMW			ePcP	PcP	03 02 45.1	-2.0
FLWY	Flagg Ranch	34.51 335	eP	P	03 00 13.4	+0.5
	6.0nm,1.1s,mb4.4					
H18A	Shoshone NF, C	34.59 337	⇑P	P	03 00 12.5	-1.1
	baz=35,SNR=9.3					
J15A	Blackfoot	34.71 332	⇓P	P	03 00 14.7	0.0
	baz=35					
BMN	Battle Mountai	35.00 324	eP	P	03 00 18.3	+1.1
	7.9nm,0.7s,mb4.8					
G18A	Lazy EL Ranch,	35.09 337	⇓P	P	03 00 16.4	-1.5
	baz=35					
WAKR	Walker	35.10 320	eP	P	03 00 19.1	+1.0
E21A	Keefer Ranch,	35.29 341	P	P	03 00 18.1	-1.4
	baz=35,SNR=5.4					
CMB	Columbia Colle	35.43 318	eP	P	03 00 20.8	-0.1
	5.7nm,1.1s,mb4.4					
J13A	Cove Ranch, Pi	35.52 331	P	P	03 00 21.4	-0.2
	baz=36,SNR=6.0					
I14A	Mackay	35.59 332	⇑P	P	03 00 22.9	+0.7
	baz=36,SNR=12					
E20A	Meyer Farm, Mu	35.60 340	⇑P	P	03 00 21.0	-1.2
	baz=36,SNR=6.5					
HLID	Hailey	35.76 331	eP	P	03 00 23.6	-0.1
	9.7nm,1.0s,mb4.7					
PAHR	Pah Rah Range	35.80 321	eP	P	03 00 25.4	+1.3
	5.5nm,0.9s,mb4.5					
I13A	Wildhorse Cree	35.89 331	⇑P	P	03 00 25.2	+0.4
	baz=36,SNR=16					
F17A	Fitzpatrick Pl	36.00 337	⇑P	P	03 00 25.2	-0.5
	baz=36,SNR=8.1					
MCMT	McKenzie Canyo	36.02 333	eP	P	03 00 26.6	+0.7
	11nm,0.9s,mb4.8					
H14A	Leadore	36.09 333	⇓P	P	03 00 26.8	+0.4
	baz=36,SNR=9.7					
G15A	Dillon	36.14 334	⇓P	P	03 00 27.0	+0.1
	baz=36,SNR=13					
BOZ	Bozeman (W)	36.17 335	eP	P	03 00 26.2	-0.9
	2.2nm,0.9s,mb4.1					
I12A	Atlanta	36.28 330	P	P	03 00 28.4	+0.3
	baz=36,SNR=56					
MFID	Camas Ranch	36.34 329	P	P	03 00 28.5	-0.2
	baz=36,SNR=14					
DLMT	Dillon	36.34 334	eP	P	03 00 29.0	+0.3
D19A	Cripps Ranch,	36.43 340	⇓P	P	03 00 28.1	-1.3
	baz=36,SNR=6.8					
H13A	Challis	36.45 332	P	P	03 00 29.8	+0.2
	baz=36,SNR=37					
ULM	Lac du Bonnet	36.57 355	P	P	03 00 27.2	-3.3
	4.0nm,0.8s,mb4.3,baz=178,slow=11,SNR=4.7					
ULM			LR	LR	03 17 57.2	
	comp=Z,152nm,21.1s,MS3.8,baz=172,slow=41					
G14A	Jackson	36.62 333	⇑P	P	03 00 30.9	-0.1
	baz=37					
LRM	Limekiln Ridge	36.65 335	eP	P	03 00 31.0	-0.3
F15A	Butte	36.68 335	⇓P	P	03 00 31.5	0.0
	baz=37,SNR=7.6					
H12A	Diamond D Ranc	36.71 331	⇓P	P	03 00 31.9	+0.1
	baz=37,SNR=33					
G13A	Cobalt	36.84 332	⇓P	P	03 00 32.9	0.0
	baz=37,SNR=13					
E16A	East Helena	36.92 336	⇑P	P	03 00 32.9	-0.6
	baz=37,SNR=5.9					
D17A	Six Diamond Ra	37.06 338	⇑P	P	03 00 33.7	-1.0
	baz=37,SNR=5.2					
WVOR	Wild Horse Val	37.12 326	eP	P	03 00 34.6	-0.8
	27nm,1.0s,mb5.0					
E15A	Deer Lodge	37.22 335	⇓P	P	03 00 35.3	-0.7
	baz=37,SNR=5.9					
G12A	Big Creek, Yel	37.37 331	⇑P	P	03 00 37.2	-0.2
	baz=37					
F13A	Darby	37.43 333	P	P	03 00 37.4	-0.5
	baz=38,SNR=18					
EGMT	Eagleton	37.47 339	eP	P	03 00 37.3	-0.9
	7.9nm,0.9s,mb4.5					
C17A	Wharram Farm,	37.49 338	⇓P	P	03 00 37.4	-1.0
	baz=38					
LPAZ	La Paz	37.56 142	P	P	03 00 47.6	+8.3
	1.1nm,0.9s,mb3.6,baz=317,slow=5.3,SNR=5.4					
LPAZ			LR	LR	03 15 52.6	
	comp=Z,194nm,19.8s,MS3.9,baz=242,slow=35					
J08A	Circle Bar Ran	37.66 327	⇑P	P	03 00 40.6	+0.7
	baz=38,SNR=26					
D15A	Lincoln	37.67 336	⇑P	P	03 00 39.1	-0.8
	baz=38,SNR=6.6					
MOD	Modoc	37.72 324	eP	P	03 00 40.9	+0.5
	5.6nm,0.9s,mb4.3					
F12A	Elk City	37.81 332	P	P	03 00 40.7	-0.4
	baz=38,SNR=43					
CHMT	Chamberlain Mo	37.86 335	eP	P	03 00 40.8	-0.6
E13A	Victor	37.88 334	⇑P	P	03 00 41.0	-0.6
	baz=38,SNR=15					
C16A	Fuhringer Ranc	38.00 337	⇓P	P	03 00 41.6	-1.0
	baz=38,SNR=7.8					
MSO	Missoula	38.08 334	eP	P	03 00 42.6	-0.7
	3.1nm,0.9s,mb4.0					
D14A	Greenough	38.10 335	⇓P	P	03 00 42.6	-0.9
	baz=38,SNR=7.5					
SLMT	Seeley Lake	38.22 335	eP	P	03 00 43.9	-0.6
KCPM	Cahto Peak	38.42 318	eP	P	03 00 46.7	+0.4
	14nm,1.3s,mb4.5					
KIPM	Iron Peak	38.42 319	eP	P	03 00 46.4	+0.1
	12nm,1.0s,mb4.6					
E12A	Beaver Dam Sad	38.46 333	⇑P	P	03 00 45.8	-0.7
	baz=38,SNR=27					
D13A	Huson	38.50 334	P	P	03 00 46.2	-0.7
	baz=39,SNR=18					
K05A	Summer Lake	38.58 324	⇓P	P	03 00 47.4	-0.2
	baz=39					
SWMT	Swartz Lake	38.64 335	eP	P	03 00 47.5	-0.5
I07A	Izee	38.70 327	⇓P	P	03 00 48.2	-0.4
	baz=39,SNR=24					
D12A	Red Ives Fores	38.85 333	⇑P	P	03 00 49.0	-0.8
	baz=39					
F10A	Beach Ranch, E	38.89 331	⇓P	P	03 00 49.3	-0.8
	baz=39,SNR=48					
YBMT	Yellow Bay	38.93 335	eP	P	03 00 50.3	-0.2
JTMT	Jette	38.95 335	eP	P	03 00 50.4	-0.2
JTMT			ePcP	PcP	03 02 59.2	-1.4
C13A	Hot Springs	39.01 335	⇑P	P	03 00 50.5	-0.7
	baz=39					
KHMM	Horse Mountain	39.17 320	eP	P	03 00 52.6	0.0
	8.2nm,0.8s,mb4.5					
BSMT	Bassoo Peak	39.24 335	eP	P	03 00 52.9	-0.1
LNOR	Lincton Mounta	39.33 330	eP	P	03 00 52.9	-0.9
	3.8nm,0.8s,mb4.2					
A15A	Johnson Ranch,	39.34 338	⇑P	P	03 00 53.2	-0.7
	baz=39					
B13A	Whitefish	39.52 336	⇑P	P	03 00 55.0	-0.4
	baz=40,SNR=5.5					
VIPM	Ingram Point	39.58 326	P	P	03 00 55.9	-0.1
A14A	Double T Ranch	39.60 337	⇑P	P	03 00 55.3	-0.7
	baz=40,SNR=7.1					
E09A	Wood Farm, Sta	39.72 331	P	P	03 00 55.7	-1.4
	baz=40,SNR=8.1					
C11A	Tepee Creek (N	39.85 334	P	P	03 00 57.4	-0.7
	baz=40,SNR=19					
BROR	Big Rock Looko	40.43 325	P	P	03 01 02.9	-0.1
D08A	Wollman Farm,	40.48 331	⇓P	P	03 01 02.7	-0.7
	baz=41					
H04A	Detroit Lake	40.55 326	⇑P	P	03 01 04.1	+0.1
	baz=41,SNR=9.4					
NEW	Newport	40.55 333	eP	P	03 01 02.6	-1.3
VFP	Flag Point	40.57 327	P	P	03 01 05.0	+0.9
E07A	Sunnyside	40.58 329	⇓P	P	03 01 04.0	-0.3
	baz=41					
OD2	Odessa Site #2	40.62 331	P	P	03 01 03.7	-0.8
HOOD	Mount Hood Mea	40.67 327	eP	P	03 01 05.9	+0.9
	83nm,0.9s,mb5.4					
KEBM	Edson Butte	40.68 322	eP	P	03 01 05.1	0.0
	41nm,1.0s,mb5.0					
C09A	Chrisman Ranch	40.72 332	⇓P	P	03 01 05.0	-0.3
	baz=41,SNR=11					
G04A	Mulino	41.04 326	P	P	03 01 08.3	+0.2
	baz=41,SNR=6.3					
ETW	Entiat	41.55 330	eP	P	03 01 11.7	-0.4
B08A	Colville Reser	41.61 332	⇑P	P	03 01 11.9	-0.8
	baz=42,SNR=7.2					
LON	Longmire	41.70 328	eP	P	03 01 12.5	-0.9
	16nm,0.9s,mb4.6					
LON			ePcP	PcP	03 03 07.2	-2.3
JCW	Jim Creek	42.73 330	eP	P	03 01 20.3	-1.5
	19nm,1.0s,mb4.8					
B06A	Marblemount	42.74 330	P	P	03 01 20.9	-1.0
	baz=43,SNR=5.8					
GNW	Green Mountain	42.76 328	eP	P	03 01 20.1	-1.9
	8.4nm,1.1s,mb4.4					
NLWA	Neilton Lookou	43.18 328	eP	P	03 01 25.2	-0.2
	22nm,1.1s,mb4.8					
MCW	Mount Constitu	43.50 330	P	P	03 01 27.2	-0.9
PGC	Sidney	43.79 329	eP	P	03 01 29.3	-1.1
	2.2nm,1.4s,mb3.7					
SCHQ	Schefferville	45.16 20	P	P	03 01 37.3	-3.8
	12nm,0.8s,mb4.8,baz=263,slow=6.3,SNR=6.1					
SCHQ			LR	LR	03 21 55.0	
	comp=Z,304nm,18.7s,MS4.3,baz=252,slow=38					
YKA	Yellowknife Ar	51.43 346	P	P	03 02 26.8	-2.6
	5.8nm,0.9s,mb4.5,baz=146,slow=7.5,SNR=9.7					
CPUP	Villa Florida	51.70 140	LR	LR	03 26 05.1	
	comp=Z,134nm,20.7s,MS4.0,baz=309,slow=37					
BDFB	Brasilia	51.73 123	LR	LR	03 25 42.6	
	comp=Z,114nm,21.2s,MS3.9,baz=335,slow=37					
DLBC	Dease Lake	53.18 336	eP	P	03 02 42.4	-0.1
TAOE	Nuku Hiva Isla	53.55 248	eS	S	03 10 17.7	+1.2
	124nm,25.1s					
TAOE			eLR	LR	03 17 51.2	
	175nm,25.7s					
RKT	Rikitea	56.41 230	eLR	LR	03 19 38.6	
	172nm,25.2s					
PLCA	Paso Flores	57.51 161	LR	LR	03 22 43.0	
	comp=Z,254nm,19.1s,MS4.3,baz=234,slow=30					
INK	Inuvik	60.88 343	eP	P	03 03 34.6	-2.2
	2.3nm,0.6s,mb4.5					
SLKM	Skilak Lake	63.07 332	eP	P	03 03 50.4	-1.2
ILAR	Eielson Array	63.36 337	P	P	03 03 51.6	-1.8
	6.4nm,1.0s,mb4.7,baz=123,slow=4.8,SNR=49					
ILAR			LR	LR	03 33 44.9	
	comp=Z,162nm,20.1s,MS4.2,baz=119,slow=38					
RSO	Redoubt South	64.23 331	eP	P	03 03 58.3	-1.0
PPT	Papeete	65.50 243	eS	S	03 12 53.5	+2.9
	68nm,25.2s					
PPT			eLR	LR	03 23 38.6	
	188nm,23.5s					
PPT	Papeete	65.50 243	LR	LR	03 25 54.7	
	comp=Z,138nm,20.8s,MS4.1,baz=48,slow=29					
TTA	Tatalina	66.46 333	eP	P	03 04 11.5	-2.1
TBI	Tubuai	67.91 238	eS	S	03 13 21.5	+2.0
	65nm,29.8s					
TBI			eLR	LR	03 24 44.4	
	174nm,28.2s					
NOA	NORSAR Array B	83.96 29	LR	LR	03 43 42.6	
	comp=Z,45nm,18.4s,MS3.9,baz=300,slow=36					
TIC	Tounodi	84.72 84	eP	P	03 06 01.5	+2.3
	3.3nm,0.2s,mb5.1					
LIC	Lamto	84.81 85	eP	P	03 06 04.2	+4.6
	21nm,0.4s,mb5.6					
KIC	Kosan Boka	85.06 85	eP	P	03 06 00.2	-0.6
	12nm,0.7s,mb5.1					
AKASG	Malin Array Be	97.47 34	LR	LR	03 51 32.2	
	comp=Z,68nm,20.1s,MS4.1,baz=270,slow=36					
CN2	Changchun	113.67 332	ePKP	PKiKP	03 12 04.8	+1.9
BJI	Beijing	120.72 336	P	Pdif	03 08 38.4	-3.2
BJI			pmax	pmax		
	comp=Z,4.0nm,0.6s					
BJI			LR	LR		
	comp=N,170nm,9.6s					
BJI			LR	LR		
	comp=E,170nm,11.2s					
BJI			LR	LR		
	comp=Z,30nm,16.1s					
HHC	Hu-ho-hao-te	121.71 340	ePKP	PKPdf	03 12 16.4	-2.1
HHC			PKS		03 15 52.3	
HHC			SKS	SKSdf	03 19 23.9	-3.4
HHC			AMB	AMB		
	comp=Z,39nm,5.3s					
HHC			LR	LR		
	comp=N,110nm,18.2s					
HHC			LR	LR		
	comp=E,110nm,18.7s					
HHC			LR	LR		
	comp=Z,120nm,19.7s					
WMQ	Urumqi	122.67 1	ePKP	PKPdf	03 12 18.0	-2.2
CD2	Chengdu	133.31 342	ePKP	PKPdf	03 12 38.3	-2.6
WRA	Warramunga Arr	136.12 256	PKhKP	PKPpre	03 12 42.9	
	comp=Z,0.3nm,0.7s,baz=82,slow=1.7,SNR=3.2					
ASAR	Alice Springs	136.35 250	PKhKP	PKPpre	03 12 44.1	
	comp=Z,0.8nm,1.1s,baz=119,slow=3.3,SNR=3.1					
GYA	Guiyang	136.41 337	ePdif	Pdif	03 09 48.0	-3.3
GYA			PKP	PKPdf	03 12 44.3	-2.5
GYA			sPKP		03 13 08.3	
GYA			AMB	AMB		
	comp=Z,90nm,7.8s					
KMI	Kunming	139.02 341	PKP	PKPdf	03 12 48.3	-3.3
CHTO	Chiang Mai	146.12 343	ePKPdf	PKPdf	03 13 03.2	-1.1
CM31	Chiang Mai Arr	146.45 342	ePKPdf	PKPdf	03 13 04.5	-0.4
CMAR	Chiang Mai Arr	146.45 342	PKPbc	PKPbc	03 13 04.2	-2.0
	comp=Z,11nm,1.0s,baz=339,slow=4.1,SNR=40					

BJI ***16*** *02:58:36.3,36°.95N×23°.85E,h130km,mB4.8/1,mb4.8/9*
PDG ***16*** *02:58:37.9±0.2,36°.75N×23°.68E,h150km±36km,ML4.7/9,*
Error ellipse: s-maj=4.3km s-min=7.0km az=0.0
MOS ***16*** *02:58:38.9±1.0,36°.73N×23°.99E,h147km,mb4.5/21,Error*
ellipse: s-maj=5.8km s-min=2.8km az=101.8
ISCJB ***16*** *02:58:38.6±0.2,36°.69N±0°.02×24°.01E±0°.02,h148km±1km,*
mb4.3/48,Error ellipse: s-maj=3.2km s-min=1.8km
az=34.3
IDC ***16*** *02:58:38.9±1.7,36°.75N×24°.10E,h131km±16km,mb3.9/23,*
mb1 4.0/32,mb1mx4.0/39,mbtmp4.0/32,MS2.8/1,
Ms1 2.8/1,ms1mx2.1/39,Error ellipse: s-maj=10.3km
s-min=9.6km az=151.0
NEIC ***16*** *02:58:39.8,36°.69N×24°.03E,h137km,mb4.5/32,After*
ATH.
CSEM ***16*** *02:58:39.4±0.1,36°.71N×24°.01E,h142km±1km

THR5	Thira Island,	1.11	104	P	Pn	02 59 05.8	+1.1	VLS	Valsamata	3.10	300	P	Pn	02 59 28.0	+0.1	PUK	Puka	6.23	330	ePN	Pn	03 00 08.0	-1.2
THR5	Thira Island,	1.11	104	P	Pn	02 59 05.8	+1.1	PRK	Paraskevi	3.12	34	P	Pn	02 59 29.2	+1.0	ULC	Ulcinj	6.43	326	⇓iPn	Pn	03 00 09.6	-2.3
NAIG	Nisos Aigina	1.15	339	eP	Pn	02 59 05.7	+0.7	PRK	Paraskevi	3.12	34	P	Pn	02 59 29.2	+1.0	ULC				eSn	Sn	03 01 17.0	-7.1
NAIG	Nisos Aigina	1.15	339	eP	Pn	02 59 05.7	+0.7	PRK	Paraskevi	3.12	34	eP	Pn	02 59 29.4	+1.2	ULC	Ulcinj	6.43	326	⇓iP	Pn	03 00 09.6	-2.3
THR3	Thira Island,	1.16	103	P	Pn	02 59 06.3	+1.2	PRK	Paraskevi	3.12	34	P	Pn	02 59 29.4	+1.2	ULC				e		03 01 17.0	
THR3	Thira Island,	1.16	103	P	Pn	02 59 06.3	+1.2	PRK	Paraskevi	3.12	34	P	Pn	02 59 29.2	+1.0	ULC	Ulcinj	6.43	326	⇓iPn	Pn	03 00 09.6	-2.3
VLY	Voula,Athens	1.18	352	P	Pn	02 59 05.5	+0.2	PAIG	Paliouri	3.25	356	P	Pn	02 59 29.8	0.0	BCI	Bajram Curri	6.44	333	ePN	Pn	03 00 10.5	-1.5
VLY	Voula,Athens	1.18	352	eP	Pn	02 59 05.7	+0.4	PAIG	Paliouri	3.25	356	P	Pn	02 59 29.8	0.0	LJBD	Adjabya	6.57	210	i P	Pn	03 00 13.1	-0.9
VLY				eS	Sn	02 59 23.6	-1.3	PAIG	Paliouri	3.25	356	P	Pn	02 59 30.2	+0.4		SNR=76						
VLY	Voula,Athens	1.18	352	eP	Pn	02 59 05.7	+0.4	PAIG	Paliouri	3.25	356	P	Pn	02 59 30.2	+0.4	KIZT	Kizilcal	6.61	68	ePN	Pn	03 00 14.5	+0.2
VLY				eS	Sn	02 59 23.6	-1.3	THL	Klokotos Trika	3.27	332	P	Pn	02 59 30.0	-0.2	CEL	Celeste	6.64	286	ePn	Pn	03 00 13.8	-1.0
THR1	Thera Island	1.21	105	P	Pn	02 59 06.7	+1.1	THL	Klokotos Trika	3.27	332	P	Pn	02 59 30.0	-0.2		333nm,0.8s						
THR1				S	Sn	02 59 25.4	0.0	LIA	Limnos Island	3.34	16	P	Pn	02 59 32.2	+1.2	CEL				eS	Sn	03 01 20.1	-9.2
THR1	Thera Island	1.21	105	P	Pn	02 59 06.7	+1.1	LIA	Limnos Island	3.34	16	eP	Pn	02 59 32.5	+1.5	CEL	Celeste	6.64	286	ePn	Pn	03 00 13.8	-1.0
THR1				S	Sn	02 59 25.4	0.0	LIA	Limnos Island	3.34	16	P	Pn	02 59 32.5	+1.5		333nm,0.8s						
APE	Apeiranthos	1.28	72	P	Pn	02 59 07.0	+0.7	LIA	Limnos Island	3.34	16	P	Pn	02 59 32.2	+1.2	PVY	Plav	6.67	333	⇓iPn	Pn	03 00 13.1	-2.0
APE	Apeiranthos	1.28	72	P	Pn	02 59 07.0	+0.7	ARG	Arkhangelos	3.35	97	P	Pn	02 59 31.9	+0.7	PVY				eSn	Sn	03 01 23.3	-6.6
APE	Apeiranthos	1.28	72	eP	Pn	02 59 07.5	+1.2	ARG	Arkhangelos	3.35	97	P	Pn	02 59 31.9	+0.7	PVY	Plav	6.67	333	⇓iPn	Pn	03 00 13.1	-2.0
APE				eS	Sn	02 59 26.4	-0.2	ARG	Arkhangelos	3.35	97	eP	Pn	02 59 32.3	+1.1	SZH	Strazhica	6.74	12	eP	Pn	03 00 16.8	+0.8
APE	Apeiranthos	1.28	72	P	Pn	02 59 07.4	+1.1	ARG	Arkhangelos	3.35	97	P	Pn	02 59 32.2	+1.0	HDMB	Hadim	6.81	85	ePN	Pn	03 00 16.8	-0.2
APE				S	Sn	02 59 26.0	-0.6	ARG	Arkhangelos	3.35	97	P	Pn	02 59 31.9	+0.7	PDG	Podgorica	6.81	329	ePn	Pn	03 00 14.3	-2.6
APE	Apeiranthos	1.28	72	P	Pn	02 59 07.4	+1.1	YER	Yerkesik	3.46	81	ePN	Pn	02 59 34.9	+2.4	TTG	Podgorica	6.81	329	ePn	Pn	03 00 14.3	-2.6
APE				eS	Sn	02 59 26.4	-0.2	YER	Yerkesik	3.46	81	ePn	Pn	02 59 34.9	+2.4	TTG				eSn	Sn	03 01 26.0	-7.2
KARN	Karanos	1.28	183	P	Pn	02 59 07.5	+1.1	LIT	Litokhoron	3.61	341	P	Pn	02 59 34.1	-0.4	TTG	Podgorica	6.81	329	eP	Pn	03 00 14.3	-2.6
KARN				S	Sn	02 59 27.3	+0.5	LIT	Litokhoron	3.61	341	P	Pn	02 59 34.1	-0.4	TTG				e		03 01 26.0	
KARN	Karanos	1.28	183	P	Pn	02 59 07.5	+1.1	LIT	Litokhoron	3.61	341	P	Pn	02 59 34.4	-0.1	TTG	Podgorica	6.81	329	eP	Pn	03 00 14.3	-2.6
KARN				S	Sn	02 59 27.3	+0.5	LIT	Litokhoron	3.61	341	P	Pn	02 59 34.4	-0.1	BUM	Brajici-Budva	6.86	326	⇓iPn	Pn	03 00 15.1	-2.5
VAM	Vamos	1.29	173	P	Pn	02 59 06.6	+0.2	EZN	Ezine	3.62	29	ePN	Pn	02 59 34.7	0.0	BUM				eSn	Sn	03 01 27.4	-7.0
VAM	Vamos	1.29	173	P	Pn	02 59 06.6	+0.2	EZN	Ezine	3.62	29	ePn	Pn	02 59 34.7	0.0	BUM	Brajici-Budva	6.86	326	⇓iPn	Pn	03 00 15.1	-2.5
VAM	Vamos	1.29	173	eP	Pn	02 59 07.0	+0.6	OUR	Ouranopolis	3.64	360	P	Pn	02 59 35.0	+0.1	BEY	Berane	6.94	334	⇓iPn	Pn	03 00 16.5	-2.2
VAM	Vamos	1.29	173	eP	Pn	02 59 07.0	+0.6	OUR	Ouranopolis	3.64	360	P	Pn	02 59 35.0	+0.1	IVA	Berane	6.94	334	⇓iPn	Pn	03 00 16.5	-2.2
ATHU	Athens Univers	1.29	352	P	Pn	02 59 08.4	+2.0	OUR	Ouranopolis	3.64	360	P	Pn	02 59 35.3	+0.4	IVA				eSn	Sn	03 01 29.9	-6.4
ATHU	Athens Univers	1.29	352	P	Pn	02 59 08.4	+2.0	OUR	Ouranopolis	3.64	360	P	Pn	02 59 35.3	+0.4	IVA	Berane	6.94	334	⇓iPn	Pn	03 00 16.5	-2.2
ATH	Athens Observa	1.30	350	P	Pn	02 59 07.0	+0.5	PLG	Polygyros	3.71	353	P	Pn	02 59 35.8	0.0	PPCY	Paphos	7.01	102	P	Pn	03 00 17.5	-2.3
ATH	Athens Observa	1.30	350	P	Pn	02 59 07.0	+0.5	PLG	Polygyros	3.71	353	P	Pn	02 59 35.8	0.0	ZIMR		7.04	8	⇓iP	Pn	03 00 20.2	+0.1
ATH	Athens Observa	1.30	350	eP	Pn	02 59 07.3	+0.8	PLG	Polygyros	3.71	353	eP	Pn	02 59 36.2	+0.4	ZIMR		7.04	8	⇓iP	Pn	03 00 20.2	+0.1
ATH				eS	Sn	02 59 26.3	-0.8	PLG	Polygyros	3.71	353	P	Pn	02 59 36.1	+0.3	ALFC	Alevga	7.13	100	P	Pn	03 00 19.4	-2.0
ATH	Athens Observa	1.30	350	P	Pn	02 59 07.0	+0.5	PLG	Polygyros	3.71	353	P	Pn	02 59 36.1	+0.3		9.6nm,0.2s						
ATH				eS	Sn	02 59 26.3	-0.8	GADA	Gvkgeada	3.80	22	ePN	Pn	02 59 37.9	+0.9	ALFC				S	Sn	03 01 33.3	-7.9
PTL	Penteli	1.36	355	P	Pn	02 59 07.5	+0.4	GADA	Gvkgeada	3.80	22	ePn	Pn	02 59 37.9	+0.9	HCY	Herceg Novi	7.15	325	⇑iPn	Pn	03 00 18.4	-3.2
PTL	Penteli	1.36	355	eP	Pn	02 59 07.9	+0.8	JAN	Janina	3.87	321	P	Pn	02 59 38.2	+0.3	HCY				eSn	Sn	03 01 34.1	-7.4
PTL	Penteli	1.36	355	eP	Pn	02 59 07.9	+0.8	JAN	Janina	3.87	321	P	Pn	02 59 38.2	+0.3	HCY	Herceg Novi	7.15	325	⇑iP	Pn	03 00 18.4	-3.2
VLX	Vlachokerasia	1.47	298	eP	Pn	02 59 09.4	+1.1	JAN	Janina	3.87	321	eP	Pn	02 59 38.7	+0.8	HCY				e		03 01 34.1	
VLX				eS	Sn	02 59 30.0	-0.2	JAN	Janina	3.87	321	P	Pn	02 59 38.2	+0.3	NKY	Niksic	7.23	329	⇓iPn	Pn	03 00 20.4	-2.3
VLX	Vlachokerasia	1.47	298	P	Pn	02 59 09.2	+0.9	HORT	Hortiatis	3.97	350	P	Pn	02 59 39.4	+0.2	NKY				eSn	Sn	03 01 36.7	-6.7
VLX				S	Sn	02 59 30.0	-0.2	HORT	Hortiatis	3.97	350	P	Pn	02 59 39.7	+0.5	NKY	Niksic	7.23	329	⇓iP	Pn	03 00 20.4	-2.3
VLX	Vlachokerasia	1.47	298	P	Pn	02 59 09.2	+0.9	HORT	Hortiatis	3.97	350	P	Pn	02 59 39.4	+0.2	NKY				e		03 01 36.7	
VLX				eS	Sn	02 59 30.0	-0.2	KZN	Kozani	4.02	335	P	Pn	02 59 39.5	-0.3	NKY	Niksic	7.23	329	⇓iPn	Pn	03 00 20.4	-2.3
LTK	Loutraki	1.57	328	eP	Pn	02 59 10.1	+0.8	KZN	Kozani	4.02	335	P	Pn	02 59 39.5	-0.3	CUC	Castrocucco	7.24	300	ePn	Pn	03 00 21.9	-0.8
LTK				eS	Sn	02 59 31.3	-0.8	KZN	Kozani	4.02	335	P	Pn	02 59 39.7	-0.1	CUC				eS	Sn	03 01 33.1	-10
LTK	Loutraki	1.57	328	P	Pn	02 59 10.0	+0.7	KZN	Kozani	4.02	335	P	Pn	02 59 39.7	-0.1	CUC	Castrocucco	7.24	300	ePn	Pn	03 00 21.9	-0.8
LTK				S	Sn	02 59 31.3	-0.8	THE	Thessaloniki	4.02	349	P	Pn	02 59 39.9	0.0	LEF	Lefka	7.38	100	ePN	Pn	03 00 22.4	-2.3
LTK	Loutraki	1.57	328	P	Pn	02 59 10.0	+0.7	THE	Thessaloniki	4.02	349	P	Pn	02 59 39.9	0.0	SZAC	Souni-Zanaja	7.47	102	P	Pn	03 00 23.7	-2.2
LTK				eS	Sn	02 59 31.3	-0.8	THE	Thessaloniki	4.02	349	P	Pn	02 59 39.8	-0.1	BRY	Bratogost	7.50	328	⇑iPn	Pn	03 00 23.3	-2.9
ITM	Ithomi	1.74	287	P	Pn	02 59 12.1	+0.9	THE	Thessaloniki	4.02	349	P	Pn	02 59 39.9	0.0	BRY				eSn	Sn	03 01 42.8	-6.9
ITM	Ithomi	1.74	287	eP	Pn	02 59 12.6	+1.4	IGT	Igoumenitsa	4.06	316	P	Pn	02 59 40.2	-0.2	BRY	Bratogost	7.50	328	⇑iP	Pn	03 00 23.3	-2.9
ITM				eS	Sn	02 59 35.8	+0.4	IGT	Igoumenitsa	4.06	316	P	Pn	02 59 40.2	-0.2	BRY				e		03 01 42.8	
ITM	Ithomi	1.74	287	P	Pn	02 59 12.4	+1.2	IGT	Igoumenitsa	4.06	316	P	Pn	02 59 40.1	-0.3	PLE	Pljevlja	7.52	333	⇑iPn	Pn	03 00 24.2	-2.3
ITM				S	Sn	02 59 35.7	+0.3	IGT	Igoumenitsa	4.06	316	P	Pn	02 59 40.2	-0.2	PLE				eSn	Sn	03 01 43.7	-6.6
ITM	Ithomi	1.74	287	P	Pn	02 59 12.1	+0.9	KULA	Kula-Manisa	4.12	62	ePN	Pn	02 59 41.7	+0.5	PLE	Pljevlja	7.52	333	⇑iP	Pn	03 00 24.2	-2.3
ITM				eS	Sn	02 59 35.8	+0.4	KULA	Kula-Manisa	4.12	62	ePn	Pn	02 59 41.7	+0.5	PLE				e		03 01 43.7	
SIVA	Sivas	1.79	158	P	Pn	02 59 12.6	+0.7	DENT	Denizli	4.15	74	ePN	Pn	02 59 42.6	+1.1	PLE	Pljevlja	7.52	333	⇑iPn	Pn	03 00 24.2	-2.3
SIVA	Sivas	1.79	158	P	Pn	02 59 12.9	+1.0	DENT	Denizli	4.15	74	ePn	Pn	02 59 42.7	+1.1	UPM	Unac-Piva	7.59	331	⇓iPn	Pn	03 00 25.3	-2.2
SIVA				S	Sn	02 59 37.2	+0.7	SOH	Sokhos	4.16	353	P	Pn	02 59 42.3	+0.6	UPM				eSn	Sn	03 01 45.4	-6.7
SIVA	Sivas	1.79	158	P	Pn	02 59 12.6	+0.7	SOH	Sokhos	4.16	353	P	Pn	02 59 42.3	+0.6	UPM	Unac-Piva	7.59	331	⇓iPn	Pn	03 00 25.3	-2.2
SIVA				S	Sn	02 59 37.2	+0.7	SOH	Sokhos	4.16	353	P	Pn	02 59 42.7	+1.0	MAMC	Mammari	7.62	99	P	Pn	03 00 26.2	-1.8
GUR	Goura	1.82	314	eP	Pn	02 59 13.0	+0.8	SOH	Sokhos	4.16	353	P	Pn	02 59 42.3	+0.6	MAMC	Mammari	7.62	99	P	Pn	03 00 26.2	-1.8
GUR				eS	Sn	02 59 36.4	-0.7	GELI	Tayfur-Gelibol	4.18	27	ePN	Pn	02 59 43.3	+1.3	WDD	Wield Dalam	7.71	267	ePn	Pn	03 00 29.6	+0.5
GUR	Goura	1.82	314	P	Pn	02 59 12.8	+0.6	GELI	Tayfur-Gelibol	4.18	27	ePn	Pn	02 59 43.3	+1.3		135nm,0.3s						
GUR				S	Sn	02 59 36.3	-0.8	BALB	Balikesir	4.24	45	ePN	Pn	02 59 43.6	+0.8	WDD				eS	Sn	03 01 49.3	-5.6
GUR	Goura	1.82	314	P	Pn	02 59 12.8	+0.6	BALB	Balikesir	4.24	45	ePn	Pn	02 59 43.6	+0.8	WDD	Wield Dalam	7.71	267	ePn	Pn	03 00 29.6	+0.5
GUR				eS	Sn	02 59 36.4	-0.7	LPK	Lapseki	4.26	30	ePN	Pn	02 59 43.7	+0.6		135nm,0.3s						
NPS	Neapolis	1.93	137	P	Pn	02 59 12.9	-0.5	LPK	Lapseki	4.26	30	ePn	Pn	02 59 43.7	+0.6	SULT	Sultanhani-AKS	7.71	76	ePN	Pn	03 00 29.3	+0.2
NPS	Neapolis	1.93	137	P	Pn	02 59 12.9	-0.5	KAVA	Kavala	4.32	5	P	Pn	02 59 44.4	+0.6	VAE	Valguarnera	7.71	279	P	Pn	03 00 30.4	+1.3
NPS	Neapolis	1.93	137	eP	Pn	02 59 13.4	0.0	KAVA	Kavala	4.32	5	P	Pn	02 59 44.4	+0.6		5.9nm,0.3s,baz=304,slow=8.5,SNR=30						
NPS	Neapolis	1.93	137	eP	Pn	02 59 13.4	0.0	LSK	Leskovik	4.37	323	ePN	Pn	02 59 45.0	+0.5	VAE				S	Sn	03 01 48.7	-6.3
LAST	Lasithi	1.94	141	P	Pn	02 59 13.7	+0.2	LSK	Leskovik	4.37	323	ePn	Pn	02 59 45.0	+0.5		45nm,0.3s,baz=312,slow=2.0,SNR=18						
LAST				S	Sn	02 59 38.6	-0.9	NEST	Nestorio	4.38	329	P	Pn	02 59 44.7	0.0	VAE	Valguarnera	7.71	279	P	Pn	03 00 30.5	+1.4
LAST	Lasithi	1.94	141	P	Pn	02 59 13.7	+0.2	NEST	Nestorio	4.38	329	P	Pn	02 59 44.7	0.0	CSS	Prodhromos	7.77	100	P	Pn	03 00 27.9	-2.0
LAST				S	Sn	02 59 38.6	-0.9	GLHS	Gihisar (BURDU	4.42	82	ePN	Pn	02 59 47.6	+2.4		3.9nm,0.4s						
DSF	Desfina	2.08	326	P	Pn	02 59 15.8	+0.5	GLHS	Gihisar (BURDU	4.42	82	ePn	Pn	02 59 47.6	+2.4	CSS				S	Sn	03 01 49.4	-7.0
DSF	Desfina	2.08	326	P	Pn	02 59 15.8	+0.5	GONE	Gonen-Balikesi	4.43	40	ePN	Pn	02 59 45.9	+0.6	CSS	Prodhromos	7.77	100	ePN	Pn	03 00 28.6	-1.2
LKR	Lokris	2.12	338	P	Pn	02 59 15.8	+0.2	GONE	Gonen-Balikesi	4.43	40	ePn	Pn	02 59 45.9	+0.7	CSS	Prodhromos	7.77	100	Pn	Pn	03 00 27.5	-2.4
LKR	Lokris	2.12	338	eP	Pn	02 59 16.4	+0.8	SRS	Serrai	4.43	356	P	Pn	02 59 45.6	+0.3	CSS				S	Sn	03 01 49.4	-7.0
LKR				eS	Sn	02 59 42.7	-0.7	SRS	Serrai	4.43	356	P	Pn	02 59 45.6	+0.3	CSS	Prodhromos	7.77	100	P	Pn	03 00 27.9	-2.0
LKR	Lokris	2.12	338	P	Pn	02 59 16.2	+0.6	SRS	Serrai	4.43	356	P	Pn	02 59 45.6	+0.7		3.9nm,0.4s						
LKR				S	Sn	02 59 43.2	-0.2	SRS	Serrai	4.43	356	P	Pn	02 59 45.6	+0.3	CSS	Prodhromos	7.77	100	ePn	Pn	03 00 28.7	-1.2
LKR	Lokris	2.12	338	P	Pn	02 59 15.8	+0.2	GRG	Griva	4.44	344	P	Pn	02 59 44.5	-1.0	IKL	Isikli	7.81	90	ePN	Pn	03 00 30.0	-0.4
LKR				S	Sn	02 59 43.2	-0.2	GRG	Griva	4.44	344	P	Pn	02 59 44.5	-1.0	LFK	Lefkose	7.85	97	ePN	Pn	03 00 30.2	-0.7
ATAL	Atalanti	2.15	339	P	Pn	02 59 16.6	+0.6	GRG	Griva	4.44	344	P	Pn	02 59 44.7	-0.8	STON	Ston	7.86	324	i Pn	Pn	03 00 26.6	-4.4
ATAL				S	Sn	02 59 43.6	-0.5	GRG	Griva	4.44	344	P	Pn	02 59 44.7	-0.8	STON				Sn	Sn	03 01 48.2	-10
ATAL	Atalanti	2.15	339	P	Pn	02 59 16.6	+0.6	SRN	Sarande	4.48	317	ePN	Pn	02 59 45.7	-0.3	KAMT	Kaman	8.11	68	ePN	Pn	03 00 34.4	-0.1
ATAL				S	Sn	02 59 43.6	-0.5	SRN	Sarande	4.48	317	ePn	Pn	02 59 45.7	-0.3	SULR		8.16	11	⇓iP	Pn	03 00 34.6	-0.5
LAKA	Lakka	2.24	314	P	Pn	02 59 17.9	+0.8	KEK	Kerkira	4.49	314	P	Pn	02 59 45.3	-0.7	BR131	Keskin Array S	8.16	65	ePn	Pn	03 00 37.5	+2.4
LAKA				S	Sn	02 59 45.0	-1.0	KEK	Kerkira	4.49	314	P	Pn	02 59 45.6	-0.4	BR131	Keskin Array S	8.16	65	ePn	Pn	03 00 37.5	+2.3
LAKA	Lakka	2.24	314	P	Pn	02 59 17.9	+0.8	KEK				S	Sn	03 00 33.1	-4.6	BRTR	Keskin Array B	8.16	65	P	Pn	03 00 37.3	+2.1
LAKA				S	Sn	02 59 45.0	-1.0	KEK	Kerkira	4.49	314	P	Pn	02 59 45.6	-0.4		0.2nm,0.3s,baz=239,slow=13,SNR=8.3						
KALE	Kalithea	2.26	319	P	Pn	02 59 17.8	+0.4	KEK				S	Sn	03 00 33.1	-4.6	BRTR	Keskin Array B	8.16	65	P	Pn	03 00 37.3	+2.1
KALE				S	Sn	02 59 45.8	-0.6	ALN	Alexandroupoli	4.50	20	P	Pn	02 59 46.5	+0.4	BRTR	Keskin Array B	8.16	65	P	Pn	03 00 37.3	+2.1
KALE	Kalithea	2.26	319	P	Pn	02 59 17.8	+0.4	ALN	Alexandroupoli	4.50	20	P	Pn	02 59 46.5	+0.4	LMSR	Misrath	8.61	242	i P	Pn	03 00 41.2	-0.1
KALE				S	Sn	02 59 45.8	-0.6	ALN	Alexandroupoli	4.50	20	P	Pn	02 59 46.4	+0.3		SNR=70						
TRIZ	Trizonia	2.27	318	P	Pn	02 59 18.3	+0.7	ALN	Alexandroupoli	4.50	20	P	Pn	02 59 46.4	+0.3	GZR	Gura Zlata	8.75	354	⇓P	Pn	03 00 42.7	-0.2
TRIZ	Trizonia	2.27	318	P	Pn	02 59 18.3	+0.7	KSL	Kastellorizon	4.53	95	eP	Pn	02 59 47.5	+0.9	GZR	Gura Zlata	8.75	354	⇓iP	Pn	03 00 42.7	-0.2
CHOS	Chios island	2.35	43	P	Pn	02 59 19.9	+1.4	KSL	Kastellorizon	4.53	95	eP	Pn	02 59 47.5	+0.9	GZR	Gura Zlata	8.75	354	P	Pn	03 00 42.7	-0.2
CHOS	Chios island	2.35	43	P	Pn	02 59 19.9	+1.4	LTBQ	Tobruq	4.62	181	i P	Pn	02 59 48.0	+0.1	VOIR		8.78	5	⇑P	Pn	03 00 44.1	+0.8
UPR	University Cam	2.38	313	eP	Pn	02 59 20.2	+1.4		SNR=76							VOIR		8.78	5	⇑iP	Pn	03 00 44.1	+0.8
UPR				eS	Sn	02 59 49.1	0.0	NVR	Nevrokopi	4.66	359	P	Pn	02 59 48.1	-0.2	VOIR		8.78	5	P	Pn	03 00 44.1	+0.8
UPR	University Cam	2.38	313	P	Pn	02 59 20.0	+1.2	NVR	Nevrokopi	4.66	359	P	Pn	02 59 48.1	-0.2	KARA	Karaisali	8.86	83	ePN	Pn	03 00 45.0	+0.5
UPR	University Cam	2.38	313	P	Pn	02 59 20.0	+1.2	KBN	Korca	4.67	328	ePN	Pn	02 59 48.2	-0.2	MLR	Muntele Rosu	8.91	9	⇓P	Pn	03 00 45.7	+0.5
UPR				eS	Sn	02 59 49.1	0.0	KBN	Korca	4.67	328	ePn	Pn	02 59 48.2	-0.2	MLR	Muntele Rosu	8.91	9	⇓iP	Pn	03 00 45.7	+0.5
ZKR	Zakros	2.38	131	P	Pn	02 59 19.2	+0.3	KHL	Karahalli	4.68	68	ePN	Pn	02 59 48.7	+0.1	MLR	Muntele Rosu	8.91	9	P	Pn	03 00 45.7	+0.5
ZKR	Zakros	2.38	131	P	Pn	02 59 19.2	+0.3	KHL	Karahalli	4.68	68	ePn	Pn	02 59 48.7	+0.1	CORM	Corum	9.03	64	ePN	Pn	03 00 47.7	+0.9
EFP	Efpalio	2.41	317	eP	Pn	02 59 20.1	+0.9	ELL	Elmali	4.74	88	ePN	Pn	02 59 50.9	+1.5	BZS	Buzias	9.10	349	⇓P	Pn	03 00 46.3	-1.3
EFP				eS	Sn	02 59 49.3	-0.4	ELL	Elmali	4.74	88	ePn	Pn	02 59 50.9	+1.5	BZS	Buzias	9.10	349	⇓iP	Pn	03 00 46.3	-1.3
EFP	Efpalio	2.41	317	P	Pn	02 59 20.0	+0.8	EDC	Edincik	4.74	38	ePN	Pn	02 59 50.0	+0.6	BZS	Buzias	9.10	349	P	Pn	03 00 46.3	-1.3
EFP	Efpalio	2.41	317	P	Pn	02 59 20.0	+0.8	EDC	Edincik	4.74	38	ePn	Pn	02 59 50.0	+0.6	KRTS	Karatas	9.14	87	ePN	Pn	03 00 48.3	0.0
EFP				eS	Sn	02 59 49.3	-0.4	VAY	Valandovo	4.76	347	ePn	Pn	02 59 48.8	-0.9	DEV	Deva	9.22	355	⇓P	Pn	03 00 50.2	+0.9
RLS	Riolos of Patr	2.44	305	P	Pn	02 59 21.1	+1.5	TPE	Tepelena	4.78	320	ePN	Pn	02 59 50.2	+0.3	DEV	Deva	9.22	355	⇓iP	Pn	03 00 50.2	+0.9
RLS	Riolos of Patr	2.44	305	eP	Pn	02 59 21.5	+1.9	TPE	Tepelena	4.78	320	ePn	Pn	02 59 50.2	+0.3	DEV	Deva	9.22	355	P	Pn	03 00 50.2	+0.9
RLS	Riolos of Patr	2.44	305	P	Pn	02 59 21.1	+1.5	BNT	Bandirma	4.78	139	ePN	Pn	02 59 50.0	+0.2	PLOR	Plostina	9.37	11	⇓P	Pn	03 00 52.4	+1.2
SMG	Samos	2.48	65	eP	Pn	02 59 21.6	+1.5	BIA	Bitola	4.81	335	P	Pn	02 59 48.9	-1.4	PLOR	Plostina	9.37	11	⇓iP	Pn	03 00 52.4	+1.2
SMG	Samos	2.48	65	eP	Pn	02 59 21.6	+1.5	BIA	Bitola	4.81	335	ePn	Pn	02 59 49.4	-0.9	PLOR	Plostina	9.37	11	P	Pn	03 00 52.4	+1.2
AOS	Alonnisos	2.48	358	P	Pn	02 59 20.5	+0.4	BIA				eSg	Sn	03 00 42.9	-2.4	VRI	Vrincioaia	9.40	12	⇑P	Pn	03 00 53.2	+1.6
AOS	Alonnisos	2.48	358	P	Pn	02 59 21.0	+0.9	BIA	Bitola	4.81	335	P	Pn	02 59 48.9	-1.4	VRI	Vrincioaia	9.40	12	⇑iP	Pn	03 00 53.2	+1.6
AOS				S	Sn	02 59 50.4	-0.9	MMB	Musomiste	4.90	358	i P	Pn	02 59 51.7	+0.2	VRI	Vrincioaia	9.40	12	P	Pn	03 00 53.2	+1.6
AOS	Alonnisos	2.48	358	P	Pn	02 59 20.5	+0.4	MMB	Musomiste	4.90	358	i P	Pn	02 59 51.7	+0.2	KOZT	Kozan	9.48	82	ePN	Pn	03 00 53.4	+0.6
AOS				S	Sn	02 59 50.4	-0.9	KCTX	Karacabey (Bur	4.94	42	ePN	Pn	02 59 52.4	+0.3	OFRI	'Ofer	9.91	111	Pn	Pn	03 00 55.4	-3.1
BODT	Bodrum	2.67	81	ePN	Pn	02 59 23.3	+0.8	KCTX	Karacabey (Bur	4.94	42	ePn	Pn	02 59 52.4	+0.4	BHL	Bhannes	9.91	103	eP	Pn	03 00 55.1	-3.5
BODT	Bodrum	2.67	81	ePn	Pn	02 59 23.3	+0.8	RZN	Rozhen	5.02	6	i P	Pn	02 59 54.3	+1.2	AQU	L'Aquila	9.95	308	ePn	Pn	03 01 00.0	+

NVLJ	Novalja	10.49	321	*e*Pn	Pn	03 01 03.6	-2.5
RTMI	Retamim	10.51	119	Pn	Pn	03 01 03.8	-2.6
YTIR	Yattir	10.63	117	Pn	Pn	03 01 06.6	-1.5
YTIR	Yattir	10.63	117	Pn	Pn	03 01 06.6	-1.5
DSI	Dead Sea	10.71	115	Pn	Pn	03 01 07.0	-2.2
DSI				S	Sn	03 02 58.5	-9.1
PKS9	Tamasi	10.78	338⇑	*e*P	Pn	03 01 07.8	-2.1
RMNI	Mount Ramon	10.82	121	Pn	Pn	03 01 08.5	-2.1
MZDA	Masada	10.84	116	Pn	Pn	03 01 09.0	-1.9
MZDA	Masada	10.84	116	Pn	Pn	03 01 09.0	-1.9
BURAR	Bucovina Array	10.96	4	⇓P	Pn	03 01 13.0	+0.8
BURAR	Bucovina Array	10.96	4	⇓*i*P	Pn	03 01 13.0	+0.8
BOJS	Bojanci	11.00	326	*i* Pn	Pn	03 01 09.9	-2.9
BOJS				*i* Sn	Sn	03 03 04.2	-10
BOJS	comp=Z,19nm,0.4s						
BOJS	Bojanci	11.00	326	*i* Pn	Pn	03 01 09.9	-3.0
BOJS				*i* Sn	Sn	03 03 04.2	-10
	comp=Z,19nm,0.4s						
KRMI	Paran Flat	11.09	123	Pn	Pn	03 01 11.5	-2.7
ZFRI	Zfri	11.14	120	Pn	Pn	03 01 12.4	-2.4
PRNI	Paran	11.14	121	Pn	Pn	03 01 12.2	-2.6
PRNI	Paran	11.14	121	P	Pn	03 01 12.2	-2.6
CRES	Cresnjev	11.16	328	*i* Pn	Pn	03 01 11.9	-3.0
CRES	Cresnjev	11.16	328	*i* Pn	Pn	03 01 11.9	-3.1
HRFI	Mount Harif	11.35	123	Pn	Pn	03 01 15.4	-2.2
VISS	Visnje	11.42	326	*i* Pn	Pn	03 01 15.5	-2.9
VISS				*e*Sn	Sn	03 03 16.1	-8.2
VISS	Visnje	11.42	326	*i* Pn	Pn	03 01 15.5	-2.8
VISS				*e*Sn	Sn	03 03 16.1	-8.2
TRPA	Tarpa	11.49	355	⇓*i*P	Pn	03 01 19.1	-0.1
TRPA	Tarpa	11.49	355	*e*P	Pn	03 01 18.5	-0.7
EIL	Elat	11.53	124	P	Pn	03 01 17.6	-2.3
	comp=Z,10.0nm,0.3s,baz=334,slow=9.6,SNR=104						
EIL				S	Sn	03 03 16.7	-11
	comp=Z,9.9nm,0.3s,baz=320,slow=20,SNR=10						
EIL	Elat	11.53	124	Pn	Pn	03 01 17.6	-2.3
ASF	Jabal al Asfar	11.55	109	P	Pn	03 01 19.8	-0.5
	comp=Z,2.9nm,0.3s,baz=154,slow=6.6,SNR=31						
ASF				S	Sn	03 03 20.1	-7.7
	comp=Z,0.8nm,0.3s,baz=227,slow=19,SNR=2.6						
ASF	Jabal al Asfar	11.55	109	P	Pn	03 01 19.8	-0.4
ASF				S	Sn	03 03 20.1	-7.7
MALT	Malatya	11.57	78	*e*Pn	Pn	03 01 22.2	+1.8
MALT	Malatya	11.57	78	⇓P	Pn	03 01 25.4	+5.0
MALT	Malatya	11.57	78	⇓*i*P	Pn	03 01 25.4	+5.0
MALT	Malatya	11.57	78	*e*Pn	Pn	03 01 22.2	+1.8
PSZ	Piszkesteto	11.63	346	*e*Pn	Pn	03 01 19.6	-1.5
PSZ	Piszkesteto	11.63	346	⇓P	Pn	03 01 21.6	+0.6
PSZ	Piszkesteto	11.63	346	⇓*i*P	Pn	03 01 21.6	+0.6
PSZ	Piszkesteto	11.63	346	*e*P	Pn	03 01 21.0	0.0
PSZ	Piszkesteto	11.63	346	*e*Pn	Pn	03 01 19.6	-1.4
PSZ	Piszkesteto	11.63	346	*e*P	Pn	03 01 21.0	0.0
LJU	Ljubljana	11.74	326	*i* Pn	Pn	03 01 19.6	-2.9
LJU				*i* Sn	Sn	03 03 25.6	-6.5
LJU	Ljubljana	11.74	326	*i* Pn	Pn	03 01 19.6	-3.0
LJU				*i* Sn	Sn	03 03 25.6	-6.5
JAVS	Javornik	11.85	324	*i* Pn	Pn	03 01 21.4	-2.5
JAVS				*i* Sn	Sn	03 03 23.5	-11
JAVS	Javornik	11.85	324	*i* Pn	Pn	03 01 21.4	-2.5
JAVS				*i* Sn	Sn	03 03 23.5	-11
VSL	Villasalto	11.87	288	*e*Pn	Pn	03 01 24.9	+0.7
VSL	Villasalto	11.87	288	*e*Pn	Pn	03 01 24.9	+0.7
KEST	Kesra	11.88	270	P	Pn	03 01 27.2	+2.7
	comp=Z,0.1nm,0.3s,baz=67,slow=16,SNR=9.5						
KEST				S	Sn	03 03 30.2	-5.5
	comp=Z,0.3nm,0.3s,baz=237,slow=20,SNR=6.1						
KEST	Kesra	11.88	270	P	Pn	03 01 27.2	+2.7
PERS	Pernice	11.95	329	*i* Pn	Pn	03 01 22.3	-3.0
PERS				*i* Sn	Sn	03 03 26.5	-11
PERS	Pernice	11.95	329	*i* Pn	Pn	03 01 22.3	-3.0
PERS				*i* Sn	Sn	03 03 26.5	-11
MOZS	Mozjanca	11.97	326	*i* Pn	Pn	03 01 22.7	-2.9
SOKA	Soboth	12.02	329⇑	*i*Pn	Pn	03 01 23.0	-3.1
VOY	Vojsko	12.03	324	*e*Pn	Pn	03 01 23.7	-2.6
VOY				*e*		03 01 24.8	
VOY				*e*		03 01 33.7	
VOY				*e*(Sn)	Sn	03 03 28.8	-10
VOY				*e*		03 03 31.0	
VOY	Vojsko	12.03	324	*e*Pn	Pn	03 01 23.7	-2.6
KECS	Kecovo	12.07	349	*e*P	Pn	03 01 26.7	-0.1
KECS	Kecovo	12.07	349	*e*P	Pn	03 01 26.7	-0.1
KECS	Kecovo	12.07	349	*e*PN	Pn	03 01 26.7	-0.1
OBKA	Obir	12.09	327⇑	*i*Pn	Pn	03 01 24.2	-2.9
	SNR=11						
ARSA	Arzberg	12.29	332⇓	*i*Pn	Pn	03 01 26.9	-2.8
	SNR=21						
KOLS	Kolonicke sedl	12.30	355	*e*P	Pn	03 01 30.3	+0.4
KOLS	Kolonicke sedl	12.30	355	*e*P	Pn	03 01 30.3	+0.4
KOLS	Kolonicke sedl	12.30	355	*e*PN	Pn	03 01 30.3	+0.4
KOLS	Kolonicke sedl	12.30	355	*e*P	Pn	03 01 30.3	+0.4
CRVS	Cervenica-Dubn	12.35	352	*e*P	Pn	03 01 32.1	+1.6
CRVS	Cervenica-Dubn	12.35	352	*e*P	Pn	03 01 32.1	+1.6
CRVS	Cervenica-Dubn	12.35	352	*e*PN	Pn	03 01 32.1	+1.6
CRVS	Cervenica-Dubn	12.35	352	*e*P	Pn	03 01 32.1	+1.6
VYHS	Vyhne	12.39	344	*e*P	Pn	03 01 34.7	+3.6
VYHS				*e*S	Sn	03 03 48.3	+0.5
VYHS	Vyhne	12.39	344	*e*P	Pn	03 01 34.7	+3.6
VYHS				*e*S	Sn	03 03 48.3	+0.5
VYHS	Vyhne	12.39	344	*e*PN	Pn	03 01 34.7	+3.6
VYHS	Vyhne	12.39	344	*e*SN	Sn	03 03 48.3	+0.5
VYHS	Vyhne	12.39	344	*e*P	Pn	03 01 34.7	+3.6
VYHS				*e*S	Sn	03 03 48.3	+0.5
CONA	Conrad Observa	12.74	334⇑	*i*Pn	Pn	03 01 34.4	-1.1
CONA	Conrad Observa	12.74	334	Pn	Pn	03 01 34.4	-1.1
VLC	Villacollemand	12.77	310	*e*Pn	Pn	03 01 38.7	+2.7
KWP	Kalwaria Pacla	12.97	356	⇓P	Pn	03 01 39.6	+1.1
KWP	Kalwaria Pacla	12.97	356	⇓*i*P	Pn	03 01 39.6	+1.1
KWP	Kalwaria Pacla	12.97	356	P	Pn	03 01 39.6	+1.1
ANN	Anapa	13.00	47	*e*P	Pn	03 01 27.1	-12
ANN				pmax	pmax		
	comp=Z,21nm,0.9s						
ABTA	Abfaltersbach	13.21	323⇑	*i*Pn	Pn	03 01 38.4	-3.1
	SNR=20						
MOA	Molln	13.27	330⇓	*i*Pn	Pn	03 01 40.4	-1.9
	SNR=13						
MOA	Molln	13.27	330	Pn	Pn	03 01 40.4	-1.9
	SNR=13						
VRAC	Vranov	13.72	339	P	Pn	03 01 48.9	+0.8
	comp=Z,0.2nm,0.3s,baz=108,slow=9.2,SNR=3.3						
VRAC				LR	LR	03 07 30.4	
	comp=Z,45nm,20.8s,baz=70,slow=39						
VRAC	Vranov	13.72	339	P	Pn	03 01 48.9	+0.8
VRAC				LR	LR	03 07 30.4	
VRAC	Vranov	13.72	339	⇓P	Pn	03 01 51.4	+3.3
VRAC	Vranov	13.72	339	⇓*i*P	Pn	03 01 51.4	+3.3
VRAC	Vranov	13.72	339	P	Pn	03 01 51.4	+3.3
OKC	Ostrava-Krasne	13.81	344	*e*P	Pn	03 01 53.1	+3.9
OKC				smax			
	comp=N,12nm,0.4s						
OKC	Ostrava-Krasne	13.81	344	*e*P	Pn	03 01 53.1	+3.9
OKC	Ostrava-Krasne	13.81	344	*e*P	Pn	03 01 53.1	+3.9
MORC	Moravsky Berou	13.90	342	*e*Pn	Pn	03 01 51.0	+0.7
	comp=N,6.9nm,0.9s						
MORC	Moravsky Berou	13.90	342	*e*P	Pn	03 01 51.0	+0.7
MORC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MORC	Moravsky Berou	13.90	342	*e*Pn	Pn	03 01 51.0	+0.7
	comp=Z,6.9nm,0.9s						
WTTA	Wattenberg	13.99	323⇑	*i*Pn	Pn	03 01 50.1	-1.4
	SNR=11						
WTTA	Wattenberg	13.99	323	Pn	Pn	03 01 50.1	-1.5
	SNR=11						
TREC	Trest	14.05	336	*e*P	Pn	03 01 52.6	+0.4
TREC	Trest	14.05	336	*e*P	Pn	03 01 52.6	+0.4
TREC				*ex*	x	03 01 56.3	
WATA	Walderalm	14.07	323⇑	*i*Pn	Pn	03 01 51.3	-1.3
	SNR=17						
WATA	Walderalm	14.07	323	Pn	Pn	03 01 51.3	-1.3
	SNR=17						
FETA	Feichten	14.28	320⇓	*i*Pn	Pn	03 01 54.1	-1.1
	SNR=17						
FETA	Feichten	14.28	320	Pn	Pn	03 01 54.1	-1.1
	SNR=17						
GERES	GERESS Array B	14.30	331	P	Pn	03 01 56.5	+1.1
	comp=Z,2.7nm,0.3s,baz=149,slow=12,SNR=61						
GERES	GERESS Array B	14.30	331	P	Pn	03 01 56.5	+1.1
GERES	GERESS Array B	14.30	331	P	Pn	03 01 56.5	+1.1
GERES	GERESS Array B	14.30	331	P	Pn	03 01 56.5	+1.1
MOTA	Moosalm	14.31	322	⇓*i*Pn	Pn	03 01 54.3	-1.2
	SNR=27						
MOTA				⇑*i*Sn	Sn	03 04 25.0	-9.0
MOTA	Moosalm	14.31	322	Pn	Pn	03 01 54.3	-1.3
	SNR=27						
KIEV	Kiev	14.49	13	*e*Pn	Pn	03 01 56.3	-1.5
KIEV				*e*S	Sn	03 04 40.7	+2.4
KIEV	Kiev	14.49	13	*e*P	Pn	03 01 56.3	-1.5
KIEV				*e*S	Sn	03 04 40.7	+2.5
KIEV	Kiev	14.49	13	*e*Pn	Pn	03 01 56.3	-1.5
AKASG	Malin Array Be	14.50	13	P	Pn	03 01 56.5	-1.4
	comp=Z,3.0nm,0.3s,baz=201,slow=11,SNR=8.9						
AKASG	Malin Array Be	14.50	13	P	Pn	03 01 56.6	-1.3
DAVOX	Davos/Dischmat	14.57	318	P	Pn	03 02 00.4	+1.6
	comp=Z,1.8nm,0.3s,baz=152,slow=15,SNR=18						
DAVOX	Davos/Dischmat	14.57	318	P	Pn	03 02 00.4	+1.6
DAVOX	Davos/Dischmat	14.57	318	P	Pn	03 02 00.4	+1.6
KHC	Kasperske Hory	14.58	332	*e*P	Pn	03 01 59.3	+0.4
KHC				*ex*	x	03 02 02.3	
RETA	Reutte	14.58	322⇓	*i*Pn	Pn	03 01 57.1	-1.8
	SNR=7.0						
RETA	Reutte	14.58	322	Pn	Pn	03 01 57.1	-1.8
	SNR=7.0						
DPC	Dobruska-Polom	14.74	340	*e*Pn	Pn	03 02 02.4	+1.5
DPC	Dobruska-Polom	14.74	340	*e*P	Pn	03 02 01.7	+0.8
DPC	Dobruska-Polom	14.74	340	*e*P	Pn	03 02 01.7	+0.8
DPC				*ex*	x	03 02 04.5	
DPC	Dobruska-Polom	14.74	340	*e*P	Pn	03 02 01.7	+0.8
DPC	Dobruska-Polom	14.74	340	*e*Pn	Pn	03 02 02.4	+1.5
DAVA	Damuels	14.89	320⇓	*i*Pn	Pn	03 02 01.3	-1.5
	SNR=14						
DAVA	Damuels	14.89	320	Pn	Pn	03 02 01.3	-1.5
	SNR=14						
PRU	Pruhonice	14.96	336	*e*P	Pn	03 02 04.0	+0.4
PRU	Pruhonice	14.96	336	*e*P	Pn	03 02 04.0	+0.4
PRU				*ex*	x	03 02 06.9	
PRU	Pruhonice	14.96	336	*e*P	Pn	03 02 04.0	+0.4
BNI	Bardonecchia	15.52	308	*e*Pn	Pn	03 02 11.1	+0.3
BNI	Bardonecchia	15.52	308	*e*P	Pn	03 02 11.1	+0.4
BNI	Bardonecchia	15.52	308	*e*P	Pn	03 02 11.1	+0.4
NKC	Novy Kostel	15.90	332	*e*P	Pn	03 02 14.7	-0.6
NKC	Novy Kostel	15.90	332	*e*P	Pn	03 02 14.7	-0.6
NKC	Novy Kostel	15.90	332	*e*P	Pn	03 02 14.7	-0.6
BRG	Berggiesshubel	15.91	336	*e*P	Pn	03 02 17.6	+2.1
	comp=Z,8.0nm,1.0s						
GRA1	Grafenberg Arr	15.96	328	*e*P	Pn	03 02 15.9	-0.2
	comp=Z,55nm,1.0s						
GRA1	Grafenberg Arr	15.96	328	*e*P	Pn	03 02 15.9	-0.2
	comp=Z,55nm,1.0s						
GRF	Grafenberg Arr	15.96	328	*e*P	Pn	03 02 15.9	-0.2
	comp=Z,55nm,1.0s						
GRF	Grafenberg Arr	15.96	328	*e*P	Pn	03 02 15.9	-0.2
GRF				pmax	pmax		
	comp=Z,55nm,1.0s						
GRF	Grafenberg Arr	15.96	328	*e*P	Pn	03 02 15.9	-0.2
GRF				pmax	pmax		
	comp=Z,55nm,1.0s						
GRF	Grafenberg Arr	15.96	328	*e*P	Pn	03 02 15.9	-0.2
	comp=Z,55nm,1.0s						
GRFO	Grafenberg	15.96	328	*e*Pn	Pn	03 02 14.8	-1.2
	comp=Z,34nm,0.9s						
GRFO	Grafenberg	15.96	328	*e*P	Pn	03 02 14.8	-1.3
GRFO				pmax	pmax		
	comp=Z,34nm,0.9s						
GRFO	Grafenberg	15.96	328	*e*P	Pn	03 02 14.8	-1.3
	comp=Z,34nm,0.9s						
KIV	Kislovodsk	15.97	57	*e*Pn	Pn	03 02 18.0	+1.8
	comp=Z,21nm,0.9s						
KIV	Kislovodsk	15.97	57	*e*P	Pn	03 02 18.7	+2.5
KIV				pmax	pmax		
	comp=Z,29nm,1.2s						
KIV	Kislovodsk	15.97	57	*e*Pn	Pn	03 02 18.0	+1.8
	comp=Z,21nm,0.9s						
KIV	Kislovodsk	15.97	57	*e*P	Pn	03 02 18.7	+2.5
	comp=Z,29nm,1.2s						
SPAK	Spaichingen-Ko	15.98	320	*e*P	Pn	03 02 16.2	-0.1
SPAK	Spaichingen-Ko	15.98	320	*e*P	Pn	03 02 16.2	-0.1
TANN	Tannenbergstha	16.04	332	*e*P	Pn	03 02 17.3	+0.3
	comp=Z,9.0nm,1.2s						
FBE	Freiberg	16.15	335	*e*P	Pn	03 02 18.3	0.0
	comp=Z,27nm,1.4s						
FELD	Feldberg im Sc	16.25	318	*e*P	Pn	03 02 19.4	-0.2
FELD	Feldberg im Sc	16.25	318	*e*P	Pn	03 02 19.4	-0.2
BBS	Basel-Blauen	16.27	317	*e*P	Pn	03 02 19.3	-0.6
BBS	Basel-Blauen	16.27	317	*e*P	Pn	03 02 19.3	-0.6
BBS	Basel-Blauen	16.27	317	*e*P	Pn	03 02 19.3	-0.6
BFO	Black Forest	16.36	320	*e*P	Pn	03 02 21.3	+0.3
	comp=Z,16nm,1.0s						
BFO	Black Forest	16.36	320	*e*P	Pn	03 02 21.3	+0.3
BFO				pmax	pmax		
	comp=Z,16nm,1.0s						
BFO	Black Forest	16.36	320	*e*P	Pn	03 02 21.3	+0.3
	comp=Z,16nm,1.0s						
ZEI	Tsey	16.45	62	*e*P	Pn	03 02 23.2	+1.1
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEI	Tsey	16.45	62	*e*P	Pn	03 02 23.2	+1.1
	comp=Z,10.0nm,0.9s						
MOX	Moxa	16.55	331	*e*P	Pn	03 02 24.3	+1.1
	comp=Z,7.0nm,0.8s						
MOX	Moxa	16.55	331	*e*P	Pn	03 02 24.3	+1.1
MOX				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MOX	Moxa	16.55	331	*e*P	Pn	03 02 24.3	+1.1
	comp=Z,7.0nm,0.8s						
LOMF	Lomont	16.59	315	*e*P	Pn	03 02 24.1	+0.4
LOMF	Lomont	16.59	315	*e*P	Pn	03 02 24.1	+0.4
LOMF	Lomont	16.59	315	*e*P	Pn	03 02 24.1	+0.4
CLL	Collm	16.59	335	*e*P	Pn	03 02 24.1	+0.4
	comp=Z,10.0nm,0.9s						
CLL	Collm	16.59	335⇓	*i*P	Pn	03 02 23.9	+0.2
	comp=Z,10.0nm,0.9s						
CLL				*e*pP	pP	03 02 46.0	-2.4
CLL	Collm	16.59	335⇓	*i*P	Pn	03 02 23.9	+0.2
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CLL	Collm	16.59	335⇓	*i*P	Pn	03 02 23.9	+0.2
	comp=Z,10.0nm,0.9s						
CLL				*e*pP	pP	03 02 46.0	-2.4
CLL				*e*PcP	PcP	03 07 07.0	+2.0
CLL	Collm	16.59	335⇓	*i*P	Pn	03 02 23.9	+0.2
	comp=Z,10.0nm,0.9s						
GNI	Garni	16.61	72	P	Pn	03 02 27.2	+3.2
	comp=Z,2.0nm,0.3s,baz=299,slow=4.7,SNR=7.7						
GNI	Garni	16.61	72	*e*Pn	Pn	03 02 27.3	+3.3
	comp=Z,9.6nm,0.6s						
GNI	Garni	16.61	72	*c i*P	Pn	03 02 27.2	+3.2
GNI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MOF	Molkenrain	16.71	317	*e*P	Pn	03 02 24.8	-0.3
MOF	Molkenrain	16.71	317	*e*P	Pn	03 02 24.8	-0.3
MOF	Molkenrain	16.71	317	*e*P	Pn	03 02 24.8	-0.3
ECH	Echery	16.91	318	*e*P	Pn	03 02 27.0	-0.6
ECH	Echery	16.91	318	*e*P	Pn	03 02 27.0	-0.6
ECH	Echery	16.91	318	*e*P	Pn	03 02 27.0	-0.6
NEUB	Neuenburg	16.94	333	*e*P	Pn	03 02 29.2	+1.2
	comp=Z,30nm,1.2s						
TOD	Tromm	16.98	324	*e*P	Pn	03 02 29.0	+0.6
TOD	Tromm	16.98	324	*e*P	Pn	03 02 29.0	+0.6
TOD	Tromm	16.98	324	*e*P	Pn	03 02 29.0	+0.6
LANF	Langenberg	17.05	321	*e*P	Pn	03 02 30.2	+1.0
LANF	Langenberg	17.05	321	*e*P	Pn	03 02 30.2	+1.0
LANF	Langenberg	17.05	321	*e*P	Pn	03 02 30.2	+1.0
SUW	Suwalki	17.34	358	*e*Pn	Pn	03 02 31.6	-1.0
	comp=Z,38nm,0.6s						
SUW	Suwalki	17.34	358	*e*P	Pn	03 02 31.6	-1.0
SUW				pmax	pmax		
	comp=Z,38nm,0.6s						
SUW	Suwalki	17.34	358	*e*P	Pn	03 02 31.6	-1.0
	comp=Z,38nm,0.6s						
CFON	Fontmartina	17.45	293	P	Pn	03 02 36.6	+2.4
	comp=Z,7.0nm,0.6s						
THEF	They Montfort	17.55	317	*e*P	Pn	03 02 35.7	+0.4
THEF	They Montfort	17.55	317	*e*P	Pn	03 02 35.7	+0.4
THEF	They Montfort	17.55	317	*e*P	Pn	03 02 35.7	+0.4
RUP	Ruppelstein	17.89	322	*e*P	Pn	03 02 39.2	-0.1
RUP	Ruppelstein	17.89	322	*e*P	Pn	03 02 39.2	-0.1
RUP	Ruppelstein	17.89	322	*e*P	Pn	03 02 39.2	-0.1
CLLI	Llivia	17.92	296	P	Pn	03 02 40.3	+0.6
CLLI	Llivia	17.92	296	P	Pn	03 02 40.3	+0.5
VORD	Divnogorie	17.98	33	*e*P	Pn	03 02 39.0	-1.4
VORD				pmax	pmax		
	comp=N,7.0nm,0.4s						
VORD				pmax	pmax		
	comp=E,6.0nm,0.4s						
VORD				pmax	pmax		
	comp=Z,5.0nm,0.4s						
VORD	Divnogorie	17.98	33	*e*P	Pn	03 02 39.0	-1.4
VSR	Storozhevoye	18.11	32	*e*P	P	03 02 40.2	-0.2
VSR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,20nm,0.4s						
VSR	Storozhevoye	18.11	32	*e*P	P	03 02 40.2	-0.2
EMIR	Miracle	18.15	294	P	P	03 02 43.2	+2.3
	comp=Z,9.8nm,0.5s						
EMIR	Miracle	18.15	294	P	P	03 02 43.2	+2.3
	comp=Z,9.8nm,0.5s						
PYM	Petit Puy Mans	18.17	306	*e*P	P	03 02 42.9	+1.9
PYM	Petit Puy Mans	18.17	306	*e*P	P	03 02 42.9	+1.9
PYM	Petit Puy Mans	18.17	306	*e*P	P	03 02 42.9	+1.9
WLF	Walferdange	18.32	321	P	P	03 02 43.7	+1.0
WLF	Walferdange	18.32	321	*e*P	P	03 02 43.6	+0.9
	comp=Z,11nm,0.7s						
WLF	Walferdange	18.32	321	*e*P	P	03 02 43.6	+0.9
WLF				pmax	pmax		
	comp=Z,11nm,0.7s						
WLF	Walferdange	18.32	321	*e*P	P	03 02 43.6	+0.9
	comp=Z,11nm,0.7s						
EPOB	Poblet	18.40	292	P	P	03 02 45.1	+1.5
	comp=Z,7.3nm,0.5s						
EPOB	Poblet	18.40	292	P	P	03 02 45.1	+1.5
	comp=Z,7.3nm,0.5s						
CSOR	Sort	18.51	295	P	P	03 02 47.9	+3.0
	comp=Z,13nm,0.5s						
ERTA	Horta de San J	18.92	290	P	P	03 02 53.5	+4.2
	comp=Z,7.4nm,1.0s						
MEM	Membach	18.99	323	P	P	03 02 51.7	+1.7
	comp=Z,7.3nm,0.9s						
BCLA	Clavier	19.22	321	P	P	03 02 54.3	+1.9
	comp=Z,9.3nm,1.6s						
EBIE	Bielsa	19.29	295	P	P	03 02 53.9	+0.6
	comp=Z,11nm,0.6s						
EBIE	Bielsa	19.29	295	P	P	03 02 53.9	+0.6
	comp=Z,11nm,0.6s						
DOU	Dourbes	19.38	320	P	P	03 02 55.6	+1.4
ESAC	San Caprasio	19.60	292	P	P	03 02 58.2	+1.6
	comp=Z,17nm,0.4s						
ESAC	San Caprasio	19.60	292	P	P	03 02 58.2	+1.6
	comp=Z,17nm,0.4s						
SNF	Seneffe	19.79	320	P	P	03 02 59.5	+0.9
OBN	Obninsk	20.34	21⇑	*e*P	P	03 03 03.5	-0.9
OBN				*i* S	S	03 06 40.9	-3.4
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
OBN	Obninsk	20.34	21	*e*P	P	03 03 03.5	-0.9
	comp=Z,8.0nm,0.6s						
EALK	Alkurruntz	20.57	296	P	P	03 03 08.8	+1.6
	comp=Z,9.7nm,0.5s						
EALK	Alkurruntz	20.57	296	P	P	03 03 08.8	+1.7
	comp=Z,9.7nm,0.5s						
ELIZ	Elizondo	20.58	296	P	P	03 03 08.7	+1.5
	comp=Z,4.9nm,0.3s						
ELIZ	Elizondo	20.58	296	P	P	03 03 08.7	+1.5
ELIZ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ELIZ	Elizondo	20.58	296	P	P	03 03 08.7	+1.5
	comp=Z,4.9nm,0.3s						
ELAN	Lanestosa	21.97	296	P	P	03 03 25.6	+3.7
	comp=Z,13nm,0.7s,mb4.5						
ESDC	Sonseca Array	22.15	286	P	P	03 03 22.9	-0.9
	comp=Z,0.8nm,0.4s,mb3.5,baz=83,slow=9.9,SNR=10						
ESDC	Sonseca Array	22.15	286	P	P	03 03 23.7	-0.2
	comp=Z,1.0nm,0.5s,mb3.5						
ESDC	Sonseca Array	22.15	286	P	P	03 03 23.7	-0.2
	comp=Z,1.0nm,0.5s,mb3.5						
HFS	Hagfors	24.38	347	P	P	03 03 43.7	-0.6
	comp=Z,1.9nm,0.7s,mb3.8,baz=148,slow=12,SNR=11						
HFS	Hagfors	24.38	347	P	P	03 03 43.7	-0.5
HFS	Hagfors	24.38	347	P	P	03 03 43.7	-0.5
EBAD	Badajoz	24.57	284	P	P	03 03 48.7	+2.5
	comp=Z,2.2nm,0.9s,mb3.7						
FINES	FINESS Array B	24.81	2	P	P	03 03 47.2	-0.9
	comp=Z,0.7nm,0.3s,mb3.6,baz=163,slow=12,SNR=11						
FIN

comp=Z,3.0nm,0.9s,mb3.9
AAK Ala-Archa 38.84 65 *i* P **P 03 05 51.9 +1.2**
comp=Z,3.0nm,0.9s,mb3.9
TKM2 Tokmak 2 39.60 65 *i* P **P 03 05 57.2 +0.2**
TKM2 pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
TKM2 Tokmak 2 39.60 65 *i* P **P 03 05 57.2 +0.2**
comp=Z,2.0nm,0.8s,mb3.8
DBIC Dimbokro 39.83 228 P **P 03 05 59.8 +0.6**
comp=Z,2.9nm,0.4s,mb4.3,baz=7.5,slow=11,SNR=14
DBIC Dimbokro 39.83 228 P **P 03 05 59.8 +0.6**
DBIC Dimbokro 39.83 228 P **P 03 05 59.8 +0.6**
DBIC pmax pmax
comp=Z,3.0nm,0.4s
DBIC Dimbokro 39.83 228 P **P 03 05 59.8 +0.6**
comp=Z,3.0nm,0.4s,mb4.3
KSH Kashi 40.53 70 *e*P **P 03 06 04.3 -0.3**
KSH pmax pmax
comp=Z,4.0nm,0.3s,mb4.5
KSH pmax pmax
comp=Z,14nm,0.5s,mb4.8
KURK Kurchatov 40.97 52 *e*P **P 03 06 07.8 -0.2**
comp=Z,12nm,0.6s,mb4.7
KURK Kurchatov 40.97 52 *d i*P **P 03 06 07.9 -0.2**
KURK pmax pmax
comp=Z,20nm,1.1s,mb4.7
KURK Kurchatov 40.97 52 *i* P **P 03 06 07.9 -0.2**
comp=Z,20nm,1.1s,mb4.7
KBS Kingsbay 42.64 357 *i* P **P 03 06 18.9 -2.5**
KBS pmax pmax
comp=Z,36nm,1.5s,mb4.8
MK31 Makanchi Array 43.73 58 *e*P **P 03 06 30.8 +0.3**
MK31 *e*PP PP 03 08 15.4 +0.5
MK31 Makanchi Array 43.73 58 *ce*P **P 03 06 30.6 +0.1**
MK31 pmax pmax
comp=Z,8.0nm,0.2s,mb5.0
MK31 Makanchi Array 43.73 58 *e*P **P 03 06 30.8 +0.3**
MKAR Makanchi Array 43.73 58 P **P 03 06 30.7 +0.2**
comp=Z,14nm,0.3s,mb5.0,baz=282,slow=6.8,SNR=216
MKAR PcP PcP 03 08 15.6 +0.8
comp=Z,2.4nm,0.6s,baz=268,slow=4.6,SNR=4.2
MKAR Makanchi Array 43.73 58 P **P 03 06 30.7 +0.2**
MKAR 03 08 15.6
ZAA0 Zalesovo Array 44.64 47 *e*P **P 03 06 37.2 -0.4**
ZAA0 Zalesovo Array 44.64 47 *e*P **P 03 06 37.2 -0.4**
ZALV Zalesovo Beam 44.64 47 P **P 03 06 37.2 -0.4**
comp=Z,10nm,0.3s,mb5.0,baz=268,slow=8.9,SNR=38
ZALV Zalesovo Beam 44.64 47 P **P 03 06 37.2 -0.4**
DANN Dangsing 50.37 81 *e*P **P 03 07 22.8 +0.6**
comp=Z,91nm,0.7s
DANN Dangsing 50.37 81 *e*P **P 03 07 22.8 +0.6**
comp=Z,91nm,0.7s
KOLN Koldanda 50.49 82 *e*P **P 03 07 23.4 +0.3**
comp=Z,10nm,0.5s,mb4.8
KOLN Koldanda 50.49 82 *e*P **P 03 07 23.4 +0.3**
comp=Z,10nm,0.5s,mb4.7
GKN Gorkha 51.21 81 *e*P **P 03 07 28.9 +0.4**
comp=Z,28nm,0.5s,mb5.2
GKN Gorkha 51.21 81 *e*P **P 03 07 28.9 +0.4**
comp=Z,28nm,0.5s,mb5.2
DMN Daman 51.76 82 *e*P **P 03 07 33.1 +0.5**
comp=Z,36nm,0.6s,mb5.2
DMN Daman 51.76 82 *e*P **P 03 07 33.1 +0.5**
comp=Z,36nm,0.6s,mb5.2
KKN Kakani 51.82 81 *e*P **P 03 07 33.2 +0.2**
comp=Z,14nm,0.5s,mb4.8
KKN Kakani 51.82 81 *e*P **P 03 07 33.2 +0.2**
KKN pmax pmax
comp=Z,14nm,0.5s,mb4.8
KKN Kakani 51.82 81 *e*P **P 03 07 33.2 +0.2**
comp=Z,14nm,0.5s,mb4.8
PKI Pulchoki 52.02 81 *e*P **P 03 07 35.0 +0.5**
comp=Z,13nm,0.4s,mb4.9
PKI Pulchoki 52.02 81 *e*P **P 03 07 35.0 +0.5**
PKI pmax pmax
comp=Z,13nm,0.4s,mb4.9
PKI Pulchoki 52.02 81 *e*P **P 03 07 35.0 +0.5**
comp=Z,13nm,0.4s,mb4.9
GUN Gumba 52.24 81 *e*P **P 03 07 36.4 +0.2**
comp=Z,31nm,0.7s,mb5.0
GUN Gumba 52.24 81 *e*P **P 03 07 36.4 +0.2**
comp=Z,31nm,0.7s,mb5.0
LSA Lhasa 55.60 76 *e*P **P 03 08 02.2 +1.7**
comp=Z,10nm,0.8s,mb4.7
LSA Lhasa 55.60 76 *e*P **P 03 08 02.3 +1.7**
LSA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
LSA Lhasa 55.60 76 *e*P **P 03 08 02.2 +1.6**
comp=Z,10nm,0.8s,mb4.7
SONM Songino Array 59.25 51 P **P 03 08 26.2 +0.4**
comp=Z,1.7nm,0.5s,mb4.1,baz=282,slow=7.4,SNR=7.1
SONM PcP PcP 03 09 12.0 -0.5
comp=Z,0.4nm,0.4s,baz=302,slow=3.3,SNR=4.0
SONM Songino Array 59.25 51 P **P 03 08 26.2 +0.4**
SONM PcP PcP 03 09 12.0 -0.5
SONM Songino Array 59.25 51 P **P 03 08 26.2 +0.4**
SONM 03 09 12.0
SONM pmax pmax
comp=Z,2.0nm,0.5s
SONM Songino Array 59.25 51 P **P 03 08 26.2 +0.4**
comp=Z,2.0nm,0.5s,mb4.2
SONM Songino Array 59.25 51 PcP PcP 03 09 12.0 -0.6
LBTB Lobatse 61.39 178 P **P 03 08 42.5 +2.1**
comp=Z,2.2nm,0.8s,mb4.0,baz=349,slow=5.2,SNR=3.0
LBTB Lobatse 61.39 178 P **P 03 08 42.5 +2.1**
LBTB Lobatse 61.39 178 P **P 03 08 42.5 +2.0**
LBTB pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
LBTB Lobatse 61.39 178 P **P 03 08 42.5 +2.0**
comp=Z,2.0nm,0.8s,mb4.0
SCHQ Schefferville 61.42 319 P **P 03 08 41.4 +0.9**
comp=Z,5.6nm,0.6s,mb4.6,baz=58,slow=14,SNR=10
SCHQ Schefferville 61.42 319 P **P 03 08 41.4 +0.9**
BOSA Boshof 64.97 179 P **P 03 09 05.2 +1.2**
comp=Z,4.2nm,1.1s,mb4.2,baz=0.0,slow=8.1,SNR=4.8
BOSA Boshof 64.97 179 P **P 03 09 05.2 +1.2**
BOSA Boshof 64.97 179 P **P 03 09 05.2 +1.2**
CMAR Chiang Mai Arr 67.32 83 P **P 03 09 19.4 0.0**
comp=Z,3.6nm,0.7s,mb4.3,baz=303,slow=8.2,SNR=16
CMAR Chiang Mai Arr 67.32 83 P **P 03 09 19.5 +0.1**
CMAR Chiang Mai Arr 67.32 83 P **P 03 09 19.5 +0.1**
YKA Yellowknife Ar 75.71 342 P **P 03 10 09.1 +0.2**
comp=Z,0.9nm,0.4s,mb3.7,baz=32,slow=5.0,SNR=6.0
YKA Yellowknife Ar 75.71 342 P **P 03 10 09.1 +0.2**
YKA Yellowknife Ar 75.71 342 P **P 03 10 09.1 +0.2**
KSRS Korea Array 78.09 52 P **P 03 10 22.8 +0.1**
comp=Z,5.8nm,0.6s,mb4.4,baz=309,slow=4.8,SNR=13
KSRS Korea Array 78.09 52 P **P 03 10 22.8 +0.1**
KSRS pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
KSRS Korea Array 78.09 52 P **P 03 10 22.8 +0.1**
comp=Z,6.0nm,0.6s,mb4.4
ILAR Eielson Array 78.62 356 P **P 03 10 25.4 +0.3**
comp=Z,0.8nm,0.7s,mb4.3,baz=355,slow=3.2,SNR=9.0
ILAR Eielson Array 78.62 356 P **P 03 10 25.4 +0.3**
ILAR Eielson Array 78.62 356 P **P 03 10 25.4 +0.3**
MAT Matsushiro 84.99 48 P **P 03 10 59.1 +0.1**
MJAR Matsushiro Arr 84.99 48 P **P 03 10 59.2 +0.1**
comp=Z,5.2nm,0.7s,mb4.3,baz=312,slow=4.3,SNR=12
MJAR Matsushiro Arr 84.99 48 P **P 03 10 59.2 +0.2**
MJAR Matsushiro Arr 84.99 48 P **P 03 10 59.2 +0.2**
BDFB Brasilia 85.43 247 P **P 03 11 02.9 +1.5**
comp=Z,2.6nm,0.7s,mb4.1,baz=31,slow=4.8,SNR=4.8
BDFB Brasilia 85.43 247 P **P 03 11 02.9 +1.5**
BDFB Brasilia 85.43 247 P **P 03 11 02.9 +1.5**
KDAK Kodiak Island 85.85 358 *i* P **P 03 11 04.0 +1.2**
KDAK Kodiak Island 85.85 358 *i* P **P 03 11 04.0 +1.2**
PHWY Pilot Hill 89.65 324 *e*P **P 03 11 22.8 +1.5**
comp=Z,4.2nm,0.8s,mb4.4
PDAR Pinedale Array 90.32 328 P **P 03 11 24.6 +0.2**
comp=Z,0.4nm,0.6s,mb3.5,baz=73,slow=5.0,SNR=4.2
WRA Warramunga Arr 117.67 95 PKP PKPdf 03 17 09.1 0.0
comp=Z,0.6nm,0.7s,baz=314,slow=1.9,SNR=5.5
WRA Warramunga Arr 117.67 95 PKIKP PKPdf 03 17 09.1 0.0
ASAR Alice Springs 119.22 99 PKP PKPdf 03 17 12.2 +0.2
comp=Z,1.2nm,0.4s,baz=310,slow=1.7,SNR=18
ASAR Alice Springs 119.22 99 PKIKP PKPdf 03 17 12.2 +0.2

DDA ***16*** *03:11:35.4, 39°.17N×25°.80E, h7km±4km, Md3.1*
ISK ***16*** *03:11:35.5, 39°.23N×25°.77E, h5km, MD3.3*
CSEM ***16*** *03:11:36.3±0.2, 39°.18N×25°.77E, h2km, ML2.8/5, Error ellipse: s-maj=4.6km s-min=2.9km az=76.0*
THE 16 03:11:36.6, 39°.18N×25°.83E, h1km, ML2.8/5, Error ellipse: s-maj=1.0km s-min=0.4km az=53.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.04**	**34**	P	Pg	03 11 37.5	+0.1
SIGR				S	Sg	03 11 38.6	+0.7
SIGR	**SIGRI**	**0.04**	**34**	P	Pg	03 11 37.5	+0.1
SIGR				S	Sg	03 11 38.6	+0.7
PRK	**Paraskevi**	**0.35**	**79**	P	Pg	03 11 43.6	+0.2
PRK				S	Sg	03 11 48.8	+0.9
PRK	**Paraskevi**	**0.35**	**79**	P	Pg	03 11 43.6	+0.2
PRK				S	Sg	03 11 48.8	+0.9
AYVA	**Ayvalik**	**0.68**	**79**	*i* P	Pg	03 11 49.1	-0.6
AYVA				*i* S	Sg	03 11 59.9	+1.4
AYVA	**Ayvalik**	**0.68**	**79**	*i* P	Pg	03 11 49.1	-0.6
AYVA				*i* S	Sg	03 11 59.9	+1.4
BOZC	**Bozcaada**	**0.69**	**15**	*i* P	Pg	03 11 49.3	-0.4
BOZC				*i* S	Sg	03 11 59.7	+1.0
EZN	**Ezine**	**0.75**	**31**	*e*PG	Pg	03 11 50.3	-0.7
EZN				*e*SG	Sg	03 12 01.5	+0.7
EZN	**Ezine**	**0.75**	**31**	*e*Pg	Pg	03 11 50.3	-0.7
EZN				*e*Sg	Sg	03 12 01.5	+0.7
CHOS	**Chios island**	**0.81**	**167**	P	Pg	03 11 52.2	+0.1
CHOS				S	Sg	03 12 04.4	+1.8
CHOS	**Chios island**	**0.81**	**167**	P	Pg	03 11 52.2	+0.1
CHOS				S	Sg	03 12 04.4	+1.8
LIA	**Limnos Island**	**0.87**	**326**	P	Pg	03 11 53.3	-0.1
LIA				S	Sg	03 12 06.0	+1.3
LIA	**Limnos Island**	**0.87**	**326**	P	Pg	03 11 53.3	-0.1
GADA	**Gvkgeada**	**1.01**	**3**	*e*PG	Pg	03 11 55.3	-0.7
GADA				*e*SG	Sg	03 12 10.2	+1.0
GADA	**Gvkgeada**	**1.01**	**3**	*e*Pg	Pg	03 11 55.3	-0.7
GADA				*e*Sg	Sg	03 12 10.2	+1.0
URLA	**Izmir**	**1.01**	**143**	*i* P	Pg	03 11 54.6	-1.4
URLA				*i* S	Sg	03 12 08.9	-0.3
URLA	**Izmir**	**1.01**	**143**	*i* P	Pg	03 11 54.6	-1.4
URLA				*i* S	Sg	03 12 08.9	-0.3
BLCB	**Balcova**	**1.24**	**129**	*e*PN	Pn	03 12 01.2	+0.2
BLCB	**Balcova**	**1.24**	**129**	P	Pg	03 11 59.6	-0.7
BLCB				S	Sg	03 12 17.0	+0.7
BLCB	**Balcova**	**1.24**	**129**	P	Pg	03 11 59.6	-0.7
BLCB	**Balcova**	**1.24**	**129**	*e*Pn	Pn	03 12 01.2	+0.2
BLCB				S	Sg	03 12 17.0	+0.7
GELI	**Tayfur-Gelibol**	**1.32**	**22**	*e*PN	Pn	03 12 00.6	-1.5
GELI				*e*SN	Sn	03 12 18.8	-1.5
GELI	**Tayfur-Gelibol**	**1.32**	**22**	*e*Pn	Pn	03 12 00.6	-1.5
GELI				*e*Sn	Sn	03 12 18.8	-1.5
IZM	**Izmir**	**1.37**	**124**	*e*PN	Pn	03 12 03.4	+0.6
LPK	**Lapseki**	**1.39**	**31**	*e*PN	Pn	03 12 01.8	-1.3
LPK	**Lapseki**	**1.39**	**31**	*e*Pn	Pn	03 12 01.8	-1.4
BALY	**Balya**	**1.50**	**67**	*i* P	Pn	03 12 03.8	-0.8
BALY				*i* S	Sb	03 12 24.5	-0.2
BALY	**Balya**	**1.50**	**67**	*i* P	Pn	03 12 03.8	-0.8
BALY				*i* S	Sb	03 12 24.5	-0.2
ENEZ	**Enez**	**1.58**	**9**	*e*PN	Pn	03 12 04.5	-1.2
ENEZ				*e*SN	Sn	03 12 26.2	-0.5
ENEZ	**Enez**	**1.58**	**9**	*e*Pn	Pn	03 12 04.5	-1.2
ENEZ				*e*Sn	Sn	03 12 26.2	-0.5
AKHS	**Akhisar**	**1.58**	**100**	*i* P	Pn	03 12 05.8	+0.1
AKHS				*i* S	Sn	03 12 29.2	+2.5
AKHS	**Akhisar**	**1.58**	**100**	*i* P	Pn	03 12 05.8	+0.1
AKHS				*i* S	Sn	03 12 29.2	+2.5
ERIK	**Erikli-Kesan**	**1.58**	**19**	*e*PN	Pn	03 12 05.1	-0.7
ERIK				*e*SN	Sn	03 12 26.6	-0.2
ERIK	**Erikli-Kesan**	**1.58**	**19**	*e*Pn	Pn	03 12 05.1	-0.7
ERIK				*e*Sn	Sn	03 12 26.6	-0.2
BALB	**Balikesir**	**1.66**	**73**	*e*PN	Pn	03 12 07.2	+0.4
BALB				*e*SN	Sn	03 12 30.6	+1.9
BALB	**Balikesir**	**1.66**	**73**	*e*Pn	Pn	03 12 07.2	+0.4
BALB				*e*Sn	Sn	03 12 30.6	+1.9
GONE	**Gonen-Balikesi**	**1.68**	**58**	*e*PN	Pn	03 12 07.5	+0.4
GONE	**Gonen-Balikesi**	**1.68**	**58**	*e*Pn	Pn	03 12 07.5	+0.4
ALN	**Alexandroupoli**	**1.73**	**6**	P	Pn	03 12 06.3	-1.4
ALN				S	Sn	03 12 30.2	-0.2
ALN	**Alexandroupoli**	**1.73**	**6**	P	Pn	03 12 06.3	-1.4
ALN				S	Sn	03 12 30.2	-0.2
PAIG	**Paliouri**	**1.82**	**295**	P	Pn	03 12 07.8	-1.2
PAIG	**Paliouri**	**1.82**	**295**	P	Pn	03 12 07.8	-1.2
RKY	**Sarkoy-Tekirda**	**1.83**	**34**	*e*PN	Pn	03 12 09.2	0.0
RKY	**Sarkoy-Tekirda**	**1.83**	**34**	*e*Pn	Pn	03 12 09.2	0.0
EDC	**Edincik**	**1.96**	**53**	*e*PN	Pn	03 12 11.2	+0.3
EDC	**Edincik**	**1.96**	**53**	*e*Pn	Pn	03 12 11.2	+0.3
MFT	**Murefte**	**1.96**	**34**	*e*PN	Pn	03 12 11.3	+0.4
MFT				*e*SN	Sn	03 12 37.2	+1.1
MFT	**Murefte**	**1.96**	**34**	*e*Pn	Pn	03 12 11.3	+0.4
MFT				*e*Sn	Sn	03 12 37.2	+1.1
BNT	**Bandirma**	**2.00**	**53**	*e*PN	Pn	03 12 11.6	+0.1
BNT				*e*SN	Sn	03 12 38.9	-0.2
DURS	**Dursunbey**	**2.10**	**78**	*i* P	Pn	03 12 11.9	-0.9
DURS				*i* S	Sn	03 12 37.3	-2.2
DURS	**Dursunbey**	**2.10**	**78**	*i* P	Pn	03 12 11.9	-0.9
DURS				*i* S	Sn	03 12 37.3	-2.2
APE	**Apeiranthos**	**2.12**	**186**	*e*PN	Pn	03 12 13.7	+0.6
APE	**Apeiranthos**	**2.12**	**186**	*e*Pn	Pn	03 12 13.7	+0.6
KCTX	**Karacabey (Bur**	**2.23**	**60**	*e*PN	Pn	03 12 15.8	+1.1
KCTX	**Karacabey (Bur**	**2.23**	**60**	*e*Pn	Pn	03 12 15.8	+1.1
KULA	**Kula-Manisa**	**2.31**	**106**	*e*PN	Pn	03 12 17.2	+1.4
KULA	**Kula-Manisa**	**2.31**	**106**	*e*Pn	Pn	03 12 17.2	+1.4
BODT	**Bodrum**	**2.42**	**151**	*e*PN	Pn	03 12 17.7	+0.5
BODT	**Bodrum**	**2.42**	**151**	*e*Pn	Pn	03 12 17.7	+0.5
ARMT	**Armutlu**	**2.72**	**58**	*e*PN	Pn	03 12 22.1	+0.7
ARMT	**Armutlu**	**2.72**	**58**	*e*Pn	Pn	03 12 22.1	+0.8
SLVT	**Silivri**	**2.74**	**41**	*e*PN	Pn	03 12 22.8	+1.1
SLVT	**Silivri**	**2.74**	**41**	*e*Pn	Pn	03 12 22.8	+1.1
EDRB	**Edirne**	**2.76**	**14**	*e*PN	Pn	03 12 21.4	-0.5
EDRB	**Edirne**	**2.76**	**14**	*e*Pn	Pn	03 12 21.4	-0.5
CTKS	**Kestanelik-??a**	**2.91**	**44**	*e*PN	Pn	03 12 24.9	+1.0
CTKS	**Kestanelik-??a**	**2.91**	**44**	*e*Pn	Pn	03 12 24.9	+1.0
ADVT	**Abdulvahap**	**3.26**	**66**	*e*PN	Pn	03 12 30.0	+1.1
ADVT	**Abdulvahap**	**3.26**	**66**	*e*Pn	Pn	03 12 30.0	+1.1

NIED ***16*** *03:19:00, 29°.60N×130°.10E, h8km, Mw4.0 Best double couple: M0=1.07000×10^15 NP1:φ0=302.00000°, δ53.00000°, λ-91.00000°. NP2:φ0=124.00000°, δ37.00000°, λ-89.00000°.*
ISCJB ***16*** *03:19:57.5±1.4, 29°.59N±0°.08×130°.1E±0°.2, h31km±15km, mb4.2/3, Error ellipse: s-maj=34.1km s-min=6.4km az=21.5*
IDC ***16*** *03:19:57.0±1.4, 29°.32N×130°.41E, h0km, mb4.1/3, mb1 4.4/5, mb1mx3.8/26, mbtmp4.1/5, ML3.3/2, Error ellipse: s-maj=69.3km s-min=21.2km az=98.0*
JMA ***16*** *03:19:57.6±0.1, 29°.60N×130°.09E, h30km±3km, M4.0*
JMA Felt I J1.
ISC 16 03:19:58.4±0.8, 29°.63N±0°.08×130°.0E±0°.2, h34km±10km, n12, σ0°69/16, mb4.2/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.22**	**343**	P	**Pb**	**03 20 05.0**	**-0.3**
JNN				*e*S	**Sb**	**03 20 10.3**	**+0.4**
JKC	**Kuchinoerabu**	**0.85**	**15**	P	**Pn**	**03 20 13.7**	**-0.4**
JKC				*e*S	**Sn**	**03 20 25.8**	**+0.4**
JAM	**Amami Oshima**	**1.25**	**194**	P	**Pn**	**03 20 18.9**	**-0.7**
JAM				*e*S	**Sn**	**03 20 34.3**	**-1.0**
JZK	**Kikaishima**	**1.31**	**179**	P	**Pn**	**03 20 21.0**	**+0.6**
JTN	**Tanegashima 3**	**1.35**	**41**	P	**Pn**	**03 20 20.1**	**-0.9**
JTSR	**Tashiro 2**	**1.75**	**29**	P	**Pn**	**03 20 25.9**	**-0.4**
JTSR				*e*S	**Sn**	**03 20 46.9**	**-0.5**
JSU	**Suzuyama**	**1.92**	**13**	P	**Pn**	**03 20 28.8**	**+0.1**
KSRS	**Korea Array**	**7.98**	**348**	Pn	**Pn**	**03 22 00.5**	**+8.5**
0.2nm,0.3s,baz=162,slow=16,SNR=8.3							
MJAR	**Matsushiro Arr**	**9.77**	**43**	Pn	**Pn**	**03 22 17.3**	**+0.8**
0.5nm,0.3s,baz=225,slow=29,SNR=4.0							
WRA	**Warramunga Arr**	**49.47**	**175**	P	**P**	**03 28 46.1**	**+0.6**
5.1nm,0.7s,mb4.7,baz=351,slow=8.3,SNR=27							
ASAR	**Alice Springs**	**53.13**	**175**	P	**P**	**03 29 14.2**	**+1.4**
1.8nm,0.6s,mb4.2,baz=6.8,slow=14,SNR=30							
ILAR	**Eielson Array**	**60.73**	**29**	P	**P**	**03 30 10.7**	**+4.3**
0.5nm,0.7s,mb3.8,baz=285,slow=6.8,SNR=8.6							

DJA 16 03:32:31, 2°.34S×127°.84E, h30km, MLv3.5/4, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.16**	**220**	P	Pn	03 32 50.2	-1.0
NLAI				S	Sn	03 33 08.0	+2.0
LBMI	**Labuha**	**1.72**	**349**	P	Pn	03 32 58.4	-0.6
LBMI				S	Sn	03 33 22.8	+2.8
KDI	**Kendari**	**5.46**	**253**	P	Pn	03 33 51.0	+0.7

ISCJB ***16*** *04:11:16.7±1.3, 28°.6N±0°.1×51°.47E±0°.05, h10km, Error ellipse: s-maj=19.0km s-min=4.1km az=165.1*
KISR ***16*** *04:11:18.2±1.0, 28°.97N×51°.40E, h27km±980km, ML2.9*
TEH ***16*** *04:11:19.9, 28°.52N×51°.61E, h31km*
ISC 16 04:11:18.1±2.5, 28°.6N±0°.1×51°.51E±0°.07, h15km±15km, n12, σ0°70/17, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRV	**Sarvestan**	**1.62**	**59**	*e*Pn	**Pn**	**04 11 46.2**	**+0.1**
ISRV				*e*Sg	**Sg**	**04 12 09.6**	**-0.8**
ISRV				*e*		04 12 14.7	
comp=Z,6μm,0.3s							
IPAR	**Pars**	**1.85**	**46**	*e*Pn	**Pn**	**04 11 49.0**	**-0.2**
IPAR				*e*Sg	**Sg**	**04 12 17.8**	**+0.1**
IPAR				*e*		04 12 30.6	
comp=Z,2μm,0.4s							
RDF	**Al-Radifah**	**3.50**	**277**	*e*P	**Pn**	**04 12 12.7**	**+0.8**
RDF				*e*S	**Sn**	**04 12 53.2**	**+0.2**
RDF				AML	AML	04 13 10.8	
comp=Z,35nm,0.6s							
NAY	**Al-Naaiem**	**3.81**	**281**	*e*P	**Pn**	**04 12 16.0**	**-0.1**
NAY				*e*S	**Sn**	**04 13 00.5**	**0.0**
NAY				AML	AML	04 13 21.6	
comp=Z,13nm,0.6s							
ISAD	**Sadrabad**	**3.83**	**29**	*e*Pn	**Pn**	**04 12 16.6**	**+0.1**
ISAD				*e*		04 13 19.3	
comp=Z,411nm,0.3s							
MIB	**Mutribah**	**3.85**	**290**	*e*P	**Pn**	**04 12 16.7**	**-0.1**
MIB				*e*S	**Sn**	**04 12 59.7**	**-2.1**
MIB				AML	AML	04 13 12.8	
comp=Z,31nm,0.5s							
IGAR	**Gharneh**	**3.85**	**7**	*e*Pn	**Pn**	**04 12 17.8**	**+1.0**
IGAR				*e*		04 13 16.6	
comp=Z,180nm,0.2s							
IMEH	**Mehriz**	**3.90**	**43**	*e*Pn	**Pn**	**04 12 17.2**	**-0.1**
IMEH				*e*		04 12 21.7	
comp=Z,369nm,0.2s							
IPIR	**Pirpir**	**4.14**	**353**	*e*Pn	**Pn**	**04 12 22.0**	**+1.3**
IPIR				*e*		04 13 37.2	
comp=Z,185nm,0.1s							
IZEF	**Zefreh**	**4.38**	**9**	*e*Pn	**Pn**	**04 12 23.4**	**-0.5**
IZEF				*e*		04 12 27.6	
comp=Z,162nm,0.1s							
IBAF	**Bafgh**	**4.63**	**48**	*e*Pn	**Pn**	**04 12 27.1**	**-0.4**
IBAF				*e*		04 12 30.5	
comp=Z,284nm,0.2s							
IKLH	**Kolahrood**	**4.74**	**1**	*e*Pn	**Pn**	**04 12 29.3**	**+0.3**
IKLH				*e*		04 13 18.0	
comp=Z,133nm,0.2s							

IDC ***16*** *04:25:32.1±1.4, 22°.47N×94°.79E, h0km, mb3.9/6, mb1 3.9/7, mb1mx3.6/27, mbtmp3.8/7, Error ellipse: s-maj=93.8km s-min=17.1km az=57.0*
NEIC ***16*** *04:25:38.6±0.6, 22°.10N×94°.57E, h70km±10km, Error ellipse: s-maj=24.9km s-min=6.1km az=221.0*
ISC 16 04:25:39.7±0.8, 22°.3N±0°.1×94°.4E±0°.1, h68km±10km, n25, σ1°66/40, mb3.8/6, 1C, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.02**	**326**	*i*PN	**Pn**	**04 26 43.5**	**+4.7**
SHL				*e*SN	**Sn**	**04 27 24.0**	**-0.6**
CHTO	**Chiang Mai**	**5.47**	**128**	*e*Pn	**Pn**	**04 26 55.8**	**-2.9**
CHTO				*e*S	**Sn**	**04 27 59.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**5.70**	**131**	Pn	**Pn**	**04 26 55.9**	**-6.0**
baz=312,slow=13,SNR=2.0							
CMAR				Sn	**Sn**	**04 27 52.3**	**-14**
0.5nm,0.3s,baz=299,slow=20,SNR=4.9							
ODAN	**Odare**	**7.85**	**307**	*e*Pn	**Pn**	**04 27 34.0**	**+2.8**
ODAN				*e*Sn	**Sn**	**04 28 55.1**	**-3.5**
249nm,0.4s							
TAPN	**Taplejung**	**7.91**	**311**	*e*Pn	**Pn**	**04 27 34.6**	**+2.5**
TAPN				*e*Sn	**Sn**	**04 28 57.1**	**-3.0**
93nm,0.3s							
LSA	**Lhasa**	**7.97**	**339**	*e*Pn	**Pn**	**04 27 35.5**	**+2.7**
18nm,0.6s							
LSA				*e*S	**Sn**	**04 28 51.5**	**-10**
GUN	**Gumba**	**9.55**	**308**	*e*Pn	**Pn**	**04 27 57.2**	**+2.7**
GUN				*e*Sn	**Sn**	**04 29 36.2**	**-4.0**
141nm,0.4s							
PKI	**Pulchoki**	**9.72**	**305**	*e*Pn	**Pn**	**04 27 58.7**	**+1.9**
PKI				*e*Sn	**Sn**	**04 29 39.7**	**-4.7**
47nm,0.4s							
PKI	**Pulchoki**	**9.72**	**305**	*e*Pn	**Pn**	**04 27 59.2**	**+2.4**
PKI				*e*Sn	**Sn**	**04 29 39.6**	**-4.8**
PKIN	**Phulchoki**	**9.73**	**305**	*e*Pn	**Pn**	**04 27 59.2**	**+2.2**
PKIN				*e*Sn	**Sn**	**04 29 39.6**	**-5.1**
57nm,0.4s							
KKN	**Kakani**	**9.93**	**306**	*e*Pn	**Pn**	**04 28 01.8**	**+2.1**
KKN				*e*Sn	**Sn**	**04 29 45.6**	**-3.9**
36nm,0.2s							
DMN	**Daman**	**9.97**	**304**	*e*Pn	**Pn**	**04 28 02.1**	**+1.9**
DMN				*e*Sn	**Sn**	**04 29 45.6**	**-4.9**
30nm,0.3s							
GKN	**Gorkha**	**10.53**	**305**	*e*Pn	**Pn**	**04 28 09.5**	**+1.7**
GKN				*e*Sn	**Sn**	**04 29 59.7**	**-4.4**
93nm,0.3s							
KOLN	**Koldanda**	**11.22**	**301**	*e*Pn	**Pn**	**04 28 18.9**	**+1.6**
KOLN				*e*Sn	**Sn**	**04 30 15.3**	**-5.7**
87nm,0.4s							
DANN	**Dangsing**	**11.37**	**304**	*e*Pn	**Pn**	**04 28 20.9**	**+1.6**
DANN				*e*Sn	**Sn**	**04 30 18.7**	**-6.0**
48nm,0.4s							
MK31	**Makanchi Array**	**26.37**	**341**	*e*P	**P**	**04 31 10.0**	**+0.5**
MKAR	**Makanchi Array**	**26.37**	**341**	P	**P**	**04 31 10.3**	**+0.8**
1.0nm,0.3s,mb3.7,baz=149,slow=9.8,SNR=18							
MKAR	**Makanchi Array**	**26.37**	**341**	P	**P**	**04 31 10.3**	**+0.8**
ZALV	**Zalesovo Beam**	**32.47**	**349**	P	**P**

ECHF	Ech Chlef	0.38 168	P	Pg	04 52 30.9	-1.2
ECHA	Ech Chlef	0.39 165	P	Pg	04 52 30.9	-1.4
ECHA	Ech Chlef	0.39 165	P	Pg	04 52 30.9	-1.4
EANR	'Ain N'Sour	0.58 191	P	Pg	04 52 36.3	+0.3
EANR	'Ain N'Sour	0.58 191	P	Pg	04 52 36.3	+0.3
EANR	'Ain N'Sour	0.58 191	P	Pg	04 52 36.3	+0.3
EANR	'Ain N'Sour	0.58 191	P	Pg	04 52 36.3	+0.3
ETRT	Tiaret	1.13 178	P	Pb	04 52 48.0	+2.0
ETRT	Tiaret	1.13 178	P	Pb	04 52 48.0	+2.0
ETRT	Tiaret	1.13 178	P	Pb	04 52 48.0	+2.0
ETRT	Tiaret	1.13 178	P	Pb	04 52 48.0	+2.0
EMHD	Djebel Mahouad	1.42 103	P	Pn	04 52 50.9	+0.8
EMHD	Djebel Mahouad	1.42 103	P	Pn	04 52 50.9	+0.8
EMHD	Djebel Mahouad	1.42 103	P	Pn	04 52 50.9	+0.8
EMHD	Djebel Mahouad	1.42 103	P	Pn	04 52 50.9	+0.8
EMUR	La Murta	2.38 304	P	Pn	04 53 03.4	+0.1
EMUR			S	Sn	04 53 31.8	-0.6
EMUR	La Murta	2.38 304	P	Pn	04 53 03.4	+0.1
	0.5nm,0.3s,SNR=7.9					
EMUR			S	Sn	04 53 31.8	-0.6
	4.2nm,0.7s,SNR=7.9					
EMUR	La Murta	2.38 304	P	Pn	04 53 03.4	+0.1
	0.5nm,0.3s,SNR=7.9					
EMUR			S	Sn	04 53 31.8	-0.6
	4.2nm,0.7s,SNR=7.9					
EMUR	La Murta	2.38 304	P	Pn	04 53 03.4	+0.1
	0.5nm,0.3s,SNR=7.9					
EMUR			S	Sn	04 53 31.8	-0.6
	SNR=7.9					
EBEN	Beniarda	2.47 332	P	Pn	04 53 04.5	0.0
EBEN			S	Sn	04 53 30.6	-4.0
EBEN	Beniarda	2.47 332	P	Pn	04 53 04.5	0.0
	0.2nm,0.1s,SNR=7.1					
EBEN			S	Sn	04 53 34.5	-0.1
	7.6nm,0.9s,SNR=7.9					
EBEN	Beniarda	2.47 332	P	Pn	04 53 04.5	0.0
	0.2nm,0.1s,SNR=7.1					
EBEN			S	Sn	04 53 34.5	-0.1
	7.6nm,0.9s,SNR=7.9					
EBEN	Beniarda	2.47 332	P	Pn	04 53 04.5	0.0
	0.2nm,0.1s,SNR=7.1					
EIBI	Ibiza	2.50 2	P	Pn	04 53 05.3	+0.3
EIBI			S	Sn	04 53 33.6	-1.7
EIBI	Ibiza	2.50 2	P	Pn	04 53 05.3	+0.3
	5.0nm,0.4s,SNR=8.5					
EIBI			S	Sn	04 53 34.2	-1.2
	9.5nm,0.5s,SNR=6.9					
EIBI	Ibiza	2.50 2	P	Pn	04 53 05.3	+0.3
	5.0nm,0.4s,SNR=8.5					
EIBI			S	Sn	04 53 34.2	-1.2
	9.5nm,0.5s,SNR=6.9					
EIBI	Ibiza	2.50 2	P	Pn	04 53 05.3	+0.3
	5.0nm,0.4s,SNR=8.5					
ETOB	Tobarra	3.07 315	P	Pn	04 53 13.5	+0.8
ETOB			S	Sn	04 53 50.5	+1.2
ETOB	Tobarra	3.07 315	P	Pn	04 53 13.3	+0.5
	5.9nm,0.6s,SNR=18					
ETOB			S	Sn	04 53 49.0	-0.3
	3.3nm,0.6s					
ETOB	Tobarra	3.07 315	P	Pn	04 53 13.3	+0.5
	5.9nm,0.6s,SNR=18					
ETOB			S	Sn	04 53 49.0	-0.3
	3.3nm,0.6s					
ETOB	Tobarra	3.07 315	P	Pn	04 53 13.5	+0.8
	5.9nm,0.6s,SNR=18					
ETOB			S	Sn	04 53 50.5	+1.2
	3.3nm,0.6s					
EHUE	Huescar	3.32 294	P	Pn	04 53 17.6	+1.4
EHUE			S	Sn	04 54 00.5	+4.9
EHUE	Huescar	3.32 294	P	Pn	04 53 15.5	-0.8
	1.1nm,0.4s,SNR=7.9					
EHUE			S	Sn	04 53 53.5	-2.2
	1.5nm,0.4s,SNR=7.9					
EHUE	Huescar	3.32 294	P	Pn	04 53 15.5	-0.8
	1.1nm,0.4s,SNR=7.9					
EHUE			S	Sn	04 53 53.5	-2.2
	1.5nm,0.4s,SNR=7.9					
EHUE	Huescar	3.32 294	P	Pn	04 53 17.6	+1.3
	1.1nm,0.4s,SNR=7.9					
EBER	Berja	3.34 278	P	Pn	04 53 16.0	-0.5
EBER			S	Sn	04 53 50.4	-5.7
EBER	Berja	3.34 278	P	Pn	04 53 16.1	-0.4
	1.7nm,0.3s,SNR=14					
EBER			S	Sn	04 53 54.9	-1.1
	11nm,1.1s					
EBER	Berja	3.34 278	P	Pn	04 53 16.1	-0.4
	1.7nm,0.3s,SNR=14					
EBER			S	Sn	04 53 54.9	-1.1
	11nm,1.1s					
EBER	Berja	3.34 278	P	Pn	04 53 16.0	-0.5
	1.7nm,0.3s,SNR=14					
ETOS	Mallorca	3.47 20	P	Pn	04 53 19.5	+1.2
ETOS			S	Sn	04 53 57.4	-1.8
ETOS	Mallorca	3.47 20	P	Pn	04 53 17.9	-0.4
	2.8nm,0.3s,SNR=7.9					
ETOS			S	Sn	04 53 57.4	-1.8
	5.1nm,0.6s,SNR=7.9					
ETOS	Mallorca	3.47 20	P	Pn	04 53 17.9	-0.4
	2.8nm,0.3s,SNR=7.9					
ETOS			S	Sn	04 53 57.4	-1.8
	5.1nm,0.6s,SNR=7.9					
ETOS	Mallorca	3.47 20	P	Pn	04 53 19.5	+1.2
	2.8nm,0.3s,SNR=7.9					
ECHE	Chera	3.52 331	P	Pn	04 53 18.1	-1.0
ECHE			S	Sn	04 54 02.6	+2.0
ECHE	Chera	3.52 331	P	Pn	04 53 18.1	-0.9
	0.8nm,0.3s,SNR=7.9					
ECHE			S	Sn	04 54 02.6	+2.0
	SNR=7.9					
EVIA	Vianos	3.65 306	P	Pn	04 53 22.1	+1.3
EVIA			S	Sn	04 54 05.0	+1.3
EVIA	Vianos	3.65 306	P	Pn	04 53 21.4	+0.6
	0.3nm,0.3s,SNR=7.9					
EVIA			S	Sn	04 54 02.8	-0.9
	3.1nm,0.3s,SNR=7.9					
EVIA	Vianos	3.65 306	P	Pn	04 53 21.4	+0.6
	0.3nm,0.3s,SNR=7.9					
EVIA			S	Sn	04 54 02.8	-0.9
	3.1nm,0.3s,SNR=7.9					
EVIA	Vianos	3.65 306	P	Pn	04 53 22.1	+1.4
	0.3nm,0.3s,SNR=7.9					
EVIA			S	Sn	04 54 05.0	+1.3
	SNR=7.9					
EQES	Quesada	3.67 292	P	Pn	04 53 22.6	+1.5
EQES			S	Sn	04 54 06.6	+2.3
EQES	Quesada	3.67 292	P	Pn	04 53 21.8	+0.7
	3.1nm,0.3s,SNR=17					
EQES			S	Sn	04 54 03.4	-0.9
	6.1nm,0.9s					
EQES	Quesada	3.67 292	P	Pn	04 53 21.8	+0.7
	3.1nm,0.3s,SNR=17					
EQES			S	Sn	04 54 03.4	-0.9
	6.1nm,0.9s					
EQES	Quesada	3.67 292	P	Pn	04 53 22.6	+1.5
	3.1nm,0.3s,SNR=17					
EQES			S	Sn	04 54 06.6	+2.3
	6.1nm,0.9s					
EQUE	Quentar	3.82 282	P	Pn	04 53 23.4	+0.3
	0.8nm,0.2s,SNR=7.9					
EQUE			S	Sn	04 54 06.8	-1.0
	0.9nm,0.7s,SNR=7.9					
EQUE	Quentar	3.82 282	P	Pn	04 53 23.4	+0.3
	0.8nm,0.2s,SNR=7.9					
EQUE			S	Sn	04 54 06.8	-1.0
	0.9nm,0.7s,SNR=7.9					
EQUE	Quentar	3.82 282	P	Pn	04 53 23.4	+0.3
	0.8nm,0.2s,SNR=7.9					
EGUA	Guajares	3.88 276	P	Pn	04 53 23.0	-0.9
EGUA	Guajares	3.88 276	P	Pn	04 53 24.1	+0.2
	2.7nm,0.2s,SNR=7.9					
EGUA			S	Sn	04 54 07.9	-1.4
	7.3nm,0.6s,SNR=7.9					
EGUA	Guajares	3.88 276	P	Pn	04 53 24.1	+0.2
	2.7nm,0.2s,SNR=7.9					
EGUA			S	Sn	04 54 07.9	-1.4
	7.3nm,0.6s,SNR=7.9					
EGUA	Guajares	3.88 276	P	Pn	04 53 23.0	-0.9
	2.7nm,0.2s,SNR=7.9					
EMOS	Mosqueruela	4.06 341	P	Pn	04 53 28.0	+1.6
EMOS			S	Sn	04 54 14.2	+0.3
EMOS	Mosqueruela	4.06 341	P	Pn	04 53 27.2	+0.8
	3.6nm,0.7s,SNR=17					
EMOS			S	Sn	04 54 12.3	-1.6
	17nm,1.1s					
EMOS	Mosqueruela	4.06 341	P	Pn	04 53 27.2	+0.8
	3.6nm,0.7s,SNR=17					
EMOS			S	Sn	04 54 12.3	-1.6
	17nm,1.1s					
EMOS	Mosqueruela	4.06 341	P	Pn	04 53 28.0	+1.5
	3.6nm,0.7s,SNR=17					
EMOS			S	Sn	04 54 14.2	+0.3
	17nm,1.1s					
ERON	Agron	4.08 278	P	Pn	04 53 29.7	+3.0
ERON	Agron	4.08 278	P	Pn	04 53 29.7	+3.0
	1.0nm,0.3s,SNR=7.9					
EBAN	Banos Encina	4.33 294	P	Pn	04 53 31.0	+0.9
EBAN			S	Sn	04 54 21.2	+0.7
EBAN	Banos Encina	4.33 294	P	Pn	04 53 31.0	+0.9
	1.6nm,0.3s,SNR=7.9					
EBAN			S	Sn	04 54 21.2	+0.8
	SNR=7.9					
ERTA	Horta de San J	4.48 351	P	Pn	04 53 33.6	+1.4
ERTA			S	Sn	04 54 27.3	+3.1
ERTA	Horta de San J	4.48 351	P	Pn	04 53 33.1	+0.8
	4.5nm,0.9s,SNR=8.1					
ERTA			S	Sn	04 54 21.3	-2.9
	61nm,1.6s					
ERTA	Horta de San J	4.48 351	P	Pn	04 53 33.1	+0.8
	4.5nm,0.9s,SNR=8.1					
ERTA			S	Sn	04 54 21.3	-2.9
	61nm,1.6s					
ERTA	Horta de San J	4.48 351	P	Pn	04 53 33.6	+1.4
	4.5nm,0.9s,SNR=8.1					
ERTA			S	Sn	04 54 27.3	+3.1
	61nm,1.6s					
EPOB	Poblet	4.82 359	P	Pn	04 53 37.7	+0.8
EPOB	Poblet	4.82 359	P	Pn	04 53 37.7	+0.8
	0.7nm,0.3s,SNR=7.9					
EPOB			S	Sn	04 54 30.1	-2.6
	1.6nm,1.1s,SNR=7.9					
EPOB	Poblet	4.82 359	P	Pn	04 53 37.7	+0.8
	0.7nm,0.3s,SNR=7.9					
EPOB			S	Sn	04 54 30.1	-2.6
	1.6nm,1.1s,SNR=7.9					
EPOB	Poblet	4.82 359	P	Pn	04 53 37.7	+0.8
	0.7nm,0.3s,SNR=7.9					
EMIJ	Mijas	4.84 272	P	Pn	04 53 35.5	-1.7
EADA	Adamuz	4.92 291	P	Pn	04 53 37.4	-0.8
EADA			S	Sn	04 54 44.0	+9.1
EADA	Adamuz	4.92 291	P	Pn	04 53 37.4	-0.8
	0.3nm,0.2s,SNR=7.9					
ESDC	Sonseca Array	5.17 309	P	Pn	04 53 41.9	+0.2
ESDC	Sonseca Array	5.17 309	P	Pn	04 53 41.9	+0.2
	0.4nm,0.3s,baz=122,slow=13,SNR=5.8					
CFON	Fontmartina	5.31 10	P	Pn	04 53 43.9	+0.3
CFON	Fontmartina	5.31 10	P	Pn	04 53 43.9	+0.3
	0.2nm,0.2s,SNR=4.0					
CFON	Fontmartina	5.31 10	P	Pn	04 53 43.9	+0.3
	0.2nm,0.2s,SNR=4.0					
CFON	Fontmartina	5.31 10	P	Pn	04 53 43.9	+0.3
	0.2nm,0.2s,SNR=7.9					
CSOR	Sort	5.84 359	P	Pn	04 53 52.9	+2.0
CSOR			S	Sn	04 54 54.7	-3.1
CSOR	Sort	5.84 359	P	Pn	04 53 51.8	+0.9
	5.8nm,0.8s,SNR=7.6					
CSOR			S	Sn	04 54 54.7	-3.1
	41nm,1.6s					
CSOR	Sort	5.84 359	P	Pn	04 53 51.8	+0.9
	5.8nm,0.8s,SNR=7.6					
CSOR			S	Sn	04 54 54.7	-3.1
	41nm,1.6s					
CSOR	Sort	5.84 359	P	Pn	04 53 52.9	+2.0
	5.8nm,0.8s,SNR=7.6					
ELAN	Lanestosa	7.60 333	P	Pn	04 54 16.5	+1.5
ELAN	Lanestosa	7.60 333	P	Pn	04 54 16.6	+1.6
	0.2nm,0.2s,SNR=7.9					
ELAN	Lanestosa	7.60 333	P	Pn	04 54 16.6	+1.6
	0.2nm,0.2s,SNR=7.9					
ELAN	Lanestosa	7.60 333	P	Pn	04 54 16.5	+1.5
	0.2nm,0.2s,SNR=7.9					

IDC 16 04:58:42.8±2.0, 9°16S×126°43E, h0km, mb3.6/1, mb1 3.9/3, mb1mx3.6/16, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=165.3km s-min=32.8km az=59.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.17	145	Pn	Pn	05 01 50.5	-0.7
	0.5nm,0.3s,baz=320,slow=13,SNR=21						
WRA				Sn	Sn	05 04 07.8	-11
	0.5nm,0.3s,baz=319,slow=23,SNR=6.7						
ASAR	Alice Springs	16.10	155	Pn	Pn	05 02 31.6	+0.9
	0.4nm,0.3s,baz=322,slow=10,SNR=26						
ASAR				Sn	Sn	05 05 22.8	-7.2
	0.3nm,0.3s,baz=318,slow=18,SNR=5.4						
MKAR	Makanchi Array	68.16	329	P	P	05 09 44.9	+0.1
	0.4nm,0.6s,baz=126,slow=7.5,SNR=4.1						

*CASC **16** 05:35:41.7±2.9, 13°40N×103°50W, h20km±999km, MD4.9, mb4.7(NEIC)*
*IDC **16** 05:37:41.4±0.8, 15°18N×94°25W, h0km, mb4.3/16, mb1 4.5/19, mb1mx4.4/26, mbtmp4.3/19, ML3.7/3, MS3.7/17, Ms1 3.7/17, ms1mx3.6/27, Error ellipse: s-maj=22.1km s-min=10.3km az=54.0*
*NEIC **16** 05:37:43.6, 14°78N×94°64W, h16km, mb4.7/81, MD4.5(MEX), After MEX.*
*MEX **16** 05:37:43.4±0.8, 14°78N×94°63W, h16km±18km, MD4.5*
*BJI **16** 05:37:46.6, 14°80N×94°60W, h16km, mB5.3/1, Ms4.8/2, Ms7 4.5/2*
*ISCJB **16** 05:37:47.9±0.7, 15°21N±0°04×94°22W±0°04, h52km±6km, mb4.6/89, MS3.7/16, Error ellipse: s-maj=8.8km s-min=4.1km az=36.0*

ISC 16 05:37:48.0±1.3, 15°16N±0°04×94°29W±0°03, h34km±9km, n444, g0°78/445, mb4.6/89, MS3.7/16, 123C-115D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.16	62	*i* P	Pn	05 38 07.4	-0.5
PCIG				*e*S	Sn	05 38 27.1	+4.5
HUIG	Huatulco	1.86	289	*i* P	Pn	05 38 09.4	-8.1
HUIG				*e*S	Sn	05 38 28.9	-11
HUIG	Huatulco	1.86	289	*i* P	Pn	05 38 09.4	-8.1
HUIG				*e*S	Sn	05 38 28.9	-11
TGIG		1.96	35	*i* P	Pn	05 38 20.3	+1.5
TGIG				*e*S	Sn	05 38 48.7	+6.4
THIG		1.97	97	*i* P	Pn	05 38 17.5	-1.4
THIG				*e*S	Sn	05 38 43.6	+1.2
CMIG	Matias Romero	2.00	343	Pn	Pn	05 38 17.8	-1.7
	114nm,0.3s,baz=161,slow=11,SNR=897						
CMIG				Sn	Sn	05 38 41.0	-2.3
	203nm,0.3s,baz=24,slow=16,SNR=11						
CMIG				Lg		05 38 45.2	
	244nm,0.3s,baz=30,slow=17,SNR=12						
CMIG				LR	LR	05 38 49.7	
	comp=Z,1μm,18.8s,baz=1.9,slow=34						
SCX	San Cristobal	2.23	45	*i* P	Pn	05 38 25.4	+2.8
SCX				*e*S	Sn	05 38 57.0	+8.1
SCX	San Cristobal	2.23	45	*i* P	Pn	05 38 25.4	+2.8
SCX				*e*S	Sn	05 38 57.0	+8.1
CCIG	Comitan	2.35	61	*i* P	Pn	05 38 26.5	+2.3
CCIG				*e*S	Sn	05 38 58.4	+6.5
CCIG	Comitan	2.35	61	*i* P	Pn	05 38 26.5	+2.3
CCIG				*e*S	Sn	05 38 58.4	+6.5
JAT	Jato	2.70	108	*e*P	Pn	05 38 27.9	-1.1
OXX	Oaxaca	3.02	310	*i* P	Pn	05 38 25.7	-7.8
OXX				*e*S	Sn	05 39 04.0	-4.5
OXX	Oaxaca	3.02	310	*i* P	Pn	05 38 25.7	-7.8
OXX				*e*S	Sn	05 39 04.0	-4.5
VHO	Vista Hermosa	3.03	309	*i* P	Pn	05 38 29.8	-3.7
VHO				*e*S	Sn	05 39 04.6	-3.9
VHO	Vista Hermosa	3.03	309	*i* P	Pn	05 38 29.8	-3.7
VHO				*e*S	Sn	05 39 04.6	-3.9
TP2	Tecpan 2	3.18	96	*e*P	Pn	05 38 37.1	+1.5
FG6		3.34	100	*e*P	Pn	05 38 38.3	+0.5
FUG	Fuego 3	3.41	102	*e*P	Pn	05 38 38.3	-0.4
APG	El Apazote	3.69	92	Pn	Pn	05 38 41.5	-1.2
	5.9nm,0.3s,baz=266,slow=8.8,SNR=21						
APG				Lg		05 39 38.0	
	11nm,0.3s,baz=307,slow=13,SNR=7.2						
APG	El Apazote	3.69	92	Pn	Pn	05 38 41.5	-1.1
APG				Lg		05 39 38.0	
PNIG	Pinotepa	3.90	289	*i* P	Pn	05 38 38.7	-6.7
PNIG				*e*S	Sn	05 39 20.2	-10
PNIG	Pinotepa	3.90	289	*i* P	Pn	05 38 38.7	-6.7
PNIG				*e*S	Sn	05 39 20.2	-10

MRL	Marmol	4.44 91	*e*P	Pn	05 38 53.7	+0.8
TGUH	Tegucigalpa,Un	6.88 98	*e*Pn	Pn	05 39 29.2	+2.7
TEIG	Tepich	7.63 48	*e*Pn	Pn	05 39 36.7	0.0
TEIG			*e*Sn	Sn	05 41 05.7	+3.7
JTS	JuntasAbangare	10.31 117	Pn	Pn	05 40 11.7	-1.8
	0.3nm,0.3s,baz=297,slow=12,SNR=2.3					
JTS	JuntasAbangare	10.31 117	*e*Pn	Pn	05 40 14.7	+1.1
JCT	Junction City	16.07 343	*e*P	Pn	05 41 31.1	-0.3
	19nm,0.8s					
628A	Black Gap, Mar	16.32 332	⇓P	Pn	05 41 34.9	+0.3
	baz=16,SNR=39					
627A	Terlingua Ranc	16.52 331	⇓P	Pn	05 41 36.9	-0.2
	baz=16,SNR=105					
TXAR	Lajitas Array	16.55 330	Pn	Pn	05 41 37.3	-0.2
	0.1nm,0.3s,baz=156,slow=14,SNR=67					
TXAR			LR	LR	05 48 49.3	
	comp=Z,204nm,19.3s,baz=180,slow=40					
528A	Cox Ranch, San	16.86 334	⇓P	Pn	05 41 40.9	-0.4
	baz=17,SNR=7.5					
626A	Big Bend Ranch	16.96 329	⇑P	Pn	05 41 42.6	0.0
	baz=17,SNR=33					
527A	Woodward Ranch	17.21 332	⇓P	Pn	05 41 45.8	+0.1
	baz=17,SNR=61					
428A	Kincaid Ranch,	17.30 335	⇑P	Pn	05 41 46.8	-0.1
	baz=17,SNR=21					
526A	Mary Lane Ranc	17.36 330	⇑P	Pn	05 41 47.9	+0.2
	baz=17,SNR=43					
427A	Hayter Ranch,	17.71 333	⇑P	Pn	05 41 51.9	-0.1
	baz=18,SNR=10					
426A	McDonald Obser	17.84 332	⇓P	Pn	05 41 53.8	+0.2
	baz=18,SNR=41					
328A	Wristen Ranch,	17.93 336	⇑P	Pn	05 41 54.7	0.0
	baz=18,SNR=31					
326A	Caldwell Ranch	18.37 333	⇓P	Pn	05 41 59.8	-0.2
	baz=18,SNR=14					
425A	Indio Mountain	18.39 330	⇓P	Pn	05 41 59.9	-0.4
	baz=18,SNR=21					
227A	Bennet, Jal	18.68 335	⇑P	Pn	05 42 03.2	-0.6
	baz=19					
325A	Bean Ranch, Si	18.87 331	⇓P	Pn	05 42 05.1	-1.0
	baz=19,SNR=6.5					
LRAL	Lakeview Retre	18.99 19	*e*P	Pn	05 42 06.5	-1.0
	7.4nm,0.8s					
226A	Malaga, Loving	19.06 334	⇓P	Pn	05 42 07.7	-0.6
	baz=19,SNR=8.8					
CLNB	Carlsbad	19.14 334	*e*P	Pn	05 42 08.6	-0.8
	2.5nm,0.6s					
324A	Moseley Ranch,	19.17 330	⇓P	Pn	05 42 08.4	-1.3
	baz=19,SNR=24					
GDL2	Guadalupe Moun	19.29 333	*e*P	Pn	05 42 10.3	-0.8
127A	Arkansas Junct	19.29 336	⇓P	Pn	05 42 09.7	-1.4
	baz=19,SNR=9.1					
MNTX	Cornudas Mount	19.33 330	*e*P	Pn	05 42 09.5	-2.2
	10nm,1.0s					
225A	Deer Hill, Car	19.42 332	⇑P	Pn	05 42 11.4	-1.3
	baz=19,SNR=12					
126A	Clayton Basin,	19.53 335	⇓P	Pn	05 42 12.3	-1.7
	baz=20					
UALR	University of	19.61 5	*e*P	Pn	05 42 12.8	-2.2
	28nm,0.9s					
224A	Cornudas Mount	19.71 331	⇓P	Pn	05 42 14.3	-1.9
	baz=20					
OXF	Oxford	19.77 12	*e*P	Pn	05 42 13.5	-3.3
	11nm,0.6s					
CPRX	Cap Rock	19.80 336	*e*P	Pn	05 42 15.1	-2.2
	13nm,0.7s					
Z27A	Tatum	19.81 337	⇓P	Pn	05 42 15.4	-1.8
	baz=20,SNR=30					
125A	Gardner Draw,	19.81 333	⇓P	Pn	05 42 15.4	-1.9
	baz=20					
WMOK	Wichita Mounta	19.91 349	*e*P	Pn	05 42 15.9	-2.6
	29nm,1.4s					
Z26A	Caprock	20.06 336	P	P	05 42 18.1	-0.2
	baz=20,SNR=13					
124A	Stringfield Ra	20.20 332	⇓P	P	05 42 20.3	+0.4
	baz=20,SNR=20					
MSTX	Muleshoe	20.24 339	⇑P	P	05 42 19.9	-0.4
	baz=20,SNR=17					
Y27A	Causey	20.30 338	⇓P	P	05 42 20.6	-0.3
	baz=20,SNR=15					
Z25A	Roswell	20.37 334	⇓P	P	05 42 21.4	-0.3
	baz=20,SNR=20					
123A	Bell Site, Whi	20.53 330	P	P	05 42 23.6	+0.2
	baz=20,SNR=10					
Y26A	Elida	20.58 337	⇓P	P	05 42 24.0	0.0
	baz=20,SNR=6.5					
GOGA	Godfrey	20.65 26	*e*P	P	05 42 24.9	+0.2
	72nm,1.7s					
Z24A	Sheeppen Canyo	20.69 333	P	P	05 42 25.6	+0.4
	baz=21,SNR=30					
320A	Kipp Ranch, An	20.71 323	⇑P	P	05 42 26.3	+0.8
	baz=21,SNR=13					
AMTX	Amarillo	20.74 343	*e*P	P	05 42 25.0	-0.7
	49nm,0.8s					
221A	Mesquite Ranch	20.80 326	⇓P	P	05 42 27.4	+1.0
	baz=21,SNR=13					
Y25A	Mesa, Roswell	20.92 335	⇑P	P	05 42 27.7	+0.1
	baz=21,SNR=26					
X27A	F and S Farms,	20.96 339	⇓P	P	05 42 28.0	-0.2
	baz=21,SNR=34					
Z23A	Rita Site, Whi	21.03 331	⇑P	P	05 42 29.5	+0.7
	baz=21,SNR=30					
X26A	CR and CF Fran	21.13 338	⇓P	P	05 42 30.0	+0.1
	baz=21,SNR=37					
220A	Playas Peak, P	21.13 325	⇓P	P	05 42 30.7	+0.7
	baz=21,SNR=41					
319A	Douglas	21.18 322	⇓P	P	05 42 31.0	+0.5
	baz=21,SNR=20					
121A	Cookes Peak, D	21.21 327	⇑P	P	05 42 31.8	+0.9
	baz=21,SNR=24					
Y24A	Capitan	21.23 334	⇑P	P	05 42 31.6	+0.6
	baz=21,SNR=52					
W27A	Bowe Ranch, En	21.33 340	⇑P	P	05 42 31.8	-0.3
	baz=21,SNR=38					
SWET	Sewanee	21.34 19	*e*P	P	05 42 31.1	-1.0
Z22A	Elephant Butte	21.37 330	⇑P	P	05 42 32.8	+0.3
	baz=21,SNR=13					
Y23A	Lovelace Mesa,	21.51 332	⇑P	P	05 42 34.4	+0.5
	baz=21,SNR=31					
OTAV	Otavalo	21.55 132	*e*P	P	05 42 34.9	+0.2
	7.0nm,0.9s,mb4.1					
W26A	Owens Ranch, T	21.60 338	P	P	05 42 34.6	-0.3
	baz=22,SNR=6.9					
219A	White Tail Can	21.62 323	⇓P	P	05 42 35.8	+0.6
	baz=22,SNR=31					
318A	Bisbee	21.65 321	⇓P	P	05 42 35.9	+0.3
	baz=22,SNR=20					
WVT	Waverly	21.67 14	*e*P	P	05 42 33.5	-2.2
	11nm,0.8s,mb4.3					
120A	U Bar Ranch, L	21.68 325	⇑P	P	05 42 36.5	+0.6
	baz=22,SNR=6.5					
Z21A	St. Cloud Mine	21.77 328	⇑P	P	05 42 37.5	+0.7
	baz=22,SNR=15					
X24A	Lazy VL Ranch,	21.78 335	⇑P	P	05 42 37.3	+0.4
	baz=22,SNR=19					
COW	Cow Castle Cre	21.93 32	*e*P

TKL Tuckaleechee C 22.48 23 eP P 05 42 42.9 -1.4
118A Homack Ranch, 22.50 323 ⇑P P 05 42 44.8 +0.2
baz=22,SNR=11
ANMO Albuquerque 22.54 333 P P 05 42 44.0 -1.0
4.1nm,0.9s,mb3.9,baz=152,slow=12,SNR=19
ANMO Albuquerque 22.54 333 eP P 05 42 44.8 -0.3
5.4nm,0.9s,mb4.0
V25A Rancho No Teng 22.57 338 ⇑P P 05 42 45.6 +0.2
baz=22
W23A Werner Place, 22.59 334 ⇑P P 05 42 45.8 +0.3
baz=22,SNR=6.3
Y20A Horse Springs, 22.60 328 ⇑P P 05 42 46.3 +0.7
baz=22,SNR=14
V24A Rampart Ranch, 22.72 336 ⇓P P 05 42 47.4 +0.5
baz=23,SNR=54
X21A Alamocita Cree 22.73 330 ⇑P P 05 42 47.2 +0.1
baz=23,SNR=23
TUC Tucson 22.74 322 eP P 05 42 47.2 +0.1
74nm,2.1s,mb4.8
U26A Atchley Ranch, 22.77 340 ⇑P P 05 42 47.4 0.0
baz=23,SNR=37
SIUC Southern Illin 22.91 10 eP P 05 42 46.8 -2.1
26nm,0.9s,mb4.7
216A Three Points, 22.94 320 ⇑P P 05 42 49.9 +0.6
baz=23,SNR=8.5
U25A Circle Dot Ran 23.00 339 ⇑P P 05 42 49.9 0.0
baz=23,SNR=23
Y19A Nutrioso 23.09 327 ⇑P P 05 42 51.4 +0.6
baz=23,SNR=8.2
V23A Ortiz Mt. (NFS 23.10 335 ⇓P P 05 42 51.6 +0.6
baz=23,SNR=42
X20A Quemado 23.16 329 P P 05 42 52.3 +0.8
baz=23,SNR=29
U24A Moreno Valley 23.33 337 ⇑P P 05 42 54.0 +0.7
baz=23,SNR=15
Y18A Canyon Day Jun 23.38 325 ⇓P P 05 42 54.1 +0.3
baz=23,SNR=11
X19A St. Johns 23.47 328 P P 05 42 55.4 +0.7
baz=23,SNR=10.0
V22A San Miguel Ran 23.55 334 ⇓P P 05 42 55.6 +0.2
baz=24,SNR=51
U23A El Rito 23.61 335 P P 05 42 56.3 +0.3
baz=24,SNR=80
W20A Ramah 23.63 330 ⇓P P 05 42 56.8 +0.6
baz=24,SNR=14
T25A Trinidad 23.67 340 ⇓P P 05 42 56.7 +0.2
baz=24,SNR=39
214A Organ Pipe Nat 23.77 318 ⇓P P 05 42 57.4 0.0
baz=24
Y17A Roosevelt 23.77 324 ⇓P P 05 42 57.9 +0.5
baz=24,SNR=8.2
V21A Milan 23.78 332 ⇓P P 05 42 58.3 +0.8
baz=24,SNR=6.6
T24A Torres, Weston 23.83 338 ⇓P P 05 42 58.5 +0.5
baz=24,SNR=20
Z16A Peralta Trail, 23.85 322 ⇓P P 05 42 57.9 -0.3
baz=24,SNR=6.8
115A Sonoran Desert 23.89 320 ⇑P P 05 42 59.1 +0.6
baz=24
X18A Snowflake 23.90 327 ⇓P P 05 42 59.6 +1.0
baz=24,SNR=10
U22A Llaves 23.93 334 ⇑P P 05 42 59.5 +0.7
baz=24,SNR=17
KSU1 Kansas State U 23.94 356 eP P 05 42 58.4 -0.5
20nm,0.8s,mb4.6
CBKS Cedar Bluff 24.05 350 eP P 05 43 00.5 +0.6
86nm,1.1s,mb5.1
OLIL Olney 24.11 12 eP P 05 42 58.3 -2.2
38nm,0.8s,mb4.9
V20A Brimhall 24.16 331 ⇑P P 05 43 00.8 -0.1
baz=24,SNR=9.8
T23A Casias Ranch, 24.17 337 ⇑P P 05 43 01.7 +0.7
baz=24,SNR=14
X17A Forest Lakes 24.22 325 P P 05 43 01.9 +0.4
baz=24,SNR=19
W18A Petrified Fore 24.24 328 ⇓P P 05 43 03.1 +1.4
baz=24,SNR=7.0
Y16A Circle Bar Ran 24.27 323 ⇑P P 05 43 02.4 +0.4
baz=24,SNR=8.7
U21A Nageezi 24.31 333 ⇓P P 05 43 02.7 +0.3
baz=24,SNR=22
T22A Edith 24.49 335 ⇑P P 05 43 05.1 +1.1
baz=24,SNR=21
R25A Fountain Ranch 24.55 341 P P 05 43 05.3 +0.9
baz=24,SNR=20
SDCO Great Sand Dun 24.59 338 eP P 05 43 05.2 +0.3
13nm,1.1s,mb4.4
X16A Lo Mia Camp, P 24.63 324 ⇓P P 05 43 05.6 +0.2
baz=25,SNR=37
T21A Navajo Lake 24.73 334 ⇑P P 05 43 07.2 +1.1
baz=25,SNR=10.0
V18A Ganado 24.80 328 ⇑P P 05 43 09.0 +2.2
baz=25,SNR=5.2
Y15A Casa Rosa Ranc 24.82 322 ⇑P P 05 43 08.0 +1.0
baz=25,SNR=21
BLO Bloomington 24.88 14 eP P 05 43 05.7 -1.7
21nm,0.8s,mb4.7
R24A Sanders Place, 24.89 339 ⇑P P 05 43 08.3 +0.7
baz=25,SNR=9.0
113A Mohawk Valley, 24.91 318 ⇑P P 05 43 07.4 -0.5
baz=25,SNR=12
U19A Dine' College, 24.91 330 ⇑P P 05 43 07.7 -0.2
baz=25,SNR=19
S22A 4UR Ranch, Cre 25.09 336 ⇓P P 05 43 10.2 +0.8
baz=25,SNR=13
Z13A Yuma Proving G 25.12 319 ⇑P P 05 43 09.3 -0.4
baz=25,SNR=15
X15A Humboldt 25.14 323 ⇑P P 05 43 09.9 0.0
baz=25,SNR=11
V17A Tonalea, Kykot 25.18 327 ⇑P P 05 43 10.5 +0.3
baz=25,SNR=26
W16A Flagstaff 25.18 325 ⇓P P 05 43 10.4 +0.1
baz=25,SNR=6.3
Y14A Wickenburg 25.21 321 ⇓P P 05 43 10.4 -0.2
baz=25,SNR=9.5
Q25A Bedland, Calha 25.24 342 P P 05 43 11.3 +0.5
baz=25,SNR=14
T19A Beclabito 25.26 331 ⇑P P 05 43 10.8 -0.1
baz=25,SNR=7.5
S21A Coal Bank Pass 25.41 334 P P 05 43 12.6 +0.2
baz=25,SNR=23
R22A Saguache, Gunn 25.48 337 ⇑P P 05 43 13.5 +0.5
baz=25,SNR=17
W15A Williams 25.65 324 ⇓P P 05 43 14.6 0.0
baz=26
Q23A Hartsel 25.75 339 ⇑P P 05 43 16.2 +0.8
baz=26,SNR=11
P25A Willow Gulch B 25.76 342 ⇑P P 05 43 15.8 +0.3
baz=26
GLA Glamis 25.78 317 eP P 05 43 15.6 -0.1
13nm,0.9s,mb4.5
S20A Disappointment 25.79 334 ⇓P P 05 43 16.7 +0.9
baz=26,SNR=9.9
T18A Mexican Hat 25.91 331 ⇓P P 05 43 16.6 -0.2
baz=26,SNR=10
R21A Cimarron 25.91 336 ⇑P P 05 43 17.3 +0.4
baz=26,SNR=6.6
S19A Harvey Farm, M 26.06 332 ⇑P P 05 43 18.2 0.0
baz=26,SNR=9.0
V15A Kaibab Nationa 26.07 325 ⇑P P 05 43 18.5 +0.2
baz=26
Q22A Crested Butte, 26.10 337 ⇑P P 05 43 18.3 -0.2
baz=26,SNR=9.2
R20A Redvale 26.10 334 ⇑P P 05 43 19.7 +1.1
baz=26,SNR=16
PV01 Paradox Valley 26.14 334 eP P 05 43 19.4 +0.5
2um,1.1s
PDMCI Parker Dam,Lak 26.15 320 ⇓P P 05 43 18.8 -0.3
baz=26
X13A Yucca 26.16 321 ⇑P P 05 43 18.3 -0.9
baz=26,SNR=6.5
T17A Navajo Res., N 26.25 329 ⇑P P 05 43 20.6 +0.6
baz=26,SNR=5.9
Q21A Lamborn Mesa, 26.33 336 ⇓P P 05 43 21.2 +0.6
baz=26,SNR=6.4
SMCO Snowmass 26.40 337 eP P 05 43 22.1 +0.8
16nm,1.1s,mb4.5
S18A Hurst Farm, Bl 26.41 331 ⇑P P 05 43 21.1 -0.2
baz=26,SNR=11
V14A Boquillas Ranc 26.45 324 ⇑P P 05 43 22.4 +0.5
baz=26,SNR=7.1
ISCO Idaho Springs 26.48 340 eP P 05 43 22.6 +0.6
13nm,1.0s,mb4.4
ISCO e pP 05 43 33.4 +1.6
PV04 Paradox Valley 26.50 334 eP P 05 43 22.9 +0.7
PV10 Paradox Valley 26.54 333 eP P 05 43 21.6 -1.0
197nm,1.0s,mb5.6
OGNE Ogallala 26.56 347 eP P 05 43 23.2 +0.5
42nm,0.9s,mb5.0
BC3 Big Chuckawall 26.56 318 ⇑P P 05 43 22.7 -0.2
baz=26,SNR=8.0
R19A Curley Farm, L 26.57 333 ⇑P P 05 43 22.8 0.0
baz=26,SNR=7.7
U15A North Rim 26.58 326 ⇑P P 05 43 22.8 -0.1
baz=26,SNR=7.2
SCIA State Center 26.67 2 eP P 05 43 21.9 -1.7
53nm,0.8s,mb5.1
IRM Iron Mountain 26.69 319 ⇓P P 05 43 23.4 -0.6
baz=27
Q20A Ridgley Place, 26.72 335 ⇓P P 05 43 23.9 -0.3
baz=27,SNR=5.6
S17A Black Ridge (B 26.75 330 ⇑P P 05 43 24.5 +0.1
baz=27
R18A Canyonlands Na 26.93 332 ⇓P P 05 43 25.9 -0.1
baz=27
U14A Mt Trumbull 27.06 325 ⇓P P 05 43 27.3 0.0
baz=27,SNR=7.0
T15A Red Dirt Ranch 27.07 327 ⇑P P 05 43 27.8 +0.5
baz=27,SNR=8.5
V13A Grand Canyon W 27.11 323 ⇓P P 05 43 27.9 +0.2
baz=27,SNR=11
Q19A Hogan Spring (27.12 334 ⇓P P 05 43 28.0 +0.2
baz=27,SNR=9.6
ATAH Atahualpa 27.18 143 LR LR 05 50 56.2
comp=Z,120nm,22.0s,MS3.4,baz=109,slow=29
S16A Weppner Ranch, 27.21 329 ⇓P P 05 43 28.7 +0.1
baz=27,SNR=6.0
P20A De Beque 27.22 336 ⇑P P 05 43 29.0 +0.3
baz=27,SNR=14
LDFC Landfair 27.26 320 eP P 05 43 30.1 +1.0
19nm,1.1s,mb4.5
R17A Hanksville Air 27.33 331 ⇑P P 05 43 29.6 -0.1
baz=27,SNR=11
GMRC Granite Mounta 27.41 319 ⇓P P 05 43 30.5 +0.1
baz=27,SNR=6.3
U13A Pakoon Wash 27.50 324 ⇑P P 05 43 31.2 0.0
baz=28,SNR=7.0
V12A Nelson 27.54 322 P P 05 43 31.7 +0.1
baz=28,SNR=9.9
S15A Panguitch 27.56 328 ⇓P P 05 43 32.1 +0.3
baz=28,SNR=6.2
N23A Red Feather La 27.57 341 ⇓P P 05 43 32.1 +0.3
baz=28,SNR=7.8
R16A Teasdale 27.59 330 ⇓P P 05 43 32.3 +0.3
baz=28,SNR=7.1
Q18A Rafter H Ranch 27.62 333 ⇓P P 05 43 32.1 -0.1
baz=28,SNR=8.2
N22A Wattenberg Ran 27.66 340 ⇓P P 05 43 33.3 +0.8
baz=28,SNR=8.2
O20A White River Ci 27.71 337 ⇑P P 05 43 33.5 +0.4
baz=28
PHWY Pilot Hill 27.79 342 eP P 05 43 34.0 +0.2
2.1nm,0.7s,mb3.9
SRU San Rafael 27.80 332 eP P 05 43 34.0 +0.1
8.5nm,1.3s,mb4.2
U12A Valley of Fire 27.84 323 P P 05 43 34.3 0.0
baz=28,SNR=7.7
HEC Hector,Ludlow 27.86 319 ⇑P P 05 43 34.7 +0.2
baz=28
JFWS Jewell Farm 27.88 6 eP P 05 43 32.7 -1.8
26nm,0.7s,mb5.0
T13A Saint George 27.90 325 ⇓P P 05 43 35.4 +0.6
baz=28,SNR=6.9
Q16A Castle Valley 27.94 331 P P 05 43 35.5 +0.4
baz=28,SNR=5.4
CCUT Cedar City 27.99 326 eP P 05 43 36.3 +0.7
4.8nm,1.0s,mb4.1
N21A Black Mountain 27.99 338 ⇓P P 05 43 36.6 +1.0
baz=28,SNR=6.3
S14A Cedar City 28.04 327 ⇑P P 05 43 36.6 +0.5
baz=28,SNR=8.5
P18A Preston Nutter 28.10 333 ⇓P P 05 43 36.7 +0.1
baz=28,SNR=5.5
MSU Marysvale 28.11 329 eP P 05 43 37.3 +0.7
P17A Butcher Ranch, 28.19 332 ⇓P P 05 43 37.8 +0.4
baz=28,SNR=6.0
O19A Miners Draw (B 28.20 336 ⇓P P 05 43 37.4 0.0
baz=28
M22A Cedar Creek Ra 28.24 340 ⇑P P 05 43 38.6 +0.8
baz=28,SNR=6.0
SHPR Sheep Range 28.25 323 eP P 05 43 38.1 +0.1
TMUT Trail Mountain 28.26 332 eP P 05 43 37.7 -0.3
5.3nm,0.9s,mb4.2
S13A Holt Ranch, En 28.28 326 ⇓P P 05 43 38.9 +0.7
baz=28,SNR=9.2
N20A Spence Gulch, 28.32 337 ⇑P P 05 43 39.0 +0.4
baz=28,SNR=7.3
O18A Roosevelt 28.53 334 ⇓P P 05 43 41.2 +0.8
baz=28,SNR=8.1
ECSD EROS Data Cent 28.55 356 eP P 05 43 39.0 -1.5
39nm,1.6s,mb4.9
L23A Garrett 28.61 342 ⇑P P 05 43 41.3 +0.3
baz=28,SNR=12
M21A Separation Pea 28.68 339 ⇓P P 05 43 42.7 +1.0
baz=29,SNR=9.6
RWWY Rawlins 28.70 340 eP P 05 43 43.1 +1.2
27nm,0.9s,mb5.0
R13A O'Grain Ranch, 28.78 327 ⇑P P 05 43 43.3 +0.7
baz=29,SNR=5.6
O17A Robinson Place 28.78 333 P P 05 43 43.3 +0.7
baz=29,SNR=25
S12A Delamar Landin 28.84 325 ⇑P P 05 43 43.9 +0.7
baz=29
M20A Sweetwater, Wa 28.87 338 ⇑P P 05 43 43.7 +0.4
baz=29
N18A Larsen Ranch, 28.99 336 ⇓P P 05 43 44.9 +0.4
baz=29
L21A Rawlins 29.00 340 ⇓P P 05 43 44.2 -0.3
baz=29,SNR=5.3
Q14A Sevier Lake (B 29.02 328 ⇓P P 05 43 44.6 -0.1
baz=29,SNR=8.1
MPU Maple Canyon 29.04 332 eP P 05 43 45.1 +0.3
7.6nm,1.2s,mb4.3
DAU Daniels Canyon 29.19 333 eP P 05 43 46.7 +0.5
NLU North Lily Min 29.19 331 eP P 05 43 45.7 -0.6
1.0nm,0.6s,mb3.7
K22A Casper 29.35 341 ⇓P P 05 43 48.0 +0.3
baz=29,SNR=7.1
L20A Wamsutter 29.38 338 ⇑P P 05 43 47.9 0.0
baz=29
N17A Moffit Pass 29.44 334 ⇓P P 05 43 48.5 +0.1
baz=29,SNR=7.0
M18A Lyman 29.53 335 ⇑P P 05 43 49.0 -0.2
baz=30
DUG Dugway 29.73 331 eP P 05 43 51.8 +0.7
9.6nm,1.4s,mb4.3
M17A Scofys Gap (B 29.81 335 ⇑P P 05 43 51.6 -0.2
baz=30,SNR=6.8
GRAC Grapevine Rang 29.90 321 P P 05 43 53.2 +0.6
baz=30,SNR=6.1
K20A Yellowstone Ra 29.95 339 ⇑P P 05 43 52.5 -0.4
baz=30
J22A Midwest 30.03 342 ⇓P P 05 43 53.7 +0.1
baz=30,SNR=6.4
M16A Huntsville 30.09 333 ⇓P P 05 43 54.4 +0.2
baz=30,SNR=9.3
N15A Stansbury Isla 30.14 332 P P 05 43 55.0 +0.4
baz=30,SNR=5.5
J21A Lysite 30.27 341 ⇓P P 05 43 56.4 +0.6
baz=30,SNR=9.9
K19A Absolon Red Bu 30.27 338 ⇓P P 05 43 55.4 -0.4
baz=30,SNR=5.8
HWUT Hardware Ranch 30.30 334 eP P 05 43 56.2 +0.2
7.8nm,1.0s,mb4.4
SPUT South Promonto 30.45 332 eP P 05 43 57.0 -0.3
7.3nm,1.2s,mb4.3
J20A Shoshoni 30.48 340 ⇑P P 05 43 58.3 +0.7
baz=30,SNR=6.3
PDAR Pinedale Array 30.48 338 P P 05 43 56.6 -1.0
3.5nm,0.9s,mb4.1,baz=145,slow=7.9,SNR=27
PDAR LR LR 05 59 46.0
comp=Z,81nm,19.2s,MS3.4,baz=62,slow=44
K18A Toltan Ranch, 30.55 337 P P 05 43 58.7 +0.4
baz=30,SNR=29
M15A Larsen Ranch, 30.57 333 ⇑P P 05 43 58.7 +0.3
baz=30,SNR=12
L16A Fish Haven 30.58 334 ⇑P P 05 43 58.6 +0.1
baz=30,SNR=15
I21A Big Trails, Te 30.64 341 ⇓P P 05 43 59.2 +0.2
baz=31,SNR=6.4
GLMI Grayling 30.68 14 eP P 05 43 57.2 -2.1
47nm,0.8s,mb5.4
HVU Hansel Valley 30.97 333 eP P 05 44 02.2 +0.3
15nm,0.8s,mb4.9
L15A Malad City 30.98 333 ⇑P P 05 44 02.0 0.0
baz=31,SNR=10
K17A Gardner Place, 30.99 336 ⇓P P 05 44 02.4 +0.2
baz=31,SNR=13
I20A Worland 31.03 340 ⇓P P 05 44 03.1 +0.6
baz=31,SNR=10.0
J18A Kendall Valley 31.04 337 ⇓P P 05 44 02.7 +0.2
baz=31,SNR=7.9
AHID Auburn Hatcher 31.07 336 eP P 05 44 01.9 -0.9
12nm,1.0s,mb4.7
H21A Big Horn, Sher 31.30 342 ⇓P P 05 44 04.9 0.0
baz=31,SNR=5.4
L14A Malta 31.38 332 P P 05 44 05.8 +0.2
baz=31,SNR=35
I18A Diamond G Ranc 31.39 338 ⇑P P 05 44 05.6 0.0
baz=31,SNR=6.7
I19A Meeteetse 31.39 339 ⇑P P 05 44 06.4 +0.8
baz=31,SNR=5.8
NVAR Mina Array Bea 31.39 322 P P 05 44 05.5 -0.3
6.6nm,0.9s,mb4.5,baz=136,slow=7.4,SNR=46
J17A Brown Place, J 31.43 337 ⇓P P 05 44 06.5 +0.6
baz=31,SNR=23
H20A Greybull 31.47 341 ⇓P P 05 44 06.0 -0.3
baz=31,SNR=14
REDW Red Top Meadow 31.48 337 eP P 05 44 06.5 +0.1
23nm,0.9s,mb5.0
SNOW Snow King Moun 31.53 337 eP P 05 44 07.2 +0.4
41nm,0.8s,mb5.3
K15A Arbon 31.59 334 ⇑P P 05 44 07.8 +0.3
baz=32,SNR=18
LOHW Long Hollow 31.60 337 eP P 05 44 07.5 +0.1
16nm,0.8s,mb4.9
TPAW Teton Pass 31.63 337 eP P 05 44 08.0 +0.3
22nm,1.1s,mb4.9
RRI2 Red Ridge 31.65 336 eP P 05 44 08.4 +0.5
14nm,0.9s,mb4.8
J16A Bone 31.70 336 ⇑P P 05 44 08.6 +0.2
baz=32,SNR=9.0
K14A Jones Ranch, D 31.76 333 P P 05 44 09.1 +0.2
baz=32,SNR=13
MOOW Moose Ponds 31.77 337 eP P 05 44 08.8 -0.2
8.0nm,0.8s,mb4.6
DCID1 Drake Creek 31.80 336 eP P 05 44 09.4 +0.1
13nm,0.6s,mb4.9
I17A Pilgrim Ck. 31.85 337 ⇑P P 05 44 10.6 +0.9
baz=32,SNR=6.3
H19A Powell 31.95 340 ⇑P P 05 44 11.1 +0.5
baz=32,SNR=14
IMW Indian Meadow 31.97 337 eP P 05 44 11.0 +0.3
5.5nm,0.8s,mb4.4
FLWY Flagg Ranch 32.04 337 eP P 05 44 11.7 +0.4
6.4nm,0.8s,mb4.5
WAKR Walker 32.12 321 eP P 05 44 13.0 +0.9
J15A Blackfoot 32.14 335 ⇑P P 05 44 12.5 +0.3
baz=32
I16A Newdale 32.16 336 ⇓P P 05 44 12.9 +0.5
baz=32,SNR=8.8
H18A Shoshone NF, C 32.18 339 ⇑P P 05 44 12.5 -0.1
baz=32,SNR=20
G20A Bridger 32.19 341 P P 05 44 12.1 -0.6
baz=32,SNR=6.3
LKWY Lake 32.34 338 eP P 05 44 14.8 +0.8
7.0nm,0.8s,mb4.5
CMB Columbia Colle 32.41 320 eP P 05 44 14.5 -0.2
1.9nm,0.9s,mb3.9
RLMT Red Lodge 32.44 340 eP P 05 44 15.2 +0.3
24nm,1.3s,mb4.9
J14A Carey 32.54 333 ⇑P P 05 44 16.0 +0.3
baz=32,SNR=7.8
YMR Madison River 32.64 338 eP P 05 44 17.4 +0.9
9.3nm,0.7s,mb4.8
F20A Billings 32.70 342 ⇑P P 05 44 16.8 -0.3
baz=33,SNR=11
G18A Lazy EL Ranch, 32.71 340 ⇑P P 05 44 17.2 0.0
baz=33,SNR=10.0
H16A Russell Place, 32.77 337 ⇑P P 05 44 18.1 +0.4
baz=33,SNR=6.0
EYMN Ely 32.77 3 eP P 05 44 15.2 -2.5
6.8nm,0.7s,mb4.7
WCN Washoe City 32.82 322 ⇑P P 05 44 18.9 +0.7
baz=33,SNR=5.1
PAHR Pah Rah Range 32.87 323 eP P 05 44 18.4 -0.2
22nm,1.8s,mb4.8
F19A Roth Farm, Mol 32.99 341 ⇑P P 05 44 19.4 -0.2
baz=33,SNR=5.6
I14A Mackay 33.00 334 ⇓P P 05 44 19.8 0.0
baz=33,SNR=14
AGMN Agassiz Nation 33.07 358 eP P 05 44 18.8 -1.5
20nm,0.9s,mb5.0
HLID Hailey 33.12 333 eP P 05 44 20.8 -0.1
9.4nm,0.9s,mb4.7
GCMT Greycliff 33.16 340 eP P 05 44 20.7 -0.4
8.2nm,0.8s,mb4.7
H15A Lima 33.23 336 P P 05 44 23.0 +1.2
baz=33,SNR=8.1
I13A Wildhorse Cree 33.27 333 ⇑P P 05 44 22.0 -0.1
baz=33,SNR=8.7
F18A Big Timber 33.28 340 ⇓P P 05 44 22.2 0.0
baz=33,SNR=13
E20A Meyer Farm, Mu 33.33 342 ⇓P P 05 44 22.2 -0.3
baz=33,SNR=9.1
D22A Cohagen 33.40 345 ⇑P P 05 44 22.8 -0.4
baz=33
G16A Moss Hill, Enn 33.42 337 ⇓P P 05 44 23.7 +0.3
baz=33
E19A Rath Farm, Rou 33.48 342 ⇓P P 05 44 23.8 -0.1
baz=33,SNR=13
MCMT McKenzie Canyo 33.49 336 eP P 05 44 24.7 +0.7
8.9nm,0.9s,mb4.7
H14A Leadore 33.52 335 ⇓P P 05 44 25.2 +0.9
baz=34,SNR=8.5
F17A Fitzpatrick Pl 33.60 339 ⇑P P 05 44 25.7 +0.7
baz=34,SNR=20
I12A Atlanta 33.62 332 ⇑P P 05 44 25.4 +0.3
baz=34,SNR=17
G15A Dillon 33.63 336 ⇑P P 05 44 26.2 +1.0
baz=34,SNR=16
BOZ Bozeman (W) 33.72 338 eP P 05 44 26.2 +0.3
15nm,1.8s,mb4.6
C23A Lambert 33.78 347 ⇓P P 05 44 26.6 +0.1
baz=34
DLMT Dillon 33.84 337 eP P 05 44 27.6 +0.6
21nm,1.0s,mb5.0
H13A Challis 33.85 334 P P 05 44 27.4 +0.3
baz=34,SNR=22
D20A Manuel Ranch, 33.86 343 ⇓P P 05 44 26.8 -0.4
baz=34,SNR=7.6
C22A Vida 33.88 346 ⇑P P 05 44 27.7 +0.2
baz=34
E18A Harlowton 33.93 341 ⇓P P 05 44 28.0 +0.2
baz=34,SNR=12
G14A Jackson 34.08 336 P P 05 44 29.8 +0.6
baz=34,SNR=8.2
H12A Diamond D Ranc 34.10 333 ⇑P P 05 44 29.9 +0.6
baz=34,SNR=38
D19A Cripps Ranch, 34.15 342 ⇓P P 05 44 29.7 0.0
baz=34,SNR=11
E17A Martinsdale 34.15 339 ⇑P P 05 44 28.8 -0.9
baz=34,SNR=5.5
LRM Limekiln Ridge 34.17 337 eP P 05 44 30.0 +0.1
F15A Butte 34.20 337 P P 05 44 30.4 +0.2
baz=34,SNR=12
C21A Desert Coulee 34.26 345 ⇑P P 05 44 30.7 +0.1
baz=34,SNR=6.7
G13A Cobalt 34.27 335 P P 05 44 30.8 0.0
baz=34,SNR=9.3
WVOR Wild Horse Val 34.31 327 eP P 05 44 30.9 -0.3
31nm,1.5s,mb5.0
C20A Veseth Ranch, 34.39 344 ⇑P P 05 44 31.4 -0.4
baz=34
D18A Linhart Farms, 34.45 341 ⇑P P 05 44 32.7 +0.4
baz=34,SNR=12
E16A East Helena 34.49 339 P P 05 44 32.8 +0.1
baz=34,SNR=7.8
D17A Six Diamond Ra 34.70 340 P P 05 44 34.3 -0.1
baz=35,SNR=10
HRY Holter Researc 34.70 339 eP P 05 44 34.7 +0.1
C19A Slack Wire Ran 34.71 342 ⇓P P 05 44 34.1 -0.4
baz=35,SNR=5.3
E15A Deer Lodge 34.75 338 ⇑P P 05 44 34.9 0.0
baz=35
G12A Big Creek, Yel 34.76 334 ⇓P P 05 44 34.8 -0.2
baz=35,SNR=15
MOD Modoc 34.84 325 eP P 05 44 35.6 -0.2
4.4nm,0.9s,mb4.4
F13A Darby 34.88 335 P P 05 44 35.6 -0.4
baz=35,SNR=9.0
J08A Circle Bar Ran 34.89 328 ⇑P P 05 44 36.4 +0.2
baz=35,SNR=7.9
ULM Lac du Bonnet 35.02 358 P P 05 44 34.2 -3.0

6.0nm,0.8s,mb4.6,baz=191,slow=8.0,SNR=6.2
ULM LR LR 06 01 35.4
comp=Z,123nm,18.2s,MS3.7,baz=183,slow=41
E14A Clinton 35.06 337 ⇑P **P 05 44 37.5 -0.1**
baz=35
B20A Solberg Farm, 35.06 344 ⇓P **P 05 44 36.9 -0.7**
baz=35
C17A Wharram Farm, 35.14 341 P **P 05 44 38.2 -0.1**
baz=35,SNR=18
EGMT Eagleton 35.18 342 *e*P **P 05 44 38.7 +0.1**
39nm,1.4s,mb5.1
F12A Elk City 35.23 334 ⇑P **P 05 44 39.1 0.0**
baz=35,SNR=24
B19A Brinkman Farms 35.33 343 ⇓P **P 05 44 39.6 -0.3**
baz=35,SNR=12
E13A Victor 35.35 336 P **P 05 44 39.7 -0.5**
baz=35,SNR=15
CHMT Chamberlain Mo 35.39 337 *e*P **P 05 44 40.0 -0.5**
KCPM Cahto Peak 35.40 319 *e*P **P 05 44 41.0 +0.4**
4.6nm,0.9s,mb4.4
KIPM Iron Peak 35.41 320 *e*P **P 05 44 40.7 0.0**
17nm,1.2s,mb4.8
B18A Beardsley Farm 35.52 342 ⇑P **P 05 44 41.6 +0.1**
baz=35,SNR=5.3
MSO Missoula 35.58 337 *e*P **P 05 44 41.9 -0.2**
9.3nm,1.1s,mb4.6
C16A Fuhringer Ranc 35.62 340 ⇓P **P 05 44 42.0 -0.4**
baz=36,SNR=8.4
D14A Greenough 35.62 337 ⇓P **P 05 44 41.7 -0.7**
baz=36,SNR=5.4
A19A Klindworth Far 35.71 344 ⇑P **P 05 44 42.8 -0.3**
baz=36,SNR=6.4
SLMT Seeley Lake 35.75 337 *e*P **P 05 44 43.0 -0.5**
E12A Beaver Dam Sad 35.89 335 ⇓P **P 05 44 43.9 -0.8**
baz=36
I07A Izee 35.93 328 ⇑P **P 05 44 44.4 -0.7**
baz=36,SNR=5.4
D13A Huson 36.00 336 ⇓P **P 05 44 45.3 -0.4**
baz=36,SNR=8.5
A18A Metzger Ranch, 36.01 342 ⇓P **P 05 44 45.4 -0.3**
baz=36,SNR=8.4
SWMT Swartz Lake 36.17 337 *e*P **P 05 44 46.7 -0.4**
KHMM Horse Mountain 36.19 321 *e*P **P 05 44 47.5 +0.1**
11nm,1.1s,mb4.7
F10A Beach Ranch, E 36.25 333 ⇓P **P 05 44 47.3 -0.5**
baz=36,SNR=15
A17A Triple J Farms 36.28 342 ⇑P **P 05 44 47.2 -0.8**
baz=36,SNR=6.1
D12A Red Ives Fores 36.31 335 ⇓P **P 05 44 47.5 -0.9**
baz=36
B15A Bradely Ranch, 36.33 339 ⇓P **P 05 44 48.1 -0.4**
baz=36
YBMT Yellow Bay 36.47 338 *e*P **P 05 44 49.5 -0.1**
JTMT Jette 36.47 337 *e*P **P 05 44 48.5 -1.2**
BLMT Blacktail Moun 36.72 337 *e*P **P 05 44 51.9 +0.1**
4.0nm,0.7s,mb4.4
C12B Naegeli Ranch, 36.90 336 P **P 05 44 52.9 -0.4**
baz=37,SNR=5.5
B13A Whitefish 37.06 338 ⇑P **P 05 44 54.8 +0.1**
baz=37,SNR=8.0
E09A Wood Farm, Sta 37.08 332 P **P 05 44 53.6 -1.3**
baz=37,SNR=6.1
A14A Double T Ranch 37.19 339 ⇓P **P 05 44 55.5 -0.3**
baz=37,SNR=5.4
C11A Tepee Creek (N 37.31 335 ⇑P **P 05 44 56.2 -0.7**
baz=37,SNR=6.2
A13A Flathead Natio 37.51 338 ⇓P **P 05 44 58.5 0.0**
baz=37
B12A Libby 37.56 337 ⇓P **P 05 44 59.0 +0.1**
baz=38,SNR=5.9
H04A Detroit Lake 37.73 327 ⇑P **P 05 44 59.7 -0.7**
baz=38,SNR=8.9
OD2 Odessa Site #2 38.00 333 *e*P **P 05 45 02.0 -0.7**
NEW Newport 38.00 335 *e*P **P 05 45 02.0 -0.7**
3.4nm,0.6s,mb4.2
ETW Entiat 38.88 332 *e*P **P 05 45 09.5 -0.6**
LON Longmire 38.97 330 *e*P **P 05 45 10.4 -0.3**
5.4nm,0.8s,mb4.3
FFC Flin Flon 39.93 353 *e*P **P 05 45 17.7 -1.0**
35nm,1.6s,mb4.8
LPAZ La Paz 40.54 139 P **P 05 45 22.2 -2.0**
0.8nm,0.7s,mb3.5,baz=308,slow=6.4,SNR=4.9
LPAZ LR LR 05 59 13.0
comp=Z,60nm,19.9s,MS3.5,baz=338,slow=32
PGC Sidney 41.09 331 *e*P **P 05 45 27.7 -0.7**
0.5nm,0.9s
SCHQ Schefferville 44.95 22 LR LR 06 08 07.2
comp=Z,364nm,18.1s,MS4.3,baz=238,slow=41
YKA Yellowknife Ar 49.41 348 P **P 05 46 32.4 -1.8**
6.8nm,0.8s,mb4.8,baz=152,slow=7.6,SNR=13
YKA LR LR 06 06 33.0
comp=Z,9.9nm,21.8s,MS2.8,baz=230,slow=35
DLBC Dease Lake 50.71 337 *e*P **P 05 46 44.5 +0.4**
CPUP Villa Florida 54.70 139 P **P 05 47 13.0 -1.0**
0.6nm,0.6s,mb3.8,baz=300,slow=12,SNR=2.8
CPUP LR LR 06 11 18.2
comp=Z,72nm,18.1s,MS3.8,baz=100,slow=37
BDFB Brasilia 55.01 122 P **P 05 47 17.4 +1.0**
5.9nm,1.0s,mb4.6,baz=261,slow=4.9,SNR=5.4
BDFB LR LR 06 13 53.6
comp=Z,84nm,18.1s,MS3.9,baz=301,slow=40
RKT Rikitea 55.06 227 *e*LR LR 06 03 17.0
126nm,27.0s
RKT *e*T 06 46 23.8
2.0nm,0.3s
INK Inuvik 58.71 344 *e*P **P 05 47 40.7 -1.2**
11nm,1.0s,mb4.8
EGAK Eagle 58.83 339 *e*P **P 05 47 41.2 -1.6**
5.0nm,1.1s,mb4.5
PLCA Paso Flores 59.81 159 P **P 05 47 50.4 +0.5**
1.7nm,0.4s,mb4.5,baz=299,slow=13,SNR=2.2
PLCA LR LR 06 07 19.8
comp=Z,69nm,19.1s,MS3.8,baz=111,slow=30
ILAR Eielson Array 60.91 337 P **P 05 47 55.2 -1.9**
5.4nm,1.0s,mb4.6,baz=137,slow=4.3,SNR=43
COLA College 61.33 337 *e*P **P 05 47 58.3 -1.6**
5.9nm,1.1s,mb4.6
SVW2 Sparrevohn 63.10 331 *e*P **P 05 48 08.9 -2.9**
36nm,1.9s,mb5.2
PPT Papeete 63.48 241 *e*LR LR 06 06 40.3
92nm,28.2s
PPT Papeete 63.48 241 LR LR 06 09 47.1
comp=Z,21nm,18.9s,MS3.3,baz=8.2,slow=30
TTA Tatalina 63.88 333 *e*P **P 05 48 13.9 -3.0**
SUMG Summit 65.72 16 *e*P **P 05 48 28.7 -0.1**
99nm,2.1s,mb5.5
ESK Eskdalemuir 78.30 36 *e*P **P 05 49 42.4 -2.1**
23nm,1.0s,mb5.1
ESDC Sonseca Array 80.73 51 P **P 05 49 56.6 -1.4**
6.2nm,0.9s,mb4.5,baz=290,slow=4.9,SNR=19
ESDC LR LR 06 20 02.0
comp=Z,51nm,19.1s,MS3.9,baz=285,slow=32
ESLA Sonseca Array 80.73 51 *e*P **P 05 49 57.2 -0.9**
0.8nm,0.9s,mb3.6
NB2 NORSAR Subarra 84.18 28 P **P 05 50 15.0 -0.6**
comp=Z,5.1nm,0.8s,mb4.7,baz=291,slow=5.1
NOA NORSAR Array B 84.18 28 P **P 05 50 14.6 -0.9**
comp=Z,4.9nm,0.9s,mb4.7,baz=291,slow=5.1,SNR=11
NOA LR LR 06 25 03.4
comp=Z,96nm,20.4s,MS4.2,baz=290,slow=34
ARCES ARCESS Array B 85.73 18 P **P 05 50 21.7 -1.5**
comp=Z,0.9nm,0.5s,mb4.3,baz=281,slow=4.0,SNR=12
DBIC Dimbokro 87.73 84 LR LR 06 27 34.4
comp=Z,68nm,18.0s,MS4.1,baz=215,slow=34
GERES GERESS Array B 90.11 39 P **P 05 50 43.2 -1.4**
comp=Z,0.4nm,0.5s,mb4.0,baz=318,slow=1.8,SNR=5.7
GERES GERESS Array B 90.11 39 P **P 05 50 43.2 -1.4**
FINES FINESS Array B 90.38 24 LR LR 06 36 43.1
comp=Z,87nm,18.2s,MS4.2,baz=139,slow=39
KEST Kesra 91.95 52 LR LR 06 31 19.4
comp=Z,20nm,18.5s,MS3.6,baz=336,slow=35
TORD Torodi Ar. Bea 92.25 76 P **P 05 50 52.4 -2.8**
comp=Z,0.4nm,0.7s,mb3.9,baz=288,slow=4.7,SNR=6.2
CN2 Changchun 111.01 330 *e*PKP PKiKP 05 56 22.0 +4.0
HHC Hu-ho-hao-te 119.34 338 *e*PKP PKPdf 05 56 33.3 -0.8
HHC sPKP 05 56 47.6
HHC PKS 06 00 08.6
HHC SKS SKSdf 06 03 40.9 -2.8
HHC AMB AMB
comp=Z,60nm,6.1s
HHC LR LR
comp=N,120nm,19.6s
HHC LR LR
comp=E,130nm,19.8s
HHC LR LR
comp=Z,110nm,17.3s
WMQ Urumqi 121.28 358 *e*PKP PKPdf 05 56 38.0 +0.3
LZH Lanzhou 126.23 342 *e*PKP PKPdf 05 56 43.5 -3.9
CD2 Chengdu 131.02 339 *e*PKP PKPdf 05 56 55.3 -1.4
WRA Warramunga Arr 133.52 257 PKP PKPdf 05 56 58.5 -3.1
comp=Z,0.4nm,0.5s,baz=87,slow=2.2,SNR=7.4
KMI Kunming 136.66 337 PKP PKPdf 05 57 08.5 +1.1
CMAR Chiang Mai Arr 144.14 338 PKP PKPdf 05 57 17.1 -4.0
comp=Z,1.6nm,0.3s,baz=338,slow=5.0,SNR=11

*IDC **16** 05:38:15.3±1.5, 10.85N×91.74E, h0km, mb4.2/7, mb1 4.3/8, mb1mx3.9/25, mbtmp4.1/8, ML3.8/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/26, Error ellipse: s-maj=57.1km s-min=16.9km az=63.0*
*ISCJB **16** 05:38:17.8±0.8, 10.8N±0.1×91.6E±0.2, h33km, mb4.2/10, Error ellipse: s-maj=24.8km s-min=10.6km az=146.2*
*NEIC **16** 05:38:17.1±0.7, 10.85N×91.81E, h10km, mb4.3/4, Error ellipse: s-maj=20.0km s-min=9.2km az=66.0*
*BJI **16** 05:38:21.1, 11.49N×91.42E, h15km, mB4.6/3, mb4.3/8*
ISC 16 05:38:20.5±0.8, 10.85N±0.10×91.8E±0.1, h35km, (h41km±3.3km:pP-P), n18, σ0.79/19, mb4.2/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.27**	**42**	Pn	**Pn**	**05 40 44.4**	**-1.1**
0.2nm,0.3s,baz=236,slow=16,SNR=5.2							
VIS	**Vishakhapatnam**	**10.64**	**311**	*i* P	**Pn**	**05 40 49.2**	**-1.2**
VIS				*i* S	**Sn**	**05 42 37.0**	**-11**
VIS				*i* S	**Sn**	**05 42 37.0**	**-11**
VIS				*ex*	x	05 42 39.7	
comp=N,61nm,0.5s							
VIS				*ex*	x	05 42 40.4	
comp=E,66nm,0.8s							
PSI	**Prapat**	**10.71**	**138**	LR	LR	05 45 53.9	
comp=E,140nm,18.1s,baz=171,slow=42							
LSA	**Lhasa**	**18.76**	**358**	*e*P	**Pn**	**05 42 38.7**	**+1.5**
comp=E,9.0nm,0.6s							
ENH	**Enshi**	**25.41**	**38**	*e*P	**P**	**05 43 43.6**	**-1.3**
comp=E,12nm,0.6s,mb4.6							
GTA	**Gaotai**	**29.33**	**13**	*e*P	**P**	**05 44 20.9**	**+1.0**
GTA				pP	pP	05 44 33.3	+3.3
GTA				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.3							
MK31	**Makanchi Array**	**36.71**	**349**	*e*P	**P**	**05 45 24.2**	**+0.1**
MKAR	**Makanchi Array**	**36.71**	**349**	P	**P**	**05 45 24.4**	**+0.2**
comp=Z,3.3nm,0.7s,mb4.3,baz=168,slow=8.2,SNR=37							
SONM	**Songino Array**	**38.87**	**16**	P	**P**	**05 45 42.3**	**-0.1**
comp=Z,1.9nm,0.9s,mb3.8,baz=220,slow=8.0,SNR=6.5							
KURK	**Kurchatov**	**41.18**	**347**	*e*P	**P**	**05 46 01.7**	**+0.2**
comp=Z,2.2nm,0.7s,mb3.9							
ZALV	**Zalesovo Beam**	**43.34**	**354**	P	**P**	**05 46 18.6**	**-0.4**
comp=Z,9.5nm,0.4s,mb4.9,baz=185,slow=10,SNR=27							
ZALV				LR	LR	06 07 18.0	
comp=Z,14nm,19.8s,baz=140,slow=40							
FITZ	**Fitzroy Crossi**	**44.13**	**130**	P	**P**	**05 46 25.8**	**-0.1**
comp=Z,3.9nm,0.5s,mb4.4,baz=318,slow=4.7,SNR=19							
FITZ	**Fitzroy Crossi**	**44.13**	**130**	*e*P	**P**	**05 46 25.8**	**-0.1**
comp=Z,6.0nm,0.9s,mb4.3							
FITZ				*e*	pP	05 46 36.0	-0.2
WRA	**Warramunga Arr**	**51.91**	**126**	P	**P**	**05 47 26.3**	**+0.2**
comp=Z,1.5nm,0.3s,mb4.4,baz=300,slow=10.0,SNR=30							
WB2	**Warramunga Arr**	**51.92**	**126**	*e*P	**P**	**05 47 26.2**	**+0.1**
WB2				*e*	pP	05 47 36.8	+0.2
ASAR	**Alice Springs**	**53.63**	**130**	P	**P**	**05 47 38.7**	**0.0**
comp=Z,1.1nm,0.5s,mb4.0,baz=306,slow=6.8,SNR=14							
ERM	**Erimo**	**54.45**	**46**	*e*P	**P**	**05 47 48.1**	**+3.6**
comp=Z,54nm,0.4s							
ERM				*e*		05 48 01.6	
ARCES	**ARCESS Array B**	**71.68**	**340**	P	**P**	**05 49 38.8**	**+0.4**
comp=Z,1.0nm,0.6s,mb3.9,baz=125,slow=7.8,SNR=5.0							

MEX 16 06:08:51.9±1.2, 16.91N×95.53W, h8km±17km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.16**	**278**	*i* P	Pg	06 09 10.3	-3.9
VHO				*e*S	Sg	06 09 25.1	-4.2
HUIG	**Huatulco**	**1.27**	**206**	*i* P	Pn	06 09 13.0	-2.9
HUIG				*i* S	Sb	06 09 27.7	-4.7
TPIG	**Tehuac#an**	**2.30**	**311**	*i* P	Pn	06 09 27.2	-2.8
TPIG				*i* S	Sn	06 09 55.4	-3.2
TGIG		**2.31**	**93**	*i* P	Pn	06 09 28.2	-2.1
TGIG				*i* S	Sn	06 09 55.6	-3.3
PCIG		**2.53**	**118**	*e*P	Pn	06 09 29.1	-4.1
PCIG				*i* S	Sn	06 10 00.4	-3.7
PNIG	**Pinotepa**	**2.54**	**259**	*i* P	Pn	06 09 32.1	-1.3
PNIG				*i* S	Sn	06 09 59.4	-5.2

IDC 16 06:15:00.7±2.9, 30.38S×138.37E, h0km, mb1 3.3/4, mb1mx3.2/15, mbtmp3.1/4, ML3.0/4, Error ellipse: s-maj=73.7km s-min=14.8km az=41.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.14**	**119**	Pn	Pn	06 15 52.3	+0.9
0.6nm,0.3s,baz=307,slow=13,SNR=7.9							
STKA				Pg	Pg	06 15 58.5	-2.5
2.3nm,0.3s,baz=299,slow=16,SNR=24							
STKA				Lg		06 16 39.3	
7.0nm,0.3s,baz=232,slow=18,SNR=8.9							
ASAR	**Alice Springs**	**7.78**	**328**	Pn	Pn	06 16 54.9	-0.3
0.1nm,0.3s,baz=150,slow=12,SNR=10							
ASAR				Sn	Sn	06 18 26.0	+2.0
0.2nm,0.3s,baz=151,slow=22,SNR=4.5							
WRA	**Warramunga Arr**	**11.01**	**340**	Pn	Pn	06 17 40.6	+1.1
0.2nm,0.3s,baz=160,slow=11,SNR=7.1							
WRA				Sn	Sn	06 19 43.6	+0.2
0.1nm,0.3s,baz=161,slow=24,SNR=4.9							
FITZ	**Fitzroy Crossi**	**16.84**	**314**	Pn	Pn	06 18 56.7	-1.2
0.1nm,0.3s,baz=159,slow=12,SNR=4.2							

WEL 16 06:22:29.8±0.1, 37.06S×177.31E, h164km±1km, ML3.8/15, 2D, Error ellipse: s-maj=2.1km s-min=1.4km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.94**	**123**	SN	Sn	06 23 15.2	0.0
URZ	**Urewera**	**1.21**	**187**	⇓PN	Pn	06 22 57.7	0.0
URZ				SN	Sn	06 23 19.4	+0.2
PUZ	**Puketiti**	**1.26**	**144**	PN	Pn	06 22 58.2	+0.1
PUZ				SN	Sn	06 23 19.5	-0.6
MWZ	**Matawai**	**1.29**	**172**	⇓PN	Pn	06 22 58.5	+0.2
MWZ				SN	Sn	06 23 20.7	+0.3
CNGZ	**Carnagh Statio**	**1.59**	**154**	PN	Pn	06 23 01.5	+0.1
PRRZ	**Plateau Road**	**1.61**	**206**	PN	Pn	06 23 01.9	+0.4
RAHZ	**Arahi**	**1.86**	**185**	PN	Pn	06 23 04.3	0.0
PRGZ	**Paritu Road**	**1.92**	**166**	PN	Pn	06 23 04.7	-0.1
KNZ	**Kokohu**	**1.98**	**172**	PN	Pn	06 23 05.0	-0.5
NMHZ	**Naumai**	**2.08**	**191**	PN	Pn	06 23 06.6	0.0
MHGZ	**Mahia Peninsul**	**2.15**	**167**	PN	Pn	06 23 07.1	-0.3
BKZ	**Black Stump Fm**	**2.20**	**197**	PN	Pn	06 23 07.1	-0.9
MCHZ	**McNeill Hill**	**2.43**	**191**	PN	Pn	06 23 10.2	-0.5
TUVZ	**Tukino**	**2.56**	**210**	PN	Pn	06 23 11.8	-0.5
CKHZ	**Cape Kidnapper**	**2.60**	**184**	PN	Pn	06 23 11.7	-1.1
BHHZ	**Black Hill Sta**	**2.62**	**202**	PN	Pn	06 23 11.7	-1.3
WNVZ	**Wahianoa**	**2.64**	**210**	PN	Pn	06 23 12.4	-0.8
MOVZ	**Moawhango**	**2.65**	**207**	PN	Pn	06 23 12.0	-1.3
KAHZ	**Kahuranaki**	**2.75**	**187**	PN	Pn	06 23 13.3	-1.4
PNHZ	**Pukenui**	**2.98**	**197**	PN	Pn	06 23 15.5	-1.9
PXZ	**Pawanui**	**2.99**	**187**	PN	Pn	06 23 15.6	-1.9
WPHZ	**Waipukurau**	**3.08**	**192**	PN	Pn	06 23 16.8	-1.8
TSZ	**Takapari Road**	**3.18**	**199**	PN	Pn	06 23 17.8	-2.1
PRHZ	**Porangahau**	**3.25**	**189**	PN	Pn	06 23 18.8	-2.0
DVHZ	**Dannevirke**	**3.36**	**195**	PN	Pn	06 23 19.7	-2.4
POWZ	**Post Office Ro**	**3.54**	**199**	PN	Pn	06 23 22.2	-2.3
BFZ	**Birch Farm**	**3.71**	**193**	PN	Pn	06 23 24.0	-2.7
MRZ	**Mangatainoka R**	**3.84**	**200**	PN	Pn	06 23 25.2	-3.1
TIWZ	**Tintock**	**3.88**	**196**	PN	Pn	06 23 26.0	-2.8
HOWZ	**Holdsworth Sta**	**4.08**	**199**	PN	Pn	06 23 27.9	-3.5
OGWZ	**Otaki Gorge**	**4.11**	**203**	PN	Pn	06 23 28.5	-3.2
TMWZ	**Te Maipa**	**4.19**	**195**	PN	Pn	06 23 29.5	-3.2
KIW	**Kapiti Island**	**4.23**	**205**	PN	Pn	06 23 29.8	-3.5
MTW	**Mount Morrison**	**4.33**	**198**	PN	Pn	06 23 30.7	-3.9
CAW	**Cannon Point**	**4.40**	**203**	PN	Pn	06 23 31.7	-3.9
MSWZ	**Moikau Station**	**4.63**	**200**	PN	Pn	06 23 34.4	-4.2
BHW	**Baring Head**	**4.74**	**203**	PN	Pn	06 23 35.6	-4.3
TCW	**Tory Channel**	**4.77**	**209**	PN	Pn	06 23 35.9	-4.4
PLWZ	**Palliser**	**4.78**	**199**	PN	Pn	06 23 36.2	-4.3
NNZ	**Nelson**	**5.15**	**215**	PN	Pn	06 23 41.4	-4.0
BSWZ	**Blackbirch Sta**	**5.36**	**209**	PN	Pn	06 23 44.5	-3.5
THZ	**Tophouse**	**5.80**	**215**	PN	Pn	06 23 49.6	-4.3
KHZ	**Kahutara**	**6.09**	**207**	PN	Pn	06 23 52.8	-4.9
KHZ				SN	Sn	06 24 58.7	-8.0
MQZ	**McQueen's Vall**	**7.53**	**207**	PN	Pn	06 24 10.1	-6.6
MQZ				SN	Sn	06 25 29.6	-11

DJA 16 06:24:51, 6.57S×130.53E, h80km, mb4.1/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.38**	**67**	P	Pn	06 25 28.2	+0.2
TLE				S	Sn	06 25 57.5	+1.1
KAKA	**Kakadu**	**6.39**	**163**	P	Pn	06 26 24.1	+1.6
0.2nm891nm9.9nm,0.8s							
KAKA				S	Sn	06 27 37.0	+3.0
0.2nm891nm9.9nm,0.8s							
KNA	**Kununurra**	**9.29**	**191**	P	Pn	06 27 03.2	+1.1
774nm23nm,0.8s							
KNA				S	Sn	06 28 47.5	+2.6
774nm23nm,0.8s							
FITZ	**Fitzroy Crossi**	**12.41**	**202**	P	Pn	06 27 43.1	-1.7
17nm,3.9s							
FITZ				S	Sn	06 30 03.7	+2.5
17nm,3.9s							
COEN	**Coen**	**14.44**	**122**	P	Pn	06 28 11.6	+0.1

*BJI **16** 06:32:33.8, 36.35N×71.23E, h220km, mB4.6/1, mb4.4/7*
*IDC **16** 06:32:34.9±3.1, 36.50N×71.04E, h235km±28km, mb3.3/7, mb1 3.6/12, mb1mx3.3/29, mbtmp3.5/12, Error ellipse: s-maj=22.4km s-min=18.6km az=23.0*
*ISCJB **16** 06:32:36.0±0.4, 36.64N±0.03×71.06E±0.06, h250km±5km, mb3.5/8, Error ellipse: s-maj=7.7km s-min=4.7km az=171.7*
*NEIC **16** 06:32:37.0±0.8, 36.59N×71.05E, h250km±9km, mb4.8/7, Error ellipse: s-maj=12.1km s-min=7.8km az=70.0*
*NNC **16** 06:32:41.2±6.9, 37.04N×71.00E, h233km±70km, mb3.1, mpv4.1, Error ellipse: s-maj=66.3km s-min=34.1km az=6.0*
ISC 16 06:32:37.0±0.4, 36.65N±0.03×71.09E±0.06, h242km±5km, n48, σ1.19/59, mb3.5/8, 8C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.68**	**219**	*e*Pn	**Pn**	**06 33 25.6**	**0.0**
KBL				*e*Sn	**S**	**06 34 02.5**	**-1.4**
CEP	**Cherat**	**2.90**	**166**	⇑P	**Pn**	**06 33 29.0**	**+1.1**
CEP				S	**S**	**06 34 09.0**	**+0.9**
CHCP	**Chirah Chowk**	**3.48**	**149**	⇑P	**Pn**	**06 33 35.7**	**+1.3**
THW	**Thamme Wali**	**3.88**	**172**	⇑P	**Pn**	**06 33 39.8**	**+0.7**
KSH	**Kashi**	**4.80**	**52**	⇑*i*Pn	**Pn**	**06 33 50.6**	**+0.6**
KSH				Sn	**S**	**06 34 46.1**	**-2.0**
KSH				smax			
comp=N,630nm,1.0s							
KSH				smax			
comp=E,470nm,0.8s							
KK31	**Karatay Array**	**6.46**	**356**	P	**Pn**	**06 34 10.3**	**-0.3**
comp=E,19nm,0.5s,baz=170,slow=12,SNR=175							
KK31				⇑S	**S**	**06 35 20.5**	**-5.0**
comp=E,29nm,0.7s,baz=180,slow=21,SNR=15							
AAK	**Ala-Archa**	**6.53**	**23**	P	**Pn**	**06 34 12.2**	**+0.7**
comp=E,0.1nm,0.3s,baz=154,slow=4.6,SNR=14							
AAK				S	**S**	**06 35 25.7**	**-1.5**
comp=E,0.1nm,0.3s,baz=316,slow=22,SNR=42							
AAK	**Ala-Archa**	**6.53**	**23**	*e*Pn	**Pn**	**06 34 11.9**	**+0.4**
AAK				*e*Sn	**S**	**06 35 29.6**	**+2.5**
SDNR	**Sundarnagar**	**7.08**	**135**	*e*PKP	**Pn**	**06 34 19.5**	**+0.8**
TKM2	**Tokmak 2**	**7.16**	**28**	⇓P	**Pn**	**06 34 19.7**	**+0.2**
comp=E,3.0nm,0.5s							
TKM2				⇑S	**S**	**06 35 39.6**	**-2.0**
comp=E,40nm,0.9s							
SMLA	**Simla**	**7.47**	**136**	*i* P	**Pn**	**06 34 22.8**	**-0.8**
SMLA				*i* S	**S**	**06 35 43.2**	**-6.0**
SMLA				*i* S	**S**	**06 35 45.3**	**-3.9**
SMLA				⇓		06 35 48.8	
comp=E,627nm,0.5s							
SMLA				⇓		06 35 52.5	
comp=N,504nm,0.3s							
DDI	**Dehra Dun**	**8.58**	**135**	*e*PKP	**Pn**	**06 34 36.5**	**-1.2**
JOSI	**Joshimath**	**9.31**	**128**	*e*PKP	**Pn**	**06 34 47.3**	**+0.3**
JOSI				AMb	AMB	06 34 48.6	
comp=Z,557nm,0.8s							
JOSI				*e*S	**S**	**06 36 25.9**	**-6.3**
KHET	**Khetri**	**9.43**	**154**	*e*PKP	**Pn**	**06 34 47.7**	**-0.8**
NDI	**New Delhi**	**9.47**	**145**	*ex*	**Pn**	**06 34 46.5**	**-2.5**
AYAN	**Aya Nagar**	**9.60**	**146**	*e*PKP	**Pn**	**06 34 49.9**	**-0.8**
AYAN				AMb	AMB	06 34 50.4	
comp=Z,624nm,0.6s							
MK31	**Makanchi Array**	**13.13**	**36**	P	**Pn**	**06 35 34.1**	**-0.5**
comp=Z,5.2nm,0.5s,baz=204,slow=9.1,SNR=118							
MK31	**Makanchi Array**	**13.13**	**36**	*e*Pn	**Pn**	**06 35 34.1**	**-0.5**
MKAR	**Makanchi Array**	**13.13**	**36**	P	**Pn**	**06 35 34.2**	**-0.3**
comp=Z,2.0nm,0.3s,baz=225,slow=13,SNR=65							
KOLN	**Koldanda**	**13.79**	**126**	*e*P	**Pn**	**06 35 43.5**	**+0.6**
comp=Z,22nm,0.5s							
GKN	**Gorkha**	**14.32**	**123**	*e*P	**Pn**	**06 35 49.2**	**-0.2**
comp=Z,43nm,0.6s							
WMQ	**Urumqi**	**14.55**	**55**	P	**Pn**	**06 35 53.0**	**+1.0**
WMQ				pmax	pmax		
comp=Z,45nm,1.0s							
DMN	**Daman**	**14.89**	**123**	*e*P	**Pn**	**06 35 56.8**	**+0.5**
comp=Z,28nm,0.6s							
KKN	**Kakani**	**14.90**	**122**	*e*P	**Pn**	**06 35 55.9**	**-0.4**
comp=Z,37nm,0.6s							
AB31	**Akbulak array**	**14.99**	**331**	⇑P	**Pn**	**06 35 57.3**	**+0.1**
comp=Z,1.0nm,0.3s,baz=134,slow=13,SNR=65							
KURK	**Kurchatov**	**15.07**	**19**	*e*P	**Pn**	**06 35 57.4**	**-0.7**
comp=Z,1.1nm,0.8s							
PKIN	**Phulchoki**	**15.11**	**123**	*e*P	**Pn**	**06 35 59.3**	**+0.4**
comp=Z,36nm,0.5s							
PKI	**Pulchoki**	**15.12**	**123**	*e*P	**Pn**	**06 35 59.3**	**+0.3**
comp=Z,38nm,0.5s							
GUN	**Gumba**	**15.23**	**121**	*e*P	**Pn**	**06 36 00.2**	**-0.1**
comp=Z,17nm,0.3s							
ZRNK	**Zerenda**	**16.37**	**356**	⇓P	**P**	**06 36 14.1**	**+2.1**
comp=Z,2.7nm,0.6s							
BVAR	**Borovoye Array**	**16.38**	**359**	P	**P**	**06 36 13.7**	**+1.5**
comp=Z,1.9nm,0.3s,baz=159,slow=13,SNR=20							
BVAR				S	**S**	**06 39 10.2**	**-0.9**
comp=Z,0.3nm,0.3s,baz=165,slow=23,SNR=3.7							
BRVK	**Borovoye**	**16.42**	**358**	*e*P	**P**	**06 36 15.2**	**+2.6**
comp=Z,5.5nm,0.5s							
AKTK	**Aktyubinsk**	**16.69**	**330**	P	**P**	**06 36 16.2**	**+0.7**
AKTO	**Aktyubinsk**	**16.69**	**330**	⇑P	**P**	**06 36 16.0**	**+0.4**
comp=Z,4.4nm,0.7s							
AKTO	**Aktyubinsk**	**16.69**	**330**	P	**P**	**06 36 16.2**	**+0.6**
comp=Z,6.5nm,0.3s,baz=134,slow=11,SNR=40							
TAPN	**Taplejung**	**16.86**	**119**	*e*P	**P**

*ISCJB **16** 06:44:15.5±0.3,24°.72N±0°.03×122°.70E±0°.02, h123km±3km, mb3.7/7, Error ellipse: s-maj=5.1km s-min=2.7km az=162.4*
*TAP **16** 06:44:17.1,24°.70N×122°.65E, h116km, ML4.3, C*
*JMA **16** 06:44:17.2±0.2,24°.78N×122°.69E, h109km±3km, M4.4*
ISC 16 06:44:16.4±0.3,**24°.73N**±0°.03×**122°.70E**±0°.02,**h119**km±3km, **n59**,σ0°.93/103,**mb3.7**/7,**1D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.39**	**133**	P	**Pn**	**06 44 33.6**	**0.0**
YOJ				*e*S	**Sn**	**06 44 46.2**	**-0.3**
TWB1	**Santiao Chiao**	**0.70**	**293**	*i* P	**Pn**	**06 44 36.2**	**+0.5**
	baz=298						
TWB1				S	**Sn**	**06 44 50.0**	**-0.1**
	baz=298						
TWC	**Suao**	**0.78**	**261**	*i* P	**Pn**	**06 44 36.1**	**-0.2**
	baz=260						
TWC				S	**Sn**	**06 44 49.9**	**-1.5**
	baz=260						
ILA	**Ilan**	**0.87**	**273**	*e*P	**Pn**	**06 44 37.6**	**+0.6**
	baz=275						
ILA				S	**Sn**	**06 44 52.6**	**-0.1**
	baz=275						
NWF	**Wu-fen Shan**	**0.90**	**292**	*i* P	**Pn**	**06 44 38.1**	**+0.7**
	baz=290						
NWF				*i* S	**Sn**	**06 44 53.6**	**+0.4**
	baz=290						
ENA	**Nanau**	**0.92**	**251**	P	**Pn**	**06 44 37.7**	**+0.2**
	baz=252						
ENA				*e*S	**Sn**	**06 44 52.7**	**-0.9**
	baz=252						
TWE	**Neicheng**	**0.94**	**270**	*i* P	**Pn**	**06 44 38.1**	**+0.4**
	baz=272						
TWE				S	**Sn**	**06 44 53.4**	**-0.5**
	baz=272						
ENTT	**Nioudou**	**1.03**	**265**	*i* P	**Pn**	**06 44 39.3**	**+0.7**
	baz=267						
ENTT				S	**Sn**	**06 44 55.9**	**+0.4**
	baz=267						
TWA	**Mucha**	**1.04**	**284**	*e*P	**Pn**	**06 44 38.8**	**+0.1**
	baz=278						
TWA				S	**Sn**	**06 44 55.0**	**-0.7**
	baz=278						
TAP1	**Taipei**	**1.11**	**286**	*e*S	**Sn**	**06 44 56.2**	**-0.7**
	baz=281						
TWY	**Chenhua**	**1.14**	**299**	*i* P	**Pn**	**06 44 40.5**	**+0.8**
	baz=296						
TWY				*e*S	**Sn**	**06 44 57.8**	**+0.4**
	baz=296						
TWD	**Chiawan**	**1.20**	**238**	*e*P	**Pn**	**06 44 39.8**	**-0.6**
	baz=234						
TWD				S	**Sn**	**06 44 56.9**	**-1.5**
	baz=234						
NSK	**Sanguang**	**1.22**	**268**	*i* P	**Pn**	**06 44 41.3**	**+0.7**
	baz=263						
NSK				S	**Sn**	**06 44 58.5**	**-0.5**
	baz=263						
TWS1	**Kuangyinshan**	**1.22**	**288**	*i* P	**Pn**	**06 44 41.5**	**+0.9**
	baz=284						
TWS1				S	**Sn**	**06 44 58.8**	**-0.2**
	baz=284						
HWA	**Hwalien**	**1.25**	**233**	*e*P	**Pn**	**06 44 41.1**	**+0.2**
	baz=229						
HWA				*e*S	**Sn**	**06 44 59.0**	**-0.4**
	baz=229						
JKRS	**Kuro-shima**	**1.29**	**112**	P	**Pn**	**06 44 42.2**	**+0.9**
JKRS				*e*S	**Sn**	**06 45 01.0**	**+0.7**
JIJ	**Ishigaki jima**	**1.36**	**105**	P	**Pn**	**06 44 42.8**	**+0.6**
JIJ				*e*S	**Sn**	**06 45 01.2**	**-0.5**
NCU	**National Centr**	**1.40**	**280**	*e*P	**Pn**	**06 44 43.7**	**+1.2**
	baz=282						
NCU				*e*S	**Sn**	**06 45 02.4**	**0.0**
	baz=282						
ESL	**Shilin**	**1.47**	**232**	P	**Pn**	**06 44 42.9**	**-0.5**
	baz=228						
ESL				*e*S	**Sn**	**06 45 01.7**	**-2.3**
	baz=228						
NSTT	**Nanjuang**	**1.55**	**267**	P	**Pn**	**06 44 45.0**	**+0.7**
	baz=268						
NSTT				S	**Sn**	**06 45 04.8**	**-0.7**
	baz=268						
HSN	**Hsinchu**	**1.57**	**273**	*e*S	**Sn**	**06 45 05.2**	**-0.9**
	baz=275						
EHY	**Hungye**	**1.75**	**226**	P	**Pn**	**06 44 47.0**	**+0.2**
	baz=226						
EHY				*e*S	**Sn**	**06 45 08.7**	**-1.2**
	baz=226						
NSY	**Sanyi**	**1.79**	**260**	*e*P	**Pn**	**06 44 48.3**	**+1.0**
	baz=261						
NSY				*e*S	**Sn**	**06 45 10.9**	**+0.2**
	baz=261						
TWQ1	**Liyutan**	**1.79**	**258**	⇓*i* P	**Pn**	**06 44 48.0**	**+0.8**
	baz=259						
TWQ1				*e*S	**Sn**	**06 45 10.4**	**-0.4**
	baz=259						
JTJ	**Tarama**	**1.82**	**92**	P	**Pn**	**06 44 48.6**	**+1.0**
JTJ				*e*S	**Sn**	**06 45 11.1**	**-0.3**
SMLT	**Sun Moon Lake**	**1.84**	**243**	*e*P	**Pn**	**06 44 49.1**	**+1.2**
	baz=239						
SMLT				*e*S	**Sn**	**06 45 11.9**	**0.0**
	baz=239						
TYC	**Yuchr**	**1.87**	**244**	*i* P	**Pn**	**06 44 49.5**	**+1.3**
	baz=242						
TYC				*e*S	**Sn**	**06 45 12.4**	**-0.1**
	baz=242						
TWF1	**Yuli**	**1.88**	**223**	P	**Pn**	**06 44 48.1**	**-0.2**
	baz=230						
TWF1				*e*S	**Sn**	**06 45 11.2**	**-1.4**
	baz=230						
TCU	**Taichung**	**1.93**	**253**	*e*P	**Pn**	**06 44 50.0**	**+1.0**
	baz=261						
TCU				*e*S	**Sn**	**06 45 13.4**	**-0.4**
	baz=261						
YUS	**Yu-Shan**	**2.02**	**233**	*e*P	**Pn**	**06 44 51.0**	**+1.0**
	baz=229						
YUS				S	**Sn**	**06 45 15.6**	**-0.1**
	baz=229						
WNT	**Mingjian**	**2.02**	**246**	*e*P	**Pn**	**06 44 51.2**	**+1.2**
	baz=246						
WNT				*e*S	**Sn**	**06 45 15.9**	**0.0**
	baz=246						
CHKT	**Chengkung**	**2.03**	**217**	*e*P	**Pn**	**06 44 50.3**	**+0.1**
	baz=216						
CHKT				*e*S	**Sn**	**06 45 14.8**	**-1.2**
	baz=216						
ALS	**Alishan**	**2.11**	**235**	P	**Pn**	**06 44 52.5**	**+1.3**
	baz=230						
ALS				*e*S	**Sn**	**06 45 17.8**	**-0.1**
	baz=230						
ELDTW	**Lidau**	**2.17**	**225**	*i* P	**Pn**	**06 44 52.1**	**+0.2**
	baz=224						
ELDTW				*e*S	**Sn**	**06 45 18.3**	**-0.9**
	baz=224						
WGK	**Gukeng**	**2.21**	**242**	*e*S	**Sn**	**06 45 20.9**	**+0.8**
	baz=243						
JMJ	**Miyako jima 2**	**2.36**	**87**	P	**Pn**	**06 44 55.7**	**+1.4**
JMJ				*e*S	**Sn**	**06 45 23.7**	**+0.3**
WTP	**Ta-pu**	**2.41**	**233**	P	**Pn**	**06 44 56.2**	**+1.2**
	baz=232						
WTP				*e*S	**Sn**	**06 45 24.7**	**0.0**
	baz=232						
CHY	**Chiayi**	**2.41**	**240**	*e*P	**Pn**	**06 44 56.0**	**+0.9**
	baz=249						
CHY				*e*S	**Sn**	**06 45 25.0**	**+0.3**
	baz=249						
TWG	**Pinlang**	**2.41**	**218**	*e*S	**Sn**	**06 45 23.4**	**-1.3**
	baz=218						
TTN	**Taitung**	**2.43**	**216**	*e*S	**Sn**	**06 45 24.7**	**-0.3**
	baz=213						
JOGS	**Gusukube**	**2.46**	**89**	P	**Pn**	**06 44 56.9**	**+1.3**
JOGS				*e*S	**Sn**	**06 45 27.9**	**+2.1**
CHN1	**Nanshi**	**2.51**	**233**	*i* P	**Pn**	**06 44 57.3**	**+1.0**
	baz=233						
CHN1				S	**Sn**	**06 45 26.9**	**0.0**
	baz=233						
SGST	**Jiashian**	**2.54**	**230**	*e*P	**Pn**	**06 44 57.6**	**+1.0**
	baz=230						
SGST				S	**Sn**	**06 45 27.0**	**-0.5**
	baz=230						
SCZT	**Fangliau**	**3.02**	**220**	*e*P	**Pn**	**06 45 07.4**	**+4.4**
	baz=214						
PNG	**Penghu**	**3.10**	**249**	*e*P	**Pn**	**06 45 03.2**	**-0.7**
	baz=249						
KNM	**Kinmen**	**3.90**	**266**	*e*P	**Pn**	**06 45 15.9**	**+1.3**
	baz=266						
JKE	**Kume jima 2**	**4.02**	**66**	P	**Pn**	**06 45 17.2**	**+1.0**
JKE				*e*S	**Sn**	**06 46 03.5**	**+1.0**
JAGN	**Aguni-jima**	**4.50**	**65**	P	**Pn**	**06 45 23.3**	**+0.7**
JAGN				*e*S	**Sn**	**06 46 12.0**	**-2.0**
JOW	**Kunigami**	**5.45**	**66**	P	**Pn**	**06 45 35.1**	**-0.2**
JOW				*e*S	**Sn**	**06 46 34.4**	**-2.4**
JTK	**Tokunoshima**	**6.38**	**60**	P	**Pn**	**06 45 46.9**	**-1.1**
JTK				*e*S	**Sn**	**06 46 57.2**	**-2.3**
JAM	**Amami Oshima**	**7.19**	**58**	P	**Pn**	**06 45 57.7**	**-1.2**
JAM				*e*S	**Sn**	**06 47 16.7**	**-2.3**
JMZ	**Minamidaito 2**	**7.79**	**80**	P	**Pn**	**06 46 04.4**	**-2.6**
JMZ				*e*S	**Sn**	**06 47 24.8**	**-8.8**
SONM	**Songino Array**	**26.43**	**335**	P	**P**	**06 49 41.5**	**-0.4**
	1.5nm,0.8s,mb3.5,baz=134,slow=11,SNR=4.4						
MKAR	**Makanchi Array**	**38.92**	**315**	P	**P**	**06 51 30.4**	**-0.1**
	0.4nm,0.6s,mb3.4,baz=100,slow=7.1,SNR=15						
ZALV	**Zalesovo Beam**	**40.55**	**326**	P	**P**	**06 51 43.0**	**-0.8**
	0.5nm,0.4s,mb3.7,baz=104,slow=6.1,SNR=2.9						
WRA	**Warramunga Arr**	**45.82**	**165**	P	**P**	**06 52 26.3**	**-0.2**
	2.3nm,0.6s,mb4.1,baz=347,slow=8.4,SNR=26						
BVAR	**Borovoye Array**	**48.14**	**320**	P	**P**	**06 52 41.8**	**-2.4**
	0.3nm,0.5s,mb3.4,baz=108,slow=9.5,SNR=3.0						
ASAR	**Alice Springs**	**49.32**	**166**	P	**P**	**06 52 53.2**	**-0.3**
	0.5nm,0.7s,mb3.6,baz=351,slow=14,SNR=9.0						
STKA	**Stephens Creek**	**59.11**	**161**	P	**P**	**06 54 04.2**	**-0.2**
	1.9nm,0.9s,mb4.1,baz=8.7,slow=15,SNR=3.8						

*ISCJB **16** 06:55:37.2±0.3,35°.83N±0°.04×27°.21E±0°.03, h81km±10km, Error ellipse: s-maj=6.2km s-min=4.0km az=168.1*
*CSEM **16** 06:55:38.9±0.2,35°.84N×27°.14E, h60km, ML3.2/1, Error ellipse: s-maj=5.1km s-min=4.1km az=89.0*
*ISK **16** 06:55:38.8,35°.93N×27°.07E, h29km, MD3.3*
*HLW **16** 06:55:39.1,35°.77N×27°.38E, h33km±50km, Md3.5, Ml3.3*
*THE **16** 06:55:40.7,35°.97N×27°.08E, h67km±4km, ML3.2/1, Error ellipse: s-maj=4.4km s-min=0.7km az=81.0*
*DDA **16** 06:55:43.3,36°.18N×27°.60E, h49km±4km, Md3.0*
*GII **16** 06:55:43.7±0.0,34°.97N×27°.43E, h0km*
ISC 16 06:55:38.7±0.4,**35°.85N**±0°.03×**27°.16E**±0°.03,**h69**km±12km, **n93**,σ1°.19/123,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.75**	**1**	P	**Pn**	**06 55 54.3**	**+0.3**
NIS1				S	**Sn**	**06 56 04.7**	**-0.7**
NIS1	**Nisyros Isl.**	**0.75**	**1**	P	**Pn**	**06 55 54.3**	**+0.3**
NIS1				S	**Sn**	**06 56 04.7**	**-0.7**
ARG	**Arkhangelos**	**0.86**	**65**	P	**Pn**	**06 55 57.2**	**+1.9**
ARG				S	**Sn**	**06 56 09.1**	**+1.4**
ARG	**Arkhangelos**	**0.86**	**65**	P	**Pn**	**06 55 57.2**	**+1.9**
ARG				S	**Sn**	**06 56 09.1**	**+1.4**
DAT	**Datca**	**0.94**	**21**	*e*PG	**Pn**	**06 55 56.5**	**+0.2**
DAT				*e*SG	**Sn**	**06 56 08.8**	**-0.6**
DAT	**Datca**	**0.94**	**21**	*e*Pg	**Pn**	**06 55 56.5**	**+0.2**
DAT				*e*Sg	**Sn**	**06 56 08.8**	**-0.6**
BODT	**Bodrum**	**1.21**	**6**	*e*PN	**Pn**	**06 55 58.3**	**-1.5**
BODT				*e*SN	**Sn**	**06 56 14.0**	**-1.6**
BODT	**Bodrum**	**1.21**	**6**	*e*Pn	**Pn**	**06 55 58.3**	**-1.5**
BODT				*e*Sn	**Sn**	**06 56 14.0**	**-1.6**
BDRM	**Kayabasi**	**1.23**	**11**	*i* P	**Pn**	**06 56 00.3**	**+0.3**
BDRM				*i* S	**Sn**	**06 56 14.4**	**-1.6**
BDRM	**Kayabasi**	**1.23**	**11**	*i* P	**Pn**	**06 56 00.3**	**+0.3**
BDRM				*i* S	**Sn**	**06 56 14.4**	**-1.6**
THR1	**Thera Island**	**1.47**	**291**	P	**Pn**	**06 56 02.8**	**-0.4**
THR1				S	**Sn**	**06 56 19.3**	**-2.4**
THR1	**Thera Island**	**1.47**	**291**	P	**Pn**	**06 56 02.8**	**-0.4**
THR1				S	**Sn**	**06 56 19.3**	**-2.4**
MLSB	**Milas**	**1.52**	**19**	*e*PN	**Pn**	**06 56 04.3**	**+0.5**
MLSB	**Milas**	**1.52**	**19**	*e*Pn	**Pn**	**06 56 04.3**	**+0.5**
THR3	**Thira Island,**	**1.53**	**292**	P	**Pn**	**06 56 04.0**	**0.0**
THR3	**Thira Island,**	**1.53**	**292**	P	**Pn**	**06 56 04.0**	**0.0**
LAST	**Lasithi**	**1.54**	**244**	P	**Pn**	**06 56 05.7**	**+1.6**
LAST				S	**Sn**	**06 56 24.4**	**+1.2**
LAST	**Lasithi**	**1.54**	**244**	P	**Pn**	**06 56 05.7**	**+1.6**
LAST				S	**Sn**	**06 56 24.4**	**+1.2**
TURN	**Turunc**	**1.54**	**48**	*i* P	**Pn**	**06 56 01.0**	**-3.1**
TURN				*i* S	**Sn**	**06 56 17.1**	**-6.3**
TURN	**Turunc**	**1.54**	**48**	*i* P	**Pn**	**06 56 01.0**	**-3.1**
YER	**Yerkesik**	**1.56**	**35**	*e*PN	**Pn**	**06 56 05.3**	**+0.9**
YER				*e*SN	**Sn**	**06 56 23.8**	**-0.1**
YER	**Yerkesik**	**1.56**	**35**	*e*Pn	**Pn**	**06 56 05.3**	**+0.9**
YER				*e*Sn	**Sn**	**06 56 23.8**	**-0.1**
THR5	**Thira Island,**	**1.57**	**291**	P	**Pn**	**06 56 04.4**	**-0.1**
THR5	**Thira Island,**	**1.57**	**291**	P	**Pn**	**06 56 04.4**	**-0.1**
APE	**Apeiranthos**	**1.79**	**313**	*e*PN	**Pn**	**06 56 07.1**	**-0.3**
APE				*e*SN	**Sn**	**06 56 27.5**	**-1.8**
APE	**Apeiranthos**	**1.79**	**313**	P	**Pn**	**06 56 07.1**	**-0.3**
APE	**Apeiranthos**	**1.79**	**313**	P	**Pn**	**06 56 07.1**	**-0.3**
APE				*e*Sn	**Sn**	**06 56 27.5**	**-1.7**
AYDN	**Tasoluk**	**1.89**	**17**	*i* P	**Pn**	**06 56 09.4**	**+0.6**
AYDN				*i* S	**Sn**	**06 56 29.1**	**-2.6**
AYDN	**Tasoluk**	**1.89**	**17**	*i* P	**Pn**	**06 56 09.4**	**+0.6**
AYDN				*i* S	**Sn**	**06 56 29.1**	**-2.6**
AKAS	**Kas**	**2.02**	**78**	*i* P	**Pn**	**06 56 11.1**	**+0.6**
AKAS				*i* S	**Sn**	**06 56 30.9**	**-3.7**
AKAS	**Kas**	**2.02**	**78**	*i* P	**Pn**	**06 56 11.1**	**+0.7**
AKAS				*i* S	**Sn**	**06 56 30.9**	**-3.8**
GLHS	**Glhisar (BURDU**	**2.29**	**55**	*e*PN	**Pn**	**06 56 15.8**	**+1.6**
GLHS	**Glhisar (BURDU**	**2.29**	**55**	*e*Pn	**Pn**	**06 56 15.8**	**+1.7**
GOLH	**Golhisar**	**2.37**	**54**	*i* P	**Pn**	**06 56 16.3**	**+1.0**
GOLH				*i* S	**Sn**	**06 56 44.4**	**+1.0**
GOLH	**Golhisar**	**2.37**	**54**	*i* P	**Pn**	**06 56 16.3**	**+1.0**
GOLH				*i* S	**Sn**	**06 56 44.3**	**+0.9**
ELL	**Elmali**	**2.39**	**67**	*e*PN	**Pn**	**06 56 17.4**	**+1.9**
ELL	**Elmali**	**2.39**	**67**	*e*Pn	**Pn**	**06 56 17.4**	**+1.9**
BLCB	**Balcova**	**2.53**	**358**	P	**Pn**	**06 56 17.1**	**-0.3**
BLCB	**Balcova**	**2.53**	**358**	P	**Pn**	**06 56 17.1**	**-0.3**
CHOS	**Chios island**	**2.68**	**341**	P	**Pn**	**06 56 19.1**	**-0.3**
CHOS	**Chios island**	**2.68**	**341**	P	**Pn**	**06 56 19.1**	**-0.3**
KARN	**Karanos**	**2.68**	**261**	P	**Pn**	**06 56 20.8**	**+1.3**
KARN				S	**Sn**	**06 56 51.2**	**+0.3**
KARN	**Karanos**	**2.68**	**261**	P	**Pn**	**06 56 20.8**	**+1.3**
KARN				S	**Sn**	**06 56 51.2**	**+0.3**
KORT	**Korkueli**	**2.81**	**65**	*i* P	**Pn**	**06 56 23.7**	**+2.4**
KORT				*i* S	**Sn**	**06 56 56.8**	**+2.7**
KORT	**Korkueli**	**2.81**	**65**	*i* P	**Pn**	**06 56 23.7**	**+2.4**
KORT				*i* S	**Sn**	**06 56 56.8**	**+2.7**
KULA	**Kula-Manisa**	**2.91**	**24**	*e*PN	**Pn**	**06 56 24.3**	**+1.6**
KULA	**Kula-Manisa**	**2.91**	**24**	*e*Pn	**Pn**	**06 56 24.3**	**+1.7**
SUTC	**Sutluce-Ispart**	**3.48**	**61**	*e*PN	**Pn**	**06 56 32.6**	**+2.3**
SUTC	**Sutluce-Ispart**	**3.48**	**61**	*e*Pn	**Pn**	**06 56 32.7**	**+2.3**
SLUM		**4.64**	**201**	P	**Pn**	**06 56 47.4**	**+1.1**
	baz=204						
SLUM				AMP		06 57 00.0	
	comp=N,40μm,0.1s,logA/T=5.4,baz=204						
SLUM		**4.64**	**201**	P	**Pn**	**06 56 47.4**	**+1.1**
HMAT	**Matruh**	**4.75**	**181**	P	**Pn**	**06 56 47.2**	**-0.5**
	baz=183						
HMAT				AMP		06 57 00.0	
	comp=E,30μm,0.1s,logA/T=5.3,baz=183						
HMAT				S	**Sn**	**06 57 36.1**	**-5.3**
	baz=183						
HMAT	**Matruh**	**4.75**	**181**	P	**Pn**	**06 56 47.2**	**-0.5**
SWA2		**6.75**	**193**	P	**Pn**	**06 57 15.9**	**+0.9**
	baz=195						
SWA2		**6.75**	**193**	P	**Pn**	**06 57 15.9**	**+0.9**
KOT	**Kottamia**	**7.09**	**145**	P	**Pn**	**06 57 19.8**	**+0.1**
	baz=146						
KOT	**Kottamia**	**7.09**	**145**	P	**Pn**	**06 57 19.8**	**0.0**
HHAG	**Hagoal**	**7.20**	**143**	P	**Pn**	**06 57 20.0**	**-1.2**
	baz=144						
HHAG	**Hagoal**	**7.20**	**143**	P	**Pn**	**06 57 20.0**	**-1.2**
HSAF	**As Saff**	**7.23**	**148**	P	**Pn**	**06 57 22.0**	**+0.3**
	baz=149						
HSAF	**As Saff**	**7.23**	**148**	P	**Pn**	**06 57 22.0**	**+0.3**
AMAG	**Maghara**	**7.25**	**134**	P	**Pn**	**06 57 20.5**	**-1.4**
	baz=134						
AMAG	**Maghara**	**7.25**	**134**	P	**Pn**	**06 57 20.5**	**-1.5**
GLL	**Jalalah**	**7.34**	**147**	P	**Pn**	**06 57 23.1**	**+0.1**
	baz=148						
GLL	**Jalalah**	**7.34**	**147**	P	**Pn**	**06 57 23.1**	**0.0**
MMLI	**Mount Malkishu**	**7.65**	**114**	Sn	**Sn**	**06 58 50.9**	**-1.5**
AWBH		**7.65**	**168**	P	**Pn**	**06 57 27.1**	**-0.4**
	baz=169						
AWBH		**7.65**	**168**	P	**Pn**	**06 57 27.1**	**-0.4**
SUZ		**7.66**	**140**	P	**Pn**	**06 57 27.5**	**0.0**
	baz=140						
SUZ		**7.66**	**140**	P	**Pn**	**06 57 27.5**	**0.0**
HMDT	**Nahal Hemdat**	**7.81**	**115**	Sn	**Sn**	**06 58 56.0**	**-0.5**
DSI	**Dead Sea**	**8.07**	**120**	Pn	**Pn**	**06 57 33.9**	**+0.9**
DSI	**Dead Sea**	**8.07**	**120**	Sn	**Sn**	**06 59 00.7**	**-2.0**
MZDA	**Masada**	**8.21**	**121**	Pn	**Pn**	**06 57 35.5**	**+0.6**
MZDA	**Masada**	**8.21**	**121**	Sn	**Sn**	**06 59 03.5**	**-2.7**
HNKL	**Nakhl**	**8.23**	**134**	P	**Pn**	**06 57 34.5**	**-0.9**
	baz=134						
HNKL	**Nakhl**	**8.23**	**134**	P	**Pn**	**06 57 34.4**	**-0.9**
KRMI	**Paran Flat**	**8.55**	**130**	Pn	**Pn**	**06 57 38.5**	**-1.1**
KRMI	**Paran Flat**	**8.55**	**130**	Sn	**Sn**	**06 59 09.1**	**-5.4**
HFRF	**Wahat Farafira**	**8.73**	**173**	P	**Pn**	**06 57 42.4**	**+0.1**
	baz=174						
HFRF	**Wahat Farafira**	**8.73**	**173**	P	**Pn**	**06 57 42.4**	**+0.2**
HRFI	**Mount Harif**	**8.80**	**129**	Sn	**Sn**	**06 59 16.0**	**-4.7**
MBRI	**Mt Berech**	**8.89**	**131**	Pn	**Pn**	**06 57 43.5**	**-0.8**
MBRI	**Mt Berech**	**8.89**	**131**	Sn	**Sn**	**06 59 17.4**	**-5.5**
EIL	**Elat**	**9.00**	**131**	Sn	**Sn**	**06 59 20.5**	**-5.1**
TR2		**9.29**	**141**	P	**Pn**	**06 57 48.8**	**-1.0**
	baz=142						
TR2		**9.29**	**141**	P	**Pn**	**06 57 48.8**	**-1.0**
HKAT	**Jabal Katrina**	**9.32**	**140**	P	**Pn**	**06 57 49.4**	**-0.9**
	baz=140						
HKAT	**Jabal Katrina**	**9.32**	**140**	P	**Pn**	**06 57 49.4**	**-0.8**
HDK1	**Dakhla**	**10.46**	**169**	P	**Pn**	**06 58 06.6**	**+0.9**
	baz=169						
HDK1	**Dakhla**	**10.46**	**169**	P	**Pn**	**06 58 06.6**	**+0.9**
HDK2	**Wahat Dakhilah**	**11.60**	**172**	P	**Pn**	**06 58 21.5**	**+0.2**
	baz=172						
HDK2	**Wahat Dakhilah**	**11.60**	**172**	P	**Pn**	**06 58 21.5**	**+0.2**

*NOU **16** 06:55:56.1±0.6, 14°.62S×167°.37E, h30km, MD3.6, ML3.8*
*ISCJB **16** 06:56:00.9±1.0, 15°.12S±0°.05×167°.54E±0°.07, h152km±10km, mb4.2/21, Error ellipse: s-maj=12.3km s-min=7.8km az=153.3*
*IDC **16** 06:56:00.3±0.8, 15°.08S×167°.65E, h137km±5km, mb4.0/16, mb1 4.1/17, mb1mx4.1/21, mbtmp4.1/17, MS3.8/2, Ms1 3.8/2, ms1mx3.1/19, Error ellipse: s-maj=17.9km s-min=13.4km az=120.0*
*NEIC **16** 06:56:03.1±1.2, 15°.05S×167°.63E, h163km±11km, mb4.5/11, Error ellipse: s-maj=10.1km s-min=8.8km az=206.0*
ISC 16 06:56:01.5±1.0,**15°.10S**±0°.05×**167°.57E**±0°.07,**h143**km±9km, **h141**km±1.5km:**pP-P**,**n49**,σ1°.10/43,**mb4.2**/21,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.02**	**189**	*e*Pn	**Pn**	**06 57 41.7**	**-0.1**
	134nm,0.3s						
DZM				*e*Sn	**Sn**	**06 58 54.7**	**-5.6**
	36nm,0.3s						
DZM				*e*LR	LR	06 59 16.8	
	429nm,27.9s						
DZM	**Mont Dzumac**	**7.02**	**189**	*e*P	**Pn**	**06 57 41.8**	**0.0**
DZM				*e*S	**Sn**	**06 59 00.6**	**+0.3**
DZM				AMP		06 59 07.8	
	comp=Z,619nm,2.6s						
BAYA	**Yate Dam**	**7.05**	**185**	*e*P	**Pn**	**06 57 42.2**	**0.0**
NOUC	**Port Laguerre**	**7.07**	**190**	*e*P	**Pn**	**06 57 42.3**	**-0.2**
NOUC				*e*S	**Sn**	**06 59 00.2**	**-1.3**
NOUC				AMP		06 59 09.0	
	comp=Z,27nm,0.7s						
NORM	**Noumea**	**7.17**	**188**	*e*P	**Pn**	**06 57 44.1**	**+0.3**
HNR	**Honiara**	**9.34**	**306**	P	**Pn**	**06 58 14.2**	**+1.3**
	comp=Z,14nm,0.3s,baz=199,slow=3.0,SNR=15						
HNR				S	**Sn**	**06 59 54.0**	**-2.3**
	comp=Z,96nm,0.3s,baz=258,slow=3.8,SNR=5.3						
MSVF	**Nonsavu**	**10.39**	**106**	*e*Pn	**Pn**	**06 58 27.8**	**+0.9**
	comp=Z,37nm,0.8s						
EIDS	**Eidsvold**	**18.52**	**234**	*e*P	**P**	**07 00 09.6**	**+2.6**
	comp=Z,21nm,1.2s						
OUZ	**Omahuta**	**20.76**	**166**	*e*P	**P**	**07 00 31.4**	**+0.4**
	comp=Z,25nm,1.0s						
CTA	**Charters Tower**	**20.91**	**253**	P	**P**	**07 00 34.1**	**+1.3**
	comp=Z,4.8nm,0.7s,baz=84,slow=10,SNR=5.2						
CTA				pP		07 00 57.3	
	comp=Z,3.6nm,0.6s,baz=77,slow=15,SNR=2.7						
CTAO	**Charters Tower**	**20.91**	**253**	*e*P	**P**	**07 00 34.2**	**+1.4**
	comp=Z,54nm,1.5s						
CTAO				*e*		07 00 57.4	
URZ	**Urewera**	**24.57**	**162**	P	**P**	**07 01 08.0**	**-0.1**
	comp=Z,12nm,0.5s,mb4.7,baz=319,slow=4.2,SNR=7.9						
URZ	**Urewera**	**24.57**	**162**	*e*P	**P**	**07 01 08.1**	**+0.1**
	comp=Z,16nm,0.8s,mb4.6						
RPZ	**Rata Peaks**	**28.68**	**175**	LR	LR	07 11 51.4	
	comp=Z,284nm,20.6s,baz=199,slow=33						
STKA	**Stephens Creek**	**28.98**	**230**	P	**P**	**07 01 49.4**	**+1.6**
	comp=Z,2.3nm,0.5s,mb4.2,baz=1.4,slow=16,SNR=7.0						
STKA				PcP	PcP	07 04 52.6	-0.4
	comp=Z,4.7nm,0.7s,baz=96,slow=4.7,SNR=6.0						
STKA	**Stephens Creek**	**28.98**	**230**	*e*P	**P**	**07 01 48.7**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.6						
STKA				PcP	PcP	07 04 52.6	-0.4
WRA	**Warramunga Arr**	**32.02**	**256**	P	**P**	**07 02 13.3**	**-1.3**
	comp=Z,1.5nm,0.5s,mb4.0,baz=84,slow=8.7,SNR=32						
WRA				pP	pP	07 02 43.1	-2.1
	comp=Z,3.9nm,1.1s,

ZALV	**Zalesovo Beam**	**97.86**	**324**	P	**P**	**07 09 19.6**	**-1.0**
	comp=Z,0.4nm,0.4s,mb4.2,baz=96,slow=4.7,SNR=3.8						
ARCES	**ARCESS Array B 120.68**	**345**		PKP	PKPdf	07 14 34.9	-0.9
	comp=Z,2.5nm,0.6s,baz=81,slow=2.1,SNR=14						
ARCES	**ARCESS Array B 120.68**	**345**		PKP	PKPdf	07 14 34.9	-0.9
BNI	**Bardonecchia**	**146.05**	**335**	*e*PKPbc	PKPbc	07 15 25.2	+0.5
KEST	**Kesra**	**151.68**	**320**	PKPbc	PKPbc	07 15 39.8	+0.4
	comp=Z,2.1nm,0.7s,baz=142,slow=2.6,SNR=8.4						
TORD	**Torodi Ar. Bea**	**166.16**	**264**	PKP	PKPdf	07 15 49.0	-1.5
	comp=Z,1.1nm,0.7s,baz=55,slow=0.9,SNR=8.2						
TORD				PKPab	PKPab	07 16 51.6	-0.5
	comp=Z,0.5nm,0.7s,baz=117,slow=4.3,SNR=2.9						
TORD	**Torodi Ar. Bea**	**166.16**	**264**	PKP	PKPdf	07 15 49.0	-1.5
TORD				PKPab	PKPab	07 16 51.6	-0.5

*CSEM **16** 07:24:52.0, 63°.95N×22°.11W, h6km, ML4.0, After REY*

REY 16 07:24:52.0, 63°.95N×22°.11W, h6km, ML4.0, ML3.5, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRI	**Krysuvik**	**0.07**	**170**	P	Pg	07 24 53.8	+0.1
IKRI				S	Sg	07 24 55.3	+0.4
IVOG	**Vogar**	**0.13**	**278**	P	Pg	07 24 55.0	+0.4
IVOG				S	Sg	07 24 57.3	+0.9
IKAS	**Kald??rsel**	**0.13**	**57**	P	Pg	07 24 55.1	+0.4
IKAS				S	Sg	07 24 57.7	+1.2
IGRV	**Grindav??k**	**0.18**	**239**	P	Pg	07 24 55.8	+0.2
IGRV				S	Sg	07 24 58.7	+0.7
INYL	**Nylenda**	**0.28**	**275**	P	Pg	07 24 57.3	-0.1
INYL				S	Sg	07 25 01.4	+0.3
IBJA	**Bjarnastaoir**	**0.35**	**91**	P	Pg	07 24 58.8	0.0
IBJA				S	Sg	07 25 04.0	+0.5
IKUD	**Kuludalsa**	**0.39**	**15**	P	Pg	07 24 59.1	-0.3
IKUD				S	Sg	07 25 04.3	-0.1
IHEI	**Heioarbar**	**0.46**	**56**	P	Pg	07 25 00.3	-0.5
IHEI				S	Sg	07 25 06.8	+0.1
IKRO	**Krokur**	**0.46**	**71**	P	Pg	07 25 00.4	-0.4
IKRO				S	Sg	07 25 06.9	+0.1
ISOL	**Solvholt**	**0.51**	**92**	P	Pg	07 25 01.3	-0.6
ISOL				S	Sg	07 25 08.6	+0.1
IASM	**Asmuli**	**0.67**	**99**	P	Pg	07 25 03.9	-0.9
IASM				S	Sg	07 25 13.4	-0.1
ISAU	**Saurbar**	**0.75**	**86**	P	Pg	07 25 05.2	-1.1
ISAU				S	Sg	07 25 15.0	-1.0
IASB	**`sbjarnarst**	**0.87**	**23**	P	Pg	07 25 06.9	-1.8
IASB				S	Sg	07 25 18.6	-1.3
IGYG	**Gygjarholskot**	**0.89**	**67**	P	Pg	07 25 07.5	-1.6
IGYG				S	Sg	07 25 19.9	-0.8
IHAU	**Haukadalur**	**0.94**	**88**	P	Pg	07 25 08.5	-1.6
IHAU				S	Sg	07 25 21.7	-0.6
IVES	**Vestmannaeyjar**	**0.96**	**121**	P	Pg	07 25 08.5	-1.8
IVES				S	Sg	07 25 21.6	-1.1
IMID	**Miomork**	**1.03**	**106**	P	Pg	07 25 09.9	-1.8
IMID				S	Sg	07 25 24.0	-1.0
IESK	**Eystri-Skogar**	**1.26**	**109**	P	Pg	07 25 12.7	-3.3
IESK				S	Sg	07 25 28.9	-3.4
IVAT	**Vatnsfell**	**1.42**	**79**	P	Pn	07 25 15.8	-2.5
IVAT				S	Sb	07 25 36.4	-0.8
IHVO	**Lagu-Hvolar**	**1.51**	**105**	P	Pn	07 25 17.2	-2.3
ISNB	**Snabyli**	**1.56**	**96**	P	Pn	07 25 18.0	-2.1
ISNB				S	Sn	07 25 39.7	-0.9
ISKR	**Skrokkalda**	**1.73**	**68**	P	Pn	07 25 20.7	-1.9
ISKR				S	Sn	07 25 45.0	0.0
IKAL	**Kalfafell**	**1.95**	**88**	P	Pn	07 25 24.4	-1.2
IKAL				S	Sn	07 25 51.3	+1.0
IGRF	**Grimsfjall**	**2.17**	**76**	P	Pn	07 25 28.1	-0.5
IHRN	**Hraun**	**2.33**	**20**	P	Pn	07 25 29.3	-1.4
IHRN				S	Sn	07 26 00.5	+0.9
IFAG	**Fagurholsmyri**	**2.41**	**89**	P	Pn	07 25 31.7	-0.2
IFAG				S	Sn	07 26 04.7	+3.0
ISVA	**Svartarkot**	**2.51**	**54**	P	Pn	07 25 32.1	-1.1
ISIG	**Siglufjorour**	**2.57**	**30**	P	Pn	07 25 32.9	-1.2
IKRE	**Kreppuhraun**	**2.62**	**69**	P	Pn	07 25 33.7	-1.1
IKRE				S	Sn	07 26 11.3	+4.3
IMKO	**Mokollar**	**2.70**	**65**	P	Pn	07 25 34.8	-1.1
IMKO				S	Sn	07 26 12.5	+3.6
IBRU	**Bruarjokull**	**2.76**	**69**	P	Pn	07 25 36.2	-0.5
IGRA	**Granastaoir**	**2.76**	**42**	P	Pn	07 25 38.5	+1.8
IREN	**Reynihlio**	**2.80**	**50**	P	Pn	07 25 38.5	+1.2
IBRE	**Brettingsstaoi**	**2.81**	**37**	P	Pn	07 25 37.2	-0.2
IVSH	**V-Sauoahnukur**	**2.90**	**70**	P	Pn	07 25 39.8	+1.2
IADA	**Aoalbol**	**3.02**	**66**	P	Pn	07 25 41.7	+1.4
IADA				S	Sn	07 26 22.1	+5.3
IGRS	**Grimsstaoir**	**3.07**	**54**	P	Pn	07 25 42.5	+1.6
IGRS				S	Sn	07 26 23.0	+5.1
IGIL	**Gilhagi**	**3.24**	**46**	P	Pn	07 25 46.3	+3.0

*IDC **16** 07:28:23.2±0.4, 1°.11N×29°.04W, h0km, mb4.8/26, mb1 4.9/28, mb1mx4.9/28, mbtmp4.8/28, ML5.6/1, MS5.2/27, Ms1 5.1/27, ms1mx5.1/29, Error ellipse: s-maj=13.3km s-min=9.6km az=149.0*

*ISCJB **16** 07:28:23.5±0.2, 0°.91N±0°.04×28°.90W±0°.02, h10km, mb5.1/234, MS5.2/189, Error ellipse: s-maj=6.1km s-min=2.5km az=158.6*

*MOS **16** 07:28:23.3±0.8, 0°.98N×28°.98W, h10km, mb5.3/74, MS5.1/38, Error ellipse: s-maj=7.5km s-min=4.4km az=59.2*

*NEIC **16** 07:28:25.0±0.2, 0°.90N×29°.00W, h10km, mb5.2/154, MS5.2/151, MW5.8, Error ellipse: s-maj=5.3km s-min=2.9km az=161.0*

*BJI **16** 07:28:26.0, 0°.90N×29°.00W, h10km, mB5.5/15, Ms5.6/17, Ms7 5.3/17*

*GCMT **16** 07:28:30.9±0.1, 0°.95N×28°.80W, h21km, MW5.8, Moment Tensor Solution. s102, c188; s74, c87; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.22±.05; $M_{\theta\theta}$1.19±.05; $M_{\phi\phi}$-0.97±.06; $M_{r\theta}$-0.42±.10; $M_{\theta\phi}$-5.68±.05; $M_{\phi r}$-0.40±.11; Best double couple: $M_0$5.80000×10^{17} NP1:ϕ_s354.00000°, δ85.00000°, λ-4.00000°. NP2:ϕ_s85.00000°, δ86.00000°, λ-175.00000°. Principal axes: T 5.8900, Plg1.0000°, Azm220.0000°; N -0.1600, Plg84.0000°, Azm124.0000°; P -5.7300, Plg6.0000°, Azm310.0000°; Data Used: II IU IC G CN. Surface waves: sta=109, comp=238, per= 50.*

*SZGRF **16** 07:28:33.0, 1°.03N×27°.40W, h33km, mb5.2, MS5.0, Central Mid-Atlantic Ridge*

ISC 16 07:28:25.1±0.2, 0°.86N±0°.04×28°.96W±0°.02, h10km, (h12km±.7km:pP-P), n922, σ0.77/849, mb5.1/234, MS5.2/189, 173C-107D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**9.60**	**226**	Pn	**Pn**	**07 30 42.2**	**-1.3**
	19nm,0.3s,baz=31,slow=16,SNR=182						
RCBR				Sn	**Sn**	**07 32 21.8**	**-10**
	8.5nm,0.3s,baz=338,slow=17,SNR=3.5						
RCBR	**Riachuelo**	**9.60**	**226**	*e*Pn	**Pn**	**07 30 42.1**	**-1.4**
RCBR				*e*Sn	**Sn**	**07 32 25.1**	**-6.4**
SACV	**Santiago Islan**	**14.98**	**20**	Pn	**Pn**	**07 31 54.5**	**-2.6**
	2μm,0.8s,SNR=48						
BBTS	**Babate**	**18.41**	**41**	P	**Pn**	**07 32 38.7**	**-1.9**
	18nm,0.3s,baz=4.1,slow=0.7,SNR=11						
BBTS				LR	LR	07 38 03.2	
	comp=Z,7μm,20.7s,baz=28,slow=32						
BBTS	**Babate**	**18.41**	**41**	P	**Pn**	**07 32 38.7**	**-1.9**
BBTS				LR	LR	07 38 03.2	
LIC	**Lamto**	**24.47**	**77**	*e*P	**P**	**07 33 42.4**	**-2.1**
	339nm,1.0s,mb5.7						
TIC	**Toumodi**	**24.56**	**76**	*e*P	**P**	**07 33 44.6**	**-0.8**
	111nm,1.0s,mb5.3						
TIC	**Toumodi**	**24.56**	**76**	*e*P	**P**	**07 33 44.6**	**-0.8**
TIC				pmax	pmax		
	comp=Z,111nm,1.0s,mb5.3						
DBIC	**Dimbokro**	**24.73**	**76**	P	**P**	**07 33 44.9**	**-2.0**
	comp=Z,161nm,1.0s,mb5.5,baz=242,slow=11,SNR=76						
DBIC				S	**S**	**07 38 09.4**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=239,slow=18,SNR=2.7						
DBIC				LR	LR	07 41 24.8	
	comp=Z,12μm,18.4s,MS5.4,baz=237,slow=32						
DBIC	**Dimbokro**	**24.73**	**76**	*e*P	**P**	**07 33 44.7**	**-2.2**
	comp=Z,161nm,0.9s,mb5.5						
DBIC				LR	LR		
	comp=Z,13μm,19.0s,MS5.4						
DBIC	**Dimbokro**	**24.73**	**76**	P	**P**	**07 33 44.9**	**-2.0**
DBIC				S	**S**	**07 38 09.5**	**+0.4**
DBIC				pmax	pmax		
	comp=Z,161nm,1.0s						
DBIC				smax			
	comp=N,5.0nm,0.9s						
DBIC				MLR	MLR		
	comp=Z,12μm,18.4s						
KIC	**Kosan Boka**	**24.77**	**77**	*e*P	**P**	**07 33 45.1**	**-2.2**
	comp=Z,235nm,0.9s,mb5.7						
BDFB	**Brasilia**	**24.97**	**228**	P	**P**	**07 33 49.1**	**+0.1**
	comp=Z,29nm,0.7s,mb4.9,baz=54,slow=9.4,SNR=43						
BDFB				S	**S**	**07 38 10.1**	**-2.8**
	comp=Z,5.9nm,0.9s,baz=29,slow=19,SNR=1.4						
BDFB				LR	LR	07 42 43.6	
	comp=Z,14μm,18.9s,MS5.5,baz=60,slow=34						
BDFB	**Brasilia**	**24.97**	**228**	P	**P**	**07 33 49.1**	**+0.1**
BDFB				S	**S**	**07 38 10.1**	**-2.8**
CAM4	**Nova Friburgo**	**26.62**	**209**	||*i*P	**P**	**07 34 04.4**	**+0.5**
CAM4				*i*		07 34 10.3	
CAM4				*i*		07 34 11.4	
CAM4				*i*		07 34 15.5	
CAM4				*i*		07 34 19.0	
CAM4				*i*		07 34 30.2	
CAM4				*i*		07 34 36.7	
SHEL	**Horse Pasture**	**28.37**	**127**	PFAKE		07 34 30.0	+10
SHEL				LR	LR		
	comp=Z,μm,20.0s,MS4.7						
CHIE	**El Hierro**	**28.72**	**21**	P	**P**	**07 34 22.0**	**-0.6**
	comp=Z,192nm,1.6s,mb5.6						
EBAJ	**Bajamar**	**30.05**	**23**	P	**P**	**07 34 33.2**	**-1.2**
	comp=Z,106nm,1.6s,mb5.3						
SPB	**Sao Paulo**	**30.22**	**215**	PFAKE		07 34 50.0	+14
SPB				LR	LR		
	comp=Z,3μm,19.0s,MS5.0						
TORD	**Torodi Ar. Bea**	**32.73**	**67**	P	**P**	**07 34 56.7**	**-1.5**
	comp=Z,38nm,1.0s,mb5.3,baz=254,slow=7.2,SNR=94						
TORD				LR	LR	07 46 35.1	
	comp=Z,5μm,19.0s,MS5.2,baz=240,slow=33						
TORD	**Torodi Ar. Bea**	**32.73**	**67**	P	**P**	**07 34 56.7**	**-1.5**
TORD				LR	LR	07 46 35.1	
FDF	**Fort de France**	**34.66**	**295**	PFAKE		07 35 30.0	+15
FDF				LR	LR		
	comp=Z,1μm,19.0s,MS4.7						
PSMA	**Santa Maria**	**36.13**	**5**	*e*T		08 13 12.4	
PSMN	**Pico do Norte,**	**36.14**	**5**	*e*T		08 13 11.3	
CMLA	**Cha da Macela**	**36.86**	**5**	*e*T		08 13 42.0	
CPUP	**Villa Florida**	**38.47**	**223**	P	**P**	**07 35 47.6**	**+0.2**
	comp=Z,26nm,1.1s,mb4.9,baz=34,slow=7.8,SNR=27						
CPUP				LR	LR	07 51 13.1	
	comp=Z,15μm,19.4s,MS5.8,baz=49,slow=36						
CPUP	**Villa Florida**	**38.47**	**223**	*e*P	**P**	**07 35 48.6**	**+1.1**
	comp=Z,177nm,1.3s,mb5.6						
CPUP				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
CPUP	**Villa Florida**	**38.47**	**223**	*e*P	**P**	**07 35 48.6**	**+1.2**
CPUP				pmax	pmax		
	comp=Z,177nm,1.3s						
CPUP				MLR	MLR		
	comp=Z,2μm,19.0s						
MDT	**Midelt**	**39.18**	**33**	P	**P**	**07 35 50.6**	**-2.7**
	comp=Z,34nm,1.1s,mb5.0,baz=234,slow=7.6,SNR=34						
STVI	**Saint Thomas**	**39.37**	**298**	*e*P	**P**	**07 35 55.1**	**0.0**
	comp=Z,55nm,1.5s,mb5.1						
TAM	**Tamanrasset**	**39.97**	**54**	PFAKE		07 36 10.0	+10
TAM				LR	LR		
	comp=Z,6μm,20.0s,MS5.5						
HUMP	**Col San Antoni**	**40.09**	**298**	*e*P	**P**	**07 36 01.4**	**+0.3**
	comp=Z,190nm,2.3s,mb5.4						
SJG	**San Juan**	**40.34**	**297**	P	**P**	**07 36 02.1**	**-1.2**
	comp=Z,13nm,0.7s,mb4.8,baz=63,slow=5.2,SNR=9.8						
SJG				LR	LR	07 49 16.2	
	comp=Z,3μm,21.1s,MS5.2,baz=123,slow=31						
SJG	**San Juan**	**40.34**	**297**	*e*P	**P**	**07 36 03.2**	**-0.1**
	comp=Z,83nm,1.5s,mb5.2						
SJG	**San Juan**	**40.34**	**297**	P	**P**	**07 36 02.1**	**-1.1**
SJG				pmax	pmax		
	comp=Z,13nm,0.7s						
PFVI	**Vila Bisbo**	**40.60**	**25**	*e*P	**P**	**07 36 05.6**	**+0.5**
	comp=Z,99nm,1.2s,mb5.3						
PFVI				*e*S	**S**	**07 42 14.1**	**-0.7**
PFVI				*e*LQ		07 45 13.3	
PFVI				*e*LR	LR	07 47 19.4	
	comp=Z,2μm,20.0s						
PFVI	**Vila Bisbo**	**40.60**	**25**	P	**P**	**07 36 04.8**	**-0.3**
CELP	**Cerrillos**	**40.71**	**297**	*e*P	**P**	**07 36 05.6**	**-0.7**
MORF	**Marmelete**	**40.82**	**25**	*e*P	**P**	**07 36 07.7**	**+0.8**
	comp=Z,179nm,1.4s,mb5.5						
MORF				*e*S	**S**	**07 42 17.6**	**-0.4**
MORF				*e*LQ		07 45 19.5	
MORF				*e*LR	LR	07 47 26.5	
	comp=Z,2μm,20.0s						
PTEO	**Sao Teotonio**	**40.99**	**25**	*e*P	**P**	**07 36 09.0**	**+0.7**
	comp=Z,156nm,1.3s,mb5.5						
PBDV	**Barranco-do-Ve**	**41.08**	**26**	*e*P	**P**	**07 36 09.8**	**+0.8**
	comp=Z,71nm,1.2s,mb5.2						
PBDV				*e*S	**S**	**07 42 18.0**	**-3.9**
PBDV				*e*LQ		07 45 17.1	
PBDV				*e*LR	LR	07 47 25.6	
	comp=Z,2μm,18.0s						
CRPR	**Cabo Rojo, PR**	**41.16**	**297**	*e*P	**P**	**07 36 08.9**	**-1.1**
	comp=Z,23nm,1.3s,mb4.6						
SFS	**San Fernando**	**41.22**	**28**	PFAKE		07 36 20.0	+10
SFS				LR	LR		
	comp=Z,3μm,20.0s,MS5.1						
MPR	**Mayaguez**	**41.26**	**297**	*e*P	**P**	**07 36 08.5**	**-2.3**
	comp=Z,54nm,1.2s,mb5.0						
PVAQ	**Vaqueiros**	**41.31**	**26**	*e*P	**P**	**07 36 11.8**	**+0.9**
	comp=Z,92nm,1.4s,mb5.2						
PVAQ				*e*S	**S**	**07 42 26.0**	**+0.8**
PVAQ				*e*LQ		07 45 24.3	
PVAQ				*e*LR	LR	07 47 28.5	
	comp=Z,1μm,18.0s						
PCVE	**Castro Verde**	**41.36**	**25**	*e*P	**P**	**07 36 12.0**	**+0.7**
	comp=Z,110nm,1.2s,mb5.4						
PCVE				*e*S	**S**	**07 42 24.4**	**-1.6**
PCVE				*e*LQ		07 45 16.5	
PCVE				*e*LR	LR	07 47 32.8	
	comp=Z,2μm,18.0s						
MESJ	**Messejana**	**41.46**	**25**	*e*P	**P**	**07 36 12.3**	**+0.2**
	comp=Z,52nm,1.7s,mb4.9						
MESJ				*e*S	**S**	**07 42 29.1**	**+1.7**
MESJ				*e*SS	SS	07 45 34.3	+2.4
MESJ	**Messejana**	**41.46**	**25**	*e*P	**P**	**07 36 12.3**	**+0.2**
MESJ				AMb	AMB	07 36 13.7	
	comp=Z,52nm,1.7s,mb4.9						
MESJ				*e*S	**S**	**07 42 29.1**	**+1.7**
MESJ				*e*S	**S**	**07 42 29.1**	**+1.7**
MESJ				*e*SS	SS	07 45 34.3	+2.4
MESJ				*e*SS	SS	07 45 35.3	+3.4
MESJ	**Messejana**	**41.46**	**25**	*e*P	**P**	**07 36 07.3**	**-4.8**
MESJ				*e*S	**S**	**07 42 20.1**	**-7.3**
MESJ				*e*SS	SS	07 45 21.8	-10
EGRO	**El Granado**	**41.52**	**26**	P	**P**	**07 36 12.5**	**-0.1**
	comp=Z,37nm,1.1s,mb4.9						
EJIF	**Jimena Fronter**	**41.56**	**29**	P	**P**	**07 36 13.5**	**+0.4**
	comp=Z,44nm,1.2s,mb5.0						
EJIF	**Jimena Fronter**	**41.56**	**29**	P	**P**	**07 36 13.5**	**+0.4**
EJIF				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.0						
ESPR	**Espera**	**41.72**	**28**	P	**P**	**07 36 13.4**	**-0.9**
	comp=Z,32nm,1.0s,mb4.9						
PBEJ	**Beja**	**41.76**	**25**	*e*P	**P**	**07 36 15.5**	**+0.8**
	comp=Z,49nm,1.6s,mb4.9						
LIS	**Lisbon**	**41.82**	**23**	*e*P	**P**	**07 36 15.8**	**+0.7**
	comp=Z,108nm,1.5s,mb5.3						
LIS				*e*S	**S**	**07 42 34.6**	**+1.8**
LIS				*e*SS	SS	07 45 41.6	+2.5
LIS	**Lisbon**	**41.82**	**23**	*e*P	**P**	**07 36 15.8**	**+0.7**
LIS				AMb	AMB	07 36 17.1	
	comp=Z,108nm,1.5s,mb5.2						
LIS				*e*S	**S**	**07 42 34.5**	**+1.7**
LIS				*e*S	**S**	**07 42 34.6**	**+1.8**
LIS				*e*SS	SS	07 45 41.6	+2.4
PMAFR	**Mafra**	**41.98**	**23**	*e*S	**S**	**07 42 34.0**	**-1.1**
PMAFR				*e*LQ		07 45 49.0	
PMAFR				*e*LR	LR	07 48 03.4	
	comp=Z,2μm,18.0s						
EMIJ	**Mijas**	**41.99**	**30**	P	**P**	**07 36 15.8**	**-0.8**
	comp=Z,38nm,1.2s,mb4.9						
EMIN	**Mina Concepcio**	**42.07**	**27**	P	**P**	**07 36 17.1**	**-0.1**
	comp=Z,47nm,1.1s,mb5.0						
EVO	**Evora**	**42.13**	**25**	*e*P	**P**	**07 36 17.8**	**+0.2**
	comp=Z,89nm,1.4s,mb5.2						
SDV	**Santo Domingo**	**42.24**	**282**	*e*P	**P**	**07 36 19.9**	**+1.0**
	comp=Z,42nm,1.0s,mb5.0						
LPAZ	**La Paz**	**42.24**	**244**	P	**P**	**07 36 20.6**	**+1.7**
	comp=Z,9.9nm,0.8s,mb4.5,baz=64,slow=6.1,SNR=39						
LPAZ				LR	LR	07 53 00.7	
	comp=Z,6μm,21.0s,MS5.5,baz=70,slow=35						
LPAZ	**La Paz**	**42.24**	**244**	*e*P	**P**	**07 36 20.3**	**+1.4**
	comp=Z,23nm,0.9s,mb4.8						
LPAZ				LR	LR		
	comp=Z,6μm,21.0s,MS5.5						
LPAZ	**La Paz**	**42.24**	**244**	*e*P	**P**	**07 36 20.3**	**+1.4**
LPAZ				pmax	pmax		
	comp=Z,23nm,0.9s						
LPAZ				MLR	MLR		
	comp=Z,6μm,21.0s						
PBAR	**Barrancos**	**42.24**	**26**	*e*P	**P**	**07 36 19.3**	**+0.7**
	comp=Z,31nm,1.3s,mb4.8						
PBAR				*e*S	**S**	**07 42 41.3**	**+2.2**
PBAR				*e*LQ		07 45 41.3	
PBAR				*e*LR	LR	07 48 12.9	
	comp=Z,2μm,20.0s						
EALB	**Alboran**	**42.40**	**32**	P	**P**	**07 36 19.6**	**-0.2**
	comp=Z,71nm,1.1s,mb5.2						
PESTR	**Estremoz**	**42.59**	**25**	*e*P	**P**	**07 36 22.4**	**+1.0**
	comp=Z,56nm,1.3s,mb5.1						
PESTR				*e*S	**S**	**07 42 44.2**	**+0.1**
PESTR				*e*LQ		07 46 01.0	
PESTR				*e*LR	LR	07 48 03.7	
	comp=Z,2μm,20.0s						
EBAD	**Badajoz**	**42.74**	**26**	P	**P**	**07 36 23.6**	**+1.0**
	comp=Z,66nm,1.1s,mb5.3						
PTOM	**Tomar**	**42.89**	**23**	*e*P	**P**	**07 36 25.0**	**+1.2**
	comp=Z,134nm,1.3s,mb5.5						
PMRV	**Marv??o**	**43.14**	**25**	*e*P	**P**	**07 36 27.2**	**+1.3**
	comp=Z,114nm,1.4s,mb5.4						
PMRV				*e*S	**S**	**07 42 52.5**	**+0.2**
PMRV				*e*LQ		07 46 03.8	
PMRV				*e*LR	LR	07 48 19.2	
	comp=Z,1μm,18.0s						
EBER	**Berja**	**43.20**	**31**	P	**P**	**07 36 26.9**	**+0.5**
	comp=Z,18nm,0.9s,mb4.8						
EADA	**Adamuz**	**43.36**	**28**	P	**P**	**07 36 28.3**	**+0.7**
	comp=Z,24nm,1.1s,mb4.8						
PCBR	**Castelo Branco**	**43.45**	**24**	*e*P	**P**	**07 36 29.0**	**+0.6**
	comp=Z,42nm,1.3s,mb5.0						
EBAN	**Banos Encina**	**43.74**	**29**	P	**P**	**07 36 31.3**	**+0.6**
	comp=Z,22nm,0.9s,mb4.9						
EBAN	**Banos Encina**	**43.74**	**29**	P	**P**	**07 36 31.3**	**+0.6**
EBAN				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.9						
EQES	**Quesada**	**43.81**	**30**	P	**P**	**07 36 31.4**	**+0.1**
	comp=Z,155nm,1.5s,mb5.5						
MTE	**Manteigas**	**43.90**	**24**	*e*P	**P**	**07 36 32.7**	**+0.7**
	comp=Z,64nm,1.2s,mb5.2						
MTE				*e*S	**S**	**07 42 58.9**	**-4.5**
MTE				*e*LQ		07 46 21.1	
MTE				*e*LR	LR	07 48 41.3	
	comp=Z,1μm,20.0s						
MTE	**Manteigas**	**43.90**	**24**	*e*P	**P**	**07 36 32.2**	**+0.3**
	comp=Z,49nm,1.2s,mb5.1						
MTE				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
PVIS	**Viseu**	**44.03**	**23**	*e*P	**P**	**07 36 33.7**	**+0.7**
	comp=Z,106nm,1.3s,mb5.4						
EPLA	**Plasencia**	**44.23**	**25**	P	**P**	**07 36 34.0**	**-0.6**
	comp=Z,92nm,0.9s,mb5.5						
EPLA	**Plasencia**	**44.23**	**25**	P	**P**	**07 36 34.0**	**-0.6**
EPLA				pmax	pmax		
	comp=Z,92nm,0.9s,mb5.5						
ETRT	**Tiaret**	**44.42**	**36**	P	**P**	**07 36 37.0**	**+0.8**
PAB	**San Pablo**	**44.57**	**27**	*e*P	**P**	**07 36 37.9**	**+0.6**
	comp=Z,51nm,1.3s,mb5.2						
PAB				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
PAB	**San Pablo**	**44.57**	**27**	*e*P	**P**	**07 36 37.9**	**+0.5**
PAB				pmax	pmax		
	comp=Z,51nm,1.3s,mb5.2						
PAB				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.0						
EANR	**`Ain N'Sour**	**44.69**	**35**	P	**P**	**07 36 39.6**	**+1.2**
LPA	**La Plata**	**44.73**	**214**	*e*P	**P**	**07 36 44.0**	**+5.3**
LPA				S	**S**	**07 43 20.0**	**+4.4**
EVIA	**Vianos**	**44.74**	**30**	P	**P**	**07 36 38.9**	**+0.2**
	comp=Z,23nm,0.8s,mb5.1						
EVIA	**Vianos**	**44.74**	**30**	P	**P**	**07 36 38.9**	**+0.2**
EVIA				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.1						
MVO	**Moncorvo**	**44.76**	**24**	*e*P	**P**	**07 36 39.6**	**+0.8**
	comp=Z,68nm,1.3s,mb5.3						
MVO				*e*S	**S**	**07 43 16.3**	**+0.5**
MVO				*e*LQ		07 46 40.5	
MVO				*e*LR	LR	07 49 02.1	
	comp=Z,1μm,22.0s						
MVO	**Moncorvo**	**44.76**	**24**	P	**P**	**07 36 39.5**	**+0.7**
EMUR	**La Murta**	**44.77**	**32**	P	**P**	**07 36 38.4**	**-0.6**
	comp=Z,64nm,1.3s,mb5.3						
PCAB	**Cabril**	**44.83**	**22**	*e*P	**P**	**07 36 40.0**	**+0.6**
	comp=Z,106nm,1.3s,mb5.5						
ESDC	**Sonseca Array**	**44.85**	**28**	P	**P**	**07 36 39.2**	**-0.4**
	comp=Z,49nm,1.2s,mb5.2,baz=221,slow=8.3,SNR=62						
ESDC				LR	LR	07 52 22.5	
	comp=Z,2μm,19.6s,MS4.9,baz=220,slow=32						
ESDC	**Sonseca Array**	**44.85**	**28**	P	**P**	**07 36 40.4**	**+0.8**
	comp=Z,21nm,1.0s,mb4.9						
ESLA	**Sonseca Array**	**44.85**	**28**	*e*P	**P**	**07 36 40.3**	**+0.7**
	comp=Z,24nm,1.3s,m

comp=Z,9.7nm,0.9s,mb4.8,baz=217,slow=1.9,SNR=9.7
KEST LR LR 07 58 18.7
comp=Z,2µm,18.5s,MS5.0,baz=8.2,slow=36
KEST Kesra 49.68 41 *e*P **P 07 37 17.1 -0.2**
SALF Salau 49.69 29 *e*P **P 07 37 18.1 +0.8**
LCO Las Campanas 49.74 230 PFAKE 07 37 30.0 +12
LCO LR LR
comp=Z,2µm,22.0s,MS5.1
MLS Moulis 49.80 29 *e*P **P 07 37 19.1 +1.0**
TSUM Tsumeb 49.83 116 P **P 07 37 23.0 +4.3**
comp=Z,17nm,1.1s,mb5.0,baz=245,slow=8.6,SNR=7.0
TSUM LR LR 07 55 22.3
comp=Z,2µm,18.3s,MS5.2,baz=92,slow=32
TSUM Tsumeb 49.83 116 *e*P **P 07 37 20.4 +1.7**
comp=Z,5.8nm,1.1s,mb4.5
VSL Villasalto 51.95 38 PFAKE 07 37 50.0 +16
VSL LR LR
comp=Z,1µm,19.0s,MS5.0
VERF Verneugheol 52.56 27 *e*P **P 07 37 39.3 +0.5**
PYM Petit Puy Mans 52.80 28 *e*P **P 07 37 41.7 +1.1**
PYM Petit Puy Mans 52.80 28 *e*P **P 07 37 41.7 +1.1**
COLF Collangettes 52.95 28 *e*P **P 07 37 42.4 +0.7**
AGO Saint Agoulin 53.08 28 *e*P **P 07 37 43.4 +0.8**
SSB Saint Sauveur 53.18 29 *e*P **P 07 37 44.0 +0.6**
SSB Saint Sauveur 53.18 29 *e*P **P 07 37 44.0 +0.6**
PLDF La Plantade 53.25 28 *e*P **P 07 37 44.9 +1.0**
PLDF La Plantade 53.25 28 *e*P **P 07 37 44.9 +1.0**
VAL Valentia 53.27 14 *e*P **P 07 37 53.2 +9.3**
VAL Valentia 53.27 14⇓ *i*S **S 07 45 02.8 -12**
WDD Wield Dalam 53.27 44 PFAKE 07 38 00.0 +16
WDD LR LR
comp=Z,5µm,19.0s,MS5.6
MVIF Mont Vial 53.54 32 *e*P **P 07 37 46.8 +0.8**
MVIF Mont Vial 53.54 32 *e*P **P 07 37 46.8 +0.8**
LUCF Luceram 53.64 32 *e*P **P 07 37 46.2 -0.6**
TOUF Mont Tournerai 53.67 32 *e*P **P 07 37 47.6 +0.6**
TOUF Mont Tournerai 53.67 32 *e*P **P 07 37 47.6 +0.6**
AUTN L'Aution 53.75 32 *e*P **P 07 37 48.2 +0.6**
AUTN L'Aution 53.75 32 *e*P **P 07 37 48.2 +0.6**
SAOF Saorge 53.81 32 *e*P **P 07 37 48.4 +0.3**
SAOF Saorge 53.81 32 *e*P **P 07 37 48.4 +0.3**
BNI Bardonecchia 54.09 31 *e*P **P 07 37 51.0 +1.0**
comp=Z,20nm,1.0s,mb5.0
BNI LR LR
comp=Z,2µm,20.0s,MS5.1
BNI Bardonecchia 54.09 31 *e*P **P 07 37 51.0 +1.0**
BNI pmax pmax
comp=Z,20nm,1.0s,mb5.0
BNI MLR MLR
comp=Z,2µm,20.0s,MS5.1
VLC Villacollemand 55.47 34 PFAKE 07 38 10.0 +10
VLC LR LR
comp=Z,911nm,21.0s,MS4.8
LOMF Lomont 55.77 29 *e*P **P 07 38 02.5 +0.3**
LOMF Lomont 55.77 29 *e*P **P 07 38 02.5 +0.3**
THEF They Montfort 56.00 28 *e*P **P 07 38 04.0 +0.2**
THEF They Montfort 56.00 28 *e*P **P 07 38 04.0 +0.2**
PLCA Paso Flores 56.04 217 P **P 07 38 04.2 -0.1**
comp=Z,2.1nm,0.8s,mb4.2,baz=37,slow=7.9,SNR=6.4
PLCA LR LR 08 02 11.1
comp=Z,2µm,19.4s,MS5.2,baz=58,slow=36
PLCA Paso Flores 56.04 217 *e*P **P 07 38 04.9 +0.6**
comp=Z,13nm,1.4s,mb4.8
PLCA LR LR
comp=Z,2µm,20.0s,MS5.2
PLCA Paso Flores 56.04 217 *e*P **P 07 38 04.9 +0.7**
PLCA pmax pmax
comp=Z,13nm,1.4s
PLCA MLR MLR
comp=Z,2µm,20.0s
AQU L'Aquila 56.10 37 *e*P **P 07 38 03.9 -0.8**
comp=Z,60nm,1.0s,mb5.6
AQU LR LR
comp=Z,2µm,21.0s,MS5.2
AQU L'Aquila 56.10 37⇑P **P 07 38 04.6 -0.1**
AQU L'Aquila 56.10 37⇑*i*P **P 07 38 04.6 -0.1**
BBS Basel-Blauen 56.18 29 *e*P **P 07 38 04.8 -0.3**
BBS Basel-Blauen 56.18 29 *e*P **P 07 38 04.8 -0.3**
MOF Molkenrain 56.27 28 *e*P **P 07 38 05.5 -0.3**
MOF Molkenrain 56.27 28 *e*P **P 07 38 05.5 -0.3**
CUC Castrocucco 56.30 41 PFAKE 07 38 20.0 +14
CUC LR LR
comp=Z,1µm,19.0s,MS5.0
JTS JuntasAbangare 56.42 282 PFAKE 07 38 20.0 +13
JTS LR LR
comp=Z,1µm,19.0s,MS5.0
ECH Echery 56.54 28 *e*P **P 07 38 07.6 -0.1**
ECH LR LR
comp=Z,2µm,22.0s,MS5.1
ECH Echery 56.54 28 *e*P **P 07 38 07.6 -0.1**
ECH MLR MLR
comp=Z,2µm,22.0s,MS5.1
FELD Feldberg im Sc 56.71 29 *e*P **P 07 38 08.4 -0.5**
PKME Peaks-Kenny Pk 56.71 327 PFAKE 07 38 20.0 +11
PKME LR LR
comp=Z,2µm,20.0s,MS5.1
DOU Dourbes 56.76 25 P **P 07 38 09.1 -0.1**
comp=Z,11nm,1.4s,mb4.7
DOU AP pP 07 38 13.2 +0.8
CNNC Cliffs of the 56.88 313 *e*P **P 07 38 10.7 +0.3**
comp=Z,37nm,0.9s,mb5.4
CNNC LR LR
comp=Z,1µm,21.0s,MS5.0
PAL Palisades 56.95 320 *e*P **P 07 38 10.5 -0.2**
comp=Z,61nm,1.1s,mb5.5
PAL Palisades 56.95 320 *e*P **P 07 38 10.5 -0.2**
PAL pmax pmax
comp=Z,61nm,1.1s,mb5.5
DWPF Disney 56.97 303 *e*P **P 07 38 10.3 -0.9**
comp=Z,113nm,1.6s,mb5.7
DWPF LR LR
comp=Z,2µm,22.0s,MS5.2
WLF Walferdange 57.12 26 PFAKE 07 38 20.0 +8.2
WLF LR LR
comp=Z,2µm,20.0s,MS5.2
BFO Black Forest 57.18 29 *e*P **P 07 38 11.7 -0.5**
comp=Z,50nm,1.6s,mb5.3
BFO LR LR
comp=Z,1µm,20.0s,MS5.0
BFO Black Forest 57.18 29 *e*P **P 07 38 11.7 -0.5**
BFO pmax pmax
comp=Z,50nm,1.6s,mb5.3
BFO Black Forest 57.18 29 P **P 07 38 11.5 -0.7**
comp=Z,96nm,1.2s,mb5.7,SNR=5.0
DAVA Damuels 57.24 31⇑*i*P **P 07 38 12.0 -0.7**
comp=Z,52nm,1.5s,mb5.3,SNR=9.8
SPAK Spaichingen-Ko 57.24 29 *e*P **P 07 38 12.5 -0.2**
BCLA Clavier 57.31 25 P **P 07 38 13.2 +0.2**
SUR Sutherland 57.42 130 PFAKE 07 38 30.0 +16
SUR LR LR
comp=Z,3µm,21.0s,MS5.4
HNH Hanover 57.47 324 *e*P **P 07 38 13.5 -0.8**
comp=Z,45nm,0.9s,mb5.5
FETA Feichten 57.50 31⇑*i*P **P 07 38 13.5 -0.9**
comp=Z,36nm,1.4s,mb5.2,SNR=9.9
RUP Ruppelstein 57.56 27 *e*P **P 07 38 14.5 -0.3**
RUP Ruppelstein 57.56 27 *e*P **P 07 38 14.5 -0.3**
LBNH Lisbon 57.57 325 PFAKE 07 38 30.0 +15
LBNH LR LR
comp=Z,3µm,21.0s,MS5.3
NHSC New Hope 57.74 309 *e*P **P 07 38 16.9 +0.4**
comp=Z,129nm,1.4s,mb5.8
NHSC LR LR
comp=Z,4µm,21.0s,MS5.5
MEM Membach 57.75 26 P **P 07 38 16.1 -0.1**
comp=Z,16nm,1.6s,mb4.8
RETA Reutte 57.82 31⇑*i*P **P 07 38 15.6 -1.1**
comp=Z,35nm,1.1s,mb5.3,SNR=11
HGN Heimansgroeve 57.83 25⇑*e*P **P 07 38 13.3 -3.4**
comp=Z,29nm,1.5s,mb5.1
HGN Heimansgroeve 57.83 25 *i*S **S 07 46 15.6 -0.6**
CBN Corbin 57.85 316 PFAKE 07 38 30.0 +13
CBN LR LR
comp=Z,2µm,19.0s,MS5.2
MOTA Moosalm 57.90 31⇑*i*P **P 07 38 16.6 -0.7**
comp=Z,21nm,0.9s,mb5.2
SDMD Soldier's Deli 58.06 317 *e*P **P 07 38 18.3 -0.3**
comp=Z,25nm,0.8s,mb5.3
WTTA Wattenberg 58.13 31⇑*i*P **P 07 38 17.9 -1.0**
comp=Z,33nm,1.4s,mb5.2,SNR=6.6
WATA Walderalm 58.14 31⇓*i*P **P 07 38 18.3 -0.7**
comp=Z,11nm,0.8s,mb4.9
ESK Eskdalemuir 58.19 17 PFAKE 07 38 30.0 +11
ESK LR LR
comp=Z,2µm,19.0s,MS5.3
COW Cow Castle Cre 58.25 309 *e*P **P 07 38 20.7 +0.7**
ABTA Abfaltersbach 58.26 32⇑*i*P **P 07 38 19.4 -0.5**
comp=Z,68nm,1.3s,mb5.5,SNR=16
TOD Tromm 58.29 28 *e*P **P 07 38 19.7 -0.3**
TOD Tromm 58.29 28 *e*P **P 07 38 19.7 -0.3**
FUR Furstenfeldbru 58.53 30 *e*P **P 07 38 21.1 -0.6**
comp=Z,57nm,1.3s,mb5.4
FUR Furstenfeldbru 58.53 30 *e*P **P 07 38 21.1 -0.6**
FUR pmax pmax
comp=Z,57nm,1.3s,mb5.4
TNS Taunus Mts 58.56 27 *e*P **P 07 38 21.3 -0.5**
comp=Z,49nm,1.2s,mb5.4
TNS Taunus Mts 58.56 27 *e*P **P 07 38 21.3 -0.5**
TNS pmax pmax
comp=Z,49nm,1.2s,mb5.4
VOY Vojsko 58.58 34 *e*P **P 07 38 22.8 +0.8**
VOY *e* pP 07 38 26.7 +1.4
VOY *e* 07 38 48.3
JAVS Javornik 58.59 34 *i*P **P 07 38 21.7 -0.4**
JAVS *e*S **S 07 46 28.0 +1.8**
LBTB Lobatse 58.68 120 P **P 07 38 24.2 +1.0**
comp=Z,9.8nm,1.0s,mb4.8,baz=288,slow=5.9,SNR=5.8
LBTB Lobatse 58.68 120 *e*P **P 07 38 23.9 +0.6**
comp=Z,15nm,0.9s,mb5.0
LBTB LR LR
comp=Z,4µm,20.0s,MS5.5
LBTB Lobatse 58.68 120 P **P 07 38 24.3 +1.1**
LBTB pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
LSZ Lusaka 58.70 108 *e*P **P 07 38 24.9 +1.4**
comp=Z,196nm,2.8s,mb5.6
LSZ LR LR
comp=Z,3µm,19.0s,MS5.4
LSZ Lusaka 58.70 108 *e*P **P 07 38 24.9 +1.5**
LSZ pmax pmax
comp=Z,196nm,2.8s,mb5.7
LSZ MLR MLR
comp=Z,3µm,19.0s,MS5.4
NCB Newcomb 58.77 323 *e*P **P 07 38 23.3 -0.2**
comp=Z,50nm,1.3s,mb5.4
NCB LR LR
comp=Z,2µm,21.0s,MS5.1
MYKA Terra Mystica 58.80 33⇑*i*P **P 07 38 23.4 -0.2**
comp=Z,55nm,1.5s,mb5.4
FRNY Flat Rock 58.88 324 *e*P **P 07 38 23.6 -0.6**
comp=Z,10nm,0.9s,mb4.9
BINY Binghamton 58.90 321 *e*P **P 07 38 24.7 +0.2**
comp=Z,360nm,2.0s,mb6.1
BINY LR LR
comp=Z,2µm,21.0s,MS5.1
BUG Bochum-Univer 58.90 26 *e*P **P 07 38 24.3 +0.1**
comp=Z,24nm,1.1s,mb5.1
KBA Koelnbreinsper 58.91 32⇑*i*P **P 07 38 23.5 -0.9**
comp=Z,53nm,1.6s,mb5.3
LJU Ljubljana 58.94 34 *i*P **P 07 38 23.8 -0.8**
LJU *e* 07 40 33.0
LJU *e*PP tx 07 42 06.0
LJU *e*S **S 07 46 33.9 +3.2**
JSC Jenkinsville 59.02 310 *e*P **P 07 38 26.1 +0.6**
JSC Jenkinsville 59.02 310 *e*P **P 07 38 26.1 +0.7**
BOJS Bojanci 59.03 35 *i*P **P 07 38 24.5 -0.7**
BOJS *e* 07 40 32.0
BOJS *e*PP tx 07 42 05.0
BOJS *e*S **S 07 46 35.6 +3.6**
BOJS *i*SS SS 07 50 20.7 -5.3
RJOB Jochberg 59.03 32 *e*P **P 07 38 24.3 -0.9**
comp=Z,17nm,0.8s,mb5.1
WTSB Winterswijk 59.09 25⇑*i*P **P 07 38 25.1 -0.3**
comp=Z,33nm,1.1s,mb5.3
OBKA Obir 59.23 34⇑*i*P **P 07 38 26.3 -0.2**
comp=Z,26nm,1.4s,mb5.1
VWCC Virginia Weste 59.27 314 *e*P **P 07 38 27.4 +0.3**
LONY Lake Ozonia 59.34 324 PFAKE 07 38 40.0 +13
LONY LR LR
comp=Z,1µm,19.0s,MS5.1
SSPA Standing Stone 59.36 318 *e*P **P 07 38 27.2 -0.4**
comp=Z,103nm,1.9s,mb5.5
GRFO Grafenberg 59.50 29 *e*P **P 07 38 28.1 -0.4**
comp=Z,26nm,1.0s,mb5.2
GRFO Grafenberg 59.50 29 *e*P **P 07 38 28.1 -0.3**
GRFO pmax pmax
comp=Z,26nm,1.0s,mb5.2
GRA1 Grafenberg Arr 59.51 29 *e*P **P 07 38 27.9 -0.5**
comp=Z,72nm,1.5s,mb5.5
GRA1 *e*S **S 07 46 40.3 +2.3**
GRA1 LR LR
comp=Z,1µm,21.3s,MS5.0
GRF Grafenberg Arr 59.51 29 *e*P **P 07 38 27.9 -0.5**
comp=Z,72nm,1.5s,mb5.5
GRF *e*S **S 07 46 40.3 +2.3**
GRF *e*L 08 01 05.8
comp=Z,1µm,21.3s
GRF Grafenberg Arr 59.51 29 *e*P **P 07 38 27.9 -0.5**
GRF *e*S **S 07 46 40.3 +2.3**
GRF pmax pmax
comp=Z,72nm,1.5s,mb5.5
GRF MLR MLR
comp=Z,1µm,21.3s,MS5.0
GRF Grafenberg Arr 59.51 29 *e*P **P 07 38 27.9 -0.5**
GRF *e*S **S 07 46 40.3 +2.3**
GRF pmax pmax
comp=Z,72nm,1.5s,mb5.5
BOSA Boshof 59.54 124 P **P 07 38 29.2 +0.1**
comp=Z,5.0nm,0.6s,mb4.8,baz=296,slow=8.6,SNR=10
BOSA LR LR 07 58 54.9
comp=Z,3µm,20.9s,MS5.4,baz=281,slow=31
BOSA Boshof 59.54 124 P **P 07 38 29.2 +0.1**
BLA Blacksburg 59.58 314 *e*P **P 07 38 29.2 0.0**
comp=Z,51nm,1.1s,mb5.5
BLA LR LR
comp=Z,1µm,19.0s,MS5.0
BLA Blacksburg 59.58 314 *e*P **P 07 38 29.2 0.0**
BLA pmax pmax
comp=Z,51nm,1.1s,mb5.5
BLA MLR MLR
comp=Z,1µm,19.0s,MS5.0
SOKA Soboth 59.59 34⇑*i*P **P 07 38 28.8 -0.3**
comp=Z,51nm,1.3s,mb5.4
PERS Pernice 59.62 34 *i*P **P 07 38 28.6 -0.6**
PERS *e*S **S 07 46 42.7 +3.2**
PERS *e*SS SS 07 50 20.7 -15
UBBA Unterbreizbach 59.69 28 *e*P **P 07 38 29.1 -0.6**
comp=Z,37nm,1.8s,mb5.1
MSNY Massena 59.72 324 *e*P **P 07 38 30.4 +0.4**
comp=Z,593nm,2.0s
IBBN Ibbenburen 59.74 25 *e*P **P 07 38 29.8 -0.2**
comp=Z,37nm,1.3s,mb5.2
MOA Molln 59.88 32⇓*i*P **P 07 38 29.6 -1.5**
comp=Z,41nm,1.5s,mb5.2,SNR=14
WET Wettzell 59.97 30 *e*P **P 07 38 30.8 -0.8**
comp=Z,26nm,1.3s,mb5.1
WET Wettzell 59.97 30 *e*P **P 07 38 30.8 -0.8**
WET pmax pmax
comp=Z,26nm,1.3s,mb5.1
ROTZ Rotzenmuhle 60.04 30 *e*P **P 07 38 31.4 -0.7**
comp=Z,44nm,1.2s,mb5.4
GEC2 GERESS Array S 60.20 31 *e*P **P 07 38 32.4 -0.8**
comp=Z,27nm,1.2s,mb5.2
GEC2 GERESS Array S 60.20 31 *e*P **P 07 38 32.4 -0.8**
GEC2 pmax pmax
comp=Z,27nm,1.2s,mb5.2
GERES GERESS Array B 60.20 31 P **P 07 38 32.6 -0.7**
comp=Z,8.4nm,0.8s,mb4.8,baz=224,slow=5.6,SNR=49
GERES GERESS Array B 60.20 31 *i*P **P 07 38 32.6 -0.6**
ARSA Arzberg 60.20 33⇑*i*P **P 07 38 32.4 -0.9**
comp=Z,21nm,1.2s,mb5.1,SNR=7.2
MCWV Mont Chateau 60.23 316 *e*P **P 07 38 33.6 -0.1**
comp=Z,13nm,0.8s,mb5.0
MCWV LR LR
comp=Z,2µm,20.0s,MS5.3
KHC Kasperske Hory 60.32 31 *e*P **P 07 38 33.6 -0.4**
KHC *e*S **S 07 46 50.1 +1.6**
KHC AMS AMS 08 00 50.0
comp=Z,1µm,16.4s
MOX Moxa 60.33 28 *e*P **P 07 38 34.2 +0.1**
comp=Z,38nm,1.5s,mb5.2
MOX *e*S **S 07 46 53.0 +4.5**
MOX
comp=Z,800nm,19.0s
MOX Moxa 60.33 28 *e*P **P 07 38 33.8 -0.3**
comp=Z,27nm,1.3s,mb5.1
MOX Moxa 60.33 28 *e*P **P 07 38 34.2 +0.1**
MOX *e*S **S 07 46 53.0 +4.5**
MOX pmax pmax
comp=Z,38nm,1.5s,mb5.2
MOX MLR MLR
comp=Z,800nm,19.0s,MS4.9
GOGA Godfrey 60.41 308 *e*P **P 07 38 35.3 +0.3**
comp=Z,26nm,1.3s,mb5.1
GOGA LR LR
comp=Z,4µm,21.0s,MS5.5
GOGA Godfrey 60.41 308 *e*P **P 07 38 35.3 +0.3**
GOGA pmax pmax
comp=Z,26nm,1.3s,mb5.1
GOGA MLR MLR
comp=Z,4µm,21.0s,MS5.5
NKC Novy Kostel 60.46 29 *e*P **P 07 38 34.9 -0.1**
NKC *e*S **S 07 46 52.1 +1.9**
NKC MLR MLR
comp=Z,1µm,18.5s,MS5.0
NKC Novy Kostel 60.46 29 *e*P **P 07 38 34.9 -0.1**
NKC *e*S **S 07 46 52.1 +1.9**
NKC AMS AMS 08 01 20.0
comp=Z,1µm,18.5s
WERN Wernitzgruen 60.46 29 *e*P **P 07 38 34.3 -0.7**
comp=Z,28nm,1.2s,mb5.2
PLN Plauen 60.48 29 *e*P **P 07 38 34.7 -0.4**
WERD Werda 60.53 29 *e*P **P 07 38 35.0 -0.4**
comp=Z,24nm,1.4s,mb5.1
CLZ Clausthal 60.56 27 *e*P **P 07 38 35.2 -0.4**
comp=Z,26nm,1.6s,mb5.1
CLZ Clausthal 60.56 27 *e*P **P 07 38 35.2 -0.4**
CLZ pmax pmax
comp=Z,26nm,1.6s,mb5.1
KRUS Krusevo 60.56 42 *e*P **P 07 38 35.1 -0.8**
TANN Tannenbergstha 60.58 29 *e*P **P 07 38 35.5 -0.3**
comp=Z,26nm,1.2s,mb5.2
CONA Conrad Observa 60.79 33⇑*i*P **P 07 38 36.9 -0.4**
comp=Z,34nm,1.1s,mb5.4,SNR=9.9
NRDL Niedersach Rie 60.89 26 *e*P **P 07 38 38.0 +0.1**
comp=Z,35nm,1.6s,mb5.2
SKO Skopje 60.97 41 *e*P **P 07 38 38.9 +0.3**
SOP Sopron 61.03 33⇑*e*P **P 07 38 38.1 -0.8**
ALLY Alegheny Colle 61.34 318 *e*P **P 07 38 41.0 -0.2**
comp=Z,24nm,0.7s,mb5.4
PRA Prague 61.34 30 P **P 07 38 42.0 +1.0**
PRA S **S 07 47 04.0 +2.5**
PRA AMS AMS 08 02 00.0
PAYG Puerto Ayora 61.34 269 PFAKE 07 38 50.0 +8.3
PAYG LR LR
comp=Z,2µm,22.0s,MS5.3
PRU Pruhonice 61.34 30 *e*P **P 07 38 41.3 +0.3**
PRU *e*S **S 07 47 03.9 +2.4**
PRU MLR MLR
comp=Z,1µm,20.5s,MS5.0
PRU Pruhonice 61.34 30 *e*P **P 07 38 41.3 +0.3**
PRU *e*S **S 07 47 03.9 +2.4**
PRU AMS AMS 08 01 20.0
comp=Z,1µm,20.5s
FBE Freiberg 61.34 29 *e*P **P 07 38 41.1 +0.1**
comp=Z,37nm,1.2s,mb5.4
PKSM Moragy 61.38 36⇑P **P 07 38 40.7 -0.7**
PKSM Moragy 61.38 36⇑*i*P **P 07 38 40.7 -0.7**
TREC Trest 61.41 31 *e*P **P 07 38 41.3 -0.1**
TREC MLR MLR
comp=Z,1µm,22.8s,MS5.1
TREC Trest 61.41 31 *e*P **P 07 38 41.3 -0.1**
TREC AMS AMS 08 00 50.0
comp=Z,1µm,22.8s
VAY Valandovo 61.42 42 *e*P **P 07 38 41.2 -0.5**
CLL Collm 61.42 29 *e*P **P 07 38 41.2 -0.3**
comp=Z,36nm,1.8s,mb5.2
CLL Collm 61.42 29⇑*i*P **P 07 38 41.1 -0.4**
comp=Z,36nm,1.8s,mb5.2
CLL *i*PcP PcP 07 39 18.8 -4.8
CLL *e*S **S 07 47 06.0 +3.5**
CLL LR LR
comp=Z,700nm,18.6s,MS4.8
CLL Collm 61.42 29⇑*i*P **P 07 38 41.1 -0.4**
CLL *i* 07 39 18.8
CLL *e*S **S 07 47 06.0 +3.5**
CLL pmax pmax
comp=Z,10.0nm,1.8s,mb4.6
CLL MLR MLR
comp=Z,700nm,18.6s,MS4.8
CLL Collm 61.42 29⇑*i*P **P 07 38 41.1 -0.4**
comp=Z,36nm,1.8s,mb5.2
CLL *i* 07 39 18.8
CLL *e*PP PP 07 40 55.0 -1.8
CLL *e*PPP 07 42 26.0
CLL *e*S **S 07 47 06.0 +3.5**
comp=N,1µm,28.1s
CLL *e*S **S 07 47 06.0 +3.5**
comp=E,2µm,26.3s
CLL *e* 07 49 54.0
CLL *e*SS SS 07 51 00.0 -3.4
CLL LmV 08 03 00.0
comp=Z,700nm,18.6s
TKL Tuckaleechee C 61.45 311 *e*P **P 07 38 41.6 -0.4**
TKL Tuckaleechee C 61.45 311 *e*P **P 07 38 41.6 -0.4**
ERPA Erie 61.45 319 PFAKE 07 38 50.0 +8.1
ERPA LR LR
comp=Z,2µm,21.0s,MS5.2
BRG Berggiesshubel 61.60 29 *e*P **P 07 38 42.1 -0.6**
comp=Z,22nm,1.5s,mb5.1
BRG Berggiesshubel 61.60 29⇑*i*P **P 07 38 42.1 -0.6**
comp=Z,20nm,1.3s,mb5.1
BRG S **S 07 47 08.0 +3.2**
BRG
comp=Z,813nm,13.2s
BRG
comp=N,436nm,15.1s
BRG
comp=E,434nm,15.1s
ZST Bratislava 61.62 33 *e*P **P 07 38 42.9 0.0**
comp=E,28nm,0.8s,mb5.4
ZST *e*S **S 07 47 07.9 +2.8**
ZST Bratislava 61.62 33 *e*P **P 07 38 42.9 0.0**
ZST pmax pmax
comp=Z,28nm,0.8s,mb5.4
ZST Bratislava 61.62 33 *e*P **P 07 38 42.9 0.0**
ZST *e*S **S 07 47 07.9 +2.8**
PVCC Panska Ves 61.69 30 *e*P **P 07 38 43.5 +0.2**
PVCC *e*S **S 07 47 09.0 +3.0**
PVCC *e*S **S 07 47 09.5 +3.5**
PVCC MLR MLR
comp=Z,1µm,17.3s,MS5.0
PVCC Panska Ves 61.69 30 *e*P **P 07 38 43.5 +0.2**
PVCC *e*S **S 07 47 09.0 +3.0**
PVCC AMS AMS 08 02 30.0
comp=Z,1µm,17.3s
MODS Modra-Piesok 61.82 33 *e*P **P 07 38 44.6 +0.4**
MODS Modra-Piesok 61.82 33 *e*P **P 07 38 44.6 +0.4**
MODS Modra-Piesok 61.82 33 *e*P **P 07 38 44.6 +0.4**
CPCT Cooper Cave 61.95 310 *e*P **P 07 38 45.4 +0.1**
VRAC Vranov 61.99 32 P **P 07 38 44.7 -0.7**
VRAC Vranov 61.99 32⇓*i*P **P 07 38 44.7 -0.7**
KKB Krupnik 62.01 42 *i*P **P 07 38 45.7 0.0**
SCHQ Schefferville 62.04 336 P **P 07 38 43.3 -2.3**
comp=Z,15nm,1.1s,mb5.1,baz=122,slow=8.1,SNR=4.7
SCHQ LR LR 07 59 40.7
comp=Z,820nm,21.1s,MS4.9,baz=142,slow=30
SCHQ Schefferville 62.04 336 *e*P **P 07 38 44.0 -1.6**
BUD Budapest 62.30 35⇑*e*P **P 07 38 46.0 -1.5**
MMB Musomiste 62.32 42 *i*P **P 07 38 47.7 -0.1**
UPC Upice 62.41 31 *e*P **P 07 38 48.0 -0.2**
UPC Upice 62.41 31 *e*P **P 07 38 48.0 -0.2**
VTS Vitosha 62.42 41⇑P **P 07 38 48.5 +0.1**
VTS Vitosha 62.42 41⇑*i*P **P 07 38 48.5 +0.1**
VTS Vitosha 62.42 41 *i*P **P 07 38 48.5 +0.1**
DPC Dobruska-Polom 62.47 31 *e*P **P 07 38 48.5 -0.1**
DPC *e*S **S 07 47 18.1 +2.3**
DPC MLR MLR
comp=Z,800nm,18.2s,MS4.9
DPC Dobruska-Polom 62.47 31 *e*P **P 07 38 48.5 -0.1**
DPC *e*S **S 07 47 18.1 +2.3**
DPC AMS AMS 08 01 40.0
comp=Z,800nm,18.2s
BRAL Brewton 62.52 305 PFAKE 07 39 00.0 +11
BRAL LR LR
comp=Z,2µm,21.0s,MS5.2
RUE Ruedersdorf 62.55 28 *e*P **P 07 38 49.4 +0.3**
comp=Z,47nm,1.3s,mb5.5
KOLL Kolacno 62.55 33 *e*P **P 07 38 49.3 +0.1**
KOLL Kolacno 62.55 33 *e*P **P 07 38 49.3 +0.1**
KOLL Kolacno 62.55 33 *e*P **P 07 38 49.3 +0.1**
VYHS Vyhne 62.74 34 *e*P **P 07 38 50.2 -0.2**
comp=Z,14nm,1.2s,mb5.0
VYHS *e*S **S 07 47 15.9 -3.4**
VYHS Vyhne 62.74 34 *e*P **P 07 38 50.2 -0.2**

VYHS pmax pmax
comp=Z,14nm,1.2s,mb5.0
VYHS Vyhne 62.74 34 *e*P **P 07 38 50.2 -0.2**
VYHS *e*S **S 07 47 15.9 -3.4**
KSP Ksiaz 62.75 30 *e*P **P 07 38 50.6 +0.1**
KSP *e*S **S 07 47 23.7 +4.4**
MORC Moravsky Berou 62.77 32 *e*P **P 07 38 50.8 +0.2**
comp=Z,34nm,1.2s,mb5.3
MORC Moravsky Berou 62.77 32 *e*P **P 07 38 50.8 +0.2**
MORC pmax pmax
comp=Z,34nm,1.2s,mb5.3
MORC Moravsky Berou 62.77 32⇓*i*P **P 07 38 50.6 0.0**
BZS Buzias 62.85 38 ⇓P **P 07 38 52.0 +0.8**
BZS Buzias 62.85 38⇓*i*P **P 07 38 52.0 +0.8**
SWET Sewanee 62.95 310 *e*P **P 07 38 51.7 -0.4**
RZN Rozhen 63.03 43 *i* P **P 07 38 52.1 -0.4**
PGB Panagyurishte 63.04 42 *i* P **P 07 38 52.1 -0.4**
LRAL Lakeview Retre 63.08 307 *e*P **P 07 38 52.9 -0.1**
comp=Z,16nm,1.1s,mb5.1
LRAL LR LR
comp=Z,2μm,22.0s,MS5.2
MPEP Malo Peshtene 63.12 41 *i* P **P 07 38 52.8 -0.2**
OKC Ostrava-Krasne 63.13 32 *e*P **P 07 38 53.0 0.0**
OKC *e*S **S 07 47 25.2 +1.2**
OKC MLR MLR
comp=Z,900nm,17.5s,MS5.0
OKC Ostrava-Krasne 63.13 32 *e*P **P 07 38 53.0 0.0**
OKC *e*S **S 07 47 25.2 +1.2**
OKC AMS AMS 08 01 40.0
comp=Z,900nm,17.5s
GZR Gura Zlata 63.45 38 P **P 07 38 56.2 +1.0**
GZR Gura Zlata 63.45 38⇓*i*P **P 07 38 56.2 +1.0**
KDZ Kurdzhali 63.49 43 *i* P **P 07 38 53.9 -1.6**
KECS Kecovo 63.66 34 *e*P **P 07 38 57.2 +0.7**
comp=Z,8.6nm,1.2s,mb4.7
KECS Kecovo 63.66 34 *e*P **P 07 38 57.2 +0.7**
KECS pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
KECS Kecovo 63.66 34 *e*P **P 07 38 57.2 +0.7**
AAM Ann Arbor 63.98 318 *e*P **P 07 38 58.8 0.0**
comp=Z,69nm,1.3s,mb5.5
AAM LR LR
comp=Z,2μm,20.0s,MS5.3
AAM Ann Arbor 63.98 318 *e*P **P 07 38 58.8 0.0**
AAM pmax pmax
comp=Z,69nm,1.3s,mb5.5
AAM MLR MLR
comp=Z,2μm,20.0s,MS5.3
BORG Borgarnes 63.98 4 PFAKE 07 39 10.0 +12
BORG LR LR
comp=Z,1μm,20.0s,MS5.0
NIE Niedzica 64.06 33 *e*P **P 07 38 59.5 +0.3**
NIE Niedzica 64.06 33⇑*i*P **P 07 38 59.5 +0.3**
DRGR 64.09 37 P **P 07 38 59.9 +0.5**
DRGR 64.09 37⇓*i*P **P 07 38 59.9 +0.5**
OJC Ojcow 64.22 32 *i* P **P 07 39 00.0 -0.2**
OJC *es*P sP 07 39 04.6 0.0
OJC *e*S **S 07 47 39.2 +1.5**
OJC L 08 06 03.3
comp=Z,0.5nm,22.0s
OJC Ojcow 64.22 32 *e*P **P 07 39 00.4 +0.2**
comp=Z,31nm,1.0s,mb5.3
OJC Ojcow 64.22 32⇑*i*P **P 07 39 00.0 -0.2**
OJC *e**SP sP 07 39 04.6 0.0
OJC *e*S **S 07 47 39.2 +1.5**
CRVS Cervenica-Dubn 64.43 34 *e*P **P 07 39 01.8 +0.2**
comp=Z,26nm,1.5s,mb5.0
CRVS *e*S **S 07 47 43.6 +3.3**
CRVS LR LR
comp=Z,900nm,46.8s,MS4.6
CRVS Cervenica-Dubn 64.43 34 *e*P **P 07 39 01.8 +0.2**
CRVS pmax pmax
comp=Z,26nm,1.5s,mb5.0
CRVS Cervenica-Dubn 64.43 34 *e*P **P 07 39 01.8 +0.2**
CRVS *e*S **S 07 47 43.6 +3.3**
SZH Strazhica 64.52 41 *i* P **P 07 39 01.5 -0.8**
TRPA Tarpa 64.65 35⇓*i*P **P 07 39 02.3 -0.8**
WVT Waverly 64.70 310 *e*P **P 07 39 02.5 -1.1**
comp=Z,34nm,1.4s,mb5.2
WVT Waverly 64.70 310 *e*P **P 07 39 02.5 -1.2**
WVT pmax pmax
comp=Z,34nm,1.4s,mb5.2
UZH Uzhgorod 64.76 35⇓*e*P **P 07 39 02.3 -1.5**
UZH *e* 07 39 32.9
UZH *e* 07 41 26.7
UZH *e*PPP 07 43 00.9
UZH *e*S **S 07 47 39.6 -4.8**
UZH *e*PS 07 48 05.3
UZH *e* 07 48 48.7
UZH *e*SSS 07 54 47.3
BLO Bloomington 64.77 314 *e*P **P 07 39 04.0 0.0**
comp=Z,51nm,1.0s,mb5.5
BLO Bloomington 64.77 314 *e*P **P 07 39 04.0 0.0**
BLO pmax pmax
comp=Z,51nm,1.0s,mb5.5
VOIR 64.89 39 ⇑P **P 07 39 05.2 +0.5**
VOIR 64.89 39⇑*i*P **P 07 39 05.2 +0.5**
KOLS Kolonicke sedl 64.91 35 *e*P **P 07 39 05.1 +0.4**
comp=Z,16nm,1.5s,mb4.8
KOLS *e*S **S 07 47 58.3 +12**
KOLS LR LR
comp=Z,800nm,46.8s,MS4.5
KOLS Kolonicke sedl 64.91 35 *e*P **P 07 39 05.1 +0.4**
KOLS pmax pmax
comp=Z,16nm,1.5s,mb4.8
KOLS Kolonicke sedl 64.91 35 *e*P **P 07 39 05.1 +0.4**
KOLS *e*S **S 07 47 58.2 +12**
BER Bergen 64.96 18 *e*S **S 07 47 46.9 +0.5**
BER AMS AMS 08 00 54.6
comp=Z,1μm,17.2s,MS5.2
OXF Oxford 65.44 308 *e*P **P 07 39 06.7 -1.7**
comp=Z,31nm,1.1s,mb5.2
OXF LR LR
comp=Z,3μm,22.0s,MS5.5
OXF Oxford 65.44 308 *e*P **P 07 39 06.7 -1.8**
OXF pmax pmax
comp=Z,31nm,1.1s,mb5.2
OXF MLR MLR
comp=Z,3μm,22.0s,MS5.5
MLR Muntele Rosu 65.48 39 P **P 07 39 09.0 +0.5**
MLR Muntele Rosu 65.48 39⇓*i*P **P 07 39 09.0 +0.5**
KWP Kalwaria Pacla 65.51 34 PFAKE 07 39 20.0 +11
KWP LR LR
comp=Z,962nm,19.0s,MS5.0
GLMI Grayling 65.67 320 *e*P **P 07 39 09.4 -0.4**
comp=Z,24nm,0.3s,mb5.7
GLMI LR LR
comp=Z,2μm,20.0s,MS5.3
VBMS Vicksburg 65.69 305 *e*P **P 07 39 09.3 -0.8**
comp=Z,39nm,0.3s,mb5.9
VBMS LR LR
comp=Z,2μm,19.0s,MS5.3
OLIL Olney 65.77 313 *e*P **P 07 39 10.0 -0.5**
comp=Z,86nm,1.1s,mb5.7
KONO Kongsberg 65.80 20 *e*S S 07 47 57.2 +0.4
KONO AMS AMS 08 01 47.2
comp=Z,896nm,22.5s,MS4.9
KONO Kongsberg 65.80 20 PFAKE 07 39 20.0 +10
KONO LR LR
comp=Z,1μm,22.0s,MS5.0
FOO Floro 65.83 17 *e*S S 07 47 56.5 -0.5
BURAR Bucovina Array 65.99 37 ⇑P **P 07 39 11.7 0.0**
BURAR Bucovina Array 65.99 37⇑*i*P **P 07 39 11.7 0.0**
PLOR Plostina 66.08 39⇑*i*P **P 07 39 09.4 -3.0**
VRI Vrincioaia 66.14 39 ⇓P **P 07 39 13.1 +0.4**
VRI Vrincioaia 66.14 39⇓*i*P **P 07 39 13.1 +0.4**
KMBO Kilima Mbogo 66.24 92 P **P 07 39 15.8 +1.7**
comp=Z,4.0nm,1.0s,mb4.4,baz=360,slow=24,SNR=6.0
KMBO LR LR 08 04 45.4
comp=Z,3μm,18.9s,MS5.5,baz=82,slow=33
KMBO Kilima Mbogo 66.24 92 *e*P **P 07 39 15.5 +1.4**
comp=Z,28nm,1.8s,mb5.0
KMBO LR LR
comp=Z,3μm,20.0s,MS5.4
KMBO Kilima Mbogo 66.24 92 *e*P **P 07 39 15.5 +1.5**
KMBO pmax pmax
comp=Z,28nm,1.8s
KMBO MLR MLR
comp=Z,3μm,20.0s
SIUC Southern Illin 66.27 311 *e*P **P 07 39 12.7 -1.0**
comp=Z,34nm,1.0s,mb5.3
LVV L'vov 66.34 34 *e*P **P 07 39 12.4 -1.6**
TESR 66.37 38⇑*i*P **P 07 39 13.9 -0.3**
CSS Prodhromos 67.02 52 PFAKE 07 39 30.0 +11
CSS LR LR
comp=Z,1μm,22.0s,MS5.1
NAO01 NORSAR Array S 67.11 20 *e*P **P 07 39 19.6 +0.9**
comp=Z,14nm,1.0s,mb5.0
NAO01 LR LR
comp=Z,1μm,21.0s,MS5.0
FVM French Village 67.26 311 *e*P **P 07 39 18.7 -1.4**
comp=Z,6.3nm,0.6s,mb4.8
FVM French Village 67.26 311 *e*P **P 07 39 18.7 -1.4**
FVM pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
NB2 NORSAR Subarra 67.36 20 P **P 07 39 20.1 -0.1**
comp=Z,15nm,0.9s,mb5.0,baz=225,slow=6.5
NOA NORSAR Array B 67.36 20 P **P 07 39 19.8 -0.5**
comp=Z,15nm,1.1s,mb4.9,baz=224,slow=6.2,SNR=7.6
NOA LR LR 08 03 47.8
comp=Z,965nm,19.8s,MS5.0,baz=230,slow=32
NOA NORSAR Array B 67.36 20 P **P 07 39 19.8 -0.4**
SFJD Kangerlussuaq 67.73 351 *e*P **P 07 39 21.3 -1.2**
comp=Z,32nm,1.9s,mb5.0
SFJD Kangerlussuaq 67.73 351 *e*P **P 07 39 21.3 -1.1**
SFJD pmax pmax
comp=Z,32nm,1.9s,mb5.0
UALR University of 67.83 307 *e*P **P 07 39 22.7 -1.1**
comp=Z,22nm,0.9s,mb5.2
SUW Suwalki 68.02 30 *e*P **P 07 39 24.3 -0.3**
SUW Suwalki 68.02 30 *e*P **P 07 39 24.3 -0.2**
BR131 Keskin Array S 68.63 47 *e*P **P 07 39 28.3 -0.3**
comp=Z,18nm,1.1s,mb4.9
BR131 LR LR
comp=Z,1μm,20.0s,MS5.2
BRTR Keskin Array B 68.63 47 P **P 07 39 27.3 -1.4**
comp=Z,6.5nm,0.6s,mb4.7,baz=233,slow=5.3,SNR=26
BRTR LR LR 08 11 11.9
comp=Z,1μm,19.6s,MS5.2,baz=82,slow=38
BRTR Keskin Array B 68.63 47 *ce*P **P 07 39 28.5 -0.2**
BRTR pmax pmax
comp=Z,7.0nm,0.6s
JFWS Jewell Farm 68.71 316 *e*P **P 07 39 27.9 -1.2**
comp=Z,22nm,0.9s,mb5.1
JFWS LR LR
comp=Z,2μm,21.0s,MS5.2
JFWS Jewell Farm 68.71 316 *e*P **P 07 39 27.9 -1.2**
JFWS pmax pmax
comp=Z,22nm,0.9s,mb5.1
JFWS MLR MLR
comp=Z,2μm,21.0s,MS5.2
NATX Nacogdoches 69.00 304 PFAKE 07 39 40.0 +8.9
NATX LR LR
comp=Z,2μm,20.0s,MS5.3
COWI Conover 69.10 320 PFAKE 07 39 40.0 +8.6
COWI LR LR
comp=Z,2μm,22.0s,MS5.3
KIEV Kiev 69.70 35 *e*P **P 07 39 34.6 -0.5**
comp=Z,57nm,1.2s,mb5.4
KIEV LR LR
comp=Z,626nm,19.0s,MS4.9
KIEV Kiev 69.70 35 *e*P **P 07 39 34.6 -0.5**
KIEV pmax pmax
comp=Z,57nm,1.2s,mb5.4
KIEV MLR MLR
comp=Z,626nm,19.0s,MS4.9
AKASG Malin Array Be 69.71 35 P **P 07 39 33.5 -1.6**
comp=Z,24nm,0.9s,mb5.2,baz=243,slow=7.1,SNR=62
AKASG Malin Array Be 69.71 35 P **P 07 39 33.5 -1.7**
AKASG Malin Array Be 69.71 35 P **P 07 39 33.5 -1.6**
NACGM Naroch 70.29 30 *e*P **P 07 39 37.0 -1.6**
SIM Simferopol' 70.61 42 *e*P **P 07 39 41.7 +0.9**
SIM *e*S S 07 48 56.0 +1.3
SIM *e*SS SS 07 53 19.0 -7.4
SIM pmax pmax
comp=Z,150nm,13.0s
SIM MLR MLR
comp=Z,600nm,17.0s,MS4.9
MNK Minsk 70.64 31 *e*P **P 07 39 39.0 -1.7**
MICGM Minsk 70.66 31 *e*P **P 07 39 39.0 -1.9**
KVTX Kingsville 70.97 299 PFAKE 07 39 50.0 +6.7
KVTX LR LR
comp=Z,1μm,19.0s,MS5.2
JMIC Jan Mayen 71.27 7 *e*S S 07 49 03.9 +2.4
EYMN Ely 71.27 321 PFAKE 07 40 00.0 +15
EYMN LR LR
comp=Z,1μm,22.0s,MS5.2
MALT Malatya 71.84 50 *e*P **P 07 39 48.4 0.0**
comp=Z,12nm,0.9s,mb4.8
MALT LR LR
comp=Z,910nm,20.0s,MS5.0
MALT Malatya 71.84 50 *e*P **P 07 39 48.4 0.0**
MALT pmax pmax
comp=Z,12nm,0.9s,mb4.8
MALT MLR MLR
comp=Z,910nm,20.0s,MS5.0
SUMG Summit 71.86 357 *e*P **P 07 39 48.4 +0.6**
comp=Z,11nm,0.8s,mb4.8
SUMG Summit 71.86 357 *i* P **P 07 39 47.9 +0.1**
comp=Z,7.8nm,1.0s,mb4.6
KSU1 Kansas State U 72.23 311 *e*P **P 07 39 48.7 -2.0**
comp=Z,23nm,0.9s,mb5.1
KSU1 LR LR
comp=Z,1μm,19.0s,MS5.3
ANN Anapa 72.81 43 *e*P **P 07 39 50.4 -3.6**
ANN *e**PP pP 07 39 53.9 -3.4
ANN *e* 07 40 07.4
ANN *e* 07 42 31.3
ANN *e*PPP 07 44 15.2
ANN *e*S S 07 49 15.1 -5.0
ANN *e*SS SS 07 53 59.7 -0.4
ANN *e*SSS 07 57 14.3
ANN pmax pmax
comp=Z,53nm,1.5s,mb5.2
ANN MLR MLR
comp=N,857nm,22.0s,MS5.1
ANN MLR MLR
comp=E,592nm,22.0s,MS5.1
ANN MLR MLR
comp=Z,799nm,22.0s,MS5.0
WMOK Wichita Mounta 72.99 306 *e*P **P 07 39 53.9 -1.4**
comp=Z,38nm,1.8s,mb5.0
WMOK Wichita Mounta 72.99 306 *e*P **P 07 39 53.9 -1.4**
WMOK pmax pmax
comp=Z,38nm,1.8s,mb5.0
JCT Junction City 73.09 302 *e*P **P 07 39 55.2 -0.8**
comp=Z,30nm,1.0s,mb5.2
JCT LR LR
comp=Z,829nm,21.0s,MS5.0
JCT Junction City 73.09 302 *e*P **P 07 39 55.2 -0.8**
JCT pmax pmax
comp=Z,30nm,1.0s,mb5.2
JCT MLR MLR
comp=Z,829nm,21.0s,MS5.0
FINES FINESS Array B 73.24 24 P **P 07 39 55.5 -0.7**
comp=Z,20nm,0.9s,mb5.1,baz=308,slow=7.1,SNR=17
FINES LR LR 08 07 46.2
comp=Z,1μm,19.6s,MS5.3,baz=247,slow=32
FINES FINESS Array B 73.24 24 P **P 07 39 55.5 -0.7**
ECSD EROS Data Cent 73.39 316 *e*P **P 07 39 56.0 -1.5**
comp=Z,22nm,1.1s,mb5.0
ECSD LR LR
comp=Z,1μm,19.0s,MS5.3
KAF Kangasniemi 73.68 24 *e*P **P 07 39 57.4 -1.4**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KAF Kangasniemi 73.68 24 *e*p **P 07 39 57.4 -1.4**
comp=Z,0.9nm,0.4s,mb4.0
SOC Sochi 74.07 45 *c i*P **P 07 40 00.3 -1.2**
SOC *e**SP sP 07 40 04.7 -1.3
SOC *e* 07 42 51.2
SOC *e*S S 07 49 33.5 -0.9
SOC pmax pmax
comp=Z,13nm,0.8s,mb4.9
SOC MLR MLR
comp=Z,468nm,14.0s,MS4.9
AGMN Agassiz Nation 74.15 320 *e*P **P 07 40 00.5 -1.3**
comp=Z,20nm,0.9s,mb5.0
AGMN LR LR
comp=Z,1μm,20.0s,MS5.2
SNAA Sanae 74.34 172 P **P 07 40 04.2 +1.7**
comp=Z,1.0nm,0.7s,baz=322,slow=8.2,SNR=25
SNAA Sanae 74.34 172 P **P 07 40 04.2 +1.7**
CBKS Cedar Bluff 74.54 310 PFAKE 07 40 20.0 +16
CBKS LR LR
comp=Z,2μm,20.0s,MS5.5
ULM Lac du Bonnet 74.74 322 P **P 07 40 03.0 -2.2**
comp=Z,18nm,0.9s,mb5.0,baz=102,slow=5.3,SNR=12
ULM LR LR 08 11 13.5
comp=Z,987nm,18.1s,MS5.2,baz=326,slow=34
ULM Lac du Bonnet 74.74 322 *e*P **P 07 40 03.4 -1.9**
comp=Z,51nm,1.4s,mb5.3
AMTX Amarillo 75.36 306 PFAKE 07 40 20.0 +11
AMTX LR LR
comp=Z,2μm,21.0s,MS5.4
OBN Obninsk 75.51 33 PFAKE 07 40 20.0 +10
OBN LR LR
comp=Z,872nm,21.0s,MS5.0
OBN Obninsk 75.51 33⇓*e*P **P 07 40 09.8 +0.2**
OBN *e* 07 43 04.8
OBN *i* S S 07 49 49.1 -0.9
OBN pmax pmax
comp=Z,11nm,0.6s,mb5.0
OBN MLR MLR
comp=Z,900nm,20.0s,MS5.1
428A Kincaid Ranch, 75.59 301 ⇑P **P 07 40 10.4 -0.1**
baz=76,SNR=16
TRO Tromso 75.60 16 *e* **P 07 40 14.2 +4.4**
TRO *e*S S 07 49 50.2 -0.3
TRO *e*SS SS 07 54 42.1 +0.6
TRO AMS AMS 08 06 17.7
comp=Z,796nm,19.5s,MS5.0
628A Black Gap, Mar 75.60 300 ⇓P **P 07 40 10.5 -0.2**
baz=76,SNR=10.0
VSR Storozhevoye 75.77 37 *e*P **P 07 40 10.4 -0.7**
VSR *e*S S 07 49 50.6 -2.4
VSR *e*SS SS 07 54 46.8 +2.0
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VSR smax
comp=N,350nm,5.3s
VSR smax
comp=E,190nm,5.3s
VSR smax
comp=Z,210nm,5.3s
VSR MLR MLR
comp=N,540nm,18.0s,MS5.1
VSR MLR MLR
comp=E,580nm,18.0s,MS5.1
VSR MLR MLR
comp=Z,790nm,18.0s,MS5.1
VORD Divnogorie 75.77 37 *e*P **P 07 40 10.7 -0.4**
VORD *e*S S 07 49 50.6 -2.5
VORD pmax pmax
comp=N,10.0nm,0.4s
VORD pmax pmax
comp=E,8.0nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
328A Wristen Ranch, 75.78 302 ⇓P **P 07 40 10.5 -1.2**
baz=76
627A Terlingua Ranc 76.03 300 ⇓P **P 07 40 12.8 -0.3**
baz=76,SNR=7.9
DAG Danmarks Havn 76.05 2 *i* P **P 07 40 12.4 +0.1**
DAG pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
DAG Danmarks Havn 76.05 2 *i* P **P 07 40 12.4 +0.1**
comp=Z,81nm,1.0s,mb5.6
JOF Joensuu 76.10 24 *e*P **P 07 40 04.6 -8.2**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
JOF Joensuu 76.10 24 *e*p **P 07 40 04.6 -8.2**
comp=Z,0.8nm,0.5s,mb3.9
MSTX Muleshoe 76.11 305 ⇑P **P 07 40 13.5 0.0**
baz=76,SNR=12
427A Hayter Ranch, 76.21 301 ⇑P **P 07 40 14.1 0.0**
baz=76,SNR=8.9
KIV Kislovodsk 76.25 45 *e*P **P 07 40 13.6 -0.5**
comp=Z,21nm,1.0s,mb5.0
KIV LR LR
comp=Z,946nm,21.0s,MS5.1
KIV Kislovodsk 76.25 45 *e*P **P 07 40 13.8 -0.2**
KIV *e* 07 43 04.8
KIV *e*S S 07 49 58.3 -0.3
KIV *e*SS SS 07 54 52.0 -0.5
KIV pmax pmax
comp=Z,25nm,1.2s,mb5.0
KIV MLR MLR
comp=Z,670nm,18.0s,MS5.0
KIV Kislovodsk 76.25 45 P **P 07 40 14.8 +0.8**
SNR=6.7
TXAR Lajitas Array 76.26 300 P **P 07 40 13.9 -0.4**
comp=Z,4.2nm,0.8s,mb4.4,baz=122,slow=7.1,SNR=45
TXAR LR LR 08 10 05.2
comp=Z,704nm,21.9s,MS4.9,baz=5.0,slow=33
TXAR Lajitas Array 76.26 300 P **P 07 40 14.0 -0.4**
MOS Moscow 76.29 32 *e*P **P 07 40 13.6 -0.4**
MOS *e* pP 07 40 16.8 -0.5
MOS *e* 07 40 23.3
MOS *e*S S 07 49 57.7 -0.9
MOS pmax pmax
comp=Z,42nm,0.7s,mb5.5
MOS pmax pmax
comp=Z,100nm,0.9s,mb5.8
MAIT Maitri 76.29 167 *e*P **P 07 40 15.0 +1.3**
NVL N'lazarevskaya 76.30 167 *e*P PcP 07 40 30.8 +5.1
NVL pmax pmax
comp=Z,14nm,0.9s,mb4.9
527A Woodward Ranch 76.31 301 ⇑P **P 07 40 14.8 +0.1**
baz=76,SNR=16
Z27A Tatum 76.39 304 ⇑P **P 07 40 14.8 -0.2**
baz=76,SNR=24
KTK1 Kautokeino 76.42 17 *e* **P 07 40 17.3 +2.8**
KTK1 *e*S S 07 49 59.6 0.0
KTK1 *e*SS SS 07 55 01.5 +7.4
Y27A Causey 76.42 305 ⇓P **P 07 40 15.2 -0.1**
baz=76,SNR=17
W27A Bowe Ranch, En 76.51 306 ⇑P **P 07 40 15.3 -0.4**
baz=76,SNR=8.6
FCC Fort Churchill 76.59 331 *e*P **P 07 40 14.5 -1.1**
FCC Fort Churchill 76.59 331 *e*P **P 07 40 14.5 -1.1**
OGNE Ogallala 76.69 312 *e*P **P 07 40 16.4 -0.2**
comp=Z,128nm,1.6s,mb5.6
OGNE LR LR
comp=Z,1μm,21.0s,MS5.3
626A Big Bend Ranch 76.69 300 ⇑P **P 07 40 16.8 0.0**
baz=77,SNR=9.8
526A Mary Lane Ranc 76.71 301 ⇓P **P 07 40 17.3 +0.4**
baz=77,SNR=19
426A McDonald Obser 76.73 301 ⇓P **P 07 40 17.6 +0.5**
baz=77,SNR=16
326A Caldwell Ranch 76.76 302 ⇑P **P 07 40 17.4 +0.2**
baz=77,SNR=11
CLNB Carlsbad 76.80 303 *e*P **P 07 40 17.0 -0.4**
comp=Z,1.2nm,0.3s,mb4.3
ZEI Tsey 76.87 46 *e*P **P 07 40 16.7 -0.9**
ZEI *e*S S 07 50 05.5 0.0
ZEI pmax pmax
comp=Z,35nm,2.0s,mb4.9
CPRX Cap Rock 76.89 304 *e*P **P 07 40 17.3 -0.6**
comp=Z,8.0nm,1.2s,mb4.5
Y26A Elida 76.97 305 ⇑P **P 07 40 18.3 -0.1**
baz=77
Z26A Caprock 77.02 304 ⇓P **P 07 40 18.2 -0.4**
baz=77
GNI Garni 77.02 49 PFAKE 07 40 30.0 +12
GNI LR LR
comp=Z,1μm,20.0s,MS5.2
GNI Garni 77.02 49⇓*e*P **P 07 40 18.9 +0.4**
GNI pmax pmax
comp=Z,17nm,1.2s
GNI MLR MLR
comp=Z,1μm,25.0s
W26A Owens Ranch, T 77.09 306 ⇑P **P 07 40 19.1 +0.1**
baz=77,SNR=6.9
GDL2 Guadalupe Moun 77.20 303 *e*P **P 07 40 19.9 +0.3**
ABPO Ambohimpanom 77.23 110 PFAKE 07 40 30.0 +10
ABPO LR LR
comp=Z,1μm,20.0s,MS5.2
U26A Atchley Ranch, 77.26 307 P **P 07 40 19.8 -0.1**
baz=77,SNR=23
ARCES ARCESS Array B 77.39 17 P **P 07 40 16.4 -3.6**
comp=Z,0.8nm,0.9s,baz=240,slow=3.0,SNR=2.2
ARCES LR LR 08 09 08.1
comp=Z,753nm,18.4s,baz=58,slow=32
ARCES ARCESS Array B 77.39 17 P **P 07 40 16.4 -3.5**
125A Gardner Draw, 77.50 303 ⇓P **P 07 40 21.2 -0.1**
baz=78
425A Indio Mountain 77.56 301 ⇓P **P 07 40 21.6 -0.1**
baz=78,SNR=21
325A Bean Ranch, Si 77.61 302 ⇓P **P 07 40 21.9 -0.1**
baz=78,SNR=27

Z25A	Roswell	77.63	304	⇑P	P	07 40 21.9 -0.2
	baz=78,SNR=14					
Y25A	Mesa, Roswell	77.69	304	⇑P	P	07 40 22.0 -0.4
	baz=78,SNR=5.9					
U25A	Circle Dot Ran	77.79	307	⇑P	P	07 40 22.9 0.0
	baz=78,SNR=11					
V25A	Rancho No Teng	77.88	306	⇑P	P	07 40 23.5 +0.1
	baz=78					
T25A	Trinidad	77.89	308	⇓P	P	07 40 23.9 +0.5
	baz=78,SNR=6.5					
R25A	Fountain Ranch	77.94	309	⇑P	P	07 40 23.5 -0.2
	baz=78,SNR=8.9					
KEV	Kevo	77.95	17	PFAKE		07 40 30.0 +7.0
KEV				LR	LR	
	comp=Z,744nm,20.0s,MS5.0					
KEV	Kevo	77.95	17	eP	P	07 40 22.6 -0.4
KEV	Kevo	77.95	17	ep	P	07 40 22.6 -0.4
	comp=Z,0.2nm,0.3s					
S25A	Robets Cordova	77.99	308	⇓P	P	07 40 24.4 +0.5
	baz=78,SNR=5.9					
MNTX	Cornudas Mount	78.00	302	eP	P	07 40 22.8 -1.4
	comp=Z,18nm,1.5s,mb4.8					
MNTX				LR	LR	
	comp=Z,913nm,20.0s,MS5.1					
Q25A	Bedland, Calha	78.03	310	⇑P	P	07 40 24.3 +0.2
	baz=78,SNR=8.8					
P25A	Willow Gulch B	78.06	310	⇑P	P	07 40 24.7 +0.5
	baz=78					
324A	Moseley Ranch,	78.06	302	⇑P	P	07 40 23.5 -0.9
	baz=78,SNR=9.7					
O25A	Wiggins	78.11	311	⇓P	P	07 40 25.2 +0.6
	baz=78,SNR=9.3					
224A	Cornudas Mount	78.16	302	⇑P	P	07 40 24.7 -0.3
	baz=78					
124A	Stringfield Ra	78.17	303	⇑P	P	07 40 24.5 -0.6
	baz=78,SNR=6.5					
Y24A	Capitan	78.30	304	⇑P	P	07 40 25.5 -0.3
	baz=78,SNR=16					
V24A	Rampart Ranch,	78.39	306	⇓P	P	07 40 26.3 0.0
	baz=78,SNR=8.3					
T24A	Torres, Weston	78.39	308	⇓P	P	07 40 27.1 +0.9
	baz=78,SNR=8.7					
W24A	Lazy 6 Ranch,	78.44	306	⇓P	P	07 40 27.2 +0.7
	baz=78,SNR=18					
R24A	Sanders Place,	78.59	309	⇑P	P	07 40 28.3 +1.0
	baz=79					
S24A	Houchin Ranch,	78.60	308	⇓P	P	07 40 28.0 +0.7
	baz=79					
RSSD	Black Hills	78.71	315	eP	P	07 40 27.4 -0.3
	comp=Z,4.8nm,0.9s,mb4.4					
RSSD	Black Hills	78.71	315	eP	P	07 40 27.5 -0.3
RSSD				pmax	pmax	
	comp=Z,5.0nm,0.9s,mb4.4					
Q24A	Divide	78.73	309	⇑P	P	07 40 28.8 +0.7
	baz=79,SNR=5.6					
N24A	Carr	78.80	311	⇑P	P	07 40 28.7 +0.4
	baz=79,SNR=6.2					
Y23A	Lovelace Mesa,	78.81	304	⇓P	P	07 40 28.7 +0.1
	baz=79,SNR=6.9					
SDCO	Great Sand Dun	78.84	308	eP	P	07 40 28.9 +0.3
	comp=Z,8.2nm,1.2s,mb4.5					
SDCO				LR	LR	
	comp=Z,2µm,22.0s,MS5.3					
M24A	Cheyenne	78.85	312	⇑P	P	07 40 29.2 +0.5
	baz=79,SNR=12					
Z23A	Rita Site, Whi	78.89	304	⇑P	P	07 40 29.1 +0.1
	baz=79					
KLMR	Klimovskoe	78.90	28	eP	P	07 40 29.1 +0.7
KLMR				e		07 43 21.2
KLMR				S	S	07 50 31.0 +4.3
KLMR				pmax	pmax	
	comp=Z,53nm,1.5s,mb5.2					
KLMR				pmax	pmax	
	comp=Z,138nm,8.7s					
APA	Apatity	78.94	20	⇓P	P	07 40 33.6 +5.0
APA				eS	S	07 50 30.0 +3.1
APA				e		07 50 40.0
APA				ePS		07 51 06.0
APA				eSS	SS	07 55 30.0 -2.1
APA				pmax	pmax	
	comp=Z,18nm,1.0s,mb5.0					
W23A	Werner Place,	79.03	306	⇑P	P	07 40 30.2 +0.4
	baz=79,SNR=5.4					
V23A	Ortiz Mt. (NFS	79.13	306	⇑P	P	07 40 31.3 +1.0
	baz=79,SNR=11					
T23A	Casias Ranch,	79.17	307	⇓P	P	07 40 31.3 +0.8
	baz=79,SNR=8.2					
ISCO	Idaho Springs	79.20	310	eP	P	07 40 30.9 +0.3
	comp=Z,37nm,1.9s,mb5.0					
ISCO				LR	LR	
	comp=Z,2µm,20.0s,MS5.5					
ISCO	Idaho Springs	79.20	310	eP	P	07 40 30.9 +0.3
ISCO				pmax	pmax	
	comp=Z,37nm,1.9s,mb5.0					
ISCO				MLR	MLR	
	comp=Z,2µm,20.0s,MS5.5					
U23A	El Rito	79.21	307	⇑P	P	07 40 31.8 +1.1
	baz=79,SNR=11					
ANMO	Albuquerque	79.26	305	eP	P	07 40 31.1 0.0
	comp=Z,96nm,2.3s,mb5.3					
ANMO				LR	LR	
	comp=Z,2µm,20.0s,MS5.5					
ANMO	Albuquerque	79.26	305	eP	P	07 40 31.1 +0.1
ANMO				pmax	pmax	
	comp=Z,96nm,2.3s					
ANMO				MLR	MLR	
	comp=Z,2µm,20.0s					
PHWY	Pilot Hill	79.30	312	eP	P	07 40 31.3 +0.2
	comp=Z,6.2nm,1.1s,mb4.5					
O23A	Lake Granby, G	79.49	311	⇓P	P	07 40 33.0 +0.8
	baz=79,SNR=12					
222A	Williams Famil	79.50	302	⇑P	P	07 40 33.1 +0.8
	baz=80,SNR=12					
Z22A	Elephant Butte	79.50	304	⇓P	P	07 40 32.9 +0.6
	baz=80,SNR=14					
LVZ	Lovozero	79.51	20	PFAKE		07 40 40.0 +8.3
LVZ				LR	LR	
	comp=Z,1µm,21.0s,MS5.2					
MAK	Makhachkala	79.52	47	eP	P	07 40 28.4 -3.9
MAK				e		07 43 34.7
MAK				ePPP		07 45 21.3
MAK				eS	S	07 50 29.0 -5.0
MAK				e		07 50 49.5
MAK				eSS	SS	07 55 41.3 -0.5
MAK				eSSS		07 58 57.5
MAK				pmax	pmax	
	comp=Z,404nm,1.8s,mb6.0					
FFC	Flin Flon	79.54	326	PFAKE		07 40 40.0 +7.9
FFC				LR	LR	
	comp=Z,1µm,20.0s,MS5.2					
FFC	Flin Flon	79.54	326	ceP	P	07 40 31.3 -0.8
A24A	Westby	79.55	320	⇓P	P	07 40 32.0 -0.3
	baz=80					
Y22A	Socorro	79.57	304	⇑P	P	07 40 32.2 -0.6
	baz=80,SNR=6.2					
DGMT	Dagmar	79.59	319	eP	P	07 40 32.8 +0.3
	comp=Z,65nm,1.2s,mb5.4					
DGMT				LR	LR	
	comp=Z,2µm,22.0s,MS5.4					
N23A	Red Feather La	79.60	311	⇑P	P	07 40 33.1 +0.3
	baz=80,SNR=9.4					
V22A	San Miguel Ran	79.73	306	⇑P	P	07 40 34.5 +0.9
	baz=80,SNR=14					
U22A	Llaves	79.74	307	⇓P	P	07 40 34.6 +1.0
	baz=80,SNR=12					
LAZ	Ladron	79.76	305	eP	P	07 40 34.1 +0.4
	comp=Z,14nm,1.5s,mb4.7					
T22A	Edith	79.85	307	⇓P	P	07 40 35.2 +1.0
	baz=80,SNR=9.2					
R22A	Saguache, Gunn	79.88	309	⇓P	P	07 40 35.4 +1.0
	baz=80,SNR=7.1					
S22A	4UR Ranch, Cre	79.88	308	⇓P	P	07 40 35.0 +0.7
	baz=80,SNR=9.3					
O22A	Kremmling	79.96	311	⇑P	P	07 40 34.7 0.0
	baz=80,SNR=6.4					
P22A	Eagle	80.05	310	⇓P	P	07 40 35.0 -0.2
	baz=80,SNR=9.9					
221A	Mesquite Ranch	80.06	302	P	P	07 40 36.9 +1.5
	baz=80,SNR=7.3					
Q22A	Crested Butte,	80.08	309	⇑P	P	07 40 36.1 +0.7
	baz=80					
A23A	Redstone	80.12	320	⇓P	P	07 40 35.3 -0.1
	baz=80					
C23A	Lambert	80.12	318	⇓P	P	07 40 35.8 +0.3
	baz=80					
Y21A	Point of Rocks	80.16	304	P	P	07 40 36.8 +0.8
	baz=80,SNR=6.4					
SMCO	Snowmass	80.17	309	eP	P	07 40 36.2 +0.3
	comp=Z,17nm,1.2s,mb4.9					
W21A	San Fidel	80.25	305	⇑P	P	07 40 37.0 +0.6
	baz=80,SNR=8.0					
X21A	Alamocita Cree	80.30	305	P	P	07 40 37.1 +0.5
	baz=80,SNR=13					
J22A	Midwest	80.34	314	⇑P	P	07 40 35.6 -1.1
	baz=80,SNR=5.9					
U21A	Nageezi	80.39	307	⇑P	P	07 40 37.8 +0.6
	baz=80,SNR=12					
R21A	Cimarron	80.52	309	⇑P	P	07 40 38.0 +0.2
	baz=80,SNR=9.0					
P21A	Newcastle	80.57	310	⇑P	P	07 40 39.7 +1.7
	baz=80,SNR=5.9					
C22A	Vida	80.58	318	⇑P	P	07 40 37.5 -0.3
	baz=80					
Q21A	Lamborn Mesa,	80.59	309	⇓P	P	07 40 38.8 +0.6
	baz=80,SNR=13					
S21A	Coal Bank Pass	80.63	308	⇓P	P	07 40 39.2 +0.9
	baz=81,SNR=16					
320A	Kipp Ranch, An	80.64	301	P	P	07 40 39.6 +1.0
	baz=81,SNR=19					
LAO	LASA Array	80.64	317	eP	P	07 40 38.3 0.0
	comp=Z,23nm,0.9s,mb5.1					
LAO				LR	LR	
	comp=Z,2µm,20.0s,MS5.4					
D22A	Cohagen	80.68	318	⇓P	P	07 40 38.5 +0.1
	baz=81					
220A	Playas Peak, P	80.68	302	⇓P	P	07 40 39.4 +0.6
	baz=81,SNR=10					
Y20A	Horse Springs,	80.73	304	⇓P	P	07 40 39.9 +0.9
	baz=81,SNR=6.6					
KBS	Kingsbay	80.75	7	PFAKE		07 40 50.0 +12
KBS				LR	LR	
	comp=Z,444nm,20.0s,MS4.8					
M21A	Separation Pea	80.76	312	⇑P	P	07 40 38.9 -0.1
	baz=81					
N21A	Black Mountain	80.77	311	⇓P	P	07 40 39.7 +0.6
	baz=81,SNR=12					
K21A	Alcova	80.80	313	P	P	07 40 39.0 -0.2
	baz=81,SNR=8.8					
L21A	Rawlins	80.81	312	⇓P	P	07 40 39.0 -0.2
	baz=81,SNR=13					
120A	U Bar Ranch, L	80.83	303	⇑P	P	07 40 40.2 +0.6
	baz=81,SNR=6.1					
Z20A	Nine Sixteen R	80.84	303	⇑P	P	07 40 40.4 +0.8
	baz=81,SNR=6.5					
X20A	Quemado	80.89	305	⇓P	P	07 40 40.6 +0.7
	baz=81,SNR=11					
W20A	Ramah	80.94	305	⇑P	P	07 40 40.5 +0.4
	baz=81,SNR=9.4					
V20A	Brimhall	80.98	306	⇑P	P	07 40 40.3 0.0
	baz=81					
I21A	Big Trails, Te	80.98	314	⇓P	P	07 40 39.3 -0.8
	baz=81,SNR=15					
J21A	Lysite	81.03	314	⇓P	P	07 40 40.1 -0.4
	baz=81,SNR=12					
S20A	Disappointment	81.10	308	⇓P	P	07 40 41.9 +1.0
	baz=81,SNR=7.1					
R20A	Redvale	81.15	308	⇑P	P	07 40 41.8 +0.7
	baz=81,SNR=18					
Q20A	Ridgley Place,	81.16	309	⇑P	P	07 40 41.5 +0.3
	baz=81,SNR=6.6					
D21A	La Casta Ranch	81.22	317	⇑P	P	07 40 41.4 +0.1
	baz=81,SNR=5.0					
O20A	White River Ci	81.25	310	⇓P	P	07 40 41.9 +0.3
	baz=81,SNR=8.1					
PV01	Paradox Valley	81.29	308	eP	P	07 40 42.3 +0.4
	comp=Z,2µm,1.5s					
P20A	De Beque	81.29	310	⇑P	P	07 40 42.4 +0.5
	baz=81,SNR=9.8					
219A	White Tail Can	81.31	302	⇓P	P	07 40 42.7 +0.5
	baz=81,SNR=11					
N20A	Spence Gulch,	81.34	311	⇓P	P	07 40 42.1 0.0
	baz=81,SNR=7.4					
M20A	Sweetwater, Wa	81.36	312	⇑P	P	07 40 42.4 +0.2
	baz=81,SNR=5.9					
C21A	Desert Coulee	81.40	318	⇓P	P	07 40 42.0 -0.3
	baz=81,SNR=9.0					
Y19A	Nutrioso	81.46	304	⇑P	P	07 40 44.1 +1.2
	baz=81,SNR=11					
J20A	Shoshoni	81.50	314	⇓P	P	07 40 42.6 -0.3
	baz=81,SNR=12					
T19A	Beclabito	81.53	307	⇓P	P	07 40 43.5 +0.3
	baz=82					
H20A	Greybull	81.57	315	⇑P	P	07 40 42.4 -0.8
	baz=82,SNR=7.9					
PV04	Paradox Valley	81.58	309	eP	P	07 40 43.6 +0.2
I20A	Worland	81.60	314	⇑P	P	07 40 42.7 -0.8
	baz=82,SNR=7.5					
K20A	Yellowstone Ra	81.60	313	⇑P	P	07 40 42.8 -0.7
	baz=82,SNR=7.1					
U19A	Dine' College,	81.62	306	P	P	07 40 43.6 -0.1
	baz=82,SNR=7.8					
PV10	Paradox Valley	81.68	309	eP	P	07 40 44.6 +0.6
	comp=Z,248nm,1.0s,mb6.1					
P19A	Cripple Cowboy	81.76	310	⇑P	P	07 40 44.3 -0.1
	baz=82,SNR=7.0					
RPN	Rapa Nui	81.82	243	LR	LR	08 13 40.1
	comp=Z,1µm,18.6s,MS5.3,baz=74,slow=33					
F20A	Billings	81.84	316	⇓P	P	07 40 44.3 -0.3
	baz=82,SNR=6.7					
R19A	Curley Farm, L	81.85	308	P	P	07 40 45.4 +0.5
	baz=82,SNR=28					
318A	Bisbee	81.89	301	P	P	07 40 45.6 +0.4
	baz=82,SNR=8.8					
Q19A	Hogan Spring (	81.91	309	P	P	07 40 45.6 +0.5
	baz=82,SNR=33					
E20A	Meyer Farm, Mu	81.92	317	⇑P	P	07 40 44.6 -0.5
	baz=82					
O19A	Miners Draw (B	81.94	310	⇓P	P	07 40 45.3 0.0
	baz=82,SNR=10					
PRGR	Permogore	81.95	28	eP	P	07 40 40.9 -4.0
PRGR				e		07 40 46.5
PRGR				pmax	pmax	
	comp=Z,5.0nm,0.5s,mb4.7					
118A	Homack Ranch,	81.96	303	P	P	07 40 46.3 +0.7
	baz=82,SNR=5.7					
C20A	Veseth Ranch,	81.99	318	⇓P	P	07 40 45.0 -0.3
	baz=82,SNR=8.2					
K19A	Absolon Red Bu	81.99	313	⇓P	P	07 40 44.8 -0.7
	baz=82,SNR=7.0					
D20A	Manuel Ranch,	82.00	317	P	P	07 40 45.0 -0.4
	baz=82,SNR=10.0					
X18A	Snowflake	82.08	305	⇓P	P	07 40 46.8 +0.6
	baz=82,SNR=11					
A20A	Cobblestone Ra	82.09	319	⇓P	P	07 40 45.5 -0.4
	baz=82					
B20A	Solberg Farm,	82.10	319	⇑P	P	07 40 45.3 -0.7
	baz=82					
U18A	Rough Rock, Ch	82.17	306	⇑P	P	07 40 46.9 +0.3
	baz=82					
J19A	Crowheart	82.19	313	⇑P	P	07 40 45.9 -0.7
	baz=82,SNR=7.5					
T18A	Mexican Hat	82.23	307	⇑P	P	07 40 47.1 +0.2
	baz=82,SNR=7.0					
I19A	Meeteetse	82.23	314	⇑P	P	07 40 46.3 -0.5
	baz=82					
L19A	Farson	82.29	312	⇑P	P	07 40 46.9 -0.2
	baz=82,SNR=8.0					
R18A	Canyonlands Na	82.35	308	⇑P	P	07 40 47.7 +0.2
	baz=82,SNR=6.6					
E19A	Rath Farm, Rou	82.36	317	⇑P	P	07 40 47.0 -0.4
	baz=82,SNR=11					
S18A	Hurst Farm, Bl	82.37	308	⇑P	P	07 40 48.0 +0.4
	baz=82,SNR=9.9					
F19A	Roth Farm, Mol	82.40	316	⇓P	P	07 40 47.2 -0.3
	baz=82,SNR=8.1					
N18A	Larsen Ranch,	82.42	311	⇑P	P	07 40 47.5 -0.3
	baz=82					
BW06	Boulder Array	82.51	313	eP	P	07 40 47.3 -0.9
	comp=Z,5.0nm,1.0s,mb4.5					
BW06				LR	LR	
	comp=Z,1µm,19.0s,MS5.2					
PDAR	Pinedale Array	82.51	313	P	P	07 40 45.7 -2.5
	comp=Z,1.2nm,0.7s,mb4.0,baz=83,slow=5.6,SNR=11					
PDAR				LR	LR	08 15 33.8
	comp=Z,884nm,18.8s,MS5.2,baz=119,slow=34					
D19A	Cripps Ranch,	82.51	317	⇓P	P	07 40 47.5 -0.6
	baz=82,SNR=9.6					
RLMT	Red Lodge	82.55	315	eP	P	07 40 48.4 0.0
	comp=Z,61nm,1.9s,mb5.3					
RLMT				LR	LR	
	comp=Z,1µm,20.0s,MS5.2					
Q18A	Rafter H Ranch	82.60	309	⇓P	P	07 40 48.3 -0.5
	baz=82,SNR=7.7					
O18A	Roosevelt	82.61	310	⇑P	P	07 40 49.1 +0.3
	baz=83,SNR=8.8					
TUC	Tucson	82.62	302	eP	P	07 40 49.0 -0.1
	comp=Z,21nm,1.7s,mb4.9					
TUC	Tucson	82.62	302	eP	P	07 40 49.0 -0.1
TUC				pmax	pmax	
	comp=Z,21nm,1.7s,mb4.9					
A19A	Klindworth Far	82.63	319	⇓P	P	07 40 48.5 -0.2
	baz=83,SNR=10					
C19A	Slack Wire Ran	82.69	318	⇑P	P	07 40 48.7 -0.4
	baz=83,SNR=8.6					
B19A	Brinkman Farms	82.71	319	⇓P	P	07 40 48.6 -0.5
	baz=83,SNR=6.3					
P18A	Preston Nutter	82.73	310	⇑P	P	07 40 49.8 +0.4
	baz=83,SNR=9.7					
W17A	Winslow	82.75	305	⇑P	P	07 40 50.3 +0.6
	baz=83,SNR=8.8					
M18A	Lyman	82.76	312	⇑P	P	07 40 49.6 0.0
	baz=83,SNR=5.3					
Y17A	Roosevelt	82.76	304	⇑P	P	07 40 50.3 +0.6
	baz=83,SNR=8.7					
X17A	Forest Lakes	82.78	304	⇑P	P	07 40 50.4 +0.6
	baz=83,SNR=7.4					
H18A	Shoshone NF, C	82.78	315	⇑P	P	07 40 48.9 -0.7
	baz=83,SNR=8.8					
I18A	Diamond G Ranc	82.79	314	⇑P	P	07 40 49.3 -0.3
	baz=83,SNR=5.5					
K18A	Toltan Ranch,	82.85	313	⇓P	P	07 40 49.4 -0.6
	baz=83,SNR=7.0					
V17A	Tonalea, Kykot	82.85	306	⇓P	P	07 40 50.9 +0.7
	baz=83,SNR=23					
GCMT	Greycliff	82.90	316	eP	P	07 40 50.0 -0.2
	comp=Z,1.6nm,0.7s,mb4.2					
SRU	San Rafael	82.90	309	eP	P	07 40 50.4 +0.1
	comp=Z,15nm,1.2s,mb4.9					
SRU	San Rafael	82.90	309	eP	P	07 40 50.4 0.0
SRU				pmax	pmax	
	comp=Z,15nm,1.2s,mb4.9					
F18A	Big Timber	82.94	316	⇑P	P	07 40 50.2 -0.2
	baz=83,SNR=13					
T17A	Navajo Res., N	82.96	307	⇓P	P	07 40 51.9 +1.2
	baz=83,SNR=20					
R17A	Hanksville Air	83.00	308	⇑P	P	07 40 50.7 -0.1
	baz=83,SNR=5.4					
S17A	Black Ridge (B	83.01	308	⇓P	P	07 40 51.7 +0.8
	baz=83,SNR=26					
D18A	Linhart Farms,	83.14	317	⇓P	P	07 40 51.3 -0.1
	baz=83,SNR=8.7					
E18A	Harlowton	83.15	317	⇑P	P	07 40 51.4 -0.1
	baz=83					
O17A	Robinson Place	83.16	310	⇑P	P	07 40 52.2 +0.5
	baz=83,SNR=9.3					
U16A	Tuba City	83.16	306	⇓P	P	07 40 52.3 +0.5
	baz=83,SNR=6.9					
EGMT	Eagleton	83.20	318	eP	P	07 40 51.1 -0.5
	comp=Z,22nm,1.3s,mb5.0					
EGMT				LR	LR	
	comp=Z,2µm,20.0s,MS5.4					
M17A	Scullys Gap (B	83.21	312	⇑P	P	07 40 51.6 -0.3
	baz=83,SNR=8.4					
Z16A	Peralta Trail,	83.23	303	⇑P	P	07 40 52.8 +0.7
	baz=83,SNR=5.4					
SYO	Syowa Base	83.23	160	⇑eP	P	07 40 51.6 +0.2
SYO	Syowa Base	83.23	160	⇓epP	pP	07 40 54.8 +0.1
B18A	Beardsley Farm	83.25	319	⇓P	P	07 40 51.5 -0.4
	baz=83,SNR=5.5					
LKWY	Lake	83.29	315	eP	P	07 40 52.6 +0.3
LKWY				LR	LR	
	comp=Z,2µm,21.0s,MS5.5					
LKWY	Lake	83.29	315	eP	P	07 40 52.6 +0.4
LKWY				MLR	MLR	
	comp=Z,2µm,21.0s,MS5.5					
N17A	Moffit Pass	83.29	311	⇓P	P	07 40 52.1 -0.2
	baz=83,SNR=5.7					
Y16A	Circle Bar Ran	83.30	304	⇑P	P	07 40 53.3 +0.7
	baz=83,SNR=7.2					
X16A	Lo Mia Camp, P	83.31	304	⇑P	P	07 40 53.6 +1.0
	baz=83,SNR=11					
LOHW	Long Hollow	83.35	314	eP	P	07 40 52.4 -0.2
	comp=Z,11nm,1.2s,mb4.8					
A18A	Metzger Ranch,	83.36	319	⇓P	P	07 40 51.4 -1.1
	baz=83,SNR=7.4					
I17A	Pilgrim Ck.	83.36	314	P	P	07 40 53.2 +0.6
	baz=83,SNR=5.3					
J17A	Brown Place, J	83.41	313	⇓P	P	07 40 53.1 +0.3
	baz=83					
W16A	Flagstaff	83.42	305	⇓P	P	07 40 54.3 +1.2
	baz=83,SNR=6.2					
SNOW	Snow King Moun	83.44	313	eP	P	07 40 52.8 -0.2
	comp=Z,5.8nm,0.9s,mb4.6					
TMUT	Trail Mountain	83.45	309	eP	P	07 40 53.4 +0.2
	comp=Z,10nm,1.1s,mb4.8					
FLWY	Flagg Ranch	83.46	314	eP	P	07 40 53.1 0.0
	comp=Z,108nm,2.1s,mb5.5					
MOOW	Moose Ponds	83.46	314	eP	P	07 40 52.6 -0.6
	comp=Z,3.1nm,1.0s,mb4.3					
REDW	Red Top Meadow	83.51	313	eP	P	07 40 53.0 -0.4
	comp=Z,9.9nm,1.2s,mb4.8					
DAU	Daniels Canyon	83.57	310	eP	P	07 40 54.0 +0.3
	comp=Z,5.9nm,0.9s,mb4.7					
DAU	Daniels Canyon	83.57	310	eP	P	07 40 54.1 +0.3
DAU				pmax	pmax	
	comp=Z,6.0nm,0.9s,mb4.7					
TPAW	Teton Pass	83.59	314	eP	P	07 40 53.0 -0.8
	comp=Z,9.9nm,1.2s,mb4.8					
R16A	Teasdale	83.59	308	⇑P	P	07 40 54.1 +0.2
	baz=84,SNR=13					
YFT	Old Faithful	83.59	314	eP	P	07 40 55.2 +1.5
	comp=Z,8.9nm,0.9s,mb4.9					
F17A	Fitzpatrick Pl	83.60	316	⇓P	P	07 40 53.7 -0.1
	baz=84,SNR=5.7					
IMW	Indian Meadow	83.61	314	eP	P	07 40 53.9 -0.1
	comp=Z,65nm,2.5s,mb5.3					
AHID	Auburn Hatcher	83.64	313	PFAKE		07 41 10.0 +16
AHID				LR	LR	
	comp=Z,1µm,19.0s,MS5.3					
S16A	Weppner Ranch,	83.64	308	⇑P	P	07 40 54.2 0.0
	baz=84,SNR=11					
JLU	Jordanelle	83.73	311	eP	P	07 40 54.9 +0.3
	comp=Z,7.2nm,1.0s,mb4.8					
D17A	Six Diamond Ra	83.73	317	⇑P	P	07 40 54.0 -0.5
	baz=84,SNR=6.2					
E17A	Martinsdale	83.79	316	⇑P	P	07 40 54.7 0.0
	baz=84,SNR=16					
MPU	Maple Canyon	83.83	310	eP	P	07 40 54.9 -0.2
	comp=Z,2.4nm,0.9s,mb4.3					
C17A	Wharram Farm,	83.83	318	⇑P	P	07 40 54.3 -0.7
	baz=84,SNR=6.3					
RRI2	Red Ridge	83.85	313	eP	P	07 40 55.1 0.0
	comp=Z,62nm,2.2s,mb5.3					
HWUT	Hardware Ranch	83.89	312	eP	P	07 40 54.9 -0.5
	comp=Z,4.0nm,0.6s,mb4.7					
HWUT				LR	LR	
	comp=Z,2µm,20.0s,MS5.5					
A17A	Triple J Farms	83.92	319	⇑P	P	07 40 54.9 -0.5
	baz=84,SNR=5.1					
M16A	Huntsville	83.92	311	⇑P	P	07 40 55.1 -0.5
	baz=84					
B17A	L&G Farms, Che	83.92	318	⇑P	P	07 40 54.6 -0.7
	baz=84,SNR=7.1					
X15A	Humboldt	83.97	304	⇑P	P	07 40 56.8 +0.9
	baz=84,SNR=16					
V15A	Kaibab Nationa	83.99	306	⇑P	P	07 40 57.0 +0.9
	baz=84,SNR=14					
I16A	Newdale	84.01	314	⇓P	P	07 40 55.8 -0.2
	baz=84					
Y15A	Casa Rosa Ranc	84.02	304	⇓P	P	07 40 56.4 +0.2
	baz=84,SNR=6.4					
QLMT	Earthquake

HRY	Holter Researc	84.48	317	eP	P	07 40 58.2	0.0
X14A	Yava	84.50	304	⇑P	P	07 40 59.3	+0.7
baz=84,SNR=9.0							
A16A	West Butte Ran	84.51	319	⇓P	P	07 40 58.1	-0.2
baz=84							
C16A	Fuhringer Ranc	84.51	318	⇑P	P	07 40 58.0	-0.4
baz=84,SNR=6.6							
L15A	Malad City	84.53	312	⇑P	P	07 40 58.1	-0.5
baz=84,SNR=7.6							
M15A	Larsen Ranch,	84.54	311	⇑P	P	07 40 58.0	-0.7
baz=84,SNR=6.1							
N15A	Stansbury Isla	84.56	311	P	P	07 40 58.4	-0.4
baz=84,SNR=7.4							
J15A	Blackfoot	84.66	313	⇑P	P	07 40 59.3	0.0
baz=85							
W14A	Seligman	84.70	305	⇓P	P	07 41 00.1	+0.4
baz=85,SNR=8.6							
V14A	Boquillas Ranc	84.73	306	⇑P	P	07 41 00.8	+1.0
baz=85,SNR=9.5							
DUG	Dugway	84.74	310	eP	P	07 40 59.8	0.0
comp=Z,44nm,1.8s,mb5.3							
DUG				LR	LR		
comp=Z,2μm,19.0s,MS5.5							
DUG	Dugway	84.74	310	eP	P	07 40 59.8	+0.1
DUG				pmax	pmax		
comp=Z,44nm,1.8s,mb5.3							
DUG				MLR	MLR		
comp=Z,2μm,19.0s,MS5.5							
HVU	Hansel Valley	84.81	312	eP	P	07 40 59.1	-0.9
comp=Z,17nm,1.5s,mb5.0							
HVU	Hansel Valley	84.81	312	eP	P	07 40 59.1	-0.9
HVU				pmax	pmax		
comp=Z,17nm,1.5s,mb5.0							
G15A	Dillon	84.82	315	⇓P	P	07 41 00.0	0.0
baz=85,SNR=14							
U14A	Mt Trumbull	84.83	306	⇑P	P	07 41 01.1	+0.8
baz=85,SNR=9.8							
LRM	Limekiln Ridge	84.84	316	eP	P	07 41 00.6	+0.5
F15A	Butte	84.87	316	⇑P	P	07 41 00.6	+0.4
baz=85,SNR=8.2							
S14A	Cedar City	84.89	308	P	P	07 41 00.9	+0.4
baz=85,SNR=12							
P14A	Drum Mountains	84.91	309	⇑P	P	07 41 01.0	+0.4
baz=85,SNR=14							
DLMT	Dillon	84.91	315	eP	P	07 41 00.5	0.0
comp=Z,43nm,1.5s,mb5.4							
BGU	Big Grassy Mou	84.95	311	eP	P	07 41 00.1	-0.6
comp=Z,44nm,1.8s,mb5.3							
D15A	Lincoln	84.97	317	⇑P	P	07 41 00.7	0.0
baz=85							
CCUT	Cedar City	85.03	307	eP	P	07 41 01.8	+0.5
comp=Z,12nm,1.1s,mb4.9							
Q14A	Sevier Lake (B	85.03	309	⇑P	P	07 41 01.4	+0.2
baz=85,SNR=18							
MCMT	McKenzie Canyo	85.05	315	eP	P	07 41 01.5	+0.3
comp=Z,7.7nm,1.3s,mb4.7							
C15A	Salmond Ranch,	85.08	318	⇓P	P	07 41 01.3	0.0
baz=85,SNR=13							
Z13A	Yuma Proving G	85.09	303	P	P	07 41 02.3	+0.7
baz=85,SNR=13							
B15A	Bradely Ranch,	85.09	318	P	P	07 41 00.8	-0.6
baz=85,SNR=16							
L14A	Malta	85.17	312	⇑P	P	07 41 01.3	-0.6
baz=85,SNR=8.9							
HATD	Hatta, Dubai	85.18	65	P	P	07 41 02.3	0.0
SNR=8.9							
A15A	Johnson Ranch,	85.25	319	⇑P	P	07 41 01.6	-0.5
baz=85,SNR=33							
X13A	Yucca	85.28	304	⇑P	P	07 41 02.7	+0.1
baz=85,SNR=11							
W13A	Hualapai Mount	85.35	305	⇑P	P	07 41 03.4	+0.5
baz=85							
H14A	Leadore	85.41	315	⇓P	P	07 41 02.9	0.0
baz=85,SNR=5.5							
I14A	Mackay	85.43	314	⇓P	P	07 41 03.5	+0.4
baz=85,SNR=8.7							
S13A	Holt Ranch, En	85.43	307	⇓P	P	07 41 04.1	+0.8
baz=85,SNR=7.5							
T13A	Saint George	85.44	307	⇑P	P	07 41 04.1	+0.8
baz=85,SNR=9.7							
J14A	Carey	85.44	313	⇑P	P	07 41 03.6	+0.4
baz=85,SNR=6.4							
CHMT	Chamberlain Mo	85.47	317	eP	P	07 41 03.1	-0.1
U13A	Pakoon Wash	85.47	306	⇑P	P	07 41 03.7	+0.3
baz=85,SNR=8.1							
ARQ	Araqi	85.51	67	P	P	07 41 04.1	+0.2
SNR=7.8							
R13A	O'Grain Ranch,	85.54	308	⇑P	P	07 41 04.1	+0.3
baz=86,SNR=6.9							
B14A	Marquette Ranc	85.57	318	⇓P	P	07 41 02.7	-1.0
baz=86							
D14A	Greenough	85.65	317	⇓P	P	07 41 03.2	-1.0
baz=86							
SLMT	Seeley Lake	85.65	317	eP	P	07 41 04.5	+0.3
A14A	Double T Ranch	85.71	319	P	P	07 41 04.2	-0.2
baz=86,SNR=21							
C14A	Swan Lake	85.85	318	⇓P	P	07 41 04.8	-0.3
baz=86							
I13A	Wildhorse Cree	85.91	314	⇑P	P	07 41 05.8	+0.3
baz=86,SNR=14							
J13A	Cove Ranch, Pi	85.93	313	⇑P	P	07 41 06.0	+0.4
baz=86,SNR=5.3							
MSO	Missoula	85.93	317	PFAKE		07 41 20.0	+14
MSO				LR	LR		
comp=Z,1μm,20.0s,MS5.3							
SWMT	Swartz Lake	86.01	317	eP	P	07 41 05.7	-0.2
WALA	Waterton Lakes	86.03	319	eP	P	07 41 05.7	-0.3
comp=Z,1.3nm,1.4s,mb4.0							
YBMT	Yellow Bay	86.03	318	eP	P	07 41 05.9	-0.2
H13A	Challis	86.04	314	⇑P	P	07 41 06.2	+0.1
baz=86,SNR=11							
G13A	Cobalt	86.05	315	⇓P	P	07 41 06.6	+0.5
baz=86,SNR=23							
GLA	Glamis	86.06	303	eP	P	07 41 06.6	+0.1
comp=Z,16nm,1.2s,mb5.1							
GLA	Glamis	86.06	303	eP	P	07 41 06.6	+0.1
GLA				pmax	pmax		
comp=Z,16nm,1.2s,mb5.1							
E13A	Victor	86.08	316	P	P	07 41 06.3	0.0
baz=86,SNR=11							
HLID	Hailey	86.11	313	eP	P	07 41 07.0	+0.5
comp=Z,13nm,1.1s,mb5.1							
HLID				LR	LR		
comp=Z,2μm,19.0s,MS5.4							
BSY	Bisya	86.13	67	P	P	07 41 07.1	+0.1
SNR=5.7							
F13A	Darby	86.15	316	P	P	07 41 06.5	-0.2
baz=86,SNR=16							
JTMT	Jette	86.21	318	eP	P	07 41 06.7	-0.2
S12A	Delamar Landin	86.21	307	⇑P	P	07 41 08.1	+0.9
baz=86,SNR=6.8							
HOQ	Hoqain	86.24	67	P	P	07 41 06.5	-1.1
SNR=6.8							
D13A	Huson	86.30	317	⇓P	P	07 41 06.7	-0.7
baz=86,SNR=5.0							
A13A	Flathead Natio	86.36	319	⇓P	P	07 41 07.4	-0.2
baz=86,SNR=14							
IRM	Iron Mountain	86.36	304	⇑P	P	07 41 08.1	+0.2
baz=86							
B13A	Whitefish	86.37	318	⇑P	P	07 41 07.4	-0.3
baz=86,SNR=7.1							
C13A	Hot Springs	86.41	318	⇑P	P	07 41 07.6	-0.2
baz=86,SNR=7.4							
SHPR	Sheep Range	86.43	306	eP	P	07 41 08.7	+0.4
H12A	Diamond D Ranc	86.47	314	⇑P	P	07 41 08.6	+0.4
baz=86,SNR=33							
T11A	Corn Creek, Al	86.50	307	⇑P	P	07 41 09.1	+0.5
baz=86,SNR=11							
BSMT	Bassoo Peak	86.56	318	eP	P	07 41 08.6	0.0
I12A	Atlanta	86.64	314	⇑P	P	07 41 09.1	+0.1
baz=87,SNR=9.1							
F12A	Elk City	86.79	316	⇑P	P	07 41 09.9	+0.1
baz=87,SNR=20							
GMRC	Granite Mounta	86.80	305	⇑P	P	07 41 10.2	+0.1
baz=87							
R11A	Troy Canyon, C	86.82	308	⇓P	P	07 41 10.3	+0.2
baz=87,SNR=16							
G12A	Big Creek, Yel	86.82	315	⇓P	P	07 41 09.9	0.0
baz=87,SNR=20							
D12A	Red Ives Fores	86.91	317	⇑P	P	07 41 09.4	-0.9
baz=87							
SMDO	Samad	86.91	67	P	P	07 41 10.4	-0.5
SNR=8.3							
TUQ	Turquoise Moun	87.03	305	⇑P	P	07 41 12.0	+0.8
baz=87							
E12A	Beaver Dam Sad	87.04	316	⇑P	P	07 41 10.6	-0.3
baz=87							
YKA	Yellowknife Ar	87.22	332	P	P	07 41 09.1	-2.4
comp=Z,0.6nm,0.7s,mb4.0,baz=206,slow=6.2,SNR=5.7							
YKA				LR	LR	08 16 13.5	
comp=Z,130nm,20.2s,MS4.3,baz=180,slow=33							
YKA	Yellowknife Ar	87.22	332	P	P	07 41 09.1	-2.4
YKA				LR	LR	08 16 13.5	
YKA	Yellowknife Ar	87.22	332	P	P	07 41 09.1	-2.4
PFO	Pinyon Flat Ob	87.44	303	PFAKE		07 41 20.0	+6.8
PFO				LR	LR		
comp=Z,1μm,21.0s,MS5.2							
C11A	Tepee Creek (N	87.55	318	⇑P	P	07 41 12.6	-0.7
baz=88							
GSC	Goldstone	87.74	305	⇑P	P	07 41 14.9	+0.2
baz=88							
GSC	Goldstone	87.74	305	eP	P	07 41 14.9	+0.2
comp=Z,36nm,1.8s,mb5.3							
GSC	Goldstone	87.74	305	eP	P	07 41 14.9	+0.2
GSC				pmax	pmax		
comp=Z,36nm,1.8s,mb5.3							
FURC	Furnace Creek,	87.80	306	⇓P	P	07 41 14.6	-0.3
baz=88							
ARU	Arti	87.91	34	PFAKE		07 41 30.0	+15
ARU				LR	LR		
comp=Z,987nm,22.0s,MS5.2							
ARU	Arti	87.91	34	P	P	07 41 21.3	+6.3
ARU				S	S	07 51 52.8	-5.3
ARU				SP		07 53 04.5	
TPH	Tonopah	88.10	308	PFAKE		07 41 30.0	+14
TPH				LR	LR		
comp=Z,1μm,22.0s,MS5.3							
BMN	Battle Mountai	88.12	310	PFAKE		07 41 30.0	+14
BMN				LR	LR		
comp=Z,2μm,21.0s,MS5.4							
NEW	Newport	88.14	318	eP	P	07 41 14.9	-1.3
comp=Z,6.1nm,1.2s,mb4.7							
NEW				LR	LR		
comp=Z,2μm,20.0s,MS5.4							
NEW	Newport	88.14	318	eP	P	07 41 14.9	-1.3
NEW				pmax	pmax		
comp=Z,6.0nm,1.2s							
NEW				MLR	MLR		
comp=Z,2μm,20.0s							
DAC	Darwin (Calif)	88.39	306	PFAKE		07 41 30.0	+12
DAC				LR	LR		
comp=Z,1μm,20.0s,MS5.3							
NVAR	Mina Array Bea	88.95	308	P	P	07 41 19.9	-0.4
comp=Z,2.6nm,0.7s,mb4.7,baz=98,slow=5.3,SNR=30							
ISA	Isabella	89.11	305	eP	P	07 41 21.2	+0.1
comp=Z,16nm,1.1s,mb5.3							
ISA	Isabella	89.11	305	eP	P	07 41 21.2	+0.1
ISA				pmax	pmax		
comp=Z,16nm,1.1s,mb5.3							
WVOR	Wild Horse Val	89.18	312	eP	P	07 41 20.9	-0.4
comp=Z,25nm,1.7s,mb5.3							
WVOR	Wild Horse Val	89.18	312	eP	P	07 41 20.9	-0.4
WVOR				pmax	pmax		
comp=Z,25nm,1.7s,mb5.3							
OD2	Odessa Site #2	89.20	317	eP	P	07 41 20.3	-1.0
HAWA	Hanford	89.78	316	PFAKE		07 41 30.0	+6.0
HAWA				LR	LR		
comp=Z,1μm,19.0s,MS5.4							
WAKR	Walker	89.84	308	eP	P	07 41 25.3	+0.9
MOD	Modoc	90.43	312	PFAKE		07 41 40.0	+13
MOD				LR	LR		
comp=Z,728nm,22.0s,MS5.1							
CMB	Columbia Colle	90.60	308	PFAKE		07 41 40.0	+12
CMB				LR	LR		
comp=Z,1μm,21.0s,MS5.3							
SAO	San Andreas Ge	91.49	307	PFAKE		07 41 40.0	+7.8
SAO				LR	LR		
comp=Z,1μm,20.0s,MS5.3							
MAW	Mawson	91.49	157	P	P	07 41 34.8	+3.4
comp=Z,5.4nm,0.9s,mb4.8,baz=280,slow=7.8,SNR=8.0							
MAW				LR	LR	08 18 18.1	
comp=Z,388nm,18.4s,MS4.9,baz=273,slow=33							
MAW	Mawson	91.49	157	eP	P	07 41 34.3	+2.8
comp=Z,2.3nm,1.1s,mb4.4							
MAW	Mawson	91.49	157	P	P	07 41 34.8	+3.3
MAW				pmax	pmax		
comp=Z,5.0nm,1.0s							
WDC	Whiskeytown Da	92.17	310	PFAKE		07 41 50.0	+15
WDC				LR	LR		
comp=Z,1μm,22.0s,MS5.4							
YBH	Yreka Blue Hor	92.24	312	PFAKE		07 41 50.0	+14
YBH				LR	LR		
comp=Z,2μm,22.0s,MS5.4							
PGC	Sidney	92.33	319	eP	P	07 41 35.1	-0.7
comp=Z,1.3nm,1.0s,mb4.2							
HUMO	Hull Mountain	92.37	313	PFAKE		07 41 50.0	+14
HUMO				LR	LR		
comp=Z,1μm,22.0s,MS5.3							
COR	Corvallis	92.50	315	PFAKE		07 41 50.0	+13
COR				LR	LR		
comp=Z,1μm,21.0s,MS5.3							
MCCM	Marconi Confer	92.56	308	PFAKE		07 41 50.0	+13
MCCM				LR	LR		
comp=Z,1μm,22.0s,MS5.3							
HOPS	Hopland	92.67	309	PFAKE		07 41 50.0	+12
HOPS				LR	LR		
comp=Z,1μm,19.0s,MS5.3							
NLWA	Neilton Lookou	92.70	317	PFAKE		07 41 50.0	+12
NLWA				LR	LR		
comp=Z,2μm,20.0s,MS5.6							
INK	Inuvik	94.56	339	eP	P	07 41 44.4	-1.3
comp=Z,6.3nm,1.0s,mb5.0							
INK	Inuvik	94.56	339	eP	P	07 41 44.4	-1.2
INK				pmax	pmax		
comp=Z,6.0nm,1.0s							
BRVK	Borovoye	94.88	37	PFAKE		07 42 00.0	+13
BRVK				LR	LR		
comp=Z,888nm,22.0s,MS5.2							
BRVK	Borovoye	94.88	37	i P	P	07 41 46.2	-1.2
DAWY	Dawson	98.05	335	eP	P	07 42 00.7	-0.9
EGAK	Eagle	98.53	336	PFAKE		07 42 10.0	+6.3
EGAK				LR	LR		
comp=Z,2μm,19.0s,MS5.6							
EKS2	Erkin-Say	98.77	47	PFAKE		07 42 20.0	+15
EKS2				LR	LR		
comp=Z,781nm,19.0s,MS5.2							
AML	Almayashu	98.80	47	PFAKE		07 42 20.0	+15
AML				LR	LR		
comp=Z,678nm,19.0s,MS5.2							
AAK	Ala-Archa	99.30	47	PFAKE		07 42 20.0	+12
AAK				LR	LR		
comp=Z,553nm,20.0s,MS5.1							
NIL	Nilore	99.68	56	PFAKE		07 42 20.0	+11
NIL				LR	LR		
comp=Z,82nm,20.0s,MS4.2							
TKM2	Tokmak 2	100.05	46	PFAKE		07 42 20.0	+9.3
TKM2				LR	LR		
comp=Z,601nm,19.0s,MS5.1							
KURK	Kurchatov	100.40	38	PFAKE		07 42 20.0	+7.8
KURK				LR	LR		
comp=Z,787nm,22.0s,MS5.2							
ILAR	Eielson Array	100.79	337	P	Pdif	07 42 11.8	-2.2
comp=Z,1.9nm,1.0s,baz=54,slow=3.9,SNR=14							
ILAR	Eielson Array	100.79	337	P	Pdif	07 42 11.8	-2.2
COLA	College	101.11	338	PFAKE		07 42 30.0	+15
COLA				LR	LR		
comp=Z,1μm,21.0s,MS5.4							
DGAR	Diego Garcia	101.43	97	PFAKE		07 42 30.0	+13
DGAR				LR	LR		
comp=Z,2μm,20.0s,MS5.7							
RKT	Rikitea	105.06	246	eSKSac	SKSac	07 53 12.0	-2.5
comp=Z,223nm,27.2s							
RKT	Rikitea	105.06	246	ePS	PS	07 56 04.5	-4.9
comp=Z,567nm,34.2s							
RKT				eSS	SS	08 01 50.6	+1.0
comp=Z,352nm,28.0s							
RKT				eLQ		08 12 08.8	
comp=Z,750nm,36.2s							
RKT				eLR	LR	08 17 11.3	
comp=Z,1μm,23.0s							
KDAK	Kodiak Island	106.50	332	PFAKE		07 47 00.0	+10
KDAK				LR	LR		
comp=Z,2μm,20.0s,MS5.6							
WMQ	Urumqi	108.32	43	ePdif	Pdif	07 42 50.0	+2.5
WMQ				PP	PP	07 47 23.0	+5.3
WMQ				S	Sdif	07 54 54.0	-0.6
WMQ				SS	SS	08 02 35.0	+2.4
WMQ				AMB	AMB		
comp=Z,98nm,8.0s							
WMQ				LR	LR		
comp=N,980nm,22.0s,MS5.5							
WMQ				LR	LR		
comp=E,960nm,22.0s,MS5.5							
WMQ				LR	LR		
comp=Z,830nm,22.0s,MS5.2							
CASY	Casey	108.74	164	PFAKE		07 47 10.0	+16
CASY				LR	LR		
comp=Z,1μm,22.0s,MS5.4							
BILL	Bilibino	110.43	354	PFAKE		07 47 10.0	+13
BILL				LR	LR		
comp=Z,561nm,22.0s,MS5.1							
TAOE	Nuku Hiva Isla	111.06	261	eLR	LR	08 19 57.0	
comp=Z,697nm,24.9s							
TLY	Talaya	114.19	30	PFAKE		07 47 20.0	+15
TLY				LR	LR		
comp=Z,684nm,22.0s,MS5.2							
LSA	Lhasa	115.41	56	PFAKE		07 47 20.0	+12
LSA				LR	LR		
comp=Z,1μm,20.0s,MS5.5							
TBI	Tubuai	118.18	244	ePP	PP	07 48 15.8	-13
comp=Z,72nm,29.2s							
TBI				eSKSac	SKSac	07 54 04.8	-3.0
comp=Z,159nm,31.0s							
TBI				eSP	SP	07 58 11.2	-2.4
comp=Z,341nm,35.8s							
TBI				eSS	SS	08 04 43.7	-0.9
comp=Z,544nm,32.5s							
TBI				eLQ		08 17 59.6	
comp=Z,765nm,38.2s							
TBI				eLR	LR	08 23 06.7	
comp=Z,1μm,31.8s							
GTA	Gaotai	118.40	43	eP	PKPdf	07 47 21.1	+7.7
PPT	Papeete	119.36	250	ePP	PP	07 48 34.0	-2.9
comp=Z,57nm,25.8s							
PPT				eSKSac	SKSac	07 54 08.2	-3.9
comp=Z,194nm,25.2s							
PPT	Papeete	119.36	250	ePS	PS	07 58 24.9	-1.0
comp=Z,242nm,26.8s							
PPT				eSS	SS	08 04 58.6	-1.5
comp=Z,1μm,33.2s							
PPT				eLQ		08 18 18.3	
comp=Z,2μm,32.0s							
PPT				eLR	LR	08 23 40.9	
comp=Z,2μm,23.5s							
LZH	Lanzhou	122.79	45	ePKP	PKPdf	07 47 19.5	-2.4
HIA	Hailar	123.26	24	PFAKE		07 47 30.0	+7.6
HIA				LR	LR		
comp=Z,716nm,20.0s,MS5.3							
COCO	West Island	125.10	104	PFAKE		07 47 40.0	+13
COCO				LR	LR		
comp=Z,1μm,22.0s,MS5.6							
CD2	Chengdu	125.13	51	ePKP	PKPdf	07 47 25.3	-1.2
CD2				sPKP		07 47 31.3	
CD2				PP	PP	07 49 18.3	+2.9
CD2				PKS		07 51 00.6	
CD2				SKS	SKSdf	07 54 32.1	-6.8
CD2				SKKS	SKKSac	07 56 06.3	-8.3
CD2				SS	SS	08 06 09.3	-3.0
CD2				AMB	AMB		
comp=Z,160nm,12.0s							
CD2				LR	LR		
comp=N,730nm,28.0s,MS5.4							
CD2				LR	LR		
comp=E,900nm,26.2s,MS5.4							
CD2				LR	LR		
comp=Z,600nm,32.0s							
HHC	Hu-ho-hao-te	125.15	36	ePKP	PKPdf	07 47 27.4	+1.1
HHC				PP	PP	07 49 19.8	+4.8
HHC				PKS		07 51 03.3	
HHC				SKS	SKSdf	07 54 38.0	-0.5
HHC				SKKS	SKKSac	07 56 12.0	-2.3
HHC				SS	SS	08 06 14.5	+2.9
HHC				AMB	AMB		
comp=Z,150nm,8.6s							
HHC				LR	LR		
comp=N,670nm,21.4s,MS5.4							
HHC				LR	LR		
comp=E,420nm,18.8s,MS5.4							
HHC				LR	LR		
comp=Z,740nm,21.0s,MS5.3							
CHTO	Chiang Mai	125.25	66	PFAKE		07 47 40.0	+13
CHTO				LR	LR		
comp=Z,576nm,20.0s,MS5.2							
CM31	Chiang Mai Arr	125.33	67	PFAKE		07 47 40.0	+13
CM31				LR	LR		
comp=Z,535nm,20.0s,MS5.2							
CMAR	Chiang Mai Arr	125.33	67	PKP	PKPdf	07 47 27.1	-0.2
comp=Z,1.1nm,0.5s,baz=271,slow=3.9,SNR=2.3							
CMAR	Chiang Mai Arr	125.33	67	PKIKP	PKPdf	07 47 27.1	-0.1
PET	Petropavlovsk	125.93	354	PFAKE		07 47 40.0	+13
PET				LR	LR		
comp=Z,276nm,21.0s,MS4.9							
KMI	Kunming	126.63	57	PKP	PKPdf	07 47 28.9	-0.7
KMI				sPKP		07 47 33.1	
KMI				PP	PP	07 49 28.4	+2.7
KMI				SKKS	SKKSac	07 56 22.6	-1.8
KMI				SS	SS	08 06 31.3	-0.4
KMI				AMB	AMB		
comp=Z,160nm,7.8s							
KMI				LR	LR		
comp=N,380nm,19.0s,MS5.4							
KMI				LR	LR		
comp=E,590nm,15.7s,MS5.4							
KMI				LR	LR		
comp=Z,780nm,19.0s,MS5.4							
BJI	Beijing	128.34	34	PKP	PKPdf	07 47 27.6	-4.8
BJI				SKS	SKSdf	07 54 42.4	-2.0
BJI				SS	SS	08 06 51.1	-0.1
BJI				LR	LR		
comp=N,470nm,18.4s,MS5.3							
BJI				LR	LR		
comp=E,290nm,17.7s,MS5.3							
BJI				LR	LR		
comp=Z,530nm,21.9s,MS5.2							
BJT	Baijiatuau	128.35	34	PFAKE		07 47 40.0	+7.6
BJT				LR	LR		
comp=Z,676nm,21.0s,MS5.3							
KULM	Kulim	129.31	82	PFAKE		07 47 50.0	+15
KULM				LR	LR		
comp=Z,861nm,21.0s,MS5.4							
ENH	Enshi	129.78	48	PFAKE		07 47 50.0	+15
ENH				LR	LR		
comp=Z,579nm,20.0s,MS5.3							
CN2	Changchun	129.99	24	ePKP	PKPdf	07 47 30.8	-4.6
CN2				esPKP		07 47 44.0	
CN2				AMB	AMB		
comp=Z,200nm,5.0s							
CN2				LR	LR		
comp=N,300nm,20.0s,MS5.3							
CN2				LR	LR		
comp=E,500nm,20.0s,MS5.3							
CN2				LR	LR		
comp=Z,700nm,22.0s,MS5.3							
MDJ	Mudanjiang	130.86	20	PKP	PKPdf	07 47 35.8	-1.3
MDJ				sPKP		07 47 40.4	
MDJ				SS	SS	08 07 21.3	-0.1
MDJ				AMB	AMB		
comp=Z,85nm,5.0s							
MDJ				LR	LR		
comp=N,410nm,26.1s,MS5.1							
MDJ				LR	LR		
comp=E,340nm,28.6s,MS5.1							
MDJ				LR	LR		
comp=Z,470nm,27.4s,MS5.0							
MDJ	Mudanjiang	130.86	20	PFAKE		07 47 50.0	+13
MDJ				LR	LR		
comp=Z,374nm,20.0s,MS5.1							
NWAO	Narrogin (SRO)	134.98	139	PFAKE		07 48 00.0	+15
NWAO				LR	LR		
comp=Z,459nm,19.0s,MS5.2							
QIZ	Qiongzhong	134.99	62	PKP	PKPdf	07 47 43.9	-1.6
QIZ				SS	SS	08 08 13.5	-1.0
QIZ				AMB	AMB		
comp=Z,78nm,6.5s							
QIZ				LR	LR		
comp=N,320nm,17.4s,MS5.1							
QIZ				LR	LR		
comp=E,110nm,18.7s,MS5.1							
QIZ				LR	LR		
comp=Z,520nm,24.7s							
NJ2	Nanjing	135.29	40	ePKP	PKPdf	07 47 41.8	-4.0
INCN	Inchon	135.67	28	PFAKE		07 48 00.0	+14
INCN				LR	LR		
comp=Z,667nm,22.0s,MS5.3							
ERM	Erimo	136.73	9	PFAKE		07 48 00.0	+12
ERM				LR	L

KSM	**Kuching**	**139.21**	**87**	PFAKE		07 48 10.0 +16
KSM				LR	LR	
	comp=Z,760nm,19.0s,MS5.5					
MAJO	**Matsushiro**	**140.92**	**16**	PFAKE		07 48 10.0 +14
MAJO				LR	LR	
	comp=Z,532nm,21.0s,MS5.3					
AFI	**Afiamalu**	**141.00**	**249**	PFAKE		07 48 10.0 +13
AFI				LR	LR	
	comp=Z,672nm,19.0s,MS5.4					
MBWA	**Marble Bar**	**143.39**	**126**	PFAKE		07 48 10.0 +9.2
MBWA				LR	LR	
	comp=Z,1μm,20.0s,MS5.7					
KKM	**Kota Kinabalu**	**144.56**	**78**	PFAKE		07 48 10.0 +6.9
KKM				LR	LR	
	comp=Z,510nm,19.0s,MS5.3					
STKA	**Stephens Creek**	**147.89**	**165**	PKPbc	PKPbc	07 48 13.1 +1.9
	comp=Z,3.7nm,0.8s,baz=144,slow=5.0,SNR=3.3					
KAPI	**Kappang**	**148.49**	**98**	PFAKE		07 48 20.0 +10
KAPI				LR	LR	
	comp=Z,767nm,20.0s,MS5.5					
MSVF	**Nonsavu**	**148.60**	**236**	PFAKE		07 48 20.0 +10
MSVF				LR	LR	
	comp=Z,741nm,20.0s,MS5.5					
FITZ	**Fitzroy Crossi**	**149.74**	**126**	*e*PKPbc	PKPbc	07 48 17.2 +0.9
ASAR	**Alice Springs**	**151.89**	**145**	PKP	PKPdf	07 48 16.8 +2.0
	comp=Z,2.4nm,0.8s,baz=208,slow=2.6,SNR=13					
ASAR				PKPbc	PKPbc	07 48 21.4 +0.2
	comp=Z,2.4nm,0.8s,baz=207,slow=2.3,SNR=15					
ASAR				PKPab	PKPab	07 48 33.1 +2.9
	comp=Z,7.2nm,0.8s,baz=207,slow=2.1,SNR=13					
ASAR	**Alice Springs**	**151.89**	**145**	PKIKP	PKPdf	07 48 16.8 +2.0
ASAR						07 48 21.4
DZM	**Mont Dzumac**	**154.13**	**214**	*e*PP	PP	07 52 10.2 -3.1
	comp=Z,110nm,26.4s					
DZM				*e*LR	LR	08 39 58.4
	comp=Z,1μm,23.1s					
WRA	**Warramunga Arr**	**154.97**	**140**	PKP	PKPdf	07 48 17.6 -1.7
	comp=Z,0.3nm,0.9s,baz=272,slow=0.9,SNR=2.7					
WRA				PKPab	PKPab	07 48 45.2 +2.0
	comp=Z,1.4nm,0.8s,baz=223,slow=2.6,SNR=7.3					
WRA	**Warramunga Arr**	**154.97**	**140**	PKIKP	PKPdf	07 48 17.6 -1.7
CTAO	**Charters Tower**	**160.33**	**167**	PFAKE		07 48 40.0 +14
CTAO				LR	LR	
	comp=Z,1μm,22.0s					
HNR	**Honiara**	**167.71**	**226**	PFAKE		07 48 40.0 +7.2
HNR				LR	LR	
	comp=Z,589nm,19.0s					
PMG	**Port Moresby**	**170.68**	**156**	PFAKE		07 48 50.0 +15
PMG				LR	LR	
	comp=Z,1μm,22.0s					

*IDC **16** 07:30:49.9±1.5, 8°.91S×127°.13E, h0km, mb4.2/2, mb1 4.4/5, mb1mx4.0/16, mbtmp4.2/5, ML4.0/3, MS4.0/1, Ms1 4.0/1, ms1mx2.7/19, Error ellipse: s-maj=91.7km s-min=25.4km az=71.0*

*NEIC **16** 07:30:55.4±0.7, 9°.10S×126°.93E, h35km, mb4.3/2, Error ellipse: s-maj=15.6km s-min=10.6km az=58.0*

ISC 16 07:30:56.7±2.7, 9°.2S±0°.1×127°.0E±0°.1, h55km±33km, n22, σ0=93/22, mb4.0/3, MS4.7/2, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.44**	**124**	*e*P	**Pn**	**07 32 30.1**	**+1.1**
	9.5nm,0.4s						
KAKA	**Kakadu**	**6.44**	**124**	*e*Pn	**Pn**	**07 32 29.9**	**+0.9**
	38nm,0.6s						
KNA	**Kununurra**	**6.78**	**165**	*e*P	**Pn**	**07 32 37.0**	**+3.4**
	40nm,0.8s						
KAPI	**Kappang**	**8.24**	**300**	LR	LR	07 36 13.2	
	comp=Z,126nm,18.4s,baz=106,slow=39						
FITZ	**Fitzroy Crossi**	**8.98**	**188**	Pn	**Pn**	**07 33 04.7**	**+1.0**
	0.4nm,0.3s,baz=16,slow=12,SNR=3.3						
FITZ				Sn	**Sn**	**07 34 43.7**	**+0.3**
	5.3nm,0.3s,baz=82,slow=17,SNR=8.9						
FITZ	**Fitzroy Crossi**	**8.98**	**188**	*e*P	**Pn**	**07 33 04.8**	**+1.1**
	15nm,0.4s						
FITZ				*e*S	**Sn**	**07 34 43.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**8.98**	**188**	Pn	**Pn**	**07 33 04.7**	**+1.0**
FITZ				Sn	**Sn**	**07 34 43.7**	**+0.3**
WRA	**Warramunga Arr**	**12.88**	**147**	Pn	**Pn**	**07 33 56.0**	**-1.0**
	1.1nm,0.3s,baz=323,slow=13,SNR=71						
WRA				Sn	Sx	07 36 14.5	
	0.8nm,0.3s,baz=321,slow=22,SNR=7.0						
WRA	**Warramunga Arr**	**12.88**	**147**	Pn	**Pn**	**07 33 56.0**	**-1.0**
WRA				Sn	Sx	07 36 14.5	
WB2	**Warramunga Arr**	**12.89**	**147**	*e*Pn	**Pn**	**07 33 55.8**	**-1.3**
WB2				*e*Sn	Sx	07 36 16.9	
MBWA	**Marble Bar**	**13.81**	**209**	*e*P	**Pn**	**07 34 08.2**	**-1.4**
MBWA				*e*S	Sx	07 36 35.2	
MBWA	**Marble Bar**	**13.81**	**209**	*e*Pn	**Pn**	**07 34 09.1**	**-0.5**
MBWA				*e*Sn	Sx	07 36 37.9	
ASAR	**Alice Springs**	**15.88**	**156**	Pn	**Pn**	**07 34 37.0**	**+0.3**
	1.0nm,0.3s,baz=329,slow=12,SNR=51						
ASAR				Sn	Sx	07 37 25.3	
	0.3nm,0.3s,baz=335,slow=24,SNR=6.2						
COEN	**Coen**	**16.59**	**108**	*e*P	**Pn**	**07 34 45.6**	**-0.1**
	56nm,1.1s						
MEEK	**Meekatharra**	**19.09**	**203**	*e*P	**Pn**	**07 35 21.5**	**+5.3**
STKA	**Stephens Creek**	**26.38**	**151**	P	**P**	**07 36 33.0**	**+5.1**
	2.9nm,1.0s,mb3.8,baz=321,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**68.43**	**329**	P	**P**	**07 41 52.9**	**+0.2**
	1.1nm,0.6s,mb4.1,baz=135,slow=7.8,SNR=6.2						
MKAR	**Makanchi Array**	**68.43**	**329**	P	**P**	**07 41 52.9**	**+0.2**
RAR	**Rarotonga**	**71.22**	**109**	LR	LR	08 09 26.6	
	comp=Z,89nm,18.7s,MS4.0,baz=274,slow=33						
ZALV	**Zalesovo Beam**	**72.22**	**335**	P	**P**	**07 42 15.8**	**0.0**
	2.8nm,0.7s,mb4.3,baz=123,slow=5.5,SNR=8.6						
ZALV	**Zalesovo Beam**	**72.22**	**335**	P	**P**	**07 42 15.8**	**0.0**
ILAR	**Eielson Array**	**96.58**	**25**	LR	LR	08 24 04.0	
	comp=Z,1μm,20.8s,MS5.3,baz=70,slow=33						

*ISCJB **16** 07:31:38.4±1.2, 42°.49N±0°.06×76°.09E±0°.08, h10km, Error ellipse: s-maj=8.7km s-min=7.6km az=39.0*

*NNC **16** 07:31:38.1±1.1, 42°.43N×75°.97E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=16.1km s-min=5.5km az=62.0*

*KNET **16** 07:31:39.3±0.8, 42°.51N×75°.95E, h0km, ml2.1, Error ellipse: s-maj=4.7km s-min=1.9km az=81.0*

ISC 16 07:31:39.6±1.2, 42°.49N±0°.05×76°.01E±0°.07, h10km, n10, σ0=84/15, 5C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**0.52**	**325**	⇓P	**Pg**	**07 31 49.2**	**-0.6**
	18nm,0.2s						
TKM2				⇓S	**Sg**	**07 31 57.2**	**+0.5**
	13nm,0.2s						
TKM2	**Tokmak 2**	**0.52**	**325**	P	**Pg**	**07 31 49.2**	**-0.6**
	54nm,0.1s,SNR=628						
KZA	**Kyzart**	**0.70**	**234**	⇑P	**Pg**	**07 31 52.2**	**-0.9**
	21nm,0.1s,SNR=47						
KZA				⇑S	**Sg**	**07 32 02.8**	**+0.6**
	44nm,0.1s						
KBK	**Karagaybulak**	**0.80**	**282**	⇓P	**Pg**	**07 31 54.5**	**-0.5**
	22nm,0.1s,SNR=15						
KBK				⇓S	**Sg**	**07 32 06.5**	**+1.1**
	108nm,0.1s						
CHMS	**Chumysh**	**1.05**	**299**	⇓P	**Pg**	**07 31 58.6**	**-1.3**
	23nm,0.2s,SNR=33						
CHMS				⇑S	**Sg**	**07 32 13.5**	**-0.1**
	37nm,0.2s						
AAK	**Ala-Archa**	**1.13**	**278**	⇓P	**Pb**	**07 32 00.1**	**-1.1**
	8.1nm,0.1s,SNR=20						
AAK				⇑S	**Sb**	**07 32 15.8**	**0.0**
	45nm,0.2s						
USP	**Ospenovka**	**1.35**	**305**	⇓P	**Pn**	**07 32 03.8**	**-0.7**
	24nm,0.1s,SNR=120						
EKS2	**Erkin-Say**	**1.66**	**277**	⇓P	**Pn**	**07 32 10.2**	**+1.5**
	15nm,0.2s,SNR=27						
KK31	**Karatay Array**	**4.09**	**280**	Pg	**Pb**	**07 32 52.4**	**+0.7**
	0.3nm,0.3s,baz=98,slow=16,SNR=12						
KK31				Lg		07 33 45.7	
	3.8nm,0.4s,baz=96,slow=29,SNR=18						
MK31	**Makanchi Array**	**6.21**	**44**	⇑Pn	**Pn**	**07 33 12.1**	**+0.9**
	0.8nm,0.3s,baz=220,slow=15,SNR=22						

*ISCJB **16** 08:05:13.4±0.1, 26°.59S±0°.03×177°.51W±0°.04, h175km, mb4.7/42, Error ellipse: s-maj=6.1km s-min=2.5km az=30.4*

*IDC **16** 08:05:15.6±0.6, 25°.97S×177°.56W, h178km±5km, mb4.2/14, mb1 4.5/15, mb1mx4.5/17, mbtmp4.3/15, Error ellipse: s-maj=13.7km s-min=11.0km az=165.0*

*NEIC **16** 08:05:18.2±1.2, 25°.99S×177°.64W, h199km±11km, mb4.6/16, Error ellipse: s-maj=9.6km s-min=7.5km az=138.0*

*DJA **16** 08:05:57, 26°.28S×179°.39W, h526km, mb5.2/10*

ISC 16 08:05:15.1±0.2, 26°.54S±0°.04×177°.49W±0°.05, h177km, h177km±3.2km: pP-P, n220, σ0=91/205, mb4.7/42, 36C-43D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.69**	**334**	*e*Pn	**Pn**	**08 07 25.8**	**-4.7**
PUZ	**Puketiti**	**12.05**	**196**	PN	**Pn**	**08 07 57.9**	**-3.1**
PUZ				SN	**Sn**	**08 10 09.9**	**-4.9**
MWZ	**Matawai**	**12.49**	**198**	SN	**Sn**	**08 10 19.7**	**-5.6**
URZ	**Urewera**	**12.54**	**200**	P	**Pn**	**08 08 14.7**	**+7.3**
	2.0nm,0.3s,baz=13,slow=1.8,SNR=6.4						
URZ				S	**Sn**	**08 10 22.6**	**-4.0**
	11nm,0.3s,baz=81,slow=19,SNR=12						
URZ	**Urewera**	**12.54**	**200**	*e*Pn	**Pn**	**08 08 15.5**	**+8.1**
	35nm,0.3s						
URZ				*e*Sn	**Sn**	**08 10 26.3**	**-0.3**
URZ	**Urewera**	**12.54**	**200**	PN	**Pn**	**08 08 07.7**	**+0.3**
URZ				SN	**Sn**	**08 10 20.3**	**-6.3**
KNZ	**Kokohu**	**13.09**	**197**	SN	**Sn**	**08 10 33.7**	**-6.1**
BKZ	**Black Stump Fm**	**13.56**	**200**	*e*PN	**Pn**	**08 08 21.9**	**+1.5**
BKZ				SN	**Sn**	**08 10 43.2**	**-7.9**
AFI	**Afiamalu**	**13.66**	**24**	P	**Pn**	**08 08 07.2**	**-14**
	29nm,0.3s,baz=30,slow=8.1,SNR=33						
AFI				S	Sn	08 10 21.8	-32
	10nm,0.3s,baz=60,slow=20,SNR=6.1						
AFI	**Afiamalu**	**13.66**	**24**	*e*Pn	**Pn**	**08 08 07.3**	**-14**
CKHZ	**Cape Kidnapper**	**13.85**	**198**	SN	**Sn**	**08 10 49.6**	**-8.3**
BHHZ	**Black Hill Sta**	**13.99**	**201**	PN	**Pn**	**08 08 28.0**	**+2.3**
PNHZ	**Pukenui**	**14.34**	**200**	SN	**Sn**	**08 11 00.6**	**-9.0**
BFZ	**Birch Farm**	**15.03**	**199**	PN	**Pn**	**08 08 41.5**	**+2.9**
BFZ				SN	**Sn**	**08 11 15.5**	**-11**
MRZ	**Mangatainoka R**	**15.21**	**200**	PN	**Pn**	**08 08 41.5**	**+0.7**
MRZ				SN	**Sn**	**08 11 18.5**	**-12**
DZM	**Mont Dzumac**	**15.30**	**283**	*e*P	**Pn**	**08 08 45.3**	**+3.3**
OGWZ	**Otaki Gorge**	**15.49**	**201**	PN	**Pn**	**08 08 44.6**	**+0.5**
CAW	**Cannon Point**	**15.78**	**201**	SN	**Sn**	**08 11 33.9**	**-10**
TCW	**Tory Channel**	**16.14**	**203**	PN	**Pn**	**08 08 51.8**	**-0.2**
NNZ	**Nelson**	**16.47**	**205**	PN	**Pn**	**08 08 54.1**	**-2.0**
NNZ				SN	**Sn**	**08 11 50.0**	**-10**
QRZ	**Quartz Range**	**16.48**	**208**	PN	**Pn**	**08 08 57.1**	**+1.0**
QRZ				SN	**Sn**	**08 11 52.6**	**-8.0**
RAR	**Rarotonga**	**17.05**	**76**	P	**Pn**	**08 09 05.1**	**+2.0**
	1.3nm,0.3s,baz=246,slow=12,SNR=2.4						
RAR				S	**S**	**08 12 03.6**	**-7.1**
	1.0nm,0.3s,baz=313,slow=19,SNR=2.9						
THZ	**Tophouse**	**17.12**	**205**	PN	**Pn**	**08 09 02.3**	**-1.5**
THZ				SN	**Sn**	**08 12 03.0**	**-13**
CTZ	**Chatham Island**	**17.17**	**178**	PN	**Pn**	**08 09 07.5**	**+3.1**
CTZ				SN	**Sn**	**08 12 09.2**	**-8.0**
KHZ	**Kahutara**	**17.46**	**203**	*e*P	**Pn**	**08 09 08.8**	**+1.0**
	48nm,0.6s						
KHZ	**Kahutara**	**17.46**	**203**	*e*PN	**Pn**	**08 09 06.3**	**-1.6**
KHZ				SN	**Sn**	**08 12 10.4**	**-14**
DSZ	**Denniston Nort**	**17.54**	**207**	SN	**Sn**	**08 12 12.8**	**-13**
MQZ	**McQueen's Vall**	**18.91**	**203**	SN	**S**	**08 12 41.6**	**-5.9**
RPZ	**Rata Peaks**	**19.50**	**206**	P	**P**	**08 09 28.7**	**+0.2**
	0.4nm,0.3s,baz=156,slow=13,SNR=4.5						
RPZ				S	**S**	**08 12 55.0**	**-4.1**
	1.5nm,0.3s,baz=350,slow=18,SNR=9.4						
FOZ	**Fox Glacier**	**19.93**	**208**	PN	**P**	**08 09 34.2**	**+1.1**
JCZ	**Jackson Bay**	**20.73**	**209**	PN	**P**	**08 09 44.3**	**+2.6**
ARMA	**Armidale**	**27.37**	**255**	*e*P	**P**	**08 10 47.5**	**+3.6**
CNB	**Canberra Magne**	**29.64**	**245**	*e*P	**P**	**08 11 08.1**	**+4.2**
TOO	**Toolangi**	**33.05**	**241**	*e*P	**P**	**08 11 37.3**	**+3.5**
CTA	**Charters Tower**	**33.83**	**273**	*e*P	**P**	**08 11 41.7**	**+1.0**
	50nm,0.6s,mb5.4						
CTAO	**Charters Tower**	**33.83**	**273**	*e*P	**P**	**08 11 41.8**	**+1.1**
	65nm,0.7s,mb5.5						
QLP	**Quilpie**	**34.15**	**261**	*e*P	**P**	**08 11 44.8**	**+1.4**
STKA	**Stephens Creek**	**35.95**	**252**	P	**P**	**08 12 00.1**	**+1.3**
	13nm,0.5s,mb4.8,baz=107,slow=9.1,SNR=53						
STKA				PcP	PcP	08 14 23.0	+1.4
	2.7nm,0.5s,baz=69,slow=8.6,SNR=3.4						
STKA	**Stephens Creek**	**35.95**	**252**	*e*P	**P**	**08 12 00.5**	**+1.8**
	12nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**35.95**	**252**	*e*P	**P**	**08 12 01.2**	**+2.4**
	2.7nm,0.6s,mb4.0						
BBOO	**Buckleboo**	**40.59**	**250**	*e*P	**P**	**08 12 38.3**	**+0.9**
	29nm,0.7s,mb5.0						
ASAR	**Alice Springs**	**43.90**	**263**	P	**P**	**08 13 04.8**	**+0.5**
	11nm,0.4s,mb4.8,baz=96,slow=7.6,SNR=168						
ASAR				pP	pP	08 13 45.1	+2.1
	2.5nm,0.8s,baz=108,slow=7.9,SNR=1.2						
ASAR				PcP	PcP	08 14 47.4	+0.1
	2.2nm,0.6s,baz=110,slow=4.2,SNR=5.2						
ASAR				S	**S**	**08 19 25.0**	**+2.6**
	0.4nm,0.6s,baz=100,slow=15,SNR=3.4						
ASAR				PKiKP	PKiKP	08 21 47.2	-1.0
	0.3nm,0.6s,baz=112,slow=1.4,SNR=3.6						
ASAR	**Alice Springs**	**43.90**	**263**	P	**P**	**08 13 04.8**	**+0.5**
ASAR				pP	pP	08 13 45.1	+2.1
ASAR				PcP	PcP	08 14 47.4	+0.1
ASAR				S	**S**	**08 19 25.0**	**+2.6**
WB2	**Warramunga Arr**	**44.53**	**268**	*e*P	**P**	**08 13 09.1**	**-0.2**
WRA	**Warramunga Arr**	**44.54**	**268**	P	**P**	**08 13 08.8**	**-0.6**
	38nm,0.4s,mb5.4,baz=104,slow=6.2,SNR=244						
WRA				PcP	PcP	08 14 49.8	+0.2
	5.3nm,0.8s,baz=109,slow=3.6,SNR=6.5						
WRA				S	**S**	**08 19 29.5**	**-2.2**
	1.5nm,0.9s,baz=96,slow=15,SNR=9.0						
WRA				PKiKP	PKiKP	08 21 47.5	-1.5
	0.2nm,0.5s,baz=105,slow=0.5,SNR=5.1						
WRA	**Warramunga Arr**	**44.54**	**268**	P	**P**	**08 13 08.8**	**-0.6**
WRA				PcP	PcP	08 14 49.8	+0.2
WRA				S	**S**	**08 19 29.5**	**-2.2**
FORT	**Forrest**	**47.58**	**252**	*e*P	**P**	**08 13 33.1**	**0.0**
	105nm,0.5s,mb5.7						
KAKA	**Kakadu**	**48.83**	**276**	*e*P	**P**	**08 13 41.4**	**-1.4**
	9.4nm,0.5s,mb4.7						
KAKA	**Kakadu**	**48.83**	**276**	P	**P**	**08 13 41.8**	**-1.0**
	288nm25nm,0.6s,mb5.0						
KNA	**Kununurra**	**50.95**	**271**	P	**P**	**08 13 59.4**	**+0.7**
	2μm353nm,0.8s						
SBA	**Scott Base**	**51.91**	**184**	*e*P	**P**	**08 14 11.9**	**+6.9**
	100nm,2.1s,mb5.1						
FITZ	**Fitzroy Crossi**	**52.92**	**267**	*e*P	**P**	**08 14 13.5**	**+0.2**
	38nm,0.5s,mb5.4						
FITZ	**Fitzroy Crossi**	**52.92**	**267**	P	**P**	**08 14 13.4**	**+0.1**
	72nm,0.8s,mb5.4						
KLBR	**Kellerberrin**	**56.10**	**248**	*e*P	**P**	**08 14 36.3**	**+0.2**
	17nm,0.5s,mb5.1						
MEEK	**Meekatharra**	**56.56**	**254**	*e*P	**P**	**08 14 39.0**	**-0.4**
MBWA	**Marble Bar**	**57.18**	**261**	*e*P	**P**	**08 14 43.3**	**-0.5**
MBWA	**Marble Bar**	**57.18**	**261**	*e*P	**P**	**08 14 43.1**	**-0.8**
	23nm,1.1s,mb4.9						
MBWA	**Marble Bar**	**57.18**	**261**	P	**P**	**08 14 44.1**	**+0.3**
	19nm,1.0s,mb4.8						
CASY	**Casey**	**58.76**	**207**	*e*P	**P**	**08 14 57.0**	**+2.9**
CASY	**Casey**	**58.76**	**207**	*e*P	**P**	**08 14 57.0**	**+2.9**
	38nm,0.8s,mb5.3						
LUWI	**Luwuk**	**62.65**	**284**	P	**P**	**08 15 21.8**	**+0.6**
	5μm170nm,0.3s						
BKSI	**Bulukumba**	**62.97**	**278**	P	**P**	**08 15 22.0**	**-1.3**
	40nm,0.6s,mb5.4						
QSPA	**South Pole Qui**	**63.56**	**180**	P	**P**	**08 15 31.1**	**+5.0**
	22nm,0.8s,mb5.0,baz=9.1,slow=4.9,SNR=120						
MJAR	**Matsushiro Arr**	**75.35**	**324**	P	**P**	**08 16 36.3**	**-2.6**
	2.3nm,0.7s,mb3.9,baz=167,slow=6.2,SNR=6.7						
MAW	**Mawson**	**76.07**	**200**	P	**P**	**08 16 46.6**	**+3.9**
	21nm,0.5s,mb5.0,baz=139,slow=10,SNR=164						
MAW	**Mawson**	**76.07**	**200**	*e*P	**P**	**08 16 46.5**	**+3.9**
	19nm,0.5s,mb5.0						
MAW	**Mawson**	**76.07**	**200**	*e*P	**P**	**08 16 45.4**	**+2.8**
	5.1nm,0.5s,mb4.4						
MDSI	**Maura Dua**	**77.57**	**271**	P	**P**	**08 16 50.5**	**-1.5**
	42nm,0.7s,mb5.2						
KSI	**Kapahiang**	**79.36**	**271**	P	**P**	**08 17 01.0**	**-0.8**
	9μm81nm,0.8s,mb5.4						
SYO	**Syowa Base**	**80.97**	**193**	⇓*e*P	**P**	**08 17 10.6**	**+1.2**
KSRS	**Korea Array**	**81.72**	**319**	P	**P**	**08 17 13.0**	**-0.7**
	1.5nm,0.6s,mb3.8,baz=136,slow=6.0,SNR=8.5						
PETK	**Petropavlovsk-**	**82.20**	**345**	P	**P**	**08 17 13.5**	**-2.3**
	1.6nm,0.5s,mb3.9,baz=116,slow=7.2,SNR=4.0						
MAIT	**Maitri**	**82.74**	**183**	*e*P	**P**	**08 17 21.6**	**+3.0**
ISA	**Isabella**	**83.25**	**45**	*e*P	**P**	**08 17 20.9**	**-0.7**
	9.0nm,1.4s,mb4.3						
MNSI	**Mandailing Nat**	**84.02**	**274**	P	**P**	**08 17 24.8**	**-1.4**
	5μm20nm,0.4s,mb5.2						
GSC	**Goldstone**	**84.08**	**46**	*e*P	**P**	**08 17 25.3**	**-0.6**
	6.6nm,1.2s,mb4.2						
NJ2	**Nanjing**	**84.09**	**310**	*e*P	**P**	**08 17 26.3**	**+0.2**
NJ2				pP	pP	08 18 12.9	+3.2
NJ2				sP	sP	08 18 32.8	+4.5
NJ2				SKS		08 27 25.5	
NJ2				S	S	08 27 29.0	-6.8
NJ2				sS	sS	08 28 53.0	+1.3
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,70nm,6.2s						
NJ2				LR	LR		
	comp=N,170nm,12.3s						
NJ2				LR	LR		
	comp=E,500nm,15.0s						
NJ2				LR	LR		
	comp=Z,9μm,12.5s						
MPMC	**Manual Prospec**	**84.12**	**45**	⇓P	**P**	**08 17 26.1**	**0.0**
	baz=84						
IRM	**Iron Mountain**	**84.47**	**48**	⇓P	**P**	**08 17 28.0**	**+0.1**
	baz=84						
WAKR	**Walker**	**84.47**	**42**	*e*P	**P**	**08 17 27.7**	**-0.1**
WAKR				*e*pP	pP	08 18 08.1	-3.4
113A	**Mohawk Valley,**	**84.56**	**49**	⇓P	**P**	**08 17 27.6**	**-0.8**
	baz=84						
WCN	**Washoe City**	**84.80**	**41**	⇓P	**P**	**08 17 29.2**	**-0.3**
	baz=85						
PLCA	**Paso Flores**	**84.81**	**133**	P	**P**	**08 17 32.0**	**+2.3**
	comp=Z,2.3nm,0.6s,mb4.1,baz=230,slow=6.2,SNR=10						
Z13A	**Yuma Proving G**	**84.89**	**49**	⇓P	**P**	**08 17 30.0**	**-0.1**
	baz=85						
NVAR	**Mina Array Bea**	**85.11**	**43**	P	**P**	**08 17 30.2**	**-0.8**
	comp=Z,3.0nm,0.7s,mb4.1,baz=220,slow=8.2,SNR=20						
NVAR				pP	pP	08 18 13.0	-1.7
	comp=Z,1.7nm,0.8s,baz=217,slow=8.0,SNR=3.7						
NVAR				PKPPKP		08 43 47.0	
	comp=Z,0.5nm,0.8s,baz=117,slow=1.4,SNR=3.7						
X13A	**Yucca**	**85.60**	**48**	⇓P	**P**	**08 17 33.7**	**+0.2**
	baz=86						
MDJ	**Mudanjiang**	**85.71**	**325**	P	**P**	**08 17 33.8**	**0.0**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,100nm,5.9s						
Y14A	**Wickenburg**	**85.77**	**49**	⇑P	**P**	**08 17 34.2**	**-0.2**
	baz=86						
X14A	**Yava**	**86.15**	**48**	⇓P	**P**	**08 17 36.1**	**-0.2**
	baz=86						
Y15A	**Casa Rosa Ranc**	**86.23**	**49**	⇓P	**P**	**08 17 36.5**	**-0.2**
	baz=86						
U12A	**Valley of Fire**	**86.23**	**46**	⇓P	**P**	**08 17 36.8**	**+0.2**
	baz=86						
V13A	**Grand Canyon W**	**86.24**	**47**	⇓P	**P**	**08 17 36.6**	**0.0**
	baz=86						
T11A	**Corn Creek, Al**	**86.28**	**45**	⇑P	**P**	**08 17 36.3**	**-0.5**
	baz=86						
TUC	**Tucson**	**86.35**	**51**	*e*P	**P**	**08 17 37.3**	**0.0**
	comp=Z,3.8nm,0.9s,mb4.1						
318A	**Bisbee**	**86.42**	**52**	⇑P	**P**	**08 17 38.1**	**+0.4**
	baz=86,SNR=5.2						
Z16A	**Peralta Trail,**	**86.49**	**50**	⇑P	**P**	**08 17 38.5**	**+0.6**
	baz=86						
U13A	**Pakoon Wash**	**86.59**	**46**	⇑P	**P**	**08 17 38.1**	**-0.2**
	baz=86						
218A	**Dragoon**	**86.68**	**52**	⇓P	**P**	**08 17 39.7**	**+0.8**
	baz=87,SNR=6.6						
V14A	**Boquillas Ranc**	**86.69**	**47**	⇑P	**P**	**08 17 39.0**	**+0.2**
	baz=87						
S12A	**Delamar Landin**	**86.74**	**45**	⇓P	**P**	**08 17 39.2**	**+0.2**
	baz=87						
Y16A	**Circle Bar Ran**	**86.77**	**50**	⇓P	**P**	**08 17 39.7**	**+0.5**
	baz=87,SNR=7.7						
319A	**Douglas**	**86.89**	**53**	⇑P	**P**	**08 17 40.5**	**+0.6**
	baz=87						
T13A	**Saint George**	**86.99**	**46**	⇑P	**P**	**08 17 40.3**	**+0.1**
	baz=87						
Y17A	**Roosevelt**	**87.10**	**50**	⇓P	**P**	**08 17 40.7**	**-0.2**
	baz=87						
X16A	**Lo Mia Camp, P**	**87.10**	**49**	⇓P	**P**	**08 17 41.3**	**+0.5**
	baz=87,SNR=5.1						
U14A	**Mt Trumbull**	**87.10**	**47**	⇑P	**P**	**08 17 41.3**	**+0.5**
	baz=87						
118A	**Homack Ranch,**	**87.11**	**51**	⇑P	**P**	**08 17 41.8**	**+0.9**
	baz=87						
TPTI		**87.26**	**275**	P	**P**	**08 17 41.4**	**-0.8**
CN2	**Changchun**	**87.35**	**323**	*e*P	**P**	**08 17 43

HLID				*e*pP	pP	08 18 39.9	-1.2
OD2	**Odessa Site #2**	**90.61**	**36**	*e*P	**P**	**08 17 56.3**	**-0.7**
U21A	**Nageezi**	**90.78**	**49**	⇑P	**P**	**08 17 58.3**	**+0.2**
	baz=91,SNR=5.6						
O17A	**Robinson Place**	**90.85**	**45**	⇑P	**P**	**08 17 58.3**	**0.0**
	baz=91						
L15A	**Malad City**	**90.87**	**43**	⇓P	**P**	**08 17 57.7**	**-0.6**
	baz=91						
427A	**Hayter Ranch,**	**90.89**	**56**	⇑P	**P**	**08 17 58.8**	**+0.1**
	baz=91						
125A	**Gardner Draw,**	**90.90**	**54**	⇓P	**P**	**08 17 58.5**	**-0.2**
	baz=91						
H12A	**Diamond D Ranc**	**90.93**	**39**	P	**P**	**08 17 58.1**	**-0.4**
	baz=91,SNR=9.5						
J14A	**Carey**	**90.97**	**41**	⇓P	**P**	**08 17 58.6**	**-0.2**
	baz=91						
Y24A	**Capitan**	**91.00**	**52**	P	**P**	**08 17 59.5**	**+0.4**
	baz=91,SNR=6.9						
G12A	**Big Creek, Yel**	**91.02**	**39**	P	**P**	**08 17 58.4**	**-0.6**
	baz=91,SNR=5.5						
CFAA	**Coronel Fontan**	**91.16**	**126**	P	**P**	**08 18 01.4**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=229,slow=11,SNR=5.0						
Z25A	**Roswell**	**91.17**	**53**	⇑P	**P**	**08 17 60.0**	**0.0**
	baz=91						
K15A	**Arbon**	**91.18**	**42**	⇓P	**P**	**08 17 59.7**	**-0.1**
	baz=91						
N17A	**Moffit Pass**	**91.22**	**44**	⇓P	**P**	**08 18 00.0**	**0.0**
	baz=91						
I14A	**Mackay**	**91.37**	**41**	⇓P	**P**	**08 18 00.5**	**-0.1**
	baz=91						
F12A	**Elk City**	**91.44**	**38**	P	**P**	**08 18 00.1**	**-0.8**
	baz=91,SNR=7.1						
Y25A	**Mesa, Roswell**	**91.52**	**53**	⇑P	**P**	**08 18 01.4**	**-0.2**
	baz=92						
G13A	**Cobalt**	**91.61**	**39**	⇓P	**P**	**08 18 00.9**	**-0.8**
	baz=92						
J15A	**Blackfoot**	**91.66**	**41**	⇓P	**P**	**08 18 02.2**	**+0.3**
	baz=92						
M18A	**Lyman**	**91.97**	**44**	⇑P	**P**	**08 18 03.6**	**+0.2**
	baz=92						
F13A	**Darby**	**91.98**	**39**	⇓P	**P**	**08 18 02.3**	**-1.0**
	baz=92,SNR=5.3						
S22A	**4UR Ranch, Cre**	**92.05**	**48**	⇑P	**P**	**08 18 03.6**	**-0.3**
	baz=92						
V24A	**Rampart Ranch,**	**92.05**	**51**	⇑P	**P**	**08 18 04.0**	**0.0**
	baz=92						
J16A	**Bone**	**92.07**	**42**	⇑P	**P**	**08 18 04.0**	**+0.1**
	baz=92						
KMI	**Kunming**	**92.49**	**297**	P	pP	08 18 36.3	-14
KMI				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.5						
KMI	**Kunming**	**92.49**	**297**	P	**P**	**08 18 07.9**	**+1.7**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
I16A	**Newdale**	**92.49**	**41**	⇓P	**P**	**08 18 05.9**	**+0.1**
	baz=92						
CMAR	**Chiang Mai Arr**	**92.55**	**289**	P	**P**	**08 18 07.8**	**+1.2**
	comp=Z,4.0nm,0.8s,mb4.6,baz=118,slow=3.4,SNR=16						
Y27A	**Causey**	**92.60**	**53**	⇑P	**P**	**08 18 06.3**	**-0.3**
	baz=92						
G15A	**Dillon**	**92.65**	**40**	⇑P	**P**	**08 18 06.0**	**-0.5**
	baz=92						
K18A	**Toltan Ranch,**	**92.66**	**43**	P	**P**	**08 18 06.5**	**-0.2**
	baz=93,SNR=5.1						
J17A	**Brown Place, J**	**92.66**	**42**	⇓P	**P**	**08 18 06.0**	**-0.6**
	baz=93						
SNOW	**Snow King Moun**	**92.69**	**42**	*e*P	**P**	**08 18 06.4**	**-0.4**
	comp=Z,4.7nm,1.0s,mb4.6						
SNOW				*e*pP	pP	08 18 47.7	-3.2
CHTO	**Chiang Mai**	**92.71**	**290**	*e*P	**P**	**08 18 08.4**	**+1.0**
	comp=Z,6.6nm,0.8s,mb4.8						
J18A	**Kendall Valley**	**92.99**	**43**	P	**P**	**08 18 07.7**	**-0.4**
	baz=93,SNR=9.1						
BW06	**Boulder Array**	**93.03**	**43**	*e*P	**P**	**08 18 07.0**	**-1.2**
	comp=Z,1.2nm,0.9s,mb4.0						
BW06				*e*pP	pP	08 18 50.1	-2.4
PDAR	**Pinedale Array**	**93.03**	**43**	P	**P**	**08 18 06.9**	**-1.4**
	comp=Z,1.6nm,0.7s,mb4.3,baz=224,slow=2.5,SNR=17						
PDAR				pP	pP	08 18 50.7	-1.8
	comp=Z,1.3nm,0.9s,baz=225,slow=1.9,SNR=5.8						
PDAR				PKKP	PKKPbc	08 35 18.6	+0.4
	comp=Z,0.3nm,0.8s,baz=73,slow=4.0,SNR=3.5						
H16A	**Russell Place,**	**93.11**	**41**	⇓P	**P**	**08 18 08.6**	**0.0**
	baz=93						
HHC	**Hu-ho-hao-te**	**93.88**	**314**	*e*P	**P**	**08 18 12.6**	**+0.3**
HHC				pP	pP	08 19 00.1	+3.6
HHC				sP	sP	08 19 20.4	+5.4
HHC				PP	PP	08 22 03.0	+2.2
HHC				SKS		08 28 27.1	
HHC				S	S	08 29 01.6	-5.0
HHC				sS	sS	08 30 25.4	+1.3
HHC				SS	SS	08 35 28.3	-2.6
HHC				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.1						
HHC				pmax	pmax		
	comp=Z,75nm,6.2s						
HHC				LR	LR		
	comp=N,270nm,18.8s						
HHC				LR	LR		
	comp=E,290nm,17.1s						
HHC				LR	LR		
	comp=Z,560nm,18.4s						
ILAR	**Eielson Array**	**94.07**	**13**	P	**P**	**08 18 10.1**	**-2.5**
	comp=Z,0.7nm,0.7s,mb3.9,baz=214,slow=5.2,SNR=8.8						
CD2	**Chengdu**	**94.41**	**302**	*e*P	**P**	**08 18 15.0**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
CD2				pmax	pmax		
	comp=Z,20nm,5.9s						
MKAR	**Makanchi Array**	**115.60**	**311**	PKP	PKPdf	08 23 34.3	-1.5
	comp=Z,2.0nm,0.7s,baz=132,slow=1.0,SNR=14						
MKAR				PKKPbc	PKKPbc	08 34 10.4	+0.3
	comp=Z,0.3nm,0.5s,baz=245,slow=3.0,SNR=3.9						
BOSA	**Boshof**	**120.97**	**203**	PKP	PKPdf	08 23 48.5	+1.6
	comp=Z,2.9nm,0.8s,baz=161,slow=2.0,SNR=5.2						
KBL	**Kabul**	**123.04**	**295**	*e*PKPdf	PKPdf	08 23 50.8	+0.3
ARU	**Arti**	**130.35**	**323**	*e*PKPdf	PKPdf	08 24 04.0	+0.3
KEV	**Kevo**	**134.46**	**348**	*e*p	PKPdf	08 24 09.2	-2.0
	comp=Z,0.4nm,0.4s						
ARCES	**ARCESS Array B**	**134.91**	**349**	PKP	PKPdf	08 24 10.8	-1.2
	comp=Z,3.4nm,0.6s,baz=48,slow=1.3,SNR=18						
ARCES				pPKP	pPKPdf	08 24 56.5	-1.8
	comp=Z,2.0nm,0.7s,baz=26,slow=3.4,SNR=2.6						
JOF	**Joensuu**	**138.97**	**340**	*e*p	PKPpre	08 24 08.0	
	comp=Z,1.9nm,0.4s						
KAF	**Kangasniemi**	**141.04**	**342**	*e*p	PKPpre	08 24 08.8	
	comp=Z,1.4nm,0.4s						
FINES	**FINESS Array B**	**141.65**	**342**	PKhKP	PKPpre	08 24 17.3	
	comp=Z,1.3nm,0.4s,baz=38,slow=4.0,SNR=14						
NOA	**NORSAR Array B**	**145.00**	**353**	PKP	PKPdf	08 24 28.3	-2.2
	comp=Z,19nm,0.8s,baz=21,slow=2.3,SNR=54						
NOA				pPKP	pPKPdf	08 25 14.8	-2.1
	comp=Z,2.8nm,0.8s,baz=13,slow=2.4,SNR=2.6						
NAO01	**NORSAR Array S**	**145.23**	**353**	*e*PKPdf	PKPdf	08 24 29.4	-1.5
IZAR	**Zarasai**	**146.12**	**336**	*e*P	PKPdf	08 24 30.6	-2.0
IZAR				AMB	AMB	08 24 34.7	
	comp=Z,26nm,1.0s						
IDID	**Didziasalis**	**146.26**	**335**	*e*P	PKPdf	08 24 31.7	-1.1
IDID				AMB	AMB	08 24 35.0	
	comp=Z,22nm,0.9s						
ISAL	**Salakas**	**146.30**	**336**	*e*P	PKPdf	08 24 30.9	-1.9
ISAL				AMB	AMB	08 24 34.3	
	comp=Z,9.4nm,1.1s						
IIGN	**Ignalina**	**146.43**	**335**	*e*P	PKPdf	08 24 31.7	-1.4
IIGN				AMB	AMB	08 24 34.7	
	comp=Z,16nm,0.8s						
NACGM	**Naroch**	**146.56**	**334**	*e*	PKPdf	08 24 31.0	-2.3
AKASG	**Malin Array Be**	**148.41**	**327**	PKPbc	PKPbc	08 24 38.8	-1.5
	comp=Z,8.6nm,0.6s,baz=44,slow=3.9,SNR=34						
AKASG				pPKPbc	pPKPbc	08 25 25.5	-0.7
	comp=Z,4.2nm,0.7s,baz=40,slow=3.4,SNR=3.2						
KIEV	**Kiev**	**148.42**	**327**	*e*PKPbc	PKPbc	08 24 38.8	-1.5
BR131	**Keskin Array S**	**150.96**	**305**	*e*PKPbc	PKPbc	08 24 46.7	-0.2
BR131				*e*PKPab	PKPab	08 24 55.0	+0.1
BRTR	**Keskin Array B**	**150.96**	**305**	PKPbc	PKPbc	08 24 46.6	-0.3
	comp=Z,9.0nm,0.7s,baz=137,slow=3.7,SNR=28						
BRTR				PKPab	PKPab	08 24 54.5	-0.5
	comp=Z,3.9nm,0.3s,baz=104,slow=3.5,SNR=13						
CSS	**Prodhromos**	**152.30**	**295**	*e*PKPbc	PKPbc	08 24 50.1	+0.1
BUR08	**Bucovina Ar. S**	**152.41**	**326**	*e*PKPbc	PKPbc	08 24 49.7	-0.2
OJC	**Ojcow**	**152.88**	**335**	*e*PX	PKPbc	08 24 50.5	-0.3
CRVS	**Cervenica-Dubn**	**153.25**	**332**	*e*PKP	PKPdf	08 24 46.1	+2.1
CLL	**Collm**	**154.01**	**345**	*i* PKPbc	PKPbc	08 24 52.6	-0.6
	comp=Z,7.0nm,0.8s						
CLL				*i* PKPab	PKPab	08 25 05.6	-1.7
	comp=Z,6.0nm,0.8s						
CLL				*i* pPKPbc	pPKPbc	08 25 37.5	-1.9
VYHS	**Vyhne**	**154.65**	**334**	*e*PKP	PKPbc	08 24 55.2	+0.5
VYHS				*e*		08 25 09.6	
GERES	**GERESS Array B**	**156.09**	**342**	PKPab	PKPab	08 25 14.5	-1.8
	comp=Z,0.3nm,0.3s,baz=38,slow=5.0,SNR=5.1						
LIC	**Lamto**	**158.56**	**159**	*e*PKP1	PKPab	08 25 29.7	+1.9
	comp=Z,32nm,1.0s						
KIC	**Kosan Boka**	**158.78**	**160**	*e*PKP1	PKPab	08 25 30.8	+2.0
	comp=Z,21nm,0.7s						
TIC	**Toumodi**	**158.96**	**159**	*e*PKP1	PKPab	08 25 30.5	+0.9
	comp=Z,4.8nm,0.2s						
DBIC	**Dimbokro**	**159.03**	**159**	PKPab	PKPab	08 25 32.0	+2.1
	comp=Z,1.4nm,0.6s,baz=152,slow=5.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**166.66**	**177**	PKP	PKPdf	08 24 59.8	-0.2
	comp=Z,1.8nm,0.6s,baz=180,slow=1.4,SNR=14						
TORD				PKPab	PKPab	08 26 05.8	+2.6
	comp=Z,3.2nm,0.9s,baz=187,slow=3.5,SNR=14						

IDC 16 08:05:46.2±1.3, 13°.54S×76°.89W, h0km, mb3.6/3, mb1 3.7/6, mb1mx3.6/19, mbtmp3.5/6, ML3.2/3, Error ellipse: s-maj=37.6km s-min=13.2km az=78.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.55**	**2**	Pg	Pg	08 06 15.0	-0.9
	41nm,0.3s,baz=186,slow=15,SNR=79						
NNA				Lg		08 06 35.4	
	209nm,0.3s,baz=292,slow=19,SNR=19						
ATAH	**Atahualpa**	**6.54**	**347**	Pn	Pn	08 07 26.2	+2.5
	0.5nm,0.3s,baz=165,slow=18,SNR=2.1						
ATAH				Sn	Sn	08 08 55.7	+17
	0.5nm,0.3s,baz=49,slow=19,SNR=3.8						
LPAZ	**La Paz**	**8.90**	**109**	Pn	Pn	08 07 58.2	+2.1
	0.5nm,0.3s,baz=310,slow=13,SNR=14						
LPAZ				Sn	Sn	08 09 46.6	+9.5
	baz=180,slow=19,SNR=3.1						
CFAA	**Coronel Fontan**	**19.66**	**158**	P	Pn	08 10 18.8	+0.8
	0.0nm,0.3s,baz=345,slow=9.9,SNR=7.3						
CPUP	**Villa Florida**	**22.32**	**128**	P	P	08 10 45.8	+0.2
	1.7nm,0.9s,baz=276,slow=10.0,SNR=3.1						
TXAR	**Lajitas Array**	**49.85**	**329**	P	P	08 14 41.2	-0.1
	0.2nm,0.7s,baz=159,slow=11,SNR=2.5						
DBIC	**Dimbokro**	**74.27**	**79**	P	P	08 17 31.2	+5.2
	1.4nm,0.6s,baz=232,slow=5.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**82.25**	**75**	P	P	08 18 08.7	-1.4
	2.7nm,0.9s,baz=267,slow=5.4,SNR=9.4						
WRA	**Warramunga Arr**	**134.71**	**223**	PKP	PKPdf	08 25 06.7	-1.0
	0.3nm,0.7s,baz=152,slow=1.3,SNR=3.1						
SONM	**Songino Array**	**145.70**	**356**	PKPbc	PKPbc	08 25 26.3	-0.8
	0.9nm,0.7s,baz=22,slow=1.6,SNR=5.6						

IDC 16 08:11:47.8±2.7, 13°.17S×76°.41W, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.4/20, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=76.7km s-min=15.2km az=57.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.25**	**340**	Pg	Pg	08 12 09.8	-1.8
	17nm,0.3s,baz=160,slow=18,SNR=34						
NNA				Lg		08 12 29.7	
	49nm,0.3s,baz=105,slow=18,SNR=16						
ATAH	**Atahualpa**	**6.30**	**342**	Pn	Pn	08 13 21.1	-0.9
	0.4nm,0.3s,baz=180,slow=7.1,SNR=2.4						
ATAH				Sn	Sn	08 14 34.9	+0.1
	0.5nm,0.3s,baz=193,slow=18,SNR=2.3						
LPAZ	**La Paz**	**8.59**	**112**	Pn	Pn	08 13 55.4	+2.0
	0.2nm,0.3s,baz=290,slow=15,SNR=8.1						
LPAZ				Sn	Sn	08 15 38.3	+7.1
	0.0nm,0.3s,baz=180,slow=20,SNR=1.7						
TXAR	**Lajitas Array**	**49.78**	**328**	P	P	08 20 43.7	+1.4
	0.3nm,0.8s,baz=144,slow=9.2,SNR=2.7						
TORD	**Torodi Ar. Bea**	**81.70**	**74**	P	P	08 24 08.5	-0.2
	0.3nm,0.8s,baz=242,slow=5.5,SNR=2.4						

*IDC **16** 08:27:27.4±0.9, 54°.06N×163°.82W, h0km, mb3.8/15, mb1 4.0/17, mb1mx3.9/29, mbtmp3.8/17, ML3.2/2, Error ellipse: s-maj=24.6km s-min=14.5km az=167.0*
*NEIC **16** 08:27:30.9, 53°.92N×163°.53W, h17km, ML3.7(PMR), ML3.6(AEIC), After AEIC.*
*ISCJB **16** 08:27:32.8±0.9, 54°.2N±0°.1×163°.61W±0°.10, h54km±7km, mb3.8/14, Error ellipse: s-maj=18.9km s-min=7.1km az=159.7*

ISC 16 08:27:33.8±0.8, 54°.2N±0°.1×163°.62W±0°.10, h44km±7km, n26, σ1s11/28, mb3.8/14, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	**Akutan**	**1.27**	**268**	*e*P	**Pn**	**08 27 54.2**	**-0.8**
UNV	**Unalaska Valle**	**1.74**	**259**	P	**Pn**	**08 28 00.3**	**-1.2**
UNV				S	**Sn**	**08 28 23.1**	**+0.7**
SDPT	**Sand Point**	**2.15**	**56**	*e*P	**Pn**	**08 28 08.5**	**+1.4**
NIKO	**Nikolski**	**3.35**	**251**	P	**Pn**	**08 28 23.5**	**-0.2**
CHGN	**Chignik**	**3.65**	**53**	*e*P	**Pn**	**08 28 28.6**	**+1.0**
SPIA	**Saint Paul Isl**	**4.79**	**311**	P	**Pn**	**08 28 46.0**	**+2.7**
KDAK	**Kodiak Island**	**7.15**	**55**	Pn	**Pn**	**08 29 15.0**	**-0.7**
	1.1nm,0.3s,baz=249,slow=8.4,SNR=7.7						
KDAK				Sn	**Sn**	**08 30 33.1**	**-2.4**
	0.5nm,0.3s,baz=180,slow=20,SNR=2.1						
TTA	**Tatalina**	**9.60**	**21**	*e*P	**Pn**	**08 29 53.8**	**+4.6**
ILAR	**Eielson Array**	**13.52**	**32**	Pn	**Pn**	**08 30 42.0**	**-0.7**
	0.0nm,0.3s,baz=225,slow=13,SNR=2.9						
INK	**Inuvik**	**19.92**	**33**	P	**Pn**	**08 32 01.1**	**-2.2**
	2.2nm,1.1s,baz=239,slow=5.9,SNR=13						
PETK	**Petropavlovsk-**	**22.76**	**283**	P	**P**	**08 32 31.1**	**-0.9**
	1.0nm,0.4s,mb3.6,baz=104,slow=12,SNR=5.6						
YKA	**Yellowknife Ar**	**26.41**	**52**	P	**P**	**08 33 08.2**	**+2.4**
	0.8nm,0.7s,mb3.4,baz=271,slow=9.2,SNR=3.7						
NVAR	**Mina Array Bea**	**34.37**	**98**	P	**P**	**08 34 17.5**	**+1.2**
	0.7nm,0.7s,mb3.7,baz=307,slow=8.9,SNR=6.8						
KSRS	**Korea Array**	**48.57**	**279**	P	**P**	**08 36 12.3**	**-0.2**
	0.8nm,0.8s,mb3.8,baz=58,slow=7.9,SNR=4.3						
TXAR	**Lajitas Array**	**49.36**	**95**	P	**P**	**08 36 18.9**	**+0.3**
	0.4nm,0.7s,mb3.5,baz=307,slow=7.5,SNR=5.3						
SONM	**Songino Array**	**53.27**	**301**	P	**P**	**08 36 48.1**	**+0.5**
	0.4nm,0.5s,mb3.6,baz=33,slow=9.0,SNR=2.9						
SONM				PcP	PcP	08 37 55.9	+1.1
	0.3nm,0.5s,baz=34,slow=2.8,SNR=2.2						
SONM	**Songino Array**	**53.27**	**303**	P	**P**	**08 36 48.1**	**+0.5**
SONM				PcP	PcP	08 37 55.9	+1.1
ARCES	**ARCESS Array B**	**56.39**	**356**	P	**P**	**08 37 10.0**	**+0.1**
	1.7nm,0.8s,mb4.1,baz=12,slow=9.2,SNR=6.0						
ARCES				PcP	PcP	08 38 06.2	-0.2
	2.1nm,0.8s,baz=28,slow=4.1,SNR=3.4						
ZALV	**Zalesovo Beam**	**58.33**	**320**	P	**P**	**08 37 24.3**	**+0.5**
	0.5nm,0.5s,mb3.8,baz=23,slow=4.8,SNR=3.0						
ZALV				PcP	PcP	08 38 14.9	+0.6
	0.8nm,0.5s,baz=35,slow=5.3,SNR=3.0						
FINES	**FINESS Array B**	**64.44**	**355**	P	**P**	**08 38 04.9**	**0.0**
	2.2nm,0.6s,mb4.3,baz=12,slow=8.9,SNR=6.1						
MKAR	**Makanchi Array**	**64.96**	**316**	P	**P**	**08 38 08.5**	**0.0**
	0.7nm,0.5s,mb3.9,baz=42,slow=6.0,SNR=10						
NB2	**NORSAR Subarra**	**65.03**	**3**	P	**P**	**08 38 09.2**	**+0.5**
	comp=Z,1.0nm,0.7s,mb4.0,baz=358,slow=6.5						
NOA	**NORSAR Array B**	**65.03**	**3**	P	**P**	**08 38 08.9**	**+0.2**
	comp=Z,1.3nm,0.7s,mb4.1,baz=357,slow=6.6,SNR=4.8						
AKASG	**Malin Array Be**	**74.91**	**352**	P	**P**	**08 39 08.6**	**-0.9**
	comp=Z,1.3nm,0.5s,mb4.1,baz=10,slow=5.5,SNR=2.9						
CMAR	**Chiang Mai Arr**	**79.49**	**287**	P	**P**	**08 39 36.0**	**+0.3**
	comp=Z,0.4nm,0.3s,mb3.8,baz=25,slow=5.3,SNR=4.3						
WRA	**Warramunga Arr**	**90.87**	**236**	P	**P**	**08 40 30.8**	**-1.6**
	comp=Z,0.2nm,0.8s,mb3.5,baz=32,slow=5.4,SNR=4.1						

*CSEM **16** 08:51:38.5, 36°.25N×37°.12E, h7km, MD3.0, After DDA*

DDA 16 08:51:38.5, 36°.25N×37°.12E, h7km±7km, Md3.0, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COBT	**Iskenderun**	**0.75**	**291**	*i* P	Pg	08 51 51.7	-1.1
COBT	**Iskenderun**	**0.75**	**291**	*i* P	Pg	08 51 51.7	-1.1
YAYL	**Yayladag**	**0.85**	**255**	*i* P	Pg	08 51 56.0	+1.3
YAYL				*i* S	Sg	08 52 08.5	+2.7
YAYL	**Yayladag**	**0.85**	**255**	*i* P	Pg	08 51 56.0	+1.2
YAYL				*i* S	Sg	08 52 08.5	+2.7
GZT	**Gaziantep**	**1.16**	**18**	*i* P	Pg	08 52 01.3	+0.6
GZT				*i* S	Sg	08 52 16.8	+1.1

*CSEM **16** 08:52:01.8±0.3, 38°.55N×35°.22E, h5km, MD3.0, Error ellipse: s-maj=7.4km s-min=6.5km az=36.0*

*ISCJB **16** 08:52:02.3±0.9, 38°.54N±0°.04×35°.07E±0°.05, h6km±7km, Error ellipse: s-maj=7.9km s-min=5.1km az=136.7*
*ISK **16** 08:52:02.2, 38°.56N×35°.11E, h10km, MD3.0*

ISC 16 08:52:03.0±0.8, 38°.56N±0°.04×35°.14E±0°.05, h12km±6km, n33, σ0s85/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVNT	**Avonos**	**0.31**	**315**	*i* P	**Pg**	**08 52 09.9**	**+0.5**
AVNT	**Avonos**	**0.31**	**315**	*i* P	**Pg**	**08 52 09.9**	**+0.5**
PINB	**Pinarbasi**	**1.00**	**83**	*i* P	**Pb**	**08 52 21.4**	**-0.8**
PINB	**Pinarbasi**	**1.00**	**83**	*i* P	**Pb**	**08 52 21.4**	**-0.8**
YOZ	**Yozgat**	**1.09**	**7**	*e*PN	**Pg**	**08 52 24.0**	**0.0**
YOZ	**Yozgat**	**1.09**	**7**	*e*Pn	**Pg**	**08 52 24.0**	**0.0**
KOZT	**Kozan**	**1.21**	**153**	*e*PN	**Pn**	**08 52 25.2**	**-0.4**
KOZT				*e*SN	**Sn**	**08 52 43.5**	**+1.7**
CDAG	**Cicekdag**	**1.22**	**331**	*i* P	**Pn**	**08 52 26.0**	**+0.2**
CDAG				*i* S	**Sb**	**08 52 42.4**	**+0.7**
CDAG	**Cicekdag**	**1.22**	**331**	*i* P	**Pn**	**08 52 26.0**	**+0.2**
CDAG				*i* S	**Sb**	**08 52 42.4**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.23**	**84**	*e*PG	**Pn**	**08 52 22.3**	**-3.6**
SARI				*e*SG	**Sn**	**08 52 37.2**	**-5.2**
SARI	**SarD1z-Kayseri**	**1.23**	**84**	*e*Pg	**Pn**	**08 52 22.3**	**-3.6**
SARI				*e*Sg	**Sn**	**08 52 37.2**	**-5.2**
KARA	**Karaisali**	**1.30**	**183**	*e*PN	**Pn**	**08 52 26.9**	**0.0**
KARA	**Karaisali**	**1.30**	**183**	*e*Pn	**Pn**	**08 52 26.9**	**0.0**
GULE	**Gulek**	**1.30**	**193**	*i* P	**Pn**	**08 52 26.0**	**-1.0**
GULE	**Gulek**	**1.30**	**193**	*i* P	**Pn**	**08 52 26.0**	**-1.0**
GULE	**Gulek**	**1.30**	**193**	*i* P	**Pn**	**08 52 26.0**	**-1.0**
SULT	**Sultanhani-AKS**	**1.33**	**255**	*e*PN	**Pn**	**08 52 27.0**	**-0.3**
SULT	**Sultanhani-AKS**	**1.33**	**255**	*e*Pn	**Pn**	**08 52 27.0**	**-0.3**
KAMT	**Kaman**	**1.38**	**306**	*e*PN	**Pn**	**08 52 28.5**	**+0.5**
KAMT				*e*SN	**Sn**	**08 52 45.9**	**-0.1**
KAMT	**Kaman**	**1.38**	**306**	*e*Pn	**Pn**	**08 52 28.5**	**+0.5**
KAMT				*e*Sn	**Sn**	**08 52 45.9**	**-0.2**
MERS	**Mersin**	**1.76**	**196**	*e*PN	**Pn**	**08 52 34.1**	**+0.9**
MERS	**Mersin**	**1.76**	**196**	*e*Pn	**Pn**	**08 52 34.1**	**+0.9**
SVSK	**Karacayir**	**1.98**	**46**	*e*PN	**Pn**	**08 52 36.7**	**+0.4**
SVSK	**Karacayir**	**1.98**	**46**	*e*Pn	**Pn**	**08 52 36.7**	**+0.4**
ESKT	**Eskisehir**	**3.48**	**287**	*i* P	**Sn**	**08 53 38.3**	**+0.4**
KHAL	**Karahalli**	**4.44**	**269**	*i* P	Px	08 53 44.1	
KHAL	**Karahalli**	**4.44**	**269**	*i* S	**Sn**	**08 54 01.2**	**-0.4**
GDZ	**Gediz**	**4.45**	**279**	*i* P	**Pg**	**08 53 29.7**	**+1.4**
ULDT	**Uludag**	**4.92**	**291**	*i* P	**Pb**	**08 53 29.1**	**+0.2**
DEMI	**Demirci**	**5.04**	**278**	*i* P	**Pg**	**08 53 35.5**	**-4.1**
BUY	**Buyukada**	**5.18**	**298**	*i* P	**Pg**	**08 53 42.0**	**-0.1**
DURS	**Dursunbey**	**5.29**	**283**	*i* P	**Pb**	**08 53 33.6**	**-1.7**
BALY	**Balya**	**5.96**	**284**	*i* P	**Pb**	**08 53 45.6**	**-1.2**

*MOS **16** 09:18:50.7±1.3, 5°.84N×127°.04E, h33km, mb5.2/23, MS4.1/4, Error ellipse: s-maj=18.3km s-min=7.5km az=113.0*
*BJI **16** 09:18:52.9, 5°.80N×127°.10E, h47km, mB4.8/8, mb4.8/19, Ms4.4/5, Ms7 4.3/5*
*IDC **16** 09:18:53.8±1.5, 5°.82N×127°.11E, h47km±14km, mb4.2/20, mb1 4.3/21, mb1mx4.3/24, mbtmp4.3/21, ML4.4/1, MS4.0/13, Ms1 4.0/13, ms1mx3.7/38, Error ellipse: s-maj=20.2km s-min=10.1km az=80.0*
*NEIC **16** 09:18:55.0±1.2, 5°.78N×127°.06E, h57km±10km, mb4.9/21, Error ellipse: s-maj=12.6km s-min=5.2km az=70.0*
*ISCJB **16** 09:18:54.7±0.7, 5°.79N±0°.03×127°.15E±0°.06, h72km±5km, mb4.7/61, Error ellipse: s-maj=10.0km s-min=4.6km az=164.5*
*DJA **16** 09:18:58, 5°.86N×127°.11E, h74km, mb5.0/20*
*MAN **16** 09:19:05, 6°.26N×126°.27E, h6km, mb5.0, ML3.9, MS4.0*

ISC 16 09:18:56.2±0.6, 5°.81N±0°.03×127°.15E±0°.06, h70km±5km, n161, σ1s10/149, mb4.7/61, 6C-3D, Philippine Islands region

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

PPI Padang Panjang 27.42 258 P **P** **09 24 34.5 -1.2**
comp=Z,19nm,1.0s,mb4.6
PDSI Padang 27.47 257 P **P** **09 24 35.9 -0.2**
comp=Z,6μmcomp=Z,50nm,1.2s,mb4.9
MBWA Marble Bar 27.77 195 *eP* **P** **09 24 38.2 -0.5**
comp=Z,15nm,1.0s,mb4.5
MBWA Marble Bar 27.77 195 P **P** **09 24 37.9 -0.8**
comp=Z,24nm,2.3s,mb4.3
ASAR Alice Springs 30.03 168 P **P** **09 24 57.9 -0.7**
comp=Z,3.3nm,0.7s,mb4.1,baz=346,slow=7.2,SNR=19
ASAR PcP PcP 09 28 01.8 +2.4
comp=Z,1.0nm,0.5s,baz=353,slow=2.9,SNR=4.7
ASAR ScP ScP 09 31 38.0 +2.2
comp=Z,1.5nm,0.6s,baz=344,slow=3.0,SNR=8.7
ASAR Alice Springs 30.03 168 P **P** **09 24 57.9 -0.8**
ASAR 09 28 01.8
ASAR 09 31 38.0
CMAR Chiang Mai Arr 30.24 297 P **P** **09 24 59.8 -0.9**
comp=Z,1.4nm,0.6s,mb3.8,baz=110,slow=7.3,SNR=7.0
CMAR LR LR 09 38 49.8
comp=Z,131nm,19.1s,baz=140,slow=40
CMAR Chiang Mai Arr 30.24 297 P **P** **09 24 59.8 -0.9**
KSRS Korea Array 31.50 1 P **P** **09 25 10.5 -1.1**
comp=Z,0.6nm,0.4s,mb3.7,baz=171,slow=8.6,SNR=5.4
KSRS LR LR 09 37 29.2
comp=Z,62nm,19.6s,baz=186,slow=35
CTA Charters Tower 31.86 144 P **P** **09 25 15.6 +0.7**
comp=Z,3.5nm,0.8s,mb4.2,baz=338,slow=5.4,SNR=3.5
CTA Charters Tower 31.86 144 P **P** **09 25 15.6 +0.7**
MJAR Matsushiro Art 32.22 17 P **P** **09 25 16.6 -1.3**
comp=Z,2.4nm,0.7s,mb4.0,baz=189,slow=9.3,SNR=9.1
MJAR LR LR 09 35 51.0
comp=Z,123nm,21.3s,baz=245,slow=32
MJAR Matsushiro Art 32.22 17 P **P** **09 25 16.6 -1.3**
MJAR LR LR 09 35 51.0
MJAR Matsushiro Art 32.22 17 P **P** **09 25 16.6 -1.3**
XAN Xi'an 32.78 331 P **P** **09 25 23.3 +0.5**
XAN pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
XAN pmax pmax
comp=Z,26nm,6.0s
BJT Baijiatuau 35.46 345 *eP* **P** **09 25 49.0 +3.0**
comp=Z,21nm,0.6s,mb5.2
BJT Baijiatuau 35.46 345 *eP* **P** **09 25 49.0 +3.1**
BJT pmax pmax
comp=Z,21nm,0.6s
BJI Beijing 35.48 345 P **P** **09 25 48.9 +2.8**
BJI pmax pmax
comp=Z,30nm,0.9s,mb5.1
BJI pmax pmax
comp=Z,120nm,4.5s
BJI LR LR
comp=N,96nm,17.6s
BJI LR LR
comp=E,150nm,16.7s
BJI LR LR
comp=Z,91nm,18.4s
FORT Forrest 36.39 179 *eP* **P** **09 25 54.1 +0.1**
comp=Z,18nm,0.6s,mb5.2
FORT Forrest 36.39 179 *eP* **P** **09 25 54.5 +0.5**
comp=Z,23nm,0.7s,mb5.2
LZH Lanzhou 36.95 328 *eP* **P** **09 26 03.5 +4.8**
LZH pmax pmax
comp=Z,23nm,1.2s,mb5.0
NWAO Narrogin (SRO) 39.66 193 P **P** **09 26 21.6 +0.2**
comp=Z,7.0nm,0.7s,mb4.6,baz=8.6,slow=7.7,SNR=7.3
NWAO Narrogin (SRO) 39.66 193 P **P** **09 26 21.6 +0.2**
STKA Stephens Creek 39.93 161 P **P** **09 26 23.4 -0.4**
comp=Z,9.5nm,0.7s,mb4.7,baz=338,slow=9.8,SNR=13
STKA Stephens Creek 39.93 161 *eP* **P** **09 26 23.3 -0.4**
comp=Z,2.4nm,0.7s,mb4.1
STKA Stephens Creek 39.93 161 *eP* **P** **09 26 23.3 -0.4**
STKA pmax pmax
comp=Z,2.0nm,0.7s
GTA Gaotai 41.56 328 ⇑P **P** **09 26 37.5 +0.4**
GTA pP pP 09 26 47.8 -6.5
GTA sP sP 09 26 51.8 -10
GTA pmax pmax
comp=Z,14nm,1.3s,mb4.5
TAPN Taplejung 43.16 304 *eP* **P** **09 26 50.1 -0.2**
comp=Z,14nm,0.6s,mb4.9
ODAN Odare 43.24 303 *eP* **P** **09 26 50.7 -0.3**
comp=Z,18nm,0.7s,mb4.9
GUN Gumba 44.88 304 *eP* **P** **09 27 03.7 -0.3**
comp=Z,40nm,0.8s,mb5.2
ULN Ulaanbaatar 45.29 341 *eP* **P** **09 27 06.8 -0.2**
comp=Z,10nm,0.8s,mb4.6
ULN Ulaanbaatar 45.29 341 *eP* **P** **09 27 06.8 -0.2**
ULN pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
ULN Ulaanbaatar 45.29 341 P **P** **09 27 06.1 -0.9**
comp=Z,12nm,1.3s,mb4.5
DMN Daman 45.41 303 *eP* **P** **09 27 07.8 -0.5**
SONM Songino Array 45.48 340 P **P** **09 27 07.8 -0.6**
comp=Z,2.7nm,0.7s,mb4.1,baz=154,slow=6.1,SNR=13
SONM LR LR 09 47 58.5
comp=Z,145nm,21.5s,baz=98,slow=38
SONM Songino Array 45.48 340 P **P** **09 27 07.8 -0.7**
KOLN Koldanda 46.72 303 *eP* **P** **09 27 18.3 -0.2**
comp=Z,20nm,0.5s,mb5.1
DANN Dangsing 46.78 304 *eP* **P** **09 27 18.8 -0.2**
comp=Z,35nm,0.6s,mb5.2
ZAK Zakamensk 48.72 340 *eP* **P** **09 27 36.4 +2.8**
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
TLY Talaya 49.70 341 *eP* **P** **09 27 50.7 +10**
TLY pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,83nm,20.0s
BOD Bodaibo 52.88 351 *eP* **P** **09 28 04.2 -0.6**
BOD *e* 09 28 09.9
BOD pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
PETK Petropavlovsk- 53.36 22 P **P** **09 28 09.2 +0.8**
comp=Z,4.6nm,0.8s,mb4.5,baz=209,slow=8.3,SNR=5.4
PETK Petropavlovsk- 53.36 22 P **P** **09 28 09.2 +0.8**
MK31 Makanchi Array 56.11 324 *eP* **P** **09 28 27.9 -0.5**
MK31 Makanchi Array 56.11 324 *ceP* **P** **09 28 28.3 -0.1**
MK31 pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
MKAR Makanchi Array 56.11 324 P **P** **09 28 28.1 -0.3**
comp=Z,7.0nm,0.7s,mb4.8,baz=123,slow=7.8,SNR=8.3
MKAR ScP ScP 09 33 20.1 +1.2
comp=Z,0.5nm,0.5s,baz=108,slow=5.8,SNR=3.8
MKAR LR LR 09 54 20.7
comp=Z,152nm,21.3s,baz=121,slow=38
MKAR Makanchi Array 56.11 324 P **P** **09 28 28.1 -0.3**
KSH Kashi 56.89 314 *eP* **P** **09 28 35.8 +1.7**
KSH *ep*P pP 09 28 46.3 -5.8
KSH *es*P sP 09 28 50.1 -10
KSH pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KSH pmax pmax
comp=Z,170nm,3.9s
KSH LR LR
comp=N,830nm,11.3s
KSH LR LR
comp=E,440nm,8.3s
KSH LR LR
comp=Z,230nm,6.6s
ZAA0 Zalesovo Array 58.94 332 *eP* **P** **09 28 47.4 -0.7**
ZALV Zalesovo Beam 58.94 332 P **P** **09 28 47.3 -0.9**
comp=Z,8.0nm,0.7s,mb4.9,baz=123,slow=7.0,SNR=29
ZALV LR LR 09 55 39.7
comp=Z,73nm,18.2s,baz=246,slow=37
ZALV Zalesovo Beam 58.94 332 P **P** **09 28 47.3 -0.9**
SEY Seymchan 59.93 13 *i* P **P** **09 28 57.3 +2.5**
NVS Novosibirsk 60.22 332 *eP* **P** **09 28 55.0 -2.0**
KURK Kurchatov 60.23 327 *eP* **P** **09 28 57.1 -0.1**
comp=Z,35nm,0.6s,mb5.6
KURK Kurchatov 60.23 327 *c i*P **P** **09 28 57.0 -0.1**
KURK pmax pmax
comp=Z,56nm,1.2s,mb5.5
KURK MLR MLR
comp=Z,114nm,22.0s
KBL Kabul 60.61 306 *eP* **P** **09 28 59.6 -0.4**
comp=Z,4.1nm,0.4s,mb4.8
KBL Kabul 60.61 306 *eP* **P** **09 28 59.6 -0.4**
KBL pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
BRVK Borovoye 65.89 326 *eP* **P** **09 29 34.6 0.0**
comp=Z,19nm,0.9s,mb4.9
BRVK Borovoye 65.89 326 *eP* **P** **09 29 34.6 0.0**
BRVK pmax pmax
comp=Z,19nm,0.9s,mb4.9

AB31 Akbulak array 70.82 320 *ceP* **P** **09 30 05.3 -0.2**
AB31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
AKTO Aktyubinsk 72.30 321 LR LR 10 04 25.4
comp=Z,235nm,19.5s,baz=115,slow=38
SVE Sverdlovsk 72.42 328 *eP* **P** **09 30 13.6 -1.3**
SVE pmax pmax
comp=Z,14nm,0.7s,mb4.9
CASY Casey 72.92 187 *eP* **P** **09 30 18.6 +1.0**
comp=Z,2.8nm,0.7s,mb4.2
ARU Arti 73.42 327 *eP* **P** **09 30 20.0 -0.8**
comp=Z,9.3nm,0.5s,mb4.9
ARU Arti 73.42 327 *c iP* **P** **09 30 20.1 -0.7**
ARU *e* 09 32 59.0
ARU PPP 09 34 45.6
ARU S S 09 39 48.0 +3.5
ARU pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
KDAK Kodiak Island 79.92 32 *i* P **P** **09 30 59.3 +1.8**
GNI Garni 80.48 310 LR LR 10 09 38.4
comp=Z,121nm,18.0s,baz=81,slow=38
GNI Garni 80.48 310 *i* P **P** **09 31 02.8 +1.9**
GNI pmax pmax
comp=Z,16nm,1.5s
PRGR Permogore 80.89 331 P **P** **09 31 01.4 -1.2**
PRGR *e* 09 31 09.0
PRGR pmax pmax
comp=Z,14nm,0.4s,mb5.1
ZEI Tsey 81.13 312 *eP* **P** **09 31 04.0 -0.3**
ZEI pmax pmax
comp=Z,17nm,0.9s,mb4.9
KIV Kislovodsk 82.02 313 *eP* **P** **09 31 10.4 +1.5**
KIV pmax pmax
comp=Z,12nm,1.1s,mb4.6
KIV MLR MLR
comp=Z,156nm,19.0s
COLA College 82.65 25 *eP* **P** **09 31 12.2 +0.4**
comp=Z,2.6nm,0.6s,mb4.2
COLA College 82.65 25 *eP* **P** **09 31 12.2 +0.4**
COLA pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
ILAR Eielson Array 83.06 26 P **P** **09 31 13.6 -0.3**
comp=Z,1.7nm,0.6s,mb4.0,baz=248,slow=5.2,SNR=16
ILAR Eielson Array 83.06 26 P **P** **09 31 13.6 -0.3**
KLMR Klimovskoe 83.81 331 *eP* **P** **09 31 17.4 -0.4**
KLMR pmax pmax
comp=Z,48nm,1.4s,mb5.1
VORD Divnogorie 84.18 321 *eP* **P** **09 31 20.1 +0.2**
VORD pmax pmax
comp=N,9.0nm,0.6s
VORD pmax pmax
comp=E,5.0nm,0.6s
VORD pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
VSR Storozhevoye 84.25 321 *eP* **P** **09 31 21.5 +1.2**
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.4s
VSR pmax pmax
comp=Z,7.0nm,0.4s,mb4.8
MOS Moscow 84.97 325 *eP* **P** **09 31 30.4 +6.6**
MOS pmax pmax
comp=Z,57nm,0.8s,mb5.5
MALT Malatya 85.44 308 *eP* **P** **09 31 27.6 +1.1**
comp=Z,3.6nm,0.6s,mb4.5
MALT Malatya 85.44 308 *eP* **P** **09 31 27.6 +1.1**
MALT pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
OBN Obninsk 85.61 325 ⇓*eP* **P** **09 31 27.0 0.0**
OBN *e* 09 34 45.5
OBN pmax pmax
comp=Z,32nm,1.0s,mb5.2
OBN MLR MLR
comp=Z,200nm,17.0s
MAW Mawson 85.84 200 P **P** **09 31 28.5 +0.7**
comp=Z,1.1nm,0.8s,mb3.9,baz=72,slow=7.5,SNR=3.5
MAW Mawson 85.84 200 P **P** **09 31 28.5 +0.7**
JOF Joensuu 87.53 333 *eP* **P** **09 31 33.9 -2.3**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KEV Kevo 88.09 340 *eP* **P** **09 31 38.7 -0.1**
SPITS Spitsbergen Ar 88.53 349 LR LR 10 15 51.9
comp=Z,82nm,18.2s,baz=220,slow=39
ARCES ARCESS Array B 88.65 340 P **P** **09 31 40.2 -1.3**
comp=Z,3.6nm,0.7s,mb4.5,baz=88,slow=6.7,SNR=13
ARCES ARCESS Array B 88.65 340 P **P** **09 31 40.2 -1.3**
ARCES ARCESS Array B 88.65 340 P **P** **09 31 40.2 -1.2**
BR131 Keskin Array S 89.02 310 *eP* **P** **09 31 44.6 +0.8**
comp=Z,4.0nm,0.9s,mb4.5
BRTR Keskin Array B 89.02 310 P **P** **09 31 43.2 -0.6**
comp=Z,3.7nm,0.9s,mb4.4,baz=97,slow=4.0,SNR=13
BRTR Keskin Array B 89.02 310 P **P** **09 31 43.2 -0.6**
KAF Kangasniemi 89.96 332 *eP* **P** **09 31 39.5 -8.2**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
KMBO Kilima Mbogo 90.01 269 LR LR 10 07 54.0
comp=Z,146nm,19.1s,baz=298,slow=33
FINES FINESS Array B 90.21 332 P **P** **09 31 49.9 +1.0**
comp=Z,2.9nm,0.6s,mb4.6,baz=66,slow=3.4,SNR=7.1
FINES FINESS Array B 90.21 332 P **P** **09 31 49.9 +1.0**
AKASG Malin Array Be 90.55 321 P **P** **09 31 50.3 -0.4**
comp=Z,2.1nm,0.6s,mb4.5,baz=69,slow=4.7,SNR=6.0
AKASG Malin Array Be 90.55 321 P **P** **09 31 50.3 -0.4**
DLBC Dease Lake 91.76 31 LR LR 10 06 52.3
comp=Z,108nm,20.9s,baz=304,slow=31
SUW Suwalki 93.47 325 *eP* **P** **09 32 03.6 -0.5**
SUW Suwalki 93.47 325 *eP* **P** **09 32 03.6 -0.5**
BBB Bella Bella 94.39 37 PKKP PKKPbc 09 49 05.5 -4.2
comp=Z,3.4nm,0.3s,baz=22,slow=16,SNR=8.2
NB2 NORSAR Subarra 97.12 334 P **P** **09 32 22.1 +1.5**
comp=Z,1.8nm,0.8s,mb4.5,baz=64,slow=4.6
NOA NORSAR Array B 97.12 334 P **P** **09 32 21.1 +0.5**
comp=Z,1.2nm,0.7s,mb4.4,baz=65,slow=4.6,SNR=5.1
NOA LR LR 10 19 39.4
comp=Z,119nm,20.3s,baz=65,slow=38
NOA NORSAR Array B 97.12 334 P **P** **09 32 21.1 +0.5**
PDAR Pinedale Array 109.52 41 PKKPab PKKPab 09 48 34.6 -2.4
comp=Z,0.4nm,0.6s,baz=108,slow=4.8,SNR=3.7
TXAR Lajitas Array 120.00 51 PKP PKPdf 09 37 41.3 +1.7
comp=Z,0.1nm,0.6s,baz=216,slow=4.5,SNR=2.5
TXAR Lajitas Array 120.00 51 PKIKP PKPdf 09 37 41.3 +1.7
TORD Torodi Ar. Bea 122.64 290 PKP PKPdf 09 37 45.0 -0.1
comp=Z,2.1nm,0.6s,baz=65,slow=1.4,SNR=21
TORD Torodi Ar. Bea 122.64 290 PKP PKPdf 09 37 45.0 -0.1
DBIC Dimbokro 130.52 284 PKP PKPdf 09 38 01.4 +1.3
comp=Z,3.5nm,0.8s,baz=62,slow=2.8,SNR=3.8
DBIC Dimbokro 130.52 284 PKIKP PKPdf 09 38 01.5 +1.3
PLCA Paso Flores 141.78 158 PKP PKPdf 09 38 22.3 +2.0
comp=Z,0.8nm,0.8s,baz=233,slow=2.1,SNR=2.6
PLCA Paso Flores 141.78 158 PKP PKPdf 09 38 22.3 +2.0
PLCA Paso Flores 141.78 158 PKIKP PKPdf 09 38 22.3 +2.0
LCO Las Campanas 151.41 146 *e*PKPbc PKPbc 09 38 44.0 +1.1

PGC ***16*** *09:41:54.5±2.5, 47°.46N×128°.87W, h10km, ML3.4/11, Mw4.1, 288km Wsw of Tofino, Bc Off Coast Of Washington*
BJI ***16*** *09:41:55.3, 46°.91N×129°.14W, h10km, mB4.7/4, mb4.5/4, Ms4.7/2, Ms7 4.5/2*
ISCJB ***16*** *09:41:58.5±0.4, 47°.82N±0°.02×128°.52W±0°.05, h10km, mb4.5/12, MS3.5/5, Error ellipse: s-maj=4.7km s-min=3.2km az=170.6*
IDC ***16*** *09:41:58.8±1.9, 47°.74N×128°.41W, h0km, mb3.9/3, mb1 4.3/10, mb1mx3.9/30, mbtmp4.0/10, ML3.3/6, MS3.5/10, Ms1 3.5/10, ms1mx3.3/40, Error ellipse: s-maj=42.7km s-min=12.2km az=65.0*
NEIC ***16*** *09:41:59.6±0.7, 47°.88N×128°.62W, h10km, mb4.3/29, MW4.1(PGC), Error ellipse: s-maj=9.0km s-min=5.3km az=86.0*
ISC 16 09:41:59.3±1.4, 47°.89N±0°.03×128°.55W±0°.05, h3km±10km, n145, σ1§25/151, mb4.5/12, MS3.5/5, 2C-10D, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETB	**Estevan Point**	**2.00**	**41**	Pn	**Pn**	**09 42 33.4**	**-0.5**
ETB	**Estevan Point**	**2.00**	**41**	⇓Pn	**Pn**	**09 42 33.4**	**-0.5**
EDB	**Eliza Dome**	**2.20**	**25**	⇑Pn	**Pn**	**09 42 35.9**	**-0.8**
EDB	**Eliza Dome**	**2.20**	**25**	⇑Pn	**Pn**	**09 42 35.9**	**-0.8**
OZB	**Mount Ozzard**	**2.30**	**61**	⇓Pn	**Pn**	**09 42 36.7**	**-1.4**
OZB				Sn	**Sn**	**09 43 07.2**	**+0.4**
OZB	**Mount Ozzard**	**2.30**	**61**	⇓Pn	**Pn**	**09 42 36.7**	**-1.4**
OZB				⇓Sn	**Sn**	**09 43 07.2**	**+0.4**
BPBC	**Brooks Peninsu**	**2.33**	**12**	⇑Pn	**Pn**	**09 42 37.0**	**-1.4**
BPBC	**Brooks Peninsu**	**2.33**	**12**	⇑Pn	**Pn**	**09 42 37.0**	**-1.4**
BMSB	**Bamfield Mari**	**2.47**	**66**	⇑Pn	**Pn**	**09 42 38.7**	**-1.6**
BMSB				⇑Sn	**Sn**	**09 43 11.0**	**+0.1**
GDR	**Gold River**	**2.52**	**40**	⇓Pn	**Pn**	**09 42 40.6**	**-0.4**
WOSB	**Woss**	**2.62**	**29**	⇑Pn	**Pn**	**09 42 42.6**	**+0.1**
WOSB				⇓Sn	**Sn**	**09 43 17.9**	**+3.2**
MAYB	**Maynard**	**2.67**	**19**	⇑Pn	**Pn**	**09 42 42.8**	**-0.3**
HOLB	**Holberg**	**2.77**	**6**	⇓Pn	**Pn**	**09 42 43.5**	**-0.9**
MGB	**Mount Grey**	**2.80**	**65**	⇓Pn	**Pn**	**09 42 43.2**	**-1.6**
MGB				⇓Sn	**Sn**	**09 43 19.8**	**+0.7**
ALB	**Alberni**	**2.83**	**59**	⇑Pn	**Pn**	**09 42 44.1**	**-1.2**
PFB	**Port Renfrew**	**2.83**	**74**	P	**Pn**	**09 42 43.0**	**-2.3**
PFB	**Port Renfrew**	**2.83**	**74**	⇓Pn	**Pn**	**09 42 42.9**	**-2.4**
PFB				⇑Sn	**Sn**	**09 43 18.7**	**-1.2**
PHC	**Port Hardy**	**2.92**	**14**	⇓Pn	**Pn**	**09 42 46.0**	**-0.4**
OSR	**Olympics--Salm**	**3.12**	**95**	P	**Pn**	**09 42 46.8**	**-2.5**
NLWA	**Neilton Lookou**	**3.20**	**97**	*e*Pn	**Pn**	**09 42 48.0**	**-2.4**
PGC	**Sidney**	**3.49**	**75**	*e*Pn	**Pn**	**09 42 52.2**	**-2.2**
VGZ	**Gonzales**	**3.54**	**79**	P	**Pn**	**09 42 52.4**	**-2.6**
GNW	**Green Mountain**	**3.88**	**93**	*e*Pn	**Pn**	**09 42 58.2**	**-1.4**
HEBO	**Mount Hebo**	**4.25**	**127**	*e*Pn	**Pn**	**09 43 01.5**	**-3.4**
HEBO				*e*Sn	**Sn**	**09 43 52.8**	**-2.2**
BBB	**Bella Bella**	**4.31**	**4**	Pn	**Pn**	**09 43 05.5**	**-0.2**
	42nm,0.3s,baz=14,slow=15,SNR=536						
BBB				LR	LR	09 44 47.9	
	comp=Z,934nm,18.3s,baz=81,slow=38						
BBB	**Bella Bella**	**4.31**	**4**	Pn	**Pn**	**09 43 05.5**	**-0.2**
BBB				LR	LR	09 44 47.9	
JCW	**Jim Creek**	**4.45**	**84**	*e*Pn	**Pn**	**09 43 06.6**	**-1.0**
JCW				*e*Sn	**Sn**	**09 43 59.6**	**-0.2**
MBW	**Mount Baker**	**4.53**	**76**	P	**Pn**	**09 43 08.2**	**-0.4**
LON	**Longmire**	**4.72**	**101**	*e*Pn	**Pn**	**09 43 10.4**	**-0.9**
RPW	**Rockport**	**4.74**	**81**	*e*Pn	**Pn**	**09 43 11.8**	**+0.2**
COR	**Corvallis**	**4.91**	**130**	*e*Pn	**Pn**	**09 43 11.3**	**-2.6**
COR				*e*Sn	**Sn**	**09 44 06.6**	**-4.6**
ASR	**Mount Adams--S**	**5.07**	**107**	P	**Pn**	**09 43 15.1**	**-0.9**
HOOD	**Mount Hood Mea**	**5.40**	**116**	*e*Pn	**Pn**	**09 43 19.2**	**-1.4**
ETW	**Entiat**	**5.55**	**90**	*e*Pn	**Pn**	**09 43 21.7**	**-1.0**
KEBM	**Edson Butte**	**5.83**	**148**	*e*Pn	**Pn**	**09 43 23.0**	**-3.5**
RSW	**Rattlesnake Hi**	**6.29**	**100**	*e*Pn	**Pn**	**09 43 33.5**	**+0.7**
HAWA	**Hanford**	**6.33**	**100**	*e*Pn	**Pn**	**09 43 32.4**	**-1.0**
KBO	**Bosley Butte**	**6.45**	**150**	*e*Pn	**Pn**	**09 43 33.9**	**-1.1**
HUMO	**Hull Mountain**	**6.59**	**141**	*e*Pn	**Pn**	**09 43 35.1**	**-1.8**
OD2	**Odessa Site #2**	**6.67**	**91**	*e*Pn	**Pn**	**09 43 36.9**	**-1.1**
LNOR	**Lincton Mounta**	**7.32**	**102**	*e*Pn	**Pn**	**09 43 46.5**	**-0.5**
YBH	**Yreka Blue Hor**	**7.42**	**144**	Pn	**Pn**	**09 43 48.2**	**-0.2**
	0.2nm,0.3s,baz=326,slow=13,SNR=26						
YBH				LR	LR	09 46 05.7	
	comp=Z,206nm,20.6s,baz=323,slow=34						
YBH	**Yreka Blue Hor**	**7.42**	**144**	*e*Pn	**Pn**	**09 43 48.3**	**-0.1**
NEW	**Newport**	**7.67**	**83**	*e*Pn	**Pn**	**09 43 50.7**	**-1.0**
MOD	**Modoc**	**8.37**	**133**	*e*Pn	**Pn**	**09 44 01.7**	**+0.4**
WDC	**Whiskeytown Da**	**8.48**	**147**	*e*Pn	**Pn**	**09 44 02.8**	**-0.1**
KIPM	**Iron Peak**	**8.87**	**154**	*e*Pn	**Pn**	**09 44 08.2**	**0.0**
WVOR	**Wild Horse Val**	**8.87**	**124**	*e*Pn	**Pn**	**09 44 08.4**	**+0.1**
KCPM	**Cahto Peak**	**8.95**	**155**	*e*Pn	**Pn**	**09 44 09.2**	**-0.1**
BSMT	**Bassoo Peak**	**9.26**	**85**	*e*Pn	**Pn**	**09 44 13.3**	**-0.2**
JTMT	**Jette**	**9.60**	**86**	*e*Pn	**Pn**	**09 44 16.9**	**-1.3**
HOPS	**Hopland**	**9.74**	**154**	*e*Pn	**Pn**	**09 44 18.5**	**-1.6**
YBMT	**Yellow Bay**	**9.77**	**85**	*e*Pn	**Pn**	**09 44 20.2**	**-0.3**
WALA	**Waterton Lakes**	**9.80**	**78**	*e*Pn	**Pn**	**09 44 22.4**	**+1.5**
SWMT	**Swartz Lake**	**9.82**	**87**	*e*Pn	**Pn**	**09 44 20.4**	**-0.8**
MSO	**Missoula**	**9.97**	**91**	*e*Pn	**Pn**	**09 44 24.1**	**+0.8**
SLMT	**Seeley Lake**	**10.20**	**88**	*e*Pn	**Pn**	**09 44 25.5**	**-0.9**
	9.7nm,1.2s						
CHMT	**Chamberlain Mo**	**10.42**	**90**	*e*Pn	**Pn**	**09 44 27.3**	**-2.1**
PAHR	**Pah Rah Range**	**10.52**	**138**	*e*Pn	**Pn**	**09 44 31.5**	**+0.7**
DLBC	**Dease Lake**	**10.61**	**356**	Pn	**Pn**	**09 44 35.0**	**+3.0**
	0.2nm,0.3s,baz=191,slow=11,SNR=6.8						
DLBC				LR	LR	09 48 44.4	
	comp=Z,238nm,19.9s,baz=278,slow=38						
DLBC	**Dease Lake**	**10.61**	**356**	*e*Pn	**Pn**	**09 44 35.7**	**+3.8**
HLID	**Hailey**	**10.79**	**108**	*e*Pn	**Pn**	**09 44 35.3**	**+0.8**
BMN	**Battle Mountai**	**11.03**	**128**	*e*Pn	**Pn**	**09 44 40.1**	**+2.4**
LRM	**Limekiln Ridge**	**11.22**	**95**	*e*Pn	**Pn**	**09 44 41.7**	**+1.3**
DLMT	**Dillon**	**11.26**	**97**	*e*Pn	**Pn**	**09 44 41.0**	**+0.1**
MCMT	**McKenzie Canyo**	**11.27**	**100**	*e*Pn	**Pn**	**09 44 41.6**	**+0.5**
	4.4nm,1.2s						
WAKR	**Walker**	**11.49**	**141**	*e*Pn	**Pn**	**09 44 45.2**	**+1.1**
CMB	**Columbia Colle**	**11.51**	**146**	*e*Pn	**Pn**	**09 44 44.7**	**+0.3**
BOZ	**Bozeman (W)**	**11.82**	**95**	*e*Pn	**Pn**	**09 44 50.4**	**+1.8**
NVAR	**Mina Array Bea**	**12.04**	**138**	Pn	**Pn**	**09 44 51.8**	**+0.1**
	0.1nm,0.3s,baz=310,slow=11,SNR=30						
QLMT	**Earthquake Lak**	**12.22**	**98**	*e*Pn	**Pn**	**09 44 56.6**	**+2.6**
EGMT	**Eagleton**	**12.60**	**82**	*e*Pn	**Pn**	**09 45 00.8**	**+1.5**
HVU	**Hansel Valley**	**12.74**	**113**	*e*Pn	**Pn**	**09 45 03.0**	**+1.8**
DCID1	**Drake Creek**	**12.86**	**103**	*e*Pn	**Pn**	**09 45 05.4**	**+2.5**
RRI2	**Red Ridge**	**12.88**	**104**	*e*Pn	**Pn**	**09 45 03.8**	**+0.7**
IMW	**Indian Meadow**	**12.90**	**102**	*e*Pn	**Pn**	**09 45 04.1**	**+0.7**
FLWY	**Flagg Ranch**	**12.98**	**100**	*e*Pn	**Pn**	**09 45 06.2**	**+1.8**
LKWY	**Lake**	**13.00**	**98**	*e*Pn	**Pn**	**09 45 07.9**	**+3.2**
	4.3nm,0.7s						
TPAW	**Teton Pass**	**13.06**	**103**	*e*Pn	**Pn**	**09 45 07.3**	**+1.7**
BGU	**Big Grassy Mou**	**13.09**	**116**	*e*Pn	**Pn**	**09 45 07.7**	**+1.8**
	20nm,1.4s						
MOOW	**Moose Ponds**	**13.09**	**102**	*e*Pn	**Pn**	**09 45 07.7**	**+1.8**
REDW	**Red Top Meadow**	**13.18**	**104**	*e*Pn	**Pn**	**09 45 10.7**	**+3.5**
SNOW	**Snow King Moun**	**13.20**	**103**	*e*Pn	**Pn**	**09 45 10.5**	**+3.1**
SPUT	**South Promonto**	**13.21**	**114**	*e*Pn	**Pn**	**09 45 09.7**	**+2.0**
LOHW	**Long Hollow**	**13.24**	**102**	*e*Pn	**Pn**	**09 45 09.8**	**+1.9**
HWUT	**Hardware Ranch**	**13.60**	**111**	*e*Pn	**Pn**	**09 45 15.5**	**+2.6**
JLU	**Jordanelle**	**14.24**	**114**	*e*Pn	**Pn**	**09 45 22.5**	**+0.9**
BW06	**Boulder Array**	**14.30**	**104**	*e*Pn	**Pn**	**09 45 24.3**	**+1.9**
PDAR	**Pinedale Array**	**14.30**	**104**	Pn	**Pn**	**09 45 24.0**	**+1.5**
	0.0nm,0.3s,baz=300,slow=11,SNR=30						
PDAR				LR	LR	09 51 02.5	
	comp=Z,446nm,19.1s,baz=355,slow=38						
ISA	**Isabella**	**14.32**	**145**	*e*Pn	**Pn**	**09 45 23.5**	**+0.7**
DAU	**Daniels Canyon**	**14.47**	**115**	*e*Pn	**Pn**	**09 45 26.2**	**+1.4**
MPU	**Maple Canyon**	**14.48**	**117**	*e*Pn	**Pn**	**09 45 25.8**	**+0.8**
ARUT	**Antelope Range**	**14.96**	**127**	*e*P	**Pn**	**09 45 30.8**	**-0.8**
	7.7nm,1.0s						
SHPR	**Sheep Range**	**15.07**	**134**	*e*P	**Pn**	**09 45 32.3**	**-0.7**
MSU	**Marysvale**	**15.15**	**122**	*e*P	**Pn**	**09 45 33.6**	**-0.4**
CCUT	**Cedar City**	**15.18**	**127**	*e*P	**Pn**	**09 45 33.4**	**-1.0**
	14nm,1.2s						
TMUT	**Trail Mountain**	**15.19**	**118**	*e*P	**Pn**	**09 45 35.4**	**+0.8**
	9.0nm,1.1s						
LAO	**LASA Array**	**15.19**	**86**	*e*P	**Pn**	**09 45 36.5**	**+2.0**
	75nm,1.8s						
GSC	**Goldstone**	**15.31**	**141**	*e*P	**Pn**	**09 45 36.0**	**-0.2**
	9.0nm,1.0s						
SRU	**San Rafael**	**15.72**	**117**	*e*P	**Pn**	**09 45 43.5**	**+2.1**
	20nm,1.2s						
DGMT	**Dagmar**	**16.24**	**79**	*e*P	**Pn**	**09 45 48.9**	**+0.7**
	24nm,1.3s						
LDFC	**Landfair**	**16.25**	**137**	*e*P	**Pn**	**09 45 47.0**	**-1.5**
	55nm,1.3s						
RWWY	**Rawlins**	**16.34**	**104**	*e*P	**Pn**	**09 45 49.1**	**-0.4**
	32nm,1.4s						
YKA	**Yellowknife Ar**	**16.60**	**23**	Pn	**Pn**	**09 45 52.5**	**-0.1**
	0.1nm,0.3s,baz=210,slow=11,SNR=5.6				

ANMO	Albuquerque	20.92	120	eP		P	09 46 42.4 -0.4
	71nm,2.1s						
LAZ	Ladron	20.92	122	eP		P	09 46 42.4 -0.5
	9.1nm,1.5s						
LENM	Lemitar	21.19	122	eP		P	09 46 45.6 -0.1
LPM	Los Pinos Moun	21.28	122	eP		P	09 46 45.3 -1.3
BNM	Barren Site	21.39	122	eP		P	09 46 48.0 +0.1
	52nm,1.7s,mb4.6						
TTA	Tatalina	21.43	325	eP		P	09 46 47.8 -0.3
ULM	Lac du Bonnet	21.45	71	P		P	09 46 47.8 -0.6
	8.2nm,1.1s,mb4.0,baz=275,slow=13,SNR=4.1						
ULM				LR		LR	09 55 21.6
	comp=Z,309nm,18.0s,MS3.7,baz=307,slow=38						
AGMN	Agassiz Nation	21.75	77	eP		P	09 46 52.6 +0.9
	38nm,1.7s,mb4.5						
ECSD	EROS Data Cent	22.55	89	eP		P	09 46 59.5 -0.7
	9.3nm,1.0s,mb4.2						
CBKS	Cedar Bluff	22.72	103	eP		P	09 47 02.4 +0.3
	51nm,1.5s,mb4.7						
AMTX	Amarillo	23.84	113	eP		P	09 47 12.7 -0.9
	33nm,1.4s,mb4.6						
MNTX	Cornudas Mount	23.91	124	eP		P	09 47 12.3 -1.9
	28nm,1.7s,mb4.4						
GDL2	Guadalupe Moun	24.11	122	eP		P	09 47 14.9 -1.1
KSU1	Kansas State U	24.64	99	eP		P	09 47 23.4 +2.7
	32nm,1.3s,mb4.7						
EYMN	Ely	24.68	76	eP		P	09 47 21.9 +0.8
WMOK	Wichita Mounta	25.75	110	eP		P	09 47 30.4 -0.6
	90nm,2.5s,mb4.8						
TXAR	Lajitas Array	26.67	125	P		P	09 47 37.3 -2.0
	2.2nm,1.0s,mb3.6,baz=327,slow=9.7,SNR=11						
TXAR				LR		LR	09 59 31.8
	comp=Z,122nm,21.6s,MS3.4,baz=0.0,slow=40						
JCT	Junction City	28.03	118	eP		P	09 47 50.4 -1.1
	11nm,1.0s,mb4.4						
OXF	Oxford	31.98	100	eP		P	09 48 26.7 +0.3
	25nm,1.2s,mb4.9						
SCHQ	Schefferville	38.02	56	LR		LR	10 06 10.2
	comp=Z,53nm,19.2s,MS3.4,baz=356,slow=38						
BORG	Borgarnes	54.37	30	LR		LR	10 14 03.5
	comp=Z,64nm,18.3s,MS3.7,baz=71,slow=35						
CN2	Changchun	67.93	311	eP		P	09 53 00.0 +1.0
HHC	Hu-ho-hao-te	76.85	318	eP		P	09 53 52.8 +0.5
HHC				pP		pP	09 53 57.5 +4.1
HHC				sP		sP	09 53 59.8 +6.1
HHC				PcP		PcP	09 54 04.5 +1.0
HHC				PP		PP	09 56 46.3 +1.8
HHC				S		S	10 03 37.8 -2.7
HHC				ScS		ScS	10 04 05.3 -4.4
HHC				pmax		pmax	
	comp=Z,170nm,6.5s						
HHC				LR		LR	
	comp=N,140nm,17.9s						
HHC				LR		LR	
	comp=E,180nm,18.1s						
HHC				LR		LR	
	comp=Z,160nm,17.5s						
WMQ	Urumqi	83.26	334	eP		P	09 54 29.0 +2.1
CD2	Chengdu	88.61	317	eP		P	09 54 54.3 +0.7

IDC ***16*** *09:46:52.0±0.4, 16°.72S×172°.73W, h0km, mb4.8/27, mb1 4.9/27, mb1mx4.9/28, mbtmp4.8/27, MS4.9/21, Ms1 4.9/21, ms1mx4.8/27, Error ellipse: s-maj=18.3km s-min=12.0km az=148.0*

ISCJB ***16*** *09:46:52.0±2.3, 16°.64S±0°.04×172°.68W±0°.03, h4km±14km, mb5.1/169, MS4.9/49, Error ellipse: s-maj=7.6km s-min=4.4km az=150.3*

NEIC ***16*** *09:46:54.2±0.1, 16°.64S×172°.74W, h10km, mb5.3/119, Error ellipse: s-maj=6.8km s-min=3.9km az=144.0*

BJI ***16*** *09:46:56.2, 16°.54S×172°.51W, h35km, mB5.5/37, mb5.3/41, Ms5.2/34, Ms7 4.9/34*

SZGRF ***16*** *09:46:57.4, 17°.01S×172°.80W, h33km, Tonga Islands region*

GCMT ***16*** *09:46:59.0±0.2, 16°.67S×172°.31W, h16km, MW5.3, Moment Tensor Solution. s61,c92; s86,c139; Moment tensor: Scale 10^{17}Nm; M_{rr}0.44±.01; $M_{\theta\theta}$0.03±.01; $M_{\phi\phi}$-0.47±.01; $M_{r\theta}$0.32±.04; $M_{r\phi}$-0.04±.01; $M_{\theta\phi}$1.08±.03; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s173.00000°, δ12.00000°, λ67.00000°. NP2:ϕ_s16.00000°, δ79.00000°, λ95.00000°. Principal axes: T 1.2100, Plg56.0000°, Azm292.0000°; N 0.0100, Plg5.0000°, Azm195.0000°; P -1.2200, Plg34.0000°, Azm102.0000°; Data Used: II IU IC G CN.*

MOS ***16*** *09:47:00.2±1.3, 15°.74S×172°.65W, h33km, mb5.4/41, MS5.0/13 Error ellipse: s-maj=13.3km s-min=7.6km az=63.9*

DJA ***16*** *09:47:02, 17°.27S×173°.07W, h30km, mb5.4/19*

ISC 16 09:46:56.4±2.9, 16°.68S±0°.05×172°.70W±0°.03, h22km±20km, h33km±1.3km: pP-P, n909, σ0s71/654, mb5.1/169, MS4.9/49, 164C-135D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.89	18	Pn	Pn	09 47 33.7	-7.4
	123nm,0.3s,baz=182,slow=1.3,SNR=174						
AFI				Sn	Sn	09 48 03.5	-12
	344nm,0.3s,baz=54,slow=19,SNR=11						
AFI				LR	LR	09 48 47.4	
	comp=Z,12μm,21.6s,baz=177,slow=39						
AFI	Afiamalu	2.89	18	ePn	Pn	09 47 33.5	-7.7
AFI	Afiamalu	2.89	18	eP	Pn	09 47 33.5	-7.6
MSVF	Nonsavu	8.90	262	ePn	Pn	09 49 08.9	+5.2
MSVF	Nonsavu	8.90	262	Pn	Pn	09 49 09.0	+5.3
	1μm,1.3s,SNR=17						
RAR	Rarotonga	13.04	112	Pn	Pn	09 49 52.6	-7.8
	13nm,0.3s,baz=260,slow=10,SNR=17						
RAR				Sn	Sn	09 52 10.4	-14
	2.2nm,0.3s,baz=347,slow=19,SNR=2.2						
RAR	Rarotonga	13.04	112	ePn	Pn	09 49 54.1	-6.2
RAR	Rarotonga	13.04	112	eP	Pn	09 49 54.1	-6.3
DZM	Mont Dzumac	20.38	251	ePn	P	09 51 34.6	+2.8
DZM				eLR	LR	09 56 26.5	
	7μm,23.4s						
DZM	Mont Dzumac	20.38	251	eP	P	09 51 33.4	+1.6
NOUC	Port Laguerre	20.52	251	eP	P	09 51 33.5	+0.3
PAE	Paea	22.11	96	eP	P	09 51 50.7	+0.2
	37nm,1.3s,mb4.7						
PAE	Paea	22.11	96	eP	P	09 51 50.7	+0.2
PAE				pmax	pmax		
	comp=Z,37nm,1.3s,mb4.7						
PPT	Papeete	22.12	96	eP	P	09 51 50.7	+0.2
	comp=Z,123nm,1.2s,mb5.2						
PPT				eS	S	09 55 47.0	-6.5
	comp=Z,2μm,25.0s						
PPT				eLR	LR	09 57 00.8	
	comp=Z,4μm,24.5s						
PPT	Papeete	22.12	96	P	P	09 51 47.9	-2.6
	comp=Z,118nm,1.3s,mb5.2,baz=225,slow=11,SNR=2.5						
PPT				LR	LR	09 58 22.6	
	comp=Z,3μm,19.1s,MS4.7,baz=274,slow=31						
PPT	Papeete	22.12	96	P	P	09 51 47.9	-2.6
OUZ	Omahuta	22.16	211	eP	P	09 51 50.5	-0.2
	comp=Z,81nm,1.0s,mb5.1						
TIAR	Tiarei	22.34	96	eP	P	09 51 53.2	+0.3
	comp=Z,95nm,1.1s,mb5.1						
TBI	Tubuai	22.81	111	eP	P	09 51 57.6	-0.2
	comp=Z,538nm,1.3s,mb5.8						
TBI				eS	S	09 55 59.7	-6.5
	comp=Z,1μm,28.8s						
TBI				eLR	LR	09 57 27.1	
	comp=Z,4μm,24.5s						
TBI	Tubuai	22.81	111	eP	P	09 51 57.6	-0.2
	comp=Z,538nm,1.3s,mb5.8						
TBI				eS	S	09 55 59.7	-6.5
URZ	Urewera	23.29	201	P	P	09 52 00.9	-1.9
	comp=Z,25nm,0.5s,mb5.0,baz=6.3,slow=4.0,SNR=29						
URZ				S	S	09 56 12.3	-1.5
	comp=Z,8.1nm,0.8s,baz=114,slow=20,SNR=6.1						
URZ				LR	LR	09 58 44.9	
	comp=Z,2μm,20.2s,MS4.5,baz=203,slow=31						
URZ	Urewera	23.29	201	eP	P	09 52 03.3	+0.5
	comp=Z,179nm,1.2s,mb5.4						
PMOR	Pomariorio Ree	23.92	89	eP	P	09 52 07.9	-1.1
	comp=Z,310nm,1.4s,mb5.6						
XMAS	Kiritimati	23.94	40	eP	P	09 52 09.8	+0.7
	comp=Z,88nm,0.9s,mb5.2						
SNZO	South Karori	26.84	201	eP	P	09 52 35.3	0.0
	comp=Z,24nm,0.6s,mb4.9						
HNR	Honiara	27.57	282	LR	LR	10 02 10.7	
	comp=Z,9μm,19.1s,MS5.4,baz=130,slow=33						
KHZ	Kahutara	28.23	202	eP	P	09 52 48.5	+0.8
	comp=Z,49nm,1.1s,mb5.0						
RPZ	Rata Peaks	30.27	204	P	P	09 53 10.0	+4.2
	comp=Z,15nm,0.5s,mb5.0,baz=41,slow=6.1,SNR=9.7						
RPZ				S	S	09 58 09.2	+4.8
	comp=Z,7.7nm,0.9s,baz=162,slow=19,SNR=2.6						
RPZ	Rata Peaks	30.27	204	eP	P	09 53 08.1	+2.3
	comp=Z,44nm,0.8s,mb5.2						
RPZ				S	S	09 58 09.2	+4.8
TAOE	Nuku Hiva Isla	32.65	80	eLR	LR	10 02 01.7	
	comp=Z,2μm,23.6s						
EIDS	Eidsvold	34.80	249	eP	P	09 53 43.7	-2.0
	comp=Z,181nm,3.0s						
ARMA	Armidale	35.28	241	eP	P	09 53 48.5	-1.3
ARMA	Armidale	35.28	241	eP	P	09 53 48.4	-1.4
	comp=Z,25nm,0.9s,mb5.1						
RKT	Rikitea	35.98	106	eP	P	09 53 55.0	-0.8
	comp=Z,95nm,1.2s,mb5.6						
RKT				eLR	LR	10 03 30.4	
	comp=Z,2μm,25.0s						
RKT	Rikitea	35.98	106	eP	P	09 53 55.0	-0.8
RKT				pmax	pmax		
	comp=Z,95nm,1.2s,mb5.6						
CNB	Canberra Magne	38.52	234	eP	P	09 54 14.6	-2.7
CTA	Charters Tower	39.03	259	P	P	09 54 19.1	-2.6
	comp=Z,6.1nm,0.7s,mb4.4,baz=107,slow=10,SNR=5.2						
CTA				LR	LR	10 09 12.8	
	comp=Z,2μm,18.5s,MS5.0,baz=91,slow=34						
CTA	Charters Tower	39.03	259	eP	P	09 54 20.3	-1.4
	comp=Z,5.7nm,0.8s,mb4.3						
CTA	Charters Tower	39.03	259	P	P	09 54 19.1	-2.6
CTAO	Charters Tower	39.03	259	eP	P	09 54 20.3	-1.4
	comp=Z,7.8nm,0.7s,mb4.5						
CTAO	Charters Tower	39.03	259	eP	P	09 54 20.3	-1.4
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
CTAO	Charters Tower	39.03	259	P	P	09 54 22.3	+0.6
	comp=Z,19nm,0.9s,mb4.8						
PMG	Port Moresby	39.71	275	⇓eP	P	09 54 31.1	+3.7
PMG				pmax	pmax		
	comp=Z,37nm,1.7s						
KIP	Kipapa	40.51	21	eP	P	09 54 34.7	+0.8
	comp=Z,751nm,2.2s,mb5.9						
KIP	Kipapa	40.51	21	eP	P	09 54 34.7	+0.8
KIP				pmax	pmax		
	comp=Z,751nm,2.2s,mb5.9						
TOO	Toolangi	42.20	232	eP	P	09 54 47.0	-0.7
COEN	Coen	42.58	267	eP	P	09 54 54.0	+2.9
	comp=Z,142nm,1.0s,mb5.7						
COEN	Coen	42.58	267	P	P	09 54 53.9	+2.8
	comp=Z,90nm,1.0s,mb5.4						
STKA	Stephens Creek	44.00	241	P	P	09 55 00.0	-2.3
	comp=Z,20nm,0.8s,mb4.9,baz=77,slow=7.0,SNR=13						
STKA				LR	LR	10 12 25.1	
	comp=Z,2μm,19.6s,MS4.9,baz=65,slow=35						
STKA	Stephens Creek	44.00	241	eP	P	09 54 59.9	-2.4
	comp=Z,28nm,1.0s,mb5.0						
STKA	Stephens Creek	44.00	241	eP	P	09 55 00.5	-1.8
	comp=Z,12nm,1.0s,mb4.6						
BBOO	Buckleboo	48.77	241	⇑iP	P	09 55 38.6	-1.2
	comp=Z,35nm,1.2s,mb5.3						
BBOO	Buckleboo	48.77	241	eP	P	09 55 38.7	-1.1
	comp=Z,153nm,1.1s,mb5.9						
WB2	Warramunga Arr	50.21	258	eP	P	09 55 48.6	-2.4
WRA	Warramunga Arr	50.22	258	P	P	09 55 48.4	-2.7
	comp=Z,3.2nm,0.6s,mb4.5,baz=95,slow=7.0,SNR=60						
WRA				LR	LR	10 16 17.1	
	comp=Z,1μm,18.4s,MS5.0,baz=90,slow=35						
WRA	Warramunga Arr	50.22	258	P	P	09 55 48.4	-2.7
ASAR	Alice Springs	50.37	253	P	P	09 55 49.4	-2.7
	comp=Z,50nm,0.6s,mb5.7,baz=88,slow=8.2,SNR=444						
ASAR				S	S	10 03 00.1	-4.2
	comp=Z,0.9nm,0.8s,baz=90,slow=15,SNR=4.8						
ASAR	Alice Springs	50.37	253	P	P	09 55 49.4	-2.7
BAKI	Biak	52.66	282	P	sP	09 56 22.5	+3.4
KAKA	Kakadu	53.08	266	eP	P	09 56 11.4	-1.1
	comp=Z,10nm,0.6s,mb4.9						
KAKA	Kakadu	53.08	266	eP	P	09 56 12.8	+0.3
	comp=Z,76nm,1.0s,mb5.6						
KAKA	Kakadu	53.08	266	P	P	09 56 13.8	+1.3
	comp=Z,240nmcomp=Z,33nm,0.8s,mb5.3						
FORT	Forrest	55.45	244	eP	P	09 56 29.4	-0.2
	comp=Z,20nm,0.6s,mb5.3						
FORT	Forrest	55.45	244	eP	P	09 56 29.9	+0.3
	comp=Z,31nm,0.8s,mb5.4						
KNA	Kununurra	56.03	262	P	P	09 56 35.1	+1.1
	comp=Z,482nmcomp=Z,43nm,0.9s,mb5.5						
FITZ	Fitzroy Crossi	58.61	259	P	P	09 56 49.6	-2.6
	comp=Z,2.0nm,0.7s,mb4.3,baz=182,slow=7.8,SNR=5.9						
FITZ	Fitzroy Crossi	58.61	259	eP	P	09 56 49.7	-2.5
	comp=Z,20nm,1.4s,mb5.0						
FITZ	Fitzroy Crossi	58.61	259	eP	P	09 56 50.4	-1.7
	comp=Z,38nm,1.7s,mb5.2						
FITZ	Fitzroy Crossi	58.61	259	P	P	09 56 54.4	+2.2
	comp=Z,32nm,2.4s,mb4.9						
LBMI	Labuha	60.97	279	P	P	09 57 10.9	+2.4
	comp=Z,1μmcomp=Z,99nm,1.2s,mb5.8						
SBA	Scott Base	62.04	185	eP	P	09 57 16.6	+1.9
	comp=Z,220nm,1.8s,mb6.0						
SBA	Scott Base	62.04	185	eP	P	09 57 16.6	+1.9
SBA				pmax	pmax		
	comp=Z,220nm,1.8s,mb6.0						
MBWA	Marble Bar	63.66	254	eP	P	09 57 24.3	-2.1
	comp=Z,34nm,1.3s,mb5.2						
MBWA	Marble Bar	63.66	254	P	P	09 57 27.1	+0.7
	comp=Z,24nm,1.3s,mb5.1						
KLBR	Kellerberrin	64.24	243	eP	P	09 57 28.7	-1.4
	comp=Z,35nm,1.1s,mb5.3						
NWAO	Narrogin (SRO)	64.59	241	P	P	09 57 32.1	-0.2
	comp=Z,8.8nm,0.9s,mb4.8,baz=99,slow=7.4,SNR=2.7						
NWAO	Narrogin (SRO)	64.59	241	P	P	09 57 32.1	-0.2
LUWI	Luwuk	65.33	277	P	sP	09 57 51.0	+3.8
WSI	Waingapu	65.36	267	P	P	09 57 31.5	-6.1
MRSI	Marisa	66.59	278	P	P	09 57 48.8	+3.2
	comp=Z,34nm,1.3s,mb5.2						
BMNI	Bima	67.17	268	P	P	09 57 51.0	+1.7
	comp=Z,65nm,1.1s,mb5.6						
SPSI	Sidrap Palu	67.35	273	P	sP	09 58 04.9	+4.8
TTSI	Tana Toraja	67.56	274	P	P	09 57 55.6	+3.9
	comp=Z,919nmcomp=Z,22nm,1.0s,mb5.1						
CASY	Casey	69.54	205	eP	P	09 58 02.8	-0.3
CASY	Casey	69.54	205	eP	P	09 58 03.0	-0.2
	comp=Z,38nm,1.1s,mb5.2						
MJAR	Matsushiro Arr	70.34	320	P	P	09 58 07.3	-1.1
	comp=Z,8.2nm,0.9s,mb4.6,baz=156,slow=6.2,SNR=12						
MJAR				LR	LR	10 22 07.4	
	comp=Z,450nm,20.4s,MS4.7,baz=120,slow=30						
MJAR	Matsushiro Arr	70.34	320	P	P	09 58 07.4	-1.1
MAJO	Matsushiro	70.34	320	eP	P	09 58 07.5	-1.0
	comp=Z,20nm,1.2s,mb4.9						
MAJO	Matsushiro	70.34	320	eP	P	09 58 07.5	-1.0
MAJO				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
MAT	Matsushiro	70.34	320	P	P	09 58 07.7	-0.8
MAT				S	S	10 07 21.0	+1.3
YUK	Yuzh-Kuril'sk	71.29	330	⇓iP	P	09 58 12.8	-1.3
YUK				i PPP		10 02 29.9	
YUK				i S	S	10 07 24.7	-5.8
YUK				i SS	SS	10 11 52.6	-13
YUK				i SSS		10 15 04.6	
YUK				smax			
	comp=N,2μm,2.1s						
YUK				smax			
	comp=E,2μm,2.1s						
YUK				MLR	MLR		
	comp=N,810nm,20.0s,MS5.3						
YUK				MLR	MLR		
	comp=Z,700nm,20.0s,MS4.9						
YUK				MLR	MLR		
	comp=E,2μm,24.0s,MS5.3						
MYLDM	Lahad Datu	71.36	281	P	P	09 58 20.1	+4.9
	comp=E,1μmcomp=E,83nm,1.2s,mb5.5						
SAC	San Andreas	71.74	40	eP	P	09 58 17.1	+0.1
SAC	San Andreas	71.74	40	eP	P	09 58 17.1	+0.1
SAO	San Andreas Ge	71.83	41	eP	P	09 58 17.7	+0.2
	comp=E,52nm,1.4s,mb5.3						
SAO	San Andreas Ge	71.83	41	eP	P	09 58 17.7	+0.2
SAO				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.3						
HOPS	Hopland	72.24	39	eP	P	09 58 20.0	+0.1
	comp=Z,54nm,1.4s,mb5.3						
KCPM	Cahto Peak	72.38	38	eP	P	09 58 21.0	+0.2
	comp=Z,32nm,1.6s,mb5.0						
PASC	Pasadena Art C	72.43	45	eP	P	09 58 20.8	-0.4
	comp=Z,172nm,1.5s,mb5.8						
KIPM	Iron Peak	72.52	38	eP	P	09 58 22.0	+0.4
	comp=Z,57nm,1.6s,mb5.2						
ARVC	Arvin	72.55	44	⇓P	P	09 58 22.0	+0.1
	baz=73						
MURC	Murrieta	72.78	46	⇓P	P	09 58 23.3	0.0
	baz=73						
VES	Vestal, Richgr	72.80	43	P	P	09 58 23.0	-0.3
	baz=73,SNR=20						
BFSC	Mount Baldy Ra	72.83	45	⇓P	P	09 58 23.0	-0.6
	baz=73						
MONP	Monument Peak	72.93	47	⇓P	P	09 58 23.4	-0.7
	baz=73						
EDW2	Edwards Air Fo	72.97	45	⇑P	P	09 58 24.1	-0.3
	baz=73,SNR=12						
RCTC	Rector, Farmer	72.98	43	⇑P	P	09 58 24.8	+0.4
	baz=73						
DVTC	Desert V Tower	73.03	47	⇓P	P	09 58 24.9	+0.2
	baz=73						
KHMM	Horse Mountain	73.07	37	eP	P	09 58 25.5	+0.7
	comp=Z,13nm,1.2s,mb4.8						
ISA	Isabella	73.10	44	P	P	09 58 25.3	+0.1
	baz=73,SNR=21						
ISA	Isabella	73.10	44	eP	P	09 58 25.1	0.0
	comp=Z,50nm,1.4s,mb5.2						
ISA	Isabella	73.10	44	eP	P	09 58 25.1	0.0
ISA				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.2						
CMB	Columbia Colle	73.28	41	eP	P	09 58 25.3	-0.8
	comp=Z,11nm,0.9s,mb4.8						
CMB	Columbia Colle	73.28	41	eP	P	09 58 25.3	-0.8
CMB				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
PFO	Pinyon Flat Ob	73.30	46	⇓P	P	09 58 25.7	-0.6
	baz=73						
PFO	Pinyon Flat Ob	73.30	46	eP	P	09 58 25.8	-0.5
	comp=Z,31nm,1.6s,mb5.0						
PFO	Pinyon Flat Ob	73.30	46	eP	P	09 58 25.8	-0.6
PFO				pmax	pmax		
	comp=Z,31nm,1.6s,mb5.0						
BBRC	Big Bear Solar	73.35	46	⇓P	P	09 58 27.1	+0.5
	baz=74						
QSPA	South Pole Qui	73.38	180	eP	P	09 58 26.5	+0.4
	comp=Z,56nm,1.1s,mb5.4						
SWSC	Sam W. Stewart	73.40	47	⇑P	P	09 58 26.8	-0.1
	baz=74,SNR=5.0						
LRMC	Laurel Mountai	73.51	44	⇑P	P	09 58 27.8	+0.3
	baz=74,SNR=12						
WDC	Whiskeytown Da	73.57	38	eP	P	09 58 27.8	0.0
	comp=Z,39nm,1.4s,mb5.1						
WDC	Whiskeytown Da	73.57	38	eP	P	09 58 27.8	0.0
WDC				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.1						
CHGN	Chignik	73.68	8	eP	P	09 58 26.8	-1.2
PET	Petropavlovsk	73.69	342	eP	P	09 58 27.5	-0.7
PET				eS	S	10 07 57.5	0.0
PET				pmax	pmax		
	comp=Z,300nm,14.5s						
PET				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
PET				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.9						
PET				MLR	MLR		
	comp=Z,700nm,17.0s						
CWC	Cottonwood Cre	73.81	43	⇓P	P	09 58 29.7	+0.4
	baz=74						
BELC	Belle Mtn. Jos	73.84	46	⇑P	P	09 58 29.1	-0.4
	baz=74,SNR=10						
MPMC	Manual Prospec	73.98	44	⇑P	P	09 58 30.3	0.0
	baz=74,SNR=39						
GSC	Goldstone	74.01	45	⇑P	P	09 58 30.0	-0.4
	baz=74,SNR=9.3						
GSC	Goldstone	74.01	45	eP	P	09 58 29.8	-0.6
	comp=Z,42nm,1.5s,mb5.2						
GSC	Goldstone	74.01	45	eP	P	09 58 29.8	-0.7
GSC				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.2						
MLAC	Mammoth Lakes	74.02	42	⇑P	P	09 58 31.2	+0.7
	baz=74,SNR=6.8						
BC3	Big Chuckawall	74.03	47	⇑P	P	09 58 30.9	+0.2
	baz=74,SNR=9.5						
MTUM	Tungsten Hills	74.03	42	eP	P	09 58 30.6	0.0
PETK	Petropavlovsk-	74.04	342	P	P	09 58 29.5	-0.7
	comp=Z,14nm,1.0s,mb4.9,baz=140,slow=9.0,SNR=17						
PETK				PKKP	PKKPbc	10 17 48.0	-17
	comp=Z,2.7nm,0.9s,baz=301,slow=12,SNR=3.9						
PETK				LR	LR	10 32 40.5	
	comp=Z,288nm,18.2s,MS4.6,baz=146,slow=37						
PETK	Petropavlovsk-	74.04	342	P	P	09 58 29.5	-0.7
112A	Yuma	74.04	48	⇓P	P	09 58 30.8	0.0
	baz=74						
HEC	Hector,Ludlow	74.07	45	⇓P	P	09 58 30.2	-0.6
	baz=74,SNR=15						
GLA	Glamis	74.14	48	⇓P	P	09 58 31.4	+0.1
	baz=74						
GLA	Glamis	74.14	48	eP	P	09 58 31.5	+0.2
	comp=Z,56nm,1.5s,mb5.3						
GLA	Glamis	74.14	48	eP	P	09 58 31.5	+0.2
GLA				pmax	pmax		
	comp=Z,57nm,1.5s,mb5.3						
WAKR	Walker	74.16	41	eP	P	09 58 31.2	-0.1
YBH	Yreka Blue Hor	74.21	37	P	P	09 58 31.4	-0.1
	comp=Z,6.8nm,0.7s,mb4.7,baz=228,slow=4.3,SNR=14						
YBH	Yreka Blue Hor	74.21	37	eP	P	09 58 31.6	0.0
	comp=Z,22nm,1.1s,mb5.0						
YBH	Yreka Blue Hor	74.21	37	eP	P	09 58 31.6	+0.1
YBH				pmax	pmax		
	comp=Z,22nm,1.1s						
WCN	Washoe City	74.44	40	⇓P	P	09 58 33.1	+0.2
	baz=75,SNR=20						
GMRC	Granite Mounta	74.50	46	⇑P	P	09 58 33.0	-0.3
	baz=75,SNR=13						
IRM	Iron Mountain	74.51	47	⇓P	P	09 58 33.2	-0.2
	baz=75,SNR=17						
GRAC	Grapevine Rang	74.60	43	⇑P	P	09 58 34.6	+0.7
	baz=75,SNR=10						
FURC	Furnace Creek,	74.63	44	⇓P	P	09 58 33.7	-0.4
	baz=75,SNR=16						
HUMO	Hull Mountain	74.64	36	eP	P	09 58 34.4	+0.5
	comp=Z,54nm,1.6s,mb5.2						
TUQ	Turquoise Moun	74.68	45	P

216A	Three Points,	76.03	50	⇓P		P	09 58 42.4 +0.1
	baz=76,SNR=11						
KDAK	Kodiak Island	76.04	11	P		P	09 58 41.0 -0.6
	comp=Z,23nm,1.1s,mb5.0,baz=223,slow=7.7,SNR=4.9						
KDAK				LR		LR	10 29 53.0
	comp=Z,829nm,18.4s,MS5.1,baz=10,slow=34						
KDAK	Kodiak Island	76.04	11	*i* P		P	09 58 43.1 +1.5
116A	Eloy	76.13	50	⇓P		P	09 58 43.0 +0.2
	baz=76						
T11A	Corn Creek, Al	76.15	44	P		P	09 58 42.8 0.0
	baz=76,SNR=42						
U12A	Valley of Fire	76.17	45	⇑P		P	09 58 43.1 +0.2
	baz=76,SNR=32						
Z15A	Gila River Ind	76.17	49	⇓P		P	09 58 43.1 +0.1
	baz=76						
T12A	Moapa	76.21	45	P		P	09 58 43.4 +0.3
	baz=76,SNR=5.5						
V13A	Grand Canyon W	76.23	46	⇑P		P	09 58 43.2 -0.1
	baz=76,SNR=13						
X14A	Yava	76.26	47	⇑P		P	09 58 43.7 +0.2
	baz=76,SNR=8.7						
Y15A	Casa Rosa Ranc	76.39	48	⇑P		P	09 58 44.5 +0.2
	baz=76,SNR=25						
SBUM	Sibu	76.44	277	P		sP	09 58 58.0 +3.2
STKI	Sintang	76.44	274	P		sP	09 58 56.9 +2.1
W14A	Seligman	76.51	47	⇑P		P	09 58 45.3 +0.4
	baz=77,SNR=18						
R11A	Troy Canyon, C	76.53	43	⇓P		P	09 58 44.7 -0.2
	baz=77,SNR=21						
MIR	Mirnyy	76.54	204	⇓*i* P		P	09 58 45.0 +0.4
MIR				pmax		pmax	
	comp=Z,58nm,1.4s,mb5.3						
U13A	Pakoon Wash	76.55	45	P		P	09 58 45.2 +0.1
	baz=77,SNR=29						
S12A	Delamar Landin	76.60	44	⇓P		P	09 58 45.8 +0.5
	baz=77,SNR=24						
BMN	Battle Mountai	76.68	40	*e*P		P	09 58 45.9 +0.2
	comp=Z,54nm,1.6s,mb5.2						
BMN	Battle Mountai	76.68	40	*e*P		P	09 58 45.9 +0.2
BMN				pmax		pmax	
	comp=Z,55nm,1.6s,mb5.2						
TUC	Tucson	76.68	50	*e*P		P	09 58 46.0 +0.1
	comp=Z,86nm,1.9s,mb5.4						
TUC	Tucson	76.68	50	*e*P		P	09 58 46.0 +0.1
TUC				pmax		pmax	
	comp=Z,86nm,1.9s,mb5.4						
V14A	Boquillas Ranc	76.72	46	⇑P		P	09 58 46.4 +0.3
	baz=77,SNR=18						
X15A	Humboldt	76.73	48	⇓P		P	09 58 46.4 +0.3
	baz=77,SNR=14						
117A	Oracle	76.84	50	⇓P		P	09 58 47.1 +0.3
	baz=77,SNR=13						
318A	Bisbee	76.85	51	⇑P		P	09 58 47.0 +0.2
	baz=77,SNR=12						
T13A	Saint George	76.91	45	⇑P		P	09 58 47.3 +0.2
	baz=77,SNR=16						
E03A	Lebam	76.91	32	⇓P		P	09 58 47.0 +0.1
	baz=77						
Y16A	Circle Bar Ran	76.96	48	⇑P		P	09 58 47.5 +0.1
	baz=77,SNR=16						
WVOR	Wild Horse Val	77.02	38	*e*P		P	09 58 47.1 -0.5
	comp=Z,38nm,1.4s,mb5.1						
WVOR	Wild Horse Val	77.02	38	*e*P		P	09 58 47.1 -0.5
WVOR				pmax		pmax	
	comp=Z,38nm,1.4s,mb5.1						
218A	Dragoon	77.06	51	P		P	09 58 48.5 +0.5
	baz=77,SNR=8.9						
U14A	Mt Trumbull	77.08	45	⇑P		P	09 58 48.6 +0.5
	baz=77,SNR=29						
HOOD	Mount Hood Mea	77.12	34	*e*P		P	09 58 47.9 -0.1
	comp=Z,25nm,1.0s,mb5.1						
VIPM	Ingram Point	77.16	35	P		P	09 58 48.3 -0.1
VIPM	Ingram Point	77.16	35	P		P	09 58 48.3 0.0
S13A	Holt Ranch, En	77.25	44	⇑P		P	09 58 49.3 +0.3
	baz=77,SNR=31						
X16A	Lo Mia Camp, P	77.26	48	⇑P		P	09 58 49.6 +0.4
	baz=77,SNR=14						
NLWA	Neilton Lookou	77.33	32	*e*P		P	09 58 48.8 -0.4
	comp=Z,123nm,2.0s,mb5.5						
Y17A	Roosevelt	77.33	49	⇓P		P	09 58 49.4 -0.1
	baz=78,SNR=7.2						
319A	Douglas	77.35	52	P		P	09 58 49.9 +0.2
	baz=78,SNR=8.8						
118A	Homack Ranch,	77.44	50	⇑P		P	09 58 50.6 +0.4
	baz=78,SNR=11						
V15A	Kaibab Nationa	77.46	46	⇓P		P	09 58 50.9 +0.7
	baz=78,SNR=17						
TDL	Tradedollar La	77.48	33	P		P	09 58 50.5 +0.4
T14A	Hurricane	77.49	45	⇓P		P	09 58 50.5 +0.2
	baz=78,SNR=14						
R13A	O'Grain Ranch,	77.50	44	⇓P		P	09 58 51.0 +0.6
	baz=78,SNR=12						
I07A	Izee	77.52	36	P		P	09 58 50.5 +0.2
	baz=78,SNR=16						
KSRS	Korea Array	77.53	315	P		P	09 58 51.4 +0.8
	comp=Z,16nm,1.1s,mb4.9,baz=125,slow=6.1,SNR=36						
KSRS				LR		LR	10 32 02.8
	comp=Z,330nm,18.4s,MS4.7,baz=111,slow=35						
W16A	Flagstaff	77.54	47	⇑P		P	09 58 51.5 +0.8
	baz=78						
CCUT	Cedar City	77.56	44	*e*P		P	09 58 50.8 +0.1
	comp=Z,32nm,1.4s,mb5.1						
ARUT	Antelope Range	77.64	44	*e*P		P	09 58 51.5 +0.3
	comp=Z,14nm,1.0s,mb4.8						
ARUT	Antelope Range	77.64	44	*e*P		P	09 58 51.5 +0.3
ARUT				pmax		pmax	
	comp=Z,14nm,1.0s,mb4.8						
219A	White Tail Can	77.66	51	⇓P		P	09 58 51.5 +0.1
	baz=78,SNR=10						
J08A	Circle Bar Ran	77.67	37	⇑P		P	09 58 51.0 -0.2
	baz=78,SNR=14						
X17A	Forest Lakes	77.67	48	⇓P		P	09 58 52.1 +0.6
	baz=78,SNR=8.0						
U15A	North Rim	77.70	46	⇑P		P	09 58 52.1 +0.6
	baz=78,SNR=20						
S14A	Cedar City	77.80	44	⇑P		P	09 58 52.5 +0.4
	baz=78,SNR=14						
320A	Kipp Ranch, An	77.90	52	⇑P		P	09 58 53.3 +0.5
	baz=78,SNR=8.3						
T15A	Red Dirt Ranch	77.94	45	⇓P		P	09 58 53.2 +0.3
	baz=78,SNR=32						
Y18A	Canyon Day Jun	77.95	49	⇑P		P	09 58 53.7 +0.6
	baz=78						
LON	Longmire	77.96	33	*e*P		P	09 58 52.3 -0.4
	comp=Z,21nm,1.4s,mb4.9						
LON	Longmire	77.96	33	*e*P		P	09 58 52.3 -0.4
LON				pmax		pmax	
	comp=Z,21nm,1.4s,mb4.9						
GNW	Green Mountain	77.97	32	*e*P		P	09 58 52.7 0.0
	comp=Z,36nm,1.9s,mb5.0						
KSM	Kuching	77.97	275	P		P	09 58 54.6 +1.0
	comp=Z,814nmcomp=Z,78nm,1.2s,mb5.5						
119A	Ashpeak Ranch,	78.00	50	⇓P		P	09 58 53.6 +0.3
	baz=78,SNR=6.9						
WPW	White Pass	78.06	33	P		P	09 58 53.1 -0.2
D05A	Enumclaw	78.15	33	⇑P		P	09 58 54.7 +0.9
	baz=78,SNR=12						
220A	Playas Peak, P	78.16	51	⇓P		P	09 58 54.7 +0.5
	baz=78,SNR=15						
LEM	Lembang	78.22	266	P		P	09 58 58.5 +3.5
	comp=Z,88nm,1.1s,mb5.6						
S15A	Panguitch	78.30	45	⇑P		P	09 58 56.1 +1.3
	baz=78,SNR=27						
V17A	Tonalea, Kykot	78.33	47	⇓P		P	09 58 55.3 +0.2
	baz=78						
U16A	Tuba City	78.36	47	P		P	09 58 55.8 +0.6
	baz=78,SNR=15						
PGC	Sidney	78.38	31	*e*P		P	09 58 54.8 -0.2
	comp=Z,6.0nm,1.8s,mb4.2						
X18A	Snowflake	78.38	49	⇓P		P	09 58 55.9 +0.6
	baz=78,SNR=6.9						
120A	U Bar Ranch, L	78.39	51	⇓P		P	09 58 56.5 +1.0
	baz=78,SNR=7.1						
Q14A	Sevier Lake (B	78.39	43	⇑P		P	09 58 55.6 +0.3
	baz=78,SNR=24						
INCN	Inchon	78.42	315	*e*P		P	09 58 57.1 +1.6
	comp=Z,42nm,1.0s,mb5.3						
T16A	Glen Canyon Da	78.52	46	P		P	09 58 56.9 +0.7
	baz=79,SNR=9.4						
RSO	Redoubt South	78.54	10	*e*P		P	09 58 57.9 +2.3
	comp=Z,48nm,0.9s,mb5.4						
G08A	Pilot Rock	78.57	36	⇑P		P	09 58 55.9 -0.3
	baz=79,SNR=25						
Y19A	Nutrioso	78.61	49	⇓P		P	09 58 57.2 +0.6
	baz=79,SNR=17						
R15A	Junction	78.64	44	P		P	09 58 57.6 +0.9
	baz=79,SNR=6.9						
QZH	Quanzhou	78.67	300	⇑*i* P		P	09 58 56.3 -0.9
QZH				S		S	10 08 50.8 -2.7
QZH				LR		LR	
	comp=Z,920nm,13.6s,MS5.3						
Z20A	Nine Sixteen R	78.69	50	P		P	09 58 57.5 +0.4
	baz=79,SNR=10						
X19A	St. Johns	78.81	49	⇑P		P	09 58 58.7 +1.0
	baz=79,SNR=10.0						
JCW	Jim Creek	78.83	32	*e*P		P	09 58 56.9 -0.6
S16A	Weppner Ranch,	78.84	45	⇓P		P	09 58 57.8 -0.1
	baz=79,SNR=18						
P14A	Drum Mountains	78.85	43	⇑P		P	09 58 58.0 +0.1
	baz=79,SNR=43						
MSU	Marysvale	78.86	44	*e*P		P	09 58 58.9 +0.9
MSU	Marysvale	78.86	44	*e*P		P	09 58 58.9 +1.0
E07A	Sunnyside	78.87	34	⇑P		P	09 58 58.1 +0.3
	baz=79,SNR=6.7						
RSW	Rattlesnake Hi	78.91	34	*e*P		P	09 58 58.1 +0.1
HAWA	Hanford	78.94	34	*e*P		P	09 58 58.0 -0.1
	comp=Z,76nm,1.8s,mb5.3						
V18A	Ganado	78.98	47	⇑P		P	09 58 59.0 +0.3
	baz=79,SNR=16						
Q15A	Fillmore	78.99	44	P		P	09 58 59.0 +0.4
	baz=79,SNR=10						
121A	Cookes Peak, D	79.01	51	⇑P		P	09 58 59.7 +0.8
	baz=79,SNR=6.7						
T17A	Navajo Res., N	79.01	46	⇓P		P	09 58 59.4 +0.6
	baz=79,SNR=16						
SLKM	Skilak Lake	79.02	11	*e*P		P	09 58 57.6 -0.6
SLKM	Skilak Lake	79.02	11	*e*P		P	09 58 57.6 -0.7
R16A	Teasdale	79.21	45	⇓P		P	09 59 00.7 +0.8
	baz=79,SNR=33						
Y20A	Horse Springs,	79.22	50	⇓P		P	09 59 00.8 +0.8
	baz=79,SNR=21						
MFID	Camas Ranch	79.26	38	⇓P		P	09 58 59.6 -0.3
	baz=79,SNR=14						
CRAG	Craig	79.27	22	*e*P		P	09 59 00.5 +0.8
	comp=Z,46nm,1.4s,mb5.2						
ETW	Entiat	79.28	33	*e*P		P	09 58 59.7 -0.3
LNOR	Lincton Mounta	79.30	35	*e*P		P	09 58 59.6 -0.5
	comp=Z,4.3nm,0.8s,mb4.4						
LNOR	Lincton Mounta	79.30	35	*e*P		P	09 58 59.6 -0.5
LNOR				pmax		pmax	
	comp=Z,4.0nm,0.8s,mb4.4						
DUG	Dugway	79.34	42	*e*P		P	09 58 59.5 -1.0
	comp=Z,10nm,0.9s,mb4.8						
DUG	Dugway	79.34	42	*e*P		P	09 58 59.5 -1.0
DUG				pmax		pmax	
	comp=Z,10.0nm,0.9s,mb4.8						
S17A	Black Ridge (B	79.34	45	⇓P		P	09 59 00.2 -0.3
	baz=80,SNR=15						
P15A	Leamington	79.36	43	P		P	09 59 00.9 +0.3
	baz=80,SNR=6.7						
U18A	Rough Rock, Ch	79.37	47	⇑P		P	09 59 01.1 +0.4
	baz=80						
X20A	Quemado	79.44	49	P		P	09 59 02.0 +0.8
	baz=80,SNR=13						
Z21A	St. Cloud Mine	79.46	51	P		P	09 59 02.5 +1.1
	baz=80,SNR=8.9						
NLW	Nelson Butte	79.58	33	P		P	09 59 00.8 -0.8
BGU	Big Grassy Mou	79.59	42	*e*P		P	09 59 01.2 -0.6
	comp=Z,11nm,1.2s,mb4.7						
D08A	Wollman Farm,	79.68	34	⇑P		P	09 59 01.9 -0.3
	baz=80,SNR=11						
W20A	Ramah	79.71	49	⇓P		P	09 59 03.3 +0.6
	baz=80,SNR=15						
T18A	Mexican Hat	79.73	46	⇑P		P	09 59 03.1 +0.4
	baz=80,SNR=44						
Q16A	Castle Valley	79.75	44	P		P	09 59 03.6 +0.9
	baz=80,SNR=8.4						
HABR	Khabarovsk	79.77	328	*ce*P		P	09 59 02.7 +0.1
HABR				*e*		pP	09 59 09.4 -0.4
HABR				*e**PP		pP	09 59 12.3 +2.5
HABR				*e**SP		sP	09 59 16.3 +3.9
HABR				*e*S		S	10 09 02.0 -2.1
HABR				S		S	10 09 14.1 +10
HABR							10 09 21.9
HABR				*e*SS		SS	10 14 09.0 -4.7
HABR				pmax		pmax	
	comp=E,27nm,0.8s						
HABR				pmax		pmax	
	comp=N,8.0nm,1.0s						
HABR				pmax		pmax	
	comp=Z,68nm,1.6s,mb5.3						
HABR				MLR		MLR	
	comp=Z,201nm,19.0s,MS4.5						
E09A	Wood Farm, Sta	79.77	35	P		P	09 59 02.1 -0.6
	baz=80,SNR=12						
U19A	Dine' College,	79.78	47	P		P	09 59 03.4 +0.5
	baz=80,SNR=19						
P16A	Fountain Green	79.78	43	P		P	09 59 03.8 +0.9
	baz=80,SNR=6.6						
Y21A	Point of Rocks	79.78	50	P		P	09 59 03.6 +0.6
	baz=80,SNR=16						
R17A	Hanksville Air	79.80	45	⇓P		P	09 59 03.0 -0.1
	baz=80,SNR=24						
I12A	Atlanta	79.89	38	⇓P		P	09 59 03.4 0.0
	baz=80,SNR=34						
N15A	Stansbury Isla	79.90	42	⇑P		P	09 59 03.4 -0.2
	baz=80						
X21A	Alamocita Cree	79.91	49	P		P	09 59 04.4 +0.6
	baz=80,SNR=11						
TMUT	Trail Mountain	79.92	44	*e*P		P	09 59 04.6 +0.9
	comp=Z,25nm,0.9s,mb5.2						
F10A	Beach Ranch, E	79.95	36	P		P	09 59 03.0 -0.7
	baz=80,SNR=21						
Z22A	Elephant Butte	79.96	51	⇑P		P	09 59 04.4 +0.4
	baz=80,SNR=16						
OD2	Odessa Site #2	80.00	34	*e*P		P	09 59 03.2 -0.7
MPU	Maple Canyon	80.01	43	*e*P		P	09 59 04.5 +0.3
	comp=Z,28nm,1.4s,mb5.0						
L14A	Malta	80.06	41	P		P	09 59 04.3 -0.1
	baz=80,SNR=11						
T19A	Beclabito	80.17	47	P		P	09 59 05.6 +0.5
	baz=80,SNR=14						
SPUT	South Promonto	80.17	42	*e*P		P	09 59 05.0 0.0
	comp=Z,26nm,1.3s,mb5.0						
HLID	Hailey	80.19	39	*e*P		P	09 59 04.9 -0.2
	comp=Z,13nm,0.8s,mb4.9						
O16A	Springville	80.20	43	⇑P		P	09 59 05.5 +0.3
	baz=80						
HVU	Hansel Valley	80.22	41	*e*P		P	09 59 05.0 -0.2
	comp=Z,19nm,1.2s,mb4.9						
HVU	Hansel Valley	80.22	41	*e*P		P	09 59 05.1 -0.1
HVU				pmax		pmax	
	comp=Z,19nm,1.2s,mb4.9						
PMR	Palmer	80.23	11	*e*P		P	09 59 03.2 -1.6
	comp=Z,44nm,1.6s,mb5.1						
PMR				LR		LR	
	comp=Z,800nm,17.0s,MS5.1						
PMR	Palmer	80.23	11	*e*P		P	09 59 03.2 -1.6
PMR				pmax		pmax	
	comp=Z,44nm,1.6s,mb5.1						
PMR				MLR		MLR	
	comp=Z,800nm,17.0s,MS5.1						
J13A	Cove Ranch, Pi	80.24	39	P		P	09 59 05.3 0.0
	baz=80,SNR=30						
M15A	Larsen Ranch,	80.25	41	⇓P		P	09 59 04.9 -0.5
	baz=80,SNR=18						
324A	Moseley Ranch,	80.26	53	⇓P		P	09 59 05.7 0.0
	baz=80,SNR=8.4						
Y22A	Socorro	80.27	50	⇓P		P	09 59 06.1 +0.4
	baz=80,SNR=8.2						
B08A	Colville Reser	80.27	33	P		P	09 59 04.5 -0.9
	baz=80,SNR=14						
SRU	San Rafael	80.28	44	*e*P		P	09 59 05.7 +0.1
	comp=Z,14nm,0.9s,mb4.9						
SRU	San Rafael	80.28	44	*e*P		P	09 59 05.7 +0.1
SRU				pmax		pmax	
	comp=Z,14nm,0.9s,mb4.9						
WRAK	Wrangell Islan	80.28	21	*e*P		P	09 59 04.6 -0.6
	comp=Z,26nm,1.3s,mb5.0						
P17A	Butcher Ranch,	80.32	44	P		P	09 59 06.1 +0.3
	baz=80,SNR=5.5						
W21A	San Fidel	80.32	49	⇓P		P	09 59 06.8 +0.8
	baz=80,SNR=5.7						
R18A	Canyonlands Na	80.34	45	P		P	09 59 05.8 -0.2
	baz=80,SNR=14						
425A	Indio Mountain	80.36	54	⇓P		P	09 59 06.3 0.0
	baz=80,SNR=18						
LAZ	Ladron	80.36	50	*e*P		P	09 59 06.6 +0.4
	comp=Z,16nm,1.7s,mb4.7						
K14A	Jones Ranch, D	80.38	40	P		P	09 59 06.1 0.0
	baz=80,SNR=20						
TTA	Tatalina	80.42	8	*e*P		P	09 59 05.7 -0.1
TTA	Tatalina	80.42	8	*e*P		P	09 59 05.7 -0.1
MDJ	Mudanjiang	80.44	322	P		P	09 59 06.9 +0.6
MDJ				pP		pP	09 59 16.4 +2.8
MDJ				sP		sP	09 59 20.1 +3.9
MDJ				PP		PP	10 02 05.8 -4.1
MDJ				S		S	10 09 11.9 +0.5
MDJ				sS		sS	10 09 28.0 +4.7
MDJ				pmax		pmax	
	comp=Z,16nm,1.6s,mb4.7						
MDJ				pmax		pmax	
	comp=Z,210nm,5.0s						
MDJ				LR		LR	
	comp=N,200nm,19.0s,MS4.7						
MDJ				LR		LR	
	comp=E,230nm,19.0s,MS4.7						
MDJ				LR		LR	
	comp=Z,420nm,21.2s,MS4.8						
MDJ	Mudanjiang	80.44	322	*e*P		P	09 59 07.5 +1.2
	comp=Z,25nm,1.0s,mb5.1						
JLU	Jordanelle	80.44	43	*e*P		P	09 59 05.3 -1.2
	comp=Z,18nm,1.3s,mb4.8						
DAU	Daniels Canyon	80.47	43	*e*P		P	09 59 07.0 +0.4
DAU	Daniels Canyon	80.47	43	*e*P		P	09 59 07.0 +0.4
H12A	Diamond D Ranc	80.48	38	P		P	09 59 06.2 -0.3
	baz=81,SNR=14						
C09A	Chrisman Ranch	80.49	34	P		P	09 59 06.1 -0.4
	baz=81,SNR=9.2						
626A	Big Bend Ranch	80.49	55	⇓P		P	09 59 07.1 +0.1
	baz=81,SNR=9.7						
Z23A	Rita Site, Whi	80.51	51	P		P	09 59 07.4 +0.4
	baz=81,SNR=6.1						
224A	Cornudas Mount	80.51	53	⇑P		P	09 59 07.2 +0.1
	baz=81						
Q18A	Rafter H Ranch	80.54	44	⇑P		P	09 59 06.8 -0.2
	baz=81,SNR=20						
G12A	Big Creek, Yel	80.54	37	⇓P		P	09 59 06.7 -0.2
	baz=81						
I13A	Wildhorse Cree	80.56	39	⇓P		P	09 59 07.0 -0.1
	baz=81,SNR=9.1						
L15A	Malad City	80.58	41	⇑P		P	09 59 06.7 -0.4
	baz=81,SNR=9.9						
N16A	Rees Ranch, Co	80.60	42	⇑P		P	09 59 07.7 +0.5
	baz=81,SNR=7.2						
J14A	Carey	80.60	39	⇑P		P	09 59 07.7 +0.4
	baz=81,SNR=29						
BNM	Barren Site	80.62	50	*e*P		P	09 59 07.6 0.0
	comp=Z,24nm,1.5s,mb4.9						
325A	Bean Ranch, Si	80.62	53	⇓P		P	09 59 07.5 -0.2
	baz=81,SNR=16						
LPM	Los Pinos Moun	80.69	50	*e*P		P	09 59 08.4 +0.4
O17A	Robinson Place	80.69	43	P		P	09 59 08.3 +0.5
	baz=81,SNR=22						
M16A	Huntsville	80.70	42	⇓P		P	09 59 07.4 -0.4
	baz=81,SNR=15						
R19A	Curley Farm, L	80.72	45	⇑P		P	09 59 07.9 -0.1
	baz=81,SNR=9.7						
P18A	Preston Nutter	80.73	44	P		P	09 59 08.4 +0.4
	baz=81,SNR=10						
526A	Mary Lane Ranc	80.74	55	⇓P		P	09 59 08.3 0.0
	baz=81,SNR=15						
TXAR	Lajitas Array	80.77	56	P		P	09 59 08.2 -0.3
	comp=Z,7.1nm,1.1s,mb4.5,baz=221,slow=6.8,SNR=36						
TXAR				LR		LR	10 30 51.1
	comp=Z,428nm,18.4s,MS4.8,baz=255,slow=33						
TXAR	Lajitas Array	80.77	56	P		P	09 59 08.2 -0.3
124A	Stringfield Ra	80.84	52	⇓P		P	09 59 09.1 +0.3
	baz=81,SNR=8.9						
H13A	Challis	80.85	38	⇓P		P	09 59 08.3 -0.2
	baz=81,SNR=13						
K15A	Arbon	80.86	40	⇓P		P	09 59 08.3 -0.3
	baz=81,SNR=13						
HWUT	Hardware Ranch	80.89	42	*e*P		P	09 59 08.0 -0.9
	comp=Z,41nm,1.8s,mb5.1						
PPBI	Pangkal Pinang	80.92	270	P		sP	09 59 22.7 +3.2
PV10	Paradox Valley	80.92	46	*e*P		P	09 59 08.8 -0.2
	comp=Z,174nm,0.8s,mb6.0						
U21A	Nageezi	80.94	48	P		P	09 59 09.8 +0.6
	baz=81,SNR=20						
F12A	Elk City	80.94	37	⇑P		P	09 59 08.4 -0.6
	baz=81,SNR=37						
Y23A	Lovelace Mesa,	80.94	51	⇑P		P	09 59 09.3 0.0
	baz=81,SNR=6.0						
I14A	Mackay	80.97	39	⇑P		P	09 59 09.3 +0.1
	baz=81,SNR=8.5						
N17A	Moffit Pass	81.02	43	⇓P		P	09 59 09.5 0.0
	baz=81,SNR=9.6						
PV04	Paradox Valley	81.02	46	*e*P		P	09 59 09.7 +0.1
627A	Terlingua Ranc	81.04	56	⇑P		P	09 59 10.2 +0.3
	baz=81,SNR=14						
426A	McDonald Obser	81.05	54	⇓P		P	09 59 10.2 +0.2
	baz=81,SNR=21						
Q19A	Hogan Spring (	81.05	45	⇓P		P	09 59 09.8 0.0
	baz=81,SNR=13						
225A	Deer Hill, Car	81.06	53	⇑P		P	09 59 10.1 +0.1
	baz=81,SNR=14						
ANMO	Albuquerque	81.11	50	P		P	09 59 09.8 -0.4
	comp=Z,6.4nm,1.1s,mb4.5,baz=223,slow=5.8,SNR=13						
ANMO	Albuquerque	81.11	50	*e*P		P	09 59 10.0 -0.2
	comp=Z,46nm,1.7s,mb5.1						
ANMO	Albuquerque	81.11	50	*e*P		P	09 59 10.0 -0.2
ANMO				pmax		pmax	
	comp=Z,46nm,1.7s						
S20A	Disappointment	81.12	46	⇓P		P	09 59 10.4 +0.2
	baz=81,SNR=10						
X23A	Hourglass Bar	81.14	50	P		P	09 59 10.6 +0.3
	baz=81,SNR=7.0						
527A	Woodward Ranch	81.15	55	⇑P		P	09 59 10.3 -0.3
	baz=81,SNR=12						
G13A	Cobalt	81.16	38	⇓P		P	09 59 10.1 -0.1
	baz=81,SNR=13						
Z24A	Sheeppen Canyo	81.19	51	⇑P		P	09 59 11.1 +0.5
	baz=81,SNR=5.7						
L16A	Fish Haven	81.19	41	P		P	09 59 10.1 -0.4
	baz=81,SNR=9.3						
R20A	Redvale	81.28	46	⇓P		P	09 59 11.4 +0.4
	baz=81,SNR=12						
T21A	Navajo Lake	81.29	47	⇑P		P	09 59 11.8 +0.7
	baz=81,SNR=7.0						
J15A	Blackfoot	81.30	40	⇑P		P	09 59 11.5 +0.5
	baz=81,SNR=30						
326A	Caldwell Ranch	81.36	54	⇓P		P	09 59 11.5 -0.1
	baz=82						
NEW	Newport	81.38	34	*e*P		P	09 59 10.3 -1.0
	comp=Z,38nm,1.8s,mb5.0						
NEW	New

427A	Hayter Ranch,	81.61	54	⇓P		P	09 59 13.2	+0.2
	baz=82,SNR=18							
D12A	Red Ives Fores	81.64	36	⇑P		P	09 59 11.6	-1.1
	baz=82							
Z25A	Roswell	81.65	52	⇓P		P	09 59 13.8	+0.7
	baz=82							
V23A	Ortiz Mt. (NFS	81.67	49	⇓P		P	09 59 14.0	+0.9
	baz=82,SNR=12							
G14A	Jackson	81.69	38	P		P	09 59 13.0	0.0
	baz=82,SNR=12							
Q20A	Ridgley Place,	81.71	45	P		P	09 59 13.4	+0.2
	baz=82,SNR=31							
SKAG	Skagway	81.73	18	eP		P	09 59 18.9	+6.0
	comp=Z,68nm,1.9s,mb5.2							
SKAG				LR		LR		
	comp=Z,800nm,17.0s,MS5.2							
J16A	Bone	81.74	40	P		P	09 59 13.6	+0.3
	baz=82,SNR=12							
T22A	Edith	81.75	48	⇓P		P	09 59 13.6	+0.1
	baz=82,SNR=8.2							
M18A	Lyman	81.76	42	P		P	09 59 13.3	-0.2
	baz=82,SNR=7.5							
N18A	Larsen Ranch,	81.79	43	⇑P		P	09 59 14.0	+0.4
	baz=82							
528A	Cox Ranch, San	81.81	55	⇑P		P	09 59 14.2	+0.2
	baz=82,SNR=13							
O19A	Miners Draw (B	81.81	44	⇑P		P	09 59 13.3	-0.5
	baz=82,SNR=6.7							
MCMT	McKenzie Canyo	81.83	38	eP		P	09 59 13.8	0.0
	comp=Z,11nm,1.3s,mb4.6							
H15A	Lima	81.83	39	P		P	09 59 14.1	+0.3
	baz=82,SNR=20							
CLNB	Carlsbad	81.85	53	eP		P	09 59 14.1	0.0
	comp=Z,2.5nm,0.6s,mb4.3							
126A	Clayton Basin,	81.90	53	⇓P		P	09 59 14.7	+0.3
	baz=82,SNR=6.9							
P20A	De Beque	81.91	45	P		P	09 59 14.5	+0.2
	baz=82,SNR=32							
R21A	Cimarron	81.94	46	P		P	09 59 14.7	+0.2
	baz=82,SNR=23							
U23A	El Rito	81.94	48	P		P	09 59 15.0	+0.5
	baz=82,SNR=21							
E13A	Victor	81.94	37	P		P	09 59 13.4	-0.8
	baz=82,SNR=17							
KLR	Kul'dur	81.94	327	eP		P	09 59 10.2	-4.0
KLR				eS		S	10 09 22.0	-4.8
KLR					smax			
	comp=N,1µm,12.0s							
KLR					smax			
	comp=E,800nm,12.0s							
C12B	Naegeli Ranch,	81.95	35	⇑P		P	09 59 14.1	-0.2
	baz=82,SNR=9.9							
Y25A	Mesa, Roswell	81.95	51	⇓P		P	09 59 14.3	-0.4
	baz=82,SNR=8.8							
RRI2	Red Ridge	81.96	40	eP		P	09 59 14.2	-0.2
	comp=E,39nm,1.4s,mb5.2							
W24A	Lazy 6 Ranch,	82.00	50	P		P	09 59 14.8	-0.1
	baz=82,SNR=8.3							
428A	Kincaid Ranch,	82.12	55	⇑P		P	09 59 15.9	+0.3
	baz=82,SNR=7.0							
I16A	Newdale	82.14	40	P		P	09 59 15.9	+0.5
	baz=82,SNR=21							
Q21A	Lamborn Mesa,	82.14	46	⇑P		P	09 59 15.9	+0.4
	baz=82,SNR=22							
S22A	4UR Ranch, Cre	82.14	47	⇑P		P	09 59 16.1	+0.6
	baz=82							
MDSI	Maura Dua	82.15	268	P		P	09 59 21.0	+4.8
	comp=E,27nm,1.0s,mb5.1							
D13A	Huson	82.16	36	P		P	09 59 14.6	-0.9
	baz=82,SNR=8.0							
DCID1	Drake Creek	82.18	40	eP		P	09 59 16.0	+0.4
	comp=E,28nm,1.0s,mb5.2							
CPRX	Cap Rock	82.19	52	eP		P	09 59 15.9	0.0
	comp=E,13nm,0.9s,mb4.9							
Z26A	Caprock	82.20	52	⇓P		P	09 59 15.7	-0.3
	baz=82,SNR=12							
G15A	Dillon	82.23	38	⇓P		P	09 59 15.7	-0.1
	baz=82,SNR=21							
X25A	Clemmons Ranch	82.24	51	P		P	09 59 16.0	-0.2
	baz=82,SNR=8.9							
REDW	Red Top Meadow	82.26	40	eP		P	09 59 15.8	-0.2
	comp=E,55nm,1.6s,mb5.2							
DLMT	Dillon	82.27	38	eP		P	09 59 15.4	-0.6
	comp=E,51nm,1.6s,mb5.2							
328A	Wristen Ranch,	82.30	54	P		P	09 59 16.2	-0.3
	baz=82,SNR=13							
MSO	Missoula	82.30	36	eP		P	09 59 15.2	-1.0
	comp=E,22nm,1.4s,mb4.9							
O20A	White River Ci	82.32	44	P		P	09 59 16.4	0.0
	baz=82,SNR=5.5							
V24A	Rampart Ranch,	82.33	49	⇓P		P	09 59 16.8	+0.2
	baz=82,SNR=9.3							
E14A	Clinton	82.33	37	⇓P		P	09 59 15.7	-0.6
	baz=82,SNR=22							
J17A	Brown Place, J	82.35	41	⇑P		P	09 59 16.8	+0.3
	baz=82,SNR=14							
M19A	Rock Springs	82.39	43	⇑P		P	09 59 17.5	+0.7
	baz=82,SNR=9.7							
K18A	Toltan Ranch,	82.39	41	⇑P		P	09 59 16.6	-0.1
	baz=82,SNR=9.8							
BSMT	Bassoo Peak	82.41	35	eP		P	09 59 16.1	-0.6
R22A	Saguache, Gunn	82.42	47	⇓P		P	09 59 18.2	+1.2
	baz=82							
127A	Arkansas Junct	82.42	53	⇑P		P	09 59 17.2	0.0
	baz=82,SNR=5.5							
C13A	Hot Springs	82.43	35	⇑P		P	09 59 16.2	-0.6
	baz=83,SNR=10.0							
IMW	Indian Meadow	82.49	40	eP		P	09 59 17.0	-0.2
	comp=E,37nm,1.3s,mb5.2							
CN2	Changchun	82.49	320	⇑P		P	09 59 17.8	+0.6
CN2				esP		sP	09 59 30.8	+3.7
CN2				eS		S	10 09 32.1	-0.5
CN2				pmax		pmax		
	comp=Z,20nm,1.3s,mb4.9							
CN2				pmax		pmax		
	comp=Z,200nm,4.0s							
CN2				LR		LR		
	comp=N,200nm,19.0s,MS4.8							
CN2				LR		LR		
	comp=E,300nm,19.0s,MS4.8							
CN2				LR		LR		
	comp=Z,400nm,21.0s,MS4.8							
MOOW	Moose Ponds	82.53	40	eP		P	09 59 17.2	-0.2
	comp=Z,33nm,1.6s,mb5.1							
MENT	Mentasta	82.54	13	eP		P	09 59 16.3	-0.7
DL2	Dalian	82.55	314	P		P	09 59 21.3	+3.7
DL2				S		S	10 09 39.6	+6.2
DL2				pmax		pmax		
	comp=Z,20nm,0.6s,mb5.3							
DL2				pmax		pmax		
	comp=Z,260nm,8.3s							
DL2				LR		LR		
	comp=N,230nm,14.0s,MS4.7							
DL2				LR		LR		
	comp=E,130nm,14.9s,MS4.7							
DL2				LR		LR		
	comp=Z,240nm,21.1s							
LOHW	Long Hollow	82.55	40	eP		P	09 59 16.8	-0.7
	comp=Z,31nm,1.5s,mb5.1							
L19A	Farson	82.56	42	⇑P		P	09 59 17.4	-0.2
	baz=83,SNR=13							
F15A	Butte	82.59	38	⇓P		P	09 59 17.6	-0.1
	baz=83,SNR=12							
LRM	Limekiln Ridge	82.61	38	eP		P	09 59 17.6	-0.2
Q22A	Crested Butte,	82.61	46	⇑P		P	09 59 18.4	+0.4
	baz=83,SNR=38							
JTMT	Jette	82.63	35	eP		P	09 59 16.1	-1.8
U24A	Moreno Valley	82.63	49	⇓P		P	09 59 20.0	+1.8
	baz=83,SNR=9.5							
DLBC	Dease Lake	82.64	21	P		P	09 59 17.1	-0.5
	comp=Z,3nm,0.7s,mb4.3,baz=221,slow=4.8,SNR=6.3							
DLBC	Dease Lake	82.64	21	eP		P	09 59 18.4	+0.7
N20A	Spence Gulch,	82.64	44	⇓P		P	09 59 18.4	+0.2
	baz=83,SNR=21							
SWMT	Swartz Lake	82.65	36	eP		P	09 59 17.4	-0.5
SNY	Shenyang	82.66	317	⇑P		P	09 59 17.1	-1.1
SNY				pmax		pmax		
	comp=Z,360nm,12.0s							
SNY				LR		LR		
	comp=N,380nm,15.9s,MS5.0							
SNY				LR		LR		
	comp=E,260nm,15.6s,MS5.0							
SNY				LR		LR		
	comp=Z,390nm,16.8s,MS4.8							
G16A	Moss Hill, Enn	82.67	39	⇓P		P	09 59 17.9	-0.2
	baz=83							
QLMT	Earthquake Lak	82.68	39	eP		P	09 59 18.9	+0.7
D14A	Greenough	82.69	36	⇑P		P	09 59 17.0	-1.2
	baz=83,SNR=18							
W25A	X Bar L Ranch,	82.69	50	⇓P		P	09 59 18.7	+0.2
	baz=83,SNR=11							
J18A	Kendall Valley	82.70	41	⇑P		P	09 59 18.1	-0.2
	baz=83,SNR=31							
SMCO	Snowmass	82.72	46	eP		P	09 59 18.4	-0.1
	comp=Z,30nm,1.2s,mb5.2							
H16A	Russell Place,	82.72	39	⇓P		P	09 59 19.1	+0.7
	baz=83,SNR=44							
I17A	Pilgrim Ck.	82.72	40	⇓P		P	09 59 18.9	+0.4
	baz=83,SNR=5.5							
FLWY	Flagg Ranch	82.73	40	eP		P	09 59 18.3	-0.2
	comp=Z,59nm,1.4s,mb5.4							
CHMT	Chamberlain Mo	82.74	37	eP		P	09 59 17.7	-0.8
BW06	Boulder Array	82.77	41	eP		P	09 59 17.9	-0.8
	comp=Z,52nm,1.7s,mb5.3							
PDAR	Pinedale Array	82.77	41	P		P	09 59 17.8	-0.9
	comp=Z,6.4nm,0.7s,mb4.7,baz=220,slow=2.4,SNR=38							
PDAR				LR		LR	10 32 50.1	
	comp=Z,503nm,18.3s,MS4.9,baz=250,slow=33							
SLMT	Seeley Lake	82.79	36	eP		P	09 59 17.4	-1.3
E15A	Deer Lodge	82.82	37	⇓P		P	09 59 18.7	-0.2
	baz=83,SNR=13							
YFT	Old Faithful	82.84	40	eP		P	09 59 20.4	+1.3
	comp=Z,36nm,1.5s,mb5.2							
V25A	Rancho No Teng	82.85	49	⇑P		P	09 59 19.8	+0.4
	baz=83							
YMR	Maison River	82.88	39	eP		P	09 59 19.8	+0.6
	comp=Z,61nm,1.3s,mb5.5							
B13A	Whitefish	82.88	35	⇑P		P	09 59 18.3	-0.9
	baz=83,SNR=7.2							
X26A	CR and CF Fran	82.88	51	⇑P		P	09 59 19.4	-0.1
	baz=83,SNR=6.2							
H17A	Grant Village	82.97	40	⇓P		P	09 59 20.9	+1.2
	baz=83,SNR=15							
BOZ	Bozeman (W)	83.00	38	eP		P	09 59 19.7	-0.1
	comp=Z,28nm,1.3s,mb5.1							
BOZ	Bozeman (W)	83.00	38	eP		P	09 59 19.7	-0.1
BOZ				pmax		pmax		
	comp=Z,28nm,1.3s,mb5.1							
M20A	Sweetwater, Wa	83.02	43	P		P	09 59 19.8	-0.2
	baz=83,SNR=11							
P22A	Eagle	83.06	45	⇑P		P	09 59 20.3	0.0
	baz=83,SNR=14							
F16A	Kennard Place,	83.07	38	⇓P		P	09 59 20.1	-0.1
	baz=83,SNR=8.6							
YNR	Norris Junctio	83.07	39	eP		P	09 59 21.5	+1.3
	comp=Z,26nm,1.2s,mb5.1							
SDCO	Great Sand Dun	83.08	47	eP		P	09 59 20.4	-0.1
	comp=Z,22nm,1.4s,mb5.0							
I18A	Diamond G Ranc	83.08	41	⇑P		P	09 59 20.1	-0.2
	baz=83,SNR=7.9							
Y27A	Causey	83.08	52	⇑P		P	09 59 19.9	-0.7
	baz=83,SNR=6.1							
T24A	Torres, Weston	83.09	48	⇓P		P	09 59 20.9	+0.4
	baz=83,SNR=9.9							
N21A	Black Mountain	83.10	44	P		P	09 59 20.7	+0.2
	baz=83,SNR=25							
LKWY	Lake	83.17	40	eP		P	09 59 22.0	+1.3
	comp=Z,24nm,1.0s,mb5.2							
LKWY	Lake	83.17	40	eP		P	09 59 22.0	+1.3
LKWY				pmax		pmax		
	comp=Z,23nm,1.0s,mb5.2							
L20A	Wamsutter	83.17	43	⇓P		P	09 59 20.9	+0.1
	baz=83,SNR=32							
D15A	Lincoln	83.23	37	⇑P		P	09 59 20.5	-0.5
	baz=83							
S24A	Houchin Ranch,	83.23	48	⇑P		P	09 59 21.7	+0.5
	baz=83,SNR=15							
K19A	Absolon Red Bu	83.25	42	P		P	09 59 20.4	-0.8
	baz=83,SNR=20							
U25A	Circle Dot Ran	83.25	49	P		P	09 59 21.3	-0.1
	baz=83,SNR=15							
J19A	Crowheart	83.34	41	⇓P		P	09 59 21.2	-0.4
	baz=84,SNR=20							
Q23A	Hartsel	83.37	46	⇑P		P	09 59 22.1	+0.1
	baz=84,SNR=12							
MSTX	Muleshoe	83.41	52	⇓P		P	09 59 21.8	-0.5
	baz=84,SNR=9.9							
V26A	Tequesquite Ra	83.44	50	⇑P		P	09 59 22.1	-0.3
	baz=84,SNR=6.9							
E16A	East Helena	83.44	37	⇓P		P	09 59 21.6	-0.5
	baz=84,SNR=20							
HRY	Holter Researc	83.45	37	eP		P	09 59 21.8	-0.4
X27A	F and S Farms,	83.45	51	⇓P		P	09 59 22.3	-0.2
	baz=84,SNR=6.4							
O22A	Kremmling	83.47	45	⇑P		P	09 59 22.3	-0.1
	baz=84,SNR=22							
COLA	College	83.48	10	eP		P	09 59 20.6	-1.3
	comp=Z,41nm,0.8s,mb5.5							
COLA	College	83.48	10	eP		P	09 59 20.6	-1.3
COLA				pmax		pmax		
	comp=Z,41nm,0.8s,mb5.5							
K20A	Yellowstone Ra	83.49	42	P		P	09 59 21.6	-0.9
	baz=84,SNR=16							
B14A	Marquette Ranc	83.53	35	⇓P		P	09 59 21.4	-1.1
	baz=84,SNR=18							
ILAR	Eielson Array	83.56	11	P		P	09 59 20.7	-1.6
	comp=Z,4.0nm,0.7s,mb4.7,baz=217,slow=4.6,SNR=35							
ILAR				LR		LR	10 33 52.1	
	comp=Z,418nm,18.1s,MS4.8,baz=217,slow=34							
ILAR	Eielson Array	83.56	11	P		P	09 59 20.7	-1.6
R24A	Sanders Place,	83.57	47	⇓P		P	09 59 23.2	+0.2
	baz=84,SNR=13							
WALA	Waterton Lakes	83.58	34	eP		P	09 59 22.1	-0.7
	comp=Z,2.2nm,1.8s,mb4.0							
T25A	Trinidad	83.58	48	⇑P		P	09 59 23.1	+0.1
	baz=84,SNR=5.9							
C15A	Salmond Ranch,	83.58	36	P		P	09 59 22.1	-0.7
	baz=84,SNR=20							
M21A	Separation Pea	83.61	43	⇑P		P	09 59 22.7	-0.4
	baz=84,SNR=22							
W27A	Bowe Ranch, En	83.66	51	P		P	09 59 22.9	-0.6
	baz=84,SNR=12							
H18A	Shoshone NF, C	83.67	40	P		P	09 59 23.4	+0.1
	baz=84,SNR=13							
F17A	Fitzpatrick Pl	83.71	38	P		P	09 59 23.5	0.0
	baz=84,SNR=15							
U26A	Atchley Ranch,	83.73	49	⇓P		P	09 59 23.5	-0.3
	baz=84,SNR=18							
RWWY	Rawlins	83.75	43	eP		P	09 59 23.5	-0.3
	comp=Z,32nm,1.0s,mb5.4							
I19A	Meeteetse	83.76	41	⇓P		P	09 59 23.7	-0.1
	baz=84,SNR=16							
L21A	Rawlins	83.78	43	P		P	09 59 23.4	-0.5
	baz=84,SNR=20							
D16A	Dana Ranch, Ca	83.78	37	P		P	09 59 23.6	-0.2
	baz=84,SNR=14							
S25A	Robets Cordova	83.79	48	⇑P		P	09 59 23.9	-0.2
	baz=84,SNR=15							
A14A	Double T Ranch	83.79	35	P		P	09 59 23.2	-0.7
	baz=84,SNR=21							
N22A	Wattenberg Ran	83.83	44	⇑P		P	09 59 24.4	+0.2
	baz=84,SNR=19							
Q24A	Divide	83.88	46	P		P	09 59 24.9	+0.4
	baz=84,SNR=9.0							
E17A	Martinsdale	83.88	38	⇑P		P	09 59 24.1	-0.2
	baz=84,SNR=8.6							
KSI	Kapahiang	83.90	268	P		sP	09 59 36.7	+1.6
B15A	Bradely Ranch,	83.90	36	⇑P		P	09 59 23.3	-1.1
	baz=84,SNR=11							
SEY	Seymchan	83.92	345	⇓eP		P	09 59 22.8	-1.3
O23A	Lake Granby, G	83.92	45	⇓P		P	09 59 24.9	+0.2
	baz=84,SNR=9.5							
ISCO	Idaho Springs	83.94	46	eP		P	09 59 24.2	-0.6
	comp=Z,27nm,1.6s,mb5.1							
ISCO	Idaho Springs	83.94	46	eP		P	09 59 24.2	-0.6
ISCO				pmax		pmax		
	comp=Z,27nm,1.6s,mb5.1							
J20A	Shoshoni	84.00	42	P		P	09 59 24.9	-0.1
	baz=84,SNR=17							
QIZ	Qiongzhong	84.00	292	P		P	09 59 23.6	-2.0
QIZ				pP		pP	09 59 35.1	+2.3
QIZ				sP		sP	09 59 40.3	+4.9
QIZ				S		S	10 09 48.1	-0.9
QIZ				sS		sS	10 10 02.0	+1.1
QIZ				pmax		pmax		
	comp=Z,4.0nm,1.2s,mb4.4							
QIZ				pmax		pmax		
	comp=Z,240nm,8.0s							
QIZ				LR		LR		
	comp=N,220nm,10.2s							
QIZ				LR		LR		
	comp=E,120nm,16.4s							
QIZ				LR		LR		
	comp=Z,470nm,21.0s							
M22A	Cedar Creek Ra	84.02	44	⇓P		P	09 59 24.9	-0.3
	baz=84,SNR=15							
G18A	Lazy EL Ranch,	84.06	39	P		P	09 59 25.3	0.0
	baz=84,SNR=13							
C16A	Fuhringer Ranc	84.08	36	P		P	09 59 24.3	-1.1
	baz=84,SNR=20							
H19A	Powell	84.09	40	⇑P		P	09 59 26.0	+0.6
	baz=84,SNR=17							
R25A	Fountain Ranch	84.11	47	⇓P		P	09 59 25.3	-0.5
	baz=84,SNR=7.1							
RLMT	Red Lodge	84.14	40	eP		P	09 59 25.8	+0.1
	comp=Z,16nm,0.9s,mb5.2							
A15A	Johnson Ranch,	84.17	35	⇑P		P	09 59 24.6	-1.2
	baz=84,SNR=21							
K21A	Alcova	84.18	42	P		P	09 59 25.1	-0.9
	baz=84,SNR=24							
N23A	Red Feather La	84.22	44	⇑P		P	09 59 26.2	0.0
	baz=84,SNR=11							
MYKOM	Kota Tinggi	84.23	274	P		sP	09 59 40.1	+3.3
GCMT	Greycliff	84.24	39	eP		P	09 59 26.1	-0.1
	comp=Z,14nm,1.0s,mb5.0							
I20A	Worland	84.26	41	⇑P		P	09 59 26.2	-0.1
	baz=84,SNR=30							
F18A	Big Timber	84.27	39	P		P	09 59 26.4	+0.1
	baz=84,SNR=19							
JCT	Junction City	84.30	56	eP		P	09 59 26.4	-0.5
	comp=Z,169nm,2.8s,mb5.7							
JCT	Junction City	84.30	56	eP		P	09 59 26.4	-0.5
JCT				pmax		pmax		
	comp=Z,169nm,2.8s,mb5.7							
D17A	Six Diamond Ra	84.35	37	⇑P		P	09 59 26.6	-0.1
	baz=84,SNR=24							
J21A	Lysite	84.40	42	⇑P		P	09 59 26.7	-0.3
	baz=84,SNR=47							
O24A	Longmont	84.45	45	⇑P		P	09 59 27.9	+0.5
	baz=85,SNR=7.0							
DAWY	Dawson	84.49	14	eP		P	09 59 26.4	-0.6
C17A	Wharram Farm,	84.56	37	⇑P		P	09 59 27.0	-0.7
	baz=85,SNR=53							
H20A	Greybull	84.61	41	P		P	09 59 27.2	-0.9
	baz=85,SNR=14							
AMTX	Amarillo	84.61	51	eP		P	09 59 27.7	-0.7
	comp=Z,20nm,0.9s,mb5.2							
M23A	Laramie	84.63	44	P		P	09 59 28.0	-0.3
	baz=85,SNR=20							
K22A	Casper	84.66	43	P		P	09 59 27.8	-0.6
	baz=85,SNR=9.3							
EGAK	Eagle	84.70	13	eP		P	09 59 27.5	-0.6
	comp=Z,26nm,1.2s,mb5.2							
F19A	Roth Farm, Mol	84.71	39	⇑P		P	09 59 28.0	-0.5
	baz=85,SNR=21							
I21A	Big Trails, Te	84.72	41	P		P	09 59 27.9	-0.7
	baz=85,SNR=26							
PHWY	Pilot Hill	84.73	44	eP		P	09 59 28.2	-0.6
	comp=Z,164nm,3.0s							
A16A	West Butte Ran	84.79	35	⇑P		P	09 59 28.2	-0.7
	baz=85,SNR=38							
P25A	Willow Gulch B	84.80	46	⇓P		P	09 59 28.9	-0.3
	baz=85,SNR=8.9							
B17A	L&G Farms, Che	84.88	36	⇓P		P	09 59 28.4	-1.0
	baz=85,SNR=16							
D18A	Linhart Farms,	84.88	38	⇑P		P	09 59 29.4	0.0
	baz=85,SNR=12							
N24A	Carr	84.90	45	⇓P		P	09 59 30.1	+0.5
	baz=85,SNR=14							
L23A	Garrett	84.95	43	⇑P		P	09 59 29.3	-0.6
	baz=85,SNR=16							
J22A	Midwest	85.05	42	P		P	09 59 29.6	-0.7
	baz=85,SNR=19							
E19A	Rath Farm, Rou	85.11	39	⇑P		P	09 59 30.6	0.0
	baz=85,SNR=16							
M24A	Cheyenne	85.23	44	⇓P		P	09 59 31.7	+0.4
	baz=85,SNR=7.3							
A17A	Triple J Farms	85.28	36	⇑P		P	09 59 30.7	-0.7
	baz=85,SNR=25							
EGMT	Eagleton	85.34	37	eP		P	09 59 31.6	0.0
	comp=Z,37nm,1.4s,mb5.3							
D19A	Cripps Ranch,	85.41	38	⇓P		P	09 59 32.1	+0.1
	baz=86,SNR=15							
B18A	Beardsley Farm	85.52	37	⇑P		P	09 59 32.1	-0.5
	baz=86,SNR=9.8							
E20A	Meyer Farm, Mu	85.52	39	⇑P		P	09 59 32.7	+0.1
	baz=86,SNR=6.8							
C19A	Slack Wire Ran	85.60	37	P		P	09 59 33.0	0.0
	baz=86,SNR=22							
A18A	Metzger Ranch,	85.75	36	⇓P		P	09 59 33.3	-0.4
	baz=86,SNR=16							
D20A	Manuel Ranch,	85.81	38	P		P	09 59 33.9	-0.2
	baz=86,SNR=16							
BILL	Bilibino	85.85	352	⇓eP		P	09 59 33.1	-0.7
BILL				e			10 02 47.7	
BILL				pmax		pmax		
	comp=Z,17nm,1.2s,mb5.2							
B19A	Brinkman Farms	86.03	37	⇓P		P	09 59 34.9	-0.1
	baz=86,SNR=9.5							
C20A	Veseth Ranch,	86.20	38	⇑P		P	09 59 36.0	+0.1
	baz=86,SNR=12							
B20A	Solberg Farm,	86.55	37	⇑P		P	09 59 37.4	-0.2
	baz=87							
WMOK	Wichita Mounta	86.74	52	eP		P	09 59 37.8	-1.1
	comp=Z,21nm,1.6s,mb5.1							
WMOK	Wichita Mounta	86.74	52	eP		P	09 59 37.8	-1.1
WMOK				pmax		pmax		
	comp=Z,21nm,1.6s,mb5.1							
LAO	LASA Array	86.76	39	eP		P	09 59 38.7	-0.1
	comp=Z,62nm,1.9s,mb5.5							
MAW	Mawson	86.80	198	P		P	09 59 38.7	0.0
	comp=Z,13nm,1.0s,mb5.1,baz=126,slow=6.2,SNR=9.1							
MAW				LR		LR	10 37 38.7	
	comp=Z,2µm,18.1s,MS5.5,baz=114,slow=35							
MAW	Mawson	86.80	198	eP		P	09 59 38.7	0.0
	comp=Z,7.7nm,0.8s,mb5.0							
A20A	Cobblestone Ra	86.82	37	⇓P		P	09 59 38.7	-0.3
	baz=87							
BJI	Beijing	86.83	313	P		P	09 59 40.0	+0.8
BJI				pP		pP	09 59 49.8	+3.3
BJI				sP		sP	09 59 53.4	+4.3
BJI				PP		PP	10 03 02.8	+0.5
BJI				S		S	10 10 08.1	-7.9
BJI				sS		sS	10 10 32.9	+4.8
BJI				pmax		pmax		

comp=Z,450nm,20.1s,MS4.9
INK Inuvik 89.34 14 P **P 09 59 50.0 -0.5**
comp=Z,5.7nm,1.2s,mb4.8,baz=205,slow=5.1,SNR=4.5
INK Inuvik 89.34 14 *e*P **P 09 59 52.8 +2.2**
comp=Z,58nm,1.8s,mb5.6
INK Inuvik 89.34 14 *e*P **P 09 59 52.8 +2.3**
INK pmax pmax
comp=Z,57nm,1.8s
XAN Xi'an 89.92 306 P **P 09 59 54.4 +0.3**
XAN pP pP 10 00 05.3 +4.0
XAN pmax pmax
comp=Z,4.0nm,1.5s,mb4.5
XAN pmax pmax
comp=Z,68nm,11.1s
HHC Hu-ho-hao-te 90.38 313 *e*P **P 09 59 56.8 +0.8**
HHC pP pP 10 00 07.5 +4.2
HHC PP PP 10 03 34.1 +3.4
HHC SKS 10 10 24.3
HHC S S 10 10 47.8 -1.8
HHC sS sS 10 11 05.3 +3.6
HHC SS SS 10 16 53.8 +3.4
HHC pmax pmax
comp=Z,24nm,1.3s,mb5.4
HHC pmax pmax
comp=Z,330nm,7.0s
HHC LR LR
comp=N,300nm,15.7s,MS4.9
HHC LR LR
comp=E,230nm,15.3s,MS4.9
HHC LR LR
comp=Z,360nm,16.3s,MS4.9
JTS JuntasAbangare 90.78 80 *e*P **P 09 59 58.8 +0.2**
comp=Z,69nm,1.2s,mb5.9
JTS JuntasAbangare 90.78 80⇓ *e*P **P 09 59 59.5 +1.0**
JTS JuntasAbangare 90.78 80 P **P 09 59 59.9 +1.4**
comp=Z,234nm,1.2s,SNR=5.8
YKA Yellowknife Ar 91.00 23 P **P 09 59 57.3 -1.1**
comp=Z,2.1nm,0.9s,mb4.5,baz=238,slow=3.5,SNR=3.8
YKA PKPPKP 10 25 41.2
comp=Z,0.9nm,0.7s,baz=305,slow=2.2,SNR=3.7
YKA LR LR 10 36 10.4
comp=Z,45nm,18.1s,MS4.0,baz=15,slow=32
YKA Yellowknife Ar 91.00 23 P **P 09 59 57.3 -1.1**
YKA P'P' 10 25 41.2
YKA LR LR 10 36 10.4
YKA Yellowknife Ar 91.00 23 P **P 09 59 57.3 -1.1**
TPTI 91.03 273 P **P 10 00 07.0 +7.2**
comp=Z,27nm,1.1s,mb5.5
BTO Baotou 91.38 312 *e*P **P 10 00 00.1 -0.6**
SYO Syowa Base 91.48 191⇑ *i*P **P 09 59 59.0 -1.8**
SYO Syowa Base 91.48 191⇓ *i*pP pP 10 00 10.6 +2.5
ECSD EROS Data Cent 91.69 45 *e*P **P 10 00 02.5 +0.5**
comp=Z,68nm,2.5s,mb5.5
LCO Las Campanas 92.12 121 *e*P **P 10 00 05.3 +0.7**
comp=Z,46nm,1.4s,mb5.6
KMI Kunming 92.18 295 P **P 10 00 06.5 +1.7**
KMI pP pP 10 00 16.8 +4.7
KMI PP PP 10 03 48.5 +3.2
KMI SKS 10 10 34.8
KMI S S 10 11 00.8 -5.8
KMI sS sS 10 11 21.3 +2.6
KMI SS SS 10 17 17.3 +0.3
KMI pmax pmax
comp=Z,23nm,1.5s,mb5.3
KMI pmax pmax
comp=Z,290nm,5.8s
KMI LR LR
comp=N,290nm,15.9s,MS5.0
KMI LR LR
comp=E,410nm,16.7s,MS5.0
KMI LR LR
comp=Z,480nm,14.3s,MS5.1
FFC Flin Flon 92.80 33 *i*P **P 10 00 08.5 +1.6**
CD2 Chengdu 93.04 301 *e*P **P 10 00 09.6 +1.0**
CD2 pP pP 10 00 20.3 +4.4
CD2 PP PP 10 03 55.3 +3.3
CD2 SKS 10 10 39.3
CD2 S S 10 11 10.5 -3.6
CD2 sS sS 10 11 28.3 +2.1
CD2 SS SS 10 17 29.3 +0.1
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,460nm,16.8s,MS5.3
CD2 LR LR
comp=E,810nm,16.8s,MS5.3
CD2 LR LR
comp=Z,380nm,19.2s,MS4.9
BDT Bhumibol Dam 93.25 287 P **P 10 00 12.0 +2.1**
comp=Z,8.9nm,1.0s,mb5.2
CHRT Chiangrai 93.28 290 P **P 10 00 10.5 +0.5**
comp=Z,105nm,1.0s,mb6.2
CMAR Chiang Mai Arr 93.65 288 P **P 10 00 12.7 +1.0**
comp=Z,7.8nm,1.0s,mb5.1,baz=107,slow=2.6,SNR=21
CMAR LR LR 10 43 13.8
comp=Z,274nm,18.4s,MS4.8,baz=278,slow=36
CMAR Chiang Mai Arr 93.65 288 P **P 10 00 12.7 +1.0**
CHG Chiang Mai 93.75 288⇑ P **P 10 00 13.1 +1.0**
comp=Z,16nm,1.2s,mb5.3
CHTO Chiang Mai 93.75 288 *e*P **P 10 00 13.5 +1.4**
comp=Z,37nm,1.5s,mb5.6
CHTO Chiang Mai 93.75 288 *e*P **P 10 00 13.5 +1.4**
CHTO pmax pmax
comp=Z,37nm,1.5s,mb5.6
CHTO Chiang Mai 93.75 288 P **P 10 00 14.8 +2.7**
FVM French Village 94.19 52 *e*P **P 10 00 13.4 -0.3**
comp=Z,18nm,1.3s,mb5.3
FVM French Village 94.19 52 *e*P **P 10 00 13.4 -0.3**
FVM pmax pmax
comp=Z,18nm,1.3s,mb5.3
ULM Lac du Bonnet 94.50 39 P **P 10 00 13.5 -1.4**
comp=Z,5.1nm,0.9s,mb5.0,baz=238,slow=5.8,SNR=3.6
ULM LR LR 10 40 22.4
comp=Z,1μm,18.1s,MS5.5,baz=259,slow=34
LZH Lanzhou 94.51 306 *e*P **P 10 00 12.8 -2.5**
LZH pP pP 10 00 21.8 -0.8
LZH sP sP 10 00 25.4 +0.2
LZH PP PP 10 04 03.1 -0.3
LZH *e*S S 10 11 19.4 -7.4
LZH pmax pmax
comp=Z,23nm,1.2s,mb5.5
LZH pmax pmax
comp=Z,68nm,4.6s
LZH LR LR
comp=N,140nm,11.9s
LZH LR LR
comp=E,490nm,17.6s
LZH LR LR
comp=Z,400nm,18.6s
BOD Bodaibo 95.36 329 *e*P sP 10 00 32.8 +4.3
JFWS Jewell Farm 95.80 47 *e*P **P 10 00 19.4 -1.6**
comp=Z,51nm,1.8s,mb5.7
JFWS Jewell Farm 95.80 47 *e*P **P 10 00 19.4 -1.6**
JFWS pmax pmax
comp=Z,51nm,1.8s,mb5.7
SONM Songino Array 96.23 318 P **P 10 00 22.8 0.0**
comp=Z,0.8nm,0.8s,mb4.2,baz=98,slow=2.2,SNR=5.1
SONM PP PP 10 04 25.2 +8.7
comp=Z,0.5nm,0.7s,baz=104,slow=6.1,SNR=3.2
SONM LR LR 10 37 46.7
comp=Z,246nm,20.8s,MS4.7,baz=110,slow=32
SONM Songino Array 96.23 318 P **P 10 00 22.8 0.0**
GTA Gaotai 98.49 309 *e*P **P 10 00 35.8 +2.5**
GTA SKS 10 11 10.4
GTA S S 10 12 02.4 +1.5
GTA pmax pmax
comp=Z,5.0nm,0.9s,mb5.0
GTA pmax pmax
comp=Z,190nm,5.5s
GTA LR LR
comp=N,260nm,19.2s,MS5.0
GTA LR LR
comp=E,350nm,19.9s,MS5.0
GTA LR LR
comp=Z,510nm,19.0s,MS5.0
LPAZ La Paz 98.75 110 P **P 10 00 35.2 +0.3**
comp=Z,1.8nm,1.1s,mb4.5,baz=270,slow=5.1,SNR=3.9
LPAZ LR LR 10 35 57.7
comp=Z,471nm,18.2s,MS5.0,baz=265,slow=30
LPAZ La Paz 98.75 110 P **P 10 00 35.3 +0.3**
ROSC El Rosal 99.39 88 LR LR 10 36 31.8
comp=Z,216nm,19.1s,MS4.7,baz=352,slow=30
MCWV Mont Chateau 102.60 52 *e*Pdif Pdif 10 00 56.7 +5.4
WMQ Urumqi 108.21 311 *e*Pdif Pdif 10 01 17.0 +0.7

WMQ PP PP 10 05 50.0 +3.4
WMQ SS SS 10 20 59.0 -0.8
WMQ AMB AMB
comp=Z,61nm,9.0s
WMQ LR LR
comp=N,150nm,20.0s,MS4.8
WMQ LR LR
comp=E,180nm,20.0s,MS4.8
WMQ LR LR
comp=Z,100nm,20.0s,MS4.4
ZALV Zalesovo Beam 110.64 322 PKiKP PKiKP 10 05 26.3 -0.8
comp=Z,0.7nm,0.5s,baz=95,slow=1.7,SNR=3.4
ZALV PP PP 10 06 06.9 +3.1
comp=Z,0.7nm,0.6s,baz=86,slow=5.9,SNR=3.8
MK31 Makanchi Array 112.19 314 *e*PKPdf PKiKP 10 05 29.4 -0.9
MK31 Makanchi Array 112.19 314 *e*PKiKP PKiKP 10 05 29.4 -0.9
MKAR Makanchi Array 112.19 314 PKiKP PKiKP 10 05 28.4 -1.9
comp=Z,1.2nm,0.7s,baz=84,slow=1.0,SNR=10
MKAR PKKPbc PKKPbc 10 16 20.8 -1.7
comp=Z,0.5nm,0.7s,baz=270,slow=2.9,SNR=4.7
MKAR Makanchi Array 112.19 314 PKiKP PKiKP 10 05 28.4 -1.9
KURK Kurchatov 114.53 319 *e*PKPdf PKiKP 10 05 33.4 -1.3
KURK Kurchatov 114.53 319 *e*PKiKP PKiKP 10 05 33.4 -1.2
BVAR Borovoye Array 119.29 322 PKP PKPdf 10 05 42.3 -1.4
comp=Z,1.9nm,0.7s,baz=79,slow=0.7,SNR=8.8
BVAR Borovoye Array 119.29 322 PKIKP PKPdf 10 05 42.3 -1.4
BRVK Borovoye 119.35 322 *i* PKIKP PKPdf 10 05 42.7 -1.1
BRVK MLR MLR
comp=Z,196nm,19.0s,MS4.8
KBL Kabul 122.38 301 *e*PKPdf PKPdf 10 05 50.6 +0.4
KBL Kabul 122.38 301 *e*PKIKP PKPdf 10 05 50.7 +0.5
ARU Arti 124.77 328 *e*PKPdf PKPdf 10 05 53.6 -0.5
ARU *e*PP PP 10 07 37.2 -4.6
ARU Arti 124.77 328 *i* PKIKP PKPdf 10 05 53.3 -0.8
ARU 10 12 52.3
ARCES ARCESS Array B 125.96 352 PKP PKPdf 10 05 56.7 +0.6
comp=Z,2.3nm,0.8s,baz=98,slow=1.8,SNR=6.3
ARCES ARCESS Array B 125.96 352 PKIKP PKPdf 10 05 56.7 +0.7
AKTK Aktyubinsk 127.39 321 PKP PKPdf 10 05 59.4 +0.1
AKTO Aktyubinsk 127.39 321 PKP PKPdf 10 05 59.4 +0.1
comp=Z,1.5nm,0.7s,baz=71,slow=2.2,SNR=5.9
AKTO Aktyubinsk 127.39 321 PKIKP PKPdf 10 05 59.4 +0.1
KLMR Klimovskoe 130.21 340 *e*PKIKP PKPdf 10 06 03.0 -1.4
KLMR pmax pmax
comp=Z,18nm,1.4s
KLMR MLR MLR
comp=Z,327nm,19.0s,MS5.0
FINES FINESS Array B 133.32 348 PKP PKPdf 10 06 10.2 -0.1
comp=Z,1.6nm,0.7s,baz=90,slow=2.8,SNR=2.7
FINES FINESS Array B 133.32 348 PKIKP PKPdf 10 06 10.2 0.0
OBN Obninsk 135.54 336⇑ *i*PKIKP PKPdf 10 06 17.0 +2.4
OBN *e*SS SS 10 26 46.0 -0.6
OBN pmax pmax
comp=Z,16nm,1.2s
OBN MLR MLR
comp=Z,300nm,23.0s,MS5.0
VSR Storozhevoye 137.19 331 *e*PKIKP PKPdf 10 06 17.4 -0.4
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,3.0nm,0.4s
VORD Divnogorie 137.30 330 *e*PKIKP PKPdf 10 06 18.3 +0.3
VORD pmax pmax
comp=N,7.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,5.0nm,0.5s
ZEI Tsey 139.43 318 *e*PKHKP PKPpre 10 06 08.4
ZEI pmax pmax
comp=Z,5.0nm,0.5s
AKASG Malin Array Be 141.77 337 PKP PKPdf 10 06 23.4 -2.7
comp=Z,0.2nm,0.2s,baz=25,slow=1.6,SNR=11
AKASG Malin Array Be 141.77 337 PKIKP PKPdf 10 06 23.4 -2.7
ANN Anapa 142.22 324 *i* PKHKP PKPpre 10 06 22.4
ANN pmax pmax
comp=Z,46nm,1.6s
SIM Simferopol' 143.92 327 *e*PKIKP PKPdf 10 06 30.9 +0.8
SIM pmax pmax
comp=Z,150nm,13.0s
NRDL Niedersach Rie 144.19 357 *e*PKPbc PKPdf 10 06 29.1 -1.3
LVV L'vov 144.27 341 *e*PKIKP PKPdf 10 06 41.8 +11
PTK Pertek 144.29 315 *e*P PKPdf 10 06 28.7 -2.3
SVRC Sivrice-ELAZID 144.60 314 *e*P PKPdf 10 06 30.9 -0.6
KIS Kishinev 144.91 334 *e*PKP PKPdf 10 06 32.0 +0.2
KIS LRM 11 16 08.0
comp=Z,400nm,20.0s
KIS Kishinev 144.91 334 *e*PKIKP PKPdf 10 06 32.0 +0.2
OJC Ojcow 145.05 346 *e*PKPdf PKPdf 10 06 30.5 -1.4
OJC *e*SS SS 10 28 34.6 -2.9
OJC Ojcow 145.05 346 *e*PKIKP PKPdf 10 06 30.5 -1.4
OJC *e*SS SS 10 28 34.6 -2.9
CLL Collm 145.15 354 *e*PKP PKPdf 10 06 31.0 -1.1
CLL *e*PKP PKPdf 10 06 36.0 +3.9
CLL *e* 10 06 42.0
CLL LR LR
comp=Z,400nm,18.6s,MS5.2
CLL Collm 145.15 354 *e*PKIKP PKPdf 10 06 31.0 -1.1
CLL *e* 10 06 36.0
CLL *e* 10 06 42.0
CLL MLR MLR
comp=Z,400nm,18.6s,MS5.2
CLL Collm 145.15 354 *e*PKPdf PKPdf 10 06 31.0 -1.1
CLL *e*PKiKP PKiKP 10 06 36.0 +0.1
CLL *e* 10 06 42.0
CLL *e* 10 06 47.0
CLL *e* 10 06 58.0
CLL *e* 10 07 59.0
CLL *e*PP PP 10 10 00.0 +10
CLL *e*PSKS 10 20 00.0
CLL Lm 11 16 00.0
comp=Z,400nm,18.6s
KSP Ksiaz 145.16 350 *e*PKP PKPdf 10 06 31.1 -1.0
MYA Malataya 145.23 315 *e*P PKPbc 10 06 33.6 +1.3
MALT Malatya 145.23 315 *e*P PKPbc 10 06 32.9 +0.5
MALT Malatya 145.23 315 *e*PKPdf PKPdf 10 06 33.3 +0.7
MALT Malatya 145.23 315⇑ PKIKP PKPdf 10 06 33.7 +1.1
MALT Malatya 145.23 315⇑ *i*P PKPbc 10 06 33.7 +1.4
MALT Malatya 145.23 315 P PKPbc 10 06 34.2 +1.9
KVT Kavak 145.28 320 *e*P PKPbc 10 06 32.3 -0.1
SVSK Karacayir 145.34 318 *e*P PKPbc 10 06 33.2 +0.6
BRG Berggiesshubel 145.47 353 *e*PKPbc PKPbc 10 06 31.6 -1.0
BRG Berggiesshubel 145.47 353 *e*PKP PKPdf 10 06 32.1 -0.5
comp=Z,70nm,2.1s
BRG *e* 10 06 49.4
comp=Z,37nm,1.5s
BRG
comp=Z,347nm,12.6s
BRG
comp=N,235nm,17.2s
BRG
comp=E,235nm,17.2s
FBE Freiberg 145.49 353 *e*PKPbc PKPbc 10 06 32.1 -0.6
UPC Upice 145.53 350 *e*PKIKP PKPdf 10 06 32.7 0.0
UPC *e* 10 06 42.6
UPC Upice 145.53 350 *e*PKP PKPdf 10 06 32.7 0.0
UPC *ex* x 10 06 42.6
KMBO Kilima Mbogo 145.56 242 PKPbc PKPbc 10 06 35.3 +1.2
comp=E,30nm,1.1s,baz=163,slow=11,SNR=24
KMBO Kilima Mbogo 145.56 242 PKHKP PKPbc 10 06 35.3 +1.2
KOLS Kolonicke sedl 145.59 342 *e*PKP PKPdf 10 06 32.9 0.0
KOLS Kolonicke sedl 145.59 342 *e*PKIKP PKPdf 10 06 32.9 0.0
KOLS Kolonicke sedl 145.59 342 *e*PKP PKPdf 10 06 32.9 0.0
DPC Dobruska-Polom 145.63 350 *e*PKIKP PKPdf 10 06 33.0 +0.1
DPC *e* 10 06 43.0
DPC MLR MLR
comp=Z,200nm,17.1s,MS5.0
DPC Dobruska-Polom 145.63 350 *e*PKP PKPdf 10 06 33.0 +0.1
DPC *ex* x 10 06 43.0
DPC AMS AMS 11 18 10.0
comp=Z,200nm,17.1s
NIE Niedzica 145.67 345 *e*PKPdf PKPdf 10 06 33.7 +0.7
NIE Niedzica 145.67 345 *e*PKIKP PKPdf 10 06 33.7 +0.7
PVCC Panska Ves 145.73 352 *e*PKIKP PKPdf 10 06 33.2 +0.1
PVCC MLR MLR
comp=Z,300nm,19.0s,MS5.1
PVCC Panska Ves 145.73 352 *e*PKP PKPdf 10 06 33.2 +0.1
PVCC AMS AMS 11 18 00.0
comp=Z,300nm,19.0s
BUR08 Bucovina Ar. S 145.78 338 *e*PKPdf PKPdf 10 06 34.0 +0.8
OKC Ostrava-Krasne 145.78 347 *e*PKIKP PKPdf 10 06 33.5 +0.3
OKC MLR MLR

comp=Z,400nm,16.9s,MS5.3
OKC Ostrava-Krasne 145.78 347 *e*PKP PKPdf 10 06 33.5 +0.3
OKC AMS AMS 11 21 10.0
comp=Z,400nm,16.9s
BURAR Bucovina Array 145.79 338⇑ PKIKP PKPdf 10 06 33.4 +0.1
BURAR Bucovina Array 145.79 338⇑ *i*P PKPdf 10 06 33.3 0.0
CRVS Cervenica-Dubn 145.84 343 *e*PKP PKPdf 10 06 34.1 +0.8
CRVS Cervenica-Dubn 145.84 343 *e*PKIKP PKPdf 10 06 34.1 +0.8
CRVS Cervenica-Dubn 145.84 343 *e*PKP PKPdf 10 06 34.1 +0.8
UZH Uzhgorod 145.85 342⇑ *e*PKIKP PKPdf 10 06 33.5 +0.2
UZH *e* 10 06 47.7
UBBA Unterbreizbach 145.87 357 *e*PKPbc PKPbc 10 06 32.6 -1.3
MOX Moxa 145.94 355 *e*PKP PKPdf 10 06 33.6 +0.2
comp=Z,77nm,1.6s
MOX
comp=Z,300nm,17.0s
MOX Moxa 145.94 355 *e*PKPbc PKPbc 10 06 33.2 -0.9
MOX Moxa 145.94 355 *e*PKP2 PKPab 10 06 33.6 -1.0
MOX MLR MLR
comp=Z,300nm,17.0s,MS5.1
BEBN Eben Emael 145.94 2 PKP PKPdf 10 06 33.0 -0.4
MORC Moravsky Berou 145.96 348 *e*PKPdf PKPdf 10 06 34.0 +0.5
MORC Moravsky Berou 145.96 348⇓ PKIKP PKPdf 10 06 34.5 +1.0
MORC Moravsky Berou 145.96 348⇓ *i*P PKPdf 10 06 34.5 +1.0
HGN Heimansgroeve 145.98 2 *e*PKP PKPdf 10 06 32.7 -0.8
comp=Z,43nm,3.7s
PLN Plauen 146.05 354 *e*PKPbc PKPbc 10 06 33.9 -0.5
WERD Werda 146.07 354 *e*PKPbc PKPbc 10 06 33.9 -0.6
TANN Tannenbergstha 146.09 354 *e*PKPbc PKPbc 10 06 34.1 -0.5
MEM Membach 146.13 1 PKP PKPdf 10 06 34.6 +0.8
GUNZ Gunzen 146.15 354 *e*PKPbc PKPbc 10 06 34.4 -0.4
SNF Seneffe 146.16 3 PKP PKPdf 10 06 34.6 +0.8
SARI SarD1z-Kayseri 146.21 316 *e*P PKPdf 10 06 34.2 -0.1
WERN Wernitzgruen 146.22 354 *e*PKPbc PKPbc 10 06 34.7 -0.3
TRPA Tarpa 146.23 342⇓ *i*P PKPdf 10 06 34.1 +0.1
PRU Pruhonice 146.26 352 *e*PKIKP PKPdf 10 06 35.3 +1.3
PRU *e* 10 06 44.9
PRU MLR MLR
comp=Z,400nm,17.9s,MS5.2
PRU Pruhonice 146.26 352 *e*PKP PKPdf 10 06 35.3 +1.3
PRU *ex* x 10 06 44.9
PRU AMS AMS 11 18 30.0
comp=Z,400nm,17.9s
NKC Novy Kostel 146.27 354 *e*PKIKP PKPdf 10 06 34.6 +0.6
NKC *e* 10 06 44.6
NKC Novy Kostel 146.27 354 *e*PKP PKPdf 10 06 34.6 +0.6
NKC *ex* x 10 06 44.6
BCLA Clavier 146.30 2 PKP PKPdf 10 06 35.1 +1.1
KECS Kecovo 146.49 344 *e*PKP PKPab 10 06 36.3 -0.5
KECS Kecovo 146.49 344 *e*PKP2 PKPab 10 06 36.3 -0.5
KECS Kecovo 146.49 344 *e*PKP PKPab 10 06 36.3 -0.5
TNS Taunus Mts 146.52 359 *e*PKPbc PKPbc 10 06 35.2 -0.7
TNS Taunus Mts 146.52 359 *e*PKIKP PKPdf 10 06 35.2 +0.8
VRAC Vranov 146.59 349⇑ PKP2 PKPab 10 06 37.4 +0.3
VRAC Vranov 146.59 349⇑ *i*P PKPab 10 06 37.4 +0.3
DOU Dourbes 146.59 3 PKP PKPdf 10 06 34.4 -0.1
GAZ Gaziantep 146.63 314 *e*P PKPab 10 06 37.7 0.0
VRI Vrincioaia 146.68 335⇓ PKP2 PKPab 10 06 40.5 +2.9
VRI Vrincioaia 146.68 335⇓ *i*P PKPab 10 06 40.5 +2.9
CORM Corum 146.68 320 *e*P PKPdf 10 06 36.8 +1.8
KMRS Kahramanmaras 146.68 314 *e*P PKPdf 10 06 34.7 -0.4
ROTZ Rotzenmuhle 146.75 354 *e*PKPbc PKPbc 10 06 36.4 -0.1
TREC Trest 146.79 350 AMS AMS 11 19 20.0
comp=Z,500nm,18.3s
ABH Alteburg 146.88 360 PKP PKPdf 10 06 36.8 +1.8
VYHS Vyhne 146.89 346 *e*PKP PKPdf 10 06 36.1 +1.0
VYHS Vyhne 146.89 346 *e*PKIKP PKPdf 10 06 36.1 +1.0
VYHS Vyhne 146.89 346 *e*PKP PKPdf 10 06 36.0 +0.9
KOLL Kolacno 146.91 346 *e*PKP PKPab 10 06 37.9 -0.5
KOLL Kolacno 146.91 346 *e*PKP2 PKPab 10 06 37.9 -0.5
KOLL Kolacno 146.91 346 *e*PKP PKPab 10 06 37.9 -0.5
GRA1 Grafenberg Arr 146.91 355 *e*PKPbc PKPbc 10 06 36.7 -0.3
GRF Grafenberg Arr 146.91 355 *e*PKP PKPbc 10 06 36.7 -0.3
GRF LR LR
comp=Z,1μm,21.6s,MS5.6
GRF Grafenberg Arr 146.91 355 *e*PKP2 PKPbc 10 06 36.7 -0.3
GRF Grafenberg Arr 146.91 355 *e*PKP2 PKPbc 10 06 36.7 -0.3
GRF MLR MLR
comp=Z,1μm,21.6s,MS5.6
GRFO Grafenberg 146.92 355 *e*PKPbc PKPbc 10 06 37.7 +0.7
GRFO Grafenberg 146.92 355 *e*PKP2 PKPab 10 06 37.7 -0.7
CANT Cankiri 147.03 322 *e*P PKPdf 10 06 36.8 +1.2
RUP Ruppelstein 147.06 0 PKP PKPdf 10 06 36.6 +1.2
RUP Ruppelstein 147.06 0 PKIKP PKPdf 10 06 36.6 +1.2
WLF Walferdange 147.08 1 PKP PKPdf 10 06 36.8 +1.4
DOPR Dopca 147.12 336⇓ *i*P PKPbc 10 06 37.6 -0.1
TOD Tromm 147.13 358 PKP PKPdf 10 06 36.6 +1.1
TOD Tromm 147.13 358 PKIKP PKPdf 10 06 36.6 +1.1
SAFT Safranbolu 147.17 323 *e*P PKPbc 10 06 38.0 0.0
MLR Muntele Rosu 147.30 335⇑ PKP2 PKPbc 10 06 38.8 +0.6
MLR Muntele Rosu 147.30 335⇑ *i*P PKPbc 10 06 38.8 +0.6
DRGR 147.36 340⇓ PKP2 PKPbc 10 06 38.6 +0.2
DRGR 147.36 340⇓ *i*P PKPbc 10 06 38.6 +0.2
KOZT Kozan 147.43 315 *e*P PKPdf 10 06 35.9 -0.5
GEC2 GERESS Array S 147.49 352 *e*PKPbc PKPbc 10 06 38.3 -0.4
GEC2 GERESS Array S 147.49 352 *e*PKP2 PKPbc 10 06 38.3 -0.4
GERES GERESS Array B 147.49 352 PKPbc PKPbc 10 06 38.1 -0.6
comp=Z,2.8nm,0.7s,baz=20,slow=3.2,SNR=19
GERES GERESS Array B 147.49 352 PKP2 PKPbc 10 06 38.1 -0.6
ZST Bratislava 147.55 348 *e*PKP PKPab 10 06 40.4 -0.5
ZST Bratislava 147.55 348 *e*PKP2 PKPab 10 06 40.4 -0.5
ZST Bratislava 147.55 348 *e*PKP PKPab 10 06 40.4 -0.5
BR131 Keskin Array S 147.56 320 *e*PKPbc PKPbc 10 06 39.1 0.0
BRTR Keskin Array B 147.56 320 PKPbc PKPbc 10 06 39.0 -0.2
comp=Z,10nm,0.8s,baz=64,slow=2.7,SNR=21
BRTR Keskin Array B 147.56 320 PKIKP PKPbc 10 06 39.0 -0.2
VOIR 147.70 336⇑ PKP2 PKPbc 10 06 40.1 +0.8
VOIR 147.70 336⇑ *i*P PKPbc 10 06 40.1 +0.8
CEYT Ceyhan 147.72 314 *e*P PKPdf 10 06 36.8 -0.1
LANF Langenberg 147.78 359 PKP PKPbc 10 06 39.1 -0.3
LANF Langenberg 147.78 359 PKP2 PKPbc 10 06 39.1 -0.3
STU Stuttgart 147.95 358 *e*PKPbc PKPbc 10 06 39.9 0.0
STU Stuttgart 147.95 358 *e*PKP2 PKPbc 10 06 39.9 0.0
CONA Conrad Observa 148.05 349⇓ *i*pPKPdf PKPbc 10 06 39.6 -0.5
comp=Z,45nm,1.3s,SNR=9.6
KARA Karaisali 148.06 315 *e*P PKPbc 10 06 39.4 -1.2
SOP Sopron 148.15 348⇑ *e*PKP PKPbc 10 06 39.7 -0.8
MOA Molln 148.39 351⇓ *i*pPKPdf PKPbc 10 06 40.2 -0.9
comp=Z,34nm,1.4s,SNR=7.7
BFO Black Forest 148.42 359 *e*PKPbc PKPbc 10 06 40.8 -0.3
BFO Black Forest 148.42 359 *e*PKP2 PKPbc 10 06 40.8 -0.3
THEF They Montfort 148.52 2 PKP PKPbc 10 06 40.5 -0.9
THEF They Montfort 148.52 2 PKIKP PKPbc 10 06 40.5 -0.9
MDU Mudurnu 148.52 324 *e*P PKPdf 10 06 39.2 +1.1
ECH Echery 148.55 0 PKP PKPbc 10 06 41.2 -0.3
ECH Echery 148.55 0 PKP2 PKPbc 10 06 41.2 -0.3
SULT Sultanhani-AKS 148.55 318 *e*P PKPbc 10 06 41.3 -0.5
GZR Gura Zlata 148.56 339⇑ PKIKP PKPbc 10 06 42.1 +0.5
GZR Gura Zlata 148.56 339⇑ *i*P PKPbc 10 06 42.1 +0.5
MERS Mersin 148.63 315 *e*P PKPbc 10 06 41.2 -0.8
SPAK Spaichingen-Ko 148.63 358 PKP PKPbc 10 06 41.0 -0.7
RJOB Jochberg 148.69 353 *e*PKPbc PKPbc 10 06 41.5 -0.4
BZS Buzias 148.75 340⇑ PKIKP PKPbc 10 06 41.5 -0.6
BZS Buzias 148.75 340⇑ *i*P PKPbc 10 06 41.5 -0.6
FELD Feldberg im Sc 148.88 359 PKP PKPdf 10 06 39.5 +1.1
MOF Molkenrain 148.91 0 PKP PKPbc 10 06 42.1 -0.3
MOF Molkenrain 148.91 0 PKP2 PKPbc 10 06 42.1 -0.3
GULT Gulveren 148.94 324 *e*P PKPbc 10 06 42.2 -0.5
SVRH Sivrihisar-ESK 149.01 322 *e*P PKPbc 10 06 41.5 -1.5
PKSM Moragy 149.07 345⇑ PKIKP PKPbc 10 06 42.0 -0.9
PKSM Moragy 149.07 345⇑ *i*P PKPbc 10 06 42.0 -0.9
ASF Jabal al Asfar 149.08 305 PKPbc PKPbc 10 06 42.4 -0.9
comp=Z,1.8nm,0.7s,baz=335,slow=1.5,SNR=8.6
ASF Jabal al Asfar 149.08 305 PKIKP PKPbc 10 06 42.4 -1.0
SZH Strazhica 149.11 333 *i* P PKPab 10 06 48.6 +1.2
HRT Hereke 149.13 326 *e*P PKPbc 10 06 42.2 -1.0
RETA Reutte 149.14 355⇓ *i*sPKPdf PKPbc 10 06 42.3 -0.7
comp=Z,36nm,1.4s
KIZT Kizilcal 149.16 321 *e*P PKPbc 10 06 43.4 0.0
MOTA Moosalm 149.26 355⇑ *i*sPKPdf PKPbc 10 06 42.4 -0.9
comp=Z,23nm,1.0s
WTTA Wattenberg 149.29 354⇑ *i*sPKPdf PKPbc 10 06 43.1 -0.3
comp=Z,60nm,1.3s
BBS Basel-Blauen 149.30 360 PKP PKPbc 10 06 41.6 -1.8
BBS Basel-Blauen 149.30 360 PKIKP PKPbc 10 06 41.6 -1.8
ADVT Abdulvahap 149.37 325 *e*P PKPbc 10 06 45.8 +2.0
DAVA Damuels 149.40 357⇑ *i*sPKPdf PKPbc 10 06 43.4 -0.3
comp=Z,60nm,1.7s
SOKA Soboth 149.40 350⇑ *i*PKPbc PKPbc 10 06 42.3 -1.4
comp=Z,36nm,1.3s
LOMF Lomont 149.41 1 PKP PKPbc 10 06 43.6 -0.1

LOMF	Lomont	149.41	1	PKP2	PKPbc	10 06 43.6	-0.1
PVL	Pavlikeni	149.41	334	*i* P	PKPbc	10 06 44.5	+0.7
PERS	Pernice	149.43	349	*i* PKPbc	PKPbc	10 06 42.8	-1.0
KONT	Konya--Tatoy	149.43	319	*e*P	PKPbc	10 06 43.4	-0.7
CAVI	Cavuskoy	149.47	325	*e*P	PKPbc	10 06 44.9	+0.8
IKL	Isikli	149.54	315	*e*P	PKPbc	10 06 42.1	-2.3
FETA	Feichten	149.61	355	⇑*i*PKPbc	PKPbc	10 06 43.8	-0.4
	comp=Z,45nm,1.3s,SNR=5.5						
GEMT	Gemlik	149.66	326	*e*P	PKPbc	10 06 45.0	+0.4
MYKA	Terra Mystica	149.67	351	⇑*i*sPKPdf	PKPbc	10 06 42.9	-1.5
	comp=Z,58nm,1.7s						
ABTA	Abfaltersbach	149.70	353	⇓*i*sPKPdf	PKPbc	10 06 42.8	-1.6
	comp=Z,63nm,1.4s,SNR=6.5						
ARMT	Armutlu	149.75	326	*e*P	PKPbc	10 06 45.3	+0.5
MMAI	Mount Meron Ar	149.88	308	PKPbc	PKPbc	10 06 45.3	0.0
	comp=Z,12nm,0.9s,baz=46,slow=4.2,SNR=11						
DAVOX	Davos/Dischmat	149.91	356	PKPbc	PKPbc	10 06 45.1	+0.2
	comp=Z,5.7nm,1.0s,baz=27,slow=4.1,SNR=9.2						
DAVOX	Davos/Dischmat	149.91	356	PKP2	PKPbc	10 06 45.1	+0.2
HDMB	Hadim	149.93	317	*e*P	PKPdf	10 06 36.8	-3.7
LJU	Ljubljana	150.10	350	*i* PKPbc	PKPbc	10 06 45.3	-0.2
LFK	Lefkose	150.16	313	*e*P	PKPbc	10 06 46.3	+0.3
SHUT	Suhut-Afyon	150.16	322	*e*P	PKPbc	10 06 47.0	+1.2
KCTX	Karacabey (Bur	150.23	326	*e*P	PKPbc	10 06 44.9	-1.0
JAVS	Javornik	150.32	350	*i* PKPbc	PKPbc	10 06 45.6	-0.4
PGB	Panagyurishte	150.45	334	*i* P	PKPbc	10 06 46.8	+0.4
CSS	Prodhromos	150.46	313	*e*PKPbc	PKPbc	10 06 46.5	-0.2
BOJS	Bojanci	150.50	349	*i* PKPdf	PKPdf	10 06 40.6	-0.4
BOJS				*i* PKPbc	PKPbc	10 06 46.0	-0.4
RKY	Sarkoy-Tekirda	150.53	328	*e*P	PKPbc	10 06 48.5	+1.9
KDZ	Kurdzhali	150.63	332	*i* P	PKPbc	10 06 46.8	-0.1
LEF	Lefka	150.69	314	*e*P	PKPab	10 06 52.1	-2.0
GONE	Gonen-Balikesi	150.74	327	*e*P	PKPbc	10 06 49.4	+2.2
VTS	Vitosha	150.81	335	⇑PKHKP	PKPbc	10 06 47.8	+0.6
VTS	Vitosha	150.81	335	⇑*i*P	PKPbc	10 06 47.8	+0.6
ERIK	Erikli-Kesan	150.88	329	*e*P	PKPbc	10 06 47.6	+0.1
BALB	Balikesir	150.94	326	*e*P	PKPbc	10 06 46.7	-0.9
LPK	Lapseki	150.98	328	*e*P	PKPbc	10 06 47.6	-0.1
KULA	Kula-Manisa	151.29	323	*e*P	PKPbc	10 06 46.7	-1.8
MMB	Musomiste	151.43	334	*i* P	PKPbc	10 06 48.3	-0.4
KKB	Krupnik	151.47	335	*i* P	PKPbc	10 06 47.6	-1.2
GADA	Gvkgeada	151.54	329	*e*P	PKPbc	10 06 48.5	-0.5
EIL	Elat	151.56	302	PKPbc	PKPbc	10 06 49.1	-0.3
	comp=Z,8.0nm,0.8s,baz=24,slow=3.2,SNR=6.8						
EIL				PKPab	PKPab	10 06 58.7	+0.8
	comp=Z,18nm,0.9s,baz=49,slow=4.8,SNR=7.7						
BNI	Bardonecchia	151.71	1	*e*PKPdf	PKPdf	10 06 43.6	+0.7
BNI	Bardonecchia	151.71	1	*e*PKIKP	PKPdf	10 06 43.7	+0.8
ELL	Elmali	151.71	319	*e*P	PKPbc	10 06 49.4	-0.1
BLCB	Balcova	152.29	325	*e*P	PKPdf	10 06 46.7	+2.7
YER	Yerkesik	152.45	322	*e*P	PKPab	10 07 02.0	+0.7
MLSB	Milas	152.64	323	*e*P	PKPbc	10 06 50.2	-1.4
BODT	Bodrum	153.07	323	*e*P	PKPdf	10 06 44.9	-0.3
DAT	Datca	153.14	322	*e*P	PKPdf	10 06 45.8	+0.5
ESDC	Sonseca Array	155.07	21	PKPab	PKPab	10 07 09.9	-2.4
	comp=Z,0.2nm,0.3s,baz=311,slow=2.1,SNR=3.1						
MDT	Midelt	160.66	32	PKP	PKPdf	10 06 55.0	0.0
	comp=Z,0.4nm,0.3s,baz=198,slow=3.2,SNR=1.8						
MDT				PKPab	PKPab	10 07 35.4	-1.3
	comp=Z,7.0nm,1.2s,baz=316,slow=5.6,SNR=3.7						
DBIC	Dimbokro	164.50	128	PKP	PKPdf	10 06 55.1	-4.3
	comp=Z,4.8nm,1.0s,baz=229,slow=1.3,SNR=2.1						
DBIC				PKPab	PKPab	10 07 53.2	-0.9
	comp=Z,7.5nm,1.1s,baz=207,slow=4.5,SNR=3.2						
DBIC	Dimbokro	164.50	128	PKIKP	PKPdf	10 06 55.1	-4.3
TORD	Torodi Ar. Bea	173.55	122	PKP	PKPdf	10 07 03.3	-1.8
	comp=Z,5.0nm,1.2s,baz=270,slow=1.4,SNR=11						
TORD				PKPab	PKPab	10 08 32.9	-1.2
	comp=Z,12nm,1.1s,baz=257,slow=4.1,SNR=13						
TORD				PP	PP	10 12 21.1	-4.7
	comp=Z,3.3nm,1.2s,baz=256,slow=2.5,SNR=5.3						
TORD	Torodi Ar. Bea	173.55	122	PKP	PKPdf	10 07 03.3	-1.7
TORD				PKPab	PKPab	10 08 32.9	-1.2
TORD				PP	PP	10 12 21.1	-4.7

IDC 16 10:00:57.4±1.0, 16°.47S×172°.82W, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.9/21, mbtmp3.7/8, ML2.0/1, Error ellipse: s-maj=50.0km s-min=19.3km az=137.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.73	22	Pn	Pn	10 01 41.0	-1.6
	16nm,0.3s,baz=23,slow=7.7,SNR=19						
AFI				Sn	Sn	10 02 11.5	-4.9
	36nm,0.3s,baz=17,slow=23,SNR=7.7						
URZ	Urewera	23.45	200	P	P	10 06 08.3	-0.3
	1.7nm,0.4s,baz=6.2,slow=15,SNR=3.0						
WRA	Warramunga Arr	50.16	258	P	P	10 09 54.8	-0.3
	0.2nm,0.6s,baz=96,slow=7.0,SNR=8.5						
ASAR	Alice Springs	50.33	253	P	P	10 09 56.4	0.0
	2.3nm,0.6s,baz=88,slow=8.3,SNR=47						
NVAR	Mina Array Bea	74.74	42	P	P	10 12 41.6	+2.3
	0.8nm,0.7s,baz=222,slow=9.1,SNR=8.3						
TXAR	Lajitas Array	80.74	56	P	P	10 13 11.5	-1.5
	0.6nm,1.0s,baz=232,slow=6.7,SNR=3.5						
PDAR	Pinedale Array	82.68	42	P	P	10 13 22.6	-0.4
	0.3nm,0.7s,baz=234,slow=5.4,SNR=4.5						
ILAR	Eielson Array	83.38	11	P	P	10 13 26.7	+0.7
	0.3nm,0.8s,baz=219,slow=6.9,SNR=3.6						

IDC 16 10:05:15.6±1.8, 12°.71N×93°.43E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/24, mbtmp3.6/6, ML3.3/1, Error ellipse: s-maj=55.4km s-min=22.1km az=68.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.80	42	Pn	Pn	10 07 12.2	+1.8
	0.1nm,0.3s,baz=232,slow=15,SNR=2.3						
MKAR	Makanchi Array	35.24	347	P	P	10 12 11.7	0.0
	0.9nm,0.8s,baz=165,slow=8.2,SNR=5.4						
KSRS	Korea Array	39.43	45	P	P	10 12 45.9	-1.5
	1.5nm,1.1s,baz=234,slow=7.5,SNR=3.7						
ZALV	Zalesovo Beam	41.70	352	P	P	10 13 06.2	+0.3
	0.9nm,0.6s,baz=185,slow=8.2,SNR=3.7						
WRA	Warramunga Arr	51.71	128	P	P	10 14 25.2	+0.3
	1.0nm,0.6s,baz=307,slow=8.2,SNR=24						
ASAR	Alice Springs	53.61	132	P	P	10 14 38.8	-0.1
	0.5nm,0.5s,baz=309,slow=6.8,SNR=15						

*ISCJB **16** 10:15:34.3±0.8, 18°.1S±0°.2×178°.4W±0°.1, h614km±11km, mb3.8/16, Error ellipse: s-maj=25.8km s-min=10.9km az=151.1*
*IDC **16** 10:15:34.7±1.7, 18°.01S×178°.46W, h601km±23km, mb3.3/11, mb1 3.6/12, mb1mx3.4/19, mbtmp3.3/12, Error ellipse: s-maj=24.5km s-min=12.0km az=147.0*
*NEIC **16** 10:15:35.0±0.7, 18°.03S×178°.39W, h607km±8km, mb3.8/7, Error ellipse: s-maj=22.0km s-min=9.5km az=153.0*
ISC 16 10:15:35.3±0.9, 18°.1S±0°.2×178°.4W±0°.1, h608km±10km, n30, σ0s83/30, mb3.8/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.37	275	*e*Pn	P	10 16 58.2	+0.9
AFI	Afiamalu	7.61	58	P	P	10 17 28.6	-2.8
	2.0nm,0.3s,baz=309,slow=7.2,SNR=4.0						
AFI	Afiamalu	7.61	58	*e*Pn	P	10 17 29.3	-2.0
URZ	Urewera	20.51	190	P	P	10 19 32.5	-0.6
	3.7nm,0.6s,baz=336,slow=20,SNR=4.8						
EIDS	Eidsvold	29.20	250	*e*P	P	10 20 49.6	-0.2
CTA	Charters Tower	33.40	261	*e*P	P	10 21 25.6	0.0
	4.4nm,0.6s,mb4.3						
CTAO	Charters Tower	33.40	261	*e*P	P	10 21 25.9	+0.3
	4.7nm,0.5s,mb4.4						
CMSA	Cobar Meteorol	35.06	241	*e*P	P	10 21 39.6	+0.4
QLP	Quilpie	35.47	249	*e*P	P	10 21 42.6	0.0
COEN	Coen	37.09	271	*e*P	P	10 21 56.7	+0.6
COEN	Coen	37.09	271	*e*P	P	10 21 56.8	+0.7
	100nm,0.5s						
STKA	Stephens Creek	38.54	241	P	P	10 22 08.4	+0.8
	4.1nm,0.5s,mb4.2,baz=80,slow=12,SNR=14						
STKA	Stephens Creek	38.54	241	*e*P	P	10 22 08.4	+0.8
	3.0nm,0.6s,mb4.0						
STKA	Stephens Creek	38.54	241	*e*P	P	10 22 08.6	+1.0
	1.0nm,0.6s,mb3.5						
WRA	Warramunga Arr	44.59	260	P	P	10 22 54.6	-0.6
	3.8nm,0.3s,mb4.4,baz=95,slow=7.5,SNR=214						
WRA				PcP	PcP	10 24 24.7	+0.1
	0.5nm,0.4s,baz=96,slow=3.3,SNR=4.7						
WRA				S	S	10 28 41.9	-6.4
	0.5nm,0.9s,baz=122,slow=16,SNR=2.8						
ASAR	Alice Springs	44.73	254	P	P	10 22 56.5	+0.2
	20nm,0.5s,mb4.9,baz=86,slow=8.6,SNR=284						
ASAR				PcP	PcP	10 24 24.6	-0.6
	1.2nm,0.6s,baz=104,slow=3.8,SNR=5.1						
ASAR				S	S	10 28 48.6	-1.7
	1.0nm,0.8s,baz=92,slow=16,SNR=6.8						
KAKA	Kakadu	47.56	269	*e*P	P	10 23 17.2	-0.6
	8.7nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	52.99	261	*e*P	P	10 23 57.0	-0.1
	1.1nm,0.6s,mb3.4						
MBWA	Marble Bar	58.02	256	*e*P	P	10 24 31.1	-0.8
	5.2nm,0.6s,mb3.8						
MJAR	Matsushiro Arr	68.01	323	P	P	10 25 34.3	-1.0
	0.8nm,0.5s,mb3.4,baz=155,slow=6.9,SNR=4.4						
KSRS	Korea Array	74.80	318	P	P	10 26 15.2	+0.4
	0.3nm,0.5s,mb3.1,baz=134,slow=6.8,SNR=2.7						
ISA	Isabella	77.93	46	*e*P	P	10 26 32.7	+0.8
	2.7nm,0.9s,mb3.7						
CMB	Columbia Colle	77.96	43	*e*P	P	10 26 32.2	+0.2
	2.3nm,0.9s,mb3.6						
NVAR	Mina Array Bea	79.54	44	P	P	10 26 40.8	+0.4
	0.8nm,0.7s,mb3.2,baz=229,slow=8.2,SNR=4.7						
ILAR	Eielson Array	86.03	13	P	P	10 27 10.7	-1.5
	0.2nm,0.5s,mb3.0,baz=225,slow=5.0,SNR=7.1						
TXAR	Lajitas Array	86.09	58	P	P	10 27 14.4	+1.2
	1.1nm,0.7s,mb3.6,baz=218,slow=5.7,SNR=13						
PDAR	Pinedale Array	87.47	43	P	P	10 27 19.4	0.0
	0.7nm,0.6s,mb3.6,baz=227,slow=2.0,SNR=6.4						
CMAR	Chiang Mai Arr	88.92	290	P	P	10 27 27.9	+1.2
	0.4nm,0.3s,mb3.7,baz=145,slow=3.3,SNR=4.9						
MKAR	Makanchi Array	109.22	314	PKiKP	PKiKP	10 32 56.0	-1.2
	0.2nm,0.6s,baz=182,slow=1.7,SNR=3.6						
BRTR	Keskin Array B	144.87	315	PKP	PKPdf	10 34 04.4	+0.1
	0.8nm,0.5s,baz=68,slow=3.9,SNR=4.6						

*IDC **16** 10:27:58.8±2.6, 24°.82S×177°.25W, h114km±22km, mb3.8/13, mb1 4.1/15, mb1mx4.0/21, mbtmp3.9/15, Error ellipse: s-maj=22.3km s-min=14.5km az=138.0*
*ISCJB **16** 10:28:02.6±3.3, 25°.05±0°.1×177°.4W±0°.1, h155km±30km, mb4.0/15, Error ellipse: s-maj=20.3km s-min=18.2km az=39.2*
*NEIC **16** 10:28:03.8±1.9, 25°.04S×177°.25W, h161km±17km, mb4.4/9, Error ellipse: s-maj=17.9km s-min=11.4km az=98.0*
ISC 16 10:28:04.4±1.9, 25°.02S±0°.08×177°.3W±0°.1, h159km±17km, n34, σ0s99/32, mb4.0/15, 2C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.43	328	*e*Pn	Pn	10 30 04.1	+0.6
	33nm,0.8s						
AFI	Afiamalu	12.23	26	P	Pn	10 30 44.6	-8.8
	9.6nm,0.3s,baz=307,slow=3.7,SNR=18						
AFI				S	Sx	10 32 46.1	
	4.9nm,0.3s,baz=53,slow=19,SNR=5.6						
AFI	Afiamalu	12.23	26	*e*Pn	Pn	10 30 44.1	-9.3
AFI				*e*Sn	Sx	10 32 50.0	
URZ	Urewera	14.02	198	P	Pn	10 31 15.8	-0.2
	4.5nm,0.3s,baz=345,slow=1.9,SNR=22						
URZ				S	Sx	10 33 37.7	
	2.7nm,0.3s,baz=143,slow=21,SNR=10						
URZ	Urewera	14.02	198	*e*Pn	Pn	10 31 15.3	-0.7
URZ				S	Sx	10 33 37.7	
KHZ	Kahutara	18.92	201	*e*P	P	10 32 09.7	-3.1
	10nm,0.4s						
RPZ	Rata Peaks	20.93	204	P	P	10 32 33.9	-0.5
	3.9nm,0.4s,baz=31,slow=5.9,SNR=5.0						
RPZ				S	Sx	10 36 09.5	
	5.4nm,0.6s,baz=133,slow=18,SNR=2.8						
CTA	Charters Tower	33.91	271	P	P	10 34 33.0	+0.6
	6.5nm,0.8s,mb4.4,baz=102,slow=10,SNR=8.0						
CTAO	Charters Tower	33.91	271	*e*P	P	10 34 33.2	+0.8
	5.6nm,0.8s,mb4.3						
STKA	Stephens Creek	36.58	250	P	P	10 34 54.8	-0.3
	1.4nm,0.7s,mb3.7,baz=94,slow=12,SNR=3.8						
STKA	Stephens Creek	36.58	250	*e*P	P	10 34 55.3	+0.2
	8.3nm,1.8s,mb4.1						
ASAR	Alice Springs	44.25	261	P	P	10 35 58.5	+0.3
	2.4nm,0.8s,mb3.9,baz=97,slow=7.8,SNR=19						
ASAR				PcP	PcP	10 37 39.0	-0.9
	0.6nm,0.5s,baz=104,slow=3.9,SNR=5.1						
ASAR				S	S	10 42 16.3	-3.7
	0.2nm,0.4s,baz=176,slow=20,SNR=3.1						
WRA	Warramunga Arr	44.75	266	P	P	10 36 00.8	-1.4
	1.2nm,0.3s,mb4.0,baz=101,slow=8.4,SNR=34						
WRA				PcP	PcP	10 37 42.0	+0.3
	1.3nm,0.8s,baz=102,slow=3.5,SNR=5.1						
WRA				ScP	ScP	10 41 23.0	+3.9
	0.3nm,0.7s,baz=100,slow=3.9,SNR=4.2						
WRA				S	S	10 42 22.9	-4.4
	0.3nm,0.8s,baz=98,slow=14,SNR=2.6						
WRA	Warramunga Arr	44.75	266	P	P	10 36 00.8	-1.4
WRA				PcP	PcP	10 37 42.0	+0.3
WRA				ScP	ScP	10 41 23.0	+3.9
WRA				S	S	10 42 22.9	-4.4
FITZ	Fitzroy Crossi	53.16	266	P	P	10 37 06.1	-0.1
	1.2nm,0.4s,mb4.0,baz=115,slow=9.1,SNR=8.9						
FITZ	Fitzroy Crossi	53.16	266	*e*P	P	10 37 06.2	0.0
	1.9nm,0.6s,mb4.0						
SBA	Scott Base	53.42	184	*e*P	P	10 37 10.2	+2.9
	8.7nm,0.8s,mb4.5						
CASY	Casey	60.18	206	⇑*i*P	P	10 37 54.9	0.0
CASY	Casey	60.18	206	*e*P	P	10 37 55.1	+0.2
	9.2nm,0.6s,mb4.8						
QSPA	South Pole Qui	65.07	180	*e*P	P	10 38 28.4	+1.3
	8.6nm,1.0s,mb4.5						
MAW	Mawson	77.54	200	P	P	10 39 43.1	+1.0
	8.4nm,0.7s,mb4.5,baz=137,slow=9.2,SNR=18						
MAW	Mawson	77.54	200	⇑*i*P	P	10 39 43.4	+1.3
	6.5nm,0.6s,mb4.4						
MAW	Mawson	77.54	200	*e*P	P	10 39 43.3	+1.2
	2.5nm,1.0s,mb3.8						
PETK	Petropavlovsk-	80.77	345	P	P	10 39 59.0	-0.7
	1.9nm,0.7s,mb3.8,baz=156,slow=7.4,SNR=6.2						
NVAR	Mina Array Bea	83.90	43	P	P	10 40 16.4	+0.1
	0.6nm,0.6s,mb3.5,baz=226,slow=7.3,SNR=7.5						
TXAR	Lajitas Array	88.99	57	P	P	10 40 40.8	-0.5
	0.3nm,0.8s,mb3.3,baz=208,slow=9.2,SNR=4.1						
PDAR	Pinedale Array	91.83	43	P	P	10 40 53.7	-0.5
	0.7nm,0.7s,mb3.8,baz=222,slow=2.4,SNR=8.1						
CMAR	Chiang Mai Arr	92.18	289	P	P	10 40 57.5	+1.1
	0.6nm,0.4s,mb4.0,baz=120,slow=5.3,SNR=4.3						
ILAR	Eielson Array	92.57	13	P	P	10 40 56.2	-0.9
	0.2nm,0.5s,mb3.5,baz=203,slow=6.5,SNR=4.2						
MKAR	Makanchi Array	114.69	312	PKP	PKiKP	10 46 23.8	-1.8
	0.3nm,0.6s,baz=111,slow=0.5,SNR=4.2						
ARCES	ARCESS Array B	133.46	349	PKP	PKPdf	10 46 59.5	-1.4
	2.4nm,0.8s,baz=46,slow=2.6,SNR=4.6						
AKASG	Malin Array Be	147.21	328	PKPbc	PKPbc	10 47 25.1	-3.4
	1.0nm,0.5s,baz=47,slow=3.7,SNR=4.1						
BRTR	Keskin Array B	150.18	307	PKPbc	PKPbc	10 47 35.5	-1.0
	1.6nm,0.8s,baz=146,slow=5.5,SNR=5.4						
TORD	Torodi Ar. Bea	168.16	175	PKP	PKPdf	10 47 51.4	-1.2
	0.5nm,0.7s,baz=304,slow=2.0,SNR=3.3						
TORD				PKPab	PKPab	10 49 01.4	+0.2
	1.3nm,0.6s,baz=181,slow=4.4,SNR=9.3						

IDC 16 10:28:20.9±9.6, 3°.11S×128°.82E, h468km±139km, mb2.7/2, mb1 2.7/3, mb1mx2.5/18, mbtmp2.6/3, Error ellipse: s-maj=138.3km s-min=47.5km az=72.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.57	163	P	P	10 31 58.7	0.0
	0.3nm,0.3s,baz=342,slow=11,SNR=22						
ASAR	Alice Springs	21.02	167	P	P	10 32 30.6	0.0
	0.6nm,0.4s,baz=346,slow=11,SNR=20						
MKAR	Makanchi Array	64.36	326	P	P	10 38 09.7	+0.1
	0.2nm,0.7s,baz=134,slow=6.2,SNR=3.7						

*ISCJB **16** 10:34:27.0±0.8, 2°.4S±0°.1×85°.4E±0°.1, h10km, mb3.7/7, Error ellipse: s-maj=19.1km s-min=15.5km az=16.0*
*IDC **16** 10:34:27.9±0.8, 2°.72S×85°.42E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, Error ellipse: s-maj=29.7km s-min=24.6km az=1.0*
*NEIC **16** 10:34:29.1±0.7, 2°.51S×85°.41E, h10km, Error ellipse: s-maj=18.4km s-min=15.7km az=184.0*
ISC 16 10:34:28.9±0.8, 2°.5S±0°.1×85°.4E±0°.1, h10km, n13, σ0s96/11, mb3.7/7, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	10.75	334	*e*Pn	Pn	10 37 02.6	-0.4
PALK				*e*Sn	Sn	10 38 53.2	-10
DGAR	Diego Garcia	13.85	249	*e*Pn	Pn	10 37 45.0	-0.4
KMBO	Kilima Mbogo	48.18	271	P	P	10 43 10.8	+0.8
	0.5nm,0.4s,mb3.9,baz=17,slow=20,SNR=4.0						
MKAR	Makanchi Array	49.11	357	P	P	10 43 20.2	+3.7
	0.2nm,0.5s,mb3.4,baz=182,slow=9.5,SNR=4.5						
WRA	Warramunga Arr	50.78	114	P	P	10 43 28.9	-0.8
	0.4nm,0.8s,mb3.4,baz=286,slow=9.4,SNR=3.4						
WRA	Warramunga Arr	50.78	114	P	P	10 43 28.9	-0.8
ASAR	Alice Springs	51.36	119	P	P	10 43 34.4	+0.3
	0.5nm,0.7s,mb3.5,baz=288,slow=6.7,SNR=5.1						
SONM	Songino Array	53.32	17	P	P	10 43 51.6	+3.5
	0.2nm,0.5s,mb3.3,baz=215,slow=7.0,SNR=2.2						
BOSA	Boshof	62.81	239	P	P	10 44 55.8	+0.7
	1.7nm,0.6s,mb4.4,baz=77,slow=7.8,SNR=5.3						
TORD	Torodi Ar. Bea	84.47	283	P	P	10 47 01.7	-1.0
	1.4nm,1.0s,mb4.0,baz=82,slow=4.6,SNR=5.6						
LPAZ	La Paz	147.94	234	PKPbc	PKPbc	10 54 16.5	+1.0
	0.5nm,0.5s,baz=108,slow=3.2,SNR=3.2						
LPAZ	La Paz	147.94	234	PKPbc	PKPbc	10 54 16.5	+1.0
TXAR	Lajitas Array	151.89	17	PKPbc	PKPbc	10 54 25.1	+0.3
	0.3nm,0.6s,baz=203,slow=1.4,SNR=5.5						
TXAR				PKPab	PKPab	10 54 34.9	+1.1
	0.2nm,0.5s,baz=316,slow=2.5,SNR=4.4						

*ISCJB **16** 10:48:33.4±0.5, 36°.89N±0°.03×58°.44E±0°.04, h2km±12km, Error ellipse: s-maj=6.6km s-min=3.9km az=42.1*
*CSEM **16** 10:48:33.7±0.2, 36°.94N×58°.52E, h2km, ML3.7, Error ellipse: s-maj=5.3km s-min=3.0km az=45.0*
*TEH **16** 10:48:34.5, 36°.94N×58°.49E, h9km*
ISC 16 10:48:34.3±0.5, 36°.92N±0°.03×58°.49E±0°.04, h1km±12km, n22, σ0s95/32, 6C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IQHU	Qucahn	0.16	13	*e*Pg	Pg	10 48 37.2	-0.2
IQHU	Qucahn	0.16	13	*e*Pg	Pg	10 48 37.2	-0.2
IAKL	Akhelmad	0.38	146	⇑*e*Pg	Pg	10 48 42.2	+0.7
IAKL				*e*	Sg	10 48 51.0	+4.6
	comp=Z,12μm,0.1s						
IAKL	Akhelmad	0.38	146	⇑*e*Pg	Pg	10 48 42.2	+0.7
ISFR	Sfrayin	0.42	290	*e*Pg	Pg	10 48 41.8	-0.5
ISFR				*e*Sg	Sg	10 48 47.1	-0.6
ISFR				*e*		10 48 48.6	
	comp=Z,50μm,0.1s						
ISFR	Sfrayin	0.42	290	*e*Pg	Pg	10 48 41.8	-0.5
ISFR				*e*Sg	Sg	10 48 47.1	-0.6
IEMG	Emamgholi	0.52	14	*e*Pg	Pg	10 48 43.2	-0.9
IEMG				*e*	Sg	10 48 52.3	+1.5
	comp=Z,62μm,0.1s						
IEMG	Emamgholi	0.52	14	*e*Pg	Pg	10 48 43.2	-0.9
IPAY	Payeh	0.62	139	⇓*e*Pg	Pg	10 48 45.8	-0.2
IPAY				*e*	Sg	10 48 57.6	+3.6
	comp=Z,69μm,0.0s						
IPAY	Payeh	0.62	139	⇓*e*Pg	Pg	10 48 45.8	-0.2
ISHV	Shirvan	0.88	315	⇑*e*Pg	Pg	10 48 50.1	-1.1
ISHV				*e*	Sg	10 49 06.2	+3.5
	comp=Z,41μm,0.1s						
ISHV	Shirvan	0.88	315	⇑*e*Pg	Pg	10 48 50.1	-1.1
ISRO	Mashad	0.99	127	*e*Pg	Pg	10 48 52.4	-0.9
ISRO				*e*	Sg	10 49 09.9	+3.8
	comp=Z,26μm,0.1s						
MHI	Mashad	0.99	127	*e*Pg	Pg	10 48 53.6	+0.3
IMOG	Moghan	1.05	139	*e*Pg	Pg	10 48 54.1	-0.4
IMOG				*e*	Sg	10 49 13.0	+4.9
	comp=Z,16μm,0.1s						
IMOG	Moghan	1.05	139	*e*Pg	Pg	10 48 54.1	-0.4
BJRD	Bojnurd	1.17	313	*e*Pg	Pg	10 48 56.3	-0.3
BJRD				*e*Sg	Sg	10 49 12.5	+0.7
IMYA	Miami	1.42	113	⇑*e*Pg	Pg	10

BPBC	Brooks Peninsu	2.24	10	⇓Pn		Pn	11 15 05.1	-0.8
BMSB	Bamfield Mari	2.34	67	⇑Pn		Pn	11 15 06.6	-0.6
BMSB				⇑Sn		Sn	11 15 39.9	+3.4
GDR	Gold River	2.40	40	Pn		Pn	11 15 08.9	+0.8
WOSB	Woss	2.51	28	Pn		Pn	11 15 10.6	+1.1
MAYB	Maynard	2.58	18	⇑Pn		Pn	11 15 11.0	+0.5
MGB	Mount Grey	2.67	66	⇓Pn		Pn	11 15 11.3	-0.5
HOLB	Holberg	2.69	3	⇑Pn		Pn	11 15 11.7	-0.4
ALB	Alberni	2.71	59	⇓Pn		Pn	11 15 12.0	-0.2
PFB	Port Renfrew	2.71	75	P		Pn	11 15 11.0	-1.3
PFB	Port Renfrew	2.71	75	Pn		Pn	11 15 10.9	-1.3
PFB				⇑Sn		Sn	11 15 46.9	+1.3
PHC	Port Hardy	2.83	12	Pn		Pn	11 15 13.9	0.0
PHC	Port Hardy	2.83	12	Pn		Pn	11 15 13.9	0.0
OBC	Olympics--Boni	2.90	87	P		Pn	11 15 13.9	-1.0
NLWA	Neilton Lookou	3.10	99	*e*Pn		Pn	11 15 15.5	-2.2
OSD	Olympics--Snow	3.16	91	P		Pn	11 15 17.3	-1.2
PGC	Sidney	3.37	76	*e*Pn		Pn	11 15 20.3	-1.0
GNW	Green Mountain	3.77	94	*e*Pn		Pn	11 15 26.0	-0.9
HEBO	Mount Hebo	4.21	129	*e*Pn		Pn	11 15 29.3	-3.6
BBB	Bella Bella	4.24	2	Pn		Pn	11 15 33.7	+0.4
	23nm,0.3s,baz=18,slow=11,SNR=225							
BBB	Bella Bella	4.24	2	Pn		Pn	11 15 33.7	+0.4
VDB	Vedder Mountai	4.32	73	P		Pn	11 15 34.4	0.0
JCW	Jim Creek	4.34	84	*e*Pn		Pn	11 15 34.3	-0.3
MBW	Mount Baker	4.40	77	P		Pn	11 15 36.1	+0.6
RPW	Rockport	4.62	81	*e*Pn		Pn	11 15 38.7	+0.1
LON	Longmire	4.63	103	*e*Pn		Pn	11 15 37.7	-1.0
COR	Corvallis	4.88	132	*e*Pn		Pn	11 15 38.8	-3.3
COR				*e*Sn		Sn	11 16 34.9	-4.2
ASR	Mount Adams--S	4.98	109	P		Pn	11 15 43.6	+0.1
HOOD	Mount Hood Mea	5.33	117	*e*Pn		Pn	11 15 47.4	-1.0
ETW	Entiat	5.44	91	*e*Pn		Pn	11 15 49.9	0.0
HAWA	Hanford	6.24	101	*e*Pn		Pn	11 16 00.4	-0.3
LNOR	Lincton Mounta	7.23	103	*e*Pn		Pn	11 16 15.2	+0.9
YBH	Yreka Blue Hor	7.41	145	Pn		Pn	11 16 14.9	-2.0
	0.1nm,0.3s,baz=348,slow=12,SNR=4.5							
YBH				Sn		Sn	11 17 28.6	-13
	0.2nm,0.3s,baz=75,slow=19,SNR=2.1							
YBH				LR		LR	11 18 23.3	
	comp=Z,86nm,20.0s,baz=331,slow=32							
YBH	Yreka Blue Hor	7.41	145	*e*Pn		Pn	11 16 16.7	-0.2
YBH				Sn		Sn	11 17 28.6	-13
YBH				LR		LR	11 18 23.3	
NEW	Newport	7.55	83	*e*Pn		Pn	11 16 18.8	+0.1
MOD	Modoc	8.33	134	Pn		Pn	11 16 28.8	-0.8
WDC	Whiskeytown Da	8.48	148	*e*Pn		Pn	11 16 31.8	+0.3
KCPM	Cahto Peak	8.96	155	*e*Pn		Pn	11 16 41.3	+3.1
PAHR	Pah Rah Range	10.49	138	*e*Pn		Pn	11 17 01.4	+2.3
DLBC	Dease Lake	10.55	355	Pn		Pn	11 17 03.8	+4.0
	0.1nm,0.3s,baz=182,slow=15,SNR=4.8							
DLBC				Sn		Sn	11 18 49.4	-9.1
	0.0nm,0.3s,baz=180,slow=20,SNR=1.8							
DLBC				LR		LR	11 20 54.8	
	comp=Z,190nm,18.4s,baz=306,slow=36							
HLID	Hailey	10.70	109	*e*Pn		Pn	11 17 02.1	+0.1
CMB	Columbia Colle	11.51	147	*e*Pn		Pn	11 17 18.5	+5.5
NVAR	Mina Array Bea	12.02	139	Pn		Pn	11 17 21.3	+1.3
	0.1nm,0.3s,baz=316,slow=14,SNR=11							
NVAR	Mina Array Bea	12.02	139	Pn		Pn	11 17 21.3	+1.3
IMW	Indian Meadow	12.80	102	*e*Pn		Pn	11 17 32.2	+1.5
TPAW	Teton Pass	12.97	104	*e*Pn		Pn	11 17 32.9	-0.1
BW06	Boulder Array	14.21	104	*e*Pn		Pn	11 17 52.4	+2.5
PDAR	Pinedale Array	14.21	104	Pn		Pn	11 17 52.9	+3.0
	0.1nm,0.3s,baz=297,slow=12,SNR=12							
CCUT	Cedar City	15.13	128	*e*Pn		Pn	11 18 04.7	+2.2
SRU	San Rafael	15.65	118	P		Pn	11 18 08.0	-1.3
	2.6nm,0.8s							
LDFC	Landfair	16.23	138	*e*Pn		Pn	11 18 18.7	+2.0
	16nm,1.5s							
YKA	Yellowknife Ar	16.50	23	Pn		Pn	11 18 20.7	+0.7
	0.1nm,0.3s,baz=218,slow=11,SNR=2.8							
YKA				LR		LR	11 24 37.6	
	comp=Z,16nm,18.1s,baz=135,slow=36							
PV04	Paradox Valley	17.08	117	*e*P		Pn	11 18 28.9	+1.3
PHWY	Pilot Hill	17.59	104	*e*Pn		Pn	11 18 34.1	+0.2
	6.4nm,1.0s							
FFC	Flin Flon	17.77	58	*e*P		Pn	11 18 36.0	0.0
	12nm,0.8s							
ILAR	Eielson Array	19.59	336	P		Pn	11 18 56.8	-1.2
	baz=147,slow=10,SNR=5.5							
INK	Inuvik	20.58	355	LR		LR	11 27 15.8	
	comp=Z,86nm,19.1s,baz=159,slow=37							
ANMO	Albuquerque	20.86	121	P		P	11 19 10.4	-0.4
	1.2nm,0.6s,baz=327,slow=12,SNR=5.9							
ANMO	Albuquerque	20.86	121	*e*P		P	11 19 10.3	-0.6
	2.5nm,0.9s							
TXAR	Lajitas Array	26.62	125	P		P	11 20 06.0	-1.5
	0.3nm,0.8s,baz=324,slow=8.9,SNR=3.2							

BJI ***16*** *11:15:32.2,9°.44S×127°.40E,h35km,mB5.8/51,mb5.8/74, Ms5.4/74,Ms7 5.2/63*

IDC ***16*** *11:15:35.2±0.3,8°.72S×126°.91E,h0km,mb5.6/30, mb1 5.5/30,mb1mx5.5/30,mbtmp5.6/30,MS5.3/16, Ms1 5.3/16,ms1mx5.0/27,Error ellipse: s-maj=13.9km s-min=9.0km az=46.0*

ISCJB ***16*** *11:15:38.7±0.1,8°.86S±0°.02×126°.87E±0°.02,h37km, mb5.8/174,MS5.4/224,Error ellipse: s-maj=3.3km s-min=2.7km az=21.4*

NEIC ***16*** *11:15:41.3±0.1,8°.78S×126°.84E,h35km,mb5.9/78, MS5.4/178,MW5.7,Error ellipse: s-maj=5.6km s-min=4.0km az=40.0*

NEIC Felt at Dili.

MOS ***16*** *11:15:41.5±1.0,8°.13S×126°.72E,h33km,mb6.0/54, MS5.3/67,Error ellipse: s-maj=9.9km s-min=6.1km az=109.2*

DJA ***16*** *11:15:42.7±0.2,9°.S±2°.×12°.7E±°,h54km±3km,mB6.1/70, mb5.8/87,MLv6.2/9,Mw(mB)5.8/70*

TEH ***16*** *11:15:42.0,8°.83S×126°.83E,h44km*

GCMT ***16*** *11:15:42.2±0.1,9°.07S×127°.05E,h18km,MW5.7,Moment Tensor Solution. s97,c198; s62,c75; Moment tensor: Scale 10^17^Nm; M_{rr}3.63±.05; $M_{\theta\theta}$-3.45±.04; $M_{\phi\phi}$-0.19±.04; $M_{r\theta}$2.49±.10; $M_{\theta\phi}$-1.45±.03; $M_{\phi r}$1.04±.10; Best double couple: $M_0$4.70000×10^17^ NP1:ϕ_{ss}251.00000°,δ27.00000°, λ92.00000°. NP2:ϕ_{ss}68.00000°,δ63.00000°,λ89.00000°. Principal axes: T 4.4900, Plg72.0000°, Azm335.0000°; N 0.3600, Plg1.0000°, Azm69.0000°; P -4.8600, Plg18.0000°, Azm159.0000°; Data Used: II IU IC G CN. Surface waves: sta=112, comp=245, per= 50.*

ISC 16 11:15:40.8±0.1,8°.85S±0°.02×126°.88E±0°.02,h39km, h39km±1.9km:pP-P,n1305,σ1°17/561,mb5.8/174, MS5.4/224,208C-166D,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	4.59	272	P	Pn	11 16 44.3	-3.5
BNDI	Bandanaira	5.24	35	P	Pn	11 16 58.2	+1.5
	17nm3μm,1.3s						
BBSI	Bau Bau	5.42	308	P	Pn	11 17 03.5	+4.3
	22nm7μm,1.1s						
NLAI	Namlea	5.57	2	P	Pn	11 17 06.2	+4.9
	7.4nm2μm,1.0s						
KDI	Kendari	6.44	319	P	Pn	11 17 15.8	+2.6
	2.8nm665nm,1.0s						
KDI				S	Sn	11 18 33.0	+7.5
	2.8nm665nm,1.0s						
WSI	Waingapu	6.55	262	P	Pn	11 17 16.2	+1.5
	48nm7μm,0.8s						
WSI				S	Sn	11 18 30.2	+2.1
	48nm7μm,0.8s						
KAKA	Kakadu	6.68	126	⇓*i*P	Pn	11 17 14.1	-2.3
	900nm,0.6s						
KAKA	Kakadu	6.68	126	*e*Pn	Pn	11 17 14.3	-2.1
KAKA	Kakadu	6.68	126	P	Pn	11 17 14.6	-1.8
	3μm,0.7s						
KNA	Kununurra	7.11	165	P	Pn	11 17 20.4	-1.9
	49nm8μm,0.8s						
BKSI	Bulukumba	7.56	297	P	Pn	11 17 31.3	+2.7
	3.7nm1μm,0.8s						
KAPI	Kappang	8.03	298	Pn	Pn	11 17 36.4	+1.3
	15nm,0.3s,baz=137,slow=9.0,SNR=27						
KAPI				Sn	Sn	11 19 09.9	+5.2
	2.1nm,0.3s,baz=167,slow=18,SNR=1.7						
KAPI				LR	LR	11 21 51.2	
	comp=Z,29μm,18.1s,baz=128,slow=47						
KAPI	Kappang	8.03	298	*e*Pn	Pn	11 17 35.6	+0.5
KAPI	Kappang	8.03	298	Pn	Pn	11 17 37.1	+2.0
	3μm,0.9s,SNR=23						
KAPI	Kappang	8.03	298	P	Pn	11 17 37.8	+2.7
	4μm459nm,1.1s						
KAPI	Kappang	8.03	298	P	Pn	11 17 38.0	+2.9
	SNR=46						
BNSI	Bone	8.05	303	P	Pn	11 17 38.9	+3.7
	3μm,1.2s						
BNSI				S	Sn	11 19 16.0	+11
	3μm,1.2s						
BMNI	Bima	8.10	272	P	Pn	11 17 36.9	+0.9
	5.6nm838nm,1.7s						
BMNI				S	Sn	11 19 08.1	+1.8
	5.6nm838nm,1.7s						
LBMI	Labuha	8.18	4	P	Pn	11 17 43.6	+6.6
	2μm,1.7s						
SPSI	Sidrap Palu	8.57	304	P	Pn	11 17 45.4	+3.0
	855nm,1.9s						
LUWI	Luwuk	8.77	332	P	Pn	11 17 50.3	+5.2
	2μm,1.2s						
MSSI	Masamba	9.03	313	P	Pn	11 17 51.9	+3.1
	392nm,1.4s						
TTSI	Tana Toraja	9.08	309	P	Pn	11 17 53.8	+4.3
	8μm728nm,1.1s						
FITZ	Fitzroy Crossi	9.28	187	Pn	Pn	11 17 49.1	-3.0
	38nm,0.3s,baz=19,slow=15,SNR=418						
FITZ				Sn	Sn	11 19 26.1	-9.2
	131nm,0.3s,baz=93,slow=19,SNR=14						
FITZ				LR	LR	11 22 00.9	
	comp=Z,15μm,21.9s,baz=11,slow=41						
FITZ	Fitzroy Crossi	9.28	187	⇓*i*P	Pn	11 17 48.5	-3.6
	1μm,0.7s						
FITZ				*e*S	Sn	11 19 26.7	-8.6
FITZ	Fitzroy Crossi	9.28	187	*e*Pn	Pn	11 17 49.2	-3.0
FITZ				*e*Sn	Sn	11 19 28.8	-6.5
FITZ	Fitzroy Crossi	9.28	187	P	Pn	11 17 49.7	-2.4
	2μm,1.2s						
MJSI	Majene	9.45	303	P	Pn	11 17 59.8	+5.3
	9μm662nm,1.2s						
TNTI	Ternate	9.57	3	P	Pn	11 18 02.6	+6.5
	1μm,1.1s						
KMSI	Cibinong	9.79	343	P	Pn	11 18 05.4	+6.2
	4μm,0.9s						
MRSI	Marisa	10.49	332	P	Pn	11 18 13.2	+4.5
	464nm,1.6s						
MTNI	Mataram	10.59	270	P	Pn	11 18 08.5	-1.6
	6μm489nm,1.0s						
KHKI	Kahang-Kahang	11.16	272	P	Pn	11 18 18.1	+0.2
	4μm250nm,0.9s						
KHKI				S	Sn	11 20 20.6	-0.8
	4μm250nm,0.9s						
SRBI	Singaraja	11.57	273	P	Pn	11 18 21.6	-1.9
	4μm210nm,0.9s						
IGBI	Denpasar	11.60	269	P	Pn	11 18 21.6	-2.3
TOLI	Toli-Toli	11.61	328	P	Pn	11 18 27.7	+3.6
	672nm,1.0s						
BAKI	Biak	11.92	51	P	Pn	11 18 27.9	-0.5
	1μm,1.1s						
BAKI				S	Sn	11 20 39.1	-1.1
	1μm,1.1s						
SGSI	Sangihe	12.52	354	P	Pn	11 18 41.6	+5.1
	2μm,2.2s						
JAGI	Jajag, Banyuwa	12.59	271	P	Pn	11 18 32.2	-5.3
	4μm312nm,1.0s						
JAGI				S	Sn	11 20 49.2	-7.3
	4μm312nm,1.0s						
WAMI	Wamena	12.75	68	P	Pn	11 18 44.6	+5.0
	1μm,1.1s						
KMMI	Kalianget	12.91	277	P	Pn	11 18 43.0	+1.1
	7μm310nm,1.3s						
WRA	Warramunga Arr	13.18	148	Pn	Pn	11 18 39.4	-6.2
	31nm,0.3s,baz=317,slow=13,SNR=704						
WRA				Sn	Sn	11 20 59.4	-11
	58nm,0.3s,baz=317,slow=24,SNR=19						
WRA	Warramunga Arr	13.18	148	P	Pn	11 18 39.4	-6.1
WB2	Warramunga Arr	13.19	148	*e*Pn	Pn	11 18 39.8	-5.8
WB2				*e*Sn	Sn	11 20 59.0	-12
GMJI	Gumukmas	13.30	271	P	Pn	11 18 46.2	-1.0
	3μm227nm,1.0s						
MMPI	Merauke	13.36	89	P	Pn	11 18 49.7	+1.7
	719nm,1.4s						
MMPI				S	Sn	11 21 06.2	-9.0
	719nm,1.4s						
MBWA	Marble Bar	14.05	209	*e*Pn	Pn	11 18 53.3	-4.0
	213nm,0.7s						
MBWA				*e*Sn	Sn	11 21 18.6	-13
MBWA	Marble Bar	14.05	209	P	Pn	11 18 53.2	-4.2
	6μm478nm,1.0s						
KRKI	Karangkates	14.29	272	P	Pn	11 19 07.1	+6.4
PLKI	Palangkaraya	14.45	296	P	Pn	11 19 10.9	+8.0
PWJI	Pagerwojo	14.94	272	P	Pn	11 19 07.1	-2.3
	4μm287nm,0.8s						
SJI	Sawahan	15.00	273	P	Pn	11 19 09.4	-0.8
	6μm432nm,0.8s						
NGJI	Ngawi	15.34	274	P	Pn	11 19 18.7	+4.1
	466nm,1.0s						
PCJI	Pacitan	15.54	271	P	Pn	11 19 12.7	-4.6
	415nm,1.1s						
MATI	Mati	15.70	358	*e*P	Pn	11 19 25.4	+6.2
TSM	Tawau	15.84	325	P	Pn	11 19 21.6	+0.5
KCP	Kidapawan	15.85	353	⇑*e*P	Pn	11 19 28.8	+7.6
DAV	Davao City (W)	15.86	355	Pn	Pn	11 19 23.7	+2.3
	baz=122,slow=4.5,SNR=16						
DAV	Davao City (W)	15.86	355	⇑*e*P	Pn	11 19 22.4	+1.0
DAV	Davao City (W)	15.86	355	P	Pn	11 19 29.6	+8.2
	1μm,0.9s						
DMPH	Davao City--Mi	15.88	355	*e*P	Pn	11 19 24.4	+2.8
CTBH	Cotabato--PC H	16.17	351	⇑*e*P	Pn	11 19 27.4	+2.0
ASAR	Alice Springs	16.20	156	Pn	Pn	11 19 21.4	-4.2
	15nm,0.3s,baz=328,slow=8.8,SNR=378						
ASAR				Sn	Sn	11 22 11.8	-13
	13nm,0.3s,baz=326,slow=19,SNR=9.9						
ASAR	Alice Springs	16.20	156	P	Pn	11 19 21.4	-4.2
UGM	Wanagama	16.21	272	*e*Pn	Pn	11 19 25.8	0.0
	488nm,0.9s						
UGM	Wanagama	16.21	272	P	Pn	11 19 26.6	+0.8
	8μm618nm,1.1s						
MYLDM	Lahad Datu	16.25	329	P	Pn	11 19 25.8	-0.5
MYLDM	Lahad Datu	16.25	329	P	Pn	11 19 31.5	+5.2
	818nm,1.6s						
PBKI	Pangkalan Bun	16.31	291	P	Pn	11 19 29.9	+2.8
	7μm572nm,1.3s						
SMRI	Semarang	16.38	275	P	Pn	11 19 31.4	+3.4
	8μm632nm,1.0s						
YOGI	Yogyakarta	16.44	272	P	Pn	11 19 31.7	+2.9
	956nm,1.2s						
BUKP	Musuan	16.71	354	*e*P	Pn	11 19 35.9	+3.8
COEN	Coen	16.76	109	*e*Pn	Pn	11 19 28.6	-4.2
	3μm,1.0s						
COEN				*e*Sn	Sn	11 22 20.1	-18
COEN	Coen	16.76	109	P	Pn	11 19 29.0	-3.8
	2μm,1.0s						
PAGZ	Pagadian	16.95	348	*e*P	Pn	11 19 38.4	+3.3
BJII	Banjamegara	17.07	274	P	Pn	11 19 36.0	-0.6
	7μm294nm,1.6s						
SDKM	Sandakan	17.33	326	P	Pn	11 19 40.1	+0.2
STKI	Sintang	17.71	299	P	Pn	11 19 47.5	+2.9
	340nm,1.3s						
BUTP	Butuan	17.74	356	*e*P	Pn	11 19 49.2	+4.2
KKM	Kota Kinabalu	18.22	324	P	Pn	11 19 50.8	0.0
KKM	Kota Kinabalu	18.22	324	P	Pn	11 19 53.4	+2.6
	799nm,1.2s						
BTM	Bintulu	18.23	310	P	Pn	11 19 53.0	+2.0
GIRL	Giralia	18.32	220	*e*P	Pn	11 19 52.3	+0.3
	2μm,0.9s						
SBUM	Sibu	18.42	307	P	Pn	11 19 55.3	+1.9
SBUM	Sibu	18.42	307	P	Pn	11 19 55.8	+2.5
	8μm418nm,0.9s						
SCPH	Surigao	18.56	356	⇑*e*P	Pn	11 19 57.0	+2.1
KDM	Kudat	18.59	327	P	Pn	11 19 54.1	-1.2
JCJI	Jatiwangi	18.59	276	P	Pn	11 19 55.1	-0.3
	653nm,0.9s						
TBP	Tagbilaran	18.66	351	*e*P	Pn	11 19 56.7	+0.6
CISI	Cisompet, Garu	18.91	272	P	Pn	11 19 58.4	-0.9
	7μm758nm,0.8s						
MSLP	Maasin	18.96	354	*e*P	Pn	11 20 00.9	+1.1
LEM	Lembang	19.19	275	P	Pn	11 20 02.2	-0.4
	8μm778nm,0.9s						
LLP	Lapu-Lapu	19.26	351	*e*P	Pn	11 20 03.7	+0.4
KSM	Kuching	19.44	301	P	Pn	11 20 06.3	+0.7
KSM	Kuching	19.44	301	P	Pn	11 20 05.7	+0.2
	6μm591nm,1.0s						
BATP	Bataraza	19.72	332	*e*P	Pn	11 20 10.0	+1.1
GUIM	Jordan	19.81	347	*e*P	Pn	11 20 09.2	-0.7
OCLP	Ormoc	19.89	353	*e*P	Pn	11 20 13.9	+3.0
CBJI	Citeko	20.00	276	P	P	11 20 08.8	-1.4
	3μm,0.8s						
PMG	Port Moresby	20.03	93	*e*P	P	11 20 11.3	+0.7
	847nm,1.2s						
PMG	Port Moresby	20.03	93	⇑*e*P	P	11 20 11.3	+0.7
PMG				pmax	pmax		
	comp=Z,1μm,2.5s						
PMG	Port Moresby	20.03	93	P	P	11 20 12.8	+2.2
	comp=Z,9μmcomp=Z,532nm,1.4s						
TPI	Tanjungpandan	20.05	286	P	P	11 20 11.6	+0.7
	comp=Z,2μmcomp=Z,122nm,1.4s						
DBJI	Dramaga	20.08	275	P	P	11 20 10.9	-0.2
	comp=Z,8μmcomp=Z,480nm,0.8s						
SKJI	Sukabumi	20.21	274	P	P	11 20 12.4	-0.2
	comp=Z,9μmcomp=Z,1μm,0.8s						
CUYO	Cuyo Island	20.42	343	*e*P	P	11 20 17.1	+2.4
SBJI	Serang	20.75	276	P	P	11 20 23.4	+5.0
	comp=Z,5μmcomp=Z,345nm,1.0s						
XMIS	Christmas Isla	20.99	264	*e*P	P	11 20 20.5	-0.5
XMIS				*e*S	S	11 24 10.9	-2.0
XMIS	Christmas Isla	20.99	264	P	P	11 20 21.5	+0.5
	comp=Z,10μm,1.2s						
ENPP	El Nido	21.25	339	*e*P	P	11 20 25.7	+1.9
CNP	Catarman	21.33	354	*e*P	P	11 20 26.3	+1.7
OTRP	Odiongan	21.61	347	*e*P	P	11 20 31.0	+3.4
PPBI	Pangkal Pinang	21.68	287	P	P	11 20 27.8	-0.6
	comp=Z,4μmcomp=Z,312nm,1.3s,mb5.6						
BUSP	Coron	21.75	342	*e*P	P	11 20 30.5	+1.4
CTA	Charters Tower	21.81	123	P	P	11 20 30.7	+0.9
	comp=Z,122nm,0.8s,mb5.4,baz=310,slow=14,SNR=93						
CTA				S	S	11 24 32.3	+3.5
	comp=Z,29nm,1.0s,baz=308,slow=20,SNR=8.5						
CTA				LR	LR	11 29 19.2	
	comp=Z,13μm,20.1s,MS5.3,baz=304,slow=38						
CTA	Charters Tower	21.81	123	⇑*i*P	P	11 20 30.2	+0.5
	comp=Z,224nm,1.5s,mb5.4						
CTA				*e*S	S	11 24 32.4	+3.6
CTA	Charters Tower	21.81	123	P	P	11 20 30.7	+0.9
CTA				S	S	11 24 32.3	+3.5
CTA				LR	LR	11 29 19.2	
CTA	Charters Tower	21.81	123	P	P	11 20 30.7	+1.0
CTA				S	S	11 24 32.3	+3.5
CTAO	Charters Tower	21.81	123	*e*P	P	11 20 30.5	+0.7
	comp=Z,1μm,1.7s,mb6.1						
CTAO				LR	LR		
	comp=Z,15μm,21.0s,MS5.4						
CTAO	Charters Tower	21.81	123	*e*P	P	11 20 30.5	+0.8
CTAO				pmax	pmax		
	comp=Z,1μm,1.7s,mb6.1						
CTAO				MLR	MLR		
	comp=Z,15μm,21.0s,MS5.4						
CTAO	Charters Tower	21.81	123	P	P	11 20 30.7	+1.0
	comp=Z,7μmcomp=Z,433nm,1.5s,mb5.7						
FORT	Forrest	21.85	177	*e*P	P	11 20 29.3	-0.8
	comp=Z,679nm,0.9s,mb6.1						
FORT				*e*S	S	11 24 20.8	-8.6
FORT	Forrest	21.85	177	*e*P	P	11 20 29.5	-0.6
	comp=Z,791nm,0.8s,mb6.2						
KLI	Kotabumi	22.22	279	P	P	11 20 42.7	+8.5
KLSI		22.38	279	P	P	11 20 32.3	-3.5
	comp=Z,4μmcomp=Z,150nm,1.5s,mb5.2						
AUQP	San Andres	22.42	349	*e*P	P	11 20 39.3	+3.2
KASI	Kota Agung	22.45	277	P	P	11 20 31.7	-4.9
	comp=Z,2μmcomp=Z,228nm,0.9s,mb5.6						
BOAC	Boac	22.72	347	*e*P	P	11 20 41.0	+1.6
MDSI	Maura Dua	22.95	279	P	P	11 20 40.0	-2.0
	comp=Z,2μmcomp=Z,85nm,1.0s,mb5.1						
LWLI	Liwa	22.97	278	P	P	11 20 45.6	+3.5
	comp=Z,9μmcomp=Z,290nm,0.9s,mb5.7						
LUBP	Lubang	23.38	344	*e*P	P	11 20 47.6	+1.3
TGY	Tagaytay City	23.55	345	P	P	11 20 47.8	-0.1
	comp=Z,639nm,0.8s,mb6.1,baz=170,slow=5.9,SNR=16						
TGY	Tagaytay City	23.55	345	P	P	11 20 47.8	-0.1
POLP	Polillo Island	23.93	348	*e*P	P	11 20 51.1	-0.3
KLBR	Kellerberrin	24.17	199	*e*P	P	11 20 52.9	-0.6
	comp=Z,1μm,1.9s,mb6.1						
KLBR				*e*S	S	11 25 11.8	+2.7
KSI	Kapahiang	24.68	281	P	P	11 20 58.9	+0.6
	comp=Z,4μmcomp=Z,135nm,1.1s,mb5.4						
BALP	Baler	24.99	348	*e*P	P	11 21 01.1	+0.1
MYKOM	Kota Tinggi	25.27	294	P	P	11 21 06.4	+2.7
MYKOM	Kota Tinggi	25.27	294	P	P	11 21 03.7	+0.1
	comp=Z,3μmcomp=Z,134nm,1.5s,mb5.3						
BBOO	Buckleboo	25.32	162	*e*P	P	11 21 03.7	-0.1
	comp=Z,1μm,1.1s,mb6.3						
SCZP	Santa Cruz	25.42	344	*e*P	P	11 21 02.9	-2.0
NWAO	Narrogin (SRO)	25.57	199	P	P	11 21 06.1	-0.1
	comp=Z,33nm,0.6s,mb5.1,baz=22,slow=9.9,SNR=32						
NWAO				S	S	11 25 43.2	+12
	comp=Z,33nm,0.6s,baz=343,slow=20,SNR=4.3						
NWAO				LR	LR	11 32 18.5	
	comp=Z,8μm,18.1s,MS5.3,baz=218,slow=39						
NWAO	Narrogin (SRO)	25.57	199	*e*P	P	11 21 05.8	-0.3
	comp=Z,282nm,1.1s,mb5.7						
NWAO				LR	LR		
	comp=Z,11μm,20.0s,MS5.4						
NWAO	Narrogin (SRO)	25.57	199	P	P	11 21 06.1	-0.1
NWAO				S	S	11 25 43.3	+12
NWAO				pmax	pmax		
	comp=Z,33nm,0.

QIZ			pP	pP	11 22 17.1	-0.9
QIZ			S	**S**	**11 27 21.8**	**+3.0**
QIZ			sS	sS	11 27 42.4	+5.3
QIZ			pmax	pmax		
	comp=Z,67nm,1.1s,mb5.4					
QIZ			pmax	pmax		
	comp=Z,540nm,9.5s					
QIZ			LR	LR		
	comp=N,5μm,16.2s,MS5.3					
QIZ			LR	LR		
	comp=E,1μm,15.1s,MS5.3					
QIZ			LR	LR		
	comp=Z,6μm,16.9s,MS5.3					
QIZ	**Qiongzhong**	**32.39 329**	*e*P	**P**	**11 22 06.5**	**-0.5**
	comp=Z,273nm,1.5s,mb5.9					
QIZ			LR	LR		
	comp=Z,4μm,19.0s,MS5.2					
HNR	**Honiara**	**32.65 94**	P	**P**	**11 22 08.4**	**-0.9**
	comp=Z,116nm,0.8s,mb5.9,baz=246,slow=10.0,SNR=20					
HNR	**Honiara**	**32.65 94**	*e*P	**P**	**11 22 09.4**	**0.0**
	comp=Z,354nm,1.0s,mb6.2					
HNR			LR	LR		
	comp=Z,3μm,20.0s,MS5.0					
HNR	**Honiara**	**32.65 94**	P	**P**	**11 22 08.4**	**-1.0**
HNR			pmax	pmax		
	comp=Z,116nm,0.8s,mb5.9					
TOO	**Toolangi**	**33.18 152**	*e*P	**P**	**11 22 16.2**	**+2.5**
TOO			*i* S	**S**	**11 27 36.4**	**+5.6**
HKC	**Hong Kong Obse**	**33.37 338**	⇑*i*P	**P**	**11 22 14.0**	**-1.5**
CNB	**Canberra Magne**	**33.42 145**	*e*P	**P**	**11 22 17.3**	**+1.5**
CNB			*i* S	**S**	**11 27 40.5**	**+6.0**
RIV	**Riverview**	**33.43 142**	*e*P	**P**	**11 22 17.3**	**+1.3**
YHNB	**Yeheng**	**33.74 351**	PFAKE		11 22 30.0	+11
YHNB			LR	LR		
	comp=Z,4μm,19.0s,MS5.1					
TATO	**Taipei**	**34.02 351**	PFAKE		11 22 30.0	+8.8
TATO			LR	LR		
	comp=Z,3μm,19.0s,MS5.0					
GZH	**Guangzhou**	**34.39 338**	P	**P**	**11 22 25.5**	**+1.1**
GZH			S	**S**	**11 27 59.9**	**+10**
GZH			LR	LR		
	comp=N,3μm,15.6s,MS5.3					
GZH			LR	LR		
	comp=E,3μm,14.7s,MS5.3					
GZH			LR	LR		
	comp=Z,7μm,16.5s,MS5.5					
QZH	**Quanzhou**	**34.54 347**	⇑*i*P	**P**	**11 22 24.3**	**-1.3**
QZH			pmax	pmax		
	comp=Z,400nm,1.1s,mb6.3					
QZH			LR	LR		
	comp=N,9μm,22.2s					
QZH			LR	LR		
	comp=E,3μm,14.8s					
QZH			LR	LR		
	comp=Z,7μm,17.0s					
BDT	**Bhumibol Dam**	**37.83 313**	⇓P	**P**	**11 22 55.0**	**+1.1**
	comp=Z,87nm,1.0s,mb5.4					
CM31	**Chiang Mai Arr**	**38.68 315**	*e*P	**P**	**11 23 02.0**	**+1.0**
	comp=Z,82nm,0.8s,mb5.5					
CM31			LR	LR		
	comp=Z,4μm,20.0s,MS5.2					
CMAR	**Chiang Mai Arr**	**38.68 315**	P	**P**	**11 23 01.2**	**+0.2**
	comp=Z,128nm,0.9s,mb5.6,baz=142,slow=6.6,SNR=266					
CMAR			ScP	ScP	11 29 01.9	+4.1
	comp=Z,2.9nm,0.8s,baz=160,slow=3.7,SNR=5.0					
CMAR			PKPPKP		11 55 36.9	
	comp=Z,0.6nm,0.6s,baz=324,slow=4.5,SNR=4.1					
CMAR	**Chiang Mai Arr**	**38.68 315**	P	**P**	**11 23 01.2**	**+0.2**
CHG	**Chiang Mai**	**38.92 315**	⇑P	**P**	**11 23 03.5**	**+0.5**
	comp=Z,291nm,1.4s,mb5.8					
CHTO	**Chiang Mai**	**38.92 315**	*e*P	**P**	**11 23 03.3**	**+0.3**
	comp=Z,262nm,1.0s,mb5.9					
CHTO			LR	LR		
	comp=Z,4μm,20.0s,MS5.2					
CHTO	**Chiang Mai**	**38.92 315**	*e*P	**P**	**11 23 03.3**	**+0.3**
CHTO			pmax	pmax		
	comp=Z,262nm,1.0s,mb5.9					
CHTO			MLR	MLR		
	comp=Z,4μm,20.0s,MS5.2					
CHTO	**Chiang Mai**	**38.92 315**	P	**P**	**11 23 03.4**	**+0.4**
	comp=Z,4μmcomp=Z,340nm,1.2s,mb5.9					
CHTO	**Chiang Mai**	**38.92 315**	P	**P**	**11 23 03.6**	**+0.6**
	SNR=77					
CHRT	**Chiangrai**	**39.06 317**	⇑P	**P**	**11 23 03.5**	**-0.7**
	comp=Z,2μm,1.0s					
NOUC	**Port Laguerre**	**40.08 114**	*e*P	**P**	**11 23 13.2**	**+0.4**
SSE	**Sheshan**	**40.09 352**	P	**P**	**11 23 12.3**	**-0.3**
SSE			pP	pP	11 23 23.8	+0.1
SSE			sP	sP	11 23 27.8	-0.6
SSE			PP	PP	11 24 45.4	0.0
SSE			S	**S**	**11 29 19.3**	**+3.2**
SSE			sS	sS	11 29 39.1	+4.5
SSE			pmax	pmax		
	comp=Z,120nm,1.1s,mb5.5					
SSE			pmax	pmax		
	comp=Z,530nm,4.8s					
SSE			LR	LR		
	comp=N,720nm,16.8s,MS4.8					
SSE			LR	LR		
	comp=E,970nm,16.7s,MS4.8					
SSE			LR	LR		
	comp=Z,1μm,21.1s,MS4.8					
DZM	**Mont Dzumac**	**40.20 114**	*e*P	**P**	**11 23 14.7**	**+0.9**
DZM			*e*S	**S**	**11 29 17.1**	**-1.2**
	comp=Z,4μm,30.1s					
DZM			*e*LR	LR	11 34 22.7	
	comp=Z,13μm,23.4s					
DZM	**Mont Dzumac**	**40.20 114**	*e*P	**P**	**11 23 13.7**	**-0.1**
GYA	**Guiyang**	**40.21 331**	⇑*i*P	**P**	**11 23 14.0**	**+0.3**
GYA			pP	pP	11 23 26.3	+1.5
GYA			sP	sP	11 23 31.6	+2.1
GYA			PP	PP	11 24 47.0	+0.2
GYA			pmax	pmax		
	comp=Z,130nm,1.0s,mb5.6					
GYA			pmax	pmax		
	comp=Z,740nm,6.0s					
GYA			LR	LR		
	comp=N,2μm,15.2s,MS5.2					
GYA			LR	LR		
	comp=E,2μm,15.5s,MS5.2					
GYA			LR	LR		
	comp=Z,2μm,14.9s,MS5.2					
WHN	**Wuhan**	**40.97 343**	⇑P	**P**	**11 23 20.5**	**+0.6**
WHN			pP	pP	11 23 33.9	+2.9
WHN			pmax	pmax		
	comp=Z,650nm,1.0s,mb6.2					
WHN			pmax	pmax		
	comp=Z,2μm,8.4s					
WHN			LR	LR		
	comp=N,5μm,19.1s,MS5.5					
WHN			LR	LR		
	comp=E,2μm,16.1s,MS5.5					
WHN			LR	LR		
	comp=Z,6μm,16.1s,MS5.5					
KMI	**Kunming**	**41.15 326**	⇑P	**P**	**11 23 23.3**	**+1.9**
KMI			pP	pP	11 23 33.9	+1.3
KMI			sP	sP	11 23 39.0	+1.7
KMI			PP	PP	11 25 03.3	+6.3
KMI			S	**S**	**11 29 35.6**	**+3.4**
KMI			SS	SS	11 32 34.4	-1.8
KMI			pmax	pmax		
	comp=Z,470nm,1.2s,mb6.0					
KMI			LR	LR		
	comp=N,3μm,14.4s					
KMI			LR	LR		
	comp=E,2μm,20.0s					
KMI			LR	LR		
	comp=Z,3μm,16.1s,MS5.2					
NJ2	**Nanjing**	**41.38 350**	*e*P	**P**	**11 23 23.1**	**-0.1**
NJ2			pP	pP	11 23 31.3	-3.1
NJ2			sP	sP	11 23 37.3	-1.8
NJ2			PcP	PcP	11 25 22.6	+1.6
NJ2			S	**S**	**11 29 31.5**	**-3.9**
NJ2			SS	SS	11 32 38.0	-2.6
NJ2			pmax	pmax		
	comp=Z,330nm,0.9s,mb6.0					
NJ2			pmax	pmax		
	comp=Z,880nm,6.1s					
NJ2			LR	LR		
	comp=N,940nm,11.8s,MS5.0					
NJ2			LR	LR		
	comp=E,690nm,12.4s,MS5.0					
NJ2			LR	LR		
	comp=Z,11μm,14.9s,MS5.9					
KWAJ	**Kwajalein Atol**	**44.20 68**	*e*P	**P**	**11 23 48.2**	**+1.8**
CD2	**Chengdu**	**45.32 332**	*e*P	**P**	**11 23 54.8**	**-0.3**
CD2			pP	pP	11 24 07.3	+0.9
CD2			sP	sP	11 24 12.5	+1.5
CD2			PP	PP	11 25 42.0	+0.2
CD2			PcS	PcS	11 29 26.4	-1.9
CD2			S	**S**	**11 30 32.0**	**-1.2**
CD2			sS	sS	11 30 53.0	+1.1
CD2			pmax	pmax		
	comp=Z,260nm,1.4s,mb5.9					
CD2			pmax	pmax		
	comp=Z,2μm,7.2s					
CD2			LR	LR		
	comp=N,2μm,23.8s					
CD2			LR	LR		
	comp=E,4μm,17.8s					
CD2			LR	LR		
	comp=Z,3μm,19.2s,MS5.2					
TIA	**Tai'an**	**45.75 349**	⇑P	**P**	**11 23 57.3**	**-1.0**
TIA			PP	PP	11 25 42.0	-4.1
TIA			pmax	pmax		
	comp=Z,130nm,1.3s,mb5.7					
TIA			LR	LR		
	comp=N,2μm,22.6s,MS5.0					
TIA			LR	LR		
	comp=E,1μm,22.6s,MS5.0					
TIA			LR	LR		
	comp=Z,2μm,22.6s,MS4.9					
XAN	**Xi'an**	**45.93 339**	P	**P**	**11 23 58.8**	**-1.0**
XAN			sP	sP	11 24 16.3	+0.5
XAN			PP	PP	11 25 47.3	-0.8
XAN			S	**S**	**11 30 39.9**	**-1.9**
XAN			pmax	pmax		
	comp=Z,64nm,1.1s,mb5.5					
XAN			pmax	pmax		
	comp=Z,180nm,9.4s					
XAN			LR	LR		
	comp=N,2μm,19.2s,MS5.2					
XAN			LR	LR		
	comp=E,320nm,15.8s,MS5.2					
XAN			LR	LR		
	comp=Z,1μm,16.5s,MS4.9					
KSRS	**Korea Array**	**46.06 1**	P	**P**	**11 24 00.5**	**-0.3**
	comp=Z,41nm,0.9s,mb5.4,baz=176,slow=9.7,SNR=169					
KSRS			PcP	PcP	11 25 37.5	+0.8
	comp=Z,11nm,0.9s,baz=189,slow=3.9,SNR=5.5					
KSRS			LR	LR	11 41 35.6	
	comp=Z,2μm,21.0s,MS5.0,baz=185,slow=34					
KSRS	**Korea Array**	**46.06 1**	P	**P**	**11 24 00.5**	**-0.3**
KSRS					11 25 37.5	
KSRS			pmax	pmax		
	comp=Z,41nm,0.9s,mb5.4					
KSRS			pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8					
INCN	**Inchon**	**46.08 360**	*e*P	**P**	**11 24 00.4**	**-0.6**
	comp=Z,192nm,1.6s,mb5.8					
INCN			LR	LR		
	comp=Z,2μm,22.0s,MS5.0					
INCN	**Inchon**	**46.08 360**	P	**P**	**11 24 01.5**	**+0.6**
	SNR=6.8					
MAJO	**Matsushiro**	**46.38 13**	*e*P	**P**	**11 24 00.6**	**-2.7**
	comp=Z,49nm,0.8s,mb5.5					
MAJO			LR	LR		
	comp=Z,3μm,19.0s,MS5.2					
MAJO	**Matsushiro**	**46.38 13**	*e*P	**P**	**11 24 00.6**	**-2.7**
MAJO			pmax	pmax		
	comp=Z,49nm,0.8s,mb5.5					
MAJO			MLR	MLR		
	comp=Z,3μm,19.0s,MS5.2					
MAT	**Matsushiro**	**46.38 13**	P	**P**	**11 24 00.8**	**-2.5**
MAT			S	**S**	**11 30 54.0**	**+5.7**
MJAR	**Matsushiro Arr**	**46.38 13**	P	**P**	**11 24 00.8**	**-2.5**
	comp=Z,50nm,0.8s,mb5.5,baz=191,slow=9.3,SNR=98					
MJAR			PcP	PcP	11 25 38.2	+0.3
	comp=Z,7.0nm,0.6s,baz=195,slow=4.7,SNR=5.7					
MJAR			ScP	ScP	11 29 32.3	+4.0
	comp=Z,1.9nm,0.8s,baz=203,slow=4.9,SNR=3.9					
MJAR	**Matsushiro Arr**	**46.38 13**	P	**P**	**11 24 00.9**	**-2.4**
MJAR					11 25 38.2	
AGT	**Agartala**	**47.64 314**	*ex*	**P**	**11 24 09.0**	**-4.4**
AGT			*ex*	x	11 24 37.0	
DL2	**Dalian**	**47.76 354**	⇑*i*P	**P**	**11 24 13.3**	**-0.7**
DL2			pP	pP	11 24 24.9	-0.4
DL2			S	**S**	**11 31 09.9**	**+2.2**
DL2			pmax	pmax		
	comp=Z,80nm,0.9s,mb5.8					
DL2			pmax	pmax		
	comp=Z,440nm,5.8s					
DL2			LR	LR		
	comp=N,540nm,16.5s,MS4.8					
DL2			LR	LR		
	comp=E,750nm,17.6s,MS4.8					
DL2			LR	LR		
	comp=Z,820nm,15.7s,MS4.8					
WAKE	**Wake Island**	**48.14 54**	*e*P	**P**	**11 24 16.7**	**-0.6**
	comp=Z,518nm,1.3s,mb6.4					
WAKE			LR	LR		
	comp=Z,3μm,20.0s,MS5.2					
TIY	**Taiyuan**	**48.25 345**	*e*P	**P**	**11 24 17.0**	**-0.8**
TIY			pP	pP	11 24 26.8	-2.4
TIY			sP	sP	11 24 30.9	-2.9
TIY			pmax	pmax		
	comp=Z,650nm,7.9s					
TIY			LR	LR		
	comp=N,2μm,14.3s,MS5.3					
TIY			LR	LR		
	comp=E,540nm,12.0s,MS5.3					
TIY			LR	LR		
	comp=Z,2μm,22.3s					
SHL	**Shillong**	**48.27 316**	⇑*i*P	**P**	**11 24 19.0**	**+0.8**
SHL			*ex*	x	11 31 28.0	
PALK	**Pallekele**	**48.73 288**	*e*P	**P**	**11 24 21.0**	**-1.0**
	comp=Z,174nm,1.3s,mb5.9					
PALK	**Pallekele**	**48.73 288**	*e*P	**P**	**11 24 21.0**	**-1.0**
PALK			pmax	pmax		
	comp=Z,174nm,1.3s,mb5.9					
PALK	**Pallekele**	**48.73 288**	P	**P**	**11 24 21.4**	**-0.6**
	comp=Z,902nmcomp=Z,63nm,1.5s,mb5.4					
CAL	**Calcutta**	**48.98 310**	*e*PKP	**P**	**11 24 24.2**	**+0.5**
CAL			*ex*	x	11 35 23.6	
BJT	**Baijiatuau**	**49.62 349**	*e*P	**P**	**11 24 27.5**	**-0.8**
	comp=Z,100nm,0.8s,mb5.9					
BJT			LR	LR		
	comp=Z,1μm,19.0s,MS5.0					
BJT	**Baijiatuau**	**49.62 349**	*e*P	**P**	**11 24 27.5**	**-0.8**
BJT			pmax	pmax		
	comp=Z,100nm,0.8s					
BJT			MLR	MLR		
	comp=Z,1μm,19.0s					
BJI	**Beijing**	**49.64 349**	P	**P**	**11 24 27.1**	**-1.3**
BJI			pP	pP	11 24 40.9	+1.1
BJI			sP	sP	11 24 44.8	+0.3
BJI			PcP	PcP	11 25 50.6	+1.1
BJI			PP	PP	11 26 26.3	+3.0
BJI			ScP	ScP	11 29 40.6	-1.4
BJI			S	**S**	**11 31 33.3**	**-0.9**
BJI			sS	sS	11 31 55.3	+2.2
BJI			pmax	pmax		
	comp=Z,120nm,0.8s,mb6.0					
BJI			pmax	pmax		
	comp=Z,810nm,9.8s					
BJI			LR	LR		
	comp=N,2μm,18.0s,MS5.2					
BJI			LR	LR		
	comp=E,1μm,21.6s,MS5.2					
BJI			LR	LR		
	comp=Z,1μm,18.9s,MS4.8					
LZH	**Lanzhou**	**49.68 335**	*e*P	**P**	**11 24 29.8**	**+1.0**
LZH			pP	pP	11 24 39.8	-0.4
LZH			sP	sP	11 24 43.3	-1.6
LZH			PcP	PcP	11 25 49.3	-0.4
LZH			PP	PP	11 26 24.3	+0.6
LZH			*e*S	**S**	**11 31 35.4**	**+0.5**
LZH			sS	sS	11 31 51.3	-2.5
LZH			pmax	pmax		
	comp=Z,66nm,1.0s,mb5.6					
LZH			pmax	pmax		
	comp=Z,380nm,5.8s					
LZH			LR	LR		
	comp=N,760nm,11.0s,MS5.3					
LZH			LR	LR		
	comp=E,2μm,13.1s,MS5.3					
MSVF	**Nonsavu**	**50.45 106**	*e*P	**P**	**11 24 36.6**	**+1.6**
	comp=E,90nm,1.2s,mb5.7					
MSVF			LR	LR		
	comp=Z,3μm,19.0s,MS5.4					
MSVF	**Nonsavu**	**50.45 106**	P	**P**	**11 24 37.6**	**+2.6**
	comp=Z,254nm,1.0s,mb6.2,SNR=5.7					
SNY	**Shenyang**	**50.51 357**	⇑P	**P**	**11 24 34.3**	**-0.8**
SNY			S	**S**	**11 31 41.6**	**-4.8**
SNY			pmax	pmax		
	comp=Z,660nm,9.9s					
SNY			LR	LR		
	comp=N,1μm,17.4s,MS5.1					
SNY			LR	LR		
	comp=E,1μm,20.4s,MS5.1					
SNY			LR	LR		
	comp=Z,2μm,25.7s					
MDRS	**Chennai**	**51.18 295**	⇑*ex*	pP	11 24 52.2	+0.2
MDRS			*ex*	x	11 32 22.2	
MDRS			*ex*	x	11 35 52.2	
HHC	**Hu-ho-hao-te**	**51.42 345**	⇑*i*P	**P**	**11 24 41.6**	**-0.3**
HHC			pP	pP	11 24 54.1	+0.7
HHC			sP	sP	11 24 59.3	+1.3
HHC			PcP	PcP	11 25 55.3	-0.7
HHC			PP	PP	11 26 39.8	+0.3
HHC			ScP	ScP	11 29 46.5	-3.2
HHC			PcS	PcS	11 29 51.9	-1.9
HHC			S	**S**	**11 31 58.5**	**-0.5**
HHC			sS	sS	11 32 19.4	+1.4
HHC			ScS	ScS	11 34 24.8	-4.3
HHC			SS	SS	11 35 32.4	-3.1
HHC			pmax	pmax		
	comp=Z,89nm,1.3s,mb5.5					
HHC			pmax	pmax		
	comp=Z,620nm,8.8s					
HHC			LR	LR		
	comp=N,2μm,18.0s,MS5.2					
HHC			LR	LR		
	comp=E,1μm,16.3s,MS5.2					
HHC			LR	LR		
	comp=Z,2μm,16.9s,MS5.2					
LSA	**Lhasa**	**51.49 320**	P	**P**	**11 24 43.6**	**+1.0**
LSA			S	**S**	**11 32 01.5**	**+1.3**
BTO	**Baotou**	**51.61 344**	*e*P	**P**	**11 24 41.3**	**-2.0**
FUNA	**Funafuti**	**51.68 94**	*e*P	**P**	**11 24 45.6**	**+1.2**
	comp=Z,2μm,1.9s,mb6.7					
FUNA			LR	LR		
	comp=Z,5μm,19.0s,MS5.6					
RPZ	**Rata Peaks**	**51.75 140**	LR	LR	11 47 11.8	
	comp=Z,11μm,19.3s,MS5.9,baz=215,slow=37					
RPZ	**Rata Peaks**	**51.75 140**	*e*P	**P**	**11 24 45.5**	**+1.2**
	comp=Z,85nm,0.9s,mb5.7					
VLA	**Vladivostok**	**51.92 5**	⇓*i*P	**P**	**11 24 42.8**	**-2.7**
VLA			S	**S**	**11 32 04.8**	**-0.9**
VLA			pmax	pmax		
	comp=Z,129nm,1.8s,mb5.6					
ODAN	**Odare**	**52.22 314**	*e*P	**P**	**11 24 47.9**	**-0.2**
	comp=Z,429nm,0.9s,mb6.4					
TAPN	**Taplejung**	**52.29 315**	*e*P	**P**	**11 24 48.5**	**-0.1**
	comp=Z,612nm,1.0s,mb6.5					
CN2	**Changchun**	**52.41 359**	⇓P	**P**	**11 24 49.0**	**-0.2**
CN2			*es*P	sP	11 25 06.8	+1.5
CN2			*es*	**S**	**11 32 13.3**	**+0.9**
CN2			pmax	pmax		
	comp=Z,30nm,0.6s,mb5.4					
CN2			LR	LR		
	comp=N,2μm,18.0s,MS5.2					
CN2			LR	LR		
	comp=E,1μm,18.0s,MS5.2					
CN2			LR	LR		
	comp=Z,2μm,17.0s,MS5.1					
TRD	**Trivandrum**	**52.63 288**	*e*PKP	**P**	**11 24 51.0**	**-0.5**
TRD			AMb	AMB	11 24 52.3	
	comp=Z,73nm,1.0s,mb5.6					
ERM	**Erimo**	**52.77 15**	PFAKE		11 25 00.0	+8.1
ERM			LR	LR		
	comp=Z,3μm,21.0s,MS5.2					
KHZ	**Kahutara**	**52.78 137**	*e*P	**P**	**11 24 53.0**	**+0.9**
	comp=Z,113nm,1.0s,mb5.8					
SNZO	**South Karori**	**53.11 136**	PFAKE		11 25 10.0	+15
SNZO			LR	LR		
	comp=Z,8μm,19.0s,MS5.8					
MDJ	**Mudanjiang**	**53.27 2**	P	**P**	**11 24 55.0**	**-0.5**
MDJ			pP	pP	11 25 03.8	-3.2
MDJ			sP	sP	11 25 08.0	-3.6
MDJ			PP	PP	11 26 54.4	-1.7
MDJ			S	**S**	**11 32 21.9**	**-2.2**
MDJ			sS	sS	11 32 38.1	-5.0
MDJ			ScS	ScS	11 34 42.3	+0.5
MDJ			pmax	pmax		
	comp=Z,61nm,1.7s,mb5.2					
MDJ			pmax	pmax		
	comp=Z,530nm,7.5s					
MDJ			LR	LR		
	comp=N,1μm,24.1s					
MDJ			LR	LR		
	comp=E,760nm,17.4s					
MDJ			LR	LR		
	comp=Z,2μm,22.1s,MS5.0					
MDJ	**Mudanjiang**	**53.27 2**	*e*P	**P**	**11 24 54.7**	**-0.8**
	comp=Z,96nm,1.1s,mb5.6					
MDJ			LR	LR		
	comp=Z,2μm,22.0s,MS5.1					
URZ	**Urewera**	**53.71 131**	LR	LR	11 46 22.3	
	comp=Z,7μm,21.5s,MS5.7,baz=118,slow=34					
URZ	**Urewera**	**53.71 131**	*e*P	**P**	**11 24 59.4**	**+0.4**
	comp=Z,55nm,1.0s,mb5.4					
DGAR	**Diego Garcia**	**53.86 267**	*e*P	**P**	**11 25 01.5**	**+1.0**
	comp=Z,641nm,0.9s,mb6.5					
DGAR			LR	LR		
	comp=Z,3μm,19.0s,MS5.4					
DGAR	**Diego Garcia**	**53.86 267**	*e*P	**P**	**11 25 01.5**	**+1.0**
DGAR			pmax	pmax		
	comp=Z,641nm,0.9s,mb6.5					
DGAR			MLR	MLR		
	comp=Z,3μm,19.0s,MS5.4					
DGAR	**Diego Garcia**	**53.86 267**	P	**P**	**11 25 01.0**	**+0.5**
	comp=Z,4μm,0.8s,SNR=6.5					
GUN	**Gumba**	**53.92 314**	*e*P	**P**	**11 25 00.8**	**+0.2**
	comp=Z,496nm,0.8s,mb6.5					
PKI	**Pulchoki**	**54.05 313**	*e*P	**P**	**11 25 01.5**	**-0.1**
	comp=Z,274nm,0.7s,mb6.3					
PKI	**Pulchoki**	**54.05 313**	*e*P	**P**	**11 25 01.5**	**-0.1**
PKI			pmax	pmax		
	comp=Z,211nm,0.6s,mb6.2					
PKIN	**Phulchoki**	**54.07 313**	*e*P	**P**	**11 25 01.5**	**-0.2**
	comp=Z,211nm,0.6s,mb6.3					
GTA	**Gaotai**	**54.18 334**	⇑P	**P**	**11 25 02.5**	**+0.2**
GTA			pP	pP	11 25 12.9	-1.0
GTA			sP	sP	11 25 17.0	-1.5
GTA			S	**S**	**11 32 36.1**	**-0.6**
GTA			sS	sS	11 32 52.8	-3.0
GTA			pmax	pmax		
	comp=Z,220nm,1.1s,mb6.0					
GTA			pmax	pmax		
	comp=Z,1μm,5.5s					
GTA			LR	LR		
	comp=N,2μm,19.4s,MS5.2					
GTA			LR	LR		
	comp=E,2μm,18.0s,MS5.2					
GTA			LR	LR		
	comp=Z,2μm,17.6s,MS5.2					
KKN	**Kakani**	**54.27 314**	*e*P	**P**	**11 25 03.2**	**0.0**
	comp=Z,387nm,1.1s,mb6.3					
KKN	**Kakani**	**54.27 314**	*e*P	**P**	**11 25 03.2**	**0.0**
KKN			pmax	pmax		
	comp=Z,387nm,1.0s,mb6.3					
DMN	**Daman**	**54.29 313**	*e*P	**P**	**11 25 03.3**	**-0.1**
	comp=Z,632nm,1.1s,mb6.4					
HYB	**Hyderabad**	**54.42 299**	*i* P	**P**	**11 25 04.0**	**-0.4**
	comp=Z,80nm,1.0s,mb5.6					
HYB			*es*S	**S**	**11 32 42.0**	**+1.4**
ASAJ	**Asahikawa**	**54.60 14**	P	**P**	**11 25 04.2**	**-1.1**
	comp=Z,39nm,0.8s,mb5.5,baz=231,slow=6.5,SNR=22					
ASAJ	**Asahikawa**	**54.60 14**	P	**P**	**11 25 04.2**	**-1.1**
ASAJ			pmax	pmax		
	comp=Z,39nm,0.8s					
GKN	**Gorkha**	**54.86 313**	*e*P	**P**	**11 25 07.4**	**-0.1**
	comp=Z,502nm,0.8s,mb6.6					
YUK	**Yuzh-Kuril'sk**	**55.37 17**	⇑*i*P	**P**	**11 25 04.1**	**-6.8**
YUK			*i*		11 26 07.8	
YUK			*i* PPP		11 28 31.6	
YUK			*i* SS	SS	11 36 36.6	-1.2
YUK			pmax	pmax		
	comp=Z,2μm,1.8s,mb6.7					
YUK			MLR	MLR		
	comp=Z,1μm,22.0s,MS4.9					
YUK			MLR	MLR		
	comp=N,2μm,20.0s					
KOLN	**Koldanda**	**55.48 312**	*e*P	**P**	**11 25 11.8**	**-0.1**
	comp=N,667nm,0.9s,mb6.7					
DANN	**Dangsing**	**55.69 313**	*e*P	**P**	**11 25 13.3**	**-0.2**
	comp=N,1μm,1.0s					

LATR Latur 56.56 299 *e*PKP **P** **11 25 18.6 -1.2**
YSS Yuzh-Sakhalins 57.32 13 *e*P **P** **11 25 24.0 -0.7**
comp=N,66nm,0.8s,mb5.7
YSS LR LR
comp=Z,506nm,20.0s,MS4.6
YSS Yuzh-Sakhalins 57.32 13*c i*P **P** **11 25 23.0 -1.7**
YSS *e*S **S** **11 33 16.0 -2.2**
YSS *e*PS 11 33 30.0
YSS *e*SS SS 11 37 03.0 -5.4
YSS pmax pmax
comp=Z,140nm,0.8s,mb6.0
YSS MLR MLR
comp=Z,1μm,17.0s,MS5.1
YSS MLR MLR
comp=N,2μm,18.0s,MS5.3
YSS MLR MLR
comp=E,900nm,16.0s,MS5.3
HABR Khabarovsk 57.52 6 *i* P **P** **11 25 25.2 -0.9**
HABR *e**PP pP 11 25 33.1 -4.6
HABR *e* 11 26 16.6
HABR *e* 11 27 31.0
HABR PPP 11 28 47.7
HABR S **S** **11 33 21.9 +1.1**
HABR *e**SS sS 11 33 35.9 -4.1
HABR *e* 11 35 09.7
HABR *e*SS SS 11 37 09.8 -1.7
HABR pmax pmax
comp=Z,255nm,1.8s,mb6.0
HABR pmax pmax
comp=E,61nm,1.5s
HABR pmax pmax
comp=N,74nm,1.8s
HABR pmax pmax
comp=Z,385nm,1.6s,mb6.2
HABR MLR MLR
comp=Z,1μm,18.0s,MS5.1
BHPL Bhopal 57.93 304 *e*PKP **P** **11 25 28.5 -1.0**
BHPL AMb AMB 11 25 31.3
comp=Z,316nm,1.4s,mb6.2
KLR Kul'dur 57.98 4 *e*P **P** **11 25 24.2 -5.1**
KLR *e* 11 33 23.5
KLR pmax pmax
comp=Z,110nm,1.8s,mb5.6
KLR MLR MLR
comp=E,2μm,19.0s
DRV Dumont d'Urvil 58.43 174 P **P** **11 25 43.0 +11**
DRV S **S** **11 33 39.0 +6.7**
DRV SS SS 11 37 24.0 -0.9
DRV R 11 43 00.0
CASY Casey 58.44 188 ⇑*i*P **P** **11 25 33.2 +0.9**
CASY Casey 58.44 188 *e*P **P** **11 25 32.7 +0.4**
comp=E,85nm,1.4s,mb5.6
CASY LR LR
comp=Z,5μm,20.0s,MS5.7
POO Poona 58.96 298 *e*PKP **P** **11 25 35.8 -0.9**
POO AMb AMB 11 25 38.6
comp=Z,202nm,1.5s,mb5.9
ULN Ulaanbaatar 59.13 345 *e*P **P** **11 25 37.6 +0.3**
comp=Z,133nm,1.0s,mb5.9
ULN LR LR
comp=Z,2μm,20.0s,MS5.1
ULN Ulaanbaatar 59.13 345 *e*P **P** **11 25 37.6 +0.3**
ULN pmax pmax
comp=Z,133nm,1.0s,mb5.9
ULN MLR MLR
comp=Z,2μm,20.0s,MS5.1
ULN Ulaanbaatar 59.13 345 P **P** **11 25 37.9 +0.6**
comp=Z,2μmcomp=Z,163nm,1.3s,mb5.9
ULN Ulaanbaatar 59.13 345 P **P** **11 25 38.0 +0.7**
SNR=47
SONM Songino Array 59.28 344 P **P** **11 25 38.2 -0.1**
comp=Z,62nm,0.9s,mb5.6,baz=160,slow=8.8,SNR=249
SONM LR LR 11 51 39.4
comp=Z,2μm,18.0s,MS5.2,baz=183,slow=37
SONM PKPPKP 11 55 15.9
comp=Z,1.9nm,1.1s,baz=318,slow=1.9,SNR=8.0
SONM Songino Array 59.28 344 P **P** **11 25 38.2 -0.1**
JOSI Joshimath 59.96 313 *e*PKP **P** **11 25 43.5 +0.1**
AFI Afiamalu 60.22 101 P **P** **11 25 47.3 +1.8**
comp=Z,98nm,0.9s,mb5.8,baz=123,slow=17,SNR=12
AFI Afiamalu 60.22 101 *e*P **P** **11 25 47.3 +1.8**
comp=Z,806nm,1.9s,mb6.4
AFI LR LR
comp=Z,2μm,20.0s,MS5.3
AFI Afiamalu 60.22 101 *e*P **P** **11 25 47.3 +1.8**
AFI pmax pmax
comp=Z,806nm,1.9s,mb6.4
AFI MLR MLR
comp=Z,2μm,20.0s,MS5.3
ASOR Ausora 60.33 310 *e*PKP **P** **11 25 45.3 -0.7**
SONA Sohna 60.60 309 *e*PKP **P** **11 25 46.8 -1.0**
SONA AMb AMB 11 25 48.5
comp=Z,280nm,1.3s,mb6.2
SONA AMb AMB 11 25 49.1
comp=Z,302nm,1.5s,mb6.2
AYAN Aya Nagar 60.69 310 *e*PKP **P** **11 25 47.5 -1.0**
AYAN AMb AMB 11 25 49.5
comp=Z,282nm,1.7s,mb6.1
NDI New Delhi 60.72 310 ⇑*i x* **P** **11 25 45.0 -3.6**
DDI Dehra Dun 60.93 312 *ex* **P** **11 25 48.5 -1.6**
KHET Khetri 61.50 309 *e*PKP **P** **11 25 52.7 -1.3**
KHET AMb AMB 11 25 54.5
comp=Z,193nm,1.5s,mb6.0
AJM Ajmer 61.66 306 *e*PKP **P** **11 25 54.1 -0.9**
AJM AMb AMB 11 25 57.2
comp=Z,278nm,1.4s,mb6.2
KKR Kurukshetra 61.66 311 *e*PKP **P** **11 25 54.3 -0.7**
KKR AMb AMB 11 25 55.8
comp=Z,791nm,0.7s
CIT Chita 61.70 351 *e*P **P** **11 25 54.9 +0.2**
CIT pmax pmax
comp=Z,233nm,2.0s,mb6.0
SMLA Simla 62.00 312 *i* P **P** **11 25 56.8 -0.5**
SMLA AMb AMB 11 26 00.1
comp=Z,1μm,0.9s
SMLA *i* S **S** **11 34 21.9 +2.7**
MIR Mirnyy 62.07 195 ⇓*i*P **P** **11 25 58.4 +1.3**
MIR pmax pmax
comp=Z,368nm,1.6s,mb6.3
MIR pmax pmax
comp=Z,202nm,1.0s,mb6.2
MIR MLR MLR
comp=N,3μm,16.0s,MS5.7
MIR MLR MLR
comp=E,2μm,16.0s,MS5.7
MIR MLR MLR
comp=E,6μm,16.0s,MS5.8
SDNR Sundarnagar 62.34 312 *e*PKP **P** **11 25 59.5 0.0**
SDNR *ex* x 11 26 23.5
ZAK Zakamensk 62.45 343 ⇓*i*P **P** **11 25 59.3 -0.6**
ZAK pmax pmax
comp=Z,20nm,1.2s,mb5.1
BHK Bhakra 62.70 312 *e*PKP **P** **11 26 01.2 -0.7**
WMQ Urumqi 63.32 329 ⇑*i*P **P** **11 26 06.0 +0.2**
WMQ pP pP 11 26 19.0 +1.5
WMQ sP sP 11 26 24.0 +2.0
WMQ PP PP 11 28 27.0 +1.5
WMQ ScP ScP 11 30 40.0 -2.1
WMQ S **S** **11 34 33.0 -2.2**
WMQ sS sS 11 34 56.0 +1.4
WMQ ScS ScS 11 35 51.0 -4.7
WMQ pmax pmax
comp=Z,230nm,1.0s,mb6.3
WMQ pmax pmax
comp=Z,1μm,6.0s
WMQ LR LR
comp=N,2μm,20.0s,MS5.5
WMQ LR LR
comp=E,2μm,20.0s,MS5.5
WMQ LR LR
comp=Z,1μm,20.0s,MS5.2
TLY Talaya 63.52 344 *e*P **P** **11 26 07.1 +0.1**
comp=Z,61nm,1.3s,mb5.5
TLY LR LR
comp=Z,1μm,20.0s,MS5.1
TLY Talaya 63.52 344*c i*P **P** **11 26 07.4 +0.5**
TLY *e*S **S** **11 34 41.9 +4.5**
TLY *e*PS 11 35 07.5
TLY pmax pmax
comp=Z,35nm,0.9s,mb5.4
TLY MLR MLR
comp=Z,956nm,21.0s,MS5.0
TLY Talaya 63.52 344 P **P** **11 26 07.5 +0.6**
comp=Z,227nm,0.8s,mb6.2,SNR=6.8
TLY Talaya 63.52 344 P **P** **11 26 07.7 +0.8**
SNR=6.2
IRK Irkutsk 63.86 345 *e*P **P** **11 26 08.8 -0.4**
IRK *e* 11 26 47.2
IRK pmax pmax
comp=Z,207nm,2.5s,mb5.7
MOY Mondy 64.26 342 *e*P **P** **11 26 12.1 +0.3**
MOY pmax pmax
comp=Z,296nm,2.1s,mb6.0
SKR Severo-Kuril's 64.48 20 *e*P **P** **11 26 13.4 +0.1**
SKR *e* 11 26 21.6
SKR *e* 11 35 13.0
SKR pmax pmax
comp=Z,60nm,0.7s,mb5.7
MIDW Midway 65.23 53 PFAKE 11 26 30.0 +11
MIDW LR LR
comp=Z,3μm,21.0s,MS5.4
CLNS Chul'man 65.47 359 *e*P **P** **11 26 18.7 -0.8**
CLNS *e**PP pP 11 26 28.6 -2.7
CLNS *e* 11 26 49.7
CLNS *e* 11 28 41.0
CLNS *e*PPP 11 30 14.1
CLNS *e*S S 11 35 01.2 -0.1
CLNS pmax pmax
comp=Z,34nm,1.3s,mb5.2
CLNS pmax pmax
comp=N,21nm,1.2s
CLNS pmax pmax
comp=E,11nm,1.1s
CLNS pmax pmax
comp=E,18nm,1.1s
CLNS pmax pmax
comp=Z,16nm,1.4s,mb4.9
CLNS pmax pmax
comp=N,25nm,1.1s
CLNS smax
comp=N,488nm,12.2s
CLNS smax
comp=E,318nm,12.5s
CLNS MLR MLR
comp=E,417nm,16.0s,MS4.8
CLNS MLR MLR
comp=N,229nm,15.0s,MS4.8
CLNS MLR MLR
comp=Z,498nm,15.0s,MS4.8
PEA0B Petropavlovsk- 67.06 20 *e*P **P** **11 26 29.6 -0.2**
PETK Petropavlovsk- 67.06 20 P **P** **11 26 30.0 +0.2**
comp=Z,140nm,0.8s,mb6.0,baz=194,slow=4.3,SNR=309
PETK Petropavlovsk- 67.06 20 P **P** **11 26 30.0 +0.2**
BOD Bodaibo 67.26 353 *e*P **P** **11 26 30.3 -0.7**
BOD pmax pmax
comp=Z,91nm,1.4s,mb5.6
PET Petropavlovsk 67.31 20 *e*P **P** **11 26 31.6 +0.2**
comp=Z,301nm,1.1s,mb6.2
PET Petropavlovsk 67.31 20 ⇑*i*P **P** **11 26 31.1 -0.3**
PET *e*S S 11 35 23.8 +0.1
PET pmax pmax
comp=Z,900nm,1.6s,mb6.5
PET pmax pmax
comp=Z,230nm,1.2s,mb6.1
PET pmax pmax
comp=Z,500nm,14.6s
PET MLR MLR
comp=Z,800nm,19.0s,MS5.0
PET MLR MLR
comp=Z,800nm,20.0s
KSH Kashi 67.34 319 *e*P **P** **11 26 31.9 0.0**
KSH *e*pP pP 11 26 42.3 -1.4
KSH *e*sP sP 11 26 46.1 -2.2
KSH *e*PcP PcP 11 27 01.0 +1.6
KSH *e*PP PP 11 29 00.6 -0.3
KSH *e*ScP 11 31 00.4
KSH *e*PcS 11 31 04.3
KSH *e*S S 11 35 19.6 -5.1
KSH *e*ScS ScS 11 36 22.5 -4.5
KSH pmax pmax
comp=Z,120nm,1.1s,mb5.8
KSH LR LR
comp=N,3μm,16.3s,MS5.7
KSH LR LR
comp=E,2μm,16.5s,MS5.7
KSH LR LR
comp=Z,3μm,20.2s,MS5.6
JOHN Johnston Islan 67.82 68 *e*P **P** **11 26 36.3 +0.9**
comp=Z,258nm,1.0s,mb6.2
MK31 Makanchi Array 68.13 329 *e*P **P** **11 26 36.2 -0.5**
MK31 Makanchi Array 68.13 329 *i* P **P** **11 26 36.4 -0.3**
MK31 pmax pmax
comp=Z,139nm,0.8s,mb6.0
MKAR Makanchi Array 68.13 329 P **P** **11 26 36.4 -0.3**
comp=Z,78nm,0.6s,mb5.9,baz=128,slow=7.3,SNR=830
MKAR PKPPKP 11 54 55.6
comp=Z,0.8nm,0.9s,baz=292,slow=3.3,SNR=4.5
MKAR LR LR 11 58 10.1
comp=Z,1μm,18.3s,MS5.2,baz=145,slow=38
MKAR Makanchi Array 68.13 329 P **P** **11 26 36.4 -0.3**
MKAR P'P' 11 54 55.6
MKAR LR LR 11 58 10.1
MKAR Makanchi Array 68.13 329 P **P** **11 26 36.4 -0.3**
ULHL Ulahol 68.71 322 P **P** **11 26 40.7 +0.2**
SNR=9.1
KZA Kyzart 69.22 321 P **P** **11 26 44.6 +0.9**
SNR=32
TKM2 Tokmak 2 69.49 322 P **P** **11 26 45.3 0.0**
SNR=33
TKM2 Tokmak 2 69.49 322 PFAKE 11 27 00.0 +15
TKM2 LR LR
comp=Z,2μm,21.0s,MS5.4
KBL Kabul 69.63 312 *e*P **P** **11 26 46.3 -0.1**
comp=Z,143nm,1.1s,mb5.8
KBL Kabul 69.63 312 *e*P **P** **11 26 46.3 -0.1**
KBL pmax pmax
comp=Z,143nm,1.1s,mb5.8
KBK Karagaybulak 69.73 322 P **P** **11 26 47.4 +0.6**
SNR=15
AAK Ala-Archa 70.00 322 P **P** **11 26 48.8 +0.3**
SNR=35
FRU Bishkek 70.03 322 ⇓*e*P **P** **11 26 47.0 -1.6**
FRU pmax pmax
comp=Z,50nm,2.2s,mb5.1
CHMS Chumysh 70.04 322 P **P** **11 26 48.5 -0.2**
SNR=9.9
AML Almayashu 70.22 321 P **P** **11 26 51.1 +1.3**
SNR=11
AML Almayashu 70.22 321 PFAKE 11 27 00.0 +10
AML LR LR
comp=Z,2μm,22.0s,MS5.2
USP Ospenovka 70.35 322 P **P** **11 26 50.7 +0.2**
SNR=39
EKS2 Erkin-Say 70.46 321 P **P** **11 26 51.8 +0.6**
SNR=48
EKS2 Erkin-Say 70.46 321 PFAKE 11 27 00.0 +8.8
EKS2 LR LR
comp=Z,2μm,20.0s,MS5.3
YAK Yakutsk 70.69 1 *e*P **P** **11 26 51.5 -0.8**
comp=Z,317nm,0.9s,mb6.2
YAK LR LR
comp=Z,1μm,19.0s,MS5.1
YAK Yakutsk 70.69 1*c i*P **P** **11 26 51.4 -0.8**
YAK *e**PP pP 11 26 59.6 -4.5
YAK *e* 11 29 31.7
YAK *e*S S 11 36 00.9 -2.5
YAK *e**SS sS 11 36 19.3 -3.8
YAK pmax pmax
comp=Z,276nm,0.9s,mb6.2
YAK pmax pmax
comp=N,93nm,1.0s
YAK pmax pmax
comp=E,43nm,1.0s
YAK pmax pmax
comp=N,37nm,1.4s
YAK pmax pmax
comp=Z,104nm,2.3s,mb5.4
YAK pmax pmax
comp=E,70nm,2.5s
YAK smax
comp=E,130nm,2.5s
YAK smax
comp=N,156nm,3.2s
MSEY Mahe Island 70.94 268 PFAKE 11 27 10.0 +15
MSEY LR LR
comp=Z,3μm,21.0s,MS5.5
RAR Rarotonga 71.39 109 LR LR 11 52 19.6
comp=Z,1μm,19.7s,MS5.1,baz=260,slow=31
ZAA0 Zalesovo Array 71.91 335 *e*P **P** **11 26 58.8 -1.0**
ZALV Zalesovo Beam 71.91 335 P **P** **11 26 58.8 -1.0**
comp=Z,260nm,0.8s,mb6.2,baz=138,slow=5.3,SNR=430
ZALV PKPPKP 11 54 52.1
comp=Z,0.8nm,0.5s,baz=323,slow=3.8,SNR=6.3
ZALV Zalesovo Beam 71.91 335 P **P** **11 26 58.8 -1.0**
SBA Scott Base 71.94 172 *e*P **P** **11 27 01.6 +1.9**
comp=Z,66nm,1.3s,mb5.4
SBA LR LR
comp=Z,4μm,20.0s,MS5.7
SBA Scott Base 71.94 172 *e*P **P** **11 27 01.6 +1.9**
SBA pmax pmax
comp=Z,66nm,1.3s,mb5.4
SBA MLR MLR
comp=Z,4μm,20.0s,MS5.7
MAW Mawson 72.12 201 P **P** **11 27 02.0 +1.1**
comp=Z,22nm,0.9s,mb5.1,baz=65,slow=8.5,SNR=34
MAW LR LR 11 55 41.4
comp=Z,2μm,20.0s,MS5.4,baz=63,slow=33
MAW Mawson 72.12 201 ⇑*i*P **P** **11 27 02.3 +1.4**
comp=Z,25nm,0.9s,mb5.1
MAW Mawson 72.12 201 *e*P **P** **11 27 02.2 +1.3**
comp=Z,8.3nm,0.9s,mb4.7
MAW Mawson 72.12 201 *e*P **P** **11 27 02.2 +1.3**
MAW pmax pmax
comp=Z,8.0nm,0.9s
KURK Kurchatov 72.52 330 P **P** **11 27 02.7 -0.8**
comp=Z,120nm,1.0s,mb5.8,baz=136,slow=4.2,SNR=218
KURK Kurchatov 72.52 330 *e*P **P** **11 27 02.7 -0.8**
comp=Z,499nm,1.3s,mb6.3
KURK LR LR
comp=Z,2μm,22.0s,MS5.3
KURK Kurchatov 72.52 330*c i*P **P** **11 27 03.0 -0.5**
KURK pmax pmax
comp=Z,454nm,1.2s,mb6.3
KURK Kurchatov 72.52 330 P **P** **11 27 03.3 -0.2**
SNR=170
KK31 Karatay Array 72.73 320 *i* P **P** **11 27 04.8 -0.1**
NVS Novosibirsk 73.20 335 ⇑*i*P **P** **11 27 06.2 -1.2**
NVS *e*S S 11 36 34.8 +2.3
NVS pmax pmax
comp=Z,529nm,1.1s,mb6.4
NVS pmax pmax
comp=N,257nm,1.4s
NVS pmax pmax
comp=E,294nm,1.2s
NVS smax
comp=E,74nm,1.6s
NVS smax
comp=N,33nm,1.8s
SMY Shemya 73.32 28 *e*P **P** **11 27 08.5 +0.3**
comp=N,368nm,1.0s,mb6.3
SMY LR LR
comp=Z,2μm,22.0s,MS5.3
SMY Shemya 73.32 28 *e*P **P** **11 27 08.5 +0.3**
SMY pmax pmax
comp=Z,368nm,1.0s,mb6.3
SMY MLR MLR
comp=Z,2μm,22.0s,MS5.3
WBK Wadi Bani Khal 73.44 297 P **P** **11 27 09.9 +0.4**
SNR=5.8
JMDO Jabal Madar 74.14 296 P **P** **11 27 14.0 +0.4**
SNR=9.0
SEY Seymchan 74.20 12*c i*P **P** **11 27 13.1 0.0**
SMDO Samad 74.38 297 P **P** **11 27 15.2 +0.1**
SNR=9.5
AMKA Amchitka 75.01 31 *e*P **P** **11 27 17.9 -0.2**
comp=Z,75nm,1.8s,mb5.3
BSY Bisya 75.04 296 P **P** **11 27 19.4 +0.4**
SNR=14
HOQ Hoqain 75.18 297 P **P** **11 27 20.1 +0.4**
SNR=25
ARQ Araqi 75.81 297 P **P** **11 27 23.8 +0.5**
SNR=13
IDAH Dahanechah 75.93 307 *e*P **P** **11 27 24.5 +0.7**
XMAS Kiritimati 76.17 86 *e*P **P** **11 27 28.3 +2.6**
comp=Z,181nm,1.2s,mb5.9
XMAS LR LR
comp=Z,2μm,20.0s,MS5.5
IKOO Kooshah 76.51 306 *e*P **P** **11 27 27.3 +0.2**
HATD Hatta, Dubai 76.57 298 P **P** **11 27 27.8 +0.2**
SNR=25
ASHO Ashiyiah 76.59 298 P **P** **11 27 27.7 0.0**
SNR=26
BANOM Banah 76.73 299 P **P** **11 27 29.6 +1.1**
SNR=16
NAZ Nazwa, Dubai 77.02 298 P **P** **11 27 30.6 +0.5**
SNR=17
IMYA Miami 77.03 310 *e*P **P** **11 27 30.1 +0.2**
ASUD Al Ashush, Dub 77.21 298 P **P** **11 27 32.4 +1.2**
SNR=6.1
ABPO Ambohimpanom 77.44 252 *e*P **P** **11 27 34.2 +1.5**
comp=Z,113nm,1.5s,mb5.6
ABPO LR LR
comp=Z,2μm,20.0s,MS5.5
ABPO Ambohimpanom 77.44 252 *e*P **P** **11 27 34.2 +1.6**
ABPO pmax pmax
comp=Z,113nm,1.5s,mb5.6
ABPO MLR MLR
comp=Z,2μm,20.0s,MS5.5
IMOG Moghan 77.52 310 *e*P **P** **11 27 32.4 -0.3**
VOSK Vostochnaya 77.54 329 P **P** **11 27 31.3 -1.1**
VOSK pmax pmax
comp=Z,152nm,0.8s,mb6.0
IPAY Payeh 77.90 310 *e*P **P** **11 27 35.1 +0.3**
BVAR Borovoye Array 78.00 329 P **P** **11 27 34.6 -0.4**
comp=Z,69nm,0.7s,mb5.7,baz=129,slow=8.2,SNR=349
BVAR Borovoye Array 78.00 329 P **P** **11 27 34.6 -0.4**
BRVK Borovoye 78.08 329 *e*P **P** **11 27 35.0 -0.4**
comp=Z,311nm,1.2s,mb6.1
BRVK LR LR
comp=Z,2μm,21.0s,MS5.4
BRVK Borovoye 78.08 329*c i*P **P** **11 27 34.9 -0.5**
BRVK pmax pmax
comp=Z,341nm,1.2s,mb6.2
BRVK Borovoye 78.08 329 P **P** **11 27 35.3 -0.1**
SNR=151
IAKL Akhelmad 78.13 310 *e*P **P** **11 27 36.3 +0.2**
IKRD Kardeh 78.38 310 *e*P **P** **11 27 34.2 -3.2**
IEMG Emamgholi 78.50 311 *e*P **P** **11 27 38.3 +0.2**
IBAF Bafgh 79.01 305 *e*P **P** **11 27 40.5 -0.6**
ABKT Ailbek 79.07 311 P **P** **11 27 41.4 +0.2**
comp=Z,900nm,1.2s,mb6.6,SNR=50
ISHV Shirvan 79.25 311 *e*P **P** **11 27 42.3 +0.1**
HON Honolulu 79.55 66 *e*P **P** **11 27 46.0 +1.8**
HON Honolulu 79.55 66 *e*P **P** **11 27 46.0 +1.8**
KIP Kipapa 79.56 66 *e*P **P** **11 27 45.2 +1.0**
comp=Z,303nm,1.6s,mb6.0
KIP Kipapa 79.56 66 *e*P **P** **11 27 45.2 +1.0**
KIP pmax pmax
comp=Z,303nm,1.6s,mb6.0
IMEH Mehriz 79.73 304 *e*P **P** **11 27 43.8 -1.2**
ICHK Chekchek 80.15 305 *e*P **P** **11 27 46.2 -1.0**
TIXI Tiksi 80.33 1 *e*P **P** **11 27 45.6 -1.7**
comp=Z,150nm,1.2s,mb5.8
TIXI LR LR
comp=Z,1μm,19.0s,MS5.3
TIXI Tiksi 80.33 1*c i*P **P** **11 27 45.9 -1.4**
TIXI *e* 11 30 47.5
TIXI *e*S S 11 37 47.3 -2.5
TIXI pmax pmax
comp=N,35nm,1.1s
TIXI pmax pmax
comp=Z,104nm,1.0s,mb5.7
TIXI pmax pmax
comp=E,23nm,1.6s
TIXI pmax pmax
comp=Z,180nm,6.7s
TIXI MLR MLR
comp=Z,1μm,17.0s,MS5.3
ISRV Sarvestan 80.41 302 *e*P **P** **11 27 48.7 0.0**
TBI Tubuai 80.76 112 *e*P **P** **11 27 52.6 +1.8**
comp=Z,213nm,1.0s,mb6.0
TBI *e*S S 11 37 57.6 +1.3
comp=Z,2μm,27.2s
TBI *e*SS SS 11 43 09.9 -0.3
comp=Z,691nm,36.0s
TBI *e*LQ 11 49 38.9
comp=Z,3μm,35.2s
TBI *e*LR LR 11 53 04.2
comp=Z,3μm,24.5s
TBI Tubuai 80.76 112 *e*P **P** **11 27 52.6 +1.8**
comp=Z,213nm,1.0s,mb6.0
TBI *e*S S 11 37 57.6 +1.3
TBI *e*SS SS 11 43 09.9 -0.3
TBI *e*LQ 11 49 38.9
SYO Syowa Base 80.83 201 ⇓*i*P **P** **11 27 50.0 -0.2**
SYO Syowa Base 80.83 201 ⇓*i*PcP PcP 11 27 56.5 -0.2
QSPA South Pole Qui 81.14 180 PKKPbc PKKPbc 11 46 27.9 -3.0

comp=Z,1.3nm,0.8s,baz=135,slow=2.9,SNR=6.0
QSPA South Pole Qui 81.14 180 *e*P P **11 27 52.9 +1.2**
comp=Z,194nm,1.4s,mb5.8
QSPA LR LR
comp=Z,4μm,20.0s,MS5.8
PAE Paea 81.25 107 *e*P P **11 27 54.6 +1.1**
comp=Z,40nm,1.4s,mb5.2
PAE Paea 81.25 107 *e*P P **11 27 54.6 +1.1**
PAE pmax pmax
comp=Z,40nm,1.4s,mb5.2
PPT Papeete 81.27 106 *e*P P **11 27 54.5 +1.0**
comp=Z,127nm,1.4s,mb5.7
PPT *e*S S 11 38 00.2 -1.5
comp=Z,2μm,25.5s
PPT *e*SS SS 11 43 17.1 -0.9
comp=Z,756nm,25.8s
PPT *e*LQ 11 49 54.2
PPT *e*LR LR 11 53 23.5
comp=Z,4μm,33.2s
PPT Papeete 81.27 106 P P **11 27 55.9 +2.3**
comp=Z,51nm,1.0s,mb5.4,baz=74,slow=3.6,SNR=3.6
PPT LR LR 11 59 41.9
comp=Z,462nm,20.6s,MS4.8,baz=264,slow=33
PPT Papeete 81.27 106 P P **11 27 55.9 +2.4**
POHA Pohakuloa 81.45 68 *e*P P **11 27 56.5 +2.1**
comp=Z,102nm,0.9s,mb5.8
IANJ Anjilo 81.48 308 *e*P P **11 27 54.1 -0.2**
TIAR Tiarei 81.49 106 *e*P P **11 27 56.2 +1.5**
comp=Z,100nm,1.0s,mb5.7
BILL Bilibino 81.62 14 *e*P P **11 27 53.6 -0.6**
comp=Z,33nm,0.8s,mb5.3
BILL LR LR
comp=Z,1μm,22.0s,MS5.3
BILL Bilibino 81.62 14⇑ *e*P P **11 27 53.7 -0.6**
BILL *e* 11 31 07.7
BILL *i*S S 11 37 49.3 -14
BILL pmax pmax
comp=Z,48nm,1.2s,mb5.3
BILL MLR MLR
comp=Z,1μm,21.0s,MS5.2
IZEF Zefreh 82.02 305 *e*P P **11 27 55.5 -1.6**
AB31 Akbulak array 82.05 323 *i*P P **11 27 56.4 -0.5**
AB31 pmax pmax
comp=Z,86nm,0.9s,mb5.7
IGAR Gharneh 82.11 304 *e*P P **11 27 57.3 -0.4**
ILAS Lasjerd 82.21 308 *e*P P **11 27 58.1 0.0**
MEH Mehetia 82.66 107 *e*P P **11 28 01.8 +1.0**
comp=Z,199nm,1.2s,mb6.0
IKLH Kolahrood 82.73 305 *e*P P **11 28 01.3 +0.4**
IPRN Peran 82.93 308 *e*P P **11 28 01.9 0.0**
IDMV Damavand 82.99 308 *e*P P **11 28 01.3 -0.8**
PMOR Pomariorio Ree 83.18 104 *e*P P **11 28 04.1 +0.5**
comp=Z,351nm,1.6s,mb6.1
AKTK Aktyubinsk 83.66 323 P P **11 28 04.7 -0.5**
AKTK PP PP 11 31 18.2 -0.3
AKTK PKKPbc PKKPbc 11 46 23.3 -1.5
AKTO Aktyubinsk 83.66 323 P P **11 28 04.7 -0.5**
comp=Z,74nm,0.7s,mb5.9,baz=113,slow=7.9,SNR=246
AKTO PP PP 11 31 18.2 -0.3
comp=Z,6.8nm,0.9s,baz=139,slow=7.4,SNR=3.5
AKTO PKKPbc PKKPbc 11 46 23.3 -1.5
comp=Z,1.0nm,0.6s,baz=302,slow=3.2,SNR=4.9
AKTO Aktyubinsk 83.66 323 P P **11 28 04.7 -0.5**
AKTO 11 31 18.2
AKUT Akutan 84.23 33 *e*P P **11 28 08.3 +0.2**
comp=Z,717nm,2.2s,mb6.4
AKUT LR LR
comp=Z,1μm,21.0s,MS5.2
QRN Al-Qurain 84.66 300 *e*P P **11 28 10.3 -0.5**
QRN AMb AMB 11 28 14.7
comp=Z,308nm,1.9s,mb6.1
SVE Sverdlovsk 84.76 330⇓ *e*P P **11 28 10.2 -0.5**
SVE *e*PPP 11 33 25.3
SVE *e*S S 11 38 26.6 -9.0
SVE *e*SS SS 11 44 01.6 -6.7
SVE pmax pmax
comp=Z,250nm,1.5s,mb6.1
KBD Kabd 84.95 300 *e*P P **11 28 11.7 -0.6**
KBD AMb AMB 11 28 15.4
comp=Z,143nm,1.7s,mb5.8
UMR Umm Al-Rimmam 85.01 301 *e*P P **11 28 12.1 -0.5**
UMR AMb AMB 11 28 21.7
comp=Z,226nm,1.3s,mb6.1
RDF Al-Radifah 85.02 300 *e*P P **11 28 11.9 -0.7**
RDF AMb AMB 11 28 14.7
comp=Z,253nm,1.2s,mb6.2
NAY Al-Naaiem 85.35 300 *e*P P **11 28 13.9 -0.4**
NAY AMb AMB 11 28 15.6
comp=Z,142nm,1.1s,mb6.0
MIB Mutribah 85.39 301 *e*P P **11 28 13.7 -0.8**
MIB AMb AMB 11 28 16.5
comp=Z,331nm,1.4s,mb6.3
ARU Arti 85.65 329 *e*P P **11 28 14.7 -0.5**
comp=Z,93nm,1.0s,mb6.0
ARU LR LR
comp=Z,2μm,21.0s,MS5.4
ARU Arti 85.65 329*c i*P P **11 28 14.0 -1.2**
ARU 11 31 32.0
ARU S S 11 38 36.3 -8.1
ARU pmax pmax
comp=Z,231nm,1.7s,mb6.1
ARU Arti 85.65 329 P P **11 28 14.3 -0.9**
comp=Z,503nm,1.1s,mb6.7,SNR=25
FALS False Pass 85.78 33 *e*P P **11 28 15.2 -0.7**
comp=Z,197nm,1.2s,mb6.2
ATD Arta Tunnel 85.97 282 P P **11 28 19.0 +1.4**
comp=Z,34nm,1.0s,mb5.5,baz=94,slow=3.8,SNR=12
ATD Arta Tunnel 85.97 282 P P **11 28 19.0 +1.4**
ILIN Lien 86.84 306 *e*P P **11 28 19.8 -1.7**
IVIS Veis 86.84 305 *e*P P **11 28 20.1 -1.5**
ISRB Sarab 86.95 309 *e*P P **11 28 20.5 -1.5**
IGHG Ghaleghazi 87.03 305 *e*P P **11 28 21.6 -0.9**
IDHR Dehrash 87.25 306 *e*P P **11 28 21.9 -1.7**
SDPT Sand Point 87.54 33 *e*P P **11 28 26.2 +1.8**
comp=Z,189nm,1.2s,mb6.2
SDPT LR LR
comp=Z,700nm,21.0s,MS5.0
IHRS Heris 87.55 309 *e*P P **11 28 24.7 -0.2**
SOKR Solikamsk 87.72 331*c i*P P **11 28 23.6 -1.6**
SOKR 11 31 48.1
SOKR S SKSac 11 38 47.8 -2.1
SOKR pmax pmax
comp=Z,110nm,1.4s,mb5.9
MAK Makhachkala 88.28 314 *e*P P **11 28 26.5 -1.7**
MAK *e*S SKSac 11 38 53.7 -0.4
MAK *e* 11 39 13.3
MAK *e*SP 11 40 07.3
MAK pmax pmax
comp=Z,200nm,1.3s,mb6.2
ISHB Shabestar 88.63 309 *e*P P **11 28 30.2 +0.2**
IMRD Marand 88.66 309 *e*P P **11 28 30.5 +0.4**
CHGN Chignik 88.94 33 *e*P P **11 28 30.9 -0.2**
KMBO Kilima Mbogo 89.46 269 P P **11 28 37.0 +2.5**
comp=Z,102nm,1.4s,mb6.0,baz=180,slow=24,SNR=74
KMBO LR LR 12 04 57.7
comp=Z,2μm,22.0s,MS5.5,baz=91,slow=33
KMBO Kilima Mbogo 89.46 269 *e*P P **11 28 36.6 +2.1**
comp=Z,216nm,1.5s,mb6.3
KMBO LR LR
comp=Z,2μm,22.0s,MS5.5
KMBO Kilima Mbogo 89.46 269 *e*P P **11 28 36.6 +2.1**
KMBO pmax pmax
comp=Z,216nm,1.5s
KMBO MLR MLR
comp=Z,2μm,22.0s
KMBO Kilima Mbogo 89.46 269 P P **11 28 37.2 +2.7**
SNR=55
GNI Garni 89.69 311 P P **11 28 36.0 +1.1**
comp=Z,3.5nm,0.4s,mb5.1,baz=162,slow=6.4,SNR=10.0
GNI Garni 89.69 311 *e*P P **11 28 36.0 +1.1**
comp=Z,55nm,1.1s,mb5.8
GNI LR LR
comp=Z,631nm,20.0s,MS5.0
GNI Garni 89.69 311*c i*P P **11 28 35.4 +0.5**
GNI pmax pmax
comp=Z,38nm,1.2s
GNI Garni 89.69 311 P P **11 28 35.8 +0.9**
SNR=9.2
NVL N'lazarevskaya 89.69 197 *e*P P **11 28 35.0 +0.6**
NVL *e* 11 28 42.6
NVL *e**PP pP 11 28 48.2 +1.6
NVL *i* 11 34 14.6
NVL *e* 11 39 34.0
NVL *e* 11 45 35.5
NVL pmax pmax
comp=Z,14nm,1.1s,mb5.2
NVL MLR MLR
comp=Z,3μm,20.0s,MS5.7
MAIT Maitri 89.71 197 *e*P P **11 28 36.6 +2.2**
MTA Mtatsminda 89.96 312 P P **11 28 35.9 -0.3**
TBLG Delisi 90.01 312 P P **11 28 36.9 +0.5**
TBLG Delisi 90.01 312 P P **11 28 37.0 +0.6**
GOR Gori 90.52 312 P P **11 28 39.6 +0.8**
ZEI Tsey 90.83 313 *e*P P **11 28 38.5 -1.7**
ZEI pmax pmax
comp=Z,76nm,1.4s,mb5.8
ZEI pmax pmax
comp=E,63nm,0.8s
ZEI pmax pmax
comp=N,63nm,1.2s
ZEI pmax pmax
comp=Z,6.0nm,2.2s
TAOE Nuku Hiva Isla 91.56 99 *e*S S 11 39 41.8 -0.2
comp=Z,2μm,26.0s
TAOE *e*LR LR 11 58 07.5
comp=Z,1μm,22.6s
SVW2 Sparrevohn 91.72 28 *e*P P **11 28 43.7 -0.2**
comp=Z,75nm,2.1s,mb5.7
SVW2 LR LR
comp=Z,1μm,23.0s,MS5.3
KIV Kislovodsk 91.92 314 PFAKE 11 29 00.0 +15
KIV LR LR
comp=Z,628nm,21.0s,MS5.0
KIV Kislovodsk 91.92 314 *e*P P **11 28 45.1 -0.1**
KIV *e* 11 32 20.7
KIV *e* 11 39 14.7
KIV *e*SS SS 11 45 54.1 +1.0
KIV pmax pmax
comp=Z,22nm,1.1s,mb5.4
KIV pmax pmax
comp=Z,168nm,6.1s
KIV MLR MLR
comp=Z,691nm,19.0s,MS5.1
KIV Kislovodsk 91.92 314 P P **11 28 44.9 -0.3**
SNR=5.5
TTA Tatalina 92.00 27 *e*P P **11 28 45.0 -0.2**
TTA Tatalina 92.00 27 *e*P P **11 28 45.0 -0.2**
KDAK Kodiak Island 92.40 32 P P **11 28 46.9 -0.3**
comp=Z,12nm,0.8s,mb5.2,baz=262,slow=3.3,SNR=4.9
KDAK Kodiak Island 92.40 32 P P **11 28 46.9 -0.3**
KDAK LR LR
comp=Z,1μm,22.0s,MS5.3
KDAK Kodiak Island 92.40 32 P P **11 28 46.9 -0.2**
KDAK MLR MLR
comp=Z,1μm,22.0s,MS5.3
SNAA Sanae 93.15 194 PKKP PKKPbc 11 45 57.1 -4.5
comp=Z,0.6nm,0.8s,baz=239,slow=4.5,SNR=4.9
PRGR Permogore 93.58 332 *e*P P **11 28 45.6 -6.9**
PRGR pmax pmax
comp=Z,15nm,0.7s,mb5.5
RKT Rikitea 93.97 114 *e*PP PP 11 32 42.6 +1.1
comp=Z,156nm,27.6s
RKT *e*S S 11 39 59.8 -3.3
comp=Z,1μm,27.2s
RKT *e*SS SS 11 46 24.7 +1.4
comp=Z,474nm,26.8s
RKT *e*LQ 11 55 15.9
RKT *e*LR LR 11 59 10.7
comp=Z,1μm,25.0s
SOC Sochi 93.98 313 *e*P P **11 28 53.0 -1.7**
SOC *e*S SKSac 11 39 24.9 -1.7
SOC pmax pmax
comp=Z,17nm,0.9s,mb5.5
SOC MLR MLR
comp=Z,913nm,22.0s,MS5.2
SLKM Skilak Lake 94.15 29 *e*P P **11 28 54.2 -0.9**
SLKM Skilak Lake 94.15 29 *e*P P **11 28 54.2 -0.9**
MALT Malatya 94.20 308 *e*P P **11 28 56.1 +0.1**
comp=Z,61nm,1.5s,mb5.8
MALT LR LR
comp=Z,879nm,20.0s,MS5.2
MALT Malatya 94.20 308 *e*P P **11 28 56.1 +0.2**
MALT pmax pmax
comp=Z,61nm,1.5s,mb5.8
MALT MLR MLR
comp=Z,879nm,20.0s,MS5.2
ASF Jabal al Asfar 94.63 302 P P **11 28 58.3 +0.3**
comp=Z,7.7nm,0.9s,mb5.1,baz=108,slow=3.2,SNR=20
ASF Jabal al Asfar 94.63 302 P P **11 28 58.3 +0.3**
PMR Palmer 94.86 29 *e*P P **11 28 56.4 -1.9**
comp=Z,26nm,1.8s,mb5.4
PMR LR LR
comp=Z,2μm,22.0s,MS5.4
PMR Palmer 94.86 29 *e*P P **11 28 56.4 -1.9**
PMR pmax pmax
comp=Z,26nm,1.8s,mb5.4
PMR MLR MLR
comp=Z,2μm,22.0s,MS5.4
VORD Divnogorie 95.28 321 *e*P P **11 28 59.1 -1.4**
VORD *e*S SKSac 11 39 32.8 -0.5
VORD pmax pmax
comp=N,40nm,1.0s
VORD pmax pmax
comp=E,30nm,1.0s
VORD pmax pmax
comp=Z,40nm,1.0s,mb5.8
VORD smax
comp=N,180nm,5.1s
VORD smax
comp=Z,20nm,2.6s
VORD smax
comp=E,20nm,4.3s
VORD MLR MLR
comp=N,1μm,24.0s,MS5.3
VORD MLR MLR
comp=E,270nm,24.0s,MS5.3
VORD MLR MLR
comp=Z,1μm,24.0s,MS5.2
VSR Storozhevoye 95.39 321 *e*P P **11 28 59.6 -1.4**
VSR *e* 11 32 54.2
VSR *i*S SKSac 11 39 33.5 -0.3
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=Z,40nm,1.1s,mb5.8
VSR pmax pmax
comp=Z,120nm,2.5s,mb5.9
VSR pmax pmax
comp=N,20nm,0.4s
VSR pmax pmax
comp=E,30nm,1.0s
VSR smax
comp=N,80nm,2.9s
VSR smax
comp=Z,7.0nm,0.4s
VSR smax
comp=E,80nm,2.9s
VSR MLR MLR
comp=N,580nm,24.0s,MS5.1
VSR MLR MLR
comp=E,500nm,24.0s,MS5.1
VSR MLR MLR
comp=Z,1μm,24.0s,MS5.3
ANN Anapa 95.77 314 *e*P P **11 28 57.0 -5.9**
ANN *e**PP pP 11 29 09.3 -5.8
ANN *e* 11 39 29.8
ANN *e* 11 40 13.1
ANN *e*PS PS 11 41 29.9 -11
ANN *e*SS SS 11 46 37.7 -10
ANN pmax pmax
comp=Z,40nm,1.2s,mb5.7
BOSA Boshof 95.87 240 P P **11 29 04.5 +0.7**
comp=Z,6.7nm,0.6s,mb5.2,baz=99,slow=4.4,SNR=14
BOSA Boshof 95.87 240 *e*P P **11 29 04.8 +1.0**
BOSA LR LR
comp=Z,3μm,19.0s,MS5.8
BOSA Boshof 95.87 240 *e*P P **11 29 04.8 +1.0**
BOSA MLR MLR
comp=Z,3μm,19.0s,MS5.8
COLA College 95.93 25 *e*P P **11 29 01.1 -2.1**
comp=Z,11nm,1.1s,mb5.2
COLA LR LR
comp=Z,551nm,20.0s,MS5.0
COLA College 95.93 25 *e*P P **11 29 01.1 -2.1**
COLA pmax pmax
comp=Z,11nm,1.1s,mb5.2
COLA MLR MLR
comp=Z,551nm,20.0s,MS5.0
LSZ Lusaka 95.98 254 *e*P P **11 29 05.9 +1.4**
comp=Z,36nm,1.3s,mb5.6
LSZ LR LR
comp=Z,2μm,19.0s,MS5.5
LSZ Lusaka 95.98 254 *e*P P **11 29 05.9 +1.4**
LSZ pmax pmax
comp=Z,36nm,1.3s,mb5.6
LSZ MLR MLR
comp=Z,2μm,19.0s,MS5.5
MBAR Mbarara 95.98 268 PFAKE 11 29 20.0 +15
MBAR LR LR
comp=Z,712nm,19.0s,MS5.2
EIL Elat 95.98 299 P P **11 29 03.1 -1.1**
comp=Z,2.3nm,0.5s,mb4.9,baz=90,slow=3.0,SNR=7.3
MMAI Mount Meron Ar 95.98 302 P P **11 29 04.3 +0.1**
comp=Z,18nm,1.0s,mb5.4,baz=85,slow=4.9,SNR=15
ILAR Eielson Array 96.33 25 P P **11 29 02.0 -3.0**
comp=Z,2.3nm,0.8s,mb4.7,baz=270,slow=3.6,SNR=28
ILAR PKKP PKKPbc 11 45 50.4 -3.0
comp=Z,1.4nm,1.0s,baz=9.5,slow=0.5,SNR=6.4
ILAR LR LR 12 13 25.1
comp=Z,600nm,20.1s,MS5.1,baz=278,slow=36
ILAR Eielson Array 96.33 25 P P **11 29 02.0 -3.0**
KLMR Klimovskoe 96.37 331*c i*P P **11 29 02.9 -2.3**
KLMR *e* 11 32 51.5
KLMR pmax pmax
comp=Z,48nm,1.5s,mb5.7
KLMR pmax pmax
comp=Z,92nm,9.6s
KLMR MLR MLR
comp=Z,859nm,21.0s,MS5.2
LBTB Lobatse 96.38 244 *e*P P **11 29 06.2 0.0**
comp=Z,27nm,1.1s,mb5.6
LBTB LR LR
comp=Z,4μm,22.0s,MS5.9
LBTB Lobatse 96.38 244 *e*P P **11 29 06.2 0.0**
LBTB pmax pmax
comp=Z,27nm,1.1s,mb5.6
LBTB MLR MLR
comp=Z,4μm,22.0s,MS5.9
OBN Obninsk 97.36 325 *e*P P **11 29 08.8 -1.1**
OBN LR LR
comp=Z,1μm,19.0s,MS5.5
OBN Obninsk 97.36 325⇓ *i*P P **11 29 08.9 -1.0**
OBN *i*S SKSac 11 39 49.3 +5.4
OBN pmax pmax
comp=Z,46nm,0.8s,mb6.0
OBN MLR MLR
comp=Z,800nm,23.0s,MS5.1
MENT Mentasta 97.53 27 *e*P P **11 29 09.9 -0.5**
CSS Prodhromos 97.90 304 PFAKE 11 29 20.0 +7.2
CSS LR LR
comp=Z,2μm,21.0s,MS5.6
BR131 Keskin Array S 98.07 309 *e*P P **11 29 12.2 -1.3**
comp=Z,11nm,0.9s,mb5.4
BR131 LR LR
comp=Z,698nm,20.0s,MS5.2
BRTR Keskin Array B 98.07 309 P P **11 29 12.1 -1.4**
comp=Z,12nm,0.9s,mb5.4,baz=121,slow=4.5,SNR=31
BRTR PP PP 11 33 03.0 -10
comp=Z,2.5nm,0.9s,baz=105,slow=5.9,SNR=4.1
BRTR LR LR 12 24 13.8
comp=Z,498nm,19.8s,MS5.0,baz=269,slow=42
BRTR Keskin Array B 98.07 309 P P **11 29 12.1 -1.3**
SUR Sutherland 98.63 235 PFAKE 11 29 30.0 +14
SUR LR LR
comp=Z,1μm,19.0s,MS5.4
EGAK Eagle 98.77 26 *e*P P **11 29 14.6 -1.3**
comp=Z,12nm,1.1s,mb5.3
EGAK LR LR
comp=Z,678nm,20.0s,MS5.1
LVZ Lovozero 98.97 337 PFAKE 11 29 30.0 +13
LVZ LR LR
comp=Z,1μm,21.0s,MS5.4
LVZ Lovozero 98.97 337*c i*P P **11 29 14.3 -2.5**
LVZ pmax pmax
comp=Z,27nm,1.7s,mb5.5
APA Apatity 99.44 337⇑ *i*P P **11 29 14.0 -4.9**
APA *i* 11 33 22.0
APA *e* 11 39 58.0
APA *e*S S 11 40 32.0 -16
APA pmax pmax
comp=Z,38nm,1.5s,mb5.7
DAWY Dawson 99.52 26 *e*P P **11 29 18.8 -0.6**
AKASG Malin Array Be 101.63 320 P Pdif 11 29 27.4 -1.6
comp=Z,9.0nm,0.9s,baz=78,slow=4.6,SNR=24
AKASG PP PP 11 33 33.5 -6.1
comp=Z,2.2nm,0.7s,baz=78,slow=6.6,SNR=4.2
AKASG Malin Array Be 101.63 320 P Pdif 11 29 27.4 -1.6
AKASG 11 33 33.5
KIEV Kiev 101.64 320 *e*Pdif Pdif 11 29 27.6 -1.4
comp=Z,7.4nm,0.8s
KIEV LR LR
comp=Z,1μm,22.0s,MS5.3
KIEV Kiev 101.64 320 *e*P Pdif 11 29 27.6 -1.4
KIEV pmax pmax
comp=Z,7.0nm,0.8s
KIEV MLR MLR
comp=Z,1μm,22.0s,MS5.3
KEV Kevo 101.67 340 PFAKE 11 29 40.0 +11
KEV LR LR
comp=Z,1μm,20.0s,MS5.4
INK Inuvik 101.72 22 P Pdif 11 29 26.4 -2.9
comp=Z,8.0nm,1.0s,baz=290,slow=5.4,SNR=9.3
INK PKKPbc PKKPbc 11 45 34.6 -3.6
comp=Z,2.7nm,0.9s,baz=56,slow=1.4,SNR=3.6
INK Inuvik 101.72 22 *e*Pdif Pdif 11 29 28.3 -1.1
comp=Z,14nm,1.1s
INK Inuvik 101.72 22 P Pdif 11 29 26.5 -2.9
INK pmax pmax
comp=Z,8.0nm,1.0s
INK pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 102.21 339 P Pdif 11 29 30.5 -1.1
comp=Z,13nm,0.9s,baz=75,slow=4.9,SNR=22
ARCES PP PP 11 33 42.7 -0.8
comp=Z,6.2nm,1.0s,baz=55,slow=7.8,SNR=3.9
ARCES PKKPbc PKKPbc 11 45 33.0 -3.8
comp=Z,2.6nm,0.7s,baz=250,slow=1.8,SNR=12
ARCES ARCESS Array B 102.21 339 P Pdif 11 29 30.5 -1.1
ARCES PP PP 11 33 42.7 -0.8
ARCES PKKPbc PKKPbc 11 45 33.0 -3.8
ARCES ARCESS Array B 102.21 339 P Pdif 11 29 30.5 -1.1
ARCES 11 33 42.7
ARE0 ARCESS Array S 102.21 339 *e*Pdif Pdif 11 29 29.9 -1.7
FINES FINESS Array B 102.88 331 Pdiff Pdif 11 29 32.4 -2.2
comp=Z,2.8nm,0.9s,baz=62,slow=3.6,SNR=5.4
FINES FINESS Array B 102.88 331 P Pdif 11 29 32.4 -2.2
KTK1 Kautokeino 103.09 339 *e*SKS 11 40 14.9
KTK1 *e* 11 44 01.9
KTK1 *e*SS SS 11 48 32.8 +3.7
WRAK Wrangell Islan 103.28 34 PFAKE 11 29 50.0 +14
WRAK LR LR
comp=Z,724nm,22.0s,MS5.2
KBS Kingsbay 103.32 350 *e*PP PP 11 33 50.8 -0.8
KBS *e* 11 43 53.3
KBS Kingsbay 103.32 350 PFAKE 11 29 50.0 +13
KBS LR LR
comp=Z,1μm,21.0s,MS5.4
DLBC Dease Lake 104.34 32 Pdiff Pdif 11 29 39.0 -2.1
comp=Z,1.2nm,0.6s,baz=252,slow=6.4,SNR=3.7
DLBC Dease Lake 104.34 32 Pdif Pdif 11 29 39.0 -2.1
BUR08 Bucovina Ar. S 104.35 317 *e*Pdif Pdif 11 29 41.2 +0.1
TRO Tromso 104.46 340 *e*SKS SKSac 11 40 18.5 +0.7
TRO AMS AMS 12 21 12.4
comp=Z,1μm,25.9s,MS5.3
KWP Kalwaria Pacla 105.87 319 PFAKE 11 34 10.0 +10
KWP LR LR
comp=Z,997nm,21.0s,MS5.3
TIR Tirane 108.56 311 PFAKE 11 34 20.0 +14
TIR LR LR
comp=Z,774nm,20.0s,MS5.3
OKC Ostrava-Krasne 108.78 320 *e*PS PS 11 43 57.7 -1.0
OKC AMS AMS 12 24 10.0
comp=Z,600nm,16.9s
HFS Hagfors 109.09 331 PKiKP PKiKP 11 34 06.5 +0.5
comp=Z,5.0nm,0.8s,baz=66,slow=3.5,SNR=4.5
MORC Moravsky Berou 109.17 320 *e*PKPdf PKiKP 11 34 08.2 +1.7
NLWA Neilton Lookou 109.48 43 PFAKE 11 34 20.0 +13
NLWA LR LR
comp=Z,765nm,21.0s,MS5.2
DPC Dobruska-Polom 109.85 320 *e*PKP PKiKP 11 34 09.4 +1.6
DPC *e*PP PP 11 34 44.6 +4.3
DPC *e*SP SP 11 44 00.6 -3.4
DPC AMS AMS 12 28 20.0
comp=Z,1μm,20.2s
NB2 NORSAR Subarra 109.98 332 P Pdif 11 29 58.4 -7.7

comp=Z,1.6nm,0.7s,baz=72,slow=4.4
NOA NORSAR Array B 109.98 332 Pdiff Pdif 11 30 02.6 -3.6
comp=Z,1.5nm,0.7s,baz=73,slow=4.6,SNR=3.7
NOA PKiKP PKiKP 11 34 07.5 -0.2
comp=Z,8.2nm,0.9s,baz=260,slow=3.3,SNR=13
NOA PP PP 11 34 38.9 -2.0
comp=Z,3.3nm,0.9s,baz=73,slow=7.2,SNR=4.2
NOA NORSAR Array B 109.98 332 P Pdif 11 30 02.6 -3.5
UPC Upice 110.02 321 *e*PKP PKiKP 11 34 09.6 +1.5
UPC *e*PP PP 11 34 45.2 +3.7
NAO01 NORSAR Array S 110.20 332 PFAKE 11 34 20.0 +12
NAO01 LR LR
comp=Z,1μm,20.0s,MS5.6
COR Corvallis 110.26 46 PFAKE 11 34 20.0 +11
COR LR LR
comp=Z,1μm,21.0s,MS5.5
A05A Maple Falls 110.40 41 ⇑PKiKP PKiKP 11 34 09.8 +1.0
baz=110
CSNA Conrad Observa 110.58 318 ⇑*i*PP PP 11 34 48.6 +3.0
comp=Z,38nm,1.7s
TREC Trest 110.58 319 AMS AMS 12 27 00.0
comp=Z,900nm,23.2s
JCW Jim Creek 110.64 42 *e*PKPdf PKiKP 11 34 10.9 +1.5
KIPM Iron Peak 110.69 51 *e*PKPdf PKiKP 11 34 11.5 +1.9
KIPM *e*PP PP 11 34 44.8 -1.9
YKA Yellowknife Ar 110.75 26 PKiKP PKiKP 11 34 08.6 -0.5
comp=Z,4.9nm,0.9s,baz=302,slow=1.5,SNR=7.1
YKA Yellowknife Ar 110.75 26 PKIKP PKiKP 11 34 08.6 -0.5
HUMO Hull Mountain 110.77 48 *e*PKPdf PKiKP 11 34 11.9 +2.1
HUMO *e*PP PP 11 34 45.5 -1.7
HUMO LR LR
comp=Z,1μm,22.0s,MS5.4
ARSA Arzberg 110.92 317 ⇑*i*PP PP 11 34 50.4 +2.3
comp=Z,25nm,1.4s
PVCC Panska Ves 110.92 321 *e*PKIKP PKiKP 11 34 10.7 +0.9
PVCC MLR MLR
comp=Z,800nm,17.8s,MS5.3
PVCC Panska Ves 110.92 321 *e*PKP PKiKP 11 34 10.7 +0.9
PVCC AMS AMS 12 24 00.0
comp=Z,800nm,17.8s
PRU Pruhonice 111.05 320 *e*PKIKP PKiKP 11 34 11.9 +1.9
PRU *e* 11 44 17.6
PRU MLR MLR
comp=Z,900nm,22.5s,MS5.3
PRU Pruhonice 111.05 320 *e*PKP PKiKP 11 34 11.9 +1.9
PRU *e*SP SP 11 44 17.6 +2.4
PRU AMS AMS 12 29 00.0
comp=Z,900nm,22.5s
YBH Yreka Blue Hor 111.06 49 PKiKP PKiKP 11 34 10.7 +0.4
comp=Z,2.0nm,0.9s,baz=288,slow=3.2,SNR=5.1
YBH PP PP 11 34 46.8 -2.5
comp=Z,13nm,1.3s,baz=285,slow=9.7,SNR=8.6
YBH Yreka Blue Hor 111.06 49 *e*PKPdf PKiKP 11 34 11.3 +1.0
YBH *e*PP PP 11 34 47.2 -2.1
YBH LR LR
comp=Z,2μm,22.0s,MS5.6
YBH Yreka Blue Hor 111.06 49 *e*PKIKP PKiKP 11 34 11.3 +1.0
YBH *e* 11 34 47.3
YBH MLR MLR
comp=Z,2μm,22.0s
HOPS Hopland 111.08 52 PFAKE 11 34 20.0 +10
HOPS LR LR
comp=Z,1μm,20.0s,MS5.5
PRA Prague 111.10 320 *e*x PKiKP 11 34 12.0 +1.9
PRA PP PP 11 34 54.0 +4.7
PRA AMS AMS 12 29 30.0
KONO Kongsberg 111.20 331 *e*SKS SKSac 11 40 57.0 +10
KONO *e* 11 44 17.8
KONO Kongsberg 111.20 331 PFAKE 11 34 20.0 +10
KONO LR LR
comp=Z,1μm,19.0s,MS5.5
BRG Berggiesshubel 111.24 321 *e*PKiKP PKiKP 11 34 11.9 +1.6
BRG Berggiesshubel 111.24 321 *i* PKP PKiKP 11 34 11.8 +1.4
comp=Z,15nm,1.4s
BRG PP PP 11 34 53.1 +2.8
comp=Z,19nm,1.3s
BRG *e* 11 44 20.0
BRG PKKP PKKPbc 11 45 19.0 +11
comp=Z,12nm,1.5s
BRG *e* 11 45 32.0
BRG SS SS 11 50 31.0 +11
BRG
comp=Z,957nm,21.7s
BRG
comp=N,1μm,24.5s
BRG
comp=E,845nm,24.5s
MCCM Marconi Confer 111.32 53 PFAKE 11 34 20.0 +9.1
MCCM LR LR
comp=Z,1μm,19.0s,MS5.5
WDC Whiskeytown Da 111.32 50 *e*PKPdf PKiKP 11 34 11.2 +0.4
WDC *e*PP PP 11 34 49.0 -2.2
WDC LR LR
comp=Z,932nm,20.0s,MS5.4
WDC Whiskeytown Da 111.32 50 *e*PKIKP PKiKP 11 34 11.2 +0.4
WDC *e* 11 34 49.0
WDC MLR MLR
comp=Z,932nm,20.0s,MS5.4
SOKA Soboth 111.35 317 ⇑*i*PKiKP PKiKP 11 34 11.6 +0.9
comp=Z,14nm,1.2s
SOKA ⇑*i*PP PP 11 34 53.4 +2.2
comp=Z,43nm,2.3s
CLL Collm 111.72 322 *e*PKiKP PKiKP 11 34 12.5 +1.3
CLL Collm 111.72 322 ⇑*i*PKP PKiKP 11 34 12.1 +0.9
CLL *e*PP PP 11 34 56.0 +2.3
CLL LR LR
comp=Z,800nm,19.0s,MS5.3
CLL Collm 111.72 322 ⇑*i*PKIKP PKiKP 11 34 12.1 +0.9
CLL *e* 11 34 56.0
CLL pmax pmax
comp=Z,7.0nm,1.0s
CLL pmax pmax
comp=Z,12nm,1.2s
CLL MLR MLR
comp=Z,800nm,19.0s,MS5.3
CUC Castrocucco 111.76 309 PFAKE 11 34 20.0 +8.3
CUC LR LR
comp=Z,569nm,22.0s,MS5.1
ETW Entiat 111.81 42 *e*PKPdf PKiKP 11 34 13.0 +1.5
GEC2 GERESS Array S 111.82 319 *e*PKiKP PKiKP 11 34 12.9 +1.4
GEC2 GERESS Array S 111.82 319 *i*PKiKP PKiKP 11 34 12.9 +1.4
GERES GERESS Array B 111.82 319 PKiKP PKiKP 11 34 12.7 +1.2
comp=Z,3.8nm,0.8s,baz=22,slow=1.1,SNR=12
GERES PP PP 11 34 53.5 -0.9
comp=Z,2.7nm,0.8s,baz=62,slow=6.8,SNR=4.1
GERES PKKPab PKKPab 11 45 14.6 +1.1
comp=Z,0.3nm,0.4s,baz=270,slow=2.9,SNR=5.1
GERES GERESS Array B 111.82 319 PKIKP PKiKP 11 34 12.7 +1.2
GERES 11 34 53.6
KHC Kasperske Hory 111.84 319 *e*PKP PKiKP 11 34 12.8 +1.3
KHC *e*x x 11 34 40.8
KHC *e*PP PP 11 34 59.2 +4.6
KHC *e*PS PS 11 44 31.5 +3.6
KHC AMS AMS 12 27 40.0
comp=Z,1μm,24.4s
CEL Celeste 111.89 308 PFAKE 11 34 20.0 +8.0
CEL LR LR
comp=Z,506nm,19.0s,MS5.1
JMIC Jan Mayen 112.02 346 *e* PS 11 44 29.5 +0.7
WET Wettzell 112.28 320 *e*PKiKP PKiKP 11 34 14.0 +1.6
WET Wettzell 112.28 320 *i* PKiKP PKiKP 11 34 14.0 +1.6
NKC Novy Kostel 112.31 321 *e*PKIKP PKiKP 11 34 13.7 +1.3
NKC *e* 11 44 32.6
NKC MLR MLR
comp=Z,800nm,16.5s,MS5.4
NKC Novy Kostel 112.31 321 *e*PKP PKiKP 11 34 13.7 +1.3
NKC *e*PS PS 11 44 32.6 +0.4
NKC AMS AMS 12 30 20.0
comp=Z,800nm,16.5s
B08A Colville Reser 112.31 41 ⇓PKiKP PKiKP 11 34 13.3 +0.9
baz=112
WERD Werda 112.35 321 *e*PKiKP PKiKP 11 34 14.0 +1.5
F07A Phinny Hill Vi 112.41 44 ⇑PKiKP PKiKP 11 34 14.6 +1.9
baz=112
RSW Rattlesnake Hi 112.54 43 *e*PKPdf PKiKP 11 34 15.4 +2.5
FOO Floro 112.55 334 AMS AMS 12 27 20.6
comp=Z,2μm,25.9s,MS5.6
HAWA Hanford 112.58 43 *e*PKPdf PKiKP 11 34 14.8 +1.7
HAWA LR LR
comp=Z,744nm,20.0s,MS5.3
SAO San Andreas Ge 112.59 54 PFAKE 11 34 30.0 +17
SAO LR LR
comp=Z,934nm,19.0s,MS5.4
RJOB Jochberg 112.64 318 *e*PKiKP PKiKP 11 34 14.2 +1.1
MOX Moxa 112.73 321 *e*PKP PKiKP 11 34 14.0 +0.8
MOX *e* 11 35 05.6
comp=Z,55nm,1.7s
MOX *e*S PS 11 44 45.0 +8.9
MOX
comp=Z,600nm,21.0s
MOX Moxa 112.73 321 *e*PKiKP PKiKP 11 34 14.5 +1.3
MOX *e*PP PP 11 35 05.2 +4.3
MOX Moxa 112.73 321 *e*PKIKP PKiKP 11 34 14.0 +0.8
MOX *e* 11 35 05.6
MOX MLR MLR
comp=Z,600nm,21.0s,MS5.2
MOD Modoc 112.81 48 PFAKE 11 34 30.0 +16
MOD LR LR
comp=Z,843nm,22.0s,MS5.3
D08A Wollman Farm, 112.86 43 ⇑PKiKP PKiKP 11 34 14.7 +1.1
baz=113
ASSE Asse, Remlinge 112.91 323 *e*PKiKP PKiKP 11 34 15.0 +1.5
BER Bergen 112.92 333 *e* SP 11 44 30.6 -1.0
BER AMS AMS 12 25 50.1
comp=Z,929nm,18.8s,MS5.4
OD2 Odessa Site #2 112.93 42 *e*PKPdf PKiKP 11 34 14.6 +0.9
OD2 *e*PP PP 11 35 00.2 -2.2
I07A Izee 113.03 46 ⇓PKiKP PKiKP 11 34 15.3 +1.3
baz=113
ABTA Abfaltersbach 113.03 317 ⇑*i*PKiKP PKiKP 11 34 14.2 +0.3
comp=Z,23nm,1.2s
NRDL Niedersach Rie 113.14 324 *e*PKiKP PKiKP 11 34 15.7 +1.8
CLZ Clausthal 113.17 323 *e*PKiKP PKiKP 11 34 15.9 +1.9
CLZ Clausthal 113.17 323 *i* PKiKP PKiKP 11 34 15.9 +1.9
G08A Pilot Rock 113.19 44 ⇑PKiKP PKiKP 11 34 15.4 +1.1
baz=113
GRF Grafenberg Arr 113.21 320 *e*L 12 25 52.9
comp=Z,1μm,21.6s
AQU L'Aquila 113.23 312 PFAKE 11 34 30.0 +16
AQU LR LR
comp=Z,885nm,21.0s,MS5.3
WDD Wield Dalam 113.23 305 PFAKE 11 34 30.0 +15
WDD LR LR
comp=Z,672nm,21.0s,MS5.2
CMB Columbia Colle 113.28 52 *e*PKPdf PKiKP 11 34 16.2 +1.5
CMB LR LR
comp=Z,858nm,20.0s,MS5.3
CMB Columbia Colle 113.28 52 *e*PKIKP PKiKP 11 34 16.2 +1.5
CMB MLR MLR
comp=Z,858nm,20.0s,MS5.3
E09A Wood Farm, Sta 113.49 43 ⇑PKiKP PKiKP 11 34 15.6 +0.8
baz=113
GTTG Gvttingen 113.50 323 *e*PKiKP PKiKP 11 34 16.3 +1.7
WTTA Wattenberg 113.51 318 ⇓*i*PKiKP PKiKP 11 34 15.9 +1.1
comp=Z,41nm,1.2s
WATA Walderalm 113.53 318 ⇑*i*PKiKP PKiKP 11 34 15.6 +0.8
comp=Z,7.4nm,0.5s
LNOR Lincton Mounta 113.53 44 *e*PKPdf PKiKP 11 34 16.1 +1.2
LNOR *e*PP PP 11 35 08.3 +1.5
LNOR Lincton Mounta 113.53 44 *e*PKIKP PKiKP 11 34 16.1 +1.2
LNOR *e* 11 35 08.3
WCN Washoe City 113.61 51 ⇑PKiKP PKiKP 11 34 17.0 +1.7
baz=114
NEW Newport 113.77 41 *e*PKPdf PKiKP 11 34 15.7 +0.5
NEW LR LR
comp=Z,718nm,20.0s,MS5.3
NEW Newport 113.77 41 *e*PKIKP PKiKP 11 34 15.7 +0.4
NEW MLR MLR
comp=Z,718nm,20.0s
PAHR Pah Rah Range 113.83 51 *e*PKPdf PKiKP 11 34 17.6 +2.0
PAHR *e*PP PP 11 35 07.5 -1.7
MOTA Moosalm 113.84 318 ⇑*i*PKiKP PKiKP 11 34 16.3 +0.9
comp=Z,5.7nm,0.5s
J08A Circle Bar Ran 113.90 46 ⇓PKiKP PKiKP 11 34 17.3 +1.6
baz=114
WVOR Wild Horse Val 113.95 47 *e*PKPdf PKiKP 11 34 16.9 +1.2
WVOR *e*PP PP 11 35 13.7 +3.8
WVOR LR LR
comp=Z,985nm,22.0s,MS5.4
WVOR Wild Horse Val 113.95 47 *e*PKIKP PKiKP 11 34 17.0 +1.2
WVOR *e* 11 35 13.7
WVOR MLR MLR
comp=Z,985nm,22.0s,MS5.4
WAKR Walker 113.96 52 *e*PKPdf PKiKP 11 34 18.0 +2.0
WAKR *e*PP PP 11 35 07.2 -2.9
FETA Feichten 114.17 318 ⇑*i*PKiKP PKiKP 11 34 17.2 +1.1
comp=Z,18nm,1.2s
FETA ⇑*i*PP PP 11 35 13.1 +1.8
comp=Z,22nm,1.3s
F10A Beach Ranch, E 114.23 43 ⇑PKiKP PKiKP 11 34 17.9 +1.7
baz=114
C11A Tepee Creek (N 114.44 41 ⇓PKiKP PKiKP 11 34 17.4 +0.9
baz=114
IBBN Ibbenburen 114.58 324 *e*PKiKP PKiKP 11 34 18.4 +1.7
VES Vestal, Richgr 114.59 55 ⇓PKiKP PKiKP 11 34 18.1 +0.8
baz=115
DAVA Damuels 114.67 318 ⇑*i*PKiKP PKiKP 11 34 18.1 +1.1
comp=Z,26nm,1.1s
DAVA ⇓*i*PP PP 11 35 17.3 +2.5
comp=Z,25nm,1.2s
DAVOX Davos/Dischmat 114.79 318 PKP PKiKP 11 34 17.2 0.0
comp=Z,11nm,0.9s,baz=63,slow=6.8,SNR=8.3
DAVOX Davos/Dischmat 114.79 318 PKIKP PKiKP 11 34 17.2 -0.1
TNS Taunus Mts 114.79 322 *e*PKiKP PKiKP 11 34 18.8 +1.6
TNS Taunus Mts 114.79 322 *i* PKiKP PKiKP 11 34 18.8 +1.6
NVAR Mina Array Bea 114.86 52 PKP PKiKP 11 34 19.5 +1.8
comp=Z,6.8nm,0.9s,baz=266,slow=2.6,SNR=32
NVAR PP PP 11 35 13.8 -2.7
comp=Z,6.0nm,1.1s,baz=262,slow=4.5,SNR=7.9
NVAR PKKPab PKKPab 11 45 01.4 +1.1
comp=Z,2.5nm,0.9s,baz=128,slow=4.3,SNR=11
NVAR PKKP PKKPdf 11 45 22.1 +2.8
comp=Z,1.6nm,0.9s,baz=108,slow=6.0,SNR=4.9
NVAR Mina Array Bea 114.86 52 PKP PKiKP 11 34 19.5 +1.8
NVAR PP PP 11 35 13.8 -2.7
NVAR PKKPab PKKPab 11 45 01.4 +1.1
NVAR PKKP PKKPdf 11 45 22.1 +2.8
RPN Rapa Nui 114.87 125 PFAKE 11 34 30.0 +12
RPN LR LR
comp=Z,1μm,22.0s,MS5.4
C12B Naegeli Ranch, 114.98 41 ⇓PKiKP PKiKP 11 34 18.4 +0.8
baz=115
VLC Villacollemand 115.05 315 PFAKE 11 34 30.0 +12
VLC LR LR
comp=Z,1μm,21.0s,MS5.4
ISA Isabella 115.10 55 *e*PKPdf PKiKP 11 34 20.1 +1.9
ISA Isabella 115.10 55 *e*PKIKP PKiKP 11 34 20.1 +1.9
SPAK Spaichingen-Ko 115.17 319 *e*P PKiKP 11 34 18.9 +0.9
D12A Red Ives Fores 115.23 42 ⇓PKiKP PKiKP 11 34 18.8 +0.7
baz=115
A13A Flathead Natio 115.33 40 ⇓PKiKP PKiKP 11 34 19.6 +1.3
baz=115
BMN Battle Mountai 115.35 49 PFAKE 11 34 30.0 +11
BMN LR LR
comp=Z,601nm,19.0s,MS5.2
BSMT Bassoo Peak 115.39 41 *e*PKPdf PKPdf 11 34 19.6 +1.2
BFO Black Forest 115.40 320 PFAKE 11 34 30.0 +12
BFO LR LR
comp=Z,739nm,20.0s,MS5.3
B13A Whitefish 115.45 40 ⇓PKiKP PKiKP 11 34 19.7 +1.2
baz=115,SNR=6.8
PASC Pasadena Art C 115.52 56 *e*PKPdf PKPdf 11 34 21.0 +1.9
LANF Langenberg 115.55 320 *e*P PKiKP 11 34 19.7 +1.0
LANF Langenberg 115.55 320 *e*PKIKP PKPdf 11 34 19.7 +1.0
C13A Hot Springs 115.58 41 ⇓PKiKP PKiKP 11 34 19.6 +0.8
baz=116,SNR=8.4
EDW2 Edwards Air Fo 115.59 56 ⇑PKiKP PKiKP 11 34 21.3 +2.1
WALA Waterton Lakes 115.61 40 *e*PKPdf PKPdf 11 34 19.3 +0.5
MWC Mount Wilson 115.62 56 *e*PKPdf PKPdf 11 34 21.5 +2.3
MWC Mount Wilson 115.62 56 *e*PKIKP PKPdf 11 34 21.5 +2.2
F12A Elk City 115.62 43 ⇑PKiKP PKiKP 11 34 20.1 +1.2
baz=116,SNR=8.7
DAC Darwin (Calif) 115.73 54 PFAKE 11 34 30.0 +11
DAC LR LR
comp=Z,1μm,20.0s,MS5.5
G12A Big Creek, Yel 115.73 44 ⇑PKiKP PKiKP 11 34 20.4 +1.3
baz=116
FELD Feldberg im Sc 115.74 319 *e*P PKiKP 11 34 19.8 +0.7
JTMT Jette 115.75 41 *e*PKPdf PKPdf 11 34 20.1 +1.0
TPH Tonopah 115.75 52 PFAKE 11 34 30.0 +11
TPH LR LR
comp=Z,734nm,20.0s,MS5.3
LRMC Laurel Mountai 115.76 55 ⇓PKiKP PKiKP 11 34 21.8 +2.3
baz=116
MFID Camas Ranch 115.77 46 ⇓PKiKP PKiKP 11 34 21.2 +2.0
baz=116
RUP Ruppelstein 115.80 321 *e*P PKiKP 11 34 20.6 +1.5
RUP Ruppelstein 115.80 321 *e*PKIKP PKPdf 11 34 20.6 +1.5
D13A Huson 115.81 42 ⇓PKiKP PKiKP 11 34 19.8 +0.6
baz=116,SNR=12
A14A Double T Ranch 115.95 40 ⇓PKiKP PKiKP 11 34 20.4 +1.0
baz=116
BFSC Mount Baldy Ra 115.95 56 ⇓PKiKP PKiKP 11 34 21.5 +1.6
baz=116
SWMT Swartz Lake 116.00 41 *e*PKPdf PKPdf 11 34 20.6 +1.0
C14A Swan Lake 116.09 41 ⇑PKiKP PKiKP 11 34 20.6 +0.9
baz=116
E13A Victor 116.17 42 PKiKP PKiKP 11 34 21.0 +1.1
baz=116,SNR=11
BBS Basel-Blauen 116.17 319 *e*P PKPdf 11 34 20.4 +0.5
BBS Basel-Blauen 116.17 319 *e*PKIKP PKPdf 11 34 20.4 +0.5
I12A Atlanta 116.18 45 ⇑PKiKP PKiKP 11 34 21.4 +1.4
baz=116,SNR=35
ECH Echery 116.19 320 *e*P PKPdf 11 34 20.2 +0.3
ECH LR LR
comp=Z,767nm,20.0s,MS5.3
ECH Echery 116.19 320 *e*PKIKP PKPdf 11 34 20.2 +0.3
ECH MLR MLR
comp=Z,767nm,20.0s,MS5.3
H12A Diamond D Ranc 116.19 45 ⇓PKiKP PKiKP 11 34 21.9 +1.9
baz=116,SNR=28
B14A Marquette Ranc 116.22 40 ⇓PKiKP PKiKP 11 34 21.0 +1.0
baz=116,SNR=7.3
MSO Missoula 116.22 42 *e*PKPdf PKPdf 11 34 20.7 +0.7
MSO LR LR
comp=Z,523nm,20.0s,MS5.2
F13A Darby 116.24 43 ⇓PKiKP PKiKP 11 34 20.9 +0.8
baz=116,SNR=6.6
WLF Walferdange 116.37 321 *e*PKiKP PKiKP 11 34 22.1 +1.9
WLF Walferdange 116.37 321 PFAKE 11 34 30.0 +10
WLF LR LR
comp=Z,926nm,20.0s,MS5.4
A15A Johnson Ranch, 116.38 39 ⇑PKiKP PKiKP 11 34 20.9 +0.6
baz=116
SLMT Seeley Lake 116.40 41 *e*PKPdf PKPdf 11 34 21.3 +1.0
D14A Greenough 116.44 42 ⇓PKiKP PKiKP 11 34 21.2 +0.8
baz=116,SNR=12
G13A Cobalt 116.49 44 ⇑PKiKP PKiKP 11 34 21.9 +1.3
baz=116,SNR=5.8
GSC Goldstone 116.50 55 *e*PKPdf PKPdf 11 34 23.3 +2.4
GSC Goldstone 116.50 55 *e*PKIKP PKPdf 11 34 23.3 +2.4
H13A Challis 116.61 44 ⇑PKiKP PKiKP 11 34 22.6 +1.8
baz=116,SNR=45
LOMF Lomont 116.65 319 *e*P PKPdf 11 34 21.7 +0.9
LOMF Lomont 116.65 319 *e*PKIKP PKPdf 11 34 21.7 +0.9
CHMT Chamberlain Mo 116.66 42 *e*PKPdf PKPdf 11 34 21.3 +0.4
B15A Bradely Ranch, 116.69 40 ⇑PKiKP PKiKP 11 34 21.5 +0.6
baz=117,SNR=12
VSL Villasalto 116.74 310 PFAKE 11 34 30.0 +8.7
VSL LR LR
comp=Z,352nm,19.0s,MS5.0
HLID Hailey 116.74 46 *e*PKPdf PKPdf 11 34 23.3 +2.2
HLID LR LR
comp=Z,1μm,21.0s,MS5.4
C15A Salmond Ranch, 116.82 41 PKiKP PKiKP 11 34 22.2 +1.0
baz=117,SNR=15
SHOC Shoshone 116.84 54 ⇓PKiKP PKiKP 11 34 23.2 +1.6
baz=117
I13A Wildhorse Cree 116.86 45 ⇓PKiKP PKiKP 11 34 23.8 +2.4
baz=117,SNR=52
THEF They Montfort 116.93 320 *e*P PKPdf 11 34 22.0 +0.7
THEF They Montfort 116.93 320 *e*PKIKP PKPdf 11 34 22.0 +0.7
J13A Cove Ranch, Pi 116.95 46 ⇓PKiKP PKiKP 11 34 23.8 +2.2
baz=117,SNR=39
R11A Troy Canyon, C 116.97 51 ⇑PKiKP PKiKP 11 34 23.3 +1.5
baz=117
PFO Pinyon Flat Ob 117.02 57 ⇓PKiKP PKiKP 11 34 24.0 +2.0
baz=117
PFO Pinyon Flat Ob 117.02 57 *e*PKPdf PKPdf 11 34 24.1 +2.2
PFO Pinyon Flat Ob 117.02 57 *e*PKIKP PKPdf 11 34 24.1 +2.1
D15A Lincoln 117.10 41 ⇓PKiKP PKiKP 11 34 23.0 +1.3
baz=117
A16A West Butte Ran 117.10 39 ⇑PKiKP PKiKP 11 34 22.8 +1.2
baz=117,SNR=8.8
MONP Monument Peak 117.14 58 ⇓PKiKP PKiKP 11 34 24.4 +2.2
baz=117
H14A Leadore 117.21 44 ⇓PKiKP PKiKP 11 34 23.5 +1.5
baz=117,SNR=12
I14A Mackay 117.33 45 ⇑PKiKP PKiKP 11 34 24.2 +1.9
baz=117,SNR=20
BELC Belle Mtn. Jos 117.34 56 ⇑PKiKP PKiKP 11 34 24.9 +2.3
baz=117
C16A Fuhringer Ranc 117.37 40 ⇑PKiKP PKiKP 11 34 23.0 +0.8
baz=117,SNR=6.5
BNI Bardonecchia 117.40 316 *e*PKPdf PKPdf 11 34 23.4 +1.1
BNI LR LR
comp=Z,1μm,22.0s,MS5.4
BNI Bardonecchia 117.40 316 *e*PKIKP PKPdf 11 34 23.4 +1.1
BNI MLR MLR
comp=Z,1μm,22.0s,MS5.4
KEST Kesra 117.42 306 PKP PKPdf 11 34 23.3 +0.6
comp=Z,7.2nm,0.9s,baz=176,slow=0.2,SNR=13
KEST PP PP 11 35 31.6 -2.9
comp=Z,8.8nm,1.0s,baz=313,slow=6.1,SNR=5.4
KEST PKKPbc PKKPbc 11 44 48.5 +2.1
comp=Z,2.4nm,1.0s,baz=157,slow=2.9,SNR=3.8
KEST Kesra 117.42 306 *e*PKPdf PKPdf 11 34 24.5 +1.8
J14A Carey 117.43 46 ⇓PKiKP PKiKP 11 34 24.7 +2.3
baz=117,SNR=11
DVTC Desert V Tower 117.44 58 ⇑PKiKP PKiKP 11 34 24.9 +2.1
baz=117
T11A Corn Creek, Al 117.46 53 ⇑PKiKP PKiKP 11 34 25.4 +2.7
baz=117
F15A Butte 117.46 43 ⇓PKiKP PKiKP 11 34 23.9 +1.4
baz=117,SNR=6.7
LRM Limekiln Ridge 117.50 43 *e*PKPdf PKPdf 11 34 24.1 +1.6
MCMT McKenzie Canyo 117.50 44 *e*PKPdf PKPdf 11 34 24.9 +2.4
GMRC Granite Mounta 117.51 55 ⇓PKiKP PKiKP 11 34 25.4 +2.5
baz=118
V11A Goodsprings 117.53 54 ⇓PKiKP PKiKP 11 34 25.5 +2.6
baz=118
DLMT Dillon 117.53 43 *e*PKPdf PKPdf 11 34 24.6 +2.0
SHPR Sheep Range 117.63 53 *e*PKPdf PKPdf 11 34 25.8 +2.7
HRY Holter Researc 117.65 42 *e*PKPdf PKPdf 11 34 24.2 +1.4
A17A Triple J Farms 117.66 39 ⇓PKiKP PKiKP 11 34 23.9 +1.2
baz=118,SNR=31
G15A Dillon 117.66 43 ⇓PKiKP PKiKP 11 34 25.1 +2.2
baz=118,SNR=11
S12A Delamar Landin 117.68 52 ⇑PKiKP PKiKP 11 34 26.0 +2.9
baz=118
H15A Lima 117.70 44 ⇑PKiKP PKiKP 11 34 25.2 +2.3
baz=118,SNR=28
D16A Dana Ranch, Ca 117.73 41 ⇓PKiKP PKiKP 11 34 24.4 +1.4
baz=118,SNR=14
E16A East Helena 117.80 42 ⇑PKiKP PKiKP 11 34 23.6 +0.5
baz=118,SNR=7.5
B17A L&G Farms, Che 117.81 40 ⇓PKiKP PKiKP 11 34 23.7 +0.6
baz=118,SNR=9.9
BC3 Big Chuckawall 117.84 57 ⇓PKiKP PKiKP 11 34 25.9 +2.3
baz=118,SNR=6.7
K14A Jones Ranch, D 117.87 46 ⇑PKiKP PKiKP 11 34 25.8 +2.4
baz=118,SNR=12
LDFC Landfair 117.91 55 *e*PKPdf PKPdf 11 34 26.0 +2.4
L14A Malta 117.95 47 ⇑PKiKP PKiKP 11 34 25.9 +2.4
baz=118,SNR=17
I15A Monteview 117.98 45 ⇓PKiKP PKiKP 11 34 25.6 +2.1
baz=118,SNR=12
V12A Nelson 118.01 54 ⇓PKiKP PKiKP 11 34 26.3 +2.4
baz=118,SNR=20
IRM Iron Mountain 118.02 56 ⇑PKiKP PKiKP 11 34 26.2 +2.3
baz=118,SNR=17
C17A Wharram Farm, 118.05 40 ⇑PKiKP PKiKP 11 34 24.3 +0.7
baz=118,SNR=17
F16A Kennard Place, 118.06 43 ⇓PKiKP PKiKP 11 34 25.7 +2.0
baz=118,SNR=13
BOZ Bozeman (W) 118.10 43 *e*PKPdf PKPdf 11 34 25.4 +1.7
BOZ LR LR
comp=Z,713nm,21.0s,MS5.3
BOZ Bozeman (W) 118.10 43 *e*PKIKP PKPdf 11 34 25.4 +1.7
BOZ MLR MLR
comp=Z,713nm,21.0s,MS5.3
G16A Moss Hill, Enn 118.10 43 ⇓PKiKP PKiKP 11 34 25.5 +1.8
baz=118
U12A Valley of Fire 118.14 53 ⇓PKiKP PKiKP 11 34 26.3 +2.3
baz=118,SNR=8.4
J15A Blackfoot 118.18 45 ⇑PKiKP PKiKP 11 34 26.6 +2.7
baz=118,SNR=29
A18A Metzger Ranch, 118.19 39 ⇑PKiKP PKiKP 11 34 24.6 +0.9
baz=118,SNR=14
D17A Six Diamond Ra 118.25 41 ⇑PKiKP PKiKP 11 34 24.8 +0.8
baz=118,SNR=9.7
R13A O'Grain Ranch, 118.26 51 ⇓PKiKP PKiKP 11 34 26.8 +2.6
baz=118,SNR=14
K15A Arbon 118.30 46 ⇑PKiKP PKiKP 11 34 26.4 +2.2
baz=118,SNR=45
HVU Hansel Valley 118.35 47 *e*PKPdf PKPdf 11 34 25.8 +1.5

HVU	Hansel Valley	118.35	47	ePKIKP	PKPdf	11 34 25.8 +1.5
E17A	Martinsdale	118.36	42	⇓PKiKP	PKiKP	11 34 25.5 +1.3
	baz=118,SNR=8.5					
BGU	Big Grassy Mou	118.37	48	ePKPdf	PKPdf	11 34 26.0 +1.6
B18A	Beardsley Farm	118.42	39	⇑PKiKP	PKiKP	11 34 25.5 +1.2
	baz=118,SNR=9.9					
GLA	Glamis	118.45	57	ePKPdf	PKPdf	11 34 27.2 +2.5
GLA	Glamis	118.45	57	ePKIKP	PKPdf	11 34 27.2 +2.5
S13A	Holt Ranch, En	118.46	52	⇑PKiKP	PKiKP	11 34 27.3 +2.6
	baz=118,SNR=20					
QLMT	Earthquake Lak	118.47	44	ePKPdf	PKPdf	11 34 27.0 +2.6
T13A	Saint George	118.53	53	⇑PKiKP	PKiKP	11 34 27.6 +2.8
	baz=118,SNR=10.0					
EGMT	Eagleton	118.56	40	ePKPdf	PKPdf	11 34 25.4 +0.9
EGMT				LR	LR	
	comp=Z,707nm,21.0s,MS5.3					
L15A	Malad City	118.57	47	⇑PKiKP	PKiKP	11 34 26.2 +1.5
	baz=118,SNR=15					
Y12C	Blythe	118.59	56	⇓PKiKP	PKiKP	11 34 27.3 +2.2
	baz=119,SNR=8.3					
U13A	Pakoon Wash	118.60	53	⇑PKiKP	PKiKP	11 34 27.1 +2.2
	baz=119,SNR=8.4					
Q14A	Sevier Lake (B	118.62	50	⇓PKiKP	PKiKP	11 34 26.8 +1.9
	baz=119,SNR=11					
H16A	Russell Place,	118.63	44	⇑PKiKP	PKiKP	11 34 27.1 +2.3
	baz=119,SNR=12					
P14A	Drum Mountains	118.64	50	⇑PKiKP	PKiKP	11 34 27.2 +2.2
	baz=119,SNR=29					
M15A	Larsen Ranch,	118.66	47	⇑PKiKP	PKiKP	11 34 26.4 +1.5
	baz=119,SNR=11					
F17A	Fitzpatrick Pl	118.67	42	⇓PKiKP	PKiKP	11 34 26.7 +1.9
	baz=119,SNR=26					
V13A	Grand Canyon W	118.68	54	⇑PKiKP	PKiKP	11 34 27.3 +2.1
	baz=119,SNR=18					
DUG	Dugway	118.70	49	ePKPdf	PKPdf	11 34 26.8 +1.7
DUG				LR	LR	
	comp=Z,654nm,19.0s,MS5.3					
DUG	Dugway	118.70	49	ePKIKP	PKPdf	11 34 26.8 +1.8
DUG				MLR	MLR	
	comp=Z,654nm,19.0s,MS5.3					
SPUT	South Promonto	118.70	48	ePKPdf	PKPdf	11 34 26.7 +1.7
I16A	Newdale	118.71	45	⇑PKiKP	PKiKP	11 34 27.1 +2.2
	baz=119,SNR=21					
ARUT	Antelope Range	118.75	52	ePKPdf	PKPdf	11 34 27.6 +2.5
ARUT	Antelope Range	118.75	52	ePKIKP	PKPdf	11 34 27.6 +2.4
N15A	Stansbury Isla	118.75	48	⇓PKiKP	PKiKP	11 34 27.1 +2.0
	baz=119,SNR=28					
J16A	Bone	118.79	45	⇓PKiKP	PKiKP	11 34 27.1 +2.0
	baz=119,SNR=18					
G17A	Pierce Place,	118.79	43	⇓PKiKP	PKiKP	11 34 27.0 +1.9
	baz=119,SNR=7.8					
D18A	Linhart Farms,	118.81	41	⇓PKiKP	PKiKP	11 34 26.4 +1.4
	baz=119,SNR=11					
YMR	Madison River	118.84	44	ePKPdf	PKPdf	11 34 27.8 +2.6
CCUT	Cedar City	118.85	52	ePKPdf	PKPdf	11 34 27.9 +2.5
A19A	Klindworth Far	118.87	38	⇓PKiKP	PKiKP	11 34 26.2 +1.1
	baz=119,SNR=9.8					
W13A	Hualapai Mount	118.89	55	⇓PKiKP	PKiKP	11 34 28.2 +2.6
	baz=119					
B19A	Brinkman Farms	118.92	39	⇓PKiKP	PKiKP	11 34 26.5 +1.3
	baz=119,SNR=10					
K16A	Soda Springs	118.93	46	⇓PKiKP	PKiKP	11 34 28.0 +2.6
	baz=119					
O15A	The Old Anders	118.94	49	⇑PKiKP	PKiKP	11 34 27.6 +2.1
	baz=119					
E18A	Harlowton	118.95	41	⇑PKiKP	PKiKP	11 34 26.2 +0.9
	baz=119					
S14A	Cedar City	118.96	52	⇑PKiKP	PKiKP	11 34 28.4 +2.7
	baz=119,SNR=20					
RRI2	Red Ridge	118.97	45	ePKPdf	PKPdf	11 34 27.3 +1.9
YFT	Old Faithful	118.99	44	ePKPdf	PKPdf	11 34 28.8 +3.3
DCID1	Drake Creek	119.00	45	ePKPdf	PKPdf	11 34 27.7 +2.2
YNR	Norris Junctio	119.02	43	ePKPdf	PKPdf	11 34 28.6 +3.1
X13A	Yucca	119.03	55	⇓PKiKP	PKiKP	11 34 27.9 +2.1
	baz=119,SNR=18					
IMW	Indian Meadow	119.08	44	ePKPdf	PKPdf	11 34 27.7 +2.1
NOQ	North Oquirrh	119.10	48	ePKPdf	PKPdf	11 34 27.7 +1.9
C19A	Slack Wire Ran	119.11	40	⇑PKiKP	PKiKP	11 34 26.9 +1.3
	baz=119,SNR=13					
Y13A	Salome	119.16	56	⇑PKiKP	PKiKP	11 34 28.4 +2.3
	baz=119,SNR=11					
T14A	Hurricane	119.17	52	⇓PKiKP	PKiKP	11 34 28.6 +2.6
	baz=119,SNR=18					
PLDF	La Plantade	119.17	318	eP	PKPdf	11 34 28.3 +2.6
PLDF	La Plantade	119.17	318	ePKIKP	PKPdf	11 34 28.3 +2.6
H17A	Grant Village	119.18	44	⇑PKiKP	PKiKP	11 34 29.1 +3.2
	baz=119,SNR=6.4					
TPAW	Teton Pass	119.19	45	ePKPdf	PKPdf	11 34 28.1 +2.3
FLWY	Flagg Ranch	119.19	44	ePKPdf	PKPdf	11 34 28.3 +2.4
U14A	Mt Trumbull	119.22	53	⇓PKiKP	PKiKP	11 34 28.0 +1.9
	baz=119,SNR=21					
P15A	Leamington	119.24	50	⇓PKiKP	PKiKP	11 34 28.1 +1.9
	baz=119,SNR=19					
EKA	Eskdalemuir Ar	119.25	330	PKP	PKPdf	11 34 26.0 +0.5
	comp=Z,7.0nm,0.9s,baz=26,slow=2.6,SNR=11					
EKA	Eskdalemuir Ar	119.25	330	PKIKP	PKPdf	11 34 26.0 +0.4
LKWY	Lake	119.25	44	ePKPdf	PKPdf	11 34 28.7 +2.8
LKWY				LR	LR	
	comp=Z,2μm,22.0s,MS5.7					
LKWY	Lake	119.25	44	ePKIKP	PKPdf	11 34 28.7 +2.8
LKWY				MLR	MLR	
	comp=Z,2μm,22.0s,MS5.7					
L16A	Fish Haven	119.26	47	⇑PKiKP	PKiKP	11 34 28.0 +2.0
	baz=119,SNR=16					
MOOW	Moose Ponds	119.26	45	ePKPdf	PKPdf	11 34 27.9 +2.0
HWUT	Hardware Ranch	119.27	47	ePKPdf	PKPdf	11 34 27.4 +1.3
HWUT				LR	LR	
	comp=Z,1μm,22.0s,MS5.4					
ESK	Eskdalemuir	119.28	330	PFAKE		11 34 40.0 +14
ESK				LR	LR	
	comp=Z,1μm,20.0s,MS5.5					
AHID	Auburn Hatcher	119.29	46	PFAKE		11 34 40.0 +14
AHID				LR	LR	
	comp=Z,826nm,20.0s,MS5.4					
F18A	Big Timber	119.29	42	⇑PKiKP	PKiKP	11 34 27.8 +1.8
	baz=119,SNR=23					
REDW	Red Top Meadow	119.30	45	ePKPdf	PKPdf	11 34 28.2 +2.2
M16A	Huntsville	119.30	47	⇑PKiKP	PKiKP	11 34 27.2 +1.0
	baz=119,SNR=7.7					
Q15A	Fillmore	119.30	50	⇑PKiKP	PKiKP	11 34 28.3 +2.1
	baz=119,SNR=18					
NLU	North Lily Min	119.31	49	ePKPdf	PKPdf	11 34 27.5 +1.3
I17A	Pilgrim Ck.	119.33	44	⇓PKiKP	PKiKP	11 34 28.9 +2.7
	baz=119,SNR=6.3					
SNOW	Snow King Moun	119.33	45	ePKPdf	PKPdf	11 34 28.4 +2.3
113A	Mohawk Valley,	119.37	57	⇓PKiKP	PKiKP	11 34 27.8 +1.2
	baz=119,SNR=7.0					
A20A	Cobblestone Ra	119.39	38	⇑PKiKP	PKiKP	11 34 27.2 +1.1
	baz=119					
J17A	Brown Place, J	119.39	45	⇓PKiKP	PKiKP	11 34 28.7 +2.4
	baz=119,SNR=40					
Z13A	Yuma Proving G	119.39	57	⇑PKiKP	PKiKP	11 34 28.4 +1.8
	baz=119,SNR=29					
LOHW	Long Hollow	119.40	45	ePKPdf	PKPdf	11 34 28.2 +1.9
D19A	Cripps Ranch,	119.41	40	⇑PKiKP	PKiKP	11 34 27.1 +0.9
	baz=119,SNR=12					
K17A	Gardner Place,	119.42	46	⇓PKiKP	PKiKP	11 34 28.5 +2.1
	baz=119,SNR=8.3					
V14A	Boquillas Ranc	119.43	54	⇓PKiKP	PKiKP	11 34 29.1 +2.5
	baz=119,SNR=28					
AGO	Saint Agoulin	119.47	318	eP	PKPdf	11 34 28.8 +2.5
B20A	Solberg Farm,	119.50	39	⇓PKiKP	PKiKP	11 34 27.4 +1.0
	baz=119					
W14A	Seligman	119.52	55	⇑PKiKP	PKiKP	11 34 29.6 +2.8
	baz=120,SNR=13					
MVU	Marysvale	119.54	51	PFAKE		11 34 40.0 +13
MVU				LR	LR	
	comp=Z,942nm,21.0s,MS5.4					
N16A	Rees Ranch, Co	119.55	48	⇑PKiKP	PKiKP	11 34 28.9 +2.2
	baz=120,SNR=5.7					
R15A	Junction	119.55	51	⇓PKiKP	PKiKP	11 34 29.8 +3.0
	baz=120,SNR=5.9					
MSU	Marysvale	119.56	51	ePKPdf	PKPdf	11 34 29.9 +3.2
MSU	Marysvale	119.56	51	ePKIKP	PKPdf	11 34 30.0 +3.3
S15A	Panguitch	119.60	52	⇑PKiKP	PKiKP	11 34 29.9 +3.0
	baz=120,SNR=21					
JLU	Jordanelle	119.61	48	ePKPdf	PKPdf	11 34 28.3 +1.5
MPU	Maple Canyon	119.62	49	ePKPdf	PKPdf	11 34 28.5 +1.7
PYM	Petit Puy Mans	119.65	318	eP	PKPdf	11 34 29.1 +2.4
PYM	Petit Puy Mans	119.65	318	ePKIKP	PKPdf	11 34 29.1 +2.4
E19A	Rath Farm, Rou	119.72	41	⇑PKiKP	PKiKP	11 34 27.5 +0.7
	baz=120,SNR=12					
H18A	Shoshone NF, C	119.72	43	⇓PKiKP	PKiKP	11 34 28.7 +1.8
	baz=120,SNR=6.0					
T15A	Red Dirt Ranch	119.73	52	⇑PKiKP	PKiKP	11 34 29.3 +2.1
	baz=120,SNR=21					
DAU	Daniels Canyon	119.80	48	ePKPdf	PKPdf	11 34 29.4 +2.3
DAU	Daniels Canyon	119.80	48	ePKIKP	PKPdf	11 34 29.4 +2.3
Y14A	Wickenburg	119.81	56	⇓PKiKP	PKiKP	11 34 29.0 +1.6
	baz=120,SNR=9.9					
X14A	Yava	119.81	55	⇓PKiKP	PKiKP	11 34 29.7 +2.3
	baz=120,SNR=9.7					
F19A	Roth Farm, Mol	119.82	42	⇓PKiKP	PKiKP	11 34 28.3 +1.3
	baz=120,SNR=13					
RLMT	Red Lodge	119.84	43	ePKPdf	PKPdf	11 34 29.4 +2.4
RLMT				LR	LR	
	comp=Z,856nm,20.0s,MS5.4					
BORG	Borgarnes	119.89	345	PFAKE		11 34 40.0 +13
BORG				LR	LR	
	comp=Z,1μm,19.0s,MS5.5					
D20A	Manuel Ranch,	119.91	40	⇑PKiKP	PKiKP	11 34 27.8 +0.6
	baz=120,SNR=12					
I18A	Diamond G Ranc	119.92	44	⇑PKiKP	PKiKP	11 34 29.2 +1.8
	baz=120,SNR=10					
U15A	North Rim	119.92	53	⇓PKiKP	PKiKP	11 34 29.9 +2.4
	baz=120,SNR=42					
J18A	Kendall Valley	119.92	45	⇑PKiKP	PKiKP	11 34 28.8 +1.5
	baz=120,SNR=24					
M17A	Scullys Gap (B	119.95	47	⇓PKiKP	PKiKP	11 34 29.1 +1.6
	baz=120,SNR=13					
Z14A	Wintersburg	119.96	57	⇓PKiKP	PKiKP	11 34 29.7 +1.9
	baz=120,SNR=7.7					
N17A	Moffit Pass	119.97	48	⇓PKiKP	PKiKP	11 34 29.5 +2.0
	baz=120,SNR=24					
VERF	Verneugheol	120.00	318	eP	PKPdf	11 34 29.0 +1.7
K18A	Tonopah,	120.07	46	⇓PKiKP	PKiKP	11 34 29.6 +2.0
	baz=120,SNR=39					
FFC	Flin Flon	120.11	30	ePKPdf	PKPdf	11 34 27.7 +0.5
FFC				LR	LR	
	comp=Z,902nm,22.0s,MS5.4					
FFC	Flin Flon	120.11	30	ePKIKP	PKPdf	11 34 27.7 +0.5
FFC				MLR	MLR	
	comp=Z,902nm,22.0s,MS5.4					
114A	Black Gap (USA	120.11	57	⇑PKiKP	PKiKP	11 34 29.7 +1.6
	baz=120,SNR=19					
TMUT	Trail Mountain	120.11	50	ePKPdf	PKPdf	11 34 29.8 +2.1
E20A	Meyer Farm, Mu	120.13	41	⇓PKiKP	PKiKP	11 34 28.5 +0.9
	baz=120,SNR=8.8					
V15A	Kaibab Nationa	120.14	54	⇑PKiKP	PKiKP	11 34 30.5 +2.5
	baz=120,SNR=43					
R16A	Teasdale	120.15	51	⇑PKiKP	PKiKP	11 34 30.2 +2.2
	baz=120,SNR=18					
H19A	Powell	120.18	43	⇓PKiKP	PKiKP	11 34 30.1 +2.3
	baz=120,SNR=7.8					
W15A	Williams	120.19	54	⇓PKiKP	PKiKP	11 34 30.7 +2.6
	baz=120,SNR=7.6					
S16A	Weppner Ranch,	120.19	51	⇑PKiKP	PKiKP	11 34 29.9 +1.9
	baz=120,SNR=43					
Q16A	Castle Valley	120.23	50	⇑PKiKP	PKiKP	11 34 30.3 +2.2
	baz=120,SNR=8.4					
O17A	Robinson Place	120.24	48	⇓PKiKP	PKiKP	11 34 30.3 +2.3
	baz=120,SNR=39					
L18A	Fontenelle, Gr	120.28	46	⇑PKiKP	PKiKP	11 34 30.0 +1.9
	baz=120,SNR=58					
214A	Organ Pipe Nat	120.29	58	⇓PKiKP	PKiKP	11 34 30.3 +1.9
	baz=120,SNR=8.7					
C21A	Desert Coulee	120.30	39	⇑PKiKP	PKiKP	11 34 29.0 +1.0
	baz=120					
X15A	Humboldt	120.34	55	⇓PKiKP	PKiKP	11 34 30.6 +2.1
	baz=120,SNR=17					
Y15A	Casa Rosa Ranc	120.36	56	⇑PKiKP	PKiKP	11 34 30.3 +1.8
	baz=120,SNR=26					
BW06	Boulder Array	120.38	45	PFAKE		11 34 40.0 +12
BW06				LR	LR	
	comp=Z,1μm,21.0s,MS5.4					
I19A	Meeteetse	120.38	44	⇑PKiKP	PKiKP	11 34 29.6 +1.4
	baz=120,SNR=7.5					
PDAR	Pinedale Array	120.38	45	PKP	PKPdf	11 34 29.3 +1.1
	comp=Z,10nm,0.9s,baz=225,slow=0.3,SNR=63					
PDAR				PKKPbc	PKKPbc	11 44 35.5 -0.5
	comp=Z,1.3nm,0.7s,baz=109,slow=6.5,SNR=8.0					
M18A	Lyman	120.40	47	⇓PKiKP	PKiKP	11 34 30.3 +1.9
	baz=120,SNR=9.2					
T16A	Glen Canyon Da	120.42	52	⇓PKiKP	PKiKP	11 34 30.5 +1.9
	baz=120,SNR=12					
P17A	Butcher Ranch,	120.42	49	⇓PKiKP	PKiKP	11 34 30.2 +1.8
	baz=120,SNR=18					
G20A	Bridger	120.52	42	⇓PKiKP	PKiKP	11 34 30.3 +1.8
	baz=120,SNR=29					
J19A	Crowheart	120.58	45	⇑PKiKP	PKiKP	11 34 30.3 +1.7
	baz=120,SNR=39					
SRU	San Rafael	120.67	50	ePKPdf	PKPdf	11 34 30.1 +1.2
SRU	San Rafael	120.67	50	ePKIKP	PKPdf	11 34 30.1 +1.3
R17A	Hanksville Air	120.70	50	⇓PKiKP	PKiKP	11 34 30.7 +1.6
	baz=121,SNR=50					
L19A	Farson	120.72	46	⇓PKiKP	PKiKP	11 34 30.7 +1.7
	baz=121,SNR=23					
P18A	Preston Nutter	120.75	49	⇓PKiKP	PKiKP	11 34 31.2 +2.1
	baz=121,SNR=15					
O18A	Roosevelt	120.76	48	⇓PKiKP	PKiKP	11 34 31.2 +2.1
	baz=121,SNR=16					
S17A	Black Ridge (B	120.82	51	⇑PKiKP	PKiKP	11 34 30.9 +1.6
	baz=121,SNR=27					
K19A	Absolon Red Bu	120.86	45	⇓PKiKP	PKiKP	11 34 30.5 +1.3
	baz=121,SNR=40					
U16A	Tuba City	120.90	53	⇑PKiKP	PKiKP	11 34 31.8 +2.3
	baz=121,SNR=36					
H20A	Greybull	120.91	43	⇑PKiKP	PKiKP	11 34 30.4 +1.2
	baz=121,SNR=13					
T17A	Navajo Res., N	120.96	52	⇑PKiKP	PKiKP	11 34 32.2 +2.7
	baz=121,SNR=68					
Q18A	Rafter H Ranch	120.97	50	⇑PKiKP	PKiKP	11 34 31.1 +1.6
	baz=121,SNR=24					
I20A	Worland	121.00	44	⇑PKiKP	PKiKP	11 34 30.9 +1.5
	baz=121,SNR=33					
X16A	Lo Mia Camp, P	121.00	55	⇓PKiKP	PKiKP	11 34 31.6 +1.9
	baz=121,SNR=23					
C22A	Vida	121.08	39	⇑PKiKP	PKiKP	11 34 30.9 +1.4
	baz=121					
116A	Eloy	121.12	57	⇓PKiKP	PKiKP	11 34 31.8 +1.8
	baz=121,SNR=17					
D22A	Cohagen	121.13	40	⇑PKiKP	PKiKP	11 34 31.3 +1.8
	baz=121					
N19A	John Jarvie Ra	121.19	47	⇑PKiKP	PKiKP	11 34 31.3 +1.4
	baz=121,SNR=9.8					
A23A	Redstone	121.20	37	⇓PKiKP	PKiKP	11 34 30.9 +1.2
	baz=121					
Z16A	Peralta Trail,	121.21	56	⇑PKiKP	PKiKP	11 34 32.1 +1.9
	baz=121,SNR=12					
J20A	Shoshoni	121.22	44	⇑PKiKP	PKiKP	11 34 31.8 +1.9
	baz=121,SNR=7.6					
K20A	Yellowstone Ra	121.26	45	⇓PKiKP	PKiKP	11 34 31.2 +1.2
	baz=121,SNR=25					
V17A	Tonalea, Kykot	121.27	54	⇑PKiKP	PKiKP	11 34 32.1 +1.9
	baz=121,SNR=22					
LAO	LASA Array	121.28	40	ePKPdf	PKPdf	11 34 31.4 +1.6
LAO				LR	LR	
	comp=Z,847nm,20.0s,MS5.4					
CFON	Fontmartina	121.30	314	PKP	PKPdf	11 34 32.5 +2.5
R18A	Canyonlands Na	121.33	50	⇑PKiKP	PKiKP	11 34 31.7 +1.4
	baz=121,SNR=36					
O19A	Miners Draw (B	121.40	48	⇑PKiKP	PKiKP	11 34 31.8 +1.4
	baz=121,SNR=22					
CLLI	Llivia	121.41	315	PKP	PKPdf	11 34 31.9 +1.7
216A	Three Points,	121.42	58	⇑PKiKP	PKiKP	11 34 32.7 +2.1
	baz=121,SNR=9.4					
S18A	Hurst Farm, Bl	121.43	51	⇑PKiKP	PKiKP	11 34 32.2 +1.8
	baz=121,SNR=39					
W17A	Winslow	121.45	54	⇓PKiKP	PKiKP	11 34 33.1 +2.5
	baz=121,SNR=9.0					
L20A	Wamsutter	121.47	46	⇑PKiKP	PKiKP	11 34 32.2 +1.8
	baz=121,SNR=22					
C23A	Lambert	121.50	39	⇓PKiKP	PKiKP	11 34 32.3 +2.0
	baz=121					
H21A	Big Horn, Sher	121.50	43	⇑PKiKP	PKiKP	11 34 31.8 +1.4
	baz=121,SNR=9.1					
X17A	Forest Lakes	121.53	55	PKiKP	PKiKP	11 34 33.2 +2.4
	baz=122,SNR=19					
I21A	Big Trails, Te	121.61	44	PKiKP	PKiKP	11 34 31.6 +1.0
	baz=122,SNR=26					
Y17A	Roosevelt	121.62	56	PKiKP	PKiKP	11 34 33.1 +2.1
	baz=122,SNR=19					
T18A	Mexican Hat	121.66	52	⇓PKiKP	PKiKP	11 34 33.2 +2.2
	baz=122,SNR=50					
J21A	Lysite	121.66	44	PKiKP	PKiKP	11 34 32.0 +1.3
	baz=122,SNR=24					
Q19A	Hogan Spring (	121.66	50	⇑PKiKP	PKiKP	11 34 33.1 +2.2
	baz=122,SNR=33					
M20A	Sweetwater, Wa	121.73	46	⇑PKiKP	PKiKP	11 34 32.8 +1.8
	baz=122,SNR=14					
A24A	Westby	121.74	37	⇑PKiKP	PKiKP	11 34 32.0 +1.3
	baz=122					
DGMT	Dagmar	121.82	38	ePKPdf	PKPdf	11 34 32.1 +1.4
DGMT				LR	LR	
	comp=Z,1μm,22.0s,MS5.5					
U18A	Rough Rock, Ch	121.83	53	⇑PKiKP	PKiKP	11 34 33.6 +2.3
	baz=122					
R19A	Curley Farm, L	121.84	50	⇑PKiKP	PKiKP	11 34 33.2 +1.9
	baz=122,SNR=14					
N20A	Spence Gulch,	121.88	47	⇑PKiKP	PKiKP	11 34 33.3 +2.1
	baz=122,SNR=44					
SFJD	Kangerlussuaq	121.91	359	ePKPdf	PKPdf	11 34 30.6 +0.2
SFJD				LR	LR	
	comp=Z,760nm,22.0s,MS5.3					
SFJD	Kangerlussuaq	121.91	359	ePKIKP	PKPdf	11 34 30.6 +0.2
SFJD				MLR	MLR	
	comp=Z,760nm,22.0s,MS5.3					
117A	Oracle	121.92	57	⇑PKiKP	PKiKP	11 34 33.5 +1.9
	baz=122,SNR=11					
TUC	Tucson	121.93	57	ePKPdf	PKPdf	11 34 33.1 +1.6
TUC				LR	LR	
	comp=Z,784nm,20.0s,MS5.4					
TUC	Tucson	121.93	57	ePKIKP	PKPdf	11 34 33.1 +1.6
TUC				MLR	MLR	
	comp=Z,784nm,20.0s,MS5.4					
V18A	Ganado	121.94	53	⇑PKiKP	PKiKP	11 34 34.1 +2.6
	baz=122,SNR=22					
CSOR	Sort	122.03	315	PKP	PKPdf	11 34 33.1 +1.7
K21A	Alcova	122.03	45	PKiKP	PKiKP	11 34 32.9 +1.4
	baz=122,SNR=48					
S19A	Harvey Farm, M	122.07	51	⇓PKiKP	PKiKP	11 34 33.5 +1.8
	baz=122					
PV04	Paradox Valley	122.08	50	ePKPdf	PKPdf	11 34 33.7 +2.1
O20A	White River Ci	122.10	48	PKiKP	PKiKP	11 34 33.9 +2.2
	baz=122,SNR=61					
L21A	Rawlins	122.17	46	⇓PKiKP	PKiKP	11 34 33.4 +1.6
	baz=122,SNR=43					
P20A	De Beque	122.17	49	⇑PKiKP	PKiKP	11 34 34.0 +2.1
	baz=122,SNR=41					
X18A	Snowflake	122.18	55	⇑PKiKP	PKiKP	11 34 34.2 +2.1
	baz=122,SNR=11					
TAM	Tamanrasset	122.24	291	PFAKE		11 34 50.0 +18
TAM				LR	LR	
	comp=Z,911nm,19.0s,MS5.5					
M21A	Separation Pea	122.28	46	⇓PKiKP	PKiKP	11 34 33.8 +1.8
	baz=122,SNR=44					
J22A	Midwest	122.30	44	⇑PKiKP	PKiKP	11 34 33.1 +1.1
	baz=122,SNR=59					
RWWY	Rawlins	122.37	46	ePKPdf	PKPdf	11 34 33.3 +1.3
U19A	Dine' College,	122.38	53	⇑PKiKP	PKiKP	11 34 34.6 +2.2
	baz=122,SNR=13					
T19A	Beclabito	122.39	52	⇑PKiKP	PKiKP	11 34 34.4 +2.0
	baz=122,SNR=8.0					
Q20A	Ridgley Place,	122.39	49	PKiKP	PKiKP	11 34 34.5 +2.1
	baz=122,SNR=41					
EPOB	Poblet	122.40	314	PKP	PKPdf	11 34 33.3 +1.2
PV01	Paradox Valley	122.41	50	ePKPdf	PKPdf	11 34 34.6 +2.4
N21A	Black Mountain	122.44	47	⇑PKiKP	PKiKP	11 34 34.6 +2.3
	baz=122,SNR=18					
K22A	Casper	122.53	45	⇓PKiKP	PKiKP	11 34 33.7 +1.2
	baz=122,SNR=21					
R20A	Redvale	122.54	50	⇓PKiKP	PKiKP	11 34 35.0 +2.4
	baz=122,SNR=31					
118A	Homack Ranch,	122.55	57	⇓PKiKP	PKiKP	11 34 34.9 +2.0
	baz=122,SNR=19					
EBIE	Bielsa	122.62	315	PKP	PKPdf	11 34 34.6 +2.2
O21A	Pagoda	122.64	48	⇑PKiKP	PKiKP	11 34 35.1 +2.3
	baz=123,SNR=14					
V19A	Window Rock	122.64	53	⇓PKiKP	PKiKP	11 34 35.6 +2.7
	baz=123,SNR=8.7					
S20A	Disappointment	122.65	51	⇓PKiKP	PKiKP	11 34 35.4 +2.6
	baz=123,SNR=27					
X19A	St. Johns	122.74	55	⇓PKiKP	PKiKP	11 34 35.5 +2.3
	baz=123,SNR=12					
318A	Bisbee	122.75	58	⇑PKiKP	PKiKP	11 34 35.3 +2.0
	baz=123,SNR=20					
Y19A	Nutrioso	122.87	55	⇑PKiKP	PKiKP	11 34 36.1 +2.6
	baz=123,SNR=20					
U20A	Newcomb	122.89	52	⇓PKiKP	PKiKP	11 34 35.7 +2.3
	baz=123,SNR=5.5					
M22A	Cedar Creek Ra	122.90	46	⇓PKiKP	PKiKP	11 34 35.1 +1.9
	baz=123,SNR=16					
Q21A	Lamborn Mesa,	122.97	49	⇓PKiKP	PKiKP	11 34 35.7 +2.2
	baz=123,SNR=48					
ERTA	Horta de San J	123.06	313	PKP	PKPdf	11 34 34.5 +1.1
119A	Ashpeak Ranch,	123.07	57	⇓PKiKP	PKiKP	11 34 36.2 +2.3
	baz=123,SNR=15					
V20A	Brimhall	123.08

ECHE	Chera	124.44	312	PKP	PKPdf	11 34 37.7	+1.6
ECHE	Chera	124.44	312	PKIKP	PKPdf	11 34 37.7	+1.6
LAZ	Ladron	124.47	54	ePKPdf	PKPdf	11 34 38.9	+2.6
S23A	Nye Farm, Mont	124.47	50	⇓PKiKP	PKiKP	11 34 39.5	+3.0
	baz=124,SNR=15						
221A	Mesquite Ranch	124.49	57	⇓PKiKP	PKiKP	11 34 39.0	+2.4
	baz=124,SNR=9.8						
X22A	Bernardo	124.55	54	⇑PKiKP	PKiKP	11 34 39.5	+2.8
	baz=124						
T23A	Casias Ranch,	124.64	51	PKiKP	PKiKP	11 34 39.3	+2.5
	baz=125,SNR=39						
LENM	Lemitar	124.66	54	ePKPdf	PKPdf	11 34 39.1	+2.4
LENM				ePP	PP	11 36 30.1	+6.1
U23A	El Rito	124.72	52	PKiKP	PKiKP	11 34 39.3	+2.3
	baz=125,SNR=31						
Y22A	Socorro	124.72	55	⇓PKiKP	PKiKP	11 34 39.4	+2.3
	baz=125,SNR=28						
Q24A	Divide	124.73	48	⇓PKiKP	PKiKP	11 34 38.9	+2.0
	baz=125						
SDCO	Great Sand Dun	124.84	50	ePKPdf	PKPdf	11 34 39.0	+2.1
SDCO				LR	LR		
	comp=Z,807nm,22.0s,MS5.3						
ELAN	Lanestosa	124.86	317	PKP	PKPdf	11 34 38.3	+1.6
ANMO	Albuquerque	124.88	53	PKP	PKPdf	11 34 39.3	+2.3
	comp=Z,23nm,1.0s,baz=171,slow=1.3,SNR=61						
ANMO	Albuquerque	124.88	53	ePKPdf	PKPdf	11 34 38.8	+1.8
ANMO				LR	LR		
	comp=Z,895nm,20.0s,MS5.4						
ANMO	Albuquerque	124.88	53	ePKIKP	PKPdf	11 34 38.8	+1.8
ANMO				MLR	MLR		
	comp=Z,895nm,20.0s						
Z22A	Elephant Butte	124.89	56	⇓PKiKP	PKiKP	11 34 39.6	+2.2
	baz=125,SNR=38						
V23A	Ortiz Mt. (NFS	124.89	52	PKiKP	PKiKP	11 34 40.0	+2.7
	baz=125,SNR=25						
LPM	Los Pinos Moun	124.90	54	ePKPdf	PKPdf	11 34 39.2	+2.1
BNM	Barren Site	124.94	54	ePKPdf	PKPdf	11 34 39.3	+2.1
122A	Conniff Cattle	124.98	56	⇓PKiKP	PKiKP	11 34 40.1	+2.4
	baz=125,SNR=7.6						
222A	Williams Famil	125.03	57	⇑PKiKP	PKiKP	11 34 40.1	+2.3
	baz=125						
W23A	Werner Place,	125.07	53	⇑PKiKP	PKiKP	11 34 40.0	+2.3
	baz=125						
CART	Cartagena	125.09	310	ePKPdf	PKPdf	11 34 38.4	+1.1
S24A	Houchin Ranch,	125.09	50	⇓PKiKP	PKiKP	11 34 40.3	+2.6
	baz=125						
O25A	Wiggins	125.10	47	⇓PKiKP	PKiKP	11 34 39.3	+1.6
	baz=125						
ETOB	Tobarra	125.17	311	PKP	PKPdf	11 34 38.9	+1.4
EMUR	La Murta	125.19	310	PKP	PKPdf	11 34 38.4	+0.9
T24A	Torres, Weston	125.39	51	⇓PKiKP	PKiKP	11 34 40.7	+2.4
	baz=125						
Q25A	Bedland, Calha	125.41	48	⇑PKiKP	PKiKP	11 34 40.1	+1.7
	baz=125						
Y23A	Lovelace Mesa,	125.46	55	⇑PKiKP	PKiKP	11 34 40.4	+1.9
	baz=125						
Z23A	Rita Site, Whi	125.48	55	⇑PKiKP	PKiKP	11 34 40.8	+2.2
	baz=125						
123A	Bell Site, Whi	125.60	56	⇑PKiKP	PKiKP	11 34 40.9	+2.0
	baz=126						
V24A	Rampart Ranch,	125.61	52	⇑PKiKP	PKiKP	11 34 41.2	+2.4
	baz=126						
R25A	Fountain Ranch	125.63	49	⇓PKiKP	PKiKP	11 34 40.4	+1.6
	baz=126						
W24A	Lazy 6 Ranch,	125.64	53	⇓PKiKP	PKiKP	11 34 40.8	+2.0
	baz=126						
ULM	Lac du Bonnet	125.66	32	PKP	PKPdf	11 34 38.1	+0.1
	comp=Z,23nm,1.0s,baz=316,slow=2.2,SNR=11						
ULM	Lac du Bonnet	125.66	32	ePKPdf	PKPdf	11 34 38.0	0.0
ULM				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
S25A	Robets Cordova	125.67	50	⇑PKiKP	PKiKP	11 34 40.7	+1.9
	baz=126						
T25A	Trinidad	125.85	50	⇑PKiKP	PKiKP	11 34 41.2	+2.0
	baz=126						
EVIA	Vianos	125.88	312	PKP	PKPdf	11 34 40.7	+1.9
EVIA	Vianos	125.88	312	PKIKP	PKPdf	11 34 40.7	+1.9
Y24A	Capitan	125.96	54	⇑PKiKP	PKiKP	11 34 41.6	+2.1
	baz=126						
U25A	Circle Dot Ran	126.08	51	⇑PKiKP	PKiKP	11 34 41.7	+2.0
	baz=126						
V25A	Rancho No Teng	126.08	52	⇑PKiKP	PKiKP	11 34 41.9	+2.1
	baz=126						
TORD	Torodi Ar. Bea	126.10	280	PKP	PKPdf	11 34 41.1	+1.2
	comp=Z,43nm,1.0s,baz=83,slow=1.9,SNR=121						
Z24A	Sheeppen Canyo	126.17	55	⇓PKiKP	PKiKP	11 34 41.9	+1.9
	baz=126						
EHUE	Huescar	126.22	311	PKP	PKPdf	11 34 40.9	+1.4
EHUE	Huescar	126.22	311	PKIKP	PKPdf	11 34 40.9	+1.4
124A	Stringfield Ra	126.25	56	⇓PKiKP	PKiKP	11 34 42.3	+2.2
	baz=126						
OGNE	Ogallala	126.28	45	ePKPdf	PKPdf	11 34 40.8	+1.2
OGNE				LR	LR		
	comp=Z,906nm,20.0s,MS5.4						
224A	Cornudas Mount	126.34	57	⇓PKiKP	PKiKP	11 34 42.1	+1.8
	baz=126						
GUD	Guadarrama	126.36	315	PKP	PKPdf	11 34 41.3	+1.6
GUD	Guadarrama	126.36	315	PKIKP	PKPdf	11 34 41.3	+1.6
W25A	X Bar L Ranch,	126.38	53	⇑PKiKP	PKiKP	11 34 42.2	+1.9
	baz=126						
324A	Moseley Ranch,	126.52	57	⇓PKiKP	PKiKP	11 34 42.4	+1.7
	baz=126						
MNTX	Cornudas Mount	126.55	57	ePKPdf	PKPdf	11 34 42.4	+2.1
MNTX				LR	LR		
	comp=Z,797nm,21.0s,MS5.4						
Y25A	Mesa, Roswell	126.56	54	⇓PKiKP	PKiKP	11 34 42.3	+1.5
	baz=126						
EQES	Quesada	126.58	311	PKP	PKPdf	11 34 41.2	+1.0
ESDC	Sonseca Array	126.58	313	PKP	PKPdf	11 34 41.2	+1.1
	comp=Z,10nm,1.0s,baz=26,slow=2.2,SNR=27						
ESDC				PP	PP	11 36 31.9	-4.6
	comp=Z,1.1nm,0.5s,baz=72,slow=4.7,SNR=5.3						
ESDC	Sonseca Array	126.58	313	PKP	PKPdf	11 34 41.4	+1.2
ESLA	Sonseca Array	126.58	313	ePKPdf	PKPdf	11 34 41.0	+0.8
ESLA				LR	LR		
	comp=Z,4μm,22.0s,MS6.0						
U26A	Atchley Ranch,	126.59	51	⇑PKiKP	PKiKP	11 34 42.5	+1.8
	baz=126						
Z25A	Roswell	126.70	55	⇓PKiKP	PKiKP	11 34 42.9	+1.8
	baz=127						
EBER	Berja	126.73	310	PKP	PKPdf	11 34 42.1	+1.5
V26A	Tequesquite Ra	126.74	52	⇑PKiKP	PKiKP	11 34 42.3	+1.3
	baz=127						
AGMN	Agassiz Nation	126.75	34	ePKPdf	PKPdf	11 34 39.8	-0.4
AGMN				LR	LR		
	comp=Z,1μm,22.0s,MS5.5						
PAB	San Pablo	126.91	313	ePKPdf	PKPdf	11 34 42.5	+1.7
PAB				ePP	PP	11 36 37.0	-1.6
PAB	San Pablo	126.91	313	ePKIKP	PKPdf	11 34 42.5	+1.7
PAB				e		11 36 37.0	
125A	Gardner Draw,	126.91	56	⇓PKiKP	PKiKP	11 34 42.7	+1.2
	baz=127						
225A	Deer Hill, Car	126.91	56	⇑PKiKP	PKiKP	11 34 43.1	+1.6
	baz=127						
325A	Bean Ranch, Si	126.96	57	⇓PKiKP	PKiKP	11 34 42.9	+1.2
	baz=127						
W26A	Owens Ranch, T	126.97	53	⇑PKiKP	PKiKP	11 34 43.2	+1.6
	baz=127						
EBAN	Banos Encina	126.99	312	PKP	PKPdf	11 34 42.5	+1.5
EBAN	Banos Encina	126.99	312	PKIKP	PKPdf	11 34 42.5	+1.5
425A	Indio Mountain	127.08	58	⇑PKiKP	PKiKP	11 34 43.5	+1.6
	baz=127						
X26A	CR and CF Fran	127.09	53	⇓PKiKP	PKiKP	11 34 43.7	+1.9
	baz=127						
ECOG	Cogollos-Vega	127.12	310	PKP	PKPdf	11 34 42.0	+0.8
ECOG	Cogollos-Vega	127.12	310	PKIKP	PKPdf	11 34 42.0	+0.7
EALB	Alboran	127.15	309	PKP	PKPdf	11 34 42.4	+1.0
GDL2	Guadalupe Moun	127.27	56	ePKPdf	PKPdf	11 34 43.7	+2.0
EGUA	Guajares	127.27	310	PKP	PKPdf	11 34 42.4	+0.8
EGUA	Guajares	127.27	310	PKIKP	PKPdf	11 34 42.4	+0.8
EPON	Pontenova	127.28	319	PKP	PKPdf	11 34 42.5	+1.1
Z26A	Caprock	127.30	55	⇓PKiKP	PKiKP	11 34 43.4	+1.1
	baz=127						
ERON	Agron	127.39	310	PKP	PKPdf	11 34 42.8	+1.1
126A	Clayton Basin,	127.43	56	⇓PKiKP	PKiKP	11 34 43.9	+1.4
	baz=127						
CPRX	Cap Rock	127.46	55	ePKPdf	PKPdf	11 34 43.1	+1.1
226A	Malaga, Loving	127.52	56	⇑PKiKP	PKiKP	11 34 44.2	+1.4
	baz=128						
W27A	Bowe Ranch, En	127.52	52	⇓PKiKP	PKiKP	11 34 43.9	+1.3
	baz=128						
ELUQ	Luque	127.55	311	PKP	PKPdf	11 34 43.5	+1.4
ELUQ	Luque	127.55	311	PKIKP	PKPdf	11 34 43.5	+1.4
EADA	Adamuz	127.57	312	PKP	PKPdf	11 34 44.0	+1.9
ELOJ	Sierra Loja	127.61	310	PKP	PKPdf	11 34 43.5	+1.3
ELOJ	Sierra Loja	127.61	310	PKIKP	PKPdf	11 34 43.5	+1.3
ECAL	Calabor	127.61	317	PKP	PKPdf	11 34 43.9	+1.9
CLNB	Carlsbad	127.65	56	ePKPdf	PKPdf	11 34 44.5	+2.1
ERUA	La Rua	127.69	318	PKP	PKPdf	11 34 43.6	+1.5
ERUA	La Rua	127.69	318	PKIKP	PKPdf	11 34 43.6	+1.4
Y27A	Causey	127.79	54	⇑PKiKP	PKiKP	11 34 44.4	+1.2
	baz=128						
326A	Caldwell Ranch	127.80	57	⇓PKiKP	PKiKP	11 34 44.6	+1.3
	baz=128						
Z27A	Tatum	127.91	54	⇓PKiKP	PKiKP	11 34 44.9	+1.4
	baz=128						
EPLA	Plasencia	127.94	315	PKP	PKPdf	11 34 44.2	+1.5
EPLA	Plasencia	127.94	315	PKIKP	PKPdf	11 34 44.2	+1.5
127A	Arkansas Junct	127.97	55	⇑PKiKP	PKiKP	11 34 45.5	+1.9
	baz=128						
526A	Mary Lane Ranc	128.00	59	⇓PKiKP	PKiKP	11 34 45.3	+1.5
	baz=128						
MSTX	Muleshoe	128.08	54	⇓PKiKP	PKiKP	11 34 44.9	+1.1
	baz=128						
PLCA	Paso Flores	128.11	163	PKP	PKPdf	11 34 44.6	+1.5
	comp=Z,17nm,0.9s,baz=221,slow=3.5,SNR=26						
PLCA	Paso Flores	128.11	163	ePKPdf	PKPdf	11 34 45.4	+2.3
PLCA	Paso Flores	128.11	163	ePKIKP	PKPdf	11 34 45.4	+2.3
MVO	Moncorvo	128.14	316	ePKPdf	PKPdf	11 34 45.5	+2.4
MVO	Moncorvo	128.14	316	PKP	PKPdf	11 34 45.3	+2.2
ECAB	El Cabril	128.22	312	PKP	PKPdf	11 34 45.5	+2.1
EMIJ	Mijas	128.27	310	PKP	PKPdf	11 34 44.7	+1.2
527A	Woodward Ranch	128.38	58	⇑PKiKP	PKiKP	11 34 46.0	+1.5
	baz=128						
STS	Santiago	128.39	319	PKP	PKPdf	11 34 45.8	+2.3
STS	Santiago	128.39	319	PKIKP	PKPdf	11 34 45.8	+2.3
427A	Hayter Ranch,	128.39	58	⇑PKiKP	PKiKP	11 34 46.0	+1.5
	baz=128						
TXAR	Lajitas Array	128.52	60	PKP	PKPdf	11 34 44.8	+0.6
	comp=Z,9.7nm,1.0s,baz=282,slow=1.8,SNR=38						
TXAR				PP	PP	11 36 46.5	-3.3
	comp=Z,3.8nm,0.9s,baz=282,slow=4.5,SNR=4.8						
TXAR	Lajitas Array	128.52	60	PKIKP	PKPdf	11 34 44.8	+0.6
TXAR						11 36 46.5	
EMAZ	Mazaricos	128.64	319	PKP	PKPdf	11 34 46.3	+2.4
AMTX	Amarillo	128.66	52	ePKPdf	PKPdf	11 34 46.1	+1.8
AMTX				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
ECSD	EROS Data Cent	128.68	40	ePKPdf	PKPdf	11 34 44.6	+0.5
ECSD				LR	LR		
	comp=Z,994nm,22.0s,MS5.5						
627A	Terlingua Ranc	128.73	59	⇓PKiKP	PKiKP	11 34 46.8	+1.5
	baz=129						
CBKS	Cedar Bluff	128.73	47	ePKPdf	PKPdf	11 34 45.7	+1.4
CBKS				LR	LR		
	comp=Z,959nm,20.0s,MS5.5						
CBKS	Cedar Bluff	128.73	47	ePKIKP	PKPdf	11 34 45.7	+1.4
CBKS				MLR	MLR		
	comp=Z,959nm,20.0s,MS5.5						
328A	Wristen Ranch,	128.75	57	⇓PKiKP	PKiKP	11 34 46.6	+1.4
	baz=129						
MTE	Manteigas	128.82	316	ePKPdf	PKPdf	11 34 46.7	+2.3
MTE	Manteigas	128.82	316	PFAKE		11 35 00.0	+16
MTE				LR	LR		
	comp=Z,870nm,21.0s,MS5.4						
EJIF	Jimena Fronter	128.84	310	PKP	PKPdf	11 34 45.9	+1.4
EJIF	Jimena Fronter	128.84	310	PKIKP	PKPdf	11 34 45.9	+1.3
PVIS	Viseu	128.93	316	ePKPdf	PKPdf	11 34 47.0	+2.4
ESPR	Espera	128.98	311	PKP	PKPdf	11 34 46.8	+1.9
PCBR	Castelo Branco	129.01	315	ePKPdf	PKPdf	11 34 47.1	+2.3
428A	Kincaid Ranch,	129.02	58	⇓PKiKP	PKiKP	11 34 48.1	+2.3
	baz=129						
528A	Cox Ranch, San	129.07	58	⇑PKiKP	PKiKP	11 34 47.5	+1.6
	baz=129						
PMRV	Marv??o	129.12	314	ePKPdf	PKPdf	11 34 46.6	+1.6
EBAD	Badajoz	129.12	313	PKP	PKPdf	11 34 46.7	+1.7
628A	Black Gap, Mar	129.15	59	⇑PKiKP	PKiKP	11 34 47.5	+1.4
	baz=129						
EMIN	Mina Concepcio	129.26	312	PKP	PKPdf	11 34 47.6	+2.2
MDT	Midelt	129.33	305	PKP	PKPdf	11 34 47.6	+2.0
	comp=Z,23nm,1.1s,baz=66,slow=2.6,SNR=23						
EYMN	Ely	129.34	33	ePKPdf	PKPdf	11 34 45.9	+0.7
EYMN				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
PBAR	Barrancos	129.37	313	ePKPdf	PKPdf	11 34 47.4	+1.9
SFS	San Fernando	129.39	310	PFAKE		11 35 00.0	+14
SFS				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
EGRO	El Granado	129.94	312	PKP	PKPdf	11 34 48.7	+2.1
PVAQ	Vaqueiros	130.16	312	ePKPdf	PKPdf	11 34 49.4	+2.3
PCVE	Castro Verde	130.31	313	ePKPdf	PKPdf	11 34 50.8	+3.5
PBDV	Barranco-do-Ve	130.38	312	ePKPdf	PKPdf	11 34 51.3	+3.8
KSU1	Kansas State U	130.83	45	ePKPdf	PKPdf	11 34 49.0	+0.7
KSU1				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
MORF	Marmelete	130.88	312	ePKPdf	PKPdf	11 34 52.0	+3.6
WMOK	Wichita Mounta	130.96	51	ePKPdf	PKPdf	11 34 50.5	+1.8
WMOK				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
WMOK	Wichita Mounta	130.96	51	ePKIKP	PKPdf	11 34 50.5	+1.9
WMOK				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.6						
PFVI	Vila Bisbo	131.08	312	PKP	PKPdf	11 34 50.8	+2.0
JCT	Junction City	131.48	57	ePKPdf	PKPdf	11 34 51.1	+1.3
JCT				eSKPbc	SKPbc	11 38 17.5	+5.4
JCT				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
JCT	Junction City	131.48	57	ePKIKP	PKPdf	11 34 51.1	+1.3
JCT				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.6						
SCIA	State Center	131.76	40	ePKPdf	PKPdf	11 34 51.4	+1.4
SCIA				LR	LR		
	comp=Z,784nm,20.0s,MS5.4						
KIC	Kosan Boka	132.01	271	ePKP1	PKPdf	11 34 52.5	+1.3
	comp=Z,75nm,1.0s						
DBIC	Dimbokro	132.15	271	PKP	PKPdf	11 34 52.5	+1.0
	comp=Z,5.4nm,0.7s,baz=76,slow=3.2,SNR=3.7						
DBIC				PP	PP	11 37 13.6	-0.3
	comp=Z,9.7nm,1.2s,baz=87,slow=9.6,SNR=1.8						
DBIC	Dimbokro	132.15	271	ePKPdf	PKPdf	11 34 53.3	+1.8
DBIC				eSKPbc	SKPbc	11 38 20.8	+5.8
DBIC				LR	LR		
	comp=Z,1μm,19.0s,MS5.6						
DBIC	Dimbokro	132.15	271	ePKIKP	PKPdf	11 34 53.3	+1.8
DBIC				MLR	MLR		
	comp=Z,1μm,19.0s						
LIC	Lamto	132.28	270	ePKP1	PKPdf	11 34 53.0	+1.3
	comp=Z,130nm,1.1s						
TIC	Toumodi	132.31	271	ePKP1	PKPdf	11 34 54.0	+2.2
	comp=Z,103nm,1.1s						
TIC	Toumodi	132.31	271	ePKIKP	PKPdf	11 34 54.0	+2.2
TRQA	Tornquist	132.62	170	ePKPdf	PKPdf	11 34 53.7	+2.0
TRQA				LR	LR		
	comp=Z,1μm,21.0s,MS5.6						
SCHQ	Schefferville	132.85	11	PKP	PKPdf	11 34 53.2	+1.6
	comp=Z,8.8nm,0.9s,baz=8.7,slow=1.6,SNR=4.5						
SCHQ	Schefferville	132.85	11	PKP	PKPdf	11 34 53.2	+1.6
SCHQ				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
JFWS	Jewell Farm	133.04	37	ePKPdf	PKPdf	11 34 52.7	+0.3
JFWS				eSKPbc	SKPbc	11 38 18.8	+1.7
JFWS				LR	LR		
	comp=Z,851nm,19.0s,MS5.5						
JFWS	Jewell Farm	133.04	37	ePKIKP	PKPdf	11 34 52.7	+0.4
JFWS				MLR	MLR		
	comp=Z,851nm,19.0s,MS5.5						
KVTX	Kingsville	133.88	60	PFAKE		11 35 10.0	+16
KVTX				LR	LR		
	comp=Z,1μm,19.0s,MS5.6						
GLMI	Grayling	134.99	32	PFAKE		11 35 10.0	+14
GLMI				LR	LR		
	comp=Z,861nm,19.0s,MS5.5						
NATX	Nacogdoches	135.25	53	PFAKE		11 35 10.0	+13
NATX				LR	LR		
	comp=Z,945nm,22.0s,MS5.5						
UALR	University of	135.81	48	ePKPdf	PKPdf	11 35 00.4	+2.6
SIUC	Southern Illin	136.58	43	ePKPdf	PKPdf	11 35 00.3	+1.2
SIUC				eSKPab		11 38 37.2	
OLIL	Olney	136.76	41	ePKPdf	PKPdf	11 35 01.1	+1.6
GNAR	Gosnell	136.93	45	ePKPdf	PKPdf	11 35 00.5	+0.7
AAM	Ann Arbor	137.22	34	PFAKE		11 35 10.0	+10
AAM				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
GLAT	Glass	137.28	45	ePKPdf	PKPdf	11 35 01.2	+0.8
SADO	Sadowa	137.72	28	PKP	PKPdf	11 35 02.2	+1.3
	comp=Z,15nm,0.9s,baz=314,slow=3.3,SNR=6.8						
OXF	Oxford	138.07	47	ePKPpre	PKPpre	11 34 51.6	
OXF				ePKPdf	PKPdf	11 35 02.8	+0.8
OXF				LR	LR		
	comp=Z,991nm,21.0s,MS5.5						
OXF	Oxford	138.07	47	ePKHKP	PKPpre	11 34 51.6	
OXF				e		11 35 02.8	
OXF				MLR	MLR		
	comp=Z,991nm,21.0s,MS5.5						
VBMS	Vicksburg	138.29	51	ePKPdf	PKPdf	11 35 03.5	+1.0
VBMS				eSKP		11 38 40.1	
VBMS				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
WVT	Waverly	138.36	44	PFAKE		11 35 20.0	+18
WVT				LR	LR		
	comp=Z,734nm,20.0s,MS5.4						
CFTV	Fuerteventura	138.46	303	PKP	PKPdf	11 35 05.0	+2.1
CMIG	Matias Romero	138.56	74	PKhKP	PKPpre	11 34 56.3	
	comp=Z,3.1nm,0.7s,baz=284,slow=4.1,SNR=3.6						
CMIG				PKP	PKPdf	11 35 04.7	+1.3
	comp=Z,7.6nm,0.7s,baz=265,slow=2.4,SNR=8.2						
CMIG	Matias Romero	138.56	74	PKP	PKPdf	11 35 04.7	+1.3
LCO	Las Campanas	138.72	156	ePKPdf	PKPdf	11 35 05.9	+2.5
LCO				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
ERPA	Erie	139.29	31	PFAKE		11 35 20.0	+16
ERPA				LR	LR		
	comp=Z,981nm,21.0s,MS5.5						
MSNY	Massena	139.37	24	ePKPdf	PKPdf	11 35 05.2	+1.2
EOSO	Osorio	139.79	303	PKP	PKPdf	11 35 07.1	+1.8
LONY	Lake Ozonia	139.80	24	ePKPdf	PKPdf	11 35 05.0	+0.2
LONY				LR	LR		
	comp=Z,974nm,22.0s,MS5.5						
SWET	Sewanee	140.16	44	ePKPpre	PKPpre	11 35 00.9	
NCB	Newcomb	140.48	24	PFAKE		11 35 20.0	+14
NCB				LR	LR		
	comp=Z,887nm,21.0s,MS5.5						
LRAL	Lakeview Retre	140.54	47	ePKPpre	PKPpre	11 34 59.7	
LRAL				ePKPdf	PKPdf	11 35 09.2	+2.7
LRAL				LR	LR		
	comp=Z,885nm,19.0s,MS5.5						
CCAN	Las Canadas	140.60	304	PKP	PKPdf	11 35 08.7	+1.9
CPCT	Cooper Cave	140.98	43	ePKPpre	PKPpre	11 35 01.5	
CPCT				ePKPdf	PKPdf	11 35 08.6	+1.4
MCWV	Mont Chateau	141.12	34	PFAKE		11 35 20.0	+13
MCWV				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
LBNH	Lisbon	141.13	22	PFAKE		11 35 20.0	+13
LBNH				LR	LR		
	comp=Z,953nm,21.0s,MS5.5						
BINY	Binghamton	141.16	27	ePKPpre	PKPpre	11 35 02.5	
BINY				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
TKL	Tuckaleechee C	141.35	42	PKhKP	PKPpre	11 35 02.8	
	comp=Z,7.0nm,0.8s,baz=168,slow=3.0,SNR=5.9						
TKL				PKP	PKPdf	11 35 08.8	+0.8
	comp=Z,24nm,0.8s,baz=214,slow=1.2,SNR=14						
TKL				SKPbc	SKPbc	11 38 44.4	+2.4
	comp=Z,6.5nm,0.7s,baz=198,slow=3.2,SNR=3.6						
TKL	Tuckaleechee C	141.35	42	ePKPpre	PKPpre	11 35 02.4	
TKL				PKP	PKPdf	11 35 08.8	+0.8
TKL				ePKPdf	PKPdf	11 35 09.5	+1.6
TKL				SKPbc	SKPbc	11 38 44.4	+2.4
TKL	Tuckaleechee C	141.35	42	ePKHKP	PKPpre	11 35 02.4	
TKL						11 35 08.8	
SSPA	Standing Stone	141.44	31	ePKPpre	PKPpre	11 35 02.4	
BRAL	Brewton	141.47	50	ePKPpre	PKPpre	11 35 03.5	
BRAL				LR	LR		
	comp=Z,946nm,20.0s,MS5.5						
WVL	Waterville	141.63	19	ePKPdf	PKPdf	11 35 05.3	-2.8
TRY	Troy	141.73	25	ePKPdf	PKPdf	11 35 10.4	+2.1
CMLA	Cha da Macela	141.93	323	PFAKE		11 35 20.0	+11
CMLA				LR	LR		
	comp=Z,1μm,19.0s,MS5.6						
BLA	Blacksburg	142.48	37	ePKPdf	PKPdf	11 35 09.9	0.0
BLA				LR	LR		
	comp=Z,745nm,19.0s,MS5.5						
BLA	Blacksburg	142.48	37	ePKIKP	PKPdf	11 35 09.9	0.0
BLA				MLR	MLR		
	comp=Z,745nm,19.0s,MS5.5						
VWCC	Virginia Weste	142.72	37	ePKPdf	PKPdf	11 35 11.4	+1.2
GOGA	Godfrey	142.85	44	ePKPpre	PKPpre	11 35 07.3	
GOGA				LR	LR		
	comp=Z,814nm,20.0s,MS5.5						
GOGA	Godfrey	142.85	44	ePKHKP	PKPpre	11 35 07.3	
GOGA				MLR	M

comp=Z,799nm,20.0s,MS5.5
BCIP Isla Barro Col 153.61 87 *e*PKPbc PKPbc 11 35 36.8 +0.3
BCIP LR LR
comp=Z,866nm,22.0s,MS5.5
BBSR BB Station 154.25 23 PFAKE 11 35 40.0 +11
BBSR LR LR
comp=Z,748nm,20.0s,MS5.5
MTDJ Mount Denham 154.53 66 *e*PKPdf PKPdf 11 35 30.2 +0.4
MTDJ *e*PKPab PKPab 11 35 54.6 +1.7
MTDJ LR LR
comp=Z,1μm,21.0s,MS5.6
BDFB Brasilia 155.15 192 PKP PKPdf 11 35 32.5 +1.8
comp=Z,5.5nm,0.8s,baz=223,slow=2.9,SNR=5.8
BDFB Brasilia 155.15 192 PKIKP PKPdf 11 35 32.6 +1.8
GTBY Guantanamo Bay 156.05 60 PFAKE 11 35 40.0 +8.2
GTBY LR LR
comp=Z,742nm,20.0s,MS5.5
RCBR Riachuelo 157.48 230 PFAKE 11 35 50.0 +16
RCBR LR LR
comp=Z,1μm,21.0s,MS5.7
ROSC El Rosal 158.58 99 PKPab PKPab 11 36 12.6 +2.2
comp=Z,34nm,0.8s,baz=91,slow=2.1,SNR=8.3
SDDR Presa de Saban 159.71 58 PFAKE 11 35 50.0 +14
SDDR LR LR
comp=Z,964nm,22.0s,MS5.6
SDV Santo Domingo 162.69 89 *e*PKPdf PKPdf 11 35 40.6 +0.9
SDV LR LR
comp=Z,462nm,20.0s
SJG San Juan 164.34 53 PFAKE 11 35 50.0 +8.9
SJG LR LR
comp=Z,1μm,22.0s
ANWB Willy Bob 167.84 43 PFAKE 11 36 00.0 +16
ANWB LR LR
comp=Z,798nm,20.0s
FDF Fort de France 170.20 53 PFAKE 11 36 00.0 +15
FDF LR LR
comp=Z,990nm,21.0s
GRGR Grenville 171.00 68 PFAKE 11 36 00.0 +14
GRGR LR LR
comp=Z,1μm,19.0s
BBGH Gun Hill 172.37 55 PFAKE 11 36 00.0 +13
BBGH LR LR
comp=Z,2μm,20.0s

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*HLW **16** 11:24:05.7, 35°.98N×22°.10E, h24km±40km, Md3.8, Ml3.8*
*ISCJB **16** 11:24:05.8±1.4, 35°.42N±0°.04×21°.80E±0°.07, h16km±11km, mb4.0/6, Error ellipse: s-maj=10.1km s-min=4.6km az=149.7*
*IDC **16** 11:24:05.5±1.4, 35°.64N×22°.14E, h0km, mb4.0/7, mb1 4.0/8, mb1mx3.8/29, mbtmp3.9/8, ML2.8/1, Error ellipse: s-maj=30.5km s-min=22.7km az=146.0*
*ATH **16** 11:24:06.9, 35°.61N×21°.86E, h5km±3km, ML3.6*
*CSEM **16** 11:24:07.2±0.4, 35°.52N×21°.94E, h2km, ML3.6, Error ellipse: s-maj=11.0km s-min=5.6km az=62.0*
*NEIC **16** 11:24:14.3, 35°.87N×22°.15E, h5km, ML3.7(ATH), After ATH.*

ISC 16 11:24:08.3±1.6, 35°.52N±0°.03×21°.92E±0°.05, h16km±11km, n88, σ1s37/97, mb4.0/6, 1C, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.18**	**50**	*e*PB	**Pb**	**11 24 28.8**	**-1.5**
KYTH	**Kithira**	**1.18**	**50**	*e*Pg	**Pb**	**11 24 28.8**	**-1.5**
VLI	**Veliai**	**1.45**	**34**	P	**Pn**	**11 24 33.7**	**-0.2**
VLI	**Veliai**	**1.45**	**34**	*e*PB	**Pb**	**11 24 33.4**	**-1.5**
VLI				*e*SB	**Sb**	**11 24 52.7**	**-0.4**
VLI	**Veliai**	**1.45**	**34**	*e*Pb	**Pb**	**11 24 33.4**	**-1.5**
VLI	**Veliai**	**1.45**	**34**	P	**Pn**	**11 24 33.7**	**-0.2**
VLI				*e*Sb	**Sb**	**11 24 52.7**	**-0.4**
ITM	**Ithomi**	**1.65**	**0**	P	**Pn**	**11 24 36.8**	**+0.2**
ITM	**Ithomi**	**1.65**	**0**	*e*PB	**Pb**	**11 24 36.7**	**-1.6**
ITM				*e*SB	**Sb**	**11 24 58.4**	**-0.5**
ITM	**Ithomi**	**1.65**	**0**	P	**Pn**	**11 24 36.8**	**+0.2**
ITM				*e*Sb	**Sb**	**11 24 58.4**	**-0.5**
VAM	**Vamos**	**1.87**	**93**	P	**Pg**	**11 24 43.5**	**-0.6**
VAM	**Vamos**	**1.87**	**93**	*e*PG	**Pg**	**11 24 43.1**	**-1.0**
VAM	**Vamos**	**1.87**	**93**	*e*Pg	**Pg**	**11 24 43.1**	**-1.0**
DID	**Didima**	**2.25**	**28**	*e*PN	**Pn**	**11 24 45.9**	**+1.1**
DID	**Didima**	**2.25**	**28**	*e*Pn	**Pn**	**11 24 45.9**	**+1.1**
GUR	**Goura**	**2.43**	**8**	*e*PN	**Pn**	**11 24 48.6**	**+1.3**
GUR	**Goura**	**2.43**	**8**	*e*Pn	**Pn**	**11 24 48.6**	**+1.3**
RLS	**Riolos of Patr**	**2.55**	**352**	P	**Pn**	**11 24 51.8**	**+2.8**
RLS	**Riolos of Patr**	**2.55**	**352**	*e*PN	**Pn**	**11 24 50.4**	**+1.4**
RLS	**Riolos of Patr**	**2.55**	**352**	*e*Pn	**Pn**	**11 24 50.4**	**+1.4**
RLS	**Riolos of Patr**	**2.55**	**352**	P	**Pn**	**11 24 51.8**	**+2.8**
NAIG	**Nisos Aigina**	**2.56**	**29**	*e*PN	**Pn**	**11 24 51.3**	**+2.1**
NAIG	**Nisos Aigina**	**2.56**	**29**	*e*Pn	**Pn**	**11 24 51.3**	**+2.1**
VLY	**Voula,Athens**	**2.77**	**32**	*e*PN	**Pn**	**11 24 54.3**	**+2.3**
VLY	**Voula,Athens**	**2.77**	**32**	*e*Pn	**Pn**	**11 24 54.3**	**+2.3**
ATH	**Athens Observa**	**2.84**	**30**	*e*PN	**Pn**	**11 24 54.4**	**+1.4**
ATH	**Athens Observa**	**2.84**	**30**	*e*Pn	**Pn**	**11 24 54.4**	**+1.4**
VLS	**Valsamata**	**2.85**	**339**	*e*PB	**Pn**	**11 24 53.2**	**+0.1**
EFP	**Efpalio**	**2.90**	**360**	*e*PN	**Pn**	**11 24 56.1**	**+2.4**
EFP	**Efpalio**	**2.90**	**360**	*e*Pn	**Pn**	**11 24 56.1**	**+2.4**
PTL	**Penteli**	**2.97**	**31**	*e*PB	**Pn**	**11 24 56.8**	**+2.1**
PTL	**Penteli**	**2.97**	**31**	*e*Pb	**Pn**	**11 24 56.8**	**+2.1**
XRY	**Khrisi**	**3.16**	**101**	*e*PN	**Pn**	**11 25 00.5**	**+3.1**
XRY	**Khrisi**	**3.16**	**101**	*e*Pn	**Pn**	**11 25 00.5**	**+3.1**
LKR	**Lokris**	**3.24**	**15**	P	**Pn**	**11 24 58.8**	**+0.4**
LKR	**Lokris**	**3.24**	**15**	*e*Pn	**Pn**	**11 24 58.2**	**-0.2**
LKR	**Lokris**	**3.24**	**15**	P	**Pn**	**11 24 58.8**	**+0.4**
APE	**Apeiranthos**	**3.30**	**61**	*e*PN	**Pn**	**11 25 01.3**	**+2.0**
APE	**Apeiranthos**	**3.30**	**61**	*e*Pn	**Pn**	**11 25 01.3**	**+2.0**
EVR	**Evrytania**	**3.39**	**359**	*e*PN	**Pn**	**11 25 01.9**	**+1.4**
EVR	**Evrytania**	**3.39**	**359**	*e*Pn	**Pn**	**11 25 01.9**	**+1.4**
NEO	**Neokhori**	**3.92**	**15**	P	**Pn**	**11 25 08.2**	**+0.4**
NEO	**Neokhori**	**3.92**	**15**	P	**Pn**	**11 25 08.2**	**+0.4**
THL	**Klokotos Trika**	**4.03**	**1**	*e*PN	**Pn**	**11 25 09.8**	**+0.4**
THL	**Klokotos Trika**	**4.03**	**1**	*e*Pn	**Pn**	**11 25 09.8**	**+0.4**
KARP	**Karpathos**	**4.28**	**88**	P	**Pn**	**11 25 18.3**	**+5.6**
KEK	**Kerkira**	**4.51**	**339**	*e*PN	**Pn**	**11 25 16.5**	**+0.6**
KEK	**Kerkira**	**4.51**	**339**	*e*Pn	**Pn**	**11 25 16.5**	**+0.6**
KZN	**Kozani**	**4.78**	**359**	P	**Pn**	**11 25 21.5**	**+1.9**
KZN	**Kozani**	**4.78**	**359**	*e*PN	**Pn**	**11 25 20.4**	**+0.8**
KZN	**Kozani**	**4.78**	**359**	*e*Pn	**Pn**	**11 25 20.4**	**+0.8**
KZN	**Kozani**	**4.78**	**359**	P	**Pn**	**11 25 21.5**	**+1.9**
SLUM		**4.87**	**145**	P	**Pn**	**11 25 21.4**	**+0.5**
	baz=149						
SLUM				S	**Sn**	**11 26 15.7**	**-1.3**
	baz=149						
SLUM		**4.87**	**145**	P	**Pn**	**11 25 21.4**	**+0.5**
SLUM				S	**Sn**	**11 26 15.7**	**-1.3**
HMAT	**Matruh**	**6.19**	**134**	P	**Pn**	**11 25 38.8**	**-0.2**
	baz=138						
HMAT	**Matruh**	**6.19**	**134**	P	**Pn**	**11 25 38.8**	**-0.2**
PE1	**Pezze di Greco**	**6.35**	**327**	*e*Pn	**Pn**	**11 25 40.0**	**-1.2**
SG1	**Sgolgore (BA)**	**6.72**	**324**	*e*Pn	**Pn**	**11 25 45.8**	**-0.5**
SWA2		**6.94**	**153**	P	**Pn**	**11 25 51.7**	**+2.4**
	baz=156						
SWA2				AMP		11 27 00.0	
	comp=E,50μm,0.4s,logA/T=5.1,baz=156						
SWA2				S	**Sn**	**11 27 06.2**	**-1.8**
	baz=156						
SWA2		**6.94**	**153**	P	**Pn**	**11 25 51.7**	**+2.4**
CDT	**Castel del Mon**	**7.10**	**323**	*e*Pn	**Pn**	**11 25 51.2**	**-0.3**
BARS	**Barje**	**7.28**	**359**	↑*i*P	**Pn**	**11 25 52.6**	**-1.4**
STON	**Ston**	**8.03**	**337**	*e*Pn	**Pn**	**11 26 00.3**	**-4.0**
STON				Sn	**Sn**	**11 27 22.4**	**-12**
AWBH		**9.32**	**138**	P	**Pn**	**11 26 23.3**	**+1.3**
	baz=141						
AWBH		**9.32**	**138**	P	**Pn**	**11 26 23.3**	**+1.4**
HNAT	**Natroun**	**9.40**	**126**	P	**Pn**	**11 26 23.4**	**+0.3**
	baz=129						
HNAT	**Natroun**	**9.40**	**126**	P	**Pn**	**11 26 23.4**	**+0.3**
HFRF	**Wahat Farafira**	**9.98**	**145**	P	**Pn**	**11 26 31.9**	**+0.9**
	baz=147						
HFRF	**Wahat Farafira**	**9.98**	**145**	P	**Pn**	**11 26 31.9**	**+0.9**
BRTR	**Keskin Array B**	**10.20**	**62**	Pn	**Pn**	**11 26 32.1**	**-1.9**
	comp=E,0.1nm,0.3s,baz=263,slow=12,SNR=2.5						
BRTR	**Keskin Array B**	**10.20**	**62**	Pn	**Pn**	**11 26 32.1**	**-1.9**
NVLJ	**Novalja**	**10.52**	**331**	*e*Pn	**Pn**	**11 26 36.6**	**-1.7**
NVLJ				Sn	**Sn**	**11 28 24.3**	**-11**
AMAG	**Maghara**	**10.65**	**114**	P	**Pn**	**11 26 38.9**	**-1.2**
	baz=116						
AMAG	**Maghara**	**10.65**	**114**	P	**Pn**	**11 26 38.9**	**-1.3**
SUZ		**10.80**	**119**	P	**Pn**	**11 26 42.0**	**-0.2**
	baz=121						
SUZ		**10.80**	**119**	P	**Pn**	**11 26 42.0**	**-0.3**
BOJS	**Bojanci**	**11.18**	**335**	*i* Pn	**Pn**	**11 26 44.9**	**-2.5**
BOJS				*i* Sn	**Sn**	**11 28 43.5**	**-8.4**
HNKL	**Nakhl**	**11.59**	**115**	P	**Pn**	**11 26 52.2**	**-0.9**
	baz=117						
HNKL	**Nakhl**	**11.59**	**115**	P	**Pn**	**11 26 52.2**	**-0.8**
PERS	**Pernice**	**12.22**	**337**	*i* Pn	**Pn**	**11 26 59.6**	**-2.0**
BHD	**Baghdad**	**18.67**	**90**	*ex*	x	11 28 27.0	
BHD				*ex*	x	11 31 57.0	
BHD				*ex*	x	11 38 54.0	
BHD				*ex*	x	11 39 14.0	
DGRG	**David-gareji**	**19.27**	**65**	P	**Pn**	**11 28 33.5**	**+0.3**
ESDC	**Sonseca Array**	**20.89**	**289**	P	**P**	**11 28 50.7**	**+0.9**
	comp=E,0.4nm,0.4s,baz=87,slow=12,SNR=4.5						
HFS	**Hagfors**		**25.20**	**350**	P	**P**	**11 29 31.4**	**-1.4**
	comp=E,1.2nm,0.4s,mb3.8,baz=170,slow=8.8,SNR=10						
EKA	**Eskdalemuir Ar**	**26.25**	**327**	P	**P**	**11 29 43.6**	**+1.2**
	comp=E,6.2nm,0.7s,mb4.2,baz=128,slow=9.0,SNR=25						
NOA	**NORSAR Array B**	**26.44**	**348**	P	**P**	**11 29 42.8**	**-1.3**
	comp=E,0.5nm,0.5s,mb3.3,baz=142,slow=10,SNR=2.7						
TORD	**Torodi Ar. Bea**	**28.79**	**224**	P	**P**	**11 30 07.0**	**+1.4**
	comp=E,0.7nm,0.6s,mb3.6,baz=30,slow=9.9,SNR=6.9						
ARCES	**ARCESS Array B**	**34.12**	**2**	P	**P**	**11 30 49.6**	**-2.4**
	comp=E,2.3nm,0.5s,mb4.3,baz=185,slow=10.0,SNR=7.3						
MKAR	**Makanchi Array**	**45.79**	**56**	P	**P**	**11 32 26.9**	**-2.1**
	comp=E,2.7nm,0.4s,mb4.5,baz=267,slow=7.5,SNR=28						

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*ISCJB **16** 11:31:24.3±0.7, 19°.10N±0°.07×66°.15W±0°.03, h47km±10km, mb3.9/9, Error ellipse: s-maj=11.5km s-min=4.1km az=179.9*
*RSPR **16** 11:31:25.0, 19°.08N×66°.12W, h8km±1km, MD3.8/19*
*IDC **16** 11:31:25.3±1.8, 19°.03N×66°.25W, h44km±21km, mb3.7/9, mb1 4.0/10, mb1mx3.8/24, mbtmp3.8/10, ML3.2/1, Error ellipse: s-maj=18.7km s-min=13.5km az=172.0*
*NEIC **16** 11:31:25.0, 19°.08N×66°.12W, h8km, MD3.8(RSPR), After RSPR.*
NEIC Felt at Arecibo, Rio Piedras and San Juan.

ISC 16 11:31:24.1±1.5, 19°.14N±0°.03×66°.21W±0°.03, h30km±13km, n47, σ1s16/58, mb3.9/9, 4C-14D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**0.95**	**213**	↓*i*P	**Pn**	**11 31 41.2**	**-0.1**
AOPR				*e*S	**Sn**	**11 31 54.0**	**+0.2**
SJG	**San Juan**	**1.03**	**177**	↓*e*P	**Pn**	**11 31 41.8**	**-0.6**
SJG	**San Juan**	**1.03**	**177**	*e*S	**Sn**	**11 31 54.9**	**-0.9**
SJG	**San Juan**	**1.03**	**177**	↓*i*P	**Pn**	**11 31 41.8**	**-0.6**
SJG	**San Juan**	**1.03**	**177**	P	**Pn**	**11 31 41.9**	**-0.5**
	983nm,0.3s,baz=14,slow=9.0,SNR=1476						
SJG				S	**Sn**	**11 31 54.5**	**-1.2**
	1μm,0.3s,baz=336,slow=20,SNR=32						
SJG	**San Juan**	**1.03**	**177**	↓*e*P	**Pn**	**11 31 41.8**	**-0.6**
SJG				*e*S	**Sn**	**11 31 54.9**	**-0.9**
LRS	**Lares**	**1.04**	**216**	↓*e*P	**Pn**	**11 31 42.5**	**-0.1**
HUMP	**Col San Antoni**	**1.05**	**161**	↓*e*P	**Pn**	**11 31 41.4**	**-1.4**
HUMP				*e*S	**Sn**	**11 31 54.2**	**-2.2**
AGPR	**Aguadilla, PR**	**1.09**	**232**	↓*e*P	**Pn**	**11 31 42.8**	**-0.5**
CELP	**Cerrillos**	**1.12**	**198**	↓*i*P	**Pn**	**11 31 43.4**	**-0.3**
AGP	**Aguadilla**	**1.15**	**231**	*e*Pg	**Pn**	**11 31 42.7**	**-1.3**
OBIP	**Obispado Ponce**	**1.16**	**199**	↓*i*P	**Pn**	**11 31 44.1**	**-0.1**
OBIP				*e*S	**Sn**	**11 31 58.6**	**-0.4**
LSP	**Las Mesas**	**1.27**	**221**	↑*i*P	**Pn**	**11 31 46.0**	**+0.3**
ICM	**Isla Caja Muer**	**1.28**	**194**	↓*e*P	**Pn**	**11 31 46.0**	**+0.1**
MPR	**Mayaguez**	**1.28**	**224**	↓*e*P	**Pn**	**11 31 46.0**	**+0.2**
MPR				*e*S	**Sn**	**11 32 01.8**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.33**	**209**	↓*i*P	**Pn**	**11 31 47.0**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.42**	**217**	↓*e*P	**Pn**	**11 31 48.1**	**+0.4**
CRPR				*e*S	**Sn**	**11 32 06.5**	**+1.1**
STVI	**Saint Thomas**	**1.43**	**123**	↓*e*P	**Pn**	**11 31 46.5**	**-1.4**
STVI				*e*S	**Sn**	**11 32 03.0**	**-2.6**
TBVI	**Tortola**	**1.67**	**115**	↑*i*P	**Pn**	**11 31 49.9**	**-1.3**
IMO	**Isla Mona**	**1.91**	**238**	↑*e*P	**Pn**	**11 31 56.5**	**+2.0**
CDVI	**St. Croix**	**1.95**	**135**	↓*e*P	**Pn**	**11 31 55.1**	**0.0**
SMRT	**St. Maarten**	**3.16**	**110**	↑*e*P	**Pn**	**11 32 12.2**	**+0.4**
SMRT				*e*S	**Sn**	**11 32 47.9**	**-0.6**
SABA	**Saba**	**3.20**	**118**	↑*e*P	**Pn**	**11 32 13.5**	**+1.2**
ANWB	**Willy Bob**	**4.45**	**109**	*e*Pn	**Pn**	**11 32 32.7**	**+3.3**
ANWB				*e*Sn	**Sn**	**11 33 21.8**	**+1.5**
BPA	**Boggy Peak**	**4.63**	**116**	*e*P	**Pn**	**11 32 32.5**	**+0.5**
BPA				*e*S	**Sn**	**11 33 26.0**	**+1.2**
SDDR	**Presa de Saban**	**4.81**	**269**	*e*Pn	**Pn**	**11 32 37.2**	**+2.8**
SDDR				*e*Sn	**Sn**	**11 33 34.8**	**+5.7**
LZG	**Guadaloupe-1**	**5.17**	**125**	*e*P	**Pn**	**11 32 39.7**	**+0.3**
PHG	**Guadaloupe-2**	**5.35**	**125**	*e*P	**Pn**	**11 32 43.9**	**+2.0**
MASC	**Masc**	**7.63**	**279**	*e*P	**Pn**	**11 33 11.6**	**-1.6**
	baz=98						
MASC				*e*S	**Sn**	**11 34 33.8**	**-4.9**
	comp=N,385nm,0.5s						
MASC				*e*			
	comp=E,349nm,0.5s						
RCC	**Rio Carpintero**	**8.99**	**277**	*e*P	**Pn**	**11 33 29.1**	**-2.7**
RCC				*e*S	**Sn**	**11 35 04.3**	**-7.7**
	comp=N,38nm,1.0s						
RCC				*e*			
	comp=E,46nm,0.7s						
LMGC	**Las Mercedes**	**10.22**	**277**	*e*S	**Sn**	**11 35 34.8**	**-7.5**
	comp=N,48nm,0.8s						
LMGC				*e*			
	comp=E,56nm,1.6s						
SDV	**Santo Domingo**	**11.06**	**203**	*e*Pn	**Pn**	**11 34 02.9**	**+2.6**
	comp=E,13nm,0.6s						
BBSR	**BB Station**	**13.24**	**6**	*e*Pn	**Pn**	**11 34 27.3**	**-2.7**
	comp=E,53nm,0.4s						
ROSC	**El Rosal**	**16.26**	**210**	P	**Pn**	**11 35 11.6**	**+1.2**
	comp=E,1.9nm,0.3s,baz=99,slow=19,SNR=2.3						
TXAR	**Lajitas Array**	**35.50**	**294**	P	**P**	**11 38 17.6**	**-0.6**
	comp=E,1.4nm,0.8s,mb4.0,baz=108,slow=10,SNR=9.9						
SCHQ	**Schefferville**	**35.63**	**359**	P	**P**	**11 38 18.5**	**-0.4**
	comp=E,10nm,0.8s,mb4.8,baz=252,slow=6.4,SNR=6.1						
SCHQ	**Schefferville**	**35.63**	**359**	P	**P**	**11 38 18.5**	**-0.4**
PDAR	**Pinedale Array**	**43.38**	**313**	P	**P**	**11 39 24.6**	**+0.9**
	comp=E,0.6nm,0.7s,mb3.4,baz=120,slow=8.5,SNR=4.1						
NVAR	**Mina Array Bea**	**48.86**	**305**	P	**P**	**11 40 08.7**	**+1.8**
	comp=E,0.6nm,0.6s,mb3.8,baz=88,slow=5.8,SNR=4.5						
ESDC	**Sonseca Array**	**56.83**	**55**	P	**P**	**11 41 05.9**	**+0.1**
	comp=E,0.2nm,0.3s,mb3.6,baz=270,slow=7.7,SNR=3.2						
TORD	**Torodi Ar. Bea**	**65.16**	**84**	P	**P**	**11 42 02.7**	**-0.1**
	comp=E,0.7nm,0.7s,mb3.8,baz=288,slow=5.6,SNR=2.9						
ILAR	**Eielson Array**	**68.89**	**333**	P	**P**	**11 42 25.9**	**+0.2**
	comp=E,0.7nm,0.6s,mb3.8,baz=102,slow=4.1,SNR=18						
ARCES	**ARCESS Array B**	**72.83**	**22**	P	**P**	**11 42 48.9**	**-0.6**
	comp=E,1.9nm,0.6s,mb4.2,baz=274,slow=3.4,SNR=13						
FINES	**FINESS Array B**	**74.47**	**30**	P	**P**	**11 42 59.3**	**+0.1**
	comp=E,1.8nm,0.8s,mb4.1,baz=249,slow=6.9,SNR=2.6						
STKA	**Stephens Creek**	**151.98**	**238**	PKPbc	PKPbc	11 51 16.0	-0.7
	comp=E,2.7nm,0.5s,baz=105,slow=5.6,SNR=9.4						
WRA	**Warramunga Arr**	**160.62**	**264**	PKP	PKPdf	11 51 20.5	-1.2
	comp=E,0.3nm,0.7s,baz=85,slow=0.7,SNR=6.5						
WRA				PKPab	PKPab	11 52 01.3	-2.2
	comp=E,0.2nm,0.6s,baz=90,slow=3.7,SNR=3.6						
ASAR	**Alice Springs**	**160.75**	**253**	PKP	PKPdf	11 51 20.4	-1.3
	comp=E,0.3nm,0.8s,baz=95,slow=1.8,SNR=4.6						
ASAR				PKPab	PKPab	11 52 03.6	-0.4
	comp=E,0.5nm,0.5s,baz=108,slow=4.4,SNR=9.1						

IDC 16 11:38:31.4±1.7, 9°.79S×127°.10E, h0km, mb3.1/1, mb1 3.3/4, mb1mx3.2/17, mbtmp3.1/4, ML3.0/3, Error ellipse: s-maj=62.8km s-min=23.4km az=72.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.38**	**190**	Pn	Pn	11 40 34.8	+0.6
	0.1nm,0.3s,baz=4.4,slow=10,SNR=3.7						
FITZ				Sn	Sn	11 42 11.8	+2.2
	0.1nm,0.3s,baz=156,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**12.28**	**146**	Pn	Pn	11 41 26.0	-1.6
	0.1nm,0.3s,baz=325,slow=13,SNR=6.9						
WRA				Sn	Sn	11 43 48.7	+3.4
	0.1nm,0.3s,baz=318,slow=25,SNR=3.0						
ASAR	**Alice Springs**	**15.25**	**156**	Pn	Pn	11 42 08.2	0.0
	0.1nm,0.3s,baz=316,slow=10,SNR=5.5						
MKAR	**Makanchi Array**	**69.04**	**329**	P	P	11 49 39.0	+0.2
	0.1nm,0.6s,baz=120,slow=8.5,SNR=2.3						

IDC 16 11:38:44.9±1.7, 9°.67S×127°.13E, h0km, mb3.1/1, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=63.2km s-min=22.1km az=71.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.51**	**190**	Pn	Pn	11 40 51.1	+1.6
	0.7nm,0.3s,baz=6.2,slow=9.9,SNR=14						
FITZ				Sn	Sn	11 42 27.4	+1.1
	0.3nm,0.3s,baz=120,slow=20,SNR=4.2						
WRA	**Warramunga Arr**	**12.37**	**147**	Pn	Pn	11 41 41.9	-0.5
	0.3nm,0.3s,baz=326,slow=14,SNR=12						
WRA				Sn	Sn	11 44 02.2	+1.3
	0.2nm,0.3s,baz=320,slow=23,SNR=5.0						
ASAR	**Alice Springs**	**15.36**	**156**	Pn	Pn	11 42 22.7	-0.4
	0.3nm,0.3s,baz=322,slow=11,SNR=17						
ASAR				Sn	Sn	11 45 13.0	-1.0
	0.0nm,0.3s,baz=318,slow=20,SNR=2.6						
MKAR	**Makanchi Array**	**68.95**	**329**	P	P	11 49 51.9	0.0
	0.1nm,0.5s,baz=128,slow=9.5,SNR=3.1						

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*LDG **16** 11:44:05.9±0.1, 44°.55N×7°.11E, h2km, Md2.1/1, Ml2.5/7, Error ellipse: s-maj=1.3km s-min=0.6km az=62.0*
*STR **16** 11:44:05.8±0.1, 44°.54N×7°.11E, h5km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **16** 11:44:05.6±0.1, 44°.54N×7°.10E, h10km, ML2.4/14, Error ellipse: s-maj=1.3km s-min=0.7km az=75.0*
*ISCJB **16** 11:44:05.4±0.3, 44°.53N±0°.02×7°.10E±0°.04, h4km±5km, Error ellipse: s-maj=5.7km s-min=2.4km az=159.8*
*ROM **16** 11:44:05.4±0.3, 44°.55N×7°.12E, h7km±3km, Md2.1/4, Ml1.7/5, Error ellipse: s-maj=4.9km s-min=2.3km az=88.0*
*NEIC **16** 11:44:05.9, 44°.55N×7°.11E, h2km, ML2.5(LDG), After LDG.*

ISC 16 11:44:06.0±0.3, 44°.53N±0°.02×7°.11E±0°.05, h7km±5km, n42, σ0s57/78, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.10**	**107**	Pg	**Pg**	**11 44 08.3**	**0.0**
DOI				Sg	**Sg**	**11 44 09.7**	**-0.2**
	310nm,0.2s						
DOI	**San Damiano**	**0.10**	**107**	Pg	**Pg**	**11 44 08.3**	**0.0**
DOI				Sg	**Sg**	**11 44 09.7**	**-0.2**
	310nm,0.2s						
SURF	**Saint Ours**	**0.22**	**256**	Pg	**Pg**	**11 44 10.4**	**+0.1**
SURF	**Saint Ours**	**0.22**	**256**	Pg	**Pg**	**11 44 10.4**	**+0.1**
MBDF	**Montbardon**	**0.31**	**309**	*e*Pg	**Pg**	**11 44 12.0**	**0.0**
MBDF				*e*Sg	**Sg**	**11 44 16.3**	**+0.2**
	93nm,0.3s						
MBDF	**Montbardon**	**0.31**	**309**	*e*Pg	**Pg**	**11 44 12.0**	**0.0**
MBDF				*e*Sg	**Sg**	**11 44 16.3**	**+0.2**
	47nm,0.3s						
OG22	**Abries**	**0.31**	**338**	Pg	**Pg**	**11 44 12.0**	**-0.1**
OG22				Sg	**Sg**	**11 44 16.5**	**+0.3**
OG22	**Abries**	**0.31**	**338**	Pg	**Pg**	**11 44 12.0**	**-0.1**
OG22				Sg	**Sg**	**11 44 16.5**	**+0.3**
TOUF	**Mont Tournerai**	**0.53**	**169**	Pg	**Pg**	**11 44 16.1**	**-0.1**
TOUF	**Mont Tournerai**	**0.53**	**169**	Pg	**Pg**	**11 44 16.1**	**-0.1**
AUTN	**L'Aution**	**0.59**	**157**	Pg	**Pg**	**11 44 17.5**	**+0.2**
AUTN				Sg	**Sg**	**11 44 25.2**	**+0.3**
AUTN	**L'Aution**	**0.59**	**157**	Pg	**Pg**	**11 44 17.5**	**+0.2**
AUTN				Sg	**Sg**	**11 44 25.2**	**+0.3**
BNI	**Bardonecchia**	**0.60**	**330**	Pg	**Pg**	**11 44 17.5**	**-0.1**
BNI				Sg	**Sg**	**11 44 25.5**	**+0.1**
	14nm,0.5s						
BNI	**Bardonecchia**	**0.60**	**330**	Pg	**Pg**	**11 44 17.5**	**-0.1**
BNI				Sg	**Sg**	**11 44 25.5**	**+0.1**
	14nm,0.5s						
RSP	**Reno Superiore**	**0.62**	**10**	Pg	**Pg**	**11 44 18.0**	**0.0**
RSP				Sg	**Sg**	**11 44 26.8**	**+0.6**
	29nm,0.2s						
RSP	**Reno Superiore**	**0.62**	**10**	Pg	**Pg**	**11 44 18.0**	**0.0**
RSP				Sg	**Sg**	**11 44 26.8**	**+0.6**
	29nm,0.2s						
SAOF	**Saorge**	**0.64**	**149**	Pg	**Pg**	**11 44 18.2**	**0.0**
SAOF				Sg	**Sg**	**11 44 26.4**	**-0.1**
SAOF	**Saorge**	**0.64**	**149**	Pg	**Pg**	**11 44 18.2**	**0.0**
SAOF				Sg	**Sg**	**11 44 26.4**	**-0.1**
MVIF	**Mont Vial**	**0.64**	**177**	Pg	**Pg**	**11 44 18.3**	**0.0**
MVIF				Sg	**Sg**	**11 44 27.3**	**+0.7**
MVIF	**Mont V

0.3nm,0.4s,baz=120,slow=7.5,SNR=9.6
ZALV Zalesovo Beam 72.51 335 P P 12 02 22.3 +0.1
0.4nm,0.4s,baz=129,slow=6.1,SNR=3.4

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*IDC **16** 12:23:39.5±1.8,2.06N×127.71E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.7/19,mbtmp3.8/5,Error ellipse: s-maj=93.1km s-min=24.7km az=69.0*
*ISCJB **16** 12:23:52.7±2.0,1.8N±0.2×127.4E±0.2,h127km±11km, mb3.8/4,Error ellipse: s-maj=36.6km s-min=17.2km az=41.0*
*DJA **16** 12:23:53,1.91N×127.48E,h104km,MLv3.7/4*
ISC 16 12:23:53.9±2.0,1.8N±0.2×127.4E±0.2,h121km±11km,n10, σ0.24/11,mb3.8/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.02**	**183**	P	**Pn**	**12 24 16.2**	**-0.1**
TNTI				S	**Sn**	**12 24 33.3**	**0.0**
LBMI	**Labuha**	**2.42**	**178**	P	**Pn**	**12 24 32.9**	**+0.1**
KMSI	**Cibinong**	**3.65**	**251**	P	**Pn**	**12 24 48.4**	**-0.4**
NLAI	**Namlea**	**5.01**	**184**	P	**Pn**	**12 25 07.5**	**+0.3**
	0.1nm24nm,0.9s						
LUWI	**Luwuk**	**5.44**	**239**	P	**Pn**	**12 25 13.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.85**	**185**	P	**P**	**12 28 15.6**	**+0.1**
	1.1nm,0.5s,baz=20,slow=10,SNR=7.8						
WRA	**Warramunga Arr**	**22.65**	**163**	P	**P**	**12 28 45.1**	**0.0**
	2.8nm,0.5s,mb3.8,baz=344,slow=11,SNR=39						
ASAR	**Alice Springs**	**26.09**	**166**	P	**P**	**12 29 16.4**	**0.0**
	0.5nm,0.4s,mb3.3,baz=344,slow=7.6,SNR=19						
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**12 30 43.7**	**-0.4**
	2.0nm,0.4s,mb4.4,baz=339,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**59.52**	**326**	P	**P**	**12 33 44.7**	**+0.3**
	0.4nm,0.6s,mb3.6,baz=121,slow=6.3,SNR=4.3						

IDC 16 13:16:17.1±1.9,8.94S×126.92E,h0km,mb3.1/1, mb1 3.6/3,mb1mx3.4/16,mbtmp3.4/3,ML3.5/1,Error ellipse: s-maj=192.2km s-min=31.6km az=61.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.08**	**148**	Pn	Pn	13 19 23.9	-0.4
	0.3nm,0.3s,baz=321,slow=13,SNR=15						
WRA				Sn	Sn	13 21 44.8	-5.8
	0.3nm,0.3s,baz=324,slow=25,SNR=6.5						
ASAR	**Alice Springs**	**16.09**	**156**	Pn	Pn	13 20 05.4	+0.6
	0.1nm,0.3s,baz=334,slow=15,SNR=11						
MKAR	**Makanchi Array**	**68.23**	**329**	P	P	13 27 19.6	+0.1
	0.1nm,0.5s,baz=131,slow=6.7,SNR=2.1						

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*IDC **16** 13:33:30.2±1.1,8.86S×127.14E,h0km,mb4.1/4, mb1 4.2/7,mb1mx3.9/17,mbtmp4.0/7,ML4.0/3,Error ellipse: s-maj=76.3km s-min=19.1km az=65.0*
*NEIC **16** 13:33:35.4±2.6,9.06S×126.93E,h38km±30km,mb4.1/1, Error ellipse: s-maj=26.2km s-min=16.0km az=192.0*
*ISCJB **16** 13:33:37.9±1.8,9.30S±0.07×127.00E±0.08,h91km±19km, mb4.0/6,Error ellipse: s-maj=14.8km s-min=9.9km az=145.0*
ISC 16 13:33:39.3±1.9,9.32S±0.09×127.03E±0.08,h87km±21km, n21,σ0.96/28,mb4.0/6,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.29**	**123**	*e*P	**Pn**	**13 35 11.0**	**+1.5**
	51nm,0.6s						
FITZ	**Fitzroy Crossi**	**8.84**	**189**	Pn	**Pn**	**13 35 45.0**	**+0.8**
	1.3nm,0.3s,baz=27,slow=11,SNR=44						
FITZ				Sn	**Sn**	**13 37 24.7**	**+2.6**
	5.6nm,0.3s,baz=247,slow=15,SNR=9.1						
FITZ	**Fitzroy Crossi**	**8.84**	**189**	*e*P	**Pn**	**13 35 44.9**	**+0.7**
	12nm,0.5s						
FITZ				*e*S	**Sn**	**13 37 20.7**	**-1.4**
FITZ	**Fitzroy Crossi**	**8.84**	**189**	*e*P	**Pn**	**13 35 44.9**	**+0.7**
FITZ				Sn	**Sn**	**13 37 24.7**	**+2.6**
WRA	**Warramunga Arr**	**12.71**	**147**	Pn	**Pn**	**13 36 35.9**	**-0.9**
	1.0nm,0.3s,baz=318,slow=13,SNR=54						
WRA				Sn	**Sn**	**13 38 56.5**	**0.0**
	2.1nm,0.3s,baz=315,slow=24,SNR=12						
WRA	**Warramunga Arr**	**12.71**	**147**	Pn	**Pn**	**13 36 35.9**	**-0.9**
WRA				Sn	**Sn**	**13 38 56.5**	**0.0**
WB2	**Warramunga Arr**	**12.72**	**147**	*e*P	**Pn**	**13 36 35.8**	**-1.1**
WB2				*e*S	**Sn**	**13 38 55.2**	**-1.5**
MBWA	**Marble Bar**	**13.71**	**210**	*e*P	**Pn**	**13 36 49.2**	**-0.7**
ASAR	**Alice Springs**	**15.71**	**156**	Pn	**Pn**	**13 37 17.1**	**+1.5**
	0.6nm,0.3s,baz=322,slow=12,SNR=34						
ASAR				Sn	**Sn**	**13 40 08.9**	**-0.4**
	0.4nm,0.3s,baz=326,slow=24,SNR=10						
COEN	**Coen**	**16.47**	**108**	*e*P	**Pn**	**13 37 25.6**	**+0.4**
FORT	**Forrest**	**21.38**	**178**	*e*P	**P**	**13 38 26.1**	**+6.4**
	13nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**26.20**	**151**	P	**P**	**13 39 10.8**	**+4.9**
	1.4nm,0.5s,mb3.6,baz=335,slow=12,SNR=5.1						
STKA	**Stephens Creek**	**26.20**	**151**	*e*P	**P**	**13 39 12.8**	**+6.9**
	2.5nm,1.0s,mb3.6						
STKA	**Stephens Creek**	**26.20**	**151**	*e*P	**P**	**13 39 11.7**	**+5.8**
CMAR	**Chiang Mai Arr**	**39.11**	**315**	P	**P**	**13 40 58.2**	**-0.2**
	0.8nm,0.7s,mb3.7,baz=146,slow=6.6,SNR=4.9						
MSVF	**Nonsavu**	**50.18**	**105**	*e*P	**P**	**13 42 27.7**	**+1.2**
MK31	**Makanchi Array**	**68.60**	**329**	*e*P	**P**	**13 44 32.7**	**-0.1**
MKAR	**Makanchi Array**	**68.60**	**329**	P	**P**	**13 44 32.9**	**+0.1**
	0.9nm,0.5s,mb3.9,baz=126,slow=7.8,SNR=15						
ZALV	**Zalesovo Beam**	**72.40**	**335**	P	**P**	**13 44 55.7**	**-0.1**
	2.7nm,0.6s,mb4.3,baz=127,slow=6.1,SNR=9.2						
ZALV	**Zalesovo Beam**	**72.40**	**335**	P	**P**	**13 44 55.7**	**-0.1**
KURK	**Kurchatov**	**73.00**	**330**	*e*P	**P**	**13 44 58.7**	**-0.8**
	0.8nm,0.4s,mb3.9						

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*CSEM **16** 13:40:21.9±0.5,38.10N×20.30E,h2km,MD3.6,Error ellipse: s-maj=9.4km s-min=5.6km az=53.0*
*ISCJB **16** 13:40:22.5±0.8,38.06N±0.04×20.29E±0.05,h10km,Error ellipse: s-maj=6.4km s-min=4.0km az=139.8*
*ATH **16** 13:40:22.1,38.10N×20.30E,h7km±1km,MD3.6/14*
*THE **16** 13:40:22.8,38.06N×20.31E,h7km±1km,ML3.0/4,Error ellipse: s-maj=2.9km s-min=1.7km az=35.0*
*NEIC **16** 13:40:25.4,38.07N×20.31E,h5km,ML2.8(ATH),After ATH.*
ISC 16 13:40:22.4±0.9,38.09N±0.04×20.29E±0.05,h4km±5km, n54,σ0.98/80,1D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.26**	**69**	*i/e*PG	**Pg**	**13 40 27.2**	**-0.1**
VLS				*e*SG	**Sg**	**13 40 31.3**	**+0.6**
VLS	**Valsamata**	**0.26**	**69**	P	**Pg**	**13 40 27.2**	**-0.1**
VLS				S	**Sg**	**13 40 31.7**	**+1.0**
VLS	**Valsamata**	**0.26**	**69**	P	**Pg**	**13 40 27.2**	**-0.1**
VLS				*e*Sg	**Sg**	**13 40 31.3**	**+0.6**
VLS				S	**Sg**	**13 40 31.7**	**+1.0**
KFL	**Anninata**	**0.40**	**87**	P	**Pg**	**13 40 29.9**	**-0.1**
KFL				S	**Sg**	**13 40 36.7**	**+1.5**
KFL	**Anninata**	**0.40**	**87**	P	**Pg**	**13 40 29.9**	**-0.1**
KFL				S	**Sg**	**13 40 36.7**	**+1.5**
RLS	**Riolos of Patr**	**0.93**	**91**	P	**Pg**	**13 40 41.0**	**+0.7**
RLS	**Riolos of Patr**	**0.93**	**91**	*e*PB	**Pg**	**13 40 39.7**	**-0.6**
RLS				*e*SB	**Sg**	**13 40 52.3**	**0.0**
RLS	**Riolos of Patr**	**0.93**	**91**	*e*Pb	**Pg**	**13 40 39.7**	**-0.6**
RLS	**Riolos of Patr**	**0.93**	**91**	P	**Pg**	**13 40 41.0**	**+0.7**
RLS				*e*Sb	**Sg**	**13 40 52.3**	**0.0**
EFP	**Efpalio**	**1.32**	**75**	*e*PB	**Pb**	**13 40 46.5**	**-1.2**
EFP				*e*SB	**Sb**	**13 41 04.8**	**-0.1**
EFP	**Efpalio**	**1.32**	**75**	P	**Pn**	**13 40 46.0**	**-1.5**
EFP				S	**Sg**	**13 41 04.9**	**+0.1**
EFP	**Efpalio**	**1.32**	**75**	P	**Pn**	**13 40 46.0**	**-1.5**
EFP	**Efpalio**	**1.32**	**75**	*e*Pb	**Pb**	**13 40 46.5**	**-1.2**
EFP				S	**Sg**	**13 41 04.9**	**+0.1**
LAKA	**Lakka**	**1.34**	**83**	P	**Pn**	**13 40 46.4**	**-1.4**
LAKA				S	**Sg**	**13 41 05.8**	**+0.3**
LAKA	**Lakka**	**1.34**	**83**	P	**Pn**	**13 40 46.4**	**-1.4**
LAKA				S	**Sg**	**13 41 05.8**	**+0.3**
TRIZ	**Trizonia**	**1.43**	**78**	P	**Pn**	**13 40 47.7**	**-1.4**
TRIZ				S	**Sb**	**13 41 07.5**	**-0.7**
TRIZ	**Trizonia**	**1.43**	**78**	P	**Pn**	**13 40 47.7**	**-1.4**
TRIZ				S	**Sb**	**13 41 07.5**	**-0.7**
IGT	**Igoumenitsa**	**1.44**	**1**	P	**Pn**	**13 40 50.3**	**+1.1**
IGT	**Igoumenitsa**	**1.44**	**1**	P	**Pn**	**13 40 48.7**	**-0.5**
IGT				S	**Sb**	**13 41 10.4**	**+1.9**
IGT	**Igoumenitsa**	**1.44**	**1**	P	**Pn**	**13 40 48.7**	**-0.5**
IGT				S	**Sb**	**13 41 10.4**	**+1.9**
EVR	**Evrytania**	**1.45**	**55**	*e*PG	**Pn**	**13 40 48.7**	**-0.7**
EVR				*e*SB	**Sn**	**13 41 08.7**	**-0.1**
EVR	**Evrytania**	**1.45**	**55**	*e*Pg	**Pn**	**13 40 48.7**	**-0.7**
EVR				*e*Sb	**Sn**	**13 41 08.7**	**-0.1**
ITM	**Ithomi**	**1.59**	**124**	P	**Pg**	**13 40 53.3**	**+0.5**
ITM	**Ithomi**	**1.59**	**124**	*e*PB	**Pb**	**13 40 51.8**	**-0.4**
ITM				*e*SB	**Sg**	**13 41 14.0**	**+0.7**
ITM	**Ithomi**	**1.59**	**124**	P	**Pn**	**13 40 51.3**	**+0.1**
ITM	**Ithomi**	**1.59**	**124**	P	**Pn**	**13 40 51.3**	**+0.1**
ITM	**Ithomi**	**1.59**	**124**	*e*Pb	**Pb**	**13 40 51.8**	**-0.4**
ITM				*e*Sb	**Sg**	**13 41 14.0**	**+0.7**
JAN	**Janina**	**1.63**	**16**	*e*PB	**Pb**	**13 40 52.2**	**-0.7**
JAN				*e*SB	**Sb**	**13 41 14.3**	**+0.5**
JAN	**Janina**	**1.63**	**16**	*e*Pb	**Pb**	**13 40 52.2**	**-0.7**
JAN				*e*Sb	**Sb**	**13 41 14.3**	**+0.5**
GUR	**Goura**	**1.63**	**95**	*e*PG	**Pg**	**13 40 52.0**	**-1.6**
GUR	**Goura**	**1.63**	**95**	P	**Pn**	**13 40 50.9**	**-0.9**
GUR				S	**Sn**	**13 41 13.4**	**+0.2**
GUR	**Goura**	**1.63**	**95**	P	**Pn**	**13 40 50.9**	**-0.9**
GUR	**Goura**	**1.63**	**95**	*e*Pg	**Pg**	**13 40 52.0**	**-1.6**
GUR				S	**Sn**	**13 41 13.4**	**+0.2**
KEK	**Kerkira**	**1.67**	**347**	P	**Pg**	**13 40 54.7**	**+0.4**
KEK	**Kerkira**	**1.67**	**347**	*e*PB	**Pb**	**13 40 53.3**	**-0.3**
KEK	**Kerkira**	**1.67**	**347**	*e*Pb	**Pb**	**13 40 53.3**	**-0.3**
KEK	**Kerkira**	**1.67**	**347**	P	**Pg**	**13 40 54.7**	**+0.4**
VLX	**Vlachokerasia**	**1.81**	**113**	*e*PG	**Pn**	**13 40 55.2**	**+1.0**
VLX	**Vlachokerasia**	**1.81**	**113**	*e*Pg	**Pn**	**13 40 55.2**	**+1.0**
AGG	**Agios Georgios**	**1.85**	**59**	P	**Pg**	**13 40 57.8**	**-0.1**
AGG	**Agios Georgios**	**1.85**	**59**	*e*PG	**Pg**	**13 40 56.5**	**-1.4**
AGG	**Agios Georgios**	**1.85**	**59**	*e*Pg	**Pg**	**13 40 56.5**	**-1.4**
AGG	**Agios Georgios**	**1.85**	**59**	P	**Pg**	**13 40 57.8**	**-0.1**
THL	**Klokotos Trika**	**2.00**	**42**	*e*PN	**Pn**	**13 40 58.3**	**+1.4**
THL	**Klokotos Trika**	**2.00**	**42**	*e*Pn	**Pn**	**13 40 58.3**	**+1.4**
LTK	**Loutraki**	**2.12**	**91**	*e*PN	**Pn**	**13 40 59.7**	**+1.2**
LTK	**Loutraki**	**2.12**	**91**	*e*Pn	**Pn**	**13 40 59.7**	**+1.2**
LKR	**Lokris**	**2.21**	**74**	P	**Pg**	**13 41 03.2**	**-1.4**
LKR	**Lokris**	**2.21**	**74**	P	**Pg**	**13 41 03.2**	**-1.4**
DID	**Didima**	**2.41**	**103**	*e*PN	**Pn**	**13 41 04.6**	**+2.1**
VLI	**Veliai**	**2.52**	**122**	*e*PN	**Pn**	**13 41 05.4**	**+1.4**
VLI	**Veliai**	**2.52**	**122**	*e*Pn	**Pn**	**13 41 05.4**	**+1.4**
STON	**Ston**	**5.17**	**338**	*e*Pn	**Pn**	**13 41 36.2**	**-4.2**
STON				Sn	**Sn**	**13 42 33.8**	**-6.7**
STON	**Ston**	**5.17**	**338**	*e*Pn	**Pn**	**13 41 36.2**	**-4.2**

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*IDC **16** 13:41:02.0±2.4,20.15S×176.63W,h309km±30km,mb4.1/5, mb1 4.1/7,mb1mx3.6/20,mbtmp4.0/7,Error ellipse: s-maj=26.1km s-min=14.9km az=98.0*
*NEIC **16** 13:41:06.5±1.0,19.87S×176.84W,h350km,mb4.4/4, Error ellipse: s-maj=26.6km s-min=18.0km az=134.0*
ISC 16 13:41:02.5±1.4,20.10S±0.09×176.5W±0.1,h323km±17km, n27,σ0.81/32,mb4.0/8,1C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.66**	**37**	P	**Pn**	**13 42 52.0**	**-0.4**
	2.8nm,0.3s,baz=233,slow=23,SNR=16						
AFI				S	**S**	**13 44 14.7**	**-6.8**
	7.9nm,0.3s,baz=267,slow=17,SNR=4.7						
AFI	**Afiamalu**	**7.66**	**37**	*e*P	**Pn**	**13 42 51.5**	**-0.9**
AFI				*e*S	**S**	**13 44 16.5**	**-5.0**
FUNA	**Funafuti**	**12.23**	**340**	*e*P	**Pn**	**13 43 48.4**	**+0.9**
	68nm,1.0s						
DZM	**Mont Dzumac**	**16.00**	**260**	*e*P	**P**	**13 44 28.9**	**-0.5**
NOUC	**Port Laguerre**	**16.14**	**260**	*e*P	**P**	**13 44 30.8**	**-0.1**
URZ	**Urewera**	**18.91**	**196**	P	**P**	**13 45 00.9**	**+0.4**
	1.7nm,0.3s,baz=24,slow=20,SNR=20						
URZ				S	**S**	**13 48 17.5**	**-0.3**
	1.8nm,0.3s,baz=88,slow=22,SNR=12						
URZ	**Urewera**	**18.91**	**196**	*e*P	**P**	**13 45 01.2**	**+0.7**
URZ				S	**S**	**13 48 17.5**	**-0.3**
ARMA	**Armidale**	**30.47**	**244**	*e*P	**P**	**13 46 47.5**	**+1.2**
CTA	**Charters Tower**	**34.90**	**263**	P	**P**	**13 47 24.5**	**-0.1**
	8.5nm,0.5s,mb4.2,baz=95,slow=11,SNR=19						
CTA	**Charters Tower**	**34.90**	**263**	*i/e*P	**P**	**13 47 24.5**	**-0.1**
	5.5nm,0.4s,mb4.1						
CTA	**Charters Tower**	**34.90**	**263**	P	**P**	**13 47 24.5**	**-0.1**
CTAO	**Charters Tower**	**34.90**	**263**	*e*P	**P**	**13 47 24.5**	**-0.1**
	6.4nm,0.5s,mb4.1						
TOO	**Toolangi**	**37.24**	**234**	*e*P	**P**	**13 47 45.2**	**+1.1**
STKA	**Stephens Creek**	**39.20**	**244**	P	**P**	**13 48 00.7**	**+0.4**
	3.2nm,0.4s,mb3.9,baz=85,slow=11,SNR=21						
STKA	**Stephens Creek**	**39.20**	**244**	*e*P	**P**	**13 48 00.7**	**+0.3**
	3.3nm,0.9s,mb3.6						
STKA	**Stephens Creek**	**39.20**	**244**	*e*P	**P**	**13 48 00.6**	**+0.2**
ASAR	**Alice Springs**	**45.95**	**256**	P	**P**	**13 48 54.1**	**-0.2**
	22nm,0.7s,mb4.4,baz=88,slow=8.3,SNR=238						
ASAR				S	**S**	**13 55 08.4**	**-5.8**
	0.9nm,0.9s,baz=92,slow=16,SNR=6.8						
WB2	**Warramunga Arr**	**46.01**	**261**	*e*P	**P**	**13 48 53.6**	**-1.2**
WRA	**Warramunga Arr**	**46.02**	**261**	P	**P**	**13 48 54.2**	**-0.8**
	6.8nm,0.3s,mb4.3,baz=96,slow=7.4,SNR=257						
WRA	**Warramunga Arr**	**46.02**	**261**	P	**P**	**13 48 54.2**	**-0.8**
KAKA	**Kakadu**	**49.34**	**270**	*e*P	**P**	**13 49 19.5**	**-0.8**
	6.6nm,0.3s,mb4.3						
KAKA	**Kakadu**	**49.34**	**270**	*e*P	**P**	**13 49 19.4**	**-0.9**
	10.0nm,0.3s,mb4.5						
FITZ	**Fitzroy Crossi**	**54.44**	**262**	P	**P**	**13 49 58.0**	**+0.3**
	2.7nm,0.5s,mb3.8,baz=117,slow=6.8,SNR=11						
FITZ	**Fitzroy Crossi**	**54.44**	**262**	*e*P	**P**	**13 49 58.0**	**+0.3**
	5.5nm,1.1s,mb3.8						
QSPA	**South Pole Qui**	**69.96**	**180**	*e*P	**P**	**13 51 43.8**	**+4.9**
WAKR	**Walker**	**79.12**	**42**	*e*P	**P**	**13 52 30.8**	**-1.0**
	1.6nm,0.4s,mb4.1						
ILAR	**Eielson Array**	**87.63**	**12**	P	**P**	**13 53 15.8**	**+1.6**
	0.2nm,0.5s,mb3.2,baz=212,slow=6.4,SNR=4.0						

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*IDC **16** 14:21:01.3±3.1,24.77S×179.83E,h479km±46km,mb3.2/4, mb1 3.4/6,mb1mx3.2/18,mbtmp3.4/6,Error ellipse: s-maj=32.5km s-min=26.6km az=115.0*
*ISCJB **16** 14:21:03.2±1.1,24.94S±0.09×179.9W±0.2,h548km±30km, mb3.8/5,Error ellipse: s-maj=31.6km s-min=13.2km az=179.5*
*NEIC **16** 14:21:03.4±1.2,24.99S×179.98E,h514km±21km,mb4.3/1, Error ellipse: s-maj=27.6km s-min=16.8km az=107.0*
ISC 16 14:21:03.0±1.0,25.05S±0.08×179.8W±0.2,h531km±26km, n15,σ0.91/16,mb3.8/5,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.54**	**344**	*e*P	**P**	**14 22 56.2**	**+0.4**
AFI	**Afiamalu**	**13.42**	**36**	P	**P**	**14 23 55.6**	**-0.9**
	1.1nm,0.3s,baz=162,slow=20,SNR=3.4						
AFI	**Afiamalu**	**13.42**	**36**	*e*P	**P**	**14 23 56.0**	**-0.5**
URZ	**Urewera**	**13.43**	**190**	P	**P**	**14 23 56.8**	**+0.6**
	2.2nm,0.3s,baz=65,slow=3.5,SNR=13						
URZ				S	**S**	**14 26 17.7**	**-1.3**
	0.3nm,0.3s,baz=37,slow=20,SNR=2.6						
URZ	**Urewera**	**13.43**	**190**	*e*P	**P**	**14 23 56.9**	**+0.7**
URZ				S	**S**	**14 26 17.7**	**-1.3**
RPZ	**Rata Peaks**	**20.06**	**200**	P	**P**	**14 25 02.7**	**+2.3**
	8.2nm,0.7s,baz=0.0,slow=19,SNR=2.9						
RPZ	**Rata Peaks**	**20.06**	**200**	P	**P**	**14 25 02.7**	**+2.3**
CTA	**Charters Tower**	**31.67**	**272**	*e*P	**P**	**14 26 42.7**	**-0.3**
	3.7nm,0.4s,mb4.3						
CTAO	**Charters Tower**	**31.67**	**272**	*e*P	**P**	**14 26 42.6**	**-0.4**
	5.1nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**34.47**	**250**	P	**P**	**14 27 06.3**	**-0.2**
	1.5nm,0.8s,mb3.6,baz=97,slow=8.1,SNR=3.6						
ASAR	**Alice Springs**	**42.03**	**262**	P	**P**	**14 28 07.9**	**-0.2**
	2.6nm,0.9s,mb3.8,baz=95,slow=8.4,SNR=19						
WRA	**Warramunga Arr**	**42.51**	**267**	P	**P**	**14 28 11.1**	**-0.8**
	1.5nm,0.5s,mb3.8,baz=99,slow=7.0,SNR=22						
WRA	**Warramunga Arr**	**42.51**	**267**	P	**P**	**14 28 11.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**50.92**	**266**	*e*P	**P**	**14 29 16.1**	**+0.6**
	2.6nm,0.6s,mb3.7						
HFS	**Hagfors**	**143.70**	**349**	PKP	PKPdf	14 39 39.4	+2.5
	1.0nm,0.4s,baz=35,slow=5.3,SNR=7.7						

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*ISCJB **16** 14:23:43.6±1.1,21.60S±0.06×66.5W±0.2,h199km±15km, mb3.6/5,Error ellipse: s-maj=26.7km s-min=10.1km az=179.4*
*IDC **16** 14:23:47.4±1.5,21.33S×66.46W,h225km±16km,mb3.4/5, mb1 3.5/9,mb1mx3.4/20,mbtmp3.3/9,Error ellipse: s-maj=20.5km s-min=14.0km az=72.0*
*NEIC **16** 14:23:47.8±1.0,21.38S×66.49W,h233km±9km,mb4.1/2, Error ellipse: s-maj=15.2km s-min=10.0km az=70.0*
ISC 16 14:23:45.0±0.9,21.58S±0.06×66.6W±0.2,h199km±13km, n19,σ1.15/18,mb3.6/5,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.46**	**344**	P	**Pn**	**14 25 07.2**	**+1.9**
	7.3nm,0.3s,baz=150,slow=8.5,SNR=137						
LPAZ				S	**Sn**	**14 26 08.2**	**-0.6**
	baz=168,slow=19,SNR=3.0						
LPAZ	**La Paz**	**5.46**	**344**	*e*P	**Pn**	**14 25 07.1**	**+1.7**
LPAZ				*e*S	**Sn**	**14 26 08.2**	**-0.6**
LPAZ				S	**Sn**	**14 26 08.2**	**-0.6**
LCO	**Las Campanas**	**8.28**	**206**	*e*P	**Pn**	**14 25 39.9**	**-1.9**
	12nm,0.3s						
CPUP	**Villa Florida**	**9.70**	**121**	P	**Pn**	**14 26 03.9**	**+3.6**
	0.3nm,0.3s,baz=274,slow=14,SNR=2.4						
CFAA	**Coronel Fontan**	**10.10**	**188**	P	**Pn**	**14 26 05.0**	**-0.4**
	0.3nm,0.3s,baz=350,slow=14,SNR=18						
CFAA				S	**Sn**	**14 27 51.2**	**-6.9**
	0.3nm,0.3s,baz=59,slow=22,SNR=6.0						
TRQA	**Tornquist**	**16.90**	**167**	*e*P	**P**	**14 27 29.9**	**+1.2**
	2.1nm,0.7s						
BDFB	**Brasilia**	**18.56**	**75**	P	**P**	**14 27 46.1**	**-0.9**
	0.7nm,0.3s,baz=241,slow=10,SNR=2.6						
PLCA	**Paso Flores**	**19.39**	**189**	P	**P**	**14 27 59.5**	**+3.7**
	0.2nm,0.3s,baz=34,slow=12,SNR=6.3						
SNAA	**Sanae**	**61.50**	**161**	P	**P**	**14 33 40.7**	**+0.5**
	0.3nm,0.8s,mb3.0,baz=312,slow=2.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**75.35**	**69**	P	**P**	**14 35 05.7**	**-1.2**
	2.4nm,0.5s,mb4.1,baz=255,slow=5.5,SNR=26						
TORD	**Torodi Ar. Bea**	**75.35**	**69**	P	**P**	**14 35 05.7**	**-1.2**
NVAR	**Mina Array Bea**	**76.90**	**321**	P	**P**	**14 35 15.3**	**+0.1**
	0.2nm,0.6s,mb3.0,baz=157,slow=4.9,SNR=2.9						
BOSA	**Boshof**	**81.50**	**11**	P	**P**	**14 35 39.9**	**-0.6**
	4.8nm,1.0s,mb4.1,baz=247,slow=2.4,SNR=4.2						
MAW	**Mawson**	**83.62**	**163**	P	**P**	**14 35 51.3**	**+0.7**
	1.2nm,0.6s,mb3.8,baz=211,slow=5.9,SNR=5.9						
ASAR	**Alice Springs**	**130.80**	**205**	PKP	PKPdf	14 42 31.9	-1.2
	0.3nm,0.5s,baz=137,slow=1.8,SNR=6.1						
WRA	**Warramunga Arr**	**133.94**	**208**	PKP	PKPdf	14 42 38.4	-0.8
	0.4nm,0.4s,baz=147,slow=2.1,SNR=3.7						
ZALV	**Zalesovo Beam**	**141.08**	**27**	PKP	PKPdf	14 42 48.9	-2.2
	0.5nm,0.4s,baz=318,slow=1.9,SNR=2.7						
MKAR	**Makanchi Array**	**144.40**	**38**	PKP	PKPdf	14 42 55.7	-1.6
	1.6nm,0.6s,baz=308,slow=3.4,SNR=14						
MKAR	**Makanchi Array**	**144.40**	**38**	PKP	PKPdf	14 42 55.7	-1.6

IDC 16 14:37:05.9±2.2,7.83S×130.74E,h0km,mb3.4/1, mb1 3.3/3,mb1mx3.2/15,mbtmp3.1/3,ML3.1/2,Error ellipse: s-maj=128.0km s-min=31.8km az=70.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.36**	**205**	Sn	Sn	14 41 49.7	-7.5
	0.2nm,0.3s,baz=8.9,slow=1.0,SNR=5.8						
WRA	**Warramunga Arr**	**12.54**	**164**	Pn	Pn	14 40 06.0	+0.3
	0.1nm,0.3s,baz=348,slow=13,SNR=10						
WRA				Sn	Sn	14 42 22.9	-3.3
	0.3nm,0.3s,baz=348,slow=23,SNR=3.4						
ASAR	**Alice Springs**	**16.04**	**169**	Pn	Pn	14 40 52.7	-0.3
	0.1nm,0.3s,baz=344,slow=13,SNR=3.4						
ASAR				Sn	Sn	14 43 49.3	-2.2
	0.1nm,0.3s,baz=350,slow=25,SNR=3.6						
MKAR	**Makanchi Array**	**69.31**	**327**	P	P	14 48 15.2	+0.1
	0.2nm,0.5s,baz=121,slow=7.1,SNR=3.9						

CASC 16 14:42:16.5±1.8,12.80N×88.91W,h36km±999km,MD3.9, ML3.7,1C,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.81**	**5**	*e*P	Pn	14 42 31.8	+0.3
SNVI				*e*S	Sn	14 42 42.9	+0.8
LFRS	**El Faro**	**0.83**	**350**	*e*P	Pn	14 42 31.8	+0.1
VSM	**San Migu

CTKT	**Corum**	**0.55**	**17**	*i* P	Pg	15 02 48.6	+0.8
CTKT	**Corum**	**0.55**	**17**	*i* P	Pg	15 02 48.7	+0.8
CTKT				*i* S	Sg	15 02 57.8	+2.8
YOZ	**Yozgat**	**0.73**	**128**	*e*PG	Pg	15 02 52.4	+1.2
YOZ				*e*SG	Sg	15 03 02.8	+2.1
YOZ	**Yozgat**	**0.73**	**128**	*e*Pg	Pg	15 02 52.4	+1.2
YOZ				*e*Sg	Sg	15 03 02.8	+2.1
KAMT	**Kaman**	**0.99**	**223**	*e*PG	Pg	15 02 57.7	+1.5
KAMT				*e*SG	Sg	15 03 11.0	+2.0
KAMT	**Kaman**	**0.99**	**223**	*e*Pg	Pg	15 02 57.7	+1.5
KAMT				*e*Sg	Sg	15 03 11.0	+2.0

IDC 16 15:14:57.7±1.9, 8°82S×127°32E, h0km, mb3.1/1, mb1 3.3/3, mb1mx3.2/16, mbtmp3.1/3, ML3.1/2, Error ellipse: s-maj=203.1km s-min=31.8km az=62.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.98**	**149**	Pn	Pn	15 18 03.5	-0.1
	0.1nm,0.3s,baz=324,slow=14,SNR=2.7						
WRA				Sn	Sn	15 20 21.0	-7.7
	0.2nm,0.3s,baz=331,slow=22,SNR=4.3						
ASAR	**Alice Springs**	**16.05**	**158**	Pn	Pn	15 18 45.1	+0.2
	0.1nm,0.3s,baz=330,slow=11,SNR=6.6						
ASAR				Sn	Sn	15 21 36.1	-7.6
	0.1nm,0.3s,baz=323,slow=21,SNR=4.7						
MKAR	**Makanchi Array**	**68.33**	**328**	P	P	15 26 00.9	+0.1
	0.1nm,0.5s,baz=121,slow=4.7,SNR=2.4						

*CSEM **16** 15:27:52.1, 36°53N×21°87E, h20km, MD3.5, After ATH*
ATH 16 15:27:52.1, 36°53N×21°87E, h20km±1km, MD3.5/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.65**	**4**	*e*PN	Pn	15 28 04.9	-1.3
ITM				*e*SN	Sb	15 28 13.8	+0.4
ITM	**Ithomi**	**0.65**	**4**	*e*Pn	Pn	15 28 04.9	-1.3
ITM				*e*Sn	Sb	15 28 13.8	+0.4
VLI	**Veliai**	**0.88**	**77**	*e*PN	Pn	15 28 08.8	-0.5
VLI				*e*SN	Sn	15 28 21.8	+0.3
VLI	**Veliai**	**0.88**	**77**	*e*Pn	Pn	15 28 08.8	-0.5
VLI				*e*Sn	Sn	15 28 21.8	+0.3
VLX	**Vlachokerasia**	**0.93**	**26**	*e*PN	Pn	15 28 09.9	-0.2
VLX				*e*SN	Sn	15 28 23.0	+0.2
VLX	**Vlachokerasia**	**0.93**	**26**	*e*Pn	Pn	15 28 09.9	-0.2
VLX				*e*Sn	Sn	15 28 23.0	+0.2
GUR	**Goura**	**1.45**	**15**	*e*PN	Pn	15 28 19.8	+2.6
GUR				*e*SN	Sn	15 28 38.8	+3.1
GUR	**Goura**	**1.45**	**15**	*e*Pn	Pn	15 28 19.8	+2.6
GUR				*e*Sn	Sn	15 28 38.8	+3.1
DID	**Didima**	**1.47**	**48**	*e*PN	Pn	15 28 19.2	+1.8
DID	**Didima**	**1.47**	**48**	*e*Pn	Pn	15 28 19.2	+1.8
RLS	**Riolos of Patr**	**1.56**	**348**	*e*PN	Pn	15 28 21.3	+2.6
RLS	**Riolos of Patr**	**1.56**	**348**	*e*Pn	Pn	15 28 21.3	+2.6

*ISCJB **16** 15:27:58.5±1.4, 24°53S±0°06×179°90E±0°10, h470km±19km, mb3.9/11, Error ellipse: s-maj=14.7km s-min=7.7km az=18.3*
*IDC **16** 15:27:59.3±2.0, 24°52S×179°96E, h472km±23km, mb3.4/9, mb1 3.6/11, mb1mx3.4/19, mbtmp3.5/11, Error ellipse: s-maj=19.3km s-min=14.6km az=134.0*
*NEIC **16** 15:28:00.2±1.1, 24°59S×179°98W, h487km±15km, mb4.1/1, Error ellipse: s-maj=16.9km s-min=12.5km az=121.0*
ISC 16 15:27:58.9±1.0, 24°60S±0°06×180°0W±0°1, h469km±14km, n28, σ0°91/34, mb3.9/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.07**	**345**	*e*P	**P**	15 29 49.0	+4.0
	25nm,0.6s						
AFI	**Afiamalu**	**13.15**	**38**	P	**P**	15 30 48.7	-1.4
	1.8nm,0.3s,baz=162,slow=3.2,SNR=4.3						
AFI				S	**S**	15 33 11.5	+0.1
	0.9nm,0.3s,baz=263,slow=10.0,SNR=3.2						
AFI	**Afiamalu**	**13.15**	**38**	*e*P	**P**	15 30 49.1	-1.1
AFI				S	**S**	15 33 11.5	+0.1
URZ	**Urewera**	**13.84**	**190**	P	**P**	15 30 57.8	+0.6
	2.5nm,0.3s,baz=114,slow=7.9,SNR=10						
URZ				S	**S**	15 33 26.0	+1.6
	1.0nm,0.3s,baz=87,slow=22,SNR=16						
URZ	**Urewera**	**13.84**	**190**	P	**P**	15 30 57.5	+0.3
URZ				S	**S**	15 33 26.0	+1.6
BFZ	**Birch Farm**	**16.35**	**190**	PN	**P**	15 31 23.1	-0.5
BFZ				*e*SN	**S**	15 34 09.4	-3.3
MRZ	**Mangatainoka R**	**16.44**	**192**	PN	**P**	15 31 24.5	-0.1
QRZ	**Quartz Range**	**17.35**	**199**	PN	**P**	15 31 34.6	+0.5
NNZ	**Nelson**	**17.48**	**197**	*e*PN	**P**	15 31 34.1	-1.3
THZ	**Tophouse**	**18.11**	**197**	*e*PN	**P**	15 31 40.7	-1.0
THZ				SN	**S**	15 34 42.5	-1.3
DSZ	**Denniston Nort**	**18.41**	**200**	*e*PN	**P**	15 31 44.8	+0.2
RPZ	**Rata Peaks**	**20.44**	**199**	P	**P**	15 32 04.0	+1.1
	6.5nm,0.4s,baz=41,slow=20,SNR=3.7						
HNR	**Honiara**	**24.35**	**305**	P	**P**	15 32 38.8	+0.2
	19nm,0.8s,mb4.6,baz=127,slow=5.1,SNR=3.2						
CTA	**Charters Tower**	**31.50**	**271**	*e*P	**P**	15 33 42.1	+0.9
	4.8nm,0.4s,mb4.3						
CTAO	**Charters Tower**	**31.50**	**271**	*e*P	**P**	15 33 42.1	+0.9
STKA	**Stephens Creek**	**34.48**	**249**	P	**P**	15 34 06.7	+0.3
	0.6nm,0.3s,mb3.5,baz=101,slow=10,SNR=11						
STKA	**Stephens Creek**	**34.48**	**249**	*e*P	**P**	15 34 07.1	+0.7
	2.0nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**41.94**	**261**	P	**P**	15 35 07.4	-0.1
	1.1nm,0.6s,mb3.5,baz=90,slow=7.3,SNR=47						
WB2	**Warramunga Arr**	**42.36**	**267**	*e*P	**P**	15 35 10.3	-0.6
WRA	**Warramunga Arr**	**42.37**	**267**	P	**P**	15 35 10.4	-0.6
	3.7nm,0.5s,mb4.1,baz=103,slow=8.0,SNR=26						
WRA				ScP	ScP	15 39 58.3	-1.3
	0.8nm,0.7s,baz=100,slow=3.7,SNR=5.3						
FITZ	**Fitzroy Crossi**	**50.79**	**266**	*e*P	**P**	15 36 15.2	+0.1
	4.5nm,0.8s,mb3.9						
QSPA	**South Pole Qui**	**65.49**	**180**	*e*P	**P**	15 37 55.1	+1.0
	3.6nm,0.6s,mb4.2						
MAW	**Mawson**	**77.10**	**200**	P	**P**	15 39 03.0	+0.4
	0.8nm,0.4s,mb3.6,baz=125,slow=4.5,SNR=6.9						
NVAR	**Mina Array Bea**	**85.25**	**44**	P	**P**	15 39 45.7	+0.6
	0.7nm,0.7s,mb3.4,baz=225,slow=9.1,SNR=6.0						
NVAR	**Mina Array Bea**	**85.25**	**44**	P	**P**	15 39 45.7	+0.6
TXAR	**Lajitas Array**	**90.79**	**58**	P	**P**	15 40 12.6	+1.2
	1.0nm,0.8s,mb3.8,baz=218,slow=7.4,SNR=11						
TXAR	**Lajitas Array**	**90.79**	**58**	P	**P**	15 40 12.6	+1.2
ILAR	**Eielson Array**	**92.70**	**14**	P	**P**	15 40 17.9	-1.4
	0.2nm,0.5s,mb3.4,baz=217,slow=4.3,SNR=3.8						

DJA 16 15:30:05.0±04S×123°12E, h113km, MLv3.8/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.05**	**199**	P	Pn	15 30 26.2	-0.8
LUWI				S	Sn	15 30 44.2	+0.5
MRSI	**Marisa**	**1.29**	**294**	P	Pn	15 30 30.1	+0.6
MRSI				S	Sn	15 30 50.4	+2.3
APSI	**Ampana**	**1.71**	**240**	P	Pn	15 30 34.9	+0.4
APSI				S	Sn	15 30 58.4	+1.4
MSSI	**Masamba**	**3.75**	**228**	P	Pn	15 31 02.5	+1.4

*DDA **16** 15:59:14.4, 37°47N×38°55E, h7km±3km, Md2.8, Ml3.0*
*ISCJB **16** 15:59:15.0±1.0, 37°51N±0°05×38°56E±0°06, h2km±5km, Error ellipse: s-maj=11.0km s-min=4.3km az=138.9*
*CSEM **16** 15:59:15.3±0.4, 37°49N×38°56E, h2km, ML3.0, Error ellipse: s-maj=9.3km s-min=4.3km az=134.0*
*ISK **16** 15:59:16.2, 37°57N×38°51E, h9km, MD2.8*
ISC 16 15:59:15.2±1.1, 37°48N±0°05×38°57E±0°06, h2km±6km, n21, σ0°79/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.22**	**267**	*i* P	**Pg**	15 59 18.9	-0.5
ATAB				*i* S	**Sg**	15 59 22.3	0.0
ATAB	**Bozova**	**0.22**	**267**	*i* P	**Pg**	15 59 18.9	-0.5
ATAB				*i* S	**Sg**	15 59 22.3	0.0
GZT	**Gaziantep**	**0.81**	**261**	*i* P	**Pg**	15 59 29.5	-1.3
GZT				*i* S	**Sg**	15 59 42.4	+1.1
MALT	**Malatya**	**0.84**	**352**	*e*PG	**Pg**	15 59 31.1	-0.2
MALT				*e*SG	**Sg**	15 59 42.1	-0.1
MALT	**Malatya**	**0.84**	**352**	*e*Pg	**Pg**	15 59 31.1	-0.2
MALT				*e*Sg	**Sg**	15 59 42.1	-0.1
AKCD	**Akcadag**	**0.96**	**328**	*i* P	**Pg**	15 59 33.3	-0.4
AKCD				*i* S	**Sg**	15 59 47.4	+1.2
AKCD	**Akcadag**	**0.96**	**328**	*i* P	**Pg**	15 59 33.3	-0.4
AKCD				*i* S	**Sg**	15 59 47.4	+1.2
ELZG	**Elazig**	**1.07**	**18**	*i* P	**Pg**	15 59 35.3	-0.4
ELZG				*i* S	**Sg**	15 59 48.3	-1.2
ELZG	**Elazig**	**1.07**	**18**	*i* P	**Pg**	15 59 35.3	-0.4
ELZG				*i* S	**Sg**	15 59 48.3	-1.3
SVRC	**Sivrice-ELAZID**	**1.07**	**33**	*e*PG	**Pg**	15 59 36.2	+0.4
SVRC				*e*SG	**Sg**	15 59 50.6	+1.0
SVRC	**Sivrice-ELAZID**	**1.07**	**33**	*e*Pg	**Pg**	15 59 36.2	+0.4
SVRC				*e*Sg	**Sg**	15 59 50.6	+1.0
GAZ	**Gaziantep**	**1.12**	**255**	*e*PN	**Pn**	15 59 37.2	-0.8
GAZ				*e*SN	**Sn**	15 59 53.9	-0.1
GAZ	**Gaziantep**	**1.12**	**255**	*e*Pn	**Pn**	15 59 37.2	-0.8
GAZ				*e*Sn	**Sn**	15 59 53.9	-0.1
KMRS	**Kahramanmaras**	**1.33**	**272**	*e*PN	**Pn**	15 59 41.5	+0.8
KMRS	**Kahramanmaras**	**1.33**	**272**	*e*Pn	**Pn**	15 59 41.6	+0.8
PTK	**Pertek**	**1.55**	**24**	*e*PN	**Pn**	15 59 44.4	+0.5
PTK	**Pertek**	**1.55**	**24**	*e*Pn	**Pn**	15 59 44.4	+0.5
SARI	**SarD1z-Kayseri**	**1.90**	**310**	*e*PN	**Pn**	15 59 48.3	-0.3
SARI				*e*SN	**Sn**	16 00 12.3	-0.8
SARI	**SarD1z-Kayseri**	**1.90**	**310**	*e*Pn	**Pn**	15 59 48.3	-0.4
SARI				*e*Sn	**Sn**	16 00 12.3	-0.9
KOZT	**Kozan**	**2.18**	**271**	*e*PN	**Pn**	15 59 53.9	+1.3
KOZT	**Kozan**	**2.18**	**271**	*e*Pn	**Pn**	15 59 53.9	+1.4

*IDC **16** 16:05:54.4±2.8, 18°64S×174°92W, h112km±25km, mb4.1/12, mb1 4.3/13, mb1mx4.1/21, mbtmp4.2/13, Error ellipse: s-maj=28.1km s-min=14.8km az=124.0*
*NEIC **16** 16:05:59.5±0.4, 18°56S×175°21W, h150km, mb4.8/3, Error ellipse: s-maj=13.3km s-min=10.2km az=168.0*
*ISCJB **16** 16:06:00.8±3.6, 18°6S±0°1×175°2W±0°1, h176km±37km, mb4.4/12, Error ellipse: s-maj=24.2km s-min=16.2km az=147.9*
ISC 16 16:06:01.8±3.5, 18°6S±0°1×175°2W±0°1, h171km±36km, n37, σ0°84/32, mb4.4/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.73**	**35**	P	**Pn**	16 07 15.4	**-10**
	23nm,0.3s,baz=208,slow=6.8,SNR=42						
AFI				S	Sx	16 08 13.6	
	47nm,0.3s,baz=67,slow=22,SNR=13						
AFI	**Afiamalu**	**5.73**	**35**	*e*Pn	**Pn**	16 07 15.6	**-10**
AFI				*e*Sn	Sx	16 08 13.9	
MSVF	**Nonsavu**	**6.50**	**277**	*e*P	**Pn**	16 07 40.5	**+5.2**
	13nm,0.7s						
RAR	**Rarotonga**	**14.71**	**103**	P	**Pn**	16 09 22.3	**+0.5**
	2.0nm,0.3s,baz=342,slow=3.2,SNR=4.7						
URZ	**Urewera**	**20.67**	**197**	P	**P**	16 10 26.6	**-1.8**
	9.6nm,0.4s,baz=306,slow=2.5,SNR=30						
URZ	**Urewera**	**20.67**	**197**	*e*P	**P**	16 10 27.3	**-1.0**
EIDS	**Eidsvold**	**31.93**	**252**	*e*P	**P**	16 12 11.5	**0.0**
ARMA	**Armidale**	**32.27**	**242**	*e*P	**P**	16 12 15.6	**+1.2**
CNB	**Canberra Magne**	**35.46**	**235**	*e*P	**P**	16 12 42.6	**+0.7**
CTA	**Charters Tower**	**36.36**	**261**	P	**P**	16 12 50.2	**+0.5**
	12nm,0.5s,mb4.8,baz=96,slow=11,SNR=30						
CTA	**Charters Tower**	**36.36**	**261**	*e*P	**P**	16 12 49.6	**-0.1**
	8.8nm,0.4s,mb4.7						
CTA	**Charters Tower**	**36.36**	**261**	P	**P**	16 12 50.2	**+0.5**
CTAO	**Charters Tower**	**36.36**	**261**	*e*P	**P**	16 12 49.5	**-0.2**
	11nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**40.99**	**243**	P	**P**	16 13 28.5	**+0.3**
	2.5nm,0.5s,mb4.1,baz=81,slow=9.6,SNR=14						
STKA	**Stephens Creek**	**40.99**	**243**	*e*P	**P**	16 13 28.3	**+0.2**
	1.9nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**40.99**	**243**	*e*P	**P**	16 13 28.2	**+0.1**
WB2	**Warramunga Arr**	**47.51**	**260**	*e*P	**P**	16 14 19.4	**-0.7**
WRA	**Warramunga Arr**	**47.52**	**260**	P	**P**	16 14 19.6	**-0.5**
	9.9nm,0.5s,mb4.7,baz=97,slow=7.6,SNR=76						
WRA				PcP	PcP	16 15 47.6	0.0
	0.8nm,0.5s,baz=96,slow=3.3,SNR=6.3						
ASAR	**Alice Springs**	**47.55**	**255**	P	**P**	16 14 20.5	**+0.2**
	30nm,0.7s,mb5.0,baz=88,slow=8.4,SNR=386						
ASAR				PcP	PcP	16 15 47.8	+0.1
	3.0nm,0.6s,baz=102,slow=4.0,SNR=11						
KAKA	**Kakadu**	**50.63**	**269**	*e*P	**P**	16 14 43.4	**-0.5**
	9.2nm,0.4s,mb4.8						
KAKA	**Kakadu**	**50.63**	**269**	*e*P	**P**	16 14 43.4	**-0.5**
	32nm,0.5s,mb5.2						
FITZ	**Fitzroy Crossi**	**55.93**	**260**	P	**P**	16 15 22.6	**+0.1**
	2.6nm,0.4s,mb4.4,baz=93,slow=5.0,SNR=26						
FITZ				PcP	PcP	16 16 20.1	+1.1
	1.2nm,0.5s,baz=45,slow=2.9,SNR=3.4						
FITZ	**Fitzroy Crossi**	**55.93**	**260**	*e*P	**P**	16 15 22.3	**-0.2**
	4.4nm,0.4s,mb4.6						
KLBR	**Kellerberrin**	**61.25**	**244**	*e*P	**P**	16 15 58.0	**-1.1**
	23nm,1.3s,mb4.8						
MJAR	**Matsushiro Arr**	**70.35**	**322**	P	**P**	16 16 56.8	**-0.3**
	3.2nm,0.6s,mb4.2,baz=165,slow=7.0,SNR=13						
QSPA	**South Pole Qui**	**71.42**	**180**	*e*P	**P**	16 17 03.6	**+0.7**
PETK	**Petropavlovsk-**	**75.21**	**343**	P	**P**	16 17 24.5	**-0.7**
	0.9nm,0.6s,mb3.6,baz=113,slow=7.7,SNR=10						
PETK	**Petropavlovsk-**	**75.21**	**343**	P	**P**	16 17 24.5	**-0.7**
KSRS	**Korea Array**	**77.31**	**317**	P	**P**	16 17 38.9	**+1.4**
	1.8nm,0.8s,mb3.8,baz=132,slow=6.5,SNR=11						
MAW	**Mawson**	**84.19**	**199**	P	**P**	16 18 13.4	**-0.2**
	2.0nm,0.5s,mb4.1,baz=133,slow=9.5,SNR=8.3						
ILAR	**Eielson Array**	**85.94**	**12**	P	**P**	16 18 20.7	**-1.4**
	0.2nm,0.4s,baz=194,slow=7.2,SNR=4.8						
CMAR	**Chiang Mai Arr**	**92.02**	**289**	P	**P**	16 18 53.6	**+1.8**
	3.1nm,1.0s,mb4.3,baz=111,slow=2.9,SNR=14						
ZALV	**Zalesovo Beam**	**110.71**	**322**	PKiKP	PKiKP	16 24 12.6	-1.3
	0.3nm,0.3s,baz=116,slow=3.4,SNR=2.4						
ARCES	**ARCESS Array B**	**127.55**	**351**	PKP	PKPdf	16 24 44.9	-0.9
	0.5nm,0.4s,baz=17,slow=1.3,SNR=9.0						
MALT	**Malatya**	**144.82**	**311**	*e*PKP	PKPdf	16 25 19.1	+0.5
BRTR	**Keskin Array B**	**147.45**	**316**	PKPbc	PKPbc	16 25 25.6	-0.1
	0.9nm,0.6s,baz=135,slow=4.3,SNR=6.3						
GERES	**GERESS Array B**	**149.02**	**349**	PKPbc	PKPbc	16 25 29.5	0.0
	0.9nm,0.5s,baz=33,slow=2.5,SNR=7.5						

*IDC **16** 16:12:02.8±3.0, 4°89S×151°81E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/17, mbtmp3.7/5, Error ellipse: s-maj=83.9km s-min=29.7km az=107.0*
*ISCJB **16** 16:12:04.6±1.1, 5°0S±0°2×152°0E±0°1, h33km, mb3.6/5, Error ellipse: s-maj=22.1km s-min=15.4km az=0.3*
*NEIC **16** 16:12:07.3±1.9, 5°00S×152°02E, h41km±19km, Error ellipse: s-maj=24.3km s-min=10.5km az=164.0*
ISC 16 16:12:07.1±1.1, 5°0S±0°2×152°0E±0°1, h35km, n10, σ0°36/9, mb3.6/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.51**	**227**	P	**Pn**	16 13 40.7	**+0.3**
HNR	**Honiara**	**9.03**	**120**	*e*P	**Pn**	16 14 15.0	**-0.1**
	40nm,0.4s						
KAKA	**Kakadu**	**20.79**	**247**	*e*P	**P**	16 16 45.3	**-0.1**
	25nm,0.5s						
WB2	**Warramunga Arr**	**22.72**	**228**	*e*P	**P**	16 17 06.1	**+0.1**
WRA	**Warramunga Arr**	**22.73**	**228**	P	**P**	16 17 06.1	**0.0**
	2.1nm,0.6s,mb3.8,baz=51,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**25.48**	**221**	P	**P**	16 17 32.5	**+0.4**
	0.7nm,0.5s,mb3.5,baz=53,slow=9.1,SNR=6.1						
FITZ	**Fitzroy Crossi**	**28.88**	**241**	P	**P**	16 18 01.8	**-0.9**
	1.2nm,0.4s,mb4.0,baz=78,slow=9.8,SNR=7.2						
CMAR	**Chiang Mai Arr**	**57.24**	**296**	P	**P**	16 21 51.3	**-0.1**
	0.3nm,0.5s,mb3.6,baz=115,slow=5.0,SNR=4.3						
MKAR	**Makanchi Array**	**79.94**	**319**	P	**P**	16 24 12.9	**+0.4**
	0.2nm,0.6s,mb3.2,baz=123,slow=6.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**149.61**	**287**	PKPbc	PKPbc	16 31 54.0	0.0
	0.4nm,0.3s,baz=101,slow=2.4,SNR=9.5						

*NIED **16** 16:20:00, 42°50N×143°50E, h50km, Mw4.0 Best double couple: M0 1.26000×10^15 NP1:φ0=298.00000°, δ64.00000°, λ-135.00000°. NP2:φ0=184.00000°, δ51.00000°, λ-35.00000°.*
*MOS **16** 16:20:01.3±1.3, 42°54N×143°45E, h52km, mb4.3/1, Error ellipse: s-maj=23.5km s-min=9.5km az=66.6*
*ISCJB **16** 16:20:02.0±0.4, 42°51N±0°04×143°56E±0°05, h59km±3km, mb3.8/9, MS3.0/2, Error ellipse: s-maj=7.7km s-min=4.0km az=139.1*
*NEIC **16** 16:20:02.7±0.6, 42°56N×143°63E, mb3.8/1, Error ellipse: s-maj=17.5km s-min=8.2km az=120.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido.
*JMA **16** 16:20:03.0±0.1, 42°52N×143°47E, h55km±1km, M4.0*
JMA Felt II J1.
*IDC **16** 16:20:03.4±0.9, 42°51N×143°53E, h53km±8km, mb3.5/8, mb1 3.8/10, mb1mx3.6/24, mbtmp3.5/10, MS2.9/5, Ms1 3.0/5, ms1mx2.7/32, Error ellipse: s-maj=18.8km s-min=16.4km az=109.0*
ISC 16 16:20:03.3±0.4, 42°54N±0°04×143°54E±0°05, h51km±4km, h53km±2.7km: pP-P, n46, σ0°95/56, mb3.8/9, MS3.0/2, 4C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCH	**Churui**	**0.15**	**301**	⇓P	**Pn**	16 20 11.4	**-0.1**
JCH				*e*S	**Sn**	16 20 17.4	**+0.1**
JOB	**Onbets**	**0.43**	**30**	⇓P	**Pn**	16 20 14.2	**+0.4**
JOB				*e*S	**Sn**	16 20 22.4	**+1.1**
JEM	**Erimo**	**0.59**	**209**	P	**Pn**	16 20 15.2	**-0.5**
ERM	**Erimo**	**0.59**	**209**	*e*Pn	**Pn**	16 20 14.2	**-1.5**
ERM	**Erimo**	**0.59**	**209**	*e*PN	**Pn**	16 20 14.3	**-1.5**
JNBK	**Urakawa-nobuka**	**0.64**	**247**	⇑P	**Pn**	16 20 15.7	**-0.6**
JNBK				*e*S	**Sn**	16 20 25.0	**-0.7**
JAR	**Ashorobuto**	**0.78**	**12**	⇓P	**Pn**	16 20 18.1	**0.0**
JAR				*e*S	**Sn**	16 20 29.4	**+0.5**
JBT2	**Biratori 2**	**0.90**	**286**	⇓P	**Pn**	16 20 18.9	**-0.9**
JBT2				*e*S	**Sn**	16 20 30.7	**-1.1**
JFR	**Furan**	**0.94**	**312**	P	**Pn**	16 20 19.4	**-0.8**
JAK	**Akkeshi**	**0.97**	**61**	⇑P	**Pn**	16 20 20.0	**-0.6**
JAK				*e*S	**Sn**	16 20 32.8	**-0.5**
JNK	**Nakash**	**1.36**	**39**	⇑P	**Pn**	16 20 25.1	**-0.8**
JNK				*e*S	**Sn**	16 20 41.6	**-1.2**
JAB	**Ashibetsu**	**1.37**	**316**	P	**Pn**	16 20 26.6	**+0.6**
JAB				*e*S	**Sn**	16 20 44.5	**+1.4**
ASAJ	**Asahikawa**	**1.73**	**337**	P	**Pn**	16 20 31.8	**+0.9**
	12nm,0.3s,baz=195,slow=9.9,SNR=204						
ASAJ				S	**Sn**	16 20 57.4	**+5.7**
	33nm,0.3s,baz=336,slow=20,SNR=21						
YUK	**Yuzh-Kuril'sk**	**2.26**	**48**	⇑iPN	**Pn**	16 20 38.6	**+0.4**
YUK				*i* S	**Sn**	16 21 04.7	**-0.2**
YUK				pmax	pmax		
	comp=N,141nm,0.2s						
YUK				pmax	pmax		
	comp=Z,549nm,0.2s						
YUK				pmax	pmax		
	comp=E,200nm,0.1s						
YUK				pmax	pmax		
	comp=Z,1μm,1.2s						
YUK				smax			
	comp=N,993nm,0.6s						
YUK				smax			
	comp=E,2μm,0.6s						
YUK				smax			
	comp=N,900nm,0.6s						
YUK				smax			
	comp=E,1μm,0.6s						
KUR	**Kuril'sk**	**4.13**	**48**	*e*PN	**Pn**	16 21 06.0	**+2.2**
KUR				*e*S	**Sn**	16 21 52.0	**+1.2**
KUR				pmax	pmax		
	comp=Z,280nm,0.9s						
KUR				smax			
	comp=N,190nm,0.7s						
KUR				smax			
	comp=E,80nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.45**	**353**	*e*P	**Pn**	16 21 07.9	**-0.3**
YSS	**Yuzh-Sakhalins**	**4.45**	**353**	*e*PN	**Pn**	16 21 07.9	**-0.4**
MAJO	**Matsushiro**	**7.26**	**216**	*e*P	**Pn**	16 21 47.1	**+0.3**
	comp=E,8.5nm,0.6s						
MAJO	**Matsushiro**	**7.26**	**216**	*e*PN	**Pn**	16 21 47.1	**+0.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MAT	**Matsushiro**	**7.26**	**216**	P	**Pn**	16 21 48.9	**+2.1**
MAT				S	**Sn**	16 23 08.6	**+0.7**
MJAR	**Matsushiro Arr**	**7.26**	**216**	P	**Pn**	16 21 47.7	**+0.8**
	comp=Z,0.7nm,0.3s,baz=34,slow=12,SNR=19						
MJAR				LR	LR	16 25 05.1	
	comp=Z,123nm,21.1s,baz=175,slow=42						
MJAR	**Matsushiro Arr**	**7.26**	**216**	PN	**Pn**	16 21 47.7	**+0.9**
SKR	**Severo-Kuril's**	**11.87**	**42**	*e*PN	**Pn**	16 22 49.8	**+0.1**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
KSRS	**Korea Array**	**13.00**	**252**	P	**Pn**	16 23 07.0	**+1.8**
	comp=Z,0.3nm,0.3s,baz=64,slow=13,SNR=11						
KSRS				LR	LR	16 27 43.1	
	comp=Z,40nm,20.2s,baz=336,slow=35						
PEA0B	**Petropavlovsk-**	**14.20**	**37**	*e*Pn	**Pn**	16 23 18.0	**-3.4**
PETK	**Petropavlovsk-**	**14.20**	**37**	P	**Pn**	16 23 18.6	**-2.7**
	comp=Z,0.4nm,

CTA	Charters Tower	14.00 185	P	Pn	16 59 47.3	+3.7	
	0.4nm,0.3s,baz=345,slow=12,SNR=2.8						
CTAO	Charters Tower	14.00 185	eP	Pn	16 59 47.7	+4.1	
WB2	Warramunga Arr	18.80 222	eP	Pn	17 00 42.5	-1.5	
WRA	Warramunga Arr	18.81 222	P	Pn	17 00 42.6	-1.4	
	0.6nm,0.3s,baz=51,slow=11,SNR=14						
WRA			ScP	ScP	17 08 37.6	-1.3	
	0.1nm,0.3s,baz=38,slow=2.2,SNR=6.4						
EIDS	Eidsvold	19.51 170	P	Pn	17 00 51.4	-1.0	
ASAR	Alice Springs	21.85 215	P	P	17 01 15.9	+0.1	
	3.9nm,0.4s,mb4.2,baz=53,slow=8.4,SNR=72						
ASAR			S	S	17 05 16.3	+2.3	
	3.9nm,0.8s,baz=34,slow=20,SNR=19						
ASAR			ScP	ScP	17 08 46.0	-0.1	
	1.1nm,0.8s,baz=49,slow=2.8,SNR=8.8						
FITZ	Fitzroy Crossi	24.45 239	P	P	17 01 42.5	+0.9	
	4.1nm,0.5s,mb4.1,baz=64,slow=9.5,SNR=8.7						
FITZ	Fitzroy Crossi	24.45 239	eP	P	17 01 42.5	+0.9	
	7.4nm,0.4s,mb4.5						
FITZ	Fitzroy Crossi	24.45 239	eP	P	17 01 42.2	+0.6	
	5.2nm,0.6s,mb4.1						
STKA	Stephens Creek	26.27 191	P	P	17 01 57.9	-0.1	
	1.3nm,0.4s,mb3.9,baz=28,slow=9.9,SNR=9.3						
STKA			LR	LR	17 12 07.7		
	comp=Z,136nm,19.4s,baz=26,slow=36						
STKA	Stephens Creek	26.27 191	eP	P	17 01 58.1	+0.2	
	1.3nm,0.3s,mb3.9						
STKA	Stephens Creek	26.27 191	eP	P	17 01 58.2	+0.3	
STKA			LR	LR	17 12 07.7		
KSRS	Korea Array	46.97 339	P	P	17 04 54.6	+1.4	
	0.4nm,0.4s,mb3.7,baz=159,slow=8.7,SNR=4.0						
KSRS			LR	LR	17 21 25.8		
	comp=Z,21nm,20.1s,baz=225,slow=32						
MKAR	Makanchi Array	77.84 320	P	P	17 08 18.8	-0.5	
	0.2nm,0.4s,mb3.4,baz=101,slow=7.6,SNR=5.4						
MKAR	Makanchi Array	77.84 320	P	P	17 08 18.8	-0.5	
ZAA0	Zalesovo Array	79.31 328	eP	P	17 08 26.6	-0.6	
ZALV	Zalesovo Beam	79.31 328	P	P	17 08 26.7	-0.5	
	0.8nm,0.4s,mb4.0,baz=113,slow=6.2,SNR=5.2						
ILAR	Eielson Array	85.34 23	P	P	17 08 58.8	+0.3	
	0.3nm,0.5s,mb3.6,baz=251,slow=5.4,SNR=4.8						
TORD	Torodi Ar. Bea	145.57 284	PKPbc	PKPbc	17 16 01.1	+0.2	
	1.9nm,0.5s,baz=67,slow=4.2,SNR=22						

IDC 16 17:38:35.3±50.0, 15°00'S×166°85W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/18, mbtmp3.9/3, Error ellipse: s-maj=1035.0km s-min=212.3km az=81.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	49.73	241	P	P	17 47 30.2	+0.7
	1.7nm,0.9s,baz=111,slow=8.6,SNR=5.6						
WRA	Warramunga Arr	56.08	256	P	P	17 48 16.1	-0.6
	0.3nm,0.5s,baz=98,slow=6.7,SNR=3.4						
ASAR	Alice Springs	56.23	251	P	P	17 48 17.7	0.0
	2.0nm,0.6s,baz=94,slow=7.2,SNR=58						

IDC 16 17:40:42.1±1.4, 5°18N×126°99E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/21, mbtmp3.6/6, Error ellipse: s-maj=97.6km s-min=18.4km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.17	183	P	P	17 45 51.4	+1.0
	2.9nm,1.1s,baz=355,slow=12,SNR=2.5						
WRA	Warramunga Arr	25.98	164	P	P	17 46 18.4	+1.7
	1.5nm,0.4s,baz=342,slow=10,SNR=25						
ASAR	Alice Springs	29.45	167	P	P	17 46 46.4	-1.3
	0.1nm,0.5s,baz=348,slow=7.0,SNR=6.4						
STKA	Stephens Creek	39.39	160	P	P	17 48 12.3	-1.3
	1.0nm,0.5s,baz=343,slow=14,SNR=2.1						
MKAR	Makanchi Array	56.53	325	P	P	17 50 26.5	+0.3
	0.1nm,0.3s,baz=119,slow=7.2,SNR=6.1						
BVAR	Borovoye Array	66.26	327	P	P	17 51 32.0	0.0
	0.4nm,0.6s,baz=126,slow=7.3,SNR=2.4						

*ISCJB **16** 17:50:07.0±1.2, 24°30S±0°09×180°0W±0°1, h489km±14km, mb3.9/15, Error ellipse: s-maj=17.7km s-min=12.6km az=30.2*
*IDC **16** 17:50:07.2±1.8, 24°22S×179°91W, h478km±19km, mb3.5/13, mb1 3.7/15, mb1mx3.6/20, mbtmp3.5/15, Error ellipse: s-maj=18.6km s-min=14.3km az=125.0*
*NEIC **16** 17:50:07.6±0.9, 24°28S×179°92W, h490km±11km, mb4.3/6, Error ellipse: s-maj=14.6km s-min=10.4km az=120.0*

ISC 16 17:50:07.8±1.1, 24°30S±0°09×179°9W±0°1, h486km±13km, n36, σ0°91/30, mb3.9/15, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.81	343	eP	P	17 51 52.6	+0.9
	16nm,0.4s						
AFI	Afiamalu	12.88	38	P	P	17 52 55.8	-0.1
	1.9nm,0.3s,baz=21,slow=22,SNR=7.6						
AFI	Afiamalu	12.88	38	eP	P	17 52 54.7	-1.2
URZ	Urewera	14.14	190	P	P	17 53 08.5	-0.6
	2.7nm,0.3s,baz=353,slow=2.9,SNR=12						
FUNA	Funafuti	15.71	357	eP	P	17 53 17.0	-8.9
RPZ	Rata Peaks	20.74	199	P	P	17 54 13.7	0.0
	4.9nm,0.5s,baz=3.5,slow=3.9,SNR=5.7						
HNR	Honiara	24.24	304	P	P	17 54 44.4	-1.1
	23nm,0.7s,mb4.7,baz=249,slow=2.9,SNR=4.8						
HNR	Honiara	24.24	304	P	P	17 54 43.3	-2.3
	25nm,0.8s,mb4.7						
ARMA	Armidale	25.96	250	eP	P	17 55 02.5	+1.9
CTA	Charters Tower	31.56	271	eP	P	17 55 50.5	+0.9
	19nm,0.3s,mb5.0						
CTAO	Charters Tower	31.56	271	eP	P	17 55 50.3	+0.8
	16nm,0.3s,mb4.9						
STKA	Stephens Creek	34.65	249	P	P	17 56 16.5	+0.8
	3.2nm,0.6s,mb4.0,baz=77,slow=7.1,SNR=15						
STKA	Stephens Creek	34.65	249	eP	P	17 56 16.4	+0.7
	3.1nm,0.6s,mb3.9						
STKA	Stephens Creek	34.65	249	eP	P	17 56 16.0	+0.3
	1.0nm,0.7s,mb3.4						
ASAR	Alice Springs	42.05	261	P	P	17 57 16.1	0.0
	3.2nm,0.6s,mb4.0,baz=93,slow=6.9,SNR=178						
ASAR			ScP	ScP	18 02 03.4	-0.6	
	0.7nm,0.9s,baz=113,slow=3.7,SNR=4.6						
WB2	Warramunga Arr	42.45	267	eP	P	17 57 18.3	-1.0
WRA	Warramunga Arr	42.46	267	P	P	17 57 18.9	-0.6
	6.7nm,0.3s,mb4.5,baz=97,slow=8.5,SNR=147						
WRA			ScP	ScP	18 02 07.3	+1.6	
	2.0nm,1.0s,baz=100,slow=4.5,SNR=6.6						
FITZ	Fitzroy Crossi	50.88	266	P	P	17 58 23.5	+0.2
	8.9nm,0.6s,mb4.3,baz=117,slow=6.8,SNR=38						
FITZ	Fitzroy Crossi	50.88	266	eP	P	17 58 23.4	0.0
	15nm,0.8s,mb4.4						
MBWA	Marble Bar	55.38	260	eP	P	17 58 54.3	-1.3
	13nm,1.0s,mb4.2						
CASY	Casey	59.79	206	eP	P	17 59 24.2	-0.7
	2.3nm,0.8s,mb3.7						
MJAR	Matsushiro Arr	72.27	326	P	P	18 00 42.5	-0.7
	0.9nm,0.6s,mb3.5,baz=169,slow=5.4,SNR=7.4						
MAW	Mawson	77.40	200	P	P	18 01 12.4	+0.8
	0.9nm,0.5s,mb3.6,baz=245,slow=21,SNR=7.2						
MAW	Mawson	77.40	200	eP	P	18 01 11.7	+0.1
	0.3nm,0.6s,mb3.0						
KSRS	Korea Array	78.60	320	P	P	18 01 19.1	+0.5
	1.0nm,0.7s,mb3.5,baz=125,slow=5.4,SNR=8.1						
PETK	Petropavlovsk-	79.51	346	P	P	18 01 22.1	-0.8
	2.2nm,0.8s,mb3.8,baz=104,slow=8.6,SNR=8.4						
NVAR	Mina Array Bea	84.98	44	P	P	18 01 52.4	+1.2
	0.2nm,0.4s,mb3.1,baz=216,slow=7.6,SNR=2.7						
NVAR	Mina Array Bea	84.98	44	P	P	18 01 52.4	+1.2
CMAR	Chiang Mai Arr	89.74	290	P	P	18 02 15.5	+1.4
	1.6nm,1.1s,mb3.8,baz=127,slow=3.3,SNR=5.8						
TXAR	Lajitas Array	90.58	58	P	P	18 02 17.7	0.0
	0.5nm,0.8s,mb3.5,baz=202,slow=9.5,SNR=4.5						
ARCES	ARCESS Array B	132.29	348	PKP	PKPdf	18 08 24.8	-0.4
	1.8nm,0.8s,baz=75,slow=2.0,SNR=6.4						
FINES	FINESS Array B	138.85	341	PKhKP	PKPpre	18 08 29.3	
	2.3nm,0.9s,baz=132,slow=2.8,SNR=4.4						
FINES			PKP	PKPdf	18 08 36.2	-1.4	
	1.5nm,0.9s,baz=67,slow=4.6,SNR=4.1						
FINES	FINESS Array B	138.85	341	PKP	PKPpre	18 08 29.3	
FINES			PKP	PKPdf	18 08 36.2	-1.4	
AKASG	Malin Array Be	145.35	327	PKPbc	PKPbc	18 08 48.1	-2.3
	0.8nm,0.3s,baz=46,slow=3.9,SNR=5.5						
BRTR	Keskin Array B	147.88	307	PKPbc	PKPbc	18 08 56.9	-0.9
	1.0nm,0.6s,baz=148,slow=4.8,SNR=5.6						
CLL	Collm	151.26	345	jj PKPbc	PKPbc	18 09 04.8	-0.7
	comp=Z,5.0nm,0.9s						

MEX 16 17:53:38.2±1.5, 17°13N×94°81W, h152km±22km, MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		1.65	102	i P	Pn	17 54 08.5	-1.0
TGIG				i S	Sn	17 54 30.5	-2.9
HUIG	Huatulco	1.84	223	i P	Pn	17 54 09.4	-2.1
HUIG				i S	Sn	17 54 35.6	-1.6
VHO	Vista Hermosa	1.84	269	i P	Pn	17 54 11.1	-0.5
VHO				i S	Sn	17 54 36.2	-0.9
PCIG		2.08	133	i P	Pn	17 54 14.0	-0.4
PCIG				i S	Sn	17 54 40.3	-1.8
PNIG	Pinotepa	3.26	258	i P	Pn	17 54 26.9	-2.0
PNIG				i S	Sn	17 55 05.8	-2.5

*ATH **16** 18:12:14.7, 35°39N×29°61E, h41km±3km, MD3.5/8*
*ISK **16** 18:12:14.6, 35°45N×29°67E, h19km, MD3.3, ML3.3*
*CSEM **16** 18:12:16.5±0.1, 35°40N×29°61E, h40km, MD3.1, Error ellipse: s-maj=2.6km s-min=2.2km az=68.0*
*HLW **16** 18:12:16.6, 35°32N×29°63E, h33km±41km, Md3.6, Ml3.3*
*DDA **16** 18:12:22.8, 36°13N×29°37E, h28km±2km, Md3.1*

ISC 16 18:12:16.4±0.8, 35°41N±0°02×29°61E±0°03, h33km±8km, n106, σ0°83/134, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.74	359	eP	Pb	18 12 29.9	-1.0
AKAS	Kas	0.82	0	i P	Pn	18 12 29.2	-2.4
AKAS				i S	Sb	18 12 42.2	-0.9
AKAS	Kas	0.82	0	i P	Pn	18 12 29.2	-2.4
AKAS				i S	Sb	18 12 42.2	-0.8
ELL	Elmali	1.36	10	ePN	Pn	18 12 38.6	-0.4
ELL				eSN	Sn	18 12 56.1	+0.3
ELL	Elmali	1.36	10	ePn	Pn	18 12 38.6	-0.4
ELL				eSn	Sn	18 12 56.1	+0.3
ARG	Arkhangelos	1.45	304	eP	Pn	18 12 40.7	+0.5
ARG	Arkhangelos	1.45	304	eP	Pn	18 12 40.7	+0.5
TURN	Turunc	1.67	331	i P	Pn	18 12 43.6	+0.4
TURN				i S	Sn	18 13 03.8	+0.3
TURN	Turunc	1.67	331	i P	Pn	18 12 43.6	+0.3
TURN				i S	Sn	18 13 03.8	+0.3
KORT	Korkueli	1.70	21	i P	Pn	18 12 43.6	0.0
KORT				i S	Sn	18 13 03.6	-0.6
KORT	Korkueli	1.70	21	i P	Pn	18 12 43.6	0.0
KORT				i S	Sn	18 13 03.6	-0.6
ANTB	Antalya	1.71	29	ePN	Pn	18 12 43.2	-0.6
ANTB				eSN	Sn	18 13 03.8	-0.8
ANTB	Antalya	1.71	29	ePn	Pn	18 12 43.2	-0.6
ANTB				eSn	Sn	18 13 03.8	-0.7
GLHS	Glhisar (BURDU	1.74	357	ePN	Pn	18 12 44.6	+0.3
GLHS				eSN	Sn	18 13 05.9	+0.6
GLHS	Glhisar (BURDU	1.74	357	ePn	Pn	18 12 44.6	+0.3
GLHS				eSn	Sn	18 13 05.9	+0.6
GOLH	Golhisar	1.82	359	i P	Pn	18 12 44.5	-0.8
GOLH				i S	Sn	18 13 07.2	-0.1
GOLH	Golhisar	1.82	359	i P	Pn	18 12 44.5	-0.9
GOLH				i S	Sn	18 13 07.2	-0.1
KARP	Karpathos	2.00	275	eP	Pn	18 12 47.7	-0.1
KARP				eS	Sn	18 13 11.6	-0.1
KARP	Karpathos	2.00	275	eP	Pn	18 12 47.7	-0.1
KARP				eS	Sn	18 13 11.6	-0.1
YER	Yerkesik	2.02	329	ePN	Pn	18 12 48.5	+0.4
YER	Yerkesik	2.02	329	ePn	Pn	18 12 48.5	+0.3
DAT	Datca	2.10	309	ePN	Pn	18 12 50.1	+0.8
DAT	Datca	2.10	309	ePn	Pn	18 12 50.1	+0.9
BCK	Bucak	2.19	21	ePN	Pn	18 12 50.6	+0.1
BCK	Bucak	2.19	21	ePn	Pn	18 12 50.6	+0.1
DNZL	Cakiroluk	2.32	349	i P	Pn	18 12 52.7	+0.5
DNZL				i S	Sn	18 13 18.2	-1.3
DNZL	Cakiroluk	2.32	349	i P	Pn	18 12 52.7	+0.5
DNZL				i S	Sn	18 13 18.2	-1.3
SUTC	Sutluce-Ispart	2.35	28	ePN	Pn	18 12 52.9	+0.3
SUTC	Sutluce-Ispart	2.35	28	ePn	Pn	18 12 52.9	+0.3
GAZI	Gazipasa	2.35	69	i P	Pn	18 12 51.2	-1.4
GAZI				i S	Sn	18 13 19.5	-0.8
GAZI	Gazipasa	2.35	69	i P	Pn	18 12 51.2	-1.4
GAZI				i S	Sn	18 13 19.5	-0.8
MLSB	Milas	2.39	322	ePN	Pn	18 12 54.2	+1.1
MLSB	Milas	2.39	322	ePn	Pn	18 12 54.2	+1.0
BDRM	Kayabasi	2.40	314	i P	Pn	18 12 54.4	+1.0
BDRM				i S	Sn	18 13 18.2	-3.4
BDRM	Kayabasi	2.40	314	i P	Pn	18 12 54.4	+1.0
BDRM				i S	Sn	18 13 18.2	-3.4
BODT	Bodrum	2.48	312	ePN	Pn	18 12 54.7	+0.3
BODT	Bodrum	2.48	312	ePn	Pn	18 12 54.7	+0.3
AYDN	Tasoluk	2.64	329	i P	Pn	18 12 56.9	+0.3
AYDN				i S	Sn	18 13 24.9	-2.6
AYDN	Tasoluk	2.64	329	i P	Pn	18 12 56.9	+0.3
AYDN				i S	Sn	18 13 24.9	-2.6
LEF	Lefka	2.70	95	ePN	Pn	18 12 57.0	-0.5
LEF	Lefka	2.70	95	ePn	Pn	18 12 57.0	-0.5
ZKR	Zakros	2.79	265	eP	Pn	18 12 58.7	+0.1
ZKR	Zakros	2.79	265	eP	Pn	18 12 58.7	+0.1
HDMB	Hadim	2.80	56	ePN	Pn	18 12 58.4	-0.4
HDMB	Hadim	2.80	56	ePn	Pn	18 12 58.4	-0.4
KHL	Karahalli	2.91	359	ePN	Pn	18 13 00.6	+0.3
KHL	Karahalli	2.91	359	ePn	Pn	18 13 00.6	+0.3
KHAL	Karahalli	2.96	358	i P	Pn	18 13 02.0	+1.1
KHAL	Karahalli	2.96	358	i P	Pn	18 13 02.0	+1.1
GCAM	G?zelcaml?	2.98	321	i P	Pn	18 13 01.5	+0.2
GCAM				i S	Sn	18 13 32.9	-2.9
GCAM	G?zelcaml?	2.98	321	i P	Pn	18 13 01.5	+0.3
GCAM				i S	Sn	18 13 32.9	-2.9
CSS	Prodhromos	3.08	97	ePN	Pn	18 13 03.3	+0.6
CSS	Prodhromos	3.08	97	eP	Pn	18 13 02.9	+0.2
CSS	Prodhromos	3.08	97	eP	Pn	18 13 02.9	+0.2
CSS	Prodhromos	3.08	97	ePn	Pn	18 13 03.3	+0.6
SMG	Samos	3.20	317	eP	Pn	18 13 04.5	+0.2
SMG	Samos	3.20	317	eP	Pn	18 13 04.5	+0.2
LFK	Lefkose	3.21	91	ePN	Pn	18 13 05.3	+0.8
LFK	Lefkose	3.21	91	ePn	Pn	18 13 05.3	+0.8
SHUT	Suhut-Afyon	3.23	13	ePN	Pn	18 13 04.8	+0.2
SHUT	Suhut-Afyon	3.23	13	ePn	Pn	18 13 04.8	+0.1
KONT	Konya--Tatoy	3.36	40	ePN	Pn	18 13 07.1	+0.6
KONT	Konya--Tatoy	3.36	40	ePn	Pn	18 13 07.1	+0.6
LAST	Lasithi	3.38	267	eP	Pn	18 13 07.3	+0.4
LAST	Lasithi	3.38	267	eP	Pn	18 13 07.3	+0.4
IKL	Isikli	3.42	75	ePN	Pn	18 13 07.6	+0.3
IKL	Isikli	3.42	75	ePn	Pn	18 13 07.6	+0.3
ALT	Altintas	3.66	6	ePN	Pn	18 13 11.7	+1.1
ALT	Altintas	3.66	6	ePn	Pn	18 13 11.7	+1.1
KIZT	Kizilcal	3.91	27	ePN	Pn	18 13 14.0	-0.1
KIZT	Kizilcal	3.91	27	ePn	Pn	18 13 14.0	-0.1
MERS	Mersin	4.24	69	ePN	Pn	18 13 19.5	+1.0
MERS	Mersin	4.24	69	ePn	Pn	18 13 19.5	+0.9
KARN	Karanos	4.65	272	eP	Pn	18 13 24.2	0.0
KARN	Karanos	4.65	272	eP	Pn	18 13 24.2	0.0
KARA	Karaisali	4.77	66	ePN	Pn	18 13 26.9	+1.0
KARA	Karaisali	4.77	66	ePn	Pn	18 13 26.9	+1.0
HMAT	Matruh	4.79	207	P	Pn	18 13 26.1	-0.1
	baz=208						
HMAT				AMP		18 14 00.0	
	comp=E,20μm,0.4s,logA/T=4.7,baz=208						
HMAT				S	Sn	18 14 14.5	-6.1
	baz=208						
HMAT	Matruh	4.79	207	P	Pn	18 13 26.1	-0.1
AFSR	Af´ar-Bala (A	4.88	33	ePN	Pn	18 13 28.7	+1.3
AFSR	Af´ar-Bala (A	4.88	33	ePn	Pn	18 13 28.7	+1.3
KAMT	Kaman	5.13	38	ePN	Pn	18 13 31.5	+0.7
KAMT	Kaman	5.13	38	ePn	Pn	18 13 31.5	+0.7
SLUM		5.36	224	P	Pn	18 13 34.2	+0.2
	baz=226						
SLUM				AMP		18 14 00.0	
	comp=N,40μm,0.2s,logA/T=5.2,baz=226						
SLUM		5.36	224	P	Pn	18 13 34.2	+0.1
KOZT	Kozan	5.42	66	ePN	Pn	18 13 35.6	+0.8
HRSH	Kfar Ka'horesh	5.43	118	P	Pn	18 13 37.8	+2.9
	baz=140						
RSH		5.62	141	P	Pn	18 13 37.8	+0.2
AMAG	Maghara	5.64	147	P	Pn	18 13 37.2	-0.6
	baz=146						
AMAG	Maghara	5.64	147	P	Pn	18 13 37.2	-0.6
KOT	Kottamia	5.78	160	P	Pn	18 13 40.0	+0.2
	baz=160						
KOT	Kottamia	5.78	160	P	Pn	18 13 40.0	+0.2
GLL	Jalalah	6.08	162	P	Pn	18 13 43.4	-0.6
	baz=162						
GLL	Jalalah	6.08	162	P	Pn	18 13 43.4	-0.6

SUZ		6.19	153	P	Pn	18 13 44.5	-0.8
	baz=152						
SUZ		6.19	153	P	Pn	18 13 44.5	-0.9
HNKL	Nakhl	6.59	145	P	Pn	18 13 50.4	-0.5
	baz=144						
HNKL				S	Sn	18 14 57.9	-7.1
	baz=144						
HNKL	Nakhl	6.59	145	P	Pn	18 13 50.4	-0.6
SWA2		7.08	211	P	Pn	18 13 57.0	-0.7
	baz=212						
SWA2		7.08	211	P	Pn	18 13 57.0	-0.7
HKAT	Jabal Katrina	7.81	150	P	Pn	18 14 07.0	-0.8
	baz=150						
HKAT	Jabal Katrina	7.81	150	P	Pn	18 14 06.9	-0.8
TR2		7.83	152	P	Pn	18 14 07.3	-0.7
	baz=152						
TR2		7.83	152	P	Pn	18 14 07.3	-0.6
HFRF	Wahat Farafira	8.31	188	P	Pn	18 14 14.1	-0.4
	baz=189						
HFRF	Wahat Farafira	8.31	188	P	Pn	18 14 14.1	-0.5

*DDA **16** 18:21:33.9, 36°06N×27°36E, h28km±2km, Md3.3*
*IDC **16** 18:21:34.7±2.5, 37°88N×25°97E, h0km, mb3.5/2, mb1 3.3/3, mb1mx3.2/24, mbtmp3.3/3, ML2.6/1, Error ellipse: s-maj=240.6km s-min=25.1km az=147.0*
*ISK **16** 18:21:36.6, 36°25N×27°47E, h8km, MD3.5*
*CSEM **16** 18:21:37.6±0.1, 36°26N×27°50E, h2km, ML3.7/1, Error ellipse: s-maj=3.8km s-min=2.9km az=166.0*
*ATH **16** 18:21:37.7, 36°34N×27°52E, h18km±2km, MD3.5/9*
*ISCJB **16** 18:21:37.9±0.4, 36°28N±0°02×27°52E±0°02, h10km±3km, mb3.4/2, Error ellipse: s-maj=3.6km s-min=2.7km az=154.2*
*THE **16** 18:21:38.7, 36°36N×27°58E, h9km±2km, ML3.7/1, Error ellipse: s-maj=2.5km s-min=1.1km az=32.0*

ISC 16 18:21:38.4±0.5, 36°27N±0°02×27°51E±0°02, h7km±3km, n122, σ1°04/160, mb3.4/2, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS1	Nisyros Isl.	0.43	322	P	Pg	18 21 47.1	+0.4
NIS1				S	Sg	18 21 53.1	+0.8
NIS1	Nisyros Isl.	0.43	322	P	Pg	18 21 47.1	+0.4
NIS1				S	Sg	18 21 53.1	+0.8
DAT	Datca	0.47	7	PG	Pg	18 21 47.1	-0.3
DAT	Datca	0.47	7	i Pg	Pg	18 21 47.1	-0.3
ARG	Arkhangelos	0.50	96	ePN	Pg	18 21 47.7	-0.4
ARG				eSN	Sg	18 21 55.4	+0.7
ARG	Arkhangelos	0.50	96	ePn	Pg	18 21 47.7	-0.4
KARP	Karpathos	0.77	202	ePN	Pg	18 21 53.8	+0.5
KARP				eSN	Sg	18 22 06.1	+2.8
KARP	Karpathos	0.77	202	ePn	Pg	18 21 53.8	+0.5
BDRM	Kayabasi	0.80	356	i P	Pg	18 21 53.4	-0.4
BDRM				i S	Sg	18 22 06.0	+1.8
BDRM	Kayabasi	0.80	356	i P	Pg	18 21 53.4	-0.4
BDRM				i S	Sg	18 22 06.0	+1.8
BODT	Bodrum	0.81	349	PG	Pg	18 21 52.5	-1.5
BODT				eSG	Sg	18 22 04.9	+0.4
BODT	Bodrum	0.81	349	i Pg	Pg	18 21 52.6	-1.4
BODT				eSg	Sg	18 22 04.9	+0.4
MLSB	Milas	1.05	12	PG	Pg	18 21 57.8	-0.8
MLSB				eSG	Sg	18 22 12.6	+0.4
MLSB	Milas	1.05	12	i Pg	Pg	18 21 57.8	-0.8
MLSB				eSg	Sg	18 22 12.6	+0.4
YER	Yerkesik	1.07	35	PN	Pg	18 21 57.9	-1.1
YER				eSN	Sg	18 22 13.9	+1.1
YER	Yerkesik	1.07	35	i Pn	Pg	18 21 57.9	-1.0
YER				eSn	Sg	18 22 13.9	+1.1
TURN	Turunc	1.07	55	i P	Pg	18 21 53.0	-6.0
TURN				i S	Sg	18 22 03.7	-9.2
AYDN	Tasoluk	1.42	12	i P	Pn	18 22 03.3	-1.4
AYDN				i S	Sb	18 22 26.4	+2.7
AYDN	Tasoluk	1.42	12	i P	Pn	18 22 03.3	-1.4
AYDN				i S	Sb	18 22 26.4	+2.8
GCAM	G?zelcaml?	1.45	351	i P	Pn	18 22 03.7	-1.3
GCAM				i S	Sn	18 22 26.5	+2.3
GCAM	G?zelcaml?	1.45	351	i P	Pn	18 22 03.7	-1.3
GCAM				i S	Sn	18 22 26.5	+2.2
SMG	Samos	1.54	340	ePN	Pn	18 22 04.8	-1.5
SMG				eSN	Sn	18 22 26.1	-0.4
SMG	Samos	1.54	340	ePn	Pn	18 22 04.8	-1.5
SMG				eSn	Sn	18 22 26.1	-0.4
ZKR	Zakros	1.56	223	P	Pn	18 22 05.6	-0.9
ZKR				S	Sn	18 22 28.6	+1.6
ZKR	Zakros	1.56	223	P	Pn	18 22 05.6	-0.9
THR1	Thera Island	1.66	274	P	Pn	18 22 07.0	-0.9
THR1	Thera Island	1.66	274	P	Pn	18 22 07.0	-0.9
KSL	Kastellorizon	1.68	93	ePN	Pn	18 22 08.3

KYTH	Kithira	3.61	272	*e*PN		Pn	18 22 35.7 +0.9
KYTH	Kithira	3.61	272	*e*Pn		Pn	18 22 35.7 +0.9
DID	Didima	3.64	291	*e*PN		Pn	18 22 35.8 +0.6
DID	Didima	3.64	291	*e*Pn		Pn	18 22 35.8 +0.6
VLI	Veliai	3.71	278	*e*PN		Pn	18 22 36.8 +0.6
VLI	Veliai	3.71	278	*e*Pn		Pn	18 22 36.8 +0.6
GONE	Gonen-Balikesi	3.78	2	*e*PN		Pn	18 22 36.8 -0.3
GONE	Gonen-Balikesi	3.78	2	*e*Pn		Pn	18 22 36.8 -0.2
GAZI	Gazipasa	3.89	89	*i* P		Pn	18 22 38.0 -0.6
GAZI				*i* S		Sn	18 23 19.6 -4.9
GAZI	Gazipasa	3.89	89	*i* P		Pn	18 22 38.0 -0.6
HDMB	Hadim	4.07	79	*e*PN		Pn	18 22 42.4 +1.4
HDMB	Hadim	4.07	79	*e*Pn		Pn	18 22 42.4 +1.4
GELI	Tayfur-Gelibol	4.20	349	*e*PN		Pn	18 22 42.4 -0.6
GELI	Tayfur-Gelibol	4.20	349	*e*Pn		Pn	18 22 42.4 -0.5
KONT	Konya--Tatoy	4.22	65	*e*PN		Pn	18 22 44.2 +1.0
KONT	Konya--Tatoy	4.22	65	*e*Pn		Pn	18 22 44.2 +1.0
VLX	Vlachokerasia	4.26	287	*e*PN		Pn	18 22 44.5 +0.8
VLX	Vlachokerasia	4.26	287	*e*Pn		Pn	18 22 44.5 +0.8
KIZT	Kizilcal	4.34	52	*e*PN		Pn	18 22 46.1 +1.3
KIZT	Kizilcal	4.34	52	*e*Pn		Pn	18 22 46.1 +1.3
GUR	Goura	4.45	294	*e*PN		Pn	18 22 46.7 +0.3
GUR	Goura	4.45	294	*e*Pn		Pn	18 22 46.7 +0.3
LEF	Lefka	4.53	103	*e*PN		Pn	18 22 47.0 -0.3
LEF	Lefka	4.53	103	*e*Pn		Pn	18 22 47.0 -0.4
ITM	Ithomi	4.58	283	*e*PN		Pn	18 22 49.3 +1.3
ITM	Ithomi	4.58	283	*e*Pn		Pn	18 22 49.3 +1.3
CSS	Prodhromos	4.92	104	*e*PN		Pn	18 22 54.0 +1.3
CSS	Prodhromos	4.92	104	P		Pn	18 22 51.4 -1.4
CSS	Prodhromos	4.92	104	P		Pn	18 22 51.4 -1.4
CSS	Prodhromos	4.92	104	*e*Pn		Pn	18 22 54.0 +1.2
IKL	Isikli	4.99	89	*e*PN		Pn	18 22 54.1 +0.3
IKL	Isikli	4.99	89	*e*Pn		Pn	18 22 54.1 +0.3
LFK	Lefkose	5.00	100	*e*PN		Pn	18 22 54.1 +0.2
LFK	Lefkose	5.00	100	*e*Pn		Pn	18 22 54.1 +0.3
BRTR	Keskin Array B	5.95	53	Pn		Pn	18 23 08.6 +1.7
	0.1nm,0.3s,baz=234,slow=14,SNR=3.3						
BRTR				Sn		Sn	18 24 14.2 -1.0
	0.1nm,0.3s,baz=225,slow=24,SNR=3.4						
KARA	Karaisali	6.14	78	*e*PN		Pn	18 23 10.4 +0.9
KARA	Karaisali	6.14	78	*e*Pn		Pn	18 23 10.4 +0.9
TORD	Torodi Ar. Bea	32.67	232	P		P	18 28 09.6 -1.8
	0.7nm,0.4s,mb3.9,baz=34,slow=8.7,SNR=12						
MKAR	Makanchi Array	41.57	58	P		P	18 29 25.6 -1.0
	0.2nm,0.7s,mb2.9,baz=266,slow=8.7,SNR=2.8						

*ISCJB **16** 18:30:28.3±0.4, 38°.16N±0°.02×28°.74E±0°.03, h4km±7km, Error ellipse: s-maj=4.2km s-min=3.4km az=157.0*
*DDA **16** 18:30:28.3, 38°.18N×28°.74E, h16km±2km, Md2.7*
*ISK **16** 18:30:28.1, 38°.16N×28°.74E, h8km, MD2.7*
*CSEM **16** 18:30:28.5±0.1, 38°.15N×28°.75E, h10km, MD2.7, Error ellipse: s-maj=3.3km s-min=2.9km az=72.0*
ISC 16 18:30:29.0±0.4,**38°.16N**±0°.02×**28°.74E**±0°.03,**h8**km±5km,
n32,σ0**87/54,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULA	**Kula-Manisa**	**0.36**	**350**	PG	**Pg**	**18 30 36.0**	**-0.1**
KULA				SG	**Sg**	**18 30 41.0**	**+0.1**
KULA	**Kula-Manisa**	**0.36**	**350**	*i* Pg	**Pg**	**18 30 36.0**	**-0.1**
KULA				*i* Sg	**Sg**	**18 30 41.0**	**+0.1**
DENT	**Denizli**	**0.47**	**150**	*e*PG	**Pg**	**18 30 37.5**	**-0.5**
DENT				*e*SG	**Sg**	**18 30 45.5**	**+1.4**
DENT	**Denizli**	**0.47**	**150**	*e*Pg	**Pg**	**18 30 37.5**	**-0.5**
DENT				*e*Sg	**Sg**	**18 30 45.5**	**+1.4**
KHAL	**Karahalli**	**0.63**	**70**	*i* P	**Pg**	**18 30 41.1**	**0.0**
KHAL				*i* S	**Sg**	**18 30 49.6**	**+0.3**
KHAL	**Karahalli**	**0.63**	**70**	*i* P	**Pg**	**18 30 41.1**	**0.0**
KHAL				*i* S	**Sg**	**18 30 49.6**	**+0.3**
KHL	**Karahalli**	**0.64**	**75**	*e*PG	**Pg**	**18 30 41.4**	**+0.1**
KHL				*e*SG	**Sg**	**18 30 50.0**	**+0.4**
KHL	**Karahalli**	**0.64**	**75**	*e*Pg	**Pg**	**18 30 41.4**	**+0.1**
KHL				*e*Sg	**Sg**	**18 30 50.1**	**+0.5**
AYDN	**Tasoluk**	**0.84**	**234**	*i* P	**Pg**	**18 30 44.6**	**-0.7**
AYDN				*i* S	**Sg**	**18 30 56.9**	**+0.7**
AYDN	**Tasoluk**	**0.84**	**234**	*i* P	**Pg**	**18 30 44.6**	**-0.6**
AYDN				*i* S	**Sg**	**18 30 56.9**	**+0.7**
DEMI	**Demirci**	**0.88**	**359**	*i* P	**Pg**	**18 30 45.4**	**-0.7**
DEMI				*i* S	**Sg**	**18 30 57.2**	**-0.3**
DEMI	**Demirci**	**0.88**	**359**	*i* P	**Pg**	**18 30 45.3**	**-0.7**
DEMI				*i* S	**Sg**	**18 30 57.2**	**-0.3**
AKHS	**Akhisar**	**1.02**	**315**	*i* P	**Pg**	**18 30 48.9**	**+0.2**
AKHS				*i* S	**Sg**	**18 31 03.0**	**+1.1**
AKHS	**Akhisar**	**1.02**	**315**	*i* P	**Pg**	**18 30 48.9**	**+0.2**
AKHS				*i* S	**Sg**	**18 31 03.0**	**+1.0**
AKS	**Akhisar**	**1.02**	**315**	*e*PG	**Pg**	**18 30 47.8**	**-0.9**
AKS				*e*SG	**Sg**	**18 31 02.9**	**+1.0**
AKS	**Akhisar**	**1.02**	**315**	*e*Pg	**Pg**	**18 30 47.8**	**-0.9**
AKS				*e*Sg	**Sg**	**18 31 02.9**	**+0.9**
YER	**Yerkesik**	**1.08**	**200**	*e*PN	**Pg**	**18 30 49.0**	**-0.9**
YER	**Yerkesik**	**1.08**	**200**	*e*Pn	**Pg**	**18 30 49.0**	**-0.8**
GDZ	**Gediz**	**1.09**	**32**	*i* P	**Pg**	**18 30 48.4**	**-1.7**
GDZ				*i* S	**Sg**	**18 31 04.3**	**+0.1**
GDZ	**Gediz**	**1.09**	**32**	*i* P	**Pg**	**18 30 48.3**	**-1.7**
GDZ				*i* S	**Sg**	**18 31 04.3**	**0.0**
GOLH	**Golhisar**	**1.13**	**144**	*i* P	**Pg**	**18 30 49.4**	**-1.2**
GOLH				*i* S	**Sg**	**18 31 07.7**	**+2.4**
GOLH	**Golhisar**	**1.13**	**144**	*i* P	**Pg**	**18 30 49.4**	**-1.2**
GOLH				*i* S	**Sg**	**18 31 07.7**	**+2.4**
GLHS	**Glhisar (BURDU**	**1.17**	**149**	*e*PN	**Pn**	**18 30 50.8**	**-0.8**
GLHS	**Glhisar (BURDU**	**1.17**	**149**	*e*Pn	**Pn**	**18 30 50.8**	**-0.8**
BLCB	**Balcova**	**1.36**	**280**	*e*PN	**Pn**	**18 30 54.0**	**-0.2**
BLCB	**Balcova**	**1.36**	**280**	*e*Pn	**Pn**	**18 30 54.0**	**-0.2**
DURS	**Dursunbey**	**1.46**	**352**	*i* P	**Pn**	**18 30 55.0**	**-0.5**
DURS				*i* S	**Sn**	**18 31 16.7**	**+1.9**
DURS	**Dursunbey**	**1.46**	**352**	*i* P	**Pn**	**18 30 55.0**	**-0.6**
DURS				*i* S	**Sn**	**18 31 16.7**	**+1.9**
SHUT	**Suhut-Afyon**	**1.48**	**74**	*e*PN	**Pn**	**18 30 55.9**	**0.0**
SHUT	**Suhut-Afyon**	**1.48**	**74**	*e*Pn	**Pn**	**18 30 55.9**	**+0.1**
DAT	**Datca**	**1.70**	**213**	*e*PN	**Pn**	**18 30 58.6**	**-0.3**
DAT	**Datca**	**1.70**	**213**	*e*Pn	**Pn**	**18 30 58.6**	**-0.3**

*NIED **16** 18:32:00, 30°.50N×139°.70E, h260km, Mw4.2 Best double couple: M0 2.45000×10^15 NP1:φ0s38.00000°, δ71.00000°, λ21.00000°. NP2:φ0s301.00000°, δ70.00000°, λ160.00000°.*
*BJI **16** 18:32:52.4, 30°.43N×138°.92E, h241km, mB4.7/3, mb4.5/6*
*ISCJB **16** 18:32:54.0±0.5, 30°.51N±0°.04×139°.47E±0°.07, h286km±4km, mb3.8/31, Error ellipse: s-maj=10.1km s-min=6.8km az=14.4*
*IDC **16** 18:32:54.2±0.8, 30°.44N×139°.19E, h265km±7km, mb3.5/18, mb1 3.6/22, mb1mx3.5/29, mbtmp3.5/22, Error ellipse: s-maj=15.4km s-min=8.8km az=80.0*
*NEIC **16** 18:32:54.4±1.1, 30°.47N×139°.18E, h267km±9km, mb4.3/12, Error ellipse: s-maj=12.5km s-min=9.0km az=110.0*
*JMA **16** 18:32:54.9±0.2, 30°.52N×139°.65E, h283km, M4.3*
ISC 16 18:32:55.0±0.6,**30°.52N**±0°.05×**139°.44E**±0°.08,**h279**km±4km,
n70,σ1**16/80,mb3.8/31,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.60**	**7**	P	**Pn**	**18 33 46.5**	**+1.2**
JHJ2				S	**S**	**18 34 24.9**	**-0.4**
JHJ	**Hachijo jima 2**	**2.61**	**6**	P	**Pn**	**18 33 46.6**	**+1.3**
	58nm,0.3s,baz=78,slow=21,SNR=69						
JHJ				S	**S**	**18 34 24.9**	**-0.5**
	200nm,0.3s,baz=76,slow=23,SNR=17						
JMY	**Miyakejima3**	**3.54**	**1**	P	**Pn**	**18 33 55.2**	**+0.3**
JKO	**Kozu shima**	**3.66**	**356**	P	**Pn**	**18 33 57.5**	**+1.2**
JKO				*e*S	**S**	**18 34 45.3**	**+0.1**
TK02	**Tokai 2**	**3.70**	**338**	P	**Pn**	**18 33 58.6**	**+1.9**
CBIJ	**Chichi jima**	**4.18**	**144**	P	**Pn**	**18 33 59.8**	**-2.4**
	19nm,0.3s,baz=263,slow=22,SNR=8.9						
CBIJ				S	**S**	**18 34 49.9**	**-6.0**
	219nm,0.3s,baz=273,slow=22,SNR=30						
CBIJ	**Chichi jima**	**4.18**	**144**	P	**Pn**	**18 34 00.7**	**-1.5**
CBIJ				S	**S**	**18 34 49.5**	**-6.4**
BSO1	**Boso 1**	**4.32**	**17**	P	**Pn**	**18 34 03.2**	**-0.5**
BSO1				S	**S**	**18 34 55.3**	**-3.3**
JWZ	**Kozaga**	**4.36**	**314**	P	**Pn**	**18 34 05.2**	**+1.0**
JIE	**Ise**	**4.50**	**330**	P	**Pn**	**18 34 07.5**	**+1.7**
JOD2	**Odawara 2**	**4.74**	**356**	P	**Pn**	**18 34 09.0**	**+0.5**
JOD2				S	**S**	**18 35 05.8**	**-1.6**
JRY	**Ryogami san**	**5.50**	**355**	P	**Pn**	**18 34 17.4**	**-0.2**
JRY				S	**S**	**18 35 20.1**	**-3.8**
MJAR	**Matsushiro Arr**	**6.09**	**351**	P	**Pn**	**18 34 23.4**	**-1.4**
	8.4nm,0.3s,baz=212,slow=31,SNR=54						
MJAR				S	**S**	**18 35 35.7**	**-1.2**
	1.9nm,0.3s,baz=16,slow=35,SNR=3.0						
MAJO	**Matsushiro**	**6.09**	**351**	*e*Pn	**Pn**	**18 34 24.7**	**-0.1**
	38nm,0.3s						
MAT	**Matsushiro**	**6.09**	**351**	P	**Pn**	**18 34 24.7**	**-0.1**
MAT				S	**S**	**18 35 35.2**	**-1.8**
MAT	**Matsushiro**	**6.09**	**351**	P	**Pn**	**18 34 24.8**	**0.0**
MAT				*e*S	**S**	**18 35 36.1**	**-0.9**
JHS	**Saijyo**	**6.95**	**312**	P	**Pn**	**18 34 36.9**	**+1.6**
JSJ	**Shimokoshiki**	**8.42**	**280**	P	**Pn**	**18 34 54.6**	**+1.0**
JMK	**Ichinoseki**	**8.54**	**9**	P	**Pn**	**18 34 53.7**	**-1.2**
JMK				S	**S**	**18 36 25.3**	**-6.8**
JOT	**Ohata**	**10.91**	**6**	P	**Pn**	**18 35 23.7**	**-0.7**
JOT				*e*S	**S**	**18 37 22.7**	**-3.8**
JKB	**Kayabe**	**11.41**	**6**	P	**Pn**	**18 35 30.5**	**-0.1**
JOSM	**Okushiri--Mats**	**11.54**	**0**	P	**Pn**	**18 35 31.4**	**-0.7**
KSRS	**Korea Array**	**11.79**	**309**	P	**Pn**	**18 35 36.7**	**+1.4**
	0.3nm,0.3s,baz=119,slow=13,SNR=32						
ERM	**Erimo**	**11.85**	**14**	*e*Pn	**Pn**	**18 35 36.7**	**+0.7**
	38nm,0.8s						
NEM2	**Nemuro 2**	**13.77**	**20**	P	**Pn**	**18 36 01.7**	**+2.5**
NEM2				S	**S**	**18 38 26.6**	**-4.6**
ASAJ	**Asahikawa**	**13.80**	**10**	P	**Pn**	**18 36 00.8**	**+1.3**
	2.1nm,0.3s,baz=326,slow=25,SNR=21						
MDJ	**Mudanjiang**	**16.07**	**334**	*e*Pn	**Pn**	**18 36 23.1**	**-3.5**
YSS	**Yuzh-Sakhalins**	**16.61**	**8**	*e*P	**P**	**18 36 33.3**	**+2.8**
	80nm,0.6s						
TATO	**Taipei**	**16.82**	**255**	*e*Pn	**Pn**	**18 36 34.2**	**-1.3**
	58nm,0.5s						
SONM	**Songino Array**	**30.60**	**314**	P	**P**	**18 38 43.6**	**+0.4**
	0.7nm,0.6s,mb3.4,baz=119,slow=8.9,SNR=3.8						
CHTO	**Chiang Mai**	**38.41**	**262**	*e*P	**P**	**18 39 49.4**	**-0.8**
	4.6nm,0.8s,mb4.0						
CMAR	**Chiang Mai Arr**	**38.57**	**261**	P	**P**	**18 39 51.1**	**-0.4**
	1.9nm,0.7s,mb3.7,baz=60,slow=6.3,SNR=14						
ZALV	**Zalesovo Beam**	**45.34**	**317**	P	**P**	**18 40 44.6**	**-0.8**
	0.6nm,0.5s,mb3.1,baz=102,slow=8.7,SNR=4.5						
ZALV				PcP	PcP	18 42 19.9	+0.1
	1.2nm,0.5s,baz=114,slow=3.7,SNR=6.7						
MKAR	**Makanchi Array**	**46.47**	**307**	P	**P**	**18 40 53.9**	**-0.5**
	0.6nm,0.3s,mb3.4,baz=90,slow=10,SNR=9.8						
MKAR				PcP	PcP	18 42 24.2	+0.4
	0.4nm,0.6s,baz=79,slow=7.5,SNR=3.6						
KURK	**Kurchatov**	**48.89**	**313**	*e*P	**P**	**18 41 11.3**	**-1.4**
	2.8nm,0.9s,mb3.6						
WRA	**Warramunga Arr**	**50.41**	**186**	P	**P**	**18 41 24.0**	**-0.4**
	0.9nm,0.4s,mb3.4,baz=3.7,slow=7.9,SNR=18						
WRA				PcP	PcP	18 42 38.7	+0.3
	0.3nm,0.4s,baz=2.2,slow=4.0,SNR=4.6						
WRA	**Warramunga Arr**	**50.41**	**186**	P	**P**	**18 41 24.0**	**-0.4**
WRA				PcP	PcP	18 42 38.7	+0.3
KDAK	**Kodiak Island**	**53.12**	**38**	P	**P**	**18 41 46.5**	**+2.5**
	10nm,0.9s,mb4.2,baz=236,slow=3.6,SNR=3.6						
KDAK	**Kodiak Island**	**53.12**	**38**	P	**P**	**18 41 46.5**	**+2.5**
BVAR	**Borovoye Array**	**53.91**	**316**	P	**P**	**18 41 49.9**	**+0.1**
	3.9nm,0.5s,mb4.0,baz=94,slow=7.5,SNR=38						
BVAR				PcP	PcP	18 42 51.5	+0.2
	1.2nm,0.4s,baz=92,slow=3.7,SNR=8.5						
BRVK	**Borovoye**	**53.97**	**316**	*e*P	**P**	**18 41 50.1**	**0.0**
	1.1nm,0.6s,mb3.4						
ASAR	**Alice Springs**	**54.14**	**186**	P	**P**	**18 41 51.5**	**-0.1**
	0.4nm,0.6s,mb3.0,baz=3.0,slow=6.4,SNR=21						
MBWA	**Marble Bar**	**54.77**	**203**	*e*P	**P**	**18 41 54.7**	**-1.5**
	6.2nm,1.0s,mb4.0						
ILAR	**Eielson Array**	**55.91**	**30**	P	**P**	**18 42 06.3**	**+2.6**
	0.6nm,0.9s,mb3.0,baz=245,slow=6.0,SNR=4.2						
ILAR				pP	pP	18 43 08.7	+4.2
	0.3nm,0.6s,baz=266,slow=8.4,SNR=4.2						
ARU	**Arti**	**60.25**	**321**	*e*P	**P**	**18 42 33.6**	**-0.3**
	5.1nm,0.6s,mb4.2						
INK	**Inuvik**	**60.94**	**25**	P	**P**	**18 42 40.3**	**+2.0**
	1.7nm,0.6s,mb3.8,baz=322,slow=7.4,SNR=4.1						
INK	**Inuvik**	**60.94**	**25**	P	**P**	**18 42 40.2**	**+1.9**
AKTK	**Aktyubinsk**	**61.92**	**314**	P	**P**	**18 42 44.7**	**-0.5**
AKTO	**Aktyubinsk**	**61.92**	**314**	P	**P**	**18 42 44.7**	**-0.5**
	1.5nm,0.5s,mb3.9,baz=90,slow=11,SNR=6.2						
STKA	**Stephens Creek**	**62.09**	**178**	P	**P**	**18 42 47.0**	**+0.6**
	0.9nm,0.7s,mb3.5,baz=332,slow=15,SNR=2.9						
KEV	**Kevo**	**68.96**	**340**	*ep*	**P**	**18 43 29.6**	**-0.1**
	0.3nm,0.4s,mb3.4						
ARCES	**ARCESS Array B**	**69.52**	**340**	P	**P**	**18 43 34.4**	**+1.3**
	0.9nm,0.5s,mb3.8,baz=73,slow=9.4,SNR=15						
ARCES	**ARCESS Array B**	**69.52**	**340**	P	**P**	**18 43 34.4**	**+1.3**
JOF	**Joensuu**	**70.95**	**333**	*ep*	**P**	**18 43 38.7**	**-3.2**
	1.1nm,0.4s,mb3.8						
KAF	**Kangasniemi**	**73.35**	**333**	*ep*	**P**	**18 43 50.2**	**-5.8**
	1.7nm,0.4s,mb4.0						
FINES	**FINESS Array B**	**73.82**	**333**	P	**P**	**18 43 59.4**	**+0.6**
	2.4nm,0.5s,mb4.1,baz=56,slow=5.9,SNR=39						
KIV	**Kislovodsk**	**73.97**	**312**	*e*P	**P**	**18 44 00.5**	**+0.5**
	12nm,0.8s,mb4.6						
MIB	**Mutribah**	**77.15**	**297**	*e*P	**P**	**18 44 17.5**	**-0.7**
MIB				AMb	AMB	18 44 18.3	
	comp=Z,16nm,0.6s,mb4.9						
NAY	**Al-Naaiem**	**77.49**	**297**	*e*P	**P**	**18 44 19.4**	**-0.7**
NAY				AMb	AMB	18 44 19.8	
	comp=Z,12nm,0.7s,mb4.7						
AKASG	**Malin Array Be**	**78.44**	**322**	P	**P**	**18 44 24.9**	**0.0**
	comp=Z,1.7nm,0.3s,mb4.2,baz=52,slow=5.5,SNR=20						
AKASG	**Malin Array Be**	**78.44**	**322**	P	**P**	**18 44 24.9**	**0.0**
MALT	**Malatya**	**79.50**	**308**	*e*P	**P**	**18 44 30.9**	**+0.1**
	comp=Z,0.7nm,0.8s,mb4.0						
NOA	**NORSAR Array B**	**79.54**	**337**	P	**P**	**18 44 31.2**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.5,baz=46,slow=5.3,SNR=3.4						
NVAR	**Mina Array Bea**	**80.27**	**51**	pP	pP	18 45 44.5	+4.0
	comp=Z,0.4nm,0.5s,baz=278,slow=6.2,SNR=2.8						
MCMT	**McKenzie Canyo**	**80.31**	**43**	*e*P	**P**	**18 44 32.4**	**-2.7**
	comp=Z,1.7nm,1.0s,mb3.7						
BRTR	**Keskin Array B**	**81.93**	**311**	P	**P**	**18 44 44.2**	**+0.5**
	comp=Z,3.5nm,0.8s,mb4.1,baz=93,slow=3.8,SNR=14						
GERES	**GERESS Array B**	**87.34**	**328**	P	**P**	**18 45 10.0**	**-0.4**
	comp=Z,0.3nm,0.5s,mb3.4,baz=26,slow=9.4,SNR=3.7						
TXAR	**Lajitas Array**	**95.42**	**51**	pP	pP	18 46 54.5	-0.8
	comp=Z,0.7nm,0.8s,baz=298,slow=1.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**120.53**	**310**	PKP	PKPdf	18 51 12.7	-1.4
	comp=Z,0.2nm,0.5s,baz=60,slow=1.9,SNR=4.7						
LPAZ	**La Paz**	**151.10**	**67**	PKPbc	PKPbc	18 52 18.2	+2.7
	comp=Z,0.6nm,0.5s,baz=294,slow=1.5,SNR=4.6						

*NIED **16** 18:38:00, 41°.90N×145°.80E, h11km, Mw3.8 Best double couple: M0 6.24000×10^14 NP1:φ0s12.00000°, δ61.00000°, λ63.00000°. NP2:φ0s239.00000°, δ38.00000°, λ130.00000°.*
*ISCJB **16** 18:38:30.4±1.5, 41°.91N±0°.04×145°.65E±0°.08, h17km±10km, mb3.8/10, MS3.2/2, Error ellipse: s-maj=9.8km s-min=7.1km az=3.1*
*JMA **16** 18:38:30.5±0.3, 41°.91N×145°.75E, h28km±2km, M4.0*
*IDC **16** 18:38:30.1±1.1, 41°.86N×145°.57E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/26, mbtmp3.8/11, ML3.4/2, MS3.2/2, Ms1 3.1/2, ms1mx2.5/31, Error ellipse: s-maj=23.7km s-min=20.0km az=120.0*
*NEIC **16** 18:38:34.3±5.0, 41°.83N×145°.54E, h29km±36km, MG4.0(JMA), Error ellipse: s-maj=18.6km s-min=15.4km az=105.0*
ISC 16 18:38:31.1±1.4,**41°.99N**±0°.04×**145°.60E**±0°.08,**h7**km±8km,
n27,σ0**98/33,mb3.8/10,MS3.2/2,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**1.21**	**327**	P	**Pg**	**18 38 53.9**	**-0.4**
JAK				*e*S	**Sg**	**18 39 10.9**	**+1.0**
NEM2	**Nemuro 2**	**1.38**	**4**	P	**Pn**	**18 38 56.1**	**-0.6**
NEM2				*e*S	**Sb**	**18 39 14.2**	**-0.7**
JOB	**Onbets**	**1.59**	**306**	P	**Pn**	**18 38 59.4**	**-0.2**
JOB				*e*S	**Sn**	**18 39 20.0**	**-0.4**
JNK	**Nakash**	**1.72**	**338**	P	**Pn**	**18 39 00.5**	**-0.9**
JNK				*e*S	**Sn**	**18 39 21.7**	**-1.9**
JCH	**Churui**	**1.77**	**291**	P	**Pn**	**18 39 01.8**	**-0.3**
JEM	**Erimo**	**1.82**	**272**	P	**Pn**	**18 39 03.2**	**+0.5**
ERM	**Erimo**	**1.82**	**272**	*e*Pn	**Pn**	**18 39 03.4**	**+0.6**
ERM				*e*Sn	**Sn**	**18 39 31.2**	**+5.2**
JAR	**Ashorobuto**	**1.88**	**315**	P	**Pn**	**18 39 02.9**	**-0.6**
JAR				*e*S	**Sn**	**18 39 27.1**	**-0.4**
JRA	**Rausu**	**1.98**	**350**	P	**Pn**	**18 39 04.7**	**-0.2**
JRA				*e*S	**Sn**	**18 39 29.4**	**-0.5**
JNBK	**Urakawa-nobuka**	**2.14**	**279**	P	**Pn**	**18 39 06.7**	**-0.4**
ASAJ	**Asahikawa**	**3.06**	**315**	Pn	**Pn**	**18 39 20.7**	**+0.9**
	3.9nm,0.3s,baz=161,slow=5.9,SNR=25						
ASAJ				Sn	**Sn**	**18 39 58.9**	**+2.3**
	4.1nm,0.3s,baz=125,slow=30,SNR=4.1						
MAJO	**Matsushiro**	**7.90**	**229**	*e*Pn	**Pn**	**18 40 25.2**	**-1.1**
MJAR	**Matsushiro Arr**	**7.90**	**229**	Pn	**Pn**	**18 40 25.1**	**-1.2**
	0.3nm,0.3s,baz=31,slow=12,SNR=6.9						
SONM	**Songino Array**	**28.15**	**295**	P	**P**	**18 44 25.6**	**+2.0**
	7.1nm,1.1s,mb4.2,baz=85,slow=7.2,SNR=14						
DAV	**Davao City (W)**	**39.04**	**213**	LR	LR	19 01 39.2	
	comp=Z,153nm,18.2s,MS3.9,baz=269,slow=36						
ZALV	**Zalesovo Beam**	**41.18**	**308**	P	**P**	**18 46 15.8**	**+0.1**
	1.7nm,0.8s,mb3.8,baz=90,slow=7.9,SNR=7.3						
ZALV	**Zalesovo Beam**	**41.18**	**308**	P	**P**	**18 46 15.8**	**+0.1**
ILAR	**Eielson Array**	**43.58**	**35**	P	**P**	**18 46 36.9**	**+1.7**
	0.3nm,0.8s,mb3.1,baz=259,slow=9.1,SNR=4.0						
MKAR	**Makanchi Array**	**44.41**	**299**	P	**P**	**18 46 42.2**	**+0.1**
	0.6nm,0.6s,mb3.5,baz=82,slow=11,SNR=6.2						
MKAR	**Makanchi Array**	**44.41**	**299**	P	**P**	**18 46 42.2**	**+0.1**
KURK	**Kurchatov**	**45.59**	**305**	*e*P	**P**	**18 46 51.1**	**-0.3**
	3.3nm,0.9s,mb4.3						
CMAR	**Chiang Mai Arr**	**45.94**	**254**	P	**P**	**18 46 55.7**	**+1.1**
	0.4nm,0.8s,mb3.4,baz=44,slow=9.2,SNR=3.2						
INK	**Inuvik**	**48.50**	**29**	P	**P**	**18 47 15.9**	**+2.0**
	2.7nm,0.9s,mb4.3,baz=352,slow=7.1,SNR=3.0						
YKA	**Yellowknife Ar**	**57.90**	**33**	LR	LR	19 15 08.8	
	comp=Z,3.5nm,19.2s,MS2.5,baz=85,slow=38						
WRA	**Warramunga Arr**	**62.49**	**192**	P	**P**	**18 48 53.6**	**-1.4**
	0.2nm,0.5s,mb3.5,baz=11,slow=6.6,SNR=2.3						
FINES	**FINESS Array B**	**65.92**	**333**	P	**P**	**18 49 17.2**	**+0.1**
	1.6nm,0.5s,mb4.3,baz=46,slow=8.2,SNR=10						
NOA	**NORSAR Array B**	**70.83**	**338**	P	**P**	**18 49 47.9**	**0.0**
	0.5nm,0.6s,mb3.6,baz=36,slow=6.1,SNR=3.4						

*IDC **16** 18:40:38.2±1.6, 7°.00N×126°.72E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/20, mbtmp3.2/3, Error ellipse: s-maj=33.2km s-min=13.7km az=19.0*
*ISCJB **16** 18:40:46.0±0.9, 6°.7N±0°.2×126°.2E±0°.1, h71km±10km, mb3.0/3, Error ellipse: s-maj=31.1km s-min=15.8km az=26.4*
*MAN **16** 18:40:51, 7°.27N×126°.07E, h1km, mb4.6, ML3.4, MS3.3*
ISC 16 18:40:47.3±0.8,**6°.7N**±0°.2×**126°.2E**±0°.1,**h63**km±11km,**n7,**
σ0**59/10,mb3.0/3,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.27**	**24**	*e*P	**Pn**	**18 40 58.5**	**+0.9**
MATI				*e*S	**Sn**	**18 41 04.2**	**-0.8**
DAV	**Davao City (W)**	**0.68**	**303**	Pg	**Pn**	**18 41 02.0**	**+0.5**
	91nm,0.3s,baz=298,slow=4.0,SNR=9.0						
DAV				Lg		18 41 13.5	
	269nm,0.3s,baz=233,slow=20,SNR=23						
DMPH	**Davao City--Mi**	**0.74**	**301**	*e*P	**P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT				eSG	Sg	19 35 32.2	-1.0
BODT	Bodrum	0.42	268	ePg	Pg	19 35 26.3	-1.1
BODT				eSg	Sg	19 35 32.2	-1.1
AYDN	Tasoluk	0.58	3	iP	Pb	19 35 31.3	+1.1
AYDN				iS	Sb	19 35 38.8	+0.7
AYDN	Tasoluk	0.58	3	iP	Pb	19 35 31.3	+1.1
AYDN				iS	Sb	19 35 38.8	+0.7
TURN	Turunc	0.64	108	iP	Pb	19 35 31.1	-0.1
TURN				iS	Sb	19 35 38.3	-1.5
TURN	Turunc	0.64	108	iP	Pb	19 35 31.1	-0.1
TURN				iS	Sb	19 35 38.3	-1.5
GCAM	G?zelcaml?	0.79	322	iP	Pb	19 35 33.8	+0.1
GCAM				iS	Sb	19 35 43.8	-0.2
GCAM	G?zelcaml?	0.79	322	iP	Pb	19 35 33.8	+0.1
GCAM				iS	Sb	19 35 43.8	-0.2

IDC 16 19:51:34.3±1.3, 16°.20S×174°.30W, h0km, mb4.3/4, mb1 4.5/4, mb1mx4.0/17, mbtmp4.3/4, Error ellipse: s-maj=63.2km s-min=29.2km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.83	258	P	P	20 00 21.6	-0.2
	2.2nm,0.8s,baz=91,slow=6.7,SNR=26						
ASAR	Alice Springs	49.05	253	P	P	20 00 23.8	+0.4
	13nm,0.7s,baz=86,slow=8.0,SNR=182						
ILAR	Eielson Array	83.40	11	P	P	20 04 04.2	+1.2
	0.7nm,0.4s,baz=233,slow=5.2,SNR=16						
MAW	Mawson	86.76	199	P	P	20 04 20.5	+0.4
	1.0nm,0.8s,baz=130,slow=7.9,SNR=5.0						
ARCES	ARCESS Array B	125.28	352	PKP	PKPdf	20 10 34.3	-2.1
	0.8nm,0.8s,baz=13,slow=1.6,SNR=6.9						
BRTR	Keskin Array B	146.22	319	PKPbc	PKPbc	20 11 15.7	-1.3
	2.1nm,1.0s,baz=95,slow=2.7,SNR=7.0						
GERES	GERESS Array B	146.80	350	PKPbc	PKPbc	20 11 17.9	-0.4
	0.4nm,0.5s,baz=64,slow=3.1,SNR=4.6						

IDC 16 20:17:53.4±3.3, 5°.57S×149°.59E, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.6/16, mbtmp4.1/3, Error ellipse: s-maj=103.9km s-min=43.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.60	225	P	P	20 22 34.6	+0.3
	7.1nm,0.7s,baz=50,slow=11,SNR=50						
ASAR	Alice Springs	23.50	218	P	P	20 23 05.1	-0.1
	2.3nm,0.5s,baz=54,slow=8.5,SNR=28						
FITZ	Fitzroy Crossi	26.50	240	P	P	20 23 31.7	-1.0
	1.9nm,0.7s,baz=78,slow=9.4,SNR=16						
TORD	Torodi Ar. Bea	147.47	286	PKPbc	PKPbc	20 37 40.6	+0.2
	0.4nm,0.8s,baz=97,slow=2.8,SNR=9.7						

WEL 16 20:20:09.6±0.6, 37°.47S×176°.57E, h184km±4km, ML3.6/10, Error ellipse: s-maj=6.6km s-min=5.7km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.90	151	PN	Pn	20 20 37.1	+0.2
URZ				SN	Sn	20 20 58.0	-0.1
MWZ	Matawai	1.15	139	PN	Pn	20 20 38.8	0.0
MWZ				SN	Sn	20 21 01.9	+0.5
PUZ	Puketiti	1.47	115	PN	Pn	20 20 41.5	0.0
PUZ				SN	Sn	20 21 05.2	-1.0
RAHZ	Arahi	1.50	164	PN	Pn	20 20 42.1	+0.3
NMHZ	Naumai	1.63	173	PN	Pn	20 20 43.7	+0.6
CNGZ	Carnagh Statio	1.64	128	PN	Pn	20 20 43.7	+0.5
BKZ	Black Stump Fm	1.69	182	PN	Pn	20 20 43.2	-0.5
KNZ	Kokohu	1.77	151	PN	Pn	20 20 44.1	-0.4
TUVZ	Tukino	1.93	202	PN	Pn	20 20 46.2	0.0
MCHZ	McNeill Hill	1.97	177	PN	Pn	20 20 46.4	-0.1
MHGZ	Mahia Peninsul	1.98	148	PN	Pn	20 20 46.1	-0.6
WNVZ	Wahianoa	2.00	202	PN	Pn	20 20 46.7	-0.2
BHHZ	Black Hill Sta	2.05	191	PN	Pn	20 20 46.7	-0.7
PNHZ	Pukenui	2.45	187	PN	Pn	20 20 50.4	-1.5
PXZ	Pawanui	2.56	175	PN	Pn	20 20 51.5	-1.7
PXZ				SN	Sn	20 21 24.1	-3.2
PRHZ	Porangahau	2.79	179	PN	Pn	20 20 54.1	-1.7
BFZ	Birch Farm	3.21	184	PN	Pn	20 20 58.2	-2.8
MRZ	Mangatainoka R	3.27	193	PN	Pn	20 20 58.7	-3.0
MRZ				SN	Sn	20 21 37.5	-5.0
TIWZ	Tintock	3.34	189	PN	Pn	20 20 59.7	-2.8
OGWZ	Otaki Gorge	3.51	198	PN	Pn	20 21 01.7	-2.9
HOWZ	Holdsworth Sta	3.52	193	PN	Pn	20 21 01.6	-3.1
KIW	Kapiti Island	3.62	200	PN	Pn	20 21 02.8	-3.2
MTW	Mount Morrison	3.77	192	PN	Pn	20 21 04.5	-3.4
MSWZ	Moikau Station	4.07	194	PN	Pn	20 21 07.8	-3.7
PLWZ	Palliser	4.21	194	PN	Pn	20 21 09.5	-4.0

*NEIC **16** 20:20:50.1±1.6, 5°.75S×148°.55E, h218km±19km, Error ellipse: s-maj=23.4km s-min=14.5km az=124.0*
*IDC **16** 20:20:52.6±2.1, 5°.73S×148°.61E, h244km±21km, mb3.6/9, mb1 3.8/12, mb1mx3.6/18, mbtmp3.7/12, Error ellipse: s-maj=24.0km s-min=9.0km az=113.0*

ISC 16 20:20:49.7±1.2, 5°.72S±0°.08×148°.5E±0°.1, h208km±13km, n19, σ0s95/22, mb3.8/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.91	200	ePn	Pn	20 21 49.5	-1.2
HNR	Honiara	11.90	109	P	Pn	20 23 33.8	+0.7
	4.5nm,0.3s,baz=258,slow=7.2,SNR=6.4						
HNR	Honiara	11.90	109	ePn	Pn	20 23 33.5	+0.4
CTA	Charters Tower	14.46	189	P	Pn	20 24 10.4	+5.4
	0.1nm,0.3s,baz=314,slow=1.8,SNR=3.3						
GUMO	Guam	19.52	349	P	P	20 25 03.7	+2.2
	1.9nm,0.3s,baz=13,slow=16,SNR=4.0						
WB2	Warramunga Arr	19.75	223	eP	P	20 25 04.2	+0.2
WB2				eS	S	20 28 35.1	-0.2
WRA	Warramunga Arr	19.76	223	P	P	20 25 04.5	+0.4
	0.8nm,0.3s,baz=49,slow=10,SNR=27						
WRA				S	S	20 28 36.0	+0.6
	0.2nm,0.3s,baz=42,slow=20,SNR=8.0						
WRA	Warramunga Arr	19.76	223	P	P	20 25 04.5	+0.4
WRA				S	S	20 28 36.0	+0.6
ASAR	Alice Springs	22.74	217	P	P	20 25 35.1	+1.1
	3.2nm,0.5s,mb4.1,baz=53,slow=8.4,SNR=35						
ASAR				S	S	20 29 26.8	-0.1
	1.3nm,1.1s,baz=185,slow=14,SNR=3.8						
FITZ	Fitzroy Crossi	25.52	239	P	P	20 25 59.2	-0.1
	5.3nm,0.5s,mb4.4,baz=64,slow=7.8,SNR=20						
MJAR	Matsushiro Arr	43.13	348	P	P	20 28 29.3	-0.4
	1.3nm,0.6s,mb3.5,baz=170,slow=8.6,SNR=5.2						
KSRS	Korea Array	47.05	337	P	P	20 29 00.9	+0.4
	2.9nm,0.7s,mb3.7,baz=152,slow=8.3,SNR=18						
PETK	Petropavlovsk-	59.11	6	P	P	20 30 28.8	+0.7
	2.3nm,0.6s,mb4.0,baz=156,slow=8.9,SNR=3.7						
PETK	Petropavlovsk-	59.11	6	P	P	20 30 28.8	+0.7
MKAR	Makanchi Array	78.26	320	P	P	20 32 25.4	-1.1
	0.5nm,0.7s,mb3.3,baz=92,slow=8.0,SNR=6.3						
ZALV	Zalesovo Beam	79.59	327	P	P	20 32 31.1	-2.5
	0.6nm,0.4s,mb3.6,baz=106,slow=5.3,SNR=4.4						
MAW	Mawson	83.10	203	P	P	20 32 51.6	-0.1
	0.8nm,0.6s,mb3.6,baz=90,slow=4.0,SNR=6.3						
ILAR	Eielson Array	84.62	23	P	P	20 32 58.5	-1.0
	2.2nm,0.6s,mb4.0,baz=251,slow=4.9,SNR=33						
TORD	Torodi Ar. Bea	146.50	285	PKPbc	PKPbc	20 40 04.4	-3.0
	0.6nm,0.4s,baz=47,slow=2.8,SNR=13						

*ISCJB **16** 20:30:09.1±0.3, 38°.82S±0°.02×175°.92E±0°.03, h10km±2km, mb4.2/6, Error ellipse: s-maj=4.2km s-min=2.9km az=35.2*
*WEL **16** 20:30:09.3±0.1, 38°.81S×175°.87E, h5km, ML4.5/51, Error ellipse: s-maj=1.8km s-min=1.1km az=90.0, 5. Difficult to get a reasonable fit.*
WEL Felt between Waikato, King Country and Taupo, maximum reported intensity MM.
*IDC **16** 20:30:09.2±0.7, 38°.84S×175°.94E, h0km, mb4.2/5, mb1 4.3/6, mb1mx4.1/16, mbtmp4.1/6, ML3.5/1, Error ellipse: s-maj=25.1km s-min=10.3km az=150.0*
*NEIC **16** 20:30:09.3, 38°.81S×175°.87E, h5km, mb4.4/3, ML4.2(WEL), After WEL.*
NEIC Felt at Taupo and Wairakei.

ISC 16 20:30:09.2±0.3, 38°.82S±0°.02×175°.94E±0°.03, h7km±3km, n78, σ0s77/81, mb4.2/6, 21C-4D, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATZ	Rangitukua	0.14	248	⇑PG	Pg	20 30 12.5	+0.4
RATZ				SG	Sg	20 30 14.9	+0.7
HATZ	Hinemaiaia	0.14	123	⇓PG	Pg	20 30 11.7	-0.5
HATZ				SG	Sg	20 30 13.8	-0.4
HATZ				SG	Sg	20 30 13.8	-0.4
WHTZ	Whakaora	0.15	6	⇓PG	Pg	20 30 13.3	+1.1
RITZ	Rihia Road	0.17	201	PG	Pg	20 30 12.9	+0.1
RITZ				SG	Sg	20 30 16.1	+0.9
WATZ	Wairara	0.19	303	⇑PG	Pg	20 30 13.8	+0.7
KATZ	Kakaramea	0.25	230	⇑PG	Pg	20 30 14.2	+0.1
KRVZ	Karewarewa	0.36	219	⇑PG	Pg	20 30 16.2	-0.1
ALRZ	Allen Road	0.40	52	PG	Pg	20 30 17.1	+0.1
WTVZ	West Tongariro	0.41	222	⇑PG	Pg	20 30 17.0	-0.1
OTVZ	Oturere	0.41	211	⇑PG	Pg	20 30 17.0	-0.1
NGZ	Ngauruhoe	0.45	216	⇑PG	Pg	20 30 17.8	-0.1
TWVZ	Taurewa	0.47	236	⇑PG	Pg	20 30 18.0	-0.2
PRRZ	Plateau Road	0.48	49	PG	Pg	20 30 18.5	+0.1
WPVZ	Whakapapa	0.50	218	PG	Pg	20 30 18.7	-0.1
WPVZ				SG	Sg	20 30 26.1	+0.8
HRRZ	Handcock Road	0.50	33	⇓PG	Pg	20 30 19.5	+0.7
TUVZ	Tukino	0.51	206	⇑PG	Pg	20 30 18.7	-0.2
FWVZ	Far West T-bar	0.53	214	PG	Pg	20 30 19.0	-0.5
DRZ	Dome Shelter	0.55	212	PG	Pg	20 30 19.5	-0.2
BKZ	Black Stump Fm	0.56	129	⇑P*	Pg	20 30 19.9	0.0
TRVZ	Turoa	0.57	212	PG	Pg	20 30 19.9	-0.3
WNVZ	Wahianoa	0.58	207	⇑PG	Pg	20 30 19.9	-0.4
MOVZ	Moawhango	0.61	194	⇑P*	Pb	20 30 20.2	-1.9
RRRZ	Republican Roa	0.65	44	P*	Pb	20 30 22.0	-0.9
UTU	Utuhina	0.67	17	P*	Pb	20 30 23.5	+0.4
MTVZ	Mangateitei	0.68	212	P*	Pb	20 30 21.6	-1.7
BHHZ	Black Hill Sta	0.68	172	⇑P*	Pb	20 30 21.9	-1.5
TARZ	Mount Tarawera	0.73	38	P*	Pb	20 30 24.1	-0.1
NMHZ	Naumai	0.73	113	P*	Pb	20 30 24.0	-0.2
OMRZ	Omania	0.78	26	P*	Pb	20 30 25.2	+0.1
KARZ	Kaharoa	0.83	17	P*	Pb	20 30 25.8	0.0
MCHZ	McNeill Hill	0.86	137	⇑P*	Pb	20 30 27.0	+0.6
LIRZ	Lichensteins R	0.88	24	P*	Pb	20 30 26.9	+0.1
HIZ	Hauiti	0.90	289	P*	Pb	20 30 26.5	-0.6
RAHZ	Arahi	0.90	97	P*	Pb	20 30 27.0	-0.1
EDRZ	Edgecumbe	0.94	42	⇓P*	Pb	20 30 27.5	-0.3
VRZ	Vera Road	0.97	251	⇑P*	Pb	20 30 27.3	-1.0
MARZ	Manawahe	1.01	35	P*	Pb	20 30 28.5	-0.5
URZ	Urewera	1.07	59	Pg	Pg	20 30 29.3	-0.4
	140nm,0.3s,baz=246,slow=9.2,SNR=240						
URZ				Lg		20 30 45.1	
	89nm,0.3s,baz=94,slow=18,SNR=8.8						
OPRZ	Ohinepanea	1.08	27	P*	Pb	20 30 29.2	-1.0
PNHZ	Pukenui	1.12	170	⇑P*	Pb	20 30 30.1	-0.7
TOZ	Tahuroa Road	1.14	342	P*	Pb	20 30 30.2	-0.9
KAHZ	Kahuranaki	1.22	144	P*	Pb	20 30 33.5	+0.9
CKHZ	Cape Kidnapper	1.22	134	P*	Pb	20 30 34.0	+1.4
TSZ	Takapari Road	1.24	179	P*	Pb	20 30 32.2	-0.7
MHEZ	Mangahewa	1.29	258	P*	Pb	20 30 34.2	+0.5
WPHZ	Waipukurau	1.31	163	P*	Pb	20 30 34.3	+0.3
MWZ	Matawai	1.33	69	P*	Pb	20 30 33.3	-1.2
KNZ	Kokohu	1.37	99	PN	Pn	20 30 35.6	+0.9
DVHZ	Dannevirke	1.49	173	⇑PN	Pn	20 30 36.9	+0.5
POWZ	Post Office Ro	1.58	185	⇑PN	Pn	20 30 38.1	+0.5
NRZ	Ngariki Road	1.65	251	PN	Pn	20 30 39.3	+0.8
CNGZ	Carnagh Statio	1.81	80	PN	Pn	20 30 42.8	+2.1
MKAZ	Moumakai	1.81	340	PN	Pn	20 30 39.9	-0.7
MRZ	Mangatainoka R	1.87	188	⇑PN	Pn	20 30 42.1	+0.6
BFZ	Birch Farm	1.88	173	PN	Pn	20 30 41.7	0.0
PUZ	Puketiti	1.97	69	PN	Pn	20 30 43.9	+1.0
OGWZ	Otaki Gorge	2.09	196	⇑PN	Pn	20 30 45.4	+0.8
HOWZ	Holdsworth Sta	2.11	189	⇑PN	Pn	20 30 45.0	+0.2
TMWZ	Te Maipa	2.29	181	PN	Pn	20 30 47.0	-0.4
DUWZ	D'Urville Isla	2.52	217	ePN	Pn	20 30 52.0	+1.5
TRWZ	Traveller	2.59	184	PN	Pn	20 30 50.6	-0.9
SNZO	South Karori	2.67	200	PN	Pn	20 30 52.6	+0.1
SNZO	South Karori	2.67	200	ePn	Pn	20 30 51.8	-0.7
SNZO				eS	Sn	20 31 34.7	+10
KHZ	Kahutara	4.04	206	ePn	Pn	20 31 10.2	-1.1
OUZ	Omahuta	4.05	332	ePn	Pn	20 31 10.1	-1.3
RPZ	Rata Peaks	6.12	215	Pn	Pn	20 31 39.5	-0.5
	1.3nm,0.3s,baz=72,slow=19,SNR=5.3						
RPZ	Rata Peaks	6.12	215	Pn	Pn	20 31 39.5	-0.5
ASAR	Alice Springs	38.63	280	P	P	20 37 34.2	+1.1
	3.3nm,0.9s,mb4.0,baz=119,slow=7.6,SNR=21						
WRA	Warramunga Arr	40.42	286	P	P	20 37 48.5	+0.4
	2.6nm,0.8s,mb4.0,baz=127,slow=7.9,SNR=11						
CASY	Casey	45.38	211	eP	P	20 38 27.0	-0.8
	4.2nm,0.8s,mb4.3						
FITZ	Fitzroy Crossi	48.13	281	P	P	20 38 51.0	+1.1
	1.9nm,0.8s,mb4.2,baz=166,slow=11,SNR=6.5						
QSPA	South Pole Qui	51.31	180	P	P	20 39 15.4	+2.1
	3.3nm,0.9s,mb4.2,baz=76,slow=3.1,SNR=7.2						
QSPA	South Pole Qui	51.31	180	eP	P	20 39 14.7	+1.3
	6.6nm,1.0s,mb4.5						
MAW	Mawson	62.66	203	P	P	20 40 34.2	+0.4
	2.3nm,0.8s,mb4.4,baz=103,slow=10,SNR=4.2						
MAW	Mawson	62.66	203	eP	P	20 40 33.4	-0.4
	1.1nm,1.1s,mb3.9						
ARCES	ARCESS Array B	145.42	342	PKPbc	PKPbc	20 49 48.3	+1.6
	1.2nm,0.7s,baz=57,slow=4.5,SNR=5.6						
FINES	FINESS Array B	150.70	330	PKP	PKPdf	20 49 58.0	+2.5
	1.3nm,0.7s,baz=172,slow=33,SNR=3.7						
FINES				PKPbc	PKPbc	20 50 02.1	+1.1
	2.8nm,1.1s,baz=47,slow=6.1,SNR=3.3						
TORD	Torodi Ar. Bea	153.93	193	PKPbc	PKPbc	20 50 11.2	+1.4
	0.3nm,0.5s,baz=166,slow=7.5,SNR=4.1						
TORD				PKPab	PKPab	20 50 22.6	-0.2
	0.6nm,0.7s,baz=149,slow=3.1,SNR=3.9						

KRSC 16 20:30:15.0±0.1, 52°.39N×159°.56E, h46km±46km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.76	21	eP	Pn	20 30 30.6	+1.2
SPN				iS	Sn	20 30 41.8	+2.0
NLC	Nalytchevo	0.79	351	eP	Pn	20 30 30.2	+0.4
NLC				iS	Sn	20 30 41.0	+0.4
PET	Petropavlovsk	0.84	319	eP	Pn	20 30 31.2	+0.8
PET				iS	Sn	20 30 41.8	+0.1
GRL	Gorelyy	0.92	281	eP	Pn	20 30 33.2	+1.7
GRL				iS	Sn	20 30 46.6	+2.9
AVH	Avacha	1.01	331	eP	Pn	20 30 33.9	+1.2
GNL	Ganaly	1.63	324	eP	Pn	20 30 43.2	+2.0
GNL				iS	Sn	20 31 03.6	+2.6
KII	Karymskiy	1.65	358	eP	Pn	20 30 44.5	+3.0
KII				iS	Sn	20 31 05.6	+4.2
MKZ	Mys Kozlova	2.53	30	eP	Pn	20 30 55.0	+1.5
MKZ				iS	Sn	20 31 24.1	+1.1
ALID	Alaid	2.93	240	eP	Pn	20 31 01.7	+2.8
SRDR	Sredinnyy	3.94	1	eP	Pn	20 31 18.0	+5.2
KBTR	Krutoberegovo	4.28	25	eP	Pn	20 31 20.8	+3.4
KBTR				iS	Sn	20 32 10.7	+4.7

*NEIC **16** 20:33:28.1, 27°.55N×15°.44W, h0km, MN2.6(MDD), After MDD.*

MDD 16 20:33:30.8±0.3, 27°.66N×15°.46W, h47km±3km, mb3.8/4, 3C-3D, Error ellipse: s-maj=4.7km s-min=1.4km az=177.0, PRIMO TT_MODEL: CANARY, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOSO	Osorio	0.42	348	⇑P	Pn	20 33 40.0	-0.9
EOSO				S	Sn	20 33 47.6	-0.6
EOSO	Osorio	0.42	348	⇑P	Pn	20 33 40.1	-0.9
	21nm,0.1s,SNR=18						
EOSO				S	Sn	20 33 47.6	-0.6
	38nm,0.1s,SNR=14						
EOSO	Osorio	0.42	348	⇑P	Pn	20 33 40.1	-0.9
	21nm,0.1s,SNR=18						
EOSO				S	Sn	20 33 47.6	-0.6
	38nm,0.1s,SNR=14						
CCAN	Las Canadas	1.16	299	⇓P	Pn	20 33 49.6	-1.0
CCAN				S	Sn	20 34 02.6	-2.8
CCAN	Las Canadas	1.16	299	⇓P	Pn	20 33 49.6	-1.0
	9.0nm,0.1s,SNR=18						
CCAN				S	Sn	20 34 01.6	-3.7
	13nm,0.1s,SNR=9.4						
CCAN	Las Canadas	1.16	299	⇓P	Pn	20 33 49.6	-1.0
	9.0nm,0.1s,SNR=18						
CCAN				S	Sn	20 34 01.6	-3.7
	13nm,0.1s,SNR=9.4						
CRAJ	Montana Rajada	1.18	301	S	Sn	20 34 03.4	-2.3
	59nm,0.1s,SNR=7.9						
CRAJ	Montana Rajada	1.18	301	S	Sn	20 34 03.4	-2.3
	59nm,0.1s,SNR=7.9						
EBAJ	Bajamar	1.18	319	P	Pn	20 33 50.2	-0.7
EBAJ				S	Sn	20 34 03.5	-2.3
EBAJ	Bajamar	1.18	319	P	Pn	20 33 50.2	-0.7
	3.2nm,0.1s,SNR=9.2						
EBAJ				S	Sn	20 34 03.5	-2.3
	17nm,0.1s,SNR=15						
EBAJ	Bajamar	1.18	319	P	Pn	20 33 50.2	-0.7
	3.2nm,0.1s,SNR=9.2						
EBAJ				S	Sn	20 34 03.5	-2.3
	17nm,0.1s,SNR=15						
CICO	Icod de los Vi	1.32	302	S	Sn	20 34 07.4	-1.8
	1.0nm,0.2s,SNR=7.9						
CICO	Icod de los Vi	1.32	302	S	Sn	20 34 07.4	-1.8
	1.0nm,0.2s,SNR=7.9						
CHIO	Chio	1.34	296	S	Sn	20 34 06.0	-3.7
	27nm,0.1s,SNR=9.0						
CHIO	Chio	1.34	296	S	Sn	20 34 06.0	-3.7
	27nm,0.1s,SNR=9.0						
CFTV	Fuerteventura	1.43	58	P	Pn	20 33 52.9	-1.3
CFTV				S	Sn	20 34 08.7	-3.2
CFTV	Fuerteventura	1.43	58	P	Pn	20 33 52.9	-1.3
	2.2nm,0.1s,SNR=7.9						
CFTV				S	Sn	20 34 08.7	-3.2
	9.1nm,0.1s,SNR=14						
CFTV	Fuerteventura	1.43	58	P	Pn	20 33 52.9	-1.3
	2.2nm,0.1s,SNR=7.9						
CFTV				S	Sn	20 34 08.7	-3.2
	9.1nm,0.1s,SNR=14						
CFUE	Fuerteventura	1.67	53	P	Pn	20 33 56.0	-1.5
	5.6nm,0.0s,SNR=7.9						
CFUE				S	Sn	20 34 15.2	-2.5
	29nm,0.1s,SNR=7.9						
CFUE	Fuerteventura	1.67	53	P	Pn	20 33 56.0	-1.5
	5.6nm,0.0s,SNR=7.9						
CFUE				S	Sn	20 34 15.2	-2.5
	29nm,0.1s,SNR=7.9						
CHIE	El Hierro	2.22	272	P	Pn	20 34 05.9	+0.7
CHIE				S	Sn	20 34 28.8	-2.6
CHIE	El Hierro	2.22	272	P	Pn	20 34 05.9	+0.7
	2.2nm,0.1s,SNR=7.9						
CHIE				S	Sn	20 34 28.8	-2.6
	1.6nm,0.1s,SNR=7.9						
CHIE	El Hierro	2.22	272	P	Pn	20 34 05.9	+0.7
	2.2nm,0.1s,SNR=7.9						
CHIE				S	Sn	20 34 28.8	-2.6
	1.6nm,0.1s,SNR=7.9						
EFAM	Famara	2.24	49	P	Pn	20 34 05.1	-0.4
EFAM				S	Sn	20 34 30.4	-1.5
EFAM	Famara	2.24	49	P	Pn	20 34 05.1	-0.4
	2.8nm,0.2s,SNR=7.9						
EFAM				S	Sn	20 34 30.4	-1.5
	4.7nm,0.1s,SNR=7.9						
EFAM	Famara	2.24	49	P	Pn	20 34 05.1	-0.4
	2.8nm,0.2s,SNR=7.9						
EFAM				S	Sn	20 34 30.4	-1.5
	4.7nm,0.1s,SNR=7.9						

*SKO **16** 20:41:49.4, 41°.39N×19°.57E, h90km, M2.2, ML2.5*
*ISCJB **16** 20:41:51.8±1.1, 41°.35N±0°.10×19°.77E±0°.06, h10km, Error ellipse: s-maj=14.7km s-min=4.8km az=17.7*

ISC 16 20:41:53.3±1.2, 41°.3N±0°.1×19°.77E±0°.06, h10km, n6, σ1s12/11, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	Krusevo	1.11	86	ePg	Pg	20 42 14.8	+0.2
BIA	Bitola	1.21	103	ePg	Pg	20 42 16.5	+0.1
BIA				eSg	Sg	20 42 33.4	+1.3
SKO	Skopje	1.41	61	ePg	Pg	20 42 19.5	-0.9
SKO				eSg	Sg	20 42 38.5	-0.2
SKO				eLg		20 42 39.5	
	comp=E,59nm,0.8s						
SKO				eLg		20 42 39.6	
	comp=N,51nm,0.3s						
VAY	Valandovo	2.11	89	ePg	Pg	20 42 32.1	-1.5
VAY				eSg	Sg	20 43 01.8	+0.8
STON	Ston	2.20	316	ePn	Pn	20 42 28.4	-1.4
STON				Sn	Sn	20 42 59.4	+2.4
NVLJ	Novalja	4.85	314	ePn	Pn	20 43 05.4	-0.9
NVLJ				Sn	Sn	20 44 03.5	+1.0

WEL 16 21:27:02.7±0.1, 38°.85S×175°.97E, h5km, ML3.5/37, 12C, Error ellipse: s-maj=1.1km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATZ	Hinemaiaia	0.10	112	⇑PG	Pg	21 27 05.3	+0.5
HATZ				SG	Sg	21 27 07.4	+1.1
RITZ	Rihia Road	0.15	215	PG	Pg	21 27 06.5	+0.8
RITZ				SG	Sg	21 27 09.9	+2.1
RATZ	Rangitukua	0.16	265	⇑PG	Pg	21 27 06.1	+0.3
WHTZ	Whakaora	0.19	357	PG	Pg	21 27 06.8	+0.5
WATZ	Wairara	0.23	308	⇑PG	Pg	21 27 07.2	-0.

BOJS
comp=Z,6.0nm,0.1s
KNDS Knezji Dol 0.52 319 *i* Pg **Pg 21 30 47.3 -1.0**
KNDS *i* Sg **Sg 21 30 55.6 +0.5**
NVLJ Novalja 0.58 180 *e*Pg **Pg 21 30 49.0 -0.6**
NVLJ Sg **Sg 21 30 58.0 +0.8**
VISS Visnje 0.66 358 *i* Pg **Pg 21 30 51.5 +0.3**
VISS
comp=Z,2.0nm,0.1s
CEY Cerknica 0.67 333 *i* Pg **Pg 21 30 50.6 -0.8**
CEY *i* Sg **Sg 21 31 00.8 +0.7**

*DDA **16** 21:34:41.9, 37.°03N×29.°19E, h36km±2km, Md3.1*
*CSEM **16** 21:34:43.1±0.2, 37.°10N×29.°12E, h8km, MD3.1, Error ellipse: s-maj=4.6km s-min=2.7km az=7.0*
ISK 16 21:34:42.6, 37.°09N×29.°12E, h8km, MD3.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**77**	PG	Pg	21 34 49.2	+0.4
GLHS				SG	Sg	21 34 55.0	+2.1
GLHS	**Glhisar (BURDU**	**0.31**	**77**	*i* Pg	Pg	21 34 49.2	+0.4
GLHS				*i* Sg	Sg	21 34 55.0	+2.1
GOLH	**Golhisar**	**0.39**	**67**	*i* P	Pg	21 34 49.8	-0.3
GOLH				*i* S	Sg	21 34 56.6	+1.4
GOLH	**Golhisar**	**0.39**	**67**	*i* P	Pg	21 34 49.8	-0.3
GOLH				*i* S	Sg	21 34 56.6	+1.4
TURN	**Turunc**	**0.46**	**243**	*i* P	Pg	21 34 56.4	+4.8
TURN				*i* S	Sg	21 35 08.5	+11
TURN	**Turunc**	**0.46**	**243**	*i* P	Pg	21 34 56.4	+4.8
DNZL	**Cakiroluk**	**0.60**	**355**	*i* P	Pg	21 34 55.1	+0.9
DNZL				*i* S	Sg	21 35 06.2	+4.0
DNZL	**Cakiroluk**	**0.60**	**355**	*i* P	Pg	21 34 55.1	+0.8
DNZL				*i* S	Sg	21 35 06.2	+4.1
DENT	**Denizli**	**0.67**	**354**	*e*PG	Pg	21 34 55.6	+0.1
DENT	**Denizli**	**0.67**	**354**	*e*Pg	Pg	21 34 55.6	+0.1
YER	**Yerkesik**	**0.67**	**274**	*e*PG	Pg	21 34 56.1	+0.6
YER				*e*SG	Sg	21 35 06.3	+2.1
YER	**Yerkesik**	**0.67**	**274**	*e*Pg	Pg	21 34 56.1	+0.6
YER				*e*Sg	Sg	21 35 06.3	+2.1
ELL	**Elmali**	**0.72**	**118**	*e*PG	Pg	21 34 56.1	-0.3
ELL				*e*SG	Sg	21 35 07.2	+1.4
ELL	**Elmali**	**0.72**	**118**	*e*Pg	Pg	21 34 56.1	-0.4
ELL				*e*Sg	Sg	21 35 07.2	+1.4
AKAS	**Kas**	**0.94**	**155**	*i* P	Pg	21 34 58.7	-1.9
AKAS				*i* S	Sg	21 35 14.2	+1.4
KORT	**Korkueli**	**0.99**	**95**	*i* P	Pg	21 35 01.0	-0.6
KORT				*i* S	Sg	21 35 17.2	+2.7
KORT	**Korkueli**	**0.99**	**95**	*i* P	Pg	21 35 01.0	-0.6
KORT				*i* S	Sg	21 35 17.2	+2.7
MLSB	**Milas**	**1.09**	**281**	*e*PN	Pn	21 35 03.9	-0.3
MLSB	**Milas**	**1.09**	**281**	*e*Pn	Pn	21 35 03.9	-0.2
AYDN	**Tasoluk**	**1.14**	**300**	*i* P	Pg	21 35 05.2	+0.7
AYDN				*i* S	Sg	21 35 22.4	+3.1
AYDN	**Tasoluk**	**1.14**	**300**	*i* P	Pg	21 35 05.2	+0.7
AYDN				*i* S	Sg	21 35 22.4	+3.1
BCK	**Bucak**	**1.23**	**72**	*e*PN	Pn	21 35 06.2	+0.1
BCK	**Bucak**	**1.23**	**72**	*e*Pn	Pn	21 35 06.2	+0.1
ANTB	**Antalya**	**1.25**	**98**	*e*PN	Pn	21 35 06.7	+0.4
ANTB	**Antalya**	**1.25**	**98**	*e*Pn	Pn	21 35 06.7	+0.4
KHL	**Karahalli**	**1.27**	**15**	*e*PN	Pn	21 35 07.1	+0.4
KHL	**Karahalli**	**1.27**	**15**	*e*Pn	Pn	21 35 07.1	+0.4
DAT	**Datca**	**1.28**	**254**	*e*PN	Pn	21 35 07.7	+0.9
DAT				*e*SN	Sn	21 35 25.9	+1.7
DAT	**Datca**	**1.28**	**254**	*e*Pn	Pn	21 35 07.7	+0.9
DAT				*e*Sn	Sn	21 35 25.9	+1.7
KHAL	**Karahalli**	**1.31**	**13**	*i* P	Pn	21 35 07.8	+0.6
KHAL				*i* S	Sb	21 35 28.5	+3.9
KHAL	**Karahalli**	**1.31**	**13**	*i* P	Pn	21 35 07.8	+0.6
KHAL				*i* S	Sb	21 35 28.5	+4.0
BDRM	**Kayabasi**	**1.34**	**270**	*i* P	Pn	21 35 08.5	+1.0
BDRM				*i* S	Sb	21 35 26.9	+1.7
BDRM	**Kayabasi**	**1.34**	**270**	*i* P	Pn	21 35 08.5	+1.0
BODT	**Bodrum**	**1.44**	**270**	*e*PN	Pn	21 35 09.4	+0.4
BODT	**Bodrum**	**1.44**	**270**	*e*Pn	Pn	21 35 09.4	+0.4
KULA	**Kula-Manisa**	**1.47**	**346**	*e*PN	Pn	21 35 09.4	0.0
KULA	**Kula-Manisa**	**1.47**	**346**	*e*Pn	Pn	21 35 09.4	0.0
SUTC	**Sutluce-Ispart**	**1.55**	**75**	*e*PN	Pn	21 35 11.7	+1.2
SUTC	**Sutluce-Ispart**	**1.55**	**75**	*e*Pn	Pn	21 35 11.7	+1.2
IZM	**Izmir**	**1.97**	**312**	*e*PN	Pn	21 35 16.3	+0.1
DEMI	**Demirci**	**1.98**	**351**	*i* P	Pn	21 35 15.9	-0.5
DEMI	**Demirci**	**1.98**	**351**	*i* P	Pn	21 35 15.9	-0.5
ALT	**Altintas**	**2.12**	**21**	*e*PN	Pn	21 35 19.1	+0.8
ALT	**Altintas**	**2.12**	**21**	*e*Pn	Pn	21 35 19.1	+0.9
HDMB	**Hadim**	**2.70**	**92**	*e*PN	Pn	21 35 28.3	+2.0
HDMB	**Hadim**	**2.70**	**92**	*e*Pn	Pn	21 35 28.3	+2.0
KIZT	**Kizilcal**	**2.82**	**50**	*e*PN	Pn	21 35 29.6	+1.7
KIZT	**Kizilcal**	**2.82**	**50**	*e*Pn	Pn	21 35 29.6	+1.6

IDC 16 21:41:39.7±66.0, 19.°02S×167.°93E, h0km, mb4.7/3, mb1 4.8/3, mb1mx4.1/15, mbtmp4.7/3, Error ellipse: s-maj=1111.0km s-min=103.9km az=74.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**26.92**	**236**	P	P	21 47 22.6	-0.1
	3.8nm,0.7s,baz=60,slow=10,SNR=13						
WRA	**Warramunga Arr**	**31.65**	**263**	P	P	21 48 04.9	0.0
	1.6nm,0.3s,baz=93,slow=8.9,SNR=18						
ASAR	**Alice Springs**	**31.98**	**256**	P	P	21 48 08.0	+0.2
	17nm,0.5s,baz=82,slow=9.3,SNR=338						

*BJI **16** 21:47:10.0, 17.°10N×73.°52E, h10km, mB4.9/30, mb4.9/48, Ms4.7/39, Ms7 4.4/35*
*IDC **16** 21:47:13.7±0.5, 17.°44N×73.°83E, h0km, mb4.6/22, mb1 4.7/22, mb1mx4.7/23, mbtmp4.6/22, MS3.8/13, Ms1 3.9/13, ms1mx3.6/32, Error ellipse: s-maj=16.0km s-min=11.9km az=20.0*
*NEIC **16** 21:47:14.5±0.2, 17.°44N×73.°92E, h10km, mb5.0/65, Error ellipse: s-maj=6.2km s-min=5.2km az=179.0*
NEIC One person killed in the Daund area. At least 20 people injured, over 1,500 buildings damaged and several roads damaged by rockfalls in Satara. Buildings also damaged at Bombay. Felt [V] at Dabhol and Pune; [IV] at Bombay, Candolim, Karad, Madgaon, Mahabaleshwar, Panchgani, Pilerne, Ratnagiri and Vasco da Gama. Felt [II] in Panaji. Felt in most of western Maharashtra. Also felt in Goa and northern Karnataka.
*ISCJB **16** 21:47:14.2±0.7, 17.°39N±0.°03×73.°78E±0.°03, h18km±4km, mb4.8/139, MS4.2/36, Error ellipse: s-maj=4.3km s-min=4.0km az=40.1*
*NDI **16** 21:47:15.0±8.1, 17.°40N×73.°76E, h15km±29km, ML5.0, mb5.0(NEIC)*
*SZGRF **16** 21:47:16.0, 16.°10N×72.°83E, h33km, mb4.8, MS3.6, Arabian Sea*
*MOS **16** 21:47:16.3±1.2, 17.°34N×73.°77E, h33km, mb5.0/47, MS4.1/13, Error ellipse: s-maj=8.7km s-min=4.7km az=116.3*
*DJA **16** 21:47:20, 17.°40N×73.°87E, h20km, mb4.9/10*
ISC 16 21:47:13.4±0.7, 17.°39N±0.°02×73.°87E±0.°02, h1km±4km, n340, σ1§28/354, mb4.9/139, MS4.2/36, 8C-24D, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAD	**Karad**	**0.30**	**105**	*e*PKP	**Pg**	**21 47 23.1**	**+3.8**
KAD				*e*S	**Sg**	**21 47 28.3**	**+5.1**
KAD				AML	AML	21 47 28.7	
	comp=N,159μm,0.3s						
KAD				AML	AML	21 47 30.6	
	comp=E,35μm,0.3s						
POO	**Poona**	**1.14**	**359**	*e*PKP	**Pg**	**21 47 37.4**	**+2.2**
POO				*e*S	**Sg**	**21 47 52.3**	**+2.3**
POO				AML	AML	21 47 55.8	
	comp=N,28μm,0.4s						
POO				AML	AML	21 47 55.8	
	comp=E,39μm,0.4s						
GOA	**Goa**	**1.88**	**181**	⇓*i*P	**Pn**	**21 47 47.2**	**+0.5**
GOA				*i* S	**Sn**	**21 48 10.3**	**-0.9**
LATR	**Latur**	**2.75**	**68**	*e*PKP	**Pn**	**21 48 01.6**	**+2.8**
LATR				*ex*	**Sg**	**21 48 43.3**	**+1.3**
LATR				AML	AML	21 48 44.1	
	comp=N,15μm,0.2s						
LATR				AML	AML	21 48 44.5	
	comp=E,7μm,0.4s						
AKL	**Akola**	**4.44**	**42**	*i* P	**Pg**	**21 48 37.5**	**-1.1**
AKL				*i* S	**Sg**	**21 49 34.2**	**-1.9**
AKL				AML	AML	21 49 37.5	
	comp=E,20μm,0.4s						
AKL				AML	AML	21 49 37.6	
	comp=N,5μm,0.4s						
HYB	**Hyderabad**	**4.47**	**89**	*i* Pn	**Pn**	**21 48 22.0**	**-0.3**
HYB				*e*Pg	**Pg**	**21 48 37.0**	**-2.1**
HYB				*e*Sn	**Sn**	**21 49 13.0**	**-2.0**
HYB				*e*Sg	**Sg**	**21 49 36.0**	**-1.0**
BHV	**Bhavnagar**	**4.64**	**340**	*e*PKP	**Pn**	**21 48 23.8**	**-0.9**
BHV				*ex*	**Sb**	**21 49 34.5**	**+2.5**
NGP	**Nagpur**	**6.16**	**52**	*e*PKP	**Pn**	**21 48 45.2**	**-0.3**
NGP				*ex*	x	21 49 47.0	
BHPL	**Bhopal**	**6.71**	**29**	*e*PKP	**Pn**	**21 48 54.1**	**+1.0**
BHPL				*ex*	x	21 50 09.4	
BHPL				AML	AML	21 50 48.7	
	comp=N,3μm,0.4s						
MDRS	**Chennai**	**7.50**	**124**	*ex*	**Pb**	**21 49 20.1**	**-4.3**
MDRS				*ex*	**Sb**	**21 50 49.1**	**-5.2**
JBP	**Jabalpur**	**8.12**	**44**	*e*PKP	**Pn**	**21 49 14.3**	**+1.8**
JBP				*ex*	x	21 50 35.9	
VIS	**Vishakhapatnam**	**9.03**	**86**	*e*PKP	**Pn**	**21 49 25.8**	**+0.8**
VIS				*i* x	x	21 51 04.9	
VIS				*ex*	x	21 51 21.3	
	comp=N,540nm,0.7s						
VIS				*ex*	x	21 51 22.4	
	comp=E,349nm,0.7s						
AJM	**Ajmer**	**9.08**	**4**	*e*PKP	**Pn**	**21 49 25.0**	**-0.6**
AJM				*e*S	**Sn**	**21 51 00.4**	**-8.2**
TRD	**Trivandrum**	**9.32**	**161**	*e*PKP	**Pn**	**21 49 28.7**	**-0.3**
HMDM	**Hanimaadhoo**	**10.57**	**184**	P	**Pn**	**21 49 49.4**	**+3.3**
ALBI	**Allahabad**	**10.80**	**42**	*e*PKP	**Pn**	**21 49 47.5**	**-1.8**
NDI	**New Delhi**	**11.66**	**15**	*e*PKP	**Pn**	**21 49 59.0**	**-2.0**
BWNR	**Bhubaneshwar**	**11.66**	**74**	*e*PKP	**Pn**	**21 49 57.0**	**-4.1**
BWNR				*e*S	**Sn**	**21 52 00.0**	**-12**
PALK	**Pallekele**	**12.06**	**146**	*e*Pn	**Pn**	**21 50 05.7**	**-0.8**
PALK	**Pallekele**	**12.06**	**146**	*i* P	**Pn**	**21 50 07.3**	**+0.8**
PALK	**Pallekele**	**12.06**	**146**	P	**Pn**	**21 50 06.6**	**+0.1**
	comp=E,38nm,0.6s						
BOK	**Bokaro**	**12.93**	**58**	*ex*	**Sn**	**21 52 43.0**	**+0.1**
PTH	**Pithoragarh**	**13.43**	**24**	*e*PKP	**Pn**	**21 50 24.2**	**-1.0**
PTH				*e*S	**Sn**	**21 52 43.3**	**-12**
DDI	**Dehra Dun**	**13.43**	**16**	*e*PKP	**Pn**	**21 50 24.0**	**-1.2**
DDI				*ex*	x	21 54 12.8	
PYUN	**Piuthan**	**13.57**	**37**	*e*P	**Pn**	**21 50 25.7**	**-1.5**
KOLN	**Koldanda**	**13.69**	**39**	*e*P	**Pn**	**21 50 26.5**	**-2.2**
	comp=E,333nm,0.5s						
SMLA	**Simla**	**14.01**	**12**	*i* x	**Pn**	**21 50 30.6**	**-2.5**
SMLA				*i* x	x	21 52 59.9	
SMLA				⇓		21 53 05.3	
	comp=E,2μm,0.6s						
SMLA				⇓		21 53 05.6	
	comp=N,2μm,0.6s						
BHK	**Bhakra**	**14.16**	**9**	*e*PKP	**Pn**	**21 50 34.0**	**-1.1**
BHK				*ex*	x	21 53 16.2	
DANN	**Dangsing**	**14.21**	**38**	*e*P	**Pn**	**21 50 33.6**	**-2.2**
	comp=N,277nm,0.7s						
SDNR	**Sundarnagar**	**14.33**	**11**	*e*PKP	**Pn**	**21 50 37.5**	**0.0**
SDNR				*ex*	x	21 53 08.9	
GKN	**Gorkha**	**14.49**	**41**	*e*P	**Pn**	**21 50 37.2**	**-2.5**
	comp=N,336nm,0.5s						
DMN	**Daman**	**14.52**	**44**	*e*P	**Pn**	**21 50 37.8**	**-2.3**
	comp=N,371nm,0.9s						
PKIN	**Phulchoki**	**14.70**	**44**	*e*P	**Pn**	**21 50 39.5**	**-3.0**
	comp=N,167nm,0.5s						
PKI	**Pulchoki**	**14.70**	**44**	*e*P	**Pn**	**21 50 39.7**	**-2.8**
	comp=N,109nm,0.4s						
PKI	**Pulchoki**	**14.70**	**44**	*e*P	**Pn**	**21 50 39.7**	**-2.8**
PKI				pmax	pmax		
	comp=Z,109nm,0.4s						
KKN	**Kakani**	**14.76**	**43**	*e*P	**Pn**	**21 50 40.7**	**-2.7**
	comp=Z,389nm,0.7s						
KKN	**Kakani**	**14.76**	**43**	*e*P	**Pn**	**21 50 40.7**	**-2.7**
KKN				pmax	pmax		
	comp=Z,389nm,0.7s						
DLH	**Dalhousie**	**15.21**	**7**	*ex*	**Sn**	**21 53 38.0**	**-0.6**
DLH				*ex*	x	21 55 22.0	
GUN	**Gumba**	**15.24**	**44**	*e*P	**Pn**	**21 50 47.1**	**-2.7**
	comp=Z,93nm,0.3s						
JMU	**Jammu**	**15.29**	**3**	*ex*	x	21 54 50.0	
JMDO	**Jabal Madar**	**15.64**	**291**	P	**Pn**	**21 51 02.0**	**+6.9**
	SNR=5.2						
ODAN	**Odare**	**15.66**	**51**	*e*P	**Pn**	**21 50 53.6**	**-1.8**
	comp=Z,301nm,0.8s						
SMDO	**Samad**	**15.88**	**293**	P	**Pn**	**21 51 04.6**	**+6.3**
	SNR=8.8						
TAPN	**Taplejung**	**16.18**	**50**	*e*P	**Pn**	**21 51 00.3**	**-1.7**
	comp=Z,279nm,0.6s						
NIL	**Nilore**	**16.21**	**358**	*e*Pn	**Pn**	**21 51 03.6**	**+1.2**
	comp=Z,13nm,0.8s						
NIL	**Nilore**	**16.21**	**358**	*e*P	**Pn**	**21 51 03.6**	**+1.2**
NIL				pmax	pmax		
	comp=Z,13nm,0.8s						
CHCP	**Chirah Chowk**	**16.21**	**358**	P	**Pn**	**21 51 00.4**	**-2.1**
CEP	**Cherat**	**16.46**	**354**	P	**Pn**	**21 51 03.3**	**-2.4**
HOQ	**Hoqain**	**16.69**	**294**	P	**Pn**	**21 51 13.7**	**+5.0**
	SNR=7.6						
ARQ	**Araqi**	**17.31**	**293**	P	**Pn**	**21 51 22.1**	**+5.6**
	SNR=9.8						
KBL	**Kabul**	**17.62**	**347**	*e*Pn	**Pn**	**21 51 21.4**	**+1.1**
	comp=Z,45nm,1.0s						
KBL	**Kabul**	**17.62**	**347**	*e*P	**Pn**	**21 51 21.4**	**+1.1**
KBL				pmax	pmax		
	comp=Z,45nm,1.0s						
ASHO	**Ashiyiah**	**18.14**	**297**	P	**Pn**	**21 51 30.6**	**+3.9**
	SNR=7.1						
SHL	**Shillong**	**18.62**	**61**	*ex*	x	21 51 39.0	
SHL				*ex*	x	21 53 54.0	
LSA	**Lhasa**	**20.00**	**49**	P	**Pn**	**21 51 51.3**	**+2.2**
LSA				P		21 51 55.5	
KSH	**Kashi**	**22.13**	**4**	*e*P	**P**	**21 52 07.8**	**-2.6**
KSH				*e*pP		21 52 11.9	
KSH				*e*sP	sP	21 52 14.8	+4.1
KSH				*e*PP		21 52 33.0	
KSH				*e*S	**S**	**21 56 02.3**	**-13**
KSH				*e*PcP	PcP	21 56 08.4	+0.5
KSH				pmax	pmax		
	comp=Z,43nm,0.8s,mb4.9						
KSH				LR	LR		
	comp=N,3μm,11.0s						
KSH				LR	LR		
	comp=E,2μm,9.4s						
KSH				LR	LR		
	comp=Z,4μm,10.5s,MS5.1						
CHG	**Chiang Mai**	**23.87**	**83**	⇓P	**P**	**21 52 34.1**	**+5.5**
	comp=Z,24nm,0.7s,mb4.8						
CHTO	**Chiang Mai**	**23.87**	**83**	*e*P	**P**	**21 52 30.9**	**+2.3**
	comp=Z,19nm,1.0s,mb4.6						
CHTO	**Chiang Mai**	**23.87**	**83**	*e*P	**P**	**21 52 30.9**	**+2.3**
CHTO				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.6						
CHTO	**Chiang Mai**	**23.87**	**83**	P	**P**	**21 52 32.6**	**+4.0**
	comp=Z,27nm,2.1s,mb4.4						
CHTO	**Chiang Mai**	**23.87**	**83**	P	**P**	**21 52 34.6**	**+6.0**
	SNR=5.6						
CMAR	**Chiang Mai Arr**	**23.87**	**84**	P	**P**	**21 52 31.1**	**+2.4**
	comp=Z,19nm,0.7s,mb4.7,baz=275,slow=9.7,SNR=48						
CMAR				LR	LR	22 03 13.3	
	comp=Z,64nm,20.7s,MS3.1,baz=260,slow=40						
CMAR	**Chiang Mai Arr**	**23.87**	**84**	P	**P**	**21 52 31.1**	**+2.4**
KZA	**Kyzart**	**24.64**	**2**	P	**P**	**21 52 38.0**	**+2.6**
	SNR=9.8						
AML	**Almayashu**	**24.66**	**360**	P	**P**	**21 52 37.4**	**+1.8**
	SNR=57						
CHRT	**Chiangrai**	**24.67**	**80**	P	**P**	**21 52 38.0**	**+2.1**
	comp=Z,171nm,1.0s,mb5.7						
ABKT	**Ailbek**	**24.70**	**329**	P	**P**	**21 52 38.6**	**+2.5**
	comp=Z,166nm,1.0s,mb5.7,SNR=14						
AAK	**Ala-Archa**	**25.17**	**1**	P	**P**	**21 52 42.9**	**+2.6**
	SNR=34						
EKS2	**Erkin-Say**	**25.19**	**360**	P	**P**	**21 52 42.9**	**+2.5**
	SNR=241						
KBK	**Karagaybulak**	**25.20**	**2**	P	**P**	**21 52 43.3**	**+2.7**
	SNR=87						
FRU	**Bishkek**	**25.37**	**1**	⇓*e*P	**P**	**21 52 44.0**	**+1.9**
FRU				*e*		21 58 04.0	
FRU				*e*		21 58 24.0	
FRU				pmax	pmax		
	comp=Z,60nm,1.9s,mb5.0						
TKM2	**Tokmak 2**	**25.50**	**3**	P	**P**	**21 52 45.3**	**+2.1**
	SNR=25						
CHMS	**Chumysh**	**25.54**	**1**	P	**P**	**21 52 45.2**	**+1.6**
	SNR=7.8						
USP	**Ospenovka**	**25.80**	**1**	P	**P**	**21 52 47.3**	**+1.3**
	SNR=29						
KBD	**Kabd**	**26.69**	**301**	*e*P	**P**	**21 52 55.1**	**+0.9**
KBD				AMb	AMB	21 53 05.4	
	comp=Z,43nm,1.2s,mb5.1						
RDF	**Al-Radifah**	**26.73**	**300**	*e*P	**P**	**21 52 55.8**	**+1.2**
RDF				AMb	AMB	21 53 05.6	
	comp=Z,67nm,1.2s,mb5.3						
NAY	**Al-Naaiem**	**27.09**	**301**	*e*P	**P**	**21 52 58.5**	**+0.7**
NAY				AMb	AMB	21 53 03.2	
	comp=Z,20nm,1.3s,mb4.7						
MIB	**Mutribah**	**27.20**	**302**	*e*P	**P**	**21 52 59.3**	**+0.5**
MIB				AMb	AMB	21 53 04.0	
	comp=Z,27nm,0.9s,mb5.0						
KMI	**Kunming**	**27.94**	**69**	P	**P**	**21 53 08.4**	**+2.9**
KMI				pP		21 53 11.4	
KMI				sP	sP	21 53 12.6	+6.8
KMI				PP		21 53 58.4	
KMI				S	**S**	**21 57 52.1**	**+1.7**
KMI				SS		21 59 12.1	
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
KMI				pmax	pmax		
	comp=Z,44nm,3.6s						
KMI				LR	LR		
	comp=N,210nm,16.5s,MS4.0						
KMI				LR	LR		
	comp=E,230nm,16.0s,MS4.0						
KMI				LR	LR		
	comp=Z,250nm,15.6s,MS3.9						
PSI	**Prapat**	**28.54**	**118**	P	**P**	**21 53 13.3**	**+2.4**
	comp=Z,6.9nm,0.5s,mb4.7,baz=140,slow=22,SNR=6.6						
PSI				LR	LR	22 03 32.1	
	comp=Z,188nm,20.6s,MS3.7,baz=310,slow=34						
PSI	**Prapat**	**28.54**	**118**	P	**P**	**21 53 13.3**	**+2.4**
PSI				LR	LR	22 03 32.1	
PSI	**Prapat**	**28.54**	**118**	P	**P**	**21 53 13.3**	**+2.4**
KULM	**Kulim**	**28.82**	**111**	P	**P**	**21 53 18.7**	**+5.2**
	comp=Z,2μmcomp=Z,18nm,1.1s,mb4.8						
WMQ	**Urumqi**	**28.83**	**21**	P	**P**	**21 53 15.0**	**+1.8**
WMQ				sP	sP	21 53 22.0	+8.5
WMQ				PP	PP	21 54 09.0	-9.2
WMQ				S	**S**	**21 58 04.0**	**0.0**
WMQ				sS	sS	21 58 11.0	+6.7
WMQ				SS	SS	21 59 32.0	-34
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.1						
WMQ				LR	LR		
	comp=N,420nm,10.0s,MS4.6						
WMQ				LR	LR		
	comp=E,620nm,10.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,390nm,10.0s,MS4.3						
MKAR	**Makanchi Array**	**30.14**	**12**	P	**P**	**21 53 25.3**	**+0.6**
	comp=Z,6.2nm,0.7s,mb4.6,baz=202,slow=10,SNR=71						
MKAR				LR	LR	22 06 17.5	
	comp=Z,171nm,19.1s,MS3.7,baz=22,slow=38						
MKAR	**Makanchi Array**	**30.14**	**12**	P	**P**	**21 53 25.3**	**+0.5**
CD2	**Chengdu**	**30.30**	**58**	⇓*i*P	**P**	**21 53 27.3**	**+0.9**
CD2				pP		21 53 31.3	
CD2				sP	sP	21 53 34.9	+8.2
CD2				PP	PP	21 54 26.8	-7.9
CD2				S	**S**	**21 58 26.3**	**-1.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.3						
CD2				pmax	pmax		
	comp=Z,100nm,5.4s						
CD2				LR	LR		
	comp=N,390nm,8.4s						
CD2				LR	LR		
	comp=E,260nm,6.0s						
CD2				LR	LR		
	comp=Z,410nm,7.2s						
GTA	**Gaotai**	**31.46**	**40**	*e*P	**P**	**21 53 37.9**	**+1.4**
GTA				pP		21 53 42.3	
GTA				sP	sP	21 53 44.9	+8.0
GTA				S	**S**	**21 58 45.8**	**+0.4**
GTA				SS	SS	22 00 34.8	-25
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
GTA				pmax	pmax		
	comp=Z,100nm,5.0s						
GTA				LR	LR		
	comp=N,640nm,16.1s,MS4.5						
GTA				LR	LR		
	comp=E,520nm,16.6s,MS4.5						
GTA				LR	LR		
	comp=Z,600nm,14.7s,MS4.4						
GYA	**Guiyang**	**31.66**	**68**	P	**P**	**21 53 39.8**	**+1.4**
GYA				PP	PP	21 54 43.8	-6.0
GYA				PcP	PcP	21 56 32.3	+1.7
GYA				S	**S**	**21 58 48.3**	**-0.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,80nm,4.1s						
GYA				LR	LR		
	comp=N,450nm,18.5s,MS4.2						
GYA				LR	LR		
	comp=E,310nm,19.8s,MS4.2						
GYA				LR	LR		
	comp=Z,430nm,17.3s,MS4.2						
LZH	**Lanzhou**	**32.41**	**49**	*e*P	**P**	**21 53 46.4**	**+1.4**
LZH				pP		21 53 51.3	
LZH				sP	sP	21 53 54.4	+9.1
LZH				PP	PP	21 54 54.1	-4.0
LZH				PcP	PcP	21 56 32.5	0.0
LZH				*e*S	**S**	**21 59 00.5**	**+0.1**
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,57nm,4.0s						
LZH				LR	LR		
	comp=N,370nm,11.9s						
LZH				LR	LR		
	comp=E,420nm,8.9s						
LZH				LR	LR		
	comp=Z,570nm,12.8s,MS4.5						
KURK	**Kurchatov**	**33.47**	**5**	*e*P	**P**	**21 53 54.5**	**+0.6**
	comp=Z,43nm,0.8s,mb5.4						
KURK	**Kurchatov**	**33.47**	**5**	*d*iP	**P**	**21 53 55.0**	**+1.0**
KURK				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.5						
KURK				MLR	MLR		
	comp=Z,370nm,20.0s,MS4.1						
KURK	**Kurchatov**	**33.47**	**5**	P	**P**	**21 53 55.4**	**+1.5**
	SNR=16						
GNI	**Garni**	**33.90**	**318**	*e*P	**P**	**21 54 00.4**	**+2.5**
	comp=Z,11nm,1.0s,mb4.7						
GNI	**Garni**	**33.90**	**

comp=Z,15nm,1.1s,mb4.6
MALT Malatya 37.32 311 *e*P **P 21 54 29.1 +1.8**
comp=Z,4.7nm,1.2s,mb4.1
MALT Malatya 37.32 311 *e*P **P 21 54 29.1 +1.8**
MALT pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
MALT Malatya 37.32 311 P **P 21 54 29.7 +2.4**
comp=Z,4.5nm,1.3s,mb4.0
ZAA0 Zalesovo Array 37.47 11 *e*P **P 21 54 28.6 +0.3**
ZALV Zalesovo Beam 37.47 11 P **P 21 54 28.9 +0.5**
comp=Z,21nm,0.6s,mb5.0,baz=198,slow=8.6,SNR=99
ZALV LR LR 22 11 06.2
comp=Z,86nm,19.6s,MS3.6,baz=204,slow=38
ZALV Zalesovo Beam 37.47 11 P **P 21 54 28.9 +0.6**
NVS Novosibirsk 38.07 9⇓*i*P **P 21 54 33.7 +0.3**
NVS pmax pmax
comp=Z,36nm,1.5s,mb4.9
NVS pmax pmax
comp=N,30nm,1.7s
WHN Wuhan 39.03 63 P **P 21 54 42.3 +0.4**
HHC Hu-ho-hao-te 39.94 46 *e*P **P 21 54 50.8 +1.5**
HHC pP 21 54 55.3
HHC sP sP 21 54 57.8 +8.2
HHC PP PP 21 56 26.9 +5.9
HHC PcP PcP 21 56 54.8 0.0
HHC ScP ScP 22 00 42.9 -2.3
HHC S **S 22 00 56.8 +1.4**
HHC sS sS 22 01 04.4 +8.6
HHC SS SS 22 03 48.9 -2.9
HHC ScS ScS 22 04 55.6 -2.5
HHC pmax pmax
comp=Z,17nm,1.2s,mb4.5
HHC pmax pmax
comp=Z,68nm,6.8s
HHC LR LR
comp=N,410nm,11.3s,MS4.6
HHC LR LR
comp=E,270nm,12.2s,MS4.6
HHC LR LR
comp=Z,440nm,12.6s,MS4.5
SONM Songino Array 40.37 34 P **P 21 54 55.0 +2.3**
comp=Z,13nm,0.8s,mb4.6,baz=226,slow=8.8,SNR=85
SONM LR LR 22 12 48.4
comp=Z,176nm,20.5s,MS3.9,baz=234,slow=38
SONM Songino Array 40.37 34 P **P 21 54 55.0 +2.3**
ZAK Zakamensk 40.47 29⇓*i*P **P 21 54 54.9 +1.3**
ZAK pmax pmax
comp=Z,4.0nm,1.3s,mb3.9
KMBO Kilima Mbogo 40.50 247 *e*P **P 21 54 54.4 +0.1**
comp=Z,5.4nm,1.2s,mb4.0
KMBO Kilima Mbogo 40.50 247 *e*P **P 21 54 54.4 +0.1**
KMBO pmax pmax
comp=Z,5.0nm,1.2s
SVE Sverdlovsk 40.62 349⇑*e*P **P 21 54 55.3 +0.6**
SVE pmax pmax
comp=Z,23nm,0.9s,mb4.9
SVE MLR MLR
comp=Z,328nm,14.0s,MS4.3
ARU Arti 40.66 347 *e*P **P 21 54 55.6 +0.5**
comp=Z,30nm,0.8s,mb5.1
ARU Arti 40.66 347*d i*P **P 21 54 56.0 +1.0**
ARU *e* 21 56 29.2
ARU *e*PPP 21 56 56.3
ARU S **S 22 01 08.3 +2.5**
ARU pmax pmax
comp=Z,28nm,0.7s,mb5.1
ARU MLR MLR
comp=Z,279nm,18.0s,MS4.2
ARU Arti 40.66 347 P **P 21 54 56.4 +1.4**
comp=Z,258nm,0.6s,mb6.1,SNR=20
ULN Ulaanbaatar 40.74 34 *e*P **P 21 54 57.1 +1.3**
comp=Z,13nm,0.9s,mb4.7
ULN Ulaanbaatar 40.74 34 *e*P **P 21 54 57.1 +1.3**
ULN pmax pmax
comp=Z,13nm,0.9s,mb4.7
ULN Ulaanbaatar 40.74 34 P **P 21 54 57.5 +1.7**
comp=Z,16nm,1.1s,mb4.7
ULN Ulaanbaatar 40.74 34 P **P 21 54 57.9 +2.1**
SNR=6.8
ANN Anapa 40.94 320 *e*P **P 21 54 40.5 -17**
ANN *e* 21 54 53.9
ANN *e* 21 56 42.4
ANN pmax pmax
comp=Z,23nm,1.1s,mb4.8
BRTR Keskin Array B 41.30 311 P **P 21 55 01.7 +1.1**
comp=Z,2.6nm,0.8s,mb4.0,baz=125,slow=8.6,SNR=13
BRTR PcP PcP 21 56 59.1 -0.1
comp=Z,2.2nm,0.6s,baz=144,slow=5.4,SNR=5.5
BRTR Keskin Array B 41.30 311 *i* P **P 21 55 01.7 +1.1**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BJI Beijing 42.90 49 P **P 21 55 15.3 +1.6**
BJI pP 21 55 17.6
BJI sP sP 21 55 18.6 +4.6
BJI PP PP 21 56 52.9 -0.2
BJI PcP PcP 21 57 04.5 -0.1
BJI S **S 22 01 37.0 -2.5**
BJI pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
BJI LR LR
comp=N,370nm,10.3s,MS4.7
BJI LR LR
comp=E,310nm,10.3s,MS4.7
BJI LR LR
comp=Z,74nm,16.2s
NJ2 Nanjing 43.08 61 *e*P **P 21 55 16.9 +1.7**
NJ2 pmax pmax
comp=Z,50nm,1.0s,mb5.2
VSR Storozhevoye 43.57 329 *e*P **P 21 55 19.0 +0.2**
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
SOKR Solikamsk 43.93 348*d i*P **P 21 55 23.2 +1.6**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.1
SOKR MLR MLR
comp=Z,270nm,19.0s,MS4.2
MYLDM Lahad Datu 45.29 100 P **P 21 55 37.0 +3.8**
comp=Z,45nm,0.9s,mb5.4
MOS Moscow 47.12 333 *e*P **P 21 55 47.1 +0.1**
MOS pmax pmax
comp=Z,88nm,1.2s,mb5.8
OBN Obninsk 47.20 332 *e*P **P 21 55 48.0 +0.4**
comp=Z,17nm,0.8s,mb5.2
OBN Obninsk 47.20 332⇑*e*P **P 21 55 47.7 +0.1**
OBN *e* 21 57 40.7
OBN *i* S **S 22 02 38.8 -2.4**
OBN pmax pmax
comp=Z,47nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.1
PRGR Permogore 48.50 342⇓*i*P **P 21 55 56.7 -0.9**
PRGR pmax pmax
comp=Z,44nm,0.7s,mb5.6
AKASG Malin Array Be 48.61 323 P **P 21 55 58.2 -0.4**
comp=Z,3.3nm,0.7s,mb4.5,baz=117,slow=6.5,SNR=10
AKASG Malin Array Be 48.61 323 P **P 21 55 58.2 -0.4**
AKASG Malin Array Be 48.61 323 *i* P **P 21 55 58.2 -0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
KIEV Kiev 48.62 323 *e*P **P 21 55 58.4 -0.2**
comp=Z,12nm,1.2s,mb4.8
KIEV Kiev 48.62 323 *e*P **P 21 55 58.4 -0.2**
KIEV pmax pmax
comp=Z,12nm,1.2s,mb4.8
BUR08 Bucovina Ar. S 49.82 318 *e*P **P 21 56 08.3 +0.4**
KLMR Klimovskoe 49.84 339*d i*P **P 21 56 08.1 +0.2**
KLMR pmax pmax
comp=Z,40nm,0.9s,mb5.3
KLMR pmax pmax
comp=Z,70nm,6.9s
KLMR MLR MLR
comp=Z,190nm,18.0s,MS4.1
BOD Bodaibo 50.09 27 *e*P **P 21 56 10.4 +0.6**
BOD pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MRSI Marisa 50.17 104 P **P 21 56 12.0 +0.9**
KAPI Kappang 50.47 112 *e*P **P 21 56 13.1 -0.2**
CN2 Changchun 50.61 47 ⇓P **P 21 56 15.0 +1.0**
CN2 *e*pP 21 56 19.0
CN2 *e*S **S 22 03 28.4 -1.3**
CN2 pmax pmax
comp=Z,50nm,0.7s,mb5.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,14.0s,MS4.5
CN2 LR LR
comp=E,300nm,14.0s,MS4.5
CN2 LR LR
comp=Z,300nm,16.0s,MS4.4
KSRS Korea Array 51.25 56 P **P 21 56 18.9 0.0**
comp=Z,5.5nm,0.8s,mb4.5,baz=257,slow=8.0,SNR=21
KWP Kalwaria Pacla 52.05 320 *e*P **P 21 56 24.8 +0.1**
KWP Kalwaria Pacla 52.05 320 *e*P **P 21 56 24.5 -0.2**
comp=Z,15nm,1.0s,mb4.9
KWP Kalwaria Pacla 52.05 320 *e*P **P 21 56 24.8 +0.1**
KOLS Kolonicke sedl 52.09 319 *e*P **P 21 56 25.8 +0.8**
comp=Z,6.0nm,0.8s,mb4.6
KOLS Kolonicke sedl 52.09 319 *e*P **P 21 56 25.8 +0.8**
KOLS pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CRVS Cervenica-Dubn 52.59 319 *e*P **P 21 56 28.2 -0.5**
CRVS Cervenica-Dubn 52.59 319 *e*P **P 21 56 28.2 -0.5**
KECS Kecovo 53.09 318 *e*P **P 21 56 32.8 +0.4**
comp=Z,4.4nm,0.9s,mb4.4
KECS Kecovo 53.09 318 *e*P **P 21 56 32.8 +0.4**
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
PSZ Piszkesteto 53.31 317 *e*P **P 21 56 33.4 -0.7**
comp=Z,2.8nm,0.8s,mb4.2
PSZ Piszkesteto 53.31 317 *e*P **P 21 56 33.4 -0.7**
PSZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
SUW Suwalki 53.36 325 *e*P **P 21 56 33.5 -0.8**
SUW Suwalki 53.36 325 *e*P **P 21 56 33.6 -0.7**
comp=Z,24nm,0.9s,mb5.1
SUW Suwalki 53.36 325 *e*P **P 21 56 33.6 -0.7**
NIE Niedzica 53.47 319 *e*P **P 21 56 36.3 +1.1**
MDJ Mudanjiang 53.70 47 P **P 21 56 37.5 +0.5**
MDJ pP 21 56 40.8
MDJ sP sP 21 56 41.9 +4.6
MDJ PcP PcP 21 57 43.3 +0.1
MDJ PP PP 21 58 38.3 +0.6
MDJ PcS PcS 22 01 42.4 +0.2
MDJ S **S 22 04 11.9 -0.1**
MDJ ScS ScS 22 06 26.8 -1.0
MDJ SS SS 22 07 53.6 +1.1
MDJ pmax pmax
comp=Z,13nm,0.8s,mb5.0
MDJ pmax pmax
comp=Z,57nm,4.6s
MDJ LR LR
comp=N,120nm,14.9s,MS4.2
MDJ LR LR
comp=E,100nm,15.6s,MS4.2
MDJ LR LR
comp=Z,130nm,11.7s,MS4.2
MDJ Mudanjiang 53.70 47 *e*P **P 21 56 37.8 +0.8**
comp=Z,16nm,0.9s,mb5.1
OJC Ojcow 54.02 320 *e*P **P 21 56 39.2 0.0**
OJC Ojcow 54.02 320 *e*P **P 21 56 39.2 0.0**
comp=Z,8.8nm,0.8s,mb4.8
OJC Ojcow 54.02 320 *e*P **P 21 56 39.3 +0.1**
OJC pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
JOF Joensuu 54.13 338 *e*P **P 21 56 39.6 -0.2**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
JOF Joensuu 54.13 338 *e*p **P 21 56 39.6 -0.2**
comp=Z,2.5nm,0.4s,mb4.6
VYHS Vyhne 54.15 318 *e*P **P 21 56 39.6 -0.6**
comp=Z,2.5nm,0.7s,mb4.3
VYHS Vyhne 54.15 318 *e*P **P 21 56 39.6 -0.6**
VYHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
CLNS Chul'man 54.67 32 *e*P **P 21 56 42.3 -1.6**
CLNS pmax pmax
comp=N,13nm,1.4s
CLNS pmax pmax
comp=Z,11nm,1.0s,mb4.8
CLNS MLR MLR
comp=Z,122nm,15.0s,MS4.1
CLNS MLR MLR
comp=N,205nm,15.0s
ZST Bratislava 55.19 317 *e*P **P 21 56 47.3 -0.5**
comp=N,7.0nm,0.7s,mb4.8
ZST Bratislava 55.19 317 *e*P **P 21 56 47.3 -0.5**
ZST pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
MORC Moravsky Berou 55.30 319 *e*P **P 21 56 47.7 -0.8**
comp=Z,4.6nm,0.6s,mb4.7
MORC Moravsky Berou 55.30 319 *e*P **P 21 56 47.7 -0.8**
MORC pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
FINES FINESS Array B 55.34 334 P **P 21 56 48.5 -0.2**
comp=Z,10nm,0.7s,mb4.9,baz=113,slow=9.1,SNR=23
FINES LR LR 22 23 02.8
comp=Z,168nm,18.1s,MS4.2,baz=310,slow=39
FINES FINESS Array B 55.34 334 P **P 21 56 48.5 -0.1**
LSZ Lusaka 55.52 237 *e*P **P 21 56 50.9 +0.4**
comp=Z,9.1nm,0.8s,mb4.9
LSZ Lusaka 55.52 237 *e*P **P 21 56 50.9 +0.3**
LSZ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KAF Kangasniemi 55.60 335 *e*P **P 21 56 49.4 -1.0**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 55.60 335 *e*p **P 21 56 49.4 -1.0**
comp=Z,2.4nm,0.4s,mb4.6
ARSA Arzberg 56.03 316⇑*i*P **P 21 56 53.7 -0.1**
comp=Z,5.5nm,0.8s,mb4.7
KLR Kul'dur 56.14 42 *e*P **P 21 56 50.3 -4.3**
PERS Pernice 56.19 315 *i* P **P 21 56 54.1 -0.9**
DPC Dobruska-Polom 56.20 319 *e*P **P 21 56 54.8 -0.2**
comp=Z,5.3nm,0.6s,mb4.8
DPC Dobruska-Polom 56.20 319 *e*P **P 21 56 54.9 -0.1**
DPC Dobruska-Polom 56.20 319 *e*P **P 21 56 54.9 -0.1**
SOKA Soboth 56.25 315⇓*i*P **P 21 56 54.7 -0.7**
comp=Z,7.3nm,1.3s,mb4.6
LVZ Lovozero 56.30 343*d i*P **P 21 56 55.3 -0.1**
LVZ pmax pmax
comp=Z,18nm,1.2s,mb5.0
LVZ MLR MLR
comp=Z,134nm,16.0s,MS4.1
APA Apatity 56.43 343⇑*i*P **P 21 56 56.7 +0.4**
APA *i* 21 57 03.4
APA pmax pmax
comp=Z,22nm,0.7s,mb5.3
APA MLR MLR
comp=Z,300nm,17.0s,MS4.5
UPC Upice 56.43 320 *e*P **P 21 56 56.6 0.0**
UPC Upice 56.43 320 *e*P **P 21 56 56.6 0.0**
TREC Trest 56.48 318 *e*P **P 21 56 56.5 -0.5**
TREC Trest 56.48 318 *e*P **P 21 56 56.5 -0.5**
MOA Molln 56.98 316⇑*i*P **P 21 56 59.0 -1.6**
comp=Z,5.4nm,0.8s,mb4.6
PRU Pruhonice 57.23 319 *e*P **P 21 57 02.1 -0.2**
PRU Pruhonice 57.23 319 *e*P **P 21 57 02.1 -0.2**
PVCC Panska Ves 57.34 319 *e*P **P 21 57 00.8 -2.2**
PVCC Panska Ves 57.34 319 *e*P **P 21 57 00.8 -2.2**
GEC2 GERESS Array S 57.54 317 *e*P **P 21 57 03.7 -0.8**
comp=Z,5.0nm,0.7s,mb4.7
GEC2 GERESS Array S 57.54 317 *e*P **P 21 57 03.7 -0.8**
GEC2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
GERES GERESS Array B 57.54 317 P **P 21 57 03.6 -0.9**
comp=Z,3.3nm,0.7s,mb4.5,baz=106,slow=7.1,SNR=35
GERES PcP PcP 21 57 57.9 -0.2
comp=Z,1.5nm,0.8s,baz=97,slow=6.9,SNR=3.7
GERES GERESS Array B 57.54 317 P **P 21 57 03.6 -0.9**
GERES 21 57 57.9
KHC Kasperske Hory 57.67 318 *e*P **P 21 57 04.2 -1.3**
BRG Berggiesshubel 57.80 320 *e*P **P 21 57 06.5 +0.2**
comp=Z,12nm,0.7s,mb5.0
BRG Berggiesshubel 57.80 320⇓*i*P **P 21 57 06.5 +0.2**
BRG comp=Z,12nm,0.7s,mb5.0 *i* 21 57 18.7
comp=Z,8.2nm,0.8s
FBE Freiberg 58.17 320 *e*P **P 21 57 09.4 +0.5**
comp=Z,12nm,0.8s,mb5.0
CLL Collm 58.47 320 *e*P **P 21 57 10.6 -0.4**
comp=Z,12nm,1.1s,mb4.8
CLL Collm 58.47 320⇓*i*P **P 21 57 10.2 -0.8**
comp=Z,12nm,1.1s,mb4.8
CLL *e*PcP PcP 21 58 01.0 -0.6
CLL Collm 58.47 320⇓*i*P **P 21 57 10.2 -0.8**
CLL *e* 21 58 01.0
CLL pmax pmax
comp=Z,18nm,1.1s,mb5.0
CLL Collm 58.47 320⇓*i*P **P 21 57 10.2 -0.8**
comp=Z,12nm,1.1s,mb4.8
CLL *e* 21 57 22.0
CLL *e*PcP PcP 21 58 01.0 -0.6
CLL *e*SSS 22 12 06.0
CLL LmH 22 26 00.0
comp=Z,100nm,18.2s
ROTZ Rotzenmuhle 58.67 318 *e*P **P 21 57 12.4 0.0**
comp=Z,6.0nm,0.8s,mb4.7
MBWA Marble Bar 59.06 129 *e*P **P 21 57 14.6 -0.9**
comp=Z,14nm,1.0s,mb5.0
VLC Villacollemand 59.14 311 P **P 21 57 12.1 -3.7**
MOX Moxa 59.20 319 *e*P **P 21 57 16.1 0.0**
comp=Z,10.0nm,0.8s,mb4.9
MOX Moxa 59.20 319 *e*P **P 21 57 16.1 0.0**
MOX pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
FETA Feichten 59.22 315⇑*i*P **P 21 57 15.1 -1.2**
comp=Z,10nm,1.3s,mb4.7
GRA1 Grafenberg Arr 59.29 318 *e*P **P 21 57 16.5 -0.2**
comp=Z,16nm,1.1s,mb5.0
GRF Grafenberg Arr 59.29 318 *e*P **P 21 57 16.5 -0.2**
comp=Z,16nm,1.1s,mb5.0
GRF *e*L 22 23 52.1
comp=Z,46nm,18.6s
GRF Grafenberg Arr 59.29 318 *e*P **P 21 57 16.5 -0.2**
GRF pmax pmax
comp=Z,16nm,1.1s,mb5.0
GRF Grafenberg Arr 59.29 318 *e*P **P 21 57 16.5 -0.2**
GRF pmax pmax
comp=Z,16nm,1.1s,mb5.0
MAJO Matsushiro 59.39 57 *e*P **P 21 57 17.1 -0.6**
MAJO Matsushiro 59.39 57 *e*P **P 21 57 17.1 -0.6**
MJAR Matsushiro Arr 59.40 57 P **P 21 57 17.9 +0.2**
comp=Z,2.7nm,0.6s,mb4.5,baz=263,slow=9.2,SNR=12
MJAR PcP PcP 21 58 05.7 0.0
comp=Z,0.9nm,0.6s,baz=249,slow=7.6,SNR=4.4
MJAR LR LR 22 25 58.0
comp=Z,64nm,19.7s,MS3.8,baz=260,slow=39
MJAR Matsushiro Arr 59.40 57 P **P 21 57 17.9 +0.2**
MJAR 21 58 05.7
KEST Kesra 59.55 302 P **P 21 57 19.7 +0.9**
comp=Z,4.5nm,0.7s,mb4.6,baz=35,slow=2.0,SNR=16
VSL Villasalto 59.59 306 *e*P **P 21 57 18.6 -0.3**
KEV Kevo 59.63 343 *e*P **P 21 57 19.2 +0.5**
comp=Z,66nm,0.9s,mb5.7
KEV Kevo 59.63 343 *e*P **P 21 57 18.3 -0.4**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KEV Kevo 59.63 343 *e*p **P 21 57 18.3 -0.4**
comp=Z,0.7nm,0.3s,mb4.2
DAVA Damuels 59.83 315⇓*i*P **P 21 57 19.0 -1.5**
comp=Z,11nm,1.2s,mb4.8
ARCES ARCESS Array B 59.93 342 P **P 21 57 21.2 +0.5**
comp=Z,19nm,0.7s,mb5.3,baz=128,slow=6.9,SNR=140
ARCES LR LR 22 27 56.8
comp=Z,69nm,18.9s,MS3.8,baz=334,slow=41
ARCES ARCESS Array B 59.93 342 P **P 21 57 21.2 +0.4**
CLZ Clausthal 60.18 320 *e*P **P 21 57 22.9 +0.1**
comp=Z,13nm,1.4s,mb4.8
CLZ Clausthal 60.18 320 *e*P **P 21 57 22.9 +0.1**
CLZ pmax pmax
comp=Z,13nm,1.4s,mb4.8
NRDL Niedersach Rie 60.46 321 *e*P **P 21 57 24.6 -0.1**
comp=Z,17nm,1.6s,mb4.8
NB2 NORSAR Subarra 61.78 331 P **P 21 57 32.1 -1.4**
comp=Z,11nm,0.8s,mb5.1,baz=107,slow=6.9
NOA NORSAR Array B 61.78 331 P **P 21 57 32.3 -1.2**
comp=Z,7.5nm,0.8s,mb5.0,baz=106,slow=6.9,SNR=34
NOA LR LR 22 29 06.5
comp=Z,172nm,18.8s,MS4.2,baz=95,slow=41
NOA NORSAR Array B 61.78 331 P **P 21 57 32.3 -1.2**
BNI Bardonecchia 61.85 312 *e*P **P 21 57 32.3 -2.0**
comp=Z,6.7nm,0.7s,mb5.0
BNI Bardonecchia 61.85 312 *e*P **P 21 57 32.3 -2.0**
BNI pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
MEM Membach 62.74 318 P **P 21 57 40.3 +0.2**
comp=Z,8.9nm,1.5s,mb4.7
TIXI Tiksi 62.92 17 *e*P **P 21 57 41.0 0.0**
TIXI pmax pmax
comp=Z,29nm,1.3s,mb5.2
TIXI MLR MLR
comp=Z,246nm,16.0s,MS4.5
YSS Yuzh-Sakhalins 63.13 46 *e*P **P 21 57 42.3 -0.5**
YSS Yuzh-Sakhalins 63.13 46 *e*P **P 21 57 42.3 -0.5**
BCLA Clavier 63.16 318 P **P 21 57 42.3 -0.7**
comp=Z,9.6nm,2.6s,mb4.5
CBIJ Chichi jima 63.31 68 LR LR 22 26 57.0
comp=Z,63nm,19.5s,MS3.8,baz=214,slow=38
CFON Fontmartina 64.88 308 P **P 21 57 55.1 +0.6**
comp=Z,38nm,1.5s,mb5.4
NWAO Narrogin (SRO) 64.96 140 P **P 21 57 54.2 -0.8**
comp=Z,10nm,0.7s,mb5.2
NWAO Narrogin (SRO) 64.96 140 P **P 21 57 54.2 -0.8**
NWAO pmax pmax
comp=Z,11nm,0.7s
CLLI Llivia 65.21 309 P **P 21 57 56.1 -0.5**
YUK Yuzh-Kuril'sk 65.25 49⇑*i*P **P 21 58 01.9 +5.1**
YUK *i* 22 00 27.4
YUK *e*S S 22 06 40.7 -0.6
YUK pmax pmax
comp=N,303nm,1.1s
YUK pmax pmax
comp=Z,682nm,1.1s
YUK pmax pmax
comp=E,163nm,0.8s
YUK MLR MLR
comp=N,176nm,14.5s,MS4.8
YUK MLR MLR
comp=E,387nm,14.5s,MS4.8
YUK MLR MLR
comp=Z,89nm,14.5s,MS4.1
EMIR Miracle 65.56 309 P **P 21 57 58.2 -0.6**
comp=Z,49nm,1.0s,mb5.7
BOSA Boshof 65.57 226 P **P 21 58 01.3 +2.3**
comp=Z,9.8nm,0.6s,mb5.2,baz=48,slow=7.9,SNR=25
BOSA Boshof 65.57 226 P **P 21 58 01.3 +2.3**
CSOR Sort 65.84 309 P **P 21 57 60.0 -0.7**
comp=Z,11nm,0.7s,mb5.2
ERTA Horta de San J 66.50 308 P **P 21 58 04.0 -0.9**
comp=Z,42nm,1.4s,mb5.5
EBIE Bielsa 66.56 310 P **P 21 58 04.4 -0.9**
comp=Z,24nm,0.9s,mb5.4
EMOS Mosqueruela 67.14 307 P **P 21 58 09.0 0.0**
comp=Z,55nm,1.1s,mb5.7
GUMO Guam 68.18 82 LR LR 22 30 48.3
comp=Z,34nm,20.5s,MS3.6,baz=272,slow=38
EVIA Vianos 68.85 305 P **P 21 58 19.5 -0.3**
comp=Z,9.5nm,0.9s,mb5.0
EVIA Vianos 68.85 305 P **P 21 58 19.5 -0.3**
EVIA pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
EBER Berja 69.34 303 P **P 21 58 22.2 -0.7**
comp=Z,19nm,0.9s,mb5.3
EQES Quesada 69.38 304 P **P 21 58 22.3 -0.8**
comp=Z,9.5nm,1.2s,mb4.9
TORD Torodi Ar. Bea 69.40 278 P **P 21 58 22.6 -1.1**
comp=Z,2.6nm,0.7s,mb4.6,baz=83,slow=5.1,SNR=15
SEY Seymchan 69.45 29*d i*P **P 21 58 24.2 +1.2**
ESDC Sonseca Array 69.87 307 P **P 21 58 25.1 -1.0**
comp=Z,3.7nm,0.8s,mb4.5,baz=72,slow=5.9,SNR=11
ESDC Sonseca Array 69.87 307 P **P 21 58 25.1 -1.0**
comp=Z,3.2nm,1.1s,mb4.4
EGUA Guajares 69.89 303 P **P 21 58 25.5 -0.8**
comp=Z,106nm,0.8s,mb6.0
EGUA Guajares 69.89 303 P **P 21 58 25.5 -0.8**
EGUA pmax pmax
comp=Z,106nm,0.8s,mb6.0
EBAN Banos Encina 69.90 305 P **P 21 58 25.6 -0.7**
comp=Z,10nm,0.8s,mb5.0
EBAN Banos Encina 69.90 305 P **P 21 58 25.6 -0.8**
EBAN pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
GUD Guadarrama 69.92 308 P **P 21 58 25.9 -0.5**
comp=Z,9.1nm,0.8s,mb5.0
GUD Guadarrama 69.92 308 P **P 21 58 25.9 -0.5**
GUD pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
WRA Warramunga Arr 69.99 119 P **P 21 58 27.2 +0.1**
comp=Z,7.0nm,0.7s,mb4.9,baz=307,slow=5.8,SNR=48
WRA Warramunga Arr 69.99 119 P **P 21 58 27.2 +0.1**
WRA Warramunga Arr 69.99 119 P **P 21 58 27.2 +0.1**
WB2 Warramunga Arr 70.00 119 *e*P **P 21 58 26.7 -0.5**

ELOJ Sierra Loja 70.31 304 P **P 21 58 27.3 -1.6**
comp=Z,0.2nm,0.4s
ELOJ Sierra Loja 70.31 304 P **P 21 58 27.3 -1.6**
EADA Adamuz 70.52 305 P **P 21 58 28.6 -1.6**
comp=Z,55nm,2.0s,mb5.3
EMIJ Mijas 70.88 303 P **P 21 58 29.3 -3.1**
comp=Z,38nm,2.0s,mb5.2
SUR Sutherland 70.90 226 *e*P **P 21 58 31.5 -0.9**
comp=Z,95nm,1.6s,mb5.7
ECAB El Cabril 71.19 305 P **P 21 58 33.0 -1.2**
comp=Z,37nm,1.4s,mb5.3
ASAR Alice Springs 71.41 123 P **P 21 58 35.8 +0.1**
comp=Z,6.6nm,0.9s,mb4.8,baz=304,slow=5.7,SNR=49
ASAR Alice Springs 71.41 123 P **P 21 58 35.8 +0.1**
EPLA Plasencia 71.44 307 P **P 21 58 33.0 -2.8**
comp=Z,26nm,1.4s,mb5.2
EPLA Plasencia 71.44 307 P **P 21 58 33.0 -2.7**
EPLA pmax pmax
comp=Z,26nm,1.4s,mb5.2
ESPR Espera 71.70 304 P **P 21 58 36.2 -1.1**
comp=Z,17nm,1.4s,mb5.0
MVO Moncorvo 72.02 308 *e*P **P 21 58 38.4 -0.7**
comp=Z,16nm,1.2s,mb5.0
MVO Moncorvo 72.02 308 P **P 21 58 37.4 -1.8**
EMIN Mina Concepcio 72.22 305 P **P 21 58 37.7 -2.7**
comp=Z,41nm,1.6s,mb5.3
EBAD Badajoz 72.34 306 P **P 21 58 39.8 -1.4**
comp=Z,54nm,1.6s,mb5.4
PBAR Barrancos 72.44 305 *e*P **P 21 58 41.0 -0.8**
comp=Z,31nm,1.7s,mb5.2
PVRL Vila Real 72.52 309 *e*P **P 21 58 42.8 +0.7**
comp=Z,30nm,1.0s,mb5.4
PMRV Marv??o 72.53 307 *e*P **P 21 58 41.5 -0.8**
comp=Z,15nm,1.3s,mb5.0
PCBR Castelo Branco 72.54 307 *e*P **P 21 58 42.4 +0.1**
comp=Z,24nm,1.1s,mb5.2
PETK Petropavlovsk- 72.61 39 P **P 21 58 42.5 0.0**
comp=Z,2.7nm,0.7s,mb4.5,baz=238,slow=4.6,SNR=3.4
PETK LR LR 22 33 34.5
comp=Z,123nm,19.0s,MS4.2,baz=95,slow=38
PETK Petropavlovsk- 72.61 39 P **P 21 58 42.5 +0.1**
PVIS Viseu 72.73 308 *e*P **P 21 58 43.9 +0.5**
comp=Z,31nm,1.3s,mb5.3
PTOM Tomar 73.28 307 *e*P **P 21 58 47.8 +1.1**
comp=Z,27nm,1.7s,mb5.1
DAG Danmarks Havn 73.78 346 *i*P **P 21 58 49.2 +0.2**
DAG pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
DAG Danmarks Havn 73.78 346 *i*P **P 21 58 49.2 +0.2**
comp=Z,59nm,0.8s,mb5.7
BILL Bilibino 74.92 23 *e*P **P 21 58 56.4 +0.7**
BILL Bilibino 74.92 23⇑*i*P **P 21 58 57.7 +2.0**
BILL *e*S S 22 08 32.4 -1.4
BILL pmax pmax
comp=Z,20nm,1.7s,mb4.9
BILL MLR MLR
comp=Z,300nm,21.0s,MS4.6
KIC Kosan Boka 77.29 273 *e*P **P 21 59 14.4 +4.2**
comp=Z,101nm,1.8s,mb5.7
DBIC Dimbokro 77.31 273 P **P 21 59 11.9 +1.6**
comp=Z,4.7nm,1.0s,mb4.6,baz=139,slow=6.1,SNR=4.0
DBIC Dimbokro 77.31 273 P **P 21 59 12.0 +1.6**
TIC Toumodi 77.48 273 *e*P **P 21 59 09.8 -1.5**
comp=Z,25nm,1.0s,mb5.3
TIC Toumodi 77.48 273 *e*P **P 21 59 09.8 -1.5**
TIC pmax pmax
comp=Z,25nm,1.0s,mb5.3
LIC Lamto 77.60 273 *e*P **P 21 59 13.6 +1.6**
comp=Z,59nm,1.9s,mb5.4
SUMG Summit 79.99 344 *e*P **P 21 59 24.8 +0.8**
comp=Z,7.9nm,0.6s,mb4.8
SUMG Summit 79.99 344 *i*P **P 21 59 25.0 +1.0**
comp=Z,8.7nm,0.7s,mb4.8
CTAO Charters Tower 80.19 115 *e*P **P 21 59 25.8 -0.3**
comp=Z,9.7nm,0.8s,mb4.8
CTAO Charters Tower 80.19 115 *e*P **P 21 59 25.8 -0.2**
CTAO pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CTAO Charters Tower 80.19 115 P **P 21 59 31.3 +5.3**
STKA Stephens Creek 81.26 127 P **P 21 59 31.7 +0.2**
comp=Z,3.3nm,0.9s,mb4.3,baz=231,slow=5.0,SNR=3.3
STKA Stephens Creek 81.26 127 P **P 21 59 31.2 -0.3**
MAW Mawson 85.13 184 *e*P **P 21 59 49.1 -1.5**
MAW Mawson 85.13 184 *e*P **P 21 59 49.1 -1.6**
CASY Casey 87.80 166 *e*P **P 22 00 03.1 -0.7**
comp=Z,1.7nm,0.7s,mb4.5
ILAR Eielson Array 92.39 16 PP PP 22 04 04.8 -0.7
comp=Z,1.9nm,1.0s,baz=316,slow=6.8,SNR=10
ILAR LR LR 22 47 13.2
comp=Z,116nm,20.0s,MS4.3,baz=312,slow=39
EGAK Eagle 93.83 14 *e*P **P 22 00 31.6 -0.5**
comp=Z,4.5nm,0.9s,mb4.8
DAWY Dawson 94.84 14 *e*P **P 22 00 37.1 +0.3**
HLID Hailey 118.88 7 *e*PKPdf PKPdf 22 06 04.0 +0.1
PDAR Pinedale Array 120.07 3 PKP PKPdf 22 06 05.8 -0.4
comp=Z,3.9nm,0.6s,baz=72,slow=2.6,SNR=36
KIPM Iron Peak 120.84 16 *e*PKPdf PKPdf 22 06 07.5 -0.3
NVAR Mina Array Bea 123.32 11 PKP PKPdf 22 06 13.4 +0.8
comp=Z,1.6nm,0.7s,baz=290,slow=1.6,SNR=9.1
CFAA Coronel Fontan 142.93 240 PKP PKPdf 22 06 48.6 -0.8
comp=Z,0.5nm,0.8s,baz=233,slow=2.7,SNR=4.0
LPAZ La Paz 143.66 266 PKP PKPdf 22 06 52.1 +1.1
comp=Z,1.0nm,0.6s,baz=290,slow=2.1,SNR=3.5
LPAZ La Paz 143.66 266 PKIKP PKPdf 22 06 52.1 +1.0
ATAH Atahualpa 151.09 287 PKPbc PKPbc 22 07 10.8 +1.5
comp=Z,4.9nm,0.6s,baz=104,slow=2.3,SNR=4.0
NNA Nana 151.19 277 PKPbc PKPbc 22 07 09.7 +0.2
comp=Z,11nm,0.6s,baz=240,slow=4.8,SNR=4.7

*ISCJB **16** 21:56:38.8±0.2, 20°.41S±0°.03×68°.64W±0°.05, h115km, mb4.7/32, Error ellipse: s-maj=6.6km s-min=4.2km az=7.7*
*NEIC **16** 21:56:40.6±0.3, 20°.39S×68°.62W, mb5.0/23, Error ellipse: s-maj=9.5km s-min=6.4km az=70.0*
*IDC **16** 21:56:41.3±0.5, 20°.23S×68°.70W, h119km±3km, mb4.1/16, mb1 4.2/17, mb1mx4.2/19, mbtmp4.1/17, MS3.6/4, Ms1 3.6/4, ms1mx3.1/24, Error ellipse: s-maj=17.4km s-min=11.8km az=52.0*
*GUC **16** 21:56:42.0±0.7, 20°.87S×68°.61W, h125km, ML4.7*
ISC 16 21:56:40.6±0.2, 20°.45S±0°.03×68°.68W±0°.05, h117km, h117km±.9km; pP-P, n209, σ1§17/81, mb4.7/32, 57C-56D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**2.01**	**210**	*e*P			**Pn**	**21 57 14.1**	**+0.1**
MACH				*i*S			**Sn**	**21 57 38.4**	**-1.1**
TOCH	**Tocopilla**	**2.16**	**221**	*e*P			**Pn**	**21 57 15.3**	**-0.6**
TOCH				*i*S			**Sn**	**21 57 40.8**	**-2.2**
TOCH				AML			AML	21 57 47.3	
	comp=N,5μm,0.3s								
MECH	**Mejillones**	**3.11**	**211**	*e*P			**Pn**	**21 57 27.6**	**-0.7**
MECH				AML			AML	21 58 27.2	
	comp=N,3μm,0.8s								
ANCH	**Antofagasta**	**3.59**	**206**	⇑*i*P			**Pn**	**21 57 33.2**	**-1.4**
ANCH				*i*S			**Sn**	**21 58 11.7**	**-4.8**
ANCH	**Antofagasta**	**3.59**	**206**	⇑*i*P			**Pn**	**21 57 33.2**	**-1.4**
ANCH				*i*S			**Sn**	**21 58 11.7**	**-4.8**
LPAZ	**La Paz**	**4.17**	**7**	P			**Pn**	**21 57 44.7**	**+2.3**
	comp=N,13nm,0.3s,baz=195,slow=5.4,SNR=172								
LPAZ				S			**Sn**	**21 58 28.3**	**-2.0**
	comp=N,3.7nm,0.3s,baz=126,slow=9.0,SNR=3.9								
LPAZ	**La Paz**	**4.17**	**7**	‖*e*Pn			**Pn**	**21 57 44.6**	**+2.3**
LCO	**Las Campanas**	**8.72**	**192**	*e*Pn			**Pn**	**21 58 40.2**	**-3.6**
	comp=N,16nm,0.6s								
LCO							Sn	**22 00 16.4**	**-4.0**
CFAA	**Coronel Fontan**	**11.12**	**178**	P			**Pn**	**21 59 15.8**	**-0.3**
	comp=N,0.1nm,0.3s,baz=359,slow=13,SNR=6.2								
CFAA				S			**Sn**	**22 01 37.6**	**+19**
	baz=205,slow=24,SNR=2.7								
NNA	**Nana**	**11.49**	**316**	P			**Pn**	**21 59 20.7**	**-0.4**
	comp=N,1.5nm,0.3s,baz=198,slow=3.2,SNR=3.2								
NNA				S			**Sn**	**22 01 28.2**	**+0.5**
	comp=N,2.4nm,0.3s,baz=248,slow=19,SNR=3.1								
NNA	**Nana**	**11.49**	**316**	*e*Pn			**Pn**	**21 59 20.7**	**-0.4**
CPUP	**Villa Florida**	**11.96**	**121**	P			**Pn**	**21 59 26.6**	**-0.6**
	comp=N,1.8nm,0.3s,baz=289,slow=12,SNR=82								
CPUP	**Villa Florida**	**11.96**	**121**	*e*Pn			**Pn**	**21 59 26.8**	**-0.4**
	comp=N,199nm,1.4s								
ATAH	**Atahualpa**	**16.24**	**323**	LR			LR	22 07 27.2	
	comp=N,81nm,20.6s,baz=30,slow=40								
TRQA	**Tornquist**	**18.49**	**163**	*e*P			**P**	**22 00 48.3**	**+0.9**
	comp=N,20nm,0.6s								
BDFB	**Brasilia**	**20.22**	**80**	P			**P**	**22 01 06.2**	**-0.3**
	comp=N,23nm,0.7s,baz=253,slow=12,SNR=31								
BDFB				LR			LR	22 10 43.0	
	comp=N,274nm,18.1s,baz=28,slow=42								
PLCA	**Paso Flores**	**20.28**	**184**	P			**P**	**22 01 08.3**	**+1.4**
	comp=N,14nm,0.9s,baz=9.1,slow=12,SNR=22								
ROSC	**El Rosal**	**25.75**	**347**	*e*P			**P**	**22 02 00.2**	**-0.2**
SDV	**Santo Domingo**	**29.21**	**356**	*e*P			**P**	**22 02 30.3**	**-1.1**
RCBR	**Riachuelo**	**34.97**	**70**	P			**P**	**22 03 22.1**	**+0.2**
	comp=N,19nm,1.0s,mb4.9,baz=254,slow=11,SNR=3.7								
RPN	**Rapa Nui**	**37.66**	**252**	P			**P**	**22 03 45.0**	**+0.4**
ICM	**Isla Caja Muer**	**38.16**	**3**	*e*P			**P**	**22 03 48.4**	**-0.3**
ICM				*e*pP			pP	22 04 13.5	-1.4
CRPR	**Cabo Rojo, PR**	**38.24**	**2**	*e*P			**P**	**22 03 47.8**	**-1.7**
	comp=N,17nm,1.0s,mb4.8								
CRPR				*e*pP			pP	22 04 14.9	-0.8
OBIP	**Obispado Ponce**	**38.30**	**3**	*e*P			**P**	**22 03 48.0**	**-1.9**
	comp=N,38nm,0.6s,mb5.4								
OBIP				*e*pP			pP	22 04 15.9	-0.3
CELP	**Cerrillos**	**38.34**	**3**	*e*P			**P**	**22 03 48.5**	**-1.7**
CELP				*e*pP			pP	22 04 16.4	0.0
SJG	**San Juan**	**38.40**	**4**	*e*P			**P**	**22 03 48.5**	**-2.2**
	comp=N,23nm,0.6s,mb5.2								
AOPR	**Arecibo Observ**	**38.60**	**3**	*e*P			**P**	**22 03 50.3**	**-2.0**
	comp=N,11nm,0.7s,mb4.8								
TEIG	**Tepich**	**44.74**	**333**	*e*P			**P**	**22 04 42.5**	**+0.1**
TEIG				*e*pP			pP	22 05 08.3	-0.9
DWPF	**Disney**	**49.82**	**345**	*e*P			**P**	**22 05 21.5**	**-0.2**
DWPF				*e*pP			pP	22 05 48.6	-0.4
SWET	**Sewanee**	**57.73**	**343**	*e*P			**P**	**22 06 18.0**	**-1.2**
SWET				*e*pP			pP	22 06 46.0	-1.2
WVT	**Waverly**	**59.11**	**342**	*e*P			**P**	**22 06 27.3**	**-1.4**
	comp=N,5.7nm,0.6s,mb4.8								
WVT				*e*pP			pP	22 06 55.2	-1.7
628A	**Black Gap, Mar**	**59.59**	**325**	‖pP			pP	22 07 00.2	-0.2
	baz=60								
627A	**Terlingua Ranc**	**59.83**	**325**	‖pP			pP	22 07 01.3	-0.8
	baz=60								
TXAR	**Lajitas Array**	**59.89**	**325**	P			**P**	**22 06 32.7**	**-1.6**
	comp=N,0.8nm,0.9s,mb3.8,baz=138,slow=8.2,SNR=5.9								
TXAR				pP			pP	22 07 01.9	-0.6
	comp=N,1.7nm,0.8s,baz=145,slow=7.9,SNR=9.1								
TXAR	**Lajitas Array**	**59.89**	**325**	P			**P**	**22 06 32.7**	**-1.6**
TXAR				pP			pP	22 07 01.9	-0.6
528A	**Cox Ranch, San**	**60.07**	**326**	⇑pP			pP	22 07 03.0	-0.8
	baz=60								
626A	**Big Bend Ranch**	**60.32**	**324**	‖pP			pP	22 07 05.6	+0.2
	baz=60,SNR=5.9								
527A	**Woodward Ranch**	**60.50**	**325**	⇑pP			pP	22 07 06.3	-0.4
	baz=61,SNR=5.4								
526A	**Mary Lane Ranc**	**60.69**	**325**	‖pP			pP	22 07 07.9	0.0
	baz=61,SNR=6.5								
MCWV	**Mont Chateau**	**60.69**	**350**	*e*P			**P**	**22 06 39.6**	**+0.1**
	comp=N,16nm,0.3s,mb5.5								
427A	**Hayter Ranch,**	**60.94**	**326**	‖pP			pP	22 07 09.0	-0.7
	baz=61								
328A	**Wristen Ranch,**	**61.05**	**327**	‖pP			pP	22 07 09.9	-0.6
	baz=61,SNR=5.3								
426A	**McDonald Obser**	**61.13**	**325**	‖pP			pP	22 07 10.8	-0.2
	baz=61,SNR=6.0								
FVM	**French Village**	**61.61**	**341**	*e*P			**P**	**22 06 44.9**	**-0.8**
	comp=N,13nm,1.0s,mb4.9								
FVM				*e*pP			pP	22 07 13.0	-1.1
326A	**Caldwell Ranch**	**61.61**	**326**	‖pP			pP	22 07 14.3	+0.1
	baz=62								
425A	**Indio Mountain**	**61.74**	**325**	⇑pP			pP	22 07 14.7	-0.4
	baz=62,SNR=8.9								
325A	**Bean Ranch, Si**	**62.18**	**325**	⇑pP			pP	22 07 17.7	-0.5
	baz=62,SNR=11								
226A	**Malaga, Loving**	**62.26**	**326**	⇑pP			pP	22 07 18.9	+0.3
	baz=62,SNR=6.4								
GDL2	**Guadalupe Moun**	**62.51**	**326**	*e*P			**P**	**22 06 56.9**	**+5.1**
GDL2				*e*pP			pP	22 07 19.7	-0.6
324A	**Moseley Ranch,**	**62.51**	**325**	‖pP			pP	22 07 19.2	-1.1
	baz=63,SNR=6.2								
MNTX	**Cornudas Mount**	**62.66**	**325**	‖pP			pP	22 07 20.1	-1.2
	baz=63								
225A	**Deer Hill, Car**	**62.68**	**326**	⇑pP			pP	22 07 20.9	-0.5
	baz=63								
125A	**Gardner Draw,**	**63.02**	**326**	‖pP			pP	22 07 22.6	-1.1
	baz=63								
224A	**Cornudas Mount**	**63.02**	**325**	⇑pP			pP	22 07 22.8	-1.0
	baz=63								
MSTX	**Muleshoe**	**63.11**	**329**	⇑pP			pP	22 07 23.5	-0.8
	baz=63								
SNAA	**Sanae**	**63.20**	**161**	P			**P**	**22 06 57.8**	**+1.9**
	comp=N,1.9nm,0.7s,mb4.1,baz=298,slow=9.6,SNR=10								
SNAA				pP			pP	22 07 27.4	+3.0
	comp=N,2.2nm,0.7s,baz=296,slow=11,SNR=5.8								
124A	**Stringfield Ra**	**63.47**	**326**	⇑pP			pP	22 07 26.3	-0.4
	baz=64								
222A	**Williams Famil**	**63.90**	**324**	⇑pP			pP	22 07 30.4	+0.8
	baz=64								
Z24A	**Sheeppen Canyo**	**63.91**	**326**	⇑pP			pP	22 07 29.4	-0.3
	baz=64								
320A	**Kipp Ranch, An**	**64.13**	**322**	⇑pP			pP	22 07 31.5	+0.4
	baz=64								
Z23A	**Rita Site, Whi**	**64.32**	**325**	⇑pP			pP	22 07 32.4	+0.1
	baz=64								
220A	**Playas Peak, P**	**64.55**	**323**	‖pP			pP	22 07 34.3	+0.4
	baz=65,SNR=9.5								
319A	**Douglas**	**64.59**	**322**	⇑pP			pP	22 07 34.6	+0.5
	baz=65,SNR=5.8								
Z22A	**Elephant Butte**	**64.70**	**325**	⇑pP			pP	22 07 35.0	+0.1
	baz=65,SNR=5.2								
KSU1	**Kansas State U**	**64.75**	**336**	P			**P**	**22 07 06.9**	**+0.5**
	comp=N,27nm,0.7s,mb5.2								
219A	**White Tail Can**	**65.03**	**322**	⇑pP			pP	22 07 37.5	+0.4
	baz=65,SNR=7.5								
318A	**Bisbee**	**65.05**	**322**	‖pP			pP	22 07 37.4	+0.2
	baz=65								
120A	**U Bar Ranch, L**	**65.09**	**323**	⇑pP			pP	22 07 37.9	+0.5
	baz=65								
218A	**Dragoon**	**65.47**	**322**	‖pP			pP	22 07 40.0	+0.1
	baz=66								
Z20A	**Nine Sixteen R**	**65.49**	**324**	‖pP			pP	22 07 40.9	+0.9
	baz=66,SNR=8.2								
V25A	**Rancho No Teng**	**65.51**	**328**	‖pP			pP	22 07 39.7	-0.4
	baz=66								
Y21A	**Point of Rocks**	**65.66**	**325**	‖pP			pP	22 07 41.6	+0.5
	baz=66,SNR=7.1								
217A	**Green Valley**	**65.77**	**321**	‖pP			pP	22 07 42.2	+0.3
	baz=66								
U25A	**Circle Dot Ran**	**65.86**	**329**	⇑pP			pP	22 07 42.4	+0.1
	baz=66								
118A	**Homack Ranch,**	**65.91**	**322**	‖pP			pP	22 07 43.1	+0.3
	baz=66								
Y20A	**Horse Springs,**	**65.97**	**324**	‖pP			pP	22 07 44.1	+1.0
	baz=66								
X21A	**Alamocita Cree**	**66.05**	**325**	⇑pP			pP	22 07 44.3	+0.7
	baz=66								
JFWS	**Jewell Farm**	**66.10**	**343**	*e*P			**P**	**22 07 14.4**	**-0.6**
	comp=N,12nm,0.7s,mb4.8								
JFWS				*e*pP			pP	22 07 43.2	-0.5
117A	**Oracle**	**66.31**	**322**	‖pP			pP	22 07 45.9	+0.5
	baz=66,SNR=7.1								
216A	**Three Points,**	**66.31**	**321**	‖pP			pP	22 07 45.7	+0.3
	baz=66								
Y19A	**Nutrioso**	**66.48**	**324**	‖pP			pP	22 07 47.6	+1.2
	baz=67,SNR=12								
116A	**Eloy**	**66.86**	**321**	⇑P			pP	22 07 49.6	+0.7
	baz=67								
214A	**Organ Pipe Nat**	**67.09**	**320**	‖P			pP	22 07 51.1	+0.7
	baz=67								
Y17A	**Roosevelt**	**67.18**	**323**	⇑P			pP	22 07 51.4	+0.5
	baz=67,SNR=8.3								
115A	**Sonoran Desert**	**67.27**	**321**	⇑P			pP	22 07 52.1	+0.6
	baz=68								
SDCO	**Great Sand Dun**	**67.45**	**329**	*e*P			**P**	**22 07 24.1**	**+0.4**
	comp=N,2.7nm,0.8s,mb4.1								
Y16A	**Circle Bar Ran**	**67.68**	**322**	⇑P			pP	22 07 55.2	+1.2
	baz=68								
114A	**Black Gap (USA**	**67.69**	**321**	⇑P			pP	22 07 55.1	+0.9
	baz=68								
LIC	**Lamto**	**67.89**	**74**	*e*P			**P**	**22 07 26.6**	**-0.5**
	comp=N,38nm,0.8s,mb5.3								
X16A	**Lo Mia Camp, P**	**68.05**	**323**	⇑P			pP	22 07 57.0	+0.6
	baz=68,SNR=7.0								
TIC	**Toromdi**	**68.08**	**74**	*e*P			**P**	**22 07 27.8**	**-0.4**
	comp=N,64nm,1.1s,mb5.4								
KIC	**Kosan Boka**	**68.21**	**74**	*e*P			**P**	**22 07 28.8**	**-0.2**
	comp=N,112nm,0.8s,mb5.7								
Y15A	**Casa Rosa Ranc**	**68.22**	**322**	P			pP	22 07 57.9	+0.3
	baz=68,SNR=7.3								
DBIC	**Dimbokro**	**68.24**	**74**	P			**P**	**22 07 29.1**	**-0.1**
	comp=N,38nm,0.8s,mb5.3,baz=227,slow=6.8,SNR=47								
DBIC				pP			pP	22 07 59.0	+1.0
	comp=N,8.0nm,0.8s,baz=200,slow=5.8,SNR=2.8								
DBIC	**Dimbokro**	**68.24**	**74**	*e*P			**P**	**22 07 29.2**	**0.0**
	comp=N,56nm,1.0s,mb5.3								
DBIC				*e*pP			pP	22 07 58.6	+0.5
X15A	**Humboldt**	**68.55**	**322**	⇑P			pP	22 08 00.1	+0.5
	baz=69,SNR=6.6								
V17A	**Tonalea, Kykot**	**68.56**	**324**	P			pP	22 08 00.4	+0.7
	baz=69,SNR=7.9								
Y14A	**Wickenburg**	**68.61**	**321**	⇑P			pP	22 07 59.7	-0.3
	baz=69,SNR=5.9								
X14A	**Yava**	**68.92**	**322**	⇑P			pP	22 08 02.6	+0.7
	baz=69,SNR=7.5								
T18A	**Mexican Hat**	**69.19**	**326**	‖P			pP	22 08 03.7	+0.1
	baz=69								
V15A	**Kaibab Nationa**	**69.47**	**323**	⇑P			pP	22 08 06.5	+1.1
	baz=70,SNR=9.2								
X13A	**Yucca**	**69.55**	**321**	‖P			pP	22 08 06.5	+0.6
	baz=70,SNR=9.1								
W14A	**Seligman**	**69.56**	**322**	⇑P			pP	22 08 06.6	+0.8
	baz=70,SNR=8.5								
T17A	**Navajo Res., N**	**69.59**	**325**	⇑P			pP	22 08 07.4	+1.4
	baz=70,SNR=5.3								
BC3	**Big Chuckawall**	**69.87**	**320**	⇑P			pP	22 08 08.5	+0.7
	baz=70,SNR=7.8								
V14A	**Boquillas Ranc**	**69.87**	**323**	P			pP	22 08 09.1	+1.3
	baz=70,SNR=9.6								
W13A	**Hualapai Mount**	**69.94**	**322**	‖P			pP	22 08 09.3	+1.1
	baz=70,SNR=7.4								
U15A	**North Rim**	**69.98**	**324**	⇑P			pP	22 08 09.7	+1.2
	baz=70,SNR=9.4								
IRM	**Iron Mountain**	**70.03**	**320**	P			pP	22 08 09.5	+0.7
	baz=70,SNR=8.8								
BELC	**Belle Mtn. Jos**	**70.43**	**320**	‖P			pP	22 08 12.3	+1.0
	baz=71								
PFO	**Pinyon Flat Ob**	**70.45**	**319**	⇑P			pP	22 08 12.5	+1.1
	baz=71								
PFO	**Pinyon Flat Ob**	**70.45**	**319**	P			**P**	**22 07 44.7**	**+2.3**
	comp=N,9.9nm,0.9s,mb4.6								
PFO				*e*pP			pP	22 08 12.3	+0.9
U14A	**Mt Trumbull**	**70.47**	**323**	P			pP	22 08 12.8	+1.3
	baz=71,SNR=10								
V13A	**Grand Canyon W**	**70.53**	**322**	⇑P			pP	22 08 12.9	+1.0
	baz=71								
S16A	**Weppner Ranch,**	**70.55**	**325**	‖P			pP	22 08 12.6	+0.7
	baz=71								
GMRC	**Granite Mounta**	**70.76**	**320**	P			pP	22 08 14.2	+0.9
	baz=71,SNR=8.6								
V12A	**Nelson**	**70.94**	**322**	‖P			pP	22 08 14.9	+0.5
	baz=71,SNR=7.3								
SRU	**San Rafael**	**71.01**	**327**	‖P			pP	22 08 14.9	+0.1
	baz=71								
HEC	**Hector,Ludlow**	**71.20**	**320**	‖P			pP	22 08 16.5	+0.5
	baz=71,SNR=6.5								
U12A	**Valley of Fire**	**71.25**	**322**	P			pP	22 08 17.2	+0.9
	baz=72,SNR=9.2								
P18A	**Preston Nutter**	**71.26**	**327**	‖P			pP	22 08 17.1	+0.8
	baz=72								
T13A	**Saint George**	**71.31**	**323**	⇑P			pP	22 08 17.8	+1.2
	baz=72								
V11A	**Goodsprings**	**71.36**	**321**	‖P			pP	22 08 18.0	+1.0
	baz=72								
CCUT	**Cedar City**	**71.38**	**324**	*e*P			**P**	**22 07 51.0**	**+3.0**
	comp=N,16nm,1.1s,mb4.8								
CCUT				*e*pP			pP	22 08 18.0	+0.9
MSU	**Marysvale**	**71.44**	**325**	*e*P			**P**	**22 07 50.2**	**+2.0**
MSU				*e*pP			pP	22 08 18.5	+1.2
BFSC	**Mount Baldy Ra**	**71.61**	**319**	‖P			pP	22 08 19.4	+0.9
	baz=72								
S13A	**Holt Ranch, En**	**71.68**	**324**	‖P			pP	22 08 19.8	+0.9
	baz=72								
GSC	**Goldstone**	**71.81**	**320**	P			pP	22 08 20.6	+0.9
	baz=72,SNR=5.5								
O17A	**Robinson Place**	**71.93**	**327**	⇑P			pP	22 08 21.0	+0.7
	baz=72								
EDW2	**Edwards Air Fo**	**72.24**	**319**	‖P			pP	22 08 22.6	+0.3
	baz=72								
Q14A	**Sevier Lake (B**	**72.37**	**325**	‖P			pP	22 08 24.2	+1.2
	baz=73								
FURC	**Furnace Creek,**	**72.63**	**321**	P			pP	22 08 25.8	+1.2
	baz=73,SNR=5.5								
P14A	**Drum Mountains**	**72.70**	**326**	‖P			pP	22 08 26.1	+1.2
	baz=73								
MPMC	**Manual Prospec**	**72.73**	**320**	P			pP	22 08 25.7	+0.5
	baz=73,SNR=5.8								
DUG	**Dugway**	**73.00**	**326**	⇑P			pP	22 08 27.6	+0.9
	baz=73								
ISA	**Isabella**	**73.06**	**319**	P			pP	22 08 28.1	+0.9
	baz=73,SNR=9.5								
ISA	**Isabella**	**73.06**	**319**	*e*P			**P**	**22 07 59.6**	**+1.7**
	comp=N,12nm,0.8s,mb4.8								
ISA				*e*pP			pP	22 08 27.7	+0.6
I21A	**Big Trails, Te**	**73.09**	**332**	‖P			pP	22 08 27.1	-0.1
	baz=73								
R11A	**Troy Canyon, C**	**73.19**	**323**	⇑P			pP	22 08 28.9	+1.0
	baz=73								
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F13A	**Darby**	**77.84**	**329**	⇓P	pP	22 08 55.4	+0.8
baz=78							
G12A	**Big Creek, Yel**	**77.85**	**328**	⇑P	pP	22 08 55.2	+0.6
baz=78							
C15A	**Salmond Ranch,**	**78.51**	**331**	⇑P	pP	22 08 58.9	+0.7
baz=79							
D13A	**Huson**	**78.85**	**330**	⇑P	pP	22 09 00.9	+0.7
baz=79							
B15A	**Bradely Ranch,**	**78.89**	**332**	⇓P	pP	22 09 00.4	0.0
baz=79							
E12A	**Beaver Dam Sad**	**78.89**	**329**	⇑P	pP	22 09 00.3	-0.1
baz=79							
A16A	**West Butte Ran**	**78.95**	**333**	⇓P	pP	22 09 01.0	+0.3
baz=79							
K05A	**Summer Lake**	**79.12**	**324**	⇓P	pP	22 09 03.1	+1.4
baz=79							
D12A	**Red Ives Fores**	**79.24**	**330**	⇑P	pP	22 09 02.6	+0.2
baz=80							
I07A	**Izee**	**79.27**	**325**	⇓P	pP	22 09 02.9	+0.4
baz=80							
A13A	**Flathead Natio**	**80.18**	**331**	⇓P	pP	22 09 08.1	+0.7
baz=80							
C11A	**Tepee Creek (N**	**80.24**	**330**	⇓P	pP	22 09 07.8	+0.1
baz=80							
OD2	**Odessa Site #2**	**81.11**	**328**	*e*P	**P**	**22 08 43.3**	**+0.6**
OD2				*e*PcP	PcP	22 08 49.5	+0.8
OD2				*e*pP	pP	22 09 12.3	-0.1
OD2				*e*sP	sP	22 09 26.2	+1.3
FCC	**Fort Churchill**	**81.66**	**347**	P	**P**	**22 08 45.4**	**0.0**
ETW	**Entiat**	**82.06**	**328**	*e*P	**P**	**22 08 48.9**	**+1.2**
comp=N,5.1nm,0.8s,mb4.4							
ETW				*e*pP	pP	22 09 18.0	+0.5
ETW				*e*sP	sP	22 09 31.9	+1.9
BOSA	**Boshof**	**83.75**	**118**	P	**P**	**22 08 58.3**	**+1.2**
comp=N,11nm,1.0s,mb4.6,baz=249,slow=10,SNR=8.4							
BOSA				pP	pP	22 09 29.8	+2.8
comp=N,3.9nm,1.0s,baz=184,slow=4.0,SNR=1.7							
ESDC	**Sonseca Array**	**84.94**	**44**	P	**P**	**22 09 03.5**	**+0.9**
comp=N,4.2nm,0.9s,mb4.4,baz=245,slow=5.6,SNR=15							
ESDC				pP	pP	22 09 34.5	+1.9
comp=N,1.5nm,0.9s,baz=245,slow=5.8,SNR=2.9							
MAW	**Mawson**	**85.27**	**163**	P	**P**	**22 09 05.6**	**+1.7**
comp=N,2.0nm,0.7s,mb4.2,baz=228,slow=7.4,SNR=6.8							
MAW				pP	pP	22 09 36.8	+2.9
comp=N,2.0nm,0.8s,baz=216,slow=1.6,SNR=2.9							
MAW	**Mawson**	**85.27**	**163**	*e*P	**P**	**22 09 05.6**	**+1.6**
comp=N,0.5nm,0.7s							
MAW				pP	pP	22 09 36.1	+2.2
BBB	**Bella Bella**	**88.85**	**328**	LR	LR	22 52 43.1	
comp=N,50nm,19.0s,baz=304,slow=38							
YKA	**Yellowknife Ar**	**90.27**	**341**	P	**P**	**22 09 27.2**	**-0.4**
comp=N,4.5nm,0.8s,mb4.6,baz=134,slow=4.6,SNR=22							
YKA				pP	pP	22 09 57.8	-0.1
comp=N,6.2nm,0.7s,baz=134,slow=4.6,SNR=15							
YKA	**Yellowknife Ar**	**90.27**	**341**	P	**P**	**22 09 27.2**	**-0.4**
YKA				pP	pP	22 09 57.8	-0.1
KEST	**Kesra**	**92.50**	**53**	P	**P**	**22 09 38.5**	**-0.1**
comp=N,1.3nm,0.8s,mb4.3,baz=65,slow=5.8,SNR=4.2							
DLBC	**Dease Lake**	**93.37**	**332**	*e*P	**P**	**22 09 43.0**	**+0.9**
DLBC				*e*pP	pP	22 10 12.9	+0.5
SUMG	**Summit**	**94.99**	**9**	*e*P	**P**	**22 09 49.2**	**-0.1**
ZAA0	**Zalesovo Array**	**140.91**	**25**	*e*PKPdf	PKPdf	22 15 56.6	+0.1
ZAA0				*e*pPKPdf	pPKPdf	22 16 28.0	-0.2
ZAA0				*e*sPKPdf		22 16 40.5	
ZALV	**Zalesovo Beam**	**140.91**	**25**	PKP	PKPdf	22 15 53.9	-2.6
comp=N,1.9nm,0.5s,baz=306,slow=3.5,SNR=5.6							
ZALV				pPKP	pPKPdf	22 16 26.6	-1.5
comp=N,2.3nm,0.8s,baz=298,slow=3.2,SNR=4.5							
AAK	**Ala-Archa**	**142.03**	**46**	PKP	PKPdf	22 16 01.1	+2.2
comp=N,0.9nm,0.3s,baz=266,slow=2.7							
MKAR	**Makanchi Array**	**144.66**	**35**	PKP	PKPdf	22 16 03.2	-0.2
comp=N,6.7nm,0.8s,baz=320,slow=3.6,SNR=54							
WMQ	**Urumqi**	**149.49**	**35**	*e*PKPbc	PKPdf	22 16 06.0	-5.5
MJAR	**Matsushiro Arr**	**151.57**	**310**	pPKPbc	pPKPbc	22 16 52.5	-0.3
comp=N,2.8nm,0.7s,baz=96,slow=1.8,SNR=5.6							
SONM	**Songino Array**	**152.39**	**7**	PKPbc	PKPbc	22 16 23.2	+0.5
comp=N,2.5nm,0.6s,baz=334,slow=1.4,SNR=10							
SONM				PKPab	PKPab	22 16 33.6	+0.4
comp=N,1.1nm,0.7s,baz=336,slow=3.2,SNR=3.7							
SONM				pPKPbc	pPKPbc	22 16 55.1	+0.8
comp=N,1.7nm,0.6s,baz=0.6,slow=0.8,SNR=4.8							
CN2	**Changchun**	**153.89**	**336**	*e*PKPbc	PKPdf	22 16 20.0	+1.8
CN2				*e*PP	PP	22 20 19.0	+5.0
CN2				AMB	AMB		
comp=Z,200nm,8.0s							
HHC	**Hu-ho-hao-te**	**159.66**	**359**	*e*PKP	PKPdf	22 16 27.8	+2.1
HHC				pPKP	pPKPdf	22 16 54.5	-2.9
HHC				sPKP		22 17 05.3	
HHC				PKS		22 19 59.9	
HHC				PP	PP	22 20 50.6	+5.2
HHC				SKS	SKSdf	22 23 21.6	+1.2
HHC				SKKS	SKKSac	22 27 27.1	+3.1
HHC				SS	SS	22 40 46.8	+4.3
HHC				AMB	AMB		
comp=Z,120nm,9.1s							
HHC				LR	LR		
comp=N,85nm,17.8s							
HHC				LR	LR		
comp=E,120nm,19.3s							
HHC				LR	LR		
comp=Z,130nm,19.4s							
LZH	**Lanzhou**	**163.10**	**21**	*e*PKP	PKPdf	22 16 34.5	+5.1
LZH				pPKP	pPKPdf	22 17 02.5	+1.3
LZH				sPKP		22 17 13.0	
CD2	**Chengdu**	**167.56**	**32**	*e*PKP	PKPdf	22 16 32.8	-0.5
CMAR	**Chiang Mai Arr**	**168.16**	**98**	PKPab	PKPab	22 17 43.9	+1.0
comp=Z,1.4nm,0.7s,baz=259,slow=6.8,SNR=9.9							
CMAR				pPKPab	pPKPab	22 18 15.8	+2.5
comp=Z,0.4nm,0.4s,baz=251,slow=5.4,SNR=2.7							
KMI	**Kunming**	**170.82**	**58**	PKP	PKPdf	22 16 36.6	+1.1
GYA	**Guiyang**	**172.65**	**35**	*e*PKP	PKPdf	22 16 35.0	-1.3
GYA				pPKP	pPKPdf	22 17 06.4	-1.8
GYA				sPKP		22 17 20.0	
GYA				PKPab	PKPab	22 18 01.9	-0.4
GYA				PKS		22 20 05.8	
GYA				PP	PP	22 21 53.5	+0.3
GYA				AMB	AMB		
comp=Z,120nm,8.0s							

*IDC **16** 22:05:34.4±0.7, 10.°17S×120.°23E, h0km, mb4.2/10, mb1 4.3/13, mb1mx4.2/19, mbtmp4.2/13, ML4.1/3, MS3.5/6, Ms1 3.6/6, ms1mx3.1/21, Error ellipse: s-maj=32.2km s-min=14.2km az=63.0*

*ISCJB **16** 22:05:38.0±0.6, 10.°43S±0.°04×120.°17E±0.°04, h55km±6km, mb4.6/28, MS3.6/4, Error ellipse: s-maj=7.4km s-min=5.4km az=33.0*

*NEIC **16** 22:05:38.5±0.8, 10.°33S×120.°22E, h37km±8km, mb4.8/19, Error ellipse: s-maj=8.9km s-min=4.8km az=63.0*

*DJA **16** 22:05:40, 10.°43S×120.°21E, h30km, mb5.0/13*

ISC 16 22:05:39.9±0.5, 10.°38S±0.°04×120.°21E±0.°04, h50km±5km, n73, σ1s02/79, mb4.6/28, MS3.6/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.71**	**7**	P	**Pn**	**22 05 51.9**	**-1.9**
BMNI	**Bima**	**2.36**	**320**	P	**Pn**	**22 06 15.4**	**-0.8**
MTNI	**Mataram**	**4.34**	**293**	P	**Pn**	**22 06 45.2**	**+1.8**
MTNI				S	**Sn**	**22 07 48.1**	**+15**
KHKI	**Kahang-Kahang**	**4.96**	**293**	P	**Pn**	**22 06 52.6**	**+0.7**
BKSI	**Bulukumba**	**5.02**	**359**	P	**Pn**	**22 06 54.1**	**+1.4**
KAPI	**Kappang**	**5.35**	**355**	Pn	**Pn**	**22 06 56.5**	**-0.7**
6.1nm,0.3s,baz=153,slow=3.8,SNR=18							
KAPI				Sn	**Sn**	**22 07 54.7**	**-2.8**
9.8nm,0.3s,baz=265,slow=22,SNR=5.2							
KAPI				LR	LR	22 09 18.8	
comp=Z,150nm,20.1s,baz=182,slow=44							
KAPI	**Kappang**	**5.35**	**355**	P	**Pn**	**22 06 57.5**	**+0.3**
0.2nm803nm70nm,0.8s							
BBSI	**Bau Bau**	**5.39**	**26**	P	**Pn**	**22 06 58.3**	**+0.5**
0.6nm2μm162nm,1.1s							
JAGI	**Jajag, Banyuwa**	**6.27**	**287**	P	**Pn**	**22 07 10.8**	**+0.9**
JAGI				S	**Sn**	**22 08 18.7**	**-1.6**
SPSI	**Sidrap Palu**	**6.38**	**356**	P	**Pn**	**22 07 13.7**	**+2.3**
KDI	**Kendari**	**6.81**	**21**	P	**Pn**	**22 07 21.1**	**+3.8**
0.2nm83nm,0.9s							
GMJI	**Gumukmas**	**7.00**	**287**	P	**Pn**	**22 07 19.5**	**-0.3**
0.5nm149nm,1.0s							
PWJI	**Pagerwojo**	**8.62**	**285**	P	**Pn**	**22 07 43.0**	**+0.9**
77nm,0.9s							
PWJI				S	**Sn**	**22 09 17.2**	**-0.9**
77nm,0.9s							
PCJI	**Pacitan**	**9.18**	**283**	P	**Pn**	**22 07 49.5**	**-0.2**
112nm,1.1s							

FITZ	**Fitzroy Crossi**	**9.31**	**146**	Pn	**Pn**	**22 07 50.6**	**-0.9**
2.5nm,0.3s,baz=338,slow=7.7,SNR=40							
FITZ				Sn	**Sn**	**22 09 28.2**	**-6.6**
5.9nm,0.3s,baz=192,slow=19,SNR=9.6							
FITZ				LR	LR	22 12 34.0	
comp=Z,179nm,19.1s,baz=329,slow=44							
FITZ	**Fitzroy Crossi**	**9.31**	**146**	P	**Pn**	**22 07 50.5**	**-1.0**
54nm,0.7s							
LUWI	**Luwuk**	**9.62**	**16**	P	**Pn**	**22 07 59.5**	**+3.8**
UGM	**Wanagama**	**9.87**	**284**	P	**Pn**	**22 07 58.9**	**-0.4**
170nm,1.9s							
KNA	**Kununurra**	**9.90**	**124**	P	**Pn**	**22 07 59.8**	**+0.2**
876nm75nm,0.8s							
MBWA	**Marble Bar**	**10.73**	**182**	*e*Pn	**Pn**	**22 08 10.0**	**-0.9**
MBWA				*e*Sn	**Sn**	**22 10 02.7**	**-7.0**
MRSI	**Marisa**	**10.92**	**9**	P	**Pn**	**22 08 15.3**	**+1.7**
33nm,1.0s							
CISI	**Cisompet, Garu**	**12.56**	**282**	P	**Pn**	**22 08 34.0**	**-2.0**
70nm,0.7s							
KLSI		**16.35**	**289**	P	**Pn**	**22 09 29.4**	**+3.2**
48nm,1.5s							
WRA	**Warramunga Arr**	**16.61**	**127**	Pn	**Pn**	**22 09 28.8**	**-0.7**
0.4nm,0.3s,baz=312,slow=10,SNR=5.7							
WRA				Sn	**Sn**	**22 12 21.2**	**-12**
0.9nm,0.3s,baz=246,slow=23,SNR=5.1							
WRA	**Warramunga Arr**	**16.61**	**127**	Pn	**Pn**	**22 09 28.8**	**-0.7**
WRA				Sn	**Sn**	**22 12 21.2**	**-12**
WB2	**Warramunga Arr**	**16.62**	**127**	*e*Pn	**Pn**	**22 09 27.5**	**-2.0**
WB2				*e*Sn	**Sn**	**22 12 20.2**	**-13**
LWLI	**Liwa**	**16.86**	**287**	P	**Pn**	**22 09 35.8**	**+3.2**
ASAR	**Alice Springs**	**18.58**	**137**	P	**Pn**	**22 09 54.4**	**+0.7**
1.0nm,0.3s,baz=319,slow=12,SNR=66							
ASAR				S	**S**	**22 13 07.8**	**-14**
0.4nm,0.3s,baz=316,slow=24,SNR=14							
KSI	**Kapahiang**	**18.71**	**290**	P	**Pn**	**22 09 56.3**	**+1.1**
NWAO	**Narrogin (SRO)**	**22.61**	**187**	P	**P**	**22 10 38.7**	**+2.3**
14nm,0.8s,mb4.5,baz=51,slow=7.6,SNR=6.6							
NWAO				S	**S**	**22 14 42.5**	**+1.6**
9.3nm,0.7s,baz=226,slow=6.9,SNR=5.8							
NWAO				LR	LR	22 19 44.7	
comp=Z,249nm,21.7s,MS3.6,baz=147,slow=37							
NWAO	**Narrogin (SRO)**	**22.61**	**187**	*e*P	**P**	**22 10 37.3**	**+0.9**
12nm,0.6s,mb4.5							
NWAO				LR	LR	22 19 44.7	
TGY	**Tagaytay City**	**24.33**	**2**	LR	LR	22 20 59.0	
comp=Z,5.7nm,18.8s,baz=42,slow=38							
PSI	**Prapat**	**24.91**	**301**	P	**P**	**22 10 57.6**	**-0.8**
2.4nm,0.4s,mb4.1,baz=186,slow=6.7,SNR=3.9							
CTAO	**Charters Tower**	**26.88**	**114**	P	**P**	**22 11 15.1**	**-1.2**
STKA	**Stephens Creek**	**29.14**	**140**	P	**P**	**22 11 38.8**	**+2.5**
1.9nm,0.5s,mb4.0,baz=307,slow=8.3,SNR=4.7							
STKA				LR	LR	22 23 20.2	
comp=Z,173nm,19.1s,MS3.7,baz=297,slow=36							
STKA	**Stephens Creek**	**29.14**	**140**	*e*P	**P**	**22 11 36.7**	**+0.5**
0.6nm,0.7s							
STKA				LR	LR	22 23 20.2	
QIZ	**Qiongzhong**	**30.95**	**341**	*e*P	**P**	**22 11 52.4**	**0.0**
GUMO	**Guam**	**34.14**	**46**	*e*P	**P**	**22 12 19.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**35.52**	**324**	P	**P**	**22 12 33.2**	**+1.1**
1.7nm,0.6s,mb4.1,baz=153,slow=6.9,SNR=12							
CMAR				LR	LR	22 28 42.9	
comp=Z,119nm,18.4s,MS3.7,baz=160,slow=39							
CHTO	**Chiang Mai**	**35.79**	**324**	*e*P	**P**	**22 12 33.9**	**-0.7**
2.2nm,0.6s,mb4.3							
PALK	**Pallekele**	**43.07**	**292**	*e*P	**P**	**22 13 34.8**	**-0.5**
8.9nm,0.9s,mb4.5							
KSRS	**Korea Array**	**48.12**	**8**	P	**P**	**22 14 14.8**	**0.0**
0.5nm,0.3s,mb4.0,baz=179,slow=8.3,SNR=4.1							
ODAN	**Odare**	**48.84**	**320**	*e*P	**P**	**22 14 20.3**	**-0.2**
41nm,1.0s,mb5.4							
TAPN	**Taplejung**	**48.98**	**321**	*e*P	**P**	**22 14 22.0**	**+0.4**
53nm,1.1s,mb5.5							
MAJO	**Matsushiro**	**49.65**	**19**	*e*P	**P**	**22 14 26.3**	**-0.2**
2.8nm,0.4s,mb4.7							
MJAR	**Matsushiro Arr**	**49.65**	**19**	P	**P**	**22 14 26.4**	**-0.2**
0.6nm,0.4s,mb4.0,baz=190,slow=27,SNR=3.6							
BJT	**Baijiatuan**	**50.28**	**356**	*e*P	**P**	**22 14 31.1**	**-0.1**
7.1nm,0.9s,mb4.7							
GUN	**Gumba**	**50.53**	**320**	*e*P	**P**	**22 14 33.4**	**0.0**
55nm,0.9s,mb5.5							
PKI	**Pulchoki**	**50.60**	**319**	*e*P	**P**	**22 14 33.6**	**-0.3**
19nm,0.7s,mb5.2							
DMN	**Daman**	**50.82**	**319**	*e*P	**P**	**22 14 35.2**	**-0.4**
26nm,1.0s,mb5.1							
KKN	**Kakani**	**50.83**	**319**	*e*P	**P**	**22 14 35.3**	**-0.3**
16nm,0.8s,mb5.0							
GKN	**Gorkha**	**51.39**	**319**	*e*P	**P**	**22 14 39.3**	**-0.5**
21nm,0.7s,mb5.2							
KOLN	**Kolsanda**	**51.91**	**318**	*e*P	**P**	**22 14 43.4**	**-0.4**
16nm,0.8s,mb5.0							
DANN	**Dangsing**	**52.19**	**318**	*e*P	**P**	**22 14 45.4**	**-0.4**
33nm,0.7s,mb5.4							
GTA	**Gaotai**	**53.04**	**340**	*e*P	**P**	**22 14 58.6**	**+6.7**
GTA				pP	pP	22 15 02.9	-2.7
GTA				sP	sP	22 15 05.6	-5.8
GTA				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.1							
MDJ	**Mudanjiang**	**55.39**	**8**	P	**P**	**22 15 08.3**	**-0.5**
CASY	**Casey**	**56.22**	**185**	*e*P	**P**	**22 15 14.6**	**0.0**
comp=Z,1.5nm,0.8s,mb4.1							
ULN	**Ulaanbaatar**	**59.15**	**350**	*e*P	**P**	**22 15 35.4**	**0.0**
comp=Z,3.4nm,1.1s,mb4.3							
SONM	**Songino Array**	**59.24**	**349**	P	**P**	**22 15 35.7**	**-0.2**
comp=Z,2.4nm,0.8s,mb4.3,baz=166,slow=8.1,SNR=18							
KBL	**Kabul**	**65.90**	**315**	*e*P	**P**	**22 16 20.0**	**-0.7**
comp=Z,4.7nm,0.9s,mb4.5							
MKAR	**Makanchi Array**	**66.22**	**333**	P	**P**	**22 16 22.8**	**+0.3**
comp=Z,2.0nm,0.6s,mb4.3,baz=147,slow=7.7,SNR=10							
AAK	**Ala-Archa**	**67.28**	**325**	P	**P**	**22 16 30.0**	**+0.6**
comp=Z,2.2nm,0.7s,mb4.3,baz=147,slow=7.3,SNR=5.8							
AAK	**Ala-Archa**	**67.28**	**325**	*e*P	**P**	**22 16 29.9**	**+0.5**
comp=Z,3.1nm,0.8s,mb4.4							
ZALV	**Zalesovo Beam**	**70.75**	**339**	P	**P**	**22 16 49.8**	**-0.8**
comp=Z,2.6nm,0.6s,mb4.3,baz=153,slow=5.0,SNR=4.2							
KURK	**Kurchatov**	**70.75**	**333**	*e*P	**P**	**22 16 50.3**	**-0.4**
comp=Z,2.4nm,0.7s,mb4.2							
SBA	**Scott Base**	**71.44**	**171**	*e*P	**P**	**22 16 54.8**	**+0.2**
BRVK	**Borovoye**	**76.14**	**332**	*e*P	**P**	**22 17 22.1**	**-0.2**
QSPA	**South Pole Qui**	**79.63**	**180**	*e*P	**P**	**22 17 43.0**	**+1.7**
BRTR	**Keskin Array B**	**93.93**	**309**	LR	LR	23 03 25.7	
comp=Z,21nm,21.0s,MS3.6,baz=1.2,slow=37							
TSUM	**Tsumeb**	**98.32**	**249**	*e*P	**P**	**22 19 14.0**	**+1.1**
TXAR	**Lajitas Array**	**134.95**	**59**	PKP	PKPdf	22 24 56.8	+2.8
comp=Z,0.3nm,0.7s,baz=217,slow=6.1,SNR=3.8							
LPAZ	**La Paz**	**152.25**	**163**	PKPbc	PKPbc	22 25 36.7	+5.6
comp=Z,0.4nm,0.4s,baz=326,slow=13,SNR=2.9							
LPAZ				PKPab	PKPab	22 25 43.2	+2.4
comp=Z,0.6nm,0.6s,baz=244,slow=5.0,SNR=3.7							
LPAZ	**La Paz**	**152.25**	**163**	PKPbc	PKPbc	22 25 36.7	+5.6
LPAZ				PKPab	PKPab	22 25 43.2	+2.4

*ISCJB **16** 22:19:53.0±0.6, 38.°38N±0.°03×21.°89E±0.°03, h14km±5km, Error ellipse: s-maj=5.2km s-min=3.9km az=145.2*

*ATH **16** 22:19:53.2, 38.°36N×21.°94E, h5km±3km, MD2.5/4*

*CSEM **16** 22:19:53.3±0.1, 38.°39N×21.°90E, h7km, ML1.5/4, Error ellipse: s-maj=3.7km s-min=2.9km az=138.0*

*THE **16** 22:19:53.2, 38.°39N×21.°85E, h7km±1km, ML1.5/4, Error ellipse: s-maj=1.8km s-min=0.6km az=343.0*

ISC 16 22:19:54.0±0.6, 38.°38N±0.°03×21.°89E±0.°03, h6km±8km, n26, σ0s77/52, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.05**	**16**	*e*PG	**Pg**	**22 19 55.0**	**-0.5**
EFP				*e*SG	**Sg**	**22 19 56.4**	**-0.1**
EFP	**Efpalio**	**0.05**	**16**	P	**Pg**	**22 19 55.0**	**-0.5**
EFP				S	**Sg**	**22 19 56.1**	**-0.4**
EFP	**Efpalio**	**0.05**	**16**	P	**Pg**	**22 19 55.0**	**-0.5**
EFP				S	**Sg**	**22 19 56.1**	**-0.4**
EFP				*e*Sg	**Sg**	**22 19 56.4**	**-0.1**
UPR	**University Cam**	**0.12**	**220**	*e*PG	**Pg**	**22 19 56.4**	**-0.2**
UPR				*e*SG	**Sg**	**22 19 58.2**	**-0.1**
UPR	**University Cam**	**0.12**	**220**	*e*Pg	**Pg**	**22 19 56.4**	**-0.2**
UPR				*e*Sg	**Sg**	**22 19 58.2**	**-0.1**
TRIZ	**Trizonia**	**0.15**	**95**	P	**Pg**	**22 19 56.9**	**-0.1**
TRIZ				S	**Sg**	**22 19 59.7**	**+0.7**
TRIZ	**Trizonia**	**0.15**	**95**	P	**Pg**	**22 19 56.9**	**-0.1**
TRIZ				S	**Sg**	**22 19 59.7**	**+0.7**
LAKA	**Lakka**	**0.16**	**153**	P	**Pg**	**22 19 57.2**	**0.0**
LAKA	**Lakka**	**0.16**	**153**	P	**Pg**	**22 19 57.2**	**0.0**
KALE	**Kalithea**	**0.20**	**86**	P	**Pg**	**22 19 57.9**	**0.0**
KALE				S	**Sg**	**22 20 01.4**	**+0.8**
KALE	**Kalithea**	**0.20**	**86**	P	**Pg**	**22 19 57.9**	**0.0**
KALE				S	**Sg**	**22 20 01.4**	**+0.8**

RLS	**Riolos of Patr**	**0.46**	**226**	*e*PB	**Pg**	**22 20 02.6**	**-0.3**
RLS				*e*SB	**Sg**	**22 20 09.2**	**+0.3**
RLS	**Riolos of Patr**	**0.46**	**226**	*e*Pb	**Pg**	**22 20 02.6**	**-0.3**
RLS				*e*Sb	**Sg**	**22 20 09.2**	**+0.3**
DSF	**Desfina**	**0.50**	**86**	P	**Pg**	**22 20 03.1**	**-0.6**
DSF				S	**Sg**	**22 20 11.4**	**+1.1**
DSF	**Desfina**	**0.50**	**86**	P	**Pg**	**22 20 03.1**	**-0.6**
DSF				S	**Sg**	**22 20 11.4**	**+1.1**
EVR	**Evrytania**	**0.54**	**353**	*e*PB	**Pg**	**22 20 03.6**	**-0.8**
EVR				*e*SB	**Sg**	**22 20 12.1**	**+0.6**
EVR	**Evrytania**	**0.54**	**353**	*e*Pb	**Pg**	**22 20 03.6**	**-0.8**
EVR				*e*Sb	**Sg**	**22 20 12.1**	**+0.6**
GUR	**Goura**	**0.57**	**141**	*e*PB	**Pg**	**22 20 04.0**	**-0.9**
GUR				*e*SB	**Sg**	**22 20 10.4**	**-1.9**
GUR	**Goura**	**0.57**	**141**	P	**Pg**	**22 20 04.3**	**-0.6**
GUR				S	**Sg**	**22 20 13.3**	**+1.0**
GUR	**Goura**	**0.57**	**141**	*e*Pb	**Pg**	**22 20 04.0**	**-0.9**
GUR	**Goura**	**0.57**	**141**	P	**Pg**	**22 20 04.3**	**-0.6**
GUR				*e*Sb	**Sg**	**22 20 10.4**	**-1.9**
GUR				S	**Sg**	**22 20 13.3**	**+1.0**
AGG	**Agios Georgios**	**0.73**	**28**	*e*PG	**Pg**	**22 20 06.7**	**-1.3**
AGG				*e*SB	**Sg**	**22 20 17.5**	**0.0**
AGG	**Agios Georgios**	**0.73**	**28**	P	**Pg**	**22 20 06.8**	**-1.2**
AGG				S	**Sg**	**22 20 18.3**	**+0.8**
AGG	**Agios Georgios**	**0.73**	**28**	P	**Pg**	**22 20 06.8**	**-1.2**
AGG				*e*Sb	**Sg**	**22 20 17.5**	**0.0**
AGG				S	**Sg**	**22 20 18.3**	**+0.8**
VLS	**Valsamata**	**1.04**	**259**	*e*PG	**Pg**	**22 20 13.6**	**-0.4**
VLS				*e*SB	**Sg**	**22 20 29.4**	**+1.9**
VLS	**Valsamata**	**1.04**	**259**	*e*Pg	**Pg**	**22 20 13.6**	**-0.4**
VLS				*e*Sb	**Sg**	**22 20 29.4**	**+1.9**

*ISCJB **16** 22:20:02.8±0.7, 40.°11N±0.°04×21.°90E±0.°05, h10km, Error ellipse: s-maj=7.1km s-min=4.4km az=137.5*

*CSEM **16** 22:20:03.5, 40.°22N×21.°90E, h19km, MD2.7, After ATH*

*ATH **16** 22:20:03.5, 40.°22N×21.°90E, h19km, MD2.7/3*

*SKO **16** 22:20:05.6, 40.°13N×21.°95E, h5km*

ISC 16 22:20:04.2±0.7, 40.°15N±0.°04×21.°92E±0.°10, h17km±9km, n13, σ0s92/24, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.19**	**324**	*e*PB	**Pg**	**22 20 07.8**	**-1.1**
KZN				*e*SB	**Sg**	**22 20 11.1**	**-1.1**
KZN	**Kozani**	**0.19**	**324**	*e*Pb	**Pg**	**22 20 07.8**	**-1.1**
KZN				*e*Sb	**Sg**	**22 20 11.1**	**-1.1**
LIT	**Litokhoron**	**0.44**	**97**	*e*PB	**Pb**	**22 20 12.9**	**-0.6**
LIT				*e*SB	**Sb**	**22 20 19.9**	**+0.1**
LIT	**Litokhoron**	**0.44**	**97**	*e*Pb	**Pb**	**22 20 12.9**	**-0.6**
LIT				*e*Sb	**Sb**	**22 20 19.9**	**+0.1**
THL	**Klokotos Trika**	**0.59**	**173**	*e*PN	**Pn**	**22 20 16.5**	**-1.3**
THL				*e*SN	**Sg**	**22 20 25.6**	**+1.7**
THL	**Klokotos Trika**	**0.59**	**173**	*e*Pn	**Pn**	**22 20 16.5**	**-1.3**
THL				*e*Sn	**Sg**	**22 20 25.6**	**+1.7**
BIA	**Bitola**	**0.98**	**333**	*e*Pg	**Pg**	**22 20 23.9**	**+0.8**
BIA				*e*Sg	**Sg**	**22 20 37.7**	**+1.7**
BIA				*e*Lg		22 20 41.2	
comp=E,8.3nm,0.4s							
BIA				*e*Lg		22 20 42.6	
comp=N,7.4nm,0.4s							
PLG	**Polygyros**	**1.19**	**79**	*e*PN	**Pn**	**22 20 25.2**	**-0.8**
PLG				*e*SN	**Sn**	**22 20 41.8**	**0.0**
PLG	**Polygyros**	**1.19**	**79**	*e*Pn	**Pn**	**22 20 25.2**	**-0.8**
PLG				*e*Sn	**Sn**	**22 20 41.8**	**0.0**
VAY	**Valandovo**	**1.27**	**23**	*e*Pg	**Pg**	**22

WGK	**Gukeng**	**1.04**	**309**	P	**Pb**	**22 28 12.2**	**+0.1**
	baz=308						
WGK				*e*S	**Sb**	**22 28 26.5**	**+1.0**
	baz=308						
CHY	**Chiayi**	**1.04**	**296**	*e*P	**Pb**	**22 28 11.9**	**-0.3**
	baz=295						
CHY				S	**Sb**	**22 28 25.9**	**+0.1**
	baz=295						
TWD	**Chiawan**	**1.05**	**8**	*e*P	**Pb**	**22 28 11.2**	**-1.2**
	baz=358						
WNT	**Mingjian**	**1.09**	**321**	*i*P	**Pb**	**22 28 13.1**	**0.0**
	baz=320						
WNT				*e*S	**Sb**	**22 28 26.9**	**-0.3**
	baz=320						
TAI1	**Yung-k'ang**	**1.12**	**271**	*e*P	**Pb**	**22 28 14.8**	**+1.3**
	baz=277						
TAI1				*e*S	**Sb**	**22 28 30.5**	**+2.6**
	baz=277						
KAU	**Kaohsiung**	**1.15**	**246**	*e*P	**Pb**	**22 28 15.3**	**+1.4**
	baz=261						
KAU				*e*S	**Sb**	**22 28 33.2**	**+4.5**
	baz=261						
SCLT	**Jiali**	**1.16**	**277**	*e*P	**Pn**	**22 28 14.7**	**+0.6**
	baz=284						
SCLT				*e*S	**Sb**	**22 28 30.6**	**+1.6**
	baz=284						
TWP	**Hsiaoliuchiu**	**1.21**	**236**	*e*P	**Pn**	**22 28 17.7**	**+2.9**
	baz=230						
TWP				*e*S	**Sb**	**22 28 34.8**	**+4.3**
	baz=230						
HEN	**Hengchun**	**1.21**	**213**	*e*P	**Pn**	**22 28 15.3**	**+0.4**
	baz=202						
TSEB	**Hengchuen, Pin**	**1.23**	**204**	*e*P	**Pn**	**22 28 14.7**	**-0.4**
	baz=193						
TSEB				*e*S	**Sb**	**22 28 30.5**	**-0.7**
	baz=193						
TWK1	**Hengchun**	**1.23**	**209**	*e*P	**Pn**	**22 28 13.2**	**-1.9**
	baz=197						
WSF	**Szhu**	**1.27**	**298**	*e*P	**Pn**	**22 28 15.4**	**-0.3**
	baz=297						
WSF				S	**Sb**	**22 28 32.0**	**-0.3**
	baz=297						
TCU	**Taichung**	**1.31**	**328**	*e*P	**Pn**	**22 28 17.0**	**+0.7**
	baz=327						
TCU				*e*S	**Sb**	**22 28 33.5**	**0.0**
	baz=327						
WTCT	**Ta-ch'eng**	**1.35**	**308**	*e*P	**Pn**	**22 28 15.7**	**-1.0**
	baz=306						
WTCT				*e*S	**Sn**	**22 28 34.0**	**-0.5**
	baz=306						
TWQ1	**Liyutan**	**1.45**	**335**	P	**Pn**	**22 28 18.8**	**+0.7**
	baz=334						
TWQ1				S	**Sn**	**22 28 37.9**	**+1.0**
	baz=334						
NSY	**Sanyi**	**1.51**	**336**	*e*P	**Pn**	**22 28 19.3**	**+0.3**
	baz=334						
NSY				S	**Sn**	**22 28 40.4**	**+1.9**
	baz=334						
ENTT	**Nioudou**	**1.60**	**4**	*e*P	**Pn**	**22 28 20.5**	**+0.3**
	baz=5.0						
TWC	**Suao**	**1.61**	**13**	*e*P	**Pn**	**22 28 20.3**	**-0.1**
	baz=2.0						
NSK	**Sanguang**	**1.64**	**357**	*e*P	**Pn**	**22 28 19.5**	**-1.2**
	baz=13						
NSTT	**Nanjuang**	**1.64**	**346**	*e*P	**Pn**	**22 28 21.1**	**+0.3**
	baz=346						
TWE	**Neicheng**	**1.69**	**7**	*e*P	**Pn**	**22 28 21.8**	**+0.3**
	baz=8.0						
PNG	**Penghu**	**1.82**	**287**	P	**Pn**	**22 28 21.8**	**-1.3**
	baz=286						
PNG				S	**Sn**	**22 28 44.1**	**-1.8**
	baz=286						
TATO	**Taipei**	**1.93**	**1**	*e*Pn	**Pn**	**22 28 25.8**	**+1.0**
TATO				*e*Sn	**Sn**	**22 28 49.4**	**+0.5**
TWA	**Mucha**	**1.94**	**4**	*e*P	**Pn**	**22 28 24.8**	**-0.2**
	baz=16						
YOJ	**Yonaguni jima**	**2.02**	**45**	*e*S	**Sn**	**22 28 51.6**	**+0.5**
TWB1	**Santiao Chiao**	**2.03**	**14**	*e*P	**Pn**	**22 28 25.0**	**-1.1**
	baz=4.0						
NWF	**Wu-fen Shan**	**2.05**	**9**	*e*P	**Pn**	**22 28 26.6**	**+0.2**
	baz=8.0						
TWS1	**Kuangyinshan**	**2.06**	**359**	*e*P	**Pn**	**22 28 27.5**	**+1.0**
	baz=15						
IRIF	**Iriomote-Funau**	**2.46**	**58**	P	**Pn**	**22 28 32.6**	**+0.5**
IRIF				*e*S	**Sn**	**22 29 02.8**	**+0.8**
JKRS	**Kuro-shima**	**2.64**	**62**	P	**Pn**	**22 28 35.0**	**+0.5**
JKRS				*e*S	**Sn**	**22 29 06.0**	**-0.3**
JIJ	**Ishigaki jima**	**2.81**	**61**	P	**Pn**	**22 28 37.5**	**+0.7**
JIJ				*e*S	**Sn**	**22 29 08.8**	**-1.6**
KNM	**Kinmen**	**3.08**	**297**	*e*P	**Pn**	**22 28 40.8**	**+0.2**
	baz=294						
QZH	**Quanzhou**	**3.23**	**307**	⇑*i*Pn	**Pn**	**22 28 40.3**	**-2.3**
QZH				Sn	**Sn**	**22 29 15.9**	**-4.9**
QZH				smax			
	comp=N,280nm,0.7s						
QZH				smax			
	comp=E,290nm,1.0s						
JTJ	**Tarama**	**3.39**	**61**	P	**Pn**	**22 28 45.5**	**+0.7**
JTJ				*e*S	**Sn**	**22 29 24.9**	**+0.2**
QIZ	**Qiongzhong**	**11.54**	**252**	Pn	**Pn**	**22 30 37.0**	**+0.3**
KSRS	**Korea Array**	**15.42**	**20**	P	**Pn**	**22 31 35.5**	**+6.2**
	comp=E,0.2nm,0.3s,baz=200,slow=12,SNR=2.9						
MAJO	**Matsushiro**	**19.78**	**43**	*e*P	**Pn**	**22 32 24.6**	**+1.0**
	comp=E,2.3nm,0.4s						
MJAR	**Matsushiro Arr**	**19.78**	**43**	P	**Pn**	**22 32 27.1**	**+3.5**
	comp=E,0.2nm,0.3s,baz=235,slow=8.8,SNR=5.3						
CMAR	**Chiang Mai Arr**	**21.52**	**262**	P	**P**	**22 32 43.1**	**+2.0**
	comp=E,1.0nm,0.7s,mb3.4,baz=64,slow=8.6,SNR=7.3						
SONM	**Songino Array**	**27.52**	**338**	P	**P**	**22 33 38.3**	**0.0**
	comp=E,0.3nm,0.6s,mb3.1,baz=151,slow=9.9,SNR=2.6						
SONM	**Songino Array**	**27.52**	**338**	P	**P**	**22 33 38.3**	**0.0**
MKAR	**Makanchi Array**	**39.33**	**317**	P	**P**	**22 35 20.8**	**-0.2**
	comp=E,0.4nm,0.7s,mb3.2,baz=109,slow=8.7,SNR=4.0						
MKAR	**Makanchi Array**	**39.33**	**317**	P	**P**	**22 35 20.8**	**-0.2**
YAK	**Yakutsk**	**39.38**	**6**	P	**P**	**22 35 21.6**	**+0.4**
ZALV	**Zalesovo Beam**	**41.34**	**328**	P	**P**	**22 35 37.0**	**-0.6**
	comp=E,1.0nm,0.4s,mb3.8,baz=114,slow=8.0,SNR=7.2						
KURK	**Kurchatov**	**43.13**	**321**	*e*P	**P**	**22 35 51.1**	**-1.1**
	comp=E,4.9nm,1.6s,mb4.0						
ASAR	**Alice Springs**	**47.97**	**165**	P	**P**	**22 36 33.5**	**+2.8**
	comp=E,0.2nm,0.4s,mb3.5,baz=339,slow=6.5,SNR=2.7						
BRVK	**Borovoye**	**48.78**	**321**	P	**P**	**22 36 36.1**	**-0.7**
FINES	**FINESS Array B**	**72.56**	**330**	P	**P**	**22 39 16.7**	**-2.0**
	comp=E,0.6nm,0.5s,mb3.8,baz=57,slow=7.0,SNR=5.5						
NB2	**NORSAR Subarra**	**79.35**	**332**	P	**P**	**22 39 55.4**	**-2.0**
	comp=Z,0.1nm,0.7s,mb2.9,baz=64,slow=6.5						
NOA	**NORSAR Array B**	**79.35**	**332**	P	**P**	**22 39 55.8**	**-1.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=59,slow=5.9,SNR=5.2						
GERES	**GERESS Array B**	**83.88**	**321**	P	**P**	**22 40 20.9**	**-0.8**
	comp=Z,0.4nm,0.6s,mb3.7,baz=76,slow=4.1,SNR=5.9						

*ISCJB **16** 22:43:42.4±0.8, 51°.42N±0°.04×16°.10E±0°.04, h0km, Error ellipse: s-maj=6.0km s-min=3.2km az=14.5*
*WAR **16** 22:43:44.4, 51°.50N×16°.12E, ML2.3, Mining Induced*
*CSEM **16** 22:44.1±0.6, 51°.44N×16°.12E, h2km, ML3.0/5, Error ellipse: s-maj=9.6km s-min=4.9km az=16.0*
*PRU **16** 22:43:45.0, 51°.41N×16°.13E, h0km*
*VIE **16** 22:43:46.8±0.6, 51°.24N×16°.23E, h0km, mb1.8/2, ML2.4/4, Error ellipse: s-maj=4.5km s-min=3.8km az=98.0 56 km WNW of Wroclav Suspected Mining induced.*

ISC 16 22:43:43.6±0.9, 51°.46N±0°.04×16°.13E±0°.04, h0km, n25, σ0.72/46, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.62**	**170**	*e*Pg	**Pg**	**22 43 56.5**	**+1.0**
KSP				*e*Sg	**Sg**	**22 44 04.0**	**+0.4**
KSP	**Ksiaz**	**0.62**	**170**	*e*Pg	**Pg**	**22 43 56.5**	**+1.0**
KSP				*e*Sg	**Sg**	**22 44 05.5**	**+1.9**
KSP	**Ksiaz**	**0.62**	**170**	*e*Pg	**Pg**	**22 43 56.5**	**+1.0**
KSP				*e*Sg	**Sg**	**22 44 05.5**	**+1.9**
UPC	**Upice**	**0.95**	**184**	*e*PG	**Pg**	**22 44 02.6**	**+0.7**
UPC	**Upice**	**0.95**	**184**	Pg	**Pg**	**22 44 02.6**	**+0.7**
DPC	**Dobruska-Polom**	**1.11**	**174**	*e*PG	**Pg**	**22 44 05.4**	**+0.4**
DPC				*e*SG	**Sg**	**22 44 19.4**	**0.0**
	comp=Z,10nm,0.3s						
DPC	**Dobruska-Polom**	**1.11**	**174**	Pg	**Pg**	**22 44 05.4**	**+0.4**
DPC				Sg	**Sg**	**22 44 19.4**	**0.0**
	comp=Z,10nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**227**	*e*PG	**Pg**	**22 44 09.6**	**+0.1**
PVCC				*e*SG	**Sg**	**22 44 27.4**	**+0.3**
	comp=Z,42nm,0.2s						
PVCC	**Panska Ves**	**1.35**	**227**	Pg	**Pg**	**22 44 09.6**	**+0.1**
PVCC				Sg	**Sg**	**22 44 27.4**	**+0.3**
	comp=Z,42nm,0.2s						
PRU	**Pruhonice**	**1.78**	**215**	*e*PN	**Pn**	**22 44 16.5**	**+0.9**
PRU				*e*PG	**Pg**	**22 44 17.5**	**-0.3**
PRU				*e*SG	**Sg**	**22 44 40.9**	**+0.1**
	comp=Z,9.2nm,0.4s						
PRU	**Pruhonice**	**1.78**	**215**	Pn	**Pn**	**22 44 16.5**	**+0.9**
MORC	**Moravsky Berou**	**1.91**	**151**	*e*Sg	**Sg**	**22 44 44.2**	**-0.7**
CLL	**Collm**	**1.96**	**267**	*e*Pg	**Pg**	**22 44 20.0**	**-1.2**
CLL				*i*		22 44 23.4	
CLL				*e*Sg	**Sg**	**22 44 47.0**	**+0.3**
	comp=Z,7.0nm,0.7s						
OKC	**Ostrava-Krasne**	**2.07**	**141**	*e*PG	**Pg**	**22 44 22.7**	**-0.5**
OKC				*e*SG	**Sg**	**22 44 49.0**	**-1.0**
OKC	**Ostrava-Krasne**	**2.07**	**141**	Pg	**Pg**	**22 44 22.7**	**-0.5**
OKC				Sg	**Sg**	**22 44 49.0**	**-1.0**
VRAC	**Vranov**	**2.17**	**172**	*e*Pn	**Pn**	**22 44 21.6**	**+0.6**
VRAC				*e*Sg	**Sg**	**22 44 51.0**	**-2.3**
NKC	**Novy Kostel**	**2.63**	**244**	*e*PG	**Pg**	**22 44 33.6**	**-0.5**
NKC				*e*SG	**Sg**	**22 45 07.7**	**-0.5**
	comp=Z,9.1nm,0.3s						
NKC	**Novy Kostel**	**2.63**	**244**	Pg	**Pg**	**22 44 33.6**	**-0.5**
NKC				Sg	**Sg**	**22 45 07.7**	**-0.5**
	comp=Z,9.1nm,0.3s						
OJC	**Ojcow**	**2.64**	**117**	*e*Pg	**Pg**	**22 44 34.2**	**+0.1**
OJC				*e*Sg	**Sg**	**22 45 08.6**	**+0.3**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*SN	**Sn**	**22 45 05.6**	**+0.5**
KHC				*e*SG	**Sg**	**22 45 14.9**	**-0.1**
	comp=Z,2.8nm,0.3s						
MOX	**Moxa**	**2.96**	**256**	*e*PG	**Pg**	**22 44 39.6**	**-0.7**
MOX				*e*SG	**Sg**	**22 45 18.7**	**0.0**
CONA	**Conrad Observa**	**3.54**	**183**	⇓*i*Pn	**Pn**	**22 44 39.9**	**+0.1**
CONA				⇓*i*Sg	**Sg**	**22 45 36.7**	**-0.5**
	comp=Z,3.0nm,0.4s						
CONA	**Conrad Observa**	**3.54**	**183**	Pn	**Pn**	**22 44 39.9**	**+0.2**
MOA	**Molln**	**3.81**	**199**	⇑*i*Pn	**Pn**	**22 44 44.0**	**+0.6**
MOA				⇑*i*Sg	**Sg**	**22 45 46.3**	**+0.4**
	comp=Z,5.8nm,0.6s						
MOA	**Molln**	**3.81**	**199**	Pn	**Pn**	**22 44 44.0**	**+0.5**
MOA				Sg	**Sg**	**22 45 46.3**	**+0.4**
	comp=Z,5.8nm,0.6s						

IDC 16 22:56:15.8±6.5, 28°.69S×179°.25W, h398km±62km, mb3.2/3, mb1 3.4/4, mb1mx3.2/17, mbtmp3.3/4, Error ellipse: s-maj=55.0km s-min=27.4km az=37.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.02**	**197**	P	Pn	22 58 33.2	-0.6
	3.0nm,0.3s,baz=350,slow=2.8,SNR=8.0						
URZ				S	S	23 00 27.5	+0.5
	5.0nm,0.3s,baz=104,slow=23,SNR=13						
CTA	**Charters Tower**	**32.47**	**277**	P	P	23 02 11.4	+0.3
	2.2nm,0.3s,baz=95,slow=9.9,SNR=5.8						
ASAR	**Alice Springs**	**42.13**	**266**	P	P	23 03 31.2	0.0
	0.5nm,0.6s,baz=96,slow=7.3,SNR=9.1						
WRA	**Warramunga Arr**	**42.96**	**271**	P	P	23 03 37.3	-0.5
	1.2nm,0.6s,baz=107,slow=8.0,SNR=5.3						
FINES	**FINESS Array B**	**143.17**	**340**	PKP	PKPdf	23 14 59.5	-2.8
	4.7nm,1.0s,baz=27,slow=3.4,SNR=7.4						
NOA	**NORSAR Array B**	**146.90**	**351**	PKPbc	PKPbc	23 15 11.2	-0.1
	0.8nm,0.8s,baz=24,slow=4.4,SNR=3.1						
AKASG	**Malin Array Be**	**149.28**	**324**	PKPbc	PKPbc	23 15 17.8	0.0
	0.2nm,0.3s,baz=52,slow=3.2,SNR=5.8						
TORD	**Torodi Ar. Bea**	**164.51**	**183**	PKPab	PKPab	23 16 30.2	0.0
	0.4nm,0.5s,baz=178,slow=4.7,SNR=5.1						

*ISCJB **16** 23:11:05.6±0.6, 37°.83N±0°.03×20°.95E±0°.03, h10km, Error ellipse: s-maj=4.4km s-min=2.5km az=37.7*
*THE **16** 23:11:05.3, 37°.81N×20°.96E, h5km±1km, ML3.0/6, Error ellipse: s-maj=1.7km s-min=0.6km az=30.0*
*NEIC **16** 23:11:06.3, 37°.91N×20°.94E, h4km, MD2.7(ATH), ML3.0(THE), After ATH.*
*CSEM **16** 23:11:06.8±0.3, 37°.91N×20°.97E, h2km, ML3.0/6, Error ellipse: s-maj=6.0km s-min=3.9km az=36.0*
*ATH **16** 23:11:06.3, 37°.91N×20°.94E, h4km, ML2.7*

ISC 16 23:11:05.9±0.6, 37°.86N±0°.03×20°.94E±0°.03, h3km±4km, n72, σ1.905/131, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.28**	**335**	P	**Pg**	**23 11 11.8**	**+0.5**
KFL				S	**Sg**	**23 11 16.1**	**+1.1**
KFL	**Anninata**	**0.28**	**335**	P	**Pg**	**23 11 11.8**	**+0.5**
KFL				S	**Sg**	**23 11 16.1**	**+1.1**
VLS	**Valsamata**	**0.42**	**320**	P	**Pg**	**23 11 13.5**	**-0.5**
VLS	**Valsamata**	**0.42**	**320**	*e*PG	**Pg**	**23 11 13.7**	**-0.3**
VLS				*e*SG	**Sg**	**23 11 20.1**	**+0.6**
VLS	**Valsamata**	**0.42**	**320**	P	**Pg**	**23 11 13.5**	**-0.5**
VLS				*e*Sg	**Sg**	**23 11 20.1**	**+0.6**
RLS	**Riolos of Patr**	**0.47**	**64**	P	**Pg**	**23 11 14.6**	**-0.2**
RLS	**Riolos of Patr**	**0.47**	**64**	*e*PG	**Pg**	**23 11 15.1**	**+0.3**
RLS				*e*SG	**Sg**	**23 11 21.7**	**+0.8**
RLS	**Riolos of Patr**	**0.47**	**64**	P	**Pg**	**23 11 14.6**	**-0.2**
RLS	**Riolos of Patr**	**0.47**	**64**	*e*Pg	**Pg**	**23 11 15.1**	**+0.3**
RLS				*e*Sg	**Sg**	**23 11 21.7**	**+0.8**
UPR	**University Cam**	**0.80**	**57**	*e*PB	**Pg**	**23 11 21.0**	**-0.2**
UPR				*e*SG	**Sg**	**23 11 31.5**	**0.0**
UPR	**University Cam**	**0.80**	**57**	*e*Pb	**Pg**	**23 11 21.0**	**-0.2**
UPR				*e*Sg	**Sg**	**23 11 31.5**	**0.0**
LAKA	**Lakka**	**0.91**	**65**	P	**Pg**	**23 11 22.3**	**-1.0**
LAKA				S	**Sg**	**23 11 35.7**	**+0.6**
LAKA	**Lakka**	**0.91**	**65**	P	**Pg**	**23 11 22.3**	**-1.0**
LAKA				S	**Sg**	**23 11 35.7**	**+0.6**
EFP	**Efpalio**	**0.95**	**53**	*e*PG	**Pg**	**23 11 23.2**	**-1.0**
EFP				*e*SG	**Sg**	**23 11 36.2**	**-0.4**
EFP	**Efpalio**	**0.95**	**53**	P	**Pg**	**23 11 23.1**	**-1.1**
EFP				S	**Sg**	**23 11 37.4**	**+0.8**
EFP	**Efpalio**	**0.95**	**53**	*e*Pg	**Pg**	**23 11 23.2**	**-1.0**
EFP				*e*Sg	**Sg**	**23 11 36.2**	**-0.4**
EFP				S	**Sg**	**23 11 37.4**	**+0.8**
TRIZ	**Trizonia**	**1.03**	**60**	P	**Pg**	**23 11 24.5**	**-1.2**
TRIZ				S	**Sg**	**23 11 40.2**	**+1.1**
TRIZ	**Trizonia**	**1.03**	**60**	P	**Pg**	**23 11 24.5**	**-1.2**
TRIZ				S	**Sg**	**23 11 40.2**	**+1.1**
ITM	**Ithomi**	**1.04**	**130**	P	**Pg**	**23 11 28.1**	**+2.3**
ITM	**Ithomi**	**1.04**	**130**	*e*PG	**Pg**	**23 11 26.3**	**+0.5**
ITM				*e*SG	**Sg**	**23 11 41.5**	**+2.3**
ITM	**Ithomi**	**1.04**	**130**	*e*Pg	**Pg**	**23 11 26.3**	**+0.5**
ITM	**Ithomi**	**1.04**	**130**	P	**Pg**	**23 11 28.1**	**+2.3**
ITM				*e*Sg	**Sg**	**23 11 41.5**	**+2.3**
KALE	**Kalithea**	**1.09**	**60**	P	**Pg**	**23 11 25.5**	**-1.3**
KALE				S	**Sg**	**23 11 42.2**	**+1.3**
KALE	**Kalithea**	**1.09**	**60**	P	**Pg**	**23 11 25.5**	**-1.3**
KALE				S	**Sg**	**23 11 42.2**	**+1.3**
GUR	**Goura**	**1.11**	**85**	*e*PB	**Pg**	**23 11 26.4**	**-0.9**
GUR				*e*SB	**Sb**	**23 11 43.0**	**+0.2**
GUR	**Goura**	**1.11**	**85**	P	**Pg**	**23 11 26.3**	**-1.0**
GUR				S	**Sg**	**23 11 41.4**	**-0.3**
GUR	**Goura**	**1.11**	**85**	*e*Pb	**Pg**	**23 11 26.4**	**-0.9**
GUR				S	**Sg**	**23 11 41.4**	**-0.3**
GUR				*e*Sb	**Sb**	**23 11 43.0**	**+0.2**
VLX	**Vlachokerasia**	**1.24**	**112**	*e*PB	**Pg**	**23 11 30.1**	**+0.4**
VLX				*e*SB	**Sg**	**23 11 47.3**	**+1.4**
VLX	**Vlachokerasia**	**1.24**	**112**	*e*Pb	**Pg**	**23 11 30.1**	**+0.4**
VLX				*e*Sb	**Sg**	**23 11 47.3**	**+1.4**
EVR	**Evrytania**	**1.26**	**33**	P	**Pg**	**23 11 28.3**	**-1.8**
EVR	**Evrytania**	**1.26**	**33**	*e*PG	**Pg**	**23 11 29.0**	**-1.1**
EVR				*e*SB	**Sb**	**23 11 46.0**	**-1.0**
EVR	**Evrytania**	**1.26**	**33**	P	**Pg**	**23 11 28.3**	**-1.8**
EVR	**Evrytania**	**1.26**	**33**	*e*Pg	**Pg**	**23 11 29.0**	**-1.1**
EVR				*e*Sb	**Sb**	**23 11 46.0**	**-1.0**
DSF	**Desfina**	**1.37**	**66**	P	**Pn**	**23 11 30.0**	**-2.0**
DSF	**Desfina**	**1.37**	**66**	P	**Pn**	**23 11 30.0**	**-2.0**
AGG	**Agios Georgios**	**1.60**	**43**	*e*PN	**Pn**	**23 11 35.0**	**-0.1**
AGG				*e*SB	**Sb**	**23 11 56.6**	**-0.1**
AGG	**Agios Georgios**	**1.60**	**43**	*e*Pn	**Pn**	**23 11 35.0**	**-0.1**
AGG				*e*Sb	**Sb**	**23 11 56.6**	**-0.1**
LTK	**Loutraki**	**1.61**	**83**	*e*PN	**Pn**	**23 11 35.8**	**+0.5**
LTK				*e*SB	**Sg**	**23 11 58.4**	**+0.6**
LTK	**Loutraki**	**1.61**	**83**	*e*Pn	**Pn**	**23 11 35.8**	**+0.5**
LTK				*e*Sb	**Sg**	**23 11 58.4**	**+0.6**
IGT	**Igoumenitsa**	**1.74**	**344**	P	**Pn**	**23 11 36.4**	**-0.7**
IGT				S	**Sn**	**23 11 59.6**	**-0.2**
IGT	**Igoumenitsa**	**1.74**	**344**	P	**Pn**	**23 11 36.4**	**-0.7**
IGT				S	**Sn**	**23 11 59.6**	**-0.2**
IGT	**Igoumenitsa**	**1.74**	**344**	P	**Pn**	**23 11 36.4**	**-0.7**
IGT				S	**Sn**	**23 11 59.6**	**-0.2**
JAN	**Janina**	**1.80**	**358**	*e*PB	**Pb**	**23 11 39.3**	**-0.2**
JAN				*e*SB	**Sb**	**23 12 02.8**	**+0.3**
JAN	**Janina**	**1.80**	**358**	*e*Pb	**Pb**	**23 11 39.3**	**-0.2**
JAN				*e*Sb	**Sb**	**23 12 02.8**	**+0.3**
LKR	**Lokris**	**1.81**	**63**	*e*PB	**Pb**	**23 11 39.7**	**0.0**
LKR				*e*SB	**Sb**	**23 12 03.7**	**+1.0**
LKR	**Lokris**	**1.81**	**63**	*e*Pb	**Pb**	**23 11 39.7**	**0.0**
LKR				*e*Sb	**Sb**	**23 12 03.7**	**+1.0**
DID	**Didima**	**1.86**	**100**	*e*PG	**Pg**	**23 11 40.5**	**-1.0**
DID				*e*SB	**Sg**	**23 12 06.6**	**+1.0**
DID	**Didima**	**1.86**	**100**	P	**Pg**	**23 11 40.2**	**-1.3**
DID	**Didima**	**1.86**	**100**	P	**Pg**	**23 11 40.2**	**-1.3**
DID	**Didima**	**1.86**	**100**	*e*Pg	**Pg**	**23 11 40.5**	**-1.0**
DID				*e*Sb	**Sg**	**23 12 06.6**	**+1.0**
THL	**Klokotos Trika**	**1.90**	**26**	*e*PB	**Pb**	**23 11 41.6**	**+0.3**
THL				*e*SB	**Sb**	**23 12 06.2**	**+0.7**
THL	**Klokotos Trika**	**1.90**	**26**	*e*Pb	**Pb**	**23 11 41.6**	**+0.3**
THL				*e*Sb	**Sb**	**23 12 06.2**	**+0.7**
VLI	**Veliai**	**1.96**	**125**	*e*PN	**Pg**	**23 11 42.6**	**-0.8**
VLI				*e*SN	**Sg**	**23 12 10.2**	**+1.4**
VLI	**Veliai**	**1.96**	**125**	*e*Pn	**Pg**	**23 11 42.6**	**-0.8**
VLI				*e*Sn	**Sg**	**23 12 10.2**	**+1.4**
KEK	**Kerkira**	**2.06**	**335**	P	**Pn**	**23 11 40.9**	**-0.5**
KEK				S	**Sn**	**23 12 08.4**	**+0.8**
KEK	**Kerkira**	**2.06**	**335**	*e*PN	**Pn**	**23 11 42.9**	**+1.5**
KEK				*e*SN	**Sn**	**23 12 10.0**	**+2.4**
KEK	**Kerkira**	**2.06**	**335**	P	**Pn**	**23 11 40.9**	**-0.5**
KEK				S	**Sn**	**23 12 08.4**	**+0.8**
KEK	**Kerkira**	**2.06**	**335**	P	**Pn**	**23 11 40.9**	**-0.5**
KEK	**Kerkira**	**2.06**	**335**	*e*Pn	**Pn**	**23 11 42.9**	**+1.5**
KEK				S	**Sn**	**23 12 08.4**	**+0.8**
KEK				*e*Sn	**Sn**	**23 12 10.0**	**+2.4**
ATH	**Athens Observa**	**2.20**	**86**	*e*PN	**Pb**	**23 11 45.5**	**-0.9**
ATH				*e*SN	**Sg**	**23 12 14.8**	**-1.9**
ATH	**Athens Observa**	**2.20**	**86**	*e*Pn	**Pb**	**23 11 45.5**	**-0.9**
ATH				*e*Sn	**Sg**	**23 12 14.8**	**-1.9**
VLY	**Voula,Athens**	**2.26**	**89**	*e*PN	**Pb**	**23 11 46.4**	**-1.0**
VLY				*e*SN	**Sb**	**23 12 15.5**	**-0.3**
VLY	**Voula,Athens**	**2.26**	**89**	*e*Pn	**Pb**	**23 11 46.4**	**-1.0**
VLY				*e*Sn	**Sb**	**23 12 15.5**	**-0.3**
NEO	**Neokhori**	**2.31**	**50**	P	**Pn**	**23 11 45.8**	**+1.0**
NEO	**Neokhori**	**2.31**	**50**	P	**Pn**	**23 11 45.8**	**+1.0**
PTL	**Penteli**	**2.32**	**84**	*e*PN	**Pb**	**23 11 47.2**	**-1.2**
PTL				*e*SN	**Sb**	**23 12 15.9**	**-1.6**
PTL	**Penteli**	**2.32**	**84**	*e*Pn	**Pb**	**23 11 47.2**	**-1.2**
PTL				*e*Sn	**Sb**	**23 12 15.9**	**-1.6**
KZN	**Kozani**	**2.53**	**15**	*e*PN	**Pb**	**23 11 50.1**	**-1.9**
KZN	**Kozani**	**2.53**	**15**	*e*Pn	**Pb**	**23 11 50.1**	**-1.9**
LIT	**Litokhoron**	**2.55**	**28**	*e*PN	**Pn**	**23 11 50.0**	**+1.8**
LIT				*e*SN	**Sn**	**23 12 21.5**	**+1.8**
LIT	**Litokhoron**	**2.55**	**28**	*e*Pn	**Pn**	**23 11 50.0**	**+1.8**
LIT				*e*Sn	**Sn**	**23 12 21.5**	**+1.8**
STON	**Ston**	**5.59**	**335**	*e*Pn	**Pn**	**23 12 26.1**	**-3.8**
STON				Sn	**Sn**	**23 13 25.2**	**-9.4**

*CSEM **16** 23:19:01.6, 17°.18N×42°.29E, h13km, ML3.6, After SNSN*

SGS 16 23:19:01.6, 17°.18N×42°.29E, h13km, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRSS	**Farasan al Kab**	**0.47**	**200**	P	Pg	23 19 11.1	+0.2
FRSS	**Farasan al Kab**	**0.47**	**200**	P	Pg	23 19 11.1	+0.2
JAZS	**Jizan**	**0.61**	**101**	P	Pg	23 19 13.5	0.0
JAZS	**Jizan**	**0.61**	**101**	P	Pg	23 19 13.5	-0.1
JAZS				S	Sg	23 19 23.4	+1.7
WBHS	**Wadi 'Ibn Hash**	**1.48**	**16**	P	Pn	23 19 26.0	-1.8
WBHS	**Wadi 'Ibn Hash**	**1.48**	**16**	P	Pn	23 19 26.0	-1.8
NAMS	**An Nimas**	**1.98**	**358**	P	Pn	23

KVT	Kavak	1.06 62	*e*Pg	Pg	23 53 13.3	0.0
TOKA	Tokat	1.30 101	*i* P	Pg	23 53 18.2	+0.3
TOKA			*i* S	Sg	23 53 36.2	+1.4
TOKA	Tokat	1.30 101	*i* P	Pg	23 53 18.2	+0.3
TOKA			*i* S	Sg	23 53 36.2	+1.4
TOKT	Tokat	1.36 101	*e*PN	Pn	23 53 19.3	+0.6
TOKT	Tokat	1.36 101	*e*Pn	Pn	23 53 19.3	+0.6
BALT	Daday	1.43 312	*i* P	Pn	23 53 19.7	0.0
BALT			*i* S	Sb	23 53 40.5	+1.8
BALT	Daday	1.43 312	*i* P	Pn	23 53 19.7	0.0
BALT			*i* S	Sb	23 53 40.5	+1.7
KAMT	Kaman	1.48 215	*e*PN	Pn	23 53 20.5	+0.2
KAMT	Kaman	1.48 215	*e*Pn	Pn	23 53 20.5	+0.1
ERBA	Erbaa	1.49 86	*i* P	Pn	23 53 20.4	-0.2
ERBA			*i* S	Sn	23 53 43.1	+2.7
ERBA	Erbaa	1.49 86	*i* P	Pn	23 53 20.4	-0.1
ERBA			*i* S	Sn	23 53 43.1	+2.7
BZK	Bozkurt	1.50 337	*e*PN	Pn	23 53 21.8	+1.1
BZK	Bozkurt	1.50 337	*e*Pn	Pn	23 53 21.8	+1.1
BBAL	Bala	1.66 232	*i* P	Pn	23 53 23.9	+1.0
BBAL			*i* S	Sn	23 53 46.4	+1.7
BBAL	Bala	1.66 232	*i* P	Pn	23 53 23.9	+1.0
BBAL			*i* S	Sn	23 53 46.4	+1.8
LOD	Lodumlu	1.71 247	*e*PN	Pn	23 53 24.8	+1.3
LOD	Lodumlu	1.71 247	*e*Pn	Pn	23 53 24.8	+1.2
SAFT	Safranbolu	1.73 293	*e*PN	Pn	23 53 25.5	+1.6
SAFT	Safranbolu	1.73 293	*e*Pn	Pn	23 53 25.5	+1.6
AFSR	Af´ar-Bala (A	1.75 230	*e*PN	Pn	23 53 25.4	+1.2
AFSR	Af´ar-Bala (A	1.75 230	*e*Pn	Pn	23 53 25.4	+1.3
AVNT	Avonos	1.81 179	*i* P	Pn	23 53 26.5	+1.6
AVNT			*i* S	Sn	23 53 51.6	+3.3
AVNT	Avonos	1.81 179	*i* P	Pn	23 53 26.5	+1.6
AVNT			*i* S	Sn	23 53 51.6	+3.3
SVSK	Karacayir	1.81 111	*e*PN	Pn	23 53 26.1	+1.2
SVSK	Karacayir	1.81 111	*e*Pn	Pn	23 53 26.1	+1.2
SCER	sogukcermik	1.92 111	*i* P	Pn	23 53 29.1	+2.6
SCER			*i* S	Sn	23 53 55.0	+3.9
SCER	sogukcermik	1.92 111	*i* P	Pn	23 53 29.1	+2.6
SCER			*i* S	Sn	23 53 55.0	+3.8
RSDY	Resadiye-TOKAT	1.93 95	*e*PN	Pn	23 53 27.9	+1.2
RSDY	Resadiye-TOKAT	1.93 95	*e*Pn	Pn	23 53 27.9	+1.2
SGKT	Sivrigoynuk	2.09 270	*i* P	Pn	23 53 29.5	+0.7
SGKT			*i* S	Sn	23 54 00.1	+4.7
SGKT	Sivrigoynuk	2.09 270	*i* P	Pn	23 53 29.5	+0.7
PINB	Pinarbasi	2.27 147	*i* P	Pn	23 53 34.8	+3.4
PINB	Pinarbasi	2.27 147	*i* P	Pn	23 53 34.8	+3.5
SARI	SarD1z-Kayseri	2.40 142	*e*PN	Pn	23 53 35.4	+2.3
SARI	SarD1z-Kayseri	2.40 142	*e*Pn	Pn	23 53 35.4	+2.3
SULT	Sultanhani-AKS	2.59 203	*e*PN	Pn	23 53 37.2	+1.6
SULT	Sultanhani-AKS	2.59 203	*e*Pn	Pn	23 53 37.2	+1.6
KIZT	Kizilcal	2.83 234	*e*PN	Pn	23 53 40.0	+1.1
KIZT	Kizilcal	2.83 234	*e*Pn	Pn	23 53 40.0	+1.1
ESPY	Espiye-Giresun	3.00 82	*e*PN	Pn	23 53 42.8	+1.5
ESPY	Espiye-Giresun	3.00 82	*e*Pn	Pn	23 53 42.8	+1.5
KOZT	Kozan	3.20 165	*e*PN	Pn	23 53 46.0	+1.9
KARA	Karaisali	3.33 177	*e*PN	Pn	23 53 47.8	+2.0
KARA	Karaisali	3.33 177	*e*Pn	Pn	23 53 47.8	+2.0
KMRS	Kahramanmaras	3.48 151	*e*PN	Pn	23 53 49.6	+1.7
KMRS	Kahramanmaras	3.48 151	*e*Pn	Pn	23 53 49.7	+1.7
GUMT	Gumushane	3.57 91	*e*PN	Pn	23 53 51.5	+2.4
GUMT	Gumushane	3.57 91	*e*Pn	Pn	23 53 51.5	+2.4
PTK	Pertek	3.92 114	*e*PN	Pn	23 53 56.5	+2.6
PTK	Pertek	3.92 114	*e*Pn	Pn	23 53 56.5	+2.5

SZGRF **17** *01:08:49.4, 33°.40N×32°.82E, h33km, mb4.2, Eastern Mediterranean Sea*
DDA **17** *01:09:17.8, 35°.85N×31°.88E, h59km±4km, Ml4.1*
ISCJB **17** *01:09:19.9±0.1, 35°.90N±0°.01×31°.69E±0°.01, h93km±2km, mb3.9/43, Error ellipse: s-maj=2.3km s-min=1.5km az=41.5*
HLW **17** *01:09:19.1, 36°.01N×31°.73E, h33km±73km, Md4.1, Ml4.4*
NEIC **17** *01:09:19.0, 35°.90N×31°.67E, h83km, mb4.0/39, After ISK.*
ISK **17** *01:09:19.9, 35°.88N×31°.68E, h88km, ML4.3*
MOS **17** *01:09:20.4±0.8, 35°.93N×31°.67E, h96km, mb4.0/39, Error ellipse: s-maj=9.1km s-min=4.1km az=124.0*
IDC **17** *01:09:21.7±1.4, 36°.03N×31°.71E, h86km±14km, mb3.6/14, mb1 3.8/22, mb1mx3.7/32, mbtmp3.7/22, MS2.5/1, Ms1 2.5/1, ms1mx1.6/33, Error ellipse: s-maj=11.9km s-min=10.2km az=54.0*
CSEM **17** *01:09:21.4±0.1, 35°.93N×31°.67E, h91km±1km, mb4.0/37, Mw3.6, Error ellipse: s-maj=1.9km s-min=1.3km az=46.0*
THE **17** *01:09:22.5, 35°.93N×31°.61E, h36km±11km, ML4.4/2, Error ellipse: s-maj=11.8km s-min=1.7km az=85.0*
NIC **17** *01:09:24.5±0.2, 35°.93N×31°.99E, h61km, mb4.2, ML4.0, MW3.6*
GRAL **17** *01:09:25.5±0.9, 35°.90N×31°.98E, h63km±28km, MD4.2*
GII **17** *01:09:25.5±0.0, 35°.64N×31°.85E, h20km*
NSSC **17** *01:09:28, 35°.87N×32°.39E, h40km*
ISC 17 01:09:21.3±0.1, 35°.91N±0°.01×31°.68E±0°.01, h89km±2km, n707, σ1§00/819, mb3.9/43, 20C-30D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALFC	Alevga	1.06	135	⇑P	Pn	01 09 41.5	-0.1
ALFC				S	Sn	01 09 55.1	-1.7
ALFC	Alevga	1.06	135	⇑P	Pn	01 09 41.5	-0.1
PPCY	Paphos	1.16	152	P	Pn	01 09 43.6	+0.8
PPCY	Paphos	1.16	152	P	Pn	01 09 43.6	+0.8
ERMK	Ermenek	1.23	53	P	Pn	01 09 39.5	-4.1
ERMK	Ermenek	1.23	53	*i* P	Pn	01 09 39.3	-4.3
ERMK				*i* S	Sn	01 09 54.6	-5.8
ERMK	Ermenek	1.23	53	*i* P	Pn	01 09 39.3	-4.3
HDMB	Hadim	1.23	31	*e*PN	Pn	01 09 44.7	+1.1
HDMB				*e*SN	Sn	01 10 00.6	+0.1
HDMB	Hadim	1.23	31	*e*Pn	Pn	01 09 44.7	+1.1
HDMB				*e*Sn	Sn	01 10 00.6	+0.1
LEF	Lefka	1.26	128	*e*PN	Pn	01 09 43.4	-0.6
LEF				*e*SN	Sn	01 09 59.4	-1.8
LEF	Lefka	1.26	128	*e*Pn	Pn	01 09 43.4	-0.6
LEF				*e*Sn	Sn	01 09 59.4	-1.7
ANTB	Antalya	1.29	320	*e*PN	Pn	01 09 43.9	-0.5
ANTB				*e*SN	Sn	01 10 00.6	-1.1
ANTB	Antalya	1.29	320	*e*Pn	Pn	01 09 43.9	-0.4
ANTB				*e*Sn	Sn	01 10 00.6	-1.1
MAMC	Mammari	1.45	120	P	Pn	01 09 46.3	-0.1
MAMC	Mammari	1.45	120	P	Pn	01 09 46.3	-0.1
SZAC	Souni-Zanaja	1.51	139	P	Pn	01 09 48.2	+1.1
SZAC				S	Sn	01 10 08.3	+1.6
SZAC	Souni-Zanaja	1.51	139	P	Pn	01 09 48.2	+1.1
SZAC				S	Sn	01 10 08.3	+1.6
KORT	Korkueli	1.53	316	*i* P	Pn	01 09 46.9	-0.4
KORT	Korkueli	1.53	316	*i* P	Pn	01 09 46.9	-0.4
LFK	Lefkose	1.63	112	*e*PN	Pn	01 09 47.8	-0.8
LFK	Lefkose	1.63	112	*e*Pn	Pn	01 09 47.8	-0.8
CSS	Prodhromos	1.65	125	P	Pn	01 09 48.7	-0.1
	29nm,0.3s						
CSS				S	Sn	01 10 07.7	-2.0
CSS	Prodhromos	1.65	125	*e*PN	Pn	01 09 48.5	-0.3
CSS				*e*SN	Sn	01 10 08.7	-1.0
CSS	Prodhromos	1.65	125	*e*P	Pn	01 09 48.7	-0.1
CSS	Prodhromos	1.65	125	P	Pn	01 09 48.3	-0.5
CSS				S	Sn	01 10 08.7	-1.0
CSS	Prodhromos	1.65	125	P	Pn	01 09 48.7	-0.1
	29nm,0.3s						
CSS				S	Sn	01 10 08.7	-1.0
IKL	Isikli	1.65	78	*e*PN	Pn	01 09 48.6	-0.3
IKL	Isikli	1.65	78	*e*Pn	Pn	01 09 48.6	-0.3
SUTC	Sutluce-Ispart	1.66	341	*e*PN	Pn	01 09 49.6	+0.6
SUTC	Sutluce-Ispart	1.66	341	*e*Pn	Pn	01 09 49.6	+0.7
ELL	Elmali	1.66	301	*e*PN	Pn	01 09 49.7	+0.7
ELL				*e*SN	Sn	01 10 10.8	+0.8
ELL	Elmali	1.66	301	*e*Pn	Pn	01 09 49.7	+0.7
ELL				*e*Sn	Sn	01 10 10.8	+0.8
AKAS	Kas	1.71	281	P	Pn	01 09 48.4	-1.3
AKAS	Kas	1.71	281	*i* P	Pn	01 09 48.4	-1.3
AKAS				*i* S	Sn	01 10 04.4	-6.9
AKAS	Kas	1.71	281	P	Pn	01 09 48.4	-1.3
KSL	Kastellorizon	1.72	279	*e*P	Pn	01 09 49.5	-0.2
BCK	Bucak	1.78	331	*e*PN	Pn	01 09 50.5	0.0
BCK	Bucak	1.78	331	*e*Pn	Pn	01 09 50.5	0.0
KONT	Konya--Tatoy	2.10	15	*e*PN	Pn	01 09 55.4	+0.7
KONT	Konya--Tatoy	2.10	15	*e*Pn	Pn	01 09 55.4	+0.7
GLHS	Glhisar (BURDU	2.15	306	*e*PN	Pn	01 09 56.5	+1.0
GLHS	Glhisar (BURDU	2.15	306	*e*Pn	Pn	01 09 56.5	+1.1
GOLH	Golhisar	2.16	308	*i* P	Pn	01 09 56.6	+1.1
GOLH				*i* S	Sn	01 10 21.0	-0.7
GOLH	Golhisar	2.16	308	*i* P	Pn	01 09 56.6	+1.1
GOLH				*i* S	Sn	01 10 21.0	-0.7
MERS	Mersin	2.48	67	*e*PN	Pn	01 10 01.0	+1.2
MERS	Mersin	2.48	67	*e*Pn	Pn	01 10 01.0	+1.2
TURN	Turunc	2.66	292	*i* P	Pn	01 10 05.9	+3.7
TURN				*i* S	Sn	01 10 36.5	+2.8
TURN	Turunc	2.66	292	*i* P	Pn	01 10 05.9	+3.7
TURN				*i* S	Sn	01 10 36.5	+2.8
SULT	Sultanhani-AKS	2.71	32	*e*PN	Pn	01 10 03.7	+0.9
SULT	Sultanhani-AKS	2.71	32	*e*Pn	Pn	01 10 03.7	+0.9
SHUT	Suhut-Afyon	2.79	341	*e*PN	Pn	01 10 04.2	+0.3
SHUT	Suhut-Afyon	2.79	341	*e*Pn	Pn	01 10 04.2	+0.3
DENT	Denizli	2.81	312	*e*PN	Pn	01 10 04.5	+0.4
DENT	Denizli	2.81	312	*e*Pn	Pn	01 10 04.5	+0.3
GULE	Gulek	2.84	60	*i* P	Pn	01 10 06.6	+2.1
GULE				*i* S	Sn	01 10 39.0	+1.1
GULE	Gulek	2.84	60	*i* P	Pn	01 10 06.6	+2.0
GULE				*i* S	Sn	01 10 39.0	+1.1
BOLV	Bolvadin	2.86	348	*i* P	Pn	01 10 05.3	+0.5
BOLV				*e*S	Sn	01 10 35.7	-2.7
BOLV	Bolvadin	2.86	348	*i* P	Pn	01 10 05.3	+0.4
BOLV				*e*S	Sn	01 10 35.7	-2.7
ARG	Arkhangelos	2.90	277	*e*P	Pn	01 10 05.4	0.0
ARG	Arkhangelos	2.90	277	P	Pn	01 10 05.3	-0.1
ARG				S	Sn	01 10 37.0	-2.3
ARG	Arkhangelos	2.90	277	P	Pn	01 10 05.3	-0.1
ARG				S	Sn	01 10 37.0	-2.3
KHL	Karahalli	2.96	325	*e*PN	Pn	01 10 06.5	+0.3
KHL	Karahalli	2.96	325	*e*Pn	Pn	01 10 06.5	+0.3
KIZT	Kizilcal	2.97	3	*e*PN	Pn	01 10 06.2	0.0
KIZT	Kizilcal	2.97	3	*e*Pn	Pn	01 10 06.2	-0.1
YER	Yerkesik	3.00	295	*e*PN	Pn	01 10 07.4	+0.7
YER	Yerkesik	3.00	295	*e*Pn	Pn	01 10 07.4	+0.7
KHAL	Karahalli	3.02	325	*i* P	Pn	01 10 07.0	+0.1
KHAL				*i* S	Sn	01 10 38.4	-3.7
KHAL	Karahalli	3.02	325	*i* P	Pn	01 10 07.0	+0.1
KHAL				*i* S	Sn	01 10 38.4	-3.7
KARA	Karaisali	3.03	63	*e*PN	Pn	01 10 07.7	+0.6
KARA	Karaisali	3.03	63	*e*Pn	Pn	01 10 07.7	+0.6
KRTS	Karatas	3.06	76	*e*PN	Pn	01 10 08.3	+0.8
KRTS	Karatas	3.06	76	*e*Pn	Pn	01 10 08.3	+0.8
YURE	YUREGIR	3.31	73	*i* P	Pn	01 10 11.4	+0.5
YURE	YUREGIR	3.31	73	*i* P	Pn	01 10 11.4	+0.5
DAT	Datca	3.42	285	*e*PN	Pn	01 10 12.6	+0.3
DAT	Datca	3.42	285	*e*Pn	Pn	01 10 12.6	+0.3
MLSB	Milas	3.43	295	*e*PN	Pn	01 10 12.7	+0.2
MLSB	Milas	3.43	295	*e*Pn	Pn	01 10 12.7	+0.1
CEYT	Ceyhan	3.45	70	*e*PN	Pn	01 10 12.6	-0.2
CEYT	Ceyhan	3.45	70	*e*Pn	Pn	01 10 12.6	-0.2
AYDN	Tasoluk	3.52	301	*i* P	Pn	01 10 13.9	+0.2
AYDN				*i* S	Sn	01 10 48.5	-5.8
AYDN	Tasoluk	3.52	301	*i* P	Pn	01 10 13.9	+0.2
AYDN				*i* S	Sn	01 10 48.5	-5.8
SVRH	Sivrihisar-ESK	3.53	358	*e*PN	Pn	01 10 14.1	+0.2
SVRH	Sivrihisar-ESK	3.53	358	*e*Pn	Pn	01 10 14.1	+0.2
KULA	Kula-Manisa	3.54	318	*e*PN	Pn	01 10 14.0	0.0
KULA	Kula-Manisa	3.54	318	*e*Pn	Pn	01 10 14.0	-0.1
YAYL	Yayladag	3.59	87	*i* P	Pn	01 10 14.6	0.0
YAYL				*i* S	Sn	01 10 54.4	-1.7
YAYL	Yayladag	3.59	87	*i* P	Pn	01 10 14.6	-0.1
YAYL				*i* S	Sn	01 10 54.4	-1.6
BDRM	Kayabasi	3.60	290	*i* P	Pn	01 10 15.2	+0.3
BDRM				*i* S	Sn	01 10 49.8	-6.6
BDRM	Kayabasi	3.60	290	*i* P	Pn	01 10 15.2	+0.3
HTY	Hatay	3.62	85	*e*PN	Pn	01 10 15.2	+0.2
HTY	Hatay	3.62	85	*e*Pn	Pn	01 10 15.2	+0.2
GDZ	Gediz	3.62	332	*i* P	Pn	01 10 14.3	-0.8
GDZ				*i* S	Sn	01 10 51.3	-5.5
GDZ	Gediz	3.62	332	*i* P	Pn	01 10 14.3	-0.8
ESKT	Eskisehir	3.66	350	*i* P	Pn	01 10 14.4	-1.2
ESKT				*i* S	Sn	01 10 55.0	-2.8
SEYT	Eskypehyr	3.66	350	*i* P	Pn	01 10 14.4	-1.2
SEYT				*i* S	Sn	01 10 55.0	-2.7
KOZT	Kozan	3.68	64	*e*PN	Pn	01 10 15.6	-0.2
AFSR	Af´ar-Bala (A	3.70	17	*e*PN	Pn	01 10 15.8	-0.3
AFSR	Af´ar-Bala (A	3.70	17	*e*Pn	Pn	01 10 15.8	-0.3
KARP	Karpathos	3.70	266	*e*P	Pn	01 10 16.7	+0.6
SLNF	Slenfeh	3.71	94	⇓P	Pn	01 10 16.0	-0.2
SLNF				⇓S	Sn	01 10 51.0	-7.8
SLNF	Slenfeh	3.71	94	⇓*i*P	Pn	01 10 16.7	+0.5
NIS1	Nisyros Isl.	3.71	282	P	Pn	01 10 16.3	+0.1
NIS1				S	Sn	01 10 55.9	-2.9
NIS1	Nisyros Isl.	3.71	282	P	Pn	01 10 16.3	+0.1
NIS1				S	Sn	01 10 55.9	-2.9
BODT	Bodrum	3.71	289	*e*PN	Pn	01 10 15.7	-0.6
BODT	Bodrum	3.71	289	*e*Pn	Pn	01 10 15.7	-0.6
BEYL	Beirut	3.73	122	*e*P	Pn	01 10 16.7	0.0
BEYL	Beirut	3.73	122	*e*P	Pn	01 10 16.7	0.0
COBT	Iskenderun	3.75	79	*i* P	Pn	01 10 16.1	-0.7
COBT	Iskenderun	3.75	79	*i* P	Pn	01 10 16.1	-0.7
BBAL	Bala	3.80	17	*i* P	Pn	01 10 18.1	+0.6
BBAL				*i* S	Sn	01 10 59.8	-1.2
BBAL	Bala	3.80	17	*i* P	Pn	01 10 18.1	+0.6
BBAL				*i* S	Sn	01 10 59.8	-1.3
KAMT	Kaman	3.81	24	*e*PN	Pn	01 10 17.9	+0.3
KAMT	Kaman	3.81	24	*e*Pn	Pn	01 10 18.0	+0.4
AVNT	Avonos	3.82	40	*i* P	Pn	01 10 18.6	+0.9
AVNT	Avonos	3.82	40	*i* P	Pn	01 10 18.6	+0.9
BHL	Bhannes	3.83	120	*e*P	Pn	01 10 17.1	-0.8
BHL				*e*S	Sn	01 10 56.5	-5.4
BHL	Bhannes	3.83	120	*e*P	Pn	01 10 17.1	-0.8
MATL	Matarih	3.85	128	*e*P	Pn	01 10 18.4	+0.1
MATL	Matarih	3.85	128	*e*P	Pn	01 10 18.4	+0.1
HWQ	Hawqa	3.86	114	*e*P	Pn	01 10 18.4	+0.1
HWQ				*e*S	Sn	01 10 57.5	-5.0
HWQ	Hawqa	3.86	114	*e*P	Pn	01 10 18.4	+0.1
WRDH	Warideh	3.87	95	⇑P	Pn	01 10 17.0	-1.5
WRDH				⇑S	Sn	01 10 54.0	-8.8
WRDH	Warideh	3.87	95	⇑*i*P	Pn	01 10 17.8	-0.7
BTCH	Batrach	3.88	87	⇓P	Pn	01 10 18.0	-0.5
BTCH				⇓S	Sn	01 10 54.0	-8.9
BTCH	Batrach	3.88	87	⇓*i*P	Pn	01 10 18.2	-0.3
BIDA	Albida	3.89	102	⇓P	Pn	01 10 18.0	-0.7
BIDA				⇓S	Sn	01 10 55.0	-8.3
BIDA	Albida	3.89	102	⇓*i*P	Pn	01 10 18.2	-0.5
DEMI	Demirci	3.92	324	*i* P	Pn	01 10 19.3	+0.2
DEMI				*i* S	Sn	01 11 01.0	-3.0
DEMI	Demirci	3.92	324	*i* P	Pn	01 10 19.3	+0.2
DEMI				*i* S	Sn	01 11 01.0	-2.9
GCAM	G?zelcaml?	3.99	298	*i* P	Pn	01 10 19.8	-0.3
GCAM				*i* S	Sn	01 10 58.9	-6.8
GCAM	G?zelcaml?	3.99	298	*i* P	Pn	01 10 19.8	-0.3
HNTI	Hanita	4.03	133	Pn	Pn	01 10 21.5	+0.8
HNTI				S	Sn	01 11 05.5	-1.3
HNTI	Hanita	4.03	133	Pn	Pn	01 10 21.5	+0.8
HNTI				S	Sn	01 11 05.5	-1.3
HNTI	Hanita	4.03	133	Pn	Pn	01 10 21.5	+0.8
HNTI	Hanita	4.03	133	Sn	Sn	01 11 05.5	-1.3
LOD	Lodumlu	4.06	12	*e*PN	Pn	01 10 21.3	+0.2
LOD	Lodumlu	4.06	12	*e*Pn	Pn	01 10 21.3	+0.3
BORA	Eskisehir	4.08	347	*i* P	Pn	01 10 20.6	-0.7
BORA				*i* S	Sn	01 11 04.1	-3.7
BORA	Eskisehir	4.08	347	*i* P	Pn	01 10 20.6	-0.7
BORA				*i* S	Sn	01 11 04.1	-3.8
DRWC	Darouich	4.09	79	⇑P	Pn	01 10 21.0	-0.4
DRWC				⇑S	Sn	01 11 00.0	-8.1
DRWC	Darouich	4.09	79	⇑*i*P	Pn	01 10 21.0	-0.4
ANDN	Andirin	4.10	65	*i* P	Pn	01 10 20.9	-0.6
ANDN				*i* S	Sn	01 11 03.5	-4.8
ANDN	Andirin	4.10	65	*i* P	Pn	01 10 20.9	-0.6
ANDN				*i* S	Sn	01 11 03.5	-4.8
HAWK	Haweek	4.11	108	⇑P	Pn	01 10 21.0	-0.7
HAWK				⇑S	Sn	01 11 00.0	-8.6
HAWK	Haweek	4.11	108	⇑*i*P	Pn	01 10 21.9	+0.2
BR131	Keskin Array S	4.11	22	*e*Pn	Pn	01 10 22.0	+0.3
BR131	Keskin Array S	4.11	22	*e*Pn	Pn	01 10 22.0	+0.3
BRTR	Keskin Array B	4.11	22	P	Pn	01 10 22.1	+0.4
	5.4nm,0.3s,baz=191,slow=16,SNR=196						
BRTR				S	Sn	01 11 06.8	-1.7
	3.3nm,0.3s,baz=187,slow=22,SNR=6.2						
BRTR	Keskin Array B	4.11	22	P	Pn	01 10 22.1	+0.4
BRTR				S	Sn	01 11 06.8	-1.8
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
BRTR				smax			
	comp=N,3.0nm,0.3s						
BRTR	Keskin Array B	4.11	22	P	Pn	01 10 22.1	+0.4
	comp=N,5.0nm,0.3s						
BRTR				S	Sn	01 11 06.8	-1.8
	comp=N,3.0nm,0.3s						
RCY	Rachaya	4.18	124	*e*P	Pn	01 10 23.3	+0.5
RCY	Rachaya	4.18	124	*e*P	Pn	01 10 23.3	+0.6
MMA0B	Mount Meron ar	4.22	132	Pn	Pn	01 10 23.3	+0.1
MMA0B	Mount Meron ar	4.22	132	Sn	Sn	01 11 09.4	-1.9
MMAI	Mount Meron Ar	4.22	132	P	Pn	01 10 23.8	+0.6
	comp=N,213nm,0.3s,baz=315,slow=12,SNR=1435						
MMAI				S	Sn	01 11 09.1	-2.2
	comp=N,268nm,0.3s,baz=313,slow=34,SNR=16						
KSDI	Kefar Szold	4.26	128	⇓Pn	Pn	01 10 24.2	+0.5
KSDI	Kefar Szold	4.26	128	⇓Pn	Pn	01 10 24.2	+0.5
KSDI	Kefar Szold	4.26	128	Pn	Pn	01 10 24.2	+0.4
KSDI	Kefar Szold	4.26	128	Sn	Sn	01 11 10.3	-2.0
HRI	Mount Hermon	4.26	127	⇑Pn	Pn	01 10 24.1	+0.3
HRI	Mount Hermon	4.26	127	⇑P	Pn	01 10 24.1	+0.3
HRI	Mount Hermon	4.26	127	P	Pn	01 10 24.1	+0.3
HRI	Mount Hermon	4.26	127	Pn	Pn	01 10 24.1	+0.3
OFRI	'Ofer	4.27	139	Pn	Pn	01 10 24.0	+0.1
OFRI	'Ofer	4.27	139	Pn	Pn	01 10 24.0	+0.1
OFRI	'Ofer	4.27	139	Pn	Pn	01 10 24.0	0.0
CDAG	Cicekdag	4.27	29	*i* P	Pn	01 10 25.0	+1.0
CDAG	Cicekdag	4.27	29	*i* P	Pn	01 10 25.0	+1.1
AKHS	Akhisar	4.27	315	*i* P	Pn	01 10 23.3	-0.6
AKHS				*i* S	Sn	01 11 09.8	-2.9
AKHS	Akhisar	4.27	315	*i* P	Pn	01 10 23.3	-0.6
AKHS				*i* S	Sn	01 11 09.8	-2.8
SMG	Samos	4.28	296	*e*P	Pn	01 10 23.2	-0.9
BLGI	Bet Lehem HaGe	4.30	137	Pn	Pn	01 10 24.9	+0.6
BRBR	Barbar	4.31	124	⇑P	Pn	01 10 25.0	+0.5
BRBR				⇑S	Sn	01 11 07.0	-6.6
BRBR	Barbar	4.31	124	⇑*i*P	Pn	01 10 25.6	+1.1
IZM	Izmir	4.32	306	*e*PN	Pn	01 10 24.3	-0.2
MARH	Ras Al Marh	4.37	114	⇑P	Pn	01 10 26.0	+0.8
MARH				⇑S	Sn	01 11 07.0	-7.9
MARH	Ras Al Marh	4.37	114	⇑*i*P	Pn	01 10 26.3	+1.1
KUZU	Kuzuini	4.44	77	*i* P	Pn	01 10 25.6	-0.5
KUZU				*i* S	Sn	01 11 13.0	-3.6
KUZU	Kuzuini	4.44	77	*i* P	Pn	01 10 25.6	-0.5
KUZU				*i* S	Sn	01 11 13.0	-3.6
BLCB	Balcova	4.46	305	*e*PN	Pn	01 10 26.3	-0.1
BLCB	Balcova	4.46	305	P	Pn	01 10 26.3	-0.1
BLCB				S	Sn	01 11 14.5	-2.5
BLCB	Balcova	4.46	305	P	Pn	01 10 26.3	-0.1
BLCB				S	Sn	01 11 14.5	-2.5
QASN	Qassioun	4.46	121	⇓P	Pn	01 10 28.0	+1.4
QASN				⇓S	Sn	01 11 10.0	-7.3
QASN	Qassioun	4.46	121	⇓*i*P	Pn	01 10 28.0	+1.4
DURS	Dursunbey	4.47	326	*i* P	Pn	01 10 26.6	-0.1
DURS				*i* S	Sn	01 11 13.7	-3.8
DURS	Dursunbey	4.47	326	*i* P	Pn	01 10 26.6	-0.1
DURS				*i* S	Sn	01 11 13.7	-3.8
KMRS	Kahramanmaras	4.48	68	*e*PN	Pn	01 10 26.7	0.0
KMRS	Kahramanmaras	4.48	68	*e*Pn

baz=166
AMAG Maghara 5.41 166 P Pn 01 10 38.5 -0.9
PRK Paraskevi 5.44 309 *e*P **Pn 01 10 39.6 -0.1**
PRK Paraskevi 5.44 309 P **Pn 01 10 39.9 +0.2**
PRK Paraskevi 5.44 309 P **Pn 01 10 39.9 +0.2**
RTMI Retamim 5.46 152 Pn **Pn 01 10 40.5 +0.4**
RTMI S **Sn 01 11 39.6 -1.9**
RTMI Retamim 5.46 152 Pn **Pn 01 10 40.5 +0.4**
RTMI Retamim 5.46 152 Pn **Pn 01 10 40.5 +0.4**
RTMI Retamim 5.46 152 Sn **Sn 01 11 39.6 -1.9**
KZIT Kziot 5.48 155 Pn **Pn 01 10 40.6 +0.2**
KZIT Kziot 5.48 155 Pn **Pn 01 10 40.6 +0.2**
KZIT Kziot 5.48 155 Pn **Pn 01 10 40.6 +0.2**
MZDA Masada 5.52 145 Pn **Pn 01 10 42.1 +1.1**
MZDA S **Sn 01 11 42.7 -0.4**
MZDA Masada 5.52 145 Pn **Pn 01 10 42.1 +1.1**
MZDA S **Sn 01 11 42.7 -0.4**
MZDA Masada 5.52 145 Pn **Pn 01 10 42.1 +1.1**
MZDA Masada 5.52 145 Sn **Sn 01 11 42.7 -0.4**
AKCD Akcadag 5.52 63 *i* P **Pn 01 10 41.3 +0.4**
AKCD *e*S **Sn 01 11 38.9 -4.1**
ATAB Bozova 5.54 72 *i* P **Pn 01 10 39.4 -1.7**
ATAB *i* S **Sn 01 11 35.1 -8.2**
ZALF Zalf 5.54 121 ⇑P **Pn 01 10 42.0 +0.8**
ZALF ⇑S **Sn 01 11 35.0 -8.5**
ZALF Zalf 5.54 121 ⇑*i*P **Pn 01 10 43.0 +1.8**
SIVA Sivas 5.68 263 *e*P **Pn 01 10 43.6 +0.5**
SIVA Sivas 5.68 263 P **Pn 01 10 43.8 +0.7**
SIVA S **Sn 01 11 47.3 +0.4**
SIVA Sivas 5.68 263 P **Pn 01 10 43.8 +0.7**
SIVA S **Sn 01 11 47.3 +0.4**
ASF Jabal al Asfar 5.71 129 P **Pn 01 10 45.3 +1.8**
comp=N,9.1nm,0.3s,baz=191,slow=5.1,SNR=154
ASF S **Sn 01 11 49.9 +2.2**
comp=N,8.3nm,0.3s,baz=32,slow=19,SNR=2.8
ASF Jabal al Asfar 5.71 129 P **Pn 01 10 45.3 +1.8**
ASF S **Sn 01 11 49.9 +2.2**
ASF pmax pmax
comp=Z,9.0nm,0.3s
ASF smax
comp=N,8.0nm,0.3s
EZN Ezine 5.76 314 *e*PN **Pn 01 10 44.2 0.0**
EZN Ezine 5.76 314 *e*Pn **Pn 01 10 44.2 0.0**
BALT Daday 5.77 13 *i* P **Pn 01 10 44.1 -0.2**
SVSK Karacayir 5.80 45 *e*PN **Pn 01 10 44.2 -0.5**
SVSK Karacayir 5.80 45 *e*Pn **Pn 01 10 44.2 -0.5**
SCER sogukcermik 5.84 46 *i* P **Pn 01 10 45.3 +0.2**
RMNI Mount Ramon 5.89 153 Pn **Pn 01 10 46.8 +0.8**
RMNI Mount Ramon 5.89 153 Pn **Pn 01 10 46.8 +0.8**
RMNI Mount Ramon 5.89 153 Pn **Pn 01 10 46.8 +0.7**
MALT Malatya 5.90 64 *e*PN **Pn 01 10 46.4 +0.4**
MALT Malatya 5.90 64 *e*Pn **Pn 01 10 45.6 -0.4**
MALT *e*Sn **Sn 01 11 51.4 -0.8**
MALT Malatya 5.90 64 *e*P **Pn 01 10 45.6 -0.4**
MALT *e* 01 11 51.4
MALT Malatya 5.90 64 ⇓*i*P **Pn 01 10 46.1 +0.1**
MALT Malatya 5.90 64 *e*P **Pn 01 10 45.6 -0.4**
MALT Malatya 5.90 64 *e*Pn **Pn 01 10 46.4 +0.4**
MALT *e*S **Sn 01 11 51.4 -0.8**
MYA Malataya 5.90 64 *e*PN **Pn 01 10 45.9 -0.2**
MYA Malataya 5.90 64 *e*Pn **Pn 01 10 45.9 -0.2**
LPK Lapseki 5.91 320 *e*PN **Pn 01 10 46.1 0.0**
LPK Lapseki 5.91 320 *e*Pn **Pn 01 10 46.1 0.0**
HHAG Hagoal 5.95 177 P **Pn 01 10 46.0 -0.8**
baz=176
HHAG Hagoal 5.95 177 P **Pn 01 10 46.0 -0.8**
KOT Kottamia 5.97 179 P **Pn 01 10 46.3 -0.8**
baz=179
KOT S **Sn 01 11 49.4 -4.6**
baz=179
KOT Kottamia 5.97 179 P **Pn 01 10 46.3 -0.8**
SQR 6.03 184 P **Pn 01 10 48.3 +0.5**
baz=185
SQR 6.03 184 P **Pn 01 10 48.3 +0.4**
GELI Tayfur-Gelibol 6.07 319 *e*PN **Pn 01 10 48.3 -0.1**
GELI Tayfur-Gelibol 6.07 319 *e*Pn **Pn 01 10 48.3 -0.1**
VAM Vamos 6.11 267 *e*P **Pn 01 10 48.8 -0.2**
SUZ 6.13 171 P **Pn 01 10 50.1 +0.9**
baz=171
SUZ 6.13 171 P **Pn 01 10 50.1 +0.8**
HMYD Mayadein 6.14 187 P **Pn 01 10 50.3 +0.8**
baz=188
HMYD Mayadein 6.14 187 P **Pn 01 10 50.3 +0.9**
HMAT Matruh 6.15 220 P **Pn 01 10 50.0 +0.6**
baz=220
HMAT Matruh 6.15 220 P **Pn 01 10 50.0 +0.6**
PRNI Paran 6.21 152 Pn **Pn 01 10 50.7 +0.4**
PRNI Paran 6.21 152 P **Pn 01 10 50.7 +0.4**
PRNI Paran 6.21 152 P **Pn 01 10 50.7 +0.4**
PRNI Paran 6.21 152 Pn **Pn 01 10 50.7 +0.4**
AYT Al 'Ayyat 6.21 184 P **Pn 01 10 49.7 -0.6**
baz=185
AYT Al 'Ayyat 6.21 184 P **Pn 01 10 49.7 -0.6**
FYM Al Fayyum 6.23 185 P **Pn 01 10 52.1 +1.5**
baz=186
FYM Al Fayyum 6.23 185 P **Pn 01 10 52.1 +1.5**
GADA Gvkgeada 6.25 315 *e*PN **Pn 01 10 50.6 -0.2**
GADA Gvkgeada 6.25 315 *e*Pn **Pn 01 10 50.6 -0.2**
HNKL Nakhl 6.27 161 P **Pn 01 10 50.5 -0.6**
baz=162
HNKL S **Sn 01 11 55.6 -5.8**
baz=162
HNKL Nakhl 6.27 161 P **Pn 01 10 50.6 -0.6**
HSAF As Saff 6.28 181 P **Pn 01 10 51.9 +0.6**
baz=182
HSAF As Saff 6.28 181 P **Pn 01 10 51.9 +0.6**
RSDY Resadiye-TOKAT 6.31 43 *e*PN **Pn 01 10 51.7 +0.1**
RSDY Resadiye-TOKAT 6.31 43 *e*Pn **Pn 01 10 51.7 +0.1**
GLL Jalalah 6.32 180 P **Pn 01 10 52.4 +0.6**
baz=181
GLL Jalalah 6.32 180 P **Pn 01 10 52.4 +0.6**
KRMI Paran Flat 6.32 155 Pn **Pn 01 10 52.0 +0.2**
KRMI S **Sn 01 12 01.1 -1.4**
KRMI Paran Flat 6.32 155 Pn **Pn 01 10 52.0 +0.2**
KRMI S **Sn 01 12 01.1 -1.4**
KRMI Paran Flat 6.32 155 Pn **Pn 01 10 52.0 +0.1**
KRMI Paran Flat 6.32 155 Sn **Sn 01 12 01.1 -1.4**
HNAT Natroun 6.33 188 P **Pn 01 10 53.1 +1.2**
baz=189
HNAT Natroun 6.33 188 P **Pn 01 10 53.2 +1.3**
KARN Karanos 6.34 268 *e*P **Pn 01 10 52.4 +0.3**
KARN Karanos 6.34 268 P **Pn 01 10 52.5 +0.4**
KARN S **Sn 01 12 00.3 -2.8**
KARN Karanos 6.34 268 P **Pn 01 10 52.5 +0.4**
KEMA Kemaliye 6.36 56 *i* P **Pn 01 10 52.1 -0.2**
KEMA Kemaliye 6.36 56 *i* P **Pn 01 10 52.2 -0.1**
LIA Limnos Island 6.50 310 P **Pn 01 10 55.6 +1.4**
LIA Limnos Island 6.50 310 P **Pn 01 10 55.6 +1.4**
HRFI Mount Harif 6.50 153 ⇓Pn **Pn 01 10 54.3 0.0**
HRFI Mount Harif 6.50 153 ⇓Pn **Pn 01 10 54.3 0.0**
HRFI Mount Harif 6.50 153 Pn **Pn 01 10 54.3 0.0**
HRFI Mount Harif 6.50 153 Sn **Sn 01 12 05.7 -1.3**
ZNM 6.59 171 P **Pn 01 10 56.2 +0.7**
baz=171
ZNM 6.59 171 P **Pn 01 10 56.2 +0.6**
PTL Penteli 6.61 291 *e*P **Pn 01 10 56.5 +0.7**
ZAF 6.65 173 P **Pn 01 10 56.9 +0.6**
baz=173
ZAF 6.65 173 P **Pn 01 10 56.9 +0.5**
MBRI Mt Berech 6.68 155 Pn **Pn 01 10 57.1 +0.4**
MBRI Mt Berech 6.68 155 Sn **Sn 01 12 10.2 -1.1**
AQBJ Aqaba 6.79 154 Pn **Pn 01 10 59.0 +0.8**
EIL Elat 6.80 155 P **Pn 01 10 58.8 +0.4**
comp=N,7.4nm,0.3s,baz=336,slow=9.5,SNR=66
EIL S **Sn 01 12 11.9 -2.5**
comp=N,17nm,0.3s,baz=54,slow=13,SNR=11
EIL Elat 6.80 155 P **Pn 01 10 58.8 +0.4**
EIL Elat 6.80 155 Pn **Pn 01 10 58.1 -0.4**
PTK Pertek 6.82 62 *e*PN **Pn 01 10 58.1 -0.4**
PTK Pertek 6.82 62 *e*Pn **Pn 01 10 58.1 -0.4**
NAIG Nisos Aigina 6.83 288 *e*P **Pn 01 10 59.4 +0.7**
SLUM 6.96 233 P **Pn 01 11 00.8 +0.1**
baz=233
SLUM AMP 01 12 00.0
comp=E,170μm,0.2s,logA/T=5.8,baz=233
SLUM 6.96 233 P **Pn 01 11 00.8 +0.2**
DID Didima 6.97 286 *e*P **Pn 01 11 01.9 +1.3**
KYTH Kithira 7.01 276 *e*P **Pn 01 11 00.9 -0.3**
VLI Veliai 7.11 279 *e*P **Pn 01 11 02.3 -0.2**
LTK Loutraki 7.29 289 *e*P **Pn 01 11 06.3 +1.3**
MARD Mardin 7.45 76 *i* P **Pn 01 11 06.1 -1.1**
KDZ Kurdzhali 7.53 321 *i* P **Pn 01 11 08.1 -0.2**

KDZ Kurdzhali 7.53 321 *i* P **Pn 01 11 08.1 -0.2**
HDHB Dhahab 7.59 160 P **Pn 01 11 09.9 +0.8**
baz=160
HDHB Dhahab 7.59 160 P **Pn 01 11 09.9 +0.8**
VLX Vlachokerasia 7.62 284 *e*P **Pn 01 11 10.5 +1.0**
HKAT Jabal Katrina 7.62 165 P **Pn 01 11 08.8 -0.8**
baz=165
HKAT Jabal Katrina 7.62 165 P **Pn 01 11 08.8 -0.8**
JMB Yambol 7.65 330 *i* P **Pn 01 11 10.8 +1.0**
JMB Yambol 7.65 330 *i* P **Pn 01 11 10.8 +1.0**
GRB Gharib 7.68 173 P **Pn 01 11 08.8 -1.5**
baz=173
GRB Gharib 7.68 173 P **Pn 01 11 08.8 -1.5**
GUR Goura 7.75 288 *e*P **Pn 01 11 12.8 +1.5**
RZN Rozhen 7.93 319 *i* P **Pn 01 11 13.9 +0.3**
RZN Rozhen 7.93 319 *i* P **Pn 01 11 13.9 +0.3**
AWBH 7.93 198 P **Pn 01 11 13.3 -0.5**
baz=199
AWBH 7.93 198 P **Pn 01 11 13.3 -0.4**
AGG Agios Georgios 8.06 295 *e*P **Pn 01 11 17.3 +1.8**
TR1 8.11 166 P **Pn 01 11 15.8 -0.5**
baz=166
TR1 8.11 166 P **Pn 01 11 15.8 -0.5**
EFP Efpalio 8.20 291 *e*P **Pn 01 11 19.2 +1.8**
PLD Plovdiv 8.23 321 *i* P **Pn 01 11 17.8 0.0**
PLD Plovdiv 8.23 321 *i* P **Pn 01 11 17.8 0.0**
MMB Musomiste 8.41 315 *i* P **Pn 01 11 19.8 -0.4**
MMB Musomiste 8.41 315 *i* P **Pn 01 11 19.8 -0.4**
RLS Riolos of Patr 8.45 288 *e*P **Pn 01 11 24.0 +3.2**
SWA2 8.47 220 P **Pn 01 11 20.4 -0.7**
baz=220
SWA2 AMP 01 12 00.0
comp=N,160μm,0.2s,logA/T=5.8,baz=220
SWA2 8.47 220 P **Pn 01 11 20.4 -0.8**
THL Klokotos Trika 8.48 298 *e*P **Pn 01 11 23.1 +1.9**
SZH Strazhica 8.58 331 *i* P **Pn 01 11 23.1 +0.6**
SZH Strazhica 8.58 331 *i* P **Pn 01 11 23.1 +0.6**
PVL Pavlikeni 8.79 328 *i* P **Pn 01 11 26.2 +0.9**
PVL Pavlikeni 8.79 328 *i* P **Pn 01 11 26.2 +0.9**
VAY Valandovo 8.94 310 *e*Pn **Pn 01 11 29.2 +1.7**
VLS Valsamata 9.15 288 *e*P **Pn 01 11 30.2 -0.2**
HFRF Wahat Farafira 9.20 199 P **Pn 01 11 31.0 0.0**
baz=200
HFRF Wahat Farafira 9.20 199 P **Pn 01 11 31.0 -0.1**
VTS Vitosha 9.36 318 ⇓P **Pn 01 11 34.8 +1.6**
VTS Vitosha 9.36 318 ⇓*i*P **Pn 01 11 34.8 +1.6**
VTS Vitosha 9.36 318 *i* P **Pn 01 11 33.7 +0.5**
VTS Vitosha 9.36 318 P **Pn 01 11 34.8 +1.6**
BIA Bitola 9.59 305 *e*Pn **Pn 01 11 37.6 +1.3**
KRUS Krusevo 9.81 307 *e*Pn **Pn 01 11 41.7 +2.4**
MLR Muntele Rosu 10.51 337 ⇑P **Pn 01 11 50.4 +1.6**
MLR Muntele Rosu 10.51 337 ⇑*i*P **Pn 01 11 50.4 +1.6**
MLR Muntele Rosu 10.51 337 P **Pn 01 11 50.4 +1.6**
HDK1 Dakhla 10.52 191 P **Pn 01 11 49.0 -0.1**
baz=192
HDK1 Dakhla 10.52 191 P **Pn 01 11 49.0 -0.1**
VRI Vrincioaia 10.62 341 ⇑P **Pn 01 11 51.2 +0.9**
VRI Vrincioaia 10.62 341 ⇑*i*P **Pn 01 11 51.2 +0.9**
VRI Vrincioaia 10.62 341 P **Pn 01 11 51.2 +0.9**
PLOR Plostina 10.63 341 ⇑P **Pn 01 11 50.8 +0.4**
PLOR Plostina 10.63 341 ⇑*i*P **Pn 01 11 50.8 +0.4**
PLOR Plostina 10.63 341 P **Pn 01 11 50.8 +0.4**
GZR Gura Zlata 11.63 327 ⇓*i*P **Pn 01 11 48.6 -15**
KIV Kislovodsk 11.65 43 *e*Pn **Pn 01 12 01.1 -3.2**
comp=N,11nm,0.8s
KIV Kislovodsk 11.65 43 *e*P **Pn 01 12 01.1 -3.2**
KIV pmax pmax
comp=Z,11nm,0.8s
ZEI Tsey 11.67 50 *e*P **Pn 01 12 06.5 +1.9**
ZEI pmax pmax
comp=Z,4.0nm,0.5s
ZEI Tsey 11.67 50 *e*P **Pn 01 12 06.5 +1.9**
comp=Z,4.0nm,0.5s
BZS Buzias 12.33 325 ⇑P **Pn 01 12 12.2 -1.2**
BZS Buzias 12.33 325 ⇑*i*P **Pn 01 12 12.2 -1.2**
BZS Buzias 12.33 325 P **Pn 01 12 12.2 -1.2**
BURAR Bucovina Array 12.64 340 ⇓P **Pn 01 12 18.6 +1.0**
BURAR Bucovina Array 12.64 340 ⇓*i*P **Pn 01 12 18.6 +1.0**
BURAR Bucovina Array 12.64 340 ⇓*i*P **Pn 01 12 18.6 +1.0**
CUC Castrocucco 13.17 293 *e*Pn **Pn 01 12 24.4 -0.2**
CUC Castrocucco 13.17 293 *e*Pn **Pn 01 12 24.4 -0.2**
VAE Valguarnera 13.95 282 P **Pn 01 12 36.5 +1.7**
comp=Z,0.9nm,0.3s,baz=78,slow=18,SNR=4.9
VAE S **Sn 01 14 56.9 -11**
comp=Z,1.7nm,0.3s,baz=118,slow=20,SNR=6.2
KOLS Kolonicke sedl 14.73 335 *e*P **Pn 01 12 50.0 +5.1**
comp=Z,5.1nm,0.8s
KOLS Kolonicke sedl 14.73 335 *e*P **Pn 01 12 50.0 +5.1**
KOLS pmax pmax
comp=Z,5.0nm,0.8s
KOLS Kolonicke sedl 14.73 335 *e*P **Pn 01 12 50.0 +5.1**
KOLS Kolonicke sedl 14.73 335 *e*P **Pn 01 12 50.0 +5.1**
comp=Z,5.1nm,0.8s
PSZ Piszkesteto 14.84 328 *e*Pn **Pn 01 12 44.2 -2.0**
PSZ Piszkesteto 14.84 328 *e*P **Pn 01 12 44.2 -2.0**
PSZ Piszkesteto 14.84 328 *e*Pn **Pn 01 12 44.2 -2.0**
KIEV Kiev 14.88 354 *e*Pn **Pn 01 12 50.4 +3.7**
comp=Z,17nm,1.0s
KIEV Kiev 14.88 354 *e*P **Pn 01 12 50.4 +3.7**
KIEV pmax pmax
comp=Z,17nm,1.0s
KIEV Kiev 14.88 354 *e*P **Pn 01 12 50.4 +3.7**
comp=Z,17nm,1.0s
AKASG Malin Array Be 14.89 354 P **Pn 01 12 49.5 +2.7**
comp=Z,2.5nm,0.3s,baz=178,slow=10,SNR=5.8
AKASG Malin Array Be 14.89 354 P **Pn 01 12 49.5 +2.7**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKASG Malin Array Be 14.89 354 P **Pn 01 12 49.5 +2.7**
comp=Z,3.0nm,0.3s
AQU L'Aquila 15.56 300 *e*Pn **Pn 01 12 57.9 +2.5**
comp=Z,51nm,1.3s
AQU L'Aquila 15.56 300 *e*P **Pn 01 12 57.9 +2.5**
AQU pmax pmax
comp=Z,51nm,1.3s
AQU L'Aquila 15.56 300 *e*P **Pn 01 12 57.9 +2.5**
comp=Z,51nm,1.3s
VYHS Vyhne 15.74 327 *e*P **Pn 01 12 59.3 +1.7**
comp=Z,2.9nm,1.1s
VYHS Vyhne 15.74 327 *e*P **Pn 01 12 59.3 +1.7**
VYHS pmax pmax
comp=Z,3.0nm,1.1s
VYHS Vyhne 15.74 327 *e*P **Pn 01 12 59.3 +1.7**
VYHS Vyhne 15.74 327 *e*P **Pn 01 12 59.3 +1.7**
comp=Z,2.9nm,1.1s
MORC Moravsky Berou 17.26 328 *e*P **Pn 01 13 14.7 -1.7**
comp=Z,1.0nm,0.5s
MORC Moravsky Berou 17.26 328 *e*P **Pn 01 13 14.7 -1.7**
MORC pmax pmax
comp=Z,1.0nm,0.5s
MORC Moravsky Berou 17.26 328 *e*P **Pn 01 13 14.7 -1.7**
comp=Z,1.0nm,0.5s
VRAC Vranov 17.35 325 P **Pn 01 13 18.0 +0.5**
baz=127,slow=5.1,SNR=2.6
VRAC LR LR 01 19 09.1
comp=Z,17nm,20.3s,baz=74,slow=34
VRAC Vranov 17.35 325 P **Pn 01 13 18.0 +0.5**
VRAC MLR MLR
comp=Z,17nm,20.3s
VRAC Vranov 17.35 325 P **Pn 01 13 18.0 +0.5**
comp=Z,17nm,20.3s
ABTA Abfaltersbach 17.97 313 ⇑*i*Pn **Pn 01 13 25.4 +0.5**
comp=Z,3.4nm,0.7s
ABTA Abfaltersbach 17.97 313 P **Pn 01 13 25.4 +0.4**
comp=Z,3.4nm,0.7s
KEST Kesra 18.12 276 P **Pn 01 13 28.6 +1.8**
comp=Z,0.1nm,0.3s,baz=70,slow=5.4,SNR=6.9
DPC Dobruska-Polom 18.22 327 *e*P **Pn 01 13 28.0 +0.1**
comp=Z,4.2nm,0.8s
DPC Dobruska-Polom 18.22 327 *e*P **Pn 01 13 28.0 0.0**
DPC pmax pmax
comp=Z,4.0nm,0.8s
DPC Dobruska-Polom 18.22 327 *e*P **Pn 01 13 28.0 0.0**
comp=Z,4.2nm,0.8s
GERES GERESS Array B 18.47 320 P **Pn 01 13 30.7 -0.4**
comp=Z,0.5nm,0.3s,baz=129,slow=7.1,SNR=16
GERES GERESS Array B 18.47 320 P **Pn 01 13 30.7 -0.4**
GERES GERESS Array B 18.47 320 P **Pn 01 13 30.7 -0.3**
GERES pmax pmax
comp=Z,1.0nm,0.3s
GERES GERESS Array B 18.47 320 P **Pn 01 13 30.7 -0.3**
comp=Z,1.0nm,0.3s
WTTA Wattenberg 18.74 313 ⇓*i*Pn **Pn 01 13 34.2 -0.1**
comp=Z,17nm,0.7s,SNR=15

WTTA Wattenberg 18.74 313 P **Pn 01 13 34.2 -0.1**
comp=Z,17nm,0.7s,SNR=15
PGF Pioggiola 18.75 298 *e*P **Pn 01 13 33.1 -1.3**
PGF Pioggiola 18.75 298 *e*P **Pn 01 13 33.1 -1.3**
PGF Pioggiola 18.75 298 *e*P **Pn 01 13 33.1 -1.3**
WATA Walderalm 18.82 314 ⇑*i*Pn **Pn 01 13 34.5 -0.6**
comp=Z,6.5nm,0.5s
WATA Walderalm 18.82 314 P **Pn 01 13 34.5 -0.6**
comp=Z,6.5nm,0.5s
WET Wettzell 19.09 320 *e*P **Pn 01 13 37.0 -1.3**
comp=Z,12nm,1.0s
WET Wettzell 19.09 320 *e*P **Pn 01 13 37.0 -1.3**
comp=Z,12nm,1.0s
WET Wettzell 19.09 320 *e*P **Pn 01 13 37.0 -1.3**
WET pmax pmax
comp=Z,12nm,1.0s
WET Wettzell 19.09 320 *e*P **Pn 01 13 37.0 -1.3**
comp=Z,12nm,1.0s
MOTA Moosalm 19.10 313 ⇑*i*Pn **Pn 01 13 37.4 -1.0**
comp=Z,10nm,0.7s,SNR=13
MOTA Moosalm 19.10 313 P **Pn 01 13 37.4 -1.1**
comp=Z,10nm,0.7s,SNR=13
FETA Feichten 19.17 312 ⇑*i*Pn **Pn 01 13 39.0 -0.3**
comp=Z,6.7nm,0.6s,SNR=9.0
FETA Feichten 19.17 312 P **Pn 01 13 39.0 -0.3**
comp=Z,6.7nm,0.6s,SNR=9.0
DAVOX Davos/Dischmat 19.58 310 P **Pn 01 13 43.3 -0.8**
comp=Z,0.8nm,0.3s,baz=140,slow=12,SNR=9.6
DAVOX Davos/Dischmat 19.58 310 P **Pn 01 13 43.3 -0.8**
DAVOX Davos/Dischmat 19.58 310 P **Pn 01 13 43.3 -0.8**
BRG Berggiesshubel 19.67 325 *e*P **Pn 01 13 43.0 -2.1**
comp=Z,9.0nm,0.8s
BRG Berggiesshubel 19.67 325 *i* P **Pn 01 13 43.0 -2.1**
comp=Z,8.9nm,0.8s
DAVA Damuels 19.80 312 *i* Pn **Pn 01 13 44.8 -1.9**
comp=Z,6.9nm,0.4s,SNR=8.2
DAVA Damuels 19.80 312 P **Pn 01 13 44.8 -1.9**
comp=Z,6.9nm,0.4s,SNR=8.2
ROTZ Rotzenmuhle 19.81 320 *e*P **Pn 01 13 44.6 -2.2**
comp=Z,10.0nm,1.3s
WERN Wernitzgruen 20.04 322 *e*P **P 01 13 47.1 +0.2**
comp=Z,4.0nm,0.6s
TANN Tannenbergstha 20.08 322 *e*P **P 01 13 47.3 0.0**
comp=Z,7.0nm,1.0s
GUNZ Gunzen 20.11 322 *e*P **P 01 13 48.0 +0.3**
comp=Z,9.0nm,0.7s
WERD Werda 20.18 322 *e*P **P 01 13 48.5 +0.1**
comp=Z,6.0nm,0.9s
GRA1 Grafenberg Arr 20.28 319 *e*P **P 01 13 49.6 0.0**
comp=Z,6.0nm,0.8s
GRA1 Grafenberg Arr 20.28 319 *e*P **P 01 13 49.6 0.0**
comp=Z,6.0nm,0.8s
GRF Grafenberg Arr 20.28 319 *e*P **P 01 13 49.6 0.0**
comp=Z,6.0nm,0.8s
GRF Grafenberg Arr 20.28 319 *e*P **P 01 13 49.6 0.0**
comp=Z,6.0nm,0.8s
GRF Grafenberg Arr 20.28 319 *e*P **P 01 13 49.6 0.0**
GRF pmax pmax
comp=Z,6.0nm,0.8s
GRF Grafenberg Arr 20.28 319 *e*P **P 01 13 49.6 0.0**
GRF pmax pmax
comp=Z,6.0nm,0.8s
GRF Grafenberg Arr 20.28 319 *e*P **P 01 13 49.6 0.0**
comp=Z,6.0nm,0.8s
CLL Collm 20.40 325 *e*P **P 01 13 50.3 -0.5**
comp=Z,10.0nm,1.5s
CLL Collm 20.40 325 *i* P **P 01 13 50.7 -0.1**
CLL Collm 20.40 325 *i* P **P 01 13 50.7 -0.1**
CLL Collm 20.40 325 *i* P **P 01 13 50.7 -0.1**
CLL Collm 20.40 325 *i* P **P 01 13 50.7 -0.1**
MOX Moxa 20.65 322 *e*P **P 01 13 53.9 +0.5**
comp=Z,11nm,1.1s
MOX Moxa 20.65 322 *e*P **P 01 13 53.8 +0.4**
comp=Z,11nm,1.2s
MOX Moxa 20.65 322 *e*P **P 01 13 53.9 +0.5**
comp=Z,11nm,1.1s
MOX Moxa 20.65 322 *e*P **P 01 13 53.9 +0.5**
MOX pmax pmax
comp=Z,11nm,1.1s
MOX Moxa 20.65 322 *e*P **P 01 13 53.9 +0.5**
comp=Z,11nm,1.1s
FRF La Foret Royal 20.66 299 *e*P **P 01 13 53.3 -0.4**
comp=Z,10nm,0.9s
FRF La Foret Royal 20.66 299 *e*P **P 01 13 53.3 -0.4**
comp=Z,5.2nm,0.9s
FRF La Foret Royal 20.66 299 *e*P **P 01 13 53.3 -0.4**
FRF pmax pmax
comp=Z,5.0nm,0.9s
FRF La Foret Royal 20.66 299 *e*P **P 01 13 53.3 -0.4**
comp=Z,5.2nm,0.9s
MBDF Montbardon 20.87 303 *e*P **P 01 13 55.7 -0.2**
comp=Z,14nm,0.9s
MBDF Montbardon 20.87 303 *e*P **P 01 13 55.7 -0.2**
comp=Z,7.2nm,0.9s
MBDF Montbardon 20.87 303 *e*P **P 01 13 55.7 -0.2**
MBDF pmax pmax
comp=Z,7.0nm,0.9s
MBDF Montbardon 20.87 303 *e*P **P 01 13 55.7 -0.2**
comp=Z,7.2nm,0.9s
STU Stuttgart 20.91 315 *e*P **P 01 13 55.9 -0.4**
comp=Z,13nm,0.8s
STU Stuttgart 20.91 315 *e*P **P 01 13 55.9 -0.5**
STU pmax pmax
comp=Z,13nm,0.8s
STU Stuttgart 20.91 315 *e*P **P 01 13 55.9 -0.5**
comp=Z,13nm,0.8s
BNI Bardonecchia 21.03 303 *e*P **P 01 13 57.6 0.0**
comp=Z,3.9nm,0.7s,mb3.9
BNI Bardonecchia 21.03 303 *e*P **P 01 13 57.6 0.0**
BNI pmax pmax
comp=Z,4.0nm,0.7s,mb3.9
BNI Bardonecchia 21.03 303 *e*P **P 01 13 57.6 0.0**
comp=Z,3.9nm,0.7s,mb3.9
SENIN Lac Senin/Sane 21.05 307 *e*P **P 01 13 57.4 -0.4**
comp=Z,8.7nm,0.7s,mb4.2
SENIN Lac Senin/Sane 21.05 307 *e*P **P 01 13 57.4 -0.4**
comp=Z,8.7nm,0.7s,mb4.2
LPG La Plagne 21.12 305 *e*P **P 01 13 59.1 +0.6**
comp=Z,19nm,0.9s,mb4.1
LPG La Plagne 21.12 305 *e*P **P 01 13 59.1 +0.6**
comp=Z,9.4nm,0.9s,mb4.1
LPG La Plagne 21.12 305 *e*P **P 01 13 59.1 +0.6**
LPG pmax pmax
comp=Z,9.0nm,0.9s,mb4.1
LPG La Plagne 21.12 305 *e*P **P 01 13 59.1 +0.6**
comp=Z,9.4nm,0.9s,mb4.1
LPL La Plagne 21.13 305 *e*P **P 01 13 59.0 +0.3**
comp=Z,12nm,0.6s,mb4.1
LPL La Plagne 21.13 305 *e*P **P 01 13 59.0 +0.3**
comp=Z,5.8nm,0.6s,mb4.1
LPL La Plagne 21.13 305 *e*P **P 01 13 59.0 +0.3**
LPL pmax pmax
comp=Z,6.0nm,0.6s,mb4.1
LPL La Plagne 21.13 305 *e*P **P 01 13 59.0 +0.3**
comp=Z,5.8nm,0.6s,mb4.1
BFO Black Forest 21.21 313 *e*P **P 01 13 59.8 +0.2**
comp=Z,11nm,1.2s,mb4.1
BFO Black Forest 21.21 313 *e*P **P 01 13 59.8 +0.3**
BFO pmax pmax
comp=Z,11nm,1.2s,mb4.1
BFO Black Forest 21.21 313 *e*P **P 01 13 59.8 +0.3**
comp=Z,11nm,1.2s,mb4.1
SMRF Simiane la Rot 21.51 300 *e*P **P 01 14 02.9 +0.1**
comp=Z,26nm,1.3s,mb4.1
SMRF Simiane la Rot 21.51 300 *e*P **P 01 14 02.9 +0.1**
comp=Z,26nm,1.3s,mb4.4
SMRF Simiane la Rot 21.51 300 *e*P **P 01 14 02.9 +0.1**
comp=Z,13nm,1.3s,mb4.1
ORIF Oris-en-Rattie 21.54 303 *e*P **P 01 14 02.8 -0.2**
comp=Z,5.8nm,0.8s,mb3.7
ORIF Oris-en-Rattie 21.54 303 *e*P **P 01 14 02.8 -0.2**
comp=Z,2.9nm,0.8s,mb3.7
ORIF Oris-en-Rattie 21.54 303 *e*P **P 01 14 02.8 -0.2**
ORIF pmax pmax
comp=Z,3.0nm,0.8s,mb3.7
ORIF Oris-en-Rattie 21.54 303 *e*P **P 01 14 02.8 -0.2**
comp=Z,2.9nm,0.8s,mb3.7
CDF Champ du Feu 21.88 312 *e*P **P 01 14 06.1 -0.5**
comp=Z,12nm,0.8s,mb4.0
CDF Champ du Feu 21.88 312 *e*P **P 01 14 06.1 -0.5**
comp=Z,5.8nm,0.8s,mb4.0
CDF Champ du Feu 21.88 312 *e*P **P 01 14 06.1 -0.5**
CDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.0
CDF Champ du Feu 21.88 312 *e*P **P 01 14 06.1 -0.5**
comp=Z,5.8nm,0.8s,mb4.0
HINF Hinteralfeld 21.88 311 *e*P **P 01 14 05.7 -1.0**

comp=Z,5.8nm,0.5s,mb3.9
HINF Hinteralfeld 21.88 311 *e*P **P 01 14 05.7 -1.0**
comp=Z,2.9nm,0.5s,mb3.9
HINF Hinteralfeld 21.88 311 *e*P **P 01 14 05.7 -1.0**
HINF pmax pmax
comp=Z,3.0nm,0.5s,mb3.9
HINF Hinteralfeld 21.88 311 *e*P **P 01 14 05.7 -1.0**
comp=Z,2.9nm,0.5s,mb3.9
CABF La Chapelle 21.92 307 *e*P **P 01 14 06.3 -0.8**
comp=Z,33nm,1.2s,mb4.3
CABF La Chapelle 21.92 307 *e*P **P 01 14 06.3 -0.8**
comp=Z,17nm,1.2s,mb4.2
CABF La Chapelle 21.92 307 *e*P **P 01 14 06.3 -0.8**
CABF pmax pmax
comp=Z,17nm,1.2s,mb4.2
CABF La Chapelle 21.92 307 *e*P **P 01 14 06.3 -0.8**
comp=Z,17nm,1.2s,mb4.3
CLZ Clausthal 22.00 323 *e*P **P 01 14 06.9 -1.0**
comp=Z,4.0nm,0.8s,mb3.8
CLZ Clausthal 22.00 323 *e*P **P 01 14 06.9 -1.0**
comp=Z,4.0nm,0.8s,mb3.8
CLZ Clausthal 22.00 323 *e*P **P 01 14 06.9 -1.0**
CLZ pmax pmax
comp=Z,4.0nm,0.8s,mb3.8
CLZ Clausthal 22.00 323 *e*P **P 01 14 06.9 -1.0**
comp=Z,4.0nm,0.8s,mb3.8
HAU Haudompre 22.27 311 *e*P **P 01 14 09.9 -0.9**
comp=Z,11nm,0.6s,mb4.0
HAU Haudompre 22.27 311 *e*P **P 01 14 09.9 -0.9**
comp=Z,5.3nm,0.6s,mb4.0
HAU Haudompre 22.27 311 *e*P **P 01 14 09.9 -0.9**
HAU pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
HAU Haudompre 22.27 311 *e*P **P 01 14 09.9 -0.9**
comp=Z,5.3nm,0.6s,mb4.0
VIVF Saint-Julien-l 22.35 302 *e*P **P 01 14 11.4 -0.2**
VIVF Saint-Julien-l 22.35 302 *e*P **P 01 14 11.4 -0.2**
VIVF Saint-Julien-l 22.35 302 *e*P **P 01 14 11.4 -0.2**
LASF Ste Croix 22.75 300 *e*P **P 01 14 15.0 -0.8**
LASF Ste Croix 22.75 300 *e*P **P 01 14 15.0 -0.8**
WLF Walferdange 23.10 314 *e*P **P 01 14 17.7 -1.5**
comp=Z,5.2nm,0.8s,mb3.9
WLF Walferdange 23.10 314 *e*P **P 01 14 17.7 -1.4**
WLF pmax pmax
comp=Z,5.0nm,0.8s,mb3.9
WLF Walferdange 23.10 314 *e*P **P 01 14 17.7 -1.4**
comp=Z,5.2nm,0.8s,mb3.9
SFTF Sexfontaines 23.16 310 *e*P **P 01 14 19.2 -0.5**
SFTF Sexfontaines 23.16 310 *e*P **P 01 14 19.2 -0.5**
MEZF Maizieres J'vi 23.26 311 *e*P **P 01 14 19.9 -0.8**
comp=Z,8.2nm,0.4s,mb4.1
MEZF Maizieres J'vi 23.26 311 *e*P **P 01 14 19.9 -0.8**
comp=Z,8.2nm,0.4s,mb4.4
MEZF Maizieres J'vi 23.26 311 *e*P **P 01 14 19.9 -0.8**
comp=Z,4.1nm,0.4s,mb4.1
SMF Signal de Mont 23.39 306 *e*P **P 01 14 21.6 -0.3**
comp=Z,30nm,0.9s,mb4.3
SMF Signal de Mont 23.39 306 *e*P **P 01 14 21.6 -0.3**
comp=Z,15nm,0.9s,mb4.3
SMF Signal de Mont 23.39 306 *e*P **P 01 14 21.6 -0.3**
SMF pmax pmax
comp=Z,15nm,0.9s,mb4.3
SMF Signal de Mont 23.39 306 *e*P **P 01 14 21.6 -0.3**
comp=Z,15nm,0.9s,mb4.3
LOR Lormes 23.58 307 *e*P **P 01 14 23.0 -0.6**
comp=Z,18nm,0.6s,mb4.3
LOR Lormes 23.58 307 *e*P **P 01 14 23.0 -0.6**
comp=Z,9.1nm,0.6s,mb4.3
LOR Lormes 23.58 307 *e*P **P 01 14 23.0 -0.6**
LOR pmax pmax
comp=Z,9.0nm,0.6s,mb4.3
LOR Lormes 23.58 307 *e*P **P 01 14 23.0 -0.6**
comp=Z,9.1nm,0.6s,mb4.2
SSF Saint Saulge 23.74 307 *e*P **P 01 14 23.9 -1.2**
comp=Z,15nm,0.7s,mb4.1
SSF Saint Saulge 23.74 307 *e*P **P 01 14 23.9 -1.2**
comp=Z,7.4nm,0.7s,mb4.1
SSF Saint Saulge 23.74 307 *e*P **P 01 14 23.9 -1.2**
SSF pmax pmax
comp=Z,7.0nm,0.7s,mb4.1
SSF Saint Saulge 23.74 307 *e*P **P 01 14 23.9 -1.2**
comp=Z,7.4nm,0.7s,mb4.1
AVF Avril sur Loir 23.76 306 *e*P **P 01 14 25.0 -0.2**
comp=Z,17nm,0.8s,mb4.1
AVF Avril sur Loir 23.76 306 *e*P **P 01 14 25.0 -0.2**
comp=Z,8.7nm,0.8s,mb4.1
AVF Avril sur Loir 23.76 306 *e*P **P 01 14 25.0 -0.2**
AVF pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
AVF Avril sur Loir 23.76 306 *e*P **P 01 14 25.0 -0.2**
comp=Z,8.7nm,0.8s,mb4.1
MTLF Montolieu 23.79 297 *e*P **P 01 14 26.0 +0.4**
comp=Z,4.7nm,0.7s,mb3.6
MTLF Montolieu 23.79 297 *e*P **P 01 14 26.0 +0.4**
comp=Z,2.3nm,0.7s,mb3.6
MTLF Montolieu 23.79 297 *e*P **P 01 14 26.0 +0.4**
MTLF pmax pmax
comp=Z,2.0nm,0.7s,mb3.6
MTLF Montolieu 23.79 297 *e*P **P 01 14 26.0 +0.4**
comp=Z,2.3nm,0.7s,mb3.6
AKTK Aktyubinsk 23.91 44 P **P 01 14 26.8 +0.2**
AKTK Aktyubinsk 23.91 44 P **P 01 14 26.8 +0.3**
comp=Z,4.0nm,0.7s,mb3.9
AKTO Aktyubinsk 23.91 44 P **P 01 14 26.8 +0.2**
comp=Z,3.7nm,0.7s,mb3.8,baz=251,slow=11,SNR=18
AKTO Aktyubinsk 23.91 44 P **P 01 14 26.8 +0.3**
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb3.9
CAF Calviac 24.17 301 *e*P **P 01 14 29.5 +0.5**
comp=Z,4.9nm,0.8s,mb3.6
CAF Calviac 24.17 301 *e*P **P 01 14 29.5 +0.5**
comp=Z,2.5nm,0.8s,mb3.6
CAF Calviac 24.17 301 *e*P **P 01 14 29.5 +0.5**
CAF pmax pmax
comp=Z,2.0nm,0.8s,mb3.5
CAF Calviac 24.17 301 *e*P **P 01 14 29.5 +0.5**
comp=Z,2.5nm,0.8s,mb3.6
BAIF Baives 24.40 314 *e*P **P 01 14 30.3 -0.7**
comp=Z,3.1nm,0.4s,mb3.7
BAIF Baives 24.40 314 *e*P **P 01 14 30.3 -0.7**
comp=Z,1.5nm,0.4s,mb3.7
BAIF Baives 24.40 314 *e*P **P 01 14 30.3 -0.7**
BAIF pmax pmax
comp=Z,2.0nm,0.4s,mb3.8
BAIF Baives 24.40 314 *e*P **P 01 14 30.3 -0.7**
comp=Z,1.5nm,0.4s,mb3.7
ABKAR Akbulak array 24.54 48 *e*P **P 01 14 32.5 +0.1**
comp=Z,1.2nm,0.5s,mb3.6
ABKAR Akbulak array 24.54 48 *e*P **P 01 14 32.5 +0.1**
comp=Z,1.2nm,0.5s,mb3.6
RJF Les Rejaudoux 24.63 302 *e*P **P 01 14 33.1 -0.1**
comp=Z,12nm,0.8s,mb4.1
RJF Les Rejaudoux 24.63 302 *e*P **P 01 14 33.1 -0.1**
comp=Z,6.2nm,0.8s,mb4.1
RJF Les Rejaudoux 24.63 302 *e*P **P 01 14 33.1 -0.1**
RJF pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
RJF Les Rejaudoux 24.63 302 *e*P **P 01 14 33.1 -0.1**
comp=Z,6.2nm,0.8s,mb4.1
LFF La Frestale 25.10 301 *e*P **P 01 14 37.7 +0.3**
LFF La Frestale 25.10 301 *e*P **P 01 14 37.7 +0.3**
LFF La Frestale 25.10 301 *e*P **P 01 14 37.7 +0.3**
EPF Esparros 25.12 296 *e*P **P 01 14 38.2 +0.6**
EPF Esparros 25.12 296 *e*P **P 01 14 38.2 +0.6**
EPF Esparros 25.12 296 *e*P **P 01 14 38.2 +0.6**
ETSF Etsaut 25.76 296 *e*P **P 01 14 43.9 +0.4**
comp=Z,10nm,0.7s,mb4.0
ETSF Etsaut 25.76 296 *e*P **P 01 14 43.9 +0.4**
comp=Z,5.1nm,0.7s,mb4.1
ETSF Etsaut 25.76 296 *e*P **P 01 14 43.9 +0.4**
ETSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
ETSF Etsaut 25.76 296 *e*P **P 01 14 43.9 +0.4**
comp=Z,5.1nm,0.7s,mb4.0
FINES FINESS Array B 25.80 354 P **P 01 14 42.4 -1.2**
comp=Z,2.0nm,0.4s,mb3.9,baz=159,slow=10,SNR=15
FINES FINESS Array B 25.80 354 P **P 01 14 42.4 -1.2**
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 25.80 354 P **P 01 14 42.4 -1.2**
comp=Z,2.0nm,0.4s,mb3.9
MFF Saint Martin d 26.04 304 *e*P **P 01 14 46.6 +0.7**
MFF Saint Martin d 26.04 304 *e*P **P 01 14 46.6 +0.7**
MFF Saint Martin d 26.04 304 *e*P **P 01 14 46.6 +0.7**
SJPF Ste Jean 26.27 296 *e*P **P 01 14 48.7 +0.7**
comp=Z,19nm,1.0s,mb4.2
SJPF Ste Jean 26.27 296 *e*P **P 01 14 48.7 +0.7**
comp=Z,9.4nm,1.0s,mb4.2
SJPF Ste Jean 26.27 296 *e*P **P 01 14 48.7 +0.7**
SJPF pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
SJPF Ste Jean 26.27 296 *e*P **P 01 14 48.7 +0.7**
comp=Z,9.4nm,1.0s,mb4.2
HFS Hagfors 26.88 340 P **P 01 14 52.3 -0.9**
comp=Z,2.1nm,0.8s,mb3.7,baz=144,slow=12,SNR=3.7
HFS Hagfors 26.88 340 P **P 01 14 52.3 -1.0**
HFS pmax pmax
comp=Z,2.0nm,0.8s
HFS Hagfors 26.88 340 P **P 01 14 52.3 -1.0**
comp=Z,2.0nm,0.8s,mb3.7
NAO01 NORSAR Array S 28.27 338 *e*P **P 01 15 04.8 -0.9**
comp=Z,2.7nm,0.8s,mb3.8
NAO01 NORSAR Array S 28.27 338 *e*P **P 01 15 04.8 -0.9**
comp=Z,2.7nm,0.8s,mb3.8
ESDC Sonseca Array 28.30 288 P **P 01 15 07.1 +0.9**
comp=Z,1.9nm,0.7s,mb3.7,baz=82,slow=9.7,SNR=9.8
ESDC Sonseca Array 28.30 288 P **P 01 15 07.1 +0.8**
NB2 NORSAR Subarra 28.32 339 P **P 01 15 05.1 -1.1**
comp=Z,0.7nm,0.6s,mb3.4,baz=138,slow=10
NOA NORSAR Array B 28.32 339 P **P 01 15 05.4 -0.8**
comp=Z,1.1nm,0.7s,mb3.5,baz=141,slow=9.4,SNR=4.1
NOA NORSAR Array B 28.32 339 P **P 01 15 05.4 -0.8**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 28.32 339 P **P 01 15 05.4 -0.8**
comp=Z,1.0nm,0.7s,mb3.5
EKA Eskdalemuir Ar 30.69 320 P **P 01 15 26.9 -0.3**
comp=Z,0.5nm,0.6s,mb3.4,baz=123,slow=10,SNR=3.6
EKA Eskdalemuir Ar 30.69 320 P **P 01 15 26.9 -0.3**
EKA Eskdalemuir Ar 30.69 320 P **P 01 15 26.9 -0.3**
EKA pmax pmax
comp=Z,1.0nm,0.6s
EKA Eskdalemuir Ar 30.69 320 P **P 01 15 26.9 -0.3**
comp=Z,1.0nm,0.6s,mb3.7
BVAR Borovoye Array 32.00 45 P **P 01 15 38.9 +0.2**
comp=Z,0.4nm,0.5s,mb3.4,baz=227,slow=5.3,SNR=4.1
BVAR Borovoye Array 32.00 45 P **P 01 15 38.9 +0.2**
BVAR Borovoye Array 32.00 45 P **P 01 15 38.9 +0.2**
ARCES ARCESS Array B 33.85 356 P **P 01 15 54.2 -0.5**
comp=Z,0.9nm,0.5s,mb3.9,baz=172,slow=9.9,SNR=11
ARCES ARCESS Array B 33.85 356 P **P 01 15 54.2 -0.5**
ARCES ARCESS Array B 33.85 356 P **P 01 15 54.2 -0.5**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES ARCESS Array B 33.85 356 P **P 01 15 54.2 -0.5**
comp=Z,1.0nm,0.5s,mb3.9
TKM2 Tokmak 2 34.33 65 *e*P **P 01 16 01.1 +2.0**
comp=Z,1.3nm,0.9s,mb3.8
TKM2 Tokmak 2 34.33 65 *e*P **P 01 16 01.1 +2.0**
TKM2 pmax pmax
comp=Z,1.0nm,0.9s,mb3.6
TKM2 Tokmak 2 34.33 65 *e*P **P 01 16 01.1 +2.0**
comp=Z,1.3nm,0.9s,mb3.8
TORD Torodi Ar. Bea 35.23 238 P **P 01 16 08.5 +1.4**
comp=Z,0.5nm,0.6s,mb3.5,baz=36,slow=8.9,SNR=6.5
KURK Kurchatov 36.57 51 *e*P **P 01 16 19.4 +1.2**
comp=Z,1.7nm,0.9s,mb4.0
KURK Kurchatov 36.57 51 *e*P **P 01 16 19.4 +1.2**
KURK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KURK Kurchatov 36.57 51 *e*P **P 01 16 19.4 +1.2**
comp=Z,1.7nm,0.9s,mb4.0
MKAR Makanchi Array 38.90 58 P **P 01 16 38.9 +1.0**
comp=Z,2.0nm,0.6s,mb4.1,baz=274,slow=7.5,SNR=19
MKAR Makanchi Array 38.90 58 P **P 01 16 38.9 +1.0**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 38.90 58 P **P 01 16 38.8 +0.9**
ZALV Zalesovo Beam 40.63 47 P **P 01 16 51.5 -0.7**
comp=Z,0.6nm,0.4s,mb3.8,baz=260,slow=8.9,SNR=3.8
ZALV Zalesovo Beam 40.63 47 P **P 01 16 51.5 -0.7**
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
LIC Lamto 44.77 238 *e*P **P 01 17 31.3 +5.2**
SONM Songino Array 54.85 53 P **P 01 18 43.0 +1.0**
comp=Z,0.3nm,0.5s,mb3.6,baz=258,slow=5.3,SNR=2.8
SONM Songino Array 54.85 53 P **P 01 18 43.0 +0.9**
SONM Songino Array 54.85 53 P **P 01 18 43.0 +0.9**
CMAR Chiang Mai Arr 61.21 87 P **P 01 19 27.7 +0.8**
comp=Z,0.9nm,0.3s,mb4.2,baz=299,slow=8.2,SNR=3.8
CMAR Chiang Mai Arr 61.21 87 P **P 01 19 27.7 +0.8**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 61.21 87 P **P 01 19 27.7 +0.8**
comp=Z,1.0nm,0.3s,mb4.3
KSRS Korea Array 73.54 56 P **P 01 20 44.5 +0.1**
comp=Z,1.3nm,0.7s,mb3.8,baz=292,slow=5.1,SNR=5.9
KSRS Korea Array 73.54 56 P **P 01 20 44.6 +0.2**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
KSRS Korea Array 73.54 56 P **P 01 20 44.6 +0.2**
comp=Z,1.0nm,0.7s,mb3.6

GUC 17 01:15:21.3±0.8, 21°.81S×68°.65W, h134km±14km, ML3.7, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**1.09**	**249**	*e*P	Pn		01 15 46.3	+0.9
MACH				*i* S	Sn		01 16 05.5	+1.7
TOCH	**Tocopilla**	**1.46**	**259**	*e*P	Pn		01 15 50.0	+0.8
TOCH				*i* S	Sn		01 16 11.4	+0.9
TOCH				AML	AML		01 16 13.4	
	comp=N,2μm,0.1s							
MECH	**Mejillones**	**2.10**	**232**	*e*P	Pn		01 15 57.2	+0.6
MECH				*e*S	Sn		01 16 25.1	+1.3
MECH				AML	AML		01 16 35.4	
	comp=N,236nm,0.3s							
ANCH	**Antofagasta**	**2.47**	**221**	*e*P	Pn		01 16 01.0	-0.3
ANCH				*e*S	Sn		01 16 30.8	-1.2

NIED ***17*** *01:47:00, 41°.80N×144°.00E, h23km, Mw3.9 Best double couple: M=9.10000×10¹⁴ NP1:φ=278.00000°, δ=88.00000°, λ=13.00000°. NP2:φ=188.00000°, δ=77.00000°, λ=178.00000°.*
IDC ***17*** *01:47:14.7±0.8, 41°.75N×144°.01E, h0km, mb3.8/13, mb1 4.0/15, mb1mx3.9/27, mbtmp3.8/15, ML3.5/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/32, Error ellipse: s-maj=21.2km s-min=16.3km az=152.0*
ISCJB ***17*** *01:47:17.9±0.9, 41°.69N±0°.05×144°.00E±0°.08, h37km±7km, mb3.9/16, Error ellipse: s-maj=10.8km s-min=7.0km az=30.8*
JMA ***17*** *01:47:18.9±0.2, 41°.78N×143°.99E, h35km±4km, M4.0*
NEIC ***17*** *01:47:19.9±0.7, 41°.76N×143°.93E, h36km±7km, mb4.1/3, Error ellipse: s-maj=8.9km s-min=6.4km az=137.0*

ISC 17 01:47:18.6±1.4, 41°.77N±0°.04×143°.98E±0°.07, h25km±10km, n39, σ0°62/42, mb3.9/16, 3C-1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.66**	**292**	*e*Pn	Pn		01 47 31.4	-0.9
ERM				*e*Sn	Sn		01 47 42.0	+0.2
JEM	**Erimo**	**0.66**	**292**	⇑P	Pb		01 47 31.3	-0.2
JCH	**Churui**	**0.96**	**332**	P	Pn		01 47 36.2	-0.2
JCH				*e*S	Sn		01 47 49.8	+0.6
JNBK	**Urakawa-nobuka**	**1.04**	**300**	⇓P	Pn		01 47 38.2	+0.6
JOB	**Onbets**	**1.14**	**355**	P	Pn		01 47 38.8	-0.1
JAK	**Akkeshi**	**1.33**	**23**	⇑P	Pn		01 47 41.0	-0.6
JAR	**Ashorobuto**	**1.53**	**354**	⇑P	Pn		01 47 43.8	-0.5
JAR				*e*S	Sn		01 48 03.1	-0.3
JBT2	**Biratori 2**	**1.56**	**311**	P	Pn		01 47 44.3	-0.4
JFR	**Furan**	**1.73**	**324**	P	Pn		01 47 47.2	+0.2
ASAJ	**Asahikawa**	**2.55**	**337**	Pn	Pn		01 47 59.8	+1.4
	3.8nm,0.3s,baz=282,slow=17,SNR=5.5							
ASAJ				Lg			01 48 43.5	
	9.7nm,0.3s,baz=245,slow=20,SNR=4.3							
ASAJ	**Asahikawa**	**2.55**	**337**	*e*Pn	Pn		01 47 59.9	+1.6
MJAR	**Matsushiro Arr**	**6.88**	**222**	Pn	Pn		01 48 57.5	-0.3
	1.7nm,0.3s,baz=30,slow=13,SNR=7.9							
MAJO	**Matsushiro**	**6.88**	**223**	*e*Pn	Pn		01 48 58.3	+0.5
	7.1nm,0.6s							
MAT	**Matsushiro**	**6.88**	**223**	P	Pn		01 48 57.5	-0.3
MAT				*e*S	Sn		01 50 19.5	+4.2
JHJ	**Hachijo jima 2**	**9.26**	**202**	Sn	Sn		01 51 05.5	-8.3
	10nm,0.3s,baz=253,slow=19,SNR=3.4							
KSRS	**Korea Array**	**13.11**	**256**	Pn	Pn		01 50 23.9	+0.9
	0.3nm,0.3s,baz=72,slow=13,SNR=3.7							
CN2	**Changchun**	**13.76**	**285**	*e*P	Pn		01 50 41.3	+9.3
CN2				*e*sP			01 50 45.3	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				LR	LR			
	comp=Z,200nm,17.0s							
PEA0B	**Petropavlovsk-**	**14.62**	**35**	*e*Pn	Pn		01 50 44.4	+0.7
PETK	**Petropavlovsk-**	**14.62**	**35**	LR	LR		01 56 45.5	
	comp=Z,35nm,19.2s,baz=226,slow=39							
SONM	**Songino Array**	**27.15**	**296**	P	P		01 53 00.1	+0.5
	comp=Z,1.1nm,0.5s,mb3.6,baz=84,slow=10,SNR=7.1							
ZAA0	**Zalesovo Array**	**40.36**	**308**	*e*P	P		01 54 54.1	+0.1
ZALV	**Zalesovo Beam**	**40.36**	**308**	P	P		01 54 53.7	-0.2
	comp=Z,1.8nm,0.7s,mb3.9,baz=88,slow=7.7,SNR=8.1							
ZALV	**Zalesovo Beam**	**40.36**	**308**	P	P		01 54 53.7	-0.2
KDAK	**Kodiak Island**	**42.30**	**45**	P	P		01 55 08.8	-1.0
	comp=Z,5.2nm,0.7s,mb4.3,baz=292,slow=8.8,SNR=3.8							
MK31	**Makanchi Array**	**43.45**	**298**	*e*P	P		01 55 18.7	-0.6
MKAR	**Makanchi Array**	**43.45**	**298**	P	P		01 55 18.9	-0.4
	comp=Z,0.3nm,0.4s,mb3.4,baz=81,slow=10,SNR=7.3							
MKAR				LR	LR		02 14 48.6	
	comp=Z,25nm,20.0s,baz=356,slow=38							
ILAR	**Eielson Array**	**44.45**	**35**	P	P		01 55 27.2	+0.2
	comp=Z,1.1nm,0.7s,mb3.7,baz=282,slow=9.4,SNR=12							
KURK	**Kurchatov**	**44.72**	**305**	*e*P	P		01 55 28.0	-1.3
	comp=Z,1.9nm,0.6s,mb4.1							
TKM2	**Tokmak 2**	**49.25**	**296**	*e*P	P		01 56 05.6	+0.7
	comp=Z,2.1nm,0.6s,mb4.3							
INK	**Inuvik**	**49.28**	**29**	P	P		01 56 04.2	-0.5
	comp=Z,1.0nm,0.4s,mb4.2,baz=256,slow=4.2,SNR=6.7							
INK	**Inuvik**	**49.28**	**29**	P	P		01 56 04.2	-0.5
ABKAR	**Akbulak array**	**56.47**	**309**	*e*P	P		01 56 57.6	-0.5
	comp=Z,0.7nm,0.4s,mb4.0							
YKA	**Yellowknife Ar**	**58.73**	**32**	P	P		01 57 13.8	0.0
	comp=Z,0.1nm,0.5s,mb3.1,baz=303,slow=7.0,SNR=2.5							
WRA	**Warramunga Arr**	**62.05**	**190**	P	P		01 57 36.6	-0.2
	comp=Z,0.7nm,0.3s,mb4.3,baz=7.8,slow=6.7,SNR=22							
FINES	**FINESS Array B**	**65.55**	**332**	P	P		01 57 59.4	-0.2
	comp=Z,0.8nm,0.6s,mb4.0,baz=63,slow=8.8,SNR=4.0							
NOA	**NORSAR Array B**	**70.58**	**338**	P	P		01 58 30.8	-0.2
	comp=Z,0.3nm,0.6s,mb3.4,baz=36,slow=6.0,SNR=2.8							
NVAR	**Mina Array Bea**	**70.62**	**56**	P	P		01 58 32.9	+1.1
	comp=Z,0.7nm,0.6s,mb3.8,baz=294,slow=6.7,SNR=5.4							
PDAR	**Pinedale Array**	**72.97**	**48**	P	P		01 58 46.3	+0.5
	comp=Z,0.4nm,0.6s,mb3.5,baz=250,slow=3.0,SNR=4.4							
TXAR	**Lajitas Array**	**85.70**	**54**	P	P		01 59 56.1	+0.7
	comp=Z,1.2nm,0.6s,mb4.3,baz=298,slow=4.0,SNR=19							

IDC 17 02:03:33.4±2.4, 13°.04N×145°.30E, h54km±17km, mb3.3/4, mb1 3.6/4, mb1mx3.3/23, mbtmp3.3/4, Error ellipse: s-maj=43.0km s-min=24.4km az=89.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.69**	**322**	P	Pn		02 03 47.9	+0.7
	142nm,0.3s,baz=240,slow=19,SNR=73							
GUMO				S	Sn		02 03 58.8	+1.6
	848nm,0.3s,baz=16,slow=19,SNR=71							
WRA	**Warramunga Arr**	**34.51**	**198**	P	P		02 10 16.5	0.0
	0.3nm,0.4s,baz=21,slow=9.9,SNR=3.3							
MKAR	**Makanchi Array**	**62.17**	**316**	P	P		02 13 49.2	+0.1
	0.2nm,0.4s,baz=98,slow=8.8,SNR=3.8							
ILAR	**Eielson Array**	**68.88**	**25**	P	P		02 14 32.1	0.0
	0.3nm,0.4s,baz=252,slow=5.6,SNR=10							
BVAR	**Borovoye Array**	**70.61**	**322**	P	P		02 14 43.1	+0.1
	0.5nm,0.3s,baz=83,slow=12,SNR=4.5							

IDC 17 02:21:40.2±8.4, 20°.27S×178°.02W, h586km±98km, mb3.1/6, mb1 3.3/6, mb1mx3.1/17, mbtmp3.1/6, Error ellipse: s-maj=87.4km s-min=43.8km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.50**	**264**	P	P		02 27 32.6	+0.1
	5.1nm,0.6s,baz=90,slow=9.8,SNR=7.8							
STKA	**Stephens Creek**	**37.88**	**244**	P	P		02 28 08.4	0.0
	1.7nm,0.5s,baz=90,slow=7.4,SNR=5.6							
ASAR	**Alice Springs**	**44.56**	**256**	P	P		02 29 01.4	+0.1
	7.1nm,0.7s,baz=96,slow=7.6,SNR=86							
WRA	**Warramunga Arr**	**44.62**	**262**	P	P		02 29 01.4	-0.5
	2.6nm,0.5s,baz=98,slow=8.3,SNR=20							
TXAR	**Lajitas Array**	**86.94**	**57**	P	P		02 33 24.4	+0.3
	0.1nm,0.7s,baz=240,slow=3.6,SNR=2.2							
ILAR	**Eielson Array**	**88.09**	**13**	P	P		02 33 28.4	-0.2
	0.3nm,1.0s,baz=203,slow=6.6,SNR=3.5							
AKASG	**Malin Array Be**	**142.80**	**331**	PKP	PKPdf		02 40 05.5	-2.0
	0.7nm,0.4s,baz=47,slow=3.6,SNR=5.5							
BRTR	**Keskin Array B**	**146.67**	**313**	PKPbc	PKPbc		02 40 17.7	+0.5
	0.6nm,0.6s,baz=164,slow=6.6,SNR=3.9							

ISCJB ***17*** *02:31:13.0±0.4, 42°.84N±0°.04×144°.17E±0°.04, h86km±3km, mb3.7/10, Error ellipse: s-maj=7.4km s-min=4.5km az=152.3*
JMA ***17*** *02:31:13.6±0.1, 42°.85N×144°.18E, h82km±1km, M3.4 Broadband fault plane solution: P waves. NP1: φ=51.00000°, δ=35.00000°, λ=137.00000°. NP2: φ=178.00000°, δ=67.00000°, λ=63.00000°. Principal axes: T Plg=59.0000°, Azm=50.0000°; N Plg=25.0000°, Azm=189.0000°; P Plg=18.0000°, Azm=288.0000°;*
JMA Felt II J1.
NEIC ***17*** *02:31:14.9±0.8, 42°.90N×144°.09E, h88km±9km, mb4.0/1 Error ellipse: s-maj=14.8km s-min=13.3km az=193.0*
MOS ***17*** *02:31:17.0±1.3, 43°.37N×144°.05E, h100km, mb4.0/5, Error ellipse: s-maj=21.1km s-min=16.2km az=47.6*
IDC ***17*** *02:31:18.3±2.9, 43°.18N×144°.06E, h107km±17km, mb3.5/10, mb1 3.7/11, mb1mx3.5/26, mbtmp3.5/11, Error ellipse: s-maj=39.9km s-min=17.8km az=172.0*

ISC 17 02:31:13.9±0.4, 42°.84N±0°.04×144°.17E±0°.04, h80km±3km, n42, σ0°73/59, mb3.7/10, 5C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JOB	**Onbets**	**0.25**	**286**	⇑P	Pn		02 31 26.3	+0.4
JOB				*e*S	Sn		02 31 35.4	+0.7
JAK	**Akkeshi**	**0.42**	**67**	⇓P	Pn		02 31 26.8	-0.2
JAK				*e*S	Sn		02 31 36.4	-0.2
JAR	**Ashorobuto**	**0.55**	**328**	⇑P	Pn		02 31 28.0	0.0
JAR				*e*S	Sn		02 31 38.3	-0.1
JCH	**Churui**	**0.63**	**250**	⇑P	Pn		02 31 29.1	+0.3
JCH				*e*S	Sn		02 31 40.0	+0.1
JNK	**Nakash**	**0.85**	**28**	⇓P	Pn		02 31 30.7	-0.5
JNK				*e*S	Sn		02 31 43.0	-1.0
ERM	**Erimo**	**1.11**	**223**	*e*Pn	Pn		02 31 35.6	+1.4
ERM	**Erimo**	**1.11**	**223**	*e*PN	Pn		02 31 35.7	+1.5
JEM	**Erimo**	**1.11**	**223**	P	Pn		02 31 33.9	-0.3
JTKR	**Abashiri--Toko**	**1.15**	**351**	P	Pn		02 31 35.0	+0.3
JTKR				*e*S	Sn		02 31 51.3	+0.9
JNBK	**Urakawa-nobuka**	**1.18**	**242**	⇑P	Pn		02 31 34.9	-0.2
JNBK				*e*S	Sn		02 31 50.5	-0.6
JFR	**Furan**	**1.20**	**286**	P	Pn		02 31 35.3	0.0
JFR				*e*S	Sn		02 31 51.1	-0.3
NEM2	**Nemuro 2**	**1.27**	**65**	P	Pn		02 31 35.3	-0.9
NEM2				*e*S	Sn		02 31 50.8	-2.2
JRA	**Rausu**	**1.30**	**32**	P	Pn		02 31 36.8	+0.1
JRA				*e*S	Sn		02 31 54.1	+0.3
JMP	**Maruseppu**	**1.31**	**334**	⇓P

YUK smax
comp=N,1μm,0.4s
YUK smax
comp=E,598nm,0.4s
YUK smax
comp=N,2μm,0.4s
YUK smax
comp=E,1μm,0.4s
KUR Kuril'sk 3.59 47 PN **Pn 02 32 10.0 +2.9**
KUR *eS* **Sn 02 32 50.0 +1.7**
KUR smax
comp=N,160nm,0.4s
KUR smax
comp=E,80nm,0.4s
KSRS Korea Array 13.53 252 P **Pn 02 34 28.7 +6.3**
comp=E,0.3nm,0.3s,baz=64,slow=14,SNR=5.5
KSRS Korea Array 13.53 252 P **Pn 02 34 28.7 +6.3**
SONM Songino Array 26.83 294 P **P 02 36 46.8 +0.2**
comp=E,1.4nm,0.6s,mb3.6,baz=80,slow=8.3,SNR=9.5
SONM Songino Array 26.83 294 P **P 02 36 46.8 +0.2**
SONM pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 43.08 297 P **P 02 39 05.2 -0.5**
comp=Z,0.2nm,0.4s,mb3.2,baz=79,slow=10,SNR=3.1
MKAR Makanchi Array 43.08 297 P **P 02 39 05.2 -0.5**
ILAR Eielson Array 43.51 36 P **P 02 39 08.6 -0.3**
comp=Z,1.8nm,0.8s,mb3.8,baz=281,slow=9.4,SNR=19
ILAR Eielson Array 43.51 36 P **P 02 39 08.6 -0.3**
ILAR pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 48.28 30 P **P 02 39 46.1 -0.4**
comp=Z,2.2nm,0.9s,mb4.0,baz=333,slow=5.8,SNR=5.8
INK Inuvik 48.28 30 *eP* **P 02 39 45.7 -0.8**
comp=Z,1.0nm,0.5s,mb3.9
INK Inuvik 48.28 30 P **P 02 39 46.1 -0.4**
INK pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 57.76 33 P **P 02 40 56.3 +0.1**
comp=Z,0.3nm,0.5s,mb3.5,baz=299,slow=5.2,SNR=3.3
YKA Yellowknife Ar 57.76 33 P **P 02 40 56.3 +0.2**
FINES FINESS Array B 64.68 332 P **P 02 41 41.8 -1.1**
comp=Z,2.4nm,1.0s,mb4.0,baz=39,slow=9.0,SNR=3.4
FINES FINESS Array B 64.68 332 P **P 02 41 41.8 -1.1**
FINES pmax pmax
comp=Z,2.0nm,1.0s
HFS Hagfors 69.67 336 P **P 02 42 13.7 -0.7**
comp=Z,2.4nm,1.0s,mb4.0,baz=76,slow=7.9,SNR=4.2
HFS Hagfors 69.67 336 P **P 02 42 13.7 -0.7**
HFS pmax pmax
comp=Z,2.0nm,1.0s
NVAR Mina Array Bea 69.90 56 P **P 02 42 17.4 +1.1**
comp=Z,0.8nm,0.6s,mb3.7,baz=291,slow=5.5,SNR=9.4
PDAR Pinedale Array 72.15 48 P **P 02 42 30.2 +0.4**
comp=Z,0.8nm,0.5s,mb3.8,baz=251,slow=0.7,SNR=13
TXAR Lajitas Array 84.96 54 P **P 02 43 40.6 +0.2**
comp=Z,0.4nm,0.6s,mb3.5,baz=290,slow=3.7,SNR=6.7
TXAR Lajitas Array 84.96 54 P **P 02 43 40.6 +0.2**

*ISCJB **17** 02:34:39.6±0.9, 24°.33S±0°.05×67°.2W±0°.1, h166km±20km, Error ellipse: s-maj=19.2km s-min=7.9km az=6.4*
*IDC **17** 02:34:40.2±1.7, 24°.30S×67°.12W, h152km±19km, mb3.8/1, mb1 3.6/5, mb1mx3.3/18, mbtmp3.5/5, Error ellipse: s-maj=30.2km s-min=14.5km az=94.0*
*NEIC **17** 02:34:40.9±1.0, 24°.29S×67°.13W, h157km±14km, mb3.8/1, Error ellipse: s-maj=17.7km s-min=11.5km az=110.0*
ISC 17 02:34:40.4±0.8, 24°.32S±0°.05×67°.2W±0°.1, h152km±19km**, n12,** σ0$96/16**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**5.64**	**213**	*e*Pn	**Pn**	**02 36 02.5**	**+0.2**
	22nm,0.7s						
LCO				*e*Sn	**Sn**	02 37 05.9	-0.5
CFAA	**Coronel Fontan**	**7.32**	**187**	P	**Pn**	**02 36 25.6**	**+0.9**
	0.1nm,0.3s,baz=2.8,slow=11,SNR=12						
CFAA				S	**Sn**	02 37 45.2	-1.3
	0.2nm,0.3s,baz=258,slow=21,SNR=10						
CFAA	**Coronel Fontan**	**7.32**	**187**	P	**Pn**	**02 36 25.6**	**+0.9**
CFAA				S	**Sn**	02 37 45.2	-1.4
LPAZ	**La Paz**	**8.04**	**353**	P	**Pn**	**02 36 35.7**	**+1.3**
	3.7nm,0.3s,baz=157,slow=7.1,SNR=148						
LPAZ				S	**Sn**	02 38 03.1	-0.9
	0.1nm,0.3s,baz=348,slow=15,SNR=3.2						
LPAZ	**La Paz**	**8.04**	**353**	P	**Pn**	**02 36 35.7**	**+1.3**
LPAZ				S	**Sn**	02 38 03.1	-0.9
CPUP	**Villa Florida**	**9.12**	**105**	P	**Pn**	**02 36 48.9**	**+0.2**
	0.2nm,0.3s,baz=264,slow=15,SNR=3.0						
CPUP	**Villa Florida**	**9.12**	**105**	P	**Pn**	**02 36 48.9**	**+0.2**
PLCA	**Paso Flores**	**16.61**	**189**	P	**Pn**	**02 38 25.8**	**+1.4**
	0.1nm,0.3s,baz=353,slow=12,SNR=3.5						
PLCA	**Paso Flores**	**16.61**	**189**	*e*P	**Pn**	**02 38 26.3**	**+2.0**
	3.0nm,0.6s						
BDFB	**Brasilia**	**19.94**	**68**	P	**P**	**02 39 00.3**	**-0.4**
	1.9nm,0.3s,baz=240,slow=11,SNR=19						
TORD	**Torodi Ar. Bea**	**76.82**	**69**	P	**P**	**02 46 14.9**	**-1.0**
	1.3nm,0.5s,baz=254,slow=6.0,SNR=21						
MKAR	**Makanchi Array**	**146.86**	**40**	PKPbc	PKPbc	02 54 04.3	-0.3
	0.9nm,0.6s,baz=292,slow=3.8,SNR=9.7						

*IDC **17** 02:53:34.4±1.3, 71°.12N×6°.64W, h0km, mb3.7/2, mb1 3.7/5, mb1mx3.3/28, mbtmp3.6/5, ML3.0/4, MS2.6/5, Ms1 2.6/5, ms1mx2.4/28, Error ellipse: s-maj=39.1km s-min=12.6km az=176.0*
*ISCJB **17** 02:53:36.1±1.0, 71°.0N±0°.1×6°.1W±0°.2, h21km±15km, mb3.5/2, MS2.3/2, Error ellipse: s-maj=20.1km s-min=9.2km az=180.0*
*NEIC **17** 02:53:36.0±0.9, 71°.04N×6°.51W, h10km, Error ellipse: s-maj=16.1km s-min=9.1km az=172.0*
*CSEM **17** 02:53:36.8±0.3, 70°.99N×6°.25W, h10km, ML2.6, Error ellipse: s-maj=16.7km s-min=4.8km az=6.0*
*BER **17** 02:53:39.9±2.1, 70°.98N×6°.53W, h10km, MD1.9, ML2.6*
ISC 17 02:53:38.1±1.0, 71°.0N±0°.1×6°.4W±0°.2, h24km±14km**, n37,** σ0$73/41**, mb3.5/2, MS2.3/2, 8C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.62**	**268**	⇑*iP*	**Pb**	**02 53 50.5**	**+0.3**
JNE	**Jan Mayen East**	**0.62**	**268**	⇑*iP*	**Pb**	**02 53 50.5**	**+0.3**
	SNR=99						
JNW	**Jan Mayen West**	**0.66**	**272**	⇑*iP*	**Pb**	**02 53 51.2**	**+0.2**
JNW				*e*S	**Sb**	02 53 59.8	+0.2
JNW				AML	AML	02 54 00.6	
	comp=Z,2μm,0.3s						
JNW	**Jan Mayen West**	**0.66**	**272**	⇑*iP*	**Pb**	**02 53 51.2**	**+0.3**
	SNR=70						
JNW				*e*S	**Sb**	02 53 59.8	+0.1
	comp=Z,2μm,0.3s,SNR=70						
JMIC	**Jan Mayen**	**0.69**	**268**	⇑*iP*	**Pb**	**02 53 51.4**	**-0.1**
JMIC				*e*S	**Sb**	02 54 00.4	-0.2
JMIC	**Jan Mayen**	**0.69**	**268**	Pn	**Pn**	**02 53 51.1**	**-1.1**
	comp=Z,165nm,0.3s,baz=134,slow=2.9,SNR=269						
JMIC				Sn	**Sb**	02 54 00.4	-0.2
	comp=Z,254nm,0.3s,baz=144,slow=19,SNR=72						
JMIC	**Jan Mayen**	**0.69**	**268**	Pn	**Pn**	**02 53 51.2**	**-1.1**
JMIC	**Jan Mayen**	**0.69**	**268**	⇑*iP*	**Pb**	**02 53 51.4**	**-0.1**
	SNR=70						
JMIC				*e*S	**Sb**	02 54 00.4	-0.1
	SNR=70						
JMI	**Jan Mayen**	**0.77**	**264**	⇑*iP*	**Pb**	**02 53 52.8**	**+0.1**
JMI	**Jan Mayen**	**0.77**	**264**	⇑*iP*	**Pb**	**02 53 52.8**	**+0.1**
	SNR=70						
LOF	**Lofoten**	**7.54**	**103**	*e*P	**Pn**	**02 55 25.1**	**-1.2**
LOF				AML	AML	02 56 51.4	
	comp=Z,3.8nm,0.6s						
LOF	**Lofoten**	**7.54**	**103**	*e*P	**Pn**	**02 55 25.1**	**-1.2**
	SNR=47						
KONS	**Konsvik**	**8.39**	**113**	*e*P	**Pn**	**02 55 37.3**	**-0.7**
FLOS	**Flostrand**	**8.57**	**114**	*e*P	**Pn**	**02 55 40.4**	**0.0**
TRO	**Tromso**	**8.63**	**87**	*e*P	**Pn**	**02 55 40.3**	**-0.9**
TRO	**Tromso**	**8.63**	**87**	*e*P	**Pn**	**02 55 40.3**	**-0.9**
	SNR=47						
MOR8	**Moi Rana**	**9.01**	**112**	*e*P	**Pn**	**02 55 46.8**	**+0.5**
MOR8				*e*S	**Sn**	02 57 20.4	-6.4
MOR8				AML	AML	02 57 28.8	
	comp=Z,2.3nm,0.5s						
MOR8	**Moi Rana**	**9.01**	**112**	*e*P	**Pn**	**02 55 46.8**	**+0.5**
MOR8				*e*S	**Sn**	02 57 20.4	-6.4
MOR8	**Moi Rana**	**9.01**	**112**	*e*P	**Pn**	**02 55 46.8**	**+0.4**
	SNR=47						
NSS	**Namsos**	**9.49**	**124**	*e*P	**Pn**	**02 55 51.8**	**-1.2**
NSS				AML	AML	02 57 36.5	
	comp=Z,2.9nm,0.6s						
NSS	**Namsos**	**9.49**	**124**	*e*P	**Pn**	**02 55 51.8**	**-1.2**
	SNR=47						
KTK1	**Kautokeino**	**10.28**	**87**	*e*P	**Pn**	**02 56 04.7**	**+0.8**
KTK1	**Kautokeino**	**10.28**	**87**	*e*P	**Pn**	**02 56 04.7**	**+0.9**
	SNR=47						
ARCES	**ARCESS Array B**	**10.81**	**83**	Pn	**Pn**	**02 56 11.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=289,slow=12,SNR=8.7						
ARCES				LR	LR	02 59 49.2	
	comp=Z,28nm,21.8s,baz=146,slow=34						
ARCES	**ARCESS Array B**	**10.81**	**83**	Pn	**Pn**	**02 56 11.8**	**+0.8**
NOA	**NORSAR Array B**	**12.24**	**136**	LR	LR	03 00 04.9	
	comp=Z,31nm,19.6s,baz=330,slow=32						
HFS	**Hagfors**	**13.62**	**133**	Pn	**Pn**	**02 56 49.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=338,slow=13,SNR=3.4						
HFS	**Hagfors**	**13.62**	**133**	Pn	**Pn**	**02 56 49.3**	**-0.2**
EKA	**Eskdalemuir Ar**	**15.81**	**173**	Pn	**Pn**	**02 57 19.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=350,slow=12,SNR=2.7						
EKA	**Eskdalemuir Ar**	**15.81**	**173**	Pn	**Pn**	**02 57 19.1**	**+0.3**
FINES	**FINESS Array B**	**15.99**	**110**	Pn	**Pn**	**02 57 22.6**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=323,slow=10,SNR=5.1						
FINES				LR	LR	03 02 49.8	
	comp=Z,47nm,19.3s,baz=312,slow=34						
FINES	**FINESS Array B**	**15.99**	**110**	Pn	**Pn**	**02 57 22.5**	**+1.5**
DAVOX	**Davos/Dischmat**	**25.54**	**153**	LR	LR	03 09 58.0	
	comp=Z,13nm,18.8s,MS2.5,baz=271,slow=38						
BVAR	**Borovoye Array**	**37.04**	**77**	P	**P**	**03 00 45.3**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.4,baz=353,slow=10,SNR=1.9						
BVAR	**Borovoye Array**	**37.04**	**77**	P	**P**	**03 00 45.3**	**-0.1**
YKA	**Yellowknife Ar**	**37.86**	**314**	LR	LR	03 15 46.9	
	comp=Z,2.7nm,19.1s,MS2.1,baz=30,slow=35						
TORD	**Torodi Ar. Bea**	**58.05**	**171**	P	**P**	**03 03 29.9**	**+1.0**
	comp=Z,0.5nm,0.8s,mb3.6,baz=344,slow=8.6,SNR=4.9						

*ISCJB **17** 02:57:41.0±0.2, 47°.20N±0°.01×7°.49E±0°.02, h9km±2km, Error ellipse: s-maj=2.1km s-min=1.9km az=25.7*
*NEIC **17** 02:57:42.9, 47°.23N×7°.55E, h8km, ML2.5(LDG), ML2.3(STR), ML2.1(ZUR), After ZUR.*
*ZUR **17** 02:57:42.9, 47°.23N×7°.55E, h8km±1km, ML2.1/15*
*CSEM **17** 02:57:42.1±0.1, 47°.22N×7°.53E, h15km, ML2.6/22, Error ellipse: s-maj=2.1km s-min=1.7km az=140.0*
*GEN **17** 02:57:43.6, 47°.19N×7°.58E, h1km, ML2.0*
*STR **17** 02:57:43.4±0.2, 47°.26N×7°.55E, h10km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **17** 02:57:43.0±0.1, 47°.22N×7°.53E, h8km, Md2.7/2, Ml2.5/18, Error ellipse: s-maj=1.2km s-min=0.8km az=132.0*
*BGR **17** 02:57:45.0±1.1, 47°.29N×7°.64E, h10km, ML2.1/3, Error ellipse: s-maj=10.0km s-min=3.3km az=42.0*
*ROM **17** 02:57:45.4±0.8, 47°.19N×7°.46E, h10km, Md2.5/4, Ml1.9/1, Error ellipse: s-maj=11.5km s-min=3.5km az=139.0*
*VIE **17** 02:57:45.2±0.4, 47°.16N×7°.72E, h13km±2km, mb1.7/1, ML2.2/2, Error ellipse: s-maj=2.7km s-min=2.4km az=37.0*
21 km NW of Luzern
ISC 17 02:57:42.2±0.2, 47°.22N±0°.01×7°.52E±0°.02, h16km±2km**, n137,** σ1$01/250**, 25C-9D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALST	**Balsthal**	**0.17**	**46**	⇑*iPg*	**Pg**	**02 57 46.5**	**0.0**
	3μm,0.2s						
BALST				*e*Sg	**Sg**	02 57 48.9	-0.5
	3μm,0.2s						
BALST	**Balsthal**	**0.17**	**46**	⇑*iPg*	**Pg**	**02 57 46.5**	**0.0**
	3μm,0.2s						
BALST				*e*Sg	**Sg**	02 57 48.9	-0.5
	3μm,0.2s						
BBS	**Basel-Blauen**	**0.25**	**359**	Pg	**Pg**	**02 57 48.3**	**+0.6**
BBS				Sg	**Sg**	02 57 51.6	+0.2
BBS	**Basel-Blauen**	**0.25**	**359**	Pg	**Pg**	**02 57 48.3**	**+0.6**
BBS				Sg	**Sg**	02 57 51.6	+0.2
BOURR	**Bourrignon**	**0.26**	**312**	⇓*iPg*	**Pg**	**02 57 48.9**	**+1.0**
	236nm,0.5s						
BOURR				*e*Sg	**Sg**	02 57 53.1	+1.3
	236nm,0.5s						
BOURR	**Bourrignon**	**0.26**	**312**	⇓*iPg*	**Pg**	**02 57 48.9**	**+1.0**
	236nm,0.5s						
BOURR				*e*Sg	**Sg**	02 57 53.1	+1.3
	236nm,0.5s						
LOMF	**Lomont**	**0.49**	**286**	Pg	**Pg**	**02 57 53.1**	**+1.2**
LOMF				Sg	**Sg**	02 57 59.9	+1.5
LOMF	**Lomont**	**0.49**	**286**	Pg	**Pg**	**02 57 53.1**	**+1.2**
LOMF				Sg	**Sg**	02 57 59.9	+1.5
SULZ	**Cheisacher**	**0.51**	**52**	⇓*iPg*	**Pg**	**02 57 52.8**	**+0.5**
	131nm,0.4s						
SULZ				*e*Sg	**Sg**	02 57 59.4	+0.2
	131nm,0.4s						
SULZ	**Cheisacher**	**0.51**	**52**	⇓*iPg*	**Pg**	**02 57 52.8**	**+0.5**
	131nm,0.4s						
SULZ				*e*Sg	**Sg**	02 57 59.4	+0.2
	131nm,0.4s						
WIMIS	**Wimmis**	**0.56**	**172**	⇓*iPg*	**Pg**	**02 57 54.0**	**+0.8**
	71nm,0.4s						
WIMIS	**Wimmis**	**0.56**	**172**	⇓*iPg*	**Pg**	**02 57 54.0**	**+0.8**
	71nm,0.4s						
TORNY	**Torny/Romont**	**0.58**	**221**	⇑*iPg*	**Pg**	**02 57 55.0**	**+1.3**
	138nm,0.1s						
TORNY				*e*Sg	**Sg**	02 57 57.3	-4.2
	138nm,0.1s						
TORNY	**Torny/Romont**	**0.58**	**221**	⇑*iPg*	**Pg**	**02 57 55.0**	**+1.3**
	138nm,0.1s						
HASLI	**Hasliberg/Brie**	**0.63**	**136**	⇓*iPg*	**Pg**	**02 58 03.4**	**+8.8**
	94nm,0.2s						
MOF	**Molkenrain**	**0.69**	**338**	Pg	**Pg**	**02 57 56.5**	**+0.9**
MOF				Sg	**Sg**	02 58 06.9	+2.2
MOF	**Molkenrain**	**0.69**	**338**	Pg	**Pg**	**02 57 56.5**	**+0.9**
MOF				Sg	**Sg**	02 58 06.9	+2.2
FELD	**Feldberg im Sc**	**0.74**	**27**	Pg	**Pg**	**02 57 56.8**	**+0.2**
FELD				Sg	**Sg**	02 58 06.2	-0.1
FELD	**Feldberg im Sc**	**0.74**	**27**	Pg	**Pg**	**02 57 56.8**	**+0.2**
FELD				Sg	**Sg**	02 58 06.2	-0.1
ZUR	**Degenried**	**0.74**	**78**	⇑*iPg*	**Pg**	**02 57 55.2**	**-1.4**
	434nm,0.2s						
ZUR	**Degenried**	**0.74**	**78**	⇑*iPg*	**Pg**	**02 57 55.2**	**-1.4**
	434nm,0.2s						
HINF	**Hinteralfeld**	**0.75**	**323**	*e*Pn	**Pn**	**02 57 58.5**	**+0.5**
	SNR=1.0						
HINF				*e*Sg	**Sg**	02 58 07.1	+0.4
HINF				*e*Sn	**Sn**	02 58 09.2	+0.2
	81nm,0.2s,SNR=1.0						
HINF	**Hinteralfeld**	**0.75**	**323**	*e*Pg	**Pg**	**02 57 57.5**	**+0.7**
HINF				*e*Pn	**Pn**	02 57 58.5	+0.5
HINF				*e*Sg	**Sg**	02 58 07.1	+0.4
HINF				*e*Sn	**Sn**	02 58 09.2	+0.2
HINF	**Hinteralfeld**	**0.75**	**323**	*e*Pg	**Pg**	**02 57 57.5**	**+0.7**
BRANT	**Les Verrieres**	**0.77**	**249**	⇑*iP*	**Pb**	**02 57 58.1**	**+1.1**
	117nm,0.3s						
BRANT	**Les Verrieres**	**0.77**	**249**	⇑*iP*	**Pb**	**02 57 58.1**	**+1.1**
	117nm,0.3s						
FLACH	**Flaach**	**0.80**	**63**	⇑*iPg*	**Pg**	**02 57 56.8**	**-0.9**
	79nm,0.2s						
FLACH	**Flaach**	**0.80**	**63**	⇑*iPg*	**Pg**	**02 57 56.8**	**-0.9**
	79nm,0.2s						
SLE	**Schleitheim**	**0.86**	**50**	⇑*iPg*	**Pg**	**02 57 58.4**	**-0.5**
	156nm,0.2s						
SLE	**Schleitheim**	**0.86**	**50**	⇑*iPg*	**Pg**	**02 57 58.4**	**-0.5**
	156nm,0.2s						
TRULL	**Truellikon**	**0.90**	**61**	⇑*iPg*	**Pg**	**02 58 00.0**	**+0.3**
	84nm,0.2s						
TRULL	**Truellikon**	**0.90**	**61**	⇑*iPg*	**Pg**	**02 58 00.0**	**+0.3**
	84nm,0.2s						
WILA	**Wila**	**0.97**	**78**	⇑*iPg*	**Pg**	**02 57 59.0**	**-1.9**
	607nm,0.3s						
WILA	**Wila**	**0.97**	**78**	⇑*iPg*	**Pg**	**02 57 59.0**	**-1.9**
	607nm,0.3s						
STEIN	**Stein am Rhein**	**1.02**	**63**	⇑*iPg*	**Pg**	**02 58 00.1**	**-1.9**
	42nm,0.3s						
STEIN	**Stein am Rhein**	**1.02**	**63**	⇑*iPg*	**Pg**	**02 58 00.1**	**-1.9**
	42nm,0.3s						
ECH	**Echery**	**1.03**	**347**	Pg	**Pg**	**02 58 02.7**	**+0.7**
ECH				Sg	**Sg**	02 58 16.5	+1.0
ECH	**Echery**	**1.03**	**347**	Pg	**Pg**	**02 58 02.7**	**+0.7**
ECH				Sg	**Sg**	02 58 16.5	+1.0
WEIN	**Weingarten**	**1.05**	**72**	⇑*iPg*	**Pg**	**02 58 01.2**	**-1.2**
	135nm,0.3s						
WEIN	**Weingarten**	**1.05**	**72**	⇑*iPg*	**Pg**	**02 58 01.2**	**-1.2**
	135nm,0.3s						
OG01	**Vacheresse**	**1.06**	**213**	Pg	**Pg**	**02 58 03.9**	**+1.3**
OG01				Sg	**Sg**	02 58 20.0	+3.6
OG01	**Vacheresse**	**1.06**	**213**	Pg	**Pg**	**02 58 03.9**	**+1.3**
OG01				Sg	**Sg**	02 58 20.0	+3.6
GIMEL	**St. Georges /**	**1.10**	**232**	⇑*iP*	**Pb**	**02 58 02.2**	**-0.5**
	107nm,0.2s						
GIMEL	**St. Georges /**	**1.10**	**232**	⇑*iP*	**Pb**	**02 58 02.2**	**-0.5**
	107nm,0.2s						
HAU	**Haudompre**	**1.12**	**315**	*e*Pg	**Pg**	**02 58 04.5**	**+0.8**
HAU				*e*Sg	**Sg**	02 58 18.6	+0.3
	55nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**1.12**	**315**	*e*Pn	**Pn**	**02 58 03.3**	**+0.2**
HAU				*e*Pg	**Pg**	02 58 04.5	+0.8
HAU				*e*Sg	**Sg**	02 58 18.6	+0.3
HAU	**Haudompre**	**1.12**	**315**	*e*Pn	**Pn**	**02 58 03.3**	**+0.2**
	SNR=1.0						
HAU	**Haudompre**	**1.12**	**315**	*e*Pg	**Pg**	**02 58 04.5**	**+0.8**
HAU				*e*Sg	**Sg**	02 58 18.6	+0.3
	27nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**1.15**	**239**	*e*Pg	**Pg**	**02 58 04.9**	**+0.5**
CABF	**La Chapelle**	**1.15**	**239**	*e*P	**Pn**	**02 58 06.0**	**+2.5**
	SNR=1.0						
CABF				*e*Sg	**Sg**	02 58 20.1	+0.7
	11nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**1.15**	**239**	*e*Pn	**Pn**	**02 58 04.1**	**+0.6**
CABF				*e*Pg	**Pg**	02 58 04.9	+0.5
CABF				*e*P		02 58 06.0	
CABF				*e*Sg	**Sg**	02 58 20.1	+0.7
CABF	**La Chapelle**	**1.15**	**239**	*e*Pn	**Pn**	**02 58 04.1**	**+0.6**
	SNR=1.0						
CABF	**La Chapelle**	**1.15**	**239**	*e*Pg	**Pg**	**02 58 04.9**	**+0.5**
CABF	**La Chapelle**	**1.15**	**239**	*e*P	**Pn**	**02 58 06.0**	**+2.5**
	SNR=1.0						
CABF				*e*Sg	**Sg**	02 58 20.1	+0.7
	5.7nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**1.21**	**352**	*e*P	**Pn**	**02 58 06.2**	**+1.9**
	SNR=1.0						
CDF				*e*Sg	**Sg**	02 58 21.1	-0.1
	38nm,0.4s						
CDF	**Champ du Feu**	**1.21**	**352**	*e*Pn	**Pn**	**02 58 04.7**	**+0.4**
CDF				*e*Pg	**Pg**	02 58 05.3	-0.1
CDF				*e*P		02 58 06.2	
CDF				*e*Sg	**Sg**	02 58 21.1	-0.1
CDF	**Champ du Feu**	**1.21**	**352**	*e*Pn	**Pn**	**02 58 04.7**	**+0.4**
	SNR=1.0						
CDF	**Champ du Feu**	**1.21**	**352**	*e*P	**Pn**	**02 58 06.2**	**+1.9**
	SNR=1.0						
CDF				*e*Sg	**Sg**	02 58 21.1	-0.1
	19nm,0.4s						
EMV	**Vieux Emosson**	**1.23**	**200**	Pg	**Pg**	**02 58 06.7**	**+0.8**
EMV				Sg	**Sg**	02 58 23.2	+1.3
EMV	**Vieux Emosson**	**1.23**	**200**	Pg	**Pg**	**02 58 06.7**	**+0.8**
EMV				Sg	**Sg**	02 58 23.2	+1.3
SPAK	**Spaichingen-Ko**	**1.23**	**44**	Pg	**Pg**	**02 58 06.1**	**+0.1**
SPAK				Sg	**Sg**	02 58 22.1	0.0
SPAK	**Spaichingen-Ko**	**1.23**	**44**	Pg	**Pg**	**02 58 06.1**	**+0.1**
SPAK				Sg	**Sg**	02 58 22.1	0.0
BFO	**Black Forest**	**1.24**	**26**	*e*Pg	**Pg**	**02 58 05.9**	**-0.2**
BFO				*e*Sg	**Sg**	02 58 22.2	-0.1
BFO	**Black Forest**	**1.24**	**26**	*e*Pn	**Pn**	**02 58 06.0**	**+1.2**
BFO				*e*Sn	**Sn**	02 58 21.9	+0.7
BFO	**Black Forest**	**1.24**	**26**	Pg	**Pg**	**02 58 05.9**	**-0.2**
BFO				*e*Sn	**Sn**	02 58 21.9	+0.7
BFO				Sg	**Sg**	02 58 22.2	-0.1
THEF	**They Montfort**	**1.44**	**315**	Pg	**Pg**	**02 58 10.8**	**+0.9**
THEF				Sg	**Sg**	02 58 29.3	+0.6
THEF	**They Montfort**	**1.44**	**315**	Pg	**Pg**	**02 58 10.8**	**+0.9**
THEF				Sg	**Sg**	02 58 29.3	+0.6
MRGE	**Morge**	**1.48**	**192**	Pg	**Pg**	**02 58 12.2**	**+1.6**
MRGE				Sg	**Sg**	02 58 30.7	+0.8
	17nm,0.6s						
MRGE	**Morge**	**1.48**	**192**	Pg	**Pg**	**02 58 12.2**	**+1.6**
MRGE				Sg	**Sg**	02 58 30.7	+0.8
	17nm,0.6s						
DAVA	**Damuels**	**1.61**	**87**	*e*Pg	**Pg**	**02 58 13.6**	**+0.4**
DAVA				*e*Sg	**Sg**	02 58 33.9	-0.2
DAVA	**Damuels**	**1.61**	**87**	⇑*iPn*	**Pn**	**02 58 11.7**	**+1.8**
DAVA				⇓*iPg*	**Pg**	02 58 13.5	+0.3
DAVA				⇓*iSg*	**Sg**	02 58 34.4	+0.3
	12nm,0.2s						
DAVA	**Damuels**	**1.61**	**87**	Pn	**Pn**	**02 58 11.7**	**+1.8**
DAVOX	**Davos/Dischmat**	**1.68**	**104**	Pg	**Pg**	**02 58 15.2**	**+0.8**
DAVOX				Sg	**Sg**	02 58 36.8	+0.7
TRAV	**Traversella**	**1.71**	**175**	Pg	**Pg**	**02 58 16.3**	**+1.3**
TRAV				Sg	**Sg**	02 58 37.5	+0.2
TRAV	**Traversella**	**1.71**	**175**	P	**Pn**	**02 58 13.0**	**+1.8**
TRAV	**Traversella**	**1.71**	**175**	Pg	**Pg**	**02 58 16.3**	**+1.3**
TRAV				S	**Sn**	02 58 33.0	+0.2
TRAV				Sg	**Sg**	02 58 37.5	+0.2
LSD	**Lago del Serru**	**1.78**	**189**	P	**Pn**	**02 58 16.2**	**+4.1**
LSD				S	**Sn**	02 58 38.4	+4.0
LPL	**La Plagne**	**1.79**	**198**	*e*Pg	**Pg**	**02 58 16.6**	**+0.2**
	SNR=1.0						
LPL				*e*Sg	**Sg**	02 58 40.3	+0.7
	6.4nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**1.79**	**198**	*e*Pg	**Pg**	**02 58 16.6**	**+0.2**
	SNR=1.0						
LPL				*e*Sg	**Sg**	02 58 40.3	+0.7
	3.2nm,0.4s,SNR=1.0						
LPG	**La Plagne**	**1.80**	**197**	*e*Pg	**Pg**	**02 58 16.9**	**+0.2**
	SNR=1.0						
LPG		

SMF	**Signal de Mont**	**2.58 259**	*e*Pn	**Pn**	**02 58 23.4**	**+0.2**
	SNR=1.0					
SMF	**Signal de Mont**	**2.58 259**	*e*Pg	**Pg**	**02 58 31.1**	**-0.5**
SMF			*e*Sn	**Sn**	**02 58 53.0**	**-1.2**
	SNR=1.0					
SMF			*e*Sg	**Sg**	**02 59 04.1**	**-1.0**
	2.2nm,0.2s,SNR=1.0					
WLF	**Walferdange**	**2.61 340**	*e*Sg	**Sg**	**02 59 06.8**	**+0.8**
WLF	**Walferdange**	**2.61 340**	Sg	**Sg**	**02 59 06.8**	**+0.8**
SSF	**Saint Saulge**	**2.74 268**	*e*Pg	**Pg**	**02 58 33.9**	**-0.8**
SSF			*e*Sn	**Sn**	**02 58 55.5**	**-2.6**
	SNR=1.0					
SSF			*e*Sg	**Sg**	**02 59 08.6**	**-1.6**
	2.6nm,0.3s,SNR=1.0					
SSF	**Saint Saulge**	**2.74 268**	*e*Pn	**Pn**	**02 58 25.5**	**+0.1**
SSF			*e*Pg	**Pg**	**02 58 33.9**	**-0.8**
SSF			*e*Sn	**Sn**	**02 58 55.5**	**-2.6**
SSF			*e*Sg	**Sg**	**02 59 08.6**	**-1.6**
SSF	**Saint Saulge**	**2.74 268**	*e*Pn	**Pn**	**02 58 25.5**	**+0.1**
	SNR=1.0					
SSF	**Saint Saulge**	**2.74 268**	*e*Pg	**Pg**	**02 58 33.9**	**-0.8**
SSF			*e*Sn	**Sn**	**02 58 55.5**	**-2.6**
	SNR=1.0					
SSF			*e*Sg	**Sg**	**02 59 08.6**	**-1.6**
	1.3nm,0.3s,SNR=1.0					
WTTA	**Wattenberg**	**2.81 88**	*e*Sg	**Sg**	**02 59 11.6**	**-0.8**
WTTA	**Wattenberg**	**2.81 88**	Sg	**Sg**	**02 59 11.6**	**-0.8**
AVF	**Avril sur Loir**	**2.88 263**	*e*Pg	**Pg**	**02 58 36.3**	**-1.0**
AVF			*e*Sg	**Sg**	**02 59 12.6**	**-2.0**
	1.7nm,0.3s,SNR=1.0					
AVF	**Avril sur Loir**	**2.88 263**	*e*Pn	**Pn**	**02 58 27.3**	**0.0**
AVF			*e*P		02 58 29.7	
AVF			*e*Pg	**Pg**	**02 58 36.3**	**-1.0**
AVF			*e*Sg	**Sg**	**02 59 12.6**	**-2.0**
AVF	**Avril sur Loir**	**2.88 263**	*e*Pn	**Pn**	**02 58 27.3**	**0.0**
	SNR=1.0					
AVF	**Avril sur Loir**	**2.88 263**	*e*Pg	**Pg**	**02 58 36.3**	**-1.0**
AVF			*e*Sg	**Sg**	**02 59 12.6**	**-2.0**
	0.9nm,0.3s,SNR=1.0					
TNS	**Taunus Mts**	**3.07 11**	*e*Sg	**Sg**	**02 59 20.6**	**-0.2**
TNS	**Taunus Mts**	**3.07 11**	Sg	**Sg**	**02 59 20.6**	**-0.1**
VIVF	**Saint-Julien-l**	**3.08 221**	*e*Pg	**Pg**	**02 58 40.2**	**-1.0**
VIVF			*e*Sn	**Sn**	**02 59 04.6**	**-1.9**
	SNR=1.0					
VIVF			*e*Sg	**Sg**	**02 59 19.6**	**-1.5**
	2.7nm,0.2s,SNR=1.0					
VIVF	**Saint-Julien-l**	**3.08 221**	*e*Pn	**Pn**	**02 58 30.0**	**-0.1**
VIVF			*e*Pg	**Pg**	**02 58 40.2**	**-1.0**
VIVF			*e*Sn	**Sn**	**02 59 04.6**	**-1.9**
VIVF			*e*Sg	**Sg**	**02 59 19.6**	**-1.5**
VIVF	**Saint-Julien-l**	**3.08 221**	*e*Pn	**Pn**	**02 58 30.0**	**-0.1**
VIVF	**Saint-Julien-l**	**3.08 221**	*e*Pg	**Pg**	**02 58 40.2**	**-1.0**
VIVF			*e*Sn	**Sn**	**02 59 04.6**	**-1.9**
	SNR=1.0					
VIVF			*e*Sg	**Sg**	**02 59 19.6**	**-1.5**
	1.4nm,0.2s,SNR=1.0					
BGF	**Bois d'Agland**	**3.27 260**	*e*Pg	**Pg**	**02 58 44.1**	**-0.7**
BGF			*e*Sg	**Sg**	**02 59 26.2**	**-0.9**
	5.7nm,0.4s,SNR=1.0					
BGF	**Bois d'Agland**	**3.27 260**	*e*Pg	**Pg**	**02 58 44.1**	**-0.7**
BGF			*e*Sg	**Sg**	**02 59 26.2**	**-0.9**
	2.8nm,0.4s,SNR=1.0					
HYF	**Humbligny**	**3.32 273**	*e*Pg	**Pg**	**02 58 44.8**	**-1.0**
HYF			*e*Sg	**Sg**	**02 59 27.3**	**-1.5**
HYF	**Humbligny**	**3.32 273**	*e*Pg	**Pg**	**02 58 44.8**	**-1.0**
HYF			*e*Sg	**Sg**	**02 59 27.3**	**-1.5**
GRA1	**Grafenberg Arr**	**3.50 44**	Pg	**Pg**	**02 58 48.3**	**-0.8**
GRA1			Sg	**Sg**	**02 59 32.5**	**-1.8**
GRF	**Grafenberg Arr**	**3.50 44**	*e*Pg	**Pg**	**02 58 48.3**	**-0.7**
GRF			*e*Sg	**Sg**	**02 59 32.5**	**-1.9**
RJOB	**Jochberg**	**3.62 80**	*e*Sg	**Sg**	**02 59 36.6**	**-1.8**
RJOB	**Jochberg**	**3.62 80**	Sg	**Sg**	**02 59 36.6**	**-1.7**
LASF	**Ste Croix**	**4.05 221**	*e*Pg	**Pg**	**02 58 58.1**	**-1.7**
LASF			*e*Sg	**Sg**	**02 59 50.5**	**-1.8**
	1.5nm,0.3s					
LASF	**Ste Croix**	**4.05 221**	*e*Pn	**Pn**	**02 58 43.4**	**0.0**
LASF			*e*Pg	**Pg**	**02 58 58.1**	**-1.7**
LASF			*e*Sg	**Sg**	**02 59 50.5**	**-1.8**
LASF	**Ste Croix**	**4.05 221**	*e*Pn	**Pn**	**02 58 43.4**	**0.0**
LASF	**Ste Croix**	**4.05 221**	*e*Pg	**Pg**	**02 58 58.1**	**-1.7**
LASF			*e*Sg	**Sg**	**02 59 50.5**	**-1.8**
	0.8nm,0.3s					
WET	**Wettzell**	**4.07 60**	*e*Sg	**Sg**	**02 59 50.3**	**-2.5**
WET	**Wettzell**	**4.07 60**	Sg	**Sg**	**02 59 50.3**	**-2.6**

IDC 17 03:05:01.6±2.9, 14°.25N×144°.70E, h89km±21km, mb3.2/4, mb1 3.5/4, mb1mx3.2/22, mbtmp3.2/4, Error ellipse: s-maj=105.4km s-min=21.6km az=113.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.67**	**166**	P	Pn	03 05 19.6	+1.9
	407nm,0.3s,baz=1.0,slow=1.9,SNR=126						
GUMO				S	Sn	03 05 30.8	+1.1
	737nm,0.3s,baz=78,slow=22,SNR=74						
WRA	**Warramunga Arr**	**35.47**	**197**	P	P	03 11 49.0	-0.7
	0.7nm,0.7s,baz=19,slow=9.4,SNR=6.7						
ASAR	**Alice Springs**	**39.13**	**196**	P	P	03 12 21.1	+0.5
	0.2nm,0.4s,baz=11,slow=16,SNR=3.8						
ILAR	**Eielson Array**	**68.05**	**25**	P	P	03 15 50.6	-0.7
	0.2nm,0.5s,baz=251,slow=6.5,SNR=3.7						
NVAR	**Mina Array Bea**	**86.64**	**51**	P	P	03 17 36.6	+1.0
	0.4nm,0.6s,baz=289,slow=5.6,SNR=5.8						

IDC 17 03:09:18.4±6.6, 19°.33N×146°.67E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/22, mbtmp3.7/4, Error ellipse: s-maj=221.5km s-min=29.3km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.85**	**198**	P	P	03 17 02.4	+0.3
	0.7nm,0.5s,baz=21,slow=9.0,SNR=6.9						
FITZ	**Fitzroy Crossi**	**42.54**	**210**	P	P	03 17 15.4	-0.6
	0.6nm,0.2s,baz=28,slow=9.6,SNR=8.6						
ASAR	**Alice Springs**	**44.51**	**197**	P	P	03 17 31.8	0.0
	0.3nm,0.4s,baz=21,slow=8.0,SNR=3.7						
MKAR	**Makanchi Array**	**58.69**	**314**	P	P	03 19 17.8	0.0
	0.4nm,0.7s,baz=90,slow=8.6,SNR=2.9						

JMA 17 03:23:04.1±0.2, 30°.91N×141°.20E, h54km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.49**	**332**	P	Pn	03 23 43.2	+1.0
JHJ2				*e*S	Sn	03 24 11.7	+0.4
BSO1	**Boso 1**	**3.74**	**357**	P	Pn	03 24 01.2	+2.0
CBIJ	**Chichi jima**	**3.90**	**167**	P	Pn	03 24 02.6	+1.1
BSO4	**Boso 4**	**4.13**	**350**	*e*S	Sn	03 24 54.7	+3.0
JOD2	**Odawara 2**	**4.69**	**338**	P	Pn	03 24 17.3	+5.0
JRY	**Ryogami san**	**5.44**	**340**	P	Pn	03 24 26.9	+4.3
JAG	**Ashikaga**	**5.69**	**346**	P	Pn	03 24 29.4	+3.4
JAG				*e*S	Sn	03 25 32.7	+2.7
JHO	**Hitachi**	**5.71**	**355**	P	Pn	03 24 27.9	+1.6
JHO				*e*S	Sn	03 25 30.2	-0.3

*IDC **17** 03:30:51.4±1.7, 54°.38N×164°.47W, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.6/32, mbtmp3.7/11, ML3.1/2, Error ellipse: s-maj=37.8km s-min=22.6km az=179.0*
*ISCJB **17** 03:30:52.9±1.4, 53°.8N±0°.2×164°.0W±0°.1, h52km±8km, mb3.8/8, Error ellipse: s-maj=27.7km s-min=7.0km az=164.1*
*NEIC **17** 03:30:52.1, 53°.73N×164°.02W, h18km, ML3.5(AEIC), After AEIC.*

ISC 17 03:30:54.1±1.4, 53°.8N±0°.2×164°.03W±0°.09, h46km±8km, n20, σ1°.05/24, mb3.8/8, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	**Akutan**	**1.10**	**291**	P	**Pn**	**03 31 12.2**	**-0.9**
AKUT				S	**Sn**	**03 31 27.1**	**+0.1**
UNV	**Unalaska Valle**	**1.47**	**275**	P	**Pn**	**03 31 16.7**	**-1.4**
UNV				S	**Sn**	**03 31 37.2**	**+1.1**
SDPT	**Sand Point**	**2.62**	**51**	P	**Pn**	**03 31 34.6**	**+0.7**
NIKO	**Nikolski**	**2.99**	**257**	P	**Pn**	**03 31 39.1**	**+0.1**
CHGN	**Chignik**	**4.12**	**49**	*e*Pn	**Pn**	**03 31 55.0**	**+0.5**
CHGN				*e*Sn	**Sn**	**03 32 41.0**	**-0.4**
SPIA	**Saint Paul Isl**	**4.93**	**317**	P	**Pn**	**03 32 06.0**	**+0.5**
KDAK	**Kodiak Island**	**7.62**	**53**	Pn	**Pn**	**03 32 41.0**	**-1.3**
	0.6nm,0.3s,baz=252,slow=6.4,SNR=3.2						
KDAK				Sn	**Sn**	**03 34 02.1**	**-5.0**
	0.2nm,0.3s,baz=133,slow=19,SNR=2.8						
ILAR	**Eielson Array**	**14.04**	**31**	Pn	**Pn**	**03 34 03.9**	**-6.1**
	0.0nm,0.3s,baz=237,slow=9.6,SNR=2.7						
EGAK	**Eagle**	**15.97**	**37**	*e*Pn	**Pn**	**03 34 37.0**	**+1.7**
DAWY	**Dawson**	**16.27**	**41**	*e*Pn	**Pn**	**03 34 42.5**	**+3.5**
INK	**Inuvik**	**20.43**	**33**	P	**P**	**03 35 25.0**	**-2.0**
	1.8nm,0.4s,baz=244,slow=8.5,SNR=5.2						
YKA	**Yellowknife Ar**	**26.89**	**51**	P	**P**	**03 36 31.4**	**+1.2**
	0.3nm,0.5s,mb3.1,baz=274,slow=9.4,SNR=5.9						
TXAR	**Lajitas Array**	**49.57**	**94**	P	**P**	**03 39 46.7**	**+6.4**
	0.1nm,0.5s,mb3.1,baz=321,slow=3.7,SNR=3.0						
ARCES	**ARCESS Array B**	**56.83**	**356**	P	**P**	**03 40 31.6**	**-1.5**
	1.5nm,0.9s,mb4.0,baz=8.7,slow=8.3,SNR=2.6						
BVAR	**Borovoye Array**	**64.38**	**327**	P	**P**	**03 41 24.7**	**0.0**
	0.6nm,0.6s,mb3.6,baz=64,slow=9.8,SNR=3.0						
FINES	**FINESS Array B**	**64.88**	**355**	P	**P**	**03 41 26.9**	**-0.9**
	0.7nm,0.3s,mb4.1,baz=36,slow=5.2,SNR=4.2						
HFS	**Hagfors**	**66.45**	**1**	P	**P**	**03 41 37.3**	**-0.7**
	1.5nm,0.5s,mb4.2,baz=64,slow=3.4,SNR=8.1						
AKTK	**Aktyubinsk**	**70.34**	**333**	P	**P**	**03 42 02.9**	**+0.4**
AKTO	**Aktyubinsk**	**70.34**	**333**	P	**P**	**03 42 02.9**	**+0.4**
	1.7nm,0.9s,mb4.0,baz=54,slow=9.2,SNR=5.5						
BRTR	**Keskin Array B**	**85.66**	**346**	P	**P**	**03 43 28.8**	**+1.3**
	0.5nm,0.7s,mb3.9,baz=356,slow=6.2,SNR=3.9						

*IDC **17** 03:32:08.1±1.8, 8°.90S×127°.23E, h0km, mb3.9/1, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, ML3.9/3, Error ellipse: s-maj=84.9km s-min=26.7km az=71.0*
*NEIC **17** 03:32:12.9±0.9, 8°.92S×127°.36E, h35km, Error ellipse: s-maj=31.7km s-min=11.1km az=65.0*

ISC 17 03:32:15.4±2.7, 9°.2S±0°.1×127°.3E±0°.1, h63km±31km, n7, σ1°.03/12, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.04**	**190**	Pn	**Pn**	**03 34 24.2**	**+0.9**
	0.9nm,0.3s,baz=17,slow=8.1,SNR=24						
FITZ				Sn	**Sn**	**03 36 02.4**	**-1.0**
	3.0nm,0.3s,baz=272,slow=22,SNR=12						
WRA	**Warramunga Arr**	**12.73**	**148**	Pn	**Pn**	**03 35 12.6**	**-1.1**
	0.8nm,0.3s,baz=319,slow=13,SNR=23						
WRA				Sn	**Sn**	**03 37 32.0**	**-1.7**
	1.3nm,0.3s,baz=323,slow=26,SNR=12						
WB2	**Warramunga Arr**	**12.73**	**148**	*e*Pn	**Pn**	**03 35 14.0**	**+0.3**
WB2				*e*Sn	**Sn**	**03 37 33.9**	**0.0**
ASAR	**Alice Springs**	**15.77**	**157**	Pn	**Pn**	**03 35 55.2**	**+1.5**
	0.4nm,0.3s,baz=335,slow=11,SNR=20						
ASAR				Sn	**Sn**	**03 38 49.3**	**+1.6**
	0.5nm,0.3s,baz=321,slow=20,SNR=9.4						
ASAR	**Alice Springs**	**15.77**	**157**	Pn	**Pn**	**03 35 55.2**	**+1.4**
ASAR				Sn	**Sn**	**03 38 49.3**	**+1.6**
MK31	**Makanchi Array**	**68.58**	**329**	*e*P	**P**	**03 43 11.2**	**-0.3**
MKAR	**Makanchi Array**	**68.58**	**329**	P	**P**	**03 43 11.4**	**-0.2**
	0.7nm,0.5s,baz=141,slow=7.1,SNR=10						

*ISCJB **17** 03:35:59.3±0.7, 52°.62S±0°.09×18°.8E±0°.2, h10km, mb4.0/9, MS3.5/8, Error ellipse: s-maj=20.7km s-min=12.9km az=172.5*
*IDC **17** 03:35:59.5±0.8, 52°.65S×18°.96E, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.0/19, mbtmp4.1/9, MS3.6/8, Ms1 3.6/8, ms1mx3.4/22, Error ellipse: s-maj=28.2km s-min=19.7km az=71.0*
*NEIC **17** 03:36:00.7±0.4, 52°.62S×18°.86E, h10km, mb4.3/1, Error ellipse: s-maj=16.0km s-min=10.8km az=73.0*

ISC 17 03:36:00.6±9.1, 52°.65S±0°.10×18°.9E±0°.2, h6km±58km, n24, σ0°.58/11, mb4.0/9, MS3.5/8, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	**Maitri**	**18.48**	**188**	*e*P	**Pn**	**03 40 16.2**	**-0.7**
SUR	**Sutherland**	**20.31**	**5**	P	**P**	**03 40 37.3**	**+0.2**
	10nm,1.1s,baz=163,slow=14,SNR=3.1						
SUR				LR	LR	03 46 30.0	
	comp=Z,311nm,19.4s,MS3.7,baz=256,slow=31						
SNAA	**Sanae**	**21.37**	**199**	P	**P**	**03 40 48.1**	**-0.2**
	4.7nm,0.9s,mb3.8,baz=22,slow=13,SNR=13						
SNAA				LR	LR	03 46 49.9	
	comp=Z,62nm,21.2s,MS3.0,baz=274,slow=30						
BOSA	**Boshof**	**24.47**	**14**	LR	LR	03 49 06.7	
	comp=Z,236nm,19.0s,MS3.7,baz=165,slow=32						
MAW	**Mawson**	**25.76**	**142**	P	**P**	**03 41 32.4**	**+0.7**
	4.0nm,1.0s,mb3.9,baz=283,slow=11,SNR=5.5						
MAW				LR	LR	03 49 37.2	
	comp=Z,123nm,21.0s,MS3.4,baz=34,slow=32						
LBTB	**Lobatse**	**28.06**	**13**	LR	LR	03 50 52.5	
	comp=Z,214nm,19.9s,MS3.7,baz=242,slow=32						
QSPA	**South Pole Qui**	**37.58**	**180**	P	**P**	**03 43 15.4**	**+0.2**
	8.9nm,0.8s,mb4.5,baz=238,slow=3.2,SNR=30						
CASY	**Casey**	**44.08**	**144**	*e*P	**P**	**03 44 09.4**	**+0.6**
	4.9nm,1.1s,mb4.2						
CPUP	**Villa Florida**	**61.34**	**263**	P	**P**	**03 46 18.0**	**+0.9**
	0.2nm,0.3s,mb3.7,baz=115,slow=14,SNR=3.7						
CPUP				LR	LR	04 06 39.6	
	comp=Z,38nm,18.8s,MS3.6,baz=14,slow=30						
TORD	**Torodi Ar. Bea**	**67.20**	**342**	P	**P**	**03 46 54.8**	**-0.6**
	1.0nm,0.9s,mb3.8,baz=157,slow=4.2,SNR=4.1						
TORD				LR	LR	04 09 02.5	
	comp=Z,28nm,20.4s,MS3.5,baz=130,slow=30						
LPAZ	**La Paz**	**75.47**	**262**	P	**P**	**03 47 45.5**	**-0.1**
	1.1nm,0.9s,mb3.8,baz=135,slow=2.9,SNR=3.0						
ASAR	**Alice Springs**	**85.37**	**123**	P	**P**	**03 48 38.5**	**-0.2**
	1.4nm,1.0s,mb4.1,baz=209,slow=5.2,SNR=6.2						
WRA	**Warramunga Arr**	**88.68**	**122**	P	**P**	**03 48 53.9**	**-0.9**
	1.7nm,1.2s,mb4.2,baz=214,slow=4.1,SNR=3.9						
BRTR	**Keskin Array B**	**92.88**	**11**	LR	LR	04 36 27.9	
	comp=Z,19nm,19.7s,MS3.5,baz=346,slow=39						
BVAR	**Borovoye Array**	**113.74**	**31**	PKiKP	PKiKP	03 54 38.5	-0.3
	0.4nm,0.7s,baz=90,slow=1.7,SNR=2.7						
PDAR	**Pinedale Array**	**144.66**	**275**	PKP	PKPdf	03 55 34.9	-2.5
	1.5nm,0.8s,baz=130,slow=3.8,SNR=12						
BW06	**Boulder Array**	**144.66**	**275**	*e*PKPdf	PKPdf	03 55 34.0	-3.4
DUG	**Dugway**	**145.14**	**269**	*e*PKPbc	PKPbc	03 55 37.0	-0.8
HWUT	**Hardware Ranch**	**145.22**	**272**	*e*PKPbc	PKPbc	03 55 37.2	-0.9
LOHW	**Long Hollow**	**145.77**	**275**	*e*PKPbc	PKPbc	03 55 39.1	-0.6
NVAR	**Mina Array Bea**	**147.37**	**261**	PKPbc	PKPbc	03 55 44.5	-0.1
	1.1nm,0.8s,baz=127,slow=5.8,SNR=7.6						
HLID	**Hailey**	**148.06**	**272**	*e*PKPbc	PKPbc	03 55 45.9	-0.3
WVOR	**Wild Horse Val**	**150.00**	**267**	*e*PKPbc	PKPbc	03 55 50.5	-0.6
ILAR	**Eielson Array**	**165.84**	**335**	PKPab	PKPab	03 57 06.0	+1.4
	0.7nm,0.9s,baz=351,slow=2.2,SNR=4.2						

IDC 17 04:15:53.1±32.0, 19°.10S×178°.51W, h650km±317km, mb2.9/3, mb1 3.1/3, mb1mx2.8/18, mbtmp2.9/3, Error ellipse: s-maj=300.7km s-min=126.6km az=118.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.18**	**262**	P	P	04 21 39.8	+0.6
	2.0nm,0.4s,baz=143,slow=5.1,SNR=3.3						
WRA	**Warramunga Arr**	**44.34**	**261**	P	P	04 23 08.2	-0.2
	0.5nm,0.3s,baz=97,slow=7.9,SNR=26						
ASAR	**Alice Springs**	**44.39**	**255**	P	P	04 23 09.1	+0.2
	1.4nm,0.6s,baz=86,slow=8.2,SNR=13						
ARCES	**ARCESS Array B**	**127.47**	**350**	PKP	PKPdf	04 33 44.5	-0.6
	1.8nm,1.0s,baz=58,slow=2.2,SNR=4.5						
GERES	**GERESS Array B**	**148.74**	**344**	PKPbc	PKPbc	04 34 29.1	+0.2
	0.5nm,0.7s,baz=35,slow=3.6,SNR=5.2						

*ISCJB **17** 04:30:07.2±0.7, 52°.7S±0°.1×18°.6E±0°.2, h10km, mb4.2/11, MS3.5/6, Error ellipse: s-maj=20.7km s-min=13.5km az=151.8*
*IDC **17** 04:30:07.0±0.8, 52°.57S×18°.71E, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.1/17, mbtmp4.2/9, MS3.6/6, Ms1 3.6/6, ms1mx3.3/23, Error ellipse: s-maj=29.7km s-min=21.6km az=58.0*
*NEIC **17** 04:30:08.2±0.5, 52°.51S×18°.96E, h10km, mb4.4/3, Error ellipse: s-maj=20.2km s-min=12.5km az=48.0*

ISC 17 04:30:08.2±0.8, 52°.5S±0°.1×18°.9E±0°.2, h10km, n30, σ0°.95/15, mb4.2/11, MS3.5/6, 1D, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**19.20**	**157**	*e*P	**Pn**	**04 34 32.0**	**-0.7**
SUR	**Sutherland**	**20.18**	**5**	P	**P**	**04 34 48.5**	**+5.7**
SUR				LR	P	04 40 28.2	
	comp=Z,304nm,21.2s,MS3.6,baz=212,slow=31						
SNAA	**Sanae**	**21.47**	**199**	P	**P**	**04 34 56.5**	**+0.1**
	5.1nm,0.9s,mb3.9,baz=25,slow=7.7,SNR=13						
SNAA				LR	LR	04 41 18.4	
	comp=Z,66nm,18.2s,MS3.1,baz=182,slow=31						
BOSA	**Boshof**	**24.36**	**14**	LR	LR	04 43 28.3	
	comp=Z,172nm,19.9s,MS3.5,baz=159,slow=33						
MAW	**Mawson**	**25.89**	**142**	P	**P**	**04 35 37.2**	**-2.5**
	4.5nm,0.8s,mb4.0,baz=270,slow=12,SNR=8.9						
LBTB	**Lobatse**	**27.94**	**13**	LR	LR	04 45 45.4	
	comp=Z,161nm,21.6s,MS3.6,baz=180,slow=34						
QSPA	**South Pole Qui**	**37.70**	**180**	P	**P**	**04 37 23.8**	**+0.6**
	10nm,0.8s,mb4.6,baz=245,slow=5.0,SNR=29						
CASY	**Casey**	**44.21**	**145**	*e*P	**P**	**04 38 17.9**	**+1.1**
	4.5nm,0.9s,mb4.2						
CPUP	**Villa Florida**	**61.31**	**263**	P	**P**	**04 40 21.7**	**-2.1**
	0.4nm,0.4s,mb3.9,baz=82,slow=6.6,SNR=3.8						
CPUP	**Villa Florida**	**61.31**	**263**	*e*P	**P**	**04 40 23.5**	**-0.3**
	5.1nm,0.6s,mb4.8						
DBIC	**Dimbokro**	**62.34**	**333**	LR	LR	05 01 32.8	
	comp=Z,50nm,19.0s,MS3.7,baz=214,slow=30						
BDFB	**Brasilia**	**63.69**	**279**	P	**P**	**04 40 39.5**	**-0.2**
	2.6nm,0.9s,mb4.3,baz=145,slow=5.4,SNR=3.5						
TORD	**Torodi Ar. Bea**	**67.06**	**342**	P	**P**	**04 41 01.1**	**-0.4**
	3.7nm,1.3s,mb4.3,baz=184,slow=6.4,SNR=5.9						
LPAZ	**La Paz**	**75.44**	**262**	P	**P**	**04 41 53.0**	**+0.7**
	1.7nm,1.0s,mb3.9,baz=181,slow=9.1,SNR=3.6						
LPAZ	**La Paz**	**75.44**	**262**	*e*P	**P**	**04 41 54.0**	**+1.6**
	2.5nm,1.1s,mb4.1						
STKA	**Stephens Creek**	**82.24**	**134**	P	**P**	**04 42 30.2**	**+0.7**
	3.6nm,0.9s,mb4.3,baz=120,slow=19,SNR=4.1						
ASAR	**Alice Springs**	**85.47**	**124**	P	**P**	**04 42 46.5**	**+0.3**
	1.5nm,0.7s,mb4.2,baz=208,slow=4.4,SNR=11						
WRA	**Warramunga Arr**	**88.78**	**122**	P	**P**	**04 43 02.4**	**+0.2**
	1.1nm,1.0s,mb4.2,baz=206,slow=3.5,SNR=4.9						
BRTR	**Keskin Array B**	**92.77**	**11**	LR	LR	05 29 40.7	
	comp=Z,24nm,20.8s,MS3.6,baz=338,slow=38						
BW06	**Boulder Array**	**144.61**	**275**	*e*PKPdf	PKPdf	04 49 43.5	-0.6
PDAR	**Pinedale Array**	**144.61**	**275**	PKP	PKPdf	04 49 43.8	-0.4
	2.8nm,0.9s,baz=131,slow=5.5,SNR=23						
LAO	**LASA Array**	**144.69**	**283**	*e*PKPdf	PKPdf	04 49 44.1	-0.1
DUG	**Dugway**	**145.10**	**269**	*e*PKPbc	PKPbc	04 49 45.4	+0.8
HWUT	**Hardware Ranch**	**145.17**	**272**	*e*PKPbc	PKPbc	04 49 45.9	+1.1
SNOW	**Snow King Moun**	**145.72**	**275**	*e*PKPbc	PKPbc	04 49 46.9	+0.4
MOOW	**Moose Ponds**	**145.88**	**276**	*e*PKPbc	PKPbc	04 49 47.7	+0.8
RES	**Resolute Bay**	**145.96**	**334**	*e*PKPbc	PKPbc	04 49 45.6	-0.8
NVAR	**Mina Array Bea**	**147.35**	**262**	PKPbc	PKPbc	04 49 53.6	+2.2
	1.8nm,0.8s,baz=148,slow=5.4,SNR=5.0						
WVOR	**Wild Horse Val**	**149.96**	**268**	*e*PKPbc	PKPbc	04 49 59.9	+1.9
ILAR	**Eielson Array**	**165.71**	**335**	PKPab	PKPab	04 51 13.3	+2.4
	1.3nm,0.8s,baz=15,slow=4.0,SNR=13						

IDC 17 04:36:19.4±1.2, 43°.64N×152°.27E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=35.5km s-min=31.7km az=29.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**31.93**	**294**	P	P	04 42 47.8	+1.3
	0.3nm,0.4s,baz=65,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**47.90**	**300**	P	P	04 44 57.1	-2.0
	0.7nm,0.6s,baz=69,slow=8.8,SNR=7.2						
WRA	**Warramunga Arr**	**65.37**	**199**	P	P	04 47 03.8	+0.3
	0.4nm,0.8s,baz=20,slow=6.7,SNR=4.9						
NOA	**NORSAR Array B**	**70.98**	**341**	P	P	04 47 39.3	+1.0
	0.3nm,0.5s,baz=29,slow=6.6,SNR=3.0						
TXAR	**Lajitas Array**	**79.57**	**59**	P	P	04 48 28.2	-0.1
	0.3nm,0.5s,baz=302,slow=4.8,SNR=6.7						

*IDC **17** 04:43:10.2±1.9, 30°.79N×83°.82E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/26, mbtmp3.6/7, MS2.9/1, Ms1 2.9/1, ms1mx2.3/36, Error ellipse: s-maj=67.7km s-min=21.3km az=70.0*
*NDI **17** 04:43:11.1±3.7, 31°.00N×83°.

KULM Kulim 4.99 55 P **Pn 05 06 04.2 -0.6**
0.7nm2μm212nm,0.9s
PDSI Padang 5.15 130 P **Pn 05 06 08.4 +1.4**
0.4nm83nm,0.7s
MYKOM Kota Tinggi 7.35 95 P **Pn 05 06 37.2 +0.3**
0.1nm25nm,1.3s
MDSI Maura Dua 10.29 132 P **Pn 05 07 14.4 -2.7**
CMAR Chiang Mai Arr 16.09 8 Pn **Pn 05 08 34.1 +0.1**
0.5nm,0.3s,baz=200,slow=11,SNR=27
CMAR LR LR 05 15 32.3
comp=Z,270nm,18.2s,baz=200,slow=40
QIZ Qiongzhong 21.02 37 P **P 05 09 28.1 -1.8**
QIZ S **S 05 13 18.0 -1.8**
QIZ pmax pmax
comp=Z,39nm,5.0s
QIZ LR LR
comp=N,280nm,16.0s
QIZ LR LR
comp=E,93nm,14.1s
QIZ LR LR
comp=Z,340nm,11.9s
KMI Kunming 23.33 14 P **P 05 09 55.9 +2.0**
KMI pmax pmax
comp=Z,11nm,0.7s,mb4.3
KMI LR LR
comp=Z,93nm,18.0s
KAPI Kappang 24.36 108 P **P 05 10 02.2 -1.3**
comp=Z,7.8nm,0.8s,mb4.1,baz=316,slow=13,SNR=3.6
TGY Tagaytay City 26.75 63 P **P 05 10 25.2 +0.1**
comp=Z,117nm,0.3s,baz=341,slow=5.1,SNR=4.3
PKI Pulchoki 27.16 338 *eP* **P 05 10 28.7 +0.1**
comp=Z,31nm,0.8s,mb4.9
PKIN Phulchoki 27.17 338 *eP* **P 05 10 28.5 -0.2**
comp=Z,25nm,0.7s,mb4.9
GUN Gumba 27.30 339 *eP* **P 05 10 30.3 +0.5**
comp=Z,42nm,0.6s,mb5.1
DMN Daman 27.31 337 *eP* **P 05 10 29.9 0.0**
comp=Z,22nm,0.8s,mb4.7
KKN Kakani 27.41 338 *eP* **P 05 10 30.9 +0.1**
comp=Z,40nm,0.8s,mb5.0
GKN Gorkha 27.84 337 *eP* **P 05 10 34.8 +0.1**
comp=Z,41nm,0.8s,mb5.0
KOLN Koldanda 28.06 335 *eP* **P 05 10 36.5 -0.1**
comp=Z,25nm,0.7s,mb4.8
DANN Dangsing 28.50 336 *eP* **P 05 10 40.9 +0.3**
comp=Z,21nm,0.6s,mb4.9
XAN Xi'an 33.50 19 P **P 05 11 23.8 -0.7**
XAN pP pP 05 11 35.5 -7.0
XAN sP sP 05 11 39.3 -12
XAN pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
LZH Lanzhou 34.16 11 *eP* **P 05 11 30.5 +0.3**
LZH pP pP 05 11 37.5 -11
LZH sP sP 05 11 40.0 -17
LZH pmax pmax
comp=Z,18nm,1.4s,mb4.7
FITZ Fitzroy Crossi 35.20 127 P **P 05 11 38.6 -0.8**
comp=Z,3.0nm,0.8s,mb4.2,baz=344,slow=7.3,SNR=5.9
FITZ LR LR 05 27 30.3
comp=Z,112nm,20.9s,baz=154,slow=39
NJ2 Nanjing 36.18 33 *eP* **P 05 11 47.3 -0.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
GTA Gaotai 36.92 4 *eP* **P 05 11 54.3 +0.5**
GTA pP pP 05 12 03.3 -8.7
GTA sP sP 05 12 07.8 -13
GTA pmax pmax
comp=Z,15nm,0.8s,mb5.0
KAKA Kakadu 38.71 114 *eP* **P 05 12 09.1 -0.2**
comp=Z,27nm,0.6s,mb5.2
NWAO Narrogin (SRO) 40.26 153 LR LR 05 26 16.4
comp=Z,127nm,21.4s,baz=179,slow=32
BJT Baijiatuau 41.43 23 *eP* **P 05 12 33.2 +1.8**
comp=Z,15nm,0.8s,mb4.9
BJI Beijing 41.46 23 P **P 05 12 33.4 +1.8**
BJI pmax pmax
comp=Z,36nm,0.7s,mb5.3
WRA Warramunga Arr 43.26 123 P **P 05 12 47.4 +0.8**
comp=Z,2.4nm,0.7s,mb4.0,baz=301,slow=9.0,SNR=17
WB2 Warramunga Arr 43.27 123 *eP* **P 05 12 47.2 +0.5**
TKM2 Tokmak 2 44.42 338 *eP* **P 05 12 55.8 +0.2**
comp=Z,4.0nm,1.0s,mb4.1
AAK Ala-Archa 44.60 337 *eP* **P 05 12 58.5 +1.5**
comp=Z,5.7nm,0.9s,mb4.3
ASAR Alice Springs 44.68 128 P **P 05 12 58.8 +0.9**
comp=Z,1.3nm,0.8s,mb3.7,baz=303,slow=7.5,SNR=11
ASAR PcP PcP 05 14 40.0 +0.7
comp=Z,0.6nm,0.6s,baz=293,slow=3.1,SNR=4.5
EKS2 Erkin-Say 44.91 336 *eP* **P 05 12 59.6 +0.2**
comp=Z,3.4nm,0.9s,mb4.1
KSRS Korea Array 45.23 36 P **P 05 13 01.7 -0.3**
comp=Z,0.6nm,0.3s,mb3.8,baz=229,slow=11,SNR=4.9
MK31 Makanchi Array 45.88 346 *eP* **P 05 13 06.9 -0.2**
MKAR Makanchi Array 45.88 346 P **P 05 13 06.9 -0.1**
comp=Z,13nm,0.7s,mb4.8,baz=161,slow=8.0,SNR=98
MKAR LR LR 05 34 48.6
comp=Z,40nm,20.8s,baz=174,slow=39
SONM Songino Array 46.02 9 P **P 05 13 08.6 +0.5**
comp=Z,3.2nm,0.5s,mb4.3,baz=189,slow=8.9,SNR=23
SONM PcP PcP 05 14 45.3 +1.8
comp=Z,1.8nm,0.7s,baz=167,slow=1.9,SNR=4.9
ULN Ulaanbaatar 46.16 10 *eP* **P 05 13 09.9 +0.7**
comp=Z,2.6nm,0.8s,mb4.0
KURK Kurchatov 50.43 345 *eP* **P 05 13 41.6 -0.4**
comp=Z,6.2nm,0.8s,mb4.6
MJAR Matsushiro Arr 51.25 43 P **P 05 13 49.7 +1.3**
comp=Z,0.9nm,0.3s,mb4.2,baz=121,slow=36,SNR=3.7
MJAR LR LR 05 37 02.8
comp=Z,40nm,19.9s,baz=260,slow=38
ZAA0 Zalesovo Array 52.24 351 *eP* **P 05 13 55.3 -0.2**
ZALV Zalesovo Beam 52.24 351 P **P 05 13 55.5 +0.1**
comp=Z,12nm,0.5s,mb5.2,baz=178,slow=6.4,SNR=50
CTA Charters Tower 53.66 117 LR LR 05 40 34.6
comp=Z,84nm,21.9s,baz=50,slow=40
STKA Stephens Creek 54.68 132 LR LR 05 40 13.4
comp=Z,144nm,18.3s,baz=277,slow=39
BRVK Borovoye 54.93 341 *eP* **P 05 14 14.4 -0.7**
comp=Z,4.0nm,0.6s,mb4.6
ABKAR Akbulak array 56.11 332 *eP* **P 05 14 23.0 -0.8**
comp=Z,4.2nm,0.8s,mb4.5
BRTR Keskin Array B 67.79 312 P **P 05 15 40.4 -1.9**
comp=Z,0.6nm,0.7s,mb3.5,baz=138,slow=8.3,SNR=3.7
AKASG Malin Array Be 73.87 322 P **P 05 16 17.4 -1.5**
comp=Z,1.8nm,0.7s,mb3.9,baz=97,slow=5.0,SNR=5.8
FINES FINESS Array B 78.60 332 P **P 05 16 45.5 0.0**
comp=Z,2.6nm,0.7s,mb4.2,baz=114,slow=8.5,SNR=5.5
FINES FINESS Array B 78.60 332 P **P 05 16 45.5 0.0**
ARCES ARCESS Array B 81.15 340 P **P 05 16 59.6 +0.5**
comp=Z,2.6nm,0.7s,mb4.2,baz=101,slow=5.7,SNR=20
BRG Berggiesshubel 83.43 321 *e*(P) **P 05 17 20.1 +8.7**
comp=Z,3.2nm,0.7s,mb4.3
GERES GERESS Array B 83.44 319 P **P 05 17 10.9 -0.6**
comp=Z,0.7nm,0.6s,mb3.6,baz=93,slow=4.5,SNR=5.8
NOA NORSAR Array B 85.60 331 P **P 05 17 21.1 -1.0**
comp=Z,1.1nm,0.8s,mb3.8,baz=93,slow=5.3,SNR=3.4
NOA NORSAR Array B 85.60 331 P **P 05 17 21.1 -1.0**
NVAR Mina Array Bea 128.17 35 PKP PKPdf 05 23 51.6 +1.4
comp=Z,0.2nm,0.5s,baz=348,slow=6.5,SNR=3.5
TXAR Lajitas Array 142.96 30 PKP PKPdf 05 24 17.0 -1.0
comp=Z,0.3nm,0.6s,baz=268,slow=1.3,SNR=5.5

IDC 17 05:13:58.5±2.9,25°.04S×179°.09W,h0km,mb4.1/5, mb1 4.3/5,mb1mx3.9/17,mbtmp4.1/5,Error ellipse: s-maj=225.0km s-min=33.5km az=166.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.32**	**272**	P	P	05 20 31.4	+1.9
	3.4nm,0.4s,baz=99,slow=13,SNR=7.5						
ASAR	**Alice Springs**	**42.68**	**262**	P	P	05 21 57.7	+0.4
	0.6nm,0.5s,baz=96,slow=7.5,SNR=7.6						
WRA	**Warramunga Arr**	**43.16**	**267**	P	P	05 22 00.4	-0.9
	1.6nm,0.4s,baz=104,slow=8.2,SNR=28						
FITZ	**Fitzroy Crossi**	**51.57**	**266**	P	P	05 23 05.2	-1.6
	1.1nm,0.6s,baz=115,slow=8.7,SNR=3.9						
TXAR	**Lajitas Array**	**90.33**	**58**	P	P	05 27 02.1	+0.3
	0.3nm,0.8s,baz=216,slow=6.2,SNR=3.9						

ISCJB 17 05:27:18.1±0.4,36°.88N±0°.03×4°.53W±0°.02,h77km±4km, Error ellipse: s-maj=4.2km s-min=2.3km az=173.3
CSEM 17 05:27:19.1±0.2,36°.80N×4°.50W,h60km,mb4.0/40,Error ellipse: s-maj=4.0km s-min=2.4km az=175.0
MDD 17 05:27:19.3±0.4,36°.72N×4°.47W,h66km±4km,mb4.0/40,
Error ellipse: s-maj=4.2km s-min=2.4km az=164.0,PRIMO
LDG 17 05:27:19.1,36°.75N×4°.51W,h48km
NEIC 17 05:27:20.9,36°.83N×4°.52W,h40km,MG2.9(MDD),After MDD.
IGIL 17 05:27:20.6,36°.83N×4°.52W,h40km,ML3.0
INMG 17 05:27:21.1±1.3,36°.81N×4°.64W,h58km±5km,ML3.0,Error ellipse: s-maj=3.2km s-min=2.7km az=127.0

ISC 17 05:27:19.5±0.4,36°.87N±0°.02×4°.52W±0°.02,h65km±5km, n307,σ1$28/529,20C-16D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAL	**Malaga-Limoner**	**0.13**	**146**	P	**Pn**	**05 27 28.7**	**-0.5**
EMAL				S	**Sn**	**05 27 35.4**	**-0.8**
EMAL	**Malaga-Limoner**	**0.13**	**146**	P	**Pn**	**05 27 28.7**	**-0.5**
EMAL				S	**Sn**	**05 27 35.4**	**-0.8**
EMIJ	**Mijas**	**0.37**	**214**	Pg	**Pn**	**05 27 29.5**	**-1.1**
EMIJ				Lg		05 27 35.5	
EMIJ	**Mijas**	**0.37**	**214**	⇑P	**Pn**	**05 27 29.5**	**-1.1**
	31nm,0.1s,SNR=18						
EMIJ				S	**Sn**	**05 27 36.6**	**-2.1**
	156nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**0.37**	**214**	⇑P	**Pn**	**05 27 29.5**	**-1.1**
	31nm,0.1s,SNR=18						
EMIJ				S	**Sn**	**05 27 36.6**	**-2.1**
	156nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**0.37**	**214**	P	**Pn**	**05 27 29.5**	**-1.1**
	31nm,0.1s,SNR=18						
EMIJ				Lg		05 27 35.5	
EMIJ				S	**Sn**	**05 27 36.6**	**-2.1**
	156nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**0.41**	**47**	Pg	**Pn**	**05 27 31.9**	**+1.0**
ELOJ				Lg		05 27 41.0	
ELOJ	**Sierra Loja**	**0.41**	**47**	P	**Pn**	**05 27 32.1**	**+1.2**
	16nm,0.1s,SNR=7.9						
ELOJ				S	**Sn**	**05 27 41.0**	**+1.8**
	115nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**0.41**	**47**	P	**Pn**	**05 27 32.1**	**+1.2**
	16nm,0.1s,SNR=7.9						
ELOJ				S	**Sn**	**05 27 41.0**	**+1.8**
	115nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**0.41**	**47**	Pg	**Pn**	**05 27 31.9**	**+1.0**
ELOJ				Lg		05 27 41.0	
ELOJ				S	**Sn**	**05 27 41.0**	**+1.7**
	115nm,0.2s,SNR=7.9						
ERON	**Agron**	**0.59**	**75**	Pg	**Pn**	**05 27 32.6**	**-0.2**
ERON				Lg		05 27 41.6	
ERON	**Agron**	**0.59**	**75**	⇑P	**Pn**	**05 27 32.9**	**+0.1**
	143nm,0.2s,SNR=18						
ERON				S	**Sn**	**05 27 43.1**	**+0.6**
	71nm,0.2s,SNR=7.9						
ERON	**Agron**	**0.59**	**75**	⇑P	**Pn**	**05 27 32.9**	**+0.1**
	143nm,0.2s,SNR=18						
ERON				S	**Sn**	**05 27 43.1**	**+0.6**
	71nm,0.2s,SNR=7.9						
ERON	**Agron**	**0.59**	**75**	Pg	**Pn**	**05 27 32.6**	**-0.2**
ERON	**Agron**	**0.59**	**75**	P	**Pn**	**05 27 32.9**	**+0.1**
	143nm,0.2s,SNR=18						
ERON				Lg		05 27 41.6	
ERON				S	**Sn**	**05 27 43.1**	**+0.6**
	71nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**0.72**	**16**	Pg	**Pn**	**05 27 35.3**	**+1.1**
ELUQ				Lg		05 27 44.6	
ELUQ	**Luque**	**0.72**	**16**	⇓P	**Pn**	**05 27 35.7**	**+1.5**
	84nm,0.2s,SNR=18						
ELUQ				S	**Sn**	**05 27 47.8**	**+2.7**
	285nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**0.72**	**16**	⇓P	**Pn**	**05 27 35.7**	**+1.5**
	84nm,0.2s,SNR=18						
ELUQ				S	**Sn**	**05 27 47.8**	**+2.7**
	285nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**0.72**	**16**	Pg	**Pn**	**05 27 35.3**	**+1.1**
ELUQ	**Luque**	**0.72**	**16**	P	**Pn**	**05 27 35.7**	**+1.5**
	84nm,0.2s,SNR=18						
ELUQ				Lg		05 27 44.6	
ELUQ				S	**Sn**	**05 27 47.8**	**+2.7**
	285nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**0.77**	**92**	Pg	**Pn**	**05 27 32.9**	**-1.9**
EGUA				Lg		05 27 45.2	
EGUA	**Guajares**	**0.77**	**92**	⇑P	**Pn**	**05 27 33.2**	**-1.6**
	377nm,0.2s,SNR=18						
EGUA				S	**Sn**	**05 27 45.2**	**-0.9**
	131nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**0.77**	**92**	⇑P	**Pn**	**05 27 33.2**	**-1.6**
	377nm,0.2s,SNR=18						
EGUA				S	**Sn**	**05 27 45.2**	**-0.9**
	131nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**0.77**	**92**	Pg	**Pn**	**05 27 32.9**	**-1.9**
EGUA	**Guajares**	**0.77**	**92**	P	**Pn**	**05 27 33.2**	**-1.6**
	377nm,0.2s,SNR=18						
EGUA				Lg		05 27 45.2	
ECOG	**Cogollos-Vega**	**0.86**	**62**	Pg	**Pn**	**05 27 36.6**	**+0.6**
ECOG				Lg		05 27 48.0	
ECOG	**Cogollos-Vega**	**0.86**	**62**	P	**Pn**	**05 27 36.6**	**+0.6**
	49nm,0.2s,SNR=7.9						
ECOG				S	**Sn**	**05 27 49.4**	**+1.2**
	89nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**0.86**	**62**	P	**Pn**	**05 27 36.6**	**+0.6**
	49nm,0.2s,SNR=7.9						
ECOG				S	**Sn**	**05 27 49.4**	**+1.2**
	89nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**0.86**	**62**	P	**Pn**	**05 27 36.6**	**+0.6**
	49nm,0.2s,SNR=7.9						
ECOG				Lg		05 27 48.0	
ECOG				S	**Sn**	**05 27 49.4**	**+1.2**
	89nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.87**	**242**	Pg	**Pn**	**05 27 35.6**	**-0.4**
EJIF				Lg		05 27 47.4	
EJIF	**Jimena Fronter**	**0.87**	**242**	P	**Pn**	**05 27 35.9**	**-0.1**
	9.0nm,0.1s,SNR=7.9						
EJIF				S	**Sn**	**05 27 48.3**	**+0.1**
	9.5nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.87**	**242**	P	**Pn**	**05 27 35.9**	**-0.1**
	9.0nm,0.1s,SNR=7.9						
EJIF				S	**Sn**	**05 27 48.3**	**+0.1**
	9.5nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.87**	**242**	P	**Pn**	**05 27 35.9**	**-0.1**
	9.0nm,0.1s,SNR=7.9						
EJIF				Lg		05 27 47.4	
EJIF				S	**Sn**	**05 27 48.3**	**0.0**
	9.5nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**0.93**	**69**	⇑P	**Pn**	**05 27 37.0**	**+0.2**
	29nm,0.2s,SNR=18						
EQUE				S	**Sn**	**05 27 50.1**	**+0.6**
	31nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**0.93**	**69**	⇑P	**Pn**	**05 27 37.0**	**+0.2**
	29nm,0.2s,SNR=18						
EQUE				S	**Sn**	**05 27 50.1**	**+0.6**
	31nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**0.93**	**69**	P	**Pn**	**05 27 37.0**	**+0.2**
	29nm,0.2s,SNR=18						
EQUE				S	**Sn**	**05 27 50.1**	**+0.5**
	31nm,0.2s,SNR=7.9						
ESPR	**Espera**	**1.07**	**270**	Pg	**Pn**	**05 27 39.6**	**+1.1**
ESPR				Lg		05 27 53.3	
ESPR	**Espera**	**1.07**	**270**	P	**Pn**	**05 27 39.6**	**+1.1**
	7.4nm,0.1s,SNR=11						
ESPR				S	**Sn**	**05 27 52.9**	**+0.1**
	44nm,0.2s,SNR=18						
ESPR	**Espera**	**1.07**	**270**	P	**Pn**	**05 27 39.6**	**+1.1**
	7.4nm,0.1s,SNR=11						
ESPR				S	**Sn**	**05 27 52.9**	**+0.1**
	44nm,0.2s,SNR=18						
ESPR	**Espera**	**1.07**	**270**	P	**Pn**	**05 27 39.6**	**+1.0**
	7.4nm,0.1s,SNR=11						
ESPR				S	**Sn**	**05 27 52.9**	**+0.1**
	44nm,0.2s,SNR=18						
ESPR				Lg		05 27 53.3	
ECEU	**Ceuta**	**1.19**	**216**	⇑P	**Pn**	**05 27 39.9**	**-0.3**
	22nm,0.1s,SNR=18						
ECEU				S	**Sn**	**05 27 54.7**	**-0.9**
	15nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**1.19**	**216**	⇑P	**Pn**	**05 27 39.9**	**-0.3**
	22nm,0.1s,SNR=18						
ECEU				S	**Sn**	**05 27 54.7**	**-0.9**
	15nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**1.19**	**216**	P	**Pn**	**05 27 39.9**	**-0.2**
	22nm,0.1s,SNR=18						
ECEU				S	**Sn**	**05 27 54.7**	**-0.9**
	15nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.30**	**358**	Pg	**Pn**	**05 27 43.1**	**+1.5**
EADA				Lg		05 27 59.3	
EADA	**Adamuz**	**1.30**	**358**	⇓P	**Pn**	**05 27 43.1**	**+1.5**
	17nm,0.1s,SNR=18						
EADA				S	**Sn**	**05 28 00.1**	**+2.0**
	26nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.30**	**358**	⇓P	**Pn**	**05 27 43.1**	**+1.5**
	17nm,0.1s,SNR=18						
EADA				S	**Sn**	**05 28 00.1**	**+2.0**
	26nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.30**	**358**	P	**Pn**	**05 27 43.1**	**+1.6**
	17nm,0.1s,SNR=18						
EADA				Lg		05 27 59.3	
EADA				S	**Sn**	**05 28 00.1**	**+2.0**
	26nm,0.1s,SNR=7.9						
EBER	**Berja**	**1.31**	**88**	Pg	**Pn**	**05 27 40.3**	**-1.4**
EBER				Lg		05 27 57.7	
EBER	**Berja**	**1.31**	**88**	P	**Pn**	**05 27 40.3**	**-1.4**
	23nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**05 27 56.6**	**-1.7**
	13nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.31**	**88**	P	**Pn**	**05 27 40.3**	**-1.4**
	23nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**05 27 56.6**	**-1.7**
	13nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.31**	**88**	P	**Pn**	**05 27 40.3**	**-1.4**
	23nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**05 27 56.6**	**-1.8**
	13nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**1.40**	**330**	Pg	**Pn**	**05 27 43.9**	**+1.0**
ECAB				Lg		05 28 01.6	
ECAB	**El Cabril**	**1.40**	**330**	⇓P	**Pn**	**05 27 44.0**	**+1.1**
	81nm,0.1s,SNR=18						
ECAB				S	**Sn**	**05 28 01.6**	**+1.1**
	0.2nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**1.40**	**330**	⇓P	**Pn**	**05 27 44.0**	**+1.1**
	81nm,0.1s,SNR=18						
ECAB				S	**Sn**	**05 28 01.6**	**+1.1**
	0.2nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**1.40**	**330**	P	**Pn**	**05 27 44.0**	**+1.1**
	81nm,0.1s,SNR=18						
ECAB				S	**Sn**	**05 28 01.6**	**+1.1**
	0.2nm,0.1s,SNR=7.9						
ECAB				Lg		05 28 01.6	
EBAN	**Banos Encina**	**1.42**	**24**	Pg	**Pn**	**05 27 43.3**	**+0.2**
EBAN				Lg		05 28 00.8	
EBAN	**Banos Encina**	**1.42**	**24**	⇑P	**Pn**	**05 27 44.1**	**+0.9**
	8.1nm,0.0s,SNR=18						
EBAN				S	**Sn**	**05 28 01.6**	**+0.6**
	83nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**1.42**	**24**	⇑P	**Pn**	**05 27 44.1**	**+0.9**
	8.1nm,0.0s,SNR=18						
EBAN				S	**Sn**	**05 28 01.6**	**+0.6**
	83nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**1.42**	**24**	P	**Pn**	**05 27 44.1**	**+0.9**
	8.1nm,0.0s,SNR=18						
EBAN				S	**Sn**	**05 28 01.6**	**+0.6**
	83nm,0.1s,SNR=7.9						
EQES	**Quesada**	**1.48**	**51**	Pg	**Pn**	**05 27 44.4**	**+0.4**
EQES				Lg		05 28 03.0	
EQES	**Quesada**	**1.48**	**51**	⇑P	**Pn**	**05 27 44.6**	**+0.6**
	32nm,0.1s,SNR=18						
EQES				S	**Sn**	**05 28 03.0**	**+0.5**
	55nm,0.1s,SNR=7.9						
EQES	**Quesada**	**1.48**	**51**	⇑P	**Pn**	**05 27 44.6**	**+0.6**
	32nm,0.1s,SNR=18						
EQES				S	**Sn**	**05 28 03.0**	**+0.5**
	55nm,0.1s,SNR=7.9						
EQES	**Quesada**	**1.48**	**51**	P	**Pn**	**05 27 44.6**	**+0.6**
	32nm,0.1s,SNR=18						
EQES				S	**Sn**	**05 28 03.0**	**+0.5**
	55nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.52**	**127**	Pg	**Pn**	**05 27 40.3**	**-4.2**
EALB				Lg		05 28 01.6	
EALB	**Alboran**	**1.52**	**127**	P	**Pn**	**05 27 41.3**	**-3.1**
	8.2nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**05 27 57.0**	**-6.3**
	11nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.52**	**127**	P	**Pn**	**05 27 41.3**	**-3.1**
	8.2nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**05 27 57.0**	**-6.3**
	11nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.52**	**127**	P	**Pn**	**05 27 41.3**	**-3.2**
	8.2nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**05 27 57.0**	**-6.3**
	11nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**1.80**	**58**	Pn	**Pn**	**05 27 48.6**	**+0.3**
EHUE				Lg		05 28 09.2	
EHUE	**Huescar**	**1.80**	**58**	P	**Pn**	**05 27 48.6**	**+0.3**
	7.4nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**05 28 09.2**	**-0.9**
	9.2nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**1.80**	**58**	P	**Pn**	**05 27 48.6**	**+0.3**
	7.4nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**05 28 09.2**	**-0.9**
	9.2nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**1.80**	**58**	P	**Pn**	**05 27 48.6**	**+0.3**
	7.4nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**05 28 09.2**	**-1.0**
	9.2nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.94**	**298**	Pn	**Pn**	**05 27 50.5**	**+0.4**
EMIN				Lg		05 28 13.5	
EMIN	**Mina Concepcio**	**1.94**	**298**	⇓P	**Pn**	**05 27 50.7**	**+0.6**
	13nm,0.1s,SNR=18						
EMIN				S	**Sn**	**05 28 13.4**	**0.0**
	72nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.94**	**298**	⇓P	**Pn**	**05 27 50.7**	**+0.6**
	13nm,0.1s,SNR=18						
EMIN				S	**Sn**	**05 28 13.4**	**0.0**
	72nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.94**	**298**	Pn	**Pn**	**05 27 50.5**	**+0.4**
EMIN				S	**Sn**	**05 28 13.4**	**0.0**
	72nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**2.38**	**42**	Pn	**Pn**	**05 27 56.1**	**0.0**
EVIA				Lg		05 28 24.0	
EVIA	**Vianos**	**2.38**	**42**	P	**Pn**	**05 27 56.2**	**0.0**
	5.6nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**05 28 22.5**	**-1.8**
	98nm,0.1s,SNR=7.9				

92nm,0.2s,SNR=7.9
EBAD Badajoz 2.73 314 ⇓P **Pn 05 28 02.1 +1.2**
18nm,0.1s,SNR=18
EBAD S **Sn 05 28 33.2 +0.6**
92nm,0.2s,SNR=7.9
EBAD Badajoz 2.73 314 Pn **Pn 05 28 02.0 +1.2**
EBAD S **Sn 05 28 33.2 +0.5**
92nm,0.2s,SNR=7.9
PBDV Barranco-do-Ve 2.75 279 *e*P **Pn 05 28 01.2 0.0**
PBDV *e*S **Sn 05 28 31.7 -1.6**
PBDV A 05 28 34.1
32nm,0.4s
PBDV Barranco-do-Ve 2.75 279 P **Pn 05 28 01.2 0.0**
PBDV S **Sn 05 28 31.7 -1.6**
32nm,0.4s
PBDV Barranco-do-Ve 2.75 279 P **Pn 05 28 01.2 0.0**
PBDV S **Sn 05 28 31.7 -1.6**
32nm,0.4s
PBDV Barranco-do-Ve 2.75 279 *e*P **Pn 05 28 01.2 0.0**
PBDV *e*S **Sn 05 28 31.7 -1.6**
32nm,0.4s
EMUR La Murta 2.79 69 Pn **Pn 05 28 01.1 -0.6**
EMUR Lg 05 28 32.7
EMUR La Murta 2.79 69 P **Pn 05 28 01.1 -0.6**
1.9nm,0.2s,SNR=7.9
EMUR S **Sn 05 28 32.7 -1.4**
1.9nm,0.2s,SNR=7.9
EMUR La Murta 2.79 69 P **Pn 05 28 01.1 -0.6**
1.9nm,0.2s,SNR=7.9
EMUR S **Sn 05 28 32.7 -1.4**
1.9nm,0.2s,SNR=7.9
EMUR La Murta 2.79 69 P **Pn 05 28 01.1 -0.6**
1.9nm,0.2s,SNR=7.9
EMUR S **Sn 05 28 32.7 -1.5**
1.9nm,0.2s,SNR=7.9
ESDC Sonseca Array 2.83 9 Pn **Pn 05 28 03.8 +1.4**
ESDC Lg 05 28 34.5
ESDC Sonseca Array 2.83 9 P **Pn 05 28 03.6 +1.3**
17nm,0.1s,baz=192,slow=12,SNR=7.9
ESDC S **Sn 05 28 34.5 -0.8**
14nm,0.1s,baz=189,slow=23,SNR=7.9
ESDC Sonseca Array 2.83 9 P **Pn 05 28 03.6 +1.3**
17nm,0.1s,baz=192,slow=12,SNR=7.9
ESDC S **Sn 05 28 34.5 -0.8**
14nm,0.1s,baz=189,slow=23,SNR=7.9
ESDC Sonseca Array 2.83 9 P **Pn 05 28 03.6 +1.3**
17nm,0.1s,slow=12,SNR=7.9
ESDC S **Sn 05 28 34.5 -0.8**
14nm,0.1s,baz=189,slow=23,SNR=7.9
PBEJ Beja 2.90 294 *e*P **Pn 05 28 03.8 +0.6**
PBEJ *e*S **Sn 05 28 35.7 -1.2**
PBEJ A 05 28 38.2
39nm,0.1s
PBEJ Beja 2.90 294 P **Pn 05 28 03.8 +0.6**
PBEJ S **Sn 05 28 35.7 -1.2**
20nm,0.1s
PBEJ Beja 2.90 294 P **Pn 05 28 03.8 +0.6**
PBEJ S **Sn 05 28 35.7 -1.2**
20nm,0.1s
PBEJ Beja 2.90 294 *e*P **Pn 05 28 03.8 +0.6**
PBEJ *e*S **Sn 05 28 35.7 -1.2**
39nm,0.1s
PCVE Castro Verde 2.91 286 *e*P **Pn 05 28 03.5 +0.2**
PCVE *e*S **Sn 05 28 35.2 -1.9**
PCVE A 05 28 37.3
50nm,0.2s
PCVE Castro Verde 2.91 286 P **Pn 05 28 03.5 +0.2**
PCVE S **Sn 05 28 35.2 -1.9**
50nm,0.2s
PCVE Castro Verde 2.91 286 P **Pn 05 28 03.5 +0.2**
PCVE S **Sn 05 28 35.2 -1.9**
50nm,0.2s
PCVE Castro Verde 2.91 286 *e*P **Pn 05 28 03.5 +0.2**
PCVE *e*S **Sn 05 28 35.2 -1.9**
50nm,0.2s
ETOB Tobarra 2.95 52 Pn **Pn 05 28 03.8 0.0**
ETOB Pg **Pn 05 28 08.8 +5.0**
ETOB Lg 05 28 36.3
ETOB Tobarra 2.95 52 ⇑P **Pn 05 28 03.8 0.0**
17nm,0.2s,SNR=18
ETOB S **Sn 05 28 36.3 -1.7**
9.3nm,0.1s,SNR=7.9
ETOB Tobarra 2.95 52 ⇑P **Pn 05 28 03.8 0.0**
17nm,0.2s,SNR=18
ETOB S **Sn 05 28 36.3 -1.7**
9.3nm,0.1s,SNR=7.9
ETOB Tobarra 2.95 52 P **Pn 05 28 03.8 0.0**
17nm,0.2s,SNR=18
ETOB S **Sn 05 28 36.3 -1.8**
9.3nm,0.1s,SNR=7.9
MESJ Messejana 3.10 289 *e*P **Pn 05 28 06.4 +0.4**
MESJ *e*S **Sn 05 28 39.8 -2.1**
MESJ *e*S **Sn 05 28 39.8 -2.0**
MESJ Messejana 3.10 289 P **Pn 05 28 06.4 +0.4**
MESJ S **Sn 05 28 39.8 -2.0**
MESJ Messejana 3.10 289 P **Pn 05 28 06.4 +0.4**
MESJ S **Sn 05 28 39.8 -2.0**
MESJ Messejana 3.10 289 *e*P **Pn 05 28 06.4 +0.4**
MESJ *e*S **Sn 05 28 39.8 -2.0**
PESTR Estremoz 3.14 310 *e*P **Pn 05 28 07.7 +1.2**
PESTR *e*S **Sn 05 28 42.5 -0.3**
PESTR A 05 28 43.4
21nm,0.3s
PESTR Estremoz 3.14 310 P **Pn 05 28 07.7 +1.2**
PESTR S **Sn 05 28 42.5 -0.3**
10nm,0.3s
PESTR Estremoz 3.14 310 P **Pn 05 28 07.7 +1.2**
PESTR S **Sn 05 28 42.5 -0.3**
10nm,0.3s
PESTR Estremoz 3.14 310 *e*P **Pn 05 28 07.7 +1.2**
PESTR *e*S **Sn 05 28 42.5 -0.3**
21nm,0.3s
EVO Evora 3.23 302 *e*Pn **Pn 05 28 09.5 +1.8**
EVO *e*Sn **Sn 05 28 45.8 +0.9**
68nm,0.3s
EVOP Sao Brissos 3.30 301 *e*Sn **Sn 05 28 45.8 -0.9**
34nm,0.3s
MORF Marmelete 3.33 279 *e*P **Pn 05 28 09.0 -0.1**
MORF *e*S **Sn 05 28 45.4 -2.0**
MORF A 05 28 48.7
43nm,0.1s
MORF Marmelete 3.33 279 P **Pn 05 28 09.0 -0.1**
MORF S **Sn 05 28 45.4 -2.0**
43nm,0.1s
MORF Marmelete 3.33 279 P **Pn 05 28 09.0 -0.1**
MORF S **Sn 05 28 45.4 -2.0**
43nm,0.1s
MORF Marmelete 3.33 279 *e*P **Pn 05 28 09.0 -0.1**
MORF *e*S **Sn 05 28 45.4 -2.0**
43nm,0.1s
PMRV Marv??o 3.41 319 *i*P **Pn 05 28 11.5 +1.3**
PMRV *e*S **Sn 05 28 49.2 -0.2**
PMRV A 05 28 52.4
29nm,0.2s
PMRV Marv??o 3.41 319 ⇓P **Pn 05 28 11.5 +1.3**
PMRV S **Sn 05 28 49.2 -0.2**
29nm,0.2s
PMRV Marv??o 3.41 319 ⇓P **Pn 05 28 11.5 +1.3**
PMRV S **Sn 05 28 49.2 -0.2**
29nm,0.2s
EPLA Plasencia 3.42 339 Pn **Pn 05 28 10.8 +0.6**
EPLA Pg **Pn 05 28 16.7 +6.5**
EPLA Lg 05 28 48.9
EPLA Plasencia 3.42 339 ⇓P **Pn 05 28 10.9 +0.7**
11nm,0.0s,SNR=18
EPLA S **Sn 05 28 48.9 -0.6**
4.1nm,0.1s,SNR=7.9
EPLA Plasencia 3.42 339 ⇓P **Pn 05 28 10.9 +0.7**
11nm,0.0s,SNR=18
EPLA S **Sn 05 28 48.9 -0.6**
4.1nm,0.1s,SNR=7.9
EPLA Plasencia 3.42 339 Pn **Pn 05 28 10.8 +0.6**
EPLA S **Sn 05 28 48.9 -0.6**
4.1nm,0.1s,SNR=7.9
PTEO Sao Teotonio 3.42 283 *e*P **Pn 05 28 10.6 +0.3**
PTEO *e*S **Sn 05 28 47.8 -1.9**
PTEO A 05 28 49.8
32nm,0.3s
PTEO Sao Teotonio 3.42 283 P **Pn 05 28 10.6 +0.3**
PTEO S **Sn 05 28 47.8 -1.9**
16nm,0.3s
PTEO Sao Teotonio 3.42 283 P **Pn 05 28 10.6 +0.3**
PTEO S **Sn 05 28 47.8 -1.9**
16nm,0.3s
PTEO Sao Teotonio 3.42 283 *e*P **Pn 05 28 10.6 +0.3**
PTEO *e*S **Sn 05 28 47.8 -1.9**
32nm,0.3s
MOE Montemor 3.46 300 *e*S **Sn 05 28 49.7 -0.8**
MOE Montemor 3.46 300 S **Sn 05 28 49.7 -0.8**
MOE Montemor 3.46 300 S **Sn 05 28 49.7 -0.8**
MOE Montemor 3.46 300 *e*S **Sn 05 28 49.7 -0.8**
PFVI Vila Bisbo 3.46 276 *e*P **Pn 05 28 10.6 -0.2**
PFVI *e*S **Sn 05 28 47.8 -2.7**
PFVI A 05 28 53.5
33nm,0.3s
PFVI Vila Bisbo 3.46 276 Pn **Pn 05 28 10.5 -0.3**
PFVI Pg **Pn 05 28 17.5 +6.7**
PFVI Lg 05 28 48.3
PFVI Vila Bisbo 3.46 276 P **Pn 05 28 10.5 -0.3**
11nm,0.1s,SNR=7.9
PFVI S **Sn 05 28 48.3 -2.2**
18nm,0.1s,SNR=7.9
PFVI Vila Bisbo 3.46 276 P **Pn 05 28 10.5 -0.3**
11nm,0.1s,SNR=7.9
PFVI S **Sn 05 28 48.3 -2.2**
18nm,0.1s,SNR=7.9
PFVI Vila Bisbo 3.46 276 *e*P **Pn 05 28 10.6 -0.2**
PFVI S **Sn 05 28 48.3 -2.2**
18nm,0.1s,SNR=7.9
PCBR Castelo Branco 3.77 323 *e*P **Pn 05 28 16.5 +1.5**
PCBR *e*S **Sn 05 28 57.7 -0.4**
PCBR A 05 29 00.0
23nm,0.6s
PCBR Castelo Branco 3.77 323 P **Pn 05 28 16.5 +1.5**
PCBR S **Sn 05 28 57.7 -0.4**
12nm,0.6s
PCBR Castelo Branco 3.77 323 P **Pn 05 28 16.5 +1.5**
PCBR S **Sn 05 28 57.7 -0.4**
12nm,0.6s
PCBR Castelo Branco 3.77 323 *e*P **Pn 05 28 16.5 +1.5**
PCBR *e*S **Sn 05 28 57.7 -0.4**
23nm,0.6s
GUD Guadarrama 3.78 4 Pn **Pn 05 28 16.6 +1.4**
GUD Lg 05 28 58.0
GUD Guadarrama 3.78 4 P **Pn 05 28 16.6 +1.4**
6.9nm,0.1s,SNR=7.9
GUD S **Sn 05 28 58.0 -0.4**
0.9nm,0.1s,SNR=7.9
GUD Guadarrama 3.78 4 P **Pn 05 28 16.6 +1.4**
6.9nm,0.1s,SNR=7.9
GUD S **Sn 05 28 58.0 -0.4**
0.9nm,0.1s,SNR=7.9
GUD Guadarrama 3.78 4 P **Pn 05 28 16.6 +1.4**
6.9nm,0.1s,SNR=7.9
GUD S **Sn 05 28 58.0 -0.4**
0.9nm,0.1s,SNR=7.9
EBEN Beniarda 3.86 60 Pn **Pn 05 28 15.7 -0.7**
EBEN Lg 05 28 59.4
EBEN Beniarda 3.86 60 P **Pn 05 28 15.7 -0.7**
0.9nm,0.2s,SNR=7.9
EBEN S **Sn 05 28 56.7 -3.8**
1.2nm,0.2s,SNR=7.9
EBEN Beniarda 3.86 60 P **Pn 05 28 15.7 -0.7**
0.9nm,0.2s,SNR=7.9
EBEN S **Sn 05 28 56.7 -3.8**
1.2nm,0.2s,SNR=7.9
EBEN Beniarda 3.86 60 P **Pn 05 28 15.7 -0.7**
0.9nm,0.2s,SNR=7.9
EBEN S **Sn 05 28 56.7 -3.8**
1.2nm,0.2s,SNR=7.9
ECHE Chera 3.90 45 Pn **Pn 05 28 16.1 -0.8**
ECHE Lg 05 28 59.8
ECHE Chera 3.90 45 P **Pn 05 28 16.7 -0.1**
4.5nm,0.2s,SNR=7.9
ECHE S **Sn 05 28 58.3 -3.0**
3.6nm,0.1s,SNR=7.9
ECHE Chera 3.90 45 P **Pn 05 28 16.7 -0.1**
4.5nm,0.2s,SNR=7.9
ECHE S **Sn 05 28 58.3 -3.0**
3.6nm,0.1s,SNR=7.9
ECHE Chera 3.90 45 Pn **Pn 05 28 16.0 -0.8**
ECHE Chera 3.90 45 P **Pn 05 28 16.7 -0.1**
4.5nm,0.2s,SNR=7.9
ECHE S **Sn 05 28 58.3 -3.0**
3.6nm,0.1s,SNR=7.9
ALMR Almeirim 3.93 307 *e*P **Pn 05 28 17.3 0.0**
ALMR AML AML 05 29 02.3
comp=N,18nm,0.2s
ALMR Almeirim 3.93 307 P **Pn 05 28 17.3 0.0**
ALMR Almeirim 3.93 307 P **Pn 05 28 17.3 0.0**
ALMR Almeirim 3.93 307 *e*P **Pn 05 28 17.3 0.0**
PTOM Tomar 4.11 313 *e*P **Pn 05 28 21.0 +1.3**
PTOM *e*S **Sn 05 29 05.7 -0.8**
PTOM A 05 29 09.8
comp=N,28nm,0.3s
PTOM Tomar 4.11 313 P **Pn 05 28 21.0 +1.3**
PTOM S **Sn 05 29 05.7 -0.8**
comp=N,14nm,0.3s
PTOM Tomar 4.11 313 P **Pn 05 28 21.0 +1.3**
PTOM S **Sn 05 29 05.7 -0.8**
comp=N,14nm,0.3s
PTOM Tomar 4.11 313 *e*P **Pn 05 28 21.0 +1.3**
PTOM *e*S **Sn 05 29 05.7 -0.8**
comp=N,28nm,0.3s
MTE Manteigas 4.25 327 *e*P **Pn 05 28 23.1 +1.5**
MTE *e*S **Sn 05 29 09.8 0.0**
MTE A 05 29 12.6
comp=N,17nm,0.3s
MTE Manteigas 4.25 327 P **Pn 05 28 23.1 +1.5**
MTE S **Sn 05 29 09.8 0.0**
comp=N,8.4nm,0.3s
MTE Manteigas 4.25 327 P **Pn 05 28 23.1 +1.5**
MTE S **Sn 05 29 09.8 0.0**
comp=N,8.4nm,0.3s
MTE Manteigas 4.25 327 *e*P **Pn 05 28 23.1 +1.5**
MTE *e*S **Sn 05 29 09.8 0.0**
comp=N,17nm,0.3s
PMAFR Mafra 4.30 300 *e*P **Pn 05 28 23.4 +1.0**
PMAFR *e*S **Sn 05 29 09.9 -1.3**
PMAFR A 05 29 13.4
comp=N,61nm,0.3s
PMAFR Mafra 4.30 300 P **Pn 05 28 23.4 +1.1**
comp=N,5.7nm,0.1s,SNR=7.9
PMAFR S **Sn 05 29 10.3 -1.0**
comp=N,29nm,0.1s,SNR=7.9
PMAFR Mafra 4.30 300 P **Pn 05 28 23.4 +1.1**
comp=N,5.7nm,0.1s,SNR=7.9
PMAFR S **Sn 05 29 10.3 -1.0**
comp=N,29nm,0.1s,SNR=7.9
PMAFR Mafra 4.30 300 P **Pn 05 28 23.5 +1.1**
comp=N,5.7nm,0.1s,SNR=7.9
PMAFR S **Sn 05 29 10.3 -0.9**
comp=N,29nm,0.1s,SNR=7.9
PVIS Viseu 4.66 327 *e*P **Pn 05 28 28.9 +1.7**
PVIS *e*S **Sn 05 29 19.8 -0.1**
PVIS A 05 29 22.8
comp=N,38nm,0.3s
PVIS Viseu 4.66 327 P **Pn 05 28 28.9 +1.7**
PVIS S **Sn 05 29 19.8 -0.1**
comp=N,19nm,0.3s
PVIS Viseu 4.66 327 P **Pn 05 28 28.9 +1.7**
PVIS S **Sn 05 29 19.8 -0.1**
comp=N,19nm,0.3s
PVIS Viseu 4.66 327 *e*P **Pn 05 28 28.9 +1.7**
PVIS *e*S **Sn 05 29 19.8 -0.1**
comp=N,38nm,0.3s
MVO Moncorvo 4.71 336 *e*P **Pn 05 28 29.8 +1.9**
MVO *e*S **Sn 05 29 21.1 -0.1**
MVO A 05 29 24.3
comp=N,9.2nm,0.3s
MVO Moncorvo 4.71 336 Pn **Pn 05 28 29.8 +1.9**
MVO Lg 05 29 20.4
MVO Moncorvo 4.71 336 ⇓P **Pn 05 28 29.7 +1.8**
comp=N,20nm,0.1s,SNR=18
MVO S **Sn 05 29 21.0 -0.2**
comp=N,4.1nm,0.2s,SNR=7.9
MVO Moncorvo 4.71 336 ⇓P **Pn 05 28 29.7 +1.8**
comp=N,20nm,0.1s,SNR=18
MVO S **Sn 05 29 21.0 -0.2**
comp=N,4.1nm,0.2s,SNR=7.9
MVO Moncorvo 4.71 336 P **Pn 05 28 29.7 +1.8**
comp=N,20nm,0.1s,SNR=18
MVO S **Sn 05 29 21.0 -0.2**
comp=N,4.1nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.71 41 Pn **Pn 05 28 29.0 +1.0**
EMOS Lg 05 29 18.8
EMOS Mosqueruela 4.71 41 P **Pn 05 28 29.1 +1.2**
comp=N,1.6nm,0.1s,SNR=25
EMOS S **Sn 05 29 18.8 -2.5**
comp=N,4.8nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.71 41 P **Pn 05 28 29.1 +1.2**
comp=N,1.6nm,0.1s,SNR=25
EMOS S **Sn 05 29 18.8 -2.5**
comp=N,4.8nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.71 41 Pn **Pn 05 28 29.0 +1.0**
EMOS S **Sn 05 29 18.8 -2.5**
comp=N,4.8nm,0.2s,SNR=7.9
PVRL Vila Real 5.05 332 *e*P **Pn 05 28 34.7 +2.1**
PVRL *e*S **Sn 05 29 29.3 -0.3**
PVRL A 05 29 33.6
comp=N,23nm,0.1s
PVRL Vila Real 5.05 332 P **Pn 05 28 34.7 +2.1**
PVRL S **Sn 05 29 29.3 -0.3**
comp=N,12nm,0.1s
PVRL Vila Real 5.05 332 P **Pn 05 28 34.7 +2.1**
PVRL S **Sn 05 29 29.3 -0.3**
comp=N,12nm,0.1s
PVRL Vila Real 5.05 332 *e*P **Pn 05 28 34.7 +2.1**
PVRL *e*S **Sn 05 29 29.3 -0.3**
comp=N,23nm,0.1s
EIBI Ibiza 5.11 63 Pn **Pn 05 28 32.5 -1.0**
EIBI Ibiza 5.11 63 P **Pn 05 28 32.4 -1.0**
comp=N,2.3nm,0.1s,SNR=7.9
EIBI Ibiza 5.11 63 P **Pn 05 28 32.4 -1.0**
comp=N,2.3nm,0.1s,SNR=7.9
EIBI Ibiza 5.11 63 Pn **Pn 05 28 32.5 -0.9**
PBRG Braganca 5.22 341 *e*P **Pn 05 28 36.8 +1.9**
PBRG *e*S **Sn 05 29 32.9 -0.8**
PBRG A 05 29 36.3
comp=N,8.6nm,0.5s
PBRG Braganca 5.22 341 P **Pn 05 28 36.8 +1.9**
PBRG S **Sn 05 29 32.9 -0.8**
comp=N,4.3nm,0.5s
PBRG Braganca 5.22 341 P **Pn 05 28 36.8 +1.9**
PBRG S **Sn 05 29 32.9 -0.8**
comp=N,4.3nm,0.5s
PBRG Braganca 5.22 341 *e*P **Pn 05 28 36.8 +1.9**
PBRG *e*S **Sn 05 29 32.9 -0.8**
comp=N,8.6nm,0.5s
PTO Porto 5.32 325 *e*P **Pn 05 28 38.1 +1.9**
PTO *e*S **Sn 05 29 35.0 -1.1**
PTO Porto 5.32 325 P **Pn 05 28 38.1 +1.9**
PTO S **Sn 05 29 35.0 -1.1**
PTO Porto 5.32 325 P **Pn 05 28 38.1 +1.9**
PTO S **Sn 05 29 35.0 -1.1**
PTO Porto 5.32 325 *e*P **Pn 05 28 38.1 +1.9**
PTO *e*S **Sn 05 29 35.0 -1.1**
ECAL Calabor 5.35 342 Pn **Pn 05 28 38.6 +2.0**
ECAL Lg 05 29 35.9
ECAL Calabor 5.35 342 P **Pn 05 28 38.6 +2.0**
comp=N,4.0nm,0.1s,SNR=37
ECAL S **Sn 05 29 35.9 -0.9**
comp=N,1.8nm,0.2s,SNR=7.9
ECAL Calabor 5.35 342 P **Pn 05 28 38.6 +2.0**
comp=N,4.0nm,0.1s,SNR=37
ECAL S **Sn 05 29 35.9 -0.9**
comp=N,1.8nm,0.2s,SNR=7.9
ECAL Calabor 5.35 342 P **Pn 05 28 38.6 +2.0**
comp=N,4.0nm,0.1s,SNR=37
ECAL S **Sn 05 29 35.9 -0.9**
comp=N,1.8nm,0.2s,SNR=7.9
PCAB Cabril 5.55 332 *e*P **Pn 05 28 41.0 +1.7**
PCAB *e*S **Sn 05 29 39.8 -1.9**
PCAB A 05 29 44.6
comp=N,7.1nm,0.3s
PCAB Cabril 5.55 332 P **Pn 05 28 41.0 +1.7**
PCAB S **Sn 05 29 39.8 -1.9**
comp=N,3.6nm,0.3s
PCAB Cabril 5.55 332 P **Pn 05 28 41.0 +1.7**
PCAB S **Sn 05 29 39.8 -1.9**
comp=N,3.6nm,0.3s
PCAB Cabril 5.55 332 *e*P **Pn 05 28 41.0 +1.7**
PCAB *e*S **Sn 05 29 39.8 -1.9**
comp=N,7.1nm,0.3s
ERTA Horta de San J 5.57 41 P **Pn 05 28 40.6 +0.9**
comp=N,0.9nm,0.1s,SNR=7.9
ERTA Horta de San J 5.57 41 P **Pn 05 28 40.6 +0.9**
comp=N,0.9nm,0.1s,SNR=7.9
ERTA Horta de San J 5.57 41 P **Pn 05 28 40.6 +1.0**
comp=N,0.9nm,0.1s,SNR=7.9
ELOB Lobios 5.69 332 Pn **Pn 05 28 43.2 +1.8**
ELOB Lg 05 29 43.3
ELOB Lobios 5.69 332 P **Pn 05 28 43.2 +1.8**
comp=N,4.1nm,0.1s,SNR=34
ELOB S **Sn 05 29 43.3 -2.0**
comp=N,1.4nm,0.2s,SNR=7.9
ELOB Lobios 5.69 332 P **Pn 05 28 43.2 +1.8**
comp=N,4.1nm,0.1s,SNR=34
ELOB S **Sn 05 29 43.3 -2.0**
comp=N,1.4nm,0.2s,SNR=7.9
ELOB Lobios 5.69 332 P **Pn 05 28 43.2 +1.8**
comp=N,4.1nm,0.1s,SNR=34
ELOB S **Sn 05 29 43.3 -2.0**
comp=N,1.4nm,0.2s,SNR=7.9
ESAC San Caprasio 5.78 32 S **Sn 05 29 45.3 -2.0**
comp=N,7.0nm,0.1s,SNR=7.9
ESAC San Caprasio 5.78 32 S **Sn 05 29 45.3 -2.0**
comp=N,7.0nm,0.1s,SNR=7.9
ESAC San Caprasio 5.78 32 S **Sn 05 29 45.3 -2.0**
comp=N,7.0nm,0.1s,SNR=7.9
EPOB Poblet 6.24 42 Pn **Pn 05 28 48.8 -0.1**
EPOB Lg 05 29 55.3
EPOB Poblet 6.24 42 P **Pn 05 28 49.3 +0.4**
comp=N,1.1nm,0.1s,SNR=7.9
EPOB S **Sn 05 29 55.3 -3.5**
comp=N,0.9nm,0.2s,SNR=7.9
EPOB Poblet 6.24 42 P **Pn 05 28 49.3 +0.4**
comp=N,1.1nm,0.1s,SNR=7.9
EPOB S **Sn 05 29 55.3 -3.5**
comp=N,0.9nm,0.2s,SNR=7.9
EPOB Poblet 6.24 42 Pn **Pn 05 28 48.8 -0.1**
EPOB Poblet 6.24 42 P **Pn 05 28 49.3 +0.4**
comp=N,1.1nm,0.1s,SNR=7.9
EPOB S **Sn 05 29 55.3 -3.5**
comp=N,0.9nm,0.2s,SNR=7.9
ELAN Lanestosa 6.41 7 Pn **Pn 05 28 52.9 +1.8**
ELAN Lg 05 30 00.1
ELAN Lanestosa 6.41 7 P **Pn 05 28 53.5 +2.3**
comp=N,3.2nm,0.2s,SNR=7.9
ELAN S **Sn 05 30 00.1 -2.7**
comp=N,0.7nm,0.1s,SNR=7.9
ELAN Lanestosa 6.41 7 P **Pn 05 28 53.5 +2.3**
comp=N,3.2nm,0.2s,SNR=7.9
ELAN S **Sn 05 30 00.1 -2.7**
comp=N,0.7nm,0.1s,SNR=7.9
ELAN Lanestosa 6.41 7 Pn **Pn 05 28 52.9 +1.8**
ELAN Lanestosa 6.41 7 P **Pn 05 28 53.5 +2.4**
comp=N,3.2nm,0.2s,SNR=7.9
ELAN S **Sn 05 30 00.1 -2.7**
comp=N,0.7nm,0.1s,SNR=7.9
EARI Arriondas 6.45 356 Pn **Pn 05 28 53.9 +2.2**
EARI Lg 05 30 00.4
EARI Arriondas 6.45 356 P **Pn 05 28 54.0 +2.3**
comp=N,1.2nm,0.1s,SNR=7.9
EARI S **Sn 05 30 00.4 -3.4**
comp=N,1.2nm,0.2s,SNR=7.9
EARI Arriondas 6.45 356 P **Pn 05 28 54.0 +2.3**
comp=N,1.2nm,0.1s,SNR=7.9
EARI S **Sn 05 30 00.4 -3.4**
comp=N,1.2nm,0.2s,SNR=7.9
EARI Arriondas 6.45 356 Pn **Pn 05 28 53.9 +2.3**
EARI S **Sn 05 30 00.4 -3.3**
comp=N,1.2nm,0.2s,SNR=7.9
EORO Oroz-Betelu 6.50 21 P **Pn 05 28 53.7 +1.3**
comp=N,0.6nm,0.1s,SNR=7.9
EORO S **Sn 05 30 02.0 -3.2**
comp=N,1.7nm,0.2s,SNR=7.9
EORO Oroz-Betelu 6.50 21 P **Pn 05 28 53.7 +1.3**
comp=N,0.6nm,0.1s,SNR=7.9
EORO S **Sn 05 30 02.0 -3.2**
comp=N,1.7nm,0.2s,SNR=7.9
EORO Oroz-Betelu 6.50 21 P **Pn 05 28 53.7 +1.3**
comp=N,0.6nm,0.1s,SNR=7.9
EORO S **Sn 05 30 02.0 -3.1**
comp=N,1.7nm,0.2s,SNR=7.9
ELIZ Elizondo 6.69 19 S **Sn 05 30 06.6 -3.2**
comp=N,4.0nm,0.2s,SNR=7.9
ELIZ Elizondo 6.69 19 S **Sn 05 30 06.6 -3.2**
comp=N,4.0nm,0.2s,SNR=7.9
ELIZ Elizondo 6.69 19 S **Sn 05 30 06.6 -3.2**
comp=N,4.0nm,0.2s,SNR=7.9
SJPF Ste Jean 6.73 21 *e*Pn **Pn 05 28 56.3 +0.8**
SJPF *e*Sn **Sn 05 30 06.9 -3.8**
comp=N,3.5nm,0.3s
SJPF Ste Jean 6.73 21 Pn **Pn 05 28 56.3 +0.8**
SJPF Sn **Sn 05 30 06.9 -3.8**
comp=N,1.8nm,0.3s

SJPF	Ste Jean	6.73	21	Pn	Pn	05 28 56.3	+0.8
SJPF				Sn	Sn	05 30 06.9	-3.8
comp=N,1.8nm,0.3s							
SJPF	Ste Jean	6.73	21	ePn	Pn	05 28 56.3	+0.8
ETSF	Etsaut	6.75	26	ePn	Pn	05 28 56.7	+0.9
ETSF				eSn	Sn	05 30 08.0	-3.1
comp=N,4.5nm,0.3s							
ETSF	Etsaut	6.75	26	Pn	Pn	05 28 56.7	+0.9
ETSF				Sn	Sn	05 30 08.0	-3.1
comp=N,2.2nm,0.3s							
ETSF	Etsaut	6.75	26	Pn	Pn	05 28 56.7	+0.9
ETSF				Sn	Sn	05 30 08.0	-3.1
comp=N,2.2nm,0.3s							
ETSF	Etsaut	6.75	26	ePn	Pn	05 28 56.7	+0.9
EALK	Alkurruntz	6.75	19	Pn	Pn	05 28 57.4	+1.6
EALK				Lg		05 30 07.5	
EALK	Alkurruntz	6.75	19	P	Pn	05 28 58.7	+2.9
comp=N,0.9nm,0.1s,SNR=7.9							
EALK				S	Sn	05 30 09.3	-1.9
comp=N,2.7nm,0.2s,SNR=7.9							
EALK	Alkurruntz	6.75	19	P	Pn	05 28 58.7	+2.9
comp=N,0.9nm,0.1s,SNR=7.9							
EALK				S	Sn	05 30 09.3	-1.9
comp=N,2.7nm,0.2s,SNR=7.9							
EALK	Alkurruntz	6.75	19	Pn	Pn	05 28 57.4	+1.6
EALK	Alkurruntz	6.75	19	P	Pn	05 28 58.7	+2.9
comp=N,0.9nm,0.1s,SNR=7.9							
EALK				S	Sn	05 30 09.3	-1.9
comp=N,2.7nm,0.2s,SNR=7.9							
EPON	Pontenova	6.76	343	Pn	Pn	05 28 57.2	+1.3
EPON				Lg		05 30 07.9	
EPON	Pontenova	6.76	343	P	Pn	05 28 58.2	+2.3
comp=N,2.4nm,0.1s,SNR=7.9							
EPON				S	Sn	05 30 09.5	-1.8
comp=N,1.3nm,0.2s,SNR=7.9							
EPON	Pontenova	6.76	343	P	Pn	05 28 58.2	+2.3
comp=N,2.4nm,0.1s,SNR=7.9							
EPON				S	Sn	05 30 09.5	-1.8
comp=N,1.3nm,0.2s,SNR=7.9							
EPON	Pontenova	6.76	343	Pn	Pn	05 28 57.2	+1.3
EPON	Pontenova	6.76	343	P	Pn	05 28 58.2	+2.3
comp=N,2.4nm,0.1s,SNR=7.9							
EPON				S	Sn	05 30 09.5	-1.9
comp=N,1.3nm,0.2s,SNR=7.9							
EBIE	Bielsa	6.83	30	Pn	Pn	05 28 57.7	+0.8
EBIE				Lg		05 30 09.8	
EBIE	Bielsa	6.83	30	P	Pn	05 28 57.7	+0.8
comp=N,0.4nm,0.1s,SNR=7.9							
EBIE				S	Sn	05 30 09.8	-3.3
comp=N,0.2nm,0.2s,SNR=7.9							
EBIE	Bielsa	6.83	30	P	Pn	05 28 57.7	+0.8
comp=N,0.4nm,0.1s,SNR=7.9							
EBIE				S	Sn	05 30 09.8	-3.3
comp=N,0.2nm,0.2s,SNR=7.9							
EMIR	Miracle	6.88	41	Pn	Pn	05 28 58.1	+0.6
EMIR	Miracle	6.88	41	P	Pn	05 28 58.1	+0.6
comp=N,4.0nm,0.2s,SNR=7.9							
EMIR				S	Sn	05 30 11.0	-3.3
SNR=7.9						

ARMA	Armidale	35.80	239	P	P	06 28 43.0	+0.2
RKT	Rikitea	36.51	108	eLR	LR	06 38 21.0	
368nm,33.2s							
CTAO	Charters Tower	39.15	257	P	P	06 29 10.3	-1.0
STKA	Stephens Creek	44.50	240	P	P	06 29 53.5	-1.4
1.1nm,0.6s,mb3.8,baz=91,slow=6.1,SNR=3.1							
WB2	Warramunga Arr	50.34	257	eP	P	06 30 40.0	-0.5
WRA	Warramunga Arr	50.35	257	P	P	06 30 39.1	-1.5
0.6nm,0.6s,mb3.8,baz=92,slow=7.0,SNR=16							
ASAR	Alice Springs	50.61	252	P	P	06 30 41.5	-1.1
1.5nm,0.5s,mb4.2,baz=88,slow=8.4,SNR=22							
PETK	Petropavlovsk-	72.76	342	LR	LR	06 57 31.1	
comp=Z,28nm,21.5s,MS3.5,baz=274,slow=30							
QSPA	South Pole Qui	74.67	180	eP	P	06 33 23.0	+0.7
17nm,1.2s,mb4.8							
KSRS	Korea Array	76.50	315	LR	LR	07 01 10.0	
comp=Z,31nm,20.4s,MS3.6,baz=104,slow=31							
TXAR	Lajitas Array	80.17	56	P	P	06 33 55.9	+2.1
1.2nm,1.0s,mb3.8,baz=205,slow=5.5,SNR=9.1							
TXAR				LR	LR	07 00 19.3	
comp=Z,56nm,20.8s,MS3.9,baz=180,slow=29							
TXAR	Lajitas Array	80.17	56	P	P	06 33 55.9	+2.1
TXAR				LR	LR	07 00 19.3	
PV01	Paradox Valley	80.33	46	eP	P	06 33 55.8	+1.3
PDAR	Pinedale Array	81.90	42	P	P	06 34 03.5	+0.7
0.8nm,0.7s,mb3.7,baz=214,slow=2.9,SNR=8.7							
PDAR				LR	LR	07 01 44.0	
comp=Z,66nm,19.9s,MS4.0,baz=62,slow=29							
ILAR	Eielson Array	82.32	11	P	P	06 34 04.8	+0.4
0.4nm,0.6s,mb3.5,baz=223,slow=6.0,SNR=7.9							
ILAR				LR	LR	07 03 10.8	
comp=Z,55nm,20.7s,MS3.9,baz=194,slow=30							
MAW	Mawson	87.98	198	P	P	06 34 33.9	+0.9
6.0nm,1.0s,mb4.8,baz=107,slow=4.6,SNR=11							
PLCA	Paso Flores	89.15	132	LR	LR	07 03 53.8	
comp=Z,80nm,20.8s,MS4.1,baz=209,slow=28							
YKA	Yellowknife Ar	89.87	23	LR	LR	07 08 22.1	
comp=Z,6.2nm,21.1s,MS3.0,baz=280,slow=31							
CMAR	Chiang Mai Arr	93.09	288	LR	LR	07 18 30.9	
comp=Z,22nm,18.3s,MS3.6,baz=80,slow=37							
ULM	Lac du Bonnet	93.59	39	LR	LR	07 09 32.3	
comp=Z,95nm,21.4s,MS4.2,baz=153,slow=31							
SONM	Songino Array	95.17	318	LR	LR	07 11 44.1	
comp=Z,56nm,19.8s,MS4.0,baz=357,slow=32							
GERES	GERESS Array B	146.19	352	PKPbc	PKPbc	06 41 24.9	+1.4
0.3nm,0.2s,baz=325,slow=2.1,SNR=4.1							
BRTR	Keskin Array B	146.46	321	PKPbc	PKPbc	06 41 25.8	+1.2
2.1nm,0.9s,baz=93,slow=2.5,SNR=7.6							
TORD	Torodi Ar. Bea	174.28	112	PKPab	PKPab	06 43 25.6	-0.5
1.3nm,1.0s,baz=258,slow=7.4,SNR=4.7							

*ISCJB **17** 06:49:29.8±1.1, 37.°10N±0.°05×35.°75E±0.°06, h22km±10km, Error ellipse: s-maj=9.5km s-min=6.1km az=141.3*
*DDA **17** 06:49:29.6, 37.°10N×35.°71E, h7km±5km, Md2.8*
*ISK **17** 06:49:29.2, 37.°13N×35.°74E, h21km, ML1.8*
*CSEM **17** 06:49:29.1±0.4, 37.°09N×35.°73E, h25km±4km, ML1.8, Error ellipse: s-maj=8.1km s-min=4.9km az=133.0*

ISC 17 06:49:29.8±0.9, 37.°10N±0.°05×35.°74E±0.°06, h22km±10km, n15, σ0s67/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.09	177	PG	Pb	06 49 33.6	-0.3
CEYT				eSG	Sb	06 49 37.1	+0.4
CEYT	Ceyhan	0.09	177	i Pg	Pb	06 49 33.6	-0.3
CEYT				eSg	Sb	06 49 37.1	+0.4
YURE	YUREGIR	0.29	198	i P	Pb	06 49 35.8	-0.6
YURE	YUREGIR	0.29	198	i P	Pb	06 49 35.8	-0.6
KOZT	Kozan	0.38	10	PG	Pb	06 49 37.1	-0.8
KOZT				eSG	Sb	06 49 43.3	-0.2
KARA	Karaisali	0.57	286	ePG	Pb	06 49 40.6	-0.5
KARA				eSG	Sb	06 49 49.5	+0.7
KARA	Karaisali	0.57	286	ePg	Pb	06 49 40.6	-0.5
KRTS	Karatas	0.61	209	ePG	Pb	06 49 42.4	+0.7
KRTS	Karatas	0.61	209	ePg	Pb	06 49 42.4	+0.7
ANDN	Andirin	0.68	45	i P	Pb	06 49 42.2	-0.8
ANDN				i S	Sb	06 49 53.4	+1.5
ANDN	Andirin	0.68	45	i P	Pb	06 49 42.2	-0.7
ANDN				i S	Sb	06 49 53.4	+1.5
GULE	Gulek	0.79	283	i P	Pb	06 49 44.3	-0.6
GULE				i S	Sb	06 49 55.5	+0.3
GULE	Gulek	0.79	283	i P	Pb	06 49 44.3	-0.6
GULE				i S	Sb	06 49 55.5	+0.3
MERS	Mersin	1.00	257	ePG	Pb	06 49 48.7	+0.2
MERS	Mersin	1.00	257	ePg	Pb	06 49 48.7	+0.2

IDC 17 07:02:38.1±0.8, 52.°70S×18.°95E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.9/18, mbtmp4.0/6, MS3.6/5, Ms1 3.6/5, ms1mx3.2/26, Error ellipse: s-maj=34.6km s-min=20.0km az=76.0, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	20.36	5	P	P	07 07 17.6	+1.7
6.1nm,0.8s,baz=172,slow=7.1,SNR=3.0							
SUR				LR	LR	07 14 11.5	
comp=Z,100nm,18.6s,baz=71,slow=34							
SNAA	Sanae	21.32	199	P	P	07 07 26.7	+0.6
5.2nm,1.0s,baz=22,slow=12,SNR=6.9							
BOSA	Boshof	24.52	13	LR	LR	07 16 05.7	
comp=Z,172nm,18.4s,baz=167,slow=33							
MAW	Mawson	25.72	142	P	P	07 08 09.6	0.0
3.0nm,0.9s,baz=292,slow=8.3,SNR=6.4							
QSPA	South Pole Qui	37.52	180	P	P	07 09 53.7	+0.6
4.0nm,0.8s,baz=236,slow=7.0,SNR=17							
CPUP	Villa Florida	61.34	263	LR	LR	07 35 18.0	
comp=Z,36nm,20.8s,baz=160,slow=32							
DBIC	Dimbokro	62.52	333	LR	LR	07 34 01.4	
comp=Z,49nm,18.8s,baz=239,slow=30							
TORD	Torodi Ar. Bea	67.25	342	P	P	07 13 33.5	-0.6
1.3nm,1.0s,baz=170,slow=7.2,SNR=4.2							
LPAZ	La Paz	75.47	262	P	P	07 14 24.7	+0.7
1.1nm,0.9s,baz=180,slow=6.1,SNR=2.9							
LPAZ				LR	LR	07 42 13.8	
comp=Z,34nm,20.2s,baz=211,slow=32							
ASAR	Alice Springs	85.33	123	P	P	07 15 16.8	-0.2
0.8nm,0.7s,baz=208,slow=4.5,SNR=8.7							
PDAR	Pinedale Array	144.67	275	PKP	PKPdf	07 22 13.4	-2.4
1.0nm,0.6s,baz=122,slow=4.5,SNR=12							
NVAR	Mina Array Bea	147.37	261	PKPbc	PKPbc	07 22 22.9	-0.1
0.9nm,0.9s,baz=137,slow=4.6,SNR=9.6							
ILAR	Eielson Array	165.89	335	PKPab	PKPab	07 23 43.6	+0.4
0.8nm,0.9s,baz=20,slow=2.5,SNR=7.7							

*BYKL **17** 07:13:56.7±0.3, 51.°41N×105.°12E*

MOS 17 07:13:56.2±0.8, 51.°50N×105.°13E, h14km, mb4.2/1, 1C-1D, Error ellipse: s-maj=28.0km s-min=18.2km az=99.4, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSTR	Listvyanka	0.42	334	ePG	Pg	07 14 05.4	+0.9
LSTR				eS	Sg	07 14 12.2	+2.0
LSTR	Listvyanka	0.42	334	ePg	Pg	07 14 05.4	+0.9
LSTR				e		07 14 06.9	
LSTR				eSg	Sg	07 14 12.2	+2.0
LSTR				max			
61nm,0.2s							
LSTR				Smax			
262nm,0.3s							
IRK	Irkutsk	0.92	325	ePG	Pg	07 14 13.6	-0.4
IRK				e		07 14 25.5	
IRK				pmax	pmax		
comp=Z,411nm,0.1s							
IRK				smax			
comp=N,1μm,0.3s							
IRK	Irkutsk	0.92	325	ePg	Pg	07 14 14.0	0.0
IRK				i Sg	Sg	07 14 27.0	+1.0
IRK				Pmax			
comp=N,412nm,0.2s							
IRK				Smax			
comp=N,1μm,0.3s							
TLY	Talaya	0.94	282	ePG	Pg	07 14 14.1	-0.3
TLY				e		07 14 26.0	
TLY				pmax	pmax		
comp=Z,93nm,0.1s							
TLY				smax			
comp=N,2μm,0.1s							
TLY	Talaya	0.94	282	ePg	Pg	07 14 15.0	+0.6
TLY				eSg	Sg	07 14 29.1	+2.3
TLY				Pmax			
comp=N,88nm,0.1s							
TLY				Smax			
comp=N,2μm,0.1s							
STDB	Stepnoy Dvoret	1.02	48	⇑i Pg	Pg	07 14 17.1	+1.2
STDB				i Sg	Sg	07 14 32.4	+3.1
STDB				Pmax			
comp=N,125nm,0.2s							
STDB				Smax			
comp=N,1μm,0.5s							
KAB	Kabansk	1.10	59	i Sg	Sg	07 14 33.2	+1.5
KAB				Smax			
comp=N,828nm,0.6s							
HRMR	Khuramsha	1.15	83	⇓i Pg	Pg	07 14 17.2	-1.1
HRMR				i Sg	Sg	07 14 33.0	-0.3
HRMR				Pmax			
comp=N,111nm,0.1s							
HRMR				Smax			
comp=N,2μm,0.7s							
TRG	Tyrgan	1.47	30	ePN	Pn	07 14 22.9	+0.6
TRG				e		07 14 44.0	
TRG				pmax	pmax		
comp=Z,40nm,0.1s							
TRG				smax			
comp=E,855nm,0.1s							
TRG	Tyrgan	1.47	30	ePg	Pg	07 14 22.8	-1.7
TRG				eSg	Sg	07 14 44.0	+0.4
TRG				Pmax			
comp=E,39nm,0.1s							
TRG				Smax			
comp=E,867nm,0.1s							
ZAK	Zakamensk	1.61	227	ePN	Pn	07 14 24.4	+0.2
ZAK				e		07 14 44.3	
ZAK				pmax	pmax		
comp=Z,78nm,0.2s							
ZAK				smax			
comp=N,287nm,0.2s							
ZAK	Zakamensk	1.61	227	ePg	Pg	07 14 23.8	-3.4
ZAK				i Sg	Sg	07 14 44.6	-3.5
ZAK				Pmax			
comp=N,71nm,0.2s							
ZAK				Smax			
comp=N,284nm,0.2s							
UUDB	Ulan-Yde	1.62	76	ePg	Pg	07 14 25.4	-1.9
UUDB				eSg	Sg	07 14 48.1	-0.3
UUDB				Pmax			
comp=N,26nm,0.2s							
UUDB				Smax			
comp=N,112nm,0.3s							
ARS	Arshan	1.74	285	ePN	Pn	07 14 27.8	+1.9
ARS				e		07 14 51.1	
ARS				pmax	pmax		
comp=Z,26nm,0.1s							
ARS				smax			
comp=E,361nm,0.3s							
ARS	Arshan	1.74	285	ePg	Pg	07 14 27.8	-1.7
ARS				i Sg	Sg	07 14 50.7	-1.3
ARS				Pmax			
comp=E,31nm,0.2s							
ARS				Smax			
comp=E,479nm,0.7s							
MOY	Mondy	2.59	275	ePg	Pg	07 14 44.0	-1.7
MOY				i Sg	Sg	07 15 17.2	-2.0
MOY				Pmax			
comp=E,15nm,0.4s							
MOY				Smax			
comp=E,156nm,1.0s							
OGRR	Ongureny	2.63	34	ePn	Pn	07 14 39.3	+1.2
OGRR				ePg	Pg	07 14 43.4	-3.1
OGRR				eSn	Sn	07 15 10.8	+1.1
OGRR				i Sg	Sg	07 15 18.0	-2.5
OGRR				e		07 15 29.6	
OGRR				Pmax			
comp=E,8.0nm,0.2s							
OGRR				Smax			
comp=E,91nm,0.4s							
MXMB	Maximikha	2.84	50	ePg	Pg	07 14 49.2	-1.3
MXMB				eSg	Sg	07 15 26.4	-0.9
MXMB				Pmax			
comp=E,26nm,0.5s							
MXMB				Smax			
comp=E,126nm,0.4s							
ULN	Ulaanbaatar	3.84	160	ePg	Pg	07 15 03.8	-6.0
ULN				eSg	Sg	07 15 52.2	-7.3
KPC	Khapcheranga	4.95	108	eSg	Sg	07 16 29.6	-5.5
KPC				Smax			
comp=E,44nm,1.1s							
YLYR	Ulyunkhan	4.96	45	e	Pn	07 15 21.9	+12
YLYR				eSg	Sg	07 16 31.3	-4.1
YLYR				Smax			
comp=E,9.0nm,0.6s							
TUP	Tupik	9.42	66	eSg	Sn	07 18 51.1	+54
TUP				Smax			
comp=E,70nm,0.8s							

*ISCJB **17** 07:23:31.8±0.5, 32.°39N±0.°03×47.°40E±0.°07, h10km, Error ellipse: s-maj=8.6km s-min=3.8km az=6.0*
*KISR **17** 07:23:31.5±0.7, 32.°23N×47.°18E, h11km±999km, ML3.0*
*CSEM **17** 07:23:31.9±0.1, 32.°38N×47.°36E, h2km, ML3.0, Error ellipse: s-maj=4.6km s-min=2.0km az=105.0*
*TEH **17** 07:23:35.4, 32.°50N×47.°42E, h24km*

ISC 17 07:23:32.5±0.4, 32.°41N±0.°02×47.°34E±0.°06, h10km, n24, σ0s59/35, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.28	103	ePg	Pg	07 23 55.9	-1.1
IKOM	Komasi	1.76	5	eSg	Sg	07 24 28.1	-1.2
IKOM				ePn	Pn	07 24 03.6	+0.5
IKOM				e		07 24 31.4	
comp=Z,4μm,0.3s							
IGHG	Ghaleghazi	2.02	342	e	Sg	07 24 55.6	+18
IGHG				ePn	Pn	07 24 06.9	+0.3
IVIS	Veis	2.15	349	e	Sg	07 24 49.3	+7.7
comp=E,3μm,0.5s							
IVIS				ePn	Pn	07 24 09.0	+0.6
IDHR	Dehrash	2.42	341	eSg	Sg	07 24 49.3	-0.9
IDHR				ePn	Pn	07 24 07.4	-4.7
IDHR				e		07 24 55.6	
comp=Z,1μm,0.3s							
ILIN	Lien	2.52	353	ePn	Pn	07 24 14.3	+0.8
ILIN				e		07 24 25.9	
comp=Z,693nm,0.4s							
MIB	Mutribah	2.60	180	eP	Pn	07 24 14.1	-0.5
MIB				eS	Sn	07 24 46.2	0.0
MIB				AML	AML	07 24 48.7	
comp=Z,94nm,0.5s							
MIB	Mutribah	2.60	180	eP	Pn	07 24 14.1	-0.5
MIB				eS	Sn	07 24 46.2	-0.1
SNGE	Sanandaj	2.67	0	ePn	Pn	07 24 16.7	+1.0
UMR	Umm Al-Rimmam	2.87	173	eP	Pn	07 24 18.6	+0.2
UMR	Umm Al-Rimmam	2.87	173	eP	Pn	07 24 18.5	+0.2
IPIR	Pirpir	3.01	84	ePn	Pn	07 24 20.9	+0.6
IPIR				e		07 25 23.0	
comp=Z,1μm,0.4s							
ASAO	Ashtian	3.10	46	ePn	Pn	07 24 22.2	+0.8
NAY	Al-Naaiem	3.15	182	eP	Pn	07 24 21.6	-0.7
NAY				eS	Sn	07 24 59.7	-0.2
NAY				AML	AML	07 25 02.1	
comp=Z,17nm,0.5s							
NAY	Al-Naaiem	3.15	182	eP	Pn	07 24 21.6	-0.7
NAY				eS	Sn	07 24 59.7	-0.2
RDF	Al-Radifah	3.48	177	eP	Pn	07 24 26.7	0.0
RDF				eS	Sn	07 25 07.9	0.0
RDF				AML	AML	07 25 10.6	
comp=Z,35nm,0.5s							
RDF	Al-Radifah	3.48	177	eP	Pn	07 24 26.7	0.0
RDF				eS	Sn	07 25 07.9	-0.1
IKLH	Kolahrood	3.68	75	ePn	Pn	07 24 29.6	+0.1
IKLH				e		07 25 36.4	
comp=E,840nm,0.3s							
IRAZ	Razeghan	3.68	35	ePn	Pn	07 24 29.3	-0.2
IRAZ				e		07 25 32.3	
comp=N,573nm,0.3s							
QRN	Al-Qurain	3.69	172	eP	Pn	07 24 29.6	0.0
QRN				eS	Sn	07 25 13.5	+0.3
QRN				AML	AML	07 25 15.6	
comp=Z,62nm,0.3s							
GHVR	GHOM	3.90	57	ePn	Pn	07 24 33.0	+0.5
IGAR	Gharneh	3.98	89	ePn	Pn	07 24 33.7	+0.1
IGAR				e		07 25 22.1	
comp=Z,444nm,0.2s							
IZEF	Zefreh	4.24	82	ePn	Pn	07 24 37.3	+0.2
IZEF				e		07 25 47.4	
comp=N,263nm,0.4s							
IDMV	Damavand	5.02	50	ePn	Pn	07 24 47.0	-0.9

IDC 17 07:23:40.5±1.1, 52.°63S×18.°82E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/18, mbtmp3.8/5, MS3.6/9, Ms1 3.5/9, ms1mx3.3/30, Error ellipse: s-maj=41.7km s-min=29.1km az=73.0, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	20.29	5	P	P	07 28 22.8	+5.2
5.7nm,0.8s,baz=203,slow=13,SNR=2.9							
SUR				LR	LR	07 35 09.8	
comp=Z,76nm,20.0s,baz=257,slow=34							
SNAA	Sanae	21.37	199	P	P	07 28 28.6	-0.5
2.2nm,1.0s,baz=20,slow=13,SNR=7.4							
SNAA				LR	LR	07 34 41.7	
comp=Z,27nm,21.5s,baz=57,slow=31							
BOSA	Boshof	24.46	14	LR	LR	07 36 49.1	
comp=Z,138nm,18.2s,baz=29,slow=32							
MAW	Mawson	25.83	142	P	P	07 29 12.8	-0.3
1.6nm,0.9s,baz=305,slow=11,SNR=4.0							
LBTB	Lobatse	28.05	13	LR	LR	07 38 58.0	
comp=Z,101nm,19.1s,baz=136,slow=33							
QSPA	South Pole Qui	37.60	180	P	P	07 30 56.9	+0.7
2.8nm,0.8s,baz=248,slow=5.5,SNR=18							
PMSA	Palmer Station	41.52	220	LR	LR	07 45 18.9	
comp=Z,132nm,18.8s,baz=44,slow=31							
USHA	Ushuaia	48.43	231	LR	LR	07 47 12.4	
comp=Z,99nm,19.8s,baz=265,slow=29							
PLCA	Paso Flores	58.64	243	LR	LR	07 54 13.7	
comp=Z,46nm,20.8s,baz=311,slow=31							
CPUP	Villa Florida	61.27	264	LR	LR	07 54 33.1	
comp=Z,38nm,18.6s,baz=5.1,slow=30							
RPZ	Rata Peaks	81.09	160	LR	LR	08 08 03.1	
comp=Z,90nm,18.9s,baz=2.8,slow=33							
ASAR	Alice Springs	85.44	124	P	P	07 36 20.7	+0.7
0.6nm,0.6s,baz=203,slow=5.2,SNR=6.8							
WRA	Warramunga Arr	88.76	122	P	P	07 36 35.7	-0.4
0.8nm,1.0s,baz=212,slow=4.4,SNR=3.7							
PDAR	Pinedale Array	144.59	275	PKP	PKPdf	07 43 16.5	-1.6
0.8nm,0.7s,baz=116,slow=6.8,SNR=9.0							
NVAR	Mina Array Bea	147.30	262	PKPbc	PKPbc	07 43 25.6	+0.3
0.9nm,0.8s,baz=126,slow=5.0,SNR=8.2							
ILAR	Eielson Array	165.79	334	PKPab	PKPab	07 44 44.9	-0.4
0.6nm,0.8s,baz=14,slow=3.5,SNR=7.5							

KRSC 17 07:49:59.1±0.8, 50.°63N×157.°84E, h80km±80km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.47	280	eP	Pn	07 50 25.3	+1.3
ALID				eS	Sn	07 50 43.9	+1.1
PET	Petropavlovsk	2.45	12	eP	Pn	07 50 39.7	+2.8
AVH	Avacha	2.70	12	eP	Pn	07 50 42.9	+2.6
AVH				eS	Sn	07 51 15.5	+3.6
NLC	Nalytchevo	2.71	20	P	Pn	07 50 42.1	+1.7
SPN	Mys Shipunski	2.82	28	S	Sn	07 51 18.3	+3.5
GNL	Ganaly	3.07	1	eP	Pn	07 50 48.0	+2.7
GNL				eS	Sn	07 51 24.1	+3.2
MKZ	Mys Kozlova	4.59	30	P	Pn	07 51 07.6	+1.6

IDC 17 08:01:01.4±3.3, 51.°99N×34.°44E, h0km, mb1 3.7/2, mb1mx3.2/23, mbtmp3.6/2, ML3.1/3, 1D, Error ellipse: s-maj=40.0km s-min=14.8km az=114.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	3.52	251	Pn	Pn	08 01 56.8	-0.5
0.7nm,0.3s,baz=68,slow=15,SNR=4.5							
AKASG				Lg		08 02 54.7	
2.0nm,0.3s,baz=62,slow=24,SNR=3.4							
MICGM	Minsk	4.67	305	⇓eP	Sg	08 03 37.0	+5.5
FINES	FINESS Array B	10.52	337	Pn	Pn	08 03 28.7	-4.5
0.2nm,0.3s,baz=150,slow=16,SNR=4.7							
FINES				Sn	Sn	08 05 21.4	-10
0.3nm,0.3s,baz=155,slow=23,SNR=4.0							
ARCES	ARCESS Array B	18.10	350	Pn	Pn	08 05 07.8	-6.1
0.3nm,0.3s,baz=157,slow=10,SNR=14							

IDC 17 08:46:46.0±2.4, 54.°84N×86.°68E, h0km, mb1 3.2/3, mb1mx3.1/28, mbtmp3.2/3, ML3.2/3, Error ellipse: s-maj=22.1km s-min=18.0km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.41	231	Pg	Pg	08 47 13.2	+0.2
4.5nm,0.3s,baz=53,slow=17,SNR=35							
ZALV				Lg		08 47 30.7	
4.0nm,0.3s,baz=54,slow=29,SNR=13							
MKAR	Makanchi Array	8.52	201	Pn	Pn	08 48 51.8	+1.3
0.5nm,0.3s,baz=20,slow=12,SNR=5.0							
MKAR				Sn	Sn	08 50 26.1	-1.2
0.2nm,0.3s,baz=21,slow=29,SNR=3.6							
MKAR				Lg		08 51 17.6	
0.2nm,0.3s,baz=22,slow=31,SNR=3.5							
BVAR	Borovoye Array	9.78	266	Pn	Pn	08 49 06.2	-1.6
0.3nm,0.3s,baz=79,slow=6.1,SNR=2.5							
SONM	Songino Array	14.15	112	Pn	Pn	08 50 07.0	-0.4
0.1nm,0.3s,baz=302,slow=14,SNR=2.3							

*ISCJB **17** 09:04:40.5±0.6, 52.°66S±0.°09×18.°7E±0.°3, h10km, mb4.2/10, MS3.7/14, Error ellipse: s-maj=22.6km s-min=12.2km az=174.0*
*IDC **17** 09:04:40.8±0.7, 52.°68S×18.°87E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.1/18, mbtmp4.2/10, MS3.6/14, Ms1 3.6/14, ms1mx3.5/28, Error ellipse: s-maj=28.6km s-min=16.3km az=77.0*
*NEIC **17** 09:04:42.0±0.4, 52.°68S×18.°79E, h10km, mb4.2/2, Error ellipse: s-maj=16.4km s-min=9.5km az=84.0*

ISC 17 09:04:42.4±0.6, 52.°68S±0.°08×18.°8E±0.°3, h10km, n32, σ0s50/15, mb4.1/10, MS3.7/14, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	20.34	5	P	P	09 09 18.7	+0.1
6.0nm,0.8s,baz=166,slow=19,SNR=2.1							
SUR	Sutherland	20.34	5	eP	P	09 09 19.0	+0.3
22nm,0.9s							
SNAA	Sanae	21.32	199	P	P	09 09 29.6	+0.6
7.0nm,1.0s,mb4.0,baz=50,slow=8.8,SNR=24							
BOSA	Boshof	24.51	14	P	P	09 10 02.5	+0.7
5.4nm,1.0s,mb4.0,baz=174,slow=9.2,SNR=3.8							
BOSA				LR	LR	09 18 06.9	
comp=Z,178nm,19.1s,MS3.6,baz=161,slow=33							
MAW	Mawson	25.78	142	P	P	09 10 13.6	+0.6
4.2nm,0.9s,mb4.0,baz=289,slow=10,SNR=8.8							
MAW				LR	LR	09 17 33.2	
comp=Z,165nm,21.8s,MS3.5,baz=111,slow=30							
MAW	Mawson	25.78	142	eP	P	09 10 13.2	+0.2
2.3nm,1.0s,mb3.7							
MAW				LR	LR	09 17 33.2	
LBTB	Lobatse	28.10	13	LR	LR	09 19 46.0	
comp=Z,251nm,18.9s,MS3.8,baz=262,slow=32							
QSPA	South Pole Qui	37.55	180	P	P	09 11 56.0	-0.1
7.3nm,0.7s,mb4.5,baz=247,slow=3.6,SNR=38							
USHA	Ushuaia	48.41	231	LR	LR	09 28 42.7	
comp=Z,121nm,18.4s,MS3.9,baz=34,slow=30							
PLCA	Paso Flores	58.63	243	LR	LR	09 34 14.6	
comp=Z,66nm,19.0s,MS3.8,baz=113,slow=30							
CPUP	Villa Florida	61.27	264	P	P	09 14 57.6	-0.1
0.6nm,0.6s,mb3.9,baz=128,slow=7.5

ASAR	Alice Springs	85.41	124	P	P	09 17 20.3	+0.3
	1.3nm,0.6s,mb4.2,baz=212,slow=4.4,SNR=8.4						
ASF	Jabal al Asfar	85.95	15	LR	LR	09 57 34.7	
	comp=Z,36nm,19.5s,MS3.8,baz=238,slow=37						
MMAI	Mount Meron Ar	86.55	14	LR	LR	09 57 50.5	
	comp=Z,35nm,18.1s,MS3.8,baz=260,slow=37						
WRA	Warramunga Arr	88.72	122	P	P	09 17 35.8	-0.4
	1.2nm,1.0s,mb4.2,baz=208,slow=4.0,SNR=4.2						
BRTR	Keskin Array B	92.92	11	LR	LR	10 03 26.4	
	comp=Z,20nm,18.2s,MS3.6,baz=102,slow=38						
GNI	Garni	95.15	20	LR	LR	10 00 28.9	
	comp=Z,22nm,19.0s,MS3.6,baz=86,slow=35						
DAVOX	Davos/Dischmat	99.38	354	LR	LR	10 05 18.0	
	comp=Z,24nm,18.0s,MS3.7,baz=96,slow=37						
SONM	Songino Array	124.66	55	PKP	PKPdf	09 23 40.8	-0.3
	0.3nm,0.3s,baz=219,slow=3.7,SNR=3.4						
PDAR	Pinedale Array	144.60	275	PKP	PKPdf	09 24 16.4	-2.0
	1.8nm,0.7s,baz=134,slow=5.1,SNR=18						
LAO	LASA Array	144.70	283	*e*PKPdf	PKPdf	09 24 17.9	-0.5
HWUT	Hardware Ranch	145.15	272	*e*PKPbc	PKPbc	09 24 18.4	-0.6
NVAR	Mina Array Bea	147.30	262	PKPbc	PKPbc	09 24 25.9	+0.5
	1.5nm,0.7s,baz=137,slow=4.7,SNR=12						
NVAR	Mina Array Bea	147.30	262	PKPbc	PKPbc	09 24 25.9	+0.4
ILAR	Eielson Array	165.84	334	PKPab	PKPab	09 25 46.8	+1.1
	1.3nm,0.8s,baz=23,slow=2.7,SNR=15						

IDC 17 09:08:22.7±1.4, 13°.42S×98°.25W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.9/16, mbtmp3.7/5, MS2.9/1, Ms1 3.1/1, ms1mx2.6/15, Error ellipse: s-maj=218.5km s-min=27.0km az=83.0, Southwest of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	29.24	99	LR	LR	09 24 13.4	
	comp=Z,23nm,18.8s,baz=215,slow=32						
TXAR	Lajitas Array	42.83	353	P	P	09 16 22.6	+0.1
	0.3nm,0.7s,baz=168,slow=9.2,SNR=4.5						
NVAR	Mina Array Bea	54.89	341	P	P	09 17 55.9	+0.8
	0.7nm,0.7s,baz=174,slow=9.0,SNR=6.4						
PDAR	Pinedale Array	56.87	350	P	P	09 18 09.2	0.0
	0.6nm,0.7s,baz=161,slow=8.6,SNR=6.1						
QSPA	South Pole Qui	76.70	180	P	P	09 20 15.7	+0.5
	1.4nm,0.9s,baz=150,slow=3.0,SNR=4.3						
ILAR	Eielson Array	86.15	341	P	P	09 21 04.8	-0.5
	0.7nm,0.8s,baz=152,slow=4.1,SNR=7.3						
MKAR	Makanchi Array	146.73	359	PKPbc	PKPbc	09 28 06.3	-0.4
	1.6nm,0.7s,baz=14,slow=2.4,SNR=14						

HEL 17 09:31:16.7±1.5, 60°.28N×30°.50E, h0km, ML1.5, Explosion
IDC 17 09:31:19.1±2.0, 60°.45N×30°.18E, h0km, mb1 3.1/4, mb1mx2.9/26, mbtmp3.0/4, ML2.7/3, Error ellipse: s-maj=21.6km s-min=15.5km az=2.0
ISC 17 09:31:15.7±1.5, 60°.41N±0°.07×30°.4E±0°.1, h0km, n11, σ1§08/16, Baltic States - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	Virojoki	1.41	276	PG	Pg	09 31 41.4	-1.3
VJF				SG	Sg	09 32 02.1	+1.2
VJF				MSG		09 32 02.1	
	comp=Z,1.1nm,0.1s						
PVF	Pernaja	2.25	275	PN	Pn	09 31 55.4	+1.4
PVF				SG	Sg	09 32 27.4	-0.4
PVF				MSG		09 32 27.4	
	comp=Z,3.2nm,0.2s						
FIA0	FINESS Array S	2.35	298	PN	Pn	09 31 56.5	+1.1
FIA0				SG	Sg	09 32 32.1	+1.1
FIA0				MSG		09 32 32.1	
	comp=Z,1.6nm,0.2s						
FIA0				RG		09 32 42.3	
FINES	FINESS Array B	2.35	298	Pn	Pn	09 31 58.1	+2.7
	comp=Z,0.8nm,0.3s,baz=115,slow=13,SNR=14						
FINES				Lg		09 32 29.6	
	comp=Z,0.8nm,0.3s,baz=113,slow=22,SNR=7.7						
JOF	Joensuu	2.56	10	PN	Pn	09 32 02.7	+4.4
	baz=181						
JOF				SG	Sg	09 32 37.7	0.0
JOF				MSG		09 32 37.7	
	comp=Z,1.6nm,0.2s						
KAF	Kangasniemi	2.61	313	PN	Pn	09 32 04.5	+5.5
KAF				SG	Sg	09 32 38.3	-1.1
KAF				MSG		09 32 38.3	
	comp=Z,1.7nm,0.2s						
MEF	Metsahovi	2.99	269	SG	Sg	09 32 50.9	-0.7
MEF				MSG		09 32 50.9	
	comp=Z,2.5nm,0.4s						
KEF	Keuruu	3.19	306	SG	Sg	09 33 02.7	+4.5
KEF				MSG		09 33 02.7	
	comp=Z,1.4nm,0.4s						
HFS	Hagfors	8.30	275	Pn	Pn	09 33 17.1	-0.1
	comp=Z,0.1nm,0.3s,baz=100,slow=16,SNR=2.5						
HFS				Lg		09 35 37.5	
	comp=Z,0.2nm,0.3s,baz=88,slow=35,SNR=2.8						
ARCES	ARCESS Array B	9.39	349	Pn	Pn	09 33 31.9	-0.2
	comp=Z,0.1nm,0.3s,baz=167,slow=14,SNR=6.5						
ARCES				Lg		09 36 07.2	
	comp=Z,0.2nm,0.3s,baz=165,slow=35,SNR=3.6						
NOA	NORSAR Array B	9.41	282	Pn	Pn	09 33 30.8	-1.6
	comp=Z,0.1nm,0.3s,baz=88,slow=16,SNR=4.2						

MAN 17 09:45:30, 13°.56N×120°.98E, h22km, mb4.1, ML2.9, MS2.6, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.07	200	⇓*i*P	Pb	09 45 35.6	+1.7
TGY	Tagaytay City	0.54	356	⇑*i*P	Pb	09 45 42.3	+1.5
LUBP	Lubang	0.73	283	*e*P	Pb	09 45 45.2	+1.1
LUBP				*e*S	Sb	09 45 57.0	+3.4
BOAC	Boac	0.85	97	*e*P	Pb	09 45 46.4	+0.3
BOAC				*e*S	Sb	09 46 00.2	+3.1
BUSP	Coron	1.73	206	*e*P	Pn	09 46 05.9	+7.2

ISCJB 17 09:52:01.2±1.3, 60°.24N±0°.06×30°.5E±0°.1, h0km, Error ellipse: s-maj=11.5km s-min=7.0km az=37.5
HEL 17 09:52:02.5±0.2, 60°.21N×30°.56E, h0km, ML1.7, Explosion
IDC 17 09:52:04.3±2.1, 60°.32N×30°.13E, h0km, mb1 3.1/4, mb1mx3.0/26, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=19.4km s-min=16.0km az=180.0
ISC 17 09:52:01.8±1.2, 60°.25N±0°.06×30°.5E±0°.1, h0km, n9, σ1§05/14, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	Virojoki	1.50	283	*e*P	Pn	09 52 29.7	-0.3
VJF				*e*S	Sg	09 52 48.9	-1.1
PVF	Pernaja	2.33	279	*e*P	Pn	09 52 42.5	+1.1
PVF				*e*S	Sn	09 53 11.3	+0.6
PVF				MSG		09 53 16.9	
	comp=Z,4.9nm,0.2s						
FIA0	FINESS Array S	2.49	301	*e*P	Pn	09 52 45.1	+1.7
FIA0				*e*S	Sn	09 53 15.7	+1.3
FIA0				MSG		09 53 22.1	
	comp=Z,1.6nm,0.1s						
FINES	FINESS Array B	2.49	301	Pn	Pn	09 52 43.7	+0.2
	comp=Z,0.8nm,0.3s,baz=115,slow=14,SNR=15						
FINES				Lg		09 53 15.8	
	comp=Z,0.8nm,0.3s,baz=115,slow=22,SNR=7.5						
VSU	Vasula	2.64	229	*e*P	Pn	09 52 45.9	+0.3
VSU				*e*S	Sn	09 53 18.1	-0.1
JOF	Joensuu	2.71	8	*e*P	Pn	09 52 47.5	+1.0
JOF				*e*S	Sn	09 53 19.7	-0.3
JOF				MSG		09 53 29.0	
	comp=Z,2.6nm,0.2s						
HFS	Hagfors	8.39	277	Pn	Pn	09 54 02.5	-1.9
	comp=Z,0.1nm,0.3s,baz=84,slow=16,SNR=2.5						
HFS				Lg		09 56 23.9	
	comp=Z,0.1nm,0.3s,baz=87,slow=32,SNR=2.4						
NOA	NORSAR Array B	9.51	283	Pn	Pn	09 54 15.7	-4.2
	comp=Z,0.2nm,0.3s,baz=90,slow=12,SNR=4.4						
ARCES	ARCESS Array B	9.56	349	Pn	Pn	09 54 18.9	-1.7
	comp=Z,0.1nm,0.3s,baz=163,slow=14,SNR=5.6						
ARCES				Lg		09 57 01.4	
	comp=Z,0.1nm,0.3s,baz=171,slow=28,SNR=3.3						

NIED 17 09:55:00, 43°.60N×147°.90E, h38km, Mw3.6 Best double couple: M0=2.99000×10^14 NP1:φs=234.00000°, δ87.00000°, λ-105.00000°. NP2:φs=135.00000°, δ16.00000°, λ-10.00000°.
IDC 17 09:55:37.3±1.1, 43°.92N×148°.12E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.6/25, mbtmp3.6/7, ML2.9/2, Error ellipse: s-maj=32.7km s-min=23.5km az=144.0
MOS 17 09:55:39.6±1.9, 43°.98N×148°.23E, h30km, mb3.9/4, Error ellipse: s-maj=24.5km s-min=15.4km az=139.2
JMA 17 09:55:41.3±0.1, 43°.63N×147°.91E, h9km, M4.1
ISCJB 17 09:55:42.6±1.3, 43°.81N±0°.09×148°.0E±0°.1, h54km±13km, mb3.5/5, Error ellipse: s-maj=16.5km s-min=11.0km az=152.2
NEIC 17 09:55:42.7±0.8, 43°.95N×148°.13E, h35km, MG4.1(JMA), Error ellipse: s-maj=22.7km s-min=12.4km az=145.0
ISC 17 09:55:43.9±1.4, 43°.88N±0°.10×148°.0E±0°.1, h48km±14km, n33, σ0§87/43, mb3.5/5, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.56	277	⇓*i*PN	Pn	09 56 08.5	-0.7
YUK				*i* S	Sn	09 56 27.7	-0.6
YUK				pmax	pmax		
	comp=Z,88nm,0.3s						
YUK				pmax	pmax		
	comp=Z,474nm,0.2s						
YUK				pmax	pmax		
	comp=N,84nm,0.2s						
YUK				pmax	pmax		
	comp=E,318nm,0.1s						
YUK				smax			
	comp=N,862nm,0.2s						
YUK				smax			
	comp=E,336nm,0.2s						
YUK				smax			
	comp=N,926nm,0.7s						
YUK				smax			
	comp=E,193nm,0.2s						
NEM2	Nemuro 2	1.73	254	P	Pn	09 56 10.1	-1.3
NEM2				*e*S	Sn	09 56 31.1	-1.2
JRA	Rausu	2.09	273	P	Pn	09 56 16.6	+0.2
JRA				*e*S	Sn	09 56 42.3	+1.1
JNK	Nakash	2.41	264	P	Pn	09 56 20.5	-0.3
JNK				*e*S	Sn	09 56 49.2	+0.2
JAK	Akkeshi	2.57	251	P	Pn	09 56 22.3	-0.7
JAK				*e*S	Sn	09 56 51.9	-1.1
JTKR	Abashiri--Toko	2.97	273	P	Pn	09 56 29.3	+0.8
JAR	Ashorobuto	3.14	261	P	Pn	09 56 31.3	+0.5
JAR				*e*S	Sn	09 57 07.9	+0.9
JOB	Onbets	3.20	254	*e*S	Sn	09 57 08.2	-0.3
JMP	Maruseppu	3.36	274	P	Pn	09 56 34.9	+1.0
JCH	Churui	3.62	251	P	Pn	09 56 37.2	-0.3
JCH				*e*S	Sn	09 57 17.9	-1.1
ASAJ	Asahikawa	3.92	275	Pn	Pn	09 56 41.6	+0.1
	comp=E,0.6nm,0.3s,baz=110,slow=9.1,SNR=2.9						
ASAJ				Sn	Sn	09 57 37.0	+11
	comp=E,1.0nm,0.3s,baz=146,slow=18,SNR=2.7						
ASAJ	Asahikawa	3.92	275	*e*Pn	Pn	09 56 41.4	0.0
ASAJ				*e*Sg	Sn	09 57 44.2	+18
ASAJ	Asahikawa	3.92	275	PN	Pn	09 56 41.6	+0.1
ASAJ						09 57 37.1	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ERM	Erimo	4.02	244	*e*Pn	Pn	09 56 44.8	+1.9
ERM				*e*Sn	Sn	09 57 31.5	+2.7
ERM	Erimo	4.02	244	*e*PN	Pn	09 56 44.8	+1.9
ERM				*e*		09 57 31.5	
JNBK	Urakawa-nobuka	4.17	249	P	Pn	09 56 44.8	-0.2
MJAR	Matsushiro Arr	10.48	229	Pn	Pn	09 58 11.2	-0.2
	comp=N,0.1nm,0.3s,baz=41,slow=11,SNR=2.3						
MJAR	Matsushiro Arr	10.48	229	PN	Pn	09 58 11.2	-0.2
PETK	Petropavlovsk-	11.24	31	*e*PN	Pn	09 58 16.6	-5.2
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ILAR	Eielson Array	41.02	36	P	P	10 03 21.4	-0.5
	comp=Z,0.5nm,0.6s,mb3.3,baz=274,slow=9.4,SNR=8.9						
ILAR	Eielson Array	41.02	36	P	P	10 03 21.5	-0.4
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	45.08	298	P	P	10 03 55.0	+0.1
	comp=Z,0.3nm,0.6s,mb3.3,baz=88,slow=8.1,SNR=2.8						
MKAR	Makanchi Array	45.08	298	P	P	10 03 55.1	+0.1
WRA	Warramunga Arr	64.73	194	P	P	10 06 17.2	+0.1
	comp=Z,0.9nm,1.2s,mb3.7,baz=17,slow=6.9,SNR=5.6						
WRA	Warramunga Arr	64.73	194	P	P	10 06 17.2	+0.1
WRA	Warramunga Arr	64.73	194	P	P	10 06 17.2	+0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
DGRG	David-gareji	70.34	309	P	P	10 06 44.5	-7.9
AKASG	Malin Array Be	71.85	324	P	P	10 07 00.5	-0.9
	comp=Z,0.6nm,0.4s,mb3.9,baz=39,slow=6.9,SNR=4.3						
AKASG	Malin Array Be	71.85	324	P	P	10 07 00.5	-0.9
AKASG	Malin Array Be	71.85	324	P	P	10 07 00.5	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	Lajitas Array	82.06	57	P	P	10 07 59.9	+0.7
	comp=Z,0.5nm,0.9s,mb3.5,baz=304,slow=3.4,SNR=4.3						
TXAR	Lajitas Array	82.06	57	P	P	10 07 59.9	+0.7
TXAR	Lajitas Array	82.06	57	P	P	10 07 59.9	+0.7
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

HEL 17 10:10:35.7±1.4, 60°.25N×30°.66E, h0km, ML1.7, Explosion
IDC 17 10:10:38.6±2.1, 60°.33N×30°.18E, h0km, mb1 3.0/4, mb1mx2.9/26, mbtmp2.9/4, ML3.1/2, Error ellipse: s-maj=21.1km s-min=15.7km az=177.0
ISC 17 10:10:37.8±1.4, 60°.45N±0°.07×30°.4E±0°.1, h0km, n11, σ1§32/16, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	Virojoki	1.39	275	PG	Pg	10 11 02.5	-1.8
VJF				SG	Sg	10 11 23.6	+1.4
VJF				MSG		10 11 23.6	
	comp=Z,4.3nm,0.2s						
PVF	Pernaja	2.22	274	PN	Pn	10 11 16.9	+1.1
PVF				SG	Sg	10 11 48.7	-0.4
PVF				MSG		10 11 48.7	
	comp=Z,2.4nm,0.2s						
FIA0	FINESS Array S	2.31	297	PN	Pn	10 11 17.8	+0.8
	baz=117						
FIA0				SG	Sg	10 11 54.1	+2.2
FIA0				MSG		10 11 54.1	
	comp=Z,4.5nm,0.5s						
FIA0				RG		10 12 03.7	
FINES	FINESS Array B	2.31	297	Pn	Pn	10 11 17.8	+0.8
	comp=Z,0.9nm,0.3s,baz=116,slow=14,SNR=12						
FINES				Lg		10 11 51.0	
	comp=Z,1.0nm,0.3s,baz=117,slow=22,SNR=6.4						
JOF	Joensuu	2.52	10	PN	Pn	10 11 22.3	+2.4
	baz=182						
JOF				SG	Sg	10 11 57.5	-1.0
JOF				MSG		10 11 57.5	
	comp=Z,1.2nm,0.2s						
KAF	Kangasniemi	2.57	312	SG	Sg	10 11 59.4	-0.7
KAF				MSG		10 11 59.4	
	comp=Z,1.8nm,0.2s						
MEF	Metsahovi	2.97	268	PN	Pn	10 11 26.4	+0.3
MEF				SG	Sg	10 12 12.2	-0.9
MEF				MSG		10 12 12.2	
	comp=Z,2.7nm,0.4s						
KEF	Keuruu	3.15	305	MSG		10 12 24.1	
	comp=Z,1.6nm,0.4s						
HFS	Hagfors	8.28	275	Pn	Pn	10 12 37.1	-1.9
	comp=Z,0.2nm,0.3s,baz=174,slow=40,SNR=2.6						
HFS				Sn	Sn	10 14 05.3	-7.7
	comp=Z,0.1nm,0.3s,baz=87,slow=26,SNR=1.8						
HFS				Lg		10 14 57.3	
	comp=Z,0.2nm,0.3s,baz=87,slow=32,SNR=3.3						
ARCES	ARCESS Array B	9.35	349	Pn	Pn	10 12 53.1	-0.3
	baz=168,slow=14,SNR=5.3						
NOA	NORSAR Array B	9.38	282	Pn	Pn	10 12 50.2	-3.8
	comp=Z,0.2nm,0.3s,baz=81,slow=12,SNR=3.8						

IDC 17 10:12:25.8±0.8, 52°.04N×177°.78E, h0km, mb3.8/14, mb1 3.9/14, mb1mx3.8/29, mbtmp3.8/14, Error ellipse: s-maj=23.4km s-min=19.5km az=151.0
ISCJB 17 10:12:37.0±0.6, 52°.2N±0°.1×177°.91E±0°.10, h103km±7km, mb3.7/14, Error ellipse: s-maj=20.4km s-min=7.2km az=21.6
NEIC 17 10:12:39.0, 51°.85N×177°.70E, h108km, MG3.2(AEIC), After AEIC.
ISC 17 10:12:38.2±0.6, 52°.2N±0°.1×177°.90E±0°.10, h98km±7km, n22, σ0§66/23, mb3.7/14, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	1.16	131	P	Pn	10 13 00.6	+0.4
AMKA				S	Sn	10 13 16.5	-0.3
SMY	Shemya	2.40	285	P	Pn	10 13 16.5	+0.7
SMY				S	Sn	10 13 44.9	+0.2
FX1	Attu Island--F	2.99	286	P	Pn	10 13 24.1	+0.6
FX1				S	Sn	10 13 57.6	-1.0
ILAR	Eielson Array	21.97	41	P	P	10 17 21.7	-1.9
	0.4nm,0.5s,mb3.0,baz=237,slow=8.1,SNR=4.4						
INK	Inuvik	28.03	36	P	P	10 18 19.9	+0.4
	1.1nm,0.4s,mb3.8,baz=266,slow=14,SNR=9.5						
SONM	Songino Array	44.46	294	P	P	10 20 38.8	-0.4
	0.7nm,0.5s,mb3.6,baz=76,slow=8.4,SNR=5.5						
NVAR	Mina Array Bea	45.47	81	P	P	10 20 48.0	+0.8
	0.3nm,0.6s,mb3.2,baz=304,slow=6.4,SNR=3.4						
SPITS	Spitsbergen Ar	49.45	355	P	P	10 21 17.5	-0.1
	2.9nm,0.4s,mb4.5,baz=46,slow=5.6,SNR=6.1						
ARCES	ARCESS Array B	56.96	349	P	P	10 22 12.6	0.0
	0.6nm,0.3s,mb4.1,baz=19,slow=9.0,SNR=13						
ARCES	ARCESS Array B	56.96	349	P	P	10 22 12.6	0.0
MKAR	Makanchi Array	57.94	306	P	P	10 22 19.7	-0.1
	0.6nm,0.5s,mb3.9,baz=48,slow=6.7,SNR=5.4						
BVAR	Borovoye Array	58.96	318	P	P	10 22 27.1	+0.3
	1.1nm,0.5s,mb4.2,baz=35,slow=5.4,SNR=5.8						
TXAR	Lajitas Array	60.54	79	P	P	10 22 38.2	+0.2
	0.2nm,0.6s,mb3.3,baz=310,slow=6.2,SNR=4.9						
TXAR	Lajitas Array	60.54	79	P	P	10 22 38.2	+0.2
FINES	FINESS Array B	64.55	345	P	P	10 23 04.2	+0.1
	0.8nm,0.4s,mb4.0,baz=17,slow=7.2,SNR=5.4						
FINES	FINESS Array B	64.55	345	P	P	10 23 04.2	+0.1
AKASG	Malin Array Be	74.15	340	P	P	10 24 03.2	-0.2
	0.7nm,0.3s,mb3.8,baz=20,slow=5.7,SNR=3.5						
WRA	Warramunga Arr	81.20	221	P	P	10 24 42.1	-0.8
	0.4nm,0.5s,mb3.5,baz=31,slow=5.9,SNR=6.0						
BRTR	Keskin Array B	83.36	333	P	P	10 24 55.4	+1.3
	0.8nm,0.8s,mb3.6,baz=19,slow=6.1,SNR=2.7						
ASAR	Alice Springs	84.72	220	P	P	10 25 00.8	-0.2
	0.2nm,0.5s,mb3.3,baz=23,slow=5.2,SNR=4.7						
MAW	Mawson	145.83	218	PKPbc	PKPbc	10 32 04.3	-0.2
	0.8nm,0.7s,baz=144,slow=0.9,SNR=5.5						
BOSA	Boshof	148.91	309	PKPbc	PKPbc	10 32 14.7	+0.6
	3.1nm,0.9s,baz=53,slow=5.1,SNR=3.4						

ISCJB 17 10:13:55.5±0.4, 24°.16N±0°.02×122°.28E±0°.02, h22km±4km, Error ellipse: s-maj=4.2km s-min=2.9km az=149.4
TAP 17 10:13:55.6, 24°.19N×122°.31E, h24km±1km, ML3.3, D
JMA 17 10:13:56.9, 24°.91N×122°.41E, h37km, M2.6
ISC 17 10:13:55.8±0.5, 24°.18N±0°.02×122°.27E±0°.02, h21km±4km, n37, σ0§83/69, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.54	297	*i* P	Pb	10 14 06.2	-0.4
	baz=295						
ENA				S	Sb	10 14 14.1	+0.1
	baz=295						
TWC	Suao	0.57	318	⇑*i*P	Pb	10 14 06.4	-0.8
	baz=315						
TWC				*i* S	Sb	10 14 13.8	-1.2
	baz=315						
TWD	Chiawan	0.62	261	P	Pb	10 14 07.9	-0.2
	baz=260						
TWD				*i* S	Sb	10 14 17.5	+1.1
	baz=260						
HWA	Hwalien	0.64	252	*e*P	Pb	10 14 08.7	+0.3
	baz=251						
HWA				*e*S	Sb	10 14 18.3	+1.5
	baz=251						
YOJ	Yonaguni jima	0.73	67	P	Pb	10 14 10.4	+0.5
YOJ				*e*S	Sb	10 14 20.0	+0.5
ILA	Ilan	0.75	321	P	Pb	10 14 09.8	-0.4
	baz=318						
ILA				S	Sb	10 14 20.1	0.0
	baz=318						
TWE	Neicheng	0.77	315	*i* P	Pb	10 14 10.1	-0.5
	baz=312						
TWE				S	Sb	10 14 20.6	0.0
	baz=312						
ENTT	Nioudou	0.79	306	*i* P	Pb	10 14 10.7	-0.2
	baz=303						
ENTT				S	Sb	10 14 21.7	+0.6
	baz=303						
ESL	Shilin	0.85	245	*e*P	Pb	10 14 10.9	-1.0
	baz=244						
ESL				*e*S	Sb	10 14 22.7	-0.1
	baz=244						
TWB1	Santiao Chiao	0.86	343	P	Pb	10 14 12.0	-0.2
	baz=340						
TWB1				S	Sb	10 14 23.2	0.0
	baz=340						
NSK	Sanguang	0.97	301	*e*P	Pb	10 14 13.8	-0.1
	baz=299						
NSK				*e*S	Sb	10 14 26.7	+0.4
	baz=299						
NWF	Wu-fen Shan	0.99	333	*e*P	Pb	10 14 14.0	-0.3
	baz=331						
NWF				*e*S	Sb	10 14 27.2	+0.2
	baz=331						
TWA	Mucha	1.01	322	*e*P	Pb	10 14 15.0	+0.4
	baz=320						
TWA				*e*S	Sb	10 14 28.3	+0.7
	baz=320						
TAP1	Taipei	1.09	322	*e*P	Pn	10 14 15.5	-0.3
	baz=319						
TAP1				*e*S	Sb	10 14 30.3	+0.5
	baz=319						
EHY	Hungye	1.10	233	*e*P	Pn	10 14 14.5	-1.4
	baz=232						
EHY				*e*S	Sb	10 14 29.4	-0.6
	baz=232						
TWS1	Kuangyinshan	1.20	320	P	Pn	10 14 17.9	+0.5
	baz=318						
TWF1	Yuli	1.21	227	P	Pn	10 14 16.1	-1.4
	baz=227						
TWF1				*e*S	Sn	10 14 31.7	-1.6
	baz=227						
NSTT	Nanjuang	1.24	291	*e*P	Pn	10 14 18.3	+0.4
	baz=290						
NSTT				*e*S	Sn	10 14 33.6	-0.4
	baz=290						
TWY	Chenhua	1.25	331	*e*P	Pn	10 14 17.7	-0.3
	baz=329						
TWY				*e*S	Sn	10 14 33.6	-0.7
	baz=329						
SMLT	Sun Moon Lake	1.29	257	P	Pn	10 14 18.2	-0.3
	baz=256						
SMLT				*e*S	Sn	10 14 34.2	-0.9
	baz=256						
TYC	Yuchr	1.32	258	P	Pn	10 14 18.6	-0.4
	baz=257						
TYC				*e*S	Sn	10 14 36.2	+0.2
	baz=257						
IRIF	Iriomote-Funau	1.34	83	*e*S	Sn	10 14 36.5	0.0
CHKT	Chengkung	1.36	218	*e*P	Pn	10 14 17.6	-2.0
	baz=218						
C

TWG	**Pinlang**	**1.74 219**	*e*P	**Pn**	**10 14 23.1**	**-1.8**
	baz=219					
WTP	**Ta-pu**	**1.78 239**	*e*P	**Pn**	**10 14 26.0**	**+0.7**
	baz=238					
WTP			*e*S	**Sn**	**10 14 48.5**	**+1.2**
	baz=238					
CHN1	**Nanshi**	**1.88 239**	*e*P	**Pn**	**10 14 27.2**	**+0.6**
	baz=238					
CHN1			*e*S	**Sn**	**10 14 51.0**	**+1.3**
	baz=238					
SGST	**Jiashian**	**1.89 235**	*e*P	**Pn**	**10 14 27.5**	**+0.6**
	baz=235					
SGST			*e*S	**Sn**	**10 14 51.1**	**+1.0**
	baz=235					
EAST	**Anshuo**	**2.21 216**	*e*P	**Pn**	**10 14 31.8**	**+0.5**
	baz=216					
EAST			*e*S	**Sn**	**10 14 59.1**	**+1.1**
	baz=216					
SCZT	**Fangliau**	**2.35 220**	*e*P	**Pn**	**10 14 34.9**	**+1.7**
	baz=220					
SCZT			*e*S	**Sn**	**10 15 02.6**	**+1.2**
	baz=220					

*IDC **17** 11:04:09.8±1.5, 8°.77S×126°.99E, h0km, mb3.8/2, mb1 4.2/5, mb1mx3.8/16, mbtmp4.0/5, ML4.2/3, Error ellipse: s-maj=90.9km s-min=24.8km az=72.0*
*NEIC **17** 11:04:14.9±0.8, 8°.94S×126°.83E, h35km, mb4.4/1, Error ellipse: s-maj=14.9km s-min=11.5km az=55.0*
*ISCJB **17** 11:04:16.8±2.0, 9°.11S±0°.08×127°.00E±0°.07, h82km±22km, mb3.6/2, Error ellipse: s-maj=13.9km s-min=11.7km az=29.1*

ISC 17 11:04:18.9±2.3, 9°.1S±0°.1×127°.01E±0°.10, h83km±27km, n9, σ1s14/14, mb3.6/2, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.41 124**		Pn	**Pn**	**11 05 50.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**9.01 188**		Pn	**Pn**	**11 06 26.7**	**+0.5**
	1.5nm,0.3s,baz=11,slow=12,SNR=39						
FITZ				Sn	**Sn**	**11 08 07.6**	**+1.6**
	2.6nm,0.3s,baz=299,slow=19,SNR=8.3						
WRA	**Warramunga Arr**	**12.87 147**		Pn	**Pn**	**11 07 18.1**	**-0.5**
	1.7nm,0.3s,baz=321,slow=14,SNR=109						
WRA				Sn	**Sn**	**11 09 38.6**	**-1.4**
	1.2nm,0.3s,baz=318,slow=24,SNR=6.5						
WB2	**Warramunga Arr**	**12.87 147**		*e*Pn	**Pn**	**11 07 18.1**	**-0.5**
MBWA	**Marble Bar**	**13.86 210**		*e*Pn	**Pn**	**11 07 29.4**	**-2.2**
MBWA				*e*Sn	**Sn**	**11 09 55.2**	**-8.8**
ASAR	**Alice Springs**	**15.88 156**		Pn	**Pn**	**11 07 59.1**	**+1.6**
	0.8nm,0.3s,baz=328,slow=10.0,SNR=42						
ASAR				Sn	**Sn**	**11 10 52.8**	**-0.3**
	0.3nm,0.3s,baz=328,slow=23,SNR=5.0						
COEN	**Coen**	**16.55 108**		*e*Pn	**Pn**	**11 08 07.8**	**+1.9**
	19nm,0.6s						
COEN				*e*Sn	**Sn**	**11 11 04.7**	**-4.5**
MKAR	**Makanchi Array**	**68.44 329**		P	**P**	**11 15 11.6**	**-0.3**
	0.3nm,0.5s,mb3.4,baz=133,slow=6.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**72.23 335**		P	**P**	**11 15 34.8**	**0.0**
	0.5nm,0.4s,mb3.7,baz=134,slow=4.2,SNR=3.3						

*IDC **17** 11:07:34.7±0.9, 8°.75S×126°.96E, h0km, mb4.0/6, mb1 4.2/9, mb1mx4.0/16, mbtmp4.1/9, ML4.4/3, Error ellipse: s-maj=50.8km s-min=18.7km az=68.0*
*NEIC **17** 11:07:36.8±10.0, 8°.85S×126°.81E, h14km±68km, mb4.4/1, Error ellipse: s-maj=22.5km s-min=14.0km az=177.0*
*ISCJB **17** 11:07:41.0±2.0, 9°.11S±0°.07×126°.86E±0°.09, h77km±22km, mb3.9/6, Error ellipse: s-maj=15.2km s-min=11.4km az=158.5*

ISC 17 11:07:43.6±2.2, 9°.2S±0°.1×126°.91E±0°.09, h87km±26km, n14, σ0s91/19, mb3.9/6, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.48 124**		*e*Pn	**Pn**	**11 09 15.9**	**-0.5**
FITZ	**Fitzroy Crossi**	**8.98 188**		Pn	**Pn**	**11 09 52.0**	**+1.6**
	2.0nm,0.3s,baz=11,slow=12,SNR=6.2						
FITZ				Sn	**Sn**	**11 11 30.2**	**+0.3**
	5.3nm,0.3s,baz=9.6,slow=18,SNR=7.6						
WRA	**Warramunga Arr**	**12.91 147**		Pn	**Pn**	**11 10 42.8**	**-1.0**
	2.8nm,0.3s,baz=317,slow=13,SNR=14						
WRA				Sn	**Sn**	**11 13 04.4**	**-1.2**
	3.1nm,0.3s,baz=312,slow=24,SNR=9.8						
WB2	**Warramunga Arr**	**12.91 147**		*e*Pn	**Pn**	**11 10 43.2**	**-0.6**
MBWA	**Marble Bar**	**13.79 209**		*e*Pn	**Pn**	**11 10 54.4**	**-1.0**
MBWA				*e*Sn	**Sn**	**11 13 19.6**	**-7.6**
ASAR	**Alice Springs**	**15.90 156**		Pn	**Pn**	**11 11 24.0**	**+1.6**
	1.3nm,0.3s,baz=325,slow=10,SNR=22						
ASAR				Sn	**Sn**	**11 14 18.2**	**0.0**
	0.8nm,0.3s,baz=318,slow=20,SNR=7.7						
COEN	**Coen**	**16.63 108**		*e*Pn	**Pn**	**11 11 32.9**	**+1.5**
	25nm,0.8s						
COEN				*e*Sn	**Sn**	**11 14 27.9**	**-8.0**
STKA	**Stephens Creek**	**26.40 151**		P	**P**	**11 13 16.4**	**+4.4**
	0.9nm,0.5s,mb3.5,baz=327,slow=11,SNR=3.9						
CMAR	**Chiang Mai Arr**	**38.92 315**		P	**P**	**11 14 59.9**	**-1.1**
	0.6nm,0.4s,mb3.7,baz=148,slow=7.8,SNR=4.4						
SONM	**Songino Array**	**59.58 344**		P	**P**	**11 17 38.0**	**0.0**
	0.3nm,0.5s,mb3.6,baz=166,slow=6.7,SNR=3.3						
PETK	**Petropavlovsk-**	**67.34 20**		P	**P**	**11 18 29.0**	**-0.1**
	5.8nm,1.1s,mb4.3,baz=167,slow=3.4,SNR=4.9						
MKAR	**Makanchi Array**	**68.41 329**		P	**P**	**11 18 36.4**	**+0.5**
	1.0nm,0.6s,mb3.8,baz=128,slow=8.0,SNR=9.4						
MKAR	**Makanchi Array**	**68.41 329**		P	**P**	**11 18 36.4**	**+0.5**
ZALV	**Zalesovo Beam**	**72.20 335**		P	**P**	**11 18 59.1**	**+0.1**
	1.9nm,0.5s,mb4.2,baz=139,slow=5.6,SNR=9.9						

*ISCJB **17** 11:40:36.5±0.3, 64°.53N±0°.02×79°.26W±0°.06, h10km, mb3.7/11, Error ellipse: s-maj=4.4km s-min=2.9km az=143.0*
*IDC **17** 11:40:39.3±0.6, 64°.83N×78°.67W, h0km, mb3.8/11, mb1 4.1/16, mb1mx3.8/33, mbtmp3.9/16, ML3.6/5, Error ellipse: s-maj=13.0km s-min=8.4km az=10.0*
*OTT **17** 11:40:40.6±0.2, 64°.67N×78°.84W, h18km, MN4.3/31, 121km northwest from Cape Dorset, Nu*

ISC 17 11:40:38.7±0.3, 64°.56N±0°.02×79°.19W±0°.06, h10km, n74, σ1s37/94, mb3.7/11, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVKQ	**Ivujivik**	**2.22 164**		PN	**Pn**	**11 41 18.2**	**+2.6**
IVKQ				SN	**Sn**	**11 41 44.1**	**+1.1**
IVKQ				SG	**Sg**	**11 41 50.4**	**+0.3**
IVKQ				Trac		11 41 56.8	
	comp=Z,540nm,0.2s						
QILN	**Qililugaq Expl**	**3.65 308**		PN	**Pn**	**11 41 37.6**	**+2.5**
QILN				SN	**Sn**	**11 42 17.3**	**-0.9**
QILN				LG		11 42 34.1	
QILN				Trac		11 42 36.8	
	comp=Z,223nm,0.3s						
AKVQ	**Akulivik**	**3.79 173**		PN	**Pn**	**11 41 40.2**	**+3.1**
AKVQ				SN	**Sn**	**11 42 22.6**	**+0.9**
AKVQ				LG		11 42 40.9	
AKVQ				Trac		11 42 41.3	
	comp=Z,692nm,0.5s						
SRLN	**Sarcpa Lake, N**	**4.34 339**		PN	**Pn**	**11 41 45.4**	**+0.7**
SRLN				SN	**Sn**	**11 42 30.4**	**-4.7**
SRLN				LG		11 42 50.8	
SRLN				Trac		11 42 56.7	
	comp=Z,600nm,0.5s						
WAGN	**Wager Bay**	**4.52 292**		PN	**Pn**	**11 41 49.7**	**+2.6**
WAGN				SN	**Sn**	**11 42 38.8**	**-0.7**
WAGN				LG		11 43 03.0	
WAGN				Trac		11 43 14.0	
	comp=Z,325nm,0.4s						
FRB	**Frobisher Bay**	**4.73 95**		Pn	**Pn**	**11 41 49.0**	**-1.0**
	12nm,0.3s,baz=279,slow=12,SNR=46						
FRB				Sn	**Sn**	**11 42 38.7**	**-6.1**
	31nm,0.3s,baz=202,slow=19,SNR=14						
FRB				Lg		11 42 59.3	
	63nm,0.3s,baz=198,slow=22,SNR=20						
FRB	**Frobisher Bay**	**4.73 95**		PN	**Pn**	**11 41 48.9**	**-1.1**
FRB				SN	**Sn**	**11 42 38.2**	**-6.6**
FRB				LG		11 42 59.4	
FRB				Trac		11 43 07.3	
	comp=Z,206nm,0.2s						
LAIN	**Lailor River,**	**4.88 341**		PN	**Pn**	**11 41 52.1**	**0.0**
NUNN	**Nunuq Camp, NU**	**5.11 283**		PN	**Pn**	**11 41 57.2**	**+2.0**
NUNN				SN	**Sn**	**11 42 53.0**	**-1.1**
NUNN				LG		11 43 18.8	
NUNN				Trac		11 43 23.7	
	comp=Z,220nm,0.5s						
AP3N	**Apex site 3 Nu**	**5.34 340**		PN	**Pn**	**11 41 58.7**	**+0.4**
AP3N				SN	**Sn**	**11 42 53.6**	**-6.1**
AP3N				LG		11 43 22.3	
AP3N				Trac		11 43 27.9	
	comp=Z,563nm,0.5s						
SEDN	**First Sedna Si**	**5.47 262**		PN	**Pn**	**11 42 02.6**	**+2.5**
SEDN				SN	**Sn**	**11 43 02.0**	**-0.9**
SEDN				LG		11 43 33.8	
SEDN				Trac		11 43 36.2	
	comp=Z,323nm,0.4s						
KUGN	**Kugaaruk Camp,**	**5.63 314**		PN	**Pn**	**11 42 03.8**	**+1.4**
KUGN				SN	**Sn**	**11 43 02.7**	**-4.3**
KUGN				LG		11 43 34.3	
KUGN				Trac		11 43 50.3	
	comp=Z,300nm,0.6s						
JOSN	**Second Sedna S**	**5.64 261**		PN	**Pn**	**11 42 05.2**	**+2.7**
JOSN				SN	**Sn**	**11 43 05.7**	**-1.4**
JOSN				LG		11 43 38.6	
JOSN				Trac		11 43 42.2	
	comp=Z,237nm,0.4s						
BULN	**Bullion Camp,**	**6.09 294**		PN	**Pn**	**11 42 07.0**	**-1.6**
BULN				SN	**Sn**	**11 43 15.9**	**-2.3**
BULN				LG		11 43 48.1	
BULN				Trac		11 44 03.0	
	comp=Z,103nm,0.4s						
INUQ	**Inukjuak**	**6.15 175**		PN	**Pn**	**11 42 12.4**	**+2.9**
INUQ				SN	**Sn**	**11 43 18.7**	**-1.0**
INUQ				LG		11 43 49.7	
INUQ				Trac		11 43 57.3	
	comp=Z,164nm,0.3s						
STLN	**Stellar Camp,**	**6.28 302**		PN	**Pn**	**11 42 13.1**	**+1.9**
STLN				SN	**Sn**	**11 43 18.6**	**-4.4**
STLN				LG		11 43 54.0	
STLN				Trac		11 44 00.7	
	comp=Z,168nm,0.6s						
ARVN	**Arviat, NU**	**7.64 250**		PN	**Pn**	**11 42 31.6**	**+1.7**
ARVN				SN	**Sn**	**11 43 55.7**	**-0.7**
ARVN				LG		11 44 38.9	
ARVN				Trac		11 44 44.4	
	comp=Z,257nm,0.5s						
FCC	**Fort Churchill**	**9.15 237**		PN	**Pn**	**11 42 52.5**	**+1.9**
FCC				SN	**Sn**	**11 44 33.0**	**-0.5**
FCC				LG		11 45 25.5	
FCC				Trac		11 45 34.1	
	comp=Z,120nm,0.5s						
SILO	**Sutton Inlier**	**10.51 199**		PN	**Pn**	**11 43 09.6**	**+0.3**
SILO				SN	**Sn**	**11 45 00.7**	**-6.2**
SILO				LG		11 46 03.7	
SILO				Trac		11 46 28.8	
	comp=Z,67nm,0.4s						
CB31	**Cambridge Bay**	**11.12 306**		PN	**Pn**	**11 43 17.6**	**0.0**
CB31				SN	**Sn**	**11 45 13.6**	**-8.2**
CB31				LG		11 46 22.6	
CB31				Trac		11 46 31.6	
	comp=Z,61nm,0.4s						
LG4Q	**La Grande 4**	**11.27 164**		PN	**Pn**	**11 43 19.8**	**+0.2**
LG4Q				SN	Sx	11 45 15.8	
LG4Q				LG		11 46 24.1	
LG4Q				Trac		11 46 35.9	
	comp=Z,87nm,0.4s						
RES	**Resolute Bay**	**11.49 339**		Pn	**Pn**	**11 43 20.1**	**-2.4**
	0.5nm,0.3s,baz=156,slow=10.0,SNR=5.5						
RES				Lg		11 46 29.9	
	5.6nm,0.3s,baz=245,slow=23,SNR=10						
RES	**Resolute Bay**	**11.49 339**		PN	**Pn**	**11 43 19.9**	**-2.6**
RES				SN	Sx	11 45 15.7	
RES				LG		11 46 28.4	
RES				Trac		11 46 42.9	
	comp=Z,132nm,0.6s						
SCHQ	**Schefferville**	**11.55 142**		Pn	**Pn**	**11 43 22.1**	**-1.3**
	2.5nm,0.3s,baz=341,slow=11,SNR=14						
SCHQ				Sn	Sx	11 45 21.4	
	4.5nm,0.3s,baz=46,slow=19,SNR=7.0						
SCHQ				Lg		11 46 33.2	
	5.2nm,0.3s,baz=15,slow=18,SNR=5.2						
SCHQ	**Schefferville**	**11.55 142**		PN	**Pn**	**11 43 19.7**	**-3.7**
SCHQ				SN	Sx	11 45 21.4	
SCHQ				LG		11 46 28.9	
SCHQ				Trac		11 46 39.0	
	comp=Z,127nm,0.7s						
WEMQ	**Wemindji, Queb**	**11.55 176**		PN	**Pn**	**11 43 23.8**	**+0.3**
WEMQ				SN	Sx	11 45 22.9	
WEMQ				LG		11 46 28.5	
WEMQ				Trac		11 46 42.1	
	comp=Z,118nm,0.6s						
VIMO	**Victor Mine**	**12.01 193**		PN	**Pn**	**11 43 29.2**	**-0.4**
VIMO				SN	Sx	11 45 36.6	
VIMO				LG		11 46 52.5	
VIMO				Trac		11 47 00.8	
	comp=Z,119nm,0.8s						
GDLN	**Gardenia Lake,**	**12.28 270**		SN	Sx	11 45 42.9	
GDLN				LG		11 47 03.3	
GDLN				Trac		11 47 12.5	
	comp=Z,61nm,0.5s						
WHFN	**White Fish Lak**	**12.54 274**		PN	**Pn**	**11 43 39.6**	**+2.6**
WHFN				SN	Sx	11 45 50.3	
WHFN				LG		11 47 10.8	
WHFN				Trac		11 47 17.8	
	comp=Z,84nm,0.7s						
SNLN	**Sandy Lake, NW**	**12.67 275**		PN	**Pn**	**11 43 39.1**	**+0.4**
SNLN				SN	Sx	11 45 51.0	
SNLN				LG		11 47 13.1	
SNLN				Trac		11 47 24.0	
	comp=Z,103nm,0.7s						
COKN	**Cook Lake**	**13.02 278**		PN	Sx	11 43 44.5	
COKN				SN	**Sn**	**11 45 57.4**	**-11**
COKN				LG		11 47 24.2	
COKN				Trac		11 47 31.2	
	comp=Z,62nm,0.6s						
JERN	**Jeri Cho Mine,**	**13.50 291**		PN	**Pn**	**11 43 49.4**	**-0.6**
JERN				SN	Sx	11 46 10.2	
JERN				LG		11 47 32.4	
JERN				Trac		11 48 05.4	
	comp=Z,107nm,1.1s						
PKLO	**Pickle Lake**	**14.33 209**		PN	**Pn**	**11 44 00.2**	**-1.2**
PKLO				SN	Sx	11 46 28.9	
PKLO				LG		11 47 59.5	
PKLO				Trac		11 48 19.5	
	comp=Z,137nm,1.3s						
OTRO	**Otter Rapids**	**14.47 186**		PN	**Pn**	**11 44 00.2**	**-3.1**
OTRO				SN	Sx	11 46 33.1	
OTRO				LG		11 48 06.8	
OTRO				Trac		11 48 22.3	
	comp=Z,42nm,0.3s						
MALO	**McAlpine Lake**	**14.58 181**		PN	**Pn**	**11 44 02.5**	**-2.2**
MALO				SN	Sx	11 46 33.6	
MALO				LG		11 48 08.3	
MALO				Trac		11 48 25.7	
	comp=Z,240nm,1.8s						
NANO	**Nakina Ontario**	**14.82 200**		PN	**Pn**	**11 44 07.8**	**-0.3**
NANO				SN	Sx	11 46 42.2	
NANO				LG		11 48 30.4	
NANO				Trac		11 48 38.5	
	comp=Z,55nm,0.6s						
MATQ	**Matagami**	**14.86 176**		PN	**Pn**	**11 44 02.8**	**-5.9**
MATQ				SN	Sx	11 46 40.7	
MATQ				LG		11 48 10.8	
MATQ				Trac		11 48 32.0	
	comp=Z,73nm,0.6s						
CHGQ	**Chibougamau**	**14.91 168**		SN	Sx	11 46 37.7	
CHGQ				LG		11 48 06.1	
CHGQ				Trac		11 48 30.9	
	comp=Z,50nm,0.4s						
FFC	**Flin Flon**	**15.06 240**		PN	**Pn**	**11 44 08.2**	**-3.1**
FFC				PN	**Pn**	**11 44 09.1**	**-2.2**
FFC				SN	Sx	11 46 44.1	
FFC				SN	Sx	11 46 47.5	
FFC				LG		11 48 25.0	
FFC				LG		11 48 29.0	
FFC				Trac		11 48 34.2	
	comp=Z,278nm,1.4s						
FFC				Trac		11 48 42.5	
	comp=Z,114nm,0.9s						
MNQ	**Manicouagan**	**15.10 154**		PN	**Pn**	**11 44 13.4**	**+1.6**
MNQ				SN	Sx	11 46 48.1	
MNQ				LG		11 48 26.0	
MNQ				Trac		11 48 38.7	
	comp=Z,68nm,0.5s						
ILKN	**Indian Lake**	**15.42 285**		PN	**Pn**	**11 44 17.5**	**+1.6**
ILKN				SN	Sx	11 46 56.0	
ILKN				LG		11 48 36.7	
CTLN	**Castor Lake**	**15.72 286**		PN	**Pn**	**11 44 20.0**	**+0.1**
CTLN				SN	Sx	11 47 02.8	
CTLN				LG		11 48 44.9	
CTLN				Trac		11 49 09.6	
	comp=Z,161nm,2.2s						
YKW3	**Yellowknife Ar**	**15.78 279**		PN	**Pn**	**11 44 20.5**	**-0.1**
YKW3				SN	Sx	11 47 00.6	
YKW3				LG		11 48 48.2	
YKW3				Trac		11 48 53.7	
	comp=Z,104nm,1.1s						
YKW3				Trac		11 48 54.2	
	comp=Z,50nm,0.8s						
YKA	**Yellowknife Ar**	**15.80 279**		Pn	**Pn**	**11 44 20.4**	**-0.5**
	0.6nm,0.3s,baz=353,slow=17,SNR=14						
YKA				Lg		11 48 51.0	
	1.6nm,0.3s,baz=68,slow=30,SNR=9.0						
SMQ	**Clarke City**	**15.82 149**		PN	**Pn**	**11 44 18.0**	**-3.2**
SMQ				SN	Sx	11 46 58.0	
SMQ				LG		11 48 48.6	
SMQ				Trac		11 49 03.0	
	comp=Z,47nm,0.6s						
KILO	**Kirkland Lake**	**16.10 181**		PN	**Pn**	**11 44 25.2**	**+0.2**
KILO				SN	Sx	11 47 09.0	
KILO				LG		11 48 55.7	
KILO				Trac		11 49 06.4	
	comp=Z,76nm,1.0s						
GALN	**Gameti Lake**	**16.36 286**		PN	**Pn**	**11 44 28.7**	**+0.6**
GALN				SN	Sx	11 47 14.6	
GALN				LG		11 49 00.8	
GALN				Trac		11 49 15.3	
	comp=Z,172nm,1.9s						
ICQ	**Pointe Anglais**	**16.36 151**		PN	**Pn**	**11 44 23.6**	**-4.6**
ICQ				SN	Sx	11 47 13.4	
ICQ				LG		11 49 04.8	
ICQ				Trac		11 49 14.5	
	comp=Z,113nm,0.9s						
CNQ	**Baie Comeau**	**16.41 153**		PN	**Pn**	**11 44 27.7**	**-1.1**
CNQ				SN	Sx	11 47 15.8	
CNQ				LG		11 49 03.8	
CNQ				Trac		11 49 11.2	
	comp=Z,47nm,0.6s						
PNPO	**Pukaskwa Natio**	**16.45 197**		PN	**Pn**	**11 44 29.4**	**0.0**
PNPO				SN	Sx	11 47 20.4	
PNPO				LG		11 49 10.2	
PNPO				Trac		11 49 30.4	
	comp=Z,53nm,0.9s						
VLDQ	**Val d'Or**	**16.51 176**		PN	**Pn**	**11 44 27.7**	**-2.5**
VLDQ				SN	Sx	11 47 15.9	
VLDQ				LG		11 48 59.9	
VLDQ				Trac		11 49 24.0	
	comp=Z,74nm,0.8s						
EPLO	**Experimental L**	**16.81 214**		SN	Sx	11 47 17.8	
EPLO				LG		11 49 19.9	
ULM	**Lac du Bonnet**	**16.84 220**		Pn	**Pn**	**11 44 35.2**	**+1.0**
	1.0nm,0.3s,baz=20,slow=13,SNR=5.1						
ULM				Sn	Sx	11 47 33.5	
	1.8nm,0.3s,baz=84,slow=19,SNR=4.4						
ULM				Lg		11 49 27.8	
	1.3nm,0.3s,baz=99,slow=9.4,SNR=4.8						
ULM	**Lac du Bonnet**	**16.84 220**		PN	**Pn**	**11 44 35.3**	**+1.1**
ULM				SN	Sx	11 47 29.3	
ULM				LG		11 49 30.8	
ULM				Trac		11 49 35.7	
	comp=Z,146nm,1.9s						
TBO	**Thunder Bay**	**16.87 204**		PN	**Pn**	**11 44 32.5**	**-2.2**
TBO				SN	Sx	11 47 33.5	
TBO				LG		11 49 27.5	
TBO				Trac		11 49 39.1	
	comp=Z,48nm,0.7s						
ATKO	**Atikokan Iron**	**17.12 209**		SN	Sx	11 47 37.4	
ATKO				LG		11 49 30.6	
ATKO				Trac		11 50 07.9	
	comp=Z,710nm,0.6s						
BELQ	**Belleterre**	**17.20 179**		PN	**Pn**	**11 44 34.8**	**-4.1**
BELQ				SN	Sx	11 47 34.7	
BELQ				LG		11 49 26.2	
BELQ				Trac		11 49 44.5	
	comp=Z,104nm,1.1s						
EYMN	**Ely**	**17.94 208**		PN	**Pn**	**11 44 48.7**	**+0.7**
EYMN				SN	Sx	11 47 51.0	
EYMN				LG		11 49 53.8	
EEO	**Eldee**	**17.96 180**		PN	**Pn**	**11 44 44.1**	**-4.1**
EEO				SN	Sx	11 47 55.2	
EEO				LG		11 49 50.4	
EEO				Trac		11 50 04.1	
	comp=Z,29nm,0.6s						
CRLO	**Chalk River**	**18.59 176**		PN	**Pn**	**11 44 56.8**	**+0.9**
CRLO				SN	Sx	11 48 06.0	
CRLO				LG		11 50 07.5	
CRLO				Trac		11 50 27.0	
	comp=Z,39nm,0.6s						
DRLN	**Deer Lake**	**19.21 133**		PN	**Pn**	**11 44 59.5**	**-3.8**
DRLN				SN	Sx	11 48 21.2	
DRLN				LG		11 50 29.6	
FNBB	**Fort Nelson**	**21.16 275**		PN	**P**	**11 45 29.0**	**+5.4**
FNBB				SN	**S**	**11 49 11.6**	**-6.9**
INK	**Inuvik**	**21.43 304**		P	**P**	**11 45 27.4**	**+1.0**
	1.9nm,0.6s,mb3.6,baz=69,slow=11,SNR=8.3						
INK				S	**S**	**11 49 24.3**	**+0.6**
	2.5nm,0.7s,baz=144,slow=19,SNR=3.5						
INK	**Inuvik**	**21.43 304**		PN	**P**	**11 45 27.8**	**+1.3**
INK				SN	**S**	**11 49 16.7**	**-7.0**
ILAR	**Eielson Array**	**27.73 302**		P	**P**	**11 46 30.3**	**+3.5**
	0.2nm,0.5s,mb3.0,baz=60,slow=8.6,SNR=5.7						
PDAR	**Pinedale Array**	**27.80 233**		P	**P**	**11 46 32.5**	**+4.9**
	0.4nm,0.6s,mb3.2,baz=30,slow=7.5,SNR=4.3						
ARCES	**ARCESS Array B**	**36.32 35**		P	**P**	**11 47 41.2**	**-0.7**
	2.2nm,0.9s,mb4.1,baz=325,slow=6.2,SNR=4.3						
TXAR	**Lajitas Array**	**38.48 216**		P	**P**	**11 48 04.9**	**+4.3**
	0.7nm,0.5s,mb3.6,baz=33,slow=6.7,SNR=13						
FINES	**FINESS Array B**	**42.58 43**		P	**P**	**11 48 33.6**	**-0.6**
	1.2nm,0.7s,mb3.7,baz=335,slow=9.2,SNR=3.0						
AKASG	**Malin Array Be**	**52.46 50**		P	**P**	**11 49 50.3**	**-0.8**
	0.3nm,0.3s,mb3.7,baz=327,slow=8.3,SNR=4.3						
BVAR	**Borovoye Array**	**60.41 21**		P	**P**	**11 50 47.6**	**0.0**
	0.6nm,0.6s,mb3.8,baz=33,slow=9.2,SNR=2.9						
ZALV	**Zalesovo Beam**	**61.19 11**		P	**P**	**11 50 52.2**	**-0.7**
	1.2nm,0.4s,mb4.3,baz=352,slow=8.1,SNR=9.9						
BRTR	**Keskin Array B**	**63.59 53**		P	**P**	**11 51 09.5**	**+0.3**
	0.7nm,0.6s,mb3.9,baz=341,slow=6.0,SNR=3.2						
MKAR	**Makanchi Array**	**68.05 14**		P	**P**	**11 51 37.8**	**+0.1**
	0.7nm,0.5s,mb4.0,baz=19,slow=6.1,SNR=8.9						

*IDC **17** 11:49:28.3±1.1, 1°.35N×121°.68E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.5/20, mbtmp3.4/5, ML3.6/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/18, Error ellipse: s-maj=116.8km s-min=19.4km az=67.0*
*ISCJB **17** 11:49:30.4±1.9, 0°.93N±0°.08×120°.44E±0°.07, h2km±14km, mb3.4/4, Error ellipse: s-maj=13.3km s-min=10.9km az=24.2*
*DJA **17** 11:49:33, 0°.97N×120°.56E, h3km, MLv4.3/3*

ISC 17 11:49:32.8±1.7, 0°.89N±0°.08×120°.6E±0°.1, h13km±13km, n14, σ1s59/15, mb3.4/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLI	**Toli-Toli**	**0.31 43**		P	**Pg**	**11 49 38.1**	**-1.1**
TOLI				S	**Sg**	**11 49 43.9**	**+0.4**
MRSI	**Marisa**	**1.42 107**		P	**P

*NEIC **17** 11:53:56.0±2.0, 8.92S×126.89E, h45km±22km, mb4.6/2, Error ellipse: s-maj=18.6km s-min=14.5km az=187.0*
*ISCJB **17** 11:53:56.2±1.8, 9.08S±0.07×126.94E±0.07, h69km±20km, mb3.9/5, Error ellipse: s-maj=13.3km s-min=10.1km az=142.3*
ISC 17 11:53:57.7±1.8, **9.06S**±0.08×**126.95E**±0.08, **h65**km±20km, **n13**, σ0.92/20, **mb3.9**/5, **Timor region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.50**	**124**	*e*Pn		**Pn**		**11 55 32.6**	**+1.7**
KAKA	32nm,0.4s					*e*Sn	**Sn**	**11 56 43.6**	**0.0**
FITZ	**Fitzroy Crossi**	**9.08**	**188**	Pn		**Pn**		**11 56 06.2**	**+0.2**
FITZ	1.1nm,0.3s,baz=14,slow=7.6,SNR=42			Sn		**Sn**		**11 57 46.7**	**-0.1**
WRA	**Warramunga Arr**	**12.97**	**147**	Pn		**Pn**		**11 56 58.3**	**-0.9**
WRA	7.9nm,0.3s,baz=99,slow=13,SNR=10			Sn		**Sn**		**11 59 20.6**	**-1.2**
WB2	**Warramunga Arr**	**12.97**	**147**	*e*Pn		**Pn**		**11 56 58.7**	**-0.5**
WB2	1.6nm,0.3s,baz=321,slow=14,SNR=121			*e*Sn		**Sn**		**11 59 21.4**	**-0.5**
MBWA	**Marble Bar**	**13.89**	**209**	*e*Pn		**Pn**		**11 57 11.9**	**+0.3**
MBWA	2.6nm,0.3s,baz=314,slow=23,SNR=16			*e*Sn		**Sn**		**11 59 37.4**	**-6.9**
ASAR	**Alice Springs**	**15.98**	**156**	Pn		**Pn**		**11 57 39.1**	**+0.6**
ASAR	0.7nm,0.3s,baz=329,slow=11,SNR=47			Sn		**Sn**		**12 00 34.4**	**-0.5**
COEN	**Coen**	**16.63**	**109**	*e*Pn		**Pn**		**11 57 47.1**	**+0.4**
COEN	56nm,0.9s			*e*Sn		**Sn**		**12 00 42.7**	**-8.1**
FORT	**Forrest**	**21.64**	**177**	P		**P**		**11 58 45.5**	**+2.8**
STKA	**Stephens Creek**	**26.47**	**151**	P		**P**		**11 59 30.2**	**+1.4**
CMAR	**Chiang Mai Arr**	**38.87**	**315**	P		**P**		**12 01 16.1**	**-1.0**
MKAR	**Makanchi Array**	**68.34**	**329**	P		**P**		**12 04 51.6**	**-0.6**
ZALV	**Zalesovo Beam**	**72.13**	**335**	P		**P**		**12 05 14.6**	**-0.6**

0.9nm,0.4s,baz=321,slow=14,SNR=121
2.6nm,0.3s,baz=314,slow=23,SNR=16
0.7nm,0.3s,baz=317,slow=19,SNR=5.1
56nm,0.9s
2.0nm,0.5s,mb4.2,baz=136,slow=5.6,SNR=10
2.0nm,0.5s,mb4.2,baz=136,slow=5.6,SNR=10

*IDC **17** 11:54:56.7±1.5, 8.68S×127.07E, h0km, mb4.2/3, mb1 4.4/6, mb1mx4.0/16, mbtmp4.2/6, ML4.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/29, Error ellipse: s-maj=78.0km s-min=23.9km az=69.0*
*NEIC **17** 11:55:01.6±0.7, 8.79S×127.05E, h35km, mb4.6/1, Error ellipse: s-maj=14.0km s-min=9.0km az=55.0*
ISC 17 11:55:03.2±2.0, **8.95S**±0.09×**127.00E**±0.08, **h54**km±25km, **n10**, σ1.916/17, **mb4.2**/3, **Timor region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.52**	**125**	Pn		**Pn**		**11 56 34.6**	**-2.0**
KAKA						*e*Sn	**Sn**	**11 57 52.0**	**+2.2**
FITZ	**Fitzroy Crossi**	**9.19**	**188**	Pn		**Pn**		**11 57 14.6**	**+1.3**
FITZ	1.7nm,0.3s,baz=9.8,slow=14,SNR=3.5			Sn		**Sn**		**11 58 54.2**	**-1.0**
WRA	**Warramunga Arr**	**13.03**	**148**	Pn		**Pn**		**11 58 05.1**	**-0.6**
WRA	2.6nm,0.3s,baz=327,slow=13,SNR=13			Sn		**Sn**		**12 00 28.7**	**-0.5**
WB2	**Warramunga Arr**	**13.04**	**148**	*e*Pn		**Pn**		**11 58 05.2**	**-0.6**
WB2	4.4nm,0.3s,baz=323,slow=26,SNR=6.4			*e*Sn		**Sn**		**12 00 25.3**	**-4.0**
MBWA	**Marble Bar**	**14.01**	**209**	*e*Pn		**Pn**		**11 58 20.2**	**+1.2**
MBWA				*e*Sn		**Sn**		**12 00 42.5**	**-11**
ASAR	**Alice Springs**	**16.06**	**157**	Pn		**Pn**		**11 58 47.6**	**+2.0**
ASAR	0.9nm,0.3s,baz=332,slow=11,SNR=6.3			Sn		**Sn**		**12 01 42.5**	**-0.3**
COEN	**Coen**	**16.61**	**109**	*e*Pn		**Pn**		**11 58 53.4**	**+0.8**
COEN	29nm,0.6s			*e*Sn		**Sn**		**12 01 47.8**	**-8.6**
CMAR	**Chiang Mai Arr**	**38.83**	**315**	P		**P**		**12 02 22.6**	**-0.8**
MKAR	**Makanchi Array**	**68.28**	**329**	P		**P**		**12 05 58.4**	**-0.1**
ZALV	**Zalesovo Beam**	**72.05**	**335**	P		**P**		**12 06 21.3**	**-0.1**

1.0nm,0.5s,mb3.8,baz=146,slow=6.5,SNR=4.7
3.1nm,0.5s,mb4.5,baz=138,slow=5.7,SNR=12

*BJI **17** 11:59:17.3, 50.00N×178.40W, h10km, mB4.7/16, mb4.7/26, Ms4.7/10, Ms7 4.4/10*
*ISCJB **17** 11:59:18.5±1.7, 50.05N±0.05×178.37W±0.04, h11km±10km, mb4.5/74, MS3.7/11, Error ellipse: s-maj=9.1km s-min=4.1km az=0.6*
*IDC **17** 11:59:18.5±0.6, 50.03N×178.39W, h0km, mb4.4/28, mb1 4.5/30, mb1mx4.5/37, mbtmp4.4/30, ML4.6/2, MS3.5/8, Ms1 3.5/8, ms1mx3.1/44, Error ellipse: s-maj=17.6km s-min=10.6km az=172.0*
*NEIC **17** 11:59:20.3±0.3, 50.04N×178.38W, h10km, mb4.6/32, ML4.2(AEIC), Error ellipse: s-maj=7.2km s-min=3.5km az=179.0*
*MOS **17** 11:59:22.1±0.9, 50.15N×178.44W, h33km, mb4.7/40, Error ellipse: s-maj=11.1km s-min=7.3km az=105.5*
ISC 17 11:59:21.5±1.9, **50.05N**±0.06×**178.35W**±0.04, **h18**km±11km, **h15**km±1.1km: **pP-P, n206**, σ0.81/202, **mb4.5**/74, **MS3.7**/11, **23C-22D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**2.00**	**313**	P		**Pn**		**11 59 52.1**	**-2.2**
GSTR	**Great Sitkin T**	**2.50**	**34**	*e*Pn		**Pn**		**12 00 00.6**	**-0.7**
GSTR				*e*Sn		**Sn**		**12 00 31.4**	**+0.1**
ATKA	**Atka Island**	**3.39**	**49**	P		**Pn**		**12 00 11.9**	**-1.5**
SMY	**Shemya**	**5.43**	**302**	P		**Pn**		**12 00 40.4**	**-1.1**
SMY	**Shemya**	**5.43**	**302**	P		**Pn**		**12 00 40.4**	**-1.1**
FX1	**Attu Island--F**	**6.01**	**301**	P		**Pn**		**12 00 48.4**	**-1.0**
FX1	**Attu Island--F**	**6.01**	**301**	P		**Pn**		**12 00 48.4**	**-1.0**
UNV	**Unalaska Valle**	**8.24**	**58**	P		**Pn**		**12 01 20.2**	**+0.2**
SPIA	**Saint Paul Isl**	**8.61**	**31**	P		**Pn**		**12 01 26.7**	**+1.8**
FALS	**False Pass**	**10.30**	**56**	*e*Pn		**Pn**		**12 01 47.9**	**-0.3**
SDPT	**Sand Point**	**12.06**	**57**	*e*Pn		**Pn**		**12 02 10.2**	**-2.0**
PEA0B	**Petropavlovsk-**	**15.18**	**291**	Pn		**Pn**		**12 02 55.9**	**+1.2**
PETK	**Petropavlovsk-**	**15.18**	**291**	Pn		**Pn**		**12 02 54.9**	**+0.2**
	2.4nm,0.3s,baz=93,slow=15,SNR=39								
PETK	**Petropavlovsk-**	**15.18**	**291**	P		**Pn**		**12 02 54.9**	**+0.2**
PETK				pmax		pmax			
	comp=Z,2.0nm,0.3s								
OHAK	**Old Harbor**	**16.44**	**55**	*e*P		**Pn**		**12 03 13.8**	**+2.8**
	comp=Z,38nm,0.6s								
SVW2	**Sparrevohn**	**16.87**	**40**	*e*Pn		**Pn**		**12 03 16.6**	**+0.3**
	comp=Z,13nm,1.0s								
KDAK	**Kodiak Island**	**16.95**	**53**	Pn		**Pn**		**12 03 17.1**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=260,slow=4.7,SNR=8.7								
KDAK	**Kodiak Island**	**16.95**	**53**	*e*Pn		**Pn**		**12 03 18.6**	**+1.1**
	comp=Z,392nm,2.4s								
KDAK	**Kodiak Island**	**16.95**	**53**	*i* P		**Pn**		**12 03 14.3**	**-3.2**
TTA	**Tatalina**	**17.71**	**35**	*e*Pn		**Pn**		**12 03 27.4**	**+0.5**
TTA	**Tatalina**	**17.71**	**35**	*e*P		**Pn**		**12 03 27.4**	**+0.5**
PPLA	**Purkeypile**	**19.16**	**38**	*e*Pn		**Pn**		**12 03 46.0**	**+1.4**
	comp=Z,23nm,1.2s								
BILL	**Bilibino**	**19.58**	**343**	*e*P		**Pn**		**12 03 49.1**	**-0.5**
	comp=Z,8.2nm,0.6s								
BILL	**Bilibino**	**19.58**	**343**	*d i*P		**Pn**		**12 03 49.0**	**-0.5**
BILL				pmax		pmax			
	comp=Z,10.0nm,1.0s								
BILL				MLR		MLR			
	comp=Z,100nm,22.0s								
TRF	**Thorofare Moun**	**20.18**	**38**	*e*Pn		**P**		**12 03 56.2**	**+1.5**
	comp=Z,17nm,1.0s								
BPAW	**Bear Paw Mtn.**	**20.24**	**36**	*e*P		**P**		**12 03 55.9**	**+0.5**
	comp=Z,43nm,2.0s								
SEY	**Seymchan**	**20.43**	**320**	*e*P		**P**		**12 03 58.1**	**+0.6**
MCK	**McKinley**	**20.85**	**38**	*e*P		**P**		**12 04 01.9**	**0.0**
	comp=Z,61nm,2.0s								
MCK	**McKinley**	**20.85**	**38**	*e*P		**P**		**12 04 02.0**	**0.0**
MCK				pmax		pmax			
	comp=Z,61nm,2.0s								
ILAR	**Eielson Array**	**22.12**	**36**	P		**P**		**12 04 15.3**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.5,baz=237,slow=8.1,SNR=15								
ILAR				PcP		PcP		12 08 11.4	-0.7
	comp=Z,0.7nm,0.8s,baz=258,slow=2.8,SNR=7.3								
ILAR				LR		LR		12 13 59.2	
	comp=Z,37nm,19.9s,MS2.8,baz=316,slow=40								
ILAR	**Eielson Array**	**22.12**	**36**	P		**P**		**12 04 15.3**	**-0.3**
ILAR								12 08 11.5	
ILAR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
ILAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
ILAR				MLR		MLR			
	comp=Z,37nm,19.9s								
COLD	**Coldfoot**	**22.26**	**29**	*e*P		**P**		**12 04 17.4**	**+0.3**
	comp=Z,5.4nm,0.9s,mb4.0								
DOT	**Dot Lake**	**22.80**	**40**	*e*P		**P**		**12 04 23.6**	**+0.8**
	comp=Z,31nm,0.7s,mb4.8								
EGAK	**Eagle**	**24.38**	**39**	*e*P		**P**		**12 04 38.0**	**-0.2**
	comp=Z,80nm,2.4s,mb4.7								
DAWY	**Dawson**	**24.90**	**41**	*e*P		**P**		**12 04 43.2**	**+0.3**
ASAJ	**Asahikawa**	**27.01**	**272**	P		**P**		**12 05 01.6**	**-0.7**
	comp=Z,7.5nm,0.9s,mb4.2,baz=104,slow=29,SNR=4.4								
ASAJ	**Asahikawa**	**27.01**	**272**	P		**P**		**12 05 01.6**	**-0.7**
ASAJ				pmax		pmax			
	comp=Z,8.0nm,0.9s								
INK	**Inuvik**	**28.40**	**33**	P		**P**		**12 05 13.9**	**-0.5**
	comp=Z,1.9nm,0.4s,mb4.1,baz=236,slow=7.2,SNR=12								
INK				PcP		PcP		12 08 25.9	-0.3
	comp=Z,1.4nm,0.5s,baz=287,slow=2.3,SNR=5.9								
INK				LR		LR		12 15 32.2	
	comp=Z,43nm,21.5s,MS3.0,baz=308,slow=34								
INK	**Inuvik**	**28.40**	**33**	P		**P**		**12 05 13.9**	**-0.5**
INK								12 08 25.9	
INK				pmax		pmax			
	comp=Z,2.0nm,0.4s								
INK				pmax		pmax			
	comp=Z,1.0nm,0.5s								
INK				MLR		MLR			
	comp=Z,43nm,21.5s								
DLBC	**Dease Lake**	**28.88**	**54**	P		**P**		**12 05 18.5**	**-0.2**
	comp=Z,4.9nm,0.8s,mb4.3,baz=273,slow=7.6,SNR=12								
YAK	**Yakutsk**	**30.52**	**313**	*e*P		**P**		**12 05 31.0**	**-2.2**
YAK				pmax		pmax			
	comp=Z,11nm,1.0s,mb4.6								
BBB	**Bella Bella**	**31.10**	**66**	P		**P**		**12 05 41.0**	**+2.6**
	comp=Z,4.6nm,1.0s,mb4.3,baz=99,slow=5.4,SNR=3.6								
MJAR	**Matsushiro Arr**	**33.89**	**263**	LR		LR		12 16 20.8	
	comp=Z,43nm,21.3s,MS3.1,baz=155,slow=30								
MDJ	**Mudanjiang**	**35.10**	**282**	P		**P**		**12 06 12.1**	**-1.3**
MDJ				pmax		pmax			
	comp=Z,3.0nm,0.4s,mb4.6								
MDJ				pmax		pmax			
	comp=Z,43nm,3.7s								
YKA	**Yellowknife Ar**	**35.95**	**45**	P		**P**		**12 06 21.1**	**+0.6**
	comp=Z,10nm,0.8s,mb4.8,baz=279,slow=7.9,SNR=12								
YKA				LR		LR		12 20 36.8	
	comp=Z,3.4nm,20.8s,baz=335,slow=36								
YKA	**Yellowknife Ar**	**35.95**	**45**	P		**P**		**12 06 21.1**	**+0.5**
YKA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
YKA				MLR		MLR			
	comp=Z,3.0nm,20.8s								
CN2	**Changchun**	**38.10**	**283**	*e*P		**P**		**12 06 38.9**	**-0.1**
CN2				*es*P		sP		12 06 45.0	-1.6
CN2				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.6								
YBH	**Yreka Blue Hor**	**38.80**	**80**	P		**P**		**12 06 45.6**	**+0.7**
	comp=Z,1.2nm,0.6s,mb3.8,baz=333,slow=5.2,SNR=7.9								
YBH	**Yreka Blue Hor**	**38.80**	**80**	P		**P**		**12 06 45.6**	**+0.6**
YBH				pmax		pmax			
	comp=Z,1.0nm,0.6s								
BOD	**Bodaibo**	**39.01**	**308**	*e*P		**P**		**12 06 45.6**	**-0.9**
BOD				pmax		pmax			
	comp=Z,5.0nm,0.9s,mb4.2								
I07A	**Izee**	**39.62**	**75**	⇓P		**P**		**12 06 52.2**	**+0.5**
	baz=40								
KSRS	**Korea Array**	**39.96**	**273**	P		**P**		**12 06 54.4**	**-0.3**
	comp=Z,2.6nm,0.7s,mb4.1,baz=58,slow=8.3,SNR=16								
KSRS	**Korea Array**	**39.96**	**273**	P		**P**		**12 06 54.4**	**-0.3**
KSRS				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.1								
MOD	**Modoc**	**40.24**	**79**	*e*P		**P**		**12 06 58.0**	**+1.1**
	comp=Z,1.8nm,0.8s,mb3.9								
WALA	**Waterton Lakes**	**40.64**	**66**	*e*P		**P**		**12 07 00.4**	**+0.2**
	comp=Z,0.2nm,0.9s								
BSMT	**Bassoo Peak**	**40.68**	**68**	*e*P		**P**		**12 07 01.2**	**+0.7**
A14A	**Double T Ranch**	**40.97**	**66**	⇓P		**P**		**12 07 02.6**	**-0.2**
	baz=41,SNR=8.2								
WVOR	**Wild Horse Val**	**41.01**	**77**	*e*P		**P**		**12 07 03.9**	**+0.7**
	comp=Z,4.0nm,1.0s,mb4.0								
WVOR	**Wild Horse Val**	**41.01**	**77**	*e*P		**P**		**12 07 03.9**	**+0.6**
WVOR				pmax		pmax			
	comp=Z,4.0nm,1.0s,mb4.0								
B14A	**Marquette Ranc**	**41.34**	**66**	⇑P		**P**		**12 07 05.8**	**-0.1**
	baz=41,SNR=6.7								
F12A	**Elk City**	**41.40**	**71**	⇑P		**P**		**12 07 05.9**	**-0.5**
	baz=41,SNR=5.7								
MSO	**Missoula**	**41.67**	**69**	⇓P		**P**		**12 07 07.5**	**-1.2**
	baz=42								
MSO	**Missoula**	**41.67**	**69**	*e*P		**P**		**12 07 08.3**	**-0.4**
	comp=Z,3.2nm,1.0s,mb3.9								
B15A	**Bradely Ranch,**	**41.78**	**66**	⇓P		**P**		**12 07 09.3**	**-0.3**
	baz=42,SNR=8.4								
D14A	**Greenough**	**41.81**	**68**	⇑P		**P**		**12 07 09.4**	**-0.4**
	baz=42,SNR=5.3								
C15A	**Salmond Ranch,**	**42.01**	**67**	⇑P		**P**		**12 07 10.9**	**-0.5**
	baz=42								
CMB	**Columbia Colle**	**42.35**	**84**	*e*P		**P**		**12 07 15.7**	**+1.4**
	comp=Z,2.7nm,1.0s,mb3.8								
CMB	**Columbia Colle**	**42.35**	**84**	*e*P		**P**		**12 07 15.7**	**+1.4**
CMB				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb3.9								
D15A	**Lincoln**	**42.42**	**68**	⇑P		**P**		**12 07 14.3**	**-0.5**
	baz=42								
C16A	**Fuhringer Ranc**	**42.51**	**66**	⇓P		**P**		**12 07 14.8**	**-0.6**
	baz=42								
A17A	**Triple J Farms**	**42.57**	**64**	⇑P		**P**		**12 07 15.6**	**-0.4**
	baz=42,SNR=8.5								
B17A	**L&G Farms, Che**	**42.83**	**65**	⇑P		**P**		**12 07 16.8**	**-1.2**
	baz=43								
HRY	**Holter Researc**	**42.99**	**68**	*e*P		**P**		**12 07 19.0**	**-0.4**
HLID	**Hailey**	**43.04**	**73**	⇑P		**P**		**12 07 19.6**	**-0.2**
	baz=43								
HLID	**Hailey**	**43.04**	**73**	*e*P		**P**		**12 07 19.7**	**-0.1**
	comp=Z,2.3nm,1.0s,mb3.9								
E16A	**East Helena**	**43.17**	**68**	⇓P		**P**		**12 07 20.4**	**-0.5**
	baz=43,SNR=5.1								
NVAR	**Mina Array Bea**	**43.45**	**82**	P		**P**		**12 07 24.1**	**+0.9**
	comp=Z,1.0nm,0.8s,mb3.6,baz=293,slow=7.9,SNR=9.0								
NVAR				PcP		PcP		12 09 11.4	+0.2
	comp=Z,1.1nm,0.8s,baz=283,slow=2.5,SNR=6.9								
EGMT	**Eagleton**	**43.57**	**65**	*e*P		**P**		**12 07 24.2**	**+0.2**
	comp=Z,31nm,1.4s,mb4.8								
BOZ	**Bozeman (W)**	**43.65**	**69**	*e*P		**P**		**12 07 24.9**	**+0.2**
	comp=Z,32nm,2.5s,mb4.6								
BOZ	**Bozeman (W)**	**43.65**	**69**	*e*P		**P**		**12 07 24.9**	**+0.2**
BOZ				pmax		pmax			
	comp=Z,32nm,2.5s,mb4.6								
D18A	**Linhart Farms,**	**43.95**	**66**	⇓P		**P**		**12 07 27.0**	**-0.1**
	baz=44,SNR=9.0								
C19A	**Slack Wire Ran**	**44.12**	**65**	⇑P		**P**		**12 07 27.9**	**-0.6**
	baz=44,SNR=9.0								
A20A	**Cobblestone Ra**	**44.21**	**63**	⇑P		**P**		**12 07 29.0**	**-0.2**
	baz=44								
C20A	**Veseth Ranch,**	**44.74**	**65**	⇓P		**P**		**12 07 33.6**	**+0.2**
	baz=45,SNR=6.5								
E19A	**Rath Farm, Rou**	**44.93**	**67**	⇑P		**P**		**12 07 34.2**	**-0.7**
	baz=45								
ISA	**Isabella**	**44.99**	**85**	⇑P		**P**		**12 07 34.9**	**-0.7**
	baz=45								
ISA	**Isabella**	**44.99**	**85**	*e*P		**P**		**12 07 35.8**	**+0.1**
	comp=Z,3.7nm,1.0s,mb4.2								
ISA	**Isabella**	**44.99**	**85**	*e*P		**P**		**12 07 35.8**	**+0.2**
ISA				pmax		pmax			
	comp=Z,4.0nm,1.0s,mb4.2								
C21A	**Desert Coulee**	**45.22**	**64**	⇓P		**P**		**12 07 36.7**	**-0.5**
	baz=45,SNR=5.6								
R11A	**Troy Canyon, C**	**45.23**	**80**	⇑P		**P**		**12 07 37.3**	**-0.1**
	baz=45,SNR=7.1								
A22A	**Carney Farms,**	**45.30**	**62**	⇑P		**P**		**12 07 37.2**	**-0.7**
	baz=45								
RLMT	**Red Lodge**	**45.34**	**68**	⇓P		**P**		**12 07 38.0**	**-0.2**
	baz=45,SNR=5.0								
RLMT	**Red Lodge**	**45.34**	**68**	*e*P		**P**		**12 07 38.5**	**+0.3**
	comp=Z,153nm,3.0s								
DUG	**Dugway**	**45.90**	**76**	⇓P		**P**		**12 07 42.3**	**-0.4**
	baz=46,SNR=5.6								
DUG	**Dugway**	**45.90**	**76**	*e*P		**P**		**12 07 42.8**	**+0.1**
	comp=Z,8.2nm,1.3s,mb4.5								
DUG	**Dugway**	**45.90**	**76**	*e*P		**P**		**12 07 42.8**	**+0.1**
DUG				pmax		pmax			
	comp=Z,8.0nm,1.3s,mb4.5								
G20A	**Bridger**	**45.92**	**68**	⇑P		**P**		**12 07 42.1**	**-0.7**
	baz=46,SNR=6.8								
BJI	**Beijing**	**45.95**	**284**	P		**P**		**12 07 38.8**	**-4.3**
BJI				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.6								
BJI				pmax		pmax			
	comp=Z,67nm,3.9s								
GSC	**Goldstone**	**46.29**	**84**	*e*P		**P**		**12 07 46.7**	**+0.8**
	comp=Z,6.2nm,1.1s,mb4.5								
GSC	**Goldstone**	**46.29**	**84**	*e*P		**P**		**12 07 46.7**	**+0.8**
GSC				pmax		pmax			
	comp=Z,6.0nm,1.1s,mb4.4								
Q14A	**Sevier Lake (B**	**46.31**	**78**	⇑P		**P**		**12 07 45.5**	**-0.4**
	baz=46,SNR=6.8								
C23A	**Lambert**	**46.33**	**63**	⇓P		**P**		**12 07 45.6**	**-0.4**
	baz=46								
A24A	**Westby**	**46.42**	**61**	⇑P		**P**		**12 07 46.2**	**-0.6**
	baz=46								
BW06	**Boulder Array**	**46.45**	**71**	*e*P		**P**		**12 07 47.3**	**+0.2**
	comp=Z,3.4nm,0.9s,mb4.3								
PDAR	**Pinedale Array**	**46.45**	**71**	P		**P**		**12 07 47.5**	**+0.4**
	comp=Z,3.3nm,0.9s,mb4.2,baz=315,slow=4.0,SNR=24								
DAU	**Daniels Canyon**	**46.74**	**75**	*e*P		**P**		**12 07 50.0**	**+0.7**
	comp=Z,3.1nm,0.9s,mb4.2								
DAU				*e*PcP		PcP		12 09 23.7	+1.2
DAU	**Daniels Canyon**	**46.74**	**75**	*e*P		**P**		**12 07 50.1**	**+0.7**
DAU				*e*				12 09 23.7	
DAU				pmax		pmax			
	comp=Z,3.0nm,0.9s,mb4.2								
U13A	**Pakoon Wash**	**47.42**	**81**	⇓P		**P**		**12 07 54.6**	**0.0**
	baz=47								
SONM	**Songino Array**	**47.51**	**298**	P		**P**		**12 07 55.5**	**+0.3**
	comp=Z,2.8nm,0.9s,mb4.3,baz=62,slow=8.3,SNR=13								
SONM				PcP		PcP		12 09 25.1	0.0
	comp=Z,0.9nm,0.5s,baz=55,slow=2.4,SNR=5.2								
SONM	**Songino Array**	**47.51**	**298**	P		**P**		**12 07 55.5**	**+0.3**
SONM								12 09 25.1	
SONM				pmax		pmax			
	comp=Z,3.0nm,0.9s								
SONM				pmax		pmax			
	comp=Z,1.0nm,0.5s								
R16A	**Teasdale**	**47.86**	**77**	⇓P		**P**		**12 07 58.4**	**+0.3**
	baz=48,SNR=7.0								
ZAK	**Zakamensk**	**47.89**	**302**	*e*P		**P**		**12 07 58.7**	**+0.5**
ZAK				pmax		pmax			
	comp=Z,4.0nm,1.2s,mb4.3								
K21A	**Alcova**	**47.93**	**70**	⇓P		**P**		**12 07 57.8**	**-0.8**
	baz=48								
SRU	**San Rafael**	**47.97**	**76**	*e*P		**P**		**12 08 00.4**	**+1.5**
	comp=Z,3.4nm,0.9s,mb4.4								
SRU	**San Rafael**	**47.97**	**76**	*e*P		**P**		**12 08 00.4**	**+1.5**
SRU				pmax		pmax			
	comp=Z,3.0nm,0.9s,mb4.3								
S16A	**Weppner Ranch,**	**48.12**	**78**	⇓P		**P**		**12 08 00.4**	**+0.2**
	baz=48,SNR=6.1								
L21A	**Rawlins**	**48.24**	**71**	⇑P		**P**		**12 08 00.6**	**-0.4**
	baz=48								
HHC	**Hu-ho-hao-te**	**48.34**	**287**	*e*P		**P**		**12 08 02.0**	**+0.2**
HHC				pP		pP		12 08 06.5	-0.8
HHC				sP		sP		12 08 09.0	-0.4
HHC				PcP		PcP		12 09 28.0	-0.2
HHC				PP		PP		12 09 54.9	+0.8
HHC				ScP		ScP		12 13 21.3	-0.5
HHC				S		**S**		**12 14 59.8**	**-1.1**
HHC				sS		sS		12 15 07.1	-2.9
HHC				ScS		ScS		12 17 51.3	-2.3
HHC				pmax		pmax			
	comp=Z,16nm,1.1s,mb5.0								
HHC				pmax		pmax			
	comp=Z,74nm,5.4s								
HHC				LR		LR			
	comp=N,120nm,13.0s,MS4.3								
HHC				LR		LR			
	comp=E,160nm,12.1s,MS4.3								
HHC				LR		LR			
	comp=Z,120nm,13.4s,MS4.0								
U15A	**North Rim**	**48.47**	**80**	⇑P		**P**		**12 08 03.5**	**+0.7**
	baz=48,SNR=5.7								
S17A	**Black Ridge (B**	**48.68**	**78**	⇑P		**P**		**12 08 04.4**	**0.0**
	baz=48,SNR=5.8								
NJ2	**Nanjing**	**49.16**	**273**	*e*P		**P**		**12 08 09.6**	**+1.5**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.5s,mb5.1								
T18A	**Mexican Hat**	**49.57**	**78**	⇓P		**P**		**12 08 10.2**	**-1.0**
	baz=49,SNR=5.7								
PV01	**Paradox Valley**	**49.77**	**76**	*e*P		**P**		**12 08 12.8**	**0.0**
	comp=Z,184nm,0.8s								
ULM	**Lac du B

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**60.87**	**38**	P	**P**	**12 09 33.1**	**+0.6**
	comp=Z,2.9nm,0.7s,mb4.5,baz=355,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**61.09**	**309**	P	**P**	**12 09 33.6**	**-0.5**
	comp=Z,2.2nm,0.7s,mb4.4,baz=55,slow=6.9,SNR=20						
MKAR	**Makanchi Array**	**61.09**	**309**	P	**P**	**12 09 33.6**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	**Borovoye Array**	**62.09**	**320**	P	**P**	**12 09 41.0**	**+0.3**
	comp=Z,6.1nm,0.6s,mb4.9,baz=48,slow=6.6,SNR=38						
BVAR	**Borovoye Array**	**62.09**	**320**	P	**P**	**12 09 41.0**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	**Borovoye**	**62.11**	**321**	*e*P	**P**	**12 09 41.1**	**+0.3**
	comp=Z,7.5nm,0.6s,mb5.0						
BRVK	**Borovoye**	**62.11**	**321**	*c i*P	**P**	**12 09 41.2**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb5.0						
HNR	**Honiara**	**62.20**	**204**	LR	LR	12 32 58.3	
	comp=Z,35nm,18.2s,MS3.6,baz=273,slow=32						
SVE	**Sverdlovsk**	**62.87**	**328**	*e*P	**P**	**12 09 47.0**	**+1.1**
SVE				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
PRGR	**Permogore**	**63.24**	**338**	*e*P	**P**	**12 09 48.0**	**-0.3**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.3s,mb5.4						
ARU	**Arti**	**63.88**	**329**	*e*P	**P**	**12 09 53.1**	**+0.5**
	comp=Z,9.1nm,0.6s,mb5.0						
ARU	**Arti**	**63.88**	**329**	*d i*P	**P**	**12 09 52.9**	**+0.3**
ARU						12 10 24.7	
ARU						12 12 09.8	
ARU				S	**S**	**12 18 31.8**	**+5.0**
ARU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
AFI	**Afiamalu**	**63.95**	**173**	LR	LR	12 33 08.6	
	comp=Z,37nm,20.2s,MS3.6,baz=33,slow=32						
BORG	**Borgarnes**	**64.15**	**11**	LR	LR	12 35 50.7	
	comp=Z,85nm,21.7s,MS3.9,baz=192,slow=34						
KMI	**Kunming**	**64.20**	**279**	P	**P**	**12 09 56.0**	**+0.8**
KMI				pP	pP	12 09 59.3	-1.5
KMI				sP	sP	12 10 00.3	-2.6
KMI				PP	PP	12 12 16.8	+0.6
KMI				S	**S**	**12 18 31.0**	**-0.7**
KMI				sS	sS	12 18 37.1	-3.9
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
KMI				LR	LR		
	comp=N,190nm,14.4s,MS4.4						
KMI				LR	LR		
	comp=E,120nm,18.6s,MS4.4						
KMI				LR	LR		
	comp=Z,130nm,15.8s,MS4.2						
JOF	**Joensuu**	**64.95**	**346**	*e*P	**P**	**12 09 58.5**	**-1.0**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KLMR	**Klimovskoe**	**65.32**	**341**	*e*P	**P**	**12 09 59.7**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.8						
KAF	**Kangasniemi**	**66.47**	**348**	*e*P	**P**	**12 10 08.0**	**-1.2**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
FINES	**FINESS Array B**	**67.14**	**348**	P	**P**	**12 10 13.5**	**-0.1**
	comp=Z,6.3nm,0.8s,mb4.7,baz=28,slow=8.6,SNR=13						
FINES	**FINESS Array B**	**67.14**	**348**	P	**P**	**12 10 13.5**	**-0.1**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TKM2	**Tokmak 2**	**67.18**	**310**	*e*P	**P**	**12 10 15.3**	**+1.2**
	comp=Z,5.8nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**67.18**	**310**	*e*P	**P**	**12 10 15.3**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KBK	**Karagaybulak**	**67.70**	**310**	*e*P	**P**	**12 10 18.5**	**+1.1**
	comp=Z,36nm,1.6s,mb5.2						
EKS2	**Erkin-Say**	**68.27**	**311**	*e*P	**P**	**12 10 22.2**	**+1.2**
	comp=Z,9.2nm,0.6s,mb5.0						
AKTK	**Aktyubinsk**	**68.94**	**325**	P	**P**	**12 10 25.5**	**+0.5**
AKTO	**Aktyubinsk**	**68.94**	**325**	P	**P**	**12 10 25.5**	**+0.5**
	comp=Z,5.8nm,0.5s,mb4.8,baz=57,slow=8.3,SNR=19						
AKTO	**Aktyubinsk**	**68.94**	**325**	P	**P**	**12 10 25.5**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
NB2	**NORSAR Subarra**	**68.99**	**355**	P	**P**	**12 10 25.5**	**+0.3**
	comp=Z,7.8nm,0.7s,mb4.8,baz=7.6,slow=6.5						
NOA	**NORSAR Array B**	**68.99**	**355**	P	**P**	**12 10 25.8**	**+0.6**
	comp=Z,6.2nm,0.7s,mb4.7,baz=6.6,slow=6.3,SNR=26						
NOA	**NORSAR Array B**	**68.99**	**355**	P	**P**	**12 10 25.8**	**+0.6**
NOA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ABKAR	**Akbulak array**	**69.17**	**323**	*e*P	**P**	**12 10 26.6**	**+0.1**
KSH	**Kashi**	**69.53**	**307**	*e*P	**P**	**12 10 33.1**	**+4.2**
KSH				*ep*P	pP	12 10 37.8	+3.2
KSH				*es*P	sP	12 10 40.1	+3.4
KSH				*e*PcP	PcP	12 10 55.8	+3.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.9						
KSH				LR	LR		
	comp=N,300nm,5.4s						
KSH				LR	LR		
	comp=E,210nm,6.4s						
KSH				LR	LR		
	comp=Z,470nm,6.2s						
HFS	**Hagfors**	**69.74**	**354**	P	**P**	**12 10 29.7**	**-0.1**
	comp=Z,5.0nm,0.7s,mb4.5,baz=50,slow=2.3,SNR=15						
HFS	**Hagfors**	**69.74**	**354**	P	**P**	**12 10 29.7**	**-0.1**
HFS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN	**Obninsk**	**71.21**	**340**	*e*P	**P**	**12 10 39.4**	**+0.5**
OBN				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
CMAR	**Chiang Mai Arr**	**71.44**	**277**	P	**P**	**12 10 40.5**	**-0.4**
	comp=Z,1.5nm,0.6s,mb4.1,baz=33,slow=6.9,SNR=12						
CMAR	**Chiang Mai Arr**	**71.44**	**277**	P	**P**	**12 10 40.5**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PPT	**Papeete**	**71.96**	**151**	LR	LR	12 33 04.6	
	comp=Z,71nm,21.3s,MS3.9,baz=104,slow=28						
KBL	**Kabul**	**76.88**	**309**	*e*P	**P**	**12 11 12.4**	**0.0**
	comp=Z,6.5nm,0.7s,mb4.7						
KBL	**Kabul**	**76.88**	**309**	*e*P	**P**	**12 11 12.4**	**0.0**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
AKASG	**Malin Array Be**	**76.90**	**342**	P	**P**	**12 11 12.3**	**+0.1**
	comp=Z,5.0nm,0.6s,mb4.6,baz=19,slow=5.7,SNR=14						
AKASG	**Malin Array Be**	**76.90**	**342**	P	**P**	**12 11 12.3**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIEV	**Kiev**	**76.91**	**342**	*e*P	**P**	**12 11 12.4**	**+0.1**
	comp=Z,65nm,0.8s,mb5.6						
KIEV	**Kiev**	**76.91**	**342**	*e*P	**P**	**12 11 12.4**	**+0.2**
KIEV				pmax	pmax		
	comp=Z,65nm,0.8s,mb5.6						
GERES	**GERESS Array B**	**80.94**	**352**	P	**P**	**12 11 35.0**	**+0.6**
	comp=Z,1.1nm,0.6s,mb4.0,baz=34,slow=5.0,SNR=7.1						
GERES	**GERESS Array B**	**80.94**	**352**	P	**P**	**12 11 35.0**	**+0.6**
GERES	**GERESS Array B**	**80.94**	**352**	P	**P**	**12 11 35.0**	**+0.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DRGR		**81.83**	**346**	P	**P**	**12 11 39.4**	**+0.3**
JTS	**JuntasAbangare**	**84.37**	**81**	*e*P	**P**	**12 11 50.7**	**-2.1**
ASAR	**Alice Springs**	**84.70**	**223**	P	**P**	**12 11 53.5**	**-0.6**
	comp=Z,2.0nm,0.8s,mb4.3,baz=27,slow=5.6,SNR=17						
ASAR	**Alice Springs**	**84.70**	**223**	P	**P**	**12 11 53.5**	**-0.6**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	**88.97**	**213**	P	**P**	**12 12 14.5**	**-0.1**
	comp=Z,1.9nm,0.7s,mb4.5,baz=343,slow=11,SNR=5.3						
RPZ	**Rata Peaks**	**93.84**	**188**	LR	LR	12 50 18.0	
	comp=Z,174nm,18.4s,MS4.5,baz=137,slow=33						
MAW	**Mawson**	**145.60**	**216**	PKPbc	PKPbc	12 18 56.5	-0.9
	comp=Z,3.8nm,0.7s,baz=82,slow=4.1,SNR=20						
BOSA	**Boshof**	**152.07**	**311**	PKPbc	PKPbc	12 19 15.6	+0.1

MAN 17 12:00:54, 9.52N×121.92E, h1km, mb3.8, ML2.5, MS2.1, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.28**	**31**	*e*P	Pg	12 01 18.3	-0.3
CUYO	**Cuyo Island**	**1.59**	**326**	*e*P	Pn	12 01 23.1	-0.3
IPIL	**Ipil**	**1.84**	**159**	*e*P	Pn	12 01 26.8	+0.1
PAGZ	**Pagadian**	**2.20**	**139**	*e*P	Pn	12 01 32.4	+0.6

DDA ***17*** *12:08:11.6, 40.00N×39.95E, h20km±1km, Ml4.9*

ISK ***17*** *12:08:11.9, 40.03N×40.01E, h5km, ML4.7*

BJI ***17*** *12:08:12.0, 40.00N×40.00E, h10km, mB5.0/20, mb4.8/38, Ms4.6/23, Ms7 4.2/24*

NEIC ***17*** *12:08:12.0, 40.01N×39.98E, h5km, mb4.7/66, ML4.7(ISK), After ISK.*

MOS ***17*** *12:08:13.8±1.1, 40.13N×39.92E, h13km, mb4.9/57, Error ellipse: s-maj=4.6km s-min=2.8km az=129.2*

ISCJB ***17*** *12:08:13.3±0.1, 40.06N±0.01×39.95E±0.01, h10km, mb4.6/124, MS3.9/42, Error ellipse: s-maj=1.7km s-min=1.4km az=178.7*

CSEM ***17*** *12:08:14.0±0.1, 40.09N×39.99E, h5km, mb4.7/77, Ms3.7, Mw4.8, Error ellipse: s-maj=2.8km s-min=2.5km az=170.0*

TEH ***17*** *12:08:15.0, 40.19N×39.89E, h10km*

IDC ***17*** *12:08:15.8±1.6, 40.05N×39.94E, h23km±11km, mb4.2/23, mb1 4.2/31, mb1mx4.2/36, mbtmp4.2/31, ML3.8/6, MS3.8/28, Ms1 3.8/28, ms1mx3.7/42, Error ellipse: s-maj=10.7km s-min=7.6km az=175.0*

SZGRF ***17*** *12:08:16.0, 39.56N×39.79E, h33km, mb4.6, Turkey*

GCMT ***17*** *12:08:17.2±0.4, 40.15N×39.93E, h20km±1km, MW4.8, Moment Tensor Solution. s22,c26; s68,c102; Moment tensor: Scale 10^{16}Nm; M_{rr}0.01±.11; $M_{\theta\theta}$-0.15±.10; $M_{\phi\phi}$0.14±.08; $M_{r\theta}$0.17±.18; $M_{\theta\phi}$-2.16±.08; $M_{\phi r}$-0.12±.16; Best double couple: $M_0$2.20000×10^{16} NP1:ϕ_p182.00000°, δ85.00000°, λ3.00000°. NP2:ϕ_p92.00000°, δ87.00000°, λ175.00000°. Principal axes: T 2.1800, Plg5.0000°, Azm47.0000°; N -0.0100, Plg84.0000°, Azm239.0000°; P -2.1700, Plg1.0000°, Azm137.0000°; Data Used: IU IC CN II G.*

ISC 17 12:08:14.9±0.1, 40.07N±0.01×39.96E±0.01, h10km, (h14km±1.3km:pP-P), n887, σ1930/993, mb4.6/124, MS3.9/42, 53C-39D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYT	**Ayd¯-ntepe-Bay**	**0.36**	**23**	PG	**Pg**	**12 08 20.6**	**-1.3**
BAYT				*e*SG	**Sg**	**12 08 26.7**	**0.0**
BAYT	**Ayd¯-ntepe-Bay**	**0.36**	**23**	*i* Pg	**Pg**	**12 08 20.6**	**-1.3**
BAYT				*e*Sg	**Sg**	**12 08 26.7**	**0.0**
KOPT	**Kop Dagi**	**0.42**	**96**	⇑*i*P	**Pg**	**12 08 20.6**	**-2.4**
KOPT				*i* S	**Sg**	**12 08 27.7**	**-0.9**
KOPT	**Kop Dagi**	**0.42**	**96**	*i* P	**Pg**	**12 08 20.6**	**-2.4**
KOPT				*i* S	**Sg**	**12 08 27.7**	**-0.9**
GUMT	**Gumushane**	**0.54**	**317**	PG	**Pg**	**12 08 24.2**	**-1.2**
GUMT	**Gumushane**	**0.54**	**317**	*i* Pg	**Pg**	**12 08 24.2**	**-1.2**
KELT	**Kelkit**	**0.55**	**279**	⇓*i*P	**Pg**	**12 08 22.7**	**-2.8**
KELT				*i* S	**Sg**	**12 08 30.2**	**-2.5**
KELT	**Kelkit**	**0.55**	**279**	*i* P	**Pg**	**12 08 22.7**	**-2.8**
KELT				*i* S	**Sg**	**12 08 30.2**	**-2.5**
EZC	**Erzincan**	**0.56**	**236**	PG	**Pg**	**12 08 23.2**	**-2.5**
EZC	**Erzincan**	**0.56**	**236**	*i* Pg	**Pg**	**12 08 23.2**	**-2.6**
MACK	**Trabzon**	**0.89**	**351**	⇓*i*P	**Pg**	**12 08 30.6**	**-1.4**
MACK				*i* S	**Sg**	**12 08 43.7**	**+0.1**
MACK	**Trabzon**	**0.89**	**351**	*i* P	**Pg**	**12 08 30.6**	**-1.4**
MACK				*i* S	**Sg**	**12 08 43.7**	**+0.1**
KTUT	**Trabzon**	**0.93**	**351**	*e*PG	**Pg**	**12 08 31.6**	**-1.3**
KTUT				*e*SG	**Sg**	**12 08 46.1**	**+1.1**
KTUT	**Trabzon**	**0.93**	**351**	*e*Pg	**Pg**	**12 08 31.6**	**-1.2**
KTUT				*e*Sg	**Sg**	**12 08 46.1**	**+1.1**
EZM	**Erzurum**	**1.09**	**98**	*e*PG	**Pg**	**12 08 32.8**	**-3.1**
ERZM	**Erzurum**	**1.09**	**98**	⇓*i*P	**Pg**	**12 08 31.6**	**-4.3**
ERZM				*i* S	**Sg**	**12 08 53.1**	**+3.0**
ERZM	**Erzurum**	**1.09**	**98**	*i* P	**Pg**	**12 08 31.5**	**-4.4**
ERZM				*i* S	**Sg**	**12 08 53.1**	**+3.0**
ESPY	**Espiye-Giresun**	**1.27**	**313**	*e*PN	**Pn**	**12 08 36.9**	**-1.8**
ESPY	**Espiye-Giresun**	**1.27**	**313**	*e*Pn	**Pn**	**12 08 36.9**	**-1.7**
PZAR	**Pazar-Rize**	**1.32**	**32**	*e*PN	**Pn**	**12 08 38.1**	**-1.3**
PZAR				*e*SN	**Sn**	**12 08 57.6**	**+0.5**
PZAR	**Pazar-Rize**	**1.32**	**32**	*e*Pn	**Pn**	**12 08 38.1**	**-1.3**
PZAR				*e*Sn	**Sn**	**12 08 57.6**	**+0.5**
SUSE	**Susehri**	**1.35**	**277**	⇓*i*P	**Pn**	**12 08 36.7**	**-3.1**
SUSE				*i* S	**Sb**	**12 08 56.0**	**-1.6**
SUSE	**Susehri**	**1.35**	**277**	*i* P	**Pn**	**12 08 36.7**	**-3.1**
SUSE				*i* S	**Sb**	**12 08 56.0**	**-1.7**
KEMA	**Kemaliye**	**1.38**	**235**	⇑*i*P	**Pn**	**12 08 36.6**	**-3.6**
KEMA				*i* S	**Sb**	**12 08 57.2**	**-1.3**
KEMA	**Kemaliye**	**1.38**	**235**	*i* P	**Pn**	**12 08 36.6**	**-3.6**
KEMA				*i* S	**Sb**	**12 08 57.2**	**-1.3**
BNGL	**BINGOL**	**1.44**	**140**	⇓*i*P	**Pn**	**12 08 36.9**	**-4.1**
BNGL				*i* S	**Sn**	**12 09 00.8**	**+0.8**
HOMI	**Horasan**	**1.49**	**90**	⇓*i*P	**Pn**	**12 08 40.0**	**-1.8**
HOMI				*i* S	**Sn**	**12 09 01.3**	**0.0**
GRSN	**GIRESUNGRSN**	**1.55**	**304**	⇓*i*P	**Pn**	**12 08 40.4**	**-2.1**
GRSN				*i* S	**Sn**	**12 08 58.3**	**-4.3**
GRSN	**GIRESUNGRSN**	**1.55**	**304**	*i* P	**Pn**	**12 08 40.4**	**-2.1**
GRSN				*i* S	**Sn**	**12 08 58.3**	**-4.3**
DDEM	**Demirkent**	**1.60**	**58**	⇑*i*P	**Pn**	**12 08 41.5**	**-1.7**
DDEM				*i* S	**Sn**	**12 09 02.9**	**-1.0**
DDEM	**Demirkent**	**1.60**	**58**	*i* P	**Pn**	**12 08 41.5**	**-1.7**
DDEM				*i* S	**Sn**	**12 09 02.9**	**-0.9**
ELZG	**Elazig**	**1.74**	**206**	P	**Pn**	**12 08 42.8**	**-2.3**
ELZG				S	**Sn**	**12 09 06.7**	**-0.6**
ELZG	**Elazig**	**1.74**	**206**	⇑*i*P	**Pn**	**12 08 42.8**	**-2.3**
ELZG				*i* S	**Sn**	**12 09 04.1**	**-3.2**
ELZG	**Elazig**	**1.74**	**206**	*i* P	**Pn**	**12 08 42.8**	**-2.3**
ELZG				S	**Sn**	**12 09 06.7**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.76**	**197**	*e*PN	**Pn**	**12 08 43.0**	**-2.4**
SVRC	**Sivrice-ELAZID**	**1.76**	**197**	*e*Pn	**Pn**	**12 08 43.0**	**-2.4**
DBOC	**Borcka**	**1.82**	**45**	⇑*i*P	**Pn**	**12 08 45.7**	**-0.6**
DBOC				*i* S	**Sn**	**12 09 10.2**	**+0.8**
DBOC	**Borcka**	**1.82**	**45**	*i* P	**Pn**	**12 08 45.7**	**-0.6**
DBOC				*i* S	**Sn**	**12 09 10.2**	**+0.8**
BCA	**Borcka**	**1.87**	**42**	*e*PN	**Pn**	**12 08 46.3**	**-0.6**
BCA				*e*SN	**Sn**	**12 09 11.6**	**+1.1**
BCA	**Borcka**	**1.87**	**42**	*e*Pn	**Pn**	**12 08 46.3**	**-0.6**
BCA				*e*Sn	**Sn**	**12 09 11.6**	**+1.0**
ARTV	**Artvin**	**1.87**	**53**	⇑*i*P	**Pn**	**12 08 45.4**	**-1.5**
ARTV				*i* S	**Sn**	**12 09 11.9**	**+1.3**
ARTV	**Artvin**	**1.87**	**53**	*i* P	**Pn**	**12 08 45.4**	**-1.5**
ARTV				*i* S	**Sn**	**12 09 11.9**	**+1.3**
RSDY	**Resadiye-TOKAT**	**2.04**	**280**	*e*PN	**Pn**	**12 08 49.2**	**0.0**
RSDY	**Resadiye-TOKAT**	**2.04**	**280**	*e*Pn	**Pn**	**12 08 49.2**	**-0.1**
MYA	**Malataya**	**2.11**	**215**	*e*PN	**Pn**	**12 08 48.7**	**-1.5**
MYA	**Malataya**	**2.11**	**215**	*e*Pn	**Pn**	**12 08 48.7**	**-1.5**
MALT	**Malatya**	**2.12**	**215**	*e*PN	**Pn**	**12 08 48.6**	**-1.7**
MALT				*e*SN	**Sn**	**12 09 17.1**	**+0.5**
MALT	**Malatya**	**2.12**	**215**	*e*Pn	**Pn**	**12 08 48.6**	**-1.6**
MALT				*e*Sn	**Sg**	**12 09 22.2**	**-0.7**
MALT	**Malatya**	**2.12**	**215**	*e*P	**Pn**	**12 08 48.7**	**-1.6**
MALT				*e*		12 09 22.2	
MALT	**Malatya**	**2.12**	**215**	*e*Pn	**Pn**	**12 08 48.6**	**-1.7**
MALT				*e*Sn	**Sn**	**12 09 17.1**	**+0.5**
DIYA	**Diyarbakir**	**2.14**	**177**	⇓*i*P	**Pn**	**12 08 49.1**	**-1.6**
DIYA				*i* S	**Sn**	**12 09 18.4**	**+1.1**
DIYA	**Diyarbakir**	**2.14**	**177**	*i* P	**Pn**	**12 08 49.1**	**-1.6**
DIYA				*i* S	**Sn**	**12 09 18.4**	**+1.1**
SCER	**sogukcermik**	**2.19**	**266**	⇓*i*P	**Pn**	**12 08 51.4**	**+0.1**
SCER				*i* S	**Sg**	**12 09 22.6**	**-2.4**
SCER	**sogukcermik**	**2.19**	**266**	*i* P	**Pn**	**12 08 51.4**	**+0.2**
SCER				*i* S	**Sg**	**12 09 22.6**	**-2.5**
SVSK	**Karacayir**	**2.28**	**267**	*e*PN	**Pn**	**12 08 53.1**	**+0.6**
SVSK				*e*SN	**Sn**	**12 09 22.7**	**+2.0**
SVSK	**Karacayir**	**2.28**	**267**	*e*Pn	**Pn**	**12 08 53.1**	**+0.6**
SVSK				*e*Sn	**Sn**	**12 09 22.7**	**+2.0**
AKCD	**Akcadag**	**2.37**	**222**	⇑*i*P	**Pn**	**12 08 51.6**	**-2.2**
AKCD				*i* S	**Sn**	**12 09 22.0**	**-0.9**
AKCD	**Akcadag**	**2.37**	**222**	*i* P	**Pn**	**12 08 51.6**	**-2.2**
AKCD				*i* S	**Sn**	**12 09 22.0**	**-0.9**
TATV	**Tatvan**	**2.37**	**130**	⇓*i*P	**Pn**	**12 08 50.9**	**-2.9**
TATV				*e*S	**Sn**	**12 09 22.0**	**-1.0**
TATV	**Tatvan**	**2.37**	**130**	*i* P	**Pn**	**12 08 50.9**	**-2.9**
TATV				*e*S	**Sn**	**12 09 22.0**	**-1.0**
AGRB	**Hanur-Agry**	**2.39**	**101**	*e*PN	**Pn**	**12 08 53.3**	**-0.7**
AGRB	**Hanur-Agry**	**2.39**	**101**	*e*Pn	**Pn**	**12 08 53.3**	**-0.7**
BEST	**Besiri**	**2.40**	**154**	⇓*i*P	**Pn**	**12 08 52.2**	**-2.0**
BEST				*i* S	**Sg**	**12 09 26.8**	**-5.1**
KARS	**Kars**	**2.45**	**76**	*e*PN	**Pn**	**12 08 54.4**	**-0.5**
KARS	**Kars**	**2.45**	**76**	*e*Pn	**Pn**	**12 08 54.4**	**-0.5**
ERBA	**Erbaa**	**2.52**	**285**	P	**Pn**	**12 08 57.7**	**+1.8**
ERBA	**Erbaa**	**2.52**	**285**	⇓*i*P	**Pn**	**12 08 55.6**	**-0.3**
ERBA				*i* S	**Sg**	**12 09 33.3**	**-2.7**
ERBA	**Erbaa**	**2.52**	**285**	P	**Pn**	**12 08 57.7**	**+1.8**
TOKT	**Tokat**	**2.63**	**277**	*e*PN	**Pn**	**12 08 58.5**	**+1.1**
TOKT	**Tokat**	**2.63**	**277**	*e*Pn	**Pn**	**12 08 58.5**	**+1.2**
TOKA	**Tokat**	**2.68**	**277**	*i* P	**Pn**	**12 08 59.5**	**+1.4**
TOKA				*i* S	**Sg**	**12 09 35.7**	**-5.2**
TOKA	**Tokat**	**2.68**	**277**	*i* P	**Pn**	**12 08 59.5**	**+1.5**
URFA	**Urfa**	**2.77**	**199**	*e*PN	**Pn**	**12 08 58.6**	**-0.7**
URFA	**Urfa**	**2.77**	**199**	*e*Pn	**Pn**	**12 08 58.6**	**-0.7**
SARI	**SarD1z-Kayseri**	**2.88**	**242**	*e*PN	**Pg**	**12 09 06.5**	**-3.6**
SARI	**SarD1z-Kayseri**	**2.88**	**242**	*e*Pn	**Pg**	**12 09 06.5**	**-3.6**
ATAB	**Bozova**	**2.90**	**207**	⇑*i*P	**Pn**	**12 08 58.5**	**-2.6**
ATAB				*i* S	**Sg**	**12 09 41.3**	**-6.8**
ATAB	**Bozova**	**2.90**	**207**	*i* P	**Pn**	**12 08 58.5**	**-2.6**
ATAB				*i* S	**Sg**	**12 09 41.3**	**-6.7**
DYDN	**Diyadin**	**2.92**	**99**	⇓*i*P	**Pn**	**12 09 04.2**	**+2.9**
DYDN				*i* S	**Sg**	**12 09 50.6**	**+2.0**
DYDN	**Diyadin**	**2.92**	**99**	*i* P	**Pn**	**12 09 04.2**	**+2.8**
VANB	**Van**	**3.04**	**118**	*e*PN	**Pn**	**12 09 02.6**	**-0.4**
VANB	**Van**	**3.04**	**118**	*e*Pn	**Pn**	**12 09 02.6**	**-0.4**
TVAN	**Van**	**3.08**	**119**	*i* P	**Pn**	**12 09 06.6**	**+3.0**
TVAN				*i* S	**Sg**	**12 09 54.5**	**+0.5**
TVAN	**Van**	**3.08**	**119**	*i* P	**Pn**	**12 09 06.6**	**+3.0**
PINB	**Pinarbasi**	**3.08**	**244**	⇑*i*P	**Pn**	**12 09 02.9**	**-0.8**
PINB				*i* S	**Sg**	**12 09 46.2**	**-7.8**
PINB	**Pinarbasi**	**3.08**	**244**	*i* P	**Pn**	**12 09 02.8**	**-0.8**
KVT	**Kavak**	**3.15**	**290**	*e*PN	**Pn**	**12 09 05.0**	**+0.6**
KVT	**Kavak**	**3.15**	**290**	*e*Pn	**Pn**	**12 09 05.0**	**+0.5**
CLDR	**Caldiran**	**3.19**	**105**	*e*PN	**Pn**	**12 09 05.2**	**+0.1**
CLDR	**Caldiran**	**3.19**	**105**	*e*Pn	**Pn**	**12 09 05.2**	**+0.1**
GZT	**Gaziantep**	**3.29**	**215**	*i* P	**Pn**	**12 09 03.4**	**-3.1**
GZT				*i* S	**Sg**	**12 09 57.4**	**-3.1**
KMRS	**Kahramanmaras**	**3.50**	**224**	*e*PN	**Pn**	**12 09 10.0**	**+0.7**
KMRS	**Kahramanmaras**	**3.50**	**224**	*e*Pn	**Pn**	**12 09 10.0**	**+0.7**
SOC	**Sochi**	**3.52**	**357**	*d i*P	**Pn**	**12 09 09.2**	**-0.4**
SOC				*i*		12 09 51.5	
SOC				pmax	pmax		
	comp=Z,408nm,0.6s						
SOC				smax			
	comp=N,4μm,0.8s						
SOC				MLR	MLR		
	comp=E,748nm,9.0s						
SOC				MLR	MLR		
	comp=N,1μm,10.0s						
SOC				MLR	MLR		
	comp=Z,2μm,12.0s						
SOC	**Sochi**	**3.52**	**357**	*i* P	**Pn**	**12 09 09.2**	**-0.4**
	comp=Z,408nm,0.6s						
SOC				*i* S	**Sn**	**12 09 51.5**	**+0.2**
	comp=Z,2μm,12.0s						
YOZ	**Yozgat**	**3.60**	**265**	*e*PN	**Pn**	**12 09 12.4**	**+1.8**
YOZ	**Yozgat**	**3.60**	**265**	*e*Pn	**Pn**	**12 09 12.4**	**+1.8**
GAZ	**Gaziantep**	**3.60**	**218**	*e*PN	**Pn**	**12 09 11.1**	**+0.4**
GAZ	**Gaziantep**	**3.60**	**218**	*e*Pn	**Pn**	**12 09 11.1**	**+0.4**
GNI	**Garni**	**3.67**	**87**	Pn	**Pn**	**12 09 13.2**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=198,slow=14,SNR=8.3						
GNI				Pg	**Pg**	**12 09 21.3**	**-3.9**
	comp=Z,17nm,0.3s,baz=279,slow=5.2,SNR=28						
GNI				LR	LR	12 10 59.9	
	comp=Z,2μm,19.0s,baz=265,slow=44						
GNI	**Garni**	**3.67**	**87**	*e*Pn	**Pn**	**12 09 13.5**	**+1.9**
GNI	**Garni**	**3.67**	**87**	*ce*P	**Pn**	**12 09 15.5**	**+3.9**
GNI				pmax	pmax		
	comp=Z,28nm,0.7s						
GNI	**Garni**	**3.67**	**87**	*e*Pn	**Pn**	**12 09 13.5**	**+1.9**
GNI	**Garni**	**3.67**	**87**	P	**Pn**	**12 09 14.2**	**+2.6**
	SNR=80						
GNI	**Garni**	**3.67**	**87**	P	**Pn**	**12 09 14.2**	**+2.6**
	SNR=80						
GOR	**Gori**	**3.68**	**57**	P	**Pn**	**12 09 10.3**	**-1.5**
GOR				S	**Sg**	**12 10 08.3**	**-4.7**
HKR	**Hakkari**	**3.86**	**129**	*e*PN	**Pn**	**12 09 14.2**	**-0.1**
HKR	**Hakkari**	**3.86**	**129**	*e*Pn	**Pn**	**12 09 14.2**	**-0.1**
TBLG	**Delisi**	**3.99**	**64**	P	**Pb**	**12 09 24.2**	**-1.0**
TBLG	**Delisi**	**3.99**	**64**	P	**Pn**	**12 09 15.5**	**-0.5**
TBLG				S	**S

ALU	**Alushta**	**6.18 320**	*e*P	**Pn**	**12 09 45.1 -1.0**
IKL	**Isikli**	**6.25 234**	*e*PN	**Pn**	**12 09 48.8 +1.7**
IKL	**Isikli**	**6.25 234**	*e*Pn	**Pn**	**12 09 48.8 +1.7**
ROOS	**tl_alroos**	**6.26 201** ⇓	*i*P	**Pn**	**12 09 48.9 +1.6**
KIZT	**Kizilcal**	**6.36 262**	*e*PN	**Pn**	**12 09 50.9 +2.3**
KIZT	**Kizilcal**	**6.36 262**	*e*Pn	**Pn**	**12 09 50.9 +2.2**
ISRB	**Sarab**	**6.41 108**	*e*P	**Pn**	**12 09 51.7 +2.4**
ISRB	**Sarab**	**6.41 108**	*e*P	**Pn**	**12 09 51.7 +2.4**
SEV	**Sevastopol'**	**6.46 316**	*e*P	**Pn**	**12 09 49.6 -0.4**
SEV			*e*S	**Sn**	**12 11 04.5 +0.7**
SEV	**Sevastopol'**	**6.46 316**	*e*P	**Pn**	**12 09 49.6 -0.4**
SEV			*e*S	**Sn**	**12 11 04.5 +0.7**
SIM	**Simferopol'**	**6.51 320**	*e*P	**Pn**	**12 09 53.8 +3.1**
SIM			*e*S	**Sn**	**12 11 11.0 +5.9**
SIM			MLR	MLR	
	comp=Z,440nm,22.1s				
KDZE	**Karadeniz Ereo**	**6.59 284**	*e*PN	**Pn**	**12 09 54.5 +2.7**
KDZE	**Karadeniz Ereo**	**6.59 284**	*e*Pn	**Pn**	**12 09 54.5 +2.7**
HWQ	**Hawqa**	**6.60 210**	*e*P	**Pn**	**12 09 50.5 -1.5**
HWQ	**Hawqa**	**6.60 210**	*e*P	**Pn**	**12 09 50.5 -1.5**
MARH	**Ras Al Marh**	**6.64 206** ⇑	*i*P	**Pn**	**12 09 51.2 -1.2**
MDU	**Mudurnu**	**6.70 276**	*e*PN	**Pn**	**12 09 56.2 +2.9**
MDU	**Mudurnu**	**6.70 276**	*e*Pn	**Pn**	**12 09 56.2 +2.9**
LFK	**Lefkose**	**6.98 229**	*e*PN	**Pn**	**12 09 59.9 +2.7**
LFK	**Lefkose**	**6.98 229**	*e*Pn	**Pn**	**12 09 59.9 +2.7**
CSS	**Prodhromos**	**7.33 228**	*e*PN	**Pn**	**12 10 04.2 +2.3**
CSS	**Prodhromos**	**7.33 228**	*e*Pn	**Pn**	**12 10 04.2 +2.3**
CSS	**Prodhromos**	**7.33 228**	*e*Pn	**Pn**	**12 10 04.2 +2.3**
BRBR	**Barbar**	**7.38 207** ⇓	*i*P	**Pn**	**12 10 02.8 +0.2**
SUTC	**Sutluce-Ispart**	**7.46 253**	*e*PN	**Pn**	**12 10 05.9 +2.2**
SUTC	**Sutluce-Ispart**	**7.46 253**	*e*Pn	**Pn**	**12 10 05.9 +2.2**
BHD	**Baghdad**	**7.65 151**	*e*x	x	12 10 06.0
BHD			*e*x	x	12 10 41.0
BHD			*e*x	x	12 11 29.0
BHD			*e*x	x	12 12 18.0
KSDI	**Kefar Szold**	**7.68 208**	P	**Pn**	**12 10 08.4 +1.6**
KSDI	**Kefar Szold**	**7.68 208**	P	**Pn**	**12 10 08.4 +1.6**
CAVI	**Cavuskoy**	**7.75 274**	*e*PN	**Pn**	**12 10 10.0 +2.2**
CAVI	**Cavuskoy**	**7.75 274**	*e*Pn	**Pn**	**12 10 10.0 +2.3**
ADVT	**Abdulvahap**	**7.83 276**	*e*PN	**Pn**	**12 10 11.4 +2.6**
ADVT	**Abdulvahap**	**7.83 276**	*e*Pn	**Pn**	**12 10 11.4 +2.6**
MMAI	**Mount Meron Ar**	**7.93 209**	Pn	**Pn**	**12 10 10.1 -0.2**
	comp=Z,1.4nm,0.3s,baz=61,slow=15,SNR=6.1				
MMAI			LR	LR	12 13 24.1
	comp=Z,1μm,21.5s,baz=20,slow=39				
ASF	**Jabal al Asfar**	**8.26 198**	Pn	**Pn**	**12 10 14.4 -0.3**
	comp=Z,0.6nm,0.3s,baz=272,slow=6.7,SNR=22				
ASF			Lg		12 12 38.3
	comp=Z,0.4nm,0.3s,baz=209,slow=19,SNR=3.3				
ASF			LR	LR	12 13 22.0
	comp=Z,521nm,20.0s,baz=154,slow=37				
ASF	**Jabal al Asfar**	**8.26 198**	P	**Pn**	**12 10 14.4 -0.3**
ARMT	**Armutlu**	**8.49 277**	*e*PN	**Pn**	**12 10 19.2 +1.3**
ARMT	**Armutlu**	**8.49 277**	*e*Pn	**Pn**	**12 10 19.2 +1.3**
ELL	**Elmali**	**8.56 250**	*e*PN	**Pn**	**12 10 20.3 +1.5**
ELL	**Elmali**	**8.56 250**	*e*Pn	**Pn**	**12 10 20.3 +1.5**
TIRR	**Tirgusor**	**9.62 301**	*e*Pn	**Pn**	**12 10 32.7 -0.6**
TIRR	**Tirgusor**	**9.62 301** ⇑	P	**Pn**	**12 10 34.2 +0.9**
TIRR	**Tirgusor**	**9.62 301** ⇑	*i*P	**Pn**	**12 10 34.2 +0.9**
TIRR	**Tirgusor**	**9.62 301**	*e*Pn	**Pn**	**12 10 32.7 -0.6**
TIRR	**Tirgusor**	**9.62 301**	P	**Pn**	**12 10 34.2 +0.9**
TLCR		**9.67 306** ⇑	P	**Pn**	**12 10 33.8 -0.3**
TLCR		**9.67 306** ⇑	*i*P	**Pn**	**12 10 33.8 -0.3**
TLCR		**9.67 306**	P	**Pn**	**12 10 33.8 -0.3**
CFR	**Carcaliu**	**10.10 304** ⇓	P	**Pn**	**12 10 39.6 -0.3**
CFR	**Carcaliu**	**10.10 304** ⇓	*i*P	**Pn**	**12 10 39.6 -0.3**
CFR	**Carcaliu**	**10.10 304**	P	**Pn**	**12 10 39.6 -0.3**
KIS	**Kishinev**	**10.64 314**	*e*P	**Pn**	**12 10 45.0 -2.3**
KIS			*i*S	**Sn**	**12 12 44.0 -2.5**
KIS			LRM		12 17 32.0
	comp=Z,500nm,14.0s				
KIS	**Kishinev**	**10.64 314**	*e*P	**Pn**	**12 10 45.0 -2.3**
KIS			*i*S	**Sn**	**12 12 44.0 -2.5**
KIS			MLR	MLR	
	comp=Z,500nm,14.0s				
KIS			MLR	MLR	
	comp=N,400nm,15.0s				
KIS			MLR	MLR	
	comp=E,600nm,12.0s				
KIS			MLR	MLR	
	comp=Z,500nm,14.0s				
KIS	**Kishinev**	**10.64 314**	*e*P	**Pn**	**12 10 45.0 -2.3**
KIS			*i*S	**Sn**	**12 12 44.0 -2.5**
	comp=Z,500nm,14.0s				
VORD	**Divnogorie**	**10.91 358**	*e*P	**Pn**	**12 10 49.9 -1.1**
EIL	**Elat**	**11.15 203**	Pn	**Pn**	**12 10 54.6 +0.2**
	comp=Z,0.4nm,0.3s,baz=69,slow=14,SNR=2.7				
EIL			Lg		12 14 10.2
	comp=Z,0.5nm,0.3s,baz=0.0,slow=17,SNR=2.0				
EIL			LR	LR	12 15 37.9
	comp=Z,1μm,19.5s,baz=12,slow=40				
EIL	**Elat**	**11.15 203**	Pn	**Pn**	**12 10 54.6 +0.2**
VSR	**Storozhevoye**	**11.17 357**	*e*P	**Pn**	**12 10 53.0 -1.4**
VRI	**Vrincioaia**	**11.29 305**	P	**Pn**	**12 10 58.8 +2.6**
VRI	**Vrincioaia**	**11.29 305**	P	**Pn**	**12 10 58.8 +2.6**
VRI	**Vrincioaia**	**11.29 305** ⇑	*i*P	**Pn**	**12 10 55.3 -0.9**
VRI	**Vrincioaia**	**11.29 305** ⇑	*i*P	**Pn**	**12 10 55.3 -0.9**
PLOR	**Plostina**	**11.33 305** ⇑	P	**Pn**	**12 10 58.0 +1.3**
PLOR	**Plostina**	**11.33 305** ⇑	*i*P	**Pn**	**12 10 58.0 +1.3**
PLOR	**Plostina**	**11.33 305**	P	**Pn**	**12 10 58.0 +1.3**
MLR	**Muntele Rosu**	**11.63 302**	P	**Pn**	**12 11 03.6 +2.7**
MLR	**Muntele Rosu**	**11.63 302** ⇑	P	**Pn**	**12 11 02.5 +1.6**
MLR	**Muntele Rosu**	**11.63 302** ⇑	*i*P	**Pn**	**12 11 02.5 +1.6**
MLR	**Muntele Rosu**	**11.63 302**	P	**Pn**	**12 11 02.5 +1.6**
TESR		**11.64 308** ⇓	*i*P	**Pn**	**12 11 00.9 0.0**
TESR		**11.64 308** ⇓	*i*P	**Pn**	**12 11 00.9 0.0**
VOR	**Voronezh**	**11.68 358**	P	**Pn**	**12 11 03.0 +1.5**
VOR			pmax	pmax	
	comp=Z,240nm,1.0s				
VOR	**Voronezh**	**11.68 358**	P	**Pn**	**12 11 03.0 +1.5**
	comp=Z,240nm,1.0s				
MIB	**Mutribah**	**11.89 147**	*e*P	**Pn**	**12 11 00.5 -3.9**
MIB			AMb	AMB	12 11 08.2
	comp=Z,146nm,1.7s				
VOIR		**12.20 301** ⇑	P	**Pn**	**12 11 09.7 +1.1**
VOIR		**12.20 301** ⇑	*i*P	**Pn**	**12 11 09.7 +1.1**
VOIR		**12.20 301**	P	**Pn**	**12 11 09.7 +1.1**
NAY	**Al-Naaiem**	**12.34 149**	*e*P	**Pn**	**12 11 06.8 -3.8**
NAY			AMb	AMB	12 11 13.8
	comp=Z,39nm,1.5s				
RDF	**Al-Radifah**	**12.75 148**	*e*P	**Pn**	**12 11 12.5 -3.7**
RDF			AMb	AMB	12 11 18.5
	comp=Z,78nm,1.1s				
VTS	**Vitosha**	**12.84 287** ⇑	P	**Pn**	**12 11 20.6 +3.2**
VTS	**Vitosha**	**12.84 287** ⇑	*i*P	**Pn**	**12 11 20.5 +3.1**
KMPD	**K-Podol'skiy**	**12.85 316**	P	**Pn**	**12 11 16.0 -1.5**
KMPD	**K-Podol'skiy**	**12.85 316**	P	**Pn**	**12 11 16.0 -1.5**
KMPD	**K-Podol'skiy**	**12.85 316**	P	**Pn**	**12 11 16.0 -1.5**
AKASG	**Malin Array Be**	**13.02 328**	Pn	**Pn**	**12 11 17.4 -2.4**
	comp=Z,4.0nm,0.3s,baz=134,slow=12,SNR=21				
AKASG			Sn	**Sn**	**12 13 36.2 -8.4**
	comp=Z,1.5nm,0.3s,baz=136,slow=24,SNR=8.8				
AKASG	**Malin Array Be**	**13.02 328**	Pn	**Pn**	**12 11 17.4 -2.4**
AKASG			Sn	**Sn**	**12 13 36.2 -8.4**
AKASG	**Malin Array Be**	**13.02 328**	P	**Pn**	**12 11 17.5 -2.3**
AKASG					12 13 36.3
AKASG	**Malin Array Be**	**13.02 328**	P	**Pn**	**12 11 17.5 -2.3**
KIEV	**Kiev**	**13.03 328**	*e*Pn	**Pn**	**12 11 17.9 -2.0**
	comp=Z,69nm,0.8s				
KIEV	**Kiev**	**13.03 328**	*e*P	**Pn**	**12 11 17.9 -1.9**
KIEV			pmax	pmax	
	comp=Z,69nm,0.8s				
KIEV	**Kiev**	**13.03 328**	*e*P	**Pn**	**12 11 17.9 -1.9**
	comp=Z,69nm,0.8s				
BURAR	**Bucovina Array**	**13.03 310** ⇑	*i*P	**Pn**	**12 11 19.0 -1.0**
BURAR	**Bucovina Array**	**13.03 310** ⇑	*i*P	**Pn**	**12 11 19.0 -1.0**
BUR08	**Bucovina Ar. S**	**13.06 310**	*e*Pn	**Pn**	**12 11 19.2 -1.1**
BUR08			*e*Sn	**Sn**	**12 13 53.0 +7.5**
BUR08	**Bucovina Ar. S**	**13.06 310**	*e*Pn	**Pn**	**12 11 19.2 -1.1**
GZR	**Gura Zlata**	**13.70 298**	P	**Pn**	**12 11 31.6 +2.5**
GZR	**Gura Zlata**	**13.70 298** ⇑	*i*P	**Pn**	**12 11 31.4 +2.3**
GZR	**Gura Zlata**	**13.70 298** ⇑	*i*P	**Pn**	**12 11 31.4 +2.3**
DRGR		**14.21 304** ⇓	*i*P	**Pn**	**12 11 36.0 0.0**
BZS	**Buzias**	**14.54 298** ⇑	*i*P	**Pn**	**12 11 46.2 +5.6**
BZS	**Buzias**	**14.54 298** ⇑	*i*P	**Pn**	**12 11 46.2 +5.6**
IMEH	**Mehriz**	**14.70 122**	*e*P	**Pn**	**12 11 46.6 +3.8**
IMEH	**Mehriz**	**14.70 122**	*e*P	**Pn**	**12 11 46.6 +3.8**
IPAR	**Pars**	**14.79 130**	*e*P	**Pn**	**12 11 41.8 -2.2**
IPAR	**Pars**	**14.79 130**	*e*P	**Pn**	**12 11 41.8 -2.2**
TRPA	**Tarpa**	**14.87 309** ⇓	*e*P	**Pn**	**12 11 50.9 +5.9**
LVV	**L'vov**	**14.88 316**	*e*P	**Pn**	**12 11 44.8 -0.4**
LVV	**L'vov**	**14.88 316**	*e*P	**Pn**	**12 11 44.8 -0.4**
ISRV	**Sarvestan**	**15.17 131**	*e*P	**Pn**	**12 11 46.4 -2.7**
ISRV	**Sarvestan**	**15.17 131**	*e*P	**Pn**	**12 11 46.4 -2.7**
OBN	**Obninsk**	**15.23 353**	*e*Pn	**Pn**	**12 11 47.6 -2.2**
OBN			*e*Sn	**Sn**	**12 14 21.4 -17**
OBN	**Obninsk**	**15.23 353**	*d*i P	**Pn**	**12 11 47.4 -2.4**
OBN			*i*S	**Sn**	**12 14 28.6 -10**
OBN			pmax	pmax	
	comp=Z,58nm,1.2s				
OBN			MLR	MLR	
	comp=Z,500nm,19.0s				
OBN	**Obninsk**	**15.23 353**	*e*Pn	**Pn**	**12 11 47.6 -2.2**
UZH	**Uzhgorod**	**15.24 310**	*e*P	**Pn**	**12 11 46.4 -3.6**
UZH			*e*S	**Sn**	**12 14 33.0 -5.7**
KOLS	**Kolonicke sedl**	**15.39 311**	*e*P	**Pn**	**12 11 50.8 -1.2**
	comp=Z,20nm,1.0s				
KOLS			*e*		12 11 58.0
KOLS	**Kolonicke sedl**	**15.39 311**	*e*P	**Pn**	**12 11 50.8 -1.2**
KOLS			pmax	pmax	
	comp=Z,20nm,1.0s				
KOLS	**Kolonicke sedl**	**15.39 311**	*e*PN	**Pn**	**12 11 50.8 -1.2**
KOLS	**Kolonicke sedl**	**15.39 311**	*e*P	**Pn**	**12 11 58.0 +6.0**
KWP	**Kalwaria Pacla**	**15.50 314**	*e*Pn	**Pn**	**12 11 52.3 -1.0**
KWP	**Kalwaria Pacla**	**15.50 314**	*e*P	**Pn**	**12 11 52.3 -1.0**
KWP	**Kalwaria Pacla**	**15.50 314**	*e*Pn	**Pn**	**12 11 52.3 -1.0**
MOS	**Moscow**	**15.76 355**	*e*P	**Pn**	**12 11 52.9 -3.8**
MOS			*e*S	**Sn**	**12 14 42.2 -9.1**
MOS			pmax	pmax	
	comp=Z,46nm,0.9s				
ISRO	**Mashad**	**15.79 98**	*e*P	**Pn**	**12 11 59.6 +2.3**
ISRO	**Mashad**	**15.79 98**	*e*P	**Pn**	**12 11 59.6 +2.3**
CRVS	**Cervenica-Dubn**	**15.85 310**	*e*P	**Pn**	**12 11 57.1 -0.9**
	comp=Z,23nm,1.4s				
CRVS			*e*		12 12 02.7
CRVS	**Cervenica-Dubn**	**15.85 310**	*e*P	**Pn**	**12 11 57.1 -0.9**
CRVS			pmax	pmax	
	comp=Z,23nm,1.4s				
CRVS	**Cervenica-Dubn**	**15.85 310**	*e*PN	**Pn**	**12 11 57.1 -0.9**
CRVS	**Cervenica-Dubn**	**15.85 310**	*e*P	**Pn**	**12 12 02.7 +4.7**
KECS	**Kecovo**	**16.26 308**	*e*P	**Pn**	**12 12 01.7 -1.5**
	comp=Z,3.8nm,1.1s				
KECS			*e*		12 12 06.9
KECS	**Kecovo**	**16.26 308**	*e*P	**Pn**	**12 12 01.7 -1.5**
KECS			pmax	pmax	
	comp=Z,4.0nm,1.1s				
KECS	**Kecovo**	**16.26 308**	*e*PN	**Pn**	**12 12 01.7 -1.5**
KECS	**Kecovo**	**16.26 308**	*e*P	**Pn**	**12 12 06.9 +3.7**
AKTK	**Aktyubinsk**	**16.36 45**	Pn	**Pn**	**12 12 02.5 -2.0**
AKTK			LR	LR	12 19 58.9
AKTK	**Aktyubinsk**	**16.36 45**	Pn	**Pn**	**12 12 02.5 -2.0**
AKTO	**Aktyubinsk**	**16.36 45**	Pn	**Pn**	**12 12 02.5 -2.0**
	comp=Z,0.4nm,0.3s,baz=242,slow=12,SNR=14				
AKTO			LR	LR	12 19 58.9
	comp=Z,263nm,20.7s,baz=252,slow=43				
AKTO	**Aktyubinsk**	**16.36 45**	P	**Pn**	**12 12 02.5 -2.0**
AKTO			MLR	MLR	
	comp=Z,263nm,20.7s				
PSZ	**Piszkesteto**	**16.40 305**	*e*Pn	**Pn**	**12 12 04.1 -1.0**
	comp=Z,15nm,0.9s				
PSZ	**Piszkesteto**	**16.40 305** ⇑	P	**Pn**	**12 12 04.7 -0.4**
PSZ	**Piszkesteto**	**16.40 305** ⇑	*i*P	**Pn**	**12 12 04.7 -0.4**
PSZ	**Piszkesteto**	**16.40 305**	*e*P	**Pn**	**12 12 04.9 -0.2**
PSZ	**Piszkesteto**	**16.40 305**	*e*Pn	**Pn**	**12 12 04.1 -1.0**
	comp=Z,15nm,0.9s				
MICGM	**Minsk**	**16.57 335** ⇑	*e*P	**Pn**	**12 12 02.0 -5.1**
MNK	**Minsk**	**16.58 335** ⇑	*e*P	**Pn**	**12 12 02.0 -5.3**
MNK			pmax	pmax	
	comp=Z,180nm,1.0s				
PKSM	**Moragy**	**16.71 299**	P	**Pn**	**12 12 12.5 +3.6**
PKSM	**Moragy**	**16.71 299** ⇑	P	**Pn**	**12 12 10.4 +1.5**
PKSM	**Moragy**	**16.71 299** ⇑	*i*P	**Pn**	**12 12 10.4 +1.5**
PKSM	**Moragy**	**16.71 299**	*e*P	**Pn**	**12 12 09.5 +0.6**
NIE	**Niedzica**	**16.76 310**	*e*P	**Pn**	**12 12 09.8 +0.3**
NIE			e		12 12 13.4
NIE	**Niedzica**	**16.76 310**	P	**Pn**	**12 12 11.9 +2.4**
NIE	**Niedzica**	**16.76 310**	*e*P	**Pn**	**12 12 09.8 +0.3**
NIE	**Niedzica**	**16.76 310**	*e*P	**Pn**	**12 12 09.8 +0.3**
AB31	**Akbulak array**	**16.89 50**	*i* P	**Pn**	**12 12 08.9 -2.3**
AB31			pmax	pmax	
	comp=Z,8.0nm,0.6s				
ABKAR	**Akbulak array**	**16.89 50**	*e*Pn	**Pn**	**12 12 09.3 -1.9**
ABKAR	**Akbulak array**	**16.89 50**	*e*Pn	**Pn**	**12 12 09.3 -1.9**
NACGM	**Naroch**	**17.26 334**	*e*P	**Pn**	**12 12 10.0 -5.8**
VYHS	**Vyhne**	**17.27 306**	*e*P	**Pn**	**12 12 11.9 -4.1**
	comp=Z,19nm,1.4s				
VYHS	**Vyhne**	**17.27 306**	*e*P	**Pn**	**12 12 11.9 -4.1**
VYHS			pmax	pmax	
	comp=Z,19nm,1.4s				
VYHS	**Vyhne**	**17.27 306**	*e*PN	**Pn**	**12 12 11.9 -4.1**
VYHS	**Vyhne**	**17.27 306**	*e*P	**Pn**	**12 12 16.7 +0.7**
SRO	**Srobarova**	**17.37 304**	*e*P	**Pn**	**12 11 59.6 -18**
OJC	**Ojcow**	**17.42 312**	*e*P	**Pn**	**12 12 16.2 -1.6**
OJC			*e*S	**Sn**	**12 15 28.4 -3.2**
OJC			L		12 23 31.2
	comp=Z,0.4nm,14.4s				
OJC	**Ojcow**	**17.42 312**	P	**Pn**	**12 12 19.7 +1.9**
OJC	**Ojcow**	**17.42 312**	*e*P	**Pn**	**12 12 16.2 -1.6**
OJC			*e*S	**Sn**	**12 15 28.4 -3.2**
OJC	**Ojcow**	**17.42 312**	P	**Pn**	**12 12 19.7 +1.9**
IDID	**Didziasalis**	**17.61 334**	*e*P	**Pn**	**12 12 19.1 -1.1**
IDID	**Didziasalis**	**17.61 334**	*e*P	**Pn**	**12 12 19.1 -1.1**
	SNR=33				
IIGN	**Ignalina**	**17.82 334**	*e*P	**Pn**	**12 12 21.5 -1.2**
IIGN			AMB	AMB	12 12 26.8
	comp=Z,11nm,1.1s				
IIGN	**Ignalina**	**17.82 334**	*e*P	**Pn**	**12 12 21.5 -1.2**
	comp=Z,11nm,1.1s,SNR=33				
SUW	**Suwalki**	**17.97 326**	*e*P	**Pn**	**12 12 23.1 -1.6**
SUW			LMZ		12 20 30.9
	comp=Z,300nm,23.8s				
SUW	**Suwalki**	**17.97 326**	*e*Pn	**Pn**	**12 12 23.4 -1.2**
	comp=Z,66nm,0.8s				
SUW	**Suwalki**	**17.97 326**	*e*P	**Pn**	**12 12 23.4 -1.2**
SUW			pmax	pmax	
	comp=Z,66nm,0.8s				
SUW	**Suwalki**	**17.97 326**	*e*P	**Pn**	**12 12 23.1 -1.5**
SUW	**Suwalki**	**17.97 326**	*e*Pn	**Pn**	**12 12 23.4 -1.2**
	comp=Z,66nm,0.8s				
ISAL	**Salakas**	**18.03 334**	*e*P	**Pn**	**12 12 22.2 -3.0**
ISAL			AMB	AMB	12 12 24.1
	comp=Z,9.6nm,1.8s				
JAVC	**Velka Javorina**	**18.12 306**	P	**Pn**	**12 12 28.5 +1.9**
JAVC	**Velka Javorina**	**18.12 306**	P	**Pn**	**12 12 28.5 +1.9**
JAVC	**Velka Javorina**	**18.12 306**	P	**Pn**	**12 12 28.5 +1.9**
IZAR	**Zarasai**	**18.13 334**	*e*P	**Pn**	**12 12 24.7 -1.9**
IZAR			AMB	AMB	12 12 25.3
	comp=Z,17nm,1.4s				
IZAR	**Zarasai**	**18.13 334**	*e*P	**Pn**	**12 12 24.7 -1.9**
	comp=Z,17nm,1.4s,SNR=28				
OKC	**Ostrava-Krasne**	**18.21 310**	*e*P	**Pn**	**12 12 27.8 +0.2**
OKC			MLR	MLR	
	comp=Z,400nm,13.1s				
OKC	**Ostrava-Krasne**	**18.21 310**	*e*P	**Pn**	**12 12 27.8 +0.2**
OKC			AMS	AMS	12 21 40.0
	comp=Z,400nm,13.1s				
OKC	**Ostrava-Krasne**	**18.21 310**	*e*P	**Pn**	**12 12 27.8 +0.2**
	comp=Z,400nm,13.1s				
SOP	**Sopron**	**18.46 302**	P	**Pn**	**12 12 32.0 +1.3**
SOP	**Sopron**	**18.46 302**	P	**Pn**	**12 12 32.0 +1.3**
SOP	**Sopron**	**18.46 302** ⇓	*e*P	**Pn**	**12 12 30.8 +0.1**
SOP	**Sopron**	**18.46 302** ⇓	*e*P	**Pn**	**12 12 30.8 +0.1**
CUC	**Castrocucco**	**18.48 278**	*e*Pn	**Pn**	**12 12 32.1 +1.1**
	comp=Z,20nm,0.9s				
CUC	**Castrocucco**	**18.48 278**	*e*Pn	**Pn**	**12 12 32.1 +1.1**
	comp=Z,20nm,0.9s				
MORC	**Moravsky Berou**	**18.55 309**	*e*P	**Pn**	**12 12 30.9 -0.8**
	comp=Z,7.8nm,1.0s				
MORC	**Moravsky Berou**	**18.55 309**	*e*P	**Pn**	**12 12 30.9 -0.8**
MORC			pmax	pmax	
	comp=Z,8.0nm,1.0s				
MORC	**Moravsky Berou**	**18.55 309**	*e*P	**Pn**	**12 12 30.8 -0.9**
VRAC	**Vranov**	**18.95 307**	P	**Pn**	**12 12 34.9 -1.7**
	comp=Z,0.4nm,0.3s,baz=354,slow=16,SNR=5.3				
VRAC			LR	LR	12 21 44.3
	comp=Z,233nm,18.7s,baz=112,slow=43				
VRAC	**Vranov**	**18.95 307**	P	**Pn**	**12 12 34.9 -1.6**
VRAC	**Vranov**	**18.95 307**	P	**Pn**	**12 12 34.9 -1.6**
CONA	**Conrad Observa**	**18.98 302** ⇓	*i*P	**Pn**	**12 12 37.1 +0.1**
	comp=Z,34nm,1.2s,SNR=22				
CONA	**Conrad Observa**	**18.98 302**	P	**Pn**	**12 12 37.1 +0.1**
	comp=Z,34nm,1.2s,SNR=22				
KRUC	**Moravsky**	**18.98 306**	P	**Pn**	**12 12 37.7 +0.7**
KRUC	**Moravsky**	**18.98 306**	P	**Pn**	**12 12 37.7 +0.7**
KRUC	**Moravsky**	**18.98 306**	P	**Pn**	**12 12 37.7 +0.7**
SOKA	**Soboth**	**19.24 298** ⇑	*i*P	**Pn**	**12 12 40.0 -0.2**
	comp=Z,9.7nm,1.1s				
SOKA	**Soboth**	**19.24 298**	P	**Pn**	**12 12 40.0 -0.1**
	comp=Z,9.7nm,1.1s				
SGG	**Gregorio Mates**	**19.42 282**	P	**Pn**	**12 12 42.7 +0.4**
SGG	**Gregorio Mates**	**19.42 282**	P	**Pn**	**12 12 42.7 +0.4**
DPC	**Dobruska-Polom**	**19.49 310**	*e*Pn	**Pn**	**12 12 42.2 -0.9**
	comp=Z,85nm,2.0s				
DPC	**Dobruska-Polom**	**19.49 310**	*e*P	**Pn**	**12 12 42.2 -0.9**
DPC			pmax	pmax	
	comp=Z,85nm,2.0s				
DPC	**Dobruska-Polom**	**19.49 310**	*e*P	**Pn**	**12 12 42.4 -0.7**
DPC			*e*S	**Sn**	**12 16 28.5 +6.8**
DPC			AMS	AMS	12 23 50.0
DPC	**Dobruska-Polom**	**19.49 310**	*e*P	**Pn**	**12 12 42.2 -0.9**
	comp=Z,85nm,2.0s				
TREC	**Trest**	**19.62 306**	*e*P	**Pn**	**12 12 44.9 +0.2**
TREC			MLR	MLR	
	comp=Z,400nm,11.2s				
TREC	**Trest**	**19.62 306**	*e*P	**Pn**	**12 12 44.9 +0.2**
TREC			*e*S	**Sn**	**12 16 31.8 +6.9**
TREC			AMS	AMS	12 24 10.0
	comp=Z,400nm,11.2s				
TREC	**Trest**	**19.62 306**	*e*P	**Pn**	**12 12 44.9 +0.2**
	comp=Z,400nm,11.2s				
KSP	**Ksiaz**	**19.70 311**	*e*P	**Pn**	**12 12 45.0 -0.7**
KSP			LMZ		12 24 49.5
	comp=Z,500nm,14.9s				
KSP	**Ksiaz**	**19.70 311**	P	**Pn**	**12 12 46.9 +1.3**
KSP	**Ksiaz**	**19.70 311**	P	**Pn**	**12 12 46.9 +1.3**
KSP	**Ksiaz**	**19.70 311**	*e*P	**Pn**	**12 12 44.3 -1.3**
UPC	**Upice**	**19.74 310**	*e*P	**Pn**	**12 12 46.3 +0.3**
UPC	**Upice**	**19.74 310**	*e*P	**Pn**	**12 12 46.3 +0.3**
UPC	**Upice**	**19.74 310**	*e*P	**Pn**	**12 12 46.3 +0.3**
SDI	**San Donato**	**19.82 283**	P	**Pn**	**12 12 46.4 -0.7**
SDI	**San Donato**	**19.82 283**	P	**Pn**	**12 12 46.4 -0.7**
SDI	**San Donato**	**19.82 283**	P	**Pn**	**12 12 46.4 -0.7**
VVLD	**Villa Vallelon**	**19.95 284**	P	**Pn**	**12 12 48.0 -0.6**
VVLD	**Villa Vallelon**	**19.95 284**	P	**Pn**	**12 12 48.0 -0.6**
MOA	**Molln**	**20.00 301**	P	**P**	**12 12 48.5 +1.0**
MOA	**Molln**	**20.00 301** ⇑	*i*P	**P**	**12 12 48.2 +0.8**
	comp=Z,26nm,1.1s,SNR=9.2				
MOA	**Molln**	**20.00 301**	P	**P**	**12 12 48.2 +0.7**
	comp=Z,26nm,1.1s,SNR=9.2				
AQU	**L'Aquila**	**20.09 285**	*e*Pn	**P**	**12 12 49.9 +1.5**
	comp=Z,105nm,0.9s				
AQU	**L'Aquila**	**20.09 285** ⇑	P	**P**	**12 12 49.8 +1.4**
AQU	**L'Aquila**	**20.09 285** ⇑	*i*P	**P**	**12 12 49.8 +1.4**
AQU	**L'Aquila**	**20.09 285**	*e*Pn	**P**	**12 12 49.9 +1.5**
	comp=Z,105nm,0.9s				
CING	**Cingoli**	**20.22 288**	P	**P**	**12 12 50.8 +0.9**
CING	**Cingoli**	**20.22 288**	P	**P**	**12 12 50.8 +0.9**
VSU	**Vasula**	**20.27 340**	*i* P	**P**	**12 12 51.6 +1.4**
VSU			pmax	pmax	
	comp=Z,40nm,0.8s				
VSU	**Vasula**	**20.27 340**	*i* P	**P**	**12 12 51.6 +1.4**
	comp=Z,40nm,0.8s				
NRCA	**Norcia**	**20.28 287**	P	**P**	**12 12 51.7 +1.1**
NRCA	**Norcia**	**20.28 287**	P	**P**	**12 12 51.7 +1.1**
FDMO	**Fiordimonte**	**20.30 287**	P	**P**	**12 12 51.7 +1.0**
FDMO	**Fiordimonte**	**20.30 287**	P	**P**	**12 12 51.7 +1.0**
GKP	**Gorka Klasztor**	**20.

WET Wettzell 21.22 304 *e*P **P 12 13 00.0 -0.6**
comp=Z,32nm,1.2s,mb4.5
WET Wettzell 21.22 304 *e*P **P 12 13 00.0 -0.6**
WET pmax pmax
comp=Z,32nm,1.2s,mb4.5
WET Wettzell 21.22 304 *e*P **P 12 13 00.0 -0.6**
comp=Z,32nm,1.2s,mb4.5
LATE Laterza 21.25 286 P **P 12 13 02.3 +1.2**
LATE Laterza 21.25 286 P **P 12 13 02.3 +1.2**
VMG Vicchio 21.42 290 P **P 12 13 05.2 +2.3**
VMG Vicchio 21.42 290 P **P 12 13 05.2 +2.3**
FBE Freiberg 21.46 309 *e*P **P 12 13 03.2 0.0**
comp=Z,40nm,1.2s,mb4.6
CTI Castel Tesino 21.47 296 P **P 12 13 03.1 -0.2**
CTI Castel Tesino 21.47 296 P **P 12 13 03.1 -0.2**
CTI Castel Tesino 21.47 296 P **P 12 13 03.1 -0.2**
SVE Sverdlovsk 21.52 32⇑ *e*P **P 12 13 03.5 -0.3**
SVE *e*S **S 12 17 03.9 +1.7**
SVE pmax pmax
comp=Z,59nm,1.0s,mb5.0
SVE MLR MLR
comp=Z,698nm,16.0s,MS4.2
SVE Sverdlovsk 21.52 32 *e*P **P 12 13 03.5 -0.3**
comp=Z,59nm,1.0s,mb5.0
SVE *e*S **S 12 17 03.9 +1.7**
comp=Z,698nm,16.0s
WTTA Wattenberg 21.64 299⇑ *i*P **P 12 13 05.6 +0.4**
comp=Z,60nm,1.5s,mb4.8,SNR=11
WTTA Wattenberg 21.64 299 P **P 12 13 05.6 +0.5**
comp=Z,60nm,1.5s,mb4.8,SNR=11
FNVD Fontana Vidola 21.73 290 P **P 12 13 08.6 +2.5**
FNVD Fontana Vidola 21.73 290 P **P 12 13 08.6 +2.5**
NKC Novy Kostel 21.79 307 P **P 12 13 07.4 +0.7**
NKC Novy Kostel 21.79 307 *e*P **P 12 13 06.8 +0.1**
NKC Novy Kostel 21.79 307 *e*P **P 12 13 06.8 +0.1**
NKC *e*S **S 12 17 17.3 +10**
NKC Novy Kostel 21.79 307 *e*P **P 12 13 06.8 +0.1**
CLL Collm 21.80 310 *e*P **P 12 13 06.4 -0.5**
comp=Z,36nm,1.3s,mb4.6
CLL Collm 21.80 310⇑ *i*P **P 12 13 06.9 0.0**
comp=Z,36nm,1.3s,mb4.6
CLL *e* 12 13 16.0
CLL *e*S **S 12 17 11.0 +3.3**
CLL Collm 21.80 310⇑ *i*P **P 12 13 06.9 0.0**
CLL *e* 12 13 16.0
CLL *e*S **S 12 17 11.0 +3.3**
CLL pmax pmax
comp=Z,36nm,1.3s,mb4.6
CLL Collm 21.80 310⇑ *i*P **P 12 13 06.9 0.0**
comp=Z,36nm,1.3s,mb4.6
CLL *e* 12 13 16.0
CLL *e*PP 12 13 26.0
CLL *e* 12 13 43.0
CLL *e*S **S 12 17 11.0 +3.3**
CLL Collm 21.80 310 *i* P **P 12 13 06.9 0.0**
comp=Z,36nm,1.3s,mb4.6
ROTZ Rotzenmuhle 21.80 306 *e*P **P 12 13 06.9 0.0**
comp=Z,33nm,1.3s,mb4.6
RUE Ruedersdorf 21.80 313 *e*P **P 12 13 05.8 -1.1**
comp=Z,30nm,0.6s,mb4.9
RUE Ruedersdorf 21.80 313 *e*P **P 12 13 05.8 -1.1**
comp=Z,30nm,0.6s,mb4.9
TANN Tannenbergstha 21.83 307 *e*P **P 12 13 07.0 -0.2**
comp=Z,41nm,1.5s,mb4.6
WERN Wernitzgruen 21.85 307 *e*P **P 12 13 07.5 +0.1**
comp=Z,71nm,1.4s,mb4.9
PRGR Permogore 21.88 7⇑ *i*P **P 12 13 04.9 -2.7**
PRGR *e*S **S 12 17 06.3 -2.7**
PRGR pmax pmax
comp=Z,21nm,0.5s,mb4.8
PRGR Permogore 21.88 7 *i* P **P 12 13 04.9 -2.7**
comp=Z,21nm,0.5s,mb4.8
GUNZ Gunzen 21.90 307 *e*P **P 12 13 07.8 -0.1**
comp=Z,49nm,1.5s,mb4.7
WERD Werda 21.94 307 *e*P **P 12 13 07.7 -0.7**
comp=Z,17nm,1.3s,mb4.3
MOTA Moosalm 22.01 299 P **P 12 13 08.7 -0.4**
MOTA Moosalm 22.01 299 P **P 12 13 08.7 -0.4**
MOTA Moosalm 22.01 299⇓ *i*pP pP 12 13 08.5 -3.4
comp=Z,27nm,0.9s,SNR=9.0
MOTA Moosalm 22.01 299 P **P 12 13 08.5 -0.6**
comp=Z,27nm,0.9s,mb4.7,SNR=9.0
PLN Plauen 22.04 307 *e*P **P 12 13 09.0 -0.4**
FETA Feichten 22.21 298⇓ *i*P **P 12 13 11.0 -0.3**
comp=Z,21nm,1.0s,mb4.5,SNR=8.9
FETA Feichten 22.21 298 P **P 12 13 11.0 -0.3**
comp=Z,21nm,1.0s,mb4.5,SNR=8.9
SOKR Solikamsk 22.22 23 *d i*P **P 12 13 14.4 +3.2**
SOKR S **S 12 17 13.0 -2.7**
SOKR pmax pmax
comp=Z,90nm,1.3s,mb5.0
SOKR MLR MLR
comp=Z,390nm,24.0s,MS3.8
VLC Villacollemand 22.26 290 P **P 12 13 18.5 +6.7**
comp=Z,26nm,1.0s,mb4.6
GRA1 Grafenberg Arr 22.40 305 *e*P **P 12 13 13.4 +0.1**
comp=Z,137nm,1.2s,mb5.3
GRA1 Grafenberg Arr 22.40 305 *e*P **P 12 13 13.4 +0.1**
comp=Z,137nm,1.2s,mb5.3
GRF Grafenberg Arr 22.40 305 *e*P **P 12 13 13.4 +0.1**
comp=Z,137nm,1.2s,mb5.3
GRF Grafenberg Arr 22.40 305 *e*P **P 12 13 13.4 +0.1**
GRF pmax pmax
comp=Z,137nm,1.2s,mb5.3
GRF Grafenberg Arr 22.40 305 *e*P **P 12 13 13.4 +0.1**
comp=Z,137nm,1.2s,mb5.3
GRF Grafenberg Arr 22.40 305 *e*P **P 12 13 13.4 +0.1**
comp=Z,137nm,1.2s,mb5.3
GRFO Grafenberg 22.40 305 *e*P **P 12 13 13.4 +0.1**
comp=Z,109nm,1.3s,mb5.1
GRFO Grafenberg 22.40 305 *e*P **P 12 13 13.4 +0.1**
GRFO pmax pmax
comp=Z,109nm,1.3s,mb5.1
GRFO Grafenberg 22.40 305 *e*P **P 12 13 13.4 +0.1**
comp=Z,109nm,1.3s,mb5.1
MOX Moxa 22.42 308 *e*(P) **P 12 13 13.1 -0.4**
MOX *e*S **S 12 17 30.0 +10**
MOX
comp=Z,200nm,18.0s
MOX Moxa 22.42 308 P **P 12 13 13.1 -0.4**
MOX MLR MLR
comp=Z,200nm,18.0s,MS3.6
MOX Moxa 22.42 308 P **P 12 13 13.1 -0.4**
comp=Z,200nm,18.0s
FUORN Ofenpass-Fuorn 22.48 297 *e*P **P 12 13 13.0 -1.2**
comp=Z,21nm,1.0s,mb4.5
FUORN Ofenpass-Fuorn 22.48 297 *e*P **P 12 13 13.0 -1.2**
comp=Z,21nm,1.0s,mb4.5
BSY Bisya 22.62 135 P **P 12 13 18.3 +2.5**
SNR=16
BSYO Bisya 22.65 135 P **P 12 13 18.3 +2.2**
SNR=16
DAVOX Davos/Dischmat 22.76 297 P **P 12 13 17.3 +0.1**
comp=Z,3.5nm,0.6s,mb3.9,baz=108,slow=12,SNR=4.6
DAVOX Davos/Dischmat 22.76 297 P **P 12 13 17.3 +0.1**
DAVOX Davos/Dischmat 22.76 297 P **P 12 13 17.3 +0.1**
DAVA Damuels 22.82 298 P **P 12 13 17.1 -0.7**
DAVA Damuels 22.82 298⇓ *i*pP pP 12 13 16.8 -3.9
comp=Z,33nm,1.2s,SNR=5.8
DAVA Damuels 22.82 298 P **P 12 13 16.8 -1.0**
comp=Z,33nm,1.2s,mb4.6,SNR=5.8
SMDO Samad 22.84 133 P **P 12 13 20.5 +2.3**
SNR=12
SMDO Samad 22.84 133 P **P 12 13 20.5 +2.4**
SNR=12
KK31 Karatay Array 22.99 72 *ce*P **P 12 13 20.0 +0.4**
KK31 pmax pmax
comp=Z,12nm,0.6s,mb4.5
KK31 Karatay Array 22.99 72 *e*P **P 12 13 20.0 +0.4**
comp=Z,12nm,0.6s,mb4.5
KKAR Karatay Array 22.99 72 *e*P **P 12 13 19.7 +0.1**
KKAR Karatay Array 22.99 72 *e*P **P 12 13 19.7 +0.1**
FINES FINESS Array B 23.04 343 P **P 12 13 20.5 +0.6**
comp=Z,22nm,0.8s,mb4.7,baz=126,slow=9.7,SNR=14
FINES S **S 12 17 27.6 -2.8**
comp=Z,5.9nm,0.9s,baz=129,slow=24,SNR=2.7
FINES LR LR 12 24 02.4
comp=Z,198nm,21.0s,MS3.5,baz=149,slow=41
FINES FINESS Array B 23.04 343 P **P 12 13 20.5 +0.6**
FINES S **S 12 17 27.6 -2.8**
FINES LR LR 12 24 02.4
FINES FINESS Array B 23.04 343 P **P 12 13 20.5 +0.6**
FINES S **S 12 17 27.6 -2.8**
FINES FINESS Array B 23.04 343 P **P 12 13 20.5 +0.6**

TUE Stuetta 23.10 296 *e*P **P 12 13 20.4 -0.3**
comp=Z,15nm,0.9s,mb4.4
TUE Stuetta 23.10 296 *e*P **P 12 13 20.4 -0.3**
comp=Z,15nm,0.9s,mb4.4
PGF Pioggiola 23.33 286 *e*P **P 12 13 21.7 -1.4**
comp=Z,82nm,1.4s,mb4.7
PGF Pioggiola 23.33 286 *e*P **P 12 13 21.7 -1.4**
comp=Z,41nm,1.4s,mb4.7
PGF Pioggiola 23.33 286 *e*P **P 12 13 21.7 -1.4**
PGF pmax pmax
comp=Z,41nm,1.4s,mb4.7
PGF Pioggiola 23.33 286 *e*P **P 12 13 21.7 -1.4**
comp=Z,41nm,1.4s,mb4.7
UBBA Unterbreizbach 23.45 307 *e*P **P 12 13 24.1 -0.3**
comp=Z,19nm,1.6s,mb4.3
VSL Villasalto 23.46 279 *e*P **P 12 13 24.2 -0.4**
comp=Z,24nm,1.0s,mb4.6
VSL Villasalto 23.46 279 *e*P **P 12 13 24.2 -0.4**
comp=Z,24nm,1.0s,mb4.6
JOF Joensuu 23.47 350 *e*P **P 12 13 22.9 -1.5**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.2
JOF Joensuu 23.47 350 *e*P **P 12 13 22.9 -1.5**
comp=Z,3.5nm,0.4s,mb4.1
CLZ Clausthal 23.53 310 *e*P **P 12 13 24.7 -0.5**
comp=Z,25nm,1.3s,mb4.5
CLZ Clausthal 23.53 310 *e*P **P 12 13 24.7 -0.5**
CLZ pmax pmax
comp=Z,25nm,1.3s,mb4.5
CLZ Clausthal 23.53 310 *e*P **P 12 13 24.7 -0.5**
comp=Z,25nm,1.3s,mb4.5
KAF Kangasniemi 23.58 344 *e*P **P 12 13 26.8 +1.2**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb3.7
KAF Kangasniemi 23.58 344 *e*P **P 12 13 26.8 +1.2**
comp=Z,1.1nm,0.3s,mb3.8
SPAK Spaichingen-Ko 23.66 300 *e*P **P 12 13 25.8 -0.7**
SPAK Spaichingen-Ko 23.66 300 *e*P **P 12 13 25.8 -0.7**
KBL Kabul 23.73 94 *e*P **P 12 13 28.2 +1.0**
KBL Kabul 23.73 94 *e*P **P 12 13 28.2 +1.0**
KBL Kabul 23.73 94 *e*P **P 12 13 28.2 +1.0**
TOD Tromm 23.91 304 *e*P **P 12 13 27.8 -0.9**
TOD Tromm 23.91 304 *e*P **P 12 13 27.8 -0.9**
TOD Tromm 23.91 304 *e*P **P 12 13 27.8 -0.9**
BFO Black Forest 24.00 301 *e*P **P 12 13 28.3 -1.2**
comp=Z,39nm,2.0s,mb4.5
BFO Black Forest 24.00 301 *e*P **P 12 13 28.3 -1.2**
BFO pmax pmax
comp=Z,39nm,2.0s,mb4.5
BFO Black Forest 24.00 301 *e*P **P 12 13 28.3 -1.2**
comp=Z,39nm,2.0s,mb4.5
FELD Feldberg im Sc 24.16 299 *e*P **P 12 13 30.7 -0.3**
FELD Feldberg im Sc 24.16 299 *e*P **P 12 13 30.7 -0.3**
TNS Taunus Mts 24.27 305 *e*P **P 12 13 32.0 0.0**
comp=Z,98nm,1.4s,mb5.0
TNS Taunus Mts 24.27 305 *e*P **P 12 13 32.0 0.0**
TNS pmax pmax
comp=Z,98nm,1.4s,mb5.0
TNS Taunus Mts 24.27 305 *e*P **P 12 13 32.0 0.0**
comp=Z,98nm,1.4s,mb5.0
SAOF Saorge 24.30 290 *e*P **P 12 13 32.0 -0.3**
SAOF Saorge 24.30 290 *e*P **P 12 13 32.0 -0.3**
SAOF Saorge 24.30 290 *e*P **P 12 13 32.0 -0.3**
KTD Kalmit 24.32 303 *e*P **P 12 13 32.0 -0.5**
KTD Kalmit 24.32 303 *e*P **P 12 13 32.0 -0.5**
KTD Kalmit 24.32 303 *e*P **P 12 13 32.0 -0.5**
BRVK Borovoye 24.36 48 *e*P **P 12 13 32.6 -0.2**
comp=Z,14nm,1.0s,mb4.4
BRVK Borovoye 24.36 48 *ce*P **P 12 13 32.9 +0.2**
BRVK pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
BRVK pmax pmax
comp=Z,21nm,0.9s,mb4.6
BRVK Borovoye 24.36 48 *e*P **P 12 13 32.6 -0.1**
comp=Z,14nm,1.0s,mb4.4
AUTN L'Aution 24.39 290 *e*P **P 12 13 33.6 +0.4**
AUTN L'Aution 24.39 290 *e*P **P 12 13 33.6 +0.4**
AUTN L'Aution 24.39 290 *e*P **P 12 13 33.6 +0.4**
SBF Sospel 24.39 290 *e*P **P 12 13 31.8 -1.4**
comp=Z,118nm,1.1s,mb4.9
SBF Sospel 24.39 290 *e*P **P 12 13 31.8 -1.4**
comp=Z,59nm,1.1s,mb4.9
SBF Sospel 24.39 290 *e*P **P 12 13 31.8 -1.4**
SBF pmax pmax
comp=Z,59nm,1.1s,mb4.9
SBF Sospel 24.39 290 *e*P **P 12 13 31.8 -1.4**
comp=Z,59nm,1.1s,mb4.9
BVAR Borovoye Array 24.40 48 P **P 12 13 33.2 0.0**
comp=Z,6.5nm,0.9s,mb4.1,baz=226,slow=3.9,SNR=12
BVAR Borovoye Array 24.40 48 P **P 12 13 33.2 0.0**
BVAR Borovoye Array 24.40 48 P **P 12 13 33.2 0.0**
BBS Basel-Blauen 24.44 298 *e*P **P 12 13 33.0 -0.6**
BBS Basel-Blauen 24.44 298 *e*P **P 12 13 33.0 -0.6**
BBS Basel-Blauen 24.44 298 *e*P **P 12 13 33.0 -0.6**
LANF Langenberg 24.44 302 *e*P **P 12 13 32.7 -0.9**
LANF Langenberg 24.44 302 *e*P **P 12 13 32.7 -0.9**
LANF Langenberg 24.44 302 *e*P **P 12 13 32.7 -0.9**
LUCF Luceram 24.45 290 *e*P **P 12 13 34.3 +0.6**
LUCF Luceram 24.45 290 *e*P **P 12 13 34.3 +0.6**
KEST Kesra 24.48 270 P **P 12 13 33.3 -0.7**
comp=Z,3.0nm,0.7s,mb3.8,baz=344,slow=3.8,SNR=8.0
KEST LR LR 12 24 47.7
comp=Z,170nm,18.8s,MS3.6,baz=315,slow=40
KEST Kesra 24.48 270 *e*P **P 12 13 33.7 -0.3**
KEST Kesra 24.48 270 *e*P **P 12 13 33.7 -0.3**
SENIN Lac Senin/Sane 24.50 296 *e*P **P 12 13 33.8 -0.4**
comp=Z,68nm,1.8s,mb4.9
SENIN Lac Senin/Sane 24.50 296 *e*P **P 12 13 33.8 -0.3**
comp=Z,68nm,1.8s,mb4.9
TOUF Mont Tournerai 24.52 290 *e*P **P 12 13 35.0 +0.7**
TOUF Mont Tournerai 24.52 290 *e*P **P 12 13 35.0 +0.7**
TOUF Mont Tournerai 24.52 290 *e*P **P 12 13 35.0 +0.7**
MVIF Mont Vial 24.59 290 *e*P **P 12 13 35.5 +0.5**
MVIF Mont Vial 24.59 290 *e*P **P 12 13 35.5 +0.5**
MVIF Mont Vial 24.59 290 *e*P **P 12 13 35.5 +0.5**
CDF Champ du Feu 24.71 301 *e*P **P 12 13 35.2 -0.8**
comp=Z,38nm,1.1s,mb4.5
CDF Champ du Feu 24.71 301 *e*P **P 12 13 35.2 -0.8**
comp=Z,19nm,1.1s,mb4.5
CDF Champ du Feu 24.71 301 *e*P **P 12 13 35.2 -0.8**
CDF pmax pmax
comp=Z,19nm,1.1s,mb4.5
CDF Champ du Feu 24.71 301 *e*P **P 12 13 35.2 -0.8**
comp=Z,19nm,1.1s,mb4.5
MOF Molkenrain 24.74 299 *e*P **P 12 13 36.0 -0.3**
MOF Molkenrain 24.74 299 *e*P **P 12 13 36.0 -0.3**
MOF Molkenrain 24.74 299 *e*P **P 12 13 36.0 -0.3**
ECH Echery 24.76 300 *e*P **P 12 13 36.9 +0.4**
ECH Echery 24.76 300 *e*P **P 12 13 35.7 -0.8**
comp=Z,28nm,1.1s,mb4.7
ECH Echery 24.76 300 *e*P **P 12 13 35.7 -0.8**
ECH pmax pmax
comp=Z,27nm,1.1s,mb4.7
ECH Echery 24.76 300 *e*P **P 12 13 35.7 -0.8**
comp=Z,27nm,1.1s,mb4.7
MBDF Montbardon 24.84 292 *e*P **P 12 13 37.3 0.0**
comp=Z,34nm,0.8s,mb4.6
MBDF Montbardon 24.84 292 *e*P **P 12 13 37.3 0.0**
comp=Z,17nm,0.8s,mb4.6
MBDF Montbardon 24.84 292 *e*P **P 12 13 37.3 0.0**
MBDF pmax pmax
comp=Z,17nm,0.8s,mb4.6
MBDF Montbardon 24.84 292 *e*P **P 12 13 37.3 0.0**
comp=Z,17nm,0.8s,mb4.6
LPG La Plagne 24.86 294 *e*P **P 12 13 37.5 +0.1**
comp=Z,30nm,0.9s,mb4.5
LPG La Plagne 24.86 294 *e*P **P 12 13 37.5 +0.1**
comp=Z,15nm,0.9s,mb4.5
LPG La Plagne 24.86 294 *e*P **P 12 13 37.5 +0.1**
LPG pmax pmax
comp=Z,15nm,0.9s,mb4.5
LPG La Plagne 24.86 294 *e*P **P 12 13 37.5 +0.1**
comp=Z,15nm,0.9s,mb4.5
LPL La Plagne 24.87 294 *e*P **P 12 13 37.5 0.0**
comp=Z,55nm,1.3s,mb4.6
LPL La Plagne 24.87 294 *e*P **P 12 13 37.5 0.0**
comp=Z,28nm,1.3s,mb4.6
LPL La Plagne 24.87 294 *e*P **P 12 13 37.5 0.0**
LPL pmax pmax
comp=Z,28nm,1.3s,mb4.6
LPL La Plagne 24.87 294 *e*P **P 12 13 37.5 0.0**
comp=Z,28nm,1.3s,mb4.6
LOMF Lomont 24.89 298 *e*P **P 12 13 37.8 +0.1**
LOMF Lomont 24.89 298 *e*P **P 12 13 37.8 +0.1**
LOMF Lomont 24.89 298 *e*P **P 12 13 37.8 +0.1**

BNI Bardonecchia 24.91 293 *e*P **P 12 13 38.0 +0.2**
comp=Z,26nm,0.9s,mb4.8
BNI Bardonecchia 24.91 293 *e*P **P 12 13 38.1 +0.3**
BNI pmax pmax
comp=Z,26nm,0.9s,mb4.8
BNI Bardonecchia 24.91 293 *e*P **P 12 13 38.0 +0.2**
comp=Z,26nm,0.9s,mb4.8
HINF Hinteralfeld 24.92 299 *e*P **P 12 13 37.5 -0.4**
comp=Z,29nm,1.0s,mb4.5
HINF Hinteralfeld 24.92 299 *e*P **P 12 13 37.5 -0.4**
comp=Z,14nm,1.0s,mb4.5
HINF Hinteralfeld 24.92 299 *e*P **P 12 13 37.5 -0.4**
HINF pmax pmax
comp=Z,14nm,1.0s,mb4.5
HINF Hinteralfeld 24.92 299 *e*P **P 12 13 37.5 -0.4**
comp=Z,14nm,1.0s,mb4.5
FRF La Foret Royal 24.98 289 *e*P **P 12 13 38.5 0.0**
comp=Z,91nm,1.2s,mb4.9
FRF La Foret Royal 24.98 289 *e*P **P 12 13 38.5 0.0**
comp=Z,46nm,1.2s,mb4.9
FRF La Foret Royal 24.98 289 *e*P **P 12 13 38.5 0.0**
FRF pmax pmax
comp=Z,46nm,1.2s,mb4.9
FRF La Foret Royal 24.98 289 *e*P **P 12 13 38.5 0.0**
comp=Z,46nm,1.2s,mb4.9
RUP Ruppelstein 25.05 304 *e*P **P 12 13 38.9 -0.1**
RUP Ruppelstein 25.05 304 *e*P **P 12 13 38.9 -0.1**
RUP Ruppelstein 25.05 304 *e*P **P 12 13 38.9 -0.1**
LMR La Mourre 25.09 288 *e*P **P 12 13 37.9 -1.6**
comp=Z,42nm,1.3s,mb4.5
LMR La Mourre 25.09 288 *e*P **P 12 13 37.9 -1.6**
comp=Z,21nm,1.3s,mb4.5
LMR La Mourre 25.09 288 *e*P **P 12 13 37.9 -1.6**
LMR pmax pmax
comp=Z,21nm,1.3s,mb4.5
LMR La Mourre 25.09 288 *e*P **P 12 13 37.9 -1.6**
comp=Z,21nm,1.3s,mb4.5
HAU Haudompre 25.28 299 *e*P **P 12 13 41.2 0.0**
HAU *e*MLR MLR
comp=Z,225nm,18.2s,MS3.4
HAU Haudompre 25.28 299 *e*P **P 12 13 41.2 0.0**
HAU LR LR
comp=Z,230nm,18.3s,MS3.7
HAU Haudompre 25.28 299 *e*P **P 12 13 41.2 0.0**
HAU MLR MLR
comp=Z,230nm,18.3s,MS3.7
HAU Haudompre 25.28 299 *e*P **P 12 13 41.2 0.0**
CABF La Chapelle 25.35 296 *e*P **P 12 13 41.9 0.0**
comp=Z,85nm,1.2s,mb4.8
CABF La Chapelle 25.35 296 *e*P **P 12 13 41.9 0.0**
comp=Z,43nm,1.2s,mb4.8
CABF La Chapelle 25.35 296 *e*P **P 12 13 41.9 0.0**
CABF pmax pmax
comp=Z,43nm,1.2s,mb4.8
CABF La Chapelle 25.35 296 *e*P **P 12 13 41.9 0.0**
comp=Z,43nm,1.2s,mb4.8
TAVF Tavernes 25.40 289 *e*P **P 12 13 44.6 +2.3**
TAVF Tavernes 25.40 289 *e*P **P 12 13 44.6 +2.3**
EKS2 Erkin-Say 25.42 73 *e*P **P 12 13 42.7 +0.2**
comp=Z,22nm,0.9s,mb4.7
EKS2 Erkin-Say 25.42 73 *e*P **P 12 13 42.7 +0.2**
EKS2 pmax pmax
comp=Z,22nm,0.9s,mb4.7
EKS2 Erkin-Say 25.42 73 *e*P **P 12 13 42.7 +0.2**
comp=Z,22nm,0.9s,mb4.7
ORIF Oris-en-Rattie 25.47 292 *e*P **P 12 13 41.9 -1.1**
comp=Z,93nm,1.4s,mb4.8
ORIF *e*MLR MLR
comp=Z,305nm,20.8s,MS3.5
ORIF Oris-en-Rattie 25.47 292 *e*P **P 12 13 41.9 -1.1**
comp=Z,46nm,1.4s,mb4.8
ORIF Oris-en-Rattie 25.47 292 *e*P **P 12 13 41.9 -1.1**
ORIF pmax pmax
comp=Z,47nm,1.4s,mb4.8
ORIF Oris-en-Rattie 25.47 292 *e*P **P 12 13 41.9 -1.1**
comp=Z,46nm,1.4s,mb4.8
WLF Walferdange 25.62 303 P **P 12 13 44.7 +0.4**
comp=Z,12nm,1.0s,mb4.4
WLF Walferdange 25.62 303 *e*P **P 12 13 44.0 -0.3**
comp=Z,18nm,0.8s,mb4.6
WLF Walferdange 25.62 303 *e*P **P 12 13 44.0 -0.3**
WLF pmax pmax
comp=Z,18nm,0.8s,mb4.7
WLF Walferdange 25.62 303 *e*P **P 12 13 44.0 -0.3**
comp=Z,18nm,0.8s,mb4.7
VILF Villemus 25.63 290 *e*P **P 12 13 44.1 -0.4**
VILF Villemus 25.63 290 *e*P **P 12 13 44.1 -0.4**
BERF Bertagne 25.69 289 *e*P **P 12 13 45.5 +0.5**
BERF Bertagne 25.69 289 *e*P **P 12 13 45.5 +0.5**
SMRF Simiane la Rot 25.73 290 *e*P **P 12 13 45.2 -0.1**
comp=Z,38nm,1.2s,mb4.5
SMRF Simiane la Rot 25.73 290 *e*P **P 12 13 45.2 -0.1**
comp=Z,38nm,1.2s,mb4.8
SMRF Simiane la Rot 25.73 290 *e*P **P 12 13 45.2 -0.1**
comp=Z,19nm,1.2s,mb4.5
MEM Membach 25.88 305 P **P 12 13 47.6 +1.1**
comp=Z,9.8nm,1.1s,mb4.2
MEM Membach 25.88 305 P **P 12 13 47.6 +1.0**
comp=Z,9.8nm,1.1s,mb4.2
HFS Hagfors 25.91 330 P **P 12 13 46.6 -0.2**
comp=Z,11nm,0.9s,mb4.4,baz=143,slow=5.4,SNR=12
HFS LR LR 12 25 47.7
comp=Z,275nm,21.6s,MS3.8,baz=132,slow=41
HFS Hagfors 25.91 330 P **P 12 13 46.6 -0.2**
HFS Hagfors 25.91 330 P **P 12 13 46.6 -0.2**
FRU Bishkek 26.02 72 *e*P **P 12 13 50.0 +2.1**
FRU *e* 12 13 57.0
FRU pmax pmax
comp=Z,120nm,2.0s,mb5.1
FRU Bishkek 26.02 72 *e*P **P 12 13 50.0 +2.1**
comp=Z,120nm,2.0s,mb5.1
PRAF Pradon 26.03 290 *e*P **P 12 13 51.5 +3.4**
KBK Karagaybulak 26.28 73 *e*P **P 12 13 50.7 +0.4**
comp=Z,19nm,0.8s,mb4.7
KBK Karagaybulak 26.28 73 *e*P **P 12 13 50.7 +0.4**
KBK pmax pmax
comp=Z,19nm,0.8s,mb4.7
KBK Karagaybulak 26.28 73 *e*P **P 12 13 50.7 +0.4**
comp=Z,19nm,0.8s,mb4.7
BCLA Clavier 26.28 305 P **P 12 13 51.3 +1.0**
BCLA Clavier 26.28 305 P **P 12 13 51.2 +0.9**
VIVF Saint-Julien-I 26.33 292 *e*P **P 12 13 49.3 -1.5**
comp=Z,16nm,0.9s,mb4.3
VIVF Saint-Julien-I 26.33 292 *e*P **P 12 13 49.3 -1.5**
comp=Z,8.1nm,0.9s,mb4.2
VIVF Saint-Julien-I 26.33 292 *e*P **P 12 13 49.3 -1.5**
VIVF pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
VIVF Saint-Julien-I 26.33 292 *e*P **P 12 13 49.3 -1.5**
comp=Z,8.1nm,0.9s,mb4.3
KZA Kyzart 26.57 74 *e*P **P 12 13 53.8 +0.9**
comp=Z,17nm,0.8s,mb4.6
KZA Kyzart 26.57 74 *e*P **P 12 13 53.8 +0.8**
KZA pmax pmax
comp=Z,17nm,0.8s,mb4.6
KZA Kyzart 26.57 74 *e*P **P 12 13 53.8 +0.8**
comp=Z,17nm,0.8s,mb4.6
DOU Dourbes 26.68 304 P **P 12 13 54.1 +0.2**
DOU Dourbes 26.68 304 P **P 12 13 54.1 +0.2**
TKM2 Tokmak 2 26.73 72 *e*P **P 12 13 56.0 +1.7**
comp=Z,13nm,0.8s,mb4.5
TKM2 Tokmak 2 26.73 72 *e*P **P 12 13 56.1 +1.8**
TKM2 pmax pmax
comp=Z,13nm,0.8s,mb4.5
TKM2 Tokmak 2 26.73 72 *e*P **P 12 13 56.0 +1.7**
comp=Z,13nm,0.8s,mb4.5
SMF Signal de Mont 26.90 296 *e*P **P 12 13 55.4 -0.5**
comp=Z,14nm,0.8s,mb4.2
SMF Signal de Mont 26.90 296 *e*P **P 12 13 55.4 -0.5**
comp=Z,7.2nm,0.8s,mb4.2
SMF Signal de Mont 26.90 296 *e*P **P 12 13 55.4 -0.5**
SMF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
SMF Signal de Mont 26.90 296 *e*P **P 12 13 55.4 -0.5**
comp=Z,7.2nm,0.8s,mb4.2
LOR Lormes 26.91 298 *e*P **P 12 13 55.7 -0.2**
comp=Z,19nm,1.1s,mb4.2
LOR *e*MLR MLR
comp=Z,258nm,19.0s,MS3.5
LOR Lormes 26.91 298 *e*P **P 12 13 55.7 -0.2**
comp=Z,9.4nm,1.1s,mb4.2
LOR LR LR
comp=Z,260nm,19.0s,MS3.8
LOR Lormes 26.91 298 *e*P **P 12 13 55.7 -0.2**
LOR pmax pmax
comp=Z,9.0nm,1.1s,mb4.2

LOR MLR MLR
comp=Z,260nm,19.0s,MS3.8
LOR Lormes 26.91 298 *e*P **P 12 13 55.7 -0.2**
comp=Z,9.4nm,1.1s,mb4.2
BAIF Baives 26.92 304 *e*P **P 12 13 56.3 +0.3**
comp=Z,79nm,1.4s,mb4.8
BAIF Baives 26.92 304 *e*P **P 12 13 56.3 +0.3**
comp=Z,40nm,1.4s,mb4.8
BAIF Baives 26.92 304 *e*P **P 12 13 56.3 +0.3**
BAIF pmax pmax
comp=Z,40nm,1.4s,mb4.8
BAIF Baives 26.92 304 *e*P **P 12 13 56.3 +0.3**
comp=Z,40nm,1.4s,mb4.8
LASF Ste Croix 26.96 290 *e*P **P 12 13 56.0 -0.4**
comp=Z,35nm,1.3s,mb4.4
LASF Ste Croix 26.96 290 *e*P **P 12 13 56.0 -0.4**
comp=Z,17nm,1.3s,mb4.4
SSF Saint Saulge 27.14 297 *e*P **P 12 13 57.5 -0.5**
SSF Saint Saulge 27.14 297 *e*P **P 12 13 57.5 -0.5**
SSF Saint Saulge 27.14 297 *e*P **P 12 13 57.5 -0.5**
AVF Avril sur Loir 27.24 296 *e*P **P 12 13 57.5 -1.4**
comp=Z,40nm,1.2s,mb4.5
AVF Avril sur Loir 27.24 296 *e*P **P 12 13 57.5 -1.4**
comp=Z,20nm,1.2s,mb4.5
AVF Avril sur Loir 27.24 296 *e*P **P 12 13 57.5 -1.4**
AVF pmax pmax
comp=Z,20nm,1.2s,mb4.5
AVF Avril sur Loir 27.24 296 *e*P **P 12 13 57.5 -1.4**
comp=Z,20nm,1.2s,mb4.5
KONO Kongsberg 27.30 326 *e*P **P 12 13 59.3 -0.1**
comp=Z,16nm,1.1s,mb4.5
KONO Kongsberg 27.30 326 *e*P **P 12 13 59.3 -0.1**
KONO pmax pmax
comp=Z,17nm,1.1s,mb4.5
KONO Kongsberg 27.30 326 *e*P **P 12 13 59.3 -0.1**
comp=Z,17nm,1.1s,mb4.5
NB2 NORSAR Subarra 27.43 329 P **P 12 14 07.2 +6.7**
comp=Z,3.6nm,1.0s,mb3.9,baz=127,slow=9.3
NOA NORSAR Array B 27.43 329 P **P 12 13 59.6 -0.9**
comp=Z,1.3nm,0.9s,mb3.5,baz=128,slow=8.5,SNR=3.8
NOA LR LR 12 26 44.0
comp=Z,221nm,20.6s,MS3.7,baz=130,slow=40
NOA NORSAR Array B 27.43 329 P **P 12 13 59.6 -0.9**
NOA NORSAR Array B 27.43 329 P **P 12 13 59.6 -0.9**
KSH Kashi 27.57 79 *e*P **P 12 14 02.0 +0.1**
KSH *e*pP pP 12 14 06.3 +1.3
KSH *e*sP sP 12 14 09.0 +2.8
KSH *e*PP 12 14 49.4
KSH *e*PcP PcP 12 17 22.1 +2.6
KSH *e*S **S 12 18 39.9 -3.2**
KSH sS sS 12 18 47.1 -1.0
KSH *e*SS 12 19 56.9
KSH pmax pmax
comp=Z,33nm,1.6s,mb4.7
KSH LR LR
comp=N,610nm,12.0s
KSH LR LR
comp=E,330nm,8.3s
KSH LR LR
comp=Z,410nm,12.3s,MS4.2
BGF Bois d'Agland 27.59 296 *e*P **P 12 14 02.7 +0.7**
BGF Bois d'Agland 27.59 296 *e*P **P 12 14 02.7 +0.7**
BGF Bois d'Agland 27.59 296 *e*P **P 12 14 02.7 +0.7**
APA Apatity 27.80 355⇑ *i*P **P 12 14 03.0 -0.7**
APA pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
APA Apatity 27.80 355 *i*P **P 12 14 03.0 -0.7**
comp=Z,7.0nm,0.6s,mb4.5
TCF Toulx Ste Croi 28.03 295 *e*P **P 12 14 04.6 -1.4**
TCF Toulx Ste Croi 28.03 295 *e*P **P 12 14 04.6 -1.4**
TCF Toulx Ste Croi 28.03 295 *e*P **P 12 14 04.6 -1.4**
MTLF Montolieu 28.21 289 *e*P **P 12 14 07.2 -0.4**
MTLF Montolieu 28.21 289 *e*P **P 12 14 07.2 -0.4**
MTLF Montolieu 28.21 289 *e*P **P 12 14 07.2 -0.4**
KURK Kurchatov 28.85 55 P **P 12 14 11.9 -1.4**
comp=Z,5.0nm,0.9s,mb4.2,baz=274,slow=8.9,SNR=23
KURK Kurchatov 28.85 55 *e*P **P 12 14 13.4 +0.1**
comp=Z,11nm,1.0s,mb4.5
KURK Kurchatov 28.85 55*c i*P **P 12 14 12.9 -0.4**
KURK pmax pmax
comp=Z,13nm,1.1s,mb4.6
KURK Kurchatov 28.85 55 *i*P **P 12 14 12.9 -0.4**
KURK Kurchatov 28.85 55 P **P 12 14 13.8 +0.5**
SNR=7.6
EPF Esparros 29.61 289 *e*P **P 12 14 20.3 +0.2**
EPF Esparros 29.61 289 *e*P **P 12 14 20.3 +0.2**
EPF Esparros 29.61 289 *e*P **P 12 14 20.3 +0.2**
MFF Saint Martin d 29.65 296 *e*P **P 12 14 19.8 -0.6**
MFF Saint Martin d 29.65 296 *e*P **P 12 14 19.8 -0.6**
MFF Saint Martin d 29.65 296 *e*P **P 12 14 19.8 -0.6**
ETSF Etsaut 30.28 289 *e*P **P 12 14 27.0 +1.0**
comp=Z,16nm,1.0s,mb4.4
ETSF Etsaut 30.28 289 *e*P **P 12 14 27.0 +1.0**
comp=Z,8.1nm,1.0s,mb4.4
ETSF Etsaut 30.28 289 *e*P **P 12 14 27.0 +1.0**
ETSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
ETSF Etsaut 30.28 289 *e*P **P 12 14 27.0 +1.0**
comp=Z,8.1nm,1.0s,mb4.4
ARCES ARCESS Array B 30.51 350 P **P 12 14 27.8 +0.1**
comp=Z,5.7nm,0.8s,mb4.5,baz=159,slow=10,SNR=19
ARCES LR LR 12 27 49.7
comp=Z,460nm,19.1s,MS4.2,baz=151,slow=38
ARCES ARCESS Array B 30.51 350 P **P 12 14 27.8 0.0**
ARCES ARCESS Array B 30.51 350 P **P 12 14 27.8 0.0**
ARE0 ARCESS Array S 30.51 350 *e*P **P 12 14 28.0 +0.2**
ARE0 ARCESS Array S 30.51 350 *e*P **P 12 14 28.0 +0.2**
KEV Kevo 30.53 351 *e*P **P 12 14 22.6 -5.3**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
MK31 Makanchi Array 31.17 63 *e*P **P 12 14 34.3 +0.5**
MK31 Makanchi Array 31.17 63*ce*P **P 12 14 35.4 +1.6**
MK31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
MK31 Makanchi Array 31.17 63 *e*P **P 12 14 34.3 +0.5**
MKAR Makanchi Array 31.17 63 P **P 12 14 33.4 -0.5**
comp=Z,1.6nm,0.8s,mb3.9,baz=281,slow=7.0,SNR=12
MKAR PcP PcP 12 17 28.0 -0.6
comp=Z,0.9nm,0.8s,baz=267,slow=5.1,SNR=3.2
MKAR LR LR 12 29 25.1
comp=Z,103nm,19.6s,MS3.5,baz=270,slow=41
MKAR Makanchi Array 31.17 63*ce*P **P 12 14 35.2 +1.4**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
NVS Novosibirsk 32.20 48 *e*P **P 12 14 43.0 +0.2**
NVS Novosibirsk 32.20 48 *e*P **P 12 14 43.0 +0.2**
ESK Eskdalemuir 32.22 313 *e*P **P 12 14 42.5 -0.5**
comp=Z,8.8nm,0.8s,mb4.6
ESK Eskdalemuir 32.22 313 *e*P **P 12 14 42.5 -0.4**
ESK pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
ESK Eskdalemuir 32.22 313 *e*P **P 12 14 42.5 -0.4**
comp=Z,9.0nm,0.8s,mb4.7
ZAA0 Zalesovo Array 33.00 50 *e*P **P 12 14 48.9 -0.9**
ZAA0 Zalesovo Array 33.00 50 *e*P **P 12 14 48.9 -0.9**
ZALV Zalesovo Beam 33.00 50 P **P 12 14 48.7 -1.1**
comp=Z,6.5nm,0.7s,mb4.7,baz=263,slow=7.9,SNR=20
ZALV Zalesovo Beam 33.00 50 P **P 12 14 48.7 -1.1**
ZALV Zalesovo Beam 33.00 50 P **P 12 14 48.7 -1.1**
ESDC Sonseca Array 33.46 284 P **P 12 14 52.7 -1.2**
comp=Z,4.1nm,0.8s,mb4.4,baz=70,slow=8.7,SNR=14
ESDC LR LR 12 29 14.6
comp=Z,69nm,19.0s,MS3.4,baz=85,slow=38
ESDC Sonseca Array 33.46 284 P **P 12 14 52.7 -1.2**
ESDC LR LR 12 29 14.6
ESDC Sonseca Array 33.46 284 P **P 12 14 52.7 -1.3**
ESLA Sonseca Array 33.46 284 *e*P **P 12 14 52.9 -1.1**
comp=Z,4.9nm,1.2s,mb4.3
ESLA Sonseca Array 33.46 284 *e*P **P 12 14 52.9 -1.1**
comp=Z,4.9nm,1.2s,mb4.3
PAB San Pablo 33.78 284 *e*P **P 12 14 56.1 -0.7**
comp=Z,50nm,1.9s,mb5.1
PAB San Pablo 33.78 284 *e*P **P 12 14 56.1 -0.7**
PAB pmax pmax
comp=Z,50nm,1.9s,mb5.1
PAB San Pablo 33.78 284 *e*P **P 12 14 56.1 -0.7**
comp=Z,50nm,1.9s,mb5.1
TAM Tamanrasset 33.79 250 *e*P **P 12 14 58.0 +1.0**
comp=Z,7.1nm,1.1s,mb4.5
TAM Tamanrasset 33.79 250 *e*P **P 12 14 58.0 +1.0**
TAM pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
TAM Tamanrasset 33.79 250 *e*P **P 12 14 58.0 +1.0**
comp=Z,7.0nm,1.1s,mb4.5
WMQ Urumqi 35.32 68 P **P 12 15 11.0 +1.0**

WMQ sP sP 12 15 18.0 +3.6
WMQ PP PP 12 16 31.0 +0.9
WMQ S **S 12 20 44.0 0.0**
WMQ sS sS 12 20 53.0 +3.9
WMQ SS SS 12 23 03.0 -14
WMQ pmax pmax
comp=Z,29nm,0.8s,mb5.3
WMQ LR LR
comp=N,450nm,15.0s,MS4.4
WMQ LR LR
comp=E,280nm,15.0s,MS4.4
WMQ LR LR
comp=Z,260nm,15.0s,MS4.1
PCBR Castelo Branco 36.02 285 *e*P **P 12 15 15.8 -0.3**
comp=Z,24nm,1.7s,mb4.8
PCBR Castelo Branco 36.02 285 *e*P **P 12 15 15.8 -0.3**
comp=Z,24nm,1.7s,mb4.8
PMRV Marv??o 36.07 285 *e*P **P 12 15 16.2 -0.4**
PMRV Marv??o 36.07 285 *e*P **P 12 15 16.2 -0.4**
PBAR Barrancos 36.18 282 *e*P **P 12 15 18.8 +1.3**
comp=Z,19nm,1.5s,mb4.8
PBAR Barrancos 36.18 282 *e*P **P 12 15 18.8 +1.3**
comp=Z,19nm,1.5s,mb4.8
MDT Midelt 36.28 273 P **P 12 15 17.8 -0.6**
comp=Z,2.2nm,0.9s,mb4.1,baz=71,slow=8.1,SNR=5.2
MDT Midelt 36.28 273 P **P 12 15 17.8 -0.6**
PESTR Estremoz 36.38 284 *e*P **P 12 15 21.9 +2.6**
comp=Z,28nm,1.4s,mb5.0
PVAQ Vaqueiros 36.94 282 *e*P **P 12 15 26.3 +2.3**
comp=Z,23nm,1.7s,mb4.7
PVAQ Vaqueiros 36.94 282 *e*P **P 12 15 26.3 +2.3**
comp=Z,23nm,1.7s,mb4.7
PCVE Castro Verde 37.11 282 *e*P **P 12 15 27.6 +2.2**
comp=Z,24nm,1.3s,mb4.9
PCVE Castro Verde 37.11 282 *e*P **P 12 15 27.6 +2.2**
comp=Z,24nm,1.3s,mb4.9
PBDV Barranco-do-Ve 37.15 281 *e*P **P 12 15 28.3 +2.5**
comp=Z,34nm,1.3s,mb5.0
PBDV Barranco-do-Ve 37.15 281 *e*P **P 12 15 28.3 +2.5**
comp=Z,34nm,1.3s,mb5.0
TORD Torodi Ar. Bea 42.96 242 P **P 12 16 11.1 -3.0**
comp=Z,5.9nm,1.1s,mb4.2,baz=42,slow=5.9,SNR=21
TORD LR LR 12 37 52.8
comp=Z,86nm,18.8s,MS3.7,baz=35,slow=41
TLY Talaya 44.48 53 P **P 12 16 26.8 +0.7**
comp=Z,3.2nm,0.6s,mb4.2
TLY Talaya 44.48 53 *e*P **P 12 16 28.3 +2.3**
TLY *e* 12 22 50.5
TLY pmax pmax
comp=Z,18nm,1.4s,mb4.6
TLY MLR MLR
comp=Z,129nm,18.0s,MS3.9
TLY Talaya 44.48 53 P **P 12 16 26.8 +0.8**
comp=Z,3.2nm,0.6s,mb4.2
ZAK Zakamensk 44.51 55 *e*P **P 12 16 26.8 +0.5**
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.0
ZAK Zakamensk 44.51 55 *e*P **P 12 16 26.8 +0.5**
comp=Z,3.0nm,1.3s,mb4.0
IRK Irkutsk 44.75 52 *e*P **P 12 16 28.6 +0.4**
IRK *e* 12 18 08.0
IRK pmax pmax
comp=Z,41nm,2.0s,mb4.9
IRK Irkutsk 44.75 52 *e*P **P 12 16 28.6 +0.4**
comp=Z,41nm,2.0s,mb4.9
IRK Irkutsk 44.75 52 *e*PcP PcP 12 18 08.0 -2.2
GTA Gaotai 45.26 71 *e*P **P 12 16 34.6 +2.2**
GTA pP pP 12 16 39.1 +3.6
GTA sP sP 12 16 42.0 +5.2
GTA S **S 12 23 15.9 +3.4**
GTA sS sS 12 23 23.5 +5.9
GTA pmax pmax
comp=Z,4.0nm,1.2s,mb4.1
GTA LR LR
comp=N,170nm,16.1s,MS4.1
GTA LR LR
comp=E,130nm,19.0s,MS4.1
GTA LR LR
comp=Z,170nm,16.8s,MS4.0
SONM Songino Array 47.12 57 P **P 12 16 46.9 -0.1**
comp=Z,1.7nm,0.7s,mb4.1,baz=281,slow=8.9,SNR=9.8
SONM LR LR 12 38 53.0
comp=Z,496nm,19.0s,MS4.5,baz=288,slow=39
SONM Songino Array 47.12 57 P **P 12 16 46.9 -0.1**
SONM Songino Array 47.12 57 P **P 12 16 46.9 -0.1**
ULN Ulaanbaatar 47.54 57 *e*P **P 12 16 50.6 +0.4**
comp=Z,70nm,2.1s,mb5.3
ULN Ulaanbaatar 47.54 57 *e*P **P 12 16 50.6 +0.4**
ULN pmax pmax
comp=Z,70nm,2.1s,mb5.3
ULN Ulaanbaatar 47.54 57 *e*P **P 12 16 50.6 +0.4**
comp=Z,70nm,2.1s,mb5.3
SUMG Summit 48.87 337 *e*P **P 12 17 00.2 0.0**
comp=Z,17nm,1.4s,mb4.9
SUMG Summit 48.87 337 *e*P **P 12 17 00.2 0.0**
SUMG pmax pmax
comp=Z,17nm,1.4s
SUMG Summit 48.87 337 *e*P **P 12 17 00.2 0.0**
comp=Z,17nm,1.4s,mb4.9
BOD Bodaibo 49.12 43 *e*P **P 12 17 01.4 -0.9**
BOD pmax pmax
comp=Z,15nm,0.9s,mb5.0
BOD Bodaibo 49.12 43 *e*P **P 12 17 01.4 -0.9**
comp=Z,15nm,0.9s,mb5.0
LZH Lanzhou 49.49 73 *e*P **P 12 17 06.6 +1.2**
LZH pP pP 12 17 10.5 +1.9
LZH sP sP 12 17 14.0 +4.2
LZH PP PP 12 19 02.0 +2.6
LZH *e*S **S 12 24 14.0 +1.1**
LZH sS sS 12 24 20.0 +1.9
LZH SS SS 12 27 37.0 -7.5
LZH pmax pmax
comp=Z,20nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,120nm,5.3s
LZH LR LR
comp=N,230nm,12.2s,MS4.5
LZH LR LR
comp=E,150nm,11.0s,MS4.5
LZH LR LR
comp=Z,340nm,13.4s,MS4.5
CD2 Chengdu 51.76 79 *e*P **P 12 17 23.8 +1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CD2 pmax pmax
comp=Z,30nm,7.2s
DBIC Dimbokro 52.07 243 P **P 12 17 23.1 -1.9**
comp=Z,1.6nm,0.4s,mb4.3,baz=16,slow=7.4,SNR=4.1
DBIC Dimbokro 52.07 243 *e*P **P 12 17 23.1 -1.9**
comp=Z,9.1nm,1.1s,mb4.6
DBIC Dimbokro 52.07 243 *e*P **P 12 17 23.1 -2.0**
DBIC pmax pmax
comp=Z,9.0nm,1.1s
DBIC Dimbokro 52.07 243 *e*P **P 12 17 23.1 -2.0**
comp=Z,9.0nm,1.1s,mb4.6
TIC Toumodi 52.20 243 *e*PKP1 **P 12 17 27.5 +1.5**
comp=Z,17nm,0.6s,mb5.2
TIC Toumodi 52.20 243 *e*P **P 12 17 27.5 +1.5**
TIC Toumodi 52.20 243 *e*P **P 12 17 27.5 +1.5**
KIC Kosan Boka 52.21 242 *e*PKP1 **P 12 17 27.7 +1.6**
comp=Z,70nm,1.6s,mb5.3
KIC Kosan Boka 52.21 242 *e*P **P 12 17 27.7 +1.6**
LIC Lamto 52.51 242 *e*PKP1 **P 12 17 26.8 -1.5**
comp=Z,30nm,0.8s,mb5.3
LIC Lamto 52.51 242 *e*P **P 12 17 26.9 -1.4**
comp=Z,20nm,0.8s,mb4.8
LIC *e*MLR MLR
comp=Z,166nm,19.8s,MS3.8
LIC Lamto 52.51 242 *e*P **P 12 17 26.9 -1.4**
comp=Z,9.9nm,0.8s,mb4.8
LIC LR LR
comp=Z,80nm,19.8s,MS3.8
LIC Lamto 52.51 242 *e*P **P 12 17 26.9 -1.4**
comp=Z,9.9nm,0.8s,mb4.8
HHC Hu-ho-hao-te 53.03 64 *e*P **P 12 17 32.8 +0.9**
HHC pP pP 12 17 37.3 +2.2
HHC sP sP 12 17 39.8 +3.5
HHC PcP PcP 12 18 41.4 +1.0
HHC PP PP 12 19 34.8 +3.4
HHC ScP ScP 12 22 37.8 -0.1
HHC S **S 12 25 00.8 -0.8**
HHC sS sS 12 25 08.6 +1.7
HHC ScS ScS 12 27 18.8 -2.8
HHC SS SS 12 28 38.4 -2.0
HHC pmax pmax
comp=Z,20nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,76nm,5.5s
HHC LR LR
comp=N,280nm,16.6s,MS4.5
HHC LR LR
comp=E,200nm,16.3s,MS4.5
HHC LR LR
comp=Z,150nm,15.7s,MS4.1
KMI Kunming 53.92 86 P **P 12 17 41.3 +2.6**
KMI pP pP 12 17 43.6 +1.7
KMI PP PP 12 19 43.3 +3.5
KMI S **S 12 25 14.0 -0.1**
KMI sS sS 12 25 18.0 -1.4
KMI SS SS 12 28 54.5 -0.6
KMI pmax pmax
comp=Z,11nm,0.7s,mb4.9
KMI LR LR
comp=N,120nm,15.5s,MS4.2
KMI LR LR
comp=E,120nm,16.1s,MS4.2
KMI LR LR
comp=Z,130nm,13.0s,MS4.2
XAN Xi'an 54.13 73 P **P 12 17 42.5 +2.4**
XAN pP pP 12 17 47.5 +4.2
XAN pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
CHTO Chiang Mai 54.54 95 *e*P **P 12 17 41.3 -2.0**
comp=Z,6.0nm,0.8s,mb4.7
CHTO *e*PP PP 12 19 48.9 +3.3
CHTO Chiang Mai 54.54 95 *e*P **P 12 17 41.3 -2.0**
CHTO *e* 12 19 48.9
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
CHTO Chiang Mai 54.54 95 *e*P **P 12 17 41.3 -2.0**
comp=Z,6.0nm,0.8s,mb4.7
CM31 Chiang Mai Arr 54.75 95 *e*P **P 12 17 44.0 -0.8**
comp=Z,0.8nm,0.3s,mb4.2
CM31 Chiang Mai Arr 54.75 95 *e*P **P 12 17 44.0 -0.8**
comp=Z,0.8nm,0.3s,mb4.2
CMAR Chiang Mai Arr 54.75 95 P **P 12 17 43.9 -0.9**
comp=Z,4.7nm,0.9s,mb4.5,baz=300,slow=7.4,SNR=15
CMAR LR LR 12 47 16.2
comp=Z,54nm,19.3s,MS3.6,baz=300,slow=43
CMAR Chiang Mai Arr 54.75 95 P **P 12 17 43.9 -0.9**
CMAR Chiang Mai Arr 54.75 95 P **P 12 17 43.9 -0.9**
GYA Guiyang 56.21 82 *e*P **P 12 17 56.8 +1.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BJI Beijing 56.55 63 P **P 12 17 56.4 -1.0**
BJI PP PP 12 19 59.4 -3.6
BJI S **S 12 25 45.8 -3.2**
BJI pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BJI LR LR
comp=N,250nm,21.9s,MS4.3
BJI LR LR
comp=E,170nm,21.9s,MS4.3
BJI LR LR
comp=Z,52nm,30.4s
WHN Wuhan 59.85 74 P **P 12 18 20.0 -0.6**
WHN LR LR
comp=Z,480nm,34.3s,MS4.4
CN2 Changchun 60.93 56 *e*P **P 12 18 28.5 +0.7**
KLR Kul'dur 62.07 48 *e*P **P 12 18 31.0 -4.4**
NJ2 Nanjing 62.35 70 *e*P **P 12 18 38.8 +1.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
PSI Prapat 64.77 109 P **P 12 18 53.2 -0.5**
comp=Z,6.6nm,0.7s,mb4.8,baz=302,slow=6.7,SNR=4.6
PSI LR LR 12 48 44.8
comp=Z,179nm,18.1s,MS4.3,baz=123,slow=38
PSI Prapat 64.77 109 P **P 12 18 53.3 -0.5**
BILL Bilibino 64.97 20 *e*P **P 12 18 55.2 +0.9**
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
BILL MLR MLR
comp=Z,100nm,22.0s,MS4.0
BILL Bilibino 64.97 20 *e*P **P 12 18 55.2 +0.9**
comp=Z,100nm,22.0s
IPM Ipoh 65.17 106 *e*P **P 12 18 56.2 -0.2**
KSRS Korea Array 65.80 61 P **P 12 18 59.2 -1.0**
comp=Z,2.6nm,0.8s,mb4.3,baz=296,slow=6.3,SNR=13
KSRS LR LR 12 53 13.2
comp=Z,60nm,18.4s,MS3.8,baz=152,slow=41
KSRS Korea Array 65.80 61 P **P 12 18 59.2 -1.0**
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KSRS Korea Array 65.80 61 P **P 12 18 59.2 -1.0**
comp=Z,3.0nm,0.8s,mb4.4
LBTB Lobatse 66.11 194 *e*P **P 12 19 04.8 +2.6**
comp=Z,221nm,2.8s,mb5.7
LBTB Lobatse 66.11 194 *e*P **P 12 19 04.8 +2.7**
comp=Z,221nm,2.8s,mb5.7
BOSA Boshof 69.68 194 P **P 12 19 23.9 -0.7**
comp=Z,5.4nm,1.0s,mb4.4,baz=53,slow=5.1,SNR=4.3
BOSA LR LR 12 50 10.1
comp=Z,176nm,18.0s,MS4.3,baz=169,slow=36
BOSA Boshof 69.68 194 P **P 12 19 23.9 -0.7**
BOSA LR LR 12 50 10.1
BOSA Boshof 69.68 194 P **P 12 19 23.9 -0.6**
BOSA Boshof 69.68 194 P **P 12 19 23.9 -0.6**
ASAJ Asahikawa 71.11 48 P **P 12 19 32.5 -0.8**
comp=Z,7.5nm,0.9s,mb4.6,baz=51,slow=6.4,SNR=3.9
ASAJ LR LR 12 57 12.3
comp=Z,105nm,18.3s,MS4.1,baz=318,slow=41
ASAJ Asahikawa 71.11 48 P **P 12 19 32.5 -0.8**
ASAJ pmax pmax
comp=Z,8.0nm,0.9s
INK Inuvik 71.84 357 LR LR 12 52 58.5
comp=Z,53nm,18.7s,MS3.8,baz=340,slow=37
PETK Petropavlovsk- 72.78 34 LR LR 12 54 12.8
comp=Z,59nm,18.6s,MS3.9,baz=297,slow=38
MJAR Matsushiro Arr 73.06 56 P **P 12 19 43.6 -1.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=303,slow=7.3,SNR=5.2
MJAR LR LR 12 55 27.2
comp=Z,65nm,19.4s,MS3.9,baz=270,slow=39
MJAR Matsushiro Arr 73.06 56 P **P 12 19 43.6 -1.5**
MJAR Matsushiro Arr 73.06 56 P **P 12 19 43.6 -1.5**
ILAR Eielson Array 75.36 3 P **P 12 19 59.2 +1.2**
comp=Z,0.8nm,1.1s,mb3.6,baz=253,slow=3.7,SNR=4.3
ILAR LR LR 12 53 49.8
comp=Z,62nm,21.6s,MS3.9,baz=333,slow=36
ILAR Eielson Array 75.36 3 P **P 12 19 59.3 +1.3**
ILAR Eielson Array 75.36 3 P **P 12 19 59.2 +1.2**
YKA Yellowknife Ar 75.76 348 LR LR 12 54 36.0
comp=Z,8.0nm,19.0s,MS3.0,baz=30,slow=37
ULM Lac du Bonnet 82.06 333 P **P 12 20 38.0 +2.8**
comp=Z,4.4nm,0.7s,mb4.5,baz=8.5,slow=6.5,SNR=3.4
ULM LR LR 13 00 32.3
comp=Z,83nm,19.8s,MS4.1,baz=318,slow=38
ULM Lac du Bonnet 82.06 333 P **P 12 20 38.0 +2.8**
NEW Newport 89.73 345 P **P 12 21 14.1 +0.9**
comp=Z,6.6nm,1.2s,mb4.8
NEW Newport 89.73 345 P **P 12 21 14.1 +0.9**
NEW pmax pmax
comp=Z,7.0nm,1.2s
NEW Newport 89.73 345 P **P 12 21 14.1 +0.9**
comp=Z,7.0nm,1.2s,mb4.9
SLMT Seeley Lake 89.92 342 P **P 12 21 14.4 +0.4**
comp=Z,3.7nm,0.8s,mb4.8
SLMT Seeley Lake 89.92 342 P **P 12 21 14.4 +0.4**
comp=Z,3.7nm,0.8s,mb4.8
PDAR Pinedale Array 93.06 338 P **P 12 21 29.1 +0.5**
comp=Z,0.8nm,1.1s,mb4.1,baz=85,slow=1.6,SNR=3.9
PDAR LR LR 13 03 18.5
comp=Z,84nm,21.8s,MS4.2,baz=38,slow=36
PDAR Pinedale Array 93.06 338 P **P 12 21 29.1 +0.4**

MAN 17 12:24:19,16°.45N×120°.52E,h37km,mb4.5,ML3.4,MS3.3, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.09**	**136**⇑	*i*P	Pn	12 24 22.1	-3.2
BOLP	**Bolinao**	**0.58**	**264**	*e*P	Pn	12 24 32.9	+2.1
BOLP				*e*S	Sn	12 24 39.0	-0.1
SCZP	**Santa Cruz**	**0.89**	**221**	*e*P	Pn	12 24 37.0	+2.1
ABRA	**Dolores**	**1.21**	**9**	*e*P	Pn	12 24 40.7	+1.3
BALP	**Baler**	**1.24**	**124**	*e*P	Pn	12 24 40.5	+0.7
CAUP	**Cauayan**	**1.35**	**68**	*e*P	Pn	12 24 43.6	+2.3
APYP	**Conner**	**1.57**	**26**	*e*P	Pn	12 24 30.3	-14
APYP				*e*S	Sn	12 25 04.6	+1.1
PALP	**Palanan**	**1.93**	**71**	*e*P	Pn	12 24 55.2	+5.9

IDC 17 12:30:34.2±1.9, 4°33S×152°74E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/16, mbtmp3.7/5, Error ellipse: s-maj=81.8km s-min=22.8km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.71**	**228**	P	P	12 35 48.6	+0.5
	1.8nm,0.6s,baz=52,slow=9.9,SNR=32						
ASAR	**Alice Springs**	**26.45**	**222**	P	P	12 36 12.8	-0.2
	0.3nm,0.6s,baz=53,slow=9.3,SNR=6.4						
PETK	**Petropavlovsk-**	**57.38**	**4**	P	P	12 40 23.2	-0.9
	8.8nm,1.1s,baz=143,slow=5.2,SNR=4.3						
SONM	**Songino Array**	**65.90**	**328**	P	P	12 41 22.5	+0.7
	0.2nm,0.5s,baz=128,slow=4.0,SNR=2.8						
ILAR	**Eielson Array**	**81.75**	**22**	P	P	12 42 55.4	+0.9
	0.2nm,0.8s,baz=243,slow=6.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**150.10**	**289**	PKPbc	PKPbc	12 50 26.5	-1.6
	0.3nm,0.5s,baz=61,slow=2.7,SNR=3.5						

IDC 17 12:35:20.4±2.2, 16°78S×179°46W, h512km±27km, mb3.2/8, mb1 3.5/9, mb1mx3.2/19, mbtmp3.2/9, Error ellipse: s-maj=49.1km s-min=13.8km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.94**	**70**	P	P	12 37 16.3	-0.2
	4.7nm,0.3s,baz=158,slow=15,SNR=11						
STKA	**Stephens Creek**	**38.31**	**240**	P	P	12 41 57.0	+0.2
	2.9nm,0.5s,baz=94,slow=8.6,SNR=6.9						
WRA	**Warramunga Arr**	**43.86**	**259**	P	P	12 42 40.8	-0.3
	0.8nm,0.5s,baz=95,slow=7.9,SNR=9.8						
ASAR	**Alice Springs**	**44.14**	**253**	P	P	12 42 43.4	+0.1
	6.0nm,0.5s,baz=87,slow=8.1,SNR=105						
FITZ	**Fitzroy Crossi**	**52.23**	**260**	P	P	12 43 43.7	-0.1
	1.5nm,0.7s,baz=154,slow=4.7,SNR=6.5						
NVAR	**Mina Array Bea**	**79.32**	**44**	P	P	12 46 33.5	+0.9
	0.4nm,0.6s,baz=221,slow=8.7,SNR=5.4						
TXAR	**Lajitas Array**	**86.25**	**58**	P	P	12 47 08.7	+0.9
	0.3nm,0.8s,baz=249,slow=7.6,SNR=3.1						
PDAR	**Pinedale Array**	**87.23**	**44**	P	P	12 47 11.3	-0.7
	0.2nm,0.5s,baz=222,slow=2.0,SNR=3.4						
PLCA	**Paso Flores**	**92.83**	**134**	P	P	12 47 37.9	-0.3
	1.8nm,1.0s,baz=190,slow=6.1,SNR=2.5						
BRTR	**Keskin Array B**	**143.28**	**315**	PKP	PKPdf	12 53 54.8	-1.5
	0.9nm,0.9s,baz=164,slow=5.0,SNR=4.1						

MAN 17 12:44:45, 16°46N×120°55E, h5km, mb4.6, ML3.5, MS3.4, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.08**	**161**	*i* P	Pg	12 44 47.3	+0.5
BOLP	**Bolinao**	**0.62**	**263**	*e* P	Pg	12 44 58.0	+1.1
BOLP				*e* S	Sg	12 45 03.6	-1.4
SCZP	**Santa Cruz**	**0.92**	**222**	*e* P	Pg	12 45 02.2	-0.4
ABRA	**Dolores**	**1.19**	**7**	*e* P	Pg	12 45 06.0	-2.0
BALP	**Baler**	**1.22**	**126**	*e* P	Pg	12 45 05.8	-2.5
CAUP	**Cauayan**	**1.31**	**68**	*e* P	Pn	12 45 08.8	-1.1
APYP	**Conner**	**1.54**	**25**	*e* P	Pn	12 45 12.1	-1.1
CVP	**Callao Caves**	**1.73**	**44**	*i* P	Pn	12 45 15.1	-0.7
PIP	**Pasuquin**	**1.86**	**2**	*i* P	Pn	12 45 17.2	-0.3
PALP	**Palanan**	**1.89**	**71**	*e* P	Pn	12 45 21.3	+3.4
POLP	**Polillo Island**	**2.18**	**142**	*e* P	Pn	12 45 22.8	+0.9
LUBP	**Lubang**	**2.72**	**186**	*e* P	Pn	12 45 30.2	+0.7

*DDA **17** 13:00:00.2, 40°01N×39°94E, h22km±1km, Md3.6*
*ISK **17** 13:00:00.9, 40°01N×39°99E, h6km, MD3.6, ML3.6*
*ISCJB **17** 13:00:01.9±0.2, 40°03N±0°02×39°96E±0°02, h10km, mb3.7/2, Error ellipse: s-maj=2.7km s-min=2.3km az=170.5*
*CSEM **17** 13:00:01.3±0.2, 40°01N×39°99E, h2km, MD3.6, Error ellipse: s-maj=4.0km s-min=3.4km az=158.0*
*IDC **17** 13:00:06.9±1.6, 40°37N×39°63E, h0km, mb3.7/2, mb1 3.6/5, mb1mx3.3/26, mbtmp3.6/5, ML2.6/1, Error ellipse: s-maj=28.6km s-min=13.1km az=22.0*

ISC 17 13:00:01.5±0.4, 40°01N±0°02×39°97E±0°02, h0km±3km, n86, σ1°24/122, mb3.8/2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYT	**Ayd¨–ntepe-Bay**	**0.40**	**19**	PG	**Pg**	**13 00 09.6**	**+0.4**
BAYT				SG	**Sg**	**13 00 15.2**	**+0.8**
BAYT	**Ayd¨–ntepe-Bay**	**0.40**	**19**	*i* Pg	**Pg**	**13 00 09.6**	**+0.4**
BAYT				*i* Sg	**Sg**	**13 00 15.2**	**+0.8**
KOPT	**Kop Dagi**	**0.40**	**89**	*i* P	**Pg**	**13 00 09.2**	**+0.1**
KOPT				*i* S	**Sg**	**13 00 16.4**	**+2.0**
KOPT	**Kop Dagi**	**0.40**	**89**	*i* P	**Pg**	**13 00 09.2**	**0.0**
KOPT				*i* S	**Sg**	**13 00 16.4**	**+2.0**
EZC	**Erzincan**	**0.54**	**242**	PG	**Pg**	**13 00 12.1**	**+0.3**
EZC				*e*SG	**Sg**	**13 00 20.6**	**+1.7**
EZC	**Erzincan**	**0.54**	**242**	*i* Pg	**Pg**	**13 00 12.1**	**+0.2**
EZC				*e*Sg	**Sg**	**13 00 20.6**	**+1.7**
KELT	**Kelkit**	**0.57**	**284**	*i* P	**Pg**	**13 00 11.6**	**-0.8**
KELT				*i* S	**Sg**	**13 00 18.7**	**-1.0**
KELT	**Kelkit**	**0.57**	**284**	*i* P	**Pg**	**13 00 11.6**	**-0.7**
KELT				*i* S	**Sg**	**13 00 18.7**	**-1.0**
GUMT	**Gumushane**	**0.58**	**320**	PG	**Pg**	**13 00 13.1**	**+0.4**
GUMT				*e*SG	**Sg**	**13 00 21.6**	**+1.4**
GUMT	**Gumushane**	**0.58**	**320**	*i* Pg	**Pg**	**13 00 13.1**	**+0.4**
GUMT				*e*Sg	**Sg**	**13 00 21.7**	**+1.4**
MACK	**Trabzon**	**0.94**	**351**	*i* P	**Pg**	**13 00 19.3**	**-0.2**
MACK				*i* S	**Sg**	**13 00 32.2**	**+0.4**
MACK	**Trabzon**	**0.94**	**351**	*i* P	**Pg**	**13 00 19.3**	**-0.2**
MACK				*i* S	**Sg**	**13 00 32.2**	**+0.4**
KTUT	**Trabzon**	**0.99**	**351**	PG	**Pg**	**13 00 20.5**	**+0.1**
KTUT				*e*SG	**Sg**	**13 00 34.5**	**+1.4**
KTUT	**Trabzon**	**0.99**	**351**	*i* Pg	**Pg**	**13 00 20.5**	**+0.1**
KTUT				*e*Sg	**Sg**	**13 00 34.5**	**+1.3**
EZM	**Erzurum**	**1.07**	**95**	PG	**Pg**	**13 00 21.8**	**-0.3**
ERZM	**Erzurum**	**1.08**	**95**	*i* P	**Pg**	**13 00 20.0**	**-2.1**
ERZM				*e*S	**Sg**	**13 00 37.4**	**+1.4**
ERZM	**Erzurum**	**1.08**	**95**	*i* P	**Pg**	**13 00 20.0**	**-2.1**
ERZM				*e*S	**Sg**	**13 00 37.4**	**+1.4**
BINT	**Bingol**	**1.20**	**160**	*e*PN	**Pn**	**13 00 23.7**	**-1.8**
BINT	**Bingol**	**1.20**	**160**	*e*Pn	**Pn**	**13 00 23.7**	**-1.8**
PTK	**Pertek**	**1.21**	**202**	*e*PN	**Pn**	**13 00 23.4**	**-2.1**
ESPY	**Espiye-Giresun**	**1.31**	**314**	*e*PN	**Pn**	**13 00 25.8**	**-1.1**
ESPY	**Espiye-Giresun**	**1.31**	**314**	*e*Pn	**Pn**	**13 00 25.8**	**-1.2**
PZAR	**Pazar-Rize**	**1.36**	**31**	*e*PN	**Pn**	**13 00 26.7**	**-0.9**
PZAR	**Pazar-Rize**	**1.36**	**31**	*e*Pn	**Pn**	**13 00 26.7**	**-1.0**
KEMA	**Kemaliye**	**1.36**	**237**	*i* P	**Pg**	**13 00 26.0**	**-1.6**
KEMA	**Kemaliye**	**1.36**	**237**	*i* P	**Pg**	**13 00 26.0**	**-1.6**
SUSE	**Susehri**	**1.37**	**279**	*i* P	**Pn**	**13 00 25.5**	**-2.3**
SUSE				*i* S	**Sg**	**13 00 42.4**	**-3.1**
SUSE	**Susehri**	**1.37**	**279**	*i* P	**Pn**	**13 00 25.5**	**-2.3**
SUSE				*i* S	**Sg**	**13 00 42.4**	**-3.1**
BNGL	**BINGOL**	**1.40**	**139**	*i* P	**Pn**	**13 00 25.6**	**-2.5**
BNGL				*i* S	**Sg**	**13 00 47.3**	**+1.0**
HOMI	**Horasan**	**1.48**	**88**	*i* P	**Pn**	**13 00 28.7**	**-0.7**
HOMI				*i* S	**Sg**	**13 00 50.0**	**+0.9**
GRSN	**GIRESUNGRSN**	**1.59**	**306**	*i* P	**Pn**	**13 00 29.3**	**-1.4**
GRSN				*i* S	**Sn**	**13 00 50.6**	**-1.4**
DDEM	**Demirkent**	**1.62**	**57**	*i* P	**Pn**	**13 00 30.2**	**-1.0**
DDEM				*i* S	**Sn**	**13 00 51.8**	**-0.8**
DDEM	**Demirkent**	**1.62**	**57**	*i* P	**Pn**	**13 00 30.2**	**-1.0**
DDEM				*i* S	**Sn**	**13 00 51.8**	**-0.9**
ELZG	**Elazig**	**1.70**	**207**	*i* P	**Pn**	**13 00 31.9**	**-0.4**
ELZG				*i* S	**Sn**	**13 00 56.5**	**+1.9**
ELZG	**Elazig**	**1.70**	**207**	*i* P	**Pn**	**13 00 31.9**	**-0.4**
ELZG				*i* S	**Sn**	**13 00 56.5**	**+1.9**
SVRC	**Sivrice-ELAZID**	**1.71**	**198**	*e*PN	**Pn**	**13 00 31.6**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.71**	**198**	*e*Pn	**Pn**	**13 00 31.6**	**-0.9**
DBOC	**Borcka**	**1.85**	**44**	*i* P	**Pn**	**13 00 34.7**	**+0.3**
DBOC				*i* S	**Sn**	**13 00 58.6**	**+0.1**
ARTV	**Artvin**	**1.89**	**51**	*i* P	**Pn**	**13 00 34.1**	**-0.9**
ARTV				*i* S	**Sn**	**13 00 59.1**	**-0.4**
BCA	**Borcka**	**1.90**	**41**	*e*PN	**Pn**	**13 00 35.3**	**+0.2**
BCA	**Borcka**	**1.90**	**41**	*e*Pn	**Pn**	**13 00 35.3**	**+0.2**
RSDY	**Resadiye-TOKAT**	**2.06**	**282**	*e*PN	**Pn**	**13 00 37.9**	**+0.6**
RSDY	**Resadiye-TOKAT**	**2.06**	**282**	*e*Pn	**Pn**	**13 00 37.9**	**+0.6**
MYA	**Malataya**	**2.07**	**216**	*e*PN	**Pn**	**13 00 37.5**	**+0.1**
MYA	**Malataya**	**2.07**	**216**	*e*Pn	**Pn**	**13 00 37.5**	**+0.1**
MALT	**Malatya**	**2.08**	**216**	*e*PN	**Pn**	**13 00 37.3**	**-0.2**
MALT	**Malatya**	**2.08**	**216**	*e*Pn	**Pn**	**13 00 37.3**	**-0.2**
DIYA	**Diyarbakir**	**2.09**	**177**	*i* P	**Pn**	**13 00 39.0**	**+1.4**
DIYA				*i* S	**Sn**	**13 01 05.0**	**+0.6**
DIYA	**Diyarbakir**	**2.09**	**177**	*i* P	**Pn**	**13 00 39.0**	**+1.3**
DIYA				*i* S	**Sn**	**13 01 05.0**	**+0.7**
SCER	**sogukcermik**	**2.19**	**267**	*i* P	**Pn**	**13 00 38.8**	**-0.3**
SCER				*i* S	**Sn**	**13 01 09.1**	**+2.3**
SVSK	**Karacayir**	**2.29**	**269**	*e*PN	**Pn**	**13 00 40.5**	**+0.1**
SVSK	**Karacayir**	**2.29**	**269**	*e*Pn	**Pn**	**13 00 40.5**	**+0.1**
AKCD	**Akcadag**	**2.34**	**224**	*i* P	**Pn**	**13 00 41.6**	**+0.5**
AKCD				*i* S	**Sg**	**13 01 16.1**	**-0.6**
AKCD	**Akcadag**	**2.34**	**224**	*i* P	**Pn**	**13 00 41.6**	**+0.5**
BEST	**Besiri**	**2.35**	**154**	*i* P	**Pn**	**13 00 42.8**	**+1.6**
AGRB	**Hanur-Agry**	**2.37**	**100**	*e*PN	**Pn**	**13 00 40.5**	**-1.0**
AGRB	**Hanur-Agry**	**2.37**	**100**	*e*Pn	**Pn**	**13 00 40.5**	**-1.0**
KARS	**Kars**	**2.45**	**75**	*e*PN	**Pn**	**13 00 42.7**	**+0.1**
KARS	**Kars**	**2.45**	**75**	*e*Pn	**Pn**	**13 00 42.7**	**0.0**
ERBA	**Erbaa**	**2.55**	**286**	*i* P	**Pn**	**13 00 47.9**	**+3.9**
ERBA				*i* S	**Sn**	**13 01 18.5**	**+2.9**
ERBA	**Erbaa**	**2.55**	**286**	*i* P	**Pn**	**13 00 47.9**	**+3.9**
ERBA				*i* S	**Sn**	**13 01 18.5**	**+2.8**
TOKT	**Tokat**	**2.65**	**278**	*e*PN	**Pn**	**13 00 45.7**	**+0.4**
TOKT	**Tokat**	**2.65**	**278**	*e*Pn	**Pn**	**13 00 45.7**	**+0.4**
TOKA	**Tokat**	**2.70**	**278**	*i* P	**Pn**	**13 00 46.7**	**+0.7**
TOKA	**Tokat**	**2.70**	**278**	*i* P	**Pn**	**13 00 46.7**	**+0.7**
MARD	**Mardin**	**2.77**	**167**	*i* P	**Pn**	**13 00 44.2**	**-2.8**
SARI	**SarD1z-Kayseri**	**2.87**	**243**	*e*PN	**Pg**	**13 00 53.8**	**-2.6**
PINB	**Pinarbasi**	**3.07**	**245**	*i* P	**Pn**	**13 00 55.2**	**+4.0**
PINB				*i* S	**Sn**	**13 01 35.0**	**+6.4**
PINB	**Pinarbasi**	**3.07**	**245**	*i* P	**Pn**	**13 00 55.2**	**+4.0**
KVT	**Kavak**	**3.18**	**291**	*e*PN	**Pn**	**13 00 53.5**	**+0.9**
KVT	**Kavak**	**3.18**	**291**	*e*Pn	**Pn**	**13 00 53.5**	**+0.9**
GZT	**Gaziantep**	**3.25**	**216**	*i* P	**Pn**	**13 00 56.6**	**+3.0**
KMRS	**Kahramanmaras**	**3.47**	**225**	*e*PN	**Pn**	**13 00 57.6**	**+1.0**
KMRS	**Kahramanmaras**	**3.47**	**225**	*e*Pn	**Pn**	**13 00 57.6**	**+1.0**
GNI	**Garni**	**3.66**	**86**	Pn	**Pg**	**13 01 11.1**	**-0.6**
	1.0nm,0.3s,baz=198,slow=20,SNR=3.0						
CTKT	**Corum**	**4.01**	**280**	*i* P	**Pn**	**13 01 04.8**	**+0.7**
CTKT	**Corum**	**4.01**	**280**	*i* P	**Pn**	**13 01 04.8**	**+0.7**
KOZT	**Kozan**	**4.11**	**233**	*e*PN	**Pn**	**13 01 06.6**	**+1.1**
AVNT	**Avonos**	**4.15**	**254**	*i* P	**Pn**	**13 01 11.1**	**+5.1**
AVNT	**Avonos**	**4.15**	**254**	*i* P	**Pn**	**13 01 11.1**	**+5.1**
CDAG	**Cicekdag**	**4.33**	**267**	*i* P	**Pn**	**13 01 15.4**	**+6.9**
CDAG				*i* S	**Sg**	**13 02 19.3**	**-1.3**
DGRG	**David-gareji**	**4.35**	**69**	P	**Pg**	**13 01 21.2**	**-3.5**
BRTR	**Keskin Array B**	**4.88**	**269**	Pn	**Pn**	**13 01 17.9**	**+1.8**
	0.3nm,0.3s,baz=98,slow=13,SNR=4.6						
BRTR				Lg		13 02 36.1	
	baz=88,slow=22,SNR=1.8						
AKASG	**Malin Array Be**	**13.07**	**328**	Pn	**Pn**	**13 03 05.6**	**-2.6**
	1.3nm,0.3s,baz=136,slow=13,SNR=6.1						
AKASG				Sn	**Sn**	**13 05 26.1**	**-8.2**
	baz=140,slow=36,SNR=1.9						
FINES	**FINESS Array B**	**23.09**	**343**	P	**P**	**13 05 09.6**	**+1.2**
	1.9nm,0.9s,mb3.6,baz=156,slow=11,SNR=2.7						
ARCES	**ARCESS Array B**	**30.57**	**350**	P	**P**	**13 06 16.6**	**+0.3**
	1.8nm,0.9s,mb4.0,baz=150,slow=9.2,SNR=5.2						

*NEIC **17** 13:07:49.6, 17°26N×100°10W, h33km, MD3.5(MEX), After MEX.*

MEX 17 13:07:49.7±1.0, 17°26N×100°11W, h31km±14km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.26**	**216**	*i* P	Pb	13 07 54.9	-1.9
CAIG				*i* S	Sb	13 08 00.2	-1.4
CAIG	**El Cayaco**	**0.26**	**216**	*i* P	Pb	13 07 54.9	-1.9
CAIG				*i* S	Sb	13 08 00.2	-1.4
ACX	**Acapulco**	**0.46**	**149**	*i* P	Pb	13 07 57.3	-2.2
ACX				*i* S	Sb	13 08 04.2	-2.0
ACX	**Acapulco**	**0.46**	**149**	*i* P	Pb	13 07 57.3	-2.2
ACX				*i* S	Sb	13 08 04.2	-2.0
MEIG	**Mezcala**	**0.81**	**35**	*i* P	Pn	13 08 03.4	-1.5
MEIG				*i* S	Sb	13 08 12.2	-3.7
PLIG	**Platanillo**	**1.26**	**27**	*i* P	Pn	13 08 09.2	-2.0
PLIG				*i* S	Sn	13 08 25.0	-2.1
PLIG	**Platanillo**	**1.26**	**27**	*i* P	Pn	13 08 09.2	-2.0
PLIG				*i* S	Sn	13 08 25.0	-2.1
ZIIG	**Zihuatanejo**	**1.34**	**285**	*i* P	Pn	13 08 10.6	-1.7
ZIIG				*i* S	Sn	13 08 26.7	-2.3
ZIIG	**Zihuatanejo**	**1.34**	**285**	*i* P	Pn	13 08 10.6	-1.7
ZIIG				*i* S	Sn	13 08 26.7	-2.3
PNIG	**Pinotepa**	**2.08**	**114**	*i* P	Pn	13 08 20.2	-2.3
PNIG				*i* S	Sn	13 08 42.3	-5.1
PNIG	**Pinotepa**	**2.08**	**114**	*i* P	Pn	13 08 20.2	-2.3
PNIG				*i* S	Sn	13 08 45.2	-2.2
MZVM		**2.09**	**23**	*e*P	Pn	13 08 20.8	-1.8
IIO	**Organos**	**2.66**	**29**	*e*P	Pn	13 08 28.9	-1.5
IIO				*i* S	Sn	13 09 00.1	-1.6
IIO	**Organos**	**2.66**	**29**	*e*P	Pn	13 08 28.9	-1.5

*CSEM **17** 13:18:30.8±0.2, 39°98N×39°95E, h12km, MD2.5, Error ellipse: s-maj=5.3km s-min=4.0km az=169.0*
*DDA **17** 13:18:30.7, 40°13N×39°94E, h7km±3km, Md2.8*
*ISK **17** 13:18:30.6, 39°99N×39°97E, h6km, MD2.5*
*ISCJB **17** 13:18:31.0±0.7, 39°98N±0°06×39°94E±0°05, h10km±9km, Error ellipse: s-maj=9.5km s-min=5.8km az=13.5*

ISC 17 13:18:31.3±0.7, 39°98N±0°06×39°95E±0°04, h11km±10km, n14, σ0°67/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.43**	**84**	*i* P	**Pg**	**13 18 39.1**	**-0.6**
KOPT				*i* S	**Sg**	**13 18 46.7**	**+1.3**
KOPT	**Kop Dagi**	**0.43**	**84**	*i* P	**Pg**	**13 18 39.1**	**-0.6**
KOPT				*i* S	**Sg**	**13 18 46.7**	**+1.3**
BAYT	**Ayd¨–ntepe-Bay**	**0.44**	**20**	*e*PG	**Pg**	**13 18 39.6**	**-0.4**
BAYT				*e*SG	**Sg**	**13 18 45.4**	**-0.5**
BAYT	**Ayd¨–ntepe-Bay**	**0.44**	**20**	*e*Pg	**Pg**	**13 18 39.6**	**-0.4**
BAYT				*e*Sg	**Sg**	**13 18 45.4**	**-0.6**
EZC	**Erzincan**	**0.51**	**244**	*e*PG	**Pg**	**13 18 41.1**	**-0.1**
EZC	**Erzincan**	**0.51**	**244**	*e*Pg	**Pg**	**13 18 41.1**	**-0.1**
KELT	**Kelkit**	**0.56**	**288**	*i* P	**Pg**	**13 18 41.4**	**-0.8**
KELT				*i* S	**Sg**	**13 18 49.6**	**+0.1**
KELT	**Kelkit**	**0.56**	**288**	*i* P	**Pg**	**13 18 41.4**	**-0.8**
KELT				*i* S	**Sg**	**13 18 49.6**	**+0.1**
GUMT	**Gumushane**	**0.60**	**324**	*e*PG	**Pg**	**13 18 43.2**	**+0.3**
GUMT				*e*SG	**Sg**	**13 18 51.6**	**+0.7**
GUMT	**Gumushane**	**0.60**	**324**	*e*Pg	**Pg**	**13 18 43.3**	**+0.3**
GUMT				*e*Sg	**Sg**	**13 18 51.6**	**+0.7**
PTK	**Pertek**	**1.16**	**202**	*e*PN	**Pn**	**13 18 53.6**	**+0.1**
PTK	**Pertek**	**1.16**	**202**	*e*Pn	**Pn**	**13 18 53.6**	**+0.1**
SUSE	**Susehri**	**1.36**	**280**	*i* P	**Pn**	**13 18 55.2**	**-0.9**
SUSE				*i* S	**Sb**	**13 19 14.9**	**+0.9**
SUSE	**Susehri**	**1.36**	**280**	*i* P	**Pn**	**13 18 55.2**	**-0.9**
SUSE				*i* S	**Sb**	**13 19 14.9**	**+0.9**

*IDC **17** 13:20:54.6±1.1, 3°34S×145°25E, h0km, mb4.1/9, mb1 4.4/11, mb1mx4.3/16, mbtmp4.2/11, ML4.4/1, MS3.6/15, Ms1 3.6/15, ms1mx3.5/23, Error ellipse: s-maj=41.9km s-min=12.8km az=104.0*
*GCMT **17** 13:20:57.8±0.4, 3°39S×145°86E, h19km±2km, MW4.8, Moment Tensor Solution. s11,c13; s54,c83; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.15±.13; $M_{\theta\theta}$0.23±.09; $M_{\phi\phi}$-0.08±.10; $M_{r\theta}$0.09±.19; $M_{r\phi}$1.69±.08; $M_{\theta\phi}$0.37±.20; Best double couple: $M_0$1.70000×10^{16} NP1:ϕ_s93.00000°, δ78.00000°, λ1.00000°. NP2:ϕ_s3.00000°, δ89.00000°, λ168.00000°. Principal axes: T 1.8200, Plg9.0000°, Azm317.0000°; N -0.1700, Plg78.0000°, Azm180.0000°; P -1.6500, Plg8.0000°, Azm48.0000°; Data Used: II G IC IU CN.*
*ISCJB **17** 13:20:57.0±0.7, 3°47S±0°06×145°5E±0°1, h33km, mb4.1/10, MS3.6/11 Error ellipse: s-maj=19.1km s-min=9.1km az=5.8*
*NEIC **17** 13:20:59.4±0.7, 3°49S×145°50E, h35km, mb4.3/2, Error ellipse: s-maj=19.7km s-min=9.5km az=92.0*

ISC 17 13:20:59.0±0.7, 3°55S±0°06×145°6E±0°1, h35km, n33, σ1°34/28, mb4.1/10, MS3.6/11, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.03**	**165**	*e*P	**Pn**	**13 22 22.5**	**-3.2**
	16nm,0.4s						
COEN	**Coen**	**10.61**	**193**	*e*P	**Pn**	**13 23 31.0**	**+2.4**
	186nm,1.2s						
HNR	**Honiara**	**15.41**	**113**	LR	LR	13 29 28.8	
	comp=Z,155nm,20.7s,baz=282,slow=32						
KAKA	**Kakadu**	**15.87**	**234**	*e*P	**Pn**	**13 24 39.6**	**-0.3**
	16nm,0.7s						
KAKA	**Kakadu**	**15.87**	**234**	*e*P	**Pn**	**13 24 39.6**	**-0.3**
	64nm,0.8s						
CTA	**Charters Tower**	**16.45**	**178**	Pn	**Pn**	**13 24 48.4**	**+1.2**
	baz=348,slow=9.5,SNR=4.5						
CTA				LR	LR	13 31 17.2	
	comp=Z,305nm,18.4s,baz=6.9,slow=37						
CTA	**Charters Tower**	**16.45**	**178**	Pn	**Pn**	**13 24 48.4**	**+1.2**
CTA				LR	LR	13 31 17.2	
CTAO	**Charters Tower**	**16.45**	**178**	*e*P	**Pn**	**13 24 48.9**	**+1.6**
	11nm,1.1s						
GUMO	**Guam**	**17.04**	**358**	LR	LR	13 29 40.1	
	comp=Z,192nm,21.0s,baz=158,slow=31						
WB2	**Warramunga Arr**	**19.64**	**213**	*e*P	**Pn**	**13 25 25.6**	**-0.7**
WRA	**Warramunga Arr**	**19.64**	**213**	P	**Pn**	**13 25 25.2**	**-1.2**
	1.1nm,0.3s,baz=39,slow=12,SNR=92						
WRA				LR	LR	13 33 08.2	
	comp=Z,292nm,19.8s,baz=50,slow=37						
WRA	**Warramunga Arr**	**19.64**	**213**	P	**Pn**	**13 25 25.2**	**-1.2**
WRA				LR	LR	13 33 08.2	
KNA	**Kununurra**	**20.52**	**233**	*e*P	**P**	**13 25 34.6**	**+0.3**
	59nm,1.1s						
EIDS	**Eidsvold**	**22.33**	**167**	*e*P	**P**	**13 25 50.7**	**-3.0**
EIDS	**Eidsvold**	**22.33**	**167**	*e*P	**P**	**13 25 53.0**	**-0.8**
QLP	**Quilpie**	**22.94**	**183**	*e*P	**P**	**13 25 59.3**	**-0.9**
ASAR	**Alice Springs**	**22.97**	**208**	P	**P**	**13 26 00.5**	**0.0**
	9.7nm,0.9s,mb4.2,baz=39,slow=8.6,SNR=60						
ASAR				S	**S**	**13 30 14.8**	**+6.2**
	1.0nm,1.1s,baz=23,slow=23,SNR=4.7						
FITZ	**Fitzroy Crossi**	**24.31**	**232**	P	**P**	**13 26 13.1**	**-0.3**
	31nm,1.1s,mb4.7,baz=56,slow=7.2,SNR=23						
FITZ				LR	LR	13 36 37.2	
	comp=Z,373nm,18.4s,MS3.9,baz=292,slow=39						
FITZ	**Fitzroy Crossi**	**24.31**	**232**	*e*P	**P**	**13 26 12.8**	**-0.6**
	34nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**24.31**	**232**	*e*P	**P**	**13 26 13.2**	**-0.2**
FITZ				LR	LR	13 36 37.2	
STKA	**Stephens Creek**	**28.43**	**187**	P	**P**	**13 26 52.8**	**+2.4**
	1.4nm,0.4s,mb3.9,baz=4.0,slow=12,SNR=7.2						
STKA				LR	LR	13 39 13.2	
	comp=Z,357nm,18.9s,MS4.0,baz=194,slow=38						
STKA	**Stephens Creek**	**28.43**	**187**	*e*P	**P**	**13 26 52.7**	**+2.3**
STKA				LR	LR	13 39 13.2	
MJAR	**Matsushiro Arr**	**40.47**	**351**	LR	LR	13 44 27.1	
	comp=Z,40nm,18.7s,MS3.3,baz=210,slow=35						
KSRS	**Korea Array**	**43.98**	**340**	P	**P**	**13 28 59.8**	**-3.1**
	1.7nm,0.9s,mb3.8,baz=153,slow=8.5,SNR=8.5						
KSRS				LR	LR	13 44 49.5	
	comp=Z,96nm,20.4s,MS3.7,baz=180,slow=33						
CMAR	**Chiang Mai Arr**	**50.87**	**297**	P	**P**	**13 29 57.7**	**+0.9**
	2.1nm,1.0s,mb4.0,baz=108,slow=5.8,SNR=6.7						
CMAR				LR	LR	13 53 47.1	
	comp=Z,40nm,19.2s,MS3.5,baz=289,slow=39						
PETK	**Petropavlovsk-**	**57.36**	**9**	P	**P**	**13 30 44.6**	**+1.1**
	3.6nm,0.9s,mb4.4,baz=176,slow=6.8,SNR=3.6						
PETK				LR	LR	13 49 32.7	
	comp=Z,40nm,21.8s,MS3.5,baz=3.0,slow=30						
SONM	**Songino Array**	**61.59**	**331**	P	**P**	**13 31 12.4**	**-0.5**
	1.8nm,1.1s,mb4.1,baz=148,slow=8.7,SNR=5.3						
SONM				LR	LR	13 56 51.2

GDZ				*i* S	**Sg**	**13 45 34.9**	**+0.2**
GDZ	**Gediz**	**0.77**	**342**	*i* P	**Pg**	**13 45 23.7**	**-0.9**
GDZ				*i* S	**Sg**	**13 45 34.9**	**+0.3**
KULA	**Kula-Manisa**	**0.90**	**280**	*e*PG	**Pg**	**13 45 27.0**	**-0.1**
KULA				*e*SG	**Sg**	**13 45 40.7**	**+1.9**
KULA	**Kula-Manisa**	**0.90**	**280**	*e*Pg	**Pg**	**13 45 27.0**	**-0.1**
DEMI	**Demirci**	**1.08**	**309**	*i* P	**Pb**	**13 45 29.7**	**-0.7**
DEMI				*i* S	**Sb**	**13 45 44.9**	**+0.3**
DEMI	**Demirci**	**1.08**	**309**	*i* P	**Pb**	**13 45 29.7**	**-0.7**
DEMI				*i* S	**Sb**	**13 45 44.9**	**+0.4**

*ISCJB **17** 13:57:31.7±1.8, 52.°6S±0.°3×18.°7E±0.°3, h10km, mb3.8/6, Error ellipse: s-maj=41.9km s-min=27.1km az=169.7*
*IDC **17** 13:57:32.6±1.1, 52.°65S×18.°92E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.8/18, mbtmp3.8/6, Error ellipse: s-maj=34.5km s-min=28.6km az=56.0*
*NEIC **17** 13:57:33.4±0.9, 52.°57S×18.°86E, h10km, mb4.0/1, Error ellipse: s-maj=25.6km s-min=22.8km az=223.0*
ISC 17 13:57:33.1±1.8, 52.°5S±0.°3×18.°8E±0.°3, h10km, n12, σ0°58/8, mb3.8/6, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**21.49**	**199**	P	**P**	**14 02 21.4**	**-0.1**
	0.4nm,0.7s,mb2.9,baz=36,slow=12,SNR=4.5						
MAW	**Mawson**	**25.94**	**142**	P	**P**	**14 03 05.5**	**+0.3**
	1.9nm,0.9s,mb3.6,baz=299,slow=9.2,SNR=4.9						
MAW	**Mawson**	**25.94**	**142**	*e*P	**P**	**14 03 04.9**	**-0.2**
QSPA	**South Pole Qui**	**37.74**	**180**	P	**P**	**14 04 48.7**	**+0.4**
	2.2nm,0.7s,mb4.0,baz=234,slow=4.2,SNR=19						
QSPA	**South Pole Qui**	**37.74**	**180**	*e*P	**P**	**14 04 48.1**	**-0.2**
	2.0nm,0.6s,mb4.0						
PLCA	**Paso Flores**	**58.69**	**243**	P	**P**	**14 07 30.6**	**+0.1**
	1.7nm,0.6s,mb4.2,baz=150,slow=8.1,SNR=3.5						
ASAR	**Alice Springs**	**85.53**	**124**	P	**P**	**14 10 12.2**	**+0.9**
	0.5nm,0.7s,mb3.9,baz=217,slow=3.9,SNR=6.7						
WRA	**Warramunga Arr**	**88.84**	**122**	P	**P**	**14 10 26.4**	**-1.0**
	0.9nm,1.1s,mb4.0,baz=216,slow=4.7,SNR=2.7						
ULM	**Lac du Bonnet**	**140.40**	**294**	PKP	PKPdf	14 17 01.7	+0.4
	1.1nm,0.4s,baz=112,slow=5.4,SNR=2.5						
PDAR	**Pinedale Array**	**144.56**	**275**	PKP	PKPdf	14 17 08.3	-0.6
	0.5nm,0.8s,baz=123,slow=5.5,SNR=4.5						
NVAR	**Mina Array Bea**	**147.31**	**262**	PKPbc	PKPbc	14 17 18.7	+2.5
	0.4nm,0.5s,baz=141,slow=5.8,SNR=2.8						
ILAR	**Eielson Array**	**165.66**	**335**	PKPab	PKPab	14 18 38.0	+2.4
	0.4nm,0.7s,baz=9.0,slow=4.2,SNR=4.8						

*NEIC **17** 14:16:56.2, 17.°30N×100.°33W, h11km, MD3.5(MEX), After MEX.*
MEX 17 14:16:56.1±0.8, 17.°30N×100.°33W, h9km±6km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.26**	**166**	*i* P	Pg	14 17 00.6	-0.7
CAIG				*i* S	Sg	14 17 05.2	+0.3
CAIG	**El Cayaco**	**0.26**	**166**	*i* P	Pg	14 17 00.6	-0.7
CAIG				*i* S	Sg	14 17 05.2	+0.3
ACX	**Acapulco**	**0.62**	**133**	*i* P	Pg	14 17 07.1	-1.1
ACX				*i* S	Sg	14 17 13.9	-2.4
ACX	**Acapulco**	**0.62**	**133**	*i* P	Pg	14 17 07.1	-1.1
ACX				*i* S	Sg	14 17 13.9	-2.4
MEIG	**Mezcala**	**0.92**	**47**	*i* P	Pg	14 17 11.6	-2.3
MEIG				*i* S	Sg	14 17 23.3	-2.6
ZIIG	**Zihuatanejo**	**1.12**	**286**	*i* P	Pb	14 17 13.9	-3.8
ZIIG				*i* S	Sg	14 17 28.4	-3.9
ZIIG	**Zihuatanejo**	**1.12**	**286**	*i* P	Pb	14 17 13.9	-3.8
ZIIG				*i* S	Sg	14 17 28.4	-3.9
MZVM		**2.15**	**29**	*i* P	Pn	14 17 27.1	-5.1
PNIG	**Pinotepa**	**2.30**	**113**	*i* P	Pn	14 17 30.7	-3.4
PNIG				*i* S	Sn	14 17 55.3	-7.2
PNIG	**Pinotepa**	**2.30**	**113**	*i* P	Pn	14 17 30.7	-3.4
PNIG				*i* S	Sn	14 17 57.6	-4.9

*ISCJB **17** 14:20:26.9±0.8, 28.°02N±0.°07×139.°9E±0.°2, h391km±8km, mb3.4/9, Error ellipse: s-maj=32.0km s-min=7.8km az=166.6*
*IDC **17** 14:20:27.2±1.1, 27.°95N×139.°86E, h383km±13km, mb3.1/9, mb1 3.3/10, mb1mx3.1/24, mbtmp3.1/10, Error ellipse: s-maj=33.0km s-min=16.0km az=93.0*
*JMA **17** 14:20:28.8±0.1, 28.°17N×140.°58E, h408km, M3.7*
ISC 17 14:20:28.1±0.7, 27.°93N±0.°09×140.°0E±0.°2, h393km±7km, n18, σ0°96/24, mb3.4/9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.10**	**113**	P	**Pn**	**14 21 24.3**	**+0.3**
	21nm,0.3s,baz=304,slow=18,SNR=26						
CBIJ				S	**S**	**14 22 08.4**	**-0.7**
	88nm,0.3s,baz=298,slow=21,SNR=28						
CBIJ	**Chichi jima**	**2.10**	**113**	P	**Pn**	**14 21 24.3**	**+0.3**
CBIJ				S	**S**	**14 22 08.2**	**-0.9**
JHHJ	**Haha-jima-NKT**	**2.32**	**123**	P	**Pn**	**14 21 26.2**	**+0.7**
JHHJ				S	**S**	**14 22 11.9**	**0.0**
JNY	**Yasuok**	**7.63**	**347**	P	**Pn**	**14 22 19.8**	**+1.2**
JHU	**Hanno**	**7.92**	**356**	P	**Pn**	**14 22 21.8**	**-0.1**
JHU				*e*S	**S**	**14 23 49.2**	**-5.9**
JAG	**Ashikaga**	**8.49**	**357**	P	**Pn**	**14 22 27.3**	**-1.1**
JAG				*e*S	**S**	**14 24 00.5**	**-6.5**
JHO	**Hitachi**	**8.67**	**3**	P	**Pn**	**14 22 30.2**	**-0.3**
JHO				*e*S	**S**	**14 24 05.2**	**-5.7**
JHS	**Saijyo**	**9.19**	**322**	P	**Pn**	**14 22 39.2**	**+2.7**
WRA	**Warramunga Arr**	**47.90**	**187**	P	**P**	**14 28 28.8**	**+0.1**
	0.1nm,0.3s,mb2.7,baz=5.6,slow=7.6,SNR=8.1						
ASAR	**Alice Springs**	**51.63**	**187**	P	**P**	**14 28 55.6**	**-0.7**
	0.4nm,1.1s,mb2.6,baz=1.2,slow=5.1,SNR=4.8						
ILAR	**Eielson Array**	**57.91**	**29**	P	**P**	**14 29 39.0**	**-1.2**
	0.3nm,0.8s,mb2.6,baz=259,slow=5.9,SNR=4.5						
ARCES	**ARCESS Array B**	**72.12**	**340**	P	**P**	**14 31 11.1**	**+0.5**
	1.7nm,0.5s,mb3.8,baz=77,slow=8.5,SNR=18						
FINES	**FINESS Array B**	**76.35**	**333**	P	**P**	**14 31 34.0**	**-0.7**
	1.7nm,0.3s,mb4.1,baz=75,slow=4.0,SNR=12						
NVAR	**Mina Array Bea**	**81.51**	**51**	P	**P**	**14 32 04.1**	**+1.1**
	0.3nm,0.5s,mb3.3,baz=289,slow=5.5,SNR=3.7						
HFS	**Hagfors**	**81.89**	**336**	P	**P**	**14 32 03.7**	**-0.8**
	1.4nm,0.4s,mb4.1,baz=100,slow=1.7,SNR=18						
NB2	**NORSAR Subarra**	**82.12**	**337**	P	**P**	**14 32 05.0**	**-0.6**
	comp=Z,0.9nm,0.6s,mb3.7,baz=51,slow=4.6						
NOA	**NORSAR Array B**	**82.12**	**337**	P	**P**	**14 32 05.1**	**-0.5**
	comp=Z,1.1nm,0.6s,mb3.8,baz=49,slow=4.8,SNR=5.0						
TXAR	**Lajitas Array**	**96.63**	**52**	P	**P**	**14 33 16.6**	**+1.8**
	comp=Z,0.1nm,0.5s,mb3.2,baz=270,slow=4.1,SNR=2.5						

*IDC **17** 14:25:57.6±8.5, 0.°18N×123.°67E, h126km±82km, mb3.0/5, mb1 3.2/6, mb1mx3.1/19, mbtmp3.1/6, Error ellipse: s-maj=81.0km s-min=17.5km az=60.0*
*ISCJB **17** 14:25:59.2±0.5, 0.°03N±0.°07×123.°34E±0.°06, h156km±5km, mb3.3/5, Error ellipse: s-maj=12.1km s-min=8.8km az=37.4*
*DJA **17** 14:26:03, 0.°11S×123.°30E, h117km, MLv4.0/6*
*NEIC **17** 14:26:04.3±1.8, 0.°11S×123.°31E, h194km±20km, mb4.4/1, Error ellipse: s-maj=30.5km s-min=8.2km az=59.0*
ISC 17 14:26:00.3±0.5, 0.°01S±0.°06×123.°34E±0.°06, h149km±5km, n20, σ1°20/23, mb3.3/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.86**	**48**	P	**Pn**	**14 26 23.2**	**-0.7**
KMSI				S	**Sn**	**14 26 43.5**	**+1.7**
LUWI	**Luwuk**	**1.17**	**209**	P	**Pn**	**14 26 24.6**	**-1.9**
LUWI				S	**Sn**	**14 26 43.4**	**-3.2**
MRSI	**Marisa**	**1.48**	**289**	P	**Pn**	**14 26 27.5**	**-2.0**
TOLI	**Toli-Toli**	**2.78**	**294**	P	**Pn**	**14 26 45.6**	**+0.7**
TOLI				S	**Sn**	**14 27 18.9**	**-0.3**
TTSI	**Tana Toraja**	**4.63**	**229**	P	**Pn**	**14 27 09.5**	**+0.6**
NLAI	**Namlea**	**4.94**	**131**	P	**Pn**	**14 27 12.9**	**-0.1**
SPSI	**Sidrap Palu**	**5.31**	**222**	P	**Pn**	**14 27 19.3**	**+1.5**
	0.1nm20nm,1.0s						
KAPI	**Kappang**	**6.13**	**216**	*e*P	**Pn**	**14 27 31.3**	**+2.5**
MYLDM	**Lahad Datu**	**7.06**	**317**	P	**Pn**	**14 27 45.3**	**+4.0**
	29nm,0.8s						
KKM	**Kota Kinabalu**	**9.31**	**310**	*e*P	**Pn**	**14 28 16.0**	**+4.7**
KKM	**Kota Kinabalu**	**9.31**	**310**	P	**Pn**	**14 28 16.1**	**+4.8**
KAKA	**Kakadu**	**15.52**	**145**	*e*P	**Pn**	**14 29 32.2**	**+0.9**
	10nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.12**	**173**	P	**P**	**14 30 01.0**	**-0.1**
	0.1nm,0.3s,baz=23,slow=13,SNR=3.3						
FITZ	**Fitzroy Crossi**	**18.12**	**173**	*e*P	**P**	**14 30 01.4**	**+0.3**
WRA	**Warramunga Arr**	**22.55**	**152**	P	**P**	**14 30 47.7**	**-0.5**
	0.3nm,0.4s,mb3.1,baz=333,slow=10,SNR=7.8						
WB2	**Warramunga Arr**	**22.56**	**152**	P	**P**	**14 30 46.9**	**-1.3**
ASAR	**Alice Springs**	**25.66**	**157**	P	**P**	**14 31 16.3**	**-0.1**
	0.2nm,0.6s,mb2.9,baz=341,slow=14,SNR=5.3						
ASAR				PcP	PcP	14 34 43.0	-0.1
	0.2nm,0.4s,baz=348,slow=2.0,SNR=7.2						
CMAR	**Chiang Mai Arr**	**30.18**	**309**	P	**P**	**14 31 57.6**	**+0.8**
	0.5nm,0.8s,mb3.6,baz=130,slow=7.1,SNR=4.6						
SONM	**Songino Array**	**49.88**	**345**	P	**P**	**14 34 37.7**	**-0.7**
	0.6nm,0.4s,mb3.6,baz=160,slow=10,SNR=4.0						
MKAR	**Makanchi Array**	**58.80**	**328**	P	**P**	**14 35 42.6**	**-0.3**
	0.2nm,0.4s,mb3.3,baz=119,slow=7.1,SNR=1.9						

CASC 17 14:36:18.8±2.0, 11.°28N×85.°62W, h166km±8km, MD3.7, ML2.1, 1C, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONN	**Concepcion**	**0.28**	**358**	*e*P	Pn	14 36 42.1	+1.0
GB1A	**Borinquen Arri**	**0.51**	**155**	*i* P	Pn	14 36 42.5	+0.5
GBS3	**Finca Las Im¨¡**	**0.52**	**162**	*i* P	Pn	14 36 42.1	+0.1
GBS3				*i* S	Sn	14 37 01.3	+1.4
BUEV	**Buena Vista**	**0.52**	**157**	*i* P	Pn	14 36 42.3	+0.2
LAPC	**Finca la Perla**	**0.54**	**161**	*i* P	Pn	14 36 42.1	0.0
LAPC				*i* S	Sn	14 37 01.1	+1.0
CUI	**Cuipilapa**	**0.76**	**144**	*i* P	Pn	14 36 44.0	+0.6
CUI				*i* S	Sn	14 37 04.1	+1.9
TICN	**Ticuantepe**	**0.96**	**321**	*e*P	Pn	14 36 45.8	+1.1
CRUN	**El Crucero**	**0.97**	**316**	*e*P	Pn	14 36 46.4	+1.6
MGAN	**Managua**	**1.06**	**324**	*e*P	Pn	14 36 46.4	+0.9
TISN	**Laguna Tiscapa**	**1.07**	**323**	*e*P	Pn	14 36 46.4	+0.8
XAVN	**Gruta Xavier**	**1.11**	**321**	*e*P	Pn	14 36 46.7	+0.8
VCR	**Vista de Mar**	**1.15**	**181**	⇑*i*P	Pn	14 36 46.4	+0.1
VCR				*e*S	Sn	14 37 06.0	-1.4
BOAB	**BOACO BROADBAN**	**1.16**	**358**	*e*P	Pn	14 36 46.1	-0.3
BOAB				*e*S	Sn	14 37 08.3	+0.7
BOAB				AML	AML	14 37 11.4	
	comp=E,14nm,0.6s						
HUEN		**1.18**	**333**	*e*P	Pn	14 36 46.8	+0.2
CSAN		**1.19**	**319**	*e*P	Pn	14 36 47.1	+0.4
COPN	**Copaltepe**	**1.31**	**313**	*e*P	Pn	14 36 48.0	+0.3
MOMN	**Momotombo**	**1.44**	**321**	*e*P	Pn	14 36 49.6	+0.7
JCR	**Jicaral**	**1.51**	**161**	*e*P	Pn	14 36 49.6	0.0
JCR				*e*S	Sn	14 37 14.6	+1.2
CNGN	**Cerro Negro**	**1.61**	**319**	*e*P	Pn	14 36 50.5	-0.2
CGA2	**Cerro Gallo 2**	**1.69**	**138**	*e*P	Pn	14 36 52.1	+0.5
CGA2				*e*S	Sn	14 37 17.8	+1.0
PRS1	**Puriscal**	**1.82**	**135**	*e*P	Pn	14 36 54.9	+2.0
PRS1				*e*S	Sn	14 37 20.1	+0.9
CRIN	**San Cristobal**	**1.99**	**315**	*e*P	Pn	14 36 54.6	-0.1
LAJ	**Bijagual**	**2.04**	**134**	*e*P	Pn	14 36 53.8	-1.5
LAJ				*e*S	Sn	14 37 22.2	-1.3
URSC	**Urasca**	**2.31**	**128**	*e*P	Pn	14 37 00.1	+1.7
URSC				*e*S	Sn	14 37 31.2	+2.1
QCR	**Quepos**	**2.33**	**142**	*e*P	Pn	14 36 59.7	+0.9
QCR				*e*S	Sn	14 37 31.0	+1.4

*IDC **17** 14:45:49.5±0.9, 3.°90S×123.°86E, h0km, mb3.8/7, mb1 4.1/10, mb1mx3.9/20, mbtmp3.9/10, ML3.7/3, MS3.8/2, Ms1 3.8/2, ms1mx2.8/27, Error ellipse: s-maj=32.0km s-min=16.3km az=63.0*
*ISCJB **17** 14:45:52.7±0.7, 3.°82S±0.°05×123.°88E±0.°04, h40km±9km, mb3.9/8, MS3.7/2, Error ellipse: s-maj=8.1km s-min=7.1km az=16.4*
*DJA **17** 14:45:53, 3.°62S×123.°80E, h19km, MLv4.2/5*
*NEIC **17** 14:45:53.6±3.7, 3.°90S×123.°87E, h29km±28km, mb4.4/1, Error ellipse: s-maj=21.7km s-min=8.4km az=53.0*
ISC 17 14:45:54.3±2.0, 3.°86S±0.°05×123.°86E±0.°04, h33km±17km, n28, σ1°30/31, mb3.9/8, MS3.7/2, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.25**	**265**	P	**Pn**	**14 46 14.3**	**-1.1**
KDI				S	**Sn**	**14 46 30.2**	**-0.8**
BBSI	**Bau Bau**	**2.07**	**218**	P	**Pn**	**14 46 28.2**	**+1.5**
LUWI	**Luwuk**	**3.00**	**339**	P	**Pn**	**14 46 37.7**	**-1.9**
LUWI				S	**Sn**	**14 47 10.0**	**-4.4**
NLAI	**Namlea**	**3.29**	**79**	P	**Pn**	**14 46 44.3**	**+0.8**
BKSI	**Bulukumba**	**4.00**	**249**	P	**Pn**	**14 46 55.9**	**+2.6**
KAPI	**Kappang**	**4.26**	**254**	Pn	**Pn**	**14 46 57.5**	**+0.7**
	14nm,0.3s,baz=111,slow=6.1,SNR=51						
KAPI				Sn	**Sn**	**14 47 45.0**	**-0.4**
	12nm,0.3s,baz=240,slow=22,SNR=23						
KAPI	**Kappang**	**4.26**	**254**	*e*P	**Pn**	**14 46 57.4**	**+0.6**
KAPI				Sn	**Sn**	**14 47 45.0**	**-0.4**
KAPI	**Kappang**	**4.26**	**254**	P	**Pn**	**14 46 57.8**	**+1.0**
KAPI				S	**Sn**	**14 47 46.2**	**+0.8**
TNTI	**Ternate**	**5.78**	**37**	P	**Pn**	**14 47 15.6**	**-2.2**
	4μm148nm,0.5s						
TOLI	**Toli-Toli**	**5.82**	**328**	P	**Pn**	**14 47 18.7**	**+0.4**
	3μm313nm,0.8s						
BNDI	**Bandanaira**	**6.06**	**96**	P	**Pn**	**14 47 23.9**	**+2.2**
MYLDM	**Lahad Datu**	**10.45**	**329**	P	**Pn**	**14 48 23.1**	**+1.1**
KAKA	**Kakadu**	**12.22**	**137**	*e*P	**Pn**	**14 48 46.3**	**+0.2**
	20nm,0.7s						
KKM	**Kota Kinabalu**	**12.45**	**322**	*e*P	**Pn**	**14 48 48.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**14.26**	**173**	Pn	**Pn**	**14 49 12.1**	**-1.9**
	0.2nm,0.3s,baz=27,slow=4.8,SNR=8.5						
WRA	**Warramunga Arr**	**18.97**	**148**	P	**Pn**	**14 50 10.9**	**-3.0**
	0.2nm,0.3s,baz=320,slow=13,SNR=33						
WB2	**Warramunga Arr**	**18.98**	**148**	*e*P	**Pn**	**14 50 11.3**	**-2.7**
ASAR	**Alice Springs**	**21.95**	**155**	P	**P**	**14 50 46.5**	**+1.2**
	1.8nm,0.8s,mb3.5,baz=325,slow=7.5,SNR=23						
CTA	**Charters Tower**	**27.14**	**128**	LR	LR	15 02 57.5	
	comp=Z,74nm,20.1s,MS3.2,baz=232,slow=38						
STKA	**Stephens Creek**	**32.47**	**151**	P	**P**	**14 52 21.9**	**+0.1**
	1.5nm,0.7s,mb3.9,baz=296,slow=15,SNR=3.7						
CMAR	**Chiang Mai Arr**	**33.08**	**313**	P	**P**	**14 52 27.9**	**+0.7**
	0.6nm,0.7s,mb3.6,baz=143,slow=7.2,SNR=5.1						
JHJ	**Hachijo jima 2**	**39.75**	**21**	LR	LR	15 07 02.7	
	comp=Z,381nm,22.0s,MS4.2,baz=108,slow=32						
SONM	**Songino Array**	**53.71**	**345**	P	**P**	**14 55 14.5**	**+1.5**
	0.5nm,0.5s,mb3.7,baz=176,slow=11,SNR=3.8						
MK31	**Makanchi Array**	**62.34**	**329**	*e*P	**P**	**14 56 13.7**	**+0.2**
MKAR	**Makanchi Array**	**62.34**	**329**	P	**P**	**14 56 14.2**	**+0.7**
	1.5nm,0.9s,mb4.1,baz=122,slow=8.1,SNR=8.8						
ZALV	**Zalesovo Beam**	**66.16**	**336**	P	**P**	**14 56 37.8**	**-0.6**
	0.6nm,0.4s,mb4.0,baz=134,slow=8.5,SNR=4.5						
KURK	**Kurchatov**	**66.73**	**331**	*e*P	**P**	**14 56 42.0**	**-0.1**
	3.1nm,0.9s,mb4.3						
MAW	**Mawson**	**75.69**	**200**	P	**P**	**14 57 35.0**	**-1.0**
	1.3nm,0.9s,mb3.9,baz=95,slow=12,SNR=2.8						

IDC 17 14:46:28.7±28.0, 16.°05S×174.°01W, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.9/18, mbtmp4.3/4, Error ellipse: s-maj=557.7km s-min=144.6km az=85.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.20**	**240**	P	P	14 54 32.5	+0.8
	3.8nm,0.9s,baz=92,slow=12,SNR=10						
WRA	**Warramunga Arr**	**49.12**	**257**	P	P	14 55 17.5	-1.1
	0.9nm,0.4s,baz=97,slow=6.8,SNR=34						
ASAR	**Alice Springs**	**49.35**	**252**	P	P	14 55 19.6	-0.6
	8.3nm,0.6s,baz=89,slow=7.8,SNR=184						
FITZ	**Fitzroy Crossi**	**57.50**	**259**	P	P	14 56 20.9	+0.6
	0.7nm,0.3s,baz=76,slow=8.3,SNR=7.8						

*ISCJB **17** 14:54:30.4±0.4, 23.°92N±0.°02×122.°51E±0.°02, h18km±4km, Error ellipse: s-maj=3.8km s-min=2.7km az=159.8*
*TAP **17** 14:54:30.4, 23.°95N×122.°39E, h6km±1km, ML3.2, D*
*JMA **17** 14:54:32.0±0.2, 24.°28N×122.°46E, h53km, M2.5*
ISC 17 14:54:29.6±0.5, 23.°93N±0.°02×122.°51E±0.°02, h9km±3km, n36, σ0°52/72, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.70**	**41**	P	**Pg**	**14 54 43.8**	**+0.6**
YOJ				S	**Sg**	**14 54 52.3**	**-0.1**
HWA	**Hwalien**	**0.82**	**273**	*i* P	**Pg**	**14 54 45.4**	**-0.1**
	baz=271						
HWA				*i* S	**Sg**	**14 54 56.0**	**-0.2**
	baz=271						
TWD	**Chiawan**	**0.84**	**280**	*i* P	**Pg**	**14 54 45.9**	**0.0**
	baz=279						
TWD				*i* S	**Sg**	**14 54 56.5**	**-0.4**
	baz=279						
ENA	**Nanau**	**0.86**	**306**	*i* P	**Pg**	**14 54 46.0**	**-0.1**
	baz=308						
ENA				*i* S	**Sg**	**14 54 57.8**	**+0.5**
	baz=308						
TWC	**Suao**	**0.90**	**319**	⇑*i*P	**Pg**	**14 54 46.5**	**-0.6**
	baz=323						
TWC				S	**Sg**	**14 54 58.2**	**-0.6**
	baz=323						
ESL	**Shilin**	**0.99**	**264**	P	**Pg**	**14 54 48.4**	**-0.2**
	baz=260						
ESL				S	**Sg**	**14 55 01.1**	**-0.4**
	baz=260						
ILA	**Ilan**	**1.08**	**320**	*e*P	**Pg**	**14 54 50.9**	**+0.5**
	baz=324						
ILA				*e*S	**Sg**	**14 55 05.2**	**+0.7**
	baz=324						
TWE	**Neicheng**	**1.10**	**316**	⇑*i*P	**Pg**	**14 54 50.2**	**-0.6**
	baz=319						
TWE				S	**Sg**	**14 55 05.0**	**0.0**
	baz=319						
ENTT	**Nioudou**	**1.11**	**310**	P	**Pg**	**14 54 50.7**	**-0.3**
	baz=312						
ENTT				S	**Sg**	**14 55 05.0**	**-0.4**
	baz=312						
EHY	**Hungye**	**1.16**	**249**	P	**Pb**	**14 54 51.5**	**-0.4**
	baz=245						
EHY				S	**Sb**	**14 55 06.8**	**-0.3**
	baz=245						
TWB1	**Santiao Chiao**	**1.17**	**336**	P	**Pb**	**14 54 51.1**	**-0.9**
	baz=341						
TWB1				*e*S	**Sb**	**14 55 07.7**	**+0.4**
	baz=341						
IRIF	**Iriomote-Funau**	**1.19**	**70**	P	**Pb**	**14 54 52.1**	**-0.2**
IRIF				*e*S	**Sb**	**14 55 07.5**	**-0.3**
TWF1	**Yuli**	**1.25**	**243**	*e*P	**Pn**	**14 54 53.0**	**-0.2**
	baz=238						
TWF1				*e*S	**Sb**	**14 55 10.1**	**+0.6**
	baz=238						
NSK	**Sanguang**	**1.28**	**306**	*e*P	**Pn**	**14 54 53.2**	**-0.5**
	baz=307						
NSK				*e*S	**Sb**	**14 55 10.6**	**+0.1**
	baz=307						
NWF	**Wu-fen Shan**	**1.31**	**330**	*e*P	**Pn**	**14 54 54.0**	**-0.1**
	baz=333						
NWF				*e*S	**Sb**	**14 55 11.4**	**0.0**
	baz=333						
CHKT	**Chengkung**	**1.33**	**232**	*e*P	**Pn**	**14 54 54.7**	**+0.3**
	baz=227						
CHKT				*e*S	**Sb**	**14 55 12.1**	**+0.2**
	baz=227						
TWA	**Mucha**	**1.34**	**321**	*e*P	**Pn**	**14 54 55.2**	**+0.7**
	baz=324						
TWA				*e*S	**Sb**	**14 55 12.6**	**+0.4**
	baz=324						
JKRS	**Kuro-shima**	**1.41**	**77**	P	**Pn**	**14 54 55.7**	**+0.3**
JKRS				*e*S	**Sn**	**14 55 14.2**	**+0.1**
TAP1	**Taipei**	**1.42**	**321**	*e*P	**Pn**	**14 54 55.8**	**+0.2**
	baz=323						
TAP1				*e*S	**Sn**	**14 55 14.3**	**-0.1**
	baz=323						
SMLT	**Sun Moon Lake**	**1.47**	**269**	*e*P	**Pn**	**14 54 56.4**	**+0.2**
	baz=266						
SMLT				*e*S	**Sn**	**14 55 15.2**	**-0.4**
	baz=266						
YUS	**Yu-Shan**	**1.49**	**253**	*e*P	**Pn**	**14 54 57.1**	**+0.6**
	baz=250						
YUS				*e*S	**Sn**	**14 55 15.7**	**-0.3**
	baz=250						
TYC	**Yuchr**	**1.51**	**269**	*e*P	**Pn**	**14 54 56.6**	**-0.2**
	baz=268						
TYC				*e*S	**Sn**	**14 55 15.7**	**-0.8**
	baz=268						
TWS1	**Kuangyinshan**	**1.53**	**320**	*e*P	**Pn**	**14 54 57.2**	**+0.1**
	baz=322						
TWS1				*e*S	**Sn**	**14 55 17.4**	**+0.3**
	baz=322						
NSTT	**Nanjuang**	**1.54**	**297**	*e*P	**Pn**	**14 54 57.6**	**+0.4**
	baz=298						
NSTT				*e*S	**Sn**	**14 55 17.0**	**-0.3**
	baz=298						
ELDTW	**Lidau**	**1.55**	**242**	*e*P	**Pn**	**14 54 58.1**	**+0.7**
	baz=238						
ELDTW				*e*S	**Sn**	**14 55 17.9**	**+0.3**
	baz=238						
JIJ	**Ishigaki jima**	**1.56**	**74**	P	**Pn**	**14 54 57.3**	**-0.1**
JIJ				*e*S	**Sn**	**14 55 17.2**	**-0.5**
TWY	**Chenhua**	**1.57**	**329**	*e*P	**Pn**	**14 54 58.4**	**+0.7**
	baz=331						
TWY				*e*S	**Sn**	**14 55 19.1**	**+0.9**
	baz=331						
ALS	**Alishan**	**1.61**	**255**	*e*P	**Pn**	**14 54 58.3**	**+0.1**
	baz=252						
ALS				*e*S	**Sn**	**14

MKAR Makanchi Array 42.06 305 P P 15 02 34.1 +0.3
1.1nm,0.7s,mb3.6,baz=94,slow=9.9,SNR=11

*ISCJB **17** 14:54:51.0±0.8, 32°.33N±0°.04×104°.59E±0°.07, h12km±10km, mb3.6/3, Error ellipse: s-maj=10.9km s-min=6.1km az=25.6*
*IDC **17** 14:54:53.1±1.6, 32°.51N×105°.50E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/23, mbtmp3.5/3, Error ellipse: s-maj=691.8km s-min=28.4km az=61.0*
*BJI **17** 14:54:58.0, 32°.24N×104°.71E, h15km, ML3.3/8*
ISC 17 14:54:53.1±1.0, 32°.27N±0°.04×104°.7E±0°.1, h2km±10km, n6, σ0s73/9, mb3.6/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.58**	**211**	Pg	**Pg**	**14 55 26.8**	**+0.5**
CD2				Sg	**Sg**	**14 55 43.6**	**-0.1**
CD2	comp=N,2μm,0.7s			smax			
CD2	comp=E,930nm,1.0s			smax			
LZH	**Lanzhou**	**3.88**	**350**	*e*Pg	**Pg**	**14 56 06.1**	**-1.3**
LZH				Sg	**Sg**	**14 56 57.9**	**+0.3**
LZH	comp=N,42nm,0.6s			smax			
LZH	comp=E,72nm,0.7s			smax			
XAN	**Xi'an**	**3.95**	**62**	Pg	**Pg**	**14 56 09.3**	**+0.5**
XAN				Sg	**Sg**	**14 57 05.9**	**+5.9**
XAN	comp=N,88nm,0.6s			smax			
XAN	comp=E,35nm,0.6s			smax			
ZALV	**Zalesovo Beam**	**25.92**	**333**	P	**P**	**15 00 27.6**	**+1.2**
	comp=E,0.8nm,0.6s,mb3.5,baz=139,slow=9.2,SNR=3.8						
WRA	**Warramunga Arr**	**59.16**	**147**	P	**P**	**15 04 54.7**	**-0.7**
	comp=E,0.4nm,0.4s,mb3.8,baz=319,slow=11,SNR=18						
ASAR	**Alice Springs**	**62.22**	**150**	P	**P**	**15 05 15.9**	**-0.3**
	comp=E,0.2nm,0.5s,mb3.5,baz=335,slow=6.5,SNR=7.7						

IDC 17 15:08:11.7±1.2, 18°.63N×146°.43E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.8/22, mbtmp4.0/6, MS3.2/1, Ms1 3.2/1, ms1mx2.0/29, Error ellipse: s-maj=124.4km s-min=18.8km az=111.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.12**	**198**	P	P	15 15 49.6	+0.3
	4.0nm,0.7s,baz=22,slow=9.1,SNR=75						
ASAR	**Alice Springs**	**43.78**	**197**	P	P	15 16 19.1	-0.2
	0.8nm,0.4s,baz=11,slow=6.6,SNR=25						
STKA	**Stephens Creek**	**50.43**	**185**	P	P	15 17 10.6	-0.5
	1.3nm,0.7s,baz=24,slow=10.0,SNR=3.8						
MKAR	**Makanchi Array**	**59.01**	**314**	LR	LR	15 42 01.9	
	comp=Z,19nm,19.6s,baz=172,slow=34						
ILAR	**Eielson Array**	**63.41**	**26**	P	P	15 18 41.1	-1.6
	0.6nm,0.7s,baz=255,slow=5.4,SNR=6.9						
INK	**Inuvik**	**69.17**	**23**	P	P	15 19 20.9	+1.2
	2.2nm,0.9s,baz=301,slow=5.9,SNR=2.9						
NVAR	**Mina Array Bea**	**82.64**	**52**	P	P	15 20 38.2	+1.0
	0.9nm,0.7s,baz=262,slow=5.4,SNR=7.5						

*KISR **17** 15:09:01.0±0.9, 32°.12N×47°.74E, h34km, ML2.5*
*CSEM **17** 15:09:01.0±0.2, 32°.45N×47°.33E, h5km, ML3.1, Error ellipse: s-maj=4.8km s-min=2.8km az=105.0*
*ISCJB **17** 15:09:03.5±2.3, 32°.44N±0°.03×47°.31E±0°.07, h31km±22km, Error ellipse: s-maj=9.4km s-min=4.4km az=172.0*
*TEH **17** 15:09:05.8, 32°.50N×47°.33E, h31km*
ISC 17 15:09:02.5±1.8, 32°.44N±0°.03×47°.35E±0°.09, h13km±11km, n17, σ0s91/26, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.28**	**105**	*e*Pg	**Pg**	**15 09 25.8**	**-1.3**
SHGR				*e*Sg	**Sg**	**15 09 43.3**	**-0.4**
IKOM	**Komasi**	**1.73**	**4**	*e*Pn	**Pn**	**15 09 33.1**	**+0.8**
IKOM				*e*Sn	**Sn**	**15 09 53.3**	**-1.0**
IKOM	comp=Z,3μm,0.2s			*e*		15 10 00.9	
IGHG	**Ghaleghazi**	**1.99**	**341**	*e*Pn	**Pn**	**15 09 37.1**	**+1.2**
IGHG				*e*		15 10 15.1	
IGHG	comp=Z,2μm,0.2s						
IVIS	**Veis**	**2.12**	**349**	*e*Pn	**Pn**	**15 09 38.7**	**+1.0**
IVIS				*e*Sn	**Sn**	**15 10 02.8**	**-1.0**
IVIS	comp=Z,1μm,0.2s			*e*		15 10 17.1	
IDHR	**Dehrash**	**2.39**	**341**	*e*Pn	**Pn**	**15 09 41.5**	**+0.1**
IDHR				*e*Sn	**Sn**	**15 10 08.7**	**-1.8**
IDHR	comp=Z,2μm,0.2s			*e*		15 10 21.0	
ILIN	**Lien**	**2.49**	**353**	*e*Pn	**Pn**	**15 09 43.4**	**+0.6**
ILIN				*e*		15 09 50.0	
ILIN	comp=Z,737nm,0.1s						
MIB	**Mutribah**	**2.63**	**180**	*e*P	**Pn**	**15 09 44.5**	**-0.1**
MIB				*e*S	**Sn**	**15 10 17.0**	**+0.6**
MIB	comp=Z,29nm,0.5s			AML	AML	15 10 22.7	
MIB	**Mutribah**	**2.63**	**180**	*e*P	**Pn**	**15 09 44.5**	**-0.1**
MIB				*e*S	**Sn**	**15 10 17.0**	**+0.6**
SNGE	**Sanandaj**	**2.65**	**0**	*e*Pn	**Pn**	**15 09 44.4**	**-0.5**
IPIR	**Pirpir**	**3.00**	**84**	*e*Pn	**Pn**	**15 09 51.3**	**+1.5**
IPIR				*e*		15 10 31.7	
IPIR	comp=Z,374nm,0.2s						
ASAO	**Ashtian**	**3.07**	**46**	*e*Pn	**Pn**	**15 09 50.7**	**0.0**
NAY	**Al-Naaiem**	**3.18**	**182**	*e*P	**Pn**	**15 09 51.6**	**-0.7**
NAY				*e*S	**Sn**	**15 10 30.6**	**+0.6**
NAY	comp=Z,7.9nm,0.6s			AML	AML	15 10 33.6	
NAY	**Al-Naaiem**	**3.18**	**182**	*e*P	**Pn**	**15 09 51.6**	**-0.7**
NAY				*e*S	**Sn**	**15 10 30.6**	**+0.5**
IRAZ	**Razeghan**	**3.65**	**35**	*e*Pn	**Pn**	**15 10 00.3**	**+1.6**
IRAZ				*e*		15 10 11.0	
IRAZ	comp=Z,497nm,0.2s						
QRN	**Al-Qurain**	**3.72**	**172**	*e*P	**Pn**	**15 09 59.3**	**-0.3**
QRN				*e*S	**Sn**	**15 10 42.1**	**-1.1**
QRN	comp=Z,23nm,0.3s			AML	AML	15 10 46.6	
GHVR	**GHOM**	**3.88**	**57**	*e*Pn	**Pn**	**15 10 01.4**	**-0.4**
IDMV	**Damavand**	**4.99**	**50**	*e*Pn	**Pn**	**15 10 17.7**	**+0.6**
IDMV				*e*		15 10 21.0	
IDMV	comp=Z,118nm,0.1s						

*IDC **17** 15:22:35.2±2.9, 17°.45S×168°.50E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/16, mbtmp3.9/3, Error ellipse: s-maj=120.9km s-min=46.3km az=146.0*
*NOU **17** 15:22:49.1±1.3, 17°.79S×168°.46E, h30km, MD3.1, ML2.9*
ISC 17 15:22:51.8±2.5, 17°.71S±0°.09×167°.1E±0°.3, h35km, n9, σ0s90/12, mb3.7/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.39**	**188**	*e*P	**Pn**	**15 23 56.1**	**+0.2**
DZM				*e*S	**Sn**	**15 24 46.3**	**+0.5**
DZM	comp=Z,693nm,7.6s			AMP		15 24 46.5	
BAYA	**Yate Dam**	**4.43**	**183**	*e*S	**Sn**	**15 24 43.5**	**-3.2**
NOUC	**Port Laguerre**	**4.44**	**190**	*e*P	**Pn**	**15 23 57.4**	**+0.8**
NOUC				*e*S	**Sn**	**15 24 48.4**	**+1.4**
NOUC	comp=Z,44nm,3.4s			AMP		15 24 49.7	
NORM	**Noumea**	**4.54**	**188**	*e*P	**Pn**	**15 23 58.2**	**+0.2**
NORM				*e*S	**Sn**	**15 24 48.2**	**-1.2**
PLUM	**Mont Dore**	**4.56**	**186**	*e*P	**Pn**	**15 23 58.2**	**-0.1**
PLUM				*e*S	**Sn**	**15 24 50.0**	**-0.1**
STKA	**Stephens Creek**	**27.05**	**234**	P	**P**	**15 28 29.6**	**-1.3**
	comp=Z,1.8nm,0.9s,mb3.6,baz=78,slow=9.3,SNR=3.8						
WRA	**Warramunga Arr**	**31.10**	**261**	P	**P**	**15 29 07.2**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.4,baz=90,slow=9.0,SNR=10						
ASAR	**Alice Springs**	**31.60**	**254**	P	**P**	**15 29 11.7**	**+0.3**
	comp=Z,1.1nm,0.5s,mb4.0,baz=83,slow=8.6,SNR=39						
ARCES	**ARCESS Array B**	**123.09**	**345**	PKP	PKPdf	15 41 33.1	-11
	comp=Z,2.8nm,0.9s,baz=70,slow=3.0,SNR=4.9						

IDC 17 15:44:19.5±67.0, 13°.27S×164°.79E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/17, mbtmp3.9/3, Error ellipse: s-maj=1119.0km s-min=106.8km az=61.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.21**	**225**	P	P	15 50 13.7	-0.4
	1.7nm,0.6s,baz=72,slow=11,SNR=5.2						
WRA	**Warramunga Arr**	**29.89**	**253**	P	P	15 50 29.5	+0.3
	0.4nm,0.5s,baz=84,slow=8.8,SNR=7.6						
ASAR	**Alice Springs**	**31.00**	**246**	P	P	15 50 39.1	+0.2
	1.1nm,0.7s,baz=70,slow=9.8,SNR=28						

*IDC **17** 15:50:05.5±2.3, 20°.69S×177°.72W, h329km±23km, mb3.9/13, mb1 4.1/15, mb1mx3.9/21, mbtmp3.9/15, Error ellipse: s-maj=22.0km s-min=10.9km az=145.0*
*ISCJB **17** 15:50:10.7±1.4, 20°.74S±0°.07×177°.90W±0°.09, h394km±14km, mb4.1/26, Error ellipse: s-maj=15.7km s-min=9.0km az=35.3*
*NEIC **17** 15:50:11.7±1.2, 20°.63S×177°.91W, h391km±11km, mb4.3/12, Error ellipse: s-maj=13.6km s-min=8.1km az=137.0*
ISC 17 15:50:11.7±1.5, 20°.70S±0°.09×177°.87W±0°.10, h390km±14km, n75, σ0s95/51, mb4.1/26, 4C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.86**	**307**	*e*P	**Pn**	**15 51 31.2**	**-0.6**
AFI	**Afiamalu**	**8.91**	**42**	P	**Pn**	**15 52 08.4**	**-8.7**
	16nm,0.3s,baz=335,slow=1.4,SNR=31						
AFI				S	**S**	**15 53 42.9**	**-17**
	22nm,0.3s,baz=54,slow=19,SNR=10						
AFI	**Afiamalu**	**8.91**	**42**	*e*P	**Pn**	**15 52 08.3**	**-8.8**
AFI				S	**S**	**15 53 42.9**	**-17**
DZM	**Mont Dzumac**	**14.68**	**262**	*e*P	**P**	**15 53 23.1**	**+1.9**
NOUC	**Port Laguerre**	**14.81**	**262**	*e*P	**P**	**15 53 24.3**	**+1.7**
URZ	**Urewera**	**18.03**	**193**	P	**P**	**15 53 53.3**	**-3.6**
	3.0nm,0.3s,baz=303,slow=4.7,SNR=13						
URZ				S	**S**	**15 56 57.8**	**-5.5**
	1.0nm,0.3s,baz=124,slow=22,SNR=8.9						
URZ	**Urewera**	**18.03**	**193**	*e*P	**P**	**15 53 53.3**	**-3.6**
URZ				S	**S**	**15 56 57.8**	**-5.4**
RPZ	**Rata Peaks**	**24.75**	**199**	P	**P**	**15 54 59.4**	**-0.2**
	5.5nm,0.4s,mb4.4,baz=178,slow=4.7,SNR=8.6						
ARMA	**Armidale**	**29.09**	**244**	*e*P	**P**	**15 55 39.1**	**+0.8**
CNB	**Canberra Magne**	**32.22**	**236**	*e*P	**P**	**15 56 05.8**	**+0.4**
CAN	**Canberra**	**32.50**	**236**	*e*P	**P**	**15 56 08.0**	**+0.2**
	13nm,0.8s,mb4.3						
CTA	**Charters Tower**	**33.59**	**265**	P	**P**	**15 56 18.2**	**+0.8**
	35nm,0.6s,mb4.9,baz=97,slow=10,SNR=76						
CTA	**Charters Tower**	**33.59**	**265**	*e*P	**P**	**15 56 17.8**	**+0.4**
	26nm,0.5s,mb4.8						
CTA	**Charters Tower**	**33.59**	**265**	P	**P**	**15 56 18.2**	**+0.8**
CTAO	**Charters Tower**	**33.59**	**265**	*e*P	**P**	**15 56 17.6**	**+0.2**
	27nm,0.6s,mb4.8						
PMG	**Port Moresby**	**35.51**	**283**	*e*P	**P**	**15 56 34.0**	**+0.3**
	30nm,1.0s,mb4.6						
TOO	**Toolangi**	**35.88**	**234**	*e*P	**P**	**15 56 35.9**	**-0.6**
STKA	**Stephens Creek**	**37.81**	**244**	P	**P**	**15 56 52.9**	**+0.2**
	4.5nm,0.5s,mb4.1,baz=90,slow=11,SNR=27						
STKA	**Stephens Creek**	**37.81**	**244**	*e*P	**P**	**15 56 52.6**	**-0.1**
	3.1nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**37.81**	**244**	*e*P	**P**	**15 56 52.5**	**-0.2**
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**15 57 47.0**	**-0.3**
	49nm,0.7s,mb4.9,baz=96,slow=8.2,SNR=609						
WB2	**Warramunga Arr**	**44.69**	**262**	*e*P	**P**	**15 57 46.7**	**-1.3**
WRA	**Warramunga Arr**	**44.70**	**262**	P	**P**	**15 57 47.1**	**-1.0**
	13nm,0.6s,mb4.4,baz=98,slow=7.4,SNR=279						
KAKA	**Kakadu**	**48.10**	**271**	*e*P	**P**	**15 58 13.7**	**-0.6**
	8.2nm,0.3s,mb4.5						
KAKA	**Kakadu**	**48.10**	**271**	*e*P	**P**	**15 58 13.5**	**-0.8**
	29nm,0.5s,mb4.9						
FORT	**Forrest**	**49.33**	**247**	*e*P	**P**	**15 58 22.3**	**-1.0**
	12nm,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**53.12**	**262**	*e*P	**P**	**15 58 51.2**	**-0.1**
	15nm,1.5s,mb4.0						
FITZ	**Fitzroy Crossi**	**53.12**	**262**	*e*P	**P**	**15 58 51.0**	**-0.3**
	11nm,1.0s,mb4.0						
SBA	**Scott Base**	**57.68**	**184**	*e*P	**P**	**15 59 24.4**	**+1.9**
MBWA	**Marble Bar**	**57.93**	**257**	*e*P	**P**	**15 59 24.5**	**-0.6**
CASY	**Casey**	**63.84**	**205**	*e*P	**P**	**16 00 03.2**	**-0.3**
	9.4nm,0.8s,mb4.4						
QSPA	**South Pole Qui**	**69.37**	**180**	*e*P	**P**	**16 00 38.7**	**+0.8**
	4.8nm,0.8s,mb4.2						
PETK	**Petropavlovsk-**	**76.49**	**345**	P	**P**	**16 01 17.1**	**-2.4**
	8.0nm,0.8s,mb4.4,baz=126,slow=9.8,SNR=6.2						
ISA	**Isabella**	**79.38**	**45**	*e*P	**P**	**16 01 36.0**	**+0.3**
	1.5nm,0.7s,mb3.7						
YBH	**Yreka Blue Hor**	**80.37**	**39**	P	**P**	**16 01 41.5**	**+0.8**
	2.4nm,0.5s,mb4.0,baz=90,slow=0.8,SNR=10.0						
WAKR	**Walker**	**80.40**	**43**	*e*P	**P**	**16 01 41.4**	**+0.4**
	2.3nm,0.8s,mb3.9						
NVAR	**Mina Array Bea**	**81.08**	**43**	P	**P**	**16 01 45.0**	**+0.5**
	1.4nm,0.6s,mb3.9,baz=224,slow=8.2,SNR=16						
LDFC	**Landfair**	**81.34**	**48**	*e*P	**P**	**16 01 46.8**	**+0.8**
	6.0nm,0.8s,mb4.4						
MAW	**Mawson**	**81.42**	**200**	P	**P**	**16 01 45.3**	**-0.6**
	0.6nm,0.5s,mb3.6,baz=107,slow=11,SNR=3.6						
CCUT	**Cedar City**	**83.86**	**46**	*e*P	**P**	**16 01 59.3**	**+0.6**
	2.7nm,0.9s,mb4.0						
TXAR	**Lajitas Array**	**87.06**	**57**	P	**P**	**16 02 15.2**	**+0.6**
	1.4nm,0.7s,mb3.8,baz=221,slow=6.4,SNR=19						
ANMO	**Albuquerque**	**87.43**	**51**	P	**P**	**16 02 15.7**	**-0.5**
	1.5nm,0.8s,mb3.8,baz=293,slow=13,SNR=3.0						
MCMT	**McKenzie Canyo**	**88.02**	**40**	*e*P	**P**	**16 02 18.1**	**-0.6**
	0.7nm,0.7s,mb3.5						
ILAR	**Eielson Array**	**88.48**	**13**	P	**P**	**16 02 18.9**	**-1.4**
	1.1nm,0.8s,mb3.6,baz=216,slow=5.4,SNR=6.0						
BW06	**Boulder Array**	**89.02**	**43**	*e*P	**P**	**16 02 22.9**	**-0.5**
PDAR	**Pinedale Array**	**89.02**	**43**	P	**P**	**16 02 23.1**	**-0.4**
	1.2nm,0.7s,mb3.8,baz=218,slow=2.6,SNR=12						
CMAR	**Chiang Mai Arr**	**90.30**	**290**	P	**P**	**16 02 32.0**	**+2.1**
	0.4nm,0.3s,mb3.7,baz=128,slow=3.2,SNR=4.8						
MKAR	**Makanchi Array**	**111.42**	**313**	PKiKP	PKiKP	16 07 59.4	-0.7
	0.4nm,0.6s,baz=77,slow=0.8,SNR=3.6						
BVAR	**Borovoye Array**	**119.31**	**320**	PKP	PKPdf	16 08 13.9	-1.1
	0.5nm,0.6s,baz=97,slow=3.4,SNR=4.5						
FINES	**FINESS Array B**	**136.00**	**344**	PKhKP	PKPpre	16 08 42.2	
	0.9nm,0.6s,baz=111,slow=10,SNR=3.8						
HFS	**Hagfors**	**139.75**	**351**	PKhKP	PKPpre	16 08 44.8	
	0.8nm,0.4s,baz=336,slow=3.3,SNR=6.5						
AKASG	**Malin Array Be**	**143.25**	**331**	PKhKP	PKPpre	16 08 57.0	
	6.9nm,0.6s,baz=43,slow=4.4,SNR=36						
AKASG	**Malin Array Be**	**143.25**	**331**	PKP	PKPdf	16 08 57.0	-2.9
EKA	**Eskdalemuir Ar**	**145.19**	**5**	PKPbc	PKPbc	16 09 03.2	-0.4
	1.6nm,0.6s,baz=340,slow=3.2,SNR=10						
BRTR	**Keskin Array B**	**147.06**	**312**	PKPbc	PKPbc	16 09 10.6	+1.0
	1.9nm,0.9s,baz=80,slow=1.4,SNR=5.5						
BUR08	**Bucovina Ar. S**	**147.28**	**331**	*e*PKPbc	PKPbc	16 09 10.7	+0.8
KOLS	**Kolonicke sedl**	**147.54**	**335**	*e*P	PKPab	16 09 13.1	-0.7
KOLS	**Kolonicke sedl**	**147.54**	**335**	*e*PKP	PKPab	16 09 13.1	-0.7
CRVS	**Cervenica-Dubn**	**147.88**	**336**	*e*P	PKPab	16 09 16.0	+0.8
CRVS	**Cervenica-Dubn**	**147.88**	**336**	*e*PKP	PKPab	16 09 16.0	+0.8
CLL	**Collm**	**148.28**	**347**	*i* P	PKPbc	16 09 12.6	+0.3
CLL				*i*		16 09 16.2	
CLL	**Collm**	**148.28**	**347**	*i* PKPbc	PKPbc	16 09 12.6	+0.3
	comp=Z,11nm,0.6s						
CLL				*i* PKPab	PKPab	16 09 16.2	-0.5
	comp=Z,7.0nm,0.9s						
UPC	**Upice**	**148.30**	**343⇑**	*e*PKP	PKPbc	16 09 13.0	+0.6
UPC				*e*PKPAB	PKPab	16 09 17.2	+0.4
DPC	**Dobruska-Polom**	**148.35**	**343⇑**	*e*PKP	PKPbc	16 09 13.6	+1.1
DPC				*e*PKPAB	PKPab	16 09 17.8	+0.8
BRG	**Berggiesshubel**	**148.48**	**346**	*i* P	PKPbc	16 09 13.5	+0.6
	comp=Z,6.5nm,0.8s						
BRG	**Berggiesshubel**	**148.48**	**346**	*e*(P)	PKPab	16 09 17.4	-0.1
	comp=Z,5.0nm,0.9s						
KECS	**Kecovo**	**148.60**	**336**	*e*P	PKPbc	16 09 14.6	+1.4
KECS	**Kecovo**	**148.60**	**336**	*e*PKP	PKPbc	16 09 14.6	+1.4
PVCC	**Panska Ves**	**148.65**	**345⇑**	*e*PKP	PKPbc	16 09 14.4	+1.1
PVCC				*e*PKPAB	PKPab	16 09 18.6	+0.3
PRU	**Pruhonice**	**149.16**	**344⇑**	*e*PKP	PKPbc	16 09 15.3	+0.8
VYHS	**Vyhne**	**149.19**	**338**	*e*P	PKPbc	16 09 15.5	+0.8
VYHS	**Vyhne**	**149.19**	**338**	*e*PKP	PKPbc	16 09 15.5	+0.8
MOX	**Moxa**	**149.19**	**348**	*e*PKP	PKPbc	16 09 15.4	+0.8
GERES	**GERESS Array B**	**150.43**	**344**	PKPbc	PKPbc	16 09 17.8	+0.1
	comp=Z,2.2nm,0.8s,baz=45,slow=2.1,SNR=12						
DAVOX	**Davos/Dischmat**	**153.23**	**348**	PKPbc	PKPbc	16 09 24.0	0.0
	comp=Z,1.6nm,0.4s,baz=324,slow=8.7,SNR=3.9						

*ISCJB **17** 15:55:45.2±1.2, 17°.7S±0°.1×178°.2W±0°.1, h515km±16km, mb4.0/14, Error ellipse: s-maj=25.2km s-min=11.0km az=148.5*
*IDC **17** 15:55:46.7±1.8, 17°.70S×178°.15W, h520km±20km, mb3.4/11, mb1 3.6/12, mb1mx3.6/18, mbtmp3.4/12, Error ellipse: s-maj=29.7km s-min=11.0km az=152.0*
*NEIC **17** 15:55:49.5±0.9, 17°.71S×178°.27W, h554km±9km, mb4.8/2, Error ellipse: s-maj=19.5km s-min=10.4km az=148.0*
ISC 17 15:55:49.4±1.1, 17°.7S±0°.1×178°.2W±0°.1, h552km±12km, n44, σ0s71/40, mb4.0/14, 2C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.54**	**269**	*e*P	**P**	**15 57 08.5**	**+0.4**
AFI	**Afiamalu**	**7.28**	**59**	P	**P**	**15 57 34.6**	**-5.7**
	4.4nm,0.3s,baz=77,slow=8.7,SNR=5.8						
AFI				S	**S**	**15 59 00.7**	**-10**
	baz=324,slow=19						
AFI	**Afiamalu**	**7.28**	**59**	*e*P	**P**	**15 57 34.6**	**-5.7**
AFI				S	**S**	**15 59 00.7**	**-10**
EIDS	**Eidsvold**	**29.48**	**250**	*e*P	**P**	**16 01 08.5**	**-0.9**
EIDS	**Eidsvold**	**29.48**	**250**	*e*P	**P**	**16 01 09.0**	**-0.3**
ARMA	**Armidale**	**30.17**	**240**	*e*P	**P**	**16 01 15.9**	**+0.7**
CTA	**Charters Tower**	**33.64**	**260**	P	**P**	**16 01 44.9**	**0.0**
	4.5nm,0.7s,mb4.1,baz=109,slow=8.5,SNR=8.2						
CTAO	**Charters Tower**	**33.64**	**260**	*e*P	**P**	**16 01 44.8**	**-0.1**
CNB	**Canberra Magne**	**33.66**	**232**	*e*P	**P**	**16 01 45.6**	**+0.7**
QLP	**Quilpie**	**35.75**	**249⇑**	*i*P	**P**	**16 02 02.2**	**-0.2**
TOO	**Toolangi**	**37.41**	**231**	*e*P	**P**	**16 02 16.0**	**+0.1**
STKA	**Stephens Creek**	**38.86**	**241**	P	**P**	**16 02 28.4**	**+0.6**
	14nm,0.8s,mb4.5,baz=90,slow=9.6,SNR=30						
STKA	**Stephens Creek**	**38.86**	**241**	*e*P	**P**	**16 02 28.3**	**+0.6**
	7.9nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**38.86**	**241**	*e*P	**P**	**16 02 28.4**	**+0.6**
WB2	**Warramunga Arr**	**44.82**	**259**	*e*P	**P**	**16 03 14.0**	**-0.8**
WRA	**Warramunga Arr**	**44.83**	**259**	P	**P**	**16 03 14.2**	**-0.7**
	6.3nm,0.7s,mb4.3,baz=94,slow=7.4,SNR=71						
WRA				PcP	PcP	16 04 45.2	+0.3
	1.3nm,0.7s,baz=89,slow=3.8,SNR=5.2						
WRA				S	**S**	**16 09 14.8**	**+2.2**
	0.6nm,1.0s,baz=98,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**45.00**	**254**	P	**P**	**16 03 16.4**	**+0.2**
	50nm,0.5s,baz=88,slow=8.4,SNR=528						
ASAR				PcP	PcP	16 04 45.7	+0.2
	2.7nm,0.7s,baz=97,slow=4.2,SNR=7.5						
ASAR				S	**S**	**16 09 14.7**	**-0.2**
	1.3nm,1.0s,baz=84,slow=16,SNR=10.0						
KAKA	**Kakadu**	**47.76**	**269**	*e*P	**P**	**16 03 36.9**	**-0.2**
	15nm,0.4s,mb4.9						
KAKA	**Kakadu**	**47.76**	**269**	*e*P	**P**	**16 03 36.8**	**-0.3**
	48nm,0.6s						
FORT	**Forrest**	**50.23**	**244**	*e*P	**P**	**16 03 54.5**	**-0.7**
	13nm,0.5s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.22**	**260**	*e*P	**P**	**16 04 16.9**	**-0.1**
	3.8nm,0.6s,mb3.9						
MBWA	**Marble Bar**	**58.28**	**256**	*e*P	**P**	**16 04 51.0**	**-0.9**
MBWA	**Marble Bar**	**58.28**	**256**	*e*P	**P**	**16 04 51.1**	**-0.8**
MEEK	**Meekatharra**	**58.65**	**249⇑**	*i*P	**P**	**16 04 53.9**	**-0.5**
KLBR	**Kellerberrin**	**59.06**	**243**	*e*P	**P**	**16 04 56.5**	**-0.5**
	14nm,0.6s,mb4.4						
MJAR	**Matsushiro Arr**	**67.87**	**323**	P	**P**	**16 05 52.9**	**-0.2**
	1.5nm,0.6s,mb3.7,baz=153,slow=5.6,SNR=4.1						
MJAR	**Matsushiro Arr**	**67.87**	**323**	P	**P**	**16 05 52.9**	**-0.2**
QSPA	**South Pole Qui**	**72.32**	**180**	*e*P	**P**	**16 06 18.9**	**+0.1**
	14nm,1.2s,mb4.3						
KSRS	**Korea Array**	**74.69**	**318**	P	**P**	**16 06 34.0**	**+1.1**
	0.3nm,0.5s,mb3.0,baz=123,slow=6.3,SNR=4.4						
NVAR	**Mina Array Bea**	**79.18**	**44**	P	**P**	**16 06 57.6**	**+0.2**
	1.3nm,0.7s,mb3.4,baz=223,slow=8.6,SNR=14						
MAW	**Mawson**	**84.08**	**200**	P	**P**	**16 07 21.8**	**-0.2**
	2.8nm,0.5s,mb4.1,baz=149,slow=4.5,SNR=9.6						
ILAR	**Eielson Array**	**85.68**	**13**	P	**P**	**16 07 27.8**	**-1.8**
	0.1nm,0.4s,baz=215,slow=6.2,SNR=4.5						
TXAR	**Lajitas Array**	**85.76**	**58**	P	**P**	**16 07 31.8**	**+1.0**
	1.3nm,0.8s,mb3.6,baz=212,slow=6.2,SNR=8.7						
TXAR	**Lajitas Array**	**85.76**	**58**	P	**P**	**16 07 31.8**	**+1.0**
PDAR	**Pinedale Array**	**87.11**	**43**	P	**P**	**16 07 37.0**	**+0.1**
	0.2nm,0.6s,baz=236,slow=1.6,SNR=4.1						
CMAR	**Chiang Mai Arr**	**88.98**	**290**	P	**P**	**16 07 47.5**	**+1.3**
	0.8nm,0.4s,mb4.0,baz=104,slow=2.5,SNR=6.7						
ARCES	**ARCESS Array B**	**126.18**	**350**	PKP	PKPdf	16 13 47.7	-0.9
	1.

az=178.9
*NEIC **17** 16:31:25.2±3.2, 35°.90N×21°.66E, h31km±24km, mb4.3/1, Error ellipse: s-maj=14.1km s-min=8.6km az=160.0*
*THE **17** 16:31:27.4, 36°.08N×21°.54E, h2km±4km, ML2.9/2, Error ellipse: s-maj=7.2km s-min=3.2km az=193.0*
*CSEM **17** 16:31:28.0±0.2, 35°.87N×21°.69E, h60km, ML2.9/2, Error ellipse: s-maj=4.5km s-min=4.1km az=159.0*

ISC 17 16:31:26.8±0.6, 35°.81N±0°.05×21°.57E±0°.05, h50km±6km, n108, σ0°92/114, mb3.8/11, 3C, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.27**	**68**	*eP*	**Pn**	**16 31 48.3**	**+0.1**
KYTH	**Kithira**	**1.27**	**68**	*eP*	**Pn**	**16 31 48.3**	**+0.1**
ITM	**Ithomi**	**1.40**	**12**	*eP*	**Pn**	**16 31 50.0**	**+0.1**
ITM	**Ithomi**	**1.40**	**12**	P	**Pn**	**16 31 48.6**	**-1.3**
ITM	**Ithomi**	**1.40**	**12**	*eP*	**Pn**	**16 31 50.0**	**+0.1**
VLI	**Veliai**	**1.43**	**50**	*eP*	**Pn**	**16 31 50.6**	**+0.3**
VLI	**Veliai**	**1.43**	**50**	*eP*	**Pn**	**16 31 50.6**	**+0.3**
VLX	**Vlachokerasia**	**1.69**	**22**	*eP*	**Pn**	**16 31 54.4**	**+0.5**
VLX	**Vlachokerasia**	**1.69**	**22**	P	**Pn**	**16 31 54.2**	**+0.3**
VLX	**Vlachokerasia**	**1.69**	**22**	P	**Pn**	**16 31 54.2**	**+0.3**
DID	**Didima**	**2.16**	**38**	*eP*	**Pn**	**16 32 00.1**	**-0.2**
DID	**Didima**	**2.16**	**38**	P	**Pn**	**16 31 59.7**	**-0.6**
DID				S	**Sn**	**16 32 27.7**	**+1.9**
DID	**Didima**	**2.16**	**38**	*eP*	**Pn**	**16 32 00.1**	**-0.2**
DID				*eS*	**Sn**	**16 32 26.2**	**+0.4**
VAM	**Vamos**	**2.18**	**100**	*eP*	**Pn**	**16 32 00.2**	**-0.4**
VAM	**Vamos**	**2.18**	**100**	*eP*	**Pn**	**16 32 00.2**	**-0.4**
GUR	**Goura**	**2.21**	**16**	*eP*	**Pn**	**16 32 01.6**	**+0.6**
GUR	**Goura**	**2.21**	**16**	P	**Pn**	**16 32 01.6**	**+0.6**
GUR	**Goura**	**2.21**	**16**	P	**Pn**	**16 32 01.6**	**+0.6**
RLS	**Riolos of Patr**	**2.25**	**358**	*eP*	**Pn**	**16 32 02.0**	**+0.5**
RLS	**Riolos of Patr**	**2.25**	**358**	*eP*	**Pn**	**16 32 02.0**	**+0.5**
LTK	**Loutraki**	**2.48**	**26**	*eP*	**Pn**	**16 32 04.5**	**-0.1**
LTK	**Loutraki**	**2.48**	**26**	*eP*	**Pn**	**16 32 04.5**	**-0.1**
NAIG	**Nisos Aigina**	**2.48**	**38**	*eP*	**Pn**	**16 32 04.5**	**-0.2**
NAIG	**Nisos Aigina**	**2.48**	**38**	*eP*	**Pn**	**16 32 04.5**	**-0.2**
VLS	**Valsamata**	**2.49**	**342**	*eP*	**Pn**	**16 32 05.1**	**+0.2**
VLS	**Valsamata**	**2.49**	**342**	P	**Pn**	**16 32 03.7**	**-1.2**
VLS				S	**Sn**	**16 32 34.0**	**0.0**
VLS	**Valsamata**	**2.49**	**342**	P	**Pn**	**16 32 05.1**	**+0.2**
VLS				S	**Sn**	**16 32 34.0**	**0.0**
EFP	**Efpalio**	**2.63**	**6**	*eP*	**Pn**	**16 32 07.5**	**+0.8**
EFP	**Efpalio**	**2.63**	**6**	*eP*	**Pn**	**16 32 07.5**	**+0.8**
DSF	**Desfina**	**2.71**	**16**	P	**Pn**	**16 32 09.0**	**+1.2**
DSF				S	**Sn**	**16 32 38.8**	**-0.5**
DSF	**Desfina**	**2.71**	**16**	P	**Pn**	**16 32 09.0**	**+1.2**
DSF				S	**Sn**	**16 32 38.8**	**-0.5**
VLY	**Voula,Athens**	**2.71**	**40**	*eP*	**Pn**	**16 32 07.8**	**0.0**
VLY	**Voula,Athens**	**2.71**	**40**	*eP*	**Pn**	**16 32 07.8**	**0.0**
ATH	**Athens Observa**	**2.76**	**38**	*eP*	**Pn**	**16 32 08.4**	**-0.1**
ATH	**Athens Observa**	**2.76**	**38**	*eP*	**Pn**	**16 32 08.4**	**-0.1**
PTL	**Penteli**	**2.89**	**39**	*eP*	**Pn**	**16 32 09.9**	**-0.5**
PTL	**Penteli**	**2.89**	**39**	*eP*	**Pn**	**16 32 09.9**	**-0.5**
LKR	**Lokris**	**3.06**	**21**	*eP*	**Pn**	**16 32 12.9**	**+0.3**
LKR	**Lokris**	**3.06**	**21**	P	**Pn**	**16 32 12.8**	**+0.2**
LKR	**Lokris**	**3.06**	**21**	P	**Pn**	**16 32 12.8**	**+0.2**
EVR	**Evrytania**	**3.11**	**3**	*eP*	**Pn**	**16 32 13.7**	**+0.4**
EVR	**Evrytania**	**3.11**	**3**	*eP*	**Pn**	**16 32 13.7**	**+0.4**
AGG	**Agios Georgios**	**3.26**	**10**	*eP*	**Pn**	**16 32 16.1**	**+0.7**
AGG	**Agios Georgios**	**3.26**	**10**	P	**Pn**	**16 32 16.5**	**+1.1**
AGG	**Agios Georgios**	**3.26**	**10**	*eP*	**Pn**	**16 32 16.1**	**+0.7**
APE	**Apeiranthos**	**3.43**	**67**	*eP*	**Pn**	**16 32 17.8**	**+0.1**
APE	**Apeiranthos**	**3.43**	**67**	*eP*	**Pn**	**16 32 17.8**	**+0.1**
THL	**Klokotos Trika**	**3.77**	**5**	*eP*	**Pn**	**16 32 22.5**	**+0.2**
THL	**Klokotos Trika**	**3.77**	**5**	P	**Pn**	**16 32 22.2**	**-0.1**
THL				S	**Sn**	**16 33 05.5**	**+0.2**
THL	**Klokotos Trika**	**3.77**	**5**	*eP*	**Pn**	**16 32 22.5**	**+0.2**
THL				S	**Sn**	**16 33 05.5**	**+0.2**
LIT	**Litokhoron**	**4.34**	**9**	*eP*	**Pn**	**16 32 30.9**	**+0.6**
LIT	**Litokhoron**	**4.34**	**9**	*eP*	**Pn**	**16 32 30.9**	**+0.6**
CHOS	**Chios island**	**4.41**	**53**	*eP*	**Pn**	**16 32 31.5**	**+0.3**
CHOS	**Chios island**	**4.41**	**53**	*eP*	**Pn**	**16 32 31.5**	**+0.3**
KZN	**Kozani**	**4.49**	**2**	*eP*	**Pn**	**16 32 33.4**	**+1.1**
KZN	**Kozani**	**4.49**	**2**	*eP*	**Pn**	**16 32 33.4**	**+1.1**
PLG	**Polygyros**	**4.79**	**17**	*eP*	**Pn**	**16 32 36.5**	**+0.1**
PLG	**Polygyros**	**4.79**	**17**	*eP*	**Pn**	**16 32 36.5**	**+0.1**
CEL	**Celeste**	**5.16**	**300**	*eP*	**Pn**	**16 32 39.2**	**-2.3**
	50nm,0.7s						
CEL	**Celeste**	**5.16**	**300**	*eP*	**Pn**	**16 32 39.2**	**-2.2**
	50nm,0.7s						
SOH	**Sokhos**	**5.20**	**15**	*eP*	**Pn**	**16 32 42.8**	**+0.9**
SOH	**Sokhos**	**5.20**	**15**	*eP*	**Pn**	**16 32 42.8**	**+0.9**
KRUS	**Krusevo**	**5.56**	**357**	*i* Pn	**Pn**	**16 32 45.0**	**-1.9**
WDD	**Wield Dalam**	**5.73**	**273**	*eP*	**Pn**	**16 32 47.7**	**-1.6**
VAE	**Valguarnera**	**5.99**	**288**	Pn	**Pn**	**16 32 54.0**	**+1.1**
	3.6nm,0.3s,baz=89,slow=18,SNR=5.2						
VAE				Sn	**Sn**	**16 34 04.3**	**+4.1**
	4.1nm,0.3s,baz=59,slow=12,SNR=4.2						
VAE	**Valguarnera**	**5.99**	**288**	Pn	**Pn**	**16 32 54.0**	**+1.1**
CUC	**Castrocucco**	**6.18**	**314**	*eP*	**Pn**	**16 32 53.2**	**-2.2**
	9.0nm,0.6s						
VTS	**Vitosha**	**6.89**	**10⇑**	*iP*	**Pn**	**16 33 05.4**	**+0.2**
VTS	**Vitosha**	**6.89**	**10⇑**	*iP*	**Pn**	**16 33 05.4**	**+0.2**
BARS	**Barje**	**7.00**	**1⇑**	*iPn*	**Pn**	**16 33 04.8**	**-1.9**
STON	**Ston**	**7.66**	**338**	*ePn*	**Pn**	**16 33 11.5**	**-4.3**
STON				Sn	**Sn**	**16 34 31.5**	**-10**
KEST	**Kesra**	**9.94**	**273**	Pn	**Pn**	**16 33 46.5**	**-0.5**
	0.1nm,0.3s,baz=44,slow=17,SNR=3.8						
BRTR	**Keskin Array B**	**10.32**	**64**	Pn	**Pn**	**16 33 51.0**	**-1.1**
	0.1nm,0.3s,baz=251,slow=14,SNR=7.5						
BRTR	**Keskin Array B**	**10.32**	**64**	Pn	**Pn**	**16 33 51.0**	**-1.1**
ESDC	**Sonseca Array**	**20.54**	**288**	P	**P**	**16 36 03.5**	**+2.6**
	0.8nm,0.4s,baz=81,slow=9.1,SNR=4.4						
ESDC	**Sonseca Array**	**20.54**	**288**	P	**P**	**16 36 03.5**	**+2.6**
HFS	**Hagfors**	**24.87**	**351**	P	**P**	**16 36 43.9**	**-0.4**
	2.2nm,0.5s,mb4.0,baz=163,slow=11,SNR=16						
HFS	**Hagfors**	**24.87**	**351**	P	**P**	**16 36 43.9**	**-0.5**
FINES	**FINESS Array B**	**25.81**	**5**	P	**P**	**16 36 52.5**	**-0.4**
	1.9nm,0.7s,mb3.7,baz=162,slow=12,SNR=6.4						
FINES	**FINESS Array B**	**25.81**	**5**	P	**P**	**16 36 52.5**	**-0.4**
EKA	**Eskdalemuir Ar**	**25.86**	**327**	P	**P**	**16 36 53.7**	**+0.3**
	1.3nm,0.6s,mb3.6,baz=130,slow=7.7,SNR=7.6						
EKA	**Eskdalemuir Ar**	**25.86**	**327**	P	**P**	**16 36 53.7**	**+0.3**
NB2	**NORSAR Subarra**	**26.10**	**349**	P	**P**	**16 36 56.4**	**+0.9**
	comp=Z,0.8nm,0.5s,mb3.5,baz=159,slow=10						
NB2	**NORSAR Subarra**	**26.10**	**349**	P	**P**	**16 36 56.4**	**+0.9**
	comp=Z,0.8nm,0.5s,mb3.5,SNR=4.8						
NOA	**NORSAR Array B**	**26.10**	**349**	P	**P**	**16 36 56.5**	**+1.0**
	comp=Z,1.2nm,0.7s,mb3.5,baz=160,slow=10,SNR=5.6						
NOA	**NORSAR Array B**	**26.10**	**349**	P	**P**	**16 36 56.5**	**+1.0**
TORD	**Torodi Ar. Bea**	**28.80**	**223**	P	**P**	**16 37 21.6**	**+1.4**
	comp=Z,1.8nm,0.6s,mb4.0,baz=34,slow=9.1,SNR=15						
ARCES	**ARCESS Array B**	**33.85**	**2**	P	**P**	**16 38 03.4**	**-0.6**
	comp=Z,2.0nm,0.8s,mb4.1,baz=186,slow=9.5,SNR=8.1						
ARCES	**ARCESS Array B**	**33.85**	**2**	P	**P**	**16 38 03.4**	**-0.6**
DBIC	**Dimbokro**	**37.79**	**226**	P	**P**	**16 38 39.0**	**+0.7**
	comp=Z,1.8nm,0.8s,mb3.9,baz=97,slow=6.8,SNR=3.2						
DBIC	**Dimbokro**	**37.79**	**226**	P	**P**	**16 38 39.8**	**+1.4**
	comp=Z,3.7nm,0.8s,mb4.2						
DBIC	**Dimbokro**	**37.79**	**226**	P	**P**	**16 38 39.8**	**+1.5**
	comp=Z,3.7nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**45.86**	**57**	*eP*	**P**	**16 39 43.8**	**-0.1**
MK31	**Makanchi Array**	**45.86**	**57**	*eP*	**P**	**16 39 43.8**	**-0.1**
MKAR	**Makanchi Array**	**45.86**	**57**	P	**P**	**16 39 43.9**	**0.0**
	comp=Z,0.9nm,0.4s,mb4.0,baz=272,slow=7.7,SNR=21						
MKAR	**Makanchi Array**	**45.86**	**57**	P	**P**	**16 39 43.8**	**-0.1**
ZAA0	**Zalesovo Array**	**46.67**	**47**	*eP*	**P**	**16 39 48.7**	**-1.4**
ZAA0	**Zalesovo Array**	**46.67**	**47**	*eP*	**P**	**16 39 48.7**	**-1.5**
ZALV	**Zalesovo Beam**	**46.67**	**47**	P	**P**	**16 39 48.5**	**-1.6**
	comp=Z,1.3nm,0.5s,mb4.1,baz=267,slow=9.6,SNR=7.8						
ZALV	**Zalesovo Beam**	**46.67**	**47**	P	**P**	**16 39 48.5**	**-1.7**
SONM	**Songino Array**	**61.32**	**50**	P	**P**	**16 41 36.9**	**-0.1**
	comp=Z,0.6nm,0.7s,mb3.8,baz=280,slow=8.7,SNR=4.5						
SONM	**Songino Array**	**61.32**	**50**	P	**P**	**16 41 36.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**69.39**	**82**	P	**P**	**16 42 29.9**	**+0.2**
	comp=Z,0.3nm,0.7s,mb3.3,baz=299,slow=7.3,SNR=4.1						
CMAR	**Chiang Mai Arr**	**69.39**	**82**	P	**P**	**16 42 29.9**	**+0.2**
WRA	**Warramunga Arr**	**119.56**	**94**	PKP	PKPdf	16 50 12.3	+1.0
	comp=Z,0.3nm,0.9s,baz=340,slow=37,SNR=3.1						
WRA	**Warramunga Arr**	**119.56**	**94**	PKIKP	PKPdf	16 50 12.3	+1.0
ASAR	**Alice Springs**	**121.04**	**98**	PKP	PKPdf	16 50 15.4	+1.4
	comp=Z,0.3nm,1.0s,baz=298,slow=1.9,SNR=4.3						
ASAR	**Alice Springs**	**121.04**	**98**	PKIKP	PKPdf	16 50 15.4	+1.4

*IDC **17** 16:51:39.1±3.3, 12°.97N×87°.27W, h19km±25km, mb3.5/3, mb1 4.0/5, mb1mx3.6/24, mbtmp3.6/5, ML3.4/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/27, Error ellipse: s-maj=89.9km s-min=13.1km az=44.0*
*ISCJB **17** 16:51:42.4±0.4, 12°.50N±0°.05×87°.76W±0°.04, h68km±8km, mb3.6/3, Error ellipse: s-maj=10.9km s-min=3.0km az=35.7*
*NEIC **17** 16:51:43.4±1.1, 12°.53N×87°.75W, h65km±12km, Error ellipse: s-maj=25.7km s-min=10.2km az=50.0*
*CASC **17** 16:51:43.2±2.3, 12°.53N×87°.77W, h51km±34km, MD4.0, ML4.1*

ISC 17 16:51:43.4±0.4, 12°.52N±0°.05×87°.76W±0°.04, h61km±9km, n43, σ0°81/60, mb3.6/3, 2C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.76**	**354**	*eP*	**Pn**	**16 51 57.8**	**-0.6**
CNCH				*eS*	**Sn**	**16 52 10.2**	**+0.7**
CNGN	**Cerro Negro**	**1.03**	**91**	*eP*	**Pn**	**16 52 01.4**	**-0.5**
CNGN				*eS*	**Sn**	**16 52 15.4**	**-0.2**
CNGN				AML	AML	16 52 24.5	
	comp=N,5μm,0.6s						
BLLM	**Bellamira**	**1.03**	**333**	*eP*	**Pn**	**16 52 01.1**	**-0.9**
BLLM				*eS*	**Sn**	**16 52 16.0**	**+0.4**
VSM	**San Miguel**	**1.04**	**331**	*eP*	**Pn**	**16 52 01.8**	**-0.2**
VSM				*eS*	**Sn**	**16 52 15.8**	**+0.1**
COPN	**Copaltepe**	**1.19**	**106⇑**	*eP*	**Pn**	**16 52 03.0**	**-0.9**
MOMN	**Momotombo**	**1.19**	**95**	*eP*	**Pn**	**16 52 03.8**	**-0.2**
CAHU	**Cacacuatique**	**1.32**	**340**	*eP*	**Pn**	**16 52 05.4**	**-0.4**
CAHU				*eS*	**Sn**	**16 52 23.9**	**+1.4**
CSAN		**1.34**	**104**	*eP*	**Pn**	**16 52 05.7**	**-0.3**
SNVI	**San Vicente**	**1.52**	**316**	*eP*	**Pn**	**16 52 07.6**	**-0.7**
SNVI				*eS*	**Sn**	**16 52 26.8**	**-0.3**
MGAN	**Managua**	**1.52**	**104**	*eP*	**Pn**	**16 52 08.1**	**-0.2**
MGAN				*eS*	**Sn**	**16 52 26.8**	**-0.3**
MGAN				AML	AML	16 52 27.9	
	comp=N,5μm,0.3s						
HUEN		**1.56**	**96**	*eP*	**Pn**	**16 52 08.4**	**-0.5**
HUEN				*eS*	**Sn**	**16 52 28.9**	**+0.8**
TICN	**Ticuantepe**	**1.56**	**108**	*eP*	**Pn**	**16 52 08.7**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.60**	**17**	*eP*	**Pn**	**16 52 09.6**	**+0.1**
TGUH				*eS*	**Sn**	**16 52 30.1**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.60**	**17**	*eP*	**Pn**	**16 52 09.5**	**+0.1**
TGUH				*eS*	**Sn**	**16 52 28.7**	**-0.5**
LFRS	**El Faro**	**1.68**	**311⇑**	*eP*	**Pn**	**16 52 09.7**	**-0.9**
LFRS				*eS*	**Sn**	**16 52 30.1**	**-1.0**
LBRS	**Las Brisas**	**1.75**	**314**	*eP*	**Pn**	**16 52 11.3**	**-0.1**
LBRS				*eS*	**Sn**	**16 52 32.8**	**+0.1**
SNET	**Serv Nac Est T**	**1.85**	**309**	*eP*	**Pn**	**16 52 12.7**	**-0.1**
SNET				*eS*	**Sn**	**16 52 34.1**	**-1.0**
SNET				AML	AML	16 52 35.5	
	comp=Z,2μm,0.2s						
BOQS	**Boqueron**	**1.92**	**309**	*eP*	**Pn**	**16 52 13.2**	**-0.6**
BOQS				*eS*	**Sn**	**16 52 37.1**	**+0.3**
SBLS	**San Blas**	**2.24**	**306**	*eP*	**Pn**	**16 52 17.8**	**-0.4**
RBDL	**Robledal**	**2.46**	**310**	*eP*	**Pn**	**16 52 20.8**	**-0.3**
IXG	**Ixpaco**	**3.10**	**302**	*eP*	**Pn**	**16 52 30.1**	**+0.2**
VCR	**Vista de Mar**	**3.16**	**139**	*eP*	**Pn**	**16 52 30.8**	**+0.1**
JTS	**JuntasAbangare**	**3.53**	**129**	Pn	**Pn**	**16 52 34.4**	**-1.4**
	comp=Z,4.6nm,0.3s,baz=318,slow=20,SNR=14						
JTS				Pg	**Pn**	**16 52 42.9**	**+7.1**
	comp=Z,250nm,0.3s,baz=291,slow=22,SNR=261						
JTS				Sn	**Sn**	**16 53 15.4**	**-0.8**
	comp=Z,17nm,0.3s,baz=311,slow=21,SNR=4.8						
JTS				Lg		16 53 29.6	
	comp=Z,53nm,0.3s,baz=118,slow=23,SNR=8.9						
JTS	**JuntasAbangare**	**3.53**	**129**	*eP*	**Pn**	**16 52 35.8**	**0.0**
JTS				*eS*	**Sn**	**16 53 17.8**	**+1.6**
JTS				Lg		16 53 29.6	
FUG	**Fuego 3**	**3.56**	**303**	*eP*	**Pn**	**16 52 39.2**	**+3.0**
APG	**El Apazote**	**3.61**	**314**	Pn	**Pn**	**16 52 37.2**	**+0.3**
	comp=Z,2.5nm,0.3s,baz=140,slow=12,SNR=12						
APG				Pg	**Pn**	**16 52 52.0**	**+15**
	comp=Z,2.4nm,0.3s,baz=117,slow=15,SNR=7.7						
APG				Sn	**Sn**	**16 53 18.9**	**+0.6**
	comp=Z,4.0nm,0.3s,baz=171,slow=23,SNR=4.5						
APG				Lg		16 53 36.7	
	comp=Z,3.1nm,0.3s,baz=90,slow=17,SNR=4.2						
APG	**El Apazote**	**3.61**	**314**	Pn	**Pn**	**16 52 37.2**	**+0.3**
APG				Pg	**Pn**	**16 52 52.0**	**+15**
APG				Sn	**Sn**	**16 53 18.9**	**+0.6**
APG				Lg		16 53 36.7	
FG6		**3.66**	**304**	*eS*	**Sn**	**16 53 20.4**	**+1.0**
JCR	**Jicaral**	**3.71**	**135**	*eP*	**Pn**	**16 52 38.6**	**+0.4**
TP2	**Tecpan 2**	**3.89**	**306**	*eP*	**Pn**	**16 52 43.5**	**+2.8**
CGA2	**Cerro Gallo 2**	**4.07**	**127**	*eP*	**Pn**	**16 52 45.1**	**+1.9**
PRS1	**Puriscal**	**4.21**	**126**	*eP*	**Pn**	**16 52 49.6**	**+4.5**
LAJ	**Bijagual**	**4.43**	**126**	*eP*	**Pn**	**16 52 47.2**	**-1.0**
QCR	**Quepos**	**4.68**	**131**	*eP*	**Pn**	**16 52 52.2**	**+0.7**
URSC	**Urasca**	**4.72**	**124**	*eP*	**Pn**	**16 52 55.5**	**+3.4**
ACR	**Cerro Adams**	**5.92**	**130**	*eP*	**Pn**	**16 53 08.8**	**+0.2**
TXAR	**Lajitas Array**	**22.34**	**321**	P	**P**	**16 56 35.5**	**-0.6**
	comp=Z,2.4nm,0.7s,mb3.7,baz=142,slow=9.0,SNR=25						
TKL	**Tuckaleechee C**	**23.32**	**8**	LR	LR	17 05 25.3	
	comp=Z,28nm,21.2s,baz=328,slow=36						
PDAR	**Pinedale Array**	**35.57**	**332**	P	**P**	**16 58 34.1**	**-0.7**
	comp=Z,0.7nm,0.7s,mb3.7,baz=129,slow=10,SNR=5.0						
NVAR	**Mina Array Bea**	**37.46**	**319**	P	**P**	**16 58 51.4**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.5,baz=125,slow=6.9,SNR=4.2						
YBH	**Yreka Blue Hor**	**42.11**	**320**	LR	LR	17 18 20.9	
	comp=Z,33nm,20.1s,baz=191,slow=38						
WRA	**Warramunga Arr**	**139.00**	**254**	PKP	PKPdf	17 11 03.5	-0.3
	comp=Z,0.7nm,1.1s,baz=90,slow=2.5,SNR=7.6						
ASAR	**Alice Springs**	**139.01**	**248**	PKP	PKPdf	17 11 03.8	0.0
	comp=Z,0.2nm,0.9s,baz=90,slow=1.9,SNR=3.6						

*MOS **17** 16:58:13.3±0.8, 52°.38N×159°.60E, h26km, mb4.3/1, Error ellipse: s-maj=40.0km s-min=11.6km az=82.8*
*ISCJB **17** 16:58:14.3±1.0, 52°.41N±0°.05×159°.53E±0°.08, h29km±5km, Error ellipse: s-maj=9.4km s-min=5.4km az=43.2*
*KRSC **17** 16:58:14.5±1.0, 52°.47N×159°.60E, h24km±24km, ML4.2*

ISC 17 16:58:14.6±1.0, 52°.42N±0°.04×159°.47E±0°.07, h16km±4km, n25, σ0°93/40, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.75**	**354**	*eP*	**Pg**	**16 58 28.4**	**-0.9**
NLC				*i* S	**Sg**	**16 58 39.1**	**-0.2**
NLC	**Nalytchevo**	**0.75**	**354**	PN	**Pg**	**16 58 28.4**	**-0.9**
NLC				S	**Sg**	**16 58 39.1**	**-0.2**
SPN	**Mys Shipunski**	**0.76**	**26**	*eP*	**Pg**	**16 58 28.3**	**-1.0**
SPN				*i* S	**Sg**	**16 58 39.1**	**-0.2**
SPN	**Mys Shipunski**	**0.76**	**26**	PN	**Pg**	**16 58 28.3**	**-1.0**
SPN				S	**Sg**	**16 58 39.1**	**-0.2**
PET	**Petropavlovsk**	**0.78**	**321**	*eP*	**Pg**	**16 58 29.3**	**-0.5**
PET				*i* S	**Sg**	**16 58 40.0**	**-0.1**
PET	**Petropavlovsk**	**0.78**	**321⇓**	*ePN*	**Pn**	**16 58 29.1**	**-1.8**
PET				*eS*	**Sg**	**16 58 39.9**	**-0.2**
PET				pmax	pmax		
	comp=Z,498nm,0.5s						
PET				smax			
	comp=N,777nm,0.3s						
PET				smax			
	comp=E,885nm,0.6s						
GRL	**Gorelyy**	**0.86**	**279**	*eP*	**Pb**	**16 58 31.5**	**+0.3**
GRL				*i* S	**Sg**	**16 58 44.4**	**+1.7**
AVH	**Avacha**	**0.95**	**333**	*eP*	**Pb**	**16 58 32.1**	**-0.6**
AVH				*i* S	**Sb**	**16 58 45.4**	**+0.3**
GNL	**Ganaly**	**1.57**	**325**	*eP*	**Pn**	**16 58 41.4**	**-0.4**
GNL				*i* S	**Sn**	**16 59 01.0**	**-0.8**
KII	**Karymskiy**	**1.62**	**360**	*eP*	**Pn**	**16 58 42.7**	**+0.3**
KII				*i* S	**Sn**	**16 59 03.3**	**+0.5**
MKZ	**Mys Kozlova**	**2.53**	**31**	*eP*	**Pn**	**16 58 52.4**	**-2.5**
MKZ				*i* S	**Sn**	**16 59 19.6**	**-5.7**
MKZ	**Mys Kozlova**	**2.53**	**31**	PN	**Pn**	**16 58 52.4**	**-2.5**
SKR	**Severo-Kuril's**	**2.72**	**232**	*ePN*	**Pn**	**16 58 57.7**	**+0.1**
SKR				*i* S	**Sn**	**16 59 28.5**	**-1.6**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=E,260nm,0.3s						
SKR				smax			
	comp=N,190nm,0.5s						
BZMR	**Bezymyannaya**	**3.57**	**9**	*eP*	**Pn**	**16 59 10.2**	**+1.0**
KIRR	**Kirishev**	**3.58**	**8**	*eP*	**Pn**	**16 59 11.2**	**+1.9**
KPT	**Kopyto**	**3.58**	**7**	*eP*	**Pn**	**16 59 09.8**	**+0.5**
KPT				*eS*	**Sn**	**16 59 50.5**	**-0.7**
BZGR	**Bezymyannyi-Gr**	**3.60**	**11**	*eP*	**Pn**	**16 59 10.5**	**+0.9**
BZWR	**Bezymyannyi-We**	**3.60**	**9**	*eP*	**Pn**	**16 59 09.9**	**+0.3**
BZWR				*eS*	**Sn**	**16 59 51.2**	**-0.5**
KOZ	**Kozyrevsk**	**3.65**	**4**	*eP*	**Pn**	**16 59 11.2**	**+0.9**
KOZR	**Kozyr**	**3.66**	**4**	PN	**Pn**	**16 59 11.2**	**+0.8**
SRDR	**Sredinnyy**	**3.91**	**2**	*eP*	**Pn**	**16 59 15.1**	**+1.3**
SRDR				*i* S	**Sn**	**16 59 58.7**	**-0.5**
KLY	**Klyuchi**	**3.96**	**10**	*eP*	**Pn**	**16 59 15.4**	**+0.9**
KLY	**Klyuchi**	**3.96**	**10**	PN	**Pn**	**16 59 15.4**	**+0.9**
KBTR	**Krutoberegovo**	**4.27**	**26**	*eP*	**Pn**	**16 59 18.8**	**0.0**
KBTR	**Krutoberegovo**	**4.27**	**26**	PN	**Pn**	**16 59 18.8**	**0.0**

*BJI **17** 17:07:26.5, 11°.79N×142°.15E, h20km, mB5.0/2, mb4.4/8*
*IDC **17** 17:07:45.6±2.1, 12°.34N×141°.73E, h133km±22km, mb3.8/9, mb1 4.0/10, mb1mx3.8/23, mbtmp3.8/10, Error ellipse: s-maj=21.5km s-min=13.3km az=81.0*
*NEIC **17** 17:07:46.4±1.5, 12°.34N×141°.76E, h144km±16km, mb4.5/3, Error ellipse: s-maj=19.1km s-min=11.3km az=76.0*
*ISCJB **17** 17:07:47.1±2.0, 12°.35N±0°.10×142°.0E±0°.2, h177km±24km, mb4.0/16, Error ellipse: s-maj=31.7km s-min=15.6km az=177.1*

ISC 17 17:07:48.6±1.9, 12°.36N±0°.10×142°.0E±0°.2, h176km±24km, n22, σ0°75/20, mb4.0/16, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.04**	**66**	P	**Pn**	**17 08 37.2**	**-0.4**
	25nm,0.3s,baz=191,slow=3.6,SNR=66						
GUMO				S	**Sn**	**17 09 15.7**	**+3.3**
	76nm,0.3s,baz=115,slow=23,SNR=11						
WRA	**Warramunga Arr**	**32.97**	**193**	P	**P**	**17 14 06.7**	**-0.2**
	6.6nm,0.7s,mb4.5,baz=11,slow=9.7,SNR=67						
WRA				PcP	PcP	17 16 49.2	+2.3
	0.3nm,0.8s,baz=12,slow=3.5,SNR=3.7						
ASAR	**Alice Springs**	**36.67**	**193**	P	**P**	**17 14 38.7**	**+0.1**
	0.9nm,0.4s,mb3.7,baz=22,slow=11,SNR=55						
ASAR				PcP	PcP	17 16 59.9	+2.3
	0.4nm,0.7s,baz=34,slow=4.0,SNR=5.4						
CM31	**Chiang Mai Arr**	**41.89**	**284**	*eP*	**P**	**17 15 21.8**	**-0.2**
	14nm,1.1s,mb4.5						
CMAR	**Chiang Mai Arr**	**41.89**	**284**	P	**P**	**17 15 21.5**	**-0.5**
	7.5nm,0.8s,mb4.4,baz=86,slow=6.5,SNR=55						
STKA	**Stephens Creek**	**43.98**	**181**	P	**P**	**17 15 39.0**	**+0.5**
	1.1nm,0.4s,mb3.8,baz=348,slow=11,SNR=5.9						
GTA	**Gaotai**	**45.96**	**314**	*eP*	**P**	**17 15 54.1**	**0.

MOS **17** 17:43:48.8±1.0, 26°.97N×56°.02E, h33km, mb5.3/126, MS4.5/49, Error ellipse: s-maj=5.3km s-min=2.8km az=126.1
SGS **17** 17:43:48.5, 26°.88N×55°.99E, h0km
TEH **17** 17:43:48.6, 27°.03N×56°.18E, h25km
GCMT **17** 17:43:49.6±0.2, 26°.75N×55°.96E, h12km, MW5.2, Moment Tensor Solution. s58,c87; s89,c175; Moment tensor: Scale 10^{16}Nm; M_{rr}8.01±.13; $M_{\theta\theta}$-9.41±.13; $M_{\phi\phi}$1.40±.14; $M_{r\theta}$1.41±.38; $M_{\theta\phi}$-0.80±.12; $M_{\phi r}$-3.02±.37; Best double couple: $M_0$9.40000×10^{16} NP1:ϕ_s245.00000°, δ45.00000°, λ59.00000°. NP2:ϕ_s106.00000°, δ53.00000°, λ117.00000°. Principal axes: T 9.3200, Plg68.0000°, Azm77.0000°; N 0.2300, Plg21.0000°, Azm269.0000°; P -9.5500, Plg4.0000°, Azm177.0000°; Data Used: IU II IC G CN.
DJA **17** 17:43:49, 26°.92N×56°.06E, h10km, mb5.1/8
NEIC **17** 17:43:49.0, 27°.00N×56°.20E, h4km, mb5.3/160, ML4.9(THR), MN5.0(TEH), After TEH.
OMAN **17** 17:43:51.0±49.0, 26°.76N×56°.23E, h10km, Error ellipse: s-maj=16.0km s-min=8.5km az=3.0
THR **17** 17:43:50.3±0.4, 27°.20N×55°.94E, h4km±2km, ML4.6
SZGRF **17** 17:44:02.6, 27°.14N×53°.97E, h33km, mb4.9, MS4.6, Southern Iran
ISC 17 17:43:47.9±0.1,**26°.90N**±0°.02×**56°.03E**±0°.01,**h14**km, **h14**km±1.0km;**pP-P,n1441**,σ1**09**/1550,**mb5.1**/306, **MS4.6**/81,**111C-23D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.51**	**14**	*e*Pg	**Pg**		**17 43 56.0**	**-2.0**
BNDS	**Bandar-Abbas**	**0.51**	**14**	*e*Pg	**Pg**		**17 43 56.3**	**-1.7**
BNDS				*e*Sg	**Sg**		**17 44 00.7**	**-4.1**
BNDS	**Bandar-Abbas**	**0.51**	**14**	*e*Pg	**Pg**		**17 43 56.0**	**-2.0**
IBND	**Bandar-abas**	**0.71**	**40**	‖*e*Pg	**Pg**		**17 44 00.4**	**-1.3**
IBND				*e*Pg	**Pg**		**17 44 00.4**	**-1.3**
IBND				*e*Sg	**Sg**		**17 44 07.7**	**-3.4**
IBND				*e*Sg	**Sg**		**17 44 07.9**	**-3.2**
IBND				*e*			17 44 43.2	
	comp=Z,1623μm,0.3s							
IBND				*e*			17 44 43.4	
	comp=Z,1306μm,0.3s							
IBND	**Bandar-abas**	**0.71**	**40**	*e*Pg	**Pg**		**17 44 00.4**	**-1.3**
IBND				*e*Sg	**Sg**		**17 44 07.9**	**-3.2**
BANOM	**Banah**	**1.01**	**166**	P	**Pb**		**17 44 06.9**	**-0.2**
	SNR=2145							
BANOM				P			17 44 07.5	
	SNR=886							
NAZ	**Nazwa, Dubai**	**1.94**	**190**	P	**Pn**		**17 44 24.1**	**+3.8**
	SNR=21							
NAZ	**Nazwa, Dubai**	**1.94**	**190**	P	**Pn**		**17 44 23.0**	**+2.6**
	SNR=82							
NAZ				P			17 44 24.1	
	SNR=21							
HATD	**Hatta, Dubai**	**2.07**	**177**	P	**Pn**		**17 44 24.1**	**+1.8**
	SNR=575							
HATD				P			17 44 24.3	
	SNR=45							
ASHO	**Ashiyiah**	**2.21**	**179**	P	**Pn**		**17 44 25.9**	**+1.8**
	SNR=387							
ASHO				P			17 44 26.6	
	SNR=104							
ASUD	**Al Ashush, Dub**	**2.35**	**196**	P	**Pn**		**17 44 28.4**	**+2.3**
	SNR=403							
ASUD				P			17 44 29.5	
	SNR=61							
KRBR	**Kerman**	**3.13**	**12**	*e*Pn	**Pn**		**17 44 38.0**	**+1.1**
KRBR	**Kerman**	**3.13**	**12**	*e*Pn	**Pn**		**17 44 38.9**	**+2.1**
KRBR				Sn	**Sn**		**17 45 14.8**	**+0.7**
KRBR				AML	AML		17 45 33.5	
	comp=E,4μm,0.6s							
KRBR	**Kerman**	**3.13**	**12**	*e*Pn	**Pn**		**17 44 38.0**	**+1.1**
HOQ	**Hoqain**	**3.50**	**160**	P	**Pn**		**17 44 41.2**	**-0.7**
	SNR=17							
HOQ				P			17 44 41.3	
	SNR=62							
ISRV	**Sarvestan**	**3.57**	**314**	Pn	**Pn**		**17 44 45.9**	**+3.1**
ISRV	**Sarvestan**	**3.57**	**314**	*e*Pn	**Pn**		**17 44 45.9**	**+3.1**
ISRV				*e*			17 46 20.9	
	comp=Z,44μm,0.9s							
ISRV	**Sarvestan**	**3.57**	**314**	*e*Pn	**Pn**		**17 44 45.9**	**+3.1**
ARQ	**Araqi**	**3.58**	**173**	P	**Pn**		**17 44 44.2**	**+1.2**
	SNR=77							
ARQ				P			17 44 45.0	
	SNR=60							
IPAR	**Pars**	**3.93**	**319**	Pn	**Pn**		**17 44 50.7**	**+2.9**
IPAR				Sn	**Sn**		**17 45 37.5**	**+3.7**
IPAR	**Pars**	**3.93**	**319**	*e*Pn	**Pn**		**17 44 50.7**	**+2.9**
IPAR				*e*Sn	**Sn**		**17 45 37.5**	**+3.7**
IPAR				*e*			17 45 39.7	
	comp=Z,34μm,0.4s							
IPAR	**Pars**	**3.93**	**319**	*e*Pn	**Pn**		**17 44 50.7**	**+2.9**
IPAR				*e*Sn	**Sn**		**17 45 37.5**	**+3.7**
SMDO	**Samad**	**4.24**	**154**	P	**Pn**		**17 44 53.9**	**+1.8**
	SNR=56							
IMEH	**Mehriz**	**4.64**	**345**	Pn	**Pn**		**17 44 59.9**	**+2.4**
IMEH				Sn	**Sn**		**17 45 51.6**	**+0.4**
IMEH	**Mehriz**	**4.64**	**345**	*e*Pn	**Pn**		**17 45 00.0**	**+2.5**
IMEH				*e*Sn	**Sn**		**17 45 51.6**	**+0.4**
IMEH				*e*			17 46 31.0	
	comp=Z,29μm,0.6s							
IMEH	**Mehriz**	**4.64**	**345**	Pn	**Pn**		**17 44 59.9**	**+2.4**
IMEH				*e*Sn	**Sn**		**17 45 51.6**	**+0.4**
IBAF	**Bafgh**	**4.69**	**355**	Pn	**Pn**		**17 44 59.8**	**+1.6**
IBAF	**Bafgh**	**4.69**	**355**	*e*Pn	**Pn**		**17 44 59.9**	**+1.7**
IBAF				*e*			17 46 48.6	
	comp=Z,28μm,0.9s							
IBAF	**Bafgh**	**4.69**	**355**	Pn	**Pn**		**17 44 59.8**	**+1.6**
JMDO	**Jabal Madar**	**4.89**	**157**	P	**Pn**		**17 45 03.0**	**+1.9**
	SNR=19							
ZHSF	**Zahedan**	**4.98**	**56**	*e*Pn	**Pn**		**17 45 07.0**	**+4.8**
ZHSF	**Zahedan**	**4.98**	**56**	*e*Pn	**Pn**		**17 45 07.1**	**+4.9**
ZHSF				AML	AML		17 46 33.3	
	comp=E,206nm,0.8s							
ZHSF	**Zahedan**	**4.98**	**56**	*e*Pn	**Pn**		**17 45 07.1**	**+4.9**
WBK	**Wadi Bani Khal**	**5.04**	**147**	P	**Pn**		**17 45 03.7**	**+0.6**
	SNR=88							
SLWS		**5.29**	**248**	P	**Pn**		**17 45 07.0**	**+0.6**
SLWS		**5.29**	**248**	P	**Pn**		**17 45 07.0**	**+0.6**
SLWS				S	**Sn**		**17 46 06.5**	**-0.6**
ISAD	**Sadrabad**	**5.39**	**338**	Pn	**Pn**		**17 45 09.9**	**+2.0**
ISAD	**Sadrabad**	**5.39**	**338**	*e*Pn	**Pn**		**17 45 10.0**	**+2.1**
ISAD				*e*			17 46 20.0	
	comp=Z,10μm,0.3s							
ISAD	**Sadrabad**	**5.39**	**338**	Pn	**Pn**		**17 45 09.9**	**+2.0**
BTHS		**5.48**	**240**	P	**Pn**		**17 45 10.2**	**+1.1**
BTHS		**5.48**	**240**	P	**Pn**		**17 45 10.2**	**+1.1**
ICHK	**Chekchek**	**5.51**	**346**	Pn	**Pn**		**17 45 11.7**	**+2.2**
ICHK	**Chekchek**	**5.51**	**346**	*e*Pn	**Pn**		**17 45 11.8**	**+2.3**
ICHK				*e*			17 46 28.7	
	comp=Z,7μm,0.4s							
ICHK	**Chekchek**	**5.51**	**346**	Pn	**Pn**		**17 45 11.7**	**+2.2**
BOQSS		**6.05**	**262**	S	**Sn**		**17 46 24.8**	**-1.4**
BOQSS		**6.05**	**262**	P	**Pn**		**17 45 17.5**	**+0.5**
IKOO	**Kooshah**	**6.08**	**24**	*e*Pn	**Pn**		**17 45 19.3**	**+2.0**
IKOO				*e*			17 47 15.0	
	comp=Z,6μm,0.3s							
IKOO	**Kooshah**	**6.08**	**24**	*e*Pn	**Pn**		**17 45 19.3**	**+2.0**
IMON	**Monand**	**7.01**	**26**	*e*Pn	**Pn**		**17 45 33.1**	**+2.9**
IMON				*e*			17 47 44.1	
	comp=Z,1μm,0.2s							
IMON	**Monand**	**7.01**	**26**	*e*Pn	**Pn**		**17 45 33.1**	**+2.9**
HRDDS		**7.16**	**238**	S	**Sn**		**17 46 51.4**	**-1.8**
HRDDS		**7.16**	**238**	P	**Pn**		**17 45 31.7**	**-0.4**
IPIR	**Pirpir**	**7.29**	**323**	Pn	**Pn**		**17 45 36.1**	**+2.2**
IPIR	**Pirpir**	**7.29**	**323**	*e*Pn	**Pn**		**17 45 36.1**	**+2.2**
IPIR				*e*			17 47 02.0	
	comp=Z,7μm,0.4s							
IPIR	**Pirpir**	**7.29**	**323**	*e*Pn	**Pn**		**17 45 36.1**	**+2.2**
IKLH	**Kolahrood**	**7.46**	**330**	Pn	**Pn**		**17 45 38.0**	**+1.7**
IKLH	**Kolahrood**	**7.46**	**330**	*e*Pn	**Pn**		**17 45 38.1**	**+1.8**
IKLH				*e*			17 47 19.1	
	comp=Z,4μm,0.4s							
IKLH	**Kolahrood**	**7.46**	**330**	Pn	**Pn**		**17 45 38.0**	**+1.7**
KBD	**Kabd**	**7.71**	**289**	*e*P	**Pn**		**17 45 40.3**	**+0.7**
KBD	**Kabd**	**7.71**	**289**	*e*P	**Pn**		**17 45 40.3**	**+0.6**
RDF	**Al-Radifah**	**7.77**	**287**	*e*P	**Pn**		**17 45 40.9**	**+0.4**
RDF				AML	AML		17 47 08.8	
	comp=Z,360nm,0.4s							
RDF	**Al-Radifah**	**7.77**	**287**	*e*P	**Pn**		**17 45 40.9**	**+0.4**
UMR	**Umm Al-Rimmam**	**7.79**	**292**	*e*P	**Pn**		**17 45 41.3**	**+0.4**
UMR	**Umm Al-Rimmam**	**7.79**	**292**	*e*P	**Pn**		**17 45 41.3**	**+0.4**
NAY	**Al-Naaiem**	**8.11**	**289**	*e*P	**Pn**		**17 45 45.7**	**+0.5**
NAY				AML	AML		17 47 17.4	
	comp=Z,194nm,0.6s							
NAY	**Al-Naaiem**	**8.11**	**289**	*e*P	**Pn**		**17 45 45.7**	**+0.5**
ISFB	**Sefidab**	**8.11**	**337**	Pn	**Pn**		**17 45 46.6**	**+1.4**
ISFB	**Sefidab**	**8.11**	**337**	*e*Pn	**Pn**		**17 45 46.7**	**+1.5**
ISFB				*e*			17 47 47.8	
	comp=Z,2μm,0.6s							
ISFB	**Sefidab**	**8.11**	**337**	Pn	**Pn**		**17 45 46.6**	**+1.4**
MIB	**Mutribah**	**8.18**	**293**	*e*P	**Pn**		**17 45 46.9**	**+0.6**
MIB				AML	AML		17 47 17.4	
	comp=Z,280nm,0.4s							
MIB	**Mutribah**	**8.18**	**293**	*e*P	**Pn**		**17 45 46.8**	**+0.6**
GHVR	**GHOM**	**8.58**	**333**	*e*Pn	**Pn**		**17 45 54.4**	**+2.7**
GHVR	**GHOM**	**8.58**	**333**	*e*Pn	**Pn**		**17 45 54.4**	**+2.8**
IANJ	**Anjilo**	**8.73**	**349**	Pn	**Pn**		**17 45 54.8**	**+1.1**
IANJ	**Anjilo**	**8.73**	**349**	*e*Pn	**Pn**		**17 45 54.8**	**+1.1**
IANJ				*e*			17 48 50.0	
	comp=Z,2μm,0.6s							
IANJ	**Anjilo**	**8.73**	**349**	*e*Pn	**Pn**		**17 45 54.8**	**+1.1**
ILAS	**Lasjerd**	**8.85**	**343**	Pn	**Pn**		**17 45 56.8**	**+1.4**
ILAS	**Lasjerd**	**8.85**	**343**	*e*Pn	**Pn**		**17 45 56.8**	**+1.4**
ILAS				*e*			17 47 05.9	
	comp=Z,1μm,0.6s							
ILAS	**Lasjerd**	**8.85**	**343**	*e*Pn	**Pn**		**17 45 56.8**	**+1.4**
IVRN	**Varamin**	**8.87**	**336**	Pn	**Pn**		**17 45 56.9**	**+1.3**
IVRN	**Varamin**	**8.87**	**336**	‖*e*Pn	**Pn**		**17 45 56.9**	**+1.3**
IVRN				*e*Pn	**Pn**		**17 45 57.0**	**+1.4**
IVRN	**Varamin**	**8.87**	**336**	Pn	**Pn**		**17 45 56.9**	**+1.3**
IFIR	**Firoozkooh**	**9.15**	**343**	Pn	**Pn**		**17 46 00.5**	**+1.0**
IFIR	**Firoozkooh**	**9.15**	**343**	*e*Pn	**Pn**		**17 46 00.6**	**+1.1**
IFIR				*e*			17 46 09.9	
	comp=Z,633nm,0.2s							
IFIR	**Firoozkooh**	**9.15**	**343**	*e*Pn	**Pn**		**17 46 00.6**	**+1.1**
ISHM	**Shahmirzad**	**9.18**	**346**	Pn	**Pn**		**17 46 01.7**	**+1.9**
ISHM	**Shahmirzad**	**9.18**	**346**	*e*Pn	**Pn**		**17 46 01.8**	**+2.0**
ISHM				*e*			17 46 14.5	
	comp=Z,2μm,0.2s							
ISHM	**Shahmirzad**	**9.18**	**346**	Pn	**Pn**		**17 46 01.7**	**+1.9**
IDMV	**Damavand**	**9.30**	**339**	Pn	**Pn**		**17 46 02.6**	**+1.1**
IDMV	**Damavand**	**9.30**	**339**	*e*Pn	**Pn**		**17 46 02.7**	**+1.2**
IDMV				*e*			17 46 55.1	
	comp=Z,1μm,0.6s							
IDMV	**Damavand**	**9.30**	**339**	*e*Pn	**Pn**		**17 46 02.7**	**+1.2**
DAMV	**Damavand**	**9.37**	**339**	*e*Pn	**Pn**		**17 46 04.7**	**+2.3**
DAMV	**Damavand**	**9.37**	**339**	*e*Pn	**Pn**		**17 46 04.7**	**+2.3**
IKIA	**Kiasar**	**9.49**	**348**	Pn	**Pn**		**17 46 05.5**	**+1.4**
IKIA	**Kiasar**	**9.49**	**348**	*e*Pn	**Pn**		**17 46 05.5**	**+1.4**
IKIA				*e*			17 49 32.4	
	comp=Z,7μm,1.0s							
IKIA	**Kiasar**	**9.49**	**348**	*e*Pn	**Pn**		**17 46 05.5**	**+1.4**
IR3	**Iran Long-Peri**	**9.56**	**335**	*e*Pn	**Pn**		**17 46 05.5**	**+0.4**
IMOG	**Moghan**	**9.60**	**16**	Pn	**Pn**		**17 46 06.5**	**+0.9**
IMOG	**Moghan**	**9.60**	**16**	*e*Pn	**Pn**		**17 46 06.5**	**+0.9**
IMOG				*e*			17 49 42.6	
	comp=Z,4μm,1.0s							
IMOG	**Moghan**	**9.60**	**16**	*e*Pn	**Pn**		**17 46 06.5**	**+0.9**
IGLO	**Ghaloghah**	**9.75**	**349**	Pn	**Pn**		**17 46 10.1**	**+2.4**
IGLO	**Ghaloghah**	**9.75**	**349**	*e*Pn	**Pn**		**17 46 10.2**	**+2.5**
IGLO				*e*			17 49 50.8	
	comp=Z,8μm,0.9s							
IGLO	**Ghaloghah**	**9.75**	**349**	*e*Pn	**Pn**		**17 46 10.2**	**+2.5**
ISRO	**Mashad**	**9.82**	**17**	*e*Pn	**Pn**		**17 46 08.9**	**+0.2**
IPRN	**Peran**	**9.83**	**342**	Pn	**Pn**		**17 46 11.6**	**+2.9**
IPRN	**Peran**	**9.83**	**342**	*e*Pn	**Pn**		**17 46 11.7**	**+3.0**
IPRN				*e*			17 46 24.2	
	comp=Z,2μm,0.2s							
IPRN	**Peran**	**9.83**	**342**	Pn	**Pn**		**17 46 11.6**	**+2.9**
ABTO	**Aybut**	**9.83**	**195**	P	**Pn**		**17 46 11.5**	**+2.6**
	SNR=10							
IPAY	**Payeh**	**9.85**	**14**	Pn	**Pn**		**17 46 10.9**	**+1.9**
IPAY	**Payeh**	**9.85**	**14**	*e*Pn	**Pn**		**17 46 10.9**	**+1.9**
IPAY	**Payeh**	**9.85**	**14**	*e*Pn	**Pn**		**17 46 10.9**	**+1.9**
IAKL	**Akhelmad**	**9.94**	**13**	Pn	**Pn**		**17 46 10.9**	**+0.6**
IAKL	**Akhelmad**	**9.94**	**13**	*e*Pn	**Pn**		**17 46 10.9**	**+0.6**
IAKL				*e*			17 49 49.0	
	comp=Z,4μm,1.2s							
IRAZ	**Razeghan**	**9.95**	**330**	Pn	**Pn**		**17 46 10.9**	**+0.4**
IRAZ	**Razeghan**	**9.95**	**330**	*e*Pn	**Pn**		**17 46 11.0**	**+0.5**
IRAZ				*e*			17 48 35.5	
	comp=Z,2μm,0.4s							
IRAZ	**Razeghan**	**9.95**	**330**	*e*Pn	**Pn**		**17 46 11.0**	**+0.5**
IMYA	**Miami**	**10.03**	**19**	Pn	**Pn**		**17 46 12.1**	**+0.6**
IMYA	**Miami**	**10.03**	**19**	*e*Pn	**Pn**		**17 46 12.2**	**+0.7**
IMYA	**Miami**	**10.03**	**19**	Pn	**Pn**		**17 46 12.1**	**+0.6**
IKRD	**Kardeh**	**10.07**	**11**	Pn	**Pn**		**17 46 15.6**	**+3.6**
IKRD	**Kardeh**	**10.07**	**11**	*e*Pn	**Pn**		**17 46 15.7**	**+3.7**
IKRD				*e*			17 49 45.3	
	comp=Z,8μm,1.3s							
ISFR	**Sfrayin**	**10.26**	**9**	Pn	**Pn**		**17 46 15.5**	**+0.9**
ISFR	**Sfrayin**	**10.26**	**9**	*e*Pn	**Pn**		**17 46 15.6**	**+1.0**
ISFR				*e*			17 50 05.3	
	comp=Z,5μm,0.8s							
ISFR	**Sfrayin**	**10.26**	**9**	Pn	**Pn**		**17 46 15.5**	**+0.9**
IKOM	**Komasi**	**10.31**	**317**	Pn	**Pn**		**17 46 14.5**	**-0.9**
IKOM	**Komasi**	**10.31**	**317**	*e*Pn	**Pn**		**17 46 14.6**	**-0.8**
IKOM				*e*			17 48 17.8	
	comp=Z,9μm,0.3s							
IKOM	**Komasi**	**10.31**	**317**	*e*Pn	**Pn**		**17 46 14.6**	**-0.8**
IVIS	**Veis**	**10.96**	**316**	Pn	**Pn**		**17 46 23.1**	**-1.1**
IVIS	**Veis**	**10.96**	**316**	*e*Pn	**Pn**		**17 46 23.1**	**-1.1**
IVIS				*e*			17 48 29.4	
	comp=Z,3μm,0.3s							
IVIS	**Veis**	**10.96**	**316**	*e*Pn	**Pn**		**17 46 23.1**	**-1.1**
IGHG	**Ghaleghazi**	**11.00**	**315**	Pn	**Pn**		**17 46 24.4**	**-0.5**
IGHG	**Ghaleghazi**	**11.00**	**315**	*e*Pn	**Pn**		**17 46 24.4**	**-0.5**
IGHG				*e*			17 48 35.7	
	comp=Z,6μm,0.3s							
IGHG	**Ghaleghazi**	**11.00**	**315**	*e*Pn	**Pn**		**17 46 24.4**	**-0.5**
ABKT	**Ailbek**	**11.14**	**9**	Pn	**Pn**		**17 46 29.4**	**+2.7**
	comp=Z,362nm,1.0s,SNR=9.0							
ILIN	**Lien**	**11.15**	**318**	Pn	**Pn**		**17 46 26.9**	**0.0**
ILIN	**Lien**	**11.15**	**318**	*e*Pn	**Pn**		**17 46 27.0**	**+0.1**
ILIN				*e*			17 48 31.9	
	comp=Z,4μm,0.4s							
ILIN	**Lien**	**11.15**	**318**	*e*Pn	**Pn**		**17 46 27.0**	**+0.1**
VAN	**Vannovskaya**	**11.15**	**9**	*e*P	**Pn**		**17 46 29.2**	**+2.3**
VAN	**Vannovskaya**	**11.15**	**9**	*e*P	**Pn**		**17 46 29.2**	**+2.3**
IDHR	**Dehrash**	**11.36**	**316**	Pn	**Pn**		**17 46 28.5**	**-1.2**
IDHR	**Dehrash**	**11.36**	**316**	*e*Pn	**Pn**		**17 46 28.5**	**-1.2**
IDHR				*e*			17 48 39.2	
	comp=Z,6μm,0.2s							
IDHR	**Dehrash**	**11.36**	**316**	*e*Pn	**Pn**		**17 46 28.5**	**-1.2**
ISRB	**Sarab**	**12.97**	**329**	Pn	**Pn**		**17 46 52.0**	**+0.2**
ISRB	**Sarab**	**12.97**	**329**	*e*Pn	**Pn**		**17 46 52.0**	**+0.2**
KBL	**Kabul**	**13.53**	**53**	‖*i*Pn	**Pn**		**17 47 01.4**	**+2.0**
	comp=Z,39nm,1.1s							
KBL				*e*Sn	**Sn**		**17 49 38.2**	**+8.7**
KBL	**Kabul**	**13.53**	**53**	‖*i*P	**Pn**		**17 47 01.4**	**+2.0**
KBL				*e*			17 49 38.2	
KBL				pmax	pmax			
	comp=Z,39nm,1.1s							
KBL	**Kabul**	**13.53**	**53**	*i* P	**Pn**		**17 47 01.4**	**+2.0**
	comp=Z,39nm,1.1s							
KBL				*e*S	**Sn**		**17 49 38.2**	**+8.7**
MUKL	**Al Mukalla**	**13.98**	**209**	‖*e*P	**Pn**		**17 47 02.4**	**-3.3**
ITBZ	**Tabriz**	**14.03**	**326**	Pn	**Pn**		**17 47 07.5**	**+1.4**
ITBZ	**Tabriz**	**14.03**	**326**	*e*	Px		17 47 17.2	
	comp=Z,773nm,0.5s							
ITBZ				*e*Pn	**Pn**		**17 47 07.5**	**+1.4**
ISHB	**Shabestar**	**14.33**	**325**	Pn	**Pn**		**17 47 10.0**	**-0.3**
ISHB	**Shabestar**	**14.33**	**325**	*e*Pn	**Pn**		**17 47 10.1**	**-0.2**
ISHB				*e*			17 47 43.7	
	comp=Z,515nm,0.3s							
THW	**Thamme Wali**	**14.84**	**63**	P	**Pn**		**17 47 14.8**	**-2.5**
CEP	**Cherat**	**15.34**	**59**	P	**Pn**		**17 47 23.2**	**-0.7**
BDHA	**Al Bayda'**	**16.16**	**219**	‖*e*P	**Pn**		**17 47 31.5**	**-3.1**
BDHA				*i* S	**Sn**		**17 50 33.6**	**-0.1**
GNI	**Garni**	**16.20**	**327**	Pn	**Pn**		**17 47 37.2**	**+2.2**
	comp=Z,1.1nm,0.3s,baz=103,slow=0.9,SNR=34							
GNI				Sn	**Sn**		**17 50 35.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=108,slow=18,SNR=1.6							
GNI				LR	LR		17 55 21.6	
	comp=Z,896nm,21.9s,baz=135,slow=43							
GNI	**Garni**	**16.20**	**327**	*e*Pn	**Pn**		**17 47 36.9**	**+1.8**
	comp=Z,237nm,1.0s							
GNI	**Garni**	**16.20**	**327**	*d i*P	**Pn**		**17 47 37.8**	**+2.8**
GNI				pmax	pmax			
	comp=Z,116nm,1.2s							
GNI	**Garni**	**16.20**	**327**	*e*Pn	**Pn**		**17 47 36.9**	**+1.9**
	comp=Z,237nm,1.0s							
GNI	**Garni**	**16.20**	**327**	*i* P	**Pn**		**17 47 37.8**	**+2.8**
	comp=Z,116nm,1.2s							
CHCP	**Chirah Chowk**	**16.33**	**62**	P	**Pn**		**17 47 35.3**	**-1.5**
LBOS		**16.42**	**220**	*e*P	**Pn**		**17 47 35.0**	**-3.1**
LBOS				AMb	AMB		17 47 37.6	
	comp=Z,124nm,2.0s							
LBOS				*i* S	**Sn**		**17 50 41.0**	**+0.8**
AJM	**Ajmer**	**16.64**	**87**	*e*PKP	**Pn**		**17 47 41.0**	**+0.2**
AJM				*ex*	x		17 50 32.0	
DGRG	**David-gareji**	**16.96**	**332**	P	**Pn**		**17 47 46.7**	**+2.1**
MTA	**Mtatsminda**	**17.41**	**331**	P	**Pn**		**17 47 52.3**	**+2.0**
ASF	**Jabal al Asfar**	**17.45**	**292**	P	**Pn**		**17 47 49.4**	**-1.5**
	comp=Z,1.4nm,0.3s,baz=337,slow=3.4,SNR=17							
ASF				S	**Sn**		**17 51 06.0**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=163,slow=17,SNR=3.9							
ASF	**Jabal al Asfar**	**17.45**	**292**	P	**Pn**		**17 47 49.4**	**-1.5**
ASF				S	**Sn**		**17 51 06.0**	**+1.0**
ASF				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASF				smax				
	comp=N,1.0nm,0.3s							
TBLG	**Delisi**	**17.46**	**331**	P	**Pn**		**17 47 53.3**	**+2.4**
TBLG	**Delisi**	**17.46**	**331**	P	**Pn**		**17 47 53.4**	**+2.4**
TBLG	**Delisi**	**17.46**	**331**	P	**Pn**		**17 47 53.3**	**+2.4**
MAK	**Makhachkala**	**17.46**	**339**	*e*P	**Pn**		**17 47 55.2**	**+4.3**
MAK				*e*			17 51 07.8	
MAK				pmax	pmax			
	comp=Z,1μm,1.4s							
MAK				MLR	MLR			
	comp=Z,3μm,19.0s							
MAK	**Makhachkala**	**17.46**	**339**	*e*P	**Pn**		**17 47 55.2**	**+4.3**
	comp=Z,1μm,1.4s							
MAK				*e*S	**Sn**		**17 51 07.8**	**+2.8**
	comp=Z,3μm,19.0s							
KHET	**Khetri**	**17.59**	**82**	*e*PKP	**Pn**		**17 47 50.9**	**-1.8**
TRBA	**At Turbah**	**17.59**	**222**	‖*e*P	**Pn**		**17 47 49.6**	**-3.2**
GOR	**Gori**	**17.94**	**330**	P	**Pn**		**17 47 59.9**	**+3.0**
BHK	**Bhakra**	**18.36**	**71**	*e*PKP	**Pn**		**17 48 02.0**	**-0.1**
FKH	**Fakeheh**	**18.39**	**298**	*e*P	**Pn**		**17 48 02.0**	**-0.5**
POO	**Poona**	**18.42**	**113**	*e*PKP	**Pn**		**17 48 05.7**	**+2.8**
POO				AMb	AMB		17 48 13.0	
	comp=Z,108nm,1.5s							
KKR	**Kurukshetra**	**18.54**	**76**	*e*PKP	**Pn**		**17 48 05.1**	**+0.8**
RCY	**Rachaya**	**18.64**	**295**	*e*P	**Pn**		**17 48 05.2**	**-0.3**
MALT	**Malatya**	**18.66**	**312**	*e*P	**Pn**		**17 48 05.7**	**0.0**
	comp=Z,179nm,1.0s							
MALT				*e*S	**Sn**		**17 51 34.3**	**+0.3**
MALT	**Malatya**	**18.66**	**312**	*e*P	**Pn**		**17 48 05.7**	**+0.1**
MALT				*e*S	**Sn**		**17 51 34.3**	**+0.3**
MALT				pmax	pmax			
	comp=Z,179nm,1.0s							
MALT	**Malatya**	**18.66**	**312**	P	**Pn**		**17 48 06.1**	**+0.5**
	comp=Z,2μmcomp=Z,182nm,1.4s							
MALT	**Malatya**	**18.66**	**312**	*e*P	**Pn**		**17 48 05.7**	**+0.1**
	comp=Z,179nm,1.0s							
MALT				*e*S	**Sn**		**17 51 34.3**	**+0.3**
ZEI	**Tsey**	**18.67**	**331**	*e*P	**Pn**		**17 48 06.7**	**+1.0**
ZEI				*e*S	**Sn**		**17 51 37.3**	**+3.1**
ZEI				pmax	pmax			
	comp=Z,346nm,1.4s							
ZEI				MLR	MLR			
	comp=Z,983nm,9.0s							
**Z

AML eS S 17 52 22.3 -1.6
AML Almayashu 20.98 39 eP P 17 48 30.0 -0.6
comp=Z,48nm,0.6s
AML eS S 17 52 22.3 -1.5
CSS Prodhromos 21.03 298 P P 17 48 30.2 -1.1
comp=Z,4.3nm,1.6s
CSS Prodhromos 21.03 298 P P 17 48 30.2 -1.1
MAMC Mammari 21.18 298 P P 17 48 34.1 +1.3
MAMC Mammari 21.18 298 P P 17 48 34.1 +1.3
SOC Sochi 21.25 326 d iP P 17 48 33.8 +0.3
SOC e 17 48 54.9
SOC i S S 17 52 28.5 -0.8
SOC pmax pmax
comp=Z,138nm,1.3s,mb5.1
SOC MLR MLR
comp=N,985nm,11.0s,MS4.6
SOC MLR MLR
comp=E,1μm,11.0s,MS4.6
SOC MLR MLR
comp=Z,2μm,11.0s,MS4.8
SOC Sochi 21.25 326 i P P 17 48 33.8 +0.3
comp=Z,138nm,1.3s,mb5.1
SOC i S S 17 52 28.5 -0.8
comp=Z,2μm,11.0s
EKS2 Erkin-Say 21.37 38 P P 17 48 34.7 -0.2
SNR=59
EKS2 Erkin-Say 21.37 38 eP P 17 48 34.5 -0.4
comp=Z,276nm,1.4s,mb5.4
EKS2 eS S 17 52 28.9 -2.8
EKS2 Erkin-Say 21.37 38 eP P 17 48 34.5 -0.3
comp=Z,276nm,1.4s,mb5.4
EKS2 eS S 17 52 28.9 -2.7
PTH Pithoragarh 21.47 77 ex P 17 48 34.6 -1.4
ALFC Alevga 21.66 298 P P 17 48 37.0 -1.0
comp=Z,2.0nm,0.8s
ALFC Alevga 21.66 298 P P 17 48 37.0 -1.0
AAK Ala-Archa 21.75 39 P P 17 48 39.2 +0.3
SNR=23
AAK Ala-Archa 21.75 39 P P 17 48 39.3 +0.4
comp=Z,17nm,0.6s,mb4.7,baz=200,slow=4.8,SNR=28
AAK S S 17 52 39.4 +0.3
comp=Z,1.9nm,0.4s,baz=177,slow=4.0,SNR=4.5
AAK Ala-Archa 21.75 39⇑ eP P 17 48 38.8 -0.1
comp=Z,234nm,1.5s,mb5.4
AAK Ala-Archa 21.75 39 c iP P 17 48 38.7 -0.2
AAK pmax pmax
comp=Z,77nm,5.0s
AAK Ala-Archa 21.75 39 P P 17 48 39.9 +1.0
comp=Z,408nm,1.4s,mb5.7,SNR=28
AAK Ala-Archa 21.75 39 P P 17 48 39.3 +0.4
comp=Z,380nmcomp=Z,24nm,1.7s,mb4.3
AAK Ala-Archa 21.75 39 i P P 17 48 38.7 -0.2
comp=Z,77nm,5.0s
PPCY Paphos 21.79 297 P P 17 48 38.3 -1.1
PPCY Paphos 21.79 297 P P 17 48 38.3 -1.1
KZA Kyzart 21.84 41 eP P 17 48 41.6 +1.8
comp=Z,132nm,1.0s,mb5.3
FRU Bishkek 21.95 39 eP P 17 48 40.0 -1.0
FRU e 17 53 13.0
FRU pmax pmax
comp=Z,200nm,2.0s,mb5.2
FRU Bishkek 21.95 39 eP P 17 48 40.0 -1.0
comp=Z,200nm,2.0s,mb5.2
JBP Jabalpur 22.01 94 ePKP P 17 48 43.1 +1.2
JBP ex x 17 52 55.2
KBK Karagaybulak 22.02 40 P P 17 48 45.1 +3.3
SNR=29
CHMS Chumysh 22.13 39 P P 17 48 45.8 +2.9
SNR=13
USP Ospenovka 22.17 38 P P 17 48 46.0 +2.6
SNR=30
AB31 Akbulak array 22.52 7 i P P 17 48 46.7 -0.4
AB31 pmax pmax
comp=Z,13nm,0.4s,mb4.7
AB31 Akbulak array 22.52 7 i P P 17 48 46.7 -0.4
comp=Z,13nm,0.4s,mb4.7
ABKAR Akbulak array 22.52 7 eP P 17 48 46.0 -1.0
comp=Z,28nm,0.7s,mb4.8
ABKAR eS S 17 52 48.7 -5.2
ABKAR Akbulak array 22.52 7 eP P 17 48 46.0 -1.1
comp=Z,28nm,0.7s,mb4.8
ABKAR eS S 17 52 48.7 -5.2
ULHL Ulahol 22.53 42 P P 17 48 49.9 +2.7
SNR=7.2
TKM2 Tokmak 2 22.56 40 P P 17 48 47.5 0.0
SNR=31
TKM2 Tokmak 2 22.56 40⇑ eP P 17 48 46.7 -0.9
comp=Z,167nm,1.6s,mb5.2
TKM2 Tokmak 2 22.56 40⇑ eP P 17 48 46.7 -0.9
TKM2 pmax pmax
comp=Z,167nm,1.6s,mb5.2
TKM2 Tokmak 2 22.56 40 eP P 17 48 46.7 -0.9
comp=Z,167nm,1.6s,mb5.2
BR131 Keskin Array S 22.59 310 eP P 17 48 47.4 -0.5
comp=Z,19nm,0.6s,mb4.7
BR131 eS S 17 52 56.2 +0.8
BR131 Keskin Array S 22.59 310 eP P 17 48 47.3 -0.6
comp=Z,19nm,0.6s,mb4.7
BR131 eS S 17 52 56.2 +0.8
BRTR Keskin Array B 22.59 310 P P 17 48 48.2 +0.3
comp=Z,52nm,0.9s,mb5.0,baz=129,slow=12,SNR=111
BRTR S S 17 53 00.7 +5.2
comp=Z,1.1nm,0.8s,baz=12,slow=30,SNR=3.7
BRTR LR LR 17 58 55.3
comp=Z,3μm,18.6s,MS4.7,baz=114,slow=40
BRTR Keskin Array B 22.59 310 P P 17 48 48.2 +0.3
BRTR pmax pmax
comp=Z,52nm,0.9s
BRTR MLR MLR
comp=Z,3μm,18.6s
BRTR Keskin Array B 22.59 310 P P 17 48 48.2 +0.3
comp=Z,3μm,18.6s
BRTR S S 17 53 00.6 +5.2
HYB Hyderabad 22.87 110 i P P 17 48 52.0 +1.0
HYB eS S 17 53 02.0 +1.6
ANN Anapa 23.27 325 eP P 17 48 55.8 +0.7
ANN e*PP 17 49 10.5
ANN eS S 17 53 03.9 -2.8
ANN eSS 17 53 46.0
ANN pmax pmax
comp=Z,100nm,1.2s,mb5.1
ANN MLR MLR
comp=Z,804nm,12.0s,MS4.4
ANN Anapa 23.27 325 eP P 17 48 55.8 +0.7
comp=Z,100nm,1.2s,mb5.1
ANN eS S 17 53 03.9 -2.8
AKTK Aktyubinsk 23.55 3 P P 17 48 57.3 -0.5
AKTK S S 17 53 17.0 +6.0
AKTK LR LR 17 59 18.8
AKTK Aktyubinsk 23.55 3 P P 17 48 57.3 -0.5
comp=Z,3μm,20.4s
AKTK S S 17 53 17.0 +6.0
AKTO Aktyubinsk 23.55 3 P P 17 48 57.3 -0.5
comp=Z,20nm,0.7s,mb4.7,baz=185,slow=8.4,SNR=50
AKTO S S 17 53 17.0 +6.0
comp=Z,4.7nm,1.0s,baz=66,slow=22,SNR=3.1
AKTO LR LR 17 59 18.8
comp=Z,3μm,20.4s,MS4.7,baz=21,slow=40
AKTO Aktyubinsk 23.55 3 P P 17 48 57.3 -0.5
AKTO pmax pmax
comp=Z,20nm,0.7s,mb4.7
AKTO MLR MLR
comp=Z,3μm,20.4s,MS4.7
AAE Adis Abeba 24.14 226 i P P 17 49 06.3 +2.7
AAE eS S 17 53 30.5 +9.2
DANN Dangsing 24.59 80 eP P 17 49 09.2 +1.6
comp=Z,120nm,0.8s,mb5.5
DANN Dangsing 24.59 80 eP P 17 49 09.2 +1.6
comp=Z,120nm,0.8s,mb5.5
SIM Simferopol' 25.15 321 deP P 17 49 14.2 +1.7
SIM eS S 17 53 34.8 -2.2
SIM pmax pmax
comp=Z,201nm,2.2s,mb5.3
SIM MLR MLR
comp=Z,900nm,17.3s,MS4.3
SIM Simferopol' 25.15 321 eP P 17 49 14.2 +1.7
comp=Z,201nm,2.2s,mb5.3
SIM eS S 17 53 34.8 -2.2
comp=Z,900nm,17.3s
GKN Gorkha 25.39 81 eP P 17 49 16.0 +1.1
comp=Z,63nm,1.1s,mb5.1
GKN Gorkha 25.39 81 eP P 17 49 16.0 +1.1
comp=Z,63nm,1.1s,mb5.1
DMN Daman 25.84 82 eP P 17 49 20.6 +1.7
comp=Z,54nm,0.9s,mb5.1
DMN Daman 25.84 82 eP P 17 49 20.6 +1.7
comp=Z,54nm,0.9s,mb5.1
KKN Kakani 25.97 81 eP P 17 49 21.4 +1.2
comp=Z,35nm,0.7s,mb5.0
KKN Kakani 25.97 81 eP P 17 49 21.4 +1.2
KKN pmax pmax
comp=Z,35nm,0.7s,mb5.0
KKN Kakani 25.97 81 eP P 17 49 21.4 +1.2
comp=Z,35nm,0.7s,mb5.0
KARP Karpathos 26.07 296 eP P 17 49 21.6 +0.6
PKIN Phulchoki 26.09 82 eP P 17 49 22.7 +1.4
comp=Z,59nm,1.0s,mb5.1
PKI Pulchoki 26.11 82 eP P 17 49 22.7 +1.3
comp=Z,49nm,0.8s,mb5.1
PKI Pulchoki 26.11 82 eP P 17 49 22.7 +1.3
PKI pmax pmax
comp=Z,49nm,0.8s,mb5.1
PKI Pulchoki 26.11 82 eP P 17 49 22.7 +1.3
comp=Z,49nm,0.8s,mb5.1
GUN Gumba 26.49 81 eP P 17 49 25.5 +0.6
comp=Z,118nm,1.1s,mb5.3
GUN Gumba 26.49 81 eP P 17 49 25.5 +0.6
comp=Z,118nm,1.1s,mb5.3
SMG Samos 26.82 301 eP P 17 49 28.5 +0.8
TRD Trivandrum 26.98 129⇑ ex x 17 49 44.7
TRD ex x 17 54 40.7
VORD Divnogorie 27.20 337 eP P 17 49 32.8 +1.8
VORD e*PP pP 17 49 47.5 +12
VORD eS S 17 54 06.7 -2.5
VORD pmax pmax
comp=N,20nm,1.2s
VORD pmax pmax
comp=E,10.0nm,1.2s
VORD pmax pmax
comp=Z,20nm,1.2s,mb4.5
VORD smax
comp=N,380nm,2.5s
VORD smax
comp=E,510nm,2.5s
VORD smax
comp=Z,140nm,2.5s
VORD Divnogorie 27.20 337 eP P 17 49 32.8 +1.8
VORD eS S 17 54 06.7 -2.5
NPS Neapolis 27.27 295 eP P 17 49 33.9 +2.1
VSR Storozhevoye 27.45 337 eP P 17 49 35.2 +2.0
VSR e*PP pP 17 49 50.9 +13
VSR e 17 50 21.2
VSR eS S 17 54 09.6 -3.6
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
VSR pmax pmax
comp=E,4.0nm,0.4s
VSR pmax pmax
comp=Z,100nm,2.1s,mb5.0
VSR pmax pmax
comp=N,40nm,1.0s
VSR pmax pmax
comp=E,50nm,2.1s
VSR smax
comp=E,380nm,2.7s
VSR smax
comp=Z,50nm,1.4s
VSR smax
comp=N,230nm,2.7s
VSR Storozhevoye 27.45 337 eP P 17 49 35.2 +2.0
VSR eS S 17 54 09.6 -3.6
comp=N,230nm,2.7s
CHOS Chios island 27.60 302 eP P 17 49 35.8 +1.1
VOR Voronezh 27.87 337 P P 17 49 38.0 +1.1
VOR pmax pmax
comp=Z,240nm,1.2s,mb5.7
VOR Voronezh 27.87 337 P P 17 49 38.0 +1.1
comp=Z,240nm,1.2s,mb5.7
ODAN Odare 27.94 83 eP P 17 49 38.6 +0.7
comp=Z,46nm,1.0s,mb5.0
ODAN Odare 27.94 83 eP P 17 49 38.6 +0.7
comp=Z,46nm,1.0s,mb5.1
BRVK Borovoye 28.21 18⇑ eP P 17 49 38.3 -1.7
comp=Z,42nm,1.2s,mb5.0
BRVK Borovoye 28.21 18⇑ eP P 17 49 38.3 -1.7
BRVK pmax pmax
comp=Z,43nm,1.2s,mb5.0
BRVK Borovoye 28.21 18 P P 17 49 40.9 +0.9
comp=Z,126nm,0.9s,mb5.5,SNR=20
BRVK Borovoye 28.21 18 eP P 17 49 38.3 -1.7
comp=Z,43nm,1.2s,mb5.0
BVAR Borovoye Array 28.21 18 P P 17 49 40.0 0.0
comp=Z,18nm,0.8s,mb4.8,baz=201,slow=7.9,SNR=128
BVAR PcP PcP 17 52 53.7 +0.3
comp=Z,2.5nm,0.4s,baz=217,slow=2.9,SNR=8.3
BVAR Borovoye Array 28.21 18 P P 17 49 40.0 0.0
BVAR 17 52 53.7
BVAR pmax pmax
comp=Z,19nm,0.8s
BVAR pmax pmax
comp=Z,3.0nm,0.4s
BVAR Borovoye Array 28.21 18 P P 17 49 40.0 0.0
comp=Z,19nm,0.8s,mb4.8
BVAR Borovoye Array 28.21 18 PcP PcP 17 52 53.7 +0.4
comp=Z,3.0nm,0.4s
TIRR Tirgusor 28.26 315 P P 17 49 45.1 +4.5
TIRR Tirgusor 28.26 315 P P 17 49 45.1 +4.5
TIRR Tirgusor 28.26 315 ⇑ iP P 17 49 37.3 -3.3
TIRR Tirgusor 28.26 315 P P 17 49 45.1 +4.5
ALN Alexandroupoli 28.37 307 eP P 17 49 41.3 -0.3
VAM Vamos 28.43 295 eP P 17 49 43.3 +1.1
LIA Limnos Island 28.68 305 eP P 17 49 44.8 +0.5
MK31 Makanchi Array 28.69 39⇑ eP P 17 49 43.7 -0.6
MK31 Makanchi Array 28.69 39⇑ eP P 17 49 43.7 -0.6
MK31 Makanchi Array 28.69 39 eP P 17 49 43.7 -0.6
MKAR Makanchi Array 28.69 39 P P 17 49 44.8 +0.4
comp=Z,6.1nm,0.7s,mb4.5,baz=222,slow=8.4,SNR=32
MKAR LR LR 18 01 31.1
comp=Z,1μm,20.5s,MS4.4,baz=239,slow=37
MKAR Makanchi Array 28.69 39 P P 17 49 44.8 +0.5
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR MLR MLR
comp=Z,1μm,20.5s
MKAR Makanchi Array 28.69 39 P P 17 49 44.8 +0.5
comp=Z,1μm,20.5s
CFR Carcaliu 28.79 317 ⇓ iP P 17 49 45.2 -0.1
RDO Rodhopi 28.82 307 eP P 17 49 46.3 +0.7
RDO Rodhopi 28.82 307 P P 17 49 45.6 0.0
VLY Voula,Athens 29.20 300 eP P 17 49 49.1 +0.1
KIS Kishinev 29.34 320 eP P 17 49 49.0 -1.1
KIS epP pP 17 50 06.0 +12
KIS eS S 17 54 38.0 -5.1
KIS eSS sS 17 55 06.0 +16
KIS eSS SS 17 56 03.0 -45
KIS eSSS 17 56 23.0
KIS LRM 18 06 14.0
comp=Z,800nm,16.0s
KIS Kishinev 29.34 320 eP P 17 49 49.0 -1.1
KIS e*PP pP 17 50 06.0 +12
KIS e 17 50 44.0
KIS eS S 17 54 38.0 -5.1
KIS MLR MLR
comp=N,800nm,16.0s
KIS MLR MLR
comp=Z,800nm,16.0s,MS4.4
KIS MLR MLR
comp=Z,800nm,16.0s
KIS Kishinev 29.34 320 eP P 17 49 49.0 -1.1
KIS eS S 17 54 38.0 -5.1
comp=Z,800nm,16.0s
KURK Kurchatov 29.36 30⇑ iP P 17 49 49.7 -0.5
comp=Z,9.8nm,0.8s,mb4.6
KURK Kurchatov 29.36 30⇑ iP P 17 49 49.7 -0.5
KURK pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
KURK Kurchatov 29.36 30 P P 17 49 50.6 +0.4
comp=Z,73nm,0.9s,mb5.4,SNR=5.7
KURK Kurchatov 29.36 30 i P P 17 49 49.7 -0.5
comp=Z,10.0nm,0.8s,mb4.6
KYTH Kithira 29.50 297 eP P 17 49 52.1 +0.4
DID Didima 29.56 299 eP P 17 49 51.2 -1.0
ARU Arti 29.56 3 eP P 17 49 50.8 -1.1
comp=Z,11nm,0.8s,mb4.6
ARU Arti 29.56 3 d iP P 17 49 52.0 +0.1
ARU e 17 50 52.9
ARU S S 17 54 43.7 -2.5
ARU SS SS 17 56 18.3 -34
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.5
ARU Arti 29.56 3 i P P 17 49 52.0 +0.1
comp=Z,18nm,1.7s,mb4.5
VLI Velíai 29.65 298 eP P 17 49 52.4 -0.6
LKFR Kufra 29.69 272 i P P 17 49 53.4 -0.1
comp=Z,79nm,1.2s,mb5.3,SNR=152
PLD Plovdiv 29.74 309 P P 17 49 54.8 +1.1
PLD Plovdiv 29.74 309 P P 17 49 54.8 +1.1
PLD Plovdiv 29.74 309 P P 17 49 54.8 +1.1
LTK Loutraki 29.87 300 eP P 17 49 50.7 -4.2
VRI Vrincioaia 29.99 317 P P 17 49 57.5 +1.6
VRI Vrincioaia 29.99 317 P P 17 49 57.5 +1.6
VRI Vrincioaia 29.99 317 ⇑ iP P 17 49 56.5 +0.6
VRI Vrincioaia 29.99 317 P P 17 49 57.5 +1.6
PLOR Plostina 30.03 317 ⇑ iP P 17 49 57.1 +0.9
NVR Nevrokopi 30.08 307 eP P 17 49 57.1 +0.4
SVE Sverdlovsk 30.08 5⇑ eP P 17 49 56.6 0.0
SVE eS S 17 54 52.0 -2.5
SVE pmax pmax
comp=Z,20nm,1.5s,mb4.6
SVE MLR MLR
comp=Z,2μm,15.0s,MS4.8
SVE Sverdlovsk 30.08 5 eP P 17 49 56.6 0.0
comp=Z,20nm,1.5s,mb4.6
PLG Polygyros 30.09 305 eP P 17 49 58.4 +1.6
PLG Polygyros 30.09 305 P P 17 49 57.7 +0.9
SRS Serrai 30.20 306 P P 17 49 58.5 +0.7
VLX Vlachokerasia 30.20 299 eP P 17 49 54.2 -3.7
SOH Sokhos 30.28 306 eP P 17 49 59.0 +0.4
SOH Sokhos 30.28 306 P P 17 49 59.2 +0.6
MLR Muntele Rosu 30.30 316 P P 17 49 59.6 +1.0
MLR Muntele Rosu 30.30 316 P P 17 49 59.6 +1.0
MLR Muntele Rosu 30.30 316 ⇑ iP P 17 49 59.6 +1.0
MLR Muntele Rosu 30.30 316 P P 17 49 59.6 +1.0
GUR Goura 30.34 300 eP P 17 49 58.3 -0.8
TESR 30.36 318 ⇑ iP P 17 49 59.1 0.0
ITM Ithomi 30.52 298 eP P 17 50 00.7 0.0
AGG Agios Georgios 30.58 302 eP P 17 50 00.9 -0.3
WMQ Urumqi 30.61 48 P P 17 50 02.0 +0.6
WMQ sP sP 17 50 09.0 +1.5
WMQ PP PP 17 51 02.0 -8.5
WMQ PcP PcP 17 53 00.0 +0.4
WMQ S S 17 55 02.0 -1.0
WMQ pmax pmax
comp=Z,24nm,1.0s,mb5.0
WMQ LR LR
comp=N,2μm,14.0s,MS5.1
WMQ LR LR
comp=E,2μm,14.0s,MS5.1
WMQ LR LR
comp=Z,2μm,14.0s,MS4.8
LIT Litokhoron 30.72 304 eP P 17 50 02.2 -0.2
EFP Efpalio 30.77 301 eP P 17 50 02.6 -0.3
VOIR 30.83 315 P P 17 50 04.2 +0.8
VOIR 30.83 315 ⇑ P P 17 50 04.1 +0.7
VOIR 30.83 315 ⇑ iP P 17 50 04.1 +0.7
VOIR 30.83 315 P P 17 50 04.1 +0.7
DOPR Dopca 30.86 316 ⇓ iP P 17 50 04.2 +0.6
VTS Vitosha 30.95 309 P P 17 50 05.2 +0.8
VTS Vitosha 30.95 309 ⇓ P P 17 50 05.0 +0.6
VTS Vitosha 30.95 309 ⇓ iP P 17 50 04.9 +0.5
VTS Vitosha 30.95 309 P P 17 50 05.0 +0.6
EVR Evrytania 30.95 301 eP P 17 50 05.2 +0.7
LSA Lhasa 30.98 77 P P 17 50 05.3 +0.5
LSA S S 17 55 06.1 -3.0
VAY Valandovo 31.00 306 P P 17 50 05.7 +0.9
VAY Valandovo 31.00 306 P P 17 50 05.7 +0.9
VAY Valandovo 31.00 306 P P 17 50 04.8 0.0
VAY Valandovo 31.00 306 i P P 17 50 04.8 -0.1
VAY Valandovo 31.00 306 P P 17 50 05.7 +0.9
GRG Griva 31.01 306 P P 17 50 04.7 -0.3
RLS Riolos of Patr 31.04 300 eP P 17 50 05.5 +0.2
AKASG Malin Array Be 31.33 327 P P 17 50 07.0 -0.6
comp=Z,7.2nm,0.6s,mb4.7,baz=130,slow=7.8,SNR=50
AKASG PcP PcP 17 53 01.3 -0.1
comp=Z,4.0nm,0.6s,baz=99,slow=2.4,SNR=8.6
AKASG LR LR 18 05 38.0
comp=Z,763nm,21.8s,MS4.3,baz=125,slow=42
AKASG Malin Array Be 31.33 327 P P 17 50 07.0 -0.6
AKASG 17 53 01.3
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG MLR MLR
comp=Z,763nm,21.8s
AKASG Malin Array Be 31.33 327 P P 17 50 07.0 -0.6
comp=Z,7.0nm,0.6s,mb4.7
AKASG Malin Array Be 31.33 327 PcP PcP 17 53 01.3 -0.1
comp=Z,763nm,21.8s
KIEV Kiev 31.33 327⇑ eP P 17 50 05.8 -1.9
comp=Z,36nm,1.0s,mb5.2
KIEV ePcP PcP 17 53 00.9 -0.5
KIEV Kiev 31.33 327⇑ eP P 17 50 05.8 -1.9
KIEV e 17 53 00.9
KIEV pmax pmax
comp=Z,36nm,1.0s,mb5.2
KIEV Kiev 31.33 327 eP P 17 50 05.8 -1.9
comp=Z,36nm,1.0s,mb5.2
KMPD K-Podol'skiy 31.53 321 P P 17 50 09.0 -0.4
KMPD K-Podol'skiy 31.53 321 P P 17 50 09.0 -0.4
KMPD K-Podol'skiy 31.53 321 P P 17 50 09.0 -0.4
OBN Obninsk 31.56 339 eP P 17 50 09.2 -0.4
comp=Z,50nm,0.9s,mb5.3
OBN Obninsk 31.56 339 ⇓ iP P 17 50 10.1 +0.5
OBN eS S 17 55 16.9 -0.7
OBN eSS SS 17 57 19.1 -14
OBN pmax pmax
comp=Z,74nm,1.4s,mb5.3
OBN MLR MLR
comp=Z,800nm,20.0s,MS4.4
OBN Obninsk 31.56 339 i P P 17 50 10.1 +0.5
comp=Z,74nm,1.4s,mb5.3
OBN eS S 17 55 16.9 -0.7
comp=Z,800nm,20.0s
MDB Medias 31.57 316 P P 17 50 11.5 +1.7
MDB Medias 31.57 316 P P 17 50 11.5 +1.7
MDB Medias 31.57 316 P P 17 50 11.5 +1.7
VLS Valsamata 31.74 300 eP P 17 50 10.8 -0.7
MOS Moscow 31.75 340 eP P 17 50 11.1 -0.1
MOS e 17 51 14.2
MOS e 17 52 55.7
MOS eS S 17 55 17.7 -2.8
MOS eSSS 17 57 34.3
MOS pmax pmax
comp=Z,72nm,1.2s,mb5.4
MOS pmax pmax
comp=Z,200nm,2.4s,mb5.5
MOS Moscow 31.75 340 eP P 17 50 11.1 -0.1
comp=Z,200nm,2.4s,mb5.5
BURAR Bucovina Array 31.75 319 ⇑ iP P 17 50 11.9 +0.5
BURAR Bucovina Array 31.75 319 ⇑ iP P 17 50 11.9 +0.5
BUR08 Bucovina Ar. S 31.78 319 eP P 17 50 11.3 -0.3
BUR08 Bucovina Ar. S 31.78 319 eP P 17 50 11.3 -0.3
BIA Bitola 31.82 305 eP P 17 50 12.2 +0.1
KRUS Krusevo 31.96 306 i P P 17 50 13.6 +0.3
BARS Barje 31.99 309 P P 17 50 13.0 -0.6
BARS Barje 31.99 309 P P 17 50 13.0 -0.6
SKO Skopje 32.00 307 P P 17 50 15.5 +1.9
SKO Skopje 32.00 307 P P 17 50 15.5 +1.9
SKO Skopje 32.00 307 eP P 17 50 14.4 +0.8
SKO Skopje 32.00 307 P P 17 50 15.5 +1.9
SHL Shillong 32.12 84 ePKP P 17 50 17.0 +2.0
DJES Djerdap 32.15 312 P P 17 50 15.6 +0.6
GZR Gura Zlata 32.27 314 P P 17 50 16.5 +0.5
GZR Gura Zlata 32.27 314 P P 17 50 16.4 +0.4
GZR Gura Zlata 32.27 314 P P 17 50 16.4 +0.4
SOKR Solikamsk 32.66 1 d iP P 17 50 19.9 +0.7
SOKR pmax pmax
comp=Z,30nm,1.4s,mb5.0
SOKR MLR MLR
comp=Z,2μm,24.0s,MS4.7
SOKR Solikamsk 32.66 1 i P P 17 50 19.9 +0.7
comp=Z,2μm,24.0s
BMR Baia Mare 32.80 318 P P 17 50 21.6 +1.0
BMR Baia Mare 32.80 318 P P 17 50 21.6 +1.0
BMR Baia Mare 32.80 318 P P 17 50 21.6 +1.0
DRGR 32.89 316 P P 17 50 21.9 +0.5
DRGR 32.89 316 ⇑ P P 17 50 21.7 +0.3
DRGR 32.89 316 ⇑ iP P 17 50 21.7 +0.3
DRGR 32.89 316 P P 17 50 21.7 +0.3
TIR Tirane 32.97 305 eP P 17 50 18.7 -3.4
comp=Z,95nm,1.0s,mb5.7

TIR Tirane 32.97 305 *e*P **P 17 50 18.7 -3.4**
TIR pmax pmax
comp=Z,95nm,1.0s,mb5.7
TIR Tirane 32.97 305 *e*P **P 17 50 18.7 -3.4**
comp=Z,95nm,1.0s,mb5.7
BZS Buzias 33.11 313 P **P 17 50 23.6 +0.3**
BZS Buzias 33.11 313 ⇑P **P 17 50 23.5 +0.2**
BZS Buzias 33.11 313 ⇑*i*P **P 17 50 23.5 +0.2**
BZS Buzias 33.11 313 P **P 17 50 23.5 +0.2**
KMBO Kilima Mbogo 33.23 216 *e*P **P 17 50 27.0 +2.3**
comp=Z,37nm,1.2s,mb5.2
KMBO Kilima Mbogo 33.23 216 *e*P **P 17 50 27.0 +2.4**
KMBO pmax pmax
comp=Z,37nm,1.2s
KMBO Kilima Mbogo 33.23 216 *e*P **P 17 50 27.0 +2.4**
comp=Z,37nm,1.2s,mb5.2
LVV L'vov 33.55 322 *e*P **P 17 50 16.8 -10**
LVV MLR MLR
comp=N,400nm,16.0s,MS4.3
LVV MLR MLR
comp=E,300nm,16.0s,MS4.3
LVV MLR MLR
comp=Z,300nm,16.0s,MS4.1
LVV L'vov 33.55 322 *e*P **P 17 50 16.8 -10**
TRPA Tarpa 33.59 318 ⇑*i*P **P 17 50 27.4 -0.1**
UZH Uzhgorod 33.96 319 *i*P **P 17 50 30.7 0.0**
UZH Uzhgorod 33.96 319 ⇑*i*P **P 17 50 30.4 -0.3**
UZH *i* 17 50 43.6
UZH *e* 17 51 50.8
UZH *e*PPP 17 52 00.0
UZH *e* 17 53 10.6
UZH *e*S **S 17 55 52.0 -3.1**
UZH *e*SSS 17 58 23.0
UZH MLR MLR
comp=N,700nm,18.6s,MS4.9
UZH MLR MLR
comp=E,2µm,18.6s,MS4.9
UZH MLR MLR
comp=Z,430nm,18.6s,MS4.2
UZH Uzhgorod 33.96 319 *i*P **P 17 50 30.4 -0.3**
UZH Uzhgorod 33.96 319 *e*PcP PcP 17 53 10.6 +1.9
UZH *e*S **S 17 55 52.0 -3.1**
LZLA Zalla 33.99 282 *i*P **P 17 50 32.6 +1.3**
comp=Z,89nm,1.3s,mb5.5,SNR=153
KOLS Kolonicke sedl 34.11 319 *e*P **P 17 50 33.1 +1.1**
comp=Z,51nm,1.1s,mb5.4
KOLS Kolonicke sedl 34.11 319 *e*P **P 17 50 33.1 +1.1**
KOLS pmax pmax
comp=Z,51nm,1.1s,mb5.4
KOLS Kolonicke sedl 34.11 319 *e*P **P 17 50 33.1 +1.1**
KOLS Kolonicke sedl 34.11 319 *e*P **P 17 50 33.1 +1.1**
comp=Z,51nm,1.1s,mb5.4
FRGS Fruska Gora 34.13 312 P **P 17 50 32.9 +0.7**
KWP Kalwaria Pacla 34.20 321 *e*P **P 17 50 32.5 -0.2**
KWP *e*S **S 17 55 51.4 -7.3**
KWP LMZ 18 08 17.5
comp=Z,700nm,21.3s
KWP Kalwaria Pacla 34.20 321 *e*P **P 17 50 32.9 +0.2**
comp=Z,26nm,0.9s,mb5.2
KWP Kalwaria Pacla 34.20 321 *e*P **P 17 50 32.5 -0.2**
KWP *e*S **S 17 55 51.4 -7.3**
KWP MLR MLR
comp=Z,700nm,21.3s,MS4.4
KWP Kalwaria Pacla 34.20 321 *e*P **P 17 50 32.5 -0.2**
comp=Z,700nm,21.3s
KWP *e*S **S 17 55 51.4 -7.3**
NVS Novosibirsk 34.26 28 *e*P **P 17 50 33.0 -0.2**
NVS *i*S **S 17 55 57.6 -1.9**
NVS pmax pmax
comp=Z,101nm,2.0s,mb5.4
NVS pmax pmax
comp=N,47nm,1.8s
NVS pmax pmax
comp=E,12nm,1.0s
NVS smax
comp=N,62nm,2.0s
NVS smax
comp=E,26nm,2.2s
NVS Novosibirsk 34.26 28 *e*P **P 17 50 33.0 -0.2**
comp=E,47nm,1.8s,mb5.1
NVS *i*S **S 17 55 57.6 -1.9**
comp=E,62nm,2.0s
ZAA0 Zalesovo Array 34.35 30 *e*P **P 17 50 32.8 -1.2**
ZAA0 Zalesovo Array 34.35 30 *e*P **P 17 50 32.8 -1.2**
ZALV Zalesovo Beam 34.35 30 P **P 17 50 33.5 -0.5**
comp=E,14nm,0.5s,mb5.1,baz=244,slow=9.2,SNR=82
ZALV PcP PcP 17 53 09.0 -0.7
comp=E,2.6nm,0.4s,baz=235,slow=3.9,SNR=4.2
ZALV LR LR 18 05 41.9
comp=E,790nm,19.8s,MS4.5,baz=318,slow=38
ZALV Zalesovo Beam 34.35 30 P **P 17 50 33.5 -0.5**
ZALV 17 53 09.0
ZALV pmax pmax
comp=Z,14nm,0.5s,mb5.2
ZALV pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
ZALV MLR MLR
comp=Z,790nm,19.8s,MS4.5
MICGM Minsk 34.43 331⇑*e*P **P 17 50 33.0 -1.7**
MNK Minsk 34.45 331⇑*e*P **P 17 50 33.0 -1.9**
MNK *e* 17 51 55.0
MNK *e*S **S 17 55 57.0 -5.5**
MNK pmax pmax
comp=Z,80nm,1.0s,mb5.6
MNK Minsk 34.45 331 *e*P **P 17 50 33.0 -1.9**
comp=Z,80nm,1.0s,mb5.6
LSRT Sirt 34.56 286 *i*P **P 17 50 37.4 +1.2**
comp=Z,144nm,1.6s,mb5.7,SNR=153
LSRT *e*S **S 17 56 03.8 -1.1**
SNR=152
CRVS Cervenica-Dubn 34.57 319 *e*P **P 17 50 36.5 +0.5**
comp=Z,26nm,1.1s,mb5.1
CRVS Cervenica-Dubn 34.57 319 *e*P **P 17 50 36.5 +0.5**
CRVS pmax pmax
comp=Z,27nm,1.1s,mb5.1
CRVS Cervenica-Dubn 34.57 319 *e*P **P 17 50 36.5 +0.5**
CRVS Cervenica-Dubn 34.57 319 *e*P **P 17 50 36.5 +0.5**
comp=Z,27nm,1.1s,mb5.1
KECS Kecovo 34.97 318 *e*P **P 17 50 40.4 +0.9**
comp=Z,22nm,1.0s,mb5.0
KECS Kecovo 34.97 318 *e*P **P 17 50 40.4 +0.9**
KECS pmax pmax
comp=Z,22nm,1.0s,mb5.0
KECS Kecovo 34.97 318 *e*P **P 17 50 40.3 +0.8**
GRI Girifalco 35.07 300 P **P 17 50 41.7 +1.2**
GRI Girifalco 35.07 300 P **P 17 50 41.7 +1.2**
GRI Girifalco 35.07 300 P **P 17 50 41.7 +1.2**
PSZ Piszkesteto 35.10 316⇑*i*P **P 17 50 39.4 -1.2**
comp=Z,23nm,0.9s,mb5.1
PSZ Piszkesteto 35.10 316 ⇓P **P 17 50 41.3 +0.7**
PSZ Piszkesteto 35.10 316 ⇓*i*P **P 17 50 41.3 +0.7**
PSZ Piszkesteto 35.10 316⇓*e*P **P 17 50 40.4 -0.2**
PSZ Piszkesteto 35.10 316 P **P 17 50 41.3 +0.7**
NACGM Naroch 35.17 331 *e*P **P 17 50 37.0 -4.1**
PKSM Moragy 35.26 313 P **P 17 50 42.1 +0.1**
PKSM Moragy 35.26 313 P **P 17 50 42.5 +0.5**
PKSM Moragy 35.26 313⇑*i*P **P 17 50 42.1 +0.1**
PKSM Moragy 35.26 313 P **P 17 50 42.5 +0.5**
PRGR Permogore 35.43 351⇑*i*P **P 17 50 40.3 -2.9**
PRGR *e*PP pP 17 50 58.3 +11
PRGR *e*S **S 17 56 10.7 -6.7**
PRGR pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
LJFR Jufra 35.46 283 *i*P **P 17 50 45.0 +1.1**
comp=Z,95nm,1.3s,mb5.5,SNR=153
LJFR *e*S **S 17 56 17.8 -0.9**
SNR=152
IDID Didziasalis 35.46 331 *e*P **P 17 50 43.8 +0.2**
IDID AMB AMB 17 50 48.0
comp=Z,13nm,2.4s,mb4.4
IDID Didziasalis 35.46 331 *e*P **P 17 50 43.8 +0.2**
comp=Z,13nm,2.4s,mb4.4,SNR=38
NIE Niedzica 35.48 319 *e*P **P 17 50 43.9 +0.1**
NIE Niedzica 35.48 319 P **P 17 50 45.3 +1.5**
NIE Niedzica 35.48 319 P **P 17 50 45.3 +1.5**
NIE Niedzica 35.48 319 P **P 17 50 45.3 +1.5**
CUC Castrocucco 35.71 302 ⇓*i*P **P 17 50 47.2 +1.3**
comp=Z,97nm,1.0s,mb5.7
CUC Castrocucco 35.71 302 ⇓*i*P **P 17 50 47.2 +1.3**
comp=Z,97nm,1.0s,mb5.7
IIGN Ignalina 35.71 331 *e*P **P 17 50 46.1 +0.4**
IIGN AMB AMB 17 50 47.6
comp=Z,19nm,1.2s,mb4.9
IIGN Ignalina 35.71 331 *e*P **P 17 50 46.1 +0.4**
comp=Z,19nm,1.2s,mb4.9,SNR=38

KLMR Klimovskoe 35.75 346*c i*P **P 17 50 45.3 -0.7**
KLMR *e*S **S 17 56 21.4 -1.0**
KLMR pmax pmax
comp=Z,140nm,1.5s,mb5.7
KLMR pmax pmax
comp=Z,73nm,5.9s
KLMR MLR MLR
comp=Z,586nm,16.0s,MS4.4
KLMR Klimovskoe 35.75 346 *i*P **P 17 50 45.3 -0.7**
comp=Z,586nm,16.0s
KLMR *e*S **S 17 56 21.4 -1.0**
ISAL Salakas 35.90 331 *e*P **P 17 50 47.4 +0.1**
ISAL AMB AMB 17 50 50.1
comp=Z,18nm,1.2s,mb4.9
ISAL Salakas 35.90 331 *e*P **P 17 50 47.4 +0.1**
comp=Z,18nm,1.2s,mb4.9,SNR=38
LMSR Misrath 35.91 289 *i*P **P 17 50 48.6 +0.8**
comp=Z,192nm,1.2s,mb5.9,SNR=153
LMSR *e*S **S 17 56 25.5 -0.1**
SNR=152
IZAR Zarasai 35.96 331 *e*P **P 17 50 48.2 +0.3**
IZAR AMB AMB 17 50 49.7
comp=Z,17nm,1.3s,mb4.8
IZAR Zarasai 35.96 331 *e*P **P 17 50 48.2 +0.3**
comp=Z,17nm,1.3s,mb4.8,SNR=38
VYHS Vyhne 35.98 317 *e*P **P 17 50 48.2 +0.1**
comp=Z,15nm,1.1s,mb4.8
VYHS Vyhne 35.98 317 *e*P **P 17 50 48.2 +0.1**
VYHS pmax pmax
comp=Z,15nm,1.1s,mb4.8
VYHS Vyhne 35.98 317 *e*P **P 17 50 48.2 +0.1**
VYHS Vyhne 35.98 317 *e*P **P 17 50 48.2 +0.1**
comp=Z,15nm,1.1s,mb4.8
LIKS Likavka 36.04 318 *e*P **P 17 50 49.9 +1.3**
comp=Z,67nm,1.1s,mb5.5
LIKS Likavka 36.04 318 *e*P **P 17 50 49.9 +1.3**
LIKS pmax pmax
comp=Z,67nm,1.1s,mb5.5
LIKS Likavka 36.04 318 *e*P **P 17 50 49.9 +1.3**
LIKS Likavka 36.04 318 *e*P **P 17 50 49.9 +1.3**
comp=Z,67nm,1.1s,mb5.5
MRLC Muro Lucano 36.08 303 P **P 17 50 49.9 +0.8**
MRLC Muro Lucano 36.08 303 P **P 17 50 49.9 +0.8**
OJC Ojcow 36.13 320 *e*P **P 17 50 49.2 -0.2**
OJC *e*sP sP 17 51 12.7 +17
OJC *e*S **S 17 56 21.8 -6.7**
OJC L 18 09 36.4
comp=Z,0.7nm,20.6s
OJC Ojcow 36.13 320 P **P 17 50 49.1 -0.3**
OJC Ojcow 36.13 320 *e*P **P 17 50 49.2 -0.2**
OJC *e*S **S 17 56 21.8 -6.7**
OJC MLR MLR
comp=Z,700nm,20.6s,MS4.4
OJC Ojcow 36.13 320 *e*P **P 17 50 49.2 -0.2**
OJC *e*S **S 17 56 21.8 -6.7**
comp=Z,700nm,20.6s
SGO Sicignano 36.18 303 P **P 17 50 51.0 +1.0**
SGO Sicignano 36.18 303 P **P 17 50 51.0 +1.0**
SGO Sicignano 36.18 303 P **P 17 50 51.0 +1.0**
SUW Suwalki 36.28 327 *e*P **P 17 50 50.0 -0.6**
SUW *e*pP pP 17 51 04.3 +9.3
SUW *e*S **S 17 56 27.3 -3.4**
SUW LMZ 18 09 13.4
comp=Z,800nm,22.1s
SUW Suwalki 36.28 327 *e*P **P 17 50 49.7 -0.9**
comp=Z,72nm,1.0s,mb5.5
SUW Suwalki 36.28 327 *e*P **P 17 50 50.0 -0.7**
SUW *e**PP pP 17 51 04.3 +9.3
SUW *e*S **S 17 56 27.3 -3.4**
SUW MLR MLR
comp=Z,800nm,22.1s,MS4.5
SUW Suwalki 36.28 327 *e*P **P 17 50 50.0 -0.7**
SUW *e*S **S 17 56 27.3 -3.4**
comp=Z,800nm,22.1s
FG5 Orsara di Pugl 36.33 304 P **P 17 50 52.3 +1.0**
FG5 Orsara di Pugl 36.33 304 P **P 17 50 52.3 +1.0**
FG5 Orsara di Pugl 36.33 304 P **P 17 50 52.3 +1.0**
CSSN Cassano Irpino 36.44 303 P **P 17 50 54.4 +2.2**
CSSN Cassano Irpino 36.44 303 P **P 17 50 54.4 +2.2**
MRB1 Monte Rocchett 36.53 304 P **P 17 50 54.6 +1.7**
MRB1 Monte Rocchett 36.53 304 P **P 17 50 54.6 +1.7**
MBAR Mbarara 36.61 226 *e*P **P 17 50 50.9 -3.0**
MBAR Mbarara 36.61 226 *e*P **P 17 50 50.9 -3.0**
PSB1 Pescosannita 36.66 304 P **P 17 50 55.0 +0.9**
PSB1 Pescosannita 36.66 304 P **P 17 50 55.0 +0.9**
CIGN Sant'Elia a Pi 36.67 304 P **P 17 50 55.6 +1.5**
CIGN Sant'Elia a Pi 36.67 304 P **P 17 50 55.6 +1.5**
LSHF Shwairf 36.72 285 *i*P **P 17 50 55.5 +0.8**
comp=Z,129nm,1.6s,mb5.5,SNR=154
LSHF *e*S **S 17 56 38.5 +0.5**
SNR=153
LUMB Murzuk 36.83 278 *i*P **P 17 50 56.4 +0.7**
comp=Z,122nm,1.3s,mb5.6,SNR=154
LUMB *e*S **S 17 56 37.7 -2.0**
SNR=153
JAVC Velka Javorina 36.83 317 P **P 17 50 56.3 +0.9**
JAVC Velka Javorina 36.83 317 P **P 17 50 56.3 +0.9**
JAVC Velka Javorina 36.83 317 P **P 17 50 56.3 +0.9**
MODS Modra-Piesok 36.89 316 *e*P **P 17 50 56.5 +0.6**
MODS Modra-Piesok 36.89 316 *e*P **P 17 50 56.5 +0.6**
MODS Modra-Piesok 36.89 316 *e*P **P 17 50 56.5 +0.6**
MODS Modra-Piesok 36.89 316 *e*P **P 17 50 56.5 +0.6**
KOGS Kog 36.90 313 P **P 17 50 56.3 +0.3**
KOGS Kog 36.90 313 *e*P **P 17 50 55.9 -0.2**
KOGS Kog 36.90 313 P **P 17 50 56.3 +0.3**
OKC Ostrava-Krasne 36.93 319 P **P 17 50 56.0 -0.2**
OKC Ostrava-Krasne 36.93 319 *e*P **P 17 50 55.8 -0.4**
OKC MLR MLR
comp=Z,800nm,18.2s,MS4.5
OKC Ostrava-Krasne 36.93 319 *e*P **P 17 50 55.8 -0.4**
OKC *e*pP pP 17 50 59.5 -1.1
OKC AMS AMS 18 08 40.0
comp=Z,800nm,18.2s
OKC Ostrava-Krasne 36.93 319 *e*P **P 17 50 55.8 -0.4**
comp=Z,800nm,18.2s
ZST Bratislava 36.94 316 *e*P **P 17 50 56.9 +0.6**
comp=Z,12nm,0.9s,mb4.7
ZST Bratislava 36.94 316 *e*P **P 17 50 56.9 +0.6**
ZST pmax pmax
comp=Z,12nm,0.9s,mb4.7
ZST Bratislava 36.94 316 *e*P **P 17 50 56.9 +0.6**
ZST Bratislava 36.94 316 *e*P **P 17 50 56.9 +0.6**
comp=Z,12nm,0.9s,mb4.7
SOP Sopron 37.10 315 P **P 17 50 58.0 +0.3**
SOP Sopron 37.10 315 P **P 17 50 58.0 +0.3**
SOP Sopron 37.10 315⇓*e*P **P 17 50 57.5 -0.2**
SOP Sopron 37.10 315 P **P 17 50 58.0 +0.3**
MIDA Miranda 37.15 304 P **P 17 51 00.4 +2.2**
MIDA Miranda 37.15 304 P **P 17 51 00.4 +2.2**
RNI2 Rionero Sannit 37.23 304 P **P 17 51 00.5 +1.6**
RNI2 Rionero Sannit 37.23 304 P **P 17 51 00.5 +1.6**
MORC Moravsky Berou 37.27 318⇑*i*P **P 17 50 58.0 -1.1**
comp=Z,21nm,0.8s,mb5.0
MORC Moravsky Berou 37.27 318 ⇑P **P 17 50 58.4 -0.7**
MORC Moravsky Berou 37.27 318⇑*i*P **P 17 50 58.4 -0.7**
MORC Moravsky Berou 37.27 318 P **P 17 50 58.4 -0.7**
BOJS Bojanci 37.30 311 *e*P **P 17 50 59.3 -0.1**
BOJS *e*S **S 17 56 41.0 -5.4**
BOJS *e* 17 59 28.7
INTR Introdacqua 37.47 305 P **P 17 51 01.9 +1.0**
INTR Introdacqua 37.47 305 P **P 17 51 01.9 +1.0**
SDI San Donato 37.49 304 P **P 17 51 01.3 +0.2**
SDI San Donato 37.49 304 P **P 17 51 01.3 +0.2**
SDI San Donato 37.49 304 P **P 17 51 01.3 +0.2**
GHAR Gharyan 37.55 288 *i*P **P 17 51 02.4 +0.7**
comp=Z,144nm,1.1s,mb5.6,SNR=154
GHAR *e*S **S 17 56 50.0 -0.5**
SNR=153
VSU Vasula 37.60 335*c i*P **P 17 51 00.4 -1.4**
VSU pmax pmax
comp=Z,42nm,1.2s,mb5.0
VSU Vasula 37.60 335 *i*P **P 17 51 00.4 -1.4**
comp=Z,42nm,1.2s,mb5.0
ARSA Arzberg 37.62 314 P **P 17 51 02.4 +0.2**
ARSA Arzberg 37.62 314⇑*i*P **P 17 51 02.1 -0.1**
comp=Z,18nm,1.1s,mb4.7,SNR=8.5
ARSA Arzberg 37.62 314 P **P 17 51 02.4 +0.2**
CONA Conrad Observa 37.63 315⇑*i*P **P 17 51 01.6 -0.5**
comp=Z,22nm,1.2s,mb4.8,SNR=14
VRAC Vranov 37.66 317 P **P 17 51 02.8 +0.4**
comp=Z,32nm,1.0s,mb5.0,baz=110,slow=8.6,SNR=34
VRAC LR LR 18 08 43.2
comp=Z,1µm,20.3s,MS4.7,baz=120,slow=40
VRAC Vranov 37.66 317 P **P 17 51 02.8 +0.4**

VRAC LR LR 18 08 43.2
VRAC Vranov 37.66 317⇑P **P 17 51 03.1 +0.7**
VRAC Vranov 37.66 317⇑*i*P **P 17 51 03.1 +0.7**
VRAC Vranov 37.66 317 P **P 17 51 03.1 +0.7**
PERS Pernice 37.70 312 *e*P **P 17 51 02.4 -0.4**
SOKA Soboth 37.77 312⇑*i*P **P 17 51 03.1 -0.3**
comp=Z,14nm,1.1s,mb4.6
TERO Teramo 37.80 306 P **P 17 51 04.4 +0.7**
TERO Teramo 37.80 306 P **P 17 51 04.4 +0.7**
GUAR Guarcino 37.87 304 P **P 17 51 03.9 -0.4**
GUAR Guarcino 37.87 304 P **P 17 51 03.9 -0.4**
AQU L'Aquila 37.90 305 *e*P **P 17 51 04.0 -0.6**
comp=Z,17nm,1.0s,mb5.6
AQU L'Aquila 37.90 305 ⇑P **P 17 51 05.5 +1.0**
AQU L'Aquila 37.90 305⇑*i*P **P 17 51 05.5 +1.0**
AQU L'Aquila 37.90 305 P **P 17 51 05.5 +1.0**
CEY Cerknica 37.91 311 P **P 17 51 05.4 +0.8**
CEY Cerknica 37.91 311 P **P 17 51 05.4 +0.8**
LJU Ljubljana 37.93 311 P **P 17 51 05.6 +0.8**
LJU Ljubljana 37.93 311 P **P 17 51 05.6 +0.8**
LJU Ljubljana 37.93 311 *e*P **P 17 51 04.9 +0.2**
LJU Ljubljana 37.93 311 P **P 17 51 05.6 +0.8**
OBKA Obir 38.04 312 P **P 17 51 06.1 +0.4**
OBKA Obir 38.04 312⇑*i*P **P 17 51 05.6 -0.1**
comp=Z,19nm,1.2s,mb4.7,SNR=6.9
OBKA Obir 38.04 312 P **P 17 51 06.1 +0.4**
FIAM Fiamignano 38.09 305 P **P 17 51 06.9 +0.7**
FIAM Fiamignano 38.09 305 P **P 17 51 06.9 +0.7**
NRCA Norcia 38.19 306 P **P 17 51 07.9 +0.9**
NRCA Norcia 38.19 306 P **P 17 51 07.9 +0.9**
DPC Dobruska-Polom 38.21 319 P **P 17 51 06.9 -0.2**
DPC Dobruska-Polom 38.21 319 *e*P **P 17 51 07.0 -0.1**
DPC *e* pP 17 51 12.2 +0.7
DPC MLR MLR
comp=Z,1µm,23.3s,MS4.6
DPC Dobruska-Polom 38.21 319 *e*P **P 17 51 07.0 -0.1**
DPC *e*pP pP 17 51 12.2 +0.7
DPC AMS AMS 18 06 50.0
comp=Z,1µm,23.3s
DPC Dobruska-Polom 38.21 319 *e*P **P 17 51 07.0 -0.1**
comp=Z,1µm,23.3s
FDMO Fiordimonte 38.25 306 P **P 17 51 07.4 -0.1**
FDMO Fiordimonte 38.25 306 P **P 17 51 07.4 -0.1**
TREC Trest 38.33 317 *e*P **P 17 51 08.3 +0.2**
TREC MLR MLR
comp=Z,1µm,21.1s,MS4.6
TREC Trest 38.33 317 *e*P **P 17 51 08.3 +0.2**
TREC AMS AMS 18 08 30.0
comp=Z,1µm,21.1s
TREC Trest 38.33 317 *e*P **P 17 51 08.3 +0.2**
comp=Z,1µm,21.1s
VOY Vojsko 38.35 311 *e*P **P 17 51 07.8 -0.5**
VOY *e* 17 51 34.7
GTA Gaotai 38.37 60 *e*P **P 17 51 09.3 +0.7**
GTA pP pP 17 51 14.1 +1.1
GTA sP sP 17 51 17.1 +2.4
GTA S **S 17 57 01.3 -1.5**
GTA pmax pmax
comp=Z,12nm,1.4s,mb4.4
GTA pmax pmax
comp=Z,220nm,5.0s
GTA LR LR
comp=N,830nm,21.3s,MS4.7
GTA LR LR
comp=E,620nm,16.6s,MS4.7
GTA LR LR
comp=Z,1µm,15.9s,MS4.8
CESI CESI - Serrava 38.37 306 P **P 17 51 09.4 +0.9**
CESI CESI - Serrava 38.37 306 P **P 17 51 09.4 +0.9**
SNTG Esanatoglia 38.39 307 P **P 17 51 09.5 +0.8**
SNTG Esanatoglia 38.39 307 P **P 17 51 09.5 +0.8**
KSP Ksiaz 38.42 319 *e*P **P 17 51 08.5 -0.3**
KSP *e*S **S 17 57 01.7 -1.6**
KSP LMZ 18 07 37.1
comp=Z,2µm,24.4s
UPC Upice 38.46 319 *e*P **P 17 51 09.0 -0.1**
UPC Upice 38.46 319 *e*P **P 17 51 09.0 -0.1**
UPC *e*pP pP 17 51 12.8 -0.7
UPC Upice 38.46 319 *e*P **P 17 51 09.0 -0.1**
CADS Cadrg 38.51 311 *e*P **P 17 51 08.9 -0.8**
CESX Cesi 38.54 305 P **P 17 51 09.8 -0.1**
CESX Cesi 38.54 305 P **P 17 51 09.8 -0.1**
ASS Assisi 38.56 306 P **P 17 51 11.6 +1.4**
ASS Assisi 38.56 306 P **P 17 51 11.6 +1.4**
ASS Assisi 38.56 306 P **P 17 51 11.6 +1.4**
FSSB Fossombrone 38.59 307 P **P 17 51 10.3 -0.1**
FSSB Fossombrone 38.59 307 P **P 17 51 10.3 -0.1**
MOA Molln 38.62 314 P **P 17 51 10.4 -0.1**
MOA Molln 38.62 314⇑*i*P **P 17 51 10.1 -0.4**
comp=Z,27nm,1.0s,mb4.9,SNR=16
MOA Molln 38.62 314 P **P 17 51 10.4 -0.1**
MURB Monte Urbino 38.69 306 P **P 17 51 12.9 +1.7**
MURB Monte Urbino 38.69 306 P **P 17 51 12.9 +1.7**
PIEI Pieia 38.74 307 P **P 17 51 12.2 +0.6**
PIEI Pieia 38.74 307 P **P 17 51 12.2 +0.6**
ALAS Alassa 38.75 290 *i*P **P 17 51 13.0 +1.1**
comp=Z,128nm,1.2s,mb5.5,SNR=154
ALAS *e*S **S 17 57 09.6 +0.9**
SNR=153
PTCC Patocco-Chiusa 38.81 312 P **P 17 51 12.1 -0.1**
PTCC Patocco-Chiusa 38.81 312 P **P 17 51 12.1 -0.1**
TOLF Tolfa 38.88 304 P **P 17 51 13.1 +0.3**
TOLF Tolfa 38.88 304 P **P 17 51 13.1 +0.3**
MGAB Montegabbione 38.93 306 P **P 17 51 13.4 +0.2**
MGAB Montegabbione 38.93 306 P **P 17 51 13.4 +0.2**
BADI Badiali 38.94 307 P **P 17 51 14.3 +1.0**
BADI Badiali 38.94 307 P **P 17 51 14.3 +1.0**
KBA Koelnbreinsper 39.00 313 P **P 17 51 13.9 +0.2**
KBA Koelnbreinsper 39.00 313 P **P 17 51 13.9 +0.2**
KBA Koelnbreinsper 39.00 313⇑*i*P **P 17 51 13.5 -0.2**
comp=Z,42nm,1.0s,mb5.1,SNR=9.5
KBA Koelnbreinsper 39.00 313 P **P 17 51 13.9 +0.2**
LATE Laterza 39.10 305 P **P 17 51 14.7 0.0**
LATE Laterza 39.10 305 P **P 17 51 14.7 0.0**
PRU Pruhonice 39.15 317 *e*P **P 17 51 15.2 +0.3**
PRU *e*S **S 17 57 11.4 -2.8**
PRU MLR MLR
comp=Z,1µm,21.0s,MS4.6
PRU Pruhonice 39.15 317 *e*P **P 17 51 15.2 +0.3**
PRU *e*S **S 17 57 11.4 -2.8**
PRU AMS AMS 18 09 00.0
comp=Z,1µm,21.0s
PRU Pruhonice 39.15 317 *e*P **P 17 51 15.2 +0.3**
comp=Z,1µm,21.0s
PRU *e*S **S 17 57 11.4 -2.8**
GEC2 GERESS Array S 39.28 315 *e*P **P 17 51 16.0 -0.1**
comp=Z,14nm,1.1s,mb4.6
GEC2 GERESS Array S 39.28 315 *e*P **P 17 51 16.0 -0.1**
GEC2 pmax pmax
comp=Z,14nm,1.1s,mb4.6
GEC2 GERESS Array S 39.28 315 *e*P **P 17 51 16.0 -0.1**
comp=Z,14nm,1.1s,mb4.6
GERES GERESS Array B 39.28 315 P **P 17 51 15.7 -0.4**
comp=Z,2.9nm,0.5s,mb4.2,baz=114,slow=8.9,SNR=38
GERES GERESS Array B 39.28 315 P **P 17 51 15.7 -0.4**
GERES pmax pmax
comp=Z,3.0nm,0.5s
GERES GERESS Array B 39.28 315 P **P 17 51 15.7 -0.4**
comp=Z,3.0nm,0.5s,mb4.3
SFI Santa Sofia 39.29 307 P **P 17 51 16.0 -0.3**
SFI Santa Sofia 39.29 307 P **P 17 51 16.0 -0.3**
SFI Santa Sofia 39.29 307 P **P 17 51 16.0 -0.3**
PVCC Panska Ves 39.32 318 *e*P **P 17 51 16.1 -0.3**
PVCC MLR MLR
comp=Z,800nm,20.9s,MS4.5
PVCC Panska Ves 39.32 318 *e*P **P 17 51 16.1 -0.3**
PVCC AMS AMS 18 09 20.0
comp=Z,800nm,20.9s
PVCC Panska Ves 39.32 318 *e*P **P 17 51 16.1 -0.3**
comp=Z,800nm,20.9s
KHC Kasperske Hory 39.45 316 *i*P **P 17 51 16.8 -0.7**
KHC AMS AMS 18 08 40.0
comp=Z,800nm,20.6s
ABTA Abfaltersbach 39.46 312⇑*i*P **P 17 51 17.2 -0.4**
comp=Z,41nm,1.0s,mb5.1,SNR=21
JOF Joensuu 39.52 342 *e*P **P 17 51 17.5 -0.3**
JOF pmax pmax
comp=Z,5.0nm,0.3s,mb4.7
JOF Joensuu 39.52 342 *e*p **P 17 51 17.5 -0.3**
comp=Z,5.1nm,0.3s,mb4.7
JOF Joensuu 39.52 342 *e*P **P 17 51 17.5 -0.3**
comp=Z,5.0nm,0.3s,mb4.7
VMG Vicchio 39.52 307 P **P 17 51 20.0 +1.9**

VMG Vicchio 39.52 307 P **P** **17 51 20.0 +1.9**
RJOB Jochberg 39.53 313 *e*P **P** **17 51 18.1 -0.1**
comp=Z,18nm,1.0s,mb4.8
BRG Berggiesshubel 39.82 318 *e*P **P** **17 51 20.5 0.0**
comp=Z,29nm,1.1s,mb4.9
BRG Berggiesshubel 39.82 318⇓ *i*P **P** **17 51 20.1 -0.4**
comp=Z,27nm,1.0s,mb4.9
BRG
comp=Z,969nm,18.0s
BRG
comp=N,1µm,20.0s
BRG
comp=E,431nm,20.0s
FNVD Fontana Vidola 39.86 308 P **P** **17 51 21.9 +1.0**
FNVD Fontana Vidola 39.86 308 P **P** **17 51 21.9 +1.0**
CTI Castel Tesino 39.87 311 P **P** **17 51 21.1 +0.1**
CTI Castel Tesino 39.87 311 P **P** **17 51 21.1 +0.1**
CTI Castel Tesino 39.87 311 P **P** **17 51 21.1 +0.1**
WET Wettzell 39.89 316 *e*P **P** **17 51 20.7 -0.5**
comp=Z,22nm,1.2s,mb4.8
WET Wettzell 39.89 316 *e*P **P** **17 51 20.7 -0.5**
WET pmax pmax
comp=Z,22nm,1.2s,mb4.8
WET Wettzell 39.89 316 *e*P **P** **17 51 20.7 -0.5**
comp=Z,22nm,1.2s,mb4.8
FINES FINESS Array B 39.96 338 P **P** **17 51 21.1 -0.5**
comp=Z,5.9nm,0.5s,mb4.6,baz=139,slow=8.7,SNR=38
FINES LR LR 18 10 25.7
comp=Z,542nm,21.3s,MS4.4,baz=153,slow=40
FINES FINESS Array B 39.96 338 P **P** **17 51 21.1 -0.4**
FINES pmax pmax
comp=Z,6.0nm,0.5s
FINES MLR MLR
comp=Z,542nm,21.3s
FINES FINESS Array B 39.96 338 P **P** **17 51 21.1 -0.4**
comp=Z,542nm,21.3s
WTTA Wattenberg 40.17 312 P **P** **17 51 23.1 -0.4**
WTTA Wattenberg 40.17 312 P **P** **17 51 23.1 -0.4**
WTTA Wattenberg 40.17 312⇑ *i*P **P** **17 51 22.7 -0.8**
comp=Z,89nm,1.0s,mb5.5,SNR=22
WTTA Wattenberg 40.17 312 P **P** **17 51 23.1 -0.4**
FBE Freiberg 40.18 318 *e*P **P** **17 51 23.8 +0.3**
comp=Z,24nm,1.2s,mb4.8
CHTO Chiang Mai 40.20 92 *e*P **P** **17 51 24.6 +0.5**
comp=Z,11nm,0.9s,mb4.6
CHTO Chiang Mai 40.20 92 *e*P **P** **17 51 24.6 +0.5**
CHTO pmax pmax
comp=Z,11nm,0.9s,mb4.6
CHTO Chiang Mai 40.20 92 P **P** **17 51 24.9 +0.8**
comp=Z,25nm,2.0s,mb4.6
CHTO Chiang Mai 40.20 92 *e*P **P** **17 51 24.6 +0.5**
comp=Z,11nm,0.9s,mb4.6
BDI Bagni Di Lucca 40.21 307 P **P** **17 51 25.3 +1.4**
BDI Bagni Di Lucca 40.21 307 P **P** **17 51 25.3 +1.4**
BDI Bagni Di Lucca 40.21 307 P **P** **17 51 25.3 +1.4**
WATA Walderalm 40.23 312 P **P** **17 51 23.3 -0.7**
WATA Walderalm 40.23 312 P **P** **17 51 23.3 -0.7**
WATA Walderalm 40.23 312⇑ *i*P **P** **17 51 23.0 -1.0**
comp=Z,76nm,1.1s,mb5.3,SNR=14
WATA Walderalm 40.23 312 P **P** **17 51 23.3 -0.7**
CM31 Chiang Mai Arr 40.32 93 *e*P **P** **17 51 26.6 +1.5**
comp=Z,2.8nm,0.6s,mb4.2
CM31 Chiang Mai Arr 40.32 93 *e*P **P** **17 51 26.6 +1.5**
comp=Z,2.8nm,0.6s,mb4.2
CMAR Chiang Mai Arr 40.32 93 P **P** **17 51 25.7 +0.6**
comp=Z,2.1nm,0.6s,mb4.1,baz=284,slow=9.3,SNR=22
CMAR PcP PcP 17 53 28.9 +0.3
comp=Z,1.5nm,0.8s,baz=276,slow=4.6,SNR=4.1
CMAR LR LR 18 11 01.0
comp=Z,220nm,18.9s,MS4.0,baz=285,slow=41
CMAR Chiang Mai Arr 40.32 93 P **P** **17 51 25.7 +0.6**
CMAR 17 53 28.9
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR MLR MLR
comp=Z,220nm,18.9s
CMAR Chiang Mai Arr 40.32 93 P **P** **17 51 25.7 +0.6**
comp=Z,2.0nm,0.6s,mb4.0
CMAR Chiang Mai Arr 40.32 93 PcP PcP 17 53 28.9 +0.3
KAF Kangasniemi 40.37 339 *e*P **P** **17 51 23.1 -1.8**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
KAF Kangasniemi 40.37 339 *e*p **P** **17 51 23.1 -1.8**
comp=Z,1.4nm,0.3s,mb4.2
KAF Kangasniemi 40.37 339 *e*P **P** **17 51 23.1 -1.8**
comp=Z,1.0nm,0.3s,mb4.0
VLC Villacollemand 40.38 307 P **P** **17 51 24.8 -0.5**
comp=Z,25nm,1.0s,mb4.9
VLC Villacollemand 40.38 307 P **P** **17 51 24.8 -0.5**
comp=Z,25nm,1.0s,mb4.9
ERBM Eremo 40.40 308 P **P** **17 51 25.6 +0.1**
ERBM Eremo 40.40 308 P **P** **17 51 25.6 +0.1**
NKC Novy Kostel 40.50 317 *e*P **P** **17 51 26.1 -0.1**
NKC *e*S **S** **17 57 32.3 -2.2**
NKC MLR MLR
comp=Z,1µm,22.0s,MS4.7
NKC Novy Kostel 40.50 317 *e*P **P** **17 51 26.1 -0.1**
NKC *e*S **S** **17 57 32.3 -2.2**
NKC AMS AMS 18 10 00.0
comp=Z,1µm,22.0s
NKC Novy Kostel 40.50 317 *e*P **P** **17 51 26.1 -0.1**
comp=Z,1µm,22.0s
NKC *e*S **S** **17 57 32.3 -2.2**
ROTZ Rotzenmuhle 40.50 316 *e*P **P** **17 51 26.5 +0.3**
comp=Z,40nm,1.2s,mb4.9
CLL Collm 40.52 319 *e*P **P** **17 51 26.6 +0.2**
comp=Z,42nm,1.2s,mb4.9
CLL Collm 40.52 319⇓ *i*P **P** **17 51 26.4 0.0**
comp=Z,42nm,1.2s,mb4.9
CLL *e* 17 51 40.0
CLL *i* 17 51 56.0
CLL *e*PcS PcS 17 57 16.0 -3.0
CLL *e*S **S** **17 57 28.0 -6.9**
CLL LR LR
comp=Z,900nm,19.0s,MS4.6
CLL Collm 40.52 319⇓ *i*P **P** **17 51 26.4 0.0**
CLL *e* 17 51 40.0
CLL *e*S **S** **17 57 28.0 -6.9**
CLL pmax pmax
comp=Z,11nm,1.2s,mb4.4
CLL MLR MLR
comp=Z,900nm,19.0s,MS4.6
CLL Collm 40.52 319⇓ *i*P **P** **17 51 26.4 0.0**
comp=Z,42nm,1.2s,mb4.9
CLL *e* 17 51 35.0
CLL *e* 17 51 40.0
CLL *e*PP PP 17 52 59.0 -0.6
CLL *e*S **S** **17 57 30.0 -4.9**
CLL *e*(PS) 17 57 53.0
CLL *e*SS SS 18 00 37.0 +2.6
CLL LmV 18 10 00.0
comp=Z,900nm,19.0s
CLL Collm 40.52 319 *i*P **P** **17 51 26.4 0.0**
comp=Z,11nm,1.2s,mb4.4
CLL *e*S **S** **17 57 28.0 -6.9**
KEST Kesra 40.53 294 P **P** **17 51 28.1 +1.5**
comp=Z,9.5nm,1.0s,mb4.4,baz=25,slow=1.4,SNR=23
KEST LR LR 18 11 54.9
comp=Z,280nm,18.0s,MS4.2,baz=14,slow=42
KEST Kesra 40.53 294⇑ *e*P **P** **17 51 26.6 0.0**
KEST Kesra 40.53 294⇑ *e*P **P** **17 51 26.6 0.0**
MOTA Moosalm 40.54 312 P **P** **17 51 25.7 -0.9**
MOTA Moosalm 40.54 312 P **P** **17 51 25.7 -0.9**
MOTA Moosalm 40.54 312⇑ *i*P **P** **17 51 25.2 -1.4**
comp=Z,81nm,1.2s,mb5.2,SNR=27
MOTA Moosalm 40.54 312 P **P** **17 51 25.7 -0.9**
TANN Tannenbergstha 40.55 317 *e*P **P** **17 51 26.5 -0.1**
comp=Z,42nm,2.3s,mb4.7
WERN Wernitzgruen 40.56 317 *e*P **P** **17 51 26.9 +0.2**
comp=Z,29nm,1.2s,mb4.7
VSL Villasalto 40.59 300⇑ *e*P **P** **17 51 27.4 +0.3**
comp=Z,51nm,0.8s,mb5.2
VSL Villasalto 40.59 300⇑ *e*P **P** **17 51 27.4 +0.3**
comp=Z,51nm,0.8s,mb5.2
GUNZ Gunzen 40.61 317 *e*P **P** **17 51 27.1 0.0**
comp=Z,36nm,2.0s,mb4.7
FUR Furstenfeldbru 40.63 314 *e*P **P** **17 51 26.9 -0.4**
comp=Z,52nm,1.2s,mb5.0
FUR Furstenfeldbru 40.63 314 *e*P **P** **17 51 26.9 -0.4**
FUR pmax pmax
comp=Z,52nm,1.2s,mb5.0
FUR Furstenfeldbru 40.63 314 *e*P **P** **17 51 26.9 -0.4**
comp=Z,52nm,1.2s,mb5.0
MABI Malga Bissina 40.65 310 P **P** **17 51 27.2 +0.3**

MABI Malga Bissina 40.65 310 P **P** **17 51 27.7 +0.3**
WERD Werda 40.65 317 *e*P **P** **17 51 27.2 -0.2**
comp=Z,12nm,1.3s,mb4.4
FETA Feichten 40.71 312⇑ *i*P **P** **17 51 27.4 -0.6**
comp=Z,102nm,1.1s,mb5.4,SNR=50
PLN Plauen 40.76 317 *e*P **P** **17 51 28.1 -0.2**
RETA Reutte 40.80 312⇓ *i*P **P** **17 51 27.4 -1.3**
comp=Z,18nm,0.9s,mb4.7,SNR=9.0
BRMO Bormio 40.83 311 P **P** **17 51 29.3 +0.3**
BRMO Bormio 40.83 311 P **P** **17 51 29.3 +0.3**
LGHD Ghdames 40.86 286 *i* P **P** **17 51 30.1 +0.7**
comp=Z,93nm,1.8s,mb5.1,SNR=154
LGHD *e*S **S** **17 57 39.7 -0.7**
SNR=153
BSD Bornholm Skovb 40.98 325 *e*P **P** **17 51 29.1 -1.0**
BSD pmax pmax
comp=Z,37nm,0.9s,mb5.0
BSD MLR MLR
comp=Z,370nm,21.0s,MS4.2
BSD Bornholm Skovb 40.98 325 *i* P **P** **17 51 29.1 -1.0**
comp=Z,37nm,0.9s,mb5.0
BSD
comp=Z,370nm,21.0s
BSD Bornholm Skovb 40.98 325 *e*P **P** **17 51 29.1 -1.0**
comp=Z,370nm,21.0s
BERNI Berninapass 41.05 311⇑ *i*P **P** **17 51 30.7 -0.1**
comp=Z,194nm,2.3s,mb5.3
BERNI Berninapass 41.05 311⇑ *i*P **P** **17 51 30.7 -0.1**
comp=Z,194nm,2.3s,mb5.3
GRA1 Grafenberg Arr 41.09 316 *e*P **P** **17 51 31.2 +0.2**
comp=Z,89nm,1.2s,mb5.3
GRA1 LR LR
comp=Z,800nm,18.9s,MS4.6
GRA1 Grafenberg Arr 41.09 316 *e*P **P** **17 51 31.2 +0.2**
comp=Z,800nm,18.9s
GRF Grafenberg Arr 41.09 316 *e*P **P** **17 51 31.2 +0.2**
comp=Z,89nm,1.2s,mb5.3
GRF *e*L 18 12 48.0
comp=Z,836nm,18.9s
GRF Grafenberg Arr 41.09 316 *e*P **P** **17 51 31.2 +0.2**
GRF pmax pmax
comp=Z,89nm,1.2s,mb5.3
GRF MLR MLR
comp=Z,800nm,18.9s,MS4.6
GRF Grafenberg Arr 41.09 316 *e*P **P** **17 51 31.2 +0.2**
GRF pmax pmax
comp=Z,89nm,1.2s,mb5.3
GRF MLR MLR
comp=Z,800nm,18.9s,MS4.6
GRF Grafenberg Arr 41.09 316 *e*P **P** **17 51 31.2 +0.2**
comp=Z,800nm,18.9s
GRFO Grafenberg 41.09 316⇑ *e*P **P** **17 51 30.4 -0.6**
comp=Z,63nm,1.1s,mb5.2
GRFO Grafenberg 41.09 316⇑ *e*P **P** **17 51 30.4 -0.7**
GRFO pmax pmax
comp=Z,63nm,1.1s,mb5.2
GRFO Grafenberg 41.09 316 *e*P **P** **17 51 30.4 -0.7**
comp=Z,63nm,1.1s,mb5.2
MOX Moxa 41.13 317 *e*P **P** **17 51 31.2 -0.2**
comp=Z,47nm,1.9s,mb4.8
MOX *e*SS **S** **17 57 45.0 +1.1**
MOX
comp=Z,900nm,20.0s
MOX Moxa 41.13 317 *e*P **P** **17 51 31.4 0.0**
comp=Z,14nm,1.1s,mb4.5
MOX Moxa 41.13 317 *e*P **P** **17 51 31.2 -0.2**
MOX *e*SS **S** **17 57 45.0 +1.1**
MOX pmax pmax
comp=Z,47nm,1.9s,mb4.8
MOX MLR MLR
comp=Z,900nm,20.0s,MS4.6
MOX Moxa 41.13 317 *e*P **P** **17 51 31.2 -0.2**
comp=Z,47nm,1.9s,mb4.8
MOX *e*S **S** **17 57 45.0 +1.1**
comp=Z,900nm,20.0s
BOB Bobbio (Coli) 41.14 308 P **P** **17 51 32.1 +0.5**
BOB Bobbio (Coli) 41.14 308 P **P** **17 51 32.1 +0.5**
BOB Bobbio (Coli) 41.14 308 P **P** **17 51 32.1 +0.5**
PGF Pioggiola 41.15 305 *e*P **P** **17 51 30.4 -1.2**
comp=Z,22nm,0.9s,mb4.5
PGF Pioggiola 41.15 305 *e*P **P** **17 51 30.4 -1.2**
comp=Z,11nm,0.9s,mb4.5
PGF Pioggiola 41.15 305 *e*P **P** **17 51 30.4 -1.2**
PGF pmax pmax
comp=Z,11nm,0.9s,mb4.5
PGF Pioggiola 41.15 305 *e*P **P** **17 51 30.4 -1.2**
comp=Z,11nm,0.9s,mb4.5
NEUB Neuenburg 41.22 318 *e*P **P** **17 51 32.3 +0.2**
comp=Z,40nm,1.1s,mb5.0
DAVOX Davos/Dischmat 41.23 311⇑ *i*P **P** **17 51 31.7 -0.5**
comp=Z,119nm,2.3s,mb5.1
DAVOX Davos/Dischmat 41.23 311⇑ *i*P **P** **17 51 31.7 -0.5**
comp=Z,119nm,2.3s,mb5.1
UBR Ueberruh 41.28 313 P **P** **17 51 32.1 -0.5**
UBR Ueberruh 41.28 313 P **P** **17 51 32.1 -0.5**
DAVA Damuels 41.34 312 P **P** **17 51 32.3 -0.8**
DAVA Damuels 41.34 312⇑ *i*P **P** **17 51 32.3 -0.8**
comp=Z,149nm,1.1s,mb5.5,SNR=30
DAVA Damuels 41.34 312 P **P** **17 51 32.3 -0.8**
LZH Lanzhou 41.44 65 *e*P **P** **17 51 35.1 +1.0**
LZH pP pP 17 51 39.3 +0.7
LZH sP sP 17 51 42.0 +1.7
LZH PcP PcP 17 53 34.6 +2.7
LZH *e*S **S** **17 57 50.0 +1.1**
LZH pmax pmax
comp=Z,31nm,1.3s,mb4.8
LZH pmax pmax
comp=Z,150nm,5.0s
LZH LR LR
comp=N,210nm,10.8s,MS4.8
LZH LR LR
comp=E,880nm,14.3s,MS4.8
LZH LR LR
comp=Z,1µm,14.6s,MS4.8
TUE Stuetta 41.52 311⇑ *e*P **P** **17 51 33.3 -1.4**
comp=Z,54nm,1.3s,mb5.0
TUE Stuetta 41.52 311⇑ *e*P **P** **17 51 33.3 -1.4**
comp=Z,54nm,1.3s,mb5.0
LIENZ Kamor/St.Gall 41.60 312⇑ *i*P **P** **17 51 34.1 -1.1**
comp=Z,235nm,2.4s,mb5.4
LIENZ Kamor/St.Gall 41.60 312⇑ *i*P **P** **17 51 34.1 -1.1**
comp=Z,235nm,2.4s,mb5.4
PLONS Plons/SG 41.62 312⇑ *i*P **P** **17 51 34.3 -1.1**
comp=Z,120nm,1.1s,mb5.5
MUGIO Muggio 41.63 310⇑ *i*P **P** **17 51 34.4 -1.1**
comp=Z,58nm,1.6s,mb5.0
MUGIO Muggio 41.63 310⇑ *i*P **P** **17 51 34.4 -1.1**
comp=Z,58nm,1.6s,mb5.0
CD2 Chengdu 41.73 73 P **P** **17 51 36.5 -0.1**
CD2 pP pP 17 51 41.0 0.0
CD2 sP sP 17 51 44.3 +1.5
CD2 PP PP 17 53 16.6 +3.6
CD2 PcP PcP 17 53 33.3 +0.3
CD2 PcS PcS 17 57 23.4 -1.1
CD2 S **S** **17 57 53.4 +0.1**
CD2 SS SS 18 00 53.8 -5.2
CD2 ScS ScS 18 01 37.0 -2.7
CD2 pmax pmax
comp=Z,20nm,1.0s,mb4.7
CD2 pmax pmax
comp=Z,190nm,8.4s
CD2 LR LR
comp=N,1µm,14.4s,MS5.0
CD2 LR LR
comp=E,630nm,14.4s,MS5.0
CD2 LR LR
comp=Z,830nm,12.4s,MS4.8
MOY Mondy 41.79 41 *e*P **P** **17 51 37.7 +1.0**
MOY pmax pmax
comp=Z,61nm,2.6s,mb4.8
MOY Mondy 41.79 41 *e*P **P** **17 51 37.7 +1.0**
comp=Z,61nm,2.6s,mb4.8
LLS Linth-Limmern 41.83 311⇑ *i*P **P** **17 51 36.2 -0.9**
comp=Z,212nm,2.1s,mb5.4
KMI Kunming 41.83 82 P **P** **17 51 38.5 +1.0**
KMI pP pP 17 51 41.5 -0.4
KMI sP sP 17 51 43.8 +0.1
KMI PP PP 17 53 18.3 +4.0
KMI PcP PcP 17 53 35.1 +1.7
KMI S **S** **17 57 55.9 +0.9**
KMI SS SS 18 00 55.5 -5.7
KMI pmax pmax
comp=Z,14nm,1.5s,mb4.4
KMI pmax pmax
comp=Z,320nm,3.5s
KMI LR LR

comp=N,500nm,14.0s,MS4.7
KMI LR LR
comp=E,520nm,12.7s,MS4.7
KMI LR LR
comp=Z,450nm,12.7s,MS4.5
WEIN Weingarten 41.98 312⇑ *i*P **P** **17 51 37.5 -0.9**
comp=Z,214nm,1.2s,mb5.7
WEIN Weingarten 41.98 312⇑ *i*P **P** **17 51 37.5 -0.9**
comp=Z,214nm,1.2s,mb5.7
WILA Wila 42.01 312⇑ *i*P **P** **17 51 37.9 -0.7**
comp=Z,218nm,1.1s,mb5.7
WILA Wila 42.01 312⇑ *i*P **P** **17 51 37.9 -0.7**
comp=Z,218nm,1.1s,mb5.7
GUT Gutenstein 42.02 313 P **P** **17 51 38.5 -0.2**
GUT Gutenstein 42.02 313 P **P** **17 51 38.5 -0.2**
ABSA Djebel Ababsia 42.03 295 P **P** **17 51 40.3 +1.3**
ABSA Djebel Ababsia 42.03 295 P **P** **17 51 40.3 +1.3**
CMAH Djebel Manchou 42.07 296 P **P** **17 51 40.3 +1.0**
CMAH Djebel Manchou 42.07 296 P **P** **17 51 40.3 +1.0**
MUO Muotathal 42.10 311⇑ *i*P **P** **17 51 38.4 -1.0**
comp=Z,206nm,2.3s,mb5.4
MUO Muotathal 42.10 311⇑ *i*P **P** **17 51 38.4 -1.0**
comp=Z,206nm,2.3s,mb5.4
UBBA Unterbreizbach 42.16 317 *e*P **P** **17 51 40.3 +0.5**
comp=Z,13nm,1.0s,mb4.5
ZUR Degenried 42.22 312⇑ *i*P **P** **17 51 39.5 -0.8**
comp=Z,224nm,1.1s,mb5.7
ZUR Degenried 42.22 312⇑ *i*P **P** **17 51 39.5 -0.8**
comp=Z,224nm,1.1s,mb5.7
SPAK Spaichingen-Ko 42.24 313 *e*P **P** **17 51 39.1 -1.4**
SPAK Spaichingen-Ko 42.24 313 *e*P **P** **17 51 39.1 -1.4**
CLZ Clausthal 42.25 319 *e*P **P** **17 51 41.3 +0.8**
comp=Z,76nm,1.2s,mb5.2
CLZ Clausthal 42.25 319 *e*P **P** **17 51 41.3 +0.8**
CLZ pmax pmax
comp=Z,76nm,1.2s,mb5.2
CLZ Clausthal 42.25 319 *e*P **P** **17 51 41.3 +0.8**
comp=Z,76nm,1.2s,mb5.2
SLE Schleitheim 42.36 312⇑ *i*P **P** **17 51 40.2 -1.3**
comp=Z,67nm,1.6s,mb5.0
SLE Schleitheim 42.36 312⇑ *i*P **P** **17 51 40.2 -1.3**
comp=Z,67nm,1.6s,mb5.0
SAOF Saorge 42.37 307 *e*P **P** **17 51 40.8 -0.8**
SAOF Saorge 42.37 307 *e*P **P** **17 51 40.8 -0.8**
SAOF Saorge 42.37 307 *e*P **P** **17 51 40.8 -0.8**
SBF Sospel 42.44 306 *e*P **P** **17 51 41.1 -1.1**
comp=Z,116nm,1.1s,mb5.1
SBF Sospel 42.44 306 *e*P **P** **17 51 41.1 -1.1**
comp=Z,58nm,1.1s,mb5.1
SBF Sospel 42.44 306 *e*P **P** **17 51 41.1 -1.1**
SBF pmax pmax
comp=Z,58nm,1.1s,mb5.1
SBF Sospel 42.44 306 *e*P **P** **17 51 41.1 -1.1**
comp=Z,58nm,1.1s,mb5.1
AUTN L'Aution 42.46 307 *e*P **P** **17 51 42.0 -0.4**
AUTN L'Aution 42.46 307 *e*P **P** **17 51 42.0 -0.4**
AUTN L'Aution 42.46 307 *e*P **P** **17 51 42.0 -0.4**
COP Copenhagen 42.51 325 *e*P **P** **17 51 37.6 -5.0**
COP *e* 18 01 06.6
COP pmax pmax
comp=Z,21nm,1.0s,mb4.8
COP MLR MLR
comp=Z,240nm,16.0s,MS4.2
COP Copenhagen 42.51 325 *i* P **P** **17 51 37.6 -5.0**
comp=Z,21nm,1.0s,mb4.8
COP *e* 18 01 06.6
COP
comp=Z,240nm,16.0s
LUCF Luceram 42.51 307 *e*P **P** **17 51 42.7 0.0**
LUCF Luceram 42.51 307 *e*P **P** **17 51 42.7 0.0**
CAEH 'Ain El Ouahch 42.52 296 P **P** **17 51 43.8 +0.8**
CAEH 'Ain El Ouahch 42.52 296 P **P** **17 51 43.8 +0.8**
TOD Tromm 42.58 315 *e*P **P** **17 51 42.4 -0.8**
TOD Tromm 42.58 315 *e*P **P** **17 51 42.4 -0.8**
TOD Tromm 42.58 315 *e*P **P** **17 51 42.4 -0.8**
BFO Black Forest 42.59 313 *e*P **P** **17 51 42.8 -0.5**
comp=Z,8.4nm,0.8s,mb4.5
BFO Black Forest 42.59 313 *e*P **P** **17 51 42.8 -0.5**
BFO pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
BFO Black Forest 42.59 313 *e*P **P** **17 51 42.8 -0.5**
comp=Z,8.0nm,0.8s,mb4.5
TOUF Mont Tournerai 42.59 307 *e*P **P** **17 51 43.3 -0.1**
TOUF Mont Tournerai 42.59 307 *e*P **P** **17 51 43.3 -0.1**
TOUF Mont Tournerai 42.59 307 *e*P **P** **17 51 43.3 -0.1**
NRDL Niedersach Rie 42.61 320 *e*P **P** **17 51 44.4 +0.9**
comp=Z,54nm,1.0s,mb5.2
SWS Schriesheim-Wi 42.62 315 P **P** **17 51 43.2 -0.3**
SWS Schriesheim-Wi 42.62 315 P **P** **17 51 43.2 -0.3**
CKFL Kef-Lekhel 42.64 295 P **P** **17 51 44.9 +1.0**
CKFL Kef-Lekhel 42.64 295 P **P** **17 51 44.9 +1.0**
FELD Feldberg im Sc 42.70 312 *e*P **P** **17 51 43.1 -1.2**
FELD Feldberg im Sc 42.70 312 *e*P **P** **17 51 43.1 -1.2**
WIMIS Wimmis 42.73 311⇑ *i*P **P** **17 51 43.1 -1.4**
comp=Z,71nm,1.0s,mb5.3
WIMIS Wimmis 42.73 311⇑ *i*P **P** **17 51 43.1 -1.4**
comp=Z,71nm,1.0s,mb5.3
DIX Grande Dixence 42.77 310⇑ *i*P **P** **17 51 44.1 -0.8**
comp=Z,107nm,2.2s,mb5.2
DIX Grande Dixence 42.77 310⇑ *i*P **P** **17 51 44.1 -0.8**
comp=Z,107nm,2.2s,mb5.2
KIZ Kirchzarten 42.78 313 P **P** **17 51 45.4 +0.5**
KIZ Kirchzarten 42.78 313 P **P** **17 51 45.4 +0.5**
KIZ Kirchzarten 42.78 313 P **P** **17 51 45.4 +0.5**
ZAK Zakamensk 42.79 44 *e*P **P** **17 51 45.2 +0.2**
ZAK pmax pmax
comp=Z,6.0nm,1.8s,mb4.0
ZAK Zakamensk 42.79 44 *e*P **P** **17 51 45.2 +0.2**
comp=Z,6.0nm,1.8s,mb4.0
BALST Balsthal 42.80 312⇑ *i*P **P** **17 51 43.9 -1.2**
comp=Z,358nm,2.2s,mb5.7
BALST Balsthal 42.80 312⇑ *i*P **P** **17 51 43.9 -1.2**
comp=Z,358nm,2.2s,mb5.7
CALN Calern 42.82 306 *e*P **P** **17 51 44.7 -0.6**
CALN Calern 42.82 306 *e*P **P** **17 51 44.7 -0.6**
CALN Calern 42.82 306 *e*P **P** **17 51 44.7 -0.6**
CASM Ain Smara 42.83 295 P **P** **17 51 46.3 +0.8**
CASM Ain Smara 42.83 295 P **P** **17 51 46.3 +0.8**
CTEI Djebel Teioual 42.90 295 P **P** **17 51 47.7 +1.6**
CTEI Djebel Teioual 42.90 295 P **P** **17 51 47.7 +1.6**
BBS Basel-Blauen 42.95 312 *e*P **P** **17 51 45.2 -1.1**
BBS Basel-Blauen 42.95 312 *e*P **P** **17 51 45.2 -1.1**
BBS Basel-Blauen 42.95 312 *e*P **P** **17 51 45.2 -1.1**
APA Apatity 42.95 347⇑ *i*P **P** **17 51 45.7 -0.3**
APA *i* S **S** **17 58 10.0 -0.4**
APA pmax pmax
comp=Z,120nm,1.6s,mb5.4
APA MLR MLR
comp=Z,1µm,13.0s,MS5.0
APA Apatity 42.95 347 *i* P **P** **17 51 45.7 -0.3**
comp=Z,120nm,1.6s,mb5.4
APA *i* S **S** **17 58 10.0 -0.4**
comp=Z,1µm,13.0s
TNS Taunus Mts 42.96 316 *e*P **P** **17 51 46.7 +0.4**
comp=Z,83nm,1.3s,mb5.3
TNS Taunus Mts 42.96 316 *e*P **P** **17 51 46.7 +0.4**
TNS pmax pmax
comp=Z,83nm,1.3s,mb5.3
TNS Taunus Mts 42.96 316 *e*P **P** **17 51 46.7 +0.4**
comp=Z,83nm,1.3s,mb5.3
FRF La Foret Royal 42.97 306 *e*P **P** **17 51 45.1 -1.4**
comp=Z,31nm,1.1s,mb4.7
FRF La Foret Royal 42.97 306 *e*P **P** **17 51 45.1 -1.4**
comp=Z,16nm,1.1s,mb4.7
FRF La Foret Royal 42.97 306 *e*P **P** **17 51 45.1 -1.4**
FRF pmax pmax
comp=Z,16nm,1.1s,mb4.7
FRF La Foret Royal 42.97 306 *e*P **P** **17 51 45.1 -1.4**
comp=Z,16nm,1.1s,mb4.7
MBDF Montbardon 43.02 308 *e*P **P** **17 51 45.3 -1.6**
comp=Z,46nm,0.9s,mb4.9
MBDF Montbardon 43.02 308 *e*P **P** **17 51 45.3 -1.6**
comp=Z,23nm,0.9s,mb4.9
LMR La Mourre 43.05 306 *e*P **P** **17 51 46.2 -1.0**
LMR La Mourre 43.05 306 *e*P **P** **17 51 46.2 -1.0**
LMR La Mourre 43.05 306 *e*P **P** **17 51 46.2 -1.0**
LANF Langenberg 43.07 314 *e*P **P** **17 51 45.7 -1.5**
LANF Langenberg 43.07 314 *e*P **P** **17 51 45.7 -1.5**
LANF Langenberg 43.07 314 *e*P **P** **17 51 45.7 -1.5**
BNI Bardonecchia 43.13 308 *e*P **P** **17 51 45.2 -2.6**
comp=Z,46nm,1.1s,mb5.1
BNI Bardonecchia 43.13 308 *e*P **P** **17 51 45.2 -2.6**
BNI pmax pmax
comp=Z,46nm,1.1s,mb5.1
BNI Bardonecchia 43.13 308 *e*P **P** **17 51 45.2 -2.6**

comp=Z,46nm,1.1s,mb5.1
LPG La Plagne 43.14 309 *e*P P 17 51 46.4 -1.5
comp=Z,32nm,0.8s,mb4.8
LPG La Plagne 43.14 309 *e*P P 17 51 46.4 -1.5
comp=Z,16nm,0.8s,mb4.8
LPL La Plagne 43.16 309 *e*P P 17 51 46.5 -1.5
comp=Z,55nm,0.9s,mb5.0
LPL La Plagne 43.16 309 *e*P P 17 51 46.5 -1.5
comp=Z,27nm,0.9s,mb5.0
LPL La Plagne 43.16 309 *e*P P 17 51 46.5 -1.5
LPL pmax pmax
comp=Z,27nm,0.9s,mb5.0
LPL La Plagne 43.16 309 *e*P P 17 51 46.5 -1.5
comp=Z,27nm,0.9s,mb5.0
TORNY Torny/Romont 43.20 311⇑*i*P P 17 51 47.3 -1.0
comp=Z,127nm,1.1s,mb5.6
TORNY Torny/Romont 43.20 311⇑*i*P P 17 51 47.3 -1.0
comp=Z,127nm,1.1s,mb5.6
RSL Roselend 43.26 309 *e*P P 17 51 47.4 -1.4
RSL Roselend 43.26 309 *e*P P 17 51 47.4 -1.4
RSL Roselend 43.26 309 *e*P P 17 51 47.4 -1.4
MOF Molkenrain 43.27 312 *e*P P 17 51 47.5 -1.4
MOF Molkenrain 43.27 312 *e*P P 17 51 47.5 -1.4
MOF Molkenrain 43.27 312 *e*P P 17 51 47.5 -1.4
CDF Champ du Feu 43.29 313 *e*P P 17 51 47.2 -1.8
comp=Z,25nm,1.0s,mb4.6
CDF Champ du Feu 43.29 313 *e*P P 17 51 47.2 -1.8
comp=Z,13nm,1.0s,mb4.6
OG01 Vacheresse 43.31 310 *e*P P 17 51 47.7 -1.5
OG01 Vacheresse 43.31 310 *e*P P 17 51 47.7 -1.5
DFRA Djebel Bou Aff 43.31 296 P P 17 51 50.6 +1.2
DFRA Djebel Bou Aff 43.31 296 P P 17 51 50.6 +1.2
ECH Echery 43.33 313 *e*P P 17 51 48.4 -0.9
ECH Echery 43.33 313⇑*e*P P 17 51 47.2 -2.1
comp=Z,42nm,1.0s,mb5.1
ECH Echery 43.33 313⇑*e*P P 17 51 47.2 -2.1
ECH pmax pmax
comp=Z,42nm,1.0s,mb5.1
ECH Echery 43.33 313 *e*P P 17 51 48.4 -0.9
TLY Talaya 43.37 42 *e*P P 17 51 50.3 +0.7
TLY *e*S S 17 58 06.4 -10
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
TLY MLR MLR
comp=Z,755nm,19.0s,MS4.6
TLY Talaya 43.37 42 *e*P P 17 51 50.3 +0.7
comp=Z,4.0nm,0.7s,mb4.3
LOMF Lomont 43.38 311 *e*P P 17 51 49.0 -0.8
LOMF Lomont 43.38 311 *e*P P 17 51 49.0 -0.8
LOMF Lomont 43.38 311 *e*P P 17 51 49.0 -0.8
ABH Alteburg 43.44 315 P P 17 51 53.5 +3.3
HINF Hinteralfeld 43.45 312 *e*P P 17 51 48.6 -1.7
comp=Z,62nm,1.2s,mb4.9
HINF Hinteralfeld 43.45 312 *e*P P 17 51 48.6 -1.7
comp=Z,31nm,1.2s,mb4.9
HINF Hinteralfeld 43.45 312 *e*P P 17 51 48.6 -1.7
HINF pmax pmax
comp=Z,31nm,1.2s,mb4.9
HINF Hinteralfeld 43.45 312 *e*P P 17 51 48.6 -1.7
comp=Z,31nm,1.2s,mb4.9
BRANT Les Verrieres 43.55 311⇑*i*P P 17 51 50.6 -0.6
comp=Z,273nm,2.3s,mb5.6
BRANT Les Verrieres 43.55 311⇑*i*P P 17 51 50.6 -0.6
comp=Z,273nm,2.3s,mb5.6
CKHR Kef el Ahmar 43.63 295 P P 17 51 52.9 +1.0
CKHR Kef el Ahmar 43.63 295 P P 17 51 52.9 +1.0
ORIF Oris-en-Rattie 43.67 308 *e*P P 17 51 50.4 -1.8
comp=Z,22nm,0.9s,mb4.6
ORIF *e*MLR MLR
comp=Z,826nm,23.0s,MS4.3
ORIF Oris-en-Rattie 43.67 308 *e*P P 17 51 50.4 -1.8
comp=Z,11nm,0.9s,mb4.6
RUP Ruppelstein 43.70 315 *e*P P 17 51 51.4 -0.9
RUP Ruppelstein 43.70 315 *e*P P 17 51 51.4 -0.9
RUP Ruppelstein 43.70 315 *e*P P 17 51 51.4 -0.9
SET Setif 43.71 295 P P 17 51 54.0 +1.4
SET Setif 43.71 295 P P 17 51 54.0 +1.4
CABF La Chapelle 43.76 310 *e*P P 17 51 51.8 -1.1
comp=Z,84nm,1.2s,mb5.0
CABF La Chapelle 43.76 310 *e*P P 17 51 51.8 -1.1
comp=Z,42nm,1.2s,mb5.0
CABF La Chapelle 43.76 310 *e*P P 17 51 51.8 -1.1
CABF pmax pmax
comp=Z,42nm,1.2s,mb5.0
CABF La Chapelle 43.76 310 *e*P P 17 51 51.8 -1.1
comp=Z,42nm,1.2s,mb5.0
SMRF Simiane la Rot 43.79 306 *e*P P 17 51 51.9 -1.2
comp=Z,30nm,1.0s,mb4.7
SMRF Simiane la Rot 43.79 306 *e*P P 17 51 51.9 -1.2
comp=Z,30nm,1.0s,mb5.0
SMRF Simiane la Rot 43.79 306 *e*P P 17 51 51.9 -1.2
comp=Z,30nm,1.0s,mb5.0
HAU Haudompre 43.82 312 *e*P P 17 51 51.4 -1.9
comp=Z,24nm,0.8s,mb4.7
HAU *e*MLR MLR
comp=Z,530nm,21.0s,MS4.1
HAU Haudompre 43.82 312 *e*P P 17 51 51.4 -1.9
comp=Z,12nm,0.8s,mb4.7
HFS Hagfors 43.94 331 P P 17 51 53.3 -0.8
comp=Z,25nm,1.0s,mb4.9,baz=133,slow=8.7,SNR=20
HFS LR LR 18 13 12.2
comp=Z,710nm,19.4s,MS4.6,baz=349,slow=40
HFS Hagfors 43.94 331 P P 17 51 53.3 -0.8
HFS pmax pmax
comp=Z,25nm,1.0s
HFS MLR MLR
comp=Z,711nm,19.4s
HFS Hagfors 43.94 331 P P 17 51 53.3 -0.8
comp=Z,711nm,19.4s
HFA0 Hagfors New Ar 43.95 331 P P 17 51 52.0 -2.2
HFA0 Hagfors New Ar 43.95 331 P P 17 51 52.0 -2.2
BUG Bochum--Univer 43.99 317 *e*P P 17 51 55.4 +0.8
comp=Z,71nm,1.3s,mb5.2
THEF They Montfort 44.10 313 *e*P P 17 51 54.3 -1.2
THEF They Montfort 44.10 313 *e*P P 17 51 54.3 -1.2
THEF They Montfort 44.10 313 *e*P P 17 51 54.3 -1.2
SONM Songino Array 44.24 48 P P 17 51 57.8 +1.1
comp=Z,20nm,1.2s,mb4.7,baz=256,slow=8.7,SNR=47
SONM LR LR 18 11 28.5
comp=Z,1μm,20.5s,MS4.8,baz=264,slow=38
SONM Songino Array 44.24 48 P P 17 51 57.8 +1.1
SONM pmax pmax
comp=Z,20nm,1.2s
SONM MLR MLR
comp=Z,1μm,20.5s
SONM Songino Array 44.24 48 P P 17 51 57.8 +1.1
comp=Z,1μm,20.5s
WLF Walferdange 44.27 315 P P 17 51 56.9 0.0
comp=Z,25nm,1.3s,mb4.8
WLF Walferdange 44.27 315 *e*P P 17 51 56.8 -0.1
comp=Z,42nm,1.2s,mb5.0
WLF Walferdange 44.27 315 *e*P P 17 51 56.1 -0.8
comp=Z,32nm,1.0s,mb5.0
WLF Walferdange 44.27 315 *e*P P 17 51 56.1 -0.8
WLF pmax pmax
comp=Z,32nm,1.0s,mb5.0
WLF Walferdange 44.27 315 *e*P P 17 51 56.1 -0.8
comp=Z,32nm,1.0s,mb5.0
MUD Monsted U'grnd 44.49 325 *i*P P 17 51 59.2 +0.7
MUD pmax pmax
comp=Z,19nm,0.9s,mb4.8
MUD MLR MLR
comp=Z,530nm,18.0s,MS4.5
MUD Monsted U'grnd 44.49 325 *i*P P 17 51 59.2 +0.7
comp=Z,19nm,0.9s,mb4.8
MUD
comp=Z,530nm,18.0s
MUD Monsted U'grnd 44.49 325 *i*P P 17 51 59.2 +0.7
comp=Z,530nm,18.0s
VIVF Saint-Julien-l 44.52 308 *e*P P 17 51 57.2 -1.8
comp=Z,78nm,1.2s,mb5.1
VIVF Saint-Julien-l 44.52 308 *e*P P 17 51 57.2 -1.8
comp=Z,39nm,1.2s,mb5.1
MEM Membach 44.57 316 P P 17 52 00.2 +0.9
comp=Z,23nm,1.7s,mb4.7
SSB Saint Sauveur 44.66 308 *e*P P 17 51 58.5 -1.6
SSB Saint Sauveur 44.66 308 *e*P P 17 51 58.5 -1.6
SSB Saint Sauveur 44.66 308 *e*P P 17 51 58.5 -1.6
ULN Ulaanbaatar 44.69 48⇑*i*P P 17 52 00.0 -0.2
comp=Z,17nm,0.9s,mb4.9
ULN Ulaanbaatar 44.69 48⇑*i*P P 17 52 00.0 -0.2
ULN pmax pmax
comp=Z,17nm,0.9s,mb4.9
ULN Ulaanbaatar 44.69 48 P P 17 52 00.8 +0.6
comp=Z,17nm,1.7s,mb4.6
ULN Ulaanbaatar 44.69 48 *i*P P 17 52 00.0 -0.2
comp=Z,17nm,0.9s,mb4.9
SFTF Sexfontaines 44.72 312 *e*P P 17 51 59.3 -1.2
comp=Z,206nm,1.3s,mb5.5,baz=106
SFTF Sexfontaines 44.72 312 *e*P P 17 51 59.3 -1.2
comp=Z,206nm,1.3s,mb5.8
SFTF Sexfontaines 44.72 312 *e*P P 17 51 59.3 -1.2
comp=Z,206nm,1.3s,mb5.8
MEZF Maizieres J'vi 44.76 313 *e*P P 17 51 59.9 -0.9
comp=Z,170nm,1.2s,mb5.5
MEZF Maizieres J'vi 44.76 313 *e*P P 17 51 59.9 -0.9
comp=Z,170nm,1.2s,mb5.8
MEZF Maizieres J'vi 44.76 313 *e*P P 17 51 59.9 -0.9
comp=Z,170nm,1.2s,mb5.8
BEBN Eben Emael 44.81 316 P P 17 52 01.4 +0.2
comp=Z,15nm,1.5s,mb4.6
BCLA Clavier 44.96 316 P P 17 52 03.0 +0.6
comp=Z,29nm,1.4s,mb4.9
GYA Guiyang 44.99 79 P P 17 52 03.8 +0.8
GYA PcP PcP 17 53 46.3 +2.2
GYA PP PP 17 53 49.4 +1.2
GYA S **S** **17 58 41.3 +0.1**
GYA SS SS 18 01 53.6 -9.4
GYA pmax pmax
comp=Z,20nm,0.7s,mb5.1
GYA pmax pmax
comp=Z,170nm,5.1s
GYA LR LR
comp=N,290nm,16.1s,MS4.6
GYA LR LR
comp=E,500nm,13.6s,MS4.6
GYA LR LR
comp=Z,630nm,15.8s,MS4.6
LASF Ste Croix 45.03 306 *e*P P 17 52 01.8 -1.3
comp=Z,67nm,1.0s,mb5.1
LASF Ste Croix 45.03 306 *e*P P 17 52 01.8 -1.3
GIVF Givet 45.20 315 *e*P P 17 52 04.1 -0.2
comp=Z,186nm,1.3s,mb5.5
GIVF Givet 45.20 315 *e*P P 17 52 04.1 -0.2
comp=Z,93nm,1.3s,mb5.5
GIVF Givet 45.20 315 *e*P P 17 52 04.1 -0.2
GIVF pmax pmax
comp=Z,93nm,1.3s,mb5.5
GIVF Givet 45.20 315 *e*P P 17 52 04.1 -0.2
comp=Z,93nm,1.3s,mb5.5
COLF Collangettes 45.28 308 *e*P P 17 52 04.0 -1.0
COLF Collangettes 45.28 308 *e*P P 17 52 04.0 -1.0
SMF Signal de Mont 45.30 310 *e*P P 17 52 03.6 -1.5
comp=Z,143nm,1.1s,mb5.4
SMF Signal de Mont 45.30 310 *e*P P 17 52 03.6 -1.5
comp=Z,71nm,1.1s,mb5.4
SMF Signal de Mont 45.30 310 *e*P P 17 52 03.6 -1.5
SMF pmax pmax
comp=Z,71nm,1.1s,mb5.4
SMF Signal de Mont 45.30 310 *e*P P 17 52 03.6 -1.5
comp=Z,71nm,1.1s,mb5.4
DOU Dourbes 45.34 315 P P 17 52 05.4 0.0
comp=Z,30nm,1.4s,mb4.9
LOR Lormes 45.37 311⇑*i*P P 17 52 04.2 -1.5
comp=Z,66nm,1.1s,mb5.1,baz=96
LOR *e*MLR MLR
comp=Z,1μm,21.5s,MS4.5
LOR Lormes 45.37 311⇑*i*P P 17 52 04.2 -1.5
comp=Z,33nm,1.1s,mb5.1
LOR LR LR
comp=Z,1μm,21.5s,MS4.8
LOR Lormes 45.37 311⇑*i*P P 17 52 04.2 -1.5
LOR pmax pmax
comp=Z,33nm,1.1s,mb5.1
LOR MLR MLR
comp=Z,1μm,21.5s,MS4.8
LOR Lormes 45.37 311 *i*P P 17 52 04.2 -1.5
comp=Z,1μm,21.5s
PLDF La Plantade 45.37 309 *e*P P 17 52 06.0 +0.3
PLDF La Plantade 45.37 309 *e*P P 17 52 06.0 +0.3
PLDF La Plantade 45.37 309 *e*P P 17 52 06.0 +0.3
NB2 NORSAR Subarra 45.45 331 P P 17 52 04.8 -1.3
comp=Z,19nm,1.0s,mb4.9,baz=117,slow=7.9
NB2 NORSAR Subarra 45.45 331 P P 17 52 04.0 -2.1
NB2 NORSAR Subarra 45.45 331 P P 17 52 04.0 -2.1
NB2 NORSAR Subarra 45.45 331 P P 17 52 04.8 -1.3
comp=Z,19nm,1.0s,mb4.9,SNR=8.5
NOA NORSAR Array B 45.45 331 P P 17 52 05.2 -1.0
comp=Z,14nm,1.0s,mb4.7,baz=118,slow=8.0,SNR=20
NOA LR LR 18 14 08.7
comp=Z,603nm,19.6s,MS4.5,baz=120,slow=40
NOA NORSAR Array B 45.45 331 P P 17 52 05.2 -0.9
NOA pmax pmax
comp=Z,14nm,1.0s
NOA MLR MLR
comp=Z,603nm,19.6s
NOA NORSAR Array B 45.45 331 P P 17 52 05.2 -0.9
comp=Z,603nm,19.6s
NAO01 NORSAR Array S 45.51 331 *e*P P 17 52 04.8 -1.8
comp=Z,28nm,1.2s,mb5.1
NAO01 *e*PP PP 17 53 54.1 +1.2
NAO01 NORSAR Array S 45.51 331 *e*P P 17 52 04.8 -1.7
comp=Z,28nm,1.2s,mb5.1
KONO Kongsberg 45.55 329 *e*P P 17 52 05.2 -1.7
comp=Z,23nm,1.3s,mb5.0
KONO *e* 17 52 20.7
KONO Kongsberg 45.55 329 *e*P P 17 52 05.2 -1.7
KONO *e* 17 52 20.7
KONO pmax pmax
comp=Z,23nm,1.3s,mb5.0
KONO Kongsberg 45.55 329 *e*P P 17 52 05.2 -1.7
comp=Z,23nm,1.3s,mb5.0
LBL Lubilhac 45.56 308 *e*P P 17 52 08.1 +0.9
LBL Lubilhac 45.56 308 *e*P P 17 52 08.1 +0.9
LBL Lubilhac 45.56 308 *e*P P 17 52 08.1 +0.9
SSF Saint Saulge 45.58 311 *e*P P 17 52 06.0 -1.4
comp=Z,121nm,1.1s,mb5.4
SSF Saint Saulge 45.58 311 *e*P P 17 52 06.0 -1.4
comp=Z,61nm,1.1s,mb5.4
SSF Saint Saulge 45.58 311 *e*P P 17 52 06.0 -1.4
SSF pmax pmax
comp=Z,61nm,1.1s,mb5.4
SSF Saint Saulge 45.58 311 *e*P P 17 52 06.0 -1.4
comp=Z,61nm,1.1s,mb5.4
BAIF Baives 45.58 315⇑*i*P P 17 52 07.3 0.0
comp=Z,191nm,1.2s,mb5.6
BAIF Baives 45.58 315⇑*i*P P 17 52 07.3 0.0
comp=Z,95nm,1.2s,mb5.6
BAIF Baives 45.58 315⇑*i*P P 17 52 07.3 0.0
BAIF pmax pmax
comp=Z,95nm,1.2s,mb5.6
BAIF Baives 45.58 315 *i*P P 17 52 07.3 0.0
comp=Z,95nm,1.2s,mb5.6
SNF Seneffe 45.62 315 P P 17 52 08.2 +0.5
comp=Z,28nm,1.5s,mb5.0
EJON La Jonquera 45.64 304 P P 17 52 08.8 +0.8
comp=Z,56nm,1.2s,mb5.4
EJON La Jonquera 45.64 304 P P 17 52 08.8 +0.9
comp=Z,56nm,1.2s,mb5.4
AVF Avril sur Loir 45.65 310 *e*P P 17 52 06.3 -1.6
comp=Z,61nm,1.2s,mb5.1
AVF Avril sur Loir 45.65 310 *e*P P 17 52 06.3 -1.6
comp=Z,30nm,1.2s,mb5.1
AVF Avril sur Loir 45.65 310 *e*P P 17 52 06.3 -1.6
AVF pmax pmax
comp=Z,31nm,1.2s,mb5.1
AVF Avril sur Loir 45.65 310 *e*P P 17 52 06.3 -1.6
comp=Z,31nm,1.2s,mb5.1
ETOS Mallorca 45.66 300 P P 17 52 08.8 +0.7
comp=Z,87nm,1.2s,mb5.6
ETOS Mallorca 45.66 300 P P 17 52 08.8 +0.7
comp=Z,87nm,1.2s,mb5.6
AGO Saint Agoulin 45.72 309 *e*P P 17 52 08.1 -0.4
AGO Saint Agoulin 45.72 309 *e*P P 17 52 08.1 -0.4
XAN Xi'an 45.72 68 P P 17 52 08.8 +0.1
XAN pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
TAM Tamanrasset 45.77 276 *e*P P 17 52 09.7 +0.4
comp=Z,44nm,1.0s,mb5.3
TAM Tamanrasset 45.77 276 *e*P P 17 52 09.7 +0.5
TAM pmax pmax
comp=Z,44nm,1.0s,mb5.3
TAM Tamanrasset 45.77 276 *e*P P 17 52 09.7 +0.5
comp=Z,44nm,1.0s,mb5.3
PYM Petit Puy Mans 45.78 309 *e*P P 17 52 09.0 +0.1
PYM Petit Puy Mans 45.78 309 *e*P P 17 52 09.0 +0.1
PYM Petit Puy Mans 45.78 309 *e*P P 17 52 09.0 +0.1
CFON Fontmartina 45.96 303 P P 17 52 11.4 +0.9
comp=Z,25nm,1.0s,mb5.1
CFON Fontmartina 45.96 303 P P 17 52 11.4 +1.0
comp=Z,25nm,1.0s,mb5.1
BGF Bois d'Agland 45.97 310 *e*P P 17 52 09.1 -1.4
comp=Z,40nm,0.7s,mb5.1
BGF Bois d'Agland 45.97 310 *e*P P 17 52 09.1 -1.4
comp=Z,20nm,0.7s,mb5.2
BGF Bois d'Agland 45.97 310 *e*P P 17 52 09.1 -1.4
BGF pmax pmax
comp=Z,20nm,0.7s,mb5.2
BGF Bois d'Agland 45.97 310 *e*P P 17 52 09.1 -1.4
comp=Z,20nm,0.7s,mb5.2
KEV Kevo 46.07 346 *e*P P 17 52 10.3 -0.7
comp=Z,44nm,1.0s,mb5.3
KEV Kevo 46.07 346 *e*P P 17 52 10.3 -0.6
KEV pmax pmax
comp=Z,44nm,1.0s,mb5.3
KEV Kevo 46.07 346 *e*p P 17 52 10.2 -0.7
comp=Z,4.8nm,0.4s,mb4.8
KEV Kevo 46.07 346 *e*P P 17 52 10.3 -0.6
comp=Z,44nm,1.0s,mb5.3
VERF Verneugheol 46.14 309 *e*P P 17 52 11.6 -0.2
VERF Verneugheol 46.14 309 *e*P P 17 52 11.6 -0.2
MTLF Montolieu 46.17 305 *e*P P 17 52 11.6 -0.5
comp=Z,91nm,1.1s,mb5.3
MTLF Montolieu 46.17 305 *e*P P 17 52 11.6 -0.5
comp=Z,45nm,1.1s,mb5.3
MTLF Montolieu 46.17 305 *e*P P 17 52 11.6 -0.5
MTLF pmax pmax
comp=Z,45nm,1.1s,mb5.3
MTLF Montolieu 46.17 305 *e*P P 17 52 11.6 -0.5
comp=Z,45nm,1.1s,mb5.3
HYF Humbligny 46.19 311 *e*P P 17 52 11.4 -0.8
HYF Humbligny 46.19 311 *e*P P 17 52 11.4 -0.8
ARE0 ARCESS Array S 46.22 346 *e*P P 17 52 10.6 -1.5
ARE0 ARCESS Array S 46.22 346 *e*P P 17 52 10.6 -1.5
ARCES ARCESS Array B 46.22 346 P P 17 52 11.3 -0.8
comp=Z,5.8nm,0.6s,mb4.7,baz=138,slow=9.7,SNR=27
ARCES LR LR 18 14 16.8
comp=Z,736nm,19.6s,MS4.6,baz=147,slow=40
ARCES ARCESS Array B 46.22 346 P P 17 52 11.3 -0.8
ARCES LR LR 18 14 16.8
ARCES ARCESS Array B 46.22 346 P P 17 52 11.3 -0.8
ARCES pmax pmax
comp=Z,6.0nm,0.6s
ARCES MLR MLR
comp=Z,736nm,19.6s
ARCES ARCESS Array B 46.22 346 P P 17 52 11.3 -0.8
comp=Z,736nm,19.6s
BTO Baotou 46.25 58 *e*P P 17 52 13.8 +1.0
VALF Valcebollere 46.29 304 *e*P P 17 52 12.9 -0.1
VALF Valcebollere 46.29 304 *e*P P 17 52 12.9 -0.1
CLLI Llivia 46.32 304 P P 17 52 14.0 +0.7
CLLI Llivia 46.32 304 P P 17 52 14.0 +0.7
CAF Calviac 46.37 307 *e*P P 17 52 12.7 -0.9
comp=Z,82nm,1.1s,mb5.3
CAF Calviac 46.37 307 *e*P P 17 52 12.7 -0.9
comp=Z,41nm,1.1s,mb5.3
CAF Calviac 46.37 307 *e*P P 17 52 12.7 -0.9
CAF pmax pmax
comp=Z,41nm,1.1s,mb5.3
CAF Calviac 46.37 307 *e*P P 17 52 12.7 -0.9
comp=Z,41nm,1.1s,mb5.3
TCF Toulx Ste Croi 46.38 309 *e*P P 17 52 12.5 -1.2
comp=Z,96nm,1.1s,mb5.3
TCF Toulx Ste Croi 46.38 309 *e*P P 17 52 12.5 -1.2
comp=Z,48nm,1.1s,mb5.3
TCF Toulx Ste Croi 46.38 309 *e*P P 17 52 12.5 -1.2
TCF pmax pmax
comp=Z,48nm,1.1s,mb5.3
TCF Toulx Ste Croi 46.38 309 *e*P P 17 52 12.5 -1.2
comp=Z,48nm,1.1s,mb5.3
EMIR Miracle 46.64 303 P P 17 52 16.7 +0.9
comp=Z,69nm,0.8s,mb5.6
EMIR Miracle 46.64 303 P P 17 52 16.7 +0.9
comp=Z,69nm,0.8s,mb5.6
RJF Les Rejaudoux 46.79 308 *e*P P 17 52 16.2 -0.7
comp=Z,120nm,1.1s,mb5.4
RJF *e*MLR MLR
comp=Z,843nm,22.0s,MS4.3
RJF Les Rejaudoux 46.79 308 *e*P P 17 52 16.2 -0.7
comp=Z,60nm,1.1s,mb5.4
RJF LR LR
comp=Z,840nm,22.0s,MS4.7
RJF Les Rejaudoux 46.79 308 *e*P P 17 52 16.2 -0.7
RJF pmax pmax
comp=Z,60nm,1.1s,mb5.4
RJF MLR MLR
comp=Z,840nm,22.0s,MS4.7
RJF Les Rejaudoux 46.79 308 *e*P P 17 52 16.2 -0.7
comp=Z,840nm,22.0s
EIBI Ibiza 46.82 299 P P 17 52 18.1 +0.8
comp=Z,61nm,1.1s,mb5.4
EIBI Ibiza 46.82 299 P P 17 52 18.1 +0.9
comp=Z,61nm,1.1s,mb5.4
CSOR Sort 46.94 304 P P 17 52 18.7 +0.6
comp=Z,59nm,1.3s,mb5.3
CSOR Sort 46.94 304 P P 17 52 18.7 +0.6
comp=Z,59nm,1.3s,mb5.3
EPOB Poblet 46.98 303 P P 17 52 18.7 +0.3
comp=Z,71nm,1.1s,mb5.5
EPOB Poblet 46.98 303 P P 17 52 18.7 +0.3
comp=Z,71nm,1.1s,mb5.5
MLS Moulis 46.98 305 *e*P P 17 52 17.7 -0.7
MLS Moulis 46.98 305 *e*P P 17 52 17.7 -0.7
LFF La Frestale 47.31 307 *e*P P 17 52 20.2 -0.8
comp=Z,136nm,1.2s,mb5.5
LFF La Frestale 47.31 307 *e*P P 17 52 20.2 -0.8
comp=Z,68nm,1.2s,mb5.5
LFF La Frestale 47.31 307 *e*P P 17 52 20.2 -0.8
LFF pmax pmax
comp=Z,68nm,1.2s,mb5.5
LFF La Frestale 47.31 307 *e*P P 17 52 20.2 -0.8
comp=Z,68nm,1.2s,mb5.5
HHC Hu-ho-hao-te 47.42 58 *e*P P 17 52 21.3 -0.6
HHC pP pP 17 52 26.0 -0.4
HHC sP sP 17 52 28.8 +0.7
HHC PcP PcP 17 53 51.6 -0.7
HHC PP PP 17 54 12.3 -0.8
HHC ScP ScP 17 57 44.8 -1.3
HHC S **S** **17 59 14.9 -0.9**
HHC ScS ScS 18 02 12.3 -3.3
HHC SS SS 18 02 34.9 -8.4
HHC pmax pmax
comp=Z,14nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,320nm,5.5s
HHC LR LR
comp=N,940nm,17.4s,MS5.0
HHC LR LR
comp=E,700nm,12.4s,MS5.0
HHC LR LR
comp=Z,710nm,12.7s,MS4.8
PSI Prapat 47.52 113 LR LR 18 12 31.9
comp=Z,301nm,18.1s,MS4.3,baz=165,slow=36
EPF Esparros 47.54 305 *e*P P 17 52 21.2 -1.6
comp=Z,23nm,1.1s,mb4.8
EPF Esparros 47.54 305 *e*P P 17 52 21.2 -1.6
comp=Z,12nm,1.1s,mb4.8
EPF Esparros 47.54 305 *e*P P 17 52 21.2 -1.6
EPF pmax pmax
comp=Z,12nm,1.1s,mb4.8
EPF Esparros 47.54 305 *e*P P 17 52 21.2 -1.6
comp=Z,12nm,1.1s,mb4.8
ERTA Horta de San J 47.54 302 P P 17 52 23.3 +0.5
comp=Z,80nm,1.1s,mb5.7
ERTA Horta de San J 47.54 302 P P 17 52 23.3 +0.5
comp=Z,80nm,1.1s,mb5.7
EBIE Bielsa 47.68 304 P P 17 52 23.5 -0.4
comp=Z,22nm,1.4s,mb5.0
EBIE Bielsa 47.68 304 P P 17 52 23.5 -0.4
comp=Z,22nm,1.4s,mb5.0
EBEN Beniarda 48.05 299 P P 17 52 27.5 +0.7
comp=Z,40nm,1.1s,mb5.4
EBEN Beniarda 48.05 299 P P 17 52 27.5 +0.6
comp=Z,40nm,1.1s,mb5.4
EMOS Mosqueruela 48.17 301 P P 17 52 29.1 +1.4
comp=Z,113nm,1.3s,mb5.7
EMOS Mosqueruela 48.17 301 P P 17 52 29.1 +1.4
comp=Z,113nm,1.3s,mb5.7
LDF La Druitiere 48.18 312 *e*P P 17 52 26.3 -1.4
LDF La Druitiere 48.18 312 *e*P P 17 52 26.3 -1.4
LDF La Druitiere 48.18 312 *e*P P 17 52 26.3 -1.4
ETSF Etsaut 48.20 305 *e*P P 17 52 27.4 -0.5
comp=Z,68nm,1.1s,mb5.3
ETSF Etsaut 48.20 305 *e*P P 17 52 27.4 -0.5
comp=Z,34nm,1.1s,mb5.3
ETSF Etsaut 48.20 305 *e*P P 17 52 27.4 -0.5
ETSF pmax pmax
comp=Z,34nm,1.1s,mb5.3
ETSF Etsaut 48.20 305 *e*P P 17 52 27.4 -0.5

comp=Z,34nm,1.1s,mb5.3
ATE Arette 48.30 305 *e*P **P 17 52 28.3 -0.4**
ATE Arette 48.30 305 *e*P **P 17 52 28.3 -0.4**
FLN La Foliniere 48.43 312 *e*P **P 17 52 28.0 -1.6**
comp=Z,106nm,1.1s,mb5.5
FLN *e*MLR MLR
comp=Z,657nm,22.0s,MS4.3
FLN La Foliniere 48.43 312 *e*P **P 17 52 28.0 -1.6**
comp=Z,53nm,1.1s,mb5.5
FLN LR LR
comp=Z,660nm,22.0s,MS4.6
FLN La Foliniere 48.43 312 *e*P **P 17 52 28.0 -1.6**
comp=Z,53nm,1.1s,mb5.5
FLN pmax pmax
comp=Z,660nm,22.0s,MS4.6
FLN La Foliniere 48.43 312 *e*P **P 17 52 28.0 -1.6**
comp=Z,660nm,22.0s
ECHE Chera 48.58 300 P **P 17 52 32.0 +1.0**
comp=Z,63nm,1.4s,mb5.5
ECHE Chera 48.58 300 P **P 17 52 32.0 +1.1**
ECHE pmax pmax
comp=Z,63nm,1.4s,mb5.5
ECHE Chera 48.58 300 P **P 17 52 32.0 +1.1**
comp=Z,63nm,1.4s,mb5.5
GRR Gorron 48.65 312 *e*P **P 17 52 29.7 -1.6**
comp=Z,90nm,1.2s,mb5.4
GRR Gorron 48.65 312 *e*P **P 17 52 29.7 -1.6**
comp=Z,45nm,1.2s,mb5.4
GRR Gorron 48.65 312 *e*P **P 17 52 29.7 -1.6**
GRR pmax pmax
comp=Z,45nm,1.2s,mb5.4
GRR Gorron 48.65 312 *e*P **P 17 52 29.7 -1.6**
comp=Z,45nm,1.2s,mb5.4
SJPF Ste Jean 48.68 305 *e*P **P 17 52 31.1 -0.5**
comp=Z,29nm,0.7s,mb5.1
SJPF Ste Jean 48.68 305 *e*P **P 17 52 31.1 -0.5**
comp=Z,15nm,0.7s,mb5.1
SJPF Ste Jean 48.68 305 *e*P **P 17 52 31.1 -0.5**
SJPF pmax pmax
comp=Z,15nm,0.7s,mb5.1
SJPF Ste Jean 48.68 305 *e*P **P 17 52 31.1 -0.5**
comp=Z,15nm,0.7s,mb5.1
EALK Alkurruntz 48.89 305 P **P 17 52 33.0 -0.2**
comp=Z,28nm,1.1s,mb5.2
EALK Alkurruntz 48.89 305 P **P 17 52 33.0 -0.2**
comp=Z,28nm,1.1s,mb5.2
ELIZ Elizondo 48.91 305 P **P 17 52 32.2 -1.2**
comp=Z,13nm,0.9s,mb5.0
ELIZ Elizondo 48.91 305 P **P 17 52 32.2 -1.1**
ELIZ pmax pmax
comp=Z,13nm,0.9s,mb5.0
ELIZ Elizondo 48.91 305 P **P 17 52 32.2 -1.1**
comp=Z,13nm,0.9s,mb5.0
EMUR La Murta 48.91 298 P **P 17 52 33.0 -0.5**
comp=Z,47nm,1.1s,mb5.4
EMUR La Murta 48.91 298 P **P 17 52 33.0 -0.5**
comp=Z,47nm,1.1s,mb5.4
ETOB Tobarra 49.09 299 P **P 17 52 35.5 +0.7**
comp=Z,116nm,1.4s,mb5.7
ETOB Tobarra 49.09 299 P **P 17 52 35.5 +0.6**
comp=Z,116nm,1.4s,mb5.7
CIT Chita 49.45 43 *e*P **P 17 52 36.0 -1.3**
CIT *e* 17 52 47.0
CIT Chita 49.45 43 *e*P **P 17 52 36.0 -1.3**
SGMF Saint Gilles 49.77 312 *e*P **P 17 52 38.5 -1.4**
comp=Z,106nm,1.1s,mb5.5
SGMF Saint Gilles 49.77 312 *e*P **P 17 52 38.5 -1.4**
comp=Z,53nm,1.1s,mb5.5
SGMF Saint Gilles 49.77 312 *e*P **P 17 52 38.5 -1.4**
SGMF pmax pmax
comp=Z,53nm,1.1s,mb5.5
SGMF Saint Gilles 49.77 312 *e*P **P 17 52 38.5 -1.4**
comp=Z,53nm,1.1s,mb5.5
EVIA Vianos 49.84 299 P **P 17 52 41.1 +0.5**
comp=Z,45nm,1.1s,mb5.4
EVIA Vianos 49.84 299 P **P 17 52 41.1 +0.6**
EVIA pmax pmax
comp=Z,45nm,1.1s,mb5.4
EVIA Vianos 49.84 299 P **P 17 52 41.1 +0.6**
comp=Z,45nm,1.1s,mb5.4
QIZ Qiongzhong 49.86 87 P **P 17 52 40.3 -0.7**
QIZ pP pP 17 52 43.3 -2.2
QIZ S **S 17 59 50.3 -0.4**
QIZ pmax pmax
comp=Z,16nm,1.3s,mb4.9
QIZ pmax pmax
comp=Z,170nm,7.3s
QIZ LR LR
comp=N,480nm,25.3s,MS4.4
QIZ LR LR
comp=E,82nm,20.7s,MS4.4
QIZ LR LR
comp=Z,370nm,16.4s,MS4.5
LSZ Lusaka 49.89 216 *e*P **P 17 52 41.6 +0.5**
comp=Z,12nm,1.1s,mb4.8
LSZ Lusaka 49.89 216 *e*P **P 17 52 41.6 +0.5**
LSZ pmax pmax
comp=Z,12nm,1.1s,mb4.8
LSZ Lusaka 49.89 216 *e*P **P 17 52 41.6 +0.5**
comp=Z,12nm,1.1s,mb4.8
EHUE Huescar 49.98 298 P **P 17 52 41.4 -0.2**
comp=Z,14nm,0.8s,mb5.1
EHUE Huescar 49.98 298 P **P 17 52 41.4 -0.3**
EHUE pmax pmax
comp=Z,15nm,0.8s,mb5.1
EHUE Huescar 49.98 298 P **P 17 52 41.4 -0.3**
comp=Z,15nm,0.8s,mb5.1
QUIF Quistinic 50.16 311 *e*P **P 17 52 41.2 -1.6**
comp=Z,50nm,0.9s,mb5.2
QUIF Quistinic 50.16 311 *e*P **P 17 52 41.2 -1.6**
comp=Z,25nm,0.9s,mb5.2
QUIF Quistinic 50.16 311 *e*P **P 17 52 41.2 -1.6**
QUIF pmax pmax
comp=Z,25nm,0.9s,mb5.2
QUIF Quistinic 50.16 311 *e*P **P 17 52 41.2 -1.6**
comp=Z,25nm,0.9s,mb5.2
ROSF Rostrenen 50.25 312 *e*P **P 17 52 42.0 -1.5**
comp=Z,141nm,1.3s,mb5.5
ROSF Rostrenen 50.25 312 *e*P **P 17 52 42.0 -1.5**
comp=Z,70nm,1.3s,mb5.5
ROSF Rostrenen 50.25 312 *e*P **P 17 52 42.0 -1.5**
ROSF pmax pmax
comp=Z,70nm,1.3s,mb5.5
ROSF Rostrenen 50.25 312 *e*P **P 17 52 42.0 -1.5**
comp=Z,70nm,1.3s,mb5.5
ELAN Lanestosa 50.30 305 P **P 17 52 43.9 0.0**
comp=Z,128nm,1.5s,mb5.7
ELAN Lanestosa 50.30 305 P **P 17 52 43.9 -0.1**
comp=Z,128nm,1.5s,mb5.7
EBER Berja 50.31 297 P **P 17 52 44.6 +0.5**
comp=Z,78nm,1.3s,mb5.6
EBER Berja 50.31 297 P **P 17 52 44.6 +0.4**
comp=Z,78nm,1.3s,mb5.6
EQES Quesada 50.36 298 P **P 17 52 44.3 -0.2**
comp=Z,62nm,1.2s,mb5.5
EQES Quesada 50.36 298 P **P 17 52 44.3 -0.2**
comp=Z,62nm,1.2s,mb5.5
EALB Alboran 50.54 296 P **P 17 52 45.0 -0.9**
comp=Z,55nm,0.9s,mb5.5
EALB Alboran 50.54 296 P **P 17 52 45.0 -0.9**
comp=Z,55nm,0.9s,mb5.5
BOD Bodaibo 50.68 36 *e*P **P 17 52 45.9 -0.7**
BOD pmax pmax
comp=Z,29nm,1.4s,mb5.0
BOD Bodaibo 50.68 36 *e*P **P 17 52 45.9 -0.7**
comp=Z,29nm,1.4s,mb5.0
WHN Wuhan 50.79 71 P **P 17 52 49.0 +1.1**
WHN pmax pmax
comp=Z,43nm,1.2s,mb5.2
WHN LR LR
comp=N,2μm,22.6s
WHN LR LR
comp=E,810nm,11.6s
WHN LR LR
comp=Z,1μm,14.1s
ECOG Cogollos-Vega 50.81 297 P **P 17 52 47.6 -0.3**
comp=Z,16nm,1.1s,mb4.9
ECOG Cogollos-Vega 50.81 297 P **P 17 52 47.6 -0.3**
ECOG pmax pmax
comp=Z,16nm,1.1s,mb4.9
ECOG Cogollos-Vega 50.81 297 P **P 17 52 47.6 -0.3**
comp=Z,16nm,1.1s,mb4.9
EGUA Guajares 50.86 297 P **P 17 52 47.4 -0.9**
comp=Z,228nm,0.9s,mb6.1
EGUA Guajares 50.86 297 P **P 17 52 47.4 -0.9**
EGUA pmax pmax
comp=Z,228nm,0.9s,mb6.1
EGUA Guajares 50.86 297 P **P 17 52 47.4 -0.9**
comp=Z,228nm,0.9s,mb6.1
EBAN Banos Encina 50.89 299 P **P 17 52 48.5 0.0**
comp=Z,95nm,1.3s,mb5.6
EBAN Banos Encina 50.89 299 P **P 17 52 48.5 0.0**
EBAN pmax pmax
comp=Z,95nm,1.3s,mb5.6
EBAN Banos Encina 50.89 299 P **P 17 52 48.5 0.0**
comp=Z,95nm,1.3s,mb5.6
ESDC Sonseca Array 50.89 301 P **P 17 52 47.7 -0.7**
comp=Z,3.7nm,0.5s,mb4.6,baz=82,slow=7.0,SNR=26
ESDC Sonseca Array 50.89 301 P **P 17 52 48.5 0.0**
comp=Z,38nm,1.5s,mb5.1
ESDC Sonseca Array 50.89 301 P **P 17 52 48.5 0.0**
comp=Z,38nm,1.5s,mb5.1
ESLA Sonseca Array 50.89 301 *e*P **P 17 52 46.7 -1.8**
comp=Z,11nm,1.3s,mb4.6
ESLA Sonseca Array 50.89 301 *e*P **P 17 52 46.7 -1.8**
comp=Z,11nm,1.3s,mb4.6
ESK Eskdalemuir 50.92 321 *i* P **P 17 52 49.0 +0.5**
ESK Eskdalemuir 50.92 321 *i* P **P 17 52 49.0 +0.5**
GUD Guadarrama 50.96 302 P **P 17 52 48.0 -0.9**
comp=Z,41nm,1.0s,mb5.3
GUD Guadarrama 50.96 302 P **P 17 52 48.0 -1.0**
GUD pmax pmax
comp=Z,41nm,1.0s,mb5.3
GUD Guadarrama 50.96 302 P **P 17 52 48.0 -1.0**
comp=Z,41nm,1.0s,mb5.3
BJT Baijiatuau 50.97 59 *e*P **P 17 52 50.0 +0.9**
comp=Z,9.8nm,0.8s,mb4.8
BJT Baijiatuau 50.97 59 *e*P **P 17 52 50.0 +0.9**
BJT pmax pmax
comp=Z,10.0nm,0.8s
BJT Baijiatuau 50.97 59 *e*P **P 17 52 50.0 +0.9**
comp=Z,10.0nm,0.8s,mb4.8
BJI Beijing 50.98 59 P **P 17 52 49.9 +0.8**
BJI S **S 18 00 04.6 -1.1**
BJI pmax pmax
comp=Z,19nm,1.1s,mb4.9
BJI pmax pmax
comp=Z,92nm,4.1s
BJI LR LR
comp=N,820nm,21.1s,MS4.8
BJI LR LR
comp=E,550nm,21.1s,MS4.8
BJI LR LR
comp=Z,450nm,25.0s,MS4.4
ERON Agron 51.03 297 P **P 17 52 48.8 -0.8**
comp=Z,8.1nm,0.6s,mb4.8
ERON Agron 51.03 297 P **P 17 52 48.8 -0.8**
comp=Z,8.1nm,0.6s,mb4.8
PAB San Pablo 51.19 300 *e*P **P 17 52 49.5 -1.2**
comp=Z,44nm,1.2s,mb5.3
PAB San Pablo 51.19 300 *e*P **P 17 52 49.6 -1.2**
PAB pmax pmax
comp=Z,44nm,1.2s,mb5.3
PAB San Pablo 51.19 300 *e*P **P 17 52 49.6 -1.2**
comp=Z,44nm,1.2s,mb5.3
ELUQ Luque 51.33 298 P **P 17 52 50.9 -0.9**
comp=Z,16nm,0.8s,mb5.0
ELUQ Luque 51.33 298 P **P 17 52 50.9 -0.9**
ELUQ pmax pmax
comp=Z,16nm,0.8s,mb5.0
ELUQ Luque 51.33 298 P **P 17 52 50.9 -0.9**
comp=Z,16nm,0.8s,mb5.0
EADA Adamuz 51.51 299 P **P 17 52 53.1 -0.1**
comp=Z,106nm,1.3s,mb5.6
EADA Adamuz 51.51 299 P **P 17 52 53.1 0.0**
comp=Z,106nm,1.3s,mb5.6
EARI Arriondas 51.59 305 P **P 17 52 52.3 -1.4**
comp=Z,97nm,1.5s,mb5.5
EARI Arriondas 51.59 305 P **P 17 52 52.3 -1.4**
comp=Z,97nm,1.5s,mb5.5
EMIJ Mijas 51.85 297 P **P 17 52 54.7 -1.1**
comp=Z,68nm,1.3s,mb5.4
EMIJ Mijas 51.85 297 P **P 17 52 54.7 -1.1**
comp=Z,68nm,1.3s,mb5.4
ECAB El Cabril 52.17 299 P **P 17 52 57.0 -1.2**
comp=Z,126nm,1.1s,mb5.8
ECAB El Cabril 52.17 299 P **P 17 52 57.0 -1.1**
comp=Z,126nm,1.1s,mb5.8
EJIF Jimena Fronter 52.42 297 P **P 17 52 58.8 -1.2**
comp=Z,18nm,0.9s,mb5.0
EJIF Jimena Fronter 52.42 297 P **P 17 52 58.8 -1.2**
EJIF pmax pmax
comp=Z,18nm,0.9s,mb5.0
EJIF Jimena Fronter 52.42 297 P **P 17 52 58.8 -1.2**
comp=Z,18nm,0.9s,mb5.0
EPLA Plasencia 52.47 301 P **P 17 52 59.4 -0.9**
comp=Z,25nm,1.0s,mb5.1
EPLA Plasencia 52.47 301 P **P 17 52 59.4 -0.9**
EPLA pmax pmax
comp=Z,25nm,1.0s,mb5.1
EPLA Plasencia 52.47 301 P **P 17 52 59.4 -0.9**
comp=Z,25nm,1.0s,mb5.1
TORD Torodi Ar. Bea 52.49 266 P **P 17 52 59.8 -1.0**
comp=Z,36nm,0.6s,mb5.5,baz=59,slow=7.2,SNR=172
TORD LR LR 18 17 38.2
comp=Z,382nm,19.7s,MS4.4,baz=75,slow=39
DLF Lyons Farm 52.63 318 *e*P **P 17 53 00.8 -0.4**
ESPR Espera 52.67 297 P **P 17 53 00.8 -1.0**
comp=Z,72nm,1.4s,mb5.4
ESPR Espera 52.67 297 P **P 17 53 00.8 -1.1**
comp=Z,72nm,1.4s,mb5.4
ECAL Calabor 52.80 304 P **P 17 53 01.1 -1.6**
comp=Z,149nm,2.3s,mb5.5
ECAL Calabor 52.80 304 P **P 17 53 01.1 -1.6**
comp=Z,149nm,2.3s,mb5.5
PBRG Braganca 52.82 303 *e*P **P 17 53 03.2 +0.4**
comp=Z,38nm,1.7s,mb5.0
PBRG Braganca 52.82 303 *e*P **P 17 53 03.2 +0.4**
comp=Z,38nm,1.7s,mb5.0
EPON Pontenova 53.00 305 P **P 17 53 01.9 -2.3**
comp=Z,164nm,1.6s,mb5.7
EPON Pontenova 53.00 305 P **P 17 53 01.9 -2.3**
comp=Z,164nm,1.6s,mb5.7
MVO Moncorvo 53.09 303 *e*P **P 17 53 05.2 +0.4**
comp=Z,51nm,1.3s,mb5.3
MVO *e*S **S 18 00 35.6 +0.9**
MVO *i* P 18 05 02.6
MVO A 18 17 30.1
comp=Z,230nm,18.0s
MVO Moncorvo 53.09 303 P **P 17 53 04.2 -0.6**
MVO Moncorvo 53.09 303 *e*P **P 17 53 05.2 +0.4**
comp=Z,51nm,1.3s,mb5.3
MVO *e*S **S 18 00 35.6 +0.9**
EMIN Mina Concepcio 53.20 298 P **P 17 53 05.0 -0.7**
comp=Z,70nm,1.7s,mb5.3
EMIN Mina Concepcio 53.20 298 P **P 17 53 05.0 -0.7**
comp=Z,70nm,1.7s,mb5.3
EBAD Badajoz 53.34 300 P **P 17 53 06.1 -0.6**
comp=Z,115nm,2.4s,mb5.4
EBAD Badajoz 53.34 300 P **P 17 53 06.1 -0.6**
comp=Z,115nm,2.4s,mb5.4
PBAR Barrancos 53.43 299 *e*P **P 17 53 06.9 -0.5**
comp=Z,42nm,1.1s,mb5.3
PBAR *e*S **S 18 00 40.5 +1.1**
PBAR A 18 16 53.7
comp=Z,286nm,20.0s
PBAR Barrancos 53.43 299 *e*P **P 17 53 06.9 -0.5**
comp=Z,42nm,1.1s,mb5.3
PBAR *e*S **S 18 00 40.5 +1.1**
comp=Z,286nm,20.0s
PMRV Marv??o 53.55 301 *e*P **P 17 53 08.2 -0.1**
comp=Z,38nm,1.4s,mb5.1
PMRV *e*S **S 18 00 43.0 +2.0**
PMRV *i* P 18 05 06.3
PMRV A 18 17 31.7
comp=Z,347nm,22.0s
PMRV Marv??o 53.55 301 *e*P **P 17 53 08.2 -0.1**
comp=Z,38nm,1.4s,mb5.1
PMRV *e*S **S 18 00 43.0 +2.0**
MTE Manteigas 53.55 302 *e*P **P 17 53 08.7 +0.4**
comp=Z,54nm,1.4s,mb5.3
MTE *e*S **S 18 00 41.9 +0.9**
MTE *i* P 18 05 03.0
MTE A 18 17 30.1
comp=Z,403nm,20.0s
MTE Manteigas 53.55 302 *e*P **P 17 53 08.7 +0.4**
comp=Z,54nm,1.4s,mb5.3
MTE *e*S **S 18 00 41.9 +0.9**
PCBR Castelo Branco 53.56 301 *e*P **P 17 53 08.8 +0.4**
comp=Z,43nm,1.2s,mb5.3
PCBR Castelo Branco 53.56 301 *e*P **P 17 53 08.8 +0.4**
comp=Z,43nm,1.2s,mb5.3
PVRL Vila Real 53.59 303 *e*P **P 17 53 09.0 +0.4**
comp=Z,58nm,1.7s,mb5.2
PVRL Vila Real 53.59 303 *e*P **P 17 53 09.0 +0.4**
comp=Z,58nm,1.7s,mb5.2
PESTR Estremoz 53.77 300 *e*P **P 17 53 09.6 -0.3**
comp=Z,28nm,1.3s,mb5.0
PESTR *e*S **S 18 00 44.5 +0.5**
PESTR A 18 17 41.1
comp=Z,459nm,20.0s
PESTR Estremoz 53.77 300 *e*P **P 17 53 09.6 -0.3**
comp=Z,28nm,1.3s,mb5.0
PESTR *e*S **S 18 00 44.5 +0.5**
comp=Z,459nm,20.0s
PCAB Cabril 53.78 303 *e*P **P 17 53 10.5 +0.6**
comp=Z,64nm,1.7s,mb5.3
PCAB Cabril 53.78 303 *e*P **P 17 53 10.5 +0.6**
comp=Z,64nm,1.7s,mb5.3
PVIS Viseu 53.78 302 *e*P **P 17 53 10.6 +0.6**
comp=Z,51nm,1.2s,mb5.3
PVIS Viseu 53.78 302 *e*P **P 17 53 10.6 +0.6**
comp=Z,51nm,1.2s,mb5.3
ELOB Lobios 53.79 304 P **P 17 53 09.1 -0.9**
comp=Z,120nm,1.7s,mb5.5
ELOB Lobios 53.79 304 P **P 17 53 09.1 -0.9**
comp=Z,120nm,1.7s,mb5.5
EGRO El Granado 53.87 298 P **P 17 53 09.8 -0.9**
comp=Z,81nm,2.7s,mb5.2
EGRO El Granado 53.87 298 P **P 17 53 09.8 -0.8**
comp=Z,81nm,2.7s,mb5.2
PVAQ Vaqueiros 54.07 298 *e*P **P 17 53 11.5 -0.6**
comp=Z,25nm,1.4s,mb5.0
PVAQ *e*S **S 18 00 46.6 -1.5**
PVAQ A 18 21 11.3
comp=Z,234nm,20.0s
PVAQ Vaqueiros 54.07 298 *e*P **P 17 53 11.5 -0.6**
comp=Z,25nm,1.4s,mb5.0
PVAQ *e*S **S 18 00 46.6 -1.5**
comp=Z,234nm,20.0s
PBEJ Beja 54.10 299 *e*P **P 17 53 12.0 -0.3**
comp=Z,26nm,1.6s,mb4.9
PBEJ Beja 54.10 299 *e*P **P 17 53 12.0 -0.3**
comp=Z,26nm,1.6s,mb4.9
EVO Evora 54.14 300 *e*P **P 17 53 12.8 +0.2**
comp=Z,52nm,1.2s,mb5.0
EVO *e*MLR MLR
comp=Z,641nm,22.5s,MS4.3
EVO Evora 54.14 300 *e*P **P 17 53 12.6 0.0**
comp=Z,38nm,1.1s,mb5.2
EVO Evora 54.14 300 *e*P **P 17 53 12.6 0.0**
comp=Z,38nm,1.1s,mb5.2
EVOP Sao Brissos 54.23 300 *e*P **P 17 53 12.8 -0.5**
comp=Z,26nm,1.2s,mb5.0
PBDV Barranco-do-Ve 54.26 298 *e*S **S 18 00 51.2 +0.5**
PBDV A 18 21 17.3
comp=Z,176nm,18.0s
PBDV Barranco-do-Ve 54.26 298 *e*S **S 18 00 51.2 +0.5**
comp=Z,176nm,18.0s
NJ2 Nanjing 54.27 69 *e*P **P 17 53 18.3 +4.7**
NJ2 pP pP 17 53 22.9 +4.7
NJ2 sP sP 17 53 25.3 +5.4
NJ2 S **S 18 00 51.0 +0.1**
NJ2 sS sS 18 00 59.0 +0.6
NJ2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
NJ2 pmax pmax
comp=Z,650nm,8.7s
NJ2 LR LR
comp=N,840nm,25.3s
NJ2 LR LR
comp=E,680nm,20.2s
NJ2 LR LR
comp=Z,870nm,24.5s,MS4.7
PCVE Castro Verde 54.29 298 *e*P **P 17 53 13.2 -0.5**
comp=Z,28nm,1.9s,mb4.9
PCVE *e*S **S 18 00 54.2 +3.1**
PCVE Castro Verde 54.29 298 *e*P **P 17 53 13.2 -0.5**
comp=Z,28nm,1.9s,mb4.9
PCVE *e*S **S 18 00 54.2 +3.1**
EMAZ Mazaricos 54.37 305 P **P 17 53 11.6 -2.5**
comp=Z,148nm,1.5s,mb5.7
EMAZ Mazaricos 54.37 305 P **P 17 53 11.6 -2.6**
comp=Z,148nm,1.5s,mb5.7
SPITS Spitsbergen Ar 54.40 351 P **P 17 53 14.3 +0.4**
comp=Z,4.9nm,0.5s,mb4.7,baz=142,slow=8.2,SNR=5.3
SPITS Spitsbergen Ar 54.40 351 P **P 17 53 14.3 +0.4**
SPITS pmax pmax
comp=Z,5.0nm,0.5s
SPITS Spitsbergen Ar 54.40 351 P **P 17 53 14.3 +0.4**
comp=Z,5.0nm,0.5s,mb4.7
MORF Marmelete 54.82 298 A 18 23 20.7
comp=Z,207nm,18.0s
PFVI Vila Bisbo 54.99 298 *e*P **P 17 53 18.8 0.0**
comp=Z,67nm,1.2s,mb5.5
PFVI *e*S **S 18 01 01.9 +1.4**
PFVI A 18 23 26.9
comp=Z,185nm,20.0s
PFVI Vila Bisbo 54.99 298 P **P 17 53 16.4 -2.4**
PFVI Vila Bisbo 54.99 298 *e*P **P 17 53 18.8 0.0**
comp=Z,67nm,1.2s,mb5.5
PMAFR Mafra 55.07 300 *e*S **S 18 01 02.5 +1.0**
PMAFR A 18 18 29.6
comp=Z,271nm,20.0s
SSE Sheshan 56.42 69 P **P 17 53 25.8 -3.4**
SSE pmax pmax
comp=Z,20nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,180nm,4.1s
SSE LR LR
comp=N,710nm,23.1s,MS4.7
SSE LR LR
comp=E,250nm,23.1s,MS4.7
SSE LR LR
comp=Z,590nm,17.6s
CN2 Changchun 57.47 54 *e*P **P 17 53 36.3 -0.1**
CN2 *es*P sP 17 53 44.0 +1.3
CN2 *e*S **S 18 01 30.8 -2.5**
CN2 pmax pmax
comp=Z,40nm,1.2s,mb5.3
CN2 LR LR
comp=N,500nm,20.0s,MS5.2
CN2 LR LR
comp=E,2μm,20.0s,MS5.2
CN2 LR LR
comp=Z,1μm,20.0s,MS4.9
YHNB Yeheng 58.28 76 *e*P **P 17 53 43.1 +0.7**
comp=Z,67nm,0.9s,mb5.7
YHNB Yeheng 58.28 76 *e*P **P 17 53 43.1 +0.7**
comp=Z,67nm,0.9s,mb5.7
TWG Pinlang 58.59 79 *e*P **P 17 53 44.9 +0.3**
comp=Z,49nm,1.2s,mb5.4
TWG Pinlang 58.59 79 *e*P **P 17 53 44.9 +0.3**
comp=Z,49nm,1.2s,mb5.4
YULB Yu-li 58.61 78 *e*P **P 17 53 46.4 +1.7**
comp=Z,18nm,1.0s,mb5.1
YULB Yu-li 58.61 78 *e*P **P 17 53 46.4 +1.7**
comp=Z,18nm,1.0s,mb5.1
YAK Yakutsk 58.98 32 *e*P **P 17 53 44.7 -1.9**
comp=Z,42nm,1.4s,mb5.3
YAK Yakutsk 58.98 32 *e*P **P 17 53 44.4 -2.2**
YAK pmax pmax
comp=Z,23nm,1.4s,mb5.0
YAK Yakutsk 58.98 32 *e*P **P 17 53 44.4 -2.2**
comp=Z,23nm,1.4s,mb5.0
TIXI Tiksi 59.31 21 *e*P **P 17 53 46.6 -2.2**
comp=Z,14nm,1.1s,mb4.9
TIXI Tiksi 59.31 21 *e*P **P 17 53 46.4 -2.4**
TIXI *e*S **S 18 01 52.9 -3.5**
TIXI *e*SS SS 18 05 50.7 +0.1
TIXI pmax pmax
comp=Z,32nm,1.9s,mb5.0
TIXI MLR MLR
comp=Z,942nm,18.0s,MS5.0
TIXI Tiksi 59.31 21 *e*P **P 17 53 46.4 -2.4**
comp=Z,32nm,1.9s,mb5.0
LBTB Lobatse 59.38 212 LR LR 18 19 21.0
comp=Z,601nm,20.6s,MS4.7,baz=16,slow=36
LBTB Lobatse 59.38 212 *e*P **P 17 53 50.3 +0.4**
comp=Z,104nm,1.5s,mb5.6
LBTB Lobatse 59.38 212 *e*P **P 17 53 50.3 +0.5**
LBTB pmax pmax
comp=Z,104nm,1.5s,mb5.6
LBTB Lobatse 59.38 212 *e*P **P 17 53 50.3 +0.5**
comp=Z,104nm,1.5s,mb5.6
MDJ Mudanjiang 60.30 52 P **P 17 53 54.8 -1.2**
MDJ pP pP 17 53 57.8 -2.8
MDJ PcP PcP 17 54 39.3 -1.9
MDJ PP PP 17 56 07.0 -1.8
MDJ ScP ScP 17 58 41.1 -1.0

MDJ PcS PcS 17 58 42.1 -1.4
MDJ S **S** **18 02 08.6 -1.3**
MDJ ScS ScS 18 03 45.3 -1.1
MDJ pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
MDJ pmax pmax
comp=Z,100nm,5.6s
MDJ LR LR
comp=N,900nm,26.0s,MS4.8
MDJ LR LR
comp=E,480nm,25.3s,MS4.8
MDJ LR LR
comp=Z,620nm,23.1s,MS4.7
KSRS Korea Array 60.44 60 P **P** **17 53 56.8 -0.3**
comp=Z,8.5nm,0.9s,mb4.8,baz=278,slow=7.5,SNR=33
KSRS LR LR 18 22 43.2
comp=Z,290nm,20.1s,MS4.4,baz=107,slow=39
KSRS Korea Array 60.44 60 P **P** **17 53 56.8 -0.3**
KSRS pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KSRS MLR MLR
comp=Z,290nm,20.1s,MS4.4
KSRS Korea Array 60.44 60 P **P** **17 53 56.8 -0.3**
comp=Z,290nm,20.1s
KLR Kul'dur 61.04 47 *e*P **P** **17 53 55.8 -5.2**
KLR *e*S **S** **18 02 14.5 -4.7**
KLR *e*SS SS 18 06 21.0 +2.5
KLR pmax pmax
comp=E,23nm,1.2s
KLR pmax pmax
comp=Z,50nm,1.2s,mb5.5
KLR MLR MLR
comp=E,900nm,12.5s
KLR MLR MLR
comp=Z,1μm,12.5s,MS5.2
DBIC Dimbokro 61.08 262 P **P** **17 54 01.2 -0.7**
comp=Z,14nm,0.8s,mb5.1,baz=48,slow=8.3,SNR=14
DBIC Dimbokro 61.08 262 *e*P **P** **17 54 00.6 -1.3**
comp=Z,27nm,1.1s,mb5.3
DBIC Dimbokro 61.08 262 P **P** **17 54 01.2 -0.7**
DBIC pmax pmax
comp=Z,14nm,0.8s
DBIC Dimbokro 61.08 262 P **P** **17 54 01.2 -0.7**
comp=Z,14nm,0.8s,mb5.1
KIC Kosan Boka 61.12 262 *e*P **P** **17 54 01.5 -0.6**
comp=Z,77nm,1.1s,mb5.7
KIC Kosan Boka 61.12 262 *e*P **P** **17 54 01.5 -0.6**
comp=Z,77nm,1.1s,mb5.8
TIC Toumodi 61.24 263 *e*P **P** **17 54 02.2 -0.7**
comp=Z,77nm,1.2s,mb5.7
TIC Toumodi 61.24 263 *e*P **P** **17 54 02.2 -0.7**
TIC pmax pmax
comp=Z,77nm,1.2s,mb5.7
TIC Toumodi 61.24 263 *e*P **P** **17 54 02.2 -0.7**
comp=Z,77nm,1.2s,mb5.7
LIC Lamto 61.44 262 *e*P **P** **17 54 03.3 -0.9**
comp=Z,63nm,1.0s,mb5.7
LIC Lamto 61.44 262 *e*P **P** **17 54 03.4 -0.8**
comp=Z,64nm,1.1s,mb5.3,baz=64
LIC *e*MLR MLR
comp=Z,784nm,22.5s,MS4.5
LIC Lamto 61.44 262 *e*P **P** **17 54 03.4 -0.8**
comp=Z,32nm,1.1s,mb5.4
LIC LR LR
comp=Z,390nm,22.5s,MS4.5
LIC Lamto 61.44 262 *e*P **P** **17 54 03.4 -0.8**
comp=Z,32nm,1.1s,mb5.4
VLA Vladivostok 62.21 53 *e*P **P** **17 54 07.3 -1.7**
VLA pmax pmax
comp=Z,28nm,1.0s,mb5.3
VLA Vladivostok 62.21 53 *e*P **P** **17 54 07.3 -1.7**
comp=Z,28nm,1.0s,mb5.3
BOSA Boshof 62.60 210 P **P** **17 54 12.2 +0.5**
comp=Z,11nm,0.6s,mb5.2,baz=30,slow=6.4,SNR=28
BOSA Boshof 62.60 210 *e*P **P** **17 54 11.7 0.0**
comp=Z,114nm,1.6s,mb5.8
BOSA Boshof 62.60 210 P **P** **17 54 12.2 +0.5**
BOSA pmax pmax
comp=Z,11nm,0.6s,mb5.2
BOSA Boshof 62.60 210 P **P** **17 54 12.2 +0.5**
comp=Z,11nm,0.6s,mb5.2
SUMG Summit 65.91 341 *e*P **P** **17 54 33.5 +0.7**
comp=Z,38nm,1.0s,mb5.4
SUMG Summit 65.91 341 *i* P **P** **17 54 33.9 +1.0**
comp=Z,29nm,1.1s,mb5.2
SUMG Summit 65.91 341 *e*P **P** **17 54 33.5 +0.6**
comp=Z,38nm,1.0s,mb5.4
SUR Sutherland 67.82 212 *e*P **P** **17 54 46.4 +0.9**
comp=Z,72nm,1.6s,mb5.5
SUR Sutherland 67.82 212 *e*P **P** **17 54 46.4 +0.9**
comp=Z,72nm,1.6s,mb5.5
MAJO Matsushiro 68.61 59 *e*P **P** **17 54 49.0 -1.7**
comp=Z,5.4nm,0.9s,mb4.5
MAJO Matsushiro 68.61 59 *e*P **P** **17 54 49.0 -1.6**
MAJO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MAJO Matsushiro 68.61 59 *e*P **P** **17 54 49.0 -1.6**
comp=Z,5.0nm,0.9s,mb4.4
MAT Matsushiro 68.61 59 P **P** **17 54 48.7 -1.9**
MAT *e*S S 18 03 52.6 -0.4
MJAR Matsushiro Arr 68.61 59 P **P** **17 54 50.3 -0.3**
comp=Z,3.0nm,0.8s,mb4.3,baz=273,slow=9.4,SNR=10.0
MJAR LR LR 18 28 36.9
comp=Z,250nm,18.5s,MS4.5,baz=285,slow=39
MJAR Matsushiro Arr 68.61 59 P **P** **17 54 50.3 -0.3**
MJAR LR LR 18 28 36.9
MJAR Matsushiro Arr 68.61 59 P **P** **17 54 50.3 -0.3**
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MJAR MLR MLR
comp=Z,250nm,18.5s
MJAR Matsushiro Arr 68.61 59 P **P** **17 54 50.3 -0.3**
comp=Z,250nm,18.5s
YSS Yuzh-Sakhalins 68.73 47 *e*P **P** **17 54 49.9 -1.2**
comp=Z,56nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 68.73 47⇓*e*P **P** **17 54 50.2 -0.9**
YSS *e* 17 55 09.0
YSS *e*S S 18 03 48.0 -6.0
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.4
YSS MLR MLR
comp=N,500nm,14.0s,MS5.1
YSS MLR MLR
comp=E,700nm,14.0s,MS5.1
YSS MLR MLR
comp=Z,900nm,14.0s,MS5.2
YSS Yuzh-Sakhalins 68.73 47 *e*P **P** **17 54 50.2 -0.9**
comp=Z,50nm,0.9s,mb5.4
SEY Seymchan 69.21 29 *d i*P **P** **17 54 54.0 +0.2**
SEY Seymchan 69.21 29 *i* P **P** **17 54 54.0 +0.2**
ASAJ Asahikawa 69.47 50 LR LR 18 27 08.4
comp=Z,389nm,21.1s,MS4.6,baz=163,slow=38
JHJ Hachijo jima 2 70.96 62 LR LR 18 29 36.9
comp=Z,248nm,18.5s,MS4.5,baz=203,slow=39
BILL Bilibino 72.50 22 *e*P **P** **17 55 13.9 +0.2**
BILL *e* 17 55 29.1
BILL pmax pmax
comp=Z,39nm,2.6s,mb4.9
BILL MLR MLR
comp=Z,600nm,16.0s,MS5.0
BILL Bilibino 72.50 22 *e*P **P** **17 55 13.9 +0.2**
comp=Z,39nm,2.6s,mb4.9
BILL Bilibino 72.50 22 *e*PcP PcP 17 55 29.1 -2.3
comp=Z,600nm,16.0s
CBIJ Chichi jima 75.09 67 LR LR 18 31 42.0
comp=Z,244nm,20.5s,MS4.5,baz=315,slow=38
PETK Petropavlovsk- 75.51 38 P **P** **17 55 29.9 -1.7**
comp=Z,8.7nm,1.0s,mb4.7,baz=311,slow=7.7,SNR=3.7
PETK PKKP PKKPbc 18 14 30.2 -21
comp=Z,2.6nm,0.5s,baz=117,slow=5.2,SNR=4.1
PETK LR LR 18 30 22.0
comp=Z,257nm,18.8s,MS4.5,baz=296,slow=37
PETK Petropavlovsk- 75.51 38 P **P** **17 55 29.9 -1.7**
PETK PKKP PKKPbc 18 14 30.2 -21
PETK LR LR 18 30 22.0
PETK Petropavlovsk- 75.51 38 P **P** **17 55 29.9 -1.7**
PETK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
PETK pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
PETK MLR MLR
comp=Z,257nm,18.8s,MS4.5
PETK Petropavlovsk- 75.51 38 P **P** **17 55 29.9 -1.7**
comp=Z,257nm,18.8s
FITZ Fitzroy Crossi 80.97 115 *e*P **P** **17 56 01.7 -0.6**
comp=Z,13nm,1.0s,mb4.8
FITZ Fitzroy Crossi 80.97 115 *e*P **P** **17 56 01.7 -0.7**
comp=Z,13nm,1.0s,mb4.8
KAKA Kakadu 83.90 107 *e*P **P** **17 56 17.5 -0.2**
comp=Z,50nm,0.6s,mb5.8
COLD Coldfoot 84.11 10 *e*P **P** **17 56 17.3 -0.7**
comp=Z,7.6nm,0.9s,mb4.8
COLD Coldfoot 84.11 10 *e*P **P** **17 56 17.3 -0.6**
comp=Z,7.6nm,0.9s,mb4.8
INK Inuvik 84.81 4 *e*P **P** **17 56 20.4 -1.1**
comp=Z,37nm,1.4s,mb5.3
INK Inuvik 84.81 4 *e*P **P** **17 56 20.4 -1.1**
INK pmax pmax
comp=Z,37nm,1.4s
INK Inuvik 84.81 4 *e*P **P** **17 56 20.4 -1.1**
comp=Z,37nm,1.4s,mb5.3
SCHQ Schefferville 85.03 331 LR LR 18 35 20.0
comp=Z,266nm,21.8s,MS4.6,baz=288,slow=36
BPAW Bear Paw Mtn. 86.85 12 *e*P **P** **17 56 30.9 -0.7**
comp=Z,59nm,1.3s,mb5.7
BPAW Bear Paw Mtn. 86.85 12 *e*P **P** **17 56 30.9 -0.8**
comp=Z,59nm,1.3s,mb5.7
ILAR Eielson Array 86.90 10 P **P** **17 56 31.1 -0.8**
comp=Z,3.4nm,0.7s,mb4.7,baz=322,slow=4.3,SNR=38
ILAR PP PP 17 59 56.6 +2.7
comp=Z,1.5nm,1.2s,baz=329,slow=8.8,SNR=4.5
ILAR LR LR 18 38 09.6
comp=Z,293nm,20.8s,MS4.7,baz=59,slow=38
ILAR Eielson Array 86.90 10 P **P** **17 56 31.1 -0.8**
ILAR 17 59 56.7
ILAR pmax pmax
comp=Z,3.0nm,0.7s
ILAR pmax pmax
comp=Z,2.0nm,1.2s
ILAR MLR MLR
comp=Z,293nm,20.8s
ILAR Eielson Array 86.90 10 P **P** **17 56 31.1 -0.8**
comp=Z,3.0nm,0.7s,mb4.6
ILAR Eielson Array 86.90 10 PP PP 17 59 56.7 +2.8
TTA Tatalina 86.91 14 *e*P **P** **17 56 31.4 -0.6**
comp=Z,24nm,1.5s,mb5.2
TTA Tatalina 86.91 14 *e*P **P** **17 56 31.4 -0.6**
TTA pmax pmax
comp=Z,24nm,1.5s,mb5.2
TTA Tatalina 86.91 14 *e*P **P** **17 56 31.4 -0.6**
comp=Z,24nm,1.5s,mb5.2
MCK McKinley 87.55 11 *e*P **P** **17 56 34.7 -0.4**
comp=Z,14nm,0.9s,mb5.2
MCK McKinley 87.55 11 *e*P **P** **17 56 34.7 -0.4**
MCK pmax pmax
comp=Z,14nm,0.9s,mb5.2
MCK McKinley 87.55 11 *e*P **P** **17 56 34.7 -0.4**
comp=Z,14nm,0.9s,mb5.2
TRF Thorofare Moun 87.57 12 *e*P **P** **17 56 34.8 -0.4**
comp=Z,14nm,1.0s,mb5.2
TRF Thorofare Moun 87.57 12 *e*P **P** **17 56 34.8 -0.4**
comp=Z,14nm,1.0s,mb5.2
EGAK Eagle 87.64 7 *e*P **P** **17 56 35.4 -0.1**
comp=Z,42nm,1.3s,mb5.5
EGAK Eagle 87.64 7 *e*P **P** **17 56 35.4 -0.1**
comp=Z,42nm,1.3s,mb5.5
DAWY Dawson 88.53 7 *e*P **P** **17 56 39.6 -0.1**
DAWY Dawson 88.53 7 *e*P **P** **17 56 39.7 0.0**
WRA Warramunga Arr 88.99 113 P **P** **17 56 42.5 -0.1**
comp=Z,5.7nm,0.8s,mb4.9,baz=312,slow=4.1,SNR=63
WRA PKKP PKKPbc 18 14 20.4 -0.4
comp=Z,0.6nm,0.9s,baz=120,slow=2.5,SNR=5.7
WRA Warramunga Arr 88.99 113 P **P** **17 56 42.5 -0.1**
WRA pmax pmax
comp=Z,6.0nm,0.8s
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 88.99 113 P **P** **17 56 42.5 -0.1**
comp=Z,1.0nm,0.9s,mb4.2
WRA Warramunga Arr 88.99 113 PKKP PKKPbc 18 14 20.4 -0.4
WB2 Warramunga Arr 89.00 113 *e*P **P** **17 56 42.3 -0.4**
WB2 Warramunga Arr 89.00 113 *e*P **P** **17 56 42.3 -0.4**
ASAR Alice Springs 90.44 116 P **P** **17 56 48.9 -0.4**
comp=Z,3.3nm,0.8s,mb4.7,baz=307,slow=4.8,SNR=58
ASAR PKKP PKKPbc 18 14 17.4 +0.1
comp=Z,0.3nm,0.8s,baz=116,slow=2.8,SNR=4.2
ASAR Alice Springs 90.44 116 P **P** **17 56 48.9 -0.4**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
ASAR Alice Springs 90.44 116 P **P** **17 56 48.9 -0.4**
comp=Z,3.0nm,0.8s,mb4.7
ASAR Alice Springs 90.44 116 PKKP PKKPbc 18 14 17.4 +0.1
YKA Yellowknife Ar 90.60 356 P **P** **17 56 49.4 -0.1**
comp=Z,1.7nm,0.6s,mb4.6,baz=0.4,slow=5.6,SNR=3.6
YKA LR LR 18 45 27.8
comp=Z,36nm,19.3s,MS3.8,baz=230,slow=41
YKA Yellowknife Ar 90.60 356 P **P** **17 56 49.4 0.0**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA MLR MLR
comp=Z,36nm,19.3s
YKA Yellowknife Ar 90.60 356 P **P** **17 56 49.4 0.0**
comp=Z,36nm,19.3s
MAW Mawson 94.36 177 P **P** **17 57 06.8 +0.5**
comp=Z,1.5nm,0.5s,mb4.7,baz=35,slow=3.7,SNR=11
MAW LR LR 18 33 47.1
comp=Z,335nm,18.2s,MS4.8,baz=329,slow=32
MAW Mawson 94.36 177 P **P** **17 57 06.8 +0.4**
MAW pmax pmax
comp=Z,2.0nm,0.5s
MAW MLR MLR
comp=Z,335nm,18.2s
MAW Mawson 94.36 177 P **P** **17 57 06.8 +0.4**
comp=Z,335nm,18.2s
CTA Charters Tower 99.03 108 LR LR 18 45 41.0
comp=Z,130nm,21.0s,MS4.4,baz=294,slow=38
ULM Lac du Bonnet 99.25 342 LR LR 18 47 53.5
comp=Z,260nm,18.4s,MS4.8,baz=64,slow=39
PDAR Pinedale Array 109.42 349 PKKP PKKPbc 18 13 34.1 +10
comp=Z,0.7nm,0.6s,baz=164,slow=4.8,SNR=8.8
NVAR Mina Array Bea 114.79 355 PKP PKiKP 18 02 29.2 +0.9
comp=Z,1.5nm,1.0s,baz=2.7,slow=1.3,SNR=6.3
NVAR Mina Array Bea 114.79 355 PKP PKiKP 18 02 29.2 +0.9
QSPA South Pole Qui 116.75 180 PKIKP PKPdf 18 02 30.5 -0.1
comp=Z,2.9nm,0.8s,baz=244,slow=1.3,SNR=16
QSPA South Pole Qui 116.75 180 PKIKP PKPdf 18 02 30.5 -0.2
DZM Mont Dzumac 117.20 102 *e*LR LR 18 38 31.1
comp=Z,231nm,36.1s
TXAR Lajitas Array 120.79 339 PKP PKPdf 18 02 40.4 +0.3
comp=Z,0.4nm,0.6s,baz=114,slow=1.5,SNR=5.0
TXAR Lajitas Array 120.79 339 PKIKP PKPdf 18 02 40.4 +0.3
TXAR Lajitas Array 120.79 339 PKIKP PKPdf 18 02 40.3 +0.2
CPUP Villa Florida 121.08 254 PKP PKPdf 18 02 39.6 -0.9
comp=Z,1.8nm,0.6s,baz=78,slow=2.7,SNR=7.5
CPUP Villa Florida 121.08 254 PKIKP PKPdf 18 02 39.7 -0.9
CPUP pmax pmax
comp=Z,2.0nm,0.6s
CPUP Villa Florida 121.08 254 PKIKP PKPdf 18 02 39.7 -0.9
LPAZ La Paz 127.37 270 PKP PKPdf 18 02 53.5 +0.7
comp=Z,2.3nm,0.6s,baz=52,slow=2.7,SNR=9.5
LPAZ La Paz 127.37 270 PKIKP PKPdf 18 02 53.5 +0.6
LPAZ pmax pmax
comp=Z,2.0nm,0.6s
LPAZ La Paz 127.37 270 PKIKP PKPdf 18 02 53.5 +0.6
PLCA Paso Flores 134.18 238 PKP PKPdf 18 03 06.1 +1.0
comp=Z,3.0nm,1.0s,baz=189,slow=8.6,SNR=3.3
PLCA Paso Flores 134.18 238 PKIKP PKPdf 18 03 06.1 +1.0
PLCA pmax pmax
comp=Z,3.0nm,1.0s
PLCA Paso Flores 134.18 238 PKIKP PKPdf 18 03 06.1 +1.0
PPT Papeete 154.59 74 *e*LR LR 18 55 33.2
comp=Z,231nm,23.8s
TAOE Nuku Hiva Isla 156.40 43 *e*LR LR 18 56 30.5
comp=Z,418nm,26.0s
TBI Tubuai 156.66 87 *e*LR LR 18 56 30.9
comp=Z,326nm,30.0s
RKT Rikitea 169.34 72 *e*LR LR 19 02 21.4
comp=Z,198nm,33.5s

ISCJB ***17*** *17:48:06.7±0.5, 52.°74S±0.°09×18.°7E±0.°2, h10km, mb4.2/12, MS3.7/6, Error ellipse: s-maj=18.9km s-min=12.5km az=178.4*
IDC ***17*** *17:48:06.4±0.6, 52.°71S×18.°87E, h0km, mb4.2/13, mb1 4.3/13, mb1mx4.2/19, mbtmp4.2/13, MS3.8/6, Ms1 3.7/6, ms1mx3.5/30, Error ellipse: s-maj=22.5km s-min=16.4km az=81.0*
NEIC ***17*** *17:48:08.1±0.5, 52.°75S×18.°84E, h10km, mb4.6/1, Error ellipse: s-maj=17.5km s-min=11.9km az=91.0*
ISC 17 17:48:08.5±0.6, 52.°74S±0.°09×18.°9E±0.°2, h10km, n21, σ0.°94/14, mb4.2/12, MS3.7/6, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.40**	**5**	***e*P**	**P**	**17 52 46.5**	**+1.2**
	13nm,0.7s,baz=188,slow=12,SNR=11						
SUR				LR	LR	17 58 22.9	
	comp=Z,369nm,21.7s,MS3.7,baz=117,slow=30						
SUR	**Sutherland**	**20.40**	**5**	***e*P**	**P**	**17 52 47.6**	**+2.2**
	34nm,1.1s						
SUR				LR	LR	17 58 22.9	
SNAA	**Sanae**	**21.27**	**199**	**P**	**P**	**17 52 55.1**	**+0.6**
	7.3nm,1.0s,mb4.0,baz=48,slow=8.4,SNR=26						
SNAA				LR	LR	17 59 06.7	
	comp=Z,78nm,18.4s,MS3.1,baz=41,slow=31						
BOSA	**Boshof**	**24.57**	**14**	**P**	**P**	**17 53 28.7**	**+0.4**
	6.3nm,1.1s,mb4.0,baz=164,slow=12,SNR=3.2						
BOSA				LR	LR	18 01 24.3	
	comp=Z,256nm,18.6s,MS3.8,baz=26,slow=32						
MAW	**Mawson**	**25.72**	**142**	**P**	**P**	**17 53 39.1**	**+0.6**
	3.6nm,0.9s,mb3.9,baz=293,slow=8.2,SNR=7.1						
MAW				LR	LR	18 01 32.9	
	comp=Z,88nm,21.0s,MS3.3,baz=59,slow=31						
QSPA	**South Pole Qui**	**37.48**	**180**	**P**	**P**	**17 55 22.1**	**+0.6**
	14nm,0.8s,mb4.8,baz=243,slow=3.6,SNR=62						
PMSA	**Palmer Station**	**41.45**	**220**	LR	LR	18 11 01.7	
	comp=Z,233nm,18.3s,MS4.1,baz=263,slow=33						
PLCA	**Paso Flores**	**58.61**	**243**	**P**	**P**	**17 58 06.2**	**+0.9**
	1.3nm,0.8s,mb4.0,baz=258,slow=5.1,SNR=2.3						
CPUP	**Villa Florida**	**61.28**	**264**	**P**	**P**	**17 58 22.1**	**-1.6**
	1.5nm,0.6s,mb4.3,baz=81,slow=7.5,SNR=5.1						
DBIC	**Dimbokro**	**62.53**	**333**	**P**	**P**	**17 58 30.9**	**-1.4**
	6.5nm,1.0s,mb4.7,baz=311,slow=6.7,SNR=3.7						
LPAZ	**La Paz**	**75.40**	**262**	**P**	**P**	**17 59 53.0**	**+0.6**
	0.5nm,0.4s,mb3.8,baz=226,slow=6.3,SNR=3.5						
STKA	**Stephens Creek**	**82.10**	**134**	**P**	**P**	**18 00 27.9**	**-1.2**
	2.6nm,0.8s,mb4.2,baz=169,slow=14,SNR=3.1						
ASAR	**Alice Springs**	**85.36**	**124**	**P**	**P**	**18 00 45.5**	**-0.4**
	1.3nm,0.7s,mb4.2,baz=204,slow=4.7,SNR=19						
KEST	**Kesra**	**88.50**	**352**	**P**	**P**	**18 01 00.4**	**-0.1**
	1.9nm,1.1s,mb4.3,baz=287,slow=3.9,SNR=3.6						
WRA	**Warramunga Arr**	**88.68**	**122**	**P**	**P**	**18 01 01.2**	**-0.7**
	1.1nm,1.2s,mb4.1,baz=177,slow=2.4,SNR=5.0						
WRA				LR	LR	18 37 07.8	
	comp=Z,88nm,21.0s,MS4.2,baz=280,slow=33						
ZALV	**Zalesovo Beam**	**119.61**	**38**	PKP	PKPdf	18 06 55.7	-1.5
	0.6nm,0.6s,baz=289,slow=4.4,SNR=2.8						
ARCES	**ARCESS Array B**	**122.06**	**3**	PKP	PKPdf	18 07 00.6	-0.9
	1.0nm,0.7s,baz=339,slow=6.5,SNR=4.3						
SONM	**Songino Array**	**124.69**	**55**	PKP	PKPdf	18 07 06.2	-1.0
	0.7nm,0.7s,baz=256,slow=2.4,SNR=5.2						
PDAR	**Pinedale Array**	**144.62**	**275**	PKP	PKPdf	18 07 41.6	-2.7
	2.1nm,0.7s,baz=108,slow=4.8,SNR=9.9						
NVAR	**Mina Array Bea**	**147.31**	**261**	PKPbc	PKPbc	18 07 51.4	-0.1
	2.1nm,0.7s,baz=137,slow=4.3,SNR=15						
ILAR	**Eielson Array**	**165.90**	**334**	PKPab	PKPab	18 09 12.4	+0.5
	1.2nm,0.7s,baz=16,slow=3.3,SNR=12						

IDC ***17*** *17:49:39.8±0.7, 26.°86N×56.°09E, h0km, mb4.1/21, mb1 4.3/22, mb1mx4.2/30, mbtmp4.1/22, ML1.9/1, Error ellipse: s-maj=17.9km s-min=14.2km az=32.0*
CSEM ***17*** *17:49:40.9±0.4, 26.°81N×56.°18E, h10km, ML4.1, Error ellipse: s-maj=10.9km s-min=7.3km az=159.0*
ISCJB ***17*** *17:49:40.2±1.2, 26.°87N±0.°05×56.°13E±0.°05, h12km±6km, mb4.0/26, Error ellipse: s-maj=8.6km s-min=6.8km az=156.6*
TEH ***17*** *17:49:42.7, 27.°04N×56.°16E, h20km*
NEIC ***17*** *17:49:44.7, 27.°16N×55.°90E, h7km, ML4.1 (THR), MN4.1 (TEH), After THR.*
THR ***17*** *17:49:44.5±0.3, 27.°13N×55.°98E, h12km±1km, ML4.0*
ISC 17 17:49:41.5±1.3, 26.°87N±0.°05×56.°18E±0.°05, h8km±7km, n103, σ1.9/14/109, mb4.0/26, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.53**	**359**	***e*Pg**	**Pg**	**17 49 51.0**	**-0.8**
BNDS	**Bandar-Abbas**	**0.53**	**359**	***e*Pg**	**Pg**	**17 49 51.3**	**-0.6**
BNDS				***e*Sg**	**Sg**	**17 49 56.0**	**-2.8**
BNDS				AML	AML	17 50 04.0	
	comp=E,18μm,0.3s						
BNDS	**Bandar-Abbas**	**0.53**	**359**	***e*Pg**	**Pg**	**17 49 51.7**	**-0.1**
BNDS				***e*Sg**	**Sg**	**17 49 56.9**	**-1.9**
IBND	**Bandar-abas**	**0.66**	**29**	***e*Pg**	**Pg**	**17 49 54.2**	**-0.1**
IBND				***e*Sg**	**Sg**	**17 50 02.7**	**-0.3**
IBND				*e*		17 50 07.6	
	comp=Z,81μm,0.2s						
IBND	**Bandar-abas**	**0.66**	**29**	***e*Pg**	**Pg**	**17 49 54.2**	**-0.1**
IBND				***e*Sg**	**Sg**	**17 50 02.7**	**-0.3**
KRBR	**Kerman**	**3.15**	**9**	***e*Pn**	**Pn**	**17 50 33.0**	**+1.7**
KRBR	**Kerman**	**3.15**	**9**	***e*Pn**	**Pn**	**17 50 33.0**	**+1.7**
KRBR				Sn	**Sn**	**17 51 08.5**	**-0.6**
KRBR				AML	AML	17 51 21.6	
	comp=N,490nm,0.4s						
KRBR				AML	AML	17 51 24.7	
	comp=E,587nm,0.5s						
KRBR	**Kerman**	**3.15**	**9**	***e*Pn**	**Pn**	**17 50 33.7**	**+2.4**
ISRV	**Sarvestan**	**3.69**	**313**	Pn	**Pn**	**17 50 40.3**	**+1.5**
ISRV	**Sarvestan**	**3.69**	**313**	***e*Pn**	**Pn**	**17 50 40.3**	**+1.5**
ISRV				*e*		17 52 20.3	
	comp=Z,7μm,0.6s						
ISRV	**Sarvestan**	**3.69**	**313**	***e*Pn**	**Pn**	**17 50 40.3**	**+1.5**
IPAR	**Pars**	**4.05**	**318**	Pn	**Pn**	**17 50 45.2**	**+1.4**
IPAR	**Pars**	**4.05**	**318**	***e*Pn**	**Pn**	**17 50 45.2**	**+1.4**
IPAR				*e*		17 52 15.7	
	comp=Z,3μm,0.4s						
IPAR	**Pars**	**4.05**	**318**	***e*Pn**	**Pn**	**17 50 45.2**	**+1.4**
IMEH	**Mehriz**	**4.71**	**343**	Pn	**Pn**	**17 50 54.0**	**+1.2**
IMEH	**Mehriz**	**4.71**	**343**	***e*Pn**	**Pn**	**17 50 54.0**	**+1.2**
IMEH				*e*		17 51 02.3	
	comp=Z,1μm,0.2s						
IMEH	**Mehriz**	**4.71**	**343**	***e*Pn**	**Pn**	**17 50 54.0**	**+1.2**
IBAF	**Bafgh**	**4.74**	**354**	Pn	**Pn**	**17 50 53.3**	**+0.1**
IBAF	**Bafgh**	**4.74**	**354**	***e*Pn**	**Pn**	**17 50 53.3**	**+0.1**
IBAF				*e*		17 52 32.8	
	comp=Z,1μm,0.3s						
IBAF	**Bafgh**	**4.74**	**354**	***e*Pn**	**Pn**	**17 50 53.3**	**+0.1**
ZHSF	**Zahedan**	**4.89**	**55**	***e*Pn**	**Pn**	**17 51 00.1**	**+4.8**
ISAD	**Sadrabad**	**5.48**	**337**	Pn	**Pn**	**17 51 04.6**	**+1.2**
ISAD	**Sadrabad**	**5.48**	**337**	*e*	Px	17 51 11.8	
	comp=Z,1μm,0.1s						
ISAD				***e*Pn**	**Pn**	**17 51 04.6**	**+1.2**
ICHK	**Chekchek**	**5.58**	**344**	Pn	**Pn**	**17 51 05.6**	**+0.9**
ICHK	**Chekchek**	**5.58**	**344**	*e*	**Pb**	**17 51 22.8**	**+3.7**
	comp=Z,946nm,0.1s						
ICHK				***e*Pn**	**Pn**	**17 51 05.6**	**+0.9**
IKOO	**Kooshah**	**6.06**	**23**	***e*Pn**	**Pn**	**17 51 12.5**	**+1.1**
IKOO				*e*		17 52 57.4	
	comp=N,867nm,0.2s						
IKOO	**Kooshah**	**6.06**	**23**	***e*Pn**	**Pn**	**17 51 12.5**	**+1.1**
NASN	**Na'in**	**6.60**	**334**	***e*Pn**	**Pn**	**17 51 19.4**	**+0.6**
NASN	**Na'in**	**6.60**	**334**	***e*Pn**	**Pn**	**17 51 19.7**	**+0.9**
IPIR	**Pirpir**	**7.40**	**323**	Pn	**Pn**	**17 51 30.7**	**+1.0**
IPIR	**Pirpir**	**7.40**	**323**	***e*Pn**	**Pn**	**17 51 30.8**	**+1.1**
IPIR				*e*		17 51 35.5	
	comp=Z,1μm,0.2s						
IPIR	**Pirpir**	**7.40**	**323**	***e*Pn**	**Pn**	**17 51 30.8**	**+1.1**
QRN	**Al-Qurain**	**7.55**	**286**	***e*P**	**Pn**	**17 51 31.7**	**-0.2**
QRN				AML	AML	17 52 57.7	
	comp=Z,56nm,0.3s						
IKLH	**Kolahrood**	**7.56**	**329**	Pn	**Pn**	**17 51 32.8**	**+0.8**
IKLH	**Kolahrood**	**7.56**	**329**	***e*Pn**	**Pn**	**17 51 32.8**	**+0.8**
IKLH				*e*		17 51 39.2	
	comp=Z,509nm,0.1s						
IKLH	**Kolahrood**	**7.56**	**329**	***e*Pn**	**Pn**	**17 51 32.8**	**+0.8**
UMR	**Umm Al-Rimmam**	**7.93**	**292**	***e*P**	**Pn**	**17 51 36.4**	**-0.7**
UMR	**Umm Al-Rimmam**	**7.93**	**292**	***e*P**	**Pn**	**17 51 36.4**	**-0.7**
NAY	**Al-Naaiem**	**8.24**	**289**	***e*P**	**Pn**	**17 51 40.7**	**-0.7**
NAY				AML	AML	17 53 10.2	
	comp=Z,14nm,0.6s						
NAY	**Al-Naaiem**	**8.24**	**289**	***e*P**	**Pn**	**17 51 40.7**	**-0.7**
MIB	**Mutribah**	**8.32**	**293**	***e*P**	**Pn**	**17 51 42.5**	**0.0**
MIB				AML	AML	17 53 12.1	
	comp=Z,19nm,0.6s						
MIB	**Mutribah**	**8.32**	**293**	***e*P**	**Pn**	**17 51 42.5**	**+0.1**
GNI	**Garni**	**16.30**	**327**	Pn	**Pn**	**17 53 33.5**	**+2.7**
	comp=Z,1.0nm,0.3s,baz=137,slow=2.3,SNR=5.5						
ASF	**Jabal al Asfar**	**17.59**	**292**	P	**Pn**	**17 53 53.0**	**+6.0**
	comp=Z,0.9nm,0.3s,baz=284,slow=14,SNR=2.7						
EIL	**Elat**	**18.91**	**283**	P	**Pn**	**17 54 11.7**	**+8.6**
	comp=Z,0.6nm,0.3s,baz=350,slow=14,SNR=2.4						
MMAI	**Mount Meron Ar**	**19.01**	**294**	P	**Pn**	**17 54 12.7**	**+8.3**
	comp=Z,0.7nm,0.3s,baz=106,slow=14,SNR=2.3						
ATD	**Arta Tunnel**	**19.75**	**222**	P	**Pn**	**17 54 13.9**	**+0.5**
	comp=Z,0.7nm

KKAR	Karatay Array	19.96	32	eP	Pn	17 54 12.6	-3.1
KIV	Kislovodsk	20.24	331	eP	P	17 54 17.9	+0.8
KIV	Kislovodsk	20.24	331	eP	P	17 54 17.9	+0.8
CSS	Prodhromos	21.17	298	eP	P	17 54 29.9	+2.7
EKS2	Erkin-Say	21.32	38	eP	P	17 54 29.4	+0.7
EKS2	Erkin-Say	21.32	38	eP	P	17 54 29.4	+0.7
AAK	Ala-Archa	21.70	39	P	P	17 54 36.4	+3.6
	comp=Z,4.5nm,0.8s,mb4.0,baz=220,slow=8.4,SNR=3.9						
BR131	Keskin Array S	22.72	310	eP	P	17 54 43.2	-0.4
BR131	Keskin Array S	22.72	310	eP	P	17 54 43.2	-0.5
BRTR	Keskin Array B	22.72	310	P	P	17 54 43.7	0.0
	comp=Z,4.5nm,0.7s,mb4.0,baz=131,slow=14,SNR=7.5						
BRTR	Keskin Array B	22.72	310	P	P	17 54 43.7	0.0
AKTK	Aktyubinsk	23.58	3	P	P	17 54 52.6	0.0
AKTK	Aktyubinsk	23.58	3	P	P	17 54 52.6	0.0
AKTO	Aktyubinsk	23.58	3	P	P	17 54 52.6	0.0
	comp=Z,2.3nm,0.4s,mb4.0,baz=180,slow=6.3,SNR=5.8						
BVAR	Borovoye Array	28.20	18	P	P	17 55 34.4	0.0
	comp=Z,5.9nm,0.8s,mb4.3,baz=193,slow=8.0,SNR=9.8						
BVAR	Borovoye Array	28.20	18	P	P	17 55 34.4	0.0
MKAR	Makanchi Array	28.63	39	P	P	17 55 39.2	+0.9
	comp=Z,1.0nm,0.6s,mb3.8,baz=214,slow=8.4,SNR=8.2						
MKAR	Makanchi Array	28.63	39	P	P	17 55 39.2	+0.9
AKASG	Malin Array Be	31.43	326	P	P	17 56 01.0	-2.1
	comp=Z,2.0nm,0.7s,mb4.1,baz=134,slow=8.4,SNR=5.6						
AKASG	Malin Array Be	31.43	326	P	P	17 56 01.0	-2.1
ZAA0	Zalesovo Array	34.31	30	eP	P	17 56 28.6	+0.4
ZAA0	Zalesovo Array	34.31	30	eP	P	17 56 28.5	+0.3
ZALV	Zalesovo Beam	34.31	30	P	P	17 56 27.7	-0.5
	comp=Z,1.6nm,0.3s,mb4.4,baz=230,slow=8.7,SNR=8.1						
ZALV	Zalesovo Beam	34.31	30	P	P	17 56 27.7	-0.5
VRAC	Vranov	37.77	317	P	P	17 56 57.0	-0.9
	comp=Z,2.8nm,0.5s,mb4.2,baz=115,slow=7.4,SNR=5.0						
VRAC	Vranov	37.77	317	P	P	17 56 57.0	-0.9
GERES	GERESS Array B	39.41	315	P	P	17 57 10.7	-0.9
	comp=Z,0.9nm,0.6s,mb3.7,baz=106,slow=4.4,SNR=4.8						
GERES	GERESS Array B	39.41	315	P	P	17 57 10.7	-0.9
JOF	Joensuu	39.59	342	ep	P	17 57 11.1	-1.9
	comp=Z,1.4nm,0.3s,mb4.2						
JOF	Joensuu	39.59	342	eP	P	17 57 11.1	-1.9
	comp=Z,1.4nm,0.3s,mb4.2						
FINES	FINESS Array B	40.05	338	P	P	17 57 15.8	-1.0
	comp=Z,1.4nm,0.4s,mb4.0,baz=136,slow=9.6,SNR=5.8						
FINES	FINESS Array B	40.05	338	P	P	17 57 15.8	-1.0
CMAR	Chiang Mai Arr	40.19	93	P	P	17 57 17.8	-0.7
	comp=Z,1.2nm,1.0s,mb3.6,baz=294,slow=6.8,SNR=4.4						
CMAR	Chiang Mai Arr	40.19	93	P	P	17 57 17.8	-0.7
KAF	Kangasniemi	40.45	339	ep	P	17 57 18.2	-2.0
	comp=Z,0.7nm,0.3s,mb3.9						
KAF	Kangasniemi	40.45	339	eP	P	17 57 18.2	-2.0
	comp=Z,0.7nm,0.3s,mb3.9						
HFS	Hagfors	44.04	331	P	P	17 57 48.7	-0.7
	comp=Z,1.0nm,0.4s,mb3.9,baz=128,slow=9.7,SNR=5.0						
HFS	Hagfors	44.04	331	P	P	17 57 48.7	-0.7
SONM	Songino Array	44.17	48	P	P	17 57 51.4	+0.8
	comp=Z,2.6nm,1.1s,mb3.9,baz=243,slow=5.9,SNR=4.8						
SONM	Songino Array	44.17	48	P	P	17 57 51.4	+0.8
NOA	NORSAR Array B	45.55	331	P	P	17 57 59.8	-1.7
	comp=Z,0.8nm,0.7s,mb3.8,baz=118,slow=7.4,SNR=3.8						
NOA	NORSAR Array B	45.55	331	P	P	17 57 59.8	-1.6
KEV	Kevo	46.14	346	ep	P	17 58 04.0	-2.0
	comp=Z,0.8nm,0.4s,mb4.0						
KEV	Kevo	46.14	346	eP	P	17 58 04.0	-2.0
	comp=Z,0.8nm,0.4s,mb4.0						
ARCES	ARCESS Array B	46.29	346	P	P	17 58 06.7	-0.5
	comp=Z,1.1nm,0.6s,mb4.0,baz=142,slow=8.6,SNR=5.0						
ARCES	ARCESS Array B	46.29	346	P	P	17 58 06.7	-0.5
ESDC	Sonseca Array	51.02	301	P	P	17 58 43.2	-0.8
	comp=Z,0.5nm,0.4s,mb3.8,baz=79,slow=6.9,SNR=7.3						
ESDC	Sonseca Array	51.02	301	P	P	17 58 43.2	-0.8
TORD	Torodi Ar. Bea	52.62	266	P	P	17 58 54.9	-1.4
	comp=Z,6.9nm,0.7s,mb4.7,baz=61,slow=7.5,SNR=16						
KSRS	Korea Array	60.34	60	P	P	17 59 53.3	+2.3
	comp=Z,0.5nm,0.5s,mb3.9,baz=281,slow=7.3,SNR=5.2						
BOSA	Boshof	62.64	211	P	P	18 00 06.7	+0.2
	comp=Z,5.3nm,0.9s,mb4.7,baz=19,slow=7.2,SNR=6.8						
FITZ	Fitzroy Crossi	80.83	116	P	P	18 01 56.3	+0.1
	comp=Z,3.1nm,0.8s,mb4.3,baz=326,slow=7.5,SNR=6.2						
ILAR	Eielson Array	86.91	10	P	P	18 02 26.7	+0.1
	comp=Z,0.5nm,0.7s,mb3.8,baz=326,slow=4.5,SNR=4.1						
WRA	Warramunga Arr	88.85	113	P	P	18 02 36.4	-0.1
	comp=Z,1.9nm,0.8s,mb4.5,baz=313,slow=3.7,SNR=11						
ASAR	Alice Springs	90.30	116	P	P	18 02 43.4	+0.1
	comp=Z,1.0nm,0.8s,mb4.2,baz=304,slow=5.0,SNR=9.8						

BER 17 17:52:16.2±1.9, 58°.94N×5°.59E, h0km±19km, MD1.3, ML1.4, 2C, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMY	Karmoy	0.32	327	↑iP	Pg	17 52 21.7	-0.7
KMY				eS	Sg	17 52 26.8	+0.2
BLS5	Blasjo	0.66	43	↑iP	Pg	17 52 28.0	-0.8
BLS5				eS	Sg	17 52 37.0	-0.3
BLS5				AML	AML	17 52 40.8	
	comp=Z,12nm,0.6s						
SNART	Snartemo	1.04	125	eP	Pg	17 52 34.0	-2.1
SNART				eS	Sg	17 52 49.2	-0.5
SNART				AML	AML	17 52 51.5	
	comp=Z,14nm,0.3s						
RUND	Rundenannen	1.48	356	eSg	Sg	17 53 01.2	-2.5
RUND				AML	AML	17 53 03.4	
	comp=Z,9.2nm,0.4s						
ASK	Askoy	1.56	353	eP	Pn	17 52 43.0	-2.1
ASK				eSg	Sg	17 53 04.5	-1.7
ASK				AML	AML	17 53 07.0	
	comp=Z,8.4nm,0.7s						

*ISCJB **17** 18:01:01.4±0.4, 43°.76N±0°.02×105°.21W±0°.04, h0km, Error ellipse: s-maj=4.0km s-min=2.7km az=169.2*
*NEIC **17** 18:01:03.3±0.4, 43°.78N×105°.20W, h0km, ML3.1, Error ellipse: s-maj=5.0km s-min=4.7km az=52.0, Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
*IDC **17** 18:01:06.0±1.0, 44°.76N×106°.38W, h0km, mb1 3.8/3, mb1mx3.4/27, mbtmp3.5/3, ML3.5/3, Error ellipse: s-maj=62.1km s-min=8.3km az=140.0*

ISC 17 18:01:02.6±0.4, 43°.73N±0°.02×105°.26W±0°.04, h0km, n66, σ1§13/77, 20C-23D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J22A	Midwest	0.94	251	↑P	Pg	18 01 20.0	-0.8
	baz=1.0						
RSSD	Black Hills	0.96	66	eP	Pg	18 01 21.3	+0.2
K22A	Casper	1.43	221	↑P	Pn	18 01 28.8	-0.9
	baz=1.5						
K22A				↓S	Sg	18 01 48.3	-0.1
	baz=1.5						
I21A	Big Trails, Te	1.48	274	↑P	Pn	18 01 29.1	-1.4
	baz=1.5,SNR=110						
H21A	Big Horn, Sher	1.57	305	↓Pb	Pb	18 01 31.5	-1.0
	baz=1.6						
H21A				↑Sb	Sb	18 01 53.3	+0.4
	baz=1.6						
J21A	Lysite	1.64	257	↑Pn	Pn	18 01 31.8	-0.9
	baz=1.7						
L23A	Garrett	1.65	192	↑Pb	Pb	18 01 32.9	-1.0
	baz=1.7						
L23A				↓Sg	Sg	18 01 56.0	+0.3
	baz=1.7						
L24A	Wheatland	1.71	172	↓Pb	Pb	18 01 34.1	-0.7
	baz=1.8						
L24A				↓Sg	Sg	18 01 57.8	+0.4
	baz=1.8						
K21A	Alcova	1.83	234	↓Pb	Pb	18 01 35.7	-1.2
	baz=1.9						
K21A				↑Sb	Sb	18 02 00.3	0.0
	baz=1.9						
G21A	Lodge Grass	2.04	318	↓Pn	Pn	18 01 38.5	+0.3
	baz=2.0						
I20A	Worland	2.09	277	Pb	Pb	18 01 39.5	-1.9
	baz=2.1,SNR=170						
I20A				↑Sn	Sn	18 02 06.0	+0.5
	baz=2.1						
J20A	Shoshoni	2.09	260	↓Pb	Pb	18 01 40.6	-0.8
	baz=2.1,SNR=98						
H20A	Greybull	2.12	292	↓Pb	Pb	18 01 40.4	-1.4
	baz=2.1						
M24A	Cheyenne	2.29	172	↓Pb	Pb	18 01 43.5	-1.2
	baz=2.3						
M23A	Laramie	2.29	189	↑Pb	Pb	18 01 43.7	-1.1
	baz=2.3						
M23A				↓Sb	Sb	18 02 13.8	+0.2
	baz=2.3						
L21A	Rawlins	2.35	222	↓Pb	Pb	18 01 44.6	-1.3
	baz=2.4						
L21A				↑Sb	Sb	18 02 15.1	-0.4
	baz=2.4						
PHWY	Pilot Hill	2.44	184	ePn	Pn	18 01 44.5	+0.8
F21A	Absaloka Mine,	2.48	328	↓Pn	Pn	18 01 43.5	-0.8
	baz=2.5						
K20A	Yellowstone Ra	2.50	246	↑Pb	Pb	18 01 47.1	-1.3
	baz=2.6						
K20A				↓Sb	Sb	18 02 19.1	-0.6
	baz=2.6						
RWWY	Rawlins	2.50	216	ePn	Pn	18 01 46.2	+1.7
M22A	Cedar Creek Ra	2.53	203	↑Pb	Pb	18 01 47.2	-1.7
	baz=2.6						
M21A	Separation Pea	2.63	217	↑Pb	Pb	18 01 48.6	-2.1
	baz=2.7						
K19A	Absolon Red Bu	2.77	252	↓Pb	Pb	18 01 51.3	-1.8
	baz=2.8,SNR=117						
K19A				↑Sb	Sb	18 02 28.0	+0.4
	baz=2.8						
J19A	Crowheart	2.80	262	↓Sb	Sb	18 02 28.8	+0.4
	baz=2.8						
F20A	Billings	2.92	316	↓Pn	Pn	18 01 49.7	-0.6
	baz=2.9						
LAO	LASA Array	3.03	347	↓Pn	Pn	18 01 51.7	-0.2
	baz=3.0						
LAO	LASA Array	3.03	347	ePn	Pn	18 01 51.5	-0.4
N22A	Wattenberg Ran	3.06	197	↓Pb	Pb	18 01 57.3	-0.6
	baz=3.1						
E21A	Keefer Ranch,	3.09	336	↓Pn	Pn	18 01 51.4	-1.2
	baz=3.1						
RLMT	Red Lodge	3.19	297	ePn	Pn	18 01 54.4	+0.3
PDAR	Pinedale Array	3.29	254	Pn	Pn	18 01 57.2	+1.8
	4.0nm,0.3s,baz=69,slow=16,SNR=48						
PDAR				Pg	Pg	18 02 05.3	-0.3
	11nm,0.3s,baz=60,slow=20,SNR=32						
PDAR				Lg		18 02 41.9	
	4.0nm,0.3s,baz=52,slow=30,SNR=4.9						
H18A	Shoshone NF, C	3.31	288	↑Pn	Pn	18 01 55.2	-0.4
	baz=3.3,SNR=32						
E20A	Meyer Farm, Mu	3.44	325	↓Pn	Pn	18 01 56.3	-1.1
	baz=3.4						
G18A	Lazy EL Ranch,	3.46	299	↑Pn	Pn	18 01 58.1	+0.3
	baz=3.5,SNR=11						
D21A	La Casta Ranch	3.55	340	↓Pn	Pn	18 01 58.6	-0.3
	baz=3.5						
O23A	Lake Granby, G	3.56	188	↓Pb	Pb	18 02 05.2	-1.1
	baz=3.6						
OGNE	Ogallala	3.67	138	ePn	Pn	18 02 01.8	+1.1
O22A	Kremmling	3.70	196	↑Pb	Pb	18 02 07.8	-1.0
	baz=3.8						
E19A	Rath Farm, Rou	3.70	319	↑Pn	Pn	18 02 00.2	-0.8
	baz=3.7						
GCMT	Greycliff	3.75	305	ePn	Pn	18 02 02.2	+0.4
LKWY	Lake	3.79	284	ePn	Pn	18 02 05.1	+2.7
LOHW	Long Hollow	3.88	270	ePn	Pn	18 02 06.5	+3.0
D20A	Manuel Ranch,	3.92	330	↑Pn	Pn	18 02 03.4	-0.6
	baz=3.9						
ISCO	Idaho Springs	3.94	184	ePn	Pn	18 02 06.2	+1.8
MOOW	Moose Ponds	3.98	272	ePn	Pn	18 02 06.3	+1.5
J17A	Brown Place, J	3.98	267	↑Pb	Pb	18 02 12.6	-1.0
	baz=4.0						
REDW	Red Top Meadow	4.08	267	ePn	Pn	18 02 08.9	+2.6
IMW	Indian Meadow	4.12	274	ePn	Pn	18 02 07.6	+0.9
TPAW	Teton Pass	4.14	269	ePn	Pn	18 02 08.6	+1.5
RRI2	Red Ridge	4.43	267	ePn	Pn	18 02 12.2	+1.2
HWUT	Hardware Ranch	5.11	248	ePn	Pn	18 02 20.8	+0.4
	6.6nm,0.4s						
DLMT	Dillon	5.49	290	ePn	Pn	18 02 26.5	+0.8
	4.1nm,0.4s						
HRY	Holter Researc	5.52	305	ePn	Pn	18 02 26.0	0.0
	11nm,0.4s						
LRM	Limekiln Ridge	5.53	295	ePn	Pn	18 02 26.5	+0.3
	17nm,0.4s						
MCMT	McKenzie Canyo	5.56	284	Pn	Pn	18 02 28.2	+1.6
	1.8nm,0.3s						
DAU	Daniels Canyon	5.56	235	ePn	Pn	18 02 29.4	+2.8
	7.3nm,0.3s						
SDCO	Great Sand Dun	5.99	182	ePn	Pn	18 02 33.9	+1.4
	1.2nm,0.4s						
PV04	Paradox Valley	6.00	209	ePn	Pn	18 02 34.3	+1.6
SRU	San Rafael	6.08	222	ePn	Pn	18 02 33.5	-0.2
	16nm,0.3s						
PV01	Paradox Valley	6.13	205	ePn	Pn	18 02 36.5	+2.1
BGU	Big Grassy Mou	6.41	247	ePn	Pn	18 02 39.5	+1.3
	1.6nm,0.3s						
DUG	Dugway	6.65	240	ePn	Pn	18 02 42.2	+0.6
	3.0nm,0.4s						
YBMT	Yellow Bay	7.38	307	ePn	Pn	18 02 52.1	+0.6
	2.9nm,0.3s						
ULM	Lac du Bonnet	9.14	41	Pn	Pn	18 03 15.1	-0.5
	1.8nm,0.3s,baz=239,slow=12,SNR=9.1						
ULM				Pg	Pn	18 03 45.5	+30
	1.3nm,0.3s,baz=208,slow=11,SNR=3.6						
ULM				Lg		18 05 44.7	
	0.5nm,0.3s,baz=322,slow=22,SNR=2.7						
ULM	Lac du Bonnet	9.14	41	Pn	Pn	18 03 15.1	-0.5
ULM				Pg	Pn	18 03 45.5	+30
ULM				Lg		18 05 44.7	
NVAR	Mina Array Bea	11.18	246	Pn	Pn	18 03 46.4	+2.8
	0.2nm,0.3s,baz=47,slow=15,SNR=3.9						

*ISCJB **17** 18:14:26.4±0.5, 28°.12S±0°.10×13°.20W±0°.09, h10km, mb4.1/17, MS4.4/18, Error ellipse: s-maj=14.6km s-min=11.5km az=158.1*
*IDC **17** 18:14:26.5±0.6, 28°.09S×13°.23W, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.1/21, mbtmp4.1/16, MS4.4/19, Ms1 4.4/19, ms1mx4.3/24, Error ellipse: s-maj=18.2km s-min=15.3km az=132.0*
*NEIC **17** 18:14:28.0±0.4, 28°.11S×13°.19W, h10km, mb4.7/3, Error ellipse: s-maj=13.8km s-min=10.9km az=158.0*
*GCMT **17** 18:14:29.5±0.2, 28°.04S×13°.18W, h12km, MW5.1, Moment Tensor Solution. s28,c32; s87,c142; Moment tensor: Scale 10^16 Nm; Mrr=5.22±.12; Mθθ 0.70±.11; Mφφ 4.52±.11; Mrθ 0.01±.45; Mθφ -1.49±.10; Mφr 0.72±.39; Best double couple: M0 5.20000×10^16 NP1:φs 339.00000°, δ41.00000°, λ-94.00000°. NP2:φs 164.00000°, δ49.00000°, λ-87.00000°. Principal axes: T 5.0800, Plg4.0000°, Azm251.0000°; N 0.2000, Plg3.0000°, Azm341.0000°; P -5.2800, Plg85.0000°, Azm105.0000°; Data Used: IU II IC G CN.*

ISC 17 18:14:28.2±0.5, 28°.09S±0°.10×13°.20W±0°.09, h10km, n37, σ0§96/25, mb4.1/17, MS4.4/18, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	29.62	107	LR	LR	18 30 14.7	
	comp=Z,1μm,19.3s,MS4.5,baz=18,slow=32						
BOSA	Boshof	33.75	100	P	P	18 21 11.3	+1.1
	2.0nm,0.8s,mb4.1,baz=313,slow=7.4,SNR=4.0						
BOSA				LR	LR	18 33 01.1	
	comp=Z,1μm,18.8s,MS4.7,baz=286,slow=33						
BOSA	Boshof	33.75	100	P	P	18 21 10.5	+0.4
BOSA				LR	LR	18 33 01.1	
BDFB	Brasilia	34.48	284	P	P	18 21 17.4	+0.9
	2.2nm,0.3s,mb4.5,baz=134,slow=16,SNR=3.4						
BDFB				LR	LR	18 33 24.8	
	comp=Z,916nm,19.5s,MS4.5,baz=224,slow=33						
LBTB	Lobatse	34.74	94	P	P	18 21 18.2	-0.5
	6.3nm,0.9s,mb4.5,baz=259,slow=11,SNR=6.9						
LBTB	Lobatse	34.74	94	eP	P	18 21 17.1	-1.6
	8.8nm,0.9s,mb4.7						
DBIC	Dimbokro	35.48	14	P	P	18 21 26.7	+1.6
	2.0nm,0.7s,mb4.1,baz=175,slow=12,SNR=2.8						
DBIC				LR	LR	18 32 58.5	
	comp=Z,238nm,19.2s,MS4.0,baz=171,slow=31						
CPUP	Villa Florida	39.13	262	P	P	18 21 55.1	-1.0
	0.8nm,0.5s,mb3.7,baz=33,slow=12,SNR=3.3						
CPUP				LR	LR	18 35 41.5	
	comp=Z,269nm,20.6s,MS4.1,baz=80,slow=33						
LSZ	Lusaka	40.33	80	eP	P	18 22 05.8	-0.3
	23nm,1.5s,mb4.7						
TORD	Torodi Ar. Bea	43.45	21	P	P	18 22 30.6	-1.0
	2.6nm,0.8s,mb4.0,baz=202,slow=8.3,SNR=11						
TORD				LR	LR	18 37 30.4	
	comp=Z,748nm,19.2s,MS4.6,baz=195,slow=32						
SNAA	Sanae	44.01	175	P	P	18 22 36.0	+0.6
	1.1nm,0.9s,mb3.6,baz=343,slow=8.3,SNR=7.8						
CFAA	Coronel Fontan	47.45	252	P	P	18 23 01.5	-1.7
	0.2nm,0.5s,mb3.3,baz=89,slow=5.4,SNR=7.0						
CFAA	Coronel Fontan	47.45	252	P	P	18 23 01.5	-1.7
PLCA	Paso Flores	48.19	239	P	P	18 23 09.9	+1.0
	2.0nm,0.7s,mb4.2,baz=108,slow=11,SNR=4.0						
PLCA				LR	LR	18 40 50.0	
	comp=Z,267nm,21.7s,MS4.2,baz=286,slow=33						
PLCA	Paso Flores	48.19	239	eP	P	18 23 10.0	+1.2
	6.1nm,1.1s,mb4.5						
PLCA				LR	LR	18 40 50.0	
LPAZ	La Paz	51.82	271	P	P	18 23 36.9	+0.1
	0.8nm,0.7s,mb3.8,baz=138,slow=5.9,SNR=4.3						
LPAZ				LR	LR	18 44 17.7	
	comp=Z,507nm,20.6s,MS4.5,baz=107,slow=35						
LPAZ	La Paz	51.82	271	eP	P	18 23 36.6	-0.1
LPAZ				LR	LR	18 44 17.7	
MAW	Mawson	59.06	154	P	P	18 24 28.0	-0.2
	2.9nm,0.7s,mb4.4,baz=289,slow=11,SNR=7.7						
MAW				LR	LR	18 43 30.3	
	comp=Z,210nm,21.1s,MS4.2,baz=109,slow=30						
NNA	Nana	61.28	271	LR	LR	18 50 26.3	
	comp=Z,441nm,20.3s,MS4.6,baz=124,slow=35						
QSPA	South Pole Qui	62.14	180	P	P	18 24 49.4	+0.4
	9.2nm,0.8s,mb5.0,baz=224,slow=4.3,SNR=28						
QSPA	South Pole Qui	62.14	180	P	P	18 24 49.4	+0.4
ATAH	Atahualpa	64.81	275	LR	LR	18 53 35.7	
	comp=Z,468nm,20.6s,MS4.7,baz=127,slow=36						
KEST	Kesra	66.94	20	LR	LR	18 52 40.8	
	comp=Z,218nm,18.3s,MS4.4,baz=176,slow=34						
ATD	Arta Tunnel	67.01	62	LR	LR	18 55 17.8	
	comp=Z,349nm,18.3s,MS4.6,baz=201,slow=37						
ROSC	El Rosal	67.31	289	LR	LR	18 55 15.0	
	comp=Z,376nm,18.6s,MS4.6,baz=200,slow=36						
EIL	Elat	73.60	43	LR	LR	18 57 03.8	
	comp=Z,183nm,18.1s,MS4.4,baz=279,slow=35						
MMAI	Mount Meron Ar	76.30	40	LR	LR	18 56 28.1	
	comp=Z,246nm,18.4s,MS4.5,baz=70,slow=33						
ASF	Jabal al Asfar	76.56	42	LR	LR	18 54 56.8	
	comp=Z,194nm,21.7s,MS4.4,baz=257,slow=32						
GERES	GERESS Array B	80.27	18	P	P	18 26 39.4	+0.5
	0.2nm,0.3s,mb3.5,baz=172,slow=7.9,SNR=3.5						
BRTR	Keskin Array B	80.33	35	P	P	18 26 39.9	+0.4
	2.1nm,0.8s,mb4.1,baz=187,slow=6.2,SNR=8.8						
AKASG	Malin Array Be	86.94	25	P	P	18 27 11.6	-1.5
	0.2nm,0.3s,mb3.8,baz=219,slow=4.9,SNR=5.8						
AKASG				LR	LR	19 07 23.3	
	comp=Z,59nm,18.2s,MS4.0,baz=180,slow=36						
AKASG	Malin Array Be	86.94	25	P	P	18 27 11.6	-1.5
AKASG				LR	LR	19 07 23.2	
NB2	NORSAR Subarra	91.00	12	P	P	18 27 31.6	-0.4
	comp=Z,1.8nm,0.8s,mb4.5,baz=201,slow=4.6						
NOA	NORSAR Array B	91.00	12	P	P	18 27 33.3	+1.3
	comp=Z,1.5nm,0.8s,mb4.4,baz=203,slow=4.4,SNR=5.0						
ASAR	Alice Springs	119.56	145	PKP	PKPdf	18 33 18.2	-0.6
	comp=Z,0.9nm,1.0s,baz=197,slow=1.0,SNR=6.0						
SONM	Songino Array	129.80	50	PKP	PKPdf	18 33 37.1	-0.5
	comp=Z,0.5nm,0.7s,baz=219,slow=2.7,SNR=4.0						
KSRS	Korea Array	146.20	64	PKPbc	PKPbc	18 34 07.9	-1.0
	comp=Z,2.6nm,0.8s,baz=273,slow=4.8,SNR=8.9						

IDC 17 18:22:58.6±2.0, 21°.53N×143°.60E, h274km±20km, mb3.0/8, mb1 3.2/10, mb1mx3.1/25, mbtmp3.1/10, Error ellipse: s-maj=29.5km s-min=12.6km az=83.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	5.69	347	P	Pn	18 24 24.4	+1.0
	13nm,0.3s,baz=274,slow=23,SNR=13						
CBIJ				S	S	18 25 31.3	-0.2
	8.2nm,0.3s,baz=272,slow=23,SNR=6.9						
MJAR	Matsushiro Arr	15.68	344	P	Pn	18 26 24.2	-1.7
	0.4nm,0.3s,baz=86,slow=3.8,SNR=4.8						
KSRS	Korea Array	20.88	323	P	P	18 27 19.7	-0.5
	1.1nm,0.5s,baz=147,slow=8.7,SNR=7.7						
SONM	Songino Array	39.72	320	P	P	18 30 06.6	+1.9
	0.2nm,0.5s,baz=122,slow=7.7,SNR=2.6						
WRA	Warramunga Arr	42.20	193	P	P	18 30 25.1	0.0
	0.6nm,0.3s,baz=17,slow=9.0,SNR=37						
ASAR	Alice Springs	45.90	192	P	P	18 30 54.0	-0.3
	0.2nm,0.7s,baz=12,slow=6.6,SNR=6.5						
STKA	Stephens Creek	53.13	182	P	P	18 31 48.1	-0.4
	1.2nm,0.6s,baz=0.0,slow=8.1,SNR=5.4						
MKAR	Makanchi Array	55.10	313	P	P	18 32 02.2	-0.3
	0.4nm,0.6s,baz=90,slow=8.6,SNR=2.8						
ILAR	Eielson Array	62.02	27	P	P	18 32 49.3	-0.5
	0.5nm,0.8s,baz=286,slow=5.0,SNR=5.5						
FINES	FINESS Array B	83.50	335	P	P	18 34 53.8	-1.7
	0.6nm,0.6s,baz=64,slow=4.4,SNR=6.0						
LPAZ	La Paz	149.57	86	PKPbc	PKPbc	18 42 18.3	+1.9
	0.7nm,0.4s,baz=278,slow=4.1,SNR=4.5						

*IDC **17** 18:41:47.7±0.5, 26°.95N×56°.12E, h0km, mb4.3/24, mb1 4.4/29, mb1mx4.3/35, mbtmp4.3/29, ML4.1/4, MS3.9/9, Ms1 3.8

SNR=15
ARQ P 18 42 48.4
SNR=15
IPAR Pars 3.90 318 Pn Pn 18 42 53.0 +3.1
IPAR Pars 3.90 318 *e*Pn **Pn 18 42 53.0 +3.1**
IPAR Pars 3.90 318 *e*Pn **Pn 18 42 53.0 +3.1**
SMDO Samad 4.30 155 P **Pn 18 42 57.8 +2.4**
SNR=45
SMDO Samad 4.30 155 P **Pn 18 42 57.8 +2.3**
SNR=45
IMEH Mehriz 4.58 344 Pn **Pn 18 43 01.7 +2.4**
IMEH Mehriz 4.58 344 *e*Pn **Pn 18 43 01.8 +2.5**
IMEH *e* 18 44 33.8
comp=Z,3μm,0.5s
IMEH Mehriz 4.58 344 Pn **Pn 18 43 01.7 +2.4**
IBAF Bafgh 4.62 355 Pn **Pn 18 43 01.8 +2.0**
IBAF Bafgh 4.62 355 *e*Pn **Pn 18 43 01.8 +2.0**
IBAF *e* 18 44 26.8
comp=Z,2μm,0.4s
IBAF Bafgh 4.62 355 *e*Pn **Pn 18 43 01.8 +2.0**
ZHSF Zahedan 4.92 57 *e*Pn **Pn 18 43 08.6 +4.6**
ZHSF Zahedan 4.92 57 *e*Pn **Pn 18 43 08.6 +4.6**
JMDO Jabal Madar 4.95 157 P **Pn 18 43 05.9 +1.5**
SNR=21
JMDO Jabal Madar 4.95 157 P **Pn 18 43 05.9 +1.5**
SNR=21
WBK Wadi Bani Khal 5.09 148 P **Pn 18 43 06.3 0.0**
SNR=12
SLWS 5.34 247 P **Pn 18 43 10.5 +0.8**
SLWS 5.34 247 P **Pn 18 43 10.5 +0.8**
ISAD Sadrabad 5.34 338 Pn **Pn 18 43 12.5 +2.8**
ISAD Sadrabad 5.34 338 *e*Pn **Pn 18 43 12.5 +2.8**
ISAD *e* 18 43 18.7
comp=Z,2μm,0.3s
ISAD Sadrabad 5.34 338 *e*Pn **Pn 18 43 12.5 +2.8**
ICHK Chekchek 5.44 345 Pn **Pn 18 43 13.3 +2.1**
ICHK Chekchek 5.44 345 *e*Pn **Pn 18 43 13.4 +2.2**
ICHK *e* 18 43 21.2
comp=Z,1μm,0.3s
ICHK Chekchek 5.44 345 Pn **Pn 18 43 13.3 +2.1**
BTHS 5.54 239 P **Pn 18 43 12.4 -0.1**
BTHS 5.54 239 P **Pn 18 43 12.4 -0.1**
IKOO Kooshah 6.00 25 *e*Pn **Pn 18 43 19.3 +0.4**
IKOO *e* 18 45 34.1
comp=Z,2μm,0.4s
IKOO Kooshah 6.00 25 *e*Pn **Pn 18 43 19.3 +0.4**
BOQSS 6.09 261 S **Sn 18 44 30.2 +0.4**
BOQSS 6.09 261 P **Pn 18 43 20.7 +0.6**
IGAR Gharneh 6.44 328 *e*Pn **Pn 18 43 26.7 +1.9**
IGAR *e* 18 43 35.0
comp=Z,1μm,0.3s
NASN Na'in 6.45 335 *e*Pn **Pn 18 43 26.5 +1.5**
NASN Na'in 6.45 335 *e*Pn **Pn 18 43 26.5 +1.5**
IDAH Dahanechah 6.63 29 *e*Pn **Pn 18 43 28.5 +1.1**
IDAH *e* 18 45 34.8
comp=Z,2μm,0.5s
IDAH Dahanechah 6.63 29 *e*Pn **Pn 18 43 28.5 +1.1**
IZEF Zefreh 6.73 332 Pn **Pn 18 43 29.5 +0.7**
IZEF Zefreh 6.73 332 *e*Pn **Pn 18 43 29.5 +0.7**
IZEF *e* 18 43 35.0
comp=Z,772nm,0.3s
IZEF Zefreh 6.73 332 *e*Pn **Pn 18 43 29.5 +0.7**
IPIR Pirpir 7.24 323 Pn **Pn 18 43 38.4 +2.5**
IPIR Sn **Sn 18 44 57.2 -1.0**
IPIR Pirpir 7.24 323 *e*Pn **Pn 18 43 38.4 +2.5**
IPIR *e* 18 43 44.0
comp=Z,1μm,0.3s
IPIR *e*Sn **Sn 18 44 57.2 -1.0**
IPIR Pirpir 7.24 323 *e*Pn **Pn 18 43 38.4 +2.5**
IPIR *e*Sn **Sn 18 44 57.2 -1.0**
KFJS 7.30 281 P **Pn 18 43 38.7 +2.0**
IKLH Kolahrood 7.42 330 Pn **Pn 18 43 40.2 +1.9**
IKLH Kolahrood 7.42 330 *e*Pn **Pn 18 43 40.2 +1.9**
IKLH *e* 18 43 59.0
comp=Z,567nm,0.1s
IKLH Kolahrood 7.42 330 *e*Pn **Pn 18 43 40.2 +1.9**
QRN Al-Qurain 7.42 286 *e*P **Pn 18 43 38.8 +0.5**
QRN AML AML 18 45 04.4
comp=Z,96nm,0.4s
RDF Al-Radifah 7.77 286 *e*P **Pn 18 43 44.2 +1.1**
RDF AML AML 18 45 15.3
comp=Z,54nm,0.5s
RDF Al-Radifah 7.77 286 *e*P **Pn 18 43 44.2 +1.0**
UMR Umm Al-Rimmam 7.79 291 *e*P **Pn 18 43 43.8 +0.4**
UMR Umm Al-Rimmam 7.79 291 *e*P **Pn 18 43 43.8 +0.4**
NAY Al-Naaiem 8.11 288 *e*P **Pn 18 43 48.2 +0.5**
NAY AML AML 18 45 18.2
comp=Z,28nm,0.5s
NAY Al-Naaiem 8.11 288 *e*P **Pn 18 43 48.2 +0.4**
MIB Mutribah 8.18 292 *e*P **Pn 18 43 48.6 -0.2**
MIB AML AML 18 45 18.3
comp=Z,43nm,0.5s
MIB Mutribah 8.18 292 *e*P **Pn 18 43 48.6 -0.2**
ABTO Aybut 9.91 196 P **Pn 18 44 12.1 -0.4**
SNR=23
ABTO Aybut 9.91 196 P **Pn 18 44 12.1 -0.4**
SNR=23
ASYS 10.44 276 P **Pn 18 44 18.2 -1.6**
ASYS 10.44 276 P **Pn 18 44 18.2 -1.6**
KBL Kabul 13.46 53 *e*P **Pn 18 45 03.4 +2.3**
comp=Z,11nm,1.1s
KBL Kabul 13.46 53 *e*P **Pn 18 45 03.4 +2.3**
KBL pmax pmax
comp=Z,11nm,1.1s
KBL Kabul 13.46 53 *e*P **Pn 18 45 03.4 +2.3**
comp=Z,11nm,1.1s
GNI Garni 16.15 327 Pn **Pn 18 45 39.4 +2.3**
comp=Z,1.1nm,0.3s,baz=85,slow=2.8,SNR=9.0
GNI LR LR 18 52 38.4
comp=Z,498nm,20.4s,baz=127,slow=40
GNI Garni 16.15 327 *e*P **Pn 18 45 39.0 +2.0**
comp=Z,143nm,1.5s
GNI Garni 16.15 327 *e*P **Pn 18 45 41.2 +4.1**
GNI pmax pmax
comp=Z,59nm,1.7s
GNI Garni 16.15 327 *e*P **Pn 18 45 39.0 +1.9**
comp=Z,143nm,1.5s
TBLG Delisi 17.41 331 P **Pn 18 45 56.0 +3.1**
TBLG Delisi 17.41 331 P **Pn 18 45 56.0 +3.1**
ASF Jabal al Asfar 17.45 292 P **Pn 18 45 54.6 +1.1**
comp=Z,0.5nm,0.3s,baz=329,slow=13,SNR=4.7
ASF Jabal al Asfar 17.45 292 P **Pn 18 45 54.6 +1.1**
ASF pmax pmax
comp=Z,1.0nm,0.3s
ZEI Tsey 18.62 331 *e*P **Pn 18 46 08.4 +0.6**
ZEI pmax pmax
comp=Z,66nm,1.3s
ZEI Tsey 18.62 331 *e*P **Pn 18 46 08.4 +0.6**
comp=Z,66nm,1.3s
MALT Malatya 18.63 312 *e*P **Pn 18 46 08.8 +0.9**
comp=Z,48nm,1.1s
MALT Malatya 18.63 312 *e*P **Pn 18 46 08.8 +0.9**
MALT pmax pmax
comp=Z,48nm,1.1s
MALT Malatya 18.63 312 *e*P **Pn 18 46 08.8 +0.9**
comp=Z,48nm,1.1s
EIL Elat 18.77 283 P **Pn 18 46 10.8 +1.0**
comp=Z,0.3nm,0.3s,baz=111,slow=6.7,SNR=6.0
EIL Elat 18.77 283 P **Pn 18 46 10.8 +1.0**
EIL Elat 18.77 283 P **Pn 18 46 10.8 +1.0**
MMAI Mount Meron Ar 18.86 294 P **Pn 18 46 11.6 +0.7**
comp=Z,1.1nm,0.3s,baz=90,slow=16,SNR=7.2
ATD Arta Tunnel 19.76 221 P **Pn 18 46 20.5 -1.2**
comp=Z,0.9nm,0.3s,baz=314,slow=9.6,SNR=5.1
ATD Arta Tunnel 19.76 221 P **Pn 18 46 20.5 -1.2**
ATD Arta Tunnel 19.76 221 P **Pn 18 46 20.5 -1.2**
KKAR Karatay Array 19.93 32 *e*P **Pn 18 46 20.7 -2.8**
comp=Z,12nm,0.8s
KKAR Karatay Array 19.93 32 *e*P **Pn 18 46 20.7 -2.8**
KKAR pmax pmax
comp=Z,12nm,0.8s
KKAR Karatay Array 19.93 32 *e*P **Pn 18 46 20.7 -2.8**
comp=Z,12nm,0.8s
KIV Kislovodsk 20.09 331 *e*P **P 18 46 26.1 +2.4**
comp=Z,190nm,1.1s
KIV Kislovodsk 20.09 331 *e*P **P 18 46 26.1 +2.4**
KIV *e*S **S 18 50 09.4 0.0**
KIV pmax pmax
comp=Z,118nm,1.0s
KIV MLR MLR
comp=Z,38nm,13.0s,MS2.9
KIV Kislovodsk 20.09 331 *e*P **P 18 46 26.1 +2.4**
comp=Z,38nm,13.0s
KIV *e*S **S 18 50 09.4 0.0**

CSS Prodhromos 21.02 298 *e*P **P 18 46 35.3 +1.5**
comp=Z,15nm,0.8s,mb4.4
CSS Prodhromos 21.02 298 *e*P **P 18 46 35.3 +1.5**
comp=Z,15nm,0.8s,mb4.4
SOC Sochi 21.21 326 *e*P **P 18 46 42.1 +6.4**
SOC *e* 18 46 58.4
SOC *i*S **S 18 50 30.7 -0.7**
SOC *e*SS 18 51 12.3
SOC pmax pmax
comp=Z,106nm,1.0s,mb5.1
SOC MLR MLR
comp=Z,200nm,11.0s,MS3.8
SOC Sochi 21.21 326 *e*P **P 18 46 42.1 +6.4**
comp=Z,106nm,1.0s,mb5.1
SOC *i*S **S 18 50 30.7 -0.7**
comp=Z,200nm,11.0s
EKS2 Erkin-Say 21.30 38 P **P 18 46 37.1 +0.4**
SNR=37
AAK Ala-Archa 21.68 39 P **P 18 46 41.9 +1.1**
SNR=7.7
AAK Ala-Archa 21.68 39 P **P 18 46 41.0 +0.2**
comp=Z,6.8nm,0.7s,mb4.2,baz=295,slow=13,SNR=24
AAK Ala-Archa 21.68 39 *d i*P **P 18 46 41.5 +0.7**
AAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
AAK Ala-Archa 21.68 39 *i*P **P 18 46 41.5 +0.7**
comp=Z,8.0nm,0.8s,mb4.2
FRU Bishkek 21.88 39 *e*P **P 18 46 47.0 +4.1**
FRU *e* 18 47 10.0
FRU pmax pmax
comp=Z,40nm,1.6s,mb4.6
FRU Bishkek 21.88 39 *e*P **P 18 46 47.0 +4.1**
comp=Z,40nm,1.6s,mb4.6
KBK Karagaybulak 21.95 40 P **P 18 46 45.4 +1.6**
SNR=8.3
CHMS Chumysh 22.06 39 P **P 18 46 48.7 +3.8**
SNR=16
USP Ospenovka 22.10 38 P **P 18 46 47.2 +1.9**
SNR=9.8
ABKAR Akbulak array 22.45 7 *e*P **P 18 46 48.1 -0.8**
comp=Z,22nm,0.9s,mb4.6
ABKAR Akbulak array 22.45 7 *e*P **P 18 46 48.1 -0.8**
comp=Z,22nm,0.9s,mb4.6
TKM2 Tokmak 2 22.49 40 P **P 18 46 49.0 -0.5**
SNR=9.3
TKM2 Tokmak 2 22.49 40 *e*P **P 18 46 48.6 -0.8**
comp=Z,15nm,0.9s,mb4.4
TKM2 Tokmak 2 22.49 40 *e*P **P 18 46 48.6 -0.9**
TKM2 pmax pmax
comp=Z,15nm,0.9s,mb4.4
TKM2 Tokmak 2 22.49 40 *e*P **P 18 46 48.6 -0.9**
comp=Z,15nm,0.9s,mb4.4
BRTR Keskin Array B 22.56 310 P **P 18 46 51.1 +0.8**
comp=Z,11nm,1.1s,mb4.2,baz=131,slow=13,SNR=17
BRTR Keskin Array B 22.56 310 P **P 18 46 51.1 +0.8**
BRTR pmax pmax
comp=Z,11nm,1.1s
BRTR Keskin Array B 22.56 310 P **P 18 46 51.1 +0.8**
comp=Z,11nm,1.1s,mb4.2
BR131 Keskin Array S 22.56 310 *e*P **P 18 46 50.6 +0.3**
comp=Z,14nm,0.8s,mb4.4
BR131 Keskin Array S 22.56 310 *e*P **P 18 46 50.6 +0.3**
comp=Z,14nm,0.8s,mb4.4
ANN Anapa 23.23 325 *e*P **P 18 47 00.5 +3.2**
ANN *e*S **S 18 51 08.6 -0.5**
ANN *e*SS 18 51 53.7
ANN pmax pmax
comp=Z,212nm,7.0s
ANN Anapa 23.23 325 *e*P **P 18 47 00.5 +3.2**
comp=Z,212nm,7.0s
ANN *e*S **S 18 51 08.6 -0.5**
AKTK Aktyubinsk 23.47 3 P **P 18 46 59.1 -0.6**
AKTK LR LR 18 58 24.3
AKTK Aktyubinsk 23.47 3 P **P 18 46 59.2 -0.6**
comp=Z,322nm,18.9s
AKTO Aktyubinsk 23.47 3 P **P 18 46 59.1 -0.6**
comp=Z,6.7nm,0.7s,mb4.2,baz=174,slow=10,SNR=22
AKTO LR LR 18 58 24.3
comp=Z,322nm,18.9s,MS3.8,baz=13,slow=42
AKTO Aktyubinsk 23.47 3 P **P 18 46 59.2 -0.6**
AKTO pmax pmax
comp=Z,7.0nm,0.7s,mb4.2
AKTO MLR MLR
comp=Z,322nm,18.9s,MS3.8
VORD Divnogorie 27.14 336 *e*P **P 18 47 35.9 +2.7**
VORD pmax pmax
comp=N,9.0nm,0.5s
VORD pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
VORD pmax pmax
comp=E,3.0nm,0.3s
VORD Divnogorie 27.14 336 *e*P **P 18 47 35.9 +2.7**
VSR Storozhevoye 27.40 337 *e*P **P 18 47 36.5 +1.1**
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb4.2
VSR Storozhevoye 27.40 337 *e*P **P 18 47 36.5 +1.1**
BRVK Borovoye 28.13 18 *e*P **P 18 47 41.3 -0.7**
comp=Z,8.3nm,0.8s,mb4.4
BRVK Borovoye 28.13 18 *e*P **P 18 47 42.3 +0.3**
BRVK pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
BRVK Borovoye 28.13 18 *e*P **P 18 47 42.3 +0.3**
comp=Z,9.0nm,1.0s,mb4.3
BVAR Borovoye Array 28.13 18 P **P 18 47 41.2 -0.8**
comp=Z,11nm,0.8s,mb4.5,baz=202,slow=8.6,SNR=62
BVAR Borovoye Array 28.13 18 P **P 18 47 41.2 -0.8**
BVAR pmax pmax
comp=Z,11nm,0.8s
BVAR Borovoye Array 28.13 18 P **P 18 47 41.2 -0.8**
comp=Z,11nm,0.8s,mb4.5
MK31 Makanchi Array 28.62 39 *e*P **P 18 47 45.8 -0.6**
MK31 Makanchi Array 28.62 39 *e*P **P 18 47 45.8 -0.6**
MK31 Makanchi Array 28.62 39 *e*P **P 18 47 45.8 -0.6**
MKAR Makanchi Array 28.62 39 P **P 18 47 46.0 -0.4**
comp=Z,2.3nm,0.5s,mb4.2,baz=220,slow=8.2,SNR=15
MKAR LR LR 18 59 30.4
comp=Z,84nm,18.3s,MS3.4,baz=355,slow=37
MKAR Makanchi Array 28.62 39 P **P 18 47 46.1 -0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR MLR MLR
comp=Z,84nm,18.3s
MKAR Makanchi Array 28.62 39 P **P 18 47 46.1 -0.3**
comp=Z,84nm,18.3s
KURK Kurchatov 29.29 30 *e*P **P 18 47 53.0 +0.7**
comp=Z,4.4nm,0.9s,mb4.2
KURK Kurchatov 29.29 30 *e*P **P 18 47 53.0 +0.7**
KURK pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
KURK Kurchatov 29.29 30 *e*P **P 18 47 53.0 +0.7**
comp=Z,4.0nm,0.9s,mb4.2
ARU Arti 29.49 3 *e*P **P 18 47 53.7 -0.3**
comp=Z,8.6nm,1.4s,mb4.3
ARU Arti 29.49 3 *c i*P **P 18 47 54.7 +0.7**
ARU *e* 18 48 55.4
ARU *e* 18 50 54.2
ARU S **S 18 52 45.6 -2.6**
ARU SS SS 18 54 18.1 -35
ARU pmax pmax
comp=Z,10.0nm,2.5s,mb4.1
ARU Arti 29.49 3 *i*P **P 18 47 54.7 +0.7**
comp=Z,10.0nm,2.5s,mb4.1
ARU Arti 29.49 3 *e*PcP PcP 18 50 54.2 -5.1
ARU S **S 18 52 45.6 -2.6**
SVE Sverdlovsk 30.01 5 *e*P **P 18 48 00.8 +2.2**
SVE *e* 18 48 50.6
SVE *e*S **S 18 52 56.2 -0.2**
SVE pmax pmax
comp=Z,7.0nm,1.2s,mb4.3
SVE Sverdlovsk 30.01 5 *e*P **P 18 48 00.8 +2.2**
comp=Z,7.0nm,1.2s,mb4.3
SVE *e*S **S 18 52 56.2 -0.2**
AKASG Malin Array Be 31.28 326 P **P 18 48 11.0 +1.1**
comp=Z,1.9nm,0.5s,mb4.2,baz=133,slow=8.5,SNR=9.4
AKASG PcP PcP 18 51 03.2 -0.8
comp=Z,0.4nm,0.3s,baz=114,slow=2.3,SNR=5.1
AKASG Malin Array Be 31.28 326 P **P 18 48 11.0 +1.1**
AKASG PcP PcP 18 51 03.2 -0.8
AKASG Malin Array Be 31.28 326 P **P 18 48 11.0 +1.0**
AKASG 18 51 03.3
AKASG pmax pmax
comp=Z,2.0nm,0.5s

AKASG Malin Array Be 31.28 326 P **P 18 48 11.0 +1.0**
comp=Z,2.0nm,0.5s,mb4.2
AKASG Malin Array Be 31.28 326 PcP PcP 18 51 03.2 -0.9
KIEV Kiev 31.29 326 *e*P **P 18 48 11.7 +1.7**
comp=Z,8.1nm,0.9s,mb4.5
KIEV Kiev 31.29 326 *e*P **P 18 48 11.7 +1.7**
KIEV pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
KIEV Kiev 31.29 326 *e*P **P 18 48 11.6 +1.6**
comp=Z,8.1nm,0.9s,mb4.5
UZH Uzhgorod 33.92 319 *e*P **P 18 48 34.0 +0.9**
UZH *e* 18 48 44.0
UZH Uzhgorod 33.92 319 *e*P **P 18 48 34.0 +0.9**
NVS Novosibirsk 34.18 28 *i*P **P 18 48 34.2 -1.1**
NVS Novosibirsk 34.18 28 *i*P **P 18 48 34.2 -1.1**
ZAA0 Zalesovo Array 34.27 30 *e*P **P 18 48 35.0 -1.0**
ZAA0 Zalesovo Array 34.27 30 *e*P **P 18 48 35.0 -1.1**
ZALV Zalesovo Beam 34.27 30 P **P 18 48 35.2 -0.8**
comp=Z,4.8nm,0.5s,mb4.7,baz=241,slow=8.7,SNR=26
ZALV LR LR 19 03 41.5
comp=Z,76nm,19.8s,MS3.4,baz=207,slow=38
ZALV Zalesovo Beam 34.27 30 P **P 18 48 35.3 -0.8**
ZALV pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
ZALV MLR MLR
comp=Z,77nm,19.8s,MS3.4
KLMR Klimovskoe 35.69 346 *e*P **P 18 48 47.6 -0.6**
KLMR pmax pmax
comp=Z,21nm,1.2s,mb4.9
KLMR Klimovskoe 35.69 346 *e*P **P 18 48 47.6 -0.6**
comp=Z,21nm,1.2s,mb4.9
OJC Ojcow 36.09 320 *e*P **P 18 48 52.5 +0.7**
OJC Ojcow 36.09 320 *e*P **P 18 48 52.5 +0.7**
OKC Ostrava-Krasne 36.90 318 AMS AMS 19 02 10.0
comp=Z,200nm,23.7s
MORC Moravsky Berou 37.23 318 *e*P **P 18 49 00.8 -0.7**
comp=Z,7.8nm,1.0s,mb4.5
MORC Moravsky Berou 37.23 318 *e*P **P 18 49 00.8 -0.7**
MORC pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
MORC Moravsky Berou 37.23 318 *e*P **P 18 49 00.8 -0.7**
comp=Z,8.0nm,1.0s,mb4.5
VSU Vasula 37.55 335 *e*P **P 18 49 05.4 +1.3**
VSU pmax pmax
comp=Z,15nm,1.2s,mb4.6
VSU Vasula 37.55 335 *e*P **P 18 49 05.4 +1.3**
comp=Z,15nm,1.2s,mb4.6
CONA Conrad Observa 37.59 315 ⇑*i*P **P 18 49 06.5 +1.9**
comp=Z,3.7nm,1.1s,mb4.0
DPC Dobruska-Polom 38.18 319 *e*P **P 18 49 10.0 +0.5**
DPC MLR MLR
comp=Z,200nm,17.8s,MS4.0
DPC Dobruska-Polom 38.18 319 *e*P **P 18 49 10.0 +0.5**
DPC AMS AMS 19 02 00.0
comp=Z,200nm,17.8s
DPC Dobruska-Polom 38.18 319 *e*P **P 18 49 10.0 +0.5**
comp=Z,200nm,17.8s
GTA Gaotai 38.31 60 *e*P **P 18 49 11.3 +0.5**
GTA pP pP 18 49 15.8 +1.9
GTA sP sP 18 49 18.8 +3.7
GTA pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
UPC Upice 38.42 319 *e*P **P 18 49 13.9 +2.3**
UPC Upice 38.42 319 *e*P **P 18 49 13.9 +2.3**
UPC Upice 38.42 319 *e*P **P 18 49 13.9 +2.3**
GERES GERESS Array B 39.25 315 P **P 18 49 17.5 -1.1**
comp=Z,0.5nm,0.5s,mb3.5,baz=99,slow=8.8,SNR=7.5
GERES GERESS Array B 39.25 315 P **P 18 49 17.5 -1.1**
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 39.25 315 P **P 18 49 17.5 -1.1**
comp=Z,1.0nm,0.5s,mb3.8
KHC Kasperske Hory 39.42 316 *e*P **P 18 49 19.2 -0.7**
ABTA Abfaltersbach 39.43 312 ⇑*i*P **P 18 49 20.0 -0.1**
comp=Z,7.7nm,1.1s,mb4.4
JOF Joensuu 39.46 342 *e*P **P 18 49 18.9 -1.2**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
JOF Joensuu 39.46 342 *e*P **P 18 49 18.9 -1.2**
comp=Z,1.0nm,0.3s,mb4.0
FINES FINESS Array B 39.90 338 P **P 18 49 22.9 -0.9**
comp=Z,3.9nm,0.6s,mb4.3,baz=139,slow=9.1,SNR=19
FINES FINESS Array B 39.90 338 P **P 18 49 22.9 -0.9**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 39.90 338 P **P 18 49 22.9 -0.9**
comp=Z,4.0nm,0.6s,mb4.3
CHTO Chiang Mai 40.18 92 *e*P **P 18 49 26.4 -0.3**
comp=Z,18nm,1.5s,mb4.6
CHTO Chiang Mai 40.18 92 *e*P **P 18 49 26.4 -0.3**
CHTO pmax pmax
comp=Z,18nm,1.5s,mb4.6
CHTO Chiang Mai 40.18 92 *e*P **P 18 49 26.4 -0.3**
comp=Z,18nm,1.5s,mb4.6
CMAR Chiang Mai Arr 40.30 93 P **P 18 49 26.5 -1.2**
comp=Z,1.4nm,0.7s,mb3.8,baz=284,slow=10,SNR=11
CMAR PcP PcP 18 51 30.4 -0.9
comp=Z,0.7nm,0.7s,baz=289,slow=4.9,SNR=4.2
CMAR Chiang Mai Arr 40.30 93 P **P 18 49 26.5 -1.2**
CMAR 18 51 30.4
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 40.30 93 P **P 18 49 26.5 -1.2**
comp=Z,1.0nm,0.7s,mb3.6
CMAR Chiang Mai Arr 40.30 93 PcP PcP 18 51 30.4 -0.9
comp=Z,1.0nm,0.7s
KAF Kangasniemi 40.31 339 *e*P **P 18 49 26.3 -0.9**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
KAF Kangasniemi 40.31 339 *e*P **P 18 49 26.3 -0.9**
comp=Z,1.0nm,0.3s,mb4.0
CLL Collm 40.49 319 *e*P **P 18 49 30.0 +1.2**
CLL *e* 18 49 57.0
CLL Collm 40.49 319 *e*P **P 18 49 30.0 +1.2**
CLL Collm 40.49 319 *e*P **P 18 49 30.0 +1.2**
MOTA Moosalm 40.51 312 ⇓*i*P **P 18 49 28.1 -1.0**
comp=Z,5.2nm,0.7s,mb4.2
FETA Feichten 40.68 312 ⇑*i*P **P 18 49 29.4 -1.1**
comp=Z,18nm,1.0s,mb4.7
GRFO Grafenberg 41.06 316 *e*P **P 18 49 36.4 +2.9**
comp=Z,18nm,1.3s,mb4.5
GRFO Grafenberg 41.06 316 *e*P **P 18 49 36.4 +2.9**
GRFO pmax pmax
comp=Z,18nm,1.3s,mb4.5
GRFO Grafenberg 41.06 316 *e*P **P 18 49 36.4 +2.9**
comp=Z,18nm,1.3s,mb4.5
DAVA Damuels 41.31 312 ⇑*i*P **P 18 49 33.9 -1.7**
comp=Z,17nm,1.0s,mb4.7
LZH Lanzhou 41.38 65 *e*P **P 18 49 37.0 +0.6**
LZH pP pP 18 49 45.0 +5.5
LZH pmax pmax
comp=Z,18nm,1.4s,mb4.5
MOY Mondy 41.72 41 *e*P **P 18 49 40.2 +1.3**
MOY Mondy 41.72 41 *e*P **P 18 49 40.2 +1.3**
SBF Sospel 42.42 306 *e*P **P 18 49 43.2 -1.6**
comp=Z,77nm,1.4s,mb4.8
SBF Sospel 42.42 306 *e*P **P 18 49 43.2 -1.6**
comp=Z,38nm,1.4s,mb4.8
SBF Sospel 42.42 306 *e*P **P 18 49 43.2 -1.6**
SBF pmax pmax
comp=Z,38nm,1.4s,mb4.8
SBF Sospel 42.42 306 *e*P **P 18 49 43.2 -1.6**
comp=Z,38nm,1.4s,mb4.8
ZAK Zakamensk 42.72 44 *e*P **P 18 49 49.3 +2.2**
ZAK Zakamensk 42.72 44 *e*P **P 18 49 49.3 +2.2**
FRF La Foret Royal 42.95 306 *e*P **P 18 49 47.5 -1.6**
comp=Z,38nm,1.3s,mb4.7
FRF La Foret Royal 42.95 306 *e*P **P 18 49 47.5 -1.6**
comp=Z,19nm,1.3s,mb4.7
FRF La Foret Royal 42.95 306 *e*P **P 18 49 47.5 -1.6**
FRF pmax pmax
comp=Z,19nm,1.3s,mb4.7
FRF La Foret Royal 42.95 306 *e*P **P 18 49 47.5 -1.6**
comp=Z,19nm,1.3s,mb4.7
MBDF Montbardon 43.00 308 *e*P **P 18 49 47.5 -1.9**
comp=Z,8.1nm,0.7s,mb4.3
MBDF Montbardon 43.00 308 *e*P **P 18 49 47.5 -1.9**
comp=Z,4.1nm,0.7s,mb4.3
MBDF Montbardon 43.00 308 *e*P **P 18 49 47.5 -1.9**
MBDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
MBDF Montbardon 43.00 308 *e*P **P 18 49 47.5 -1.9**
comp=Z,4.0nm,0.7s,mb4.3
LPG La Plagne 43.12 309 *e*P **P 18 49 49.0 -1.4**

comp=Z,8.8nm,0.7s,mb4.3
LPG La Plagne 43.12 309 *eP* **P 18 49 49.0 -1.4**
comp=Z,4.4nm,0.7s,mb4.3
LPG La Plagne 43.12 309 *eP* **P 18 49 49.0 -1.4**
LPG pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
LPG La Plagne 43.12 309 *eP* **P 18 49 49.0 -1.4**
comp=Z,4.0nm,0.7s,mb4.3
LPL La Plagne 43.13 309 *eP* **P 18 49 49.1 -1.4**
comp=Z,13nm,0.8s,mb4.4
LPL La Plagne 43.13 309 *eP* **P 18 49 49.1 -1.4**
comp=Z,6.7nm,0.8s,mb4.4
LPL La Plagne 43.13 309 *eP* **P 18 49 49.1 -1.4**
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
LPL La Plagne 43.13 309 *eP* **P 18 49 49.1 -1.4**
comp=Z,7.0nm,0.8s,mb4.4
CDF Champ du Feu 43.26 313 *eP* **P 18 49 49.7 -1.8**
CDF Champ du Feu 43.26 313 *eP* **P 18 49 49.7 -1.8**
CDF Champ du Feu 43.26 313 *eP* **P 18 49 49.7 -1.8**
ECH Echery 43.30 313 *eP* **P 18 49 52.6 +0.8**
comp=Z,5.5nm,1.0s,mb4.2
ECH Echery 43.30 313 *eP* **P 18 49 52.6 +0.8**
ECH pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
ECH Echery 43.30 313 *eP* **P 18 49 52.6 +0.8**
comp=Z,6.0nm,1.0s,mb4.3
HINF Hinteralfeld 43.42 312 *eP* **P 18 49 51.1 -1.7**
HINF Hinteralfeld 43.42 312 *eP* **P 18 49 51.1 -1.7**
HINF Hinteralfeld 43.42 312 *eP* **P 18 49 51.1 -1.7**
ORIF Oris-en-Rattie 43.65 308 *eP* **P 18 49 53.1 -1.6**
ORIF Oris-en-Rattie 43.65 308 *eP* **P 18 49 53.1 -1.6**
ORIF Oris-en-Rattie 43.65 308 *eP* **P 18 49 53.1 -1.6**
CABF La Chapelle 43.73 310 *eP* **P 18 49 54.1 -1.3**
CABF La Chapelle 43.73 310 *eP* **P 18 49 54.1 -1.3**
CABF La Chapelle 43.73 310 *eP* **P 18 49 54.1 -1.3**
HAU Haudompre 43.79 312 *eP* **P 18 49 54.1 -1.7**
HAU Haudompre 43.79 312 *eP* **P 18 49 54.1 -1.7**
HAU Haudompre 43.79 312 *eP* **P 18 49 54.1 -1.7**
HFS Hagfors 43.89 331 P **P 18 49 55.8 -0.7**
comp=Z,1.9nm,0.5s,mb4.1,baz=130,slow=8.7,SNR=12
HFS Hagfors 43.89 331 P **P 18 49 55.8 -0.6**
HFS pmax pmax
comp=Z,2.0nm,0.5s
HFS Hagfors 43.89 331 P **P 18 49 55.8 -0.6**
comp=Z,2.0nm,0.5s,mb4.1
SONM Songino Array 44.18 48 P **P 18 49 58.3 -0.6**
comp=Z,3.9nm,1.1s,mb4.1,baz=261,slow=7.4,SNR=18
SONM LR LR 19 08 11.9
comp=Z,96nm,18.5s,MS3.7,baz=264,slow=36
SONM Songino Array 44.18 48 P **P 18 49 58.3 -0.6**
SONM pmax pmax
comp=Z,4.0nm,1.1s
SONM MLR MLR
comp=Z,96nm,18.5s
SONM Songino Array 44.18 48 P **P 18 49 58.3 -0.6**
comp=Z,96nm,18.5s
VIVF Saint-Julien-I 44.50 308 *eP* **P 18 49 59.5 -2.0**
VIVF Saint-Julien-I 44.50 308 *eP* **P 18 49 59.5 -2.0**
VIVF Saint-Julien-I 44.50 308 *eP* **P 18 49 59.5 -2.0**
ULN Ulaanbaatar 44.62 48 *eP* **P 18 50 03.1 +0.6**
comp=Z,4.3nm,0.9s,mb4.3
ULN Ulaanbaatar 44.62 48 *eP* **P 18 50 03.1 +0.7**
ULN pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
ULN Ulaanbaatar 44.62 48 *eP* **P 18 50 03.1 +0.7**
comp=Z,4.0nm,0.9s,mb4.2
SFTF Sexfontaines 44.69 312 *eP* **P 18 50 01.6 -1.4**
SFTF Sexfontaines 44.69 312 *eP* **P 18 50 01.6 -1.4**
MEZF Maizieres J'vi 44.73 313 *eP* **P 18 50 02.4 -0.9**
MEZF Maizieres J'vi 44.73 313 *eP* **P 18 50 02.4 -0.9**
LASF Ste Croix 45.01 306 *eP* **P 18 50 05.2 -0.4**
LASF Ste Croix 45.01 306 *eP* **P 18 50 05.2 -0.4**
GIVF Givet 45.17 315 *eP* **P 18 50 06.4 -0.4**
GIVF Givet 45.17 315 *eP* **P 18 50 06.4 -0.4**
GIVF Givet 45.17 315 *eP* **P 18 50 06.4 -0.4**
SMF Signal de Mont 45.27 310 *eP* **P 18 50 06.0 -1.7**
comp=Z,41nm,1.4s,mb4.8
SMF Signal de Mont 45.27 310 *eP* **P 18 50 06.0 -1.7**
comp=Z,20nm,1.4s,mb4.8
SMF Signal de Mont 45.27 310 *eP* **P 18 50 06.0 -1.7**
SMF pmax pmax
comp=Z,20nm,1.4s,mb4.8
SMF Signal de Mont 45.27 310 *eP* **P 18 50 06.0 -1.7**
comp=Z,20nm,1.4s,mb4.8
LOR Lormes 45.34 311 *eP* **P 18 50 06.4 -1.8**
LOR Lormes 45.34 311 *eP* **P 18 50 06.4 -1.8**
LOR Lormes 45.34 311 *eP* **P 18 50 06.4 -1.8**
NB2 NORSAR Subarra 45.40 331 P **P 18 50 06.7 -1.8**
comp=Z,2.8nm,0.8s,mb4.1,baz=118,slow=7.9
NB2 NORSAR Subarra 45.40 331 P **P 18 50 06.7 -1.8**
comp=Z,2.8nm,0.8s,mb4.1,SNR=7.8
NOA NORSAR Array B 45.40 331 P **P 18 50 07.1 -1.4**
comp=Z,1.0nm,0.6s,mb3.8,baz=116,slow=7.6,SNR=7.5
NOA NORSAR Array B 45.40 331 P **P 18 50 07.1 -1.4**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 45.40 331 P **P 18 50 07.1 -1.4**
comp=Z,1.0nm,0.6s,mb3.8
BAIF Baives 45.55 315 *eP* **P 18 50 09.5 -0.3**
comp=Z,44nm,1.3s,mb4.9
BAIF Baives 45.55 315 *eP* **P 18 50 09.5 -0.3**
comp=Z,22nm,1.3s,mb4.9
BAIF Baives 45.55 315 *eP* **P 18 50 09.5 -0.3**
BAIF pmax pmax
comp=Z,22nm,1.3s,mb4.9
BAIF Baives 45.55 315 *eP* **P 18 50 09.5 -0.3**
comp=Z,22nm,1.3s,mb4.9
SSF Saint Saulge 45.55 311 *eP* **P 18 50 08.4 -1.5**
comp=Z,11nm,0.8s,mb4.5
SSF Saint Saulge 45.55 311 *eP* **P 18 50 08.4 -1.5**
comp=Z,5.5nm,0.8s,mb4.5
SSF Saint Saulge 45.55 311 *eP* **P 18 50 08.4 -1.5**
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SSF Saint Saulge 45.55 311 *eP* **P 18 50 08.4 -1.5**
comp=Z,6.0nm,0.8s,mb4.6
AVF Avril sur Loir 45.62 310 *eP* **P 18 50 08.8 -1.7**
AVF Avril sur Loir 45.62 310 *eP* **P 18 50 08.8 -1.7**
AVF Avril sur Loir 45.62 310 *eP* **P 18 50 08.8 -1.7**
TAM Tamanrasset 45.79 276 *eP* **P 18 50 12.2 +0.1**
comp=Z,3.5nm,0.6s,mb4.5
TAM Tamanrasset 45.79 276 *eP* **P 18 50 12.2 +0.1**
TAM pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
TAM Tamanrasset 45.79 276 *eP* **P 18 50 12.2 +0.1**
comp=Z,4.0nm,0.6s,mb4.5
KEV Kevo 46.01 346 *eP* **P 18 50 14.8 +1.6**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
KEV Kevo 46.01 346 *eP* **P 18 50 14.8 +1.6**
comp=Z,2.0nm,0.4s,mb4.4
MTLF Montolieu 46.15 305 *eP* **P 18 50 13.9 -0.8**
comp=Z,44nm,1.5s,mb4.9
MTLF Montolieu 46.15 305 *eP* **P 18 50 13.9 -0.8**
comp=Z,22nm,1.5s,mb4.9
MTLF Montolieu 46.15 305 *eP* **P 18 50 13.9 -0.8**
MTLF pmax pmax
comp=Z,22nm,1.5s,mb4.9
MTLF Montolieu 46.15 305 *eP* **P 18 50 13.9 -0.8**
comp=Z,22nm,1.5s,mb4.9
ARCES ARCESS Array B 46.16 346 P **P 18 50 14.1 -0.2**
comp=Z,1.0nm,0.5s,mb4.0,baz=144,slow=9.0,SNR=16
ARCES LR LR 19 11 15.9
comp=Z,130nm,20.2s,MS3.9,baz=328,slow=38
ARCES ARCESS Array B 46.16 346 P **P 18 50 14.1 -0.2**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES MLR MLR
comp=Z,131nm,20.2s
ARCES ARCESS Array B 46.16 346 P **P 18 50 14.1 -0.2**
comp=Z,131nm,20.2s
CAF Calviac 46.35 307 *eP* **P 18 50 15.1 -1.1**
CAF Calviac 46.35 307 *eP* **P 18 50 15.1 -1.1**
CAF Calviac 46.35 307 *eP* **P 18 50 15.1 -1.1**
TCF Toulx Ste Croi 46.36 309 *eP* **P 18 50 14.8 -1.4**
TCF Toulx Ste Croi 46.36 309 *eP* **P 18 50 14.8 -1.4**
TCF Toulx Ste Croi 46.36 309 *eP* **P 18 50 14.8 -1.4**
RJF Les Rejaudoux 46.76 308 *eP* **P 18 50 18.5 -0.9**
RJF Les Rejaudoux 46.76 308 *eP* **P 18 50 18.5 -0.9**
RJF Les Rejaudoux 46.76 308 *eP* **P 18 50 18.5 -0.9**
LFF La Frestale 47.29 307 *eP* **P 18 50 22.6 -1.0**
LFF La Frestale 47.29 307 *eP* **P 18 50 22.6 -1.0**
LFF La Frestale 47.29 307 *eP* **P 18 50 22.6 -1.0**
PSI Prapat 47.53 113 LR LR 19 11 54.0
comp=Z,342nm,19.4s,MS4.3,baz=236,slow=38
GRR Gorron 48.62 312 *eP* **P 18 50 32.0 -1.8**
GRR Gorron 48.62 312 *eP* **P 18 50 32.0 -1.8**
GRR Gorron 48.62 312 *eP* **P 18 50 32.0 -1.8**
SJPF Ste Jean 48.66 305 *eP* **P 18 50 33.4 -0.8**
comp=Z,10.0nm,0.7s,mb4.7
SJPF Ste Jean 48.66 305 *eP* **P 18 50 33.4 -0.8**
comp=Z,5.0nm,0.7s,mb4.7
SJPF Ste Jean 48.66 305 *eP* **P 18 50 33.4 -0.8**
SJPF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
SJPF Ste Jean 48.66 305 *eP* **P 18 50 33.4 -0.8**
comp=Z,5.0nm,0.7s,mb4.7
LSZ Lusaka 49.96 216 *eP* **P 18 50 44.5 +0.1**
comp=Z,15nm,1.8s,mb4.7
LSZ Lusaka 49.96 216 *eP* **P 18 50 44.5 +0.1**
LSZ pmax pmax
comp=Z,15nm,1.8s,mb4.7
LSZ Lusaka 49.96 216 *eP* **P 18 50 44.5 +0.1**
comp=Z,15nm,1.8s,mb4.7
BOD Bodaibo 50.61 36 *eP* **P 18 50 47.2 -1.6**
BOD pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
BOD Bodaibo 50.61 36 *eP* **P 18 50 47.2 -1.6**
comp=Z,9.0nm,1.4s,mb4.5
ESDC Sonseca Array 50.87 300 P **P 18 50 50.0 -1.1**
comp=Z,0.4nm,0.3s,mb3.8,baz=76,slow=7.2,SNR=8.1
ESDC Sonseca Array 50.87 300 P **P 18 50 50.0 -1.1**
TORD Torodi Ar. Bea 52.52 266 P **P 18 51 01.8 -1.9**
comp=Z,5.4nm,0.6s,mb4.7,baz=60,slow=7.4,SNR=20
CN2 Changchun 57.41 54 *eP* **P 18 51 38.1 -0.6**
CN2 pmax pmax
comp=Z,200nm,0.8s,mb5.2
CN2 LR LR
comp=Z,200nm,18.0s,MS4.3
TIXI Tiksi 59.24 21 *eP* **P 18 51 50.2 -0.8**
TIXI pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
TIXI Tiksi 59.24 21 *eP* **P 18 51 50.2 -0.8**
comp=Z,9.0nm,1.5s,mb4.6
LBTB Lobatse 59.45 212 P **P 18 51 53.5 +0.3**
comp=Z,8.0nm,0.8s,mb4.8,baz=56,slow=9.7,SNR=12
LBTB LR LR 19 16 09.1
comp=Z,107nm,20.1s,MS4.0,baz=232,slow=35
LBTB Lobatse 59.45 212 P **P 18 51 53.5 +0.4**
LBTB pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LBTB MLR MLR
comp=Z,107nm,20.1s,MS4.0
LBTB Lobatse 59.45 212 P **P 18 51 53.5 +0.4**
comp=Z,107nm,20.1s
KSRS Korea Array 60.38 60 P **P 18 51 58.1 -1.3**
comp=Z,1.6nm,0.7s,mb4.2,baz=270,slow=6.7,SNR=10.0
KSRS Korea Array 60.38 60 P **P 18 51 58.2 -1.3**
KSRS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KSRS Korea Array 60.38 60 P **P 18 51 58.2 -1.3**
comp=Z,2.0nm,0.7s,mb4.3
KLR Kul'dur 60.97 47 *eP* **P 18 51 58.0 -5.3**
DBIC Dimbokro 61.12 262 P **P 18 52 04.3 -0.5**
comp=Z,2.1nm,0.8s,mb4.3,baz=21,slow=12,SNR=2.9
DBIC Dimbokro 61.12 262 P **P 18 52 04.4 -0.4**
DBIC pmax pmax
comp=Z,2.0nm,0.8s
DBIC Dimbokro 61.12 262 P **P 18 52 04.4 -0.4**
comp=Z,2.0nm,0.8s,mb4.3
BOSA Boshof 62.68 210 P **P 18 52 14.5 -0.4**
comp=Z,6.2nm,1.0s,mb4.7,baz=21,slow=9.6,SNR=11
BOSA LR LR 19 21 57.2
comp=Z,97nm,19.4s,MS4.0,baz=346,slow=38
BOSA Boshof 62.68 210 P **P 18 52 14.5 -0.4**
BOSA pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
BOSA MLR MLR
comp=Z,97nm,19.4s,MS4.0
BOSA Boshof 62.68 210 P **P 18 52 14.5 -0.4**
comp=Z,97nm,19.4s
MJAR Matsushiro Arr 68.56 59 P **P 18 52 52.0 -1.1**
comp=Z,1.4nm,0.9s,mb3.9,baz=284,slow=9.5,SNR=5.1
MJAR Matsushiro Arr 68.56 59 P **P 18 52 52.0 -1.0**
MJAR pmax pmax
comp=Z,1.0nm,0.9s
MJAR Matsushiro Arr 68.56 59 P **P 18 52 52.0 -1.0**
comp=Z,1.0nm,0.9s,mb3.8
YSS Yuzh-Sakhalins 68.66 47 ||*eP* **P 18 52 52.3 -1.2**
YSS Yuzh-Sakhalins 68.66 47 *eP* **P 18 52 52.3 -1.2**
SEY Seymchan 69.13 29 *eP* **P 18 52 56.6 +0.5**
SEY Seymchan 69.13 29 *eP* **P 18 52 56.6 +0.5**
ILAR Eielson Array 86.82 10 P **P 18 54 32.8 -1.5**
comp=Z,0.6nm,0.7s,mb4.0,baz=319,slow=4.3,SNR=9.0
ILAR Eielson Array 86.82 10 P **P 18 54 32.8 -1.5**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR Eielson Array 86.82 10 P **P 18 54 32.8 -1.5**
comp=Z,1.0nm,0.7s,mb4.2
WRA Warramunga Arr 88.99 113 P **P 18 54 44.5 -1.0**
comp=Z,4.8nm,0.9s,mb4.8,baz=310,slow=4.1,SNR=46
WRA Warramunga Arr 88.99 113 P **P 18 54 44.5 -0.9**
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 88.99 113 P **P 18 54 44.5 -0.9**
comp=Z,5.0nm,0.9s,mb4.8
ASAR Alice Springs 90.45 116 P **P 18 54 51.2 -0.9**
comp=Z,2.3nm,0.8s,mb4.6,baz=306,slow=4.8,SNR=36
ASAR Alice Springs 90.45 116 P **P 18 54 51.2 -0.9**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ASAR Alice Springs 90.45 116 P **P 18 54 51.2 -0.9**
comp=Z,2.0nm,0.8s,mb4.5

GUC 17 18:42:34.9±0.9, 22°.45S×70°.44W, h32km±6km, ML3.8, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**0.42**	**33**	*eP*	Pb	18 42 43.4	-0.8
TOCH				*i* S	Sb	18 42 50.1	-0.4
TOCH				AML	AML	18 42 50.5	
comp=N,16μm,0.4s							
MECH	**Mejillones**	**0.65**	**180**	*eP*	Pb	18 42 47.0	-1.0
MECH				*i* S	Sb	18 42 56.4	-0.3
MECH				AML	AML	18 42 59.7	
comp=N,5μm,0.2s							
MACH	**Maria Elena**	**0.68**	**68**	||*iP*	Pn	18 42 48.0	-0.3
MACH				*i* S	Sb	18 42 58.0	+0.4
ANCH	**Antofagasta**	**1.23**	**179**	*eP*	Pn	18 42 55.2	-0.7
ANCH				*i* S	Sn	18 43 10.6	-0.8
ANCH				AML	AML	18 43 18.1	
comp=E,2μm,0.5s							

*ISCJB **17** 18:44:47.7±2.1, 26°.94N±0°.08×56°.10E±0°.07, h9km±11km, mb4.0/30, Error ellipse: s-maj=14.1km s-min=10.2km az=171.4*
*IDC **17** 18:44:48.0±0.7, 26°.94N×56°.10E, h0km, mb4.0/19, mb1 4.1/22, mb1mx4.0/33, mbtmp4.0/22, ML4.0/2, MS3.8/1, Ms1 3.8/1, ms1mx2.7/42, Error ellipse: s-maj=17.6km s-min=15.6km az=147.0*
*CSEM **17** 18:44:50.4±0.5, 27°.05N×55°.96E, h10km, mb4.3/11, Error ellipse: s-maj=20.1km s-min=8.1km az=154.0*
*NEIC **17** 18:44:52.2, 27°.18N×56°.03E, h5km, mb4.4/7, ML3.9(THR), After THR.*
*THR **17** 18:44:52.2±0.3, 27°.18N×56°.03E, h5km±3km, ML3.9*
ISC 17 18:44:48.9±2.3, 26°.97N±0°.08×56°.10E±0°.07, h6km±12km, n82, σ0°93/83, mb4.0/30, 1C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.44**	**8**	*ePg*	**Pg**	18 44 57.5	**+0.1**
BNDS				*eSg*	**Sg**	18 45 01.4	**-1.7**
BNDS	**Bandar-Abbas**	**0.44**	**8**	*ePg*	**Pg**	18 44 57.5	**+0.1**
BNDS				*eSg*	**Sg**	18 45 01.4	**-1.7**
KRBR	**Kerman**	**3.06**	**11**	*ePn*	**Pn**	18 45 40.9	**+2.9**
KRBR				AML	AML	18 46 35.1	
comp=N,461nm,0.6s							
KRBR				AML	AML	18 46 39.5	
comp=E,382nm,0.6s							
KRBR	**Kerman**	**3.06**	**11**	*ePn*	**Pn**	18 45 40.9	**+3.0**
ZHSF	**Zahedan**	**4.89**	**56**	*ePn*	**Pn**	18 46 07.9	**+4.8**
ZHSF	**Zahedan**	**4.89**	**56**	*ePn*	**Pn**	18 46 07.9	**+4.8**
NASN	**Na'in**	**6.48**	**335**	*ePn*	**Pn**	18 46 27.7	**+2.8**
NASN				AML	AML	18 47 43.6	
comp=E,37nm,0.6s							
NASN				AML	AML	18 47 43.6	
comp=N,36nm,0.8s							
GNI	**Garni**	**16.18**	**327**	Pn	**Pn**	**18 48 39.1**	**+2.1**
comp=N,0.5nm,0.3s,baz=183,slow=8.2,SNR=3.2							
GNI	**Garni**	**16.18**	**327**	Pn	**Pn**	**18 48 39.1**	**+2.1**
ASF	**Jabal al Asfar**	**17.49**	**292**	P	**Pn**	**18 48 55.4**	**+1.8**
comp=N,0.4nm,0.3s,baz=105,slow=2.0,SNR=2.6							
MALT	**Malatya**	**18.66**	**312**	*eP*	**Pn**	**18 49 07.7**	**-0.3**
MALT	**Malatya**	**18.66**	**312**	||*iP*	**Pn**	**18 49 09.5**	**+1.6**
MALT	**Malatya**	**18.66**	**312**	*eP*	**Pn**	**18 49 07.7**	**-0.2**
MMAI	**Mount Meron Ar**	**18.91**	**294**	P	**Pn**	**18 49 11.2**	**+0.3**
comp=N,0.5nm,0.3s,baz=249,slow=43,SNR=3.5							
KIV	**Kislovodsk**	**20.12**	**331**	P	**P**	**18 49 24.7**	**+1.1**
comp=N,17nm,0.7s							
KIV	**Kislovodsk**	**20.12**	**331**	P	**P**	**18 49 24.7**	**+1.1**
comp=N,17nm,0.7s							
AAK	**Ala-Archa**	**21.66**	**39**	P	**P**	**18 49 42.0**	**+1.8**
comp=N,1.9nm,0.5s,mb3.8,baz=225,slow=19,SNR=3.2							
AAK	**Ala-Archa**	**21.66**	**39**	P	**P**	**18 49 42.0**	**+1.8**
BR131	**Keskin Array S**	**22.60**	**310**	*eP*	**P**	**18 49 50.2**	**-0.1**
BR131	**Keskin Array S**	**22.60**	**310**	*eP*	**P**	**18 49 50.2**	**-0.1**
BRTR	**Keskin Array B**	**22.60**	**310**	P	**P**	**18 49 50.2**	**0.0**
comp=N,1.9nm,0.6s,mb3.7,baz=137,slow=14,SNR=4.8							
BRTR	**Keskin Array B**	**22.60**	**310**	P	**P**	**18 49 50.2**	**-0.1**
AKTK	**Aktyubinsk**	**23.48**	**3**	P	**P**	**18 49 59.8**	**+0.4**
AKTK	**Aktyubinsk**	**23.48**	**3**	P	**P**	**18 49 59.8**	**+0.3**
AKTO	**Aktyubinsk**	**23.48**	**3**	P	**P**	**18 49 59.8**	**+0.4**
comp=N,4.3nm,0.7s,mb4.0,baz=179,slow=7.5,SNR=4.3							
BVAR	**Borovoye Array**	**28.13**	**18**	P	**P**	**18 50 41.7**	**+0.1**
comp=N,2.7nm,0.8s,mb4.0,baz=207,slow=7.6,SNR=4.2							
BVAR	**Borovoye Array**	**28.13**	**18**	P	**P**	**18 50 41.7**	**+0.1**
MKAR	**Makanchi Array**	**28.60**	**39**	P	**P**	**18 50 45.5**	**-0.4**
comp=N,1.6nm,0.9s,mb3.8,baz=222,slow=6.9,SNR=4.9							
ZALV	**Zalesovo Beam**	**34.26**	**30**	P	**P**	**18 51 35.7**	**+0.1**
comp=N,1.2nm,0.3s,mb4.3,baz=246,slow=10,SNR=4.5							
GERES	**GERESS Array B**	**39.29**	**315**	P	**P**	**18 52 18.2**	**-0.2**
comp=N,0.4nm,0.6s,mb3.4,baz=113,slow=6.2,SNR=4.0							
GERES	**GERESS Array B**	**39.29**	**315**	P	**P**	**18 52 18.2**	**-0.3**
KHC	**Kasperske Hory**	**39.45**	**316**	*eP*	**P**	**18 52 19.4**	**-0.5**
JOF	**Joensuu**	**39.48**	**342**	*ep*	**P**	**18 52 19.6**	**-0.3**
comp=N,1.2nm,0.3s,mb4.1							
JOF	**Joensuu**	**39.48**	**342**	*eP*	**P**	**18 52 19.6**	**-0.3**
comp=N,1.2nm,0.3s,mb4.1							
FINES	**FINESS Array B**	**39.93**	**338**	P	**P**	**18 52 23.6**	**-0.1**
comp=N,1.6nm,0.4s,mb4.1,baz=139,slow=9.3,SNR=9.2							
FINES	**FINESS Array B**	**39.93**	**338**	P	**P**	**18 52 23.6**	**-0.1**
KAF	**Kangasniemi**	**40.34**	**339**	*ep*	**P**	**18 52 26.3**	**-0.8**
comp=N,0.4nm,0.3s,mb3.6							
KAF	**Kangasniemi**	**40.34**	**339**	*ep*	**P**	**18 52 26.3**	**-0.8**
comp=N,0.4nm,0.3s,mb3.6							
CLL	**Collm**	**40.52**	**319**	*eP*	**P**	**18 52 32.0**	**+3.3**
FETA	**Feichten**	**40.72**	**312**	||*iP*	**P**	**18 52 30.1**	**-0.3**
comp=N,4.4nm,0.6s,mb4.3							
FETA	**Feichten**	**40.72**	**312**	P	**P**	**18 52 30.1**	**-0.3**
comp=N,4.4nm,0.6s,mb4.3							
DAVA	**Damuels**	**41.34**	**312**	||*iP*	**P**	**18 52 35.3**	**-0.3**
comp=N,8.4nm,0.5s,mb4.7							
DAVA	**Damuels**	**41.34**	**312**	P	**P**	**18 52 35.3**	**-0.3**
comp=N,8.4nm,0.5s,mb4.7							
SBF	**Sospel**	**42.46**	**306**	*eP*	**P**	**18 52 43.9**	**-0.8**
comp=N,22nm,0.8s,mb4.5							
SBF	**Sospel**	**42.46**	**306**	*eP*	**P**	**18 52 43.9**	**-0.8**
comp=N,11nm,0.8s,mb4.5							
SBF	**Sospel**	**42.46**	**306**	*eP*	**P**	**18 52 43.9**	**-0.8**
comp=N,11nm,0.8s,mb4.5							
MBDF	**Montbardon**	**43.04**	**308**	*eP*	**P**	**18 52 48.3**	**-1.1**
comp=N,7.5nm,0.7s,mb4.2							
MBDF	**Montbardon**	**43.04**	**308**	*eP*	**P**	**18 52 48.3**	**-1.1**
comp=N,3.8nm,0.7s,mb4.2							
MBDF	**Montbardon**	**43.04**	**308**	*eP*	**P**	**18 52 48.3**	**-1.1**
comp=N,3.8nm,0.7s,mb4.2							
LPG	**La Plagne**	**43.15**	**309**	*eP*	**P**	**18 52 49.3**	**-1.0**
comp=N,4.9nm,0.6s,mb4.1							
LPG	**La Plagne**	**43.15**	**309**	*eP*	**P**	**18 52 49.3**	**-1.0**
comp=N,2.5nm,0.6s,mb4.1							
LPG	**La Plagne**	**43.15**	**309**	*eP*	**P**	**18 52 49.3**	**-1.0**
comp=N,2.5nm,0.6s,mb4.1							
HFS	**Hagfors**	**43.92**	**331**	P	**P**	**18 52 55.9**	**-0.4**
comp=N,1.1nm,0.4s,mb3.9,baz=124,slow=7.5,SNR=6.0							
HFS	**Hagfors**	**43.92**	**331**	P	**P**	**18 52 55.9**	**-0.4**
SONM	**Songino Array**	**44.15**	**48**	P	**P**	**18 52 58.9**	**+0.5**
comp=N,0.5nm,0.6s,mb3.5,baz=248,slow=8.6,SNR=3.5							
SONM	**Songino Array**	**44.15**	**48**	P	**P**	**18 52 58.9**	**+0.5**
SSF	**Saint Saulge**	**45.59**	**311**	*eP*	**P**	**18 53 08.7**	**-1.1**
comp=N,4.3nm,0.6s,mb4.3							
SSF	**Saint Saulge**	**45.59**	**311**	*eP*	**P**	**18 53 08.7**	**-1.1**
comp=N,2.2nm,0.6s,mb4.3							
SSF	**Saint Saulge**	**45.59**	**311**	*eP*	**P**	**18 53 08.7**	**-1.1**
comp=N,2.2nm,0.6s,mb4.3							
TAM	**Tamanrasset**	**45.83**	**276**	*eP*	**P**	**18 53 12.9**	**+0.8**
comp=N,4.0nm,1.1s,mb4.3							
TAM	**Tamanrasset**	**45.83**	**276**	*eP*	**P**	**18 53 12.9**	**+0.8**
comp=N,4.0nm,1.1s,mb4.3							
KEV	**Kevo**	**46.03**	**346**	*ep*	**P**	**18 53 11.8**	**-1.2**
comp=N,1.0nm,0.4s,mb4.1							
KEV	**Kevo**	**46.03**	**346**	*eP*	**P**	**18 53 11.8**	**-1.2**
comp=N,1.0nm,0.4s,mb4.1							
ARCES	**ARCESS Array B**	**46.18**	**346**	P	**P**	**18 53 14.7**	**+0.6**
comp=N,0.8nm,0.5s,mb3.9,baz=140,slow=9.6,SNR=5.5							
ARCES	**ARCESS Array B**	**46.18**	**346**	P	**P**	**18 53 14.7**	**+0.6**
CAF	**Calviac**	**46.39**	**307**	*eP*	**P**	**18 53 15.4**	**-0.8**
CAF	**Calviac**	**46.39**	**307**	*eP*	**P**	**18 53 15.4**	**-0.8**
ETSF	**Etsaut**	**48.22**	**305**	*eP*	**P**	**18 53 29.7**	**-0.7**
ETSF	**Etsaut**	**48.22**	**305**	*eP*	**P**	**18 53 29.7**	**-0.7**
SJPF	**Ste Jean**	**48.70**	**305**	*eP*	**P**	**18 53 33.7**	**-0.5**
comp=N,10nm,0.8s,mb4.6							
SJPF	**Ste Jean**	**48.70**	**305**	*eP*	**P**	**18 53 33.7**	**-0.5**
comp=N,5.2nm,0.8s,mb4.6							
SJPF	**Ste Jean**	**48.70**	**305**	*eP*	**P**	**18 53 33.7**	**-0.5**
comp=N,5.2nm,0.8s,mb4.6							
ESDC	**Sonseca Array**	**50.91**	**300**	P	**P**	**18 53 50.8**	**-0.3**
comp=N,0.3nm,0.4s,mb3.6,baz=75,slow=7.1,SNR=4.6							
ESDC	**Sonseca Array**	**50.91**	**300**	P	**P**	**18 53 50.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**52.56**	**266**	P	**P**	**18 54 03.1**	**-0.6**
comp=N,4.8nm,0.6s,mb4.6,baz=63,slow=7.2,SNR=9.4							
LBTB	**Lobatse**	**59.47**	**212**	P	**P**	**18 54 53.5**	**+0.6**
comp=N,3.1nm,0.5s,mb4.6,baz=65,slow=5.5,SNR=6.7							
KSRS	**Korea Array**	**60.35**	**60**	P	**P**	**18 54 58.8**	**-0.2**
comp=N,0.7nm,0.6s,mb3.9,baz=280,slow=6.5,SNR=3.3							
BOSA	**Boshof**	**62.69**	**210**	P	**P**	**18 55 14.9**	**+0.2**
comp=N,1.4nm,0.7s,mb4.2,baz=356,slow=14,SNR=4.0							
GUMO	**Guam**	**82.88**	**78**	LR	LR	19 31 59.0	
comp=N,55nm,21.5s,baz=313,slow=34							
ILAR	**Eielson Array**	**86.83**	**10**	P	**P**	**18 57 33.5**	**-0.5**
comp=N,0.3nm,0.6s,mb3.7,baz=323,slow=4.2,SNR=6.0							
WRA	**Warramunga Arr**	**88.95**	**113**	P	**P**	**18 57 44.7**	**-0.2**
comp=N,0.8nm,0.8s,mb4.1,baz=313,slow=3.9,SNR=5.8							
ASAR	**Alice Springs**	**90.41**	**116**	P	**P**	**18 57 51.4**	**-0.3**
comp=N,0.7nm,0.9s,mb4.0,baz=305,slow=5.2,SNR=5.8							

*IS

KRBR Sn **Sn** **19 00 29.3 -0.5**
KRBR AML AML 19 00 46.4
comp=N,336nm,0.4s
KRBR AML AML 19 00 47.2
comp=E,369nm,0.6s
KRBR Kerman 3.16 10 *e*Pn **Pn** **18 59 53.7 +1.7**
ISRV Sarvestan 3.65 314 *e*Pn **Pn** **19 00 00.6 +1.8**
ISRV *e*Sn **Sn** **19 00 40.2 -1.6**
ISRV *e* 19 01 33.0
comp=Z,5μm,0.5s
ISRV Sarvestan 3.65 314 *e*Pn **Pn** **19 00 00.6 +1.8**
IPAR Pars 4.02 318 *e*Pn **Pn** **19 00 05.5 +1.7**
IPAR *e* 19 01 40.9
comp=Z,4μm,0.5s
IPAR Pars 4.02 318 *e*Pn **Pn** **19 00 05.5 +1.7**
IMEH Mehriz 4.70 344 *e*Pn **Pn** **19 00 14.7 +1.5**
IMEH *e* 19 00 20.6
comp=Z,949nm,0.2s
IMEH Mehriz 4.70 344 *e*Pn **Pn** **19 00 14.7 +1.5**
IBAF Bafgh 4.74 354 *e*Pn **Pn** **19 00 14.4 +0.7**
IBAF *e*Sn **Sn** **19 01 03.7 -4.9**
IBAF *e* 19 01 54.4
comp=Z,930nm,0.4s
IBAF Bafgh 4.74 354 *e*Pn **Pn** **19 00 14.4 +0.7**
ZHSF Zahedan 4.94 55 *e*Pn **Pn** **19 00 21.8 +5.4**
BTHS 5.53 241 P **Pn** **19 00 24.9 +0.4**
BTHS 5.53 241 P **Pn** **19 00 24.9 +0.4**
BTHS S **Sn** **19 01 27.0 -1.1**
BOQSS 6.13 262 P **Pn** **19 00 33.8 +1.0**
IGAR Gharneh 6.56 328 *e*Pn **Pn** **19 00 39.7 +0.9**
IGAR *e* 19 00 42.2
comp=Z,616nm,0.1s
NASN Na'in 6.58 335 *e*Pn **Pn** **19 00 39.6 +0.7**
NASN Na'in 6.58 335 *e*Pn **Pn** **19 00 39.7 +0.7**
IZEF Zefreh 6.86 332 *e*Pn **Pn** **19 00 42.7 -0.1**
IZEF *e* 19 00 57.0
comp=Z,301nm,0.3s
IZEF Zefreh 6.86 332 *e*Pn **Pn** **19 00 42.7 -0.1**
HRDDS 7.20 238 S **Sn** **19 02 07.1 -2.2**
HRDDS 7.20 238 P **Pn** **19 00 47.4 -0.1**
IPIR Pirpir 7.37 323 *e*Pn **Pn** **19 00 50.8 +1.0**
IPIR *e* 19 00 57.5
comp=Z,509nm,0.2s
IPIR Pirpir 7.37 323 *e*Pn **Pn** **19 00 50.8 +1.0**
RDF Al-Radifah 7.86 287 *e*P **Pn** **19 00 56.5 0.0**
RDF AML AML 19 02 24.1
comp=Z,13nm,0.3s
RDF Al-Radifah 7.86 287 *e*P **Pn** **19 00 56.5 0.0**
UMR Umm Al-Rimmam 7.88 292 *e*P **Pn** **19 00 56.7 -0.1**
UMR AML AML 19 02 24.4
comp=Z,23nm,0.2s
UMR Umm Al-Rimmam 7.88 292 *e*P **Pn** **19 00 56.7 -0.2**
NAY Al-Naaiem 8.19 289 *e*P **Pn** **19 01 00.6 -0.6**
NAY AML AML 19 02 34.9
comp=Z,12nm,0.5s
NAY Al-Naaiem 8.19 289 *e*P **Pn** **19 01 00.6 -0.5**
MIB Mutribah 8.27 293 *e*P **Pn** **19 01 01.8 -0.5**
MIB AML AML 19 02 34.2
comp=Z,23nm,0.4s
MIB Mutribah 8.27 293 *e*P **Pn** **19 01 01.8 -0.4**
ASYS 10.51 276 S **Sn** **19 03 23.5 -7.0**
ASYS 10.51 276 P **Pn** **19 01 29.9 -2.9**
GNI Garni 16.28 327 Pn **Pn** **19 02 54.2 +3.3**
comp=Z,0.4nm,0.3s,baz=177,slow=20,SNR=3.3
GNI LR LR 19 09 51.3
comp=Z,257nm,18.9s,baz=338,slow=40
GNI Garni 16.28 327 Pn **Pn** **19 02 54.1 +3.3**
GNI LR LR 19 09 51.3
GNI Garni 16.28 327 Pn **Pn** **19 02 54.2 +3.3**
ASF Jabal al Asfar 17.54 292 P **Pn** **19 03 10.4 +3.6**
comp=Z,0.3nm,0.3s,baz=301,slow=1.5,SNR=5.9
MALT Malatya 18.74 312 *e*P **Pn** **19 03 21.8 +0.3**
comp=Z,5.9nm,0.8s
MALT Malatya 18.74 312 *e*P **Pn** **19 03 21.8 +0.3**
comp=Z,5.9nm,0.8s
EIL Elat 18.85 283 P **Pn** **19 03 27.1 +4.2**
comp=Z,0.1nm,0.3s,baz=49,slow=2.6,SNR=4.5
MMAI Mount Meron Ar 18.96 294 P **Pn** **19 03 26.9 +2.7**
comp=Z,0.6nm,0.3s,baz=105,slow=16,SNR=4.4
ATD Arta Tunnel 19.71 222 LR LR 19 11 38.6
comp=Z,68nm,19.9s,baz=110,slow=38
KKAR Karatay Array 20.00 32 *e*P **Pn** **19 03 34.2 -2.3**
comp=Z,2.2nm,0.7s
KKAR Karatay Array 20.00 32 *e*P **Pn** **19 03 34.2 -2.3**
comp=Z,2.2nm,0.7s
KIV Kislovodsk 20.22 331 *e*P **P** **19 03 37.2 0.0**
comp=Z,49nm,1.1s
KIV Kislovodsk 20.22 331 *e*P **P** **19 03 37.2 0.0**
comp=Z,49nm,1.1s
EKS2 Erkin-Say 21.36 38 *e*P **P** **19 03 49.9 +0.4**
comp=Z,10nm,1.1s,mb4.1
EKS2 Erkin-Say 21.36 38 *e*P **P** **19 03 49.9 +0.4**
comp=Z,10nm,1.1s,mb4.1
AAK Ala-Archa 21.74 39 P **P** **19 03 54.5 +0.9**
comp=Z,1.1nm,0.5s,mb3.6,baz=221,slow=1.6,SNR=4.6
AAK Ala-Archa 21.74 39 *e*P **P** **19 03 56.1 +2.5**
comp=Z,11nm,1.1s,mb4.2
AAK Ala-Archa 21.74 39 *e*P **P** **19 03 56.1 +2.5**
comp=Z,11nm,1.1s,mb4.2
ABKAR Akbulak array 22.56 7 *e*P **P** **19 04 00.8 -1.4**
comp=Z,4.6nm,0.7s,mb4.0
ABKAR Akbulak array 22.56 7 *e*P **P** **19 04 00.8 -1.5**
comp=Z,4.6nm,0.7s,mb4.0
BR131 Keskin Array S 22.68 310 *e*P **P** **19 04 04.2 +0.5**
comp=Z,5.8nm,0.7s,mb4.1
BR131 Keskin Array S 22.68 310 *e*P **P** **19 04 04.2 +0.5**
comp=Z,5.8nm,0.7s,mb4.1
BRTR Keskin Array B 22.68 310 P **P** **19 04 04.5 +0.8**
comp=Z,5.2nm,0.9s,mb4.0,baz=130,slow=14,SNR=12
BRTR Keskin Array B 22.68 310 P **P** **19 04 04.4 +0.7**
AKTK Aktyubinsk 23.59 3 P **P** **19 04 12.5 -0.6**
AKTK LR LR 19 14 34.0
AKTK Aktyubinsk 23.59 3 P **P** **19 04 12.5 -0.6**
AKTO Aktyubinsk 23.59 3 P **P** **19 04 12.5 -0.6**
comp=Z,2.0nm,0.6s,mb3.7,baz=164,slow=7.7,SNR=5.2
AKTO LR LR 19 14 34.0
comp=Z,194nm,21.9s,MS3.5,baz=26,slow=40
BVAR Borovoye Array 28.23 18 P **P** **19 04 54.3 -0.6**
comp=Z,3.3nm,0.9s,mb4.0,baz=201,slow=7.9,SNR=15
BVAR Borovoye Array 28.23 18 P **P** **19 04 54.3 -0.7**
MKAR Makanchi Array 28.67 39 P **P** **19 04 59.5 +0.4**
comp=Z,0.3nm,0.5s,mb3.3,baz=218,slow=7.9,SNR=5.2
MKAR Makanchi Array 28.67 39 P **P** **19 04 59.5 +0.4**
ZALV Zalesovo Beam 34.35 30 P **P** **19 05 48.4 -0.5**
comp=Z,1.3nm,0.5s,mb4.1,baz=243,slow=9.5,SNR=7.2
GERES GERESS Array B 39.37 315 P **P** **19 06 32.6 +0.9**
comp=Z,0.3nm,0.6s,mb3.2,baz=108,slow=7.2,SNR=2.8
GERES GERESS Array B 39.37 315 P **P** **19 06 32.6 +0.9**
JOF Joensuu 39.58 342 *e*P **P** **19 06 32.8 -0.5**
comp=Z,0.5nm,0.3s,mb3.7
FINES FINESS Array B 40.03 338 P **P** **19 06 36.4 -0.6**
comp=Z,1.0nm,0.6s,mb3.7,baz=144,slow=9.4,SNR=8.7
FINES FINESS Array B 40.03 338 P **P** **19 06 36.4 -0.6**
HFS Hagfors 44.02 331 P **P** **19 07 08.8 -0.8**
comp=Z,0.6nm,0.4s,mb3.6,baz=115,slow=10.0,SNR=5.7
HFS Hagfors 44.02 331 P **P** **19 07 08.8 -0.8**
HFS Hagfors 44.02 331 P **P** **19 07 08.8 -0.8**
SONM Songino Array 44.22 48 P **P** **19 07 12.1 +0.7**
comp=Z,0.6nm,0.7s,mb3.5,baz=235,slow=5.2,SNR=5.3
SONM Songino Array 44.22 48 P **P** **19 07 12.1 +0.7**
NB2 NORSAR Subarra 45.53 331 P **P** **19 07 19.1 -2.5**
comp=Z,0.6nm,0.7s,mb3.6,baz=118,slow=8.6
NB2 NORSAR Subarra 45.53 331 P **P** **19 07 19.1 -2.5**
comp=Z,0.6nm,0.7s,mb3.6,SNR=2.5
NOA NORSAR Array B 45.53 331 P **P** **19 07 21.1 -0.5**
comp=Z,0.6nm,0.8s,mb3.6,baz=190,slow=14,SNR=2.9
NOA NORSAR Array B 45.53 331 P **P** **19 07 21.1 -0.5**
ARCES ARCESS Array B 46.28 346 P **P** **19 07 27.2 -0.3**
comp=Z,1.2nm,0.9s,mb3.8,baz=144,slow=9.1,SNR=7.5
ARCES ARCESS Array B 46.28 346 P **P** **19 07 27.2 -0.3**
ARCES ARCESS Array B 46.28 346 P **P** **19 07 27.2 -0.3**
TORD Torodi Ar. Bea 52.56 266 P **P** **19 08 15.2 -1.0**
comp=Z,3.0nm,0.5s,mb4.5,baz=62,slow=7.5,SNR=40
LBTB Lobatse 59.38 212 P **P** **19 09 06.3 +1.6**
comp=Z,2.3nm,0.9s,mb4.2,baz=255,slow=10.0,SNR=4.6
LBTB Lobatse 59.38 212 P **P** **19 09 06.3 +1.5**
ILAR Eielson Array 86.93 10 P **P** **19 11 45.9 -1.0**
comp=Z,0.2nm,0.6s,mb3.5,baz=327,slow=4.4,SNR=2.7
ILAR Eielson Array 86.93 10 P **P** **19 11 46.0 -1.0**
WRA Warramunga Arr 88.90 113 P **P** **19 11 57.6 +0.5**
comp=Z,0.4nm,0.8s,mb3.8,baz=306,slow=4.7,SNR=7.2
WRA Warramunga Arr 88.90 113 P **P** **19 11 57.6 +0.5**
DLBC Dease Lake 94.88 3 LR LR 19 59 50.4
comp=Z,83nm,21.2s,MS4.2,baz=310,slow=38
SADO Sadowa 97.85 330 LR LR 19 56 34.6
comp=Z,46nm,19.5s,MS4.0,baz=74,slow=35

MAN 17 19:00:50, 7°.12N×125°.95E, h26km, mb4.5, ML3.4, MS3.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.35**	**119**	*e*P	Pb	19 00 59.4	+1.5
MATI				*e*S	Sb	19 01 08.0	+4.7
DMPH	**Davao City--Mi**	**0.43**	**265**	*e*P	Pb	19 01 00.7	+1.5
BUKP	**Musuan**	**1.16**	**311**	*e*P	Pn	19 01 11.5	+1.0
BUKP				*e*S	Sn	19 01 24.9	-0.6

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*ISCJB **17** 19:01:46.8±0.5, 26°.82N±0°.05×56°.07E±0°.05, h10km, mb4.1/31, Error ellipse: s-maj=7.6km s-min=5.3km az=142.2*
*IDC **17** 19:01:47.5±0.6, 26°.97N×56°.07E, h0km, mb4.0/21, mb1 4.1/25, mb1mx4.1/33, mbtmp4.0/25, ML3.8/3, Error ellipse: s-maj=14.5km s-min=12.0km az=180.0*
*CSEM **17** 19:01:49.5±0.3, 26°.88N×56°.08E, h15km, mb4.2/12, Error ellipse: s-maj=9.9km s-min=8.7km az=156.0*
*BJI **17** 19:01:51.6, 27°.42N×56°.31E, h10km, mb4.4/4*
*TEH **17** 19:01:52.2, 27°.07N×56°.17E, h34km*
*NEIC **17** 19:01:53.0, 27°.23N×55°.97E, h11km, mb4.2/11, ML4.0(THR), MN4.0(TEH), After THR.*
*THR **17** 19:01:53.0±0.3, 27°.23N×55°.97E, h11km±3km, ML4.0*

ISC 17 19:01:48.5±0.5, 26°.83N±0°.05×56°.11E±0°.04, h10km, n126, σ1°.13/132, mb4.1/31, 1C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.57**	**5**	*e*Pg	**Pg**	**19 01 58.0**	**-1.6**
BNDS				*e*Sg	**Sg**	**19 02 02.0**	**-5.1**
BNDS	**Bandar-Abbas**	**0.57**	**5**	*e*Pg	**Pg**	**19 01 58.3**	**-1.4**
BNDS				*e*Sg	**Sg**	**19 02 02.1**	**-5.0**
BNDS				AML	AML	19 02 15.4	
	comp=N,22μm,0.4s						
BNDS				AML	AML	19 02 15.4	
	comp=E,21μm,0.4s						
BNDS	**Bandar-Abbas**	**0.57**	**5**	*e*Pg	**Pg**	**19 01 58.3**	**-1.3**
BNDS				*e*Sg	**Sg**	**19 02 02.1**	**-5.0**
IBND	**Bandar-abas**	**0.72**	**32**	*e*Sg	**Sg**	**19 02 11.9**	**-0.2**
IBND				*e*Pg	**Pg**	**19 02 03.7**	**+1.1**
IBND				*e*Pg	**Pg**	**19 02 04.0**	**+1.4**
IBND				*e*		19 02 34.0	
	comp=Z,29μm,0.2s						
KRBR	**Kerman**	**3.19**	**10**	*e*Pn	**Pn**	**19 02 40.0**	**+1.2**
KRBR	**Kerman**	**3.19**	**10**	*e*Pn	**Pn**	**19 02 40.4**	**+1.6**
KRBR				AML	AML	19 03 26.4	
	comp=N,488nm,0.5s						
KRBR				AML	AML	19 03 43.9	
	comp=E,622nm,0.6s						
KRBR	**Kerman**	**3.19**	**10**	*e*Pn	**Pn**	**19 02 40.4**	**+1.6**
ISRV	**Sarvestan**	**3.67**	**315**	Pn	**Pn**	**19 02 47.6**	**+2.2**
ISRV	**Sarvestan**	**3.67**	**315**	*e*Pn	**Pn**	**19 02 47.7**	**+2.3**
ISRV	**Sarvestan**	**3.67**	**315**	Pn	**Pn**	**19 02 47.6**	**+2.2**
IPAR	**Pars**	**4.04**	**319**	Pn	**Pn**	**19 02 52.4**	**+2.0**
IPAR	**Pars**	**4.04**	**319**	*e*Pn	**Pn**	**19 02 52.4**	**+2.0**
IPAR				*e*		19 04 19.4	
	comp=Z,2μm,0.4s						
IPAR	**Pars**	**4.04**	**319**	Pn	**Pn**	**19 02 52.4**	**+2.0**
IMEH	**Mehriz**	**4.73**	**344**	Pn	**Pn**	**19 03 01.1**	**+1.2**
IMEH	**Mehriz**	**4.73**	**344**	*e*Pn	**Pn**	**19 03 01.2**	**+1.3**
IMEH				*e*		19 03 16.5	
	comp=Z,1μm,0.2s						
IMEH	**Mehriz**	**4.73**	**344**	*e*Pn	**Pn**	**19 03 01.2**	**+1.3**
IBAF	**Bafgh**	**4.77**	**354**	Pn	**Pn**	**19 03 01.6**	**+1.1**
IBAF	**Bafgh**	**4.77**	**354**	*e*Pn	**Pn**	**19 03 01.6**	**+1.1**
IBAF				*e*		19 03 45.1	
	comp=Z,1μm,0.3s						
IBAF	**Bafgh**	**4.77**	**354**	Pn	**Pn**	**19 03 01.6**	**+1.1**
ZHSF	**Zahedan**	**4.96**	**55**	*e*Pn	**Pn**	**19 03 08.0**	**+4.9**
ZHSF	**Zahedan**	**4.96**	**55**	*e*Pn	**Pn**	**19 03 08.2**	**+5.1**
ZHSF	**Zahedan**	**4.96**	**55**	*e*Pn	**Pn**	**19 03 08.2**	**+5.1**
ISAD	**Sadrabad**	**5.49**	**338**	Pn	**Pn**	**19 03 11.6**	**+1.2**
ISAD	**Sadrabad**	**5.49**	**338**	*e*Pn	**Pn**	**19 03 11.6**	**+1.2**
ISAD				*e*		19 03 21.8	
	comp=Z,1μm,0.2s						
ISAD	**Sadrabad**	**5.49**	**338**	Pn	**Pn**	**19 03 11.6**	**+1.2**
IKOO	**Kooshah**	**6.12**	**24**	*e*Pn	**Pn**	**19 03 19.1**	**+0.1**
IKOO				*e*		19 05 45.1	
	comp=Z,505nm,0.3s						
IKOO	**Kooshah**	**6.12**	**24**	*e*Pn	**Pn**	**19 03 19.1**	**+0.1**
IGAR	**Gharneh**	**6.59**	**328**	*e*Pn	**Pn**	**19 03 26.7**	**+1.2**
IGAR				*e*		19 04 42.6	
	comp=Z,1μm,0.3s						
NASN	**Na'in**	**6.61**	**335**	*e*Pn	**Pn**	**19 03 26.9**	**+1.2**
NASN	**Na'in**	**6.61**	**335**	*e*Pn	**Pn**	**19 03 26.9**	**+1.2**
IZEF	**Zefreh**	**6.88**	**332**	Pn	**Pn**	**19 03 30.0**	**+0.5**
IZEF	**Zefreh**	**6.88**	**332**	*e*Pn	**Pn**	**19 03 30.0**	**+0.5**
IZEF				*e*		19 03 41.8	
	comp=Z,512nm,0.3s						
IZEF	**Zefreh**	**6.88**	**332**	Pn	**Pn**	**19 03 30.0**	**+0.5**
IPIR	**Pirpir**	**7.39**	**323**	Pn	**Pn**	**19 03 37.7**	**+1.2**
IPIR	**Pirpir**	**7.39**	**323**	*e*Pn	**Pn**	**19 03 37.8**	**+1.3**
IPIR				*e*		19 03 45.0	
	comp=Z,907nm,0.2s						
IPIR	**Pirpir**	**7.39**	**323**	Pn	**Pn**	**19 03 37.7**	**+1.2**
GNI	**Garni**	**16.30**	**327**	Pn	**Pn**	**19 05 40.3**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=174,slow=4.9,SNR=3.9						
ASF	**Jabal al Asfar**	**17.55**	**292**	P	**Pn**	**19 05 53.0**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=135,slow=16,SNR=2.7						
ASF				S	**Sn**	**19 09 09.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=286,slow=18,SNR=2.3						
MALT	**Malatya**	**18.76**	**312**	*e*P	**Pn**	**19 06 08.1**	**0.0**
	comp=Z,6.7nm,0.8s						
MALT	**Malatya**	**18.76**	**312**	*e*P	**Pn**	**19 06 08.1**	**0.0**
	comp=Z,6.7nm,0.8s						
EIL	**Elat**	**18.86**	**284**	P	**Pn**	**19 06 10.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=63,slow=6.8,SNR=2.3						
EIL	**Elat**	**18.86**	**284**	P	**Pn**	**19 06 10.2**	**+0.8**
MMAI	**Mount Meron Ar**	**18.97**	**294**	P	**Pn**	**19 06 10.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=100,slow=15,SNR=4.4						
KKAR	**Karatay Array**	**20.02**	**32**	*e*P	**P**	**19 06 21.4**	**0.0**
	comp=Z,3.2nm,0.6s						
KKAR	**Karatay Array**	**20.02**	**32**	*e*P	**P**	**19 06 21.4**	**-0.1**
	comp=Z,3.2nm,0.6s						
KIV	**Kislovodsk**	**20.25**	**331**	*e*P	**P**	**19 06 23.9**	**0.0**
	comp=Z,22nm,0.7s						
KIV	**Kislovodsk**	**20.25**	**331**	*e*P	**P**	**19 06 23.9**	**0.0**
	comp=Z,22nm,0.7s						
EKS2	**Erkin-Say**	**21.38**	**38**	*e*P	**P**	**19 06 36.6**	**+0.4**
	comp=Z,7.4nm,0.8s,mb4.1						
EKS2	**Erkin-Say**	**21.38**	**38**	*e*P	**P**	**19 06 36.6**	**+0.4**
	comp=Z,7.4nm,0.8s,mb4.1						
AAK	**Ala-Archa**	**21.76**	**39**	P	**P**	**19 06 40.9**	**+0.6**
	comp=Z,1.6nm,0.3s,mb3.9,baz=215,slow=4.5,SNR=8.7						
AAK	**Ala-Archa**	**21.76**	**39**	P	**P**	**19 06 40.8**	**+0.5**
ABKAR	**Akbulak array**	**22.59**	**7**	*e*P	**P**	**19 06 47.9**	**-1.1**
ABKAR	**Akbulak array**	**22.59**	**7**	*e*P	**P**	**19 06 47.9**	**-1.1**
BR131	**Keskin Array S**	**22.69**	**310**	*e*P	**P**	**19 06 50.0**	**-0.2**
	comp=Z,8.7nm,0.8s,mb4.2						
BR131	**Keskin Array S**	**22.69**	**310**	*e*P	**P**	**19 06 50.0**	**-0.3**
	comp=Z,8.7nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**22.69**	**310**	P	**P**	**19 06 50.8**	**+0.6**
	comp=Z,5.6nm,0.8s,mb4.1,baz=130,slow=12,SNR=12						
BRTR	**Keskin Array B**	**22.69**	**310**	P	**P**	**19 06 50.8**	**+0.5**
AKTK	**Aktyubinsk**	**23.62**	**3**	P	**P**	**19 06 58.3**	**-1.4**
AKTK	**Aktyubinsk**	**23.62**	**3**	P	**P**	**19 06 58.3**	**-1.4**
AKTO	**Aktyubinsk**	**23.62**	**3**	P	**P**	**19 06 58.3**	**-1.4**
	comp=Z,4.1nm,0.6s,mb4.0,baz=172,slow=8.2,SNR=7.6						
BVAR	**Borovoye Array**	**28.25**	**18**	P	**P**	**19 07 41.6**	**-0.1**
	comp=Z,3.0nm,0.6s,mb4.1,baz=199,slow=8.2,SNR=14						
BVAR	**Borovoye Array**	**28.25**	**18**	P	**P**	**19 07 41.6**	**-0.1**
MKAR	**Makanchi Array**	**28.70**	**39**	P	**P**	**19 07 46.1**	**+0.4**
	comp=Z,1.9nm,0.8s,mb3.9,baz=217,slow=8.7,SNR=8.9						
MKAR	**Makanchi Array**	**28.70**	**39**	P	**P**	**19 07 46.1**	**+0.4**
AKASG	**Malin Array Be**	**31.43**	**327**	P	**P**	**19 08 08.4**	**-1.5**
	comp=Z,0.9nm,0.5s,mb3.9,baz=127,slow=8.8,SNR=5.9						
AKASG	**Malin Array Be**	**31.43**	**327**	P	**P**	**19 08 08.4**	**-1.4**
ZALV	**Zalesovo Beam**	**34.37**	**30**	P	**P**	**19 08 35.1**	**-0.4**
	comp=Z,2.1nm,0.4s,mb4.4,baz=243,slow=9.9,SNR=13						
GERES	**GERESS Array B**	**39.39**	**315**	P	**P**	**19 09 17.3**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.4,baz=100,slow=6.9,SNR=4.3						
GERES	**GERESS Array B**	**39.39**	**315**	P	**P**	**19 09 17.3**	**-1.0**
JOF	**Joensuu**	**39.61**	**342**	*e*P	**P**	**19 09 18.1**	**-1.8**
	comp=Z,1.0nm,0.3s,mb4.0						
FINES	**FINESS Array B**	**40.06**	**338**	P	**P**	**19 09 23.0**	**-0.7**
	comp=Z,2.0nm,0.5s,mb4.1,baz=144,slow=10,SNR=22						
FINES	**FINESS Array B**	**40.06**	**338**	P	**P**	**19 09 23.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**40.24**	**93**	P	**P**	**19 09 27.6**	**+1.8**
	comp=Z,0.4nm,0.6s,mb3.3,baz=281,slow=10.0,SNR=3.8						
CMAR	**Chiang Mai Arr**	**40.24**	**93**	P	**P**	**19 09 27.6**	**+1.8**
FETA	**Feichten**	**40.82**	**312**	⇑*i*P	**P**	**19 09 29.3**	**-0.9**
	comp=Z,3.9nm,0.7s,mb4.2						
FETA	**Feichten**	**40.82**	**312**	P	**P**	**19 09 29.3**	**-0.9**
	comp=Z,3.9nm,0.7s,mb4.2						
DAVA	**Damuels**	**41.44**	**312**	⇓*i*P	**P**	**19 09 34.5**	**-0.8**
	comp=Z,6.1nm,0.5s,mb4.5						
DAVA	**Damuels**	**41.44**	**312**	P	**P**	**19 09 34.5**	**-0.8**
	comp=Z,6.1nm,0.5s,mb4.5						
MBDF	**Montbardon**	**43.12**	**308**	*e*P	**P**	**19 09 47.5**	**-1.6**
	comp=Z,5.7nm,0.6s,mb4.2						
MBDF	**Montbardon**	**43.12**	**308**	*e*P	**P**	**19 09 47.5**	**-1.6**
	comp=Z,2.8nm,0.6s,mb4.2						
MBDF	**Montbardon**	**43.12**	**308**	*e*P	**P**	**19 09 47.5**	**-1.6**
	comp=Z,2.8nm,0.6s,mb4.2						
LPG	**La Plagne**	**43.24**	**309**	*e*P	**P**	**19 09 48.7**	**-1.3**
	comp=Z,6.5nm,0.7s,mb4.2						
LPG	**La Plagne**	**43.24**	**309**	*e*P	**P**	**19 09 48.7**	**-1.3**
	comp=Z,3.3nm,0.7s,mb4.2						
LPG	**La Plagne**	**43.24**	**309**	*e*P	**P**	**19 09 48.7**	**-1.3**
	comp=Z,3.2nm,0.7s,mb4.2						
LPL	**La Plagne**	**43.26**	**309**	*e*P	**P**	**19 09 48.9**	**-1.2**
	comp=Z,14nm,1.1s,mb4.3						
LPL	**La Plagne**	**43.26**	**309**	*e*P	**P**	**19 09 48.9**	**-1.2**
	comp=Z,7.0nm,1.1s,mb4.3						
LPL	**La Plagne**	**43.26**	**309**	*e*P	**P**	**19 09 48.9**	**-1.2**
	comp=Z,7.0nm,1.1s,mb4.3						
HFS	**Hagfors**	**44.04**	**331**	P	**P**	**19 09 55.1**	**-1.1**
	baz=139,slow=9.0						
HFS	**Hagfors**	**44.04**	**331**	P	**P**	**19 09 55.1**	**-1.1**
SONM	**Songino Array**	**44.24**	**48**	P	**P**	**19 09 58.2**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.6,baz=258,slow=7.3,SNR=5.4						
SONM	**Songino Array**	**44.24**	**48**	P	**P**	**19 09 58.2**	**+0.2**
SMF	**Signal de Mont**	**45.41**	**310**	*e*P	**P**	**19 10 05.3**	**-2.0**
	comp=Z,12nm,1.0s,mb4.4						
SMF	**Signal de Mont**	**45.41**	**310**	*e*P	**P**	**19 10 05.3**	**-2.0**
	comp=Z,6.2nm,1.0s,mb4.4						
SMF	**Signal de Mont**	**45.41**	**310**	*e*P	**P**	**19 10 05.3**	**-2.0**
	comp=Z,6.2nm,1.0s,mb4.4						
NB2	**NORSAR Subarra**	**45.55**	**331**	P	**P**	**19 10 06.8**	**-1.4**
	comp=Z,0.3nm,0.4s,mb3.6,baz=118,slow=8.6						
NB2	**NORSAR Subarra**	**45.55**	**331**	P	**P**	**19 10 06.8**	**-1.4**
	comp=Z,0.3nm,0.4s,mb3.6,baz=118,slow=8.0,SNR=4.1						
NOA	**NORSAR Array B**	**45.55**	**331**	P	**P**	**19 10 06.8**	**-1.5**
	comp=Z,0.4nm,0.6s,mb3.6,baz=119,slow=7.4,SNR=3.5						
NOA	**NORSAR Array B**	**45.55**	**331**	P	**P**	**19 10 06.8**	**-1.4**
SSF	**Saint Saulge**	**45.68**	**311**	*e*P	**P**	**19 10 08.4**	**-1.1**
	comp=Z,10.0nm,1.0s,mb4.4						
SSF	**Saint Saulge**	**45.68**	**311**	*e*P	**P**	**19 10 08.4**	**-1.1**
	comp=Z,5.0nm,1.0s,mb4.4						
SSF	**Saint Saulge**	**45.68**	**311**	*e*P	**P**	**19 10 08.4**	**-1.1**
	comp=Z,5.0nm,1.0s,mb4.4						
TAM	**Tamanrasset**	**45.86**	**276**	*e*P	**P**	**19 10 12.2**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.2						
TAM	**Tamanrasset**	**45.86**	**276**	*e*P	**P**	**19 10 12.2**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.2						
ARCES	**ARCESS Array B**	**46.31**	**346**	P	**P**	**19 10 13.6**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.9,baz=140,slow=9.6,SNR=11						
ARCES	**ARCESS Array B**	**46.31**	**346**	P	**P**	**19 10 13.6**	**-0.5**
ARCES	**ARCESS Array B**	**46.31**	**346**	P	**P**	**19 10 13.6**	**-0.5**
TCF	**Toulx Ste Croi**	**46.49**	**309**	*e*P	**P**	**19 10 14.3**	**-1.5**
TCF	**Toulx Ste Croi**	**46.49**	**309**	*e*P	**P**	**19 10 14.3**	**-1.5**
LDF	**La Druitiere**	**48.28**	**312**	*e*P	**P**	**19 10 28.4**	**-1.4**
LDF	**La Druitiere**	**48.28**	**312**	*e*P	**P**	**19 10 28.4**	**-1.4**
ESDC	**Sonseca Array**	**50.99**	**301**	P	**P**	**19 10 50.2**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.6,baz=73,slow=6.7,SNR=4.0						
ESDC	**Sonseca Array**	**50.99**	**301**	P	**P**	**19 10 50.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**52.56**	**266**	P	**P**	**19 11 02.2**	**-0.4**
	comp=Z,5.6nm,0.5s,mb4.7,baz=62,slow=7.7,SNR=27						
LBTB	**Lobatse**	**59.36**	**212**	P	**P**	**19 11 52.9**	**+1.9**
	comp=Z,3.8nm,0.7s,mb4.6,baz=39,slow=7.8,SNR=8.3						
LBTB	**Lobatse**	**59.36**	**212**	P	**P**	**19 11 52.9**	**+1.9**
LBTB	**Lobatse**	**59.36**	**212**	P	**P**	**19 11 52.9**	**+1.9**
DBIC	**Dimbokro**	**61.15**	**263**	P	**P**	**19 12 03.9**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.3,baz=76,slow=8.3,SNR=3.4						
DBIC	**Dimbokro**	**61.15**	**263**	P	**P**	**19 12 03.9**	**+0.3**
BOSA	**Boshof**	**62.58**	**211**	P	**P**	**19 12 14.2**	**+1.3**
	comp=Z,2.9nm,0.7s,mb4.5,baz=157,slow=2.4,SNR=6.7						
BOSA	**Boshof**	**62.58**	**

BANOM	**Banah**	1.13	164	P	Pb	19 18 07.5	-1.3
	SNR=12						
ASHO	**Ashiyiah**	2.32	178	P	Pn	19 18 25.9	+0.4
	SNR=7.8						
ASHO	**Ashiyiah**	2.32	178	P	Pn	19 18 25.9	+0.3
	SNR=7.8						
ASUD	**Al Ashush, Dub**	2.44	193	P	Pn	19 18 28.7	+1.5
	SNR=8.3						
ASUD	**Al Ashush, Dub**	2.44	193	P	Pn	19 18 28.7	+1.5
	SNR=8.3						
KRBR	**Kerman**	3.04	13	*e*Pn	Pn	19 18 37.0	+1.5
KRBR	**Kerman**	3.04	13	*e*Pn	Pn	19 18 37.0	+1.5
ISRV	**Sarvestan**	3.44	314	*e*Pn	Pn	19 18 45.1	+4.1
ISRV				*e*		19 20 16.2	
	comp=Z,852nm,0.4s						
IMEH	**Mehriz**	4.52	345	*e*Pn	Pn	19 18 58.5	+2.7
IMEH				*e*		19 19 01.6	
	comp=Z,164nm,0.3s						
IMEH				*e*Sn	Sn	19 19 49.8	+1.4
ZHSF	**Zahedan**	4.98	58	*e*Pn	Pn	19 19 04.5	+2.4
NASN	**Na'in**	6.38	335	*e*Pn	Pn	19 19 23.7	+2.3
NAY	**Al-Naaiem**	8.01	288	*e*P	Pn	19 19 44.4	+0.7
NAY				*e*S	Sn	19 21 12.2	-2.2
NAY				AML	AML	19 21 14.6	
	comp=Z,3.1nm,0.4s						
NAY	**Al-Naaiem**	8.01	288	*e*P	Pn	19 19 44.4	+0.7
MIB	**Mutribah**	8.08	292	*e*P	Pn	19 19 46.0	+1.3
MIB				*e*S	Sn	19 21 13.7	-2.5
MIB				AML	AML	19 21 16.6	
	comp=Z,10nm,0.5s						
MIB	**Mutribah**	8.08	292	*e*P	Pn	19 19 46.0	+1.3
ASF	**Jabal al Asfar**	17.35	292	P	Pn	19 21 47.6	-2.0
	comp=Z,0.5nm,0.3s,baz=129,slow=6.5,SNR=2.4						
BR131	**Keskin Array S**	22.47	310	*e*P	P	19 22 48.1	+1.5
	comp=Z,1.6nm,0.8s,mb3.5						
BR131	**Keskin Array S**	22.47	310	*e*P	P	19 22 48.1	+1.5
	comp=Z,1.6nm,0.8s,mb3.5						
BRTR	**Keskin Array B**	22.47	310	P	P	19 22 47.9	+1.2
	comp=Z,1.1nm,0.9s,mb3.3,baz=122,slow=12,SNR=3.3						
BRTR	**Keskin Array B**	22.47	310	P	P	19 22 47.8	+1.2
BVAR	**Borovoye Array**	28.13	19	P	P	19 23 38.5	-0.8
	comp=Z,0.5nm,0.5s,mb3.4,baz=217,slow=7.1,SNR=3.5						
BVAR	**Borovoye Array**	28.13	19	P	P	19 23 38.5	-0.8
ZALV	**Zalesovo Beam**	34.29	30	P	P	19 24 32.1	-1.4
	comp=Z,0.4nm,0.5s,mb3.6,baz=254,slow=8.9,SNR=3.2						
FINES	**FINESS Array B**	39.84	338	P	P	19 25 18.9	-1.6
	comp=Z,0.8nm,0.5s,mb3.7,baz=166,slow=17,SNR=4.9						
FINES	**FINESS Array B**	39.84	338	P	P	19 25 19.0	-1.6
TORD	**Torodi Ar. Bea**	52.43	266	P	P	19 26 59.0	-1.4
	comp=Z,1.1nm,0.5s,mb4.1,baz=62,slow=7.3,SNR=14						

*IDC **17** 19:37:32.1±0.8, 43°.43N×78°.60E, h0km, mb3.8/6, mb1 3.9/12, mb1mx3.7/29, mbtmp3.8/12, ML3.8/6, MS2.9/3, Ms1 3.0/3, ms1mx2.6/31, Error ellipse: s-maj=12.6km s-min=7.4km az=148.0*
*ISCJB **17** 19:37:33.8±1.1, 43°.61N±0°.03×78°.62E±0°.04, h9km±7km, mb3.6/7, Error ellipse: s-maj=6.1km s-min=3.6km az=148.1*
*NNC **17** 19:37:34.2±2.3, 43°.66N×78°.62E, h6km±11km, mb4.3, mpv4.2, Error ellipse: s-maj=31.0km s-min=7.2km az=144.0*
*MOS **17** 19:37:34.7±1.6, 43°.60N×78°.54E, h18km, mb4.0/3, Error ellipse: s-maj=11.2km s-min=7.7km az=78.8*
MOS Felt (IV) at Saty, (II) at Almaty.
*BJI **17** 19:37:38.7, 43°.51N×78°.84E, h46km, mB4.6/2, mb4.3/7, ML4.1/9*
*NEIC **17** 19:37:39.1±0.7, 43°.60N×78°.49E, h47km±8km, mb3.7/1, Error ellipse: s-maj=10.7km s-min=5.9km az=136.0*

ISC 17 19:37:34.9±0.9, 43°.57N±0°.03×78°.58E±0°.04, h4km±6km, n79, σ1s34/103, mb3.6/7, 17C-11D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAA	**Alma-Ata**	1.23	256	*i* PG	Pg	19 37 59.0	+0.6
AAA				*i* S	Sg	19 38 16.1	+1.8
AAA				pmax	pmax		
	comp=Z,2μm,0.3s						
AAA				smax			
	comp=N,7μm,0.2s						
KNDC	**Almaty**	1.23	254	⇑P	Pg	19 37 58.1	-0.3
	comp=N,555nm,0.5s						
KNDC				⇑S	Sg	19 38 14.1	-0.2
	comp=N,775nm,0.3s						
ULHL	**Ulahol**	2.17	233	P	Pn	19 38 13.5	+1.8
	SNR=189						
TKM2	**Tokmak 2**	2.27	254	⇑Pn	Pn	19 38 15.2	+2.1
	comp=N,308nm,0.4s						
TKM2				⇑Sn	Sb	19 38 44.3	-0.5
	comp=N,813nm,0.6s						
TKM2	**Tokmak 2**	2.27	254	P	Pn	19 38 13.4	+0.3
	SNR=215						
TKM2	**Tokmak 2**	2.27	254	*e*P	Pn	19 38 13.2	+0.1
TKM2				*e*S	Sb	19 38 44.9	0.0
TKM2	**Tokmak 2**	2.27	254	*e*PN	Pn	19 38 13.2	+0.1
TKM2				*e*S	Sb	19 38 44.9	0.0
KBK	**Karagaybulak**	2.81	252	P	Pn	19 38 21.4	+0.9
	SNR=60						
CHMS	**Chumysh**	2.85	260	P	Pn	19 38 21.4	+0.3
	SNR=11						
KZA	**Kyzart**	2.87	240	P	Pb	19 38 27.7	+1.1
	SNR=7.3						
KZA	**Kyzart**	2.87	240	*e*P	Pn	19 38 23.6	+2.2
USP	**Ospenovka**	2.99	266	P	Pn	19 38 23.0	+0.1
	SNR=26						
AAK	**Ala-Archa**	3.13	254	P	Pn	19 38 30.1	+5.1
	SNR=56						
AAK	**Ala-Archa**	3.13	254	Pn	Pn	19 38 26.2	+1.2
	comp=N,0.4nm,0.3s,baz=101,slow=8.6,SNR=43						
AAK				Pg	Pg	19 38 30.4	-4.5
	comp=N,0.5nm,0.3s,baz=85,slow=7.5,SNR=77						
AAK				Lg		19 39 11.2	
	comp=N,1.5nm,0.3s,baz=223,slow=21,SNR=12						
AAK	**Ala-Archa**	3.13	254	*e*P	Pn	19 38 25.5	+0.5
AAK	**Ala-Archa**	3.13	254	*c i*PN	Pn	19 38 25.8	+0.8
EKS2	**Erkin-Say**	3.63	257	P	Pn	19 38 32.5	+0.8
	SNR=7.0						
EKS2	**Erkin-Say**	3.63	257	*e*P	Pn	19 38 32.4	+0.6
AML	**Almayashu**	3.87	250	P	Pg	19 38 47.3	-1.7
	SNR=15						
AML	**Almayashu**	3.87	250	P	Pn	19 38 34.5	-0.6
MK31	**Makanchi Array**	4.15	38	Pn	Pn	19 38 40.9	+1.9
	comp=N,2.5nm,0.2s,baz=210,slow=14,SNR=551						
MK31				⇓Sn	Sn	19 39 27.9	0.0
	comp=N,53nm,0.5s,baz=214,slow=15,SNR=4.6						
MK31				⇑Lg		19 39 45.0	
	comp=N,93nm,0.4s,baz=215,slow=29,SNR=9.1						
MK31	**Makanchi Array**	4.15	38	*e*P	Pn	19 38 40.8	+1.8
MK31	**Makanchi Array**	4.15	38	*e*PN	Pn	19 38 40.8	+1.8
MKAR	**Makanchi Array**	4.15	38	Pn	Pn	19 38 40.7	+1.7
	comp=N,4.1nm,0.3s,baz=209,slow=15,SNR=259						
MKAR				Pg	Pb	19 38 47.3	-1.2
	comp=N,7.9nm,0.3s,baz=213,slow=15,SNR=34						
MKAR				Sn	Sn	19 39 29.8	+1.9
	comp=N,20nm,0.3s,baz=216,slow=21,SNR=5.0						
MKAR				Lg		19 39 40.8	
	comp=N,31nm,0.3s,baz=214,slow=26,SNR=4.2						
MKAR	**Makanchi Array**	4.15	38	Pn	Pn	19 38 40.7	+1.7
MKAR				Pg	Pb	19 38 47.3	-1.2
MKAR				Sn	Sn	19 39 29.8	+1.9
MKAR				Lg		19 39 40.8	
MKAR	**Makanchi Array**	4.15	38	*e*PN	Pn	19 38 40.7	+1.7
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KSH	**Kashi**	4.50	207	P	Pb	19 38 52.8	-1.6
KSH				*e*S	Sb	19 39 49.1	+0.2
KSH				smax			
	comp=N,180nm,1.0s						
KSH				smax			
	comp=E,240nm,1.1s						
KK31	**Karatay Array**	5.90	268	⇓Pn	Pn	19 39 09.9	+6.9
	comp=E,1.0nm,0.2s,baz=81,slow=12,SNR=14						
KK31				⇓Pg	Pg	19 39 21.5	-6.4
	comp=E,36nm,0.6s,baz=84,slow=15,SNR=21						
KK31				⇑Lg		19 40 40.3	
	comp=E,92nm,0.6s,baz=81,slow=30,SNR=12						
KKAR	**Karatay Array**	5.90	268	*e*P	Pn	19 39 04.5	+1.5
	comp=E,34nm,0.4s						
KKAR	**Karatay Array**	5.90	268	*e*PN	Pn	19 39 04.5	+1.5
KKAR				pmax	pmax		
	comp=Z,34nm,0.4s						
WMQ	**Urumqi**	6.61	85	P	Pn	19 39 13.1	+0.3
WMQ				S	Sn	19 40 29.0	+0.5
WMQ				smax			
	comp=N,87nm,0.8s						
WMQ				smax			
	comp=E,84nm,0.8s						
KURBB	**Kurchatov Arra**	7.05	360	⇑Lg		19 41 19.4	
	comp=E,74nm,0.9s						
KURK	**Kurchatov**	7.15	0	⇑Pn	Pn	19 39 20.7	+0.6
	comp=E,5.9nm,0.5s						
KURK				⇑Lg		19 41 19.6	
	comp=E,275nm,0.9s						
KURK	**Kurchatov**	7.15	0	*e*P	Pn	19 39 19.9	-0.1
	comp=E,46nm,0.8s						
KURK	**Kurchatov**	7.15	0	*c i*PN	Pn	19 39 21.2	+1.2
VOSK	**Vostochnaya**	10.46	334	⇑Pn	Pn	19 40 03.2	-2.2
	comp=E,3.1nm,0.4s						
VOSK				⇑Sn	Sn	19 42 06.2	+3.2
	comp=E,18nm,0.7s						
VOSK				⇓Lg		19 43 00.5	
	comp=E,78nm,1.1s						
BVAR	**Borovoye Array**	10.91	333	Pn	Pn	19 40 10.0	-1.6
	comp=E,1.0nm,0.3s,baz=139,slow=13,SNR=15						
BVAR				Sn	Sn	19 42 10.3	-3.7
	comp=E,1.3nm,0.3s,baz=152,slow=31,SNR=3.2						
BVAR				Lg		19 43 21.4	
	comp=E,4.4nm,0.3s,baz=146,slow=30,SNR=4.3						
BVAR				LR	LR	19 44 46.5	
	comp=E,34nm,19.0s,baz=293,slow=39						
BVAR	**Borovoye Array**	10.91	333	P	Pn	19 40 10.0	-1.6
BVAR						19 42 10.3	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,34nm,19.0s						
BRVK	**Borovoye**	10.97	333	*e*P	Pn	19 40 11.1	-1.3
	comp=Z,9.9nm,0.6s						
BRVK	**Borovoye**	10.97	333	*e*P	Pn	19 40 12.8	+0.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAA0	**Zalesovo Array**	11.16	19	*e*P	Pn	19 40 15.7	+0.6
ZALV	**Zalesovo Beam**	11.16	19	Pn	Pn	19 40 16.1	+1.0
	comp=Z,1.5nm,0.3s,baz=214,slow=16,SNR=25						
ZALV				Sn	Sn	19 42 23.9	+3.7
	comp=Z,1.0nm,0.3s,baz=202,slow=19,SNR=2.8						
ZALV				Lg		19 43 30.2	
	comp=Z,0.7nm,0.3s,baz=202,slow=21,SNR=3.7						
ZALV				LR	LR	19 44 49.9	
	comp=Z,44nm,19.1s,baz=251,slow=39						
ZALV	**Zalesovo Beam**	11.16	19	P	Pn	19 40 16.1	+1.0
ZALV						19 42 23.9	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV				smax			
	comp=N,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,44nm,19.1s						
ZRNK	**Zerenda**	11.34	329	⇑Pn	Pn	19 40 16.2	-1.2
	comp=Z,8.1nm,0.8s						
ZRNK				⇑Sn	Sn	19 42 20.5	-4.0
	comp=Z,14nm,0.6s						
ZRNK				⇓Lg		19 43 30.2	
	comp=Z,59nm,1.2s						
KBL	**Kabul**	11.66	223	P	Pn	19 40 22.8	+0.8
	comp=Z,2.5nm,0.6s						
KBL	**Kabul**	11.66	223	P	Pn	19 40 22.8	+0.8
KBL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NVS	**Novosibirsk**	11.68	13	*e*P	Pn	19 40 21.9	-0.2
NVS				*e*S	Sn	19 42 27.3	-5.5
AB31	**Akbulak array**	14.04	300	⇓Pn	Pn	19 40 53.3	-1.1
	comp=Z,1.2nm,0.6s,baz=94,slow=12,SNR=18						
AB31				⇓Sn	Sn	19 43 31.2	+0.6
	comp=Z,2.8nm,0.8s						
AB31				⇑Lg		19 44 59.2	
	comp=Z,19nm,0.9s						
ABKAR	**Akbulak array**	14.04	300	*e*P	Pn	19 40 53.3	-1.1
	comp=Z,1.9nm,0.4s						
AKTK	**Aktyubinsk**	15.59	303	Pn	Pn	19 41 11.9	-3.3
AKTK				Sn	Sn	19 44 00.3	-7.9
AKTK				Lg		19 45 47.0	
AKTO	**Aktyubinsk**	15.59	303	⇓Pn	Pn	19 41 14.7	-0.5
	comp=Z,0.2nm,0.8s						
AKTO				⇓Sn	Sn	19 44 06.8	-1.4
	comp=Z,0.5nm,0.6s						
AKTO				⇓Lg		19 45 49.1	
	comp=Z,3.8nm,1.1s						
AKTO	**Aktyubinsk**	15.59	303	Pn	Pn	19 41 11.9	-3.3
	comp=Z,0.1nm,0.3s,baz=111,slow=16,SNR=2.7						
AKTO				Sn	Sn	19 44 00.3	-7.9
	comp=Z,0.1nm,0.3s,baz=202,slow=17,SNR=2.2						
AKTO				Lg		19 45 47.0	
	comp=Z,0.2nm,0.3s,baz=111,slow=14,SNR=3.7						
AKTO	**Aktyubinsk**	15.59	303	P	Pn	19 41 11.9	-3.3
AKTO						19 44 00.4	
ORY	**Orie**	15.67	37	⇓*e*P	Pn	19 41 17.5	+1.2
ORY				*e*S	Sn	19 44 11.2	+1.0
GTA	**Gaotai**	16.44	97	*e*P	Pn	19 41 22.8	-3.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARU	**Arti**	18.11	322	*e*P	Pn	19 41 47.5	+0.5
	comp=Z,3.0nm,0.5s						
ARU	**Arti**	18.11	322	*c i*P	Pn	19 41 47.4	+0.4
ARU				S	Sn	19 45 11.0	+1.8
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	19.84	68	P	Pn	19 42 06.8	-1.2
	comp=Z,1.0nm,0.3s,baz=266,slow=11,SNR=23						
SONM	**Songino Array**	19.84	68	P	Pn	19 42 06.8	-1.2
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LZH	**Lanzhou**	20.74	103	*e*P	P	19 42 15.0	-1.4
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
FINES	**FINESS Array B**	35.42	319	P	P	19 44 29.4	-2.1
	comp=Z,1.8nm,1.0s,mb4.0,baz=90,slow=6.9,SNR=2.5						
FINES	**FINESS Array B**	35.42	319	P	P	19 44 29.4	-2.1
FINES	**FINESS Array B**	35.42	319	P	P	19 44 29.4	-2.1
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARCES	**ARCESS Array B**	37.20	332	P	P	19 44 46.4	-0.3
	comp=Z,0.7nm,0.8s,mb3.5,baz=99,slow=9.5,SNR=4.2						
ARCES	**ARCESS Array B**	37.20	332	P	P	19 44 46.4	-0.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	42.60	318	P	P	19 45 37.0	+5.4
	comp=Z,0.9nm,0.5s,mb3.8,baz=84,slow=8.6						
NOA	**NORSAR Array B**	42.60	318	P	P	19 45 30.8	-0.8
	comp=Z,0.2nm,0.5s,mb3.1,baz=84,slow=8.0,SNR=2.6						
NOA				LR	LR	20 03 53.4	
	comp=Z,46nm,20.3s,baz=105,slow=37						
NOA	**NORSAR Array B**	42.60	318	P	P	19 45 30.8	-0.8
NOA				LR	LR	20 03 53.4	
NOA	**NORSAR Array B**	42.60	318	P	P	19 45 30.8	-0.8
NOA				MLR	MLR		
	comp=Z,46nm,20.3s						
CLL	**Collm**	43.67	304	*i* P	P	19 45 46.5	+6.1
GERES	**GERESS Array B**	43.99	301	P	P	19 45 44.5	+1.5
	comp=Z,0.1nm,0.3s,mb3.0,baz=72,slow=9.7,SNR=2.2						
GERES	**GERESS Array B**	43.99	301	P	P	19 45 44.5	+1.5
GERES	**GERESS Array B**	43.99	301	P	P	19 45 44.5	+1.5
TORD	**Torodi Ar. Bea**	71.58	271	P	P	19 48 54.7	-2.8
	comp=Z,1.0nm,0.4s,mb4.1,baz=40,slow=5.3,SNR=21						
TORD	**Torodi Ar. Bea**	71.58	271	P	P	19 48 54.7	-2.8
WRA	**Warramunga Arr**	81.27	128	P	P	19 49 49.6	-2.5
	comp=Z,0.2nm,0.6s,mb3.3,baz=331,slow=4.9,SNR=7.8						
WRA	**Warramunga Arr**	81.27	128	P	P	19 49 49.6	-2.5
ASAR	**Alice Springs**	83.97	131	P	P	19 50 03.5	-2.6
	comp=Z,0.5nm,0.7s,mb3.8,baz=334,slow=5.6,SNR=4.9						
ASAR	**Alice Springs**	83.97	131	*e*P	P	19 50 03.5	-2.7
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*NEIC **17** 19:44:10.5, 15°.91N×93°.66W, h101km, MD3.8(MEX), After MEX.*

MEX 17 19:44:10.5±0.7, 15°.91N×93°.66W, h101km±6km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.47	115	*i* P	Pn	19 44 25.0	-1.2
PCIG				*i* S	Sn	19 44 36.4	-1.5
TGIG		1.01	31	*i* P	Pn	19 44 29.9	-1.2
TGIG				*i* S	Sn	19 44 44.3	-2.2
SCX	**San Cristobal**	1.28	50	*i* P	Pn	19 44 33.3	-0.8
SCX				*i* S	Sn	19 44 51.3	-0.8
SCX	**San Cristobal**	1.28	50	*i* P	Pn	19 44 33.3	-0.8
SCX				*i* S	Sn	19 44 51.3	-0.8
CCIG	**Comitan**	1.51	75	*i* P	Pn	19 44 36.0	-0.9
CCIG				*i* S	Sn	19 44 55.7	-1.2
CCIG	**Comitan**	1.51	75	*i* P	Pn	19 44 36.0	-0.9
CCIG				*i* S	Sn	19 44 55.7	-1.2
THIG		1.67	126	*e*P	Pn	19 44 37.4	-1.5
THIG				*i* S	Sn	19 44 58.7	-1.8
HUIG	**Huatulco**	2.36	267	*i* P	Pn	19 44 46.4	-1.5
HUIG				*i* S	Sn	19 45 15.1	-1.4
HUIG	**Huatulco**	2.36	267	*i* P	Pn	19 44 46.4	-1.5
HUIG				*i* S	Sn	19 45 15.1	-1.4
VHO	**Vista Hermosa**	3.17	292	*i* P	Pn	19 44 58.3	-0.3
VHO				*i* S	Sn	19 45 35.5	-0.2
VHO	**Vista Hermosa**	3.17	292	*i* P	Pn	19 44 58.3	-0.3
VHO				*i* S	Sn	19 45 35.5	-0.2
PNIG	**Pinotepa**	4.32	277	*i* P	Pn	19 45 13.4	-0.6
PNIG				*i* S	Sn	19 46 00.3	-3.2
PNIG	**Pinotepa**	4.32	277	*i* P	Pn	19 45 12.3	-1.8
PNIG				*i* S	Sn	19 46 01.6	-1.8
LVIG	**Laguna Verde**	4.62	326	*e*P	Pn	19 45 15.8	-2.2
LVIG	**Laguna Verde**	4.62	326	*e*P	Pn	19 45 15.8	-2.2
CAIG	**El Cayaco**	6.44	281	*e*P	Pn	19 45 41.4	-1.5
CAIG	**El Cayaco**	6.44	281	*e*P	Pn	19 45 41.4	-1.5

*IDC **17** 20:00:54.7±4.7, 19°.89S×69°.09W, h0km, mb3.5/1, mb1 3.2/2, mb1mx3.1/17, mbtmp3.1/2, ML2.4/1, Error ellipse: s-maj=137.6km s-min=59.5km az=86.0*
*ISCJB **17** 20:00:55.5±2.0, 19°.8S±0°.2×69°.7W±0°.7, h33km, Error ellipse: s-maj=95.6km s-min=10.8km az=17.7*
*GUC **17** 20:01:09.0±0.5, 21°.16S×69°.28W, h120km±6km, ML4.1*

ISC 17 20:00:56.9±2.0, 19°.8S±0°.2×69°.8W±0°.7, h35km, n7, σ1s54/6, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	2.28	190	*e*P	Pn	20 01 34.0	+1.9
TOCH				*e*S	Sx	20 01 53.4	
TOCH				AML	AML	20 01 54.1	
	comp=N,3μm,0.1s						
MACH	**Maria Elena**	2.35	180	⇓*e*P	Pn	20 01 33.1	+0.1
MACH				*e*S	Sx	20 01 51.7	
MECH	**Mejillones**	3.31	191	*e*P	Pn	20 01 46.2	-0.1
MECH				*e*S	Sx	20 02 14.0	
LPAZ	**La Paz**	3.85	24	Pn	Pn	20 01 53.6	-0.1
	comp=N,0.2nm,0.3s,baz=194,slow=7.6,SNR=5.6						
ANCH	**Antofagasta**	3.87	189	*e*P	Pn	20 01 51.9	-2.1
ANCH				*i* S	Sx	20 02 24.9	
TORD	**Torodi Ar. Bea**	77.56	71	P	P	20 12 49.9	+0.1
	comp=N,0.2nm,0.5s,baz=244,slow=6.3,SNR=4.7						
MKAR	**Makanchi Array**	144.73	34	PKP	PKPdf	20 20 32.4	+2.5
	comp=N,1.0nm,0.7s,baz=317,slow=3.3,SNR=4.4						

*ISCJB **17** 20:09:47.9±0.4, 38°.92N±0°.02×27°.85E±0°.04, h11km±3km, Error ellipse: s-maj=4.7km s-min=3.7km az=10.4*
*DDA **17** 20:09:47.4, 38°.91N×27°.87E, h15km±1km, Md3.1*
*ISK **17** 20:09:47.6, 38°.92N×27°.82E, h12km, MD3.2*
*CSEM **17** 20:09:48.0±0.1, 38°.92N×27°.83E, h10km, MD3.1, Error ellipse: s-maj=2.8km s-min=2.2km az=102.0*

ISC 17 20:09:48.3±0.4, 38°.92N±0°.02×27°.84E±0°.03, h12km±3km, n59, σ0s54/71, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	0.04	210	*i* P	Pg	20 09 50.4	-0.1
AKHS				*i* S	Sg	20 09 52.1	+0.2
AKHS	**Akhisar**	0.04	210	*i* P	Pg	20 09 50.4	0.0
AKHS				*i* S	Sg	20 09 52.1	+0.1
IZM	**Izmir**	0.69	221	*e*PG	Pg	20 10 01.0	-0.6
IZM				*e*SG	Sg	20 10 11.2	+0.5
DEMI	**Demirci**	0.69	79	*i* P	Pg	20 10 01.3	-0.4
DEMI				*i* S	Sg	20 10 09.8	-0.9
DEMI	**Demirci**	0.69	79	*i* P	Pg	20 10 01.3	-0.4
DEMI				*i* S	Sg	20 10 09.8	-1.0
BALB	**Balikesir**	0.72	2	*e*PG	Pg	20 10 02.1	-0.1
BALB				*e*SG	Sg	20 10 12.6	+0.9
BALB	**Balikesir**	0.72	2	*e*Pg	Pg	20 10 02.1	-0.1
BALB				*e*Sg	Sg	20 10 12.6	+0.9
KULA	**Kula-Manisa**	0.76	122	*e*PG	Pg	20 10 02.4	-0.4
KULA	**Kula-Manisa**	0.76	122	*e*Pg	Pg	20 10 02.4	-0.5
BLCB	**Balcova**	0.82	230	*e*PG	Pg	20 10 04.0	-0.1
BLCB				*e*SG	Sg	20 10 15.4	+0.5
BLCB	**Balcova**	0.82	230	*e*Pg	Pg	20 10 04.0	-0.1
BLCB				*e*Sg	Sg	20 10 15.4	+0.5
BALY	**Balya**	0.84	348	*i* P	Pg	20 10 04.3	-0.2
BALY				*i* S	Sg	20 10 15.3	-0.1
BALY	**Balya**	0.84	348	*i* P	Pg	20 10 04.3	-0.2
AYVA	**Ayvalik**	0.98	294	*i* P	Pg	20 10 07.4	+0.3
AYVA				*i* S	Sg	20 10 20.2	+0.4
AYVA	**Ayvalik**	0.98	294	*i* P	Pg	20 10 07.4	+0.3
GONE	**Gonen-Balikesi**	1.13	354	*e*PN	Pn	20 10 09.5	-0.5
GONE	**Gonen-Balikesi**	1.13	354	*e*Pn	Pn	20 10 09.5	-0.5
AYDN	**Tasoluk**	1.26	179	*i* P	Pn	20 10 10.7	-1.0
AYDN				*i* S	Sb	20 10 28.1	0.0
AYDN	**Tasoluk**	1.26	179	*i* P	Pn	20 10 10.7	-1.0
KCTX	**Karacabey (Bur**	1.40	16	*e*PN	Pn	20 10 13.7	0.0
KCTX	**Karacabey (Bur**	1.40	16	*e*Pn	Pn	20 10 13.7	0.0
EDC	**Edincik**	1.43	1	*e*PN	Pn	20 10 13.7	-0.3
EDC	**Edincik**	1.43	1	*e*Pn	Pn	20 10 13.7	-0.3
BNT	**Bandirma**	1

tensor: Scale 10^{16}Nm; M_{rr}3.84±.17; $M_{\theta\theta}$-3.22±.13; $M_{\phi\phi}$-0.62±.14; $M_{r\theta}$3.70±.59; $M_{r\phi}$1.76±.10; $M_{\theta\phi}$-0.31±.31; Best double couple: $M_0$5.40000×10^{16} NP1:ϕ_s311.00000°, δ26.00000°, λ117.00000°. NP2:ϕ_s102.00000°, δ67.00000°, λ77.00000°. Principal axes: T 5.4500, Plg66.0000°, Azm350.0000°; N -0.0200, Plg11.0000°, Azm107.0000°; P -5.4300, Plg21.0000°, Azm201.0000°; Data Used: II IC G IU CN.

ISC 17 20:11:45.2±0.9, 5°39S±0°.03×102°.02E±0°.03, h35km±6km, h31km±3.3km: pP-P, n260, σ1s22/250, mb4.8/83, MS4.6/30, 6C-5D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.38**	**43**	P	**Pn**	**20 12 07.2**	**-0.9**
MNAI				S	**Sn**	**20 12 26.8**	**+1.6**
KSI	**Kapahiang**	**1.82**	**18**	P	**Pn**	**20 12 13.8**	**-0.2**
LWLI	**Liwa**	**2.07**	**80**	P	**Pn**	**20 12 17.2**	**-0.3**
LWLI				S	**Sn**	**20 12 47.1**	**+5.0**
MDSI	**Maura Dua**	**2.33**	**68**	P	**Pn**	**20 12 21.1**	**0.0**
MDSI				S	**Sn**	**20 12 53.7**	**+5.1**
KLSI		**2.79**	**76**	P	**Pn**	**20 12 27.4**	**-0.1**
KLI	**Kotabumi**	**2.88**	**80**	P	**Pn**	**20 12 29.9**	**+1.3**
BLSI	**Bandar Lampung**	**3.22**	**90**	P	**Pn**	**20 12 34.1**	**+0.8**
KRJI	**Kerinci**	**3.32**	**350**	P	**Pn**	**20 12 35.5**	**+0.8**
RBSI	**Rajabasa**	**3.74**	**97**	P	**Pn**	**20 12 40.1**	**-0.4**
CGJI	**Cibinong**	**3.85**	**109**	P	**Pn**	**20 12 40.3**	**-1.8**
SBJI	**Serang**	**4.16**	**100**	P	**Pn**	**20 12 48.6**	**+2.3**
SDSI	**Sungai Dareh**	**4.46**	**352**	P	**Pn**	**20 12 50.1**	**-0.4**
PDSI	**Padang**	**4.71**	**341**	P	**Pn**	**20 12 53.0**	**-0.8**
SKJI	**Sukabumi**	**4.79**	**110**	P	**Pn**	**20 12 55.1**	**+0.1**
DBJI	**Dramaga**	**4.85**	**104**	P	**Pn**	**20 12 55.5**	**-0.3**
CBJI	**Citeko**	**4.92**	**102**	P	**Pn**	**20 12 58.9**	**+2.2**
	11nm2μm,1.0s						
SISI	**Saibi**	**4.98**	**324**	P	**Pn**	**20 12 57.1**	**-0.5**
RGRI	**Rengat**	**5.01**	**4**	P	**Pn**	**20 12 58.5**	**+0.5**
	6.0nm714nm,1.2s						
PPI	**Padang Panjang**	**5.16**	**342**	P	**Pn**	**20 12 59.5**	**-0.5**
	2.2nm206nm,0.7s						
PPBI	**Pangkal Pinang**	**5.21**	**52**	P	**Pn**	**20 13 01.1**	**+0.3**
	3.2nm5μm140nm,1.1s						
LEM	**Lembang**	**5.75**	**105**	P	**Pn**	**20 13 08.8**	**+0.6**
	2.5nm10μm555nm,1.3s						
BKNI	**Bangkinang**	**5.76**	**350**	P	**Pn**	**20 13 07.5**	**-0.8**
	3.2nm6μm264nm,0.6s						
CISI	**Cisompet, Garu**	**6.15**	**111**	P	**Pn**	**20 13 12.0**	**-1.7**
	4.3nm543nm,0.7s						
TPI	**Tanjungpandan**	**6.20**	**65**	P	**Pn**	**20 13 15.2**	**+0.8**
	1.6nm1μm36nm,0.8s						
XMIS	**Christmas Isla**	**6.21**	**145**	P	**Pn**	**20 13 07.8**	**-6.7**
	5.8nm686nm,1.2s						
JCJI	**Jatiwangi**	**6.32**	**100**	P	**Pn**	**20 13 20.1**	**+4.1**
	2.4nm6μm414nm,1.2s						
MNSI	**Mandailing Nat**	**6.60**	**338**	P	**Pn**	**20 13 18.5**	**-1.4**
	0.6nm2μm149nm,0.6s						
MYKOM	**Kota Tinggi**	**7.36**	**14**	P	**Pn**	**20 13 31.1**	**+0.8**
	0.6nm1μm85nm,0.8s						
KGM	**Kluang**	**7.47**	**10**	P	**Pn**	**20 13 35.2**	**+3.5**
BJII	**Banjamegara**	**7.89**	**105**	P	**Pn**	**20 13 38.0**	**+0.5**
	0.6nm128nm,0.8s						
COCO	**West Island**	**8.48**	**217**	*e*P	**Pn**	**20 13 44.0**	**-1.6**
	166nm,0.4s						
COCO	**West Island**	**8.48**	**217**	*e*P	**Pn**	**20 13 44.0**	**-1.7**
COCO				pmax	pmax		
	comp=Z,166nm,0.4s						
COCO	**West Island**	**8.48**	**217**	P	**Pn**	**20 13 43.8**	**-1.9**
	comp=Z,311nm,0.9s						
SMRI	**Semarang**	**8.54**	**102**	P	**Pn**	**20 13 47.4**	**+0.9**
	comp=Z,151nm,0.9s						
YOGI	**Yogyakarta**	**8.57**	**107**	P	**Pn**	**20 13 48.0**	**+1.1**
	comp=Z,585nm,1.1s						
FRIM	**Kepong**	**8.57**	**357**	P	**Pn**	**20 13 52.5**	**+5.5**
PSI	**Prapat**	**8.70**	**339**	Pn	**Pn**	**20 13 45.0**	**-3.7**
	comp=Z,1.9nm,0.3s,baz=144,slow=10,SNR=9.5						
PSI				LR	LR	20 17 44.5	
	comp=Z,9μm,20.6s,baz=152,slow=43						
PSI	**Prapat**	**8.70**	**339**	P	**Pn**	**20 13 45.0**	**-3.7**
UGM	**Wanagama**	**8.81**	**107**	P	**Pn**	**20 13 49.9**	**-0.4**
	comp=Z,358nm,0.8s						
TSI	**Tuntungan**	**9.48**	**339**	P	**Pn**	**20 13 59.3**	**-0.1**
	comp=Z,48nm,0.7s						
PCJI	**Pacitan**	**9.52**	**108**	P	**Pn**	**20 13 58.7**	**-1.2**
	comp=Z,175nm,0.9s						
NGJI	**Ngawi**	**9.59**	**102**	P	**Pn**	**20 14 03.4**	**+2.5**
	comp=Z,157nm,0.8s						
IPM	**Ipoh**	**9.85**	**354**	*e*P	**Pn**	**20 14 04.5**	**+0.1**
	comp=Z,68nm,1.2s						
IPM	**Ipoh**	**9.85**	**354**	P	**Pn**	**20 14 04.6**	**+0.1**
	comp=Z,28nm,0.8s						
TPTI		**9.85**	**331**	P	**Pn**	**20 14 04.2**	**-0.3**
	comp=Z,26nm,0.6s						
SJI	**Sawahan**	**9.96**	**104**	P	**Pn**	**20 14 06.1**	**+0.1**
	comp=Z,2μmcomp=Z,118nm,0.8s						
PWJI	**Pagerwojo**	**10.07**	**106**	P	**Pn**	**20 14 06.1**	**-1.4**
	comp=Z,166nm,0.8s						
KULM	**Kulim**	**10.69**	**353**	P	**Pn**	**20 14 21.9**	**+5.9**
KULM	**Kulim**	**10.69**	**353**	*e*P	**Pn**	**20 14 13.0**	**-3.0**
	comp=Z,34nm,1.0s						
KULM	**Kulim**	**10.69**	**353**	P	**Pn**	**20 14 15.1**	**-0.9**
	comp=Z,825nmcomp=Z,24nm,0.8s						
KTGM	**Kuala Trenggan**	**10.70**	**6**	P	**Pn**	**20 14 18.1**	**+2.0**
STKI	**Sintang**	**10.89**	**60**	P	**Pn**	**20 14 20.9**	**+2.2**
	comp=Z,2μmcomp=Z,58nm,1.1s						
GMJI	**Gumukmas**	**11.70**	**105**	P	**Pn**	**20 14 31.3**	**+1.4**
	comp=Z,86nm,0.9s						
KMMI	**Kalianget**	**11.99**	**99**	P	**Pn**	**20 14 34.2**	**+0.3**
	comp=Z,142nm,1.3s						
JAGI	**Jajag, Banyuwa**	**12.43**	**105**	P	**Pn**	**20 14 38.1**	**-1.7**
	comp=Z,3μmcomp=Z,258nm,0.8s						
SBUM	**Sibu**	**12.82**	**53**	P	**Pn**	**20 14 46.7**	**+1.5**
	comp=Z,856nmcomp=Z,41nm,1.8s						
SRBI	**Singaraja**	**13.38**	**102**	P	**Pn**	**20 14 53.3**	**+0.5**
	comp=Z,144nm,0.9s						
IGBI	**Denpasar**	**13.47**	**105**	P	**Pn**	**20 14 54.4**	**+0.4**
	comp=Z,269nm,0.8s						
KHKI	**Kahang-Kahang**	**13.81**	**103**	P	**Pn**	**20 14 59.0**	**+0.3**
	comp=Z,81nm,0.8s						
BTM	**Bintulu**	**13.96**	**53**	P	**Pn**	**20 15 03.2**	**+2.4**
MTNI	**Mataram**	**14.41**	**104**	P	**Pn**	**20 15 05.9**	**-1.0**
	comp=Z,8μmcomp=Z,174nm,0.7s						
BMNI	**Bima**	**16.85**	**102**	P	**Pn**	**20 15 37.0**	**-1.6**
	comp=Z,44nm,1.0s						
KAPI	**Kappang**	**17.67**	**90**	P	**Pn**	**20 15 46.6**	**-2.1**
	comp=Z,2.1nm,0.3s,baz=237,slow=7.6,SNR=2.8						
KAPI	**Kappang**	**17.67**	**90**	*e*P	**Pn**	**20 15 47.4**	**-1.4**
	comp=Z,27nm,0.8s						
KAPI	**Kappang**	**17.67**	**90**	P	**Pn**	**20 15 50.3**	**+1.5**
	comp=Z,15nm,1.1s						
SPSI	**Sidrap Palu**	**17.75**	**86**	P	**Pn**	**20 15 51.5**	**+1.7**
	comp=Z,645nmcomp=Z,44nm,1.0s						
TTSI	**Tana Toraja**	**17.91**	**83**	P	**Pn**	**20 15 52.0**	**+0.3**
	comp=Z,1μmcomp=Z,80nm,1.6s						
BKSI	**Bulukumba**	**18.03**	**91**	P	**Pn**	**20 15 50.7**	**-2.5**
	comp=Z,622nmcomp=Z,50nm,1.1s						
KKM	**Kota Kinabalu**	**18.16**	**52**	P	**Pn**	**20 15 54.5**	**-0.4**
KKM	**Kota Kinabalu**	**18.16**	**52**	P	**Pn**	**20 15 56.8**	**+2.0**
	comp=Z,1μmcomp=Z,48nm,1.1s						
MSSI	**Masamba**	**18.48**	**82**	P	**Pn**	**20 15 59.1**	**+0.4**
	comp=Z,8μmcomp=Z,186nm,1.1s						
TSM	**Tawau**	**18.53**	**59**	P	**Pn**	**20 16 00.3**	**+1.0**
WSI	**Waingapu**	**18.61**	**104**	P	**Pn**	**20 15 57.8**	**-2.6**
	comp=Z,4μmcomp=Z,315nm,0.6s						
SDKM	**Sandakan**	**18.70**	**54**	P	**Pn**	**20 16 01.1**	**-0.3**
KDM	**Kudat**	**19.18**	**51**	P	**Pn**	**20 16 05.4**	**-1.8**
MYLDM	**Lahad Datu**	**19.52**	**58**	P	**Pn**	**20 16 11.1**	**-0.2**
MYLDM	**Lahad Datu**	**19.52**	**58**	P	**Pn**	**20 16 10.5**	**-0.8**
	comp=Z,2μmcomp=Z,70nm,0.8s						
MMRI	**Maumere**	**20.33**	**100**	P	**P**	**20 16 15.3**	**-3.3**
	comp=Z,1μmcomp=Z,101nm,0.9s						
BBSI	**Bau Bau**	**20.46**	**91**	P	**P**	**20 16 21.6**	**+1.5**
	comp=Z,30nm,1.1s						
KDI	**Kendari**	**20.58**	**87**	P	**P**	**20 16 20.6**	**-0.8**
	comp=Z,54nm,1.1s						
MRSI	**Marisa**	**20.73**	**74**	P	**P**	**20 16 22.4**	**-0.6**
	comp=Z,2μmcomp=Z,133nm,0.6s						
LUWI	**Luwuk**	**21.16**	**79**	P	**P**	**20 16 29.8**	**+2.1**
BDT	**Bhumibol Dam**	**22.68**	**353**	P	**P**	**20 16 42.0**	**-1.8**
CM31	**Chiang Mai Arr**	**23.89**	**353**	*e*P	**P**	**20 16 54.5**	**-1.3**
	comp=Z,24nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**23.89**	**353**	P	**P**	**20 16 54.2**	**-1.5**
	comp=Z,17nm,0.7s,mb4.6,baz=185,slow=9.6,SNR=45						
CMAR				LR	LR	20 27 25.4	
	comp=Z,1μm,19.3s,MS4.3,baz=188,slow=40						
CMAR	**Chiang Mai Arr**	**23.89**	**353**	P	**P**	**20 16 54.3**	**-1.5**
CHTO	**Chiang Mai**	**24.24**	**353**	*e*P	**P**	**20 16 55.7**	**-3.3**
	comp=Z,14nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**24.24**	**353**	*e*P	**P**	**20 16 55.7**	**-3.3**
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
CHRT	**Chiangrai**	**25.19**	**355**	⇓P	**P**	**20 17 07.0**	**-0.7**
	comp=Z,132nm,1.0s,mb5.4						
QIZ	**Qiongzhong**	**25.46**	**17**	P	**P**	**20 17 07.4**	**-2.7**
QIZ				S	**S**	**20 21 35.6**	**+0.6**
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.2						
QIZ				pmax	pmax		
	comp=Z,230nm,9.8s						
QIZ				LR	LR		
	comp=N,2μm,16.4s						
QIZ				LR	LR		
	comp=Z,2μm,17.3s,MS4.7						
FITZ	**Fitzroy Crossi**	**26.31**	**121**	P	**P**	**20 17 17.1**	**-0.8**
	comp=Z,6.8nm,0.4s,mb4.5,baz=302,slow=6.2,SNR=59						
FITZ	**Fitzroy Crossi**	**26.31**	**121**	*e*P	**P**	**20 17 16.9**	**-1.0**
	comp=Z,16nm,0.6s,mb4.7						
FITZ				*e*S	**S**	**20 22 00.6**	**+12**
TRD	**Trivandrum**	**28.55**	**299**	⇓*e*PKP	sP	20 17 57.7	+5.4
KMI	**Kunming**	**30.33**	**1**	P	**P**	**20 17 54.5**	**+0.8**
KMI				pP	pP	20 18 06.1	+2.4
KMI				sP	sP	20 18 09.1	+1.2
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
KMI				pmax	pmax		
	comp=Z,130nm,3.9s						
KMI				LR	LR		
	comp=N,2μm,16.7s,MS5.0						
KMI				LR	LR		
	comp=E,2μm,16.2s,MS5.0						
KMI				LR	LR		
	comp=Z,2μm,17.2s,MS4.8						
NWAO	**Narrogin (SRO)**	**30.86**	**155**	P	**P**	**20 17 58.6**	**+0.3**
	comp=Z,16nm,1.0s,mb4.8,baz=329,slow=5.9,SNR=5.3						
NWAO	**Narrogin (SRO)**	**30.86**	**155**	P	**P**	**20 17 58.6**	**+0.3**
SHL	**Shillong**	**32.30**	**343**	*ex*	**P**	**20 18 12.0**	**+1.0**
WRA	**Warramunga Arr**	**34.60**	**118**	P	**P**	**20 18 30.5**	**-0.7**
	comp=Z,7.0nm,0.4s,mb4.9,baz=302,slow=9.0,SNR=89						
WRA				S	**S**	**20 23 59.6**	**+1.2**
	comp=Z,2.2nm,1.2s,baz=294,slow=15,SNR=4.6						
WRA				LR	LR	20 33 24.4	
	comp=Z,452nm,21.3s,MS4.2,baz=295,slow=38						
WRA	**Warramunga Arr**	**34.60**	**118**	P	**P**	**20 18 30.5**	**-0.7**
WRA				S	**S**	**20 23 59.6**	**+1.2**
WB2	**Warramunga Arr**	**34.61**	**118**	*e*P	**P**	**20 18 30.1**	**-1.2**
ODAN	**Odare**	**35.04**	**337**	*e*P	**P**	**20 18 36.2**	**+1.3**
	comp=Z,29nm,0.5s,mb5.4						
TAPN	**Taplejung**	**35.36**	**338**	*e*P	**P**	**20 18 38.9**	**+1.3**
	comp=Z,66nm,0.8s,mb5.6						
ASAR	**Alice Springs**	**35.67**	**124**	P	**P**	**20 18 40.4**	**-0.1**
	comp=Z,4.4nm,0.4s,mb4.7,baz=302,slow=8.0,SNR=141						
ASAR				S	**S**	**20 24 20.0**	**+5.1**
	comp=Z,2.6nm,1.2s,baz=292,slow=18,SNR=4.6						
ASAR	**Alice Springs**	**35.67**	**124**	P	**P**	**20 18 40.4**	**0.0**
ASAR				S	**S**	**20 24 20.0**	**+5.1**
LSA	**Lhasa**	**36.41**	**344**	P	**P**	**20 18 46.3**	**-0.3**
PKI	**Pulchoki**	**36.48**	**335**	*e*P	**P**	**20 18 48.4**	**+1.2**
	comp=Z,5.7nm,0.3s,mb4.9						
PKIN	**Phulchoki**	**36.49**	**335**	*e*P	**P**	**20 18 48.5**	**+1.2**
	comp=Z,9.7nm,0.4s,mb5.1						
GUN	**Gumba**	**36.58**	**336**	*e*P	**P**	**20 18 49.3**	**+1.2**
	comp=Z,60nm,0.5s,mb5.7						
DMN	**Daman**	**36.64**	**334**	*e*P	**P**	**20 18 50.2**	**+1.6**
	comp=Z,11nm,0.4s,mb5.0						
KKN	**Kakani**	**36.73**	**335**	*e*P	**P**	**20 18 50.6**	**+1.3**
	comp=Z,20nm,0.4s,mb5.3						
GKN	**Gorkha**	**37.19**	**334**	*e*P	**P**	**20 18 54.6**	**+1.4**
	comp=Z,24nm,0.4s,mb5.4						
WHN	**Wuhan**	**37.63**	**18**	P	**P**	**20 18 57.0**	**+0.1**
WHN				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.0						
WHN				LR	LR		
	comp=N,3μm,19.2s,MS5.2						
WHN				LR	LR		
	comp=E,2μm,16.6s,MS5.2						
WHN				LR	LR		
	comp=Z,3μm,19.2s,MS5.2						
DANN	**Dangsing**	**37.88**	**333**	*e*P	**P**	**20 19 00.6**	**+1.6**
	comp=Z,52nm,0.4s,mb5.6						
XAN	**Xi'an**	**39.75**	**9**	P	**P**	**20 19 13.5**	**-1.2**
XAN				pP	pP	20 19 19.0	-5.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
NJ2	**Nanjing**	**40.54**	**22**	*e*P	**P**	**20 19 20.9**	**-0.3**
NJ2				pP	pP	20 19 30.8	-0.7
NJ2				sP	sP	20 19 34.8	-0.8
NJ2				PP	PP	20 20 58.3	+3.2
NJ2				S	**S**	**20 25 29.5**	**+1.3**
NJ2				sS	sS	20 25 47.5	+2.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.9						
NJ2				pmax	pmax		
	comp=Z,300nm,6.7s						
NJ2				LR	LR		
	comp=N,900nm,24.9s,MS4.6						
NJ2				LR	LR		
	comp=E,850nm,27.6s,MS4.6						
NJ2				LR	LR		
	comp=Z,1μm,24.2s,MS4.6						
SSE	**Sheshan**	**40.64**	**26**	P	**P**	**20 19 18.3**	**-3.8**
SSE				sP	sP	20 19 30.5	-6.0
SSE				PcP	PcP	20 21 16.3	-7.3
SSE				S	**S**	**20 25 28.4**	**-1.3**
SSE				sS	sS	20 25 44.3	-2.3
SSE				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.9						
SSE				pmax	pmax		
	comp=Z,140nm,5.7s						
SSE				LR	LR		
	comp=N,640nm,15.6s,MS4.7						
SSE				LR	LR		
	comp=E,410nm,15.8s,MS4.7						
SSE				LR	LR		
	comp=Z,840nm,18.0s,MS4.6						
LZH	**Lanzhou**	**41.29**	**2**	*e*P	**P**	**20 19 27.8**	**+0.5**
LZH				pP	pP	20 19 38.0	+0.4
LZH				sP	sP	20 19 42.9	+1.1
LZH				PcP	PcP	20 21 26.9	+1.3
LZH				*e*S	**S**	**20 25 36.4**	**-2.8**
LZH				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,98nm,4.7s						
LZH				LR	LR		
	comp=N,3μm,16.2s,MS5.3						
LZH				LR	LR		
	comp=E,2μm,17.3s,MS5.3						
LZH				LR	LR		
	comp=Z,3μm,15.1s,MS5.3						
DDI	**Dehra Dun**	**42.28**	**329**	*ex*	**P**	**20 19 36.0**	**+0.5**
GTA	**Gaotai**	**44.62**	**358**	*e*P	**P**	**20 19 54.4**	**+0.2**
GTA				pP	pP	20 19 58.9	-5.7
GTA				sP	sP	20 20 02.0	-6.7
GTA				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.4						
GTA				pmax	pmax		
	comp=Z,180nm,4.7s						
GTA				LR	LR		
	comp=N,2μm,17.1s,MS5.1						
GTA				LR	LR		
	comp=E,810nm,15.9s,MS5.1						
GTA				LR	LR		
	comp=Z,2μm,18.0s,MS5.1						
PMG	**Port Moresby**	**44.92**	**98**	*e*P	**P**	**20 19 54.7**	**-2.5**
	comp=Z,39nm,0.9s,mb5.2						
PMG	**Port Moresby**	**44.92**	**98**	*e*P	**P**	**20 19 54.7**	**-2.4**
PMG				pmax	pmax		
	comp=Z,39nm,0.9s						
CTA	**Charters Tower**	**45.39**	**113**	*e*P	**P**	**20 20 00.8**	**0.0**
	comp=Z,18nm,0.8s,mb5.0						
CTAO	**Charters Tower**	**45.39**	**113**	*e*P	**P**	**20 20 00.3**	**-0.4**
	comp=Z,72nm,1.3s,mb5.3						
CTAO	**Charters Tower**	**45.39**	**113**	*e*P	**P**	**20 20 00.4**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,73nm,1.3s,mb5.3						
STKA	**Stephens Creek**	**45.42**	**130**	P	**P**	**20 20 01.3**	**+0.4**
	comp=Z,16nm,0.6s,mb5.0,baz=298,slow=7.9,SNR=52						
STKA				LR	LR	20 39 24.5	
	comp=Z,1μm,21.3s,MS4.8,baz=296,slow=37						
STKA	**Stephens Creek**	**45.42**	**130**	*e*P	**P**	**20 20 01.1**	**+0.2**
	comp=Z,12nm,0.6s,mb4.9						
BTO	**Baotou**	**46.35**	**8**	*e*P	**P**	**20 20 07.3**	**-0.7**
BJT	**Baijiatuau**	**47.02**	**15**	*e*P	**P**	**20 20 12.1**	**-1.1**
	comp=Z,8.4nm,0.4s,mb5.0						
BJT	**Baijiatuau**	**47.02**	**15**	*e*P	**P**	**20 20 12.1**	**-1.1**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.4s						
BJI	**Beijing**	**47.05**	**15**	P	**P**	**20 20 12.4**	**-1.0**
BJI				S	**S**	**20 27 12.8**	**+10**
BJI				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
BJI				LR	LR		
	comp=N,2μm,18.3s,MS5.2						
BJI				LR	LR		
	comp=E,500nm,13.7s,MS5.2						
BJI				LR	LR		
	comp=Z,1μm,18.3s,MS4.8						
JNU	**Nakatsue**	**47.08**	**34**	*e*P	**P**	**20 20 12.3**	**-1.5**
	comp=Z,5.2nm,0.6s,mb4.6						
KSRS	**Korea Array**	**48.98**	**27**	P	**P**	**20 20 27.4**	**-1.0**
	comp=Z,8.1nm,0.5s,mb5.0,baz=226,slow=6.8,SNR=48						
KBL	**Kabul**	**50.44**	**324**	*e*P	**P**	**20 20 39.7**	**+0.1**
	comp=Z,4.5nm,0.8s,mb4.5						
KBL	**Kabul**	**50.44**	**324**	*e*P	**P**	**20 20 39.7**	**+0.1**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
CBIJ	**Chichi jima**	**50.50**	**48**	LR	LR	20 40 17.4	
	comp=Z,205nm,20.6s,MS4.1,baz=227,slow=34						
WMQ	**Urumqi**	**50.66**	**347**	P	**P**	**20 20 42.0**	**+1.0**
WMQ				pP	pP	20 20 52.0	+0.5
WMQ				sP	sP	20 20 56.0	+0.4
WMQ				PP	PP	20 22 41.0	+3.6
WMQ				S	**S**	**20 28 02.0**	**+8.4**
WMQ				ScS	ScS	20 30 27.0	-2.2
WMQ				pmax	pmax		
	comp=Z,54nm,0.8s,mb5.5						
WMQ				pmax	pmax		
	comp=Z,150nm,5.0s						
WMQ				LR	LR		
	comp=N,480nm,18.0s,MS4.8						
WMQ				LR	LR		
	comp=E,590nm,18.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,550nm,18.0s,MS4.6						
SNY	**Shenyang**	**50.94**	**21**	⇑P	**P**	**20 20 39.9**	**-3.3**
SNY				pmax	pmax		
	comp=Z,340nm,4.5s						
SNY				LR	LR		
	comp=N,600nm,19.6s,MS4.9						
SNY				LR	LR		
	comp=E,860nm,17.7s,MS4.9						
SNY				LR	LR		
	comp=Z,690nm,15.7s,MS4.8						
YNG	**Young**	**51.62**	**130**	*e*P	**P**	**20 20 44.5**	**-4.0**
	comp=Z,7.5nm,0.6s,mb4.8						
JHJ	**Hachijo jima 2**	**52.42**	**40**	LR	LR	20 42 40.0	
	comp=Z,261nm,18.5s,MS4.3,baz=121,slow=36						
CAN	**Canberra**	**52.47**	**131**	*e*P	**P**	**20 20 55.3**	**+0.4**
	comp=Z,14nm,0.9s,mb4.9						
CAN	**Canberra**	**52.47**	**131**	*e*P	**P**	**20 20 55.3**	**+0.4**
CAN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
ARMA	**Armidale**	**52.83**	**124**	*e*P	**P**	**20 21 01.3**	**+3.7**
SONM	**Songino Array**	**53.13**	**4**	P	**P**	**20 21 00.1**	**+0.6**
	comp=Z,23nm,0.9s,mb5.1,baz=186,slow=9.0,SNR=70						
SONM	**Songino Array**	**53.13**	**4**	P	**P**	**20 21 00.1**	**+0.7**
ULN	**Ulaanbaatar**	**53.21**	**4**	*e*P	**P**	**20 20 58.1**	**-1.9**
	comp=Z,25nm,0.9s,mb5.1						
ULN	**Ulaanbaatar**	**53.21**	**4**	*e*P	**P**	**20 20 58.1**	**-1.9**
ULN				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
CN2	**Changchun**	**53.33**	**21**	*e*P	**P**	**20 20 59.8**	**-1.2**
CN2				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
CN2				LR	LR		
	comp=N,600nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=E,900nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=Z,700nm,18.0s,MS4.8						
MAJO	**Matsushiro**	**53.71**	**36**	*e*P	**P**	**20 21 00.8**	**-3.1**
	comp=Z,8.6nm,0.8s,mb4.7						
MAJO	**Matsushiro**	**53.71**	**36**	*e*P	**P**	**20 21 00.8**	**-3.1**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MAT	**Matsushiro**	**53.71**	**36**	P	**P**	**20 21 00.7**	**-3.2**
MAT				*e*S	**S**	**20 28 39.0**	**+3.2**
MJAR	**Matsushiro Arr**	**53.71**	**36**	P	**P**	**20 21 01.0**	**-2.9**
	comp=Z,4.5nm,0.7s,mb4.5,baz=224,slow=8.8,SNR=16						
MJAR				LR	LR	20 44 50.8	
	comp=Z,177nm,19.6s,MS4.1,baz=210,slow=37						
MJAR	**Matsushiro Arr**	**53.71**	**36**	P	**P**	**20 21 01.0**	**-2.9**
TKM2	**Tokmak 2**	**53.72**	**336**	*e*P	**P**	**20 21 03.6**	**-0.2**
	comp=Z,12nm,0.7s,mb4.9						
TKM2	**Tokmak 2**	**53.72**	**336**	*e*P	**P**	**20 21 03.6**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
AAK	**Ala-Archa**	**53.94**	**335**	*e*P	**P**	**20 21 06.2**	**+0.8**
	comp=Z,4.0nm,0.8s,mb4.4						
AAK	**Ala-Archa**	**53.94**	**335**	*c i*P	**P**	**20 21 05.1**	**-0.3**
FRU	**Bishkek**	**54.05**	**335**	*e*P	**P**

comp=Z,59nm,21.9s
DZM *e*SS SS 20 35 15.7 +12
comp=Z,152nm,23.2s
DZM *e*LR LR 20 41 53.0
comp=Z,575nm,24.8s
CLNS Chul'man 64.77 14 *e*P **P 20 22 16.0 -4.0**
CLNS pmax pmax
comp=N,13nm,1.2s
CLNS pmax pmax
comp=Z,12nm,1.1s,mb4.8
CLNS MLR MLR
comp=Z,674nm,16.0s,MS4.9
CLNS MLR MLR
comp=E,336nm,18.0s,MS4.8
CLNS MLR MLR
comp=N,391nm,15.0s,MS4.8
ABKAR Akbulak array 65.56 331 *e*P **P 20 22 25.1 -0.1**
comp=N,13nm,0.6s,mb5.1
MAW Mawson 67.54 195 P **P 20 22 39.1 +1.4**
comp=N,3.7nm,0.9s,mb4.4,baz=16,slow=10.0,SNR=8.1
MAW Mawson 67.54 195 P **P 20 22 39.1 +1.4**
GNI Garni 69.35 316 *e*P **P 20 22 46.9 -2.6**
GNI pmax pmax
comp=Z,18nm,2.5s
YAK Yakutsk 70.52 13 *e*P **P 20 22 54.3 -1.8**
comp=Z,27nm,0.6s,mb5.3
YAK Yakutsk 70.52 13 *e*P **P 20 22 54.0 -2.2**
YAK pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
SVE Sverdlovsk 70.56 337‖ *e*P **P 20 22 57.0 +0.5**
SVE *e*S S 20 32 26.3 +19
SVE pmax pmax
comp=Z,35nm,0.9s,mb5.3
SVE MLR MLR
comp=Z,443nm,21.0s,MS4.7
ZEI Tsey 71.08 319 *e*P **P 20 23 00.4 +0.4**
ZEI pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
ARU Arti 71.09 336 *e*P **P 20 22 59.6 -0.2**
comp=Z,5.5nm,0.6s,mb4.7
ARU Arti 71.09 336*c i*P **P 20 22 59.8 0.0**
ARU *e* 20 23 18.3
ARU *e* 20 25 31.9
ARU PPP 20 27 25.4
ARU S S 20 32 16.4 +2.7
ARU SS SS 20 36 48.6 +0.8
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,392nm,23.0s,MS4.6
KIV Kislovodsk 72.40 319 *e*P **P 20 23 08.2 +0.3**
KIV *e* 20 23 30.4
KIV *e*S S 20 32 28.8 -0.5
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KIV MLR MLR
comp=Z,129nm,18.0s,MS4.2
MALT Malatya 73.09 313 P **P 20 23 14.1 +2.0**
comp=Z,7.9nm,1.3s,mb4.5
MALT Malatya 73.09 313 P **P 20 23 14.1 +1.9**
MALT pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
SOC Sochi 74.20 318 *e*P **P 20 23 23.1 +4.6**
SOC *e*S S 20 32 46.4 -3.3
SOC pmax pmax
comp=Z,24nm,1.0s,mb5.1
SOC MLR MLR
comp=Z,129nm,8.0s
PETK Petropavlovsk- 74.69 31 P **P 20 23 19.9 -1.3**
comp=Z,5.2nm,0.6s,mb4.7,baz=210,slow=5.1,SNR=4.5
PETK LR LR 20 56 30.1
comp=Z,106nm,18.9s,MS4.2,baz=256,slow=36
PETK Petropavlovsk- 74.69 31 P **P 20 23 19.9 -1.3**
PET Petropavlovsk 75.14 31*α i*P **P 20 23 22.3 -1.5**
PET *e* 20 26 09.7
PET *e*S S 20 32 58.1 -1.7
PET *e*SS SS 20 37 50.6 +0.9
PET *e*SSS 20 41 01.7
PET pmax pmax
comp=Z,47nm,0.6s,mb5.6
PET pmax pmax
comp=Z,100nm,20.9s
PET MLR MLR
comp=Z,400nm,20.0s,MS4.7
BOSA Boshof 75.82 242 P **P 20 23 29.4 +1.1**
comp=Z,1.9nm,0.9s,mb4.0,baz=125,slow=10,SNR=2.3
BOSA Boshof 75.82 242 P **P 20 23 29.4 +1.1**
BR131 Keskin Array S 77.08 313 *e*P **P 20 23 34.9 -0.2**
comp=Z,2.1nm,0.8s,mb4.1
BRTR Keskin Array B 77.08 313 P **P 20 23 35.1 0.0**
comp=Z,2.4nm,0.8s,mb4.2,baz=131,slow=7.0,SNR=9.3
BRTR Keskin Array B 77.08 313 P **P 20 23 35.1 0.0**
VSR Storozhevoye 77.69 325 *e*P **P 20 23 37.7 -0.6**
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
SEY Seymchan 78.02 21 *e*P **P 20 23 39.6 -0.2**
TIXI Tiksi 78.88 8 *e*P **P 20 23 42.3 -2.1**
comp=Z,5.3nm,0.6s,mb4.7
TIXI Tiksi 78.88 8 *e*P **P 20 23 40.7 -3.7**
TIXI pmax pmax
comp=Z,12nm,1.5s,mb4.6
TIXI MLR MLR
comp=Z,1μm,17.0s,MS5.3
PRGR Permogore 79.56 336 *e*P **P 20 23 47.8 -0.5**
PRGR *e* 20 23 54.1
PRGR pmax pmax
comp=Z,12nm,1.0s,mb4.8
MOS Moscow 80.42 329 *e*P **P 20 23 53.1 0.0**
MOS *e* 20 26 57.2
KLMR Klimovskoe 81.73 334 *e*P **P 20 23 58.3 -1.7**
KLMR pmax pmax
comp=Z,20nm,1.3s,mb4.9
KLMR MLR MLR
comp=Z,211nm,13.0s,MS4.7
AKASG Malin Array Be 83.38 322 P **P 20 24 08.5 -0.3**
comp=Z,2.1nm,0.6s,mb4.4,baz=102,slow=4.4,SNR=9.0
AKASG LR LR 21 04 55.7
comp=Z,127nm,21.6s,MS4.3,baz=75,slow=38
AKASG Malin Array Be 83.38 322 P **P 20 24 08.5 -0.3**
AKASG LR LR 21 04 55.7
AKASG Malin Array Be 83.38 322 *i* P **P 20 24 09.0 +0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
VRI Vrincioaia 83.69 317‖ *i*P **P 20 24 11.9 +1.4**
MLR Muntele Rosu 84.13 317‖ *i*P **P 20 24 14.2 +1.4**
BURAR Bucovina Array 85.11 319‖ *i*P **P 20 24 19.6 +1.9**
BUR08 Bucovina Ar. S 85.13 319 *e*P **P 20 24 19.5 +1.7**
BILL Bilibino 85.62 20 *e*P **P 20 24 17.2 -2.6**
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.5
JOF Joensuu 86.12 334 *e*P **P 20 24 24.6 +2.3**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.4
JOF Joensuu 86.12 334 *e*p **P 20 24 24.6 +2.3**
comp=Z,0.5nm,0.4s,mb4.1
UZH Uzhgorod 87.24 319 *e*P **P 20 24 20.0 -8.2**
UZH *i* 20 24 36.7
SUW Suwalki 87.79 325 *e*P **P 20 24 31.0 +0.3**
comp=Z,31nm,1.0s,mb5.5
SUW Suwalki 87.79 325 *e*P **P 20 24 31.0 +0.3**
SUW pmax pmax
comp=Z,31nm,1.0s,mb5.5
FINES FINESS Array B 88.03 332 P **P 20 24 32.0 +0.4**
comp=Z,2.8nm,0.6s,mb4.7,baz=108,slow=6.2,SNR=12
FINES FINESS Array B 88.03 332 P **P 20 24 32.1 +0.5**
KAF Kangasniemi 88.09 333 *e*P **P 20 24 31.6 -0.3**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.4
KAF Kangasniemi 88.09 333 *e*p **P 20 24 31.6 -0.3**
comp=Z,0.6nm,0.4s,mb4.2
OKC Ostrava-Krasne 90.13 320 *e*P **P 20 24 43.4 +1.6**
OKC smax
comp=N,4.0nm,0.6s
OKC Ostrava-Krasne 90.13 320 *e*P **P 20 24 43.4 +1.6**
ARCES ARCESS Array B 90.32 340 P **P 20 24 43.0 +0.8**
comp=N,1.1nm,0.7s,mb4.3,baz=103,slow=5.4,SNR=8.4
ARCES LR LR 21 11 01.9
comp=N,170nm,20.6s,MS4.5,baz=111,slow=40
ARCES ARCESS Array B 90.32 340 P **P 20 24 43.0 +0.8**
DPC Dobruska-Polom 91.36 320 *e*P **P 20 24 48.5 +1.0**
DPC smax
comp=N,3.0nm,0.8s
DPC Dobruska-Polom 91.36 320 *e*P **P 20 24 48.5 +1.0**
GERES GERESS Array B 92.90 319 P **P 20 24 55.5 +0.9**
comp=N,0.7nm,0.6s,mb4.2,baz=73,slow=4.5,SNR=7.8
GERES GERESS Array B 92.90 319 P **P 20 24 55.6 +0.9**
CLL Collm 93.54 321 *e*S S 20 36 06.0 +2.5
CLL *e*PS PS 20 37 21.0 -0.3
CLL *e*PPS 20 37 52.0
CLL *e*SSSS 20 49 06.0
CLL LmV 21 31 00.0
comp=Z,100nm,18.2s
NOA NORSAR Array B 95.06 331 P **P 20 25 04.6 +0.3**
comp=Z,0.5nm,0.6s,mb4.1,baz=97,slow=4.5,SNR=2.7
NOA NORSAR Array B 95.06 331 P **P 20 25 04.6 +0.3**
ILAR Eielson Array 103.76 24 Pdiff Pdif 20 25 43.2 -0.3
comp=Z,0.2nm,0.6s,baz=289,slow=5.6,SNR=3.0
ILAR Eielson Array 103.76 24 P Pdif 20 25 43.2 -0.2
TBI Tubuai 104.71 116 *e*LR LR 21 00 26.9
comp=Z,258nm,29.0s
PPT Papeete 105.78 110 *e*LR LR 21 00 50.7
comp=Z,295nm,22.8s
TAOE Nuku Hiva Isla 116.44 103 *e*LR LR 21 06 10.1
comp=Z,230nm,23.5s
RKT Rikitea 117.58 119 *e*LR LR 21 06 23.4
comp=Z,285nm,29.0s
NVAR Mina Array Bea 130.84 42 PKP PKPdf 20 30 54.9 +1.6
comp=Z,1.1nm,0.6s,baz=292,slow=2.3,SNR=11
NVAR Mina Array Bea 130.84 42 PKP PKPdf 20 30 54.9 +1.6
RRI2 Red Ridge 132.11 33 *e*PKPdf PKPdf 20 30 57.6 +2.0
ULM Lac du Bonnet 132.83 16 PKP PKPdf 20 30 57.8 +1.0
comp=Z,3.0nm,0.7s,baz=207,slow=4.2,SNR=3.1
PDAR Pinedale Array 133.45 32 PKP PKPdf 20 30 58.6 +0.5
comp=Z,0.7nm,0.6s,baz=90,slow=0.9,SNR=8.3
MSU Marysvale 134.74 38 *e*PKPdf PKPdf 20 31 03.6 +2.9
MSU Marysvale 134.74 38 *e*PKIKP PKPdf 20 31 03.6 +2.9
BDFB Brasilia 143.71 234 PKP PKPdf 20 31 16.4 -1.2
comp=Z,1.7nm,0.4s,baz=165,slow=7.7,SNR=2.7
BDFB Brasilia 143.71 234 PKIKP PKPdf 20 31 16.4 -1.2
WMOK Wichita Mounta 145.03 31 *e*PKPdf PKPdf 20 31 17.9 -1.6
WMOK Wichita Mounta 145.03 31 *e*PKIKP PKPdf 20 31 17.9 -1.6
TXAR Lajitas Array 145.99 43 PKPbc PKPbc 20 31 22.6 +0.6
comp=Z,6.3nm,0.5s,baz=321,slow=0.8,SNR=90
SIUC Southern Illin 146.23 16 *e*PKPdf PKPdf 20 31 22.3 +0.9
JCT Junction City 147.68 37 *e*PKPbc PKPbc 20 31 25.6 -1.3

IDC 17 20:15:07.5±2.5, 6°.59S×102°.08E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/19, mbtmp3.9/7, MS4.2/2, Ms1 4.2/2, ms1mx3.5/31, Error ellipse: s-maj=88.2km s-min=20.4km az=55.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**25.08**	**353**	P	P	20 20 34.1	+0.3
	2.6nm,0.8s,baz=183,slow=8.6,SNR=7.1						
WRA	**Warramunga Arr**	**34.00**	**116**	P	P	20 21 54.5	+1.2
	0.6nm,0.6s,baz=305,slow=8.9,SNR=2.7						
ASAR	**Alice Springs**	**34.97**	**122**	P	P	20 22 01.2	-0.4
	0.5nm,0.6s,baz=304,slow=7.9,SNR=2.3						
GUMO	**Guam**	**46.98**	**65**	LR	LR	20 43 17.0	
	comp=Z,210nm,18.5s,baz=250,slow=36						
KSRS	**Korea Array**	**50.02**	**27**	P	P	20 24 03.3	-0.5
	0.9nm,0.5s,baz=225,slow=7.2,SNR=4.5						
SONM	**Songino Array**	**54.32**	**4**	P	P	20 24 35.6	0.0
	1.3nm,0.7s,baz=184,slow=8.5,SNR=4.0						
MKAR	**Makanchi Array**	**55.98**	**344**	P	P	20 24 48.1	+0.5
	1.6nm,0.7s,baz=138,slow=7.4,SNR=5.5						
HNR	**Honiara**	**57.32**	**97**	LR	LR	20 49 14.2	
	comp=Z,238nm,20.2s,baz=69,slow=36						
ZALV	**Zalesovo Beam**	**62.04**	**349**	P	P	20 25 29.9	+0.3
	1.5nm,0.7s,baz=176,slow=5.8,SNR=3.7						
TXAR	**Lajitas Array**	**146.82**	**44**	PKPbc	PKPbc	20 34 50.2	-2.2
	0.4nm,0.7s,baz=224,slow=3.8,SNR=3.4						

*IDC **17** 20:15:15.8±6.6, 26°.79N×55°.82E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.4/25, mbtmp3.7/3, Error ellipse: s-maj=129.7km s-min=51.2km az=110.0*
*CSEM **17** 20:15:15.9±0.9, 26°.70N×56°.17E, h10km, ML3.7, Error ellipse: s-maj=22.0km s-min=9.6km az=132.0*
*ISCJB **17** 20:15:16.1±1.2, 26°.84N±0°.06×55°.94E±0°.08, h13km±10km, mb3.6/4, Error ellipse: s-maj=14.0km s-min=6.6km az=36.8*
*SGS **17** 20:15:16.8, 27°.21N×56°.09E, h16km*
*TEH **17** 20:15:18.8, 26°.82N×56°.11E, h7km*
*NEIC **17** 20:15:20.3, 27°.25N×55°.96E, h5km, mb3.6/5, ML3.2(THR), After THR.*
*KISR **17** 20:15:22.1±1.0, 27°.80N×55°.53E, h34km±999km, ML3.8*

ISC 17 20:15:17.7±1.4, 26°.84N±0°.05×55°.95E±0°.08, h8km±12km, n47, σ1°52/61, mb3.6/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.59**	**20**	*e*Pg	**Pg**	**20 15 25.3**	**-3.8**
BNDS				*e*Sg	**Sg**	**20 15 29.3**	**-7.5**
IBND	**Bandar-abas**	**0.81**	**41**	*e*Pg	**Pg**	**20 15 32.0**	**-1.1**
IBND				*e*Pg	**Pg**	**20 15 32.4**	**-0.8**
IBND				*e*Sg	**Sg**	**20 15 41.7**	**-1.9**
IBND				*e*		20 16 21.1	
	comp=Z,38μm,0.3s						
IBND				*e*		20 16 21.2	
	comp=Z,50μm,0.4s						
IBND	**Bandar-abas**	**0.81**	**41**	*e*Pg	**Pg**	**20 15 32.0**	**-1.1**
KRBR	**Kerman**	**3.21**	**13**	*e*Pn	**Pn**	**20 16 08.3**	**-0.1**
ISRV	**Sarvestan**	**3.56**	**316**	*e*Pn	**Pn**	**20 16 15.9**	**+2.7**
ISRV				*e*Sn	**Sn**	**20 16 58.1**	**+2.7**
ISRV				*e*		20 17 46.1	
	comp=Z,6μm,0.6s						
ISRV	**Sarvestan**	**3.56**	**316**	*e*Pn	**Pn**	**20 16 15.9**	**+2.7**
ISRV				*e*Sn	**Sn**	**20 16 58.1**	**+2.7**
IPAR	**Pars**	**3.93**	**320**	*e*Pn	**Pn**	**20 16 21.0**	**+2.7**
IPAR				*e*		20 17 54.5	
	comp=Z,1μm,0.4s						
IPAR	**Pars**	**3.93**	**320**	*e*Pn	**Pn**	**20 16 21.0**	**+2.7**
IMEH	**Mehriz**	**4.68**	**346**	*e*Pn	**Pn**	**20 16 29.6**	**+1.0**
IMEH				*e*		20 16 35.2	
	comp=Z,328nm,0.1s						
IMEH	**Mehriz**	**4.68**	**346**	*e*Pn	**Pn**	**20 16 29.6**	**+1.0**
IBAF	**Bafgh**	**4.74**	**356**	*e*Pn	**Pn**	**20 16 30.7**	**+1.2**
IBAF				*e*		20 16 34.8	
	comp=Z,434nm,0.1s						
IBAF				*e*Sn	**Sn**	**20 17 24.0**	**-0.6**
IBAF	**Bafgh**	**4.74**	**356**	*e*Pn	**Pn**	**20 16 30.7**	**+1.2**
IBAF				*e*Sn	**Sn**	**20 17 24.0**	**-0.6**
ZHSF	**Zahedan**	**5.08**	**56**	*e*Pn	**Pn**	**20 16 36.3**	**+2.3**
SLWS		**5.19**	**248**	S	**Sn**	**20 17 35.6**	**-0.2**
SLWS		**5.19**	**248**	S	**Sn**	**20 17 35.6**	**-0.2**
BTHS		**5.38**	**240**	P	**Pn**	**20 16 38.7**	**+0.4**
BTHS		**5.38**	**240**	P	**Pn**	**20 16 38.7**	**+0.4**
NASN	**Na'in**	**6.53**	**336**	*e*Pn	**Pn**	**20 16 54.7**	**+0.7**
HRDDS		**7.06**	**238**	S	**Sn**	**20 18 20.4**	**-1.4**
HRDDS		**7.06**	**238**	P	**Pn**	**20 17 02.3**	**+1.0**
IPIR	**Pirpir**	**7.29**	**324**	*e*Pn	**Pn**	**20 17 05.9**	**+1.4**
IPIR				*e*		20 18 27.5	
	comp=Z,334nm,0.3s						
IPIR	**Pirpir**	**7.29**	**324**	*e*Pn	**Pn**	**20 17 05.9**	**+1.4**
IKLH	**Kolahrood**	**7.48**	**331**	*e*	Px	20 17 18.9	
	comp=Z,107nm,0.2s						
IKLH				*e*Pn	**Pn**	**20 17 08.6**	**+1.5**
RDF	**Al-Radifah**	**7.71**	**288**	*e*P	**Pn**	**20 17 13.1**	**+2.8**
RDF				*e*S	**Sn**	**20 18 36.8**	**-1.1**
RDF				AML	AML	20 18 39.1	
	comp=Z,12nm,0.4s						
RDF	**Al-Radifah**	**7.71**	**288**	*e*P	**Pn**	**20 17 13.1**	**+2.8**
RDF				*e*S	**Sn**	**20 18 36.8**	**-1.1**
	comp=Z,12nm,0.4s						
NAY	**Al-Naaiem**	**8.05**	**289**	*e*P	**Pn**	**20 17 18.0**	**+3.0**
NAY				*e*S	**Sn**	**20 18 43.8**	**-2.4**
NAY				AML	AML	20 18 45.4	
	comp=Z,6.4nm,0.5s						
NAY	**Al-Naaiem**	**8.05**	**289**	*e*P	**Pn**	**20 17 18.0**	**+3.0**
NAY				*e*S	**Sn**	**20 18 43.8**	**-2.5**
MIB	**Mutribah**	**8.14**	**293**	*e*P	**Pn**	**20 17 17.8**	**+1.7**
MIB				*e*S	**Sn**	**20 18 45.2**	**-3.1**
MIB				AML	AML	20 18 49.6	
	comp=Z,28nm,0.8s						
MIB	**Mutribah**	**8.14**	**293**	*e*P	**Pn**	**20 17 17.8**	**+1.7**
MIB				*e*S	**Sn**	**20 18 45.2**	**-3.1**
ASYS		**10.36**	**276**	P	**Pn**	**20 17 45.3**	**-1.2**
ASYS		**10.36**	**276**	P	**Pn**	**20 17 45.3**	**-1.2**
ASYS				S	**Sn**	**20 19 37.3**	**-5.5**
GNI	**Garni**	**16.21**	**328**	P	**Pn**	**20 19 04.8**	**-0.9**
	comp=Z,8.6nm,1.0s						
GNI	**Garni**	**16.21**	**328**	P	**Pn**	**20 19 04.8**	**-0.9**
	comp=Z,8.6nm,1.0s						
MALT	**Malatya**	**18.64**	**312**	*e*P	**Pn**	**20 19 36.1**	**0.0**
	comp=Z,3.3nm,0.9s						
MALT	**Malatya**	**18.64**	**312**	*e*P	**Pn**	**20 19 36.1**	**+0.1**
	comp=Z,3.3nm,0.9s						
KIV	**Kislovodsk**	**20.16**	**331**	P	**P**	**20 19 51.6**	**-0.8**
	comp=Z,4.3nm,0.7s						
KIV	**Kislovodsk**	**20.16**	**331**	P	**P**	**20 19 51.6**	**-0.8**
	comp=Z,4.3nm,0.7s						
BRTR	**Keskin Array B**	**22.57**	**310**	P	**P**	**20 20 17.4**	**-0.9**
	comp=Z,0.9nm,0.9s,mb3.2,baz=127,slow=10,SNR=5.2						
BRTR	**Keskin Array B**	**22.57**	**310**	P	**P**	**20 20 17.5**	**-0.8**
BR131	**Keskin Array S**	**22.57**	**310**	*e*P	**P**	**20 20 17.6**	**-0.7**
	comp=Z,1.5nm,0.7s,mb3.5						
BR131	**Keskin Array S**	**22.57**	**310**	*e*P	**P**	**20 20 17.6**	**-0.7**
	comp=Z,1.5nm,0.7s,mb3.5						
ABKAR	**Akbulak array**	**22.59**	**7**	*e*P	**P**	**20 20 15.3**	**-3.2**
	comp=Z,0.4nm,0.5s,mb3.1						
ABKAR	**Akbulak array**	**22.59**	**7**	*e*P	**P**	**20 20 15.3**	**-3.1**
	comp=Z,0.4nm,0.5s,mb3.1						
FINES	**FINESS Array B**	**39.99**	**338**	P	**P**	**20 22 51.9**	**-0.6**
	comp=Z,1.5nm,0.9s,mb3.7,baz=154,slow=9.7,SNR=3.4						
FINES	**FINESS Array B**	**39.99**	**338**	P	**P**	**20 22 51.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**52.41**	**266**	P	**P**	**20 24 29.5**	**-1.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=64,slow=7.4,SNR=12						
TORD	**Torodi Ar. Bea**	**52.41**	**266**	P	**P**	**20 24 29.5**	**-1.4**

*ISCJB **17** 20:40:26.6±0.8, 52°.6S±0°.2×18°.7E±0°.3, h10km, mb3.9/9, Error ellipse: s-maj=25.0km s-min=19.0km az=140.0*
*IDC **17** 20:40:26.7±0.7, 52°.63S×18°.85E, h0km, mb4.0/9, mb1 4.1/9, mb1mx4.0/18, mbtmp4.0/9, MS3.9/1, Ms1 3.9/1, ms1mx3.0/27, Error ellipse: s-maj=29.0km s-min=20.7km az=59.0*
*NEIC **17** 20:40:27.9±0.5, 52°.60S×18°.79E, h10km, mb4.2/2, Error ellipse: s-maj=17.6km s-min=13.9km az=60.0*

ISC 17 20:40:28.3±0.8, 52°.6S±0°.1×18°.8E±0°.3, h10km, n18, σ0°67/12, mb3.9/9, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.28**	**5**	LR	LR	20 51 17.7	
	comp=Z,351nm,20.5s,baz=253,slow=32						
SNAA	**Sanae**	**21.38**	**199**	P	**P**	**20 45 15.4**	**-0.1**
	2.2nm,0.9s,mb3.5,baz=37,slow=10.0,SNR=14						
MAW	**Mawson**	**25.82**	**142**	P	**P**	**20 45 59.7**	**+0.4**
	4.7nm,0.9s,mb4.0,baz=289,slow=9.0,SNR=12						
MAW	**Mawson**	**25.82**	**142**	*e*P	**P**	**20 45 59.6**	**+0.3**
	5.1nm,1.0s,mb4.0						
MAW	**Mawson**	**25.82**	**142**	*e*P	**P**	**20 45 59.9**	**+0.6**
	2.1nm,1.1s,mb3.6						
QSPA	**South Pole Qui**	**37.61**	**180**	P	**P**	**20 47 42.7**	**+0.2**
	8.8nm,0.9s,mb4.5,baz=234,slow=4.0,SNR=23						
QSPA	**South Pole Qui**	**37.61**	**180**	*e*P	**P**	**20 47 42.3**	**-0.2**
	12nm,1.0s,mb4.6						
CPUP	**Villa Florida**	**61.28**	**264**	P	**P**	**20 50 42.5**	**-1.2**
	0.3nm,0.3s,mb3.9,baz=142,slow=7.4,SNR=2.8						
TORD	**Torodi Ar. Bea**	**67.15**	**342**	P	**P**	**20 51 22.2**	**+0.1**
	1.4nm,1.2s,mb3.9,baz=176,slow=3.8,SNR=3.8						
LPAZ	**La Paz**	**75.41**	**262**	P	**P**	**20 52 13.8**	**+1.5**
	1.5nm,1.1s,mb3.9,baz=219,slow=1.8,SNR=3.8						
STKA	**Stephens Creek**	**82.19**	**134**	P	**P**	**20 52 49.0**	**-0.3**
	1.1nm,0.7s,mb3.9,baz=252,slow=6.4,SNR=2.9						
ASAR	**Alice Springs**	**85.43**	**124**	P	**P**	**20 53 05.8**	**-0.3**
	0.7nm,0.7s,mb3.9,baz=215,slow=4.3,SNR=5.9						
WRA	**Warramunga Arr**	**88.75**	**122**	P	**P**	**20 53 22.1**	**-0.1**
	0.5nm,0.9s,mb3.9,baz=218,slow=4.6,SNR=2.8						
ZALV	**Zalesovo Beam**	**119.52**	**38**	PKP	PKPdf	20 59 16.7	-0.3
	0.4nm,0.5s,baz=292,slow=4.5,SNR=3.0						
SONM	**Songino Array**	**124.62**	**55**	PKP	PKPdf	20 59 27.0	0.0
	0.3nm,0.5s,baz=185,slow=3.6,SNR=3.6						
PDAR	**Pinedale Array**	**144.60**	**275**	PKP	PKPdf	21 00 02.5	-1.7
	1.6nm,0.9s,baz=128,slow=4.8,SNR=7.2						
NVAR	**Mina Array Bea**	**147.32**	**262**	PKPbc	PKPbc	21 00 11.9	+0.5
	1.8nm,0.8s,baz=131,slow=4.4,SNR=8.7						
ILAR	**Eielson Array**	**165.79**	**335**	PKPab	PKPab	21 01 32.1	+0.7
	0.6nm,0.8s,baz=19,slow=3.9,SNR=5.5						

*ISCJB **17** 20:51:43.7±0.7, 52°.6S±0°.1×18°.5E±0°.4, h10km, mb4.0/7, MS4.4/2, Error ellipse: s-maj=32.6km s-min=14.0km az=171.9*
*IDC **17** 20:51:44.3±0.8, 52°.62S×18°.79E, h0km, mb4.0/8, mb1 4.0/8, mb1mx3.9/19, mbtmp4.1/8, MS4.4/2, Ms1 4.4/2, ms1mx3.6/20, Error ellipse: s-maj=39.5km s-min=17.2km az=76.0*
*NEIC **17** 20:51:45.5±0.5, 52°.62S×18°.61E, h10km, mb4.0/2, Error ellipse: s-maj=24.8km s-min=11.4km az=82.0*

ISC 17 20:51:45.8±0.7, 52°.62S±0°.1×18°.7E±0°.4, h10km, n15, σ0°29/11, mb4.0/7, MS4.4/2, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.29**	**5**	P	**P**	**20 56 21.1**	**-0.4**
	4.2nm,1.0s,baz=166,slow=17,SNR=1.8						
SNAA	**Sanae**	**21.35**	**199**	P	**P**	**20 56 32.4**	**-0.3**
	2.0nm,0.8s,mb3.5,baz=39,slow=8.4,SNR=14						
MAW	**Mawson**	**25.88**	**142**	P	**P**	**20 57 17.1**	**-0.2**
	2.5nm,0.8s,mb3.8,baz=298,slow=14,SNR=8.7						
MAW	**Mawson**	**25.88**	**142**	*e*P	**P**	**20 57 17.0**	**-0.3**
	1.8nm,0.6s,mb3.8						
MAW	**Mawson**	**25.88**	**142**	*e*P	**P**	**20 57 17.6**	**+0.3**
	0.9nm,1.0s,mb3.2						
QSPA	**South Pole Qui**	**37.61**	**180**	P	**P**	**20 59 00.3**	**+0.4**
	6.5nm,0.8s,mb4.4,baz=237,slow=5.0,SNR=19						
QSPA				LR	LR	21 13 41.0	
	comp=Z,308nm,19.7s,MS4.1,baz=273,slow=35						
QSPA	**South Pole Qui**	**37.61**	**180**	*e*P	**P**	**20 58 59.6**	**-0.3**
	11nm,1.0s,mb4.5						
QSPA				LR	LR	21 13 41.0	
CPUP	**Villa Florida**	**61.19**	**264**	LR	LR	21 25 38.7	
	comp=Z,450nm,18.8s,MS4.7,baz=93,slow=33						
DBIC	**Dimbokro**	**62.37**	**333**	P	**P**	**21 02 08.7**	**+0.1**
	2.9nm,0.8s,mb4.4,baz=186,slow=10,SNR=3.3						
TORD	**Torodi Ar. Bea**	**67.12**	**342**	P	**P**	**21 02 39.8**	**+0.4**
	2.7nm,1.2s,mb4.2,baz=176,slow=3.5,SNR=5.8						
STKA	**Stephens Creek**	**82.25**	**134**	P	**P**	**21 04 07.4**	**+0.3**
	2.4nm,0.8s,mb4.2,baz=256,slow=8.3,SNR=3.3						
ASAR	**Alice Springs**	**85.51**	**124**	P	**P**	**21 04 23.9**	**0.0**
	0.6nm,0.7s,mb3.9,baz=207,slow=3.9,SNR=5.6						
PDAR	**Pinedale Array**	**144.51**	**275**	PKP	PKPdf	21 11 19.9	-1.7
	1.4nm,0.7s,baz=126,slow=4.6,SNR=14						
NVAR	**Mina Array Bea**	**147.23**	**262**	PKPbc	PKPbc	21 11 29.5	+0.8
	1.3nm,0.7s,baz=124,slow=5.5,SNR=10						
ILAR	**Eielson Array**	**165.75**	**334**	PKPab	PKPab	21 12 49.5	+0.8
	0.6nm,0.9s,baz=17,slow=4.1,SNR=5.8						

*ISCJB **17** 20:55:47.1±0.7, 52°.67S±0°.1×18°.8E±0°.3, h10km, mb4.2/9, MS3.8/3, Error ellipse: s-maj=30.6km s-min=13.6km az=170.8*
*IDC **17** 20:55:47.4±0.7, 52°.70S×18°.92E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.1/20, mbtmp4.3/10, MS3.9/3, Ms1 3.9/3, ms1mx3.7/19, Error ellipse: s-maj=37.2km s-min=17.1km az=74.0*
*NEIC **17** 20:55:48.6±0.5, 52°.71S×18°.84E, h10km, mb4.3/2, Error ellipse: s-maj=23.3km s-min=11.2km az=81.0*

ISC 17 20:55:49.1±0.7, 52°.70S±0°.1×19°.0E±0°.3, h10km, n17, σ0°63/12, mb4.2/9, MS3.8/3, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.36**	**5**	P	**P**	**21 00 26.5**	**+0.9**
	7.2nm,1.0s,baz=194,slow=12,SNR=2.0						
SUR				LR	LR	21 06 18.9	
	comp=Z,522nm,20.6s,MS3.9,baz=250,slow=31					

TORD	**Torodi Ar. Bea**	**67.25**	**342**	P		**P**	**21 06 43.3**	**-0.2**
	2.5nm,1.2s,mb4.1,baz=201,slow=7.7,SNR=5.0							
RPZ	**Rata Peaks**	**80.99**	**160**	P		**P**	**21 08 02.7**	**-0.9**
	21nm,1.1s,mb5.0,baz=229,slow=9.3,SNR=2.4							
STKA	**Stephens Creek**	**82.08**	**134**	P		**P**	**21 08 09.9**	**+0.3**
	3.8nm,1.0s,mb4.3,baz=225,slow=2.9,SNR=2.5							
ASAR	**Alice Springs**	**85.33**	**123**	P		**P**	**21 08 25.7**	**-0.7**
	2.1nm,1.0s,mb4.2,baz=206,slow=5.7,SNR=8.2							
WRA	**Warramunga Arr**	**88.64**	**122**	P		**P**	**21 08 41.9**	**-0.6**
	1.8nm,1.1s,mb4.3,baz=209,slow=3.7,SNR=5.4							
SONM	**Songino Array**	**124.61**	**55**	PKP		PKPdf	21 14 47.7	0.0
	0.4nm,0.7s,baz=242,slow=3.1,SNR=3.2							
PDAR	**Pinedale Array**	**144.68**	**275**	PKP		PKPdf	21 15 22.9	-2.3
	1.3nm,0.8s,baz=131,slow=4.1,SNR=7.3							
NVAR	**Mina Array Bea**	**147.38**	**261**	PKPbc		PKPbc	21 15 31.7	-0.7
	1.1nm,0.7s,baz=137,slow=4.5,SNR=3.9							
ILAR	**Eielson Array**	**165.90**	**335**	PKPab		PKPab	21 16 53.3	+0.7
	0.8nm,0.9s,baz=26,slow=3.0,SNR=6.0							

SZGRF ***17*** *21:03:35.1,29.4°±49S×13.1°±15W,h33km,mb5.0,MS4.5, Southern Mid-Atlantic Ridge*
IDC ***17*** *21:03:38.0±0.5,28.31°S×12.81°W,h0km,mb4.3/17, mb1 4.4/17,mb1mx4.4/20,mbtmp4.3/17,MS4.3/9, Ms1 4.3/9,ms1mx4.3/11,Error ellipse: s-maj=17.7km s-min=14.5km az=149.0*
ISCJB ***17*** *21:03:38.3±0.3,28.21°S±0.05°×12.87°W±0.07,h10km, mb4.7/64,MS4.4/21,Error ellipse: s-maj=9.1km s-min=7.0km az=26.5*
NEIC ***17*** *21:03:40.0±0.2,28.20°S×12.86°W,h10km,mb4.9/47, MS4.5/6,Error ellipse: s-maj=8.0km s-min=6.2km az=119.0*
GCMT ***17*** *21:03:42.7±0.2,28.29°S×12.65°W,h12km,MW5.0, Moment Tensor Solution. s33,c42; s86,c137; Moment tensor: Scale 10^16^Nm; M_{rr}-0.03±.10; $M_{\theta\theta}$1.82±.10; $M_{\phi\phi}$-1.79±.10; $M_{r\theta}$-0.25±.26; $M_{\theta\phi}$-3.73±.08; $M_{\phi r}$0.42±.28; Best double couple: $M_0$4.20000×10^16^ NP1:ϕ_s257.00000°, δ84.00000°,λ178.00000°. NP2:ϕ_s347.00000°,δ88.00000°, λ6.00000°. Principal axes: T 4.2000, Plg6.0000°, Azm212.0000°; N -0.0600, Plg83.0000°, Azm4.0000°; P -4.1400, Plg3.0000°, Azm122.0000°; Data Used: II IU IC G CN.*

ISC 17 21:03:40.3±0.3,28.19S±0.05°×12.88W±0.07,h10km,n145, σ0.97/117,mb4.7/64,MS4.4/21,3D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIS	**Tristan da Cun**	**8.87**	**177**	Pn	**Pn**	**21 05 49.7**	**+1.1**
SUR	**Sutherland**	**29.32**	**107**	LR	LR	21 18 32.8	
	comp=Z,998nm,20.8s,MS4.4,baz=78,slow=31						
SUR	**Sutherland**	**29.32**	**107**	P	**P**	**21 09 44.0**	**+0.8**
RCBR	**Riachuelo**	**31.17**	**311**	*eP*	**P**	**21 09 59.3**	**-0.4**
SPB	**Sao Paulo**	**31.36**	**270**	*eP*	**P**	**21 10 01.4**	**+0.1**
BOSA	**Boshof**	**33.45**	**100**	P	**P**	**21 10 17.0**	**-2.6**
	2.7nm,0.7s,mb4.3,baz=250,slow=6.1,SNR=8.8						
BOSA				LR	LR	21 21 58.8	
	comp=Z,617nm,18.2s,MS4.4,baz=264,slow=33						
BOSA	**Boshof**	**33.45**	**100**	P	**P**	**21 10 17.0**	**-2.6**
BOSA				LR	LR	21 21 58.8	
LBTB	**Lobatse**	**34.45**	**94**	P	**P**	**21 10 26.1**	**-2.3**
	6.8nm,0.8s,mb4.6,baz=274,slow=11,SNR=9.8						
LBTB				LR	LR	21 21 43.8	
	comp=Z,273nm,18.2s,MS4.0,baz=265,slow=32						
LBTB	**Lobatse**	**34.45**	**94**	*eP*	**P**	**21 10 26.4**	**-1.9**
	15nm,0.8s,mb5.0						
BDFB	**Brasilia**	**34.78**	**284**	P	**P**	**21 10 30.1**	**-1.1**
	8.3nm,0.8s,mb4.7,baz=127,slow=5.9,SNR=11						
LIC	**Lamto**	**35.04**	**14**	*eP*	**P**	**21 10 31.1**	**-2.3**
	37nm,1.1s,mb5.2						
LIC	**Lamto**	**35.04**	**14**	*eP*	**P**	**21 10 30.8**	**-2.6**
	baz=202						
LIC				*e*MLR	MLR		
	comp=Z,774nm,20.0s,MS4.2						
LIC	**Lamto**	**35.04**	**14**	*eP*	**P**	**21 10 30.8**	**-2.6**
LIC				LR	LR		
	comp=Z,390nm,20.0s,MS4.2						
KIC	**Kosan Boka**	**35.23**	**14**	*eP*	**P**	**21 10 33.6**	**-1.4**
	comp=Z,16nm,0.8s,mb5.0						
TIC	**Toumodi**	**35.45**	**14**	*eP*	**P**	**21 10 35.4**	**-1.5**
	comp=Z,39nm,1.1s,mb5.2						
DBIC	**Dimbokro**	**35.51**	**14**	P	**P**	**21 10 37.2**	**-0.2**
	comp=Z,7.0nm,0.9s,mb4.6,baz=185,slow=12,SNR=4.2						
CPUP	**Villa Florida**	**39.40**	**262**	P	**P**	**21 11 11.2**	**+0.7**
	comp=Z,0.7nm,0.3s,mb3.8,baz=79,slow=7.9,SNR=6.6						
CPUP	**Villa Florida**	**39.40**	**262**	*eP*	**P**	**21 11 10.7**	**+0.3**
LSZ	**Lusaka**	**40.06**	**80**	*eP*	**P**	**21 11 15.2**	**-0.8**
	comp=Z,22nm,1.5s,mb4.7						
TRQA	**Tornquist**	**41.87**	**243**	*eP*	**P**	**21 11 30.8**	**0.0**
	comp=Z,174nm,2.8s,mb5.2						
TORD	**Torodi Ar. Bea**	**43.44**	**21**	P	**P**	**21 11 42.4**	**-1.2**
	comp=Z,5.2nm,1.0s,mb4.2,baz=198,slow=8.1,SNR=10						
SNAA	**Sanae**	**43.88**	**175**	P	**P**	**21 11 44.1**	**-2.5**
	comp=Z,1.3nm,1.1s,baz=0.0,slow=10,SNR=3.6						
CFAA	**Coronel Fontan**	**47.69**	**252**	P	**P**	**21 12 15.8**	**-1.4**
	comp=Z,0.7nm,0.6s,mb3.9,baz=98,slow=5.1,SNR=8.6						
PLCA	**Paso Flores**	**48.39**	**239**	P	**P**	**21 12 23.1**	**+0.6**
	comp=Z,6.3nm,1.1s,mb4.6,baz=89,slow=6.8,SNR=4.2						
PMSA	**Palmer Station**	**48.57**	**206**	*eP*	**P**	**21 12 22.5**	**-1.0**
	comp=Z,11nm,0.9s,mb4.9						
LPAZ	**La Paz**	**52.11**	**271**	P	**P**	**21 12 49.9**	**-1.1**
	comp=Z,3.4nm,1.0s,mb4.2,baz=109,slow=8.1,SNR=10						
LPAZ	**La Paz**	**52.11**	**271**	*eP*	**P**	**21 12 49.6**	**-1.4**
	comp=Z,15nm,1.5s,mb4.7						
TAM	**Tamanrasset**	**53.70**	**21**	*eP*	**P**	**21 13 02.4**	**-0.1**
	comp=Z,14nm,1.5s,mb4.7						
MAW	**Mawson**	**58.85**	**154**	P	**P**	**21 13 38.3**	**-0.4**
	comp=Z,3.1nm,0.9s,mb4.4,baz=285,slow=6.5,SNR=7.5						
MAW				LR	LR	21 34 40.4	
	comp=Z,284nm,20.4s,MS4.4,baz=291,slow=32						
QSPA	**South Pole Qui**	**62.04**	**180**	*eP*	**P**	**21 14 01.6**	**+1.2**
	comp=Z,160nm,2.8s,mb5.7						
PAF	**Port-aux-Franc**	**64.85**	**134**	*eP*	**P**	**21 14 20.2**	**+0.7**
	comp=Z,82nm,3.3s						
PBDV	**Barranco-do-Ve**	**65.25**	**4**	*eP*	**P**	**21 14 28.3**	**+6.3**
MORF	**Marmelete**	**65.27**	**4**	*eP*	**P**	**21 14 26.4**	**+4.3**
PVAQ	**Vaqueiros**	**65.42**	**5**	*eP*	**P**	**21 14 28.4**	**+5.3**
PBAR	**Barrancos**	**66.24**	**5**	*eP*	**P**	**21 14 33.8**	**+5.4**
EVO	**Evora**	**66.52**	**4**	*eP*	**P**	**21 14 28.8**	**-1.4**
	comp=Z,39nm,1.4s,mb5.0						
EVO				*e*MLR	MLR		
	comp=Z,659nm,23.0s,MS4.5						
ATD	**Arta Tunnel**	**66.80**	**62**	LR	LR	21 39 23.5	
	comp=Z,178nm,18.9s,MS4.3,baz=322,slow=32						
SDV	**Santo Domingo**	**66.84**	**295**	*eP*	**P**	**21 14 33.4**	**+0.6**
	comp=Z,14nm,1.1s,mb4.9						
KEST	**Kesra**	**66.94**	**20**	P	**P**	**21 14 34.2**	**+1.3**
	comp=Z,4.6nm,1.1s,mb4.4,baz=217,slow=6.6,SNR=4.0						
KEST	**Kesra**	**66.94**	**20**	*eP*	**P**	**21 14 33.6**	**+0.7**
KEST				*e*PcP	PcP	21 15 02.3	+0.9
ESDC	**Sonseca Array**	**68.02**	**7**	P	**P**	**21 14 40.1**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=169,slow=7.7,SNR=4.4						
MVO	**Moncorvo**	**69.21**	**5**	*eP*	**P**	**21 14 48.9**	**+1.9**
ICM	**Isla Caja Muer**	**69.22**	**305**	*eP*	**P**	**21 14 47.3**	**-0.3**
	comp=Z,17nm,0.8s,mb5.0						
CELP	**Cerrillos**	**69.38**	**305**	*eP*	**P**	**21 14 49.3**	**+0.7**
ETSF	**Etsaut**	**71.63**	**10**	*eP*	**P**	**21 15 01.8**	**0.0**
	comp=Z,66nm,1.8s,mb5.0						
ETSF	**Etsaut**	**71.63**	**10**	*eP*	**P**	**21 15 01.8**	**0.0**
	comp=Z,33nm,1.8s,mb5.0						
SJPF	**Ste Jean**	**71.75**	**9**	*eP*	**P**	**21 15 02.7**	**+0.2**
	comp=Z,36nm,1.3s,mb4.9						
SJPF	**Ste Jean**	**71.75**	**9**	*eP*	**P**	**21 15 02.7**	**+0.2**
	comp=Z,18nm,1.3s,mb4.8						
MTLF	**Montolieu**	**72.51**	**11**	*eP*	**P**	**21 15 06.0**	**-1.1**
	comp=Z,50nm,1.7s,mb4.8						
MTLF	**Montolieu**	**72.51**	**11**	*eP*	**P**	**21 15 06.0**	**-1.1**
	comp=Z,25nm,1.7s,mb4.9						
PGF	**Pioggiola**	**73.21**	**17**	*eP*	**P**	**21 15 11.6**	**+0.3**
	comp=Z,14nm,1.0s,mb4.5						
PGF	**Pioggiola**	**73.21**	**17**	*eP*	**P**	**21 15 11.6**	**+0.3**
	comp=Z,6.9nm,1.0s,mb4.5						
LMR	**La Mourre**	**73.36**	**15**	*eP*	**P**	**21 15 11.7**	**-0.4**
	comp=Z,19nm,1.1s,mb4.6						
LMR	**La Mourre**	**73.36**	**15**	*eP*	**P**	**21 15 11.7**	**-0.4**
	comp=Z,9.7nm,1.1s,mb4.7						
LASF	**Ste Croix**	**73.52**	**12**	*eP*	**P**	**21 15 12.9**	**-0.2**
	comp=Z,30nm,1.3s,mb4.7						
FRF	**La Foret Royal**	**73.61**	**15**	*eP*	**P**	**21 15 13.1**	**-0.5**
	comp=Z,19nm,1.1s,mb4.6						
FRF	**La Foret Royal**	**73.61**	**15**	*eP*	**P**	**21 15 13.1**	**-0.5**
	comp=Z,9.4nm,1.1s,mb4.6						
SMRF	**Simiane la Rot**	**73.77**	**14**	*eP*	**P**	**21 15 14.7**	**+0.2**
	comp=Z,42nm,1.6s,mb4.8						
SMRF	**Simiane la Rot**	**73.77**	**14**	*eP*	**P**	**21 15 14.7**	**+0.2**
	comp=Z,42nm,1.6s,mb5.1						
LFF	**La Frestale**	**73.83**	**10**	*eP*	**P**	**21 15 14.7**	**-0.1**
	comp=Z,54nm,1.2s,mb5.1						
LFF	**La Frestale**	**73.83**	**10**	*eP*	**P**	**21 15 14.7**	**-0.1**
	comp=Z,27nm,1.2s,mb5.1						
CAF	**Calviac**	**74.03**	**11**	*eP*	**P**	**21 15 15.8**	**-0.2**
	comp=Z,23nm,1.4s,mb4.6						
CAF	**Calviac**	**74.03**	**11**	*eP*	**P**	**21 15 15.8**	**-0.2**
	comp=Z,12nm,1.4s,mb4.6						
RJF	**Les Rejaudoux**	**74.30**	**10**	*eP*	**P**	**21 15 17.3**	**-0.3**
RJF				*e*MLR	MLR		
	comp=Z,313nm,19.5s,MS4.3						
RJF	**Les Rejaudoux**	**74.30**	**10**	*eP*	**P**	**21 15 17.3**	**-0.3**
RJF				LR	LR		
	comp=Z,310nm,19.5s,MS4.6						
VIVF	**Saint-Julien-l**	**74.43**	**13**	*eP*	**P**	**21 15 18.4**	**0.0**
	comp=Z,23nm,1.1s,mb4.7						
VIVF	**Saint-Julien-l**	**74.43**	**13**	*eP*	**P**	**21 15 18.4**	**0.0**
	comp=Z,12nm,1.1s,mb4.7						
ORIF	**Oris-en-Rattie**	**74.74**	**14**	*eP*	**P**	**21 15 20.4**	**+0.3**
	comp=Z,38nm,1.3s,mb4.9						
ORIF				*e*MLR	MLR		
	comp=Z,212nm,19.5s,MS4.2						
ORIF	**Oris-en-Rattie**	**74.74**	**14**	*eP*	**P**	**21 15 20.4**	**+0.3**
	comp=Z,19nm,1.3s,mb4.9						
MBDF	**Montbardon**	**74.75**	**14**	*eP*	**P**	**21 15 20.5**	**+0.3**
	comp=Z,13nm,1.0s,mb4.5						
MBDF	**Montbardon**	**74.75**	**14**	*eP*	**P**	**21 15 20.5**	**+0.3**
	comp=Z,6.4nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**75.37**	**11**	*eP*	**P**	**21 15 23.8**	**0.0**
	comp=Z,27nm,1.3s,mb4.7						
TCF	**Toulx Ste Croi**	**75.37**	**11**	*eP*	**P**	**21 15 23.8**	**0.0**
	comp=Z,13nm,1.3s,mb4.7						
LPG	**La Plagne**	**75.47**	**14**	*eP*	**P**	**21 15 24.8**	**+0.4**
LPL	**La Plagne**	**75.49**	**14**	*eP*	**P**	**21 15 24.8**	**+0.4**
	comp=Z,22nm,1.0s,mb4.8						
LPL	**La Plagne**	**75.49**	**14**	*eP*	**P**	**21 15 24.8**	**+0.4**
	comp=Z,11nm,1.0s,mb4.8						
SMF	**Signal de Mont**	**76.00**	**12**	*eP*	**P**	**21 15 27.1**	**-0.2**
	comp=Z,32nm,1.3s,mb4.8						
SMF	**Signal de Mont**	**76.00**	**12**	*eP*	**P**	**21 15 27.1**	**-0.2**
	comp=Z,16nm,1.3s,mb4.8						
AVF	**Avril sur Loir**	**76.05**	**11**	*eP*	**P**	**21 15 27.5**	**-0.1**
	comp=Z,24nm,1.3s,mb4.7						
AVF	**Avril sur Loir**	**76.05**	**11**	*eP*	**P**	**21 15 27.5**	**-0.1**
	comp=Z,12nm,1.3s,mb4.7						
SSF	**Saint Saulge**	**76.34**	**11**	*eP*	**P**	**21 15 29.0**	**-0.3**
	comp=Z,24nm,1.1s,mb4.7						
SSF	**Saint Saulge**	**76.34**	**11**	*eP*	**P**	**21 15 29.0**	**-0.3**
	comp=Z,12nm,1.1s,mb4.7						
CABF	**La Chapelle**	**76.40**	**13**	*eP*	**P**	**21 15 29.0**	**-0.6**
	comp=Z,32nm,1.2s,mb4.8						
CABF	**La Chapelle**	**76.40**	**13**	*eP*	**P**	**21 15 29.0**	**-0.6**
	comp=Z,16nm,1.2s,mb4.8						
LOR	**Lormes**	**76.61**	**12**	*eP*	**P**	**21 15 30.3**	**-0.5**
	comp=Z,17nm,1.2s,mb4.5						
LOR				*e*MLR	MLR		
	comp=Z,260nm,21.0s,MS4.2						
LOR	**Lormes**	**76.61**	**12**	*eP*	**P**	**21 15 30.3**	**-0.5**
	comp=Z,8.5nm,1.2s,mb4.5						
LOR				LR	LR		
	comp=Z,260nm,21.0s,MS4.5						
GRR	**Gorron**	**76.98**	**8**	*eP*	**P**	**21 15 32.4**	**-0.5**
	comp=Z,76nm,1.5s,mb5.1						
GRR	**Gorron**	**76.98**	**8**	*eP*	**P**	**21 15 32.4**	**-0.5**
	comp=Z,38nm,1.5s,mb5.1						
FUORN	**Ofenpass-Fuorn**	**77.34**	**16**	*eP*	**P**	**21 15 35.2**	**+0.2**
	comp=Z,9.8nm,1.0s,mb4.7						
HAU	**Haudompre**	**77.78**	**13**	*eP*	**P**	**21 15 36.6**	**-0.8**
	comp=Z,18nm,1.1s,mb4.6						
HAU				*e*MLR	MLR		
	comp=Z,145nm,19.5s,MS4.0						
HAU	**Haudompre**	**77.78**	**13**	*eP*	**P**	**21 15 36.6**	**-0.8**
	comp=Z,8.9nm,1.1s,mb4.6						
HAU				LR	LR		
	comp=Z,140nm,19.5s,MS4.3						
MEZF	**Maizieres J'vi**	**78.01**	**12**	*eP*	**P**	**21 15 38.4**	**-0.2**
ABTA	**Abfaltersbach**	**78.04**	**18**	*⇓iP*	**P**	**21 15 40.5**	**+1.7**
	comp=Z,12nm,1.1s,mb4.8						
BFO	**Black Forest**	**78.50**	**14**	*eP*	**P**	**21 15 42.2**	**+0.9**
	comp=Z,9.9nm,1.0s,mb4.7						
KBA	**Koelnbreinsper**	**78.56**	**18**	*⇓iP*	**P**	**21 15 43.0**	**+1.3**
	comp=Z,9.1nm,1.2s,mb4.6						
BAIF	**Baives**	**79.36**	**11**	*eP*	**P**	**21 15 45.6**	**-0.4**
	comp=Z,22nm,1.1s,mb4.7						
BAIF	**Baives**	**79.36**	**11**	*eP*	**P**	**21 15 45.6**	**-0.4**
	comp=Z,11nm,1.1s,mb4.7						
MOA	**Molln**	**79.52**	**18**	*⇓iP*	**P**	**21 15 45.6**	**-1.4**
	comp=Z,7.5nm,1.1s,mb4.5						
BR131	**Keskin Array S**	**80.25**	**35**	*eP*	**P**	**21 15 52.3**	**+1.3**
	comp=Z,4.1nm,1.0s,mb4.3						
BRTR	**Keskin Array B**	**80.25**	**35**	P	**P**	**21 15 52.0**	**+0.9**
	comp=Z,3.5nm,0.9s,mb4.3,baz=182,slow=4.7,SNR=11						
GERES	**GERESS Array B**	**80.28**	**17**	P	**P**	**21 15 49.6**	**-1.4**
	comp=Z,1.1nm,0.9s,mb3.8,baz=223,slow=5.3,SNR=4.1						
GRFO	**Grafenberg**	**80.44**	**16**	*eP*	**P**	**21 15 53.2**	**+1.3**
	comp=Z,14nm,1.0s,mb4.8						
GRA1	**Grafenberg Arr**	**80.44**	**16**	*eP*	**P**	**21 15 52.7**	**+0.8**
	comp=Z,20nm,1.7s,mb4.8						
GRA1				LR	LR		
	comp=Z,200nm,18.6s,MS4.5						
GRF	**Grafenberg Arr**	**80.44**	**16**	*eP*	**P**	**21 15 52.7**	**+0.8**
	comp=Z,20nm,1.7s,mb4.8						
GRF				*e*L		21 51 18.2	
	comp=Z,213nm,18.6s						
KHC	**Kasperske Hory**	**80.51**	**17**	AMS	AMS	21 50 40.0	
	comp=Z,200nm,12.9s						
ZST	**Bratislava**	**80.65**	**20**	*eP*	**P**	**21 15 56.9**	**+3.9**
	comp=Z,5.1nm,0.8s,mb4.5						
TREC	**Trest**	**81.18**	**18**	AMS	AMS	21 49 20.0	
	comp=Z,400nm,22.6s						
PSZ	**Piszkesteto**	**81.28**	**22**	*eP*	**P**	**21 15 57.9**	**+1.5**
	comp=Z,17nm,1.0s,mb4.9						
VYHS	**Vyhne**	**81.45**	**21**	*eP*	**P**	**21 15 58.0**	**+0.7**
	comp=Z,5.1nm,1.1s,mb4.4						
PRU	**Pruhonice**	**81.55**	**17**	AMS	AMS	21 49 20.0	
	comp=Z,300nm,17.3s						
KECS	**Kecovo**	**81.96**	**22**	*eP*	**P**	**21 16 02.9**	**+2.9**
	comp=Z,4.4nm,1.4s,mb4.2						
PVCC	**Panska Ves**	**82.05**	**17**	AMS	AMS	21 49 10.0	
	comp=Z,300nm,20.6s						
MORC	**Moravsky Berou**	**82.20**	**19**	*eP*	**P**	**21 16 02.6**	**+1.4**
	comp=Z,6.0nm,1.1s,mb4.4						
DPC	**Dobruska-Polom**	**82.36**	**18**	AMS	AMS	21 50 10.0	
	comp=Z,400nm,24.5s						
OKC	**Ostrava-Krasne**	**82.43**	**20**	AMS	AMS	21 52 00.0	
	comp=Z,300nm,20.0s						
CRVS	**Cervenica-Dubn**	**82.65**	**22**	*eP*	**P**	**21 16 04.8**	**+1.2**
	comp=Z,8.4nm,1.2s,mb4.7						
CRVS				*e*	pP	21 16 09.1	+2.2
KOLS	**Kolonicke sedl**	**82.95**	**22**	*eP*	**P**	**21 16 11.1**	**+6.0**
KOLS	**Kolonicke sedl**	**82.95**	**22**	*e*pP	**P**	**21 16 11.1**	**+6.0**
KWP	**Kalwaria Pacla**	**83.69**	**22**	*eP*	**P**	**21 16 09.3**	**+0.3**
	comp=Z,17nm,1.3s,mb5.0						
AKASG	**Malin Array Be**	**86.91**	**25**	P	**P**	**21 16 25.2**	**+0.2**
	comp=Z,3.0nm,1.0s,mb4.5,baz=220,slow=5.6,SNR=8.5						
AKASG				LR	LR	21 54 57.8	
	comp=Z,115nm,21.9s,MS4.2,baz=260,slow=35						
SUW	**Suwalki**	**87.60**	**20**	*eP*	**P**	**21 16 28.8**	**+0.5**
	comp=Z,44nm,1.1s,mb5.6						
NHSC	**New Hope**	**88.25**	**309**	P	**P**	**21 16 32.4**	**+0.5**
CBN	**Corbin**	**89.42**	**315**	P	**P**	**21 16 37.3**	**-0.1**
NB2	**NORSAR Subarra**	**91.04**	**11**	P	**P**	**21 16 45.2**	**+0.9**
	comp=Z,8.3nm,1.1s,mb5.0,baz=198,slow=4.8						
NOA	**NORSAR Array B**	**91.04**	**11**	P	**P**	**21 16 46.0**	**+1.8**
	comp=Z,3.5nm,0.9s,mb4.7,baz=201,slow=4.9,SNR=5.2						
NOA				LR	LR	21 56 58.5	
	comp=Z,129nm,19.7s,MS4.4,baz=195,slow=35						
FINES	**FINESS Array B**	**94.71**	**18**	LR	LR	21 57 59.4	
	comp=Z,228nm,20.8s,MS4.6,baz=147,slow=34						
SCHQ	**Schefferville**	**94.75**	**332**	LR	LR	21 54 55.9	
	comp=Z,201nm,19.0s,MS4.6,baz=94,slow=32						
RKT	**Rikitea**	**104.38**	**234**	*e*SS	SS	21 36 51.5	-2.5
RKT				*e*LR	LR	21 52 05.7	
	comp=Z,184nm,29.2s						
TBI	**Tubuai**	**113.84**	**224**	*e*LR	LR	21 56 22.1	
	comp=Z,234nm,29.2s						
WMQ	**Urumqi**	**116.19**	**52**	*e*Pdif	Pdif	21 18 41.0	+3.3
WMQ				AMB	AMB		
	comp=Z,61nm,9.0s						
WMQ				LR	LR		
	comp=N,220nm,25.0s,MS4.9						
WMQ				LR	LR		
	comp=E,320nm,25.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,150nm,25.0s,MS4.5						
PPT	**Papeete**	**118.16**	**228**	*e*SP	SP	21 33 33.8	+6.0
	comp=Z,112nm,27.2s						
PPT				*e*LR	LR	21 58 29.3	
	comp=Z,112nm,22.8s						
ASAR	**Alice Springs**	**119.31**	**145**	PKP	PKPdf	21 22 29.0	-1.5
	comp=Z,0.4nm,0.8s,baz=189,slow=1.8,SNR=4.6						
WRA	**Warramunga Arr**	**122.61**	**143**	PKP	PKPdf	21 22 35.3	-1.5
	comp=Z,0.6nm,1.0s,baz=238,slow=1.8,SNR=3.6						
KMI	**Kunming**	**122.98**	**77**	PKP	PKPdf	21 22 37.0	-0.3
CD2	**Chengdu**	**125.47**	**71**	*e*PKP	PKPdf	21 22 41.3	-0.7
CD2				sPKP		21 22 50.0	
CD2				PP	PP	21 24 34.3	+1.0
CD2				SKS	SKSdf	21 29 48.0	-6.0
CD2				AMB	AMB		
	comp=Z,90nm,10.2s						
CD2				LR	LR		
	comp=N,180nm,22.8s						
CD2				LR	LR		
	comp=Z,150nm,15.6s						
LZH	**Lanzhou**	**126.66**	**64**	*e*PKP	PKPdf	21 22 40.8	-3.3
LZH				sPKP		21 22 49.8	
LZH				LR	LR		
	comp=N,77nm,10.6s,MS4.8						
LZH				LR	LR		
	comp=E,98nm,12.4s,MS4.8						
LZH				LR	LR		
	comp=Z,160nm,13.2s,MS4.9						
SONM	**Songino Array**	**129.64**	**50**	PKP	PKPdf	21 22 49.4	0.0
	comp=Z,0.9nm,1.0s,baz=270,slow=1.5,SNR=4.2						
SONM	**Songino Array**	**129.64**	**50**	PKP	PKPdf	21 22 49.4	0.0
DZM	**Mont Dzumac**	**130.03**	**179**	eLR	LR	22 04 09.0	
	comp=Z,204nm,24.5s						
HHC	**Hu-ho-hao-te**	**133.22**	**59**	*e*PKP	PKPdf	21 22 59.4	+3.0
HHC				PP	PP	21 25 30.3	+6.6
HHC				PKS		21 26 34.3	
HHC				SKS	SKSdf	21 30 09.1	+1.4
HHC				SKKS	SKKSac	21 32 21.5	+2.2
HHC				AMB	AMB		
	comp=Z,84nm,7.5s						
HHC				LR	LR		
	comp=Z,170nm,18.9s,MS4.8						
ILAR	**Eielson Array**	**133.42**	**335**	PKP	PKPdf	21 22 55.0	-1.0
	comp=Z,0.4nm,0.7s,baz=0.0,slow=1.6,SNR=5.0						
NJ2	**Nanjing**	**138.34**	**72**	*e*PKP	PKPdf	21 23 03.3	-2.9
CN2	**Changchun**	**143.27**	**54**	*e*PKP	PKPdf	21 23 12.0	-2.7
CN2				LR	LR		
	comp=Z,200nm,20.0s,MS4.9						
MDJ	**Mudanjiang**	**145.98**	**51**	PKPbc	PKPbc	21 23 19.6	-0.5
MDJ				pPKP	pPKPdf	21 23 24.4	+1.6
MDJ				PP	PP	21 26 43.3	+1.3
MDJ				PKS		21 26 55.1	
MDJ				SKS	SKSdf	21 30 28.6	+0.2
MDJ				AMB	AMB		
	comp=Z,90nm,7.0s						
MDJ				LR	LR		
	comp=N,51nm,18.9s,MS4.5						
MDJ				LR	LR		
	comp=E,57nm,22.2s,MS4.5						
MDJ				LR	LR		
	comp=Z,53nm,25.5s,MS4.2						
KSRS	**Korea Array**	**145.99**	**64**	PKPbc	PKPbc	21 23 19.6	-0.8
	comp=Z,4.9nm,0.9s,baz=278,slow=4.8,SNR=17						

IDC ***17*** *21:06:23.2±1.4,3.89°S×151.62°E,h0km,mb4.0/10, mb1 4.2/10,mb1mx4.1/16,mbtmp4.0/10,MS3.3/2, Ms1 3.3/2,ms1mx3.0/17,Error ellipse: s-maj=46.6km s-min=18.0km az=107.0*
ISCJB ***17*** *21:06:29.4±3.4,3.78°S±0.09×151.1°E±0.2,h39km±29km, mb4.0/16,Error ellipse:

BINT	**Bingol**	**0.81 245**	*e*Pg	**Pg**	**21 12 24.6**	**-1.0**
TATV	**Tatvan**	**0.97 137**	*i* P	**Pg**	**21 12 28.1**	**-0.6**
TATV			*i* S	**Sg**	**21 12 42.0**	**+0.7**
TATV	**Tatvan**	**0.97 137**	*i* P	**Pg**	**21 12 28.1**	**-0.6**
TATV			*i* S	**Sg**	**21 12 42.0**	**+0.6**
KOPT	**Kop Dagi**	**1.07 318**	*i* P	**Pg**	**21 12 29.5**	**-1.1**
KOPT			*i* S	**Sg**	**21 12 46.5**	**+2.1**
KOPT	**Kop Dagi**	**1.07 318**	*i* P	**Pg**	**21 12 29.5**	**-1.0**
KOPT			*i* S	**Sg**	**21 12 46.5**	**+2.1**
AGRB	**Hanur-Agry**	**1.26 74**	*e*PN	**Pn**	**21 12 34.1**	**-0.8**
AGRB			*e*SN	**Sn**	**21 12 52.4**	**-0.1**
AGRB	**Hanur-Agry**	**1.26 74**	*e*Pn	**Pn**	**21 12 34.1**	**-0.8**
AGRB			*e*Sn	**Sn**	**21 12 52.4**	**-0.1**
BEST	**Besiri**	**1.34 185**	*i* P	**Pg**	**21 12 36.0**	**+0.2**
BEST			*i* S	**Sg**	**21 12 56.0**	**+2.8**
BAYT	**Ayd¨–ntepe-Bay**	**1.53 320**	*e*PN	**Pn**	**21 12 37.9**	**-0.7**
BAYT			*e*SN	**Sn**	**21 12 59.4**	**+0.3**
BAYT	**Ayd¨–ntepe-Bay**	**1.53 320**	*e*Pn	**Pn**	**21 12 37.9**	**-0.7**
BAYT			*e*Sn	**Sn**	**21 12 59.4**	**+0.2**
PTK	**Pertek**	**1.62 259**	*e*PN	**Pn**	**21 12 37.8**	**-2.1**
PTK	**Pertek**	**1.62 259**	*e*Pn	**Pn**	**21 12 37.8**	**-2.1**
VANB	**Van**	**1.66 112**	*e*PN	**Pn**	**21 12 39.8**	**-0.6**
VANB	**Van**	**1.66 112**	*e*Pn	**Pn**	**21 12 39.8**	**-0.6**
DDEM	**Demirkent**	**1.68 8**	*i* P	**Pn**	**21 12 40.7**	**0.0**
DDEM			*i* S	**Sn**	**21 13 04.7**	**+1.8**
DDEM	**Demirkent**	**1.68 8**	*i* P	**Pn**	**21 12 40.7**	**0.0**
DDEM			*i* S	**Sn**	**21 13 04.7**	**+1.8**
EZC	**Erzincan**	**1.69 289**	*e*PN	**Pn**	**21 12 40.3**	**-0.5**
EZC	**Erzincan**	**1.69 289**	*e*Pn	**Pn**	**21 12 40.3**	**-0.5**
DBAD	**Bademkaya**	**1.80 6**	*i* P	**Pn**	**21 12 43.1**	**+0.8**
DBAD	**Bademkaya**	**1.80 6**	*i* P	**Pn**	**21 12 43.1**	**+0.8**
SVRC	**Sivrice-ELAZID**	**1.86 244**	*e*PN	**Pn**	**21 12 43.4**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.86 244**	*e*Pn	**Pn**	**21 12 43.4**	**+0.2**
KARS	**Kars**	**1.89 42**	*e*PN	**Pn**	**21 12 43.2**	**-0.4**
KARS	**Kars**	**1.89 42**	*e*Pn	**Pn**	**21 12 43.2**	**-0.3**
KELT	**Kelkit**	**1.91 299**	*i* P	**Pn**	**21 12 43.9**	**+0.1**
KELT	**Kelkit**	**1.91 299**	*i* P	**Pn**	**21 12 43.9**	**0.0**
CLDR	**Caldiran**	**1.94 92**	*e*PN	**Pn**	**21 12 44.2**	**-0.1**
CLDR	**Caldiran**	**1.94 92**	*e*Pn	**Pn**	**21 12 44.2**	**0.0**
GUMT	**Gumushane**	**1.94 310**	*e*PN	**Pn**	**21 12 44.3**	**0.0**
GUMT	**Gumushane**	**1.94 310**	*e*Pn	**Pn**	**21 12 44.3**	**0.0**
KTUT	**Trabzon**	**2.17 325**	*e*PN	**Pn**	**21 12 47.3**	**-0.2**
KTUT	**Trabzon**	**2.17 325**	*e*Pn	**Pn**	**21 12 47.3**	**-0.1**
BCA	**Borcka**	**2.22 4**	*e*PN	**Pn**	**21 12 47.9**	**-0.2**
BCA	**Borcka**	**2.22 4**	*e*Pn	**Pn**	**21 12 47.9**	**-0.2**
KEMA	**Kemaliye**	**2.28 272**	*i* P	**Pn**	**21 12 51.1**	**+2.2**
KEMA	**Kemaliye**	**2.28 272**	*i* P	**Pn**	**21 12 51.1**	**+2.2**
MYA	**Malataya**	**2.51 250**	*e*PN	**Pn**	**21 12 51.4**	**-0.7**
MYA	**Malataya**	**2.51 250**	*e*Pn	**Pn**	**21 12 51.4**	**-0.8**
MALT	**Malatya**	**2.52 250**	*e*PN	**Pn**	**21 12 51.6**	**-0.6**
MALT	**Malatya**	**2.52 250**	*e*Pn	**Pn**	**21 12 51.6**	**-0.6**
CUKT	**Cukurca**	**2.62 138**	*e*PN	**Pn**	**21 12 53.8**	**+0.2**
CUKT	**Cukurca**	**2.62 138**	*e*Pn	**Pn**	**21 12 53.8**	**+0.2**
ESPY	**Espiye-Giresun**	**2.67 310**	*e*PN	**Pn**	**21 12 54.3**	**0.0**
ESPY	**Espiye-Giresun**	**2.67 310**	*e*Pn	**Pn**	**21 12 54.3**	**0.0**
GNI	**Garni**	**2.72 69**	*e*PN	**Pn**	**21 12 55.8**	**+0.9**
GNI	**Garni**	**2.72 69**	*e*Pn	**Pn**	**21 12 55.8**	**+0.9**
URFA	**Urfa**	**2.72 230**	*e*PN	**Pn**	**21 12 54.8**	**-0.2**
URFA	**Urfa**	**2.72 230**	*e*Pn	**Pn**	**21 12 54.8**	**-0.2**

DJA 17 21:20:46,5˚.65S×102˚.32E,h26km,MLv3.5/5,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.43**	**26**	P	Pn	21 21 07.4	-2.9
MNAI				S	Sn	21 21 27.3	-0.9
LWLI	**Liwa**	**1.84**	**70**	P	Pn	21 21 17.9	+2.0
LWLI				S	Sn	21 21 39.4	+1.0
KSI	**Kapahiang**	**2.00**	**8**	P	Pn	21 21 18.4	+0.2
KSI				S	Sn	21 21 43.8	+1.4
MDSI	**Maura Dua**	**2.18**	**58**	P	Pn	21 21 20.2	-0.4
MDSI				S	Sn	21 21 47.3	+0.5
KLSI		**2.58**	**68**	P	Pn	21 21 26.5	+0.4

*BJI **17** 21:31:57.1, 18˚.21N×146˚.46E, h201km, mB4.7/25, mb4.5/35*
*ISCJB **17** 21:32:03.8±0.1, 18˚.61N±0˚.02×145˚.60E±0˚.02, h198km, mb4.7/171, Error ellipse: s-maj=3.7km s-min=2.6km az=139.3*
*MOS **17** 21:32:04.3±0.9, 18˚.62N×145˚.40E, h213km, mb4.9/43, Error ellipse: s-maj=10.4km s-min=5.8km az=94.1*
*NEIC **17** 21:32:05.0±0.1, 18˚.59N×145˚.60E, mb4.9/98, Error ellipse: s-maj=4.6km s-min=3.5km az=131.0*
*DJA **17** 21:32:05, 18˚.56N×145˚.91E, h213km, mb5.2/41*
*IDC **17** 21:32:06.0±0.7, 18˚.60N×145˚.70E, h218km±5km, mb4.2/23, mb1 4.3/26, mb1mx4.3/28, mbtmp4.2/26, Error ellipse: s-maj=12.1km s-min=7.9km az=93.0*
*GCMT **17** 21:32:07.2±0.4, 18˚.64N×145˚.87E, h195km±4km, MW5.0, Moment Tensor Solution. s16,c18; s70,c92; Moment tensor: Scale 10^{16}Nm; M_{rr}0.30±.17; $M_{\theta\theta}$0.84±.19; $M_{\phi\phi}$-1.15±.18; $M_{r\theta}$-3.10±.13; $M_{\theta\phi}$0.85±.19; $M_{r\phi}$1.44±.13; Best double couple: $M_0$3.70000×10^{16} NP1:ϕ_s200.00000°, δ21.00000°, λ174.00000°. NP2:ϕ_s297.00000°, δ88.00000°, λ69.00000°. Principal axes: T 3.7100, Plg44.0000°, Azm186.0000°; N -0.0900, Plg21.0000°, Azm297.0000°; P -3.6300, Plg39.0000°, Azm46.0000°; Data Used: II IC IU CN G.*

ISC 17 21:32:05.4±0.1,18˚.64N±0˚.02×145˚.62E±0˚.02,h200km, h200km±.5km:pP-P,n597,σ0˚.84/572,mb4.7/171, 162C-156D,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.07 188**		P	**Pn**	**21 33 19.8**	**-1.0**
	138nm,0.3s,baz=121,slow=2.4,SNR=37						
GUMO				S	**Sn**	**21 34 16.1**	**-4.2**
	259nm,0.3s,baz=22,slow=19,SNR=9.5						
GUMO	**Guam**	**5.07 188**		*e*Pn	**Pn**	**21 33 20.1**	**-0.7**
GUMO				*e*Sn	**Sn**	**21 34 14.9**	**-5.4**
GUMO	**Guam**	**5.07 188**		*e*P	**Pn**	**21 33 20.1**	**-0.7**
GUMO				*e*		21 34 14.9	
GUMO	**Guam**	**5.07 188**		P	**Pn**	**21 33 20.5**	**-0.3**
	4.5nm500nm,0.7s						
CBIJ	**Chichi jima**	**8.99 340**		P	**Pn**	**21 34 09.8**	**-1.8**
	47nm,0.3s,baz=129,slow=13,SNR=32						
CBIJ				S	**Sn**	**21 35 45.7**	**-6.7**
	71nm,0.3s,baz=119,slow=23,SNR=7.1						
JHJ	**Hachijo jima 2**	**15.34 341**		P	**Pn**	**21 35 32.3**	**+0.6**
	2.8nm,0.3s,baz=139,slow=19,SNR=3.7						
JOW	**Kunigami**	**17.95 300**		P	**P**	**21 36 03.4**	**+2.7**
	baz=133,slow=11						
JOW	**Kunigami**	**17.95 300**		*e*Pn	**Pn**	**21 36 03.6**	**+0.8**
	31nm,0.7s						
MJAR	**Matsushiro Arr**	**18.99 341**		P	**P**	**21 36 11.2**	**-0.7**
	2.0nm,0.3s,baz=171,slow=10.0,SNR=25						
MJAR				S	**S**	**21 39 34.4**	**-2.4**
	0.3nm,0.3s,baz=170,slow=16,SNR=7.7						
MJAR				ScP	ScP	21 43 40.6	-4.5
	0.1nm,0.3s,baz=204,slow=1.9,SNR=4.2						
MJAR	**Matsushiro Arr**	**18.99 341**		P	**P**	**21 36 11.2**	**-0.7**
MJAR				S	**S**	**21 39 34.4**	**-2.3**
MAJO	**Matsushiro**	**18.99 341**		*e*P	**P**	**21 36 11.3**	**-0.6**
	32nm,0.7s						
MAJO	**Matsushiro**	**18.99 341**		*e*P	**P**	**21 36 11.3**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,32nm,0.7s						
MAT	**Matsushiro**	**18.99 341**		P	**P**	**21 36 10.6**	**-1.3**
MAT				S	**S**	**21 39 35.1**	**-1.7**
BAKI	**Biak**	**21.81 206**		P	**P**	**21 36 41.9**	**-0.1**
	comp=Z,4μmcomp=Z,437nm,1.1s,mb5.9						
DAV	**Davao City (W)**	**22.64 242**		P	**P**	**21 36 50.6**	**+0.9**
	comp=Z,186nm,0.4s,baz=78,slow=9.3,SNR=4.6						
DAV	**Davao City (W)**	**22.64 242**		*e*P	**P**	**21 36 48.9**	**-0.7**
YULB	**Yu-li**	**23.18 286**		*e*P	**P**	**21 36 55.2**	**+0.7**
	comp=Z,45nm,1.5s,mb4.8						
YHNB	**Yeheng**	**23.30 289**		*e*P	**P**	**21 36 56.3**	**+0.7**
	comp=Z,41nm,0.9s,mb5.0						
WAMI	**Wamena**	**23.39 198**		P	Px	21 37 15.2	
ERM	**Erimo**	**23.40 355**		*e*P	**P**	**21 36 57.2**	**+1.1**
	comp=Z,36nm,1.0s,mb4.9						
ERM	**Erimo**	**23.40 355**		*e*P	**P**	**21 36 57.2**	**+1.0**
ERM				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.9						
SSLB	**Suanglung**	**23.55 287**		*e*P	**P**	**21 36 58.8**	**+1.0**
	comp=Z,37nm,0.7s,mb5.1						
TGY	**Tagaytay City**	**24.10 263**		P	**P**	**21 37 05.1**	**+2.2**
	comp=Z,172nm,0.4s,baz=131,slow=3.6,SNR=4.5						
TGY	**Tagaytay City**	**24.10 263**		P	**P**	**21 37 05.1**	**+2.2**
KSRS	**Korea Array**	**24.32 324**		P	**P**	**21 37 03.8**	**-0.9**
	comp=Z,3.5nm,0.7s,mb4.1,baz=144,slow=8.8,SNR=14						
KSRS				pP		21 37 46.0	
	comp=Z,17nm,0.8s,baz=143,slow=8.7,SNR=6.8						
KSRS				ScP	ScP	21 43 55.0	-3.6
	comp=Z,1.7nm,0.8s,baz=118,slow=3.4,SNR=8.3						
YUK	**Yuzh-Kuril'sk**	**25.32**	**0**	*i*P	**P**	**21 37 12.7**	**-0.9**
YUK				*i* S	**S**	**21 41 14.1**	**-10**
ASAJ	**Asahikawa**	**25.53 355**		P	**P**	**21 37 16.5**	**+1.0**
	comp=Z,28nm,0.7s,mb5.0,baz=231,slow=14,SNR=22						
ASAJ				pP	pP	21 37 56.9	+1.2
	comp=Z,26nm,0.8s,baz=171,slow=11,SNR=3.7						
ASAJ				ScP	ScP	21 43 57.5	-4.3
	comp=Z,11nm,1.0s,baz=245,slow=4.3,SNR=3.7						
ASAJ	**Asahikawa**	**25.53 355**		*e*P	**P**	**21 37 16.4**	**+1.0**
	comp=Z,73nm,1.8s,mb5.0						
LBMI	**Labuha**	**26.16 225**		P	**P**	**21 37 22.7**	**+1.2**
NJ2	**Nanjing**	**27.54 304**		*e*P	**P**	**21 37 35.3**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
PMG	**Port Moresby**	**27.91 177**		*e*P	**P**	**21 37 35.1**	**-1.9**
	comp=Z,120nm,0.9s,mb5.5						
PMG	**Port Moresby**	**27.91 177**		*c i*P	**P**	**21 37 33.9**	**-3.1**
PMG				pmax	pmax		
	comp=Z,84nm,1.2s						
PMG	**Port Moresby**	**27.91 177**		P	**P**	**21 37 35.1**	**-1.9**
	comp=Z,146nm,0.9s,mb5.6						
YSS	**Yuzh-Sakhalins**	**28.34 356**		*i*P	**P**	**21 37 40.0**	**-0.5**
YSS				*e*		21 38 25.8	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
NLAI	**Namlea**	**28.38 222**		P	**P**	**21 37 42.4**	**+1.2**
	comp=Z,832nmcomp=Z,26nm,1.1s,mb4.8						
MRSI	**Marisa**	**29.43 235**		P	**P**	**21 37 51.1**	**+0.5**
	comp=Z,86nm,1.0s,mb5.3						
MYLDM	**Lahad Datu**	**29.66 247**		P	**P**	**21 37 54.8**	**+2.2**
	comp=Z,49nm,0.8s,mb5.2						
LUWI	**Luwuk**	**29.78 231**		P	**P**	**21 37 53.1**	**-0.6**
	comp=Z,981nmcomp=Z,101nm,1.1s,mb5.4						
CN2	**Changchun**	**30.28 330**		*e*P	**P**	**21 38 01.0**	**+3.3**
KDM	**Kudat**	**30.34 251**		P	**P**	**21 37 59.8**	**+1.2**
SDKM	**Sandakan**	**30.58 249**		P	**P**	**21 38 01.3**	**+0.6**
HABR	**Khabarovsk**	**30.97 346**		*e*P	**P**	**21 38 02.3**	**-1.4**
HABR				*e*		21 40 51.3	
HABR				*e*S	**S**	**21 42 51.5**	**-1.7**
HABR				*e**SS	sS	21 44 10.9	+4.8
HABR				*e*		21 48 10.4	
HABR				pmax	pmax		
	comp=E,41nm,1.2s						
HABR				pmax	pmax		
	comp=Z,96nm,2.8s,mb4.9						
HABR				pmax	pmax		
	comp=N,39nm,2.1s						
HABR				MLR	MLR		
	comp=Z,78nm,15.0s						
KKM	**Kota Kinabalu**	**31.27 250**		P	**P**	**21 38 07.9**	**+1.1**
KKM	**Kota Kinabalu**	**31.27 250**		*e*P	**P**	**21 38 07.7**	**+0.9**
	comp=Z,66nm,0.6s,mb5.4						
KKM	**Kota Kinabalu**	**31.27 250**		P	**P**	**21 38 07.8**	**+1.0**
	comp=Z,876nmcomp=Z,109nm,1.0s,mb5.4						
KDI	**Kendari**	**31.90 228**		P	**P**	**21 38 13.5**	**+1.3**
	comp=Z,27nm,1.1s,mb4.7						
COEN	**Coen**	**32.48 184**		*e*P	**P**	**21 38 15.8**	**-1.3**
	comp=Z,352nm,0.6s						
COEN	**Coen**	**32.48 184**		P	**P**	**21 38 15.9**	**-1.3**
	comp=Z,269nm,0.8s,mb5.8						
KLR	**Kul'dur**	**32.51 343**		*e*P	**P**	**21 38 12.0**	**-5.1**
MSSI	**Masamba**	**32.61 232**		P	**P**	**21 38 19.8**	**+1.4**
	comp=Z,84nm,1.0s,mb5.2						
BBSI	**Bau Bau**	**33.03 226**		P	**P**	**21 38 23.4**	**+1.3**
	comp=Z,43nm,1.0s,mb4.9						
BJI	**Beijing**	**33.13 316**		P	**P**	**21 38 21.4**	**-1.2**
BJI				pP	pP	21 39 06.0	+2.2
BJI				sP	sP	21 39 25.4	-1.5
BJI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
TTSI	**Tana Toraja**	**33.31 232**		P	**P**	**21 38 25.5**	**+1.0**
	comp=Z,178nm,0.9s,mb5.6						
SPSI	**Sidrap Palu**	**33.96 231**		P	**P**	**21 38 29.9**	**-0.2**
	comp=Z,89nm,1.0s,mb5.2						
BKSI	**Bulukumba**	**34.62 229**		P	**P**	**21 38 36.8**	**+1.0**
	comp=Z,36nm,1.0s,mb4.8						
KAPI	**Kappang**	**34.68 230**		*e*P	**P**	**21 38 35.4**	**-0.9**
	comp=Z,33nm,0.7s,mb5.0						
KAPI	**Kappang**	**34.68 230**		P	**P**	**21 38 35.7**	**-0.6**
	comp=Z,26nm,0.9s,mb4.8						
BTM	**Bintulu**	**35.34 248**		P	**P**	**21 38 42.5**	**+0.6**
MMRI	**Maumere**	**35.59 222**		P	**P**	**21 38 43.2**	**-0.9**
	comp=Z,93nm,1.1s,mb5.2						
PEA0B	**Petropavlovsk-**	**35.66 12**		*e*P	**P**	**21 38 44.7**	**+0.5**
PETK	**Petropavlovsk-**	**35.66 12**		P	**P**	**21 38 44.9**	**+0.7**
	comp=Z,20nm,0.7s,mb4.8,baz=186,slow=9.1,SNR=17						
PETK				S	**S**	**21 44 08.5**	**+3.1**
	comp=Z,6.2nm,1.1s,baz=248,slow=15,SNR=2.9						
PETK				ScP	ScP	21 44 31.4	-3.6
	comp=Z,6.9nm,0.9s,baz=186,slow=2.6,SNR=3.6						
PETK	**Petropavlovsk-**	**35.66 12**		P	**P**	**21 38 44.9**	**+0.7**
PETK				S	**S**	**21 44 08.5**	**+3.1**
SBUM	**Sibu**	**36.45 248**		P	**P**	**21 38 52.4**	**+1.0**
	comp=Z,783nmcomp=Z,79nm,1.4s,mb5.1						
HHC	**Hu-ho-hao-te**	**36.59 315**		*e*P	**P**	**21 38 54.0**	**+1.7**
HHC				pP	pP	21 39 37.3	+3.2
HHC				sP	sP	21 40 00.9	+3.9
HHC				PP	PP	21 40 26.8	+6.9
HHC				PcP	PcP	21 41 11.3	+0.3
HHC				S	**S**	**21 44 22.5**	**+2.6**
HHC				sS	sS	21 45 38.1	+4.3
HHC				SS	SS	21 47 04.4	-4.4
HHC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.3						
HHC				pmax	pmax		
	comp=Z,130nm,6.2s						
HHC				LR	LR		
	comp=N,140nm,10.6s						
HHC				LR	LR		
	comp=E,140nm,10.0s						
HHC				LR	LR		
	comp=Z,170nm,11.0s						
GYA	**Guiyang**	**36.70 289**		P	**P**	**21 38 55.6**	**+2.2**
GYA				pP	pP	21 39 38.8	+3.6
GYA				PP	PP	21 40 28.3	+6.9
GYA				S	**S**	**21 44 22.1**	**+0.1**
GYA				sS	sS	21 45 39.6	+3.7
GYA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.7						
GYA				pmax	pmax		
	comp=Z,70nm,3.9s						
BMNI	**Bima**	**37.88 227**		P	**P**	**21 39 02.8**	**-0.6**
	comp=Z,40nm,1.0s,mb4.9						
KNA	**Kununurra**	**37.99 207**		P	**P**	**21 39 04.0**	**-0.2**
	comp=Z,2μmcomp=Z,256nm,0.9s,mb5.7						
STKI	**Sintang**	**38.27 245**		P	**P**	**21 39 06.9**	**+0.2**
	comp=Z,50nm,0.9s,mb5.0						
CTA	**Charters Tower**	**38.49 179**		*e*P	**P**	**21 39 06.6**	**-1.7**
	comp=Z,9.0nm,0.9s,mb4.3						
CTAO	**Charters Tower**	**38.49 179**		*e*P	**P**	**21 39 06.8**	**-1.5**
	comp=Z,24nm,1.1s,mb4.6						
CTAO	**Charters Tower**	**38.49 179**		*e*P	**P**	**21 39 06.8**	**-1.5**
CTAO				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.6						
CTAO	**Charters Tower**	**38.49 179**		P	**P**	**21 39 07.1**	**-1.2**
	comp=Z,26nm,1.4s,mb4.6						
KSM	**Kuching**	**38.59 248**		P	**P**	**21 39 09.8**	**+0.4**
KSM	**Kuching**	**38.59 248**		*e*P	**P**	**21 39 09.3**	**0.0**
	comp=Z,44nm,1.0s,mb5.0						
KSM	**Kuching**	**38.59 248**		P	**P**	**21 39 09.5**	**+0.1**
	comp=Z,50nm,0.9s,mb5.0						
CD2	**Chengdu**	**39.71 296**		*e*P	**P**	**21 39 19.3**	**+0.9**
CD2				pP	pP	21 40 02.9	+2.1
CD2				sP	sP	21 40 26.1	+2.5
CD2				PP	PP	21 40 58.3	+4.3
CD2				S	**S**	**21 45 07.8**	**+0.8**
CD2				sS	sS	21 46 24.3	+2.6
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.1						
CD2				pmax	pmax		
	comp=Z,100nm,5.2s						
MTNI	**Mataram**	**39.73 230**		P	**P**	**21 39 18.4**	**-0.4**
	comp=Z,154nm,0.9s,mb5.4						
WB2	**Warramunga Arr**	**39.90 197**		*e*P	**P**	**21 39 19.0**	**-1.0**
WRA	**Warramunga Arr**	**39.91 197**		P	**P**	**21 39 18.9**	**-1.2**
	comp=Z,21nm,0.5s,mb4.8,baz=20,slow=9.0,SNR=207						
WRA				ScP	ScP	21 44 48.8	-2.8
	comp=Z,3.6nm,0.9s,baz=19,slow=4.2,SNR=8.0						
WRA				S	**S**	**21 45 09.3**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=19,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**39.91 197**		P	**P**	**21 39 18.9**	**-1.2**
WRA				S	**S**	**21 45 09.3**	**-0.7**
KHKI	**Kahang-Kahang**	**39.96 230**		P	**P**	**21 39 20.6**	**0.0**
	comp=Z,202nm,1.0s,mb5.5						
KMI	**Kunming**	**40.19 287**		P	**P**	**21 39 23.4**	**+1.0**
KMI				pP	pP	21 40 05.3	+0.4
KMI				sP	sP	21 40 28.5	+0.9
KMI				PP	PP	21 41 02.4	+3.1
KMI				S	**S**	**21 45 13.8**	**-0.4**
KMI				sS	sS	21 46 31.3	+2.2
KMI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
KMI				pmax	pmax		
	comp=Z,53nm,4.3s						
KMI				LR	LR		
	comp=N,140nm,18.4s						
KMI				LR	LR		
	comp=E,100nm,10.8s						
KMI				LR	LR		
	comp=Z,130nm,19.2s						
FX1	**Attu Island--F**	**40.34 26**		*e*P	**P**	**21 39 24.6**	**+1.4**
FX1	**Attu Island--F**	**40.34 26**		*e*P	**P**	**21 39 24.6**	**+1.3**
LZH	**Lanzhou**	**40.62 304**		*e*P	**P**	**21 39 27.8**	**+2.0**
LZH				pP	pP	21 40 13.3	+4.9
LZH				sP	sP	21 40 35.5	+4.4
LZH				PP	PP	21 41 09.0	+5.2
LZH				*e*S	**S**	**21 45 22.3**	**+1.9**
LZH				sS	sS	21 46 39.9	+4.6
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.3						
LZH				pmax	pmax		
	comp=Z,58nm,5.4s						
JAGI	**Jajag, Banyuwa**	**41.10 232**		P	**P**	**21 39 30.1**	**+0.1**
	comp=Z,85nm,1.0s,mb5.1						
FITZ	**Fitzroy Crossi**	**41.46 209**		*i*P	**P**	**21 39 32.3**	**-0.5**
	comp=Z,61nm,0.9s,mb5.0						
FITZ	**Fitzroy Crossi**	**41.46 209**		P	**P**	**21 39 32.4**	**-0.4**
SJI	**Sawahan**	**42.45 235**		P	**P**	**21 39 40.8**	**-0.1**
	comp=Z,141nm,0.7s,mb5.5						
PWJI	**Pagerwojo**	**42.60 235**		P	**P**	**21 39 41.8**	**-0.3**
	comp=Z,121nm,0.8s,mb5.4						
ULN	**Ulaanbaatar**	**42.77 322**		*e*P	**P**	**21 39 42.5**	**-0.6**
	comp=Z,44nm,2.2s,mb4.5						
ULN	**Ulaanbaatar**	**42.77 322**		*e*P	**P**	**21 39 42.5**	**-0.6**
ULN				pmax	pmax		
	comp=Z,44nm,2.2s,mb4.5						
ULN	**Ulaanbaatar**	**42.77 322**		P	**P**	**21 39 44.2**	**+1.1**
	comp=Z,7.8nm,1.3s,mb4.0						
TPI	**Tanjungpandan**	**42.99 244**		P	**P**	**21 39 47.3**	**+2.0**
	comp=Z,33nm,0.8s,mb4.8						
SONM	**Songino Array**	**43.15 321**		P	**P**	**21 39 45.4**	**-0.6**
	comp=Z,3.4nm,0.6s,mb4.0,baz=136,slow=8.9,SNR=29						
SONM				pP	pP	21 40 32.4	+3.4
	comp=Z,2.2nm,0.5s,baz=133,slow=7.9,SNR=2.4						
SONM				ScP	ScP	21 45 00.6	-3.5
	comp=Z,2.1nm,1.0s,baz=151,slow=4.0,SNR=7.3						
SONM	**Songino Array**	**43.15 321**		P	**P**	**21 39 45.4**	**-0.7**
SONM				*PP	pP	21 40 32.4	+3.3
KTGM	**Kuala Trenggan**	**43.49 258**		P	**P**	**21 39 51.1**	**+1.8**
ASAR	**Alice Springs**	**43.57 196**		P	**P**	**21 39 48.5**	**-1.2**
	comp=Z,12nm,0.6s,mb4.4,baz=20,slow=6.7,SNR=92						
ASAR				PP	PP	21 41 31.9	-3.8
	comp=Z,3.6nm,0.8s,baz=20,slow=7.4,SNR=4.8						
ASAR				ScP	ScP	21 45 02.6	-3.5
	comp=Z,2.0nm,0.8s,baz=18,slow=3.6,SNR=6.6						
ASAR				S	**S**	**21 46 01.1**	**-2.6**
	comp=Z,2.0nm,1.0s,baz=19,slow=23,SNR=7.4						
ASAR	**Alice Springs**	**43.57 196**		P	**P**	**21 39 48.5**	**-1.2**
ASAR						21 41 31.9	
ASAR				S	**S**	**21 46 01.1**	**-2.6**
EIDS	**Eidsvold**	**44.06 173**		*e*P	**P**	**21 39 51.5**	**-2.1**
	comp=Z,67nm,2.1s,mb4.6						
CHTO	**Chiang Mai**	**44.11 278**		*e*pP	pP	21 40 45.4	+8.1
CM31	**Chiang Mai Arr**	**44.16 278**		*e*P	**P**	**21 39 54.2**	**-0.3**
	comp=Z,2.8nm,0.6s,mb3.8						
CM31				*e*pP	pP	21 40 40.2	+2.5
CMAR	**Chiang Mai Arr**	**44.16 278**		P	**P**	**21 39 55.6**	**+1.0**
	comp=Z,3.3nm,0.7s,mb3.8,baz=68,slow=6.9,SNR=21						
CMAR	**Chiang Mai Arr**	**44.16 278**		P	**P**	**21 39 55.6**	**+1.0**
MYKOM	**Kota Tinggi**	**44.22 253**		P	**

comp=Z,136nm,0.6s,mb5.6
FALS False Pass 52.81 34 *e*P **P 21 40 59.9 -0.1**
CAN Canberra 53.76 177 *e*P **P 21 41 06.2 -0.8**
comp=Z,7.4nm,0.7s,mb4.3
CAN *e*pP pP 21 41 49.3 -2.6
CAN Canberra 53.76 177 *e*P **P 21 41 06.2 -0.9**
CAN *e**PP pP 21 41 49.3 -2.6
CAN pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
TIXI Tiksi 53.92 354 *e*P **P 21 41 06.7 -1.1**
comp=Z,6.4nm,0.8s,mb4.2
TIXI *e*pP pP 21 41 53.1 +0.5
TIXI Tiksi 53.92 354 *e*P **P 21 41 07.8 0.0**
TIXI pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
WMQ Urumqi 54.29 311 P **P 21 41 11.0 0.0**
WMQ pP pP 21 41 54.0 -1.9
WMQ sP sP 21 42 15.0 -3.0
WMQ PP PP 21 43 17.0 +2.0
WMQ S **S 21 48 33.0 +0.1**
WMQ ScS ScS 21 50 37.0 -2.7
WMQ pmax pmax
comp=Z,24nm,1.0s,mb4.7
WMQ pmax pmax
comp=Z,84nm,5.0s
WMQ LR LR
comp=N,240nm,16.0s
WMQ LR LR
comp=E,300nm,16.0s
WMQ LR LR
comp=Z,160nm,16.0s
SDPT Sand Point 54.56 35 *e*P **P 21 41 11.9 -0.7**
comp=Z,201nm,0.6s,mb5.8
KMBL Kambalda 54.70 205 *e*P **P 21 41 12.3 -1.6**
comp=Z,56nm,0.6s,mb5.3
TNA Tin City 55.90 21 *e*P **P 21 41 22.6 +0.6**
comp=Z,80nm,1.6s,mb5.0
TNA *e*pP pP 21 42 07.8 +0.6
TNA *e*PcP PcP 21 42 17.9 -0.3
TOO Toolangi 55.91 180 *e*P **P 21 41 21.2 -1.2**
CHGN Chignik 55.97 34 *e*P **P 21 41 22.4 -0.3**
KLBR Kellerberrin 56.65 209 *e*P **P 21 41 26.9 -0.9**
comp=Z,52nm,0.9s,mb5.2
ZAA0 Zalesovo Array 58.02 323 *e*P **P 21 41 35.4 -1.7**
ZAA0 *e*pP pP 21 42 23.4 +0.7
ZALV Zalesovo Beam 58.02 323 P **P 21 41 35.4 -1.8**
comp=Z,9.4nm,0.6s,mb4.6,baz=110,slow=8.1,SNR=34
ZALV ScP ScP 21 46 04.0 -3.7
comp=Z,0.8nm,0.6s,baz=123,slow=5.7,SNR=3.9
ZALV Zalesovo Beam 58.02 323 P **P 21 41 35.4 -1.7**
MK31 Makanchi Array 58.45 314 *e*P **P 21 41 39.7 -0.5**
MK31 *e*pP pP 21 42 26.8 +0.9
MK31 Makanchi Array 58.45 314 *e*P **P 21 41 39.7 -0.6**
MK31 *e**PP pP 21 42 26.8 +1.0
MKAR Makanchi Array 58.45 314 P **P 21 41 39.6 -0.6**
comp=Z,6.4nm,0.6s,mb4.4,baz=89,slow=8.8,SNR=52
MKAR pP pP 21 42 27.9 +2.0
comp=Z,3.3nm,0.8s,baz=92,slow=8.5,SNR=3.1
MKAR Makanchi Array 58.45 314 P **P 21 41 39.6 -0.7**
MKAR *PP pP 21 42 27.9 +2.1
OHAK Old Harbor 58.94 34 *e*P **P 21 41 43.6 +0.2**
comp=Z,71nm,0.8s,mb5.3
NVS Novosibirsk 59.11 323 *e*P **P 21 41 42.6 -2.1**
NVS pmax pmax
comp=Z,14nm,1.2s,mb4.5
NVS pmax pmax
comp=N,4.0nm,0.9s
TTA Tatalina 59.34 27 *e*P **P 21 41 46.2 +0.2**
TTA Tatalina 59.34 27 *e*P **P 21 41 46.3 +0.3**
KDAK Kodiak Island 59.45 33 *e*P **P 21 41 46.9 0.0**
comp=N,37nm,0.7s,mb5.1
KDAK Kodiak Island 59.45 33 *e*P **P 21 41 46.9 0.0**
KDAK pmax pmax
comp=Z,37nm,0.7s,mb5.1
RSO Redoubt South 60.05 30 *e*P **P 21 41 50.8 -0.1**
PPLA Purkeypile 60.99 28 *e*P **P 21 41 58.2 +0.9**
comp=Z,34nm,1.0s,mb4.9
PPLA *e*pP pP 21 42 45.5 +2.3
KURK Kurchatov 61.27 318 *e*P **P 21 41 58.0 -1.3**
comp=Z,15nm,0.9s,mb4.6
KURK *e*PcP PcP 21 42 41.0 +1.2
KURK *e*pP pP 21 42 46.5 +1.1
KURK Kurchatov 61.27 318 *e*P **P 21 41 58.0 -1.4**
KURK *e* *e* 21 42 41.0 -4.4
KURK *e**PP pP 21 42 46.5 +1.1
KURK pmax pmax
comp=Z,15nm,0.9s,mb4.6
SLKM Skilak Lake 61.28 31 *e*P **P 21 41 58.2 -1.1**
SLKM *e*PcP PcP 21 42 38.9 -0.8
SLKM Skilak Lake 61.28 31 *e*P **P 21 41 58.2 -1.0**
SLKM *e* *e* 21 42 38.9
SEW Seward 61.56 31 *e*P **P 21 42 00.9 -0.2**
comp=Z,51nm,0.8s,mb5.2
RC01 Rabbit Creek A 61.64 30 *e*P **P 21 42 00.0 -1.6**
comp=Z,70nm,0.8s,mb5.3
BPAW Bear Paw Mtn. 61.84 26 *e*P **P 21 42 02.9 0.0**
comp=Z,63nm,0.8s,mb5.3
BPAW *e*pP pP 21 42 46.7 -2.3
TRF Thorofare Moun 61.97 27 *e*P **P 21 42 03.5 -0.3**
comp=Z,41nm,0.8s,mb5.1
TRF *e*pP pP 21 42 49.4 -0.5
PMR Palmer 62.04 29 *e*P **P 21 42 03.3 -1.0**
comp=Z,39nm,0.8s,mb5.1
PMR Palmer 62.04 29 *e*P **P 21 42 03.3 -1.0**
PMR pmax pmax
comp=Z,39nm,0.8s,mb5.1
SML Sawmill 62.46 29 *e*P **P 21 42 06.4 -0.7**
comp=Z,28nm,0.9s,mb4.9
SML Sawmill 62.46 29 *e*P **P 21 42 06.4 -0.7**
SML pmax pmax
comp=Z,28nm,0.9s,mb4.9
MCK McKinley 62.62 27 *e*P **P 21 42 07.2 -0.9**
comp=Z,11nm,0.6s,mb4.7
MCK *e*PcP PcP 21 42 47.2 +2.1
MCK *e*PP PP 21 44 27.4 -0.8
MCK McKinley 62.62 27 *e*P **P 21 42 07.3 -0.8**
MCK *e* 21 42 47.2
MCK *e* 21 44 27.4
MCK pmax pmax
comp=Z,11nm,0.6s,mb4.7
KSH Kashi 62.84 305 *e*P **P 21 42 11.9 +1.8**
KSH *e*PcP PcP 21 42 49.3 +2.8
KSH *e*pP pP 21 42 59.4 +3.1
KSH *e*sP sP 21 43 21.6 +3.5
KSH *e*PP PP 21 44 33.8 +3.1
KSH *e*ScP ScP 21 46 29.9 +0.4
KSH *e*PcS PcS 21 46 51.3 +1.2
KSH *e*ScS ScS 21 51 39.9 -3.2
KSH pmax pmax
comp=Z,1.0nm,0.3s,mb3.9
KSH pmax pmax
comp=Z,77nm,3.7s
KSH LR LR
comp=N,220nm,7.9s
KSH LR LR
comp=E,300nm,10.9s
KSH LR LR
comp=Z,220nm,11.3s
TKM2 Tokmak 2 63.03 309 *e*P **P 21 42 11.3 +0.1**
comp=Z,12nm,0.9s,mb4.5
TKM2 *e*pP pP 21 43 01.2 +3.7
TKM2 Tokmak 2 63.03 309 *e*P **P 21 42 11.3 +0.1**
TKM2 *e**PP pP 21 43 01.3 +3.8
TKM2 pmax pmax
comp=Z,11nm,0.9s,mb4.5
COLD Coldfoot 63.04 23 *e*P **P 21 42 11.3 +0.5**
comp=Z,28nm,1.0s,mb4.8
COLD *e*PcP PcP 21 42 47.0 +0.2
COLD *e*pP pP 21 42 59.3 +2.2
COLD *e*PP PP 21 44 32.2 +0.4
COLA College 63.35 26 *e*P **P 21 42 12.4 -0.5**
comp=Z,18nm,0.8s,mb4.8
COLA College 63.35 26 *e*P **P 21 42 12.4 -0.5**
COLA pmax pmax
comp=Z,18nm,0.8s,mb4.8
ILAR Eielson Array 63.73 26 P **P 21 42 13.9 -1.5**
comp=Z,22nm,0.8s,mb4.8,baz=251,slow=5.5,SNR=182
ILAR Eielson Array 63.73 26 P **P 21 42 13.9 -1.5**
AAK Ala-Archa 63.85 309 P **P 21 42 17.1 +0.5**
comp=Z,1.1nm,0.3s,mb4.0,baz=139,slow=2.1,SNR=4.6
AAK pP pP 21 43 06.2 +3.3
comp=Z,1.9nm,0.5s,baz=50,slow=17,SNR=2.6
AAK Ala-Archa 63.85 309 P **P 21 42 17.1 +0.5**
AAK *PP pP 21 43 06.2 +3.2
EKS2 Erkin-Say 64.38 309 *e*P **P 21 42 20.1 0.0**
comp=Z,7.4nm,1.1s,mb4.2
EKS2 Erkin-Say 64.38 309 *e*P **P 21 42 20.1 +0.1**
EKS2 pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
DOT Dot Lake 64.73 28 *e*P **P 21 42 21.6 -0.3**
comp=Z,94nm,0.8s,mb5.5
EGAK Eagle 66.15 27 *e*P **P 21 42 30.5 -0.5**
BVAR Borovoye Array 66.47 320 P **P 21 42 32.2 -1.1**
comp=Z,14nm,0.6s,mb4.8,baz=94,slow=7.7,SNR=108
BVAR S S 21 51 06.1 -1.3
comp=Z,0.6nm,0.7s,baz=87,slow=10,SNR=3.6
BVAR Borovoye Array 66.47 320 P **P 21 42 32.2 -1.1**
BVAR S S 21 51 06.1 -1.2
BRVK Borovoye 66.54 320 *e*P **P 21 42 32.2 -1.5**
comp=Z,21nm,0.9s,mb4.8
BRVK *e*pP pP 21 43 20.4 0.0
BRVK Borovoye 66.54 320 *e*P **P 21 42 32.2 -1.5**
BRVK *e**PP pP 21 43 20.4 0.0
BRVK pmax pmax
comp=Z,21nm,0.9s,mb4.8
BRVK Borovoye 66.54 320 *d*P **P 21 42 32.4 -1.3**
BRVK pmax pmax
comp=Z,17nm,0.7s,mb4.8
KKAR Karatay Array 66.75 310 *e*P **P 21 42 34.0 -1.2**
comp=Z,6.2nm,0.6s,mb4.4
KKAR *e*pP pP 21 43 23.0 +1.0
KKAR Karatay Array 66.75 310 *e*P **P 21 42 34.0 -1.2**
KKAR *e**PP pP 21 43 23.0 +1.0
KKAR pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
DAWY Dawson 66.84 28 *e*P **P 21 42 35.8 +0.4**
KBL Kabul 68.84 301 *e*P **P 21 42 48.0 -0.5**
comp=Z,10nm,1.0s,mb4.4
KBL *e*pP pP 21 43 38.8 +3.3
KBL Kabul 68.84 301 *e*P **P 21 42 48.0 -0.4**
KBL *e**PP pP 21 43 38.8 +3.3
KBL pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
INK Inuvik 69.46 23 *e*P **P 21 42 50.7 -0.8**
comp=Z,26nm,0.7s,mb5.0
INK *e*pP pP 21 43 38.2 -0.5
INK Inuvik 69.46 23 *e*P **P 21 42 50.7 -0.9**
INK *e**PP pP 21 43 38.3 -0.4
INK pmax pmax
comp=Z,26nm,0.7s
DLBC Dease Lake 71.38 34 *e*P **P 21 43 04.2 +0.9**
DLBC *e*pP pP 21 43 51.2 +0.4
SVE Sverdlovsk 71.89 325 *e*P **P 21 43 05.3 -1.1**
ARU Arti 73.07 325 *e*P **P 21 43 12.0 -1.4**
comp=Z,8.1nm,0.7s,mb4.5
ARU Arti 73.07 325 *c i*P **P 21 43 11.9 -1.5**
ARU *e* 21 43 25.2
ARU *e**PP pP 21 44 01.2 +0.2
ARU *e*PPP 21 47 48.3
ARU S S 21 52 22.0 -2.1
ARU pmax pmax
comp=Z,20nm,1.7s,mb4.5
ABKAR Akbulak array 73.33 317 *e*P **P 21 43 13.4 -1.8**
AKTK Aktyubinsk 74.36 318 P **P 21 43 19.3 -1.7**
AKTO Aktyubinsk 74.36 318 P **P 21 43 19.3 -1.7**
comp=Z,3.3nm,0.6s,mb4.2,baz=96,slow=7.5,SNR=17
NLWA Neilton Lookou 76.86 44 *e*P **P 21 43 36.7 +1.4**
comp=Z,58nm,1.5s,mb5.0
OSD Olympics--Snow 76.87 44 P **P 21 43 36.5 +1.2**
E03A Lebam 77.26 45 ⇑P **P 21 43 37.7 +0.1**
baz=77
E03A ⇑pP pP 21 44 24.7 -1.0
baz=77
HDW Hoodsport 77.34 44 P **P 21 43 39.1 +1.2**
F03A Seaside 77.41 46 ⇑P **P 21 43 38.8 +0.5**
baz=77
GNW Green Mountain 77.51 44 *e*P **P 21 43 40.0 +1.1**
comp=Z,14nm,1.0s,mb4.5
GNW *e*pP pP 21 44 28.2 +1.2
JCW Jim Creek 77.94 43 *e*P **P 21 43 41.9 +0.6**
JCW *e*pP pP 21 44 30.4 +1.0
YKA Yellowknife Ar 78.08 28 P **P 21 43 41.1 -0.6**
comp=Z,16nm,0.6s,mb4.8,baz=286,slow=5.5,SNR=18
YKA Yellowknife Ar 78.08 28 P **P 21 43 41.1 -0.6**
RPW Rockport 78.14 43 P **P 21 43 42.5 +0.1**
comp=Z,6.4nm,0.6s,mb4.4
B06A Marblemount 78.14 43 ⇓P **P 21 43 42.0 -0.4**
baz=78
D05A Enumclaw 78.15 44 ⇑P **P 21 43 42.7 +0.2**
baz=78
F04A Amboy 78.18 45 ⇑P **P 21 43 43.0 +0.4**
baz=78,SNR=8.4
G04A Mulino 78.32 46 ⇓P **P 21 43 43.1 -0.3**
baz=78
LON Longmire 78.38 45 *e*P **P 21 43 44.0 +0.3**
comp=Z,14nm,1.1s,mb4.5
LON Longmire 78.38 45 *e*P **P 21 43 44.0 +0.3**
LON pmax pmax
comp=Z,14nm,1.1s,mb4.5
PRGR Permogore 78.43 331 *e*P **P 21 43 40.5 -3.2**
PRGR *e* 21 43 53.5
PRGR pmax pmax
comp=Z,12nm,0.8s,mb4.6
KHMM Horse Mountain 78.52 51 *e*P **P 21 43 45.9 +1.2**
comp=Z,7.9nm,0.7s,mb4.5
KHMM *e*pP pP 21 44 35.0 +2.1
HUMO Hull Mountain 78.64 49 *e*P **P 21 43 45.7 +0.5**
comp=Z,27nm,1.1s,mb4.8
HUMO *e*pP pP 21 44 32.9 -0.6
H04A Detroit Lake 78.65 47 ⇑P **P 21 43 45.1 -0.1**
baz=79,SNR=11
H04A ⇓pP pP 21 44 33.5 0.0
baz=79
WRW Wenatchee Ridg 78.70 43 P **P 21 43 45.8 +0.3**
TWW Teanaway 78.90 44 P **P 21 43 47.6 +1.0**
KCPM Cahto Peak 78.94 52 *e*P **P 21 43 47.6 +0.7**
comp=Z,15nm,0.7s,mb4.7
KCPM *e*pP pP 21 44 36.3 +1.1
KIPM Iron Peak 78.98 52 *e*P **P 21 43 47.5 +0.3**
KIPM *e*pP pP 21 44 34.1 -1.4
VFP Flag Point 78.98 46 P **P 21 43 47.4 +0.4**
YBH Yreka Blue Hor 79.05 50 *e*P **P 21 43 47.6 +0.1**
comp=Z,4.8nm,0.6s,mb4.3
YBH *e*pP pP 21 44 36.9 +1.1
YBH Yreka Blue Hor 79.05 50 *e*P **P 21 43 47.6 +0.1**
YBH *e**PP pP 21 44 36.9 +1.1
YBH pmax pmax
comp=Z,5.0nm,0.6s
ETW Entiat 79.13 43 *e*P **P 21 43 48.0 +0.2**
ETW *e*pP pP 21 44 36.6 +0.5
B08A Colville Reser 79.57 42 ⇑P **P 21 43 50.2 +0.1**
baz=80
G06A Carlson Farm, 79.57 46 ⇑P **P 21 43 50.0 -0.2**
baz=80
E07A Sunnyside 79.73 44 ⇑P **P 21 43 51.4 +0.4**
baz=80
VIPM Ingram Point 79.78 47 P **P 21 43 51.7 +0.3**
VIPM Ingram Point 79.78 47 P **P 21 43 51.7 +0.3**
RSW Rattlesnake Hi 79.95 44 *e*P **P 21 43 52.8 +0.5**
RSW *e*pP pP 21 44 41.2 +0.6
HAWA Hanford 79.99 44 *e*P **P 21 43 52.5 +0.1**
comp=Z,17nm,0.8s,mb4.7
HAWA *e*pP pP 21 44 40.8 -0.1
K05A Summer Lake 80.08 48 ⇑P **P 21 43 53.5 +0.5**
baz=80
K05A ⇑pP pP 21 44 40.8 -0.6
baz=80
D08A Wollman Farm, 80.20 44 ⇓P **P 21 43 53.7 +0.1**
baz=80
D08A ⇑pP pP 21 44 41.4 -0.6
baz=80
OD2 Odessa Site #2 80.24 43 *e*P **P 21 43 53.6 -0.2**
I07A Izee 80.67 47 ⇓P **P 21 43 56.5 +0.4**
baz=81
G08A Pilot Rock 80.69 45 ⇑P **P 21 43 56.1 -0.1**
baz=81
G08A ⇓pP pP 21 44 43.8 -0.9
baz=81
E09A Wood Farm, Sta 80.87 44 ⇑P **P 21 43 57.4 +0.3**
baz=81
NEW Newport 81.01 42 P **P 21 43 57.9 +0.1**
baz=81,SNR=15
NEW ⇑pP pP 21 44 45.7 -0.7
baz=81
NEW Newport 81.01 42 *e*P **P 21 43 57.9 0.0**
comp=Z,18nm,0.8s,mb4.8
NEW Newport 81.01 42 *e*P **P 21 43 57.9 +0.1**
NEW pmax pmax
comp=Z,18nm,0.8s
KLMR Klimovskoe 81.47 332 *e*P **P 21 43 58.6 -1.4**
J08A Circle Bar Ran 81.59 47 ⇑P **P 21 44 01.5 +0.5**
baz=82
J08A ⇓pP pP 21 44 48.2 -1.4
baz=82
F10A Beach Ranch, E 81.64 44 ⇑P **P 21 44 01.0 -0.2**
baz=82
C11A Tepee Creek (N 81.69 42 ⇓P **P 21 44 01.6 +0.2**
baz=82
WVOR Wild Horse Val 81.76 48 *e*P **P 21 44 01.6 -0.3**
comp=Z,13nm,0.8s,mb4.6
WVOR *e*pP pP 21 44 50.9 +0.4
WVOR Wild Horse Val 81.76 48 *e*P **P 21 44 01.6 -0.3**
WVOR *e**PP pP 21 44 50.9 +0.4
WVOR pmax pmax
comp=Z,13nm,0.8s,mb4.6
CMB Columbia Colle 81.79 53 *e*P **P 21 44 02.2 +0.1**
comp=Z,18nm,0.7s,mb4.8
CMB *e*pP pP 21 44 50.8 0.0
CMB Columbia Colle 81.79 53 *e*P **P 21 44 02.2 0.0**
CMB *e**PP pP 21 44 50.8 0.0
CMB pmax pmax
comp=Z,18nm,0.7s,mb4.8
WCN Washoe City 81.89 51 ⇓P **P 21 44 02.6 0.0**
baz=82
WCN Washoe City 81.89 51 *e*P **P 21 44 02.5 -0.2**
comp=Z,7.8nm,0.8s,mb4.4
WCN *e*PcP PcP 21 44 07.5 -0.2
WCN *e*pP pP 21 44 51.9 +0.6
WCN Washoe City 81.89 51 *e*P **P 21 44 02.5 -0.1**
WCN *e**PP pP 21 44 51.9 +0.6
WCN pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
KEV Kevo 81.97 342 *e*P **P 21 43 59.9 -2.5**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
KEV Kevo 81.97 342 *e*p **P 21 43 59.9 -2.5**
comp=Z,1.4nm,0.4s,mb3.9
KEV Kevo 81.97 342 *e*p pP 21 44 47.5 -3.6
comp=Z,1.8nm,0.5s
PAHR Pah Rah Range 82.04 51 *e*P **P 21 44 03.9 +0.5**
comp=Z,17nm,0.9s,mb4.7
PAHR *e*pP pP 21 44 50.5 -1.5
C12B Naegeli Ranch, 82.23 42 ⇑P **P 21 44 04.4 +0.2**
baz=82
WAKR Walker 82.36 52 *e*P **P 21 44 05.6 +0.5**
A13A Flathead Natio 82.50 41 ⇓P **P 21 44 06.2 +0.6**
baz=82
D12A Red Ives Fores 82.53 43 ⇓P **P 21 44 05.8 +0.1**
baz=82
ARCES ARCESS Array B 82.53 342 P **P 21 44 03.9 -1.4**
comp=Z,2.8nm,0.6s,mb4.2,baz=75,slow=7.4,SNR=24
ARCES ARCESS Array B 82.53 342 P **P 21 44 03.9 -1.4**
ARCES ARCESS Array B 82.53 342 P **P 21 44 03.9 -1.4**
E12A Beaver Dam Sad 82.59 44 ⇑P **P 21 44 06.4 +0.3**
baz=82
E12A ⇑pP pP 21 44 53.3 -1.6
baz=82
BSMT Bassoo Peak 82.62 42 *e*P **P 21 44 06.6 +0.3**
BSMT *e*pP pP 21 44 55.7 +0.7
B13A Whitefish 82.65 41 ⇓P **P 21 44 06.9 +0.5**
baz=82,SNR=8.3
B13A ⇓pP pP 21 44 53.7 -1.4
baz=82
WALA Waterton Lakes 82.76 41 *e*P **P 21 44 07.5 +0.5**
comp=Z,0.4nm,1.0s
C13A Hot Springs 82.82 42 ⇑P **P 21 44 07.5 +0.3**
baz=83
BLMT Blacktail Moun 82.84 42 *e*P **P 21 44 08.0 +0.6**
BLMT *e*pP pP 21 44 56.8 +0.7
JTMT Jette 82.98 42 *e*P **P 21 44 08.0 -0.1**
JTMT *e*pP pP 21 44 57.1 +0.3
F12A Elk City 83.02 44 P **P 21 44 08.2 -0.2**
baz=83,SNR=14
D13A Huson 83.09 43 ⇑P **P 21 44 07.9 -0.7**
baz=83
A14A Double T Ranch 83.10 41 ⇓P **P 21 44 08.9 +0.3**
baz=83,SNR=7.0
YBMT Yellow Bay 83.11 42 *e*P **P 21 44 09.0 +0.2**
YBMT *e*pP pP 21 44 57.7 +0.1
PKM Peak Mountain 83.17 56 ⇑P **P 21 44 09.5 +0.2**
baz=83,SNR=5.9
G12A Big Creek, Yel 83.18 45 ⇓P **P 21 44 08.7 -0.4**
baz=83
G12A ⇑pP pP 21 44 57.7 -0.3
baz=83
NVAR Mina Array Bea 83.23 52 P **P 21 44 10.0 +0.4**
comp=Z,28nm,0.7s,mb5.1,baz=266,slow=5.9,SNR=237
SWMT Swartz Lake 83.24 42 *e*P **P 21 44 09.3 -0.2**
C14A Swan Lake 83.31 42 ⇓P **P 21 44 09.6 -0.2**
baz=83
C14A ⇓pP pP 21 44 57.6 -1.0
baz=83
MTUM Tungsten Hills 83.38 53 *e*P **P 21 44 10.6 +0.3**
B14A Marquette Ranc 83.40 41 ⇓P **P 21 44 10.4 +0.2**
baz=83,SNR=9.2
MFID Camas Ranch 83.41 47 ⇓P **P 21 44 10.6 +0.2**
baz=83,SNR=22
MFID ⇑pP pP 21 44 59.1 -0.1
baz=83
A15A Johnson Ranch, 83.52 41 ⇑P **P 21 44 11.2 +0.3**
baz=83,SNR=6.8
F13A Darby 83.61 44 P **P 21 44 10.8 -0.6**
baz=84,SNR=17
SLMT Seeley Lake 83.66 42 *e*P **P 21 44 12.0 +0.4**
H12A Diamond D Ranc 83.69 45 ⇓P **P 21 44 11.3 -0.5**
baz=84,SNR=8.5
H12A ⇑pP pP 21 44 59.4 -1.2
baz=84
D14A Greenough 83.70 42 ⇑P **P 21 44 11.3 -0.5**
baz=84
I12A Atlanta 83.76 46 ⇓P **P 21 44 12.1 -0.1**
baz=84,SNR=12
B15A Bradely Ranch, 83.86 41 ⇑P **P 21 44 12.4 -0.1**
baz=84,SNR=12
G13A Cobalt 83.92 45 P **P 21 44 12.6 -0.3**
baz=84,SNR=62
CHMT Chamberlain Mo 83.92 43 *e*P **P 21 44 12.5 -0.4**
ISA Isabella 83.97 55 ⇓P **P 21 44 11.8 -1.7**
baz=84
C15A Salmond Ranch, 84.03 42 ⇑P **P 21 44 12.9 -0.5**
baz=84,SNR=9.8
JOF Joensuu 84.04 335 *e*P **P 21 44 10.5 -2.7**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
JOF Joensuu 84.04 335 *e*p **P 21 44 10.5 -2.7**
comp=Z,3.9nm,0.4s,mb4.5
JOF Joensuu 84.04 335 *e*p pP 21 44 54.6 -7.5
comp=Z,1.3nm,0.4s
H13A Challis 84.09 45 ⇓P **P 21 44 14.1 +0.3**
baz=84,SNR=16
A16A West Butte Ran 84.23 40 ⇑P **P 21 44 14.5 +0.1**
baz=84
F14A Wisdom 84.24 44 ⇓P **P 21 44 13.7 -0.9**
baz=84
HLID Hailey 84.33 46 ⇑P **P 21 44 15.0 0.0**
baz=84,SNR=10
HLID ⇑pP pP 21 45 01.9 -2.1
baz=84
HLID Hailey 84.33 46 *e*P **P 21 44 15.2 +0.2**
comp=Z,9.4nm,0.9s,mb4.5
D15A Lincoln 84.35 42 ⇓P **P 21 44 14.8 -0.2**
baz=84
G14A Jackson 84.38 44 ⇓P **P 21 44 14.7 -0.6**
baz=84
I13A Wildhorse Cree 84.41 46 P **P 21 44 15.9 +0.5**
baz=84,SNR=15
E15A Deer Lodge 84.49 43 ⇑P **P 21 44 15.7 -0.1**
baz=84,SNR=20
J13A Cove Ranch, Pi 84.55 46 ⇑P **P 21 44 16.3 +0.2**
baz=84,SNR=12
C16A Fuhringer Ranc 84.56 41 ⇓P **P 21 44 15.6 -0.5**
baz=84,SNR=20
EDW2 Edwards Air Fo 84.60 55 ⇑pP pP 21 45 04.5 -1.0
baz=84
MPMC Manual Prospec 84.61 54 ⇓P **P 21 44 16.3 -0.3**
baz=84,SNR=15
MPMC ⇑pP pP 21 45 04.6 -0.9
baz=84
LRMC Laurel Mountai 84.64 55 ⇑P **P 21 44 17.0 +0.2**
baz=85
H14A Leadore 84.66 45 ⇑P **P 21 44 16.9 +0.2**
baz=85
H14A ⇓pP pP 21 45 04.9 -0.7
baz=85
A17A Triple J Farms 84.78 40 ⇓P **P 21 44 17.2 +0.1**
baz=85
F15A Butte 84.80 43 P **P 21 44 17.4 +0.1**

baz=85,SNR=22
I14A Mackay 84.85 45 ⇑P P 21 44 18.0 +0.4
baz=85,SNR=11
DLMT Dillon 84.91 44 eP P 21 44 17.6 -0.3
comp=Z,6.6nm,0.8s,mb4.4
DLMT epP pP 21 45 06.8 -0.1
HRY Holter Researc 84.91 42 eP P 21 44 17.9 +0.1
MCMT McKenzie Canyo 84.93 44 eP P 21 44 18.2 +0.1
comp=Z,2.7nm,0.7s,mb4.1
MCMT epP pP 21 45 07.7 +0.7
FURC Furnace Creek, 84.95 53 ⇓P P 21 44 18.5 +0.1
baz=85,SNR=7.3
B17A L&G Farms, Che 84.97 41 ⇑P P 21 44 18.3 +0.1
baz=85,SNR=6.4
D16A Dana Ranch, Ca 84.97 42 ⇓P P 21 44 18.4 +0.2
baz=85,SNR=10
J14A Carey 85.02 46 ⇑P P 21 44 19.3 +0.8
baz=85,SNR=36
G15A Dillon 85.05 44 ⇓P P 21 44 18.5 -0.1
baz=85,SNR=10
E16A East Helena 85.07 43 ⇑P P 21 44 18.8 +0.1
baz=85,SNR=23
E16A ⇑pP pP 21 45 05.8 -1.8
baz=85
H15A Lima 85.14 45 ⇑P P 21 44 19.5 +0.4
baz=85
C17A Wharram Farm, 85.24 41 ⇓P P 21 44 18.7 -0.7
baz=85,SNR=8.6
R11A Troy Canyon, C 85.28 51 ⇑P P 21 44 19.9 0.0
baz=85,SNR=15
A18A Metzger Ranch, 85.31 40 P P 21 44 19.6 -0.1
baz=85,SNR=11
A18A ⇓pP pP 21 45 07.3 -1.5
baz=85
U10A Ash Meadows, A 85.37 53 ⇑P P 21 44 21.0 +0.6
baz=85,SNR=7.2
U10A ⇑pP pP 21 45 08.6 -0.8
baz=85
GSC Goldstone 85.38 54 ⇑P P 21 44 20.6 +0.1
baz=85
GSC Goldstone 85.38 54 eP P 21 44 20.6 +0.2
comp=Z,14nm,1.3s,mb4.5
GSC Goldstone 85.38 54 eP P 21 44 20.7 +0.2
GSC pmax pmax
comp=Z,14nm,1.3s,mb4.5
F16A Kennard Place, 85.38 43 P P 21 44 20.3 0.0
baz=85,SNR=15
BOZ Bozeman (W) 85.43 43 P P 21 44 20.7 +0.2
baz=85,SNR=16
BOZ Bozeman (W) 85.43 43 eP P 21 44 20.5 0.0
comp=Z,5.0nm,0.6s,mb4.4
BOZ epP pP 21 45 09.6 +0.1
BOZ Bozeman (W) 85.43 43 eP P 21 44 20.5 0.0
BOZ e*PP pP 21 45 09.6 +0.1
BOZ pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
D17A Six Diamond Ra 85.47 42 ⇑P P 21 44 20.7 0.0
baz=85,SNR=14
G16A Moss Hill, Enn 85.47 44 P P 21 44 21.0 +0.3
baz=85,SNR=7.6
VSR Storozhevoye 85.53 323 eP P 21 44 18.4 -2.4
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
K14A Jones Ranch, D 85.53 47 ⇓P P 21 44 21.9 +0.8
baz=85,SNR=13
K14A ⇓pP pP 21 45 08.8 -1.3
baz=85
B18A Beardsley Farm 85.55 40 ⇑P P 21 44 20.6 -0.5
baz=85,SNR=9.6
VORD Divnogorie 85.55 323 eP P 21 44 17.4 -3.6
VORD pmax pmax
comp=N,7.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
E17A Martinsdale 85.62 42 ⇑P P 21 44 21.3 -0.2
baz=86,SNR=7.0
E17A ⇓pP pP 21 45 09.8 -0.7
baz=86
L14A Malta 85.67 47 ⇓P P 21 44 21.9 +0.2
baz=86,SNR=7.6
EGMT Eagleton 85.71 41 eP P 21 44 21.3 -0.6
comp=Z,11nm,1.0s,mb4.5
J15A Blackfoot 85.73 46 ⇑P P 21 44 22.9 +0.9
baz=86,SNR=23
J15A ⇑pP pP 21 45 09.7 -1.3
baz=86
QLMT Earthquake Lak 85.87 44 eP P 21 44 23.4 +0.8
QLMT epP pP 21 45 13.2 +1.5
HEC Hector,Ludlow 85.91 55 ⇓pP pP 21 45 11.6 -0.5
baz=86
K15A Arbon 85.93 46 ⇓P P 21 44 23.5 +0.5
baz=86,SNR=13
K15A ⇑pP pP 21 45 12.3 +0.3
baz=86
F17A Fitzpatrick Pl 85.96 43 ⇓P P 21 44 23.5 +0.4
baz=86,SNR=7.2
A19A Klindworth Far 85.97 40 ⇑P P 21 44 23.0 -0.1
baz=86
D18A Linhart Farms, 86.01 41 ⇓P P 21 44 23.5 +0.2
baz=86
TUQ Turquoise Moun 86.01 54 ⇑P P 21 44 23.1 -0.4
baz=86,SNR=5.7
H16A Russell Place, 86.04 44 ⇓P P 21 44 24.5 +1.0
baz=86,SNR=11
H16A ⇓pP pP 21 45 11.6 -1.0
baz=86,SNR=5.4
B19A Brinkman Farms 86.04 40 ⇓P P 21 44 23.1 -0.3
baz=86,SNR=5.9
HVU Hansel Valley 86.09 47 eP P 21 44 24.5 +0.7
comp=Z,22nm,1.1s,mb4.8
HVU epP pP 21 45 12.7 -0.2
HVU Hansel Valley 86.09 47 eP P 21 44 24.5 +0.7
HVU e*PP pP 21 45 12.7 -0.2
HVU pmax pmax
comp=Z,22nm,1.1s,mb4.8
E18A Harlowton 86.19 42 ⇑P P 21 44 24.5 +0.3
baz=86,SNR=12
E18A ⇓pP pP 21 45 12.3 -1.0
baz=86
PFO Pinyon Flat Ob 86.22 56 ⇑pP pP 21 45 13.4 -0.3
baz=86
PFO Pinyon Flat Ob 86.22 56 eP P 21 44 24.0 -0.6
comp=Z,51nm,2.2s,mb4.9
PFO Pinyon Flat Ob 86.22 56 eP P 21 44 24.0 -0.6
PFO pmax pmax
comp=Z,51nm,2.2s,mb4.9
SHPR Sheep Range 86.23 53 eP P 21 44 25.0 +0.4
YMR Madison River 86.24 44 eP P 21 44 25.1 +0.6
comp=Z,25nm,0.9s,mb5.0
YMR epP pP 21 45 14.1 +0.5
C19A Slack Wire Ran 86.26 41 P P 21 44 24.6 +0.1
baz=86,SNR=5.2
L15A Malad City 86.28 47 P P 21 44 24.8 +0.1
baz=86,SNR=10
L15A ⇓pP pP 21 45 13.4 -0.5
baz=86
J16A Bone 86.33 46 ⇓P P 21 44 25.5 +0.6
baz=86,SNR=6.3
J16A ⇓pP pP 21 45 13.4 -0.6
baz=86
YFT Old Faithful 86.41 44 eP P 21 44 27.8 +2.5
comp=Z,23nm,0.9s,mb4.9
YFT epP pP 21 45 17.4 +3.0
YNR Norris Junctio 86.41 44 eP P 21 44 27.8 +2.4
comp=Z,39nm,1.1s,mb5.0
YNR epP pP 21 45 14.9 +0.5
M15A Larsen Ranch, 86.43 47 P P 21 44 25.6 +0.1
baz=86,SNR=15
M15A ⇓pP pP 21 45 14.5 -0.2
baz=86
GMRC Granite Mounta 86.44 55 ⇓P P 21 44 25.6 -0.1
baz=86,SNR=6.5
GMRC ⇓pP pP 21 45 14.4 -0.4
baz=86
KAF Kangasniemi 86.44 336 eP P 21 44 22.3 -2.8
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
KAF Kangasniemi 86.44 336 ep P 21 44 22.3 -2.8
comp=Z,1.1nm,0.4s,mb3.9
KAF Kangasniemi 86.44 336 ep pP 21 45 10.1 -4.1
comp=Z,0.7nm,0.4s
BELC Belle Mtn. Jos 86.44 55 ⇓P P 21 44 24.9 -0.8
baz=86,SNR=5.4
A20A Cobblestone Ra 86.48 39 ⇓P P 21 44 25.3 -0.2
baz=86
MONP Monument Peak 86.49 57 ⇑P P 21 44 26.2 +0.3
baz=86
MONP ⇓pP pP 21 45 15.1 0.0
baz=86
SPUT South Promonto 86.49 48 eP P 21 44 26.0 +0.2
comp=Z,17nm,1.0s,mb4.7
SPUT epP pP 21 45 14.9 0.0
RRI2 Red Ridge 86.50 45 eP P 21 44 26.4 +0.6
comp=Z,15nm,0.9s,mb4.7
K16A Soda Springs 86.52 46 ⇓P P 21 44 26.2 +0.4
baz=86,SNR=7.0
K16A ⇑pP pP 21 45 15.9 +0.9
baz=86,SNR=5.7
IMW Indian Meadow 86.55 45 eP P 21 44 26.7 +0.7
comp=Z,11nm,0.8s,mb4.6
IMW epP pP 21 45 16.4 +1.2
F18A Big Timber 86.57 43 ⇓P P 21 44 24.9 -1.1
baz=86,SNR=5.2
N15A Stansbury Isla 86.59 48 ⇓P P 21 44 26.0 -0.3
baz=86
D19A Cripps Ranch, 86.60 41 P P 21 44 25.8 -0.4
baz=86,SNR=8.0
H17A Grant Village 86.60 44 ⇓pP pP 21 45 14.7 -0.7
baz=86
FLWY Flagg Ranch 86.64 45 eP P 21 44 26.4 0.0
comp=Z,6.5nm,0.5s,mb4.6
FLWY epP pP 21 45 16.8 +1.2
FLWY esP sP 21 45 37.4 +0.7
DUG Dugway 86.64 49 eP P 21 44 22.7 -3.8
comp=Z,23nm,0.8s,mb5.0
DUG Dugway 86.64 49 eP P 21 44 22.7 -3.8
DUG pmax pmax
comp=Z,23nm,0.8s,mb5.0
TPAW Teton Pass 86.70 45 eP P 21 44 27.0 +0.3
TPAW epP pP 21 45 16.7 +0.8
U12A Valley of Fire 86.72 53 ⇑P P 21 44 27.5 +0.5
baz=87
MOOW Moose Ponds 86.74 45 eP P 21 44 27.1 +0.2
comp=Z,7.3nm,0.9s,mb4.4
MOOW epP pP 21 45 16.5 +0.4
I17A Pilgrim Ck. 86.78 45 ⇓P P 21 44 27.6 +0.5
baz=87
S13A Holt Ranch, En 86.82 51 ⇓P P 21 44 27.8 +0.3
baz=87,SNR=16
LOHW Long Hollow 86.88 45 eP P 21 44 27.5 -0.1
comp=Z,18nm,1.5s,mb4.6
LOHW epP pP 21 45 17.2 +0.4
LOHW ePP PP 21 47 53.7 +0.7
FINES FINESS Array B 86.91 335 P P 21 44 24.5 -2.9
comp=Z,2.9nm,0.4s,mb4.4,baz=62,slow=4.9,SNR=48
FINES FINESS Array B 86.91 335 P P 21 44 24.5 -2.9
C20A Veseth Ranch, 86.92 40 ⇑P P 21 44 28.0 +0.3
baz=87
C20A ⇓pP pP 21 45 15.8 -1.1
baz=87
L16A Fish Haven 86.93 47 ⇑P P 21 44 28.1 +0.2
baz=87
L16A ⇑pP pP 21 45 16.9 -0.2
baz=87
E19A Rath Farm, Rou 86.94 42 ⇓P P 21 44 27.8 -0.1
baz=87
BC3 Big Chuckawall 86.99 56 ⇓P P 21 44 28.4 0.0
baz=87,SNR=6.5
T13A Saint George 86.99 52 ⇓P P 21 44 28.7 +0.4
baz=87,SNR=6.7
IRM Iron Mountain 87.05 55 ⇑P P 21 44 28.7 0.0
baz=87
H18A Shoshone NF, C 87.09 44 ⇓P P 21 44 28.7 +0.1
baz=87
U13A Pakoon Wash 87.16 53 P P 21 44 29.6 +0.5
baz=87,SNR=29
U13A ⇑pP pP 21 45 19.2 +0.9
baz=87
RLMT Red Lodge 87.17 43 eP P 21 44 29.3 +0.4
comp=Z,7.8nm,0.7s,mb4.5
RLMT ePcP PcP 21 44 31.1 +0.3
RLMT epP pP 21 45 18.6 +0.4
FFC Flin Flon 87.18 32 i P P 21 44 29.0 +0.2
CCUT Cedar City 87.20 51 eP P 21 44 27.5 -1.8
comp=Z,17nm,0.6s,mb5.0
NLU North Lily Min 87.25 49 eP P 21 44 29.2 -0.2
comp=Z,14nm,0.9s,mb4.7
V13A Grand Canyon W 87.35 53 ⇑P P 21 44 30.4 +0.4
baz=87,SNR=21
V13A ⇑pP pP 21 45 18.8 -0.5
baz=87
C21A Desert Coulee 87.43 40 ⇓P P 21 44 29.0 -1.1
baz=87,SNR=6.2
C21A ⇓pP pP 21 45 18.1 -1.3
baz=87
J18A Kendall Valley 87.43 45 ⇑P P 21 44 30.6 +0.4
baz=87,SNR=16
J18A ⇓pP pP 21 45 18.5 -1.0
baz=87,SNR=8.9
JLU Jordanelle 87.45 48 eP P 21 44 31.0 +0.6
comp=Z,21nm,0.9s,mb4.9
JLU epP pP 21 45 19.6 -0.1
MPU Maple Canyon 87.55 49 eP P 21 44 30.9 +0.1
comp=Z,16nm,1.0s,mb4.8
T14A Hurricane 87.59 52 ⇑P P 21 44 31.7 +0.5
baz=88,SNR=6.5
K18A Toltan Ranch, 87.64 46 ⇓pP pP 21 45 19.1 -1.4
baz=88,SNR=5.2
DAU Daniels Canyon 87.66 48 eP P 21 44 32.0 +0.6
DAU epP pP 21 45 21.2 +0.5
DAU Daniels Canyon 87.66 48 eP P 21 44 32.0 +0.6
DAU e*PP pP 21 45 21.2 +0.5
M17A Scullys Gap (B 87.67 47 ⇑P P 21 44 31.3 -0.1
baz=88,SNR=5.7
M17A ⇑pP pP 21 45 19.8 -0.9
baz=88,SNR=5.6
GLA Glamis 87.69 56 ⇑P P 21 44 32.0 +0.3
baz=88,SNR=7.7
GLA Glamis 87.69 56 eP P 21 44 31.8 +0.1
comp=Z,9.9nm,0.8s,mb4.7
GLA Glamis 87.69 56 eP P 21 44 31.8 +0.1
GLA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
W13A Hualapai Mount 87.69 54 ⇓P P 21 44 31.9 +0.2
baz=88
W13A ⇑pP pP 21 45 20.7 -0.2
baz=88
MSU Marysvale 87.72 50 eP P 21 44 31.4 -0.3
MSU Marysvale 87.72 50 eP P 21 44 31.4 -0.3
U14A Mt Trumbull 87.75 52 P P 21 44 32.5 +0.6
baz=88,SNR=24
U14A ⇑pP pP 21 45 21.4 +0.2
baz=88,SNR=5.4
PDMCI Parker Dam,Lak 87.78 55 ⇑P P 21 44 32.3 +0.1
baz=88
I19A Meeteetse 87.79 44 ⇓P P 21 44 32.2 +0.3
baz=88
I19A ⇑pP pP 21 45 20.2 -1.0
baz=88
D21A La Casta Ranch 87.81 41 ⇑P P 21 44 31.5 -0.5
baz=88
D21A ⇓pP pP 21 45 20.2 -1.1
baz=88
G20A Bridger 87.81 43 ⇑pP pP 21 45 20.3 -1.0
baz=88
X13A Yucca 87.92 54 ⇓P P 21 44 33.0 +0.2
baz=88,SNR=14
X13A ⇓pP pP 21 45 21.2 -0.9
baz=88
BW06 Boulder Array 87.92 45 P P 21 44 32.0 -0.6
baz=88,SNR=5.6
BW06 Boulder Array 87.92 45 eP P 21 44 31.9 -0.7
comp=Z,22nm,2.0s,mb4.6
PDAR Pinedale Array 87.92 45 P P 21 44 31.9 -0.7
comp=Z,1.5nm,0.4s,mb4.2,baz=168,slow=1.3,SNR=27
L18A Fontenelle, Gr 87.93 46 ⇑pP pP 21 45 20.8 -1.1
baz=88
J19A Crowheart 88.06 45 ⇑P P 21 44 33.7 +0.5
baz=88
J19A ⇓pP pP 21 45 21.6 -0.9
baz=88
V14A Boquillas Ranc 88.09 53 P P 21 44 34.2 +0.7
baz=88,SNR=45
V14A ⇑pP pP 21 45 22.5 -0.4
baz=88,SNR=5.6
M18A Lyman 88.10 47 ⇓P P 21 44 33.5 +0.1
baz=88
O17A Robinson Place 88.11 48 ⇓P P 21 44 33.7 +0.1
baz=88,SNR=8.2
O17A ⇑pP pP 21 45 22.3 -0.6
baz=88
T15A Red Dirt Ranch 88.13 52 ⇓P P 21 44 33.5 -0.1
baz=88,SNR=5.7
W14A Seligman 88.27 53 ⇓P P 21 44 34.6 +0.2
baz=88,SNR=20
W14A ⇑pP pP 21 45 22.5 -1.2
baz=88
Q16A Castle Valley 88.30 49 ⇑P P 21 44 35.3 +0.9
baz=88
R16A Teasdale 88.31 50 ⇓P P 21 44 35.1 +0.6
baz=88,SNR=11
R16A ⇓pP pP 21 45 23.5 -0.4
baz=88
L19A Farson 88.32 46 ⇓P P 21 44 34.2 -0.3
baz=88
L19A ⇑pP pP 21 45 23.4 -0.4
baz=88
K19A Absolon Red Bu 88.38 45 P P 21 44 34.1 -0.6
baz=88,SNR=12
K19A ⇑pP pP 21 45 22.6 -1.5
baz=88,SNR=6.0
P17A Butcher Ranch, 88.39 49 ⇓pP pP 21 45 24.9 +0.6
baz=88
U15A North Rim 88.41 52 ⇓P P 21 44 35.2 +0.1
baz=88,SNR=28
S16A Weppner Ranch, 88.44 51 ⇑P P 21 44 35.0 -0.1
baz=88,SNR=5.8
G21A Lodge Grass 88.46 42 ⇑P P 21 44 34.8 -0.2
baz=88
N18A Larsen Ranch, 88.55 47 ⇓P P 21 44 35.4 -0.2
baz=88
N18A ⇑pP pP 21 45 24.8 -0.2
baz=88
Z13A Yuma Proving G 88.55 55 ⇓P P 21 44 35.8 0.0
baz=88,SNR=11
C23A Lambert 88.60 40 ⇑P P 21 44 35.8 +0.1
baz=88
CASY Casey 88.66 193 eP P 21 44 34.0 -1.3
CASY epP pP 21 45 24.2 -0.6
J20A Shoshoni 88.67 44 ⇑P P 21 44 35.3 -0.8
baz=89
P18A Preston Nutter 88.68 49 ⇓P P 21 44 36.5 +0.3
baz=89,SNR=5.2
X14A Yava 88.69 54 P P 21 44 37.1 +0.8
baz=89,SNR=19
X14A ⇓pP pP 21 45 26.3 +0.6
baz=89,SNR=5.6
SRU San Rafael 88.69 49 ⇓P P 21 44 35.1 -1.2
baz=89,SNR=16
SRU San Rafael 88.69 49 eP P 21 44 34.8 -1.5
comp=Z,16nm,0.8s,mb4.9
SRU San Rafael 88.69 49 eP P 21 44 34.8 -1.5
SRU pmax pmax
comp=Z,16nm,0.8s,mb4.9
V15A Kaibab Nationa 88.73 53 ⇑P P 21 44 37.4 +0.9
baz=89
V15A ⇓pP pP 21 45 26.7 +0.7
baz=89
K20A Yellowstone Ra 88.78 45 ⇓P P 21 44 36.5 -0.1
baz=89,SNR=9.9
K20A ⇓pP pP 21 45 24.7 -1.3
baz=89
T16A Glen Canyon Da 88.79 51 ⇑P P 21 44 36.6 -0.2
baz=89
Y14A Wickenburg 88.79 55 P P 21 44 37.2 +0.3
baz=89,SNR=19
Y14A ⇓pP pP 21 45 25.1 -1.1
baz=89
H21A Big Horn, Sher 88.82 43 P P 21 44 37.1 +0.3
baz=89,SNR=8.8
H21A ⇑pP pP 21 45 25.1 -1.1
baz=89
R17A Hanksville Air 88.82 50 ⇓pP pP 21 45 26.2 -0.1
baz=89
W15A Williams 88.90 53 ⇓pP pP 21 45 27.9 +1.2
baz=89
Q18A Rafter H Ranch 88.97 49 ⇓P P 21 44 37.4 -0.2
baz=89
I21A Big Trails, Te 89.00 44 ⇓P P 21 44 37.6 -0.1
baz=89
Z14A Wintersburg 89.05 55 ⇓P P 21 44 38.6 +0.5
baz=89
L20A Wamsutter 89.05 46 ⇓P P 21 44 38.1 +0.2
baz=89
S17A Black Ridge (B 89.06 51 ⇑P P 21 44 37.9 -0.2
baz=89,SNR=6.0
X15A Humboldt 89.18 54 ⇑P P 21 44 39.5 +0.8
baz=89,SNR=17
X15A ⇓pP pP 21 45 27.4 -0.7
baz=89,SNR=7.2
T17A Navajo Res., N 89.30 51 P P 21 44 39.3 +0.1
baz=89,SNR=11
T17A ⇓pP pP 21 45 28.4 -0.2
baz=89
Y15A Casa Rosa Ranc 89.31 54 P P 21 44 39.8 +0.5
baz=89,SNR=17
Y15A ⇓pP pP 21 45 27.9 -0.8
baz=89,SNR=7.3
M20A Sweetwater, Wa 89.37 46 ⇓P P 21 44 39.7 +0.3
baz=89,SNR=6.7
M20A ⇓pP pP 21 45 28.4 -0.5
baz=89,SNR=5.5
U16A Tuba City 89.39 52 ⇑P P 21 44 40.4 +0.7
baz=89,SNR=6.1
K21A Alcova 89.52 45 ⇑P P 21 44 39.9 -0.2
baz=89,SNR=8.9
K21A ⇓pP pP 21 45 28.3 -1.3
baz=89
U17A Shonto 89.56 51 ⇑P P 21 44 40.7 +0.3
baz=90
P19A Cripple Cowboy 89.58 48 ⇓P P 21 44 40.2 -0.2
baz=90,SNR=12
P19A ⇓pP pP 21 45 28.7 -1.1
baz=90,SNR=6.1
N20A Spence Gulch, 89.59 47 ⇓P P 21 44 39.4 -1.0
baz=90
S18A Hurst Farm, Bl 89.62 50 ⇓P P 21 44 39.9 -0.8
baz=90,SNR=8.7
Q19A Hogan Spring (89.65 49 ⇑P P 21 44 40.0 -0.8
baz=90
214A Organ Pipe Nat 89.67 56 ⇑P P 21 44 41.5 +0.5
baz=90,SNR=9.0
214A ⇓pP pP 21 45 29.7 -0.8
baz=90
J22A Midwest 89.70 44 ⇑P P 21 44 40.4 -0.5
baz=90
L21A Rawlins 89.73 45 ⇑P P 21 44 41.2 +0.1
baz=90,SNR=7.0
L21A ⇓pP pP 21 45 29.3 -1.2
baz=90,SNR=5.8
V17A Tonalea, Kykot 89.84 52 ⇑P P 21 44 42.2 +0.5
baz=90,SNR=19
V17A ⇑pP pP 21 45 30.7 -0.5
baz=90,SNR=8.5
M21A Separation Pea 89.88 46 ⇓P P 21 44 41.4 -0.4
baz=90
R19A Curley Farm, L 89.92 49 ⇑pP pP 21 45 31.4 -0.1
baz=90
T18A Mexican Hat 89.93 51 P P 21 44 41.8 -0.3
baz=90,SNR=9.8
Y16A Circle Bar Ran 89.99 54 ⇑P P 21 44 42.9 +0.4
baz=90,SNR=14
Y16A ⇑pP pP 21 45 31.1 -0.9
baz=90,SNR=7.7
PV04 Paradox Valley 90.13 49 eP P 21 44 43.1 +0.1
PV04 epP pP 21 45 33.4 +0.9
S19A Harvey Farm, M 90.23 50 ⇓P P 21 44 43.0 -0.5
baz=90,SNR=5.1
S19A ⇓pP pP 21 45 31.6 -1.4
baz=90
Q20A Ridgley Place, 90.34 49 ⇑P P 21 44 44.1 +0.1
baz=90
Q20A ⇑pP pP 21 45 32.0 -1.5
baz=90
V18A Ganado 90.45 52 P P 21 44 45.1 +0.6
baz=90,SNR=12
V18A ⇓P pP 21 45 33.8 -0.2
baz=90,SNR=7.1
PV01 Paradox Valley 90.48 49 epP pP 21 45 34.4 +0.3
comp=Z,1μm,1.2s
M22A Cedar Creek Ra 90.49 46 ⇑P P 21 44 44.9 +0.3
baz=90
Y17A Roosevelt 90.55 54 ⇑P P 21 44 45.6 +0.5
baz=90,SNR=5.7
Y17A ⇑pP pP 21 45 34.2 -0.4
baz=90

R20A	**Redvale**	**90.59**	**49**	P	**P**	**21 44 45.3**	**+0.1**
	baz=90,SNR=5.9						
R20A				⇓pP	pP	21 45 34.3	-0.3
	baz=90						
S20A	**Disappointment**	**90.75**	**50**	⇓P	**P**	**21 44 45.9**	**0.0**
	baz=91						
L23A	**Garrett**	**90.78**	**45**	⇓P	**P**	**21 44 44.6**	**-1.4**
	baz=91,SNR=5.2						
RSSD	**Black Hills**	**90.97**	**42**	*e*P	**P**	**21 44 46.4**	**-0.4**
	comp=Z,3.5nm,0.7s,mb4.4						
RSSD	**Black Hills**	**90.97**	**42**	*e*P	**P**	**21 44 46.4**	**-0.4**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
O22A	**Kremmling**	**91.06**	**47**	⇓P	**P**	**21 44 46.7**	**-0.6**
	baz=91,SNR=6.0						
O22A				⇑pP	pP	21 45 36.0	-0.8
	baz=91						
117A	**Oracle**	**91.06**	**55**	⇑P	**P**	**21 44 48.2**	**+0.8**
	baz=91,SNR=6.8						
117A				⇓pP	pP	21 45 37.8	+0.8
	baz=91,SNR=5.9						
W19A	**Sanders**	**91.10**	**52**	⇓P	**P**	**21 44 48.3**	**+0.7**
	baz=91						
R21A	**Cimarron**	**91.11**	**49**	P	**P**	**21 44 48.2**	**+0.6**
	baz=91,SNR=20						
R21A				⇑pP	pP	21 45 37.1	0.0
	baz=91,SNR=5.3						
TUC	**Tucson**	**91.13**	**55**	*e*P	**P**	**21 44 48.4**	**+0.6**
	comp=Z,28nm,1.7s,mb4.9						
TUC				*e*pP	pP	21 45 38.3	+1.0
TUC	**Tucson**	**91.13**	**55**	*e*P	**P**	**21 44 48.4**	**+0.6**
TUC				*e**PP	pP	21 45 38.3	+1.0
TUC				pmax	pmax		
	comp=Z,29nm,1.7s,mb4.9						
N23A	**Red Feather La**	**91.15**	**46**	⇑P	**P**	**21 44 48.7**	**+1.0**
	baz=91						
N23A				⇓pP	pP	21 45 36.6	-0.6
	baz=91						
SMCO	**Snowmass**	**91.18**	**48**	*e*pP	pP	21 45 37.5	+0.1
	comp=Z,10nm,1.1s						
217A	**Green Valley**	**91.31**	**56**	⇓pP	pP	21 45 38.6	+0.4
	baz=91						
X19A	**St. Johns**	**91.45**	**53**	⇓P	**P**	**21 44 49.8**	**+0.6**
	baz=91,SNR=5.7						
X19A				⇓pP	pP	21 45 38.9	+0.2
	baz=91,SNR=5.7						
V20A	**Brimhall**	**91.51**	**51**	⇑P	**P**	**21 44 49.4**	**0.0**
	baz=91,SNR=11						
V20A				⇑pP	pP	21 45 39.2	+0.2
	baz=91,SNR=5.1						
118A	**Homack Ranch,**	**91.64**	**55**	⇓P	**P**	**21 44 49.8**	**-0.4**
	baz=92,SNR=6.9						
118A				⇑pP	pP	21 45 39.8	+0.2
	baz=92,SNR=6.6						
Y19A	**Nutrioso**	**91.66**	**53**	⇑P	**P**	**21 44 50.7**	**+0.5**
	baz=92,SNR=8.7						
Y19A				⇑pP	pP	21 45 41.3	+1.6
	baz=92,SNR=6.9						
W20A	**Ramah**	**91.76**	**52**	⇓pP	pP	21 45 40.3	+0.1
	baz=92						
U21A	**Nageezi**	**91.84**	**51**	⇓pP	pP	21 45 40.3	-0.2
	baz=92						
ISCO	**Idaho Springs**	**91.86**	**47**	⇑P	**P**	**21 44 51.4**	**+0.4**
	baz=92,SNR=5.3						
ISCO				⇑pP	pP	21 45 40.0	-0.6
	baz=92						
ISCO	**Idaho Springs**	**91.86**	**47**	*e*P	**P**	**21 44 51.7**	**+0.7**
	comp=Z,8.4nm,1.1s,mb4.6						
ISCO				*e*pP	pP	21 45 41.3	+0.7
ISCO	**Idaho Springs**	**91.86**	**47**	*e*P	**P**	**21 44 51.7**	**+0.7**
ISCO				*e**PP	pP	21 45 41.3	+0.8
ISCO				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
S22A	**4UR Ranch, Cre**	**91.89**	**49**	⇑P	**P**	**21 44 51.1**	**-0.1**
	baz=92,SNR=10.0						
S22A				⇓pP	pP	21 45 40.9	+0.2
	baz=92						
X20A	**Quemado**	**92.00**	**53**	P	**P**	**21 44 52.8**	**+1.1**
	baz=92,SNR=12						
X20A				⇑pP	pP	21 45 42.3	+1.0
	baz=92,SNR=7.3						
318A	**Bisbee**	**92.09**	**56**	⇓P	**P**	**21 44 52.7**	**+0.4**
	baz=92,SNR=6.3						
318A				⇑pP	pP	21 45 42.8	+1.0
	baz=92,SNR=5.5						
119A	**Ashpeak Ranch,**	**92.10**	**54**	⇑P	**P**	**21 44 52.5**	**+0.2**
	baz=92,SNR=7.4						
119A				⇑pP	pP	21 45 42.7	+0.9
	baz=92						
V21A	**Milan**	**92.12**	**51**	⇓P	**P**	**21 44 52.6**	**+0.3**
	baz=92,SNR=5.6						
V21A				⇓pP	pP	21 45 42.1	+0.3
	baz=92						
T22A	**Edith**	**92.15**	**50**	⇑P	**P**	**21 44 52.9**	**+0.5**
	baz=92,SNR=5.6						
T22A				⇑pP	pP	21 45 41.6	-0.4
	baz=92						
Y20A	**Horse Springs,**	**92.35**	**53**	P	**P**	**21 44 54.4**	**+1.0**
	baz=92,SNR=12						
Y20A				⇓pP	pP	21 45 43.4	+0.5
	baz=92,SNR=7.7						
219A	**White Tail Can**	**92.44**	**55**	⇑P	**P**	**21 44 54.2**	**+0.3**
	baz=92						
219A				⇑pP	pP	21 45 42.9	-0.5
	baz=92						
U22A	**Llaves**	**92.45**	**50**	⇑P	**P**	**21 44 54.2**	**+0.4**
	baz=92,SNR=6.3						
U22A				⇑pP	pP	21 45 43.5	+0.1
	baz=92,SNR=5.7						
Z20A	**Nine Sixteen R**	**92.51**	**54**	P	**P**	**21 44 55.1**	**+1.0**
	baz=92,SNR=24						
Z20A				⇑pP	pP	21 45 44.3	+0.6
	baz=92,SNR=12						
Q24A	**Divide**	**92.55**	**47**	⇑P	**P**	**21 44 54.5**	**+0.3**
	baz=92						
X21A	**Alamocita Cree**	**92.57**	**52**	⇑pP	pP	21 45 44.5	+0.6
	baz=92						
NOA	**NORSAR Array B**	**92.60**	**340**	P	**P**	**21 44 53.0**	**-1.0**
	comp=Z,0.4nm,0.5s,mb3.7,baz=42,slow=4.5,SNR=3.8						
NOA	**NORSAR Array B**	**92.60**	**340**	P	**P**	**21 44 53.0**	**-1.0**
ULM	**Lac du Bonnet**	**92.69**	**34**	P	**P**	**21 44 53.3**	**-1.3**
	comp=Z,2.4nm,0.5s,mb4.5,baz=110,slow=2.5,SNR=4.7						
ULM	**Lac du Bonnet**	**92.69**	**34**	P	**P**	**21 44 53.3**	**-1.3**
120A	**U Bar Ranch, L**	**92.71**	**54**	⇓P	**P**	**21 44 55.9**	**+0.9**
	baz=93,SNR=8.5						
120A				⇑pP	pP	21 45 45.4	+0.8
	baz=93,SNR=6.6						
SDCO	**Great Sand Dun**	**92.84**	**49**	⇑P	**P**	**21 44 55.6**	**+0.1**
	baz=93,SNR=6.8						
SDCO				⇓pP	pP	21 45 44.2	-0.9
	baz=93,SNR=6.5						
SDCO	**Great Sand Dun**	**92.84**	**49**	*e*P	**P**	**21 44 55.2**	**-0.4**
	comp=Z,9.0nm,1.4s,mb4.6						
SDCO				*e*pP	pP	21 45 46.0	+0.9
Y21A	**Point of Rocks**	**92.84**	**53**	⇑P	**P**	**21 44 56.5**	**+0.8**
	baz=93,SNR=8.0						
Y21A				⇓pP	pP	21 45 46.2	+1.0
	baz=93,SNR=7.2						
220A	**Playas Peak, P**	**93.05**	**55**	⇓P	**P**	**21 44 57.3**	**+0.6**
	baz=93,SNR=6.6						
220A				⇑pP	pP	21 45 45.9	-0.3
	baz=93,SNR=5.1						
Z21A	**St. Cloud Mine**	**93.13**	**53**	⇑P	**P**	**21 44 58.3**	**+1.2**
	baz=93,SNR=6.1						
Z21A				⇑pP	pP	21 45 47.9	+1.4
	baz=93,SNR=6.8						
ANMO	**Albuquerque**	**93.35**	**52**	*e*P	**P**	**21 44 58.6**	**+0.6**
	comp=Z,9.7nm,1.1s,mb4.8						
ANMO				*e*pP	pP	21 45 48.2	+0.6
ANMO	**Albuquerque**	**93.35**	**52**	*e*P	**P**	**21 44 58.6**	**+0.6**
ANMO				*e**PP	pP	21 45 48.2	+0.7
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
Y22A	**Socorro**	**93.40**	**53**	⇑pP	pP	21 45 48.3	+0.5
	baz=93						
W23A	**Werner Place,**	**93.49**	**51**	⇑pP	pP	21 45 49.3	+1.1
	baz=93						
Z22A	**Elephant Butte**	**93.69**	**53**	P	**P**	**21 45 00.1**	**+0.5**
	baz=94,SNR=7.4						
Z22A				⇓pP	pP	21 45 49.9	+0.8
	baz=94,SNR=8.4						
V24A	**Rampart Ranch,**	**93.89**	**50**	⇑pP	pP	21 45 50.6	+0.6
	baz=94,SNR=5.2						
W24A	**Lazy 6 Ranch,**	**94.02**	**51**	⇓P	**P**	**21 45 01.4**	**+0.3**
	baz=94,SNR=5.9						
W24A				⇑pP	pP	21 45 50.5	-0.1
	baz=94,SNR=6.4						
BRTR	**Keskin Array B**	**94.10**	**314**	P	**P**	**21 44 59.4**	**-1.9**
	comp=Z,0.8nm,0.5s,mb4.0,baz=112,slow=3.0,SNR=5.1						
BRTR				pP	pP	21 45 54.3	+3.4
	comp=Z,1.2nm,0.9s,baz=57,slow=3.5,SNR=3.4						
BRTR	**Keskin Array B**	**94.10**	**314**	P	**P**	**21 44 59.4**	**-1.9**
BRTR				**PP	pP	21 45 54.3	+3.4
U25A	**Circle Dot Ran**	**94.22**	**49**	⇓P	**P**	**21 45 01.8**	**-0.1**
	baz=94						
U25A				⇓pP	pP	21 45 51.0	-0.5
	baz=94,SNR=6.1						
Z23A	**Rita Site, Whi**	**94.25**	**53**	⇓pP	pP	21 45 52.2	+0.5
	baz=94						
124A	**Stringfield Ra**	**95.08**	**53**	⇑pP	pP	21 45 55.6	+0.1
	baz=95,SNR=5.2						
Y25A	**Mesa, Roswell**	**95.11**	**52**	⇑P	**P**	**21 45 05.7**	**-0.4**
	baz=95						
Y25A				⇓pP	pP	21 45 55.8	+0.1
	baz=95,SNR=5.9						
224A	**Cornudas Mount**	**95.29**	**54**	⇑P	**P**	**21 45 07.0**	**+0.1**
	baz=95						
224A				⇑pP	pP	21 45 56.5	-0.1
	baz=95						
Z25A	**Roswell**	**95.38**	**52**	⇑P	**P**	**21 45 07.3**	**0.0**
	baz=95						
Z25A				⇓pP	pP	21 45 56.8	-0.1
	baz=95						
X26A	**CR and CF Fran**	**95.49**	**51**	⇓P	**P**	**21 45 06.5**	**-1.3**
	baz=95						
X26A				⇓pP	pP	21 45 56.7	-0.7
	baz=95						
MNTX	**Cornudas Mount**	**95.56**	**54**	⇓P	**P**	**21 45 08.0**	**-0.1**
	baz=96						
MNTX				⇓pP	pP	21 45 57.1	-0.7
	baz=96						
125A	**Gardner Draw,**	**95.70**	**53**	⇓pP	pP	21 45 57.8	-0.5
	baz=96						
Z26A	**Caprock**	**95.94**	**52**	⇑pP	pP	21 45 59.2	-0.2
	baz=96						
325A	**Bean Ranch, Si**	**96.02**	**54**	⇑pP	pP	21 45 59.3	-0.6
	baz=96						
Z27A	**Tatum**	**96.49**	**52**	⇑pP	pP	21 46 01.5	-0.4
	baz=96						
TXAR	**Lajitas Array**	**97.93**	**56**	P	**P**	**21 45 17.1**	**-1.8**
	comp=Z,0.1nm,0.4s,mb3.5,baz=345,slow=6.5,SNR=2.7						
TXAR	**Lajitas Array**	**97.93**	**56**	P	**P**	**21 45 17.1**	**-1.8**
627A	**Terlingua Ranc**	**98.09**	**55**	⇓pP	pP	21 46 09.7	+0.4
	baz=98						
628A	**Black Gap, Mar**	**98.47**	**55**	⇓pP	pP	21 46 09.9	-1.1
	baz=98						
ESDC	**Sonseca Array**	**115.41**	**334**	PKKPab	PKKPab	22 01 03.4	-2.7
	comp=Z,0.2nm,0.5s,baz=196,slow=4.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**132.44**	**309**	PKP	PKPdf	21 50 55.2	-1.6
	comp=Z,0.6nm,0.8s,baz=81,slow=0.8,SNR=11						
TORD				SKPbc	SKPbc	21 54 00.7	-4.2
	comp=Z,3.6nm,1.0s,baz=39,slow=3.0,SNR=8.5						
DBIC	**Dimbokro**	**141.53**	**308**	PKHKP	PKPpre	21 51 05.1	
	comp=Z,1.0nm,0.4s,baz=22,slow=3.5,SNR=4.8						
DBIC	**Dimbokro**	**141.53**	**308**	PKHKP	PKPpre	21 51 05.1	
PLCA	**Paso Flores**	**142.01**	**133**	PKhKP	PKPpre	21 51 08.5	
	comp=Z,1.1nm,0.6s,baz=282,slow=2.9,SNR=4.3						
PLCA	**Paso Flores**	**142.01**	**133**	PKP	PKPpre	21 51 08.5	
PLCA	**Paso Flores**	**142.01**	**133**	PKIKP	PKPpre	21 51 08.5	
LCO	**Las Campanas**	**145.33**	**114**	*e*PKP	PKPdf	21 51 19.9	+0.1
LPAZ	**La Paz**	**147.74**	**91**	PKPbc	PKPbc	21 51 24.7	-2.6
	comp=Z,4.0nm,0.6s,baz=328,slow=2.8,SNR=17						
LPAZ	**La Paz**	**147.74**	**91**	*e*PKPdf	PKPdf	21 51 24.1	-0.1
LPAZ				*e*PKPbc	PKPbc	21 51 28.1	+0.8
LPAZ				*e*PKPab	PKPab	21 51 31.3	+1.0
LPAZ	**La Paz**	**147.74**	**91**	*e*PKIKP	PKPdf	21 51 24.1	-0.1
LPAZ				*e*		21 51 28.1	
CPUP	**Villa Florida**	**157.48**	**114**	PKPab	PKPab	21 52 09.6	-1.4
	comp=Z,0.4nm,0.3s,baz=291,slow=2.6,SNR=3.7						

*CNRM **17** 21:35:29.6, 34.°48N×4.°36W, h9km, MD2.8*
*ISCJB **17** 21:35:30.3±1.0, 34.°36N±0.°04×4.°54W±0.°07, h17km±13km, Error ellipse: s-maj=9.7km s-min=6.0km az=170.3*
*CSEM **17** 21:35:30.6±0.3, 34.°32N×4.°52W, h10km, MD2.8, Error ellipse: s-maj=9.6km s-min=5.2km az=63.0*
*MDD **17** 21:35:31.1±0.5, 34.°46N×4.°25W, h0km, mb3.5/1, Error ellipse: s-maj=7.6km s-min=3.6km az=88.0, PRIMO SIN SOLUCI*
*NEIC **17** 21:35:31.6, 34.°41N×4.°48W, h0km, MG3.6(MDD), After MDD.*

ISC 17 21:35:30.6±0.9, 34.°41N±0.°03×4.°36W±0.°07, h11km±8km, n56, σ1°26/104, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TZK	**Tazeka**	**0.35**	**156**	P	**Pg**	**21 35 38.0**	**+0.3**
TZK				S	**Sg**	**21 35 43.0**	**+0.5**
TZK	**Tazeka**	**0.35**	**156**	P	**Pg**	**21 35 38.0**	**+0.3**
TZK				S	**Sg**	**21 35 43.0**	**+0.5**
TZK	**Tazeka**	**0.35**	**156**	*i* P	**Pg**	**21 35 38.0**	**+0.3**
TZK				*i* S	**Sg**	**21 35 43.0**	**+0.5**
TOU	**Touzarine**	**0.74**	**42**	P	**Pg**	**21 35 42.0**	**-3.0**
TOU				S	**Sg**	**21 35 52.0**	**-2.7**
TOU	**Touzarine**	**0.74**	**42**	P	**Pg**	**21 35 42.0**	**-3.0**
TOU				S	**Sg**	**21 35 52.0**	**-2.7**
EMIJ	**Mijas**	**2.17**	**351**	P	**Pn**	**21 36 06.7**	**+0.1**
EMIJ				S	**Sn**	**21 36 34.7**	**+1.1**
EMIJ	**Mijas**	**2.17**	**351**	P	**Pn**	**21 36 06.7**	**0.0**
	0.1nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**21 36 34.7**	**+1.1**
	0.8nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**2.17**	**351**	P	**Pn**	**21 36 06.7**	**0.0**
	0.1nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**21 36 34.7**	**+1.1**
	0.8nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**2.17**	**351**	P	**Pn**	**21 36 06.7**	**0.0**
EMIJ				S	**Sn**	**21 36 34.7**	**+1.2**
ZFT	**Errachidia**	**2.37**	**180**	P	**Pn**	**21 36 08.0**	**-1.4**
ZFT				S	**Sn**	**21 36 37.0**	**-1.5**
ZFT	**Errachidia**	**2.37**	**180**	P	**Pn**	**21 36 08.0**	**-1.4**
ZFT				S	**Sn**	**21 36 37.0**	**-1.5**
ZFT	**Errachidia**	**2.37**	**180**	*e*P	**Pn**	**21 36 08.0**	**-1.4**
ZFT				*i* S	**Sn**	**21 36 37.0**	**-1.5**
EGUA	**Guajares**	**2.50**	**15**	P	**Pn**	**21 36 11.2**	**+0.1**
EGUA				S	**Sn**	**21 36 42.9**	**+1.3**
EGUA	**Guajares**	**2.50**	**15**	P	**Pn**	**21 36 11.2**	**+0.1**
	1.4nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**21 36 41.9**	**+0.2**
	1.1nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**2.50**	**15**	P	**Pn**	**21 36 11.2**	**+0.1**
	1.4nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**21 36 41.9**	**+0.2**
	1.1nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**2.50**	**15**	P	**Pn**	**21 36 11.2**	**0.0**
EGUA				S	**Sn**	**21 36 42.9**	**+1.3**
EQES	**Quesada**	**3.54**	**17**	P	**Pn**	**21 36 27.4**	**+2.0**
EQES				S	**Sn**	**21 37 11.8**	**+4.6**
EQES	**Quesada**	**3.54**	**17**	P	**Pn**	**21 36 26.1**	**+0.6**
	0.1nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**21 37 05.5**	**-1.8**
	0.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.54**	**17**	P	**Pn**	**21 36 26.1**	**+0.6**
	0.1nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**21 37 05.5**	**-1.8**
	0.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.54**	**17**	P	**Pn**	**21 36 27.4**	**+1.9**
EQES				S	**Sn**	**21 37 11.9**	**+4.6**
EHUE	**Huescar**	**3.68**	**22**	P	**Pn**	**21 36 31.5**	**+4.1**
EHUE	**Huescar**	**3.68**	**22**	P	**Pn**	**21 36 31.5**	**+4.1**
EADA	**Adamuz**	**3.75**	**357**	P	**Pn**	**21 36 30.2**	**+1.9**
EADA				S	**Sn**	**21 37 16.4**	**+3.9**
EADA	**Adamuz**	**3.75**	**357**	P	**Pn**	**21 36 30.3**	**+1.9**
	0.2nm,0.2s,SNR=4.0						
EADA				S	**Sn**	**21 37 13.1**	**+0.7**
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.75**	**357**	P	**Pn**	**21 36 30.3**	**+1.9**
	0.2nm,0.2s,SNR=4.0						
EADA				S	**Sn**	**21 37 13.1**	**+0.7**
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.75**	**357**	P	**Pn**	**21 36 30.2**	**+1.8**
EADA				S	**Sn**	**21 37 16.4**	**+3.9**
EBAN	**Banos Encina**	**3.77**	**7**	P	**Pn**	**21 36 30.9**	**+2.3**
EBAN	**Banos Encina**	**3.77**	**7**	P	**Pn**	**21 36 30.9**	**+2.3**
EMIN	**Mina Concepcio**	**3.83**	**331**	P	**Pn**	**21 36 30.0**	**+0.4**
EMIN				S	**Sn**	**21 37 13.9**	**-0.6**
EMIN	**Mina Concepcio**	**3.83**	**331**	P	**Pn**	**21 36 30.2**	**+0.7**
	0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**21 37 13.9**	**-0.6**
	0.1nm,0.0s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.83**	**331**	P	**Pn**	**21 36 30.2**	**+0.7**
	0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**21 37 13.9**	**-0.6**
	0.1nm,0.0s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.83**	**331**	P	**Pn**	**21 36 30.0**	**+0.5**
EMIN				S	**Sn**	**21 37 13.9**	**-0.7**
EGRO	**El Granado**	**4.01**	**322**	P	**Pn**	**21 36 32.2**	**+0.2**
EGRO				S	**Sn**	**21 37 17.0**	**-1.9**
EGRO	**El Granado**	**4.01**	**322**	P	**Pn**	**21 36 32.2**	**+0.2**
	0.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**21 37 17.0**	**-1.9**
	0.3nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.01**	**322**	P	**Pn**	**21 36 32.2**	**+0.2**
	0.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**21 37 17.0**	**-1.9**
	0.3nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.01**	**322**	P	**Pn**	**21 36 32.2**	**+0.2**
EGRO				S	**Sn**	**21 37 17.0**	**-2.0**
PVAQ	**Vaqueiros**	**4.04**	**319**	*e*Pn	**Pn**	**21 36 32.8**	**+0.5**
PVAQ				*e*Sn	**Sn**	**21 37 18.9**	**-0.7**
PVAQ				A		21 37 19.6	
	1.7nm,0.2s						
PVAQ	**Vaqueiros**	**4.04**	**319**	P	**Pn**	**21 36 32.8**	**+0.5**
PVAQ				S	**Sn**	**21 37 18.9**	**-0.7**
	1.7nm,0.2s						
PVAQ	**Vaqueiros**	**4.04**	**319**	P	**Pn**	**21 36 32.8**	**+0.5**
PVAQ				S	**Sn**	**21 37 18.9**	**-0.7**
	1.7nm,0.2s						
PVAQ	**Vaqueiros**	**4.04**	**319**	*e*Pn	**Pn**	**21 36 32.8**	**+0.5**
PVAQ				*e*Sn	**Sn**	**21 37 18.9**	**-0.7**
	1.7nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.05**	**315**	*e*Pn	**Pn**	**21 36 33.0**	**+0.5**
PBDV				*e*Sn	**Sn**	**21 37 18.1**	**-1.7**
PBDV	**Barranco-do-Ve**	**4.05**	**315**	P	**Pn**	**21 36 33.0**	**+0.5**
PBDV				S	**Sn**	**21 37 18.1**	**-1.7**
PBDV	**Barranco-do-Ve**	**4.05**	**315**	P	**Pn**	**21 36 33.0**	**+0.5**
PBDV				S	**Sn**	**21 37 18.1**	**-1.7**
PBDV	**Barranco-do-Ve**	**4.05**	**315**	*e*Pn	**Pn**	**21 36 33.0**	**+0.5**
PBDV				*e*Sn	**Sn**	**21 37 18.1**	**-1.7**
PBAR	**Barrancos**	**4.33**	**331**	*e*Pn	**Pn**	**21 36 37.7**	**+1.3**
PBAR				*e*Sn	**Sn**	**21 37 25.9**	**-0.9**
PBAR	**Barrancos**	**4.33**	**331**	P	**Pn**	**21 36 37.7**	**+1.3**
PBAR				S	**Sn**	**21 37 25.9**	**-0.9**
PBAR	**Barrancos**	**4.33**	**331**	P	**Pn**	**21 36 37.7**	**+1.3**
PBAR				S	**Sn**	**21 37 25.9**	**-0.9**
PBAR	**Barrancos**	**4.33**	**331**	*e*Pn	**Pn**	**21 36 37.7**	**+1.3**
PBAR				*e*Sn	**Sn**	**21 37 25.9**	**-0.9**
PCVE	**Castro Verde**	**4.38**	**318**	*e*Pn	**Pn**	**21 36 37.6**	**+0.6**
PCVE	**Castro Verde**	**4.38**	**318**	P	**Pn**	**21 36 37.6**	**+0.6**
PCVE	**Castro Verde**	**4.38**	**318**	P	**Pn**	**21 36 37.6**	**+0.6**
PCVE	**Castro Verde**	**4.38**	**318**	*e*Pn	**Pn**	**21 36 37.6**	**+0.6**
EBAD	**Badajoz**	**4.83**	**335**	P	**Pn**	**21 36 44.8**	**+1.6**
EBAD				S	**Sn**	**21 37 38.4**	**-0.7**
EBAD	**Badajoz**	**4.83**	**335**	P	**Pn**	**21 36 44.8**	**+1.6**
	0.4nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**21 37 38.4**	**-0.7**
	0.1nm,0.0s,SNR=7.9						
EBAD	**Badajoz**	**4.83**	**335**	P	**Pn**	**21 36 44.8**	**+1.6**
	0.4nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**21 37 38.4**	**-0.7**
	0.1nm,0.0s,SNR=7.9						
EBAD	**Badajoz**	**4.83**	**335**	P	**Pn**	**21 36 44.8**	**+1.6**
EBAD				S	**Sn**	**21 37 38.4**	**-0.7**

*ISCJB **17** 22:03:31.9±0.5, 9.°11S±0.°04×127.°10E±0.°08, h33km, mb4.2/13, Error ellipse: s-maj=12.3km s-min=5.0km az=161.3*
*IDC **17** 22:03:31.6±1.2, 8.°89S×126.°78E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.9/17, mbtmp4.1/5, ML4.9/1, Error ellipse: s-maj=74.5km s-min=22.3km az=66.0*
*NEIC **17** 22:03:34.3±0.4, 9.°00S×127.°11E, h35km, mb4.4/9, Error ellipse: s-maj=14.0km s-min=5.8km az=62.0*

ISC 17 22:03:34.2±0.5, 9.°04S±0.°05×127.°15E±0.°08, h35km, n25, σ1°12/32, mb4.2/13, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNA	**Kununurra**	**6.85**	**167**	*e*P	**Pn**	**22 05 16.6**	**+4.3**
	24nm,0.2s						
KNA				*e*S	**Sn**	**22 06 31.6**	**+2.5**
FITZ	**Fitzroy Crossi**	**9.13**	**189**	Pn	**Pn**	**22 05 44.9**	**+1.5**
	9.7nm,0.3s,baz=15,slow=12,SNR=149						
FITZ				Sn	**Sn**	**22 07 24.0**	**-1.1**
	13nm,0.3s,baz=144,slow=12,SNR=7.5						
FITZ	**Fitzroy Crossi**	**9.13**	**189**	*e*P	**Pn**	**22 05 44.7**	**+1.2**
	47nm,0.4s						
FITZ				*e*S	**Sn**	**22 07 23.3**	**-1.7**
WRA	**Warramunga Arr**	**12.88**	**148**	Pn	**Pn**	**22 06 35.6**	**+0.8**
	4.1nm,0.3s,baz=326,slow=13,SNR=137						
WRA				Sn	**Sn**	**22 08 54.5**	**-2.4**
	2.5nm,0.3s,baz=317,slow=23,SNR=6.8						
WB2	**Warramunga Arr**	**12.88**	**148**	*e*Pn	**Pn**	**22 06 35.7**	**+0.8**
WB2				*e*Sn	**Sn**	**22 08 55.8**	**-1.3**
MBWA	**Marble Bar**	**14.01**	**210**	*e*P	**Pn**	**22 06 49.6**	**-0.7**
MBWA				*e*S	**Sn**	**22 09 14.3**	**

TNG Tangerang 2.73 124 P Pn 22 05 35.7 -1.4
TNG Tangerang 2.73 124 P Pn 22 05 35.7 -1.4
PPBI Pangkal Pinang 3.02 36 P Pn 22 05 39.0 -1.6
DBJI Dramaga 3.04 129 P Pn 22 05 39.3 -1.4
SKJI Sukabumi 3.20 137 P Pn 22 05 40.4 -2.3
TPI Tanjungpandan 3.77 60 P Pn 22 05 48.1 -1.6
KRJI Kerinci 3.85 311 P Pn 22 05 51.8 +1.1
LEM Lembang 3.89 124 P Pn 22 05 50.5 -0.7
CISI Cisompet, Garu 4.49 130 P Pn 22 05 56.0 -2.7
SDSI Sungai Dareh 4.71 321 P Pn 22 06 01.3 -0.3
RGRI Rengat 4.72 334 P Pn 22 06 02.0 +0.3
PDSI Padang 5.38 313 P Pn 22 06 09.0 -1.2
3.5nm450nm,0.5s
PPI Padang Panjang 5.75 316 P Pn 22 06 14.2 -0.7
0.5nm113nm,0.8s
XMIS Christmas Isla 5.94 168 P Pn 22 06 11.5 -5.9
29nm6µm,0.6s
BJII Banjamegara 5.94 117 P Pn 22 06 17.3 -0.2
0.3nm79nm,0.8s
BKNI Bangkinang 5.95 326 P Pn 22 06 17.8 +0.2
2.2nm6µm614nm,0.8s
SISI Saibi 6.22 302 P Pn 22 06 19.7 -1.3
1.3nm7µm287nm,0.8s
MYKOM Kota Tinggi 6.41 355 P Pn 22 06 23.5 0.0
MYKOM Kota Tinggi 6.41 355 P Pn 22 06 23.4 -0.1
0.2nm1µm62nm,1.2s
SMRI Semarang 6.49 112 P Pn 22 06 25.6 +1.0
0.9nm225nm,1.0s
KGM Kluang 6.69 351 P Pn 22 06 27.5 +0.3
UGM Wanagama 6.92 118 ePn Pn 22 06 28.9 -1.3
MNSI Mandailing Nat 7.21 318 P Pn 22 06 32.9 -1.2
1.3nm7µm212nm,0.7s
PCJI Pacitan 7.63 118 P Pn 22 06 37.2 -2.2
0.6nm88nm,1.9s
SJI Sawahan 7.97 113 P Pn 22 06 43.9 0.0
0.4nm122nm,0.7s
PWJI Pagerwojo 8.11 115 P Pn 22 06 44.4 -1.4
59nm,0.7s
FRIM Kepong 8.29 341 P Pn 22 06 49.1 +1.0
KSM Kuching 8.49 44 P Pn 22 06 48.6 -2.1
PSI Prapat 9.18 324 P Pn 22 06 56.8 -2.9
3.1nm,0.3s,baz=144,slow=11,SNR=31
IPM Ipoh 9.65 340 P Pn 22 07 07.3 +1.4
IPM Ipoh 9.65 340 ePn Pn 22 07 07.0 +1.1
IPM Ipoh 9.65 340 P Pn 22 07 07.1 +1.2
28nm,0.9s
KTGM Kuala Trenggan 9.98 353 P Pn 22 07 10.4 +0.3
JAGI Jajag, Banyuwa 10.43 112 P Pn 22 07 15.1 -0.9
98nm,1.2s
SBUM Sibu 10.54 48 P Pn 22 07 18.8 +1.4
SBUM Sibu 10.54 48 P Pn 22 07 19.1 +1.7
26nm,1.0s
KULM Kulim 10.54 339 P Pn 22 07 18.4 +1.0
KULM Kulim 10.54 339 ePn Pn 22 07 16.9 -0.5
KULM Kulim 10.54 339 P Pn 22 07 17.7 +0.3
1um101nm,0.9s
COCO West Island 10.58 224 ePn Pn 22 07 23.6 +5.7
TPTI 10.64 317 P Pn 22 07 15.8 -2.9
47nm,0.5s
BTM Bintulu 11.68 48 P Pn 22 07 33.4 +1.3
BKSI Bulukumba 15.71 93 P Pn 22 08 23.7 +1.5
KKM Kota Kinabalu 15.89 48 P Pn 22 08 26.0 +1.6
KKM Kota Kinabalu 15.89 48 ePn Pn 22 08 20.2 -4.2
TSM Tawau 16.14 57 P Pn 22 08 29.7 +2.2
SDKM Sandakan 16.38 52 P Pn 22 08 31.6 +1.3
KDM Kudat 16.92 47 P Pn 22 08 38.1 +1.3
MYLDM Lahad Datu 17.15 56 P Pn 22 08 41.8 +2.2
CM31 Chiang Mai Arr 23.57 347 eP P 22 09 42.7 -1.5
2.8nm,0.4s,mb4.2
CMAR Chiang Mai Arr 23.57 347 P P 22 09 43.7 -0.5
3.3nm,0.4s,mb4.3,baz=181,slow=8.6,SNR=20
CMAR pP 22 10 19.9
4.5nm,0.6s,baz=182,slow=8.9,SNR=5.2
CMAR ScP ScP 22 16 45.9 +1.8
2.4nm,0.8s,baz=195,slow=4.0,SNR=14
CHTO Chiang Mai 23.91 347 eP P 22 09 46.5 -0.8
4.9nm,0.8s,mb4.2
NWAO Narrogin (SRO) 30.60 158 P P 22 10 49.0 +2.1
13nm,0.8s,mb4.6,baz=0.0,slow=7.1,SNR=5.1
KMBL Kambalda 31.27 150 eP P 22 10 54.5 +1.7
87nm,0.8s,mb5.4
WRA Warramunga Arr 32.90 120 P P 22 11 08.8 +1.6
1.9nm,0.6s,mb3.8,baz=292,slow=8.2,SNR=2.3
WRA ScP ScP 22 17 14.2 +1.1
0.5nm,0.4s,baz=309,slow=2.8,SNR=16
ASAR Alice Springs 34.18 126 P P 22 11 19.2 +1.0
8.5nm,0.5s,mb4.5,baz=299,slow=7.5,SNR=14
ASAR ScP ScP 22 17 20.1 +2.5
2.4nm,0.7s,baz=308,slow=3.2,SNR=12
FORT Forrest 34.26 142 eP P 22 11 20.3 +1.5
13nm,0.5s,mb4.7
FORT Forrest 34.26 142 eP P 22 11 19.2 +0.4
20nm,0.6s,mb4.8
ODAN Odare 35.36 333 eP P 22 11 28.1 -0.1
33nm,0.5s,mb5.1
TAPN Taplejung 35.64 334 eP P 22 11 30.7 +0.1
47nm,0.5s,mb5.3
PKI Pulchoki 36.88 331 eP P 22 11 41.0 -0.2
8.2nm,0.3s,mb4.8
PKIN Phulchoki 36.90 331 eP P 22 11 40.7 -0.5
7.8nm,0.3s,mb4.7
GUN Gumba 36.95 332 eP P 22 11 41.8 +0.1
46nm,0.3s,mb5.5
DMN Daman 37.06 331 eP P 22 11 42.4 -0.3
20nm,0.2s,mb5.2
KKN Kakani 37.13 331 eP P 22 11 42.8 -0.4
15nm,0.4s,mb4.9
GKN Gorkha 37.62 331 eP P 22 11 46.9 -0.4
38nm,0.3s,mb5.5
DANN Dangsing 38.34 330 eP P 22 11 53.0 -0.3
39nm,0.4s,mb5.3
XAN Xi'an 38.71 6 P P 22 11 56.9 +0.6
XAN pP pP 22 12 07.4 -30
XAN pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
LZH Lanzhou 40.51 359 eP P 22 12 12.5 +1.3
LZH pP pP 22 12 19.0 -33
LZH pmax pmax
comp=Z,16nm,1.3s,mb4.3
BBOO Buckleboo 40.75 137 eP P 22 12 14.0 +0.8
comp=Z,9.0nm,0.8s,mb4.2
NDI New Delhi 42.19 323 ePKP P 22 12 22.5 -2.5
CTA Charters Tower 43.53 114 P P 22 12 36.2 +0.3
comp=Z,2.9nm,0.7s,mb3.7,baz=317,slow=2.3,SNR=3.9
CTA Charters Tower 43.53 114 P P 22 12 36.2 +0.3
QLP Quilpie 43.87 124 eP P 22 12 40.1 +1.6
GTA Gaotai 44.03 355 eP P 22 12 40.8 +1.3
GTA pmax pmax
comp=Z,11nm,0.6s,mb4.4
STKA Stephens Creek 44.15 132 P P 22 12 42.3 +1.6
comp=Z,20nm,0.6s,mb4.6,baz=304,slow=7.7,SNR=26
STKA Stephens Creek 44.15 132 eP P 22 12 42.0 +1.3
comp=Z,16nm,0.6s,mb4.5
STKA Stephens Creek 44.15 132 eP P 22 12 42.3 +1.6
comp=Z,3.6nm,0.6s,mb3.9
SDNR Sundarnagar 44.43 326 ePKP P 22 12 43.5 +0.7
CMSA Cobar Meteorol 47.08 130 eP P 22 13 05.5 +1.9
KSRS Korea Array 47.27 26 P P 22 13 04.3 -0.6
comp=Z,1.5nm,0.6s,mb3.5,baz=221,slow=7.5,SNR=8.2
KSRS pP pP 22 13 45.7 -1.6
comp=Z,0.8nm,0.6s,baz=214,slow=8.1,SNR=2.1
YNG Young 50.33 132 eP P 22 13 30.5 +2.2
comp=Z,11nm,0.7s,mb4.3
KSH Kashi 51.15 332 eP P 22 13 32.8 -1.5
KSH pmax pmax
comp=Z,16nm,0.3s,mb4.9
KSH pmax pmax
comp=Z,37nm,1.1s,mb4.7
KBL Kabul 51.25 322 eP P 22 13 34.3 -0.8
comp=Z,7.9nm,0.8s,mb4.2
MAJO Matsushiro 51.74 35 P P 22 13 36.8 -1.9
SONM Songino Array 52.28 2 P P 22 13 42.8 +0.3
comp=Z,5.4nm,0.7s,mb4.1,baz=180,slow=9.0,SNR=27
SONM pP pP 22 14 25.1 -0.6
comp=Z,1.1nm,0.6s,baz=181,slow=9.7,SNR=2.0
SONM PcP PcP 22 14 51.2 +0.1
comp=Z,0.8nm,0.4s,baz=187,slow=3.9,SNR=4.1
SONM ScP ScP 22 18 29.3 -0.6
comp=Z,1.0nm,0.7s,baz=164,slow=3.0,SNR=6.3
SONM Songino Array 52.28 2 P P 22 13 42.8 +0.3
SONM pP pP 22 14 25.1 -0.6
SONM PcP PcP 22 14 51.2 +0.1
SONM ScP ScP 22 18 29.3 -0.6
ULN Ulaanbaatar 52.33 2 eP P 22 13 44.2 +1.3
comp=Z,4.3nm,1.0s,mb3.8
TKM2 Tokmak 2 54.03 334 eP P 22 13 55.2 -0.2
comp=Z,15nm,0.4s,mb4.9
KBK Karagaybulak 54.11 333 eP P 22 13 56.0 +0.1
comp=Z,6.2nm,0.8s,mb4.2
EKS2 Erkin-Say 54.64 333 eP P 22 13 59.7 -0.1
comp=Z,11nm,1.0s,mb4.3
MK31 Makanchi Array 54.81 342 eP P 22 14 00.4 -0.5
MK31 epP pP 22 14 46.2 +1.7
MKAR Makanchi Array 54.81 342 P P 22 14 00.3 -0.6
comp=Z,3.7nm,0.4s,mb4.3,baz=152,slow=8.9,SNR=116
KKAR Karatay Array 56.53 331 eP P 22 14 11.8 -1.4
ABPO Ambohimpanom 57.48 250 eP P 22 14 24.3 +3.9
comp=Z,2.0nm,0.4s,mb4.1
KURK Kurchatov 59.42 341 eP P 22 14 32.0 -1.2
comp=Z,6.0nm,0.9s,mb4.2
ZAA0 Zalesovo Array 60.63 347 eP P 22 14 40.4 -0.9
ZAA0 e pP 22 15 23.4 -2.4
ZALV Zalesovo Beam 60.63 347 P P 22 14 40.5 -0.8
comp=Z,8.1nm,0.3s,mb4.8,baz=161,slow=6.2,SNR=53
ZALV PcP PcP 22 15 24.9 +1.3
comp=Z,3.3nm,0.7s,baz=159,slow=4.8,SNR=5.5
ZALV Zalesovo Beam 60.63 347 P P 22 14 40.5 -0.8
ZALV PcP PcP 22 15 24.9 +1.3
RDF Al-Radifah 63.93 305 eP P 22 15 04.8 +1.1
RDF AMb AMB 22 15 08.4
comp=Z,46nm,1.3s,mb5.0
UMR Umm Al-Rimmam 64.03 306 eP P 22 15 05.2 +0.9
UMR AMb AMB 22 15 05.8
comp=Z,64nm,0.7s,mb5.4
BVAR Borovoye Array 64.20 338 P P 22 15 04.0 -1.0
comp=Z,2.3nm,0.4s,mb4.1,baz=134,slow=8.5,SNR=19
BRVK Borovoye 64.26 338 eP P 22 15 04.5 -0.9
comp=Z,3.4nm,0.6s,mb4.2
NAY Al-Naaiem 64.30 305 eP P 22 15 06.5 +0.4
NAY AMb AMB 22 15 07.7
comp=Z,20nm,0.7s,mb4.9
MIB Mutribah 64.42 306 eP P 22 15 07.4 +0.5
MIB AMb AMB 22 15 08.3
comp=Z,24nm,0.8s,mb4.9
ABKAR Akbulak array 66.06 330 eP P 22 15 16.3 -0.8
KMBO Kilima Mbogo 67.11 271 eP P 22 15 26.8 +2.4
comp=Z,0.9nm,0.4s,mb3.8
MAW Mawson 68.89 196 P P 22 15 37.8 +3.4
comp=Z,6.6nm,0.5s,mb4.5,baz=50,slow=5.8,SNR=41
MAW Mawson 68.89 196 eP P 22 15 38.0 +3.6
comp=Z,5.7nm,0.5s,mb4.5
MAW Mawson 68.89 196 eP P 22 15 38.7 +4.3
comp=Z,1.6nm,0.6s,mb3.8
ARU Arti 71.39 335 eP P 22 15 49.0 -0.8
comp=Z,11nm,1.2s,mb4.4
MALT Malatya 74.33 312 eP P 22 16 08.8 +1.2
comp=Z,4.3nm,1.1s,mb4.0
MALT ePcP PcP 22 16 21.0 -0.3
MALT epP pP 22 16 54.8 +1.0
CSS Prodhromos 77.28 307 eP P 22 16 24.5 +0.2
comp=Z,15nm,1.0s,mb4.6
LBTB Lobatse 77.89 246 eP P 22 16 31.1 +3.2
comp=Z,4.4nm,0.6s,mb4.3
BOSA Boshof 78.25 242 P P 22 16 33.0 +3.2
comp=Z,6.4nm,0.8s,mb4.3,baz=127,slow=4.9,SNR=15
BOSA Boshof 78.25 242 P P 22 16 33.0 +3.2
BR131 Keskin Array S 78.32 312 eP P 22 16 30.0 +0.1
comp=Z,4.4nm,0.6s,mb4.3
BR131 epP pP 22 17 16.9 +0.4
BRTR Keskin Array B 78.32 312 P P 22 16 30.1 +0.2
comp=Z,4.9nm,0.6s,mb4.3,baz=140,slow=7.7,SNR=30
AKASG Malin Array Be 84.23 322 P P 22 17 00.6 -0.2
comp=Z,2.0nm,0.4s,mb4.2,baz=93,slow=5.0,SNR=10
VRI Vrincioaia 84.75 317⇑iP P 22 17 05.1 +1.6
TESR 84.94 317⇑iP P 22 17 05.6 +1.2
MLR Muntele Rosu 85.21 316⇑iP P 22 17 07.6 +1.8
BURAR Bucovina Array 86.12 318⇓iP P 22 17 12.2 +2.0
BUR08 Bucovina Ar. S 86.13 318 eP P 22 17 11.0 +0.7
JOF Joensuu 86.47 334 ep P 22 17 09.2 -2.4
comp=Z,1.2nm,0.3s,mb4.1
VTS Vitosha 86.62 313⇑iP P 22 17 14.1 +1.3
BZS Buzias 88.22 316⇑iP P 22 17 21.8 +1.5
KOLS Kolonicke sedl 88.28 319 eP P 22 17 22.1 +1.6
comp=Z,7.1nm,0.8s,mb4.5
KOLS Kolonicke sedl 88.28 319 eP P 22 17 22.1 +1.6
FINES FINESS Array B 88.47 332 P P 22 17 21.5 +0.4
comp=Z,2.7nm,0.5s,mb4.3,baz=111,slow=5.3,SNR=32
KAF Kangasniemi 88.51 333 ep P 22 17 18.2 -3.1
comp=Z,0.8nm,0.5s,mb3.8
SUW Suwalki 88.55 324 eP P 22 17 21.5 -0.2
comp=Z,30nm,1.2s,mb5.0
CRVS Cervenica-Dubn 88.81 319 eP P 22 17 24.5 +1.5
comp=Z,1.2nm,0.8s,mb3.8
CRVS Cervenica-Dubn 88.81 319 eP P 22 17 24.5 +1.5
KECS Kecovo 89.39 319 eP P 22 17 26.8 +1.1
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 89.39 319 eP P 22 17 26.8 +1.1
PKSM Moragy 90.36 316⇑iP P 22 17 31.5 +1.2
ARCES ARCESS Array B 90.43 340 P P 22 17 29.9 -0.2
comp=Z,1.7nm,0.8s,mb3.9,baz=103,slow=5.5,SNR=8.1
VYHS Vyhne 90.48 318 eP P 22 17 33.1 +2.3
comp=Z,9.6nm,2.2s,mb4.2
VYHS Vyhne 90.48 318 eP P 22 17 33.1 +2.3
MORC Moravsky Berou 91.46 320⇓iP P 22 17 33.8 -1.5
GERES GERESS Array B 93.90 319 P P 22 17 46.4 -0.2
comp=Z,0.5nm,0.6s,mb3.7,baz=92,slow=4.0,SNR=4.9
GERES GERESS Array B 93.90 319 P P 22 17 46.4 -0.2
NVAR Mina Array Bea 128.70 43 PKP PKPdf 22 23 37.6 +1.9
comp=Z,0.3nm,0.5s,baz=264,slow=2.7,SNR=2.9
NVAR SKPbc 22 26 41.8
comp=Z,0.7nm,0.7s,baz=259,slow=3.6,SNR=5.7
ULM Lac du Bonnet 131.45 17 SKPbc SKPbc 22 26 47.8 +0.1
comp=Z,2.5nm,0.5s,baz=357,slow=5.2,SNR=4.2
PDAR Pinedale Array 131.56 33 PKP PKPdf 22 23 42.9 +1.9
comp=Z,0.3nm,0.6s,baz=116,slow=2.1,SNR=3.0
PDAR SKPbc SKPbc 22 26 48.5 +0.2
comp=Z,0.5nm,0.7s,baz=22,slow=1.6,SNR=4.6
TXAR Lajitas Array 143.84 44 PKP PKPdf 22 24 02.4 -1.5
comp=Z,0.3nm,0.4s,baz=287,slow=2.0,SNR=7.3
TXAR SKPbc SKPbc 22 27 25.6 +1.0
comp=Z,0.7nm,0.8s,baz=258,slow=1.0,SNR=5.0
CPUP Villa Florida 144.48 209 PKP PKPdf 22 24 07.1 +2.0
comp=Z,4.4nm,0.5s,baz=127,slow=2.2,SNR=19
CPUP SKPbc SKPbc 22 27 27.0 +0.8
comp=Z,0.6nm,0.4s,baz=71,slow=5.4,SNR=3.3
BDFB Brasilia 146.04 233 PKPbc PKPbc 22 24 12.1 +2.9
comp=Z,5.3nm,0.3s,baz=146,slow=5.3,SNR=9.3
LPAZ La Paz 157.93 199 PKPab PKPab 22 25 03.3 +3.9
comp=Z,1.0nm,0.8s,baz=155,slow=4.9,SNR=4.6

*ISCJB **17** 22:10:37.9±0.2, 47°.095N±0°.010×11°.38E±0°.01, h2km±2km, Error ellipse: s-maj=1.7km s-min=1.6km az=19.8*
*VIE **17** 22:10:38.9±0.3, 47°.05N×11°.34E, h11km±4km, mb2.0/9, ML3.1/13, Error ellipse: s-maj=1.3km s-min=1.2km az=75.0 11 km WSW of Steinach a. Brenner felt 4 ems98 at Gschnitz / TYROL*
*NEIC **17** 22:10:39.5, 47°.06N×11°.31E, h5km, ML2.8(SZGRF), ML2.4(ZUR), After ZUR.*
*ROM **17** 22:10:39.8±0.3, 47°.02N×11°.34E, h10km, Md2.8/5, Error ellipse: s-maj=4.0km s-min=2.2km az=175.0*
*CSEM **17** 22:10:39.4±0.1, 47°.08N×11°.39E, h2km, ML2.9/22, Error ellipse: s-maj=1.9km s-min=1.6km az=17.0*
*ZUR **17** 22:10:39.5, 47°.06N×11°.31E, h5km±2km, ML2.4/5*
*BGR **17** 22:10:40.6±0.3, 47°.03N×11°.43E, h10km, ML2.8/14, Error ellipse: s-maj=5.6km s-min=3.3km az=15.0*
*LDG **17** 22:10:41.5±0.1, 47°.18N×11°.55E, h10km, Ml2.9/17, Error ellipse: s-maj=3.2km s-min=2.0km az=16.0*
*PRU **17** 22:10:41.1, 47°.10N×11°.44E, h7km*
ISC 17 22:10:39.4±0.2,**47°.078N**±0°.009×**11°.38E**±0°.01,**h4**km±2km, **n222**,σ1°**08**/402,**26C-19D,Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SQTA	**Sankt Quirin**	**0.18**	**321**	⇓*i*Pg	**Pg**	**22 10 43.9**	**+0.9**
	208nm,0.1s						
SQTA	**Sankt Quirin**	**0.18**	**321**	Pg	**Pg**	**22 10 43.9**	**+0.9**
	208nm,0.1s						
SCE	**Schlegeis**	**0.23**	**100**	⇑*i*Pg	**Pg**	**22 10 44.7**	**+0.8**
SCE				⇑*i*Sg	**Sg**	**22 10 48.3**	**+1.4**
SCE	**Schlegeis**	**0.23**	**100**	Pg	**Pg**	**22 10 44.7**	**+0.8**
SCE				Sg	**Sg**	**22 10 48.3**	**+1.4**
WTTA	**Wattenberg**	**0.26**	**43**	e*P*g	**Pg**	**22 10 45.4**	**+1.0**
	SNR=139						
WTTA				e*S*g	**Sg**	**22 10 49.3**	**+1.6**
WTTA	**Wattenberg**	**0.26**	**43**	e*P*g	**Pg**	**22 10 45.4**	**+1.1**
	66nm,0.1s,SNR=424						
WTTA				⇓*i*Sg	**Sg**	**22 10 49.2**	**+1.5**
	171nm,0.1s						
WTTA	**Wattenberg**	**0.26**	**43**	Pg	**Pg**	**22 10 45.4**	**+1.0**
	66nm,0.1s,SNR=424						
WTTA				Sg	**Sg**	**22 10 49.2**	**+1.5**
	171nm,0.1s						
WATA	**Walderalm**	**0.29**	**27**	*i*Pg	**Pg**	**22 10 46.1**	**+1.1**
	65nm,0.2s,SNR=199						
WATA				⇓*i*Sg	**Sg**	**22 10 51.1**	**+2.3**
	302nm,0.1s						
WATA	**Walderalm**	**0.29**	**27**	Pg	**Pg**	**22 10 46.1**	**+1.1**
	65nm,0.2s,SNR=199						
MOTA	**Moosalm**	**0.33**	**325**	e*P*g	**Pg**	**22 10 46.3**	**+0.6**
	32nm,0.1s,SNR=286						
MOTA				⇑*i*Sg	**Sg**	**22 10 50.4**	**+0.4**
	117nm,0.2s						
MOTA	**Moosalm**	**0.33**	**325**	Pg	**Pg**	**22 10 46.3**	**+0.6**
	32nm,0.1s,SNR=286						
MOTA				Sg	**Sg**	**22 10 50.4**	**+0.4**
	117nm,0.2s						
FETA	**Feichten**	**0.45**	**263**	⇑e*P*g	**Pg**	**22 10 47.7**	**-0.3**
	52nm,0.1s,SNR=370						
FETA				⇓*i*Sg	**Sg**	**22 10 53.2**	**-0.7**
	90nm,0.1s						
FETA	**Feichten**	**0.45**	**263**	Pg	**Pg**	**22 10 47.7**	**-0.3**
	52nm,0.1s,SNR=370						
FETA				Sg	**Sg**	**22 10 53.2**	**-0.7**
	90nm,0.1s						
PART	**Garmisch-Parte**	**0.46**	**337**	⇑*i*Pg	**Pg**	**22 10 48.5**	**+0.3**
PART				⇑*i*Sg	**Sg**	**22 10 56.0**	**+1.8**
PART	**Garmisch-Parte**	**0.46**	**337**	Pg	**Pg**	**22 10 48.5**	**+0.3**
PART				Sg	**Sg**	**22 10 56.0**	**+1.8**
RETA	**Reutte**	**0.59**	**314**	⇑e*P*g	**Pg**	**22 10 50.5**	**-0.2**
	12nm,0.2s,SNR=31						
RETA				⇑*i*Sg	**Sg**	**22 10 58.1**	**-0.2**
	22nm,0.1s						
RETA	**Reutte**	**0.59**	**314**	Pg	**Pg**	**22 10 50.5**	**-0.2**
	12nm,0.2s,SNR=31						
RETA				Sg	**Sg**	**22 10 58.1**	**-0.2**
	22nm,0.1s						
APPI	**Appiano**	**0.61**	**190**	Pg	**Pg**	**22 10 50.9**	**-0.2**
APPI				Sg	**Sg**	**22 10 58.3**	**-0.7**
APPI	**Appiano**	**0.61**	**190**	Pg	**Pg**	**22 10 50.9**	**-0.2**
APPI				Sg	**Sg**	**22 10 58.3**	**-0.7**
AFL	**Alpe Faloria**	**0.78**	**135**	⇑e*P*g	**Pg**	**22 10 54.9**	**+0.6**
AFL	**Alpe Faloria**	**0.78**	**135**	e*P*g	**Pg**	**22 10 54.9**	**+0.6**
OBER	**Oberstdorf**	**0.81**	**294**	⇓*i*Pg	**Pg**	**22 10 54.8**	**-0.2**
OBER	**Oberstdorf**	**0.81**	**294**	Pg	**Pg**	**22 10 54.8**	**-0.2**
ABTA	**Abfaltersbach**	**0.84**	**113**	⇑e*P*g	**Pg**	**22 10 55.8**	**+0.2**
	12nm,0.1s,SNR=56						
ABTA				⇓*i*Sg	**Sg**	**22 11 06.9**	**+0.4**
	81nm,0.1s						
ABTA	**Abfaltersbach**	**0.84**	**113**	Pg	**Pg**	**22 10 55.8**	**+0.2**
	12nm,0.1s,SNR=56						
ABTA				Sg	**Sg**	**22 11 06.9**	**+0.4**
	81nm,0.1s						
FUORN	**Ofenpass-Fuorn**	**0.89**	**240**	⇑*i*Pg	**Pg**	**22 10 55.5**	**-1.0**
	170nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**0.89**	**240**	e*P*g	**Pg**	**22 10 55.5**	**-1.0**
FUORN	**Ofenpass-Fuorn**	**0.89**	**240**	Pg	**Pg**	**22 10 55.6**	**-0.9**
FUORN	**Ofenpass-Fuorn**	**0.89**	**240**	Pg	**Pg**	**22 10 55.6**	**-0.9**
BRMO	**Bormio**	**0.92**	**229**	Pg	**Pg**	**22 10 55.8**	**-1.2**
BRMO				Sg	**Sg**	**22 11 06.9**	**-2.0**
BRMO	**Bormio**	**0.92**	**229**	Pg	**Pg**	**22 10 55.8**	**-1.2**
BRMO				Sg	**Sg**	**22 11 06.9**	**-2.0**
FAU	**Forcella Aurin**	**0.94**	**154**	e*P*g	**Pg**	**22 10 57.3**	**-0.2**
FAU	**Forcella Aurin**	**0.94**	**154**	e*P*g	**Pg**	**22 10 57.3**	**-0.2**
CSO	**Casso**	**1.03**	**141**	⇓e*P*g	**Pg**	**22 10 59.6**	**+0.3**
CSO				e*S*g	**Sg**	**22 11 13.0**	**+0.4**
CSO	**Casso**	**1.03**	**141**	e*P*g	**Pg**	**22 10 59.6**	**+0.4**
CSO				e*S*g	**Sg**	**22 11 13.0**	**+0.4**
CSMI	**Casera Mimoias**	**1.04**	**122**	⇑e*P*g	**Pg**	**22 10 59.4**	**0.0**
CSMI				e*S*g	**Sg**	**22 11 13.0**	**+0.1**
CSMI	**Casera Mimoias**	**1.04**	**122**	e*P*g	**Pg**	**22 10 59.4**	**0.0**
CSMI				e*S*g	**Sg**	**22 11 13.0**	**+0.1**
DAVA	**Damuels**	**1.04**	**282**	e*P*g	**Pg**	**22 10 58.6**	**-0.8**
	SNR=14						
DAVA				e*S*g	**Sg**	**22 11 15.0**	**+2.0**
DAVA	**Damuels**	**1.04**	**282**	e*P*g	**Pg**	**22 10 58.6**	**-0.8**
DAVA				e*S*g	**Sg**	**22 11 15.0**	**+2.0**
DAVA	**Damuels**	**1.04**	**282**	⇑e*P*g	**Pg**	**22 10 58.5**	**-1.0**
	6.6nm,0.2s,SNR=27						
DAVA				⇓*i*Sg	**Sg**	**22 11 13.0**	**+0.1**
	326nm,0.4s						
DAVA	**Damuels**	**1.04**	**282**	Pg	**Pg**	**22 10 58.6**	**-0.8**
	SNR=14						
DAVA				Sg	**Sg**	**22 11 15.0**	**+2.0**
CIMO	**Cimolais**	**1.06**	**136**	⇑e*P*g	**Pg**	**22 10 59.5**	**-0.2**
CIMO				e*S*g	**Sg**	**22 11 13.3**	**-0.2**
CIMO	**Cimolais**	**1.06**	**136**	e*P*g	**Pg**	**22 10 59.5**	**-0.2**
CIMO				e*S*g	**Sg**	**22 11 13.3**	**-0.1**
DAVOX	**Davos/Dischmat**	**1.07**	**254**	⇑*i*Pg	**Pg**	**22 10 58.6**	**-1.3**
	182nm,0.6s						
DAVOX	**Davos/Dischmat**	**1.07**	**254**	Pg	**Pg**	**22 10 58.6**	**-1.3**
DAVOX	**Davos/Dischmat**	**1.07**	**254**	⇑*i*Pg	**Pg**	**22 10 58.6**	**-1.3**
	182nm,0.6s						
FVI	**Forni Avoltri**	**1.07**	**116**	Pg	**Pg**	**22 10 59.8**	**-0.2**
FVI				Sg	**Sg**	**22 11 13.9**	**0.0**
FVI	**Forni Avoltri**	**1.07**	**116**	Pg	**Pg**	**22 10 59.8**	**-0.2**
FVI				Sg	**Sg**	**22 11 13.9**	**0.0**
FUR	**Furstenfeldbru**	**1.09**	**356**	e*P*g	**Pg**	**22 11 02.0**	**+1.7**
	SNR=6.8						
FUR				e*S*g	**Sg**	**22 11 17.2**	**+2.7**
FUR	**Furstenfeldbru**	**1.09**	**356**	e*P*g	**Pg**	**22 11 02.0**	**+1.7**
FUR				e*S*g	**Sg**	**22 11 17.2**	**+2.7**
FUR	**Furstenfeldbru**	**1.09**	**356**	Pg	**Pg**	**22 11 02.0**	**+1.7**
	SNR=6.8						
FUR				Sg	**Sg**	**22 11 17.2**	**+2.7**
BERNI	**Berninapass**	**1.15**	**235**	⇑*i*Pg	**Pg**	**22 10 59.8**	**-1.6**
	143nm,0.6s						
BERNI	**Berninapass**	**1.15**	**235**	Pg	**Pg**	**22 10 59.9**	**-1.5**
BERNI	**Berninapass**	**1.15**	**235**	Pg	**Pg**	**22 10 59.9**	**-1.5**
RJOB	**Jochberg**	**1.17**	**55**	e*P*g	**Pg**	**22 11 01.8**	**0.0**
	SNR=39						
RJOB				e*S*g	**Sg**	**22 11 21.0**	**+4.1**
RJOB	**Jochberg**	**1.17**	**55**	Pg	**Pg**	**22 11 01.8**	**0.0**
	SNR=39						
RJOB				Sg	**Sg**	**22 11 21.0**	**+4.1**
MABI	**Malga Bissina**	**1.19**	**211**	Pg	**Pg**	**22 11 00.9**	**-1.2**
MABI				Sg	**Sg**	**22 11 15.7**	**-1.8**
MABI	**Malga Bissina**	**1.19**	**211**	Pg	**Pg**	**22 11 00.9**	**-1.2**
MABI				Sg	**Sg**	**22 11 15.7**	**-1.8**
VARN	**Col Varnada, M**	**1.20**	**155**	⇑e*P*g	**Pg**	**22 11 02.1**	**-0.2**
VARN				e*S*g	**Sg**	**22 11 17.9**	**+0.1**
VARN	**Col Varnada, M**	**1.20**	**155**	e*P*g	**Pg**	**22 11 02.1**	**-0.2**
VARN				e*S*g	**Sg**	**22 11 17.9**	**+0.1**
ZOU	**Zoufplan**	**1.21**	**115**	⇑e*P*g	**Pg**	**22 11 02.3**	**-0.3**
ZOU				e*S*g	**Sg**	**22 11 18.5**	**+0.2**
ZOU	**Zoufplan**	**1.21**	**115**	e*P*g	**Pg**	**22 11 02.3**	**-0.3**
ZOU				e*S*g	**Sg**	**22 11 18.5**	**+0.2**
BGLD	**Berchtesgaden**	**1.25**	**62**	e*P*n	**Pn**	**22 11 03.6**	**-0.1**
BGLD				*i*Sg	**Sg**	**22 11 25.1**	**+5.5**
BGLD	**Berchtesgaden**	**1.25**	**62**	Pn	**Pn**	**22 11 03.6**	**-0.1**
MLNI	**Malnisio**	**1.26**	**137**	⇓e*P*g	**Pg**	**22 11 03.6**	**+0.1**
MLNI				e*S*g	**Sg**	**22 11 20.8**	**+1.0**
MLNI	**Malnisio**	**1.26**	**137**	e*P*g	**Pg**	**22 11 03.6**	**+0.1**
MLNI				e*S*g	**Sg**	**22 11 20.8**	**+1.0**
CAE	**Caneva**	**1.30**	**145**	e*P*g	**Pg**	**22 11 04.3**	**0.0**
CAE				e*S*g	**Sg**	**22 11 22.3**	**+1.3**
CAE	**Caneva**	**1.30**	**145**	e*P*g	**Pg**	**22 11 04.3**	**+0.1**
CAE				e*S*g	**Sg**	**22 11 22.3**	**+1.3**
FUSE	**Fusea**	**1.30**	**120**	⇓e*P*g	**Pg**	**22 11 03.8**	**-0.4**
FUSE				e*S*g	**Sg**	**22 11 21.5**	**+0.4**
**FU

KBA				Sn	Sn	22 11 21.8	-1.5
KBA				Sg	Sg	22 11 22.0	-0.5
MTLO	**Montello**	**1.36 158**		*e*Pg	Pg	22 11 06.1	+0.7
MTLO	**Montello**	**1.36 158**		*e*Pg	Pg	22 11 06.1	+0.7
PLONS	**Plons/SG**	**1.37 270**		*e*P	Pn	22 11 04.6	-0.7
	152nm,0.3s						
PLONS	**Plons/SG**	**1.37 270**		*e*P	Pn	22 11 04.6	-0.7
PTCC	**Patocco-Chiusa**	**1.52 116**		Pg	Pg	22 11 07.1	-1.3
PTCC	**Patocco-Chiusa**	**1.52 116**		Pg	Pg	22 11 07.1	-1.3
TUE	**Stuetta**	**1.52 247**		*e*Pn	Pn	22 11 06.7	-0.7
TUE				*e*Sn	Sn	22 11 28.4	+0.8
TUE	**Stuetta**	**1.52 247**		*e*Pn	Pn	22 11 06.7	-0.7
TUE				*e*Sn	Sn	22 11 28.4	+0.7
BAD	**Bernadia**	**1.54 123**	⇑	*e*Pg	Pg	22 11 08.6	-0.2
BAD				*e*Sg	Sg	22 11 29.2	+0.5
BAD	**Bernadia**	**1.54 123**		*e*Pg	Pg	22 11 08.6	-0.2
BAD				*e*Sg	Sg	22 11 29.2	+0.5
VINO	**Villanova**	**1.55 121**	⇑	*e*Pg	Pg	22 11 08.6	-0.4
VINO				*e*Sg	Sg	22 11 30.8	+1.8
VINO	**Villanova**	**1.55 121**		*e*Pg	Pg	22 11 08.6	-0.4
VINO				*e*Sg	Sg	22 11 30.8	+1.7
ACOM	**Acomizza, Ital**	**1.56 109**	⇓	*e*Pg	Pg	22 11 08.9	-0.3
ACOM				*e*Sg	Sg	22 11 29.7	+0.3
ACOM	**Acomizza, Ital**	**1.56 109**		*e*Pg	Pg	22 11 08.9	-0.4
ACOM				*e*Sg	Sg	22 11 29.7	+0.3
SALO	**Salr**	**1.57 202**		Pg	Pg	22 11 08.5	-1.1
SALO	**Salr**	**1.57 202**		Pg	Pg	22 11 08.5	-1.1
LSR	**Lussari**	**1.59 111**	⇑	*e*Pg	Pg	22 11 09.8	-0.1
LSR				*e*Sg	Sg	22 11 31.1	+0.4
LSR	**Lussari**	**1.59 111**		*e*Pg	Pg	22 11 09.9	-0.1
LSR				*e*Sg	Sg	22 11 31.0	+0.4
MYKA	**Terra Mystica**	**1.62 105**	⇓	*i*Pg	Pg	22 11 09.8	-0.6
	6.9nm,0.2s						
MYKA			⇓	*i*Sg	Sg	22 11 31.7	+0.4
	23nm,0.3s						
MYKA	**Terra Mystica**	**1.62 105**		Pg	Pg	22 11 09.8	-0.6
	6.9nm,0.2s						
MYKA				Sg	Sg	22 11 31.7	+0.4
	23nm,0.3s						
COLI	**Coloredo**	**1.67 124**	⇓	*e*Pg	Pg	22 11 11.3	-0.1
COLI				*e*Sg	Sg	22 11 34.1	+1.1
COLI	**Coloredo**	**1.67 124**		*e*Pg	Pg	22 11 11.4	0.0
COLI				*e*Sg	Sg	22 11 34.1	+1.0
TEOL	**Teolo**	**1.73 173**		*e*Pg	Pg	22 11 11.2	-1.4
TEOL				*e*Sg	Sg	22 11 34.4	-0.5
TEOL	**Teolo**	**1.73 173**		*e*Pg	Pg	22 11 11.1	-1.5
TEOL				*e*Sg	Sg	22 11 34.4	-0.6
MDI	**Monti di Nese**	**1.74 222**		Pg	Pg	22 11 10.9	-1.8
MDI	**Monti di Nese**	**1.74 222**		Pg	Pg	22 11 10.9	-1.8
MOA	**Molln**	**2.10 67**		*e*Pg	Pg	22 11 19.0	-0.7
	SNR=29						
MOA				*e*Sg	Sg	22 11 48.1	+1.0
MOA	**Molln**	**2.10 67**		*e*Pg	Pg	22 11 19.0	-0.8
MOA				*e*Sg	Sg	22 11 48.1	+1.1
MOA	**Molln**	**2.10 67**	⇓	*e*Pg	Pg	22 11 19.0	-0.7
	14nm,0.2s,SNR=41						
MOA			⇑	*i*Sg	Sg	22 11 48.1	+1.1
	20nm,0.2s						
MOA	**Molln**	**2.10 67**		Pg	Pg	22 11 19.0	-0.8
	14nm,0.2s,SNR=41						
MOA				Sg	Sg	22 11 48.1	+1.1
	20nm,0.2s						
OBKA	**Obir**	**2.25 103**		*e*Pg	Pg	22 11 20.9	-1.6
	SNR=6.5						
OBKA				*e*Sg	Sg	22 11 51.0	-0.7
OBKA	**Obir**	**2.25 103**		*e*Pg	Pg	22 11 20.9	-1.6
OBKA				*e*Sg	Sg	22 11 51.0	-0.7
OBKA	**Obir**	**2.25 103**		Pg	Pg	22 11 20.9	-1.6
	SNR=6.5						
OBKA				Sg	Sg	22 11 51.0	-0.7
WET	**Wettzell**	**2.30 25**		*e*Pn	Pn	22 11 18.6	+0.5
	SNR=16						
WET				*e*Sn	Sn	22 11 47.4	+0.5
WET				*e*Sg	Sg	22 11 53.6	+0.3
WET	**Wettzell**	**2.30 25**		*e*Pn	Pn	22 11 18.6	+0.5
WET				*e*Sn	Sn	22 11 47.4	+0.6
WET				*e*Sg	Sg	22 11 53.6	+0.4
WET	**Wettzell**	**2.30 25**		Pn	Pn	22 11 18.6	+0.5
	SNR=16						
WET				Sn	Sn	22 11 47.4	+0.6
WET				Sg	Sg	22 11 53.6	+0.4
GEC2	**GERESS Array S**	**2.36 41**		*e*Pn	Pn	22 11 19.6	+0.7
	SNR=10.0						
GEC2				*e*Sn	Sn	22 11 49.2	+0.9
GEC2				*e*Sg	Sg	22 11 55.2	0.0
GEC2	**GERESS Array S**	**2.36 41**		*e*Pn	Pn	22 11 19.6	+0.7
GEC2				*e*Sn	Sn	22 11 49.2	+0.9
GEC2				*e*Sg	Sg	22 11 55.2	0.0
GEC2	**GERESS Array S**	**2.36 41**		Pn	Pn	22 11 19.6	+0.7
	SNR=10.0						
GEC2				Sn	Sn	22 11 49.2	+0.9
GEC2				Sg	Sg	22 11 55.2	0.0
BFO	**Black Forest**	**2.41 302**		*e*Pn	Pn	22 11 20.4	+0.7
	SNR=1.4						
BFO				*e*Pg	Pg	22 11 27.6	+2.0
	SNR=8.4						
BFO				*e*Sn	Sn	22 11 50.0	+0.3
BFO	**Black Forest**	**2.41 302**		*e*Pn	Pn	22 11 20.4	+0.7
BFO				*e*Pg	Pg	22 11 27.6	+2.0
BFO				*e*Sn	Sn	22 11 50.0	+0.4
BFO	**Black Forest**	**2.41 302**		Pn	Pn	22 11 20.4	+0.7
	SNR=1.4						
BFO	**Black Forest**	**2.41 302**		Pg	Pg	22 11 27.6	+2.0
	SNR=8.4						
BFO				Sn	Sn	22 11 50.0	+0.4
KHC	**Kasperske Hory**	**2.53 35**		*e*PN	Pn	22 11 22.2	+0.9
KHC				*e*PG	Pg	22 11 26.7	-1.2
KHC				*e*SN	Sn	22 11 52.3	-0.2
KHC				*e*SG	Sg	22 12 01.2	+0.6
	comp=Z,22nm,0.2s						
GRA1	**Grafenberg Arr**	**2.62 358**		*e*Sn	Sn	22 11 54.5	-0.2
GRA1				*e*Sg	Sg	22 12 03.3	-0.2
GRA1	**Grafenberg Arr**	**2.62 358**		Sn	Sn	22 11 54.5	-0.2
GRA1				Sg	Sg	22 12 03.3	-0.2
GRF	**Grafenberg Arr**	**2.62 358**		*e*Sn	Sn	22 11 54.5	-0.2
GRF				*e*Sg	Sg	22 12 03.3	-0.2
ROTZ	**Rotzenmuhle**	**2.75 11**		*e*Pn	Pn	22 11 23.5	-0.7
	SNR=3.1						
ROTZ				*e*Pg	Pg	22 11 32.4	+0.4
	SNR=9.2						
ROTZ				*e*Sn	Sn	22 11 56.9	-1.0
ROTZ				*e*Sg	Sg	22 12 07.5	-0.2
ROTZ	**Rotzenmuhle**	**2.75 11**		*e*Pn	Pn	22 11 23.5	-0.8
ROTZ				*e*Pg	Pg	22 11 32.4	+0.3
ROTZ				*e*Sn	Sn	22 11 56.9	-1.0
ROTZ				*e*Sg	Sg	22 12 07.5	-0.1
ARSA	**Arzberg**	**2.83 85**	⇓	*e*Pn	Pn	22 11 23.3	-2.1
	SNR=7.7						
ARSA			⇓	*i*Pg	Pg	22 11 32.6	-1.1
	comp=Z,8.0nm,0.4s						
ARSA	**Arzberg**	**2.83 85**		Pn	Pn	22 11 23.3	-2.1
	SNR=7.7						
TRAV	**Traversella**	**2.96 239**		P	Pn	22 11 27.3	0.0
CDF	**Champ du Feu**	**3.07 297**		*e*Pn	Pn	22 11 29.6	+0.8
	SNR=1.0						
CDF				*e*Sn	Sn	22 12 04.4	-1.6
CDF				*e*Sg	Sg	22 12 19.8	+1.7
	comp=Z,13nm,0.5s						
CDF	**Champ du Feu**	**3.07 297**		*e*Pn	Pn	22 11 29.6	+0.8
	SNR=1.0						
CDF				*e*Sn	Sn	22 12 04.4	-1.6
CDF				*e*Sg	Sg	22 12 19.8	+1.7
	comp=Z,6.3nm,0.5s						
HINF	**Hinteralfeld**	**3.16 285**		*e*Pn	Pn	22 11 31.3	+1.4
	SNR=1.0						
HINF				*e*Sn	Sn	22 12 07.0	-1.1
	SNR=1.0						
HINF				*e*Sg	Sg	22 12 21.2	+0.3
	comp=Z,9.3nm,0.5s,SNR=1.0						
HINF	**Hinteralfeld**	**3.16 285**		*e*Pn	Pn	22 11 31.3	+1.4
	SNR=1.0						
HINF				*e*Sn	Sn	22 12 07.0	-1.1
	SNR=1.0						
HINF				*e*Sg	Sg	22 12 21.2	+0.3
	comp=Z,4.7nm,0.5s,SNR=1.0						
PCP	**Piancastagn**	**3.22 219**		P	Pn	22 11 31.1	+0.3
MAIM	**Mastiano**	**3.23 191**		P	Pn	22 11 31.4	+0.6
NKC	**Novy Kostel**	**3.24 12**		*e*PG	Pg	22 11 40.1	-1.3
NKC				*e*SN	Sn	22 12 09.2	-0.8
NKC				*e*SG	Sg	22 12 22.3	-1.0
	comp=Z,16nm,0.4s						
NKC	**Novy Kostel**	**3.24 12**		Pg	Pg	22 11 40.1	-1.3
NKC				Sn	Sn	22 12 09.2	-0.8
NKC				Sg	Sg	22 12 22.3	-1.0
	comp=Z,16nm,0.4s						
WERN	**Wernitzgruen**	**3.28 11**		*e*Pg	Pg	22 11 41.8	-0.4
	SNR=2.9						
WERN				*e*Sn	Sn	22 12 09.8	-1.2
WERN				*e*Sg	Sg	22 12 24.6	-0.1
WERN	**Wernitzgruen**	**3.28 11**		*e*Pg	Pg	22 11 41.8	-0.4
WERN				*e*Sn	Sn	22 12 09.8	-1.2
WERN				*e*Sg	Sg	22 12 24.6	-0.1
WERN	**Wernitzgruen**	**3.28 11**		Pg	Pg	22 11 41.8	-0.4
	SNR=2.9						
WERN				Sn	Sn	22 12 09.8	-1.2
WERN				Sg	Sg	22 12 24.6	-0.1
NVLJ	**Novalja**	**3.50 135**		*e*Pn	Pn	22 11 35.8	+1.2
NVLJ				Sn	Sn	22 12 17.9	+1.3
NVLJ	**Novalja**	**3.50 135**		*e*Pn	Pn	22 11 35.8	+1.1
NVLJ				Sn	Sn	22 12 17.8	+1.2
TREC	**Trest**	**3.53 50**		*e*SG	Sg	22 12 32.3	-0.5
TREC	**Trest**	**3.53 50**		Sg	Sg	22 12 32.3	-0.5
HAU	**Haudompre**	**3.53 287**		*e*Pn	Pn	22 11 35.8	+0.7
	SNR=1.0						
HAU				*e*Sg	Sg	22 12 31.5	-1.3
	comp=Z,20nm,0.5s						
HAU	**Haudompre**	**3.53 287**		*e*Pn	Pn	22 11 35.8	+0.7
	SNR=1.0						
HAU				*e*Sg	Sg	22 12 31.5	-1.3
	comp=Z,10nm,0.5s						
MOX	**Moxa**	**3.57 2**		*e*PN	Pn	22 11 33.6	-2.0
MOX				*e*SN	Sn	22 12 16.8	-1.5
MOX				*e*SG	Sg	22 12 35.3	+1.1
MOX	**Moxa**	**3.57 2**	⇑	*e*Pn	Pn	22 11 33.6	-2.0
MOX				*e*Sn	Sn	22 12 16.8	-1.5
MOX				*e*Sg	Sg	22 12 35.4	+1.3
MOX	**Moxa**	**3.57 2**		*e*Pn	Pn	22 11 33.6	-2.0
MOX				*e*Sn	Sn	22 12 16.8	-1.5
MOX				*e*Sg	Sg	22 12 35.4	+1.2
MOX	**Moxa**	**3.57 2**		Pn	Pn	22 11 33.6	-2.0
MOX				Sn	Sn	22 12 16.8	-1.5
MOX				Sg	Sg	22 12 35.4	+1.2
LPG	**La Plagne**	**3.58 245**		*e*Pn	Pn	22 11 38.7	+3.0
	SNR=1.0						
LPG				*e*Sn	Sn	22 12 19.2	+0.8
	comp=Z,12nm,0.7s						
LPG	**La Plagne**	**3.58 245**		*e*Pn	Pn	22 11 38.7	+3.0
	SNR=1.0						
LPG				*e*Sn	Sn	22 12 19.2	+0.8
	comp=Z,6.1nm,0.7s						
LPL	**La Plagne**	**3.58 246**		*e*Pn	Pn	22 11 38.6	+2.9
LPL				*e*Sn	Sn	22 12 19.6	+1.2
	comp=Z,4.7nm,0.5s						
LPL	**La Plagne**	**3.58 246**		*e*Pn	Pn	22 11 38.6	+2.9
LPL				*e*Sn	Sn	22 12 19.6	+1.2
	comp=Z,2.3nm,0.5s						
PRU	**Pruhonice**	**3.59 35**		*e*PN	Pn	22 11 37.1	+1.2
PRU				*e*PG	Pg	22 11 46.3	-1.9
PRU				*e*SG	Sg	22 12 33.5	-1.2
	comp=Z,7.3nm,0.3s						
PRU	**Pruhonice**	**3.59 35**		Pn	Pn	22 11 37.1	+1.2
CABF	**La Chapelle**	**3.66 265**		*e*Pn	Pn	22 11 37.9	+1.1
	SNR=1.0						
CABF				*e*Sg	Sg	22 12 40.1	+3.1
	comp=Z,6.7nm,0.5s						
CABF	**La Chapelle**	**3.66 265**		*e*Pn	Pn	22 11 37.9	+1.1
	SNR=1.0						
CABF				*e*Sg	Sg	22 12 40.1	+3.1
	comp=Z,3.3nm,0.5s						
TNS	**Taunus Mts**	**3.70 329**		*e*Pn	Pn	22 11 38.0	+0.7
	SNR=2.1						
TNS				*e*Sn	Sn	22 12 20.8	-0.6
TNS	**Taunus Mts**	**3.70 329**		*e*Pn	Pn	22 11 38.0	+0.7
TNS				*e*Sn	Sn	22 12 20.8	-0.6
TNS	**Taunus Mts**	**3.70 329**		Pn	Pn	22 11 38.0	+0.7
	SNR=2.1						
TNS				Sn	Sn	22 12 20.8	-0.6
MBDF	**Montbardon**	**3.98 236**		*e*P	Pn	22 11 46.6	+5.3
	SNR=1.0						
MBDF				*e*Sn	Sn	22 12 27.1	-1.3
	comp=Z,8.0nm,0.6s,SNR=1.0						
MBDF	**Montbardon**	**3.98 236**		*e*Pn	Pn	22 11 42.4	+1.1
MBDF				*e*P		22 11 46.6	
MBDF				*e*Sn	Sn	22 12 27.1	-1.3
MBDF	**Montbardon**	**3.98 236**		*e*Pn	Pn	22 11 42.4	+1.1
MBDF	**Montbardon**	**3.98 236**		*e*P	Pn	22 11 46.6	+5.3
	SNR=1.0						
MBDF				*e*Sn	Sn	22 12 27.1	-1.3
	comp=Z,4.0nm,0.6s,SNR=1.0						
PVCC	**Panska Ves**	**4.04 30**		*e*SG	Sg	22 12 48.2	-1.1
	comp=Z,12nm,0.3s						
PVCC	**Panska Ves**	**4.04 30**		Sg	Sg	22 12 48.2	-1.1
	comp=Z,12nm,0.3s						
VRAC	**Vranov**	**4.14 55**		*e*Pn	Pn	22 11 44.7	+1.3
VRAC	**Vranov**	**4.14 55**		*e*Pg	Pg	22 11 55.1	-3.6
VRAC				*e*SG	Sg	22 12 50.1	-2.2
BRG	**Berggiesshubel**	**4.16 23**		PG	Pg	22 11 56.4	-2.6
BRG				SG	Sg	22 12 51.7	-1.2
	comp=Z,10.0nm,0.4s						
SBF	**Sospel**	**4.25 222**		*e*Pn	Pn	22 11 46.6	+1.7
	SNR=1.0						
SBF				*e*Sn	Sn	22 12 34.3	-0.6
	comp=Z,3.3nm,0.2s						
SBF	**Sospel**	**4.25 222**		*e*Pn	Pn	22 11 46.6	+1.7
	SNR=1.0						
SBF				*e*Sn	Sn	22 12 34.3	-0.6
	comp=Z,1.6nm,0.2s						
CLL	**Collm**	**4.37 14**		*e*Pn	Pn	22 11 47.0	+0.5
	SNR=1.7						
CLL				*e*Sg	Sg	22 13 00.0	+0.5
CLL	**Collm**	**4.37 14**		*i*Pn	Pn	22 11 46.2	-0.3
CLL				*i*Sg	Sg	22 13 00.0	+0.4
CLL	**Collm**	**4.37 14**		*i*Pn	Pn	22 11 46.2	-0.3
CLL				*e*Pg	Pg	22 12 03.0	0.0
CLL				*i*Sg	Sg	22 13 00.0	+0.4
	comp=Z,8.0nm,0.9s						
CLL	**Collm**	**4.37 14**		Pn	Pn	22 11 47.0	+0.5
	SNR=1.7						
CLL				Sg	Sg	22 13 00.0	+0.4
ORIF	**Oris-en-Rattie**	**4.40 243**		*e*Pn	Pn	22 11 48.7	+1.7
	SNR=1.0						
ORIF				*e*Sn	Sn	22 12 38.1	-0.5
	comp=Z,9.2nm,0.6s						
ORIF	**Oris-en-Rattie**	**4.40 243**		*e*Pn	Pn	22 11 48.7	+1.7
	SNR=1.0						
ORIF				*e*Sn	Sn	22 12 38.1	-0.5
	comp=Z,4.6nm,0.6s						
SFTF	**Sexfontaines**	**4.43 287**		*e*Pn	Pn	22 11 48.1	+0.7
SFTF				*e*P		22 11 52.1	
SFTF	**Sexfontaines**	**4.43 287**		*e*Pn	Pn	22 11 48.1	+0.7
DPC	**Dobruska-Polom**	**4.63 43**		*e*SG	Sg	22 13 05.8	-2.2
	comp=Z,5.0nm,0.3s						
DPC	**Dobruska-Polom**	**4.63 43**		Sg	Sg	22 13 05.8	-2.2
	comp=Z,5.0nm,0.3s						
PGF	**Pioggiola**	**4.83 201**		*e*Pn	Pn	22 11 54.0	+1.0
PGF	**Pioggiola**	**4.83 201**		*e*Pn	Pn	22 11 54.0	+1.0
FRF	**La Foret Royal**	**4.85 225**		*e*Pn	Pn	22 11 55.3	+2.2
	SNR=1.0						
FRF				*e*Sn	Sn	22 12 48.2	-1.5
	comp=Z,2.9nm,0.4s,SNR=1.0						
FRF	**La Foret Royal**	**4.85 225**		*e*Pn	Pn	22 11 55.3	+2.2
	SNR=1.0						
FRF				*e*Sn	Sn	22 12 48.2	-1.5
	comp=Z,1.5nm,0.4s,SNR=1.0						
LMR	**La Mourre**	**5.08 224**		*e*Pn	Pn	22 11 58.0	+1.6
LMR				*e*Sn	Sn	22 12 54.7	-0.8
	comp=Z,2.6nm,0.5s,SNR=1.0						
LMR	**La Mourre**	**5.08 224**		*e*Pn	Pn	22 11 58.0	+1.6
LMR				*e*Sn	Sn	22 12 54.7	-0.8
	comp=Z,1.3nm,0.5s,SNR=1.0						
SMRF	**Simiane la Rot**	**5.12 235**		*e*Pn	Pn	22 11 58.0	+1.1
	SNR=1.0						
SMRF	**Simiane la Rot**	**5.12 235**		*e*Pn	Pn	22 11 58.0	+1.1
	SNR=1.0						
LOR	**Lormes**	**5.13 275**		*e*Pn	Pn	22 11 58.0	+1.0
	SNR=1.0						
LOR	**Lormes**	**5.13 275**		*e*Pn	Pn	22 11 58.0	+1.0
	SNR=1.0						
VIVF	**Saint-Julien-l**	**5.18 247**		*e*Pn	Pn	22 11 58.4	+0.8
	SNR=1.0						
VIVF				*e*Sn	Sn	22 12 55.4	-2.4
	comp=Z,1.6nm,0.3s						
VIVF	**Saint-Julien-l**	**5.18 247**		*e*Pn	Pn	22 11 58.4	+0.8
	SNR=1.0						
VIVF				*e*Sn	Sn	22 12 55.4	-2.4
	comp=Z,0.8nm,0.3s						
SMF	**Signal de Mont**	**5.19 268**		*e*Pn	Pn	22 11 58.0	+0.2
	SNR=1.0						
SMF				*e*Sn	Sn	22 12 56.7	-1.4
	comp=Z,1.9nm,0.3s						
SMF	**Signal de Mont**	**5.19 268**		*e*Pn	Pn	22 11 58.0	+0.2
	SNR=1.0						
SMF				*e*Sn	Sn	22 12 56.7	-1.4
	comp=Z,0.9nm,0.3s						
VYHS	**Vyhne**	**5.22 72**		*e*Pn	Pn	22 12 00.4	+2.1
VYHS				*e*Sn	Sn	22 12 56.5	-2.4
VYHS	**Vyhne**	**5.22 72**		*e*PN	Pn	22 12 00.4	+2.1
VYHS				*e*SN	Sn	22 12 56.5	-2.4
VYHS	**Vyhne**	**5.22 72**		*e*Pn	Pn	22 12 00.4	+2.1
VYHS				*e*Sn	Sn	22 12 56.5	-2.4
OKC	**Ostrava-Krasne**	**5.28 56**		*e*SG	Sg	22 13 26.2	-2.7
	comp=Z,4.8nm,0.5s						
OKC	**Ostrava-Krasne**	**5.28 56**		Sg	Sg	22 13 26.2	-2.7
	comp=Z,4.8nm,0.5s						
SSF	**Saint Saulge**	**5.38 273**		*e*Pn	Pn	22 12 00.9	+0.5
SSF	**Saint Saulge**	**5.38 273**		*e*Pn	Pn	22 12 00.9	+0.5
AVF	**Avril sur Loir**	**5.51 270**		*e*Pn	Pn	22 12 02.5	+0.3
	SNR=1.0						
AVF	**Avril sur Loir**	**5.51 270**		*e*Pn	Pn	22 12 02.5	+0.3
	SNR=1.0						
BAIF	**Baives**	**5.62 305**		*e*Pn	Pn	22 12 02.5	-1.2
BAIF	**Baives**	**5.62 305**		*e*Pn	Pn	22 12 02.5	-1.2
BGF	**Bois d'Agland**	**5.88 268**		*e*Pn	Pn	22 12 07.0	-0.3
	SNR=1.0						
BGF				*e*Sn	Sn	22 13 13.2	-1.9
	comp=Z,6.2nm,0.3s						
BGF	**Bois d'Agland**	**5.88 268**		*e*Pn	Pn	22 12 07.0	-0.3
	SNR=1.0						
LASF	**Ste Croix**	**6.07 243**		*e*Pn	Pn	22 12 11.1	+1.1
LASF				*e*Sn	Sn	22 13 18.8	-1.1
	comp=Z,4.8nm,0.6s,SNR=1.0						
LASF	**Ste Croix**	**6.07 243**		*e*Pn	Pn	22 12 11.1	+1.1
LASF				*e*Sn	Sn	22 13 18.8	-1.1
	comp=Z,2.4nm,0.6s,SNR=1.0						
TCF	**Toulx Ste Croi**	**6.36 266**		*e*Pn	Pn	22 12 14.3	+0.4
TCF	**Toulx Ste Croi**	**6.36 266**		*e*Pn	Pn	22 12 14.3	+0.4
CAF	**Calviac**	**6.84 255**		*e*Pn	Pn	22 12 21.2	+0.8
	SNR=1.0						
CAF	**Calviac**	**6.84 255**		*e*Pn	Pn	22 12 21.2	+0.8
	SNR=1.0						
RJF	**Les Rejaudoux**	**7.07 259**		*e*Pn	Pn	22 12 24.8	+1.1
RJF	**Les Rejaudoux**	**7.07 259**		*e*Pn	Pn	22 12 24.8	+1.1
MFF	**Saint Martin d**	**7.92 271**		*e*Pn	Pn	22 12 36.1	+0.8
	SNR=1.0						
MFF	**Saint Martin d**	**7.92 271**		*e*Pn	Pn	22 12 36.1	+0.8
	SNR=1.0						
GRR	**Gorron**	**8.36 284**		*e*Pn	Pn	22 12 42.3	+1.0
GRR	**Gorron**	**8.36 284**		*e*Pn	Pn	22 12 42.3	+1.0

*ISCJB **17** 22:36:46.3±0.8, 10°.25N±0°.05×62°.01W±0°.05, h28km±9km, Error ellipse: s-maj=9.2km s-min=8.1km az=34.7*
*FUNV **17** 22:36:47.3, 10°.30N×61°.99W, h21km, MW2.5*
ISC 17 22:36:46.9±0.8, 10°.28N±0°.05×62°.00W±0°.05, h26km±8km, n9, σ§76/15, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.42**	**329**	*e*P	**Pb**	**22 36 55.0**	**-1.0**
GUIV				*e*S	**Sb**	**22 37 01.3**	**-0.9**
TRN	**Trinidad (W)**	**0.69**	**58**	*e*P	**Pb**	**22 36 59.9**	**-0.4**
TRN				*e*S	**Sb**	**22 37 10.3**	**+0.8**
GUNV	**Guanoco**	**0.94**	**263**	*e*P	**Pn**	**22 37 04.7**	**+0.3**
GUNV				*e*S	**Sb**	**22 37 18.3**	**+1.6**
CRUV	**Carupano**	**1.28**	**288**	*e*P	**Pn**	**22 37 08.8**	**-0.3**
CRUV				*e*S	**Sn**	**22 37 24.3**	**-1.1**
ITEV	**Isla Los Testi**	**1.54**	**314**	*e*P	**Pn**	**22 37 13.5**	**+0.8**
ITEV				*e*S	**Sn**	**22 37 32.7**	**+0.8**
PCRV	**Puerto La Cruz**	**2.60**	**268**	*e*P	**Pn**	**22 37 27.4**	**+0.1**
GURV	**El Guri**	**2.73**	**203**	*e*P	**Pn**	**22 37 29.3**	**+0.2**
GURV				*e*S	**Sn**	**22 38 00.3**	**-0.9**
CAOV	**Caicara del Or**	**5.19**	**236**	*e*P	**Pn**	**22 38 02.9**	**0.0**
BAUV	**El Baul**	**6.11**	**258**	*e*P	**Pn**	**22 38 15.4**	**-0.1**

*IDC **17** 22:53:07.6±0.7, 30°.65S×71°.58W, h0km, mb4.4/10, mb1 4.5/11, mb1mx4.4/16, mbtmp4.3/11, ML4.1/1, MS3.8/9, Ms1 3.8/9, ms1mx3.5/21, Error ellipse: s-maj=27.0km s-min=18.9km az=55.0*
*ISCJB **17** 22:53:10.9±1.0, 30°.67S±0°.02×71°.69W±0°.07, h29km±6km, mb4.6/29, MS4.0/7, Error ellipse: s-maj=9.9km s-min=3.5km az=173.2*
*NEIC **17** 22:53:12.5, 30°.73S×71°.54W, h30km, mb4.8/19, ML4.7(GUC), After GUC.*
NEIC Felt [III] at Ovalle and [II] at Combarbala.
*GUC **17** 22:53:12.5±0.5, 30°.73S×71°.54W, h30km±2km, ML4.7*
**ISC 17 22:53:11.9±1.2, 30°.67S±0°.02×71°.66W±0°.07, h22km±8km, n73, σ1§06/85, mb4.6/29, MS4.0/7, 5C-2D, Near

LMEL eS Sn 22 54 44.0 +0.6
LMEL AML AML 22 55 06.0
comp=N,1μm,0.6s
PLCA Paso Flores 10.09 175 Pn Pn 22 55 35.4 0.0
comp=N,0.4nm,0.3s,baz=334,slow=7.8,SNR=7.9
PLCA LR LR 23 00 03.2
comp=N,276nm,19.2s,baz=36,slow=41
PLCA Paso Flores 10.09 175 ePn Pn 22 55 36.2 +0.9
TRQA Tornquist 10.87 135 ePn Pn 22 55 47.6 +1.4
CPUP Villa Florida 13.32 75 Pn Pn 22 56 21.4 +1.6
comp=N,1.2nm,0.3s,baz=238,slow=12,SNR=6.0
LPAZ La Paz 14.67 14 Pn Pn 22 56 41.4 +3.2
comp=N,0.7nm,0.3s,baz=192,slow=5.3,SNR=32
LPAZ La Paz 14.67 14 ePn Pn 22 56 40.7 +2.5
SPB Sao Paulo 22.66 78 eP P 22 58 10.8 -0.9
comp=N,59nm,1.3s,mb4.8
SPB ePcP PcP 23 02 02.1 -2.0
ATAH Atahualpa 24.25 344 P P 22 58 26.0 -1.3
comp=N,3.3nm,0.6s,mb4.0,baz=220,slow=16,SNR=2.8
USHA Ushuaia 24.26 175 LR LR 23 09 08.1
comp=N,175nm,18.6s,MS3.6,baz=336,slow=40
BDFB Brasilia 26.31 61 P P 22 58 44.9 -1.2
comp=N,13nm,0.7s,mb4.6,baz=231,slow=11,SNR=19
BDFB LR LR 23 10 05.5
comp=N,356nm,20.8s,MS3.9,baz=286,slow=39
OTAV Otavalo 31.40 347 eP P 22 59 31.5 0.0
RPN Rapa Nui 33.07 267 eP P 22 59 45.6 -0.4
SDV Santo Domingo 39.34 2 eP P 23 00 39.1 -0.5
comp=N,5.0nm,0.7s,mb4.3
RCBR Riachuelo 41.68 61 LR LR 23 19 54.4
comp=N,149nm,19.1s,MS3.9,baz=209,slow=39
OBIP Obispado Ponce 48.67 6 eP P 23 01 53.4 -1.0
comp=N,22nm,0.8s,mb5.2
CELP Cerrillos 48.70 6 eP P 23 01 55.1 +0.4
SJG San Juan 48.78 7 eP P 23 01 54.4 -0.9
comp=N,8.1nm,0.3s,mb5.2
QSPA South Pole Qui 59.56 180 eP P 23 03 12.4 -0.8
comp=N,6.9nm,0.9s,mb4.7
TXAR Lajitas Array 67.00 330 P P 23 04 03.9 +0.8
comp=N,1.3nm,0.7s,mb4.0,baz=153,slow=8.1,SNR=18
GDL2 Guadalupe Moun 69.78 331 eP P 23 04 19.9 -0.5
CPRX Cap Rock 70.30 332 eP P 23 04 23.1 -0.5
comp=N,5.1nm,0.7s,mb4.6
LIC Lamto 73.44 72 eP P 23 04 41.9 -1.0
comp=N,51nm,1.1s,mb5.4
TIC Toumodi 73.68 72 eP P 23 04 43.3 -1.0
comp=N,51nm,1.3s,mb5.3
KIC Kosan Boka 73.75 72 eP P 23 04 43.8 -0.9
comp=N,52nm,0.9s,mb5.4
DBIC Dimbokro 73.83 72 P P 23 04 44.4 -0.8
comp=N,5.9nm,0.6s,mb4.7,baz=209,slow=5.6,SNR=23
DBIC LR LR 23 34 57.0
comp=N,134nm,18.7s,MS4.3,baz=205,slow=34
DBIC Dimbokro 73.83 72 P P 23 04 44.4 -0.8
DBIC LR LR 23 34 57.0
MAW Mawson 76.28 164 P P 23 04 57.8 -0.7
comp=N,2.5nm,0.7s,mb4.3,baz=148,slow=6.6,SNR=7.2
MAW Mawson 76.28 164 eP P 23 04 56.4 -2.0
comp=N,0.4nm,0.5s,mb3.6
SMCO Snowmass 76.87 333 eP P 23 05 02.4 +0.3
comp=N,12nm,1.0s,mb4.8
ECSD EROS Data Cent 77.48 342 eP P 23 05 04.4 -1.0
comp=N,5.9nm,0.7s,mb4.6
CCUT Cedar City 78.27 327 eP P 23 05 12.3 +2.4
comp=N,4.4nm,0.9s,mb4.4
SRU San Rafael 78.28 330 eP P 23 05 11.3 +1.4
comp=N,4.8nm,0.9s,mb4.4
SHPR Sheep Range 78.29 326 eP P 23 05 12.0 +1.9
MSU Marysvale 78.51 329 eP P 23 05 11.3 +0.1
comp=N,2.7nm,1.2s,mb4.0
RWWY Rawlins 79.11 334 eP P 23 05 16.1 +1.6
comp=N,77nm,2.5s,mb5.2
HWUT Hardware Ranch 80.79 331 eP P 23 05 23.0 -0.6
comp=N,6.5nm,0.8s,mb4.6
SPUT South Promonto 80.92 330 eP P 23 05 25.6 +1.4
comp=N,18nm,1.8s,mb4.7
PDAR Pinedale Array 80.94 333 P P 23 05 23.0 -1.3
comp=N,0.5nm,0.7s,mb3.6,baz=145,slow=5.4,SNR=6.0
PDAR LR LR 23 36 06.4
comp=N,43nm,21.4s,MS3.8,baz=254,slow=32
BOSA Boshof 81.34 118 P P 23 05 26.0 -1.1
comp=N,5.5nm,0.8s,mb4.6,baz=245,slow=5.8,SNR=11
BOSA LR LR 23 37 10.9
comp=N,89nm,19.1s,MS4.1,baz=161,slow=32
NVAR Mina Array Bea 81.34 325 P P 23 05 27.3 +0.7
comp=N,1.4nm,0.8s,mb3.9,baz=163,slow=6.8,SNR=11
AGMN Agassiz Nation 81.54 344 eP P 23 05 27.6 +0.2
comp=N,6.0nm,0.7s,mb4.6
TORD Torodi Ar. Bea 82.78 70 P P 23 05 33.9 -0.7
comp=N,1.5nm,0.5s,mb4.3,baz=277,slow=6.1,SNR=40
TORD LR LR 23 40 04.8
comp=N,132nm,18.0s,MS4.3,baz=210,slow=34
TORD Torodi Ar. Bea 82.78 70 P P 23 05 33.9 -0.7
TORD LR LR 23 40 04.8
ULM Lac du Bonnet 83.37 345 P P 23 05 35.5 -1.3
comp=N,4.3nm,0.8s,mb4.5,baz=119,slow=4.8,SNR=4.2
MCMT McKenzie Canyo 83.98 332 eP P 23 05 38.3 -1.8
comp=N,0.7nm,0.7s,mb3.9
WRA Warramunga Arr 123.81 210 PKP PKPdf 23 12 07.2 -1.5
comp=N,0.2nm,0.5s,baz=160,slow=1.7,SNR=17
ZALV Zalesovo Beam 151.21 29 PKPbc PKPbc 23 13 02.0 -0.9
comp=N,6.4nm,0.8s,baz=300,slow=3.1,SNR=26
ZALV PKPab PKPab 23 13 09.1 -1.8
comp=N,10nm,0.9s,baz=304,slow=2.8,SNR=9.1
MKAR Makanchi Array 154.24 44 PKPbc PKPbc 23 13 08.8 -1.1
comp=N,0.4nm,0.7s,baz=349,slow=2.9,SNR=3.2
MKAR PKPab PKPab 23 13 22.8 -1.1
comp=N,0.9nm,0.9s,baz=305,slow=4.3,SNR=4.3

NIED ***17*** *22:58:00,31°.60N×130°.00E, h5km, Mw3.6 Best double couple: M0=2.74000×10^14 NP1:φ=11.00000°, δ=84.00000°, λ=145.00000°. NP2:φ=105.00000°, δ=55.00000°, λ=8.00000°.*
ISCJB ***17*** *22:58:58.6±0.7,31°.62N±0°.05×130°.00E±0°.05, h11km±7km, Error ellipse: s-maj=9.8km s-min=5.5km az=34.5*
JMA ***17*** *22:58:58.9,31°.65N×130°.02E, h6km±1km, M3.5*
NEIC ***17*** *22:58:59.0,31°.65N×130°.02E, h6km, MG3.5(JMA), After JMA.*
ISC 17 22:58:59.0±0.7,31°.63N±0°.04×130°.01E±0°.04, h6km±6km, n10, σ0°58/17, 3C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.26**	**281**	⇓P	**Pg**	22 59 04.3	+0.2
JSJ				S	**Sg**	22 59 07.8	+0.3
JSU	**Suzuyama**	**0.40**	**108**	⇑P	**Pg**	22 59 06.9	+0.3
JSU				S	**Sg**	22 59 12.2	+0.4
JZO	**Okuchi**	**0.71**	**44**	⇓P	**Pg**	22 59 12.4	-0.3
JZO				eS	**Sg**	22 59 22.1	+0.1
JHD	**Hondo**	**0.84**	**7**	⇑P	**Pg**	22 59 14.6	-0.6
JHD				eS	**Sg**	22 59 26.1	0.0
JTSR	**Tashiro 2**	**0.90**	**120**	⇑P	**Pg**	22 59 16.4	+0.1
JTSR				eS	**Sg**	22 59 28.4	+0.4
JTZ	**Takazaki**	**0.95**	**73**	⇓P	**Pg**	22 59 17.0	-0.3
JTZ				eS	**Sg**	22 59 29.4	-0.3
JNU	**Nakatsue**	**1.66**	**26**	ePn	**Pn**	22 59 28.9	+0.2
JNU				eS	**Sn**	22 59 52.1	+1.8
ASAJ	**Asahikawa**	**15.92**	**35**	Pn	**Pn**	23 02 42.7	-0.8
YSS	**Yuzh-Sakhalins**	**18.17**	**29**	ePn	**Pn**	23 03 11.2	-0.7
GUMO	**Guam**	**22.54**	**139**	eP	**P**	23 03 59.2	-0.6

CSEM ***17*** *23:13:10.4±0.3,38°.08N×46°.66E, h2km, ML2.6, Error ellipse: s-maj=8.4km s-min=5.0km az=43.0*
ISCJB ***17*** *23:13:12.9±0.4,38°.18N±0°.02×46°.87E±0°.03, h10km, Error ellipse: s-maj=3.5km s-min=2.9km az=163.9*
TEH ***17*** *23:13:12.7,38°.33N×46°.89E, h11km*
ISC 17 23:13:13.5±0.4,38°.21N±0°.02×46°.87E±0°.03, h10km, n25, σ1°27/41, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHRS	**Heris**	**0.18**	**50**	ePg	**Pg**	23 13 15.6	-1.7
IHRS				eSg	**Sg**	23 13 18.3	-1.6
IHRS				e		23 13 18.8	
comp=Z,83μm,0.1s							
IFTB	**Fath-abad**	**0.42**	**243**	ePg	**Pg**	23 13 21.9	+0.2
IFTB				eSg	**Sg**	23 13 29.0	+1.7
IFTB				e		23 13 32.1	
comp=Z,94μm,0.1s							
ITBZ	**Tabriz**	**0.57**	**273**	ePg	**Pg**	23 13 23.4	-1.2
ITBZ				eSg	**Sg**	23 13 32.1	0.0
ITBZ				e		23 13 32.5	
comp=Z,13μm,0.1s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRB	**Sarab**	**0.74**	**121**	ePg	**Pg**	23 13 27.0	-0.7
ISRB				eSg	**Sg**	23 13 37.8	+0.5
ISRB				e		23 13 44.0	
comp=Z,6μm,0.1s							
IAZR	**Azarshahr**	**0.88**	**233**	ePg	**Pg**	23 13 30.3	-0.1
IAZR				eSg	**Sg**	23 13 43.0	+1.1
IAZR				e		23 13 47.3	
comp=Z,8μm,0.1s							
ISHB	**Shabestar**	**0.99**	**275**	ePg	**Pg**	23 13 31.0	-1.6
ISHB				e		23 13 32.3	
comp=Z,6μm,0.1s							
ISHB				eSg	**Sg**	23 13 43.6	-1.8
GRMI	**Germi**	**1.00**	**53**	ePg	**Pg**	23 13 29.8	-3.1
IMRD	**Marand**	**1.05**	**299**	ePg	**Pg**	23 13 30.9	-2.8
IMRD				e		23 13 49.1	
comp=Z,13μm,0.2s							
NAX	**Nakhchivan**	**1.45**	**312**	P	**Pn**	23 13 37.5	-2.2
SNR=45							
GLBA	**Ciilabad**	**1.58**	**49**	P	**Pn**	23 13 41.3	-0.3
SNR=11							
GLBA				S	**Sn**	23 14 03.2	+1.2
MAKU	**Maku**	**2.06**	**305**	ePg	**Pn**	23 13 48.1	0.0
MAKU				eSg	**Sn**	23 14 14.6	+0.7
BRDA	**Brd**	**2.07**	**7**	P	**Pn**	23 13 49.1	+0.8
SNR=10							
ZNJK	**Zanjan**	**2.11**	**136**	ePg	**Pg**	23 13 51.7	-2.2
ALIB	**Äli-Bayra**	**2.41**	**43**	P	**Pn**	23 13 53.8	+0.8
SNR=3.5							
ALIB				S	**Sg**	23 14 30.4	-0.7
GANJ	**Ganja**	**2.47**	**350**	P	**Pn**	23 13 53.6	-0.3
SNR=10							
GANJ				S	**Sn**	23 14 23.7	-0.4
IML	**Ismayilli**	**2.78**	**21**	P	**Pn**	23 13 58.3	+0.3
SNR=3.9							
IML				S	**Sn**	23 14 35.3	+3.7
PQL	**Pirkuli**	**2.90**	**27**	P	**Pn**	23 14 00.2	+0.4
PQL				S	**Sn**	23 14 37.7	+3.0
SEKA	**Sheki**	**3.01**	**5**	P	**Pn**	23 14 01.1	-0.1
SNR=3.4							
SEKA				S	**Sn**	23 14 41.5	+4.2
SIZA	**Siyzn**	**3.27**	**28**	P	**Pn**	23 14 08.3	+3.5
DGRG	**David-gareji**	**3.44**	**341**	P	**Pn**	23 14 11.1	+4.0
DGRG				S	**Sb**	23 14 56.4	0.0
IRAZ	**Razeghan**	**3.72**	**138**	ePn	**Pn**	23 14 13.3	+2.3
IRAZ				e		23 14 59.6	
comp=Z,272nm,0.3s							
MTA	**Mtatsminda**	**3.83**	**336**	P	**Pb**	23 14 20.7	-0.5
MTA				S	**Sb**	23 15 08.4	+0.8
TBLG	**Delisi**	**3.88**	**336**	P	**Pb**	23 14 23.9	+1.9
TBLG				S	**Sb**	23 15 10.1	+1.0
CHTH	**Charan**	**4.11**	**123**	ePn	**Pn**	23 14 15.9	-0.4
IKLH	**Kolahrood**	**6.20**	**140**	ePn	**Pn**	23 14 46.6	+1.5

ISCJB ***17*** *23:13:50.1±0.5,32°.42N±0°.03×47°.41E±0°.05, h10km, Error ellipse: s-maj=6.6km s-min=4.2km az=179.0*
CSEM ***17*** *23:13:50.0±0.3,32°.45N×47°.39E, h5km, ML2.7, Error ellipse: s-maj=7.1km s-min=3.4km az=122.0*
KISR ***17*** *23:13:50.2±0.5,31°.98N×46°.34E, h34km±999km, ML2.4*
TEH ***17*** *23:13:51.0,32°.38N×47°.26E, h14km*
ISC 17 23:13:51.1±0.5,32°.43N±0°.03×47°.39E±0°.06, h10km, n15, σ0°76/24, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.23**	**105**	ePg	**Pg**	23 14 14.0	-0.8
SHGR				eSg	**Sg**	23 14 30.0	-0.9
IKOM	**Komasi**	**1.74**	**3**	ePn	**Pn**	23 14 22.1	+0.7
IKOM				eSn	**Sn**	23 14 44.5	+0.8
IKOM				e		23 14 49.9	
comp=Z,2μm,0.2s							
IDHR	**Dehrash**	**2.42**	**340**	ePn	**Pn**	23 14 30.0	-0.7
IDHR				eSn	**Sn**	23 14 59.4	-0.9
IDHR				e		23 15 13.8	
comp=Z,1μm,0.3s							
MIB	**Mutribah**	**2.62**	**181**	eP	**Pn**	23 14 33.2	-0.2
MIB				eS	**Sn**	23 15 05.8	+0.5
MIB				AML	AML	23 15 07.1	
comp=Z,22nm,0.5s							
MIB	**Mutribah**	**2.62**	**181**	eP	**Pn**	23 14 33.2	-0.3
MIB				eS	**Sn**	23 15 05.8	+0.5
IPIR	**Pirpir**	**2.96**	**84**	ePn	**Pn**	23 14 40.0	+1.8
IPIR				e		23 14 53.6	
comp=Z,239nm,0.2s							
ASAO	**Ashtian**	**3.05**	**45**	ePn	**Pn**	23 14 39.1	-0.3
NAY	**Al-Naaiem**	**3.17**	**182**	eP	**Pn**	23 14 40.7	-0.4
NAY				eS	**Sn**	23 15 18.0	-1.0
NAY				AML	AML	23 15 22.6	
comp=Z,7.6nm,0.7s							
NAY	**Al-Naaiem**	**3.17**	**182**	eP	**Pn**	23 14 40.7	-0.4
NAY				eS	**Sn**	23 15 18.0	-1.0
RDF	**Al-Radifah**	**3.49**	**178**	eP	**Pn**	23 14 45.8	+0.3
RDF				eS	**Sn**	23 15 27.8	+0.9
RDF				AML	AML	23 15 28.1	
comp=Z,12nm,0.4s							
RDF	**Al-Radifah**	**3.49**	**178**	eP	**Pn**	23 14 45.8	+0.3
RDF				eS	**Sn**	23 15 27.8	+0.9
IKLH	**Kolahrood**	**3.63**	**75**	ePn	**Pn**	23 14 48.0	+0.6
IKLH				e		23 14 49.5	
comp=Z,212nm,0.1s							
GHVR	**GHOM**	**3.85**	**57**	ePn	**Pn**	23 14 49.5	-0.9
IZEF	**Zefreh**	**4.19**	**82**	ePn	**Pn**	23 14 55.5	+0.4
IZEF				e		23 14 59.9	
comp=Z,97nm,0.1s							
NASN	**Na'in**	**4.58**	**84**	ePn	**Pn**	23 15 00.8	+0.3

BJI ***17*** *23:41:32.4,6°.30N×125°.40E, h59km, mB5.0/10, mb4.6/17, Ms4.1/3, Ms7 3.8/3*
ISCJB ***17*** *23:41:36.9±0.3,6°.35N±0°.02×125°.43E±0°.04, h118km±3km, mb4.6/40, Error ellipse: s-maj=6.5km s-min=4.0km az=179.3*
IDC ***17*** *23:41:37.1±0.6,6°.23N×125°.44E, h108km±5km, mb4.1/15, mb1 4.2/16, mb1mx4.1/24, mbtmp4.2/16, MS3.4/4, Ms1 3.5/4, ms1mx2.9/27, Error ellipse: s-maj=17.3km s-min=8.4km az=82.0*
DJA ***17*** *23:41:38,6°.36N×125°.49E, h100km, mb5.1/30*
NEIC ***17*** *23:41:38.5±0.8,6°.35N×125°.43E, h119km±8km, mb4.7/18, Error ellipse: s-maj=10.4km s-min=6.3km az=82.0*
NEIC Felt [II PIVS] at General Santos.
MAN ***17*** *23:41:38,6°.44N×125°.27E, h86km, mb5.3, ML4.2, MS4.5*
MAN INTENSITY II - GENERAL SANTOS CITY.
ISC 17 23:41:38.0±0.3,6°.35N±0°.02×125°.42E±0°.04, h111km±3km, n122, σ1°14/130, mb4.6/40, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.73**	**12**	P	**Pn**	23 41 56.7	0.0
438nm,0.3s,baz=170,slow=1.9,SNR=132							
DAV				S	**Sn**	23 42 11.7	+0.9
2μm,0.3s,baz=0.0,slow=20,SNR=51							
DAV	**Davao City (W)**	**0.73**	**12**	ePn	**Pn**	23 41 56.4	-0.3
DAV				eSn	**Sn**	23 42 11.1	+0.2
DAV	**Davao City (W)**	**0.73**	**12**	P	**Pn**	23 41 56.8	+0.1
DMPH	**Davao City--Mi**	**0.74**	**7**	eP	**Pn**	23 41 56.6	-0.1
DMPH				eS	**Sn**	23 42 13.2	+2.3
MATI	**Mati**	**1.02**	**54**	eP	**Pn**	23 41 59.0	-0.4
MATI				eS	**Sn**	23 42 08.4	-7.3
CTBH	**Cotabato--PC H**	**1.46**	**307**	⇓eP	**Pn**	23 42 01.8	-2.5
CTBH				*i* S	**Sn**	23 42 19.6	-4.7
BUKP	**Musuan**	**1.56**	**347**	eP	**Pn**	23 42 05.1	-0.5
BUKP				eS	**Sn**	23 42 22.7	-3.9
PAGZ	**Pagadian**	**2.51**	**307**	eP	**Pn**	23 42 16.0	-1.6
BUTP	**Butuan**	**2.61**	**4**	eP	**Pn**	23 42 20.1	+1.2
ZMPH	**Zamboanga City**	**3.39**	**280**	⇓*i* P	**Pn**	23 42 26.6	-2.6
ZMPH	**Zamboanga City**	**3.39**	**280**	*i* S	**Pn**	23 42 30.2	+1.1
SCPH	**Surigao**	**3.41**	**1**	eP	**Pn**	23 42 28.8	-0.7
SCPH				eS	**Sn**	23 43 03.1	-6.2
TBP	**Tagbilaran**	**3.66**	**335**	eP	**Pn**	23 42 31.6	-1.3
MSLP	**Maasin**	**3.80**	**352**	eP	**Pn**	23 42 35.0	+0.3
LLP	**Lapu-Lapu**	**4.20**	**340**	eP	**Pn**	23 42 39.9	-0.2
OCLP	**Ormoc**	**4.74**	**350**	eP	**Pn**	23 42 48.2	+0.8
TNTI	**Ternate**	**5.87**	**161**	P	**Pn**	23 43 01.3	-1.3
2.5nm8μm709nm,1.0s							
KMSI	**Cibinong**	**5.91**	**194**	P	**Pn**	23 43 01.4	-1.8
7.8nm2μm,0.8s							
CNP	**Catarman**	**6.17**	**353**	eP	**Pn**	23 43 07.4	+0.7
CUYO	**Cuyo Island**	**6.24**	**316**	eP	**Pn**	23 43 07.5	-0.2
MRSI	**Marisa**	**6.79**	**211**	P	**Pn**	23 43 13.3	-1.7
3.2nm956nm,0.5s							
TOLI	**Toli-Toli**	**6.95**	**222**	P	**Pn**	23 43 15.8	-1.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
4.7nm272nm,0.5s							
MYLDM	**Lahad Datu**	**6.98**	**261**	P	**Pn**	23 43 18.1	+0.4
MYLDM	**Lahad Datu**	**6.98**	**261**	P	**Pn**	23 43 19.4	+1.7
0.6nm2μm188nm,1.1s							
LBMI	**Labuha**	**7.24**	**163**	P	**Pn**	23 43 19.6	-1.6
1.9nm4μm257nm,0.8s							
TSM	**Tawau**	**7.79**	**255**	P	**Pn**	23 43 27.7	-0.9
LUWI	**Luwuk**	**7.80**	**200**	P	**Pn**	23 43 29.4	+0.6
4.9nm2μm,0.7s							
SDKM	**Sandakan**	**8.21**	**266**	P	**Pn**	23 43 33.9	-0.5
TGY	**Tagaytay City**	**8.88**	**331**	P	**Pn**	23 43 47.0	+3.6
26nm,0.3s,baz=334,slow=18,SNR=3.6							
KKM	**Kota Kinabalu**	**9.16**	**269**	P	**Pn**	23 43 48.3	+1.1
KKM	**Kota Kinabalu**	**9.16**	**269**	ePn	**Pn**	23 43 48.1	+0.8
KKM	**Kota Kinabalu**	**9.16**	**269**	P	**Pn**	23 43 48.2	+0.9
2μm135nm,1.2s							
SWI	**Sorong**	**9.23**	**141**	P	**Pn**	23 43 50.1	+1.8
2μm58nm,0.9s							
NLAI	**Namlea**	**9.67**	**170**	P	**Pn**	23 43 50.8	-3.4
284nm,0.9s							
MSSI	**Masamba**	**10.20**	**210**	P	**Pn**	23 44 03.1	+1.7
206nm,0.9s							
KDI	**Kendari**	**10.61**	**195**	P	**Pn**	23 44 07.7	+0.8
2μm197nm,0.8s							
TTSI	**Tana Toraja**	**10.88**	**211**	P	**Pn**	23 44 12.2	+1.7
3μm137nm,1.0s							
SPSI	**Sidrap Palu**	**11.69**	**209**	P	**Pn**	23 44 22.5	+1.1
1μm63nm,0.8s							
BBSI	**Bau Bau**	**12.10**	**194**	P	**Pn**	23 44 29.3	+2.6
64nm,1.1s							
KAPI	**Kappang**	**12.62**	**207**	P	**Pn**	23 44 33.6	-0.1
4.4nm,0.3s,baz=21,slow=6.1,SNR=11							
KAPI	**Kappang**	**12.62**	**207**	P	**Pn**	23 44 33.6	-0.1
KAPI	**Kappang**	**12.62**	**207**	P	**Pn**	23 44 33.6	-0.1
27nm,1.1s							
BKSI	**Bulukumba**	**12.74**	**205**	P	**Pn**	23 44 36.4	+1.2
2μm169nm,1.3s							
KBKI	**Kotabaru**	**13.31**	**224**	P	**Pn**	23 44 52.2	+10
SBUM	**Sibu**	**13.72**	**254**	P	**Pn**	23 44 49.2	+1.3
SBUM	**Sibu**	**13.72**	**254**	P	**Pn**	23 44 48.8	+0.9
694nm75nm,0.9s							
TLE	**Tual**	**13.96**	**148**	P	**Pn**	23 44 59.4	+8.3
KSM	**Kuching**	**15.83**	**253**	P	**Pn**	23 45 17.7	+2.9
KSM	**Kuching**	**15.83**	**253**	ePn	**Pn**	23 45 17.8	+3.1
24nm,1.1s							
TWG	**Pinlang**	**16.91**	**346**	ePn	**Pn**	23 45 26.6	-1.3
40nm,0.7s							
YULB	**Yu-li**	**17.41**	**347**	eP	**Pn**	23 45 32.0	-1.9
16nm,0.8s							
TPUB	**Ta-pu**	**17.48**	**345**	eP	**Pn**	23 45 34.0	-0.7
82nm,0.7s							
SSLB	**Suanglung**	**17.86**	**347**	ePn	**Pn**	23 45 39.5	0.0
36nm,0.8s							
YHNB	**Yeheng**	**18.63**	**348**	ePn	**Pn**	23 45 47.8	-0.8
29nm,0.9s							
KAKA	**Kakadu**	**20.18**	**160**	eP	**P**	23 46 03.4	-0.4
30nm,0.6s							
KAKA	**Kakadu**	**20.18**	**160**	eP	**P**	23 46 03.9	+0.1
KAKA	**Kakadu**	**20.18**	**160**	P	**P**	23 46 03.7	-0.1
752nm93nm,0.7s							
JOW	**Kunigami**	**20.55**	**7**	P	**P**	23 46 09.6	+1.8
130nm,0.8s,baz=198,slow=8.6,SNR=15							
JOW	**Kunigami**	**20.55**	**7**	P	**P**	23 46 09.6	+1.8
MYKOM	**Kota Tinggi**	**21.98**	**259**	P	**P**	23 46 29.5	+6.2
MYKOM	**Kota Tinggi**	**21.98**	**259**	P	**P**	23 46 29.5	+6.3
KNA	**Kununurra**	**22.20**	**171**	P	**P**	23 46 25.6	+0.2
2μm259nm,0.8s,mb5.6							
KLSI		**23.39**	**243**	P	**P**	23 46 38.3	+1.3
50nm,0.8s,mb4.9							
MDSI	**Maura Dua**	**23.78**	**244**	P	**P**	23 46 41.7	+1.1
26nm,1.1s,mb4.5							
FITZ	**Fitzroy Crossi**	**24.29**	**179**	P	**P**	23 46 44.5	-0.7
4.3nm,0.4s,mb4.1,baz=12,slow=7.0,SNR=46							
FITZ	**Fitzroy Crossi**	**24.29**	**179**	eP	**P**	23 46 44.0	-1.2
13nm,0.4s,mb4.6							
FITZ	**Fitzroy Crossi**	**24.29**	**179**	P	**P**	23 46 44.0	-1.2
28nm,1.4s,mb4.4							
IPM	**Ipoh**	**24.36**	**267**	P	**P**	23 46 45.8	-0.1
IPM	**Ipoh**	**24.36**	**267**	eP	**P**	23 46 45.6	-0.3
20nm,0.8s,mb4.5							
IPM	**Ipoh**	**24.36**	**267**	P	**P**	23 46 46.0	+0.1
27nm,0.8s,mb4.6							
KULM	**Kulim**	**24.67**	**269**	P	**P**	23 46 49.0	+0.3
KULM	**Kulim**	**24.67**	**269**	eP	**P**	23 46 48.1	-0.6
31nm,1.1s,mb4.7							
KULM	**Kulim**	**24.67**	**269**	P	**P**	23 46 49.3	+0.6
27nm,1.2s,mb4.5							
SDSI	**Sungai Dareh**	**25.02**	**254**	P	**P**	23 46 52.8	+0.9
21nm,0.8s,mb4.6							
CBIJ	**Chichi jima**	**26.08**	**36**	P	**P**	23 47 01.6	+0.2
85nm,0.5s,mb5.5,baz=254,slow=5.2,SNR=14							
MNSI	**Mandailing Nat**	**26.36**	**259**	P	**P**	23 47 07.8	+3.7
712nm12nm,0.9s,mb4.3							
PSI	**Prapat**	**26.64**	**264**	P	**P**	23 47 05.6	-1.0
3.5nm,0.3s,mb4.3,baz=342,slow=10,SNR=5.6							
PMG	**Port Moresby**	**26.72**	**126**	eP	**P**	23 47 06.9	-0.3
26nm,0.9s,mb4.8							
COEN	**Coen**	**26.78**	**139**	eP	**P**	23 47 12.5	+4.7
175nm,0.8s,mb5.6							
COEN	**Coen**	**26.78**	**139**	P	**P**	23 47 12.1	+4.4
125nm,0.8s,mb5.5							
WRA	**Warramunga Arr**	**27.56**	**162**	P	**P**	23 47 14.1	-0.5
1.4nm,0.4s,mb3.9,baz=330,slow=11,SNR=32							
WRA				S	**S**	23 51 42.1	-5.7
2.5nm,0.9s,baz=333,slow=15,SNR=6.2							
WRA	**Warramunga Arr**	**27.56**	**162**	P	**P**	23 47 14.1	-0.5
WRA				S	**S**	23 51 42.1	-5.7
WB2	**Warramunga Arr**	**27.56**	**162**	eP	**P**	23 47 13.9	-0.8
WB2				eS	**S**	23 51 43.5	-4.5
CMAR	**Chiang Mai Arr**	**28.47**	**297**	P	**P**	23 47 23.7	+0.9
0.5nm,0.3s,mb3.5,baz=33,slow=37,SNR=3.6							
ASAR	**Alice Springs**	**30.96**	**165**	P

ARMA	**Armidale**	**44.35**	**147**	*e*P	**P**	**23 49 37.0**	**-0.3**
SONM	**Songino Array**	**44.42**	**342**	P	**P**	**23 49 37.5**	**-0.1**
	comp=Z,2.9nm,0.8s,mb4.1,baz=162,slow=8.9,SNR=14						
SONM				LR	LR	00 07 29.1	
	comp=Z,88nm,21.1s,baz=286,slow=35						
YNG	**Young**	**45.89**	**153**	*e*P	**P**	**23 49 50.2**	**+0.8**
	comp=Z,2.6nm,0.4s,mb4.3						
CAN	**Canberra**	**47.02**	**153**	*e*P	**P**	**23 49 59.1**	**+0.9**
	comp=Z,13nm,1.0s,mb4.6						
PETK	**Petropavlovsk-**	**53.54**	**24**	P	**P**	**23 50 48.8**	**+1.7**
	comp=Z,6.3nm,0.9s,mb4.6,baz=252,slow=8.3,SNR=3.0						
MK31	**Makanchi Array**	**54.68**	**325**	*e*P	**P**	**23 50 55.3**	**-0.2**
MK31				*e*pP	pP	23 51 25.9	+3.9
MK31				*e*PcP	PcP	23 51 55.4	-1.5
MKAR	**Makanchi Array**	**54.68**	**325**	P	**P**	**23 50 55.4**	**-0.1**
	comp=Z,3.7nm,0.6s,mb4.6,baz=122,slow=8.1,SNR=39						
ZALV	**Zalesovo Beam**	**57.68**	**333**	P	**P**	**23 51 15.0**	**-1.7**
	comp=Z,0.8nm,0.4s,mb4.1,baz=121,slow=7.1,SNR=8.3						
ZALV	**Zalesovo Beam**	**57.68**	**333**	P	**P**	**23 51 15.0**	**-1.7**
KURK	**Kurchatov**	**58.85**	**327**	*e*P	**P**	**23 51 24.1**	**-0.8**
	comp=Z,5.8nm,0.6s,mb4.8						
KKAR	**Karatay Array**	**60.45**	**316**	*e*P	**P**	**23 51 34.7**	**-1.3**
	comp=Z,4.2nm,1.0s,mb4.4						
ABKAR	**Akbulak array**	**69.31**	**320**	*e*P	**P**	**23 52 30.5**	**-2.8**
	comp=Z,1.8nm,0.9s,mb3.9						
BPAW	**Bear Paw Mtn.**	**81.53**	**26**	*e*P	**P**	**23 53 44.5**	**+1.6**
	comp=Z,9.5nm,1.2s,mb4.5						
BPAW				*e*PP	PP	23 56 51.3	+0.8
ILAR	**Eielson Array**	**83.32**	**26**	P	**P**	**23 53 52.0**	**-0.1**
	comp=Z,1.3nm,0.6s,mb3.9,baz=238,slow=5.0,SNR=23						
ARCES	**ARCESS Array B**	**87.56**	**340**	P	**P**	**23 54 17.6**	**+4.5**
	comp=Z,1.2nm,0.8s,mb4.0,baz=47,slow=8.9,SNR=3.8						
ARCES				LR	LR	00 34 06.9	
	comp=Z,36nm,21.8s,baz=345,slow=36						
NOA	**NORSAR Array B**	**95.88**	**333**	LR	LR	00 39 28.0	
	comp=Z,15nm,20.5s,baz=25,slow=36						
TORD	**Torodi Ar. Bea**	**120.85**	**289**	PKP	PKPdf	00 00 17.6	-0.7
	comp=Z,1.8nm,0.9s,baz=17,slow=1.5,SNR=11						
LPAZ	**La Paz**	**163.45**	**128**	PKPab	PKPab	00 02 28.1	+7.9
	comp=Z,0.9nm,0.7s,baz=162,slow=2.8,SNR=4.3						

MAN 18 00:08:25,9°.99N×125°.99E,h13km,mb4.3,ML3.2,MS3.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.53**	**248**	*e*P	Pg	00 08 36.1	+0.7
SCPH				*e*S	Sg	00 08 45.2	+2.7
MSLP	**Maasin**	**1.12**	**278**	*e*P	Pb	00 08 44.7	-1.6
MSLP				*e*S	Sb	00 09 01.8	+1.0
TBP	**Tagbilaran**	**2.12**	**262**	*e*P	Pn	00 09 00.4	+0.3
TBP				*e*S	Sn	00 09 28.2	+1.9
BUKP	**Musuan**	**2.29**	**204**	*e*P	Pn	00 09 03.8	+1.4
BUKP				*e*S	Sn	00 09 31.1	+0.7

*NEIC **18** 00:43:32.6±3.3,24°.13N×122°.15E,h10km,Error ellipse: s-maj=34.9km s-min=10.8km az=87.0*
*ISCJB **18** 00:43:36.9±0.3,24°.19N±0°.01×121°.81E±0°.02,h49km±3km, Error ellipse: s-maj=3.3km s-min=2.2km az=26.1*
*TAP **18** 00:43:36.9,24°.21N×121°.75E,h48km,ML3.9,B*
*JMA **18** 00:43:37.3±0.3,24°.34N×121°.85E,h73km,M2.8*
ISC 18 00:43:37.5±0.3,24°.19N±0°.01×121°.81E±0°.02,h45km±4km, n61,σ0°79/121,7C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**333**	P	**Pn**	**00 43 44.6**	**-0.2**
	baz=2.0						
EHP				S	**Sn**	**00 43 50.7**	**+0.7**
	baz=2.0						
NACB	**Ninganchiao**	**0.20**	**265**	*e*P	**Pn**	**00 43 44.3**	**-0.9**
NACB				*e*S	**Sn**	**00 43 50.3**	**-0.3**
TWD	**Chiawan**	**0.22**	**240**	⇑*i*P	**Pn**	**00 43 45.1**	**-0.3**
	baz=235						
TWD				*i* S	**Sn**	**00 43 51.2**	**+0.3**
	baz=235						
ENA	**Nanau**	**0.24**	**345**	⇓*i*P	**Pn**	**00 43 45.4**	**-0.2**
	baz=355						
ENA				*e*S	**Sn**	**00 43 51.9**	**+0.6**
	baz=355						
HWA	**Hwalien**	**0.28**	**221**	⇑*i*P	**Pn**	**00 43 46.0**	**+0.1**
	baz=197						
HWA				*e*S	**Sn**	**00 43 52.9**	**+1.0**
	baz=197						
TWC	**Suao**	**0.42**	**5**	⇓*i*P	**Pn**	**00 43 47.4**	**0.0**
	baz=18						
TWC				*i* S	**Sn**	**00 43 55.2**	**+0.7**
	baz=18						
ESF	**Shoufeng Towns**	**0.42**	**221**	*e*P	**Pn**	**00 43 46.6**	**-0.8**
	baz=223						
ESF				*e*S	**Sn**	**00 43 53.8**	**-0.7**
	baz=223						
ENTT	**Nioudou**	**0.50**	**334**	⇓*i*P	**Pn**	**00 43 47.9**	**-0.4**
	baz=337						
ENTT				*i* S	**Sn**	**00 43 56.1**	**-0.1**
	baz=337						
ESL	**Shilin**	**0.51**	**222**	⇑*i*P	**Pn**	**00 43 47.4**	**-1.2**
	baz=223						
ESL				*e*S	**Sn**	**00 43 55.5**	**-0.9**
	baz=223						
TEGC	**Jichi Village**	**0.54**	**207**	*e*P	**Pn**	**00 43 49.1**	**+0.2**
	baz=191						
TEGC				*e*S	**Sn**	**00 43 59.2**	**+2.2**
	baz=191						
TWE	**Neicheng**	**0.54**	**346**	*i* P	**Pn**	**00 43 48.6**	**-0.4**
	baz=346						
TWE				*i* S	**Sn**	**00 43 57.3**	**+0.1**
	baz=346						
ILA	**Ilan**	**0.57**	**355**	*e*P	**Pn**	**00 43 48.4**	**-1.0**
	baz=357						
ILA				*e*S	**Sn**	**00 43 58.9**	**+1.0**
	baz=357						
YHNB	**Yeheng**	**0.62**	**320**	*e*P	**Pn**	**00 43 49.3**	**-0.7**
YHNB				*e*S	**Sn**	**00 43 58.3**	**-0.6**
NSK	**Sanguang**	**0.63**	**320**	*i* P	**Pn**	**00 43 49.5**	**-0.6**
	baz=316						
NSK				*e*S	**Sn**	**00 43 58.0**	**-1.2**
	baz=316						
TWA	**Mucha**	**0.81**	**345**	P	**Pn**	**00 43 52.7**	**+0.2**
	baz=339						
TWA				*e*S	**Sn**	**00 44 03.3**	**-0.1**
	baz=339						
EHY	**Hungye**	**0.81**	**213**	*e*P	**Pn**	**00 43 50.9**	**-1.6**
	baz=207						
EHY				*e*S	**Sn**	**00 44 02.2**	**-1.3**
	baz=207						
TWB1	**Santiao Chiao**	**0.83**	**11**	⇑*i*P	**Pn**	**00 43 53.1**	**+0.4**
	baz=25						
TWB1				*i* S	**Sn**	**00 44 04.7**	**+0.8**
	baz=25						
TATO	**Taipei**	**0.83**	**340**	*e*P	**Pn**	**00 43 52.4**	**-0.4**
TATO				*e*S	**Sn**	**00 44 03.8**	**-0.2**
NSTT	**Nanjuang**	**0.86**	**301**	P	**Pn**	**00 43 53.1**	**0.0**
	baz=301						
NSTT				*i* S	**Sn**	**00 44 04.5**	**-0.1**
	baz=301						
NWF	**Wu-fen Shan**	**0.88**	**358**	P	**Pn**	**00 43 53.5**	**+0.2**
	baz=354						
NWF				S	**Sn**	**00 44 05.9**	**+0.9**
	baz=354						
SSLB	**Suanglung**	**0.88**	**243**	*e*P	**Pn**	**00 43 52.6**	**-0.8**
SSLB				*e*S	**Sn**	**00 44 03.9**	**-1.1**
TAP1	**Taipei**	**0.88**	**343**	*e*P	**Pn**	**00 43 53.2**	**-0.3**
	baz=347						
TAP1				*e*S	**Sn**	**00 44 05.2**	**0.0**
	baz=347						
SMLT	**Sun Moon Lake**	**0.89**	**250**	⇑P	**Pn**	**00 43 53.3**	**-0.2**
	baz=240						
SMLT				S	**Sn**	**00 44 04.8**	**-0.4**
	baz=240						
TYC	**Yuchr**	**0.92**	**252**	⇑*i*P	**Pn**	**00 43 53.6**	**-0.3**
	baz=243						
TYC				S	**Sn**	**00 44 05.5**	**-0.5**
	baz=243						
YULB	**Yu-li**	**0.92**	**211**	*e*P	**Pn**	**00 43 52.9**	**-1.1**
YULB				*e*S	**Sn**	**00 44 05.5**	**-0.6**
TWQ1	**Liyutan**	**0.96**	**280**	P	**Pn**	**00 43 54.5**	**0.0**
	baz=278						
TWQ1				S	**Sn**	**00 44 07.8**	**+0.8**
	baz=278						
TWF1	**Yuli**	**0.96**	**209**	*e*P	**Pn**	**00 43 52.8**	**-1.7**
	baz=212						
TWF1				*e*S	**Sn**	**00 44 05.6**	**-1.4**
	baz=212						
NCU	**National Centr**	**0.96**	**324**	*e*P	**Pn**	**00 43 54.1**	**-0.4**
	baz=326						
NCU				*e*S	**Sn**	**00 44 07.0**	**0.0**
	baz=326						
TWS1	**Kuangyinshan**	**0.97**	**339**	*e*P	**Pn**	**00 43 54.3**	**-0.4**
	baz=343						
TWS1				*e*S	**Sn**	**00 44 07.3**	**0.0**
	baz=343						
HSN	**Hsinchu**	**0.98**	**309**	*e*P	**Pn**	**00 43 53.7**	**-1.1**
	baz=312						
HSN				*e*S	**Sn**	**00 44 06.8**	**-0.7**
	baz=312						
NSY	**Sanyi**	**0.98**	**283**	*e*P	**Pn**	**00 43 54.9**	**+0.1**
	baz=282						
NSY				*e*S	**Sn**	**00 44 07.4**	**-0.2**
	baz=282						
TCU	**Taichung**	**1.03**	**268**	*e*P	**Pn**	**00 43 55.6**	**0.0**
	baz=265						
TCU				*e*S	**Sn**	**00 44 09.3**	**+0.4**
	baz=265						
YUS	**Yu-Shan**	**1.05**	**228**	⇑*i*P	**Pn**	**00 43 56.0**	**+0.3**
	baz=217						
YUS				*e*S	**Sn**	**00 44 09.4**	**+0.2**
	baz=217						
WNT	**Mingjian**	**1.07**	**253**	*e*P	**Pn**	**00 43 56.4**	**+0.4**
	baz=249						
WNT				*e*S	**Sn**	**00 44 10.7**	**+0.8**
	baz=249						
TWY	**Chenhua**	**1.09**	**350**	*e*P	**Pn**	**00 43 56.5**	**+0.1**
	baz=342						
TWY				*e*S	**Sn**	**00 44 11.0**	**+0.7**
	baz=342						
YOJ	**Yonaguni jima**	**1.13**	**76**	*e*P	**Pn**	**00 43 56.4**	**-0.4**
	baz=79						
YOJ				*e*S	**Sn**	**00 44 10.8**	**-0.4**
	baz=79						
YOJ	**Yonaguni jima**	**1.13**	**76**	P	**Pn**	**00 43 57.0**	**+0.2**
YOJ				*e*S	**Sn**	**00 44 11.7**	**+0.5**
ALS	**Alishan**	**1.14**	**234**	P	**Pn**	**00 43 57.5**	**+0.5**
	baz=221						
ALS				*e*S	**Sn**	**00 44 12.3**	**+0.9**
	baz=221						
CHKT	**Chengkung**	**1.16**	**201**	*e*P	**Pn**	**00 43 57.2**	**-0.1**
	baz=185						
CHKT				*e*S	**Sn**	**00 44 12.5**	**+0.5**
	baz=185						
ELDTW	**Lidau**	**1.23**	**216**	*e*P	**Pn**	**00 43 57.9**	**-0.4**
	baz=204						
ELDTW				*e*S	**Sn**	**00 44 12.6**	**-1.2**
	baz=204						
WGK	**Gukeng**	**1.25**	**246**	*e*P	**Pn**	**00 43 58.9**	**+0.5**
	baz=242						
WGK				*e*S	**Sn**	**00 44 14.6**	**+0.6**
	baz=242						
TPUB	**Ta-pu**	**1.40**	**231**	*e*Pn	**Pn**	**00 44 01.4**	**+0.9**
TPUB				*e*Sn	**Sn**	**00 44 19.9**	**+2.1**
WTCT	**Ta-ch'eng**	**1.43**	**257**	*e*P	**Pn**	**00 44 00.8**	**-0.2**
	baz=254						
WTCT				*e*S	**Sn**	**00 44 19.3**	**+0.6**
	baz=254						
CHY	**Chiayi**	**1.44**	**242**	*e*P	**Pn**	**00 44 01.9**	**+0.8**
	baz=238						
CHY				*e*S	**Sn**	**00 44 20.4**	**+1.5**
	baz=238						
WTP	**Ta-pu**	**1.44**	**230**	*e*P	**Pn**	**00 44 01.7**	**+0.6**
	baz=225						
WTP				*e*S	**Sn**	**00 44 19.7**	**+0.8**
	baz=225						
TWG	**Pinlang**	**1.52**	**206**	*e*Pn	**Pn**	**00 44 02.0**	**-0.2**
TWG				Sn	**Sn**	**00 44 18.6**	**-2.2**
TWG	**Pinlang**	**1.52**	**206**	*e*P	**Pn**	**00 44 01.4**	**-0.8**
	baz=190						
TWG				*e*S	**Sn**	**00 44 18.5**	**-2.3**
	baz=190						
CHN1	**Nanshi**	**1.54**	**230**	*e*P	**Pn**	**00 44 03.2**	**+0.7**
	baz=225						
CHN1				*e*S	**Sn**	**00 44 22.4**	**+1.1**
	baz=225						
TTN	**Taitung**	**1.56**	**203**	*e*P	**Pn**	**00 44 02.9**	**+0.2**
	baz=198						
TTN				*e*S	**Sn**	**00 44 21.9**	**+0.2**
	baz=198						
SGST	**Jiashian**	**1.58**	**226**	*e*P	**Pn**	**00 44 03.9**	**+1.0**
	baz=212						
SGST				*e*S	**Sn**	**00 44 23.4**	**+1.2**
	baz=212						
SCLT	**Jiali**	**1.79**	**236**	*e*P	**Pn**	**00 44 06.4**	**+0.5**
	baz=220						
SCLT				*e*S	**Sn**	**00 44 27.9**	**+0.4**
	baz=220						
JKRS	**Kuro-shima**	**2.01**	**88**	P	**Pn**	**00 44 09.4**	**+0.5**
JKRS				*e*S	**Sn**	**00 44 32.9**	**+0.1**
SCZT	**Fangliau**	**2.12**	**211**	*e*P	**Pn**	**00 44 11.3**	**+1.0**
	baz=221						
SCZT				*e*S	**Sn**	**00 44 35.5**	**+0.1**
	baz=221						
JIJ	**Ishigaki jima**	**2.14**	**85**	P	**Pn**	**00 44 10.6**	**0.0**
JIJ				*e*S	**Sn**	**00 44 35.3**	**-0.7**
PNG	**Penghu**	**2.15**	**254**	*e*P	**Pn**	**00 44 09.3**	**-1.6**
	baz=250						
PNG				*e*S	**Sn**	**00 44 34.0**	**-2.4**
	baz=250						
LAY	**Lan-yu**	**2.16**	**186**	*e*P	**Pn**	**00 44 09.7**	**-1.3**
	baz=182						
HEN	**Hengchun**	**2.39**	**205**	*e*P	**Pn**	**00 44 13.7**	**-0.4**
	baz=193						
HEN				*e*S	**Sn**	**00 44 42.0**	**-0.1**
	baz=193						
TWK1	**Hengchun**	**2.42**	**203**	*e*P	**Pn**	**00 44 16.4**	**+1.8**
	baz=193						
TWK1				*e*S	**Sn**	**00 44 43.0**	**+0.1**
	baz=193						
TSEB	**Hengchuen, Pin**	**2.43**	**200**	*e*P	**Pn**	**00 44 16.5**	**+1.8**
	baz=197						
TSEB				*e*S	**Sn**	**00 44 43.4**	**+0.2**
	baz=197						
JTJ	**Tarama**	**2.68**	**80**	P	**Pn**	**00 44 18.4**	**+0.4**
JTJ				*e*S	**Sn**	**00 44 49.7**	**+0.5**
KNM	**Kinmen**	**3.09**	**275**	*e*P	**Pn**	**00 44 23.9**	**+0.2**
	baz=272						
KNM				*e*S	**Sn**	**00 44 59.7**	**+0.3**
	baz=272						

PGC 18 00:45:40.0±0.5,50°.56N×130°.38W,h10km,ML3.2/12, Mw3.8,4D,209km west of Pt. Hardy, Bc Vancouver Island Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.43**	**86**	⇑Pn	Pn	00 46 04.1	-1.9
HOLB				⇑Sn	Sn	00 46 20.9	-4.0
BPBC	**Brooks Peninsu**	**1.71**	**102**	⇑Pn	Pn	00 46 07.5	-2.4
PHC	**Port Hardy**	**1.88**	**84**	⇑Pn	Pn	00 46 10.5	-1.7
PHC				⇑Sn	Sn	00 46 32.1	-3.8
MAYB	**Maynard**	**2.05**	**93**	⇑Pn	Pn	00 46 12.9	-1.7
BBB	**Bella Bella**	**2.16**	**40**	Pn	Pn	00 46 14.4	-1.6
BBB				⇑Sn	Sn	00 46 38.9	-4.0
BNB	**Barry Inlet**	**2.20**	**338**	⇓Pn	Pn	00 46 14.2	-2.3
BNB				⇓Sn	Sn	00 46 40.2	-3.5
EDB	**Eliza Dome**	**2.20**	**107**	⇑Pn	Pn	00 46 14.7	-1.8
WOSB	**Woss**	**2.47**	**98**	⇑Pn	Pn	00 46 19.1	-1.2
ETB	**Estevan Point**	**2.75**	**114**	⇑Pn	Pn	00 46 22.6	-1.5
MOBC	**Moresby Island**	**2.77**	**340**	⇑Pn	Pn	00 46 22.3	-2.1
MOBC				⇑Sn	Sn	00 46 54.9	-3.1
GDR	**Gold River**	**2.90**	**104**	⇑Pn	Pn	00 46 24.6	-1.6
BCBC	**Bella Coola**	**2.90**	**50**	⇑Pn	Pn	00 46 25.5	-0.7
DIB	**Dawson Inlet,**	**2.95**	**335**	⇓Pn	Pn	00 46 24.8	-2.1
DIB				⇑Sn	Sn	00 46 59.5	-2.8
OZB	**Mount Ozzard**	**3.55**	**115**	⇓Pn	Pn	00 46 33.7	-1.3

BJI 18 00:54:26.9,44°.41N×120°.89E,h16km,ML3.7/11,1D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNY	**Shenyang**	**3.25**	**142**	⇓Pn	Pn	00 55 18.9	+1.8
SNY				Pg	Pg	00 55 26.1	-3.0
SNY				Sg	Sg	00 56 07.1	-4.0
SNY				smax			
	comp=N,210nm,0.4s						
SNY				smax			
	comp=E,260nm,0.4s						
CN2	**Changchun**	**3.34**	**99**	*e*Pn	Pn	00 55 17.8	-0.6
CN2				*e*Pg	Pg	00 55 27.1	-3.8
CN2				*e*Sg	Sg	00 56 06.8	-7.3
CN2				smax			
	comp=N,100nm,0.6s						
CN2				smax			
	comp=E,100nm,0.6s						
MDJ	**Mudanjiang**	**6.23**	**85**	Pg	Pg	00 56 18.8	-7.2
MDJ				Sg	Sg	00 57 35.0	-12
MDJ				smax			
	comp=N,83nm,0.9s						

*IDC **18** 01:00:42.9±4.8,36°.44N×70°.65E,h164km±51km,mb3.2/5, mb1 3.3/8,mb1mx3.1/27,mbtmp3.2/8,Error ellipse: s-maj=58.3km s-min=33.7km az=114.0*
*ISCJB **18** 01:00:44.4±0.5,36°.61N±0°.03×70°.64E±0°.07,h172km±8km, mb3.4/4,Error ellipse: s-maj=10.1km s-min=4.8km az=162.3*
*NNC **18** 01:00:45.1±9.7,36°.94N×69°.87E,h0km,mb4.2,mpv4.2, Error ellipse: s-maj=77.2km s-min=51.9km az=175.0*
*NEIC **18** 01:00:45.1±0.7,36°.61N×70°.58E,h174km±9km,mb4.7/11, Error ellipse: s-maj=11.3km s-min=6.8km az=65.0*
ISC 18 01:00:44.9±0.5,36°.61N±0°.03×70°.56E±0°.07,h167km±7km, n40,σ1°12/51,mb3.4/4,5C-6D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.41**	**211**	*e*Pn	**Pn**	**01 01 27.5**	**+1.8**
CEP	**Cherat**	**2.99**	**158**	⇑P	**Pn**	**01 01 32.9**	**0.0**
CEP				S	**Sn**	**01 02 08.0**	**-2.0**
CHCP	**Chirah Chowk**	**3.68**	**142**	⇑P	**Pn**	**01 01 41.0**	**-0.6**
THW	**Thamme Wali**	**3.93**	**165**	⇑P	**Pn**	**01 01 44.0**	**-0.7**
KSH	**Kashi**	**5.17**	**54**	Pn	**Pn**	**01 01 56.8**	**-3.9**
KSH				Sn	**Sn**	**01 02 48.5**	**-12**
KSH				smax			
	comp=N,80nm,0.4s						
KSH				smax			
	comp=E,68nm,0.3s						
CHM	**Chimkent**	**5.75**	**353**	*e*Pn	**Pn**	**01 02 05.6**	**-2.7**
CHM				*e*Pg	**Pn**	**01 02 27.5**	**+19**
CHM				*e*Sg	Sn	01 03 45.6	+32
AML	**Almayashu**	**6.03**	**23**	P	**Pn**	**01 02 13.4**	**+1.4**
	SNR=67						
AML	**Almayashu**	**6.03**	**23**	*e*Pn	**Pn**	**01 02 13.2**	**+1.2**
	comp=E,51nm,0.4s						
KK31	**Karatay Array**	**6.49**	**360**	⇓P	**Pn**	**01 02 18.2**	**+0.1**
	comp=E,11nm,0.6s,baz=181,slow=13,SNR=132						
KK31				⇓S	**Sn**	**01 03 29.5**	**-1.9**
	comp=E,18nm,0.4s,baz=185,slow=22,SNR=21						
KKAR	**Karatay Array**	**6.49**	**360**	*e*Pn	**Pn**	**01 02 19.7**	**+1.6**
	comp=E,11nm,0.3s						
KKAR				*e*S	**Sn**	**01 03 30.4**	**-0.9**
EKS2	**Erkin-Say**	**6.54**	**21**	P	**Pn**	**01 02 20.0**	**+1.3**
	SNR=45						
EKS2	**Erkin-Say**	**6.54**	**21**	*e*Pn	**Pn**	**01 02 19.6**	**+0.9**
	comp=E,9.9nm,0.4s						
AAK	**Ala-Archa**	**6.74**	**26**	P	**Pn**	**01 02 22.6**	**+1.2**
	SNR=14						
AAK	**Ala-Archa**	**6.74**	**26**	P	**Pn**	**01 02 22.8**	**+1.4**
	comp=E,0.1nm,0.3s,baz=176,slow=5.5,SNR=29						
AAK				S	**Sn**	**01 03 36.6**	**-0.8**
	comp=E,0.1nm,0.3s,baz=300,slow=20,SNR=19						
AAK	**Ala-Archa**	**6.74**	**26**	*e*Pn	**Pn**	**01 02 20.8**	**-0.6**
	comp=E,9.4nm,0.3s						
CHMS	**Chumysh**	**7.15**	**26**	P	**Pn**	**01 02 27.8**	**+1.0**
	SNR=6.4						
USP	**Ospenovka**	**7.31**	**23**	P	**Pn**	**01 02 29.9**	**+1.0**
	SNR=7.5						
TKM2	**Tokmak 2**	**7.40**	**30**	⇓P	**Pn**	**01 02 34.4**	**+4.2**
	comp=E,6.4nm,0.5s						
TKM2				⇓S	**Sn**	**01 04 01.1**	**+7.9**
	comp=E,10nm,0.9s						
TKM2	**Tokmak 2**	**7.40**	**30**	P	**Pn**	**01 02 30.9**	**+0.8**
	SNR=16						
TKM2	**Tokmak 2**	**7.40**	**30**	*e*Pn	**Pn**	**01 02 30.7**	**+0.5**
	comp=E,9.4nm,0.4s						
MKAR	**Makanchi Array**	**13.41**	**37**	P	**Pn**	**01 03 48.1**	**-0.4**
	comp=E,0.2nm,0.3s,baz=213,slow=8.7,SNR=4.1						
DANN	**Dangsing**	**13.84**	**123**	*e*P	**Pn**	**01 03 55.6**	**+1.4**
	comp=E,16nm,0.5s						
GKN	**Gorkha**	**14.66**	**122**	*e*P	**Pn**	**01 04 04.6**	**+0.3**
	comp=E,27nm,0.4s						
AB31	**Akbulak array**	**14.82**	**332**	⇓P	**Pn**	**01 04 08.5**	**+2.4**
	comp=E,1.0nm,0.4s,baz=166,slow=12,SNR=45						
AB31				⇑S	**Sn**	**01 06 48.5**	**-2.4**
	comp=E,0.6nm,0.4s,baz=168,slow=22,SNR=4.1						
ABKAR	**Akbulak array**	**14.82**	**332**	*e*Pn	**Pn**	**01 04 06.2**	**+0.1**
ABKAR				*e*S	**Sn**	**01 06 45.3**	**-5.6**
DMN	**Daman**	**15.23**	**122**	*e*P	**Pn**	**01 04 11.5**	**+0.1**
	comp=E,16nm,0.5s						
KKN	**Kakani**	**15.24**	**121**	*e*P	**Pn**	**01 04 11.1**	**-0.4**
	comp=E,15nm,0.5s						
PKIN	**Phulchoki**	**15.45**	**121**	*e*P	**Pn**	**01 04 13.9**	**-0.2**
	comp=E,26nm,0.5s						
PKI	**Pulchoki**	**15.46**	**121**	*e*P	**Pn**	**01 04 13.9**	**-0.3**
	comp=E,33nm,0.7s						
GUN	**Gumba**	**15.58**	**119**	*e*P	**Pn**	**01 04 14.8**	**-0.8**
	comp=E,14nm,0.4s						
BVAR	**Borovoye Array**	**16.42**	**360**	P	**Pn**	**01 04 26.3**	**+0.8**
	comp=E,1.0nm,0.3s,baz=161,slow=8.8,SNR=18						
BVAR				S	**S**	**01 07 26.5**	**-1.2**
	comp=E,0.1nm,0.3s,baz=158,slow=23,SNR=5.4						
BRVK	**Borovoye**	**16.45**	**359**	*e*Pn	**Pn**	**01 04 27.3**	**+1.3**
AKTO	**Aktyubinsk**	**16.51**	**331**	⇓P	**Pn**	**01 04 31.1**	**+4.4**
	comp=E,1.0nm,0.5s						
AKTO				⇑S	**S**	**01 07 29.5**	**-0.4**
	comp=E,0.2nm,0.7s						
ZAA0	**Zalesovo Array**	**19.97**	**25**	*e*P	**P**	**01 05 03.3**	**-0.7**
ZALV	**Zalesovo Beam**	**19.97**	**25**	P	**P**	**01 05 03.5**	**-0.5**
	comp=E,2.3nm,0.3s,baz=224,slow=12,SNR=15						
ZALV	**Zalesovo Beam**	**19.97**	**25**	P	**P**	**01 05 03.5**	**-0.5**
FINES	**FINESS Array B**	**37.20**	**326**	P	**P**	**01 07 40.0**	**+0.5**
	comp=E,1.2nm,0.7s,mb3.6,baz=128,slow=11,SNR=5.4						
ARCES	**ARCESS Array B**	**40.91**	**338**	P	**P**	**01 08 10.8**	**+0.5**
	comp=E,0.8nm,0.6s,mb3.5,baz=105,slow=7.8,SNR=5.7						
NOA	**NORSAR Array B**	**44.08**	**323**	P	**P**	**01 08 35.8**	**-0.1**
	comp=E,0.4nm,0.6s,mb3.2,baz=99,slow=8.1,SNR=3.2						
TORD	**Torodi Ar. Bea**	**65.37**	**268**	P	**P**	**01 11 07.3**	**-2.3**
	comp=E,0.3nm,0.5s,mb3.4,baz=45,slow=6.4,SNR=5.6						

*ISCJB **18** 01:04:15.4±0.5,41°.81N±0°.03×81°.40W±0°.03,h3km±4km, Error ellipse: s-maj=4.7km s-min=3.6km az=0.3*
*NEIC

AAM				*e*S		**Sn**	**01 05 11.1 +0.9**
EFO	**Effingham**	**2.02**	**49**	Pn		**Pn**	**01 04 52.2 +1.1**
EFO				Sn		**Sn**	**01 05 16.2 -0.7**
EFO	**Effingham**	**2.02**	**49**	PN		**Pn**	**01 04 52.2 +1.1**
EFO				SN		**Sn**	**01 05 16.2 -0.7**
EFO				Trac			01 05 22.0
	comp=Z,17nm,0.1s						
ACTO	**Acton**	**2.06**	**28**	Pn		**Pn**	**01 04 52.7 +1.0**
ACTO				Sn		**Sn**	**01 05 18.9 +0.9**
ACTO	**Acton**	**2.06**	**28**	PN		**Pn**	**01 04 52.7 +1.0**
ACTO				SN		**Sn**	**01 05 18.9 +0.9**
ACTO				Trac			01 05 25.1
	comp=Z,16nm,0.1s						
STCO	**Saint Catharin**	**2.17**	**49**	Pn		**Pn**	**01 04 55.1 +1.8**
STCO				Sn		**Sn**	**01 05 20.5 -0.3**
STCO	**Saint Catharin**	**2.17**	**49**	PN		**Pn**	**01 04 55.1 +1.8**
STCO				SN		**Sn**	**01 05 20.5 -0.3**
STCO				Trac			01 05 28.7
	comp=Z,28nm,0.1s						
BASO	**Ashfield**	**2.22**	**355**	PN		**Pn**	**01 04 54.7 +0.8**
BASO				SN		**Sn**	**01 05 22.0 0.0**
BASO				SN		**Sn**	**01 05 22.2 +0.3**
BASO				Trac			01 05 29.0
	comp=Z,15nm,0.2s						
BWLO	**Walkerton**	**2.33**	**5**	PN		**Pn**	**01 04 56.1 +0.7**
BWLO				SN		**Sn**	**01 05 24.5 0.0**
BWLO				Trac			01 05 31.0
	comp=Z,11nm,0.1s						
BRCO	**Bruce Peninsul**	**2.45**	**359**	Pn		**Pn**	**01 04 56.9 -0.1**
BRCO				Sn		**Sn**	**01 05 27.8 +0.4**
BRCO	**Bruce Peninsul**	**2.45**	**359**	PN		**Pn**	**01 04 56.9 -0.1**
BRCO				SN		**Sn**	**01 05 27.8 +0.4**
BRCO				Trac			01 05 38.5
	comp=Z,29nm,0.1s						
MEDO	**Medina**	**2.58**	**57**	Pn		**Pn**	**01 05 00.5 +1.7**
MEDO				Sn		**Sn**	**01 05 31.0 +0.3**
MEDO	**Medina**	**2.58**	**57**	PN		**Pn**	**01 05 00.5 +1.7**
MEDO				SN		**Sn**	**01 05 31.0 +0.3**
MEDO				Trac			01 05 38.6
	comp=Z,9.6nm,0.1s						
PKRO	**Pickering**	**2.76**	**38**	Pn		**Pn**	**01 05 05.7 +4.3**
PKRO				Sn		**Sn**	**01 05 35.1 -0.2**
PKRO	**Pickering**	**2.76**	**38**	PN		**Pn**	**01 05 05.7 +4.3**
PKRO				SN		**Sn**	**01 05 35.1 -0.2**
PKRO				Trac			01 05 47.6
	comp=Z,66nm,0.2s						
CLWO	**Collingwood**	**2.77**	**17**	Pn		**Pn**	**01 05 02.2 +0.7**
CLWO				Sn		**Sn**	**01 05 36.7 +1.2**
CLWO	**Collingwood**	**2.77**	**17**	PN		**Pn**	**01 05 02.2 +0.7**
CLWO				SN		**Sn**	**01 05 36.7 +1.2**
CLWO				Trac			01 05 46.9
	comp=Z,20nm,0.2s						
BMRO	**Meriville Lake**	**2.80**	**3**	PN		**Pn**	**01 05 02.6 +0.7**
BMRO				SN		**Sn**	**01 05 35.2 -0.9**
BMRO				Trac			01 05 46.5
	comp=Z,8.4nm,0.2s						
SSPA	**Standing Stone**	**2.90**	**112**	*e*Pn		**Pn**	**01 05 02.8 -0.4**
SSPA				*e*S		**Sn**	**01 05 42.9 +4.3**
WLVO	**Wesleyville**	**3.07**	**45**	Pn		**Pn**	**01 05 06.6 +1.0**
WLVO				Sn		**Sn**	**01 05 41.6 -1.2**
WLVO	**Wesleyville**	**3.07**	**45**	PN		**Pn**	**01 05 06.6 +1.0**
WLVO				SN		**Sn**	**01 05 41.6 -1.2**
WLVO				Trac			01 05 51.8
	comp=Z,16nm,0.2s						
SADO	**Sadowa**	**3.40**	**28**	Pn		**Pn**	**01 05 10.9 +0.8**
SADO				Sn		**Sn**	**01 05 50.1 -0.9**
SADO	**Sadowa**	**3.40**	**28**	PN		**Pn**	**01 05 10.9 +0.8**
SADO				SN		**Sn**	**01 05 50.1 -0.9**
SADO				Trac			01 06 07.9
	comp=Z,6.2nm,0.1s						
TOBO	**Tobermory, Bru**	**3.43**	**359**	Pn		**Pn**	**01 05 16.0 +5.5**
TOBO				Sn		**Sn**	**01 05 51.1 -0.6**
TOBO	**Tobermory, Bru**	**3.43**	**359**	PN		**Pn**	**01 05 16.0 +5.5**
TOBO				SN		**Sn**	**01 05 51.1 -0.6**
TOBO				Trac			01 06 07.5
	comp=Z,8.3nm,0.3s						
KLBO	**Killbear Provi**	**3.66**	**13**	Pn		**Pn**	**01 05 13.7 -0.1**
KLBO				Sn		**Sn**	**01 05 55.5 -1.9**
KLBO	**Killbear Provi**	**3.66**	**13**	PN		**Pn**	**01 05 13.7 -0.1**
KLBO				SN		**Sn**	**01 05 55.5 -1.9**
KLBO				Trac			01 06 17.6
	comp=Z,4.0nm,0.1s						
DELO	**Deloro Mine**	**3.88**	**44**	Pn		**Pn**	**01 05 23.5 +6.7**
DELO				Sn		**Sn**	**01 05 59.8 -3.1**
DELO	**Deloro Mine**	**3.88**	**44**	PN		**Pn**	**01 05 23.5 +6.7**
DELO				SN		**Sn**	**01 05 59.8 -3.1**
DELO				Trac			01 06 18.0
	comp=Z,6.7nm,0.2s						
PECO	**Prince Edward**	**3.88**	**55**	Pn		**Pn**	**01 05 18.3 +1.6**
PECO				Sn		**Sn**	**01 06 01.8 -1.1**
PECO	**Prince Edward**	**3.88**	**55**	PN		**Pn**	**01 05 18.3 +1.6**
PECO				SN		**Sn**	**01 06 01.8 -1.1**
PECO				Trac			01 06 21.1
	comp=Z,5.0nm,0.1s						
BUKO	**Buck Lake**	**3.92**	**21**	PN		**Pn**	**01 05 17.7 +0.4**
BUKO				Trac			01 06 22.1
	comp=Z,11nm,0.2s						
BINY	**Binghamton**	**4.06**	**83**	SN		**Sn**	**01 06 02.0 -5.2**
BINY				SN		**Sn**	**01 06 05.9 -1.4**
BINY				Trac			01 06 34.9
	comp=Z,163nm,2.0s						
BANO	**Bancroft**	**4.10**	**37**	PN		**Pn**	**01 05 20.0 +0.3**
BANO				SN		**Sn**	**01 06 06.9 -1.3**
BANO				Trac			01 06 25.7
	comp=Z,7.1nm,0.1s						
RSPO	**Restoule Provi**	**4.44**	**15**	Pn		**Pn**	**01 05 24.7 +0.3**
RSPO				Sn		**Sn**	**01 06 15.0 -1.6**
RSPO	**Restoule Provi**	**4.44**	**15**	PN		**Pn**	**01 05 24.7 +0.3**
RSPO				SN		**Sn**	**01 06 15.0 -1.6**
RSPO				Trac			01 06 38.1
	comp=Z,15nm,0.3s						
PLVO	**Plevna**	**4.52**	**43**	Pn		**Pn**	**01 05 26.6 +1.1**
PLVO				Sn		**Sn**	**01 06 15.8 -2.8**
PLVO	**Plevna**	**4.52**	**43**	PN		**Pn**	**01 05 26.6 +1.1**
PLVO				SN		**Sn**	**01 06 15.8 -2.8**
PLVO				Trac			01 06 41.5
	comp=Z,6.8nm,0.2s						

*IDC **18** 01:06:34.1±0.8, 11°.07S×118°.49E, h0km, mb4.1/7, mb1 4.2/10, mb1mx4.0/20, mbtmp4.1/10, ML4.0/3, MS3.2/3, Ms1 3.2/3, ms1mx2.8/21, Error ellipse: s-maj=43.4km s-min=16.5km az=60.0*

*ISCJB **18** 01:06:36.7±0.8, 11°.30S±0°.05×118°.49E±0°.05, h38km±9km, mb4.2/11, Error ellipse: s-maj=8.5km s-min=6.9km az=141.0*

*NEIC **18** 01:06:39.1±0.5, 11°.13S×118°.58E, h35km, mb4.2/3, Error ellipse: s-maj=16.8km s-min=8.6km az=59.0*

*DJA **18** 01:06:46, 10°.71S×118°.09E, h30km, mb4.8/7*

ISC 18 01:06:39.0±0.7, 11°.28S±0°.05×118°.47E±0°.05, h37km±8km, n47, σ1°27/53, mb4.2/11, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**2.73**	**5**	P	**Pn**	**01 07 19.7**	**-0.7**
MTNI	**Mataram**	**3.47**	**319**	P	**Pn**	**01 07 29.8**	**-0.7**
MTNI				S	**Sn**	**01 08 04.1**	**-6.2**
KHKI	**Kahang-Kahang**	**4.04**	**316**	P	**Pn**	**01 07 38.4**	**0.0**
IGBI	**Denpasar**	**4.08**	**306**	S	**Sn**	**01 08 18.8**	**-6.8**
SRBI	**Singaraja**	**4.51**	**314**	P	**Pn**	**01 07 44.5**	**-0.4**
MMRI	**Maumere**	**4.55**	**55**	S	**Sn**	**01 08 33.7**	**-3.3**
MMRI	**Maumere**	**4.55**	**55**	P	**Sn**	**01 08 36.9**	**-0.1**
	0.9nm5μm223nm,0.9s						
JAGI	**Jajag, Banyuwa**	**5.09**	**303**	P	**Pn**	**01 07 50.7**	**-2.1**
GMJI	**Gumukmas**	**5.78**	**301**	P	**Pn**	**01 07 58.5**	**-3.8**
	0.5nm2μm51nm,0.6s						
BKSI	**Bulukumba**	**6.14**	**16**	P	**Pn**	**01 08 08.2**	**+0.9**
	3μm91nm,0.5s						
BKSI	**Bulukumba**	**6.14**	**16**	P	**Sn**	**01 09 16.3**	**0.0**
	1μm137nm,0.6s						
KAPI	**Kappang**	**6.35**	**12**	Pn	**Pn**	**01 08 10.1**	**0.0**
	8.6nm,0.3s,baz=191,slow=7.3,SNR=31						
KAPI				Sn	**Sn**	**01 09 15.9**	**-5.7**
	12nm,0.3s,baz=103,slow=22,SNR=9.3						
KAPI				LR	LR	01 10 41.4	
	comp=Z,99nm,20.3s,baz=135,slow=40						
KAPI	**Kappang**	**6.35**	**12**	*e*Pn	**Pn**	**01 08 08.6**	**-1.5**
KAPI				*e*S	**Sn**	**01 09 16.8**	**-4.7**
KAPI				LR	LR	01 10 41.4	
KAPI	**Kappang**	**6.35**	**12**	P	**Pn**	**01 08 10.3**	**+0.1**
	33nm,0.6s						
KAPI	**Kappang**	**6.35**	**12**	P	**Sn**	**01 09 23.1**	**+1.6**
	40nm,0.7s						
PWJI	**Pagerwojo**	**7.32**	**296**	P	**Pn**	**01 08 23.7**	**+0.2**
	65nm,1.5s						
SPSI	**Sidrap Palu**	**7.38**	**10**	P	**Pn**	**01 08 26.8**	**+2.5**
	39nm,0.9s						
TTSI	**Tana Toraja**	**8.29**	**9**	P	**Pn**	**01 08 39.0**	**+2.2**
	1μm53nm,0.6s						
UGM	**Wanagama**	**8.52**	**292**	P	**Pn**	**01 08 41.6**	**+1.7**
MSSI	**Masamba**	**8.86**	**12**	P	Px	01 09 28.2	
FITZ	**Fitzroy Crossi**	**9.70**	**135**	Pn	**Pn**	**01 08 55.8**	**-0.4**
	2.2nm,0.3s,baz=320,slow=7.4,SNR=47						
FITZ				Sn	**Sn**	**01 10 38.1**	**-5.8**
	2.9nm,0.3s,baz=176,slow=21,SNR=9.2						
FITZ	**Fitzroy Crossi**	**9.70**	**135**	*e*Pn	**Pn**	**01 08 55.7**	**-0.4**
FITZ				*e*S	**Sn**	**01 10 26.2**	**-18**
FITZ	**Fitzroy Crossi**	**9.70**	**135**	P	**Pn**	**01 09 00.8**	**+4.7**
FITZ	**Fitzroy Crossi**	**9.70**	**135**	P	**Pn**	**01 08 58.1**	**+2.0**
	26nm,1.4s						
MBWA	**Marble Bar**	**9.90**	**173**	*e*Pn	**Pn**	**01 08 58.1**	**-0.7**
	46nm,0.5s						
MBWA				*e*S	**Sn**	**01 10 40.0**	**-8.8**
MBWA	**Marble Bar**	**9.90**	**173**	P	**Pn**	**01 09 01.2**	**+2.4**
TOLI	**Toli-Toli**	**12.53**	**11**	P	Px	01 10 05.8	
KAKA	**Kakadu**	**13.74**	**97**	*e*Pn	**Pn**	**01 09 49.0**	**-2.5**
WRA	**Warramunga Arr**	**17.53**	**121**	P	**Pn**	**01 10 39.7**	**-1.0**
	0.3nm,0.3s,baz=292,slow=13,SNR=13						
WRA				S	**S**	**01 13 42.3**	**-20**
	0.3nm,0.3s,baz=290,slow=25,SNR=6.1						
WRA				LR	LR	01 18 18.9	
	comp=Z,102nm,19.9s,baz=345,slow=40						
WRA	**Warramunga Arr**	**17.53**	**121**	P	**Pn**	**01 10 39.7**	**-1.0**
WRA				S	**S**	**01 13 42.3**	**-20**
WRA				LR	LR	01 18 18.9	
WB2	**Warramunga Arr**	**17.54**	**121**	*e*Pn	**Pn**	**01 10 40.2**	**-0.6**
ASAR	**Alice Springs**	**19.17**	**132**	P	**Pn**	**01 11 01.7**	**+1.0**
	0.5nm,0.3s,baz=314,slow=9.9,SNR=20						
ASAR				S	**S**	**01 14 24.3**	**-11**
	0.3nm,0.3s,baz=300,slow=22,SNR=7.6						
FORT	**Forrest**	**21.35**	**157**	*e*P	**P**	**01 11 27.2**	**+4.1**
	18nm,0.6s,mb4.6						
NWAO	**Narrogin (SRO)**	**21.58**	**183**	P	**P**	**01 11 28.5**	**+3.0**
	15nm,0.5s,mb4.7,baz=1.6,slow=14,SNR=5.6						
NWAO				S	**S**	**01 15 14.5**	**-8.1**
	12nm,0.5s,baz=36,slow=1.7,SNR=5.3						
PSI	**Prapat**	**23.95**	**305**	P	**P**	**01 11 48.2**	**-1.8**
	2.7nm,0.4s,mb4.0,baz=140,slow=16,SNR=4.6						
CBIJ	**Chichi jima**	**44.55**	**31**	LR	LR	01 31 19.5	
	comp=Z,39nm,21.5s,baz=86,slow=34						
SONM	**Songino Array**	**59.82**	**351**	P	**P**	**01 16 41.7**	**+1.2**
	0.5nm,0.7s,mb3.6,baz=151,slow=6.6,SNR=2.6						
KSH	**Kashi**	**64.13**	**324**	*e*P	**P**	**01 17 09.5**	**-0.2**
KSH				*e*pP	pP	01 17 14.1	-6.7
KSH				*e*sP	sP	01 17 16.3	-8.7
KSH				*e*PP		01 17 31.3	
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
KSH				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3						
MK31	**Makanchi Array**	**66.24**	**334**	*e*P	**P**	**01 17 23.0**	**-0.2**
MKAR	**Makanchi Array**	**66.24**	**334**	P	**P**	**01 17 23.0**	**-0.3**
	comp=Z,3.1nm,0.6s,mb4.5,baz=149,slow=7.2,SNR=29						
KURK	**Kurchatov**	**70.80**	**334**	*e*P	**P**	**01 17 51.0**	**-0.7**
	comp=Z,1.2nm,0.5s,mb4.1						
ZALV	**Zalesovo Beam**	**70.97**	**340**	P	**P**	**01 17 51.6**	**-1.0**
	comp=Z,2.3nm,0.5s,mb4.3,baz=155,slow=4.5,SNR=11						
BVAR	**Borovoye Array**	**76.05**	**332**	P	**P**	**01 18 22.5**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=123,slow=7.3,SNR=5.7						
QSPA	**South Pole Qui**	**78.73**	**180**	P	**P**	**01 18 39.3**	**+2.1**
	comp=Z,0.3nm,0.2s,mb3.8,baz=315,slow=1.4,SNR=2.3						
QSPA	**South Pole Qui**	**78.73**	**180**	P	**P**	**01 18 39.3**	**+2.1**
ABKAR	**Akbulak array**	**79.12**	**325**	*e*P	**P**	**01 18 40.1**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.8						
LPAZ	**La Paz**	**151.84**	**166**	PKPbc	PKPbc	01 26 33.4	+2.5
	comp=Z,1.7nm,0.8s,baz=173,slow=3.3,SNR=5.7						

PGC 18 01:06:42.0±1.0, 50°.56N×130°.42W, h10km, ML3.2/12, Mw3.9, 5D, 212km west of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.46**	**86**	⇑Pn	Pn	01 07 06.3	-2.0
HOLB				⇑Sn	Sn	01 07 23.3	-4.2
BPBC	**Brooks Peninsu**	**1.74**	**102**	⇓Pn	Pn	01 07 09.9	-2.3
PHC	**Port Hardy**	**1.91**	**85**	⇑Pn	Pn	01 07 12.8	-1.7
PHC				⇑Sn	Sn	01 07 34.5	-4.1
MAYB	**Maynard**	**2.08**	**93**	⇑Pn	Pn	01 07 15.2	-1.7
BBB	**Bella Bella**	**2.17**	**41**	Pn	Pn	01 07 16.7	-1.5
BBB				⇓Sn	Sn	01 07 41.6	-3.5
BNB	**Barry Inlet**	**2.18**	**338**	⇓Pn	Pn	01 07 16.5	-1.7
BNB				⇑Sn	Sn	01 07 42.2	-3.0
EDB	**Eliza Dome**	**2.23**	**107**	Pn	Pn	01 07 17.0	-1.9
WOSB	**Woss**	**2.50**	**98**	⇑Pn	Pn	01 07 21.4	-1.2
MOBC	**Moresby Island**	**2.76**	**340**	⇓Pn	Pn	01 07 24.5	-1.6
ETB	**Estevan Point**	**2.77**	**114**	⇑Pn	Pn	01 07 24.9	-1.5
GDR	**Gold River**	**2.93**	**104**	⇑Pn	Pn	01 07 27.0	-1.5
DIB	**Dawson Inlet,**	**2.93**	**335**	⇓Pn	Pn	01 07 27.1	-1.5
OZB	**Mount Ozzard**	**3.57**	**115**	⇑Pn	Pn	01 07 36.4	-1.0

*IDC **18** 01:31:50.6±14.0, 51°.74N×176°.78E, h0km, mb3.6/4, mb1 4.1/4, mb1mx3.6/26, mbtmp3.7/4, Error ellipse: s-maj=297.1km s-min=69.5km az=89.0*

*ISCJB **18** 01:32:10.4±3.9, 51°.9N±0°.1×179°.07W±0°.10, h11km±26km, mb3.9/4, Error ellipse: s-maj=24.0km s-min=8.0km az=163.6*

*NEIC **18** 01:32:10.8, 51°.74N×179°.02W, h6km, ML3.6(AEIC), After AEIC.*

ISC 18 01:32:10.4±2.6, 51°.8N±0°.2×179°.03W±0°.10, h1km±21km, n14, σ1°00/16, mb3.8/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.12**	**249**	P	**Pg**	**01 32 30.9**	**-1.0**
AMKA				S	**Sg**	**01 32 47.2**	**+0.7**
ATKA	**Atka Island**	**3.02**	**80**	P	**Pn**	**01 32 59.3**	**+0.2**
ATKA				S	**Sn**	**01 33 37.1**	**+1.3**
SMY	**Shemya**	**4.32**	**285**	P	**Pn**	**01 33 18.2**	**+1.0**
FX1	**Attu Island--F**	**4.91**	**286**	P	**Pn**	**01 33 26.5**	**+1.3**
ILAR	**Eielson Array**	**21.01**	**40**	P	**P**	**01 36 53.8**	**-1.1**
	1.4nm,0.9s,mb3.3,baz=245,slow=8.5,SNR=10						
ILAR	**Eielson Array**	**21.01**	**40**	P	**P**	**01 36 53.8**	**-1.1**
MDJ	**Mudanjiang**	**34.37**	**279**	P	**P**	**01 38 56.9**	**-1.6**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,31nm,4.4s						
CN2	**Changchun**	**37.33**	**280**	*e*P	**P**	**01 39 23.8**	**-0.1**
NVAR	**Mina Array Bea**	**43.64**	**83**	P	**P**	**01 40 17.1**	**+0.9**
	comp=Z,1.7nm,0.8s,mb3.8,baz=292,slow=8.5,SNR=11						
NVAR	**Mina Array Bea**	**43.64**	**83**	P	**P**	**01 40 17.1**	**+0.9**
PDAR	**Pinedale Array**	**46.32**	**72**	P	**P**	**01 40 36.9**	**-0.6**
	comp=Z,0.6nm,0.8s,mb3.6,baz=316,slow=4.1,SNR=5.1						
PDAR	**Pinedale Array**	**46.32**	**72**	P	**P**	**01 40 36.9**	**-0.6**
TXAR	**Lajitas Array**	**58.73**	**81**	P	**P**	**01 42 08.5**	**-1.1**
	comp=Z,0.7nm,0.8s,mb3.8,baz=292,slow=3.9,SNR=7.5						
TXAR	**Lajitas Array**	**58.73**	**81**	P	**P**	**01 42 08.5**	**-1.1**

*ISCJB **18** 01:40:59.6±0.4, 4°.80S±0°.05×105°.98W±0°.04, h10km, mb5.4/170, MS5.7/221, Error ellipse: s-maj=7.8km s-min=5.2km az=12.6*

*IDC **18** 01:41:00.6±0.6, 4°.56S×106°.28W, h0km, mb5.0/18, mb1 5.2/18, mb1mx5.1/20, mbtmp5.0/18, MS5.7/28, Ms1 5.7/28, ms1mx5.7/29, Error ellipse: s-maj=20.1km s-min=13.0km az=51.0*

*MOS **18** 01:41:02.3±1.0, 4°.38S×105°.89W, h10km, mb5.5/54, MS5.7/36, Error ellipse: s-maj=12.4km s-min=5.3km az=92.1*

*NEIC **18** 01:41:03.0±0.3, 4°.55S×106°.00W, h11km, mb5.5/157, ME6.2, MS5.7/188, MW6.0, MW5.9, Error ellipse: s-maj=6.3km s-min=4.7km az=46.0, Moment Tensor Solution. s67 Moment tensor: Scale 10^{17}Nm; M_{rr}1.71; $M_{\theta\theta}$1.93; $M_{\phi\phi}$-3.64; $M_{r\theta}$0.72; $M_{\theta\phi}$7.38; $M_{r\phi}$2.36; Best double couple: $M_0$8.40000×10^{17} NP1:ϕ_s9.00000°, δ83.00000°, λ161.00000°. NP2:ϕ_s101.00000°, δ71.00000°, λ7.00000°. Principal axes: T 7.6800, Plg18.0000°, Azm323.0000°; N 1.2900, Plg69.0000°, Azm169.0000°; P -8.9700, Plg8.0000°, Azm56.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

*BJI **18** 01:41:04.8, 4°.60S×106°.00W, h10km, mB5.7/23, Ms6.0/12, Ms7 6.0/34*

*GCMT **18** 01:41:06.9±0.1, 4°.53S×105°.98W, h16km, MW6.0, Moment Tensor Solution. s104,c228; s89,c144; Moment tensor: Scale 10^{18}Nm; M_{rr}-0.11±.01; $M_{\theta\theta}$0.49±.01; $M_{\phi\phi}$-0.38±.01; $M_{r\theta}$0.15±.03; $M_{\theta\phi}$1.22±.01; $M_{r\phi}$0.24±.03; Best double couple: $M_0$1.30000×10^{18} NP1:ϕ_s100.00000°, δ79.00000°, λ3.00000°. NP2: ϕ_s10.00000°, δ87.00000°, λ169.00000°. Principal axes: T 1.4000, Plg10.0000°, Azm324.0000°; N -0.1400, Plg79.0000°, Azm174.0000°; P -1.2500, Plg6.0000°, Azm55.0000°; Data Used: II IU CN IC G. Surface waves: sta=115, comp=260, per= 50.*

ISC 18 01:41:01.9±0.4, 4°.75S±0°.05×105°.99W±0°.04, h10km, n908, σ0°75/672, mb5.4/170, MS5.7/221, 171C-150D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**16.19**	**76**	*e*Pn	**Pn**	**01 44 51.1**	**+1.4**
	536nm,1.6s						
CAIG	**El Cayaco**	**22.38**	**14**	*i* P	**P**	**01 46 00.8**	**+0.3**
CAIG				*i* S	**S**	**01 50 11.0**	**+4.2**
PNIG	**Pinotepa**	**22.40**	**20**	*i* P	**P**	**01 45 57.7**	**-2.9**
PNIG				*i* S	**S**	**01 50 13.0**	**+5.9**
RPN	**Rapa Nui**	**22.48**	**188**	LR	LR	01 52 35.3	
	comp=Z,24μm,18.9s,MS5.7,baz=5.1,slow=31						
RPN				T		02 09 24.4	
	95nm,0.3s,baz=259,slow=13,SNR=12						
RPN	**Rapa Nui**	**22.48**	**188**	PFAKE		01 46 10.0	+8.6
RPN				LR	LR		
	comp=Z,30μm,19.0s,MS5.8						
HUIG	**Huatulco**	**22.61**	**25**	*i* P	**P**	**01 46 01.0**	**-1.9**
HUIG				*i* S	**S**	**01 50 06.8**	**-4.4**
ZIIG	**Zihuatanejo**	**22.66**	**11**	*i* P	**P**	**01 46 02.8**	**-0.6**
ZIIG				*i* S	**S**	**01 50 08.0**	**-4.1**
VHO	**Vista Hermosa**	**23.53**	**23**	*i* P	**P**	**01 46 13.7**	**+1.1**
VHO				*i* S	**S**	**01 50 31.6**	**+5.2**
PLIG	**Platanillo**	**23.87**	**15**	*e*P	**P**	**01 46 10.0**	**-5.7**
CMIG	**Matias Romero**	**24.32**	**27**	P	**P**	**01 46 21.7**	**+1.9**
	comp=Z,30nm,0.9s,mb4.7,baz=202,slow=6.4,SNR=15						
CMIG				LR	LR	01 53 38.6	
	comp=Z,17μm,20.3s,MS5.5,baz=198,slow=31						
CMIG	**Matias Romero**	**24.32**	**27**	P	**P**	**01 46 21.7**	**+1.8**
CMIG				LR	LR	01 53 38.6	
MOIG	**Morelia**	**24.73**	**11**	*e*P	**P**	**01 46 25.9**	**+2.4**
SZVM	**Salazar**	**24.79**	**15**	*e*P	**P**	**01 46 23.4**	**-0.7**
APG	**El Apazote**	**24.94**	**38**	P	**P**	**01 46 26.3**	**+0.8**
	comp=Z,146nm,1.1s,mb5.4,baz=269,slow=23,SNR=32						
APG				LR	LR	01 54 06.0	
	comp=Z,27μm,18.8s,MS5.8,baz=205,slow=32						
APG	**El Apazote**	**24.94**	**38**	P	**P**	**01 46 26.3**	**+0.8**
APG				LR	LR	01 54 06.0	
PBVM	**Pinon**	**24.98**	**16**	*e*P	**P**	**01 46 29.6**	**+3.7**
CCIG	**Comitan**	**24.99**	**33**	*i* P	**P**	**01 46 23.5**	**-2.4**
CCIG				*i* S	**S**	**01 50 43.8**	**-6.2**
PTVM	**Pico Tres Padr**	**25.12**	**15**	*e*P	**P**	**01 46 30.0**	**+2.9**
IIO	**Organos**	**25.22**	**16**	*e*P	**P**	**01 46 31.4**	**+3.4**
SFJM	**Santa Fe**	**25.25**	**6**	*e*P	**P**	**01 46 27.4**	**-0.9**
JTS	**JuntasAbangare**	**25.73**	**54**	P	**P**	**01 46 34.5**	**+1.7**
	comp=Z,264nm,1.2s,mb5.6,baz=263,slow=5.1,SNR=33						
JTS				LR	LR	01 53 57.7	
	comp=Z,48μm,21.1s,MS6.0,baz=229,slow=30						
JTS	**JuntasAbangare**	**25.73**	**54**	*e*P	**P**	**01 46 34.2**	**+1.4**
	comp=Z,849nm,1.5s,mb6.0						
JTS				LR	LR		
	comp=Z,48μm,19.0s,MS6.0						
JTS	**JuntasAbangare**	**25.73**	**54**	*d* P	**P**	**01 46 33.6**	**+0.8**
JTS	**JuntasAbangare**	**25.73**	**54**	P	**P**	**01 46 34.7**	**+1.9**
	comp=Z,2μm,1.5s,mb6.3,SNR=18						
LVIG	**Laguna Verde**	**26.08**	**21**	*i* P	**P**	**01 46 38.8**	**+3.0**
LVIG				*i* S	**S**	**01 51 05.2**	**-2.0**
ATAH	**Atahualpa**	**27.54**	**96**	P	**P**	**01 46 53.7**	**+4.6**
	comp=Z,21nm,1.0s,mb4.7,baz=258,slow=9.0,SNR=16						
ATAH				LR	LR	01 54 59.1	
	comp=Z,10μm,19.2s,MS5.4,baz=100,slow=30						
LPIG	**La Paz**	**28.98**	**352**	*i* P	**P**	**01 46 56.1**	**-5.7**
LPIG				*i* S	**S**	**01 51 55.0**	**+2.0**
NNA	**Nana**	**29.70**	**106**	P	**P**	**01 47 11.5**	**+3.2**
	comp=Z,5.5nm,0.3s,mb4.7,baz=257,slow=12,SNR=3.0						
NNA				LR	LR	01 55 47.3	
	comp=Z,16μm,20.6s,MS5.6,baz=278,slow=30						
NNA	**Nana**	**29.70**	**106**	*e*P	**P**	**01 47 07.5**	**-0.8**
	comp=Z,97nm,1.4s,mb5.3						
NNA				*e*		01 47 36.8	
NNA				LR	LR	01 55 47.3	
TEIG	**Tepich**	**30.31**	**34**	*e*P	**P**	**01 47 12.7**	**-0.9**
	comp=Z,322nm,2.3s,mb5.7			

baz=36,SNR=24
MTDJ Mount Denham 36.17 50 *e*P **P 01 48 05.1 +0.2**
comp=Z,500nm,1.8s,mb6.1
MTDJ LR LR
comp=Z,10µm,20.0s,MS5.6
318A Bisbee 36.19 354 ⇑P **P 01 48 04.2 -0.6**
baz=36,SNR=44
MNTX Cornudas Mount 36.25 1 ⇓P **P 01 48 04.0 -1.3**
baz=36,SNR=34
MNTX Cornudas Mount 36.25 1 *e*P **P 01 48 03.8 -1.5**
comp=Z,26nm,1.1s,mb5.1
MNTX LR LR
comp=Z,5µm,19.0s,MS5.3
220A Playas Peak, P 36.53 356 ⇓P **P 01 48 07.8 +0.1**
baz=36,SNR=47
221A Mesquite Ranch 36.59 357 ⇑P **P 01 48 08.9 +0.7**
baz=37
217A Green Valley 36.61 353 ⇑P **P 01 48 08.5 +0.1**
baz=37
224A Cornudas Mount 36.62 1 ⇑P **P 01 48 08.4 -0.1**
baz=37,SNR=20
226A Malaga, Loving 36.65 3 ⇓P **P 01 48 09.0 +0.3**
baz=37,SNR=13
222A Williams Famil 36.66 358 ⇑P **P 01 48 09.5 +0.6**
baz=37,SNR=14
219A White Tail Can 36.68 355 ⇓P **P 01 48 09.2 +0.2**
baz=37,SNR=111
218A Dragoon 36.72 354 ⇑P **P 01 48 09.3 0.0**
baz=37,SNR=38
GDL2 Guadalupe Moun 36.78 2 *e*P **P 01 48 09.2 -0.6**
CLNB Carlsbad 36.86 3 *e*P **P 01 48 10.2 -0.4**
comp=Z,8.5nm,1.4s,mb4.4
216A Three Points, 36.92 352 ⇓P **P 01 48 10.9 -0.1**
baz=37,SNR=10
214A Organ Pipe Nat 37.08 350 ⇓P **P 01 48 11.8 -0.5**
baz=37,SNR=9.1
121A Cookes Peak, D 37.12 357 ⇑P **P 01 48 13.1 +0.5**
baz=37,SNR=15
TUC Tucson 37.14 353 *e*P **P 01 48 11.6 -1.2**
comp=Z,89nm,1.9s,mb5.3
TUC LR LR
comp=Z,14µm,20.0s,MS5.8
TUC Tucson 37.14 353 *e*P **P 01 48 11.6 -1.2**
TUC pmax pmax
comp=Z,89nm,1.9s,mb5.3
TUC MLR MLR
comp=Z,14µm,20.0s,MS5.8
120A U Bar Ranch, L 37.18 356 ⇑P **P 01 48 13.6 +0.4**
baz=37,SNR=40
125A Gardner Draw, 37.22 2 ⇓P **P 01 48 12.5 -1.1**
baz=37,SNR=13
126A Clayton Basin, 37.24 3 ⇓P **P 01 48 13.6 -0.1**
baz=37
124A Stringfield Ra 37.25 1 ⇑P **P 01 48 13.9 +0.1**
baz=37,SNR=52
122A Conniff Cattle 37.26 359 ⇑P **P 01 48 14.3 +0.4**
baz=37,SNR=12
118A Homack Ranch, 37.38 354 P **P 01 48 14.9 0.0**
baz=37,SNR=30
117A Oracle 37.39 353 P **P 01 48 15.1 +0.1**
baz=37,SNR=18
119A Ashpeak Ranch, 37.44 355 P **P 01 48 15.8 +0.4**
baz=38,SNR=23
CPRX Cap Rock 37.63 3 *e*P **P 01 48 16.6 -0.4**
comp=Z,26nm,1.1s,mb4.9
Z20A Nine Sixteen R 37.74 356 ⇓P **P 01 48 18.2 +0.2**
baz=38,SNR=37
SDV Santo Domingo 37.76 69 *e*P **P 01 48 19.0 +0.5**
comp=Z,140nm,1.0s,mb5.7
SDV *e*PcP PcP 01 50 31.7 -3.8
SDV LR LR
comp=Z,7µm,20.0s,MS5.5
Z23A Rita Site, Whi 37.80 360 ⇑P **P 01 48 18.8 +0.3**
baz=38,SNR=11
Z22A Elephant Butte 37.81 359 ⇑P **P 01 48 19.4 +0.8**
baz=38,SNR=14
Z25A Roswell 37.84 2 ⇓P **P 01 48 18.2 -0.6**
baz=38,SNR=28
Z26A Caprock 37.86 3 ⇓P **P 01 48 17.9 -1.0**
baz=38,SNR=11
114A Black Gap (USA 37.87 351 ⇓P **P 01 48 19.3 +0.3**
baz=38
NATX Nacogdoches 37.88 16 PFAKE 01 48 30.0 +11
NATX LR LR
comp=Z,5µm,22.0s,MS5.2
Z21A St. Cloud Mine 37.88 358 ⇑P **P 01 48 19.9 +0.7**
baz=38,SNR=21
Z19A T-Link Ranch, 37.96 356 ⇓P **P 01 48 20.7 +0.9**
baz=38
113A Mohawk Valley, 38.04 349 ⇓P **P 01 48 20.4 0.0**
baz=38,SNR=16
Z17A San Carlos Hig 38.08 354 ⇓P **P 01 48 21.5 +0.7**
baz=38
Z16A Peralta Trail, 38.23 353 ⇓P **P 01 48 22.3 +0.2**
baz=38,SNR=10.0
DVTC Desert V Tower 38.42 346 ⇓P **P 01 48 24.5 +0.7**
baz=38,SNR=9.1
Z13A Yuma Proving G 38.44 350 P **P 01 48 23.9 +0.1**
baz=38,SNR=17
Y24A Capitan 38.47 1 ⇓P **P 01 48 23.8 -0.3**
baz=38,SNR=10.0
Y23A Lovelace Mesa, 38.47 360 ⇓P **P 01 48 25.2 +1.1**
baz=38,SNR=7.2
Z14A Wintersburg 38.47 351 ⇑P **P 01 48 23.8 -0.3**
baz=38,SNR=8.5
Y25A Mesa, Roswell 38.48 2 P **P 01 48 23.7 -0.5**
baz=38,SNR=22
Y22A Socorro 38.49 359 ⇓P **P 01 48 24.4 +0.1**
baz=38,SNR=44
Y18A Canyon Day Jun 38.51 355 ⇑P **P 01 48 24.4 0.0**
baz=38,SNR=26
Y17A Roosevelt 38.51 353 ⇑P **P 01 48 24.4 -0.1**
baz=38,SNR=62
Y20A Horse Springs, 38.52 357 P **P 01 48 24.6 +0.2**
baz=38,SNR=34
GLA Glamis 38.52 348 ⇑P **P 01 48 24.6 0.0**
baz=38
GLA Glamis 38.52 348 *e*P **P 01 48 24.3 -0.2**
comp=Z,83nm,1.4s,mb5.3
GLA Glamis 38.52 348 *e*P **P 01 48 24.3 -0.2**
GLA pmax pmax
comp=Z,83nm,1.4s,mb5.3
Y21A Point of Rocks 38.58 358 ⇑P **P 01 48 25.4 +0.3**
baz=39,SNR=48
BAR Barrett 38.58 345 *e*P **P 01 48 24.6 -0.4**
comp=Z,79nm,1.4s,mb5.2
Y19A Nutrioso 38.62 356 P **P 01 48 25.5 +0.1**
baz=39,SNR=32
SWSC Sam W. Stewart 38.62 347 ⇓P **P 01 48 25.8 +0.4**
baz=39,SNR=13
Y22D IRIS PASSCAL I 38.62 359 ⇑P **P 01 48 26.9 +1.5**
baz=39
MSTX Muleshoe 38.63 4 ⇑P **P 01 48 25.5 +0.1**
baz=39,SNR=8.9
BNM Barren Site 38.70 359 *e*P **P 01 48 25.9 -0.1**
comp=Z,48nm,1.4s,mb5.0
LENM Lemitar 38.72 359 *e*P **P 01 48 26.7 +0.5**
MONP Monument Peak 38.72 346 ⇓P **P 01 48 26.9 +0.6**
baz=39,SNR=16
Y16A Circle Bar Ran 38.77 353 ⇑P **P 01 48 26.9 +0.3**
baz=39,SNR=54
LPM Los Pinos Moun 38.86 359 *e*P **P 01 48 27.5 +0.1**
LPAZ La Paz 38.87 110 P **P 01 48 32.0 +4.3**
comp=Z,19nm,1.2s,mb4.7,baz=296,slow=7.0,SNR=33
LPAZ LR LR 02 02 10.7
comp=Z,6µm,19.0s,MS5.4,baz=272,slow=32
LPAZ La Paz 38.87 110 *e*P **P 01 48 30.9 +3.1**
comp=Z,60nm,1.5s,mb5.1
LPAZ LR LR
comp=Z,7µm,20.0s,MS5.5
LPAZ La Paz 38.87 110 *e*P **P 01 48 30.9 +3.2**
LPAZ pmax pmax
comp=Z,60nm,1.5s
LPAZ MLR MLR
comp=Z,7µm,20.0s
LAZ Ladron 38.96 358 *e*P **P 01 48 28.4 +0.2**
comp=Z,47nm,1.2s,mb5.1
Y15A Casa Rosa Ranc 38.96 352 P **P 01 48 28.0 -0.2**
baz=39,SNR=52
X21A Alamocita Cree 39.02 358 ⇑P **P 01 48 29.4 +0.6**
baz=39,SNR=65
Y14A Wickenburg 39.05 351 ⇑P **P 01 48 29.7 +0.8**
baz=39
X22A Bernardo 39.06 359 ⇑P **P 01 48 29.8 +0.8**
baz=39
Y13A Salome 39.07 350 ⇑P **P 01 48 28.8 -0.3**
baz=39,SNR=10
X19A St. Johns 39.09 356 ⇓P **P 01 48 29.6 +0.3**
baz=39,SNR=19
X24A Lazy VL Ranch, 39.11 1 ⇑P **P 01 48 29.9 +0.4**
baz=39,SNR=5.8
X23A Hourglass Bar 39.12 360 ⇓P **P 01 48 30.2 +0.7**
baz=39
Y12C Blythe 39.13 349 ⇑P **P 01 48 30.1 +0.4**
baz=39
X17A Forest Lakes 39.14 354 ⇓P **P 01 48 30.2 +0.5**
baz=39,SNR=76
X20A Quemado 39.15 357 ⇑P **P 01 48 30.3 +0.4**
baz=39,SNR=31
BC3 Big Chuckawall 39.23 347 ⇓P **P 01 48 30.5 0.0**
baz=39,SNR=36
X18A Snowflake 39.25 355 ⇑P **P 01 48 31.5 +0.9**
baz=39,SNR=13
X16A Lo Mia Camp, P 39.30 353 ⇑P **P 01 48 31.2 +0.1**
baz=39,SNR=40
PFO Pinyon Flat Ob 39.42 346 ⇑P **P 01 48 32.6 +0.5**
baz=39,SNR=24
PFO Pinyon Flat Ob 39.42 346 *e*P **P 01 48 31.8 -0.3**
comp=Z,56nm,1.1s,mb5.2
PFO LR LR
comp=Z,16µm,20.0s,MS5.9
PFO Pinyon Flat Ob 39.42 346 *e*P **P 01 48 31.8 -0.3**
PFO pmax pmax
comp=Z,59nm,1.1s,mb5.2
PFO MLR MLR
comp=Z,18µm,20.0s,MS5.9
PFO Pinyon Flat Ob 39.42 346 P **P 01 48 32.0 -0.1**
comp=Z,235nm,1.0s,mb5.9,SNR=17
X15A Humboldt 39.47 352 ⇑P **P 01 48 32.6 +0.1**
baz=40,SNR=33
ANMO Albuquerque 39.49 359 *e*P **P 01 48 31.6 -1.0**
comp=Z,28nm,1.1s,mb4.9
ANMO LR LR
comp=Z,9µm,22.0s,MS5.5
ANMO Albuquerque 39.49 359 *e*P **P 01 48 31.6 -1.0**
ANMO pmax pmax
comp=Z,28nm,1.1s
ANMO MLR MLR
comp=Z,9µm,22.0s
X14A Yava 39.55 351 ⇑P **P 01 48 33.1 0.0**
baz=40,SNR=33
MURC Murrieta 39.59 345 ⇓P **P 01 48 33.9 +0.4**
baz=40,SNR=9.6
PDMCI Parker Dam,Lak 39.59 349 ⇑P **P 01 48 34.3 +0.7**
baz=40
VBMS Vicksburg 39.60 21 *e*P **P 01 48 34.0 +0.4**
comp=Z,141nm,1.5s,mb5.5
VBMS LR LR
comp=Z,4µm,20.0s,MS5.2
W22A Albuquerque 39.62 359 ⇓P **P 01 48 34.6 +0.9**
baz=40
AMTX Amarillo 39.63 6 *e*P **P 01 48 33.5 -0.3**
comp=Z,15nm,0.9s,mb4.7
AMTX LR LR
comp=Z,13µm,22.0s,MS5.7
IRM Iron Mountain 39.66 348 ⇑P **P 01 48 34.4 +0.3**
baz=40,SNR=25
W21A San Fidel 39.69 358 ⇓P **P 01 48 34.9 +0.6**
baz=40,SNR=25
BELC Belle Mtn. Jos 39.69 347 ⇓P **P 01 48 34.4 +0.1**
baz=40,SNR=34
W23A Werner Place, 39.70 360 ⇓P **P 01 48 34.7 +0.4**
baz=40,SNR=16
W20A Ramah 39.73 357 ⇓P **P 01 48 34.8 +0.2**
baz=40,SNR=12
W24A Lazy 6 Ranch, 39.75 1 ⇑P **P 01 48 34.8 0.0**
baz=40,SNR=58
W19A Sanders 39.78 356 ⇓P **P 01 48 35.5 +0.4**
baz=40,SNR=6.2
W18A Petrified Fore 39.81 355 ⇑P **P 01 48 35.7 +0.3**
baz=40,SNR=17
X13A Yucca 39.83 350 ⇓P **P 01 48 35.3 -0.1**
baz=40,SNR=23
WMOK Wichita Mounta 39.86 9 *e*P **P 01 48 34.8 -0.9**
comp=Z,34nm,1.6s,mb4.8
WMOK LR LR
comp=Z,7µm,22.0s,MS5.5
WMOK Wichita Mounta 39.86 9 *e*P **P 01 48 34.8 -0.9**
WMOK pmax pmax
comp=Z,34nm,1.6s,mb4.8
WMOK MLR MLR
comp=Z,7µm,22.0s,MS5.5
W17A Winslow 39.87 354 ⇓P **P 01 48 36.5 +0.7**
baz=40
BRAL Brewton 39.89 26 *e*P **P 01 48 36.4 +0.3**
comp=Z,150nm,1.4s,mb5.5
BRAL LR LR
comp=Z,4µm,21.0s,MS5.2
W16A Flagstaff 39.98 353 ⇑P **P 01 48 37.3 +0.6**
baz=40,SNR=28
W15A Williams 40.15 352 ⇑P **P 01 48 39.5 +1.3**
baz=40,SNR=12
V24A Rampart Ranch, 40.27 1 ⇑P **P 01 48 39.3 +0.2**
baz=40,SNR=15
V23A Ortiz Mt. (NFS 40.28 360 ⇓P **P 01 48 39.9 +0.7**
baz=40,SNR=8.2
W14A Seligman 40.31 351 ⇓P **P 01 48 41.1 +1.7**
baz=40,SNR=13
BFSC Mount Baldy Ra 40.31 345 ⇓P **P 01 48 39.4 -0.1**
baz=40,SNR=22
W13A Hualapai Mount 40.33 350 ⇓P **P 01 48 40.1 +0.5**
baz=40
DWPF Disney 40.34 35 *e*P **P 01 48 41.1 +1.3**
comp=Z,81nm,1.1s,mb5.4
V19A Window Rock 40.35 356 ⇓P **P 01 48 40.6 +0.8**
baz=40,SNR=6.4
GMRC Granite Mounta 40.36 348 ⇑P **P 01 48 40.1 +0.2**
baz=40,SNR=17
V21A Milan 40.37 358 ⇓P **P 01 48 40.8 +0.8**
baz=40,SNR=15
V26A Tequesquite Ra 40.38 3 ⇓P **P 01 48 39.4 -0.6**
baz=40,SNR=19
PASC Pasadena Art C 40.39 344 *e*P **P 01 48 39.1 -1.0**
comp=Z,80nm,1.2s,mb5.3
V25A Rancho No Teng 40.39 2 ⇓P **P 01 48 40.1 0.0**
baz=40
V20A Brimhall 40.40 357 ⇓P **P 01 48 41.2 +1.0**
baz=40,SNR=16
MWC Mount Wilson 40.41 344 *e*P **P 01 48 40.7 +0.4**
comp=Z,127nm,1.4s,mb5.5
MWC *e*PcP PcP 01 50 46.0 +2.7
MWC Mount Wilson 40.41 344 *e*P **P 01 48 40.7 +0.4**
MWC *e* 01 50 46.0
MWC pmax pmax
comp=Z,127nm,1.4s,mb5.5
V17A Tonalea, Kykot 40.41 354 ⇓P **P 01 48 40.5 +0.2**
baz=40,SNR=36
V18A Gallo 40.42 355 ⇑P **P 01 48 41.2 +0.8**
baz=40,SNR=33
V22A San Miguel Ran 40.46 359 ⇓P **P 01 48 40.9 +0.3**
baz=40,SNR=21
DECC Green Verdugo 40.50 344 ⇓P **P 01 48 41.9 +0.9**
baz=40
LDFC Landfair 40.54 348 *e*P **P 01 48 42.4 +1.1**
comp=Z,119nm,1.2s,mb5.4
HEC Hector,Ludlow 40.56 347 P **P 01 48 41.4 -0.1**
baz=41,SNR=26
V14A Boquillas Ranc 40.72 351 ⇓P **P 01 48 43.6 +0.7**
baz=41,SNR=30
V15A Kaibab Nationa 40.77 352 ⇑P **P 01 48 43.6 +0.4**
baz=41
U23A El Rito 40.86 360 P **P 01 48 44.0 0.0**
baz=41,SNR=19
U22A Llaves 40.92 359 ⇑P **P 01 48 44.8 +0.3**
baz=41
U19A Dine' College, 40.94 356 P **P 01 48 44.5 -0.1**
baz=41,SNR=13
U24A Moreno Valley 40.95 1 ⇓P **P 01 48 45.2 +0.5**
baz=41,SNR=13
OSI Osito Adit 40.95 344 *e*P **P 01 48 45.3 +0.5**
comp=Z,125nm,1.3s,mb5.4
U25A Circle Dot Ran 40.96 2 ⇑P **P 01 48 44.4 -0.4**
baz=41,SNR=21
U16A Tuba City 40.96 354 ⇑P **P 01 48 45.1 +0.3**
baz=41,SNR=40
U20A Newcomb 40.98 357 ⇑P **P 01 48 44.9 0.0**
baz=41
U26A Atchley Ranch, 40.98 3 ⇓P **P 01 48 45.0 0.0**
baz=41
U21A Nageezi 40.99 358 P **P 01 48 45.0 -0.1**
baz=41,SNR=53
EDW2 Edwards Air Fo 41.01 345 ⇓P **P 01 48 45.0 -0.2**
baz=41,SNR=23
V13A Grand Canyon W 41.08 350 ⇑P **P 01 48 46.0 +0.2**
baz=41,SNR=27
V12A Nelson 41.11 349 ⇓P **P 01 48 45.9 -0.2**
baz=41,SNR=25
U18A Rough Rock, Ch 41.12 355 ⇑P **P 01 48 46.2 +0.1**
baz=41,SNR=36
GSC Goldstone 41.12 346 ⇓P **P 01 48 46.0 -0.2**
baz=41,SNR=19
GSC Goldstone 41.12 346 *e*P **P 01 48 45.5 -0.7**
comp=Z,117nm,1.4s,mb5.3
GSC Goldstone 41.12 346 *e*P **P 01 48 45.5 -0.6**
GSC pmax pmax
comp=Z,117nm,1.4s,mb5.3
LCO Las Campanas 41.21 130 *e*P **P 01 48 51.7 +4.6**
comp=Z,143nm,1.4s,mb5.4
LCO LR LR
comp=Z,29µm,21.0s,MS6.1
V11A Goodsprings 41.34 348 ⇑P **P 01 48 48.2 +0.3**
baz=41,SNR=15
UALR University of 41.36 17 *e*P **P 01 48 49.7 +1.5**
comp=Z,46nm,1.4s,mb4.9
U15A North Rim 41.39 352 ⇑P **P 01 48 48.6 +0.3**
baz=41,SNR=21
T19A Beclabito 41.46 356 ⇓P **P 01 48 48.6 -0.3**
baz=42,SNR=45
U14A Mt Trumbull 41.50 351 ⇑P **P 01 48 49.9 +0.6**
baz=42,SNR=56
PKM Peak Mountain 41.53 343 ⇑P **P 01 48 50.1 +0.5**
baz=42
T21A Navajo Lake 41.55 358 ⇑P **P 01 48 50.3 +0.6**
baz=42,SNR=14
T22A Edith 41.56 359 ⇓P **P 01 48 50.6 +0.9**
baz=42,SNR=51
T23A Casias Ranch, 41.57 360 ⇑P **P 01 48 50.8 +1.0**
baz=42,SNR=13
T24A Torres, Weston 41.62 1 ⇓P **P 01 48 50.9 +0.7**
baz=42,SNR=17
U13A Pakoon Wash 41.62 350 ⇓P **P 01 48 51.1 +0.8**
baz=42,SNR=19
LRAL Lakeview Retre 41.67 24 *e*P **P 01 48 51.1 +0.4**
comp=Z,52nm,1.5s,mb4.9
LRAL LR LR
comp=Z,3µm,21.0s,MS5.1
T25A Trinidad 41.70 2 ⇑P **P 01 48 51.7 +0.8**
baz=42,SNR=6.0
U12A Valley of Fire 41.74 350 ⇓P **P 01 48 51.5 +0.3**
baz=42
T17A Navajo Res., N 41.77 354 ⇓P **P 01 48 51.9 +0.4**
baz=42,SNR=56
T18A Mexican Hat 41.83 355 ⇑P **P 01 48 51.8 -0.1**
baz=42,SNR=76
T16A Glen Canyon Da 41.84 353 ⇑P **P 01 48 53.2 +1.2**
baz=42
ISA Isabella 41.87 345 ⇑P **P 01 48 53.1 +0.8**
baz=42,SNR=17
ISA Isabella 41.87 345 *e*P **P 01 48 52.2 -0.1**
comp=Z,110nm,1.6s,mb5.2
ISA Isabella 41.87 345 *e*P **P 01 48 52.2 -0.1**
ISA pmax pmax
comp=Z,110nm,1.6s,mb5.2
SHPR Sheep Range 41.93 349 *e*P **P 01 48 52.3 -0.5**
T15A Red Dirt Ranch 41.98 352 ⇑P **P 01 48 54.2 +1.0**
baz=42
MPMC Manual Prospec 42.00 346 ⇑P **P 01 48 53.4 +0.1**
baz=42,SNR=17
OXF Oxford 42.06 21 *e*P **P 01 48 54.0 +0.1**
comp=Z,62nm,1.3s,mb5.1
OXF LR LR
comp=Z,5µm,20.0s,MS5.4
OXF Oxford 42.06 21 *e*P **P 01 48 54.0 +0.1**
OXF pmax pmax
comp=Z,62nm,1.3s,mb5.1
OXF MLR MLR
comp=Z,5µm,20.0s,MS5.4
T14A Hurricane 42.12 352 ⇓P **P 01 48 55.1 +0.8**
baz=42,SNR=26
S24A Houchin Ranch, 42.18 1 ⇑P **P 01 48 55.6 +0.8**
baz=42,SNR=11
T13A Saint George 42.21 351 ⇑P **P 01 48 55.6 +0.5**
baz=42,SNR=26
VES Vestal, Richgr 42.21 344 ⇓P **P 01 48 56.1 +1.0**
baz=42,SNR=11
S25A Robets Cordova 42.22 2 ⇓P **P 01 48 55.4 +0.3**
baz=42
DAC Darwin (Calif) 42.23 346 PFAKE 01 49 00.0 +4.7
DAC LR LR
comp=Z,6µm,20.0s,MS5.5
S23A Nye Farm, Mont 42.24 360 ⇓P **P 01 48 57.1 +1.8**
baz=42
FURC Furnace Creek, 42.25 347 ⇓P **P 01 48 55.5 +0.1**
baz=42,SNR=12
SDCO Great Sand Dun 42.28 1 ⇓P **P 01 48 55.7 +0.1**
baz=42,SNR=39
SDCO Great Sand Dun 42.28 1 *e*P **P 01 48 55.3 -0.3**
comp=Z,55nm,1.4s,mb5.0
SDCO LR LR
comp=Z,6µm,20.0s,MS5.5
S22A 4UR Ranch, Cre 42.28 359 ⇓P **P 01 48 56.0 +0.3**
baz=42,SNR=63
S19A Harvey Farm, M 42.38 356 ⇓P **P 01 48 56.6 +0.2**
baz=42,SNR=24
S18A Hurst Farm, Bl 42.39 355 ⇓P **P 01 48 56.8 +0.3**
baz=42,SNR=70
S17A Black Ridge (B 42.41 354 ⇓P **P 01 48 56.9 +0.3**
baz=42,SNR=27
S20A Disappointment 42.42 357 ⇑P **P 01 48 57.8 +1.1**
baz=42,SNR=42
S16A Weppner Ranch, 42.58 353 ⇑P **P 01 48 58.9 +0.9**
baz=43,SNR=91
HBAR Harrisburg 42.60 19 *e*P **P 01 48 58.1 -0.1**
S15A Panguitch 42.62 353 ⇑P **P 01 48 59.2 +0.8**
baz=43,SNR=18
CCUT Cedar City 42.64 351 *e*P **P 01 48 58.4 -0.2**
comp=Z,35nm,1.1s,mb5.0
PV01 Paradox Valley 42.73 357 *e*P **P 01 48 59.2 -0.1**
comp=Z,5µm,1.3s
S13A Holt Ranch, En 42.75 351 ⇓P **P 01 49 00.2 +0.8**
baz=43,SNR=60
R22A Saguache, Gunn 42.77 359 ⇑P **P 01 49 00.5 +0.9**
baz=43,SNR=14
R24A Sanders Place, 42.77 1 ⇓P **P 01 48 59.7 +0.1**
baz=43,SNR=7.4
R20A Redvale 42.78 357 ⇓P **P 01 48 60.0 +0.3**
baz=43,SNR=22
S14A Cedar City 42.82 352 ⇑P **P 01 49 01.4 +1.4**
baz=43,SNR=18
GRAC Grapevine Rang 42.87 347 ⇑P **P 01 49 00.8 +0.4**
baz=43,SNR=9.5
ARUT Antelope Range 42.88 351 *e*P **P 01 49 00.9 +0.4**
ARUT Antelope Range 42.88 351 *e*P **P 01 49 00.9 +0.4**
R21A Cimarron 42.92 358 ⇑P **P 01 49 01.4 +0.6**
baz=43,SNR=28
R19A Curley Farm, L 42.93 356 ⇑P **P 01 49 00.6 -0.3**
baz=43,SNR=25
PV04 Paradox Valley 43.01 357 *e*P **P 01 49 01.4 -0.2**
R18A Canyonlands Na 43.07 356 ⇑P **P 01 49 01.8 -0.2**
baz=43,SNR=14
R16A Teasdale 43.12 354 ⇓P **P 01 49 02.8 +0.4**
baz=43,SNR=53
R15A Junction 43.14 353 ⇓P **P 01 49 03.8 +1.2**
baz=43
R17A Hanksville Air 43.17 355 ⇑P **P 01 49 02.9 +0.1**
baz=43,SNR=96
GNAR Gosnell 43.18 19 *e*P **P 01 49 03.1 +0.2**
comp=Z,2µm,1.2s
R13A O'Grain Ranch, 43.35 351 P **P 01 49 05.3 +1.0**
baz=43,SNR=19
HALT Halls 43.36 20 *e*P **P 01 49 06.2 +1.8**
Q21A Lamborn Mesa, 43.39 358 ⇓P **P 01 49 04.9 +0.3**
baz=43,SNR=44
Q22A Crested Butte, 43.40 359 ⇑P **P 01 49 04.7 0.0**
baz=43,SNR=47
MVU Marysvale 43.42 353 PFAKE 01 49 10.0 +5.1
MVU LR LR
comp=Z,13µm,21.0s,MS5.8
MSU Marysvale 43.42 353 *e*P **P 01 49 05.2 +0.4**
MSU Marysvale 43.42 353 *e*P **P 01 49 05.3 +0.4**
Q23A Hartsel 43.44 0 ⇑P **P 01 49 04.8 -0.2**
baz=44,SNR=34
Q25A Bedland, Calha 43.47 2 ⇓P **P 01 49 04.9 -0.4**
baz=44
MTUM Tungsten Hills 43.50 345 *e*P **P 01 49 05.4 -0.1**
Q24A Divide 43.50 1 ⇑P **P 01 49 05.3 -0.2**
baz=44
GOGA Godfrey 43.53 28 *e*P **P 01 49 05.8 -0.1**
comp=Z,54nm,1.2s,mb5.2
GOGA LR LR
comp=Z,6µm,19.0s,MS5.5
GOGA Godfrey 43.53 28 *e*P **P 01 49 05.8 -0.1**
GOGA pmax pmax
comp=Z,54nm,1.2s,mb5.2

GOGA MLR MLR
comp=Z,6µm,19.0s,MS5.5
Q20A Ridgley Place, 43.54 357 ⇑P P 01 49 05.6 -0.2
baz=44
Q19A Hogan Spring (43.59 356 ⇑P P 01 49 06.3 +0.1
baz=44,SNR=58
GLAT Glass 43.70 20 eP P 01 49 09.5 +2.4
Q16A Castle Valley 43.71 354 ⇓P P 01 49 07.4 +0.2
baz=44,SNR=17
SMCO Snowmass 43.72 359 P P 01 49 07.4 +0.2
comp=Z,30nm,1.0s,mb5.0
CBKS Cedar Bluff 43.73 7 eP P 01 49 07.6 +0.3
comp=Z,77nm,1.1s,mb5.3
CBKS LR LR
comp=Z,20µm,20.0s,MS6.0
CBKS Cedar Bluff 43.73 7 eP P 01 49 07.6 +0.3
CBKS pmax pmax
comp=Z,77nm,1.1s,mb5.3
CBKS MLR MLR
comp=Z,20µm,20.0s,MS6.0
SAO San Andreas Ge 43.75 342 eP P 01 49 07.5 -0.1
comp=Z,71nm,1.4s,mb5.2
SAO LR LR
comp=Z,19µm,21.0s,MS6.0
SAO San Andreas Ge 43.75 342 eP P 01 49 07.5 -0.1
SAO pmax pmax
comp=Z,71nm,1.4s,mb5.2
SAO MLR MLR
comp=Z,19µm,21.0s,MS6.0
R11A Troy Canyon, C 43.80 349 P P 01 49 08.2 +0.3
baz=44,SNR=40
Q18A Rafter H Ranch 43.80 355 ⇑P P 01 49 07.9 0.0
baz=44,SNR=36
SRU San Rafael 43.84 355 ⇑P P 01 49 08.4 +0.2
baz=44,SNR=64
SRU San Rafael 43.84 355 eP P 01 49 07.9 -0.3
comp=Z,85nm,1.1s,mb5.4
SRU San Rafael 43.84 355 eP P 01 49 07.9 -0.3
SRU pmax pmax
comp=Z,85nm,1.1s,mb5.4
P23A Jefferson 43.90 0 ⇓P P 01 49 09.3 +0.5
baz=44
UTMT University of 43.91 20 eP P 01 49 08.8 0.0
Q15A Fillmore 43.93 353 ⇓P P 01 49 09.9 +0.9
baz=44,SNR=20
SWET Sewanee 44.00 24 eP P 01 49 09.4 -0.1
Q14A Sevier Lake (B 44.04 352 P P 01 49 10.1 +0.3
baz=44,SNR=69
P25A Willow Gulch B 44.07 2 ⇓P P 01 49 10.2 +0.1
baz=44,SNR=14
WVT Waverly 44.08 21 eP P 01 49 09.8 -0.5
comp=Z,89nm,1.4s,mb5.3
WVT Waverly 44.08 21 eP P 01 49 09.8 -0.4
WVT pmax pmax
comp=Z,89nm,1.4s,mb5.3
P20A De Beque 44.09 357 ⇓P P 01 49 10.8 +0.6
baz=44,SNR=33
TMUT Trail Mountain 44.09 354 eP P 01 49 10.4 +0.2
comp=Z,106nm,1.4s,mb5.4
P22A Eagle 44.13 359 ⇑P P 01 49 10.8 +0.3
baz=44,SNR=17
P17A Butcher Ranch, 44.22 355 ⇑P P 01 49 11.2 0.0
baz=44,SNR=29
P19A Cripple Cowboy 44.25 357 P P 01 49 11.6 +0.1
baz=44,SNR=45
ISCO Idaho Springs 44.33 0 ⇓P P 01 49 12.1 -0.1
baz=44,SNR=26
ISCO Idaho Springs 44.33 0 eP P 01 49 11.6 -0.6
comp=Z,43nm,1.3s,mb5.0
ISCO LR LR
comp=Z,11µm,20.0s,MS5.8
ISCO Idaho Springs 44.33 0 eP P 01 49 11.6 -0.5
ISCO pmax pmax
comp=Z,43nm,1.3s,mb5.0
ISCO MLR MLR
comp=Z,11µm,20.0s,MS5.8
P18A Preston Nutter 44.33 355 ⇓P P 01 49 12.3 +0.2
baz=44,SNR=31
P16A Fountain Green 44.45 354 ⇑P P 01 49 14.9 +1.8
baz=44
NVAR Mina Array Bea 44.45 346 P P 01 49 12.5 -0.7
comp=Z,8,4nm,0.9s,mb4.5,baz=170,slow=8.7,SNR=30
KSU1 Kansas State U 44.48 10 eP P 01 49 12.6 -0.8
comp=Z,37nm,1.0s,mb5.1
KSU1 LR LR
comp=Z,3µm,22.0s,MS5.2
PPT Papeete 44.50 250 eS S 01 55 50.1 +0.6
comp=Z,5µm,26.5s
PPT eLQ 01 59 45.1
comp=Z,16µm,27.2s
PPT eLR LR 02 01 38.3
comp=Z,28µm,26.5s,baz=75
PPT Papeete 44.50 250 LR LR 02 02 42.6
comp=Z,8µm,19.7s,MS5.6,baz=83,slow=29
CRPR Cabo Rojo, PR 44.52 58 eP P 01 49 13.1 -0.9
comp=Z,31nm,0.9s,mb5.1
P14A Drum Mountains 44.60 352 ⇓P P 01 49 14.4 +0.1
baz=45,SNR=41
CMB Columbia Colle 44.62 344 eP P 01 49 13.2 -1.3
comp=Z,49nm,1.3s,mb5.2
CMB LR LR
comp=Z,18µm,19.0s,MS6.0
CMB Columbia Colle 44.62 344 eP P 01 49 13.2 -1.3
CMB pmax pmax
comp=Z,49nm,1.3s,mb5.2
CMB MLR MLR
comp=Z,18µm,19.0s,MS6.0
O22A Kremmling 44.69 359 ⇑P P 01 49 15.5 +0.5
baz=45,SNR=31
O20A White River Ci 44.71 358 ⇑P P 01 49 15.7 +0.5
baz=45,SNR=86
O23A Lake Granby, G 44.74 0 ⇑P P 01 49 15.8 +0.3
baz=45,SNR=16
CPCT Cooper Cave 44.78 25 eP P 01 49 15.1 -0.7
WAKR Walker 44.81 345 eP P 01 49 16.2 +0.3
NLU North Lily Min 44.84 353 eP P 01 49 14.8 -1.3
comp=Z,70nm,1.3s,mb5.3
MPU Maple Canyon 44.85 354 eP P 01 49 16.2 0.0
comp=Z,158nm,1.1s,mb5.8
LRS Lares 44.87 58 eP P 01 49 15.2 -1.6
NHSC New Hope 44.90 31 eP P 01 49 14.9 -2.0
comp=Z,201nm,1.3s,mb5.8
NHSC LR LR
comp=Z,12µm,20.0s,MS5.8
FVM French Village 44.91 17 eP P 01 49 17.3 +0.5
comp=Z,50nm,1.2s,mb5.2
FVM French Village 44.91 17 eP P 01 49 17.3 +0.5
FVM pmax pmax
comp=Z,50nm,1.2s,mb5.2
O19A Miners Draw (B 44.92 357 ⇑P P 01 49 17.7 +0.9
baz=45,SNR=20
O17A Robinson Place 44.94 355 ⇓P P 01 49 17.6 +0.6
baz=45,SNR=38
O18A Roosevelt 44.95 356 ⇑P P 01 49 17.3 +0.3
baz=45
OBIP Obispado Ponce 44.96 59 eP P 01 49 16.4 -1.2
comp=Z,146nm,1.0s,mb5.8
ICM Isla Caja Muer 44.97 59 eP P 01 49 16.9 -0.7
CELP Cerrillos 45.00 59 eP P 01 49 16.8 -1.1
SIUC Southern Illin 45.04 19 eP P 01 49 18.8 +1.0
comp=Z,54nm,1.0s,mb5.3
DUG Dugway 45.16 353 ⇑P P 01 49 19.2 +0.4
baz=45,SNR=73
DUG Dugway 45.16 353 eP P 01 49 18.8 0.0
comp=Z,80nm,1.2s,mb5.4
DUG LR LR
comp=Z,20µm,20.0s,MS6.0
DUG Dugway 45.16 353 eP P 01 49 18.8 0.0
DUG pmax pmax
comp=Z,80nm,1.2s,mb5.4
DUG MLR MLR
comp=Z,20µm,20.0s,MS6.0
DAU Daniels Canyon 45.20 354 eP P 01 49 19.1 +0.1
DAU Daniels Canyon 45.20 354 eP P 01 49 19.1 0.0
O15A The Old Anders 45.20 353 ⇑P P 01 49 19.9 +0.7
baz=45,SNR=12
TKL Tuckaleechee C 45.28 26 eP P 01 49 19.8 -0.1
TKL Tuckaleechee C 45.28 26 eP P 01 49 19.8 0.0
JSC Jenkinsville 45.30 29 eP P 01 49 20.6 +0.7
JSC Jenkinsville 45.30 29 eP P 01 49 20.7 +0.7
N21A Black Mountain 45.31 358 ⇑P P 01 49 20.6 +0.6
baz=45,SNR=36
SJG San Juan 45.38 59 eP P 01 49 19.5 -1.4
comp=Z,183nm,1.3s,mb5.8
SJG LR LR
comp=Z,8µm,21.0s,MS5.6
SJG San Juan 45.38 59 eP P 01 49 19.5 -1.4
SJG pmax pmax
comp=Z,183nm,1.3s
SJG MLR MLR
comp=Z,8µm,21.0s
JLU Jordanelle 45.41 354 eP P 01 49 20.6 -0.2
comp=Z,110nm,1.3s,mb5.5
N20A Spence Gulch, 45.41 358 ⇓P P 01 49 21.0 +0.2
baz=45,SNR=71
N23A Red Feather La 45.42 0 ⇑P P 01 49 21.9 +1.1
baz=46,SNR=12
MCCM Marconi Confer 45.47 341 eP P 01 49 21.8 +0.5
comp=Z,77nm,1.3s,mb5.4
MCCM LR LR
comp=Z,12µm,19.0s,MS5.9
N19A John Jarvie Ra 45.52 357 ⇑P P 01 49 21.7 +0.1
baz=46,SNR=21
CTU Camp Tracy 45.53 354 eP P 01 49 22.0 +0.3
comp=Z,77nm,1.3s,mb5.5
NOQ North Oquirrh 45.53 353 eP P 01 49 22.2 +0.5
comp=Z,129nm,1.2s,mb5.7
OGNE Ogallala 45.62 4 eP P 01 49 22.0 -0.4
comp=Z,268nm,1.8s,mb5.9
OGNE LR LR
comp=Z,3µm,19.0s,MS5.3
WCN Washoe City 45.64 345 ⇑P P 01 49 23.5 +0.9
baz=46,SNR=8.8
WCN Washoe City 45.64 345 eP P 01 49 23.7 +1.1
comp=Z,89nm,1.3s,mb5.5
WCN Washoe City 45.64 345 eP P 01 49 23.7 +1.1
WCN pmax pmax
comp=Z,89nm,1.3s,mb5.5
HUMP Col San Antoni 45.65 59 eP P 01 49 22.0 -1.1
comp=Z,82nm,1.3s,mb5.5
N17A Moffit Pass 45.69 355 ⇓P P 01 49 23.7 +0.8
baz=46,SNR=28
USIN University of 45.78 20 eP P 01 49 23.8 0.0
comp=Z,116nm,1.2s,mb5.7
TBI Tubuai 45.80 242 eS S 01 56 07.2 -1.1
comp=Z,3µm,30.5s
TBI eLQ 02 00 17.9
comp=Z,8µm,30.5s
TBI eLR LR 02 02 12.8
comp=Z,21µm,28.5s,baz=71
N15A Stansbury Isla 45.81 353 ⇓P P 01 49 24.8 +0.9
baz=46,SNR=12
PHWY Pilot Hill 45.83 1 eP P 01 49 23.8 -0.3
comp=Z,67nm,1.4s,mb5.4
BGU Big Grassy Mou 45.91 353 eP P 01 49 24.9 +0.2
comp=Z,76nm,1.3s,mb5.5
PAHR Pah Rah Range 45.93 346 eP P 01 49 24.7 -0.2
comp=Z,146nm,1.5s,mb5.7
M24A Cheyenne 46.01 1 ⇑P P 01 49 25.5 0.0
baz=46,SNR=7.2
M18A Lyman 46.11 356 ⇓P P 01 49 26.9 +0.7
baz=46,SNR=11
BMN Battle Mountai 46.13 348 eP P 01 49 26.0 -0.4
comp=Z,36nm,1.1s,mb5.2
BMN LR LR
comp=Z,17µm,22.0s,MS6.0
BMN Battle Mountai 46.13 348 eP P 01 49 26.0 -0.4
BMN pmax pmax
comp=Z,36nm,1.1s,mb5.2
BMN MLR MLR
comp=Z,17µm,22.0s,MS6.0
OHCM Honcut 46.14 343 eP P 01 49 27.0 +0.5
M21A Separation Pea 46.15 359 P P 01 49 26.2 -0.4
baz=46,SNR=21
M17A Scullys Gap (B 46.20 355 P P 01 49 27.1 +0.1
baz=46,SNR=15
SPUT South Promonto 46.22 353 eP P 01 49 27.0 -0.1
comp=Z,87nm,1.1s,mb5.6
HOPS Hopland 46.30 342 eP P 01 49 28.4 +0.6
comp=Z,107nm,1.3s,mb5.6
HOPS LR LR
comp=Z,16µm,19.0s,MS6.0
OLIL Olney 46.33 19 eP P 01 49 28.6 +0.6
comp=Z,79nm,1.2s,mb5.5
M15A Larsen Ranch, 46.37 353 ⇓P P 01 49 28.2 -0.1
baz=46,SNR=57
CDVI St. Croix 46.41 60 eP P 01 49 27.6 -1.4
comp=Z,161nm,0.9s,mb6.0
HWUT Hardware Ranch 46.41 354 eP P 01 49 28.2 -0.4
comp=Z,324nm,1.9s,mb5.9
HWUT LR LR
comp=Z,6µm,19.0s,MS5.5
STVI Saint Thomas 46.51 59 eP P 01 49 27.8 -2.0
comp=Z,29nm,0.8s,mb5.3
L21A Rawlins 46.51 359 ⇑P P 01 49 29.1 -0.3
baz=46,SNR=13
L22A Ellis Ranch, M 46.56 360 ⇓P P 01 49 29.8 0.0
baz=47
L20A Wamsutter 46.58 358 ⇓P P 01 49 29.9 -0.1
baz=47,SNR=23
L18A Fontenelle, Gr 46.60 356 ⇑P P 01 49 30.0 -0.1
baz=47,SNR=34
L23A Garrett 46.64 0 ⇑P P 01 49 29.4 -1.0
baz=47,SNR=27
HVU Hansel Valley 46.72 353 eP P 01 49 30.9 -0.2
comp=Z,135nm,1.5s,mb5.7
HVU Hansel Valley 46.72 353 eP P 01 49 30.9 -0.1
HVU pmax pmax
comp=Z,135nm,1.5s,mb5.7
L19A Farson 46.73 357 ⇑P P 01 49 31.3 +0.1
baz=47,SNR=61
L16A Fish Haven 46.81 354 ⇑P P 01 49 31.4 -0.3
baz=47,SNR=17
L17A Cokeville 46.84 355 ⇑P P 01 49 31.7 -0.3
baz=47,SNR=9.5
L15A Malad City 46.90 353 ⇑P P 01 49 32.5 +0.1
baz=47,SNR=61
L14A Malta 47.03 353 ⇓P P 01 49 33.2 -0.2
baz=47,SNR=139
KCPM Cahto Peak 47.10 341 eP P 01 49 34.8 +0.7
comp=Z,32nm,1.2s,mb5.1
K21A Alcova 47.17 359 ⇑P P 01 49 34.1 -0.5
baz=47,SNR=18
KIPM Iron Peak 47.18 342 eP P 01 49 35.7 +1.0
comp=Z,79nm,1.1s,mb5.6
K22A Casper 47.18 359 ⇓P P 01 49 34.5 -0.1
baz=47,SNR=18
K20A Yellowstone Ra 47.23 358 ⇑P P 01 49 34.7 -0.4
baz=47,SNR=23
BW06 Boulder Array 47.40 356 ⇑P P 01 49 35.9 -0.4
baz=47,SNR=38
BW06 Boulder Array 47.40 356 PFAKE 01 49 50.0 +14
BW06 LR LR
comp=Z,11µm,20.0s,MS5.8
PDAR Pinedale Array 47.40 356 P P 01 49 34.5 -1.8
comp=Z,12nm,0.8s,mb4.9,baz=166,slow=6.4,SNR=46
PDAR LR LR 02 07 04.0
comp=Z,12µm,18.3s,MS5.9,baz=186,slow=33
K19A Absolon Red Bu 47.42 357 ⇓P P 01 49 35.6 -0.9
baz=48,SNR=64
K17A Gardner Place, 47.49 355 ⇓P P 01 49 36.9 -0.1
baz=48
AHID Auburn Hatcher 47.52 355 eP P 01 49 37.1 -0.1
comp=Z,41nm,1.2s,mb5.3
K14A Jones Ranch, D 47.52 353 ⇑P P 01 49 37.4 +0.1
baz=48,SNR=25
K15A Arbon 47.58 353 ⇑P P 01 49 37.8 0.0
baz=48,SNR=14
WDC Whiskeytown Da 47.60 343 eP P 01 49 37.0 -0.9
comp=Z,50nm,1.1s,mb5.5
WDC LR LR
comp=Z,13µm,22.0s,MS5.8
WDC Whiskeytown Da 47.60 343 eP P 01 49 37.0 -0.9
WDC pmax pmax
comp=Z,50nm,1.1s,mb5.5
WDC MLR MLR
comp=Z,13µm,22.0s,MS5.8
HDIL Hopedale 47.62 17 eP P 01 49 38.3 +0.2
comp=Z,149nm,1.6s,mb5.8
HDIL LR LR
comp=Z,3µm,19.0s,MS5.3
K16A Soda Springs 47.63 354 ⇑P P 01 49 38.7 +0.5
baz=48,SNR=10
CNNC Cliffs of the 47.75 31 eP P 01 49 39.2 0.0
comp=Z,36nm,0.8s,mb5.5
CNNC LR LR
comp=Z,12µm,20.0s,MS5.8
J19A Crowheart 47.87 357 ⇓P P 01 49 39.8 -0.2
baz=48,SNR=15
SCIA State Center 47.87 13 PFAKE 01 49 50.0 +10
SCIA LR LR
comp=Z,4µm,20.0s,MS5.4
J18A Kendall Valley 47.88 356 ⇑P P 01 49 39.7 -0.3
baz=48,SNR=16
J21A Lysite 47.89 359 ⇓P P 01 49 40.3 +0.2
baz=48,SNR=32
PLCA Paso Flores 47.89 144 P P 01 49 43.0 +2.8
comp=Z,21nm,1.1s,mb5.1,baz=304,slow=9.9,SNR=12
PLCA LR LR 02 04 59.1
comp=Z,21µm,19.1s,MS6.1,baz=334,slow=30
PLCA Paso Flores 47.89 144 eP P 01 49 43.0 +2.8
comp=Z,64nm,1.4s,mb5.5
PLCA LR LR
comp=Z,21µm,20.0s,MS6.1
PLCA Paso Flores 47.89 144 P P 01 49 43.0 +2.7
PLCA pmax pmax
comp=Z,21nm,1.1s
J20A Shoshoni 47.92 358 ⇑P P 01 49 40.6 +0.2
baz=48,SNR=66
J22A Midwest 47.94 360 ⇑P P 01 49 40.2 -0.3
baz=48,SNR=55
BLA Blacksburg 48.07 28 eP P 01 49 41.7 0.0
comp=Z,34nm,1.0s,mb5.3
BLA LR LR
comp=Z,3µm,22.0s,MS5.2
BLA Blacksburg 48.07 28 eP P 01 49 41.7 0.0
BLA pmax pmax
comp=Z,34nm,1.0s,mb5.3
BLA MLR MLR
comp=Z,3µm,22.0s,MS5.2
J16A Bone 48.07 354 ⇓P P 01 49 41.3 -0.2
baz=48,SNR=28
J17A Brown Place, J 48.08 355 ⇓P P 01 49 41.4 -0.2
baz=48,SNR=28
REDW Red Top Meadow 48.09 355 eP P 01 49 41.1 -0.6
comp=Z,52nm,1.0s,mb5.5
RRI2 Red Ridge 48.12 355 eP P 01 49 40.8 -1.1
comp=Z,62nm,0.9s,mb5.6
SNOW Snow King Moun 48.18 355 eP P 01 49 42.3 -0.1
comp=Z,167nm,1.8s,mb5.8
TPAW Teton Pass 48.23 355 eP P 01 49 42.2 -0.5
comp=Z,54nm,1.1s,mb5.5
KHMM Horse Mountain 48.23 342 eP P 01 49 43.5 +0.7
comp=Z,78nm,1.3s,mb5.6
MOD Modoc 48.23 346 eP P 01 49 42.8 0.0
comp=Z,112nm,1.6s,mb5.7
MOD LR LR
comp=Z,4µm,19.0s,MS5.5
J15A Blackfoot 48.28 354 ⇓P P 01 49 43.1 -0.1
baz=48,SNR=13
VWCC Virginia Weste 48.30 28 eP P 01 49 43.1 -0.3
LOHW Long Hollow 48.32 356 eP P 01 49 42.1 -1.3
comp=Z,29nm,0.9s,mb5.3
J14A Carey 48.33 353 ⇓P P 01 49 43.3 -0.3
baz=48,SNR=13
WVOR Wild Horse Val 48.35 347 eP P 01 49 44.3 +0.6
comp=Z,67nm,1.4s,mb5.5
WVOR LR LR
comp=Z,9µm,19.0s,MS5.8
WVOR Wild Horse Val 48.35 347 eP P 01 49 44.3 +0.6
WVOR pmax pmax
comp=Z,67nm,1.4s,mb5.5
WVOR MLR MLR
comp=Z,9µm,19.0s,MS5.8
I18A Diamond G Ranc 48.35 356 ⇓P P 01 49 43.5 -0.2
baz=48,SNR=18
I21A Big Trails, Te 48.35 359 ⇓P P 01 49 43.1 -0.6
baz=48,SNR=18
MOOW Moose Ponds 48.47 355 eP P 01 49 43.2 -1.4
comp=Z,54nm,1.3s,mb5.4
FDF Fort de France 48.47 66 eP P 01 49 43.5 -1.6
comp=Z,167nm,1.2s,mb5.9
FDF LR LR
comp=Z,5µm,22.0s,MS5.5
FDF Fort de France 48.47 66 eP P 01 49 43.5 -1.6
FDF pmax pmax
comp=Z,167nm,1.2s,mb5.9
FDF MLR MLR
comp=Z,5µm,22.0s,MS5.5
FDF Fort de France 48.47 66 eP P 01 49 44.7 -0.5
J13A Cove Ranch, Pi 48.49 352 ⇑P P 01 49 45.3 +0.5
baz=48,SNR=38
I20A Worland 48.51 358 ⇑P P 01 49 44.7 -0.3
baz=48,SNR=13
I17A Pilgrim Ck. 48.62 356 ⇑P P 01 49 46.1 +0.4
baz=49,SNR=12
IMW Indian Meadow 48.63 355 eP P 01 49 44.6 -1.2
comp=Z,99nm,1.2s,mb5.7
I19A Meeteetse 48.64 357 ⇑P P 01 49 45.0 -0.9
baz=49,SNR=17
I16A Newdale 48.66 355 ⇑P P 01 49 46.3 +0.2
baz=49,SNR=17
RSSD Black Hills 48.68 2 eP P 01 49 45.3 -0.9
comp=Z,34nm,1.1s,mb5.3
RSSD Black Hills 48.68 2 eP P 01 49 45.3 -0.9
RSSD pmax pmax
comp=Z,34nm,1.1s,mb5.3
HLID Hailey 48.69 352 ⇓P P 01 49 46.3 0.0
baz=49,SNR=70
HLID Hailey 48.69 352 eP P 01 49 45.6 -0.7
comp=Z,56nm,1.0s,mb5.5
HLID LR LR
comp=Z,12µm,19.0s,MS5.9
YBH Yreka Blue Hor 48.71 343 LR LR 02 06 18.4
comp=Z,8µm,18.1s,MS5.8,baz=145,slow=31
YBH Yreka Blue Hor 48.71 343 eP P 01 49 45.9 -0.6
comp=Z,30nm,1.1s,mb5.2
YBH LR LR
comp=Z,10µm,21.0s,MS5.8
YBH Yreka Blue Hor 48.71 343 eP P 01 49 45.9 -0.6
YBH pmax pmax
comp=Z,30nm,1.1s
YBH MLR MLR
comp=Z,10µm,21.0s
MFID Camas Ranch 48.76 350 ⇑P P 01 49 47.1 +0.2
baz=49,SNR=124
FLWY Flagg Ranch 48.79 355 eP P 01 49 46.3 -0.8
comp=Z,134nm,1.1s,mb5.9
KRMB Red Mountain 48.87 342 eP P 01 49 47.9 +0.1
comp=Z,85nm,1.4s,mb5.6
I15A Monteview 48.88 354 ⇑P P 01 49 48.3 +0.6
baz=49,SNR=16
I14A Mackay 48.92 353 ⇑P P 01 49 49.0 +0.9
baz=49,SNR=33
ANWB Willy Bob 48.98 62 PFAKE 01 50 00.0 +11
ANWB LR LR
comp=Z,6µm,21.0s,MS5.5
I13A Wildhorse Cree 48.99 352 ⇑P P 01 49 49.6 +0.9
baz=49,SNR=111
ECSD EROS Data Cent 49.00 9 eP P 01 49 47.1 -1.6
comp=Z,24nm,1.0s,mb5.2
ECSD LR LR
comp=Z,16µm,19.0s,MS6.0
I12A Atlanta 49.02 351 P P 01 49 48.8 -0.1
baz=49,SNR=71
H20A Greybull 49.05 358 ⇑P P 01 49 48.2 -0.9
baz=49,SNR=23
H17A Grant Village 49.09 356 ⇑P P 01 49 50.9 +1.5
baz=49,SNR=13
K05A Summer Lake 49.15 345 ⇑P P 01 49 50.7 +0.8
baz=49,SNR=20
YFT Old Faithful 49.17 355 eP P 01 49 50.5 +0.5
comp=Z,56nm,1.2s,mb5.5
J08A Circle Bar Ran 49.20 348 ⇑P P 01 49 51.2 +1.0
baz=49,SNR=13
LKWY Lake 49.25 356 eP P 01 49 50.3 -0.3
comp=Z,64nm,1.3s,mb5.5
LKWY LR LR
comp=Z,13µm,19.0s,MS6.0
LKWY Lake 49.25 356 eP P 01 49 50.3 -0.3
LKWY pmax pmax
comp=Z,65nm,1.3s,mb5.5
LKWY MLR MLR
comp=Z,13µm,19.0s,MS6.0
H19A Powell 49.27 357 ⇓P P 01 49 50.6 -0.2
baz=49,SNR=10
H18A Shoshone NF, C 49.31 357 ⇑P P 01 49 50.9 -0.2
baz=49,SNR=29
YMR Madison River 49.40 355 eP P 01 49 51.8 +0.1
comp=Z,158nm,1.4s,mb5.8
YNR Norris Junctio 49.42 356 eP P 01 49 51.5 -0.4
comp=Z,52nm,1.3s,mb5.4
H16A Russell Place, 49.46 355 ⇑P P 01 49 52.2 0.0
baz=50,SNR=70
H15A Lima 49.51 354 ⇓P P 01 49 53.1 +0.5
baz=50,SNR=22
JFWS Jewell Farm 49.54 15 eP P 01 49 53.0 +0.2
comp=Z,35nm,1.0s,mb5.3
JFWS LR LR
comp=Z,2µm,20.0s,MS5.2
JFWS Jewell Farm 49.54 15 eP P 01 49 53.0 +0.1
JFWS pmax pmax
comp=Z,35nm,1.0s,mb5.3

JFWS MLR MLR
comp=Z,2µm,20.0s,MS5.2
H14A Leadore 49.59 353 ⇑P P 01 49 53.2 +0.1
baz=50,SNR=78
HUMO Hull Mountain 49.59 344 eP P 01 49 52.8 -0.4
comp=Z,46nm,1.3s,mb5.3
HUMO LR LR
comp=Z,17µm,22.0s,MS6.0
QLMT Earthquake Lak 49.60 355 eP P 01 49 53.7 +0.5
KBO Bosley Butte 49.60 342 eP P 01 49 54.5 +1.2
comp=Z,98nm,1.3s,mb5.7
H13A Challis 49.65 352 ⇓P P 01 49 54.1 +0.4
baz=50,SNR=34
H12A Diamond D Ranc 49.72 352 ⇓P P 01 49 54.2 0.0
baz=50,SNR=75
RLMT Red Lodge 49.73 357 ⇑P P 01 49 53.9 -0.4
baz=50,SNR=29
RLMT Red Lodge 49.73 357 eP P 01 49 52.8 -1.5
comp=Z,32nm,1.0s,mb5.3
RLMT LR LR
comp=Z,4µm,19.0s,MS5.5
MCMT McKenzie Canyo 49.74 354 eP P 01 49 53.7 -0.6
comp=Z,50nm,1.1s,mb5.5
G21A Lodge Grass 49.76 359 ⇑P P 01 49 54.0 -0.5
baz=50,SNR=7.5
G20A Bridger 49.79 358 ⇑P P 01 49 53.8 -0.9
baz=50
G18A Lazy EL Ranch, 49.95 357 ⇓P P 01 49 55.6 -0.3
baz=50,SNR=26
G16A Moss Hill, Enn 50.03 355 ⇓P P 01 49 56.6 +0.1
baz=50,SNR=16
G17A Pierce Place, 50.03 356 ⇑P P 01 49 57.1 +0.6
baz=50,SNR=18
G15A Dillon 50.03 354 P P 01 49 56.3 -0.3
baz=50,SNR=41
I07A Izee 50.11 347 ⇑P P 01 49 57.8 +0.6
baz=50,SNR=40
G13A Cobalt 50.17 352 ⇓P P 01 49 57.5 -0.1
baz=50,SNR=91
G14A Jackson 50.22 353 ⇓P P 01 49 57.8 -0.1
baz=50,SNR=9.3
KEBM Edson Butte 50.23 342 eP P 01 49 58.6 +0.5
comp=Z,229nm,1.4s,mb6.0
DLMT Dillon 50.24 354 eP P 01 49 57.6 -0.5
comp=Z,54nm,1.1s,mb5.5
CBN Corbin 50.31 29 eP P 01 49 59.5 +0.7
comp=Z,94nm,1.1s,mb5.7
CBN LR LR
comp=Z,8µm,20.0s,MS5.7
MCWV Mont Chateau 50.33 26 eP P 01 50 00.5 +1.6
comp=Z,74nm,1.2s,mb5.6
MCWV LR LR
comp=Z,4µm,20.0s,MS5.4
F20A Billings 50.36 358 ⇓P P 01 49 58.4 -0.7
baz=50,SNR=16
GCMT Greycliff 50.42 357 eP P 01 49 58.1 -1.4
comp=Z,146nm,1.9s,mb5.7
BOZ Bozeman (W) 50.42 355 ⇑P P 01 49 58.6 -0.9
baz=50,SNR=13
BOZ Bozeman (W) 50.42 355 eP P 01 49 58.4 -1.1
comp=Z,34nm,1.4s,mb5.2
BOZ LR LR
comp=Z,7µm,20.0s,MS5.7
BOZ Bozeman (W) 50.42 355 eP P 01 49 58.4 -1.1
BOZ pmax pmax
comp=Z,34nm,1.4s,mb5.2
BOZ MLR MLR
comp=Z,7µm,20.0s,MS5.7
F19A Roth Farm, Mol 50.45 357 ⇓P P 01 49 58.1 -1.6
baz=50,SNR=20
F18A Big Timber 50.54 357 ⇑P P 01 49 59.0 -1.3
baz=51,SNR=24
F16A Kennard Place, 50.56 355 ⇓P P 01 50 00.3 -0.3
baz=51,SNR=6.0
F17A Fitzpatrick Pl 50.60 356 ⇑P P 01 50 00.7 -0.2
baz=51,SNR=18
LCCM Lewis and Clar 50.64 355 P P 01 50 00.0 -1.1
LRM Limekiln Ridge 50.68 354 eP P 01 50 00.6 -0.8
F15A Butte 50.70 354 P P 01 50 01.4 -0.2
baz=51,SNR=27
VIPM Ingram Point 50.77 347 P P 01 50 02.3 +0.1
VIPM Ingram Point 50.77 347 P P 01 50 02.3 +0.2
F14A Wisdom 50.77 353 ⇓P P 01 50 02.1 0.0
baz=51,SNR=24
F13A Darby 50.86 352 ⇑P P 01 50 01.9 -0.9
baz=51,SNR=33
F12A Elk City 50.96 352 ⇑P P 01 50 02.9 -0.6
baz=51,SNR=25
BROR Big Rock Looko 50.99 345 P P 01 50 03.3 -0.5
AAM Ann Arbor 51.04 21 PFAKE 01 50 10.0 +5.8
AAM LR LR
comp=Z,3µm,20.0s,MS5.2
E19A Rath Farm, Rou 51.05 358 ⇓P P 01 50 03.3 -0.9
baz=51,SNR=21
E20A Meyer Farm, Mu 51.06 358 ⇓P P 01 50 03.8 -0.5
baz=51,SNR=32
G08A Pilot Rock 51.15 348 ⇑P P 01 50 05.5 +0.5
baz=51,SNR=27
CPUP Villa Florida 51.16 120 P P 01 50 07.3 +1.8
comp=Z,24nm,1.0s,mb5.1,baz=270,slow=8.0,SNR=23
CPUP LR LR 02 08 21.0
comp=Z,8µm,21.0s,MS5.7,baz=269,slow=32
CPUP Villa Florida 51.16 120 P P 01 50 07.3 +1.8
CPUP pmax pmax
comp=Z,24nm,1.0s
E17A Martinsdale 51.17 356 ⇓P P 01 50 04.6 -0.5
baz=51,SNR=6.2
E18A Harlowton 51.21 357 ⇑P P 01 50 04.8 -0.7
baz=51,SNR=30
LAO LASA Array 51.22 360 eP P 01 50 04.0 -1.5
comp=Z,238nm,1.9s,mb5.8
LAO LR LR
comp=Z,6µm,19.0s,MS5.6
E15A Deer Lodge 51.29 354 ⇓P P 01 50 05.4 -0.6
baz=51,SNR=8.1
CROR Criterion Ridg 51.30 346 P P 01 50 06.2 +0.1
E16A East Helena 51.31 355 ⇓P P 01 50 05.6 -0.6
baz=51,SNR=41
E14A Clinton 51.38 353 ⇓P P 01 50 06.6 -0.1
baz=51,SNR=27
G06A Carlson Farm, 51.46 347 ⇑P P 01 50 07.1 -0.2
baz=52,SNR=13
F10A Beach Ranch, E 51.48 350 ⇑P P 01 50 08.5 +1.0
baz=52,SNR=10
E13A Victor 51.49 353 ⇑P P 01 50 08.0 +0.5
baz=52,SNR=6.5
HRY Holter Researc 51.50 355 eP P 01 50 06.4 -1.2
COR Corvallis 51.52 344 eP P 01 50 06.8 -1.0
comp=Z,180nm,1.3s,mb5.8
COR Corvallis 51.52 344 eP P 01 50 06.8 -0.9
COR pmax pmax
comp=Z,180nm,1.3s,mb5.8
SDMD Soldier's Deli 51.52 29 eP P 01 50 07.5 -0.4
comp=Z,41nm,1.0s,mb5.3
LNOR Lincton Mounta 51.58 349 eP P 01 50 08.5 +0.3
LNOR Lincton Mounta 51.58 349 eP P 01 50 08.5 +0.3
D21A La Casta Ranch 51.60 359 ⇑P P 01 50 08.3 0.0
baz=52
E12A Beaver Dam Sad 51.65 352 P P 01 50 07.8 -0.9
baz=52,SNR=17
D20A Manuel Ranch, 51.65 358 ⇓P P 01 50 07.7 -1.0
baz=52,SNR=20
D22A Cohagen 51.68 360 ⇓P P 01 50 08.7 -0.2
baz=52
D19A Cripps Ranch, 51.75 357 ⇑P P 01 50 08.6 -0.8
baz=52,SNR=28
HOOD Mount Hood Mea 51.78 346 eP P 01 50 09.7 0.0
comp=Z,104nm,1.2s,mb5.6
D16A Dana Ranch, Ca 51.79 355 ⇑P P 01 50 09.6 -0.2
baz=52,SNR=22
MSO Missoula 51.84 353 ⇑P P 01 50 11.0 +0.9
baz=52,SNR=7.8
MSO Missoula 51.84 353 eP P 01 50 10.0 -0.1
comp=Z,17nm,1.2s,mb4.8
MSO LR LR
comp=Z,4µm,19.0s,MS5.5
CHMT Chamberlain Mo 51.84 354 eP P 01 50 09.2 -0.9
D17A Six Diamond Ra 51.84 356 ⇓P P 01 50 09.7 -0.5
baz=52,SNR=55
XMAS Kiritimati 51.85 276 PFAKE 01 50 20.0 +9.1
XMAS LR LR
comp=Z,7µm,20.0s,MS5.7
G04A Mulino 51.88 345 P P 01 50 10.4 0.0
baz=52,SNR=12
D15A Lincoln 51.89 354 ⇑P P 01 50 10.0 -0.5
baz=52,SNR=15
TRQA Tornquist 51.95 136 PFAKE 01 50 20.0 +8.8
TRQA LR LR
comp=Z,14µm,21.0s,MS6.0
SSPA Standing Stone 52.00 27 eP P 01 50 09.7 -1.7
comp=Z,75nm,1.4s,mb5.4
D14A Greenough 52.03 353 ⇓P P 01 50 10.9 -0.7
baz=52,SNR=19
D13A Huson 52.16 353 ⇓P P 01 50 11.6 -0.9
baz=52
E09A Wood Farm, Sta 52.17 349 ⇓P P 01 50 12.0 -0.6
baz=52
SLMT Seeley Lake 52.19 354 eP P 01 50 11.8 -1.0
HEBO Mount Hebo 52.22 344 eP P 01 50 15.4 +2.5
comp=Z,203nm,1.3s,mb5.9
D12A Red Ives Fores 52.24 352 ⇑P P 01 50 12.4 -0.7
baz=52
C20A Veseth Ranch, 52.27 358 ⇑P P 01 50 12.7 -0.6
baz=52,SNR=11
C22A Vida 52.27 0 ⇑P P 01 50 13.1 -0.2
baz=52
ERPA Erie 52.30 24 PFAKE 01 50 20.0 +6.3
ERPA LR LR
comp=Z,4µm,19.0s,MS5.5
HAWA Hanford 52.32 348 eP P 01 50 13.2 -0.6
comp=Z,82nm,1.3s,mb5.5
HAWA LR LR
comp=Z,8µm,19.0s,MS5.8
C17A Wharram Farm, 52.33 356 ⇓P P 01 50 13.2 -0.6
baz=52,SNR=52
C19A Slack Wire Ran 52.33 357 P P 01 50 13.3 -0.4
baz=52,SNR=17
C23A Lambert 52.33 1 ⇑P P 01 50 13.4 -0.3
baz=52
RSW Rattlesnake Hi 52.34 348 eP P 01 50 14.1 +0.3
SWMT Swartz Lake 52.51 353 eP P 01 50 13.7 -1.4
C16A Fuhringer Ranc 52.57 355 ⇑P P 01 50 15.1 -0.5
baz=53,SNR=22
C15A Salmond Ranch, 52.62 354 P P 01 50 15.4 -0.5
baz=53,SNR=24
EGMT Eagleton 52.66 357 eP P 01 50 15.4 -0.8
comp=Z,92nm,1.4s,mb5.5
EGMT LR LR
comp=Z,7µm,19.0s,MS5.8
C14A Swan Lake 52.74 353 ⇑P P 01 50 16.6 -0.2
baz=53
C13A Hot Springs 52.75 353 ⇑P P 01 50 16.6 -0.2
baz=53
JTMT Jette 52.78 353 eP P 01 50 16.0 -1.1
COWI Conover 52.80 15 eP P 01 50 16.6 -0.6
comp=Z,37nm,0.9s,mb5.3
COWI LR LR
comp=Z,3µm,19.0s,MS5.3
B22A Reddig Ranch S 52.83 360 ⇑P P 01 50 16.9 -0.6
baz=53
D08A Wollman Farm, 52.84 349 ⇓P P 01 50 17.4 -0.2
baz=53,SNR=12
YBMT Yellow Bay 52.86 353 eP P 01 50 16.9 -0.8
GLMI Grayling 52.94 19 eP P 01 50 16.2 -2.1
GLMI LR LR
comp=Z,4µm,19.0s,MS5.5
BSMT Bassoo Peak 52.95 353 eP P 01 50 17.6 -0.8
B17A L&G Farms, Che 52.99 356 ⇑P P 01 50 18.7 +0.1
baz=53,SNR=17
DGMT Dagmar 53.02 1 eP P 01 50 17.7 -1.2
comp=Z,94nm,1.0s,mb5.7
DGMT ePP PP 01 52 16.0 -2.7
DGMT LR LR
comp=Z,11µm,20.0s,MS5.9
BLMT Blacktail Moun 53.05 353 eP P 01 50 18.5 -0.6
OD2 Odessa Site #2 53.12 349 eP P 01 50 18.5 -1.1
C11A Tepee Creek (N 53.14 351 ⇓P P 01 50 19.1 -0.7
baz=53
B15A Bradely Ranch, 53.15 355 ⇓P P 01 50 19.7 -0.1
baz=53,SNR=16
LON Longmire 53.16 346 eP P 01 50 19.3 -0.6
comp=Z,64nm,1.2s,mb5.4
LON Longmire 53.16 346 eP P 01 50 19.3 -0.6
LON pmax pmax
comp=Z,64nm,1.2s,mb5.4
B16A M & M Farms, S 53.18 355 ⇓P P 01 50 19.9 -0.1
baz=53,SNR=12
B14A Marquette Ranc 53.27 354 ⇑P P 01 50 21.1 +0.3
baz=53,SNR=50
B13A Whitefish 53.42 353 ⇓P P 01 50 21.8 0.0
baz=53,SNR=10
C09A Chrisman Ranch 53.43 350 ⇓P P 01 50 21.9 0.0
baz=54,SNR=11
A24A Westby 53.48 2 ⇑P P 01 50 21.8 -0.4
baz=54
A19A Klindworth Far 53.51 358 ⇑P P 01 50 22.1 -0.3
baz=54
A22A Carney Farms, 53.52 0 ⇑P P 01 50 22.3 -0.3
baz=54
A21A Bergtoll Ranch 53.52 359 ⇑P P 01 50 22.5 -0.1
baz=54
A18A Metzger Ranch, 53.55 357 ⇓P P 01 50 21.9 -0.9
baz=54
AGMN Agassiz Nation 53.57 8 eP P 01 50 21.5 -1.4
comp=Z,39nm,1.0s,mb5.3
AGMN LR LR
comp=Z,14µm,20.0s,MS6.0
D05A Enumclaw 53.61 346 ⇑P P 01 50 23.9 +0.6
baz=54
A17A Triple J Farms 53.63 356 P P 01 50 22.8 -0.5
baz=54,SNR=41
ETW Entiat 53.64 348 eP P 01 50 23.1 -0.3
NEW Newport 53.69 351 ⇓P P 01 50 23.1 -0.6
baz=54,SNR=22
NEW Newport 53.69 351 eP P 01 50 22.4 -1.4
comp=Z,93nm,1.3s,mb5.6
NEW LR LR
comp=Z,13µm,19.0s,MS6.0
NEW Newport 53.69 351 eP P 01 50 22.4 -1.4
NEW pmax pmax
comp=Z,93nm,1.3s
NEW MLR MLR
comp=Z,13µm,19.0s
A16A West Butte Ran 53.70 355 ⇓P P 01 50 23.2 -0.6
baz=54
A15A Johnson Ranch, 53.83 354 ⇑P P 01 50 23.6 -1.2
baz=54,SNR=51
BBSR BB Station 53.85 44 eP P 01 50 25.8 +0.5
comp=Z,306nm,1.6s,mb6.0
BBSR LR LR
comp=Z,3µm,21.0s,MS5.3
A14A Double T Ranch 53.89 354 ⇓P P 01 50 25.1 -0.2
baz=54,SNR=27
EYMN Ely 54.00 12 eP P 01 50 25.1 -0.9
comp=Z,73nm,1.1s,mb5.5
EYMN LR LR
comp=Z,4µm,19.0s,MS5.5
WALA Waterton Lakes 54.03 354 eP P 01 50 25.9 -0.3
comp=Z,1.5nm,1.0s
BINY Binghamton 54.11 27 eP P 01 50 27.1 +0.1
comp=Z,46nm,1.0s,mb5.4
BINY LR LR
comp=Z,4µm,20.0s,MS5.5
GNW Green Mountain 54.16 346 eP P 01 50 26.2 -1.1
comp=Z,24nm,1.2s,mb5.0
B08A Colville Reser 54.16 349 ⇑P P 01 50 26.3 -0.9
baz=54,SNR=12
PAL Palisades 54.17 30 eP P 01 50 27.5 0.0
comp=Z,42nm,1.1s,mb5.3
PAL Palisades 54.17 30 eP P 01 50 27.5 0.0
PAL pmax pmax
comp=Z,42nm,1.1s,mb5.3
NLWA Neilton Lookou 54.26 345 eP P 01 50 27.9 -0.1
NLWA LR LR
comp=Z,9µm,21.0s,MS5.8
POHA Pohakuloa 54.45 298 PFAKE 01 50 40.0 +10
POHA LR LR
comp=Z,8µm,22.0s,MS5.8
JCW Jim Creek 54.55 347 eP P 01 50 29.2 -0.8
RAR Rarotonga 54.62 247 LR LR 02 07 41.3
comp=Z,4µm,19.3s,MS5.5,baz=36,slow=29
RAR Rarotonga 54.62 247 PFAKE 01 50 40.0 +8.8
RAR LR LR
comp=Z,4µm,20.0s,MS5.5
PGC Sidney 55.33 346 eP P 01 50 35.7 0.0
comp=Z,6.0nm,1.4s,mb4.4
ULM Lac du Bonnet 55.47 8 P P 01 50 35.0 -1.7
comp=Z,34nm,1.0s,mb5.3,baz=215,slow=7.4,SNR=19
ULM LR LR 02 12 36.4
comp=Z,11µm,20.0s,MS5.9,baz=192,slow=34
ULM Lac du Bonnet 55.47 8 eP P 01 50 35.0 -1.7
comp=Z,39nm,1.0s,mb5.4
ULM LR LR
comp=Z,14µm,20.0s,MS6.0
ACCN Adirondack Com 56.10 28 eP P 01 50 41.4 0.0
comp=Z,56nm,1.1s,mb5.5
NCB Newcomb 56.30 27 eP P 01 50 43.3 +0.6
comp=Z,59nm,1.4s,mb5.4
NCB LR LR
comp=Z,5µm,22.0s,MS5.6
WES Weston 56.49 30 eP P 01 50 43.6 -0.6
comp=Z,44nm,1.2s,mb5.4
WES Weston 56.49 30 eP P 01 50 43.6 -0.6
WES pmax pmax
comp=Z,44nm,1.2s,mb5.4
LONY Lake Ozonia 56.64 26 eP P 01 50 45.4 +0.2
comp=Z,36nm,1.4s,mb5.2
LONY LR LR
comp=Z,4µm,19.0s,MS5.5
MDV Middlebury 56.80 28 eP P 01 50 46.5 +0.2
MSNY Massena 56.81 26 eP P 01 50 47.5 +1.1
comp=Z,164nm,0.9s,mb6.1
HNH Hanover 57.00 29 eP P 01 50 48.9 +1.1
KIP Kipapa 57.22 299 PFAKE 01 51 00.0 +10
KIP LR LR
comp=Z,5µm,20.0s,MS5.6
FRNY Flat Rock 57.25 27 eP P 01 50 48.9 -0.7
comp=Z,47nm,1.1s,mb5.4
LBNH Lisbon 57.57 28 eP P 01 50 52.0 +0.3
comp=Z,16nm,0.9s,mb5.0
LBNH LR LR
comp=Z,7µm,21.0s,MS5.8
LBNH Lisbon 57.57 28 eP P 01 50 52.0 +0.2
LBNH pmax pmax
comp=Z,16nm,0.9s,mb5.0
LBNH MLR MLR
comp=Z,7µm,21.0s,MS5.8
BDFB Brasilia 57.91 105 P P 01 50 56.0 +1.3
comp=Z,24nm,1.1s,mb5.1,baz=298,slow=9.6,SNR=12
BDFB LR LR 02 13 38.0
comp=Z,8µm,18.4s,MS5.8,baz=76,slow=34
BDFB Brasilia 57.91 105 P P 01 50 56.0 +1.3
BDFB pmax pmax
comp=Z,24nm,1.1s
USHA Ushuaia 58.38 156 LR LR 02 10 23.7
comp=Z,12µm,20.5s,MS6.0,baz=302,slow=30
WVL Waterville 58.91 30 eP P 01 51 00.9 -0.2
comp=Z,22nm,1.0s,mb5.1
SPB Sao Paulo 59.35 115 PFAKE 01 51 20.0 +15
SPB LR LR
comp=Z,8µm,19.0s,MS5.9
FFC Flin Flon 59.36 3 eP P 01 51 02.6 -1.5
comp=Z,42nm,1.3s,mb5.3
FFC LR LR
comp=Z,10µm,22.0s,MS5.9
FFC Flin Flon 59.36 3 eP P 01 51 02.6 -1.4
FFC pmax pmax
comp=Z,43nm,1.3s,mb5.3
FFC MLR MLR
comp=Z,10µm,22.0s,MS5.9
PKME Peaks-Kenny Pk 59.59 29 eP P 01 51 06.5 +0.6
comp=Z,8.9nm,0.7s,mb4.9
PKME LR LR
comp=Z,8µm,22.0s,MS5.8
WRAK Wrangell Islan 64.67 344 PFAKE 01 51 50.0 +10
WRAK LR LR
comp=Z,4µm,20.0s,MS5.6
AFI Afiamalu 65.39 257 LR LR 02 12 19.6
comp=Z,3µm,22.0s,MS5.5,baz=81,slow=29
AFI Afiamalu 65.39 257 PFAKE 01 52 00.0 +15
AFI LR LR
comp=Z,4µm,22.0s,MS5.5
DLBC Dease Lake 65.87 346 LR LR 02 18 04.5
comp=Z,7µm,18.1s,MS5.9,baz=147,slow=34
DLBC Dease Lake 65.87 346 eP P 01 51 46.4 -1.1
JOHN Johnston Islan 66.30 290 PFAKE 01 52 00.0 +8.9
JOHN LR LR
comp=Z,7µm,21.0s,MS5.8
PMSA Palmer Station 66.92 162 PFAKE 01 52 10.0 +16
PMSA LR LR
comp=Z,18µm,20.0s,MS6.3
YKA Yellowknife Ar 67.38 356 P P 01 51 55.4 -1.6
comp=Z,35nm,1.0s,mb5.3,baz=163,slow=6.4,SNR=16
YKA LR LR 02 19 19.6
comp=Z,529nm,18.0s,MS4.8,baz=20,slow=34
YKA Yellowknife Ar 67.38 356 P P 01 51 55.4 -1.6
YKA LR LR 02 19 19.6
YKA Yellowknife Ar 67.38 356 P P 01 51 55.4 -1.6
YKA pmax pmax
comp=Z,35nm,1.0s
SCHQ Schefferville 67.66 23 P P 01 51 58.5 -0.5
comp=Z,28nm,1.1s,mb5.2,baz=234,slow=6.5,SNR=5.9
SCHQ LR LR 02 20 24.3
comp=Z,4µm,21.0s,MS5.6,baz=236,slow=35
SCHQ Schefferville 67.66 23 eP P 01 51 59.6 +0.6
comp=Z,104nm,1.6s,mb5.6
SCHQ LR LR
comp=Z,5µm,21.0s,MS5.8
RCBR Riachuelo 69.75 94 PFAKE 01 52 20.0 +7.1
RCBR LR LR
comp=Z,7µm,20.0s,MS5.9
KDAK Kodiak Island 72.70 336 LR LR 02 17 20.9
comp=Z,13µm,18.1s,MS6.2,baz=166,slow=30
KDAK Kodiak Island 72.70 336 PFAKE 01 52 40.0 +10
KDAK LR LR
comp=Z,13µm,20.0s,MS6.2
DAWY Dawson 73.03 345 eP P 01 52 31.0 -0.6
SLKM Skilak Lake 73.63 339 eP P 01 52 34.6 -0.6
SLKM Skilak Lake 73.63 339 eP P 01 52 34.6 -0.6
SML Sawmill 73.89 341 eP P 01 52 38.0 +1.2
comp=Z,21nm,1.4s,mb4.9
SML Sawmill 73.89 341 eP P 01 52 38.0 +1.2
SML pmax pmax
comp=Z,21nm,1.4s,mb4.9
DOT Dot Lake 73.95 343 eP P 01 52 36.8 -0.3
comp=Z,104nm,1.0s,mb5.7
PMR Palmer 74.01 340 eP P 01 52 36.3 -1.1
comp=Z,81nm,1.1s,mb5.6
PMR Palmer 74.01 340 eP P 01 52 36.3 -1.1
PMR pmax pmax
comp=Z,81nm,1.1s,mb5.6
EGAK Eagle 74.05 345 eP P 01 52 36.8 -0.9
comp=Z,73nm,1.1s,mb5.5
EGAK LR LR
comp=Z,5µm,21.0s,MS5.8
FUNA Funafuti 74.32 263 PFAKE 01 52 50.0 +10
FUNA LR LR
comp=Z,8µm,19.0s,MS6.0
RSO Redoubt South 74.53 338 eP P 01 52 39.4 -1.1
comp=Z,70nm,0.9s,mb5.6
MSVF Nonsavu 75.21 253 PFAKE 01 53 00.0 +15
MSVF LR LR
comp=Z,2µm,20.0s,MS5.4
INK Inuvik 75.39 350 P P 01 52 44.5 -0.8
comp=Z,34nm,1.1s,mb5.2,baz=138,slow=7.3,SNR=16
INK LR LR 02 23 30.4
comp=Z,10µm,18.5s,MS6.1,baz=149,slow=34
INK Inuvik 75.39 350 eP P 01 52 44.6 -0.8
comp=Z,60nm,1.0s,mb5.5
INK Inuvik 75.39 350 P P 01 52 44.6 -0.7
INK pmax pmax
comp=Z,34nm,1.1s
MCK McKinley 75.47 342 eP P 01 52 45.1 -0.7
comp=Z,42nm,1.0s,mb5.3
MCK McKinley 75.47 342 eP P 01 52 45.1 -0.8
MCK pmax pmax
comp=Z,42nm,1.0s,mb5.3
ILAR Eielson Array 75.61 343 P P 01 52 43.9 -2.8
comp=Z,10nm,1.0s,mb4.7,baz=157,slow=4.5,SNR=38
ILAR LR LR 02 20 07.2
comp=Z,4µm,20.4s,MS5.7,baz=134,slow=31
ILAR Eielson Array 75.61 343 P P 01 52 43.9 -2.8
ILAR pmax pmax
comp=Z,10.0nm,1.0s
TRF Thorofare Moun 75.70 341 eP P 01 52 46.6 -0.6
comp=Z,39nm,1.0s,mb5.3
PPLA Purkeypile 75.95 340 eP P 01 52 47.8 -0.9
comp=Z,94nm,1.3s,mb5.6
COLA College 75.97 343 PFAKE 01 53 00.0 +11
COLA LR LR
comp=Z,3µm,20.0s,MS5.7
MIDW Midway 75.99 300 PFAKE 01 53 00.0 +10
MIDW LR LR
comp=Z,4µm,20.0s,MS5.7
SVW2 Sparrevohn 76.00 338 eP P 01 52 54.0 +5.0
comp=Z,68nm,1.9s,mb5.2
BPAW Bear Paw Mtn. 76.37 341 eP P 01 52 50.2 -0.9
comp=Z,17nm,0.9s,mb5.0
URZ Urewera 76.79 232 LR LR 02 21 19.1
comp=Z,4µm,18.2s,MS5.8,baz=106,slow=32
TTA Tatalina 77.30 339 eP P 01 52 56.4 +0.1

TTA	Tatalina	77.30	339	eP	P	01 52 56.4	+0.1
COLD	Coldfoot	78.33	344	eP	P	01 53 02.2	+0.2
	comp=Z,58nm,1.1s,mb5.4						
SNZO	South Karori	78.85	229	PFAKE		01 53 20.0	+15
SNZO				LR	LR		
	comp=Z,5μm,22.0s,MS5.8						
SFJD	Kangerlussuaq	81.55	19	PFAKE		01 53 30.0	+11
SFJD				LR	LR		
	comp=Z,5μm,22.0s,MS5.8						
SACV	Santiago Islan	83.88	74	PFAKE		01 53 40.0	+7.4
SACV				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
SBA	Scott Base	84.81	192	eP	P	01 53 40.6	+4.5
	comp=Z,98nm,1.8s,mb5.6						
SBA				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
SBA	Scott Base	84.81	192	eP	P	01 53 40.6	+4.5
SBA				pmax	pmax		
	comp=Z,98nm,1.8s,mb5.6						
SBA				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.5						
QSPA	South Pole Qui	85.31	180	eP	P	01 53 43.1	+4.5
	comp=Z,50nm,1.0s,mb5.6						
QSPA				LR	LR		
	comp=Z,6μm,21.0s,MS5.9						
DZM	Mont Dzumac	85.99	248	ePP	PP	01 56 59.7	-3.5
	comp=Z,131nm,26.2s						
DZM				eS	S	02 04 17.8	+0.2
	comp=Z,909nm,25.9s						
DZM				eSS	SS	02 09 55.9	+0.3
	comp=Z,3μm,26.0s						
DZM				eLQ		02 17 01.0	
	comp=Z,6μm,30.4s						
DZM				eLR	LR	02 20 44.6	
	comp=Z,4μm,26.5s						
SUMG	Summit	87.92	16	i P	P	01 53 52.5	+1.1
	comp=Z,23nm,0.9s,mb5.4						
WAKE	Wake Island	89.06	289	PFAKE		01 54 10.0	+12
WAKE				LR	LR		
	comp=Z,5μm,19.0s,MS5.9						
TRIS	Tristan da Cun	90.10	127	PFAKE		01 54 10.0	+7.5
TRIS				LR	LR		
	comp=Z,5μm,20.0s,MS5.9						
HNR	Honiara	93.23	260	PFAKE		01 54 30.0	+13
HNR				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
DRV	Dumont d'Urvil	94.94	201	S	S	02 05 48.0	+10
DRV				SS	SS	02 12 13.0	+11
DRV				L		02 21 00.0	
DRV				R		02 27 00.0	
JMIC	Jan Mayen	96.90	19	LR	LR	02 35 27.6	
	comp=Z,1μm,19.7s,MS5.5,baz=63,slow=34						
PET	Petropavlovsk	97.00	323	PFAKE		01 54 40.0	+6.2
PET				LR	LR		
	comp=Z,4μm,21.0s,MS5.9						
PET	Petropavlovsk	97.00	323	eP	P	01 54 35.5	+1.7
PET				e		01 58 32.5	
PET				e		02 05 07.5	
PET				eS	S	02 05 53.2	-3.3
PET				ePS	PS	02 07 19.4	+0.5
PET				ePPS		02 07 54.7	
PET				eSS	SS	02 12 37.0	+4.3
PET				pmax	pmax		
	comp=Z,200nm,18.0s						
PET				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.5						
PETK	Petropavlovsk-	97.57	323	LR	LR	02 30 20.8	
	comp=Z,3μm,21.2s,MS5.8,baz=89,slow=30						
PMAFR	Mafra	98.18	51	ePP	PP	01 58 22.7	-16
PMAFR				eSKSac	SKSac	02 05 24.0	+6.3
PMAFR				i P		02 07 35.0	
PMAFR				eLQ		02 22 11.5	
PMAFR				eLR	LR	02 27 13.9	
	comp=Z,3μm,21.1s						
PFVI	Vila Bisbo	98.55	53	ePP	PP	01 58 42.3	+0.4
PFVI				i P		02 07 37.8	
PFVI				eLR	LR	02 27 26.9	
	comp=Z,2μm,22.5s						
MORF	Marmelete	98.69	53	i P	PS	02 07 46.6	+8.6
MORF				eSS	SS	02 13 04.9	+7.4
MORF				eLQ		02 23 09.5	
MORF				eLR	LR	02 27 38.8	
	comp=Z,2μm,21.2s						
PCVE	Castro Verde	99.17	53	eSKSac	SKSac	02 05 30.4	+7.7
PCVE				eSS	SS	02 13 09.1	+4.9
PCVE				eLQ		02 23 09.3	
PCVE				eLR	LR	02 27 45.7	
	comp=Z,3μm,22.5s						
PBDV	Barranco-do-Ve	99.27	53	ePP	PP	01 58 47.7	+0.4
PBDV				eSKSac	SKSac	02 05 35.0	+12
PBDV				eSS	SS	02 13 15.7	+10
PBDV				eLQ		02 22 54.7	
PBDV				eLR	LR	02 27 53.8	
	comp=Z,2μm,20.0s						
CAN	Canberra	99.43	233	PFAKE		01 55 00.0	+15
CAN				LR	LR		
	comp=Z,3μm,21.0s,MS5.7						
PVAQ	Vaqueiros	99.43	53	ePP	PP	01 58 47.5	-1.1
PVAQ				eSKSac	SKSac	02 05 27.2	+3.2
PVAQ				i P		02 07 55.0	
PVAQ				eSS	SS	02 13 14.0	+6.1
PVAQ				eLQ		02 23 15.1	
PVAQ				eLR	LR	02 27 56.0	
	comp=Z,3μm,21.0s						
MTE	Manteigas	99.49	50	ePP	PP	01 58 42.0	-6.9
MTE				i P		02 07 35.8	
MTE				i P		02 13 18.1	
MTE				eLQ		02 23 13.4	
MTE				eLR	LR	02 28 13.8	
	comp=Z,1μm,30.2s						
MTE	Manteigas	99.49	50	PFAKE		01 55 00.0	+15
MTE				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
PESTR	Estremoz	99.50	52	ePP	PP	01 58 48.1	-0.9
PESTR				eLR	LR	02 27 52.9	
	comp=Z,3μm,22.7s						
PMRV	Marv??o	99.64	51	ePP	PP	01 58 49.7	-0.4
PMRV				eLQ		02 23 34.8	
PMRV				eLR	LR	02 27 58.7	
	comp=Z,3μm,22.8s						
KBS	Kingsbay	99.84	10	PFAKE		01 55 00.0	+13
KBS				LR	LR		
	comp=Z,4μm,20.0s,MS5.9						
MVO	Moncorvo	99.85	49	ePP	PP	01 58 52.2	+0.6
MVO				i P		02 07 53.3	
MVO				i P		02 13 18.8	
MVO				eLQ		02 22 24.4	
MVO				eLR	LR	02 27 51.9	
	comp=Z,2μm,19.3s						
PBAR	Barrancos	99.95	52	ePP	PP	01 58 52.8	+0.3
PBAR				eLR	LR	02 23 20.8	
	comp=Z,3μm,21.8s						
PBAR				eLR	LR	02 28 05.5	
	comp=Z,3μm,21.8s						
RTC	Rabat Centre	100.20	56	PFAKE		01 55 00.0	+12
RTC				LR	LR		
	comp=Z,4μm,22.0s,MS5.8						
SFS	San Fernando	100.67	54	PFAKE		01 55 00.0	+10
SFS				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
ESK	Eskdalemuir	101.16	35	PFAKE		01 55 00.0	+7.6
ESK				LR	LR		
	comp=Z,2μm,20.0s,MS5.5						
DBIC	Dimbokro	101.57	84	PFAKE		01 55 10.0	+16
DBIC				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
PAB	San Pablo	101.98	51	PFAKE		01 55 10.0	+14
PAB				LR	LR		
	comp=Z,3μm,22.0s,MS5.8						
ESDC	Sonseca Array	102.27	51	PP	PP	01 59 21.3	+11
	comp=Z,6.4nm,1.2s,baz=282,slow=7.2,SNR=6.4						
ESLA	Sonseca Array	102.27	51	PFAKE		01 55 10.0	+13
ESLA				LR	LR		
	comp=Z,16μm,22.0s,MS6.5						
CASY	Casey	104.41	194	PFAKE		01 55 20.0	+13
CASY				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
CTAO	Charters Tower	104.93	248	PFAKE		01 55 20.0	+11
CTAO				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
TIXI	Tiksi	105.06	344	PFAKE		01 55 20.0	+10
TIXI				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
PMG	Port Moresby	105.77	259	PFAKE		01 59 40.0	+13
PMG				LR	LR		
	comp=Z,2μm,21.0s,MS5.6						
KONO	Kongsberg	106.82	29	PFAKE		01 59 40.0	+13
KONO				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
NAO01	NORSAR Array S	107.00	27	PFAKE		01 59 40.0	+12
NAO01				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
MAW	Mawson	107.38	176	PFAKE		01 59 40.0	+12
MAW				LR	LR		
	comp=Z,9μm,22.0s,MS6.3						
WLF	Walferdange	107.85	39	PFAKE		01 59 40.0	+10
WLF				LR	LR		
	comp=Z,2μm,20.0s,MS5.6						
YSS	Yuzh-Sakhalins	107.91	318	PFAKE		01 59 40.0	+10
YSS				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
TORD	Torodi Ar. Bea	108.27	78	PP	PP	01 59 54.5	-0.6
	comp=Z,2.8nm,1.2s,baz=287,slow=2.5,SNR=7.7						
TORD				PKKPbc	PKKPbc	02 10 50.0	+7.8
	comp=Z,0.5nm,1.0s,baz=27,slow=3.6,SNR=3.5						
KEV	Kevo	108.28	16	PFAKE		01 59 40.0	+10
KEV				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
ERM	Erimo	108.62	313	PFAKE		01 59 40.0	+8.6
ERM				LR	LR		
	comp=Z,5μm,19.0s,MS6.1						
ECH	Echery	108.85	41	PFAKE		01 59 40.0	+8.4
ECH				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
BNI	Bardonecchia	109.28	44	PFAKE		01 59 40.0	+7.5
BNI				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
BFO	Black Forest	109.58	40	PFAKE		01 59 40.0	+7.0
BFO				LR	LR		
	comp=Z,2μm,21.0s,MS5.6						
GUMO	Guam	109.70	283	PFAKE		01 59 50.0	+16
GUMO				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
YAK	Yakutsk	109.73	336	PFAKE		01 59 40.0	+7.2
YAK				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
TUE	Stuetta	110.74	42	PFAKE		01 59 50.0	+15
TUE				LR	LR		
	comp=Z,2μm,22.0s,MS5.7						
MOX	Moxa	110.94	37	e(PKP)		02 00 09.6	
MOX				eS	PS	02 09 41.0	-3.5
MOX							
	comp=Z,1μm,21.0s						
GRF	Grafenberg Arr	111.01	38	ePP	PP	02 00 10.0	-3.8
GRF				eL		02 46 18.6	
	comp=Z,2μm,18.8s						
APA	Apatity	111.49	16⇑	i PKIKP	PKiKP	01 59 31.7	-4.3
APA				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.8						
LVZ	Lovozero	111.58	15	PFAKE		01 59 50.0	+14
LVZ				LR	LR		
	comp=Z,3μm,21.0s,MS5.8						
NKC	Novy Kostel	111.58	37	eSP	SP	02 09 46.0	-2.4
NKC				eSS	SS	02 15 59.3	+6.5
NKC				AMS	AMS	02 43 40.0	
	comp=Z,1μm,18.6s						
TAM	Tamanrasset	111.65	67	PFAKE		01 59 50.0	+12
TAM				LR	LR		
	comp=Z,2μm,21.0s,MS5.6						
VLC	Villacollemand	112.07	44	PFAKE		01 59 50.0	+12
VLC				LR	LR		
	comp=Z,1μm,22.0s,MS5.5						
BRG	Berggiesshubel	112.25	36	e(P)	PKiKP	02 00 03.7	+26
	comp=Z,4.3nm,1.1s						
BRG				e		02 00 19.1	
	comp=Z,4.3nm,1.1s						
BRG				e		02 00 19.1	
	comp=Z,32nm,2.0s						
BRG				e		02 10 00.0	
BRG				e		02 16 08.0	
VSL	Villasalto	112.49	49	PFAKE		01 59 50.0	+11
VSL				LR	LR		
	comp=Z,1μm,21.0s,MS5.4						
KHC	Kasperske Hory	112.64	38	ePP	PP	02 00 32.5	+7.0
KHC				eSP	SP	02 09 58.4	+0.1
KHC				eSS	SS	02 16 04.7	-2.3
KHC				AMS	AMS	02 45 20.0	
	comp=Z,1μm,20.4s						
PVCC	Panska Ves	112.75	37	eSP	SP	02 09 53.3	-5.8
PVCC				AMS	AMS	02 52 30.0	
	comp=Z,2μm,19.2s						
GERES	GERESS Array B	112.82	39	PKKPbc	PKKPbc	02 10 41.5	+13
	comp=Z,0.3nm,0.6s,baz=142,slow=6.8,SNR=4.4						
PRA	Prague	112.83	37	PP	PP	02 00 31.0	+4.2
PRA				SS	SS	02 16 18.0	+8.6
PRA				AMS	AMS	02 46 00.0	
PRU	Pruhonice	112.93	37	ePP	PP	02 00 30.4	+2.9
PRU				eSP	SP	02 10 03.3	+2.5
PRU				eSS	SS	02 16 18.1	+7.4
PRU				AMS	AMS	02 46 20.0	
	comp=Z,1μm,20.3s						
FINES	FINESS Array B	113.14	23	PP	PP	02 00 28.7	+0.2
	comp=Z,2.0nm,0.9s,baz=262,slow=3.9,SNR=4.5						
MJAR	Matsushiro Arr	113.46	308	PP	PP	02 00 39.5	+7.7
	comp=Z,1.1nm,0.3s,baz=75,slow=3.8,SNR=4.0						
MAJO	Matsushiro	113.46	308	PFAKE		01 59 50.0	+9.3
MAJO				LR	LR		
	comp=Z,4μm,21.0s,MS5.9						
UPC	Upice	113.61	36	ePP	PP	02 00 37.5	+5.2
TREC	Trest	113.76	38	eSP	SP	02 10 03.7	-4.7
TREC				AMS	AMS	02 52 40.0	
	comp=Z,1μm,18.4s						
DPC	Dobruska-Polom	113.86	36	ePP	PP	02 00 39.8	+5.8
DPC				eSDIF	Sdif	02 08 20.5	+3.0
DPC				eSP	SP	02 10 02.7	-6.6
DPC				AMS	AMS	02 46 10.0	
	comp=Z,2μm,18.7s						
AQU	L'Aquila	114.69	45	PFAKE		01 59 50.0	+7.1
AQU				LR	LR		
	comp=Z,3μm,21.0s,MS5.8						
OKC	Ostrava-Krasne	115.14	36	ePP	PP	02 00 49.0	+5.9
OKC				eSP	SP	02 10 16.9	-4.1
OKC				AMS	AMS	02 55 00.0	
	comp=Z,1μm,19.1s						
ASAR	Alice Springs	115.19	241	PKP	PKiKP	01 59 45.2	+0.8
	comp=Z,0.6nm,0.8s,baz=95,slow=2.2,SNR=5.5						
ASAR				PKKPbc	PKKPbc	02 10 24.1	+4.5
	comp=Z,0.9nm,0.9s,baz=300,slow=4.0,SNR=6.7						
ASAR	Alice Springs	115.19	241	PKIKP	PKiKP	01 59 45.2	+0.8
ASAR						02 10 24.2	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	115.87	245	PKP	PKPdf	01 59 44.7	-1.1
	comp=Z,1.0nm,0.7s,baz=102,slow=2.1,SNR=18						
WRA				PKKPbc	PKKPbc	02 10 22.7	+5.5
	comp=Z,1.2nm,1.0s,baz=300,slow=2.9,SNR=6.3						
WRA	Warramunga Arr	115.87	245	PKP	PKPdf	01 59 44.7	-1.1
WRA				PKKPbc	PKKPbc	02 10 22.7	+5.5
WRA	Warramunga Arr	115.87	245	PKIKP	PKPdf	01 59 44.7	-1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VYHS	Vyhne	116.10	37	eP	PKPpre	01 59 29.2	
VYHS				ePP	PP	02 00 54.2	+4.3
VYHS	Vyhne	116.10	37	ePKIKP	PKPpre	01 59 29.2	
VYHS				e		02 00 54.2	
VYHS	Vyhne	116.10	37	e	PKPpre	01 59 29.2	
VYHS				ePP	PP	02 00 54.2	+4.3
PSZ	Piszkesteto	116.99	38	PFAKE		02 00 00.0	+13
PSZ				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
CUC	Castrocucco	117.14	47	PFAKE		02 00 00.0	+12
CUC				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
WDD	Wield Dalam	117.32	52	PFAKE		02 00 00.0	+12
WDD				LR	LR		
	comp=Z,1μm,22.0s,MS5.4						
MDJ	Mudanjiang	117.38	318	Pdif	Pdif	01 56 03.4	-1.1
MDJ				SS	SS	02 17 11.3	+1.9
MDJ				LR	LR		
	comp=Z,3μm,20.7s,MS5.9						
MDJ	Mudanjiang	117.38	318	PFAKE		02 00 00.0	+12
MDJ				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
SUR	Sutherland	117.47	130	PFAKE		02 00 00.0	+11
SUR				LR	LR		
	comp=Z,5μm,19.0s,MS6.2						
CRVS	Cervenica-Dubn	117.50	36	ePKP	PKPdf	01 59 51.1	+3.0
CRVS				ePP	PP	02 01 01.1	+1.5
CRVS	Cervenica-Dubn	117.50	36	ePKIKP	PKPdf	01 59 51.1	+3.0
CRVS				e		02 01 01.1	
CRVS	Cervenica-Dubn	117.50	36	ePKP	PKPdf	01 59 51.0	+2.9
CRVS				ePP	PP	02 01 01.1	+1.5
CEL	Celeste	117.72	49	PFAKE		02 00 00.0	+11
CEL				LR	LR		
	comp=Z,903nm,19.0s,MS5.4						
KWP	Kalwaria Pacla	117.88	35	PFAKE		02 00 00.0	+11
KWP				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
UZH	Uzhgorod	118.11	36	i PKIKP	PKPdf	01 59 50.7	+1.4
UZH				e		02 01 09.7	
UZH				e		02 06 42.0	
UZH				i		02 10 47.0	
KLMR	Klimovskoe	118.28	18	ePKIKP	PKPdf	01 59 53.5	+4.3
KLMR				e		02 01 04.3	
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TIR	Tirane	119.58	45	PFAKE		02 00 00.0	+7.7
TIR				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
TSUM	Tsumeb	119.60	115	PFAKE		02 00 00.0	+7.0
TSUM				LR	LR		
	comp=Z,4μm,20.0s,MS6.0						
CN2	Changchun	120.44	319	ePKP	PKPdf	01 59 55.1	+1.2
CN2				ePP	PP	02 01 24.4	+4.3
CN2				SS	SS	02 17 49.6	+0.7
CN2				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
KIEV	Kiev	120.88	31	PFAKE		02 00 10.0	+15
KIEV				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
AKASG	Malin Array Be	120.88	31	PKP	PKPdf	01 59 55.5	+1.0
	comp=Z,0.2nm,0.3s,baz=278,slow=3.3,SNR=4.2						
AKASG				PP	PP	02 01 17.3	-5.5
	comp=Z,0.5nm,0.4s,baz=319,slow=6.1,SNR=3.1						
AKASG	Malin Array Be	120.88	31	PKP	PKPdf	01 59 55.5	+1.0
AKASG				PP	PP	02 01 17.3	-5.5
AKASG	Malin Array Be	120.88	31	PKIKP	PKPdf	01 59 55.5	+1.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSRS	Korea Array	121.13	311	PKP	PKPdf	01 59 57.1	+1.6
	comp=Z,0.5nm,0.3s,baz=146,slow=0.4,SNR=2.7						
KSRS	Korea Array	121.13	311	PKIKP	PKPdf	01 59 57.1	+1.7
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HIA	Hailar	121.19	327	PFAKE		02 00 10.0	+15
HIA				LR	LR		
	comp=Z,4μm,22.0s,MS6.0						
OBN	Obninsk	121.46	24	PFAKE		02 00 10.0	+14
OBN				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
OBN	Obninsk	121.46	24⇓	i PKIKP	PKPdf	02 00 02.5	+7.0
OBN						02 01 28.0	
OBN				ePS	PS	02 11 13.6	-6.1
OBN				eSS	SS	02 18 04.1	+3.2
OBN				eSSS		02 22 30.1	
OBN				pmax	pmax		
	comp=Z,26nm,1.5s						
OBN				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.8						
INCN	Inchon	122.08	312	PFAKE		02 00 10.0	+13
INCN				LR	LR		
	comp=Z,4μm,22.0s,MS6.0						
BOSA	Boshof	122.58	128	PKP	PKPdf	02 00 00.9	+2.5
	comp=Z,2.9nm,1.0s,baz=326,slow=3.6,SNR=2.8						
BOSA	Boshof	122.58	128	PKP	PKPdf	02 00 00.9	+2.5
BOSA				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
BOSA	Boshof	122.58	128	PKIKP	PKPdf	02 00 01.0	+2.5
BOSA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LBTB	Lobatse	124.44	125	PFAKE		02 00 10.0	+7.8
LBTB				LR	LR		
	comp=Z,5μm,20.0s,MS6.2						
NWAO	Narrogin (SRO)	124.49	224	PFAKE		02 00 10.0	+7.9
NWAO				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
VSR	Storozhevoye	125.34	26	ePKIKP	PKPdf	02 00 05.0	+1.9
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=N,2.0nm,0.5s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.5s						
VSR				MLR	MLR		
	comp=N,1μm,22.0s,MS5.6						
VSR				MLR	MLR		
	comp=E,1μm,22.0s,MS5.6						
VSR				MLR	MLR		
	comp=Z,3μm,22.0s,MS5.9						
PAF	Port-aux-Franc	126.02	177	PFAKE		02 00 20.0	+16
PAF				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
SIM	Simferopol'	126.93	35	i PKIKP	PKPdf	02 00 12.4	+6.1
SIM				e		02 02 12.0	
SIM				eSS	SS	02 19 03.0	-7.6
SIM				pmax	pmax		
	comp=Z,15nm,1.1s						
SIM				pmax	pmax		
	comp=Z,60nm,17.3s						
ARU	Arti	127.02	11	PFAKE		02 00 20.0	+14
ARU				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
ARU	Arti	127.02	11	i PKIKP	PKPdf	02 00 01.6	-4.5
ARU				MLR	MLR		
	comp=Z,3μm,22.0s,MS5.9						
TLY	Talaya	127.14	337	PFAKE		02 00 20.0	+14
TLY				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
BJI	Beijing	128.31	319	PKP	PKPdf	02 00 08.9	-0.2
BJI				SKS	SKSdf	02 07 20.6	-0.5
BJI				LR	LR		
	comp=Z,4μm,24.0s,MS6.0						
MBWA	Marble Bar	128.31	238	PFAKE		02 00 20.0	+10
MBWA				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
BJT	Baijiatuau	128.32	319	PFAKE		02 00 20.0	+11
BJT				LR	LR		
	comp=Z,4μm,20.0s,MS6.1						
ULN	Ulaanbaatar	128.56	332	PFAKE		02 00 20.0	+11
ULN				LR	LR		
	comp=Z,3μm,21.0s,MS6.0						
DAV	Davao City (W)	128.68	275	PFAKE		02 00 20.0	+9.5
DAV				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
ANN	Anapa	128.87	33	ePKIKP	PKPdf	02 00 09.9	-0.1
SONM	Songino Array	128.89	332	PKP	PKPdf	02 00 09.8	-0.2
	comp=Z,2.1nm,1.1s,baz=33,slow=5.5,SNR=7.1						
SONM	Songino Array	128.89	332	PKIKP	PKPdf	02 00 09.8	-0.2
SONM				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NVS	Novosibirsk	129.50	353	ePKIKP	PKPdf	02 00 16.0	+5.1
NVS				pmax	pmax		
	comp=Z,10.0nm,1.8s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.4s						
BR131	Keskin Array S	129.64	40	ePKPdf	PKPdf	02 00 12.3	+0.6
BR131				LR	LR		
	comp=Z,762nm,20.0s,MS5.4						
BRTR	Keskin Array B	129.64	40	PKP	PKPdf	02 00 12.3	+0.7
	comp=Z,4.2nm,0.8s,baz=306,slow=1.5,SNR=16						
BRTR	Keskin Array B	129.64	40	PKIKP	PKPdf	02 00 12.3	+0.7
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAA0	Zalesovo Array	130.17	352	ePKPdf	PKPdf	02 00 12.7	+0.5
ZALV	Zalesovo Beam	130.17	352	PKP	PKPdf	02 00 11.5	-0.7
	comp=Z,1.9nm,0.8s,baz=318,slow=2.0,SNR=7.0						
ZALV				PP	PP	02 02 23.7	-0.4
	comp=Z,1.8nm,0.8s,baz=8.9,slow=4.8,SNR=4.6						
ZALV	Zalesovo Beam	130.17	352	PKP	PKPdf	02 00 11.5	-0.7
ZALV				PP	PP	02 02 23.7	-0.4
ZALV	Zalesovo Beam	130.17	352	PKIKP	PKPdf	02 00 11.5	-0.7
ZALV						02 02 23.7	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TATO	Taipei	130.23	299	PFAKE		02 00

HHC				SKS	SKSdf	02 07 22.8	-2.8
HHC				AMB	AMB		
	comp=Z,370nm,8.0s						
HHC				LR	LR		
	comp=Z,2μm,19.2s,MS5.9						
BRVK	**Borovoye**	**131.75**	**3**	*e*PKPdf	PKPdf	02 00 16.4	+1.1
BRVK				LR	LR		
	comp=Z,4μm,19.0s,MS6.2						
BRVK	**Borovoye**	**131.75**	**3**	*i* PKIKP	PKPdf	02 00 16.3	+1.1
KIV	**Kislovodsk**	**132.20**	**30**	PFAKE		02 00 30.0	+14
KIV				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
KIV	**Kislovodsk**	**132.20**	**30**	*i* PKIKP	PKPdf	02 00 19.4	+3.0
KIV				*e*		02 02 39.0	
KIV				*e*PS	PS	02 12 51.8	-2.3
KIV				*e*SS	SS	02 20 15.4	+0.2
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
QZH	**Quanzhou**	**132.76**	**300**	*e*PKP	PKPdf	02 00 16.8	-1.2
QZH				PKS		02 03 50.4	
QZH				LR	LR		
	comp=Z,4μm,30.0s,MS6.0						
KAPI	**Kappang**	**133.30**	**259**	PFAKE		02 00 30.0	+11
KAPI				LR	LR		
	comp=Z,823nm,19.0s,MS5.5						
MALT	**Malatya**	**133.50**	**39**	*e*PKPdf	PKPdf	02 00 20.1	+1.1
MALT				LR	LR		
	comp=Z,903nm,22.0s,MS5.4						
MALT	**Malatya**	**133.50**	**39**	*e*PKIKP	PKPdf	02 00 20.1	+1.1
MALT				MLR	MLR		
	comp=Z,903nm,22.0s,MS5.4						
ZEI	**Tsey**	**133.67**	**31**	*e*PKIKP	PKPdf	02 00 25.5	+6.3
ZEI				pmax	pmax		
	comp=Z,24nm,1.9s						
KURK	**Kurchatov**	**134.03**	**356**	PFAKE		02 00 30.0	+10
KURK				LR	LR		
	comp=Z,4μm,19.0s,MS6.1						
KURK	**Kurchatov**	**134.03**	**356**	*i* PKIKP	PKPdf	02 00 19.0	-0.6
ABKAR	**Akbulak array**	**134.07**	**13**	*e*PKPdf	PKPdf	02 00 22.1	+2.4
WHN	**Wuhan**	**134.19**	**309**	PKP	PKPdf	02 00 25.0	+4.5
WHN				SS	SS	02 20 38.0	-2.9
WHN				LR	LR		
	comp=Z,7μm,28.9s,MS6.2						
GNI	**Garni**	**135.99**	**33**	PFAKE		02 00 30.0	+6.4
GNI				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
XAN	**Xi'an**	**136.43**	**316**	PKP	PKPdf	02 00 29.1	+4.5
XAN				AMB	AMB		
	comp=Z,100nm,11.6s						
XAN				LR	LR		
	comp=N,1μm,21.3s,MS5.7						
XAN				LR	LR		
	comp=E,770nm,22.9s,MS5.7						
XAN				LR	LR		
	comp=Z,870nm,20.9s,MS5.5						
MBAR	**Mbarara**	**136.44**	**96**	PFAKE		02 00 40.0	+15
MBAR				LR	LR		
	comp=Z,369nm,20.0s,MS5.1						
MKAR	**Makanchi Array**	**137.51**	**352**	PKP	PKPdf	02 00 27.3	+1.1
	comp=Z,1.5nm,0.8s,baz=29,slow=2.8,SNR=8.6						
MKAR				PP	PP	02 03 10.4	-0.4
	comp=Z,1.7nm,1.0s,baz=18,slow=6.2,SNR=4.6						
MKAR	**Makanchi Array**	**137.51**	**352**	PKIKP	PKPdf	02 00 27.3	+1.1
MKAR						02 03 10.4	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KKM	**Kota Kinabalu**	**137.97**	**274**	PFAKE		02 00 40.0	+12
KKM				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
ENH	**Enshi**	**138.02**	**311**	PFAKE		02 00 40.0	+12
ENH				LR	LR		
	comp=Z,3μm,22.0s,MS6.0						
GTA	**Gaotai**	**138.34**	**330**	PKP	PKPdf	02 00 32.1	+4.1
GTA				PP	PP	02 03 28.4	+12
GTA				PKS		02 04 06.9	
GTA				SKS	SKSdf	02 07 38.3	-0.6
GTA				AMB	AMB		
	comp=Z,210nm,6.2s						
GTA				LR	LR		
	comp=Z,3μm,24.0s,MS6.0						
LZH	**Lanzhou**	**138.47**	**323**	PKP	PKPdf	02 00 28.6	+0.3
LZH				sPKP		02 00 35.8	
LZH				PP	PP	02 03 20.0	+2.4
LZH				PKS		02 04 01.8	
LZH				SS	SS	02 21 34.3	+3.4
LZH				AMB	AMB		
	comp=Z,300nm,5.6s						
LZH				LR	LR		
	comp=Z,3μm,19.5s,MS6.1						
WMQ	**Urumqi**	**139.26**	**345**	PKP	PKPdf	02 00 31.0	+1.5
WMQ				PP	PP	02 03 28.0	+6.2
WMQ				SKS	SKSdf	02 07 40.0	-0.2
WMQ				SKKS	SKKSac	02 10 18.0	+0.9
WMQ				SS	SS	02 21 44.0	+5.1
WMQ				AMB	AMB		
	comp=Z,150nm,10.0s						
WMQ				LR	LR		
	comp=Z,4μm,28.0s,MS6.0						
CD2	**Chengdu**	**141.79**	**316**	*e*PKP	PKPdf	02 00 33.3	-1.2
CD2				sPKP		02 00 42.3	
CD2				PKS		02 04 07.6	
CD2				AMB	AMB		
	comp=Z,360nm,8.4s						
CD2				LR	LR		
	comp=Z,2μm,21.6s,MS5.9						
TKM2	**Tokmak 2**	**141.97**	**358**	*e*PKPdf	PKPdf	02 00 36.2	+1.8
TKM2				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
TKM2	**Tokmak 2**	**141.97**	**358**	*e*PKIKP	PKPdf	02 00 36.2	+1.8
TKM2				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.9						
GYA	**Guiyang**	**142.06**	**308**	PKP	PKPdf	02 00 40.0	+4.9
GYA				PP	PP	02 03 41.3	+1.0
GYA				SKKS	SKKSac	02 10 30.0	-4.5
GYA				SS	SS	02 22 12.8	-1.4
GYA				AMB	AMB		
	comp=Z,420nm,8.0s						
GYA				LR	LR		
	comp=Z,5μm,23.8s,MS6.2						
EKS2	**Erkin-Say**	**142.25**	**0**	*e*PKPdf	PKPdf	02 00 38.1	+3.1
EKS2				LR	LR		
	comp=Z,3μm,21.0s,MS6.1						
AAK	**Ala-Archa**	**142.28**	**359**	*e*PKPdf	PKPdf	02 00 34.3	-0.7
AAK				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
AAK	**Ala-Archa**	**142.28**	**359**	*e*PKIKP	PKPdf	02 00 34.3	-0.7
AAK				MLR	MLR		
	comp=Z,3μm,20.0s,MS6.0						
QIZ	**Qiongzhong**	**142.28**	**295**	PKP	PKPdf	02 00 32.5	-3.2
QIZ				PP	PP	02 03 44.6	+2.4
QIZ				SS	SS	02 22 14.5	-3.2
QIZ				AMB	AMB		
	comp=Z,110nm,5.7s						
QIZ				LR	LR		
	comp=N,810nm,18.4s,MS5.6						
QIZ				LR	LR		
	comp=E,190nm,16.3s,MS5.6						
QIZ				LR	LR		
	comp=Z,1μm,19.8s,MS5.7						
QIZ	**Qiongzhong**	**142.28**	**295**	PFAKE		02 00 50.0	+14
QIZ				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
CHM	**Chimkent**	**142.39**	**5**	*e*PKPdf	PKPdf	02 00 35.7	+0.5
CHM	**Chimkent**	**142.39**	**5**	*e*PKIKP	PKPdf	02 00 35.7	+0.5
AML	**Almayashu**	**142.78**	**0**	PFAKE		02 00 50.0	+14
AML				LR	LR		
	comp=Z,3μm,21.0s,MS6.1						
KSM	**Kuching**	**143.62**	**266**	PFAKE		02 00 50.0	+12
KSM				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
LEM	**Lembang**	**144.54**	**251**	P	PKPdf	02 00 46.0	+6.2
MIB	**Mutribah**	**144.56**	**42**	*e*P	PKPdf	02 00 37.4	-2.0
MIB				AMb	AMB	02 00 45.9	
	comp=Z,40nm,1.0s						
ABPO	**Ambohimpanom**	**144.59**	**133**	*e*PKPdf	PKPdf	02 00 41.2	+1.5
ABPO				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
ABPO	**Ambohimpanom**	**144.59**	**133**	*e*PKIKP	PKPdf	02 00 41.2	+1.4
ABPO				MLR	MLR		
	comp=Z,3μm,20.0s,MS6.0						
NAY	**Al-Naaiem**	**144.84**	**43**	*e*P	PKPdf	02 00 36.9	-3.0
NAY				AMb	AMB	02 00 48.9	
	comp=Z,47nm,2.1s						
RDF	**Al-Radifah**	**145.25**	**43**	*e*P	PKPbc	02 00 36.6	-3.7
RDF				AMb	AMB	02 00 52.5	
	comp=Z,160nm,1.6s						
KSH	**Kashi**	**145.35**	**357**	*e*PKPbc	PKPbc	02 00 41.3	+1.1
KSH				*e*PKS		02 04 15.6	
KSH				*e*SKS	SKSdf	02 07 49.3	-0.7
KSH				LR	LR		
	comp=Z,6μm,22.6s,MS6.3						
DBJI	**Dramaga**	**145.44**	**251**	P	PKPab	02 00 45.2	+3.7
TPI	**Tanjungpandan**	**145.57**	**258**	P	PKPab	02 00 46.1	+4.1
KMI	**Kunming**	**145.79**	**309**	PKPbc	PKPbc	02 00 41.5	-0.6
KMI				pPKP	pPKPdf	02 00 46.0	+0.9
KMI				sPKP		02 00 48.0	
KMI				PP	PP	02 04 04.5	+1.9
KMI				SKKS	SKKSac	02 10 53.5	-2.3
KMI				SS	SS	02 22 54.9	-2.1
KMI				AMB	AMB		
	comp=Z,190nm,7.4s						
KMI				LR	LR		
	comp=N,760nm,26.9s,MS5.7						
KMI				LR	LR		
	comp=E,1μm,23.6s,MS5.7						
KMI				LR	LR		
	comp=Z,2μm,21.9s,MS5.9						
PPBI	**Pangkal Pinang**	**147.18**	**259**	P	PKPab	02 00 52.0	+3.8
KASI	**Kota Agung**	**147.89**	**252**	P	PKPab	02 00 54.0	+3.0
KLSI		**147.92**	**253**	P	PKPab	02 00 50.1	-1.0
LWLI	**Liwa**	**148.46**	**252**	P	PKPab	02 01 00.5	+7.2
MDSI	**Maura Dua**	**148.50**	**254**	P	PKPdf	02 00 51.6	+5.1
RER	**Riviere de l'E**	**148.63**	**146**	PFAKE		02 01 00.0	+13
RER				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
KBL	**Kabul**	**150.00**	**8**	*e*PKPdf	PKPdf	02 00 50.0	+1.7
KBL				*e*PKPbc	PKPbc	02 00 54.5	+1.2
KBL	**Kabul**	**150.00**	**8**	*e*PKHKP	PKPdf	02 00 50.0	+1.7
KBL				*e*		02 00 54.5	
KSI	**Kapahiang**	**150.25**	**254**	P	PKPab	02 01 00.0	-0.6
LSA	**Lhasa**	**150.36**	**329**	*e*PKPdf	PKPdf	02 00 51.2	+2.2
LSA				*e*PKPbc	PKPbc	02 00 56.2	+2.0
LSA				*e*PKPab	PKPab	02 01 01.6	+1.1
LSA				LR	LR		
	comp=Z,3μm,22.0s,MS6.0						
LSA	**Lhasa**	**150.36**	**329**	*e*PKIKP	PKPdf	02 00 51.2	+2.2
LSA				*e*		02 00 56.2	
LSA				*e*		02 01 01.6	
LSA				MLR	MLR		
	comp=Z,3μm,22.0s,MS6.0						
NIL	**Nilore**	**151.24**	**1**	PFAKE		02 01 00.0	+10
NIL				LR	LR		
	comp=Z,141nm,20.0s,MS4.8						
COCO	**West Island**	**151.75**	**233**	PFAKE		02 01 00.0	+8.4
COCO				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
CHG	**Chiang Mai**	**151.94**	**302**	⇑P	PKPbc	02 00 57.2	-1.0
	comp=Z,29nm,1.2s						
CHTO	**Chiang Mai**	**151.94**	**302**	*e*PKPbc	PKPbc	02 00 57.8	-0.4
CHTO				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
CHTO	**Chiang Mai**	**151.94**	**302**	*e*PKIKP	PKPbc	02 00 57.8	-0.4
CHTO				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.8						
CM31	**Chiang Mai Arr**	**152.10**	**301**	PFAKE		02 01 00.0	+8.0
CM31				LR	LR		
	comp=Z,1μm,22.0s,MS5.7						
CMAR	**Chiang Mai Arr**	**152.10**	**301**	PKP	PKPdf	02 00 52.0	+0.1
	comp=Z,6.5nm,0.9s,baz=0.1,slow=2.6,SNR=8.1						
CMAR				PKPbc	PKPbc	02 00 58.2	-0.3
	comp=Z,10nm,0.9s,baz=56,slow=0.6,SNR=18						
CMAR	**Chiang Mai Arr**	**152.10**	**301**	PKIKP	PKPdf	02 00 52.1	+0.1
CMAR						02 00 58.3	
CMAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NST	**Nakhon Sawan**	**152.14**	**295**	P	PKPbc	02 00 56.8	-1.9
BDT	**Bhumibol Dam**	**152.56**	**299**	P	PKPdf	02 00 53.5	+0.8
IPM	**Ipoh**	**153.07**	**271**	*e*PKPbc	PKPbc	02 01 00.3	-0.6
SHL	**Shillong**	**153.13**	**322**	*e*PKP	PKPdf	02 00 55.0	+1.7
KULM	**Kulim**	**153.46**	**272**	PFAKE		02 01 10.0	+16
KULM				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
DDI	**Dehra Dun**	**154.28**	**352**	*ex*	PKPdf	02 00 56.0	+1.2
MSEY	**Mahe Island**	**159.25**	**117**	PFAKE		02 01 10.0	+8.3
MSEY				LR	LR		
	comp=Z,2μm,20.0s,MS6.0						
DGAR	**Diego Garcia**	**167.82**	**173**	PFAKE		02 01 20.0	+10
DGAR				LR	LR		
	comp=Z,3μm,20.0s						

IDC ***18*** *02:02:41.7±1.0, 4°.64S×106°.18W, h0km, mb4.1/13, mb1 4.3/13, mb1mx4.3/19, mbtmp4.1/13, MS4.6/8, Ms1 4.6/8, ms1mx4.3/23, Error ellipse: s-maj=36.9km s-min=15.9km az=57.0*

ISCJB ***18*** *02:02:42.1±0.5, 4°.70S±0°.06×106°.12W±0°.09, h10km, mb4.7/55, MS4.6/9, Error ellipse: s-maj=14.4km s-min=7.9km az=155.9*

NEIC ***18*** *02:02:43.7±0.3, 4°.65S×106°.11W, h10km, mb4.8/42, Error ellipse: s-maj=10.6km s-min=5.8km az=66.0*

GCMT ***18*** *02:02:45.7±0.4, 4°.46S×106°.12W, h12km, MW5.2, Moment Tensor Solution. s17,c20; s80,c121; Moment tensor: Scale 10^{16}Nm; M_{rr}0.63±.25; $M_{\theta\theta}$2.01±.23; $M_{\phi\phi}$-2.64±.23; $M_{r\theta}$4.15±.66; $M_{\theta\phi}$6.13±.16; $M_{\phi r}$-1.30±.66; Best double couple: $M_0$7.90000×10^{16} NP1:ϕ_s11.00000°, δ56.00000°, λ179.00000°. NP2:ϕ_s102.00000°, δ89.00000°, λ34.00000°. Principal axes: T 7.4400, Plg24.0000°, Azm332.0000°; N 0.8300, Plg56.0000°, Azm103.0000°; P -8.2700, Plg22.0000°, Azm231.0000°; Data Used: IU II CN IC G.*

ISC 18 02:02:44.0±0.5, 4°.69S±0°.06×106°.10W±0°.10, h10km, n196, σ0°62/185, mb4.7/55, MS4.6/9, 58C-37D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**24.96**	**38**	P	**P**	**02 08 07.5**	**-0.4**
	8.2nm,1.0s,mb4.2,baz=216,slow=11,SNR=4.8						
JTS	**JuntasAbangare**	**25.79**	**55**	P	**P**	**02 08 14.6**	**-0.8**
	2.9nm,0.3s,mb4.3,baz=230,slow=13,SNR=2.0						
JTS				LR	LR	02 15 37.8	
	comp=Z,3μm,18.7s,MS4.9,baz=41,slow=30						
NNA	**Nana**	**29.82**	**106**	LR	LR	02 17 20.5	
	comp=Z,2μm,18.2s,MS4.7,baz=345,slow=29						
TEIG	**Tepich**	**30.33**	**35**	LR	LR	02 18 07.6	
	comp=Z,422nm,21.7s,MS4.0,baz=2.7,slow=30						
PTCN	**Pitcairn Islan**	**30.69**	**226**	P	**P**	**02 08 59.2**	**+0.1**
RKT	**Rikitea**	**33.36**	**234**	*e*LR	LR	02 18 09.6	
	2μm,27.8s,baz=56						
TXAR	**Lajitas Array**	**33.91**	**4**	P	**P**	**02 09 26.9**	**-0.4**
	0.4nm,0.7s,baz=184,slow=12,SNR=4.8						
TXAR				PcP	PcP	02 12 04.2	-1.7
	0.2nm,0.6s,baz=202,slow=6.7,SNR=2.7						
TXAR				LR	LR	02 20 44.5	
	comp=Z,426nm,19.2s,MS4.2,baz=275,slow=32						
TXAR	**Lajitas Array**	**33.91**	**4**	P	**P**	**02 09 26.9**	**-0.4**
TXAR				PcP	PcP	02 12 04.2	-1.7
TXAR				LR	LR	02 20 44.5	
TAOE	**Nuku Hiva Isla**	**34.05**	**261**	*e*LR	LR	02 18 20.7	
	2μm,25.2s						
526A	**Mary Lane Ranc**	**34.61**	**3**	⇑P	**P**	**02 09 33.8**	**+0.4**
	baz=35						
527A	**Woodward Ranch**	**34.72**	**4**	⇓P	**P**	**02 09 34.4**	**0.0**
	baz=35						
427A	**Hayter Ranch,**	**35.43**	**4**	⇓P	**P**	**02 09 40.3**	**-0.2**
	baz=36						
324A	**Moseley Ranch,**	**35.94**	**1**	⇑P	**P**	**02 09 44.4**	**-0.4**
	baz=36						
319A	**Douglas**	**35.99**	**355**	⇓P	**P**	**02 09 45.6**	**+0.3**
	baz=36						
318A	**Bisbee**	**36.12**	**354**	⇑P	**P**	**02 09 46.1**	**-0.2**
	baz=36						
MNTX	**Cornudas Mount**	**36.19**	**1**	P	**P**	**02 09 46.2**	**-0.8**
	baz=36,SNR=6.1						
220A	**Playas Peak, P**	**36.47**	**357**	P	**P**	**02 09 49.4**	**+0.1**
	baz=37,SNR=6.2						
217A	**Green Valley**	**36.54**	**353**	⇓P	**P**	**02 09 50.4**	**+0.4**
	baz=37						
224A	**Cornudas Mount**	**36.57**	**1**	⇑P	**P**	**02 09 49.8**	**-0.4**
	baz=37						
219A	**White Tail Can**	**36.61**	**355**	P	**P**	**02 09 50.9**	**+0.4**
	baz=37,SNR=13						
218A	**Dragoon**	**36.65**	**354**	P	**P**	**02 09 51.0**	**+0.1**
	baz=37,SNR=7.0						
120A	**U Bar Ranch, L**	**37.11**	**356**	⇓P	**P**	**02 09 55.2**	**+0.4**
	baz=37						
124A	**Stringfield Ra**	**37.19**	**1**	P	**P**	**02 09 55.6**	**+0.1**
	baz=37,SNR=8.5						
118A	**Homack Ranch,**	**37.31**	**355**	⇓P	**P**	**02 09 56.7**	**+0.2**
	baz=38						
Z20A	**Nine Sixteen R**	**37.67**	**357**	⇑P	**P**	**02 09 59.8**	**+0.3**
	baz=38,SNR=6.8						
SDV	**Santo Domingo**	**37.84**	**69**	*e*P	**P**	**02 10 01.3**	**0.0**
	19nm,0.7s,mb4.9						
Y22A	**Socorro**	**38.43**	**359**	⇓P	**P**	**02 10 06.4**	**+0.4**
	baz=39,SNR=7.2						
Y25A	**Mesa, Roswell**	**38.43**	**2**	⇓P	**P**	**02 10 05.2**	**-0.7**
	baz=39,SNR=5.8						
Y18A	**Canyon Day Jun**	**38.44**	**355**	⇓P	**P**	**02 10 06.2**	**+0.2**
	baz=39						
Y17A	**Roosevelt**	**38.44**	**354**	⇑P	**P**	**02 10 06.2**	**+0.1**
	baz=39						
Y20A	**Horse Springs,**	**38.45**	**357**	⇓P	**P**	**02 10 07.0**	**+0.9**
	baz=39						
Y21A	**Point of Rocks**	**38.52**	**358**	⇑P	**P**	**02 10 07.2**	**+0.5**
	baz=39,SNR=5.6						
Y19A	**Nutrioso**	**38.55**	**356**	⇑P	**P**	**02 10 07.5**	**+0.5**
	baz=39						
LENM	**Lemitar**	**38.66**	**359**	*e*P	**P**	**02 10 08.3**	**+0.4**
Y16A	**Circle Bar Ran**	**38.70**	**353**	⇑P	**P**	**02 10 08.4**	**+0.2**
	baz=39						
Y15A	**Casa Rosa Ranc**	**38.88**	**352**	P	**P**	**02 10 09.9**	**+0.1**
	baz=39,SNR=8.1						
X21A	**Alamocita Cree**	**38.96**	**358**	⇑P	**P**	**02 10 11.1**	**+0.7**
	baz=39,SNR=7.1						
Y14A	**Wickenburg**	**38.97**	**351**	⇑P	**P**	**02 10 10.3**	**-0.2**
	baz=39						
LPAZ	**La Paz**	**38.99**	**110**	P	**P**	**02 10 12.0**	**+1.1**
	2.7nm,1.1s,mb3.9,baz=276,slow=6.9,SNR=5.2						
LPAZ	**La Paz**	**38.99**	**110**	*e*P	**P**	**02 10 12.9**	**+2.0**
X17A	**Forest Lakes**	**39.07**	**354**	⇓P	**P**	**02 10 11.7**	**+0.4**
	baz=39,SNR=8.4						
BC3	**Big Chuckawall**	**39.15**	**348**	⇓P	**P**	**02 10 12.4**	**+0.4**
	baz=39						
X16A	**Lo Mia Camp, P**	**39.22**	**353**	⇑P	**P**	**02 10 12.6**	**0.0**
	baz=39						
X15A	**Humboldt**	**39.40**	**352**	⇑P	**P**	**02 10 14.5**	**+0.5**
	baz=40						
ANMO	**Albuquerque**	**39.43**	**360**	LR	LR	02 24 40.9	
	comp=Z,551nm,18.7s,MS4.4,baz=317,slow=34						
ANMO	**Albuquerque**	**39.43**	**360**	*e*P	**P**	**02 10 13.9**	**-0.4**
	5.5nm,1.1s,mb4.2						
X14A	**Yava**	**39.47**	**351**	P	**P**	**02 10 15.0**	**+0.3**
	baz=40,SNR=5.3						
IRM	**Iron Mountain**	**39.58**	**348**	⇓P	**P**	**02 10 15.1**	**-0.5**
	baz=40						
BELC	**Belle Mtn. Jos**	**39.60**	**347**	⇑P	**P**	**02 10 16.3**	**+0.5**
	baz=40						
W23A	**Werner Place,**	**39.64**	**360**	⇓P	**P**	**02 10 16.7**	**+0.6**
	baz=40						
W24A	**Lazy 6 Ranch,**	**39.69**	**1**	P	**P**	**02 10 16.5**	**0.0**
	baz=40,SNR=7.7						
GMRC	**Granite Mounta**	**40.28**	**348**	⇑P	**P**	**02 10 21.9**	**+0.5**
	baz=40						
V17A	**Tonalea, Kykot**	**40.34**	**354**	⇑P	**P**	**02 10 22.3**	**+0.5**
	baz=40						
V22A	**San Miguel Ran**	**40.40**	**359**	⇑P	**P**	**02 10 23.1**	**+0.8**
	baz=41						
LDFC	**Landfair**	**40.46**	**349**	*e*P	**P**	**02 10 23.5**	**+0.7**
	19nm,1.3s,mb4.7						
V14A	**Boquillas Ranc**	**40.65**	**351**	⇑P	**P**	**02 10 24.9**	**+0.5**
	baz=41,SNR=7.8						
V15A	**Kaibab Nationa**	**40.70**	**352**	⇓P	**P**	**02 10 25.5**	**+0.6**
	baz=41						
U22A	**Llaves**	**40.86**	**359**	⇑P	**P**	**02 10 26.8**	**+0.6**
	baz=41						
U21A	**Nageezi**	**40.93**	**358**	⇑P	**P**	**02 10 27.2**	**+0.5**
	baz=41,SNR=7.6						
V13A	**Grand Canyon W**	**41.00**	**350**	⇑P	**P**	**02 10 27.6**	**+0.3**
	baz=41						
GSC	**Goldstone**	**41.03**	**347**	⇓P	**P**	**02 10 27.8**	**+0.2**
	baz=41						
GSC	**Goldstone**	**41.03**	**347**	*e*P	**P**	**02 10 24.9**	**-2.7**
	69nm,2.5s,mb4.8						
V12A	**Nelson**	**41.03**	**349**	⇑P	**P**	**02 10 27.6**	**0.0**
	baz=41						
U18A	**Rough Rock, Ch**	**41.05**	**355**	⇓P	**P**	**02 10 27.9**	**+0.2**
	baz=41						
V11A	**Goodsprings**	**41.26**	**348**	⇓P	**P**	**02 10 29.8**	**+0.4**
	baz=41						
U15A	**North Rim**	**41.31**	**352**	⇑P	**P**	**02 10 30.3**	**+0.4**
	baz=42						
T19A	**Beclabito**	**41.40**	**356**	P	**P**	**02 10 30.6**	**0.0**
	baz=42,SNR=7.5						
T22A	**Edith**	**41.49**	**359**	⇑P	**P**	**02 10 31.8**	**+0.4**
	baz=42,SNR=8.1						
U13A	**Pakoon Wash**	**41.55**	**350**	⇑P	**P**	**02 10 32.3**	**+0.5**
	baz=42						
T24A	**Torres, Weston**	**41.56**	**1**	⇑P	**P**	**02 10 32.6**	**+0.7**
	baz=42						
T17A	**Navajo Res., N**	**41.70**	**354**	⇓P	**P**	**02 10 33.5**	**+0.4**
	baz=42						
T18A	**Mexican Hat**	**41.76**	**355**	⇓P	**P**	**02 10 33.9**	**+0.3**
	baz=42,SNR=6.4						
ISA	**Isabella**	**41.79**	**345**	*e*P	**P**	**02 10 33.4**	**-0.5**
	27nm,2.1s,mb4.5						
SHPR	**Sheep Range**	**41.85**	**349**	*e*P	**P**	**02 10 34.8**	**+0.5**
MPMC	**Manual Prospec**	**41.92**	**346**	⇑P	**P**	**02 10 35.4**	**+0.5**
	baz=42						
SDCO	**Great Sand Dun**	**42.22**	**1**	⇑P	**P**	**02 10 37.7**	**+0.4**
	baz=42						
SDCO	**Great Sand Dun**	**42.22**	**1**	*e*P	**P**	**02 10 37.4**	**+0.1**
	33nm,2.0s,mb4.6						
S22A	**4UR Ranch, Cre**	**42.23**	**359**	⇑P	**P**	**02 10 37.9**	**+0.6**
	baz=42,SNR=7.1						
S18A	**Hurst Farm, Bl**	**42.32**	**355**	P	**P**	**02 10 38.6**	**+0.5**
	baz=42,SNR=12						
S20A	**Disappointment**	**42.36**	**357**	⇓P	**P**	**02 10 39.0**	**+0.6**
	baz=42,SNR=8.1						
S16A	**Weppner Ranch,**	**42.51**	**354**	⇓P	**P**	**02 10 39.8**	**+0.2**
	baz=43,SNR=8.3						
CCUT	**Cedar City**	**42.57**	**351**	*e*P	**P**	**02 10 41.4**	**+1.3**
	49nm,2.2s,mb4.8						
PV01	**Paradox Valley**	**42.67**	**357**	*e*P	**P**	**02 10 40.9**	**-0.1**
	2μm,1.7s						
S13A	**Holt Ranch, En**	**42.67**	**351**	⇑P	**P**	**02 10 42.1**	**+1.1**
	baz=43						
R20A	**Redvale**	**42.71

0.4nm,0.9s,baz=324,slow=8.8,SNR=4.5
P14A Drum Mountains 44.53 352 ⇓P P 02 10 56.8 +0.9
baz=45
CMB Columbia Colle 44.53 344 *e*P **P 02 10 54.7 -1.3**
15nm,1.7s,mb4.5
O22A Kremmling 44.63 360 ⇑P P 02 10 57.1 +0.3
baz=45
O20A White River Ci 44.65 358 ⇑P P 02 10 57.5 +0.6
baz=45,SNR=9.8
WAKR Walker 44.72 345 *e*P **P 02 10 58.4 +0.9**
MPU Maple Canyon 44.78 354 *e*P **P 02 10 58.7 +0.8**
14nm,1.1s,mb4.7
O19A Miners Draw (B 44.85 357 ⇓P P 02 10 58.7 +0.2
baz=45,SNR=5.4
DUG Dugway 45.09 353 ⇓P P 02 11 01.1 +0.8
baz=45,SNR=8.1
DUG Dugway 45.09 353 *e*P **P 02 10 59.9 -0.5**
31nm,1.8s,mb4.8
DAU Daniels Canyon 45.13 354 *e*P **P 02 11 00.5 -0.3**
N21A Black Mountain 45.25 358 ⇑P P 02 11 02.5 +0.8
baz=45,SNR=6.6
JLU Jordanelle 45.34 354 *e*P **P 02 11 02.8 +0.4**
12nm,1.2s,mb4.6
N20A Spence Gulch, 45.35 358 ⇓P P 02 11 02.6 +0.2
baz=46,SNR=19
N18A Larsen Ranch, 45.56 356 ⇑P P 02 11 04.1 0.0
baz=46
TBI Tubuai 45.73 242 *e*LQ 02 21 57.1
597nm,29.5s
TBI *e*LR LR 02 23 51.8
1μm,27.8s,baz=70
PHWY Pilot Hill 45.77 1 *e*P **P 02 11 05.7 -0.1**
11nm,1.2s,mb4.7
BGU Big Grassy Mou 45.84 353 *e*P **P 02 11 05.7 -0.6**
23nm,1.7s,mb4.8
PAHR Pah Rah Range 45.84 346 *e*P **P 02 11 06.3 -0.1**
83nm,2.3s,mb5.3
M16A Huntsville 46.06 354 ⇑P P 02 11 08.3 +0.2
baz=46
SPUT South Promonto 46.15 353 *e*P **P 02 11 07.8 -0.9**
85nm,2.5s,mb5.2
HOPS Hopland 46.22 342 *e*P **P 02 11 09.6 +0.2**
26nm,1.4s,mb5.0
M15A Larsen Ranch, 46.30 353 P **P 02 11 09.9 0.0**
baz=46,SNR=6.9
HWUT Hardware Ranch 46.34 354 *e*P **P 02 11 10.1 -0.2**
146nm,2.7s,mb5.4
L22A Ellis Ranch, M 46.50 360 ⇓P P 02 11 11.5 0.0
baz=47
HVU Hansel Valley 46.65 353 *e*P **P 02 11 12.4 -0.2**
20nm,1.7s,mb4.8
L19A Farson 46.66 357 P **P 02 11 12.5 -0.3**
baz=47,SNR=7.2
L15A Malad City 46.82 354 ⇑P P 02 11 13.7 -0.4
baz=47,SNR=12
L14A Malta 46.96 353 ⇑P P 02 11 15.3 +0.3
baz=47,SNR=11
KIPM Iron Peak 47.09 342 *e*P **P 02 11 17.4 +1.2**
22nm,1.5s,mb4.9
BW06 Boulder Array 47.34 357 P **P 02 11 17.2 -0.9**
baz=48,SNR=6.1
PDAR Pinedale Array 47.34 357 P **P 02 11 17.1 -1.0**
2.7nm,0.6s,mb4.3,baz=171,slow=6.4,SNR=28
K19A Absolon Red Bu 47.36 357 ⇓P P 02 11 17.4 -0.8
baz=48,SNR=8.4
K14A Jones Ranch, D 47.45 353 ⇓P P 02 11 18.7 -0.3
baz=48
WDC Whiskeytown Da 47.51 343 *e*P **P 02 11 18.5 -0.9**
10nm,1.4s,mb4.7
J20A Shoshoni 47.85 358 ⇓P P 02 11 21.7 -0.3
baz=48,SNR=11
J22A Midwest 47.88 360 P **P 02 11 21.6 -0.7**
baz=48,SNR=5.8
PLCA Paso Flores 48.00 144 P **P 02 11 23.2 -0.1**
4.3nm,1.1s,mb4.4,baz=323,slow=5.1,SNR=3.0
PLCA LR LR 02 25 57.5
comp=Z,1μm,20.5s,MS4.8,baz=0.9,slow=29
REDW Red Top Meadow 48.02 355 *e*P **P 02 11 22.6 -0.7**
13nm,1.3s,mb4.8
RRI2 Red Ridge 48.05 355 *e*P **P 02 11 22.8 -0.8**
34nm,1.8s,mb5.1
TPAW Teton Pass 48.16 355 *e*P **P 02 11 23.4 -1.0**
54nm,2.3s,mb5.2
LOHW Long Hollow 48.25 356 *e*P **P 02 11 24.2 -0.9**
32nm,1.9s,mb5.0
MOOW Moose Ponds 48.40 355 *e*P **P 02 11 25.3 -1.0**
7.6nm,1.1s,mb4.6
J13A Cove Ranch, Pi 48.42 352 ⇓P P 02 11 26.8 +0.4
baz=49
IMW Indian Meadow 48.56 355 *e*P **P 02 11 26.9 -0.6**
12nm,1.2s,mb4.8
HLID Hailey 48.61 352 ⇑P P 02 11 28.4 +0.5
baz=49,SNR=7.3
HLID Hailey 48.61 352 *e*P **P 02 11 27.9 0.0**
8.2nm,1.0s,mb4.7
RSSD Black Hills 48.62 2 *e*P **P 02 11 27.5 -0.4**
7.2nm,1.0s,mb4.7
YBH Yreka Blue Hor 48.62 343 P **P 02 11 27.0 -1.0**
1.2nm,0.8s,mb4.0,baz=135,slow=4.2,SNR=4.7
YBH LR LR 02 27 08.9
comp=Z,1μm,20.3s,MS4.8,baz=148,slow=30
MFID Camas Ranch 48.68 351 ⇑P P 02 11 28.7 +0.3
baz=49,SNR=9.6
FLWY Flagg Ranch 48.73 356 *e*P **P 02 11 28.2 -0.6**
62nm,1.8s,mb5.3
I13A Wildhorse Cree 48.92 352 ⇑P P 02 11 30.4 +0.2
baz=49,SNR=11
I12A Atlanta 48.95 351 ⇑P P 02 11 30.6 +0.2
baz=49,SNR=5.9
H16A Russell Place, 49.39 355 ⇑P P 02 11 34.0 +0.1
baz=50,SNR=11
H14A Leadore 49.52 353 P **P 02 11 35.1 +0.3**
baz=50,SNR=6.2
H13A Challis 49.58 352 ⇑P P 02 11 35.7 +0.4
baz=50,SNR=8.4
H12A Diamond D Ranc 49.64 352 ⇑P P 02 11 36.0 +0.2
baz=50,SNR=9.9
MCMT McKenzie Canyo 49.66 354 *e*P **P 02 11 35.8 -0.2**
6.0nm,1.1s,mb4.5
RLMT Red Lodge 49.67 357 *e*P **P 02 11 34.4 -1.6**
132nm,2.8s,mb5.5
I07A Izee 50.03 347 ⇑P P 02 11 39.5 +0.8
baz=50,SNR=8.7
G13A Cobalt 50.09 352 P **P 02 11 38.8 -0.4**
baz=50,SNR=9.7
BOZ Bozeman (W) 50.36 355 *e*P **P 02 11 41.2 0.0**
14nm,1.9s,mb4.7
F18A Big Timber 50.48 357 ⇑P P 02 11 41.2 -0.9
baz=51,SNR=5.2
LRM Limekiln Ridge 50.61 354 *e*P **P 02 11 42.1 -1.0**
29nm,1.0s,mb5.2
CPUP Villa Florida 51.29 120 P **P 02 11 48.7 +0.1**
3.9nm,0.9s,mb4.3,baz=286,slow=8.6,SNR=8.0
CPUP Villa Florida 51.29 120 P **P 02 11 48.7 +0.1**
HRY Holter Researc 51.43 355 *e*P **P 02 11 48.5 -0.7**
7.7nm,1.1s,mb4.5
HOOD Mount Hood Mea 51.70 346 *e*P **P 02 11 51.2 0.0**
D12A Red Ives Fores 52.17 352 ⇑P P 02 11 53.7 -1.0
baz=52
C22A Vida 52.21 0 ⇑P P 02 11 54.7 -0.4
baz=52
C17A Wharram Farm, 52.26 356 ⇑P P 02 11 54.8 -0.6
baz=52,SNR=6.9
JTMT Jette 52.71 353 *e*P **P 02 11 58.0 -0.8**
14nm,1.6s,mb4.6
YBMT Yellow Bay 52.79 353 *e*P **P 02 11 58.7 -0.6**
DGMT Dagmar 52.97 2 ⇓P P 02 11 59.7 -0.9
baz=53
DGMT Dagmar 52.97 2 *e*P **P 02 11 59.5 -1.2**
156nm,2.1s,mb5.6
BLMT Blacktail Moun 52.98 353 *e*P **P 02 12 00.4 -0.3**
6.2nm,0.9s,mb4.5
OD2 Odessa Site #2 53.04 349 *e*P **P 02 12 00.8 -0.4**
ETW Entiat 53.56 348 *e*P **P 02 12 04.2 -0.8**
A17A Triple J Farms 53.56 356 ⇑P P 02 12 04.2 -0.8
baz=54,SNR=6.3
NEW Newport 53.61 351 *e*P **P 02 12 04.3 -1.1**
44nm,1.9s,mb5.1
A16A West Butte Ran 53.63 355 ⇑P P 02 12 05.3 -0.2
baz=54
WALA Waterton Lakes 53.96 354 *e*P **P 02 12 06.9 -1.0**
1.3nm,2.0s,mb3.5
ULM Lac du Bonnet 55.43 8 P **P 02 12 16.4 -2.2**
3.0nm,0.8s,mb4.4,baz=234,slow=8.5,SNR=3.3
DLBC Dease Lake 65.79 346 P **P 02 13 28.1 -1.0**
2.2nm,1.0s,mb4.2,baz=127,slow=10,SNR=2.0
INK Inuvik 75.31 350 P **P 02 14 25.0 -2.1**
1.7nm,0.7s,mb4.1,baz=164,slow=7.4,SNR=3.3

ILAR Eielson Array 75.52 343 P **P 02 14 27.1 -1.2**
1.1nm,0.8s,mb3.8,baz=159,slow=6.1,SNR=12
QSPA South Pole Qui 85.36 180 *e*P **P 02 15 21.7 +0.6**
9.2nm,1.2s,mb4.8
BRTR Keskin Array B 129.66 40 PKP PKPdf 02 21 52.4 -1.5
1.3nm,0.9s,baz=306,slow=2.9,SNR=4.3
HHC Hu-ho-hao-te 130.66 322 *e*PKP PKPdf 02 21 54.6 -1.1
HHC PP PP 02 24 07.1 -3.1
HHC PKS 02 25 29.8
HHC SKS SKSdf 02 29 04.8 -2.8
HHC SKKS SKKSac 02 30 58.5 -9.2
HHC SS SS 02 41 26.5 -13
HHC AMB AMB
comp=Z,160nm,8.6s
HHC LR LR
comp=N,630nm,19.1s,MS5.3
HHC LR LR
comp=E,190nm,20.1s,MS5.3
HHC LR LR
comp=Z,380nm,20.6s,MS5.1
CMAR Chiang Mai Arr 151.97 301 PKPbc PKPbc 02 22 39.8 -0.7
comp=Z,1.2nm,0.3s,baz=64,slow=2.1,SNR=3.7

BJI ***18*** *02:10:17.9, 27°.22N×55°.96E, h11km, mB5.1/15, mb4.7/26, Ms4.8/14, Ms7 4.6/15*
IDC ***18*** *02:10:18.8±0.6, 26°.94N×56°.00E, h0km, mb4.2/27, mb1 4.3/29, mb1mx4.3/35, mbtmp4.2/29, ML4.0/2, MS4.4/3, Ms1 4.5/3, ms1mx3.7/34, Error ellipse: s-maj=15.1km s-min=12.0km az=1.0*
ISCJB ***18*** *02:10:19.0±0.2, 26°.95N±0°.02×55°.99E±0°.02, h10km, mb4.5/14, MS4.8/11, Error ellipse: s-maj=2.9km s-min=2.7km az=175.6*
SGS ***18*** *02:10:20.1, 26°.74N×56°.30E, h9km*
MOS ***18*** *02:10:21.8±0.9, 26°.94N×56°.01E, h33km, mb4.7/60, Error ellipse: s-maj=8.0km s-min=3.9km az=125.6*
TEH ***18*** *02:10:21.2, 27°.05N×56°.08E, h19km*
NEIC ***18*** *02:10:21.4, 27°.11N×55°.91E, h1km, mb4.6/61, ML4.3(THR), MN4.4(TEH), After THR.*
CSEM ***18*** *02:10:21.0±0.1, 26°.98N×56°.01E, h10km, mb4.5/88, Error ellipse: s-maj=5.2km s-min=4.0km az=76.0*
THR ***18*** *02:10:25.6±1.3, 27°.32N×56°.03E, h14km±9km, ML4.2*
OMAN ***18*** *02:10:29.3, 26°.47N×56°.08E, h10km*
ISC 18 02:10:20.9±0.2,**26°.95N**±0°.02×**56°.03E**±0°.02,**h10**km, (**h15**km±1.3km:**pP-P**),**n596**,σ1§**27**/614,**mb4.5**/115, **MS4.8**/11,**18C-10D**,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.47**	**16**	*e*Pg	**Pg**	**02 10 29.3**	**-0.7**
BNDS				*e*Sg	**Sg**	**02 10 34.7**	**-1.6**
BNDS	**Bandar-Abbas**	**0.47**	**16**	*e*Pg	**Pg**	**02 10 29.3**	**-0.7**
IBND	**Bandar-abas**	**0.68**	**42**	*e*Pg	**Pg**	**02 10 33.4**	**-0.6**
IBND				*e*Pg	**Pg**	**02 10 33.4**	**-0.6**
IBND				*e*Sg	**Sg**	**02 10 42.3**	**-0.6**
IBND				*e*		02 11 01.0	
	comp=Z,83μm,0.3s						
IBND				*e*		02 11 20.5	
	comp=Z,80μm,0.6s						
IBND	**Bandar-abas**	**0.68**	**42**	*e*Pg	**Pg**	**02 10 33.4**	**-0.6**
BANOM	**Banah**	**1.05**	**166**	P	**Pg**	**02 10 40.6**	**-0.4**
	SNR=747						
BANOM	**Banah**	**1.05**	**166**	P	**Pg**	**02 10 40.6**	**-0.4**
	SNR=747						
NAZ	**Nazwa, Dubai**	**1.98**	**190**	Pn	**Pn**	**02 10 57.1**	**+2.7**
	SNR=9.0						
NAZ	**Nazwa, Dubai**	**1.98**	**190**	P	**Pn**	**02 10 57.1**	**+2.7**
	SNR=9.0						
HATD	**Hatta, Dubai**	**2.11**	**177**	Pn	**Pn**	**02 10 58.1**	**+1.8**
	SNR=22						
HATD	**Hatta, Dubai**	**2.11**	**177**	P	**Pn**	**02 10 58.1**	**+1.8**
	SNR=22						
HATD				P		02 10 59.6	
	SNR=51						
ASHO	**Ashiyiah**	**2.25**	**179**	P	**Pn**	**02 11 00.2**	**+2.0**
	SNR=127						
ASHO	**Ashiyiah**	**2.25**	**179**	P	**Pn**	**02 11 00.2**	**+2.0**
	SNR=127						
ASUD	**Al Ashush, Dub**	**2.40**	**195**	Pn	**Pn**	**02 11 02.7**	**+2.6**
	SNR=94						
ASUD	**Al Ashush, Dub**	**2.40**	**195**	P	**Pn**	**02 11 02.7**	**+2.5**
	SNR=94						
KRBR	**Kerman**	**3.09**	**12**	*e*Pn	**Pn**	**02 11 12.0**	**+2.2**
KRBR				Sn	**Sn**	**02 11 48.8**	**+2.1**
KRBR	**Kerman**	**3.09**	**12**	*e*Pn	**Pn**	**02 11 12.0**	**+2.2**
KRBR				*e*Sg	**Sg**	**02 11 51.1**	**-9.1**
KRBR				AML	AML	02 11 59.3	
	comp=E,562nm,0.6s						
KRBR				AML	AML	02 12 04.0	
	comp=N,1μm,0.7s						
KRBR	**Kerman**	**3.09**	**12**	*e*Pn	**Pn**	**02 11 12.0**	**+2.3**
KRBR				Sn	**Sn**	**02 11 48.8**	**+2.0**
ISRV	**Sarvestan**	**3.54**	**314**	Pn	**Pn**	**02 11 18.4**	**+2.6**
ISRV	**Sarvestan**	**3.54**	**314**	*e*Pn	**Pn**	**02 11 18.1**	**+2.3**
ISRV				*e*		02 13 12.1	
	comp=Z,13μm,0.6s						
ISRV	**Sarvestan**	**3.54**	**314**	*e*Pn	**Pn**	**02 11 18.1**	**+2.3**
HOQ	**Hoqain**	**3.54**	**161**	P	**Pn**	**02 11 17.2**	**+1.2**
	SNR=7.5						
HOQ	**Hoqain**	**3.54**	**161**	P	**Pn**	**02 11 17.2**	**+1.2**
	SNR=7.5						
ARQ	**Araqi**	**3.62**	**173**	Pn	**Pn**	**02 11 18.4**	**+1.4**
	SNR=40						
ARQ	**Araqi**	**3.62**	**173**	P	**Pn**	**02 11 18.4**	**+1.4**
	SNR=40						
IPAR	**Pars**	**3.90**	**318**	Pn	**Pn**	**02 11 24.2**	**+3.4**
IPAR	**Pars**	**3.90**	**318**	*e*Pn	**Pn**	**02 11 23.0**	**+2.2**
IPAR				*e*		02 12 12.9	
	comp=Z,8μm,0.4s						
IPAR	**Pars**	**3.90**	**318**	*e*Pn	**Pn**	**02 11 23.0**	**+2.2**
SMDO	**Samad**	**4.28**	**154**	P	**Pn**	**02 11 28.4**	**+2.3**
	SNR=18						
SMDO	**Samad**	**4.28**	**154**	P	**Pn**	**02 11 28.4**	**+2.3**
	SNR=18						
SMDO				P		02 11 29.2	
	SNR=29						
BSY	**Bisya**	**4.32**	**165**	P	**Pn**	**02 11 30.1**	**+3.6**
	SNR=8.5						
BSYO	**Bisya**	**4.34**	**165**	P	**Pn**	**02 11 30.1**	**+3.2**
	SNR=8.5						
IMEH	**Mehriz**	**4.60**	**345**	Pn	**Pn**	**02 11 32.6**	**+2.2**
IMEH	**Mehriz**	**4.60**	**345**	*e*Pn	**Pn**	**02 11 32.3**	**+1.9**
IMEH				*e*		02 11 37.9	
	comp=Z,2μm,0.3s						
IMEH	**Mehriz**	**4.60**	**345**	*e*Pn	**Pn**	**02 11 32.3**	**+1.9**
IBAF	**Bafgh**	**4.64**	**355**	Pn	**Pn**	**02 11 32.6**	**+1.5**
IBAF	**Bafgh**	**4.64**	**355**	*e*Pn	**Pn**	**02 11 32.7**	**+1.6**
IBAF				*e*		02 13 03.6	
	comp=Z,3μm,0.4s						
IBAF	**Bafgh**	**4.64**	**355**	*e*Pn	**Pn**	**02 11 32.7**	**+1.6**
JMDO	**Jabal Madar**	**4.93**	**157**	P	**Pn**	**02 11 37.1**	**+2.1**
	SNR=12						
JMDO	**Jabal Madar**	**4.93**	**157**	P	**Pn**	**02 11 37.1**	**+2.1**
	SNR=12						
JMDO				P		02 11 37.5	
	SNR=8.0						
ZHSF	**Zahedan**	**4.96**	**57**	*e*Pn	**Pn**	**02 11 39.3**	**+4.0**
ZHSF	**Zahedan**	**4.96**	**57**	*e*Pn	**Pn**	**02 11 39.3**	**+4.0**
ZHSF	**Zahedan**	**4.96**	**57**	*e*Pn	**Pn**	**02 11 39.3**	**+3.9**
WBK	**Wadi Bani Khal**	**5.08**	**148**	P	**Pn**	**02 11 37.2**	**+0.2**
	SNR=30						
SLWS		**5.30**	**247**	P	**Pn**	**02 11 40.4**	**+0.3**
SLWS		**5.30**	**247**	P	**Pn**	**02 11 40.4**	**+0.3**
SLWS				S	**Sn**	**02 12 39.7**	**-1.6**
ISAD	**Sadrabad**	**5.36**	**338**	Pn	**Pn**	**02 11 44.2**	**+3.4**
ISAD	**Sadrabad**	**5.36**	**338**	*e*Pn	**Pn**	**02 11 43.1**	**+2.3**
ISAD				*e*		02 12 49.3	
	comp=Z,2μm,0.2s						
ISAD	**Sadrabad**	**5.36**	**338**	*e*Pn	**Pn**	**02 11 43.1**	**+2.3**
ICHK	**Chekchek**	**5.46**	**345**	Pn	**Pn**	**02 11 44.0**	**+1.7**
ICHK	**Chekchek**	**5.46**	**345**	*e*Pn	**Pn**	**02 11 43.9**	**+1.6**
ICHK				*e*		02 12 29.1	
	comp=Z,2μm,0.4s						
ICHK	**Chekchek**	**5.46**	**345**	*e*Pn	**Pn**	**02 11 43.9**	**+1.6**
BTHS		**5.50**	**239**	P	**Pn**	**02 11 42.4**	**-0.4**
BTHS		**5.50**	**239**	P	**Pn**	**02 11 42.4**	**-0.5**
BTHS				S	**Sn**	**02 12 43.9**	**-2.3**
IKOO	**Kooshah**	**6.04**	**25**	*e*Pn	**Pn**	**02 11 51.0**	**+0.7**
IKOO				*e*		02 14 07.9	
	comp=Z,1μm,0.5s						
IKOO	**Kooshah**	**6.04**	**25**	*e*Pn	**Pn**	**02 11 51.0**	**+0.7**
IGAR	**Gharneh**	**6.45**	**328**	*e*Pn	**Pn**	**02 11 57.7**	**+1.8**

IGAR *e* 02 13 13.5
comp=Z,1μm,0.3s
NASN Na'in 6.47 335 *e*Pn **Pn 02 11 57.7 +1.6**
NASN Na'in 6.47 335 *e*Pn **Pn 02 11 57.7 +1.6**
NASN AML AML 02 13 15.3
comp=E,76nm,0.5s
NASN Na'in 6.47 335 *e*Pn **Pn 02 11 57.7 +1.6**
IZEF Zefreh 6.74 332 Pn **Pn 02 12 00.7 +0.8**
IZEF Zefreh 6.74 332 *e*Pn **Pn 02 12 00.8 +0.9**
IZEF *e* 02 13 21.7
comp=Z,687nm,0.3s
IZEF Zefreh 6.74 332 *e*Pn **Pn 02 12 00.8 +0.9**
IPIR Pirpir 7.25 323 Pn **Pn 02 12 09.1 +2.2**
IPIR Sn **Sn 02 13 26.1 -3.2**
IPIR Pirpir 7.25 323 *e*Pn **Pn 02 12 08.5 +1.6**
IPIR *e* 02 13 41.2
comp=Z,2μm,0.4s
IPIR Pirpir 7.25 323 *e*Pn **Pn 02 12 08.5 +1.6**
IPIR Sn **Sn 02 13 26.1 -3.2**
IKLH Kolahrood 7.43 330 Pn **Pn 02 12 10.3 +1.0**
IKLH Kolahrood 7.43 330 *e*Pn **Pn 02 12 10.4 +1.1**
IKLH *e* 02 13 48.3
comp=Z,784nm,0.3s
IKLH Kolahrood 7.43 330 *e*Pn **Pn 02 12 10.4 +1.1**
RDF Al-Radifah 7.75 287 *e*P **Pn 02 12 14.7 +0.9**
RDF AML AML 02 13 45.6
comp=Z,57nm,0.5s
RDF Al-Radifah 7.75 287 *e*P **Pn 02 12 14.7 +0.9**
UMR Umm Al-Rimmam 7.78 291 *e*P **Pn 02 12 14.8 +0.7**
UMR AML AML 02 13 43.2
comp=Z,65nm,0.6s
UMR Umm Al-Rimmam 7.78 291 *e*P **Pn 02 12 14.8 +0.7**
ISFB Sefidab 8.07 337 Pn **Pn 02 12 20.0 +1.9**
ISFB Sefidab 8.07 337 *e*Pn **Pn 02 12 19.3 +1.2**
ISFB *e* 02 12 24.1
comp=Z,771nm,0.3s
ISFB Sefidab 8.07 337 *e*Pn **Pn 02 12 19.3 +1.2**
NAY Al-Naaiem 8.09 288 *e*P **Pn 02 12 19.1 +0.6**
NAY AML AML 02 13 47.1
comp=Z,9.3nm,0.5s
NAY Al-Naaiem 8.09 288 *e*P **Pn 02 12 19.1 +0.7**
SHGR Shooshtar-Gavs 8.13 311 *e*Pn **Pn 02 12 20.9 +2.0**
MIB Mutribah 8.16 292 *e*P **Pn 02 12 19.9 +0.4**
MIB AML AML 02 13 52.1
comp=Z,50nm,0.5s
MIB Mutribah 8.16 292 *e*P **Pn 02 12 19.9 +0.5**
GHVR GHOM 8.54 333 *e*Pn **Pn 02 12 26.5 +1.9**
IANJ Anjilo 8.68 349 *e*Pn **Pn 02 12 27.6 +1.1**
IANJ *e* 02 12 34.0
comp=Z,314nm,0.2s
IANJ Anjilo 8.68 349 *e*Pn **Pn 02 12 27.6 +1.1**
IVRN Varamin 8.83 336 *e*Pn **Pn 02 12 29.7 +1.2**
IVRN Varamin 8.83 336 *e*Pn **Pn 02 12 29.7 +1.2**
IFIR Firoozkooh 9.11 343 *e*Pn **Pn 02 12 33.3 +0.9**
IFIR Firoozkooh 9.11 343 *e*Pn **Pn 02 12 33.3 +0.9**
ISHM Shahmirzad 9.14 346 *e*Pn **Pn 02 12 33.9 +1.2**
ISHM Shahmirzad 9.14 346 *e*Pn **Pn 02 12 33.9 +1.2**
DAMV Damavand 9.32 339 *e*Pn **Pn 02 12 37.7 +2.4**
IKIA Kiasar 9.45 348 *e*Pn **Pn 02 12 38.0 +1.0**
IKIA Kiasar 9.45 348 *e*Pn **Pn 02 12 38.0 +1.0**
RBK Rabkut 9.55 191 P **Pn 02 12 40.2 +1.8**
SNR=8.6
RBK Rabkut 9.55 191 P **Pn 02 12 40.2 +1.8**
SNR=8.6
IGLO Ghaloghah 9.71 349 *e*Pn **Pn 02 12 41.5 +0.9**
IGLO Ghaloghah 9.71 349 *e*Pn **Pn 02 12 41.5 +0.9**
ABTO Aybut 9.88 195 P **Pn 02 12 45.8 +2.9**
SNR=11
ABTO Aybut 9.88 195 P **Pn 02 12 45.8 +2.8**
SNR=11
IAKL Akhelmad 9.90 13 *e*Pn **Pn 02 12 44.3 +1.1**
IRAZ Razeghan 9.91 330 Pn **Pn 02 12 44.3 +0.9**
IRAZ Razeghan 9.91 330 *e*Pn **Pn 02 12 44.5 +1.1**
IRAZ *e* 02 14 45.0
comp=Z,335nm,0.2s
IRAZ Razeghan 9.91 330 *e*Pn **Pn 02 12 44.5 +1.1**
IKOM Komasi 10.28 317 Pn **Pn 02 12 47.5 -0.9**
IKOM Komasi 10.28 317 *e*Pn **Pn 02 12 47.5 -0.9**
IKOM *e* 02 12 55.1
comp=Z,2μm,0.3s
IKOM Komasi 10.28 317 *e*Pn **Pn 02 12 47.5 -0.9**
IGHG Ghaleghazi 10.97 314 Pn **Pn 02 12 57.5 -0.4**
IGHG Ghaleghazi 10.97 314 *e*Pn **Pn 02 12 57.5 -0.4**
IGHG *e* 02 15 17.6
comp=Z,1μm,0.4s
IGHG Ghaleghazi 10.97 314 *e*Pn **Pn 02 12 57.5 -0.4**
ILIN Lien 11.12 318 *e*Pn **Pn 02 13 00.2 +0.3**
ILIN Lien 11.12 318 *e*Pn **Pn 02 13 00.2 +0.3**
IDHR Dehrash 11.32 315 Pn **Pn 02 13 01.8 -0.9**
IDHR Dehrash 11.32 315 *e*Pn **Pn 02 13 01.9 -0.8**
IDHR *e* 02 15 13.6
comp=Z,1μm,0.2s
IDHR Dehrash 11.32 315 *e*Pn **Pn 02 13 01.9 -0.8**
KBL Kabul 13.50 53 *e*P **Pn 02 13 36.8 +4.3**
comp=Z,5.9nm,0.7s
KBL Kabul 13.50 53 *e*P **Pn 02 13 36.8 +4.3**
KBL pmax pmax
comp=Z,6.0nm,0.7s
KBL Kabul 13.50 53 *e*P **Pn 02 13 36.8 +4.3**
comp=Z,6.0nm,0.7s
IHRS Heris 13.62 329 *e*Pn **Pn 02 13 36.0 +1.9**
ISHB Shabestar 14.30 325 *e*Pn **Pn 02 13 44.0 +0.7**
HAKT HAKKARI 14.84 319 *i* P **Pn 02 13 46.5 -4.2**
GNI Garni 16.16 327 Pn **Pn 02 14 11.9 +3.8**
comp=Z,0.9nm,0.3s,baz=105,slow=2.2,SNR=9.2
GNI LR LR 02 21 09.7
comp=Z,598nm,21.9s,baz=206,slow=40
GNI Garni 16.16 327 *e*Pn **Pn 02 14 08.6 +0.5**
comp=Z,49nm,1.0s
GNI LR LR 02 21 09.7
GNI Garni 16.16 327 *e*P **Pn 02 14 10.5 +2.4**
GNI pmax pmax
comp=Z,14nm,1.0s
GNI Garni 16.16 327 *e*Pn **Pn 02 14 08.6 +0.5**
comp=Z,49nm,1.0s
GNI Garni 16.16 327 *e*P **Pn 02 14 10.5 +2.4**
comp=Z,14nm,1.0s
MARD Mardin 16.52 312 *i* P **Pn 02 14 10.2 -2.5**
AJM Ajmer 16.64 87 *e*PKP **Pn 02 14 14.6 +0.3**
AJM AMb AMB 02 14 20.0
comp=Z,12nm,0.5s
DGRG David-gareji 16.92 331 P **Pn 02 14 20.2 +2.5**
MTA Mtatsminda 17.37 331 P **Pn 02 14 25.9 +2.6**
TBLG Delisi 17.42 331 P **Pn 02 14 26.7 +2.7**
TBLG Delisi 17.42 331 P **Pn 02 14 26.7 +2.8**
TBLG Delisi 17.42 331 P **Pn 02 14 26.7 +2.7**
ASF Jabal al Asfar 17.43 292 P **Pn 02 14 23.3 -0.9**
comp=Z,0.3nm,0.3s,baz=350,slow=3.0,SNR=3.2
ASF S **Sn 02 17 31.6 -6.7**
comp=Z,0.3nm,0.3s,baz=162,slow=19,SNR=3.0
ASF Jabal al Asfar 17.43 292 P **Pn 02 14 23.3 -0.9**
ASF S **Sn 02 17 31.6 -6.7**
HOMI Horasan 17.56 322 *i* P **Pn 02 14 29.3 +3.6**
KHET Khetri 17.58 82 *e*PKP **Pn 02 14 27.3 +1.2**
KHET AMb AMB 02 14 28.1
comp=Z,8.0nm,0.7s
ERZM Erzurum 17.77 320 *i* P **Pn 02 14 30.5 +2.3**
ERZM Erzurum 17.77 320 *i* P **Pn 02 14 30.5 +2.2**
GOR Gori 17.91 330 P **Pn 02 14 32.7 +2.7**
DDEM Demirkent 18.24 323 *i* P **Pn 02 14 36.3 +2.3**
DDEM Demirkent 18.24 323 *i* P **Pn 02 14 36.3 +2.3**
ARTV Artvin 18.35 324 *i* P **Pn 02 14 37.8 +2.4**
ARTV Artvin 18.35 324 *i* P **Pn 02 14 37.8 +2.4**
DBAD Bademkaya 18.36 324 *i* P **Pn 02 14 37.3 +1.8**
DBAD Bademkaya 18.36 324 *i* P **Pn 02 14 37.3 +1.8**
KKR Kurukshetra 18.53 76 *ex* x 02 14 50.7
DBOC Borcka 18.61 324 *i* P **Pn 02 14 40.2 +1.7**
DBOC Borcka 18.61 324 *i* P **Pn 02 14 40.2 +1.7**
MALT Malatya 18.63 312 *e*Pn **Pn 02 14 39.4 +0.6**
comp=Z,22nm,0.9s
MALT *e*S **Sn 02 17 49.9 -17**
MALT Malatya 18.63 312 *e*P **Pn 02 14 39.4 +0.6**
MALT pmax pmax
comp=Z,22nm,0.9s
MALT Malatya 18.63 312 *e*P **Pn 02 14 39.4 +0.6**
comp=Z,22nm,0.9s
ZEI Tsey 18.63 331 *e*P **Pn 02 14 39.5 +0.7**
ZEI pmax pmax
comp=Z,71nm,1.4s
ZEI MLR MLR
comp=Z,119nm,7.0s
ZEI Tsey 18.63 331 *e*P **Pn 02 14 39.5 +0.7**
comp=Z,119nm,7.0s

SONA Sohna 18.71 81 *e*PKP **Pn** **02 14 39.5 -0.4**
SONA AMb AMB 02 14 43.8
comp=Z,12nm,0.5s
GZT Gaziantep 18.73 308 *i* P **Pn** **02 14 39.3 -0.8**
AYAN Aya Nagar 18.75 80 *e*PKP **Pn** **02 14 40.2 -0.1**
AYAN AMb AMB 02 14 42.8
comp=Z,16nm,2.3s
EIL Elat 18.75 283 P **Pn** **02 14 41.6 +1.2**
comp=Z,0.4nm,0.3s,baz=109,slow=5.1,SNR=8.3
EIL Elat 18.75 283 P **Pn** **02 14 41.7 +1.3**
MMAI Mount Meron Ar 18.85 294 P **Pn** **02 14 42.1 +0.5**
comp=Z,0.8nm,0.3s,baz=111,slow=13,SNR=8.0
AKCD Akcadag 18.95 311 *i* P **Pn** **02 14 45.4 +2.6**
KEMA Kemaliye 19.11 314 *i* P **Pn** **02 14 46.1 +1.5**
ATD Arta Tunnel 19.72 221 P **Pn** **02 14 53.0 +0.8**
comp=Z,1.7nm,0.3s,baz=89,slow=24,SNR=8.4
ATD Arta Tunnel 19.72 221 P **Pn** **02 14 53.0 +0.9**
BHPL Bhopal 19.72 96 *ex* **Pn** **02 14 49.8 -2.4**
BHPL AMb AMB 02 16 10.1
comp=Z,12nm,1.2s
KLP Kalpa 19.91 71 *e*PKP **Pn** **02 14 54.4 0.0**
KLP AMb AMB 02 14 55.8
comp=Z,22nm,1.2s
KKAR Karatay Array 19.96 32 *e*Pn **Pn** **02 14 52.4 -2.4**
KKAR Karatay Array 19.96 32 *e*P **Pn** **02 14 52.4 -2.4**
KKAR Karatay Array 19.96 32 *e*P **Pn** **02 14 52.4 -2.4**
KIV Kislovodsk 20.11 331 *e*P **P** **02 14 55.0 +0.3**
comp=Z,209nm,1.3s
KIV Kislovodsk 20.11 331 *e*P **P** **02 14 56.5 +1.8**
KIV *e*S **S** **02 18 40.8 +0.3**
KIV pmax pmax
comp=Z,136nm,1.1s
KIV Kislovodsk 20.11 331 *e*P **P** **02 14 55.0 +0.3**
comp=Z,209nm,1.3s
KSH Kashi 20.81 48 *e*P **P** **02 14 55.6 -6.8**
KSH *e*pP 02 14 59.5
KSH *e*sP sP 02 15 02.6 -4.0
KSH *e*PP 02 15 14.3
KSH *e*S S 02 18 32.8 -22
KSH *e*SS 02 19 00.3
KSH pmax pmax
comp=Z,85nm,2.5s
KSH LR LR
comp=N,960nm,10.4s,MS4.7
KSH LR LR
comp=E,2μm,14.2s,MS4.7
KSH LR LR
comp=Z,680nm,9.2s
GOF Gofitskoye 20.86 333 *e*P Px 02 15 13.5
JOSI Joshimath 20.93 75 *e*PKP **P** **02 15 05.9 +2.1**
JOSI AMb AMB 02 15 09.0
comp=Z,237nm,0.9s
AML Almayashu 20.94 39 *e*P **P** **02 15 02.7 -1.1**
comp=Z,20nm,0.8s
AML Almayashu 20.94 39 *e*P **P** **02 15 02.7 -1.1**
comp=Z,20nm,0.8s
CSS Prodhromos 21.01 298 *e*Pn **P** **02 15 01.9 -2.7**
comp=Z,32nm,1.1s,mb4.6
SOC Sochi 21.22 326 *e*P **P** **02 15 08.7 +2.0**
SOC *e* 02 15 21.2
SOC *e*S **S** **02 19 02.0 -0.5**
SOC *e*SS 02 19 22.5
SOC pmax pmax
comp=Z,35nm,1.3s,mb4.5
SOC Sochi 21.22 326 *e*P **P** **02 15 08.7 +2.0**
comp=Z,35nm,1.3s,mb4.5
EKS2 Erkin-Say 21.34 38 *e*Pn **P** **02 15 08.2 +0.1**
comp=Z,17nm,0.9s,mb4.4
EKS2 Erkin-Say 21.34 38 *e*Pn **P** **02 15 08.2 +0.2**
comp=Z,17nm,0.9s,mb4.4
AAK Ala-Archa 21.72 39 P **P** **02 15 13.0 +0.9**
comp=Z,5.4nm,0.7s,mb4.1,baz=225,slow=9.8,SNR=13
AAK Ala-Archa 21.72 39 *e*P **P** **02 15 09.8 -2.3**
comp=Z,18nm,0.9s,mb4.5
AAK Ala-Archa 21.72 39 *e*P **P** **02 15 09.8 -2.3**
AAK pmax pmax
comp=Z,18nm,0.9s,mb4.5
ABKAR Akbulak array 22.48 7 *e*P **P** **02 15 19.8 -0.4**
comp=Z,8.7nm,0.7s,mb4.3
ABKAR Akbulak array 22.48 7 *e*P **P** **02 15 19.8 -0.4**
comp=Z,8.7nm,0.7s,mb4.3
TKM2 Tokmak 2 22.53 40 *e*P **P** **02 15 20.5 -0.3**
comp=Z,11nm,1.1s,mb4.2
TKM2 Tokmak 2 22.53 40 *e*P **P** **02 15 20.5 -0.3**
TKM2 pmax pmax
comp=Z,11nm,1.1s,mb4.2
TKM2 Tokmak 2 22.53 40 *e*P **P** **02 15 20.5 -0.3**
comp=Z,11nm,1.1s,mb4.2
BR131 Keskin Array S 22.56 310 *e*P **P** **02 15 21.8 +0.7**
comp=Z,22nm,0.9s,mb4.6
BR131 Keskin Array S 22.56 310 *e*P **P** **02 15 21.8 +0.6**
comp=Z,22nm,0.9s,mb4.6
BRTR Keskin Array B 22.56 310 P **P** **02 15 22.0 +0.8**
comp=Z,9.1nm,0.6s,mb4.3,baz=132,slow=13,SNR=42
BRTR PcP PcP 02 19 15.0 +0.4
comp=Z,0.9nm,0.9s,baz=174,slow=4.1,SNR=2.8
BRTR Keskin Array B 22.56 310 P **P** **02 15 22.0 +0.8**
BRTR 02 19 15.0
BRTR pmax pmax
comp=Z,9.0nm,0.6s
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR Keskin Array B 22.56 310 P **P** **02 15 22.0 +0.8**
comp=Z,9.0nm,0.6s,mb4.4
BRTR Keskin Array B 22.56 310 PcP PcP 02 19 15.0 +0.4
comp=Z,1.0nm,0.9s
HYB Hyderabad 22.88 110 *i* P **P** **02 15 26.0 +1.3**
ANN Anapa 23.24 325 *e*P **P** **02 15 32.7 +4.4**
ANN pmax pmax
comp=Z,62nm,1.3s,mb4.9
ANN MLR MLR
comp=N,822nm,18.0s,MS4.3
ANN MLR MLR
comp=E,685nm,18.0s,MS4.3
ANN MLR MLR
comp=Z,867nm,18.0s,MS4.2
AKTK Aktyubinsk 23.50 3 P **P** **02 15 30.6 -0.4**
AKTK LR LR 02 25 51.4
AKTK Aktyubinsk 23.50 3 P **P** **02 15 30.6 -0.4**
comp=Z,421nm,19.9s
AKTO Aktyubinsk 23.50 3 P **P** **02 15 30.6 -0.4**
comp=Z,6.7nm,0.6s,mb4.3,baz=182,slow=9.4,SNR=36
AKTO LR LR 02 25 51.4
comp=Z,421nm,19.9s,MS3.9,baz=324,slow=40
AKTO Aktyubinsk 23.50 3 P **P** **02 15 30.6 -0.4**
AKTO pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
AKTO MLR MLR
comp=Z,421nm,19.9s,MS3.9
VORD Divnogorie 27.16 336 *e*P **P** **02 16 05.5 +1.3**
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,9.0nm,0.5s
VORD pmax pmax
comp=Z,4.0nm,0.5s,mb4.2
VORD Divnogorie 27.16 336 *e*P **P** **02 16 05.5 +1.3**
VSR Storozhevoye 27.41 337 *e*P **P** **02 16 05.6 -0.9**
VSR pmax pmax
comp=N,1.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
VSR pmax pmax
comp=E,1.0nm,0.2s
VSR Storozhevoye 27.41 337 *e*P **P** **02 16 05.6 -0.9**
BRVK Borovoye 28.17 18 *e*P **P** **02 16 13.0 -0.2**
comp=E,5.2nm,0.8s,mb4.2
BRVK Borovoye 28.17 18 *d i*P **P** **02 16 13.1 -0.1**
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
BRVK Borovoye 28.17 18 *e*P **P** **02 16 13.0 -0.2**
comp=Z,5.2nm,0.8s,mb4.2
BVAR Borovoye Array 28.17 19 P **P** **02 16 13.0 -0.2**
comp=Z,8.3nm,0.7s,mb4.5,baz=201,slow=8.7,SNR=47
BVAR PcP PcP 02 19 26.9 -0.1
comp=Z,0.9nm,0.6s,baz=204,slow=3.2,SNR=3.6
BVAR Borovoye Array 28.17 19 P **P** **02 16 13.0 -0.2**
BVAR 02 19 26.9
BVAR pmax pmax
comp=Z,8.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 28.17 19 P **P** **02 16 13.0 -0.2**
comp=Z,8.0nm,0.7s,mb4.5
BVAR Borovoye Array 28.17 19 PcP PcP 02 19 26.9 0.0
comp=Z,1.0nm,0.6s

MK31 Makanchi Array 28.66 39 *e*P **P** **02 16 18.2 +0.6**
MK31 Makanchi Array 28.66 39 *e*P **P** **02 16 18.2 +0.5**
MK31 Makanchi Array 28.66 39 *e*P **P** **02 16 18.2 +0.5**
MKAR Makanchi Array 28.66 39 P **P** **02 16 17.8 +0.1**
comp=Z,1.8nm,0.7s,mb3.9,baz=226,slow=7.9,SNR=8.7
MKAR PcP PcP 02 19 28.2 0.0
comp=Z,0.4nm,0.4s,baz=215,slow=1.4,SNR=5.3
MKAR Makanchi Array 28.66 39 P **P** **02 16 17.8 +0.1**
MKAR PcP PcP 02 19 28.2 0.0
MKAR Makanchi Array 28.66 39 *i* P **P** **02 16 17.7 0.0**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 29.32 30 *e*P **P** **02 16 17.5 -6.0**
comp=Z,2.4nm,0.8s,mb4.0
KURK Kurchatov 29.32 30 *e*P **P** **02 16 22.2 -1.3**
KURK pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KURK Kurchatov 29.32 30 *e*P **P** **02 16 22.2 -1.3**
comp=Z,2.0nm,0.9s,mb3.9
PLOR Plostina 30.00 317 ⇓P **P** **02 16 32.2 +2.6**
MLR Muntele Rosu 30.27 316 ⇑P **P** **02 16 33.9 +2.0**
TESR 30.32 318 ⇑*i*P **P** **02 16 32.8 +0.4**
WMQ Urumqi 30.58 48 *e*P **P** **02 16 34.0 -0.7**
WMQ sP sP 02 16 41.0 +2.0
WMQ S **S** **02 21 34.0 -2.6**
WMQ pmax pmax
comp=Z,15nm,0.8s,mb4.9
WMQ LR LR
comp=N,750nm,12.0s,MS4.6
WMQ LR LR
comp=E,430nm,12.0s,MS4.6
WMQ LR LR
comp=Z,380nm,12.0s,MS4.3
VOIR 30.80 315 ⇑P **P** **02 16 37.6 +0.9**
VOIR 30.80 315 P **P** **02 16 37.6 +0.9**
AKASG Malin Array Be 31.29 326 P **P** **02 16 39.8 -1.2**
comp=Z,1.4nm,0.5s,mb4.0,baz=135,slow=8.5,SNR=7.8
AKASG PcP PcP 02 19 34.4 -0.6
comp=Z,0.4nm,0.4s,baz=108,slow=2.4,SNR=4.3
AKASG Malin Array Be 31.29 326 P **P** **02 16 39.8 -1.1**
AKASG 02 19 34.4
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 31.29 326 P **P** **02 16 39.8 -1.1**
comp=Z,1.0nm,0.5s,mb3.9
AKASG Malin Array Be 31.29 326 PcP PcP 02 19 34.4 -0.6
KIEV Kiev 31.30 326 *e*P **P** **02 16 39.9 -1.0**
comp=Z,7.0nm,0.9s,mb4.5
KIEV Kiev 31.30 326 *e*P **P** **02 16 39.9 -1.1**
KIEV pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
KIEV Kiev 31.30 326 *e*P **P** **02 16 39.9 -1.1**
comp=Z,7.0nm,0.9s,mb4.5
OBN Obninsk 31.52 339 P **P** **02 16 47.0 +4.2**
OBN S **S** **02 21 52.0 +1.0**
OBN pmax pmax
comp=Z,15nm,0.8s,mb4.9
OBN MLR MLR
comp=Z,300nm,20.0s,MS4.0
MOS Moscow 31.71 340 *e*P **P** **02 16 42.7 -1.8**
MOS Moscow 31.71 340 *e*P **P** **02 16 42.7 -1.8**
BURAR Bucovina Array 31.72 319 ⇑P **P** **02 16 45.3 +0.6**
BURAR Bucovina Array 31.72 319 ⇑*i*P **P** **02 16 45.3 +0.6**
BURAR Bucovina Array 31.72 319 ⇑*i*P **P** **02 16 45.3 +0.6**
BUR08 Bucovina Ar. S 31.75 319 *e*P **P** **02 16 44.5 -0.5**
BUR08 Bucovina Ar. S 31.75 319 *e*P **P** **02 16 44.5 -0.5**
BARS Barje 31.96 309 *e*P **P** **02 16 46.8 -0.1**
BOLS Boljevac 32.20 310 *e*P **P** **02 16 48.0 -1.0**
GZR Gura Zlata 32.24 314 ⇑P **P** **02 16 49.3 0.0**
GZR Gura Zlata 32.24 314 P **P** **02 16 49.3 0.0**
DRGR 32.86 316 ⇓P **P** **02 16 54.6 -0.1**
DRGR 32.86 316 P **P** **02 16 54.6 -0.1**
BZS Buzias 33.08 313 ⇓P **P** **02 16 56.3 -0.4**
BZS Buzias 33.08 313 P **P** **02 16 56.3 -0.4**
KOLS Kolonicke sedl 34.08 319 *e*P **P** **02 17 05.8 +0.5**
comp=Z,7.1nm,0.9s,mb4.6
KOLS Kolonicke sedl 34.08 319 *e*P **P** **02 17 05.8 +0.5**
KOLS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KOLS Kolonicke sedl 34.08 319 *e*P **P** **02 17 05.8 +0.5**
KOLS Kolonicke sedl 34.08 319 *e*P **P** **02 17 05.8 +0.5**
comp=Z,7.0nm,0.9s,mb4.6
KWP Kalwaria Pacla 34.16 320 ⇑P **P** **02 17 05.5 -0.6**
KWP Kalwaria Pacla 34.16 320 ⇑*i*P **P** **02 17 05.5 -0.6**
KWP Kalwaria Pacla 34.16 320 P **P** **02 17 05.5 -0.6**
NVS Novosibirsk 34.22 28 *e*P **P** **02 17 07.8 +1.3**
NVS Novosibirsk 34.22 28 *e*P **P** **02 17 07.8 +1.3**
ZAA0 Zalesovo Array 34.31 30 *e*P **P** **02 17 06.8 -0.5**
ZAA0 Zalesovo Array 34.31 30 *e*P **P** **02 17 06.8 -0.5**
ZALV Zalesovo Beam 34.31 30 P **P** **02 17 06.7 -0.6**
comp=Z,6.0nm,0.5s,mb4.8,baz=246,slow=9.5,SNR=31
ZALV PcP PcP 02 19 42.1 -1.2
comp=Z,0.7nm,0.4s,baz=246,slow=4.8,SNR=2.3
ZALV Zalesovo Beam 34.31 30 P **P** **02 17 06.7 -0.6**
ZALV 02 19 42.1
ZALV pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
CRVS Cervenica-Dubn 34.54 319 *e*P **P** **02 17 10.5 +1.2**
comp=Z,3.5nm,0.8s,mb4.3
CRVS Cervenica-Dubn 34.54 319 *e*P **P** **02 17 10.5 +1.2**
CRVS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CRVS Cervenica-Dubn 34.54 319 *e*P **P** **02 17 10.5 +1.2**
CRVS Cervenica-Dubn 34.54 319 *e*P **P** **02 17 10.5 +1.2**
comp=Z,4.0nm,0.8s,mb4.4
STON Ston 34.88 307 *e*Pn **P** **02 17 09.4 -3.0**
STON Ston 34.88 307 *e*Pn **P** **02 17 09.3 -3.1**
KECS Kecovo 34.94 318 *e*P **P** **02 17 14.1 +1.3**
comp=Z,3.4nm,0.9s,mb4.3
KECS Kecovo 34.94 318 *e*P **P** **02 17 14.1 +1.3**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS Kecovo 34.94 318 *e*P **P** **02 17 14.1 +1.3**
PSZ Piszkesteto 35.07 316 *e*P **P** **02 17 14.0 +0.1**
comp=Z,5.1nm,1.1s,mb4.4
PSZ Piszkesteto 35.07 316 *e*P **P** **02 17 14.0 +0.1**
PSZ pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
PSZ Piszkesteto 35.07 316 *e*P **P** **02 17 14.0 +0.1**
comp=Z,5.0nm,1.1s,mb4.4
PKSM Moragy 35.23 313 ⇑P **P** **02 17 15.4 +0.1**
PKSM Moragy 35.23 313 ⇓*e*P **P** **02 17 15.3 0.0**
BUD Budapest 35.44 315 ⇓*e*P **P** **02 17 17.1 0.0**
CUC Castrocucco 35.68 302 *e*P **P** **02 17 20.7 +1.4**
comp=Z,14nm,0.6s,mb5.1
CUC Castrocucco 35.68 302 *e*P **P** **02 17 20.7 +1.4**
comp=Z,14nm,0.6s,mb5.1
KLMR Klimovskoe 35.71 346 *e*P **P** **02 17 19.0 -0.2**
KLMR pmax pmax
comp=Z,32nm,1.5s,mb5.0
KLMR Klimovskoe 35.71 346 *e*P **P** **02 17 19.0 -0.2**
comp=Z,32nm,1.5s,mb5.0
VYHS Vyhne 35.95 317 *e*P **P** **02 17 22.3 +0.8**
comp=Z,6.6nm,1.6s,mb4.3
VYHS Vyhne 35.95 317 *e*P **P** **02 17 22.3 +0.8**
VYHS pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
VYHS Vyhne 35.95 317 *e*P **P** **02 17 22.3 +0.8**
comp=Z,7.0nm,1.6s,mb4.3
OJC Ojcow 36.10 320 *e*P **P** **02 17 22.1 -0.6**
OJC Ojcow 36.10 320 *e*P **P** **02 17 22.1 -0.6**
OJC Ojcow 36.10 320 *e*P **P** **02 17 22.1 -0.6**
OKC Ostrava-Krasne 36.90 319 *e*P **P** **02 17 28.9 -0.7**
OKC Ostrava-Krasne 36.90 319 *e*P **P** **02 17 28.9 -0.7**
OKC Ostrava-Krasne 36.90 319 *e*P **P** **02 17 28.9 -0.7**
SOP Sopron 37.07 315 ⇓*e*P **P** **02 17 30.8 -0.3**
MORC Moravsky Berou 37.23 318 *e*P **P** **02 17 31.9 -0.5**
comp=Z,9.3nm,1.1s,mb4.5
MORC Moravsky Berou 37.23 318 ⇓P **P** **02 17 32.2 -0.2**
MORC Moravsky Berou 37.23 318 ⇓*i*P **P** **02 17 32.2 -0.2**
MORC Moravsky Berou 37.23 318 *e*P **P** **02 17 31.6 -0.8**
VRAC Vranov 37.62 317 P **P** **02 17 35.7 0.0**
comp=Z,4.5nm,0.6s,mb4.3,baz=100,slow=9.4,SNR=7.3
VRAC Vranov 37.62 317 ⇓P **P** **02 17 36.0 +0.3**
VRAC Vranov 37.62 317 *e*P **P** **02 17 35.2 -0.5**
DPC Dobruska-Polom 38.18 319 *e*P **P** **02 17 40.0 -0.4**
DPC Dobruska-Polom 38.18 319 *e*P **P** **02 17 40.0 -0.4**
DPC Dobruska-Polom 38.18 319 *e*P **P** **02 17 40.0 -0.4**
TREC Trest 38.30 317 *e*P **P** **02 17 42.3 +0.9**
TREC Trest 38.30 317 *e*P **P** **02 17 42.3 +0.9**
TREC Trest 38.30 317 *e*P **P** **02 17 42.3 +0.9**
GTA Gaotai 38.35 60 *e*P **P** **02 17 43.3 +1.3**

GTA pP pP 02 17 47.5 +2.4
GTA sP sP 02 17 50.8 +4.5
GTA pmax pmax
comp=Z,3.0nm,1.4s,mb3.8
UPC Upice 38.42 319 *e*P **P** **02 17 41.8 -0.7**
UPC Upice 38.42 319 *e*P **P** **02 17 41.8 -0.7**
UPC Upice 38.42 319 *e*P **P** **02 17 41.8 -0.7**
KBA Koelnbreinsper 38.97 313 ⇑*i*P **P** **02 17 46.6 -0.5**
comp=Z,8.1nm,1.0s,mb4.4
KBA Koelnbreinsper 38.97 313 P **P** **02 17 46.6 -0.5**
comp=Z,8.1nm,1.0s,mb4.4
PRU Pruhonice 39.11 317 *e*P **P** **02 17 51.3 +3.0**
PRU Pruhonice 39.11 317 *e*P **P** **02 17 51.3 +3.0**
GERES GERESS Array B 39.25 315 P **P** **02 17 48.2 -1.2**
comp=Z,0.7nm,0.6s,mb3.6,baz=108,slow=8.6,SNR=9.7
GERES GERESS Array B 39.25 315 P **P** **02 17 48.3 -1.1**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES GERESS Array B 39.25 315 P **P** **02 17 48.2 -1.2**
KHC Kasperske Hory 39.42 316 *e*P **P** **02 17 49.3 -1.5**
ABTA Abfaltersbach 39.43 312 ⇑*i*pP **P** **02 17 51.0 +0.1**
comp=Z,6.3nm,0.9s,mb4.3
ABTA Abfaltersbach 39.43 312 P **P** **02 17 51.0 0.0**
comp=Z,6.3nm,0.9s,mb4.3
JOF Joensuu 39.48 342 *e*P **P** **02 17 49.5 -1.6**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
JOF Joensuu 39.48 342 *e*P **P** **02 17 49.5 -1.6**
comp=Z,1.0nm,0.3s,mb4.0
BRG Berggiesshubel 39.78 318 *e*P **P** **02 17 53.6 -0.2**
comp=Z,2.7nm,0.6s,mb4.1
BRG *e* 02 17 59.3
comp=Z,5.5nm,1.1s
FINES FINESS Array B 39.92 338 P **P** **02 17 54.2 -0.6**
comp=Z,2.5nm,0.5s,mb4.2,baz=140,slow=10,SNR=21
FINES FINESS Array B 39.92 338 P **P** **02 17 54.2 -0.6**
FINES FINESS Array B 39.92 338 P **P** **02 17 54.2 -0.6**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 39.92 338 P **P** **02 17 54.2 -0.6**
comp=Z,3.0nm,0.5s,mb4.3
WTTA Wattenberg 40.14 312 ⇑*i*P **P** **02 17 54.5 -2.3**
comp=Z,13nm,0.8s,mb4.7
WTTA Wattenberg 40.14 312 P **P** **02 17 54.5 -2.4**
comp=Z,13nm,0.8s,mb4.7
WATA Walderalm 40.20 312 ⇑*i*P **P** **02 17 56.5 -0.8**
comp=Z,7.2nm,0.7s,mb4.5
WATA Walderalm 40.20 312 P **P** **02 17 56.5 -0.8**
comp=Z,7.2nm,0.7s,mb4.5
CMAR Chiang Mai Arr 40.33 93 P **P** **02 17 59.2 +0.4**
comp=Z,0.8nm,0.3s,mb3.9,baz=279,slow=11,SNR=5.1
CMAR Chiang Mai Arr 40.33 93 P **P** **02 17 59.2 +0.4**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 40.33 93 P **P** **02 17 59.2 +0.4**
comp=Z,1.0nm,0.3s,mb4.0
KAF Kangasniemi 40.33 339 *e*P **P** **02 18 00.8 +2.6**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
KAF Kangasniemi 40.33 339 *e*p **P** **02 18 00.8 +2.6**
comp=Z,0.5nm,0.3s,mb3.7
KEST Kesra 40.51 294 P **P** **02 18 01.1 +1.1**
comp=Z,1.1nm,0.7s,mb3.6,baz=21,slow=3.2,SNR=6.9
MOTA Moosalm 40.51 312 ⇑*i*P **P** **02 17 59.4 -0.5**
comp=Z,7.7nm,0.9s,mb4.3
MOTA Moosalm 40.51 312 P **P** **02 17 59.4 -0.5**
comp=Z,7.7nm,0.9s,mb4.3
VSL Villasalto 40.56 300 *e*P **P** **02 18 00.9 +0.4**
comp=Z,5.9nm,0.6s,mb4.4
VSL Villasalto 40.56 300 *e*P **P** **02 18 00.9 +0.4**
comp=Z,5.9nm,0.6s,mb4.4
FETA Feichten 40.68 312 ⇑*i*P **P** **02 18 00.4 -1.0**
comp=Z,18nm,0.9s,mb4.7
FETA Feichten 40.68 312 P **P** **02 18 00.4 -1.0**
comp=Z,18nm,0.9s,mb4.7
GRA1 Grafenberg Arr 41.06 316 *e*P **P** **02 18 05.1 +0.7**
comp=Z,84nm,2.3s,mb5.0
GRA1 Grafenberg Arr 41.06 316 *e*P **P** **02 18 05.1 +0.7**
comp=Z,84nm,2.3s,mb5.0
GRF Grafenberg Arr 41.06 316 *e*P **P** **02 18 05.1 +0.7**
comp=Z,84nm,2.3s,mb5.0
GRF Grafenberg Arr 41.06 316 *e*P **P** **02 18 05.1 +0.7**
GRF pmax pmax
comp=Z,84nm,2.3s,mb5.0
GRF Grafenberg Arr 41.06 316 *e*P **P** **02 18 05.1 +0.7**
GRF pmax pmax
comp=Z,84nm,2.3s,mb5.0
GRF Grafenberg Arr 41.06 316 *e*P **P** **02 18 05.1 +0.7**
comp=Z,84nm,2.3s,mb5.0
PGF Pioggiola 41.12 305 *e*P **P** **02 18 04.0 -1.0**
comp=Z,16nm,0.9s,mb4.3
PGF Pioggiola 41.12 305 *e*P **P** **02 18 04.0 -1.0**
comp=Z,7.8nm,0.9s,mb4.3
PGF Pioggiola 41.12 305 *e*P **P** **02 18 04.0 -1.0**
PGF pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
PGF Pioggiola 41.12 305 *e*P **P** **02 18 04.0 -1.0**
comp=Z,7.8nm,0.9s,mb4.3
DAVOX Davos/Dischmat 41.20 311 P **P** **02 18 05.1 -0.5**
comp=Z,4.0nm,0.8s,mb4.1,baz=125,slow=12,SNR=5.5
DAVOX Davos/Dischmat 41.20 311 P **P** **02 18 05.1 -0.5**
DAVOX Davos/Dischmat 41.20 311 P **P** **02 18 05.1 -0.5**
DAVA Damuels 41.31 312 ⇑*i*P **P** **02 18 05.5 -1.0**
comp=Z,16nm,0.7s,mb4.8
DAVA Damuels 41.31 312 P **P** **02 18 05.5 -1.0**
comp=Z,16nm,0.7s,mb4.8
LZH Lanzhou 41.42 65 *e*P **P** **02 17 53.0 -15**
LZH pP pP 02 17 58.5 -12
LZH sP sP 02 18 02.0 -10
LZH pmax pmax
comp=Z,13nm,1.2s,mb4.4
LZH Lanzhou 41.42 65 *e*P **P** **02 18 06.5 -1.1**
LZH pP pP 02 18 09.9 -0.8
LZH sP sP 02 18 11.5 -0.5
LZH pmax pmax
comp=Z,13nm,1.2s,mb4.4
TUE Stuetta 41.49 311 *e*P **P** **02 18 07.1 -0.9**
comp=Z,7.8nm,0.8s,mb4.4
TUE Stuetta 41.49 311 *e*P **P** **02 18 07.1 -0.9**
comp=Z,7.8nm,0.8s,mb4.4
CD2 Chengdu 41.72 73 *e*P **P** **02 18 09.9 -0.2**
CD2 pP pP 02 18 14.4 +1.2
CD2 sP sP 02 18 17.9 +3.4
CD2 PP PP 02 19 49.5 +3.0
CD2 S **S** **02 24 25.5 -1.7**
CD2 sS sS 02 24 32.9 +0.6
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
CD2 pmax pmax
comp=Z,30nm,4.8s
KMI Kunming 41.83 82 P **P** **02 18 13.1 +2.0**
KMI pP pP 02 18 16.4 +2.2
KMI pmax pmax
comp=Z,11nm,0.9s,mb4.5
SBF Sospel 42.41 306 *e*P **P** **02 18 14.7 -0.9**
comp=Z,56nm,1.0s,mb4.8
SBF Sospel 42.41 306 *e*P **P** **02 18 14.7 -0.9**
comp=Z,28nm,1.0s,mb4.8
SBF Sospel 42.41 306 *e*P **P** **02 18 14.7 -0.9**
SBF pmax pmax
comp=Z,28nm,1.0s,mb4.8
SBF Sospel 42.41 306 *e*P **P** **02 18 14.7 -0.9**
comp=Z,28nm,1.0s,mb4.8
FRF La Foret Royal 42.95 306 *e*P **P** **02 18 18.3 -1.6**
FRF La Foret Royal 42.95 306 *e*P **P** **02 18 18.3 -1.6**
FRF La Foret Royal 42.95 306 *e*P **P** **02 18 18.3 -1.6**
MBDF Montbardon 42.99 308 *e*P **P** **02 18 19.0 -1.3**
comp=Z,12nm,0.7s,mb4.4
MBDF Montbardon 42.99 308 *e*P **P** **02 18 19.0 -1.3**
comp=Z,5.8nm,0.7s,mb4.4
MBDF Montbardon 42.99 308 *e*P **P** **02 18 19.0 -1.3**
MBDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
MBDF Montbardon 42.99 308 *e*P **P** **02 18 19.0 -1.3**
comp=Z,5.8nm,0.7s,mb4.4
LMR La Mourre 43.02 306 *e*P **P** **02 18 19.2 -1.4**
comp=Z,9.4nm,1.1s,mb4.1
LMR La Mourre 43.02 306 *e*P **P** **02 18 19.2 -1.4**
comp=Z,4.7nm,1.1s,mb4.1
LMR La Mourre 43.02 306 *e*P **P** **02 18 19.2 -1.4**
LMR pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
LMR La Mourre 43.02 306 *e*P **P** **02 18 19.2 -1.4**
comp=Z,4.7nm,1.1s,mb4.1
BNI Bardonecchia 43.10 308 *e*P **P** **02 18 20.0 -1.1**
comp=Z,5.3nm,0.8s,mb4.3

BNI Bardonecchia 43.10 308 *eP* **P 02 18 20.0 -1.2**
BNI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
BNI Bardonecchia 43.10 308 *eP* **P 02 18 20.0 -1.2**
comp=Z,5.0nm,0.8s,mb4.3
LPG La Plagne 43.11 309 *eP* **P 02 18 20.8 -0.4**
comp=Z,14nm,0.7s,mb4.5
LPG La Plagne 43.11 309 *eP* **P 02 18 20.8 -0.4**
comp=Z,6.8nm,0.7s,mb4.5
LPG La Plagne 43.11 309 *eP* **P 02 18 20.8 -0.4**
LPG pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
LPG La Plagne 43.11 309 *eP* **P 02 18 20.8 -0.4**
comp=Z,6.8nm,0.7s,mb4.5
LPL La Plagne 43.13 309 *eP* **P 02 18 20.6 -0.8**
comp=Z,7.7nm,0.6s,mb4.3
LPL La Plagne 43.13 309 *eP* **P 02 18 20.6 -0.8**
comp=Z,3.8nm,0.6s,mb4.3
LPL La Plagne 43.13 309 *eP* **P 02 18 20.6 -0.8**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
LPL La Plagne 43.13 309 *eP* **P 02 18 20.6 -0.8**
comp=Z,3.8nm,0.6s,mb4.3
CDF Champ du Feu 43.26 313 *eP* **P 02 18 21.1 -1.3**
comp=Z,10nm,1.0s,mb4.2
CDF Champ du Feu 43.26 313 *eP* **P 02 18 21.1 -1.3**
comp=Z,5.1nm,1.0s,mb4.2
CDF Champ du Feu 43.26 313 *eP* **P 02 18 21.1 -1.3**
CDF pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
CDF Champ du Feu 43.26 313 *eP* **P 02 18 21.1 -1.3**
comp=Z,5.1nm,1.0s,mb4.2
ECH Echery 43.30 313 *eP* **P 02 18 20.9 -1.8**
comp=Z,6.5nm,1.0s,mb4.3
ECH Echery 43.30 313 *eP* **P 02 18 21.0 -1.7**
ECH pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
ECH Echery 43.30 313 *eP* **P 02 18 21.0 -1.7**
comp=Z,7.0nm,1.0s,mb4.3
HINF Hinteralfeld 43.42 312 *eP* **P 02 18 22.1 -1.6**
HINF Hinteralfeld 43.42 312 *eP* **P 02 18 22.1 -1.6**
HINF Hinteralfeld 43.42 312 *eP* **P 02 18 22.1 -1.6**
ORIF Oris-en-Rattie 43.65 308 *eP* **P 02 18 24.5 -1.1**
comp=Z,14nm,1.1s,mb4.3
ORIF Oris-en-Rattie 43.65 308 *eP* **P 02 18 24.5 -1.1**
comp=Z,6.8nm,1.1s,mb4.3
ORIF Oris-en-Rattie 43.65 308 *eP* **P 02 18 24.5 -1.1**
ORIF pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
ORIF Oris-en-Rattie 43.65 308 *eP* **P 02 18 24.5 -1.1**
comp=Z,6.8nm,1.1s,mb4.3
CABF La Chapelle 43.73 310 *eP* **P 02 18 25.3 -0.9**
comp=Z,16nm,0.9s,mb4.5
CABF La Chapelle 43.73 310 *eP* **P 02 18 25.3 -0.9**
comp=Z,8.1nm,0.9s,mb4.5
CABF La Chapelle 43.73 310 *eP* **P 02 18 25.3 -0.9**
CABF pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
CABF La Chapelle 43.73 310 *eP* **P 02 18 25.3 -0.9**
comp=Z,8.1nm,0.9s,mb4.5
SMRF Simiane la Rot 43.76 306 *eP* **P 02 18 25.3 -1.2**
comp=Z,21nm,1.3s,mb4.4
SMRF Simiane la Rot 43.76 306 *eP* **P 02 18 25.3 -1.2**
comp=Z,21nm,1.3s,mb4.7
SMRF Simiane la Rot 43.76 306 *eP* **P 02 18 25.3 -1.2**
comp=Z,10nm,1.3s,mb4.4
HAU Haudompre 43.79 312 *eP* **P 02 18 25.0 -1.7**
HAU Haudompre 43.79 312 *eP* **P 02 18 25.0 -1.7**
HAU Haudompre 43.79 312 *eP* **P 02 18 25.0 -1.7**
HFS Hagfors 43.91 331 P **P 02 18 26.5 -0.9**
comp=Z,1.3nm,0.5s,mb3.9,baz=140,slow=9.5,SNR=12
HFS Hagfors 43.91 331 P **P 02 18 26.5 -0.9**
HFS pmax pmax
comp=Z,1.0nm,0.5s
HFS Hagfors 43.91 331 P **P 02 18 26.5 -0.9**
comp=Z,1.0nm,0.5s,mb3.8
SONM Songino Array 44.22 48 P **P 02 18 30.2 +0.1**
comp=Z,1.2nm,0.7s,mb3.8,baz=264,slow=9.8,SNR=8.9
SONM Songino Array 44.22 48 P **P 02 18 30.2 +0.1**
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM Songino Array 44.22 48 P **P 02 18 30.2 +0.1**
comp=Z,1.0nm,0.7s,mb3.6
VIVF Saint-Julien-l 44.49 308 *eP* **P 02 18 30.9 -1.5**
VIVF Saint-Julien-l 44.49 308 *eP* **P 02 18 30.9 -1.5**
VIVF Saint-Julien-l 44.49 308 *eP* **P 02 18 30.9 -1.5**
MEM Membach 44.53 316 P **P 02 18 34.2 +1.6**
comp=Z,9.1nm,2.3s,mb4.2
SFTF Sexfontaines 44.69 312 *eP* **P 02 18 32.9 -1.0**
SFTF Sexfontaines 44.69 312 *eP* **P 02 18 32.9 -1.0**
MEZF Maizieres J'vi 44.73 313 *eP* **P 02 18 33.3 -0.9**
MEZF Maizieres J'vi 44.73 313 *eP* **P 02 18 33.3 -0.9**
BCLA Clavier 44.93 315 P **P 02 18 37.0 +1.2**
comp=Z,12nm,2.4s,mb4.3
LASF Ste Croix 45.01 306 *eP* **P 02 18 35.4 -1.1**
comp=Z,22nm,1.1s,mb4.6
LASF Ste Croix 45.01 306 *eP* **P 02 18 35.4 -1.1**
comp=Z,11nm,1.1s,mb4.6
GIVF Givet 45.17 315 *eP* **P 02 18 37.7 0.0**
GIVF Givet 45.17 315 *eP* **P 02 18 37.7 0.0**
GIVF Givet 45.17 315 *eP* **P 02 18 37.7 0.0**
SMF Signal de Mont 45.27 310 *eP* **P 02 18 37.2 -1.3**
comp=Z,44nm,1.1s,mb4.9
SMF Signal de Mont 45.27 310 *eP* **P 02 18 37.2 -1.3**
comp=Z,22nm,1.1s,mb4.9
SMF Signal de Mont 45.27 310 *eP* **P 02 18 37.2 -1.3**
SMF pmax pmax
comp=Z,22nm,1.1s,mb4.9
SMF Signal de Mont 45.27 310 *eP* **P 02 18 37.2 -1.3**
comp=Z,22nm,1.1s,mb4.9
DOU Dourbes 45.31 315 P **P 02 18 39.8 +1.0**
comp=Z,7.1nm,1.3s,mb4.3
LOR Lormes 45.34 311 *eP* **P 02 18 37.6 -1.5**
LOR Lormes 45.34 311 *eP* **P 02 18 37.6 -1.5**
LOR Lormes 45.34 311 *eP* **P 02 18 37.6 -1.5**
NB2 NORSAR Subarra 45.42 331 P **P 02 18 37.9 -1.6**
comp=Z,2.0nm,0.7s,mb4.1,baz=119,slow=8.6
NB2 NORSAR Subarra 45.42 331 P **P 02 18 37.9 -1.6**
comp=Z,2.0nm,0.7s,mb4.1,baz=119,slow=8.1,SNR=5.3
NOA NORSAR Array B 45.42 331 P **P 02 18 37.2 -2.2**
comp=Z,0.8nm,0.6s,mb3.7,baz=117,slow=7.8,SNR=4.6
NOA NORSAR Array B 45.42 331 P **P 02 18 37.2 -2.2**
NOA NORSAR Array B 45.42 331 P **P 02 18 37.2 -2.3**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 45.42 331 P **P 02 18 37.2 -2.3**
comp=Z,1.0nm,0.6s,mb3.8
SSF Saint Saulge 45.55 311 *eP* **P 02 18 39.6 -1.1**
comp=Z,12nm,0.8s,mb4.6
SSF Saint Saulge 45.55 311 *eP* **P 02 18 39.6 -1.1**
comp=Z,5.9nm,0.8s,mb4.6
SSF Saint Saulge 45.55 311 *eP* **P 02 18 39.6 -1.1**
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SSF Saint Saulge 45.55 311 *eP* **P 02 18 39.6 -1.1**
comp=Z,5.9nm,0.8s,mb4.6
BAIF Baives 45.55 315 *eP* **P 02 18 40.7 0.0**
comp=Z,17nm,0.9s,mb4.7
BAIF Baives 45.55 315 *eP* **P 02 18 40.7 0.0**
comp=Z,8.6nm,0.9s,mb4.7
BAIF Baives 45.55 315 *eP* **P 02 18 40.7 0.0**
BAIF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BAIF Baives 45.55 315 *eP* **P 02 18 40.7 0.0**
comp=Z,8.6nm,0.9s,mb4.7
SNF Seneffe 45.59 315 P **P 02 18 41.5 +0.5**
AVF Avril sur Loir 45.62 310 *eP* **P 02 18 39.9 -1.4**
comp=Z,11nm,0.9s,mb4.5
AVF Avril sur Loir 45.62 310 *eP* **P 02 18 39.9 -1.4**
comp=Z,5.7nm,0.9s,mb4.5
AVF Avril sur Loir 45.62 310 *eP* **P 02 18 39.9 -1.4**
AVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
AVF Avril sur Loir 45.62 310 *eP* **P 02 18 39.9 -1.4**
comp=Z,5.7nm,0.9s,mb4.5
TAM Tamanrasset 45.77 276 *eP* **P 02 18 43.4 +0.6**
comp=Z,17nm,0.6s,mb5.2
TAM Tamanrasset 45.77 276 *eP* **P 02 18 43.4 +0.6**
TAM pmax pmax
comp=Z,17nm,0.6s,mb5.2
TAM Tamanrasset 45.77 276 *eP* **P 02 18 43.4 +0.6**
comp=Z,17nm,0.6s,mb5.2
BGF Bois d'Agland 45.94 310 *eP* **P 02 18 42.7 -1.2**
comp=Z,17nm,0.9s,mb4.7
BGF Bois d'Agland 45.94 310 *eP* **P 02 18 42.7 -1.2**
comp=Z,8.5nm,0.9s,mb4.7

BGF Bois d'Agland 45.94 310 *eP* **P 02 18 42.7 -1.2**
BGF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BGF Bois d'Agland 45.94 310 *eP* **P 02 18 42.7 -1.2**
comp=Z,8.5nm,0.9s,mb4.7
KEV Kevo 46.03 346 *eP* **P 02 18 43.9 -0.3**
comp=Z,3.5nm,0.5s,mb4.5
KEV Kevo 46.03 346 *eP* **P 02 18 43.9 -0.3**
KEV pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KEV Kevo 46.03 346 *ep* **P 02 18 43.3 -0.9**
comp=Z,0.9nm,0.4s,mb4.0
KEV Kevo 46.03 346 *eP* **P 02 18 43.3 -0.9**
comp=Z,0.9nm,0.4s,mb4.0
MTLF Montolieu 46.15 305 *eP* **P 02 18 45.2 -0.3**
comp=Z,24nm,1.1s,mb4.7
MTLF Montolieu 46.15 305 *eP* **P 02 18 45.2 -0.3**
comp=Z,12nm,1.1s,mb4.7
MTLF Montolieu 46.15 305 *eP* **P 02 18 45.2 -0.3**
MTLF pmax pmax
comp=Z,12nm,1.1s,mb4.7
MTLF Montolieu 46.15 305 *eP* **P 02 18 45.2 -0.3**
comp=Z,12nm,1.1s,mb4.7
HYF Humbligny 46.16 311 *eP* **P 02 18 45.1 -0.5**
HYF Humbligny 46.16 311 *eP* **P 02 18 45.1 -0.5**
ARCES ARCESS Array B 46.18 346 P **P 02 18 45.1 -0.3**
comp=Z,1.9nm,0.7s,mb4.2,baz=138,slow=9.3,SNR=14
ARCES LR LR 02 43 58.1
comp=Z,3μm,20.6s,MS5.2,baz=315,slow=44
ARCES ARCESS Array B 46.18 346 P **P 02 18 45.1 -0.3**
ARCES LR LR 02 43 58.1
ARCES ARCESS Array B 46.18 346 P **P 02 18 45.1 -0.3**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 46.18 346 P **P 02 18 45.1 -0.3**
comp=Z,2.0nm,0.7s,mb4.2
CAF Calviac 46.35 307 *eP* **P 02 18 46.3 -0.8**
comp=Z,26nm,1.2s,mb4.7
CAF Calviac 46.35 307 *eP* **P 02 18 46.3 -0.8**
comp=Z,13nm,1.2s,mb4.7
CAF Calviac 46.35 307 *eP* **P 02 18 46.3 -0.8**
CAF pmax pmax
comp=Z,13nm,1.2s,mb4.7
CAF Calviac 46.35 307 *eP* **P 02 18 46.3 -0.8**
comp=Z,13nm,1.2s,mb4.7
TCF Toulx Ste Croi 46.35 309 *eP* **P 02 18 46.1 -1.0**
comp=Z,27nm,1.2s,mb4.7
TCF Toulx Ste Croi 46.35 309 *eP* **P 02 18 46.1 -1.0**
comp=Z,13nm,1.2s,mb4.8
TCF Toulx Ste Croi 46.35 309 *eP* **P 02 18 46.1 -1.0**
TCF pmax pmax
comp=Z,13nm,1.2s,mb4.7
TCF Toulx Ste Croi 46.35 309 *eP* **P 02 18 46.1 -1.0**
comp=Z,13nm,1.2s,mb4.7
RJF Les Rejaudoux 46.76 308 *eP* **P 02 18 49.8 -0.5**
comp=Z,17nm,0.9s,mb4.7
RJF Les Rejaudoux 46.76 308 *eP* **P 02 18 49.8 -0.5**
comp=Z,8.6nm,0.9s,mb4.7
RJF Les Rejaudoux 46.76 308 *eP* **P 02 18 49.8 -0.5**
RJF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
RJF Les Rejaudoux 46.76 308 *eP* **P 02 18 49.8 -0.5**
comp=Z,8.6nm,0.9s,mb4.7
LFF La Frestale 47.29 307 *eP* **P 02 18 53.7 -0.7**
LFF La Frestale 47.29 307 *eP* **P 02 18 53.7 -0.7**
LFF La Frestale 47.29 307 *eP* **P 02 18 53.7 -0.7**
HHC Hu-ho-hao-te 47.40 58 *eP* **P 02 18 54.1 -1.3**
HHC pP pP 02 18 58.6 +0.1
HHC sP sP 02 19 01.3 +1.5
HHC PcP PcP 02 20 25.4 -0.5
HHC PP PP 02 20 44.6 -1.9
HHC ScP ScP 02 24 17.3 -2.8
HHC S **S** **02 25 46.0 -3.5**
HHC sS sS 02 25 53.3 -1.4
HHC ScS ScS 02 28 45.8 -3.8
HHC pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,94nm,7.3s
HHC LR LR
comp=N,490nm,17.8s,MS4.6
HHC LR LR
comp=E,410nm,17.3s,MS4.6
HHC LR LR
comp=Z,480nm,16.7s,MS4.5
EPF Esparros 47.51 305 *eP* **P 02 18 54.4 -1.8**
comp=Z,8.3nm,0.9s,mb4.5
EPF Esparros 47.51 305 *eP* **P 02 18 54.4 -1.8**
comp=Z,4.2nm,0.9s,mb4.5
EPF Esparros 47.51 305 *eP* **P 02 18 54.4 -1.8**
EPF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
EPF Esparros 47.51 305 *eP* **P 02 18 54.4 -1.8**
comp=Z,4.2nm,0.9s,mb4.5
MFF Saint Martin d 48.00 310 *eP* **P 02 18 59.0 -1.0**
MFF Saint Martin d 48.00 310 *eP* **P 02 18 59.0 -1.0**
MFF Saint Martin d 48.00 310 *eP* **P 02 18 59.0 -1.0**
LDF La Druitiere 48.15 312 *eP* **P 02 18 59.2 -1.9**
LDF La Druitiere 48.15 312 *eP* **P 02 18 59.2 -1.9**
LDF La Druitiere 48.15 312 *eP* **P 02 18 59.2 -1.9**
ETSF Etsaut 48.17 305 *eP* **P 02 19 01.0 -0.3**
comp=Z,26nm,1.1s,mb4.9
ETSF Etsaut 48.17 305 *eP* **P 02 19 01.0 -0.3**
comp=Z,13nm,1.1s,mb4.9
ETSF Etsaut 48.17 305 *eP* **P 02 19 01.0 -0.3**
ETSF pmax pmax
comp=Z,13nm,1.1s,mb4.9
ETSF Etsaut 48.17 305 *eP* **P 02 19 01.0 -0.3**
comp=Z,13nm,1.1s,mb4.9
FLN La Foliniere 48.40 312 *eP* **P 02 19 01.9 -1.1**
FLN La Foliniere 48.40 312 *eP* **P 02 19 01.9 -1.1**
FLN La Foliniere 48.40 312 *eP* **P 02 19 01.9 -1.1**
GRR Gorron 48.62 312 *eP* **P 02 19 03.4 -1.3**
GRR Gorron 48.62 312 *eP* **P 02 19 03.4 -1.3**
GRR Gorron 48.62 312 *eP* **P 02 19 03.4 -1.3**
SJPF Ste Jean 48.66 305 *eP* **P 02 19 04.8 -0.3**
comp=Z,10nm,0.6s,mb4.8
SJPF Ste Jean 48.66 305 *eP* **P 02 19 04.8 -0.3**
comp=Z,5.1nm,0.6s,mb4.7
SJPF Ste Jean 48.66 305 *eP* **P 02 19 04.8 -0.3**
SJPF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
SJPF Ste Jean 48.66 305 *eP* **P 02 19 04.8 -0.3**
comp=Z,5.1nm,0.6s,mb4.8
SGMF Saint Gilles 49.74 312 *eP* **P 02 19 12.0 -1.3**
comp=Z,44nm,1.1s,mb5.1
SGMF Saint Gilles 49.74 312 *eP* **P 02 19 12.0 -1.3**
comp=Z,22nm,1.1s,mb5.1
SGMF Saint Gilles 49.74 312 *eP* **P 02 19 12.0 -1.3**
SGMF pmax pmax
comp=Z,22nm,1.1s,mb5.1
SGMF Saint Gilles 49.74 312 *eP* **P 02 19 12.0 -1.3**
comp=Z,22nm,1.1s,mb5.1
QUIF Quistinic 50.13 311 *eP* **P 02 19 14.7 -1.5**
QUIF Quistinic 50.13 311 *eP* **P 02 19 14.7 -1.5**
QUIF Quistinic 50.13 311 *eP* **P 02 19 14.7 -1.5**
ROSF Rostrenen 50.22 312 *eP* **P 02 19 15.4 -1.5**
ROSF Rostrenen 50.22 312 *eP* **P 02 19 15.4 -1.5**
ROSF Rostrenen 50.22 312 *eP* **P 02 19 15.4 -1.5**
BOD Bodaibo 50.65 36 *eP* **P 02 19 18.5 -1.5**
BOD pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
BOD Bodaibo 50.65 36 *eP* **P 02 19 18.5 -1.5**
comp=Z,7.0nm,1.2s,mb4.5
EKA Eskdalemuir Ar 50.86 321 P **P 02 19 20.7 -1.0**
comp=Z,0.4nm,0.6s,mb3.5,baz=96,slow=7.2,SNR=3.1
EKA Eskdalemuir Ar 50.86 321 P **P 02 19 20.7 -0.9**
EKA Eskdalemuir Ar 50.86 321 P **P 02 19 20.7 -0.9**
ESDC Sonseca Array 50.86 300 P **P 02 19 21.0 -0.9**
comp=Z,0.9nm,0.5s,mb4.0,baz=73,slow=7.1,SNR=9.7
ESDC Sonseca Array 50.86 300 P **P 02 19 21.0 -0.9**
BJI Beijing 50.95 59 P **P 02 19 21.1 -1.5**
BJI S **S** **02 26 35.9 -3.5**
BJI pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
BJI pmax pmax
comp=Z,320nm,11.8s
BJI LR LR
comp=N,1μm,22.1s,MS5.2
BJI LR LR
comp=E,2μm,24.4s,MS5.2
BJI LR LR
comp=Z,4μm,24.1s,MS5.3
TORD Torodi Ar. Bea 52.49 266 P **P 02 19 33.4 -1.0**
comp=Z,17nm,0.5s,mb5.2,baz=61,slow=7.4,SNR=246

MVO Moncorvo 53.06 303 *eP* **P 02 19 38.5 +0.2**
MVO Moncorvo 53.06 303 *eP* **P 02 19 38.5 +0.2**
PBAR Barrancos 53.41 299 *eP* **P 02 19 40.0 -0.9**
comp=Z,15nm,1.6s,mb4.7
PBAR Barrancos 53.41 299 *eP* **P 02 19 40.0 -0.9**
comp=Z,15nm,1.6s,mb4.7
MTE Manteigas 53.53 302 *eP* **P 02 19 43.9 +2.2**
EVO Evora 54.12 300 *eP* **P 02 19 45.9 -0.2**
EVO Evora 54.12 300 *eP* **P 02 19 45.9 -0.2**
NJ2 Nanjing 54.25 69 *eP* **P 02 19 47.4 +0.2**
NJ2 PP PP 02 21 50.3 +1.4
NJ2 S **S** **02 27 18.0 -6.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
NJ2 pmax pmax
comp=Z,250nm,4.3s
NJ2 LR LR
comp=N,1μm,19.6s,MS5.3
NJ2 LR LR
comp=E,2μm,20.5s,MS5.3
NJ2 LR LR
comp=Z,3μm,21.7s,MS5.3
SPITS Spitsbergen Ar 54.36 351 P **P 02 19 47.5 +0.3**
comp=Z,6.0nm,0.7s,mb4.6,baz=187,slow=3.1,SNR=3.4
SPITS Spitsbergen Ar 54.36 351 P **P 02 19 47.5 +0.3**
SPITS pmax pmax
comp=Z,6.0nm,0.7s
SPITS Spitsbergen Ar 54.36 351 P **P 02 19 47.5 +0.3**
comp=Z,6.0nm,0.7s,mb4.6
SSE Sheshan 56.40 69 P **P 02 19 59.3 -3.4**
SSE S **S** **02 27 47.0 -6.6**
SSE sS sS 02 28 01.5 +2.6
SSE ScS ScS 02 29 45.9 -6.5
SSE pmax pmax
comp=Z,22nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,380nm,12.0s
SSE LR LR
comp=N,740nm,26.8s,MS5.1
SSE LR LR
comp=E,2μm,26.6s,MS5.1
SSE LR LR
comp=Z,3μm,25.1s,MS5.3
CN2 Changchun 57.45 54 *eP* **P 02 20 09.9 0.0**
CN2 *es*P sP 02 20 16.9 +2.6
CN2 *eS* **S** **02 28 03.3 -3.7**
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.3
CN2 LR LR
comp=N,2μm,18.0s,MS5.3
CN2 LR LR
comp=E,2μm,18.0s,MS5.3
CN2 LR LR
comp=Z,2μm,20.0s,MS5.3
YHNB Yeheng 58.28 76 *eP* **P 02 20 17.8 +1.8**
comp=Z,16nm,0.8s,mb5.1
YHNB Yeheng 58.28 76 *eP* **P 02 20 17.8 +1.8**
comp=Z,16nm,0.8s,mb5.1
LBTB Lobatse 59.42 212 *eP* **P 02 20 23.7 0.0**
comp=Z,7.2nm,0.8s,mb4.8
LBTB Lobatse 59.42 212 *eP* **P 02 20 23.7 0.0**
LBTB pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
LBTB Lobatse 59.42 212 *eP* **P 02 20 23.7 0.0**
comp=Z,7.0nm,0.8s,mb4.7
MDJ Mudanjiang 60.27 52 P **P 02 20 27.6 -1.9**
MDJ pmax pmax
comp=Z,7.0nm,1.8s,mb4.4
MDJ pmax pmax
comp=Z,78nm,5.3s
KSRS Korea Array 60.42 60 P **P 02 20 30.0 -0.6**
comp=Z,2.0nm,0.5s,mb4.4,baz=276,slow=7.2,SNR=9.2
KSRS Korea Array 60.42 60 P **P 02 20 30.0 -0.6**
KSRS pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KSRS Korea Array 60.42 60 P **P 02 20 30.0 -0.6**
comp=Z,2.0nm,0.5s,mb4.4
DBIC Dimbokro 61.09 262 P **P 02 20 34.4 -1.2**
comp=Z,2.2nm,0.5s,mb4.5,baz=64,slow=5.1,SNR=11
DBIC Dimbokro 61.09 262 *eP* **P 02 20 35.0 -0.5**
comp=Z,9.6nm,1.2s,mb4.8
DBIC Dimbokro 61.09 262 *eP* **P 02 20 35.1 -0.4**
DBIC pmax pmax
comp=Z,10.0nm,1.2s
DBIC Dimbokro 61.09 262 *eP* **P 02 20 35.0 -0.5**
comp=Z,9.6nm,1.2s,mb4.8
KIC Kosan Boka 61.13 262 *eP* **P 02 20 34.7 -1.1**
comp=Z,17nm,1.1s,mb5.1
KIC Kosan Boka 61.13 262 *eP* **P 02 20 34.7 -1.1**
comp=Z,17nm,1.1s,mb5.1
TIC Toumodi 61.24 263 *eP* **P 02 20 35.5 -1.1**
comp=Z,6.3nm,0.5s,mb5.0
TIC Toumodi 61.24 263 *eP* **P 02 20 35.5 -1.1**
TIC pmax pmax
comp=Z,6.0nm,0.5s,mb5.0
TIC Toumodi 61.24 263 *eP* **P 02 20 35.5 -1.1**
comp=Z,6.0nm,0.5s,mb5.0
LIC Lamto 61.44 262 *eP* **P 02 20 36.7 -1.2**
comp=Z,58nm,1.8s,mb5.4
LIC Lamto 61.44 262 *eP* **P 02 20 36.7 -1.2**
comp=Z,58nm,1.8s,mb5.4
BOSA Boshof 62.64 210 P **P 02 20 45.5 -0.1**
comp=Z,4.8nm,0.6s,mb4.8,baz=29,slow=5.5,SNR=16
BOSA Boshof 62.64 210 *eP* **P 02 20 45.5 -0.1**
comp=Z,6.6nm,0.8s,mb4.8
BOSA Boshof 62.64 210 P **P 02 20 45.5 -0.1**
BOSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
BOSA Boshof 62.64 210 P **P 02 20 45.5 -0.1**
comp=Z,5.0nm,0.6s,mb4.8
SUMG Summit 65.87 341 *i* P **P 02 21 01.4 -4.8**
comp=Z,7.0nm,1.0s,mb4.7
YSS Yuzh-Sakhalins 68.70 47⇑ *eP* **P 02 21 23.9 -0.7**
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.2
YSS Yuzh-Sakhalins 68.70 47 *eP* **P 02 21 23.9 -0.7**
comp=Z,30nm,0.9s,mb5.2
KAKA Kakadu 83.91 107 *eP* **P 02 22 51.3 -0.2**
comp=Z,25nm,0.7s,mb5.5
INK Inuvik 84.77 4 P **P 02 22 54.3 -0.7**
comp=Z,1.3nm,0.6s,mb4.2,baz=333,slow=4.5,SNR=3.4
INK Inuvik 84.77 4 P **P 02 22 54.3 -0.7**
INK pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 84.77 4 P **P 02 22 54.3 -0.7**
comp=Z,1.0nm,0.6s,mb4.1
BPAW Bear Paw Mtn. 86.81 12 *eP* **P 02 23 04.3 -0.8**
comp=Z,12nm,1.2s,mb5.0
BPAW Bear Paw Mtn. 86.81 12 *eP* **P 02 23 04.3 -0.8**
comp=Z,12nm,1.2s,mb5.0
ILAR Eielson Array 86.86 10 P **P 02 23 04.2 -1.2**
comp=Z,0.7nm,0.6s,mb4.1,baz=322,slow=4.5,SNR=19
ILAR Eielson Array 86.86 10 P **P 02 23 04.2 -1.2**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ILAR Eielson Array 86.86 10 P **P 02 23 04.2 -1.2**
comp=Z,1.0nm,0.6s,mb4.2
EGAK Eagle 87.60 7 *eP* **P 02 23 06.7 -2.3**
comp=Z,3.3nm,0.9s,mb4.6
EGAK Eagle 87.60 7 *eP* **P 02 23 06.7 -2.3**
comp=Z,3.2nm,0.9s,mb4.5
WRA Warramunga Arr 89.01 113 P **P 02 23 15.8 -0.5**
comp=Z,2.2nm,0.8s,mb4.5,baz=307,slow=4.3,SNR=22
WRA Warramunga Arr 89.01 113 P **P 02 23 15.9 -0.5**
WRA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 89.01 113 P **P 02 23 15.9 -0.5**
comp=Z,2.0nm,0.8s,mb4.5
ASAR Alice Springs 90.46 116 P **P 02 23 22.5 -0.6**
comp=Z,1.6nm,0.7s,mb4.5,baz=303,slow=4.8,SNR=17
ASAR Alice Springs 90.46 116 P **P 02 23 22.5 -0.6**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
ASAR Alice Springs 90.46 116 P **P 02 23 22.5 -0.6**
comp=Z,2.0nm,0.7s,mb4.6

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*IDC **18** 02:42:41.5±1.5, 3.36S×80.45W, h0km, mb3.5/3, mb1 3.9/5, mb1mx3.6/20, mbtmp3.6/5, ML3.7/2, MS3.9/1, Ms1 3.9/1, ms1mx3.2/22, Error ellipse: s-maj=73.5km s-min=22.1km az=55.0*
*ISCJB **18** 02:42:44.6±1.1, 3.48S±0.09×80.7W±0.2, h33km, mb3.5/3, Error ellipse: s-maj=27.2km s-min=9.1km az=156.6*
*NEIC **18** 02:42:48.4±3.4, 3.45S×80.51W, h56km±30km, mb3.2/1, Error ellipse: s-maj=43.9km s-min=15.4km az=64.0*

ISC 18 02:42:47.7±2.4, 3.4S±0.1×80.6W±0.3, h43km±24km, n10, σ0.92/10, mb3.5/3, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**4.24**	**30**	*e*Pn	**Pn**	**02 43 50.1**	**+0.3**
OTAV				*e*S	**Sn**	**02 44 48.8**	**+11**
ATAH	**Atahualpa**	**4.27**	**149**	Pn	**Pn**	**02 43 48.5**	**-1.7**
	1.3nm,0.3s,baz=358,slow=5.0,SNR=12						
ATAH				Sn	**Sn**	**02 44 40.2**	**+1.4**
	4.7nm,0.3s,baz=142,slow=19,SNR=3.8						
LPAZ	**La Paz**	**17.69**	**137**	P	**Pn**	**02 46 50.4**	**-0.6**
	0.2nm,0.3s,baz=316,slow=8.1,SNR=10.0						
LPAZ	**La Paz**	**17.69**	**137**	*e*Pn	**Pn**	**02 46 51.1**	**+0.1**
	1.5nm,0.7s						
CMIG	**Matias Romero**	**24.81**	**326**	LR	LR	02 56 07.0	
	comp=Z,292nm,19.1s,baz=292,slow=32						
PDAR	**Pinedale Array**	**52.93**	**333**	P	**P**	**02 51 59.8**	**+0.1**
	0.4nm,0.7s,mb3.5,baz=117,slow=7.2,SNR=4.6						
NVAR	**Mina Array Bea**	**54.32**	**324**	P	**P**	**02 52 10.5**	**+0.6**
	0.3nm,0.6s,mb3.4,baz=133,slow=6.6,SNR=3.6						
NVAR	**Mina Array Bea**	**54.32**	**324**	P	**P**	**02 52 10.5**	**+0.6**
TORD	**Torodi Ar. Bea**	**83.28**	**76**	P	**P**	**02 55 09.9**	**-0.6**
	0.5nm,1.0s,mb3.5,baz=272,slow=7.1,SNR=2.7						
WRA	**Warramunga Arr**	**138.56**	**234**	PKP	PKPdf	03 02 08.0	-1.7
	0.2nm,0.5s,baz=114,slow=2.1,SNR=5.4						

*NEIC **18** 03:36:37.0, 37.31N×115.45W, h0km, ML2.7(REN), After REN.*
*ISCJB **18** 03:36:38.1±0.4, 37.31N±0.02×115.48W±0.02, h10km, Error ellipse: s-maj=3.5km s-min=2.5km az=151.0*

ISC 18 03:36:37.8±0.4, 37.31N±0.02×115.48W±0.02, h10km, n31, σ0.92/58, 19C-19D, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHPR	**Sheep Range**	**0.84**	**162**	*e*Pg	**Pg**	**03 36 52.4**	**-1.5**
SHPR				*e*S	**Sg**	**03 37 05.0**	**+0.1**
U11A	**Corn Creek**	**0.88**	**175**	⇓S	**Sg**	**03 37 07.0**	**+0.6**
	baz=0.8						
R11A	**Troy Canyon, C**	**1.04**	**355**	⇓P	**Pg**	**03 36 58.1**	**+0.2**
	baz=1.1,SNR=540						
U10A	**Ash Meadows, A**	**1.12**	**218**	⇓P	**Pb**	**03 36 58.7**	**-0.5**
	baz=1.1,SNR=73						
U10A				⇑S	**Sb**	**03 37 14.2**	**+0.4**
	baz=1.1						
U12A	**Valley of Fire**	**1.15**	**139**	⇑P	**Pb**	**03 36 59.0**	**-0.8**
	baz=1.1,SNR=102						
U12A				⇓S	**Sb**	**03 37 14.2**	**-0.6**
	baz=1.1						
T13A	**Saint George**	**1.29**	**102**	⇓P	**Pn**	**03 37 01.2**	**-0.6**
	baz=1.2,SNR=63						
T13A				⇓S	**Sb**	**03 37 17.9**	**-0.8**
	baz=1.2						
S13A	**Holt Ranch, En**	**1.32**	**77**	⇑P	**Pn**	**03 37 01.7**	**-0.6**
	baz=1.3,SNR=181						
S13A				⇑S	**Sb**	**03 37 19.5**	**-0.1**
	baz=1.3						
FURC	**Furnace Creek,**	**1.39**	**233**	⇓Pb	**Pb**	**03 37 03.8**	**0.0**
	baz=1.4,SNR=87						
FURC				⇑Sb	**Sb**	**03 37 22.7**	**+1.1**
	baz=1.4						
V11A	**Goodsprings**	**1.47**	**178**	⇑Pb	**Pb**	**03 37 04.5**	**-0.6**
	baz=1.4,SNR=30						
V11A				⇓Sb	**Sb**	**03 37 24.2**	**+0.4**
	baz=1.4						
R13A	**O'Grain Ranch,**	**1.48**	**53**	⇓Pb	**Pb**	**03 37 04.5**	**-1.0**
	baz=1.5,SNR=83						
R13A				⇑Sb	**Sb**	**03 37 24.8**	**+0.6**
	baz=1.5						
U13A	**Pakoon Wash**	**1.50**	**126**	⇑Pb	**Pb**	**03 37 04.7**	**-1.1**
	baz=1.5,SNR=382						
GRAC	**Grapevine Rang**	**1.54**	**259**	⇓Pb	**Pb**	**03 37 06.4**	**-0.1**
	baz=1.6						
GRAC				⇑Sb	**Sb**	**03 37 27.2**	**+1.2**
	baz=1.6						
V12A	**Nelson**	**1.66**	**162**	⇓Pb	**Pb**	**03 37 08.0**	**-0.3**
	baz=1.6						
V12A				⇑Sb	**Sb**	**03 37 29.3**	**+0.1**
	baz=1.6						
ARUT	**Antelope Range**	**1.69**	**73**	*e*Pn	**Pn**	**03 37 08.1**	**+0.7**
ARUT				*e*S	**Sn**	**03 37 32.0**	**+3.0**
CCUT	**Cedar City**	**1.70**	**81**	*e*Pn	**Pn**	**03 37 08.5**	**+1.0**
CCUT				*e*S	**Sn**	**03 37 31.0**	**+1.6**
S14A	**Cedar City**	**1.89**	**75**	⇓Pb	**Pb**	**03 37 11.7**	**-0.7**
	baz=1.9						
TUQ	**Turquoise Moun**	**1.90**	**191**	⇑Pb	**Pb**	**03 37 12.4**	**-0.1**
	baz=1.9						
TUQ				⇑Sb	**Sb**	**03 37 37.3**	**+0.9**
	baz=1.9						
T14A	**Hurricane**	**1.93**	**97**	⇑Pb	**Pb**	**03 37 12.1**	**-0.9**
	baz=1.9						
T14A				⇓Sb	**Sb**	**03 37 37.2**	**+0.1**
	baz=1.9						
MPMC	**Manual Prospec**	**2.04**	**233**	⇓Pb	**Pb**	**03 37 15.2**	**+0.3**
	baz=2.0,SNR=65						
U14A	**Mt Trumbull**	**2.04**	**115**	⇑Pb	**Pb**	**03 37 14.2**	**-0.8**
	baz=2.0,SNR=40						
U14A				⇑Sb	**Sb**	**03 37 40.6**	**+0.1**
	baz=2.0						
W12A	**Cal Nev Ari**	**2.06**	**166**	⇓Sb	**Sb**	**03 37 42.0**	**+1.1**
	baz=2.0						
LDFC	**Landfair**	**2.24**	**172**	*e*Pn	**Pn**	**03 37 15.8**	**+0.9**
LDFC				*e*Pg	**Pg**	**03 37 20.2**	**-0.6**
LDFC				*e*S	**Sn**	**03 37 47.2**	**+4.5**
GSC	**Goldstone**	**2.27**	**209**	*e*Pn	**Pn**	**03 37 15.6**	**+0.2**
GSC				*e*Pg	**Pg**	**03 37 19.6**	**-1.7**
GSC				*e*S	**Sn**	**03 37 51.2**	**+7.8**
Q14A	**Sevier Lake (B**	**2.42**	**45**	⇓Pb	**Pb**	**03 37 20.9**	**-0.4**
	baz=2.4						
T15A	**Red Dirt Ranch**	**2.49**	**96**	⇓Pb	**Pb**	**03 37 21.9**	**-0.7**
	baz=2.5						
T15A				⇓Sb	**Sb**	**03 37 53.7**	**+0.4**
	baz=2.5						
V14A	**Boquillas Ranc**	**2.54**	**130**	⇑Pb	**Pb**	**03 37 22.8**	**-0.6**
	baz=2.5						
V14A				⇑Sb	**Sb**	**03 37 55.1**	**+0.4**
	baz=2.5						
W13A	**Hualapai Mount**	**2.55**	**149**	⇑Sb	**Sb**	**03 37 56.7**	**+1.6**
	baz=2.5						
U15A	**North Rim**	**2.70**	**108**	⇓Pb	**Pb**	**03 37 25.5**	**-0.7**
	baz=2.7						
U15A				⇑Sb	**Sb**	**03 37 59.9**	**+0.5**
	baz=2.7						
MSU	**Marysvale**	**2.88**	**64**	*e*Pn	**Pn**	**03 37 25.6**	**+1.9**
MSU				*e*S	**Sn**	**03 38 07.9**	**+10**
ISA	**Isabella**	**2.92**	**237**	Pn	**Pn**	**03 37 23.2**	**-1.1**
ISA				*e*Pg	**Pg**	**03 37 31.4**	**-2.4**
ISA				*e*S	**Sn**	**03 37 53.0**	**-6.4**
WAKR	**Walker**	**3.35**	**292**	*e*Pn	**Pn**	**03 37 32.0**	**+1.8**
WAKR				*e*Pg	**Pg**	**03 37 41.3**	**-0.7**
WAKR				*e*S	**Sn**	**03 38 24.7**	**+15**

IDC 18 04:51:33.3±10.0, 36.96S×79.14E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, MS3.8/10, Ms1 3.8/10, ms1mx3.5/26, Error ellipse: s-maj=344.3km s-min=48.3km az=34.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**31.34**	**94**	LR	LR	05 07 36.0	
	comp=Z,243nm,19.1s,baz=200,slow=31						
MAW	**Mawson**	**32.05**	**192**	LR	LR	05 08 00.6	
	comp=Z,114nm,20.2s,baz=203,slow=31						
FITZ	**Fitzroy Crossi**	**44.82**	**78**	LR	LR	05 18 00.6	
	comp=Z,65nm,19.0s,baz=62,slow=35						
BOSA	**Boshof**	**45.55**	**264**	LR	LR	05 14 14.1	
	comp=Z,73nm,19.7s,baz=165,slow=30						
ASAR	**Alice Springs**	**48.49**	**90**	P	P	05 00 18.2	+0.3
	1.7nm,0.9s,baz=230,slow=8.1,SNR=5.7						
KAPI	**Kappang**	**48.87**	**59**	LR	LR	05 19 09.6	
	comp=Z,107nm,18.9s,baz=257,slow=34						
WRA	**Warramunga Arr**	**50.72**	**86**	P	P	05 00 34.7	-0.2
	2.2nm,1.0s,baz=238,slow=7.5,SNR=7.9						
STKA	**Stephens Creek**	**50.97**	**104**	LR	LR	05 16 22.4	
	comp=Z,108nm,19.5s,baz=205,slow=29						
CTA	**Charters Tower**	**60.18**	**94**	LR	LR	05 24 35.6	
	comp=Z,176nm,18.7s,baz=49,slow=33						
MKAR	**Makanchi Array**	**83.42**	**2**	P	P	05 04 02.1	+0.1
	0.9nm,0.8s,baz=165,slow=6.0,SNR=4.2						
MKAR				LR	LR	05 38 11.2	
	comp=Z,38nm,18.2s,baz=357,slow=34						
TORD	**Torodi Ar. Bea**	**88.04**	**288**	LR	LR	05 42 48.1	
	comp=Z,56nm,18.3s,baz=150,slow=35						
AFI	**Afiamalu**	**96.39**	**113**	LR	LR	05 39 27.5	
	comp=Z,41nm,19.8s,baz=100,slow=30						

*IDC **18** 05:20:18.1±2.2, 32.40N×47.18E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.7/5, Error ellipse: s-maj=53.0km s-min=27.7km az=155.0*
*ISCJB **18** 05:20:20.1±0.9, 32.38N±0.03×47.40E±0.04, h13km±7km, mb3.7/5, Error ellipse: s-maj=6.2km s-min=4.5km az=17.9*
*TEH **18** 05:20:20.9, 32.35N×47.35E, h6km*
*KISR **18** 05:20:20.3±0.6, 32.09N×47.68E, h34km±419km, ML3.3*
*CSEM **18** 05:20:21.4±0.2, 32.37N×47.43E, h10km, ML3.4, Error ellipse: s-maj=4.8km s-min=3.2km az=92.0*

ISC 18 05:20:21.6±0.9, 32.38N±0.03×47.37E±0.04, h13km±7km, n53, σ0.82/67, mb3.7/5, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.24**	**102**	*e*Pg	**Pg**	**05 20 44.2**	**-1.3**
IKOM	**Komasi**	**1.79**	**4**	*e*Pn	**Pn**	**05 20 52.7**	**+0.5**
IKOM				*e*		05 20 55.6	
	comp=Z,9μm,0.2s						
IKOM	**Komasi**	**1.79**	**4**	*e*Pn	**Pn**	**05 20 52.7**	**+0.5**
IGHG	**Ghaleghazi**	**2.06**	**341**	*e*Pn	**Pn**	**05 20 56.7**	**+0.9**
IGHG				*e*		05 21 41.0	
	comp=Z,9μm,0.3s						
IGHG	**Ghaleghazi**	**2.06**	**341**	*e*Pn	**Pn**	**05 20 56.7**	**+0.9**
IDHR	**Dehrash**	**2.46**	**341**	*e*Pn	**Pn**	**05 21 01.3**	**0.0**
IDHR				*e*		05 21 46.1	
	comp=Z,6μm,0.3s						
IDHR	**Dehrash**	**2.46**	**341**	*e*Pn	**Pn**	**05 21 01.3**	**0.0**
ILIN	**Lien**	**2.56**	**352**	*e*	**Pg**	**05 21 11.5**	**+0.9**
	comp=Z,2μm,0.2s						
ILIN				*e*Pn	**Pn**	**05 21 03.2**	**+0.5**
MIB	**Mutribah**	**2.57**	**181**	*e*P	**Pn**	**05 21 03.3**	**+0.4**
MIB				AML	AML	05 21 41.8	
	comp=Z,225nm,0.5s						
MIB	**Mutribah**	**2.57**	**181**	*e*P	**Pn**	**05 21 03.3**	**+0.5**
BHD	**Baghdad**	**2.67**	**290**	*ex*	**Pg**	**05 21 12.0**	**-0.8**
BHD				*ex*	**Sg**	**05 21 47.0**	**-0.5**
SNGE	**Sanandaj**	**2.71**	**360**	*e*Pn	**Pn**	**05 21 05.6**	**+0.9**
IPIR	**Pirpir**	**2.99**	**83**	*e*	**Sg**	**05 21 50.1**	**-7.5**
	comp=Z,2μm,0.3s						
IPIR				*e*Pn	**Pn**	**05 21 09.6**	**+1.0**
ASAO	**Ashtian**	**3.10**	**45**	*e*Pn	**Pn**	**05 21 11.1**	**+1.0**
KBD	**Kabd**	**3.21**	**175**	*e*P	**Pn**	**05 21 11.4**	**-0.2**
KBD				*e*S	**Sn**	**05 21 50.2**	**+0.6**
KBD	**Kabd**	**3.21**	**175**	*e*P	**Pn**	**05 21 11.4**	**-0.2**
KBD				*e*S	**Sn**	**05 21 50.2**	**+0.6**
RDF	**Al-Radifah**	**3.45**	**177**	*e*P	**Pn**	**05 21 15.3**	**+0.4**
RDF				*e*S	**Sn**	**05 21 56.1**	**+0.6**
RDF				AML	AML	05 22 00.0	
	comp=Z,62nm,0.4s						
RDF	**Al-Radifah**	**3.45**	**177**	*e*P	**Pn**	**05 21 15.3**	**+0.4**
RDF				*e*S	**Sn**	**05 21 56.2**	**+0.6**
QRN	**Al-Qurain**	**3.65**	**172**	*e*P	**Pn**	**05 21 17.8**	**0.0**
QRN				*e*S	**Sn**	**05 22 01.2**	**+0.5**
QRN				AML	AML	05 22 03.6	
	comp=Z,83nm,0.5s						
IKLH	**Kolahrood**	**3.66**	**74**	*e*Pn	**Pn**	**05 21 18.3**	**+0.4**
IKLH				*e*Sn	**Sn**	**05 22 00.9**	**0.0**
IKLH				*e*		05 22 22.3	
	comp=Z,1μm,0.3s						
IKLH	**Kolahrood**	**3.66**	**74**	*e*Pn	**Pn**	**05 21 18.3**	**+0.4**
IKLH				*e*Sn	**Sn**	**05 22 00.9**	**0.0**
IRAZ	**Razeghan**	**3.69**	**34**	*e*Pn	**Pn**	**05 21 19.1**	**+0.8**
IRAZ				*e*		05 21 30.1	
	comp=Z,1μm,0.3s						
IRAZ	**Razeghan**	**3.69**	**34**	*e*Pn	**Pn**	**05 21 19.1**	**+0.8**
IGAR	**Gharneh**	**3.95**	**88**	*e*Pn	**Pn**	**05 21 21.7**	**-0.1**
IGAR				*e*		05 22 09.8	
	comp=Z,1μm,0.2s						
IZEF	**Zefreh**	**4.21**	**82**	*e*Pn	**Pn**	**05 21 25.1**	**-0.4**
IZEF				*e*Sn	**Sn**	**05 22 13.2**	**-1.3**
IZEF				*e*		05 22 41.2	
	comp=Z,641nm,0.3s						
IZEF	**Zefreh**	**4.21**	**82**	*e*Pn	**Pn**	**05 21 25.1**	**-0.4**
IZEF				*e*Sn	**Sn**	**05 22 13.2**	**-1.3**
IMHD	**Mahdasht**	**4.28**	**39**	*e*Pn	**Pn**	**05 21 26.9**	**+0.5**
IMHD				*e*		05 21 40.5	
	comp=Z,514nm,0.2s						
IMHD	**Mahdasht**	**4.28**	**39**	*e*Pn	**Pn**	**05 21 26.9**	**+0.5**
IVRN	**Varamin**	**4.47**	**53**	*e*Pn	**Pn**	**05 21 29.6**	**+0.6**
IVRN				*e*		05 21 44.6	
	comp=Z,646nm,0.2s						
IVRN				*e*Sn	**Sn**	**05 22 19.8**	**-1.0**
IVRN	**Varamin**	**4.47**	**53**	*e*Pn	**Pn**	**05 21 29.6**	**+0.6**
IVRN				*e*Sn	**Sn**	**05 22 19.8**	**-1.0**
CHTH	**Charan**	**4.70**	**40**	*e*Pn	**Pn**	**05 21 32.8**	**+0.7**
DAMV	**Damavand**	**5.01**	**48**	*e*Pn	**Pn**	**05 21 37.5**	**+1.1**
IDMV	**Damavand**	**5.01**	**49**	*e*Pn	**Pn**	**05 21 36.1**	**-0.4**
IDMV				*e*		05 21 59.7	
	comp=Z,465nm,0.2s						
IDMV	**Damavand**	**5.01**	**49**	*e*Pn	**Pn**	**05 21 36.1**	**-0.4**
IPAR	**Pars**	**5.49**	**116**	*e*Pn	**Pn**	**05 21 42.2**	**-0.7**
IPAR				*e*		05 23 08.3	
	comp=Z,261nm,0.4s						
IPAR	**Pars**	**5.49**	**116**	*e*Pn	**Pn**	**05 21 42.2**	**-0.7**
IFIR	**Firoozkooh**	**5.53**	**52**	*e*Pn	**Pn**	**05 21 43.2**	**-0.3**
IFIR				*e*		05 22 05.0	
	comp=Z,161nm,0.1s						
IFIR	**Firoozkooh**	**5.53**	**52**	*e*Pn	**Pn**	**05 21 43.2**	**-0.3**
ILAS	**Lasjerd**	**5.53**	**56**	*e*Pn	**Pn**	**05 21 43.2**	**-0.3**
ILAS				*e*		05 21 47.4	
	comp=Z,275nm,0.2s						
ILAS	**Lasjerd**	**5.53**	**56**	*e*Pn	**Pn**	**05 21 43.2**	**-0.3**
ISRV	**Sarvestan**	**5.77**	**120**	*e*Pn	**Pn**	**05 21 47.1**	**+0.3**
ISRV				*e*		05 23 06.9	
	comp=Z,311nm,0.2s						
ISRV	**Sarvestan**	**5.77**	**120**	*e*Pn	**Pn**	**05 21 47.1**	**+0.3**
ICHK	**Chekchek**	**5.96**	**89**	*e*Pn	**Pn**	**05 21 48.9**	**-0.5**
ICHK				*e*		05 23 00.8	
	comp=Z,388nm,0.2s						
ICHK	**Chekchek**	**5.96**	**89**	*e*Pn	**Pn**	**05 21 48.9**	**-0.5**
ISHM	**Shahmirzad**	**5.98**	**54**	*e*Pn	**Pn**	**05 21 50.3**	**+0.5**
ISHM				*e*		05 22 11.8	
	comp=Z,364nm,0.3s						
ISHM	**Shahmirzad**	**5.98**	**54**	*e*Pn	**Pn**	**05 21 50.3**	**+0.5**
IANJ	**Anjilo**	**6.25**	**59**	*e*Pn	**Pn**	**05 21 53.2**	**-0.2**
IANJ				*e*		05 22 24.0	
	comp=Z,133nm,0.2s						
IANJ	**Anjilo**	**6.25**	**59**	*e*Pn	**Pn**	**05 21 53.2**	**-0.2**
MKAR	**Makanchi Array**	**30.24**	**51**	P	**P**	**05 26 31.1**	**-0.8**
	comp=Z,0.8nm,0.7s,mb3.6,baz=249,slow=9.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**34.21**	**40**	P	**P**	**05 27 06.5**	**-0.1**
	comp=Z,1.0nm,0.5s,mb4.0,baz=253,slow=9.8,SNR=5.3						
NOA	**NORSAR Array B**	**37.05**	**332**	P	**P**	**05 27 29.2**	**-1.7**
	comp=Z,0.5nm,0.6s,mb3.5,baz=122,slow=8.4,SNR=2.7						
ARCES	**ARCESS Array B**	**39.19**	**348**	P	**P**	**05 27 46.1**	**-2.7**
	comp=Z,0.8nm,0.5s,mb3.7,baz=158,slow=10,SNR=8.3						
TORD	**Torodi Ar. Bea**	**45.87**	**256**	P	**P**	**05 28 41.0**	**-2.8**
	comp=Z,1.0nm,1.0s,mb3.7,baz=43,slow=7.0,SNR=4.9						

*IDC **18** 05:23:54.8±3.6, 8.65S×118.12E, h127km±29km, mb3.3/3, mb1 3.4/6, mb1mx3.2/21, mbtmp3.3/6, Error ellipse: s-maj=69.4km s-min=18.0km az=61.0*
*ISCJB **18** 05:23:55.7±0.5, 8.55S±0.07×118.43E±0.04, h145km±6km, mb3.5/3, Error ellipse: s-maj=10.8km s-min=6.8km az=5.4*
*NEIC **18** 05:23:55.3±1.5, 8.64S×118.19E, h132km±15km, mb4.5/1, Error ellipse: s-maj=22.5km s-min=9.9km az=70.0*
*DJA **18** 05:23:58, 8.28S×118.41E, h109km, MLv4.3/5*

ISC 18 05:23:56.6±0.4, 8.57S±0.06×118.45E±0.04, h137km±5km, n21, σ1.27/33, mb3.5/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.25**	**84**	P	**Pn**	**05 24 14.8**	**-0.6**
BMNI				S	**Sn**	**05 24 28.3**	**-1.3**
WSI	**Waingapu**	**2.13**	**121**	P	**Pn**	**05 24 35.5**	**+2.9**
WSI				S	**Sn**	**05 25 05.0**	**+4.8**
MTNI	**Mataram**	**2.25**	**268**	P	**Pn**	**05 24 33.8**	**-0.2**
MTNI				S	**Sn**	**05 25 04.7**	**+1.9**
KHKI	**Kahang-Kahang**	**2.81**	**274**	P	**Pn**	**05 24 40.3**	**-0.8**
KHKI				S	**Sn**	**05 25 15.7**	**+0.3**
SRBI	**Singaraja**	**3.23**	**278**	P	**Pn**	**05 24 47.6**	**+1.0**
IGBI	**Denpasar**	**3.27**	**265**	P	**Pn**	**05 24 48.0**	**+1.0**
IGBI				S	**Sn**	**05 25 25.5**	**-0.5**
BKSI	**Bulukumba**	**3.63**	**27**	P	**Pn**	**05 24 53.5**	**+1.8**
KAPI	**Kappang**	**3.76**	**20**	P	**Pn**	**05 24 54.5**	**+1.0**
	1.3nm,0.3s,baz=261,slow=15,SNR=4.7						
KAPI				S	**Sn**	**05 25 34.8**	**-2.8**
	1.2nm,0.3s,baz=212,slow=15,SNR=2.5						
KAPI	**Kappang**	**3.76**	**20**	P	**Pn**	**05 24 54.5**	**+1.0**
KAPI				S	**Sn**	**05 25 34.8**	**-2.7**
JAGI	**Jajag, Banyuwa**	**4.25**	**271**	P	**Pn**	**05 24 58.5**	**-1.4**
FITZ	**Fitzroy Crossi**	**11.78**	**144**	P	**Pn**	**05 26 39.0**	**-1.4**
	0.2nm,0.3s,baz=193,slow=9.7,SNR=7.1						
FITZ				S	**Sn**	**05 28 41.0**	**-9.4**
	0.9nm,0.3s,baz=193,slow=16,SNR=11						
MBWA	**Marble Bar**	**12.58**	**174**	*e*Pn	**Pn**	**05 26 49.6**	**-1.3**
MBWA				*e*Sn	**Sn**	**05 28 56.1**	**-14**
KAKA	**Kakadu**	**14.36**	**108**	*e*Pn	**Pn**	**05 27 14.6**	**+0.9**
	19nm,0.6s						
KAKA				*e*Sn	**Sn**	**05 29 42.7**	**-10**
WRA	**Warramunga Arr**	**19.09**	**128**	P	**P**	**05 28 09.5**	**+0.7**
	0.4nm,0.3s,baz=302,slow=13,SNR=28						
WRA				S	**S**	**05 31 34.3**	**-3.9**
	0.1nm,0.3s,baz=306,slow=22,SNR=3.0						
WRA	**Warramunga Arr**	**19.09**	**128**	P	**P**	**05 28 09.5**	**+0.7**
WRA				S	**S**	**05 31 34.3**	**-3.9**
WB2	**Warramunga Arr**	**19.10**	**128**	*e*P	**P**	**05 28 09.8**	**+0.9**
WB2				*e*S	**S**	**05 31 38.4**	**0.0**
ASAR	**Alice Springs**	**21.08**	**137**	P	**P**	**05 28 31.7**	**+1.5**
	1.4nm,0.5s,mb3.6,baz=309,slow=9.0,SNR=28						
ASAR				S	**S**	**05 32 17.1**	**-0.2**
	0.3nm,0.7s,baz=335,slow=24,SNR=2.8						
ASAR				ScP	ScP	05 35 55.5	-0.1
	0.5nm,0.9s,baz=327,slow=1.5,SNR=4.3						
MKAR	**Makanchi Array**	**63.83**	**333**	P	**P**	**05 34 13.6**	**-0.7**
	0.2nm,0.3s,mb3.4,baz=145,slow=5.3,SNR=2.9						
ZALV	**Zalesovo Beam**	**68.44**	**339**	P	**P**	**05 34 41.4**	**-2.2**
	0.4nm,0.3s,mb3.7,baz=128,slow=4.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**117.84**	**280**	PKP	PKPdf	05 42 27.4	-0.4
	0.5nm,0.4s,baz=41,slow=1.9,SNR=5.2						
TORD	**Torodi Ar. Bea**	**117.84**	**280**	PKP	PKPdf	05 42 27.4	-0.4

FUNV 18 05:38:36.0, 5.65N×73.76W, h60km, MW3.5, 1C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**2.63**	**33**	⇑*i*P	Pn	05 39 16.4	+0.3
CAPV				*e*S	Sn	05 39 44.9	-2.0
SOCV	**Socops**	**3.89**	**48**	*e*P	Pn	05 39 32.6	-0.8
SOCV				*e*S	Sn	05 40 13.7	-4.2
VIGV	**El Vigia**	**3.96**	**37**	*e*P	Pn	05 39 33.4	-1.0
VIGV				*e*S	Sn	05 40 15.5	-4.1
VIRV	**Villa del Rosa**	**5.01**	**15**	*e*P	Pn	05 39 46.4	-2.2
VIRV				*e*S	Sn	05 40 39.5	-5.8
QARV	**Quebrada Arrib**	**5.55**	**35**	*e*P	Pn	05 39 54.1	-2.0
QARV				*e*S	Sn	05 40 52.8	-5.8
SANV	**Sanarito**	**5.67**	**47**	*e*P	Pn	05 39 56.1	-1.6
CURV	**Curarigua**	**5.74**	**41**	*e*P	Pn	05 39 56.6	-2.1
TEPV	**Terepaima**	**6.23**	**46**	*e*P	Pn	05 40 03.7	-1.7
SIQV	**Siquisique**	**6.32**	**38**	*e*P	Pn	05 40 04.5	-2.2
BAUV	**El Baul**	**6.55**	**60**	*e*P	Pn	05 40 07.5	-2.3
BAUV				*e*S	Sn	05 41 14.9	-8.2
MAPV	**Macapo**	**6.70**	**51**	*e*P	Pn	05 40 09.4	-2.4
IMOV	**Isla Los Monje**	**7.24**	**23**	*e*P	Pn	05 40 16.7	-2.5
MONV	**Montecano**	**7.30**	**31**	*e*P	Pn	05 40 17.7	-2.3
TURV	**Turiamo**	**7.56**	**50**	*e*P	Pn	05 40 21.1	-2.4
CAOV	**Caicara del Or**	**7.57**	**77**	*e*P	Pn	05 40 21.5	-2.4
BIRV	**Birongo**	**8.83**	**57**	*e*P	Pn	05 40 38.6	-2.4
CUPV	**Cœpira**	**9.03**	**60**	*e*P	Pn	05 40 41.3	-2.4

IDC 18 05:40:03.9±1.1, 61.00N×166.74E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.6/26, mbtmp3.7/6, Error ellipse: s-maj=36.9km s-min=27.0km az=129.0, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**21.08**	**60**	P	P	05 44 49.4	0.0
	0.9nm,0.7s,baz=276,slow=11,SNR=17						
ARCES	**ARCESS Array B**	**46.86**	**342**	P	P	05 48 34.7	-0.2
	0.7nm,0.6s,baz=32,slow=7.5,SNR=5.1						
PDAR	**Pinedale Array**	**50.94**	**71**	P	P	05 49 06.8	+0.2
	0.6nm,0.8s,baz=345,slow=5.1,SNR=5.1						
NOA	**NORSAR Array B**	**56.84**	**346**	P	P	05 49 49.6	+0.2
	0.7nm,0.5s,baz=14,slow=7.3,SNR=2.6						
WRA	**Warramunga Arr**	**84.78**	**210**	P	P	05 52 39.3	-0.3
	0.5nm,0.6s,baz=17,sl

*DJA **18** 05:57:07.2′12N×96′.26E, h68km, MLv4.2/3*
*NEIC **18** 05:57:07.1±0.5, 2′.19N×96′.19E, h35km, mb4.4/1, Error ellipse: s-maj=10.6km s-min=6.8km az=214.0*
ISC 18 05:57:03.7±3.2, 2°.09N±0°.07×96°.09E±0°.06, h14km±20km, n28, σ0$76/26, mb4.2/10, MS3.7/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.59**	**43**	P	**Pn**	**05 57 30.4**	**-1.0**
TPTI				S	**Sn**	**05 57 53.3**	**+1.5**
TSI	**Tuntungan**	**2.84**	**60**	P	**Pn**	**05 57 49.3**	**+0.7**
PSI	**Prapat**	**2.92**	**76**	Pn	**Pn**	**05 57 49.5**	**-0.2**
	6.7nm,0.3s,baz=295,slow=8.9,SNR=17						
PSI				LR	LR	05 59 11.3	
	comp=Z,765nm,18.2s,baz=339,slow=44						
MNSI	**Mandailing Nat**	**3.72**	**110**	P	**Pn**	**05 58 02.2**	**+1.5**
MNSI				S	**Sn**	**05 58 42.7**	**-1.6**
IPM	**Ipoh**	**5.47**	**64**	*e*Pn	**Pn**	**05 58 24.9**	**+0.1**
	20nm,0.5s						
IPM	**Ipoh**	**5.47**	**64**	P	**Pn**	**05 58 24.8**	**0.0**
	32nm,0.8s						
KULM	**Kulim**	**5.55**	**55**	*e*Pn	**Pn**	**05 58 25.3**	**-0.6**
	43nm,0.6s						
KULM	**Kulim**	**5.55**	**55**	P	**Pn**	**05 58 24.7**	**-1.2**
	851nm71nm,0.8s						
MDSI	**Maura Dua**	**10.39**	**129**	P	**Pn**	**05 59 32.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**16.50**	**10**	Pn	**Pn**	**06 00 54.8**	**-0.1**
	0.4nm,0.3s,baz=201,slow=11,SNR=6.8						
LZH	**Lanzhou**	**34.58**	**11**	*e*P	**P**	**06 03 50.5**	**-1.6**
LZH				pP	pP	06 03 57.0	+0.5
LZH				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
GTA	**Gaotai**	**37.30**	**5**	*e*P	**P**	**06 04 15.4**	**0.0**
GTA				pP	pP	06 04 24.3	+4.5
GTA				sP	sP	06 04 28.8	+7.3
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**43.44**	**122**	P	**P**	**06 05 06.7**	**+0.2**
	comp=Z,0.6nm,0.4s,mb3.7,baz=302,slow=9.0,SNR=9.9						
WRA				LR	LR	06 23 04.0	
	comp=Z,154nm,21.8s,MS3.9,baz=180,slow=36						
WRA	**Warramunga Arr**	**43.44**	**122**	P	**P**	**06 05 06.7**	**+0.2**
WRA				LR	LR	06 23 04.0	
WB2	**Warramunga Arr**	**43.45**	**122**	*e*Pn	**P**	**06 05 07.1**	**+0.5**
AML	**Almayashu**	**44.64**	**336**	*e*P	**P**	**06 05 16.3**	**+0.5**
	comp=Z,4.8nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**44.81**	**127**	P	**P**	**06 05 18.0**	**+0.5**
	comp=Z,0.5nm,0.6s,mb3.5,baz=301,slow=8.0,SNR=7.8						
KSRS	**Korea Array**	**45.76**	**36**	LR	LR	06 27 20.1	
	comp=Z,97nm,18.4s,MS3.8,baz=1.0,slow=40						
MK31	**Makanchi Array**	**46.12**	**347**	*e*P	**P**	**06 05 27.6**	**+0.2**
MKAR	**Makanchi Array**	**46.12**	**347**	P	**P**	**06 05 27.0**	**-0.5**
	comp=Z,2.1nm,0.4s,mb4.4,baz=154,slow=7.6,SNR=20						
ZAA0	**Zalesovo Array**	**52.51**	**352**	*e*P	**P**	**06 06 16.2**	**0.0**
ZALV	**Zalesovo Beam**	**52.51**	**352**	P	**P**	**06 06 16.4**	**+0.1**
	comp=Z,6.3nm,0.5s,mb4.8,baz=179,slow=7.1,SNR=29						
ZALV				LR	LR	06 33 12.1	
	comp=Z,51nm,19.5s,MS3.6,baz=205,slow=41						
CTA	**Charters Tower**	**53.89**	**117**	LR	LR	06 31 05.5	
	comp=Z,116nm,19.5s,MS4.0,baz=51,slow=38						
BVAR	**Borovoye Array**	**55.05**	**341**	P	**P**	**06 06 34.7**	**-0.2**
	comp=Z,1.2nm,0.4s,mb4.3,baz=128,slow=9.6,SNR=6.6						
BRTR	**Keskin Array B**	**67.70**	**312**	LR	LR	06 39 03.5	
	comp=Z,20nm,19.5s,MS3.4,baz=286,slow=37						
PETK	**Petropavlovsk-**	**71.61**	**34**	LR	LR	06 45 26.4	
	comp=Z,23nm,18.6s,MS3.5,baz=273,slow=41						
FINES	**FINESS Array B**	**78.70**	**333**	P	**P**	**06 09 05.0**	**-0.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=86,slow=5.9,SNR=3.9						
FINES				LR	LR	06 47 23.9	
	comp=Z,34nm,19.4s,MS3.7,baz=311,slow=38						
ARCES	**ARCESS Array B**	**81.33**	**340**	P	**P**	**06 09 19.9**	**+0.6**
	comp=Z,1.4nm,0.7s,mb4.0,baz=98,slow=6.2,SNR=19						

IDC 18 06:32:11.2±2.0, 7°.06S×127°.81E, h0km, mb3.3/1, mb1 3.8/4, mb1mx3.4/17, mbtmp3.6/4, ML3.9/2, Error ellipse: s-maj=102.3km s-min=26.9km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.18**	**191**	Pn	Pn	06 34 53.4	+1.0
	1.3nm,0.3s,baz=23,slow=11,SNR=38						
FITZ				Sn	Sn	06 36 46.9	-11
	1.4nm,0.3s,baz=342,slow=20,SNR=5.9						
WRA	**Warramunga Arr**	**14.29**	**154**	Pn	Pn	06 35 33.5	-1.4
	0.3nm,0.3s,baz=323,slow=14,SNR=11						
WRA				Sn	Sn	06 37 54.1	-20
	0.8nm,0.3s,baz=335,slow=22,SNR=8.9						
ASAR	**Alice Springs**	**17.52**	**161**	P	Pn	06 36 17.1	+0.1
	0.3nm,0.3s,baz=342,slow=11,SNR=14						
ASAR				S	Sn	06 39 15.9	-17
	0.2nm,0.3s,baz=319,slow=15,SNR=7.3						
MKAR	**Makanchi Array**	**67.10**	**328**	P	P	06 43 06.7	+0.1
	0.1nm,0.4s,baz=115,slow=8.5,SNR=2.5						

*IDC **18** 07:02:53.4±0.6, 37°.09N×23°.59E, h0km, mb4.1/15, mb1 4.2/19, mb1mx4.0/32, mbtmp4.1/19, ML3.9/4, MS3.2/5, Ms1 3.2/5, ms1mx2.6/37, Error ellipse: s-maj=14.8km s-min=14.6km az=51.0*
*THE **18** 07:02:55.5, 37°.01N×23°.71E, h0km±1km, ML3.9/12, Error ellipse: s-maj=2.2km s-min=0.9km az=169.0*
*CSEM **18** 07:02:55.9±0.2, 37°.07N×23°.71E, h10km, mb4.4/4, Ms2.7, Error ellipse: s-maj=4.3km s-min=4.1km az=26.0*
*ISCJB **18** 07:02:55.0±0.4, 37°.04N±0°.02×23°.72E±0°.02, h13km±2km, mb4.1/20, MS3.1/5, Error ellipse: s-maj=3.0km s-min=2.7km az=18.4*
*ATH **18** 07:02:56.0, 37°.11N×23°.72E, h26km, ML4.0*
*NEIC **18** 07:02:57.5, 37°.12N×23°.69E, h5km, mb4.1/9, ML4.2(ATH), ML3.9(THE), After ATH.*
ISC 18 07:02:56.0±0.4, 37°.04N±0°.02×23°.70E±0°.02, h10km±2km, n290, σ1$16/328, mb4.1/20, MS3.1/5, 19C-12D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DID	**Didima**	**0.60**	**321**	*e*PN	**Pg**	**07 03 07.5**	**-0.1**
DID				*e*SN	**Sg**	**07 03 15.9**	**+0.5**
DID	**Didima**	**0.60**	**321**	P	**Pg**	**07 03 07.5**	**-0.1**
DID				S	**Sg**	**07 03 16.6**	**+1.2**
DID	**Didima**	**0.60**	**321**	P	**Pg**	**07 03 07.5**	**-0.1**
DID				S	**Sg**	**07 03 16.6**	**+1.2**
VLI	**Veliai**	**0.69**	**243**	P	**Pg**	**07 03 09.5**	**+0.1**
VLI	**Veliai**	**0.69**	**243**	*e*PN	**Pg**	**07 03 09.9**	**+0.5**
VLI				*e*SN	**Sg**	**07 03 21.0**	**+2.5**
VLI	**Veliai**	**0.69**	**243**	P	**Pg**	**07 03 09.5**	**+0.1**
VLI				*e*Sn	**Sg**	**07 03 21.0**	**+2.5**
NAIG	**Nisos Aigina**	**0.74**	**347**	*e*PN	**Pg**	**07 03 09.6**	**-0.7**
VLY	**Voula,Athens**	**0.81**	**5**	P	**Pg**	**07 03 10.7**	**-1.0**
VLY	**Voula,Athens**	**0.81**	**5**	*e*PN	**Pg**	**07 03 10.9**	**-0.8**
VLY				*e*SN	**Sg**	**07 03 21.8**	**-0.6**
VLY	**Voula,Athens**	**0.81**	**5**	*e*Pn	**Pg**	**07 03 10.9**	**-0.8**
VLY				*e*Sn	**Sg**	**07 03 21.8**	**-0.6**
ATHU	**Athens Univers**	**0.93**	**4**	P	**Pg**	**07 03 14.2**	**+0.3**
ATHU				S	**Sg**	**07 03 27.7**	**+1.7**
ATHU	**Athens Univers**	**0.93**	**4**	P	**Pg**	**07 03 14.2**	**+0.3**
ATHU				S	**Sg**	**07 03 27.7**	**+1.7**
ATH	**Athens Observa**	**0.93**	**1**	P	**Pg**	**07 03 13.7**	**-0.3**
ATH	**Athens Observa**	**0.93**	**1**	*e*PN	**Pg**	**07 03 13.3**	**-0.7**
ATH				*e*SN	**Sg**	**07 03 25.3**	**-0.8**
ATH	**Athens Observa**	**0.93**	**1**	*e*Pn	**Pg**	**07 03 13.3**	**-0.7**
ATH	**Athens Observa**	**0.93**	**1**	P	**Pg**	**07 03 13.7**	**-0.3**
ATH				*e*Sn	**Sg**	**07 03 25.3**	**-0.8**
PTL	**Penteli**	**1.01**	**7**	P	**Pg**	**07 03 15.0**	**-0.6**
PTL	**Penteli**	**1.01**	**7**	*e*PN	**Pg**	**07 03 14.5**	**-1.1**
PTL				*e*SN	**Sg**	**07 03 27.4**	**-1.4**
PTL	**Penteli**	**1.01**	**7**	*e*Pn	**Pg**	**07 03 14.5**	**-1.1**
PTL	**Penteli**	**1.01**	**7**	P	**Pg**	**07 03 15.0**	**-0.6**
PTL				*e*Sn	**Sg**	**07 03 27.4**	**-1.4**
VLX	**Vlachokerasia**	**1.11**	**288**	*e*PN	**Pg**	**07 03 16.6**	**-0.7**
VLX				*e*SN	**Sg**	**07 03 32.6**	**+0.9**
VLX	**Vlachokerasia**	**1.11**	**288**	P	**Pg**	**07 03 16.8**	**-0.5**
VLX				S	**Sg**	**07 03 33.2**	**+1.5**
VLX	**Vlachokerasia**	**1.11**	**288**	P	**Pg**	**07 03 16.8**	**-0.5**
VLX				*e*Sn	**Sg**	**07 03 32.6**	**+0.9**
VLX				S	**Sg**	**07 03 33.2**	**+1.5**
LTK	**Loutraki**	**1.14**	**329**	*e*PN	**Pb**	**07 03 17.2**	**-0.7**
LTK				*e*SN	**Sn**	**07 03 32.5**	**-1.4**
LTK	**Loutraki**	**1.14**	**329**	P	**Pb**	**07 03 17.2**	**-0.7**
LTK				S	**Sb**	**07 03 34.6**	**+1.8**
LTK	**Loutraki**	**1.14**	**329**	P	**Pb**	**07 03 17.2**	**-0.7**
LTK				*e*Sn	**Sn**	**07 03 32.5**	**-1.4**
LTK				S	**Sb**	**07 03 34.6**	**+1.8**
GUR	**Goura**	**1.41**	**310**	*e*PN	**Pn**	**07 03 21.4**	**-0.3**
GUR	**Goura**	**1.41**	**310**	P	**Pn**	**07 03 21.4**	**-0.3**
GUR				S	**Sn**	**07 03 42.1**	**+1.8**
GUR	**Goura**	**1.41**	**310**	P	**Pn**	**07 03 21.4**	**-0.3**
GUR				S	**Sn**	**07 03 42.1**	**+1.8**
ITM	**Ithomi**	**1.43**	**276**	P	**Pn**	**07 03 22.6**	**+0.6**
ITM	**Ithomi**	**1.43**	**276**	*e*PN	**Pn**	**07 03 22.6**	**+0.6**
ITM				*e*SN	**Sn**	**07 03 41.2**	**+0.3**
ITM	**Ithomi**	**1.43**	**276**	P	**Pn**	**07 03 22.5**	**+0.5**
ITM	**Ithomi**	**1.43**	**276**	*e*Pn	**Pn**	**07 03 22.6**	**+0.6**
ITM				*e*Sn	**Sn**	**07 03 41.2**	**+0.3**
APE	**Apeiranthos**	**1.46**	**88**	P	**Pn**	**07 03 22.0**	**-0.5**
APE	**Apeiranthos**	**1.46**	**88**	*e*PN	**Pn**	**07 03 22.1**	**-0.4**
APE	**Apeiranthos**	**1.46**	**88**	*e*Pn	**Pn**	**07 03 22.1**	**-0.4**
DSF	**Desfina**	**1.66**	**326**	P	**Pn**	**07 03 24.9**	**-0.3**
DSF				S	**Sg**	**07 03 49.5**	**+0.2**
DSF	**Desfina**	**1.66**	**326**	P	**Pn**	**07 03 24.9**	**-0.3**
DSF				S	**Sg**	**07 03 49.5**	**+0.2**
VAM	**Vamos**	**1.68**	**166**	P	**Pg**	**07 03 27.9**	**-0.3**
VAM	**Vamos**	**1.68**	**166**	*e*PN	**Pg**	**07 03 27.1**	**-1.1**
VAM				*e*SN	**Sg**	**07 03 49.9**	**-0.1**
VAM	**Vamos**	**1.68**	**166**	*e*Pn	**Pg**	**07 03 27.1**	**-1.1**
VAM	**Vamos**	**1.68**	**166**	P	**Pg**	**07 03 27.9**	**-0.3**
LKR	**Lokris**	**1.70**	**341**	P	**Pn**	**07 03 25.1**	**-0.7**
LKR	**Lokris**	**1.70**	**341**	*e*PN	**Pn**	**07 03 25.3**	**-0.5**
LKR	**Lokris**	**1.70**	**341**	P	**Pn**	**07 03 25.5**	**-0.3**
LKR	**Lokris**	**1.70**	**341**	P	**Pn**	**07 03 25.5**	**-0.3**
ATAL	**Atalanti**	**1.74**	**342**	P	**Pn**	**07 03 25.9**	**-0.4**
ATAL				S	**Sg**	**07 03 51.0**	**-0.9**
ATAL	**Atalanti**	**1.74**	**342**	P	**Pn**	**07 03 25.9**	**-0.4**
ATAL				S	**Sg**	**07 03 51.0**	**-0.9**
LAKA	**Lakka**	**1.82**	**312**	P	**Pn**	**07 03 27.9**	**+0.5**
LAKA				S	**Sn**	**07 03 52.4**	**+1.9**
LAKA	**Lakka**	**1.82**	**312**	P	**Pn**	**07 03 27.9**	**+0.5**
LAKA				S	**Sn**	**07 03 52.4**	**+1.9**
KALE	**Kalithea**	**1.83**	**318**	P	**Pn**	**07 03 27.4**	**-0.2**
KALE				S	**Sg**	**07 03 53.4**	**-1.5**
KALE	**Kalithea**	**1.83**	**318**	P	**Pn**	**07 03 27.4**	**-0.2**
KALE				S	**Sg**	**07 03 53.4**	**-1.5**
TRIZ	**Trizonia**	**1.85**	**316**	P	**Pn**	**07 03 27.6**	**-0.2**
TRIZ				S	**Sg**	**07 03 53.6**	**-1.9**
TRIZ	**Trizonia**	**1.85**	**316**	P	**Pn**	**07 03 27.6**	**-0.2**
TRIZ				S	**Sg**	**07 03 53.6**	**-1.9**
UPR	**University Cam**	**1.96**	**310**	*e*PN	**Pn**	**07 03 29.4**	**0.0**
UPR	**University Cam**	**1.96**	**310**	*e*Pn	**Pn**	**07 03 29.4**	**0.0**
EFP	**Efpalio**	**1.99**	**315**	P	**Pn**	**07 03 30.1**	**+0.4**
EFP				S	**Sn**	**07 03 56.5**	**+1.8**
EFP	**Efpalio**	**1.99**	**315**	P	**Pn**	**07 03 30.1**	**+0.4**
EFP				S	**Sn**	**07 03 56.5**	**+1.8**
RLS	**Riolos of Patr**	**2.05**	**300**	P	**Pb**	**07 03 32.8**	**-0.5**
RLS	**Riolos of Patr**	**2.05**	**300**	*e*PB	**Pn**	**07 03 31.1**	**+0.5**
RLS	**Riolos of Patr**	**2.05**	**300**	P	**Pb**	**07 03 32.8**	**-0.5**
AOS	**Alonnisos**	**2.13**	**4**	P	**Pn**	**07 03 31.5**	**-0.2**
AOS	**Alonnisos**	**2.13**	**4**	P	**Pn**	**07 03 31.1**	**-0.6**
AOS	**Alonnisos**	**2.13**	**4**	P	**Pn**	**07 03 31.1**	**-0.6**
AGG	**Agios Georgios**	**2.26**	**332**	P	**Pn**	**07 03 33.8**	**+0.4**
AGG	**Agios Georgios**	**2.26**	**332**	*e*PB	**Pn**	**07 03 33.8**	**+0.4**
AGG	**Agios Georgios**	**2.26**	**332**	P	**Pn**	**07 03 34.0**	**+0.6**
AGG				S	**Sn**	**07 04 02.6**	**+1.3**
AGG	**Agios Georgios**	**2.26**	**332**	P	**Pn**	**07 03 34.0**	**+0.6**
AGG				S	**Sn**	**07 04 02.6**	**+1.3**
NEO	**Neokhori**	**2.29**	**351**	P	**Pn**	**07 03 33.4**	**-0.5**
NEO	**Neokhori**	**2.29**	**351**	*e*PN	**Pn**	**07 03 33.6**	**-0.3**
NEO	**Neokhori**	**2.29**	**351**	*e*Pn	**Pn**	**07 03 33.6**	**-0.3**
CHOS	**Chios island**	**2.30**	**53**	*e*PN	**Pn**	**07 03 33.5**	**-0.5**
CHOS	**Chios island**	**2.30**	**53**	P	**Pn**	**07 03 33.5**	**-0.4**
CHOS				S	**Sb**	**07 04 05.0**	**-1.1**
CHOS	**Chios island**	**2.30**	**53**	*e*Pn	**Pn**	**07 03 33.5**	**-0.5**
NPS	**Neapolis**	**2.35**	**138**	P	**Pb**	**07 03 38.1**	**-0.4**
NPS	**Neapolis**	**2.35**	**138**	*e*PN	**Pn**	**07 03 35.1**	**+0.4**
NPS	**Neapolis**	**2.35**	**138**	*e*Pn	**Pn**	**07 03 35.1**	**+0.4**
NPS	**Neapolis**	**2.35**	**138**	P	**Pb**	**07 03 38.1**	**-0.4**
EVR	**Evrytania**	**2.40**	**322**	*e*PB	**Pn**	**07 03 35.8**	**+0.4**
SMG	**Samos**	**2.58**	**74**	*e*PN	**Pn**	**07 03 38.0**	**+0.1**
SMG	**Samos**	**2.58**	**74**	*e*Pn	**Pn**	**07 03 38.0**	**+0.1**
URLA	**Izmir**	**2.65**	**59**	⇑*i*P	**Pn**	**07 03 37.8**	**-1.0**
URLA	**Izmir**	**2.65**	**59**	*i* P	**Pn**	**07 03 37.8**	**-1.0**
VLS	**Valsamata**	**2.72**	**296**	*e*PN	**Pn**	**07 03 40.9**	**+1.1**
VLS				*e*SN	**Sn**	**07 04 12.9**	**+0.1**
VLS	**Valsamata**	**2.72**	**296**	*e*Pn	**Pn**	**07 03 40.9**	**+1.1**
VLS				*e*Sn	**Sn**	**07 04 12.9**	**+0.1**
THL	**Klokotos Trika**	**2.85**	**333**	*e*PN	**Pn**	**07 03 41.9**	**+0.3**
THL	**Klokotos Trika**	**2.85**	**333**	P	**Pn**	**07 03 42.1**	**+0.5**
THL	**Klokotos Trika**	**2.85**	**333**	*e*Pn	**Pn**	**07 03 41.9**	**+0.3**
BODT	**Bodrum**	**2.88**	**88**	*e*PN	**Pn**	**07 03 46.0**	**+4.0**
GCAM	**G?zelcaml?**	**2.89**	**76**	⇑*i*P	**Pn**	**07 03 42.1**	**0.0**
GCAM	**G?zelcaml?**	**2.89**	**76**	*i* P	**Pn**	**07 03 42.1**	**0.0**
BLCB	**Balcova**	**2.97**	**62**	*e*PN	**Pn**	**07 03 42.9**	**-0.4**
BDRM	**Kayabasi**	**2.99**	**88**	⇑*i*P	**Pn**	**07 03 52.2**	**+8.6**
PRK	**Paraskevi**	**2.99**	**42**	*e*PN	**Pn**	**07 03 42.9**	**-0.6**
PRK	**Paraskevi**	**2.99**	**42**	*e*Pn	**Pn**	**07 03 42.9**	**-0.6**
DAT	**Datca**	**3.12**	**95**	*e*PN	**Pn**	**07 03 49.7**	**+4.4**
IZM	**Izmir**	**3.13**	**63**	*e*PN	**Pn**	**07 03 45.1**	**-0.3**
KARP	**Karpathos**	**3.17**	**117**	P	**Pn**	**07 03 49.6**	**+3.7**
KARP	**Karpathos**	**3.17**	**117**	P	**Pn**	**07 03 49.6**	**+3.7**
LIT	**Litokhoron**	**3.20**	**343**	P	**Pn**	**07 03 46.8**	**+0.4**
LIT	**Litokhoron**	**3.20**	**343**	*e*PN	**Pn**	**07 03 46.5**	**+0.1**
LIT	**Litokhoron**	**3.20**	**343**	P	**Pn**	**07 03 46.6**	**+0.2**
LIT	**Litokhoron**	**3.20**	**343**	*e*Pn	**Pn**	**07 03 46.5**	**+0.1**
MLSB	**Milas**	**3.26**	**84**	*e*PN	**Pn**	**07 03 50.6**	**+3.3**
AYVA	**Ayvalik**	**3.27**	**45**	⇑*i*P	**Pn**	**07 03 43.4**	**-3.9**
AYVA	**Ayvalik**	**3.27**	**45**	*i* P	**Pn**	**07 03 43.4**	**-3.9**
PLG	**Polygyros**	**3.33**	**357**	P	**Pn**	**07 03 47.8**	**-0.4**
PLG	**Polygyros**	**3.33**	**357**	P	**Pn**	**07 03 47.8**	**-0.4**
AYDN	**Tasoluk**	**3.38**	**78**	⇑*i*P	**Pn**	**07 03 48.1**	**-0.9**
AYDN	**Tasoluk**	**3.38**	**78**	*i* P	**Pn**	**07 03 48.1**	**-0.8**
EZN	**Ezine**	**3.46**	**36**	*e*PN	**Pn**	**07 03 50.1**	**+0.2**
HORT	**Hortiatis**	**3.58**	**353**	P	**Pn**	**07 03 51.8**	**+0.1**
HORT	**Hortiatis**	**3.58**	**353**	P	**Pn**	**07 03 51.8**	**+0.1**
GADA	**Gvkgeada**	**3.58**	**28**	*e*PN	**Pn**	**07 03 52.0**	**+0.3**
YER	**Yerkesik**	**3.66**	**87**	*e*PN	**Pn**	**07 03 57.0**	**+4.2**
SOH	**Sokhos**	**3.79**	**356**	P	**Pn**	**07 03 57.4**	**+3.0**
SOH	**Sokhos**	**3.79**	**356**	P	**Pn**	**07 03 57.4**	**+3.0**
TURN	**Turunc**	**3.93**	**91**	⇑*i*P	**Pn**	**07 04 00.0**	**+3.7**
TURN	**Turunc**	**3.93**	**91**	*i* P	**Pn**	**07 04 00.0**	**+3.6**
GELI	**Tayfur-Gelibol**	**3.99**	**32**	*e*PN	**Pn**	**07 03 56.5**	**-0.8**
GRG	**Griva**	**4.04**	**346**	P	**Pn**	**07 04 00.1**	**+2.2**
GRG	**Griva**	**4.04**	**346**	P	**Pn**	**07 04 00.1**	**+2.2**
SRS	**Serrai**	**4.07**	**359**	P	**Pn**	**07 03 59.8**	**+1.4**
SRS	**Serrai**	**4.07**	**359**	P	**Pn**	**07 03 59.8**	**+1.4**
BALY	**Balya**	**4.09**	**48**	⇑*i*P	**Pn**	**07 03 56.2**	**-2.4**
BALY	**Balya**	**4.09**	**48**	*i* P	**Pn**	**07 03 56.2**	**-2.4**
LPK	**Lapseki**	**4.10**	**35**	*e*PN	**Pn**	**07 03 58.8**	**+0.1**
ENEZ	**Enez**	**4.16**	**27**	*e*PN	**Pn**	**07 03 59.2**	**-0.3**
BALB	**Balikesir**	**4.18**	**50**	*e*PN	**Pn**	**07 04 00.6**	**+0.7**
KULA	**Kula-Manisa**	**4.19**	**68**	*e*P	**Pn**	**07 04 02.0**	**+1.9**
ERIK	**Erikli-Kesan**	**4.24**	**30**	*e*P	**Pn**	**07 04 00.6**	**0.0**
ALN	**Alexandroupoli**	**4.26**	**25**	*e*PN	**Pn**	**07 04 01.0**	**0.0**
ALN	**Alexandroupoli**	**4.26**	**25**	*e*Pn	**Pn**	**07 04 01.0**	**0.0**
DNZL	**Cakiroluk**	**4.30**	**80**	⇑*i*P	**Pn**	**07 04 04.4**	**+2.8**
DNZL	**Cakiroluk**	**4.30**	**80**	*i* P	**Pn**	**07 04 04.4**	**+2.8**
GONE	**Gonen-Balikesi**	**4.33**	**45**	*e*P	**Pn**	**07 04 02.0**	**0.0**
FETY	**Fethiye**	**4.33**	**94**	*e*P	**Pn**	**07 04 07.4**	**+5.4**
RDO	**Rodhopi**	**4.34**	**19**	P	**Pn**	**07 04 04.8**	**+2.7**
RDO	**Rodhopi**	**4.34**	**19**	P	**Pn**	**07 04 04.8**	**+2.7**
VAY	**Valandovo**	**4.37**	**349**	*e*Pn	**Pn**	**07 04 04.1**	**+1.7**
VAY				*e*Sg	**Sn**	**07 04 44.4**	**-8.9**
DEMI	**Demirci**	**4.43**	**62**	⇑*i*P	**Pn**	**07 04 04.0**	**+0.6**
DEMI	**Demirci**	**4.43**	**62**	*i* P	**Pn**	**07 04 04.0**	**+0.7**
DURS	**Dursunbey**	**4.54**	**54**	⇑*i*P	**Pn**	**07 04 04.6**	**-0.2**
DURS	**Dursunbey**	**4.54**	**54**	*i* P	**Pn**	**07 04 04.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**4.54**	**36**	*e*P	**Pn**	**07 04 05.2**	**+0.3**
MMB	**Musomiste**	**4.54**	**0**	P	**Pn**	**07 04 02.1**	**-2.7**
MMB	**Musomiste**	**4.54**	**0**	P	**Pn**	**07 04 02.1**	**-2.7**
BNT	**Bandirma**	**4.67**	**44**	*e*P	**Pn**	**07 04 06.1**	**-0.6**
RZN	**Rozhen**	**4.71**	**9**	P	**Pn**	**07 04 07.4**	**+0.3**
RZN	**Rozhen**	**4.71**	**9**	P	**Pn**	**07 04 07.4**	**+0.3**
KRUS	**Krusevo**	**4.72**	**337**	*e*Pn	**Pn**	**07 04 07.1**	**-0.2**
KHAL	**Karahalli**	**4.78**	**72**	⇑*i*P	**Pn**	**07 04 09.3**	**+1.2**
KHAL	**Karahalli**	**4.78**	**72**	*i* P	**Pn**	**07 04 09.3**	**+1.2**
KHL	**Karahalli**	**4.79**	**73**	*e*P	**Pn**	**07 04 09.2**	**+1.0**
KDZ	**Kurdzhali**	**4.79**	**16**	P	**Pn**	**07 04 06.9**	**-1.4**
KDZ	**Kurdzhali**	**4.79**	**16**	P	**Pn**	**07 04 06.9**	**-1.4**
KCTX	**Karacabey (Bur**	**4.86**	**47**	*e*P	**Pn**	**07 04 09.2**	**0.0**
LTBQ	**Tobruq**	**4.97**	**178**	*i* P	**Pn**	**07 04 12.3**	**+1.5**
	SNR=76						
ELL	**Elmali**	**4.98**	**91**	*e*P	**Pn**	**07 04 15.6**	**+4.7**
VTS	**Vitosha**	**5.56**	**356**	⇓*i*P	**Pn**	**07 04 19.9**	**+1.1**
VTS	**Vitosha**	**5.56**	**356**	P	**Pn**	**07 04 19.2**	**+0.4**
VTS	**Vitosha**	**5.56**	**356**	P	**Pn**	**07 04 19.2**	**+0.4**
CTKS	**Kestanelik-??a**	**5.61**	**40**	*e*P	**Pn**	**07 04 18.8**	**-0.7**
BARS	**Barje**	**5.95**	**346**	⇓*i*Pn	**Pn**	**07 04 24.9**	**+0.7**
CEL	**Celeste**	**6.32**	**283**	P	**Pn**	**07 04 30.6**	**+1.4**
CEL	**Celeste**	**6.32**	**283**	P	**Pn**	**07 04 30.6**	**+1.4**
LJBD	**Adjabya**	**6.77**	**206**	*i* P	**Pn**	**07 04 38.3**	**+2.9**
	SNR=76						
CUC	**Castrocucco**	**6.85**	**298**	P	**Pn**	**07 04 39.4**	**+2.8**
CUC	**Castrocucco**	**6.85**	**298**	P	**Pn**	**07 04 39.4**	**+2.8**
DIVS	**Divibare**	**7.59**	**339**	⇑*i*Pn	**Pn**	**07 04 48.0**	**+1.3**
BRTR	**Keskin Array B**	**8.25**	**68**	Pn	**Pn**	**07 04 57.3**	**+1.6**
	0.2nm,0.3s,baz=259,slow=13,SNR=3.7						
BRTR	**Keskin Array B**	**8.25**	**68**	Pn	**Pn**	**07 04 57.3**	**+1.6**
GZR	**Gura Zlata**	**8.38**	**356**	⇓*i*P	**Pn**	**07 04 57.8**	**+0.4**
GZR	**Gura Zlata**	**8.38**	**356**	⇓*i*P	**Pn**	**07 04 57.8**	**+0.4**
VOIR		**8.45**	**6**	⇑*i*P	**Pn**	**07 04 59.6**	**+1.1**
VOIR		**8.45**	**6**	⇑*i*P	**Pn**	**07 04 59.6**	**+1.1**
MLR	**Muntele Rosu**	**8.61**	**11**	⇓*i*P	**Pn**	**07 05 02.4**	**+1.7**
MLR	**Muntele Rosu**	**8.61**	**11**	⇓*i*P	**Pn**	**07 05 02.4**	**+1.7**
CFR	**Carcaliu**	**8.79**	**21**	⇓*i*P	**Pn**	**07 05 04.6**	**+1.5**
CFR	**Carcaliu**	**8.79**	**21**	⇓*i*P	**Pn**	**07 05 04.6**	**+1.5**
DOPR	**Dopca**	**9.01**	**8**	⇓*i*P	**Pn**	**07 05 06.8**	**+0.7**
DOPR	**Dopca**	**9.01**	**8**	⇓*i*P	**Pn**	**07 05 06.8**	**+0.7**
PLOR	**Plostina**	**9.08

MK31	**Makanchi Array**	**43.75**	**58**	*e*P	**P**	**07 11 00.5**	**-1.0**
MKAR	**Makanchi Array**	**43.75**	**58**	P	**P**	**07 11 00.7**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.9,baz=268,slow=7.6,SNR=12						
MKAR	**Makanchi Array**	**43.75**	**58**	P	**P**	**07 11 00.7**	**-0.8**
ZALV	**Zalesovo Beam**	**44.58**	**48**	P	**P**	**07 11 06.7**	**-1.3**
	comp=Z,2.0nm,0.5s,mb4.2,baz=267,slow=8.3,SNR=7.9						
ZALV	**Zalesovo Beam**	**44.58**	**48**	P	**P**	**07 11 06.7**	**-1.3**
SCHQ	**Schefferville**	**61.00**	**319**	P	**P**	**07 13 08.2**	**-1.1**
	comp=Z,7.7nm,0.6s,mb4.6,baz=93,slow=4.8,SNR=7.1						
SCHQ	**Schefferville**	**61.00**	**319**	P	**P**	**07 13 08.2**	**-1.1**
BOSA	**Boshof**	**65.32**	**178**	P	**P**	**07 13 37.1**	**-1.1**
	comp=Z,2.4nm,0.8s,mb4.3,baz=36,slow=4.6,SNR=3.5						
BOSA	**Boshof**	**65.32**	**178**	P	**P**	**07 13 37.1**	**-1.1**
CMAR	**Chiang Mai Arr**	**67.53**	**83**	P	**P**	**07 13 52.5**	**-0.2**
	comp=Z,0.9nm,0.4s,mb4.1,baz=307,slow=8.3,SNR=5.6						
CMAR	**Chiang Mai Arr**	**67.53**	**83**	P	**P**	**07 13 52.5**	**-0.2**
BDFB	**Brasilia**	**85.35**	**247**	LR	LR	07 51 52.4	
	comp=Z,49nm,18.2s,MS3.9,baz=193,slow=34						
PDAR	**Pinedale Array**	**89.89**	**328**	P	**P**	**07 15 53.0**	**-2.2**
	comp=Z,0.5nm,0.7s,mb4.0,baz=0.0,slow=3.7,SNR=5.1						
PDAR	**Pinedale Array**	**89.89**	**328**	P	**P**	**07 15 53.0**	**-2.3**
WRA	**Warramunga Arr**	**117.95**	**95**	PKP	PKPdf	07 21 41.0	-2.2
	comp=Z,0.3nm,0.5s,baz=316,slow=1.9,SNR=7.0						
WRA	**Warramunga Arr**	**117.95**	**95**	PKIKP	PKPdf	07 21 41.0	-2.3
ASAR	**Alice Springs**	**119.52**	**99**	PKP	PKPdf	07 21 45.0	-1.2
	comp=Z,0.4nm,0.5s,baz=306,slow=1.6,SNR=7.4						
ASAR	**Alice Springs**	**119.52**	**99**	PKIKP	PKPdf	07 21 45.0	-1.2

IDC 18 07:31:25.6±1.8, 9°.03S×126°.85E, h0km, mb3.4/1, mb1 3.7/4, mb1mx3.3/17, mbtmp3.5/4, ML3.2/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/15, Error ellipse: s-maj=86.6km s-min=27.3km az=70.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.10**	**187**	Pn	Pn	07 33 40.2	+1.9
	0.2nm,0.3s,baz=5.0,slow=13,SNR=5.6						
FITZ				Sn	Sn	07 35 19.3	-2.2
	0.4nm,0.3s,baz=88,slow=20,SNR=6.1						
WRA	**Warramunga Arr**	**13.05**	**147**	Pn	Pn	07 34 30.3	-2.0
	0.1nm,0.3s,baz=316,slow=13,SNR=17						
WRA				Sn	Sn	07 36 51.0	-7.3
	0.2nm,0.3s,baz=322,slow=25,SNR=7.6						
ASAR	**Alice Springs**	**16.05**	**156**	Pn	Pn	07 35 12.8	+0.1
	0.1nm,0.3s,baz=330,slow=10,SNR=11						
ASAR				Sn	Sn	07 38 05.4	-6.1
	0.1nm,0.3s,baz=323,slow=21,SNR=4.4						
NWAO	**Narrogin (SRO)**	**25.39**	**199**	LR	LR	07 46 25.5	
	comp=Z,53nm,20.1s,baz=195,slow=35						
MKAR	**Makanchi Array**	**68.26**	**329**	P	P	07 42 28.3	+0.1
	0.3nm,0.6s,baz=120,slow=8.1,SNR=2.6						

*BER **18** 08:24:14.9±3.2, 59°.84N×31°.32E, h15km±82km, ML2.3(NAO)*
*CSEM **18** 08:24:15.7±1.0, 59°.97N×30°.93E, h1km, ML1.9, Error ellipse: s-maj=21.7km s-min=11.9km az=135.0, Mining explosion.*
*ISCJB **18** 08:24:17.5±1.6, 60°.02N±0°.08×30°.6E±0°.1, h0km, Error ellipse: s-maj=12.7km s-min=7.5km az=143.5*
*HEL **18** 08:24:19.7±0.3, 60°.06N×30°.61E, h0km, ML1.9, ML2.3(NAO), Explosion*
*IDC **18** 08:24:21.7±3.4, 60°.17N×30°.33E, h0km, mb1 3.2/3, mb1mx3.0/26, mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=33.8km s-min=18.6km az=134.0*
*NAO **18** 08:24:21.0±2.9, 60°.14N×30°.30E, ML2.3*

ISC 18 08:24:17.4±1.3, 59°.99N±0°.06×30°.7E±0°.1, h0km, n34, σ1§18/47, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**1.66**	**291**	*e*P	**Pn**	**08 24 47.6**	**-0.1**
VJF				*e*S	**Sn**	**08 25 08.3**	**-1.4**
VJF				MSG		08 25 13.6	
	comp=Z,12nm,0.2s						
VJF	**Virojoki**	**1.66**	**291**	P	**Pn**	**08 24 47.6**	**-0.1**
PVF	**Pernaja**	**2.48**	**285**	*e*P	**Pn**	**08 25 00.3**	**+1.4**
PVF				*e*S	**Sn**	**08 25 30.7**	**+1.0**
PVF				MSG		08 25 35.2	
	comp=Z,5.5nm,0.2s						
PVF	**Pernaja**	**2.48**	**285**	P	**Pn**	**08 25 00.2**	**+1.3**
PVF				S	**Sn**	**08 25 30.7**	**+0.9**
	comp=Z,5.5nm,0.2s						
VSU	**Vasula**	**2.55**	**235**	Lg		08 25 38.3	
VSU	**Vasula**	**2.55**	**235**	Lg		08 25 38.3	
VSU	**Vasula**	**2.55**	**235**	*e*SG	**Sg**	**08 25 38.3**	**-0.8**
VSU	**Vasula**	**2.55**	**235**	*e*P	**Pn**	**08 25 05.8**	**+5.9**
	SNR=51						
FIA0	**FINESS Array S**	**2.70**	**305**	Pn	**Pn**	**08 25 02.8**	**+0.8**
	baz=117,slow=14						
FIA0				Sn	**Sn**	**08 25 35.4**	**0.0**
	baz=115,slow=28						
FIA0	**FINESS Array S**	**2.70**	**305**	*e*P	**Pn**	**08 25 02.7**	**+0.7**
FIA0				*e*S	**Sn**	**08 25 35.1**	**-0.2**
FIA0				MSG		08 25 41.5	
	comp=Z,3.0nm,0.2s						
FIA0	**FINESS Array S**	**2.70**	**305**	P	**Pn**	**08 25 02.6**	**+0.6**
FIA0	**FINESS Array S**	**2.70**	**305**	Pn	**Pn**	**08 25 02.8**	**+0.8**
	baz=117,slow=13,SNR=7.9						
FIA0				S	**Sn**	**08 25 35.1**	**-0.3**
	comp=Z,3.0nm,0.2s						
FIA0				Sn	**Sn**	**08 25 35.4**	**0.0**
	baz=115,slow=23						
FINES	**FINESS Array B**	**2.70**	**305**	Pn	**Pn**	**08 25 02.6**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=120,slow=15,SNR=29						
FINES				Sn	**Sn**	**08 25 35.5**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=115,slow=22,SNR=8.8						
JOF	**Joensuu**	**2.96**	**5**	*e*P	**Pn**	**08 25 07.0**	**+1.5**
JOF				*e*S	**Sn**	**08 25 41.5**	**-0.2**
JOF				MSG		08 25 47.0	
	comp=Z,2.9nm,0.2s						
KAF	**Kangasniemi**	**3.02**	**317**	*e*P	**Pn**	**08 25 07.7**	**+1.4**
KAF				*e*S	**Sn**	**08 25 43.1**	**-0.1**
KAF				MSG		08 25 50.4	
	comp=Z,3.4nm,0.2s						
KAF	**Kangasniemi**	**3.02**	**317**	P	**Pn**	**08 25 07.7**	**+1.3**
KAF				S	**Sn**	**08 25 43.1**	**-0.1**
	comp=Z,3.4nm,0.2s						
MEF	**Metsahovi**	**3.17**	**277**	*e*P	**Pn**	**08 25 10.4**	**+2.0**
MEF				MSG		08 26 04.1	
	comp=Z,3.9nm,0.2s						
MEF	**Metsahovi**	**3.17**	**277**	P	**Pn**	**08 25 10.3**	**+1.9**
RAF	**Rauma**	**4.54**	**287**	*e*S	**Sn**	**08 26 20.9**	**+0.3**
	SNR=51						
HFS	**Hagfors**	**8.51**	**278**	Pn	**Pn**	**08 26 20.2**	**-1.4**
	baz=72,slow=12						
HFS	**Hagfors**	**8.51**	**278**	Pn	**Pn**	**08 26 23.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=90,slow=13,SNR=3.1						
HFS				Sn	**Sn**	**08 27 53.7**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=86,slow=28,SNR=2.8						
HFS				Lg		08 28 44.5	
	comp=Z,0.2nm,0.3s,baz=84,slow=29,SNR=2.9						
HFS	**Hagfors**	**8.51**	**278**	*e*P	**Pn**	**08 26 20.2**	**-1.4**
HFS	**Hagfors**	**8.51**	**278**	Pn	**Pn**	**08 26 20.2**	**-1.4**
	baz=72,slow=12						
HFS	**Hagfors**	**8.51**	**278**	P	**Pn**	**08 26 20.2**	**-1.4**
NB2	**NORSAR Subarra**	**9.66**	**285**	Pn	**Pn**	**08 26 36.6**	**-0.8**
NB2	**NORSAR Subarra**	**9.66**	**285**	*e*P	**Pn**	**08 26 36.6**	**-0.8**
NB2	**NORSAR Subarra**	**9.66**	**285**	Pn	**Pn**	**08 26 36.6**	**-0.8**
NB2	**NORSAR Subarra**	**9.66**	**285**	P	**Pn**	**08 26 36.6**	**-0.8**
NOA	**NORSAR Array B**	**9.66**	**285**	Pn	**Pn**	**08 26 36.5**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=91,slow=11,SNR=4.9						
ARA0	**ARCESS Array S**	**9.84**	**349**	Pn	**Pn**	**08 26 37.8**	**-2.0**
	baz=157,slow=14						
ARA0				Sn	**Sn**	**08 28 21.2**	**-10**
	baz=164,slow=28						
ARA0	**ARCESS Array S**	**9.84**	**349**	*e*P	**Pn**	**08 26 37.8**	**-2.0**
ARA0				*e*S	**Sn**	**08 28 21.2**	**-10**
ARA0	**ARCESS Array S**	**9.84**	**349**	Pn	**Pn**	**08 26 37.8**	**-2.0**
	baz=157,slow=14,SNR=8.1						
ARA0	**ARCESS Array S**	**9.84**	**349**	P	**Pn**	**08 26 37.8**	**-2.0**
ARCES	**ARCESS Array B**	**9.84**	**349**	Pn	**Pn**	**08 26 37.9**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=159,slow=13,SNR=12						
ARCES				Sn	**Sn**	**08 28 22.8**	**-7.9**
	comp=Z,0.1nm,0.3s,baz=169,slow=24,SNR=3.2						

DDA 18 08:26:36.4, 42°.07N×43°.75E, h7km±4km, Md3.1, 2C, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**1.37**	**117**	P	Pn	08 27 07.7	+5.8
DGRG				S	Sb	08 27 35.2	+15
ARTV	**Artvin**	**1.63**	**238**	⇑*i*P	Pn	08 27 06.6	+1.2
ARTV				*i* S	Sn	08 27 30.5	+3.9
DBOC	**Borcka**	**1.72**	**246**	⇑*i*P	Pn	08 27 07.9	+1.2
DBOC				*i* S	Sn	08 27 32.6	+3.7
DDEM	**Demirkent**	**1.91**	**232**	*e*P	Pn	08 27 13.2	+3.9
DDEM				*e*S	Sn	08 27 41.5	+7.9

IDC 18 08:31:19.8±3.3, 11°.95N×143°.92E, h42km±36km, mb3.4/4, mb1 3.6/4, mb1mx3.3/23, mbtmp3.4/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/18, Error ellipse: s-maj=56.9km s-min=17.0km az=106.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.87**	**29**	P	Pn	08 31 49.1	-0.3
	22nm,0.3s,baz=207,slow=7.2,SNR=15						
GUMO				S	Sn	08 32 12.2	+0.4
	64nm,0.3s,baz=191,slow=22,SNR=14						
CBIJ	**Chichi jima**	**15.15**	**354**	LR	LR	08 39 31.5	
	comp=Z,56nm,18.4s,baz=127,slow=32						
WRA	**Warramunga Arr**	**33.06**	**197**	P	P	08 37 51.1	-0.5
	1.1nm,0.7s,baz=20,slow=9.8,SNR=17						
ASAR	**Alice Springs**	**36.73**	**195**	P	P	08 38 23.8	+0.6
	1.0nm,1.1s,baz=13,slow=12,SNR=5.4						
ILAR	**Eielson Array**	**70.44**	**25**	P	P	08 42 29.4	-0.1
	0.3nm,0.8s,baz=246,slow=5.9,SNR=8.5						
BVAR	**Borovoye Array**	**70.64**	**322**	P	P	08 42 31.0	+0.1
	0.5nm,0.4s,baz=101,slow=6.6,SNR=3.3						

IDC 18 08:48:40.4±2.5, 7°.42S×128°.18E, h0km, mb3.9/1, mb1 3.7/3, mb1mx3.5/16, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=284.8km s-min=32.2km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.81**	**155**	Pn	Pn	08 51 56.0	-1.5
	0.5nm,0.3s,baz=331,slow=14,SNR=29						
WRA				Sn	Sn	08 54 15.8	-16
	0.8nm,0.3s,baz=335,slow=22,SNR=13						
ASAR	**Alice Springs**	**17.06**	**162**	P	Pn	08 52 41.9	+1.4
	0.2nm,0.3s,baz=342,slow=9.1,SNR=15						
ASAR				S	Sn	08 55 37.2	-14
	0.2nm,0.3s,baz=340,slow=24,SNR=5.9						
MKAR	**Makanchi Array**	**67.60**	**328**	P	P	08 59 39.0	+0.1
	0.6nm,0.4s,baz=120,slow=7.3,SNR=4.7						

WEL 18 09:04:39.4±0.1, 45°.27S×167°.18E, h50km±1km, ML3.5/13, Error ellipse: s-maj=1.6km s-min=0.7km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.21**	**184**	PN	Pn	09 04 47.4	-0.3
DCZ				SN	Sn	09 04 53.6	-0.1
MLZ	**Mavora Lakes**	**0.71**	**97**	PN	Pn	09 04 52.2	-0.9
MLZ				SN	Sn	09 05 02.3	-0.8
MSZ	**Milford Sound**	**0.80**	**42**	PN	Pn	09 04 54.1	-0.2
MSZ				SN	Sn	09 05 05.3	0.0
WHZ	**Wether Hill Ro**	**0.83**	**139**	PN	Pn	09 04 54.5	-0.2
WHZ				SN	Sn	09 05 06.3	+0.3
PYZ	**Puysegur Point**	**0.96**	**201**	PN	Pn	09 04 56.6	+0.1
WKZ	**Wanaka**	**1.38**	**72**	PN	Pn	09 05 02.1	0.0
WKZ				SN	Sn	09 05 18.7	-0.5
EAZ	**Earnscleugh**	**1.51**	**89**	PN	Pn	09 05 03.7	-0.2
APZ	**The Paps**	**1.67**	**160**	PN	Pn	09 05 05.7	-0.4
TUZ	**Tuapeka**	**1.86**	**113**	PN	Pn	09 05 07.9	-0.8
SYZ	**Scrubby Hill**	**1.87**	**134**	PN	Pn	09 05 08.3	-0.5
LBZ	**Lake Benmore**	**2.31**	**69**	PN	Pn	09 05 13.7	-1.2
ODZ	**Otahua Downs**	**2.46**	**86**	PN	Pn	09 05 15.8	-1.2
FOZ	**Fox Glacier**	**2.48**	**47**	PN	Pn	09 05 17.0	-0.2
RPZ	**Rata Peaks**	**3.18**	**62**	PN	Pn	09 05 24.8	-2.0
WVZ	**Waitaha Valley**	**3.37**	**51**	PN	Pn	09 05 28.1	-1.3
MQZ	**McQueen's Vall**	**4.22**	**70**	PN	Pn	09 05 38.4	-2.6
LTZ	**Lake Taylor**	**4.43**	**58**	PN	Pn	09 05 40.9	-3.1
DSZ	**Denniston Nort**	**4.87**	**45**	PN	Pn	09 05 48.0	-2.0
THZ	**Tophouse**	**5.44**	**52**	PN	Pn	09 05 55.3	-2.5
QRZ	**Quartz Range**	**5.92**	**43**	PN	Pn	09 06 02.6	-1.8
NNZ	**Nelson**	**6.07**	**50**	PN	Pn	09 06 06.6	+0.1

*ISCJB **18** 09:04:51.0±0.8, 51°.8N±0°.3×179°.1W±0°.1, h10km, mb3.1/4, Error ellipse: s-maj=37.3km s-min=7.6km az=172.5*
*NEIC **18** 09:04:51.5, 51°.72N×179°.01W, h6km, ML3.8(PMR), ML3.3(AEIC), After AEIC.*
*IDC **18** 09:05:07.7±2.8, 51°.24N×175°.90W, h0km, mb3.2/5, mb1 3.6/5, mb1mx3.3/26, mbtmp3.2/5, Error ellipse: s-maj=78.5km s-min=33.6km az=17.0*

ISC 18 09:04:52.0±0.9, 51°.6N±0°.3×179°.1W±0°.1, h10km, n12, σ1§04/12, mb3.1/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.03**	**256**	*e*P	**Pg**	**09 05 11.2**	**-0.6**
ATKA	**Atka Island**	**3.09**	**78**	P	**Pn**	**09 05 40.3**	**-0.4**
ATKA				S	**Sn**	**09 06 16.7**	**-1.0**
FX1	**Attu Island--F**	**4.91**	**288**	P	**Pn**	**09 06 06.2**	**+0.4**
ILAR	**Eielson Array**	**21.16**	**39**	P	**P**	**09 09 43.5**	**+6.6**
	0.3nm,0.9s,mb2.6,baz=232,slow=8.7,SNR=4.2						
ILAR	**Eielson Array**	**21.16**	**39**	P	**P**	**09 09 43.5**	**+6.6**
MDJ	**Mudanjiang**	**34.35**	**279**	P	**P**	**09 11 37.8**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,59nm,3.8s						
NVAR	**Mina Array Bea**	**43.70**	**83**	P	**P**	**09 12 58.0**	**+1.0**
	comp=Z,0.2nm,0.5s,mb3.1,baz=295,slow=8.2,SNR=3.6						
NVAR	**Mina Array Bea**	**43.70**	**83**	P	**P**	**09 12 58.0**	**+1.0**
PDAR	**Pinedale Array**	**46.41**	**72**	P	**P**	**09 13 23.6**	**+5.2**
	comp=Z,0.4nm,0.8s,mb3.4,baz=269,slow=3.6,SNR=2.4						
PDAR	**Pinedale Array**	**46.41**	**72**	P	**P**	**09 13 23.6**	**+5.2**
ZALV	**Zalesovo Beam**	**53.72**	**313**	P	Px	09 14 43.4	
	comp=Z,0.4nm,0.3s,baz=37,slow=9.8,SNR=2.6						
TXAR	**Lajitas Array**	**58.80**	**81**	P	**P**	**09 14 53.4**	**+3.1**
	comp=Z,0.1nm,0.4s,mb3.2,baz=251,slow=5.6,SNR=2.6						

*BER **18** 09:09:47.0±3.5, 59°.98N×30°.98E, h0km±33km, ML2.3(NAO)*
*HEL **18** 09:09:51.6, 60°.37N×30°.76E, h0km, ML1.7, Explosion*
*NAO **18** 09:09:52.0±3.0, 60°.16N×30°.27E, ML2.3*
*CSEM **18** 09:09:52.9±0.7, 60°.40N×30°.55E, h1km, ML1.7, Error ellipse: s-maj=15.3km s-min=12.0km az=151.0, Mining explosion.*
*IDC **18** 09:09:53.8±3.4, 60°.27N×30°.28E, h0km, mb1 3.1/3, mb1mx3.0/26, mbtmp3.0/3, ML3.0/2, Error ellipse: s-maj=33.5km s-min=17.6km az=132.0*

ISC 18 09:09:52.0±1.2, 60°.35N±0°.06×30°.5E±0°.1, h0km, n25, σ1§26/38, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**1.49**	**279**	*e*P	**Pn**	**09 10 19.5**	**-0.4**
VJF				*e*S	**Sg**	**09 10 39.4**	**-0.3**
VJF				MSG		09 10 39.4	
	comp=Z,5.5nm,0.2s						
VJF	**Virojoki**	**1.49**	**279**	P	**Pn**	**09 10 19.5**	**-0.4**
VJF				S	**Sg**	**09 10 39.3**	**-0.4**
	comp=Z,5.5nm,0.2s						
PVF	**Pernaja**	**2.32**	**277**	*e*P	**Pn**	**09 10 32.6**	**+1.2**
PVF				*e*SB	**Sb**	**09 11 04.5**	**+0.7**
PVF				MSG		09 11 04.5	
	comp=Z,3.0nm,0.2s						
PVF	**Pernaja**	**2.32**	**277**	P	**Pn**	**09 10 32.6**	**+1.2**
FIA0	**FINESS Array S**	**2.44**	**299**	Pn	**Pn**	**09 10 33.8**	**+0.7**
	baz=109,slow=14						
FIA0				Sn	**Sn**	**09 11 06.0**	**+2.5**
	baz=114,slow=22						
FIA0	**FINESS Array S**	**2.44**	**299**	*e*P	**Pn**	**09 10 33.4**	**+0.4**
	baz=118						
FIA0				*e*SG	**Sg**	**09 11 09.8**	**-0.5**
FIA0				MSG		09 11 09.8	
	comp=Z,4.2nm,0.6s						
FIA0				*e*RG		09 11 19.5	
FIA0	**FINESS Array S**	**2.44**	**299**	P	**Pn**	**09 10 33.4**	**+0.4**
FIA0	**FINESS Array S**	**2.44**	**299**	Pn	**Pn**	**09 10 33.8**	**+0.8**
	baz=109,slow=13,SNR=4.0						
FIA0				Sg	**Sg**	**09 11 09.8**	**-0.5**
	comp=Z,4.2nm,0.6s						
FINES	**FINESS Array B**	**2.44**	**299**	Pn	**Pn**	**09 10 33.7**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=119,slow=14,SNR=17						
FINES				Sn	**Sn**	**09 11 06.7**	**+3.3**
	comp=Z,1.0nm,0.3s,baz=116,slow=22,SNR=7.2						
KAF	**Kangasniemi**	**2.70**	**313**	*e*PB	**Pb**	**09 10 39.1**	**-2.1**
KAF				*e*SB	**Sb**	**09 11 15.3**	**+0.4**
KAF				MSG		09 11 15.3	
	comp=Z,2.0nm,0.2s						
MEF	**Metsahovi**	**3.06**	**270**	*e*P	**Pn**	**09 10 41.8**	**+0.3**
	SNR=50						
SUF	**Sumiainen**	**3.17**	**321**	*e*SB	**Sb**	**09 11 27.8**	**-0.6**
SUF				MSG		09 11 27.8	
	comp=Z,1.0nm,0.2s						
KEF	**Keuruu**	**3.29**	**306**	*e*P	**Pn**	**09 10 46.9**	**+2.2**
KEF				*e*		09 11 39.2	
KEF				MSG		09 11 39.2	
	comp=Z,1.9nm,0.4s						
KEF	**Keuruu**	**3.29**	**306**	P	**Pn**	**09 10 46.8**	**+2.1**
MTSE	**Matsula**	**3.79**	**247**	*e*SG	**Sg**	**09 11 51.3**	**-2.4**
RAF	**Rauma**	**4.36**	**283**	*e*P	**Pn**	**09 11 01.1**	**+1.7**
	SNR=49						
RAF				*e*S	**Sn**	**09 11 51.4**	**+0.5**
	comp=Z,2.7nm,0.2s,SNR=49						
HFS	**Hagfors**	**8.38**	**276**	Pn	**Pn**	**09 11 50.0**	**-4.5**
HFS				Lg		09 14 12.6	
	baz=82,slow=37						
HFS	**Hagfors**	**8.38**	**276**	*e*P	**Pn**	**09 11 50.0**	**-4.5**
HFS				*e*SG	**Sg**	**09 14 12.6**	**-8.1**
ARA0	**ARCESS Array S**	**9.46**	**349**	Pn	**Pn**	**09 12 08.8**	**-0.6**
	baz=160,slow=14						
ARA0				Sn	**Sn**	**09 13 51.8**	**-4.5**
	baz=163,slow=28						
ARA0	**ARCESS Array S**	**9.46**	**349**	*e*P	**Pn**	**09 12 08.8**	**-0.6**
ARA0				*e*S	**Sn**	**09 13 51.8**	**-4.5**
ARA0	**ARCESS Array S**	**9.46**	**349**	Pn	**Pn**	**09 12 08.8**	**-0.5**
	baz=160,slow=14,SNR=5.9						
ARCES	**ARCESS Array B**	**9.46**	**349**	Pn	**Pn**	**09 12 08.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=160,slow=14,SNR=11						
ARCES				Sn	**Sn**	**09 13 51.0**	**-5.3**
	comp=Z,0.1nm,0.3s,baz=164,slow=23,SNR=2.3						
NB2	**NORSAR Subarra**	**9.49**	**283**	Pn	**Pn**	**09 12 07.3**	**-2.4**
	baz=81,slow=16						
NB2	**NORSAR Subarra**	**9.49**	**283**	*e*P	**Pn**	**09 12 07.3**	**-2.4**
NOA	**NORSAR Array B**	**9.49**	**283**	Pn	**Pn**	**09 12 07.6**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=92,slow=12,SNR=6.4						

*NIED **18** 09:29:00, 45°.90N×143°.60E, h360km, Mw5.4 Best double couple: $M_0$1.43000×10^17 NP1:ϕ_s83.00000°, δ77.00000°, λ164.00000°. NP2:ϕ_s177.00000°, δ75.00000°, λ13.00000°.*
*DJA **18** 09:29:45, 46°.51N×144°.56E, h200km, mb5.2/13*
*BJI **18** 09:29:58.4, 46°.21N×143°.59E, h330km, mB4.8/23, mb5.3/59*
*MOS **18** 09:29:58.6±0.9, 46°.13N×143°.55E, h328km, mb5.1/146, MS4.0/4, Error ellipse: s-maj=5.8km s-min=3.5km az=100.9*
*JMA **18** 09:29:58.6±0.3, 45°.94N×143°.64E, h348km±2km, M5.4*
JMA Felt II J1.
*ISCJB **18** 09:29:59.2±0.1, 46°.11N±0°.01×143°.51E±0°.02, h332km, mb5.1/390, Error ellipse: s-maj=2.1km s-min=1.4km az=150.3*
*SKHL **18** 09:29:59.4±0.6, 46°.00N×143°.60E, h325km±6km, mb5.8/12, mbh6.0/7, mbv6.3/9, ms4.7/3, msh5.9/9, msha5.9/6*
*IDC **18** 09:30:00.1±0.3, 46°.19N×143°.60E, h332km±3km, mb4.7/37, mb1 4.9/43, mb1mx4.9/44, mbtmp4.8/43, Error ellipse: s-maj=6.7km s-min=5.6km az=110.0*
*SZGRF **18** 09:30:00.4, 46°.65N×145°.18E, h340km, mb5.2, Sea of Okhotsk*
*NEIC **18** 09:30:00.3±0.1, 46°.16N×143°.56E, mb5.2/274, Error ellipse: s-maj=3.2km s-min=1.9km az=160.0*
NEIC Recorded [2 JMA] in southwestern Hokkaido, Japan. Also recorded [2 JMA] in Aomori and [1 JMA] in Iwate, Honshu.
*GCMT **18** 09:30:03.2±0.3, 46°.18N×143°.49E, h344km±1km, MW5.4, Moment Tensor Solution. s71,c109; Moment tensor: Scale 10^17Nm; M_{rr}0.05±.03; $M_{\theta\theta}$0.32±.04; $M_{\phi\phi}$-0.37±.05; $M_{r\theta}$0.31±.04; $M_{\theta\phi}$-1.29±.04; $M_{\phi r}$-0.20±.04; Best double couple: $M_0$1.40000×10^17 NP1:ϕ_s174.00000°, δ78.00000°, λ10.00000°. NP2:ϕ_s82.00000°, δ80.00000°, λ168.00000°. Principal axes: T 1.4100, Plg15.0000°, Azm37.0000°; N -0.0500, Plg75.0000°, Azm223.0000°; P -1.3600, Plg1.0000°, Azm128.0000°; Data Used: II IU IC G CN.*

ISC 18 09:30:00.6±0.1, 46°.09N±0°.01×143°.49E±0°.02, h334km, h334km±1.5km: pP-P, n1380, σ0§81/1447, mb5.1/390, 235C-181D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**1.00**	**330**	*e*Pn	**Pn**	**09 30 43.4**	**-1.0**
YSS	**Yuzh-Sakhalins**	**1.00**	**330**	*κ i*PN	**Pn**	**09 30 44.0**	**-0.4**
YSS				*i* S	**S**	**09 31 19.0**	**-0.6**
YSS				pmax	pmax		
	comp=Z,6μm,1.0s						
YSS				pmax	pmax		
	comp=Z,1μm,0.7s						
YSS				smax			
	comp=N,30μm,4.0s						
YSS				smax			
	comp=E,19μm,4.0s						
YSS				smax			
	comp=N,5μm,1.0s						
YSS				smax			
	comp=E,3μm,1.0s						
YSS	**Yuzh-Sakhalins**	**1.00**

YUK			AMB	AMB	09 30 55.0	
	comp=E,18μm,2.0s					
YUK			AMB	AMB	09 30 57.2	
	comp=E,270nm,0.4s					
YUK			AMB	AMB	09 30 57.2	
	comp=E,420nm,0.4s					
YUK			AMB	AMB	09 30 57.2	
	comp=E,1μm,0.4s					
YUK			A		09 31 41.5	
	comp=E,2μm,3.0s					
YUK			A		09 31 41.5	
	comp=E,80μm,3.0s					
YUK			A		09 31 46.5	
	comp=E,200nm,0.6s					
YUK			A		09 31 46.5	
	comp=E,5μm,0.6s					
JHR	**Hokuryu**	**2.66 209**	⇑P	**Pn**	**09 30 54.9**	**-0.8**
JHR			*e*S	**S**	**09 31 39.6**	**-0.3**
JAR	**Ashorobuto**	**2.80 176**	⇑P	**Pn**	**09 30 55.3**	**-1.6**
JAR			*e*S	**S**	**09 31 39.7**	**-2.4**
JFR	**Furan**	**2.99 193**	P	**Pn**	**09 30 57.3**	**-1.4**
UGL	**Uglegorsk**	**3.14 343**	⇓*i*PN	**Pn**	**09 30 59.6**	**-0.3**
UGL			S	**S**	**09 31 46.5**	**-1.0**
UGL			pmax	pmax		
	comp=E,3μm,0.7s					
UGL			pmax	pmax		
	comp=Z,5μm,0.7s					
UGL			pmax	pmax		
	comp=N,1μm,0.6s					
UGL			pmax	pmax		
	comp=Z,16μm,5.0s					
UGL			pmax	pmax		
	comp=N,6μm,1.0s					
UGL			pmax	pmax		
	comp=E,8μm,2.0s					
UGL			smax			
	comp=N,16μm,2.0s					
UGL			smax			
	comp=E,22μm,2.0s					
UGL			smax			
	comp=N,3μm,0.9s					
UGL			smax			
	comp=E,5μm,0.9s					
UGL	**Uglegorsk**	**3.14 343**	⇓*i*P	**Pn**	**09 30 59.8**	**-0.1**
UGL			⇓*i*P		09 30 59.8	
UGL			AMB	AMB	09 31 01.5	
	comp=E,1μm,0.7s					
UGL			AMB	AMB	09 31 01.5	
	comp=E,3μm,0.7s					
UGL			AMB	AMB	09 31 01.5	
	comp=E,5μm,0.7s					
UGL			AMB	AMB	09 31 02.0	
	comp=E,6μm,3.0s					
UGL			AMB	AMB	09 31 02.0	
	comp=E,8μm,3.0s					
UGL			AMB	AMB	09 31 02.0	
	comp=E,16μm,3.0s					
UGL			*e*rx	rx	09 31 10.0	
UGL			*i* rx	rx	09 31 18.0	
UGL			*i* S	**S**	**09 31 47.5**	**0.0**
UGL			A		09 31 53.5	
	comp=E,16μm,2.0s					
UGL			A		09 31 53.5	
	comp=E,22μm,2.0s					
UGL			A		09 31 53.5	
	comp=E,14μm,2.0s					
NEM2	**Nemuro 2**	**3.16 149**	P	**Pn**	**09 30 55.9**	**-4.3**
KUR	**Kuril'sk**	**3.18 104**	*e*PN	**Pn**	**09 30 58.7**	**-1.7**
KUR			*e*S	**S**	**09 31 44.5**	**-3.9**
KUR			pmax	pmax		
	comp=Z,2μm,0.5s					
KUR			pmax	pmax		
	comp=N,4μm,4.0s					
KUR			pmax	pmax		
	comp=E,4μm,4.0s					
KUR			pmax	pmax		
	comp=Z,16μm,4.0s					
KUR			smax			
	comp=N,25μm,2.0s					
KUR			smax			
	comp=E,25μm,2.0s					
KUR			smax			
	comp=N,2μm,1.0s					
KUR			smax			
	comp=E,2μm,1.0s					
KUR	**Kuril'sk**	**3.18 104**	*e*P	**Pn**	**09 30 58.5**	**-1.9**
KUR			AMB	AMB	09 30 59.2	
	comp=E,320nm,0.8s					
KUR			AMB	AMB	09 30 59.2	
	comp=E,470nm,0.8s					
KUR			AMB	AMB	09 30 59.2	
	comp=E,2μm,0.8s					
KUR			AMB	AMB	09 31 01.2	
	comp=E,4μm,3.6s					
KUR			AMB	AMB	09 31 01.2	
	comp=E,7μm,3.6s					
KUR			AMB	AMB	09 31 01.2	
	comp=E,16μm,3.6s					
KUR			*e*S	**S**	**09 31 44.5**	**-3.9**
KUR			A		09 31 47.4	
	comp=E,24μm,4.5s					
KUR			A		09 31 47.4	
	comp=E,24μm,4.5s					
KUR			A		09 31 47.4	
	comp=E,18μm,4.0s					
KUR			A		09 32 04.0	
	comp=E,2μm,1.0s					
KUR			A		09 32 04.0	
	comp=E,2μm,1.0s					
JAK	**Akkeshi**	**3.21 164**	P	**Pn**	**09 30 57.6**	**-3.1**
JAK			*e*S	**S**	**09 31 44.0**	**-5.0**
JCH	**Churui**	**3.48 182**	⇑P	**Pn**	**09 31 00.2**	**-3.1**
JCH			*e*S	**S**	**09 31 47.8**	**-5.9**
JSK	**Shakotan**	**3.48 219**	⇑P	**Pn**	**09 31 03.0**	**-0.3**
JEW	**Eniwo**	**3.56 205**	⇑P	**Pn**	**09 31 03.3**	**-0.9**
JEW			*e*S	**S**	**09 31 52.9**	**-2.4**
JNBK	**Urakawa-nobuka**	**3.84 188**	⇑P	**Pn**	**09 31 04.2**	**-2.8**
JNBK			*e*S	**S**	**09 31 55.1**	**-5.4**
ERM	**Erimo**	**4.08 184**	*e*Pn	**Pn**	**09 31 06.8**	**-2.7**
ERM	**Erimo**	**4.08 184**	*e*PN	**Pn**	**09 31 06.8**	**-2.7**
ERM	**Erimo**	**4.08 184**	Pn	**Pn**	**09 31 07.7**	**-1.8**
	comp=E,128μm,0.5s					
JKB	**Kayabe**	**4.56 204**	⇑P	**Pn**	**09 31 12.2**	**-2.4**
JKB			*e*S	**S**	**09 32 08.3**	**-6.0**
TYV	**Tymovskoe**	**4.81 354**	*i* P	**Pn**	**09 31 16.0**	**-1.1**
TYV			AMB	AMB	09 31 18.0	
	comp=E,389nm,0.8s					
TYV			AMB	AMB	09 31 18.0	
	comp=E,836nm,0.8s					
TYV			AMB	AMB	09 31 18.0	
	comp=E,979nm,0.8s					
TYV			AMB	AMB	09 31 22.0	
	comp=E,2μm,2.0s					
TYV			*e*S	**S**	**09 32 17.0**	**-2.0**
TYV			A		09 32 22.0	
	comp=E,12μm,2.0s					
TYV			A		09 32 28.0	
	comp=E,3μm,1.0s					
TYV			A		09 32 28.0	
	comp=E,2μm,1.0s					
JOSM	**Okushiri--Mats**	**4.94 217**	⇑P	**Pn**	**09 31 17.0**	**-1.8**
JOSM			*e*S	**S**	**09 32 20.0**	**-1.9**
TEY	**Ternei**	**4.95 260**	*i* P	**Pn**	**09 31 19.0**	**+0.2**
TEY			AMB	AMB	09 31 19.8	
	comp=E,2μm,4.0s					
TEY			AMB	AMB	09 31 19.8	
	comp=E,3μm,4.0s					
TEY			AMB	AMB	09 31 19.8	
	comp=E,118nm,0.9s					
TEY			AMB	AMB	09 31 19.8	
	comp=E,860nm,0.9s					
TEY			AMB	AMB	09 31 19.8	
	comp=E,197nm,0.9s					
TEY			*i* S	**S**	**09 32 21.0**	**-1.0**
TEY			A		09 32 22.0	
	comp=E,8μm,1.3s					
TEY			A		09 32 22.2	
	comp=E,15μm,5.0s					
TEY			AMS	AMS	09 32 38.0	
	comp=E,6μm,4.0s					
TEY			AMS	AMS	09 32 38.0	
	comp=E,2μm,4.0s					
TEY			AMS	AMS	09 32 38.0	
	comp=E,4μm,4.0s					
JOT	**Ohata**	**5.03 201**	⇑P	**Pn**	**09 31 15.6**	**-4.2**
JOT			*e*S	**S**	**09 32 16.0**	**-7.7**
JANG	**Nango**	**5.89 195**	P	**Pn**	**09 31 25.4**	**-4.2**
JANG			*e*S	**S**	**09 32 32.7**	**-9.0**
HABR	**Khabarovsk**	**6.22 296**	*d i*PN	**Pn**	**09 31 34.4**	**+1.2**
HABR			*e*S	**S**	**09 32 49.5**	**+1.2**
HABR			pmax	pmax		
	comp=Z,8μm,1.4s					
HABR			pmax	pmax		
	comp=E,6μm,1.4s					
HABR			pmax	pmax		
	comp=N,701nm,0.8s					
HABR			MLR	MLR		
	comp=Z,263nm,14.0s					
GRNR	**Gornyy**	**6.64 317**	⇑*i*P	**Pn**	**09 31 34.4**	**-3.7**
GRNR			AMB	AMB	09 31 35.2	
	comp=Z,240nm,1.0s					
GRNR			AMB	AMB	09 31 35.2	
	comp=Z,630nm,1.0s					
NKL	**Nikolayevsk**	**7.30 347**	⇓*i*P	**Pn**	**09 31 45.0**	**-0.9**
NKL			AMB	AMB	09 31 46.0	
	comp=Z,50nm,0.5s					
NKL			AMB	AMB	09 31 46.0	
	comp=Z,210nm,0.5s					
NKL			AMB	AMB	09 31 47.0	
	comp=Z,1μm,3.0s					
NKL			AMB	AMB	09 31 47.0	
	comp=Z,1μm,3.0s					
NKL			*e*rx	rx	09 32 09.7	
NKL			*i* S	**S**	**09 33 10.0**	**-1.5**
NKL			A		09 33 14.0	
	comp=Z,6μm,6.0s					
NKL			A		09 33 14.0	
	comp=Z,9μm,6.0s					
NKL			A		09 33 15.0	
	comp=Z,2μm,1.8s					
NKL			AMS	AMS	09 35 38.0	
	comp=Z,1μm,10.0s					
NKL			AMS	AMS	09 35 38.0	
	comp=Z,800nm,10.0s					
OKH	**Okha**	**7.48 357**	⇓*i*P	**Pn**	**09 31 48.1**	**+0.1**
OKH			*e*P		09 31 48.1	
OKH			AMB	AMB	09 31 48.4	
	comp=Z,600nm,0.9s					
OKH			*e*S	**S**	**09 33 16.5**	**+1.1**
OKH			⇑*i*S	**S**	**09 33 16.5**	**+1.1**
OKH			A		09 33 18.4	
	comp=Z,13μm,4.0s					
JAW	**Awa shima**	**8.25 204**	⇑P	**Pn**	**09 31 55.9**	**-1.6**
JYS	**Shirataka**	**8.26 199**	⇑P	**Pn**	**09 31 55.6**	**-2.0**
KLR	**Kul'dur**	**8.53 296**	*e*PN	**Pn**	**09 31 56.7**	**-3.9**
KLR			*i* S	**S**	**09 33 35.5**	**-3.0**
KLR			pmax	pmax		
	comp=E,800nm,1.4s					
KLR			pmax	pmax		
	comp=Z,840nm,1.4s					
KLR			pmax	pmax		
	comp=E,3μm,7.5s					
KLR			pmax	pmax		
	comp=Z,3μm,7.5s					
KLR			smax			
	comp=N,5μm,10.5s					
KLR			smax			
	comp=E,2μm,10.5s					
KLR	**Kul'dur**	**8.53 296**	*e*P	**Pn**	**09 31 56.7**	**-3.9**
KLR			⇑*i*P		09 31 57.0	
KLR			AMB	AMB	09 31 59.1	
	comp=E,800nm,1.4s					
KLR			AMB	AMB	09 31 59.1	
	comp=E,840nm,1.4s					
KLR			AMB	AMB	09 31 59.1	
	comp=E,6μm,1.4s					
KLR			AMB	AMB	09 32 00.0	
	comp=E,3μm,7.5s					
KLR			AMB	AMB	09 32 00.0	
	comp=E,3μm,7.5s					
KLR			AMB	AMB	09 32 00.0	
	comp=E,6μm,7.5s					
KLR			⇑*i*S	**S**	**09 33 35.5**	**-3.0**
KLR			A		09 33 39.0	
	comp=E,5μm,11.0s					
KLR			A		09 33 39.0	
	comp=E,2μm,11.0s					
KLR			A		09 33 39.0	
	comp=E,6μm,11.0s					
VLA	**Vladivostok**	**8.79 254**	⇓*i*PN	**Pn**	**09 32 03.6**	**-0.3**
VLA			*i* S	**S**	**09 33 41.2**	**-3.4**
VLA			pmax	pmax		
	comp=Z,1μm,1.3s					
JNS	**Sasagawa**	**8.83 202**	⇑P	**Pn**	**09 32 02.9**	**-1.5**
SKR	**Severo-Kuril's**	**9.57 57**	*α i*PN	**Pn**	**09 32 14.0**	**+0.8**
SKR			*e*S	**S**	**09 33 52.0**	**-10**
SKR			pmax	pmax		
	comp=N,1μm,1.0s					
SKR			pmax	pmax		
	comp=E,1μm,1.0s					
SKR			pmax	pmax		
	comp=Z,5μm,1.0s					
SKR			pmax	pmax		
	comp=N,5μm,2.0s					
SKR			pmax	pmax		
	comp=E,4μm,2.0s					
SKR			pmax	pmax		
	comp=Z,11μm,2.0s					
SKR			smax			
	comp=N,330nm,0.7s					
SKR			smax			
	comp=E,280nm,0.7s					
SKR			smax			
	comp=N,4μm,10.0s					
SKR			smax			
	comp=E,5μm,10.0s					
SKR			MLR	MLR		
	comp=E,1μm,14.0s					
SKR			MLR	MLR		
	comp=Z,1μm,14.0s					
SKR			MLR	MLR		
	comp=N,1μm,10.0s					
SKR	**Severo-Kuril's**	**9.57 57**	⇑*i*P	**Pn**	**09 32 14.0**	**+0.8**
SKR			⇑*i*P		09 32 14.0	
SKR			⇑*i*P		09 32 14.0	
SKR			AMB	AMB	09 32 16.0	
	comp=N,1μm,1.0s					
SKR			AMB	AMB	09 32 16.0	
	comp=N,1μm,1.0s					
SKR			AMB	AMB	09 32 16.0	
	comp=N,5μm,1.0s					
SKR			AMB	AMB	09 32 16.0	
	comp=N,5μm,2.0s					
SKR			AMB	AMB	09 32 16.0	
	comp=N,4μm,2.0s					
SKR			AMB	AMB	09 32 16.0	
	comp=N,11μm,2.0s					
SKR			*i* rx	rx	09 32 21.0	
SKR			*e*S	**S**	**09 33 57.5**	**-4.1**
SKR			A		09 34 06.9	
	comp=N,33nm,0.9s					
SKR			A		09 34 06.9	
	comp=N,28nm,0.9s					
SKR			A		09 34 06.9	
	comp=N,340nm,0.9s					
SKR			A		09 34 10.0	
	comp=N,4μm,10.0s					
SKR			A		09 34 10.0	
	comp=N,5μm,10.0s					
SKR			A		09 34 10.0	
	comp=N,3μm,10.0s					
SKR			A		09 34 10.0	
	comp=N,4μm,10.0s					
SKR			A		09 34 10.0	
	comp=N,5μm,10.0s					
SKR			A		09 34 10.0	
	comp=N,3μm,10.0s					
SKR			AMS	AMS	09 36 18.0	
	comp=N,1μm,14.0s					
SKR			AMS	AMS	09 36 18.0	
	comp=N,1μm,14.0s					
JHG	**Hegura jima**	**9.57 213**	P	**Pn**	**09 32 12.7**	**-0.7**
JHO	**Hitachi**	**9.72 194**	P	**Pn**	**09 32 12.8**	**-2.4**
JSZ	**Suzu**	**9.77 210**	P	**Pn**	**09 32 14.7**	**-1.0**
EKMR	**Ekimchan**	**9.78 319**	*e*P	**Pn**	**09 32 11.6**	**-4.0**
EKMR			AMB	AMB	09 32 14.0	
	comp=N,240nm,0.5s					
EKMR			AMB	AMB	09 32 14.0	
	comp=N,170nm,0.5s					
EKMR			AMB	AMB	09 32 14.0	
	comp=N,400nm,0.5s					
JJN	**Nakama**	**9.82 206**	P	**Pn**	**09 32 15.7**	**-0.7**
JKT	**Katashina**	**9.84 200**	P	**Pn**	**09 32 16.0**	**-0.6**
MDJ	**Mudanjiang**	**9.90 266**	P	**Pn**	**09 32 18.8**	**+1.6**
MDJ			S	**S**	**09 34 07.3**	**-1.8**
MDJ			ScP	ScP	09 40 56.0	+1.3
MDJ			PcS	PcS	09 41 28.9	+0.7
MDJ			ScS	ScS	09 44 31.3	+2.1
MDJ			pmax	pmax		
	comp=Z,170nm,1.5s					
MDJ	**Mudanjiang**	**9.90 266**	*e*Pn	**Pn**	**09 32 18.4**	**+1.2**
	comp=Z,422nm,0.8s					
MDJ			*e*S	**S**	**09 34 11.1**	**+2.0**
JAG	**Ashikaga**	**10.12 199**	P	**Pn**	**09 32 18.7**	**-1.3**
MAJO	**Matsushiro**	**10.33 204**	*e*Pn	**Pn**	**09 32 21.4**	**-1.1**
MAJO	**Matsushiro**	**10.33 204**	*e*PN	**Pn**	**09 32 21.4**	**-1.1**
MJAR	**Matsushiro Arr**	**10.33 204**	P	**Pn**	**09 32 21.7**	**-0.8**
	comp=Z,99nm,0.3s,baz=2.7,slow=11,SNR=1011					
MJAR			S	**S**	**09 34 14.8**	**-4.0**
	baz=30,slow=14,SNR=2.9					
MJAR			ScP	ScP	09 40 55.6	+0.3
	comp=Z,0.1nm,0.3s,baz=48,slow=0.3,SNR=5.8					
MJAR	**Matsushiro Arr**	**10.33 204**	PN	**Pn**	**09 32 21.7**	**-0.8**
MJAR			S	**S**	**09 34 14.8**	**-4.1**
MJAR			pmax	pmax		
	comp=Z,99nm,0.3s					
JGF	**Kuroka**	**11.46 206**	P	**Pn**	**09 32 35.4**	**-0.6**
PEA0B	**Petropavlovsk-**	**11.58 48**	*e*Pn	**Pn**	**09 32 36.0**	**-1.2**
PEA0B			*e*S	**S**	**09 34 40.7**	**-5.4**
PETK	**Petropavlovsk-**	**11.58 48**	P	**Pn**	**09 32 36.0**	**-1.2**
	comp=Z,32nm,0.3s,baz=222,slow=7.8,SNR=248					
PETK			S	**S**	**09 34 40.2**	**-5.9**
	baz=114,slow=9.6,SNR=2.6					
PETK			ScP	ScP	09 40 55.8	-0.9
	comp=Z,0.2nm,0.3s,baz=170,slow=4.2,SNR=3.8					
PETK	**Petropavlovsk-**	**11.58 48**	PN	**Pn**	**09 32 36.1**	**-1.1**
PETK			S	**S**	**09 34 40.3**	**-5.8**
PETK			pmax	pmax		
	comp=Z,32nm,0.3s					
PET	**Petropavlovsk**	**12.03 49**	*e*Pn	**Pn**	**09 32 40.7**	**-1.9**
	comp=Z,740nm,0.9s					
PET			*e*S	**S**	**09 34 50.8**	**-5.4**
PET	**Petropavlovsk**	**12.03 49**	*α i*PN	**Pn**	**09 32 39.9**	**-2.7**
PET			pmax	pmax		
	comp=Z,2μm,2.6s					
PET			pmax	pmax		
	comp=Z,1μm,11.7s					
PET			pmax	pmax		
	comp=Z,951nm,0.9s					
PET			MLR	MLR		
	comp=Z,1μm,10.0s					
PET			MLR	MLR		
	comp=Z,600nm,13.0s					
JKY	**Yasaka**	**12.22 214**	P	**Pn**	**09 32 44.9**	**-0.2**
JWT	**Wachi**	**12.41 212**	P	**Pn**	**09 32 46.3**	**-1.1**
JKSM	**Kasumi**	**12.43 216**	P	**Pn**	**09 32 47.4**	**-0.2**
BMKR	**Bomnak**	**12.70 318**	⇓*i*P	**Pn**	**09 32 46.0**	**-4.6**
BMKR			AMB	AMB	09 32 46.9	
	comp=Z,60nm,0.5s					
JKS	**Kasai**	**12.89 214**	P	**Pn**	**09 32 52.5**	**-0.6**
ZEA	**Zeya**	**12.95 312**	⇓*e*P	**Pn**	**09 32 49.9**	**-3.6**
ZEA			⇓*e*P		09 32 49.9	
ZEA			AMB	AMB	09 32 52.0	
	comp=Z,2μm,2.0s					
ZEA			AMB	AMB	09 32 52.0	
	comp=Z,2μm,2.0s					
ZEA			AMB	AMB	09 32 52.0	
	comp=Z,4μm,2.0s					
ZEA			AMB	AMB	09 32 52.4	
	comp=Z,2μm,1.0s					
ZEA			AMB	AMB	09 32 52.4	
	comp=Z,980nm,1.0s					
ZEA			AMB	AMB	09 32 52.4	
	comp=Z,2μm,1.0s					
ZEA			*e*S	**S**	**09 35 14.0**	**-2.0**
ZEA			A		09 35 17.0	
	comp=Z,2μm,3.0s					
CN2	**Changchun**	**12.99 266**	*e*P	**Pn**	**09 32 52.6**	**-1.5**
CN2			*es*P		09 34 05.5	
CN2			*e*S	**S**	**09 35 11.8**	**-5.3**
CN2			LR	LR		
	comp=N,2μm,10.0s					
CN2			LR	LR		
	comp=E,1μm,10.0s					
CN2			LR	LR		
	comp=Z,1μm,10.0s					
JHJ	**Hachijo jima 2**	**13.26 194**	P	**Pn**	**09 32 57.2**	**-0.3**
	comp=Z,144nm,0.3s,baz=97,slow=4.1,SNR=27					
JHJ			S	**S**	**09 35 20.2**	**-2.7**
	comp=Z,28nm,0.3s,baz=49,slow=20,SNR=4.2					
KROS	**Kirovskiy**	**13.44 314**	⇓*i*Pg	**Pn**	**09 32 54.5**	**-4.9**
KROS			AMB	AMB	09 32 59.8	
	comp=Z,64nm,0.5s					
KROS			AMB	AMB	09 32 59.8	
	comp=Z,91nm,0.5s					
KROS			AMB	AMB	09 32 59.8	
	comp=Z,170nm,0.5s					
JGT	**Gotsu**	**13.91 221**	P	**Pn**	**09 33 05.2**	**+0.1**
JAI	**Aioi**	**14.09 213**	P	**P**	**09 33 06.3**	**+0.4**
KSRS	**Korea Array**	**14.45 239**	P	**P**	**09 33 11.8**	**+1.9**
	comp=Z,13nm,0.3s,baz=52,slow=10,SNR=512					
KSRS			S	**S**	**09 35 46.4**	**-0.5**
	baz=0.7,slow=6.6,SNR=2.2					
KSRS			ScP	ScP	09 41 02.8	+1.1
	comp=Z,0.3nm,0.3s,baz=7.9,slow=1.4,SNR=13					
KSRS	**Korea Array**	**14.45 239**	P	**P**	**09 33 11.8**	**+1.9**
KSRS			S	**S**	**09 35 46.4**	**-0.5**
KSRS			pmax	pmax		
	comp=Z,13nm,0.3s					
JHM	**Kurahashi**	**14.57 219**	P	**P**	**09 33 12.3**	**+1.1**
SNY	**Shenyang**	**14.95 261**	⇓P	**P**	**09 33 16.8**	**+1.5**
SNY			S	**S**	**09 35 55.1**	**-1.8**
SNY			pmax	pmax		
	comp=Z,320nm,0.8s					
SNY			pmax	pmax		
	comp=Z,470nm,3.5s					
SNY			LR	LR		
	comp=E,710nm,10.6s					
SNY			LR	LR		
	comp=Z,420nm,9.5s					
JKU	**Kubokawa**	**15.06 216**	P	**P**	**09 33 17.9**	**+1.4**
JNA	**Nagahama**	**15.09 218**	P	**P**	**09 33 18.0**	**+1.1**
INCN	**Inchon**	**15.21 242**	*e*Pn	**Pn**	**09 33 19.7**	**-0.5**
	comp=Z,372nm,0.8s					
INCN	**Inchon**	**15.21 242**	P	**P**	**09 33 20.4**	**+2.3**
	SNR=41					
UWA2	**Uwa jima 2**	**15.32 217**	P	**P**	**09 33 20.7**	**+1.3**
JTO	**Tosashimizu**	**15.56 216**	P	**P**	**09 33 23.1**	**+1.1**
CLNS	**Chul'man**	**15.76 320**	*e*P	**P**	**09 33 24.4**	**+0.6**
CLNS			*e*S	**S**	**09 36 01.6**	**-11**
CLNS			pmax	pmax		
	comp=E,63nm,1.0s					
CLNS			pmax	pmax		
	comp=N,141nm,0.9s					
CLNS			pmax	pmax		
	comp=Z,269nm,1.0s					
CLNS			smax			
	comp=N,265nm,13.5s					
CLNS			smax			
	comp=E,256nm,14.4s					
JFI	**Itaya**	**16.14 223**	P	**P**	**09 33 29.3**	**+1.0**
JNU	**Nakatsue**	**16.16 221**	*e*P	**P**	**09 33 29.6**	**+1.0**
	comp=E,197nm,0.8s					
HIA	**Hailar**	**16.29 290**	*e*P	**P**	**09 33 29.1**	**-0.7**
	comp=E,664nm,0.8s					
HIA	**Hailar**	**16.29 290**	*e*P	**P**	**09 33 29.1**	**-0.6**
HIA			pmax	pmax		
	comp=Z,664nm,0.8s					
DL2	**Dalian**	**17.62 254**	P	**P**	**09 33 45.5**	**+1.4**
DL2			pmax	pmax		
	comp=Z,40nm,1.3s					
SEY	**Seymchan**	**17.62 14**	*c i*P	**P**	**09 33 43.4**	**-0.5**
YAK	**Yakutsk**	**17.84 338**	*e*P	**P**	**09 33 44.1**	**-2.2**
	comp=Z,312nm,0.6s					
YAK	**Yakutsk**	**17.84 338**	*d i*P	**P**	**09 33 44.1**	**-2.2**
YAK			*e*S	**S**	**09 36 48.3**	**-5.2**
YAK			pmax	pmax		
	comp=Z,111nm,0.9s					
YAK			pmax	pmax		
	comp=E,18nm,0.8s					
YAK			pmax	pmax		
	comp=N,10.0nm,0.9s					
YAK			smax			
	comp=N,2μm,1.9s					
YAK			smax			
	comp=E,2μm,1.9s					
CBIJ	**Chichi jima**	**18.98 184**	P	**P**	**09 33 58.1**	**-0.7**
	comp=E,17nm,0.3s,baz=283,slow=21,SNR=11					

CBIJ S **S** **09 37 19.2 +3.0**
comp=E,3.9nm,0.3s,baz=258,slow=20,SNR=2.2
FX1 Attu Island--F 20.34 60 *e*P **P** **09 34 11.5 -1.0**
FX1 Attu Island--F 20.34 60 *e*P **P** **09 34 11.5 -1.0**
CIT Chita 20.41 298 *e*P **P** **09 34 11.2 -1.9**
CIT *e* 09 37 43.4
CIT pmax pmax
comp=Z,352nm,1.3s
BJI Beijing 20.80 263 P **P** **09 34 16.8 0.0**
BJI sP sP 09 35 46.5 -3.9
BJI S **S** **09 37 47.4 +0.8**
BJI pmax pmax
comp=Z,500nm,0.7s
BJI pmax pmax
comp=Z,630nm,3.5s
BJI LR LR
comp=N,580nm,26.3s
BJI LR LR
comp=E,530nm,25.8s
BJI LR LR
comp=Z,120nm,21.4s
BJT Baijiatuau 20.81 263 *e*P **P** **09 34 16.6 -0.4**
comp=Z,400nm,0.7s
BJT Baijiatuau 20.81 263 *e*P **P** **09 34 16.6 -0.4**
BJT pmax pmax
comp=Z,400nm,0.7s
SMY Shemya 20.88 60 *e*P **P** **09 34 16.8 -0.6**
SMY Shemya 20.88 60 *e*P **P** **09 34 16.8 -0.7**
BOD Bodaibo 21.44 314⇑*i*P **P** **09 34 20.5 -2.0**
BOD pmax pmax
comp=Z,212nm,1.4s,mb5.2
TIA Tai'an 22.08 253 *e*P **P** **09 34 29.4 +0.8**
TIA S **S** **09 38 08.4 +1.0**
TIA LR LR
comp=N,330nm,13.1s
TIA LR LR
comp=E,2μm,23.2s
TIA LR LR
comp=Z,380nm,11.3s
JOW Kunigami 22.71 217 P **P** **09 34 35.0 +0.5**
comp=Z,199nm,0.7s,mb5.5,baz=30,slow=7.3,SNR=54
SSE Sheshan 22.87 237 P **P** **09 34 33.0 -2.8**
SSE S **S** **09 38 20.0 -0.1**
SSE pmax pmax
comp=Z,40nm,0.7s,mb4.8
SSE pmax pmax
comp=Z,110nm,4.5s
SSE LR LR
comp=N,280nm,12.6s
SSE LR LR
comp=E,550nm,12.4s
SSE LR LR
comp=Z,320nm,7.0s
NJ2 Nanjing 23.59 242 *e*P **P** **09 34 42.5 +0.2**
NJ2 sP sP 09 36 16.3 -4.5
NJ2 PcP PcP 09 38 19.0 +2.4
NJ2 S **S** **09 38 31.5 0.0**
NJ2 ScP ScP 09 41 23.0 +0.6
NJ2 pmax pmax
comp=Z,40nm,0.7s,mb4.8
NJ2 pmax pmax
comp=Z,210nm,5.1s
NJ2 LR LR
comp=N,490nm,22.1s
NJ2 LR LR
comp=E,500nm,16.5s
NJ2 LR LR
comp=Z,450nm,21.0s
HHC Hu-ho-hao-te 23.66 269 *e*P **P** **09 34 44.8 +2.0**
HHC sP sP 09 36 19.3 -2.1
HHC PcP PcP 09 38 20.8 +4.2
HHC S **S** **09 38 34.9 +2.5**
HHC pmax pmax
comp=Z,170nm,1.1s,mb5.2
HHC pmax pmax
comp=Z,2μm,5.2s
HHC LR LR
comp=N,2μm,11.7s
HHC LR LR
comp=E,1μm,10.5s
HHC LR LR
comp=Z,400nm,9.8s
AMKA Amchitka 24.04 64 *e*P **P** **09 34 44.9 -1.2**
comp=Z,115nm,0.8s,mb5.2
TIY Taiyuan 24.46 261 *e*P **P** **09 34 49.8 -0.3**
TIY S **S** **09 38 49.0 +3.9**
ULN Ulaanbaatar 24.78 287 *e*P **P** **09 34 53.0 +0.1**
comp=Z,90nm,0.6s,mb5.2
ULN Ulaanbaatar 24.78 287 *e*P **P** **09 34 53.0 +0.1**
ULN pmax pmax
comp=Z,90nm,0.6s,mb5.2
ULN Ulaanbaatar 24.78 287 P **P** **09 34 53.3 +0.4**
comp=Z,1μmcomp=Z,140nm,0.8s,mb5.2
ULN Ulaanbaatar 24.78 287 P **P** **09 34 53.5 +0.7**
SNR=54
BTO Baotou 24.83 269 *e*P **P** **09 34 54.1 +0.7**
SONM Songino Array 25.23 288 P **P** **09 34 57.1 +0.2**
comp=Z,50nm,0.6s,mb4.9,baz=79,slow=7.9,SNR=128
SONM ScP ScP 09 41 27.4 +0.7
comp=Z,3.9nm,0.9s,baz=122,slow=2.3,SNR=5.2
SONM Songino Array 25.23 288 P **P** **09 34 57.1 +0.3**
SONM pmax pmax
comp=Z,50nm,0.6s
IRK Irkutsk 26.13 298 *e*P **P** **09 35 03.1 -1.7**
IRK *e* 09 36 07.2
IRK pmax pmax
comp=Z,230nm,1.4s,mb5.2
TLY Talaya 26.54 297 *e*P **P** **09 35 08.4 -0.1**
comp=Z,150nm,1.7s,mb4.9
TLY Talaya 26.54 297 *e*P **P** **09 35 08.4 -0.1**
TLY pmax pmax
comp=Z,150nm,1.7s,mb5.0
TLY Talaya 26.54 297 P **P** **09 35 08.2 -0.3**
comp=Z,231nm,1.0s,mb5.4,SNR=11
TLY Talaya 26.54 297 P **P** **09 35 08.5 0.0**
SNR=13
TIXI Tiksi 26.57 350 *e*P **P** **09 35 06.3 -2.2**
comp=Z,13nm,0.7s,mb4.3
TIXI Tiksi 26.57 350 *d i*P **P** **09 35 06.3 -2.2**
TIXI *e* 09 36 10.6
TIXI *i* S **S** **09 39 11.8 -5.7**
TIXI *e*SS SS 09 41 16.0 -9.4
TIXI pmax pmax
comp=Z,12nm,0.6s,mb4.3
ZAK Zakamensk 26.89 294 *e*P **P** **09 35 11.6 0.0**
ZAK *e* 09 36 16.1
ZAK pmax pmax
comp=Z,44nm,1.4s,mb4.5
WHN Wuhan 27.44 246 P **P** **09 35 16.5 -0.2**
WHN S **S** **09 39 27.6 -4.4**
WHN pmax pmax
comp=Z,55nm,0.5s,mb5.0
WHN LR LR
comp=N,460nm,8.7s
WHN LR LR
comp=E,430nm,8.5s
WHN LR LR
comp=Z,570nm,12.8s
MOY Mondy 28.19 297 *e*P **P** **09 35 23.2 +0.2**
MOY pmax pmax
comp=Z,112nm,2.2s,mb4.7
SSLB Suanglung 28.74 227 *e*P **P** **09 35 28.9 +0.7**
comp=Z,15nm,0.6s,mb4.4
XAN Xi'an 28.84 258 P **P** **09 35 29.5 +0.5**
XAN pmax pmax
comp=Z,33nm,6.5s
YULB Yu-li 28.89 226 *e*P **P** **09 35 29.9 +0.4**
comp=Z,11nm,0.7s,mb4.2
QZH Quanzhou 29.05 232⇓*i*P **P** **09 35 31.8 +0.9**
QZH pP 09 36 33.8
QZH S **S** **09 39 58.3 +1.0**
QZH sS sS 09 41 46.1 -6.0
QZH pmax pmax
comp=Z,160nm,1.0s,mb5.2
TWG Pinlang 29.48 226 *e*P **P** **09 35 34.5 -0.3**
comp=Z,53nm,0.6s,mb5.0
ENH Enshi 30.76 251 *e*P **P** **09 35 46.1 +0.2**
comp=Z,24nm,0.8s,mb4.5
LZH Lanzhou 31.22 266 *e*P **P** **09 35 51.8 +2.0**
LZH pP pP 09 36 51.8 -1.2
LZH PP PP 09 37 15.1 +6.8
LZH *e*S **S** **09 40 32.6 +1.6**
LZH sS sS 09 42 23.5 -2.6
LZH pmax pmax
comp=Z,55nm,1.1s,mb4.7

LZH pmax pmax
comp=Z,150nm,5.1s
TNA Tin City 32.38 36 *e*P **P** **09 35 57.8 -1.6**
comp=Z,186nm,1.1s,mb5.2
GUMO Guam 32.41 178 P **P** **09 36 00.2 -0.1**
comp=Z,49nm,0.8s,mb4.8,baz=360,slow=19,SNR=3.4
GUMO pP pP 09 37 01.6 -2.2
comp=Z,45nm,0.6s,baz=283,slow=3.1,SNR=2.8
GUMO Guam 32.41 178 P **P** **09 36 00.2 -0.1**
GUMO *PP pP 09 37 01.6 -2.2
GUMO pmax pmax
comp=Z,49nm,0.8s,mb4.8
GTA Gaotai 32.44 274 P **P** **09 36 01.5 +1.2**
GTA pP pP 09 37 03.3 -0.4
GTA sP sP 09 37 39.9 -2.4
GTA S **S** **09 40 48.8 -0.8**
GTA ScP ScP 09 41 51.8 +2.1
GTA SS SS 09 43 12.8 -13
GTA ScS ScS 09 45 51.8 +2.0
GTA pmax pmax
comp=Z,240nm,0.8s,mb5.5
GTA pmax pmax
comp=Z,490nm,4.7s
GTA LR LR
comp=N,570nm,9.5s
GTA LR LR
comp=E,370nm,10.2s
GTA LR LR
comp=Z,340nm,9.5s
AKUT Akutan 32.88 57 *e*P **P** **09 36 01.4 -2.5**
CD2 Chengdu 34.20 258 *e*P **P** **09 36 16.5 +1.0**
CD2 pP pP 09 37 18.9 -0.6
CD2 PP PP 09 37 44.8 +3.6
CD2 sP sP 09 37 55.0 -2.9
CD2 S **S** **09 41 17.4 +0.5**
CD2 sS sS 09 43 08.1 -4.9
CD2 SS SS 09 43 59.5 -2.1
CD2 pmax pmax
comp=Z,120nm,0.9s,mb5.1
CD2 pmax pmax
comp=Z,150nm,5.8s
GYA Guiyang 35.16 249 P **P** **09 36 23.0 -0.7**
GYA pP pP 09 37 26.6 -1.3
GYA sP sP 09 38 05.8 -0.4
GYA S **S** **09 41 32.0 +0.5**
GYA ScP ScP 09 42 01.4 +1.8
GYA PcS PcS 09 42 33.8 -0.2
GYA ScS ScS 09 46 04.3 -0.4
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.3
GYA pmax pmax
comp=Z,130nm,4.8s
SDPT Sand Point 35.76 54 *e*P **P** **09 36 26.2 -2.1**
comp=Z,204nm,0.7s,mb5.5
CHGN Chignik 36.75 52 *e*P **P** **09 36 35.2 -1.5**
TTA Tatalina 37.31 41 *e*P **P** **09 36 40.2 -1.1**
TTA Tatalina 37.31 41 *e*P **P** **09 36 40.2 -1.1**
ZAA0 Zalesovo Array 37.53 304 *e*P **P** **09 36 42.2 -1.0**
ZALV Zalesovo Beam 37.53 304 P **P** **09 36 42.2 -1.0**
comp=Z,34nm,0.5s,mb4.8,baz=79,slow=7.7,SNR=106
ZALV ScP ScP 09 42 08.3 +0.4
comp=Z,11nm,0.8s,baz=85,slow=4.9,SNR=7.8
ZALV Zalesovo Beam 37.53 304 P **P** **09 36 42.2 -1.0**
ZALV ScP ScP 09 42 08.3 +0.4
ZALV Zalesovo Beam 37.53 304 P **P** **09 36 42.2 -1.0**
ZALV 09 42 08.3
ZALV pmax pmax
comp=Z,34nm,0.5s,mb4.8
SVW2 Sparrevohn 37.63 44 *e*P **P** **09 36 43.5 -0.5**
comp=Z,74nm,0.7s,mb5.0
NVS Novosibirsk 38.24 306 *i*P **P** **09 36 48.0 -1.1**
NVS *i* 09 38 24.9
NVS *i*S **S** **09 42 15.2 -1.9**
NVS pmax pmax
comp=Z,121nm,1.3s,mb5.0
NVS pmax pmax
comp=N,19nm,1.0s
NVS pmax pmax
comp=E,52nm,0.6s
NVS pmax pmax
comp=Z,82nm,1.8s,mb4.7
NVS pmax pmax
comp=N,12nm,0.9s
NVS pmax pmax
comp=E,35nm,1.2s
NVS smax
comp=N,23nm,1.6s
NVS smax
comp=E,125nm,2.5s
KMI Kunming 38.64 251 P **P** **09 36 53.3 +0.5**
KMI pP pP 09 37 57.6 -0.5
KMI sP sP 09 38 32.3 -3.8
KMI S **S** **09 42 23.8 0.0**
KMI sS sS 09 44 20.3 -1.4
KMI SS SS 09 45 24.4 -5.5
KMI pmax pmax
comp=Z,19nm,1.1s,mb4.2
KMI LR LR
comp=N,220nm,10.3s
KMI LR LR
comp=E,110nm,13.9s
KMI LR LR
comp=Z,170nm,13.9s
QIZ Qiongzhong 38.67 237 P **P** **09 36 53.1 +0.1**
QIZ pP pP 09 37 55.1 -3.3
QIZ S **S** **09 42 26.6 +2.3**
QIZ pmax pmax
comp=Z,22nm,4.6s
QIZ Qiongzhong 38.67 237 *e*P **P** **09 36 54.5 +1.5**
comp=Z,12nm,0.8s,mb4.2
WMQ Urumqi 38.87 287 P **P** **09 36 55.0 +0.6**
WMQ pP pP 09 37 59.0 -0.8
WMQ PP PP 09 38 35.0 +3.5
WMQ S **S** **09 42 29.0 +2.2**
WMQ sS sS 09 44 21.0 -3.7
WMQ SS SS 09 45 28.0 -5.7
WMQ pmax pmax
comp=Z,130nm,0.8s,mb5.2
WMQ pmax pmax
comp=Z,450nm,4.0s
WMQ LR LR
comp=N,350nm,15.0s
WMQ LR LR
comp=E,460nm,15.0s
WMQ LR LR
comp=Z,210nm,14.0s
PPLA Purkeypile 39.06 41 *e*P **P** **09 36 55.1 -0.6**
comp=Z,390nm,1.4s,mb5.5
RSO Redoubt South 39.08 45 *e*P **P** **09 36 55.7 -0.2**
OHAK Old Harbor 39.37 50 *e*P **P** **09 36 55.8 -2.5**
comp=Z,348nm,2.1s,mb5.2
BPAW Bear Paw Mtn. 39.49 39 *e*P **P** **09 36 57.7 -1.6**
comp=Z,188nm,1.5s,mb5.1
COLD Coldfoot 39.62 34 *e*P **P** **09 36 58.5 -1.8**
comp=Z,187nm,1.1s,mb5.2
KDAK Kodiak Island 39.63 49 P **P** **09 36 58.5 -1.9**
comp=Z,157nm,0.5s,mb5.5,baz=292,slow=2.6,SNR=152
KDAK PcP PcP 09 38 59.5 -0.2
comp=Z,42nm,0.9s,baz=291,slow=4.4,SNR=4.6
KDAK Kodiak Island 39.63 49 *i*P **P** **09 36 58.6 -1.8**
KDAK Kodiak Island 39.63 49 P **P** **09 36 59.0 -1.4**
comp=Z,2μm,0.5s,mb6.5,SNR=71
TRF Thorofare Moun 39.86 40 *e*P **P** **09 37 00.9 -1.4**
comp=Z,141nm,1.2s,mb5.1
SLKM Skilak Lake 40.31 44 *e*P **P** **09 37 04.2 -1.8**
SLKM Skilak Lake 40.31 44 *e*P **P** **09 37 04.2 -1.8**
MCK McKinley 40.43 39 *e*P **P** **09 37 05.5 -1.3**
MCK McKinley 40.43 39 *e*P **P** **09 37 05.5 -1.4**
RC01 Rabbit Creek A 40.45 43 *e*P **P** **09 37 05.7 -1.4**
comp=Z,90nm,0.7s,mb5.1
PMR Palmer 40.65 43 *e*P **P** **09 37 07.2 -1.5**
comp=Z,56nm,0.5s,mb5.0
PMR Palmer 40.65 43 *e*P **P** **09 37 07.2 -1.5**
PMR pmax pmax
comp=Z,57nm,0.5s,mb5.1
COLA College 40.76 38 *e*P **P** **09 37 07.9 -1.6**
comp=Z,293nm,1.0s,mb5.5
COLA College 40.76 38 *e*P **P** **09 37 07.9 -1.6**
COLA pmax pmax
comp=Z,293nm,1.0s,mb5.5
SEW Seward 40.77 45 *e*P **P** **09 37 08.1 -1.6**
comp=Z,173nm,0.8s,mb5.3
SML Sawmill 40.99 42 *e*P **P** **09 37 10.2 -1.2**
comp=Z,82nm,1.1s,mb4.9
SML Sawmill 40.99 42 *e*P **P** **09 37 10.2 -1.3**

SML pmax pmax
comp=Z,82nm,1.1s,mb4.9
ILAR Eielson Array 41.18 38 P **P** **09 37 10.7 -2.2**
comp=Z,72nm,0.6s,mb5.1,baz=261,slow=5.5,SNR=527
ILAR PP PP 09 38 44.5 -11
comp=Z,7.0nm,0.9s,baz=265,slow=7.4,SNR=4.1
ILAR PcP PcP 09 39 02.9 -1.9
comp=Z,5.3nm,0.6s,baz=281,slow=3.3,SNR=4.2
ILAR ScP ScP 09 42 19.9 -2.0
comp=Z,2.9nm,0.7s,baz=274,slow=3.8,SNR=7.0
ILAR S **S** **09 42 56.6 -3.7**
comp=Z,2.3nm,1.0s,baz=273,slow=14,SNR=7.0
ILAR Eielson Array 41.18 38 P **P** **09 37 10.7 -2.2**
ILAR 09 39 02.9
ILAR S **S** **09 42 56.7 -3.7**
ILAR pmax pmax
comp=Z,72nm,0.6s
ILAR smax
comp=N,2.0nm,1.0s
MK31 Makanchi Array 41.23 294 *e*P **P** **09 37 13.3 -0.3**
MK31 Makanchi Array 41.23 294 *e*P **P** **09 37 13.3 -0.3**
MKAR Makanchi Array 41.23 294 P **P** **09 37 12.9 -0.7**
comp=N,57nm,0.5s,mb5.0,baz=78,slow=8.8,SNR=581
MKAR ScP ScP 09 42 23.2 +0.8
comp=N,7.5nm,0.8s,baz=51,slow=3.9,SNR=7.2
MKAR S **S** **09 43 01.1 -0.5**
comp=N,4.9nm,1.0s,baz=73,slow=22,SNR=6.0
MKAR Makanchi Array 41.23 294 P **P** **09 37 12.9 -0.7**
MKAR S **S** **09 43 01.1 -0.4**
MKAR pmax pmax
comp=Z,57nm,0.5s
MKAR pmax pmax
comp=N,8.0nm,0.8s
MKAR smax
comp=N,5.0nm,1.0s
KURK Kurchatov 42.08 301 *e*P **P** **09 37 19.9 -0.5**
comp=N,92nm,0.7s,mb5.0
KURK Kurchatov 42.08 301 *d i*P **P** **09 37 19.7 -0.7**
KURK pmax pmax
comp=Z,129nm,1.0s,mb5.0
KURK Kurchatov 42.08 301 P **P** **09 37 19.2 -1.2**
comp=Z,841nm,0.7s,mb6.0,SNR=89
KURK Kurchatov 42.08 301 P **P** **09 37 20.1 -0.2**
SNR=39
PAX Paxson 42.09 40 *e*P **P** **09 37 19.0 -1.3**
comp=Z,22nm,0.6s,mb4.5
PAX Paxson 42.09 40 *e*P **P** **09 37 19.0 -1.3**
PAX pmax pmax
comp=Z,22nm,0.6s,mb4.5
MENT Mentasta 42.88 40 *e*P **P** **09 37 25.5 -1.1**
EGAK Eagle 43.59 37 *e*P **P** **09 37 29.8 -2.4**
comp=Z,244nm,0.9s,mb5.3
LSA Lhasa 43.62 267 P **P** **09 37 35.0 +2.1**
LSA LR LR
comp=N,4μm,1.5s
LSA LR LR
comp=Z,570nm,1.1s
LSA Lhasa 43.62 267 *e*P **P** **09 37 34.9 +2.0**
comp=Z,21nm,0.5s,mb4.5
LSA Lhasa 43.62 267 *e*P **P** **09 37 34.9 +2.0**
LSA pmax pmax
comp=Z,21nm,0.5s,mb4.5
DAWY Dawson 44.51 38 *e*P **P** **09 37 37.5 -1.9**
CHG Chiang Mai 45.57 249⇑P **P** **09 37 49.0 +0.7**
comp=Z,17nm,0.7s,mb4.3
CHTO Chiang Mai 45.57 249 *e*P **P** **09 37 49.0 +0.7**
comp=Z,11nm,0.8s,mb4.0
CHTO Chiang Mai 45.57 249 *e*P **P** **09 37 49.0 +0.7**
SHL Shillong 45.69 262 *e*PKP **P** **09 37 51.5 +2.4**
SHL *e*S **S** **09 44 08.5 +2.2**
INK Inuvik 45.72 31 P **P** **09 37 46.6 -2.1**
comp=Z,148nm,0.4s,mb5.5,baz=294,slow=6.6,SNR=714
INK ScP ScP 09 42 39.7 -0.7
comp=Z,4.2nm,0.9s,baz=202,slow=5.4,SNR=2.8
INK S **S** **09 44 01.7 -4.0**
comp=Z,9.0nm,0.9s,baz=68,slow=28,SNR=11
INK Inuvik 45.72 31 P **P** **09 37 46.6 -2.1**
INK ScP ScP 09 42 39.7 -0.7
INK S **S** **09 44 01.7 -4.0**
INK Inuvik 45.72 31 P **P** **09 37 46.7 -2.1**
INK pmax pmax
comp=Z,148nm,0.4s
VOSK Vostochnaya 45.80 306 P **P** **09 37 48.4 -1.2**
VOSK pmax pmax
comp=Z,121nm,1.4s,mb4.8
CMAR Chiang Mai Arr 45.83 248 P **P** **09 37 50.8 +0.5**
comp=Z,4.3nm,0.6s,baz=36,slow=7.3,SNR=23
CMAR pP pP 09 39 00.1 +2.1
comp=Z,2.9nm,0.6s,baz=34,slow=5.7,SNR=2.3
CMAR ScP ScP 09 42 43.4 +1.7
comp=Z,2.8nm,0.8s,baz=6.8,slow=2.8,SNR=6.0
CMAR Chiang Mai Arr 45.83 248 P **P** **09 37 50.8 +0.5**
CMAR *PP pP 09 39 00.2 +2.2
BVAR Borovoye Array 46.02 307 P **P** **09 37 50.8 -0.5**
comp=Z,41nm,0.6s,mb4.7,baz=81,slow=9.6,SNR=128
BVAR ScP ScP 09 42 42.6 +0.6
comp=Z,3.0nm,0.6s,baz=68,slow=5.5,SNR=3.7
BVAR S **S** **09 44 08.4 -1.8**
comp=Z,8.3nm,0.8s,baz=68,slow=13,SNR=8.8
BVAR Borovoye Array 46.02 307 P **P** **09 37 50.8 -0.5**
BVAR pmax pmax
comp=Z,41nm,0.6s
BRVK Borovoye 46.06 307 *e*P **P** **09 37 51.0 -0.6**
comp=Z,118nm,1.1s,mb4.9
BRVK Borovoye 46.06 307 *d i*P **P** **09 37 51.0 -0.6**
BRVK pmax pmax
comp=Z,71nm,0.9s,mb4.8
BRVK Borovoye 46.06 307 P **P** **09 37 51.3 -0.3**
comp=Z,455nm,1.0s,mb5.6,SNR=32
BRVK Borovoye 46.06 307 P **P** **09 37 51.4 -0.2**
SNR=33
ULHL Ulahol 47.09 291 P **P** **09 38 00.9 +1.2**
SNR=31
NST Nakhon Sawan 47.14 244 P **P** **09 37 49.0 -11**
TKM2 Tokmak 2 47.19 292 P **P** **09 38 01.5 +1.1**
SNR=42
TKM2 Tokmak 2 47.19 292 *e*P **P** **09 38 01.3 +0.9**
comp=Z,69nm,0.9s,mb4.9
TKM2 Tokmak 2 47.19 292 *e*P **P** **09 38 01.3 +0.9**
TKM2 pmax pmax
comp=Z,69nm,0.9s,mb4.9
TAPN Taplejung 47.45 267 *e*P **P** **09 38 03.7 +1.0**
comp=Z,96nm,0.9s,mb5.0
CHMS Chumysh 47.70 292 P **P** **09 38 04.4 +0.1**
SNR=13
USP Ospenovka 47.73 293 P **P** **09 38 04.7 +0.1**
SNR=127
KBK Karagaybulak 47.73 292 P **P** **09 38 05.7 +1.1**
SNR=72
SKAG Skagway 47.79 43 *e*P **P** **09 38 04.5 -0.3**
comp=Z,115nm,1.1s,mb5.0
KZA Kyzart 47.82 291 P **P** **09 38 07.4 +2.2**
SNR=49
KZA Kyzart 47.82 291 *e*P **P** **09 38 06.7 +1.4**
comp=Z,168nm,0.7s,mb5.4
FRU Bishkek 47.86 292⇓*i*P **P** **09 38 05.5 -0.1**
FRU *e* pP 09 39 15.0 +1.1
FRU pmax pmax
comp=Z,80nm,2.0s,mb4.6
ODAN Odare 47.98 267 *e*P **P** **09 38 07.7 +1.0**
comp=Z,24nm,0.4s,mb4.8
AAK Ala-Archa 48.04 292 P **P** **09 38 07.6 +0.7**
SNR=41
AAK Ala-Archa 48.04 292 *e*P **P** **09 38 07.4 +0.5**
comp=Z,39nm,0.8s,mb4.7
AAK Ala-Archa 48.04 292 *d i*P **P** **09 38 07.4 +0.5**
AAK pmax pmax
comp=Z,48nm,1.5s,mb4.5
AAK Ala-Archa 48.04 292 P **P** **09 38 07.0 +0.1**
comp=Z,349nm,0.6s,mb5.8,SNR=18
AAK Ala-Archa 48.04 292 P **P** **09 38 07.5 +0.6**
comp=Z,160nmcomp=Z,14nm,1.0s,mb4.1
AAK Ala-Archa 48.04 292 P **P** **09 38 07.8 +0.9**
SNR=23
GUN Gumba 48.37 269 *e*P **P** **09 38 10.7 +1.0**
comp=Z,174nm,1.1s,mb5.2
EKS2 Erkin-Say 48.48 292 P **P** **09 38 11.0 +0.7**
SNR=97
EKS2 Erkin-Say 48.48 292 *e*P **P** **09 38 10.6 +0.2**
comp=Z,61nm,0.7s,mb4.9
KSH Kashi 48.63 288 *e*P **P** **09 38 16.3 +4.9**
KSH *e*pP pP 09 39 22.6 +2.6
KSH *e*PcP PcP 09 39 36.0 +4.9
KSH *e*sP sP 09 39 57.5 +0.2
KSH *e*PP PP 09 40 13.6 +5.8
KSH *e*PcS PcS 09 43 31.3 +3.6

KSH eS S 09 44 54.0 +6.8
KSH esS sS 09 46 50.9 +1.2
KSH eSS SS 09 48 27.1 +5.3
KSH pmax pmax
comp=Z,60nm,0.6s,mb5.0
KSH LR LR
comp=N,600nm,7.7s
KSH LR LR
comp=E,510nm,10.1s
KSH LR LR
comp=Z,650nm,8.1s
SIT Sitka 48.72 46 eP P 09 38 12.3 +0.4
comp=Z,358nm,1.4s,mb5.4
SIT Sitka 48.72 46 eP P 09 38 12.3 +0.4
SIT pmax pmax
comp=Z,358nm,1.4s,mb5.4
AML Almayashu 48.80 292 P P 09 38 14.2 +1.5
SNR=7.4
AML Almayashu 48.80 292 eP P 09 38 13.5 +0.8
comp=Z,37nm,0.6s,mb4.8
KKN Kakani 48.87 269 eP P 09 38 14.5 +1.1
comp=Z,52nm,0.6s,mb4.9
KKN Kakani 48.87 269 eP P 09 38 14.5 +1.1
KKN pmax pmax
comp=Z,53nm,0.6s,mb5.0
PKI Pulchoki 48.91 269 eP P 09 38 14.7 +1.0
comp=Z,98nm,1.0s,mb5.0
PKI Pulchoki 48.91 269 eP P 09 38 14.9 +1.2
comp=Z,59nm,0.6s,mb5.0
PKI Pulchoki 48.91 269 eP P 09 38 14.9 +1.2
PKI pmax pmax
comp=Z,59nm,0.6s,mb5.0
PKIN Phulchoki 48.92 269 eP P 09 38 14.9 +1.1
comp=Z,59nm,0.6s,mb5.0
DMN Daman 49.10 269 eP P 09 38 16.0 +0.9
comp=Z,106nm,0.8s,mb5.1
GKN Gorkha 49.18 270 eP P 09 38 16.6 +0.8
comp=Z,110nm,0.5s,mb5.4
MRSI Marisa 49.22 209 P P 09 38 17.7 +1.6
comp=Z,42nm,0.8s,mb4.8
DANN Dangsing 49.58 271 eP P 09 38 19.9 +1.2
comp=Z,194nm,0.5s,mb5.6
SVE Sverdlovsk 49.65 314⇑eP P 09 38 18.3 -0.5
SVE e 09 40 19.6
SVE eS S 09 44 57.8 -3.1
SVE pmax pmax
comp=Z,68nm,0.7s,mb5.0
KOLN Koldanda 50.05 270 eP P 09 38 23.4 +1.2
comp=Z,83nm,0.7s,mb5.1
SOKR Solikamsk 50.32 319d iP P 09 38 22.7 -1.1
SOKR pmax pmax
comp=Z,90nm,1.1s,mb4.9
KK31 Karatay Array 50.35 295 eP P 09 38 24.0 -0.3
KK31 pmax pmax
comp=Z,35nm,0.5s,mb4.8
KKAR Karatay Array 50.35 295 eP P 09 38 23.9 -0.4
comp=Z,40nm,0.5s,mb4.9
KKAR Karatay Array 50.35 295 eP P 09 38 23.9 -0.4
KKAR pmax pmax
comp=Z,40nm,0.5s,mb4.9
WRAK Wrangell Islan 50.48 46 eP P 09 38 25.7 +0.7
comp=Z,266nm,1.6s,mb5.2
CRAG Craig 50.51 47 eP P 09 38 25.8 +0.6
comp=Z,132nm,1.2s,mb5.0
DLBC Dease Lake 50.72 43 eP P 09 38 27.4 +0.7
ARU Arti 50.86 314 eP P 09 38 26.9 -1.0
comp=Z,50nm,0.6s,mb4.9
ARU Arti 50.86 314d iP P 09 38 26.8 -1.0
ARU e*PP pP 09 39 33.6 -3.5
ARU e pP 09 39 38.9 +1.8
ARU e 09 40 25.5
ARU S S 09 45 16.7 -0.7
ARU 09 47 36.3
ARU SS SS 09 48 58.8 +2.5
ARU SSS 09 51 00.5
ARU pmax pmax
comp=Z,88nm,1.0s,mb4.9
ARU Arti 50.86 314 P P 09 38 26.9 -0.9
comp=Z,503nm,0.6s,mb5.9,SNR=10
ALE Alert 50.98 4 P P 09 38 26.0 -2.4
comp=Z,360nm,0.8s,mb5.7,SNR=18
JOSI Joshimath 51.17 276 ePKP P 09 38 31.8 +1.2
SBUM Sibu 51.33 222 P P 09 38 34.6 +2.7
comp=Z,14nm,0.7s,mb4.3
KLP Kalpa 51.49 278 ePKP P 09 38 33.9 +1.0
KLP AMb AMB 09 38 35.8
comp=Z,117nm,0.6s,mb5.3
SPITS Spitsbergen Ar 51.97 348 P P 09 38 33.8 -1.9
comp=Z,34nm,0.4s,mb4.0,baz=349,slow=6.0,SNR=17
SPITS PcP PcP 09 39 42.1 -0.8
comp=Z,10nm,0.8s,baz=80,slow=2.2,SNR=4.1
SPITS Spitsbergen Ar 51.97 348 P P 09 38 33.8 -1.9
SPITS PcP PcP 09 39 42.1 -0.8
SPITS Spitsbergen Ar 51.97 348 P P 09 38 33.8 -1.9
SPITS pP 09 39 42.1 -3.2
KBS Kingsbay 52.03 349d iP P 09 38 35.2 -0.9
KBS pmax pmax
comp=Z,38nm,1.0s,mb4.7
DDI Dehra Dun 52.35 277 ex x 09 38 39.0
SDNR Sundarnagar 52.40 279 ePKP P 09 38 41.5 +2.0
RES Resolute Bay 53.47 16 eP P 09 38 45.0 -1.5
comp=Z,179nm,0.7s,mb5.5
RES Resolute Bay 53.47 16 eP P 09 38 45.0 -1.6
RES pmax pmax
comp=Z,179nm,0.7s,mb5.5
AB31 Akbulak array 53.58 306 P P 09 38 46.8 -1.0
AB31 pmax pmax
comp=Z,57nm,0.3s,mb5.4
ABKAR Akbulak array 53.58 306 eP P 09 38 46.9 -0.8
comp=Z,94nm,0.4s,mb5.5
NDI New Delhi 53.92 276 ePKP P 09 38 45.0 -5.5
NDI eS S 09 45 57.0 -2.5
AKTK Aktyubinsk 54.05 308 P P 09 38 50.4 -0.7
AKTK S S 09 46 00.0 -0.5
AKTO Aktyubinsk 54.05 308 P P 09 38 50.4 -0.7
comp=Z,30nm,0.6s,mb4.8,baz=68,slow=8.2,SNR=102
AKTO S S 09 46 00.0 -0.5
comp=Z,4.2nm,0.9s,baz=340,slow=11,SNR=4.8
AKTO Aktyubinsk 54.05 308 P P 09 38 50.4 -0.7
AKTO S S 09 46 00.0 -0.5
AKTO pmax pmax
comp=Z,30nm,0.6s,mb4.8
AKTO smax
comp=N,4.0nm,0.9s
AYAN Aya Nagar 54.11 275 ePKP P 09 38 51.0 -0.8
PRGR Permogore 54.17 324⇓iP P 09 38 50.8 -1.0
PRGR eS S 09 46 00.0 -1.8
PRGR pmax pmax
comp=Z,101nm,1.1s,mb5.1
RTK Rohtak 54.26 276 ePKP P 09 38 52.5 -0.5
RTK AMb AMB 09 38 53.6
comp=Z,86nm,0.4s,mb5.4
SONA Sohna 54.28 275 ePKP P 09 38 52.7 -0.4
AGRA Agra 54.31 274 ePKP P 09 38 53.7 +0.3
AGRA AMb AMB 09 38 55.2
comp=Z,117nm,0.7s,mb5.3
KULM Kulim 54.98 236 eP P 09 38 58.6 +0.4
comp=Z,19nm,0.9s,mb4.4
KULM Kulim 54.98 236 P P 09 39 01.8 +3.6
comp=Z,24nm,0.9s,mb4.5
APA Apatity 55.16 334⇑iP P 09 38 57.6 -1.1
APA eS S 09 46 14.0 -0.7
APA eSS ScS 09 48 14.0 +1.8
APA eSSS 09 52 28.0
APA pmax pmax
comp=Z,11nm,0.6s,mb4.4
KHET Khetri 55.27 276 ePKP P 09 39 00.0 -0.2
YKA Yellowknife Ar 55.30 34 P P 09 38 58.4 -1.3
comp=Z,80nm,0.5s,mb5.3,baz=305,slow=7.0,SNR=150
YKA PcP PcP 09 39 55.8 -0.1
comp=Z,8.6nm,0.8s,baz=309,slow=4.1,SNR=5.3
YKA pP pP 09 40 08.3 -2.0
comp=Z,4.3nm,0.8s,baz=306,slow=9.4,SNR=1.8
YKA Yellowknife Ar 55.30 34 P P 09 38 58.4 -1.3
YKA PcP PcP 09 39 55.8 -0.1
YKA pP pP 09 40 08.3 -2.0
YKA Yellowknife Ar 55.30 34 P P 09 38 58.4 -1.4
YKA 09 39 55.8
YKA *PP pP 09 40 08.3 -2.0
YKA pmax pmax
comp=Z,80nm,0.5s
PMG Port Moresby 55.34 176d iP P 09 39 00.5 -0.1
PMG pmax pmax
comp=Z,41nm,1.0s
PMG Port Moresby 55.34 176 P P 09 39 00.9 +0.2
comp=Z,84nm,1.0s,mb5.0
KEV Kevo 55.59 338 eP P 09 39 00.5 -1.3
comp=Z,9.0nm,0.6s,mb4.3
KEV Kevo 55.59 338 eP P 09 39 00.5 -1.2
KEV Kevo 55.59 338 ep P 09 38 59.6 -2.1
comp=Z,2.8nm,0.3s,mb4.1
KBL Kabul 55.99 286 eP P 09 39 05.0 -0.1
comp=Z,213nm,0.9s,mb5.5
KBL Kabul 55.99 286 eP P 09 39 05.0 -0.1
KBL pmax pmax
comp=Z,213nm,0.9s,mb5.5
ARCES ARCESS Array B 56.13 338 P P 09 39 04.5 -1.0
comp=Z,4.1nm,0.5s,mb4.0,baz=52,slow=7.2,SNR=59
ARCES pP pP 09 40 18.1 +1.8
comp=Z,6.8nm,0.9s,baz=49,slow=5.5,SNR=3.1
ARCES ARCESS Array B 56.13 338 P P 09 39 04.5 -1.0
ARCES *PP pP 09 40 18.1 +1.8
ARE0 ARCESS Array S 56.13 338 eP P 09 39 04.8 -0.7
DAG Danmarks Havn 56.89 355 i P P 09 39 09.0 -1.8
DAG pmax pmax
comp=Z,39nm,0.9s,mb4.7
DAG Danmarks Havn 56.89 355 i P P 09 39 09.0 -1.8
comp=Z,394nm,0.9s,mb5.7
KLMR Klimovskoe 57.05 326 eP P 09 39 09.8 -2.3
KLMR pmax pmax
comp=Z,54nm,1.4s,mb4.7
AJM Ajmer 57.08 275 ePKP P 09 39 13.0 +0.1
AJM AMb AMB 09 39 17.3
comp=Z,61nm,0.6s,mb5.1
KTK1 Kautokeino 57.08 338 eP P 09 39 11.4 -0.7
BHPL Bhopal 57.22 270 ePKP P 09 39 13.5 -0.4
BHPL AMb AMB 09 39 16.4
comp=Z,51nm,0.8s,mb4.9
TRO Tromso 57.70 340 eP P 09 39 15.4 -1.1
TRO Tromso 57.70 340 eP P 09 39 15.4 -1.0
JOF Joensuu 58.79 330 eP P 09 39 22.6 -1.4
JOF pmax pmax
comp=Z,10.0nm,0.3s,mb4.7
JOF Joensuu 58.79 330 ep P 09 39 22.6 -1.4
comp=Z,10nm,0.3s,mb4.7
PGC Sidney 59.15 50 eP P 09 39 26.4 -0.3
comp=Z,3.8nm,0.6s,mb4.0
KAKA Kakadu 59.37 193 eP P 09 39 28.6 +0.1
comp=Z,38nm,0.6s,mb5.0
KAKA Kakadu 59.37 193 eP P 09 39 28.6 0.0
comp=Z,192nm,0.9s,mb5.5
OSR Olympics--Salm 59.54 52 P P 09 39 30.1 +0.7
NLWA Neilton Lookou 59.66 52 eP P 09 39 30.4 +0.2
comp=Z,102nm,0.8s,mb5.3
SDSI Sungai Dareh 59.67 231 P P 09 39 34.1 +3.4
comp=Z,12nm,1.1s,mb4.2
A05A Maple Falls 59.67 50 ⇑P P 09 39 29.9 -0.3
baz=59,SNR=18
COEN Coen 59.76 180⇓iP P 09 39 31.4 +0.2
COEN Coen 59.76 180 eP P 09 39 31.2 0.0
comp=Z,335nm,0.8s,mb5.8
COEN Coen 59.76 180 P P 09 39 30.9 -0.3
comp=Z,235nm,0.8s,mb5.7
STEI Steigen 59.87 340 eP P 09 39 30.2 -1.1
CMW Cultus Mountai 59.99 50 P P 09 39 32.8 +0.4
LOF Lofoten 60.11 341 eP P 09 39 31.6 -1.3
GNW Green Mountain 60.13 51 eP P 09 39 33.0 -0.4
comp=Z,6.5nm,0.7s,mb4.2
JCW Jim Creek 60.23 50 P P 09 39 34.2 +0.2
B06A Marblemount 60.27 50 P P 09 39 34.1 -0.2
baz=60,SNR=15
RPW Rockport 60.30 50 eP P 09 39 33.0 -1.5
comp=Z,46nm,0.6s,mb5.1
HYB Hyderabad 60.33 264 i P P 09 39 35.0 -0.1
E03A Lebam 60.34 52 P P 09 39 35.5 +0.7
baz=60,SNR=32
F03A Seaside 60.71 53 ⇓P P 09 39 38.1 +0.9
baz=60,SNR=12
D05A Enumclaw 60.81 51 ⇓P P 09 39 38.5 +0.6
baz=60
WRW Wenatchee Ridg 61.00 50 P P 09 39 39.3 +0.1
HEBO Mount Hebo 61.03 54 eP P 09 39 40.0 +0.5
comp=Z,92nm,0.7s,mb5.3
KAF Kangasniemi 61.04 331 eP P 09 39 37.0 -2.2
KAF pmax pmax
comp=Z,9.0nm,0.4s,mb4.5
KAF Kangasniemi 61.04 331 ep P 09 39 37.0 -2.2
comp=Z,8.7nm,0.4s,mb4.5
ABKT Ailbek 61.06 296 P P 09 39 40.7 +1.0
comp=Z,1μm,0.7s,SNR=42
NLW Nelson Butte 61.15 50 P P 09 39 40.4 +0.2
LON Longmire 61.17 51 eP P 09 39 40.1 -0.2
comp=Z,28nm,0.9s,mb4.7
LON Longmire 61.17 51 eP P 09 39 40.1 -0.3
LON pmax pmax
comp=Z,28nm,0.9s,mb4.7
TDL Tradedollar La 61.20 52 P P 09 39 41.2 +0.7
LVP Lakeview Peak 61.26 52 P P 09 39 41.5 +0.6
F04A Amboy 61.34 53 ⇓P P 09 39 41.8 +0.3
baz=61
ETW Entiat 61.45 50 eP P 09 39 42.0 -0.1
comp=Z,77nm,0.7s,mb5.2
MOR8 Moi Rana 61.45 339 eP P 09 39 39.0 -2.8
MOR8 AMb AMB 09 39 40.4
comp=Z,26nm,0.5s,mb4.9
MOR8 Moi Rana 61.45 339 eP P 09 39 39.0 -2.8
comp=Z,26nm,0.5s,mb4.9
B08A Colville Reser 61.51 49 ⇓P P 09 39 42.0 -0.5
baz=61,SNR=46
TBM Table Mountain 61.57 51 P P 09 39 43.1 +0.1
FINES FINESS Array B 61.59 331 P P 09 39 41.8 -1.1
comp=Z,32nm,0.5s,mb5.1,baz=44,slow=7.9,SNR=125
FINES pP pP 09 40 54.3 -0.9
comp=Z,9.8nm,0.8s,baz=51,slow=11,SNR=2.3
FINES FINESS Array B 61.59 331 P P 09 39 41.8 -1.1
FINES pP pP 09 40 54.3 -0.9
FINES FINESS Array B 61.59 331 P P 09 39 41.8 -1.1
FINES *PP pP 09 40 54.3 -0.9
FINES pmax pmax
comp=Z,32nm,0.5s
SUMG Summit 61.63 1 eP P 09 39 42.6 -0.4
comp=Z,114nm,0.8s,mb5.5
SUMG Summit 61.63 1 i P P 09 39 42.9 -0.1
comp=Z,73nm,0.8s,mb5.3
COR Corvallis 61.67 54 eP P 09 39 44.5 +0.8
comp=Z,98nm,0.8s,mb5.4
COR Corvallis 61.67 54 eP P 09 39 44.5 +0.8
COR pmax pmax
comp=Z,98nm,0.8s,mb5.4
G04A Mulino 61.75 53 P P 09 39 44.9 +0.7
baz=61,SNR=46
OBN Obninsk 61.88 321de P P 09 39 43.6 -1.3
OBN e 09 41 27.6
OBN i S S 09 47 38.2 -3.0
OBN SS SS 09 51 51.0 +2.0
OBN pmax pmax
comp=Z,61nm,1.4s,mb4.9
OBN MLR MLR
comp=Z,100nm,15.0s
VLL Laurance Lake 62.04 53 P P 09 39 47.0 +0.9
HOOD Mount Hood Mea 62.14 53 eP P 09 39 47.4 +0.6
comp=Z,182nm,0.7s,mb5.7
H04A Detroit Lake 62.24 54 P P 09 39 47.6 +0.2
baz=62,SNR=51
VFP Flag Point 62.24 53 P P 09 39 48.1 +0.6
BROR Big Rock Looko 62.35 54 P P 09 39 48.6 +0.4
E07A Sunnyside 62.35 51 P P 09 39 48.5 +0.4
baz=62,SNR=25
C09A Chrisman Ranch 62.41 49 P P 09 39 48.5 0.0
baz=62,SNR=36
OD2 Odessa Site #2 62.44 49 eP P 09 39 48.1 -0.6
comp=Z,60nm,0.8s,mb5.2
D08A Wollman Farm, 62.54 50 P P 09 39 49.0 -0.4
baz=62,SNR=25
WRD Warden 62.58 50 P P 09 39 48.9 -0.8
RSW Rattlesnake Hi 62.59 51 eP P 09 39 50.0 +0.3
comp=Z,80nm,0.9s,mb5.2
KBO Bosley Butte 62.61 57 eP P 09 39 50.4 +0.5
comp=Z,100nm,1.2s,mb5.2
HAWA Hanford 62.63 51 eP P 09 39 49.9 -0.1
comp=Z,56nm,0.8s,mb5.2
NEW Newport 62.72 48 P P 09 39 50.4 -0.1
baz=62,SNR=54
NEW Newport 62.72 48 eP P 09 39 50.3 -0.2
comp=Z,42nm,0.7s,mb5.1
NEW Newport 62.72 48 eP P 09 39 50.3 -0.2
NEW pmax pmax
comp=Z,42nm,0.7s
F07A Phinny Hill Vi 62.73 51 P P 09 39 51.0 +0.4
baz=62,SNR=54
G06A Carlson Farm, 62.75 52 P P 09 39 51.3 +0.5
baz=62,SNR=25
POO Poona 62.84 269 ePKP P 09 39 51.9 +0.2
POO AMb AMB 09 39 53.0
comp=Z,56nm,0.6s,mb5.2
KNA Kununurra 62.97 196 P P 09 39 53.0 +0.5
comp=Z,758nmcomp=Z,98nm,0.9s,mb5.3
A12A Yaak River Ran 63.04 47⇑P P 09 39 52.9 +0.3
baz=63,SNR=17
HUMO Hull Mountain 63.09 56 eP P 09 39 53.5 +0.4
comp=Z,34nm,1.1s,mb4.8
KRMB Red Mountain 63.22 57 eP P 09 39 54.4 +0.5
comp=Z,42nm,1.3s,mb4.8
VSR Storozhevoye 63.26 317 eP P 09 39 52.9 -1.1
VSR e*PP pP 09 41 08.6 +1.9
VSR eS S 09 47 55.6 -2.7
VSR pmax pmax
comp=N,6.0nm,0.4s
VSR pmax pmax
comp=E,8.0nm,0.4s
VSR pmax pmax
comp=Z,40nm,0.4s,mb5.3
VSR smax
comp=N,80nm,1.0s
VSR smax
comp=E,30nm,1.0s
VSR smax
comp=Z,8.0nm,1.0s
E09A Wood Farm, Sta 63.29 50⇑P P 09 39 54.4 +0.1
baz=63
VORD Divnogorie 63.36 317 eP P 09 39 53.6 -1.1
VORD e*PP pP 09 41 09.3 +1.8
VORD e 09 42 16.0
VORD eS S 09 47 54.3 -5.3
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,30nm,0.6s,mb5.0
VORD smax
comp=N,60nm,1.5s
VORD smax
comp=Z,4.0nm,0.5s
VORD smax
comp=E,20nm,0.8s
B12A Libby 63.37 47⇓P P 09 39 55.0 +0.2
baz=63,SNR=9.0
KAD Karad 63.43 268 ePKP P 09 39 55.9 +0.2
C11A Tepee Creek (N 63.44 48⇑P P 09 39 55.4 +0.2
baz=63
VSU Vasula 63.50 328d iP P 09 39 54.4 -1.1
VSU pmax pmax
comp=Z,43nm,0.6s,mb5.3
LNOR Lincton Mounta 63.63 51 eP P 09 39 56.7 +0.2
comp=Z,24nm,0.7s,mb4.9
LNOR Lincton Mounta 63.63 51 eP P 09 39 56.7 +0.2
LNOR pmax pmax
comp=Z,24nm,0.7s,mb4.9
G08A Pilot Rock 63.64 51⇑P P 09 39 56.8 +0.3
baz=63,SNR=29
A13A Flathead Natio 63.66 46⇓P P 09 39 56.7 +0.1
baz=63
KHMM Horse Mountain 63.73 58 eP P 09 39 58.1 +0.8
comp=Z,26nm,0.8s,mb4.9
YBH Yreka Blue Hor 63.79 56 eP P 09 39 58.0 +0.4
comp=Z,34nm,0.9s,mb5.0
YBH Yreka Blue Hor 63.79 56 eP P 09 39 58.0 +0.4
YBH pmax pmax
comp=Z,34nm,0.9s
WALA Waterton Lakes 63.83 46 eP P 09 39 57.4 -0.3
comp=Z,2.1nm,0.8s
C12B Naegeli Ranch, 63.92 48⇓P P 09 39 58.6 +0.3
baz=64,SNR=47
B13A Whitefish 64.00 47 P P 09 39 59.1 +0.2
baz=64,SNR=43
I07A Izee 64.11 53 P P 09 39 59.8 +0.2
baz=64,SNR=41
F10A Beach Ranch, E 64.13 50⇑P P 09 39 59.9 +0.2
baz=64,SNR=40
A14A Double T Ranch 64.13 46⇑P P 09 39 59.5 -0.2
baz=64,SNR=60
K05A Summer Lake 64.20 55⇑P P 09 40 01.1 +0.9
baz=64,SNR=98
C13A Hot Springs 64.40 47⇑P P 09 40 01.8 +0.4
baz=64
D12A Red Ives Fores 64.41 48⇑P P 09 40 01.2 -0.3
baz=64
A15A Johnson Ranch, 64.47 45⇑P P 09 40 01.2 -0.7
baz=64,SNR=63
KIPM Iron Peak 64.56 58 eP P 09 40 02.8 +0.1
comp=Z,80nm,1.1s,mb5.3
KCPM Cahto Peak 64.58 59 eP P 09 40 03.1 +0.4
comp=Z,18nm,0.5s,mb5.0
B14A Marquette Ranc 64.61 46 P P 09 40 02.9 +0.1
baz=64,SNR=44
WDC Whiskeytown Da 64.62 57 eP P 09 40 03.0 0.0
comp=Z,43nm,1.1s,mb5.0
WDC Whiskeytown Da 64.62 57 eP P 09 40 03.0 0.0
WDC pmax pmax
comp=Z,43nm,1.1s,mb5.0
E12A Beaver Dam Sad 64.72 49⇑P P 09 40 03.6 +0.1
baz=64
C14A Swan Lake 64.76 47⇑P P 09 40 04.0 +0.2
baz=64
D13A Huson 64.85 48 P P 09 40 04.1 -0.2
baz=64,SNR=87
B15A Bradely Ranch, 65.00 46⇓P P 09 40 05.0 -0.2
baz=65,SNR=63
A16A West Butte Ran 65.05 45⇓P P 09 40 05.2 -0.4
baz=65
MOD Modoc 65.06 55 eP P 09 40 05.6 -0.2
comp=Z,31nm,1.0s,mb4.9
J08A Circle Bar Ran 65.15 53 P P 09 40 07.1 +0.8
baz=65,SNR=20
SLMT Seeley Lake 65.24 47 eP P 09 40 06.8 0.0
comp=Z,110nm,0.9s,mb5.5
FCC Fort Churchill 65.27 29 eP P 09 40 05.4 -1.4
comp=Z,1.1nm,0.5s
FCC Fort Churchill 65.27 29 eP P 09 40 05.4 -1.4
MSO Missoula 65.29 48 P P 09 40 06.9 -0.2
baz=65,SNR=93
MSO Missoula 65.29 48 eP P 09 40 06.8 -0.3
comp=Z,60nm,1.0s,mb5.2
F12A Elk City 65.31 49 P P 09 40 07.7 +0.3
baz=65,SNR=111
HOPS Hopland 65.32 59 eP P 09 40 07.2 -0.3
comp=Z,38nm,1.1s,mb4.9
C15A Salmond Ranch, 65.33 46 P P 09 40 07.9 +0.5
baz=65,SNR=142
FFC Flin Flon 65.34 36 eP P 09 40 06.5 -0.8
comp=Z,196nm,0.8s,mb5.8
FFC Flin Flon 65.34 36 i P P 09 40 06.7 -0.6
FFC Flin Flon 65.34 36 P P 09 40 06.5 -0.8
comp=Z,2μm,0.8s,SNR=39
D14A Greenough 65.34 47⇓P P 09 40 07.3 -0.2
baz=65,SNR=100
B16A M & M Farms, S 65.35 45 P P 09 40 07.3 -0.2
baz=65,SNR=37
E13A Victor 65.42 48⇑P P 09 40 07.6 -0.4
baz=65,SNR=45
A17A Triple J Farms 65.49 44⇓P P 09 40 08.1 -0.3
baz=65
CHMT Chamberlain Mo 65.58 47 eP P 09 40 08.6 -0.4
comp=Z,27nm,0.7s,mb5.1
WVOR Wild Horse Val 65.66 54 eP P 09 40 09.7 +0.1
comp=Z,53nm,1.0s,mb5.2
WVOR Wild Horse Val 65.66 54 eP P 09 40 09.7 +0.1
WVOR pmax pmax
comp=Z,53nm,1.0s,mb5.2
IZAR Zarasai 65.66 327 eP P 09 40 08.6 -0.7
IZAR AMB AMB 09 40 09.6
comp=Z,12nm,0.7s,mb4.8
G12A Big Creek, Yel 65.69 50⇓P P 09 40 09.5 -0.3
baz=65
C16A Fuhringer Ranc 65.75 46 P P 09 40 09.7 -0.4
baz=65,SNR=100
F13A Darby 65.78 49 P P 09 40 09.7 -0.6
baz=65,SNR=32
E14A Clinton 65.79 48 P P 09 40 10.3 -0.1
baz=66,SNR=68
ISAL Salakas 65.84 326 eP P 09 40 09.8 -0.7
ISAL AMB AMB 09 40 10.9
comp=Z,18nm,0.7s,mb4.9
D15A Lincoln 65.87 47⇑P P 09 40 10.9 0.0
baz=66,SNR=52
B17A L&G Farms, Che 65.88 45 P P 09 40 10.6 -0.3
baz=66,SNR=41

CTA **Charters Tower** 65.91 177 *e*P P 09 40 10.0 -1.3
comp=Z,5.9nm,0.4s,mb4.7
CTAO **Charters Tower** 65.91 177 *e*P P 09 40 10.4 -0.9
comp=Z,41nm,1.5s,mb4.9
CTAO **Charters Tower** 65.91 177 *e*P P 09 40 10.4 -0.9
CTAO pmax pmax
comp=Z,41nm,1.5s,mb4.9
CTAO **Charters Tower** 65.91 177 P P 09 40 11.0 -0.3
comp=Z,20nm,1.4s,mb4.7
A18A **Metzger Ranch,** 65.92 44 P P 09 40 10.6 -0.5
baz=66,SNR=64
MICGM **Minsk** 65.94 325 *e*P P 09 40 09.0 -2.1
MNK **Minsk** 65.95 325 *e*P P 09 40 09.0 -2.2
MNK pmax pmax
comp=Z,190nm,0.8s,mb5.9
IIGN **Ignalina** 65.97 326 *e*P P 09 40 10.6 -0.6
IIGN AMB AMB 09 40 11.8
comp=Z,27nm,0.6s,mb5.2
PALK **Pallekele** 66.05 255 *i*P P 09 40 14.0 +1.6
E15A **Deer Lodge** 66.22 47 P P 09 40 13.1 +0.1
baz=66,SNR=66
WB2 **Warramunga Arr** 66.24 189 *e*P P 09 40 13.0 -0.3
WRA **Warramunga Arr** 66.24 189 P P 09 40 13.2 -0.1
comp=Z,40nm,0.7s,mb5.3,baz=6.9,slow=6.7,SNR=502
WRA pP pP 09 41 25.8 -1.2
comp=Z,12nm,0.8s,baz=6.3,slow=7.0,SNR=1.8
WRA PKPPKP 10 08 43.4
comp=Z,2.3nm,0.9s,baz=198,slow=2.4,SNR=13
WRA **Warramunga Arr** 66.24 189 P P 09 40 13.2 -0.2
WRA *PP pP 09 41 25.8 -1.1
WRA pmax pmax
comp=Z,40nm,0.7s
F14A **Wisdom** 66.26 48 P P 09 40 13.1 -0.2
baz=66,SNR=34
KIV **Kislovodsk** 66.27 309 *e*P P 09 40 14.0 +0.6
comp=Z,103nm,0.7s,mb5.7
KIV **Kislovodsk** 66.27 309 *e*P P 09 40 14.1 +0.7
KIV *e*PP pP 09 41 25.6 -1.3
KIV *e*SP sP 09 42 00.6 -2.3
KIV *e*S S 09 48 37.2 +2.1
KIV pmax pmax
comp=Z,141nm,1.1s,mb5.6
KIV MLR MLR
comp=Z,87nm,18.0s
KIV **Kislovodsk** 66.27 309 P P 09 40 14.5 +1.1
comp=Z,930nm,0.7s,SNR=7.2
KIV **Kislovodsk** 66.27 309 P P 09 40 14.8 +1.4
SNR=7.9
G13A **Cobalt** 66.29 49 ⇑P P 09 40 12.9 -0.7
baz=66,SNR=40
B18A **Beardsley Farm** 66.31 44 P P 09 40 13.3 -0.2
baz=66,SNR=52
H12A **Diamond D Ranc** 66.33 50 P P 09 40 13.6 -0.2
baz=66,SNR=107
C17A **Wharram Farm,** 66.35 45 P P 09 40 13.3 -0.6
baz=66,SNR=71
D16A **Dana Ranch, Ca** 66.37 46 ⇓P P 09 40 14.1 +0.1
baz=66,SNR=28
ZEI **Tsey** 66.39 308 *e*P P 09 40 13.2 -1.0
ZEI pmax pmax
comp=Z,35nm,0.8s,mb5.1
A19A **Klindworth Far** 66.44 43 P P 09 40 14.3 0.0
baz=66,SNR=99
HRY **Holter Researc** 66.44 47 *e*P P 09 40 14.7 +0.3
comp=Z,102nm,0.7s,mb5.7
DGRG **David-gareji** 66.44 306 P P 09 40 14.5 0.0
NB2 **NORSAR Subarra** 66.46 337 P P 09 40 13.2 -1.1
comp=Z,12nm,0.5s,mb4.9,baz=34,slow=6.5
NOA **NORSAR Array B** 66.46 337 P P 09 40 13.4 -0.9
comp=Z,13nm,0.5s,mb4.9,baz=34,slow=6.4,SNR=79
NOA pP pP 09 41 26.7 -1.1
comp=Z,8.2nm,1.1s,baz=33,slow=6.3,SNR=2.4
NOA **NORSAR Array B** 66.46 337 P P 09 40 13.4 -0.9
NOA *PP pP 09 41 26.7 -1.1
NOA pmax pmax
comp=Z,13nm,0.5s
HFS **Hagfors** 66.50 335 P P 09 40 13.1 -1.5
comp=Z,25nm,0.4s,mb5.2,baz=54,slow=7.5,SNR=169
HFS **Hagfors** 66.50 335 P P 09 40 13.1 -1.5
HFS pmax pmax
comp=Z,25nm,0.4s
MFID **Camas Ranch** 66.56 51 ⇑P P 09 40 15.5 +0.2
baz=66,SNR=70
EGMT **Eagleton** 66.58 44 ⇓P P 09 40 15.3 0.0
baz=66,SNR=54
EGMT **Eagleton** 66.58 44 *e*P P 09 40 14.6 -0.6
comp=Z,118nm,0.9s,mb5.6
G14A **Jackson** 66.60 49 ⇓P P 09 40 14.7 -0.7
baz=66,SNR=13
MTA **Mtatsminda** 66.61 306 P P 09 40 16.7 +1.1
TBLG **Delisi** 66.62 306 P P 09 40 16.8 +1.2
TBLG **Delisi** 66.62 306 P P 09 40 16.8 +1.2
H13A **Challis** 66.64 50 ⇓P P 09 40 15.3 -0.4
baz=66,SNR=40
E16A **East Helena** 66.64 47 P P 09 40 15.8 +0.1
baz=66,SNR=56
B19A **Brinkman Farms** 66.67 44 P P 09 40 15.7 -0.1
baz=66,SNR=84
I12A **Atlanta** 66.68 51 P P 09 40 16.1 +0.1
baz=66,SNR=146
F15A **Butte** 66.69 48 P P 09 40 16.1 +0.1
baz=66,SNR=119
D17A **Six Diamond Ra** 66.71 46 P P 09 40 16.0 -0.1
baz=66,SNR=21
SFJD **Kangerlussuaq** 66.73 6 *e*P P 09 40 14.2 -1.7
comp=Z,5.5nm,0.6s,mb4.5
SFJD **Kangerlussuaq** 66.73 6 *e*P P 09 40 14.3 -1.6
SFJD pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
GOR **Gori** 66.80 307 P P 09 40 18.0 +1.2
A20A **Cobblestone Ra** 66.86 43 ⇑P P 09 40 17.0 -0.1
baz=66
DLMT **Dillon** 66.97 48 *e*P P 09 40 17.9 +0.1
comp=Z,110nm,0.8s,mb5.6
PAHR **Pah Rah Range** 67.03 56 *e*P P 09 40 18.1 -0.2
comp=Z,73nm,0.8s,mb5.5
H14A **Leadore** 67.07 49 ⇓P P 09 40 17.9 -0.5
baz=67,SNR=29
WCN **Washoe City** 67.08 57 P P 09 40 19.0 +0.5
baz=67,SNR=37
WCN **Washoe City** 67.08 57 *e*P P 09 40 18.9 +0.3
comp=Z,39nm,1.1s,mb5.0
WCN **Washoe City** 67.08 57 *e*P P 09 40 18.9 +0.3
WCN pmax pmax
comp=Z,39nm,1.1s,mb5.0
E17A **Martinsdale** 67.10 46 P P 09 40 19.0 +0.4
baz=67,SNR=84
C19A **Slack Wire Ran** 67.12 44 P P 09 40 18.8 +0.2
baz=67,SNR=84
D18A **Linhart Farms,** 67.12 45 ⇓P P 09 40 18.9 +0.2
baz=67,SNR=13
B20A **Solberg Farm,** 67.12 43 ⇑P P 09 40 18.5 -0.2
baz=67,SNR=40
I13A **Wildhorse Cree** 67.15 50 ⇑P P 09 40 19.5 +0.6
baz=67,SNR=194
G15A **Dillon** 67.16 48 P P 09 40 19.0 +0.1
baz=67,SNR=314
F16A **Kennard Place,** 67.18 47 P P 09 40 18.9 -0.1
baz=67,SNR=73
MCMT **McKenzie Canyo** 67.20 49 *e*P P 09 40 18.9 -0.3
comp=Z,13nm,0.8s,mb4.7
HLID **Hailey** 67.23 50 P P 09 40 19.9 +0.5
baz=67,SNR=41
HLID **Hailey** 67.23 50 *e*P P 09 40 19.6 +0.2
comp=Z,22nm,0.8s,mb5.0
A21A **Bergtoll Ranch** 67.25 42 ⇑P P 09 40 19.5 +0.1
baz=67
BOZ **Bozeman (W)** 67.27 47 ⇓P P 09 40 19.9 +0.3
baz=67,SNR=138
BOZ **Bozeman (W)** 67.27 47 *e*P P 09 40 19.7 +0.1
comp=Z,59nm,0.8s,mb5.4
BOZ **Bozeman (W)** 67.27 47 *e*P P 09 40 19.7 +0.1
BOZ pmax pmax
comp=Z,59nm,0.8s,mb5.4
H15A **Lima** 67.45 49 ⇓P P 09 40 20.5 -0.3
baz=67,SNR=20
J13A **Cove Ranch, Pi** 67.47 50 P P 09 40 21.4 +0.6
baz=67,SNR=105
G16A **Moss Hill, Enn** 67.47 48 P P 09 40 20.6 -0.3
baz=67,SNR=84
I14A **Mackay** 67.49 50 ⇓P P 09 40 21.3 +0.3
baz=67,SNR=26
E18A **Harlowton** 67.50 46 ⇑P P 09 40 21.5 +0.4
baz=67,SNR=32
CMB **Columbia Colle** 67.54 58 *e*P P 09 40 21.1 -0.3
comp=Z,50nm,1.0s,mb5.2
CMB **Columbia Colle** 67.54 58 *e*P P 09 40 21.1 -0.4
CMB pmax pmax
comp=Z,50nm,1.0s,mb5.2
F17A **Fitzpatrick Pl** 67.58 47 ⇓P P 09 40 22.0 +0.4
baz=67,SNR=44
D19A **Cripps Ranch,** 67.60 45 P P 09 40 21.6 0.0
baz=67,SNR=62
B21A **Ellsworth Farm** 67.61 43 P P 09 40 21.7 0.0
baz=67,SNR=33
C20A **Veseth Ranch,** 67.64 44 P P 09 40 21.8 -0.1
baz=67,SNR=94
GNI **Garni** 67.67 305 P P 09 40 23.8 +1.6
comp=Z,17nm,0.5s,mb5.0,baz=268,slow=2.9,SNR=11
GNI **Garni** 67.67 305 *d*P P 09 40 23.6 +1.4
GNI pmax pmax
comp=Z,82nm,1.4s
GNI **Garni** 67.67 305 P P 09 40 24.3 +2.1
SNR=9.3
A22A **Carney Farms,** 67.72 42 ⇓P P 09 40 22.1 -0.3
baz=67
SAO **San Andreas Ge** 67.75 60 *e*P P 09 40 22.0 -0.8
comp=Z,30nm,1.4s,mb4.8
SAO **San Andreas Ge** 67.75 60 *e*P P 09 40 22.0 -0.8
SAO pmax pmax
comp=Z,30nm,1.4s,mb4.8
BMN **Battle Mountai** 67.78 54 *e*P P 09 40 23.2 +0.3
comp=Z,92nm,1.1s,mb5.4
BMN **Battle Mountai** 67.78 54 *e*P P 09 40 23.2 +0.3
BMN pmax pmax
comp=Z,92nm,1.1s,mb5.4
WAKR **Walker** 67.79 57 *e*P P 09 40 23.2 +0.2
comp=Z,36nm,0.7s,mb5.2
J14A **Carey** 67.87 50 ⇓P P 09 40 24.4 +1.0
baz=68
QLMT **Earthquake Lak** 67.93 48 *e*P P 09 40 24.0 +0.3
comp=Z,8.7nm,0.9s,mb4.5
G17A **Pierce Place,** 67.95 47 ⇑P P 09 40 24.5 +0.6
baz=68,SNR=56
I15A **Monteview** 67.95 49 ⇑P P 09 40 24.2 +0.3
baz=68,SNR=5.3
C21A **Desert Coulee** 68.00 43 P P 09 40 23.9 -0.2
baz=68,SNR=64
D20A **Manuel Ranch,** 68.01 44 P P 09 40 24.3 +0.1
baz=68,SNR=74
F18A **Big Timber** 68.06 46 P P 09 40 24.8 +0.2
baz=68,SNR=54
SOC **Sochi** 68.11 310 *d*P P 09 40 24.7 -0.2
SOC *e*PP pP 09 41 42.5 +3.7
SOC *e*SP sP 09 42 09.9 -4.8
SOC *e* 09 43 01.8
SOC *e*S S 09 48 58.1 +1.2
SOC *e*SS SS 09 53 29.1 +3.2
SOC pmax pmax
comp=Z,48nm,0.9s,mb5.2
H16A **Russell Place,** 68.11 48 P P 09 40 25.2 +0.3
baz=68,SNR=64
E19A **Rath Farm, Rou** 68.14 45 P P 09 40 25.3 +0.3
baz=68,SNR=54
SUW **Suwalki** 68.14 327 *e*P P 09 40 24.2 -0.7
SUW **Suwalki** 68.14 327 *e*P P 09 40 24.2 -0.7
AKASG **Malin Array Be** 68.14 321 P P 09 40 24.0 -1.0
comp=Z,15nm,0.5s,mb5.0,baz=39,slow=6.6,SNR=34
AKASG pP pP 09 41 39.1 +0.2
comp=Z,15nm,0.8s,baz=38,slow=6.7,SNR=5.4
AKASG S S 09 48 55.1 -1.9
comp=Z,1.2nm,0.6s,baz=47,slow=13,SNR=4.9
AKASG **Malin Array Be** 68.14 321 P P 09 40 24.0 -1.0
AKASG *PP pP 09 41 39.1 +0.2
AKASG S S 09 48 55.1 -1.9
AKASG pmax pmax
comp=Z,15nm,0.5s
AKASG smax
comp=N,1.0nm,0.6s
KIEV **Kiev** 68.16 321 *e*P P 09 40 23.7 -1.3
comp=N,38nm,1.0s,mb5.1
KIEV *e*pP pP 09 41 38.6 -0.3
KIEV **Kiev** 68.16 321 *e*P P 09 40 23.7 -1.3
KIEV *e*PP pP 09 41 38.6 -0.4
KIEV pmax pmax
comp=Z,38nm,1.0s,mb5.1
GCMT **Greycliff** 68.16 46 *e*P P 09 40 25.5 +0.3
comp=Z,51nm,0.8s,mb5.3
B22A **Reddig Ranch S** 68.18 42 P P 09 40 25.1 -0.2
baz=68,SNR=20
A23A **Redstone** 68.23 41 ⇓P P 09 40 25.3 -0.2
baz=68
YMR **Madison River** 68.28 48 *e*P P 09 40 26.2 +0.3
comp=Z,67nm,0.9s,mb5.4
J15A **Blackfoot** 68.39 50 P P 09 40 27.3 +0.7
baz=68,SNR=42
YNR **Norris Junctio** 68.40 48 *e*P P 09 40 27.7 +1.1
comp=Z,66nm,1.3s,mb5.2
E20A **Meyer Farm, Mu** 68.43 45 ⇑P P 09 40 27.1 +0.3
baz=68,SNR=32
ANN **Anapa** 68.46 313 *e*P P 09 40 25.8 -1.2
ANN *e*PP pP 09 41 38.4 -2.6
ANN *e*S S 09 48 59.6 -1.3
ANN pmax pmax
comp=Z,138nm,1.7s,mb5.4
F19A **Roth Farm, Mol** 68.48 46 ⇓P P 09 40 27.2 +0.1
baz=68,SNR=97
YFT **Old Faithful** 68.50 48 *e*P P 09 40 28.7 +1.5
comp=Z,76nm,0.8s,mb5.5
NVAR **Mina Array Bea** 68.50 57 P P 09 40 27.6 +0.2
comp=Z,49nm,0.7s,mb5.4,baz=295,slow=5.9,SNR=385
NVAR pP pP 09 41 42.4 +1.0
comp=Z,1.5nm,0.6s,baz=321,slow=7.0,SNR=0.9
NVAR sP sP 09 42 13.1 -4.2
comp=Z,7.4nm,0.8s,baz=291,slow=6.5,SNR=5.0
B23A **Brockton** 68.53 42 ⇓P P 09 40 27.1 -0.3
baz=68
G18A **Lazy EL Ranch,** 68.55 46 ⇓P P 09 40 27.3 -0.2
baz=68,SNR=16
I16A **Newdale** 68.56 49 P P 09 40 28.5 +0.9
baz=68,SNR=109
K14A **Jones Ranch, D** 68.58 51 P P 09 40 28.3 +0.5
baz=68,SNR=66
D21A **La Casta Ranch** 68.58 44 ⇑P P 09 40 27.7 0.0
baz=68,SNR=52
C22A **Vida** 68.63 43 ⇑P P 09 40 27.5 -0.5
baz=68
LKWY **Lake** 68.65 48 *e*P P 09 40 29.1 +1.0
comp=Z,43nm,0.9s,mb5.2
LKWY **Lake** 68.65 48 *e*P P 09 40 29.1 +0.9
LKWY pmax pmax
comp=Z,43nm,0.9s,mb5.2
A24A **Westby** 68.65 41 ⇑P P 09 40 27.9 -0.2
baz=68
H17A **Grant Village** 68.67 48 P P 09 40 30.2 +1.9
baz=68,SNR=81
FLWY **Flagg Ranch** 68.83 48 *e*P P 09 40 29.9 +0.7
comp=Z,40nm,0.9s,mb5.1
IMW **Indian Meadow** 68.83 48 *e*P P 09 40 30.0 +0.7
comp=Z,43nm,0.9s,mb5.2
K15A **Arbon** 68.83 50 P P 09 40 30.4 +1.0
baz=68,SNR=37
RLMT **Red Lodge** 68.83 46 ⇓P P 09 40 29.8 +0.5
baz=68,SNR=47
RLMT **Red Lodge** 68.83 46 *e*P P 09 40 29.3 0.0
comp=Z,42nm,0.7s,mb5.3
DGMT **Dagmar** 68.89 41 P P 09 40 29.2 -0.4
baz=68,SNR=60
DGMT **Dagmar** 68.89 41 *e*P P 09 40 29.1 -0.5
comp=Z,158nm,0.6s,mb5.9
L14A **Malta** 68.90 51 P P 09 40 30.5 +0.8
baz=69,SNR=69
J16A **Bone** 68.91 49 P P 09 40 30.6 +0.8
baz=69,SNR=114
D22A **Cohagen** 68.91 43 ⇓P P 09 40 29.6 -0.2
baz=69
DCID1 **Drake Creek** 68.91 49 *e*P P 09 40 30.7 +0.8
comp=Z,120nm,1.1s,mb5.5
F20A **Billings** 68.92 45 ⇑P P 09 40 29.8 0.0
baz=69,SNR=20
C23A **Lambert** 68.92 42 ⇓P P 09 40 29.7 -0.1
baz=69
E21A **Keefer Ranch,** 68.92 44 ⇑P P 09 40 30.2 +0.4
baz=69,SNR=17
H18A **Shoshone NF, C** 68.94 47 P P 09 40 30.1 +0.2
baz=69,SNR=36
I17A **Pilgrim Ck.** 69.00 48 P P 09 40 32.0 +1.6
baz=69,SNR=38
RRI2 **Red Ridge** 69.02 49 *e*P P 09 40 31.2 +0.7
comp=Z,150nm,0.8s,mb5.8
MOOW **Moose Ponds** 69.04 48 *e*P P 09 40 31.0 +0.4
comp=Z,54nm,1.0s,mb5.2
TPAW **Teton Pass** 69.11 49 *e*P P 09 40 31.9 +0.9
comp=Z,87nm,1.1s,mb5.4
LOHW **Long Hollow** 69.20 48 *e*P P 09 40 32.2 +0.6
comp=Z,60nm,1.3s,mb5.2
LAO **LASA Array** 69.22 44 P P 09 40 31.8 +0.2
baz=69,SNR=33
LAO **LASA Array** 69.22 44 *e*P P 09 40 31.7 0.0
comp=Z,117nm,1.1s,mb5.5
SNOW **Snow King Moun** 69.23 49 *e*P P 09 40 32.2 +0.4
comp=Z,52nm,1.0s,mb5.2
K16A **Soda Springs** 69.23 49 P P 09 40 32.8 +1.0
baz=69,SNR=62
REDW **Red Top Meadow** 69.25 49 *e*P P 09 40 32.5 +0.6
comp=Z,43nm,0.9s,mb5.2
G20A **Bridger** 69.29 46 P P 09 40 31.7 -0.4
baz=69,SNR=29
H19A **Powell** 69.29 47 P P 09 40 32.5 +0.4
baz=69,SNR=17
J17A **Brown Place, J** 69.32 49 P P 09 40 33.2 +0.9
baz=69,SNR=47
HVU **Hansel Valley** 69.33 51 *e*P P 09 40 32.4 0.0
comp=Z,33nm,1.0s,mb5.0
HVU **Hansel Valley** 69.33 51 *e*P P 09 40 32.4 0.0
HVU pmax pmax
comp=Z,33nm,1.0s,mb5.0
RCTC **Rector, Farmer** 69.38 59 ⇑P P 09 40 31.5 -1.3
baz=69,SNR=5.0
L15A **Malad City** 69.38 51 P P 09 40 33.1 +0.4
baz=69,SNR=40
F21A **Absaloka Mine,** 69.40 45 ⇓P P 09 40 33.1 +0.3
baz=69,SNR=6.0
TIN **Tinemaha** 69.47 58 ⇓P P 09 40 34.2 +0.9
baz=69,SNR=8.7
AHID **Auburn Hatcher** 69.53 49 *e*P P 09 40 33.4 -0.2
comp=Z,17nm,0.4s,mb5.1
I18A **Diamond G Ranc** 69.55 48 P P 09 40 34.6 +0.9
baz=69,SNR=34
SMMC **Simmler** 69.59 60 ⇓P P 09 40 34.7 +0.6
baz=69,SNR=12
M15A **Larsen Ranch,** 69.72 51 P P 09 40 35.2 +0.4
baz=69,SNR=37
I19A **Meeteetse** 69.74 47 P P 09 40 35.3 +0.5
baz=69,SNR=19
BGU **Big Grassy Mou** 69.78 52 *e*P P 09 40 35.0 -0.1
comp=Z,59nm,1.5s,mb5.1
VES **Vestal, Richgr** 69.78 59 P P 09 40 34.6 -0.6
baz=70,SNR=18
J18A **Kendall Valley** 69.79 48 P P 09 40 35.6 +0.4
baz=69,SNR=25
G21A **Lodge Grass** 69.79 45 P P 09 40 34.9 -0.3
baz=69,SNR=41
SPUT **South Promonto** 69.83 51 *e*P P 09 40 35.6 +0.2
comp=Z,48nm,1.2s,mb5.1
L16A **Fish Haven** 69.88 50 ⇑P P 09 40 36.2 +0.4
baz=70,SNR=19
H20A **Greybull** 69.92 46 P P 09 40 35.6 -0.3
baz=70,SNR=22
ASAR **Alice Springs** 69.97 189 P P 09 40 36.9 +0.6
comp=Z,62nm,0.7s,mb5.5,baz=2.0,slow=5.3,SNR=829
ASAR pP pP 09 41 51.8 +1.0
comp=Z,7.2nm,1.0s,baz=14,slow=7.8,SNR=2.0
ASAR PKPPKP 10 08 36.2
comp=Z,2.8nm,0.9s,baz=184,slow=3.2,SNR=18
ASAR **Alice Springs** 69.97 189 P P 09 40 36.9 +0.6
ASAR *PP pP 09 41 51.8 +1.1
ASAR pmax pmax
comp=Z,62nm,0.7s
CWC **Cottonwood Cre** 69.98 58 ⇓P P 09 40 36.5 +0.1
baz=70,SNR=9.1
PKM **Peak Mountain** 69.98 60 P P 09 40 37.1 +0.6
baz=70,SNR=12
GRAC **Grapevine Rang** 70.01 57 ⇑P P 09 40 37.2 +0.6
baz=70,SNR=28
SIM **Simferopol'** 70.03 315 *c i*P P 09 40 37.2 +0.7
SIM pmax pmax
comp=Z,28nm,0.9s,mb5.0
N15A **Stansbury Isla** 70.08 51 ⇑P P 09 40 37.4 +0.5
baz=70,SNR=17
HWUT **Hardware Ranch** 70.10 50 *e*P P 09 40 37.4 +0.3
comp=Z,65nm,0.9s,mb5.4
R11A **Troy Canyon, C** 70.12 55 ⇑P P 09 40 37.5 +0.2
baz=70,SNR=74
K18A **Toltan Ranch,** 70.18 49 P P 09 40 38.1 +0.6
baz=70,SNR=54
BSD **Bornholm Skovb** 70.22 331 ⇓*i*P P 09 40 36.8 -0.7
BSD pmax pmax
comp=Z,20nm,1.0s,mb4.8
BSD **Bornholm Skovb** 70.22 331 ⇓*i*P P 09 40 36.8 -0.7
comp=Z,20nm,1.0s,mb4.8
I20A **Worland** 70.24 47 ⇑P P 09 40 38.3 +0.5
baz=70,SNR=13
J19A **Crowheart** 70.25 48 P P 09 40 38.4 +0.4
baz=70,SNR=57
M16A **Huntsville** 70.27 51 P P 09 40 38.4 +0.3
baz=70,SNR=27
ISA **Isabella** 70.27 59 ⇓P P 09 40 37.3 -0.9
baz=70,SNR=26
ISA **Isabella** 70.27 59 *e*P P 09 40 37.0 -1.2
comp=Z,23nm,0.8s,mb5.0
ISA **Isabella** 70.27 59 *e*P P 09 40 37.0 -1.2
ISA pmax pmax
comp=Z,23nm,0.8s,mb5.0
H21A **Big Horn, Sher** 70.30 46 P P 09 40 38.0 -0.2
baz=70,SNR=41
MBWA **Marble Bar** 70.31 204 *e*P P 09 40 38.4 0.0
MBWA **Marble Bar** 70.31 204 *e*P P 09 40 38.4 0.0
comp=Z,9.7nm,0.6s,mb4.7
BW06 **Boulder Array** 70.34 48 P P 09 40 38.2 -0.3
baz=70,SNR=123
PDAR **Pinedale Array** 70.34 48 P P 09 40 38.0 -0.4
comp=Z,68nm,0.8s,mb5.4,baz=300,slow=1.4,SNR=498
PDAR pP pP 09 41 55.8 +2.9
comp=Z,4.8nm,0.9s,baz=345,slow=2.8,SNR=1.8
DUG **Dugway** 70.40 52 P P 09 40 39.0 +0.1
baz=70,SNR=85
DUG **Dugway** 70.40 52 *e*P P 09 40 38.9 0.0
comp=Z,68nm,1.0s,mb5.3
DUG **Dugway** 70.40 52 *e*P P 09 40 38.9 0.0
DUG pmax pmax
comp=Z,68nm,1.0s,mb5.3
ARVC **Arvin** 70.42 60 ⇑P P 09 40 38.9 -0.2
baz=70,SNR=8.6
NOQ **North Oquirrh** 70.46 51 *e*P P 09 40 39.6 +0.3
comp=Z,55nm,0.8s,mb5.3
O15A **The Old Anders** 70.53 52 ⇓P P 09 40 40.3 +0.6
baz=70,SNR=23
MPMC **Manual Prospec** 70.58 58 P P 09 40 39.9 -0.2
baz=70,SNR=64
N16A **Rees Ranch, Co** 70.67 51 P P 09 40 40.7 +0.2
baz=70,SNR=21
K19A **Absolon Red Bu** 70.67 48 ⇓P P 09 40 39.6 -0.8
baz=70,SNR=35
M17A **Scullys Gap (B** 70.67 50 ⇓P P 09 40 40.6 +0.1
baz=70,SNR=18
FURC **Furnace Creek,** 70.67 57 ⇑P P 09 40 40.9 +0.3
baz=70,SNR=126
P14A **Drum Mountains** 70.68 53 P P 09 40 40.6 0.0
baz=70,SNR=55
J20A **Shoshoni** 70.69 47 ⇓P P 09 40 40.6 +0.1
baz=70,SNR=37
L18A **Fontenelle, Gr** 70.69 49 P P 09 40 40.9 +0.3
baz=70,SNR=39
I21A **Big Trails, Te** 70.76 46 P P 09 40 41.0 0.0
baz=70,SNR=138
HATD **Hatta, Dubai** 70.80 286 P P 09 40 42.5 +1.0
SNR=5.1
MSVF **Nonsavu** 70.80 145 *e*P P 09 40 43.3 +1.9
comp=Z,40nm,1.1s,mb5.1
MSVF **Nonsavu** 70.80 145 P P 09 40 43.0 +1.6
comp=Z,230nm,0.8s,mb6.0,SNR=5.0
LRMC **Laurel Mountai** 70.86 59 ⇑P P 09 40 41.5 -0.2
baz=71,SNR=25
L19A **Farson** 70.92 49 P P 09 40 42.0 0.0
baz=71,SNR=29
GKP **Gorka Klasztor** 70.92 329 *e*P P 09 40 41.5 -0.3
GKP **Gorka Klasztor** 70.92 329 *e*P P 09 40 41.5 -0.2
N17A **Moffit Pass** 70.96 50 ⇑P P 09 40 42.5 +0.3
baz=71
DZM **Mont Dzumac** 70.96 158 *e*P P 09 40 44.1 +1.8
comp=Z,94nm,1.3s,mb5.4
DZM **Mont Dzumac** 70.96 158 *e*P P 09 40 43.2 +0.9
NLU **North Lily Min** 70.98 52 *e*P P 09 40 42.4 +0.1
comp=Z,46nm,0.8s,mb5.3
Q14A **Sevier Lake (B** 70.99 53 ⇑P P 09 40 42.9 +0.5
baz=71,SNR=75
LVV **L'vov** 71.01 323 *e*P P 09 40 41.4 -1.0
LVV *e* pP 09 42 00.6 +3.6
J21A **Lysite** 71.02 47 P P 09 40 42.5 0.0
baz=71,SNR=47
U10A **Ash Meadows, A** 71.02 57 P P 09 40 43.0 +0.3

baz=71,SNR=27
M18A Lyman 71.02 50 ⇓P P 09 40 42.7 +0.1
baz=71,SNR=26
K20A Yellowstone Ra 71.05 48 P P 09 40 42.0 -0.7
baz=71,SNR=18
KIS Kishinev 71.06 319 eP P 09 40 42.0 -0.7
KIS Kishinev 71.06 319 eP P 09 40 42.0 -0.7
EDW2 Edwards Air Fo 71.09 59 P P 09 40 43.2 +0.1
baz=71,SNR=40
DAU Daniels Canyon 71.10 51 eP P 09 40 43.3 +0.3
comp=Z,47nm,1.1s,mb5.1
DAU Daniels Canyon 71.10 51 eP P 09 40 43.3 +0.2
DAU pmax pmax
comp=Z,47nm,1.1s,mb5.1
P15A Leamington 71.13 52 P P 09 40 43.8 +0.5
baz=71,SNR=22
R13A O'Grain Ranch, 71.16 54 ⇑P P 09 40 43.9 +0.4
baz=71,SNR=29
ULM Lac du Bonnet 71.16 36 P P 09 40 42.2 -1.1
comp=Z,93nm,0.6s,mb5.7,baz=319,slow=6.8,SNR=141
ULM Lac du Bonnet 71.16 36 P P 09 40 42.2 -1.1
MPU Maple Canyon 71.17 52 eP P 09 40 43.5 0.0
comp=Z,76nm,0.6s,mb5.6
SHOC Shoshone 71.41 57 ⇑P P 09 40 45.0 0.0
baz=71,SNR=6.6
P16A Fountain Green 71.45 52 ⇑P P 09 40 45.7 +0.5
baz=71,SNR=29
EIDS Eidsvold 71.45 173 eP P 09 40 45.9 +0.7
comp=Z,31nm,0.6s,mb5.2
M19A Rock Springs 71.45 49 P P 09 40 45.0 -0.2
baz=71,SNR=11
J22A Midwest 71.46 46 ⇓P P 09 40 44.8 -0.3
baz=71,SNR=53
PASC Pasadena Art C 71.46 60 eP P 09 40 44.6 -0.7
comp=Z,39nm,1.4s,mb4.9
Q15A Fillmore 71.48 53 P P 09 40 45.8 +0.5
baz=71,SNR=21
BSY Bisya 71.48 284 P P 09 40 46.8 +1.2
SNR=5.7
MWC Mount Wilson 71.50 60 eP P 09 40 45.2 -0.4
comp=Z,56nm,1.3s,mb5.1
MWC Mount Wilson 71.50 60 eP P 09 40 45.2 -0.4
MWC pmax pmax
comp=Z,56nm,1.3s,mb5.1
GSC Goldstone 71.51 58 P P 09 40 45.4 -0.2
baz=71,SNR=35
GSC Goldstone 71.51 58 eP P 09 40 45.3 -0.3
comp=Z,40nm,0.8s,mb5.2
GSC Goldstone 71.51 58 eP P 09 40 45.3 -0.3
GSC pmax pmax
comp=Z,40nm,0.8s,mb5.2
L20A Wamsutter 71.52 48 P P 09 40 45.6 +0.1
baz=71,SNR=36
O17A Robinson Place 71.53 51 P P 09 40 46.2 +0.6
baz=71,SNR=30
N18A Larsen Ranch, 71.55 50 ⇑P P 09 40 45.8 0.0
baz=71
U11A Corn Creek 71.57 57 ⇑P P 09 40 46.7 +0.8
baz=71,SNR=24
R14A James Farms, M 71.61 54 ⇓P P 09 40 46.2 +0.1
baz=71,SNR=9.0
K21A Alcova 71.63 47 ⇓P P 09 40 45.9 -0.3
baz=71,SNR=31
S13A Holt Ranch, En 71.64 55 P P 09 40 46.5 +0.2
baz=71,SNR=77
SHPR Sheep Range 71.64 56 eP P 09 40 46.6 +0.3
comp=Z,62nm,0.9s,mb5.3
KWP Kalwaria Pacla 71.70 324 ⇑P P 09 40 47.1 +0.6
KWP Kalwaria Pacla 71.70 324 ⇑iP P 09 40 47.0 +0.5
ARUT Antelope Range 71.73 54 eP P 09 40 47.0 +0.2
comp=Z,24nm,0.9s,mb4.9
ARUT Antelope Range 71.73 54 eP P 09 40 47.0 +0.1
ARUT pmax pmax
comp=Z,24nm,0.9s,mb4.9
BFSC Mount Baldy Ra 71.73 60 P P 09 40 46.7 -0.2
baz=71,SNR=21
T12A Moapa 71.75 56 P P 09 40 47.5 +0.6
baz=71,SNR=25
N19A John Jarvie Ra 71.87 50 P P 09 40 47.5 -0.2
baz=72,SNR=37
O18A Roosevelt 71.88 51 P P 09 40 48.5 +0.8
baz=72,SNR=62
S14A Cedar City 71.91 54 ⇓P P 09 40 48.3 +0.4
baz=72,SNR=25
TMUT Trail Mountain 71.91 52 eP P 09 40 48.1 +0.2
comp=Z,61nm,0.7s,mb5.4
MSU Marysvale 71.93 53 eP P 09 40 48.9 +0.8
comp=Z,64nm,1.2s,mb5.2
MSU Marysvale 71.93 53 eP P 09 40 48.9 +0.9
MSU pmax pmax
comp=Z,64nm,1.2s,mb5.2
TUQ Turquoise Moun 71.94 58 ⇑P P 09 40 48.3 +0.2
baz=72,SNR=81
CCUT Cedar City 71.94 54 eP P 09 40 48.1 0.0
comp=Z,32nm,1.1s,mb5.0
V11A Goodsprings 71.95 57 P P 09 40 48.4 +0.2
baz=72,SNR=39
M20A Sweetwater, Wa 71.97 49 P P 09 40 48.7 +0.5
baz=72,SNR=34
K22A Casper 71.98 47 P P 09 40 47.8 -0.4
baz=72,SNR=17
T13A Saint George 72.00 55 P P 09 40 49.1 +0.7
baz=72,SNR=51
P17A Butcher Ranch, 72.05 52 P P 09 40 49.1 +0.5
baz=72,SNR=43
L21A Rawlins 72.05 48 ⇓P P 09 40 48.5 -0.1
baz=72,SNR=33
U12A Valley of Fire 72.05 56 ⇑P P 09 40 49.3 +0.6
baz=72,SNR=19
R15A Junction 72.09 53 ⇓P P 09 40 49.8 +0.9
baz=72,SNR=25
HEC Hector,Ludlow 72.12 58 ⇑P P 09 40 49.3 +0.1
baz=72,SNR=39
RSSD Black Hills 72.15 44 eP P 09 40 48.6 -0.6
comp=Z,47nm,0.8s,mb5.3
RSSD Black Hills 72.15 44 eP P 09 40 48.6 -0.6
RSSD pmax pmax
comp=Z,47nm,0.8s,mb5.3
BBRC Big Bear Solar 72.16 59 P P 09 40 49.4 -0.1
baz=72,SNR=29
BUR08 Bucovina Ar. S 72.19 321 eP P 09 40 49.4 0.0
BURAR Bucovina Array 72.20 321 ⇓iP P 09 40 49.7 +0.3
Q16A Castle Valley 72.20 52 ⇓P P 09 40 50.1 +0.5
baz=72,SNR=32
P18A Preston Nutter 72.20 51 ⇓P P 09 40 50.1 +0.5
baz=72,SNR=80
M21A Separation Pea 72.31 48 ⇑P P 09 40 50.0 -0.2
baz=72,SNR=41
O19A Miners Draw (B 72.33 50 ⇓P P 09 40 50.1 -0.2
baz=72,SNR=44
RWWY Rawlins 72.33 48 eP P 09 40 49.9 -0.4
comp=Z,76nm,0.8s,mb5.5
V12A Nelson 72.36 57 P P 09 40 50.9 +0.3
baz=72,SNR=34
U13A Pakoon Wash 72.39 56 P P 09 40 51.1 +0.4
baz=72,SNR=169
N20A Spence Gulch, 72.40 49 P P 09 40 51.0 +0.3
baz=72,SNR=85
OJC Ojcow 72.41 326 i P P 09 40 50.7 +0.1
OJC esP sP 09 42 31.7 -9.4
OJC Ojcow 72.41 326 ⇓iP P 09 40 50.7 +0.1
TESR 72.41 320 ⇑iP P 09 40 50.8 +0.1
TLCR 72.41 318 ⇓P P 09 40 50.8 +0.1
TLCR 72.41 318 ⇓iP P 09 40 50.8 +0.1
S15A Panguitch 72.42 54 P P 09 40 51.9 +1.0
baz=72,SNR=63
SRU San Rafael 72.42 52 P P 09 40 51.0 +0.1
baz=72,SNR=112
SRU San Rafael 72.42 52 eP P 09 40 51.0 +0.2
comp=Z,94nm,0.8s,mb5.6
SRU San Rafael 72.42 52 eP P 09 40 51.1 +0.2
SRU pmax pmax
comp=Z,94nm,0.8s,mb5.6
KOLS Kolonicke sedl 72.43 324 eP P 09 40 50.8 +0.1
comp=Z,17nm,1.1s,mb4.7
KOLS Kolonicke sedl 72.43 324 eP P 09 40 50.8 +0.1
KOLS pmax pmax
comp=Z,17nm,1.1s,mb4.7
KOLS Kolonicke sedl 72.43 324 eP P 09 40 50.8 +0.1
T14A Hurricane 72.44 55 ⇑P P 09 40 51.6 +0.6
baz=72,SNR=26
MURC Murrieta 72.45 60 ⇑P P 09 40 50.7 -0.4
baz=72,SNR=9.9
R16A Teasdale 72.48 53 P P 09 40 52.2 +0.9
baz=72,SNR=94
MALT Malatya 72.48 307 eP P 09 40 52.3 +1.1
comp=Z,40nm,0.8s,mb5.2
MALT Malatya 72.48 307 ⇓iP P 09 40 52.8 +1.6
MALT Malatya 72.48 307 ⇓iP P 09 40 52.8 +1.6
MALT Malatya 72.48 307 P P 09 40 52.0 +0.8
comp=Z,576nmcomp=Z,62nm,0.9s,mb5.3
GMRC Granite Mounta 72.55 58 P P 09 40 51.8 +0.1
baz=72,SNR=44
Q18A Rafter H Ranch 72.64 51 P P 09 40 51.8 -0.4
baz=72,SNR=31
W12A Cal Nev Ari 72.65 57 ⇑P P 09 40 52.4 +0.1
baz=72,SNR=6.7
UZH Uzhgorod 72.66 324 eP P 09 40 52.7 +0.6
UZH i 09 41 05.7
LDFC Landfair 72.66 57 eP P 09 40 52.2 -0.1
comp=Z,122nm,0.8s,mb5.7
AGMN Agassiz Nation 72.69 37 eP P 09 40 50.8 -1.4
comp=Z,20nm,0.5s,mb5.1
CFR Carcaliu 72.73 318 ⇑P P 09 40 52.6 0.0
CFR Carcaliu 72.73 318 ⇑iP P 09 40 52.6 0.0
V13A Grand Canyon W 72.78 56 P P 09 40 53.3 +0.3
baz=72,SNR=74
CRVS Cervenica-Dubn 72.78 324 eP P 09 40 53.4 +0.6
comp=Z,19nm,1.3s,mb4.7
CRVS Cervenica-Dubn 72.78 324 eP P 09 40 53.4 +0.6
CRVS pmax pmax
comp=Z,19nm,1.3s,mb4.7
CRVS Cervenica-Dubn 72.78 324 eP P 09 40 53.4 +0.6
L23A Garrett 72.79 47 P P 09 40 52.3 -0.7
baz=72,SNR=21
R17A Hanksville Air 72.81 52 P P 09 40 52.8 -0.4
baz=72,SNR=71
S16A Weppner Ranch, 72.81 53 P P 09 40 53.6 +0.4
baz=72,SNR=92
NIE Niedzica 72.84 325 eP P 09 40 53.9 +0.8
NIE Niedzica 72.84 325 eP P 09 40 53.9 +0.8
U14A Mt Trumbull 72.84 55 P P 09 40 54.0 +0.6
baz=72,SNR=90
N21A Black Mountain 72.84 49 ⇑P P 09 40 53.4 +0.1
baz=72,SNR=64
M22A Cedar Creek Ra 72.86 48 ⇓P P 09 40 53.1 -0.3
baz=72,SNR=24
VRI Vrincioaia 72.86 319 ⇑P P 09 40 53.9 +0.6
VRI Vrincioaia 72.86 319 ⇑iP P 09 40 53.9 +0.6
T15A Red Dirt Ranch 72.87 54 P P 09 40 53.5 0.0
baz=72,SNR=108
P19A Cripple Cowboy 72.88 50 P P 09 40 53.4 -0.2
baz=72,SNR=67
BELC Belle Mtn. Jos 72.89 59 P P 09 40 53.4 -0.3
baz=73,SNR=28
PFO Pinyon Flat Ob 72.89 59 ⇓P P 09 40 53.4 -0.4
baz=73,SNR=18
PFO Pinyon Flat Ob 72.89 59 eP P 09 40 52.9 -0.8
comp=Z,42nm,1.3s,mb5.0
PFO Pinyon Flat Ob 72.89 59 eP P 09 40 52.9 -0.8
PFO pmax pmax
comp=Z,42nm,1.3s,mb5.0
PFO Pinyon Flat Ob 72.89 59 P P 09 40 53.0 -0.7
comp=Z,135nm,0.8s,mb5.7,SNR=12
PLOR Plostina 72.91 319 ⇓P P 09 40 54.0 +0.4
PLOR Plostina 72.91 319 ⇓iP P 09 40 54.0 +0.4
O20A White River Ci 72.92 50 P P 09 40 53.4 -0.3
baz=73,SNR=48
TRPA Tarpa 72.94 323 ⇓iP P 09 40 54.2 +0.4
109C Camp Elliot, M 73.00 60 ⇓P P 09 40 54.2 -0.2
baz=73,SNR=6.4
UMR Umm Al-Rimmam 73.06 295 eP P 09 40 54.5 -0.3
UMR AMb AMB 09 40 55.7
comp=Z,143nm,0.5s,mb5.9
MIB Mutribah 73.13 295 eP P 09 40 54.9 -0.3
MIB AMb AMB 09 40 56.1
comp=Z,144nm,1.1s,mb5.6
Q19A Hogan Spring (73.22 51 P P 09 40 54.9 -0.6
baz=73,SNR=135
KSP Ksiaz 73.23 328 eP P 09 40 55.6 +0.2
L24A Wheatland 73.23 46 ⇑P P 09 40 55.4 -0.2
baz=73,SNR=6.9
M23A Laramie 73.26 47 ⇑P P 09 40 55.7 0.0
baz=73,SNR=5.2
O21A Pagoda 73.26 49 P P 09 40 56.0 +0.2
baz=73,SNR=13
IRM Iron Mountain 73.28 58 P P 09 40 56.0 0.0
baz=73,SNR=56
R18A Canyonlands Na 73.28 52 ⇓P P 09 40 55.4 -0.5
baz=73,SNR=65
P20A De Beque 73.29 50 P P 09 40 55.4 -0.6
baz=73,SNR=26
S17A Black Ridge (B 73.32 53 P P 09 40 56.0 -0.2
baz=73,SNR=196
U15A North Rim 73.34 55 P P 09 40 56.9 +0.6
baz=73,SNR=120
OKC Ostrava-Krasne 73.35 327 ⇓iP P 09 40 56.2 +0.1
OKC eS S 09 49 56.3 -0.4
OKC Ostrava-Krasne 73.35 327 ⇓iP P 09 40 56.2 +0.1
OKC eS S 09 49 56.3 -0.4
W13A Hualapai Mount 73.36 57 ⇓P P 09 40 56.8 +0.3
baz=73
N22A Wattenberg Ran 73.37 48 P P 09 40 56.7 +0.3
baz=73,SNR=40
DOPR Dopca 73.39 320 ⇓iP P 09 40 56.6 +0.2
T16A Glen Canyon Da 73.39 54 P P 09 40 56.2 -0.3
baz=73,SNR=13
BAR Barrett 73.41 60 eP P 09 40 56.1 -0.6
comp=Z,24nm,0.8s,mb5.0
MONP Monument Peak 73.41 60 P P 09 40 56.7 -0.1
baz=73,SNR=16
V14A Boquillas Ranc 73.44 56 P P 09 40 57.3 +0.5
baz=73,SNR=82
BC3 Big Chuckawall 73.45 59 P P 09 40 57.0 0.0
baz=73,SNR=30
MLR Muntele Rosu 73.50 319 ⇑P P 09 40 57.5 +0.4
MLR Muntele Rosu 73.50 319 ⇑iP P 09 40 57.5 +0.4
KECS Kecovo 73.51 324 eP P 09 40 57.5 +0.5
comp=Z,8.5nm,1.1s,mb4.4
KECS Kecovo 73.51 324 eP P 09 40 57.5 +0.5
KECS pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
KECS Kecovo 73.51 324 eP P 09 40 57.5 +0.5
PHWY Pilot Hill 73.51 47 eP P 09 40 57.0 -0.2
comp=Z,11nm,0.8s,mb4.7
N23A Red Feather La 73.56 48 ⇑P P 09 40 57.9 +0.4
baz=73,SNR=22
NAY Al-Naaiem 73.57 295 eP P 09 40 57.2 -0.5
NAY AMb AMB 09 40 58.6
comp=Z,58nm,1.1s,mb5.2
RDF Al-Radifah 73.60 295 eP P 09 40 57.9 0.0
RDF AMb AMB 09 40 59.5
comp=Z,147nm,1.1s,mb5.6
UPC Upice 73.61 328 eP P 09 40 57.9 +0.3
UPC Upice 73.61 328 ⇓eP P 09 40 57.9 +0.3
LIKS Likavka 73.61 326 eP P 09 40 59.0 +1.4
comp=Z,44nm,0.9s,mb5.2
LIKS Likavka 73.61 326 eP P 09 40 59.0 +1.4
LIKS pmax pmax
comp=Z,45nm,0.9s,mb5.2
LIKS Likavka 73.61 326 eP P 09 40 59.0 +1.4
DPC Dobruska-Polom 73.62 328 ⇓iP P 09 40 58.2 +0.6
DPC eS S 09 49 58.5 -1.2
DPC Dobruska-Polom 73.62 328 ⇓iP P 09 40 58.2 +0.6
DPC eS S 09 49 58.5 -1.2
MORC Moravsky Berou 73.63 327 eP P 09 40 57.9 +0.2
comp=Z,28nm,0.8s,mb5.0
MORC Moravsky Berou 73.63 327 ⇓P P 09 40 58.2 +0.5
MORC Moravsky Berou 73.63 327 ⇓iP P 09 40 58.2 +0.5
R19A Curley Farm, L 73.70 52 P P 09 40 58.2 -0.1
baz=73,SNR=77
M24A Cheyenne 73.71 47 ⇓P P 09 40 58.8 +0.4
baz=73,SNR=22
S18A Hunt Farm, Bl 73.73 52 P P 09 40 58.1 -0.3
baz=73,SNR=80
Q20A Ridgley Place, 73.74 50 P P 09 40 58.1 -0.4
baz=73,SNR=38
W14A Seligman 73.75 56 ⇑P P 09 40 59.2 +0.5
baz=73,SNR=61
SWSC Sam W. Stewart 73.75 59 ⇓P P 09 40 58.0 -0.7
baz=74,SNR=12
X13A Yucca 73.75 57 P P 09 40 58.5 -0.2
baz=73,SNR=148
DVTC Desert V Tower 73.76 60 ⇑P P 09 40 58.8 0.0
baz=74,SNR=15
T17A Navajo Res., N 73.77 53 ⇓P P 09 40 58.3 -0.5
baz=73,SNR=30
P21A Newcastle 73.78 50 ⇑P P 09 40 59.1 +0.3
baz=73,SNR=48
PDMCI Parker Dam,Lak 73.78 57 P P 09 40 58.7 -0.1
baz=74,SNR=50
O22A Kremmling 73.79 49 P P 09 40 59.0 +0.2
baz=73,SNR=56
PV04 Paradox Valley 73.82 51 eP P 09 40 59.0 +0.1
V15A Kaibab Nationa 73.84 55 ⇑P P 09 41 00.1 +0.9
baz=74,SNR=72
DRGR 73.92 322 ⇑P P 09 40 59.6 +0.2
DRGR 73.92 322 ⇑iP P 09 40 59.6 +0.2
Y12C Blythe 73.94 58 P P 09 40 59.8 0.0
baz=74,SNR=21
VOIR 73.95 320 ⇓P P 09 41 00.1 +0.5
VOIR 73.95 320 ⇓iP P 09 41 00.1 +0.5
NRDL Niedersach Rie 73.98 332 epP pP 09 42 16.2 +1.2
SULR 73.98 319 ⇑iP P 09 41 00.2 +0.4
CLL Collm 74.02 330 eP P 09 40 59.7 -0.2
comp=Z,44nm,0.8s,mb5.2
CLL Collm 74.02 330 ⇓iP P 09 40 59.7 -0.2
comp=Z,44nm,0.8s,mb5.2
CLL i pP pP 09 42 16.1 +0.9
CLL eS S 09 50 02.0 -2.0
BR131 Keskin Array S 74.05 311 eP P 09 41 00.8 +0.4
comp=Z,19nm,0.7s,mb4.9
BRTR Keskin Array B 74.05 311 P P 09 41 00.8 +0.5
comp=Z,25nm,0.8s,mb5.0,baz=76,slow=3.9,SNR=88
BRTR pP pP 09 42 17.8 +2.1
comp=Z,6.5nm,0.9s,baz=90,slow=2.5,SNR=4.8
BRTR Keskin Array B 74.05 311 eP P 09 41 00.9 +0.6
BRTR pmax pmax
comp=Z,25nm,0.8s
BRG Berggiesshubel 74.05 329 eP P 09 40 59.8 -0.3
comp=Z,13nm,0.9s,mb4.7
BRG Berggiesshubel 74.05 329 i P P 09 41 00.1 0.0
comp=Z,13nm,0.9s,mb4.6
O23A Lake Granby, G 74.08 48 ⇑P P 09 41 01.2 +0.8
baz=74,SNR=68
P22A Eagle 74.09 49 P P 09 41 00.8 +0.2
baz=74,SNR=70
PVCC Panska Ves 74.11 329 ⇓iP P 09 41 00.8 +0.3
PVCC Panska Ves 74.11 329 ⇓iP P 09 41 00.8 +0.3
U17A Shonto 74.14 54 ⇑P P 09 41 01.4 +0.6
baz=74
N24A Carr 74.16 47 ⇓P P 09 41 01.3 +0.4
baz=74,SNR=19
S19A Harvey Farm, M 74.16 52 P P 09 41 00.7 -0.3
baz=74,SNR=123
VYHS Vyhne 74.16 325 eP P 09 41 01.6 +0.8
comp=Z,15nm,0.9s,mb4.7
VYHS Vyhne 74.16 325 eP P 09 41 01.6 +0.8
VYHS pmax pmax
comp=Z,15nm,0.9s,mb4.7
VYHS Vyhne 74.16 325 eP P 09 41 01.6 +0.8
PV01 Paradox Valley 74.19 51 eP P 09 41 01.0 -0.1
comp=Z,3μm,0.6s
T18A Mexican Hat 74.19 53 P P 09 41 00.4 -0.7
baz=74,SNR=73
PSZ Piszkesteto 74.20 324 eP P 09 41 01.4 +0.3
comp=Z,18nm,0.8s,mb4.9
PSZ Piszkesteto 74.20 324 ⇑P P 09 41 01.9 +0.9
PSZ Piszkesteto 74.20 324 ⇑iP P 09 41 01.9 +0.9
PSZ Piszkesteto 74.20 324 ⇓eP P 09 41 01.6 +0.6
U16A Tuba City 74.20 54 P P 09 41 01.9 +0.6
baz=74,SNR=104
Q21A Lamborn Mesa, 74.21 50 ⇑P P 09 41 01.4 +0.2
baz=74
FBE Freiberg 74.22 330 eP P 09 41 01.2 +0.1
comp=Z,24nm,0.8s,mb5.0
W15A Williams 74.24 56 P P 09 41 02.4 +0.9
baz=74,SNR=24
R20A Redvale 74.25 51 ⇓P P 09 41 01.9 +0.4
baz=74,SNR=100
GLA Glamis 74.25 59 P P 09 41 01.9 +0.3
baz=74,SNR=31
GLA Glamis 74.25 59 eP P 09 41 01.5 -0.1
comp=Z,46nm,0.9s,mb5.2
GLA Glamis 74.25 59 eP P 09 41 01.5 -0.1
GLA pmax pmax
comp=Z,46nm,0.9s,mb5.2
SMCO Snowmass 74.28 50 eP P 09 41 01.8 +0.1
comp=Z,49nm,0.7s,mb5.3
Y13A Salome 74.30 58 ⇑P P 09 41 02.1 +0.3
baz=74,SNR=39
VRAC Vranov 74.37 327 P P 09 41 02.4 +0.5
comp=Z,23nm,0.8s,mb5.0,baz=30,slow=5.6,SNR=25
VRAC Vranov 74.37 327 ⇓P P 09 41 02.6 +0.6
VRAC Vranov 74.37 327 ⇓iP P 09 41 02.6 +0.6
X14A Yava 74.39 56 P P 09 41 02.9 +0.6
baz=74,SNR=98
CLZ Clausthal 74.45 332 eP P 09 41 02.6 +0.2
comp=Z,20nm,0.8s,mb4.9
CLZ Clausthal 74.45 332 eP P 09 41 02.6 +0.2
CLZ pmax pmax
comp=Z,20nm,0.8s,mb4.9
S20A Disappointment 74.52 51 P P 09 41 03.3 +0.3
baz=74,SNR=56
ISCO Idaho Springs 74.54 48 ⇓P P 09 41 03.6 +0.5
baz=74,SNR=39
ISCO Idaho Springs 74.54 48 eP P 09 41 03.2 +0.1
comp=Z,29nm,0.9s,mb5.0
ISCO Idaho Springs 74.54 48 eP P 09 41 03.2 +0.1
ISCO pmax pmax
comp=Z,29nm,0.9s,mb5.0
Q22A Crested Butte, 74.55 50 P P 09 41 03.5 +0.4
baz=74,SNR=62
R21A Cimarron 74.56 50 P P 09 41 03.5 +0.2
baz=74,SNR=66
N25A Grover 74.57 47 ⇑P P 09 41 03.9 +0.6
baz=74,SNR=9.9
PRU Pruhonice 74.57 329 ⇓iP P 09 41 04.2 +1.1
PRU eS S 09 50 09.7 -0.5
PRU Pruhonice 74.57 329 ⇓iP P 09 41 04.2 +1.1
PRU eS S 09 50 09.7 -0.5
O24A Longmont 74.58 48 P P 09 41 04.0 +0.6
baz=74,SNR=18
Y14A Wickenburg 74.70 57 P P 09 41 04.2 +0.1
baz=74,SNR=135
U18A Rough Rock, Ch 74.71 53 ⇓P P 09 41 04.7 +0.5
baz=74,SNR=34
W16A Flagstaff 74.72 55 P P 09 41 04.9 +0.6
baz=74,SNR=28
P23A Jefferson 74.73 49 ⇑P P 09 41 05.1 +0.9
baz=74
EYMN Ely 74.75 35 eP P 09 41 02.8 -1.3
comp=Z,159nm,1.0s,mb5.7
X15A Humboldt 74.75 56 ⇓P P 09 41 05.1 +0.7
baz=74,SNR=127
112A Yuma 74.76 59 ⇓P P 09 41 04.8 +0.3
baz=74,SNR=6.2
V17A Tonalea, Kykot 74.76 54 ⇓P P 09 41 05.5 +1.0
baz=74
TREC Trest 74.80 328 eP P 09 41 05.0 +0.6
TREC Trest 74.80 328 ⇓eP P 09 41 05.0 +0.6
Z13A Yuma Proving G 74.84 58 ⇓P P 09 41 05.0 +0.1
baz=74,SNR=115
MODS Modra-Piesok 74.87 326 eP P 09 41 06.3 +1.5
MODS Modra-Piesok 74.87 326 eP P 09 41 06.3 +1.5
MODS Modra-Piesok 74.87 326 eP P 09 41 06.3 +1.5
T19A Beclabito 74.88 52 P P 09 41 05.4 +0.3
baz=74,SNR=49
BUD Budapest 74.90 325 ⇓eP P 09 41 05.7 +0.7
PLN Plauen 75.00 330 epP pP 09 42 22.7 +1.7
GUNZ Gunzen 75.04 330 eP P 09 41 05.8 0.0
comp=Z,15nm,0.8s,mb4.8
MOX Moxa 75.05 331 eP P 09 41 05.9 +0.1
comp=Z,14nm,1.1s,mb4.6
MOX Moxa 75.05 331 eP P 09 41 05.7 -0.1
comp=Z,14nm,1.0s,mb4.7
MOX epP pP 09 42 22.8 +1.5
MOX Moxa 75.05 331 eP P 09 41 05.9 +0.1
MOX pmax pmax
comp=Z,14nm,1.1s,mb4.6
Y15A Casa Rosa Ranc 75.08 57 ⇓P P 09 41 06.8 +0.5
baz=75,SNR=103
Q23A Hartsel 75.08 49 ⇓P P 09 41 06.8 +0.5
baz=75,SNR=35
ZST Bratislava 75.08 326 eP P 09 41 07.1 +1.1
comp=Z,21nm,1.1s,mb4.8
ZST Bratislava 75.08 326 eP P 09 41 07.1 +1.1
ZST pmax pmax
comp=Z,21nm,1.1s,mb4.8
ZST Bratislava 75.08 326 eP P 09 41 07.1 +1.1
R22A Saguache, Gunn 75.09 50 ⇓P P 09 41 07.2 +0.9
baz=75,SNR=56
WERN Wernitzgruen 75.09 330 eP P 09 41 06.1 +0.1
comp=Z,16nm,0.8s,mb4.8
WERN epP pP 09 42 23.2 +1.6
EKA Eskdalemuir Ar 75.10 341 P P 09 41 05.8 -0.2
comp=Z,7.7nm,0.7s,mb4.5,baz=25,slow=5.1,SNR=22
EKA Eskdalemuir Ar 75.10 341 P P 09 41 05.8 -0.2
EKA pmax pmax

comp=Z,8.0nm,0.7s
NKC Novy Kostel 75.11 330 eP P 09 41 06.0 -0.2
NKC Novy Kostel 75.11 330⇓eP P 09 41 06.0 -0.2
P24A Kohler Place, 75.12 48 ⇑P P 09 41 07.0 +0.6
baz=75,SNR=15
ESK Eskdalemuir 75.13 341 iP P 09 41 07.1 +1.0
Z14A Wintersburg 75.14 57 P P 09 41 06.8 +0.2
baz=75,SNR=22
U19A Dine' College, 75.17 53 P P 09 41 07.0 +0.3
baz=75,SNR=78
V18A Ganado 75.19 54 P P 09 41 07.4 +0.5
baz=75,SNR=76
X16A Lo Mia Camp, P 75.26 56 P P 09 41 08.0 +0.7
baz=75,SNR=166
BZS Buzias 75.31 322 ⇓P P 09 41 07.3 -0.1
BZS Buzias 75.31 322 ⇓iP P 09 41 07.3 -0.1
Q24A Divide 75.40 49 P P 09 41 08.2 +0.2
baz=75,SNR=20
S22A 4UR Ranch, Cre 75.41 50 ⇑P P 09 41 08.8 +0.7
baz=75,SNR=60
U20A Newcomb 75.49 52 ⇑P P 09 41 09.1 +0.5
baz=75
P25A Willow Gulch B 75.50 48 ⇓P P 09 41 08.7 +0.2
baz=75,SNR=28
OGNE Ogallala 75.50 45 ⇓P P 09 41 08.4 -0.2
baz=75,SNR=7.7
OGNE Ogallala 75.50 45 eP P 09 41 08.2 -0.4
comp=Z,108nm,0.9s,mb5.6
T21A Navajo Lake 75.58 51 P P 09 41 09.5 +0.5
baz=75,SNR=30
ROTZ Rotzenmuhle 75.59 330 eP P 09 41 09.3 +0.4
comp=Z,14nm,1.0s,mb4.7
ROTZ epP pP 09 42 26.4 +1.9
114A Black Gap (USA 75.61 58 P P 09 41 09.7 +0.3
baz=75,SNR=62
Y16A Circle Bar Ran 75.62 56 P P 09 41 09.7 +0.4
baz=75,SNR=59
KHC Kasperske Hory 75.63 329⇓iP P 09 41 09.6 +0.5
Z15A Gila River Ind 75.65 57 P P 09 41 09.8 +0.3
baz=75,SNR=10
V19A Window Rock 75.68 53 ⇓P P 09 41 10.4 +0.7
baz=75,SNR=6.2
X17A Forest Lakes 75.68 55 ⇓P P 09 41 10.8 +1.1
baz=75,SNR=33
SOP Sopron 75.71 326⇓eP P 09 41 10.5 +0.9
W18A Petrified Fore 75.72 54 P P 09 41 10.8 +0.8
baz=75,SNR=7.1
CONA Conrad Observa 75.78 327 iP P 09 41 10.9 +1.0
comp=Z,21nm,0.7s,mb5.0,SNR=15
BUG Bochum--Univer 75.79 333 epP pP 09 42 26.7 +1.1
GEC2 GERESS Array S 75.83 328 eP P 09 41 10.4 +0.2
comp=Z,14nm,0.9s,mb4.7
GEC2 epP pP 09 42 27.4 +1.5
GEC2 GERESS Array S 75.83 328 eP P 09 41 10.4 +0.2
GEC2 e*PP pP 09 42 27.4 +1.5
GEC2 pmax pmax
comp=Z,14nm,0.9s,mb4.7
GERES GERESS Array B 75.83 328 P P 09 41 10.6 +0.4
comp=Z,9.3nm,0.7s,mb4.6,baz=34,slow=5.2,SNR=49
GERES pP pP 09 42 26.1 +0.2
comp=Z,1.6nm,0.7s,baz=46,slow=2.8,SNR=1.4
GERES GERESS Array B 75.83 328 P P 09 41 10.6 +0.4
GERES *PP pP 09 42 26.2 +0.3
GERES pmax pmax
comp=Z,9.0nm,0.7s
WET Wettzell 75.88 329 eP P 09 41 11.1 +0.6
comp=Z,30nm,0.9s,mb5.0
WET Wettzell 75.88 329 eP P 09 41 11.1 +0.6
WET pmax pmax
comp=Z,30nm,0.9s,mb5.0
S23A Nye Farm, Mont 75.88 50 ⇑P P 09 41 11.5 +0.8
baz=76,SNR=43
Q25A Bedland, Calha 75.91 48 P P 09 41 10.8 -0.1
baz=76,SNR=35
T22A Edith 75.91 51 P P 09 41 11.5 +0.6
baz=76,SNR=56
ECSD EROS Data Cent 75.92 40 eP P 09 41 09.7 -1.1
comp=Z,88nm,0.8s,mb5.5
W19A Sanders 75.92 54 ⇑P P 09 41 11.9 +0.8
baz=76,SNR=10
U21A Nageezi 75.93 52 P P 09 41 11.1 +0.1
baz=76,SNR=51
V20A Brimhall 75.94 53 P P 09 41 11.3 +0.2
baz=76,SNR=12
R24A Sanders Place, 75.96 49 P P 09 41 11.7 +0.5
baz=76,SNR=43
GRA1 Grafenberg Arr 76.00 330 eP P 09 41 11.6 +0.5
comp=Z,52nm,0.8s,mb5.3
GRF Grafenberg Arr 76.00 330 eP P 09 41 11.6 +0.5
comp=Z,52nm,0.8s,mb5.3
GRF Grafenberg Arr 76.00 330 eP P 09 41 11.6 +0.5
GRF pmax pmax
comp=Z,52nm,0.8s,mb5.3
GRF Grafenberg Arr 76.00 330 eP P 09 41 11.6 +0.5
GRF pmax pmax
comp=Z,52nm,0.8s,mb5.3
X18A Snowflake 76.03 55 P P 09 41 12.2 +0.5
baz=76,SNR=50
115A Sonoran Desert 76.03 57 ⇓P P 09 41 12.1 +0.4
baz=76
Z16A Peralta Trail, 76.04 56 ⇑P P 09 41 12.1 +0.4
baz=76,SNR=26
PKSM Moragy 76.08 324 ⇓P P 09 41 11.4 -0.3
PKSM Moragy 76.08 324 ⇓iP P 09 41 11.4 -0.3
SDCO Great Sand Dun 76.12 50 P P 09 41 12.5 +0.4
baz=76,SNR=61
SDCO Great Sand Dun 76.12 50 eP P 09 41 11.9 -0.2
comp=Z,27nm,0.9s,mb5.0
Y17A Roosevelt 76.12 56 P P 09 41 12.4 +0.3
baz=76,SNR=45
214A Organ Pipe Nat 76.22 58 ⇑P P 09 41 12.9 +0.1
baz=76,SNR=34
SCHQ Schefferville 76.22 18 P P 09 41 11.3 -1.0
comp=Z,33nm,0.6s,mb5.2,baz=0.7,slow=6.7,SNR=35
SCHQ Schefferville 76.22 18 P P 09 41 11.3 -1.0
S24A Houchin Ranch, 76.35 50 P P 09 41 13.9 +0.6
baz=76,SNR=27
T23A Casias Ranch, 76.36 50 P P 09 41 13.8 +0.4
baz=76,SNR=39
V21A Milan 76.39 52 ⇓P P 09 41 14.1 +0.5
baz=76,SNR=21
U22A Llaves 76.40 51 ⇓P P 09 41 14.3 +0.6
baz=76
W20A Ramah 76.41 53 P P 09 41 14.1 +0.4
baz=76,SNR=27
116A Eloy 76.44 57 P P 09 41 14.3 +0.4
baz=76,SNR=18
MOA Molln 76.45 328 ⇓iP P 09 41 13.9 +0.2
comp=Z,16nm,0.8s,mb4.8,SNR=7.1
R25A Fountain Ranch 76.46 49 ⇑P P 09 41 13.7 -0.3
baz=76,SNR=8.1
TNS Taunus Mts 76.47 332 eP P 09 41 13.8 0.0
comp=Z,26nm,0.8s,mb5.0
TNS Taunus Mts 76.47 332 eP P 09 41 13.8 0.0
TNS pmax pmax
comp=Z,26nm,0.8s,mb5.0
ARSA Arzberg 76.47 326⇑iP P 09 41 14.8 +1.0
comp=Z,9.8nm,0.8s,mb4.6
X19A St. Johns 76.48 54 P P 09 41 14.6 +0.5
baz=76,SNR=156
ARMA Armidale 76.50 173 eP P 09 41 15.5 +1.5
ARMA Armidale 76.50 173 eP P 09 41 15.2 +1.1
comp=Z,11nm,0.6s,mb4.8
Y18A Canyon Day Jun 76.53 55 P P 09 41 15.1 +0.6
baz=76,SNR=84
Z17A San Carlos Hig 76.62 56 ⇓P P 09 41 15.7 +0.7
baz=76,SNR=24
V22A San Miguel Ran 76.71 52 P P 09 41 15.7 +0.3
baz=76,SNR=35
S25A Robets Cordova 76.74 49 P P 09 41 14.9 -0.6
baz=76,SNR=26
HGN Heimansgroeve 76.79 334 eP P 09 41 15.5 -0.1
comp=Z,18nm,0.7s,mb4.9
U23A El Rito 76.80 51 ⇓P P 09 41 16.6 +0.7
baz=76,SNR=163
X20A Quemado 76.84 54 ⇓P P 09 41 17.2 +1.1
baz=76
BEBN Eben Emael 76.84 334 P P 09 41 15.8 0.0
comp=Z,12nm,0.9s,mb4.6
Y19A Nutrioso 76.84 55 ⇑P P 09 41 17.3 +1.2
baz=76,SNR=32
T24A Torres, Weston 76.86 50 P P 09 41 17.1 +0.9
baz=76,SNR=46
TOD Tromm 76.89 332 eP P 09 41 16.3 +0.2
TOD Tromm 76.89 332 eP P 09 41 16.3 +0.2
W21A San Fidel 76.89 53 ⇑P P 09 41 16.9 +0.4
baz=77,SNR=8.7

MEM Membach 76.91 334 P P 09 41 16.2 +0.1
comp=Z,16nm,1.1s,mb4.7
216A Three Points, 76.99 57 P P 09 41 17.4 +0.4
baz=77,SNR=40
117A Oracle 77.00 57 P P 09 41 17.4 +0.4
baz=77,SNR=46
VTS Vitosha 77.00 319 ⇓P P 09 41 17.6 +0.7
VTS Vitosha 77.00 319 ⇓iP P 09 41 17.6 +0.7
RJOB Jochberg 77.09 328 eP P 09 41 18.0 +0.7
comp=Z,26nm,0.7s,mb5.1
SOKA Soboth 77.13 326⇓iP P 09 41 18.0 +0.5
comp=Z,24nm,0.8s,mb5.0
PERS Pernice 77.14 326 iP P 09 41 17.8 +0.3
T25A Trinidad 77.15 49 P P 09 41 17.9 +0.1
baz=77,SNR=40
TUC Tucson 77.16 57 eP P 09 41 17.9 -0.1
comp=Z,27nm,0.9s,mb5.0
TUC Tucson 77.16 57 eP P 09 41 17.9 0.0
TUC pmax pmax
comp=Z,27nm,0.9s,mb5.0
COWI Conover 77.19 35 eP P 09 41 16.1 -1.7
comp=Z,53nm,0.9s,mb5.3
U24A Moreno Valley 77.23 50 P P 09 41 19.3 +1.0
baz=77,SNR=28
V23A Ortiz Mt. (NFS 77.23 51 P P 09 41 19.6 +1.3
baz=77,SNR=50
BCLA Clavier 77.29 334 P P 09 41 18.2 -0.1
comp=Z,9.8nm,0.9s,mb4.5
X21A Alamocita Cree 77.31 53 P P 09 41 19.9 +1.2
baz=77,SNR=69
Z19A T-Link Ranch, 77.32 55 ⇓P P 09 41 19.7 +0.9
baz=77,SNR=8.4
W22A Albuquerque 77.36 52 ⇑P P 09 41 20.3 +1.3
baz=77,SNR=6.8
RUP Ruppelstein 77.37 333 eP P 09 41 18.9 +0.1
RUP Ruppelstein 77.37 333 eP P 09 41 18.9 +0.1
Y20A Horse Springs, 77.37 54 ⇑P P 09 41 20.3 +1.2
baz=77,SNR=54
118A Homack Ranch, 77.39 56 P P 09 41 19.6 +0.4
baz=77,SNR=90
KBA Koelnbreinsper 77.44 328⇓iP P 09 41 19.8 +0.6
comp=Z,30nm,0.6s,mb5.2,SNR=14
OBKA Obir 77.46 327⇑iP P 09 41 19.4 +0.1
comp=Z,14nm,0.7s,mb4.8
217A Green Valley 77.53 57 ⇑P P 09 41 20.4 +0.5
baz=77,SNR=59
STKA Stephens Creek 77.62 182 P P 09 41 20.8 +0.7
comp=Z,22nm,0.8s,mb4.9,baz=356,slow=7.4,SNR=34
STKA Stephens Creek 77.62 182⇓iP P 09 41 20.8 +0.6
comp=Z,19nm,0.9s,mb4.8
ANMO Albuquerque 77.67 52 eP P 09 41 21.3 +0.5
comp=Z,46nm,1.1s,mb5.1
ANMO Albuquerque 77.67 52 eP P 09 41 21.3 +0.6
ANMO pmax pmax
comp=Z,46nm,1.1s
119A Ashpeak Ranch, 77.68 55 ⇑P P 09 41 21.3 +0.5
baz=77,SNR=30
W23A Werner Place, 77.69 52 P P 09 41 21.7 +0.9
baz=77,SNR=46
Y21A Point of Rocks 77.69 54 P P 09 41 22.1 +1.3
baz=77,SNR=28
X22A Bernardo 77.70 53 ⇑P P 09 41 22.3 +1.4
baz=77
LAZ Ladron 77.70 53 eP P 09 41 21.5 +0.6
comp=Z,19nm,1.0s,mb4.8
U25A Circle Dot Ran 77.70 50 P P 09 41 20.8 0.0
baz=77,SNR=22
MYKA Terra Mystica 77.70 327⇓iP P 09 41 20.6 0.0
comp=Z,23nm,1.0s,mb4.9
GIVF Givet 77.71 334⇑iP P 09 41 20.5 -0.1
comp=Z,25nm,0.7s,mb4.7
GIVF Givet 77.71 334⇑iP P 09 41 20.5 -0.1
comp=Z,12nm,0.7s,mb4.8
GIVF Givet 77.71 334⇑iP P 09 41 20.5 -0.1
GIVF pmax pmax
comp=Z,12nm,0.7s,mb4.7
CSS Prodhromos 77.73 308 eP P 09 41 20.9 -0.1
comp=Z,55nm,0.9s,mb5.3
V24A Rampart Ranch, 77.74 51 P P 09 41 22.0 +0.9
baz=77,SNR=64
LANF Langenberg 77.75 332 eP P 09 41 21.1 +0.2
LANF Langenberg 77.75 332 eP P 09 41 21.1 +0.2
ASF Jabal al Asfar 77.77 304 P P 09 41 22.8 +1.5
comp=Z,12nm,0.8s,mb4.7,baz=274,slow=3.1,SNR=21
ASF Jabal al Asfar 77.77 304 P P 09 41 22.8 +1.5
ASF pmax pmax
comp=Z,13nm,0.8s
FORT Forrest 77.77 194 eP P 09 41 21.4 +0.3
comp=Z,60nm,0.5s,mb5.6
FORT Forrest 77.77 194 eP P 09 41 21.5 +0.4
comp=Z,68nm,0.6s,mb5.5
218A Dragoon 77.83 56 P P 09 41 22.4 +0.8
baz=78,SNR=47
Z20A Nine Sixteen R 77.83 55 P P 09 41 22.6 +0.9
baz=78,SNR=79
WATA Walderalm 77.87 329⇓iP P 09 41 22.2 +0.6
comp=Z,26nm,0.7s,mb5.1,SNR=8.1
WTTA Wattenberg 77.91 329 iP P 09 41 22.5 +0.7
comp=Z,50nm,1.1s,mb5.2,SNR=13
VISS Visnje 77.93 326 iP P 09 41 21.7 -0.2
LENM Lemitar 77.97 53 eP P 09 41 22.7 +0.4
comp=Z,21nm,1.3s,mb4.7
MMAI Mount Meron Ar 78.00 305 P P 09 41 23.3 +0.7
comp=Z,48nm,0.8s,mb5.3,baz=36,slow=7.5,SNR=42
V25A Rancho No Teng 78.01 50 ⇓P P 09 41 22.9 +0.3
baz=78
BOJS Bojanci 78.02 326 iP P 09 41 22.3 -0.2
ABTA Abfaltersbach 78.03 328⇑iP P 09 41 22.0 -0.4
comp=Z,18nm,1.2s,mb4.7
MOTA Moosalm 78.03 329⇓iP P 09 41 23.1 +0.6
comp=Z,79nm,1.2s,mb5.3,SNR=15
RETA Reutte 78.03 329⇑iP P 09 41 23.0 +0.6
comp=Z,23nm,1.3s,mb4.8
LPM Los Pinos Moun 78.05 53 eP P 09 41 23.1 +0.3
comp=Z,25nm,1.0s,mb4.9
W24A Lazy 6 Ranch, 78.05 51 ⇑P P 09 41 23.8 +1.0
baz=78,SNR=76
U26A Atchley Ranch, 78.06 50 P P 09 41 22.6 -0.2
baz=78,SNR=20
X23A Hourglass Bar 78.09 52 P P 09 41 23.9 +0.8
baz=78,SNR=29
Y22A Socorro 78.14 53 ⇑P P 09 41 24.0 +0.7
baz=78,SNR=21
BFO Black Forest 78.14 331 eP P 09 41 23.0 0.0
comp=Z,16nm,0.8s,mb4.8
BFO epP pP 09 42 40.5 +1.3
BFO Black Forest 78.14 331 eP P 09 41 23.0 0.0
BFO e*PP pP 09 42 40.5 +1.3
BFO pmax pmax
comp=Z,16nm,0.8s,mb4.8
BFO Black Forest 78.14 331 P P 09 41 23.4 +0.4
comp=Z,110nm,0.8s,mb5.6,SNR=5.5
JAVS Javornik 78.16 327 iP P 09 41 22.4 -0.7
BNM Barren Site 78.17 53 eP P 09 41 23.9 +0.5
comp=Z,32nm,0.9s,mb5.0
SPAK Spaichingen-Ko 78.19 331 eP P 09 41 24.1 +0.8
Z21A St. Cloud Mine 78.21 54 P P 09 41 24.8 +1.1
baz=78,SNR=58
120A U Bar Ranch, L 78.23 55 ⇓P P 09 41 24.6 +0.8
baz=78,SNR=62
318A Bisbee 78.25 57 P P 09 41 24.2 +0.2
baz=78,SNR=66
CBKS Cedar Bluff 78.27 45 ⇓P P 09 41 22.8 -1.2
baz=78,SNR=8.0
CBKS Cedar Bluff 78.27 45 eP P 09 41 22.4 -1.5
comp=Z,85nm,1.2s,mb5.3
CBKS Cedar Bluff 78.27 45 eP P 09 41 22.4 -1.5
CBKS pmax pmax
comp=Z,85nm,1.2s,mb5.3
219A White Tail Can 78.27 56 P P 09 41 24.4 +0.4
baz=78,SNR=60
CDF Champ du Feu 78.42 332⇑iP P 09 41 24.8 +0.2
comp=Z,58nm,0.9s,mb5.0
CDF Champ du Feu 78.42 332⇑iP P 09 41 24.8 +0.2
comp=Z,29nm,0.9s,mb5.0
CDF Champ du Feu 78.42 332⇑iP P 09 41 24.8 +0.2
CDF pmax pmax
comp=Z,29nm,0.9s,mb5.0
FETA Feichten 78.44 329⇓iP P 09 41 25.3 +0.6
comp=Z,21nm,1.0s,mb4.8,SNR=11
V26A Tequesquite Ra 78.49 50 ⇓P P 09 41 24.8 -0.4
baz=78,SNR=37
DAVA Damuels 78.51 330⇓iP P 09 41 25.5 +0.4
comp=Z,26nm,0.7s,mb5.1
X24A Lazy VL Ranch, 78.52 52 ⇓P P 09 41 26.3 +1.0
baz=78,SNR=20
W25A X Bar L Ranch, 78.56 51 ⇑P P 09 41 26.0 +0.4
baz=78,SNR=83

ECH Echery 78.63 332 eP P 09 41 25.6 -0.1
ECH Echery 78.63 332 eP P 09 41 25.6 -0.1
FELD Feldberg im Sc 78.65 331 eP P 09 41 25.8 0.0
Z22A Elephant Butte 78.65 54 P P 09 41 26.5 +0.4
baz=78,SNR=53
Y23A Lovelace Mesa, 78.65 53 ⇓P P 09 41 26.8 +0.8
baz=78,SNR=80
319A Douglas 78.71 56 ⇓P P 09 41 27.0 +0.5
baz=78,SNR=73
121A Cookes Peak, D 78.72 55 P P 09 41 26.9 +0.5
baz=78,SNR=39
220A Playas Peak, P 78.76 56 P P 09 41 27.2 +0.5
baz=78,SNR=30
SCIA State Center 78.89 39 eP P 09 41 26.2 -1.1
comp=Z,126nm,0.9s,mb5.7
DAVOX Davos/Dischmat 78.95 330 P P 09 41 28.3 +0.9
comp=Z,11nm,0.5s,mb4.8,baz=6.0,slow=3.0,SNR=16
DAVOX Davos/Dischmat 78.95 330 P P 09 41 28.3 +0.9
MOF Molkenrain 78.96 332 eP P 09 41 27.1 -0.4
MOF Molkenrain 78.96 332 eP P 09 41 27.1 -0.4
X25A Clemmons Ranch 78.97 51 P P 09 41 28.3 +0.5
baz=79,SNR=58
Y24A Capitan 79.00 52 P P 09 41 28.4 +0.5
baz=79,SNR=32
THEF They Montfort 79.00 333 eP P 09 41 27.5 -0.2
THEF They Montfort 79.00 333 eP P 09 41 27.5 -0.2
W26A Owens Ranch, T 79.03 50 P P 09 41 28.7 +0.6
baz=79,SNR=13
122A Conniff Cattle 79.04 54 ⇓P P 09 41 29.2 +1.0
baz=79,SNR=14
Z23A Rita Site, Whi 79.05 53 ⇑P P 09 41 28.8 +0.5
baz=79,SNR=27
MEZF Maizieres J'vi 79.06 333⇑iP P 09 41 28.3 +0.3
HAU Haudompre 79.08 332⇑iP P 09 41 28.1 0.0
comp=Z,27nm,0.9s,mb4.7
HAU Haudompre 79.08 332⇑iP P 09 41 28.1 0.0
comp=Z,13nm,0.9s,mb4.7
HAU Haudompre 79.08 332⇑iP P 09 41 28.1 0.0
HAU pmax pmax
comp=Z,13nm,0.9s,mb4.7
HINF Hinteralfeld 79.08 332⇑iP P 09 41 27.9 -0.2
comp=Z,18nm,0.7s,mb4.6
HINF Hinteralfeld 79.08 332⇑iP P 09 41 27.9 -0.2
comp=Z,9.2nm,0.7s,mb4.6
HINF Hinteralfeld 79.08 332⇑iP P 09 41 27.9 -0.2
HINF pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
221A Mesquite Ranch 79.11 55 ⇑P P 09 41 29.0 +0.4
baz=79,SNR=9.2
BBS Basel-Blauen 79.17 331 eP P 09 41 28.6 0.0
BBS Basel-Blauen 79.17 331 eP P 09 41 28.6 0.0
320A Kipp Ranch, An 79.18 56 P P 09 41 29.6 +0.6
baz=79,SNR=28
SFTF Sexfontaines 79.32 333⇑iP P 09 41 29.5 +0.1
comp=Z,84nm,0.9s,mb5.2
SFTF Sexfontaines 79.32 333⇑iP P 09 41 29.5 +0.1
comp=Z,84nm,0.9s,mb5.5
JFWS Jewell Farm 79.35 37 eP P 09 41 27.8 -1.9
comp=Z,25nm,0.8s,mb5.0
JFWS Jewell Farm 79.35 37 eP P 09 41 27.8 -1.9
JFWS pmax pmax
comp=Z,25nm,0.8s,mb5.0
TUE Stuetta 79.40 330 eP P 09 41 30.5 +0.6
comp=Z,20nm,0.6s,mb5.0
Y25A Mesa, Roswell 79.41 52 P P 09 41 30.3 +0.2
baz=79,SNR=42
X26A CR and CF Fran 79.41 51 P P 09 41 30.4 +0.3
baz=79,SNR=40
222A Williams Famil 79.42 55 ⇓P P 09 41 30.3 +0.1
baz=79,SNR=22
W27A Bowe Ranch, En 79.43 50 P P 09 41 30.4 +0.2
baz=79,SNR=29
Z24A Sheeppen Canyo 79.48 53 ⇓P P 09 41 31.0 +0.4
baz=79,SNR=26
TIR Tirane 79.49 320 eP P 09 41 30.9 +0.5
comp=Z,51nm,0.6s,mb5.4
TIR Tirane 79.49 320 eP P 09 41 30.9 +0.4
TIR pmax pmax
comp=Z,51nm,0.6s,mb5.4
LOMF Lomont 79.50 332 eP P 09 41 30.6 +0.2
LOMF Lomont 79.50 332 eP P 09 41 30.6 +0.2
123A Bell Site, Whi 79.50 54 ⇓P P 09 41 31.5 +0.8
baz=79,SNR=16
KSU1 Kansas State U 79.57 43 eP P 09 41 29.5 -1.4
comp=Z,67nm,1.0s,mb5.3
X27A F and S Farms, 79.72 50 P P 09 41 32.2 +0.4
baz=79,SNR=21
Z25A Roswell 79.88 52 P P 09 41 33.0 +0.4
baz=80,SNR=49
223A Chaparral, Ant 79.88 54 ⇑P P 09 41 33.4 +0.7
baz=80,SNR=6.0
Y26A Elida 79.88 51 ⇓P P 09 41 32.9 +0.2
baz=80,SNR=22
124A Stringfield Ra 79.91 53 P P 09 41 33.2 +0.4
baz=80,SNR=34
GLMI Grayling 79.99 33 eP P 09 41 32.0 -1.0
comp=Z,126nm,0.8s,mb5.7
Y27A Causey 80.27 51 ⇓P P 09 41 34.5 -0.2
baz=80,SNR=26
Z26A Caprock 80.29 52 P P 09 41 34.9 +0.1
baz=80,SNR=132
AMTX Amarillo 80.30 49 P P 09 41 34.7 -0.2
baz=80,SNR=63
AMTX Amarillo 80.30 49 eP P 09 41 34.4 -0.5
comp=Z,84nm,0.6s,mb5.7
224A Cornudas Mount 80.33 54 ⇓P P 09 41 35.5 +0.4
baz=80,SNR=47
125A Gardner Draw, 80.38 53 P P 09 41 35.7 +0.3
baz=80,SNR=73
CABF La Chapelle 80.39 332⇑iP P 09 41 35.4 +0.3
comp=Z,19nm,0.8s,mb4.6
CABF La Chapelle 80.39 332⇑iP P 09 41 35.4 +0.3
comp=Z,9.7nm,0.8s,mb4.6
CABF La Chapelle 80.39 332⇑iP P 09 41 35.4 +0.3
CABF pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
MSTX Muleshoe 80.41 50 ⇓P P 09 41 35.0 -0.5
baz=80,SNR=16
FLN La Foliniere 80.45 337⇑iP P 09 41 35.2 -0.2
comp=Z,45nm,0.8s,mb4.9
FLN La Foliniere 80.45 337⇑iP P 09 41 35.2 -0.2
comp=Z,23nm,0.8s,mb5.0
FLN La Foliniere 80.45 337⇑iP P 09 41 35.2 -0.2
FLN pmax pmax
comp=Z,23nm,0.8s,mb5.0
LDF La Druitiere 80.50 336 eP P 09 41 35.9 +0.2
comp=Z,22nm,0.6s,mb4.7
LDF La Druitiere 80.50 336 eP P 09 41 35.9 +0.2
comp=Z,11nm,0.6s,mb4.8
LDF La Druitiere 80.50 336 eP P 09 41 35.9 +0.2
LDF pmax pmax
comp=Z,11nm,0.6s,mb4.8
LOR Lormes 80.52 333⇑iP P 09 41 35.8 0.0
comp=Z,47nm,0.8s,mb5.0
LOR epP pP 09 42 52.5 +0.1
LOR Lormes 80.52 333⇑iP P 09 41 35.8 0.0
comp=Z,24nm,0.8s,mb5.0
LOR epP pP 09 42 52.5 +0.1
LOR Lormes 80.52 333⇑iP P 09 41 35.8 0.0
LOR e*PP pP 09 42 52.5 +0.1
LOR pmax pmax
comp=Z,24nm,0.8s,mb5.0
CPRX Cap Rock 80.53 52 eP P 09 41 35.9 -0.3
comp=Z,43nm,0.8s,mb5.2
Z27A Tatum 80.67 51 ⇓P P 09 41 36.5 -0.3
baz=80
MNTX Cornudas Mount 80.70 54 P P 09 41 37.0 -0.1
baz=80,SNR=62
MNTX Cornudas Mount 80.70 54 eP P 09 41 36.7 -0.4
comp=Z,26nm,0.9s,mb5.0
225A Deer Hill, Car 80.70 53 ⇑P P 09 41 37.4 +0.3
baz=80,SNR=32
126A Clayton Basin, 80.74 52 P P 09 41 37.5 +0.3
baz=80,SNR=14
SSF Saint Saulge 80.81 334⇑iP P 09 41 37.3 -0.1
comp=Z,29nm,0.9s,mb4.7
SSF Saint Saulge 80.81 334⇑iP P 09 41 37.3 -0.1
comp=Z,15nm,0.9s,mb4.7
SSF Saint Saulge 80.81 334⇑iP P 09 41 37.3 -0.1
SSF pmax pmax
comp=Z,15nm,0.9s,mb4.7
324A Moseley Ranch, 80.83 54 P P 09 41 37.8 0.0
baz=80,SNR=31
GDL2 Guadalupe Moun 80.89 53 eP P 09 41 38.0 0.0
comp=Z,42nm,0.6s,mb5.3
GRR Gorron 80.89 337⇑iP P 09 41 37.9 +0.2

comp=Z,60nm,0.8s,mb5.1
GRR Gorron 80.89 337⇑iP P 09 41 37.9 +0.2
comp=Z,30nm,0.8s,mb5.1
GRR Gorron 80.89 337⇑iP P 09 41 37.9 +0.2
GRR pmax pmax
comp=Z,30nm,0.8s,mb5.1
HYF Humbligny 80.90 334 eP **P 09 41 38.1 +0.3**
127A Arkansas Junct 81.08 52⇑P P 09 41 38.7 -0.3
baz=81,SNR=19
SMF Signal de Mont 81.08 333⇑iP P 09 41 38.9 +0.1
comp=Z,51nm,0.7s,mb5.0
SMF epP pP 09 42 55.8 +0.3
SMF Signal de Mont 81.08 333⇑iP P 09 41 38.9 +0.1
comp=Z,26nm,0.7s,mb5.1
SMF epP pP 09 42 55.8 +0.3
SMF Signal de Mont 81.08 333⇑iP P 09 41 38.9 +0.1
SMF e*PP pP 09 42 55.8 +0.3
SMF pmax pmax
comp=Z,25nm,0.7s,mb5.0
AVF Avril sur Loir 81.11 334⇑iP P 09 41 39.0 +0.1
comp=Z,48nm,1.0s,mb4.9
AVF epP pP 09 42 56.0 +0.4
AVF Avril sur Loir 81.11 334⇑iP P 09 41 39.0 +0.1
comp=Z,24nm,1.0s,mb4.9
AVF epP pP 09 42 56.0 +0.4
AVF Avril sur Loir 81.11 334⇑iP P 09 41 39.0 +0.1
AVF e*PP pP 09 42 56.0 +0.4
AVF pmax pmax
comp=Z,24nm,1.0s,mb4.9
CLNB Carlsbad 81.11 52 eP **P 09 41 38.9 -0.2**
comp=Z,12nm,0.9s,mb4.6
LPL La Plagne 81.13 331⇑iP P 09 41 39.9 +0.8
comp=Z,31nm,0.9s,mb4.8
LPL La Plagne 81.13 331⇑iP P 09 41 39.9 +0.8
comp=Z,16nm,0.9s,mb4.7
LPL La Plagne 81.13 331⇑iP P 09 41 39.9 +0.8
LPL pmax pmax
comp=Z,16nm,0.9s,mb4.8
226A Malaga, Loving 81.14 53 P **P 09 41 39.3 0.0**
baz=81,SNR=65
LPG La Plagne 81.14 331⇑iP P 09 41 40.1 +1.0
comp=Z,33nm,0.7s,mb4.9
LPG epP pP 09 42 57.0 +1.1
LPG La Plagne 81.14 331⇑iP P 09 41 40.1 +1.0
comp=Z,16nm,0.7s,mb4.9
LPG epP pP 09 42 57.0 +1.1
LPG La Plagne 81.14 331⇑iP P 09 41 40.1 +1.0
LPG e*PP pP 09 42 57.0 +1.1
LPG pmax pmax
comp=Z,16nm,0.7s,mb4.9
325A Bean Ranch, Si 81.17 54⇑P P 09 41 39.7 +0.2
baz=81,SNR=26
AQU L'Aquila 81.39 325⇑P P 09 41 41.5 +1.1
AQU L'Aquila 81.39 325⇑iP P 09 41 41.5 +1.1
BGF Bois d'Agland 81.47 334⇑iP P 09 41 41.7 +0.9
BGF Bois d'Agland 81.47 334⇑iP P 09 41 41.7 +0.9
SGMF Saint Gilles 81.47 338⇑iP P 09 41 41.1 +0.3
comp=Z,42nm,0.8s,mb5.0
SGMF epP pP 09 42 58.2 +0.6
SGMF Saint Gilles 81.47 338⇑iP P 09 41 41.1 +0.3
comp=Z,21nm,0.8s,mb4.9
SGMF epP pP 09 42 58.2 +0.6
SGMF Saint Gilles 81.47 338⇑iP P 09 41 41.1 +0.3
SGMF e*PP pP 09 42 58.2 +0.6
SGMF pmax pmax
comp=Z,21nm,0.8s,mb4.9
BNI Bardonecchia 81.56 331 eP **P 09 41 41.5 +0.2**
comp=Z,17nm,1.0s,mb4.8
BNI Bardonecchia 81.56 331 eP **P 09 41 41.5 +0.2**
BNI pmax pmax
comp=Z,17nm,1.0s,mb4.8
ROSF Rostrenen 81.58 338⇑iP P 09 41 41.9 +0.6
comp=Z,86nm,0.8s,mb5.3
ROSF Rostrenen 81.58 338⇑iP P 09 41 41.9 +0.6
comp=Z,43nm,0.8s,mb5.3
ROSF Rostrenen 81.58 338⇑iP P 09 41 41.9 +0.6
ROSF pmax pmax
comp=Z,43nm,0.8s,mb5.3
425A Indio Mountain 81.61 54 P **P 09 41 42.0 +0.2**
baz=81,SNR=75
227A Bennet, Jal 81.62 52 P **P 09 41 41.9 +0.1**
baz=81,SNR=11
HDIL Hopedale 81.70 38 eP **P 09 41 40.9 -1.2**
comp=Z,107nm,0.9s,mb5.7
326A Caldwell Ranch 81.77 53⇑P P 09 41 42.8 +0.1
baz=81,SNR=94
MBDF Montbardon 81.81 330⇑iP P 09 41 42.6 0.0
comp=Z,18nm,0.6s,mb4.8
MBDF epP pP 09 43 01.9 +2.4
MBDF Montbardon 81.81 330⇑iP P 09 41 42.6 0.0
comp=Z,9.1nm,0.6s,mb4.8
MBDF epP pP 09 43 01.9 +2.4
MBDF Montbardon 81.81 330⇑iP P 09 41 42.6 0.0
MBDF e*PP pP 09 43 01.9 +2.4
MBDF pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
AGO Saint Agoulin 81.83 333 eP **P 09 41 43.1 +0.4**
TCF Toulx Ste Croi 81.91 334⇑iP P 09 41 43.4 +0.4
comp=Z,20nm,0.9s,mb4.7
TCF epP pP 09 43 00.5 +0.5
TCF Toulx Ste Croi 81.91 334⇑iP P 09 41 43.4 +0.4
comp=Z,10.0nm,0.9s,mb4.7
TCF epP pP 09 43 00.5 +0.5
TCF Toulx Ste Croi 81.91 334⇑iP P 09 41 43.4 +0.4
TCF e*PP pP 09 43 00.5 +0.5
TCF pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
WMOK Wichita Mounta 81.92 47 eP **P 09 41 42.5 -0.8**
comp=Z,40nm,0.9s,mb5.2
WMOK Wichita Mounta 81.92 47 eP **P 09 41 42.5 -0.8**
WMOK pmax pmax
comp=Z,40nm,0.9s,mb5.2
QUIF Quistinic 81.94 338 eP **P 09 41 43.4 +0.2**
comp=Z,53nm,0.9s,mb5.1
QUIF epP pP 09 43 00.5 +0.4
QUIF Quistinic 81.94 338 eP **P 09 41 43.4 +0.2**
comp=Z,27nm,0.9s,mb5.1
QUIF epP pP 09 43 00.5 +0.4
QUIF Quistinic 81.94 338 eP **P 09 41 43.4 +0.2**
QUIF e*PP pP 09 43 00.5 +0.4
QUIF pmax pmax
comp=Z,27nm,0.9s,mb5.1
ORIF Oris-en-Rattie 81.95 331⇑iP P 09 41 43.9 +0.6
comp=Z,25nm,0.8s,mb4.8
ORIF Oris-en-Rattie 81.95 331⇑iP P 09 41 43.9 +0.6
comp=Z,13nm,0.8s,mb4.8
ORIF Oris-en-Rattie 81.95 331⇑iP P 09 41 43.9 +0.6
ORIF pmax pmax
comp=Z,13nm,0.8s,mb4.8
SADO Sadowa 82.00 29 P **P 09 41 41.8 -1.8**
comp=Z,16nm,1.0s,mb4.8,baz=339,slow=8.2,SNR=4.0
327A Balmorhea Ranc 82.00 53⇓P P 09 41 44.2 +0.4
baz=82,SNR=8.8
SAOF Saorge 82.19 330 eP **P 09 41 44.2 -0.3**
SAOF Saorge 82.19 330 eP **P 09 41 44.2 -0.3**
AUTN L'Aution 82.22 330 eP **P 09 41 44.6 -0.1**
AUTN L'Aution 82.22 330 eP **P 09 41 44.6 -0.1**
426A McDonald Obser 82.23 53⇓P P 09 41 45.0 0.0
baz=82,SNR=42
MFF Saint Martin d 82.32 336⇑iP P 09 41 45.7 +0.5
comp=Z,27nm,0.8s,mb4.8
MFF epP pP 09 43 03.0 +0.8
MFF Saint Martin d 82.32 336⇑iP P 09 41 45.7 +0.5
comp=Z,13nm,0.8s,mb4.8
MFF epP pP 09 43 03.0 +0.8
MFF Saint Martin d 82.32 336⇑iP P 09 41 45.7 +0.5
MFF e*PP pP 09 43 03.0 +0.8
MFF pmax pmax
comp=Z,13nm,0.8s,mb4.8
SBF Sospel 82.34 330 eP **P 09 41 45.1 -0.2**
comp=Z,30nm,0.9s,mb4.8
SBF Sospel 82.34 330 eP **P 09 41 45.1 -0.2**
comp=Z,15nm,0.9s,mb4.8
SBF Sospel 82.34 330 eP **P 09 41 45.1 -0.2**
SBF pmax pmax
comp=Z,15nm,0.9s,mb4.8
328A Wristen Ranch, 82.36 52 P **P 09 41 45.6 -0.1**
baz=82,SNR=75
VIVF Saint-Julien-I 82.40 332⇑iP P 09 41 46.2 +0.6
comp=Z,32nm,0.9s,mb4.9
VIVF epP pP 09 43 03.3 +0.6
VIVF Saint-Julien-I 82.40 332⇑iP P 09 41 46.2 +0.6
comp=Z,16nm,0.9s,mb4.9
VIVF epP pP 09 43 03.3 +0.6
VIVF Saint-Julien-I 82.40 332⇑iP P 09 41 46.2 +0.6
VIVF e*PP pP 09 43 03.3 +0.6
VIVF pmax pmax
comp=Z,16nm,0.9s,mb4.8
427A Hayter Ranch, 82.44 53 P **P 09 41 46.1 0.0**
baz=82,SNR=84
AAM Ann Arbor 82.51 33 eP **P 09 41 45.7 -0.6**
comp=Z,56nm,0.7s,mb5.5
AAM Ann Arbor 82.51 33 eP **P 09 41 45.7 -0.5**
AAM pmax pmax
comp=Z,56nm,0.7s,mb5.5
526A Mary Lane Ranc 82.66 54 P **P 09 41 47.5 +0.3**
baz=82,SNR=85
527A Woodward Ranch 82.86 54 P **P 09 41 48.2 0.0**
baz=82,SNR=51
SLM Saint Louis 82.88 40 eP **P 09 41 46.9 -1.3**
comp=Z,29nm,0.4s,mb5.5
SLM Saint Louis 82.88 40 eP **P 09 41 46.9 -1.3**
SLM pmax pmax
comp=Z,29nm,0.4s,mb5.5
SMRF Simiane la Rot 82.88 331 eP **P 09 41 48.7 +0.6**
comp=Z,14nm,0.9s,mb4.5
SMRF Simiane la Rot 82.88 331 eP **P 09 41 48.7 +0.6**
comp=Z,14nm,0.9s,mb4.8
PGF Pioggiola 82.91 328⇑iP P 09 41 48.2 -0.1
comp=Z,24nm,1.0s,mb4.7
PGF Pioggiola 82.91 328⇑iP P 09 41 48.2 -0.1
comp=Z,12nm,1.0s,mb4.7
PGF Pioggiola 82.91 328⇑iP P 09 41 48.2 -0.1
PGF pmax pmax
comp=Z,12nm,1.0s,mb4.7
428A Kincaid Ranch, 82.94 53⇑P P 09 41 49.4 +0.8
baz=83,SNR=206
RJF Les Rejaudoux 83.00 334⇑iP P 09 41 49.1 +0.4
comp=Z,13nm,0.7s,mb4.5
RJF Les Rejaudoux 83.00 334⇑iP P 09 41 49.1 +0.4
comp=Z,6.4nm,0.7s,mb4.6
RJF Les Rejaudoux 83.00 334⇑iP P 09 41 49.1 +0.4
RJF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
626A Big Bend Ranch 83.02 54 P **P 09 41 48.9 -0.2**
baz=83,SNR=92
LMR La Mourre 83.12 330⇑iP P 09 41 49.4 +0.1
comp=Z,32nm,0.9s,mb4.8
LMR epP pP 09 43 06.6 +0.1
LMR La Mourre 83.12 330⇑iP P 09 41 49.4 +0.1
comp=Z,16nm,0.9s,mb4.8
LMR epP pP 09 43 06.6 +0.1
LMR La Mourre 83.12 330⇑iP P 09 41 49.4 +0.1
LMR e*PP pP 09 43 06.6 +0.1
LMR pmax pmax
comp=Z,16nm,0.9s,mb4.8
CAF Calviac 83.17 334⇑iP P 09 41 50.6 +1.0
comp=Z,23nm,0.9s,mb4.7
CAF epP pP 09 43 07.9 +1.1
CAF Calviac 83.17 334⇑iP P 09 41 50.6 +1.0
comp=Z,12nm,0.9s,mb4.7
CAF epP pP 09 43 07.9 +1.1
CAF Calviac 83.17 334⇑iP P 09 41 50.6 +1.0
CAF e*PP pP 09 43 07.9 +1.1
CAF pmax pmax
comp=Z,12nm,0.9s,mb4.7
MSNY Massena 83.18 26 eP **P 09 41 48.4 -1.2**
comp=Z,472nm,0.9s
TOO Toolangi 83.30 178 eP **P 09 41 51.2 +1.2**
528A Cox Ranch, San 83.31 53 P **P 09 41 51.1 +0.5**
baz=83,SNR=83
FVM French Village 83.33 40 eP **P 09 41 49.4 -1.1**
comp=Z,47nm,0.6s,mb5.5
FVM French Village 83.33 40 eP **P 09 41 49.4 -1.1**
FVM pmax pmax
comp=Z,47nm,0.6s,mb5.5
LASF Ste Croix 83.36 332⇑iP P 09 41 51.5 +1.0
comp=Z,20nm,0.9s,mb4.7
TXAR Lajitas Array 83.45 54 P **P 09 41 51.0 -0.2**
comp=Z,22nm,0.5s,mb5.3,baz=293,slow=4.1,SNR=559
TXAR pP pP 09 43 12.1 +3.6
comp=Z,2.1nm,0.8s,baz=318,slow=1.2,SNR=1.9
TXAR sP sP 09 43 42.2 -1.3
comp=Z,4.1nm,0.7s,baz=296,slow=4.9,SNR=4.1
TXAR PP PP 09 45 00.3 -7.7
comp=Z,1.0nm,0.7s,baz=335,slow=4.0,SNR=1.9
TXAR Lajitas Array 83.45 54 P **P 09 41 51.0 -0.2**
TXAR pP pP 09 43 12.1 +3.6
TXAR sP sP 09 43 42.2 -1.3
TXAR PP PP 09 45 00.3 -7.7
TXAR Lajitas Array 83.45 54 P **P 09 41 51.1 -0.2**
TXAR *PP pP 09 43 12.1 +3.6
TXAR *SP sP 09 43 42.2 -1.3
TXAR pmax pmax
comp=Z,22nm,0.5s
627A Terlingua Ranc 83.52 54 P **P 09 41 51.5 0.0**
baz=83,SNR=46
LFF La Frestale 83.57 334⇑iP P 09 41 52.5 +0.9
comp=Z,35nm,0.6s,mb5.0
LFF La Frestale 83.57 334⇑iP P 09 41 52.5 +0.9
comp=Z,17nm,0.6s,mb5.1
LFF La Frestale 83.57 334⇑iP P 09 41 52.5 +0.9
LFF pmax pmax
comp=Z,17nm,0.6s,mb5.0
LONY Lake Ozonia 83.61 26 eP **P 09 41 50.1 -1.7**
comp=Z,28nm,0.9s,mb5.1
FRNY Flat Rock 83.71 26 eP **P 09 41 50.3 -2.0**
comp=Z,19nm,0.8s,mb5.0
OLIL Olney 83.73 38 eP **P 09 41 51.5 -0.9**
comp=Z,41nm,0.8s,mb5.3
628A Black Gap, Mar 83.77 53 P **P 09 41 52.8 -0.1**
baz=83,SNR=32
CEL Celeste 83.77 321 eP **P 09 41 52.5 -0.2**
comp=Z,12nm,0.8s,mb4.8
BLO Bloomington 84.03 37 eP **P 09 41 53.0 -1.0**
comp=Z,23nm,0.8s,mb5.0
BLO Bloomington 84.03 37 eP **P 09 41 53.0 -1.0**
BLO pmax pmax
comp=Z,23nm,0.8s,mb5.1
ERPA Erie 84.03 31 eP **P 09 41 53.0 -0.9**
comp=Z,56nm,0.6s,mb5.6
SIUC Southern Illin 84.09 39 eP **P 09 41 53.6 -0.7**
comp=Z,190nm,0.7s,mb6.0
ALLY Alegheny Colle 84.38 31 eP **P 09 41 55.1 -0.6**
comp=Z,97nm,0.8s,mb5.7
PKME Peaks-Kenny Pk 84.54 23 eP **P 09 41 55.5 -0.9**
comp=Z,29nm,0.8s,mb5.2
MTLF Montolieu 84.55 333 eP **P 09 41 57.5 +1.0**
MTLF Montolieu 84.55 333 eP **P 09 41 57.5 +1.0**
USIN University of 84.56 38 eP **P 09 41 55.7 -0.9**
comp=Z,53nm,0.8s,mb5.4
MDV Middlebury 84.59 26 eP **P 09 41 55.4 -1.3**
comp=Z,4μm,0.7s
JCT Junction City 84.70 51 P **P 09 41 56.9 -0.6**
baz=84,SNR=35
JCT Junction City 84.70 51 eP **P 09 41 57.0 -0.5**
comp=Z,57nm,0.8s,mb5.5
JCT Junction City 84.70 51 eP **P 09 41 57.0 -0.5**
JCT pmax pmax
comp=Z,57nm,0.8s,mb5.5
LBNH Lisbon 84.75 25 eP **P 09 41 56.7 -0.7**
comp=Z,13nm,0.8s,mb4.8
LBNH Lisbon 84.75 25 eP **P 09 41 56.7 -0.8**
LBNH pmax pmax
comp=Z,13nm,0.8s,mb4.8
ACCN Adirondack Com 85.00 26 eP **P 09 41 57.6 -1.1**
comp=Z,52nm,1.1s,mb5.3
UALR University of 85.07 43 eP **P 09 41 58.4 -0.8**
comp=Z,8.9nm,0.8s,mb4.7
GNAR Gosnell 85.18 41 eP **P 09 41 59.6 -0.1**
HBAR Harrisburg 85.22 42 eP **P 09 41 59.3 -0.7**
GLAT Glass 85.25 40 eP **P 09 41 59.5 -0.6**
BINY Binghamton 85.33 28 eP **P 09 41 59.1 -1.3**
comp=Z,16nm,0.5s,mb5.1
UTMT University of 85.38 40 eP **P 09 42 00.4 -0.4**
comp=Z,182nm,1.1s,mb5.8
EPF Esparros 85.42 334 eP **P 09 42 01.4 +0.6**
comp=Z,10nm,0.7s,mb4.4
EPF Esparros 85.42 334 eP **P 09 42 01.4 +0.6**
comp=Z,5.1nm,0.7s,mb4.5
EPF Esparros 85.42 334 eP **P 09 42 01.4 +0.6**
EPF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
FFD Franklin Falls 85.53 25 eP **P 09 42 01.1 -0.2**
comp=Z,18nm,0.6s,mb5.1
EMMW East Machias 85.53 22 eP **P 09 41 59.4 -2.0**
comp=Z,76nm,1.0s,mb5.5
TRY Troy 85.60 27 eP **P 09 42 00.8 -0.9**
comp=Z,54nm,1.1s,mb5.3
ETSF Etsaut 85.81 334⇑iP P 09 42 03.7 +1.0
comp=Z,22nm,0.6s,mb4.9
ETSF Etsaut 85.81 334⇑iP P 09 42 03.7 +1.0
comp=Z,11nm,0.6s,mb4.9
ETSF Etsaut 85.81 334⇑iP P 09 42 03.7 +1.0
ETSF pmax pmax
comp=Z,11nm,0.6s,mb4.9
SJPF Ste Jean 85.82 335 eP **P 09 42 03.6 +0.9**
comp=Z,15nm,0.9s,mb4.5
SJPF Ste Jean 85.82 335 eP **P 09 42 03.6 +0.9**
comp=Z,7.6nm,0.9s,mb4.5
SJPF Ste Jean 85.82 335 eP **P 09 42 03.6 +0.9**
SJPF pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
WVT Waverly 86.02 39 eP **P 09 42 02.9 -0.9**
comp=Z,42nm,0.7s,mb5.4
WVT Waverly 86.02 39 eP **P 09 42 02.9 -1.0**
WVT pmax pmax
comp=Z,42nm,0.7s,mb5.4
SSPA Standing Stone 86.08 30 eP **P 09 42 03.1 -0.9**
comp=Z,47nm,1.0s,mb5.3
MCWV Mont Chateau 86.23 32 eP **P 09 42 04.0 -0.8**
comp=Z,52nm,1.1s,mb5.3
QUA2 Belchertown 86.41 26 eP **P 09 42 04.7 -0.9**
comp=Z,10nm,0.8s,mb4.7
OXF Oxford 86.66 41 eP **P 09 42 06.2 -0.8**
comp=Z,97nm,0.9s,mb5.6
OXF Oxford 86.66 41 eP **P 09 42 06.2 -0.8**
OXF pmax pmax
comp=Z,97nm,0.9s,mb5.6
TAOE Nuku Hiva Isla 87.00 106 eLR LR 10 10 28.7
comp=Z,150nm,35.4s
PAL Palisades 87.08 27 eP **P 09 42 07.9 -0.9**
comp=Z,26nm,0.7s,mb5.2
PAL Palisades 87.08 27 eP **P 09 42 07.9 -1.0**
PAL pmax pmax
comp=Z,26nm,0.7s,mb5.2
PPT Papeete 87.44 119 eLR LR 10 10 23.1
comp=Z,146nm,21.8s
SDMD Soldier's Deli 87.53 30 eP **P 09 42 10.3 -0.7**
comp=Z,34nm,0.9s,mb5.2
SWET Sewanee 87.62 38 eP **P 09 42 10.5 -1.0**
CPCT Cooper Cave 88.02 37 eP **P 09 42 12.8 -0.6**
VBMS Vicksburg 88.03 43 eP **P 09 42 13.5 0.0**
comp=Z,87nm,1.0s,mb5.5
BLA Blacksburg 88.16 34 eP **P 09 42 13.4 -0.6**
comp=Z,30nm,0.8s,mb5.2
BLA Blacksburg 88.16 34 eP **P 09 42 13.4 -0.6**
BLA pmax pmax
comp=Z,30nm,0.8s,mb5.2
TKL Tuckaleechee C 88.16 37 P **P 09 42 13.6 -0.5**
comp=Z,61nm,0.7s,mb5.5,baz=154,slow=0.6,SNR=110
TKL Tuckaleechee C 88.16 37 eP **P 09 42 13.3 -0.7**
TKL Tuckaleechee C 88.16 37 P **P 09 42 13.6 -0.4**
TKL pmax pmax
comp=Z,61nm,0.7s,mb5.5
CBN Corbin 88.42 31 eP **P 09 42 14.8 -0.3**
comp=Z,53nm,0.8s,mb5.4
KEST Kesra 88.68 324 P **P 09 42 16.9 +0.5**
comp=Z,3.4nm,0.8s,mb4.2,baz=332,slow=4.8,SNR=11
KEST pP pP 09 43 36.0 +1.2
comp=Z,2.1nm,0.8s,baz=149,slow=12,SNR=2.5
KEST Kesra 88.68 324 eP **P 09 42 16.1 -0.3**
LRAL Lakeview Retre 88.99 40 eP **P 09 42 17.0 -1.0**
comp=Z,16nm,0.8s,mb4.9
ESDC Sonseca Array 89.78 335 P **P 09 42 21.6 +0.1**
comp=Z,2.9nm,0.5s,mb4.5,baz=15,slow=4.3,SNR=13
ESDC pP pP 09 43 40.5 +0.6
comp=Z,2.6nm,0.7s,baz=21,slow=4.2,SNR=3.5
ESDC Sonseca Array 89.78 335 P **P 09 42 21.6 +0.1**
ESDC pP pP 09 43 40.5 +0.6
ESLA Sonseca Array 89.78 335 eP **P 09 42 21.2 -0.3**
comp=Z,0.9nm,0.6s,mb3.9
PAB San Pablo 90.01 336 eP **P 09 42 22.0 -0.6**
comp=Z,4.6nm,0.8s,mb4.5
PAB San Pablo 90.01 336 eP **P 09 42 22.0 -0.6**
PAB pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GOGA Godfrey 90.22 38 eP **P 09 42 23.2 -0.5**
comp=Z,25nm,0.7s,mb5.2
GOGA Godfrey 90.22 38 eP **P 09 42 23.2 -0.5**
GOGA pmax pmax
comp=Z,25nm,0.7s,mb5.2
JSC Jenkinsville 90.38 36 eP **P 09 42 23.9 -0.5**
JSC Jenkinsville 90.38 36 eP **P 09 42 24.0 -0.4**
TORD Torodi Ar. Bea 111.75 320 PKKPbc PKKPbc 09 58 49.3 +1.3
comp=Z,0.4nm,0.4s,baz=202,slow=1.7,SNR=7.2
ROSC El Rosal 119.17 44 pPKP pPKPdf 09 49 34.7 +1.5
comp=Z,2.8nm,0.4s,baz=92,slow=22,SNR=1.6
DBIC Dimbokro 120.37 323 PKPkdf 09 48 12.8 0.0
comp=Z,1.7nm,0.7s,baz=11,slow=3.6,SNR=3.1
DBIC Dimbokro 120.37 323 PKIKP PKPdf 09 48 12.8 +0.1
DBIC pmax pmax
comp=Z,2.0nm,0.7s
MAW Mawson 128.30 209 PKP PKPdf 09 48 26.4 +0.3
comp=Z,1.0nm,0.7s,baz=54,slow=4.6,SNR=4.8
MAW Mawson 128.30 209 PKIKP PKPdf 09 48 26.4 +0.2
MAW pmax pmax
comp=Z,1.0nm,0.7s
LPAZ La Paz 140.29 52 PKhKP PKPpre 09 48 44.4
comp=Z,2.6nm,0.8s,baz=22,slow=4.7,SNR=5.6
LPAZ La Paz 140.29 52 PKP PKPpre 09 48 44.4
LPAZ ePKPdf PKPdf 09 48 50.3 +0.2
LPAZ La Paz 140.29 52 PKHKP PKPpre 09 48 44.4
LPAZ e 09 48 50.3
NVL N'lazarevskaya 146.18 206 ePKP2 PKPdf 09 49 00.4 +1.6
NVL pmax pmax
comp=Z,12nm,0.6s
BDFB Brasilia 148.15 21 PKPbc PKPbc 09 49 07.2 -0.2
comp=Z,31nm,0.8s,baz=289,slow=1.2,SNR=35
LCO Las Campanas 148.29 69 ePKPbc PKPbc 09 49 07.5 +0.1
SNAA Sanae 149.82 200 PKPbc PKPbc 09 49 09.6 -0.3
comp=Z,0.8nm,0.3s,baz=197,slow=2.3,SNR=41
SNAA pPKPbc pPKPbc 09 50 29.1 -3.1
comp=Z,2.6nm,1.1s,baz=108,slow=4.6,SNR=1.1
CPUP Villa Florida 154.23 47 PKPbc PKPbc 09 49 19.9 -1.3
comp=Z,0.5nm,0.4s,baz=345,slow=2.1,SNR=4.9
CPUP PKPab PKPab 09 49 36.0 -0.6
comp=Z,14nm,0.8s,baz=309,slow=4.1,SNR=28
PLCA Paso Flores 154.82 90 PKPbc PKPbc 09 49 22.1 +0.2
comp=Z,3.4nm,0.8s,baz=264,slow=3.5,SNR=8.1
PLCA PKPab PKPab 09 49 38.4 -0.4
comp=Z,4.9nm,0.9s,baz=333,slow=2.6,SNR=6.0
PLCA pPKPab pPKPab 09 51 02.6 +4.5
comp=Z,4.3nm,1.1s,baz=343,slow=5.7,SNR=3.0
PLCA Paso Flores 154.82 90 PKPbc PKPbc 09 49 22.1 +0.2
PLCA PKPab PKPab 09 49 38.4 -0.4
PLCA pPKPab pPKPab 09 51 02.6 +4.5

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*ISCJB **18** 09:40:35.1±0.4, 14°.68N±0°.02×61°.20W±0°.09, h161km±3km, mb3.6/7, Error ellipse: s-maj=14.4km s-min=3.5km az=173.1*
*TRN **18** 09:40:35.3, 14°.70N×61°.10W, h154km, MD4.1, M3.4(FDF)*
*IDC **18** 09:40:35.6±0.5, 14°.73N×61°.12W, h148km±4km, mb3.3/7, mb1 3.7/8, mb1mx3.4/25, mbtmp3.4/8, MS3.0/2, Ms1 3.0/2, ms1mx2.5/24, Error ellipse: s-maj=18.1km s-min=8.6km az=74.0*
*NEIC **18** 09:40:35.8±1.5, 14°.83N×61°.07W, h155km±8km, Error ellipse: s-maj=35.4km s-min=24.4km az=72.0*

ISC 18 09:40:36.2±0.4, 14°.68N±0°.02×61°.21W±0°.09, h156km±3km, n48, σ0.9 70/70, mb3.6/7, 12C-14D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res ISC
FDF	**Fort de France**	**0.08**	**46**	ePn	**Pn**	**09 40 56.7**	**-0.3**
FDF	**Fort de France**	**0.08**	**46**	⇓iP	**Pn**	**09 40 56.9**	**-0.1**
FDF				⇓eS	**Sn**	**09 41 12.3**	**-0.6**
BIM	**Bigot**	**0.21**	**140**	⇓eP	**Pn**	**09 40 57.0**	**-0.2**
BIM				⇓eS	**Sn**	**09 41 15.4**	**+2.2**
MVM	**Montagne Vaucl**	**0.33**	**112**	⇑iP	**Pn**	**09 40 57.4**	**0.0**
DSHT	**Scott's Head**	**0.56**	**343**	⇓iP	**Pn**	**09 40 59.0**	**+0.5**
DSHT				eS	**Sn**	**09 41 15.5**	**0.0**
DSTT	**Stowe**	**0.57**	**351**	⇑iP	**Pn**	**09 40 59.0**	**+0.4**
DSTT	**Stowe**	**0.57**	**351**	⇓iP	**Pn**	**09 40 59.1**	**+0.6**
DSTT				eS	**Sn**	**09 41 15.6**	**-0.1**
DSTT				eS	**Sn**	**09 41 16.3**	**+0.6**
DFBT	**Forest Bistro**	**0.58**	**346**	⇓iP	**Pn**	**09 40 58.8**	**+0.2**
DLPL	**La Plaine**	**0.65**	**357**	eP	**Pn**	**09 40 58.7**	**-0.3**
DLPL				eS	**Sn**	**09 41 15.9**	**-0.6**
MDN	**Morne-Daniel**	**0.66**	**345**	⇓iP	**Pn**	**09 40 59.6**	**+0.5**
MDN				eS	**Sn**	**09 41 16.5**	**-0.1**
SLW	**Petit Monier**	**0.70**	**158**	⇓iP	**Pn**	**09 40 59.0**	**-0.4**
SLW				⇓eS	**Sn**	**09 41 16.7**	**-0.3**
SLPE	**Piton Saint Es**	**0.85**	**166**	eP	**Pn**	**09 40 60.0**	**-0.4**
SLPE				eS	**Sn**	**09 41 19.1**	**+0.2**
SLB	**Belfond**	**0.86**	**169**	⇑iP	**Pn**	**09 41 01.0**	**+0.5**

SLDE	**Delcer**	**0.88**	**170**	*e*P	**Pn**	**09 41 00.2**	**-0.4**
SLDE				*e*S	**Sn**	**09 41 19.8**	**+0.5**
MCLT	**Moule a Chique**	**1.00**	**165**	⇑*i*P	**Pn**	**09 41 01.3**	**-0.2**
MCLT				*e*S	**Sn**	**09 41 20.2**	**-0.7**
MGG	**Marie-Galante**	**1.24**	**355**	*e*P	**Pn**	**09 41 03.3**	**-0.3**
TBG	**Guadaloupe-3**	**1.24**	**340**	⇑*i*P	**Pn**	**09 41 03.3**	**-0.3**
SSV	**Crater Summit**	**1.34**	**179**	⇓*i*P	**Pn**	**09 41 05.3**	**+0.7**
SSV				*e*S	**Sn**	**09 41 26.9**	**+0.4**
SVV	**Soufriere Volc**	**1.35**	**180**	⇑*i*P	**Pn**	**09 41 05.7**	**+0.9**
BHS	**Barnard House**	**1.38**	**177**	⇓*i*P	**Pn**	**09 41 04.8**	**-0.1**
HMG	**Houelmont**	**1.38**	**340**	*e*P	**Pn**	**09 41 05.0**	**0.0**
PHG	**Guadaloupe-2**	**1.39**	**343**	⇑*i*P	**Pn**	**09 41 05.3**	**+0.2**
SVB	**Belmont**	**1.40**	**182**	*e*P	**Pn**	**09 41 05.2**	**0.0**
SVB				*e*S	**Sn**	**09 41 26.4**	**-1.0**
SCG	**Saint Claude**	**1.42**	**341**	⇑*i*P	**Pn**	**09 41 05.4**	**+0.1**
BCG	**Bois Riant Cap**	**1.45**	**344**	*e*P	**Pn**	**09 41 05.8**	**+0.1**
LZG	**Guadaloupe-1**	**1.55**	**340**	⇑*i*P	**Pn**	**09 41 06.6**	**-0.1**
SFG	**Saint Francois**	**1.57**	**0**	⇑*i*P	**Pn**	**09 41 06.5**	**-0.4**
GRSS	**Sisters**	**2.40**	**189**	⇑*i*P	**Pn**	**09 41 17.0**	**+0.7**
GRSS				*e*S	**Sn**	**09 41 46.9**	**-0.5**
GRIC	**Isle de Caille**	**2.41**	**189**	*e*P	**Pn**	**09 41 17.2**	**+0.7**
GRIC				*e*S	**Sn**	**09 41 47.7**	**+0.1**
GRHS	**Sauteurs**	**2.48**	**190**	⇓*e*P	**Pn**	**09 41 18.0**	**+0.7**
GRHS				*e*S	**Sn**	**09 41 48.8**	**-0.2**
GRW	**Mount Saint Ca**	**2.54**	**190**	⇑*e*P	**Pn**	**09 41 19.0**	**+0.9**
GRW				*e*S	**Sn**	**09 41 51.4**	**+0.9**
SKI	**Saint Kitts**	**3.02**	**331**	⇓*i*P	**Pn**	**09 41 24.0**	**-0.1**
SKI				*e*S	**Sn**	**09 42 01.2**	**0.0**
ANWB	**Willy Bob**	**3.02**	**350**	*e*Pn	**Pn**	**09 41 22.2**	**-1.9**
TOSP	**Speyside**	**3.42**	**169**	*e*P	**Pn**	**09 41 29.2**	**0.0**
TOSP				*e*S	**Sn**	**09 42 08.4**	**-1.9**
TPR	**Prospect**	**3.50**	**173**	*e*P	**Pn**	**09 41 30.8**	**+0.7**
TPR				*e*S	**Sn**	**09 42 11.4**	**-0.6**
TRN	**Trinidad (W)**	**4.01**	**183**	*e*P	**Pn**	**09 41 38.1**	**+1.4**
TRN				*e*S	**Sn**	**09 42 21.9**	**-2.0**
TBH	**Brigand Hill**	**4.17**	**178**	*e*P	**Pn**	**09 41 39.7**	**+0.8**
TBH				*e*S	**Sn**	**09 42 26.7**	**-0.9**
SJG	**San Juan**	**5.84**	**306**	P	**Pn**	**09 42 00.8**	**0.0**
	2.6nm,0.3s,baz=304,slow=22,SNR=6.1						
SJG				S	**Sn**	**09 43 12.8**	**+5.7**
	2.3nm,0.3s,baz=334,slow=21,SNR=4.3						
SJG	**San Juan**	**5.84**	**306**	P	**Pn**	**09 42 00.8**	**0.0**
SJG				S	**Sn**	**09 43 12.8**	**+5.7**
ROSC	**El Rosal**	**16.19**	**234**	LR	LR	09 50 18.1	
	comp=Z,32nm,20.9s,baz=111,slow=36						
TXAR	**Lajitas Array**	**41.74**	**298**	P	**P**	**09 48 09.7**	**-0.4**
	0.2nm,0.5s,mb3.0,baz=116,slow=7.7,SNR=4.9						
TXAR				PcP	PcP	09 50 05.0	+1.4
	0.2nm,0.6s,baz=120,slow=4.9,SNR=4.0						
ULM	**Lac du Bonnet**	**45.25**	**329**	P	**P**	**09 48 36.8**	**-1.0**
	3.9nm,0.5s,mb4.3,baz=118,slow=12,SNR=6.1						
PDAR	**Pinedale Array**	**49.91**	**314**	P	**P**	**09 49 13.7**	**-0.2**
	0.8nm,0.6s,mb3.5,baz=113,slow=9.7,SNR=5.8						
PDAR				PcP	PcP	09 50 32.7	+0.8
	0.3nm,0.6s,baz=83,slow=7.4,SNR=2.4						
MDT	**Midelt**	**54.23**	**60**	LR	LR	10 06 33.0	
	comp=Z,27nm,21.5s,baz=317,slow=29						
NVAR	**Mina Array Bea**	**55.34**	**307**	P	**P**	**09 49 54.9**	**+1.0**
	0.2nm,0.6s,mb3.0,baz=92,slow=6.3,SNR=2.8						
YKA	**Yellowknife Ar**	**60.60**	**335**	P	**P**	**09 50 29.5**	**-0.6**
	1.4nm,0.6s,mb4.0,baz=102,slow=7.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**60.90**	**83**	P	**P**	**09 50 34.1**	**+1.1**
	0.5nm,0.6s,mb3.5,baz=283,slow=7.0,SNR=4.0						
ILAR	**Eielson Array**	**75.00**	**334**	P	**P**	**09 52 00.0**	**-0.1**
	0.6nm,0.5s,mb3.5,baz=89,slow=4.7,SNR=25						

IGIL ***18*** *09:41:59.3, 38.°04N×12.°06W, h30km, ML3.2*
MDD ***18*** *09:42:00.3±1.4, 38.°16N×11.°99W, h34km±47km, mb4.9/24, Error ellipse: s-maj=22.1km s-min=7.3km az=69.0, PRIMO*
NEIC ***18*** *09:42:00.3, 38.°20N×12.°00W, h32km, MN3.2(MDD), After MDD.*
ISCJB ***18*** *09:42:01.3±0.7, 38.°32N±0.°03×11.°44W±0.°05, h10km, Error ellipse: s-maj=5.7km s-min=3.7km az=157.6*
CSEM ***18*** *09:42:01.4±0.4, 38.°23N×11.°56W, h10km, ML4.2/16, Error ellipse: s-maj=8.9km s-min=5.3km az=71.0*
INMG ***18*** *09:42:02.7±1.9, 38.°06N×12.°03W, h9km±62km, ML3.0, Error ellipse: s-maj=34.9km s-min=6.1km az=77.0*
CNRM ***18*** *09:42:02.3, 37.°95N×11.°66W, h30km, MD3.5*
ISC 18 09:42:02.2±0.6, 38.°26N±0.°03×11.°49W±0.°04, h10km, n207, σ1§18/390, 8D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**1.86**	**67**	*e*Pn	**Pn**	**09 42 35.5**	**+1.4**
PMAFR				*e*Sn	**Sn**	**09 43 00.6**	**+2.9**
PMAFR				A		09 43 03.0	
	227nm,0.3s						
PMAFR				A		09 43 03.0	
	227nm,0.3s						
PMAFR	**Mafra**	**1.86**	**67**	P	**Pn**	**09 42 35.4**	**+1.3**
	20nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**09 43 00.4**	**+2.8**
	284nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**1.86**	**67**	P	**Pn**	**09 42 35.4**	**+1.3**
	20nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**09 43 00.4**	**+2.8**
	284nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**1.86**	**67**	P	**Pn**	**09 42 35.4**	**+1.3**
	20nm,0.1s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**09 43 00.6**	**+2.9**
	227nm,0.3s						
LIS	**Lisbon**	**1.89**	**75**	*e*S	**Sn**	**09 43 01.0**	**+2.6**
LIS				*e*S	**Sn**	**09 43 01.1**	**+2.6**
LIS				AML	AML	09 43 01.4	
	comp=E,143nm,0.1s						
LIS	**Lisbon**	**1.89**	**75**	S	**Sn**	**09 43 01.0**	**+2.6**
LIS	**Lisbon**	**1.89**	**75**	S	**Sn**	**09 43 01.0**	**+2.6**
PTEO	**Sao Teotonio**	**2.30**	**107**	*i* Pn	**Pn**	**09 42 39.7**	**-0.4**
PTEO				*e*Sn	**Sn**	**09 43 07.4**	**-1.1**
PTEO				A		09 43 10.4	
	comp=E,66nm,0.2s						
PTEO				A		09 43 10.4	
	comp=E,66nm,0.2s						
PTEO	**Sao Teotonio**	**2.30**	**107**	⇓P	**Pn**	**09 42 39.7**	**-0.4**
PTEO				S	**Sn**	**09 43 07.4**	**-1.1**
	comp=E,33nm,0.2s						
PTEO	**Sao Teotonio**	**2.30**	**107**	⇓P	**Pn**	**09 42 39.7**	**-0.4**
PTEO				S	**Sn**	**09 43 07.4**	**-1.1**
	comp=E,33nm,0.2s						
PFVI	**Vila Bisbo**	**2.39**	**117**	*i* Pn	**Pn**	**09 42 40.1**	**-1.3**
PFVI				*e*Sn	**Sn**	**09 43 08.2**	**-2.5**
PFVI				A		09 43 12.4	
	comp=E,26nm,0.1s						
PFVI				A		09 43 12.4	
	comp=E,26nm,0.1s						
PFVI	**Vila Bisbo**	**2.39**	**117**	P	**Pn**	**09 42 40.2**	**-1.2**
PFVI				S	**Sn**	**09 43 11.8**	**+1.0**
PFVI	**Vila Bisbo**	**2.39**	**117**	⇓P	**Pn**	**09 42 40.1**	**-1.3**
	comp=E,30nm,0.0s,SNR=18						
PFVI				S	**Sn**	**09 43 08.1**	**-2.7**
	comp=E,33nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**2.39**	**117**	⇓P	**Pn**	**09 42 40.1**	**-1.3**
	comp=E,30nm,0.0s,SNR=18						
PFVI				S	**Sn**	**09 43 08.1**	**-2.7**
	comp=E,33nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**2.39**	**117**	P	**Pn**	**09 42 40.2**	**-1.2**
PFVI				*e*Sn	**Sn**	**09 43 08.2**	**-2.5**
	comp=E,26nm,0.1s						
PFVI				S	**Sn**	**09 43 11.8**	**+1.1**
MORF	**Marmelete**	**2.44**	**112**	*e*Pn	**Pn**	**09 42 41.2**	**-0.9**
MORF				*e*Sn	**Sn**	**09 43 10.5**	**-1.5**
MORF				A		09 43 12.2	
	comp=E,120nm,0.1s						
MORF				A		09 43 12.2	
	comp=E,120nm,0.1s						
MORF	**Marmelete**	**2.44**	**112**	P	**Pn**	**09 42 41.2**	**-0.9**
MORF				S	**Sn**	**09 43 10.5**	**-1.5**
	comp=E,120nm,0.1s						
MORF	**Marmelete**	**2.44**	**112**	P	**Pn**	**09 42 41.2**	**-0.9**
MORF				S	**Sn**	**09 43 10.5**	**-1.5**
	comp=E,120nm,0.1s						
MORF	**Marmelete**	**2.44**	**112**	*e*Pn	**Pn**	**09 42 41.2**	**-0.9**
MORF				*e*Sn	**Sn**	**09 43 10.5**	**-1.5**
	comp=E,120nm,0.1s						
ALMR	**Almeirim**	**2.45**	**68**	*e*P	**Pn**	**09 42 43.3**	**+1.1**
ALMR				*e*S	**Sn**	**09 43 14.0**	**+1.9**
ALMR				*e*S	**Sn**	**09 43 14.0**	**+1.9**
ALMR				AML	AML	09 43 14.6	
	comp=N,113nm,0.1s						
ALMR	**Almeirim**	**2.45**	**68**	P	**Pn**	**09 42 43.3**	**+1.1**
ALMR				S	**Sn**	**09 43 14.0**	**+1.9**
ALMR	**Almeirim**	**2.45**	**68**	P	**Pn**	**09 42 43.3**	**+1.1**
ALMR				S	**Sn**	**09 43 14.0**	**+1.9**
ALMR	**Almeirim**	**2.45**	**68**	*e*P	**Pn**	**09 42 43.3**	**+1.1**
MOE				*e*Sn	**Sn**	**09 43 14.1**	**+1.2**
MOE	**Montemor**	**2.48**	**83**	P	**Pn**	**09 42 45.1**	**+2.5**
MOE				S	**Sn**	**09 43 14.1**	**+1.2**
MOE	**Montemor**	**2.48**	**83**	P	**Pn**	**09 42 45.1**	**+2.5**
MOE				S	**Sn**	**09 43 14.1**	**+1.2**
MOE	**Montemor**	**2.48**	**83**	*e*Pn	**Pn**	**09 42 45.1**	**+2.5**
MOE				*e*Sn	**Sn**	**09 43 14.1**	**+1.2**
MESJ	**Messejana**	**2.61**	**98**	*e*P	**Pn**	**09 42 44.7**	**+0.3**
MESJ				*e*S	**Sn**	**09 43 16.8**	**+0.6**
MESJ				*e*S	**Sn**	**09 43 16.8**	**+0.6**
MESJ	**Messejana**	**2.61**	**98**	P	**Pn**	**09 42 44.7**	**+0.2**
MESJ				S	**Sn**	**09 43 16.8**	**+0.6**
MESJ	**Messejana**	**2.61**	**98**	P	**Pn**	**09 42 44.7**	**+0.2**
MESJ				S	**Sn**	**09 43 16.8**	**+0.6**
MESJ	**Messejana**	**2.61**	**98**	*e*P	**Pn**	**09 42 44.7**	**+0.2**
EVO	**Evora**	**2.74**	**83**	*e*Pn	**Pn**	**09 42 47.3**	**+1.1**
EVO				*e*Sn	**Sn**	**09 43 20.3**	**+0.9**
EVO				A		09 43 24.2	
	comp=N,91nm,0.2s						
EVO	**Evora**	**2.74**	**83**	P	**Pn**	**09 42 47.3**	**+1.1**
EVO				S	**Sn**	**09 43 20.3**	**+0.9**
	comp=N,91nm,0.2s						
EVO	**Evora**	**2.74**	**83**	P	**Pn**	**09 42 47.3**	**+1.1**
EVO				S	**Sn**	**09 43 20.3**	**+0.9**
	comp=N,91nm,0.2s						
EVO	**Evora**	**2.74**	**83**	*e*Pn	**Pn**	**09 42 47.3**	**+1.1**
EVO				*e*Sn	**Sn**	**09 43 20.3**	**+0.9**
	comp=N,91nm,0.2s						
PTOM	**Tomar**	**2.76**	**60**	*e*Pn	**Pn**	**09 42 47.6**	**+1.2**
PTOM				*e*Sn	**Sn**	**09 43 21.8**	**+2.0**
PTOM				A		09 43 25.5	
	comp=N,71nm,0.1s						
PTOM				A		09 43 25.5	
	comp=N,71nm,0.1s						
PTOM	**Tomar**	**2.76**	**60**	P	**Pn**	**09 42 47.6**	**+1.2**
PTOM				S	**Sn**	**09 43 21.8**	**+2.0**
	comp=N,35nm,0.1s						
PTOM	**Tomar**	**2.76**	**60**	P	**Pn**	**09 42 47.6**	**+1.2**
PTOM				S	**Sn**	**09 43 21.8**	**+2.0**
	comp=N,35nm,0.1s						
PTOM	**Tomar**	**2.76**	**60**	*e*Pn	**Pn**	**09 42 47.6**	**+1.2**
PTOM				*e*Sn	**Sn**	**09 43 21.8**	**+2.0**
	comp=N,71nm,0.1s						
PCVE	**Castro Verde**	**2.80**	**102**	*e*Pn	**Pn**	**09 42 47.6**	**+0.6**
PCVE				*e*Sn	**Sn**	**09 43 20.3**	**-0.5**
PCVE				A		09 43 24.5	
	comp=N,26nm,0.1s						
PCVE				A		09 43 24.5	
	comp=N,26nm,0.1s						
PCVE	**Castro Verde**	**2.80**	**102**	P	**Pn**	**09 42 47.6**	**+0.6**
PCVE				S	**Sn**	**09 43 20.3**	**-0.5**
	comp=N,26nm,0.1s						
PCVE	**Castro Verde**	**2.80**	**102**	P	**Pn**	**09 42 47.6**	**+0.6**
PCVE				S	**Sn**	**09 43 20.3**	**-0.5**
	comp=N,26nm,0.1s						
PCVE	**Castro Verde**	**2.80**	**102**	*e*Pn	**Pn**	**09 42 47.6**	**+0.6**
PCVE				*e*Sn	**Sn**	**09 43 20.3**	**-0.5**
	comp=N,26nm,0.1s						
PBEJ	**Beja**	**2.86**	**94**	*e*Pn	**Pn**	**09 42 49.1**	**+1.2**
PBEJ				*e*Sn	**Sn**	**09 43 22.3**	**-0.1**
PBEJ				A		09 43 24.4	
	comp=N,27nm,0.1s						
PBEJ				A		09 43 24.4	
	comp=N,27nm,0.1s						
PBEJ	**Beja**	**2.86**	**94**	P	**Pn**	**09 42 49.1**	**+1.2**
PBEJ				S	**Sn**	**09 43 22.3**	**-0.1**
	comp=N,14nm,0.1s						
PBEJ	**Beja**	**2.86**	**94**	P	**Pn**	**09 42 49.1**	**+1.2**
PBEJ				S	**Sn**	**09 43 22.3**	**-0.1**
	comp=N,14nm,0.1s						
PBEJ	**Beja**	**2.86**	**94**	*e*Pn	**Pn**	**09 42 49.1**	**+1.2**
PBEJ				*e*Sn	**Sn**	**09 43 22.3**	**-0.1**
	comp=N,27nm,0.1s						
PBDV	**Barranco-do-Ve**	**3.00**	**109**	*e*Pn	**Pn**	**09 42 49.5**	**-0.2**
PBDV				*e*Sn	**Sn**	**09 43 25.1**	**-0.6**
PBDV				A		09 43 28.0	
	comp=N,29nm,0.1s						
PBDV	**Barranco-do-Ve**	**3.00**	**109**	P	**Pn**	**09 42 49.5**	**-0.2**
PBDV				S	**Sn**	**09 43 25.1**	**-0.6**
	comp=N,29nm,0.1s						
PBDV	**Barranco-do-Ve**	**3.00**	**109**	P	**Pn**	**09 42 49.5**	**-0.2**
PBDV				S	**Sn**	**09 43 25.1**	**-0.6**
	comp=N,29nm,0.1s						
PBDV	**Barranco-do-Ve**	**3.00**	**109**	*e*Pn	**Pn**	**09 42 49.5**	**-0.2**
PBDV				*e*Sn	**Sn**	**09 43 25.1**	**-0.6**
	comp=N,29nm,0.1s						
PVAQ	**Vaqueiros**	**3.10**	**105**	*e*Pn	**Pn**	**09 42 51.1**	**-0.1**
PVAQ				*e*Sn	**Sn**	**09 43 27.3**	**-1.1**
PVAQ				A		09 43 31.5	
	comp=N,32nm,0.1s						
PVAQ	**Vaqueiros**	**3.10**	**105**	P	**Pn**	**09 42 51.1**	**-0.1**
PVAQ				S	**Sn**	**09 43 27.3**	**-1.1**
	comp=N,32nm,0.1s						
PVAQ	**Vaqueiros**	**3.10**	**105**	P	**Pn**	**09 42 51.1**	**-0.1**
PVAQ				S	**Sn**	**09 43 27.3**	**-1.1**
	comp=N,32nm,0.1s						
PVAQ	**Vaqueiros**	**3.10**	**105**	*e*Pn	**Pn**	**09 42 51.1**	**-0.1**
PVAQ				*e*Sn	**Sn**	**09 43 27.3**	**-1.1**
	comp=N,32nm,0.1s						
PESTR	**Estremoz**	**3.12**	**78**	*e*Pn	**Pn**	**09 42 52.1**	**+0.7**
PESTR				*e*Sn	**Sn**	**09 43 29.6**	**+1.0**
PESTR				A		09 43 36.2	
	comp=N,28nm,0.3s						
PESTR	**Estremoz**	**3.12**	**78**	P	**Pn**	**09 42 52.1**	**+0.7**
PESTR				S	**Sn**	**09 43 29.6**	**+1.0**
	comp=N,28nm,0.3s						
PESTR	**Estremoz**	**3.12**	**78**	P	**Pn**	**09 42 52.1**	**+0.7**
PESTR				S	**Sn**	**09 43 29.6**	**+1.0**
	comp=N,28nm,0.3s						
PESTR	**Estremoz**	**3.12**	**78**	*e*Pn	**Pn**	**09 42 52.1**	**+0.7**
PESTR				*e*Sn	**Sn**	**09 43 29.6**	**+1.0**
	comp=N,28nm,0.3s						
EGRO	**El Granado**	**3.25**	**102**	P	**Pn**	**09 42 53.3**	**+0.1**
EGRO				S	**Sn**	**09 43 31.4**	**-0.5**
EGRO	**El Granado**	**3.25**	**102**	⇓P	**Pn**	**09 42 52.9**	**-0.3**
	comp=N,17nm,0.1s,SNR=18						
EGRO				S	**Sn**	**09 43 31.6**	**-0.3**
	comp=N,35nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.25**	**102**	⇓P	**Pn**	**09 42 52.9**	**-0.3**
	comp=N,17nm,0.1s,SNR=18						
EGRO				S	**Sn**	**09 43 31.6**	**-0.3**
	comp=N,35nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.25**	**102**	P	**Pn**	**09 42 53.3**	**+0.1**
EGRO				S	**Sn**	**09 43 31.6**	**-0.3**
	comp=N,35nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**3.40**	**69**	*e*Pn	**Pn**	**09 42 56.1**	**+0.8**
PMRV				*e*Sn	**Sn**	**09 43 37.0**	**+1.3**
PMRV				A		09 43 39.0	
	comp=N,36nm,0.1s						
PMRV	**Marv??o**	**3.40**	**69**	P	**Pn**	**09 42 56.1**	**+0.8**
PMRV				S	**Sn**	**09 43 37.0**	**+1.3**
	comp=N,36nm,0.1s						
PMRV	**Marv??o**	**3.40**	**69**	P	**Pn**	**09 42 56.1**	**+0.8**
PMRV				S	**Sn**	**09 43 37.0**	**+1.3**
	comp=N,36nm,0.1s						
PMRV	**Marv??o**	**3.40**	**69**	*e*Pn	**Pn**	**09 42 56.1**	**+0.8**
PMRV				*e*Sn	**Sn**	**09 43 37.0**	**+1.3**
	comp=N,36nm,0.1s						
PCBR	**Castelo Branco**	**3.50**	**62**	*e*Pn	**Pn**	**09 42 57.5**	**+0.9**
PCBR				*e*Sn	**Sn**	**09 43 39.1**	**+1.0**
PCBR				A		09 43 42.0	
	comp=N,21nm,0.2s						
PCBR	**Castelo Branco**	**3.50**	**62**	P	**Pn**	**09 42 57.5**	**+0.9**
PCBR				S	**Sn**	**09 43 39.1**	**+1.0**
	comp=N,10nm,0.2s						
PCBR	**Castelo Branco**	**3.50**	**62**	P	**Pn**	**09 42 57.5**	**+0.9**
PCBR				S	**Sn**	**09 43 39.1**	**+1.0**
	comp=N,10nm,0.2s						
PCBR	**Castelo Branco**	**3.50**	**62**	*e*Pn	**Pn**	**09 42 57.5**	**+0.9**
PCBR				*e*Sn	**Sn**	**09 43 39.1**	**+1.0**
	comp=N,21nm,0.2s						
PBAR	**Barrancos**	**3.50**	**90**	*e*Pn	**Pn**	**09 42 57.4**	**+0.7**
PBAR				*e*Sn	**Sn**	**09 43 38.2**	**0.0**
PBAR				A		09 43 43.3	
	comp=N,21nm,0.1s						
PBAR	**Barrancos**	**3.50**	**90**	P	**Pn**	**09 42 57.4**	**+0.7**
PBAR				S	**Sn**	**09 43 38.2**	**0.0**
	comp=N,21nm,0.1s						
PBAR	**Barrancos**	**3.50**	**90**	P	**Pn**	**09 42 57.4**	**+0.7**
PBAR				S	**Sn**	**09 43 38.2**	**0.0**
	comp=N,21nm,0.1s						
PBAR	**Barrancos**	**3.50**	**90**	*e*Pn	**Pn**	**09 42 57.4**	**+0.7**
PBAR				*e*Sn	**Sn**	**09 43 38.2**	**0.0**
	comp=N,21nm,0.1s						
EBAD	**Badajoz**	**3.54**	**81**	P	**Pn**	**09 42 58.7**	**+1.5**
EBAD				S	**Sn**	**09 43 39.2**	**0.0**
EBAD	**Badajoz**	**3.54**	**81**	P	**Pn**	**09 42 58.2**	**+1.0**
	comp=N,4.5nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**09 43 40.1**	**+0.9**
	comp=N,37nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.54**	**81**	P	**Pn**	**09 42 58.2**	**+1.0**
	comp=N,4.5nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**09 43 40.1**	**+0.9**
	comp=N,37nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.54**	**81**	P	**Pn**	**09 42 58.2**	**+0.9**
	comp=N,4.5nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**09 43 39.2**	**0.0**
PVIS	**Viseu**	**3.71**	**47**	*e*Pn	**Pn**	**09 42 59.9**	**+0.4**
PVIS				*e*Sn	**Sn**	**09 43 43.1**	**-0.1**
PVIS				A		09 43 46.1	
	comp=N,44nm,0.1s						
PVIS	**Viseu**	**3.71**	**47**	P	**Pn**	**09 42 59.9**	**+0.4**
PVIS				S	**Sn**	**09 43 43.1**	**-0.1**
	comp=N,22nm,0.1s						
PVIS	**Viseu**	**3.71**	**47**	P	**Pn**	**09 42 59.9**	**+0.4**
PVIS				S	**Sn**	**09 43 43.1**	**-0.1**
	comp=N,22nm,0.1s						
PVIS	**Viseu**	**3.71**	**47**	*e*Pn	**Pn**	**09 42 59.9**	**+0.4**
PVIS				*e*Sn	**Sn**	**09 43 43.1**	**-0.1**
	comp=N,44nm,0.1s						
MTE	**Manteigas**	**3.73**	**54**	*e*Pn	**Pn**	**09 43 01.0**	**+1.2**
MTE				*e*Sn	**Sn**	**09 43 44.6**	**+0.8**
MTE	**Manteigas**	**3.73**	**54**	P	**Pn**	**09 43 01.0**	**+1.2**
MTE				S	**Sn**	**09 43 44.6**	**+0.8**
MTE	**Manteigas**	**3.73**	**54**	P	**Pn**	**09 43 01.0**	**+1.2**
MTE				S	**Sn**	**09 43 44.6**	**+0.8**
EMIN	**Mina Concepcio**	**3.83**	**96**	P	**Pn**	**09 43 01.8**	**+0.5**
EMIN				S	**Sn**	**09 43 46.1**	**-0.3**
EMIN	**Mina Concepcio**	**3.83**	**96**	⇓P	**Pn**	**09 43 01.7**	**+0.5**
	comp=N,19nm,0.1s,SNR=18						
EMIN				S	**Sn**	**09 43 46.1**	**-0.3**
	comp=N,28nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.83**	**96**	⇓P	**Pn**	**09 43 01.7**	**+0.5**
	comp=N,19nm,0.1s,SNR=18						
EMIN				S	**Sn**	**09 43 46.1**	**-0.3**
	comp=N,28nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.83**	**96**	P	**Pn**	**09 43 01.8**	**+0.6**
EMIN				S	**Sn**	**09 43 46.1**	**-0.3**
	comp=N,28nm,0.5s,SNR=7.9						
PCAB	**Cabril**	**4.35**	**37**	*e*Pn	**Pn**	**09 43 08.2**	**-0.2**
PCAB				*e*Sn	**Sn**	**09 43 58.2**	**-0.9**
PCAB				A		09 44 02.8	
	comp=N,18nm,0.1s						
PCAB	**Cabril**	**4.35**	**37**	P	**Pn**	**09 43 08.2**	**-0.2**
PCAB				S	**Sn**	**09 43 58.2**	**-0.9**
	comp=N,8.8nm,0.1s						
PCAB	**Cabril**	**4.35**	**37**	P	**Pn**	**09 43 08.2**	**-0.2**
PCAB				S	**Sn**	**09 43 58.2**	**-0.9**
	comp=N,8.8nm,0.1s						
PCAB	**Cabril**	**4.35**	**37**	*e*Pn	**Pn**	**09 43 08.2**	**-0.2**
PCAB				*e*Sn	**Sn**	**09 43 58.2**	**-0.9**
	comp=N,18nm,0.1s						
EZAM	**Zamans**	**4.43**	**28**	P	**Pn**	**09 43 07.8**	**-1.7**
EZAM				S	**Sn**	**09 43 57.2**	**-3.9**
EZAM	**Zamans**	**4.43**	**28**	P	**Pn**	**09 43 07.3**	**-2.2**
	comp=N,12nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**09 43 57.2**	**-4.0**
	comp=N,29nm,0.4s,SNR=7.9						
EZAM	**Zamans**	**4.43**	**28**	P	**Pn**	**09 43 07.3**	**-2.2**
	comp=N,12nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**09 43 57.2**	**-4.0**
	comp=N,29nm,0.4s,SNR=7.9						
EZAM	**Zamans**	**4.43**	**28**	P	**Pn**	**09 43 07.8**	**-1.7**
EZAM				S	**Sn**	**09 43 57.2**	**-3.9**
	comp=N,29nm,0.4s,SNR=7.9						
ELOB	**Lobios**	**4.46**	**35**	P	**Pn**	**09 43 08.7**	**-1.2**
ELOB				S	**Sn**	**09 43 59.2**	**-2.5**
ELOB	**Lobios**	**4.46**	**35**	P	**Pn**	**09 43 08.7**	**-1.2**
	comp=N,7.0nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**09 44 00.2**	**-1.6**
	comp=N,7.5nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**4.46**	**35**	P	**Pn

comp=N,4.1nm,0.2s
PBRG Braganca 5.08 44 *e*Pn **Pn 09 43 18.5 +0.1**
PBRG *e*Sn **Sn 09 44 15.9 -1.1**
comp=N,8.2nm,0.2s
EJIF Jimena Fronter 5.12 109 P **Pn 09 43 18.8 -0.2**
EJIF Jimena Fronter 5.12 109 P **Pn 09 43 19.5 +0.5**
comp=N,3.3nm,0.2s,SNR=7.9
EJIF Jimena Fronter 5.12 109 P **Pn 09 43 19.5 +0.5**
comp=N,3.3nm,0.2s,SNR=7.9
EJIF Jimena Fronter 5.12 109 P **Pn 09 43 19.5 +0.5**
comp=N,3.3nm,0.2s,SNR=7.9
STS Santiago 5.13 25 P **Pn 09 43 18.0 -1.1**
STS Santiago 5.13 25 P **Pn 09 43 17.1 -2.0**
comp=N,7.8nm,0.1s,SNR=7.9
STS Santiago 5.13 25 P **Pn 09 43 17.1 -2.0**
comp=N,7.8nm,0.1s,SNR=7.9
STS Santiago 5.13 25 P **Pn 09 43 18.0 -1.1**
ECAL Calabor 5.18 43 P **Pn 09 43 19.6 0.0**
ECAL S **Sn 09 44 18.8 -0.7**
ECAL Calabor 5.18 43 P **Pn 09 43 19.7 0.0**
comp=N,5.8nm,0.1s,SNR=7.9
ECAL S **Sn 09 44 18.8 -0.7**
comp=N,13nm,0.2s,SNR=7.9
ECAL Calabor 5.18 43 P **Pn 09 43 19.7 0.0**
comp=N,5.8nm,0.1s,SNR=7.9
ECAL S **Sn 09 44 18.8 -0.6**
comp=N,13nm,0.2s,SNR=7.9
ECEU Ceuta 5.42 114 P **Pn 09 43 23.4 +0.3**
comp=N,5.2nm,0.1s,SNR=7.9
ECEU Ceuta 5.42 114 P **Pn 09 43 23.4 +0.3**
comp=N,5.2nm,0.1s,SNR=7.9
ECEU Ceuta 5.42 114 P **Pn 09 43 23.4 +0.3**
comp=N,5.2nm,0.1s,SNR=7.9
EADA Adamuz 5.44 89 P **Pn 09 43 23.8 +0.5**
EADA S **Sn 09 44 25.3 -0.7**
EADA Adamuz 5.44 89 P **Pn 09 43 23.8 +0.5**
comp=N,6.0nm,0.1s,SNR=7.9
EADA S **Sn 09 44 24.7 -1.3**
comp=N,19nm,0.1s,SNR=7.9
EADA Adamuz 5.44 89 P **Pn 09 43 23.8 +0.5**
comp=N,6.0nm,0.1s,SNR=7.9
EADA S **Sn 09 44 24.7 -1.3**
comp=N,19nm,0.1s,SNR=7.9
EADA Adamuz 5.44 89 P **Pn 09 43 23.8 +0.4**
comp=N,6.0nm,0.1s,SNR=7.9
EADA S **Sn 09 44 25.3 -0.7**
ESDC Sonseca Array 6.03 74 P **Pn 09 43 33.1 +1.6**
ESDC S **Sn 09 44 40.6 +0.1**
ESDC Sonseca Array 6.03 74 P **Pn 09 43 33.1 +1.6**
comp=N,6.2nm,0.1s,baz=260,slow=13,SNR=9.4
ESDC S **Sn 09 44 40.6 +0.1**
comp=N,2.3nm,0.3s,baz=260,slow=24,SNR=52
ESDC Sonseca Array 6.03 74 P **Pn 09 43 33.1 +1.6**
comp=N,6.2nm,0.1s,baz=260,slow=13,SNR=9.4
ESDC S **Sn 09 44 40.6 +0.1**
comp=N,2.3nm,0.3s,baz=260,slow=24,SNR=52
ESDC Sonseca Array 6.03 74 P **Pn 09 43 33.1 +1.7**
comp=N,6.2nm,0.1s,baz=260,slow=13,SNR=9.4
ESDC S **Sn 09 44 40.6 +0.1**
comp=N,2.3nm,0.3s,baz=260,slow=24,SNR=52
EPON Pontenova 6.04 32 P **Pn 09 43 30.2 -1.3**
EPON S **Sn 09 44 37.9 -2.7**
EPON Pontenova 6.04 32 P **Pn 09 43 30.4 -1.1**
comp=N,3.5nm,0.1s,SNR=7.9
EPON S **Sn 09 44 37.1 -3.5**
comp=N,2.4nm,0.1s,SNR=7.9
EPON Pontenova 6.04 32 P **Pn 09 43 30.4 -1.1**
comp=N,3.5nm,0.1s,SNR=7.9
EPON S **Sn 09 44 37.1 -3.5**
comp=N,2.4nm,0.1s,SNR=7.9
EPON Pontenova 6.04 32 P **Pn 09 43 30.4 -1.1**
comp=N,3.5nm,0.1s,SNR=7.9
EPON S **Sn 09 44 37.9 -2.7**
EBAN Banos Encina 6.07 89 P **Pn 09 43 31.9 0.0**
EBAN S **Sn 09 44 39.6 -1.8**
EBAN Banos Encina 6.07 89 P **Pn 09 43 32.5 +0.6**
comp=N,2.6nm,0.1s,SNR=7.9
EBAN S **Sn 09 44 39.6 -1.8**
comp=N,8.8nm,0.2s,SNR=7.9
EBAN Banos Encina 6.07 89 P **Pn 09 43 32.5 +0.6**
comp=N,2.6nm,0.1s,SNR=7.9
EBAN S **Sn 09 44 39.6 -1.8**
comp=N,8.8nm,0.2s,SNR=7.9
EBAN Banos Encina 6.07 89 P **Pn 09 43 32.5 +0.6**
comp=N,2.6nm,0.1s,SNR=7.9
EBAN S **Sn 09 44 39.6 -1.8**
comp=N,8.8nm,0.2s,SNR=7.9
GUD Guadarrama 6.15 65 P **Pn 09 43 33.9 +0.8**
GUD S **Sn 09 44 43.3 -0.2**
GUD Guadarrama 6.15 65 P **Pn 09 43 33.9 +0.8**
comp=N,4.3nm,0.3s,SNR=7.9
GUD S **Sn 09 44 43.1 -0.5**
comp=N,7.2nm,0.2s,SNR=7.9
GUD Guadarrama 6.15 65 P **Pn 09 43 33.9 +0.8**
comp=N,4.3nm,0.3s,SNR=7.9
GUD S **Sn 09 44 43.1 -0.5**
comp=N,7.2nm,0.2s,SNR=7.9
GUD Guadarrama 6.15 65 P **Pn 09 43 33.9 +0.8**
comp=N,4.3nm,0.3s,SNR=7.9
GUD S **Sn 09 44 43.1 -0.4**
comp=N,7.2nm,0.2s,SNR=7.9
EGUA Guajares 6.45 100 P **Pn 09 43 38.4 +1.2**
EGUA Guajares 6.45 100 P **Pn 09 43 38.4 +1.2**
comp=N,4.9nm,0.2s,SNR=7.9
EGUA Guajares 6.45 100 P **Pn 09 43 38.4 +1.2**
comp=N,4.9nm,0.2s,SNR=7.9
EGUA Guajares 6.45 100 P **Pn 09 43 38.4 +1.2**
comp=N,4.9nm,0.2s,SNR=7.9
EQUE Quentar 6.46 97 P **Pn 09 43 38.1 +0.7**
comp=N,3.7nm,0.3s,SNR=7.9
EQUE S **Sn 09 44 49.8 -1.3**
comp=N,4.8nm,0.5s,SNR=7.9
EQUE Quentar 6.46 97 P **Pn 09 43 38.1 +0.7**
comp=N,3.7nm,0.3s,SNR=7.9
EQUE S **Sn 09 44 49.8 -1.3**
comp=N,4.8nm,0.5s,SNR=7.9
EQUE Quentar 6.46 97 P **Pn 09 43 38.1 +0.7**
comp=N,3.7nm,0.3s,SNR=7.9
EQUE S **Sn 09 44 49.8 -1.4**
comp=N,4.8nm,0.5s,SNR=7.9
EARI Arriondas 6.93 41 P **Pn 09 43 44.2 +0.5**
EARI S **Sn 09 45 00.3 -2.3**
EARI Arriondas 6.93 41 P **Pn 09 43 45.2 +1.5**
comp=N,2.2nm,0.3s,SNR=7.9
EARI S **Sn 09 45 00.3 -2.3**
comp=N,0.6nm,0.2s,SNR=7.9
EARI Arriondas 6.93 41 P **Pn 09 43 45.2 +1.5**
comp=N,2.2nm,0.3s,SNR=7.9
EARI S **Sn 09 45 00.3 -2.3**
comp=N,0.6nm,0.2s,SNR=7.9
EARI Arriondas 6.93 41 P **Pn 09 43 44.2 +0.4**
EARI S **Sn 09 45 00.3 -2.3**
comp=N,0.6nm,0.2s,SNR=7.9
EBER Berja 6.96 99 P **Pn 09 43 45.8 +1.6**
EBER Berja 6.96 99 P **Pn 09 43 45.8 +1.6**
comp=N,0.6nm,0.2s,SNR=7.9
EBER Berja 6.96 99 P **Pn 09 43 45.8 +1.6**
comp=N,0.6nm,0.2s,SNR=7.9
EBER Berja 6.96 99 P **Pn 09 43 45.8 +1.6**
CIA Chichaoua 7.04 161 P **Pn 09 43 39.0 -6.4**
CIA S **Sn 09 44 52.0 -13**
CIA Chichaoua 7.04 161 P **Pn 09 43 39.0 -6.4**
CIA S **Sn 09 44 52.0 -13**
CIA Chichaoua 7.04 161 *e*P **Pn 09 43 39.0 -6.4**
CIA *i* S **Sn 09 44 52.0 -13**
EVIA Vianos 7.06 84 P **Pn 09 43 46.2 +0.6**
EVIA S **Sn 09 45 04.5 -1.4**
EVIA Vianos 7.06 84 P **Pn 09 43 46.2 +0.6**
comp=N,1.2nm,0.1s,SNR=7.9
EVIA S **Sn 09 45 04.5 -1.4**
comp=N,4.4nm,0.2s,SNR=7.9
EVIA Vianos 7.06 84 P **Pn 09 43 46.2 +0.6**
comp=N,1.2nm,0.1s,SNR=7.9
EVIA S **Sn 09 45 04.5 -1.4**
comp=N,4.4nm,0.2s,SNR=7.9
EVIA Vianos 7.06 84 P **Pn 09 43 46.2 +0.6**
comp=N,1.2nm,0.1s,SNR=7.9
EVIA S **Sn 09 45 04.5 -1.4**
comp=N,4.4nm,0.2s,SNR=7.9
TZK Tazeka 7.22 123 P **Pn 09 43 45.0 -2.8**
TZK S **Sn 09 45 01.0 -8.9**
TZK Tazeka 7.22 123 P **Pn 09 43 45.0 -2.8**
TZK S **Sn 09 45 01.0 -8.9**
TZK Tazeka 7.22 123 *i* P **Pn 09 43 45.0 -2.8**
TZK *i* S **Sn 09 45 01.0 -8.9**
TZC Tazercounte 7.34 145 P **Pn 09 43 45.0 -4.4**
TZC S **Sn 09 45 02.0 -11**
TZC Tazercounte 7.34 145 P **Pn 09 43 45.0 -4.4**
TZC S **Sn 09 45 02.0 -11**
TZC Tazercounte 7.34 145 *e*P **Pn 09 43 45.0 -4.4**
TZC *i* S **Sn 09 45 02.0 -11**
CZD Col de Zad 7.39 133 P **Pn 09 43 47.0 -3.2**
CZD S **Sn 09 45 03.0 -11**
CZD Col de Zad 7.39 133 P **Pn 09 43 47.0 -3.2**
CZD S **Sn 09 45 03.0 -11**
CZD Col de Zad 7.39 133 *i* P **Pn 09 43 47.0 -3.2**
CZD *i* S **Sn 09 45 03.0 -11**
ETOB Tobarra 7.81 84 P **Pn 09 43 55.8 0.0**
ETOB S **Sn 09 45 22.6 -1.7**
ETOB Tobarra 7.81 84 P **Pn 09 43 55.8 0.0**
comp=N,1.7nm,0.3s,SNR=7.9
ETOB S **Sn 09 45 22.6 -1.7**
comp=N,1.3nm,0.2s,SNR=7.9
ETOB Tobarra 7.81 84 P **Pn 09 43 55.8 0.0**
comp=N,1.7nm,0.3s,SNR=7.9
ETOB S **Sn 09 45 22.6 -1.7**
comp=N,1.3nm,0.2s,SNR=7.9
ETOB Tobarra 7.81 84 P **Pn 09 43 55.8 0.0**
comp=N,1.7nm,0.3s,SNR=7.9
ETOB S **Sn 09 45 22.6 -1.7**
comp=N,1.3nm,0.2s,SNR=7.9
ELAN Lanestosa 7.88 48 P **Pn 09 43 56.5 -0.2**
ELAN S **Sn 09 45 23.1 -2.8**
ELAN Lanestosa 7.88 48 P **Pn 09 43 57.0 +0.3**
comp=N,0.4nm,0.1s,SNR=4.0
ELAN S **Sn 09 45 23.1 -2.8**
comp=N,0.7nm,0.1s,SNR=7.9
ELAN Lanestosa 7.88 48 P **Pn 09 43 57.0 +0.3**
comp=N,0.4nm,0.1s,SNR=4.0
ELAN S **Sn 09 45 23.1 -2.8**
comp=N,0.7nm,0.1s,SNR=7.9
ELAN Lanestosa 7.88 48 P **Pn 09 43 56.5 -0.2**
ELAN S **Sn 09 45 23.1 -2.8**
comp=N,0.7nm,0.1s,SNR=7.9
ZFT Errachidia 8.53 135 P **Pn 09 44 03.0 -2.7**
ZFT S **Sn 09 45 31.0 -11**
ZFT Errachidia 8.53 135 P **Pn 09 44 03.0 -2.7**
ZFT S **Sn 09 45 31.0 -11**
ZFT Errachidia 8.53 135 *e*P **Pn 09 44 03.0 -2.7**
ZFT *e*S **Sn 09 45 31.0 -11**
EBIE Bielsa 9.90 60 P **Pn 09 44 26.1 +1.6**
comp=N,0.5nm,0.1s,SNR=7.9
EBIE Bielsa 9.90 60 P **Pn 09 44 26.1 +1.6**
comp=N,0.5nm,0.1s,SNR=7.9
EBIE Bielsa 9.90 60 P **Pn 09 44 26.1 +1.6**
comp=N,0.5nm,0.1s,SNR=7.9

NAO ***18*** *09:58:45.9±0.8, 65°.49N×22°.92E, ML2.6*
CSEM ***18*** *09:58:46.9±0.1, 65°.51N×22°.65E, h2km, ML2.4, Error ellipse: s-maj=2.7km s-min=2.3km az=115.0*
ISCJB ***18*** *09:58:46.8±0.2, 65°.51N±0°.02×22°.68E±0°.05, h10km, Error ellipse: s-maj=2.8km s-min=2.2km az=20.0*
HEL ***18*** *09:58:47.6±0.1, 65°.51N×22°.68E, h4km±1km, ML2.6, ML2.4(UPP), ML2.7(BER)*
IDC ***18*** *09:58:47.7±0.8, 65°.42N×23°.14E, h0km, mb1 3.2/5, mb1mx3.1/28, mbtmp3.2/5, ML2.6/5, Error ellipse: s-maj=14.8km s-min=6.9km az=96.0*
BER ***18*** *09:58:47.8±4.6, 65°.50N×22°.69E, h0km±16km, ML2.7, ML2.6(NAO)*
UPP ***18*** *09:58:47.7, 65°.52N×22°.56E, h5km, ML2.4*
ISC 18 09:58:47.7±0.2, 65°.51N±0°.01×22°.60E±0°.04, h10km, n98, σ1§**03**/160**, 6C-4D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SJUU	**Sjulsmark**	**0.42**	**270**	⇓*i*P	**Pg**		**09 58 55.2**	**-0.7**
SJUU				*i* S	**Sg**		**09 59 01.2**	**-0.1**
SJUU	**Sjulsmark**	**0.42**	**270**	⇓P	**Pg**		**09 58 55.2**	**-0.7**
SJUU				S	**Sg**		**09 59 01.2**	**-0.2**
HARU	**Harads**	**0.94**	**315**	⇓*e*P	**Pg**		**09 59 04.6**	**-1.2**
HARU				*e*S	**Sg**		**09 59 17.6**	**-0.3**
HARU	**Harads**	**0.94**	**315**	⇓P	**Pg**		**09 59 04.6**	**-1.1**
HARU				S	**Sg**		**09 59 17.6**	**-0.3**
BURU	**Burvik**	**1.07**	**210**	⇑*e*P	**Pg**		**09 59 07.4**	**-0.8**
BURU				*e*S	**Sg**		**09 59 21.4**	**-0.6**
BURU	**Burvik**	**1.07**	**210**	⇑P	**Pg**		**09 59 07.4**	**-0.8**
BURU				S	**Sg**		**09 59 21.4**	**-0.6**
LILU	**Lilltraesk**	**1.18**	**260**	⇑*e*P	**Pb**		**09 59 09.7**	**-0.4**
LILU				*e*S	**Sb**		**09 59 25.6**	**+0.3**
LILU	**Lilltraesk**	**1.18**	**260**	⇑P	**Pb**		**09 59 09.7**	**-0.4**
LILU				S	**Sb**		**09 59 25.6**	**+0.3**
OUL	**Oulu**	**1.45**	**106**	*e*P	**Pn**		**09 59 13.1**	**-0.9**
OUL				*e*S	**Sn**		**09 59 30.6**	**-2.3**
OUL	**Oulu**	**1.45**	**106**	P	**Pn**		**09 59 13.0**	**-0.9**
OUL				S	**Sn**		**09 59 30.6**	**-2.3**
SVAU	**Svanoeiden**	**1.64**	**233**	⇑*e*P	**Pn**		**09 59 17.1**	**+0.5**
SVAU				*e*S	**Sn**		**09 59 38.9**	**+1.2**
SVAU	**Svanoeiden**	**1.64**	**233**	⇑P	**Pn**		**09 59 17.1**	**+0.5**
SVAU				S	**Sn**		**09 59 38.9**	**+1.2**
RNF	**Rovaniemi**	**1.77**	**50**	*e*P	**Pn**		**09 59 19.0**	**+0.6**
RNF				*e*S	**Sn**		**09 59 41.3**	**+0.3**
RNF	**Rovaniemi**	**1.77**	**50**	P	**Pn**		**09 59 19.0**	**+0.6**
RNF				S	**Sn**		**09 59 41.3**	**+0.3**
MASU	**Masugnsbyn**	**1.97**	**353**	*e*P	**Pn**		**09 59 21.7**	**+0.6**
MASU				*e*S	**Sn**		**09 59 47.4**	**+1.6**
MASU	**Masugnsbyn**	**1.97**	**353**	P	**Pn**		**09 59 21.7**	**+0.6**
MASU				S	**Sn**		**09 59 47.3**	**+1.5**
BREU	**Bredtraesk**	**2.37**	**229**	*e*P	**Pn**		**09 59 27.3**	**+0.7**
BREU	**Bredtraesk**	**2.37**	**229**	P	**Pn**		**09 59 27.2**	**+0.6**
VAF	**Ylistaro**	**2.48**	**179**	*e*P	**Pn**		**09 59 29.1**	**+1.0**
VAF				*e*S	**Sn**		**09 59 58.7**	**+0.4**
VAF				MSG			10 00 02.7	
comp=Z,15nm,0.1s
VAF Ylistaro 2.48 179 P **Pn 09 59 29.0 +0.9**
VAF S **Sn 09 59 58.7 +0.4**
comp=Z,15nm,0.1s
SALU Saltoluokta 2.50 321 *e*P **Pn 09 59 29.4 +1.1**
SALU Saltoluokta 2.50 321 P **Pn 09 59 29.4 +1.1**
SGF Sodankyl 2.50 37 *e*P **Pn 09 59 29.1 +0.7**
SGF *e*S **Sn 09 59 59.2 +0.5**
SGF MSG 10 00 04.7
comp=Z,26nm,0.2s
SGF Sodankyl 2.50 37 P **Pn 09 59 29.0 +0.7**
SGF S **Sn 09 59 59.2 +0.4**
comp=Z,26nm,0.2s
LANU Lannavaara 2.56 355 *e*P **Pn 09 59 30.4 +1.2**
LANU *e*S **Sn 10 00 01.4 +1.0**
LANU Lannavaara 2.56 355 P **Pn 09 59 30.3 +1.1**
LANU S **Sn 10 00 01.3 +0.9**
KJN Kajaani 2.61 121 *e*P **Pn 09 59 29.6 -0.4**
KJN *e*S **Sn 10 00 01.5 -0.1**
KJN MSG 10 00 09.9
comp=Z,26nm,0.2s
KJN Kajaani 2.61 121 P **Pn 09 59 29.5 -0.4**
KJN S **Sn 10 00 01.5 -0.1**
comp=Z,26nm,0.2s
KUA Kurravaara 2.61 341 *e*P **Pn 09 59 31.2 +1.3**
HUSU Husum 2.63 216 *e*P **Pn 09 59 31.3 +1.2**
HUSU *e*S **Sn 10 00 03.1 +1.2**
HUSU Husum 2.63 216 P **Pn 09 59 31.3 +1.2**
HUSU S **Sn 10 00 03.1 +1.1**
MSF Maaselka 2.69 78 *e*P **Pn 09 59 31.3 +0.3**
MSF *e*S **Sn 10 00 04.0 +0.4**
MSF Maaselka 2.69 78 P **Pn 09 59 31.3 +0.3**
MSF S **Sn 10 00 03.9 +0.3**
HEF Hetta 2.94 8 *e*P **Pn 09 59 35.0 +0.6**
HEF *e*S **Sn 10 00 09.9 +0.2**
HEF MSG 10 00 21.7
comp=Z,16nm,0.2s
HEF Hetta 2.94 8 P **Pn 09 59 34.9 +0.5**
HEF S **Sn 10 00 09.9 +0.2**
comp=Z,16nm,0.2s
KU6 Riekki 3.05 77 *e*P **Pn 09 59 35.8 -0.1**
KU6 MSG 10 00 18.8
KU6 Riekki 3.05 77 P **Pn 09 59 35.8 -0.1**
SUF Sumiainen 3.21 149 *e*P **Pn 09 59 38.4 +0.3**
SUF *e*S **Sn 10 00 16.2 -0.1**
SUF MSG 10 00 31.0
comp=Z,19nm,0.2s
SUF Sumiainen 3.21 149 P **Pn 09 59 38.3 +0.2**
SUF S **Sn 10 00 16.1 -0.1**
comp=Z,19nm,0.2s
MOR8 Moi Rana 3.42 285 *e*Sg **Sg 10 00 32.6 -4.8**
MOR8 AML AML 10 00 34.5
comp=Z,32nm,0.3s
MOR8 Moi Rana 3.42 285 *e*SG **Sg 10 00 32.6 -4.8**
MOR8 AML AML 10 00 34.5
comp=Z,32nm,0.3s
KEF Keuruu 3.50 162 *e*P **Pn 09 59 43.7 +1.5**
KEF *e*S **Sn 10 00 23.6 0.0**
KEF MSG 10 00 41.8
comp=Z,17nm,0.2s
KEF Keuruu 3.50 162 P **Pn 09 59 43.6 +1.4**
KEF S **Sn 10 00 23.6 0.0**
comp=Z,17nm,0.2s
KTK1 Kautokeino 3.53 4 *e*P **Pn 09 59 43.1 +0.7**
KTK1 *e*S **Sn 10 00 25.0 +0.9**
KTK1 AML AML 10 00 43.6
comp=Z,45nm,0.8s
KTK1 Kautokeino 3.53 4 *e*P **Pn 09 59 43.1 +0.7**
KTK1 *e*S **Sn 10 00 25.0 +0.9**
KTK1 AML AML 10 00 43.6
comp=Z,45nm,0.8s
KTK1 Kautokeino 3.53 4 *e*P **Pn 09 59 43.1 +0.7**
SNR=50
KTK1 *e*S **Sn 10 00 25.0 +0.9**
comp=Z,28nm,0.3s,SNR=50
KIF Kilpisjarvi 3.58 350 *e*P **Pn 09 59 44.6 +1.4**
KIF MSG 10 00 47.1
comp=Z,23nm,0.2s
KIF Kilpisjarvi 3.58 350 P **Pn 09 59 44.5 +1.3**
VRF Varrio 3.58 48 *e*P **Pn 09 59 42.7 -0.5**
VRF *e*S **Sn 10 00 24.1 -1.4**
VRF MSG 10 00 26.9
comp=Z,15nm,0.2s
VRF Varrio 3.58 48 P **Pn 09 59 42.6 -0.6**
VRF S **Sn 10 00 24.1 -1.4**
comp=Z,15nm,0.2s
KAF Kangasniemi 3.79 153 *e*P **Pn 09 59 47.6 +1.6**
KAF MSG 10 00 48.0
comp=Z,22nm,0.2s
KAF Kangasniemi 3.79 153 P **Pn 09 59 47.5 +1.5**
STEI Steigen 3.80 313 *e*Sg **Sg 10 00 48.3 -1.2**
STEI AML AML 10 00 50.6
comp=Z,25nm,0.5s
STEI Steigen 3.80 313 *e*SG **Sg 10 00 48.3 -1.2**
STEI AML AML 10 00 50.6
comp=Z,25nm,0.5s
STEI Steigen 3.80 313 Sg **Sg 10 00 48.3 -1.3**
comp=Z,25nm,0.5s
FLOS Flostrand 3.88 287 *e*Sg **Sg 10 00 49.9 -2.2**
FLOS AML AML 10 00 51.3
comp=Z,90nm,0.7s
FLOS Flostrand 3.88 287 *e*SG **Sg 10 00 49.9 -2.2**
FLOS AML AML 10 00 51.3
comp=Z,90nm,0.7s
KONS Konsvik 4.00 289 *e*Sg **Sg 10 00 54.2 -1.8**
KONS AML AML 10 00 57.6
comp=Z,28nm,0.3s
KONS Konsvik 4.00 289 *e*SG **Sg 10 00 54.2 -1.8**
KONS AML AML 10 00 57.6
comp=Z,28nm,0.3s
ARA0 ARCESS Array S 4.19 14 Pn **Pn 09 59 51.3 -0.3**
baz=192,slow=14
ARA0 Sn **Sn 10 00 37.3 -3.2**
baz=194,slow=22
ARA0 Lg 10 00 51.9
baz=196,slow=28
ARA0 ARCESS Array S 4.19 14 *e*P **Pn 09 59 51.3 -0.3**
ARA0 *e*S **Sn 10 00 37.3 -3.2**
ARA0 *e*SB **Sb 10 00 51.9 -0.1**
ARA0 ARCESS Array S 4.19 14 P **Pn 09 59 51.3 -0.3**
ARCES ARCESS Array B 4.19 14 Pn **Pn 09 59 51.6 +0.1**
comp=Z,0.9nm,0.3s,baz=192,slow=14,SNR=144
ARCES Pg **Pg 10 00 01.3 -6.6**
comp=Z,3.6nm,0.3s,baz=191,slow=16,SNR=33
ARCES Sn **Sn 10 00 39.6 -0.9**
comp=Z,3.2nm,0.3s,baz=190,slow=20,SNR=7.5
ARCES Lg 10 00 53.7
comp=Z,3.6nm,0.3s,baz=197,slow=29,SNR=9.1
HASU Hassela 4.29 221 *e*P **Pn 09 59 53.5 +0.5**
HASU Hassela 4.29 221 P **Pn 09 59 53.4 +0.5**
FIA0 FINESS Array S 4.37 158 Pn **Pn 09 59 54.8 +0.7**
baz=350,slow=16
FIA0 Sn **Sn 10 00 43.0 -2.0**
baz=345,slow=22
FIA0 Lg 10 00 59.4
baz=339,slow=37
FIA0 FINESS Array S 4.37 158 *e*P **Pn 09 59 54.8 +0.7**
FIA0 *e*S **Sn 10 00 43.0 -2.0**
FIA0 *e*SG **Sg 10 00 59.4 -8.5**
FIA0 FINESS Array S 4.37 158 P **Pn 09 59 54.7 +0.7**
FIA0 Sn **Sn 10 00 43.0 -1.9**
baz=345,slow=21,SNR=50
FINES FINESS Array B 4.37 158 Pn **Pn 09 59 54.6 +0.6**
comp=Z,0.2nm,0.3s,baz=344,slow=13,SNR=3.0
FINES Pg **Pg 10 00 04.6 -6.7**
comp=Z,0.7nm,0.3s,baz=352,slow=16,SNR=7.8
FINES Sn **Sn 10 00 42.7 -2.2**
comp=Z,1.0nm,0.3s,baz=345,slow=20,SNR=4.4
FINES Lg 10 00 59.6
comp=Z,5.0nm,0.3s,baz=346,slow=27,SNR=16
HUDU Hudiksvall 4.51 215 *e*P **Pn 09 59 55.5 -0.5**
HUDU Hudiksvall 4.51 215 P **Pn 09 59 55.5 -0.4**
RAF Rauma 4.52 185 *e*S **Sn 10 00 48.1 -0.5**
RAF Rauma 4.52 185 S **Sn 10 00 48.1 -0.6**
KEV Kevo 4.58 20 *e*P **Pn 09 59 56.4 -0.5**
KEV *e*S **Sn 10 00 49.3 -0.8**
KEV Kevo 4.58 20 P **Pn 09 59 56.4 -0.5**
KEV S **Sn 10 00 49.2 -0.9**
JOF Joensuu 4.61 120 *e*P **Pn 09 59 58.3 +1.0**
JOF MSG 10 01 11.5
comp=Z,11nm,0.3s
JOF Joensuu 4.61 120 P **Pn 09 59 58.3 +1.0**
NSS Namsos 4.62 263 *e*P **Pn 09 59 58.3 +0.9**
NSS *e*Sg **Sg 10 01 11.2 -4.6**
NSS AML AML 10 01 17.0
comp=Z,23nm,0.6s
NSS Namsos 4.62 263 *e*P **Pn 09 59 58.3 +0.9**
NSS *e*SG **Sg 10 01 11.2 -4.6**
NSS AML AML 10 01 17.0
comp=Z,23nm,0.6s
NSS Namsos 4.62 263 *e*P **Pn 09 59 58.3 +0.9**
SNR=49
NSS *e*Sg **Sg 10 01 11.1 -4.7**
comp=Z,23nm,0.6s,SNR=90
APA0 Apatity Array 4.65 58 Pn **Pn 09 59 57.1 -0.8**
APA0 Sn **Sn 10 00 49.4 -2.4**
baz=250,slow=22
APA0 Lg 10 01 07.4
baz=243,slow=22
APA0 Apatity Array 4.65 58 *e*P **Pn 09 59 57.1 -0.8**
APA0 *e*S **Sn 10 00 49.4 -2.4**
APA0 *e*SG **Sg 10 01 07.4 -9.5**
APA0 Apatity Array 4.65 58 P **Pn 09 59 57.1 -0.8**
APA0 Sn **Sn 10 00 49.4 -2.4**
baz=250,slow=21,SNR=50
ROTU Roteberg 5.11 220 *e*P **Pn 10 00 03.1 -1.1**
ROTU Roteberg 5.11 220 P **Pn 10 00 03.1 -1.1**
GRAU Graesoe 5.52 202 *e*P **Pn 10 00 10.6 +0.8**
GRAU Graesoe 5.52 202 P **Pn 10 00 10.5 +0.7**
HFS Hagfors 6.76 221 Pn **Pn 10 00 25.4 -1.4**
baz=45,slow=14
HFS Sn **Sn 10 01 40.8 -3.0**
baz=34,slow=28
HFS Lg 10 02 15.9
baz=34,slow=28
HFS Hagfors 6.76 221 Pn **Pn 10 00 26.2 -0.6**
comp=Z,0.1nm,0.3s,baz=32,slow=14,SNR=3.2
HFS Sn **Sn 10 01 40.9 -2.8**
comp=Z,0.2nm,0.3s,baz=45,slow=27,SNR=4.0
HFS Lg 10 02 15.7
comp=Z,1.5nm,0.3s,baz=37,slow=28,SNR=9.3
HFS Hagfors 6.76 221 *e*P **Pn 10 00 25.4 -1.4**
HFS *e*S **Sn 10 01 40.8 -3.0**
HFS *e*SG **Sg 10 02 15.9 -8.6**
HFS Hagfors 6.76 221 P **Pn 10 00 25.4 -1.4**
NB2 NORSAR Subarra 6.81 234 Lg 10 02 18.0
baz=52,slow=37
NB2 NORSAR Subarra 6.81 234 Lg 10 02 18.0
baz=52,slow=37
NB2 NORSAR Subarra 6.81 234 *e*SG **Sg 10 02 18.0 -8.1**
NOA NORSAR Array B 6.81 234 Pn **Pn 10 00 29.2 +1.6**
comp=Z,0.2nm,0.3s,baz=17,slow=15,SNR=2.9
NOA Lg 10 02 13.4
comp=Z,1.1nm,0.3s,baz=234,slow=15,SNR=5.2
VSU Vasula 7.34 163 Pn **Pn 10 00 31.8 -2.9**

VSU				Lg		10 02 35.0	
VSU	**Vasula**	**7.34**	**163**	*e*P	**Pn**	**10 00 31.8**	**-2.9**
VSU				*e*SG	**Sg**	**10 02 35.0**	**-7.9**
SPITS	**Spitsbergen Ar**	**12.87**	**354**	Pn	**Pn**	**10 01 50.6**	**+0.3**
	baz=156,slow=19,SNR=2.7						

*BER **18** 10:09:54.8±1.0,59°.95N×31°.44E,h31km±89km, ML2.4(NAO)*
*NAO **18** 10:09:57.4±3.7,60°.10N×30°.28E,ML2.4*
*HEL **18** 10:09:58.6±0.1,60°.17N×30°.41E,h0km,ML1.9, ML2.4(NAO),Explosion*
*CSEM **18** 10:09:58.2±0.8,60°.21N×30°.48E,h1km,ML1.9,Error ellipse: s-maj=17.3km s-min=8.9km az=148.0,Mining explosion.*
*IDC **18** 10:09:59.7±3.5,60°.25N×30°.27E,h0km,mb1 3.2/3, mb1mx3.0/26,mbtmp3.0/3,ML2.8/3,Error ellipse: s-maj=38.0km s-min=19.5km az=155.0*
ISC 18 10:09:57.9±1.3,60°.19N±0°.08×30°.4E±0°.1,h0km,n24, σ1°08/45,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**1.46**	**285**	*e*P	**Pn**	**10 10 24.7**	**-0.9**
VJF				*e*S	**Sg**	**10 10 43.9**	**-1.0**
VJF				MSG		10 10 50.5	
	comp=Z,13nm,0.2s						
PVF	**Pernaja**	**2.29**	**281**	*e*P	**Pn**	**10 10 37.7**	**+0.8**
PVF				*e*S	**Sn**	**10 11 06.7**	**+1.0**
PVF				MSG		10 11 12.2	
	comp=Z,5.9nm,0.2s						
PVF	**Pernaja**	**2.29**	**281**	P	**Pn**	**10 10 37.6**	**+0.7**
PVF				S	**Sn**	**10 11 06.7**	**+0.9**
	comp=Z,5.9nm,0.2s						
FIA0	**FINESS Array S**	**2.47**	**303**	Pn	**Pn**	**10 10 39.4**	**0.0**
	baz=120,slow=16						
FIA0				Sn	**Sn**	**10 11 12.6**	**+2.4**
	baz=118,slow=28						
FIA0	**FINESS Array S**	**2.47**	**303**	*e*P	**Pn**	**10 10 39.8**	**+0.5**
FIA0				*e*S	**Sn**	**10 11 10.5**	**+0.3**
FIA0				MSG		10 11 18.5	
	comp=Z,3.3nm,0.2s						
FIA0	**FINESS Array S**	**2.47**	**303**	Pn	**Pn**	**10 10 39.4**	**0.0**
	baz=120,slow=15,SNR=6.2						
FIA0	**FINESS Array S**	**2.47**	**303**	P	**Pn**	**10 10 39.8**	**+0.4**
FIA0				S	**Sn**	**10 11 10.4**	**+0.2**
	comp=Z,3.3nm,0.2s						
FIA0				Sn	**Sn**	**10 11 12.6**	**+2.4**
	baz=118,slow=25,SNR=1.9						
FINES	**FINESS Array B**	**2.47**	**303**	Pn	**Pn**	**10 10 39.8**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=117,slow=15,SNR=20						
FINES				Sn	**Sn**	**10 11 12.7**	**+2.5**
	comp=Z,1.1nm,0.3s,baz=120,slow=21,SNR=8.1						
JOF	**Joensuu**	**2.77**	**9**	*e*P	**Pn**	**10 10 44.6**	**+1.1**
JOF				*e*S	**Sn**	**10 11 18.1**	**+0.5**
JOF				MSG		10 11 24.0	
	comp=Z,2.9nm,0.2s						
JOF	**Joensuu**	**2.77**	**9**	P	**Pn**	**10 10 44.6**	**+1.1**
JOF				S	**Sn**	**10 11 18.0**	**+0.4**
	comp=Z,2.9nm,0.2s						
KAF	**Kangasniemi**	**2.77**	**316**	*e*P	**Pn**	**10 10 44.6**	**+1.1**
KAF				*e*S	**Sn**	**10 11 17.8**	**+0.1**
KAF				MSG		10 11 27.4	
	comp=Z,4.0nm,0.2s						
KAF	**Kangasniemi**	**2.77**	**316**	P	**Pn**	**10 10 44.6**	**+1.1**
KAF				S	**Sn**	**10 11 17.7**	**0.0**
	comp=Z,4.0nm,0.2s						
MEF	**Metsahovi**	**3.00**	**273**	*e*P	**Pn**	**10 10 47.4**	**+0.7**
MEF				*e*S	**Sn**	**10 11 23.4**	**0.0**
MEF	**Metsahovi**	**3.00**	**273**	P	**Pn**	**10 10 47.3**	**+0.6**
MEF				S	**Sn**	**10 11 23.4**	**0.0**
SUF	**Sumiainen**	**3.26**	**323**	*e*P	**Pn**	**10 10 51.3**	**+1.1**
SUF	**Sumiainen**	**3.26**	**323**	P	**Pn**	**10 10 51.3**	**+1.1**
KEF	**Keuruu**	**3.34**	**309**	*e*P	**Pn**	**10 10 52.3**	**+1.0**
KEF				*e*S	**Sn**	**10 11 31.7**	**+0.1**
KEF	**Keuruu**	**3.34**	**309**	P	**Pn**	**10 10 52.3**	**+1.0**
KEF				S	**Sn**	**10 11 31.6**	**0.0**
HFS	**Hagfors**	**8.34**	**277**	Pn	**Pn**	**10 11 59.9**	**0.0**
	baz=79,slow=15,SNR=2.4						
HFS				Sn	**Sn**	**10 13 33.7**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=85,slow=23,SNR=3.6						
HFS				Lg		10 14 20.6	
	comp=Z,0.2nm,0.3s,baz=85,slow=32,SNR=2.8						
NOA	**NORSAR Array B**	**9.47**	**283**	Pn	**Pn**	**10 12 14.1**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=153,slow=12,SNR=4.7						
NOA				Lg		10 14 54.0	
	comp=Z,0.3nm,0.3s,baz=218,slow=22,SNR=2.5						
ARA0	**ARCESS Array S**	**9.61**	**350**	Pn	**Pn**	**10 12 15.0**	**-2.3**
	baz=160,slow=16						
ARA0				Sn	**Sn**	**10 13 58.1**	**-7.6**
	baz=165,slow=28						
ARA0	**ARCESS Array S**	**9.61**	**350**	*e*P	**Pn**	**10 12 15.0**	**-2.3**
ARA0				*e*S	**Sn**	**10 13 58.1**	**-7.6**
ARA0	**ARCESS Array S**	**9.61**	**350**	P	**Pn**	**10 12 15.0**	**-2.3**
ARA0				Sn	**Sn**	**10 13 58.2**	**-7.6**
	baz=165,slow=24						
ARCES	**ARCESS Array B**	**9.61**	**350**	Pn	**Pn**	**10 12 15.0**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=160,slow=14,SNR=12						
ARCES				Sn	**Sn**	**10 14 01.8**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=158,slow=27,SNR=3.5						

*ISCJB **18** 10:19:30.4±1.3,39°.40N±0°.06×33°.10E±0°.06,h1km±14km, Error ellipse: s-maj=11.4km s-min=5.6km az=140.8*
*CSEM **18** 10:19:30.5±0.2,39°.42N×33°.08E,h2km,MD2.8,Error ellipse: s-maj=6.4km s-min=4.9km az=144.0*
*ISK **18** 10:19:30.0,39°.44N×33°.07E,h2km,MD2.8*
*DDA **18** 10:19:30.7,39°.50N×32°.97E,h7km±5km,Md2.8*
ISC 18 10:19:30.8±0.7,39°.41N±0°.04×33°.09E±0°.05,h1km±9km, n22,σ0°61/30,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Af´ar-Bala (A**	**0.04**	**338**	*e*PG	**Pg**	**10 19 30.2**	**-1.5**
AFSR	**Af´ar-Bala (A**	**0.04**	**338**	*e*Pg	**Pg**	**10 19 30.2**	**-1.5**
BBAL	**Bala**	**0.14**	**10**	*i* P	**Pg**	**10 19 34.0**	**+0.5**
BBAL				*i* S	**Sg**	**10 19 36.6**	**+1.4**
BBAL	**Bala**	**0.14**	**10**	*i* P	**Pg**	**10 19 34.0**	**+0.5**
BBAL				*i* S	**Sg**	**10 19 36.6**	**+1.3**
LOD	**Lodumlu**	**0.54**	**332**	*e*PG	**Pg**	**10 19 41.3**	**+0.1**
LOD				*e*SG	**Sg**	**10 19 48.1**	**-0.2**
LOD	**Lodumlu**	**0.54**	**332**	*e*Pg	**Pg**	**10 19 41.3**	**+0.1**
LOD				*e*Sg	**Sg**	**10 19 48.1**	**-0.2**
CDAG	**Cicekdag**	**1.01**	**77**	*i* P	**Pg**	**10 19 50.0**	**-0.2**
CDAG				*i* S	**Sg**	**10 20 03.0**	**-0.4**
CDAG	**Cicekdag**	**1.01**	**77**	*i* P	**Pg**	**10 19 50.0**	**-0.3**
CDAG				*i* S	**Sg**	**10 20 03.0**	**-0.4**
KIZT	**Kizilcal**	**1.08**	**241**	*e*PN	**Pg**	**10 19 51.2**	**-0.3**
KIZT	**Kizilcal**	**1.08**	**241**	*e*Pn	**Pg**	**10 19 51.3**	**-0.2**
KDHN	**Kadinhani**	**1.17**	**221**	*i* P	**Pg**	**10 19 53.6**	**+0.4**
KDHN				*i* S	**Sg**	**10 20 08.5**	**+0.2**
KDHN	**Kadinhani**	**1.17**	**221**	*i* P	**Pg**	**10 19 53.6**	**+0.4**
KDHN				*i* S	**Sg**	**10 20 08.5**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.22**	**272**	*e*PN	**Pn**	**10 19 54.5**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.22**	**272**	*e*Pn	**Pn**	**10 19 54.5**	**-0.4**
SULT	**Sultanhani-AKS**	**1.25**	**165**	*e*PN	**Pn**	**10 19 55.3**	**-0.1**
SULT	**Sultanhani-AKS**	**1.25**	**165**	*e*Pn	**Pn**	**10 19 55.3**	**-0.1**
CORM	**Corum**	**1.41**	**57**	*e*PN	**Pn**	**10 19 57.1**	**-0.5**
CORM	**Corum**	**1.41**	**57**	*e*Pn	**Pn**	**10 19 57.1**	**-0.5**
KONT	**Konya--Tatoy**	**1.57**	**202**	*e*PN	**Pn**	**10 20 00.3**	**+0.5**
KONT	**Konya--Tatoy**	**1.57**	**202**	*e*Pn	**Pn**	**10 20 00.3**	**+0.6**
YOZ	**Yozgat**	**1.74**	**82**	*e*PN	**Pn**	**10 20 02.5**	**+0.4**
YOZ	**Yozgat**	**1.74**	**82**	*e*Pn	**Pn**	**10 20 02.5**	**+0.4**

IDC 18 10:20:16.8±2.3,15°.80S×173°.36W,h0km,mb3.6/4, mb1 3.9/5,mb1mx3.7/20,mbtmp3.6/5,ML1.4/1,MS3.6/2, Ms1 3.6/2,ms1mx2.8/24,Error ellipse: s-maj=140.3km s-min=19.8km az=144.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.42**	**39**	Pn	Pn	10 20 57.3	-0.4
	5.4nm,0.3s,baz=16,slow=19,SNR=11						
AFI				Sn	Sn	10 21 29.3	+1.3
	20nm,0.3s,baz=352,slow=22,SNR=8.0						
AFI				T		10 23 55.2	
	6.3nm,0.3s,baz=347,slow=21,SNR=3.6						
WRA	**Warramunga Arr**	**49.79**	**257**	P	P	10 29 11.4	-0.3
	0.9nm,1.2s,baz=94,slow=7.0,SNR=4.8						
ASAR	**Alice Springs**	**50.03**	**252**	P	P	10 29 13.6	+0.1
	1.1nm,0.5s,baz=88,slow=8.5,SNR=46						

FITZ	**Fitzroy Crossi**	**58.17**	**258**	LR	LR	10 49 54.1	
	comp=Z,210nm,20.2s,baz=261,slow=31						
NVAR	**Mina Array Bea**	**74.59**	**42**	P	P	10 31 58.9	+1.0
	0.4nm,0.7s,baz=214,slow=10,SNR=6.9						
KSRS	**Korea Array**	**76.47**	**316**	LR	LR	11 02 42.7	
	comp=Z,10nm,18.3s,baz=355,slow=33						
PDAR	**Pinedale Array**	**82.53**	**42**	P	P	10 32 41.2	-0.3
	0.3nm,0.6s,baz=218,slow=5.5,SNR=3.3						

*ISCJB **18** 10:30:32.5±4.4,57°.4S±0°.1×26°.1W±0°.2,h62km±41km, mb4.3/12,Error ellipse: s-maj=20.1km s-min=14.5km az=36.8*
*NEIC **18** 10:30:34.9±1.6,57°.46S×26°.06W,h69km±14km,Error ellipse: s-maj=9.5km s-min=7.0km az=215.0*
*IDC **18** 10:30:35.2±2.1,57°.47S×26°.06W,h70km±17km,mb4.2/10, mb1 4.2/12,mb1mx4.1/17,mbtmp4.1/12,MS3.5/6, Ms1 3.5/6,ms1mx3.3/18,Error ellipse: s-maj=17.9km s-min=13.8km az=51.0*
ISC 18 10:30:34.6±3.8,57°.5S±0°.1×26°.1W±0°.2,h66km±37km,n44, σ0°67/18,mb4.2/12,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**17.19**	**155**	P	**Pn**	**10 34 30.1**	**+0.2**
	0.4nm,0.3s,baz=317,slow=13,SNR=45						
SNAA				S	**S**	**10 37 26.1**	**-20**
	0.1nm,0.3s,baz=359,slow=18,SNR=3.0						
SNAA				PcP	PcP	10 39 10.0	+0.4
	0.1nm,0.3s,baz=239,slow=5.9,SNR=6.7						
SNAA				LR	LR	10 40 02.1	
	comp=Z,18nm,21.1s,baz=348,slow=33						
SNAA				ScP	ScP	10 42 37.4	-1.0
	0.0nm,0.3s,baz=83,slow=19,SNR=4.7						
PMSA	**Palmer Station**	**19.43**	**232**	P	**Pn**	**10 34 56.6**	**-0.3**
	0.9nm,0.3s,baz=56,slow=6.1,SNR=4.7						
USHA	**Ushuaia**	**23.42**	**258**	LR	LR	10 42 41.2	
	comp=Z,216nm,19.1s,baz=39,slow=31						
QSPA	**South Pole Qui**	**32.76**	**180**	P	**P**	**10 37 01.6**	**+1.1**
	12nm,0.5s,mb4.9,baz=215,slow=1.6,SNR=178						
QSPA				PcP	PcP	10 39 44.4	+0.4
	1.0nm,0.5s,baz=129,slow=0.5,SNR=6.9						
QSPA				ScP	ScP	10 43 21.8	-0.1
	2.2nm,0.8s,baz=270,slow=1.1,SNR=8.8						
QSPA	**South Pole Qui**	**32.76**	**180**	P	**P**	**10 37 01.6**	**+1.1**
QSPA				PcP	PcP	10 39 44.4	+0.4
QSPA				ScP	ScP	10 43 21.8	-0.1
PLCA	**Paso Flores**	**32.84**	**281**	P	**P**	**10 37 02.0**	**+0.5**
	2.5nm,0.8s,mb4.1,baz=144,slow=8.1,SNR=6.4						
PLCA				LR	LR	10 47 46.5	
	comp=Z,66nm,20.6s,baz=3.4,slow=31						
CPUP	**Villa Florida**	**38.20**	**311**	P	**P**	**10 37 47.4**	**-0.3**
	0.9nm,0.4s,mb3.9,baz=134,slow=9.0,SNR=5.2						
CPUP				PcP	PcP	10 40 01.4	+0.5
	0.3nm,0.3s,baz=82,slow=8.7,SNR=2.9						
MAW	**Mawson**	**38.65**	**142**	P	**P**	**10 37 50.7**	**-0.3**
	1.3nm,0.5s,mb4.0,baz=233,slow=9.0,SNR=22						
MAW				PcP	PcP	10 40 02.2	+0.6
	1.4nm,0.7s,baz=193,slow=4.8,SNR=6.3						
MAW				ScP	ScP	10 43 41.7	-1.9
	2.4nm,1.0s,baz=307,slow=5.7,SNR=4.0						
CFAA	**Coronel Fontan**	**38.66**	**294**	P	**P**	**10 37 50.2**	**-1.3**
	0.2nm,0.4s,mb3.3,baz=131,slow=11,SNR=2.9						
CFAA				PcP	PcP	10 40 03.4	+1.1
	0.2nm,0.5s,baz=143,slow=3.4,SNR=3.7						
BDFB	**Brasilia**	**44.90**	**329**	P	**P**	**10 38 38.1**	**-4.4**
	1.7nm,0.5s,mb4.0,baz=114,slow=19,SNR=2.3						
BOSA	**Boshof**	**45.80**	**73**	P	**P**	**10 38 48.9**	**-0.6**
	4.8nm,0.7s,mb4.3,baz=195,slow=8.3,SNR=9.7						
BOSA				LR	LR	10 54 08.8	
	comp=Z,75nm,18.9s,baz=60,slow=31						
LPAZ	**La Paz**	**51.68**	**305**	P	**P**	**10 39 35.9**	**+1.2**
	5.5nm,0.6s,mb4.8,baz=162,slow=5.8,SNR=34						
LPAZ				PcP	PcP	10 40 49.1	+1.7
	1.5nm,0.5s,baz=67,slow=2.7,SNR=2.3						
LPAZ	**La Paz**	**51.68**	**305**	*e*P	**P**	**10 39 35.7**	**+1.0**
LPAZ				PcP	PcP	10 40 49.1	+1.7
DBIC	**Dimbokro**	**66.25**	**23**	P	**P**	**10 41 15.6**	**+0.1**
	2.3nm,0.5s,mb4.3,baz=155,slow=7.9,SNR=7.1						
TOA0	**Torodi Ar. Sit**	**74.04**	**28**	*e*P	**P**	**10 42 03.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**74.04**	**28**	P	**P**	**10 42 03.6**	**+0.5**
	9.4nm,0.6s,mb4.7,baz=200,slow=6.6,SNR=65						
TORD				LR	LR	11 08 11.0	
	comp=Z,29nm,18.9s,baz=115,slow=30						
STKA	**Stephens Creek**	**90.38**	**170**	P	**P**	**10 43 28.3**	**-0.1**
	0.5nm,0.4s,mb4.0,baz=129,slow=13,SNR=4.1						
PPT	**Papeete**	**91.80**	**233**	LR	LR	11 14 42.0	
	comp=Z,113nm,20.4s,baz=143,slow=29						
ASAR	**Alice Springs**	**97.44**	**162**	P	**P**	**10 44 00.0**	**-0.9**
	0.6nm,0.6s,mb4.2,baz=184,slow=3.6,SNR=25						
ASAR				PKKP	PKKPbc	11 00 37.2	+2.1
	0.2nm,0.6s,baz=33,slow=2.0,SNR=4.1						
WRA	**Warramunga Arr**	**101.16**	**161**	P	Pdif	10 44 16.7	-0.9
	0.3nm,0.7s,baz=196,slow=4.6,SNR=6.5						
WRA				PKKPbc	PKKPbc	11 00 23.6	-1.2
	0.6nm,0.8s,baz=323,slow=4.5,SNR=7.1						
SCHQ	**Schefferville**	**116.72**	**335**	PKP	PKPdf	10 49 09.4	-0.5
	6.6nm,1.1s,baz=225,slow=5.7,SNR=2.8						
PDAR	**Pinedale Array**	**121.59**	**301**	PKP	PKPdf	10 49 19.0	-0.6
	0.4nm,0.4s,baz=129,slow=5.5,SNR=7.2						
NVAR	**Mina Array Bea**	**122.48**	**292**	PKP	PKPdf	10 49 22.7	+1.2
	0.4nm,0.5s,baz=108,slow=2.7,SNR=6.0						
LOHW	**Long Hollow**	**122.73**	**301**	*e*PKPdf	PKPdf	10 49 22.2	+0.4
TPAW	**Teton Pass**	**122.80**	**300**	*e*PKPdf	PKPdf	10 49 22.1	+0.2
CMAR	**Chiang Mai Arr**	**124.02**	**110**	PKP	PKPdf	10 49 24.8	-0.3
	0.5nm,0.3s,baz=240,slow=2.8,SNR=4.7						
FINES	**FINESS Array B**	**125.39**	**28**	PKP	PKPdf	10 49 25.9	-0.4
	2.0nm,0.5s,baz=153,slow=1.3,SNR=8.1						
KAF	**Kangasniemi**	**126.02**	**27**	*e*p	PKPdf	10 49 23.7	-3.8
	1.5nm,0.6s						
JOF	**Joensuu**	**127.97**	**29**	*e*p	PKPdf	10 49 23.1	-8.1
	2.3nm,0.6s						
ARCES	**ARCESS Array B**	**132.07**	**22**	PKP	PKPdf	10 49 38.4	-0.4
	0.8nm,0.4s,baz=235,slow=2.0,SNR=12						
YKA	**Yellowknife Ar**	**137.62**	**316**	PKP	PKPdf	10 49 49.4	+0.1
	2.5nm,0.6s,baz=137,slow=2.0,SNR=14						
YKA	**Yellowknife Ar**	**137.62**	**316**	PKP	PKPdf	10 49 49.4	+0.1
ZALV	**Zalesovo Beam**	**142.47**	**65**	PKhKP	PKPpre	10 49 53.5	
	1.1nm,0.5s,baz=260,slow=3.9,SNR=5.2						
INK	**Inuvik**	**147.28**	**319**	*e*PKPbc	PKPbc	10 50 08.5	-0.3
DAWY	**Dawson**	**148.17**	**310**	*e*PKPbc	PKPbc	10 50 10.9	-0.4
EGAK	**Eagle**	**149.13**	**311**	*e*PKPdf	PKPdf	10 50 09.8	+0.4
MENT	**Mentasta**	**149.63**	**307**	*e*PKPbc	PKPbc	10 50 14.9	0.0
DOT	**Dot Lake**	**150.00**	**308**	*e*PKPbc	PKPbc	10 50 16.4	+0.5
SONM	**Songino Array**	**150.22**	**88**	PKPbc	PKPbc	10 50 16.7	-0.2
	3.5nm,0.4s,baz=224,slow=4.6,SNR=30						
SML	**Sawmill**	**151.32**	**303**	*e*PKPbc	PKPbc	10 50 19.2	+0.2
ILAR	**Eielson Array**	**151.49**	**309**	PKPbc	PKPbc	10 50 19.3	0.0
	4.7nm,0.4s,baz=131,slow=1.9,SNR=90						
MCK	**McKinley**	**152.12**	**307**	*e*PKPbc	PKPbc	10 50 20.8	0.0
BPAW	**Bear Paw Mtn.**	**153.08**	**307**	*e*PKPbc	PKPbc	10 50 23.0	+0.1
PPLA	**Purkeypile**	**153.34**	**304**	*e*PKPbc	PKPbc	10 50 24.2	+0.7

*IDC **18** 10:42:17.9±2.3,12°.68S×166°.53E,h0km,mb3.8/7, mb1 3.9/7,mb1mx3.8/17,mbtmp3.8/7,MS3.0/1,Ms1 3.0/1, ms1mx2.5/21,Error ellipse: s-maj=75.6km s-min=30.5km az=135.0*
*ISCJB **18** 10:42:23.2±1.1,12°.5S±0°.1×166°.1E±0°.2,h33km,mb3.7/7, Error ellipse: s-maj=30.8km s-min=16.7km az=178.9*
ISC 18 10:42:25.4±1.1,12°.4S±0°.1×166°.2E±0°.2,h35km,n11, σ0°81/9,mb3.7/7,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.78**	**296**	LR	LR	10 46 41.2	
	comp=Z,96nm,18.6s,baz=130,slow=36						
DZM	**Mont Dzumac**	**9.58**	**178**	*e*P	**Pn**	**10 44 41.1**	**+0.2**
DZM				*e*S	**Sn**	**10 46 38.8**	**+11**
WRA	**Warramunga Arr**	**31.40**	**252**	P	**P**	**10 48 42.9**	**-0.5**
	0.3nm,1.0s,mb3.1,baz=84,slow=9.2,SNR=4.9						
ASAR	**Alice Springs**	**32.55**	**245**	P	**P**	**10 48 52.9**	**-0.5**
	0.3nm,0.7s,mb3.3,baz=69,slow=9.6,SNR=6.7						
KSRS	**Korea Array**	**61.24**	**326**	P	**P**	**10 52 36.4**	**-0.6**
	1.1nm,0.9s,mb4.0,baz=142,slow=6.3,SNR=4.7						
CMAR	**Chiang Mai Arr**	**73.03**	**294**	P	**P**	**10 53 54.4**	**+2.2**
	0.4nm,0.3s,mb3.8,baz=124,slow=4.9,SNR=5.3						
SONM	**Songino Array**	**80.02**	**324**	P	**P**	**10 54 31.5**	**+0.3**
	0.4nm,0.3s,mb3.8,baz=145,slow=7.4,SNR=4.8						
ILAR	**Eielson Array**	**84.70**	**18**	P	**P**	**10 54 54.8**	**-0.5**
	0.3nm,0.6s,mb3.6,baz=245,slow=5.6,SNR=4.6						
MKAR	**Makanchi Array**	**94.80**	**317**	P	**P**	**10 55 43.3**	**-0.2**
	1.1nm,0.7s,mb4.4,baz=95,slow=5.1,SNR=5.0						
ARCES	**ARCESS Array B**	**117.78**	**345**	PKP	PKPdf	11 01 04.7	-2.7
	0.8nm,0.8s,baz=73,slow=2.9,SNR=7.3						

TORD	**Torodi Ar. Bea**	**164.82**	**274**	PKPab	PKPab	11 03 23.0	+0.3
	0.8nm,0.9s,baz=90,slow=4.3,SNR=2.9						

*ISCJB **18** 10:46:55.1±0.8,39°.36N±0°.02×19°.83E±0°.05,h3km±5km, mb3.7/3,Error ellipse: s-maj=6.1km s-min=3.5km az=162.3*
*ATH **18** 10:46:55.4,39°.39N×19°.80E,h6km±1km,MD3.4/8*
*IDC **18** 10:46:55.8±1.5,39°.51N×19°.85E,h0km,mb3.7/3, mb1 3.7/4,mb1mx3.5/26,mbtmp3.6/4,ML3.1/1,Error ellipse: s-maj=31.1km s-min=24.9km az=84.0*
*TIR **18** 10:46:56.3±4.0,39°.55N×19°.39E,h29km±42km,ML3.5*
*CSEM **18** 10:46:56.3±0.2,39°.37N×19°.73E,h2km,ML3.5,Error ellipse: s-maj=5.8km s-min=3.2km az=70.0*
*THE **18** 10:46:57.4,39°.43N×19°.52E,h32km±36km,ML3.3/4,Error ellipse: s-maj=36.6km s-min=1.2km az=0.0*
*SKO **18** 10:47:02.4,39°.42N×20°.35E,h0km*
ISC 18 10:46:56.8±0.8,39°.37N±0°.02×19°.87E±0°.05,h9km±5km, n48,σ0°93/80,mb3.7/3,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.52**	**11**	*i* PG	**Pg**	**10 47 07.2**	**+0.3**
SRN				*i* SG	**Sg**	**10 47 15.3**	**+1.5**
SRN	**Sarande**	**0.52**	**11**	*i* Pg	**Pg**	**10 47 07.2**	**+0.3**
	SNR=109						
SRN				*i* Sg	**Sg**	**10 47 15.3**	**+1.5**
	SNR=109						
JAN	**Janina**	**0.81**	**69**	*e*PG	**Pg**	**10 47 11.0**	**-1.4**
JAN				*e*SB	**Sg**	**10 47 22.8**	**-0.2**
JAN	**Janina**	**0.81**	**69**	*e*Pg	**Pg**	**10 47 11.0**	**-1.4**
LSK	**Leskovik**	**0.96**	**35**	*i* PG	**Pg**	**10 47 15.0**	**-0.3**
LSK				*i* SG	**Sg**	**10 47 30.5**	**+2.6**
LSK	**Leskovik**	**0.96**	**35**	*i* Pg	**Pg**	**10 47 15.0**	**-0.3**
	SNR=97						
LSK				*i* Sg	**Sg**	**10 47 30.5**	**+2.6**
	SNR=97						
VLS	**Valsamata**	**1.31**	**154**	*e*PB	**Pb**	**10 47 21.4**	**-0.2**
VLS				*e*SB	**Sb**	**10 47 39.7**	**+1.1**
VLS	**Valsamata**	**1.31**	**154**	P	**Pn**	**10 47 21.5**	**+0.2**
VLS				S	**Sb**	**10 47 39.7**	**+1.1**
VLS	**Valsamata**	**1.31**	**154**	P	**Pn**	**10 47 21.5**	**+0.2**
VLS				S	**Sb**	**10 47 39.7**	**+1.1**
NEST	**Nestorio**	**1.38**	**41**	P	**Pn**	**10 47 21.7**	**-0.6**
NEST				S	**Sb**	**10 47 40.6**	**0.0**
NEST	**Nestorio**	**1.38**	**41**	P	**Pn**	**10 47 21.7**	**-0.6**
NEST				S	**Sb**	**10 47 40.6**	**0.0**
KBN	**Korca**	**1.44**	**29**	*i* PG	**Pg**	**10 47 25.5**	**+1.1**
KBN				*i* SG	**Sg**	**10 47 47.6**	**+4.5**
KBN	**Korca**	**1.44**	**29**	*i* Pg	**Pg**	**10 47 25.5**	**+1.1**
	SNR=94						
KBN				*i* Sg	**Sg**	**10 47 47.6**	**+4.5**
	SNR=94						
KFL	**Anninata**	**1.45**	**150**	P	**Pg**	**10 47 24.4**	**-0.1**
KFL				S	**Sg**	**10 47 44.0**	**+0.7**
KFL	**Anninata**	**1.45**	**150**	P	**Pg**	**10 47 24.4**	**-0.1**
KFL				S	**Sg**	**10 47 44.0**	**+0.7**
EVR	**Evrytania**	**1.57**	**106**	*e*PB	**Pb**	**10 47 26.0**	**0.0**
EVR				*e*SN	**Sg**	**10 47 48.6**	**+1.2**
EVR	**Evrytania**	**1.57**	**106**	*e*Pb	**Pb**	**10 47 26.0**	**0.0**
EVR				*e*Sn	**Sg**	**10 47 48.6**	**+1.2**
THL	**Klokotos Trika**	**1.67**	**83**	*e*PN	**Pg**	**10 47 27.9**	**-1.0**
THL	**Klokotos Trika**	**1.67**	**83**	P	**Pg**	**10 47 28.0**	**-0.9**
THL				S	**Sg**	**10 47 51.5**	**+1.0**
THL	**Klokotos Trika**	**1.67**	**83**	P	**Pg**	**10 47 28.0**	**-0.9**
THL				S	**Sg**	**10 47 51.5**	**+1.0**
KZN	**Kozani**	**1.74**	**57**	*e*PN	**Pg**	**10 47 29.0**	**-1.1**
KZN	**Kozani**	**1.74**	**57**	*e*Pn	**Pg**	**10 47 29.0**	**-1.1**
RLS	**Riolos of Patr**	**1.81**	**136**	*e

HNR	Honiara	12.35	103	*e*Pn	Pn	11 27 50.0	-0.1
CTAO	Charters Tower	13.30	186	*e*Pn	Pn	11 28 01.1	-1.7
WB2	Warramunga Arr	18.45	224	*e*P	Pn	11 29 07.1	-0.4
WRA	Warramunga Arr	18.46	224	P	Pn	11 29 06.7	-1.0
	0.2nm,0.3s,baz=52,slow=11,SNR=15						
ASAR	Alice Springs	21.42	217	P	P	11 29 39.6	+0.9
	1.2nm,0.4s,mb3.5,baz=50,slow=8.8,SNR=62						
FITZ	Fitzroy Crossi	24.32	240	P	P	11 30 07.3	-0.2
	1.2nm,0.6s,mb3.4,baz=62,slow=7.6,SNR=8.8						
STKA	Stephens Creek	25.61	192	P	P	11 30 20.1	+1.0
	0.9nm,0.3s,mb3.6,baz=23,slow=13,SNR=2.3						
TORD	Torodi Ar. Bea	146.01	283	PKPbc	PKPbc	11 44 26.7	-2.2
	0.6nm,0.5s,baz=58,slow=3.0,SNR=3.6						

IDC ***18*** *11:30:24.4±0.7, 15°.25S×173°.47W, h0km, mb4.1/10, mb1 4.4/11, mb1mx4.2/20, mbtmp4.1/11, ML2.8/1, Error ellipse: s-maj=39.3km s-min=15.8km az=140.0*

NEIC ***18*** *11:30:25.8±0.5, 15°.22S×173°.45W, h10km, mb4.0/1, Error ellipse: s-maj=25.7km s-min=8.8km az=142.0*

ISCJB ***18*** *11:30:27.7±0.6, 15°.2S±0°.2×173°.5W±0°.2, h33km, mb4.1/12, Error ellipse: s-maj=31.2km s-min=10.8km az=142.3*

ISC 18 11:30:29.6±0.6, 15°.2S±0°.2×173.5W±0°.2, h35km, n19, σ0=93/16, mb4.1/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.09	51	Pn	Pn	11 30 59.7	-2.4
	178nm,0.3s,baz=200,slow=1.9,SNR=410						
AFI				Sn	Sn	11 31 19.4	-7.5
	819nm,0.3s,baz=346,slow=22,SNR=30						
RAR	Rarotonga	14.30	117	T		11 48 20.4	
	5.4nm,0.3s,baz=112,slow=17,SNR=3.1						
DZM	Mont Dzumac	20.21	247	*e*LR	LR	11 40 55.2	
	207nm,27.1s						
PPT	Papeete	23.03	99	*e*LR	LR	11 40 38.8	
	77nm,27.0s						
URZ	Urewera	24.41	198	P	P	11 35 44.4	-0.3
	10.0nm,0.5s,mb4.5,baz=349,slow=5.2,SNR=13						
URZ	Urewera	24.41	198	*e*P	P	11 35 44.3	-0.4
STKA	Stephens Creek	44.08	240	P	P	11 38 34.1	-0.3
	2.3nm,0.4s,mb4.2,baz=87,slow=11,SNR=5.5						
WB2	Warramunga Arr	49.82	257	*e*P	P	11 39 19.2	-0.2
WRA	Warramunga Arr	49.83	257	P	P	11 39 18.9	-0.6
	1.2nm,0.3s,mb4.4,baz=94,slow=6.7,SNR=70						
ASAR	Alice Springs	50.11	252	P	P	11 39 20.9	-0.7
	6.9nm,0.7s,mb4.8,baz=90,slow=7.6,SNR=173						
FITZ	Fitzroy Crossi	58.19	258	P	P	11 40 21.3	+0.7
	0.8nm,0.8s,mb3.8,baz=56,slow=15,SNR=3.1						
NVAR	Mina Array Bea	74.24	42	P	P	11 42 03.5	+0.5
	0.5nm,0.7s,mb3.5,baz=234,slow=8.9,SNR=5.9						
MOD	Modoc	75.02	38	*e*P	P	11 42 08.4	+0.9
	1.7nm,1.0s,mb3.9						
HOOD	Mount Hood Mea	76.34	35	*e*P	P	11 42 13.8	-1.1
	23nm,1.4s,mb4.9						
TXAR	Lajitas Array	80.56	56	P	P	11 42 39.6	+0.9
	0.8nm,1.0s,mb3.6,baz=216,slow=4.0,SNR=5.2						
PDAR	Pinedale Array	82.17	42	P	P	11 42 48.6	+1.7
	0.2nm,0.5s,mb3.3,baz=204,slow=3.3,SNR=4.2						
ILAR	Eielson Array	82.28	11	P	P	11 42 47.2	+0.3
	0.3nm,0.7s,mb3.4,baz=235,slow=6.8,SNR=8.1						
MAW	Mawson	87.94	199	P	P	11 43 15.8	+0.4
	3.9nm,0.6s,mb4.8,baz=128,slow=5.7,SNR=30						
BRTR	Keskin Array B	145.99	321	PKPbc	PKPbc	11 50 07.2	+1.4
	3.3nm,1.0s,baz=129,slow=1.8,SNR=7.5						

BUC 18 11:57:23.0±0.8, 45°.43N×27°.04E, h21km±17km, MD2.5/1, 8C-4D, Error ellipse: s-maj=18.0km s-min=4.5km az=47.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRER		0.07	223	⇓*i*P	Pb	11 57 26.8	-0.1
GRER				*i* S	Sb	11 57 31.0	+1.5
GRER		0.07	223	⇓*i*P	Pb	11 57 26.8	-0.1
GRER				S	Sb	11 57 31.0	+1.5
VRI	Vrincioaia	0.49	333	⇑*i*P	Pb	11 57 33.1	+0.2
VRI	Vrincioaia	0.49	333	⇑*i*P	Pb	11 57 33.1	+0.2
VRI				S	Sb	11 57 40.5	+0.9
CFR	Carcaliu	0.81	108	*i* S	Sb	11 57 50.0	+1.1
CFR	Carcaliu	0.81	108	S	Sb	11 57 50.0	+1.1
TLCR		1.27	101	⇑*i*P	Pn	11 57 46.2	+0.7
TLCR		1.27	101	⇑*i*P	Pn	11 57 46.2	+0.7
DOPR	Dopca	1.28	295	⇑*i*P	Pn	11 57 46.1	+0.6
DOPR				*i* S	Sn	11 58 04.3	+2.3
DOPR	Dopca	1.28	295	⇑*i*P	Pn	11 57 46.1	+0.6
DOPR				S	Sn	11 58 04.3	+2.3
TIRR	Tirgusor	1.38	135	⇑*i*P	Pn	11 57 47.4	+0.5
TIRR				*i* S	Sn	11 58 05.8	+1.4
TIRR	Tirgusor	1.38	135	⇑*i*P	Pn	11 57 47.4	+0.5
TIRR				S	Sn	11 58 05.8	+1.4
VOIR		1.40	271	⇓*i*P	Pn	11 57 48.5	+1.2
VOIR				*i* S	Sn	11 58 08.1	+3.0
VOIR		1.40	271	⇓*i*P	Pn	11 57 48.5	+1.2
VOIR				S	Sn	11 58 08.1	+3.0

MOS ***18*** *11:58:46.2±1.0, 51°.90N×158°.31E, h43km, mb5.9/155, MS5.6/44, Error ellipse: s-maj=6.0km s-min=3.7km az=89.4*

MOS Felt (III-IV) at Petropavlovsk-Kamchatskiy, (III) at Severo-Kuril'sk.

BJI ***18*** *11:58:47.8, 52°.00N×158°.47E, h70km, mB5.6/54, mb5.5/68, Ms5.6/75, Ms7 5.4/67*

NEIC ***18*** *11:58:47.5±0.1, 51°.94N×158°.36E, h35km, mb5.8/295, ME5.3, MS5.6/6, MW5.9, MW5.8, Error ellipse: s-maj=3.3km s-min=1.8km az=171.0 Broadband fault plane solution: P waves. NP1:φs30.00000°, δ60.00000°, λ90.00000°. NP2:φs210.00000°, δ30.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm300.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm120.0000°; Moment Tensor Solution. s139 Moment tensor: Scale 10^17 Nm; Mrr7.63; Mθθ-3.10; Mφφ-4.53; Mrθ0.77; Mθφ-3.67; Mφr1.26; Best double couple: M0 7.70000×10^17 NP1:φs38.00000°, δ50.00000°, λ88.00000°. NP2:φs221.00000°, δ40.00000°, λ92.00000°. Principal axes: T 7.7700, Plg84.0000°, Azm293.0000°; N -0.0800, Plg1.0000°, Azm39.0000°; P -7.6900, Plg5.0000°, Azm129.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

IDC ***18*** *11:58:48.6±1.2, 51°.98N×158°.29E, h47km±10km, mb5.3/30, mb1 5.4/31, mb1mx5.4/32, mbtmp5.3/31, ML5.3/1, MS5.3/31, Ms1 5.3/31, ms1mx5.2/33 Error ellipse: s-maj=13.0km s-min=8.3km az=143.0*

KRSC ***18*** *11:58:49.5±1.7, 51°.82N×158°.88E, h37km±36km, ML5.6*

ISCJB ***18*** *11:58:49.0±0.1, 51°.87N±0°.02×158°.39E±0°.02, h65km, mb5.6/610, Error ellipse: s-maj=2.3km s-min=1.4km az=165.9*

BGS ***18*** *11:58:50.8±1.4, 51°.80N×157°.92E, h66km, mb5.8*

GCMT ***18*** *11:58:53.0±0.1, 51°.78N×158°.86E, h58km, MW5.8, Moment Tensor Solution. s109,c244; s64,c84; Moment tensor: Scale 10^17Nm; Mrr6.59±.07; Mθθ-1.26±.06; Mφφ-5.32±.06; Mrθ1.57±.05; Mθφ-3.34±.05; Mφr2.08±.05; Best double couple: M0 7.40000×10^17 NP1:φs206.00000°, δ35.00000°, λ85.00000°. NP2:φs32.00000°, δ55.00000°, λ94.00000°. Principal axes: T 7.0800, Plg79.0000°, Azm316.0000°; N 0.6000, Plg3.0000°, Azm210.0000°; P -7.6700, Plg10.0000°, Azm120.0000°; Data Used: II IU IC G CN. Surface waves: sta=112, comp=249, per= 50.*

DJA ***18*** *11:58:56, 52°.01N×158°.58E, h122km, Mw5.8/53*

SZGRF ***18*** *11:58:57.4, 52°.95N×156°.16E, h33km, mb5.9, MS5.6, Kamchatka Peninsula, Russia*

ISC 18 11:58:51.2±0.1, 51°.95N±0°.02×158°.29E±0°.02, h67km, h67km±1.6km: pP-P, n1908, σ0=83/1901, mb5.6/610, 431C-105D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	0.62	348	*e*P	Pn	11 59 05.3	+0.3
MIPR	Malaya Ipel'ka	1.00	290	*e*P	Pn	11 59 11.5	+2.0
PET	Petropavlovsk	1.10	12	*e*P	Pn	11 59 10.1	-0.8
PET	Petropavlovsk	1.10	12	*e*Pn	Pn	11 59 10.1	-0.7
PET				*e*Sn	Sn	11 59 21.9	-3.6
PET	Petropavlovsk	1.10	12	κ *i*PN	Pn	11 59 09.7	-1.2
PET				*i* S	Sn	11 59 25.9	+0.4
PET				pmax	pmax		
	comp=Z,42μm,1.8s						
PET				pmax	pmax		
	comp=Z,40μm,0.6s						
PET				pmax	pmax		
	comp=Z,28μm,14.1s						
PET				smax			
	comp=E,326μm,2.0s						
PET				smax			
	comp=E,186μm,4.4s						
PET				smax			
	comp=N,340μm,0.8s						
PET				smax			
	comp=N,384μm,0.7s						
PET				smax			
	comp=E,225μm,0.6s						
INSR	Institute	1.14	10	*e*P	Pn	11 59 10.1	-1.2
INSR				*i* S	Sn	11 59 25.2	-1.1
PEA0B	Petropavlovsk-	1.22	343	*e*Pn	Pn	11 59 13.7	+1.3
PETK	Petropavlovsk-	1.22	343	P	Pn	11 59 13.7	+1.3
	comp=E,3μm,0.3s,baz=127,slow=16						
PETK	Petropavlovsk-	1.22	343	PN	Pn	11 59 13.7	+1.3
AVH	Avacha	1.35	12	*e*P	Pn	11 59 13.9	-0.2
NLC	Nalytchevo	1.39	27	*e*P	Pn	11 59 11.6	-3.0
NLC	Nalytchevo	1.39	27	PN	Pn	11 59 11.6	-3.0
SPN	Mys Shipunski	1.57	42	*e*P	Pn	11 59 14.6	-2.4
SPN	Mys Shipunski	1.57	42	PN	Pn	11 59 14.6	-2.4
GNL	Ganaly	1.77	353	*e*P	Pn	11 59 20.9	+1.3
SKR	Severo-Kuril's	1.86	228	⇓*i*PN	Pn	11 59 21.1	+0.3
SKR				*i* S	Sn	11 59 44.0	+0.7
SKR				pmax	pmax		
	comp=N,6μm,2.0s						
SKR				pmax	pmax		
	comp=E,8μm,2.0s						
SKR				pmax	pmax		
	comp=Z,10μm,2.0s						
SKR				smax			
	comp=N,210μm,2.0s						
SKR				smax			
	comp=E,130μm,2.0s						
ALID	Alaid	2.02	239	*e*P	Pn	11 59 23.2	+0.1
KII	Karymskiy	2.21	18	*e*P	Pn	11 59 25.9	+0.3
MKZ	Mys Kozlova	3.33	37	*e*P	Pn	11 59 39.2	-1.7
MKZ				*i* S	Sn	12 00 15.4	-3.8
MKZ	Mys Kozlova	3.33	37	PN	Pn	11 59 39.2	-1.7
MKZ				S	Sn	12 00 15.4	-3.8
KPT	Kopyto	4.19	15	*e*P	Pn	11 59 54.4	+1.9
BZMR	Bezymyannaya	4.21	17	*e*P	Pn	11 59 54.8	+2.1
KOZ	Kozyrevsk	4.23	12	*e*P	Pn	11 59 54.7	+1.7
KOZR	Kozyr	4.24	12	PN	Pn	11 59 54.7	+1.5
ZLN	Zelenaya	4.34	19	*e*P	Pn	11 59 57.3	+2.7
CIRR	Tsirk	4.42	18	*e*P	Pn	11 59 58.0	+2.3
SRDR	Sredinnyy	4.46	10	*e*P	Pn	11 59 57.8	+1.6
KRSR	Krestovskiy	4.49	16	*e*P	Pn	11 59 58.4	+1.8
KLY	Klyuchi	4.59	17	*e*P	Pn	12 00 00.5	+2.5
KLY				*i* S	Sn	12 00 53.2	+3.2
KLY	Klyuchi	4.59	17	PN	Pn	12 00 00.5	+2.5
KLY				S	Sn	12 00 53.2	+3.2
BDR	Baidarnaya	4.94	19	*e*P	Pn	12 00 05.0	+2.3
SMKR	Semkarok	5.01	21	*e*P	Pn	12 00 05.3	+1.6
SRKR	Sorokina	5.01	19	*e*P	Pn	12 00 05.6	+1.9
KBTR	Krutoberegovo	5.04	30	*e*P	Pn	12 00 03.4	-0.7
KBTR				*i* S	Sn	12 00 57.8	-3.0
KBTR	Krutoberegovo	5.04	30	PN	Pn	12 00 03.4	-0.7
BKI	Bering	5.62	51	*e*P	Pn	12 00 08.7	-3.4
BKI				*i* S	Sn	12 01 06.1	-9.1
BKI	Bering	5.62	51	PN	Pn	12 00 08.7	-3.4
FX1	Attu Island--F	9.14	78	*e*Pn	Pn	12 00 55.1	-5.1
FX1	Attu Island--F	9.14	78	*e*PN	Pn	12 00 55.2	-5.0
KUR	Kuril'sk	9.62	230	*e*PN	Pn	12 01 07.0	+0.2
KUR				S	Sn	12 03 00.5	+7.2
KUR				pmax	pmax		
	comp=N,130nm,0.8s						
KUR				pmax	pmax		
	comp=E,160nm,0.8s						
KUR				pmax	pmax		
	comp=Z,410nm,0.8s						
KUR				pmax	pmax		
	comp=N,3μm,6.0s						
KUR				pmax	pmax		
	comp=E,4μm,6.0s						
KUR				pmax	pmax		
	comp=Z,5μm,6.0s						
KUR				smax			
	comp=N,9μm,5.0s						
KUR				smax			
	comp=E,6μm,5.0s						
KUR				smax			
	comp=N,2μm,1.0s						
KUR				smax			
	comp=E,1μm,1.0s						
KUR				MLR	MLR		
	comp=N,6μm,20.0s						
KUR				MLR	MLR		
	comp=E,9μm,20.0s						
KUR				MLR	MLR		
	comp=Z,5μm,20.0s						
SMY	Shemya	9.71	79	*e*P	Pn	12 01 03.0	-5.0
	comp=Z,1μm,0.6s						
SMY	Shemya	9.71	79	*e*PN	Pn	12 01 03.0	-5.0
SMY				pmax	pmax		
	comp=Z,1μm,0.6s						
UGL	Uglegorsk	10.72	261	*e*PN	Pn	12 01 26.0	+4.2
UGL				pmax	pmax		
	comp=Z,280nm,0.7s						
UGL				pmax	pmax		
	comp=N,800nm,4.0s						
UGL				pmax	pmax		
	comp=E,4μm,4.0s						
UGL				pmax	pmax		
	comp=Z,8μm,4.0s						
UGL				MLR	MLR		
	comp=N,8μm,12.0s						
UGL				MLR	MLR		
	comp=E,7μm,14.0s						
YSS	Yuzh-Sakhalins	11.27	250	*e*Pn	Pn	12 01 32.6	+3.3
YSS	Yuzh-Sakhalins	11.27	250	κ *i*PN	Pn	12 01 33.0	+3.7
YSS				*i* S	Sn	12 03 41.0	+7.6
YSS				pmax	pmax		
	comp=Z,220nm,1.0s						
YSS				pmax	pmax		
	comp=Z,2μm,5.0s						
YSS				smax			
	comp=E,2μm,8.0s						
YSS				MLR	MLR		
	comp=Z,15μm,19.0s						
YSS				MLR	MLR		
	comp=N,12μm,15.0s						
YSS				MLR	MLR		
	comp=E,15μm,18.0s						
SEY	Seymchan	11.46	346	⇑*e*PN	Pn	12 01 34.6	+2.9
YUK	Yuzh-Kuril'sk	11.47	231	⇓*i*PN	Pn	12 01 29.3	-2.8
YUK				pmax	pmax		
	comp=Z,810nm,0.9s						
YUK				pmax	pmax		
	comp=N,266nm,0.3s						
YUK				pmax	pmax		
	comp=E,203nm,0.3s						
YUK				pmax	pmax		
	comp=Z,879nm,0.3s						
YUK				MLR	MLR		
	comp=Z,6μm,18.0s						
AMKA	Amchitka	13.06	84	*e*P	Pn	12 01 50.2	-3.3
	comp=Z,44nm,1.2s						
ASAJ	Asahikawa	13.08	239	P	Pn	12 01 53.5	-0.4
	comp=Z,21nm,0.3s,baz=51,slow=10.0,SNR=105						
ASAJ				S	Sn	12 04 22.8	+5.3
	comp=Z,0.5nm,0.3s,baz=49,slow=20,SNR=1.4						
ASAJ				LR	LR	12 06 40.5	
	comp=Z,11μm,20.9s,baz=52,slow=36						
ASAJ				ScP	ScP	12 10 47.6	-0.3
	comp=Z,0.3nm,0.3s,baz=263,slow=12,SNR=3.9						
ASAJ	Asahikawa	13.08	239	*e*Pn	Pn	12 01 54.3	+0.4
ASAJ	Asahikawa	13.08	239	PN	Pn	12 01 53.5	-0.4
ASAJ				S	Sn	12 04 22.8	+5.3
ASAJ				pmax	pmax		
	comp=Z,21nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,11μm,20.9s						
ERM	Erimo	14.30	232	*e*Pn	Pn	12 02 06.4	-3.7
ERM	Erimo	14.30	232	*e*P	Pn	12 02 06.4	-3.7
ERM	Erimo	14.30	232	Pn	Pn	12 02 06.3	-3.8
	comp=Z,2μm,0.4s,SNR=22						
HABR	Khabarovsk	15.26	266	*i* P	Pn	12 02 25.9	+3.5
HABR				*e*S	S	12 05 14.4	-8.8
HABR				pmax	pmax		
	comp=N,77nm,1.1s						
HABR				pmax	pmax		
	comp=Z,298nm,1.1s						
HABR				pmax	pmax		
	comp=E,282nm,1.1s						
HABR				MLR	MLR		
	comp=N,10μm,20.0s						
HABR				MLR	MLR		
	comp=E,12μm,20.0s						
HABR				MLR	MLR		
	comp=Z,12μm,17.0s						
ATKA	Atka Island	16.89	78	*e*P	Pn	12 02 41.8	-1.0
	comp=Z,151nm,1.2s						
KLR	Kul'dur	17.04	271	*e*P	Pn	12 02 43.8	-0.9
KLR				*e*		12 05 56.0	
KLR				pmax	pmax		
	comp=E,440nm,1.2s						
KLR				pmax	pmax		
	comp=Z,400nm,1.2s						
KLR				MLR	MLR		
	comp=Z,7μm,15.5s						
YAK	Yakutsk	18.41	314	*e*P	Pn	12 03 00.8	-0.6
	comp=Z,693nm,0.8s						
YAK	Yakutsk	18.41	314	*c i*P	Pn	12 03 00.8	-0.5
YAK				*e*S	S	12 06 24.4	-2.4
YAK				pmax	pmax		
	comp=Z,700nm,1.0s						
YAK				pmax	pmax		
	comp=N,167nm,1.3s						
YAK				pmax	pmax		
	comp=E,437nm,1.3s						
YAK				pmax	pmax		
	comp=Z,405nm,0.8s						
YAK				pmax	pmax		
	comp=E,389nm,1.0s						
YAK				pmax	pmax		
	comp=N,175nm,1.0s						
YAK				smax			
	comp=N,2μm,2.2s						
YAK				smax			
	comp=E,1μm,1.9s						
YAK				MLR	MLR		
	comp=Z,8μm,16.0s						
YAK				MLR	MLR		
	comp=E,5μm,16.0s						
YAK				MLR	MLR		
	comp=N,4μm,15.0s						
GAMB	Gambell	19.65	41	*e*P	Pn	12 03 13.0	-3.1
	comp=N,127nm,1.1s						
VLA	Vladivostok	19.80	254	⇓*i*P	Pn	12 03 13.8	-4.2
VLA				*e*S	S	12 06 53.8	-1.3
VLA				pmax	pmax		
	comp=Z,204nm,1.1s						
CLNS	Chul'man	19.92	297	*e*P	Pn	12 03 18.3	-1.0
CLNS				pmax	pmax		
	comp=Z,258nm,1.0s						
CLNS				pmax	pmax		
	comp=E,240nm,1.1s						
CLNS				pmax	pmax		
	comp=N,166nm,1.1s						
CLNS				MLR	MLR		
	comp=Z,7μm,16.0s						
CLNS				MLR	MLR		
	comp=E,5μm,19.0s						
CLNS				MLR	MLR		
	comp=N,3μm,15.0s						
NIKO	Nikolski	19.96	74	*e*P	Pn	12 03 16.2	-3.5
	comp=N,332nm,1.1s						
MDJ	Mudanjiang	20.36	260	P	P	12 03 21.6	-0.4
MDJ				pP		12 03 34.8	
MDJ				sP	sP	12 03 42.5	-2.0
MDJ				S	S	12 07 06.6	+0.4
MDJ				sS	sS	12 07 28.4	-0.9
MDJ				ScP	ScP	12 11 03.8	+1.4
MDJ				PcS	PcS	12 11 10.5	+0.8
MDJ				pmax	pmax		
	comp=Z,54nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,280nm,4.1s						
MDJ				LR	LR		
	comp=N,3μm,30.4s						
MDJ				LR	LR		
	comp=E,12μm,24.6s						
MDJ				LR	LR		
	comp=Z,8μm,32.4s						
MDJ	Mudanjiang	20.36	260	*e*P	P	12 03 21.3	-0.7
	comp=Z,270nm,1.1s						
MAJO	Matsushiro	20.96	231	*e*P	P	12 03 29.0	+0.5
	comp=Z,856nm,0.8s						
MAJO	Matsushiro	20.96	231	*e*P	P	12 03 29.0	+0.4
MAJO				pmax	pmax		
	comp=Z,856nm,0.8s						
MJAR	Matsushiro Arr	20.96	231	P	P	12 03 28.2	-0.4
	comp=Z,481nm,0.8s,baz=21,slow=9.8,SNR=1083						
MJAR				S	S	12 07 17.4	-0.9
	comp=Z,2.7nm,0.8s,baz=274,slow=32,SNR=2.3						
MJAR				ScP	ScP	12 11 04.7	+0.8
	comp=Z,2.5nm,1.0s,baz=263,slow=3.4,SNR=4.2						
MJAR				LR	LR	12 11 45.4	
	comp=Z,8μm,21.8s,baz=55,slow=37						
MJAR	Matsushiro Arr	20.96	231	P	P	12 03 28.2	-0.4
MJAR				S	S	12 07 17.4	-0.8
MJAR				pmax	pmax		
	comp=Z,481nm,0.8s						
MJAR				smax			
	comp=N,3.0nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,8μm,21.8s						
UNV	Unalaska Valle	21.20	71	*e*P	P	12 03 29.1	-1.8
	comp=Z,374nm,1.1s,mb5.6						
TNA	Tin City	21.84	38	*e*P	P	12 03 37.6	-0.1
	comp=Z,666nm,1.1s,mb5.9						
JHJ	Hachijo jima 2	23.12	223	P	P	12 03 50.6	-0.7
	comp=Z,204nm,0.8s,mb5.5,baz=217,slow=4.1,SNR=4.6						
JHJ				LR	LR	12 14 25.5	
	comp=Z,1μm,18.5s,baz=322,slow=40						
CN2	Changchun	23.32	263	*e*P	P	12 03 50.5	-2.7
CN2				*e*pP		12 04 07.5	
CN2				*e*S	S	12 07 53.0	-7.4
CN2				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,7μm,19.0s						
CN2				LR	LR		
	comp=E,6μm,19.0s						
CN2				LR	LR		
	comp=Z,8μm,18.0s						
TIXI	Tiksi	23.69	337	*e*P	P	12 03 56.2	-0.1
	comp=Z,677nm,1.0s,mb5.9						
TIXI	Tiksi	23.69	337	*e*P	P	12 03 54.7	-1.6
TIXI				*e**PP		12 04 12.0	
TIXI				*e*		12 07 38.2	
TIXI				*e*S	S	12 08 04.1	-1.8
TIXI				pmax	pmax		
	comp=Z,799nm,1.1s,mb6.0						
TIXI				pmax	pmax		
	comp=N,318nm,1.1s						
TIXI				pmax	pmax		
	comp=E,474nm,1.2s						
TIXI				pmax	pmax		
	comp=Z,386nm,4.8s						
TIXI				MLR	MLR		
	comp=Z,3μm,12.0s						
HIA	Hailar	24.42	279	*e*P	P	12 04 02.7	-0.4
	comp=Z,224nm,0.8s,mb5.5						
HIA	Hailar	24.42	279	*e*P	P	12 04 02.7	-0.4
HIA				pmax	pmax		
	comp=Z,224nm,0.8s						
SNY	Shenyang	25.56	260	⇓P	P	12 04 13.8	+0.2
SNY				S	S	12 08 32.4	-3.9
SNY				pmax	pmax		
	comp=Z,71nm,1.2s,mb5.0						
SNY				pmax	pmax		
	comp=Z,1μm,12.0s						
SNY				LR	LR		
	comp=N,11μm,19.8s						
SNY				LR	LR		
	comp=E,4μm,16.7s						
SNY				LR	LR		
	comp=Z,6μm,29.9s						
KSRS	Korea Array	25.76	248	P	P	12 04 15.5	+0.1
	comp=Z,65nm,0.7s,mb5.1,baz=47,slow=9.4,SNR=253						
KSRS				PcP	PcP	12 07 44.4	+0.9

comp=Z,12nm,0.8s,baz=352,slow=2.3,SNR=12
KSRS ScP ScP 12 11 17.6 +0.8
comp=Z,0.8nm,0.6s,baz=99,slow=1.6,SNR=6.1
KSRS LR LR 12 12 51.1
comp=Z,4μm,22.0s,baz=50,slow=33
KSRS Korea Array 25.76 248 P P 12 04 15.5 +0.1
KSRS 12 07 44.4
KSRS pmax pmax
comp=Z,65nm,0.7s,mb5.2
KSRS MLR MLR
comp=Z,4μm,22.0s
BOD Bodaibo 25.76 301 *eP* **P 12 04 14.2 -1.0**
BOD *e* pP 12 04 30.6 -0.6
BOD pmax pmax
comp=Z,79nm,1.0s,mb5.1
TTA Tatalina 26.34 48 *eP* **P 12 04 20.0 -0.4**
TTA Tatalina 26.34 48 *eP* **P 12 04 20.0 -0.4**
INCN Inchon 26.48 249 *eP* **P 12 04 21.2 -0.7**
comp=Z,44nm,0.8s,mb4.9
INCN Inchon 26.48 249 P **P 12 04 22.0 +0.1**
SNR=6.1
SVW2 Sparrevohn 26.51 52 *eP* **P 12 04 21.4 -0.5**
comp=Z,63nm,1.0s,mb5.1
CIT Chita 27.23 288 *eP* **P 12 04 27.3 -1.1**
CIT *e* pP 12 04 41.1 -3.4
JNU Nakatsue 27.34 237 *eP* **P 12 04 30.4 +0.7**
comp=Z,134nm,1.0s,mb5.4
CBIJ Chichi jima 27.62 212 P **P 12 04 31.8 -0.5**
comp=Z,107nm,0.9s,mb5.4,baz=333,slow=6.3,SNR=4.9
CBIJ LR LR 12 15 06.2
comp=Z,759nm,20.0s,baz=3.1,slow=35
RSO Redoubt South 27.92 53 *eP* **P 12 04 34.4 -0.2**
OHAK Old Harbor 28.06 60 *eP* **P 12 04 33.8 -2.1**
comp=Z,117nm,1.0s,mb5.4
PPLA Purkeypile 28.09 48 *eP* **P 12 04 36.3 +0.2**
comp=Z,102nm,1.1s,mb5.3
KDAK Kodiak Island 28.34 59 P **P 12 04 36.2 -2.1**
comp=Z,35nm,0.8s,mb4.9,baz=304,slow=6.1,SNR=9.1
KDAK PcP PcP 12 07 49.0 -0.3
comp=Z,33nm,0.9s,baz=207,slow=3.8,SNR=4.5
KDAK LR LR 12 16 40.4
comp=Z,4μm,18.6s,baz=267,slow=38
KDAK Kodiak Island 28.34 59 *eP* **P 12 04 36.0 -2.3**
comp=Z,206nm,1.5s,mb5.4
KDAK Kodiak Island 28.34 59 P **P 12 04 36.2 -2.1**
KDAK 12 07 49.0
KDAK pmax pmax
comp=Z,35nm,0.8s,mb4.9
KDAK MLR MLR
comp=Z,4μm,18.6s
DL2 Dalian 28.52 257 P **P 12 04 39.9 -0.2**
DL2 S **S 12 09 23.5 +0.6**
DL2 pmax pmax
comp=Z,30nm,1.5s,mb4.7
DL2 pmax pmax
comp=Z,340nm,11.1s
DL2 LR LR
comp=N,3μm,19.8s
DL2 LR LR
comp=E,2μm,24.0s
DL2 LR LR
comp=Z,5μm,25.5s
BPAW Bear Paw Mtn. 28.64 45 *eP* **P 12 04 40.3 -0.5**
comp=Z,80nm,0.8s,mb5.4
TRF Thorofare Moun 28.95 47 *eP* **P 12 04 43.2 -0.5**
comp=Z,101nm,1.0s,mb5.4
COLD Coldfoot 29.14 39 *eP* **P 12 04 44.8 -0.6**
comp=Z,116nm,0.9s,mb5.5
RC01 Rabbit Creek A 29.34 51 *eP* **P 12 04 46.1 -1.0**
comp=Z,28nm,0.7s,mb5.0
MCK McKinley 29.55 46 *eP* **P 12 04 47.9 -1.0**
comp=Z,144nm,0.9s,mb5.6
MCK McKinley 29.55 46 *eP* **P 12 04 47.9 -1.0**
MCK pmax pmax
comp=Z,144nm,0.9s,mb5.6
PMR Palmer 29.58 50 *eP* **P 12 04 47.7 -1.6**
comp=Z,31nm,0.7s,mb5.0
PMR Palmer 29.58 50 *eP* **P 12 04 47.7 -1.6**
PMR pmax pmax
comp=Z,31nm,0.7s,mb5.0
SEW Seward 29.60 53 *eP* **P 12 04 47.6 -1.9**
comp=Z,123nm,1.0s,mb5.5
SML Sawmill 29.94 50 *eP* **P 12 04 51.6 -0.9**
comp=Z,104nm,0.8s,mb5.5
SML Sawmill 29.94 50 *eP* **P 12 04 51.6 -0.9**
SML pmax pmax
comp=Z,104nm,0.8s,mb5.5
COLA College 30.00 44 P **P 12 04 51.8 -1.1**
COLA College 30.00 44 P **P 12 04 51.8 -1.1**
ILAR Eielson Array 30.41 44 P **P 12 04 55.2 -1.4**
comp=Z,92nm,0.7s,mb5.5,baz=260,slow=6.6,SNR=709
ILAR PcP PcP 12 07 52.9 -1.6
comp=Z,10nm,0.7s,baz=270,slow=3.0,SNR=6.7
ILAR ScP ScP 12 11 29.5 -1.2
comp=Z,3.2nm,1.1s,baz=285,slow=3.3,SNR=5.6
ILAR PKiKP PKiKP 12 15 22.8 -2.4
comp=Z,0.4nm,0.6s,baz=290,slow=2.0,SNR=4.1
ILAR LR LR 12 18 56.4
comp=Z,2μm,18.9s,baz=274,slow=40
ILAR P3KPbc 12 36 46.6
comp=Z,1.1nm,0.9s,baz=109,slow=2.1,SNR=8.2
ILAR Eielson Array 30.41 44 P **P 12 04 55.2 -1.4**
ILAR PcP PcP 12 07 52.9 -1.6
ILAR ScP ScP 12 11 29.5 -1.2
ILAR Eielson Array 30.41 44 P **P 12 04 55.2 -1.4**
ILAR 12 07 52.9
ILAR 12 11 29.5
ILAR pmax pmax
comp=Z,92nm,0.7s
ILAR Eielson Array 30.41 44 LR LR 12 18 56.4
ILAR *e* 12 36 46.6
BJI Beijing 31.15 264 P **P 12 05 03.1 -0.3**
BJI pP pP 12 05 18.0 -1.6
BJI sP sP 12 05 25.3 -2.1
BJI S **S 12 10 04.3 +0.1**
BJI pmax pmax
comp=Z,49nm,1.0s,mb5.2
BJI pmax pmax
comp=Z,500nm,4.5s
BJI LR LR
comp=N,7μm,23.2s
BJI LR LR
comp=E,5μm,19.8s
BJI LR LR
comp=Z,6μm,29.4s
PAX Paxson 31.16 47 *eP* **P 12 05 02.5 -0.6**
comp=Z,50nm,1.0s,mb5.2
PAX Paxson 31.16 47 *eP* **P 12 05 02.6 -0.5**
PAX pmax pmax
comp=Z,50nm,1.0s,mb5.2
BJT Baijiatuau 31.17 264 *eP* **P 12 05 03.3 -0.2**
comp=Z,48nm,0.8s,mb5.3
BJT Baijiatuau 31.17 264 *eP* **P 12 05 03.3 -0.2**
BJT pmax pmax
comp=Z,48nm,0.8s
DOT Dot Lake 31.72 46 *eP* **P 12 05 06.4 -1.6**
comp=Z,224nm,0.7s,mb6.0
MENT Mentasta 31.95 47 *eP* **P 12 05 09.7 -0.5**
IRK Irkutsk 32.54 292 *eP* **P 12 05 16.0 +0.6**
IRK *e* 12 05 26.9
IRK *e* 12 07 59.4
IRK pmax pmax
comp=Z,84nm,1.2s,mb5.5
ULN Ulaanbaatar 32.69 284 *eP* **P 12 05 17.4 +0.6**
comp=Z,23nm,1.0s,mb5.0
ULN Ulaanbaatar 32.69 284 *eP* **P 12 05 17.4 +0.7**
ULN pmax pmax
comp=Z,23nm,1.0s,mb5.0
ULN Ulaanbaatar 32.69 284 P **P 12 05 17.5 +0.8**
comp=Z,715nmcomp=Z,24nm,1.1s,mb4.9
ULN Ulaanbaatar 32.69 284 P **P 12 05 17.7 +0.9**
SNR=10
EGAK Eagle 32.86 43 *eP* **P 12 05 16.3 -1.7**
comp=Z,208nm,0.8s,mb6.0
TIA Tai'an 32.98 258 *eP* **P 12 05 18.8 -0.7**
TIA S **S 12 10 27.9 -4.9**
TIA pmax pmax
comp=Z,680nm,22.0s
TIA LR LR
comp=N,3μm,30.9s
TIA LR LR
comp=E,8μm,24.9s
TIA LR LR
comp=Z,11μm,27.4s
SONM Songino Array 33.10 284 P **P 12 05 20.9 +0.6**
comp=Z,4.0nm,0.3s,mb4.7,baz=58,slow=8.1,SNR=27
SONM PcP PcP 12 08 02.5 +0.5
comp=Z,30nm,0.7s,baz=95,slow=1.8,SNR=16
SONM ScP ScP 12 11 43.1 +3.0
comp=Z,4.5nm,1.1s,baz=72,slow=2.3,SNR=3.6
SONM LR LR 12 20 06.6
comp=Z,16μm,19.4s,baz=62,slow=39
SONM Songino Array 33.10 284 P **P 12 05 20.9 +0.6**
SONM 12 08 02.5
SONM MLR MLR
comp=Z,16μm,19.4s
TLY Talaya 33.11 292 *eP* **P 12 05 21.1 +0.7**
comp=Z,55nm,1.1s,mb5.3
TLY Talaya 33.11 292 *eP* **P 12 05 19.7 -0.7**
TLY *e* pP 12 05 35.9 -0.8
TLY *e* 12 06 36.3
TLY *e* 12 08 02.6
TLY *e*S **S 12 10 44.6 +10**
TLY pmax pmax
comp=Z,53nm,1.1s,mb5.3
TLY MLR MLR
comp=Z,5μm,19.0s
TLY Talaya 33.11 292 P **P 12 05 21.8 +1.4**
comp=Z,254nm,1.1s,mb6.0,SNR=13
TLY Talaya 33.11 292 P **P 12 05 22.1 +1.6**
SNR=12
HHC Hu-ho-hao-te 33.53 269 *eP* **P 12 05 24.1 0.0**
HHC pP pP 12 05 39.3 -1.1
HHC sP sP 12 05 46.1 -2.2
HHC PP PP 12 06 38.0 -2.9
HHC PcP PcP 12 08 04.8 +1.4
HHC S **S 12 10 39.8 -1.3**
HHC sS sS 12 11 05.9 -3.0
HHC ScP ScP 12 11 43.1 +1.4
HHC SS SS 12 12 45.1 -23
HHC ScS ScS 12 15 42.1 -0.8
HHC pmax pmax
comp=Z,43nm,1.1s,mb5.2
HHC pmax pmax
comp=Z,380nm,5.7s
HHC LR LR
comp=N,8μm,17.2s
HHC LR LR
comp=E,6μm,16.7s
HHC LR LR
comp=Z,8μm,16.3s
DAWY Dawson 33.71 45 *eP* **P 12 05 24.6 -0.9**
JOW Kunigami 33.74 234 *eP* **P 12 05 26.2 +0.1**
comp=Z,152nm,1.0s,mb5.8
ZAK Zakamensk 33.84 290⇑ *iP* **P 12 05 27.5 +0.8**
ZAK *e* 12 08 04.9
ZAK pmax pmax
comp=Z,23nm,1.0s,mb5.0
SSE Sheshan 34.19 247 P **P 12 05 30.9 +0.9**
SSE pP pP 12 05 46.9 +0.6
SSE sP sP 12 05 56.3 +2.1
SSE S **S 12 10 53.1 +1.5**
SSE sS sS 12 11 22.0 +2.5
SSE pmax pmax
comp=Z,97nm,1.1s,mb5.5
SSE pmax pmax
comp=Z,680nm,5.5s
SSE LR LR
comp=N,2μm,24.8s
SSE LR LR
comp=E,2μm,24.7s
SSE LR LR
comp=Z,3μm,32.8s
BTO Baotou 34.62 270 *eP* **P 12 05 32.8 -0.8**
MOY Mondy 34.64 293 *eP* **P 12 05 34.8 +1.2**
MOY pmax pmax
comp=Z,92nm,1.2s,mb5.5
PNL Peninsula 34.65 52 *eP* **P 12 05 33.1 -0.5**
comp=Z,83nm,0.9s,mb5.6
NJ2 Nanjing 34.84 251 *eP* **P 12 05 36.1 +0.5**
NJ2 pP pP 12 05 51.3 -0.6
NJ2 sP sP 12 05 58.8 -1.0
NJ2 PP PP 12 06 52.6 -3.0
NJ2 S **S 12 10 58.0 -3.5**
NJ2 pmax pmax
comp=Z,70nm,0.8s,mb5.5
NJ2 pmax pmax
comp=Z,630nm,5.5s
NJ2 LR LR
comp=N,3μm,15.2s
NJ2 LR LR
comp=E,2μm,13.5s
NJ2 LR LR
comp=Z,4μm,18.3s
TIY Taiyuan 34.88 264 *eP* **P 12 05 35.8 -0.1**
TIY pP pP 12 05 51.9 -0.4
TIY PP PP 12 06 55.1 -0.9
TIY S **S 12 10 59.4 -2.7**
TIY pmax pmax
comp=Z,450nm,3.8s
TIY LR LR
comp=N,1μm,10.7s
TIY LR LR
comp=E,2μm,14.8s
TIY LR LR
comp=Z,3μm,15.1s
INK Inuvik 35.45 37 *eP* **P 12 05 40.3 -0.1**
comp=Z,253nm,0.8s,mb6.1
INK Inuvik 35.45 37 *eP* **P 12 05 40.3 -0.2**
INK pmax pmax
comp=Z,253nm,0.8s
SKAG Skagway 36.69 52 *eP* **P 12 05 51.1 0.0**
comp=Z,258nm,1.4s,mb6.0
SIT Sitka 37.51 55 *eP* **P 12 05 57.8 -0.3**
comp=Z,354nm,2.1s,mb5.8
SIT Sitka 37.51 55 *eP* **P 12 05 57.8 -0.3**
SIT pmax pmax
comp=Z,354nm,2.1s,mb5.8
WHN Wuhan 38.58 254 P **P 12 06 07.0 -0.4**
WHN pmax pmax
comp=Z,130nm,0.5s,mb6.0
WHN LR LR
comp=N,7μm,19.5s
WHN LR LR
comp=E,11μm,22.2s
WHN LR LR
comp=Z,6μm,20.0s
TATO Taipei 38.77 240 *eP* **P 12 06 10.6 +1.5**
comp=Z,73nm,0.8s,mb5.6
YHNB Yeheng 39.08 240 *eP* **P 12 06 11.8 +0.2**
comp=Z,44nm,0.9s,mb5.3
CRAG Craig 39.26 57 *eP* **P 12 06 13.0 +0.2**
comp=Z,94nm,1.4s,mb5.4
WRAK Wrangell Islan 39.27 55 *eP* **P 12 06 13.7 +0.9**
comp=Z,96nm,0.9s,mb5.6
NACB Ninganchiao 39.36 239 *eP* **P 12 06 13.4 -0.6**
comp=Z,62nm,1.0s,mb5.4
XAN Xi'an 39.44 263 P **P 12 06 12.9 -1.6**
XAN PP PP 12 07 50.6 +4.6
XAN S **S 12 12 09.8 -1.5**
XAN SS SS 12 15 04.6 -2.9
XAN LR LR
comp=N,4μm,29.8s
XAN LR LR
comp=E,2μm,35.4s
XAN LR LR
comp=Z,1μm,19.3s
DLBC Dease Lake 39.62 52 *eP* **P 12 06 16.8 +1.1**
SSLB Suanglung 40.02 240 *eP* **P 12 06 18.9 -0.4**
comp=Z,87nm,0.9s,mb5.6
YULB Yu-li 40.15 239 *eP* **P 12 06 20.6 0.0**
comp=Z,66nm,0.9s,mb5.5
QZH Quanzhou 40.38 244⇑ *iP* **P 12 06 22.0 -0.4**
QZH S **S 12 12 20.0 -5.5**
QZH pmax pmax
comp=Z,210nm,0.8s,mb6.0
QZH LR LR
comp=N,2μm,16.4s
QZH LR LR
comp=E,2μm,15.8s
QZH LR LR
comp=Z,3μm,28.0s
TPUB Ta-pu 40.58 240 *eP* **P 12 06 24.2 +0.1**
TWG Pinlang 40.74 239 *eP* **P 12 06 24.2 -1.2**
LZH Lanzhou 41.23 269 *eP* **P 12 06 29.9 +0.7**
LZH pP pP 12 06 45.0 -0.9
LZH sP sP 12 06 50.4 -3.3
LZH PP PP 12 08 08.5 +3.2
LZH PcP PcP 12 08 28.3 +1.3
LZH *e*S **S 12 12 36.5 -1.4**
LZH SS SS 12 15 43.6 +0.6
LZH pmax pmax
comp=Z,34nm,1.2s,mb5.0
LZH pmax pmax
comp=Z,150nm,4.7s
LZH LR LR
comp=N,3μm,15.6s
LZH LR LR
comp=E,4μm,15.6s
LZH LR LR
comp=Z,8μm,19.2s
GTA Gaotai 41.64 276 P **P 12 06 32.8 +0.2**
GTA pP pP 12 06 48.1 -1.2
GTA sP sP 12 06 54.8 -2.2
GTA PP PP 12 08 12.8 +3.1
GTA PcP PcP 12 08 29.0 +0.7
GTA ScP ScP 12 12 15.5 +3.3
GTA S **S 12 12 44.8 +0.9**
GTA ScS ScS 12 16 28.4 -0.6
GTA pmax pmax
comp=Z,32nm,1.4s,mb4.9
GTA pmax pmax
comp=Z,610nm,7.1s
GTA LR LR
comp=N,6μm,16.4s
GTA LR LR
comp=E,6μm,24.4s
GTA LR LR
comp=Z,8μm,20.6s
ENH Enshi 41.70 258 *eP* **P 12 06 32.5 -0.6**
comp=Z,121nm,0.7s,mb5.7
ZAA0 Zalesovo Array 42.47 303 *eP* **P 12 06 37.2 -2.0**
ZALV Zalesovo Beam 42.47 303 P **P 12 06 37.2 -2.0**
comp=Z,6.2nm,0.6s,mb4.5,baz=60,slow=6.8,SNR=22
ZALV PcP PcP 12 08 29.9 -0.9
comp=Z,28nm,0.6s,baz=68,slow=3.8,SNR=13
ZALV ScP ScP 12 12 17.2 +1.9
comp=Z,12nm,1.0s,baz=90,slow=2.9,SNR=2.4
ZALV PKiKP PKiKP 12 15 33.8 -1.3
comp=Z,1.4nm,0.4s,baz=173,slow=2.4,SNR=4.0
ZALV LR LR 12 25 45.6
comp=Z,6μm,19.0s,baz=61,slow=38
ZALV Zalesovo Beam 42.47 303 P **P 12 06 37.2 -2.0**
ZALV PcP PcP 12 08 29.9 -0.9
ZALV ScP ScP 12 12 17.2 +1.9
ZALV Zalesovo Beam 42.47 303 P **P 12 06 37.2 -2.0**
ZALV 12 08 29.9
NVS Novosibirsk 42.86 305⇑ *iP* **P 12 06 40.6 -1.7**
NVS *e**PP pP 12 07 01.7 +2.6
NVS *e* 12 08 31.5
NVS *e*S **S 12 12 55.4 -6.2**
NVS *e*SS SS 12 16 32.1 +18
NVS pmax pmax
comp=N,20nm,1.0s
NVS pmax pmax
comp=E,83nm,1.0s
NVS pmax pmax
comp=Z,100nm,1.0s,mb5.5
NVS smax
comp=N,38nm,1.8s
NVS smax
comp=E,26nm,2.0s
ALE Alert 44.20 7 P **P 12 06 53.0 +0.2**
comp=E,1μm,0.8s,SNR=54
CD2 Chengdu 44.75 264⇑ *iP* **P 12 06 57.5 -0.3**
CD2 pP pP 12 07 14.0 -0.6
CD2 sP sP 12 07 22.5 +0.2
CD2 PP PP 12 08 43.5 +0.3
CD2 PcS PcS 12 12 30.5 -2.1
CD2 S **S 12 13 29.5 -0.1**
CD2 sS sS 12 13 57.5 -0.8
CD2 SS SS 12 16 42.9 -9.1
CD2 pmax pmax
comp=Z,70nm,1.0s,mb5.3
CD2 pmax pmax
comp=Z,1μm,7.2s
CD2 LR LR
comp=N,5μm,22.8s
CD2 LR LR
comp=E,4μm,19.2s
CD2 LR LR
comp=Z,4μm,20.4s
YKA Yellowknife Ar 44.76 41 P **P 12 06 57.3 -0.1**
comp=Z,69nm,0.7s,mb5.5,baz=299,slow=8.1,SNR=80
YKA PcP PcP 12 08 38.2 -0.1
comp=Z,11nm,0.8s,baz=303,slow=3.4,SNR=5.3
YKA Yellowknife Ar 44.76 41 P **P 12 06 57.3 -0.1**
YKA PcP PcP 12 08 38.2 -0.1
YKA Yellowknife Ar 44.76 41 P **P 12 06 57.3 -0.1**
YKA 12 08 38.2
YKA pmax pmax
comp=Z,69nm,0.7s
GZH Guangzhou 44.79 247 P **P 12 06 54.3 -3.9**
GZH LR LR
comp=N,2μm,18.3s
GZH LR LR
comp=E,2μm,14.9s
GZH LR LR
comp=Z,3μm,16.4s
RES Resolute Bay 44.80 21 *eP* **P 12 06 58.6 +1.0**
comp=Z,163nm,0.8s,mb5.8
RES Resolute Bay 44.80 21 *eP* **P 12 06 58.6 +1.0**
RES pmax pmax
comp=Z,163nm,0.8s,mb5.8
KIP Kipapa 45.40 115⇓ *eP* **P 12 06 58.4 -4.6**
GYA Guiyang 46.17 257⇑ *iP* **P 12 07 09.8 +0.8**
GYA pP pP 12 07 25.5 -0.5
GYA sP sP 12 07 34.6 +1.0
GYA PcP PcP 12 08 43.3 -0.6
GYA PP PP 12 08 57.0 -1.3
GYA ScP ScP 12 12 31.0 +0.1
GYA S **S 12 13 47.8 -2.3**
GYA sS sS 12 14 18.9 0.0
GYA SS SS 12 17 07.6 -8.2
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,190nm,5.4s
GYA LR LR
comp=N,10μm,16.1s
GYA LR LR
comp=E,6μm,17.6s
GYA LR LR
comp=Z,11μm,15.8s
WMQ Urumqi 46.31 289 P **P 12 07 11.0 +1.1**
WMQ pP pP 12 07 27.0 +0.2
WMQ sP sP 12 07 34.0 -0.6
WMQ PP PP 12 09 00.0 +0.6
WMQ ScP ScP 12 12 33.0 +1.8
WMQ S **S 12 13 53.0 +1.2**
WMQ sS sS 12 14 18.0 -2.5
WMQ SS SS 12 17 11.0 -6.5
WMQ pmax pmax
comp=Z,74nm,1.0s,mb5.4
WMQ pmax pmax
comp=Z,790nm,4.0s
WMQ LR LR
comp=N,6μm,16.0s
WMQ LR LR
comp=E,4μm,16.0s
WMQ LR LR
comp=Z,4μm,16.0s
BCPH Baguio City Da 46.35 234⇓ *eP* **P 12 07 09.8 -0.7**
KURK Kurchatov 47.40 302 P **P 12 07 17.6 -0.7**
comp=Z,26nm,0.5s,mb5.2,baz=60,slow=7.4,SNR=4.7
KURK PcP PcP 12 08 48.0 +0.2
comp=Z,14nm,0.6s,baz=49,slow=2.8,SNR=4.6
KURK ScP ScP 12 12 40.4 +4.7
comp=Z,8.8nm,1.0s,baz=47,slow=3.7,SNR=4.7
KURK S **S 12 14 06.0 -1.2**
comp=Z,4.7nm,1.0s,baz=1.8,slow=10.0,SNR=6.4
KURK Kurchatov 47.40 302 P **P 12 07 17.6 -0.7**
KURK PcP PcP 12 08 48.0 +0.2
KURK ScP ScP 12 12 40.4 +4.7
KURK S **S 12 14 06.0 -1.2**
KURK Kurchatov 47.40 302 P **P 12 07 17.6 -0.7**
KURK 12 08 48.1
KURK S **S 12 14 06.0 -1.2**
KURK pmax pmax
comp=Z,26nm,0.5s,mb5.2
KURK smax
comp=N,5.0nm,1.0s
KURK Kurchatov 47.40 302 P **P 12 07 17.8 -0.5**
comp=N,485nm,1.2s,mb6.1,SNR=78
KURK Kurchatov 47.40 302 P **P 12 07 17.4 -0.9**
SNR=36

MK31	Makanchi Array	47.66	296	eP		P	12 07 19.3	-1.1
MK31	Makanchi Array	47.66	296	eP		P	12 07 19.3	-1.1
MKAR	Makanchi Array	47.66	296	P		P	12 07 19.3	-1.0
	comp=N,22nm,0.6s,mb5.2,baz=59,slow=7.0,SNR=204							
MKAR				ScP		ScP	12 12 39.5	+2.6
	comp=N,2.1nm,0.9s,baz=68,slow=4.2,SNR=2.9							
MKAR				LR		LR	12 28 21.2	
	comp=N,6µm,20.9s,baz=48,slow=37							
MKAR	Makanchi Array	47.66	296	P		P	12 07 19.3	-1.0
MKAR				ScP		ScP	12 12 39.5	+2.6
MKAR				LR		LR	12 28 21.2	
MKAR	Makanchi Array	47.66	296	P		P	12 07 19.3	-1.1
MKAR				pmax		pmax		
	comp=Z,22nm,0.6s							
MKAR				MLR		MLR		
	comp=Z,6µm,20.9s							
PGC	Sidney	47.83	61	eP		P	12 07 21.6	-0.1
KBS	Kingsbay	47.86	352	⇑iP		P	12 07 21.9	+0.4
KBS				AMb		AMB	12 07 23.6	
	comp=Z,115nm,0.8s,mb5.8							
KBS				eS		S	12 14 14.4	+1.4
KBS				AMS		AMS	12 25 17.9	
	comp=Z,2µm,24.5s							
KBS	Kingsbay	47.86	352	eP		P	12 07 22.2	+0.7
KBS	Kingsbay	47.86	352	c iP		P	12 07 21.6	0.0
KBS				pmax		pmax		
	comp=Z,168nm,1.2s,mb5.8							
NLWA	Neilton Lookou	48.33	63	eP		P	12 07 25.6	0.0
A05A	Maple Falls	48.36	60	⇓P		P	12 07 25.0	-0.8
	baz=48,SNR=16							
GNW	Green Mountain	48.80	62	eP		P	12 07 28.9	-0.2
JCW	Jim Creek	48.92	61	P		P	12 07 29.7	-0.3
B06A	Marblemount	48.97	60	⇓P		P	12 07 29.8	-0.6
	baz=49,SNR=19							
RPW	Rockport	48.99	60	eP		P	12 07 28.4	-2.2
E03A	Lebam	49.00	64	P		P	12 07 30.6	-0.1
	baz=49,SNR=17							
F03A	Seaside	49.37	64	⇓P		P	12 07 33.7	+0.1
	baz=49,SNR=14							
D05A	Enumclaw	49.48	62	⇓P		P	12 07 34.6	+0.2
	baz=49							
KMI	Kunming	49.53	259	P		P	12 07 35.3	+0.3
KMI				pP		pP	12 07 53.3	+1.2
KMI				sP		sP	12 08 00.8	+1.0
KMI				PcP		PcP	12 08 56.5	+0.6
KMI				PP		PP	12 09 30.3	+0.6
KMI				S		S	12 14 34.8	-2.9
KMI				sS		sS	12 15 05.9	-0.8
KMI				SS		SS	12 18 05.5	-4.7
KMI				pmax		pmax		
	comp=Z,94nm,1.0s,mb5.7							
KMI				pmax		pmax		
	comp=Z,840nm,6.1s							
KMI				LR		LR		
	comp=N,4µm,18.7s							
KMI				LR		LR		
	comp=E,2µm,22.9s							
KMI				LR		LR		
	comp=Z,5µm,25.0s							
HEBO	Mount Hebo	49.70	65	eP		P	12 07 36.5	+0.4
LON	Longmire	49.84	62	eP		P	12 07 36.4	-0.7
LON	Longmire	49.84	62	eP		P	12 07 36.4	-0.7
QIZ	Qiongzhong	49.98	248	P		P	12 07 39.4	+0.9
QIZ				pP		pP	12 07 57.8	+2.2
QIZ				S		S	12 14 44.0	-0.1
QIZ				pmax		pmax		
	comp=Z,120nm,1.2s,mb5.7							
QIZ				pmax		pmax		
	comp=Z,1µm,7.8s							
QIZ				LR		LR		
	comp=N,970nm,17.2s							
QIZ				LR		LR		
	comp=E,530nm,22.2s							
QIZ				LR		LR		
	comp=Z,2µm,24.1s							
QIZ	Qiongzhong	49.98	248	eP		P	12 07 39.3	+0.8
	comp=Z,314nm,1.1s,mb6.2							
F04A	Amboy	50.00	64	⇓P		P	12 07 38.2	-0.1
	baz=50							
VOSK	Vostochnaya	50.13	308	P		P	12 07 36.7	-2.5
VOSK				pmax		pmax		
	comp=Z,54nm,1.2s,mb5.3							
ETW	Entiat	50.13	61	eP		P	12 07 38.8	-0.5
	comp=Z,88nm,0.8s,mb5.7							
B08A	Colville Reser	50.21	59	P		P	12 07 39.5	-0.4
	baz=50,SNR=71							
BVAR	Borovoye Array	50.24	308	PcP		PcP	12 08 57.8	-0.3
	comp=Z,31nm,0.5s,baz=79,slow=2.7,SNR=9.1							
BVAR				ScP		ScP	12 12 51.3	+3.6
	comp=Z,6.4nm,0.8s,baz=119,slow=5.2,SNR=3.5							
BRVK	Borovoye	50.27	308	P		P	12 07 38.5	-1.7
BRVK	Borovoye	50.27	308	c iP		P	12 07 38.5	-1.7
BRVK				pmax		pmax		
	comp=Z,49nm,1.2s,mb5.3							
BRVK				MLR		MLR		
	comp=Z,9µm,17.0s							
BRVK	Borovoye	50.27	308	P		P	12 07 38.0	-2.2
	comp=Z,351nm,0.5s,mb6.5,SNR=13							
BRVK	Borovoye	50.27	308	P		P	12 07 39.0	-1.2
	SNR=17							
COR	Corvallis	50.34	65	eP		P	12 07 41.3	+0.4
COR	Corvallis	50.34	65	eP		P	12 07 41.3	+0.4
G04A	Mulino	50.41	64	⇑P		P	12 07 41.2	-0.3
	baz=50,SNR=11							
HOOD	Mount Hood Mea	50.80	64	eP		P	12 07 44.1	-0.3
	comp=Z,189nm,1.2s,mb6.0							
KEBM	Edson Butte	50.81	68	eP		P	12 07 44.6	+0.1
	comp=Z,121nm,1.3s,mb5.8							
BJO	Bjornoya	50.90	347	eP		P	12 07 44.4	-0.3
H04A	Detroit Lake	50.90	65	P		P	12 07 44.9	-0.3
	baz=51,SNR=29							
BJO1	Bjornoya	50.93	347	eP		P	12 07 44.4	-0.6
E07A	Sunnyside	51.03	61	⇓P		P	12 07 45.7	-0.3
	baz=51,SNR=22							
C09A	Chrisman Ranch	51.12	59	P		P	12 07 46.0	-0.7
	baz=51,SNR=25							
OD2	Odessa Site #2	51.13	60	eP		P	12 07 45.8	-1.0
D08A	Wollman Farm,	51.23	60	⇓P		P	12 07 46.7	-0.8
	baz=51,SNR=18							
RSW	Rattlesnake Hi	51.27	61	eP		P	12 07 47.3	-0.6
	comp=Z,93nm,1.0s,mb5.8							
KBO	Bosley Butte	51.29	68	eP		P	12 07 48.4	+0.3
	comp=Z,147nm,1.5s,mb5.8							
HAWA	Hanford	51.31	61	eP		P	12 07 47.6	-0.6
F07A	Phinny Hill Vi	51.40	62	P		P	12 07 48.8	0.0
	baz=51,SNR=44							
G06A	Carlson Farm,	51.42	63	⇓P		P	12 07 48.5	-0.5
	baz=51,SNR=11							
NEW	Newport	51.44	58	P		P	12 07 48.4	-0.7
	baz=51,SNR=36							
NEW	Newport	51.44	58	eP		P	12 07 48.3	-0.8
NEW	Newport	51.44	58	eP		P	12 07 48.3	-0.8
DAG	Danmarks Havn	51.54	359	P		P	12 07 49.4	-0.1
DAG	Danmarks Havn	51.54	359	⇑iP		P	12 07 49.4	-0.1
DAG				pmax		pmax		
	comp=Z,320nm,1.0s,mb6.3							
DAG	Danmarks Havn	51.54	359	⇑iP		P	12 07 49.4	-0.1
	comp=Z,3µm,1.0s,mb7.3							
HUMO	Hull Mountain	51.77	67	eP		P	12 07 51.6	-0.1
	comp=Z,33nm,0.9s,mb5.4							
A12A	Yaak River Ran	51.80	57	P		P	12 07 51.7	-0.1
	baz=52,SNR=10							
KRMB	Red Mountain	51.91	69	eP		P	12 07 52.5	-0.2
	comp=Z,34nm,1.4s,mb5.2							
E09A	Wood Farm, Sta	51.98	61	⇑P		P	12 07 52.6	-0.6
	baz=52							
C11A	Tepee Creek (N	52.16	58	⇑P		P	12 07 54.1	-0.4
	baz=52							
SOKR	Solikamsk	52.18	321	c iP		P	12 07 52.0	-2.4
SOKR				pmax		pmax		
	comp=Z,40nm,1.1s,mb5.4							
SOKR				MLR		MLR		
	comp=Z,4µm,17.0s							
DAV	Davao City (W)	52.20	223	⇑eP		P	12 07 54.6	-0.5
DAV	Davao City (W)	52.20	223	P		P	12 07 56.6	+1.5
	comp=Z,320nm,0.5s,mb6.6							
G08A	Pilot Rock	52.31	62	P		P	12 07 55.1	-0.5
	baz=52,SNR=28							
LNOR	Lincton Mounta	52.31	61	eP		P	12 07 55.1	-0.5
LNOR	Lincton Mounta	52.31	61	eP		P	12 07 55.1	-0.5
SVE	Sverdlovsk	52.36	317	⇑eP		P	12 07 55.2	-0.6
SVE				e			12 10 01.3	
SVE				eS		S	12 15 16.1	+0.1
SVE				pmax		pmax		
	comp=Z,56nm,1.1s,mb5.5							
SVE				MLR		MLR		
	comp=Z,7µm,16.0s							
KHMM	Horse Mountain	52.43	69	eP		P	12 07 57.0	+0.4
A13A	Flathead Natio	52.44	56	⇑P		P	12 07 56.4	-0.1
	baz=52							
YBH	Yreka Blue Hor	52.47	68	eP		P	12 07 57.4	+0.6
	comp=Z,134nm,1.4s,mb5.8							
YBH	Yreka Blue Hor	52.47	68	eP		P	12 07 57.4	+0.6
YBH				pmax		pmax		
	comp=Z,134nm,1.4s							
WALA	Waterton Lakes	52.62	56	eP		P	12 07 57.3	-0.5
	comp=Z,2.7nm,0.9s							
C12B	Naegeli Ranch,	52.65	58	P		P	12 07 57.8	-0.4
	baz=52,SNR=38							
B13A	Whitefish	52.76	57	P		P	12 07 58.8	-0.1
	baz=52,SNR=48							
I07A	Izee	52.77	64	P		P	12 07 58.9	-0.2
	baz=52,SNR=22							
F10A	Beach Ranch, E	52.82	61	P		P	12 07 58.9	-0.5
	baz=53,SNR=25							
K05A	Summer Lake	52.86	66	⇑P		P	12 08 00.6	+0.8
	baz=53,SNR=47							
A14A	Double T Ranch	52.92	56	⇑P		P	12 07 59.5	-0.6
	baz=53,SNR=40							
BSMT	Bassoo Peak	52.92	57	eP		P	12 08 00.3	+0.2
	comp=Z,122nm,1.0s,mb5.9							
BLMT	Blacktail Moun	53.04	57	eP		P	12 08 01.0	0.0
	comp=Z,122nm,0.9s,mb5.9							
D12A	Red Ives Fores	53.13	59	⇓P		P	12 08 01.1	-0.5
	baz=53							
C13A	Hot Springs	53.14	58	⇓P		P	12 08 01.7	0.0
	baz=53							
JTMT	Jette	53.25	57	eP		P	12 08 02.4	-0.1
	comp=Z,69nm,1.1s,mb5.6							
A15A	Johnson Ranch,	53.27	55	P		P	12 08 01.6	-1.0
	baz=53,SNR=50							
KIPM	Iron Peak	53.27	70	eP		P	12 08 03.5	+0.7
	comp=Z,126nm,1.5s,mb5.7							
KCPM	Cahto Peak	53.29	70	eP		P	12 08 03.0	0.0
	comp=Z,33nm,1.2s,mb5.2							
WDC	Whiskeytown Da	53.31	69	eP		P	12 08 02.9	-0.2
	comp=Z,32nm,1.0s,mb5.3							
WDC	Whiskeytown Da	53.31	69	eP		P	12 08 02.9	-0.2
WDC				pmax		pmax		
	comp=Z,32nm,1.0s,mb5.3							
YBMT	Yellow Bay	53.32	57	eP		P	12 08 02.6	-0.4
	comp=Z,45nm,0.9s,mb5.5							
LVZ	Lovozero	53.33	337	c eP		P	12 08 01.0	-1.8
LVZ				pmax		pmax		
	comp=Z,22nm,0.9s,mb5.2							
LVZ				MLR		MLR		
	comp=Z,7µm,20.0s							
B14A	Marquette Ranc	53.38	56	P		P	12 08 03.0	-0.5
	baz=53,SNR=23							
LSA	Lhasa	53.39	273	P		P	12 08 04.3	+0.5
LSA				pmax		pmax		
	comp=Z,20nm,1.4s,mb5.0							
LSA				LR		LR		
	comp=N,630nm,3.5s							
LSA				LR		LR		
	comp=E,620nm,3.4s							
LSA				LR		LR		
	comp=Z,30nm,2.8s							
LSA	Lhasa	53.39	273	eP		P	12 08 04.3	+0.5
	comp=Z,17nm,0.5s,mb5.3							
LSA	Lhasa	53.39	273	eP		P	12 08 04.3	+0.5
LSA				pmax		pmax		
	comp=Z,17nm,0.5s,mb5.3							
E12A	Beaver Dam Sad	53.42	59	⇓P		P	12 08 03.4	-0.4
	baz=53							
ARU	Arti	53.49	317	eP		P	12 08 02.9	-1.2
	comp=Z,44nm,0.5s,mb5.7							
ARU	Arti	53.49	317	c iP		P	12 08 02.5	-1.6
ARU				e*PP		pP	12 08 22.7	+1.3
ARU				e			12 09 07.9	
ARU				e			12 10 03.2	
ARU				ePPP			12 11 09.2	
ARU				S		S	12 15 29.4	-2.0
ARU							12 17 44.7	
ARU				SS		SS	12 19 11.8	+0.2
ARU				SSS			12 21 07.4	
ARU				pmax		pmax		
	comp=Z,54nm,1.0s,mb5.5							
ARU				MLR		MLR		
	comp=Z,6µm,16.0s							
ARU	Arti	53.49	317	P		P	12 08 02.5	-1.6
	comp=Z,525nm,0.5s,SNR=7.4							
C14A	Swan Lake	53.52	57	⇓P		P	12 08 04.4	-0.1
	baz=53							
KEV	Kevo	53.55	341	eP		P	12 08 03.7	-0.7
	comp=Z,11nm,0.6s,mb5.0							
KEV	Kevo	53.55	341	eP		P	12 08 03.7	-0.7
KEV				pmax		pmax		
	comp=Z,11nm,0.6s,mb5.1							
KEV	Kevo	53.55	341	ep		P	12 08 03.2	-1.2
	comp=Z,4.8nm,0.4s,mb4.9							
SWMT	Swartz Lake	53.55	57	eP		P	12 08 04.4	-0.3
	comp=Z,44nm,1.0s,mb5.4							
D13A	Huson	53.58	58	P		P	12 08 04.3	-0.6
	baz=53,SNR=26							
MOD	Modoc	53.73	66	eP		P	12 08 06.4	+0.3
	comp=Z,65nm,0.8s,mb5.7							
B15A	Bradely Ranch,	53.78	56	P		P	12 08 05.4	-1.0
	baz=54,SNR=47							
TKM2	Tokmak 2	53.79	295	P		P	12 08 06.1	-0.5
	SNR=15							
TKM2	Tokmak 2	53.79	295	eP		P	12 08 05.9	-0.6
	comp=Z,21nm,0.9s,mb5.2							
TKM2	Tokmak 2	53.79	295	eP		P	12 08 05.9	-0.6
TKM2				pmax		pmax		
	comp=Z,21nm,0.9s,mb5.2							
J08A	Circle Bar Ran	53.81	64	P		P	12 08 06.8	+0.2
	baz=54,SNR=27							
A16A	West Butte Ran	53.86	55	P		P	12 08 06.0	-0.9
	baz=54,SNR=87							
APA	Apatity	53.89	337	⇑iP		P	12 08 07.0	+0.1
APA				i		pP	12 08 26.0	+1.8
APA				i S		S	12 15 32.0	-4.5
APA				e			12 17 45.0	
APA				pmax		pmax		
	comp=Z,14nm,0.7s,mb5.1							
APA				MLR		MLR		
	comp=Z,6µm,19.0s							
SLMT	Seeley Lake	53.99	57	eP		P	12 08 07.5	-0.4
	comp=Z,54nm,0.7s,mb5.7							
F12A	Elk City	54.02	60	P		P	12 08 08.0	-0.1
	baz=54,SNR=51							
MSO	Missoula	54.02	58	P		P	12 08 07.8	-0.4
	baz=54,SNR=48							
MSO	Missoula	54.02	58	eP		P	12 08 07.6	-0.5
	comp=Z,66nm,1.3s,mb5.5							
ARCES	ARCESS Array B	54.03	341	P		P	12 08 06.7	-1.2
	comp=Z,17nm,0.8s,mb5.2,baz=42,slow=5.8,SNR=42							
ARCES				PcP		PcP	12 09 11.1	-0.9
	comp=Z,22nm,0.7s,baz=35,slow=4.4,SNR=7.7							
ARCES				LR		LR	12 34 39.4	
	comp=Z,4µm,21.8s,baz=28,slow=40							
ARCES	ARCESS Array B	54.03	341	P		P	12 08 06.7	-1.2
ARCES				PcP		PcP	12 09 11.1	-0.9
ARCES				LR		LR	12 34 39.4	
ARCES	ARCESS Array B	54.03	341	P		P	12 08 06.7	-1.2
ARCES							12 09 11.1	
ARCES				pmax		pmax		
	comp=Z,17nm,0.8s							
ARCES				MLR		MLR		
	comp=Z,4µm,21.8s							
ARE0	ARCESS Array S	54.03	341	eP		P	12 08 07.5	-0.5
HOPS	Hopland	54.04	71	eP		P	12 08 08.2	-0.3
	comp=Z,135nm,1.4s,mb5.8							
D14A	Greenough	54.08	58	P		P	12 08 08.3	-0.3
	baz=54,SNR=58							
C15A	Salmond Ranch,	54.10	56	P		P	12 08 08.7	0.0
	baz=54,SNR=92							
E13A	Victor	54.14	58	P		P	12 08 08.4	-0.6
	baz=54,SNR=30							
B16A	M & M Farms, S	54.15	55	⇓P		P	12 08 08.2	-0.9
	baz=54,SNR=44							
USP	Ospenovka	54.17	296	P		P	12 08 08.8	-0.6
	SNR=20							
CHMS	Chumysh	54.21	296	P		P	12 08 09.6	0.0
	SNR=6.3							
A17A	Triple J Farms	54.32	54	P		P	12 08 09.6	-0.7
	baz=54,SNR=58							
WVOR	Wild Horse Val	54.32	65	eP		P	12 08 10.5	+0.1
	comp=Z,82nm,1.0s,mb5.7							
WVOR	Wild Horse Val	54.32	65	eP		P	12 08 10.5	+0.1
WVOR				pmax		pmax		
	comp=Z,82nm,1.0s,mb5.7							
CHMT	Chamberlain Mo	54.33	58	eP		P	12 08 09.8	-0.5
	comp=Z,30nm,0.9s,mb5.3							
G12A	Big Creek, Yel	54.38	60	⇓P		P	12 08 10.5	-0.3
	baz=54							
FRU	Bishkek	54.39	296	eP		P	12 08 09.5	-1.4
FRU				e			12 09 13.0	
FRU				e			12 11 31.0	
FRU				eS		S	12 16 09.5	+26
FRU				pmax		pmax		
	comp=Z,50nm,1.6s,mb5.3							
FRU				pmax		pmax		
	comp=Z,550nm,5.0s							
FRU				MLR		MLR		
	comp=Z,7µm,19.0s							
F13A	Darby	54.49	59	P		P	12 08 11.0	-0.6
	baz=54,SNR=32							
E14A	Clinton	54.52	58	P		P	12 08 11.6	-0.2
	baz=54,SNR=48							
C16A	Fuhringer Ranc	54.53	56	P		P	12 08 11.4	-0.5
	baz=54,SNR=60							
AAK	Ala-Archa	54.59	296	P		P	12 08 11.9	-0.5
	SNR=26							
AAK	Ala-Archa	54.59	296	P		P	12 08 11.7	-0.6
	baz=128,slow=5.5							
AAK	Ala-Archa	54.59	296	eP		P	12 08 11.7	-0.7
	comp=Z,17nm,0.6s,mb5.3							
AAK	Ala-Archa	54.59	296	c eP		P	12 08 11.4	-1.0
AAK				i *PP		pP	12 08 31.3	+1.6
AAK				pmax		pmax		
	comp=Z,15nm,1.0s,mb5.0							
AAK				MLR		MLR		
	comp=Z,3µm,18.0s							
AAK	Ala-Archa	54.59	296	P		P	12 08 11.2	-1.2
	comp=Z,190nm,0.7s,mb6.2,SNR=11							
AAK	Ala-Archa	54.59	296	P		P	12 08 11.8	-0.6
	comp=Z,137nmcomp=Z,8.0nm,0.9s,mb4.8							
AAK	Ala-Archa	54.59	296	P		P	12 08 12.0	-0.4
	SNR=14							
FFC	Flin Flon	54.62	45	eP		P	12 08 11.9	-0.5
	comp=Z,86nm,0.9s,mb5.8							
FFC	Flin Flon	54.62	45	eP		P	12 08 11.9	-0.5
FFC				pmax		pmax		
	comp=Z,86nm,0.9s,mb5.8							
FFC	Flin Flon	54.62	45	P		P	12 08 12.6	+0.2
	comp=Z,591nm,0.8s,SNR=18							
D15A	Lincoln	54.62	57	P		P	12 08 12.4	-0.1
	baz=54,SNR=26							
B17A	L&G Farms, Che	54.69	55	⇓P		P	12 08 12.3	-0.7
	baz=54,SNR=26							
MCCM	Marconi Confer	54.72	71	eP		P	12 08 12.3	-1.0
	comp=Z,58nm,1.1s,mb5.5							
A18A	Metzger Ranch,	54.76	54	P		P	12 08 12.7	-0.8
	baz=54,SNR=34							
PRGR	Permogore	54.82	327	⇑iP		P	12 08 12.8	-0.9
PRGR				e			12 09 13.5	
PRGR				e			12 10 17.4	
PRGR				eS		S	12 15 49.4	+0.2
PRGR				pmax		pmax		
	comp=Z,45nm,0.5s,mb5.8							
KTK1	Kautokeino	54.91	342	⇑iP		P	12 08 13.3	-1.0
KTK1				eS		S	12 15 51.8	+1.5
KTK1				AMS		AMS	12 37 07.2	
	comp=Z,7µm,16.1s							
E15A	Deer Lodge	54.96	58	P		P	12 08 14.7	-0.3
	baz=55,SNR=46							
EKS2	Erkin-Say	54.97	296	P		P	12 08 14.8	-0.4
	SNR=28							
EKS2	Erkin-Say	54.97	296	eP		P	12 08 14.6	-0.5
	comp=Z,31nm,0.9s,mb5.3							
F14A	Wisdom	54.98	59	P		P	12 08 14.7	-0.5
	baz=55,SNR=18							
G13A	Cobalt	54.99	60	P		P	12 08 14.8	-0.5
	baz=55,SNR=70							
H12A	Diamond D Ranc	55.02	61	⇑P		P	12 08 14.7	-0.7
	baz=55							
D16A	Dana Ranch, Ca	55.13	56	⇑P		P	12 08 16.3	+0.1
	baz=55,SNR=24							
B18A	Beardsley Farm	55.14	54	P		P	12 08 15.9	-0.3
	baz=55,SNR=48							
C17A	Wharram Farm,	55.14	56	⇑P		P	12 08 15.7	-0.6
	baz=55,SNR=68							
TRO	Tromso	55.16	344	⇑iP		P	12 08 14.7	-1.4
TRO				eS		S	12 15 54.2	+0.6
TRO				AMS		AMS	12 37 52.4	
	comp=Z,2µm,15.5s							
TRO	Tromso	55.16	344	⇑iP		P	12 08 14.7	-1.4
TRO				MLR		MLR		
	comp=Z,2µm,15.5s							
HRY	Holter Researc	55.20	57	eP		P	12 08 16.6	-0.1
	comp=Z,66nm,0.9s,mb5.7							
HRY				epP		pP	12 08 32.2	-1.9
SUMG	Summit	55.23	6	eP		P	12 08 17.1	+0.5
	comp=Z,237nm,0.9s,mb6.2							
SUMG	Summit	55.23	6	⇑iP		P	12 08 17.5	+1.0
	comp=Z,141nm,0.9s,mb6.0							
SUMG				i		pP	12 08 35.7	+1.8
MFID	Camas Ranch	55.23	62	⇓P		P	12 08 16.9	-0.1
	baz=55,SNR=46							
CHRT	Chiangrai	55.27	258	⇑P		P	12 08 17.0	-0.5
	comp=Z,716nm,1.0s							
A19A	Klindworth Far	55.30	53	⇓P		P	12 08 17.0	-0.4
	baz=55,SNR=28							
G14A	Jackson	55.31	59	P		P	12 08 16.8	-0.7
	baz=55,SNR=11							
H13A	Challis	55.33	60	P		P	12 08 17.4	-0.3
	baz=55,SNR=62							
I12A	Atlanta	55.36	61	P		P	12 08 17.9	-0.1
	baz=55,SNR=65							
SAC	San Andreas	55.37	72	eP		P	12 08 17.1	-1.0
SAC	San Andreas	55.37	72	eP		P	12 08 17.1	-0.9
AML	Almayashu	55.37	296	eP		P	12 08 17.8	-0.2
	comp=Z,18nm,0.9s,mb5.1							
E16A	East Helena	55.39	57	⇓P		P	12 08 18.2	+0.1
	baz=55,SNR=24							
EGMT	Eagleton	55.40	55	⇓P		P	12 08 17.6	-0.5
	baz=55,SNR=19							
EGMT	Eagleton	55.40	55	eP		P	12 08 17.3	-0.8
	comp=Z,79nm,1.1s,mb5.7							
F15A	Butte	55.42	58	P		P	12 08 18.1	-0.2
	baz=55,SNR=32							
LRM	Limekiln Ridge	55.46	58	eP		P	12 08 18.2	-0.4
	comp=Z,245nm,0.8s,mb6.3							
D17A	Six Diamond Ra	55.50	56	P		P	12 08 18.6	-0.2
	baz=55,SNR=50							
B19A	Brinkman Farms	55.52	54	⇓P		P	12 08 18.7	-0.2
	baz=55,SNR=24							
DLMT	Dillon	55.69	59	eP		P	12 08 19.8	-0.4
	comp=Z,82nm,1.4s,mb5.6							
PAHR	Pah Rah Range	55.70	68	eP		P	12 08 20.4	0.0
	comp=Z,176nm,1.3s,mb5.9							
A20A	Cobblestone Ra	55.74	53	⇓P		P	12 08 20.2	-0.3
	baz=56,SNR=65							
WCN	Washoe City	55.76	68	P		P	12 08 21.2	+

HLID Hailey 55.91 61 *eP* **P 12 08 21.8 0.0**
comp=Z,40nm,1.1s,mb5.4
MCMT McKenzie Canyo 55.91 59 *eP* **P 12 08 21.4 -0.4**
comp=Z,13nm,0.9s,mb5.0
F16A Kennard Place, 55.92 58 P **P 12 08 21.9 0.0**
baz=56,SNR=27
D18A Linhart Farms, 55.92 55 ⇓P **P 12 08 22.0 +0.1**
baz=56,SNR=7.4
C19A Slack Wire Ran 55.94 54 P **P 12 08 22.2 +0.2**
baz=56,SNR=65
B20A Solberg Farm, 55.99 53 ⇑P **P 12 08 22.0 -0.3**
baz=56,SNR=24
BOZ Bozeman (W) 56.01 58 P **P 12 08 22.8 +0.3**
baz=56,SNR=85
BOZ Bozeman (W) 56.01 58 *eP* **P 12 08 22.7 +0.2**
comp=Z,36nm,0.7s,mb5.5
BOZ Bozeman (W) 56.01 58 *eP* **P 12 08 22.7 +0.2**
BOZ pmax pmax
comp=Z,36nm,0.7s,mb5.5
J13A Cove Ranch, Pi 56.15 61 P **P 12 08 23.8 +0.3**
baz=56,SNR=77
H15A Lima 56.16 59 P **P 12 08 23.2 -0.4**
baz=56,SNR=38
A21A Bergtoll Ranch 56.16 52 ⇑P **P 12 08 23.5 0.0**
baz=56
BAKI Biak 56.16 207 P **P 12 08 24.6 +0.7**
BAKI Biak 56.16 207 P **P 12 08 23.6 -0.3**
comp=Z,3µmcomp=Z,232nm,1.3s,mb6.0
I14A Mackay 56.18 60 P **P 12 08 24.0 +0.2**
baz=56,SNR=131
G16A Moss Hill, Enn 56.19 58 P **P 12 08 24.1 +0.2**
baz=56,SNR=48
CMB Columbia Colle 56.25 70 *eP* **P 12 08 24.1 -0.3**
comp=Z,86nm,1.3s,mb5.6
CMB Columbia Colle 56.25 70 *eP* **P 12 08 24.1 -0.2**
CMB pmax pmax
comp=Z,86nm,1.3s,mb5.6
MSF Maaselka 56.26 338 P **P 12 08 23.3 -0.7**
MSF Maaselka 56.26 338 P **P 12 08 23.3 -0.7**
JAY Jayapura 56.27 201 P **P 12 08 24.4 -0.3**
comp=Z,7µmcomp=Z,27nm,0.7s,mb5.4
E18A Harlowton 56.28 56 P **P 12 08 24.9 +0.5**
baz=56,SNR=24
KDM Kudat 56.32 232 P **P 12 08 26.6 +1.5**
F17A Fitzpatrick Pl 56.34 57 ⇓P **P 12 08 24.9 0.0**
baz=56,SNR=26
D19A Cripps Ranch, 56.41 55 ⇑P **P 12 08 25.3 0.0**
baz=56,SNR=56
BMN Battle Mountai 56.45 66 *eP* **P 12 08 25.9 +0.2**
comp=Z,268nm,1.6s,mb6.0
BMN Battle Mountai 56.45 66 *eP* **P 12 08 25.9 +0.2**
BMN pmax pmax
comp=Z,268nm,1.6s,mb6.0
KK31 Karatay Array 56.47 299 *i P* **P 12 08 24.3 -1.5**
KK31 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KKAR Karatay Array 56.47 299 *eP* **P 12 08 24.6 -1.3**
comp=Z,11nm,0.6s,mb5.0
KKAR Karatay Array 56.47 299 *eP* **P 12 08 24.6 -1.2**
KKAR pmax pmax
comp=Z,11nm,0.6s,mb5.1
WAKR Walker 56.48 69 *eP* **P 12 08 26.4 +0.4**
comp=Z,56nm,0.8s,mb5.6
C20A Veseth Ranch, 56.48 54 P **P 12 08 25.9 +0.1**
baz=56,SNR=56
SAO San Andreas Ge 56.49 72 *eP* **P 12 08 25.4 -0.7**
comp=Z,44nm,1.2s,mb5.4
SAO San Andreas Ge 56.49 72 *eP* **P 12 08 25.4 -0.7**
SAO pmax pmax
comp=Z,44nm,1.2s,mb5.4
B21A Ellsworth Farm 56.49 53 P **P 12 08 25.6 -0.2**
baz=56,SNR=18
J14A Carey 56.55 61 ⇓P **P 12 08 27.5 +1.1**
baz=56
CHG Chiang Mai 56.58 257 ⇑P **P 12 08 28.1 +1.2**
comp=Z,342nm,0.9s,mb6.4
CHTO Chiang Mai 56.58 257 *eP* **P 12 08 27.5 +0.6**
comp=Z,227nm,0.7s,mb6.3
CHTO Chiang Mai 56.58 257 *eP* **P 12 08 27.5 +0.6**
CHTO pmax pmax
comp=Z,227nm,0.7s,mb6.3
A22A Carney Farms, 56.65 52 ⇑P **P 12 08 26.9 -0.1**
baz=56
I15A Monteview 56.65 60 ⇓P **P 12 08 27.4 +0.2**
baz=56,SNR=6.6
QLMT Earthquake Lak 56.66 58 *eP* **P 12 08 27.4 +0.3**
comp=Z,37nm,1.3s,mb5.2
G17A Pierce Place, 56.69 58 P **P 12 08 28.0 +0.6**
baz=56,SNR=25
F18A Big Timber 56.83 56 P **P 12 08 28.8 +0.4**
baz=57,SNR=68
D20A Manuel Ranch, 56.83 55 P **P 12 08 28.7 +0.3**
baz=57,SNR=10
H16A Russell Place, 56.84 58 P **P 12 08 28.7 +0.3**
baz=57,SNR=88
CM31 Chiang Mai Arr 56.86 257 *eP* **P 12 08 30.4 +1.6**
comp=Z,112nm,0.6s,mb6.1
CMAR Chiang Mai Arr 56.86 257 P **P 12 08 30.0 +1.1**
comp=Z,197nm,0.9s,mb6.1,baz=27,slow=7.0,SNR=740
CMAR PcP PcP 12 09 24.4 +0.6
comp=Z,21nm,0.7s,baz=17,slow=3.6,SNR=5.0
CMAR ScP ScP 12 13 19.5 +2.4
comp=Z,2.3nm,0.9s,baz=9.0,slow=4.1,SNR=5.2
CMAR LR LR 12 36 45.1
comp=Z,2µm,18.5s,baz=203,slow=40
CMAR PKP2bc 12 38 29.8
comp=Z,1.4nm,0.8s,baz=228,slow=4.0,SNR=5.7
CMAR Chiang Mai Arr 56.86 257 P **P 12 08 30.0 +1.1**
CMAR PcP PcP 12 09 24.4 +0.6
CMAR ScP ScP 12 13 19.5 +2.4
CMAR LR LR 12 36 45.1
CMAR ⇑*e* 12 38 29.8
CMAR Chiang Mai Arr 56.86 257 P **P 12 08 30.0 +1.1**
CMAR 12 09 24.4
CMAR pmax pmax
comp=Z,197nm,0.9s
CMAR MLR MLR
comp=Z,2µm,18.5s
C21A Desert Coulee 56.86 53 P **P 12 08 28.5 0.0**
baz=57,SNR=32
E19A Rath Farm, Rou 56.93 55 P **P 12 08 29.3 +0.3**
baz=57,SNR=35
GCMT Greycliff 56.93 57 *eP* **P 12 08 29.5 +0.5**
comp=Z,33nm,0.9s,mb5.4
GCMT *e*pP pP 12 08 45.5 -1.0
YMR Madison River 57.01 58 *eP* **P 12 08 30.3 +0.6**
comp=Z,168nm,1.4s,mb5.9
MYLDM Lahad Datu 57.03 229 P **P 12 08 31.9 +1.8**
MYLDM Lahad Datu 57.03 229 P **P 12 08 32.2 +2.1**
comp=Z,2µmcomp=Z,101nm,1.4s,mb5.6
B22A Reddig Ranch S 57.08 52 P **P 12 08 30.0 0.0**
baz=57,SNR=19
J15A Blackfoot 57.09 60 P **P 12 08 30.8 +0.6**
baz=57,SNR=35
YNR Norris Junctio 57.13 58 *eP* **P 12 08 31.1 +0.6**
comp=Z,108nm,1.3s,mb5.7
A23A Redstone 57.17 51 ⇓P **P 12 08 30.8 +0.1**
baz=57
TAPN Taplejung 57.18 273 *eP* **P 12 08 31.2 +0.1**
comp=Z,125nm,0.7s,mb6.0
NVAR Mina Array Bea 57.18 68 P **P 12 08 31.3 +0.3**
comp=Z,29nm,0.7s,mb5.4,baz=294,slow=7.4,SNR=307
NVAR ScP ScP 12 13 20.0 +1.7
comp=Z,1.6nm,0.9s,baz=316,slow=2.5,SNR=3.7
NVAR PKPPKP 12 37 56.3
comp=Z,1.1nm,1.0s,baz=142,slow=3.1,SNR=4.2
NVAR Mina Array Bea 57.18 68 P **P 12 08 31.3 +0.3**
YFT Old Faithful 57.23 58 *eP* **P 12 08 32.5 +1.3**
comp=Z,71nm,0.8s,mb5.8
E20A Meyer Farm, Mu 57.23 55 P **P 12 08 31.3 +0.1**
baz=57,SNR=45
SDKM Sandakan 57.25 231 P **P 12 08 32.9 +1.3**
F19A Roth Farm, Mol 57.26 56 ⇑P **P 12 08 31.6 +0.2**
baz=57,SNR=50
K14A Jones Ranch, D 57.26 61 P **P 12 08 32.5 +1.1**
baz=57,SNR=111
I16A Newdale 57.27 59 P **P 12 08 32.2 +0.8**
baz=57,SNR=76
G18A Lazy EL Ranch, 57.30 57 ⇑P **P 12 08 31.7 0.0**
baz=57,SNR=13
KKM Kota Kinabalu 57.38 232 P **P 12 08 34.2 +1.7**
KKM Kota Kinabalu 57.38 232 *eP* **P 12 08 33.6 +1.1**
comp=Z,151nm,1.3s,mb5.9
KKM Kota Kinabalu 57.38 232 P **P 12 08 33.2 +0.6**
comp=Z,2µmcomp=Z,90nm,1.3s,mb5.6
LKWY Lake 57.38 58 *eP* **P 12 08 33.8 +1.5**
comp=Z,61nm,0.9s,mb5.6
LKWY Lake 57.38 58 *eP* **P 12 08 33.8 +1.6**
LKWY pmax pmax
comp=Z,61nm,0.9s,mb5.6
KLMR Klimovskoe 57.38 329 *c iP* **P 12 08 31.2 -0.8**
KLMR *e* 12 10 41.0
KLMR PPP 12 11 59.5
KLMR S **S 12 16 19.5 -3.7**
KLMR SS SS 12 20 21.5 +8.9
KLMR pmax pmax
comp=Z,100nm,1.0s,mb5.8
KLMR pmax pmax
comp=Z,449nm,9.8s
KLMR MLR MLR
comp=Z,6µm,19.0s
H17A Grant Village 57.40 58 P **P 12 08 34.3 +1.9**
baz=57,SNR=88
D21A La Casta Ranch 57.42 54 P **P 12 08 32.7 +0.2**
baz=57,SNR=55
B23A Brockton 57.46 52 ⇑P **P 12 08 32.7 0.0**
baz=57
AGT Agartala 57.50 268 *ex* x 12 08 29.0
C22A Vida 57.51 53 ⇑P **P 12 08 33.0 -0.1**
baz=57
K15A Arbon 57.52 61 P **P 12 08 34.0 +0.8**
baz=57,SNR=147
IMW Indian Meadow 57.55 59 *eP* **P 12 08 34.2 +0.8**
comp=Z,73nm,1.0s,mb5.7
FLWY Flagg Ranch 57.55 59 *eP* **P 12 08 34.4 +1.0**
comp=Z,76nm,0.9s,mb5.7
L14A Malta 57.57 62 P **P 12 08 34.3 +0.7**
baz=57,SNR=125
RLMT Red Lodge 57.59 57 P **P 12 08 34.4 +0.7**
baz=57,SNR=92
RLMT Red Lodge 57.59 57 *eP* **P 12 08 34.0 +0.3**
comp=Z,119nm,1.0s,mb5.9
J16A Bone 57.61 60 P **P 12 08 34.7 +0.8**
baz=57,SNR=63
A24A Westby 57.62 51 ⇑P **P 12 08 33.8 -0.1**
baz=57
DCID1 Drake Creek 57.62 59 *eP* **P 12 08 34.8 +0.8**
comp=Z,88nm,1.0s,mb5.7
H18A Shoshone NF, C 57.69 58 P **P 12 08 35.0 +0.6**
baz=57,SNR=52
ABKAR Akbulak array 57.69 310 *eP* **P 12 08 32.8 -1.6**
comp=Z,11nm,0.5s,mb5.1
F20A Billings 57.70 56 P **P 12 08 34.9 +0.4**
baz=57,SNR=24
RRI2 Red Ridge 57.72 60 *eP* **P 12 08 35.3 +0.6**
comp=Z,157nm,1.4s,mb5.8
I17A Pilgrim Ck. 57.72 59 P **P 12 08 36.0 +1.3**
baz=58,SNR=27
ODAN Odare 57.73 273 *eP* **P 12 08 34.9 0.0**
comp=Z,60nm,0.7s,mb5.8
E21A Keefer Ranch, 57.74 54 P **P 12 08 35.4 +0.7**
baz=58,SNR=22
MOOW Moose Ponds 57.75 59 *eP* **P 12 08 35.1 +0.3**
comp=Z,54nm,1.1s,mb5.5
BDT Bhubol Dam 57.76 256 P **P 12 08 37.5 +2.3**
comp=Z,42nm,0.9s,mb5.5
D22A Cohagen 57.77 53 ⇑P **P 12 08 35.2 +0.2**
baz=58
AKTO Aktyubinsk 57.78 312 LR LR 12 36 08.7
comp=Z,8µm,18.4s,baz=226,slow=39
C23A Lambert 57.82 52 ⇑P **P 12 08 35.5 +0.3**
baz=58
TPAW Teton Pass 57.82 59 *eP* **P 12 08 36.0 +0.7**
comp=Z,107nm,1.2s,mb5.8
DGMT Damar 57.84 51 P **P 12 08 35.2 -0.2**
baz=58,SNR=16
DGMT Dagmar 57.84 51 *eP* **P 12 08 35.0 -0.3**
comp=Z,112nm,1.2s,mb5.8
GUN Gumba 57.91 275 *eP* **P 12 08 36.1 -0.1**
comp=Z,83nm,0.4s,mb6.1
LOHW Long Hollow 57.92 59 *eP* **P 12 08 36.8 +0.7**
comp=Z,79nm,1.0s,mb5.7
K16A Soda Springs 57.93 60 P **P 12 08 37.2 +1.1**
baz=58,SNR=101
SNOW Snow King Moun 57.94 59 *eP* **P 12 08 36.9 +0.7**
comp=Z,84nm,1.0s,mb5.7
REDW Red Top Meadow 57.96 59 *eP* **P 12 08 36.9 +0.6**
comp=Z,102nm,1.1s,mb5.8
HVU Hansel Valley 58.00 62 *eP* **P 12 08 37.0 +0.3**
comp=Z,59nm,1.1s,mb5.5
HVU Hansel Valley 58.00 62 *eP* **P 12 08 37.0 +0.4**
HVU pmax pmax
comp=Z,59nm,1.1s,mb5.5
J17A Brown Place, J 58.03 59 P **P 12 08 38.0 +1.1**
baz=58,SNR=75
H19A Powell 58.05 57 P **P 12 08 37.7 +0.8**
baz=58,SNR=33
L15A Malad City 58.06 61 P **P 12 08 37.5 +0.5**
baz=58,SNR=50
G20A Bridger 58.07 56 P **P 12 08 36.9 -0.2**
baz=58,SNR=67
LAO LASA Array 58.07 54 P **P 12 08 37.5 +0.5**
baz=58,SNR=42
LAO LASA Array 58.07 54 *eP* **P 12 08 37.3 +0.2**
comp=Z,123nm,1.0s,mb5.9
RCTC Rector, Farmer 58.09 71 P **P 12 08 37.2 -0.2**
baz=58,SNR=6.3
TSM Tawau 58.10 230 P **P 12 08 38.3 +0.7**
JOF Joensuu 58.14 334 *eP* **P 12 08 36.2 -1.1**
JOF pmax pmax
comp=Z,8.0nm,0.4s,mb5.1
TIN Tinemaha 58.17 69 P **P 12 08 38.5 +0.6**
baz=58,SNR=9.7
F21A Absaloka Mine, 58.21 55 ⇑P **P 12 08 38.6 +0.5**
baz=58,SNR=13
AHID Auburn Hatcher 58.23 60 *eP* **P 12 08 38.7 +0.5**
comp=Z,133nm,1.1s,mb5.9
I18A Diamond G Ranc 58.27 58 P **P 12 08 39.6 +1.1**
baz=58,SNR=70
NST Nakhon Sawan 58.30 254 ⇓P **P 12 08 40.5 +1.5**
comp=Z,167nm,1.0s,mb6.0
K17A Gardner Place, 58.34 60 ⇑P **P 12 08 39.7 +0.7**
baz=58,SNR=11
KKN Kakani 58.36 276 *eP* **P 12 08 39.5 +0.1**
comp=Z,152nm,0.5s,mb6.3
KKN Kakani 58.36 276 *eP* **P 12 08 39.5 +0.1**
KKN pmax pmax
comp=Z,152nm,0.5s,mb6.3
M15A Larsen Ranch, 58.40 62 P **P 12 08 39.8 +0.4**
baz=58,SNR=48
PKI Pulchoki 58.44 275 *eP* **P 12 08 40.1 +0.2**
comp=Z,144nm,0.7s,mb6.1
PKI Pulchoki 58.44 275 *eP* **P 12 08 40.2 +0.3**
comp=Z,120nm,0.5s,mb6.2
PKI Pulchoki 58.44 275 *eP* **P 12 08 40.2 +0.3**
PKI pmax pmax
comp=Z,120nm,0.5s,mb6.2
PKIN Phulchoki 58.45 275 *eP* **P 12 08 40.2 +0.3**
comp=Z,120nm,0.5s,mb6.2
BGU Big Grassy Mou 58.45 63 *eP* **P 12 08 39.7 0.0**
comp=Z,38nm,1.2s,mb5.3
I19A Meeteetse 58.48 58 ⇑P **P 12 08 40.5 +0.6**
baz=58,SNR=33
SPUT South Promonto 58.50 62 *eP* **P 12 08 40.4 +0.3**
comp=Z,123nm,1.4s,mb5.7
J18A Kendall Valley 58.50 59 P **P 12 08 40.8 +0.7**
baz=58,SNR=52
VES Vestal, Richgr 58.51 71 P **P 12 08 39.4 -0.8**
baz=58,SNR=16
L16A Fish Haven 58.57 61 P **P 12 08 41.3 +0.7**
baz=58,SNR=48
G21A Lodge Grass 58.58 56 P **P 12 08 40.7 +0.1**
baz=58,SNR=12
DMN Daman 58.60 276 *eP* **P 12 08 41.3 +0.3**
comp=Z,174nm,0.5s,mb6.4
GKN Gorkha 58.61 276 *eP* **P 12 08 40.9 -0.2**
comp=Z,149nm,0.7s,mb6.1
CWC Cottonwood Cre 58.68 70 P **P 12 08 41.5 0.0**
baz=58,SNR=27
H20A Greybull 58.68 57 P **P 12 08 41.1 -0.2**
baz=58,SNR=26
GRAC Grapevine Rang 58.70 69 ⇑P **P 12 08 42.1 +0.5**
baz=58,SNR=12
PKM Peak Mountain 58.73 72 ⇑P **P 12 08 42.3 +0.4**
baz=58,SNR=8.5
N15A Stansbury Isla 58.75 62 P **P 12 08 42.4 +0.5**
baz=58,SNR=23
HWUT Hardware Ranch 58.78 61 *eP* **P 12 08 42.4 +0.4**
comp=Z,73nm,1.0s,mb5.7
R11A Troy Canyon, C 58.79 67 P **P 12 08 42.2 0.0**
baz=58,SNR=82
L17A Cokeville 58.81 60 ⇓P **P 12 08 43.0 +0.7**
baz=58,SNR=80
K18A Toltan Ranch, 58.89 59 P **P 12 08 43.9 +1.1**
baz=59,SNR=142
DANN Dangsing 58.90 277 *eP* **P 12 08 43.4 +0.3**
comp=Z,230nm,0.6s,mb6.4
M16A Huntsville 58.95 62 P **P 12 08 43.5 +0.3**
baz=59,SNR=40
KONS Konsvik 58.95 344 *eP* **P 12 08 43.0 +0.1**
J19A Crowheart 58.98 58 ⇑P **P 12 08 44.4 +1.0**
baz=59,SNR=31
I20A Worland 58.99 57 ⇓P **P 12 08 44.3 +0.8**
baz=59,SNR=61
ISA Isabella 58.99 71 P **P 12 08 42.5 -1.1**
baz=59,SNR=22
ISA Isabella 58.99 71 *eP* **P 12 08 42.3 -1.3**
comp=Z,49nm,1.2s,mb5.4
ISA Isabella 58.99 71 *eP* **P 12 08 42.3 -1.3**
ISA pmax pmax
comp=Z,49nm,1.2s,mb5.4
MOR8 Moi Rana 59.03 344 *eP* **P 12 08 41.9 -1.5**
MOR8 AMb AMB 12 08 43.3
comp=Z,50nm,1.1s,mb5.5
MOR8 *e*pP pP 12 08 56.7 -4.2
MOR8 Moi Rana 59.03 344 *eP* **P 12 08 41.9 -1.5**
comp=Z,50nm,1.1s,mb5.5
BW06 Boulder Array 59.05 59 P **P 12 08 44.2 +0.3**
baz=59,SNR=146
BW06 Boulder Array 59.05 59 *eP* **P 12 08 44.1 +0.1**
comp=Z,102nm,0.9s,mb5.9
PDAR Pinedale Array 59.05 59 P **P 12 08 44.1 +0.2**
comp=Z,84nm,0.8s,mb5.8,baz=312,slow=2.6,SNR=516
PDAR LR LR 12 34 49.2
comp=Z,1µm,22.0s,baz=335,slow=37
PDAR PKPPKP 12 38 08.2
comp=Z,0.8nm,1.0s,baz=101,slow=3.2,SNR=4.3
FLOS Flostrand 59.06 344 *eP* **P 12 08 43.2 -0.4**
DUG Dugway 59.07 63 P **P 12 08 44.5 +0.4**
baz=59,SNR=89
DUG Dugway 59.07 63 *eP* **P 12 08 44.2 +0.2**
comp=Z,71nm,1.0s,mb5.7
DUG Dugway 59.07 63 *eP* **P 12 08 44.3 +0.2**
DUG pmax pmax
comp=Z,71nm,1.0s,mb5.7
H21A Big Horn, Sher 59.08 56 P **P 12 08 44.4 +0.3**
baz=59,SNR=57
NOQ North Oquirrh 59.13 62 *eP* **P 12 08 45.0 +0.4**
comp=Z,182nm,1.4s,mb5.9
O15A The Old Anders 59.20 63 ⇑P **P 12 08 45.5 +0.5**
baz=59,SNR=14
MPMC Manual Prospec 59.29 70 P **P 12 08 45.5 -0.1**
baz=59,SNR=36
CTU Camp Tracy 59.31 62 *eP* **P 12 08 45.7 0.0**
comp=Z,24nm,0.6s,mb5.4
N16A Rees Ranch, Co 59.35 62 ⇑P **P 12 08 46.8 +0.8**
baz=59,SNR=12
P14A Drum Mountains 59.35 64 P **P 12 08 46.3 +0.3**
baz=59,SNR=60
M17A Scullys Gap (B 59.36 61 P **P 12 08 46.4 +0.3**
baz=59,SNR=34
FURC Furnace Creek, 59.37 69 P **P 12 08 46.3 +0.1**
baz=59,SNR=118
L18A Fontenelle, Gr 59.38 60 P **P 12 08 46.6 +0.4**
baz=59,SNR=44
SFJD Kangerlussuaq 59.39 13 *eP* **P 12 08 45.1 -0.8**
comp=Z,46nm,1.0s,mb5.5
SFJD Kangerlussuaq 59.39 13 *eP* **P 12 08 45.1 -0.8**
SFJD pmax pmax
comp=Z,46nm,1.0s,mb5.5
K19A Absolon Red Bu 59.39 59 P **P 12 08 46.0 -0.3**
baz=59,SNR=50
KOLN Koldanda 59.41 277 *eP* **P 12 08 46.4 -0.2**
comp=Z,154nm,0.7s,mb6.1
J20A Shoshoni 59.42 58 ⇓P **P 12 08 47.2 +0.7**
baz=59,SNR=63
I21A Big Trails, Te 59.52 57 P **P 12 08 47.3 +0.2**
baz=59,SNR=56
JLU Jordanelle 59.54 62 *eP* **P 12 08 47.5 +0.2**
comp=Z,54nm,1.2s,mb5.5
OSI Osito Adit 59.57 72 *eP* **P 12 08 46.6 -1.1**
LRMC Laurel Mountai 59.58 70 P **P 12 08 47.3 -0.3**
baz=59,SNR=10
L19A Farson 59.62 60 P **P 12 08 48.0 +0.1**
baz=59,SNR=22
N17A Moffit Pass 59.64 61 ⇑P **P 12 08 48.5 +0.5**
baz=59
NLU North Lily Min 59.64 63 *eP* **P 12 08 48.1 0.0**
comp=Z,55nm,1.0s,mb5.5
Q14A Sevier Lake (B 59.65 65 P **P 12 08 48.5 +0.3**
baz=59,SNR=77
MRSI Marisa 59.66 223 P **P 12 08 48.7 +0.2**
comp=Z,2µmcomp=Z,114nm,1.3s,mb5.8
U10A Ash Meadows, A 59.71 69 P **P 12 08 48.8 +0.2**
baz=60,SNR=28
M18A Lyman 59.71 61 P **P 12 08 48.7 +0.2**
baz=59,SNR=19
J21A Lysite 59.76 57 P **P 12 08 49.2 +0.4**
baz=60,SNR=58
DAU Daniels Canyon 59.77 62 *eP* **P 12 08 49.1 +0.2**
comp=Z,57nm,1.1s,mb5.5
DAU Daniels Canyon 59.77 62 *eP* **P 12 08 49.1 +0.2**
DAU pmax pmax
comp=Z,57nm,1.1s,mb5.5
K20A Yellowstone Ra 59.77 58 P **P 12 08 48.5 -0.4**
baz=60,SNR=35
O16A Springville 59.78 62 P **P 12 08 49.6 +0.6**
baz=60
P15A Leamington 59.80 63 P **P 12 08 49.6 +0.5**
baz=60,SNR=23
EDW2 Edwards Air Fo 59.82 71 ⇑P **P 12 08 48.9 -0.4**
baz=60,SNR=37
R13A O'Grain Ranch, 59.82 66 P **P 12 08 49.5 +0.2**
baz=60,SNR=38
MPU Maple Canyon 59.84 63 *eP* **P 12 08 49.7 +0.3**
comp=Z,75nm,1.0s,mb5.7
JOSI Joshimath 59.89 282 *e*PKP **P 12 08 49.5 -0.4**
KLP Kalpa 59.99 284 *e*PKP **P 12 08 49.5 -1.0**
KLP AMb AMB 12 08 51.5
comp=Z,24nm,0.4s,mb5.5
KAF Kangasniemi 60.10 336 *eP* **P 12 08 49.6 -1.2**
KAF pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KAF Kangasniemi 60.10 336 *ep* **P 12 08 49.6 -1.2**
comp=Z,6.7nm,0.4s,mb5.0
P16A Fountain Green 60.11 63 ⇑P **P 12 08 51.6 +0.3**
baz=60,SNR=7.3
Q15A Fillmore 60.14 64 P **P 12 08 51.9 +0.4**
baz=60,SNR=20
M19A Rock Springs 60.15 60 ⇓P **P 12 08 51.6 +0.1**
baz=60,SNR=5.2
PASC Pasadena Art C 60.20 72 *eP* **P 12 08 50.9 -1.1**
comp=Z,37nm,1.0s,mb5.4
O17A Robinson Place 60.21 62 P **P 12 08 52.5 +0.6**
baz=60,SNR=26
GSC Goldstone 60.21 70 P **P 12 08 51.8 -0.2**
baz=60,SNR=33
GSC Goldstone 60.21 70 *eP* **P 12 08 51.6 -0.4**
comp=Z,98nm,1.3s,mb5.7
GSC Goldstone 60.21 70 *eP* **P 12 08 51.6 -0.4**
GSC pmax pmax
comp=Z,99nm,1.3s,mb5.7
J22A Midwest 60.22 57 P **P 12 08 51.9 -0.1**
baz=60,SNR=75
L20A Wamsutter 60.23 59 P **P 12 08 52.0 0.0**
baz=60,SNR=62
MWC Mount Wilson 60.24 72 *eP* **P 12 08 51.6 -0.7**
comp=Z,134nm,1.4s,mb5.8
MWC Mount Wilson 60.24 72 *eP* **P 12 08 51.6 -0.6**
MWC pmax pmax
comp=Z,134nm,1.4s,mb5.8
N18A Larsen Ranch, 60.24 61 P **P 12 08 51.9 -0.2**
baz=60,SNR=45
U11A Corn Creek 60.25 68 ⇓P **P 12 08 52.6 +0.3**
baz=60,SNR=10
CAL Calcutta 60.30 269 *ex* x 12 08 53.4
CAL *ex* x 12 24 27.4
S13A Holt Ranch, En 60.30 66 ⇓P **P 12 08 52.9 +0.3**
baz=60,SNR=57
SHPR Shep Range 60.32 68 *eP* **P 12 08 52.2 -0.6**
comp=Z,104nm,1.6s,mb5.6
K21A Alcova 60.37 58 ⇑P **P 12 08 53.1 +0.1**
baz=60,SNR=47
ARUT Antelope Range 60.40 66 *eP* **P 12 08 53.2 -0.1**
comp=Z,34nm,0.9s,mb5.4
ARUT Antelope Range 60.40 66 *eP* **P 12 08 53.2 0.0**
ARUT pmax pmax
comp=Z,35nm,0.9s,mb5.4
ULM Lac du Bonnet 60.41 45 P **P 12 08 52.8 -0.4**
comp=Z,47nm,0.8s,mb5.6,baz=314,slow=7.3,SNR=45
ULM PcP PcP 12 09 36.8 -0.7
comp=Z,15nm,0.6s,baz=333,slow=6.8,SNR=3.8

ULM LR LR 12 37 27.9
comp=Z,2µm,19.8s,baz=314,slow=38
ULM PKPPKP 12 38 17.6
comp=Z,5.1nm,1.0s,baz=128,slow=9.1,SNR=3.9
ULM Lac du Bonnet 60.41 45 *e*P **P 12 08 52.0 -1.1**
comp=Z,64nm,0.9s,mb5.7
T12A Moapa 60.42 67 ⇓P **P 12 08 53.6 +0.2**
baz=60,SNR=13
BFSC Mount Baldy Ra 60.46 71 ⇓P **P 12 08 53.6 -0.2**
baz=60,SNR=17
O18A Roosevelt 60.56 61 P **P 12 08 55.3 +1.0**
baz=60,SNR=25
N19A John Jarvie Ra 60.57 60 P **P 12 08 54.3 0.0**
baz=60,SNR=25
S14A Cedar City 60.57 65 P **P 12 08 54.7 +0.3**
baz=60,SNR=21
TMUT Trail Mountain 60.58 63 *e*P **P 12 08 54.5 +0.1**
comp=Z,67nm,0.9s,mb5.7
MSU Marysvale 60.60 64 *e*P **P 12 08 55.0 +0.4**
comp=Z,173nm,1.7s,mb5.8
MSU *e*pP pP 12 09 11.3 -0.9
MSU Marysvale 60.60 64 *e*P **P 12 08 55.0 +0.4**
MSU *e**PP pP 12 09 11.3 -0.9
MSU pmax pmax
comp=Z,173nm,1.7s,mb5.8
CCUT Cedar City 60.61 66 *e*P **P 12 08 54.3 -0.4**
comp=Z,42nm,1.0s,mb5.4
CIS Catalina Islan 60.61 72 ⇓P **P 12 08 52.6 -2.2**
baz=60,SNR=6.2
TUQ Turquoise Moun 60.63 69 P **P 12 08 54.8 -0.1**
baz=60,SNR=50
V11A Goodsprings 60.63 68 ⇑P **P 12 08 54.6 -0.3**
baz=60,SNR=22
T13A Saint George 60.67 67 P **P 12 08 55.6 +0.5**
baz=60,SNR=53
M20A Sweetwater, Wa 60.68 59 ⇑P **P 12 08 55.5 +0.4**
baz=60,SNR=15
LUWI Luwuk 60.69 222 P **P 12 08 54.4 -1.0**
comp=Z,1µmcomp=Z,122nm,1.2s,mb5.8
P17A Butcher Ranch, 60.72 63 P **P 12 08 55.7 +0.3**
baz=60,SNR=38
U12A Valley of Fire 60.73 67 P **P 12 08 55.8 +0.3**
baz=60,SNR=15
FINES FINESS Array B 60.73 336 P **P 12 08 54.0 -1.1**
comp=Z,31nm,0.5s,mb5.6,baz=30,slow=8.0,SNR=75
FINES PcP PcP 12 09 37.5 -1.0
comp=Z,15nm,0.6s,baz=64,slow=4.4,SNR=4.0
FINES LR LR 12 39 02.7
comp=Z,9µm,20.3s,baz=30,slow=40
FINES FINESS Array B 60.73 336 P **P 12 08 54.1 -1.0**
FINES 12 09 37.5
FINES pmax pmax
comp=Z,31nm,0.5s
FINES MLR MLR
comp=Z,9µm,20.3s
K22A Casper 60.73 57 ⇑P **P 12 08 55.6 +0.1**
baz=60,SNR=15
R15A Junction 60.75 65 ⇓P **P 12 08 56.3 +0.6**
baz=60,SNR=24
L21A Rawlins 60.77 58 P **P 12 08 55.8 0.0**
baz=60,SNR=55
SDNR Sundarnagar 60.78 285 *e*PKP **P 12 08 54.5 -1.4**
HEC Hector,Ludlow 60.82 70 P **P 12 08 56.1 -0.1**
baz=61,SNR=9.2
Q16A Castle Valley 60.87 63 ⇓P **P 12 08 57.1 +0.7**
baz=61,SNR=30
P18A Preston Nutter 60.88 62 P **P 12 08 57.0 +0.6**
baz=61,SNR=52
BBRC Big Bear Solar 60.88 71 P **P 12 08 56.1 -0.5**
baz=61,SNR=21
SMLA Simla 60.93 284 *i* x **P 12 08 54.9 -2.0**
SMLA AMb AMB 12 08 56.5
comp=Z,936nm,0.4s
SMLA *i* x **S 12 17 03.2 -6.5**
NSS Namsos 60.96 344 *e*P **P 12 08 55.3 -1.3**
NSS *e*S **S 12 17 09.7 +0.5**
NSS AMS AMS 12 40 15.6
comp=Z,3µm,20.3s
DDI Dehra Dun 60.97 283 *e*x **P 12 08 53.3 -3.9**
DDI *e*x x 12 10 30.0
RSSD Black Hills 60.97 55 *e*P **P 12 08 56.9 -0.1**
comp=Z,121nm,0.8s,mb6.0
RSSD Black Hills 60.97 55 *e*P **P 12 08 56.9 -0.1**
RSSD pmax pmax
comp=Z,121nm,0.8s,mb6.0
NLAI Namlea 61.01 216 P **P 12 08 58.6 +1.0**
comp=Z,864nmcomp=Z,47nm,1.1s,mb5.4
O19A Miners Draw (B 61.02 61 P **P 12 08 57.5 +0.1**
baz=61,SNR=44
M21A Separation Pea 61.03 59 ⇑P **P 12 08 57.6 +0.1**
baz=61,SNR=15
V12A Nelson 61.04 68 P **P 12 08 57.7 0.0**
baz=61,SNR=26
RWWY Rawlins 61.05 59 *e*P **P 12 08 57.5 -0.1**
comp=Z,65nm,0.9s,mb5.7
U13A Pakoon Wash 61.06 67 P **P 12 08 58.2 +0.4**
baz=61,SNR=60
S15A Panguitch 61.08 65 ⇑P **P 12 08 58.5 +0.6**
baz=61,SNR=40
SRU San Rafael 61.09 63 ⇓P **P 12 08 58.4 +0.5**
baz=61,SNR=158
SRU San Rafael 61.09 63 *e*P **P 12 08 57.9 0.0**
comp=Z,127nm,1.0s,mb5.9
SRU San Rafael 61.09 63 *e*P **P 12 08 57.9 0.0**
SRU pmax pmax
comp=Z,127nm,1.0s,mb5.9
N20A Spence Gulch, 61.10 60 P **P 12 08 58.6 +0.7**
baz=61,SNR=95
T14A Hurricane 61.11 66 ⇑P **P 12 08 58.6 +0.5**
baz=61,SNR=18
R16A Teasdale 61.14 64 P **P 12 08 59.1 +0.8**
baz=61,SNR=98
BHK Bhakra 61.17 285 *e*PKP **P 12 08 58.0 -0.6**
MURC Murrieta 61.18 71 P **P 12 08 58.1 -0.6**
baz=61,SNR=22
L22A Ellis Ranch, M 61.22 58 ⇑P **P 12 08 59.6 +0.8**
baz=61
BNDI Bandanaira 61.22 213 P **P 12 09 07.7 +8.7**
GMRC Granite Mounta 61.25 70 P **P 12 08 58.7 -0.3**
baz=61,SNR=40
Q18A Rafter H Ranch 61.31 62 P **P 12 08 59.2 -0.2**
baz=61,SNR=29
W12A Cal Nev Ari 61.33 69 ⇓P **P 12 08 59.7 +0.1**
baz=61,SNR=5.8
LDFC Landfair 61.35 69 *e*P **P 12 08 59.2 -0.5**
comp=Z,91nm,0.8s,mb5.8
TLE Tual 61.37 209 P **P 12 09 00.7 +0.7**
comp=Z,95nm,1.6s,mb5.6
BTM Bintulu 61.38 234 P **P 12 09 01.3 +1.1**
V13A Grand Canyon W 61.45 68 ⇑P **P 12 09 00.6 +0.2**
baz=61,SNR=92
R17A Hanksville Air 61.48 63 P **P 12 09 00.4 -0.1**
baz=61,SNR=85
S16A Weppner Ranch, 61.48 64 ⇑P **P 12 09 01.1 +0.5**
baz=61,SNR=96
U14A Mt Trumbull 61.51 67 P **P 12 09 01.3 +0.5**
baz=61,SNR=86
T15A Red Dirt Ranch 61.53 66 P **P 12 09 01.4 +0.4**
baz=61,SNR=49
L23A Garrett 61.54 57 P **P 12 09 00.6 -0.3**
baz=61,SNR=42
N21A Black Mountain 61.55 60 ⇓P **P 12 09 01.1 +0.1**
baz=61,SNR=17
P19A Cripple Cowboy 61.56 61 ⇑P **P 12 09 01.3 +0.2**
baz=61,SNR=73
M22A Cedar Creek Ra 61.58 58 ⇑P **P 12 09 01.5 +0.3**
baz=61,SNR=37
BELC Belle Mtn. Jos 61.60 70 P **P 12 09 00.6 -0.8**
baz=61,SNR=34
O20A White River Ci 61.61 60 P **P 12 09 01.6 +0.2**
baz=61,SNR=28
PFO Pinyon Flat Ob 61.61 71 P **P 12 09 00.8 -0.8**
baz=61,SNR=16
PFO Pinyon Flat Ob 61.61 71 *e*P **P 12 09 00.5 -1.0**
comp=Z,62nm,1.4s,mb5.4
PFO Pinyon Flat Ob 61.61 71 *e*P **P 12 09 00.5 -1.0**
PFO pmax pmax
comp=Z,64nm,1.4s,mb5.5
PFO Pinyon Flat Ob 61.61 71 P **P 12 09 00.0 -1.5**
comp=Z,104nm,0.6s,mb6.0,SNR=10.0
PMG Port Moresby 61.85 192 *c i*P **P 12 09 02.2 -1.0**
PMG pmax pmax
comp=Z,96nm,1.2s
PMG Port Moresby 61.85 192 P **P 12 09 02.9 -0.3**
comp=Z,980nmcomp=Z,78nm,1.1s,mb5.7
AGMN Agassiz Nation 61.85 47 *e*P **P 12 09 02.3 -0.7**
comp=Z,80nm,0.9s,mb5.8

NEE2 Needles Airpor 61.86 69 ⇓P **P 12 09 02.8 -0.3**
baz=62
Q19A Hogan Spring (61.89 62 ⇓P **P 12 09 03.1 -0.3**
baz=62,SNR=214
R18A Canyonlands Na 61.95 63 P **P 12 09 03.2 -0.5**
baz=62,SNR=95
O21A Pagoda 61.96 60 P **P 12 09 04.2 +0.4**
baz=62,SNR=39
P20A De Beque 61.98 61 P **P 12 09 03.6 -0.3**
baz=62,SNR=47
S17A Black Ridge (B 61.98 64 ⇓P **P 12 09 04.2 +0.3**
baz=62
IRM Iron Mountain 61.98 70 P **P 12 09 03.8 -0.2**
baz=62,SNR=52
L24A Wheatland 61.99 57 ⇑P **P 12 09 04.6 +0.7**
baz=62,SNR=7.8
M23A Laramie 61.99 58 P **P 12 09 04.0 0.0**
baz=62,SNR=26
U15A North Rim 62.01 66 P **P 12 09 04.5 +0.3**
baz=62,SNR=45
MOS Moscow 62.02 327 *e*P **P 12 09 05.9 +2.0**
MOS *e* 12 09 42.4
MOS pmax pmax
comp=Z,90nm,0.7s,mb5.9
W13A Hualapai Mount 62.04 68 ⇑P **P 12 09 04.4 0.0**
baz=62
T16A Glen Canyon Da 62.05 65 ⇓P **P 12 09 03.2 -1.2**
baz=62,SNR=17
N22A Wattenberg Ran 62.09 59 P **P 12 09 05.3 +0.7**
baz=62,SNR=55
V14A Boquillas Ranc 62.11 67 P **P 12 09 05.3 +0.5**
baz=62,SNR=80
MONP Monument Peak 62.15 72 ⇑P **P 12 09 04.7 -0.5**
baz=62,SNR=12
BAR Barrett 62.15 72 *e*P **P 12 09 03.9 -1.2**
comp=Z,48nm,1.4s,mb5.3
BC3 Big Chuckawall 62.17 70 P **P 12 09 04.7 -0.6**
baz=62,SNR=34
PHWY Pilot Hill 62.25 58 *e*P **P 12 09 04.8 -0.9**
comp=Z,28nm,1.2s,mb5.2
N23A Red Feather La 62.29 58 P **P 12 09 06.6 +0.6**
baz=62,SNR=70
R19A Curley Farm, L 62.37 63 P **P 12 09 06.5 -0.1**
baz=62,SNR=82
S18A Hurst Farm, Bl 62.39 63 ⇑P **P 12 09 06.8 +0.1**
baz=62
Q20A Ridgley Place, 62.42 61 P **P 12 09 06.5 -0.3**
baz=62,SNR=37
W14A Seligman 62.42 67 P **P 12 09 07.1 +0.2**
baz=62,SNR=86
T17A Navajo Res., N 62.44 65 P **P 12 09 06.5 -0.5**
baz=62,SNR=31
X13A Yucca 62.44 68 P **P 12 09 06.5 -0.5**
baz=62,SNR=52
SBUM Sibu 62.46 234 P **P 12 09 09.1 +1.7**
SBUM Sibu 62.46 234 P **P 12 09 09.0 +1.6**
comp=Z,2µmcomp=Z,155nm,0.9s,mb6.0
M24A Cheyenne 62.46 57 ⇑P **P 12 09 07.7 +0.6**
baz=62,SNR=22
PDMCI Parker Dam,Lak 62.47 69 ⇓P **P 12 09 07.1 -0.1**
baz=62,SNR=19
P21A Newcastle 62.47 60 ⇑P **P 12 09 07.8 +0.6**
baz=62,SNR=60
SWSC Sam W. Stewart 62.48 71 P **P 12 09 06.5 -0.8**
baz=62,SNR=7.0
PV04 Paradox Valley 62.49 62 *e*P **P 12 09 07.0 -0.3**
O22A Kremmling 62.49 59 P **P 12 09 07.5 +0.2**
baz=62,SNR=28
DVTC Desert V Tower 62.50 71 ⇑P **P 12 09 07.1 -0.4**
baz=62,SNR=8.4
V15A Kaibab Nationa 62.51 66 P **P 12 09 08.0 +0.5**
baz=62,SNR=69
Y12C Blythe 62.64 70 P **P 12 09 08.2 -0.2**
baz=62,SNR=29
P22A Eagle 62.79 60 P **P 12 09 09.6 +0.3**
baz=62,SNR=71
O23A Lake Granby, G 62.79 59 P **P 12 09 10.5 +1.1**
baz=62,SNR=71
S19A Harvey Farm, M 62.83 63 P **P 12 09 09.5 -0.1**
baz=63,SNR=146
AYAN Aya Nagar 62.85 282 *e*PKP **P 12 09 08.9 -0.9**
T18A Mexican Hat 62.85 64 ⇓P **P 12 09 09.2 -0.6**
baz=63,SNR=79
PV01 Paradox Valley 62.86 62 *e*P **P 12 09 09.5 -0.3**
comp=Z,5µm,1.1s
U16A Tuba City 62.87 65 P **P 12 09 10.2 +0.3**
baz=63,SNR=55
OBN Obninsk 62.88 327 ⇓*e*P **P 12 09 08.5 -1.2**
OBN *e**PP pP 12 09 28.2 +0.8
OBN *e* 12 09 46.7
OBN *e* 12 11 27.6
OBN *e*S **S 12 17 29.6 -4.1**
OBN *e* 12 17 57.8
OBN *i* 12 18 53.0
OBN pmax pmax
comp=Z,31nm,0.7s,mb5.3
OBN MLR MLR
comp=Z,4µm,17.0s
N24A Carr 62.90 58 P **P 12 09 10.7 +0.7**
baz=63,SNR=12
Q21A Lamborn Mesa, 62.90 61 ⇓P **P 12 09 10.4 +0.4**
baz=63
W15A Williams 62.91 67 P **P 12 09 11.1 +0.9**
baz=63,SNR=8.5
R20A Redvale 62.92 62 P **P 12 09 10.4 +0.2**
baz=63,SNR=39
GLA Glamis 62.96 70 ⇓P **P 12 09 10.5 -0.1**
baz=63,SNR=19
GLA Glamis 62.96 70 *e*P **P 12 09 09.8 -0.7**
comp=Z,95nm,1.3s,mb5.6
GLA Glamis 62.96 70 *e*P **P 12 09 09.9 -0.7**
GLA pmax pmax
comp=Z,95nm,1.3s,mb5.6
SMCO Snowmass 62.97 60 *e*P **P 12 09 10.7 +0.2**
comp=Z,76nm,0.9s,mb5.6
Y13A Salome 62.99 69 ⇑P **P 12 09 10.9 +0.1**
baz=63,SNR=15
X14A Yava 63.06 68 P **P 12 09 11.7 +0.5**
baz=63,SNR=31
MSSI Masamba 63.08 224 P **P 12 09 12.2 +0.7**
comp=Z,8µmcomp=Z,63nm,0.9s,mb5.6
VSU Vasula 63.11 334 ⇓*e*P **P 12 09 10.5 -0.6**
VSU pmax pmax
comp=Z,72nm,0.7s,mb5.7
VSU MLR MLR
comp=Z,3µm,21.0s
S20A Disappointment 63.19 62 P **P 12 09 12.1 0.0**
baz=63,SNR=80
Q22A Crested Butte, 63.24 61 P **P 12 09 12.8 +0.5**
baz=63,SNR=81
R21A Cimarron 63.25 61 ⇓P **P 12 09 13.1 +0.7**
baz=63,SNR=122
ISCO Idaho Springs 63.25 59 ⇑P **P 12 09 13.3 +0.9**
baz=63,SNR=102
ISCO Idaho Springs 63.25 59 *e*P **P 12 09 12.8 +0.4**
comp=Z,92nm,1.0s,mb5.7
ISCO *e*pP pP 12 09 28.8 -1.3
ISCO Idaho Springs 63.25 59 *e*P **P 12 09 12.8 +0.4**
ISCO *e**PP pP 12 09 28.8 -1.3
ISCO pmax pmax
comp=Z,92nm,1.0s,mb5.7
KBL Kabul 63.26 292 *e*P **P 12 09 10.6 -1.9**
comp=Z,44nm,1.2s,mb5.3
KBL Kabul 63.26 292 *e*P **P 12 09 10.6 -1.9**
KBL pmax pmax
comp=Z,44nm,1.2s,mb5.3
O24A Longmont 63.30 58 ⇓P **P 12 09 14.0 +1.3**
baz=63,SNR=12
N25A Grover 63.32 57 ⇑P **P 12 09 13.7 +0.9**
baz=63,SNR=21
U18A Rough Rock, Ch 63.37 64 ⇓P **P 12 09 13.4 +0.2**
baz=63,SNR=33
Y14A Wickenburg 63.38 68 P **P 12 09 13.2 -0.1**
baz=63,SNR=37
W16A Flagstaff 63.39 67 ⇑P **P 12 09 13.8 +0.5**
baz=63,SNR=13
KDI Kendari 63.39 221 P **P 12 09 14.5 +1.0**
comp=Z,1µmcomp=Z,61nm,1.3s,mb5.4
X15A Humboldt 63.43 67 P **P 12 09 13.9 +0.3**
baz=63,SNR=81
V17A Tonalea, Kykot 63.43 66 ⇑P **P 12 09 14.2 +0.6**
baz=63,SNR=207
P23A Jefferson 63.44 60 P **P 12 09 14.8 +1.2**
baz=63,SNR=25
Z13A Yuma Proving G 63.54 69 P **P 12 09 14.2 -0.2**
baz=63,SNR=60
T19A Beclabito 63.55 64 ⇑P **P 12 09 14.5 +0.1**

baz=63,SNR=42
TTSI Tana Toraja 63.73 224 P **P 12 09 15.6 -0.2**
comp=Z,3µmcomp=Z,30nm,1.2s,mb5.0
Y15A Casa Rosa Ranc 63.76 68 P **P 12 09 15.9 +0.1**
baz=64,SNR=56
R22A Saguache, Gunn 63.78 61 P **P 12 09 16.9 +1.1**
baz=64,SNR=94
Q23A Hartsel 63.78 60 P **P 12 09 16.7 +0.8**
baz=64,SNR=106
O25A Wiggins 63.81 58 P **P 12 09 16.4 +0.4**
baz=64,SNR=12
Z14A Wintersburg 63.83 69 ⇓P **P 12 09 16.2 -0.1**
baz=64
U19A Dine' College, 63.83 64 P **P 12 09 16.4 +0.1**
baz=64,SNR=50
P24A Kohler Place, 63.83 59 P **P 12 09 17.3 +1.1**
baz=64,SNR=9.8
V18A Ganado 63.85 65 ⇓P **P 12 09 16.6 +0.2**
baz=64,SNR=12
W17A Winslow 63.87 66 ⇑P **P 12 09 16.6 +0.1**
baz=64,SNR=7.9
X16A Lo Mia Camp, P 63.93 67 P **P 12 09 17.5 +0.6**
baz=64,SNR=44
KHET Khetri 63.94 283 *e*PKP **P 12 09 15.8 -1.3**
KHET AMb AMB 12 09 18.3
comp=Z,13nm,0.9s,mb4.8
EYMN Ely 64.05 45 *e*P **P 12 09 16.6 -0.9**
comp=Z,132nm,0.9s,mb5.8
S22A 4UR Ranch, Cre 64.09 61 P **P 12 09 18.7 +0.8**
baz=64,SNR=101
Q24A Divide 64.11 59 ⇑P **P 12 09 18.3 +0.3**
baz=64,SNR=31
P25A Willow Gulch B 64.23 58 ⇑P **P 12 09 19.5 +0.7**
baz=64,SNR=23
T21A Navajo Lake 64.25 62 P **P 12 09 19.6 +0.6**
baz=64,SNR=28
KSM Kuching 64.26 236 P **P 12 09 21.0 +1.7**
KSM Kuching 64.26 236 *e*P **P 12 09 20.9 +1.6**
comp=Z,208nm,1.1s,mb5.9
KSM Kuching 64.26 236 P **P 12 09 20.7 +1.4**
comp=Z,3µmcomp=Z,203nm,1.3s,mb5.8
OGNE Ogallala 64.29 56 P **P 12 09 19.1 -0.1**
baz=64,SNR=30
OGNE Ogallala 64.29 56 *e*P **P 12 09 18.7 -0.5**
comp=Z,297nm,1.3s,mb6.0
Y16A Circle Bar Ran 64.30 67 ⇓P **P 12 09 19.6 +0.3**
baz=64,SNR=26
114A Black Gap (USA 64.31 69 P **P 12 09 19.6 +0.1**
baz=64,SNR=22
NB2 NORSAR Subarra 64.33 343 P **P 12 09 19.0 -0.1**
comp=Z,170nm,1.0s,mb5.8,baz=23,slow=6.9
NB2 NORSAR Subarra 64.33 343 P **P 12 09 19.0 -0.1**
NOA NORSAR Array B 64.33 343 P **P 12 09 18.7 -0.4**
comp=Z,95nm,0.9s,mb5.6,baz=21,slow=6.6,SNR=172
NOA LR LR 12 43 13.4
comp=Z,2µm,18.1s,baz=25,slow=41
NOA NORSAR Array B 64.33 343 P **P 12 09 18.7 -0.4**
NOA pmax pmax
comp=Z,95nm,0.9s
V19A Window Rock 64.34 64 ⇓P **P 12 09 19.8 +0.2**
baz=64,SNR=9.2
X17A Forest Lakes 64.35 67 P **P 12 09 20.4 +0.7**
baz=64,SNR=22
W18A Petrified Fore 64.39 65 ⇑P **P 12 09 20.7 +0.7**
baz=64,SNR=7.7
S23A Nye Farm, Mont 64.57 61 P **P 12 09 22.1 +1.1**
baz=64,SNR=42
NAO01 NORSAR Array S 64.57 343 *e*P **P 12 09 20.5 -0.2**
comp=Z,105nm,1.0s,mb5.6
SPSI Sidrap Palu 64.58 223 P **P 12 09 21.1 -0.2**
comp=Z,1µmcomp=Z,96nm,1.2s,mb5.5
T22A Edith 64.58 62 ⇓P **P 12 09 21.9 +0.7**
baz=64,SNR=82
W19A Sanders 64.59 65 P **P 12 09 22.1 +0.8**
baz=64,SNR=12
U21A Nageezi 64.59 63 P **P 12 09 21.6 +0.4**
baz=64,SNR=56
V20A Brimhall 64.60 64 P **P 12 09 21.1 -0.3**
baz=64,SNR=19
Q25A Bedland, Calha 64.62 59 P **P 12 09 21.6 +0.2**
baz=64,SNR=18
R24A Sanders Place, 64.66 60 P **P 12 09 22.1 +0.4**
baz=64,SNR=30
HFA0 Hagfors New Ar 64.69 341 P **P 12 09 20.0 -1.5**
X18A Snowflake 64.70 66 P **P 12 09 22.5 +0.6**
baz=64,SNR=44
Z16A Peralta Trail, 64.72 68 ⇑P **P 12 09 22.0 -0.1**
baz=64,SNR=13
115A Sonoran Desert 64.72 69 ⇓P **P 12 09 22.4 +0.3**
baz=64
SNG Songkhla 64.79 248 P **P 12 09 23.0 +0.2**
comp=Z,240nm,0.9s,mb6.0
Y17A Roosevelt 64.80 67 ⇓P **P 12 09 22.8 +0.2**
baz=64,SNR=48
BBSI Bau Bau 64.81 220 P **P 12 09 24.7 +1.9**
comp=Z,1µmcomp=Z,66nm,1.2s,mb5.3
SDCO Great Sand Dun 64.81 61 P **P 12 09 23.0 +0.4**
baz=64,SNR=60
SDCO Great Sand Dun 64.81 61 *e*P **P 12 09 22.7 +0.1**
comp=Z,52nm,1.2s,mb5.2
FOO Floro 64.82 346 *e*P **P 12 09 21.5 -0.8**
FOO AMb AMB 12 09 24.1
comp=Z,143nm,1.1s,mb5.7
FOO Floro 64.82 346 *e*P **P 12 09 21.5 -0.8**
comp=Z,143nm,1.1s,mb5.7
KTGM Kuala Trenggan 64.87 245 P **P 12 09 25.4 +2.1**
STKI Sintang 64.88 234 P **P 12 09 24.9 +1.6**
comp=Z,201nm,1.0s,mb5.9
ECSD EROS Data Cent 64.90 51 *e*P **P 12 09 22.2 -0.9**
comp=Z,114nm,1.1s,mb5.6
214A Organ Pipe Nat 64.93 70 P **P 12 09 23.3 -0.2**
baz=65,SNR=32
T23A Casias Ranch, 65.04 61 ⇑P **P 12 09 24.8 +0.7**
baz=65,SNR=8.5
S24A Houchin Ranch, 65.04 60 ⇑P **P 12 09 24.8 +0.7**
baz=65,SNR=38
HYA Hoyanger 65.06 346 ⇑*i*P **P 12 09 25.0 +1.2**
HYA AMb AMB 12 09 26.2
comp=Z,140nm,1.0s,mb5.8
HYA Hoyanger 65.06 346 ⇑*i*P **P 12 09 25.0 +1.2**
comp=Z,140nm,1.0s,mb5.7
V21A Milan 65.06 63 ⇓P **P 12 09 24.5 +0.3**
baz=65,SNR=17
U22A Llaves 65.07 62 ⇓P **P 12 09 24.8 +0.4**
baz=65
W20A Ramah 65.08 64 P **P 12 09 24.6 +0.3**
baz=65,SNR=19
X19A St. Johns 65.14 66 P **P 12 09 25.3 +0.5**
baz=65,SNR=61
R25A Fountain Ranch 65.17 59 ⇓P **P 12 09 24.8 -0.1**
baz=65,SNR=41
Y18A Canyon Day Jun 65.20 67 P **P 12 09 25.6 +0.4**
baz=65,SNR=44
Z17A San Carlos Hig 65.30 67 ⇓P **P 12 09 26.5 +0.6**
baz=65,SNR=5.9
V22A San Miguel Ran 65.38 63 P **P 12 09 26.5 +0.2**
baz=65,SNR=40
S25A Robets Cordova 65.44 60 P **P 12 09 26.3 -0.5**
baz=65,SNR=28
OSL Oslo 65.45 343 *e*P **P 12 09 25.8 -0.6**
U23A El Rito 65.47 62 ⇓P **P 12 09 27.7 +0.7**
baz=65,SNR=189
X20A Quemado 65.50 65 ⇑P **P 12 09 27.9 +0.8**
baz=65,SNR=76
Y19A Nutrioso 65.51 66 ⇑P **P 12 09 28.0 +0.8**
baz=65,SNR=46
KAPI Kappang 65.53 223 *e*P **P 12 09 26.9 -0.6**
comp=Z,88nm,1.2s,mb5.5
KAPI Kappang 65.53 223 P **P 12 09 27.3 -0.2**
comp=Z,594nmcomp=Z,34nm,1.4s,mb5.0
T24A Torres, Weston 65.54 61 P **P 12 09 28.2 +0.8**
baz=65,SNR=50
W21A San Fidel 65.56 64 P **P 12 09 27.6 +0.1**
baz=65,SNR=16
KBKI Kotabaru 65.58 227 P **P 12 09 27.5 -0.3**
comp=Z,2µmcomp=Z,106nm,1.5s,mb5.5
IZAR Zarasai 65.58 333 *e*P **P 12 09 27.0 -0.3**
IZAR AMB AMB 12 09 29.3
comp=Z,18nm,0.5s,mb5.1
BKSI Bulukumba 65.65 222 P **P 12 09 28.0 -0.3**
comp=Z,859nmcomp=Z,69nm,1.0s,mb5.4
117A Oracle 65.67 68 P **P 12 09 28.2 -0.1**
baz=65,SNR=31
216A Three Points, 65.68 69 ⇓P **P 12 09 28.4 0.0**
baz=65,SNR=30
Z18A Geronimo 65.70 67 ⇑P **P 12 09 29.1 +0.6**
baz=66,SNR=11
ISAL Salakas 65.77 333 *e*P **P 12 09 28.1 -0.4**

ISAL AMB AMB 12 09 32.0
comp=Z,16nm,1.1s,mb4.8
T25A Trinidad 65.84 60 P P 12 09 29.4 +0.1
baz=66,SNR=44
TUC Tucson 65.84 68 *e*P **P 12 09 29.0 -0.4**
comp=Z,32nm,1.1s,mb5.1
TUC Tucson 65.84 68 *e*P **P 12 09 29.0 -0.4**
TUC pmax pmax
comp=Z,32nm,1.1s,mb5.1
ASK Askoy 65.86 346 *e*P **P 12 09 28.4 -0.7**
RUND Rundenannen 65.90 346 *e*P **P 12 09 28.7 -0.5**
V23A Ortiz Mt. (NFS 65.91 62 P **P 12 09 30.8 +1.1**
baz=66,SNR=96
U24A Moreno Valley 65.91 61 ⇑P **P 12 09 30.8 +1.1**
baz=66,SNR=16
KONO Kongsberg 65.92 343 *e*P **P 12 09 29.6 +0.2**
comp=Z,147nm,1.1s,mb5.7
KONO Kongsberg 65.92 343 *e*P **P 12 09 29.6 +0.2**
KONO pmax pmax
comp=Z,147nm,1.1s,mb5.7
BER Bergen 65.93 346⇑*i*P **P 12 09 29.7 +0.2**
BER AMb AMB 12 09 31.2
comp=Z,213nm,0.5s,mb6.2
BER *e*S S 12 18 12.3 +1.2
BER AMS AMS 12 43 08.4
comp=Z,1μm,25.7s
BER Bergen 65.93 346⇑*i*P **P 12 09 29.7 +0.2**
comp=Z,213nm,0.5s,mb6.2
BER LR LR
comp=Z,1μm,25.7s
BER Bergen 65.93 346⇑*i*P **P 12 09 29.7 +0.2**
BER pmax pmax
comp=Z,213nm,0.5s,mb6.2
BER MLR MLR
comp=Z,1μm,25.7s
IIGN Ignalina 65.93 332 *e*P **P 12 09 29.3 -0.3**
IIGN AMB AMB 12 09 31.4
comp=Z,30nm,0.5s,mb5.3
X21A Alamocita Cree 65.97 65 ⇑P **P 12 09 31.2 +1.0**
baz=66,SNR=129
Z19A T-Link Ranch, 65.99 66 P **P 12 09 31.0 +0.7**
baz=66,SNR=12
Y20A Horse Springs, 66.04 65 ⇓P **P 12 09 31.6 +1.0**
baz=66,SNR=60
118A Homack Ranch, 66.06 67 P **P 12 09 30.9 +0.1**
baz=66,SNR=54
MNK Minsk 66.19 331 *e*P **P 12 09 29.0 -2.2**
MNK *e*PPP 12 09 50.0
MNK *e*S S 12 18 10.0 -4.5
MNK *e*SS 12 18 34.0
MNK MLR MLR
comp=Z,23μm,20.0s
217A Green Valley 66.22 69 P **P 12 09 31.6 -0.1**
baz=66,SNR=29
KULM Kulim 66.31 247 P **P 12 09 33.8 +1.3**
KULM Kulim 66.31 247 *e*P **P 12 09 33.1 +0.5**
comp=Z,132nm,1.2s,mb5.6
KULM Kulim 66.31 247 P **P 12 09 33.5 +1.0**
comp=Z,2μmcomp=Z,91nm,1.3s,mb5.4
ANMO Albuquerque 66.34 63 *e*P **P 12 09 32.6 +0.1**
comp=Z,40nm,0.9s,mb5.2
ANMO Albuquerque 66.34 63 *e*P **P 12 09 32.6 +0.1**
ANMO pmax pmax
comp=Z,40nm,0.9s
119A Ashpeak Ranch, 66.35 67 ⇑P **P 12 09 32.9 +0.2**
baz=66,SNR=16
W23A Werner Place, 66.35 63 P **P 12 09 33.0 +0.4**
baz=66,SNR=28
Y21A Point of Rocks 66.36 65 P **P 12 09 33.5 +0.8**
baz=66,SNR=46
X22A Bernardo 66.36 64 ⇑P **P 12 09 34.0 +1.3**
baz=66
LAZ Ladron 66.37 64 *e*P **P 12 09 33.2 +0.5**
comp=Z,33nm,0.9s,mb5.2
U25A Circle Dot Ran 66.39 61 P **P 12 09 32.9 +0.1**
baz=66,SNR=52
V24A Rampart Ranch, 66.42 62 ⇑P **P 12 09 33.8 +0.7**
baz=66,SNR=66
Z20A Nine Sixteen R 66.50 66 P **P 12 09 34.0 +0.4**
baz=66,SNR=31
COWI Conover 66.50 44 *e*P **P 12 09 31.9 -1.5**
comp=Z,153nm,1.3s,mb5.7
218A Dragoon 66.51 68 ⇑P **P 12 09 33.9 +0.2**
baz=66,SNR=73
BHPL Bhopal 66.51 278 *e*PKP **P 12 09 32.4 -1.4**
BHPL AMb AMB 12 09 35.5
comp=Z,101nm,0.8s,mb5.7
LENM Lemitar 66.63 64 *e*P **P 12 09 34.7 +0.3**
comp=Z,38nm,0.9s,mb5.2
V25A Rancho No Teng 66.69 61 ⇓P **P 12 09 35.2 +0.5**
baz=66
LPM Los Pinos Moun 66.72 64 *e*P **P 12 09 35.2 +0.3**
comp=Z,33nm,1.1s,mb5.1
LPM *e*pP pP 12 09 50.0 -2.8
W24A Lazy 6 Ranch, 66.73 62 P **P 12 09 35.5 +0.5**
baz=66,SNR=69
Y22D IRIS PASSCAL I 66.73 64 ⇓P **P 12 09 36.1 +1.0**
baz=66,SNR=6.2
U26A Atchley Ranch, 66.75 60 P **P 12 09 34.9 -0.2**
baz=66,SNR=24
IPM Ipoh 66.75 246 *e*P **P 12 09 36.0 +0.6**
IPM Ipoh 66.75 246 *e*P **P 12 09 35.3 -0.1**
comp=Z,127nm,1.3s,mb5.6
IPM Ipoh 66.75 246 P **P 12 09 36.1 +0.7**
comp=Z,1μmcomp=Z,85nm,1.3s,mb5.4
X23A Hourglass Bar 66.76 63 P **P 12 09 35.7 +0.5**
baz=66,SNR=28
ABKT Ailbek 66.78 302 P **P 12 09 34.7 -0.6**
comp=Z,288nm,0.9s,mb6.1,SNR=7.4
Y22A Socorro 66.81 64 P **P 12 09 36.1 +0.6**
baz=66,SNR=41
BNM Barren Site 66.84 64 *e*P **P 12 09 36.0 +0.3**
comp=Z,35nm,1.1s,mb5.1
Z21A St. Cloud Mine 66.88 65 P **P 12 09 36.7 +0.7**
baz=67,SNR=36
120A U Bar Ranch, L 66.89 66 ⇑P **P 12 09 36.8 +0.7**
baz=67,SNR=72
COEN Coen 66.92 196 *e*P **P 12 09 35.8 -0.5**
comp=Z,233nm,0.7s,mb6.1
COEN Coen 66.92 196 P **P 12 09 35.4 -0.9**
comp=Z,249nm,1.1s,mb6.0
318A Bisbee 66.94 68 P **P 12 09 36.5 +0.1**
baz=67,SNR=56
219A White Tail Can 66.94 67 ⇓P **P 12 09 36.8 +0.4**
baz=67,SNR=88
WAL1 Walls 66.99 349 P **P 12 09 36.3 +0.1**
WAL1 Walls 66.99 349 *e*P **P 12 09 36.3 +0.1**
VIS Vishakhapatnam 67.00 270 *e*PKP **P 12 09 36.4 -0.6**
VIS AMb AMB 12 09 39.7
comp=Z,119nm,1.2s,mb5.6
CBKS Cedar Bluff 67.05 56 P **P 12 09 35.9 -1.1**
baz=67,SNR=19
CBKS Cedar Bluff 67.05 56 *e*P **P 12 09 35.7 -1.3**
comp=Z,85nm,0.9s,mb5.6
CBKS Cedar Bluff 67.05 56 *e*P **P 12 09 35.7 -1.3**
CBKS pmax pmax
comp=Z,85nm,0.9s,mb5.6
LRW Lerwick 67.06 349 P **P 12 09 35.8 -0.8**
LRW AMB AMB 12 09 38.8
comp=Z,215nm,2.2s,mb5.6
LRW Lerwick 67.06 349⇑*e*P **P 12 09 35.8 -0.8**
LRW AMB AMB 12 09 38.8
comp=Z,215nm,2.2s,mb5.6
V26A Tequesquite Ra 67.17 61 P **P 12 09 37.2 -0.6**
baz=67,SNR=44
PBKI Pangkalan Bun 67.18 232 P **P 12 09 39.3 +1.3**
comp=Z,633nm,1.1s,mb6.4
SCHQ Schefferville 67.18 26 P **P 12 09 37.1 -0.4**
comp=Z,60nm,0.7s,mb5.5,baz=351,slow=7.0,SNR=35
SCHQ LR LR 12 41 49.9
comp=Z,2μm,20.8s,baz=148,slow=38
SCHQ Schefferville 67.18 26 *e*P **P 12 09 37.0 -0.5**
comp=Z,138nm,1.0s,mb5.7
X24A Lazy VL Ranch, 67.19 63 P **P 12 09 38.7 +0.8**
baz=67,SNR=21
W25A X Bar L Ranch, 67.24 62 P **P 12 09 38.2 0.0**
baz=67,SNR=74
Z22A Elephant Butte 67.31 65 P **P 12 09 39.0 +0.3**
baz=67,SNR=59
Y23A Lovelace Mesa, 67.32 64 P **P 12 09 39.2 +0.5**
baz=67,SNR=58
121A Cookes Peak, D 67.39 66 P **P 12 09 39.6 +0.4**
baz=67,SNR=22
319A Douglas 67.39 68 P **P 12 09 39.4 +0.2**
baz=67,SNR=82
MYKOM Kota Tinggi 67.41 242 P **P 12 09 41.5 +2.0**
MYKOM Kota Tinggi 67.41 242 P **P 12 09 41.1 +1.6**
comp=Z,1μmcomp=Z,94nm,1.1s,mb5.5
220A Playas Peak, P 67.43 67 P **P 12 09 39.6 +0.1**
baz=67,SNR=40
FRIM Kepong 67.44 245 P **P 12 09 41.3 +1.6**
KGM Kluang 67.51 242 P **P 12 09 42.5 +2.4**
X25A Clemmons Ranch 67.64 62 ⇑P **P 12 09 41.3 +0.5**
baz=67,SNR=63
Y24A Capitan 67.66 63 P **P 12 09 41.2 +0.3**
baz=67,SNR=83
122A Conniff Cattle 67.70 65 ⇑P **P 12 09 42.1 +0.8**
baz=67,SNR=9.2
W26A Owens Ranch, T 67.71 61 ⇓P **P 12 09 41.4 +0.1**
baz=67,SNR=17
Z23A Rita Site, Whi 67.72 64 P **P 12 09 41.5 +0.3**
baz=68,SNR=14
221A Mesquite Ranch 67.78 66 P **P 12 09 42.2 +0.6**
baz=68,SNR=27
MMRI Maumere 67.81 219 P **P 12 09 41.1 -0.8**
comp=Z,3μmcomp=Z,201nm,1.1s,mb5.8
320A Kipp Ranch, An 67.85 67 ⇓P **P 12 09 42.5 +0.3**
baz=68,SNR=27
SCIA State Center 67.91 50 *e*P **P 12 09 41.8 -0.6**
comp=Z,323nm,0.8s,mb6.2
SUW Suwalki 67.96 333 *e*P **P 12 09 41.2 -1.2**
SUW LMZ 12 42 10.2
comp=Z,6μm,22.0s
SUW Suwalki 67.96 333 *e*P **P 12 09 41.2 -1.2**
comp=Z,74nm,0.5s,mb5.8
SUW Suwalki 67.96 333 *e*P **P 12 09 41.2 -1.3**
SUW MLR MLR
comp=Z,6μm,22.0s
Y25A Mesa, Roswell 68.08 63 ⇓P **P 12 09 43.7 +0.2**
baz=68,SNR=139
X26A CR and CF Fran 68.09 62 P **P 12 09 43.5 -0.1**
baz=68,SNR=55
W27A Bowe Ranch, En 68.11 61 P **P 12 09 43.2 -0.5**
baz=68,SNR=20
Z24A Sheeppen Canyo 68.15 64 P **P 12 09 44.2 +0.3**
baz=68,SNR=67
MAK Makhachkala 68.16 312 *e*P **P 12 09 41.3 -2.6**
MAK *e**PP pP 12 10 02.0 +0.2
MAK *e**SP sP 12 10 12.3 +3.0
MAK *e* 12 12 10.0
MAK *e*PPP 12 13 50.6
MAK S S 12 18 35.6 -2.9
MAK *i* *SS sS 12 19 12.0 +3.2
MAK *i* 12 19 32.3
MAK pmax pmax
comp=Z,517nm,1.3s,mb6.2
MAK MLR MLR
comp=Z,9μm,19.0s
KAKA Kakadu 68.17 207⇑*i*P **P 12 09 43.6 -0.6**
comp=Z,80nm,0.8s,mb5.6
KAKA Kakadu 68.17 207 *e*P **P 12 09 43.7 -0.4**
comp=Z,296nm,0.9s,mb6.1
KAKA Kakadu 68.17 207 P **P 12 09 44.1 -0.1**
comp=Z,1μmcomp=Z,167nm,0.9s,mb5.8
X27A F and S Farms, 68.41 61 P **P 12 09 45.7 +0.1**
baz=68,SNR=32
KSU1 Kansas State U 68.42 54 *e*P **P 12 09 43.4 -2.2**
comp=Z,34nm,0.8s,mb5.2
JFWS Jewell Farm 68.50 47 *e*P **P 12 09 44.3 -1.7**
comp=Z,51nm,0.8s,mb5.4
JFWS Jewell Farm 68.50 47 *e*P **P 12 09 44.3 -1.8**
JFWS pmax pmax
comp=Z,51nm,0.8s,mb5.4
Z25A Roswell 68.54 63 P **P 12 09 46.6 +0.1**
baz=68,SNR=33
Y26A Elida 68.55 62 P **P 12 09 46.5 -0.1**
baz=68,SNR=29
124A Stringfield Ra 68.57 64 P **P 12 09 46.8 +0.1**
baz=68,SNR=39
ORE Reay 68.90 350 P **P 12 09 48.5 +0.2**
ORE Reay 68.90 350⇑*e*P **P 12 09 48.5 +0.2**
Y27A Causey 68.94 62 P **P 12 09 48.8 -0.1**
baz=69,SNR=84
TSI Tuntungan 68.95 247 P **P 12 09 50.2 +1.0**
comp=Z,226nm,1.3s,mb5.8
Z26A Caprock 68.96 63 P **P 12 09 48.8 -0.2**
baz=69,SNR=126
AMTX Amarillo 68.99 60 P **P 12 09 48.9 -0.3**
baz=69,SNR=22
AMTX Amarillo 68.99 60 *e*P **P 12 09 48.7 -0.5**
comp=Z,69nm,1.0s,mb5.4
224A Cornudas Mount 69.00 65 P **P 12 09 49.1 -0.2**
baz=69,SNR=58
MUD Monsted U'grnd 69.00 342⇑*i*P **P 12 09 49.5 +0.6**
MUD pmax pmax
comp=Z,120nm,1.1s,mb5.6
MUD MLR MLR
comp=Z,3μm,21.0s
MUD Monsted U'grnd 69.00 342⇑*i*P **P 12 09 49.5 +0.6**
comp=Z,115nm,1.1s,mb5.6
MUD
comp=Z,3μm,21.0s
AKASG Malin Array Be 69.02 328 P **P 12 09 47.5 -1.6**
comp=Z,50nm,0.4s,mb5.7,baz=30,slow=7.0,SNR=84
AKASG LR LR 12 45 58.4
comp=Z,2μm,18.1s,baz=40,slow=41
AKASG Malin Array Be 69.02 328 P **P 12 09 47.5 -1.6**
AKASG pmax pmax
comp=Z,50nm,0.4s
KIEV Kiev 69.03 328 *e*P **P 12 09 47.8 -1.3**
comp=Z,41nm,0.4s,mb5.6
KIEV Kiev 69.03 328 *e*P **P 12 09 47.8 -1.4**
KIEV pmax pmax
comp=Z,41nm,0.4s,mb5.6
125A Gardner Draw, 69.04 64 P **P 12 09 49.4 -0.1**
baz=69,SNR=72
BSD Bornholm Skovb 69.06 338⇑*i*P **P 12 09 48.7 -0.6**
BSD pmax pmax
comp=Z,41nm,0.9s,mb5.3
BSD MLR MLR
comp=Z,4μm,22.0s
COP Copenhagen 69.07 340⇑*i*P **P 12 09 49.6 +0.2**
COP pmax pmax
comp=Z,31nm,0.9s,mb5.1
COP MLR MLR
comp=Z,1μm,18.0s
COP Copenhagen 69.07 340⇑*i*P **P 12 09 49.6 +0.2**
comp=Z,31nm,0.9s,mb5.1
COP
comp=Z,1μm,18.0s
MSTX Muleshoe 69.09 62 P **P 12 09 49.3 -0.5**
baz=69,SNR=56
BMNI Bima 69.15 222 P **P 12 09 49.1 -1.2**
comp=Z,1μmcomp=Z,81nm,1.5s,mb5.3
CPRX Cap Rock 69.20 63 *e*P **P 12 09 50.2 -0.3**
comp=Z,84nm,1.1s,mb5.5
TPI Tanjungpandan 69.23 236 P **P 12 09 51.4 +0.5**
comp=Z,1μmcomp=Z,70nm,1.2s,mb5.3
RSC Scourie 69.24 351 P **P 12 09 50.6 +0.2**
RSC Scourie 69.24 351⇑*i*P **P 12 09 50.6 +0.2**
Z27A Tatum 69.34 62 P **P 12 09 51.0 -0.4**
baz=69,SNR=63
MNTX Cornudas Mount 69.36 65 ⇑P **P 12 09 51.6 0.0**
baz=69,SNR=108
MNTX Cornudas Mount 69.36 65 *e*P **P 12 09 51.3 -0.2**
comp=Z,52nm,1.0s,mb5.3
225A Deer Hill, Car 69.36 64 P **P 12 09 51.5 -0.1**
baz=69,SNR=47
126A Clayton Basin, 69.41 63 ⇓P **P 12 09 51.6 -0.2**
baz=69,SNR=22
GLMI Grayling 69.44 43 *e*P **P 12 09 50.8 -1.0**
comp=Z,200nm,1.0s,mb5.9
324A Moseley Ranch, 69.50 65 ⇓P **P 12 09 52.2 -0.1**
baz=69,SNR=17
PPBI Pangkal Pinang 69.50 237 P **P 12 09 54.2 +1.6**
comp=Z,3μmcomp=Z,129nm,1.3s,mb5.6
KIV Kislovodsk 69.51 316 *e*P **P 12 09 51.2 -1.1**
KIV *e* 12 10 14.9
KIV *e* 12 12 25.4
KIV *e*PPP 12 14 04.4
KIV *e*S S 12 18 53.2 -1.2
KIV *e*SS SS 12 23 22.7 +0.7
KIV pmax pmax
comp=Z,11nm,0.7s,mb4.8
KIV MLR MLR
comp=Z,3μm,18.0s
GDL2 Guadalupe Moun 69.55 64 *e*P **P 12 09 52.6 -0.1**
comp=Z,44nm,0.9s,mb5.3
MVH1 Achvaich 69.56 350 P **P 12 09 52.4 +0.1**
MVH1 Achvaich 69.56 350⇑*i*P **P 12 09 52.4 +0.1**
127A Arkansas Junct 69.75 63 P **P 12 09 53.5 -0.4**
baz=70,SNR=11
CLNB Carlsbad 69.77 63 *e*P **P 12 09 53.7 -0.4**
comp=Z,36nm,0.8s,mb5.3
RRR Rubha Reidh 69.79 351 P **P 12 09 53.8 0.0**
RRR Rubha Reidh 69.79 351⇑*i*P **P 12 09 53.8 0.0**
MCD Coleburn Disti 69.79 350 P **P 12 09 54.0 +0.2**
MCD Coleburn Disti 69.79 350⇑*i*P **P 12 09 54.0 +0.2**
226A Malaga, Loving 69.80 64 ⇓P **P 12 09 54.1 -0.2**
baz=70,SNR=71
RRH Rhenigidale 69.81 352 P **P 12 09 54.0 +0.1**
RRH Rhenigidale 69.81 352⇑*i*P **P 12 09 54.0 +0.1**
325A Bean Ranch, Si 69.84 65 ⇓P **P 12 09 54.2 -0.3**
baz=70,SNR=59
KMMI Kalianget 69.89 228 P **P 12 09 56.3 +1.4**
comp=Z,4μmcomp=Z,235nm,1.4s,mb5.8
ZEI Tsey 69.93 314 *e*P **P 12 09 52.4 -2.5**
ZEI pmax pmax
comp=Z,31nm,1.0s,mb5.1
ZEI MLR MLR
comp=Z,6μm,17.0s
ZEI MLR MLR
comp=E,3μm,16.0s
ZEI MLR MLR
comp=N,5μm,17.0s
RGN Rugen 69.94 339 *e*P **P 12 09 54.5 -0.2**
comp=N,246nm,1.0s,mb6.0
TPTI 69.94 249 P **P 12 09 54.2 -1.1**
comp=N,44nm,1.4s,mb5.1
MME1 Meikle Cairn 70.02 349 P **P 12 09 54.8 -0.3**
MME1 Meikle Cairn 70.02 349⇑*i*P **P 12 09 54.8 -0.3**
MDO Dochfour 70.05 350 P **P 12 09 55.3 -0.1**
MDO Dochfour 70.05 350⇑*i*P **P 12 09 55.3 -0.1**
KAC Achnashellach 70.09 351 P **P 12 09 55.8 +0.2**
KAC Achnashellach 70.09 351⇑*i*P **P 12 09 55.8 +0.2**
BKNI Bangkinang 70.17 243 P **P 12 09 58.1 +1.4**
comp=N,5μmcomp=N,312nm,1.2s,mb6.0
HYB Hyderabad 70.19 273 *i*P **P 12 09 56.5 -0.3**
HYB *e*S S 12 19 08.0 +5.0
GKP Gorka Klasztor 70.20 336 *e*P **P 12 09 56.0 -0.3**
GKP MLR MLR
comp=Z,8μm,19.9s
SRBI Singaraja 70.25 226 P **P 12 09 57.3 +0.2**
comp=Z,2μmcomp=Z,93nm,1.7s,mb5.3
425A Indio Mountain 70.27 65 P **P 12 09 57.2 +0.1**
baz=70,SNR=83
KPL Plockton 70.28 351 P **P 12 09 55.9 -0.9**
KPL AMB AMB 12 09 57.6
comp=Z,170nm,3.0s,mb5.4
KPL Plockton 70.28 351 *e*P **P 12 09 55.9 -0.9**
KPL AMB AMB 12 09 57.6
comp=Z,170nm,3.0s,mb5.4
227A Bennet, Jal 70.29 63 P **P 12 09 57.0 -0.2**
baz=70,SNR=5.6
MTNI Mataram 70.31 225 P **P 12 09 56.6 -0.9**
comp=Z,7μmcomp=Z,97nm,1.4s,mb5.4
KHKI Kahang-Kahang 70.32 225 P **P 12 09 56.5 -1.0**
comp=Z,3μmcomp=Z,252nm,1.2s,mb5.9
TBLG Delisi 70.39 313 P **P 12 09 59.2 +1.5**
TBLG Delisi 70.39 313 P **P 12 09 59.2 +1.6**
KSB Sheil Bridge 70.39 351 P **P 12 09 57.5 +0.1**
KSB Sheil Bridge 70.39 351⇑*i*P **P 12 09 57.5 +0.1**
MTA Mtatsminda 70.39 313 P **P 12 09 58.8 +1.1**
326A Caldwell Ranch 70.43 64 P **P 12 09 58.0 -0.2**
baz=70,SNR=65
GOR Gori 70.46 314 P **P 12 09 59.6 +1.5**
MNSI Mandailing Nat 70.59 245 P **P 12 09 58.5 -0.8**
comp=Z,29nm,1.2s,mb5.0
WMOK Wichita Mounta 70.65 58 *e*P **P 12 09 58.6 -0.8**
comp=Z,64nm,1.0s,mb5.4
WMOK *e*pP pP 12 10 13.6 -3.8
WMOK *e*sP sP 12 10 22.8 -2.1
WMOK Wichita Mounta 70.65 58 *e*P **P 12 09 58.6 -0.8**
WMOK *e**PP pP 12 10 13.6 -3.8
WMOK *e**SP sP 12 10 22.8 -2.0
WMOK pmax pmax
comp=Z,64nm,1.0s,mb5.4
LATR Latur 70.66 275 *ex* x 12 09 57.8
KAR1 Arisaig 70.72 351 P **P 12 09 59.9 +0.4**
KAR1 Arisaig 70.72 351⇑*i*P **P 12 09 59.9 +0.4**
HDIL Hopedale 70.80 48 *e*P **P 12 09 59.2 -1.1**
comp=Z,142nm,0.8s,mb5.8
426A McDonald Obser 70.89 65 P **P 12 10 00.6 -0.4**
baz=71,SNR=38
SDSI Sungai Dareh 70.99 242 P **P 12 10 02.8 +1.1**
comp=Z,7μmcomp=Z,58nm,1.0s,mb5.4
ANN Anapa 71.00 320 *e*P **P 12 09 58.7 -2.7**
ANN *e**PP pP 12 10 19.7 +0.3
ANN *e*PPP 12 14 20.0
ANN *e*S S 12 19 05.8 -6.0
ANN *e* 12 19 51.2
ANN pmax pmax
comp=Z,69nm,1.3s,mb5.3
ANN MLR MLR
comp=N,2μm,21.0s
ANN MLR MLR
comp=E,2μm,21.0s
ANN MLR MLR
comp=Z,2μm,21.0s
328A Wristen Ranch, 71.03 63 P **P 12 10 01.4 -0.3**
baz=71,SNR=144
SOC Sochi 71.07 318*c* *i*P **P 12 10 00.2 -1.6**
SOC *e**SP sP 12 10 26.4 -0.9
SOC *i* 12 12 35.5
SOC *e*PPP 12 14 23.4
SOC *e*S S 12 19 04.3 -8.3
SOC *e**SS sS 12 19 46.0 +2.8
SOC *e*SSS 12 26 59.6
SOC pmax pmax
comp=Z,58nm,1.3s,mb5.2
SOC MLR MLR
comp=Z,7μm,22.0s
427A Hayter Ranch, 71.11 64 P **P 12 10 01.9 -0.3**
baz=71,SNR=45
EBH Black Hill 71.13 349 P **P 12 10 01.9 0.0**
EBH Black Hill 71.13 349⇑*i*P **P 12 10 01.9 0.0**
BSEG Bad Segeberg 71.15 341 *e*P **P 12 10 02.7 +0.6**
comp=Z,149nm,1.0s,mb5.8
BSEG Bad Segeberg 71.15 341 *e*P **P 12 10 02.7 +0.6**
BSEG pmax pmax
comp=Z,149nm,1.0s,mb5.8
GMJI Gumukmas 71.21 227 P **P 12 10 11.8 +8.9**
EAB Aberfoyle 71.28 350 P **P 12 10 02.9 0.0**
EAB Aberfoyle 71.28 350⇑*i*P **P 12 10 02.9 0.0**
526A Mary Lane Ranc 71.32 65 ⇓P **P 12 10 03.6 +0.1**
baz=71,SNR=65
NGJI Ngawi 71.33 230 P **P 12 10 05.7 +2.0**
comp=Z,136nm,1.4s,mb5.6
ESY Stoneypath 71.35 349 P **P 12 10 03.1 -0.2**
ESY Stoneypath 71.35 349⇑*i*P **P 12 10 03.1 -0.2**
HLG Helgoland 71.39 342 *e*P **P 12 10 04.4 +0.8**
comp=Z,204nm,0.8s,mb6.0
EDI Edinburgh 71.41 349 P **P 12 10 02.1 -1.6**
EDI AMB AMB 12 10 03.2
comp=Z,120nm,1.0s,mb5.7
EDI Edinburgh 71.41 349⇑*e*P **P 12 10 02.1 -1.6**
EDI AMB AMB 12 10 03.2
comp=Z,120nm,1.0s,mb5.7
LVV L'vov 71.42 331 *e*P **P 12 10 03.0 -0.8**
LVV *e*S S 12 19 15.2 -1.3
LVV MLR MLR
comp=N,6μm,20.0s
LVV MLR MLR
comp=E,4μm,20.0s
LVV MLR MLR
comp=Z,8μm,20.0s
PDSI Padang 71.51 243 P **P 12 10 04.0 -0.8**
comp=Z,2μmcomp=Z,104nm,1.4s,mb5.5
SJI Sawahan 71.51 229 P **P 12 10 04.7 -0.1**
comp=Z,2μmcomp=Z,153nm,1.3s,mb5.7
EAU Auchinoon 71.52 349 P **P 12 10 04.5 +0.3**
EAU Auchinoon 71.52 349⇑*i*P **P 12 10 04.5 +0.3**
527A Woodward Ranch 71.53 65 P **P 12 10 04.4 -0.3**
baz=71,SNR=42
EBL Broad Law 71.54 349 P **P 12 10 04.3 -0.1**
EBL Broad Law 71.54 349⇑*i*P **P 12 10 04.3 -0.1**
SMRI Semarang 71.54 231 P **P 12 10 06.1 +1.1**
comp=Z,389nm,1.2s,mb6.1
KRKI Karangkates 71.56 228 P **P 12 10 05.0 -0.1**
comp=Z,592nm,1.1s,mb6.3
428A Kincaid Ranch, 71.60 64 P **P 12 10 05.5 +0.3**
baz=71,SNR=102
PGBU Glenifferbraes 71.67 350 P **P 12 10 05.5 +0.3**
PGBU AMB AMB 12 10 07.3
comp=Z,394nm,1.3s,mb6.1
PGBU Glenifferbraes 71.67 350⇑*e*P **P 12 10 05.5 +0.3**
PGBU AMB AMB 12 10 07.3
comp=Z,394nm,1.3s,mb6.1
626A Big Bend Ranch 71.68 65 P **P 12 10 05.5 -0.2**

baz=71,SNR=82
PWJI Pagerwojo 71.75 229 P **P 12 10 05.9 -0.3**
comp=Z,5μmcomp=Z,667nm,1.1s,mb6.4
RUE Ruedersdorf 71.75 338 *e*P **P 12 10 06.0 +0.3**
comp=Z,131nm,0.9s,mb5.8
RUE Ruedersdorf 71.75 338 *e*P **P 12 10 05.5 -0.3**
comp=Z,159nm,1.1s,mb5.8
SLM Saint Louis 71.89 50 *e*P **P 12 10 05.4 -1.4**
comp=Z,111nm,0.9s,mb5.7
SLM Saint Louis 71.89 50 *e*P **P 12 10 05.4 -1.4**
SLM pmax pmax
comp=Z,111nm,0.9s,mb5.7
AAM Ann Arbor 71.90 44 *e*P **P 12 10 06.2 -0.6**
comp=Z,180nm,0.8s,mb6.0
AAM Ann Arbor 71.90 44 *e*P **P 12 10 06.2 -0.6**
AAM pmax pmax
comp=Z,180nm,0.8s,mb6.0
KRJI Kerinci 71.94 242 P **P 12 10 08.6 +1.2**
comp=Z,968nm,1.1s,mb6.5
528A Cox Ranch, San 71.97 64 P **P 12 10 07.5 0.0**
baz=72,SNR=67
KWP Kalwaria Pacla 71.99 331 *e*P **P 12 10 07.2 -0.1**
KWP *e*S S 12 19 24.4 +1.4
KWP LMZ 12 44 18.4
comp=Z,8μm,22.4s
KWP Kalwaria Pacla 71.99 331 *e*P **P 12 10 06.8 -0.4**
comp=Z,105nm,0.9s,mb5.7
KWP Kalwaria Pacla 71.99 331 ⇓P **P 12 10 07.2 0.0**
ESK Eskdalemuir 72.01 349 P **P 12 10 06.4 -0.8**
ESK AMB AMB 12 10 07.1
comp=Z,165nm,0.8s,mb5.9
ESK Eskdalemuir 72.01 349⇑ *e*P **P 12 10 06.4 -0.8**
ESK AMB AMB 12 10 07.1
comp=Z,165nm,0.8s,mb5.9
ESK Eskdalemuir 72.01 349 *e*P **P 12 10 07.3 0.0**
comp=Z,159nm,0.8s,mb5.9
ESK Eskdalemuir 72.01 349 *i* P **P 12 10 07.7 +0.5**
ESK Eskdalemuir 72.01 349 P **P 12 10 07.9 +0.7**
comp=Z,1μm,0.7s,SNR=38
TXAR Lajitas Array 72.11 65 P **P 12 10 07.8 -0.5**
comp=Z,77nm,0.8s,mb5.6,baz=298,slow=4.4,SNR=714
TXAR PKP2ab 12 37 48.5
comp=Z,1.0nm,1.1s,baz=142,slow=6.3,SNR=4.4
TXAR Lajitas Array 72.11 65 P **P 12 10 07.9 -0.4**
TXAR pmax pmax
comp=Z,77nm,0.8s
ECK Cauldkaine Hil 72.13 349 P **P 12 10 08.1 +0.1**
ECK Cauldkaine Hil 72.13 349⇑ *i*P **P 12 10 08.1 +0.1**
KNA Kununurra 72.13 210 P **P 12 10 08.5 +0.1**
comp=Z,1μmcomp=Z,158nm,1.1s,mb5.7
BJII Banjamegara 72.14 231 P **P 12 10 08.8 +0.3**
comp=Z,144nm,1.0s,mb5.8
SIM Simferopol' 72.18 322 *e*P **P 12 10 09.6 +1.2**
SIM *e*S S 12 19 23.1 -2.2
SIM pmax pmax
comp=Z,28nm,0.9s,mb5.1
SIM MLR MLR
comp=Z,6μm,18.2s
627A Terlingua Ranc 72.18 65 P **P 12 10 08.2 -0.5**
baz=72,SNR=77
PCJI Pacitan 72.19 230 P **P 12 10 08.8 0.0**
comp=Z,98nm,0.8s,mb5.7
LPIG La Paz 72.24 74 *e*P **P 12 10 05.7 -3.4**
POO Poona 72.24 277 *e*PKP **P 12 10 09.0 -0.2**
POO AMb AMB 12 10 11.7
comp=Z,110nm,0.8s,mb5.8
UGM Wanagama 72.26 230 P **P 12 10 09.3 +0.1**
comp=Z,374nm,1.3s,mb6.0
OJC Ojcow 72.29 333⇑ *i*P **P 12 10 08.9 -0.1**
OJC *e* pP 12 10 27.2 +0.1
OJC *e* 12 12 49.6
OJC *e*S S 12 19 26.8 +0.3
OJC MLR MLR
comp=Z,5μm,21.3s
FVM French Village 72.32 51 *e*P **P 12 10 08.2 -1.2**
comp=Z,196nm,1.4s,mb5.8
FVM French Village 72.32 51 *e*P **P 12 10 08.2 -1.2**
FVM pmax pmax
comp=Z,197nm,1.4s,mb5.8
XAL Allendale 72.33 348 P **P 12 10 09.4 +0.2**
XAL Allendale 72.33 348⇑ *i*P **P 12 10 09.4 +0.2**
KIS Kishinev 72.35 326 *e*P **P 12 10 07.0 -2.4**
KIS *e*pP pP 12 10 30.0 +2.5
KIS *e*S S 12 19 23.0 -4.2
KIS *e*LR LR 12 36 30.0
comp=Z,4μm,22.0s
KIS Kishinev 72.35 326 *e*P **P 12 10 07.0 -2.4**
KIS *e**PP pP 12 10 30.0 +2.5
KIS *e*S S 12 19 23.0 -4.2
KIS MLR MLR
comp=Z,4μm,20.0s
KIS MLR MLR
comp=N,2μm,22.0s
KLSI 72.38 237 P **P 12 10 10.1 +0.1**
comp=N,4μmcomp=N,266nm,1.3s,mb5.9
628A Black Gap, Mar 72.43 65 ⇓P **P 12 10 09.4 -0.8**
baz=72
KLI Kotabumi 72.46 237 P **P 12 10 10.2 -0.3**
comp=N,199nm,1.0s,mb5.9
CTA Charters Tower 72.49 192 *e*P **P 12 10 09.6 -0.8**
comp=N,45nm,0.9s,mb5.3
CTAO Charters Tower 72.49 192 *e*P **P 12 10 09.6 -0.8**
CTAO Charters Tower 72.49 192 *e*P **P 12 10 09.6 -0.8**
CTAO Charters Tower 72.49 192 P **P 12 10 09.9 -0.5**
comp=N,1μmcomp=N,77nm,1.0s,mb5.5
MDSI Maura Dua 72.50 238 P **P 12 10 10.0 -0.7**
comp=N,1μmcomp=N,102nm,1.0s,mb5.6
GCD Castle Douglas 72.54 349 P **P 12 10 10.3 -0.1**
GCD Castle Douglas 72.54 349⇑ *i*P **P 12 10 10.3 -0.1**
NRDL Niedersach Rie 72.55 340 *e*P **P 12 10 10.7 +0.2**
comp=Z,80nm,1.0s,mb5.5
SISI Saibi 72.61 244 P **P 12 10 12.2 +0.8**
comp=Z,2μmcomp=Z,142nm,1.2s,mb5.7
GAL1 Galloway 72.62 350 P **P 12 10 10.7 -0.2**
GAL1 AMB AMB 12 10 11.6
comp=Z,162nm,0.9s,mb5.8
GAL1 Galloway 72.62 350⇑ *e*P **P 12 10 10.7 -0.2**
GAL1 AMB AMB 12 10 11.6
comp=Z,162nm,0.9s,mb5.8
KSI Kapahiang 72.63 240 P **P 12 10 10.8 -0.7**
comp=Z,105nm,0.9s,mb5.7
KESW Keswick, Cumbr 72.71 349 P **P 12 10 11.7 +0.3**
KESW AMB AMB 12 10 13.5
comp=Z,429nm,1.2s,mb6.2
KESW Keswick, Cumbr 72.71 349⇑ *e*P **P 12 10 11.7 +0.3**
KESW AMB AMB 12 10 13.5
comp=Z,429nm,1.2s,mb6.2
LEM Lembang 72.73 234 P **P 12 10 12.1 0.0**
comp=Z,2μmcomp=Z,130nm,1.2s,mb5.6
KOLS Kolonicke sedl 72.74 331 *e*P **P 12 10 12.1 +0.4**
comp=Z,62nm,1.6s,mb5.2
KOLS Kolonicke sedl 72.74 331 *e*P **P 12 10 12.1 +0.4**
KOLS pmax pmax
comp=Z,63nm,1.6s,mb5.2
CBJI Citeko 72.77 234 P **P 12 10 12.8 +0.5**
comp=Z,286nm,1.1s,mb6.0
OLIL Olney 72.81 49 *e*P **P 12 10 11.1 -1.2**
comp=Z,151nm,1.2s,mb5.7
XDE Dent Fell 72.84 349 P **P 12 10 12.4 +0.2**
XDE Dent Fell 72.84 349 *e*P **P 12 10 12.4 +0.2**
RBSI Rajabasa 72.84 236 P **P 12 10 11.7 -1.0**
comp=Z,2μmcomp=Z,156nm,1.0s,mb5.8
NIE Niedzica 72.87 333 *e*P **P 12 10 12.9 +0.4**
NIE *e* pP 12 10 30.3 -0.3
WIT Witteveen 72.93 342⇑ *i*P **P 12 10 14.3 +1.6**
comp=Z,1μm,1.2s,mb6.6
DBJI Dramaga 72.93 234 P **P 12 10 12.3 -0.9**
comp=Z,4μmcomp=Z,234nm,1.2s,mb5.9
KAD Karad 72.96 276 *e*PKP **P 12 10 13.4 -0.1**
KAD AMb AMB 12 10 14.6
comp=Z,119nm,0.6s,mb5.9
BUR08 Bucovina Ar. S 72.98 329 *e*P **P 12 10 12.9 -0.2**
BURAR Bucovina Array 73.00 329 P **P 12 10 13.9 +0.6**
BURAR Bucovina Array 73.00 329⇑P **P 12 10 13.0 -0.3**
BURAR Bucovina Array 73.00 329⇑ *i*P **P 12 10 13.0 -0.3**
UZH Uzhgorod 73.00 331 *e*P **P 12 10 11.0 -2.3**
UZH *i* 12 10 19.7
UZH *i* *PP pP 12 10 27.5 -3.9
UZH *e* 12 12 55.0
UZH *e*S S 12 19 28.0 -6.6
UZH *e*PS 12 20 03.0
UZH *i* 12 20 34.0
UZH MLR MLR
comp=N,3μm,18.0s
UZH MLR MLR
comp=E,3μm,18.0s
UZH MLR MLR
CRVS Cervenica-Dubn 73.01 332 *e*P **P 12 10 13.6 +0.3**
comp=Z,38nm,1.5s,mb5.0
CRVS Cervenica-Dubn 73.01 332 *e*P **P 12 10 13.6 +0.3**
CRVS pmax pmax
comp=Z,38nm,1.5s,mb5.0
LWLI Liwa 73.01 238 P **P 12 10 12.9 -0.8**
comp=Z,357nm,0.9s,mb6.2
CLL Collm 73.02 338 *e*P **P 12 10 13.1 -0.2**
comp=Z,129nm,0.8s,mb5.8
CLL Collm 73.02 338⇑ *i*P **P 12 10 13.1 -0.2**
comp=Z,199nm,1.1s,mb5.9
CLL *e*pP pP 12 10 32.0 +0.6
CLL Collm 73.02 338⇑ *i*P **P 12 10 13.1 -0.2**
CLL *e**PP pP 12 10 32.0 +0.6
CLL pmax pmax
comp=Z,199nm,1.1s,mb5.9
UPC Upice 73.03 336 *e*P **P 12 10 13.9 +0.5**
UPC Upice 73.03 336⇑ *e*P **P 12 10 13.9 +0.5**
OKC Ostrava-Krasne 73.09 334 *e*P **P 12 10 14.3 +0.5**
OKC *e*S S 12 19 46.1 +11
OKC MLR MLR
comp=Z,4μm,19.2s
OKC Ostrava-Krasne 73.09 334⇑ *e*P **P 12 10 14.3 +0.5**
OKC *e*S S 12 19 46.1 +11
OKC AMS AMS 12 46 00.0
comp=Z,4μm,19.2s
DPC Dobruska-Polom 73.10 336 *e*P **P 12 10 14.3 +0.5**
DPC *e*S S 12 19 36.9 +1.2
DPC MLR MLR
comp=Z,4μm,20.2s
DPC Dobruska-Polom 73.10 336 *e*P **P 12 10 14.3 +0.5**
DPC *e*S S 12 19 36.9 +1.2
DPC AMS AMS 12 46 10.0
comp=Z,4μm,20.2s
SIUC Southern Illin 73.11 50 *e*P **P 12 10 13.1 -1.0**
comp=Z,250nm,1.3s,mb5.9
CLZ Clausthal 73.11 340 *e*P **P 12 10 14.7 +0.9**
comp=Z,220nm,1.0s,mb5.9
CLZ Clausthal 73.11 340 *e*P **P 12 10 14.7 +0.9**
CLZ pmax pmax
comp=Z,220nm,1.0s,mb5.9
MSNY Massena 73.14 36 *e*P **P 12 10 13.0 -1.2**
comp=Z,781nm,1.0s,mb6.5
GIM North Isle of 73.16 350 P **P 12 10 14.2 +0.1**
GIM North Isle of 73.16 350⇑ *i*P **P 12 10 14.2 +0.1**
BLO Bloomington 73.19 47 *e*P **P 12 10 13.2 -1.3**
comp=Z,44nm,0.8s,mb5.3
BLO Bloomington 73.19 47 *e*P **P 12 10 13.2 -1.3**
BLO pmax pmax
comp=Z,44nm,0.8s,mb5.3
IBBN Ibbenburen 73.20 342 *e*P **P 12 10 15.0 +0.6**
comp=Z,159nm,0.8s,mb5.9
BRG Berggiesshubel 73.20 337 *e*P **P 12 10 14.2 -0.2**
comp=Z,65nm,1.1s,mb5.4
BRG Berggiesshubel 73.20 337⇑ *i*P **P 12 10 14.3 -0.1**
comp=Z,67nm,1.1s,mb5.4
BRG *e* 12 10 21.2
comp=Z,28nm,1.1s
BRG S S 12 19 38.0 +1.2
BRG
comp=Z,4μm,19.6s
BRG
comp=N,3μm,18.1s
BRG
comp=E,2μm,18.1s
KASI Kota Agung 73.21 237 P **P 12 10 13.5 -1.4**
comp=E,119nm,1.1s,mb5.7
FBE Freiberg 73.30 338 *e*P **P 12 10 15.3 +0.3**
comp=Z,110nm,0.9s,mb5.7
MORC Moravsky Berou 73.31 335 *e*P **P 12 10 15.1 0.0**
comp=Z,95nm,1.0s,mb5.6
MORC Moravsky Berou 73.31 335 *e*P **P 12 10 15.1 +0.1**
MORC pmax pmax
comp=Z,95nm,1.0s,mb5.6
GMM Mts of Mourne 73.37 350 P **P 12 10 15.3 0.0**
GMM Mts of Mourne 73.37 350⇑ *i*P **P 12 10 15.3 0.0**
PVCC Panska Ves 73.37 337 *e*P **P 12 10 15.5 +0.1**
PVCC MLR MLR
comp=Z,5μm,18.5s
PVCC Panska Ves 73.37 337⇑ *e*P **P 12 10 15.5 +0.1**
PVCC AMS AMS 12 46 40.0
comp=Z,5μm,18.5s
JCT Junction City 73.38 62 P **P 12 10 15.0 -0.8**
baz=73,SNR=24
JCT Junction City 73.38 62 *e*P **P 12 10 14.7 -1.1**
comp=Z,76nm,0.9s,mb5.5
JCT Junction City 73.38 62 *e*P **P 12 10 14.7 -1.1**
JCT pmax pmax
comp=Z,76nm,0.9s,mb5.5
NEUB Neuenburg 73.39 339 *e*P **P 12 10 15.6 +0.1**
comp=Z,96nm,1.0s,mb5.6
TESR 73.50 327⇑ *i*P **P 12 10 15.9 -0.3**
CGJI Cibinong 73.52 235 P **P 12 10 14.6 -2.1**
LIKS Likavka 73.55 333 *e*P **P 12 10 17.4 +1.0**
comp=Z,66nm,1.2s,mb5.2
LIKS Likavka 73.55 333 *e*P **P 12 10 17.4 +1.0**
LIKS pmax pmax
comp=Z,66nm,1.2s,mb5.2
LONY Lake Ozonia 73.56 36 *e*P **P 12 10 14.9 -1.7**
comp=Z,79nm,1.2s,mb5.3
ERPA Erie 73.58 41 *e*P **P 12 10 15.9 -0.9**
comp=Z,341nm,1.2s,mb6.0
USIN University of 73.63 49 *e*P **P 12 10 16.4 -0.8**
comp=Z,355nm,1.3s,mb5.9
KECS Kecovo 73.67 332 *e*P **P 12 10 17.4 +0.2**
comp=Z,22nm,1.1s,mb4.8
KECS Kecovo 73.67 332 *e*P **P 12 10 17.4 +0.2**
KECS pmax pmax
comp=Z,22nm,1.1s,mb4.8
WTSB Winterswijk 73.71 342⇑ *i*P **P 12 10 17.9 +0.5**
comp=Z,271nm,1.1s,mb5.9
FRNY Flat Rock 73.74 36 *e*P **P 12 10 16.0 -1.7**
comp=Z,64nm,1.3s,mb5.2
PRA Prague 73.83 337⇑P **P 12 10 20.0 +1.9**
PRA S S 12 19 47.0 +3.1
PRA AMS AMS 12 47 00.0
PRU Pruhonice 73.88 337 *e*P **P 12 10 19.4 +1.0**
PRU *e*S S 12 19 47.4 +2.9
PRU MLR MLR
comp=Z,4μm,18.7s
PRU Pruhonice 73.88 337⇑ *e*P **P 12 10 19.4 +1.0**
PRU *e*S S 12 19 47.4 +2.9
PRU AMS AMS 12 47 00.0
comp=Z,4μm,18.7s
ACSO Alum Creek Sta 73.89 44 *e*P **P 12 10 17.7 -1.0**
comp=Z,199nm,1.1s,mb5.8
ALLY Alegheny Colle 73.91 42 *e*P **P 12 10 18.0 -0.7**
comp=Z,454nm,1.3s,mb6.0
TLCR 73.92 325⇑P **P 12 10 18.6 -0.1**
TLCR 73.92 325⇑ *i*P **P 12 10 18.5 -0.2**
UALR University of 73.92 54 *e*P **P 12 10 17.2 -1.7**
comp=Z,11nm,0.7s,mb4.7
MOX Moxa 73.96 339 *e*P **P 12 10 18.9 +0.1**
comp=Z,149nm,1.4s,mb5.5
MOX *e*S S 12 19 44.0 -1.3
MOX
comp=Z,3μm,19.0s
MOX Moxa 73.96 339 *e*P **P 12 10 19.1 +0.3**
comp=Z,108nm,1.2s,mb5.5
MOX Moxa 73.96 339 *e*P **P 12 10 18.9 +0.1**
MOX *e*S S 12 19 44.0 -1.3
MOX pmax pmax
comp=Z,149nm,1.4s,mb5.5
MOX MLR MLR
comp=Z,3μm,19.0s
TANN Tannenbergstha 73.98 338 *e*P **P 12 10 19.3 +0.3**
comp=Z,72nm,1.4s,mb5.2
PLN Plauen 73.98 338 *e*P **P 12 10 19.5 +0.5**
WERD Werda 73.98 338 *e*P **P 12 10 19.4 +0.4**
comp=Z,88nm,1.1s,mb5.4
VRAC Vranov 73.99 335 P **P 12 10 19.7 +0.7**
VRAC Vranov 73.99 335⇑P **P 12 10 19.3 +0.3**
PQI Presque Isle 74.04 31 *e*P **P 12 10 18.5 -0.9**
comp=Z,21nm,0.7s,mb5.0
DZM Mont Dzumac 74.04 172 *e*P **P 12 10 20.3 +0.8**
comp=Z,142nm,1.4s,mb5.5
DZM *e*S S 12 19 47.5 +0.9
comp=Z,2μm,26.6s
DZM *e*LR LR 12 32 59.4
comp=Z,5μm,29.9s,baz=357
DZM Mont Dzumac 74.04 172 *e*P **P 12 10 19.6 +0.1**
VRI Vrincioaia 74.04 327 ⇓P **P 12 10 19.2 -0.2**
VRI Vrincioaia 74.04 327 ⇓ *i*P **P 12 10 19.2 -0.2**
GUNZ Gunzen 74.06 338 *e*P **P 12 10 19.9 +0.5**
comp=Z,71nm,1.0s,mb5.3
STNC Stoke 74.06 348 P **P 12 10 19.7 +0.3**
STNC AMB AMB 12 10 20.5
comp=Z,131nm,1.0s,mb5.6
STNC Stoke 74.06 348⇑ *e*P **P 12 10 19.7 +0.3**
STNC AMB AMB 12 10 20.5
comp=Z,131nm,1.0s,mb5.6
WERN Wernitzgruen 74.12 338 *e*P **P 12 10 20.2 +0.4**
comp=Z,89nm,0.9s,mb5.5
BUG Bochum-Univer 74.12 342 *e*P **P 12 10 20.2 +0.4**
comp=Z,203nm,1.0s,mb5.8
GNAR Gosnell 74.12 52 *e*P **P 12 10 19.4 -0.6**
comp=Z,4μm,1.3s
VYHS Vyhne 74.12 333 *e*P **P 12 10 20.1 +0.3**
comp=Z,33nm,0.8s,mb5.1
VYHS Vyhne 74.12 333 *e*P **P 12 10 20.1 +0.3**
VYHS pmax pmax
comp=Z,33nm,0.8s,mb5.1
UBBA Unterbreizbach 74.15 340 *e*P **P 12 10 20.1 +0.2**
comp=Z,78nm,1.3s,mb5.3
NKC Novy Kostel 74.15 338 *e*P **P 12 10 20.3 +0.3**
NKC *e*S S 12 19 50.7 +3.2
NKC MLR MLR
comp=Z,3μm,22.0s
NKC Novy Kostel 74.15 338⇑ *e*P **P 12 10 20.3 +0.3**
NKC *e*S S 12 19 50.7 +3.2
NKC AMS AMS 12 45 10.0
comp=Z,3μm,22.0s
CFR Carcaliu 74.16 326 P **P 12 10 20.1 0.0**
CFR Carcaliu 74.16 326 ⇓P **P 12 10 20.0 -0.1**
CFR Carcaliu 74.16 326 ⇓ *i*P **P 12 10 20.0 -0.1**
HAKT HAKKARI 74.21 311 *i* P **P 12 10 18.1 -2.4**
GLAT Glass 74.23 51 *e*P **P 12 10 20.6 -0.1**
TREC Trest 74.28 336 *e*P **P 12 10 21.3 +0.6**
TREC MLR MLR
comp=Z,5μm,22.0s
TREC Trest 74.28 336⇑ *e*P **P 12 10 21.3 +0.6**
TREC AMS AMS 12 46 40.0
comp=Z,5μm,22.0s
PSZ Piszkesteto 74.35 332 *e*P **P 12 10 21.5 +0.3**
comp=Z,84nm,1.0s,mb5.4
PSZ Piszkesteto 74.35 332⇑P **P 12 10 21.5 +0.4**
DLF Lyons Farm 74.36 351⇑ *i*P **P 12 10 21.6 +0.5**
UTMT University of 74.38 51 *e*P **P 12 10 21.4 -0.1**
GRER 74.39 327 ⇓ *i*P **P 12 10 23.3 +1.9**
DSB Dublin 74.40 351 *e*P **P 12 10 21.4 +0.1**
comp=Z,190nm,1.0s,mb5.8
DOPR Dopca 74.40 328 ⇓ *i*P **P 12 10 22.4 +0.9**
HALT Halls 74.49 51 *e*P **P 12 10 20.9 -1.3**
DRGR 74.52 330 P **P 12 10 22.1 -0.1**
DRGR 74.52 330 ⇓P **P 12 10 21.7 -0.5**
WB2 Warramunga Arr 74.58 203 *e*P **P 12 10 22.1 -0.5**
WRA Warramunga Arr 74.58 203 P **P 12 10 21.9 -0.8**
comp=Z,62nm,0.8s,mb5.4,baz=18,slow=6.1,SNR=411
WRA LR LR 12 40 27.4
comp=Z,768nm,21.9s,baz=55,slow=34
WRA Warramunga Arr 74.58 203 P **P 12 10 21.9 -0.8**
WRA pmax pmax
comp=Z,62nm,0.8s
MDV Middlebury 74.61 36 *e*P **P 12 10 21.5 -1.2**
comp=Z,6μm,0.8s
MLR Muntele Rosu 74.64 327 ⇓P **P 12 10 23.2 +0.3**
MLR Muntele Rosu 74.64 327 ⇓ *i*P **P 12 10 23.2 +0.3**
ROTZ Rotzenmuhle 74.64 338 *e*P **P 12 10 23.5 +0.7**
comp=Z,101nm,1.1s,mb5.5
MODS Modra-Piesok 74.66 334 *e*P **P 12 10 23.8 +0.8**
MODS Modra-Piesok 74.66 334 *e*P **P 12 10 23.8 +0.8**
TIRR Tirgusor 74.69 325 *e*P **P 12 10 23.0 -0.2**
comp=Z,39nm,0.8s,mb5.2
TIRR Tirgusor 74.69 325⇑P **P 12 10 23.0 -0.2**
TIRR Tirgusor 74.69 325⇑ *i*P **P 12 10 23.0 -0.2**
LBNH Lisbon 74.85 35 *e*P **P 12 10 23.8 -0.4**
comp=Z,128nm,1.3s,mb5.5
LBNH Lisbon 74.85 35 *e*P **P 12 10 23.8 -0.3**
LBNH pmax pmax
comp=Z,129nm,1.3s,mb5.5
PKME Peaks-Kenny Pk 74.86 33 *e*P **P 12 10 23.4 -0.8**
comp=Z,130nm,1.3s,mb5.5
ZST Bratislava 74.87 334 *e*P **P 12 10 25.7 +1.5**
comp=Z,54nm,1.0s,mb5.2
ZST Bratislava 74.87 334 *e*P **P 12 10 25.7 +1.5**
ZST pmax pmax
comp=Z,54nm,1.0s,mb5.2
KHC Kasperske Hory 74.91 337⇑ *i*P **P 12 10 24.8 +0.4**
KHC *e*PP PP 12 13 08.3 -3.6
KHC *e*S S 12 19 51.3 -4.7
KHC AMS AMS 12 48 30.0
comp=Z,5μm,15.5s
GRA1 Grafenberg Arr 74.94 339 *e*P **P 12 10 25.3 +0.8**
comp=Z,266nm,1.0s,mb5.9
GRA1 LR LR
comp=Z,4μm,21.8s
GRF Grafenberg Arr 74.94 339 *e*P **P 12 10 25.3 +0.8**
comp=Z,266nm,1.0s,mb5.9
GRF *e*L 12 47 05.8
comp=Z,3μm,21.8s
GRF Grafenberg Arr 74.94 339 *e*P **P 12 10 25.3 +0.8**
GRF pmax pmax
comp=Z,266nm,1.0s,mb5.9
GRF MLR MLR
comp=Z,4μm,21.8s
GRF Grafenberg Arr 74.94 339 *e*P **P 12 10 25.3 +0.8**
GRF pmax pmax
comp=Z,266nm,1.0s,mb5.9
GRF MLR MLR
comp=Z,4μm,21.8s
GRFO Grafenberg 74.94 339 *e*P **P 12 10 25.0 +0.5**
comp=Z,240nm,1.0s,mb5.9
GRFO Grafenberg 74.94 339 *e*P **P 12 10 25.0 +0.5**
GRFO pmax pmax
comp=Z,240nm,1.0s,mb5.9
ACCN Adirondack Com 74.96 36 *e*P **P 12 10 23.7 -1.1**
comp=Z,105nm,0.9s,mb5.6
VOIR 74.98 328 P **P 12 10 25.3 +0.5**
VOIR 74.98 328⇑P **P 12 10 25.0 +0.2**
VOIR 74.98 328⇑ *i*P **P 12 10 25.0 +0.2**
HGN Heimansgroeve 75.02 342⇑ *i*P **P 12 10 25.4 +0.4**
comp=Z,304nm,1.0s,mb6.0
BEBN Eben Emael 75.04 342 P **P 12 10 25.6 +0.5**
comp=Z,96nm,1.0s,mb5.5
TNS Taunus Mts 75.04 340 *e*P **P 12 10 25.6 +0.5**
comp=Z,160nm,1.0s,mb5.7
TNS Taunus Mts 75.04 340 *e*P **P 12 10 25.6 +0.5**
TNS pmax pmax
comp=Z,160nm,1.0s,mb5.7
WVT Waverly 75.04 50 *e*P **P 12 10 24.1 -1.3**
comp=Z,51nm,1.0s,mb5.2
WVT Waverly 75.04 50 *e*P **P 12 10 24.1 -1.3**
WVT pmax pmax
comp=Z,51nm,1.0s,mb5.2
BEST Besiri 75.06 313 *i* P **P 12 10 26.9 +1.5**
WET Wettzell 75.07 337 *e*P **P 12 10 26.0 +0.7**
comp=Z,146nm,0.9s,mb5.7
WET Wettzell 75.07 337 *e*P **P 12 10 26.0 +0.7**
WET pmax pmax
comp=Z,146nm,0.9s,mb5.7
BINY Binghamton 75.11 39 *e*P **P 12 10 24.2 -1.4**
comp=Z,98nm,1.1s,mb5.5
GEC2 GERESS Array S 75.15 337 *e*P **P 12 10 26.0 +0.3**
comp=Z,74nm,0.8s,mb5.5
GEC2 GERESS Array S 75.15 337 *e*P **P 12 10 26.0 +0.3**
GEC2 pmax pmax
comp=Z,74nm,0.8s,mb5.5
GERES GERESS Array B 75.15 337 P **P 12 10 25.9 +0.2**
comp=Z,38nm,0.5s,mb5.3,baz=36,slow=5.0,SNR=93
GERES GERESS Array B 75.15 337 P **P 12 10 26.0 +0.3**
GERES pmax pmax
comp=Z,38nm,0.5s
MEM Membach 75.16 342 P **P 12 10 26.3 +0.5**
HNH Hanover 75.19 35 *e*P **P 12 10 24.8 -1.3**
comp=Z,173nm,1.2s,mb5.7
MCH1 Michaelchurch 75.24 348 P **P 12 10 26.3 +0.1**
MCH1 AMB AMB 12 10 27.6
comp=Z,142nm,1.0s,mb5.7
MCH1 Michaelchurch 75.24 348⇑ *e*P **P 12 10 26.3 +0.1**
MCH1 AMB AMB 12 10 27.6
comp=Z,142nm,1.0s,mb5.7
FITZ Fitzroy Crossi 75.33 212⇑ *i*P **P 12 10 27.2 +0.1**
comp=Z,129nm,0.9s,mb5.7
FITZ Fitzroy Crossi 75.33 212 *e*P **P 12 10 27.2 +0.2**
comp=Z,103nm,1.0s,mb5.5
FITZ Fitzroy Crossi 75.33 212 P **P 12 10 27.4 +0.3**
comp=Z,4μmcomp=Z,256nm,1.4s,mb5.8
BALT Daday 75.35 320 *i* P **P 12 10 27.2 +0.1**

WVL Waterville 75.35 33 eP P 12 10 25.5 -1.5
comp=Z,174nm,1.0s,mb5.7
CONA Conrad Observa 75.45 335 i P P 12 10 28.3 +0.8
comp=Z,144nm,1.4s,mb5.5,SNR=73
BCLA Clavier 75.47 343 P P 12 10 28.1 +0.6
comp=Z,145nm,1.1s,mb5.6
ELSH Elham, Standar 75.48 345 P P 12 10 28.2 +0.6
ELSH AMB AMB 12 10 30.0
comp=Z,550nm,1.1s,mb6.2
ELSH Elham, Standar 75.48 345⇑ eP P 12 10 28.2 +0.6
ELSH AMB AMB 12 10 30.0
comp=Z,550nm,1.1s,mb6.2
TRY Troy 75.53 37 eP P 12 10 26.6 -1.4
comp=Z,190nm,1.3s,mb5.7
TOD Tromm 75.55 340 eP P 12 10 28.6 +0.6
TOD Tromm 75.55 340 eP P 12 10 28.6 +0.6
SWN1 Swindon 75.55 347 P P 12 10 27.7 -0.3
SWN1 AMB AMB 12 10 29.8
comp=Z,677nm,1.1s,mb6.3
SWN1 Swindon 75.55 347⇑ eP P 12 10 27.7 -0.3
SWN1 AMB AMB 12 10 29.8
comp=Z,677nm,1.1s,mb6.3
CTKT Corum 75.56 319 i P P 12 10 28.6 +0.4
HGH Gray Hill 75.56 348 P P 12 10 28.0 -0.1
HGH Gray Hill 75.56 348⇑ iP P 12 10 28.0 -0.1
SNF Seneffe 75.57 343 P P 12 10 28.7 +0.6
comp=Z,91nm,1.1s,mb5.4
OXF Oxford 75.58 52 eP P 12 10 27.3 -1.2
comp=Z,127nm,1.0s,mb5.6
OXF Oxford 75.58 52 eP P 12 10 27.3 -1.2
OXF pmax pmax
comp=Z,127nm,1.0s,mb5.6
FFD Franklin Falls 75.62 35 eP P 12 10 28.1 -0.5
comp=Z,62nm,0.8s,mb5.4
WOL Wolverton 75.67 347 P P 12 10 28.4 -0.3
WOL AMB AMB 12 10 29.5
comp=Z,396nm,1.1s,mb6.1
WOL Wolverton 75.67 347⇑ eP P 12 10 28.4 -0.3
WOL AMB AMB 12 10 29.5
comp=Z,396nm,1.1s,mb6.1
SSPA Standing Stone 75.68 41 eP P 12 10 28.1 -0.9
comp=Z,116nm,0.9s,mb5.6
MCWV Mont Chateau 75.70 43 eP P 12 10 28.4 -0.7
comp=Z,224nm,1.3s,mb5.7
GZR Gura Zlata 75.75 329 ⇑P P 12 10 29.3 0.0
GZR Gura Zlata 75.75 329⇑ iP P 12 10 29.3 0.0
RUP Ruppelstein 75.82 341 eP P 12 10 29.9 +0.3
RUP Ruppelstein 75.82 341 eP P 12 10 29.9 +0.3
GIVF Givet 75.86 343⇑ iP P 12 10 30.3 +0.5
comp=Z,345nm,1.0s,mb5.8
GIVF Givet 75.86 343⇑ iP P 12 10 30.3 +0.5
comp=Z,172nm,1.0s,mb5.7
GIVF Givet 75.86 343⇑ iP P 12 10 30.3 +0.5
GIVF pmax pmax
comp=Z,172nm,1.0s,mb5.7
DOU Dourbes 75.91 343 P P 12 10 30.5 +0.4
comp=Z,99nm,1.1s,mb5.5
BZS Buzias 75.91 330 P P 12 10 30.0 -0.2
BZS Buzias 75.91 330 ⇑P P 12 10 29.3 -0.9
MOA Molln 75.93 336 P P 12 10 30.6 +0.4
MOA Molln 75.93 336⇑ iP P 12 10 30.5 +0.3
comp=Z,91nm,1.0s,mb5.5,SNR=23
EMMW East Machias 75.96 32 eP P 12 10 28.9 -1.5
comp=Z,292nm,1.1s,mb5.9
MALT Malatya 75.97 315 eP P 12 10 30.7 0.0
comp=Z,57nm,1.0s,mb5.3
MALT Malatya 75.97 315 ⇑P P 12 10 30.8 +0.2
MALT Malatya 75.97 315⇑ iP P 12 10 30.8 +0.2
MALT Malatya 75.97 315 P P 12 10 31.2 +0.6
comp=Z,685nmcomp=Z,52nm,1.0s,mb5.2
BAIF Baives 76.02 343⇑ iP P 12 10 31.3 +0.6
comp=Z,377nm,1.0s,mb5.8
BAIF Baives 76.02 343⇑ iP P 12 10 31.3 +0.6
comp=Z,188nm,1.0s,mb5.8
BAIF Baives 76.02 343⇑ iP P 12 10 31.3 +0.6
BAIF pmax pmax
comp=Z,188nm,1.0s,mb5.8
WLF Walferdange 76.03 342 eP P 12 10 31.7 +0.9
comp=Z,109nm,1.1s,mb5.5
WLF Walferdange 76.03 342 eP P 12 10 31.4 +0.7
comp=Z,108nm,1.0s,mb5.5
WLF Walferdange 76.03 342 eP P 12 10 31.4 +0.6
WLF pmax pmax
comp=Z,108nm,1.0s,mb5.5
VAL Valentia 76.04 353 eP P 12 10 30.5 -0.3
PRD Provadia 76.15 325 eP P 12 10 30.4 -1.2
ARSA Arzberg 76.16 335 P P 12 10 32.5 +0.9
ARSA Arzberg 76.16 335⇑ iP P 12 10 32.2 +0.6
comp=Z,142nm,1.3s,mb5.5,SNR=32
PKSM Moragy 76.26 332 P P 12 10 31.7 -0.4
PKSM Moragy 76.26 332 P P 12 10 31.7 -0.4
LANF Langenberg 76.35 340⇑ eP P 12 10 33.2 +0.6
LANF Langenberg 76.35 340⇑ eP P 12 10 33.2 +0.6
RJOB Jochberg 76.40 337 eP P 12 10 33.7 +0.8
comp=Z,87nm,0.9s,mb5.5
QUA2 Belchertown 76.40 36 eP P 12 10 32.2 -0.8
comp=Z,149nm,1.3s,mb5.6
HTL Hartland 76.41 349 P P 12 10 33.2 +0.3
HTL AMB AMB 12 10 34.0
comp=Z,167nm,0.9s,mb5.8
HTL Hartland 76.41 349⇑ eP P 12 10 33.2 +0.3
HTL AMB AMB 12 10 34.0
comp=Z,167nm,0.9s,mb5.8
DJES Djerdap 76.48 329 P P 12 10 34.8 +1.4
CDAG Cicekdag 76.58 319 i P P 12 10 33.4 -0.7
SZH Strazhica 76.60 326 eP P 12 10 33.4 -0.7
PALK Pallekele 76.66 265 eP P 12 10 35.0 +0.1
comp=Z,199nm,0.8s,mb5.9
PALK Pallekele 76.66 265 i P P 12 10 35.4 +0.6
PALK Pallekele 76.66 265 P P 12 10 35.2 +0.4
comp=Z,1µmcomp=Z,139nm,1.0s,mb5.7
PALK Pallekele 76.66 265 P P 12 10 35.6 +0.8
SNR=10
SWET Sewanee 76.68 49 eP P 12 10 33.4 -1.3
comp=Z,114nm,1.0s,mb5.5
WES Weston 76.69 35 eP P 12 10 34.1 -0.5
comp=Z,368nm,1.2s,mb6.0
WES Weston 76.69 35 eP P 12 10 34.1 -0.5
WES pmax pmax
comp=Z,368nm,1.2s,mb6.0
SGKT Sivrigoynuk 76.69 321 i P P 12 10 34.4 -0.3
KVTX Kingsville 76.70 62 eP P 12 10 35.1 +0.2
KOGS Kog 76.71 334 P P 12 10 35.0 +0.3
BR131 Keskin Array S 76.79 319 eP P 12 10 35.3 +0.1
comp=Z,15nm,0.6s,mb4.9
BRTR Keskin Array B 76.79 319 P P 12 10 35.6 +0.3
comp=Z,12nm,0.5s,mb4.9,baz=56,slow=2.9,SNR=60
BRTR LR LR 12 50 32.1
comp=Z,1µm,20.1s,baz=204,slow=40
BRTR Keskin Array B 76.79 319 P P 12 10 35.6 +0.3
BRTR pmax pmax
comp=Z,12nm,0.5s
SOKA Soboth 76.82 335⇑ iP P 12 10 35.9 +0.6
comp=Z,210nm,1.2s,mb5.7
XMIS Christmas Isla 76.85 233 eP P 12 10 35.4 -0.4
XMIS Christmas Isla 76.85 233 P P 12 10 36.1 +0.3
comp=Z,1µm,1.1s,mb6.6
BFO Black Forest 76.86 340 eP P 12 10 35.9 +0.4
comp=Z,107nm,0.9s,mb5.6
BFO Black Forest 76.86 340 eP P 12 10 35.9 +0.4
BFO pmax pmax
comp=Z,107nm,0.9s,mb5.6
BFO Black Forest 76.86 340 P P 12 10 35.1 -0.4
comp=Z,631nm,1.0s,mb6.3,SNR=34
FRGS Fruska Gora 76.87 331 P P 12 10 35.4 -0.2
KBA Koelnbreinsper 76.88 336 i P P 12 10 36.8 +1.2
comp=Z,791nm,0.9s,mb6.4,SNR=138
VBMS Vicksburg 76.88 54 eP P 12 10 35.5 -0.4
comp=Z,29nm,0.3s,mb5.5
DYA Yadsworthy 76.89 348 P P 12 10 34.5 -1.1
DYA AMB AMB 12 10 35.9
comp=Z,319nm,1.1s,mb6.0
DYA Yadsworthy 76.89 348⇑ eP P 12 10 34.5 -1.1
DYA AMB AMB 12 10 35.9
comp=Z,319nm,1.1s,mb6.0
PAL Palisades 76.93 38 eP P 12 10 34.7 -1.3
comp=Z,267nm,1.2s,mb5.8
PAL Palisades 76.93 38 eP P 12 10 34.7 -1.3
PAL pmax pmax
comp=Z,267nm,1.2s,mb5.8
BANOM Banah 76.96 295 P P 12 10 36.4 0.0
SNR=10
SPAK Spaichingen-Ko 76.98 340⇑ eP P 12 10 36.7 +0.5
CDF Champ du Feu 77.00 341⇑ iP P 12 10 36.9 +0.6
comp=Z,467nm,1.0s,mb5.9
CDF Champ du Feu 77.00 341⇑ iP P 12 10 36.9 +0.6
comp=Z,233nm,1.0s,mb5.9
CDF Champ du Feu 77.00 341⇑ iP P 12 10 36.9 +0.6
CDF pmax pmax
comp=Z,233nm,1.0s,mb5.9
BRYW Bryant College 77.02 36 eP P 12 10 35.7 -0.8
comp=Z,150nm,0.8s,mb5.8
ZAVS Zavodnje 77.05 335 P P 12 10 38.9 +2.3
WATA Walderalm 77.07 337⇑ iP P 12 10 37.6 +0.9
comp=Z,308nm,1.2s,mb5.9,SNR=20
JMB Yambol 77.08 325 P P 12 10 37.9 +1.1
JMB Yambol 77.08 325 P P 12 10 37.9 +1.1
CPNY Central Park 77.09 38 eP P 12 10 36.0 -1.0
comp=Z,239nm,1.2s,mb5.8
OBKA Obir 77.10 335⇑ iP P 12 10 37.4 +0.5
comp=Z,256nm,1.4s,mb5.8,SNR=36
RETA Reutte 77.12 338⇑ iP P 12 10 37.4 +0.5
comp=Z,142nm,0.9s,mb5.7,SNR=31
WTTA Wattenberg 77.12 337⇑ iP P 12 10 38.0 +1.0
comp=Z,400nm,1.0s,mb6.1,SNR=82
CPCT Cooper Cave 77.14 48 eP P 12 10 36.3 -1.0
SDMD Soldier's Deli 77.15 41 eP P 12 10 36.6 -0.7
comp=Z,171nm,1.2s,mb5.7
BBAL Bala 77.15 320 i P P 12 10 36.7 -0.6
MOTA Moosalm 77.17 338⇑ iP P 12 10 37.9 +0.6
comp=Z,373nm,1.0s,mb6.1,SNR=120
LIBD Limburg 77.18 340⇑ eP P 12 10 37.9 +0.6
LIBD Limburg 77.18 340⇑ eP P 12 10 37.9 +0.6
ECH Echery 77.21 341⇑ eP P 12 10 37.9 +0.4
ECH Echery 77.21 341 eP P 12 10 37.5 0.0
comp=Z,50nm,2.9s,mb4.7
ECH Echery 77.21 341 eP P 12 10 37.5 0.0
ECH pmax pmax
comp=Z,50nm,2.9s,mb4.7
MYKA Terra Mystica 77.22 336⇑ iP P 12 10 37.7 +0.1
comp=Z,109nm,1.1s,mb5.5
EIDS Eidsvold 77.24 187 eP P 12 10 37.5 -0.2
comp=Z,62nm,1.5s,mb5.1
SVIS Svilajnac 77.25 330 P P 12 10 39.1 +1.3
TKL Tuckaleechee C 77.31 48 eP P 12 10 37.0 -1.3
TKL Tuckaleechee C 77.31 48 eP P 12 10 37.0 -1.3
MEZF Maizieres J'vi 77.36 342⇑ iP P 12 10 39.1 +0.8
comp=Z,747nm,1.0s,mb6.1
MEZF Maizieres J'vi 77.36 342⇑ iP P 12 10 39.1 +0.8
comp=Z,747nm,1.0s,mb6.4
FELD Feldberg im Sc 77.36 340⇑ eP P 12 10 38.8 +0.5
SLE Schleitheim 77.36 340⇑ iP P 12 10 38.3 0.0
comp=Z,240nm,1.0s,mb5.9
ABTA Abfaltersbach 77.39 337⇑ iP P 12 10 38.7 +0.2
comp=Z,326nm,1.0s,mb6.0,SNR=121
THEF They Montfort 77.44 341⇑ eP P 12 10 39.2 +0.5
THEF They Montfort 77.44 341⇑ eP P 12 10 39.2 +0.5
WEIN Weingarten 77.48 339⇑ iP P 12 10 39.4 +0.4
comp=Z,353nm,0.9s,mb6.1
ANDN Andirin 77.48 316 i P P 12 10 39.5 +0.3
CRES Cresnjev 77.49 334 P P 12 10 39.3 +0.2
DAVA Damuels 77.51 339 i P P 12 10 39.9 +0.7
comp=Z,244nm,0.9s,mb5.9,SNR=58
BLA Blacksburg 77.51 44 eP P 12 10 38.5 -0.9
comp=Z,76nm,0.8s,mb5.5
BLA Blacksburg 77.51 44 eP P 12 10 38.5 -0.8
BLA pmax pmax
comp=Z,76nm,0.8s,mb5.5
LJU Ljubljana 77.54 335 P P 12 10 39.7 +0.4
LJU Ljubljana 77.54 335 P P 12 10 39.7 +0.4
FETA Feichten 77.56 338 i P P 12 10 40.4 +1.0
comp=Z,246nm,1.0s,mb5.9,SNR=187
MOF Molkenrain 77.56 341⇑ eP P 12 10 39.9 +0.5
MOF Molkenrain 77.56 341⇑ eP P 12 10 39.9 +0.5
HAU Haudompre 77.58 341⇑ iP P 12 10 40.0 +0.5
comp=Z,399nm,0.9s,mb5.8
HAU eMLR MLR
comp=Z,3µm,18.5s
HAU Haudompre 77.58 341⇑ iP P 12 10 40.0 +0.5
comp=Z,200nm,0.9s,mb5.8
HAU LR LR
comp=Z,3µm,18.5s
HAU Haudompre 77.58 341⇑ iP P 12 10 40.0 +0.5
HAU pmax pmax
comp=Z,200nm,0.9s,mb5.8
HAU MLR MLR
comp=Z,3µm,18.5s
LIENZ Kamor/St.Gall 77.59 339⇑ iP P 12 10 40.1 +0.5
comp=Z,609nm,3.3s
WILA Wila 77.60 339⇑ iP P 12 10 40.2 +0.5
comp=Z,396nm,1.1s,mb6.1
SFTF Sexfontaines 77.64 342⇑ iP P 12 10 40.5 +0.6
comp=Z,905nm,0.8s,mb6.3
SFTF Sexfontaines 77.64 342⇑ iP P 12 10 40.5 +0.6
comp=Z,905nm,0.8s,mb6.5
HINF Hinteralfeld 77.66 341⇑ iP P 12 10 40.1 +0.1
comp=Z,189nm,1.0s,mb5.5
HINF Hinteralfeld 77.66 341⇑ iP P 12 10 40.1 +0.1
comp=Z,95nm,1.0s,mb5.5
HINF Hinteralfeld 77.66 341⇑ iP P 12 10 40.1 +0.1
HINF pmax pmax
comp=Z,95nm,1.0s,mb5.5
SULZ Cheisacher 77.67 340⇑ iP P 12 10 40.3 +0.3
comp=Z,373nm,1.0s,mb6.1
VWCC Virginia Weste 77.67 44 eP P 12 10 38.9 -1.4
ZUR Degenried 77.72 339⇑ iP P 12 10 40.8 +0.5
comp=Z,374nm,1.0s,mb6.1
PLONS Plons/SG 77.84 339⇑ iP P 12 10 41.6 +0.6
comp=Z,277nm,0.9s,mb6.0
BOJS Bojanci 77.85 334 P P 12 10 41.0 -0.1
CEY Cerknica 77.85 335 P P 12 10 41.0 -0.1
BBS Basel-Blauen 77.86 340⇑ eP P 12 10 41.4 +0.3
BBS Basel-Blauen 77.86 340⇑ eP P 12 10 41.4 +0.3
JSA Saint Aubin 77.88 347 P P 12 10 40.4 -0.8
JSA AMB AMB 12 10 42.9
comp=Z,235nm,1.3s,mb5.8
JSA Saint Aubin 77.88 347⇑ eP P 12 10 40.4 -0.8
JSA AMB AMB 12 10 42.9
comp=Z,235nm,1.3s,mb5.8
HATD Hatta, Dubai 77.91 295 P P 12 10 41.8 0.0
SNR=24
BALST Balsthal 77.94 340⇑ iP P 12 10 42.0 +0.5
comp=Z,471nm,1.2s,mb6.1
LRAL Lakeview Retre 77.95 51 eP P 12 10 40.2 -1.7
comp=Z,19nm,0.6s,mb5.0
BOURR Bourrignon 77.98 340⇑ iP P 12 10 42.3 +0.5
comp=Z,206nm,0.9s,mb5.9
DAVOX Davos/Dischmat 77.98 338 LR LR 12 49 52.0
comp=Z,3µm,20.3s,baz=17,slow=39
DAVOX Davos/Dischmat 77.98 338⇑ iP P 12 10 42.9 +1.1
comp=Z,368nm,1.3s,mb6.0
TRD Trivandrum 78.01 268 ePKP P 12 10 42.9 +0.5
TRD AMb AMB 12 10 45.0
comp=Z,210nm,0.8s,mb5.9
WBK Wadi Bani Khal 78.02 291 P P 12 10 44.2 +1.9
SNR=9.1
NAZ Nazwa, Dubai 78.04 295 P P 12 10 42.9 +0.4
SNR=10
FUORN Ofenpass-Fuorn 78.05 338⇑ iP P 12 10 43.1 +0.9
comp=Z,399nm,1.1s,mb6.0
FLN La Foliniere 78.05 346⇑ iP P 12 10 42.5 +0.4
comp=Z,568nm,1.0s,mb5.9
FLN eMLR MLR
comp=Z,2µm,18.5s
FLN La Foliniere 78.05 346⇑ iP P 12 10 42.5 +0.4
comp=Z,284nm,1.0s,mb6.0
FLN LR LR
comp=Z,2µm,18.5s
FLN La Foliniere 78.05 346⇑ iP P 12 10 42.5 +0.4
FLN pmax pmax
comp=Z,284nm,1.0s,mb6.0
FLN MLR MLR
comp=Z,2µm,18.5s
PLD Plovdiv 78.05 327 eP P 12 10 40.9 -1.3
ASHO Ashiyiah 78.06 295 P P 12 10 42.6 0.0
SNR=21
MUO Muotathal 78.08 339⇑ iP P 12 10 43.2 +0.8
comp=Z,384nm,0.9s,mb6.1
LOMF Lomont 78.11 341⇑ eP P 12 10 43.1 +0.6
LOMF Lomont 78.11 341⇑ eP P 12 10 43.1 +0.6
VTS Vitosha 78.12 328 ⇓P P 12 10 42.8 +0.2
VTS Vitosha 78.12 328⇓ iP P 12 10 42.8 +0.2
LLS Linth-Limmern 78.12 339⇑ iP P 12 10 43.4 +0.9
comp=Z,154nm,0.9s,mb5.7
BRMO Bormio 78.16 338 P P 12 10 44.0 +1.2
LDF La Druitiere 78.16 346⇑ iP P 12 10 42.9 +0.2
comp=Z,99nm,0.7s,mb5.3
LDF La Druitiere 78.16 346⇑ iP P 12 10 42.9 +0.2
comp=Z,50nm,0.7s,mb5.3
LDF La Druitiere 78.16 346⇑ iP P 12 10 42.9 +0.2
LDF pmax pmax
comp=Z,50nm,0.7s,mb5.3
SMDO Samad 78.20 292 P P 12 10 44.2 +0.9
SNR=11
KDZ Kurdzhali 78.21 326 eP P 12 10 42.4 -0.7
HOQ Hoqain 78.21 293 P P 12 10 43.6 +0.2
SNR=14
BNALP Bannalp 78.22 339⇑ iP P 12 10 43.8 +0.7
comp=Z,272nm,1.2s,mb5.9
ASAR Alice Springs 78.26 203 P P 12 10 43.5 +0.1
comp=Z,26nm,0.6s,mb5.2,baz=15,slow=5.3,SNR=616
ASAR PKKPbc PKKPbc 12 29 41.0 +0.3
comp=Z,0.9nm,0.7s,baz=199,slow=2.7,SNR=6.4
ASAR PKPPKP 12 37 43.8
comp=Z,1.7nm,1.0s,baz=163,slow=2.3,SNR=7.5
ASAR Alice Springs 78.26 203 P P 12 10 43.5 +0.1
ASAR pmax pmax
comp=Z,26nm,0.6s
BERNI Berninapass 78.30 338⇑ iP P 12 10 44.6 +1.1
comp=Z,382nm,1.4s,mb6.0
VDL Val di Lei 78.36 339⇑ iP P 12 10 44.6 +0.7
comp=Z,526nm,1.1s,mb6.2
BARS Barje 78.37 329 P P 12 10 42.2 -1.8
HASLI Hasliberg/Brie 78.39 340⇑ iP P 12 10 45.0 +1.0
comp=Z,262nm,0.9s,mb6.0
GULE Gulek 78.40 317 i P P 12 10 44.3 +0.1
TUE Stuetta 78.40 339 eP P 12 10 45.1 +1.0
comp=Z,213nm,0.8s,mb5.9
RZN Rozhen 78.42 326 eP P 12 10 43.9 -0.4
KDHN Kadinhani 78.43 320 i P P 12 10 43.8 -0.6
GRR Gorron 78.47 346⇑ iP P 12 10 45.0 +0.6
comp=Z,755nm,1.0s,mb6.1
GRR Gorron 78.47 346⇑ iP P 12 10 45.0 +0.6
comp=Z,378nm,1.0s,mb6.1
GRR Gorron 78.47 346⇑ iP P 12 10 45.0 +0.6
GRR pmax pmax
comp=Z,378nm,1.0s,mb6.1
ASUD Al Ashush, Dub 78.51 295 P P 12 10 45.7 +0.7
SNR=6.0
FUSIO Fusio 78.57 339⇑ iP P 12 10 45.6 +0.6
comp=Z,404nm,0.9s,mb6.2
BRANT Les Verrieres 78.57 341⇑ iP P 12 10 45.8 +0.8
comp=Z,340nm,1.1s,mb6.1
WIMIS Wimmis 78.59 340⇑ iP P 12 10 46.0 +0.9
comp=Z,308nm,1.2s,mb6.0
TORNY Torny/Romont 78.63 340⇑ iP P 12 10 46.1 +0.8
comp=Z,366nm,1.0s,mb6.2
PLE Pljevlja 78.66 331 eP P 12 10 46.2 +0.6
PLE Pljevlja 78.66 331 eP P 12 10 46.2 +0.6
PLE Pljevlja 78.66 331 eP P 12 10 46.2 +0.6
MIB Mutribah 78.70 304 eP P 12 10 44.2 -1.8
MIB AMb AMB 12 10 47.4
comp=Z,271nm,0.8s,mb6.1
JMDO Jabal Madar 78.70 292 P P 12 10 46.4 +0.3
SNR=18
LOR Lormes 78.77 343⇑ iP P 12 10 46.6 +0.5
comp=Z,828nm,1.0s,mb6.2
LOR eMLR MLR
comp=Z,5µm,22.5s
LOR Lormes 78.77 343⇑ iP P 12 10 46.6 +0.5
comp=Z,414nm,1.0s,mb6.2
LOR LR LR
comp=Z,5µm,22.5s
LOR Lormes 78.77 343⇑ iP P 12 10 46.6 +0.5
LOR pmax pmax
comp=Z,414nm,1.0s,mb6.2
LOR MLR MLR
comp=Z,5µm,22.5s
KKB Krupnik 78.81 328 eP P 12 10 45.8 -0.6
SGMF Saint Gilles 78.85 347⇑ iP P 12 10 47.1 +0.6
comp=Z,430nm,1.0s,mb5.9
SGMF Saint Gilles 78.85 347⇑ iP P 12 10 47.1 +0.6
comp=Z,215nm,1.0s,mb5.9
SGMF Saint Gilles 78.85 347⇑ iP P 12 10 47.1 +0.6
SGMF pmax pmax
comp=Z,215nm,1.0s,mb5.9
ARQ Araqi 78.85 293 P P 12 10 47.1 +0.1
SNR=22
LKBD Leukerbad 78.86 340⇑ iP P 12 10 47.2 +0.6
comp=Z,196nm,1.0s,mb5.9
ROSF Rostrenen 78.86 348⇑ iP P 12 10 47.3 +0.7
comp=Z,550nm,1.1s,mb6.0
ROSF Rostrenen 78.86 348⇑ iP P 12 10 47.3 +0.7
comp=Z,275nm,1.1s,mb6.0
ROSF Rostrenen 78.86 348⇑ iP P 12 10 47.3 +0.7
ROSF pmax pmax
comp=Z,275nm,1.1s,mb6.0
DURS Dursunbey 78.91 323 i P P 12 10 45.0 -2.0
IVA Berane 78.92 330⇑ iP P 12 10 46.4 -0.6
IVA Berane 78.92 330⇑ iP P 12 10 46.5 -0.5
UPM Unac-Piva 78.92 331⇑ iP P 12 10 46.4 -0.6
UPM Unac-Piva 78.92 331⇑ iP P 12 10 46.5 -0.5
BSY Bisya 78.93 293 P P 12 10 48.2 +0.8
SNR=20
SENIN Lac Senin/Sane 78.95 340⇑ iP P 12 10 47.4 +0.3
comp=Z,225nm,1.4s,mb5.8
CABF La Chapelle 78.96 341⇑ iP P 12 10 48.0 +0.8
comp=Z,416nm,1.0s,mb5.9
CABF La Chapelle 78.96 341⇑ iP P 12 10 48.0 +0.8
comp=Z,208nm,1.0s,mb5.9
CABF La Chapelle 78.96 341⇑ iP P 12 10 48.0 +0.8
CABF pmax pmax
comp=Z,208nm,1.0s,mb5.9
GDZ Gediz 78.97 322 i P P 12 10 41.3 -6.1
HYF Humbligny 78.98 343⇑ iP P 12 10 48.3 +1.0
MUGIO Muggio 78.99 339⇑ iP P 12 10 47.9 +0.6
comp=Z,458nm,1.3s,mb6.2
GIMEL St. Georges / 79.00 341⇑ iP P 12 10 48.1 +0.7
comp=Z,200nm,1.2s,mb5.8
NVR Nevrokopi 79.01 327 eP P 12 10 46.8 -0.7
SSF Saint Saulge 79.03 343⇑ iP P 12 10 48.1 +0.6
comp=Z,429nm,0.9s,mb6.0
SSF Saint Saulge 79.03 343⇑ iP P 12 10 48.1 +0.6
comp=Z,214nm,0.9s,mb6.0
SSF Saint Saulge 79.03 343⇑ iP P 12 10 48.1 +0.6
SSF pmax pmax
comp=Z,214nm,0.9s,mb6.0
AIGLE Aigle 79.04 340⇑ iP P 12 10 48.1 +0.5
comp=Z,288nm,1.3s,mb6.0
GRYON Gryon 79.09 340⇑ iP P 12 10 48.6 +0.7
comp=Z,204nm,1.0s,mb5.9
BALY Balya 79.10 323 i P P 12 10 46.6 -1.5
MMK Mattmark 79.10 339⇑ iP P 12 10 49.2 +1.2
comp=Z,440nm,1.0s,mb6.2
PVY Plav 79.15 330⇑ iP P 12 10 46.9 -1.4
PVY Plav 79.15 330⇑ iP P 12 10 47.0 -1.3
NAY Al-Naaiem 79.19 304 eP P 12 10 46.9 -1.8
NAY AMb AMB 12 10 50.1
comp=Z,135nm,0.9s,mb5.8
DIX Grande Dixence 79.19 340⇑ iP P 12 10 49.4 +0.9
comp=Z,354nm,1.0s,mb6.1
SALAN Lac Salanfe 79.22 340⇑ iP P 12 10 49.8 +1.2
comp=Z,161nm,1.0s,mb5.8
NKY Niksic 79.25 331⇑ iP P 12 10 48.0 -0.8
NKY Niksic 79.25 331⇑ iP P 12 10 48.0 -0.8
NKY Niksic 79.25 331⇑ iP P 12 10 48.0 -0.8
QRN Al-Qurain 79.25 303 eP P 12 10 47.1 -1.9
QRN AMb AMB 12 10 50.6
comp=Z,193nm,0.7s,mb6.0
SKO Skopje 79.25 329 eP P 12 10 48.1 -0.8
QUIF Quistinic 79.26 347⇑ iP P 12 10 49.3 +0.5
comp=Z,258nm,1.0s,mb5.7
QUIF Quistinic 79.26 347⇑ iP P 12 10 49.3 +0.5
comp=Z,129nm,1.0s,mb5.7
QUIF Quistinic 79.26 347⇑ iP P 12 10 49.3 +0.5
QUIF pmax pmax
comp=Z,129nm,1.0s,mb5.7
RDF Al-Radifah 79.29 303 eP P 12 10 48.2 -1.1
RDF AMb AMB 12 10 51.7
comp=Z,494nm,1.2s,mb6.2
SFJM Santa Fe 79.30 71 i P P 12 10 49.5 +0.1
DEMI Demirci 79.30 322 i P P 12 10 48.7 -0.5
BRY Bratogost 79.31 331⇑ iP P 12 10 47.5 -1.6
BRY Bratogost 79.31 331⇑ iP P 12 10 47.5 -1.6
BRY Bratogost 79.31 331⇑ iP P 12 10 47.5 -1.6
GOGA Godfrey 79.31 49 eP P 12 10 48.0 -1.4
comp=Z,54nm,1.3s,mb5.2
GOGA Godfrey 79.31 49 eP P 12 10 48.0 -1.4
GOGA pmax pmax
comp=Z,54nm,1.3s,mb5.2
AVF Avril sur Loir 79.32 343⇑ iP P 12 10 49.8 +0.7
comp=Z,871nm,0.9s,mb6.3
AVF Avril sur Loir 79.32 343⇑ iP P 12 10 49.8 +0.7
comp=Z,436nm,0.9s,mb6.3
AVF Avril sur Loir 79.32 343⇑ iP P 12 10 49.8 +0.7
AVF pmax pmax
comp=Z,436nm,0.9s,mb6.3
EMV Vieux Emosson 79.32 340⇑ iP P 12 10 50.0 +0.9

comp=Z,131nm,0.9s,mb5.8
BCI Bajram Curri 79.33 330 *i* P **P 12 10 48.2 -1.0**
SMF Signal de Mont 79.37 342⇑*i*P **P 12 10 50.1 +0.7**
comp=Z,669nm,1.0s,mb6.1
SMF Signal de Mont 79.37 342⇑*i*P **P 12 10 50.1 +0.7**
comp=Z,334nm,1.0s,mb6.1
SMF Signal de Mont 79.37 342⇑*i*P **P 12 10 50.1 +0.7**
SMF pmax pmax
comp=Z,335nm,1.0s,mb6.1
VAY Valandovo 79.47 328 P **P 12 10 50.0 0.0**
VAY Valandovo 79.47 328 P **P 12 10 50.0 0.0**
VAY Valandovo 79.47 328 *e*P **P 12 10 49.3 -0.7**
TTG Podgorica 79.52 330⇑*i*P **P 12 10 49.2 -1.1**
TTG Podgorica 79.52 330⇑*i*P **P 12 10 49.3 -1.0**
TTG Podgorica 79.52 330⇑*i*P **P 12 10 49.3 -1.0**
KHAL Karahalli 79.59 321 *i* P **P 12 10 50.2 -0.6**
JSC Jenkinsville 79.60 47 *e*P **P 12 10 50.1 -0.8**
JSC Jenkinsville 79.60 47 *e*P **P 12 10 50.1 -0.8**
BGF Bois d'Agland 79.64 343⇑*i*P **P 12 10 51.6 +0.8**
comp=Z,364nm,0.7s,mb6.0
BGF Bois d'Agland 79.64 343⇑*i*P **P 12 10 51.6 +0.8**
comp=Z,182nm,0.7s,mb6.0
BGF Bois d'Agland 79.64 343⇑*i*P **P 12 10 51.6 +0.8**
BGF pmax pmax
comp=Z,182nm,0.7s,mb6.0
PUK Puka 79.67 330 *i* P **P 12 10 50.9 -0.2**
HCY Herceg Novi 79.73 331⇑*i*P **P 12 10 50.1 -1.4**
HCY Herceg Novi 79.73 331⇑*i*P **P 12 10 50.1 -1.3**
HCY Herceg Novi 79.73 331⇑*i*P **P 12 10 50.1 -1.4**
RSL Roselend 79.73 340⇑*e*P **P 12 10 52.4 +1.0**
RSL Roselend 79.73 340⇑*e*P **P 12 10 52.4 +1.0**
BUM Brajici-Budva 79.75 331⇑*i*P **P 12 10 50.4 -1.1**
BUM Brajici-Budva 79.75 331⇑*i*P **P 12 10 50.5 -1.1**
KRUS Krusevo 79.86 329 *e*P **P 12 10 51.6 -0.6**
LPL La Plagne 79.88 340⇑*i*P **P 12 10 53.7 +1.5**
comp=Z,552nm,1.0s,mb6.1
LPL La Plagne 79.88 340⇑*i*P **P 12 10 53.7 +1.5**
comp=Z,276nm,1.0s,mb6.0
LPL La Plagne 79.88 340⇑*i*P **P 12 10 53.7 +1.5**
LPL pmax pmax
comp=Z,276nm,1.0s,mb6.0
LPG La Plagne 79.89 340⇑*i*P **P 12 10 54.0 +1.8**
comp=Z,444nm,0.8s,mb6.1
LPG La Plagne 79.89 340⇑*i*P **P 12 10 54.0 +1.8**
comp=Z,222nm,0.8s,mb6.0
LPG La Plagne 79.89 340⇑*i*P **P 12 10 54.0 +1.8**
LPG pmax pmax
comp=Z,222nm,0.8s,mb6.0
ULC Ulcinj 79.95 330⇑*i*P **P 12 10 52.1 -0.5**
ULC Ulcinj 79.95 330⇑*i*P **P 12 10 52.2 -0.4**
ULC Ulcinj 79.95 330⇑*i*P **P 12 10 52.2 -0.4**
BOB Bobbio (Coli) 79.99 338 P **P 12 10 53.9 +1.1**
TCF Toulx Ste Croi 80.01 343⇑*i*P **P 12 10 53.8 +0.9**
comp=Z,628nm,0.9s,mb6.1
TCF Toulx Ste Croi 80.01 343⇑*i*P **P 12 10 53.8 +0.9**
comp=Z,314nm,0.9s,mb6.1
TCF Toulx Ste Croi 80.01 343⇑*i*P **P 12 10 53.8 +0.9**
TCF pmax pmax
comp=Z,314nm,0.9s,mb6.1
PLG Polygyros 80.02 327 *e*P **P 12 10 52.2 -0.8**
PRK Paraskevi 80.03 324 *e*P **P 12 10 51.7 -1.4**
PLDF La Plantade 80.06 342⇑*e*P **P 12 10 55.4 +2.2**
PLDF La Plantade 80.06 342⇑*e*P **P 12 10 55.4 +2.2**
AGO Saint Agoulin 80.07 343⇑*e*P **P 12 10 55.8 +2.6**
MFF Saint Martin d 80.10 345⇑*i*P **P 12 10 54.4 +1.0**
comp=Z,599nm,1.1s,mb6.0
MFF Saint Martin d 80.10 345⇑*i*P **P 12 10 54.4 +1.0**
comp=Z,299nm,1.1s,mb6.0
MFF Saint Martin d 80.10 345⇑*i*P **P 12 10 54.4 +1.0**
MFF pmax pmax
comp=Z,299nm,1.1s,mb6.0
TAOE Nuku Hiva Isla 80.14 118 *e*S S 12 20 48.2 -5.2
comp=Z,534nm,22.5s
TAOE *e*LR LR 12 35 30.4
comp=Z,3µm,30.7s,baz=334
BIA Bitola 80.15 328 *e*P **P 12 10 52.7 -1.0**
FNVD Fontana Vidola 80.15 337 P **P 12 10 55.2 +1.5**
MBWA Marble Bar 80.21 216 *e*P **P 12 10 53.8 -0.4**
comp=Z,146nm,1.3s,mb5.7
MBWA Marble Bar 80.21 216 P **P 12 10 53.5 -0.6**
comp=Z,104nm,1.1s,mb5.6
MBWA Marble Bar 80.21 216 P **P 12 10 54.4 +0.3**
SNR=6.3
CNNC Cliffs of the 80.27 44 *e*P **P 12 10 53.7 -0.8**
GDM Grand'Maison 80.30 340⇑*e*P **P 12 10 56.0 +1.5**
TIR Tirane 80.31 330 *e*P **P 12 10 54.6 -0.1**
comp=Z,314nm,1.0s,mb6.1
TIR Tirane 80.31 330 *e*P **P 12 10 54.6 0.0**
TIR pmax pmax
comp=Z,314nm,1.0s,mb6.1
BNI Bardonecchia 80.33 340 *e*P **P 12 10 55.8 +1.1**
comp=Z,150nm,0.9s,mb5.8
BNI Bardonecchia 80.33 340 *e*P **P 12 10 55.8 +1.2**
BNI pmax pmax
comp=Z,150nm,0.9s,mb5.8
VLC Villacollemand 80.34 337 *e*P **P 12 10 54.7 0.0**
comp=Z,211nm,0.7s,mb6.1
GRN Grenoble 80.34 341⇑*e*P **P 12 10 56.2 +1.5**
GRN Grenoble 80.34 341⇑*e*P **P 12 10 56.2 +1.5**
DNZL Cakiroluk 80.36 321 *i* P **P 12 10 54.7 -0.2**
CING Cingoli 80.37 335 P **P 12 10 55.5 +0.6**
PYM Petit Puy Mans 80.39 343⇑*e*P **P 12 10 57.2 +2.3**
PYM Petit Puy Mans 80.39 343⇑*e*P **P 12 10 57.2 +2.3**
HWQ Hawqa 80.44 315 *e*P **P 12 10 54.8 -0.6**
KORT Korkueli 80.45 320 *i* P **P 12 10 53.1 -2.2**
COLF Collangettes 80.48 342 *e*P **P 12 10 56.6 +1.2**
VERF Verneugheol 80.48 343⇑*e*P **P 12 10 56.3 +0.9**
SSB Saint Sauveur 80.55 342⇑*e*P **P 12 10 56.8 +1.0**
SSB Saint Sauveur 80.55 342⇑*e*P **P 12 10 56.8 +1.0**
MBDF Montbardon 80.62 340⇑*i*P **P 12 10 57.1 +0.9**
comp=Z,317nm,1.0s,mb5.8
MBDF Montbardon 80.62 340⇑*i*P **P 12 10 57.1 +0.9**
comp=Z,158nm,1.0s,mb5.8
MBDF Montbardon 80.62 340⇑*i*P **P 12 10 57.1 +0.9**
MBDF pmax pmax
comp=Z,158nm,1.0s,mb5.8
ORIF Oris-en-Rattie 80.62 341⇑*i*P **P 12 10 57.6 +1.4**
comp=Z,378nm,0.9s,mb5.9
ORIF *e*MLR MLR
comp=Z,3µm,21.8s
ORIF Oris-en-Rattie 80.62 341⇑*i*P **P 12 10 57.6 +1.4**
comp=Z,189nm,0.9s,mb5.9
ORIF Oris-en-Rattie 80.62 341⇑*i*P **P 12 10 57.6 +1.4**
ORIF pmax pmax
comp=Z,189nm,0.9s,mb5.9
MURB Monte Urbino 80.65 335 P **P 12 10 57.5 +1.1**
QLNO Quiliano 80.66 339 P **P 12 10 56.4 0.0**
KBN Korca 80.68 329 *i* P **P 12 10 55.5 -1.0**
URLA Izmir 80.69 323 *i* P **P 12 10 53.3 -3.4**
DOI San Damiano 80.73 339 P **P 12 10 55.9 -0.9**
CSNT Castellina Chi 80.76 336 P **P 12 10 56.8 -0.2**
FRNF Fournols 80.82 343⇑*e*P **P 12 10 59.6 +2.4**
LBL Lubilhac 80.84 342 *e*P **P 12 10 59.7 +2.4**
LBL Lubilhac 80.84 342 *e*P **P 12 10 59.7 +2.4**
SURF Saint Ours 80.85 340⇑*e*P **P 12 10 58.6 +1.2**
BHL Bhannes 80.88 315 *e*P **P 12 10 57.1 -0.7**
VIVF Saint-Julien-l 80.93 341⇑*i*P **P 12 10 59.0 +1.2**
comp=Z,572nm,0.9s,mb6.1
VIVF Saint-Julien-l 80.93 341⇑*i*P **P 12 10 59.0 +1.2**
comp=Z,286nm,0.9s,mb6.1
VIVF Saint-Julien-l 80.93 341⇑*i*P **P 12 10 59.0 +1.2**
VIVF pmax pmax
comp=Z,286nm,0.9s,mb6.1
CSS Prodhromos 80.98 317 *e*P **P 12 10 57.6 -0.7**
comp=Z,81nm,0.6s,mb5.7
OCF Saint Nazaire 81.07 341⇑*e*P **P 12 11 00.1 +1.5**
OG26 St.-Nazaire-De 81.07 341⇑*e*P **P 12 11 00.1 +1.5**
NHSC New Hope 81.07 46 *e*P **P 12 10 58.4 -0.4**
comp=Z,324nm,1.5s,mb5.9
RJF Les Rejaudoux 81.08 344⇑*i*P **P 12 10 59.6 +1.0**
comp=Z,670nm,1.1s,mb6.1
RJF *e*MLR MLR
comp=Z,5µm,22.2s
RJF Les Rejaudoux 81.08 344⇑*i*P **P 12 10 59.6 +1.0**
comp=Z,335nm,1.1s,mb6.1
RJF LR LR
comp=Z,5µm,22.3s
RJF Les Rejaudoux 81.08 344⇑*i*P **P 12 10 59.6 +1.0**
RJF pmax pmax
comp=Z,335nm,1.1s,mb6.1
RJF MLR MLR
comp=Z,5µm,22.3s
RCY Rachaya 81.15 314 *e*P **P 12 10 59.5 +0.2**
SAOF Saorge 81.16 339⇑*e*P **P 12 10 59.3 +0.3**
SAOF Saorge 81.16 339⇑*e*P **P 12 10 59.3 +0.3**
AUTN L'Aution 81.17 339⇑*e*P **P 12 10 59.5 +0.3**
AUTN L'Aution 81.17 339⇑*e*P **P 12 10 59.5 +0.3**
TOUF Mont Tournerai 81.20 339⇑*e*P **P 12 10 59.8 +0.5**
TOUF Mont Tournerai 81.20 339⇑*e*P **P 12 10 59.8 +0.5**
TURN Turunc 81.24 321 *i* P **P 12 11 00.0 +0.4**
AQU L'Aquila 81.27 334 *e*P **P 12 11 00.1 +0.5**
comp=Z,427nm,0.9s,mb6.3
AQU L'Aquila 81.27 334⇑*e*P **P 12 11 00.5 +0.8**
LUCF Luceram 81.29 339⇑*e*P **P 12 11 00.0 +0.2**
SBF Sospel 81.30 339⇑*i*P **P 12 11 00.2 +0.4**
comp=Z,303nm,0.7s,mb5.9
SBF Sospel 81.30 339⇑*i*P **P 12 11 00.2 +0.4**
comp=Z,152nm,0.7s,mb5.9
SBF Sospel 81.30 339⇑*i*P **P 12 11 00.2 +0.4**
SBF pmax pmax
comp=Z,152nm,0.7s,mb5.9
MVIF Mont Vial 81.33 339⇑*e*P **P 12 11 00.3 +0.3**
MVIF Mont Vial 81.33 339⇑*e*P **P 12 11 00.3 +0.3**
CAF Calviac 81.35 343⇑*i*P **P 12 11 01.6 +1.5**
comp=Z,743nm,1.0s,mb6.2
CAF Calviac 81.35 343⇑*i*P **P 12 11 01.6 +1.5**
comp=Z,371nm,1.0s,mb6.2
CAF Calviac 81.35 343⇑*i*P **P 12 11 01.6 +1.5**
CAF pmax pmax
comp=Z,371nm,1.0s,mb6.2
AKAS Kas 81.41 320 *i* P **P 12 10 57.4 -3.1**
REVF Revere 81.43 339⇑*e*P **P 12 11 00.9 +0.4**
REVF Revere 81.43 339⇑*e*P **P 12 11 00.9 +0.4**
CIGN Sant'Elia a Pi 81.51 333 P **P 12 11 01.5 +0.6**
BDRM Kayabasi 81.52 322 *i* P **P 12 11 00.1 -1.0**
CALN Calern 81.52 339⇑*e*P **P 12 11 01.4 +0.4**
CALN Calern 81.52 339⇑*e*P **P 12 11 01.4 +0.4**
RAR Rarotonga 81.54 141 T 13 41 00.3
comp=Z,42nm,0.3s,baz=297,slow=7.5,SNR=5.7
LFF La Frestale 81.57 344⇑*i*P **P 12 11 02.6 +1.4**
comp=Z,971nm,1.1s,mb6.2
LFF La Frestale 81.57 344⇑*i*P **P 12 11 02.6 +1.4**
comp=Z,486nm,1.1s,mb6.2
LFF La Frestale 81.57 344⇑*i*P **P 12 11 02.6 +1.4**
LFF pmax pmax
comp=Z,486nm,1.1s,mb6.2
SMRF Simiane la Rot 81.59 340⇑*i*P **P 12 11 02.8 +1.5**
comp=Z,220nm,1.1s,mb5.6
SMRF Simiane la Rot 81.59 340⇑*i*P **P 12 11 02.8 +1.5**
comp=Z,220nm,1.1s,mb5.9
SRN Sarande 81.60 329 *i* P **P 12 10 60.0 -1.5**
HMDM Hanimaadhoo 81.69 270 P **P 12 11 03.4 +1.1**
comp=Z,450nm,0.9s,mb6.3
MIDA Miranda 81.70 334 P **P 12 11 02.6 +0.6**
MMAI Mount Meron Ar 81.75 315 LR LR 12 53 19.3
comp=Z,4µm,18.1s,baz=30,slow=40
CERT Cerreto 81.76 335 P **P 12 11 02.3 0.0**
FRF La Foret Royal 81.76 340⇑*i*P **P 12 11 02.6 +0.4**
comp=Z,130nm,0.9s,mb5.4
FRF La Foret Royal 81.76 340⇑*i*P **P 12 11 02.6 +0.4**
comp=Z,65nm,0.9s,mb5.5
FRF La Foret Royal 81.76 340⇑*i*P **P 12 11 02.6 +0.4**
FRF pmax pmax
comp=Z,65nm,0.9s,mb5.5
MAON Monte Argentar 81.78 336 P **P 12 11 02.3 -0.1**
ASF Jabal al Asfar 81.79 313 LR LR 12 52 20.2
comp=Z,3µm,19.7s,baz=252,slow=39
LASF Ste Croix 81.84 342⇑*i*P **P 12 11 04.1 +1.4**
comp=Z,305nm,1.1s,mb5.8
TOLF Tolfa 81.91 335 P **P 12 11 03.4 +0.4**
ARG Arkhangelos 82.00 321 *e*P **P 12 11 02.9 -0.8**
LMR La Mourre 82.01 340⇑*i*P **P 12 11 04.1 +0.6**
comp=Z,390nm,1.0s,mb5.9
LMR La Mourre 82.01 340⇑*i*P **P 12 11 04.1 +0.6**
comp=Z,195nm,1.0s,mb5.9
LMR La Mourre 82.01 340⇑*i*P **P 12 11 04.1 +0.6**
LMR pmax pmax
comp=Z,195nm,1.0s,mb5.9
RFI Roccamonfina 82.09 334 P **P 12 11 04.5 +0.5**
comp=Z,88nm,1.3s,mb5.4
PGF Pioggiola 82.19 338⇑*i*P **P 12 11 04.8 +0.3**
comp=Z,200nm,0.7s,mb5.7
PGF Pioggiola 82.19 338⇑*i*P **P 12 11 04.8 +0.3**
comp=Z,100nm,0.7s,mb5.8
PGF Pioggiola 82.19 338⇑*i*P **P 12 11 04.8 +0.3**
PGF pmax pmax
comp=Z,100nm,0.7s,mb5.8
ARMA Armidale 82.22 186 *e*P **P 12 11 04.8 +0.3**
ARMA Armidale 82.22 186 *e*P **P 12 11 03.5 -1.0**
comp=Z,41nm,1.4s,mb5.1
APE Apeiranthos 82.23 324⇑*i*P **P 12 11 02.0 -2.8**
PTVM Pico Tres Padr 82.27 68 *e*P **P 12 11 04.3 -0.9**
SZVM Salazar 82.33 69 *e*P **P 12 11 05.3 -0.3**
PBVM Pinon 82.41 68 *e*P **P 12 11 06.2 +0.2**
IIO Organos 82.50 68 *e*P **P 12 11 07.1 +0.7**
GUR Goura 82.58 326 *e*P **P 12 11 05.2 -1.5**
PPT Papeete 82.71 131 *e*S S 12 21 13.1 -6.6
comp=Z,4µm,30.2s
PPT *e*LR LR 12 36 50.5
comp=Z,5µm,23.8s,baz=327
PPT Papeete 82.71 131 LR LR 12 40 24.6
comp=Z,2µm,21.6s,baz=289,slow=30
CUC Castrocucco 82.78 332 *e*P **P 12 11 06.7 -1.0**
comp=Z,175nm,1.0s,mb5.8
MTLF Montolieu 82.86 343⇑*i*P **P 12 11 09.3 +1.3**
comp=Z,344nm,1.0s,mb5.8
MTLF Montolieu 82.86 343⇑*i*P **P 12 11 09.3 +1.3**
comp=Z,172nm,1.0s,mb5.8
MTLF Montolieu 82.86 343⇑*i*P **P 12 11 09.3 +1.3**
MTLF pmax pmax
comp=Z,172nm,1.0s,mb5.8
VLS Valsamata 82.96 328 *e*P **P 12 11 07.4 -1.2**
KARP Karpathos 82.96 322 *e*P **P 12 11 07.4 -1.3**
LRDF Laroque-de-Fa 83.19 342⇑*e*P **P 12 11 11.0 +1.3**
ITM Ithomi 83.41 326 *e*P **P 12 11 09.7 -1.2**
MLS Moulis 83.43 343⇑*e*P **P 12 11 11.8 +0.8**
VLI Veliai 83.47 325 *e*P **P 12 11 08.6 -2.7**
CARF Carcanieres 83.48 343⇑*e*P **P 12 11 12.1 +0.9**
EPF Esparros 83.49 344⇑*i*P **P 12 11 11.9 +0.6**
comp=Z,331nm,1.0s,mb5.8
EPF Esparros 83.49 344⇑*i*P **P 12 11 11.9 +0.6**
comp=Z,166nm,1.0s,mb5.8
EPF Esparros 83.49 344⇑*i*P **P 12 11 11.9 +0.6**
EPF pmax pmax
comp=Z,166nm,1.0s,mb5.8
ORDF Ordiarp 83.53 345⇑*e*P **P 12 11 11.7 +0.3**
OSSF Osses 83.54 345⇑*e*P **P 12 11 11.8 +0.3**
FILF Fillols 83.55 342⇑*e*P **P 12 11 12.5 +0.9**
SJAF Saint Jean de 83.56 342⇑*e*P **P 12 11 12.0 +0.4**
REYF Montagne du Re 83.58 344⇑*e*P **P 12 11 11.8 +0.1**
EJON La Jonquera 83.59 342 P **P 12 11 12.6 +0.8**
comp=Z,91nm,0.9s,mb5.6
SALF Salau 83.61 343⇑*e*P **P 12 11 11.6 -0.3**
CAIG El Cayaco 83.61 71 *e*P **P 12 11 07.5 -4.8**
EALK Alkurruntz 83.61 345 P **P 12 11 11.8 -0.1**
comp=Z,123nm,0.9s,mb5.7
ATE Arette 83.61 345⇑*e*P **P 12 11 11.7 -0.2**
ELIZ Elizondo 83.67 345 P **P 12 11 13.3 +1.1**
comp=Z,206nm,1.0s,mb5.9
ELIZ Elizondo 83.67 345 P **P 12 11 13.3 +1.1**
ELIZ pmax pmax
comp=Z,206nm,1.0s,mb5.9
SJPF Ste Jean 83.67 345⇑*i*P **P 12 11 12.8 +0.6**
comp=Z,136nm,0.9s,mb5.5
SJPF Ste Jean 83.67 345⇑*i*P **P 12 11 12.8 +0.6**
comp=Z,68nm,0.9s,mb5.5
SJPF Ste Jean 83.67 345⇑*i*P **P 12 11 12.8 +0.6**
SJPF pmax pmax
comp=Z,68nm,0.9s,mb5.5
VIEF Viey 83.69 344⇑*e*P **P 12 11 13.6 +1.3**
ZKR Zakros 83.70 322 *e*P **P 12 11 11.7 -0.8**
LARF Larrau 83.71 345 *e*P **P 12 11 11.3 -1.1**
RESF Ens 83.71 344⇑*e*P **P 12 11 13.8 +1.4**
CLLI Llivia 83.74 343 P **P 12 11 13.8 +1.3**
ETSF Etsaut 83.77 345⇑*i*P **P 12 11 14.2 +1.5**
comp=Z,230nm,1.0s,mb5.7
ETSF Etsaut 83.77 345⇑*i*P **P 12 11 14.2 +1.5**
comp=Z,115nm,1.0s,mb5.7
ETSF Etsaut 83.77 345⇑*i*P **P 12 11 14.2 +1.5**
ETSF pmax pmax
comp=Z,115nm,1.0s,mb5.7
NPS Neapolis 83.80 323 *e*P **P 12 11 12.0 -1.0**
VALF Valcebollere 83.80 343⇑*e*P **P 12 11 13.8 +0.9**
KYTH Kithira 83.83 325 *e*P **P 12 11 11.4 -1.7**
EBIE Bielsa 83.86 344 P **P 12 11 14.6 +1.5**
comp=Z,107nm,1.0s,mb5.6
ELAN Lanestosa 83.89 347 P **P 12 11 13.9 +0.6**
comp=Z,505nm,1.0s,mb6.3
LAST Lasithi 83.94 323 *e*P **P 12 11 12.3 -1.4**
CSOR Sort 83.99 343 P **P 12 11 14.2 +0.3**
comp=Z,36nm,0.8s,mb5.2
EARI Arriondas 84.00 348 P **P 12 11 15.1 +1.0**
comp=Z,261nm,1.0s,mb6.0
EPON Pontenova 84.27 349 P **P 12 11 14.6 -0.6**
comp=Z,149nm,0.7s,mb5.9
KARN Karanos 84.30 324 *e*P **P 12 11 14.6 -0.9**
SIVA Sivas 84.31 323 *e*P **P 12 11 14.7 -0.9**
CFON Fontmartina 84.34 342 P **P 12 11 15.2 -0.5**
comp=Z,27nm,0.7s,mb5.2
CEL Celeste 84.36 331 *e*P **P 12 11 14.0 -1.7**
comp=Z,58nm,0.7s,mb5.5
EMIR Miracle 84.37 343 P **P 12 11 17.0 +1.3**
comp=Z,30nm,0.8s,mb5.2
STKA Stephens Creek 84.74 194 P **P 12 11 17.2 -0.2**
comp=Z,28nm,0.8s,mb5.2,baz=349,slow=6.4,SNR=22
STKA LR LR 12 45 06.7
comp=Z,1µm,21.0s,baz=7.4,slow=33
STKA Stephens Creek 84.74 194⇑*i*P **P 12 11 17.1 -0.3**
comp=Z,25nm,0.9s,mb5.2
EMAZ Mazaricos 84.84 351 P **P 12 11 18.9 +0.8**
comp=Z,40nm,0.7s,mb5.5
STS Santiago 84.86 350 P **P 12 11 19.0 +0.8**
comp=Z,76nm,0.5s,mb5.9
STS Santiago 84.86 350 P **P 12 11 19.0 +0.8**
STS pmax pmax
comp=Z,76nm,0.5s,mb5.9
ESAC San Caprasio 84.90 344 P **P 12 11 18.9 +0.5**
comp=Z,37nm,0.6s,mb5.5
VSL Villasalto 84.99 336 *e*P **P 12 11 18.9 0.0**
comp=Z,253nm,1.0s,mb6.1
EPOB Poblet 84.99 343 P **P 12 11 19.1 +0.3**
comp=Z,23nm,0.8s,mb5.2
ERUA La Rua 85.19 349 P **P 12 11 20.4 +0.5**
comp=Z,84nm,0.8s,mb5.7
ERUA La Rua 85.19 349 P **P 12 11 20.4 +0.5**
ERUA pmax pmax
comp=Z,84nm,0.8s,mb5.7
ABTO Aybut 85.42 292 P **P 12 11 20.9 -0.4**
SNR=6.2
ERTA Horta de San J 85.51 343 P **P 12 11 22.0 +0.5**
comp=Z,18nm,0.8s,mb5.0
VAE Valguarnera 85.52 332 P **P 12 11 21.8 +0.2**
comp=Z,19nm,0.5s,mb5.3,baz=31,slow=1.6,SNR=4.3
VAE LR LR 12 53 42.4
comp=Z,4µm,21.4s,baz=98,slow=38
ECAL Calabor 85.59 349 P **P 12 11 22.3 +0.5**
comp=Z,38nm,0.6s,mb5.5
EZAM Zamans 85.61 350 P **P 12 11 21.6 -0.3**
comp=Z,186nm,0.8s,mb6.1
EZAM Zamans 85.61 350 P **P 12 11 21.6 -0.3**
EZAM pmax pmax
comp=Z,186nm,0.8s,mb6.1
PBRG Braganca 85.73 349 *e*P **P 12 11 22.5 0.0**
comp=Z,118nm,1.2s,mb5.7
ELOB Lobios 85.82 350 P **P 12 11 22.4 -0.6**
comp=Z,104nm,1.4s,mb5.6
PCAB Cabril 85.97 350 *e*P **P 12 11 24.6 +0.9**
comp=Z,103nm,1.3s,mb5.6
ETOS Mallorca 86.20 341 P **P 12 11 25.3 +0.4**
comp=Z,68nm,1.0s,mb5.5
EMOS Mosqueruela 86.23 344 P **P 12 11 25.1 +0.1**
comp=Z,60nm,0.9s,mb5.5
PVRL Vila Real 86.36 349 *e*P **P 12 11 25.8 +0.1**
comp=Z,341nm,1.4s,mb6.1
MVO Moncorvo 86.39 349 *e*P **P 12 11 25.7 -0.1**
comp=Z,205nm,1.1s,mb6.0
MVO *e*SKS 12 21 56.4
MVO *e*LQ 12 35 13.2
MVO *e*LR LR 12 40 46.1
comp=Z,737nm,22.0s
MVO Moncorvo 86.39 349 P **P 12 11 25.8 -0.1**
GUD Guadarrama 86.53 347 P **P 12 11 25.6 -0.9**
comp=Z,87nm,2.0s,mb5.3
GUD Guadarrama 86.53 347 P **P 12 11 25.6 -0.9**
GUD pmax pmax
comp=Z,87nm,2.0s,mb5.3
FORT Forrest 86.54 206⇑*i*P **P 12 11 26.2 -0.2**
comp=Z,119nm,0.8s,mb5.9
FORT Forrest 86.54 206 *e*P **P 12 11 26.2 -0.2**
comp=Z,119nm,0.8s,mb5.9
PVIS Viseu 86.94 350 *e*P **P 12 11 28.3 -0.2**
comp=Z,164nm,1.2s,mb5.8
WDD Wield Dalam 86.99 331 *e*P **P 12 11 27.9 -0.9**
comp=Z,708nm,0.9s,mb6.6
ECHE Chera 87.06 344 P **P 12 11 28.0 -1.1**
comp=Z,30nm,1.0s,mb5.2
ECHE Chera 87.06 344 P **P 12 11 28.0 -1.1**
ECHE pmax pmax
comp=Z,30nm,1.0s,mb5.2
EIBI Ibiza 87.20 342 P **P 12 11 28.5 -1.3**
comp=Z,47nm,0.9s,mb5.4
MTE Manteigas 87.21 349 *e*P **P 12 11 29.7 -0.1**
comp=Z,127nm,1.2s,mb5.7
MTE *i* SKS 12 22 04.0
MTE *e*LQ 12 35 08.2
MTE *e*LR LR 12 40 26.3
comp=Z,1µm,20.0s
MTE Manteigas 87.21 349 *e*P **P 12 11 29.4 -0.4**
comp=Z,91nm,1.1s,mb5.6
EPLA Plasencia 87.36 348 P **P 12 11 29.5 -1.0**
comp=Z,48nm,0.8s,mb5.5
EPLA Plasencia 87.36 348 P **P 12 11 29.5 -1.1**
EPLA pmax pmax
comp=Z,49nm,0.8s,mb5.5
ESDC Sonseca Array 87.45 346 P **P 12 11 30.8 -0.2**
comp=Z,44nm,0.7s,mb5.5,baz=5.0,slow=4.1,SNR=148
ESDC LR LR 12 57 39.2
comp=Z,1µm,18.8s,baz=40,slow=40
ESDC Sonseca Array 87.45 346 P **P 12 11 30.7 -0.3**
comp=Z,43nm,0.8s,mb5.4
ESLA Sonseca Array 87.45 346 *e*P **P 12 11 30.6 -0.4**
comp=Z,47nm,1.2s,mb5.3
PAB San Pablo 87.64 347 *e*P **P 12 11 30.9 -1.0**
comp=Z,86nm,1.1s,mb5.7
PAB San Pablo 87.64 347 *e*P **P 12 11 30.9 -1.0**
PAB pmax pmax
comp=Z,86nm,1.1s,mb5.7
PCBR Castelo Branco 87.75 349 *e*P **P 12 11 31.9 -0.5**
comp=Z,62nm,1.3s,mb5.5
TBI Tubuai 87.78 133 *e*S S 12 22 06.9 -2.5
comp=Z,2µm,28.8s
TBI *e*LR LR 12 38 59.1
comp=Z,3µm,31.8s,baz=327
EBEN Beniarda 87.80 343 P **P 12 11 33.1 +0.4**
comp=Z,55nm,1.1s,mb5.5
BBSR BB Station 87.98 35 *e*P **P 12 11 32.8 -0.8**
comp=Z,229nm,1.7s,mb5.9
PTOM Tomar 88.08 350 *e*P **P 12 11 33.6 -0.4**
comp=Z,90nm,1.4s,mb5.6
ETOB Tobarra 88.08 344 P **P 12 11 34.4 +0.4**
comp=Z,65nm,1.1s,mb5.6
PMRV Marv??o 88.15 349 *e*P **P 12 11 34.7 +0.4**
comp=Z,50nm,1.4s,mb5.3
PMRV *i* SKS 12 22 14.8
PMRV *e*LQ 12 36 42.5
PMRV *e*LR LR 12 41 42.6
comp=Z,1µm,18.0s
CAEH 'Ain El Ouahch 88.18 337 P **P 12 11 36.1 +1.6**
CMAH Djebel Manchou 88.19 337 P **P 12 11 33.9 -0.7**
EVIA Vianos 88.25 345 P **P 12 11 34.4 -0.4**
comp=Z,58nm,0.6s,mb5.8
EVIA Vianos 88.25 345 P **P 12 11 34.4 -0.4**
EVIA pmax pmax
comp=Z,58nm,0.6s,mb5.8
ABSA Djebel Ababsia 88.51 337 P **P 12 11 35.1 -1.0**
KEST Kesra 88.56 335 P **P 12 11 36.3 0.0**
comp=Z,47nm,0.5s,mb5.7,baz=325,slow=1.1,SNR=106
KEST LR LR 12 57 53.1
comp=Z,561nm,18.1s,baz=138,slow=40
KEST Kesra 88.56 335 *e*P **P 12 11 36.1 -0.2**
CKFL Kef-Lekhel 88.58 337 P **P 12 11 35.9 -0.5**
DFRA Djebel Bou Aff 88.63 338 P **P 12 11 36.7 0.0**
PESTR Estremoz 88.73 349 *e*P **P 12 11 36.8 -0.3**
comp=Z,52nm,1.6s,mb5.3
PESTR *i* SKS 12 22 19.6
PESTR *e*LQ 12 36 12.5
PESTR *e*LR LR 12 42 23.9
comp=Z,1µm,20.0s
CASM Ain Smara 88.76 338 P **P 12 11 36.5 -0.8**
EBAD Badajoz 88.77 349 P **P 12 11 36.4 -0.8**
comp=Z,13nm,0.8s,mb5.0
EMUR La Murta 88.81 344 P **P 12 11 37.6 +0.1**
comp=Z,26nm,0.8s,mb5.3
PMAFR Mafra 88.83 350 *e*P **P 12 11 36.9 -0.6**
comp=Z,74nm,1.2s,mb5.6
PMAFR *i* SKS 12 22 21.2

PMAFR eLQ 12 37 04.5
PMAFR eLR LR 12 41 48.8
comp=Z,1μm,18.0s
EBAN Banos Encina 88.91 346 P **P 12 11 36.6 -1.3**
comp=Z,74nm,1.1s,mb5.6
EBAN Banos Encina 88.91 346 P **P 12 11 36.6 -1.3**
EBAN pmax pmax
comp=Z,74nm,1.1s,mb5.6
CTEI Djebel Teioual 88.97 338 P **P 12 11 38.3 0.0**
EADA Adamuz 89.02 347 P **P 12 11 37.2 -1.3**
comp=Z,37nm,1.2s,mb5.3
LIS Lisbon 89.05 350 eP **P 12 11 38.6 0.0**
LIS comp=N,2μm,20.3s AMS AMS 12 59 31.1
LIS Lisbon 89.05 350 eP **P 12 11 38.6 0.0**
EHUE Huescar 89.07 345 P **P 12 11 37.5 -1.2**
comp=N,146nm,1.2s,mb5.9
EHUE Huescar 89.07 345 P **P 12 11 37.5 -1.2**
EHUE pmax pmax
comp=Z,146nm,1.2s,mb5.9
SET Setif 89.07 338 P **P 12 11 40.0 +1.3**
EVO Evora 89.11 349⇑ iP **P 12 11 38.1 -0.8**
comp=Z,53nm,1.1s,mb5.2
EVO eMLR MLR
comp=Z,2μm,20.8s
EVO Evora 89.11 349 eP **P 12 11 38.2 -0.7**
comp=Z,45nm,1.3s,mb5.3
EQES Quesada 89.15 345 P **P 12 11 39.1 0.0**
comp=Z,91nm,1.2s,mb5.7
CKHR Kef el Ahmar 89.22 338 P **P 12 11 39.7 +0.2**
ECAB El Cabril 89.23 347 P **P 12 11 38.4 -1.0**
comp=Z,18nm,0.8s,mb5.2
PBAR Barrancos 89.34 348 eP **P 12 11 39.3 -0.7**
comp=Z,56nm,1.5s,mb5.4
PBAR i SKS 12 22 27.3
PBAR eLR LR 12 41 53.4
comp=Z,1μm,20.0s
ELUQ Luque 89.57 346 P **P 12 11 40.0 -1.1**
comp=Z,104nm,1.2s,mb5.8
ELUQ Luque 89.57 346 P **P 12 11 40.0 -1.1**
ELUQ pmax pmax
comp=Z,104nm,1.2s,mb5.8
PBEJ Beja 89.59 349 eP **P 12 11 40.5 -0.6**
comp=Z,39nm,1.1s,mb5.5
EMHD Djebel Mahouad 89.61 340 P **P 12 11 40.9 -0.3**
EMIN Mina Concepcio 89.70 348 P **P 12 11 41.1 -0.5**
comp=Z,22nm,0.8s,mb5.3
ECOG Cogollos-Vega 89.75 346 P **P 12 11 41.7 -0.2**
comp=Z,42nm,0.8s,mb5.6
ECOG Cogollos-Vega 89.75 346 P **P 12 11 41.7 -0.2**
ECOG pmax pmax
comp=Z,42nm,0.8s,mb5.6
EBNR Beni Rached 89.81 341 P **P 12 11 43.5 +1.3**
MESJ Messejana 89.81 349 ePP PP 12 15 15.3 +1.0
MESJ eS SKSac 12 22 05.7 -1.1
MESJ A 12 59 07.1
comp=Z,1μm,21.0s
MESJ Messejana 89.81 349 eP **P 12 11 42.3 +0.1**
MESJ ePP PP 12 15 15.3 +1.0
MESJ eS SKSac 12 22 05.7 -1.0
MESJ AMS AMS 12 59 07.1
comp=Z,1μm,21.0s
MESJ Messejana 89.81 349 eP **P 12 11 42.3 +0.1**
MESJ e 12 15 15.3
MESJ eS SKSac 12 22 05.7 -1.1
TOO Toolangi 89.84 190⇑ iP **P 12 11 42.4 +0.5**
ELOJ Sierra Loja 89.96 346 P **P 12 11 43.1 +0.2**
comp=Z,71nm,0.9s,mb5.8
ELOJ Sierra Loja 89.96 346 P **P 12 11 43.1 +0.2**
ELOJ pmax pmax
comp=Z,71nm,0.9s,mb5.8
PCVE Castro Verde 90.00 349 eP **P 12 11 42.6 -0.4**
comp=Z,60nm,1.3s,mb5.6
PCVE eSKS 12 22 31.7
EBER Berja 90.01 345 P **P 12 11 42.3 -0.8**
comp=Z,21nm,0.7s,mb5.4
EGRO El Granado 90.03 349 P **P 12 11 42.8 -0.4**
comp=Z,29nm,0.9s,mb5.4
ERON Agron 90.03 346 P **P 12 11 42.2 -1.0**
comp=Z,3.3nm,0.7s
EGUA Guajares 90.18 346 P **P 12 11 42.7 -1.2**
comp=Z,983nm,1.1s
EGUA Guajares 90.18 346 P **P 12 11 42.7 -1.2**
PVAQ Vaqueiros 90.19 349 eP **P 12 11 43.4 -0.5**
comp=Z,58nm,1.5s,mb5.5
PVAQ eSKS 12 22 34.8
PVAQ eLQ 12 37 21.2
PVAQ eLR LR 12 42 42.3
comp=Z,1μm,22.0s
EANR 'Ain N'Sour 90.22 342 P **P 12 11 41.1 -3.0**
PBDV Barranco-do-Ve 90.37 349 eP **P 12 11 44.6 -0.2**
comp=Z,55nm,1.2s,mb5.6
PBDV eSKS 12 22 36.7
PBDV eLR LR 12 41 58.7
comp=Z,2μm,20.0s
MORF Marmelete 90.39 350 eP **P 12 11 43.3 -1.6**
comp=Z,63nm,1.4s,mb5.6
MORF eLQ 12 35 50.5
MORF eLR LR 12 46 12.5
comp=Z,1μm,20.0s
MORF Marmelete 90.39 350 eP **P 12 11 44.6 -0.3**
MORF e 12 15 20.1
MORF eS SKSac 12 22 09.4 -0.7
KLBR Kellerberrin 90.45 214 eP **P 12 11 43.8 -1.1**
comp=Z,80nm,1.4s,mb5.7
ESPR Espera 90.48 347 P **P 12 11 45.3 +0.1**
comp=Z,20nm,1.0s,mb5.2
PFVI Vila Bisbo 90.58 350 eP **P 12 11 45.3 -0.5**
comp=Z,76nm,1.3s,mb5.7
PFVI eSKS 12 22 38.6
PFVI eLR LR 12 42 56.2
comp=Z,1μm,16.0s
EMIJ Mijas 90.62 346 P **P 12 11 45.2 -0.7**
comp=Z,29nm,0.9s,mb5.4
EJIF Jimena Fronter 90.83 347 P **P 12 11 45.6 -1.4**
comp=Z,94nm,1.1s,mb5.8
EJIF Jimena Fronter 90.83 347 P **P 12 11 45.6 -1.4**
EJIF pmax pmax
comp=Z,94nm,1.1s,mb5.8
MDT Midelt 94.28 346 P **P 12 12 02.3 -0.6**
comp=Z,20nm,0.9s,mb5.4,baz=24,slow=4.9,SNR=37
MDT LR LR 13 02 48.5
comp=Z,1μm,18.4s,baz=3.8,slow=41
RKT Rikitea 94.68 122 eLR LR 12 42 18.0
comp=Z,5μm,23.2s,baz=322
ATD Arta Tunnel 96.01 297 LR LR 12 59 57.1
comp=Z,779nm,19.5s,baz=39,slow=38
TOA0 Torodi Ar. Sit 112.08 335 ePKPdf PKiKP 12 17 18.6 -0.3
TORD Torodi Ar. Bea 112.08 335 Pdiff Pdif 12 13 24.2 +1.6
comp=Z,2.3nm,0.9s,baz=9.9,slow=4.7,SNR=6.7
TORD PKiKP PKiKP 12 17 18.6 -0.3
comp=Z,4.0nm,0.7s,baz=17,slow=1.9,SNR=18
TORD PKKPbc PKKPbc 12 27 59.8 -8.4
comp=Z,1.9nm,1.2s,baz=263,slow=2.5,SNR=3.8
TORD Torodi Ar. Bea 112.08 335 Pdif Pdif 12 13 24.2 +1.6
TORD PKPdf PKiKP 12 17 18.6 -0.3
TORD PKKPbc PKKPbc 12 27 59.8 -8.4
RPN Rapa Nui 112.28 106 T 14 19 33.8
comp=Z,82nm,0.3s,baz=30,slow=3.0,SNR=8.6
DBIC Dimbokro 119.86 341 PKP PKPdf 12 17 33.7 -0.2
comp=Z,25nm,0.7s,baz=14,slow=3.0,SNR=37
DBIC Dimbokro 119.86 341 ePKPdf PKPdf 12 17 33.6 -0.3
DBIC Dimbokro 119.86 341 PKIKP PKPdf 12 17 33.7 -0.2
DBIC pmax pmax
comp=Z,25nm,0.7s
TIC Toumodi 119.91 341 ePKIKP PKPdf 12 17 33.8 -0.3
comp=Z,132nm,1.1s
TIC Toumodi 119.91 341 ePKIKP PKPdf 12 17 33.8 -0.3
KIC Kosan Boka 120.13 340 ePKIKP PKPdf 12 17 34.1 -0.4
comp=Z,113nm,1.1s
LIC Lamto 120.33 341 ePKIKP PKPdf 12 17 34.5 -0.3
comp=Z,140nm,1.1s
LIC Lamto 120.33 341⇑ iPKIKP PKPdf 12 17 34.5 -0.3
comp=Z,36nm,0.6s
LIC eMLR MLR
comp=Z,2μm,23.0s
LIC Lamto 120.33 341⇑ iPKPdf PKPdf 12 17 34.5 -0.3
LIC LR LR
comp=Z,860nm,23.0s
LSZ Lusaka 126.19 294 ePKPdf PKPdf 12 17 46.5 +0.6
LSZ Lusaka 126.19 294 ePKIKP PKPdf 12 17 46.5 +0.6
MIR Mirnyy 128.03 207 ⇓ iPKIKP PKPdf 12 17 47.6 -0.2
MIR pmax pmax
comp=Z,43nm,1.2s
LPAZ La Paz 128.96 63 PKP PKPdf 12 17 51.2 +0.1
comp=Z,8.6nm,0.8s,baz=359,slow=3.4,SNR=28
LPAZ PP PP 12 20 00.1 +1.1
comp=Z,3.6nm,1.0s,baz=298,slow=1.9,SNR=3.7
LPAZ La Paz 128.96 63 ePKPdf PKPdf 12 17 51.0 -0.1
LPAZ La Paz 128.96 63 PKIKP PKPdf 12 17 51.3 +0.1
LPAZ 12 20 00.1
LPAZ pmax pmax
comp=Z,9.0nm,0.8s
LPAZ pmax pmax
comp=Z,4.0nm,1.0s
SBA Scott Base 129.63 178 ePKPdf PKPdf 12 17 49.4 -1.3
SBA Scott Base 129.63 178 ePKIKP PKPdf 12 17 49.4 -1.3
RCBR Riachuelo 132.55 19 PKP PKPdf 12 17 58.3 +0.1
comp=Z,29nm,1.1s,baz=328,slow=2.7,SNR=4.4
TSUM Tsumeb 135.19 302 ePKPdf PKPdf 12 18 03.3 +0.4
LBTB Lobatse 135.32 288 ePKPdf PKPdf 12 18 03.2 +0.3
LBTB Lobatse 135.32 288 ePKIKP PKPdf 12 18 03.2 +0.3
LCO Las Campanas 137.28 77 ePKPdf PKPdf 12 18 06.4 0.0
BDFB Brasilia 138.16 40 PKhKP PKPpre 12 17 57.4
comp=Z,2.1nm,0.5s,baz=321,slow=25,SNR=5.0
BDFB PKP PKPdf 12 18 08.3 -0.1
comp=Z,18nm,0.8s,baz=308,slow=2.4,SNR=3.1
BDFB Brasilia 138.16 40 PKP PKPdf 12 18 08.3 -0.1
BDFB Brasilia 138.16 40 i PKHKP PKPpre 12 17 57.4
BDFB 12 18 08.3
BDFB pmax pmax
comp=Z,2.0nm,0.5s
BDFB pmax pmax
comp=Z,18nm,0.8s
BOSA Boshof 138.21 285 PKhKP PKPpre 12 17 59.3
comp=Z,6.1nm,0.9s,baz=331,slow=3.1,SNR=9.1
BOSA PKP PKPdf 12 18 08.5 +0.3
comp=Z,36nm,1.0s,baz=47,slow=1.6,SNR=12
BOSA Boshof 138.21 285 PKP PKPdf 12 18 08.5 +0.3
BOSA Boshof 138.21 285 i PKHKP PKPpre 12 17 59.3
BOSA 12 18 08.5
BOSA pmax pmax
comp=Z,6.0nm,0.9s
BOSA pmax pmax
comp=Z,36nm,1.0s
MAW Mawson 138.40 215 PKhKP PKPpre 12 17 57.2
comp=Z,3.3nm,1.0s,baz=66,slow=4.9,SNR=7.5
MAW PKP PKPdf 12 18 07.3 0.0
comp=Z,12nm,1.1s,baz=44,slow=3.0,SNR=16
MAW Mawson 138.40 215 eP PKPdf 12 17 56.9 -10
comp=Z,11nm,1.2s
MAW Mawson 138.40 215 PKP PKPdf 12 18 07.3 0.0
MAW Mawson 138.40 215 i PKHKP PKPpre 12 17 57.2
MAW 12 18 07.3
MAW pmax pmax
comp=Z,3.0nm,1.0s
MAW pmax pmax
comp=Z,12nm,1.1s
CPUP Villa Florida 142.95 60 PKhKP PKPpre 12 18 11.8
comp=Z,9.6nm,0.7s,baz=310,slow=2.3,SNR=15
PLCA Paso Flores 145.10 91 PKPbc PKPbc 12 18 18.9 -0.9
comp=Z,65nm,0.8s,baz=299,slow=3.9,SNR=123
PLCA Paso Flores 145.10 91 ePKPdf PKPdf 12 18 18.9 -1.2
PLCA Paso Flores 145.10 91 PKIKP PKPdf 12 18 18.9 -1.2
PLCA pmax pmax
comp=Z,65nm,0.8s
SPB Sao Paulo 145.50 45 ePKPbc PKPbc 12 18 21.3 -0.3
CAM4 Nova Friburgo 146.36 36 ⇓ iP PKPdf 12 18 23.2 +0.4
CAM4 i 12 18 24.3
CAM4 i 12 18 37.8
CAM4 i 12 18 41.1
SYO Syowa Base 147.11 216 ⇓ PKPdf PKPdf 12 18 22.8 +0.2
TRQA Tornquist 148.76 80 ePKPdf PKPdf 12 18 26.4 +0.1
TRQA ePKPbc PKPbc 12 18 29.2 -1.0
PMSA Palmer Station 154.92 137 ePKPbc PKPbc 12 18 42.6 -0.8
NVL N'lazarevskaya 155.78 207 ePKP2 PKPab 12 19 02.0 -0.8

*ISK **18** 12:04:03.9, 39°.47N×28°.22E, h11km, ML2.1*
*ISCJB **18** 12:04:04.6±0.6, 39°.47N±0°.04×28°.15E±0°.04, h12km±6km, Error ellipse: s-maj=7.4km s-min=4.2km az=33.4*
*DDA **18** 12:04:04.1, 39°.51N×28°.18E, h7km±2km, Md2.8*
*CSEM **18** 12:04:04.7±0.2, 39°.46N×28°.17E, h15km, MD2.8, Error ellipse: s-maj=6.2km s-min=3.3km az=45.0*
ISC 18 12:04:04.9±0.6, 39.46N±0°.04×28.15E±0°.04, h16km±5km, n22, σ0.92/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.28**	**311**	ePG	**Pg**	**12 04 10.4**	**-0.4**
BALB				eSG	**Sg**	**12 04 16.1**	**+1.3**
BALB	**Balikesir**	**0.28**	**311**	ePg	**Pg**	**12 04 10.4**	**-0.4**
BALB				eSg	**Sg**	**12 04 16.1**	**+1.3**
DURS	**Dursunbey**	**0.29**	**61**	i P	**Pg**	**12 04 09.7**	**-1.3**
DURS				i S	**Sg**	**12 04 16.7**	**+1.4**
DURS	**Dursunbey**	**0.29**	**61**	i P	**Pg**	**12 04 09.7**	**-1.4**
DURS				i S	**Sg**	**12 04 16.7**	**+1.5**
BALY	**Balya**	**0.50**	**305**	i P	**Pg**	**12 04 13.6**	**-1.2**
BALY				i S	**Sg**	**12 04 21.5**	**0.0**
BALY	**Balya**	**0.50**	**305**	i P	**Pg**	**12 04 13.6**	**-1.2**
BALY				i S	**Sg**	**12 04 21.5**	**+0.1**
DEMI	**Demirci**	**0.61**	**133**	i P	**Pg**	**12 04 16.1**	**-0.7**
DEMI				i S	**Sg**	**12 04 26.0**	**+1.2**
DEMI	**Demirci**	**0.61**	**133**	i P	**Pg**	**12 04 16.1**	**-0.7**
DEMI				i S	**Sg**	**12 04 26.0**	**+1.1**
GONE	**Gonen-Balikesi**	**0.69**	**329**	ePG	**Pg**	**12 04 17.5**	**-0.8**
GONE				eSG	**Sg**	**12 04 28.7**	**+1.3**
GONE	**Gonen-Balikesi**	**0.69**	**329**	ePg	**Pg**	**12 04 17.5**	**-0.8**
GONE				eSg	**Sg**	**12 04 28.7**	**+1.3**
KULA	**Kula-Manisa**	**1.02**	**157**	ePG	**Pg**	**12 04 24.4**	**-0.3**
KULA	**Kula-Manisa**	**1.02**	**157**	ePg	**Pg**	**12 04 24.4**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.07**	**32**	ePG	**Pg**	**12 04 24.1**	**-1.4**
MDNY				eSG	**Sg**	**12 04 39.3**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.07**	**32**	ePg	**Pg**	**12 04 24.2**	**-1.4**
MDNY				eSg	**Sg**	**12 04 39.3**	**-0.3**
GDZ	**Gediz**	**1.10**	**109**	i P	**Pb**	**12 04 24.8**	**-0.7**
GDZ				i S	**Sb**	**12 04 40.6**	**+1.0**
GDZ	**Gediz**	**1.10**	**109**	i P	**Pb**	**12 04 24.8**	**-0.7**
GDZ				i S	**Sb**	**12 04 40.6**	**+1.0**
ARMT	**Armutlu**	**1.23**	**26**	ePN	**Pn**	**12 04 27.5**	**0.0**
ARMT	**Armutlu**	**1.23**	**26**	ePn	**Pn**	**12 04 27.5**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.44**	**329**	ePN	**Pn**	**12 04 30.8**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.44**	**329**	ePn	**Pn**	**12 04 30.8**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.59**	**307**	ePN	**Pn**	**12 04 32.9**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.59**	**307**	ePn	**Pn**	**12 04 32.9**	**+0.5**

*SZGRF **18** 12:02:55.0, 18°.66S×175°.36W, h33km, Tonga Islands*
*ISCJB **18** 12:04:05.8±0.8, 18°.10S±0°.10×177°.85W±0°.08, h611km±11km, mb4.3/18, Error ellipse: s-maj=16.5km s-min=8.3km az=148.9*
*BJI **18** 12:04:05.5, 17°.38S×177°.19W, h601km, mb4.6/3*
*IDC **18** 12:04:06.1±1.1, 18°.06S×177°.84W, h600km±14km, mb3.7/14, mb1 3.9/16, mb1mx3.8/20, mbtmp3.7/16, Error ellipse: s-maj=15.0km s-min=9.3km az=150.0*
*NEIC **18** 12:04:06.2±0.7, 18°.05S×177°.81W, h604km±9km, mb4.8/3, Error ellipse: s-maj=12.1km s-min=6.6km az=157.0*
ISC 18 12:04:06.5±0.7, 18°.06S±0°.09×177°.82W±0°.08, h602km±10km, n88, σ0.75/50, mb4.3/18, 4C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.13**	**55**	P	**P**	**12 05 57.3**	**-0.5**
AFI				S	**S**	**12 07 29.4**	**+0.6**
AFI	**Afiamalu**	**7.13**	**55**	eP	**P**	**12 05 57.3**	**-0.6**
AFI				S	**S**	**12 07 29.4**	**+0.6**
RAR	**Rarotonga**	**17.29**	**103**	P	**P**	**12 07 35.0**	**-0.5**
URZ	**Urewera**	**20.61**	**191**	P	**P**	**12 08 03.9**	**-1.5**
PPT	**Papeete**	**26.89**	**93**	P	**P**	**12 09 00.9**	**-0.4**
EIDS	**Eidsvold**	**29.74**	**250**	eP	**P**	**12 09 25.6**	**-0.3**
ARMA	**Armidale**	**30.35**	**240**	⇓ iP	**P**	**12 09 32.4**	**+1.4**
ARMA	**Armidale**	**30.35**	**240**	eP	**P**	**12 09 31.1**	**+0.1**
CNB	**Canberra Magne**	**33.78**	**233**	eP	**P**	**12 10 00.9**	**+0.9**
CTA	**Charters Tower**	**33.97**	**261**	eP	**P**	**12 10 01.1**	**-0.7**
CTAO	**Charters Tower**	**33.97**	**261**	eP	**P**	**12 10 01.8**	**0.0**
TOO	**Toolangi**	**37.51**	**231**	eP	**P**	**12 10 31.2**	**+0.5**
STKA	**Stephens Creek**	**39.05**	**241**	P	**P**	**12 10 44.2**	**+1.0**
STKA	**Stephens Creek**	**39.05**	**241**	eP	**P**	**12 10 44.2**	**+1.0**
BBOO	**Buckleboo**	**43.82**	**241**	eP	**P**	**12 11 20.8**	**0.0**
WB2	**Warramunga Arr**	**45.14**	**260**	eP	**P**	**12 11 31.0**	**0.0**
WRA	**Warramunga Arr**	**45.15**	**260**	P	**P**	**12 11 30.7**	**-0.4**
WRA				PcP	PcP	12 12 58.0	-0.3
WRA				S	**S**	**12 17 27.6**	**-0.5**
WRA	**Warramunga Arr**	**45.15**	**260**	P	**P**	**12 11 30.7**	**-0.4**
WRA				PcP	PcP	12 12 58.0	-0.3
WRA				S	**S**	**12 17 27.6**	**-0.5**
ASAR	**Alice Springs**	**45.29**	**254**	P	**P**	**12 11 31.9**	**-0.2**
ASAR				PcP	PcP	12 12 58.3	-0.5
ASAR				ScP	ScP	12 15 55.8	+1.0
ASAR				S	**S**	**12 17 28.4**	**-1.5**
ASAR	**Alice Springs**	**45.29**	**254**	P	**P**	**12 11 31.9**	**-0.2**
ASAR				PcP	PcP	12 12 58.3	-0.5
ASAR				ScP	ScP	12 15 55.8	+1.0
ASAR				S	**S**	**12 17 28.4**	**-1.5**
MJAR	**Matsushiro Arr**	**68.36**	**323**	P	**P**	**12 14 08.5**	**-0.6**
MAJO	**Matsushiro**	**68.36**	**323**	eP	**P**	**12 14 08.6**	**-0.4**
MAT	**Matsushiro**	**68.36**	**323**	P	**P**	**12 14 08.6**	**-0.4**
TPUB	**Ta-pu**	**72.81**	**302**	eP	**P**	**12 14 34.0**	**-1.4**
KSM	**Kuching**	**73.26**	**277**	eP	**P**	**12 14 38.2**	**0.0**
PETK	**Petropavlovsk-**	**73.97**	**345**	P	**P**	**12 14 41.0**	**-0.3**
KSRS	**Korea Array**	**75.19**	**318**	P	**P**	**12 14 49.2**	**+0.7**
WCN	**Washoe City**	**78.69**	**42**	eP	**P**	**12 15 08.1**	**+0.6**
NVAR	**Mina Array Bea**	**79.15**	**44**	P	**P**	**12 15 10.5**	**+0.6**
NVAR	**Mina Array Bea**	**79.15**	**44**	P	**P**	**12 15 10.5**	**+0.6**
ETW	**Entiat**	**83.16**	**35**	eP	**P**	**12 15 29.8**	**-0.5**
ENH	**Enshi**	**84.82**	**304**	eP	**P**	**12 15 39.1**	**+0.3**
TXAR	**Lajitas Array**	**85.61**	**57**	P	**P**	**12 15 43.7**	**+1.0**
TXAR	**Lajitas Array**	**85.61**	**57**	P	**P**	**12 15 43.7**	**+1.0**
ILAR	**Eielson Array**	**85.91**	**13**	P	**P**	**12 15 41.7**	**-1.5**
ILAR	**Eielson Array**	**85.91**	**13**	P	**P**	**12 15 41.7**	**-1.5**
XAN	**Xi'an**	**86.80**	**307**	P	**P**	**12 15 48.8**	**+0.7**
DAWY	**Dawson**	**87.08**	**16**	eP	**P**	**12 15 48.4**	**-0.4**
PDAR	**Pinedale Array**	**87.08**	**43**	P	**P**	**12 15 49.4**	**+0.2**
EGAK	**Eagle**	**87.22**	**15**	eP	**P**	**12 15 48.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**89.46**	**290**	P	**P**	**12 16 01.7**	**+0.8**
CHTO	**Chiang Mai**	**89.58**	**290**	eP	**P**	**12 16 01.7**	**+0.3**
PLCA	**Paso Flores**	**90.82**	**133**	P	**P**	**12 16 07.2**	**+0.4**
LZH	**Lanzhou**	**91.42**	**307**	eP	**P**	**12 16 11.5**	**+1.9**
LZH				pmax	pmax		
MKAR	**Makanchi Array**	**109.64**	**314**	PKiKP	PKiKP	12 21 27.8	-1.9
MKAR	**Makanchi Array**	**109.64**	**314**	PKPdf	PKiKP	12 21 27.8	-1.9
KURK	**Kurchatov**	**112.31**	**318**	PKiKP	PKiKP	12 21 33.1	-1.5
BVAR	**Borovoye Array**	**117.31**	**321**	PKPdf	PKPdf	12 21 42.5	-1.6
ARCES	**ARCESS Array B**	**126.56**	**350**	PKP	PKPdf	12 22 00.6	-0.8
BSEG	**Bad Segeberg**	**143.64**	**352**	ePKPbc	PKPdf	12 22 32.0	-1.5
KWP	**Kalwaria Pacla**	**144.43**	**337**	⇓ iP	PKPdf	12 22 34.7	-0.3
BURAR	**Bucovina Array**	**145.01**	**333**	⇑ iP	PKPdf	12 22 37.5	+1.5
KOLS	**Kolonicke sedl**	**145.16**	**337**	ePKP	PKPdf	12 22 37.5	+1.2
TESR		**145.17**	**330**	⇓ iP	PKPdf	12 22 37.3	+0.9
BRTR	**Keskin Array B**	**145.28**	**315**	PKPbc	PKPbc	12 22 37.5	-0.5
CRVS	**Cervenica-Dubn**	**145.49**	**337**	ePKP	PKPab	12 22 40.1	+0.2
VRI	**Vrincioaia**	**145.60**	**329**	⇓ iP	PKPdf	12 22 37.0	-0.1
CLZ	**Clausthal**	**145.68**	**351**	ePKPbc	PKPbc	12 22 38.6	-0.1
UPC	**Upice**	**145.79**	**344**	ePKP	PKPbc	12 22 39.3	+0.2
DPC	**Dobruska-Polom**	**145.85**	**344**	ePKP	PKPbc	12 22 39.6	+0.3
BRG	**Berggiesshubel**	**145.94**	**347**	ePKPbc	PKPbc	12 22 39.3	-0.2
BRG	**Berggiesshubel**	**145.94**	**347**	⇓ iP	PKPdf	12 22 39.2	+1.7
FBE	**Freiberg**	**146.03**	**347**	ePKPbc	PKPbc	12 22 39.9	+0.2
NEUB	**Neuenburg**	**146.06**	**349**	ePKPbc	PKPbc	12 22 39.6	-0.2
PVCC	**Panska Ves**	**146.12**	**346**	ePKP	PKPbc	12 22 40.2	+0.2
KECS	**Kecovo**	**146.20**	**338**	ePKP	PKPbc	12 22 40.3	0.0
MLR	**Muntele Rosu**	**146.25**	**329**	⇑ iP	PKPbc	12 22 41.0	+0.5
MOX	**Moxa**	**146.63**	**349**	ePKPbc	PKPbc	12 22 40.9	-0.5
PRU	**Pruhonice**	**146.63**	**345**	ePKP	PKPbc	12 22 42.1	+0.7
PLN	**Plauen**	**146.68**	**348**	ePKPbc	PKPbc	12 22 41.2	-0.3
WERD	**Werda**	**146.69**	**348**	ePKPbc	PKPbc	12 22 41.2	-0.4
TANN	**Tannenbergstha**	**146.69**	**348**	ePKPbc	PKPbc	12 22 41.3	-0.3
DRGR		**146.72**	**334**	⇑ iP	PKPbc	12 22 41.4	-0.4
VYHS	**Vyhne**	**146.76**	**340**	ePKP	PKPbc	12 22 41.8	0.0
GUNZ	**Gunzen**	**146.76**	**348**	ePKPbc	PKPbc	12 22 41.7	-0.1
WERN	**Wernitzgruen**	**146.82**	**348**	ePKPbc	PKPbc	12 22 41.9	0.0
ROTZ	**Rotzenmuhle**	**147.35**	**348**	ePKPbc	PKPbc	12 22 43.3	0.0
TNS	**Taunus Mts**	**147.52**	**352**	ePKPbc	PKPbc	12 22 43.5	-0.2
TNS	**Taunus Mts**	**147.52**	**352**	ePKPbc	PKPbc	12 22 43.5	-0.2
GEC2	**GERESS Array S**	**147.90**	**346**	ePKPbc	PKPbc	12 22 44.5	-0.3
GEC2	**GERESS Array S**	**147.90**	**346**	ePKPbc	PKPbc	12 22 44.5	-0.3
GERES	**GERESS Array B**	**147.90**	**346**	PKPbc	PKPbc	12 22 44.6	-0.2
PKSM	**Moragy**	**148.79**	**338**	⇓ iP	PKPbc	12 22 46.5	-0.5
BFO	**Black Forest**	**149.39**	**352**	ePKPbc	PKPbc	12 22 47.9	-0.5
VTS	**Vitosha**	**149.71**	**328**	⇑ iP	PKPbc	12 22 48.6	-0.8
DAVOX	**Davos/Dischmat**	**150.66**	**349**	PKPbc	PKPbc	12 22 51.5	0.0
KEST	**Kesra**	**161.28**	**342**	PKPab	PKPab	12 23 47.2	-0.1
TORD	**Torodi Ar. Bea**	**175.09**	**174**	PKPab	PKPab	12 24 49.4	+0.6

*NEIC **18** 12:13:10.3, 16°.67N×94°.79W, h106km, MD3.9(MEX), After MEX.*
MEX 18 12:13:10.3±0.8, 16°.67N×94°.79W, h106km±8km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.43**	**348**	i P	Pn	12 13 25.0	-1.2
CMIG				i S	Sn	12 13 36.4	-1.8
CMIG	**Matias Romero**	**0.43**	**348**	i P	Pn	12 13 25.0	-1.2
CMIG				i S	Sn	12 13 36.4	-1.8
HUIG	**Huatulco**	**1.55**	**235**	i P	Pn	12 13 35.5	-2.0
HUIG				i S	Sn	12 13 57.0	-1.1
HUIG	**Huatulco**	**1.55**	**235**	i P	Pn	12 13 35.5	-2.0
HUIG				i S	Sn	12 13 57.0	-1.1
TGIG		**1.60**	**86**	i P	Pn	12 13 36.7	-1.3
TGIG				i S	Sn	12 13 57.0	-2.1
PCIG		**1.79**	**122**	i P	Pn	12 13 39.9	-0.5
PCIG				i S	Sn	12 14 02.2	-1.1
VHO	**Vista Hermosa**	**1.91**	**282**	i P	Pn	12 13 41.5	-0.4
VHO				i S	Sn	12 14 05.2	-0.8
VHO	**Vista Hermosa**	**1.91**	**282**	i P	Pn	12 13 41.5	-0.4
VHO				i S	Sn	12 14 05.2	-0.8
SCX	**San Cristobal**	**2.06**	**88**	i P	Pn	12 13 43.2	-0.7
SCX				i S	Sn	12 14 08.2	-1.4
SCX	**San Cristobal**	**2.06**	**88**	i P	Pn	12 13 43.2	-0.7
SCX				i S	Sn	12 14 08.2	-1.4
CCIG	**Comitan**	**2.57**	**98**	i P	Pn	12 13 50.1	-0.5
CCIG				i S	Sn	12 14 19.8	-1.6
CCIG	**Comitan**	**2.57**	**98**	i P	Pn	12 13 50.1	-0.5
CCIG				i S	Sn	12 14 19.8	-1.6
PNIG	**Pinotepa**	**3.21**	**266**	eP	Pn	12 13 57.6	-1.5
PNIG				i S	Sn	12 14 34.9	-1.7
PNIG	**Pinotepa**	**3.21**	**266**	eP	Pn	12 13 57.6	-1.5
PNIG				i S	Sn	12 14 34.9	-1.7

IDC 18 12:30:08.4±3.3, 57°.58S×25°.81W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.7/15, mbtmp3.9/2, Error ellipse: s-maj=118.5km s-min=51.3km az=171.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**51.88**	**305**	P	P	12 39 19.1	+0.6
	0.7nm,0.3s,baz=126,slow=6.3,SNR=7.1						

TORD Torodi Ar. Bea 74.04 28 P P 12 41 45.7 -0.1
0.5nm,0.4s,baz=203,slow=6.5,SNR=5.5
ILAR Eielson Array 151.69 309 PKPbc PKPbc 12 50 03.1 0.0
0.6nm,0.8s,baz=145,slow=4.3,SNR=14

IDC 18 12:31:31.2±2.1, 5°.59S×130°.91E, h0km, mb3.9/1, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=95.9km s-min=31.1km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.65**	**167**	Pn	Pn	12 35 00.3	+0.5
	0.2nm,0.3s,baz=347,slow=11,SNR=16						
WRA				Sn	Sn	12 37 28.1	-15
	0.4nm,0.3s,baz=338,slow=22,SNR=9.9						
ASAR	**Alice Springs**	**18.20**	**171**	P	Pn	12 35 45.1	-0.2
	0.1nm,0.3s,baz=349,slow=9.4,SNR=6.8						
ASAR				S	Sn	12 38 53.9	-15
	0.1nm,0.3s,baz=352,slow=26,SNR=4.2						
MKAR	**Makanchi Array**	**67.56**	**326**	P	P	12 42 29.6	+0.1
	0.4nm,0.3s,baz=116,slow=7.2,SNR=7.1						

*NEIC **18** 12:55:48.8, 42°.99N×0°.34W, h5km, ML4.0(STR), ML3.9(LDG), After STR.*
*STR **18** 12:55:48.9±0.3, 43°.00N×0°.35W, h5km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **18** 12:55:48.5±0.1, 43°.16N×0°.31W, h5km, ML3.9/37, Error ellipse: s-maj=1.9km s-min=1.4km az=151.0*
*ISCJB **18** 12:55:49.0±0.3, 43°.14N±0°.02×0°.42W±0°.02, h24km±2km, Error ellipse: s-maj=2.7km s-min=1.9km az=176.3*
*LDG **18** 12:55:49.7±0.1, 43°.08N×0°.34W, h5km, Md3.6/5, Ml3.9/46, Error ellipse: s-maj=1.2km s-min=0.9km az=159.0*
*MDD **18** 12:55:49.9±0.2, 43°.08N×0°.34W, h11km, mbLg3.3/30, Error ellipse: s-maj=2.0km s-min=1.3km az=1.0, PRIMO*
*INMG **18** 12:55:51.4±1.6, 42°.96N×0°.44W, h3km±5km, ML3.2, Error ellipse: s-maj=7.3km s-min=2.9km az=35.0*
*MRB **18** 12:55:51.5, 42°.95N×0°.32W, h0km±3km, ML3.6/14, Error ellipse: s-maj=2.8km s-min=1.7km az=28.0*
ISC 18 12:55:48.4±0.2, 43°.146N±0°.009×0°.32W±0°.01, h13km±1km, n464, σ1°.29/763, 12C-4D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REYF	**Montagne du Re**	**0.09**	**215**	Pg	**Pg**	**12 55 51.7**	**+0.5**
REYF				Lg		12 55 53.1	
REYF	**Montagne du Re**	**0.09**	**215**	Pg	**Pg**	**12 55 51.7**	**+0.5**
REYF				Lg		12 55 53.1	
ATE	**Arette**	**0.28**	**258**	Pg	**Pg**	**12 55 54.8**	**+0.5**
ATE	**Arette**	**0.28**	**258**	Pg	**Pg**	**12 55 54.8**	**+0.5**
ETSF	**Etsaut**	**0.30**	**215**	*e*Pg	**Pg**	**12 55 54.2**	**-0.4**
	SNR=1.0						
ETSF				*e*Sg	**Sg**	**12 55 57.2**	**-1.6**
	12μm,0.3s						
ETSF	**Etsaut**	**0.30**	**215**	Pg	**Pg**	**12 55 54.2**	**-0.4**
ETSF				Lg		12 55 57.2	
	6μm,0.3s						
ETSF	**Etsaut**	**0.30**	**215**	Pg	**Pg**	**12 55 54.2**	**-0.4**
ETSF				Lg		12 55 57.2	
	6μm,0.3s						
ETSF	**Etsaut**	**0.30**	**215**	*e*Pg	**Pg**	**12 55 54.2**	**-0.4**
	SNR=1.0						
ETSF				*e*Sg	**Sg**	**12 55 57.2**	**-1.6**
	6μm,0.3s						
LABF	**Labassere**	**0.30**	**109**	Pg	**Pg**	**12 55 55.5**	**+0.8**
LABF				Lg		12 56 00.3	
LABF	**Labassere**	**0.30**	**109**	Pg	**Pg**	**12 55 55.5**	**+0.8**
LABF				Lg		12 56 00.3	
VIEF	**Viey**	**0.36**	**136**	Pg	**Pg**	**12 55 55.9**	**+0.1**
VIEF				Lg		12 56 00.6	
VIEF	**Viey**	**0.36**	**136**	Pg	**Pg**	**12 55 55.9**	**+0.1**
VIEF				Lg		12 56 00.6	
FDAF	**Les Forges d'A**	**0.37**	**209**	Pg	**Pg**	**12 55 55.3**	**-0.6**
FDAF				Lg		12 55 59.4	
FDAF	**Les Forges d'A**	**0.37**	**209**	Pg	**Pg**	**12 55 55.3**	**-0.6**
FDAF				Lg		12 55 59.4	
ORDF	**Ordiarp**	**0.46**	**279**	Pg	**Pg**	**12 55 58.5**	**+1.1**
ORDF				Sg	**Sg**	**12 56 04.6**	**+1.1**
ORDF	**Ordiarp**	**0.46**	**279**	Pg	**Pg**	**12 55 58.5**	**+1.1**
ORDF				Lg		12 56 06.1	
ORDF	**Ordiarp**	**0.46**	**279**	Pg	**Pg**	**12 55 58.5**	**+1.1**
ORDF				Lg		12 56 06.1	
ORDF	**Ordiarp**	**0.46**	**279**	Pg	**Pg**	**12 55 58.5**	**+1.1**
ORDF				Sg	**Sg**	**12 56 04.6**	**+1.1**
EPF	**Esparros**	**0.50**	**103**	*e*Pg	**Pg**	**12 55 59.2**	**+1.0**
	SNR=1.0						
EPF				*e*Sg	**Sg**	**12 56 06.5**	**+1.7**
	2μm,0.3s,SNR=1.0						
EPF	**Esparros**	**0.50**	**103**	Pg	**Pg**	**12 55 59.2**	**+1.0**
EPF				Lg		12 56 06.5	
	818nm,0.3s						
EPF	**Esparros**	**0.50**	**103**	Pg	**Pg**	**12 55 59.2**	**+1.0**
EPF				Lg		12 56 06.5	
	818nm,0.3s						
EPF	**Esparros**	**0.50**	**103**	*e*Pg	**Pg**	**12 55 59.2**	**+1.0**
	SNR=1.0						
EPF				*e*Sg	**Sg**	**12 56 06.5**	**+1.7**
	818nm,0.3s,SNR=1.0						
LARF	**Larrau**	**0.50**	**258**	Pg	**Pg**	**12 55 56.2**	**-2.1**
LARF				Sg	**Sg**	**12 56 05.2**	**+0.3**
LARF	**Larrau**	**0.50**	**258**	Pg	**Pg**	**12 55 56.2**	**-2.1**
LARF				Lg		12 56 03.6	
LARF	**Larrau**	**0.50**	**258**	Pg	**Pg**	**12 55 56.2**	**-2.1**
LARF				Lg		12 56 03.6	
LARF	**Larrau**	**0.50**	**258**	Pg	**Pg**	**12 55 56.2**	**-2.1**
LARF				Sg	**Sg**	**12 56 05.2**	**+0.3**
EBIE	**Bielsa**	**0.57**	**143**	Pg	**Pg**	**12 55 59.4**	**-0.2**
EBIE				Lg		12 56 06.3	
EBIE	**Bielsa**	**0.57**	**143**	⇑Pg	**Pg**	**12 55 59.4**	**-0.2**
	182nm,0.3s,SNR=18						
EBIE				Lg		12 56 06.3	
	632nm,0.1s,SNR=5.0						
EBIE	**Bielsa**	**0.57**	**143**	⇑Pg	**Pg**	**12 55 59.4**	**-0.2**
	182nm,0.3s,SNR=18						
EBIE				Lg		12 56 06.3	
	632nm,0.1s,SNR=5.0						
EBIE	**Bielsa**	**0.57**	**143**	P	**Pg**	**12 55 59.3**	**-0.3**
EBIE				S	**Sg**	**12 56 06.0**	**-1.2**
EBIE				Lg		12 56 06.3	
	637nm,0.3s,SNR=5.0						
RESF	**Ens**	**0.59**	**125**	Pg	**Pg**	**12 56 00.2**	**+0.3**
RESF				Lg		12 56 07.6	
RESF	**Ens**	**0.59**	**125**	Pg	**Pg**	**12 56 00.2**	**+0.3**
RESF				Lg		12 56 07.6	
SJPF	**Ste Jean**	**0.66**	**268**	*e*Pg	**Pg**	**12 56 01.9**	**+0.6**
	SNR=1.0						
SJPF				*e*Sg	**Sg**	**12 56 11.3**	**+1.3**
	1μm,0.4s						
SJPF	**Ste Jean**	**0.66**	**268**	Pg	**Pg**	**12 56 01.9**	**+0.6**
SJPF				Lg		12 56 11.3	
	738nm,0.4s						
SJPF	**Ste Jean**	**0.66**	**268**	Pg	**Pg**	**12 56 01.9**	**+0.6**
SJPF				Lg		12 56 11.3	
	738nm,0.4s						
SJPF	**Ste Jean**	**0.66**	**268**	*e*Pg	**Pg**	**12 56 01.9**	**+0.6**
	SNR=1.0						
SJPF				*e*Sg	**Sg**	**12 56 11.3**	**+1.3**
	738nm,0.4s						
OSSF	**Osses**	**0.70**	**279**	Pg	**Pg**	**12 56 02.5**	**+0.5**
OSSF	**Osses**	**0.70**	**279**	Pg	**Pg**	**12 56 02.1**	**+0.1**
OSSF				Lg		12 56 12.2	
OSSF	**Osses**	**0.70**	**279**	Pg	**Pg**	**12 56 02.1**	**+0.1**
OSSF				Lg		12 56 12.2	
OSSF	**Osses**	**0.70**	**279**	Pg	**Pg**	**12 56 02.5**	**+0.5**
IELO	**Elcoad**	**0.74**	**246**	⇑Pg	**Pg**	**12 56 02.6**	**-0.1**
	174nm,0.3s,SNR=18						
IELO				Lg		12 56 12.2	
	644nm,0.1s,SNR=7.9						
IELO	**Elcoad**	**0.74**	**246**	⇑Pg	**Pg**	**12 56 02.6**	**-0.1**
	174nm,0.3s,SNR=18						
IELO				Lg		12 56 12.2	
	644nm,0.1s,SNR=7.9						
IELO	**Elcoad**	**0.74**	**246**	Pg	**Pg**	**12 56 02.5**	**-0.2**
	SNR=7.9						
IELO				Lg		12 56 12.5	
	SNR=7.9						
EORO	**Oroz-Betelu**	**0.77**	**251**	⇑Pg	**Pg**	**12 56 03.3**	**0.0**
	233nm,0.3s,SNR=18						
EORO				Lg		12 56 13.2	
	591nm,0.4s,SNR=20						
EORO	**Oroz-Betelu**	**0.77**	**251**	⇑Pg	**Pg**	**12 56 03.3**	**0.0**
	233nm,0.3s,SNR=18						
EORO				Lg		12 56 13.2	
	591nm,0.4s,SNR=20						
EORO	**Oroz-Betelu**	**0.77**	**251**	Pg	**Pg**	**12 56 03.3**	**0.0**
	233nm,0.3s,SNR=221						
EORO				Lg		12 56 13.5	
	591nm,0.4s,SNR=20						
MELF	**Melles**	**0.84**	**109**	Pg	**Pg**	**12 56 04.5**	**-0.2**
MELF				Lg		12 56 15.8	
MELF	**Melles**	**0.84**	**109**	Pg	**Pg**	**12 56 04.5**	**-0.2**
MELF				Lg		12 56 15.8	
EALK	**Alkurruntz**	**0.87**	**275**	Pg	**Pg**	**12 56 05.1**	**-0.2**
EALK				Lg		12 56 17.9	
EALK	**Alkurruntz**	**0.87**	**275**	Pg	**Pg**	**12 56 05.1**	**-0.1**
	132nm,0.4s,SNR=158						
EALK				Lg		12 56 17.9	
	352nm,0.3s,SNR=23						
EALK	**Alkurruntz**	**0.87**	**275**	Pg	**Pg**	**12 56 05.1**	**-0.1**
	132nm,0.4s,SNR=158						
EALK				Lg		12 56 17.9	
	352nm,0.3s,SNR=23						
EALK	**Alkurruntz**	**0.87**	**275**	Pg	**Pg**	**12 56 05.1**	**-0.2**
	132nm,0.4s,SNR=158						
EALK				Lg		12 56 17.9	
	352nm,0.3s,SNR=23						
IZUN	**Zunzarren**	**0.88**	**252**	⇓Pg	**Pg**	**12 56 05.3**	**-0.1**
	22nm,0.1s,SNR=18						
IZUN				Lg		12 56 16.9	
	426nm,0.3s,SNR=7.9						
IZUN	**Zunzarren**	**0.88**	**252**	⇓Pg	**Pg**	**12 56 05.3**	**-0.1**
	22nm,0.1s,SNR=18						
IZUN				Lg		12 56 16.9	
	426nm,0.3s,SNR=7.9						
IZUN	**Zunzarren**	**0.88**	**252**	Pg	**Pg**	**12 56 05.3**	**-0.1**
	SNR=7.9						
IZUN				Lg		12 56 19.2	
	SNR=7.9						
ELIZ	**Elizondo**	**0.88**	**272**	Pg	**Pg**	**12 56 06.0**	**+0.5**
ELIZ				Lg		12 56 18.9	
ELIZ	**Elizondo**	**0.88**	**272**	⇑Pg	**Pg**	**12 56 05.9**	**+0.4**
	107nm,0.2s,SNR=18						
ELIZ				Lg		12 56 18.6	
	400nm,0.2s,SNR=22						
ELIZ	**Elizondo**	**0.88**	**272**	⇑Pg	**Pg**	**12 56 05.9**	**+0.4**
	107nm,0.2s,SNR=18						
ELIZ				Lg		12 56 18.6	
	400nm,0.2s,SNR=22						
ELIZ	**Elizondo**	**0.88**	**272**	Pg	**Pg**	**12 56 06.0**	**+0.5**
	107nm,0.2s,SNR=118						
ELIZ				Lg		12 56 18.9	
	400nm,0.2s,SNR=22						
IUSE	**Utxeti**	**0.92**	**258**	Pg	**Pg**	**12 56 06.0**	**-0.2**
	59nm,0.3s,SNR=51						
IUSE				Lg		12 56 18.7	
	500nm,0.3s,SNR=36						
IUSE	**Utxeti**	**0.92**	**258**	Pg	**Pg**	**12 56 06.0**	**-0.2**
	59nm,0.3s,SNR=51						
IUSE				Lg		12 56 18.7	
	500nm,0.3s,SNR=36						
IUSE	**Utxeti**	**0.92**	**258**	Pg	**Pg**	**12 56 06.1**	**-0.1**
	59nm,0.3s,SNR=51						
IUSE				Lg		12 56 19.3	
	500nm,0.3s,SNR=36						
IUNC	**Unciti**	**0.95**	**246**	⇓Pg	**Pg**	**12 56 07.0**	**+0.2**
	170nm,0.3s,SNR=18						
IUNC				Lg		12 56 18.8	
	773nm,0.4s,SNR=17						
IUNC	**Unciti**	**0.95**	**246**	⇓Pg	**Pg**	**12 56 07.0**	**+0.2**
	170nm,0.3s,SNR=18						
IUNC				Lg		12 56 18.8	
	773nm,0.4s,SNR=17						
IUNC	**Unciti**	**0.95**	**246**	Pg	**Pg**	**12 56 07.2**	**+0.5**
	170nm,0.3s,SNR=33						
IUNC				Lg		12 56 22.1	
	773nm,0.4s,SNR=17						
EARA	**Aranguren**	**1.00**	**248**	Pg	**Pg**	**12 56 07.7**	**+0.1**
	86nm,0.3s,SNR=75						
EARA				Lg		12 56 20.5	
	699nm,0.6s,SNR=5.0						
EARA	**Aranguren**	**1.00**	**248**	Pg	**Pg**	**12 56 07.7**	**+0.1**
	86nm,0.3s,SNR=75						
EARA				Lg		12 56 20.5	
	699nm,0.6s,SNR=5.0						
EARA	**Aranguren**	**1.00**	**248**	Pg	**Pg**	**12 56 07.9**	**+0.3**
	86nm,0.3s,SNR=75						
EARA				Lg		12 56 24.3	
	699nm,0.6s,SNR=5.0						
MLS	**Moulis**	**1.05**	**100**	Pg	**Pg**	**12 56 09.3**	**+0.6**
MLS				Sg	**Sg**	**12 56 24.7**	**+2.2**
MLS	**Moulis**	**1.05**	**100**	Pg	**Pg**	**12 56 09.2**	**+0.5**
MLS				Lg		12 56 22.0	
MLS	**Moulis**	**1.05**	**100**	Pg	**Pg**	**12 56 09.2**	**+0.5**
MLS				Lg		12 56 22.0	
MLS	**Moulis**	**1.05**	**100**	Pg	**Pg**	**12 56 09.3**	**+0.6**
MLS				Sg	**Sg**	**12 56 24.7**	**+2.2**
CTRE	**Tremp**	**1.15**	**135**	Pg	**Pg**	**12 56 10.2**	**-0.4**
CTRE				Lg		12 56 25.2	
	631nm,0.2s						
CTRE	**Tremp**	**1.15**	**135**	Pg	**Pg**	**12 56 10.2**	**-0.4**
CTRE				Lg		12 56 25.2	
	631nm,0.2s						
CTRE	**Tremp**	**1.15**	**135**	P	**Pb**	**12 56 10.3**	**+0.1**
CTRE				S	**Sb**	**12 56 25.3**	**+0.3**
	631nm,0.2s						
SALF	**Salau**	**1.17**	**109**	Pg	**Pg**	**12 56 10.9**	**-0.1**
SALF				Sg	**Sg**	**12 56 26.7**	**+0.4**
SALF	**Salau**	**1.17**	**109**	Pg	**Pg**	**12 56 10.9**	**-0.1**
SALF				Lg		12 56 26.7	
SALF	**Salau**	**1.17**	**109**	Pg	**Pg**	**12 56 10.9**	**-0.1**
SALF				Lg		12 56 26.7	
SALF	**Salau**	**1.17**	**109**	Pg	**Pg**	**12 56 10.9**	**-0.1**
SALF				Sg	**Sg**	**12 56 26.7**	**+0.4**
CEST	**Esterri de Car**	**1.28**	**115**	Pg	**Pg**	**12 56 12.6**	**-0.4**
CEST				Lg		12 56 30.3	
	387nm,0.3s						
CEST	**Esterri de Car**	**1.28**	**115**	Pg	**Pg**	**12 56 12.6**	**-0.4**
CEST				Lg		12 56 30.3	
	387nm,0.3s						
CEST	**Esterri de Car**	**1.28**	**115**	P	**Pn**	**12 56 12.7**	**+0.7**
CEST				S	**Sb**	**12 56 30.4**	**+1.7**
	387nm,0.3s						
CSOR	**Sort**	**1.32**	**125**	Pg	**Pg**	**12 56 13.5**	**-0.3**
CSOR				Lg		12 56 35.9	
CSOR	**Sort**	**1.32**	**125**	⇑Pg	**Pg**	**12 56 13.3**	**-0.5**
	178nm,0.5s,SNR=18						
CSOR				Lg		12 56 31.1	
	550nm,0.3s,SNR=5.0						
CSOR	**Sort**	**1.32**	**125**	⇑Pg	**Pg**	**12 56 13.3**	**-0.5**
	178nm,0.5s,SNR=18						
CSOR				Lg		12 56 31.1	
	550nm,0.3s,SNR=5.0						
CSOR	**Sort**	**1.32**	**125**	P	**Pn**	**12 56 13.2**	**+0.7**
CSOR	**Sort**	**1.32**	**125**	Pg	**Pg**	**12 56 13.5**	**-0.3**
	178nm,0.5s,SNR=118						
CSOR				S	**Sb**	**12 56 31.5**	**+1.7**
	746nm,0.3s						
GRBF	**Gourbit**	**1.40**	**102**	Pg	**Pg**	**12 56 14.7**	**-0.5**
GRBF				Lg		12 56 35.5	
GRBF	**Gourbit**	**1.40**	**102**	Pg	**Pg**	**12 56 14.7**	**-0.5**
GRBF				Lg		12 56 35.5	
ESAC	**San Caprasio**	**1.43**	**184**	⇑Pg	**Pg**	**12 56 15.1**	**-0.7**
	1μm,0.3s,SNR=18						
ESAC				Lg		12 56 31.8	
	69nm,0.1s,SNR=8.2						
ESAC	**San Caprasio**	**1.43**	**184**	⇑Pg	**Pg**	**12 56 15.1**	**-0.7**
	1μm,0.3s,SNR=18						
ESAC				Lg		12 56 31.8	
	69nm,0.1s,SNR=8.2						
ESAC	**San Caprasio**	**1.43**	**184**	Lg		12 56 33.9	
	1μm,0.3s,SNR=8.2						
CAVN	**Les Avellanes**	**1.49**	**147**	Pg	**Pg**	**12 56 16.0**	**-1.1**
CAVN				Lg		12 56 34.8	
	571nm,0.4s						
CAVN	**Les Avellanes**	**1.49**	**147**	Pg	**Pg**	**12 56 16.0**	**-1.1**
CAVN				Lg		12 56 34.8	
	571nm,0.4s						
CAVN	**Les Avellanes**	**1.49**	**147**	P	**Pn**	**12 56 16.1**	**+1.2**
CAVN				S	**Sn**	**12 56 34.8**	**+0.6**
	1μm,0.4s						
CORG	**Organya**	**1.52**	**127**	Pg	**Pg**	**12 56 17.0**	**-0.5**
CORG				Lg		12 56 36.7	
	103nm,0.3s						
CORG	**Organya**	**1.52**	**127**	Pg	**Pg**	**12 56 17.0**	**-0.5**
CORG				Lg		12 56 36.7	
	103nm,0.3s						
CORG	**Organya**	**1.52**	**127**	P	**Pn**	**12 56 17.1**	**+1.9**
CORG				S	**Sn**	**12 56 36.7**	**+1.9**
	205nm,0.3s						
LPEF	**Le Peyrat**	**1.65**	**96**	Pg	**Pg**	**12 56 21.6**	**+1.6**
LPEF				Lg		12 56 42.2	
LPEF	**Le Peyrat**	**1.65**	**96**	Pg	**Pg**	**12 56 21.6**	**+1.6**
LPEF				Lg		12 56 42.2	
CLLI	**Llivia**	**1.81**	**111**	Pg	**Pg**	**12 56 23.4**	**+0.1**
CLLI				Lg		12 56 48.4	
CLLI	**Llivia**	**1.81**	**111**	Pg	**Pg**	**12 56 23.1**	**-0.2**
	73nm,0.4s,SNR=14						
CLLI				Lg		12 56 47.8	
	472nm,0.5s,SNR=24						
CLLI	**Llivia**	**1.81**	**111**	Pg	**Pg**	**12 56 23.1**	**-0.2**
	73nm,0.4s,SNR=14						
CLLI				Lg		12 56 47.8	
	472nm,0.5s,SNR=24						
CLLI	**Llivia**	**1.81**	**111**	P	**Pn**	**12 56 22.9**	**+3.5**
CLLI	**Llivia**	**1.81**	**111**	Pg	**Pg**	**12 56 23.3**	**0.0**
	80nm,0.4s,SNR=63						
CLLI				S	**Sn**	**12 56 47.4**	**+5.2**
	273nm,0.5s						
CLLI				Lg		12 56 48.4	
	483nm,0.5s,SNR=24						
CARF	**Carcanieres**	**1.83**	**103**	Pg	**Pg**	**12 56 24.0**	**+0.4**
CARF				Sg	**Sg**	**12 56 48.2**	**+0.8**
CARF	**Carcanieres**	**1.83**	**103**	Pg	**Pg**	**12 56 23.8**	**+0.2**
CARF				Lg		12 56 47.3	
CARF	**Carcanieres**	**1.83**	**103**	Pg	**Pg**	**12 56 23.8**	**+0.2**
CARF				Lg		12 56 47.3	
EMIR	**Miracle**	**1.84**	**131**	Pg	**Pg**	**12 56 23.0**	**-0.7**
EMIR				Lg		12 56 48.4	
EMIR	**Miracle**	**1.84**	**131**	Pg	**Pg**	**12 56 22.5**	**-1.2**
	124nm,0.3s,SNR=14						
EMIR				Lg		12 56 47.1	
	240nm,0.4s,SNR=10						
EMIR	**Miracle**	**1.84**	**131**	Pg	**Pg**	**12 56 22.5**	**-1.2**
	124nm,0.3s,SNR=14						
EMIR				Lg		12 56 47.1	
	240nm,0.4s,SNR=10						
EMIR	**Miracle**	**1.84**	**131**	Pg	**Pg**	**12 56 23.0**	**-0.7**
	94nm,0.4s,SNR=88						
EMIR				Lg		12 56 48.4	
	240nm,0.4s,SNR=10						
MTLF	**Montolieu**	**1.86**	**83**	*e*Pg	**Pg**	**12 56 25.4**	**+1.2**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**12 56 49.2**	**+0.8**
	252nm,0.2s						
MTLF	**Montolieu**	**1.86**	**83**	*e*Pn	**Pn**	**12 56 21.0**	**+0.9**
MTLF				*e*Pg	**Pg**	**12 56 25.4**	**+1.2**
MTLF				*e*Sg	**Sg**	**12 56 49.2**	**+0.8**
MTLF	**Montolieu**	**1.86**	**83**	Pn	**Pn**	**12 56 21.0**	**+0.9**
MTLF				Pg	**Pg**	**12 56 25.4**	**+1.2**
MTLF				Lg		12 56 49.2	
	126nm,0.2s						
MTLF	**Montolieu**	**1.86**	**83**	Pn	**Pn**	**12 56 21.0**	**+0.9**
MTLF				Pg	**Pg**	**12 56 25.4**	**+1.2**
MTLF				Lg		12 56 49.2	
	126nm,0.2s						
MTLF	**Montolieu**	**1.86**	**83**	*e*Pn	**Pn**	**12 56 21.0**	**+0.9**
	SNR=1.0						
MTLF	**Montolieu**	**1.86**	**83**	*e*Pg	**Pg**	**12 56 25.4**	**+1.2**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**12 56 49.2**	**+0.8**
	126nm,0.2s						
VALF	**Valcebollere**	**1.88**	**113**	Pg	**Pg**	**12 56 23.8**	**-0.6**
VALF				Lg		12 56 45.6	
VALF	**Valcebollere**	**1.88**	**113**	Pg	**Pg**	**12 56 23.8**	**-0.6**
VALF				Lg		12 56 45.6	
LFF	**La Frestale**	**1.95**	**23**	*e*Pg	**Pg**	**12 56 27.6**	**+1.8**
LFF				*e*Sg	**Sg**	**12 56 54.0**	**+2.9**
	641nm,0.4s,SNR=1.0						
LFF	**La Frestale**	**1.95**	**23**	*e*Pn	**Pn**	**12 56 23.1**	**+1.9**
LFF				*e*Pg	**Pg**	**12 56 27.6**	**+1.8**
LFF				*e*Sg	**Sg**	**12 56 54.0**	**+2.9**
LFF	**La Frestale**	**1.95**	**23**	Pn	**Pn**	**12 56 23.1**	**+1.9**
LFF				Pg	**Pg**	**12 56 27.6**	**+1.8**
LFF				Lg		12 56 54.0	
	321nm,0.4s						
LFF	**La Frestale**	**1.95**	**23**	Pn	**Pn**	**12 56 23.1**	**+1.9**
LFF				Pg	**Pg**	**12 56 27.6**	**+1.8**
LFF				Lg		12 56 54.0	
	321nm,0.4s						
LFF	**La Frestale**	**1.95**	**23**	*e*Pn	**Pn**	**12 56 23.1**	**+1.9**
CBRU	**Bruguera**	**2.03**	**114**	Pg	**Pg**	**12 56 26.7**	**-0.7**
CBRU	**Bruguera**	**2.03**	**114**	Pg	**Pg**	**12 56 26.7**	**-0.7**
CBRU	**Bruguera**	**2.03**	**114**	P	**Pg**	**12 56 26.7**	**-0.7**
EPOB	**Poblet**	**2.07**	**149**	Pn	**Pn**	**12 56 24.4**	**+1.5**
EPOB				Lg		12 56 53.4	
EPOB	**Poblet**	**2.07**	**149**	Pn	**Pn**	**12 56 23.9**	**+1.0**
	48nm,0.3s,SNR=58						
EPOB				Pg	**Pg**	**12 56 26.4**	**-1.8**
	39nm,0.6s,SNR=6.9						
EPOB				Sn	**Sn**	**12 56 47.3**	**-1.3**
	98nm,0.3s,SNR=8.8						
EPOB				Lg		12 56 52.6	
	198nm,0.5s,SNR=25						
EPOB	**Poblet**	**2.07**	**149**	Pn	**Pn**	**12 56 23.9**	**+1.0**
	48nm,0.3s,SNR=58						
EPOB				Pg	**Pg**	**12 56 26.4**	**-1.8**
	39nm,0.6s,SNR=6.9						
EPOB				Sn	**Sn**	**12 56 47.3**	**-1.3**
	98nm,0.3s,SNR=8.8						
EPOB				Lg		12 56 52.6	
	198nm,0.5s,SNR=25						
EPOB	**Poblet**	**2.07**	**149**	Pn	**Pn**	**12 56 24.4**	**+1.5**
	48nm,0.3s,SNR=58						
EPOB				Lg		12 56 53.4	
	198nm,0.5s,SNR=25						
CORI	**Orista**	**2.11**	**123**	Pg	**Pg**	**12 56 26.8**	**-2.0**
CORI				Lg		12 56 53.0	
	434nm,0.3s						
CORI	**Orista**	**2.11**	**123**	Pg	**Pg**	**12 56 26.8**	**-2.0**
CORI				Lg		12 56 53.0	
	434nm,0.3s						
CORI	**Orista**	**2.11**	**123**	P	**Pg**	**12 56 26.8**	**-2.0**
CORI				S	**Sn**	**12 56 53.1**	**+3.7**
	434nm,0.3s						
LRDF	**Laroque-de-Fa**	**2.11**	**95**	Pg	**Pg**	**12 56 28.2**	**-0.6**
LRDF				Sg	**Sg**	**12 56 56.6**	**+0.5**
LRDF	**Laroque-de-Fa**	**2.11**	**95**	Pg	**Pn**	**12 56 24.1**	**+0.8**
LRDF				Lg		12 56 55.4	
LRDF	**

CBEU	**Beuda**	**2.38**	**111**	Pg	**Pg**	**12 56 31.4**	**-2.7**
CBEU	**Beuda**	**2.38**	**111**	P	**Pg**	**12 56 31.5**	**-2.6**
SJAF	**Saint Jean de**	**2.45**	**105**	Pg	**Pg**	**12 56 32.3**	**-3.1**
SJAF				Lg		12 57 02.4	
SJAF	**Saint Jean de**	**2.45**	**105**	Pg	**Pg**	**12 56 32.3**	**-3.1**
SJAF				Lg		12 57 02.4	
CMAS	**Mas de Barbera**	**2.46**	**169**	Pg	**Pn**	**12 56 29.1**	**+0.8**
CMAS				Lg		12 56 58.4	
	335nm,0.4s						
CMAS	**Mas de Barbera**	**2.46**	**169**	Pg	**Pn**	**12 56 29.1**	**+0.8**
CMAS				Lg		12 56 58.4	
	335nm,0.4s						
CMAS	**Mas de Barbera**	**2.46**	**169**	P	**Pn**	**12 56 29.2**	**+0.9**
CMAS				S	**Sn**	**12 56 58.4**	**+0.2**
	335nm,0.4s						
EJON	**La Jonquera**	**2.46**	**105**	Pn	**Pn**	**12 56 30.3**	**+2.1**
	33nm,0.3s,SNR=20						
EJON				Pg	**Pg**	**12 56 34.9**	**-0.7**
	27nm,0.3s,SNR=10						
EJON				Lg		12 57 07.7	
	101nm,0.4s,SNR=7.4						
EJON	**La Jonquera**	**2.46**	**105**	Pn	**Pn**	**12 56 30.3**	**+2.1**
	33nm,0.3s,SNR=20						
EJON				Pg	**Pg**	**12 56 34.9**	**-0.7**
	27nm,0.3s,SNR=10						
EJON				Lg		12 57 07.7	
	101nm,0.4s,SNR=7.4						
EJON	**La Jonquera**	**2.46**	**105**	Lg		12 57 06.7	
	100nm,0.4s,SNR=5.5						
CFON	**Fontmartina**	**2.46**	**123**	Pn	**Pn**	**12 56 31.5**	**+3.2**
CFON				Lg		12 57 07.0	
CFON	**Fontmartina**	**2.46**	**123**	Pn	**Pn**	**12 56 31.2**	**+2.9**
	66nm,0.3s,SNR=50						
CFON				Pg	**Pg**	**12 56 34.6**	**-1.0**
	46nm,0.3s,SNR=18						
CFON				Sn	**Sn**	**12 56 57.5**	**-0.7**
	174nm,0.3s,SNR=13						
CFON				Lg		12 57 06.8	
	294nm,0.5s,SNR=5.0						
CFON	**Fontmartina**	**2.46**	**123**	Pn	**Pn**	**12 56 31.2**	**+2.9**
	66nm,0.3s,SNR=50						
CFON				Pg	**Pg**	**12 56 34.6**	**-1.0**
	46nm,0.3s,SNR=18						
CFON				Sn	**Sn**	**12 56 57.5**	**-0.7**
	174nm,0.3s,SNR=13						
CFON				Lg		12 57 06.8	
	294nm,0.5s,SNR=5.0						
CFON	**Fontmartina**	**2.46**	**123**	P	**Pn**	**12 56 31.2**	**+2.9**
CFON	**Fontmartina**	**2.46**	**123**	Pn	**Pn**	**12 56 31.5**	**+3.2**
	66nm,0.3s,SNR=50						
CFON				Lg		12 57 07.0	
	174nm,0.3s,SNR=13						
CAF	**Calviac**	**2.48**	**43**	*e*Pg	**Pg**	**12 56 36.9**	**+1.0**
CAF				*e*Sg	**Sg**	**12 57 09.1**	**+1.2**
	175nm,0.3s,SNR=1.0						
CAF	**Calviac**	**2.48**	**43**	*e*Pn	**Pn**	**12 56 29.3**	**+0.9**
CAF				*e*Pg	**Pg**	**12 56 36.9**	**+1.0**
CAF				*e*Sg	**Sg**	**12 57 09.1**	**+1.2**
CAF	**Calviac**	**2.48**	**43**	Pn	**Pn**	**12 56 29.3**	**+0.9**
CAF				Pg	**Pg**	**12 56 36.9**	**+1.0**
CAF				Lg		12 57 09.1	
	87nm,0.3s						
CAF	**Calviac**	**2.48**	**43**	Pn	**Pn**	**12 56 29.3**	**+0.9**
CAF				Pg	**Pg**	**12 56 36.9**	**+1.0**
CAF				Lg		12 57 09.1	
	87nm,0.3s						
CAF	**Calviac**	**2.48**	**43**	*e*Pn	**Pn**	**12 56 29.3**	**+0.9**
	SNR=1.0						
CAF	**Calviac**	**2.48**	**43**	*e*Pg	**Pg**	**12 56 36.9**	**+1.0**
CAF				*e*Sg	**Sg**	**12 57 09.1**	**+1.2**
	87nm,0.3s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.53**	**31**	*e*Pg	**Pg**	**12 56 37.9**	**+1.0**
RJF				*e*Sn	**Sn**	**12 57 00.0**	**+0.1**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**12 57 10.6**	**+0.9**
	168nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.53**	**31**	*e*Pn	**Pn**	**12 56 29.7**	**+0.5**
RJF				*e*Pg	**Pg**	**12 56 37.9**	**+1.0**
RJF				*e*Sn	**Sn**	**12 57 00.0**	**+0.1**
RJF				*e*Sg	**Sg**	**12 57 10.6**	**+0.9**
RJF	**Les Rejaudoux**	**2.53**	**31**	Pn	**Pn**	**12 56 29.7**	**+0.5**
RJF				Pg	**Pg**	**12 56 37.9**	**+1.0**
RJF				Sn	**Sn**	**12 57 00.0**	**+0.1**
RJF				Lg		12 57 10.6	
	84nm,0.2s						
RJF	**Les Rejaudoux**	**2.53**	**31**	Pn	**Pn**	**12 56 29.7**	**+0.5**
RJF				Pg	**Pg**	**12 56 37.9**	**+1.0**
RJF				Sn	**Sn**	**12 57 00.0**	**+0.1**
RJF				Lg		12 57 10.6	
	84nm,0.2s						
RJF	**Les Rejaudoux**	**2.53**	**31**	*e*Pn	**Pn**	**12 56 29.7**	**+0.5**
	SNR=1.0						
RJF	**Les Rejaudoux**	**2.53**	**31**	*e*Pg	**Pg**	**12 56 37.9**	**+1.0**
RJF				*e*Sn	**Sn**	**12 57 00.0**	**+0.1**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**12 57 10.6**	**+0.9**
	84nm,0.2s,SNR=1.0						
CCAS	**Cassa de la Se**	**2.70**	**117**	Pn	**Pn**	**12 56 33.2**	**+1.7**
CCAS	**Cassa de la Se**	**2.70**	**117**	Pn	**Pn**	**12 56 33.2**	**+1.7**
CCAS	**Cassa de la Se**	**2.70**	**117**	P	**Pn**	**12 56 33.2**	**+1.7**
CPAL	**Palau Saverder**	**2.70**	**107**	Pn	**Pn**	**12 56 35.4**	**+3.9**
CPAL	**Palau Saverder**	**2.70**	**107**	Pn	**Pn**	**12 56 35.4**	**+3.9**
CPAL	**Palau Saverder**	**2.70**	**107**	P	**Pn**	**12 56 35.4**	**+3.9**
EMOS	**Mosqueruela**	**2.78**	**182**	Pn	**Pn**	**12 56 34.7**	**+2.0**
	25nm,0.4s,SNR=32						
EMOS				Pg	**Pg**	**12 56 38.8**	**-3.0**
	56nm,0.3s,SNR=12						
EMOS				Sn	**Sn**	**12 57 05.6**	**-0.4**
	172nm,1.1s,SNR=6.4						
EMOS				Lg		12 57 15.1	
	265nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**2.78**	**182**	Pn	**Pn**	**12 56 34.7**	**+2.0**
	25nm,0.4s,SNR=32						
EMOS				Pg	**Pg**	**12 56 38.8**	**-3.0**
	56nm,0.3s,SNR=12						
EMOS				Sn	**Sn**	**12 57 05.6**	**-0.4**
	172nm,1.1s,SNR=6.4						
EMOS				Lg		12 57 15.1	
	265nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**2.78**	**182**	P	**Pn**	**12 56 34.5**	**+1.8**
EMOS				Lg		12 57 21.6	
	172nm,1.1s,SNR=6.4						
FRNF	**Fournols**	**3.05**	**42**	Pn	**Pn**	**12 56 36.3**	**-0.1**
FRNF	**Fournols**	**3.05**	**42**	Pn	**Pn**	**12 56 36.3**	**-0.1**
LASF	**Ste Croix**	**3.17**	**72**	*e*Pg	**Pg**	**12 56 49.2**	**0.0**
LASF				*e*Sn	**Sn**	**12 57 14.9**	**-0.8**
LASF				*e*Sg	**Sg**	**12 57 30.8**	**+0.5**
	182nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	**3.17**	**72**	*e*Pn	**Pn**	**12 56 38.4**	**+0.4**
LASF				*e*P		12 56 40.3	
LASF				*e*Pg	**Pg**	**12 56 49.2**	**0.0**
LASF				*e*Sn	**Sn**	**12 57 14.9**	**-0.8**
LASF				*e*Sg	**Sg**	**12 57 30.8**	**+0.5**
LASF	**Ste Croix**	**3.17**	**72**	Pn	**Pn**	**12 56 38.4**	**+0.4**
LASF				Pg	**Pg**	**12 56 49.2**	**0.0**
LASF				Sn	**Sn**	**12 57 14.9**	**-0.8**
LASF				Lg		12 57 30.8	
	91nm,0.4s						
LASF	**Ste Croix**	**3.17**	**72**	Pn	**Pn**	**12 56 38.4**	**+0.4**
LASF				Pg	**Pg**	**12 56 49.2**	**0.0**
LASF				Sn	**Sn**	**12 57 14.9**	**-0.8**
LASF				Lg		12 57 30.8	
	91nm,0.4s						
LASF	**Ste Croix**	**3.17**	**72**	*e*Pn	**Pn**	**12 56 38.4**	**+0.4**
LASF	**Ste Croix**	**3.17**	**72**	*e*Pg	**Pg**	**12 56 49.2**	**0.0**
LASF				*e*Sn	**Sn**	**12 57 14.9**	**-0.8**
LASF				*e*Sg	**Sg**	**12 57 30.8**	**+0.5**
	91nm,0.4s,SNR=1.0						
VERF	**Verneugheol**	**3.29**	**37**	Pn	**Pn**	**12 56 39.8**	**+0.2**
VERF	**Verneugheol**	**3.29**	**37**	Pn	**Pn**	**12 56 39.8**	**+0.2**
LBL	**Lubilhac**	**3.31**	**50**	Pn	**Pn**	**12 56 41.7**	**+1.8**
LBL	**Lubilhac**	**3.31**	**50**	Pn	**Pn**	**12 56 41.7**	**+1.8**
MFF	**Saint Martin d**	**3.46**	**2**	*e*Pg	**Pg**	**12 56 55.2**	**+0.5**
	SNR=1.0						
MFF				*e*Sn	**Sn**	**12 57 23.1**	**+0.3**
	141nm,0.3s,SNR=1.0						
MFF				*e*Sg	**Sg**	**12 57 40.0**	**+0.5**
	159nm,0.3s						
MFF	**Saint Martin d**	**3.46**	**2**	Pg	**Pg**	**12 56 55.2**	**+0.5**
MFF				Sn	**Sn**	**12 57 23.1**	**+0.3**
	71nm,0.3s						
MFF				Lg		12 57 40.0	
	79nm,0.3s						
MFF	**Saint Martin d**	**3.46**	**2**	Pg	**Pg**	**12 56 55.2**	**+0.5**
MFF				Sn	**Sn**	**12 57 23.1**	**+0.3**
	71nm,0.3s						
MFF				Lg		12 57 40.0	
	79nm,0.3s						
MFF	**Saint Martin d**	**3.46**	**2**	*e*Pg	**Pg**	**12 56 55.2**	**+0.5**
	SNR=1.0						
MFF				*e*Sn	**Sn**	**12 57 23.1**	**+0.3**
	71nm,0.3s,SNR=1.0						
MFF				*e*Sg	**Sg**	**12 57 40.0**	**+0.5**
	79nm,0.3s						
PYM	**Petit Puy Mans**	**3.53**	**41**	Pn	**Pn**	**12 56 44.5**	**+1.6**
PYM	**Petit Puy Mans**	**3.53**	**41**	Pn	**Pn**	**12 56 44.5**	**+1.6**
EARI	**Arriondas**	**3.58**	**274**	Pn	**Pn**	**12 56 47.0**	**+3.4**
EARI				Lg		12 57 49.8	
EARI	**Arriondas**	**3.58**	**274**	Pn	**Pn**	**12 56 46.9**	**+3.3**
	4.6nm,0.3s,SNR=23						
EARI				Sn	**Sn**	**12 57 26.8**	**+1.1**
	16nm,0.3s,SNR=7.2						
EARI	**Arriondas**	**3.58**	**274**	Pn	**Pn**	**12 56 46.9**	**+3.3**
	4.6nm,0.3s,SNR=23						
EARI				Sn	**Sn**	**12 57 26.8**	**+1.1**
	16nm,0.3s,SNR=7.2						
EARI	**Arriondas**	**3.58**	**274**	Pn	**Pn**	**12 56 47.0**	**+3.4**
	4.6nm,0.3s,SNR=23						
ECHE	**Chera**	**3.58**	**188**	Pn	**Pn**	**12 56 44.5**	**+0.8**
	17nm,0.3s,SNR=13						
ECHE				Pg	**Pg**	**12 56 53.6**	**-3.5**
	29nm,0.5s						
ECHE				Sn	**Sn**	**12 57 24.7**	**-1.2**
	40nm,0.4s,SNR=6.4						
ECHE				Lg		12 57 40.5	
	136nm,0.8s,SNR=7.4						
ECHE	**Chera**	**3.58**	**188**	Pn	**Pn**	**12 56 44.5**	**+0.8**
	17nm,0.3s,SNR=13						
ECHE				Pg	**Pg**	**12 56 53.6**	**-3.5**
	29nm,0.5s						
ECHE				Sn	**Sn**	**12 57 24.7**	**-1.2**
	40nm,0.4s,SNR=6.4						
ECHE				Lg		12 57 40.5	
	136nm,0.8s,SNR=7.4						
TCF	**Toulx Ste Croi**	**3.62**	**29**	*e*Pg	**Pg**	**12 56 57.4**	**-0.4**
TCF				*e*Sn	**Sn**	**12 57 26.5**	**-0.3**
TCF				*e*Sg	**Sg**	**12 57 45.3**	**+0.6**
	151nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.62**	**29**	*e*Pn	**Pn**	**12 56 44.0**	**-0.2**
TCF				*e*Pg	**Pg**	**12 56 57.4**	**-0.4**
TCF				*e*Sn	**Sn**	**12 57 26.5**	**-0.3**
TCF				*e*Sg	**Sg**	**12 57 45.3**	**+0.6**
TCF	**Toulx Ste Croi**	**3.62**	**29**	Pn	**Pn**	**12 56 44.0**	**-0.2**
TCF				Pg	**Pg**	**12 56 57.4**	**-0.4**
TCF				Sn	**Sn**	**12 57 26.5**	**-0.3**
TCF				Lg		12 57 45.3	
	76nm,0.4s						
TCF	**Toulx Ste Croi**	**3.62**	**29**	Pn	**Pn**	**12 56 44.0**	**-0.2**
TCF				Pg	**Pg**	**12 56 57.4**	**-0.4**
TCF				Sn	**Sn**	**12 57 26.5**	**-0.3**
TCF				Lg		12 57 45.3	
	76nm,0.4s						
TCF	**Toulx Ste Croi**	**3.62**	**29**	*e*Pn	**Pn**	**12 56 44.0**	**-0.2**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.62**	**29**	*e*Pg	**Pg**	**12 56 57.4**	**-0.4**
TCF				*e*Sn	**Sn**	**12 57 26.5**	**-0.3**
TCF				*e*Sg	**Sg**	**12 57 45.3**	**+0.6**
	76nm,0.4s,SNR=1.0						
GUD	**Guadarrama**	**3.80**	**230**	Pn	**Pn**	**12 56 48.4**	**+1.7**
	2.1nm,0.2s,SNR=7.9						
GUD				Pg	**Pg**	**12 56 58.2**	**-3.0**
	14nm,0.3s,SNR=7.9						
GUD				Sn	**Sn**	**12 57 30.6**	**-0.6**
	44nm,0.3s,SNR=7.9						
GUD				Lg		12 57 48.8	
	42nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**3.80**	**230**	Pn	**Pn**	**12 56 48.4**	**+1.7**
	2.1nm,0.2s,SNR=7.9						
GUD				Pg	**Pg**	**12 56 58.2**	**-3.0**
	14nm,0.3s,SNR=7.9						
GUD				Sn	**Sn**	**12 57 30.6**	**-0.6**
	44nm,0.3s,SNR=7.9						
GUD				Lg		12 57 48.8	
	42nm,0.4s,SNR=7.9						
AGO	**Saint Agoulin**	**3.81**	**39**	Pn	**Pn**	**12 56 49.5**	**+2.7**
AGO	**Saint Agoulin**	**3.81**	**39**	Pn	**Pn**	**12 56 49.5**	**+2.7**
VIVF	**Saint-Julien-l**	**3.99**	**63**	*e*Pg	**Pg**	**12 57 05.3**	**+0.5**
VIVF				*e*Sg	**Sg**	**12 57 56.7**	**+0.3**
	86nm,0.4s,SNR=1.0						
VIVF	**Saint-Julien-l**	**3.99**	**63**	*e*Pn	**Pn**	**12 56 50.3**	**+1.1**
VIVF				*e*Pg	**Pg**	**12 57 05.3**	**+0.5**
VIVF				*e*Sg	**Sg**	**12 57 56.7**	**+0.3**
VIVF	**Saint-Julien-l**	**3.99**	**63**	Pn	**Pn**	**12 56 50.3**	**+1.1**
VIVF				Pg	**Pg**	**12 57 05.3**	**+0.5**
VIVF				Lg		12 57 56.7	
	0.0nm,0.4s						
VIVF	**Saint-Julien-l**	**3.99**	**63**	Pn	**Pn**	**12 56 50.3**	**+1.1**
VIVF				Pg	**Pg**	**12 57 05.3**	**+0.5**
VIVF				Lg		12 57 56.7	
	0.0nm,0.4s						
VIVF	**Saint-Julien-l**	**3.99**	**63**	*e*Pn	**Pn**	**12 56 50.3**	**+1.1**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**3.99**	**63**	*e*Pg	**Pg**	**12 57 05.3**	**+0.5**
VIVF				*e*Sg	**Sg**	**12 57 56.7**	**+0.3**
	43nm,0.4s,SNR=1.0						
PLDF	**La Plantade**	**3.99**	**44**	Pn	**Pn**	**12 56 51.6**	**+2.4**
PLDF	**La Plantade**	**3.99**	**44**	Pn	**Pn**	**12 56 51.6**	**+2.4**
BGF	**Bois d'Agland**	**4.09**	**32**	*e*Pg	**Pg**	**12 57 07.1**	**+0.4**
BGF				*e*Sn	**Sn**	**12 57 37.2**	**-1.1**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**12 57 59.3**	**-0.3**
	402nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**4.09**	**32**	*e*Pn	**Pn**	**12 56 51.5**	**+0.9**
BGF				*e*Pg	**Pg**	**12 57 07.1**	**+0.4**
BGF				*e*Sn	**Sn**	**12 57 37.2**	**-1.1**
BGF				*e*Sg	**Sg**	**12 57 59.3**	**-0.3**
BGF	**Bois d'Agland**	**4.09**	**32**	Pn	**Pn**	**12 56 51.5**	**+0.9**
BGF				Pg	**Pg**	**12 57 07.1**	**+0.4**
BGF				Sn	**Sn**	**12 57 37.2**	**-1.1**
BGF				Lg		12 57 59.3	
	201nm,0.4s						
BGF	**Bois d'Agland**	**4.09**	**32**	Pn	**Pn**	**12 56 51.5**	**+0.9**
BGF				Pg	**Pg**	**12 57 07.1**	**+0.4**
BGF				Sn	**Sn**	**12 57 37.2**	**-1.1**
BGF				Lg		12 57 59.3	
	201nm,0.4s						
BGF	**Bois d'Agland**	**4.09**	**32**	*e*Pn	**Pn**	**12 56 51.5**	**+0.9**
	SNR=1.0						
BGF	**Bois d'Agland**	**4.09**	**32**	*e*Pg	**Pg**	**12 57 07.1**	**+0.4**
BGF				*e*Sn	**Sn**	**12 57 37.2**	**-1.1**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**12 57 59.3**	**-0.3**
	201nm,0.4s,SNR=1.0						
SSB	**Saint Sauveur**	**4.09**	**57**	Pn	**Pn**	**12 56 52.0**	**+1.3**
SSB	**Saint Sauveur**	**4.09**	**57**	Pn	**Pn**	**12 56 52.0**	**+1.3**
ETOS	**Mallorca**	**4.12**	**144**	Pn	**Pn**	**12 56 52.5**	**+1.5**
ETOS				Lg		12 58 11.5	
ETOS	**Mallorca**	**4.12**	**144**	Pn	**Pn**	**12 56 52.0**	**+1.0**
	6.7nm,0.5s,SNR=10						
ETOS				Sn	**Sn**	**12 57 37.2**	**-1.8**
	18nm,0.3s,SNR=7.2						
ETOS	**Mallorca**	**4.12**	**144**	Pn	**Pn**	**12 56 52.0**	**+1.0**
	6.7nm,0.5s,SNR=10						
ETOS				Sn	**Sn**	**12 57 37.2**	**-1.8**
	18nm,0.3s,SNR=7.2						
ETOS	**Mallorca**	**4.12**	**144**	P	**Pn**	**12 56 52.2**	**+1.2**
ETOS	**Mallorca**	**4.12**	**144**	Pn	**Pn**	**12 56 52.5**	**+1.5**
	5.7nm,0.4s,SNR=10						
EIBI	**Ibiza**	**4.30**	**162**	Pn	**Pn**	**12 56 54.2**	**+0.6**
	1.8nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**12 57 40.7**	**-2.9**
	15nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**4.30**	**162**	Pn	**Pn**	**12 56 54.2**	**+0.6**
	1.8nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**12 57 40.7**	**-2.9**
	15nm,0.2s,SNR=7.9						
SMRF	**Simiane la Rot**	**4.37**	**77**	*e*P	**Pn**	**12 56 59.5**	**+5.1**
SMRF				*e*Sn	**Sn**	**12 57 42.4**	**-2.7**
SMRF				*e*Sg	**Sg**	**12 58 07.3**	**-1.2**
	44nm,0.4s,SNR=1.0						
SMRF	**Simiane la Rot**	**4.37**	**77**	*e*Pn	**Pn**	**12 56 54.3**	**-0.1**
SMRF				*e*P		12 56 59.5	
SMRF				*e*Sn	**Sn**	**12 57 42.4**	**-2.7**
SMRF				*e*Sg	**Sg**	**12 58 07.3**	**-1.2**
SMRF	**Simiane la Rot**	**4.37**	**77**	Pn	**Pn**	**12 56 54.3**	**-0.1**
SMRF				Sn	**Sn**	**12 57 42.4**	**-2.7**
SMRF				Lg		12 58 07.3	
	44nm,0.4s						
SMRF	**Simiane la Rot**	**4.37**	**77**	Pn	**Pn**	**12 56 54.3**	**-0.1**
SMRF				Sn	**Sn**	**12 57 42.4**	**-2.7**
SMRF				Lg		12 58 07.3	
	44nm,0.4s						
SMRF	**Simiane la Rot**	**4.37**	**77**	*e*Pn	**Pn**	**12 56 54.3**	**-0.1**
SMRF				*e*Sg	**Sg**	**12 58 07.3**	**-1.2**
	44nm,0.4s						
ESDC	**Sonseca Array**	**4.42**	**220**	Pn	**Pn**	**12 56 53.7**	**-1.5**
ESDC	**Sonseca Array**	**4.42**	**220**	Pn	**Pn**	**12 56 55.6**	**+0.5**
	2.7nm,0.2s,baz=41,slow=13,SNR=3.9						
ESDC				Pg	**Pg**	**12 57 09.7**	**-3.4**
	3.9nm,0.3s,baz=42,slow=14,SNR=10						
ESDC				Sn	**Sn**	**12 57 43.9**	**-2.6**
	18nm,0.3s,baz=40,slow=24,SNR=12						
ESDC				Lg		12 58 05.0	
	19nm,0.5s,baz=36,slow=29,SNR=4.6						
ESDC	**Sonseca Array**	**4.42**	**220**	Pn	**Pn**	**12 56 55.6**	**+0.5**
	2.7nm,0.2s,baz=41,slow=13,SNR=3.9						
ESDC				Pg	**Pg**	**12 57 09.7**	**-3.4**
	3.9nm,0.3s,baz=42,slow=14,SNR=10						
ESDC				Sn	**Sn**	**12 57 43.9**	**-2.6**
	18nm,0.3s,baz=40,slow=24,SNR=12						
ESDC				Lg		12 58 05.0	
	19nm,0.5s,baz=36,slow=29,SNR=4.6						
ESDC	**Sonseca Array**	**4.42**	**220**	Pn	**Pn**	**12 56 53.7**	**-1.5**
	2.7nm,0.2s,baz=42,slow=14,SNR=3.9						
ESLA	**Sonseca Array**	**4.42**	**220**	*e*Pn	**Pn**	**12 56 55.6**	**+0.5**
ESLA				*e*Sn	**Sn**	**12 57 44.1**	**-2.4**
ESLA	**Sonseca Array**	**4.42**	**220**	*e*Pn	**Pn**	**12 56 55.6**	**+0.4**
ESLA				*e*Sn	**Sn**	**12 57 44.1**	**-2.4**
EBEN	**Beniarda**	**4.44**	**179**	Pn	**Pn**	**12 56 55.9**	**+0.4**
	6.1nm,0.4s,SNR=5.9						
EBEN				Pg	**Pg**	**12 57 08.4**	**-5.0**
	1.4nm,0.4s,SNR=7.9						
EBEN				Sn	**Sn**	**12 57 44.2**	**-2.7**
	2.6nm,0.8s,SNR=7.9						
EBEN				Lg		12 58 08.5	
	13nm,0.4s,SNR=4.0						
EBEN	**Beniarda**	**4.44**	**179**	Pn	**Pn**	**12 56 55.9**	**+0.4**
	6.1nm,0.4s,SNR=5.9						
EBEN				Pg	**Pg**	**12 57 08.4**	**-5.0**
	1.4nm,0.4s,SNR=7.9						
EBEN				Sn	**Sn**	**12 57 44.2**	**-2.7**
	2.6nm,0.8s,SNR=7.9						
EBEN				Lg		12 58 08.5	
	13nm,0.4s,SNR=4.0						
AVF	**Avril sur Loir**	**4.48**	**34**	*e*Pg	**Pg**	**12 57 13.8**	**-0.4**
AVF				*e*Sn	**Sn**	**12 57 47.5**	**-0.5**
AVF				*e*Sg	**Sg**	**12 58 10.8**	**-1.4**
	92nm,0.4s,SNR=1.0						
AVF	**Avril sur Loir**	**4.48**	**34**	*e*Pn	**Pn**	**12 56 56.7**	**+0.7**
AVF				*e*Pg	**Pg**	**12 57 13.8**	**-0.4**
AVF				*e*Sn	**Sn**	**12 57 47.5**	**-0.5**
AVF				*e*Sg	**Sg**	**12 58 10.8**	**-1.4**
AVF	**Avril sur Loir**	**4.48**	**34**	Pn	**Pn**	**12 56 56.7**	**+0.7**
AVF				Pg	**Pg**	**12 57 13.8**	**-0.4**
AVF				Sn	**Sn**	**12 57 47.5**	**-0.5**
AVF				Lg		12 58 10.8	
	46nm,0.4s						
AVF	**Avril sur Loir**	**4.48**	**34**	Pn	**Pn**	**12 56 56.7**	**+0.7**
AVF				Pg	**Pg**	**12 57 13.8**	**-0.4**
AVF				Sn	**Sn**	**12 57 47.5**	**-0.5**
AVF				Lg		12 58 10.8	
	46nm,0.4s						
AVF	**Avril sur Loir**	**4.48**	**34**	*e*Pn	**Pn**	**12 56 56.7**	**+0.7**
	SNR=1.0						
AVF	**Avril sur Loir**	**4.48**	**34**	*e*Pg	**Pg**	**12 57 13.8**	**-0.4**
AVF				*e*Sn	**Sn**	**12 57 47.5**	**-0.5**
AVF				*e*Sg	**Sg**	**12 58 10.8**	**-1.4**
	46nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**4.58**	**39**	*e*Pg	**Pg**	**12 57 15.4**	**-0.7**
SMF				*e*Sg	**Sg**	**12 58 15.5**	**+0.1**
	52nm,0.4s						
SMF	**Signal de Mont**	**4.58**	**39**	*e*Pn	**Pn**	**12 56 59.2**	**+1.8**
SMF				*e*Pg	**Pg**	**12 57 15.4**	**-0.7**
SMF				*e*Sg	**Sg**	**12 58 15.5**	**+0.1**
SMF	**Signal de Mont**	**4.58**	**39**	Pn	**Pn**	**12 56 59.2**	**+1.8**
SMF				Pg	**Pg**	**12 57 15.4**	**-0.7**
SMF				Lg		12 58 15.5	
	26nm,0.4s						
SMF	**Signal de Mont**	**4.58**	**39**	Pn	**Pn**	**12 56 59.2**	**+1.8**
SMF				Pg	**Pg**	**12 57 15.4**	**-0.7**
SMF				Lg		12 58 15.5	
	26nm,0.4s						
SMF	**Signal de Mont**	**4.58**	**39**	*e*Pn	**Pn**	**12 56 59.2**	**+1.8**
	SNR=1.0						
SMF	**Signal de Mont**	**4.58**	**39**	*e*Pg	**Pg**	**12 57 15.4**	**-0.7**
SMF				*e*Sg	**Sg**	**12 58 15.5**	**+0.1**
	26nm,0.4s						
ETOB	**Tobarra**	**4.59**	**192**	Pn	**Pn**	**12 56 58.7**	**+1.2**
	3.4nm,0.5s,SNR=4.5						
ETOB				Pg	**Pg**	**12 57 11.3**	**-5.0**
	14nm,0.6s,SNR=7.3						
ETOB				Sn	**Sn**	**12 57 47.3**	**-3.4**
	13nm,0.6s,SNR=7.3						
ETO

ORIF				Lg			12 58 22.0
	14nm,0.6s						
ORIF	**Oris-en-Rattie**	**4.81**	**66**	*e*Pn	**Pn**	**12 57 01.6**	**+1.1**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**4.81**	**66**	*e*Pg	**Pg**	**12 57 19.8**	**-0.7**
ORIF				*e*Sg	**Sg**	**12 58 22.0**	**-0.8**
	14nm,0.6s						
ECAL	**Calabor**	**4.89**	**258**	Pn	**Pn**	**12 57 03.5**	**+1.8**
ECAL				Lg		12 58 23.5	
ECAL	**Calabor**	**4.89**	**258**	Pn	**Pn**	**12 57 03.3**	**+1.7**
	12nm,0.3s,SNR=36						
ECAL				Sn	**Sn**	**12 57 57.4**	**-0.7**
	144nm,0.5s,SNR=12						
ECAL				Lg		12 58 20.6	
	61nm,0.3s,SNR=5.0						
ECAL	**Calabor**	**4.89**	**258**	Pn	**Pn**	**12 57 03.3**	**+1.7**
	12nm,0.3s,SNR=36						
ECAL				Sn	**Sn**	**12 57 57.4**	**-0.7**
	144nm,0.5s,SNR=12						
ECAL				Lg		12 58 20.6	
	61nm,0.3s,SNR=5.0						
ECAL	**Calabor**	**4.89**	**258**	Pn	**Pn**	**12 57 03.4**	**+1.8**
	12nm,0.3s,SNR=36						
ECAL				Lg		12 58 23.5	
	35nm,0.4s,SNR=5.0						
PBRG	**Braganca**	**4.93**	**256**	*e*Pn	**Pn**	**12 57 04.2**	**+2.0**
PBRG				*e*Sn	**Sn**	**12 57 58.3**	**-0.8**
PBRG				A		12 58 01.0	
	28nm,0.3s						
PBRG	**Braganca**	**4.93**	**256**	*e*Pn	**Pn**	**12 57 04.2**	**+2.0**
PBRG				*e*Sn	**Sn**	**12 57 58.3**	**-0.8**
	28nm,0.3s						
EPON	**Pontenova**	**4.99**	**274**	Pn	**Pn**	**12 57 06.4**	**+3.4**
EPON				Lg		12 58 37.7	
EPON	**Pontenova**	**4.99**	**274**	Pn	**Pn**	**12 57 06.4**	**+3.4**
	5.9nm,0.3s,SNR=16						
EPON				Sn	**Sn**	**12 58 00.7**	**+0.1**
	38nm,0.6s,SNR=10.0						
EPON	**Pontenova**	**4.99**	**274**	Pn	**Pn**	**12 57 06.4**	**+3.4**
	5.9nm,0.3s,SNR=16						
EPON				Sn	**Sn**	**12 58 00.7**	**+0.1**
	38nm,0.6s,SNR=10.0						
EPON	**Pontenova**	**4.99**	**274**	Pn	**Pn**	**12 57 06.4**	**+3.4**
	5.9nm,0.3s,SNR=16						
LMR	**La Mourre**	**4.99**	**86**	*e*P	**Pn**	**12 57 07.8**	**+4.8**
LMR				*e*Sg	**Sg**	**12 58 27.3**	**-1.4**
	11nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**4.99**	**86**	Pn	**Pn**	**12 57 07.8**	**+4.8**
LMR				Lg		12 58 27.3	
	5.4nm,0.3s						
LMR	**La Mourre**	**4.99**	**86**	Pn	**Pn**	**12 57 07.8**	**+4.8**
LMR				Lg		12 58 27.3	
	5.4nm,0.3s						
LOR	**Lormes**	**5.07**	**34**	*e*Pn	**Pn**	**12 57 05.6**	**+1.5**
	baz=209,SNR=1.0						
LOR	**Lormes**	**5.07**	**34**	*e*Pg	**Pg**	**12 57 25.3**	**-0.2**
	baz=218						
LOR				*e*Sg	**Sg**	**12 58 31.7**	**+0.6**
	94nm,0.6s						
LOR	**Lormes**	**5.07**	**34**	*e*Pn	**Pn**	**12 57 05.6**	**+1.5**
LOR				*e*Pg	**Pg**	**12 57 25.3**	**-0.2**
LOR				*e*Sg	**Sg**	**12 58 31.7**	**+0.6**
LOR	**Lormes**	**5.07**	**34**	Pn	**Pn**	**12 57 05.6**	**+1.5**
LOR				Pg	**Pg**	**12 57 25.3**	**-0.2**
LOR				Lg		12 58 31.7	
	47nm,0.6s						
LOR	**Lormes**	**5.07**	**34**	Pn	**Pn**	**12 57 05.6**	**+1.5**
LOR				Pg	**Pg**	**12 57 25.3**	**-0.2**
LOR				Lg		12 58 31.7	
	47nm,0.6s						
LOR	**Lormes**	**5.07**	**34**	*e*Pn	**Pn**	**12 57 05.6**	**+1.5**
	baz=209,SNR=1.0						
LOR	**Lormes**	**5.07**	**34**	*e*Pg	**Pg**	**12 57 25.3**	**-0.2**
	baz=218						
LOR				*e*Sg	**Sg**	**12 58 31.7**	**+0.6**
	47nm,0.6s						
ERUA	**La Rua**	**5.08**	**264**	Pn	**Pn**	**12 57 06.2**	**+2.0**
	2.8nm,0.4s,SNR=7.9						
ERUA				Sn	**Sn**	**12 58 02.2**	**-0.5**
	89nm,0.5s,SNR=7.9						
ERUA	**La Rua**	**5.08**	**264**	Pn	**Pn**	**12 57 06.2**	**+2.0**
	2.8nm,0.4s,SNR=7.9						
ERUA				Sn	**Sn**	**12 58 02.2**	**-0.5**
	89nm,0.5s,SNR=7.9						
FRF	**La Foret Royal**	**5.10**	**83**	*e*P	**Pn**	**12 57 09.2**	**+4.7**
FRF				*e*Sn	**Sn**	**12 58 01.2**	**-2.0**
	8.2nm,0.2s,SNR=1.0						
FRF				*e*Sg	**Sg**	**12 58 30.1**	**-1.9**
	14nm,0.3s						
FRF	**La Foret Royal**	**5.10**	**83**	*e*Pn	**Pn**	**12 57 05.6**	**+1.1**
FRF				*e*P		12 57 09.2	
FRF				*e*Sn	**Sn**	**12 58 01.2**	**-2.0**
FRF				*e*Sg	**Sg**	**12 58 30.1**	**-1.9**
FRF	**La Foret Royal**	**5.10**	**83**	Pn	**Pn**	**12 57 05.6**	**+1.1**
FRF				Sn	**Sn**	**12 58 01.2**	**-2.0**
	4.1nm,0.2s						
FRF				Lg		12 58 30.1	
	7.2nm,0.3s						
FRF	**La Foret Royal**	**5.10**	**83**	Pn	**Pn**	**12 57 05.6**	**+1.1**
FRF				Sn	**Sn**	**12 58 01.2**	**-2.0**
	4.1nm,0.2s						
FRF				Lg		12 58 30.1	
	7.2nm,0.3s						
FRF	**La Foret Royal**	**5.10**	**83**	*e*Pn	**Pn**	**12 57 05.6**	**+1.1**
FRF				*e*Sg	**Sg**	**12 58 30.1**	**-1.9**
	7.2nm,0.3s						
QUIF	**Quistinic**	**5.17**	**338**	*e*Pn	**Pn**	**12 57 06.7**	**+1.2**
QUIF				*e*Sn	**Sn**	**12 58 03.3**	**-1.7**
	SNR=1.0						
QUIF				*e*Sg	**Sg**	**12 58 32.8**	**-1.6**
	42nm,0.4s,SNR=1.0						
QUIF	**Quistinic**	**5.17**	**338**	Pn	**Pn**	**12 57 06.7**	**+1.2**
QUIF				Sn	**Sn**	**12 58 03.3**	**-1.7**
QUIF				Lg		12 58 32.8	
	21nm,0.4s						
QUIF	**Quistinic**	**5.17**	**338**	Pn	**Pn**	**12 57 06.7**	**+1.2**
QUIF				Sn	**Sn**	**12 58 03.3**	**-1.7**
QUIF				Lg		12 58 32.8	
	21nm,0.4s						
QUIF	**Quistinic**	**5.17**	**338**	*e*Pn	**Pn**	**12 57 06.7**	**+1.2**
QUIF				*e*Sg	**Sg**	**12 58 32.8**	**-1.6**
	21nm,0.4s,SNR=1.0						
GRR	**Gorron**	**5.26**	**356**	*e*Pn	**Pn**	**12 57 07.5**	**+0.8**
	SNR=1.0						
GRR				*e*Sn	**Sn**	**12 58 04.8**	**-2.3**
	19nm,0.3s,SNR=1.0						
GRR				*e*Sg	**Sg**	**12 58 36.7**	**-0.4**
	65nm,0.5s						
GRR	**Gorron**	**5.26**	**356**	Pn	**Pn**	**12 57 07.5**	**+0.8**
GRR				Sn	**Sn**	**12 58 04.8**	**-2.3**
	9.4nm,0.3s						
GRR				Lg		12 58 36.7	
	33nm,0.5s						
GRR	**Gorron**	**5.26**	**356**	Pn	**Pn**	**12 57 07.5**	**+0.8**
GRR				Sn	**Sn**	**12 58 04.8**	**-2.3**
	9.4nm,0.3s						
GRR				Lg		12 58 36.7	
	33nm,0.5s						
GRR	**Gorron**	**5.26**	**356**	*e*Pn	**Pn**	**12 57 07.5**	**+0.8**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**12 58 36.7**	**-0.4**
	33nm,0.5s						
EPLA	**Plasencia**	**5.30**	**236**	Pn	**Pn**	**12 57 07.4**	**+0.1**
EPLA				Lg		12 58 35.3	
EPLA	**Plasencia**	**5.30**	**236**	Pn	**Pn**	**12 57 07.6**	**+0.3**
	1.7nm,0.4s,SNR=7.4						
EPLA				Pg	**Pg**	**12 57 24.9**	**-5.0**
	3.2nm,0.3s,SNR=7.9						
EPLA				Sn	**Sn**	**12 58 05.1**	**-3.2**
	18nm,0.5s,SNR=5.7						
EPLA				Lg		12 58 36.7	
	9.4nm,0.3s,SNR=5.0						
EPLA	**Plasencia**	**5.30**	**236**	Pn	**Pn**	**12 57 07.6**	**+0.3**
	1.7nm,0.4s,SNR=7.4						
EPLA				Pg	**Pg**	**12 57 24.9**	**-5.0**
	3.2nm,0.3s,SNR=7.9						
EPLA				Sn	**Sn**	**12 58 05.1**	**-3.2**
	18nm,0.5s,SNR=5.7						
EPLA				Lg		12 58 36.7	
	9.4nm,0.3s,SNR=5.0						
EPLA	**Plasencia**	**5.30**	**236**	Pn	**Pn**	**12 57 07.4**	**+0.1**
	1.7nm,0.4s,SNR=7.4						
EPLA				Lg		12 58 35.3	
	28nm,0.6s,SNR=5.0						
EMUR	**La Murta**	**5.34**	**188**	Pn	**Pn**	**12 57 08.5**	**+0.6**
	6.3nm,0.3s,SNR=7.9						
EMUR				Pg	**Pg**	**12 57 25.6**	**-5.1**
	1.9nm,0.3s,SNR=7.9						
EMUR				Sn	**Sn**	**12 58 05.8**	**-3.4**
	15nm,0.5s,SNR=7.9						
EMUR				Lg		12 58 36.5	
	9.7nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**5.34**	**188**	Pn	**Pn**	**12 57 08.5**	**+0.6**
	6.3nm,0.3s,SNR=7.9						
EMUR				Pg	**Pg**	**12 57 25.6**	**-5.1**
	1.9nm,0.3s,SNR=7.9						
EMUR				Sn	**Sn**	**12 58 05.8**	**-3.4**
	15nm,0.5s,SNR=7.9						
EMUR				Lg		12 58 36.5	
	9.7nm,0.5s,SNR=7.9						
SGMF	**Saint Gilles**	**5.34**	**344**	*e*Pn	**Pn**	**12 57 08.5**	**+0.7**
	SNR=1.0						
SGMF				*e*Sn	**Sn**	**12 58 07.3**	**-1.9**
	30nm,0.4s,SNR=1.0						
SGMF				*e*Sg	**Sg**	**12 58 37.7**	**-2.2**
	53nm,0.5s						
SGMF	**Saint Gilles**	**5.34**	**344**	Pn	**Pn**	**12 57 08.5**	**+0.7**
SGMF				Sn	**Sn**	**12 58 07.3**	**-1.9**
	15nm,0.4s						
SGMF				Lg		12 58 37.7	
	27nm,0.5s						
SGMF	**Saint Gilles**	**5.34**	**344**	Pn	**Pn**	**12 57 08.5**	**+0.7**
SGMF				Sn	**Sn**	**12 58 07.3**	**-1.9**
	15nm,0.4s						
SGMF				Lg		12 58 37.7	
	27nm,0.5s						
SGMF	**Saint Gilles**	**5.34**	**344**	*e*Pn	**Pn**	**12 57 08.5**	**+0.7**
	SNR=1.0						
SGMF				*e*Sg	**Sg**	**12 58 37.7**	**-2.2**
	27nm,0.5s						
MBDF	**Montbardon**	**5.36**	**70**	*e*P	**Pn**	**12 57 13.8**	**+5.7**
MBDF				*e*Sn	**Sn**	**12 58 08.5**	**-1.1**
	17nm,0.6s						
MBDF				*e*Sg	**Sg**	**12 58 38.8**	**-1.6**
	26nm,0.9s						
MBDF	**Montbardon**	**5.36**	**70**	Pn	**Pn**	**12 57 13.8**	**+5.7**
MBDF				Sn	**Sn**	**12 58 08.5**	**-1.1**
	8.4nm,0.6s						
MBDF				Lg		12 58 38.8	
	13nm,0.9s						
MBDF	**Montbardon**	**5.36**	**70**	Pn	**Pn**	**12 57 13.8**	**+5.7**
MBDF				Sn	**Sn**	**12 58 08.5**	**-1.1**
	8.4nm,0.6s						
MBDF				Lg		12 58 38.8	
	13nm,0.9s						
MVO	**Moncorvo**	**5.36**	**251**	*e*Pn	**Pn**	**12 57 09.8**	**+1.6**
MVO				*e*Sn	**Sn**	**12 58 08.8**	**-1.0**
MVO				A		12 58 45.7	
	42nm,0.5s						
MVO	**Moncorvo**	**5.36**	**251**	Pn	**Pn**	**12 57 09.8**	**+1.6**
MVO				Lg		12 58 44.8	
MVO	**Moncorvo**	**5.36**	**251**	Pn	**Pn**	**12 57 09.8**	**+1.6**
	13nm,0.6s,SNR=18						
MVO				Pg	**Pg**	**12 57 28.1**	**-3.0**
	0.4nm,0.1s,SNR=7.9						
MVO				Sn	**Sn**	**12 58 07.8**	**-1.9**
	26nm,0.2s,SNR=7.9						
MVO				Lg		12 58 33.7	
	29nm,0.3s,SNR=5.0						
MVO	**Moncorvo**	**5.36**	**251**	Pn	**Pn**	**12 57 09.8**	**+1.6**
	13nm,0.6s,SNR=18						
MVO				Pg	**Pg**	**12 57 28.1**	**-3.0**
	0.4nm,0.1s,SNR=7.9						
MVO				Sn	**Sn**	**12 58 07.8**	**-1.9**
	26nm,0.2s,SNR=7.9						
MVO				Lg		12 58 33.7	
	29nm,0.3s,SNR=5.0						
MVO	**Moncorvo**	**5.36**	**251**	Pn	**Pn**	**12 57 09.8**	**+1.6**
	13nm,0.6s,SNR=18						
MVO				*e*Sn	**Sn**	**12 58 08.8**	**-1.0**
	42nm,0.5s						
MVO				Lg		12 58 44.8	
	47nm,0.6s,SNR=5.0						
LDF	**La Druitiere**	**5.45**	**1**	*e*Pn	**Pn**	**12 57 10.0**	**+0.7**
	SNR=1.0						
LDF				*e*Sn	**Sn**	**12 58 10.3**	**-1.5**
LDF				*e*Sg	**Sg**	**12 58 40.4**	**-2.9**
	48nm,0.4s,SNR=1.0						
LDF	**La Druitiere**	**5.45**	**1**	*e*Pn	**Pn**	**12 57 10.0**	**+0.7**
	SNR=1.0						
LPL	**La Plagne**	**5.59**	**62**	*e*P	**Pn**	**12 57 17.5**	**+6.3**
LPL				*e*Sg	**Sg**	**12 58 45.1**	**-2.6**
	22nm,0.7s						
LPL	**La Plagne**	**5.59**	**62**	Pn	**Pn**	**12 57 17.5**	**+6.3**
LPL				Lg		12 58 45.1	
	11nm,0.7s						
LPL	**La Plagne**	**5.59**	**62**	Pn	**Pn**	**12 57 17.5**	**+6.3**
LPL				Lg		12 58 45.1	
	11nm,0.7s						
ROSF	**Rostrenen**	**5.59**	**339**	*e*Pn	**Pn**	**12 57 12.5**	**+1.3**
	SNR=1.0						
ROSF				*e*Sn	**Sn**	**12 58 11.8**	**-3.4**
	18nm,0.4s,SNR=1.0						
ROSF				*e*Sg	**Sg**	**12 58 47.0**	**-0.7**
	51nm,0.5s						
ROSF	**Rostrenen**	**5.59**	**339**	Pn	**Pn**	**12 57 12.5**	**+1.3**
ROSF				Sn	**Sn**	**12 58 11.8**	**-3.4**
	8.8nm,0.4s						
ROSF				Lg		12 58 47.0	
	26nm,0.5s						
ROSF	**Rostrenen**	**5.59**	**339**	Pn	**Pn**	**12 57 12.5**	**+1.3**
ROSF				Sn	**Sn**	**12 58 11.8**	**-3.4**
	8.8nm,0.4s						
ROSF				Lg		12 58 47.0	
	26nm,0.5s						
ROSF	**Rostrenen**	**5.59**	**339**	*e*Pn	**Pn**	**12 57 12.5**	**+1.3**
	SNR=1.0						
ROSF				*e*Sg	**Sg**	**12 58 47.0**	**-0.7**
	26nm,0.5s						
LPG	**La Plagne**	**5.59**	**63**	*e*P	**Pn**	**12 57 17.8**	**+6.5**
LPG				*e*Sg	**Sg**	**12 58 46.6**	**-1.3**
	21nm,0.5s,SNR=1.0						
LPG	**La Plagne**	**5.59**	**63**	Pn	**Pn**	**12 57 17.8**	**+6.5**
LPG				Lg		12 58 46.6	
	11nm,0.5s						
LPG	**La Plagne**	**5.59**	**63**	Pn	**Pn**	**12 57 17.8**	**+6.5**
LPG				Lg		12 58 46.6	
	11nm,0.5s						
EHUE	**Huescar**	**5.60**	**199**	Pn	**Pn**	**12 57 12.2**	**+0.8**
	0.7nm,0.2s,SNR=7.9						
EHUE				Pg	**Pg**	**12 57 30.0**	**-5.6**
	0.4nm,0.1s,SNR=7.9						
EHUE				Sn	**Sn**	**12 58 09.2**	**-6.4**
	1.9nm,0.7s,SNR=7.9						
EHUE				Lg		12 58 44.8	
	4.8nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**5.60**	**199**	Pn	**Pn**	**12 57 12.2**	**+0.8**
	0.7nm,0.2s,SNR=7.9						
EHUE				Pg	**Pg**	**12 57 30.0**	**-5.6**
	0.4nm,0.1s,SNR=7.9						
EHUE				Sn	**Sn**	**12 58 09.2**	**-6.4**
	1.9nm,0.7s,SNR=7.9						
EHUE				Lg		12 58 44.8	
	4.8nm,0.4s,SNR=7.9						
FLN	**La Foliniere**	**5.62**	**359**	*e*Pn	**Pn**	**12 57 12.8**	**+1.2**
	baz=176,SNR=1.0						
FLN				*e*Sn	**Sn**	**12 58 14.3**	**-1.7**
	20nm,0.4s,SNR=1.0						
FLN				*e*Sg	**Sg**	**12 58 47.5**	**-1.2**
	70nm,0.4s						
FLN	**La Foliniere**	**5.62**	**359**	Pn	**Pn**	**12 57 12.8**	**+1.2**
FLN				Sn	**Sn**	**12 58 14.3**	**-1.7**
	9.8nm,0.4s						
FLN				Lg		12 58 47.5	
	35nm,0.4s						
FLN	**La Foliniere**	**5.62**	**359**	Pn	**Pn**	**12 57 12.8**	**+1.2**
FLN				Sn	**Sn**	**12 58 14.3**	**-1.7**
	9.8nm,0.4s						
FLN				Lg		12 58 47.5	
	35nm,0.4s						
FLN	**La Foliniere**	**5.62**	**359**	*e*Pn	**Pn**	**12 57 12.8**	**+1.2**
	baz=176,SNR=1.0						
FLN				*e*Sg	**Sg**	**12 58 47.5**	**-1.2**
	35nm,0.4s						
EBAN	**Banos Encina**	**5.63**	**209**	Pn	**Pn**	**12 57 12.5**	**+0.7**
	9.6nm,0.3s,SNR=8.6						
EBAN				Pg	**Pg**	**12 57 29.7**	**-6.5**
	6.1nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**12 58 12.4**	**-3.9**
	6.3nm,0.3s,SNR=7.9						
EBAN				Lg		12 58 46.0	
	19nm,0.5s,SNR=7.9						
EBAN	**Banos Encina**	**5.63**	**209**	Pn	**Pn**	**12 57 12.5**	**+0.7**
	9.6nm,0.3s,SNR=8.6						
EBAN				Pg	**Pg**	**12 57 29.7**	**-6.5**
	6.1nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**12 58 12.4**	**-3.9**
	6.3nm,0.3s,SNR=7.9						
EBAN				Lg		12 58 46.0	
	19nm,0.5s,SNR=7.9						
SBF	**Sospel**	**5.69**	**80**	*e*P	**Pn**	**12 57 17.7**	**+5.1**
SBF				*e*Sg	**Sg**	**12 58 49.0**	**-1.9**
	12nm,0.3s						
SBF	**Sospel**	**5.69**	**80**	Pn	**Pn**	**12 57 17.7**	**+5.1**
SBF				Lg		12 58 49.0	
	5.8nm,0.3s						
SBF	**Sospel**	**5.69**	**80**	Pn	**Pn**	**12 57 17.7**	**+5.1**
SBF				Lg		12 58 49.0	
	5.8nm,0.3s						
CABF	**La Chapelle**	**5.72**	**51**	*e*Pg	**Pg**	**12 57 37.2**	**-0.7**
CABF				*e*Sg	**Sg**	**12 58 51.4**	**-0.6**
	119nm,0.7s						
CABF	**La Chapelle**	**5.72**	**51**	Pg	**Pg**	**12 57 37.2**	**-0.7**
CABF				Lg		12 58 51.4	
	60nm,0.7s						
CABF	**La Chapelle**	**5.72**	**51**	Pg	**Pg**	**12 57 37.2**	**-0.7**
CABF				Lg		12 58 51.4	
	60nm,0.7s						
CABF	**La Chapelle**	**5.72**	**51**	*e*Pg	**Pg**	**12 57 37.2**	**-0.7**
CABF				*e*Sg	**Sg**	**12 58 51.4**	**-0.6**
	60nm,0.7s						
EQES	**Quesada**	**5.73**	**202**	Pn	**Pn**	**12 57 15.2**	**+1.9**
EQES				Lg		12 58 53.9	
EQES	**Quesada**	**5.73**	**202**	Pn	**Pn**	**12 57 14.7**	**+1.5**
	0.9nm,0.2s,SNR=11						
EQES				Pg	**Pg**	**12 57 31.8**	**-6.4**
	5.9nm,0.4s,SNR=9.0						
EQES				Sn	**Sn**	**12 58 14.9**	**-3.9**
	5.0nm,0.4s,SNR=4.8						
EQES				Lg		12 58 52.6	
	21nm,1.0s,SNR=7.9						
EQES	**Quesada**	**5.73**	**202**	Pn	**Pn**	**12 57 14.7**	**+1.5**
	0.9nm,0.2s,SNR=11						
EQES				Pg	**Pg**	**12 57 31.8**	**-6.4**
	5.9nm,0.4s,SNR=9.0						
EQES				Sn	**Sn**	**12 58 14.9**	**-3.9**
	5.0nm,0.4s,SNR=4.8						
EQES				Lg		12 58 52.6	
	21nm,1.0s,SNR=7.9						
EQES	**Quesada**	**5.73**	**202**	Pn	**Pn**	**12 57 15.2**	**+2.0**
	6.0nm,0.5s,SNR=11						
ELOB	**Lobios**	**5.86**	**260**	Pn	**Pn**	**12 57 16.4**	**+1.4**
ELOB				Lg		12 58 54.6	
ELOB	**Lobios**	**5.86**	**260**	Pn	**Pn**	**12 57 16.4**	**+1.4**
	2.4nm,0.3s,SNR=8.5						
ELOB				Sn	**Sn**	**12 58 20.0**	**-2.0**
	30nm,0.4s,SNR=4.6						
ELOB	**Lobios**	**5.86**	**260**	Pn	**Pn**	**12 57 16.4**	**+1.4**
	2.4nm,0.3s,SNR=8.5						
ELOB				Sn	**Sn**	**12 58 20.0**	**-2.0**
	30nm,0.4s,SNR=4.6						
ELOB	**Lobios**	**5.86**	**260**	Pn	**Pn**	**12 57 16.4**	**+1.4**
	2.4nm,0.3s,SNR=8.5						
PCAB	**Cabril**	**5.88**	**258**	*e*Pn	**Pn**	**12 57 16.7**	**+1.5**
PCAB				*e*Sn	**Sn**	**12 58 20.9**	**-1.6**
PCAB				A		12 59 01.3	
	23nm,0.5s						
PCAB	**Cabril**	**5.88**	**258**	*e*Pn	**Pn**	**12 57 16.7**	**+1.5**
EADA	**Adamuz**	**5.93**	**214**	Pn	**Pn**	**12 57 16.8**	**+0.8**
	3.0nm,0.3s,SNR=13						
EADA				Sn	**Sn**	**12 58 20.1**	**-3.6**
	3.4nm,0.5s,SNR=5.0						
EADA				Lg		12 58 56.1	
	8.6nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**5.93**	**214**	Pn	**Pn**	**12 57 16.8**	**+0.8**
	3.0nm,0.3s,SNR=13						
EADA				Sn	**Sn**	**12 58 20.1**	**-3.6**
	3.4nm,0.5s,SNR=5.0						
EADA				Lg		12 58 56.1	
	8.6nm,0.4s,SNR=7.9						
PVIS	**Viseu**	**6.15**	**249**	*e*Sn	**Sn**	**12 58 26.9**	**-2.2**
PVIS				A		12 59 02.2	
	14nm,0.5s						
EZAM	**Zamans**	**6.26**	**264**	Pn	**Pn**	**12 57 21.4**	**+1.0**
	15nm,0.3s,SNR=7.9						
EZAM				Sn	**Sn**	**12 58 29.4**	**-2.3**
	56nm,0.5s,SNR=7.9						
EZAM	**Zamans**	**6.26**	**264**	Pn	**Pn**	**12 57 21.4**	**+1.0**
	15nm,0.3s,SNR=7.9						
EZAM				Sn	**Sn**	**12 58 29.4**	**-2.3**
	56nm,0.5s,SNR=7.9						
SFTF	**Sexfontaines**	**6.30**	**35**	*e*Pn	**Pn**	**12 57 21.8**	**+0.8**
SFTF				*e*Sn	**Sn**	**12 58 30.6**	**-2.1**
SFTF				*e*Sg	**Sg**	**12 59 08.5**	**-2.0**
	44nm,0.4s						
SFTF	**Sexfontaines**	**6.30**	**35**	Pn	**Pn**	**12 57 21.8**	**+0.8**
SFTF				Sn	**Sn**	**12 58 30.6**	**-2.1**
SFTF				Lg		12 59 08.5	
	44nm,0.4s						
SFTF	**Sexfontaines**	**6.30**	**35**	Pn	**Pn**	**12 57 21.8**	**+0.8**
SFTF				Sn	**Sn**	**12 58 30.6**	**-2.1**
SFTF				Lg		12 59 08.5	
	44nm,0.4s						
SFTF	**Sexfontaines**	**6.30**	**35**	*e*Pn	**Pn**	**12 57 21.8**	**+0.8**
SFTF				*e*Sg	**Sg**	**12 59 08.5**	**-2.0**
	22nm,0.4s						
PCBR	**Castelo Branco**	**6.31**	**241**	*e*Sn	**Sn**	**12 58 29.2**	**-3.8**
PCBR				A		12 59 16.7	
	14nm,0.5s						
EMAZ	**Mazaricos**	**6.34**	**271**	Pn	**Pn**	**12 57 23.7**	**+2.1**
EMAZ				Lg		12 59 20.5	
EMAZ	**Mazaricos**	**6.34**	**271**	Pn	**Pn**	**12 57 23.7**	**+2.1**
	4.0nm,0.3s,SNR=12						
EMAZ				Sn	**Sn**	**12 58 32.2**	**-1.7**
	9.3nm,0.3s,SNR=4.8						
EMAZ	**Mazaricos**	**6.34**	**271**	Pn	**Pn**	**12 57 23.7**	**+2.1**
	4.0nm,0.3s,SNR=12						
EMAZ				Sn	**Sn**	**12 58 32.2**	**-1.7**
	9.3nm,0.3s,SNR=4.8						
EMAZ	**Mazaricos**	**6.34**	**271**	Pn	**Pn**	**12 57 23.7**	**+2.1**
	4.0nm,0.3s,SNR=12						
ECAB	**El Cabril**	**6.38**	**219**	Pn	**Pn**	**12 57 22.9**	**+0.8**
	2.1nm,0.2s,SNR=7.9						
ECAB				Sn	**Sn**	**12 58 31.3**	**-3.5**
	7.6nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**6.38**	**219**	Pn	**Pn**	**12 57 22.9**	**+0.8**
	2.1nm,0.2s,SNR=7.9						
ECAB				Sn	**Sn**	**12 58 31.3**	**-3.5**
	7.6nm,0.3s,SNR=7.9						

17nm,0.4s,SNR=4.0
EGUA Guajares 6.78 203 Pn **Pn 12 57 27.8 +0.2**
17nm,0.4s,SNR=4.0
HINF Hinteralfeld 6.87 45 *e*Sg **Sg 12 59 26.7 -2.1**
57nm,0.9s
HINF Hinteralfeld 6.87 45 Lg 12 59 26.7
29nm,0.9s
HINF Hinteralfeld 6.87 45 Lg 12 59 26.7
29nm,0.9s
HINF Hinteralfeld 6.87 45 *e*Sg **Sg 12 59 26.7 -2.1**
29nm,0.9s
PGF Pioggiola 6.88 92 *e*Pn **Pn 12 57 29.9 +1.0**
PGF *e*Sn **Sn 12 58 45.3 -1.7**
12nm,0.4s,SNR=1.0
PGF Pioggiola 6.88 92 Pn **Pn 12 57 29.9 +1.0**
PGF Sn **Sn 12 58 45.3 -1.7**
5.8nm,0.4s
PGF Pioggiola 6.88 92 Pn **Pn 12 57 29.9 +1.0**
PGF Sn **Sn 12 58 45.3 -1.7**
5.8nm,0.4s
PGF Pioggiola 6.88 92 *e*Pn **Pn 12 57 29.9 +1.0**
PESTR Estremoz 6.96 235 *e*Pn **Pn 12 57 30.8 +0.7**
PESTR *e*Sn **Sn 12 58 45.8 -3.3**
PESTR A 12 59 32.8
7.2nm,0.6s
PESTR Estremoz 6.96 235 *e*Pn **Pn 12 57 30.8 +0.7**
PBAR Barrancos 7.12 228 *e*Pn **Pn 12 57 32.9 +0.6**
PBAR *e*Sn **Sn 12 58 49.0 -4.0**
PBAR A 12 59 38.6
11nm,0.6s
PBAR Barrancos 7.12 228 *e*Pn **Pn 12 57 32.9 +0.6**
EMIN Mina Concepcio 7.23 224 Pn **Pn 12 57 34.0 +0.2**
1.9nm,0.5s,SNR=7.9
EMIN Sn **Sn 12 58 50.5 -5.3**
5.1nm,0.5s,SNR=7.9
EMIN Lg 12 59 37.8
4.3nm,0.6s,SNR=7.9
EMIN Mina Concepcio 7.23 224 Pn **Pn 12 57 34.0 +0.2**
1.9nm,0.5s,SNR=7.9
EMIN Sn **Sn 12 58 50.5 -5.3**
5.1nm,0.5s,SNR=7.9
EMIN Lg 12 59 37.8
4.3nm,0.6s,SNR=7.9
EMIJ Mijas 7.41 209 Pn **Pn 12 57 37.1 +0.9**
3.2nm,0.4s,SNR=7.9
EMIJ Mijas 7.41 209 Pn **Pn 12 57 37.1 +0.9**
3.2nm,0.4s,SNR=7.9
EVO Evora 7.43 234 *e*Pn **Pn 12 57 37.7 +1.2**
EVO *e*Sn **Sn 12 58 57.6 -3.1**
13nm,0.6s
EVO *e*Sg Sn 12 59 43.0 +42
14nm,0.5s
CDF Champ du Feu 7.48 43 *e*Sg Sx 12 59 45.8
37nm,0.8s
CDF Champ du Feu 7.48 43 Lg 12 59 45.8
18nm,0.8s
CDF Champ du Feu 7.48 43 Lg 12 59 45.8
18nm,0.8s
CDF Champ du Feu 7.48 43 *e*Sg Sx 12 59 45.8
18nm,0.8s
EVOP Sao Brissos 7.50 235 *e*Pn **Pn 12 57 37.7 +0.2**
BAIF Baives 7.58 23 *e*Pn **Pn 12 57 39.2 +0.6**
BAIF *e*Sg Sn 12 59 49.4 +45
44nm,0.7s
BAIF Baives 7.58 23 Pn **Pn 12 57 39.2 +0.6**
BAIF Lg 12 59 49.4
22nm,0.7s
BAIF Baives 7.58 23 Pn **Pn 12 57 39.2 +0.6**
BAIF Lg 12 59 49.4
22nm,0.7s
BAIF Baives 7.58 23 *e*Pn **Pn 12 57 39.2 +0.6**
BAIF *e*Sg Sn 12 59 49.4 +45
22nm,0.7s
MOE Montemor 7.64 236 *e*Sn **Sn 12 59 02.0 -3.8**
PBEJ Beja 7.69 231 *e*Sn **Sn 12 59 03.4 -3.6**
PBEJ A 12 59 31.5
5.0nm,0.6s
GIVF Givet 7.81 25 *e*Pn **Pn 12 57 40.6 -1.0**
GIVF *e*Sg Sn 12 59 56.1 +46
26nm,0.5s
GIVF Givet 7.81 25 Pn **Pn 12 57 40.6 -1.0**
GIVF Lg 12 59 56.1
13nm,0.5s
GIVF Givet 7.81 25 Pn **Pn 12 57 40.6 -1.0**
GIVF Lg 12 59 56.1
13nm,0.5s
GIVF Givet 7.81 25 *e*Pn **Pn 12 57 40.6 -1.0**
GIVF *e*Sg Sn 12 59 56.1 +46
13nm,0.5s
EGRO El Granado 7.83 227 Pn **Pn 12 57 43.2 +1.2**
EGRO El Granado 7.83 227 Pn **Pn 12 57 42.6 +0.6**
1.5nm,0.3s,SNR=4.6
EGRO Sn **Sn 12 59 04.9 -5.6**
6.5nm,0.4s,SNR=7.9
EGRO El Granado 7.83 227 Pn **Pn 12 57 42.6 +0.6**
1.5nm,0.3s,SNR=4.6
EGRO Sn **Sn 12 59 04.9 -5.6**
6.5nm,0.4s,SNR=7.9
EGRO El Granado 7.83 227 Pn **Pn 12 57 43.2 +1.2**
1.5nm,0.3s,SNR=4.6
PVAQ Vaqueiros 8.05 227 *e*Pn **Pn 12 57 45.0 0.0**
PVAQ *e*Sn **Sn 12 59 10.7 -5.2**
PVAQ A 13 00 18.4
5.3nm,0.6s
PVAQ Vaqueiros 8.05 227 *e*Pn **Pn 12 57 45.0 0.0**
PCVE Castro Verde 8.06 229 *e*Pn **Pn 12 57 45.4 +0.2**
PCVE *e*Sn **Sn 12 59 10.9 -5.3**
PCVE Castro Verde 8.06 229 *e*Pn **Pn 12 57 45.4 +0.2**
PTEO Sao Teotonio 8.51 232 *e*Pn **Pn 12 57 51.9 +0.6**
PTEO Sao Teotonio 8.51 232 *e*Pn **Pn 12 57 51.9 +0.6**
MORF Marmelete 8.63 230 *e*Pn **Pn 12 57 53.6 +0.6**
MORF *e*Sn **Sn 12 59 24.7 -5.6**
MORF Marmelete 8.63 230 *e*Pn **Pn 12 57 53.6 +0.6**
PFVI Vila Bisbo 8.86 230 *e*Sn **Sn 12 59 30.3 -5.4**
PFVI A 12 59 37.5
5.2nm,0.3s

*ISCJB **18** 13:24:41.3±0.6, 37°.07N±0°.02×23°.74E±0°.03, h4km±4km, Error ellipse: s-maj=4.7km s-min=3.8km az=144.8*
*CSEM **18** 13:24:42.9±0.2, 37°.10N×23°.75E, h15km, MD3.5, Error ellipse: s-maj=4.3km s-min=3.4km az=64.0*
*THE **18** 13:24:42.8, 37°.11N×23°.73E, h8km±1km, ML2.5/7, Error ellipse: s-maj=1.5km s-min=0.8km az=2.0*
*ATH **18** 13:24:42.2, 37°.09N×23°.70E, h23km, MD3.5/9*
*NEIC **18** 13:24:46.6, 37°.23N×23°.49E, h5km, ML2.8(ATH), After ATH.*
ISC 18 13:24:42.2±0.5, 37°.07N±0°.02×23°.74E±0°.04, h10km±3km, n50, σ0°66/82, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DID	**Didima**	**0.59**	**317**	*e*PN	**Pg**	**13 24 53.4**	**-0.3**
DID				*e*SN	**Sg**	**13 25 01.6**	**+0.1**
DID	**Didima**	**0.59**	**317**	P	**Pg**	**13 24 53.3**	**-0.4**
DID				S	**Sg**	**13 25 01.3**	**-0.2**
DID	**Didima**	**0.59**	**317**	*e*Pn	**Pg**	**13 24 53.4**	**-0.3**
DID				S	**Sg**	**13 25 01.3**	**-0.2**
VLI	**Veliai**	**0.73**	**242**	*e*PN	**Pg**	**13 24 56.1**	**-0.3**
VLI				*e*SN	**Sg**	**13 25 06.4**	**+0.4**
VLY	**Voula,Athens**	**0.78**	**3**	P	**Pg**	**13 24 57.3**	**0.0**
VLY	**Voula,Athens**	**0.78**	**3**	P	**Pg**	**13 24 57.3**	**0.0**
ATHU	**Athens Univers**	**0.89**	**2**	P	**Pg**	**13 24 59.8**	**+0.3**
ATHU				S	**Sg**	**13 25 12.4**	**+1.3**
ATHU	**Athens Univers**	**0.89**	**2**	P	**Pg**	**13 24 59.8**	**+0.3**
ATHU				S	**Sg**	**13 25 12.4**	**+1.3**
ATH	**Athens Observa**	**0.90**	**359**	P	**Pg**	**13 25 00.3**	**+0.7**
ATH	**Athens Observa**	**0.90**	**359**	P	**Pg**	**13 25 00.3**	**+0.7**
KYTH	**Kithira**	**0.97**	**216**	*e*PN	**Pg**	**13 25 00.9**	**0.0**
KYTH	**Kithira**	**0.97**	**216**	*e*Pn	**Pg**	**13 25 00.9**	**0.0**
PTL	**Penteli**	**0.98**	**6**	P	**Pg**	**13 25 01.9**	**+0.8**
PTL	**Penteli**	**0.98**	**6**	P	**Pg**	**13 25 01.9**	**+0.8**
VLX	**Vlachokerasia**	**1.13**	**286**	*e*PN	**Pg**	**13 25 03.8**	**-0.1**
VLX				*e*SN	**Sg**	**13 25 18.5**	**0.0**
VLX	**Vlachokerasia**	**1.13**	**286**	P	**Pg**	**13 25 03.6**	**-0.3**
VLX				S	**Sg**	**13 25 18.6**	**+0.1**
VLX	**Vlachokerasia**	**1.13**	**286**	P	**Pg**	**13 25 03.6**	**-0.3**
VLX				S	**Sg**	**13 25 18.6**	**+0.1**
LTK	**Loutraki**	**1.13**	**327**	*e*PN	**Pg**	**13 25 03.3**	**-0.7**
LTK				*e*SN	**Sg**	**13 25 18.1**	**-0.6**
LTK	**Loutraki**	**1.13**	**327**	P	**Pg**	**13 25 03.3**	**-0.7**
LTK				S	**Sg**	**13 25 19.1**	**+0.4**
LTK	**Loutraki**	**1.13**	**327**	P	**Pg**	**13 25 03.3**	**-0.7**
LTK				*e*Sn	**Sg**	**13 25 18.1**	**-0.6**
LTK				S	**Sg**	**13 25 19.1**	**+0.4**
GUR	**Goura**	**1.41**	**308**	*e*PN	**Pn**	**13 25 07.4**	**-0.6**
GUR				*e*SN	**Sn**	**13 25 26.5**	**-0.1**
GUR	**Goura**	**1.41**	**308**	P	**Pn**	**13 25 07.3**	**-0.7**
GUR				S	**Sn**	**13 25 27.6**	**+1.0**
GUR	**Goura**	**1.41**	**308**	*e*Pn	**Pn**	**13 25 07.4**	**-0.6**
GUR				*e*Sn	**Sn**	**13 25 26.5**	**-0.1**
GUR				S	**Sn**	**13 25 27.6**	**+1.0**
APE	**Apeiranthos**	**1.43**	**90**	P	**Pn**	**13 25 07.9**	**-0.4**
APE				S	**Sn**	**13 25 26.7**	**-0.5**
APE	**Apeiranthos**	**1.43**	**90**	P	**Pn**	**13 25 07.9**	**-0.4**
APE				S	**Sn**	**13 25 26.7**	**-0.5**
ITM	**Ithomi**	**1.45**	**275**	P	**Pn**	**13 25 09.4**	**+0.8**
ITM	**Ithomi**	**1.45**	**275**	*e*PN	**Pn**	**13 25 09.3**	**+0.7**
ITM				*e*SN	**Sn**	**13 25 28.1**	**+0.4**
ITM	**Ithomi**	**1.45**	**275**	P	**Pn**	**13 25 08.8**	**+0.2**
ITM				S	**Sn**	**13 25 28.0**	**+0.3**
ITM	**Ithomi**	**1.45**	**275**	P	**Pn**	**13 25 08.8**	**+0.2**
ITM	**Ithomi**	**1.45**	**275**	*e*Pn	**Pn**	**13 25 09.3**	**+0.7**
ITM				*e*Sn	**Sn**	**13 25 28.1**	**+0.4**
DSF	**Desfina**	**1.65**	**325**	P	**Pn**	**13 25 10.6**	**-0.7**
DSF				S	**Sn**	**13 25 32.8**	**+0.3**
DSF	**Desfina**	**1.65**	**325**	P	**Pn**	**13 25 10.6**	**-0.7**
DSF				S	**Sn**	**13 25 32.8**	**+0.3**
KARN	**Karanos**	**1.67**	**175**	P	**Pn**	**13 25 12.2**	**+0.6**
KARN				S	**Sg**	**13 25 35.5**	**-0.5**
KARN	**Karanos**	**1.67**	**175**	P	**Pn**	**13 25 12.2**	**+0.6**
KARN				S	**Sg**	**13 25 35.5**	**-0.5**
LKR	**Lokris**	**1.68**	**340**	P	**Pn**	**13 25 11.5**	**-0.2**
LKR	**Lokris**	**1.68**	**340**	P	**Pn**	**13 25 11.2**	**-0.5**
LKR				S	**Sn**	**13 25 32.8**	**-0.6**
LKR	**Lokris**	**1.68**	**340**	P	**Pn**	**13 25 11.2**	**-0.5**
LKR				S	**Sn**	**13 25 32.8**	**-0.6**
VAM	**Vamos**	**1.70**	**167**	P	**Pg**	**13 25 19.4**	**+4.5**
LAKA	**Lakka**	**1.82**	**310**	P	**Pn**	**13 25 13.5**	**-0.2**
LAKA				S	**Sn**	**13 25 37.1**	**+0.3**
LAKA	**Lakka**	**1.82**	**310**	P	**Pn**	**13 25 13.5**	**-0.2**
LAKA				S	**Sn**	**13 25 37.1**	**+0.3**
KALE	**Kalithea**	**1.83**	**317**	P	**Pn**	**13 25 13.1**	**-0.7**
KALE	**Kalithea**	**1.83**	**317**	P	**Pn**	**13 25 13.1**	**-0.7**
RLS	**Riolos of Patr**	**2.06**	**299**	*e*PN	**Pn**	**13 25 18.1**	**+1.2**
RLS	**Riolos of Patr**	**2.06**	**299**	*e*Pn	**Pn**	**13 25 18.1**	**+1.2**
AGG	**Agios Georgios**	**2.24**	**331**	P	**Pg**	**13 25 23.0**	**-2.2**
AGG	**Agios Georgios**	**2.24**	**331**	*e*PB	**Pn**	**13 25 19.9**	**+0.4**
AGG	**Agios Georgios**	**2.24**	**331**	P	**Pn**	**13 25 19.4**	**-0.1**
AGG				S	**Sn**	**13 25 46.9**	**-0.3**
AGG	**Agios Georgios**	**2.24**	**331**	P	**Pn**	**13 25 19.4**	**-0.1**
AGG				S	**Sn**	**13 25 46.9**	**-0.3**
LAST	**Lasithi**	**2.37**	**143**	P	**Pn**	**13 25 22.1**	**+0.9**
LAST	**Lasithi**	**2.37**	**143**	P	**Pn**	**13 25 22.1**	**+0.9**

IDC 18 13:28:21.2±2.1, 5°.57S×145°.73E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.5/16, mbtmp3.5/5, Error ellipse: s-maj=88.6km s-min=26.3km az=119.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.08**	**217**	P	Pn	13 32 34.9	+0.9
0.1nm,0.3s,baz=39,slow=12,SNR=11							
ASAR	**Alice Springs**	**21.30**	**211**	P	P	13 33 09.6	0.0
0.7nm,0.8s,baz=45,slow=9.7,SNR=4.9							
FITZ	**Fitzroy Crossi**	**23.24**	**236**	P	P	13 33 29.2	-1.1
1.0nm,0.6s,baz=66,slow=10.0,SNR=5.0							
ZALV	**Zalesovo Beam**	**77.98**	**328**	P	P	13 40 21.8	+0.6
0.4nm,0.3s,baz=86,slow=7.7,SNR=2.6							
ILAR	**Eielson Array**	**85.59**	**23**	P	P	13 41 01.1	0.0
0.6nm,0.6s,baz=253,slow=5.5,SNR=4.4							

*SZGRF **18** 13:28:45.3, 33°.50N×140°.02E, h33km, mb5.0, Southeast of Honshu, Japan*
*NIED **18** 13:29:00, 35°.00N×136°.80E, h340km, Mw4.7 Best double couple: $M_0$1.26000×10^{16} NP1:ϕ_s52.00000°, δ85.00000°, λ-154.00000°. NP2:ϕ_s319.00000°, δ64.00000°, λ-6.00000°.*
*BJI **18** 13:29:27.8, 34°.98N×136°.78E, h330km, mB4.7/14, mb4.8/43*
*MOS **18** 13:29:28.5±1.0, 34°.99N×136°.70E, h323km, mb4.6/52, Error ellipse: s-maj=9.6km s-min=5.2km az=114.5*
*ISCJB **18** 13:29:29.1±0.2, 34°.95N±0°.03×136°.77E±0°.03, h334km±1km, mb4.5/94, Error ellipse: s-maj=4.8km s-min=4.0km az=140.5*
*NEIC **18** 13:29:29.5±0.4, 34°.92N×136°.73E, h324km±3km, mb4.7/48, MW4.7(NIED), Error ellipse: s-maj=5.8km s-min=4.7km az=84.0*
*JMA **18** 13:29:29.7±0.2, 35°.01N×136°.77E, h334km±2km, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s313.00000°, δ58.00000°, λ-5.00000°. NP2:ϕ_s46.00000°, δ86.00000°, λ-148.00000°. Principal axes: T Plg19.0000°, Azm175.0000°; N Plg58.0000°, Azm52.0000°; P Plg25.0000°, Azm274.0000°;*
JMA Felt I J1.
*IDC **18** 13:29:30.0±0.5, 34°.90N×136°.69E, h326km±5km, mb4.1/23, mb1 4.1/26, mb1mx4.0/36, mbtmp4.1/26 Error ellipse: s-maj=10.8km s-min=6.0km az=72.0*
*DJA **18** 13:29:32, 35°.06N×136°.84E, h357km, mb4.7/15*
ISC 18 13:29:30.0±0.2, 34°.98N±0°.03×136°.77E±0°.03, h328km±1km, n285, σ0°87/316, mb4.5/94, 12C-17D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEG	**Eigenji**	**0.35**	**297**	P	**Pn**	**13 30 12.2**	**+0.8**
JEG				S	**S**	**13 30 44.4**	**-0.2**
JIE	**Ise**	**0.59**	**185**	⇓P	**Pn**	**13 30 12.7**	**+0.6**
JIE				S	**S**	**13 30 45.7**	**0.0**
JGM	**Miyama**	**0.72**	**357**	⇑P	**Pn**	**13 30 12.8**	**+0.5**
JGM				S	**S**	**13 30 46.0**	**-0.1**
JWT	**Wachi**	**1.16**	**286**	⇑P	**Pn**	**13 30 14.5**	**+0.4**
JWT				S	**S**	**13 30 48.8**	**-0.5**
JWY	**Kouya**	**1.23**	**232**	P	**Pn**	**13 30 15.2**	**+0.7**
JWY				S	**S**	**13 30 49.6**	**-0.4**
JKG	**Kaga**	**1.34**	**345**	⇑P	**Pn**	**13 30 15.2**	**+0.2**
JKG				S	**S**	**13 30 50.7**	**-0.3**
TK01	**Tokai 1**	**1.39**	**150**	P	**Pn**	**13 30 16.5**	**+1.1**
JYN	**Shimob**	**1.54**	**70**	⇓P	**Pn**	**13 30 16.7**	**+0.5**
JWZ	**Kozaga**	**1.69**	**211**	P	**Pn**	**13 30 17.2**	**0.0**
JWZ				S	**S**	**13 30 54.2**	**-0.7**
JOD2	**Odawara 2**	**1.92**	**81**	⇓P	**Pn**	**13 30 19.1**	**+0.4**
JOD2				S	**S**	**13 30 59.3**	**+1.6**
MAJO	**Matsushiro**	**1.95**	**36**	*e*P	**Pn**	**13 30 19.0**	**+0.2**
MAJO	**Matsushiro**	**1.95**	**36**	*e*P	**Pn**	**13 30 19.0**	**+0.1**
MAT	**Matsushiro**	**1.95**	**36**	P	**Pn**	**13 30 19.3**	**+0.4**
MAT				S	**S**	**13 30 57.8**	**-0.2**
MAT	**Matsushiro**	**1.95**	**36**	P	**Pn**	**13 30 19.2**	**+0.3**
MAT				S	**S**	**13 30 57.3**	**-0.7**
MJAR	**Matsushiro Arr**	**1.95**	**37**	P	**Pn**	**13 30 18.6**	**-0.3**
19nm,0.3s,baz=215,slow=8.2,SNR=292							
MJAR				S	**S**	**13 30 58.0**	**0.0**
25nm,0.3s,baz=70,slow=3.9,SNR=4.6							
MJAR	**Matsushiro Arr**	**1.95**	**37**	P	**Pn**	**13 30 18.6**	**-0.3**
MJAR				S	**S**	**13 30 58.0**	**0.0**
MJAR				pmax	pmax		
comp=Z,19nm,0.3s							
MJAR				smax			
comp=N,25nm,0.3s							
JRY	**Ryogami san**	**2.03**	**59**	⇓P	**Pn**	**13 30 20.1**	**+0.7**
JRY				S	**S**	**13 30 59.7**	**+0.7**
JAI	**Aioi**	**2.25**	**239**	P	**Pn**	**13 30 21.7**	**+0.5**
JAI				S	**S**	**13 31 01.3**	**-0.9**
JSZ	**Suzu**	**2.51**	**11**	⇑P	**Pn**	**13 30 23.5**	**+0.2**
JSZ				S	**S**	**13 31 05.7**	**-0.3**
JAG	**Ashikaga**	**2.62**	**56**	⇓P	**Pn**	**13 30 23.7**	**-0.5**
JAG				S	**S**	**13 31 05.6**	**-2.1**
JMN	**Monobe**	**2.69**	**243**	P	**Pn**	**13 30 25.4**	**+0.4**
JMN				S	**S**	**13 31 08.6**	**-0.4**
JHS	**Saijyo**	**3.00**	**271**	⇓P	**Pn**	**13 30 28.1**	**+0.4**
JHS				S	**S**	**13 31 14.4**	**+0.5**
SAI	**Saigo**	**3.05**	**295**	S	**S**	**13 31 14.6**	**-0.2**
JHJ	**Hachijo jima 2**	**3.12**	**126**	P	**Pn**	**13 30 29.0**	**+0.1**
comp=N,179nm,0.3s,baz=167,slow=3.4,SNR=69							
JHJ				S	**S**	**13 31 18.8**	**+2.7**
comp=N,140nm,0.3s,baz=58,slow=23,SNR=7.1							
JHJ2	**Mitsune**	**3.14**	**125**	P	**Pn**	**13 30 29.2**	**+0.1**
BSO1	**Boso 1**	**3.48**	**94**	P	**Pn**	**13 30 30.8**	**-1.6**
BSO1				S	**S**	**13 31 20.3**	**-2.1**
JTO	**Tosashimizu**	**3.92**	**238**	P	**Pn**	**13 30 37.7**	**+0.8**
JTO				S	**S**	**13 31 30.4**	**-0.2**
JNU	**Nakatsue**	**5.23**	**251**	*e*P	**Pn**	**13 30 51.4**	**+0.2**
comp=N,56nm,0.8s							
KSRS	**Korea Array**	**7.56**	**292**	P	**Pn**	**13 31 19.4**	**+0.9**
comp=N,3.3nm,0.3s,baz=110,slow=12,SNR=145							
KSRS	**Korea Array**	**7.56**	**292**	P	**Pn**	**13 31 19.4**	**+0.9**
KSRS				pmax	pmax		
comp=Z,3.0nm,0.3s							
INCN	**Inchon**	**8.56**	**290**	*e*P	**Pn**	**13 31 31.3**	**+0.7**
comp=Z,47nm,0.7s							
ERM	**Erimo**	**8.63**	**34**	*e*P	**Pn**	**13 31 29.4**	**-1.9**
comp=Z,85nm,0.4s							
ERM				*e*S	Px	13 32 48.3	
ERM	**Erimo**	**8.63**	**34**	*e*P	**Pn**	**13 31 29.4**	**-1.8**
ERM				pmax	pmax		
comp=Z,85nm,0.4s							
VLA	**Vladivostok**	**8.97**	**336**	*c i*P	**Pn**	**13 31 36.2**	**+0.8**
CBIJ	**Chichi jima**	**9.13**	**148**	P	**Pn**	**13 31 31.4**	**-6.1**
comp=Z,31nm,0.3s,baz=260,slow=12,SNR=21							
CBIJ				S	**S**	**13 33 09.2**	**-12**
comp=Z,191nm,0.3s,baz=313,slow=23,SNR=24							
ASAJ	**Asahikawa**	**10.17**	**24**	P	**Pn**	**13 31 48.2**	**-1.6**
comp=Z,14nm,0.3s,baz=220,slow=10,SNR=77							
ASAJ				S	**S**	**13 33 35.5**	**-9.0**
comp=Z,6.1nm,0.3s,baz=15,slow=32,SNR=5.1							
ASAJ	**Asahikawa**	**10.17**	**24**	*e*P	**Pn**	**13 31 47.3**	**-2.6**
comp=Z,24nm,0.4s							
ASAJ	**Asahikawa**	**10.17**	**24**	P	**Pn**	**13 31 48.3**	**-1.6**
ASAJ				S	**S**	**13 33 35.5**	**-9.0**
ASAJ				pmax	pmax		
comp=Z,15nm,0.3s							
ASAJ				smax			
comp=N,6.0nm,0.3s							
MDJ	**Mudanjiang**	**11.09**	**332**	*e*P	**Pn**	**13 32 01.6**	**+0.7**
comp=N,46nm,0.9s							
YUK	**Yuzh-Kuril'sk**	**11.44**	**35**	⇓*i*P	**Pn**	**13 32 04.5**	**-0.7**
YUK				*i* S	**S**	**13 34 04.3**	**-8.5**
YUK				pmax	pmax		
comp=Z,261nm,0.5s							
YUK				pmax	pmax		
comp=N,32nm,0.2s							
YUK				pmax	pmax		
comp=E,91nm,0.5s							
YUK				pmax	pmax		
comp=Z,420nm,0.9s							
YUK				smax			
comp=N,1μm,0.6s							
YUK				smax			
comp=E,810nm,0.6s							
YUK				smax			
comp=N,1μm,0.6s							
YUK				smax			
comp=E,630nm,0.6s							
CN2	**Changchun**	**12.41**	**319**	*e*P	**Pn**	**13 32 16.8**	**0.0**
CN2				pmax	pmax		
comp=Z,10.0nm,0.7s							
YSS	**Yuzh-Sakhalins**	**12.79**	**19**	*e*P	**Pn**	**13 32 19.8**	**-1.5**
comp=Z,459nm,0.6s							
YSS	**Yuzh-Sakhalins**	**12.79**	**19**	⇓*i*P	**Pn**	**13 32 19.8**	**-1.4**
YSS				*e*S	**S**	**13 34 35.0**	**-7.5**
YSS				pmax	pmax		
comp=Z,470nm,0.6s							
YSS				smax			
comp=N,30nm,1.0s							
KUR	**Kuril'sk**	**13.29**	**36**	*e*P	**Pn**	**13 32 28.6**	**+1.3**
KUR				*e*S	**S**	**13 34 53.0**	**-0.1**
KUR				pmax	pmax		
comp=N,90nm,1.0s							
KUR				pmax	pmax		
comp=E,110nm,1.0s							
KUR				pmax	pmax		
comp=Z,340nm,1.0s							
KUR				smax			
comp=N,160nm,0.8s							
KUR				smax			
comp=E,130nm,0.8s							
KUR				smax			
comp=N,25μm,3.0s							
HABR	**Khabarovsk**	**13.54**	**355**	*de*P	**Pn**	**13 32 28.0**	**-2.2**
HABR				*e*S	**S**	**13 34 55.9**	**-2.3**
HABR				pmax	pmax		
comp=Z,96nm,0.8s							
HABR				pmax	pmax		
comp=N,65nm,1.0s							
HABR				pmax	pmax		
comp=E,43nm,1.7s							
KLR	**Kul'dur**	**14.72**	**347**	*e*P	**P**	**13 32 37.2**	**-5.1**
KLR				*e*S	**S**	**13 35 27.5**	**+5.7**
KLR				pmax	pmax		
comp=E,20nm,1.0s							
KLR				pmax	pmax		
comp=Z,36nm,1.0s							
NJ2	**Nanjing**	**15.22**	**264**	*e*P	**P**	**13 32 49.3**	**+1.2**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
BJT	**Baijiatuau**	**17.09**	**293**	*e*P	**P**	**13 33 06.7**	**-1.6**
comp=Z,40nm,0.6s							
BJT	**Baijiatuau**	**17.09**	**293**	*e*P	**P**	**13 33 06.7**	**-1.6**
BJT				pmax	pmax		
comp=Z,40nm,0.6s							
TPUB	**Ta-pu**	**18.25**	**235**	*e*P	**P**	**13 33 17.8**	**-3.0**
HIA	**Hailar**	**19.00**	**324**	*e*P	**P**	**13 33 25.8**	**-2.6**
comp=Z,22nm,0.6s							
HIA	**Hailar**	**19.00**	**324**	*e*P	**P**	**13 33 25.8**	**-2.6**
HIA				pmax	pmax		
comp=Z,22nm,0.6s							
WHN	**Wuhan**	**19.35**	**263**	P	**P**	**13 33 30.8**	**-1.7**
WHN				pmax	pmax		
comp=Z,110nm,1.0s							
HHC	**Hu-ho-hao-te**	**20.70**	**294**	⇑P	**P**	**13 33 46.5**	**+0.7**
HHC				sP	sP	13 35 17.8	-0.2
HHC				S	**S**	**13 37 14.1**	**-1.1**
HHC				PcP	PcP	13 37 42.8	+2.0
HHC				pmax	pmax		
comp=Z,43nm,1.2s							
HHC				pmax	pmax		
comp=Z,71nm,5.2s							
HHC				LR	LR		
comp=N,140nm,5.0s							
HHC				LR	LR		
comp=E,160nm,6.8s							
HHC				LR	LR		
comp=Z,150nm,8.2s							
BTO	**Baotou**	**21.83**	**293**	*e*P	**P**	**13 33 54.0**	**-2.1**
GUMO	**Guam**	**22.52**	**159**	P	**P**	**13 34 02.4**	**-0.2**
comp=Z,269nm,0.9s,mb5.5,baz=342,slow=0.3,SNR=13							
GUMO	**Guam**	**22.52**	**159**	*e*P	**P**	**13 34 02.4**	**-0.3**
comp=Z,214nm,0.8s,mb5.4							
GUMO	**Guam**	**22.52**	**159**	P	**P**	**13 34 02.4**	**-0.3**
GUMO				pmax	pmax		
comp=Z,269nm,0.9s,mb5.5							
GUMO	**Guam**	**22.52**	**159**	P	**P**	**13 34 04.0**	**+1.3**
comp=Z,355nm,0.9s,mb5.6							
XAN	**Xi'an**	**22.94**	**276**	P	**P**	**13 34 05.3**	**-1.0**
XAN				pP		13 34 09.9	
XAN				pmax	pmax		
comp=Z,28nm,1.0s,mb4.5							
PETK	**Petropavlovsk-**	**23.41**	**33**	P	**P**	**13 34 11.5**	**+1.2**
comp=Z,11nm,0.8s,mb4.2,baz=228,slow=4.5,SNR=18							
PETK	**Petropavlovsk-**	**23.41**	**33**	P	**P**	**13 34 11.5**	**+1.2**
PETK				pmax	pmax		
comp=Z,11nm,0.8s,mb4.1							
ENH	**Enshi**	**23.42**	**266**	*e*P	**P**	**13 34 09.6**	**-1.1**
comp=Z,186nm,0.8s,mb5.4							
ULN	**Ulaanbaatar**	**25.56**	**309**	*e*P	**P**	**13 34 30.7**	**+1.0**
comp=Z,30nm,0.7s,mb4.6							
ULN	**Ulaanbaatar**	**25.56**	**309**	*e*P	**P**	**13 34 30.7**	**+1.0**
ULN				pmax	pmax		
comp=Z,30nm,0.7s,mb4.6

TLY Talaya 28.98 315 *e*P **P 13 35 01.0 +1.0**
TLY pmax pmax
comp=Z,23nm,0.8s,mb4.5
GTA Gaotai 29.63 290 *e*P **P 13 35 05.8 0.0**
GTA pmax pmax
comp=Z,19nm,1.1s,mb4.2
MOY Mondy 30.52 314 *e*P **P 13 35 14.6 +1.1**
KMI Kunming 30.92 261 P **P 13 35 16.4 -0.9**
KMI pmax pmax
comp=Z,16nm,0.9s,mb4.2
MYLDM Lahad Datu 34.12 214 P **P 13 35 48.0 +3.0**
comp=Z,40nm,1.1s,mb4.6
CHRT Chiangrai 35.88 255 ⇓P **P 13 35 59.0 -0.9**
comp=Z,158nm,0.7s,mb5.3
CHG Chiang Mai 37.12 254 ⇓P **P 13 36 09.8 -0.5**
comp=Z,12nm,0.9s,mb4.1
CHTO Chiang Mai 37.12 254 P **P 13 36 09.9 -0.4**
comp=Z,14nm,1.1s,mb4.1
CMAR Chiang Mai Arr 37.32 254 P **P 13 36 11.6 -0.4**
comp=Z,4.6nm,0.7s,mb3.8,baz=48,slow=7.0,SNR=31
CMAR ScP ScP 13 41 39.8 +1.1
comp=Z,0.6nm,0.4s,baz=41,slow=2.5,SNR=5.9
CMAR Chiang Mai Arr 37.32 254 P **P 13 36 11.6 -0.3**
CMAR 13 41 39.8
CMAR pmax pmax
comp=Z,5.0nm,0.7s
CMAR pmax pmax
comp=N,1.0nm,0.4s
WMQ Urumqi 38.45 298 *e*P **P 13 36 22.0 +1.0**
WMQ pmax pmax
comp=Z,45nm,1.0s,mb4.7
LSA Lhasa 38.64 275 *e*P **P 13 36 24.0 +1.2**
comp=Z,4.4nm,0.5s,mb3.9
LSA Lhasa 38.64 275 *e*P **P 13 36 24.0 +1.2**
LSA pmax pmax
comp=Z,4.0nm,0.5s,mb3.9
SHL Shillong 39.60 269 *e*PKP **P 13 36 32.0 +1.3**
ZAA0 Zalesovo Array 40.58 314 *e*P **P 13 36 38.4 +0.1**
ZALV Zalesovo Beam 40.58 314 P **P 13 36 38.4 +0.1**
comp=Z,6.8nm,0.4s,mb4.2,baz=110,slow=8.0,SNR=46
ZALV PcP PcP 13 38 32.9 -0.2
comp=Z,4.6nm,0.6s,baz=93,slow=3.1,SNR=8.7
ZALV ScP ScP 13 41 51.3 +0.6
comp=Z,0.8nm,0.5s,baz=104,slow=3.3,SNR=3.3
ZALV Zalesovo Beam 40.58 314 P **P 13 36 38.4 +0.1**
ZALV PcP PcP 13 38 32.9 -0.2
ZALV ScP ScP 13 41 51.2 +0.6
ZALV Zalesovo Beam 40.58 314 P **P 13 36 38.4 +0.1**
ZALV 13 38 32.9
ZALV pmax pmax
comp=Z,7.0nm,0.4s,mb4.2
ZALV pmax pmax
comp=Z,5.0nm,0.6s,mb3.9
ZALV pmax pmax
comp=N,1.0nm,0.5s
NVS Novosibirsk 41.60 316 ⇑*i*P **P 13 36 46.5 0.0**
NVS pmax pmax
comp=Z,27nm,1.0s,mb4.3
NVS pmax pmax
comp=N,5.0nm,0.7s
NVS pmax pmax
comp=E,17nm,1.0s
MK31 Makanchi Array 42.06 303 *e*P **P 13 36 50.7 +0.4**
MK31 Makanchi Array 42.06 303 *e*P **P 13 36 50.7 +0.4**
MKAR Makanchi Array 42.06 303 P **P 13 36 50.9 +0.6**
comp=E,13nm,0.6s,mb4.2,baz=89,slow=10.0,SNR=101
MKAR ScP ScP 13 41 56.4 -0.3
comp=E,0.5nm,0.5s,baz=77,slow=4.8,SNR=3.3
MKAR Makanchi Array 42.06 303 *ce*P **P 13 36 50.9 +0.6**
MKAR pmax pmax
comp=Z,13nm,0.6s
TAPN Taplejung 42.32 274 *e*P **P 13 36 51.9 -0.7**
comp=Z,16nm,0.4s,mb4.5
ODAN Odare 42.77 273 *e*P **P 13 36 55.1 -1.2**
comp=Z,34nm,0.7s,mb4.6
KAPI Kappang 42.88 205 P **P 13 36 56.2 -1.0**
comp=Z,14nm,0.9s,mb4.1,baz=40,slow=3.9,SNR=5.4
KAPI Kappang 42.88 205 P **P 13 36 56.2 -1.0**
BKSI Bulukumba 43.04 205 P **P 13 36 59.8 +1.3**
comp=Z,12nm,1.0s,mb4.0
GUN Gumba 43.60 275 *e*P **P 13 37 02.9 +0.1**
comp=Z,56nm,0.7s,mb4.8
PKI Pulchoki 44.12 275 *e*P **P 13 37 06.1 -0.8**
comp=Z,52nm,0.8s,mb4.7
PKI Pulchoki 44.12 275 *e*P **P 13 37 06.1 -0.8**
PKI pmax pmax
comp=Z,52nm,0.8s,mb4.7
PKIN Phulchoki 44.12 275 *e*P **P 13 37 06.1 -0.9**
comp=Z,34nm,0.7s,mb4.6
KKN Kakani 44.14 275 *e*P **P 13 37 06.5 -0.6**
comp=Z,53nm,0.8s,mb4.7
KKN Kakani 44.14 275 *e*P **P 13 37 06.5 -0.6**
KKN pmax pmax
comp=Z,53nm,0.8s,mb4.7
KURK Kurchatov 44.27 309 *e*P **P 13 37 07.8 0.0**
comp=Z,37nm,0.8s,mb4.6
KURK Kurchatov 44.27 309 *d i*P **P 13 37 07.7 -0.1**
KURK pmax pmax
comp=Z,36nm,0.8s,mb4.5
DMN Daman 44.35 275 *e*P **P 13 37 08.3 -0.4**
comp=Z,34nm,0.8s,mb4.5
GKN Gorkha 44.58 276 *e*P **P 13 37 10.1 -0.4**
comp=Z,124nm,1.0s,mb5.0
DANN Dangsing 45.16 277 *e*P **P 13 37 15.3 +0.2**
comp=Z,165nm,0.9s,mb5.2
TKM2 Tokmak 2 47.31 299 P **P 13 37 32.7 +1.3**
SNR=24
KAKA Kakadu 47.60 186 *e*P **P 13 37 32.5 -1.4**
comp=Z,23nm,1.1s,mb4.3
KAKA Kakadu 47.60 186 *e*P **P 13 37 32.1 -1.8**
comp=Z,48nm,1.0s,mb4.7
KBK Karagaybulak 47.83 299 P **P 13 37 36.5 +1.1**
SNR=19
CHMS Chumysh 47.90 299 P **P 13 37 36.5 +0.6**
SNR=6.6
USP Ospenovka 48.02 300 P **P 13 37 37.5 +0.6**
SNR=7.5
FRU Bishkek 48.03 299 *e*P **P 13 37 35.0 -1.9**
AAK Ala-Archa 48.16 299 P **P 13 37 38.6 +0.7**
SNR=9.4
AAK Ala-Archa 48.16 299 P **P 13 37 38.1 +0.2**
comp=Z,6.8nm,0.7s,mb4.0,baz=96,slow=6.2,SNR=21
AAK Ala-Archa 48.16 299 *d i*P **P 13 37 38.3 +0.4**
AAK pmax pmax
comp=Z,6.0nm,0.8s,mb3.9
AAK Ala-Archa 48.16 299 P **P 13 37 38.4 +0.5**
comp=Z,3.4nm,1.0s,mb3.5
EKS2 Erkin-Say 48.67 299 P **P 13 37 42.4 +0.6**
SNR=7.0
VOSK Vostochnaya 48.87 313 P **P 13 37 42.4 -0.7**
VOSK pmax pmax
comp=Z,31nm,0.6s,mb4.7
COEN Coen 49.04 172 *e*P **P 13 37 45.0 +0.2**
comp=Z,139nm,0.8s,mb5.2
BVAR Borovoye Array 49.19 313 P **P 13 37 45.6 +0.1**
comp=Z,12nm,0.5s,mb4.4,baz=99,slow=9.2,SNR=85
BVAR PcP PcP 13 39 03.3 +0.2
comp=Z,5.5nm,0.6s,baz=90,slow=3.4,SNR=9.2
BVAR Borovoye Array 49.19 313 P **P 13 37 45.6 +0.1**
BVAR 13 39 03.3
BVAR pmax pmax
comp=Z,12nm,0.5s
BVAR pmax pmax
comp=Z,6.0nm,0.6s
BRVK Borovoye 49.25 313 *e*P **P 13 37 45.9 -0.1**
comp=Z,18nm,0.8s,mb4.4
BRVK Borovoye 49.25 313 *d i*P **P 13 37 45.8 -0.2**
BRVK pmax pmax
comp=Z,20nm,0.9s,mb4.3
KK31 Karatay Array 50.90 300 P **P 13 37 58.3 -0.1**
KK31 pmax pmax
comp=Z,13nm,0.5s,mb4.4
ILAR Eielson Array 53.23 31 P **P 13 38 15.8 +0.8**
comp=Z,1.4nm,0.6s,mb3.5,baz=264,slow=5.4,SNR=39
ILAR Eielson Array 53.23 31 P **P 13 38 15.9 +0.9**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
FITZ Fitzroy Crossi 53.83 193 P **P 13 38 19.6 -0.3**
comp=Z,12nm,0.7s,mb4.3,baz=12,slow=8.5,SNR=26
FITZ Fitzroy Crossi 53.83 193 *e*P **P 13 38 19.4 -0.6**
comp=Z,12nm,0.8s,mb4.3
SVE Sverdlovsk 54.20 319 ⇓*e*P **P 13 38 22.9 +0.7**
SVE pmax pmax
comp=Z,17nm,0.8s,mb4.4
KBL Kabul 54.62 290 *e*P **P 13 38 25.0 -0.5**
comp=Z,8.1nm,0.8s,mb4.1
KBL Kabul 54.62 290 *e*P **P 13 38 25.0 -0.5**
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.1
WB2 Warramunga Arr 54.66 183 *e*P **P 13 38 24.7 -1.1**
WRA Warramunga Arr 54.66 183 P **P 13 38 25.0 -0.9**
comp=Z,18nm,0.5s,mb4.7,baz=360,slow=7.7,SNR=287
WRA S S 13 45 36.7 -3.2
comp=Z,0.8nm,1.1s,baz=360,slow=12,SNR=3.9
WRA Warramunga Arr 54.66 183 P **P 13 38 25.0 -0.9**
WRA S S 13 45 36.7 -3.2
WRA pmax pmax
comp=Z,19nm,0.5s
WRA smax
comp=N,1.0nm,1.1s
ARU Arti 55.41 319 *e*P **P 13 38 30.9 +0.1**
comp=N,7.5nm,0.6s,mb4.2
ARU Arti 55.41 319 *d i*P **P 13 38 30.6 -0.1**
ARU S S 13 45 48.5 -0.4
ARU pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
CTA Charters Tower 55.50 169 P **P 13 38 31.8 0.0**
comp=Z,9.2nm,0.8s,mb4.2,baz=334,slow=8.1,SNR=10.0
CTA Charters Tower 55.50 169 *e*P **P 13 38 31.4 -0.4**
comp=Z,7.5nm,0.8s,mb4.1
CTA Charters Tower 55.50 169 P **P 13 38 31.8 0.0**
CTA Charters Tower 55.50 169 P **P 13 38 31.8 0.0**
CTA pmax pmax
comp=Z,9.0nm,0.8s
CTAO Charters Tower 55.50 169 *e*P **P 13 38 31.7 -0.1**
comp=Z,5.5nm,0.9s,mb3.9
CTAO Charters Tower 55.50 169 *e*P **P 13 38 31.7 -0.1**
CTAO pmax pmax
comp=Z,6.0nm,0.9s,mb3.9
AB31 Akbulak array 56.38 310 *i*P **P 13 38 37.7 0.0**
AB31 pmax pmax
comp=Z,21nm,0.7s,mb4.6
ABKAR Akbulak array 56.38 310 *e*P **P 13 38 37.7 0.0**
comp=Z,12nm,0.6s,mb4.4
AKTK Aktyubinsk 57.24 312 P **P 13 38 43.8 +0.1**
AKTO Aktyubinsk 57.24 312 P **P 13 38 43.8 +0.1**
comp=Z,11nm,0.7s,mb4.3,baz=76,slow=12,SNR=38
AKTO Aktyubinsk 57.24 312 P **P 13 38 43.8 +0.1**
AKTO pmax pmax
comp=Z,11nm,0.7s,mb4.3
INK Inuvik 57.91 26 P **P 13 38 49.1 +1.1**
comp=Z,0.9nm,0.4s,mb3.5,baz=300,slow=8.1,SNR=9.5
INK Inuvik 57.91 26 P **P 13 38 49.2 +1.2**
INK pmax pmax
comp=Z,1.0nm,0.4s
ASAR Alice Springs 58.38 183 P **P 13 38 51.2 -0.6**
comp=Z,5.9nm,0.6s,mb4.1,baz=14,slow=12,SNR=117
ASAR S S 13 46 27.8 -0.5
comp=Z,1.4nm,0.9s,baz=20,slow=19,SNR=9.4
ASAR Alice Springs 58.38 183 P **P 13 38 51.2 -0.6**
ASAR S S 13 46 27.8 -0.5
ASAR pmax pmax
comp=Z,6.0nm,0.6s
ASAR smax
comp=N,1.0nm,0.9s
PRGR Permogore 60.42 327 *e*P **P 13 39 01.2 -4.0**
PRGR pmax pmax
comp=Z,12nm,0.5s,mb4.6
EIDS Eidsvold 61.53 165 *e*P **P 13 39 12.9 -0.1**
comp=Z,9.9nm,0.8s,mb4.4
KLMR Klimovskoe 63.46 327 *e*P **P 13 39 24.0 -1.2**
KLMR pmax pmax
comp=Z,19nm,1.2s,mb4.5
KEV Kevo 64.00 339 *e*P **P 13 39 27.4 -1.2**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb3.9
KEV Kevo 64.00 339 *ep* **P 13 39 27.4 -1.2**
comp=Z,0.8nm,0.3s,mb3.8
ARCES ARCESS Array B 64.57 339 P **P 13 39 32.9 +0.6**
comp=Z,6.4nm,0.6s,mb4.4,baz=64,slow=9.4,SNR=46
ARCES ARCESS Array B 64.57 339 P **P 13 39 32.9 +0.6**
ARCES pmax pmax
comp=Z,6.0nm,0.6s
JOF Joensuu 65.97 331 *e*P **P 13 39 41.7 +0.4**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
JOF Joensuu 65.97 331 *ep* **P 13 39 41.7 +0.4**
comp=Z,2.9nm,0.4s,mb4.4
ARMA Armidale 66.54 166 *e*P **P 13 39 45.7 +0.5**
STKA Stephens Creek 66.65 176 P **P 13 39 46.2 +0.3**
comp=Z,6.9nm,0.8s,mb4.4,baz=346,slow=7.8,SNR=14
STKA Stephens Creek 66.65 176 *e*P **P 13 39 46.0 +0.1**
comp=Z,6.6nm,0.9s,mb4.4
OBN Obninsk 67.45 322 ⇑*e*P **P 13 39 51.3 +0.6**
OBN 13 42 24.0
OBN *e* 13 48 41.3
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
KAF Kangasniemi 68.37 332 *e*P **P 13 39 54.1 -2.2**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
KAF Kangasniemi 68.37 332 *ep* **P 13 39 54.1 -2.2**
comp=Z,3.3nm,0.5s,mb4.3
FINES FINESS Array B 68.84 331 P **P 13 39 59.2 +0.1**
comp=Z,8.9nm,0.6s,mb4.7,baz=60,slow=6.5,SNR=28
FINES FINESS Array B 68.84 331 P **P 13 39 59.2 +0.1**
FINES FINESS Array B 68.84 331 P **P 13 39 59.2 0.0**
FINES pmax pmax
comp=Z,9.0nm,0.6s
ZEI Tsey 69.16 308 *e*P **P 13 40 00.5 -1.0**
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.7
KIV Kislovodsk 69.36 310 *e*P **P 13 40 03.6 +1.0**
comp=Z,18nm,0.8s,mb4.8
KIV Kislovodsk 69.36 310 *e*P **P 13 40 03.5 +0.8**
KIV pmax pmax
comp=Z,29nm,0.9s,mb5.0
GNI Garni 69.86 305 P **P 13 40 07.2 +1.4**
comp=Z,8.6nm,0.6s,mb4.6,baz=164,slow=21,SNR=4.0
GNI Garni 69.86 305 *de*P **P 13 40 07.1 +1.3**
GNI pmax pmax
comp=Z,18nm,1.2s
VSU Vasula 70.27 328 ⇑*e*P **P 13 40 08.0 +0.1**
VSU pmax pmax
comp=Z,34nm,1.6s,mb4.8
MIB Mutribah 73.18 295 *e*P **P 13 40 25.1 -0.5**
MIB AMb AMB 13 40 25.9
comp=Z,46nm,0.7s,mb5.3
RDF Al-Radifah 73.48 294 *e*P **P 13 40 27.3 -0.1**
RDF AMb AMB 13 40 28.2
comp=Z,53nm,0.6s,mb5.5
NAY Al-Naaiem 73.54 294 *e*P **P 13 40 27.2 -0.5**
NAY AMb AMB 13 40 28.3
comp=Z,30nm,0.7s,mb5.2
AKASG Malin Array Be 73.56 321 P **P 13 40 27.3 -0.2**
comp=Z,7.9nm,0.5s,mb4.7,baz=50,slow=6.0,SNR=31
AKASG Malin Array Be 73.56 321 P **P 13 40 27.3 -0.2**
AKASG Malin Array Be 73.56 321 P **P 13 40 27.3 -0.2**
AKASG pmax pmax
comp=Z,8.0nm,0.5s
NB2 NORSAR Subarra 74.57 336 P **P 13 40 32.9 -0.1**
comp=Z,16nm,1.1s,mb4.7,baz=43,slow=5.6
NOA NORSAR Array B 74.57 336 P **P 13 40 33.1 +0.1**
comp=Z,8.9nm,0.8s,mb4.5,baz=44,slow=5.7,SNR=20
NOA NORSAR Array B 74.57 336 P **P 13 40 33.2 +0.2**
NOA pmax pmax
comp=Z,9.0nm,0.8s
MALT Malatya 75.01 306 *e*P **P 13 40 36.5 +0.5**
comp=Z,8.5nm,0.9s,mb4.5
MALT Malatya 75.01 306 *e*P **P 13 40 36.5 +0.5**
MALT pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
KIS Kishinev 75.95 318 *e*P **P 13 40 43.0 +1.9**
BR131 Keskin Array S 77.33 310 *e*P **P 13 40 49.0 +0.1**
comp=Z,8.5nm,0.9s,mb4.5
BRTR Keskin Array B 77.33 310 P **P 13 40 50.0 +1.0**
comp=Z,7.1nm,0.9s,mb4.4,baz=101,slow=4.4,SNR=23
BRTR Keskin Array B 77.33 310 *ce*P **P 13 40 50.0 +1.1**
BRTR pmax pmax
comp=Z,7.0nm,0.9s
BUR08 Bucovina Ar. S 77.51 320 *e*P **P 13 40 49.9 +0.2**
KOLS Kolonicke sedl 78.20 322 *e*P **P 13 40 55.2 +1.7**
KOLS Kolonicke sedl 78.20 322 *e*P **P 13 40 55.2 +1.7**
OJC Ojcow 78.57 324 *e*P **P 13 40 56.6 +1.1**
CRVS Cervenica-Dubn 78.63 323 *e*P **P 13 40 56.1 +0.2**
comp=Z,2.8nm,0.8s,mb4.0
CRVS Cervenica-Dubn 78.63 323 *e*P **P 13 40 56.1 +0.2**
CRVS pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
CRVS Cervenica-Dubn 78.63 323 *e*P **P 13 40 56.1 +0.2**
DPC Dobruska-Polom 80.12 326 *e*P **P 13 41 05.0 +1.2**
DPC Dobruska-Polom 80.12 326 *e*P **P 13 41 05.0 +1.2**
VYHS Vyhne 80.20 323 *e*P **P 13 41 04.9 +0.6**
comp=Z,2.7nm,1.2s,mb3.9
VYHS Vyhne 80.20 323 *e*P **P 13 41 04.9 +0.6**
VYHS pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
PVCC Panska Ves 80.79 327 *e*P **P 13 41 08.5 +1.1**
PVCC Panska Ves 80.79 327 *e*P **P 13 41 08.5 +1.1**
CLZ Clausthal 81.65 330 *e*P **P 13 41 12.5 +0.7**
comp=Z,17nm,1.5s,mb4.7
CLZ Clausthal 81.65 330 *e*P **P 13 41 12.5 +0.7**
comp=Z,17nm,1.5s,mb4.7
CLZ Clausthal 81.65 330 *e*P **P 13 41 12.5 +0.7**
CLZ pmax pmax
comp=Z,17nm,1.5s,mb4.7
PKSM Moragy 81.85 322 ⇑*i*P **P 13 41 11.8 -1.2**
GUNZ Gunzen 81.90 328 *e*P **P 13 41 13.7 +0.5**
comp=Z,6.0nm,0.8s,mb4.5
WERN Wernitzgruen 81.94 328 *e*P **P 13 41 13.9 +0.6**
comp=Z,5.0nm,0.7s,mb4.5
KHC Kasperske Hory 82.24 326 *e*P **P 13 41 15.5 +0.6**
GEC2 GERESS Array S 82.39 326 *e*P **P 13 41 16.1 +0.4**
comp=Z,7.0nm,1.2s,mb4.4
GEC2 GERESS Array S 82.39 326 *e*P **P 13 41 16.1 +0.4**
comp=Z,7.0nm,1.2s,mb4.4
GEC2 GERESS Array S 82.39 326 *e*P **P 13 41 16.1 +0.4**
GEC2 pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
GERES GERESS Array B 82.39 326 P **P 13 41 16.0 +0.3**
comp=Z,2.1nm,0.4s,mb4.3,baz=36,slow=5.9,SNR=8.4
GERES GERESS Array B 82.39 326 P **P 13 41 16.0 +0.3**
GERES pmax pmax
comp=Z,2.0nm,0.4s
ROTZ Rotzenmuhle 82.39 327 *e*P **P 13 41 16.6 +0.9**
comp=Z,12nm,1.3s,mb4.6
GRA1 Grafenberg Arr 82.88 328 *e*P **P 13 41 19.0 +0.8**
comp=Z,23nm,0.9s,mb5.0
GRF Grafenberg Arr 82.88 328 *e*P **P 13 41 19.0 +0.8**
comp=Z,23nm,0.9s,mb5.0
GRF Grafenberg Arr 82.88 328 *e*P **P 13 41 19.0 +0.8**
comp=Z,23nm,0.9s,mb5.0
GRF Grafenberg Arr 82.88 328 *e*P **P 13 41 19.0 +0.8**
GRF pmax pmax
comp=Z,23nm,0.9s,mb5.0
GRF Grafenberg Arr 82.88 328 *e*P **P 13 41 19.0 +0.8**
GRF pmax pmax
comp=Z,23nm,0.9s,mb5.0
BUG Bochum--Univer 83.22 331 *e*P **P 13 41 19.8 0.0**
comp=Z,9.0nm,0.7s,mb4.7
RJOB Jochberg 83.61 326 *e*P **P 13 41 22.6 +0.7**
comp=Z,13nm,1.0s,mb4.7
BFO Black Forest 85.16 328 *e*P **P 13 41 29.7 +0.1**
comp=Z,9.0nm,0.9s,mb4.6
BFO Black Forest 85.16 328 *e*P **P 13 41 29.7 +0.1**
comp=Z,9.0nm,0.9s,mb4.6
BFO Black Forest 85.16 328 *e*P **P 13 41 29.7 +0.1**
BFO pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
CDF Champ du Feu 85.55 329 *e*P **P 13 41 31.3 -0.2**
CDF Champ du Feu 85.55 329 *e*P **P 13 41 31.3 -0.2**
HAU Haudompre 86.26 329 *e*P **P 13 41 34.2 -0.8**
comp=Z,6.8nm,0.6s,mb4.4
HAU *e*MLR MLR
comp=Z,123nm,19.2s
HAU Haudompre 86.26 329 *e*P **P 13 41 34.2 -0.8**
comp=Z,3.4nm,0.6s,mb4.3
HAU LR LR
comp=Z,120nm,19.3s
HAU Haudompre 86.26 329 *e*P **P 13 41 34.2 -0.8**
HAU pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
HAU MLR MLR
comp=Z,120nm,19.3s
CABF La Chapelle 87.46 328 *e*P **P 13 41 40.4 -0.3**
CABF La Chapelle 87.46 328 *e*P **P 13 41 40.4 -0.3**
LPL La Plagne 88.03 327 *e*P **P 13 41 43.5 +0.1**
comp=Z,14nm,0.7s,mb4.6
LPL La Plagne 88.03 327 *e*P **P 13 41 43.5 +0.1**
comp=Z,6.9nm,0.7s,mb4.6
LPL La Plagne 88.03 327 *e*P **P 13 41 43.5 +0.1**
LPL pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
LPG La Plagne 88.04 327 *e*P **P 13 41 43.7 +0.2**
comp=Z,20nm,0.7s,mb4.7
LPG La Plagne 88.04 327 *e*P **P 13 41 43.7 +0.2**
comp=Z,9.9nm,0.7s,mb4.8
LPG La Plagne 88.04 327 *e*P **P 13 41 43.7 +0.2**
LPG pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
SSF Saint Saulge 88.18 330 *e*P **P 13 41 43.7 -0.4**
SSF Saint Saulge 88.18 330 *e*P **P 13 41 43.7 -0.4**
LDF La Druitiere 88.35 333 *e*P **P 13 41 44.5 -0.4**
LDF La Druitiere 88.35 333 *e*P **P 13 41 44.5 -0.4**
AVF Avril sur Loir 88.46 330 *e*P **P 13 41 45.2 -0.3**
comp=Z,8.9nm,0.8s,mb4.4
AVF Avril sur Loir 88.46 330 *e*P **P 13 41 45.2 -0.3**
comp=Z,4.4nm,0.8s,mb4.3
AVF Avril sur Loir 88.46 330 *e*P **P 13 41 45.2 -0.3**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
MBDF Montbardon 88.63 327 *e*P **P 13 41 45.5 -0.8**
comp=Z,12nm,0.7s,mb4.5
MBDF Montbardon 88.63 327 *e*P **P 13 41 45.5 -0.8**
comp=Z,6.1nm,0.7s,mb4.5
MBDF Montbardon 88.63 327 *e*P **P 13 41 45.5 -0.8**
MBDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
GRR Gorron 88.80 333 *e*P **P 13 41 46.5 -0.5**
GRR Gorron 88.80 333 *e*P **P 13 41 46.5 -0.5**
ORIF Oris-en-Rattie 88.87 328 *e*P **P 13 41 47.1 -0.3**
comp=Z,5.7nm,0.6s,mb4.2
ORIF *e*MLR MLR
comp=Z,176nm,19.8s
ORIF Oris-en-Rattie 88.87 328 *e*P **P 13 41 47.1 -0.3**
comp=Z,2.8nm,0.6s,mb4.3
ORIF Oris-en-Rattie 88.87 328 *e*P **P 13 41 47.1 -0.3**
ORIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
TCF Toulx Ste Croi 89.33 330 *e*P **P 13 41 49.5 0.0**
comp=Z,7.9nm,0.7s,mb4.3
TCF Toulx Ste Croi 89.33 330 *e*P **P 13 41 49.5 0.0**
comp=Z,4.0nm,0.7s,mb4.4
TCF Toulx Ste Croi 89.33 330 *e*P **P 13 41 49.5 0.0**
TCF pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
VIVF Saint-Julien-l 89.45 328 *e*P **P 13 41 49.9 -0.2**
comp=Z,12nm,0.8s,mb4.5
VIVF Saint-Julien-l 89.45 328 *e*P **P 13 41 49.9 -0.2**
comp=Z,6.2nm,0.8s,mb4.5
VIVF Saint-Julien-l 89.45 328 *e*P **P 13 41 49.9 -0.2**
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
ROSF Rostrenen 89.71 335 *e*P **P 13 41 51.3 +0.1**
comp=Z,66nm,1.3s,mb5.1
ROSF Rostrenen 89.71 335 *e*P **P 13 41 51.3 +0.1**
comp=Z,33nm,1.3s,mb5.1
ROSF Rostrenen 89.71 335 *e*P **P 13 41 51.3 +0.1**
ROSF pmax pmax
comp=Z,33nm,1.3s,mb5.1
MFF Saint Martin d 90.01 332 *e*P **P 13 41 53.0 +0.3**
MFF Saint Martin d 90.01 332 *e*P **P 13 41 53.0 +0.3**
RJF Les Rejaudoux 90.42 330 *e*P **P 13 41 54.9 +0.3**
RJF *e*MLR MLR
comp=Z,187nm,22.5s
RJF Les Rejaudoux 90.42 330 *e*P **P 13 41 54.9 +0.3**
RJF LR LR
comp=Z,190nm,22.5s
RJF Les Rejaudoux 90.42 330 *e*P **P 13 41 54.9 +0.3**
RJF MLR MLR
comp=Z,190nm,22.5s
LASF Ste Croix 90.42 328 *e*P **P 13 41 54.6 0.0**
CAF Calviac 90.50 330 *e*P **P 13 41 54.8 -0.2**
CAF Calviac 90.50 330 *e*P **P 13 41 54.8 -0.2**
LFF La Frestale 91.03 330 *e*P **P 13 41 57.9 +0.5**
LFF La Frestale 91.03 330 *e*P **P 13 41 57.9 +0.5**
ETSF Etsaut 93.25 330 *e*P **P 13 42 08.2 +0.5**
comp=Z,11nm,1.1s,mb4.5
ETSF Etsaut 93.25 330 *e*P **P 13 42 08.2 +0.5**
comp=Z,5.6nm,1.1s,mb4.5
ETSF Etsaut 93.25 330 *e*P **P 13 42 08.2 +0.5**
ETSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
TORD Torodi Ar. Bea 115.94 310 PKP PKPdf 13 47 33.8 -0.8
comp=Z,0.6nm,0.4s,baz=15,slow=1.3,SNR=5.6
LPAZ La Paz 150.97 56 PKPbc PKPbc 13 48 47.7 +3.1
comp=Z,1.0nm,0.8s,baz=320,slow=7.9,SNR=3.9
PLCA Paso Flores 157.73 113 PKPab PKPab 13 49 22.1 +0.4
comp=Z,1.8nm,0.8s,baz=202,slow=5.4,SNR=3.1

PLCA	**Paso Flores**	**157.73 113**	PKP2	PKPab	13 49 22.1	+0.4
PLCA			pmax	pmax		
	comp=Z,2.0nm,0.8s					

IDC 18 13:52:34.1±13.0, 51°69N×172°66W, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/26, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=245.8km s-min=47.9km az=74.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**18.67**	**36**	P	Pn	13 56 53.5	-0.2
	0.1nm,0.3s,baz=218,slow=9.3,SNR=3.8						
INK	**Inuvik**	**25.04**	**34**	P	P	13 57 59.4	-0.1
	2.1nm,0.8s,baz=230,slow=7.9,SNR=4.3						
NVAR	**Mina Array Bea**	**39.71**	**88**	P	P	14 00 08.9	+1.0
	0.3nm,0.7s,baz=293,slow=9.2,SNR=3.6						
PDAR	**Pinedale Array**	**42.54**	**76**	P	P	14 00 31.3	+0.1
	0.7nm,0.8s,baz=306,slow=3.5,SNR=4.0						
TXAR	**Lajitas Array**	**54.81**	**86**	P	P	14 02 05.4	-0.4
	0.2nm,0.5s,baz=268,slow=8.1,SNR=2.9						

*NIED **18** 13:53:00.41°70N×144°30E, h23km, Mw4.3 Best double couple: M0=2.83000×10^15 NP1:φ1=188.00000°, δ1=79.00000°, λ1=25.00000° NP2:φ2=93.00000°, δ2=65.00000°, λ2=168.00000°.*
*BJI **18** 13:53:33.3, 41°77N×144°25E, h22km, mB5.0/9, mb4.5/17, Ms4.1/6, Ms7 3.8/6*
*ISCJB **18** 13:53:34.6±1.1, 41°68N±0°04×144°23E±0°06, h28km±7km, mb4.5/45, MS3.9/6, Error ellipse: s-maj=8.7km s-min=5.1km az=31.1*
*NEIC **18** 13:53:35.6±1.3, 41°72N×144°22E, h21km±8km, mb4.8/22, MW4.2(NIED), Error ellipse: s-maj=8.3km s-min=5.6km az=126.0*
*JMA **18** 13:53:35.8±0.2, 41°71N×144°25E, h29km±3km, M4.4*
*MOS **18** 13:53:36.7±1.4, 41°75N×144°07E, h41km, mb4.8/28, Error ellipse: s-maj=9.2km s-min=6.1km az=108.3*
*IDC **18** 13:53:37.1±3.2, 41°67N×144°20E, h33km±23km, mb4.0/13, mb1 4.1/17, mb1mx4.0/28, mbtmp3.9/17, ML3.6/4, MS3.6/5, Ms1 3.6/5, ms1mx3.1/43, Error ellipse: s-maj=20.2km s-min=14.5km az=109.0*

ISC 18 13:53:35.1±1.3, 41°73N±0°03×144°26E±0°06, h17km±7km, n134, σ0°85/142, mb4.5/45, MS3.9/6, 3C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.87**	**290**	*e*P	**Pb**	**13 53 52.4**	**+0.7**
ERM	**Erimo**	**0.87**	**290**	*e*P	**Pb**	**13 53 52.4**	**+0.7**
JEM	**Erimo**	**0.87**	**290**	P	**Pb**	**13 53 52.6**	**+0.9**
JCH	**Churui**	**1.11**	**323**	P	**Pb**	**13 53 55.6**	**-0.2**
JCH				*e*S	**Sb**	**13 54 11.1**	**+1.2**
JOB	**Onbets**	**1.22**	**345**	P	**Pn**	**13 53 57.3**	**0.0**
JNBK	**Urakawa-nobuka**	**1.25**	**297**	P	**Pn**	**13 53 58.3**	**+0.6**
JAK	**Akkeshi**	**1.31**	**14**	P	**Pn**	**13 53 58.3**	**-0.2**
JAR	**Ashorobuto**	**1.61**	**347**	P	**Pn**	**13 54 02.3**	**-0.4**
JAR				*e*S	**Sn**	**13 54 22.8**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**2.59**	**26⇑**	*i*P	**Pn**	**13 54 16.9**	**+0.8**
YUK				pmax	pmax		
	comp=Z,920nm,1.7s						
YUK				pmax	pmax		
	comp=Z,376nm,0.5s						
YUK				pmax	pmax		
	comp=N,128nm,0.5s						
YUK				pmax	pmax		
	comp=E,154nm,0.2s						
YUK				MLR	MLR		
	comp=N,730nm,13.0s						
YUK				MLR	MLR		
	comp=Z,460nm,13.0s						
ASAJ	**Asahikawa**	**2.68**	**333**	Pn	**Pn**	**13 54 17.8**	**+0.3**
	comp=Z,13nm,0.3s,baz=190,slow=9.4,SNR=76						
ASAJ				Pg	**Pg**	**13 54 26.6**	**+0.1**
	comp=Z,21nm,0.3s,baz=222,slow=11,SNR=19						
ASAJ				Lg		13 55 06.2	
	comp=Z,21nm,0.3s,baz=20,slow=20,SNR=4.4						
ASAJ				LR	LR	13 55 40.7	
	comp=Z,745nm,18.5s,baz=168,slow=46						
ASAJ	**Asahikawa**	**2.68**	**333**	*e*P	**Pn**	**13 54 17.6**	**+0.2**
ASAJ	**Asahikawa**	**2.68**	**333**	P	**Pn**	**13 54 17.8**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,13nm,0.3s						
ASAJ				pmax	pmax		
	comp=Z,21nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,745nm,18.5s						
KUR	**Kuril'sk**	**4.38**	**36**	*e*P	**Pn**	**13 54 41.0**	**+0.3**
KUR				*e*S	**Sn**	**13 55 34.5**	**+3.2**
KUR				pmax	pmax		
	comp=N,50nm,0.8s						
KUR				pmax	pmax		
	comp=E,40nm,0.8s						
KUR				pmax	pmax		
	comp=Z,130nm,0.8s						
KUR				smax			
	comp=N,200nm,0.5s						
KUR				smax			
	comp=E,110nm,0.5s						
KUR				smax			
	comp=N,2μm,3.0s						
KUR				smax			
	comp=E,2μm,3.0s						
YSS	**Yuzh-Sakhalins**	**5.34**	**349**	*e*P	**Pn**	**13 54 54.5**	**+0.6**
YSS				*e*S	**Sn**	**13 55 54.0**	**-0.9**
YSS				smax			
	comp=E,50nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
MAJO	**Matsushiro**	**6.99**	**224**	*e*P	**Pn**	**13 55 15.5**	**-1.1**
	comp=Z,16nm,0.6s						
MAJO	**Matsushiro**	**6.99**	**224**	*e*P	**Pn**	**13 55 15.5**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,17nm,0.6s						
MAT	**Matsushiro**	**6.99**	**224**	P	**Pn**	**13 55 16.4**	**-0.2**
MAT				S	**Sn**	**13 56 38.7**	**+3.0**
MJAR	**Matsushiro Arr**	**6.99**	**224**	Pn	**Pn**	**13 55 16.4**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=27,slow=14,SNR=24						
MJAR				LR	LR	13 58 27.1	
	comp=Z,255nm,21.9s,baz=65,slow=42						
MJAR	**Matsushiro Arr**	**6.99**	**224**	P	**Pn**	**13 55 16.4**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,255nm,21.9s						
VLA	**Vladivostok**	**9.25**	**283⇓**	*e*P	**Pn**	**13 55 49.0**	**+1.4**
HABR	**Khabarovsk**	**9.37**	**319**	*e*P	**Pn**	**13 55 47.7**	**-1.5**
HABR				*e*		13 57 32.5	
HABR				pmax	pmax		
	comp=N,37nm,2.5s						
HABR				pmax	pmax		
	comp=Z,29nm,2.0s						
HABR				pmax	pmax		
	comp=E,33nm,2.6s						
HABR				MLR	MLR		
	comp=Z,214nm,17.0s						
MDJ	**Mudanjiang**	**11.10**	**290**	P	**Pn**	**13 56 12.7**	**-0.2**
	comp=Z,12nm,1.0s						
KLR	**Kul'dur**	**11.54**	**315**	*e*Pn	**Pn**	**13 56 18.0**	**-0.9**
KSRS	**Korea Array**	**13.30**	**257**	Pn	**Pn**	**13 56 43.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=67,slow=13,SNR=7.8						
KSRS				LR	LR	14 01 37.9	
	comp=Z,96nm,20.4s,baz=268,slow=36						
KSRS	**Korea Array**	**13.30**	**257**	P	**Pn**	**13 56 43.3**	**+0.3**
KSRS				MLR	MLR		
	comp=Z,96nm,20.5s						
PETK	**Petropavlovsk-**	**14.54**	**34**	Pn	**Pn**	**13 56 59.8**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=166,slow=7.3,SNR=6.0						
PETK	**Petropavlovsk-**	**14.54**	**34**	P	**Pn**	**13 56 59.8**	**-0.1**
HIA	**Hailar**	**18.71**	**302**	*e*P	**Pn**	**13 57 49.9**	**-3.0**
	comp=Z,17nm,0.8s						
HIA	**Hailar**	**18.71**	**302**	*e*P	**Pn**	**13 57 49.9**	**-3.0**
HIA				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK	**Yakutsk**	**22.13**	**342**	*d i*P	**P**	**13 58 24.7**	**-4.8**
YAK				*e**PP		13 58 34.3	
YAK				*e*S	**S**	**14 02 24.2**	**-8.3**
YAK				*e**SS	sS	14 02 39.6	-0.8
YAK				*e*SSS		14 03 01.4	
YAK				*e*		14 09 40.8	
YAK				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.6						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.3						
YAK				smax			
	comp=N,214nm,3.0s						
YAK				smax			
	comp=E,42nm,1.8s						
YAK				MLR	MLR		
	comp=Z,111nm,15.0s,MS3.4						
YAK				MLR	MLR		
	comp=E,49nm,13.0s,MS3.3						
YAK				MLR	MLR		
	comp=N,59nm,14.0s,MS3.3						
BOD	**Bodaibo**	**25.02**	**320**	*e*P	**P**	**13 58 53.0**	**-4.8**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
WHN	**Wuhan**	**26.48**	**255**	P	**P**	**13 59 11.0**	**-0.3**
WHN				LR	LR		
	comp=N,350nm,12.4s,MS4.3						
WHN				LR	LR		
	comp=E,440nm,12.8s,MS4.3						
WHN				LR	LR		
	comp=Z,480nm,12.7s,MS4.2						
ULN	**Ulaanbaatar**	**26.92**	**296**	*e*P	**P**	**13 59 14.6**	**-0.5**
	comp=Z,21nm,1.3s,mb4.5						
ULN	**Ulaanbaatar**	**26.92**	**296**	*e*P	**P**	**13 59 14.6**	**-0.5**
ULN				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.5						
SONM	**Songino Array**	**27.36**	**296**	P	**P**	**13 59 19.0**	**0.0**
	comp=Z,5.7nm,0.7s,mb4.2,baz=93,slow=7.8,SNR=27						
SONM	**Songino Array**	**27.36**	**296**	P	**P**	**13 59 19.0**	**-0.1**
SONM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TLY	**Talaya**	**29.23**	**304**	*e*P	**P**	**13 59 36.4**	**+0.7**
TLY				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
TLY				MLR	MLR		
	comp=Z,92nm,20.0s,MS3.4						
ENH	**Enshi**	**30.17**	**259**	*e*P	**P**	**13 59 43.6**	**-0.7**
	comp=Z,5.5nm,0.8s,mb4.3						
GTA	**Gaotai**	**33.56**	**281**	*e*P	**P**	**14 00 14.0**	**0.0**
GTA				pP	pP	14 00 18.8	-0.4
GTA				sP	sP	14 00 22.0	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
GTA				pmax	pmax		
	comp=Z,100nm,4.7s						
GTA				LR	LR		
	comp=N,68nm,14.7s,MS3.9						
GTA				LR	LR		
	comp=E,170nm,14.9s,MS3.9						
GTA				LR	LR		
	comp=Z,200nm,14.5s,MS4.0						
ZAA0	**Zalesovo Array**	**40.55**	**308**	*e*P	**P**	**14 01 12.5**	**-0.6**
ZALV	**Zalesovo Beam**	**40.55**	**308**	P	**P**	**14 01 12.8**	**-0.3**
	comp=Z,4.5nm,0.4s,mb4.4,baz=92,slow=8.9,SNR=18						
ZALV	**Zalesovo Beam**	**40.55**	**308**	P	**P**	**14 01 12.8**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.5						
MK31	**Makanchi Array**	**43.66**	**299**	*e*P	**P**	**14 01 37.7**	**-0.8**
MK31	**Makanchi Array**	**43.66**	**299**	*e*P	**P**	**14 01 37.7**	**-0.9**
MKAR	**Makanchi Array**	**43.66**	**299**	P	**P**	**14 01 38.0**	**-0.6**
	comp=Z,1.9nm,0.5s,mb4.1,baz=82,slow=9.8,SNR=26						
MKAR	**Makanchi Array**	**43.66**	**299**	*i* P	**P**	**14 01 38.0**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LSA	**Lhasa**	**44.12**	**272**	*e*P	**P**	**14 01 43.9**	**+1.4**
	comp=Z,4.6nm,0.8s,mb4.3						
LSA	**Lhasa**	**44.12**	**272**	*e*P	**P**	**14 01 43.9**	**+1.4**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ILAR	**Eielson Array**	**44.37**	**35**	P	**P**	**14 01 44.7**	**+0.7**
	comp=Z,0.7nm,0.7s,mb3.5,baz=258,slow=5.0,SNR=12						
ILAR	**Eielson Array**	**44.37**	**35**	P	**P**	**14 01 44.7**	**+0.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.90**	**253**	P	**P**	**14 01 49.2**	**+0.4**
	comp=Z,1.6nm,0.7s,mb4.0,baz=45,slow=7.3,SNR=11						
CMAR	**Chiang Mai Arr**	**44.90**	**253**	P	**P**	**14 01 49.3**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**44.92**	**305**	*e*P	**P**	**14 01 47.5**	**-1.0**
	comp=Z,7.7nm,0.5s,mb4.8						
KURK	**Kurchatov**	**44.92**	**305⇓**	*e*P	**P**	**14 01 47.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
TAPN	**Taplejung**	**47.93**	**271**	*e*P	**P**	**14 02 13.4**	**+0.8**
	comp=Z,15nm,0.8s,mb5.1						
ODAN	**Odare**	**48.44**	**271**	*e*P	**P**	**14 02 17.1**	**+0.6**
	comp=Z,13nm,0.7s,mb5.1						
GUN	**Gumba**	**49.00**	**273**	*e*P	**P**	**14 02 21.4**	**+0.6**
	comp=Z,66nm,0.7s						
BRVK	**Borovoye**	**49.20**	**310**	*e*P	**P**	**14 02 21.6**	**-0.4**
	comp=Z,2.3nm,0.4s,mb4.6						
BRVK	**Borovoye**	**49.20**	**310⇑**	*e*P	**P**	**14 02 21.4**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
INK	**Inuvik**	**49.22**	**29**	P	**P**	**14 02 22.5**	**+0.6**
	comp=Z,5.8nm,1.0s,mb4.5,baz=279,slow=6.1,SNR=10						
INK	**Inuvik**	**49.22**	**29**	*e*P	**P**	**14 02 21.0**	**-0.9**
INK	**Inuvik**	**49.22**	**29**	P	**P**	**14 02 22.5**	**+0.6**
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TKM2	**Tokmak 2**	**49.46**	**296**	*e*P	**P**	**14 02 24.2**	**+0.1**
	comp=Z,6.4nm,0.7s,mb4.8						
TKM2	**Tokmak 2**	**49.46**	**296**	*e*P	**P**	**14 02 24.2**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KKN	**Kakani**	**49.51**	**273**	*e*P	**P**	**14 02 25.2**	**+0.5**
	comp=Z,31nm,0.8s,mb5.4						
KKN	**Kakani**	**49.51**	**273**	*e*P	**P**	**14 02 25.2**	**+0.5**
KKN				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.4						
DMN	**Daman**	**49.74**	**273**	*e*P	**P**	**14 02 27.0**	**+0.6**
	comp=Z,23nm,0.8s,mb5.2						
GKN	**Gorkha**	**49.88**	**274**	*e*P	**P**	**14 02 27.6**	**+0.1**
	comp=Z,13nm,0.6s,mb5.1						
DANN	**Dangsing**	**50.35**	**275**	*e*P	**P**	**14 02 31.4**	**+0.3**
	comp=Z,67nm,0.8s						
KKAR	**Karatay Array**	**52.78**	**298**	*e*P	**P**	**14 02 48.3**	**-0.7**
	comp=Z,2.1nm,0.4s,mb4.4						
KKAR	**Karatay Array**	**52.78**	**298**	*e*P	**P**	**14 02 48.3**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
SVE	**Sverdlovsk**	**53.16**	**317⇑**	*e*P	**P**	**14 02 51.7**	**+0.1**
SVE				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
ARU	**Arti**	**54.37**	**317**	*e*P	**P**	**14 02 59.5**	**-0.9**
	comp=Z,4.6nm,0.6s,mb4.6						
ARU	**Arti**	**54.37**	**317**	*d i*P	**P**	**14 03 00.2**	**-0.3**
ARU						14 05 00.2	
ARU				S	**S**	**14 10 38.8**	**+1.2**
ARU				SS	SS	14 14 19.1	-0.1
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
ABKAR	**Akbulak array**	**56.67**	**309**	*e*P	**P**	**14 03 16.7**	**-0.4**
	comp=Z,3.1nm,0.4s,mb4.7						
PRGR	**Permogore**	**58.07**	**326**	*e*P	**P**	**14 03 24.3**	**-2.5**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
KEV	**Kevo**	**59.85**	**339**	*e*P	**P**	**14 03 39.1**	**+0.1**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ARCES	**ARCESS Array B**	**60.39**	**339**	P	**P**	**14 03 43.4**	**+0.6**
	comp=Z,0.7nm,0.5s,mb3.9,baz=46,slow=6.9,SNR=7.7						
ARCES				LR	LR	14 34 53.1	
	comp=Z,143nm,21.3s,MS4.1,baz=30,slow=41						
ARCES	**ARCESS Array B**	**60.39**	**339**	P	**P**	**14 03 43.4**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES				MLR	MLR		
	comp=Z,143nm,21.3s						
KLMR	**Klimovskoe**	**60.99**	**327**	*e*P	**P**	**14 03 45.6**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.0						
WRA	**Warramunga Arr**	**62.04**	**191**	P	**P**	**14 03 53.5**	**-0.9**
	comp=Z,0.4nm,0.4s,mb3.9,baz=8.4,slow=6.8,SNR=9.9						
WRA	**Warramunga Arr**	**62.04**	**191**	P	**P**	**14 03 53.5**	**-0.9**
JOF	**Joensuu**	**62.87**	**332**	*e*P	**P**	**14 03 53.0**	**-6.6**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
KAF	**Kangasniemi**	**65.15**	**333**	*e*P	**P**	**14 04 12.4**	**-2.2**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
FINES	**FINESS Array B**	**65.69**	**332**	P	**P**	**14 04 17.1**	**-1.0**
	comp=Z,4.6nm,0.5s,mb4.8,baz=46,slow=8.2,SNR=15						
FINES				LR	LR	14 35 13.2	
	comp=Z,138nm,18.3s,MS4.2,baz=138,slow=38						
FINES	**FINESS Array B**	**65.69**	**332**	P	**P**	**14 04 17.1**	**-1.0**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,139nm,18.3s						
ASAR	**Alice Springs**	**65.76**	**190**	P	**P**	**14 04 18.2**	**-0.6**
	comp=Z,0.3nm,0.6s,mb3.5,baz=0.1,slow=5.6,SNR=5.3						
ASAR	**Alice Springs**	**65.76**	**190**	P	**P**	**14 04 18.3**	**-0.6**
KIV	**Kislovodsk**	**69.50**	**311**	*e*P	**P**	**14 04 43.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
ZEI	**Tsey**	**69.54**	**309**	*e*P	**P**	**14 04 40.9**	**-1.8**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
NB2	**NORSAR Subarra**	**70.70**	**338**	P	**P**	**14 04 48.7**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.0,baz=42,slow=6.2						
NOA	**NORSAR Array B**	**70.70**	**338**	P	**P**	**14 04 48.7**	**-0.7**
	comp=Z,2.3nm,0.9s,mb4.1,baz=35,slow=6.1,SNR=4.9						
NOA	**NORSAR Array B**	**70.70**	**338**	P	**P**	**14 04 48.7**	**-0.7**
NOA	**NORSAR Array B**	**70.70**	**338**	P	**P**	**14 04 48.7**	**-0.8**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	**Malin Array Be**	**71.92**	**323**	P	**P**	**14 04 56.3**	**-0.7**
	comp=Z,3.6nm,0.6s,mb4.5,baz=41,slow=6.3,SNR=12						
AKASG	**Malin Array Be**	**71.92**	**323**	P	**P**	**14 04 56.3**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BUR08	**Bucovina Ar. S**	**75.96**	**322**	P	**P**	**14 05 19.4**	**-1.3**
DPC	**Dobruska-Polom**	**77.63**	**329**	*e*P	**P**	**14 05 30.4**	**+0.3**
DPC	**Dobruska-Polom**	**77.63**	**329**	*e*P	**P**	**14 05 30.4**	**+0.3**
TREC	**Trest**	**78.80**	**329**	*e*P	**P**	**14 05 37.6**	**+1.0**
TREC	**Trest**	**78.80**	**329**	*e*P	**P**	**14 05 37.6**	**+1.0**
KHC	**Kasperske Hory**	**79.66**	**330**	*i* P	**P**	**14 05 42.0**	**+0.7**
CABF	**La Chapelle**	**84.50**	**332**	*e*P	**P**	**14 06 07.2**	**+0.4**
	comp=Z,5.5nm,0.7s,mb4.5						
CABF	**La Chapelle**	**84.50**	**332**	*e*P	**P**	**14 06 07.2**	**+0.4**
	comp=Z,2.8nm,0.7s,mb4.5						
CABF	**La Chapelle**	**84.50**	**332**	*e*P	**P**	**14 06 07.2**	**+0.4**
CABF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
LOR	**Lormes**	**84.68**	**334**	*e*P	**P**	**14 06 06.9**	**-0.8**
	comp=Z,10nm,0.8s,mb4.7						
LOR	**Lormes**	**84.68**	**334**	*e*P	**P**	**14 06 06.9**	**-0.8**
	comp=Z,5.2nm,0.8s,mb4.7						
LOR	**Lormes**	**84.68**	**334**	*e*P	**P**	**14 06 06.9**	**-0.8**
LOR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
LPL	**La Plagne**	**85.22**	**332**	*e*P	**P**	**14 06 11.5**	**+1.1**
LPL	**La Plagne**	**85.22**	**332**	*e*P	**P**	**14 06 11.5**	**+1.1**
LPG	**La Plagne**	**85.23**	**332**	*e*P	**P**	**14 06 11.2**	**+0.7**
LPG	**La Plagne**	**85.23**	**332**	*e*P	**P**	**14 06 11.2**	**+0.7**
AVF	**Avril sur Loir**	**85.26**	**334**	*e*P	**P**	**14 06 10.7**	**+0.1**
	comp=Z,11nm,0.9s,mb4.7						
AVF	**Avril sur Loir**	**85.26**	**334**	*e*P	**P**	**14 06 10.7**	**+0.1**
	comp=Z,5.4nm,0.9s,mb4.7						
AVF	**Avril sur Loir**	**85.26**	**334**	*e*P	**P**	**14 06 10.7**	**+0.1**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**85.55**	**54**	P	**P**	**14 06 13.4**	**+1.0**
	comp=Z,0.7nm,0.7s,mb4.0,baz=300,slow=4.0,SNR=6.9						
TXAR	**Lajitas Array**	**85.55**	**54**	P	**P**	**14 06 13.4**	**+1.0**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MBDF	**Montbardon**	**85.89**	**331**	*e*P	**P**	**14 06 14.3**	**+0.5**
	comp=Z,4.7nm,0.8s,mb4.5						
MBDF	**Montbardon**	**85.89**	**331**	*e*P	**P**	**14 06 14.3**	**+0.5**
	comp=Z,2.3nm,0.8s,mb4.5						
MBDF	**Montbardon**	**85.89**	**331**	*e*P	**P**	**14 06 14.3**	**+0.5**
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
ORIF	**Oris-en-Rattie**	**86.04**	**332**	*e*P	**P**	**14 06 15.0**	**+0.5**
ORIF	**Oris-en-Rattie**	**86.04**	**332**	*e*P	**P**	**14 06 15.0**	**+0.5**
VIVF	**Saint-Julien-l**	**86.52**	**332**	*e*P	**P**	**14 06 17.3**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9						
VIVF	**Saint-Julien-l**	**86.52**	**332**	*e*P	**P**	**14 06 17.3**	**+0.4**
	comp=Z,5.8nm,0.8s,mb4.9						
VIVF	**Saint-Julien-l**	**86.52**	**332**	*e*P	**P**	**14 06 17.3**	**+0.4**
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
MFF	**Saint Martin d**	**86.53**	**336**	*e*P	**P**	**14 06 17.4**	**+0.5**
MFF	**Saint Martin d**	**86.53**	**336**	*e*P	**P**	**14 06 17.4**	**+0.5**
LMR	**La Mourre**	**87.19**	**331**	*e*P	**P**	**14 06 20.3**	**+0.1**
	comp=Z,10nm,0.6s,mb4.9						
LMR	**La Mourre**	**87.19**	**331**	*e*P	**P**	**14 06 20.3**	**+0.1**
	comp=Z,5.1nm,0.6s,mb4.9						
LMR	**La Mourre**	**87.19**	**331**	*e*P	**P**	**14 06 20.3**	**+0.1**
LMR				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.9						
CAF	**Calviac**	**87.33**	**334**	*e*P	**P**	**14 06 21.3**	**+0.5**
CAF	**Calviac**	**87.33**	**334**	*e*P	**P**	**14 06 21.3**	**+0.5**
ETSF	**Etsaut**	**89.99**	**335**	*e*P	**P**	**14 06 34.2**	**+0.8**
ETSF	**Etsaut**	**89.99**	**335**	*e*P	**P**	**14 06 34.2**	**+0.8**

*DDA **18** 13:53:35.9, 39°48N×28°19E, h7km±4km, Md2.7*
*ISK **18** 13:53:35.5, 39°51N×28°23E, h5km, ML2.1*
*ISCJB **18** 13:53:36.5±0.6, 39°50N±0°03×28°22E±0°05, h1km±6km, Error ellipse: s-maj=7.3km s-min=4.0km az=136.8*
*CSEM **18** 13:53:36.9±0.2, 39°52N×28°23E, h5km, MD2.7, Error ellipse: s-maj=5.0km s-min=3.0km az=47.0*

ISC 18 13:53:37.2±0.5, 39°50N±0°03×28°20E±0°04, h8km±5km, n28, σ1°07/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.23**	**64**	*i* P	**Pg**	**13 53 42.0**	**+0.1**
DURS				*i* S	**Sg**	**13 53 48.3**	**+3.2**
DURS	**Dursunbey**	**0.23**	**64**	*i* P	**Pg**	**13 53 42.0**	**+0.1**
BALB	**Balikesir**	**0.28**	**300**	*e*PG	**Pg**	**13 53 42.2**	**-0.7**
BALB				*e*SG	**Sg**	**13 53 48.1**	**+1.4**
BALB	**Bal

KRJI	Kerinci	1.45	328	P	Pn	14 01 29.2 -1.9
MDSI	Maura Dua	2.27	121	P	Pn	14 01 43.8 +1.4
MDSI				S	Sn	14 02 11.4 +0.5
SDSI	Sungai Dareh	2.51	342	P	Pn	14 01 46.8 +1.1
KLSI		2.84	118	P	Pn	14 01 53.3 +3.0
KLSI				S	Sn	14 02 29.0 +3.9
KASI	Kota Agung	3.15	134	S	Sn	14 02 35.1 +2.5

JMA 18 14:01:37.3±0.2, 29°.84N×142°.23E, h40km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.73	181	P	Pn	14 02 20.1	+1.4
CBIJ				eS	Sn	14 02 52.1	+1.6
JHHJ	Haha-jima-NKT	3.20	181	P	Pn	14 02 26.7	+1.6
JHHJ				eS	Sn	14 03 03.9	+1.9
JRY	Ryogami san	6.76	336	P	Pn	14 03 17.8	+3.8
JHO	Hitachi	6.89	349	P	Pn	14 03 16.1	+0.3
JHO				eS	Sn	14 04 28.6	-4.3
JMK	Ichinoseki	9.13	355	eS	Sn	14 05 20.8	-7.0

WEL 18 14:04:42.2±0.1, 39°.40S×176°.02E, h56km±1km, ML3.5/15, 1D, Error ellipse: s-maj=1.0km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHHZ	Black Hill Sta	0.09	159	⇓P*	Pn	14 04 50.6	-0.2
BHHZ				S*	Sn	14 04 56.9	+0.1
MOVZ	Moawhango	0.21	268	P*	Pn	14 04 50.8	-0.4
MOVZ				S*	Sn	14 04 57.2	-0.5
TUVZ	Tukino	0.31	295	P*	Pn	14 04 52.0	0.0
TUVZ				S*	Sn	14 04 59.3	+0.2
WNVZ	Wahianoa	0.34	282	P*	Pn	14 04 52.0	-0.1
OTVZ	Oturere	0.36	311	P*	Pn	14 04 52.4	0.0
DRZ	Dome Shelter	0.37	289	P*	Pn	14 04 52.6	+0.1
TRVZ	Turoa	0.38	285	P*	Pn	14 04 52.5	-0.1
FWVZ	Far West T-bar	0.39	292	P*	Pn	14 04 52.6	-0.1
NGZ	Ngauruhoe	0.39	304	P*	Pn	14 04 52.7	0.0
WPVZ	Whakapapa	0.42	298	P*	Pn	14 04 52.8	-0.1
KRVZ	Karewarewa	0.42	316	P*	Pn	14 04 53.0	-0.1
MTVZ	Mangateitei	0.43	272	P*	Pn	14 04 52.8	-0.2
BKZ	Black Stump Fm	0.43	58	P*	Pn	14 04 53.1	-0.1
WTVZ	West Tongariro	0.44	310	P*	Pn	14 04 53.0	-0.1
RITZ	Rihia Road	0.44	343	P*	Pn	14 04 53.1	-0.1
KATZ	Kakaramea	0.49	329	P*	Pn	14 04 53.8	0.0
HATZ	Hinemaiaia	0.51	6	P*	Pn	14 04 53.5	-0.4
HATZ				S*	Sn	14 05 01.4	-1.1
MCHZ	McNeill Hill	0.53	95	PN	Pn	14 04 55.4	+1.3
PNHZ	Pukenui	0.53	165	PN	Pn	14 04 54.4	+0.2
PKVZ	Pokaka	0.53	282	P*	Pn	14 04 54.0	-0.2
TWVZ	Taurewa	0.56	306	P*	Pn	14 04 53.9	-0.6
RATZ	Rangitukua	0.57	340	P*	Pn	14 04 54.3	-0.3
TSZ	Takapari Road	0.66	184	PN	Pn	14 04 55.7	0.0
NMHZ	Naumai	0.68	64	PN	Pn	14 04 57.4	+1.4
WATZ	Wairara	0.73	342	P*	Pn	14 04 55.9	-0.6
WHTZ	Whakaora	0.73	356	P*	Pn	14 04 56.8	+0.1
WPHZ	Waipukurau	0.74	154	PN	Pn	14 04 56.8	+0.1
KAHZ	Kahuranaki	0.77	121	PN	Pn	14 04 57.9	+0.8
ALRZ	Allen Road	0.87	17	P*	Pn	14 04 58.0	-0.4
WAZ	Wanganui	0.87	246	PN	Pn	14 04 58.7	+0.2
DVHZ	Dannevirke	0.91	173	PN	Pn	14 04 58.5	-0.3
PXZ	Pawanui	0.91	134	PN	Pn	14 04 59.0	+0.2
PRRZ	Plateau Road	0.95	18	P*	Pn	14 04 58.9	-0.5
RAHZ	Arahi	0.96	60	PN	Pn	14 05 00.1	+0.6
POWZ	Post Office Ro	1.01	191	PN	Pn	14 05 00.1	-0.1
VRZ	Vera Road	1.02	285	P*	Pn	14 04 59.8	-0.5
HRRZ	Handcock Road	1.03	12	P*	Pn	14 05 00.2	-0.2
RRRZ	Republican Roa	1.13	20	P*	Pn	14 05 01.3	-0.5
TARZ	Mount Tarawera	1.22	18	P*	Pn	14 05 03.2	+0.2
RAEZ	Rainy Point	1.27	275	PN	Pn	14 05 03.9	+0.3
HIZ	Hauiti	1.27	314	PN	Pn	14 05 03.1	-0.5
HIZ				SN	Sn	14 05 18.6	-1.1
BFZ	Birch Farm	1.29	172	PN	Pn	14 05 03.2	-0.8
MRZ	Mangatainoka R	1.30	195	PN	Pn	14 05 03.4	-0.7
KNZ	Kokohu	1.34	74	PN	Pn	14 05 04.1	-0.6
MHEZ	Mangahewa	1.36	283	PN	Pn	14 05 05.2	+0.4
TIWZ	Tintock	1.38	184	PN	Pn	14 05 04.3	-0.8
URZ	Urewera	1.42	37	P*	Pn	14 05 05.0	-0.7
DREZ	Durham Road	1.43	278	PN	Pn	14 05 06.2	+0.4
MHGZ	Mahia Peninsul	1.49	81	ePN	Pn	14 05 05.9	-0.7
DFE	Dawson Falls	1.49	272	PN	Pn	14 05 07.3	+0.7
NEZ	North Egmont	1.50	274	PN	Pn	14 05 07.2	+0.5
HOWZ	Holdsworth Sta	1.54	194	PN	Pn	14 05 06.2	-1.1
OGWZ	Otaki Gorge	1.56	204	PN	Pn	14 05 06.8	-0.7
MWZ	Matawai	1.59	48	P*	Pn	14 05 08.0	+0.1
PKE	Pukeiti	1.59	277	PN	Pn	14 05 08.6	+0.6
KIW	Kapiti Island	1.69	210	PN	Pn	14 05 08.4	-0.9
MTW	Mount Morrison	1.80	193	PN	Pn	14 05 09.1	-1.8
CAW	Cannon Point	1.85	203	PN	Pn	14 05 10.1	-1.5
TRWZ	Traveller	2.01	187	PN	Pn	14 05 12.1	-1.6
PAWZ	Paruwai Farm	2.03	193	SN	Sn	14 05 35.8	-2.3
WEL	Wellington	2.11	207	PN	Pn	14 05 13.2	-1.9
DUWZ	D'Urville Isla	2.13	228	PN	Pn	14 05 15.7	+0.4
PLWZ	Palliser	2.24	195	PN	Pn	14 05 14.5	-2.4
TCW	Tory Channel	2.25	216	PN	Pn	14 05 15.1	-1.8
TUWZ	Tuamarina	2.57	217	PN	Pn	14 05 19.4	-2.0
QRZ	Quartz Range	3.03	241	ePN	Pn	14 05 25.4	-2.3
THZ	Tophouse	3.35	224	PN	Pn	14 05 30.0	-2.0
CTZ	Chatham Island	7.02	130	SN	Sn	14 07 28.9	-12

IDC 18 14:10:02.0±3.1, 3°.91N×94°.02E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, ML3.7/1, Error ellipse: s-maj=120.2km s-min=26.3km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.23	18	Pn	Pn	14 13 38.9	+0.3
	0.1nm,0.3s,baz=212,slow=9.6,SNR=4.8						
MKAR	Makanchi Array	43.91	348	P	P	14 18 10.3	-0.1
	0.7nm,0.6s,baz=160,slow=8.7,SNR=10						
WRA	Warramunga Arr	46.16	122	P	P	14 18 28.8	+0.1
	0.5nm,0.6s,baz=302,slow=9.0,SNR=5.3						
ASAR	Alice Springs	47.55	127	P	P	14 18 39.4	-0.2
	0.1nm,0.6s,baz=302,slow=8.7,SNR=5.3						

*IDC **18** 14:10:09.0±7.0, 48°.65N×154°.74E, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.4/25, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=178.9km s-min=48.2km az=93.0*
*KRSC **18** 14:10:24.8±2.1, 49°.59N×156°.57E, h196km±86km, ML4.0*
ISC 18 14:10:27.9±2.5, 49°.3N±0°.2×156°.8E±0°.5, h68km±31km, n10, σ0°98/14, mb3.3/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	3.81	8	Pn	Pn	14 11 23.3	-0.7
	0.8nm,0.3s,baz=178,slow=11,SNR=17						
PETK				Sn	Sn	14 12 20.4	+13
	0.1nm,0.3s,baz=256,slow=41,SNR=2.2						
PET	Petropavlovsk	3.86	17	eP	Pn	14 11 25.8	+1.1
PET				eS	Sn	14 12 10.6	+1.8
AVH	Avacha	4.11	16	P	Pn	14 11 28.0	-0.1
NLC	Nalytchevo	4.15	21	eP	Pn	14 11 28.6	0.0
NLC				eS	Sn	14 12 14.7	-1.1
SPN	Mys Shipunski	4.26	27	eS	Sn	14 12 19.6	+1.0
GNL	Ganaly	4.41	9	eP	Pn	14 11 31.5	-0.8
MKZ	Mys Kozlova	6.03	28	eP	Pn	14 11 54.5	+0.1
MKZ				eS	Sn	14 13 00.3	-1.7
KBTR	Krutoberegovo	7.77	26	eP	Pn	14 12 18.3	+0.1
NVAR	Mina Array Bea	59.05	66	P	P	14 20 21.9	+1.2
	0.3nm,0.6s,mb3.5,baz=294,slow=6.8,SNR=3.5						
TXAR	Lajitas Array	74.07	64	P	P	14 21 55.6	-0.9
	0.2nm,0.5s,mb3.1,baz=299,slow=5.5,SNR=3.6						

*PDG **18** 14:33:01.6±0.1, 35°.93N×20°.72E, h11km±11km, ML4.2/10, Error ellipse: s-maj=74.9km s-min=15.8km az=90.0*
*MOS **18** 14:33:02.5±1.3, 35°.90N×21°.48E, h33km, mb4.4/28, Error ellipse: s-maj=7.7km s-min=3.4km az=82.7*
*NEIC **18** 14:33:02.1, 35°.75N×21°.51E, h5km, ML3.9(ATH), After ATH.*
*ISCJB **18** 14:33:03.4±0.4, 35°.83N±0°.02×21°.50E±0°.03, h54km±4km, mb4.3/36, MS3.4/3, Error ellipse: s-maj=4.1km s-min=3.1km az=38.2*
*BJI **18** 14:33:03.3, 36°.76N×21°.83E, h15km, mB5.0/4, mb4.6/6, Ms4.6/1, Ms7 4.5/1*
*THE **18** 14:33:04.1, 35°.83N×21°.59E, h21km±6km, ML3.8/9, Error ellipse: s-maj=7.7km s-min=1.5km az=218.0*
*CSEM **18** 14:33:04.5±0.2, 35°.80N×21°.49E, h49km±2km, mb4.2/23, Error ellipse: s-maj=4.2km s-min=2.9km az=47.0*
*ATH **18** 14:33:04.4, 35°.84N×21°.65E, h43km±9km, ML4.0*
*IDC **18** 14:33:04.2±4.3, 35°.93N×21°.61E, h30km±32km, mb4.1/16, mb1 4.1/24, mb1mx4.0/37, mbtmp4.0/24, ML3.7/7, MS3.4/4, Ms1 3.4/4, ms1mx2.8/41, Error ellipse: s-maj=14.4km s-min=12.0km az=146.0*
ISC 18 14:33:05.0±0.3, 35°.83N±0°.02×21°.53E±0°.03, h46km±3km, n390, σ1°14/437, mb4.3/36, MS3.4/3, 29C-22D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	Kithira	1.30	69	eP	Pn	14 33 26.7	+0.1
KYTH	Kithira	1.30	69	eP	Pn	14 33 26.7	+0.1
ITM	Ithomi	1.39	13	P	Pn	14 33 27.5	-0.3
ITM	Ithomi	1.39	13	eP	Pn	14 33 27.8	0.0
ITM	Ithomi	1.39	13	P	Pn	14 33 27.5	-0.3
ITM				S	Sn	14 33 44.4	-0.6
ITM	Ithomi	1.39	13	eP	Pn	14 33 27.8	0.0
ITM				S	Sn	14 33 44.4	-0.6
VLI	Veliai	1.44	51	P	Pn	14 33 29.2	+0.6
VLI	Veliai	1.44	51	P	Pn	14 33 29.2	+0.6
VLX	Vlachokerasia	1.68	24	eP	Pn	14 33 32.9	+1.0
VLX				eS	Sn	14 33 52.7	+0.4
VLX	Vlachokerasia	1.68	24	P	Pn	14 33 31.9	0.0
VLX				S	Sn	14 33 53.1	+0.8
VLX	Vlachokerasia	1.68	24	eP	Pn	14 33 32.9	+1.0
VLX				S	Sn	14 33 53.1	+0.8
KARN	Karanos	1.99	102	eP	Pn	14 33 36.2	+0.1
KARN	Karanos	1.99	102	P	Pn	14 33 35.4	-0.7
KARN				S	Sn	14 34 00.9	+1.2
KARN	Karanos	1.99	102	eP	Pn	14 33 36.2	+0.1
KARN				S	Sn	14 34 00.9	+1.2
DID	Didima	2.16	39	eP	Pn	14 33 38.3	-0.2
DID				eS	Sn	14 34 03.6	-0.5
DID	Didima	2.16	39	P	Pn	14 33 38.2	-0.3
DID				S	Sn	14 34 04.7	+0.6
DID	Didima	2.16	39	eP	Pn	14 33 38.3	-0.2
DID				S	Sn	14 34 04.7	+0.6
GUR	Goura	2.20	17	eP	Pn	14 33 39.9	+0.9
GUR	Goura	2.20	17	P	Pn	14 33 39.8	+0.8
GUR				S	Sn	14 34 06.5	+1.5
GUR	Goura	2.20	17	P	Pn	14 33 39.8	+0.8
GUR				S	Sn	14 34 06.5	+1.5
VAM	Vamos	2.21	100	P	Pn	14 33 38.9	-0.2
VAM	Vamos	2.21	100	P	Pn	14 33 38.9	-0.2
VAM	Vamos	2.21	100	eP	Pn	14 33 39.2	+0.1
VAM				eS	Sn	14 34 04.1	-1.2
VAM	Vamos	2.21	100	P	Pn	14 33 38.9	-0.2
VAM				eS	Sn	14 34 04.1	-1.2
RLS	Riolos of Patr	2.23	359	P	Pn	14 33 42.5	+3.1
RLS	Riolos of Patr	2.23	359	eP	Pn	14 33 40.1	+0.7
RLS	Riolos of Patr	2.23	359	eP	Pn	14 33 40.1	+0.7
KFL	Anninata	2.35	346	P	Pn	14 33 41.5	+0.4
KFL				S	Sn	14 34 10.8	+2.0
KFL	Anninata	2.35	346	P	Pn	14 33 41.5	+0.4
KFL				S	Sn	14 34 10.8	+2.0
LAKA	Lakka	2.44	8	P	Pn	14 33 43.3	+1.1
LAKA	Lakka	2.44	8	P	Pn	14 33 43.3	+1.1
VLS	Valsamata	2.46	342	P	Pn	14 33 43.2	+0.6
VLS	Valsamata	2.46	342	P	Pn	14 33 43.2	+0.6
VLS	Valsamata	2.46	342	eP	Pn	14 33 42.8	+0.2
VLS	Valsamata	2.46	342	P	Pn	14 33 42.4	-0.2
VLS				S	Sn	14 34 12.8	+1.3
VLS	Valsamata	2.46	342	P	Pn	14 33 43.2	+0.6
VLS				S	Sn	14 34 12.8	+1.3
LTK	Loutraki	2.47	27	eP	Pn	14 33 43.0	+0.3
LTK				eS	Sn	14 34 11.1	-0.6
LTK	Loutraki	2.47	27	P	Pn	14 33 43.0	+0.3
LTK				S	Sn	14 34 12.6	+0.9
LTK	Loutraki	2.47	27	eP	Pn	14 33 43.0	+0.3
LTK				S	Sn	14 34 12.6	+0.9
NAIG	Nisos Aigina	2.48	39	eP	Pn	14 33 43.0	+0.1
NAIG	Nisos Aigina	2.48	39	eP	Pn	14 33 43.0	+0.1
TRIZ	Trizonia	2.57	9	P	Pn	14 33 45.3	+1.2
TRIZ	Trizonia	2.57	9	P	Pn	14 33 45.3	+1.2
KALE	Kalithea	2.60	11	P	Pn	14 33 45.8	+1.3
KALE	Kalithea	2.60	11	P	Pn	14 33 45.8	+1.3
EFP	Efpalio	2.61	6	eP	Pn	14 33 46.5	+1.9
EFP	Efpalio	2.61	6	P	Pn	14 33 45.8	+1.2
EFP	Efpalio	2.61	6	P	Pn	14 33 45.8	+1.2
DSF	Desfina	2.70	17	P	Pn	14 33 45.5	-0.3
DSF	Desfina	2.70	17	P	Pn	14 33 45.5	-0.3
VLY	Voula,Athens	2.71	41	P	Pn	14 33 46.2	+0.2
VLY	Voula,Athens	2.71	41	P	Pn	14 33 46.2	+0.2
ATH	Athens Observa	2.77	39	eP	Pn	14 33 47.5	+0.8
ATH	Athens Observa	2.77	39	eP	Pn	14 33 47.5	+0.8
SIVA	Sivas	2.79	106	eP	Pn	14 33 47.2	+0.1
SIVA	Sivas	2.79	106	eP	Pn	14 33 47.2	+0.1
ATHU	Athens Univers	2.79	40	P	Pn	14 33 47.9	+0.8
ATHU	Athens Univers	2.79	40	P	Pn	14 33 47.9	+0.8
PTL	Penteli	2.90	39	P	Pn	14 33 50.1	+1.5
PTL	Penteli	2.90	39	P	Pn	14 33 50.1	+1.5
LKR	Lokris	3.05	22	P	Pn	14 33 51.1	+0.4
LKR	Lokris	3.05	22	eP	Pn	14 33 50.8	+0.1
LKR	Lokris	3.05	22	P	Pn	14 33 50.1	-0.6
LKR	Lokris	3.05	22	P	Pn	14 33 51.1	+0.4
EVR	Evrytania	3.09	4	eP	Pn	14 33 54.3	+3.1
EVR	Evrytania	3.09	4	eP	Pn	14 33 54.3	+3.1
ATAL	Atalanti	3.10	22	P	Pn	14 33 51.7	+0.4
ATAL				S	Sn	14 34 27.6	+0.6
ATAL	Atalanti	3.10	22	P	Pn	14 33 51.7	+0.4
ATAL				S	Sn	14 34 27.6	+0.6
THR5	Thira Island,	3.14	78	P	Pn	14 33 50.9	-1.0
THR5	Thira Island,	3.14	78	P	Pn	14 33 50.9	-1.0
THR3	Thira Island,	3.18	78	P	Pn	14 33 51.5	-1.0
THR3	Thira Island,	3.18	78	P	Pn	14 33 51.5	-1.0
THR1	Thera Island	3.23	79	P	Pn	14 33 52.0	-1.0
THR1	Thera Island	3.23	79	P	Pn	14 33 52.0	-1.0
AGG	Agios Georgios	3.25	11	P	Pn	14 33 55.6	+2.2
AGG	Agios Georgios	3.25	11	P	Pn	14 33 55.6	+2.2
AGG	Agios Georgios	3.25	11	eP	Pn	14 33 55.0	+1.6
AGG	Agios Georgios	3.25	11	P	Pn	14 33 54.2	+0.8
AGG				S	Sn	14 34 32.5	+1.7
AGG	Agios Georgios	3.25	11	P	Pn	14 33 54.2	+0.8
AGG				S	Sn	14 34 32.5	+1.7
LAST	Lasithi	3.29	101	eP	Pn	14 33 54.2	+0.3
LAST	Lasithi	3.29	101	eP	Pn	14 33 54.2	+0.3
NPS	Neapolis	3.37	98	P	Pn	14 33 57.7	+2.6
NPS	Neapolis	3.37	98	P	Pn	14 33 57.7	+2.6
NPS	Neapolis	3.37	98	eP	Pn	14 33 54.5	-0.6
NPS	Neapolis	3.37	98	eP	Pn	14 33 54.5	-0.6
APE	Apeiranthos	3.45	68	P	Pn	14 33 57.3	+1.1
APE	Apeiranthos	3.45	68	⇓P	Pn	14 33 55.3	-0.9
APE	Apeiranthos	3.45	68	eP	Pn	14 33 56.1	-0.1
APE	Apeiranthos	3.45	68	P	Pn	14 33 54.0	-2.2
APE	Apeiranthos	3.45	68	⇓iP	Pn	14 33 55.3	-0.9
APE	Apeiranthos	3.45	68	eP	Pn	14 33 56.1	-0.1
XRY	Khrisi	3.53	104	eP	Pn	14 33 58.0	+0.8
XRY	Khrisi	3.53	104	eP	Pn	14 33 58.0	+0.8
THL	Klokotos Trika	3.75	6	eP	Pn	14 34 01.2	+0.9
THL	Klokotos Trika	3.75	6	P	Pn	14 34 01.1	+0.8
THL	Klokotos Trika	3.75	6	P	Pn	14 34 01.1	+0.8
IGT	Igoumenitsa	3.82	346	P	Pn	14 34 01.9	+0.7
IGT	Igoumenitsa	3.82	346	P	Pn	14 34 01.9	+0.7
IGT	Igoumenitsa	3.82	346	P	Pn	14 34 01.1	-0.1
IGT				S	Sn	14 34 45.6	+0.8
IGT	Igoumenitsa	3.82	346	P	Pn	14 34 01.9	+0.7
IGT				S	Sn	14 34 45.6	+0.8
AOS	Alonnisos	3.82	29	P	Pn	14 34 02.5	+1.2
AOS	Alonnisos	3.82	29	P	Pn	14 34 01.9	+0.7
AOS	Alonnisos	3.82	29	P	Pn	14 34 01.9	+0.7
JAN	Janina	3.86	352	P	Pn	14 34 04.7	+2.9
JAN	Janina	3.86	352	P	Pn	14 34 04.7	+2.9
JAN	Janina	3.86	352	eP	Pn	14 34 03.0	+1.2
JAN	Janina	3.86	352	eP	Pn	14 34 03.0	+1.2
ZKR	Zakros	3.89	99	eP	Pn	14 34 02.3	+0.2
ZKR	Zakros	3.89	99	P	Pn	14 34 02.2	+0.1
ZKR	Zakros	3.89	99	P	Pn	14 34 02.2	+0.1
LTBQ	Tobruq	4.25	152	iP	Pn	14 34 07.9	+0.7
	SNR=45						
LIT	Litokhoron	4.33	10	P	Pn	14 34 09.8	+1.6
LIT	Litokhoron	4.33	10	P	Pn	14 34 09.8	+1.6
LIT	Litokhoron	4.33	10	eP	Pn	14 34 09.6	+1.4
LIT	Litokhoron	4.33	10	P	Pn	14 34 09.5	+1.3
LIT				S	Sn	14 34 58.7	+1.2
LIT	Litokhoron	4.33	10	P	Pn	14 34 09.5	+1.3
LIT				S	Sn	14 34 58.7	+1.2
CHOS	Chios island	4.42	53	eP	Pn	14 34 08.4	-1.1
CHOS	Chios island	4.42	53	eP	Pn	14 34 08.4	-1.1
KZN	Kozani	4.48	2	P	Pn	14 34 11.6	+1.4
KZN	Kozani	4.48	2	P	Pn	14 34 11.6	+1.4
KZN	Kozani	4.48	2	eP	Pn	14 34 11.7	+1.5
KZN	Kozani	4.48	2	P	Pn	14 34 10.8	+0.6
KZN				S	Sn	14 35 01.9	+0.9
KZN	Kozani	4.48	2	P	Pn	14 34 10.8	+0.6
KZN				S	Sn	14 35 01.9	+0.9
KARP	Karpathos	4.59	92	P	Pn	14 34 11.0	-0.8
KARP	Karpathos	4.59	92	eP	Pn	14 34 10.3	-1.5
KARP	Karpathos	4.59	92	P	Pn	14 34 11.0	-0.8
NEST	Nestorio	4.60	355	P	Pn	14 34 13.1	+1.2
NEST				S	Sn	14 35 07.2	+3.3
NEST	Nestorio	4.60	355	P	Pn	14 34 13.1	+1.2
NEST				S	Sn	14 35 07.2	+3.3
PLG	Polygyros	4.78	18	P	Pn	14 34 14.4	0.0
PLG	Polygyros	4.78	18	P	Pn	14 34 14.4	0.0
PLG	Polygyros	4.78	18	eP	Pn	14 34 14.4	0.0
PLG	Polygyros	4.78	18	P	Pn	14 34 14.0	-0.4
PLG	Polygyros	4.78	18	eP	Pn	14 34 14.4	0.0
SIGR	SIGRI	4.82	44	P	Pn	14 34 16.5	+1.6
SIGR	SIGRI	4.82	44	P	Pn	14 34 16.5	+1.6
OUR	Ouranopolis	4.90	22	P	Pn	14 34 15.9	-0.1
OUR	Ouranopolis	4.90	22	P	Pn	14 34 15.9	-0.1
OUR	Ouranopolis	4.90	22	P	Pn	14 34 15.9	-0.1
HORT	Hortiatis	4.92	14	P	Pn	14 34 16.5	+0.2
HORT	Hortiatis	4.92	14	P	Pn	14 34 16.0	-0.3
HORT	Hortiatis	4.92	14	P	Pn	14 34 16.5	+0.2
BDRM	Kayabasi	4.92	74	iP	Pn	14 34 16.0	-0.4
BDRM	Kayabasi	4.92	74	iP	Pn	14 34 16.0	-0.3
THE	Thessaloniki	4.93	13	P	Pn	14 34 18.2	+1.8
THE	Thessaloniki	4.93	13	P	Pn	14 34 18.2	+1.8
THE	Thessaloniki	4.93	13	P	Pn	14 34 18.2	+1.8
LIA	Limnos Island	4.99	34	P	Pn	14 34 20.3	+3.1
LIA	Limnos Island	4.99	34	eP	Pn	14 34 17.6	+0.4
LIA	Limnos Island	4.99	34	eP	Pn	14 34 17.6	+0.4
LJBD	Adjabya	5.03	193	iP	Pn	14 34 16.9	-0.9
	SNR=45						
CEL	Celeste	5.12	300	P	Pn	14 34 18.4	-0.7
CEL	Celeste	5.12	300	P	Pn	14 34 18.4	-0.7
GRG	Griva	5.17	7	P	Pn	14 34 19.9	+0.2
GRG	Griva	5.17	7	P	Pn	14 34 19.9	+0.2
GRG	Griva	5.17	7	P	Pn	14 34 19.7	0.0
GRG	Griva	5.17	7	P	Pn	14 34 19.9	+0.2
BIA	Bitola	5.19	358	ePn	Pn	14 34 19.8	-0.2
SOH	Sokhos	5.19	15	P	Pn	14 34 20.9	+0.9
SOH	Sokhos	5.19	15	P	Pn	14 34 20.9	+0.9
SOH	Sokhos	5.19	15	eP	Pn	14 34 20.3	+0.3
SOH	Sokhos	5.19	15	P	Pn	14 34 20.3	+0.3
SOH	Sokhos	5.19	15	eP	Pn	14 34 20.3	+0.3
ARG	Arkhangelos	5.36	84	P	Pn	14 34 22.1	-0.2
ARG	Arkhangelos	5.36	84	P	Pn	14 34 22.1	-0.2
ARG	Arkhangelos	5.36	84	eP	Pn	14 34 21.5	-0.8
ARG	Arkhangelos	5.36	84	P	Pn	14 34 22.1	-0.2
AYDN	Tasoluk	5.41	68	iP	Pn	14 34 24.3	+1.2
SRS	Serrai	5.52	16	P	Pn	14 34 24.3	-0.3
SRS	Serrai	5.52	16	P	Pn	14 34 24.3	-0.3
SRS	Serrai	5.52	16	P	Pn	14 34 23.8	-0.8
SRS	Serrai	5.52	16	P	Pn	14 34 24.3	-0.3
KRUS	Krusevo	5.54	358	ePn	Pn	14 34 23.9	-0.9
VAY	Valandovo	5.55	8	ePn	Pn	14 34 24.6	-0.2
TIR	Tirane	5.67	347	eP	Pn	14 34 25.8	-0.7
	40nm,0.6s						
TIR	Tirane	5.67	347	eP	Pn	14 34 25.8	-0.7
TIR				pmax	pmax		
	comp=Z,40nm,0.6s						
TIR	Tirane	5.67	347	eP	Pn	14 34 25.8	-0.7
	comp=Z,40nm,0.6s						
KAVA	Kavala	5.67	23	P	Pn	14 34 25.8	-0.7
KAVA	Kavala	5.67	23	P	Pn	14 34 25.8	-0.7
WDD	Wield Dalam	5.70	272	P	Pn	14 34 26.6	-0.4
W

comp=Z,5.0nm,0.8s
BRTR Keskin Array B 10.34 64 *i* P **Pn 14 35 32.5 +1.9**
comp=Z,5.0nm,0.8s
PKSM Moragy 10.60 349 ⇑P **Pn 14 35 34.0 -0.1**
PKSM Moragy 10.60 349 ⇑*i*P **Pn 14 35 34.0 -0.1**
PKSM Moragy 10.60 349 P **Pn 14 35 34.0 -0.1**
VRI Vrincioaia 10.77 20 ⇑P **Pn 14 35 35.4 -1.0**
VRI Vrincioaia 10.77 20 ⇑*i*P **Pn 14 35 35.4 -1.0**
VRI Vrincioaia 10.77 20 P **Pn 14 35 35.4 -1.0**
BOJS Bojanci 10.78 336 *i* Pn **Pn 14 35 34.7 -1.7**
BOJS *e*Sn **Sn 14 37 28.1 -7.5**
BOJS Bojanci 10.78 336 *i* Pn **Pn 14 35 34.7 -1.8**
DRGR 10.99 4 ⇑*i*P **Pn 14 35 39.1 -0.3**
DRGR 10.99 4 ⇑*i*P **Pn 14 35 39.1 -0.3**
JAVS Javornik 11.53 333 *i* Pn **Pn 14 35 46.6 -0.2**
JAVS *i* Sn **Sn 14 37 47.4 -6.7**
JAVS Javornik 11.53 333 *i* Pn **Pn 14 35 46.6 -0.2**
MMAI Mount Meron Ar 11.79 100 Pn **Pn 14 35 49.0 -1.5**
comp=Z,2.5nm,0.3s,baz=276,slow=12,SNR=7.0
MMAI Sn **Sn 14 37 52.5 -8.1**
comp=Z,1.6nm,0.3s,baz=320,slow=30,SNR=3.4
PERS Pernice 11.82 338 *i* Pn **Pn 14 35 49.2 -1.6**
PERS *i* Sn **Sn 14 37 53.0 -8.2**
PERS Pernice 11.82 338 *i* Pn **Pn 14 35 49.2 -1.6**
BURAR Bucovina Array 12.09 12 ⇑P **Pn 14 35 54.3 -0.2**
BURAR Bucovina Array 12.09 12 ⇑*i*P **Pn 14 35 54.3 -0.2**
BURAR Bucovina Array 12.09 12 ⇑*i*P **Pn 14 35 54.3 -0.2**
PSZ Piszkesteto 12.14 355 *e*P **Pn 14 35 53.0 -2.2**
comp=Z,7.1nm,0.7s
PSZ Piszkesteto 12.14 355 ⇓P **Pn 14 35 53.7 -1.5**
PSZ Piszkesteto 12.14 355 ⇓*i*P **Pn 14 35 53.7 -1.5**
PSZ Piszkesteto 12.14 355 *e*P **Pn 14 35 52.9 -2.3**
PSZ Piszkesteto 12.14 355 P **Pn 14 35 53.7 -1.5**
TRPA Tarpa 12.32 3 ⇓*i*P **Pn 14 35 56.9 -0.6**
TRPA Tarpa 12.32 3 ⇓*i*P **Pn 14 35 56.9 -0.6**
KECS Kecovo 12.67 357 *e*Pn **Pn 14 36 02.2 -0.2**
KECS Kecovo 12.67 357 *e*P **Pn 14 36 02.2 -0.2**
KECS Kecovo 12.67 357 *e*PN **Pn 14 36 02.2 -0.2**
KECS Kecovo 12.67 357 *e*P **Pn 14 36 02.2 -0.2**
VYHS Vyhne 12.81 352 *e*Pn **Pn 14 36 03.4 -0.9**
VYHS Vyhne 12.81 352 *e*P **Pn 14 36 03.4 -0.9**
VYHS Vyhne 12.81 352 *e*PN **Pn 14 36 03.4 -0.9**
VYHS Vyhne 12.81 352 *e*P **Pn 14 36 03.4 -0.9**
EIL Elat 12.85 115 Pn **Pn 14 36 00.7 -4.2**
comp=Z,2.0nm,0.3s,baz=187,slow=7.1,SNR=10
EIL Sn **Sn 14 38 15.1 -11**
comp=Z,0.6nm,0.3s,baz=32,slow=17,SNR=3.3
CRVS Cervenica-Dubn 13.07 360 *e*Pn **Pn 14 36 08.5 +0.7**
CRVS Cervenica-Dubn 13.07 360 *e*P **Pn 14 36 08.5 +0.7**
CRVS Cervenica-Dubn 13.07 360 *e*PN **Pn 14 36 08.5 +0.7**
CRVS Cervenica-Dubn 13.07 360 *e*P **Pn 14 36 08.5 +0.7**
KOLS Kolonicke sedl 13.11 2 *e*Pn **Pn 14 36 09.2 +0.9**
KOLS Kolonicke sedl 13.11 2 *e*P **Pn 14 36 09.2 +0.9**
KOLS Kolonicke sedl 13.11 2 *e*PN **Pn 14 36 09.2 +0.9**
KOLS Kolonicke sedl 13.11 2 *e*P **Pn 14 36 09.2 +0.9**
ASF Jabal al Asfar 13.26 102 Pn **Pn 14 36 17.8 +7.3**
comp=Z,0.4nm,0.3s,baz=346,slow=23,SNR=3.2
ASF Sn **Sn 14 38 31.4 -4.9**
comp=Z,0.3nm,0.3s,baz=305,slow=16,SNR=2.2
ASF Jabal al Asfar 13.26 102 P **Pn 14 36 17.8 +7.3**
ASF 14 38 31.4
MALT Malatya 13.72 75 ⇑P **Pn 14 36 17.1 +0.4**
MALT Malatya 13.72 75 ⇑*i*P **Pn 14 36 17.1 +0.4**
DAVOX Davos/Dischmat 14.00 325 Pn **Pn 14 36 21.7 +1.2**
comp=Z,0.1nm,0.3s,baz=352,slow=23,SNR=2.9
DAVOX Sn **Sn 14 38 46.6 -7.7**
comp=Z,0.6nm,0.3s,baz=324,slow=23,SNR=3.2
TREC Trest 14.17 344 AMS AMS 14 42 50.0
comp=Z,600nm,14.0s
OKC Ostrava-Krasne 14.22 351 AMS AMS 14 43 00.0
comp=Z,300nm,15.4s
GERES GERESS Array B 14.23 339 Pn **Pn 14 36 22.8 -0.8**
comp=Z,0.2nm,0.3s,baz=163,slow=11,SNR=6.1
GERES Sn **Sn 14 38 53.8 -6.1**
comp=Z,0.3nm,0.3s,baz=157,slow=22,SNR=3.4
GERES GERESS Array B 14.23 339 Pn **Pn 14 36 22.8 -0.8**
GERES Sn **Sn 14 38 53.8 -6.1**
GERES GERESS Array B 14.23 339 P **Pn 14 36 22.8 -0.8**
GERES 14 38 53.8
GERES GERESS Array B 14.23 339 Pn **Pn 14 36 22.8 -0.8**
KHC Kasperske Hory 14.52 339 AMS AMS 14 43 00.0
comp=Z,500nm,11.6s
DPC Dobruska-Polom 15.00 347 *e*P **Pn 14 36 37.6 +3.9**
DPC MLR MLR
comp=Z,500nm,12.6s
DPC Dobruska-Polom 15.00 347 *e*P **Pn 14 36 37.6 +3.9**
DPC AMS AMS 14 43 40.0
comp=Z,500nm,12.6s
DPC Dobruska-Polom 15.00 347 *e*P **Pn 14 36 37.6 +3.9**
comp=Z,500nm,12.6s
PRU Pruhonice 15.04 342 AMS AMS 14 43 20.0
comp=Z,500nm,12.6s
PVCC Panska Ves 15.54 343 AMS AMS 14 43 40.0
comp=Z,500nm,11.5s
AKASG Malin Array Be 15.87 18 Pn **Pn 14 36 42.1 -2.9**
comp=Z,0.8nm,0.3s,baz=212,slow=11,SNR=5.3
AKASG Sn **Sn 14 39 34.4 -5.3**
comp=Z,0.1nm,0.3s,baz=170,slow=18,SNR=4.7
AKASG Malin Array Be 15.87 18 *c*e**P Pn 14 36 42.0 -3.0**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIV Kislovodsk 18.11 57 *e*P **Pn 14 37 15.4 +2.4**
KIV pmax pmax
comp=Z,18nm,1.2s
KIV MLR MLR
comp=Z,45nm,12.0s
ZEI Tsey 18.62 61 *e*P **Pn 14 37 18.1 -1.0**
ZEI pmax pmax
comp=Z,7.0nm,0.5s
ZEI Tsey 18.62 61 *e*P **Pn 14 37 18.1 -1.0**
comp=Z,7.0nm,0.5s
GNI Garni 18.78 70 P **Pn 14 37 19.5 -1.5**
comp=Z,1.6nm,0.3s,baz=278,slow=3.9,SNR=5.2
GNI LR LR 14 45 50.1
comp=Z,124nm,18.2s,baz=121,slow=41
GNI Garni 18.78 70 ⇑*e*P **Pn 14 37 20.7 -0.4**
GNI pmax pmax
comp=Z,37nm,2.5s
GNI Garni 18.78 70 *e*P **Pn 14 37 20.7 -0.4**
comp=Z,37nm,2.5s
VORD Divnogorie 19.81 35 *e*P **Pn 14 37 31.2 -2.0**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD Divnogorie 19.81 35 *e*P **Pn 14 37 31.2 -2.0**
comp=E,10.0nm,0.9s
VSR Storozhevoye 19.92 34 *e*P **Pn 14 37 32.3 -2.3**
VSR pmax pmax
comp=Z,10.0nm,0.4s
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR Storozhevoye 19.92 34 *e*P **Pn 14 37 32.3 -2.3**
comp=E,10.0nm,1.0s
ESDC Sonseca Array 20.50 288 P **P 14 37 40.4 +1.4**
comp=E,0.6nm,0.3s,baz=89,slow=11,SNR=13
MDT Midelt 21.78 270 LR LR 14 48 27.7
comp=E,142nm,19.1s,MS3.4,baz=126,slow=42
OBN Obninsk 21.89 24 ⇑*e*P **P 14 37 52.3 -1.5**
OBN *e* 14 38 07.8
OBN *e* 14 38 17.5
OBN pmax pmax
comp=Z,24nm,0.8s,mb4.7
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.4
OBN Obninsk 21.89 24 *e*P **P 14 37 52.3 -1.5**
comp=Z,24nm,0.8s,mb4.7
MIB Mutribah 22.47 98 *e*P **P 14 37 59.8 -0.4**
MIB AMb AMB 14 38 05.3
comp=Z,35nm,0.8s,mb4.8
MIB Mutribah 22.47 98 *e*P **P 14 37 59.8 -0.4**
comp=Z,35nm,0.8s,mb4.8
NAY Al-Naaiem 22.61 100 *e*P **P 14 38 00.8 -0.9**
NAY AMb AMB 14 38 02.5
comp=Z,12nm,0.6s,mb4.5
NAY Al-Naaiem 22.61 100 *e*P **P 14 38 00.8 -0.8**
comp=Z,12nm,0.6s,mb4.5
MOS Moscow 22.75 24 *e*P **P 14 38 06.2 +3.3**
MOS *e* 14 38 18.1
VSU Vasula 22.91 7 *de*P **P 14 38 03.2 -1.3**
VSU pmax pmax
comp=Z,16nm,1.0s,mb4.4
VSU Vasula 22.91 7 *e*P **P 14 38 03.2 -1.3**
comp=Z,16nm,1.0s,mb4.4
RDF Al-Radifah 22.98 100 *e*P **P 14 38 05.4 -0.2**
RDF AMb AMB 14 38 10.2
comp=Z,42nm,1.7s,mb4.6
RDF Al-Radifah 22.98 100 *e*P **P 14 38 05.4 -0.2**
comp=Z,42nm,1.7s,mb4.6
HFS Hagfors 24.85 351 P **P 14 38 21.8 -0.9**
comp=Z,4.0nm,0.5s,mb4.2,baz=170,slow=11,SNR=24
HFS Hagfors 24.85 351 P **P 14 38 21.8 -0.9**
HFS pmax pmax
comp=Z,4.0nm,0.5s
FINES FINESS Array B 25.80 5 P **P 14 38 31.4 0.0**
comp=Z,6.5nm,0.8s,mb4.2,baz=157,slow=10,SNR=14
FINES FINESS Array B 25.80 5 P **P 14 38 31.4 +0.1**
FINES pmax pmax
comp=Z,7.0nm,0.8s
EKA Eskdalemuir Ar 25.82 327 P **P 14 38 33.0 +1.3**
comp=Z,1.5nm,0.6s,mb3.7,baz=130,slow=7.3,SNR=9.0
EKA Eskdalemuir Ar 25.82 327 P **P 14 38 33.0 +1.4**
EKA pmax pmax
comp=Z,2.0nm,0.6s
NB2 NORSAR Subarra 26.08 349 P **P 14 38 33.8 -0.1**
comp=Z,3.0nm,0.6s,mb4.0,baz=159,slow=10
NB2 NORSAR Subarra 26.08 349 P **P 14 38 33.8 -0.1**
comp=Z,3.0nm,0.6s,mb4.0,SNR=9.3
NOA NORSAR Array B 26.08 349 P **P 14 38 33.8 0.0**
comp=Z,5.6nm,0.8s,mb4.1,baz=159,slow=9.9,SNR=11
NOA NORSAR Array B 26.08 349 P **P 14 38 33.8 -0.1**
NOA pmax pmax
comp=Z,6.0nm,0.9s
KAF Kangasniemi 26.48 5 *e*P **P 14 38 38.5 +1.0**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb3.8
KAF Kangasniemi 26.48 5 *e*p **P 14 38 38.5 +1.0**
comp=Z,0.8nm,0.3s,mb3.7
KAF Kangasniemi 26.48 5 *e*P **P 14 38 38.5 +1.0**
comp=Z,0.8nm,0.3s,mb3.7
KLMR Klimovskoe 27.56 19 *e*P **P 14 38 46.3 -0.9**
KLMR pmax pmax
comp=Z,23nm,1.8s,mb4.5
JOF Joensuu 27.79 10 *e*P **P 14 38 48.9 -0.3**
JOF Joensuu 27.79 10 *e*p **P 14 38 48.9 -0.3**
comp=Z,0.4nm,0.3s,mb3.5
JOF Joensuu 27.79 10 *e*P **P 14 38 48.9 -0.3**
comp=Z,0.4nm,0.3s,mb3.5
TORD Torodi Ar. Bea 28.80 223 P **P 14 39 00.1 +1.5**
comp=Z,7.9nm,0.7s,mb4.6,baz=33,slow=9.0,SNR=42
AKTK Aktyubinsk 30.02 49 P **P 14 39 08.6 -0.5**
comp=Z,1.0nm,0.3s,mb4.0
AKTO Aktyubinsk 30.02 49 P **P 14 39 08.6 -0.5**
comp=Z,0.9nm,0.3s,mb4.0,baz=280,slow=5.3,SNR=6.2
AKTO Aktyubinsk 30.02 49 P **P 14 39 08.6 -0.5**
AKTO pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
ARU Arti 32.33 39 *d i*P **P 14 39 28.7 -0.7**
ARU *e* 14 40 32.0
ARU S **S 14 44 42.3 +2.4**
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
ARU Arti 32.33 39 *i* P **P 14 39 28.7 -0.7**
comp=Z,6.0nm,1.0s,mb4.4
LVZ Lovozero 32.97 9 ⇑*e*P **P 14 39 33.8 -1.1**
LVZ pmax pmax
comp=Z,22nm,1.7s,mb4.8
LVZ Lovozero 32.97 9 *e*P **P 14 39 33.8 -1.1**
comp=Z,22nm,1.7s,mb4.8
ARCES ARCESS Array B 33.84 3 P **P 14 39 42.3 -0.1**
comp=Z,4.5nm,0.8s,mb4.4,baz=189,slow=7.5,SNR=18
ARCES ARCESS Array B 33.84 3 P **P 14 39 42.3 -0.1**
ARCES pmax pmax
comp=Z,5.0nm,0.8s
ARCES ARCESS Array B 33.84 3 P **P 14 39 42.3 -0.1**
comp=Z,5.0nm,0.8s,mb4.5
KEV Kevo 34.12 3 *e*P **P 14 39 45.1 +0.3**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KEV Kevo 34.12 3 *e*p **P 14 39 45.1 +0.3**
comp=Z,0.7nm,0.3s,mb4.1
KEV Kevo 34.12 3 *e*P **P 14 39 45.1 +0.3**
comp=Z,1.0nm,0.3s,mb4.2
DBIC Dimbokro 37.78 226 P **P 14 40 18.4 +1.7**
comp=Z,9.6nm,0.8s,mb4.6,baz=5.7,slow=9.8,SNR=11
DBIC Dimbokro 37.78 226 P **P 14 40 18.5 +1.7**
DBIC pmax pmax
comp=Z,10.0nm,0.8s
TIC Toumodi 37.90 226 *e*P **P 14 40 19.0 +1.2**
comp=Z,7.9nm,0.2s,mb5.1
KIC Kosan Boka 37.96 226 *e*P **P 14 40 19.7 +1.4**
comp=Z,44nm,1.1s,mb5.1
BRVK Borovoye 38.00 47 ⇓*e*P **P 14 40 18.2 0.0**
BRVK pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
BRVK Borovoye 38.00 47 *e*P **P 14 40 18.2 0.0**
comp=Z,2.0nm,0.8s,mb3.9
LIC Lamto 38.24 226 *e*P **P 14 40 22.1 +1.4**
comp=Z,47nm,0.8s,mb5.3
KMBO Kilima Mbogo 39.58 155 LR LR 15 00 34.4
comp=Z,48nm,19.0s,MS3.4,baz=81,slow=42
AAK Ala-Archa 41.02 64 ⇑*e*P **P 14 40 44.5 +1.0**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
AAK Ala-Archa 41.02 64 *e*P **P 14 40 44.5 +1.0**
comp=Z,2.0nm,0.8s,mb3.8
KURK Kurchatov 43.07 51 ⇑*e*P **P 14 40 59.0 -1.1**
KURK pmax pmax
comp=Z,4.0nm,1.7s,mb3.9
KURK Kurchatov 43.07 51 *e*P **P 14 40 59.0 -1.1**
comp=Z,4.0nm,1.7s,mb3.9
NVS Novosibirsk 45.72 45 *e*P **P 14 41 19.7 -1.5**
NVS pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
NVS pmax pmax
comp=N,1.0nm,0.9s
NVS pmax pmax
comp=E,4.0nm,0.7s
MKAR Makanchi Array 45.88 57 P **P 14 41 22.5 -0.1**
comp=E,3.3nm,0.4s,mb4.7,baz=280,slow=6.5,SNR=20
MKAR Makanchi Array 45.88 57 P **P 14 41 22.5 -0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
ZALV Zalesovo Beam 46.69 47 P **P 14 41 27.9 -0.9**
comp=Z,5.5nm,0.8s,mb4.6,baz=282,slow=7.4,SNR=17
ZALV Zalesovo Beam 46.69 47 P **P 14 41 27.9 -0.9**
ZALV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ZALV Zalesovo Beam 46.69 47 P **P 14 41 27.9 -0.9**
comp=Z,6.0nm,0.8s,mb4.6
ZAK Zakamensk 58.51 48 *e*P **P 14 42 56.2 -0.1**
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
ZAK Zakamensk 58.51 48 *e*P **P 14 42 56.2 -0.1**
comp=Z,2.0nm,1.0s,mb4.1
SONM Songino Array 61.34 50 P **P 14 43 16.2 +0.5**
comp=Z,2.1nm,0.8s,mb4.3,baz=282,slow=9.2,SNR=13
SONM Songino Array 61.34 50 P **P 14 43 16.2 +0.5**
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM Songino Array 61.34 50 P **P 14 43 16.2 +0.5**
comp=Z,2.0nm,0.8s,mb4.3
BOD Bodaibo 61.74 37 *e*P **P 14 43 17.2 -1.0**
BOD pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
BOSA Boshof 64.19 176 P **P 14 43 37.0 +2.2**
comp=Z,2.6nm,0.8s,mb4.3,baz=353,slow=9.2,SNR=3.5
BOSA Boshof 64.19 176 P **P 14 43 37.0 +2.2**
BOSA pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
CMAR Chiang Mai Arr 69.42 82 P **P 14 44 09.2 +0.7**
comp=Z,0.9nm,0.7s,mb3.8,baz=303,slow=8.0,SNR=7.5
CMAR Chiang Mai Arr 69.42 82 P **P 14 44 09.2 +0.8**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 69.42 82 P **P 14 44 09.2 +0.8**
comp=Z,1.0nm,0.7s,mb3.9
ILAR Eielson Array 79.32 355 P **P 14 45 06.5 +1.2**
comp=Z,0.8nm,0.9s,mb3.7,baz=327,slow=3.8,SNR=6.2
ILAR Eielson Array 79.32 355 P **P 14 45 06.5 +1.3**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
ILAR Eielson Array 79.32 355 P **P 14 45 06.5 +1.3**
comp=Z,1.0nm,0.9s,mb3.8
KSRS Korea Array 80.19 51 P **P 14 45 11.2 +0.7**
comp=Z,1.9nm,0.8s,mb4.1,baz=308,slow=4.2,SNR=9.6
KSRS Korea Array 80.19 51 P **P 14 45 11.2 +0.7**
KSRS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KSRS Korea Array 80.19 51 P **P 14 45 11.2 +0.7**
comp=Z,2.0nm,0.8s,mb4.1
WRA Warramunga Arr 119.60 94 PKP PKPdf 14 51 51.4 +1.4
comp=Z,0.8nm,1.2s,baz=291,slow=2.6,SNR=3.5
WRA Warramunga Arr 119.60 94 PKIKP PKPdf 14 51 51.4 +1.4
WRA pmax pmax
comp=Z,1.0nm,1.2s
ASAR Alice Springs 121.08 98 PKP PKPdf 14 51 53.9 +1.1
comp=Z,0.3nm,0.6s,baz=307,slow=1.1,SNR=7.1
ASAR Alice Springs 121.08 98 PKIKP PKPdf 14 51 53.9 +1.2

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*ISCJB **18** 14:33:15.6±0.5,51°.52N±0°.02×6°.43E±0°.04, h0km, Error ellipse: s-maj=3.7km s-min=2.8km az=39.2*
*NEIC **18** 14:33:16.4,51°.61N×6°.57E, h1km, ML3.2(LDG), ML2.6(SZGRF), After LDG.*
*LDG **18** 14:33:16.4±0.1,51°.61N×6°.57E, h1km, Ml3.2/11, Error ellipse: s-maj=2.1km s-min=1.4km az=5.0, Suspected Mining induced.*
*BUG **18** 14:33:16.7,51°.59N×6°.58E, h1km, ML2.3*
*CSEM **18** 14:33:16.0±0.3,51°.55N×6°.41E, h1km, ML3.4/15, Error ellipse: s-maj=5.4km s-min=4.1km az=141.0*
*BNS **18** 14:33:17.9±0.8,51°.54N×6°.56E, h1km, ML2.3*
*BGR **18** 14:33:18.6±0.6,51°.48N×6°.64E, h1km, ML2.6/6, Error ellipse: s-maj=8.9km s-min=3.3km az=132.0*
ISC 18 14:33:16.2±0.5,51°.54N±0°.02×6°.41E±0°.03, h0km, n73, σ1.9 36/127, 1C, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.39**	**120**	*e*Pg	**Pg**	**14 33 23.5**	**-0.1**
LAUG				*e*Sg	**Sg**	**14 33 28.5**	**-0.1**
147nm,0.7s							
LAUG	**Laupendahl**	**0.39**	**120**	Pg	**Pg**	**14 33 23.5**	**-0.1**
LAUG				Sg	**Sg**	**14 33 28.5**	**-0.1**
147nm,0.7s							
RODG	**Roetgen-Dahlhe**	**0.42**	**200**	*e*Pg	**Pg**	**14 33 26.9**	**+2.5**
RODG				*e*Sg	**Sg**	**14 33 33.5**	**+3.7**
RODG	**Roetgen-Dahlhe**	**0.42**	**200**	Pg	**Pg**	**14 33 26.9**	**+2.6**
RODG				Sg	**Sg**	**14 33 33.5**	**+3.7**
WTSB	**Winterswijk**	**0.49**	**30**	*e*Pg	**Pg**	**14 33 26.6**	**+1.0**
30nm,0.7s,baz=200							
WTSB				*e*Sg	**Sg**	**14 33 33.1**	**+1.2**
WTSB	**Winterswijk**	**0.49**	**30**	*e*Pg	**Pg**	**14 33 26.6**	**+1.0**
30nm,0.7s							
WTSB				*e*Sg	**Sg**	**14 33 33.1**	**+1.2**
BUG	**Bochum--Univer**	**0.55**	**100**	⇑*e*Pg	**Pg**	**14 33 26.2**	**-0.5**
BUG				Sg	**Sg**	**14 33 33.2**	**-0.6**
BUG	**Bochum--Univer**	**0.55**	**100**	*e*Pg	**Pg**	**14 33 26.3**	**-0.4**
BUG				*e*Sg	**Sg**	**14 33 33.4**	**-0.4**
BUG	**Bochum--Univer**	**0.55**	**100**	*e*Pg	**Pg**	**14 33 26.3**	**-0.4**
BUG				*e*Sg	**Sg**	**14 33 33.4**	**-0.4**
BNS	**Bensberg**	**0.75**	**140**	*e*Sg	**Sg**	**14 33 40.7**	**+0.3**
108nm,0.6s							
BNS	**Bensberg**	**0.75**	**140**	Sg	**Sg**	**14 33 40.7**	**+0.3**
108nm,0.6s							
HOBG	**Hohbusch**	**0.81**	**134**	*e*Pg	**Pg**	**14 33 31.8**	**+0.1**
HOBG				*e*Sg	**Sg**	**14 33 42.6**	**+0.5**
112nm,0.3s							
HOBG	**Hohbusch**	**0.81**	**134**	Pg	**Pg**	**14 33 31.8**	**+0.1**
HOBG				Sg	**Sg**	**14 33 42.6**	**+0.5**
112nm,0.3s							
DREG	**Dreilaegerbach**	**0.89**	**187**	*e*Pg	**Pg**	**14 33 34.6**	**+1.4**
SNR=17							
DREG				*e*Pg	**Pg**	**14 33 34.7**	**+1.5**
DREG				*e*Sg	**Sg**	**14 33 46.5**	**+1.8**
DREG	**Dreilaegerbach**	**0.89**	**187**	Pg	**Pg**	**14 33 34.6**	**+1.4**
SNR=17							
DREG				Sg	**Sg**	**14 33 46.5**	**+1.8**
KLL	**Kalltalsperre**	**0.90**	**184**	*e*Pg	**Pg**	**14 33 35.0**	**+1.6**
KLL				*e*Sg	**Sg**	**14 33 47.8**	**+2.7**
112nm,0.7s							
KLL	**Kalltalsperre**	**0.90**	**184**	Pg	**Pg**	**14 33 35.0**	**+1.6**
KLL				Sg	**Sg**	**14 33 47.8**	**+2.7**
112nm,0.7s							
MEM	**Membach**	**0.97**	**195**	P	**Pg**	**14 33 36.1**	**+1.4**
STB	**Steinbach**	**0.99**	**164**	*e*Pg	**Pg**	**14 33 36.6**	**+1.5**
STB				*e*Sg	**Sg**	**14 33 49.4**	**+1.5**
STB	**Steinbach**	**0.99**	**164**	Pg	**Pg**	**14 33 36.6**	**+1.5**
STB				Sg	**Sg**	**14 33 49.4**	**+1.5**
IBBN	**Ibbenburen**	**1.13**	**47**	*e*Sg	**Sg**	**14 33 53.5**	**+0.9**
IBBN	**Ibbenburen**	**1.13**	**47**	Sg	**Sg**	**14 33 53.5**	**+0.9**
HILG	**Hillesheim**	**1.27**	**172**	*e*Pg	**Pg**	**14 33 41.2**	**+0.8**
HILG				*e*Sg	**Sg**	**14 33 58.3**	**+1.5**
97nm,0.2s							
HILG	**Hillesheim**	**1.27**	**172**	Pg	**Pg**	**14 33 41.2**	**+0.8**
HILG				Sg	**Sg**	**14 33 58.3**	**+1.5**
97nm,0.2s							
BCLA	**Clavier**	**1.32**	**212**	P	**Pg**	**14 33 43.9**	**+2.4**
BCLA	**Clavier**	**1.32**	**212**	P	**Pg**	**14 33 43.9**	**+2.3**
KOE	**Koeppel**	**1.40**	**143**	*e*Pg	**Pg**	**14 33 42.3**	**-0.6**
KOE				*e*Sg	**Sg**	**14 34 00.3**	**-0.8**
89nm,0.3s							
KOE	**Koeppel**	**1.40**	**143**	Pg	**Pg**	**14 33 42.3**	**-0.7**
KOE				Sg	**Sg**	**14 34 00.3**	**-0.8**
89nm,0.3s							
BGG	**Burgeitz**	**1.46**	**156**	*e*Pg	**Pg**	**14 33 43.4**	**-0.8**
BGG				*e*Sg	**Sg**	**14 34 02.1**	**-1.1**
43nm,0.3s							
BGG	**Burgeitz**	**1.46**	**156**	Pg	**Pg**	**14 33 43.4**	**-0.8**
BGG				Sg	**Sg**	**14 34 02.1**	**-1.0**
43nm,0.3s							
SNF	**Seneffe**	**1.70**	**233**	P	**Pn**	**14 33 50.3**	**+3.3**
SNF	**Seneffe**	**1.70**	**233**	P	**Pn**	**14 33 50.3**	**+3.3**
GIVF	**Givet**	**1.76**	**215**	*e*Pn	**Pn**	**14 33 47.7**	**-0.2**
GIVF				*e*Sn	**Sn**	**14 34 11.0**	**+0.1**
GIVF				*e*Sg	**Sg**	**14 34 15.6**	**+2.9**
79nm,0.3s							
GIVF	**Givet**	**1.76**	**215**	*e*Pn	**Pn**	**14 33 47.7**	**-0.2**
GIVF				*e*Sn	**Sn**	**14 34 11.0**	**+0.1**
GIVF				*e*Sg	**Sg**	**14 34 15.6**	**+2.9**
39nm,0.3s							
TNS	**Taunus Mts**	**1.85**	**135**	*e*Pg	**Pg**	**14 33 50.8**	**-0.8**
SNR=8.1							
TNS				*e*Sg	**Sg**	**14 34 12.8**	**-2.8**
TNS	**Taunus Mts**	**1.85**	**135**	*e*Pg	**Pg**	**14 33 50.8**	**-0.8**
TNS				*e*Sg	**Sg**	**14 34 12.8**	**-2.7**
TNS	**Taunus Mts**	**1.85**	**135**	Pg	**Pg**	**14 33 50.8**	**-0.8**
SNR=8.1							
TNS				Sg	**Sg**	**14 34 12.8**	**-2.7**
WLF	**Walferdange**	**1.89**	**185**	P	**Pn**	**14 33 52.6**	**+2.9**
WLF	**Walferdange**	**1.89**	**185**	*e*Pg	**Pg**	**14 33 52.7**	**+0.3**
SNR=2.7							
WLF				*e*Sg	**Sg**	**14 34 16.2**	**-0.6**
WLF	**Walferdange**	**1.89**	**185**	*e*P	**Pn**	**14 33 53.3**	**+3.7**
WLF				*e*S	**Sn**	**14 34 15.3**	**+1.2**
WLF	**Walferdange**	**1.89**	**185**	Pg	**Pg**	**14 33 52.7**	**+0.3**
SNR=2.7							
WLF				*e*S	**Sn**	**14 34 15.3**	**+1.2**
WLF				Sg	**Sg**	**14 34 16.2**	**-0.6**
BAIF	**Baives**	**2.04**	**224**	*e*Pn	**Pn**	**14 33 50.3**	**-1.4**
BAIF				*e*Sn	**Sn**	**14 34 17.8**	**-0.1**
34nm,0.3s							
BAIF	**Baives**	**2.04**	**224**	*e*Pn	**Pn**	**14 33 50.3**	**-1.4**
BAIF				*e*Sn	**Sn**	**14 34 17.8**	**-0.1**
17nm,0.3s							
GTTG	**Gvttingen**	**2.22**	**89**	*e*Sg	**Sg**	**14 34 23.0**	**-4.5**
CLZ	**Clausthal**	**2.48**	**82**	*e*Pg	**Pg**	**14 34 02.6**	**-1.2**
SNR=3.0							
CLZ				*e*Sg	**Sg**	**14 34 31.9**	**-4.1**
CLZ	**Clausthal**	**2.48**	**82**	*e*Pg	**Pg**	**14 34 02.6**	**-1.2**
CLZ				*e*Sg	**Sg**	**14 34 31.9**	**-4.1**
CLZ	**Clausthal**	**2.48**	**82**	Pg	**Pg**	**14 34 02.6**	**-1.2**
SNR=3.0							
CDF	**Champ du Feu**	**3.18**	**170**	*e*Pn	**Pn**	**14 34 06.2**	**-1.3**
CDF				*e*Sg	**Sg**	**14 34 57.8**	**-0.6**
16nm,0.5s							
CDF	**Champ du Feu**	**3.18**	**170**	*e*Pn	**Pn**	**14 34 06.2**	**-1.3**
CDF				*e*Sg	**Sg**	**14 34 57.8**	**-0.6**
7.8nm,0.5s							
BFO	**Black Forest**	**3.45**	**158**	*e*Pn	**Pn**	**14 34 10.8**	**-0.3**
SNR=3.1							
BFO	**Black Forest**	**3.45**	**158**	*e*Pn	**Pn**	**14 34 10.8**	**-0.3**
BFO	**Black Forest**	**3.45**	**158**	Pn	**Pn**	**14 34 10.8**	**-0.3**
SNR=3.1							
HAU	**Haudompre**	**3.54**	**181**	*e*Sg	**Sg**	**14 35 09.5**	**-0.4**
16nm,0.4s							
HAU	**Haudompre**	**3.54**	**181**	*e*Sg	**Sg**	**14 35 09.5**	**-0.4**
8.0nm,0.4s							
LOR	**Lormes**	**4.59**	**202**	*e*Pn	**Pn**	**14 34 24.8**	**-2.0**
LOR				*e*Sn	**Sn**	**14 35 18.0**	**-2.8**
LOR				*e*Sg	**Sg**	**14 35 43.4

	23nm,0.5s					
LOR	Lormes	4.59 202	*e*Pn	Pn	14 34 24.8	-2.0
LOR			*e*Sn	Sn	14 35 18.0	-2.8
LOR			*e*Sg	Sg	14 35 43.4	-0.2
	11nm,0.5s					
BRG	Berggiesshubel	4.78 95	SG	Sg	14 35 46.1	-3.7
	3.8nm,0.9s					
SSF	Saint Saulge	4.87 204	*e*Pn	Pn	14 34 29.9	-0.8
SSF			*e*Sn	Sn	14 35 24.3	-3.4
SSF			*e*Sg	Sg	14 35 51.9	-0.7
	10nm,0.4s					
SSF	Saint Saulge	4.87 204	*e*Pn	Pn	14 34 29.9	-0.8
SSF			*e*Sn	Sn	14 35 24.3	-3.4
SSF			*e*Sg	Sg	14 35 51.9	-0.7
	5.1nm,0.4s					
CABF	La Chapelle	4.94 183	*e*Sg	Sg	14 35 53.8	-1.1
	18nm,0.6s					
CABF	La Chapelle	4.94 183	*e*Sg	Sg	14 35 53.8	-1.1
	8.9nm,0.6s					
LDF	La Druitiere	5.14 237	*e*Pn	Pn	14 34 34.3	0.0
LDF			*e*Sn	Sn	14 35 31.6	-2.7
LDF	La Druitiere	5.14 237	*e*Pn	Pn	14 34 34.3	0.0
LDF			*e*Sn	Sn	14 35 31.6	-2.7
SMF	Signal de Mont	5.18 200	*e*Sg	Sg	14 36 02.0	-0.7
	12nm,0.6s					
SMF	Signal de Mont	5.18 200	*e*Sg	Sg	14 36 02.0	-0.7
	6.1nm,0.6s					
FLN	La Foliniere	5.23 241	*e*Pn	Pn	14 34 35.8	+0.2
FLN			*e*Sn	Sn	14 35 33.8	-2.8
FLN	La Foliniere	5.23 241	*e*Pn	Pn	14 34 35.8	+0.2
FLN			*e*Sn	Sn	14 35 33.8	-2.8
BGF	Bois d'Agland	5.51 207	*e*Sn	Sn	14 35 39.7	-3.8
BGF	Bois d'Agland	5.51 207	*e*Sn	Sn	14 35 39.7	-3.8
GRR	Gorron	5.65 239	*e*Sn	Sn	14 35 44.0	-3.0
	17nm,0.3s					
GRR	Gorron	5.65 239	*e*Sn	Sn	14 35 44.0	-3.0
	8.7nm,0.3s					
NVLJ	Novalja	8.99 138	*e*Pn	Pn	14 35 25.3	-1.8
NVLJ			Sn	Sn	14 37 10.8	+1.8
NVLJ	Novalja	8.99 138	*e*Pn	Pn	14 35 25.3	-1.9

MAN 18 14:41:28,9.44N×125.60E,h9km,mb4.4,ML3.3,MS3.1, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.36	342	⇑*i*P	Pg	14 41 36.0	+0.9
SCPH				*i* S	Sg	14 41 41.9	+1.9
BUTP	Butuan	0.46	178	*e*P	Pg	14 41 38.0	+1.0
BUTP				*e*S	Sg	14 41 49.7	+6.5
MSLP	Maasin	1.01	314	*e*P	Pg	14 41 46.7	-0.7
CNP	Cataram	3.19	343	*e*P	Pn	14 42 19.7	+1.3

*MAN **18** 14:50:00, 11.31N×124.53E, h1km, mb4.8, ML3.8, MS3.8*
*ISCJB **18** 14:50:02.1±0.6, 11.31N±0.04×124.56E±0.05, h10km, mb3.5/5, Error ellipse: s-maj=6.9km s-min=5.4km az=1.9*
*IDC **18** 14:50:02.3±1.3, 11.29N×125.38E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/21, mbtmp3.6/5, MS3.0/2, Ms1 3.2/2, ms1mx2.5/30, Error ellipse: s-maj=62.3km s-min=20.2km az=65.0*

ISC 18 14:50:02.1±0.7, 11.35N±0.04×124.57E±0.05, h10km, n17, σ1§18/19, mb3.5/5, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.30	172	*e*P	Pg	14 50 07.1	-0.9
BESP	Borongan	0.89	73	*e*P	Pg	14 50 18.6	-0.5
CNP	Cataram	1.16	5	*e*P	Pb	14 50 24.0	-0.2
LLP	Lapu-Lapu	1.18	210	*e*P	Pb	14 50 21.9	-2.7
LLP				*e*S	Sb	14 50 39.2	-0.8
MSLP	Maasin	1.24	167	*e*P	Pn	14 50 24.8	-0.7
TBP	Tagbilaran	1.79	203	*e*P	Pn	14 50 31.7	-1.3
TBP				*e*S	Sg	14 51 00.1	+0.6
SCPH	Surigao	1.80	150	*e*P	Pn	14 50 33.5	+0.4
SCPH				*e*S	Sg	14 51 02.2	+2.2
GUIM	Jordan	2.07	250	*e*P	Pn	14 50 37.4	+0.5
BUKP	Musuan	3.48	172	*e*P	Pn	14 50 58.4	+2.1
CUYO	Cuyo Island	3.52	262	*e*P	Pn	14 50 57.7	+0.9
BUSP	Coron	4.33	279	*e*P	Pn	14 51 09.3	+1.3
DAV	Davao City (W)	4.37	167	LR	LR	14 52 55.6	
	comp=Z,158nm,18.8s,baz=27,slow=41						
CMAR	Chiang Mai Arr	25.73	289	P	P	14 55 41.9	+9.0
	0.3nm,0.6s,mb3.0,baz=114,slow=9.0,SNR=3.1						
CMAR				LR	LR	15 06 35.4	
	comp=Z,42nm,19.4s,baz=205,slow=38						
WRA	Warramunga Arr	32.55	163	P	P	14 56 32.2	-1.3
	0.5nm,0.9s,mb3.5,baz=343,slow=9.3,SNR=4.6						
ASAR	Alice Springs	35.98	165	P	P	14 57 03.4	+0.2
	1.1nm,0.9s,mb3.8,baz=351,slow=7.8,SNR=13						
SONM	Songino Array	39.44	341	P	P	14 57 37.2	+4.9
	0.5nm,0.8s,mb3.3,baz=158,slow=9.6,SNR=5.2						
ZALV	Zalesovo Beam	52.89	332	P	P	14 59 22.5	+4.4
	0.5nm,0.5s,mb3.7,baz=126,slow=7.3,SNR=3.3						

*NEIC **18** 14:56:23.3, 60.60N×137.29W, h1km, ML3.3(PGC), ML3.1(AEIC), After PGC.*

PGC 18 14:56:23.3, 60.60N×137.29W, h1km, ML3.3/5, 4D, 21km Ese of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYT	Haines Junctio	0.25	335	⇑P	Pg	14 56 27.8	-0.3
HYT				⇑S	Sg	14 56 30.9	-0.3
WHY	Whitehorse	1.19	86	P	Pg	14 56 44.5	-1.5
WHY				S	Sg	14 56 60.0	-1.4
WHY	Whitehorse	1.19	86	⇓P	Pg	14 56 44.5	-1.5
WHY				⇓S	Sg	14 57 00.0	-1.3
PLBC	Pleasant Camp	1.24	158	P	Pg	14 56 45.1	-1.8
PLBC				⇓S	Sg	14 57 01.9	-1.1
PNL	Peninsula	1.41	229	P	Pn	14 56 49.4	-0.6
PNL				S	Sg	14 57 09.6	+1.1
SKAG	Skagway	1.51	138	*e*P	Pn	14 56 49.5	-1.9
PCA	Pinnacle	1.56	252	P	Pn	14 56 52.6	+0.5
DHAK	Deception Hill	1.58	198	P	Pn	14 56 52.2	-0.2
YKU2	Yakutat	1.62	229	P	Pn	14 56 53.3	+0.4
BESE	Bessie Mountai	2.38	148	P	Pn	14 57 02.4	-0.9
BCA3	Beaver Creek A	3.27	321	P	Pn	14 57 16.3	+0.8
DAWY	Dawson	3.61	345	P	Pn	14 57 20.1	-0.2
DAWY	Dawson	3.61	345	⇓Pn	Pn	14 57 19.9	-0.4
DAWY				⇑Sn	Sn	14 58 00.9	-2.6
DAWY				⇑Sg	Sg	14 58 15.6	-3.6
SIT	Sitka	3.70	163	P	Pn	14 57 20.2	-1.2
MENT	Mentasta	3.85	310	*e*Pn	Pn	14 57 24.9	+1.4
DLBC	Dease Lake	4.29	117	P	Pn	14 57 29.1	-0.4
DLBC	Dease Lake	4.29	117	Pn	Pn	14 57 28.9	-0.6
DLBC				⇑Sg	Sg	14 58 35.2	-5.6
EGAK	Eagle	4.56	339	P	Pn	14 57 33.7	+0.5

IDC 18 15:10:04.6±1.4, 12.14N×142.46E, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.6/23, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=66.0km s-min=19.5km az=123.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	2.75	58	Pn	Pn	15 10 50.4	+0.4
	16nm,0.3s,baz=188,slow=6.8,SNR=12						
GUMO				Sn	Sn	15 11 23.8	-0.2
	17nm,0.3s,baz=38,slow=22,SNR=6.5						
WRA	Warramunga Arr	32.87	194	P	P	15 16 40.2	-0.2
	0.6nm,0.6s,baz=17,slow=9.7,SNR=12						
ASAR	Alice Springs	36.56	193	P	P	15 17 12.3	0.0
	0.3nm,0.5s,baz=20,slow=12,SNR=8.7						
ILAR	Eielson Array	70.87	25	P	P	15 21 22.6	-0.5
	0.2nm,0.5s,baz=256,slow=5.5,SNR=7.0						
NVAR	Mina Array Bea	89.65	51	P	P	15 23 06.0	+1.3
	0.8nm,0.7s,baz=268,slow=5.4,SNR=7.4						

*ISCJB **18** 15:28:18.0±0.5, 31.94N±0.05×139.08E±0.10, h277km±8km, mb2.7/4, Error ellipse: s-maj=14.0km s-min=7.4km az=157.4*
*JMA **18** 15:28:18.5±0.5, 31.89N×139.02E, h266km, M2.9*
*IDC **18** 15:28:19.5±1.0, 31.89N×138.47E, h265km±13km, mb2.6/4, mb1 2.9/5, mb1mx2.8/24, mbtmp2.7/5, Error ellipse: s-maj=33.5km s-min=15.3km az=78.0*

ISC 18 15:28:19.2±0.6, 32.00N±0.07×139.1E±0.1, h275km±9km, n24, σ0§84/38, mb2.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.27	28	P	Pn	15 28 59.4	+1.1
	4.6nm,0.3s,baz=253,slow=23,SNR=7.1						
JHJ				S	S	15 29 33.3	+4.0
	6.0nm,0.3s,baz=61,slow=22,SNR=2.6						
TK02	Tokai 2	2.24	331	P	Pn	15 29 06.0	+0.2
BSO3	Boso 3	3.04	23	P	Pn	15 29 14.2	+0.6
BSO3				S	S	15 29 56.1	-0.8
HMMJ	Hamamatsu 2	3.07	339	P	Pn	15 29 14.0	+0.1
BSO1	Boso 1	3.09	30	P	Pn	15 29 14.0	-0.1
BSO1				S	S	15 29 56.5	-1.3
JIE	Ise	3.11	321	P	Pn	15 29 14.1	-0.2
BSO4	Boso 4	3.16	19	P	Pn	15 29 15.8	+0.9
BSO4				S	S	15 29 59.7	+0.5
JKN2	Miekihoku	3.25	314	P	Pn	15 29 14.9	-0.9
JOD2	Odawara 2	3.26	0	P	Pn	15 29 16.9	+1.0
JOD2				S	S	15 30 00.0	-1.0
JNY	Yasuok	3.50	343	P	Pn	15 29 19.1	+0.6
JNY				S	S	15 30 06.3	+0.5
JHU	Hanno	3.85	2	P	Pn	15 29 22.4	+0.1
JHU				S	S	15 30 08.1	-4.6
JRY	Ryogami san	4.01	358	P	Pn	15 29 25.2	+1.0
JRY				S	S	15 30 17.2	+1.1
JGM	Miyama	4.18	333	P	Pn	15 29 26.2	+0.1
JYT	Yasato	4.32	12	P	Pn	15 29 26.8	-0.9
JYT				S	S	15 30 16.2	-6.3
JAG	Ashikaga	4.43	4	P	Pn	15 29 28.5	-0.4
JAG				S	S	15 30 19.5	-5.2
JWT	Wachi	4.49	318	P	Pn	15 29 29.0	-0.7
MJAR	Matsushiro Arr	4.59	351	P	Pn	15 29 30.4	-0.4
	0.8nm,0.3s,baz=174,slow=12,SNR=10						
MJAR				S	S	15 30 28.9	+0.7
	0.2nm,0.3s,baz=88,slow=40,SNR=3.3						
MAT	Matsushiro	4.59	351	P	Pn	15 29 31.2	+0.3
MAT				*e*S	S	15 30 26.6	-1.6
JHO	Hitachi	4.76	15	P	Pn	15 29 33.0	+0.1
JHO				S	S	15 30 26.9	-5.0
CBIJ	Chichi jima	5.58	150	P	Pn	15 29 41.9	-1.0
	3.4nm,0.3s,baz=273,slow=18,SNR=7.7						
CBIJ				S	S	15 30 45.8	-4.2
	7.3nm,0.3s,baz=334,slow=23,SNR=9.6						
MKAR	Makanchi Array	45.34	306	P	P	15 36 09.1	-1.0
	0.6nm,0.7s,mb2.9,baz=89,slow=11,SNR=4.4						
WRA	Warramunga Arr	51.84	186	P	P	15 36 59.2	-0.4
	0.2nm,0.4s,mb2.8,baz=0.6,slow=7.6,SNR=10						
ILAR	Eielson Array	54.79	30	P	P	15 37 24.1	+3.7
	0.1nm,0.6s,mb2.5,baz=281,slow=8.8,SNR=4.5						
ASAR	Alice Springs	55.57	186	P	P	15 37 27.6	+1.1
	0.1nm,0.4s,mb2.6,baz=23,slow=11,SNR=4.6						

*CSEM **18** 15:46:37.2, 38.53N×13.17E, h10km, MD2.3/4, After ROM*

ROM 18 15:46:37.2±0.3, 38.53N×13.17E, h10km, Md2.3/4, Ml2.3/1, 2D, Error ellipse: s-maj=7.5km s-min=1.9km az=80.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USI	Ustica	0.18	2	⇓*i*Pg	Pg	15 46 41.4	+0.4
USI				Sg	Sg	15 46 45.1	+1.5
USI	Ustica	0.18	2	⇓*i*Pg	Pg	15 46 41.4	+0.4
USI				Sg	Sg	15 46 45.1	+1.5
CORL	Corleone	0.65	171	Pg	Pg	15 46 49.9	+0.2
CORL				Sg	Sg	15 46 58.9	+0.8
CORL	Corleone	0.65	171	Pg	Pg	15 46 49.9	+0.2
CORL				Sg	Sg	15 46 58.9	+0.8
GIB	Gibilmanna	0.86	129	Pg	Pg	15 46 52.7	-1.1
GIB				Sg	Sg	15 47 06.0	+0.9
GIB	Gibilmanna	0.86	129	Pg	Pg	15 46 52.7	-1.1
GIB				Sg	Sg	15 47 06.0	+0.9
ALJA	Alia	0.91	149	Pg	Pg	15 46 54.9	+0.3
	126nm,0.8s						
ALJA	Alia	0.91	149	Pg	Pg	15 46 54.9	+0.3
	126nm,0.8s						
CSLB	Castelbuono	0.92	130	Pg	Pg	15 46 53.9	-0.9
CSLB	Castelbuono	0.92	130	Pg	Pg	15 46 53.9	-0.9

*ISCJB **18** 15:59:10.7±0.8, 39.41N±0.03×33.08E±0.03, h0km±7km, Error ellipse: s-maj=4.7km s-min=3.8km az=141.1*
*DDA **18** 15:59:10.7, 39.41N×33.07E, h7km±3km, Md3.4*
*ISK **18** 15:59:10.4, 39.44N×33.08E, h4km, ML3.7*
*CSEM **18** 15:59:11.2±0.1, 39.43N×33.08E, h2km, ML3.7, Error ellipse: s-maj=3.4km s-min=3.0km az=165.0*

ISC 18 15:59:11.5±0.4, 39.43N±0.03×33.07E±0.03, h3km±3km, n84, σ0§75/96, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	Af¯ar-Bala (A	0.02	6	PG	Pg	15 59 10.9	-1.3
AFSR				SG	Sg	15 59 12.2	-0.5
AFSR	Af¯ar-Bala (A	0.02	6	*i* Pg	Pg	15 59 10.9	-1.3
AFSR				*i* Sg	Sg	15 59 12.2	-0.4
BBAL	Bala	0.12	20	*i* P	Pg	15 59 14.0	+0.1
BBAL				*i* S	Sg	15 59 16.5	+1.0
BBAL	Bala	0.12	20	*i* P	Pg	15 59 14.0	+0.1
BBAL				*i* S	Sg	15 59 16.5	+1.0
LOD	Lodumlu	0.52	333	PG	Pg	15 59 20.6	-0.8
LOD				SG	Sg	15 59 28.4	+0.3
LOD	Lodumlu	0.52	333	*i* Pg	Pg	15 59 20.6	-0.8
LOD				*i* Sg	Sg	15 59 28.5	+0.4
CDAG	Cicekdag	1.03	79	*i* P	Pg	15 59 29.8	-1.4
CDAG				*i* S	Sg	15 59 46.0	+1.4
CDAG	Cicekdag	1.03	79	*i* P	Pg	15 59 29.8	-1.4
CDAG				*i* S	Sg	15 59 46.0	+1.5
KIZT	Kizilcal	1.07	240	*e*PN	Pg	15 59 31.7	-0.4
KIZT	Kizilcal	1.07	240	*e*Pn	Pg	15 59 31.7	-0.4
ELDT	Eldivan	1.09	14	*i* P	Pg	15 59 32.5	0.0
ELDT				*i* S	Sg	15 59 48.1	+1.4
ELDT	Eldivan	1.09	14	*i* P	Pg	15 59 32.5	0.0
ELDT				*i* S	Sg	15 59 48.1	+1.4
KDHN	Kadinhani	1.17	220	*i* P	Pg	15 59 35.1	+1.1
KDHN				*i* S	Sg	15 59 50.1	+0.9
KDHN	Kadinhani	1.17	220	*i* P	Pg	15 59 35.1	+1.1
KDHN				*i* S	Sg	15 59 50.1	+0.9
SVRH	Sivrihisar-ESK	1.20	271	*e*PN	Pn	15 59 34.2	-0.9
SVRH	Sivrihisar-ESK	1.20	271	*e*Pn	Pn	15 59 34.3	-0.8
CANT	Cankiri	1.25	20	*e*PN	Pn	15 59 35.4	-0.5
SULT	Sultanhani-AKS	1.28	164	*e*PN	Pn	15 59 35.6	-0.7
SULT	Sultanhani-AKS	1.28	164	*e*Pn	Pn	15 59 35.6	-0.6
SGKT	Sivrigoynuk	1.38	326	*i* P	Pn	15 59 37.0	-0.7
SGKT	Sivrigoynuk	1.38	326	*i* P	Pn	15 59 37.0	-0.7
CORM	Corum	1.42	58	*e*PN	Pn	15 59 36.7	-1.5
CORM	Corum	1.42	58	*e*Pn	Pn	15 59 36.7	-1.5
AVNT	Avonos	1.53	114	*i* P	Pn	15 59 38.9	-0.9
AVNT	Avonos	1.53	114	*i* P	Pn	15 59 38.8	-1.0
KONT	Konya--Tatoy	1.58	201	*e*PN	Pn	15 59 40.4	-0.1
KONT	Konya--Tatoy	1.58	201	*e*Pn	Pn	15 59 40.4	0.0
ILGA	Ilgaz	1.69	17	*e*P	Pn	15 59 42.4	+0.4
ILGA	Ilgaz	1.69	17	*e*P	Pn	15 59 42.4	+0.4
ESKT	Eskisehir	1.72	274	*i* P	Pn	15 59 41.9	-0.4
SEYT	Eskypehyr	1.72	274	*i* P	Pn	15 59 41.9	-0.4
YOZ	Yozgat	1.75	82	*e*PN	Pn	15 59 42.6	-0.2
YOZ	Yozgat	1.75	82	*e*Pn	Pn	15 59 42.6	-0.2
MDU	Mudurnu	1.76	307	*e*PN	Pn	15 59 42.1	-0.8
MDU	Mudurnu	1.76	307	*e*Pn	Pn	15 59 42.1	-0.8
TOS	Tosya	1.76	24	*e*PN	Pn	15 59 42.6	-0.3
TOS	Tosya	1.76	24	*e*Pn	Pn	15 59 42.6	-0.3
CTKT	Corum	1.78	47	*i* P	Pn	15 59 42.7	-0.4
CTKT	Corum	1.78	47	*i* P	Pn	15 59 42.7	-0.5
SAFT	Safranbolu	1.83	351	*e*PN	Pn	15 59 43.8	0.0
SAFT	Safranbolu	1.83	351	*e*Pn	Pn	15 59 43.8	-0.1
BALT	Daday	2.12	6	*i* P	Pn	15 59 48.9	+1.1
BALT	Daday	2.12	6	*i* P	Pn	15 59 48.9	+1.1
SHUT	Suhut-Afyon	2.15	247	*e*PN	Pn	15 59 48.4	+0.2
SHUT	Suhut-Afyon	2.15	247	*e*Pn	Pn	15 59 48.4	+0.2
GULT	Gulveren	2.20	298	*e*PN	Pn	15 59 48.7	-0.3
GULT	Gulveren	2.20	298	*e*Pn	Pn	15 59 48.7	-0.3
GPA	Golpazari	2.29	293	*e*PN	Pn	15 59 50.1	0.0
GPA	Golpazari	2.29	293	*e*Pn	Pn	15 59 50.1	-0.1
BYBT	Boyabat	2.41	32	*e*PN	Pn	15 59 52.0	+0.1
BYBT	Boyabat	2.41	32	*e*Pn	Pn	15 59 52.0	+0.1
HDMB	Hadim	2.50	191	*e*PN	Pn	15 59 53.4	+0.3
HDMB	Hadim	2.50	191	*e*Pn	Pn	15 59 53.4	+0.3
CAVI	Cavuskoy	2.60	288	*e*PN	Pn	15 59 54.9	+0.4
CAVI	Cavuskoy	2.60	288	*e*Pn	Pn	15 59 54.9	+0.4
BZK	Bozkurt	2.63	15	*e*PN	Pn	15 59 54.9	+0.1
BZK	Bozkurt	2.63	15	*e*Pn	Pn	15 59 54.9	+0.1
KARA	Karaisali	2.67	144	*e*PN	Pn	15 59 55.3	-0.1
KARA	Karaisali	2.67	144	*e*Pn	Pn	15 59 55.3	-0.1
ADVT	Abdulvahap	2.75	292	*e*PN	Pn	15 59 57.2	+0.7
ADVT	Abdulvahap	2.75	292	*e*Pn	Pn	15 59 57.2	+0.7
BCK	Bucak	2.77	225	*e*PN	Pn	15 59 57.7	+1.0
BCK	Bucak	2.77	225	*e*Pn	Pn	15 59 57.7	+1.0
KVT	Kavak	2.81	53	*e*PN	Pn	15 59 57.2	-0.1
KVT	Kavak	2.81	53	*e*Pn	Pn	15 59 57.2	-0.2
TOKT	Tokat	2.82	71	*e*PN	Pn	15 59 57.7	+0.2
TOKT	Tokat	2.82	71	*e*Pn	Pn	15 59 57.7	+0.3
KOZT	Kozan	2.91	131	*e*PN	Pn	15 59 59.1	+0.4
SARI	SarD1z-Kayseri	2.92	104	*e*PN	Pn	15 59 56.7	-2.1
SARI	SarD1z-Kayseri	2.92	104	*e*Pn	Pn	15 59 56.7	-2.2
HRT	Hereke	2.96	299	*e*PN	Pn	15 59 59.6	+0.3
HRT	Hereke	2.96	299	*e*Pn	Pn	15 59 59.6	+0.3
KHL	Karahalli	2.98	249	*e*PN	Pn	15 59 59.6	-0.1
KHL	Karahalli	2.98	249	*e*Pn	Pn	15 59 59.6	0.0
SVSK	Karacayir	3.07	80	*e*PN	Pn	16 00 01.5	+0.6
SVSK	Karacayir	3.07	80	*e*Pn	Pn	16 00 01.5	+0.6
RSDY	Resadiye-TOKAT	3.42	72	*e*PN	Pn	16 00 05.2	-0.4
RSDY	Resadiye-TOKAT	3.42	72	*e*Pn	Pn	16 00 05.3	-0.3
KMRS	Kahramanmaras	3.57	121	*e*PN	Pn	16 00 08.1	+0.3
KMRS	Kahramanmaras	3.57	121	*e*Pn	Pn	16 00 08.1	+0.4
MALT	Malatya	4.33	103	*e*PN	Pn	16 00 19.0	+0.8
MALT	Malatya	4.33	103	*e*Pn	Pn	16 00 19.0	+0.8
PTK	Pertek	4.95	94	*e*PN	Pn	16 00 27.9	+1.3
PTK	Pertek	4.95	94	*e*Pn	Pn	16 00 27.9	+1.2

*IDC **18** 16:53:46.4±1.6, 10.98S×164.04E, h0km, mb3.9/5, mb1 4.2/7, mb1mx3.9/19, mbtmp4.1/7, ML4.5/2, MS3.2/5, Ms1 3.2/5, ms1mx2.9/28, Error ellipse: s-maj=39.3km s-min=27.5km az=150.0*
*ISCJB **18** 16:53:48.4±6.5, 11.1S±0.1×164.0E±0.1, h22km±45km, mb3.8/5, MS3.1/3, Error ellipse: s-maj=26.9km s-min=17.4km az=37.0*
*NEIC **18** 16:53:52.7±4.8, 10.89S×163.91E, h41km±38km, mb4.0/1, Error ellipse: s-maj=49.0km s-min=18.5km az=122.0*

ISC 18 16:53:48.3±6.7, 11.0S±0.2×164.0E±0.1, h11km±42km, n11, σ0§74/11, mb3.8/5, MS3.1/3, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.33	291	Pn	Pn	16 54 54.7	+0.7
	33nm,0.3s,baz=169,slow=8.2,SNR=18						
HNR				Sn	Sn	16 55 45.5	+1.1
	52nm,0.3s,baz=171,slow=23,SNR=6.8						
HNR				LR	LR	16 56 32.9	
	comp=Z,375nm,18.4s,baz=130,slow=39						
HNR	Honiara	4.33	291	*e*Pn	Pn	16 54 53.7	-0.3
HNR				*e*Sn	Sn	16 55 43.7	-0.8
CTA	Charters Tower	19.33	240	P	Pn	16 58 14.8	0.0
	0.7nm,0.3s,baz=66,slow=12,SNR=7.0						
CTA				LR	LR	17 03 52.8	
	comp=Z,63nm,21.9s,baz=223,slow=31						
CTAO	Charters Tower	19.33	240	*e*P	Pn	16 58 14.7	-0.2
	9.0nm,0.9s						
AFI	Afiamalu	23.79	99	LR	LR	17 06 23.4	
	comp=Z,75nm,20.1s,MS3.2,baz=12,slow=32						
STKA	Stephens Creek	29.31	222	P	P	16 59 52.4	+1.4
	3.5nm,1.0s,mb4.0,baz=51,slow=13,SNR=4.6						
STKA				LR	LR	17 10 05.9	
	comp=Z,107nm,21.9s,MS3.4,baz=205,slow=33						
WRA	Warramunga Arr	29.91	249	P	P	16 59 55.6	-0.8
	1.2nm,0.4s,mb4.0,baz=80,slow=9.3,SNR=36						
GUMO	Guam	30.98	322	LR	LR	17 08 52.1	
	comp=Z,19nm,21.6s,MS2.7,baz=89,slow=29						
ASAR	Alice Springs	31.30	242	P	P	17 00 07.8	-0.8
	0.5nm,0.5s,mb3.6,baz=61,slow=10,SNR=16						
NVAR	Mina Array Bea	87.31	50	P	P	17 06 35.3	-0.1
	0.5nm,0.9s,mb3.7,baz=224,slow=6.3,SNR=3.9						
MKAR	Makanchi Array	92.37	317	P	P	17 06 59.0	+0.1
	0.5nm,0.9s,mb3.8,baz=110,slow=5.3,SNR=2.5						

*ISCJB **18** 16:54:14.9±0.8, 39.98N±0.05×39.93E±0.05, h9km±8km, Error ellipse: s-maj=8.0km s-min=6.0km az=165.6*
*DDA **18** 16:54:14.9, 39.98N×39.93E, h7km±3km, Md2.6*
*ISK **18** 16:54:14.4, 40.03N×39.96E, h21km, MD2.8*
*CSEM **18** 16:54:14.7±0.3, 39.98N×39.95E, h15km, MD2.6, Error ellipse: s-maj=7.0km s-min=5.5km az=153.0*

ISC 18 16:54:15.2±0.8, 39.99N±0.05×39.94E±0.05, h15km±7km, n14, σ0§72/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.43	85	*i* P	Pg	16 54 23.3	-0.6
KOPT				*i* S	Sg	16 54 30.7	+1.0
KOPT	Kop Dagi	0.43	85	*i* P	Pg	16 54 23.3	-0.5
KOPT				*i* S	Sg	16 54 30.7	+1.0
BAYT	Ayd¯–ntepe-Bay	0.44	21	PG	Pg	16 54 23.1	-0.9
BAYT				SG	Sg	16 54 29.4	-0.4
BAYT	Ayd¯–

MMC7	Mount Meron ar	2.53	124	Pn	Pn	16 55 04.6 +4.7
OFRI	'Ofer	2.54	136	Pn	Pn	16 55 04.8 +4.8
MMA1	Mount Meron ar	2.54	124	Pn	Pn	16 55 04.1 +4.1
MMA1	Mount Meron ar	2.54	124	Sn	Sn	16 55 37.3 +6.0
MMAI	Mount Meron Ar	2.54	125	Pn	Pn	16 55 04.2 +4.2
	13nm,0.3s,baz=312,slow=12,SNR=64					
MMAI				Sn	Sn	16 55 37.1 +5.9
	26nm,0.3s,baz=315,slow=25,SNR=14					
BLGI	Bet Lehem HaGe	2.58	132	Sn	Sn	16 55 38.6 +6.3
KSDI	Kefar Szold	2.63	119	Pn	Pn	16 55 05.7 +4.4
KSDI	Kefar Szold	2.63	119	Sn	Sn	16 55 38.2 +4.8
HRI	Mount Hermon	2.65	117	Pn	Pn	16 55 06.4 +5.0
KSHT	Keshet	2.84	121	Pn	Pn	16 55 09.5 +5.2
SLTI	Sal'it	2.86	141	Pn	Pn	16 55 09.9 +5.4
SLTI	Sal'it	2.86	141	Sn	Sn	16 55 45.1 +5.9
MMLI	Mount Malkishu	2.93	133	Pn	Pn	16 55 10.3 +5.0
YAYL	Yayladag	3.04	59	*i* P	Pn	16 55 09.3 +2.5
YAYL				*i* S	Sn	16 55 44.3 +0.8
HMDT	Nahal Hemdat	3.12	135	Pn	Pn	16 55 13.1 +5.1
HMDT	Nahal Hemdat	3.12	135	Sn	Sn	16 55 52.3 +6.8
GULE	Gulek	3.18	28	*i* P	Pn	16 55 12.8 +4.1
GULE				*i* S	Sn	16 55 48.1 +1.2
AKAS	Kas	3.21	304	*i* P	Pn	16 55 11.2 +1.9
YURE	YUREGIR	3.22	43	*i* P	Pn	16 55 12.8 +3.4
YURE				*i* S	Sn	16 55 49.1 +1.1
KORT	Korkueli	3.26	321	*e*P	Pn	16 55 15.3 +5.4
KORT				*i* S	Sg	16 56 03.5 +0.3
KARA	Karaisali	3.27	32	*e*PN	Pn	16 55 12.1 +2.0
ELL	Elmali	3.33	314	*e*PN	Pn	16 55 12.1 +1.3
SUTC	Sutluce-Ispart	3.36	333	*e*PN	Pn	16 55 12.6 +1.2
KONT	Konya--Tatoy	3.48	353	*e*PN	Pn	16 55 14.4 +1.4
BCK	Bucak	3.52	328	*e*PN	Pn	16 55 15.3 +1.9
DSI	Dead Sea	3.57	144	Pn	Pn	16 55 19.4 +5.2
DSI	Dead Sea	3.57	144	Sn	Sn	16 56 03.5 +6.8
RTMI	Retamim	3.74	156	Pn	Pn	16 55 22.5 +6.0
SULT	Sultanhani-AKS	3.74	7	*e*PN	Pn	16 55 18.1 +1.6
MZDA	Masada	3.78	146	Pn	Pn	16 55 22.6 +5.5
MZDA	Masada	3.78	146	Sn	Sn	16 56 09.2 +7.4
KZIT	Kziot	3.78	160	Pn	Pn	16 55 23.2 +6.1
KOZT	Kozan	3.81	38	*e*PN	Pn	16 55 20.1 +2.6
ASF	Jabal al Asfar	4.06	124	Pn	Pn	16 55 25.5 +4.7
	1.0nm,0.3s,baz=226,slow=14,SNR=7.1					
ASF				Sn	Sn	16 56 14.1 +5.5
	0.5nm,0.3s,baz=346,slow=4.2,SNR=2.7					
KDHN	Kadinhani	4.08	351	*e*P	Pn	16 55 24.1 +2.9
PRNI	Paran	4.49	156	Pn	Pn	16 55 32.8 +6.0
PRNI	Paran	4.49	156	Sn	Sn	16 56 26.8 +7.6
YER	Yerkesik	4.60	306	*e*PN	Pn	16 55 30.6 +2.3
KRMI	Paran Flat	4.62	160	Pn	Pn	16 55 34.6 +6.0
HRFI	Mount Harif	4.79	157	Pn	Pn	16 55 36.8 +5.9
HRFI	Mount Harif	4.79	157	Sn	Sn	16 56 33.5 +6.8
DAT	Datca	4.89	299	*e*PN	Pn	16 55 33.6 +1.3
MBRI	Mt Berech	4.98	159	Pn	Pn	16 55 39.6 +6.1
MBRI	Mt Berech	4.98	159	Sn	Sn	16 56 39.3 +8.0
EIL	Elat	5.10	160	Pn	Pn	16 55 41.3 +6.0
	2.1nm,0.3s,baz=337,slow=8.5,SNR=21					
EIL				Sn	Sn	16 56 41.0 +6.5
	2.7nm,0.3s,baz=60,slow=14,SNR=6.8					
EIL	Elat	5.10	160	Pn		16 55 41.2 +5.9
SARI	SarD1z-Kayseri	5.18	35	*e*PN	Pn	16 55 33.6 -2.6
BODT	Bodrum	5.23	301	*e*PN	Pn	16 55 38.6 +1.7
BRTR	Keskin Array B	5.26	6	Pn	Pn	16 55 41.2 +3.7
	0.3nm,0.3s,baz=185,slow=14,SNR=8.8					
AKASG	Malin Array Be	16.43	352	Pn	Pn	16 58 11.7 +2.4
	0.3nm,0.3s,baz=170,slow=10.0,SNR=4.1					
GERES	GERESS Array B	20.21	321	P	P	16 58 55.3 +1.6
	1.2nm,0.4s,baz=118,slow=10,SNR=4.7					
GERES				pP	pP	16 58 59.5 +3.8
	1.2nm,0.4s,baz=113,slow=10,SNR=9.7					

IDC 18 16:56:03.5±3.6, 9°.12N×92°.51E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/23, mbtmp3.4/4, Error ellipse: s-maj=136.6km s-min=24.3km az=65.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	38.54	349	P	P	17 03 27.7	0.0
	0.7nm,0.8s,baz=157,slow=7.8,SNR=3.5						
SONM	Songino Array	40.34	14	P	P	17 03 42.9	+0.2
	0.7nm,0.9s,baz=191,slow=4.4,SNR=3.2						
WRA	Warramunga Arr	50.29	125	P	P	17 05 02.1	0.0
	0.4nm,0.5s,baz=305,slow=8.4,SNR=9.7						
ASAR	Alice Springs	51.95	130	P	P	17 05 14.5	0.0
	0.4nm,0.9s,baz=305,slow=6.9,SNR=4.4						

*IDC **18** 17:05:20.8±4.7, 36°.41N×71°.33E, h211km±42km, mb3.1/6, mb1 3.3/11, mb1mx3.0/30, mbtmp3.2/11, Error ellipse: s-maj=35.8km s-min=18.6km az=32.0*
*ISCJB **18** 17:05:21.5±0.4, 36°.50N±0°.04×71°.29E±0°.08, h232km±6km, mb3.3/6, Error ellipse: s-maj=10.0km s-min=6.0km az=8.8*
*NEIC **18** 17:05:22.3±0.7, 36°.50N×71°.33E, h225km±6km, mb4.5/6, Error ellipse: s-maj=11.4km s-min=8.0km az=121.0*
ISC 18 17:05:22.4±0.4, 36°.50N±0°.04×71°.34E±0°.08, h224km±6km, n34, σ1°.03/39, mb3.3/6, 3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.71	224	*e*P	Pn	17 06 10.9	+0.8
KBL				*e*S	S	17 06 46.4	-1.1
CEP	Cherat	2.71	170	⇓P	Pn	17 06 12.2	+2.0
CEP				S	S	17 06 46.0	-1.6
CHCP	Chirah Chowk	3.24	150	P	Pn	17 06 18.8	+2.6
THW	Thamme Wali	3.71	175	P	Pn	17 06 23.2	+1.5
KSH	Kashi	4.74	49	Pn	Pn	17 06 30.0	-4.1
KSH				Sn	S	17 07 20.4	-11
KSH				smax			
	comp=N,49nm,0.5s						
KSH				smax			
	comp=E,57nm,0.4s						
AML	Almayashu	5.91	17	P	Pn	17 06 49.2	+0.4
	SNR=27						
AML	Almayashu	5.91	17	*e*P	Pn	17 06 49.0	+0.1
	comp=E,140nm,0.5s						
EKS2	Erkin-Say	6.44	16	P	Pn	17 06 55.9	+0.5
	SNR=29						
EKS2	Erkin-Say	6.44	16	*e*P	Pn	17 06 55.5	0.0
	comp=E,14nm,0.6s						
AAK	Ala-Archa	6.59	21	P	Pn	17 06 57.8	+0.3
	SNR=36						
AAK	Ala-Archa	6.59	21	P	Pn	17 06 58.3	+0.8
	comp=E,0.2nm,0.3s,baz=168,slow=5.8,SNR=71						
AAK				S	S	17 08 11.8	-1.5
	comp=E,0.0nm,0.3s,baz=0.0,slow=20,SNR=3.9						
AAK	Ala-Archa	6.59	21	*e*P	Pn	17 06 57.9	+0.4
	comp=E,41nm,0.3s						
KK31	Karatay Array	6.63	355	⇓Pn	Pn	17 06 57.1	-0.8
	comp=E,2.3nm,0.3s,baz=172,slow=12,SNR=49						
KK31				⇓Sn	S	17 08 07.9	-6.3
	comp=E,3.3nm,0.3s,baz=178,slow=21,SNR=10.0						
KKAR	Karatay Array	6.63	355	*e*P	Pn	17 06 56.4	-1.5
	comp=E,8.4nm,0.3s						
KBK	Karagaybulak	6.75	23	P	Pn	17 07 00.6	+1.1
	SNR=17						
SDNR	Sundarnagar	6.83	135	*e*PKP	S	17 08 16.5	-2.6
ULHL	Ulahol	6.88	32	P	Pn	17 07 01.5	+0.3
	SNR=14						
CHMS	Churmysh	7.00	21	P	Pn	17 07 02.7	0.0
	SNR=7.3						
USP	Ospenovka	7.18	19	P	Pn	17 07 05.7	+0.7
	SNR=7.1						
TKM2	Tokmak 2	7.20	26	P	Pn	17 07 05.7	+0.4
	SNR=45						
TKM2	Tokmak 2	7.20	26	*e*P	Pn	17 07 05.1	-0.2
	comp=E,28nm,0.5s						
MK31	Makanchi Array	13.13	35	*e*P	Pn	17 08 20.5	0.0
MKAR	Makanchi Array	13.13	35	P	Pn	17 08 20.6	+0.1
	comp=E,0.3nm,0.3s,baz=212,slow=13,SNR=16						
ABKAR	Akbulak array	15.22	330	*e*P	Pn	17 08 44.5	-1.5
	comp=E,1.4nm,0.5s						
BVAR	Borovoye Array	16.54	358	P	P	17 09 01.2	+0.7
	comp=E,0.5nm,0.3s,baz=161,slow=9.2,SNR=7.5						
AKTK	Aktyubinsk	16.92	330	P	P	17 09 05.3	+0.7
AKTO	Aktyubinsk	16.92	330	P	P	17 09 05.3	+0.7
	comp=E,1.5nm,0.3s,baz=137,slow=7.6,SNR=17						
ZALV	Zalesovo Beam	19.80	24	P	P	17 09 36.0	+0.3
	comp=E,0.9nm,0.3s,baz=212,slow=11,SNR=13						
FINES	FINESS Array B	37.64	326	P	P	17 12 15.5	0.0
	comp=E,0.5nm,0.3s,mb3.5,baz=131,slow=10,SNR=7.9						
ARCES	ARCESS Array B	41.25	338	P	P	17 12 45.6	+0.5
	comp=E,1.2nm,0.6s,mb3.5,baz=116,slow=8.2,SNR=9.7						

HFS	Hagfors	43.24	322	P	P	17 13 01.0	-0.3
	comp=E,0.9nm,0.7s,mb3.3,baz=83,slow=13,SNR=3.3					
TORD	Torodi Ar. Bea	65.99	269	P	P	17 15 44.3	-0.9
	comp=E,0.4nm,0.6s,mb3.2,baz=49,slow=5.2,SNR=2.8					
WRA	Warramunga Arr	81.76	122	P	P	17 17 15.7	-0.6
	comp=E,0.4nm,0.9s,mb3.1,baz=324,slow=5.1,SNR=5.5					
ASAR	Alice Springs	84.03	125	P	P	17 17 27.4	-0.5
	comp=E,0.4nm,1.1s,mb3.1,baz=304,slow=5.2,SNR=6.5					

*IDC **18** 17:14:08.5±2.4, 17°.39N×40°.17E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/24, mbtmp3.8/4, MS3.3/9, Ms1 3.3/9, ms1mx3.1/29, Error ellipse: s-maj=65.5km s-min=29.6km az=154.0*
*SGS **18** 17:14:11.6, 17°.78N×40°.37E, h29km*
*ISCJB **18** 17:14:12.2±1.3, 17°.79N±0°.07×40°.7E±0°.1, h10km, mb3.8/4, MS3.5/6, Error ellipse: s-maj=15.7km s-min=9.3km az=155.8*
ISC 18 17:14:12.6±2.1, 17°.7N±0°.2×40°.6E±0°.2, h10km, n17, σ0°.80/10, mb3.8/4, MS3.5/6, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRSS	Farasan al Kab	1.69	122	S	Sn	17 15 04.2	+0.4
FRSS	Farasan al Kab	1.69	122	P	Pn	17 14 41.8	-0.4
NAMS	An Nimas	2.13	44	S	Sn	17 15 10.6	-4.1
WBHS	Wadi 'Ibn Hash	2.21	64	P	Pn	17 14 49.7	+0.3
JAZS	Jizan	2.26	104	P	Pn	17 14 49.8	-0.2
DJNS	Zahran al Janu	2.78	88	P	Pn	17 14 56.0	-1.3
ATD	Arta Tunnel	6.45	160	LR	LR	17 18 07.2	
	comp=Z,148nm,20.4s,baz=21,slow=38						
ASF	Jabal al Asfar	14.85	348	LR	LR	17 22 43.0	
	comp=Z,57nm,19.8s,baz=244,slow=34						
MMAI	Mount Meron Ar	16.01	344	LR	LR	17 24 32.7	
	comp=Z,16nm,18.9s,baz=230,slow=39						
GNI	Garni	22.70	8	LR	LR	17 28 28.2	
	comp=Z,61nm,20.7s,MS3.0,baz=242,slow=37						
BRTR	Keskin Array B	22.82	346	P	P	17 19 14.9	-0.7
	4.3nm,1.1s,mb3.8,baz=163,slow=10,SNR=6.8						
TORD	Torodi Ar. Bea	37.76	269	P	P	17 21 22.6	-6.4
	0.6nm,0.7s,mb3.4,baz=74,slow=6.2,SNR=3.0						
TORD				LR	LR	17 37 43.0	
	comp=Z,70nm,18.4s,MS3.5,baz=40,slow=38						
DBIC	Dimbokro	45.67	262	LR	LR	17 40 17.4	
	comp=Z,61nm,18.6s,MS3.6,baz=71,slow=35						
BOSA	Boshof	48.33	198	LR	LR	17 43 58.0	
	comp=Z,69nm,18.2s,MS3.7,baz=164,slow=37						
ZALV	Zalesovo Beam	49.67	33	P	P	17 23 04.8	+0.3
	1.3nm,0.7s,mb4.0,baz=245,slow=9.1,SNR=6.2						
SONM	Songino Array	60.90	45	P	P	17 24 27.0	+1.4
	0.7nm,0.9s,mb3.8,baz=272,slow=7.1,SNR=3.6						
SONM				LR	LR	17 54 10.5	
	comp=Z,81nm,21.7s,MS3.8,baz=50,slow=39						
KSRS	Korea Array	77.39	55	LR	LR	18 04 36.0	
	comp=Z,29nm,19.0s,MS3.6,baz=175,slow=39						

*ISCJB **18** 17:23:12.1±0.8, 13°.76N±0°.08×145°.0E±0°.2, h144km±5km, mb3.8/14, Error ellipse: s-maj=27.9km s-min=13.0km az=174.3*
*IDC **18** 17:23:12.6±0.7, 13°.77N×145°.07E, h136km±3km, mb3.7/14, mb1 3.8/14, mb1mx3.7/25, mbtmp3.7/14, Error ellipse: s-maj=22.4km s-min=11.7km az=91.0*
*NEIC **18** 17:23:13.4±0.8, 13°.79N×145°.03E, h143km±7km, mb4.0/1, Error ellipse: s-maj=17.2km s-min=9.1km az=85.0*
ISC 18 17:23:13.2±0.8, 13°.78N±0°.08×145°.0E±0°.2, h140km±5km, n19, σ0°.73/18, mb3.8/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.24	218	P	Pn	17 23 32.8	+0.4
	baz=308,slow=19						
GUMO				S	Sn	17 23 46.5	-0.4
	2μm,0.3s,baz=45,slow=19,SNR=226						
JOW	Kunigami	20.35	312	P	P	17 27 38.7	+0.1
	25nm,1.0s,baz=127,slow=18,SNR=2.9						
MJAR	Matsushiro Arr	23.47	346	P	P	17 28 09.8	-0.2
	1.3nm,0.5s,mb3.6,baz=169,slow=9.9,SNR=6.0						
KSRS	Korea Array	28.07	330	P	P	17 28 51.6	+0.1
	0.7nm,0.8s,mb3.5,baz=142,slow=9.4,SNR=4.2						
CTAO	Charters Tower	33.68	178	*e*P	P	17 29 42.1	+1.2
	1.9nm,0.6s,mb4.0						
WRA	Warramunga Arr	35.12	198	P	P	17 29 53.0	-0.3
	4.2nm,0.6s,mb4.3,baz=18,slow=9.3,SNR=34						
FITZ	Fitzroy Crossi	37.00	212	P	P	17 30 09.2	-0.2
	2.9nm,0.3s,mb4.4,baz=39,slow=9.5,SNR=28						
ASAR	Alice Springs	38.77	196	P	P	17 30 23.9	-0.2
	0.8nm,0.3s,mb3.8,baz=21,slow=7.1,SNR=31						
CMAR	Chiang Mai Arr	44.42	282	P	P	17 31 10.6	+0.2
	0.4nm,0.4s,mb3.4,baz=92,slow=5.3,SNR=4.2						
STKA	Stephens Creek	45.52	184	P	P	17 31 18.1	-0.6
	1.1nm,0.5s,mb3.8,baz=10,slow=10.0,SNR=5.8						
SONM	Songino Array	46.66	325	P	P	17 31 28.8	+1.3
	0.7nm,0.6s,mb3.5,baz=131,slow=7.1,SNR=6.7						
MKAR	Makanchi Array	61.46	316	P	P	17 33 15.2	+0.3
	0.4nm,0.5s,mb3.5,baz=111,slow=7.4,SNR=3.6						
ILAR	Eielson Array	68.33	25	P	P	17 33 57.8	-1.2
	0.6nm,0.4s,mb3.7,baz=250,slow=6.0,SNR=14						
YBH	Yreka Blue Hor	82.63	49	P	P	17 35 22.6	+1.5
	1.6nm,0.7s,mb3.9,baz=283,slow=3.5,SNR=5.5						
KBS	Kingsbay	84.03	352	*e*P	P	17 35 27.4	-0.1
ARCES	ARCESS Array B	86.95	342	P	P	17 35 41.5	-0.6
	2.4nm,0.9s,mb4.0,baz=84,slow=8.3,SNR=3.7						
FINES	FINESS Array B	91.05	335	P	P	17 36 00.3	-1.2
	0.8nm,0.5s,mb4.0,baz=108,slow=4.5,SNR=5.5						
LPAZ	La Paz	147.90	99	PKPbc	PKPbc	17 42 43.2	+0.4
	0.7nm,0.5s,baz=344,slow=7.4,SNR=3.5						
LPAZ	La Paz	147.90	99	PKPbc	PKPbc	17 42 43.2	+0.4

*IDC **18** 17:30:16.2±1.5, 32°.93N×138°.96E, h0km, mb3.0/2, mb1 3.2/3, mb1mx3.1/24, mbtmp3.0/3, ML2.9/1, Error ellipse: s-maj=27.9km s-min=17.6km az=143.0*
*ISCJB **18** 17:30:18.0±0.8, 33°.49N±0°.04×140°.68E±0°.07, h62km±8km, mb3.1/2, Error ellipse: s-maj=9.7km s-min=5.8km az=10.4*
*JMA **18** 17:30:18.5±0.1, 33°.53N×140°.69E, h53km±4km, M2.9*
ISC 18 17:30:18.8±0.8, 33°.48N±0°.04×140°.69E±0°.07, h52km±11km, n16, σ1°.02/29, mb3.1/2, 1C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.82	244	P	Pn	17 30 34.5	+0.3
JHJ2				S	Sn	17 30 45.6	+0.2
JHJ	Hachijo jima 2	0.84	245	Pn	Pn	17 30 34.4	-0.1
	156nm,0.3s,baz=253,slow=19,SNR=559						
JHJ				Sn	Sn	17 30 45.7	-0.2
	439nm,0.3s,baz=229,slow=19,SNR=46						
BSO1	Boso 1	1.20	11	P	Pn	17 30 38.4	-0.8
BSO1				S	Sn	17 30 53.7	-0.7
BSO3	Boso 3	1.33	354	P	Pn	17 30 40.6	-0.4
BSO3				S	Sn	17 30 57.7	+0.1
JKO	Kozu shima	1.48	299	P	Pn	17 30 43.8	+0.8
JKO				S	Sn	17 31 00.5	-0.6
BSO4	Boso 4	1.54	349	P	Pn	17 30 43.9	+0.1
BSO4				S	Sn	17 31 03.3	+0.7
JIM2	Oshima 3	1.62	320	P	Pn	17 30 44.5	-0.5
JIM2				S	Sn	17 31 03.0	-1.7
JIZS	Izushimoda	1.95	310	P	Pn	17 30 49.8	+0.4
JIZS				S	Sn	17 31 12.2	-0.5
KTJJ	Kamata 2	1.98	317	P	Pn	17 30 49.5	-0.3
KTJJ				S	Sn	17 31 11.2	-2.2
JOD2	Odawara 2	2.22	324	P	Pn	17 30 52.9	-0.3
JOD2				S	Sn	17 31 17.3	-2.1
JYN	Shimob	2.68	319	P	Pn	17 31 00.5	+1.0
JYN				S	Sn	17 31 31.7	+0.9
MJAR	Matsushiro Arr	3.67	327	Pn	Pn	17 31 14.3	+1.2
	1.1nm,0.3s,baz=152,slow=11,SNR=10						
MJAR				Sn	Sn	17 31 56.8	+1.7
	0.6nm,0.3s,baz=187,slow=39,SNR=4.5						
MAT	Matsushiro	3.67	327	P	Pn	17 31 15.3	+2.2
MAT				S	Sn	17 31 56.5	+1.4
IPIL	Ipil	30.57	217	↑P	P	17 36 31.3	+3.6
WRA	Warramunga Arr	53.47	187	P	P	17 39 33.0	-0.8
	0.1nm,0.5s,mb3.0,baz=1.5,slow=7.7,SNR=6.3						
ASAR	Alice Springs	57.19	187	P	P	17 39 59.9	-0.7
	0.2nm,0.9s,mb3.1,baz=3.2,slow=6.4,SNR=4.3						

*ISCJB **18** 17:32:08.8±0.4, 35°.20N±0°.02×119°.43W±0°.03, h24km±5km, Error ellipse: s-maj=4.6km s-min=3.7km az=3.2*
*NEIC **18** 17:32:09.2, 35°.19N×119°.43W, h19km, ML3.3(PAS), After PAS.*

NEIC Felt [III] at Taft. Also felt at Bakersfield, Mettler and Tupman.
ISC 18 17:32:08.6±0.5, 35°.20N±0°.02×119°.41W±0°.03, h14km±4km, n29, σ0°.74/38, 11C-15D, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKM	Peak Mountain	0.45	228	⇓P	Pg	17 32 17.3	-0.2
	baz=0.4,SNR=174						
ARVC	Arvin	0.48	98	⇓P	Pg	17 32 18.7	+0.7
	baz=0.5						
ARVC				⇓S	Sg	17 32 25.7	+1.1
	baz=0.5						
SMMC	Simmler	0.49	283	⇓P	Pg	17 32 18.1	-0.2
	baz=0.5						
SMMC				⇓S	Sg	17 32 25.3	+0.3
	baz=0.5						
VES	Vestal, Richgr	0.69	22	⇓P	Pg	17 32 21.7	-0.4
	baz=0.7,SNR=222						
SBC	Santa Barbara	0.80	198	⇑P	Pg	17 32 23.9	0.0
	baz=0.8,SNR=8.4						
SBC				⇓S	Sg	17 32 35.5	+1.0
	baz=0.8						
OSI	Osito Adit	0.81	136	⇑P	Pg	17 32 23.8	-0.5
	baz=0.8						
ISA	Isabella	0.90	59	⇑P	Pb	17 32 25.2	-0.7
	baz=0.9,SNR=1000						
ISA	Isabella	0.90	59	*e*Pg	Pg	17 32 25.0	-0.9
RCTC	Rector, Farmer	1.12	7	⇑P	Pb	17 32 28.4	-1.2
	baz=1.1						
RCTC				⇑S	Sb	17 32 43.1	-1.0
	baz=1.1						
BLG	Laguna Peak	1.12	165	⇑P	Pb	17 32 28.9	-0.8
	baz=1.1,SNR=63						
BLG				⇓S	Sb	17 32 44.3	+0.1
	baz=1.1						
EDW2	Edwards Air Fo	1.21	105	⇓P	Pn	17 32 30.5	-0.5
	baz=1.2,SNR=93						
EDW2				⇓S	Sb	17 32 46.8	+0.1
	baz=1.2						
BSC	Santa Cruz Isl	1.22	189	⇑S	Sb	17 32 47.0	+0.1
	baz=1.2						
DECC	Green Verdugo	1.30	136	⇑Pb	Pb	17 32 32.2	-0.5
	baz=1.3						
DECC				⇑Sb	Sb	17 32 49.9	+0.6
	baz=1.3						
LRMC	Laurel Mountai	1.44	78	⇓Pb	Pb	17 32 35.1	0.0
	baz=1.5,SNR=32						
PASC	Pasadena Art C	1.44	135	*e*Pn	Pn	17 32 34.1	-0.1
MWC	Mount Wilson	1.48	131	*e*Pn	Pn	17 32 34.6	-0.2
CWC	Cottonwood Cre	1.65	41	⇑Pb	Pb	17 32 38.3	-0.4
	baz=1.7,SNR=210						
CWC				⇓Sb	Sb	17 32 59.5	+0.2
	baz=1.7						
BFSC	Mount Baldy Ra	1.73	123	⇓P	Pn	17 32 38.4	+0.2
	baz=1.7,SNR=15						
MPMC	Manual Prospec	1.79	61	⇑Pb	Pb	17 32 40.2	-0.9
	baz=1.8,SNR=251						
MPMC				⇓Sb	Sb	17 33 03.9	+0.6
	baz=1.8						
TIN	Tinemaha	2.09	27	⇓Sb	Sb	17 33 13.1	+1.1
	baz=2.1						
GSC	Goldstone	2.13	86	*e*Pn	Pn	17 32 42.7	-1.1
SAO	San Andreas Ge	2.27	314	*e*Pn	Pn	17 32 44.8	-0.9
PFO	Pinyon Flat Ob	2.91	122	*e*Pn	Pn	17 32 54.2	-0.2
CMB	Columbia Colle	2.94	345	*e*Pn	Pn	17 32 56.0	+1.1
WAKR	Walker	3.30	360	*e*Pn	Pn	17 33 01.2	+1.4
BAR	Barrett	3.39	137	*e*Pn	Pn	17 33 00.3	-0.7
SHPR	Sheep Range	3.69	68	*e*Pn	Pn	17 33 06.2	+1.1
WCN	Washoe City	4.11	356	*e*P	Pb	17 33 20.8	+0.2
PAHR	Pah Rah Range	4.50	0	*e*Pn	Pn	17 33 18.0	+1.7

*ISCJB **18** 17:52:01.5±1.2, 17°.75S±0°.2×178°.6W±0°.1, h509km±13km, mb3.5/8, Error ellipse: s-maj=27.4km s-min=16.8km az=146.3*
*NEIC **18** 17:52:01.9±1.1, 17°.72S×178°.55W, h504km±12km, Error ellipse: s-maj=22.3km s-min=15.5km az=133.0*
*IDC **18** 17:52:02.3±3.1, 17°.71S×178°.58W, h507km±36km, mb3.2/9, mb1 3.5/9, mb1mx3.3/18, mbtmp3.2/9, Error ellipse: s-maj=22.0km s-min=14.0km az=150.0*
ISC 18 17:52:02.2±1.2, 17°.7S±0°.2×178°.6W±0°.1, h506km±13km, n15, σ0°.85/16, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.20	269	*e*P	P	17 53 15.1	+0.2
URZ	Urewera	20.82	190	P	P	17 56 06.0	-1.9
	14nm,0.9s,baz=46,slow=14,SNR=7.9						
STKA	Stephens Creek	38.57	241	P	P	17 58 41.6	+0.3
	0.5nm,0.3s,mb3.5,baz=90,slow=7.1,SNR=3.6						
WB2	Warramunga Arr	44.48	259	*e*P	P	17 59 28.1	-0.2
WRA	Warramunga Arr	44.49	259	P	P	17 59 28.2	-0.1
	0.4nm,0.2s,mb3.4,baz=97,slow=7.8,SNR=23						
ASAR	Alice Springs	44.67	254	P	P	17 59 30.6	+0.9
	3.8nm,0.3s,mb4.2,baz=90,slow=

*CSEM **18** 18:06:00.5, 38°.49N×26°.56E, h6km, MD2.6, After DDA*
DDA 18 18:06:00.5, 38°.49N×26°.56E, h6km±1km, Md2.6, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.13**	**167**	*i* P	Pg	18 06 03.4	+0.1
URLA				*i* S	Sg	18 06 06.4	+1.2
URLA	**Izmir**	**0.13**	**167**	*i* P	Pg	18 06 03.4	+0.1
URLA				*i* S	Sg	18 06 06.4	+1.2
AYVA	**Ayvalik**	**0.82**	**7**	*i* P	Pg	18 06 16.2	-0.1
AYVA				*i* S	Sg	18 06 28.5	+1.4
AYVA	**Ayvalik**	**0.82**	**7**	*i* P	Pg	18 06 16.2	-0.2
AYVA				*i* S	Sg	18 06 28.5	+1.4
AKHS	**Akhisar**	**1.06**	**68**	*i* P	Pg	18 06 21.0	+0.2
AKHS				*i* S	Sg	18 06 36.0	+1.4
AKHS	**Akhisar**	**1.06**	**68**	*i* P	Pg	18 06 21.0	+0.2
AKHS				*i* S	Sg	18 06 36.0	+1.4
BOZC	**Bozcaada**	**1.41**	**344**	*i* P	Pn	18 06 27.4	+0.7
BOZC				*i* S	Sb	18 06 43.7	-1.6
BALY	**Balya**	**1.50**	**33**	*i* P	Pn	18 06 28.8	+0.9
BALY				*i* S	Sn	18 06 46.7	-1.0
BALY	**Balya**	**1.50**	**33**	*i* P	Pn	18 06 28.8	+0.9
BALY				*i* S	Sn	18 06 46.7	-1.0

*ISCJB **18** 18:17:21.7±0.5, 52°.20N±0°.07×30°.79W±0°.09, h10km, mb4.1/44, MS3.5/23, Error ellipse: s-maj=11.2km s-min=7.0km az=30.8*
*IDC **18** 18:17:21.7±0.8, 52°.13N×30°.77W, h0km, mb4.0/19, mb1 4.2/20, mb1mx4.0/36, mbtmp4.1/20, ML4.6/1, MS3.6/20, Ms1 3.6/20, ms1mx3.5/40, Error ellipse: s-maj=21.3km s-min=14.6km az=28.0*
*CSEM **18** 18:17:22.0±0.2, 52°.25N×30°.76W, h2km, mb4.3/27, Ms3.3, Error ellipse: s-maj=10.3km s-min=6.2km az=32.0*
*INMG **18** 18:17:23.0, 53°.19N×30°.85W, h33km*
*NEIC **18** 18:17:23.2±0.4, 52°.15N×30°.78W, h10km, mb4.3/28, Error ellipse: s-maj=9.6km s-min=5.2km az=198.0*
ISC 18 18:17:23.7±0.5, 52°.28N±0°.07×30°.75W±0°.09, h10km, n172, σ0°92/164, mb4.1/44, MS3.4/23, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.42**	**18**	LR	LR	18 24 10.8	
	comp=Z,264nm,21.6s,baz=4.5,slow=30						
EKA	**Eskdalemuir Ar**	**16.53**	**68**	Pn	**Pn**	**18 21 14.5**	**-0.8**
	1.3nm,0.3s,baz=268,slow=10,SNR=34						
EKA	**Eskdalemuir Ar**	**16.53**	**68**	Pn	**Pn**	**18 21 14.5**	**-0.9**
QUIF	**Quistinic**	**18.17**	**93**	*e*P	**Pn**	**18 21 34.6**	**-1.2**
QUIF	**Quistinic**	**18.17**	**93**	*e*P	**Pn**	**18 21 34.6**	**-1.2**
SGMF	**Saint Gilles**	**18.41**	**91**	*e*P	**Pn**	**18 21 38.5**	**-0.2**
	89nm,1.4s						
SGMF	**Saint Gilles**	**18.41**	**91**	*e*P	**Pn**	**18 21 38.5**	**-0.2**
	45nm,1.4s						
SGMF	**Saint Gilles**	**18.41**	**91**	*e*P	**Pn**	**18 21 38.5**	**-0.2**
	45nm,1.4s						
PCAB	**Cabril**	**18.68**	**115**	*e*P	**Pn**	**18 21 43.2**	**+1.1**
PCAB	**Cabril**	**18.68**	**115**	*e*P	**Pn**	**18 21 43.2**	**+1.1**
FLN	**La Foliniere**	**19.49**	**88**	*e*P	**Pn**	**18 21 50.7**	**-1.1**
	17nm,0.7s						
FLN				*e*MLR	MLR		
	comp=Z,134nm,17.2s						
FLN	**La Foliniere**	**19.49**	**88**	*e*P	**Pn**	**18 21 50.7**	**-1.1**
	comp=Z,8.4nm,0.7s						
FLN	**La Foliniere**	**19.49**	**88**	*e*P	**Pn**	**18 21 50.7**	**-1.1**
	comp=Z,8.4nm,0.7s						
MVO	**Moncorvo**	**19.60**	**115**	*e*P	**Pn**	**18 21 52.5**	**-0.7**
	comp=Z,19nm,1.5s						
MVO				*e*S	**Sn**	**18 25 37.4**	**+4.4**
MVO	**Moncorvo**	**19.60**	**115**	*e*P	**Pn**	**18 21 52.5**	**-0.7**
	comp=Z,19nm,1.5s						
LDF	**La Druitiere**	**19.77**	**89**	*e*P	**Pn**	**18 21 54.4**	**-0.8**
	comp=Z,9.8nm,0.9s						
LDF	**La Druitiere**	**19.77**	**89**	*e*P	**Pn**	**18 21 54.4**	**-0.8**
	comp=Z,4.9nm,0.9s						
LDF	**La Druitiere**	**19.77**	**89**	*e*P	**Pn**	**18 21 54.4**	**-0.8**
	comp=Z,4.9nm,0.9s						
MTE	**Manteigas**	**19.84**	**118**	*e*P	**Pn**	**18 21 57.5**	**+1.5**
	comp=Z,37nm,1.6s						
MTE				*e*S	**Sn**	**18 25 40.4**	**+1.5**
PMAFR	**Mafra**	**19.97**	**123**	*e*S	**Sn**	**18 25 45.8**	**+3.8**
PCBR	**Castelo Branco**	**20.27**	**119**	*e*P	**P**	**18 22 00.6**	**+1.4**
	comp=Z,28nm,1.8s						
PCBR	**Castelo Branco**	**20.27**	**119**	*e*P	**P**	**18 22 00.6**	**+1.4**
	comp=Z,28nm,1.8s						
MFF	**Saint Martin d**	**20.59**	**94**	*e*P	**P**	**18 22 03.2**	**+0.6**
	comp=Z,22nm,1.0s						
MFF	**Saint Martin d**	**20.59**	**94**	*e*P	**P**	**18 22 03.2**	**+0.6**
	comp=Z,11nm,1.0s						
MFF	**Saint Martin d**	**20.59**	**94**	*e*P	**P**	**18 22 03.2**	**+0.6**
	comp=Z,11nm,1.0s						
PMRV	**Marv??o**	**20.62**	**119**	*e*P	**P**	**18 22 03.0**	**+0.1**
	comp=Z,19nm,1.5s						
PMRV				*e*S	**S**	**18 25 58.3**	**+5.2**
PMRV	**Marv??o**	**20.62**	**119**	*e*P	**P**	**18 22 03.0**	**+0.1**
	comp=Z,19nm,1.5s						
SUMG	**Summit**	**20.65**	**353**	*i* P	**P**	**18 22 05.8**	**+2.8**
	comp=Z,5.9nm,0.9s						
PESTR	**Estremoz**	**20.92**	**121**	*e*P	**P**	**18 22 10.5**	**+4.3**
	comp=Z,20nm,1.0s						
PESTR				*e*S	**S**	**18 26 02.8**	**+3.6**
JMIC	**Jan Mayen**	**21.28**	**20**	LR	LR	18 27 37.4	
	comp=Z,147nm,20.1s,MS3.4,baz=250,slow=29						
SCHQ	**Schefferville**	**21.44**	**291**	P	**P**	**18 22 11.4**	**-0.2**
	comp=Z,5.4nm,0.8s,mb3.9,baz=78,slow=12,SNR=5.3						
SCHQ				LR	LR	18 29 18.0	
	comp=Z,67nm,20.0s,MS3.0,baz=259,slow=33						
SCHQ	**Schefferville**	**21.44**	**291**	P	**P**	**18 22 11.4**	**-0.3**
PCVE	**Castro Verde**	**21.61**	**124**	*e*P	**P**	**18 22 13.2**	**-0.4**
	comp=Z,27nm,1.6s,mb4.4						
PCVE				*e*S	**S**	**18 26 15.2**	**+2.4**
PCVE	**Castro Verde**	**21.61**	**124**	*e*P	**P**	**18 22 13.2**	**-0.4**
	comp=Z,27nm,1.6s,mb4.4						
PCVE				*e*S	**S**	**18 26 15.2**	**+2.4**
PBAR	**Barrancos**	**21.72**	**121**	*e*P	**P**	**18 22 19.0**	**+4.2**
PBAR				*e*S	**S**	**18 26 23.9**	**+9.0**
BAIF	**Baives**	**21.90**	**82**	*e*P	**P**	**18 22 16.0**	**-0.7**
	comp=Z,40nm,1.0s,mb4.5						
BAIF	**Baives**	**21.90**	**82**	*e*P	**P**	**18 22 16.0**	**-0.7**
	comp=Z,20nm,1.0s,mb4.5						
BAIF	**Baives**	**21.90**	**82**	*e*P	**P**	**18 22 16.0**	**-0.7**
	comp=Z,20nm,1.0s,mb4.5						
PVAQ	**Vaqueiros**	**21.95**	**124**	*e*P	**P**	**18 22 17.7**	**+0.4**
	comp=Z,23nm,1.7s,mb4.3						
PVAQ				*e*S	**S**	**18 26 30.0**	**+11**
PVAQ	**Vaqueiros**	**21.95**	**124**	*e*P	**P**	**18 22 17.7**	**+0.4**
	comp=Z,23nm,1.7s,mb4.3						
PBDV	**Barranco-do-Ve**	**21.96**	**124**	*e*S	**S**	**18 26 31.3**	**+12**
TCF	**Toulx Ste Croi**	**22.18**	**92**	*e*P	**P**	**18 22 20.3**	**+0.6**
	comp=Z,55nm,1.5s,mb4.5						
TCF	**Toulx Ste Croi**	**22.18**	**92**	*e*P	**P**	**18 22 20.3**	**+0.6**
	comp=Z,28nm,1.5s,mb4.5						
TCF	**Toulx Ste Croi**	**22.18**	**92**	*e*P	**P**	**18 22 20.3**	**+0.6**
	comp=Z,28nm,1.5s,mb4.5						
GIVF	**Givet**	**22.26**	**81**	*e*P	**P**	**18 22 19.9**	**-0.6**
GIVF	**Givet**	**22.26**	**81**	*e*P	**P**	**18 22 19.9**	**-0.6**
ETSF	**Etsaut**	**22.27**	**103**	*e*P	**P**	**18 22 21.9**	**+1.2**
	comp=Z,7.8nm,0.8s,mb3.9						
ETSF	**Etsaut**	**22.27**	**103**	*e*P	**P**	**18 22 21.9**	**+1.2**
	comp=Z,3.9nm,0.8s,mb3.9						
ETSF	**Etsaut**	**22.27**	**103**	*e*P	**P**	**18 22 21.9**	**+1.2**
	comp=Z,3.9nm,0.8s,mb3.9						
ESDC	**Sonseca Array**	**22.33**	**114**	P	**P**	**18 22 21.3**	**0.0**
	comp=Z,1.5nm,0.5s,mb3.7,baz=314,slow=8.7,SNR=17						
ESDC				LR	LR	18 29 01.6	
	comp=Z,101nm,19.1s,MS3.3,baz=315,slow=31						
ESDC	**Sonseca Array**	**22.33**	**114**	P	**P**	**18 22 21.3**	**0.0**
ESLA	**Sonseca Array**	**22.33**	**114**	*e*P	**P**	**18 22 20.6**	**-0.7**
ESLA	**Sonseca Array**	**22.33**	**114**	*e*P	**P**	**18 22 20.6**	**-0.7**
BGF	**Bois d'Agland**	**22.45**	**91**	*e*P	**P**	**18 22 23.0**	**+0.5**
	comp=Z,24nm,0.7s,mb4.4						
BGF	**Bois d'Agland**	**22.45**	**91**	*e*P	**P**	**18 22 23.0**	**+0.5**
	comp=Z,12nm,0.7s,mb4.4						
BGF	**Bois d'Agland**	**22.45**	**91**	*e*P	**P**	**18 22 23.0**	**+0.5**
	comp=Z,12nm,0.7s,mb4.4						
SSF	**Saint Saulge**	**22.63**	**90**	*e*P	**P**	**18 22 24.6**	**+0.2**
	comp=Z,38nm,1.1s,mb4.4						
SSF	**Saint Saulge**	**22.63**	**90**	*e*P	**P**	**18 22 24.6**	**+0.2**
	comp=Z,19nm,1.1s,mb4.4						
SSF	**Saint Saulge**	**22.63**	**90**	*e*P	**P**	**18 22 24.6**	**+0.2**
	comp=Z,19nm,1.1s,mb4.4						
AVF	**Avril sur Loir**	**22.66**	**90**	*e*P	**P**	**18 22 23.8**	**-0.9**
	comp=Z,49nm,1.1s,mb4.5						
AVF	**Avril sur Loir**	**22.66**	**90**	*e*P	**P**	**18 22 23.8**	**-0.9**
	comp=Z,24nm,1.1s,mb4.5						
AVF	**Avril sur Loir**	**22.66**	**90**	*e*P	**P**	**18 22 23.8**	**-0.9**
	comp=Z,24nm,1.1s,mb4.5						
FRB	**Frobisher Bay**	**22.70**	**315**	LR	LR	18 29 11.4	
	comp=Z,100nm,21.8s,MS3.2,baz=200,slow=31						
LOR	**Lormes**	**22.76**	**89**	*e*P	**P**	**18 22 24.7**	**-1.1**
	comp=Z,25nm,1.0s,mb4.3						
LOR				*e*MLR	MLR		
	comp=Z,297nm,17.5s,MS3.5						
LOR	**Lormes**	**22.76**	**89**	*e*P	**P**	**18 22 24.7**	**-1.1**
	comp=Z,12nm,1.0s,mb4.3						
LOR				LR	LR		
	comp=Z,300nm,17.5s,MS3.8						
LOR	**Lormes**	**22.76**	**89**	*e*P	**P**	**18 22 24.7**	**-1.1**
	comp=Z,12nm,1.0s,mb4.3						
CAF	**Calviac**	**22.76**	**96**	*e*P	**P**	**18 22 25.9**	**+0.1**
	comp=Z,25nm,1.4s,mb4.2						
CAF	**Calviac**	**22.76**	**96**	*e*P	**P**	**18 22 25.9**	**+0.1**
	comp=Z,13nm,1.4s,mb4.2						
CAF	**Calviac**	**22.76**	**96**	*e*P	**P**	**18 22 25.9**	**+0.1**
	comp=Z,13nm,1.4s,mb4.2						
MEZF	**Maizieres J'vi**	**22.98**	**85**	*e*P	**P**	**18 22 27.0**	**-1.1**
MEZF	**Maizieres J'vi**	**22.98**	**85**	*e*P	**P**	**18 22 27.0**	**-1.1**
SMF	**Signal de Mont**	**23.02**	**90**	*e*P	**P**	**18 22 28.4**	**-0.2**
	comp=Z,7.4nm,0.7s,mb3.9						
SMF	**Signal de Mont**	**23.02**	**90**	*e*P	**P**	**18 22 28.4**	**-0.2**
	comp=Z,3.7nm,0.7s,mb3.9						
SMF	**Signal de Mont**	**23.02**	**90**	*e*P	**P**	**18 22 28.4**	**-0.2**
	comp=Z,3.7nm,0.7s,mb3.9						
SFTF	**Sexfontaines**	**23.09**	**86**	*e*P	**P**	**18 22 27.9**	**-1.4**
	comp=Z,59nm,1.2s,mb4.6						
SFTF	**Sexfontaines**	**23.09**	**86**	*e*P	**P**	**18 22 27.9**	**-1.4**
	comp=Z,59nm,1.2s,mb4.9						
SFTF	**Sexfontaines**	**23.09**	**86**	*e*P	**P**	**18 22 27.9**	**-1.4**
	comp=Z,29nm,1.2s,mb4.6						
HAU	**Haudompre**	**23.98**	**85**	*e*P	**P**	**18 22 36.9**	**-1.1**
	comp=Z,13nm,0.9s,mb4.1						
HAU				*e*MLR	MLR		
	comp=Z,165nm,19.0s,MS3.2						
HAU	**Haudompre**	**23.98**	**85**	*e*P	**P**	**18 22 36.9**	**-1.1**
	comp=Z,6.7nm,0.9s,mb4.1						
HAU				LR	LR		
	comp=Z,160nm,19.0s,MS3.5						
HAU	**Haudompre**	**23.98**	**85**	*e*P	**P**	**18 22 36.9**	**-1.1**
	comp=Z,6.7nm,0.9s,mb4.1						
NB2	**NORSAR Subarra**	**24.27**	**52**	P	**P**	**18 22 39.5**	**-1.1**
	comp=Z,2.1nm,0.8s,mb3.6,baz=274,slow=11						
NB2	**NORSAR Subarra**	**24.27**	**52**	P	**P**	**18 22 39.5**	**-1.1**
	comp=Z,2.1nm,0.8s,mb3.6,SNR=5.8						
NOA	**NORSAR Array B**	**24.27**	**52**	P	**P**	**18 22 40.8**	**+0.2**
	comp=Z,2.3nm,0.8s,mb3.6,baz=268,slow=9.2,SNR=6.1						
NOA				LR	LR	18 30 13.2	
	comp=Z,146nm,21.3s,MS3.4,baz=270,slow=32						
NOA	**NORSAR Array B**	**24.27**	**52**	P	**P**	**18 22 40.8**	**+0.2**
HINF	**Hinteralfeld**	**24.36**	**85**	*e*P	**P**	**18 22 40.5**	**-1.0**
	comp=Z,10nm,0.9s,mb3.9						
HINF	**Hinteralfeld**	**24.36**	**85**	*e*P	**P**	**18 22 40.5**	**-1.0**
	comp=Z,5.1nm,0.9s,mb4.0						
HINF	**Hinteralfeld**	**24.36**	**85**	*e*P	**P**	**18 22 40.5**	**-1.0**
	comp=Z,5.1nm,0.9s,mb3.9						
CDF	**Champ du Feu**	**24.38**	**84**	*e*P	**P**	**18 22 41.5**	**-0.2**
CDF	**Champ du Feu**	**24.38**	**84**	*e*P	**P**	**18 22 41.5**	**-0.2**
ECH	**Echery**	**24.39**	**84**	*e*P	**P**	**18 22 41.7**	**0.0**
	comp=Z,2.0nm,0.6s,mb3.7						
ECH	**Echery**	**24.39**	**84**	*e*P	**P**	**18 22 41.7**	**0.0**
	comp=Z,2.0nm,0.6s,mb3.7						
VIVF	**Saint-Julien-l**	**24.39**	**94**	*e*P	**P**	**18 22 41.7**	**-0.1**
VIVF	**Saint-Julien-l**	**24.39**	**94**	*e*P	**P**	**18 22 41.7**	**-0.1**
CABF	**La Chapelle**	**24.42**	**89**	*e*P	**P**	**18 22 41.1**	**-0.9**
CABF	**La Chapelle**	**24.42**	**89**	*e*P	**P**	**18 22 41.1**	**-0.9**
BFO	**Black Forest**	**25.05**	**83**	*e*P	**P**	**18 22 48.9**	**+1.0**
	comp=Z,8.8nm,1.3s,mb4.1						
BFO	**Black Forest**	**25.05**	**83**	*e*P	**P**	**18 22 48.8**	**+1.0**
	comp=Z,8.8nm,1.3s,mb4.1						
ORIF	**Oris-en-Rattie**	**25.10**	**92**	*e*P	**P**	**18 22 48.4**	**+0.1**
	comp=Z,13nm,1.2s,mb4.0						
ORIF				*e*MLR	MLR		
	comp=Z,179nm,21.7s,MS3.2						
ORIF	**Oris-en-Rattie**	**25.10**	**92**	*e*P	**P**	**18 22 48.4**	**+0.1**
	comp=Z,6.4nm,1.2s,mb4.0						
ORIF	**Oris-en-Rattie**	**25.10**	**92**	*e*P	**P**	**18 22 48.4**	**+0.1**
	comp=Z,6.4nm,1.2s,mb4.0						
LPL	**La Plagne**	**25.33**	**90**	*e*P	**P**	**18 22 49.9**	**-0.4**
	comp=Z,14nm,1.1s,mb4.1						
LPL	**La Plagne**	**25.33**	**90**	*e*P	**P**	**18 22 49.9**	**-0.4**
	comp=Z,6.8nm,1.1s,mb4.1						
LPL	**La Plagne**	**25.33**	**90**	*e*P	**P**	**18 22 49.9**	**-0.4**
	comp=Z,6.8nm,1.1s,mb4.1						
LPG	**La Plagne**	**25.35**	**90**	*e*P	**P**	**18 22 50.3**	**-0.2**
	comp=Z,36nm,1.6s,mb4.4						
LPG	**La Plagne**	**25.35**	**90**	*e*P	**P**	**18 22 50.3**	**-0.2**
	comp=Z,18nm,1.6s,mb4.3						
LPG	**La Plagne**	**25.35**	**90**	*e*P	**P**	**18 22 50.3**	**-0.2**
	comp=Z,18nm,1.6s,mb4.4						
SMRF	**Simiane la Rot**	**25.40**	**95**	*e*P	**P**	**18 22 51.2**	**+0.2**
	comp=Z,17nm,1.2s,mb4.2						
SMRF	**Simiane la Rot**	**25.40**	**95**	*e*P	**P**	**18 22 51.2**	**+0.2**
	comp=Z,17nm,1.2s,mb4.5						
SMRF	**Simiane la Rot**	**25.40**	**95**	*e*P	**P**	**18 22 51.2**	**+0.2**
	comp=Z,8.6nm,1.2s,mb4.2						
HFS	**Hagfors**	**25.50**	**54**	P	**P**	**18 22 51.4**	**-0.3**
	comp=Z,2.0nm,0.7s,mb3.8,baz=261,slow=9.8,SNR=4.2						
HFS				LR	LR	18 30 49.8	
	comp=Z,250nm,21.9s,MS3.7,baz=301,slow=32						
HFS	**Hagfors**	**25.50**	**54**	P	**P**	**18 22 51.4**	**-0.3**
MBDF	**Montbardon**	**25.75**	**92**	*e*P	**P**	**18 22 53.7**	**-0.4**
	comp=Z,6.9nm,0.8s,mb3.9						
MBDF	**Montbardon**	**25.75**	**92**	*e*P	**P**	**18 22 53.7**	**-0.4**
	comp=Z,3.5nm,0.8s,mb3.9						
MBDF	**Montbardon**	**25.75**	**92**	*e*P	**P**	**18 22 53.7**	**-0.4**
	comp=Z,3.5nm,0.8s,mb3.9						
GRA1	**Grafenberg Arr**	**26.28**	**79**	*e*P	**P**	**18 22 59.8**	**+0.9**
	comp=Z,5.0nm,1.0s,mb4.0						
GRA1	**Grafenberg Arr**	**26.28**	**79**	*e*P	**P**	**18 22 59.8**	**+0.9**
	comp=Z,5.0nm,1.0s,mb4.0						
GRF	**Grafenberg Arr**	**26.28**	**79**	*e*P	**P**	**18 22 59.8**	**+0.9**
	comp=Z,5.0nm,1.0s,mb4.0						
GRF	**Grafenberg Arr**	**26.28**	**79**	*e*P	**P**	**18 22 59.8**	**+0.9**
	comp=Z,5.0nm,1.0s,mb4.0						
SBF	**Sospel**	**26.60**	**93**	*e*P	**P**	**18 23 03.2**	**+1.3**
	comp=Z,28nm,1.1s,mb4.4						
SBF	**Sospel**	**26.60**	**93**	*e*P	**P**	**18 23 03.2**	**+1.3**
	comp=Z,14nm,1.1s,mb4.4						
SBF	**Sospel**	**26.60**	**93**	*e*P	**P**	**18 23 03.2**	**+1.3**
	comp=Z,14nm,1.1s,mb4.4						
DAVOX	**Davos/Dischmat**	**26.67**	**86**	P	**P**	**18 23 02.6**	**+0.1**
	comp=Z,2.7nm,0.7s,mb3.9,baz=323,slow=12,SNR=4.2						
DAVOX				LR	LR	18 32 51.9	
	comp=Z,133nm,18.2s,MS3.5,baz=267,slow=35						
DAVOX	**Davos/Dischmat**	**26.67**	**86**	P	**P**	**18 23 02.6**	**+0.2**
MDT	**Midelt**	**27.12**	**126**	P	**P**	**18 23 05.4**	**-1.2**
	comp=Z,1.8nm,0.9s,mb3.6,baz=349,slow=10,SNR=2.3						
MDT	**Midelt**	**27.12**	**126**	P	**P**	**18 23 05.4**	**-1.2**
GERES	**GERESS Array B**	**28.11**	**79**	P	**P**	**18 23 15.0**	**-0.3**
	comp=Z,1.5nm,1.0s,mb3.6,baz=309,slow=8.4,SNR=9.9						
GERES	**GERESS Array B**	**28.11**	**79**	P	**P**	**18 23 15.0**	**-0.3**
VRAC	**Vranov**	**29.66**	**77**	LR	LR	18 36 01.9	
	comp=Z,108nm,18.5s,MS3.5,baz=294,slow=38						
ARCES	**ARCESS Array B**	**30.84**	**35**	LR	LR	18 33 15.2	
	comp=Z,133nm,18.9s,MS3.6,baz=41,slow=31						
FINES	**FINESS Array B**	**31.41**	**51**	P	**P**	**18 23 44.2**	**-0.2**
	comp=Z,1.9nm,0.9s,mb3.9,baz=283,slow=6.7,SNR=3.6						
FINES				LR	LR	18 35 03.0	
	comp=Z,136nm,21.0s,MS3.6,baz=313,slow=34						
FINES	**FINESS Array B**	**31.41**	**51**	P	**P**	**18 23 44.2**	**-0.2**
SADO	**Sadowa**	**32.40**	**276**	LR	LR	18 35 41.5	
	comp=Z,92nm,18.7s,MS3.5,baz=131,slow=34						
KEST	**Kesra**	**32.74**	**104**	P	**P**	**18 23 56.0**	**-0.3**
	comp=Z,3.2nm,0.8s,mb4.3,baz=300,slow=3.8,SNR=13						
KEST	**Kesra**	**32.74**	**104**	*e*P	**P**	**18 23 56.1**	**-0.3**
KEST	**Kesra**	**32.74**	**104**	*e*P	**P**	**18 23 56.1**	**-0.3**
BUR08	**Bucovina Ar. S**	**35.52**	**75**	*e*P	**P**	**18 24 21.6**	**+1.3**
BUR08	**Bucovina Ar. S**	**35.52**	**75**	*e*P	**P**	**18 24 21.6**	**+1.2**
AKASG	**Malin Array Be**	**36.45**	**68**	P	**P**	**18 24 27.7**	**-0.5**
	comp=Z,3.7nm,0.9s,mb4.3,baz=298,slow=8.4,SNR=8.2						
AKASG	**Malin Array Be**	**36.45**	**68**	P	**P**	**18 24 27.7**	**-0.5**
ULM	**Lac du Bonnet**	**39.57**	**294**	LR	LR	18 38 36.0	
	comp=Z,65nm,19.8s,MS3.5,baz=33,slow=32						
TKL	**Tuckaleechee C**	**40.64**	**267**	LR	LR	18 41 19.0	
	comp=Z,230nm,18.0s,MS4.1,baz=216,slow=35						
YKA	**Yellowknife Ar**	**43.17**	**318**	LR	LR	18 43 04.0	
	comp=Z,4.1nm,21.6s,MS2.3,baz=150,slow=36						
BRTR	**Keskin Array B**	**45.00**	**80**	P	**P**	**18 25 39.6**	**+0.6**
	comp=Z,2.6nm,1.0s,mb4.0,baz=293,slow=6.6,SNR=4.1						
BRTR				LR	LR	18 46 21.8	
	comp=Z,34nm,19.5s,MS3.3,baz=209,slow=39						
BRTR	**Keskin Array B**	**45.00**	**80**	P	**P**	**18 25 39.6**	**+0.6**
TOA0	**Torodi Ar. Sit**	**46.89**	**134**	*e*P	**P**	**18 25 52.6**	**-1.4**
TOA0	**Torodi Ar. Sit**	**46.89**	**134**	*e*P	**P**	**18 25 52.6**	**-1.4**
TORD	**Torodi Ar. Bea**	**46.89**	**134**	P	**P**	**18 25 53.1**	**-1.0**
	comp=Z,4.1nm,0.8s,mb4.4,baz=335,slow=8.5,SNR=20						
TORD				LR	LR	18 42 29.0	
	comp=Z,56nm,19.7s,MS3.5,baz=335,slow=32						
DBIC	**Dimbokro**	**50.20**	**146**	P	**P**	**18 26 17.7**	**-1.9**
	comp=Z,1.9nm,0.7s,mb4.2,baz=321,slow=6.5,SNR=2.9						
DBIC				LR	LR	18 45 33.2	
	comp=Z,52nm,20.3s,MS3.5,baz=0.7,slow=34						
DBIC	**Dimbokro**	**50.20**	**146**	P	**P**	**18 26 17.7**	**-1.9**
PDAR	**Pinedale Array**	**51.57**	**293**	P	**P**	**18 26 29.1**	**-0.5**
	comp=Z,1.1nm,0.5s,mb4.0,baz=62,slow=7.0,SNR=8.7						
PDAR	**Pinedale Array**	**51.57**	**293**	P	**P**	**18 26 29.1**	**-0.5**
AKTK	**Aktyubinsk**	**52.05**	**54**	P	**P**	**18 26 33.4**	**+0.3**
AKTK	**Aktyubinsk**	**52.05**	**54**	P	**P**	**18 26 33.4**	**+0.3**
AKTO	**Aktyubinsk**	**52.05**	**54**	P	**P**	**18 26 33.4**	**+0.3**
	comp=Z,1.4nm,0.6s,mb4.1,baz=298,slow=8.0,SNR=5.0						
ILAR	**Eielson Array**	**53.36**	**331**	P	**P**	**18 26 43.6**	**+1.0**
	comp=Z,1.4nm,0.8s,mb3.9,baz=42,slow=6.0,SNR=13						
ILAR				LR	LR	18 49 09.9	
	comp=Z,54nm,19.2s,MS3.6,baz=70,slow=36						
ILAR	**Eielson Array**	**53.36**	**331**	P	**P**	**18 26 43.6**	**+1.0**
ILAR				LR	LR	18 49 09.9	
ILAR	**Eielson Array**	**53.36**	**331**	P	**P**	**18 26 43.6**	**+1.0**
HWUT	**Hardware Ranch**	**53.46**	**293**	*e*P	**P**	**18 26 43.9**	**+0.3**
	comp=Z,4.2nm,0.8s,mb4.4						
HWUT	**Hardware Ranch**	**53.46**	**293**	*e*P	**P**	**18 26 43.9**	**+0.3**
	comp=Z,4.2nm,0.8s,mb4.4						
ZALV	**Zalesovo Beam**	**61.34**	**37**	P	**P**	**18 27 39.8**	**+0.8**
	comp=Z,1.2nm,0.7s,mb4.1,baz=330,slow=6.5,SNR=5.5						
EKS2	**Erkin-Say**	**65.23**	**52**	*e*P	**P**	**18 28 06.7**	**+1.7**
	comp=Z,4.0nm,1.0s,mb4.4						
EKS2	**Erkin-Say**	**65.23**	**52**	*e*P	**P**	**18 28 06.7**	**+1.7**
	comp=Z,4.0nm,1.0s,mb4.4						
MKAR	**Makanchi Array**	**65.92**	**44**	P	**P**	**18 28 09.8**	**+0.5**
	comp=Z,2.6nm,0.6s,mb4.4,baz=330,slow=5.0,SNR=25						
SONM	**Songino Array**	**73.77**	**29**	P	**P**	**18 28 59.3**	**+1.6**
	comp=Z,1.6nm,0.8s,mb4.0,baz=345,slow=5.2,SNR=5.5						
SONM	**Songino Array**	**73.77**	**29**	P	**P**	**18 28 59.3**	**+1.7**
LPAZ	**La Paz**	**75.58**	**217**	LR	LR	18 58 19.2	
	comp=Z,31nm,20.9s,MS3.6,baz=126,slow=33						
CPUP	**Villa Florida**	**81.66**	**204**	LR	LR	18 59 33.6	
	comp=Z,48nm,20.5s,MS3.8,baz=239,sl

Error ellipse: s-maj=6.1km s-min=4.2km az=140.6
CSEM ***18*** *18:23:21.9±0.4, 38°.13N×20°.25E, h2km, MD3.8, Error ellipse: s-maj=6.7km s-min=4.5km az=59.0*
ATH ***18*** *18:23:22.5, 38°.13N×20°.29E, h11km±2km, MD3.8/16*
THE ***18*** *18:23:22.7, 38°.04N×20°.30E, h2km±1km, ML3.1/13, Error ellipse: s-maj=1.8km s-min=1.1km az=261.0*
NEIC ***18*** *18:23:30.1, 38°.19N×20°.59E, h5km, ML3.2(ATH), After ATH.*

ISC 18 18:23:21.9±0.8, 38°.06N±0°.03×20°.23E±0°.04, h4km±3km, n84, σ1§14/132, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.31**	**68**	*e*PG	**Pg**	**18 23 27.6**	**-0.3**
VLS				*e*SG	**Sg**	**18 23 32.0**	**+0.1**
VLS	**Valsamata**	**0.31**	**68**	P	**Pg**	**18 23 27.5**	**-0.4**
VLS				S	**Sg**	**18 23 31.9**	**0.0**
VLS	**Valsamata**	**0.31**	**68**	P	**Pg**	**18 23 27.5**	**-0.4**
VLS				*e*Sg	**Sg**	**18 23 32.0**	**+0.1**
KFL	**Anninata**	**0.45**	**84**	P	**Pg**	**18 23 30.3**	**-0.2**
KFL				S	**Sg**	**18 23 36.5**	**+0.2**
KFL	**Anninata**	**0.45**	**84**	P	**Pg**	**18 23 30.3**	**-0.2**
KFL				S	**Sg**	**18 23 36.5**	**+0.2**
LKD2	**Lefkada island**	**0.80**	**25**	P	**Pg**	**18 23 36.0**	**-1.2**
LKD2				S	**Sg**	**18 23 50.2**	**+2.6**
LKD2	**Lefkada island**	**0.80**	**25**	P	**Pg**	**18 23 36.0**	**-1.2**
LKD2				S	**Sg**	**18 23 50.2**	**+2.6**
RLS	**Riolos of Patr**	**0.98**	**90**	*e*PG	**Pg**	**18 23 39.8**	**-0.9**
RLS				*e*SB	**Sg**	**18 23 54.1**	**+0.7**
RLS	**Riolos of Patr**	**0.98**	**90**	*e*Pg	**Pg**	**18 23 39.8**	**-0.9**
RLS				*e*Sb	**Sg**	**18 23 54.1**	**+0.7**
UPR	**University Cam**	**1.25**	**79**	*e*PB	**Pb**	**18 23 45.4**	**-0.6**
UPR				*e*SB	**Sb**	**18 24 01.0**	**-1.4**
UPR	**University Cam**	**1.25**	**79**	P	**Pg**	**18 23 45.0**	**-0.8**
UPR	**University Cam**	**1.25**	**79**	P	**Pg**	**18 23 45.0**	**-0.8**
UPR	**University Cam**	**1.25**	**79**	*e*Pb	**Pb**	**18 23 45.4**	**-0.6**
UPR				*e*Sb	**Sb**	**18 24 01.0**	**-1.4**
EFP	**Efpalio**	**1.37**	**74**	*e*PN	**Pn**	**18 23 46.4**	**-1.4**
EFP				*e*SB	**Sb**	**18 24 04.3**	**-1.6**
EFP	**Efpalio**	**1.37**	**74**	P	**Pn**	**18 23 46.4**	**-1.4**
EFP				S	**Sg**	**18 24 06.5**	**+0.5**
EFP	**Efpalio**	**1.37**	**74**	P	**Pn**	**18 23 46.4**	**-1.4**
EFP				*e*Sb	**Sb**	**18 24 04.3**	**-1.6**
EFP				S	**Sg**	**18 24 06.5**	**+0.5**
LAKA	**Lakka**	**1.39**	**82**	P	**Pn**	**18 23 46.9**	**-1.2**
LAKA				S	**Sb**	**18 24 07.2**	**+0.7**
LAKA	**Lakka**	**1.39**	**82**	P	**Pn**	**18 23 46.9**	**-1.2**
LAKA				S	**Sb**	**18 24 07.2**	**+0.7**
IGT	**Igoumenitsa**	**1.47**	**3**	P	**Pg**	**18 23 52.8**	**+2.7**
IGT	**Igoumenitsa**	**1.47**	**3**	P	**Pg**	**18 23 52.8**	**+2.7**
TRIZ	**Trizonia**	**1.48**	**78**	P	**Pn**	**18 23 48.2**	**-1.1**
TRIZ				S	**Sn**	**18 24 09.0**	**-0.2**
TRIZ	**Trizonia**	**1.48**	**78**	P	**Pn**	**18 23 48.2**	**-1.1**
TRIZ				S	**Sn**	**18 24 09.0**	**-0.2**
EVR	**Evrytania**	**1.51**	**55**	*e*PG	**Pn**	**18 23 48.8**	**-0.8**
EVR				*e*SB	**Sn**	**18 24 09.8**	**+0.1**
EVR	**Evrytania**	**1.51**	**55**	*e*Pg	**Pn**	**18 23 48.8**	**-0.8**
EVR				*e*Sb	**Sn**	**18 24 09.8**	**+0.1**
KALE	**Kalithea**	**1.54**	**77**	P	**Pn**	**18 23 49.1**	**-1.0**
KALE				S	**Sn**	**18 24 11.4**	**+0.8**
KALE	**Kalithea**	**1.54**	**77**	P	**Pn**	**18 23 49.1**	**-1.0**
KALE				S	**Sn**	**18 24 11.4**	**+0.8**
ITM	**Ithomi**	**1.61**	**123**	P	**Pg**	**18 23 55.1**	**+2.3**
ITM	**Ithomi**	**1.61**	**123**	*e*PB	**Pg**	**18 23 53.7**	**+0.9**
ITM				*e*SB	**Sg**	**18 24 14.9**	**+1.2**
ITM	**Ithomi**	**1.61**	**123**	P	**Pn**	**18 23 51.2**	**+0.1**
ITM				S	**Sn**	**18 24 11.6**	**-0.7**
ITM	**Ithomi**	**1.61**	**123**	P	**Pn**	**18 23 51.2**	**+0.1**
ITM	**Ithomi**	**1.61**	**123**	*e*Pb	**Pg**	**18 23 53.7**	**+0.9**
ITM				S	**Sn**	**18 24 11.6**	**-0.7**
ITM				*e*Sb	**Sg**	**18 24 14.9**	**+1.2**
JAN	**Janina**	**1.66**	**17**	P	**Pg**	**18 23 56.8**	**+3.0**
JAN	**Janina**	**1.66**	**17**	P	**Pg**	**18 23 56.8**	**+3.0**
GUR	**Goura**	**1.68**	**94**	*e*PG	**Pn**	**18 23 52.3**	**+0.3**
GUR	**Goura**	**1.68**	**94**	P	**Pn**	**18 23 51.7**	**-0.3**
GUR				S	**Sn**	**18 24 12.9**	**-1.0**
GUR	**Goura**	**1.68**	**94**	P	**Pn**	**18 23 51.7**	**-0.3**
GUR	**Goura**	**1.68**	**94**	*e*Pg	**Pn**	**18 23 52.3**	**+0.3**
GUR				S	**Sn**	**18 24 12.9**	**-1.0**
VLX	**Vlachokerasia**	**1.84**	**111**	*e*PN	**Pn**	**18 23 55.4**	**+1.2**
VLX				*e*SN	**Sg**	**18 24 20.1**	**-1.0**
VLX	**Vlachokerasia**	**1.84**	**111**	P	**Pn**	**18 23 54.0**	**-0.2**
VLX				S	**Sn**	**18 24 18.8**	**+0.8**
VLX	**Vlachokerasia**	**1.84**	**111**	P	**Pn**	**18 23 54.0**	**-0.2**
VLX	**Vlachokerasia**	**1.84**	**111**	*e*Pn	**Pn**	**18 23 55.4**	**+1.2**
VLX				S	**Sn**	**18 24 18.8**	**+0.8**
VLX				*e*Sn	**Sg**	**18 24 20.1**	**-1.0**
DSF	**Desfina**	**1.84**	**78**	P	**Pn**	**18 23 54.1**	**-0.2**
DSF	**Desfina**	**1.84**	**78**	P	**Pn**	**18 23 54.1**	**-0.2**
AGG	**Agios Georgios**	**1.91**	**59**	P	**Pg**	**18 23 59.0**	**+0.5**
AGG	**Agios Georgios**	**1.91**	**59**	*e*PG	**Pg**	**18 23 57.0**	**-1.5**
AGG	**Agios Georgios**	**1.91**	**59**	P	**Pn**	**18 23 55.1**	**0.0**
AGG				S	**Sn**	**18 24 19.3**	**-0.3**
AGG	**Agios Georgios**	**1.91**	**59**	*e*Pg	**Pg**	**18 23 57.0**	**-1.5**
AGG	**Agios Georgios**	**1.91**	**59**	P	**Pg**	**18 23 59.0**	**+0.5**
AGG				S	**Sn**	**18 24 19.3**	**-0.3**
THL	**Klokotos Trika**	**2.05**	**42**	*e*PG	**Pb**	**18 23 58.8**	**-0.8**
THL	**Klokotos Trika**	**2.05**	**42**	P	**Pn**	**18 23 57.0**	**-0.1**
THL				S	**Sn**	**18 24 24.2**	**+1.1**
THL	**Klokotos Trika**	**2.05**	**42**	P	**Pn**	**18 23 57.0**	**-0.1**
THL	**Klokotos Trika**	**2.05**	**42**	*e*Pg	**Pb**	**18 23 58.8**	**-0.8**
THL				S	**Sn**	**18 24 24.2**	**+1.1**
LTK	**Loutraki**	**2.16**	**90**	*e*PN	**Pn**	**18 23 59.5**	**+0.8**
LTK	**Loutraki**	**2.16**	**90**	P	**Pn**	**18 23 58.9**	**+0.2**
LTK				S	**Sn**	**18 24 26.1**	**+0.2**
LTK	**Loutraki**	**2.16**	**90**	P	**Pn**	**18 23 58.9**	**+0.2**
LTK	**Loutraki**	**2.16**	**90**	*e*Pn	**Pn**	**18 23 59.5**	**+0.8**
LTK				S	**Sn**	**18 24 26.1**	**+0.2**
LKR	**Lokris**	**2.26**	**74**	P	**Pn**	**18 24 03.1**	**+3.1**
LKR	**Lokris**	**2.26**	**74**	*e*PN	**Pn**	**18 24 01.0**	**+1.0**
LKR	**Lokris**	**2.26**	**74**	P	**Pn**	**18 23 59.1**	**-0.9**
LKR				S	**Sn**	**18 24 28.9**	**+0.7**
LKR	**Lokris**	**2.26**	**74**	P	**Pn**	**18 23 59.1**	**-0.9**
LKR	**Lokris**	**2.26**	**74**	*e*Pn	**Pn**	**18 24 01.0**	**+1.0**
LKR				S	**Sn**	**18 24 28.9**	**+0.7**
NEST	**Nestorio**	**2.43**	**15**	P	**Pn**	**18 24 03.5**	**+1.1**
NEST				S	**Sn**	**18 24 35.1**	**+2.5**
NEST	**Nestorio**	**2.43**	**15**	P	**Pn**	**18 24 03.5**	**+1.1**
NEST				S	**Sn**	**18 24 35.1**	**+2.5**
DID	**Didima**	**2.45**	**102**	*e*PN	**Pn**	**18 24 04.2**	**+1.6**
DID	**Didima**	**2.45**	**102**	P	**Pn**	**18 24 02.4**	**-0.2**
DID				S	**Sn**	**18 24 32.8**	**-0.1**
DID	**Didima**	**2.45**	**102**	P	**Pn**	**18 24 02.4**	**-0.2**
DID	**Didima**	**2.45**	**102**	*e*Pn	**Pn**	**18 24 04.2**	**+1.6**
DID				S	**Sn**	**18 24 32.8**	**-0.1**
KZN	**Kozani**	**2.54**	**28**	P	**Pn**	**18 24 04.7**	**+0.8**
KZN	**Kozani**	**2.54**	**28**	P	**Pn**	**18 24 04.7**	**+0.8**
VLI	**Veliai**	**2.54**	**121**	*e*PN	**Pn**	**18 24 06.8**	**+2.9**
VLY	**Voula,Athens**	**2.83**	**93**	P	**Pg**	**18 24 13.3**	**-2.8**
VLY	**Voula,Athens**	**2.83**	**93**	*e*PN	**Pn**	**18 24 08.3**	**+0.5**
VLY	**Voula,Athens**	**2.83**	**93**	*e*Pn	**Pn**	**18 24 08.3**	**+0.5**
VLY	**Voula,Athens**	**2.83**	**93**	P	**Pg**	**18 24 13.3**	**-2.8**
KYTH	**Kithira**	**2.86**	**128**	*e*PB	**Pn**	**18 24 11.0**	**+2.7**
KRUS	**Krusevo**	**3.39**	**13**	*e*Pn	**Pn**	**18 24 15.1**	**-0.5**
KARN	**Karanos**	**3.98**	**131**	P	**Pn**	**18 24 25.1**	**+1.5**
KARN	**Karanos**	**3.98**	**131**	P	**Pn**	**18 24 25.1**	**+1.5**
BARS	**Barje**	**4.90**	**14**	*e*Pn	**Pn**	**18 24 35.4**	**-0.9**
STON	**Ston**	**5.17**	**339**	*i* Pn	**Pn**	**18 24 37.3**	**-2.7**
STON				Sn	**Sn**	**18 25 35.0**	**-5.1**
STON	**Ston**	**5.17**	**339**	*i* Pn	**Pn**	**18 24 37.3**	**-2.7**
STON				Sn	**Sn**	**18 25 35.0**	**-5.1**
DIVS	**Divibare**	**6.03**	**358**	*e*Pn	**Pn**	**18 24 50.1**	**-1.7**
NVLJ	**Novalja**	**7.64**	**330**	*i* Pn	**Pn**	**18 25 13.8**	**-0.1**
NVLJ				Sn	**Sn**	**18 26 35.5**	**-5.4**
NVLJ	**Novalja**	**7.64**	**330**	*i* Pn	**Pn**	**18 25 13.7**	**-0.2**

ISK ***18*** *18:36:04.4, 38°.53N×26°.48E, h13km, MD3.1*
ISCJB ***18*** *18:36:06.5±0.3, 38°.49N±0°.02×26°.52E±0°.03, h21km±3km, Error ellipse: s-maj=4.2km s-min=3.1km az=145.8*
DDA ***18*** *18:36:06.4, 38°.50N×26°.61E, h29km±1km, Md3.1*
THE ***18*** *18:36:06.4, 38°.49N×26°.56E, h13km±1km, ML2.7/3, Error ellipse: s-maj=1.2km s-min=0.6km az=113.0*
CSEM ***18*** *18:36:06.0±0.1, 38°.51N×26°.52E, h15km, MD3.1, Error ellipse: s-maj=3.7km s-min=2.8km az=55.0*

ISC 18 18:36:06.4±0.4, 38°.50N±0°.02×26°.53E±0°.03, h16km±2km, n70, σ0§91/102, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.15**	**159**	*i* P	**Pg**	**18 36 09.2**	**-1.1**
URLA				*i* S	**Sg**	**18 36 12.3**	**-0.7**
URLA	**Izmir**	**0.15**	**159**	*i* P	**Pg**	**18 36 09.2**	**-1.2**
CHOS	**Chios island**	**0.39**	**253**	P	**Pg**	**18 36 15.0**	**+0.7**
CHOS				S	**Sg**	**18 36 20.5**	**+0.9**
CHOS	**Chios island**	**0.39**	**253**	P	**Pg**	**18 36 15.0**	**+0.7**
CHOS				S	**Sg**	**18 36 20.5**	**+0.9**
BLCB	**Balcova**	**0.42**	**106**	PG	**Pg**	**18 36 14.6**	**-0.3**
BLCB				SG	**Sg**	**18 36 20.6**	**0.0**
BLCB	**Balcova**	**0.42**	**106**	P	**Pg**	**18 36 14.4**	**-0.5**
BLCB				S	**Sg**	**18 36 20.3**	**-0.3**
BLCB	**Balcova**	**0.42**	**106**	P	**Pg**	**18 36 14.4**	**-0.5**
BLCB	**Balcova**	**0.42**	**106**	*i* Pg	**Pg**	**18 36 14.6**	**-0.3**
BLCB				S	**Sg**	**18 36 20.3**	**-0.3**
BLCB				*i* Sg	**Sg**	**18 36 20.6**	**0.0**
IZM	**Izmir**	**0.59**	**100**	PG	**Pg**	**18 36 17.3**	**-0.6**
IZM				SG	**Sg**	**18 36 26.3**	**+0.5**
PRK	**Paraskevi**	**0.77**	**345**	P	**Pg**	**18 36 21.1**	**-0.3**
PRK				S	**Sg**	**18 36 32.8**	**+1.2**
PRK	**Paraskevi**	**0.77**	**345**	P	**Pg**	**18 36 21.1**	**-0.3**
PRK				S	**Sg**	**18 36 32.8**	**+1.2**
AYVA	**Ayvalik**	**0.81**	**9**	*i* P	**Pg**	**18 36 22.2**	**-0.1**
AYVA				*i* S	**Sg**	**18 36 34.5**	**+1.5**
AYVA	**Ayvalik**	**0.81**	**9**	*i* P	**Pg**	**18 36 22.2**	**-0.1**
SIGR	**SIGRI**	**0.88**	**324**	P	**Pb**	**18 36 23.4**	**0.0**
SIGR				S	**Sb**	**18 36 36.4**	**+1.5**
SIGR	**SIGRI**	**0.88**	**324**	P	**Pb**	**18 36 23.4**	**0.0**
SIGR				S	**Sb**	**18 36 36.4**	**+1.5**
GCAM	**G?zelcaml?**	**0.98**	**145**	*i* P	**Pb**	**18 36 25.0**	**0.0**
GCAM				*i* S	**Sb**	**18 36 38.3**	**+0.8**
GCAM	**G?zelcaml?**	**0.98**	**145**	*i* P	**Pb**	**18 36 25.0**	**+0.1**
AKHS	**Akhisar**	**1.07**	**69**	*i* P	**Pb**	**18 36 26.4**	**-0.3**
AKHS				*i* S	**Sb**	**18 36 41.0**	**+0.5**
AKHS	**Akhisar**	**1.07**	**69**	*i* P	**Pb**	**18 36 26.4**	**-0.2**
AKHS				*i* S	**Sb**	**18 36 41.0**	**+0.5**
EZN	**Ezine**	**1.33**	**353**	*e*PN	**Pn**	**18 36 29.0**	**-1.3**
EZN				*e*SN	**Sn**	**18 36 46.4**	**-1.3**
EZN	**Ezine**	**1.33**	**353**	*e*Pn	**Pn**	**18 36 29.0**	**-1.4**
EZN				*e*Sn	**Sn**	**18 36 46.4**	**-1.4**
AYDN	**Tasoluk**	**1.36**	**128**	*i* P	**Pn**	**18 36 30.5**	**-0.2**
AYDN				*i* S	**Sn**	**18 36 47.5**	**-0.9**
AYDN	**Tasoluk**	**1.36**	**128**	*i* P	**Pn**	**18 36 30.5**	**-0.2**
AYDN				*i* S	**Sn**	**18 36 47.5**	**-0.9**
BOZC	**Bozcaada**	**1.39**	**345**	*i* P	**Pn**	**18 36 33.2**	**+2.0**
BOZC				*i* P		18 36 31.9	
BOZC				*i* S	**Sn**	**18 36 49.4**	**+0.2**
BALY	**Balya**	**1.50**	**34**	*i* P	**Pn**	**18 36 34.2**	**+1.5**
BALY				*i* S	**Sn**	**18 36 52.7**	**+0.8**
BALY	**Balya**	**1.50**	**34**	*i* P	**Pn**	**18 36 34.2**	**+1.5**
BALY				*i* S	**Sn**	**18 36 52.7**	**+0.8**
BALB	**Balikesir**	**1.55**	**42**	*e*PN	**Pn**	**18 36 32.6**	**-0.8**
BALB	**Balikesir**	**1.55**	**42**	*e*Pn	**Pn**	**18 36 32.6**	**-0.8**
MLSB	**Milas**	**1.56**	**140**	*e*PN	**Pn**	**18 36 33.0**	**-0.5**
MLSB	**Milas**	**1.56**	**140**	*e*Pn	**Pn**	**18 36 33.0**	**-0.5**
BODT	**Bodrum**	**1.57**	**156**	*e*PN	**Pn**	**18 36 32.8**	**-0.8**
BODT	**Bodrum**	**1.57**	**156**	*e*Pn	**Pn**	**18 36 32.8**	**-0.8**
BDRM	**Kayabasi**	**1.61**	**153**	*e*P	**Pn**	**18 36 36.0**	**+1.8**
BDRM				*i* S	**Sn**	**18 36 57.1**	**+2.5**
BDRM	**Kayabasi**	**1.61**	**153**	*e*P	**Pn**	**18 36 36.0**	**+1.8**
APE	**Apeiranthos**	**1.64**	**209**	*e*PN	**Pn**	**18 36 34.0**	**-0.6**
APE	**Apeiranthos**	**1.64**	**209**	P	**Pn**	**18 36 33.7**	**-0.8**
APE				S	**Sn**	**18 36 55.0**	**-0.2**
APE	**Apeiranthos**	**1.64**	**209**	P	**Pn**	**18 36 33.7**	**-0.8**
APE	**Apeiranthos**	**1.64**	**209**	*e*Pn	**Pn**	**18 36 34.0**	**-0.5**
APE				S	**Sn**	**18 36 55.0**	**-0.2**
KULA	**Kula-Manisa**	**1.67**	**89**	*e*PN	**Pn**	**18 36 34.8**	**-0.3**
KULA				*e*SN	**Sn**	**18 36 57.2**	**+1.0**
KULA	**Kula-Manisa**	**1.67**	**89**	*e*Pn	**Pn**	**18 36 34.8**	**-0.3**
KULA				*e*Sn	**Sn**	**18 36 57.2**	**+1.0**
LIA	**Limnos Island**	**1.74**	**324**	P	**Pn**	**18 36 36.1**	**+0.1**
LIA				S	**Sn**	**18 36 57.9**	**0.0**
LIA	**Limnos Island**	**1.74**	**324**	P	**Pn**	**18 36 36.1**	**+0.1**
LIA				S	**Sn**	**18 36 57.9**	**0.0**
GADA	**Gvkgeada**	**1.75**	**344**	*e*PN	**Pn**	**18 36 34.8**	**-1.4**
GADA	**Gvkgeada**	**1.75**	**344**	*e*Pn	**Pn**	**18 36 34.8**	**-1.4**
GONE	**Gonen-Balikesi**	**1.79**	**30**	*e*PN	**Pn**	**18 36 35.3**	**-1.3**
GONE	**Gonen-Balikesi**	**1.79**	**30**	*e*Pn	**Pn**	**18 36 35.3**	**-1.3**
DURS	**Dursunbey**	**1.87**	**53**	*e*P	**Pn**	**18 36 38.0**	**+0.3**
DURS				*i* S	**Sn**	**18 37 00.8**	**-0.3**
DURS	**Dursunbey**	**1.87**	**53**	*e*P	**Pn**	**18 36 38.0**	**+0.2**
DURS				*i* S	**Sn**	**18 37 00.8**	**-0.3**
LPK	**Lapseki**	**1.88**	**5**	*e*PN	**Pn**	**18 36 36.4**	**-1.5**
LPK	**Lapseki**	**1.88**	**5**	*e*Pn	**Pn**	**18 36 36.4**	**-1.5**
GELI	**Tayfur-Gelibol**	**1.89**	**359**	*e*PN	**Pn**	**18 36 37.0**	**-1.1**
GELI	**Tayfur-Gelibol**	**1.89**	**359**	*e*Pn	**Pn**	**18 36 37.0**	**-1.1**
YER	**Yerkesik**	**1.95**	**134**	*e*PN	**Pn**	**18 36 38.7**	**-0.1**
YER	**Yerkesik**	**1.95**	**134**	*e*Pn	**Pn**	**18 36 38.7**	**-0.1**
DNZL	**Cakiroluk**	**2.15**	**111**	*i* P	**Pn**	**18 36 42.2**	**+0.6**
DNZL	**Cakiroluk**	**2.15**	**111**	*i* P	**Pn**	**18 36 42.2**	**+0.6**
ERIK	**Erikli-Kesan**	**2.17**	**360**	*e*PN	**Pn**	**18 36 41.7**	**-0.1**
ERIK	**Erikli-Kesan**	**2.17**	**360**	*e*Pn	**Pn**	**18 36 41.7**	**-0.1**
RKY	**Sarkoy-Tekirda**	**2.24**	**13**	*e*PN	**Pn**	**18 36 42.2**	**-0.6**
RKY	**Sarkoy-Tekirda**	**2.24**	**13**	*e*Pn	**Pn**	**18 36 42.2**	**-0.7**
ENEZ	**Enez**	**2.25**	**353**	*e*PN	**Pn**	**18 36 41.8**	**-1.2**
ENEZ	**Enez**	**2.25**	**353**	*e*Pn	**Pn**	**18 36 41.8**	**-1.2**
KCTX	**Karacabey (Bur**	**2.26**	**38**	*e*PN	**Pn**	**18 36 42.7**	**-0.4**
KCTX	**Karacabey (Bur**	**2.26**	**38**	*e*Pn	**Pn**	**18 36 42.7**	**-0.4**
KHAL	**Karahalli**	**2.33**	**92**	*i* P	**Pn**	**18 36 45.2**	**+1.1**
KHAL	**Karahalli**	**2.33**	**92**	*i* P	**Pn**	**18 36 45.2**	**+1.1**
KHL	**Karahalli**	**2.36**	**93**	*e*PN	**Pn**	**18 36 45.0**	**+0.5**
KHL	**Karahalli**	**2.36**	**93**	*e*Pn	**Pn**	**18 36 45.0**	**+0.5**
ARMT	**Armutlu**	**2.74**	**40**	*e*PN	**Pn**	**18 36 49.6**	**-0.1**
ARMT	**Armutlu**	**2.74**	**40**	*e*Pn	**Pn**	**18 36 49.6**	**-0.1**

IDC ***18*** *18:37:16.4±1.0, 29°.52N×95°.25E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/27, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=78.4km s-min=19.0km az=57.0*
BJI ***18*** *18:37:19.2, 29°.75N×95°.11E, h30km, ML3.6/4*
ISCJB ***18*** *18:37:20.1±3.8, 29°.64N±0°.08×95°.5E±0°.2, h39km±34km, mb3.6/7, Error ellipse: s-maj=30.7km s-min=13.9km az=175.5*
NEIC ***18*** *18:37:21.7±0.7, 29°.68N×95°.48E, h35km, mb3.7/2, Error ellipse: s-maj=18.3km s-min=11.9km az=224.0*

ISC 18 18:37:22.0±3.6, 29°.71N±0°.09×95°.5E±0°.2, h38km±34km, n11, σ0§80/11, mb3.6/7, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.75**	**271**	Pg	**Pn**	**18 38 17.8**	**+0.4**
LSA	**Lhasa**	**3.75**	**271**	*e*P	**Pn**	**18 38 18.4**	**+1.0**
SHL	**Shillong**	**5.21**	**218**	*e*PN	Px	18 38 53.0	
SHL				*e*SN	**Sn**	**18 39 36.0**	**-0.2**
SHL				*i* x	x	18 39 58.0	
MKAR	**Makanchi Array**	**19.90**	**333**	P	**Pn**	**18 41 50.1**	**-1.9**
	0.2nm,0.3s,baz=133,slow=14,SNR=11						
KBL	**Kabul**	**22.86**	**289**	*e*P	**P**	**18 42 22.0**	**-0.1**
	2.6nm,0.7s,mb3.8						
KURK	**Kurchatov**	**24.50**	**334**	*e*P	**P**	**18 42 38.0**	**+0.5**
	1.5nm,0.7s,mb3.6						
ZALV	**Zalesovo Beam**	**25.43**	**345**	P	**P**	**18 42 47.4**	**+1.4**
	1.2nm,0.6s,mb3.6,baz=159,slow=11,SNR=6.9						
BVAR	**Borovoye Array**	**29.66**	**329**	P	**P**	**18 43 23.5**	**-0.3**
	0.3nm,0.4s,mb3.3,baz=145,slow=8.7,SNR=4.4						
WRA	**Warramunga Arr**	**61.97**	**138**	P	**P**	**18 47 38.0**	**-0.3**
	0.5nm,0.7s,mb3.8,baz=324,slow=8.2,SNR=9.7						
ASAR	**Alice Springs**	**64.66**	**141**	P	**P**	**18 47 56.2**	**+0.2**
	0.5nm,0.7s,mb3.7,baz=326,slow=6.4,SNR=19						
TORD	**Torodi Ar. Bea**	**86.81**	**283**	P	**P**	**18 50 02.8**	**-0.1**
	0.2nm,0.4s,mb3.7,baz=62,slow=3.7,SNR=3.6						

DJA ***18*** *18:46:22, 4°.50S×155°.40E, h23km, mb5.2/24*
MOS ***18*** *18:46:39.7±0.9, 4°.49S×153°.16E, h33km, mb5.2/18, Error ellipse: s-maj=10.9km s-min=7.3km az=106.3*
IDC ***18*** *18:46:40.4±1.5, 4°.64S×153°.40E, h39km±11km, mb4.7/19, mb1 4.8/21, mb1mx4.7/24, mbtmp4.7/21, ML4.6/2, MS4.2/19, Ms1 4.2/19, ms1mx4.1/22, Error ellipse: s-maj=16.1km s-min=10.3km az=95.0*
ISCJB ***18*** *18:46:41.6±0.9, 4°.65S±0°.04×153°.35E±0°.04, h63km±8km, mb5.0/90, Error ellipse: s-maj=6.7km s-min=5.8km az=167.7*
NEIC ***18*** *18:46:45.8±0.1, 4°.73S×153°.26E, mb5.1/37, Error ellipse: s-maj=6.3km s-min=4.5km az=97.0*
GCMT ***18*** *18:46:45.5±0.2, 4°.80S×153°.25E, h49km±1km, MW5.1, Moment Tensor Solution. s63,c91; s76,c140; Moment tensor: Scale 10^{16}Nm; M_{rr}4.06±.15; $M_{\theta\theta}$2.66±.12; $M_{\phi\phi}$-6.72±.12; $M_{r\theta}$-2.83±.11; $M_{\theta\phi}$0.06±.13; $M_{\phi r}$-1.33±.12; Best double couple: $M_0$6.60000×10^{16} NP1:ϕ_s328.00000°, δ49.00000°, λ38.00000°. NP2:ϕ_s211.00000°, δ62.00000°, λ133.00000°. Principal axes: T 6.3700, Plg52.0000°, Azm172.0000°; N 0.5200, Plg37.0000°, Azm7.0000°; P -6.8900, Plg7.0000°, Azm272.0000°; Data Used: II IU IC G CN.*

BJI ***18*** *18:46:46.1, 4°.17S×153°.22E, h79km, mB5.0/35, mb4.8/48, Ms4.7/34, Ms7 4.4/32*

ISC 18 18:46:44.8±0.8, 4°.69S±0°.04×153°.34E±0°.04, h78km±7km, h83km±2.0km: pP-P, n411, σ1§10/210, mb5.0/90, 12C-17D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.72**	**232**	*e*Pn	**Pn**	**18 48 33.4**	**-1.3**
	78nm,0.6s						
PMG				*e*Sn	**Sn**	**18 49 46.7**	**-14**
PMG	**Port Moresby**	**7.72**	**232**	*e*P	**Pn**	**18 48 33.4**	**-1.2**
PMG				pmax	pmax		
	comp=Z,78nm,0.6s						
PMG	**Port Moresby**	**7.72**	**232**	P	**Pn**	**18 48 34.8**	**+0.2**
	comp=Z,6μmcomp=Z,172nm,0.8s						
PMG				S	**Sn**	**18 49 48.2**	**-12**
	comp=Z,6μmcomp=Z,172nm,0.8s						
HNR	**Honiara**	**8.07**	**126**	Pn	**Pn**	**18 48 39.9**	**+0.5**
	comp=Z,70nm,0.3s,baz=219,slow=6.1,SNR=37						
HNR				Sn	**Sn**	**18 50 09.8**	**+0.7**
	baz=343,slow=20,SNR=2.0						
HNR	**Honiara**	**8.07**	**126**	*e*Pn	**Pn**	**18 48 39.9**	**+0.5**
	comp=Z,970nm,1.0s						
HNR	**Honiara**	**8.07**	**126**	*e*P	**Pn**	**18 48 39.9**	**+0.5**
HNR				pmax	pmax		
	comp=Z,970nm,1.0s						
MMPI	**Merauke**	**13.41**	**253**	P	**Pn**	**18 49 59.4**	**+7.4**
	comp=Z,451nm,1.1s						
COEN	**Coen**	**13.62**	**227**	*e*Pn	**Pn**	**18 49 54.7**	**+0.1**
	comp=Z,190nm,0.8s						
COEN	**Coen**	**13.62**	**227**	P	**Pn**	**18 49 56.0**	**+1.4**
	comp=Z,138nm,0.9s						
CTA	**Charters Tower**	**16.79**	**204**	Pn	**Pn**	**18 50 34.8**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=30,slow=13,SNR=18						
CTA				PcP	PcP	18 55 20.8	+1.4
	comp=Z,0.3nm,0.3s,baz=344,slow=5.5,SNR=3.9						
CTA	**Charters Tower**	**16.79**	**204**	*e*P	**Pn**	**18 50 34.9**	**-0.3**
	comp=Z,21nm,0.8s						
CTA				*e*S	**S**	**18 53 39.3**	**-8.2**
CTA				*e*PCP	PcP	18 55 20.7	+1.4
CTA	**Charters Tower**	**16.79**	**204**	Pn	**Pn**	**18 50 34.8**	**-0.4**
CTA				PcP	P

comp=Z,55nm,0.7s,mb5.5
FORT Forrest 35.22 220 *e*P **P 18 53 30.6 -1.2**
comp=Z,93nm,0.9s,mb5.6
MYLDM Lahad Datu 36.16 285 P **P 18 53 40.0 0.0**
comp=Z,34nm,1.1s,mb5.2
MBWA Marble Bar 36.50 240 *e*P **P 18 53 42.2 -0.7**
comp=Z,20nm,0.6s,mb5.2
MBWA Marble Bar 36.50 240 P **P 18 53 44.3 +1.4**
comp=Z,37nm,0.8s,mb5.3
MOO Moorlands 37.99 187 *e*P **P 18 53 57.0 +1.8**
MOO *e*PCP PcP 18 56 09.9 +0.5
JOW Kunigami 39.62 324 P **P 18 54 09.6 +0.6**
comp=Z,24nm,0.7s,mb5.1,baz=145,slow=11,SNR=8.7
JHJ Hachijo jima 2 39.74 342 LR LR 19 07 46.4
comp=Z,276nm,20.3s,baz=111,slow=32
URZ Urewera 39.81 150 P **P 18 54 11.3 +0.9**
comp=Z,21nm,0.7s,mb5.1,baz=311,slow=6.3,SNR=11
URZ Urewera 39.81 150 *e*P **P 18 54 11.5 +1.0**
SBUM Sibu 41.70 279 P **P 18 54 27.1 +0.7**
comp=Z,14nm,1.1s,mb4.6
RPZ Rata Peaks 41.90 161 P **P 18 54 28.0 +0.5**
comp=Z,138nm,0.8s,mb5.8,baz=357,slow=1.6,SNR=40
RPZ Rata Peaks 41.90 161 *e*P **P 18 54 26.8 -0.7**
comp=Z,177nm,0.9s,mb5.8
YULB Yu-li 41.91 313 *e*P **P 18 54 27.7 -0.2**
comp=Z,18nm,0.7s,mb4.9
SSLB Suanglung 42.40 313 P **P 18 54 30.2 -1.8**
comp=Z,21nm,0.8s,mb4.9
YHNB Yeheng 42.64 315 *e*P **P 18 54 35.2 +1.3**
comp=Z,48nm,0.9s,mb5.2
KLBR Kellerberrin 42.78 227 *e*P **P 18 54 33.7 -1.2**
comp=Z,29nm,1.1s,mb4.9
MJAR Matsushiro Arr 43.39 342 P **P 18 54 38.2 -1.5**
comp=Z,3.1nm,0.8s,mb4.1,baz=175,slow=10.0,SNR=9.5
MJAR PcP PcP 18 56 26.3 -0.7
comp=Z,2.8nm,0.9s,baz=173,slow=3.5,SNR=5.2
MJAR ScP ScP 19 00 15.4 +3.9
comp=Z,3.0nm,1.1s,baz=179,slow=5.5,SNR=5.4
MJAR LR LR 19 10 30.4
comp=Z,265nm,22.0s,baz=195,slow=33
MJAR Matsushiro Arr 43.39 342 P **P 18 54 38.2 -1.5**
MJAR PcP PcP 18 56 26.3 -0.7
MJAR ScP ScP 19 00 15.4 +3.9
MJAR LR LR 19 10 30.4
MJAR Matsushiro Arr 43.39 342 P **P 18 54 38.2 -1.5**
MJAR 18 56 26.3
MAT Matsushiro 43.39 342 P **P 18 54 37.8 -1.9**
KSM Kuching 43.43 277 *e*P **P 18 54 39.9 -0.6**
comp=Z,11nm,0.8s,mb4.6
KSM Kuching 43.43 277 P **P 18 54 41.5 +1.1**
comp=Z,18nm,0.9s,mb4.8
SSE Sheshan 46.99 321 P **P 18 55 06.8 -1.5**
SSE S **S 19 01 55.6 +1.4**
SSE pmax pmax
comp=Z,38nm,0.6s,mb5.3
SSE pmax pmax
comp=Z,140nm,5.2s
SSE LR LR
comp=N,190nm,31.7s
SSE LR LR
comp=E,230nm,31.5s
SSE LR LR
comp=Z,360nm,28.8s
KSRS Korea Array 48.15 333 P **P 18 55 16.9 -0.3**
comp=Z,9.6nm,1.0s,mb4.6,baz=153,slow=9.1,SNR=27
KSRS ScP ScP 19 00 36.2 +4.8
comp=Z,4.3nm,1.0s,baz=134,slow=5.4,SNR=9.1
KSRS LR LR 19 11 13.6
comp=Z,177nm,21.6s,baz=153,slow=31
INCN Inchon 48.77 332 *e*P **P 18 55 22.1 +0.2**
comp=Z,17nm,1.4s,mb4.8
QIZ Qiongzhong 48.88 300 P **P 18 55 22.1 -1.0**
QIZ pP pP 18 55 41.9 -0.5
QIZ S **S 19 02 20.0 -1.3**
QIZ pmax pmax
comp=Z,5.0nm,1.6s,mb4.2
QIZ pmax pmax
comp=Z,62nm,8.6s
QIZ LR LR
comp=N,180nm,23.1s
QIZ LR LR
comp=E,150nm,22.8s
QIZ LR LR
comp=Z,600nm,23.6s
NJ2 Nanjing 49.10 320 *e*P **P 18 55 24.8 +0.2**
NJ2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
NJ2 pmax pmax
comp=Z,190nm,3.7s
NJ2 LR LR
comp=N,120nm,13.8s
NJ2 LR LR
comp=E,150nm,16.6s
NJ2 LR LR
comp=Z,150nm,14.3s
ASAJ Asahikawa 49.53 350 P **P 18 55 26.9 -0.7**
comp=Z,8.0nm,0.9s,mb4.7,baz=168,slow=19,SNR=3.9
SDSI Sungai Dareh 51.97 272 P **P 18 55 46.0 -0.6**
comp=Z,15nm,0.8s,mb5.1
YSS Yuzh-Sakhalins 52.26 351 *e*P **P 18 55 48.0 -0.1**
PPI Padang Panjang 53.05 273 P **P 18 55 52.7 -1.8**
MDJ Mudanjiang 53.51 339 P **P 18 55 57.3 0.0**
MDJ pP pP 18 56 17.0 +0.1
MDJ sP sP 18 56 26.6 +0.9
MDJ ScP ScP 19 00 53.3 -1.0
MDJ PcS PcS 19 01 02.3 +0.1
MDJ S **S 19 03 24.1 -0.1**
MDJ pmax pmax
comp=Z,13nm,1.4s,mb4.8
MDJ LR LR
comp=N,190nm,25.4s
MDJ LR LR
comp=E,110nm,30.7s
MDJ LR LR
comp=Z,280nm,28.1s
MDJ Mudanjiang 53.51 339 *e*P **P 18 55 57.9 +0.6**
CN2 Changchun 54.42 335 *e*P **P 18 56 04.0 0.0**
CN2 *ep*P pP 18 56 27.8 +4.2
CN2 *e*S **S 19 03 34.3 -2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,200nm,17.0s
GYA Guiyang 54.76 307 P **P 18 56 07.8 +1.0**
GYA pP pP 18 56 28.5 +2.1
GYA sP sP 18 56 40.0 +4.8
GYA PP PP 18 58 12.3 +2.0
GYA ScP ScP 19 00 58.9 -1.3
GYA S **S 19 03 40.0 -1.8**
GYA sS sS 19 04 16.5 +1.2
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,120nm,5.7s
GYA LR LR
comp=N,680nm,18.1s
GYA LR LR
comp=E,510nm,19.6s
GYA LR LR
comp=Z,720nm,17.8s
BJI Beijing 56.10 326 P **P 18 56 16.8 +0.7**
BJI PP PP 18 58 22.9 +0.9
BJI S **S 19 04 00.9 +1.7**
BJI pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BJI pmax pmax
comp=Z,77nm,3.6s
BJI LR LR
comp=N,230nm,18.5s
BJI LR LR
comp=E,310nm,20.0s
BJI LR LR
comp=Z,360nm,28.5s
KLR Kul'dur 56.89 343 *e*P **P 18 56 17.4 -4.1**
XAN Xi'an 56.91 316 P **P 18 56 22.8 +0.8**
XAN pmax pmax
comp=Z,2.0nm,1.1s,mb4.1
PPT Papeete 57.24 108 *e*S **S 19 04 25.2 +10**
comp=Z,223nm,25.8s
PPT *e*LR LR 19 13 21.5
comp=Z,207nm,24.5s
KMI Kunming 57.37 304 P **P 18 56 25.3 -0.1**
KMI pP pP 18 56 47.5 +2.2
KMI sP sP 18 56 58.1 +4.1
KMI PP PP 18 58 34.8 +1.1
KMI S **S 19 04 16.9 +0.4**
KMI sS sS 19 04 52.3 +2.0
KMI SS SS 19 08 07.5 +0.1
KMI pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
KMI pmax pmax
comp=Z,64nm,5.8s
KMI LR LR
comp=N,150nm,20.9s
KMI LR LR
comp=E,290nm,21.4s
KMI LR LR
comp=Z,450nm,28.1s
PET Petropavlovsk 57.67 4 *e*P **P 18 56 34.8 +7.9**
PET *e*S **S 19 04 29.6 +10**
PET pmax pmax
comp=Z,100nm,19.1s
PET MLR MLR
comp=Z,200nm,12.0s
PET MLR MLR
comp=Z,400nm,13.0s
PETK Petropavlovsk- 57.70 3 P **P 18 56 27.7 +0.6**
comp=Z,14nm,1.1s,mb4.9,baz=134,slow=4.3,SNR=6.6
PETK LR LR 19 17 00.2
comp=Z,120nm,21.4s,baz=349,slow=32
PETK Petropavlovsk- 57.70 3 P **P 18 56 27.7 +0.6**
TBI Tubuai 58.11 115 *e*LQ 19 11 25.5
comp=Z,896nm,30.0s
TBI *e*LR LR 19 13 56.4
comp=Z,730nm,29.2s
CM31 Chiang Mai Arr 58.32 295 *e*P **P 18 56 33.7 +1.5**
comp=Z,2.0nm,0.6s,mb4.3
CMAR Chiang Mai Arr 58.32 295 P **P 18 56 32.8 +0.6**
comp=Z,1.9nm,0.8s,mb4.2,baz=115,slow=5.7,SNR=13
CMAR Chiang Mai Arr 58.32 295 P **P 18 56 32.8 +0.6**
CD2 Chengdu 59.08 310 *e*P **P 18 56 38.1 +0.9**
CD2 pP pP 18 56 58.3 +1.2
CD2 sP sP 18 57 08.3 +2.5
CD2 PP PP 18 58 51.3 +2.6
CD2 S **S 19 04 38.3 -0.2**
CD2 sS sS 19 05 11.5 -0.9
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,40nm,5.2s
CD2 LR LR
comp=N,390nm,25.2s
CD2 LR LR
comp=E,430nm,24.0s
CD2 LR LR
comp=Z,490nm,24.0s
HHC Hu-ho-hao-te 59.27 324 *e*P **P 18 56 40.3 +1.9**
HHC PcP PcP 18 57 26.5 +0.7
HHC PP PP 18 58 55.3 +5.1
HHC ScP ScP 19 01 17.1 -2.7
HHC S **S 19 04 41.3 +0.6**
HHC ScS ScS 19 06 17.3 -4.1
HHC pmax pmax
comp=Z,11nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,96nm,5.6s
HHC LR LR
comp=N,190nm,15.5s
HHC LR LR
comp=E,250nm,13.9s
HHC LR LR
comp=Z,370nm,14.2s
LZH Lanzhou 61.53 316 *e*P **P 18 56 56.5 +2.6**
LZH pP pP 18 57 15.6 +1.7
LZH *e*S **S 19 05 10.5 +0.8**
LZH sS sS 19 05 44.5 +0.7
LZH pmax pmax
comp=Z,26nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,83nm,4.6s
GTA Gaotai 65.94 317 *e*P **P 18 57 24.5 +1.7**
GTA pP pP 18 57 44.4 +1.3
GTA sP sP 18 57 53.3 +1.6
GTA S S 19 06 08.5 +4.1
GTA sS sS 19 06 39.4 +0.5
GTA SS SS 19 10 17.9 -3.1
GTA pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
GTA pmax pmax
comp=Z,120nm,5.6s
GTA LR LR
comp=N,170nm,14.6s
GTA LR LR
comp=E,160nm,15.8s
GTA LR LR
comp=Z,140nm,16.5s
TAOE Nuku Hiva Isla 66.11 98 *e*LR LR 19 17 22.3
comp=Z,380nm,31.7s
ULN Ulaanbaatar 66.19 328 *e*P **P 18 57 25.1 +0.9**
comp=Z,15nm,1.0s,mb4.8
ULN Ulaanbaatar 66.19 328 *e*P **P 18 57 25.2 +1.0**
ULN pmax pmax
comp=Z,15nm,1.0s,mb4.8
ULN Ulaanbaatar 66.19 328 P **P 18 57 25.3 +1.1**
SONM Songino Array 66.52 328 P **P 18 57 26.9 +0.6**
comp=Z,3.4nm,0.7s,mb4.3,baz=134,slow=4.8,SNR=15
SONM ScP 19 01 56.4
comp=Z,1.1nm,0.8s,baz=132,slow=6.0,SNR=3.7
SONM LR LR 19 26 24.6
comp=Z,199nm,19.8s,baz=120,slow=36
SONM Songino Array 66.52 328 P **P 18 57 26.9 +0.6**
SHL Shillong 66.72 300 *e*PKP **P 18 57 32.0 +3.9**
CASY Casey 68.28 197 *e*P **P 18 57 37.6 +0.5**
LSA Lhasa 68.62 304 *e*P **P 18 57 34.8 -5.2**
LSA Lhasa 68.62 304 *e*P **P 18 57 37.6 -2.4**
comp=Z,6.4nm,0.8s,mb4.5
LSA Lhasa 68.62 304 *e*P **P 18 57 37.6 -2.4**
LSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
YAK Yakutsk 68.97 348 *e*P **P 18 57 41.7 +0.3**
comp=Z,15nm,1.0s,mb4.8
YAK Yakutsk 68.97 348 *e*P **P 18 57 41.1 -0.3**
YAK *e**PP pP 18 58 07.1 +5.3
YAK *e* 19 00 11.1
YAK *e*PPP 19 01 50.5
YAK *e*S S 19 06 36.5 -3.3
YAK *e**SS sS 19 07 15.2 +0.7
YAK *e* 19 07 33.0
YAK *e*SS SS 19 11 01.2 -5.8
YAK *e*SSS 19 14 03.8
YAK pmax pmax
comp=Z,15nm,1.0s,mb4.8
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=Z,42nm,2.5s,mb4.8
YAK pmax pmax
comp=E,26nm,2.1s
YAK pmax pmax
comp=N,63nm,2.5s
YAK smax
comp=N,67nm,2.8s
YAK smax
comp=E,61nm,2.8s
ZAK Zakamensk 69.68 328 *e*P **P 18 57 45.6 -0.5**
ZAK pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
TAPN Taplejung 70.81 301 *e*P **P 18 57 55.5 +2.0**
comp=Z,34nm,1.0s,mb5.1
ODAN Odare 70.95 300 *e*P **P 18 57 56.9 +2.5**
comp=Z,26nm,0.6s,mb5.2
RKT Rikitea 71.33 113 *e*LR LR 19 19 49.4
comp=Z,646nm,32.2s
GUN Gumba 72.53 301 *e*P **P 18 58 04.7 +0.9**
comp=Z,25nm,0.7s,mb5.2
KKN Kakani 73.01 301 *e*P **P 18 58 07.6 +1.0**
comp=Z,13nm,0.5s,mb5.0
KKN Kakani 73.01 301 *e*P **P 18 58 07.6 +1.0**
KKN pmax pmax
comp=Z,13nm,0.5s,mb5.0
DMN Daman 73.11 301 *e*P **P 18 58 08.2 +0.9**
comp=Z,38nm,0.7s,mb5.3
GKN Gorkha 73.61 301 *e*P **P 18 58 10.8 +0.6**
comp=Z,28nm,0.8s,mb5.0
DANN Dangsing 74.45 301 *e*P **P 18 58 15.1 0.0**
comp=Z,24nm,0.8s,mb5.0
WMQ Urumqi 76.03 317 P **P 18 58 25.0 +1.2**
WMQ pP pP 18 58 45.0 +0.5
WMQ sP sP 18 58 54.0 +1.0
WMQ PP PP 19 01 18.0 +2.5
WMQ S S 19 08 01.0 0.0
WMQ ScS ScS 19 08 29.0 -2.7
WMQ pmax pmax
comp=Z,18nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,190nm,6.0s
WMQ LR LR
comp=N,200nm,20.0s
WMQ LR LR
comp=E,160nm,20.0s
WMQ LR LR
comp=Z,190nm,20.0s
TIXI Tiksi 77.86 352 *e*P **P 18 58 33.2 -0.3**
TIXI pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
MCK McKinley 80.55 22 *e*P **P 18 58 47.2 -1.1**
comp=Z,45nm,1.0s,mb5.2
MCK McKinley 80.55 22 *e*P **P 18 58 47.3 -1.0**
MCK pmax pmax
comp=Z,45nm,1.0s,mb5.2
MK31 Makanchi Array 80.60 319 *e*P **P 18 58 49.2 +0.3**
MK31 Makanchi Array 80.60 319 P **P 18 58 49.2 +0.3**
MK31 pmax pmax
comp=Z,36nm,1.2s,mb5.1
MKAR Makanchi Array 80.60 319 P **P 18 58 49.4 +0.4**
comp=Z,14nm,0.8s,mb4.8,baz=101,slow=5.7,SNR=63
MKAR LR LR 19 35 51.3
comp=Z,126nm,18.2s,baz=180,slow=37
MKAR Makanchi Array 80.60 319 *ce*P **P 18 58 49.4 +0.5**
MKAR pmax pmax
comp=Z,14nm,0.8s
ZAA0 Zalesovo Array 81.36 326 *e*P **P 18 58 52.2 -0.6**
ZALV Zalesovo Beam 81.36 326 P **P 18 58 52.4 -0.4**
comp=Z,3.4nm,0.4s,mb4.5,baz=104,slow=6.3,SNR=29
ZALV LR LR 19 32 14.3
comp=Z,113nm,21.0s,baz=245,slow=34
ZALV Zalesovo Beam 81.36 326 P **P 18 58 52.4 -0.4**
ZALV LR LR 19 32 14.3
ZALV Zalesovo Beam 81.36 326 P **P 18 58 52.4 -0.4**
COLA College 81.55 22 *e*P **P 18 58 52.9 -0.7**
comp=Z,15nm,0.9s,mb4.8
COLA College 81.55 22 *e*P **P 18 58 52.9 -0.7**
COLA pmax pmax
comp=Z,15nm,0.9s,mb4.8
ILAR Eielson Array 81.85 22 P **P 18 58 53.8 -1.4**
comp=Z,9.1nm,1.0s,mb4.5,baz=256,slow=4.8,SNR=36
ILAR PKKPbc PKKPbc 19 17 26.1 -2.9
comp=Z,1.0nm,0.9s,baz=343,slow=0.8,SNR=9.2
ILAR PKP2bc 19 25 25.9
comp=Z,0.8nm,1.1s,baz=19,slow=4.9,SNR=4.8
ILAR LR LR 19 35 06.7
comp=Z,154nm,18.9s,baz=118,slow=36
ILAR Eielson Array 81.85 22 P **P 18 58 53.8 -1.4**
ILAR PKKPbc PKKPbc 19 17 26.1 -2.9
ILAR ⇑*e* 19 25 25.9
ILAR LR LR 19 35 06.7
ILAR Eielson Array 81.85 22 P **P 18 58 53.8 -1.4**
NVS Novosibirsk 82.53 327 *e*P **P 18 58 58.1 -0.8**
NVS *e*S S 19 09 11.4 +1.9
NVS pmax pmax
comp=N,4.0nm,1.4s
NVS pmax pmax
comp=E,11nm,1.4s
NVS pmax pmax
comp=Z,20nm,1.4s,mb4.8
NVS smax
comp=N,4.0nm,1.5s
NVS smax
comp=E,12nm,2.2s
KSH Kashi 83.27 311 *e*P **P 18 59 05.8 +2.7**
KSH *ep*P pP 18 59 26.3 +2.2
KSH *es*P sP 18 59 34.6 +2.0
KSH *e*PP PP 19 02 19.3 +3.5
KSH *e*SKS 19 09 16.6
KSH *es*S sS 19 09 52.6 -0.9
KSH *e*SS SS 19 14 45.6 +1.3
KSH pmax pmax
comp=Z,17nm,1.1s,mb4.8
KSH pmax pmax
comp=Z,380nm,4.1s
KSH LR LR
comp=N,340nm,6.0s
KSH LR LR
comp=E,490nm,5.4s
KSH LR LR
comp=Z,450nm,20.9s
KURK Kurchatov 84.01 322 *e*P **P 18 59 06.5 -0.2**
KURK Kurchatov 84.01 322 *c i*P **P 18 59 06.3 -0.4**
KURK pmax pmax
comp=Z,45nm,1.2s,mb5.2
KURK Kurchatov 84.01 322 P **P 18 59 06.4 -0.3**
comp=Z,178nm,1.0s,mb5.8,SNR=24
EGAK Eagle 84.04 23 *e*P **P 18 59 06.3 -0.2**
comp=Z,8.6nm,1.0s,mb4.5
EGAK *ep*P pP 18 59 28.8 +1.3
TKM2 Tokmak 2 84.24 314 P **P 18 59 09.1 +1.0**
SNR=24
TKM2 Tokmak 2 84.24 314 *e*P **P 18 59 08.9 +0.9**
comp=Z,22nm,0.9s,mb5.0
TKM2 Tokmak 2 84.24 314 *e*P **P 18 59 08.9 +0.9**
TKM2 pmax pmax
comp=Z,22nm,0.9s,mb5.0
VIB Van Inlet 84.31 36 T 20 32 17.9
SNR=108
DAWY Dawson 84.46 24 *e*P **P 18 59 09.5 +0.9**
DAWY *ep*P pP 18 59 31.7 +2.0
KBK Karagaybulak 84.66 313 P **P 18 59 11.6 +1.5**
SNR=17
CHMS Chumysh 84.87 314 P **P 18 59 12.0 +0.9**
SNR=20
FRU Bishkek 84.93 314 *e*P **P 18 59 11.0 -0.5**
AAK Ala-Archa 84.98 313 P **P 18 59 14.0 +2.3**
SNR=11
USP Ospenovka 85.10 314 P **P 18 59 13.0 +0.7**
SNR=37
QSPA South Pole Qui 85.27 180 *e*P **P 18 59 13.4 +0.9**
comp=Z,156nm,1.1s,mb5.8
AML Almayashu 85.47 313 P **P 18 59 16.5 +2.3**
SNR=16
AML Almayashu 85.47 313 *e*P **P 18 59 15.8 +1.6**
comp=Z,7.1nm,1.0s,mb5.5
EKS2 Erkin-Say 85.51 313 P **P 18 59 15.5 +1.2**
SNR=22
EKS2 Erkin-Say 85.51 313 *e*P **P 18 59 15.2 +0.9**
comp=Z,30nm,1.0s,mb5.2
EKS2 *e* 18 59 26.1
MAW Mawson 85.88 203 P **P 18 59 15.8 +0.1**
comp=Z,9.7nm,0.5s,mb5.0,baz=67,slow=5.6,SNR=70
MAW LR LR 19 34 05.7
comp=Z,166nm,20.5s,baz=98,slow=33
MAW Mawson 85.88 203 *e*P **P 18 59 15.8 +0.1**
comp=Z,8.6nm,0.5s,mb4.9
MAW Mawson 85.88 203 *e*P **P 18 59 15.6 -0.1**
comp=Z,5.2nm,1.0s,mb4.4
MAW Mawson 85.88 203 *e*P **P 18 59 15.6 -0.1**
MAW pmax pmax
comp=Z,5.0nm,1.0s
BBB Bella Bella 86.68 37 LR LR 19 30 06.2
comp=Z,103nm,20.0s,baz=88,slow=30
DLBC Dease Lake 87.01 31 LR LR 19 32 23.9
comp=Z,349nm,20.1s,baz=69,slow=32
DLBC Dease Lake 87.01 31 *e*P **P 18 59 21.5 +0.2**
DLBC *ep*P pP 18 59 44.6 +2.1
KBL Kabul 87.94 305 *e*P **P 18 59 25.5 -0.9**
comp=Z,4.1nm,0.8s,mb4.5
KBL Kabul 87.94 305 *e*P **P 18 59 25.5 -0.9**
KBL pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KK31 Karatay Array 87.95 313 P **P 18 59 25.8 -0.4**
KK31 pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KKAR Karatay Array 87.95 313 *e*P **P 18 59 26.3 +0.1**
comp=Z,8.0nm,0.8s,mb4.8
KKAR Karatay Array 87.95 313 *e*P **P 18 59 26.3 +0.1**
KKAR pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
INK Inuvik 88.16 21 P **P 18 59 24.5 -2.2**
comp=Z,11nm,1.1s,mb4.8,baz=207,slow=8.1,SNR=6.3
INK LR LR 19 35 07.5
comp=Z,162nm,21.2s,baz=135,slow=33

INK Inuvik 88.16 21 *eP* **P 18 59 25.5 -1.1**
comp=Z,11nm,1.0s,mb4.8
INK Inuvik 88.16 21 *eP* **P 18 59 25.5 -1.2**
INK pmax pmax
comp=Z,11nm,1.0s
YBH Yreka Blue Hor 88.58 48 LR LR 19 31 27.7
comp=Z,261nm,21.9s,baz=266,slow=30
VOSK Vostochnaya 89.08 323 P **P 18 59 29.4 -1.9**
VOSK pmax pmax
comp=Z,32nm,1.2s,mb5.2
BVAR Borovoye Array 89.47 323 P **P 18 59 32.5 -0.7**
comp=Z,37nm,0.9s,mb5.4,baz=106,slow=5.3,SNR=156
BVAR Borovoye Array 89.47 323 P **P 18 59 32.5 -0.7**
BRVK Borovoye 89.54 323 *eP* **P 18 59 32.7 -0.8**
BRVK Borovoye 89.54 323 *eP* **P 18 59 32.7 -0.8**
BRVK Borovoye 89.54 323 P **P 18 59 32.5 -1.0**
comp=Z,248nm,1.1s,SNR=40
NVAR Mina Array Bea 91.59 52 P **P 18 59 43.3 -0.1**
comp=Z,1.3nm,0.9s,mb4.2,baz=269,slow=6.0,SNR=8.3
SYO Syowa Base 93.95 199 ⇑*iP* **P 18 59 52.4 -1.3**
YKA Yellowknife Ar 95.07 28 LR LR 19 36 19.7
comp=Z,23nm,21.7s,baz=255,slow=31
SVE Sverdlovsk 95.38 327⇓*eP* **P 18 59 59.1 -1.2**
SVE pmax pmax
comp=Z,17nm,1.2s,mb5.3
AB31 Akbulak array 95.74 319 *i* P **P 19 00 00.4 -1.8**
AB31 pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
ABKAR Akbulak array 95.74 319 *eP* **P 19 00 00.6 -1.6**
comp=Z,7.5nm,0.9s,mb5.1
ARU Arti 96.53 326 *eP* **P 19 00 03.8 -1.8**
comp=Z,15nm,0.9s,mb5.4
ARU Arti 96.53 326*d iP* **P 19 00 03.9 -1.7**
ARU 19 03 59.2
ARU S SKSac 19 10 33.1 -2.2
ARU pmax pmax
comp=Z,15nm,1.0s,mb5.4
ARU Arti 96.53 326 P **P 19 00 03.6 -2.0**
comp=Z,96nm,1.1s,mb6.1,SNR=6.7
AKTO Aktyubinsk 96.98 320 P **P 19 00 05.4 -2.4**
AKTO pmax pmax
comp=Z,2.0nm,1.1s,mb4.5
PDAR Pinedale Array 98.37 48 LR LR 19 40 44.2
comp=Z,197nm,18.3s,baz=258,slow=33
PRGR Permogore 102.48 332⇓*iP* Pdif 19 00 29.2 -3.1
PRGR *e* 19 11 04.1
PRGR pmax pmax
comp=Z,18nm,1.0s
TXAR Lajitas Array 103.60 61 PKiKP PKiKP 19 04 56.4 +0.3
comp=Z,0.1nm,0.3s,baz=261,slow=3.6,SNR=2.1
KLMR Klimovskoe 105.54 332 *eP* Pdif 19 00 42.5 -3.4
KLMR pmax pmax
comp=Z,13nm,1.1s
ARCES ARCESS Array B 106.92 343 Pdiff Pdif 19 00 50.0 -2.0
comp=Z,3.3nm,1.0s,baz=67,slow=6.9,SNR=3.1
ARCES PKiKP PKiKP 19 05 00.1 -0.9
comp=Z,1.9nm,0.8s,baz=96,slow=1.8,SNR=6.0
ARCES PKKPbc PKKPbc 19 16 19.5 -2.5
comp=Z,2.5nm,1.0s,baz=180,slow=2.4,SNR=5.2
ARCES ARCESS Array B 106.92 343 Pdif Pdif 19 00 50.0 -2.0
ARCES PKPdf PKiKP 19 05 00.1 -0.9
ARCES PKKPbc PKKPbc 19 16 19.5 -2.5
ARCES ARCESS Array B 106.92 343 P Pdif 19 00 50.0 -2.0
OBN Obninsk 108.93 327 P Pdif 19 01 03.0 +2.1
FINES FINESS Array B 111.17 336 Pdiff Pdif 19 01 09.2 -1.7
comp=Z,0.7nm,0.5s,baz=47,slow=3.9,SNR=7.9
FINES PKiKP PKiKP 19 05 09.0 -0.3
comp=Z,0.7nm,0.6s,baz=60,slow=3.9,SNR=4.0
FINES FINESS Array B 111.17 336 P Pdif 19 01 09.2 -1.7
FINES 19 05 09.0
MALT Malatya 112.36 310 ⇑PKIKP PKiKP 19 05 13.3 +1.1
AKASG Malin Array Be 114.72 325 PKP PKiKP 19 05 15.9 -0.4
comp=Z,5.6nm,0.7s,baz=65,slow=2.2,SNR=20
AKASG Malin Array Be 114.72 325 PKIKP PKiKP 19 05 15.9 -0.4
BRTR Keskin Array B 115.63 312 PKP PKPdf 19 05 18.3 -0.1
comp=Z,3.9nm,0.9s,baz=135,slow=2.2,SNR=8.1
BRTR Keskin Array B 115.63 312 PKIKP PKPdf 19 05 18.3 -0.1
NB2 NORSAR Subarra116.99 340 PKPdf PKPdf 19 05 20.6 +0.2
comp=Z,1.1nm,0.8s,baz=44,slow=1.9
NOA NORSAR Array B116.99 340 PKP PKPdf 19 05 21.0 +0.6
comp=Z,1.2nm,0.6s,baz=48,slow=2.1,SNR=4.7
NOA NORSAR Array B116.99 340 PKIKP PKPdf 19 05 21.0 +0.6
BUR08 Bucovina Ar. S 118.43 323 *e*PKPdf PKPdf 19 05 24.6 +1.1
BURAR Bucovina Array 118.43 323 ⇑PKIKP PKPdf 19 05 24.7 +1.1
MLR Muntele Rosu 118.92 320 ⇓PKIKP PKPdf 19 05 24.9 +0.3
VOIR 119.51 321 ⇑PKIKP PKPdf 19 05 27.5 +1.8
KOLS Kolonicke sedl 119.53 325 *e*PKP PKPdf 19 05 26.5 +0.9
KOLS Kolonicke sedl 119.53 325 *e*PKIKP PKPdf 19 05 26.5 +0.9
PLCA Paso Flores 119.54 143 PKP PKPdf 19 05 26.1 +0.1
comp=Z,0.7nm,0.4s,baz=237,slow=12,SNR=6.1
PLCA Paso Flores 119.54 143 PKIKP PKPdf 19 05 26.1 +0.1
CRVS Cervenica-Dubn 120.00 325 *e*PKP PKPdf 19 05 27.5 +1.0
CRVS Cervenica-Dubn 120.00 325 *e*PKIKP PKPdf 19 05 27.5 +1.0
BOSA Boshof 120.13 233 PKP PKPdf 19 05 28.6 +1.2
comp=Z,5.8nm,1.0s,baz=137,slow=13,SNR=9.5
BOSA Boshof 120.13 233 PKIKP PKPdf 19 05 28.6 +1.2
OJC Ojcow 120.22 327 *e*PKIKP PKPdf 19 05 26.7 -0.2
DRGR 120.33 323 ⇓PKIKP PKPdf 19 05 27.8 +0.6
NIE Niedzica 120.37 326 *e*PKIKP PKPdf 19 05 28.6 +1.4
KECS Kecovo 120.77 325 *e*PKP PKPdf 19 05 28.5 +0.5
KECS Kecovo 120.77 325 *e*PKIKP PKPdf 19 05 28.5 +0.5
GZR Gura Zlata 120.95 321 ⇓PKIKP PKPdf 19 05 29.5 +1.0
OKC Ostrava-Krasne 121.31 328 *e*PKIKP PKPdf 19 05 29.6 +0.6
OKC Ostrava-Krasne 121.31 328 *e*PKPdf PKPdf 19 05 29.6 +0.6
PSZ Piszkesteto 121.41 325 *e*PKPdf PKPdf 19 05 30.0 +0.7
PSZ Piszkesteto 121.41 325 ⇑PKIKP PKPdf 19 05 30.1 +0.8
BZS Buzias 121.56 322 ⇓PKIKP PKPdf 19 05 30.1 +0.4
MORC Moravsky Berou 121.67 328 ⇓PKIKP PKPdf 19 05 30.5 +0.8
VYHS Vyhne 121.69 326 *e*PKP PKPdf 19 05 30.0 +0.2
VYHS Vyhne 121.69 326 *e*PKIKP PKPdf 19 05 30.0 +0.2
VTS Vitosha 121.95 318 ⇑PKIKP PKPdf 19 05 31.4 +0.9
DPC Dobruska-Polom 121.97 329 *e*PKIKP PKPdf 19 05 31.0 +0.7
DPC Dobruska-Polom 121.97 329 *e*PKPdf PKPdf 19 05 31.0 +0.7
UPC Upice 122.03 329 *e*PKIKP PKPdf 19 05 31.2 +0.8
UPC Upice 122.03 329 *e*PKPdf PKPdf 19 05 31.2 +0.8
BSEG Bad Segeberg 122.43 335 *e*PKPdf PKPdf 19 05 32.3 +1.2
BSEG Bad Segeberg 122.43 335 *e*PKIKP PKPdf 19 05 32.3 +1.2
VRAC Vranov 122.45 328 ⇑PKIKP PKPdf 19 05 31.5 +0.3
PVCC Panska Ves 122.75 330 *e*PKIKP PKPdf 19 05 32.7 +0.9
PVCC Panska Ves 122.75 330 *e*PKPdf PKPdf 19 05 32.7 +0.9
BRG Berggiesshubel 122.84 331 *e*PKPdf PKPdf 19 05 32.8 +0.9
BRG Berggiesshubel 122.84 331⇓*iP*KP PKPdf 19 05 32.7 +0.8
comp=Z,15nm,1.2s
TREC Trest 123.04 328 *e*PKIKP PKPdf 19 05 33.1 +0.7
TREC Trest 123.04 328 *e*PKPdf PKPdf 19 05 33.1 +0.7
PKSM Moragy 123.04 324 ⇓PKIKP PKPdf 19 05 32.7 +0.2
FBE Freiberg 123.09 331 *e*PKPdf PKPdf 19 05 33.6 +1.2
PRU Pruhonice 123.10 330 *e*PKIKP PKPdf 19 05 33.8 +1.3
PRU Pruhonice 123.10 330 *e*PKPdf PKPdf 19 05 33.8 +1.3
NRDL Niedersach Rie 123.53 334 *e*PKPdf PKPdf 19 05 34.3 +1.1
CONA Conrad Observa 123.65 327⇓*iP*KiKP PKiKP 19 05 33.7 -0.1
comp=Z,13nm,1.4s,SNR=7.2
NEUB Neuenburg 123.66 332 *e*PKPdf PKPdf 19 05 34.3 +0.8
KRUS Krusevo 123.80 318 *e*PKP PKPdf 19 05 33.6 -0.5
TANN Tannenbergstha 123.86 331 *e*PKPdf PKPdf 19 05 34.8 +0.9
CLZ Clausthal 123.87 333 *e*PKPdf PKPdf 19 05 35.2 +1.3
CLZ Clausthal 123.87 333 *e*PKIKP PKPdf 19 05 35.2 +1.3
WERD Werda 123.91 331 *e*PKPdf PKPdf 19 05 34.8 +0.8
GUNZ Gunzen 123.95 331 *e*PKPdf PKPdf 19 05 35.1 +1.0
NKC Novy Kostel 123.98 331 *e*PKIKP PKPdf 19 05 35.0 +0.8
NKC Novy Kostel 123.98 331 *e*PKPdf PKPdf 19 05 35.0 +0.8
WERN Wernitzgruen 123.98 331 *e*PKPdf PKPdf 19 05 35.3 +1.2
MOX Moxa 124.11 332 *e*PKP PKPdf 19 05 35.3 +0.9
comp=Z,17nm,1.5s
MOX Moxa 124.11 332 *e*PKIKP PKPdf 19 05 35.3 +0.9
KHC Kasperske Hory 124.12 329 *e*PKPdf PKPdf 19 05 35.2 +0.7
ARSA Arzberg 124.23 326⇓*iP*KPdf PKPdf 19 05 34.5 -0.2
comp=Z,6.5nm,1.1s
GEC2 GERESS Array S 124.24 329 *e*PKPdf PKPdf 19 05 35.5 +0.8
GEC2 GERESS Array S 124.24 329 *e*PKIKP PKPdf 19 05 35.5 +0.8
GERES GERESS Array B 124.24 329 PKP PKPdf 19 05 35.3 +0.6
comp=Z,7.6nm,0.8s,baz=48,slow=2.0,SNR=44
GERES GERESS Array B 124.24 329 PKIKP PKPdf 19 05 35.3 +0.6
ROTZ Rotzenmuhle 124.40 330 *e*PKPdf PKPdf 19 05 35.8 +0.8
WET Wettzell 124.47 330 *e*PKPdf PKPdf 19 05 36.1 +1.0
WET Wettzell 124.47 330 *e*PKIKP PKPdf 19 05 36.1 +1.0
SOKA Soboth 124.84 326⇑*iP*KiKP PKiKP 19 05 36.0 -0.2
comp=Z,13nm,1.1s
GRA1 Grafenberg Arr 124.93 331 *e*PKPdf PKPdf 19 05 36.8 +0.8
GRF Grafenberg Arr 124.93 331 *e*PKPdf PKPdf 19 05 36.8 +0.8
GRF Grafenberg Arr 124.93 331 *e*PKIKP PKPdf 19 05 36.8 +0.8
GRF Grafenberg Arr 124.93 331 *e*PKIKP PKPdf 19 05 36.8 +0.8
RJOB Jochberg 125.41 328 *e*PKPdf PKPdf 19 05 37.2 +0.2

TNS Taunus Mts 125.87 333 *e*PKPdf PKPdf 19 05 38.8 +1.0
TNS Taunus Mts 125.87 333 *e*PKIKP PKPdf 19 05 38.8 +1.0
FUR Furstenfeldbru 125.92 329 *e*PKPdf PKPdf 19 05 38.7 +0.8
FUR Furstenfeldbru 125.92 329 *e*PKIKP PKPdf 19 05 38.7 +0.8
ABTA Abfaltersbach 126.18 327⇓*iP*KiKP PKiKP 19 05 38.5 -0.4
comp=Z,21nm,1.1s
WTTA Wattenberg 126.31 328⇓*iP*KiKP PKiKP 19 05 38.9 -0.3
comp=Z,33nm,1.0s
MOTA Moosalm 126.54 329⇓*iP*KiKP PKiKP 19 05 39.3 -0.3
comp=Z,24nm,0.9s,SNR=14
FETA Feichten 126.94 329⇑*iP*KiKP PKiKP 19 05 40.2 -0.2
comp=Z,30nm,1.0s,SNR=17
DAVA Damuels 127.20 329⇓*iP*KiKP PKiKP 19 05 41.1 +0.2
comp=Z,15nm,1.0s
BFO Black Forest 127.26 331 *e*PKPdf PKPdf 19 05 41.0 +0.5
BFO Black Forest 127.26 331 *e*PKIKP PKPdf 19 05 41.0 +0.5
WLF Walferdange 127.30 334 *e*PKPdf PKPdf 19 05 42.2 +1.7
GIVF Givet 127.55 335 *e*PKIKP PKPdf 19 05 42.0 +1.0
comp=Z,42nm,1.0s
GIVF Givet 127.55 335 *e*PKIKP PKPdf 19 05 42.0 +1.0
CDF Champ du Feu 127.70 332 *e*PKIKP PKPdf 19 05 41.8 +0.5
comp=Z,18nm,1.1s
CDF Champ du Feu 127.70 332 *e*PKIKP PKPdf 19 05 41.8 +0.5
BAIF Baives 127.84 335 *e*PKIKP PKPdf 19 05 42.5 +1.0
comp=Z,16nm,1.0s
BAIF Baives 127.84 335 *e*PKIKP PKPdf 19 05 42.5 +1.0
ECH Echery 127.89 332 *e*PKPdf PKPdf 19 05 41.8 +0.1
ECH Echery 127.89 332 *e*PKIKP PKPdf 19 05 41.8 +0.1
TUE Stuetta 128.02 329 *e*PKPdf PKPdf 19 05 42.5 +0.5
HINF Hinteralfeld 128.32 332 *e*PKIKP PKPdf 19 05 43.1 +0.6
comp=Z,42nm,1.1s
HINF Hinteralfeld 128.32 332 *e*PKIKP PKPdf 19 05 43.1 +0.6
HAU Haudompre 128.42 332 *e*PKIKP PKPdf 19 05 43.4 +0.7
comp=Z,24nm,0.9s
HAU Haudompre 128.42 332 *e*PKIKP PKPdf 19 05 43.4 +0.7
MEZF Maizieres J'vi 128.65 333 *e*PKIKP PKPdf 19 05 44.3 +1.2
comp=Z,26nm,1.0s
CABF La Chapelle 129.55 331 *e*PKIKP PKPdf 19 05 46.2 +1.3
comp=Z,60nm,1.2s
CABF La Chapelle 129.55 331 *e*PKIKP PKPdf 19 05 46.2 +1.3
LPL La Plagne 130.00 330 *e*PKIKP PKPdf 19 05 46.8 +1.0
LPL La Plagne 130.00 330 *e*PKPdf PKPdf 19 05 46.8 +1.0
LPG La Plagne 130.01 330 *e*PKIKP PKPdf 19 05 46.9 +1.1
LPG La Plagne 130.01 330 *e*PKPdf PKPdf 19 05 46.9 +1.1
LOR Lormes 130.11 333 *e*PKIKP PKPdf 19 05 46.9 +1.0
comp=Z,20nm,1.0s
LOR Lormes 130.11 333 *e*PKIKP PKPdf 19 05 46.9 +1.0
BNI Bardonecchia 130.35 329 *e*PKPdf PKPdf 19 05 47.6 +1.2
BNI Bardonecchia 130.35 329 *e*PKIKP PKPdf 19 05 47.7 +1.2
SSF Saint Saulge 130.42 333 *e*PKIKP PKPdf 19 05 47.5 +1.0
comp=Z,26nm,1.1s
SSF Saint Saulge 130.42 333 *e*PKIKP PKPdf 19 05 47.5 +1.0
MBDF Montbardon 130.53 329 *e*PKIKP PKPdf 19 05 47.9 +1.1
comp=Z,8.7nm,0.9s
MBDF Montbardon 130.53 329 *e*PKIKP PKPdf 19 05 47.9 +1.1
SMF Signal de Mont 130.58 333 *e*PKIKP PKPdf 19 05 47.8 +0.9
comp=Z,29nm,1.1s
SMF Signal de Mont 130.58 333 *e*PKIKP PKPdf 19 05 47.8 +0.9
AVF Avril sur Loir 130.69 333 *e*PKIKP PKPdf 19 05 47.7 +0.6
comp=Z,4.1nm,0.8s
AVF Avril sur Loir 130.69 333 *e*PKIKP PKPdf 19 05 47.7 +0.6
LDF La Druitiere 130.75 337 *e*PKIKP PKPdf 19 05 47.5 +0.4
LDF La Druitiere 130.75 337 *e*PKPdf PKPdf 19 05 47.5 +0.4
FLN La Foliniere 130.75 337 *e*PKIKP PKPdf 19 05 47.9 +0.8
FLN La Foliniere 130.75 337 *e*PKPdf PKPdf 19 05 47.9 +0.8
SBF Sospel 130.78 328 *e*PKIKP PKPdf 19 05 48.0 +0.7
comp=Z,39nm,1.1s
SBF Sospel 130.78 328 *e*PKPdf PKPdf 19 05 48.0 +0.7
PGF Pioggiola 130.78 325 *e*PKIKP PKPdf 19 05 47.9 +0.5
comp=Z,48nm,1.0s
PGF Pioggiola 130.78 325 *e*PKIKP PKPdf 19 05 47.9 +0.5
ORIF Oris-en-Rattie 130.85 330 *e*PKIKP PKPdf 19 05 48.7 +1.3
comp=Z,7.6nm,0.8s
ORIF Oris-en-Rattie 130.85 330 *e*PKIKP PKPdf 19 05 48.7 +1.3
BGF Bois d'Agland 131.10 333 *e*PKIKP PKPdf 19 05 49.1 +1.2
comp=Z,9.1nm,0.6s
BGF Bois d'Agland 131.10 333 *e*PKIKP PKPdf 19 05 49.1 +1.2
GRR Gorron 131.20 337 *e*PKIKP PKPdf 19 05 49.2 +1.2
GRR Gorron 131.20 337 *e*PKPdf PKPdf 19 05 49.2 +1.2
FRF La Foret Royal 131.40 328 *e*PKIKP PKPdf 19 05 49.4 +0.9
comp=Z,39nm,1.2s
FRF La Foret Royal 131.40 328 *e*PKPdf PKPdf 19 05 49.4 +0.9
VIVF Saint-Julien-l 131.50 330 *e*PKIKP PKPdf 19 05 50.0 +1.3
comp=Z,8.9nm,0.8s
VIVF Saint-Julien-l 131.50 330 *e*PKPdf PKPdf 19 05 50.0 +1.3
TCF Toulx Ste Croi 131.59 333 *e*PKIKP PKPdf 19 05 50.1 +1.3
comp=Z,20nm,0.8s
TCF Toulx Ste Croi 131.59 333 *e*PKIKP PKPdf 19 05 50.1 +1.3
LMR La Mourre 131.63 328 *e*PKIKP PKPdf 19 05 49.9 +0.9
comp=Z,52nm,1.1s
LMR La Mourre 131.63 328 *e*PKIKP PKPdf 19 05 49.9 +0.9
SMRF Simiane la Rot 131.67 329 *e*PKIKP PKPdf 19 05 50.5 +1.5
comp=Z,37nm,1.1s
ROSF Rostrenen 132.13 339 *e*PKIKP PKPdf 19 05 50.7 +0.9
ROSF Rostrenen 132.13 339 *e*PKPdf PKPdf 19 05 50.7 +0.9
MFF Saint Martin d 132.36 335 *e*PKIKP PKPdf 19 05 51.5 +1.3
comp=Z,50nm,1.5s
MFF Saint Martin d 132.36 335 *e*PKIKP PKPdf 19 05 51.5 +1.3
QUIF Quistinic 132.45 339 *e*PKIKP PKPdf 19 05 51.6 +1.2
QUIF Quistinic 132.45 339 *e*PKPdf PKPdf 19 05 51.6 +1.2
LASF Ste Croix 132.47 330 *e*PKIKP PKPdf 19 05 52.0 +1.5
comp=Z,24nm,1.0s
RJF Les Rejaudoux 132.65 333 *e*PKIKP PKPdf 19 05 52.2 +1.4
RJF Les Rejaudoux 132.65 333 *e*PKPdf PKPdf 19 05 52.2 +1.4
CAF Calviac 132.69 332 *e*PKIKP PKPdf 19 05 51.8 +0.9
CAF Calviac 132.69 332 *e*PKPdf PKPdf 19 05 51.8 +0.9
LFF La Frestale 133.28 333 *e*PKIKP PKPdf 19 05 53.7 +1.7
LFF La Frestale 133.28 333 *e*PKPdf PKPdf 19 05 53.7 +1.7
MTLF Montolieu 133.81 331 *e*PKIKP PKPdf 19 05 53.6 +0.5
comp=Z,22nm,1.3s
MTLF Montolieu 133.81 331 *e*PKIKP PKPdf 19 05 53.6 +0.5
LPAZ La Paz 133.99 118 PKhKP PKPpre 19 05 46.2
comp=Z,0.4nm,0.6s,baz=185,slow=7.4,SNR=1.9
LPAZ PKP PKPdf 19 05 55.3 +1.2
comp=Z,1.7nm,0.5s,baz=39,slow=4.2,SNR=7.6
LPAZ SKPbc SKPbc 19 09 19.9 +3.2
comp=Z,0.8nm,0.8s,baz=301,slow=4.4,SNR=3.7
LPAZ La Paz 133.99 118 *e*PKPdf PKPdf 19 05 55.3 +1.2
LPAZ La Paz 133.99 118 *e*PKIKP PKPdf 19 05 55.3 +1.1
KEST Kesra 134.69 318 PKhKP PKPpre 19 05 45.6
comp=Z,0.9nm,0.9s,baz=103,slow=14,SNR=2.0
KEST PKP PKPdf 19 05 54.1 -0.9
comp=Z,5.2nm,1.0s,baz=300,slow=6.5,SNR=10.0
KEST SKPbc SKPbc 19 09 22.2 +3.8
comp=Z,2.7nm,1.0s,baz=18,slow=6.4,SNR=4.9
KEST Kesra 134.69 318 *e*PKPdf PKPdf 19 05 55.5 +0.6
EPF Esparros 134.94 332 *e*PKIKP PKPdf 19 05 55.9 +0.7
comp=Z,16nm,1.1s
EPF Esparros 134.94 332 *e*PKIKP PKPdf 19 05 55.9 +0.7
ETSF Etsaut 135.46 333 *e*PKIKP PKPdf 19 05 57.5 +1.3
comp=Z,13nm,0.7s
ETSF Etsaut 135.46 333 *e*PKIKP PKPdf 19 05 57.5 +1.3
SJPF Ste Jean 135.60 333 *e*PKIKP PKPdf 19 05 57.5 +1.1
comp=Z,25nm,1.2s
SJPF Ste Jean 135.60 333 *e*PKIKP PKPdf 19 05 57.5 +1.1
SDV Santo Domingo 136.15 82 *e*PKPdf PKPdf 19 05 57.6 -0.7
CPUP Villa Florida 137.18 138 PKP PKPdf 19 06 00.2 +0.4
comp=Z,1.8nm,0.6s,baz=303,slow=1.9,SNR=7.5
CPUP Villa Florida 137.18 138 PKIKP PKPdf 19 06 00.3 +0.4
ESDC Sonseca Array 139.58 333 PKhKP PKPpre 19 05 55.5
comp=Z,0.3nm,0.5s,baz=28,slow=1.5,SNR=3.2
ESDC SKPbc SKPbc 19 09 36.8 +4.1
comp=Z,0.5nm,0.6s,baz=10,slow=7.8,SNR=3.3
MVO Moncorvo 139.64 337 *e*PKP PKPdf 19 06 02.2 -1.7
PVRL Vila Real 139.81 338 *e*PKP PKPdf 19 06 01.4 -2.8
MTE Manteigas 140.50 337 *e*PKP PKPdf 19 06 06.6 +1.1
PCBR Castelo Branco 140.95 336 *e*PKP PKPdf 19 06 06.2 -0.2
PMRV Marv??o 141.27 336 *e*PKP PKPdf 19 06 03.6 -3.3
PTOM Tomar 141.51 337 *e*PKP PKPdf 19 06 03.6 -3.8
PBAR Barrancos 142.18 334 *e*PKP PKPdf 19 06 09.1 +0.5
PBEJ Beja 142.65 335 *e*PKP PKPdf 19 06 06.0 -3.5
PCVE Castro Verde 143.06 335 *e*PKP PKPdf 19 06 09.0 -1.2
PVAQ Vaqueiros 143.12 334 *e*PKP PKPdf 19 06 10.6 +0.3
PBDV Barranco-do-Ve 143.34 335 *e*PKP PKPdf 19 06 10.6 -0.1
PTEO Sao Teotonio 143.42 336 *e*PKP PKPdf 19 06 08.2 -2.6
TAM Tamanrasset 144.07 303 *e*PKPdf PKPdf 19 06 11.7 -0.7
TAM Tamanrasset 144.07 303 *e*PKIKP PKPdf 19 06 11.7 -0.7
BDFB Brasilia 150.76 134 PKPbc PKPbc 19 06 28.5 -0.8
comp=Z,18nm,0.7s,baz=204,slow=2.0,SNR=12
TOA0 Torodi Ar. Sit 150.79 289 *e*PKPdf PKPdf 19 06 23.1 -0.5
TOA0 *e*PKPbc PKPbc 19 06 29.0 -0.3
TORD Torodi Ar. Bea 150.79 289 PKP PKPdf 19 06 23.5 -0.2
comp=Z,4.1nm,1.0s,baz=52,slow=2.9,SNR=15
TORD PKPbc PKPbc 19 06 29.1 -0.2
comp=Z,44nm,0.9s,baz=49,slow=2.0,SNR=103
KIC Kosan Boka 158.12 275 *eP* PKPdf 19 06 33.6 -0.4
comp=Z,21nm,0.9s
DBIC Dimbokro 158.22 276 PKP PKPdf 19 06 33.1 -1.0
comp=Z,3.7nm,0.8s,baz=35,slow=4.4,SNR=4.2
DBIC PKPab PKPab 19 07 09.5 +1.1
comp=Z,3.3nm,0.6s,baz=21,slow=5.2,SNR=4.3
DBIC Dimbokro 158.22 276 PKP PKPdf 19 06 33.1 -1.0
DBIC PKPab PKPab 19 07 09.5 +1.1
DBIC Dimbokro 158.22 276 PKIKP PKPdf 19 06 33.1 -1.0
DBIC 19 07 09.5
TIC Toumodi 158.38 276 *eP* PKPdf 19 06 33.9 -0.4
comp=Z,7.9nm,0.2s
TIC Toumodi 158.38 276 *e*PKIKP PKPdf 19 06 33.9 -0.4
LIC Lamto 158.42 275 *eP* PKPdf 19 06 34.9 +0.6
comp=Z,41nm,1.3s

IDC ***18*** *19:08:52.2±0.8, 1°.55S×134°.59E, h0km, mb3.9/8, mb1 4.2/10, mb1mx4.1/17, mbtmp4.0/10, ML4.0/2, MS3.7/3, Ms1 3.7/3, ms1mx2.9/32, Error ellipse: s-maj=39.4km s-min=16.4km az=79.0*
BJI ***18*** *19:08:57.2, 1°.49S×134°.80E, h50km, mB5.0/3, mb4.7/8*
DJA ***18*** *19:08:59, 1°.62S×134°.44E, h20km, mb4.4/9*
NEIC ***18*** *19:08:59.0±5.4, 1°.64S×134°.51E, h49km±49km, mb4.2/2, Error ellipse: s-maj=30.7km s-min=10.6km az=57.0*
ISCJB ***18*** *19:09:01.5±0.8, 1°.73S±0°.05×134°.68E±0°.06, h97km±9km, mb4.0/12, Error ellipse: s-maj=11.5km s-min=8.1km az=29.2*
ISC 18 19:09:01.5±1.0, **1°.70S**±0°.06×**134°.64E**±0°.07, **h75**km±11km, **n38**,σ1°.**16**/36, **mb4.0**/12, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**1.55**	**71**	P	**Pn**	**19 09 22.5**	**-4.8**
BAKI				S	**Sn**	**19 09 48.1**	**+1.3**
TLE	**Tual**	**4.34**	**206**	P	**Pn**	**19 10 03.4**	**-1.7**
BNDI	**Bandanaira**	**5.50**	**239**	P	**Pn**	**19 10 23.6**	**+2.8**
NLAI	**Namlea**	**7.69**	**258**	P	**Pn**	**19 10 45.6**	**-5.2**
0.1nm32nm,0.9s							
KDI	**Kendari**	**12.21**	**259**	P	**Pn**	**19 11 47.8**	**-4.8**
16nm,1.1s							
BBSI	**Bau Bau**	**12.62**	**252**	P	**Pn**	**19 12 03.3**	**+5.2**
TTSI	**Tana Toraja**	**14.87**	**265**	P	**Pn**	**19 12 29.9**	**+2.2**
BKSI	**Bulukumba**	**14.93**	**256**	P	**Pn**	**19 12 29.1**	**+0.6**
10nm,1.4s							
KNA	**Kununurra**	**15.11**	**202**	*eP*	**Pn**	**19 12 25.7**	**-5.1**
35nm,0.9s							
KNA	**Kununurra**	**15.11**	**202**	P	**Pn**	**19 12 26.3**	**-4.5**
KAPI	**Kappang**	**15.22**	**257**	P	**Pn**	**19 12 36.2**	**+4.0**
BMNI	**Bima**	**17.27**	**246**	P	**Pn**	**19 12 58.3**	**+0.5**
19nm,1.3s							
MYLDM	**Lahad Datu**	**17.51**	**293**	P	**Pn**	**19 13 02.4**	**+1.6**
27nm,1.3s							
WB2	**Warramunga Arr**	**18.13**	**181**	*eP*	**Pn**	**19 13 08.2**	**-0.1**
WRA	**Warramunga Arr**	**18.13**	**181**	P	**Pn**	**19 13 08.0**	**-0.3**
0.5nm,0.3s,baz=360,slow=11,SNR=29							
GUMO	**Guam**	**18.27**	**33**	LR	LR	19 18 19.7	
comp=Z,122nm,19.0s,baz=264,slow=31							
FITZ	**Fitzroy Crossi**	**18.54**	**208**	P	**Pn**	**19 13 10.8**	**-2.4**
0.4nm,0.3s,baz=31,slow=10,SNR=12							
FITZ				S	**S**	**19 16 32.5**	**-7.3**
0.2nm,0.3s,baz=14,slow=8.7,SNR=3.5							
FITZ	**Fitzroy Crossi**	**18.54**	**208**	*eP*	**Pn**	**19 13 11.2**	**-2.0**
16nm,0.7s							
FITZ	**Fitzroy Crossi**	**18.54**	**208**	P	**Pn**	**19 13 11.8**	**-1.4**
34nm,1.0s							
ASAR	**Alice Springs**	**21.84**	**182**	P	**P**	**19 13 48.2**	**+0.3**
4.5nm,0.6s,mb4.0,baz=7.7,slow=12,SNR=101							
ASAR				S	**S**	**19 17 46.2**	**+1.1**
4.1nm,0.9s,baz=5.1,slow=23,SNR=11							
KSM	**Kuching**	**24.53**	**277**	*eP*	**P**	**19 14 13.8**	**-0.5**
11nm,0.6s,mb4.5							
KSM	**Kuching**	**24.53**	**277**	P	**P**	**19 14 14.2**	**-0.1**
STKA	**Stephens Creek**	**30.72**	**168**	P	**P**	**19 15 11.1**	**+1.7**
4.0nm,1.1s,mb4.1,baz=329,slow=5.9,SNR=2.8							
STKA	**Stephens Creek**	**30.72**	**168**	*eP*	**P**	**19 15 10.5**	**+1.1**
3.1nm,0.8s,mb4.1							
STKA	**Stephens Creek**	**30.72**	**168**	P	**P**	**19 15 11.1**	**+1.7**
KSRS	**Korea Array**	**39.45**	**352**	P	**P**	**19 16 22.6**	**-1.8**
0.3nm,0.3s,mb3.6,baz=153,slow=8.2,SNR=4.2							
CMAR	**Chiang Mai Arr**	**40.43**	**301**	P	**P**	**19 16 31.7**	**-1.0**
1.3nm,0.9s,mb3.8,baz=128,slow=7.4,SNR=9.0							
LZH	**Lanzhou**	**47.30**	**326**	*eP*	**P**	**19 17 28.0**	**+0.5**
LZH				pP	pP	19 17 39.5	-6.7
LZH				sP	sP	19 17 44.1	-11
LZH				pmax	pmax		
comp=Z,20nm,1.3s,mb4.7							
GTA	**Gaotai**	**51.90**	**326**	*eP*	**P**	**19 18 02.9**	**+0.4**
GTA				pmax	pmax		
comp=Z,5.0nm,1.5s,mb4.3							
AFI	**Afiamalu**	**54.32**	**106**	LR	LR	19 39 04.1	
comp=Z,58nm,18.3s,baz=92,slow=33							
SONM	**Songino Array**	**55.15**	**337**	P	**P**	**19 18 25.4**	**-0.6**
comp=Z,0.8nm,0.9s,mb3.8,baz=150,slow=7.1,SNR=5.2							
MKAR	**Makanchi Array**	**66.54**	**324**	P	**P**	**19 19 43.6**	**+0.2**
comp=Z,2.0nm,0.9s,mb4.0,baz=111,slow=8.6,SNR=12							
ZALV	**Zalesovo Beam**	**69.06**	**331**	P	**P**	**19 19 58.1**	**-1.0**
comp=Z,0.7nm,0.6s,mb3.7,baz=125,slow=8.8,SNR=4.7							
KURK	**Kurchatov**	**70.59**	**326**	*eP*	**P**	**

KHAL	Karahalli	1.37	10	*i* P		Pn	19 18 44.0	+0.8
KHAL				*i* S		Sb	19 19 03.3	+2.0
KULA	Kula-Manisa	1.54	345	*e*PN		Pn	19 18 45.5	-0.2
KULA	Kula-Manisa	1.54	345	*e*Pn		Pn	19 18 45.5	-0.2

IDC 18 19:24:12.9±3.2, 4°.40S×153°.23E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=131.0km s-min=45.4km az=125.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.02	228	P	P	19 29 30.5	+0.8
	1.1nm,0.5s,baz=53,slow=9.9,SNR=29						
ASAR	Alice Springs	26.73	222	P	P	19 29 53.8	-0.5
	0.2nm,0.5s,baz=59,slow=8.3,SNR=3.9						
FITZ	Fitzroy Crossi	30.22	241	P	P	19 30 25.6	+0.1
	2.5nm,0.6s,baz=54,slow=8.7,SNR=14						
TORD	Torodi Ar. Bea	150.58	289	PKPbc	PKPbc	19 44 07.4	-0.6
	0.4nm,0.7s,baz=71,slow=2.4,SNR=4.1						

*IDC **18** 19:25:03.3±0.8, 5°.20S×103°.61E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.3/22, mbtmp4.3/16, Error ellipse: s-maj=35.4km s-min=12.8km az=52.0*
*BJI **18** 19:25:05.7, 5°.31S×103°.25E, h26km, mB4.8/1, mb4.8/4*
*NEIC **18** 19:25:09.2±3.1, 5°.18S×103°.67E, h40km±26km, mb4.4/9, Error ellipse: s-maj=21.0km s-min=5.8km az=51.0*
*ISCJB **18** 19:25:11.8±0.7, 5°.32S±0°.06×103°.58E±0°.05, h86km±4km, mb4.3/28, Error ellipse: s-maj=12.3km s-min=4.9km az=36.7*
*DJA **18** 19:25:12, 5°.38S×103°.57E, h28km, MLv4.3/12*
ISC 18 19:25:12.8±0.7, 5°.33S±0°.06×103°.58E±0°.05, h78km±4km, n62, σ1.9±0.4/65, mb4.3/28, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	Liwa	0.57	57	P	Pn	19 25 25.0	-2.0
LWLI				S	Sn	19 25 34.8	-2.7
MDSI	Maura Dua	1.03	35	P	Pn	19 25 31.3	-0.8
MDSI				S	Sn	19 25 46.1	-0.4
MNAI	Manna	1.15	327	P	Pn	19 25 32.7	-0.9
MNAI				S	Sn	19 25 48.5	-0.6
KLSI		1.31	61	P	Pn	19 25 34.8	-0.8
KLSI				S	Sn	19 25 54.3	+1.6
KLI	Kotabumi	1.35	70	P	Pn	19 25 35.6	-0.5
BLSI	Bandar Lampung	1.66	91	P	Pn	19 25 39.2	-0.9
BLSI				S	Sn	19 26 00.6	-0.2
KSI	Kapahiang	1.94	329	P	Pn	19 25 44.5	+0.7
KSI				S	Sn	19 26 09.0	+1.5
RBSI	Rajabasa	2.21	103	P	Pn	19 25 47.1	-0.3
CGJI	Cibinong	2.46	121	P	Pn	19 25 49.4	-1.3
SBJI	Serang	2.65	107	P	Pn	19 25 55.1	+1.7
DBJI	Dramaga	3.38	111	P	Pn	19 26 04.9	+1.7
SKJI	Sukabumi	3.39	119	P	Pn	19 26 10.0	+6.6
CBJI	Citeko	3.43	109	P	Pn	19 26 08.3	+4.4
PPBI	Pangkal Pinang	4.05	39	P	Pn	19 26 12.7	+0.3
LEM	Lembang	4.28	110	P	Pn	19 26 16.6	+1.1
TPI	Tanjungpandan	4.80	58	P	Pn	19 26 22.6	-0.1
SDSI	Sungai Dareh	4.87	334	P	Pn	19 26 25.5	+1.9
PDSI	Padang	5.38	325	P	Pn	19 26 30.8	+0.2
MYKOM	Kota Tinggi	7.08	2	P	Pn	19 26 55.9	+2.1
	0.1nm27nm,1.0s						
MNSI	Mandailing Nat	7.28	327	P	Pn	19 26 56.6	0.0
STKI	Sintang	9.54	56	P	Pn	19 27 28.1	+0.8
SBUM	Sibu	11.59	48	P	Pn	19 27 57.2	+1.9
BKSI	Bulukumba	16.47	91	P	Pn	19 29 00.0	+0.8
MSSI	Masamba	16.93	81	P	Pn	19 29 09.0	+4.1
CM31	Chiang Mai Arr	24.08	349	*e*P	P	19 30 20.4	-0.6
	3.8nm,0.4s,mb4.1						
CMAR	Chiang Mai Arr	24.08	349	P	P	19 30 20.1	-1.0
	5.4nm,0.5s,mb4.1,baz=183,slow=9.1,SNR=49						
CHTO	Chiang Mai	24.43	349	*e*P	P	19 30 23.2	-1.0
	3.3nm,0.6s,mb3.8						
FITZ	Fitzroy Crossi	25.01	122	P	P	19 30 29.7	+0.1
	2.5nm,0.6s,mb3.9,baz=306,slow=3.1,SNR=13						
FITZ	Fitzroy Crossi	25.01	122	P	P	19 30 29.7	+0.1
WRA	Warramunga Arr	33.25	119	P	P	19 31 42.7	-0.1
	2.5nm,0.4s,mb4.4,baz=300,slow=9.3,SNR=34						
WRA				PcP	PcP	19 34 24.8	+0.9
	0.7nm,0.4s,baz=303,slow=2.0,SNR=7.1						
WRA	Warramunga Arr	33.25	119	P	P	19 31 42.7	-0.1
WRA				PcP	PcP	19 34 24.8	+0.9
ASAR	Alice Springs	34.42	125	P	P	19 31 53.5	+0.6
	1.7nm,0.5s,mb4.1,baz=295,slow=7.1,SNR=35						
ASAR				PcP	PcP	19 34 28.4	+1.3
	1.2nm,0.5s,baz=310,slow=2.6,SNR=13						
ASAR				S	S	19 37 13.4	-2.1
	1.4nm,1.0s,baz=296,slow=16,SNR=7.8						
LSA	Lhasa	36.82	342	*e*P	P	19 32 12.4	-0.9
	2.8nm,0.6s,mb4.4						
CTA	Charters Tower	43.98	113	P	P	19 33 12.0	-0.6
	4.9nm,0.8s,mb4.3,baz=297,slow=4.5,SNR=3.4						
CTA	Charters Tower	43.98	113	P	P	19 33 12.0	-0.6
STKA	Stephens Creek	44.28	131	P	P	19 33 15.9	+1.0
	5.8nm,0.6s,mb4.5,baz=307,slow=7.0,SNR=23						
STKA				PcP	PcP	19 34 59.5	+1.3
	1.6nm,0.5s,baz=16,slow=2.8,SNR=4.1						
STKA	Stephens Creek	44.28	131	P	P	19 33 15.9	+1.0
STKA				PcP	PcP	19 34 59.5	+1.3
GTA	Gaotai	44.66	356	*e*P	P	19 33 18.5	+0.8
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
KSRS	Korea Array	48.24	26	P	P	19 33 45.0	-0.7
	comp=Z,1.0nm,0.5s,mb3.9,baz=227,slow=7.1,SNR=5.7						
KBL	Kabul	51.32	323	*e*P	P	19 34 08.4	-0.8
	comp=Z,3.7nm,0.7s,mb4.5						
KSH	Kashi	51.39	333	*e*P	P	19 34 08.8	-0.9
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
KSH				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.9						
MJAR	Matsushiro Arr	52.76	35	P	P	19 34 18.7	-1.2
	comp=Z,2.2nm,0.9s,mb4.2,baz=220,slow=8.0,SNR=7.3						
SONM	Songino Array	53.00	2	P	P	19 34 21.2	-0.2
	comp=Z,5.0nm,0.7s,mb4.7,baz=179,slow=9.2,SNR=40						
SONM				PcP	PcP	19 35 30.0	+0.8
	comp=Z,0.8nm,0.3s,baz=190,slow=4.1,SNR=6.9						
ULN	Ulaanbaatar	53.06	3	*e*P	P	19 34 22.4	+0.6
	comp=Z,1.1nm,0.5s,mb4.1						
TKM2	Tokmak 2	54.32	335	*e*P	P	19 34 31.4	+0.2
	comp=Z,6.3nm,0.4s,mb5.0						
EKS2	Erkin-Say	54.90	333	*e*P	P	19 34 35.5	+0.1
	comp=Z,4.1nm,0.7s,mb4.6						
MK31	Makanchi Array	55.22	342	*e*P	P	19 34 36.5	-1.2
MKAR	Makanchi Array	55.22	342	P	P	19 34 37.4	-0.3
	comp=Z,2.2nm,0.4s,mb4.5,baz=148,slow=8.8,SNR=53						
ZALV	Zalesovo Beam	61.13	347	P	P	19 35 18.2	-0.5
	comp=Z,7.4nm,0.4s,mb5.0,baz=160,slow=4.9,SNR=42						
BRVK	Borovoye	64.61	338	*e*P	P	19 35 41.1	-0.8
	comp=Z,2.9nm,0.5s,mb4.4						
ABKAR	Akbulak array	66.27	330	*e*P	P	19 35 52.3	-0.3
	comp=Z,7.3nm,0.6s,mb4.7						
BRTR	Keskin Array B	78.19	312	P	P	19 37 04.8	+0.9
	comp=Z,1.5nm,0.7s,mb3.8,baz=130,slow=6.1,SNR=5.2						
AKASG	Malin Array Be	84.29	322	P	P	19 37 36.4	+0.4
	comp=Z,1.1nm,0.6s,mb3.9,baz=104,slow=4.0,SNR=5.1						
BUR08	Bucovina Ar. S	86.12	318	*e*P	P	19 37 47.3	+2.1
FINES	FINESS Array B	88.71	332	P	P	19 37 58.1	+0.8
	comp=Z,1.4nm,0.7s,mb4.1,baz=112,slow=5.6,SNR=7.0						
KAF	Kangasniemi	88.76	333	*e*p	P	19 37 54.5	-3.1
	comp=Z,3.2nm,0.7s,mb4.5						
ARCES	ARCESS Array B	90.81	340	P	P	19 38 07.4	+0.4
	comp=Z,1.1nm,0.8s,mb4.1,baz=99,slow=7.5,SNR=4.7						
GERES	GERESS Array B	93.89	319	P	P	19 38 22.4	+0.6
	comp=Z,0.2nm,0.5s,mb3.8,baz=106,slow=7.2,SNR=4.5						
TXAR	Lajitas Array	144.88	44	PKP	PKPdf	19 44 42.0	+0.4
	comp=Z,1.6nm,0.6s,baz=266,slow=1.1,SNR=16						
JCT	Junction City	146.68	39	*e*PKPbc	PKPbc	19 44 46.7	+0.4
BLA	Blacksburg	148.06	6	*e*PKPdf	PKPdf	19 44 48.0	+1.3
LRAL	Lakeview Retre	150.73	18	*e*PKPdf	PKPdf	19 44 52.2	+1.1

*ISCJB **18** 19:34:43.8±0.5, 38°.91N±0°.03×31°.62E±0°.03, h11km±4km, Error ellipse: s-maj=5.1km s-min=3.9km az=25.9*
*DDA **18** 19:34:43.8, 38°.92N×31°.61E, h7km±2km, Ml2.9*
*ISK **18** 19:34:43.2, 38°.93N×31°.61E, h16km, MD2.9*
*CSEM **18** 19:34:43.6±0.2, 38°.93N×31°.64E, h12km, MD2.9, Error ellipse: s-maj=5.2km s-min=3.9km az=24.0*
ISC 18 19:34:44.1±0.5, 38°.93N±0°.03×31°.63E±0°.03, h11km±4km, n32, σ1.9±0.4/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIZT	Kizilcal	0.20	103	PG	Pg	19 34 48.4	+0.1
KIZT				SG	Sg	19 34 52.4	+1.2
KIZT	Kizilcal	0.20	103	*i* Pg	Pg	19 34 48.4	+0.1
KIZT				*i* Sg	Sg	19 34 52.4	+1.2
SVRH	Sivrihisar-ESK	0.53	351	*e*PG	Pg	19 34 54.5	+0.2
SVRH				*e*SG	Sg	19 35 01.6	+0.2
SVRH	Sivrihisar-ESK	0.53	351	*e*Pg	Pg	19 34 54.5	+0.1
SVRH				*e*Sg	Sg	19 35 01.6	+0.3
KDHN	Kadinhani	0.56	137	*i* P	Pg	19 34 54.7	-0.1
KDHN				*i* S	Sg	19 35 02.8	+0.6
KDHN	Kadinhani	0.56	137	*i* P	Pg	19 34 54.7	-0.2
KDHN				*i* S	Sg	19 35 02.8	+0.7
BOLV	Bolvadin	0.57	249	*i* P	Pg	19 34 55.0	-0.1
BOLV				*i* S	Sg	19 35 02.7	+0.1
BOLV	Bolvadin	0.57	249	*i* P	Pg	19 34 55.0	-0.1
BOLV				*i* S	Sg	19 35 02.7	+0.1
ESKT	Eskisehir	0.85	315	*i* P	Pg	19 34 58.6	-1.9
ESKT				*i* S	Sg	19 35 09.8	-1.7
SEYT	Eskypehyr	0.85	315	*i* P	Pg	19 34 58.6	-1.8
SEYT				*i* S	Sg	19 35 09.8	-1.7
SHUT	Suhut-Afyon	0.92	247	*e*PG	Pg	19 35 01.4	-0.5
SHUT				*e*SG	Sg	19 35 14.3	+0.4
SHUT	Suhut-Afyon	0.92	247	*e*Pg	Pg	19 35 01.4	-0.4
SHUT				*e*Sg	Sg	19 35 14.3	+0.5
KONT	Konya--Tatoy	1.13	149	*e*PN	Pn	19 35 05.2	-0.7
KONT				*e*SN	Sn	19 35 21.4	-0.1
KONT	Konya--Tatoy	1.13	149	*e*Pn	Pn	19 35 05.2	-0.7
KONT				*e*Sn	Sn	19 35 21.4	-0.1
AFSR	Af¯ar-Bala (A	1.23	65	*e*PN	Pn	19 35 06.6	-0.7
AFSR	Af¯ar-Bala (A	1.23	65	*e*Pn	Pn	19 35 06.6	-0.7
LOD	Lodumlu	1.30	42	*e*PN	Pn	19 35 07.0	-1.2
LOD	Lodumlu	1.30	42	*e*Pn	Pn	19 35 07.0	-1.2
BORA	Eskisehir	1.32	317	*i* P	Pn	19 35 09.0	+0.5
BORA				*i* S	Sb	19 35 27.0	+1.2
BORA	Eskisehir	1.32	317	*i* P	Pn	19 35 09.0	+0.5
BORA				*i* S	Sb	19 35 27.0	+1.2
SUTC	Sutluce-Ispart	1.53	199	*e*PN	Pn	19 35 09.8	-1.6
SUTC	Sutluce-Ispart	1.53	199	*e*Pn	Pn	19 35 09.8	-1.6
SULT	Sultanhani-AKS	1.65	116	*e*PN	Pn	19 35 11.7	-1.3
SULT	Sultanhani-AKS	1.65	116	*e*Pn	Pn	19 35 11.7	-1.3
SGKT	Sivrigoynuk	1.68	11	*i* P	Pn	19 35 15.6	+2.2
SGKT				*i* S	Sn	19 35 40.4	+5.5
SGKT	Sivrigoynuk	1.68	11	*i* P	Pn	19 35 15.6	+2.2
GDZ	Gediz	1.68	276	*i* P	Pn	19 35 15.0	+1.6
GDZ				*i* S	Sn	19 35 34.9	-0.1
GDZ	Gediz	1.68	276	*i* P	Pn	19 35 15.0	+1.5
GDZ				*i* S	Sn	19 35 34.9	-0.1
KHL	Karahalli	1.76	251	*e*PN	Pn	19 35 14.4	-0.1
KHL	Karahalli	1.76	251	*e*Pn	Pn	19 35 14.4	-0.1
KHAL	Karahalli	1.76	252	*i* P	Pn	19 35 16.6	+2.0
KHAL				*i* S	Sn	19 35 41.4	+4.4
KHAL	Karahalli	1.76	252	*i* P	Pn	19 35 16.6	+2.0

*BJI **18** 19:43:48.0, 59°.50N×152°.80W, h90km, mB5.0/19, mb4.8/33, Ms4.6/9, Ms7 4.3/9*
*MOS **18** 19:43:50.2±0.8, 59°.61N×153°.13W, h89km, mb4.6/49, Error ellipse: s-maj=10.8km s-min=4.3km az=84.4*
*ISCJB **18** 19:43:50.4±0.3, 59°.64N±0°.02×153°.12W±0°.04, h88km±2km, mb4.5/155, Error ellipse: s-maj=3.8km s-min=2.5km az=42.5*
*IDC **18** 19:43:52.6±0.5, 59°.65N×153°.05W, h99km±3km, mb4.2/28, mb1 4.3/33, mb1mx4.3/35, mbtmp4.2/33, MS3.2/8, Ms1 3.2/8, ms1mx2.9/35, Error ellipse: s-maj=11.6km s-min=8.0km az=22.0*
*NEIC **18** 19:43:53.1, 59°.50N×152°.79W, h90km, mb4.5/84, After AEIC.*
NEIC Felt [IV] at Homer and [II] at Seward. Felt at Anchor Point, Anchorage, Kasilof, Soldotna and Sterling.
*SZGRF **18** 19:44:00.2, 60°.51N×152°.69W, h94km, mb4.9, Southern Alaska, United States*
ISC 18 19:43:52.0±0.3, 59°.64N±0°.02×153°.12W±0°.04, h87km±2km, h96km±1.1km: pP-P, n606, σ0.9±0.83/613, mb4.5/155, 143C-88D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSO	Redoubt South	0.84	12	*e*Pg	Pn	19 44 11.3	+1.7
CNPM	China Poot	0.96	96	P	Pn	19 44 10.3	-0.8
CNPM				S	Sn	19 44 23.4	-1.9
BRLK	Bradley Lake	1.14	83	P	Pn	19 44 12.2	-0.8
BRLK				S	Sn	19 44 26.9	-2.0
SLKM	Skilak Lake	1.69	58	P	Pn	19 44 19.5	-0.4
SLKM	Skilak Lake	1.69	58	P	Pn	19 44 19.5	-0.5
KDAK	Kodiak Island	1.89	171	P	Pn	19 44 20.4	-2.2
	552nm,0.3s,baz=17,slow=8.3,SNR=2559						
KDAK				S	Sn	19 44 42.1	-3.7
	603nm,0.3s,baz=332,slow=20,SNR=6.4						
KDAK	Kodiak Island	1.89	171	P	Pn	19 44 20.4	-2.2
KDAK				S	Sn	19 44 41.7	-4.2
KDAK	Kodiak Island	1.89	171	P	Pn	19 44 20.4	-2.2
KDAK				S	Sn	19 44 41.7	-4.1
SVW2	Sparrevohn	1.90	321	*e*P	Pn	19 44 25.4	+2.6
SEW	Seward	1.91	74	P	Pn	19 44 21.2	-1.6
SEW				S	Sn	19 44 43.2	-3.0
FIB	Fire Island	2.11	42	P	Pn	19 44 27.1	+1.6
FIB				S	Sn	19 44 54.2	+3.1
FIB	Fire Island	2.11	42	P	Pn	19 44 27.1	+1.6
FIB				S	Sn	19 44 54.2	+3.1
SUA	Susitna One	2.17	32	P	Pn	19 44 27.9	+1.7
SUA				S	Sn	19 44 55.3	+2.8
RC01	Rabbit Creek A	2.22	48	P	Pn	19 44 27.2	+0.2
RC01				S	Sn	19 44 54.0	+4.4
OHAK	Old Harbor	2.43	182	*e*P	Pn	19 44 27.4	-2.3
SKT	Skwentna	2.47	18	P	Pn	19 44 31.8	+1.5
SKT				S	Sn	19 45 03.4	+3.8
PMR	Palmer	2.77	43	*e*P	Pn	19 44 34.0	-0.3
PMR	Palmer	2.77	43	*e*P	Pn	19 44 34.0	-0.3
SML	Sawmill	3.20	45	P	Pn	19 44 39.7	-0.4
SML	Sawmill	3.20	45	P	Pn	19 44 39.7	-0.3
PPLA	Purkeypile	3.30	7	P	Pn	19 44 43.9	+2.6
MID	Middleton Isla	3.46	91	*e*P	Pn	19 44 41.8	-1.8
MID	Middleton Isla	3.46	91	*e*P	Pn	19 44 41.8	-1.8
TT01	Tatalina	3.56	338	P	Pn	19 44 47.4	+2.5
TTA	Tatalina	3.58	338	*e*P	Pn	19 44 47.1	+1.9
TTA	Tatalina	3.58	338	*e*P	Pn	19 44 47.1	+1.9
SCM	Sheep Creek Mo	3.59	50	P	Pn	19 44 44.8	-0.5
SCM	Sheep Creek Mo	3.59	50	P	Pn	19 44 44.8	-0.5
TRF	Thorofare Moun	4.05	18	P	Pn	19 44 53.7	+2.1
CHUM	Lake Minchumin	4.27	5	P	Pn	19 44 56.5	+1.9
RND	Reindeer	4.29	27	P	Pn	19 44 55.4	+0.6
RND	Reindeer	4.29	27	P	Pn	19 44 55.4	+0.6
CHGN	Chignik	4.38	222	*e*P	Pn	19 44 56.1	0.0
DHY	Denali Highway	4.42	36	P	Pn	19 44 57.0	+0.5
MCK	McKinley	4.56	24	P	Pn	19 44 59.8	+1.3
MCK	McKinley	4.56	24	P	Pn	19 44 59.8	+1.3
BPAW	Bear Paw Mtn.	4.58	12	P	Pn	19 44 59.2	+0.4
PAX	Paxson	4.97	45	P	Pn	19 45 04.0	-0.1
PAX	Paxson	4.97	45	P	Pn	19 45 04.0	0.0
GCSA	Galena City Sc	5.42	343	P	Pn	19 45 12.3	+2.2
HDA	Harding Lake	5.59	29	P	Pn	19 45 12.9	+0.5
MENT	Mentasta	5.61	50	*e*Pn	Pn	19 45 11.5	-1.1
COLA	College	5.79	23	P	Pn	19 45 15.8	+0.6
COLA	College	5.79	23	P	Pn	19 45 15.9	+0.7
MDM	Murphy Dome	5.80	21	P	Pn	19 45 15.4	+0.2
SDPT	Sand Point	5.85	226	P	Pn	19 45 15.9	-0.2
DOT	Dot Lake	5.89	43	P	Pn	19 45 16.6	0.0
IL1	Eielson Array	5.91	27	P	Pn	19 45 16.6	-0.3
ILAR	Eielson Array	5.91	27	P	Pn	19 45 16.6	-0.3
	53nm,0.3s,baz=210,slow=14,SNR=1249						
ILAR				S	Sn	19 46 22.3	-0.8
	64nm,0.3s,baz=213,slow=23,SNR=11						
ILAR	Eielson Array	5.91	27	P	Pn	19 45 16.6	-0.3
ILAR				S	Sn	19 46 22.3	-0.8
ILAR	Eielson Array	5.91	27	P	Pn	19 45 16.6	-0.2
ILAR				S	Sn	19 46 22.3	-0.7
IM3	Indian Mountai	6.37	358	P	Pn	19 45 24.9	+1.8
BCA3	Beaver Creek A	6.44	53	P	Pn	19 45 23.3	-0.7
PCA	Pinnacle	6.49	80	P	Pn	19 45 23.5	-1.3
PNL	Peninsula	6.95	84	P	Pn	19 45 29.0	-2.0
EGAK	Eagle	7.59	42	*e*Pn	Pn	19 45 38.6	-1.1
	91nm,0.6s						
DHAK	Deception Hill	7.64	88	P	Pn	19 45 38.1	-2.2
COLD	Coldfoot	7.72	8	P	Pn	19 45 42.7	+1.2
DAWY	Dawson	7.85	50	P	Pn	19 45 43.0	-0.2
BM3	Burnt Mountain	8.67	22	P	Pn	19 45 53.6	-0.7

AKUT	Akutan	8.85	237	*e*Pn		Pn	19 45 57.2	+0.4
TNA	Tin City	9.03	317	P		Pn	19 46 01.4	+2.2
	100nm,0.5s							
SKAG	Skagway	9.03	83	*e*P		Pn	19 45 58.3	-1.1
WHY	Whitehorse	9.15	76	P		Pn	19 45 59.0	-1.9
UNV	Unalaska Valle	9.36	237	P		Pn	19 46 03.6	-0.3
SIT	Sitka	9.70	98	*e*P		Pn	19 46 06.4	-2.0
SIT	Sitka	9.70	98	*e*P		Pn	19 46 06.4	-2.0
NIKO	Nikolski	10.98	239	*e*Pn		Pn	19 46 25.2	-0.7
WRAK	Wrangell Islan	11.46	97	*e*P		Pn	19 46 31.1	-1.3
	44nm,0.5s							
CRAG	Craig	11.51	103	*e*P		Pn	19 46 29.9	-3.1
	31nm,0.5s							
DLBC	Dease Lake	11.94	86	P		Pn	19 46 38.4	-0.5
	16nm,0.3s,baz=282,slow=12,SNR=108							
DLBC				S		Sn	19 48 43.5	-6.3
	2.3nm,0.3s,baz=225,slow=19,SNR=5.4							
DLBC				LR	LR		19 51 24.9	
	comp=Z,75nm,18.9s,baz=159,slow=38							
DLBC	Dease Lake	11.94	86	*e*P		Pn	19 46 38.5	-0.4
INK	Inuvik	12.16	36	P		Pn	19 46 40.9	-0.9
	2.5nm,0.3s,baz=225,slow=14,SNR=47							
INK				S		Sn	19 48 54.3	-0.9
	0.5nm,0.3s,baz=213,slow=17,SNR=3.8							
INK				LR	LR		19 51 52.1	
	comp=Z,93nm,18.2s,baz=211,slow=40							
INK	Inuvik	12.16	36	*e*P		Pn	19 46 40.9	-1.0
	69nm,1.0s							
INK	Inuvik	12.16	36	*e*P		Pn	19 46 40.9	-0.9
INK				pmax	pmax			
	comp=Z,69nm,1.0s							
BBB	Bella Bella	15.81	107	P		Pn	19 47 29.1	-0.1
	comp=Z,0.9nm,0.3s,baz=303,slow=13,SNR=9.5							
BBB				S		S	19 50 18.0	-15
	comp=Z,0.8nm,0.3s,baz=297,slow=18,SNR=6.4							
BBB				LR	LR		19 53 15.4	
	comp=Z,25nm,19.6s,baz=168,slow=36							
BBB	Bella Bella	15.81	107	P		Pn	19 47 29.1	0.0
BBB				S		S	19 50 18.0	-15
BBB				LR	LR		19 53 15.4	
YKA	Yellowknife Ar	18.66	65	P		Pn	19 48 02.2	-1.6
	comp=Z,1.2nm,0.3s,baz=277,slow=10,SNR=16							
YKA				PcP	PcP		19 52 25.9	-1.1
	comp=Z,0.7nm,0.3s,baz=281,slow=1.3,SNR=12							
YKA	Yellowknife Ar	18.66	65	P		Pn	19 48 02.2	-1.6
YKA				PcP	PcP		19 52 25.9	-1.1
YKA	Yellowknife Ar	18.66	65	P		Pn	19 48 02.2	-1.7
E07A	Sunnyside	23.58	109	⇑P		P	19 48 54.0	-0.4
	baz=23							
NEW	Newport	23.73	103	⇑P		P	19 48 55.6	-0.1
	baz=23,SNR=5.6							
NEW	Newport	23.73	103	*e*P		P	19 48 55.6	-0.1
	comp=Z,8.9nm,0.8s,mb4.2							
NEW				*e*pP			19 49 16.2	
NEW	Newport	23.73	103	*e*P		P	19 48 55.6	-0.1
NEW				*e**PP			19 49 16.3	
NEW				pmax	pmax			
	comp=Z,9.0nm,0.8s							
F07A	Phinny Hill Vi	24.02	110	⇓P		P	19 48 58.5	+0.1
	baz=24							
C11A	Tepee Creek (N	24.44	102	⇑P		P	19 49 01.5	-0.8
	baz=24							
A13A	Flathead Natio	24.64	98	⇑P		P	19 49 03.7	-0.3
	baz=24							
WALA	Waterton Lakes	24.81	98	*e*P		P	19 49 04.8	-0.8
	comp=Z,0.3nm,1.0s							
WALA				*e*pP			19 49 26.9	
G08A	Pilot Rock	24.93	110	⇓P		P	19 49 06.0	-0.7
	baz=25,SNR=5.6							
HUMO	Hull Mountain	25.14	119	*e*P		P	19 49 10.3	+1.6
	comp=Z,3.8nm,0.8s,mb3.9							
HUMO				*e*pP	pP		19 49 29.4	+1.2
BSMT	Bassoo Peak	25.17	101	*e*P		P	19 49 08.9	+0.1
	comp=Z,8.5nm,1.1s,mb4.1							
BSMT				*e*pP	pP		19 49 30.1	+1.6
F10A	Beach Ranch, E	25.27	107	⇓P		P	19 49 09.6	-0.1
	baz=25,SNR=7.2							
C13A	Hot Springs	25.39	101	⇑P		P	19 49 10.4	-0.4
	baz=25							
D12A	Red Ives Fores	25.43	103	⇓P		P	19 49 11.2	0.0
	baz=25							
JTMT	Jette	25.49	100	*e*pP		pP

C20A Veseth Ranch, 28.67 94 ⇑P P 19 49 39.9 -0.3
baz=28
C21A Desert Coulee 29.06 93 ⇑P P 19 49 43.3 -0.4
baz=29
H16A Russell Place, 29.12 102 ⇓P P 19 49 45.1 +0.9
baz=29,SNR=5.3
E19A Rath Farm, Rou 29.12 97 ⇓P P 19 49 44.4 +0.1
baz=29
F19A Roth Farm, Mol 29.46 98 ⇓P P 19 49 47.5 +0.3
baz=29
K14A Jones Ranch, D 29.76 107 ⇓P P 19 49 50.9 +1.0
baz=30
RLMT Red Lodge 29.81 99 ⇓P P 19 49 50.7 +0.4
baz=30
FLWY Flagg Ranch 29.84 102 *e*P P 19 49 51.5 +0.9
comp=Z,10nm,0.6s,mb4.6
IMW Indian Meadow 29.86 103 *e*P P 19 49 51.4 +0.6
comp=Z,12nm,0.7s,mb4.6
H18A Shoshone NF, C 29.93 100 ⇑P P 19 49 51.9 +0.5
baz=30
WAKR Walker 30.04 120 *e*P P 19 49 53.6 +1.2
comp=Z,6.8nm,1.1s,mb4.2
WAKR *e*pP pP 19 50 16.1 +3.8
MOOW Moose Ponds 30.06 103 *e*P P 19 49 53.0 +0.5
comp=Z,2.5nm,1.0s,mb3.8
RRI2 Red Ridge 30.07 104 *e*P P 19 49 52.6 0.0
comp=Z,3.6nm,0.8s,mb4.0
TPAW Teton Pass 30.15 103 *e*P P 19 49 54.1 +0.8
comp=Z,7.8nm,0.6s,mb4.5
LOHW Long Hollow 30.23 103 *e*P P 19 49 54.8 +0.7
comp=Z,6.0nm,0.6s,mb4.4
H19A Powell 30.27 100 ⇓P P 19 49 54.7 +0.3
baz=30
L15A Malad City 30.55 107 ⇑P P 19 49 58.0 +1.1
baz=30,SNR=5.4
NVAR Mina Array Bea 30.60 118 P P 19 49 57.7 +0.3
comp=Z,3.6nm,0.8s,mb4.2,baz=308,slow=8.1,SNR=18
NVAR PcP PcP 19 52 53.0 -0.6
comp=Z,1.8nm,0.7s,baz=314,slow=2.2,SNR=7.6
NVAR Mina Array Bea 30.60 118 P P 19 49 57.7 +0.3
NVAR PcP PcP 19 52 53.0 -0.6
J18A Kendall Valley 30.81 103 P P 19 49 59.9 +0.7
baz=30,SNR=5.5
M15A Larsen Ranch, 30.93 108 ⇓P P 19 50 01.0 +0.8
baz=31
HWUT Hardware Ranch 31.25 107 *e*P P 19 50 03.5 +0.4
comp=Z,4.2nm,0.6s,mb4.3
BW06 Boulder Array 31.37 103 ⇓P P 19 50 04.3 +0.2
baz=31
PDAR Pinedale Array 31.37 103 P P 19 50 04.1 0.0
comp=Z,2.2nm,0.7s,mb4.0,baz=328,slow=4.4,SNR=20
PDAR PcP PcP 19 52 54.4 -1.3
comp=Z,0.9nm,0.6s,baz=304,slow=1.8,SNR=4.0
M16A Huntsville 31.45 107 P P 19 50 05.5 +0.7
baz=31,SNR=23
J20A Shoshoni 31.67 101 ⇓P P 19 50 07.5 +0.8
baz=31,SNR=6.4
K19A Absolon Red Bu 31.68 102 ⇓P P 19 50 06.5 -0.3
baz=31,SNR=5.8
I21A Big Trails, Te 31.74 99 ⇓P P 19 50 07.3 0.0
baz=31
DUG Dugway 31.74 110 ⇓P P 19 50 06.7 -0.7
baz=31
DUG Dugway 31.74 110 *e*P P 19 50 07.8 +0.4
comp=Z,3.5nm,0.7s,mb4.2
DUG Dugway 31.74 110 *e*P P 19 50 07.8 +0.4
DUG pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
R11A Troy Canyon, C 31.90 115 ⇑P P 19 50 09.0 +0.1
baz=32,SNR=14
J21A Lysite 32.00 100 P P 19 50 09.9 +0.3
baz=32,SNR=7.9
K20A Yellowstone Ra 32.05 102 ⇑P P 19 50 09.4 -0.7
baz=32
P14A Drum Mountains 32.09 111 ⇑P P 19 50 10.7 +0.2
baz=32,SNR=5.9
J22A Midwest 32.43 99 ⇓P P 19 50 13.9 +0.5
baz=32,SNR=5.0
Q14A Sevier Lake (B 32.47 112 ⇓P P 19 50 13.6 -0.1
baz=32
L20A Wamsutter 32.54 103 ⇑P P 19 50 14.0 -0.4
baz=32
K21A Alcova 32.62 101 P P 19 50 14.6 -0.5
baz=32,SNR=8.0
N18A Larsen Ranch, 32.66 105 ⇑P P 19 50 15.4 0.0
baz=32
M20A Sweetwater, Wa 33.00 103 ⇓P P 19 50 18.2 -0.2
baz=33,SNR=8.4
L21A Rawlins 33.05 102 ⇓P P 19 50 17.5 -1.3
baz=33
U10A Ash Meadows, A 33.15 118 ⇓P P 19 50 20.2 +0.6
baz=33,SNR=5.9
RSSD Black Hills 33.15 96 *e*P P 19 50 19.9 +0.2
comp=Z,6.9nm,0.8s,mb4.5
RSSD Black Hills 33.15 96 *e*P P 19 50 19.9 +0.2
RSSD pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
ULM Lac du Bonnet 33.19 81 P P 19 50 19.3 -0.6
comp=Z,2.1nm,0.5s,mb4.2,baz=293,slow=11,SNR=4.5
ULM PcP PcP 19 52 58.9 -1.6
comp=Z,2.6nm,0.7s,baz=34,slow=3.6,SNR=3.2
ULM Lac du Bonnet 33.19 81 P P 19 50 19.3 -0.6
ULM PcP PcP 19 52 58.9 -1.6
ULM Lac du Bonnet 33.19 81 P P 19 50 19.3 -0.6
ULM 19 52 58.9
M21A Separation Pea 33.32 102 ⇓P P 19 50 20.7 -0.4
baz=33,SNR=7.8
S13A Holt Ranch, En 33.32 114 ⇓P P 19 50 21.6 +0.4
baz=33,SNR=13
RWWY Rawlins 33.34 102 *e*P P 19 50 20.9 -0.4
comp=Z,6.3nm,0.8s,mb4.5
MSU Marysvale 33.37 111 *e*P P 19 50 22.6 +1.1
comp=Z,2.3nm,0.5s,mb4.3
MSU Marysvale 33.37 111 *e*P P 19 50 22.6 +1.0
MSU pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
O19A Miners Draw (B 33.45 105 ⇓P P 19 50 22.5 +0.2
baz=33
N20A Spence Gulch, 33.46 104 ⇓P P 19 50 22.6 +0.3
baz=33,SNR=6.3
Q16A Castle Valley 33.53 109 ⇓P P 19 50 23.6 +0.6
baz=33,SNR=5.7
CCUT Cedar City 33.58 113 *e*P P 19 50 23.8 +0.4
comp=Z,3.6nm,0.6s,mb4.4
SRU San Rafael 33.69 108 ⇓P P 19 50 25.0 +0.7
baz=33,SNR=24
SRU San Rafael 33.69 108 *e*P P 19 50 24.7 +0.4
comp=Z,19nm,0.6s,mb5.1
SRU San Rafael 33.69 108 *e*P P 19 50 24.7 +0.4
SRU pmax pmax
comp=Z,19nm,0.6s,mb5.1
T13A Saint George 33.76 114 ⇑P P 19 50 25.7 +0.7
baz=34,SNR=6.5
L23A Garrett 33.77 100 ⇓P P 19 50 24.6 -0.4
baz=34,SNR=6.0
R16A Teasdale 33.88 110 ⇑P P 19 50 27.1 +1.1
baz=34
N21A Black Mountain 33.88 103 ⇓P P 19 50 25.9 -0.1
baz=34
O20A White River Ci 34.00 105 ⇑P P 19 50 27.0 0.0
baz=34
P19A Cripple Cowboy 34.03 106 ⇑P P 19 50 27.4 +0.1
baz=34
V11A Goodsprings 34.03 117 ⇓P P 19 50 28.4 +1.1
baz=34
U13A Pakoon Wash 34.22 115 P P 19 50 29.9 +0.8
baz=34,SNR=9.6
S16A Weppner Ranch, 34.27 111 ⇓P P 19 50 30.5 +1.1
baz=34,SNR=5.7
N22A Wattenberg Ran 34.38 102 ⇓P P 19 50 30.7 +0.4
baz=34
V12A Nelson 34.39 117 ⇑P P 19 50 31.2 +0.7
baz=34,SNR=9.0
R18A Canyonlands Na 34.56 108 ⇓P P 19 50 31.3 -0.6
baz=34,SNR=5.6
U14A Mt Trumbull 34.58 114 ⇓P P 19 50 33.1 +1.0
baz=34,SNR=7.7
V13A Grand Canyon W 34.68 116 ⇑P P 19 50 33.7 +0.8
baz=34,SNR=12
S17A Black Ridge (B 34.72 110 ⇑P P 19 50 33.6 +0.3
baz=34
GMRC Granite Mounta 34.81 119 ⇑P P 19 50 34.8 +0.7
baz=34
R19A Curley Farm, L 34.94 108 ⇓P P 19 50 35.0 -0.2
baz=35,SNR=5.5
U15A North Rim 34.99 113 ⇑P P 19 50 36.3 +0.6
baz=35,SNR=9.6
PV04 Paradox Valley 35.03 107 *e*P P 19 50 35.8 -0.2

S18A Hurst Farm, Bl 35.06 109 ⇓P P 19 50 35.7 -0.5
baz=35
O23A Lake Granby, G 35.09 102 ⇑P P 19 50 36.1 -0.3
baz=35,SNR=6.0
T17A Navajo Res., N 35.23 111 ⇑P P 19 50 37.7 0.0
baz=35
V14A Boquillas Ranc 35.26 115 ⇓P P 19 50 38.3 +0.3
baz=35,SNR=11
W13A Hualapai Mount 35.35 116 ⇓P P 19 50 39.2 +0.5
baz=35
PV01 Paradox Valley 35.40 107 *e*P P 19 50 39.0 -0.1
comp=Z,484nm,0.6s
S19A Harvey Farm, M 35.43 108 ⇓P P 19 50 39.2 -0.2
baz=35,SNR=6.2
R20A Redvale 35.45 107 ⇑P P 19 50 39.8 +0.2
baz=35
V15A Kaibab Nationa 35.54 114 P P 19 50 41.4 +1.0
baz=35,SNR=14
IRM Iron Mountain 35.56 119 ⇓P P 19 50 41.6 +1.0
baz=35,SNR=5.8
T18A Mexican Hat 35.56 110 ⇓P P 19 50 40.1 -0.4
baz=35,SNR=11
W14A Seligman 35.62 115 P P 19 50 42.0 +0.9
baz=35,SNR=16
YAK Yakutsk 35.64 308 *e*P P 19 50 40.5 -0.4
comp=Z,58nm,0.8s,mb5.6
YAK Yakutsk 35.64 308 *e*P P 19 50 40.0 -0.9
YAK *e*PP pP 19 51 03.2 +2.1
YAK *e* 19 52 04.3
YAK *e* 19 53 06.1
YAK *e*S **S** **19 56 11.4 +1.0**
YAK *e*SS sS 19 56 48.4 +3.2
YAK *e* 20 00 51.8
YAK pmax pmax
comp=E,18nm,1.2s
YAK pmax pmax
comp=Z,58nm,1.0s,mb5.5
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=Z,47nm,2.0s,mb5.1
YAK pmax pmax
comp=N,18nm,2.3s
YAK pmax pmax
comp=E,46nm,2.5s
YAK smax
comp=N,59nm,2.1s
YAK smax
comp=E,32nm,2.0s
S20A Disappointment 35.74 107 ⇑P P 19 50 42.2 +0.1
baz=35
X13A Yucca 35.79 117 ⇑P P 19 50 42.7 +0.2
baz=36,SNR=6.4
W15A Williams 36.02 114 ⇑P P 19 50 45.8 +1.3
baz=36,SNR=5.2
Q23A Hartsel 36.14 104 ⇓P P 19 50 45.8 +0.4
baz=36
T19A Beclabito 36.21 109 ⇓P P 19 50 46.1 0.0
baz=36,SNR=5.5
X14A Yava 36.32 116 ⇑P P 19 50 47.4 +0.3
baz=36,SNR=8.6
V17A Tonalea, Kykot 36.35 112 P P 19 50 48.1 +0.8
baz=36,SNR=30
Q24A Divide 36.43 103 ⇑P P 19 50 48.3 +0.3
baz=36
P25A Willow Gulch B 36.49 101 ⇓P P 19 50 49.1 +0.6
baz=36
S22A 4UR Ranch, Cre 36.55 106 ⇓P P 19 50 48.9 -0.1
baz=36
U19A Dine' College, 36.56 110 ⇓P P 19 50 48.9 -0.1
baz=36
X15A Humboldt 36.61 115 P P 19 50 50.5 +1.0
baz=36,SNR=15
V18A Ganado 36.68 111 ⇑P P 19 50 50.4 +0.3
baz=36
Y14A Wickenburg 36.71 116 ⇑P P 19 50 51.0 +0.6
baz=36
Y15A Casa Rosa Ranc 37.01 116 ⇑P P 19 50 53.6 +0.8
baz=37,SNR=12
X16A Lo Mia Camp, P 37.03 114 ⇑P P 19 50 54.1 +1.0
baz=37
Z13A Yuma Proving G 37.04 118 ⇓P P 19 50 53.1 0.0
baz=37,SNR=5.8
SDCO Great Sand Dun 37.20 104 ⇑P P 19 50 55.2 +0.8
baz=37,SNR=10
SDCO Great Sand Dun 37.20 104 *e*P P 19 50 54.6 +0.2
comp=E,5.2nm,0.9s,mb4.5
V20A Brimhall 37.31 110 ⇑P P 19 50 55.5 +0.1
baz=37
X17A Forest Lakes 37.40 113 ⇑P P 19 50 56.8 +0.7
baz=37
Y16A Circle Bar Ran 37.46 115 ⇑P P 19 50 57.6 +0.9
baz=37
R25A Fountain Ranch 37.49 103 ⇑P P 19 50 57.4 +0.5
baz=37,SNR=6.3
X18A Snowflake 37.64 112 ⇑P P 19 50 59.0 +0.9
baz=37
S25A Robets Cordova 37.79 103 ⇓P P 19 50 59.6 +0.1
baz=38
W20A Ramah 37.84 110 ⇑P P 19 51 00.2 +0.4
baz=38,SNR=8.9
Y17A Roosevelt 37.91 114 ⇑P P 19 51 01.2 +0.7
baz=38,SNR=5.5
V22A San Miguel Ran 37.97 108 ⇓P P 19 51 01.2 +0.2
baz=38,SNR=5.9
X19A St. Johns 38.03 112 ⇓P P 19 51 02.1 +0.6
baz=38
115A Sonoran Desert 38.10 117 ⇑P P 19 51 03.0 +0.9
baz=38
X20A Quemado 38.31 111 ⇑P P 19 51 04.5 +0.6
baz=38
Z17A San Carlos Hig 38.41 114 P P 19 51 06.1 +1.4
baz=38,SNR=5.3
X21A Alamocita Cree 38.73 110 P P 19 51 08.2 +0.8
baz=38,SNR=20
YSS Yuzh-Sakhalins 38.80 280 *e*P P 19 51 08.8 +1.0
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.2
117A Oracle 38.89 115 P P 19 51 09.8 +1.0
baz=39,SNR=11
W23A Werner Place, 38.94 108 ⇑P P 19 51 10.0 +0.9
baz=39
ANMO Albuquerque 38.96 108 P P 19 51 09.6 +0.3
comp=Z,1.7nm,0.5s,mb4.1,baz=335,slow=7.9,SNR=5.0
ANMO PcP PcP 19 53 17.8 -0.2
comp=Z,0.7nm,0.5s,baz=17,slow=1.8,SNR=5.3
ANMO Albuquerque 38.96 108 P P 19 51 09.6 +0.3
ANMO 19 53 17.8
U26A Atchley Ranch, 39.13 104 ⇑P P 19 51 11.0 +0.4
baz=39
Y21A Point of Rocks 39.14 110 ⇓P P 19 51 11.4 +0.6
baz=39,SNR=5.5
V25A Rancho No Teng 39.14 105 ⇓P P 19 51 10.9 +0.1
baz=39
118A Homack Ranch, 39.19 114 ⇑P P 19 51 12.1 +0.9
baz=39,SNR=5.2
W24A Lazy 6 Ranch, 39.26 107 ⇓P P 19 51 12.3 +0.5
baz=39
119A Ashpeak Ranch, 39.40 113 P P 19 51 14.0 +1.1
baz=39,SNR=9.3
Z20A Nine Sixteen R 39.44 112 ⇑P P 19 51 14.4 +1.1
baz=39,SNR=5.5
217A Green Valley 39.52 116 P P 19 51 14.7 +0.7
baz=39,SNR=7.1
218A Dragoon 39.71 115 P P 19 51 16.3 +0.8
baz=39,SNR=6.0
120A U Bar Ranch, L 39.89 113 ⇑P P 19 51 17.8 +0.8
baz=40
Y23A Lovelace Mesa, 39.98 109 ⇑P P 19 51 18.5 +0.7
baz=40
219A White Tail Can 40.05 114 P P 19 51 19.2 +0.8
baz=40,SNR=6.9
Z22A Elephant Butte 40.10 110 P P 19 51 19.4 +0.7
baz=40,SNR=10
318A Bisbee 40.19 115 P P 19 51 20.2 +0.7
baz=40,SNR=8.8
Y24A Capitan 40.28 108 ⇓P P 19 51 20.9 +0.7
baz=40,SNR=5.4
121A Cookes Peak, D 40.30 112 ⇑P P 19 51 20.4 0.0
baz=40
220A Playas Peak, P 40.48 113 ⇑P P 19 51 22.2 +0.3
baz=40,SNR=5.4
Y25A Mesa, Roswell 40.64 107 P P 19 51 23.5 +0.3
baz=40,SNR=10
CLNS Chul'man 40.66 303 *e*P P 19 51 23.0 -0.1
CLNS pmax pmax
comp=Z,23nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,12nm,0.8s
CLNS pmax pmax
comp=E,18nm,0.9s
SUMG Summit 40.75 25 *e*P P 19 51 23.9 +0.2
comp=E,13nm,0.8s,mb4.8
SUMG Summit 40.75 25 *e*P P 19 51 23.9 +0.2
SUMG pmax pmax
comp=Z,13nm,0.8s
SUMG Summit 40.75 25 *i* P P 19 51 23.7 0.0
comp=Z,14nm,0.8s,mb4.8
SUMG *i* pP 19 51 45.5 +1.3
Z24A Sheeppen Canyo 40.80 108 P P 19 51 25.1 +0.6
baz=40,SNR=9.0
320A Kipp Ranch, An 40.95 114 ⇑P P 19 51 26.6 +0.9
baz=41
Y27A Causey 41.42 106 ⇑P P 19 51 29.6 0.0
baz=41
Z26A Caprock 41.52 107 ⇓P P 19 51 29.9 -0.5
baz=41
HABR Khabarovsk 41.55 288 *e*P P 19 51 29.8 -0.7
HABR *e*PP pP 19 51 48.8 -2.3
HABR *SP sP 19 51 58.4 -2.6
HABR *e* 19 53 07.1
HABR PPP 19 53 39.1
HABR *e*S **S** **19 57 40.9 +1.3**
HABR *e*SS sS 19 58 13.9 -1.0
HABR *e* 20 01 24.8
HABR pmax pmax
comp=N,7.0nm,0.6s
HABR pmax pmax
comp=Z,36nm,1.2s,mb5.0
HABR pmax pmax
comp=E,28nm,1.2s
HABR MLR MLR
comp=Z,40nm,16.0s
125A Gardner Draw, 41.69 108 P P 19 51 32.2 +0.4
baz=41,SNR=10.0
224A Cornudas Mount 41.75 110 ⇓P P 19 51 32.4 +0.1
baz=42
MNTX Cornudas Mount 42.13 110 ⇑P P 19 51 35.6 +0.2
baz=42,SNR=15
MNTX Cornudas Mount 42.13 110 *e*P P 19 51 35.4 0.0
comp=Z,4.6nm,0.6s,mb4.4
GDL2 Guadalupe Moun 42.21 108 *e*P P 19 51 36.0 0.0
comp=Z,49nm,0.9s,mb5.2
324A Moseley Ranch, 42.30 110 P P 19 51 37.0 +0.2
baz=42,SNR=7.1
325A Bean Ranch, Si 42.60 110 ⇑P P 19 51 39.5 +0.3
baz=42,SNR=6.6
WMOK Wichita Mounta 42.90 101 *e*P P 19 51 40.9 -0.8
comp=Z,8.9nm,0.8s,mb4.5
WMOK Wichita Mounta 42.90 101 *e*P P 19 51 40.9 -0.7
WMOK pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
425A Indio Mountain 43.08 110 P P 19 51 43.8 +0.7
baz=43,SNR=15
326A Caldwell Ranch 43.12 109 P P 19 51 43.5 +0.1
baz=43,SNR=7.6
426A McDonald Obser 43.63 109 ⇓P P 19 51 47.5 -0.1
baz=43,SNR=8.7
427A Hayter Ranch, 43.78 109 ⇓P P 19 51 48.3 -0.4
baz=44
SCHQ Schefferville 43.81 57 P P 19 51 46.8 -1.9
comp=Z,4.3nm,0.5s,mb4.5,baz=45,slow=19,SNR=8.0
SCHQ PcP PcP 19 53 32.6 -0.9
comp=Z,6.3nm,1.1s,baz=307,slow=8.0,SNR=3.8
526A Mary Lane Ranc 44.11 110 P P 19 51 51.7 +0.4
baz=44,SNR=10
428A Kincaid Ranch, 44.23 108 ⇑P P 19 51 52.4 +0.1
baz=44,SNR=14
527A Woodward Ranch 44.27 109 ⇑P P 19 51 52.1 -0.5
baz=44,SNR=6.1
626A Big Bend Ranch 44.51 110 ⇑P P 19 51 54.5 -0.1
baz=44
528A Cox Ranch, San 44.65 108 ⇓P P 19 51 55.8 +0.1
baz=44,SNR=14
TXAR Lajitas Array 44.91 110 P P 19 51 57.7 -0.1
comp=Z,3.3nm,0.7s,mb4.2,baz=329,slow=6.3,SNR=37
TXAR Lajitas Array 44.91 110 P P 19 51 57.7 -0.1
TXAR Lajitas Array 44.91 110 P P 19 51 57.7 -0.1
627A Terlingua Ranc 44.95 110 ⇓P P 19 51 58.0 0.0
baz=45,SNR=11
628A Black Gap, Mar 45.16 109 ⇓P P 19 51 59.6 -0.1
baz=45
SADO Sadowa 45.21 75 P P 19 51 59.0 -0.9
comp=Z,2.3nm,0.3s,mb4.3,baz=322,slow=12,SNR=3.5
SADO LR LR 20 11 29.3
comp=Z,66nm,19.3s,baz=93,slow=37
JCT Junction City 45.84 105 ⇓P P 19 52 04.9 -0.1
baz=46,SNR=15
JCT Junction City 45.84 105 *e*P P 19 52 04.4 -0.6
comp=Z,39nm,0.6s,mb5.3
JCT Junction City 45.84 105 *e*P P 19 52 04.4 -0.7
JCT pmax pmax
comp=Z,39nm,0.6s,mb5.3
MDJ Mudanjiang 46.94 288 P P 19 52 13.0 -0.5
MDJ pP pP 19 52 32.5 -2.0
MDJ sP sP 19 52 41.8 -2.5
MDJ PP PP 19 54 03.3 -1.2
MDJ ScP ScP 19 57 31.8 +1.7
MDJ PcS PcS 19 57 40.6 +1.0
MDJ S **S** **19 58 56.6 -1.2**
MDJ pmax pmax
comp=Z,17nm,2.1s,mb4.4
MDJ LR LR
comp=N,69nm,13.3s
MDJ LR LR
comp=E,61nm,12.9s
MDJ LR LR
comp=Z,74nm,7.6s
HIA Hailar 48.13 299 *e*P P 19 52 22.7 0.0
comp=Z,5.3nm,0.6s,mb4.5
HIA Hailar 48.13 299 *e*P P 19 52 22.7 +0.1
HIA pmax pmax
comp=Z,5.0nm,0.6s
BINY Binghamton 48.66 75 *e*P P 19 52 26.4 -0.4
comp=Z,7.4nm,0.6s,mb4.8
BINY *e*pP pP 19 52 49.6 +1.7
MAJO Matsushiro 48.74 274 *e*P P 19 52 27.4 -0.1
comp=Z,12nm,0.8s,mb4.9
MAJO Matsushiro 48.74 274 *e*P P 19 52 27.4 -0.1
MAJO pmax pmax
comp=Z,11nm,0.8s,mb4.8
MAT Matsushiro 48.74 274 P P 19 52 27.2 -0.3
MJAR Matsushiro Arr 48.74 274 P P 19 52 27.0 -0.5
comp=Z,5.9nm,1.1s,mb4.5,baz=7.9,slow=7.1,SNR=16
MJAR Matsushiro Arr 48.74 274 P P 19 52 27.0 -0.5
CN2 Changchun 49.54 290 *e*P P 19 52 33.0 -0.5
CN2 *e*pP pP 19 52 56.3 +1.6
CN2 *e*S **S** **19 59 32.4 -2.1**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
TKL Tuckaleechee C 49.77 86 LR LR 20 12 28.0
comp=Z,74nm,18.4s,baz=328,slow=34
KEV Kevo 50.90 360 *e*P P 19 52 42.6 -0.8
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KEV Kevo 50.90 360 *e*p P 19 52 42.6 -0.8
comp=Z,0.7nm,0.3s,mb4.2
ARCES ARCESS Array B 51.11 1 P P 19 52 44.8 -0.2
comp=Z,1.8nm,0.6s,mb4.3,baz=9.1,slow=6.3,SNR=16
ARCES PcP PcP 19 53 58.3 -1.0
comp=Z,2.7nm,0.6s,baz=0.0,slow=3.9,SNR=5.3
ARCES ARCESS Array B 51.11 1 P P 19 52 44.8 -0.2
ARCES 19 53 58.3
KSRS Korea Array 53.20 283 P P 19 53 01.1 +0.1
comp=Z,12nm,0.9s,mb4.9,baz=38,slow=6.7,SNR=39
KSRS LR LR 20 15 55.3
comp=Z,14nm,18.6s,baz=75,slow=36
ULN Ulaanbaatar 54.66 306 *e*P P 19 53 11.4 0.0
comp=Z,7.6nm,0.8s,mb4.8
ULN Ulaanbaatar 54.66 306 *e*P P 19 53 11.4 0.0
ULN pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
SONM Songino Array 54.95 306 P P 19 53 14.2 +0.7
comp=Z,14nm,0.8s,mb5.0,baz=41,slow=6.6,SNR=70
SONM pP pP 19 53 39.1 +4.1
comp=Z,3.9nm,0.8s,baz=55,slow=4.3,SNR=3.2
SONM Songino Array 54.95 306 P P 19 53 14.2 +0.7
SONM *PP pP 19 53 39.1 +4.1
BJI Beijing 56.83 293 P P 19 53 27.1 +0.1
BJI S **S** **20 01 16.6 +3.3**
BJI pmax pmax
comp=Z,14nm,0.6s,mb5.2

BJI pmax pmax
comp=Z,73nm,5.0s
BJI LR LR
comp=N,140nm,15.1s
BJI LR LR
comp=E,100nm,16.1s
NVS Novosibirsk 57.33 325 eP P 19 53 28.9 -1.4
NVS e pP 19 53 54.1 +2.2
NVS pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
NVS pmax pmax
comp=N,2.0nm,0.7s
NVS pmax pmax
comp=E,3.0nm,0.5s
ZAA0 Zalesovo Array 57.63 324 eP P 19 53 32.1 -0.3
ZALV Zalesovo Beam 57.63 324 P P 19 53 31.9 -0.5
comp=E,11nm,0.5s,mb5.1,baz=29,slow=7.4,SNR=43
ZALV pP pP 19 53 57.4 +3.3
comp=E,3.9nm,0.5s,baz=29,slow=6.8,SNR=3.8
ZALV Zalesovo Beam 57.63 324 P P 19 53 31.9 -0.5
ZALV *PP pP 19 53 57.4 +3.3
PRGR Permogore 58.19 350 eP P 19 53 34.7 -1.5
PRGR pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KAF Kangasniemi 58.57 0 eP P 19 53 37.2 -1.7
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KAF Kangasniemi 58.57 0 ep P 19 53 37.2 -1.7
comp=Z,1.2nm,0.3s,mb4.4
NB2 NORSAR Subarra 59.04 9 P P 19 53 41.1 -1.0
comp=Z,1.4nm,0.6s,mb4.2,baz=351,slow=6.9
NOA NORSAR Array B 59.04 9 P P 19 53 41.4 -0.8
comp=Z,3.9nm,0.9s,mb4.4,baz=351,slow=6.8,SNR=7.9
NOA pP pP 19 54 04.6 +0.7
comp=Z,1.9nm,0.7s,baz=351,slow=7.0,SNR=3.5
NOA NORSAR Array B 59.04 9 P P 19 53 41.4 -0.8
NOA pP pP 19 54 04.6 +0.7
NOA NORSAR Array B 59.04 9 P P 19 53 41.4 -0.7
NOA *PP pP 19 54 04.6 +0.8
FINES FINESS Array B 59.24 0 P P 19 53 42.8 -0.7
comp=Z,1.6nm,0.4s,mb4.4,baz=0.1,slow=7.3,SNR=17
FINES pP pP 19 54 06.8 +1.5
comp=Z,4.5nm,0.7s,baz=5.7,slow=7.7,SNR=5.4
FINES FINESS Array B 59.24 0 P P 19 53 42.8 -0.7
FINES *PP pP 19 54 06.8 +1.5
KLMR Klimovskoe 59.44 353 eP P 19 53 43.3 -1.5
KLMR pmax pmax
comp=Z,22nm,1.7s,mb4.9
CMIG Matias Romero 59.51 109 P P 19 53 44.5 -1.5
comp=Z,1.9nm,0.5s,mb4.3,baz=296,slow=7.5,SNR=5.1
CMIG pP pP 19 54 09.2 +1.5
comp=Z,3.5nm,0.7s,baz=315,slow=10,SNR=3.1
CMIG Matias Romero 59.51 109 P P 19 53 44.5 -1.5
CMIG pP pP 19 54 09.2 +1.5
TEIG Tepich 60.08 101 P P 19 53 48.1 -1.7
comp=Z,4.6nm,0.4s,mb4.8,baz=350,slow=6.1,SNR=3.8
ARU Arti 61.57 341 eP P 19 53 59.1 -0.3
comp=Z,4.5nm,0.8s,mb4.5
ARU Arti 61.57 341 c iP **P 19 53 59.9 +0.5**
ARU e 19 54 37.3
ARU S **S 20 02 17.8 +3.8**
ARU SS SS 20 06 17.1 +1.7
ARU pmax pmax
comp=Z,11nm,1.7s,mb4.6
NJ2 Nanjing 61.98 286 eP P 19 54 05.3 +2.7
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.3
KURK Kurchatov 62.29 326 eP P 19 54 04.3 0.0
comp=Z,12nm,0.8s,mb5.0
KURK Kurchatov 62.29 326 c iP **P 19 54 03.9 -0.4**
KURK pmax pmax
comp=Z,11nm,1.0s,mb4.8
BRVK Borovoye 62.35 332 eP P 19 54 04.1 -0.6
comp=Z,9.1nm,0.7s,mb4.9
BRVK Borovoye 62.35 332 d iP **P 19 54 04.9 +0.2**
BRVK pmax pmax
comp=Z,11nm,1.0s,mb4.8
APG El Apazote 63.44 106 P P 19 54 10.9 -1.6
comp=Z,6.2nm,0.8s,mb4.6,baz=300,slow=9.2,SNR=7.6
GTA Gaotai 64.58 305 eP P 19 54 19.3 -0.3
GTA pP pP 19 54 44.3 +2.6
GTA sP sP 19 54 54.4 +3.1
GTA pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
MK31 Makanchi Array 64.67 321 eP P 19 54 18.9 -1.2
MK31 Makanchi Array 64.67 321 eP P 19 54 19.0 -1.1
MKAR Makanchi Array 64.67 321 P P 19 54 19.3 -0.8
comp=Z,2.6nm,0.5s,mb4.3,baz=38,slow=6.5,SNR=59
MKAR PP PP 19 56 41.4 -1.3
comp=Z,2.0nm,1.0s,baz=40,slow=4.7,SNR=3.6
MKAR Makanchi Array 64.67 321 P P 19 54 19.3 -0.8
MKAR 19 56 41.4
XAN Xi'an 65.07 295 P P 19 54 21.6 -1.3
XAN pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
WHN Wuhan 65.41 289 P P 19 54 29.8 +4.7
LZH Lanzhou 65.65 300 eP P 19 54 26.1 -0.5
LZH pP pP 19 54 49.9 +1.2
LZH sP sP 19 54 59.8 +1.5
LZH PP PP 19 56 52.6 +1.1
LZH eS S 20 03 03.0 -2.2
LZH SS SS 20 07 21.1 +1.2
LZH pmax pmax
comp=Z,24nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,60nm,4.8s
LZH LR LR
comp=N,660nm,13.4s
LZH LR LR
comp=E,170nm,11.0s
LZH LR LR
comp=Z,1μm,17.8s
BSEG Bad Segeberg 65.99 11 eP P 19 54 28.8 +0.3
comp=Z,15nm,0.9s,mb4.8
BSEG epP pP 19 54 52.5 +1.9
BSEG Bad Segeberg 65.99 11 eP P 19 54 28.8 +0.3
BSEG epP pP 19 54 52.6 +2.0
BSEG Bad Segeberg 65.99 11 eP P 19 54 28.8 +0.3
BSEG e*PP pP 19 54 52.6 +2.0
NRDL Niedersach Rie 67.40 11 eP P 19 54 37.5 0.0
comp=Z,7.0nm,1.0s,mb4.5
CLZ Clausthal 68.07 11 eP P 19 54 42.3 +0.6
comp=Z,10.0nm,1.0s,mb4.6
CLZ epP pP 19 55 06.0 +2.1
CLZ Clausthal 68.07 11 eP P 19 54 42.3 +0.6
CLZ e*PP pP 19 55 06.0 +2.1
CLZ pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
BUG Bochum-Univer 68.14 13 eP P 19 54 42.0 -0.1
comp=Z,15nm,0.9s,mb4.8
ABKAR Akbulak array 68.17 337 eP P 19 54 41.0 -1.4
comp=Z,4.5nm,0.6s,mb4.5
BAIF Baives 69.11 15⇑ iP **P 19 54 47.8 -0.4**
comp=Z,7.5nm,0.6s,mb4.4
BAIF Baives 69.11 15⇑ iP **P 19 54 47.8 -0.4**
comp=Z,3.8nm,0.6s,mb4.4
BAIF Baives 69.11 15⇑ iP **P 19 54 47.8 -0.4**
BAIF pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
GIVF Givet 69.15 15 eP P 19 54 47.9 -0.5
GIVF Givet 69.15 15 eP P 19 54 47.9 -0.5
BRG Berggiesshubel 69.34 9 eP P 19 54 49.6 0.0
comp=Z,8.0nm,1.4s,mb4.4
BRG epP pP 19 55 13.4 +1.5
BRG Berggiesshubel 69.34 9 eP P 19 54 50.0 +0.4
comp=Z,7.7nm,1.3s,mb4.4
MOX Moxa 69.37 10 eP P 19 54 49.7 -0.1
comp=Z,11nm,1.1s,mb4.6
MOX e pP 19 55 13.6 +1.5
MOX Moxa 69.37 10 eP P 19 54 49.9 +0.1
comp=Z,11nm,1.1s,mb4.6
MOX epP pP 19 55 13.9 +1.8
MOX Moxa 69.37 10 eP P 19 54 49.7 -0.1
MOX e pP 19 55 13.6 +1.5
MOX pmax pmax
comp=Z,11nm,1.1s,mb4.6
TNS Taunus Mts 69.47 13 eP P 19 54 50.5 +0.1
comp=Z,17nm,1.3s,mb4.7
TNS Taunus Mts 69.47 13 eP P 19 54 50.5 +0.1
TNS pmax pmax
comp=Z,17nm,1.3s,mb4.7
ROSF Rostrenen 69.60 21 eP P 19 54 51.0 -0.2
ROSF Rostrenen 69.60 21 eP P 19 54 51.0 -0.2
WERD Werda 69.63 10 eP P 19 54 51.5 +0.1
comp=Z,4.0nm,0.9s,mb4.2
FLN La Foliniere 69.67 19 eP P 19 54 51.4 -0.3
comp=Z,5.4nm,0.5s,mb4.4
FLN La Foliniere 69.67 19 eP P 19 54 51.4 -0.3
comp=Z,2.7nm,0.5s,mb4.3
FLN La Foliniere 69.67 19 eP P 19 54 51.4 -0.3
FLN pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
TANN Tannenbergstha 69.68 10 eP P 19 54 51.8 +0.2
comp=Z,4.0nm,0.9s,mb4.2
GUNZ Gunzen 69.72 10 eP P 19 54 52.1 +0.2
comp=Z,3.0nm,0.9s,mb4.1
PVCC Panska Ves 69.73 8 eP P 19 54 52.4 +0.4
PVCC e*PP pP 19 55 16.3 +2.0
PVCC Panska Ves 69.73 8 eP P 19 54 52.4 +0.4
PVCC epP pP 19 55 16.3 +2.0
WLF Walferdange 69.75 14 eP P 19 54 52.4 +0.3
comp=Z,16nm,1.1s,mb4.8
WLF epP pP 19 55 16.4 +1.9
WERN Wernitzgruen 69.80 10 eP P 19 54 52.8 +0.4
comp=Z,7.0nm,1.2s,mb4.4
SGMF Saint Gilles 69.81 20 eP P 19 54 52.8 +0.3
comp=Z,9.2nm,0.6s,mb4.5
SGMF Saint Gilles 69.81 20 eP P 19 54 52.8 +0.3
comp=Z,4.6nm,0.6s,mb4.5
SGMF Saint Gilles 69.81 20 eP P 19 54 52.8 +0.3
SGMF pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
UPC Upice 69.85 7 eP P 19 54 52.7 0.0
UPC e*PP pP 19 55 16.9 +1.8
UPC Upice 69.85 7 eP P 19 54 52.7 0.0
UPC epP pP 19 55 16.9 +1.8
NKC Novy Kostel 69.86 10 eP P 19 54 52.6 -0.1
NKC e*PP pP 19 55 13.8 -1.3
NKC Novy Kostel 69.86 10 eP P 19 54 52.6 -0.1
NKC epP pP 19 55 13.8 -1.3
LDF La Druitiere 69.89 19⇑ iP **P 19 54 51.9 -1.1**
comp=Z,6.6nm,0.6s,mb4.3
LDF La Druitiere 69.89 19⇑ iP **P 19 54 51.9 -1.1**
comp=Z,3.3nm,0.6s,mb4.3
LDF La Druitiere 69.89 19⇑ iP **P 19 54 51.9 -1.1**
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
GRR Gorron 69.97 19 eP P 19 54 52.7 -0.8
GRR Gorron 69.97 19 eP P 19 54 52.7 -0.8
AKASG Malin Array Be 70.00 358 P P 19 54 51.8 -1.8
comp=Z,1.4nm,0.4s,mb4.1,baz=4.1,slow=6.3,SNR=8.4
AKASG pP pP 19 55 17.1 +1.1
comp=Z,2.4nm,0.5s,baz=4.3,slow=6.7,SNR=4.3
AKASG Malin Array Be 70.00 358 P P 19 54 51.8 -1.8
AKASG *PP pP 19 55 17.1 +1.1
QUIF Quistinic 70.03 21 eP P 19 54 53.5 -0.3
QUIF Quistinic 70.03 21 eP P 19 54 53.5 -0.3
DPC Dobruska-Polom 70.03 7 eP P 19 54 54.2 +0.4
DPC e*PP pP 19 55 18.2 +2.0
DPC Dobruska-Polom 70.03 7 eP P 19 54 54.2 +0.4
DPC epP pP 19 55 18.2 +2.0
PRU Pruhonice 70.27 8 eP P 19 54 56.1 +0.8
PRU e*PP pP 19 55 19.9 +2.3
PRU Pruhonice 70.27 8 eP P 19 54 56.1 +0.8
PRU epP pP 19 55 19.9 +2.3
GRA1 Grafenberg Arr 70.28 11 eP P 19 54 55.7 +0.3
comp=Z,4.0nm,0.8s,mb4.3
GRA1 epP pP 19 55 19.7 +2.0
GRF Grafenberg Arr 70.28 11 eP P 19 54 55.7 +0.3
comp=Z,4.0nm,0.8s,mb4.3
GRF epP pP 19 55 19.7 +2.0
GRF Grafenberg Arr 70.28 11 eP P 19 54 55.7 +0.3
GRF e*PP pP 19 55 19.7 +2.0
GRF pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
GRF Grafenberg Arr 70.28 11 eP P 19 54 55.7 +0.3
GRF e*PP pP 19 55 19.7 +2.0
GRF pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
ROTZ Rotzenmuhle 70.30 10 eP P 19 54 55.9 +0.4
comp=Z,6.0nm,1.0s,mb4.4
ROTZ epP pP 19 55 19.9 +2.1
MORC Moravsky Berou 70.67 6 ⇓P P 19 54 57.6 -0.2
MORC Moravsky Berou 70.67 6 ↓iP **P 19 54 57.6 -0.2**
MEZF Maizieres J'vi 70.75 15 eP P 19 54 56.8 -1.4
WET Wettzell 70.97 10 eP P 19 54 59.9 +0.3
comp=Z,10.0nm,1.5s,mb4.4
WET Wettzell 70.97 10 eP P 19 54 59.9 +0.3
WET pmax pmax
comp=Z,10.0nm,1.5s,mb4.4
TREC Trest 71.03 8 eP P 19 54 59.6 -0.3
TREC Trest 71.03 8 eP P 19 54 59.6 -0.3
SFTF Sexfontaines 71.04 15 eP P 19 54 59.3 -0.7
KHC Kasperske Hory 71.04 9 eP P 19 55 00.3 +0.3
KHC epP pP 19 55 23.9 +1.5
VRAC Vranov 71.08 7 ⇓P P 19 55 00.1 -0.1
VRAC Vranov 71.08 7 ↓iP **P 19 55 00.1 -0.1**
CDF Champ du Feu 71.12 14 eP P 19 55 00.2 -0.3
comp=Z,3.2nm,0.5s,mb4.1
CDF Champ du Feu 71.12 14 eP P 19 55 00.2 -0.3
comp=Z,1.6nm,0.5s,mb4.1
CDF Champ du Feu 71.12 14 eP P 19 55 00.2 -0.3
CDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
BFO Black Forest 71.33 13 eP P 19 55 01.6 -0.1
comp=Z,12nm,1.4s,mb4.5
BFO Black Forest 71.33 13 eP P 19 55 01.6 -0.1
BFO pmax pmax
comp=Z,12nm,1.4s,mb4.5
GEC2 GERESS Array S 71.34 9 eP P 19 55 01.9 +0.1
GEC2 GERESS Array S 71.34 9 eP P 19 55 01.9 +0.1
GERES GERESS Array B 71.34 9 P P 19 55 01.3 -0.5
comp=Z,1.4nm,0.6s,mb3.9,baz=353,slow=4.6,SNR=14
GERES pP pP 19 55 25.9 +1.7
comp=Z,1.4nm,0.7s,baz=0.0,slow=4.3,SNR=4.6
GERES GERESS Array B 71.34 9 P P 19 55 01.3 -0.5
GERES *PP pP 19 55 25.9 +1.7
HAU Haudompre 71.41 14⇑ iP **P 19 55 01.7 -0.5**
HAU Haudompre 71.41 14⇑ iP **P 19 55 01.7 -0.5**
KKAR Karatay Array 71.50 328 eP P 19 55 01.5 -1.4
comp=Z,2.2nm,0.5s,mb4.2
KKAR Karatay Array 71.50 328 eP P 19 55 01.5 -1.4
KKAR pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
HYF Humbligny 71.62 17 eP P 19 55 03.0 -0.5
HINF Hinteralfeld 71.66 14 eP P 19 55 03.1 -0.6
HINF Hinteralfeld 71.66 14 eP P 19 55 03.1 -0.6
KOLS Kolonicke sedl 71.72 3 eP P 19 55 05.9 +1.8
KOLS Kolonicke sedl 71.72 3 eP P 19 55 05.9 +1.8
KOLS Kolonicke sedl 71.72 3 eP P 19 55 05.9 +1.8
CRVS Cervenica-Dubn 71.72 4 eP P 19 55 06.8 +2.7
CRVS Cervenica-Dubn 71.72 4 eP P 19 55 06.8 +2.7
CRVS Cervenica-Dubn 71.72 4 eP P 19 55 06.8 +2.7
LOR Lormes 71.80 16⇑ iP **P 19 55 04.0 -0.6**
comp=Z,14nm,0.7s,mb4.6
LOR Lormes 71.80 16⇑ iP **P 19 55 04.0 -0.6**
comp=Z,6.9nm,0.7s,mb4.6
LOR Lormes 71.80 16⇑ iP **P 19 55 04.0 -0.6**
LOR pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
MFF Saint Martin d 71.82 19⇑ iP **P 19 55 04.1 -0.6**
comp=Z,13nm,0.7s,mb4.6
MFF Saint Martin d 71.82 19⇑ iP **P 19 55 04.1 -0.6**
comp=Z,6.4nm,0.7s,mb4.6
MFF Saint Martin d 71.82 19⇑ iP **P 19 55 04.1 -0.6**
MFF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
SSF Saint Saulge 71.95 17⇑ iP **P 19 55 04.9 -0.6**
comp=Z,35nm,1.0s,mb4.9
SSF Saint Saulge 71.95 17⇑ iP **P 19 55 04.9 -0.6**
comp=Z,18nm,1.0s,mb4.8
SSF Saint Saulge 71.95 17⇑ iP **P 19 55 04.9 -0.6**
SSF pmax pmax
comp=Z,18nm,1.0s,mb4.9
VYHS Vyhne 72.02 6 eP P 19 55 05.7 -0.2
comp=Z,2.7nm,1.0s,mb4.0
VYHS Vyhne 72.02 6 eP P 19 55 05.7 -0.2
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
VYHS Vyhne 72.02 6 eP P 19 55 05.7 -0.2
KECS Kecovo 72.11 4 eP P 19 55 06.6 +0.2
comp=Z,1.5nm,0.8s,mb3.9
KECS Kecovo 72.11 4 eP P 19 55 06.6 +0.2
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
KECS Kecovo 72.11 4 eP P 19 55 06.6 +0.2
AVF Avril sur Loir 72.19 17⇑ iP **P 19 55 06.1 -0.8**
comp=Z,12nm,0.4s,mb4.8
BGF Bois d'Agland 72.34 17⇑ iP **P 19 55 07.0 -0.8**
comp=Z,11nm,0.6s,mb4.6
BGF Bois d'Agland 72.34 17⇑ iP **P 19 55 07.0 -0.8**
comp=Z,5.6nm,0.6s,mb4.6
BGF Bois d'Agland 72.34 17⇑ iP **P 19 55 07.0 -0.8**
BGF pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
RJOB Jochberg 72.36 10 eP P 19 55 08.0 +0.1
comp=Z,8.0nm,0.8s,mb4.6
RJOB epP pP 19 55 32.0 +1.6
SMF Signal de Mont 72.40 16⇑ iP **P 19 55 07.3 -0.9**
comp=Z,5.8nm,0.4s,mb4.4
CSNA Conrad Observa 72.41 8⇓ iP **P 19 55 08.5 +0.3**
comp=Z,5.4nm,1.0s,mb4.3
GYA Guiyang 72.48 292 eP P 19 55 09.8 +0.8
GYA pP pP 19 55 33.3 +1.8
GYA sP sP 19 55 44.3 +3.3
GYA PP PP 19 57 52.1 +1.3
GYA S S 20 04 24.8 -1.3
GYA SKS 20 05 01.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
TCF Toulx Ste Croi 72.51 18⇑ iP **P 19 55 07.9 -0.9**
TCF Toulx Ste Croi 72.51 18⇑ iP **P 19 55 07.9 -0.9**
MOTA Moosalm 72.59 11⇑ iP **P 19 55 09.1 -0.2**
comp=Z,4.9nm,0.8s,mb4.4
PSZ Piszkesteto 72.65 5 ⇓P P 19 55 09.2 -0.4
PSZ Piszkesteto 72.65 5 ↓iP **P 19 55 09.2 -0.4**
WTTA Wattenberg 72.72 11 ↓iP **P 19 55 09.7 -0.3**
comp=Z,18nm,1.3s,mb4.7
CABF La Chapelle 72.74 15⇑ iP **P 19 55 10.0 -0.2**
CABF La Chapelle 72.74 15⇑ iP **P 19 55 10.0 -0.2**
FETA Feichten 72.88 11⇑ iP **P 19 55 10.6 -0.4**
comp=Z,10nm,1.2s,mb4.5
BURAR Bucovina Array 73.09 1 ⇑P P 19 55 04.7 -7.6
BURAR Bucovina Array 73.09 1⇑ iP **P 19 55 04.7 -7.6**
KSH Kashi 73.22 322 eP P 19 55 17.1 +3.9
KSH pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
KSH pmax pmax
comp=Z,220nm,4.6s
RJF Les Rejaudoux 73.36 18 eP P 19 55 12.9 -1.0
RJF Les Rejaudoux 73.36 18 eP P 19 55 12.9 -1.0
LFF La Frestale 73.59 19⇑ iP **P 19 55 14.7 -0.5**
LFF La Frestale 73.59 19⇑ iP **P 19 55 14.7 -0.5**
OBKA Obir 73.73 9⇑ iP **P 19 55 15.6 -0.3**
comp=Z,11nm,0.6s,mb4.8
CAF Calviac 73.81 18⇑ iP **P 19 55 15.9 -0.6**
CAF Calviac 73.81 18⇑ iP **P 19 55 15.9 -0.6**
LPL La Plagne 73.90 15⇑ iP **P 19 55 17.6 +0.6**
LPL La Plagne 73.90 15⇑ iP **P 19 55 17.6 +0.6**
LPG La Plagne 73.92 15⇑ iP **P 19 55 17.9 +0.7**
LPG La Plagne 73.92 15⇑ iP **P 19 55 17.9 +0.7**
VIVF Saint-Julien-I 74.27 16⇑ iP **P 19 55 18.8 -0.4**
comp=Z,10.0nm,0.6s,mb4.5
VIVF Saint-Julien-I 74.27 16⇑ iP **P 19 55 18.8 -0.4**
comp=Z,5.0nm,0.6s,mb4.4
VIVF Saint-Julien-I 74.27 16⇑ iP **P 19 55 18.8 -0.4**
VIVF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
BNI Bardonecchia 74.35 15 eP P 19 55 19.2 -0.4
comp=Z,13nm,1.1s,mb4.6
BNI Bardonecchia 74.35 15 eP P 19 55 19.3 -0.4
BNI pmax pmax
comp=Z,13nm,1.1s,mb4.6
ORIF Oris-en-Rattie 74.38 15⇑ iP **P 19 55 19.6 -0.2**
comp=Z,4.9nm,0.5s,mb4.2
ORIF Oris-en-Rattie 74.38 15⇑ iP **P 19 55 19.6 -0.2**
comp=Z,2.5nm,0.5s,mb4.2
ORIF Oris-en-Rattie 74.38 15⇑ iP **P 19 55 19.6 -0.2**
ORIF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
MBDF Montbardon 74.68 15 eP P 19 55 22.2 +0.6
comp=Z,10nm,0.7s,mb4.4
MBDF Montbardon 74.68 15 eP P 19 55 22.2 +0.6
comp=Z,5.2nm,0.7s,mb4.4
MBDF Montbardon 74.68 15 eP P 19 55 22.2 +0.6
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
VRI Vrincioaia 74.85 0 ⇑P P 19 55 24.1 +1.6
VRI Vrincioaia 74.85 0⇑ iP **P 19 55 24.1 +1.6**
LASF Ste Croix 74.92 17 eP P 19 55 22.8 -0.1
BZS Buzias 75.01 4 ⇓P P 19 55 23.0 -0.5
BZS Buzias 75.01 4 ↓iP **P 19 55 23.0 -0.5**
SJPF Ste Jean 75.02 21 eP P 19 55 23.5 0.0
SMRF Simiane la Rot 75.26 16⇑ iP **P 19 55 25.3 +0.4**
comp=Z,12nm,0.7s,mb4.4
SMRF Simiane la Rot 75.26 16⇑ iP **P 19 55 25.3 +0.4**
comp=Z,12nm,0.7s,mb4.7
GZR Gura Zlata 75.27 3 ⇑P P 19 55 24.3 -0.6
GZR Gura Zlata 75.27 3⇑ iP **P 19 55 24.3 -0.6**
ETSF Etsaut 75.34 20⇑ iP **P 19 55 25.4 0.0**
comp=Z,23nm,1.0s,mb4.4
ETSF Etsaut 75.34 20⇑ iP **P 19 55 25.4 0.0**
comp=Z,12nm,1.0s,mb4.6
ETSF Etsaut 75.34 20⇑ iP **P 19 55 25.4 0.0**
ETSF pmax pmax
comp=Z,12nm,1.0s,mb4.6
EPF Esparros 75.37 20⇑ iP **P 19 55 24.4 -1.2**
EPF Esparros 75.37 20⇑ iP **P 19 55 24.4 -1.2**
MTLF Montolieu 75.38 18⇑ iP **P 19 55 25.1 -0.5**
comp=Z,9.1nm,0.7s,mb4.3
MTLF Montolieu 75.38 18⇑ iP **P 19 55 25.1 -0.5**
comp=Z,4.6nm,0.7s,mb4.3
MTLF Montolieu 75.38 18⇑ iP **P 19 55 25.1 -0.5**
MTLF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
KMI Kunming 75.45 295 P P 19 55 27.8 +1.5
KMI pP pP 19 55 50.0 +1.1
KMI sP sP 19 56 01.3 +2.9
KMI PP PP 19 58 18.0 +2.1
KMI S S 20 04 58.4 -1.0
KMI sS sS 20 05 40.9 +2.9
KMI SS SS 20 09 51.8 +1.1
KMI pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
KMI pmax pmax
comp=Z,81nm,5.9s
KMI LR LR
comp=N,55nm,18.7s
KMI LR LR
comp=E,47nm,20.4s
KMI LR LR
comp=Z,60nm,18.7s
PVRL Vila Real 75.47 26 eP P 19 55 26.3 +0.2
comp=Z,18nm,1.3s,mb4.7
SBF Sospel 75.62 14⇑ iP **P 19 55 26.5 -0.5**
comp=Z,25nm,0.7s,mb4.7
SBF Sospel 75.62 14⇑ iP **P 19 55 26.5 -0.5**
comp=Z,12nm,0.7s,mb4.8
SBF Sospel 75.62 14⇑ iP **P 19 55 26.5 -0.5**
SBF pmax pmax
comp=Z,12nm,0.7s,mb4.7
EBIE Bielsa 75.67 20 P P 19 55 27.4 +0.1
comp=Z,7.3nm,1.0s,mb4.4
MVO Moncorvo 75.72 26 eP P 19 55 27.7 +0.1
comp=Z,14nm,1.5s,mb4.5
PGOR Pogoanele 75.81 360⇑ iP **P 19 55 35.7 +7.7**
FRF La Foret Royal 75.81 15⇑ iP **P 19 55 27.5 -0.6**
comp=Z,11nm,0.8s,mb4.3
FRF La Foret Royal 75.81 15⇑ iP **P 19 55 27.5 -0.6**
comp=Z,5.7nm,0.8s,mb4.3
FRF La Foret Royal 75.81 15⇑ iP **P 19 55 27.5 -0.6**
FRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
PVIS Viseu 75.96 27 eP P 19 55 29.0 0.0
comp=Z,18nm,1.8s,mb4.5
LMR La Mourre 76.02 15⇑ iP **P 19 55 29.0 -0.3**
comp=Z,6.9nm,0.6s,mb4.3
LMR La Mourre 76.02 15⇑ iP **P 19 55 29.0 -0.3**
comp=Z,3.5nm,0.6s,mb4.3
LMR La Mourre 76.02 15⇑ iP **P 19 55 29.0 -0.3**
LMR pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
CLLI Llivia 76.19 19 P P 19 55 31.2 +0.9
MTE Manteigas 76.34 26 eP P 19 55 31.3 +0.2
comp=Z,19nm,1.3s,mb4.7
MTE Manteigas 76.34 26 eP P 19 55 31.0 -0.1
comp=Z,9.8nm,0.9s,mb4.5
LSA Lhasa 76.54 306 P P 19 55 33.0 +0.6
LSA Lhasa 76.54 306 eP P 19 55 32.3 -0.1
comp=Z,7.8nm,0.6s,mb4.6
LSA Lhasa 76.54 306 eP P 19 55 32.3 -0.1
LSA pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
PCBR Castelo Branco 76.89 26 eP P 19 55 34.0 -0.2

comp=Z,16nm,1.4s,mb4.5
EPLA Plasencia 76.99 25 P **P 19 55 34.3 -0.4**
comp=Z,7.3nm,0.6s,mb4.6
EPLA Plasencia 76.99 25 P **P 19 55 34.3 -0.5**
EPLA pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
PGF Pioggiola 77.11 13⇑ *i*P **P 19 55 34.9 -0.5**
comp=Z,17nm,0.8s,mb4.5
PMRV Marv??o 77.30 27 *e*P **P 19 55 36.1 -0.5**
comp=Z,12nm,1.4s,mb4.4
ESDC Sonseca Array 77.81 24 P **P 19 55 39.2 -0.2**
comp=Z,3.4nm,0.6s,mb4.2,baz=342,slow=5.4,SNR=22
ESDC pP pP 19 56 03.8 +1.7
comp=Z,1.3nm,0.6s,baz=342,slow=5.2,SNR=3.6
ESDC Sonseca Array 77.81 24 P **P 19 55 39.2 -0.2**
comp=Z,3.4nm,0.6s,mb4.2
ESLA Sonseca Array 77.81 24 *e*P **P 19 55 39.0 -0.4**
comp=Z,2.2nm,1.1s,mb3.8
EVO Evora 78.01 27 *e*P **P 19 55 40.1 -0.4**
comp=Z,12nm,1.7s,mb4.3
EBAD Badajoz 78.03 26 P **P 19 55 40.1 -0.5**
comp=Z,5.9nm,0.6s,mb4.5
PBEJ Beja 78.53 27 *e*P **P 19 55 43.2 -0.2**
comp=Z,13nm,1.6s,mb4.5
PBAR Barrancos 78.58 27 *e*P **P 19 55 43.4 -0.2**
comp=Z,15nm,1.9s,mb4.5
MORF Marmelete 79.03 28 *e*P **P 19 55 46.0 -0.1**
comp=Z,31nm,1.8s,mb4.8
EGRO El Granado 79.09 27 P **P 19 55 47.8 +1.3**
comp=Z,4.8nm,0.7s,mb4.4
PVAQ Vaqueiros 79.16 27 *e*P **P 19 55 46.9 +0.1**
comp=Z,15nm,1.6s,mb4.6
PBDV Barranco-do-Ve 79.26 28 *e*P **P 19 55 47.7 +0.3**
comp=Z,18nm,1.8s,mb4.6
EBAN Banos Encina 79.30 24 P **P 19 55 47.6 0.0**
comp=Z,6.8nm,0.7s,mb4.6
EBAN Banos Encina 79.30 24 P **P 19 55 47.6 0.0**
EBAN pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
KBL Kabul 79.90 326 *e*P **P 19 55 50.4 -0.5**
comp=Z,2.8nm,0.8s,mb4.1
KBL Kabul 79.90 326 *e*P **P 19 55 50.4 -0.5**
KBL pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
ESPR Espera 80.10 26 P **P 19 55 52.5 +0.6**
comp=Z,7.7nm,0.8s,mb4.6
ERON Agron 80.40 24 P **P 19 55 53.6 0.0**
comp=Z,5.4nm,0.5s,mb4.6
EMIJ Mijas 80.63 25 P **P 19 55 54.5 -0.2**
comp=Z,4.0nm,0.5s,mb4.5
EBER Berja 80.70 24 P **P 19 55 57.2 +2.0**
comp=Z,4.1nm,0.4s,mb4.6
BRTR Keskin Array B 80.83 355 P **P 19 55 54.9 -1.0**
comp=Z,0.9nm,0.7s,mb3.7,baz=22,slow=1.3,SNR=4.5
BRTR Keskin Array B 80.83 355 *i*P **P 19 55 55.7 -0.1**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
CHTO Chiang Mai 82.65 295 *e*P **P 19 56 03.5 -2.2**
comp=Z,6.4nm,1.2s,mb4.3
CHTO Chiang Mai 82.65 295 *e*P **P 19 56 03.5 -2.1**
CHTO pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
CM31 Chiang Mai Arr 82.96 295 *e*P **P 19 56 05.8 -1.4**
comp=Z,2.3nm,0.5s,mb4.3
CMAR Chiang Mai Arr 82.96 295 P **P 19 56 06.0 -1.3**
comp=Z,3.6nm,0.9s,mb4.2,baz=7.1,slow=5.4,SNR=23
CMAR pP pP 19 56 31.4 +1.1
comp=Z,1.7nm,0.8s,baz=11,slow=5.9,SNR=3.5
PMG Port Moresby 83.52 239 *de*P **P 19 56 08.9 -1.2**
PMG pmax pmax
comp=Z,21nm,1.2s
KEST Kesra 83.87 14 P **P 19 56 11.5 -0.2**
comp=Z,4.3nm,0.7s,mb4.4,baz=301,slow=2.1,SNR=20
KEST Kesra 83.87 14 *e*P **P 19 56 11.2 -0.5**
CTA Charters Tower 93.44 235 P **P 19 56 56.2 -1.1**
comp=Z,7.7nm,0.7s,mb5.1,baz=42,slow=8.5,SNR=8.4
WRA Warramunga Arr 98.55 245 P **P 19 57 18.4 -2.2**
comp=Z,0.9nm,0.8s,mb4.4,baz=33,slow=5.6,SNR=13
WRA PKiKP PKiKP 20 01 50.3 -1.6
comp=Z,0.2nm,0.5s,baz=24,slow=1.9,SNR=5.4
ASAR Alice Springs 101.98 244 P Pdif 19 57 33.4 -2.8
comp=Z,0.4nm,0.5s,baz=26,slow=4.5,SNR=5.8
TORD Torodi Ar. Bea 104.66 25 PKKPbc PKKPbc 20 13 28.8 -0.3
comp=Z,0.5nm,0.6s,baz=183,slow=2.2,SNR=4.7
KMBO Kilima Mbogo 121.09 348 PKP PKPdf 20 02 34.0 -0.4
comp=Z,2.8nm,0.5s,baz=0.0,slow=20,SNR=8.1
LBTB Lobatse 145.38 2 PKPbc PKPbc 20 03 18.8 -0.5
comp=Z,57nm,0.6s,baz=355,slow=2.7,SNR=118
LBTB pPKPbc pPKPbc 20 03 45.6 +2.5
comp=Z,10.0nm,0.7s,baz=336,slow=3.1,SNR=2.4
LBTB Lobatse 145.38 2 *e*PKPdf PKPdf 20 03 18.6 -0.6
LBTB Lobatse 145.38 2 *e*PKP2 PKPab 20 03 18.6 -0.9
BOSA Boshof 148.96 3 PKP PKPdf 20 03 24.2 -0.9
comp=Z,12nm,0.6s,baz=3.1,slow=3.0,SNR=4.0
BOSA PKPbc PKPbc 20 03 28.1 -1.0
comp=Z,22nm,0.7s,baz=3.4,slow=3.0,SNR=42
BOSA Boshof 148.96 3 *e*PKPbc PKPbc 20 03 28.0 -1.2
QSPA South Pole Qui 149.44 180 PKP PKPdf 20 03 23.1 -1.2
comp=Z,1.5nm,0.6s,baz=13,slow=1.8,SNR=4.9
QSPA PKPbc PKPbc 20 03 28.0 -0.9
comp=Z,8.5nm,0.6s,baz=67,slow=4.1,SNR=38
QSPA pPKPbc pPKPbc 20 03 54.8 +1.8
comp=Z,7.8nm,0.7s,baz=123,slow=0.4,SNR=3.6
QSPA South Pole Qui 149.44 180 *e*PKPbc PKPbc 20 03 27.6 -1.3
SUR Sutherland 152.43 11 PKPbc PKPbc 20 03 36.5 -0.8
comp=Z,15nm,1.0s,baz=303,slow=1.9,SNR=15
MAW Mawson 162.39 228 PKPab PKPab 20 04 28.9 -1.0
comp=Z,14nm,0.7s,baz=109,slow=5.4,SNR=39
SNAA Sanae 163.08 147 PKPab PKPab 20 04 30.3 -2.5
comp=Z,0.6nm,0.7s,baz=241,slow=5.0,SNR=9.2

*ISCJB **18** 19:50:18.1±0.7,52.°6S±0.°1×18.°9E±0.°3,h10km,mb4.1/10, MS3.7/11, Error ellipse: s-maj=23.5km s-min=15.8km az=150.6*
*IDC **18** 19:50:18.2±0.7,52.°62S×18.°98E,h0km,mb4.1/10, mb1 4.2/10,mb1mx4.1/19,mbtmp4.1/10,MS3.8/11, Ms1 3.7/11,ms1mx3.6/23, Error ellipse: s-maj=28.5km s-min=18.0km az=62.0*
*NEIC **18** 19:50:19.5±0.5,52.°61S×18.°95E,h10km,mb4.7/1, Error ellipse: s-maj=19.6km s-min=13.6km az=64.0*
ISC 18 19:50:19.8±0.7,52.°6S±0.°1×19.°0E±0.°2,h10km,n24, σ0.49/13,mb4.1/10,MS3.7/11,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.27**	**4**	P	**P**	**19 55 00.7**	**+5.4**
	12nm,0.8s,baz=175,slow=15,SNR=7.9						
SUR				LR	LR	20 00 35.7	
	comp=Z,387nm,19.7s,MS3.8,baz=140,slow=30						
SNAA	**Sanae**	**21.41**	**199**	P	**P**	**19 55 06.6**	**-0.8**
	4.2nm,0.9s,mb3.8,baz=39,slow=8.7,SNR=35						
SNAA				LR	LR	20 01 18.8	
	comp=Z,49nm,21.2s,MS2.9,baz=243,slow=31						
BOSA	**Boshof**	**24.43**	**13**	LR	LR	20 03 14.3	
	comp=Z,246nm,19.9s,MS3.7,baz=160,slow=32						
MAW	**Mawson**	**25.76**	**142**	P	**P**	**19 55 51.0**	**+0.7**
	3.3nm,0.8s,mb3.9,baz=288,slow=8.9,SNR=9.5						
MAW				LR	LR	20 03 59.4	
	comp=Z,57nm,20.9s,MS3.1,baz=58,slow=32						
LBTB	**Lobatse**	**28.02**	**13**	LR	LR	20 05 21.7	
	comp=Z,233nm,18.4s,MS3.8,baz=141,slow=32						
QSPA	**South Pole Qui**	**37.61**	**180**	P	**P**	**19 57 34.0**	**0.0**
	8.6nm,0.9s,mb4.5,baz=237,slow=4.1,SNR=18						
KMBO	**Kilima Mbogo**	**53.53**	**23**	LR	LR	20 19 12.6	
	comp=Z,67nm,21.7s,MS3.7,baz=180,slow=32						
CPUP	**Villa Florida**	**61.38**	**263**	P	**P**	**20 00 36.5**	**+0.6**
	1.6nm,0.7s,mb4.3,baz=90,slow=6.4,SNR=5.6						
CPUP				LR	LR	20 23 37.9	
	comp=Z,53nm,19.0s,MS3.7,baz=97,slow=33						
DBIC	**Dimbokro**	**62.46**	**333**	P	**P**	**20 00 42.6**	**-0.5**
	3.4nm,1.1s,mb4.4,baz=141,slow=11,SNR=5.4						
DBIC	**Dimbokro**	**62.46**	**333**	P	**P**	**20 00 42.8**	**-0.4**
	3.8nm,0.7s,mb4.6						
TORD	**Torodi Ar. Bea**	**67.18**	**342**	P	**P**	**20 01 13.7**	**-0.1**
	2.1nm,0.9s,mb4.2,baz=184,slow=7.1,SNR=5.9						
LPAZ	**La Paz**	**75.51**	**262**	P	**P**	**20 02 04.8**	**+0.4**
	0.6nm,0.6s,mb3.7,baz=180,slow=6.1,SNR=3.7						
LPAZ	**La Paz**	**75.51**	**262**	P	**P**	**20 02 04.8**	**+0.4**
RPZ	**Rata Peaks**	**81.06**	**160**	LR	LR	20 36 58.4	
	comp=Z,99nm,18.0s,MS4.2,baz=336,slow=34						
STKA	**Stephens Creek**	**82.11**	**134**	P	**P**	**20 02 39.8**	**-0.7**
	2.5nm,1.0s,mb4.1,baz=225,slow=8.6,SNR=3.0						
ASAR	**Alice Springs**	**85.35**	**123**	P	**P**	**20 02 57.5**	**+0.3**
	1.0nm,0.6s,mb4.1,baz=205,slow=4.6,SNR=15						
URZ	**Urewera**	**87.51**	**163**	LR	LR	20 37 00.1	
	comp=Z,91nm,19.7s,MS4.2,baz=327,slow=32						
KEST	**Kesra**	**88.39**	**352**	LR	LR	20 40 02.0	
	comp=Z,38nm,20.2s,MS3.8,baz=266,slow=34						
WRA	**Warramunga Arr**	**88.66**	**122**	P	**P**	**20 03 13.3**	**0.0**
	0.7nm,0.9s,mb4.0,baz=214,slow=4.3,SNR=4.2						
ROSC	**El Rosal**	**95.86**	**270**	LR	LR	20 45 23.1	
	comp=Z,74nm,18.1s,MS4.2,baz=79,slow=34						
SONM	**Songino Array**	**124.54**	**55**	PKP	PKPdf	20 09 18.5	+0.2
	0.6nm,0.7s,baz=226,slow=2.6,SNR=4.9						
PDAR	**Pinedale Array**	**144.70**	**275**	PKP	PKPdf	20 09 53.8	-2.1
	2.0nm,0.9s,baz=124,slow=4.9,SNR=13						
NVAR	**Mina Array Bea**	**147.42**	**261**	PKPbc	PKPbc	20 10 03.1	-0.1
	1.9nm,0.7s,baz=140,slow=4.6,SNR=12						
ILAR	**Eielson Array**	**165.83**	**335**	PKPab	PKPab	20 11 23.4	+0.3
	1.6nm,0.8s,baz=20,slow=3.2,SNR=16						

*ISCJB **18** 19:51:40.8±0.4,37.°85N±0.°02×29.°48E±0.°03,h8km±3km, Error ellipse: s-maj=3.4km s-min=2.8km az=174.6*
*CSEM **18** 19:51:40.6±0.1,37.°84N×29.°48E,h5km,MD3.3, Error ellipse: s-maj=3.0km s-min=2.6km az=99.0*
*DDA **18** 19:51:40.3,37.°85N×29.°48E,h16km±1km,Ml3.7*
*ISK **18** 19:51:40.2,37.°84N×29.°49E,h10km,MD3.3*
ISC 18 19:51:41.4±0.4,37.°84N±0.°02×29.°49E±0.°03,h11km±3km, n77,σ0.92/107,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.37**	**256**	PG	**Pg**	**19 51 48.2**	**-0.6**
DENT				*e*SG	**Sg**	**19 51 54.1**	**+0.5**
DENT	**Denizli**	**0.37**	**256**	*i* Pg	**Pg**	**19 51 48.2**	**-0.5**
DENT				*e*Sg	**Sg**	**19 51 54.2**	**+0.5**
DNZL	**Cakiroluk**	**0.38**	**246**	*i* P	**Pg**	**19 51 48.1**	**-0.9**
DNZL				*i* S	**Sg**	**19 51 54.7**	**+0.7**
DNZL	**Cakiroluk**	**0.38**	**246**	*i* P	**Pg**	**19 51 48.1**	**-0.8**
DNZL				*i* S	**Sg**	**19 51 54.7**	**+0.7**
KHL	**Karahalli**	**0.48**	**4**	PG	**Pg**	**19 51 49.8**	**-1.1**
KHL				*e*SG	**Sg**	**19 51 57.6**	**+0.4**
KHL	**Karahalli**	**0.48**	**4**	*i* Pg	**Pg**	**19 51 49.8**	**-1.0**
KHL				*e*Sg	**Sg**	**19 51 57.6**	**+0.4**
KHAL	**Karahalli**	**0.53**	**1**	*i* P	**Pg**	**19 51 50.4**	**-1.4**
KHAL				*i* S	**Sg**	**19 51 58.2**	**-0.5**
KHAL	**Karahalli**	**0.53**	**1**	*i* P	**Pg**	**19 51 50.3**	**-1.4**
KHAL				*i* S	**Sg**	**19 51 58.2**	**-0.5**
GOLH	**Golhisar**	**0.61**	**174**	*i* P	**Pg**	**19 51 51.6**	**-1.6**
GOLH				*i* S	**Sg**	**19 52 02.3**	**+1.1**
GOLH	**Golhisar**	**0.61**	**174**	*i* P	**Pg**	**19 51 51.6**	**-1.6**
GOLH				*i* S	**Sg**	**19 52 02.3**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.69**	**179**	PG	**Pg**	**19 51 53.4**	**-1.3**
GLHS				*e*SG	**Sg**	**19 52 04.4**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.69**	**179**	*i* Pg	**Pg**	**19 51 53.4**	**-1.3**
GLHS				*e*Sg	**Sg**	**19 52 04.4**	**+0.7**
KULA	**Kula-Manisa**	**0.93**	**316**	*e*PG	**Pg**	**19 51 58.3**	**-1.1**
KULA				*e*SG	**Sg**	**19 52 13.1**	**+1.5**
KULA	**Kula-Manisa**	**0.93**	**316**	*e*Pg	**Pg**	**19 51 58.3**	**-1.1**
KULA				*e*Sg	**Sg**	**19 52 13.1**	**+1.5**
BCK	**Bucak**	**0.96**	**113**	*e*PG	**Pg**	**19 51 59.6**	**-0.2**
BCK				*e*SG	**Sg**	**19 52 12.4**	**+0.1**
BCK	**Bucak**	**0.96**	**113**	*e*Pg	**Pg**	**19 51 59.6**	**-0.2**
BCK				*e*Sg	**Sg**	**19 52 12.4**	**+0.1**
SHUT	**Suhut-Afyon**	**1.10**	**50**	*e*PN	**Pn**	**19 52 01.5**	**-1.2**
SHUT	**Suhut-Afyon**	**1.10**	**50**	*e*Pn	**Pn**	**19 52 01.5**	**-1.2**
ELL	**Elmali**	**1.14**	**163**	*e*PN	**Pn**	**19 52 02.3**	**-1.0**
ELL	**Elmali**	**1.14**	**163**	*e*Pn	**Pn**	**19 52 02.3**	**-1.0**
YER	**Yerkesik**	**1.19**	**234**	*e*PN	**Pn**	**19 52 03.1**	**-0.8**
YER	**Yerkesik**	**1.19**	**234**	*e*Pn	**Pn**	**19 52 03.1**	**-0.8**
TURN	**Turunc**	**1.20**	**216**	*i* P	**Pn**	**19 52 08.2**	**+4.2**
TURN				*i* S	**Sb**	**19 52 27.5**	**+7.9**
GDZ	**Gediz**	**1.24**	**360**	*i* P	**Pn**	**19 52 02.6**	**-2.1**
GDZ				*i* S	**Sb**	**19 52 20.9**	**-0.1**
GDZ	**Gediz**	**1.24**	**360**	*i* P	**Pn**	**19 52 02.6**	**-2.1**
GDZ				*i* S	**Sb**	**19 52 20.9**	**0.0**
AYDN	**Tasoluk**	**1.29**	**262**	*i* P	**Pn**	**19 52 04.7**	**-0.5**
AYDN				*i* S	**Sb**	**19 52 21.7**	**-0.4**
AYDN	**Tasoluk**	**1.29**	**262**	*i* P	**Pn**	**19 52 04.7**	**-0.6**
AYDN				*i* S	**Sb**	**19 52 21.7**	**-0.4**
ANTB	**Antalya**	**1.32**	**135**	*e*PN	**Pn**	**19 52 05.2**	**-0.6**
ANTB	**Antalya**	**1.32**	**135**	*e*Pn	**Pn**	**19 52 05.2**	**-0.6**
DEMI	**Demirci**	**1.34**	**333**	*i* P	**Pn**	**19 52 05.5**	**-0.5**
DEMI				*i* S	**Sb**	**19 52 22.5**	**-1.2**
DEMI	**Demirci**	**1.34**	**333**	*i* P	**Pn**	**19 52 05.6**	**-0.5**
DEMI				*i* S	**Sb**	**19 52 22.5**	**-1.2**
BOLV	**Bolvadin**	**1.45**	**52**	*i* P	**Pn**	**19 52 07.9**	**+0.4**
BOLV				*i* S	**Sn**	**19 52 28.3**	**+1.8**
BOLV	**Bolvadin**	**1.45**	**52**	*i* P	**Pn**	**19 52 07.9**	**+0.4**
BOLV				*i* S	**Sn**	**19 52 28.3**	**+1.8**
MLSB	**Milas**	**1.46**	**249**	*e*PN	**Pn**	**19 52 07.2**	**-0.6**
MLSB	**Milas**	**1.46**	**249**	*e*Pn	**Pn**	**19 52 07.2**	**-0.5**
AKAS	**Kas**	**1.61**	**177**	*i* P	**Pn**	**19 52 11.4**	**+1.7**
AKAS				*i* S	**Sg**	**19 52 36.3**	**+3.1**
AKAS	**Kas**	**1.61**	**177**	*i* P	**Pn**	**19 52 11.4**	**+1.7**
AKHS	**Akhisar**	**1.67**	**309**	*e*P	**Pn**	**19 52 10.9**	**+0.3**
AKHS				*i* S	**Sg**	**19 52 36.0**	**+0.8**
AKHS	**Akhisar**	**1.67**	**309**	*e*P	**Pn**	**19 52 10.9**	**+0.3**
AKHS				*i* S	**Sg**	**19 52 36.0**	**+0.8**
BDRM	**Kayabasi**	**1.80**	**245**	*i* P	**Pn**	**19 52 13.2**	**+0.8**
BDRM				*i* S	**Sg**	**19 52 40.0**	**+0.7**
BDRM	**Kayabasi**	**1.80**	**245**	*i* P	**Pn**	**19 52 13.2**	**+0.8**
IZM	**Izmir**	**1.84**	**288**	*e*PN	**Pn**	**19 52 12.2**	**-0.7**
DAT	**Datca**	**1.88**	**234**	*e*PN	**Pn**	**19 52 13.1**	**-0.4**
DAT	**Datca**	**1.88**	**234**	*e*Pn	**Pn**	**19 52 13.1**	**-0.4**
BODT	**Bodrum**	**1.90**	**246**	*e*PN	**Pn**	**19 52 13.6**	**-0.1**
BODT	**Bodrum**	**1.90**	**246**	*e*Pn	**Pn**	**19 52 13.6**	**-0.1**
DURS	**Dursunbey**	**1.93**	**336**	*i* P	**Pn**	**19 52 13.6**	**-0.5**
DURS				*i* S	**Sg**	**19 52 46.0**	**+2.6**
DURS	**Dursunbey**	**1.93**	**336**	*i* P	**Pn**	**19 52 13.6**	**-0.5**
BLCB	**Balcova**	**2.00**	**286**	*e*PN	**Pn**	**19 52 14.7**	**-0.4**
BLCB	**Balcova**	**2.00**	**286**	*e*Pn	**Pn**	**19 52 14.7**	**-0.4**
KIZT	**Kizilcal**	**2.15**	**60**	*e*PN	**Pn**	**19 52 17.2**	**+0.1**
KIZT	**Kizilcal**	**2.15**	**60**	*e*Pn	**Pn**	**19 52 17.2**	**+0.1**
BORA	**Eskisehir**	**2.17**	**20**	*e*P	**Pn**	**19 52 18.6**	**+1.2**
BORA	**Eskisehir**	**2.17**	**20**	*e*P	**Pn**	**19 52 18.6**	**+1.2**
BALB	**Balikesir**	**2.19**	**326**	*e*PN	**Pn**	**19 52 17.7**	**0.0**
BALB	**Balikesir**	**2.19**	**326**	*e*Pn	**Pn**	**19 52 17.7**	**0.0**
SVRH	**Sivrihisar-ESK**	**2.26**	**44**	*e*PN	**Pn**	**19 52 18.6**	**-0.1**
SVRH	**Sivrihisar-ESK**	**2.26**	**44**	*e*Pn	**Pn**	**19 52 18.6**	**-0.1**
KONT	**Konya--Tatoy**	**2.28**	**87**	*e*PN	**Pn**	**19 52 19.1**	**+0.2**
KONT	**Konya--Tatoy**	**2.28**	**87**	*e*Pn	**Pn**	**19 52 19.1**	**+0.2**
BALY	**Balya**	**2.39**	**323**	*i* P	**Pn**	**19 52 20.7**	**+0.2**
BALY	**Balya**	**2.39**	**323**	*i* P	**Pn**	**19 52 20.7**	**+0.2**
GPA	**Golpazari**	**2.52**	**14**	*e*PN	**Pn**	**19 52 23.2**	**+0.9**
GPA	**Golpazari**	**2.52**	**14**	*e*Pn	**Pn**	**19 52 23.2**	**+0.9**
KCTX	**Karacabey (Bur**	**2.57**	**340**	*e*PN	**Pn**	**19 52 23.2**	**+0.2**
KCTX	**Karacabey (Bur**	**2.57**	**340**	*e*Pn	**Pn**	**19 52 23.2**	**+0.2**
ADVT	**Abdulvahap**	**2.59**	**4**	*e*PN	**Pn**	**19 52 24.1**	**+0.9**
ADVT	**Abdulvahap**	**2.59**	**4**	*e*Pn	**Pn**	**19 52 24.1**	**+0.8**
GONE	**Gonen-Balikesi**	**2.61**	**328**	*e*PN	**Pn**	**19 52 23.5**	**0.0**
GONE	**Gonen-Balikesi**	**2.61**	**328**	*e*Pn	**Pn**	**19 52 23.5**	**0.0**
GULT	**Gulveren**	**2.71**	**17**	*e*PN	**Pn**	**19 52 25.6**	**+0.8**
GULT	**Gulveren**	**2.71**	**17**	*e*Pn	**Pn**	**19 52 25.6**	**+0.8**
ARMT	**Armutlu**	**2.76**	**350**	*e*PN	**Pn**	**19 52 26.4**	**+0.8**
ARMT	**Armutlu**	**2.76**	**350**	*e*Pn	**Pn**	**19 52 26.4**	**+0.8**
BNT	**Bandirma**	**2.79**	**335**	*e*PN	**Pn**	**19 52 25.8**	**-0.1**
GELI	**Tayfur-Gelibol**	**3.46**	**318**	*e*PN	**Pn**	**19 52 35.6**	**+0.4**
GELI	**Tayfur-Gelibol**	**3.46**	**318**	*e*Pn	**Pn**	**19 52 35.6**	**+0.4**

*SKO **18** 19:55:26.1,41.°05N×20.°01E,h5km,M2.2,ML2.8*
*PDG **18** 19:55:26.1±0.2,41.°11N×20.°02E,h4km±2km,ML2.8/10, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*
*NEIC **18** 19:55:26.1,41.°11N×20.°02E,h4km,ML2.8(PDG),After PDG.*
*THE **18** 19:55:27.5,41.°18N×20.°08E,h0km±2km,ML2.5/2,Error ellipse: s-maj=2.8km s-min=1.0km az=3.0*
*ISCJB **18** 19:55:27.6±0.3,41.°18N±0.°02×20.°06E±0.°03,h10km, Error ellipse: s-maj=4.1km s-min=2.0km az=145.5*
*TIR **18** 19:55:27.1±1.8,41.°20N×20.°13E,h13km±129km,ML3.0*
*CSEM **18** 19:55:27.2±0.2,41.°15N×20.°04E,h2km,ML2.5/2,Error ellipse: s-maj=6.8km s-min=3.2km az=54.0*
ISC 18 19:55:27.5±0.5,41.°15N±0.°02×20.°06E±0.°03,h3km±4km, n60,σ1.36/107,19C-4D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.24**	**323**	*e*P	**Pg**	**19 55 31.1**	**-1.1**
TIR	**Tirane**	**0.24**	**323**	P	**Pg**	**19 55 31.3**	**-0.9**
TIR				S	**Sg**	**19 55 36.1**	**+0.7**
TIR	**Tirane**	**0.24**	**323**	P	**Pg**	**19 55 31.3**	**-0.9**
TIR				S	**Sg**	**19 55 36.1**	**+0.7**
KBN	**Korca**	**0.77**	**133**	*i* PG	**Pg**	**19 55 42.7**	**+0.5**
KBN				*i* SG	**Sg**	**19 55 53.7**	**+1.5**
KBN	**Korca**	**0.77**	**133**	*i* Pg	**Pg**	**19 55 42.7**	**+0.5**
SNR=95							
KBN				*i* Sg	**Sg**	**19 55 53.7**	**+1.6**
SNR=95							
PUK	**Puka**	**0.90**	**352**	*i* PG	**Pg**	**19 55 43.2**	**-1.5**
PUK				*i* SG	**Sg**	**19 55 57.0**	**+0.6**
PUK	**Puka**	**0.90**	**352**	*i* Pg	**Pg**	**19 55 43.2**	**-1.6**
SNR=95							
PUK				*i* Sg	**Sg**	**19 55 57.0**	**+0.6**
SNR=95							
KRUS	**Krusevo**	**0.92**	**76**	*e*Pg	**Pg**	**19 55 42.4**	**-2.9**
BIA	**Bitola**	**0.97**	**98**	P	**Pg**	**19 55 45.0**	**-1.1**
BIA				S	**Sg**	**19 55 59.1**	**+0.5**
BIA	**Bitola**	**0.97**	**98**	*e*Pg	**Pg**	**19 55 43.4**	**-2.7**
BIA				*e*Sg	**Sg**	**19 55 57.2**	**-1.4**
BIA				*e*Lg		19 55 57.8	
	comp=N,51nm,0.4s						
BIA				*e*Lg		19 55 58.9	
	comp=E,58nm,0.3s						
BIA	**Bitola**	**0.97**	**98**	P	**Pg**	**19 55 45.0**	**-1.1**
BIA				S	**Sg**	**19 55 59.1**	**+0.5**
ULC	**Ulcinj**	**1.01**	**323**⇑	*i* Pg	**Pg**	**19 55 44.9**	**-2.0**
ULC				*e*Sg	**Sg**	**19 56 01.7**	**+1.6**
ULC	**Ulcinj**	**1.01**	**323**⇑	*i* Pg	**Pg**	**19 55 44.9**	**-2.0**
ULC				*e*Sg	**Sg**	**19 56 01.7**	**+1.6**
NEST	**Nestorio**	**1.05**	**134**	P	**Pg**	**19 55 46.8**	**-0.9**
NEST				S	**Sg**	**19 56 03.7**	**+2.3**
NEST	**Nestorio**	**1.05**	**134**	P	**Pg**	**19 55 46.8**	**-0.9**
NEST				S	**Sg**	**19 56 03.7**	**+2.3**
BCI	**Bajram Curri**	**1.21**	**0**	*i* PG	**Pg**	**19 55 50.3**	**-0.5**
BCI				*i* SG	**Sg**	**19 56 08.1**	**+1.6**
BCI	**Bajram Curri**	**1.21**	**0**	*i* Pg	**Pg**	**19 55 50.3**	**-0.5**
SNR=93							
BCI				*i* Sg	**Sg**	**19 56 08.1**	**+1.6**
SNR=93							
SRN	**Sarande**	**1.27**	**182**	*i* PG	**Pg**	**19 55 52.2**	**+0.3**
SRN				*i* SG	**Sg**	**19 56 13.2**	**+4.8**
SRN	**Sarande**	**1.27**	**182**	*i* Pg	**Pg**	**19 55 52.2**	**+0.3**
SNR=93							
SKO	**Skopje**	**1.32**	**51**	P	**Pg**	**19 55 53.6**	**+0.7**
SKO	**Skopje**	**1.32**	**51**	*e*Pg	**Pg**	**19 55 51.9**	**-1.0**
SKO				*e*Sg	**Sg**	**19 56 11.6**	**+1.5**
SKO				*e*Lg		19 56 12.3	
	comp=E,163nm,0.8s						
SKO				*e*Lg		19 56 12.8	
	comp=N,358nm,1.3s						
SKO	**Skopje**	**1.32**	**51**	P	**Pg**	**19 55 53.6**	**+0.7**
PDG	**Podgorica**	**1.41**	**335**⇑	*i* Pg	**Pn**	**19 55 51.6**	**-2.5**
PDG				*e*Sg	**Sg**	**19 56 14.9**	**+2.1**
TTG	**Podgorica**	**1.41**	**335**⇑	*i* Pg	**Pn**	**19 55 51.6**	**-2.5**
TTG				*e*Sg	**Sg**	**19 56 14.9**	**+2.1**
TTG	**Podgorica**	**1.41**	**335**⇑	*i* Pg	**Pn**	**19 55 51.6**	**-2.5**
TTG				*e*Sg	**Sg**	**19 56 14.9**	**+2.1**
BUM	**Brajici-Budva**	**1.44**	**323**⇑	*i* Pg	**Pn**	**19 55 53.0**	**-1.5**
BUM				*e*Sg	**Sg**	**19 56 16.0**	**+2.3**
BUM	**Brajici-Budva**	**1.44**	**323**⇑	*i* Pg	**Pn**	**19 55 53.0**	**-1.5**
BUM				*e*Sg	**Sg**	**19 56 16.0**	**+2.3**
PVY	**Plav**	**1.44**	**358**⇑	*i* Pg	**Pn**	**19 55 53.6**	**-1.0**
PVY				*e*Sg	**Sg**	**19 56 16.7**	**+2.8**
PVY	**Plav**	**1.44**	**358**⇑	*i* Pg	**Pn**	**19 55 53.6**	**-1.0**
PVY				*e*Sg	**Sg**	**19 56 16.7**	**+2.8**
KZN	**Kozani**	**1.55**	**122**	P	**Pn**	**19 55 56.1**	**0.0**
KZN				S	**Sn**	**19 56 17.4**	**+0.7**
KZN	**Kozani**	**1.55**	**122**	P	**Pn**	**19 55 56.1**	**0.0**
KZN				S	**Sn**	**19 56 17.4**	**+0.7**
IGT	**Igoumenitsa**	**1.63**	**172**	P	**Pn**	**19 55 57.2**	**0.0**
IGT				S	**Sn**	**19 56 20.3**	**+1.6**
IGT	**Igoumenitsa**	**1.63**	**172**	P	**Pn**	**19 55 57.2**	**0.0**
IGT				S	**Sn**	**19 56 20.3**	**+1.6**

GCMT ***18*** *20:32:50.1±0.2, 10°.97N×91°.83E, h27km±1km, MW5.0, Moment Tensor Solution. s42,c55; s65,c106; Moment tensor: Scale 10^16Nm; Mrr=3.46±.21; Mθθ=-1.48±.14; Mφφ=4.94±.14; Mrθ=-0.96±.29; Mrφ=1.53±.11; Mθφ=0.39±.24; Best double couple: M0=4.60000×10^16 NP1:φs=36.00000°, δ=49.00000°, λ=-55.00000°. NP2:φs=170.00000°, δ=51.00000°, λ=-124.00000°. Principal axes: T 5.2900, Plg1.0000°, Azm283.0000°; N -1.3400, Plg26.0000°, Azm192.0000°; P -3.9500, Plg64.0000°, Azm15.0000°; Data Used: II IU G IC CN.*

DJA ***18*** *20:32:52, 11°.05N×91°.87E, h63km, mb5.1/37*

ISC 18 20:32:48.3±0.8, 10°.98N±0°.02×91°.81E±0°.02, h30km±5km, h34km±1.1km: pP-P, n747, σ0s89/714, mb5.2/258, MS4.3/51, 29C-124D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**9.34**	**145**	P	**Pn**	**20 34 56.4**	**-4.5**
NST	**Nakhon Sawan**	**9.34**	**59**	P	**Pn**	**20 35 02.0**	**+1.1**
BDT	**Bhumibol Dam**	**9.35**	**47**	P	**Pn**	**20 35 01.0**	**0.0**
	31nm,0.9s						
SNG	**Songkhla**	**9.48**	**113**	P	**Pn**	**20 35 03.0**	**+0.2**
	120nm,0.8s						
CM31	**Chiang Mai Arr**	**10.13**	**42**	*e*P	**Pn**	**20 35 10.1**	**-1.7**
	18nm,0.5s						
CMAR	**Chiang Mai Arr**	**10.13**	**42**	Pn	**Pn**	**20 35 11.8**	**0.0**
	2.8nm,0.3s,baz=236,slow=15,SNR=12						
CMAR				Sn	**Sn**	**20 37 01.4**	**-3.1**
	1.5nm,0.3s,baz=238,slow=28,SNR=5.8						
CMAR	**Chiang Mai Arr**	**10.13**	**42**	P	**Pn**	**20 35 11.8**	**0.0**
CMAR						20 37 01.4	
CHTO	**Chiang Mai**	**10.39**	**41**	*e*P	**Pn**	**20 35 14.4**	**-0.9**
	26nm,0.8s						
CHTO	**Chiang Mai**	**10.39**	**41**	*e*P	**Pn**	**20 35 14.4**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,26nm,0.8s						
CHTO	**Chiang Mai**	**10.39**	**41**	P	**Pn**	**20 35 16.7**	**+1.4**
	comp=Z,493nmcomp=Z,39nm,0.8s						
CHTO	**Chiang Mai**	**10.39**	**41**	Pn	**Pn**	**20 35 17.1**	**+1.8**
	SNR=6.8						
KULM	**Kulim**	**10.42**	**122**	P	**Pn**	**20 35 15.1**	**-0.6**
KULM	**Kulim**	**10.42**	**122**	*e*P	**Pn**	**20 35 13.1**	**-2.6**
	comp=Z,203nm,0.8s						
KULM	**Kulim**	**10.42**	**122**	P	**Pn**	**20 35 16.3**	**+0.6**
	comp=Z,689nmcomp=Z,56nm,1.1s						
VIS	**Vishakhapatnam**	**10.60**	**310**	*i* P	**Pn**	**20 35 16.3**	**-1.9**
VIS				*i* x	x	20 37 04.3	
PSI	**Prapat**	**10.76**	**139**	Pn	**Pn**	**20 35 19.2**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=335,slow=15,SNR=3.2						
PSI				LR	LR	20 40 50.0	
	comp=Z,2μm,18.2s,baz=310,slow=44						
PSI	**Prapat**	**10.76**	**139**	Pn	**Pn**	**20 35 19.2**	**-1.3**
PSI				LR	LR	20 40 50.0	
PSI	**Prapat**	**10.76**	**139**	P	**Pn**	**20 35 19.2**	**-1.2**
BWNR	**Bhubaneshwar**	**10.91**	**329**	*e*PKP	**Pn**	**20 35 14.0**	**-8.5**
BWNR				*e*S	Sn	20 37 03.0	-21
IPM	**Ipoh**	**11.18**	**125**	P	**Pn**	**20 35 25.6**	**-0.6**
IPM	**Ipoh**	**11.18**	**125**	*e*P	**Pn**	**20 35 25.4**	**-0.8**
	comp=Z,49nm,0.8s						
IPM	**Ipoh**	**11.18**	**125**	P	**Pn**	**20 35 25.1**	**-1.1**
PALK	**Pallekele**	**11.57**	**252**	*e*P	**Pn**	**20 35 29.9**	**-1.6**
	comp=Z,376nm,0.9s						
PALK	**Pallekele**	**11.57**	**252**	*e*P	**Pn**	**20 35 30.0**	**-1.5**
PALK				pmax	pmax		
	comp=Z,377nm,0.9s						
PALK	**Pallekele**	**11.57**	**252**	Pn	**Pn**	**20 35 30.3**	**-1.2**
	comp=Z,1μm,0.6s,SNR=51						
PALK	**Pallekele**	**11.57**	**252**	P	**Pn**	**20 35 30.6**	**-0.9**
PALK	**Pallekele**	**11.57**	**252**	Pn	**Pn**	**20 35 33.7**	**+2.2**
	SNR=10						
MNSI	**Mandailing Nat**	**12.73**	**142**	P	**Pn**	**20 35 48.7**	**+1.4**
	comp=Z,14nm,1.0s						
BKNI	**Bangkinang**	**14.01**	**139**	P	**Pn**	**20 36 08.2**	**+3.4**
	comp=Z,51nm,1.1s						
SISI	**Saibi**	**14.21**	**149**	P	**Pn**	**20 36 17.2**	**+10**
PPI	**Padang Panjang**	**14.21**	**143**	P	**Pn**	**20 36 11.3**	**+3.7**
	comp=Z,9μmcomp=Z,25nm,1.3s						
HYB	**Hyderabad**	**14.35**	**298**	*i* P	**Pn**	**20 36 06.0**	**-3.5**
HYB				*ep*P	pP	20 36 15.0	-9.2
HYB				*e*S	**Sn**	**20 38 50.0**	**+2.3**
SHL	**Shillong**	**14.51**	**0**	*ex*	**Pn**	**20 36 15.0**	**+3.5**
SHL				*ex*	x	20 37 18.0	
SHL				*i* x	x	20 38 43.0	
PDSI	**Padang**	**14.62**	**143**	P	**Pn**	**20 36 17.1**	**+4.0**
	comp=Z,1μmcomp=Z,148nm,0.8s						
TRD	**Trivandrum**	**14.85**	**262**	*e*PKP	**Pn**	**20 36 14.1**	**-2.2**
TRD				AMb	AMB	20 36 23.8	
	comp=Z,74nm,1.6s						
MYKOM	**Kota Tinggi**	**15.04**	**127**	P	**Pn**	**20 36 23.8**	**+5.0**
SDSI	**Sungai Dareh**	**15.22**	**140**	P	**Pn**	**20 36 25.0**	**+3.9**
	comp=Z,24nm,1.0s						
NGP	**Nagpur**	**15.88**	**311**	*e*PKP	**Pn**	**20 36 25.9**	**-3.8**
NGP				AMb	AMB	20 36 27.8	
	comp=Z,119nm,0.7s						
ODAN	**Odare**	**16.33**	**346**	*e*P	**Pn**	**20 36 34.1**	**-1.4**
	comp=Z,150nm,0.7s						
LATR	**Latur**	**16.49**	**298**	*e*PKP	**Pn**	**20 36 35.5**	**-2.0**
LATR				*e*PKP		20 36 35.8	
LATR				AMb	AMB	20 36 37.7	
	comp=Z,112nm,1.2s						
LATR				*ex*	x	20 39 25.2	
JBP	**Jabalpur**	**16.56**	**319**	*e*PKP	**Pn**	**20 36 37.7**	**-0.6**
JBP				*ex*	x	20 39 31.4	
TAPN	**Taplejung**	**16.73**	**347**	*e*P	**Pn**	**20 36 38.9**	**-1.6**
	comp=Z,342nm,0.9s						
AKL	**Akola**	**17.19**	**306⇑**	*i* P	**Pn**	**20 36 45.0**	**-1.3**
AKL				AMP		20 36 49.3	
	comp=Z,206nm,0.7s						
AKL				*i* x	x	20 39 42.0	
KMI	**Kunming**	**17.47**	**35**	P	**Pn**	**20 36 51.1**	**+1.4**
KMI				pP	pP	20 37 00.3	+1.6
KMI				PP		20 37 08.8	
KMI				S	**Sn**	**20 40 03.0**	**-0.4**
KMI				sS	sS	20 40 15.5	-8.0
KMI				SS		20 40 27.4	
KMI				pmax	pmax		
	comp=Z,65nm,1.0s						
KMI				pmax	pmax		
	comp=Z,160nm,5.0s						
KMI				LR	LR		
	comp=N,570nm,16.7s						
KMI				LR	LR		
	comp=E,630nm,15.4s						
KMI				LR	LR		
	comp=Z,630nm,13.3s						
PKI	**Pulchoki**	**17.57**	**341**	*e*P	**Pn**	**20 36 51.1**	**+0.2**
	comp=Z,101nm,0.5s						
PKI	**Pulchoki**	**17.57**	**341**	*e*P	**Pn**	**20 36 51.1**	**+0.2**
PKI				pmax	pmax		
	comp=Z,101nm,0.5s						
PKIN	**Phulchoki**	**17.57**	**341**	*e*P	**Pn**	**20 36 51.0**	**0.0**
	comp=Z,137nm,0.4s						
DMN	**Daman**	**17.70**	**340**	*e*P	**Pn**	**20 36 52.7**	**+0.1**
	comp=Z,168nm,0.7s						
GUN	**Gumba**	**17.74**	**343**	*e*P	**Pn**	**20 36 53.0**	**0.0**
	comp=Z,76nm,0.6s						
KKN	**Kakani**	**17.81**	**341**	*e*P	**Pn**	**20 36 53.8**	**-0.1**
	comp=Z,41nm,0.5s						
KKN	**Kakani**	**17.81**	**341**	*e*P	**Pn**	**20 36 53.8**	**-0.1**
KKN				pmax	pmax		
	comp=Z,41nm,0.5s						
KSI	**Kapahiang**	**18.07**	**143**	P	**Pn**	**20 36 57.1**	**-0.1**
	comp=Z,116nm,0.9s						
KAD	**Karad**	**18.21**	**292**	*e*PKP	**Pn**	**20 36 58.2**	**-0.6**
KAD				AMb	AMB	20 37 09.7	
	comp=Z,62nm,1.5s						
KAD				*ex*	x	20 40 00.0	
GKN	**Gorkha**	**18.22**	**339**	*e*P	**Pn**	**20 36 59.0**	**0.0**
	comp=Z,85nm,0.3s						
BHPL	**Bhopal**	**18.36**	**313**	*e*PKP	**Pn**	**20 37 00.1**	**-0.5**
BHPL				AMb	AMB	20 37 13.4	
	comp=Z,81nm,1.7s						
LSA	**Lhasa**	**18.63**	**358**	P	**Pn**	**20 37 04.5**	**+0.5**
LSA				S	**Sn**	**20 40 25.6**	**-5.9**
LSA	**Lhasa**	**18.63**	**358**	*e*P	**Pn**	**20 37 04.3**	**+0.3**
	comp=Z,307nm,1.1s						
LSA	**Lhasa**	**18.63**	**358**	*e*P	**Pn**	**20 37 04.3**	**+0.3**
LSA				pmax	pmax		
	comp=Z,307nm,1.1s						
DANN	**Dangsing**	**18.85**	**338**	*e*P	**Pn**	**20 37 06.8**	**+0.2**
	comp=Z,157nm,0.7s						
HMDM	**Hanimaadhoo**	**18.87**	**259**	P	**Pn**	**20 37 11.2**	**+4.2**
POO	**Poona**	**18.91**	**295**	*e*PKP	**Pn**	**20 37 05.6**	**-1.8**
POO				AMb	AMB	20 37 12.6	
	comp=Z,72nm,1.0s						
QIZ	**Qiongzhong**	**19.15**	**63**	P	**Pn**	**20 37 10.3**	**0.0**
QIZ				pP	pP	20 37 15.1	-2.2
QIZ				sP	sP	20 37 23.3	+2.1
QIZ				S	**Sn**	**20 40 41.8**	**-2.4**
QIZ				pmax	pmax		
	comp=Z,120nm,6.4s						
QIZ				LR	LR		
	comp=N,600nm,19.9s						
QIZ				LR	LR		
	comp=E,260nm,21.0s						
QIZ				LR	LR		
	comp=Z,930nm,20.5s						
QIZ	**Qiongzhong**	**19.15**	**63**	*e*P	**Pn**	**20 37 12.1**	**+1.7**
	comp=Z,84nm,1.3s						
MDSI	**Maura Dua**	**19.69**	**141**	P	**Pn**	**20 37 11.7**	**-5.1**
LWLI	**Liwa**	**20.03**	**142**	P	**P**	**20 37 19.7**	**+0.8**
	comp=Z,93nm,0.9s						
KLSI		**20.19**	**140**	P	**P**	**20 37 17.0**	**-3.7**
KSM	**Kuching**	**20.65**	**116**	*e*P	**P**	**20 37 24.5**	**-1.2**
	comp=Z,146nm,1.1s						
KSM	**Kuching**	**20.65**	**116**	P	**P**	**20 37 24.9**	**-0.8**
	comp=Z,1μmcomp=Z,139nm,1.2s						
GYA	**Guiyang**	**20.82**	**40⇑**	*i* P	**P**	**20 37 29.8**	**+2.4**
GYA				pP		20 37 38.8	
GYA				sP	sP	20 37 41.3	+2.0
GYA				PP		20 37 54.0	
GYA				S	**S**	**20 41 16.4**	**-1.8**
GYA				sS	sS	20 41 30.0	-1.1
GYA				SS		20 41 49.6	
GYA				ScP	ScP	20 45 09.4	-1.0
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,4.8s						
GYA				LR	LR		
	comp=N,3μm,12.1s,MS4.8						
GYA				LR	LR		
	comp=E,2μm,14.6s,MS4.8						
GYA				LR	LR		
	comp=Z,4μm,15.8s,MS4.9						
TPI	**Tanjungpandan**	**20.85**	**130**	P	**P**	**20 37 27.5**	**-0.3**
	comp=Z,584nmcomp=Z,57nm,1.1s						
PTH	**Pithoragarh**	**21.41**	**331**	*e*PKP	**P**	**20 37 35.3**	**+1.6**
PTH				*ex*	x	20 41 25.3	
BHV	**Bhavnagar**	**21.67**	**302**	*ex*	pP	20 37 45.0	+0.3
BHV				*ex*	x	20 41 03.2	
SBUM	**Sibu**	**21.95**	**111**	P	**P**	**20 37 39.0**	**-0.7**
	comp=Z,694nmcomp=Z,61nm,1.1s,mb4.9						
NDI	**New Delhi**	**22.29**	**324**	*e*PKP	**P**	**20 37 42.0**	**-1.1**
NDI				*ex*	x	20 41 46.0	
STKI	**Sintang**	**22.35**	**118**	P	**P**	**20 37 44.0**	**0.0**
	comp=Z,80nm,1.1s,mb5.1						
AJM	**Ajmer**	**22.36**	**316**	*e*PKP	**P**	**20 37 44.0**	**+0.1**
AJM				AMb	AMB	20 37 56.6	
	comp=Z,88nm,1.5s,mb5.0						
DDI	**Dehra Dun**	**23.11**	**328⇑**	*i* P	**P**	**20 37 52.5**	**+0.7**
DDI				*ex*	x	20 41 44.0	
GZH	**Guangzhou**	**23.81**	**57**	P	**P**	**20 38 03.3**	**+4.6**
GZH				S	**S**	**20 42 20.3**	**+7.7**
GZH				LR	LR		
	comp=N,270nm,15.1s,MS4.2						
GZH				LR	LR		
	comp=E,630nm,16.4s,MS4.2						
GZH				LR	LR		
	comp=Z,750nm,15.6s,MS4.3						
SMLA	**Simla**	**24.21**	**328**	*i* P	**P**	**20 38 02.0**	**-0.3**
SDNR	**Sundarnagar**	**24.61**	**328**	*ex*	x	20 38 09.5	
KKM	**Kota Kinabalu**	**24.62**	**99**	*e*P	**P**	**20 38 05.8**	**-0.4**
	comp=Z,104nm,1.4s,mb5.2						
KKM	**Kota Kinabalu**	**24.62**	**99**	P	**P**	**20 38 08.1**	**+1.9**
	comp=Z,767nmcomp=Z,51nm,1.4s,mb4.9						
SMRI	**Semarang**	**25.78**	**133**	P	**P**	**20 38 18.0**	**+1.3**
	comp=Z,155nm,1.0s,mb5.5						
NGJI	**Ngawi**	**26.73**	**132**	P	**P**	**20 38 29.8**	**+4.4**
MYLDM	**Lahad Datu**	**27.03**	**100**	P	**P**	**20 38 31.4**	**+3.3**
	comp=Z,57nm,1.0s,mb5.1						
LZH	**Lanzhou**	**27.27**	**22**	*e*P	**P**	**20 38 30.6**	**+0.7**
LZH				pP	pP	20 38 40.1	+1.4
LZH				sP	sP	20 38 44.4	+2.0
LZH				PP		20 39 19.0	
LZH				*e*S	**S**	**20 43 08.0**	**+0.7**
LZH				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,160nm,4.5s						
LZH				LR	LR		
	comp=N,660nm,13.4s,MS4.4						
LZH				LR	LR		
	comp=E,170nm,11.0s,MS4.4						
LZH				LR	LR		
	comp=Z,1μm,14.8s,MS4.6						
XAN	**Xi'an**	**27.78**	**32**	P	**P**	**20 38 33.4**	**-1.1**
XAN				pP	pP	20 38 39.5	-3.8
XAN				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
WHN	**Wuhan**	**28.58**	**44**	P	**P**	**20 38 41.8**	**+0.1**
WHN				pmax	pmax		
	comp=Z,110nm,1.4s,mb5.4						
WHN				LR	LR		
	comp=N,940nm,21.7s,MS4.7						
WHN				LR	LR		
	comp=E,2μm,20.9s,MS4.7						
WHN				LR	LR		
	comp=Z,2μm,15.9s,MS4.8						
GTA	**Gaotai**	**29.19**	**13**	P	**P**	**20 38 48.3**	**+1.2**
GTA				pP	pP	20 38 57.3	+1.4
GTA				sP	sP	20 39 01.6	+2.1
GTA				PcP	PcP	20 41 55.0	+1.0
GTA				S	**S**	**20 43 40.9**	**+3.3**
GTA				PcS	PcS	20 45 37.1	+0.3
GTA				pmax	pmax		
	comp=Z,120nm,1.1s,mb5.5						
GTA				pmax	pmax		
	comp=Z,340nm,4.6s						
GTA				LR	LR		
	comp=N,140nm,14.8s,MS4.0						
GTA				LR	LR		
	comp=E,240nm,15.8s,MS4.0						
GTA				LR	LR		
	comp=Z,270nm,15.6s,MS4.0						
SSLB	**Suanglung**	**30.51**	**61**	*e*P	**P**	**20 38 59.7**	**+0.8**
	comp=Z,30nm,0.9s,mb5.1						
MJSI	**Majene**	**30.65**	**117**	P	pP	20 39 12.4	+3.3
YULB	**Yu-li**	**30.68**	**62**	*e*P	**P**	**20 39 02.1**	**+1.7**
	comp=Z,16nm,0.8s,mb4.9						
TTSI	**Tana Toraja**	**31.16**	**115**	P	**P**	**20 39 06.6**	**+1.8**
	comp=Z,1μmcomp=Z,42nm,1.1s,mb5.2						
YHNB	**Yeheng**	**31.17**	**60**	*e*P	**P**	**20 39 06.3**	**+1.5**
	comp=Z,79nm,1.4s,mb5.3						
KBL	**Kabul**	**31.32**	**322**	*e*P	**P**	**20 39 06.9**	**+0.9**
	comp=Z,34nm,1.0s,mb5.1						
KBL	**Kabul**	**31.32**	**322**	*e*P	**P**	**20 39 06.9**	**+0.9**
KBL				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.1						
SPSI	**Sidrap Palu**	**31.54**	**117**	P	**P**	**20 39 08.3**	**+0.2**
	comp=Z,21nm,0.9s,mb5.0						
MRSI	**Marisa**	**31.70**	**107**	P	**P**	**20 39 10.4**	**+0.8**
	comp=Z,566nmcomp=Z,47nm,1.1s,mb5.2						
KSH	**Kashi**	**31.71**	**336**	*e*P	**P**	**20 39 08.3**	**-1.1**
KSH				*ep*P	pP	20 39 17.8	-0.4
KSH				*es*P	sP	20 39 21.8	0.0
KSH				*e*PP	PP	20 40 12.4	-8.9
KSH				*e*PcP	PcP	20 42 01.5	+0.9
KSH				*e*S	**S**	**20 44 12.1**	**-5.1**
KSH				*es*S	sS	20 44 28.4	-3.3
KSH				*e*ScP	ScP	20 45 40.8	-1.2
KSH				*e*PcS	PcS	20 45 44.6	-0.5
KSH				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.5						
KSH				LR	LR		
	comp=N,770nm,8.8s						
KSH				LR	LR		
	comp=E,660nm,8.1s						
KSH				LR	LR		
	comp=Z,1μm,15.8s,MS4.7						
KAPI	**Kappang**	**32.03**	**118**	P	**P**	**20 39 11.0**	**-1.5**
	comp=Z,11nm,0.8s,mb4.7,baz=290,slow=11,SNR=5.4						
KAPI				PcP	PcP	20 42 01.2	-0.8
	comp=Z,4.0nm,0.5s,baz=300,slow=20,SNR=3.4						
KAPI				pPcP		20 42 13.0	
	comp=Z,4.9nm,0.2s,baz=49,slow=17,SNR=3.7						
KAPI	**Kappang**	**32.03**	**118**	*e*P	**P**	**20 39 11.3**	**-1.2**
	comp=Z,22nm,0.8s,mb5.0						
KAPI	**Kappang**	**32.03**	**118**	P	**P**	**20 39 11.3**	**-1.1**
	comp=Z,255nmcomp=Z,17nm,1.3s,mb4.7						
BKSI	**Bulukumba**	**32.50**	**119**	P	**P**	**20 39 17.1**	**+0.5**
	comp=Z,1μmcomp=Z,136nm,1.1s,mb5.8						
NJ2	**Nanjing**	**32.58**	**46**	*e*P	**P**	**20 39 17.6**	**+0.5**
NJ2				pP	pP	20 39 20.6	-5.3
NJ2				sP	sP	20 39 23.5	-6.1
NJ2				PP	PP	20 40 24.8	-6.2
NJ2				S	**S**	**20 44 31.5**	**+0.6**
NJ2				sS	sS	20 44 41.5	-3.9
NJ2				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.7						
NJ2				pmax	pmax		
	comp=Z,170nm,6.1s						
NJ2				LR	LR		
	comp=N,430nm,13.6s,MS4.4						
NJ2				LR	LR		
	comp=E,450nm,16.5s,MS4.4						
NJ2				LR	LR		
	comp=Z,750nm,17.6s,MS4.4						
WMQ	**Urumqi**	**32.91**	**355**	P	**P**	**20 39 21.0**	**+1.2**
WMQ				pP	pP	20 39 31.0	+2.4
WMQ				pmax	pmax		
	comp=Z,66nm,1.0s,mb5.5						
WMQ				LR	LR		
	comp=N,460nm,14.0s,MS4.6						
WMQ				LR	LR		
	comp=E,680nm,14.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,390nm,14.0s,MS4.3						
LUWI	**Luwuk**	**33.02**	**109**	P	**P**	**20 39 21.8**	**+0.7**
	comp=Z,1μmcomp=Z,154nm,1.1s,mb5.8						
BMNI	**Bima**	**33.04**	**125**	P	**P**	**20 39 20.7**	**-0.5**
	comp=Z,26nm,1.5s,mb4.9						
KMSI	**Cibinong**	**33.59**	**106**	P	**P**	**20 39 26.1**	**0.0**
	comp=Z,309nm,1.0s						
BTO	**Baotou**	**33.60**	**25**	*e*P	**P**	**20 39 24.3**	**-1.6**
SSE	**Sheshan**	**33.77**	**49**	P	**P**	**20 39 27.4**	**0.0**
SSE				sP	sP	20 39 40.1	+0.2
SSE				S	**S**	**20 44 48.5**	**-0.8**
SSE				sS	sS	20 45 01.8	-2.1
SSE				pmax	pmax		
	comp=Z,43nm,0.7s,mb5.5						
SSE				pmax	pmax		
	comp=Z,83nm,4.7s						
SSE				LR	LR		
	comp=N,160nm,17.6s,MS4.2						
SSE				LR	LR		
	comp=E,390nm,17.5s,MS4.2						
SSE				LR	LR		
	comp=Z,500nm,15.3s,MS4.3						
KDI	**Kendari**	**34.06**	**114**	P	**P**	**20 39 30.1**	**-0.1**
	comp=Z,19nm,1.3s,mb4.9						
HHC	**Hu-ho-hao-te**	**34.47**	**27**	⇓P	**P**	**20 39 33.8**	**+0.4**
HHC				pP	pP	20 39 38.3	-4.0
HHC				sP	sP	20 39 40.8	-5.1
HHC				PP	PP	20 40 50.4	-1.5
HHC				PcP	PcP	20 42 08.4	+0.1
HHC				S	**S**	**20 45 01.8**	**+1.8**
HHC				sS	sS	20 45 09.6	-5.0
HHC				ScP	ScP	20 45 51.8	+0.3
HHC				SS	SS	20 47 12.9	-17
HHC				ScS	ScS	20 49 53.3	-0.9
HHC				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.3						
HHC				pmax	pmax		
	comp=Z,77nm,5.7s						
HHC				LR	LR		
	comp=N,440nm,14.9s,MS4.4						
HHC				LR	LR		
	comp=E,320nm,15.5s,MS4.4						
HHC				LR	LR		
	comp=Z,380nm,13.5s,MS4.3						
BBSI	**Bau Bau**	**34.71**	**117**	P	**P**	**20 39 37.4**	**+1.5**
	comp=Z,53nm,1.0s,mb5.4						
TKM2	**Tokmak 2**	**34.81**	**339**	P	**P**	**20 39 37.9**	**+1.6**
	SNR=20						
TKM2	**Tokmak 2**	**34.81**	**339**	*e*P	**P**	**20 39 37.6**	**+1.3**
	comp=Z,29nm,0.9s,mb5.2						
TKM2	**Tokmak 2**	**34.81**	**339**	*e*P	**P**	**20 39 37.6**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.2						
KBK	**Karagaybulak**	**34.81**	**338**	P	**P**	**20 39 38.3**	**+2.0**
	SNR=29						
AML	**Almayashu**	**34.84**	**336**	P	**P**	**20 39 38.7**	**+2.1**
	SNR=19						
AML	**Almayashu**	**34.84**	**336**	*e*P	**P**	**20 39 38.8**	**+2.1**
	comp=Z,143nm,1.1s,mb5.8						
AAK	**Ala-Archa**	**34.96**	**337**	P	**P**	**20 39 39.4**	**+1.7**
	SNR=34						
FRU	**Bishkek**	**35.09**	**338**	*e*P	**P**	**20 39 38.0**	**-0.7**
FRU				pmax	pmax		
	comp=Z,120nm,2.0s,mb5.5						
CHMS	**Chumysh**	**35.18**	**338**	P	**P**	**20 39 40.2**	**+0.6**
	SNR=22						
EKS2	**Erkin-Say**	**35.26**	**337**	P	**P**	**20 39 42.1**	**+1.9**
	SNR=31						
EKS2	**Erkin-Say**	**35.26**	**337**	*e*P	**P**	**20 39 42.0**	**+1.8**
	comp=Z,56nm,0.8s,mb5.5						
USP	**Ospenovka**	**35.51**	**338**	P	**P**	**20 39 43.3**	**+1.0**
	SNR=49						
BJT	**Baijiatuau**	**36.08**	**33**	*e*P	**P**	**20 39 47.9**	**+0.7**
	comp=Z,102nm,0.6s,mb5.9						
BJT	**Baijiatuau**	**36.08**	**33**	*e*P	**P**	**20 39 47.9**	**+0.6**
BJT				pmax	pmax		
	comp=Z,102nm,0.6s						
BJI	**Beijing**	**36.10**	**33**	P	**P**	**20 39 47.9**	**+0.5**
BJI				S	**S**	**20 45 27.3**	**+2.3**
BJI				pmax	pmax		
	comp=Z,170nm,0.8s,mb6.0						
BJI				pmax	pmax		
	comp=Z,180nm,3.9s						
BJI				LR	LR		
	comp=N,420nm,20.2s,MS4.4						
BJI				LR	LR		
	comp=E,540nm,19.6s,MS4.4						
BJI				LR	LR		
	comp=Z,370nm,24.2s,MS4.1						
MK31	**Makanchi Array**	**36.59**	**349**	*e*P	**P**	**20 39 52.1**	**+0.5**
MK31	**Makanchi Array**	**36.59**	**349**	*e*P	**P**	**20 39 52.1**	**+0.6**
MKAR	**Makanchi Array**	**36.59**	**349**	P	**P**	**20 39 52.1**	**+0.6**
	comp=Z,97nm,0.8s,mb5.7,baz=167,slow=8.3,SNR=365						
MKAR				PcP	PcP	20 42 13.9	-0.5
	comp=Z,7.9nm,0.8s,baz=208,slow=3.6,SNR=6.3						
MKAR				LR	LR	20 56 45.8	
	comp=Z,299nm,20.6s,MS4.1,baz=166,slow=39						
MKAR	**Makanchi Array**	**36.59**	**349**	P	**P**	**20 39 52.2**	**+0.7**
MKAR						20 42 13.9	
IKOO	**Kooshah**	**36.97**	**310**	*e*P	**P**	**20 39 56.1**	**+1.1**
KK31	**Karatay Array**	**36.97**	**334**	*i* P	**P**	**20 39 55.2**	**+0.4**
KK31				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.3						
KKAR	**Karatay Array**	**36.97**	**334**	*e*P	**P**	**20 39 55.6**	**+0.7**
	comp=Z,53nm,0.8s,mb5.4						
KKAR	**Karat

ULN Ulaanbaatar 38.93 16 P **P 20 40 11.8 +0.5**
comp=Z,499nmcomp=Z,38nm,1.3s,mb5.0
ULN Ulaanbaatar 38.93 16 P **P 20 40 12.0 +0.7**
SNR=14
IPAY Payeh 38.98 316 *e*P **P 20 40 12.4 +0.5**
IAKL Akhelmad 39.23 316 *e*P **P 20 40 14.1 +0.1**
IBAF Bafgh 39.24 307 *e*P **P 20 40 15.6 +1.4**
IEMG Emamgholi 39.73 317 *e*P **P 20 40 19.3 +1.1**
IMEH Mehriz 39.92 306 *e*P **P 20 40 20.3 +0.5**
ISFR Sfrayin 39.98 316 *e*P **P 20 40 21.2 +1.0**
ABKT Ailbek 40.37 317 P **P 20 40 25.7 +2.3**
comp=Z,236nm,0.9s,mb5.9,SNR=14
ZAK Zakamensk 40.40 11⇑*i*P **P 20 40 23.7 +0.2**
ZAK *e* 20 42 22.2
ZAK pmax pmax
comp=Z,15nm,1.1s,mb4.6
ISRV Sarvestan 40.43 303 *e*P **P 20 40 24.8 +0.7**
KURK Kurchatov 41.07 347 *e*P **P 20 40 29.3 +0.3**
comp=Z,118nm,1.1s,mb5.4
KURK Kurchatov 41.07 347*d i*P **P 20 40 29.0 0.0**
KURK pmax pmax
comp=Z,129nm,1.1s,mb5.5
KURK Kurchatov 41.07 347 P **P 20 40 29.6 +0.6**
comp=Z,543nm,1.1s,mb6.1,SNR=54
KURK Kurchatov 41.07 347 P **P 20 40 29.8 +0.8**
SNR=41
MOY Mondy 41.25 9 *e*P **P 20 40 31.0 +0.5**
MOY pmax pmax
comp=Z,37nm,2.0s,mb4.7
SNY Shenyang 41.44 36 ⇓P **P 20 40 32.0 -0.2**
SNY pmax pmax
comp=Z,73nm,0.8s,mb5.4
SNY pmax pmax
comp=Z,180nm,5.4s
SNY LR LR
comp=E,2μm,15.7s
SNY LR LR
comp=Z,520nm,16.3s,MS4.5
TLY Talaya 41.71 11 *e*P **P 20 40 35.7 +1.4**
comp=Z,35nm,1.1s,mb4.9
TLY Talaya 41.71 11 *e*P **P 20 40 33.9 -0.4**
TLY *e*S **S 20 46 49.1 -0.1**
TLY pmax pmax
comp=Z,33nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,186nm,19.0s,MS4.0
TLY Talaya 41.71 11 P **P 20 40 35.6 +1.3**
comp=Z,195nm,1.0s,mb5.7,SNR=15
TLY Talaya 41.71 11 P **P 20 40 36.2 +2.0**
SNR=11
KSRS Korea Array 41.76 45 P **P 20 40 34.3 -0.6**
comp=Z,12nm,0.8s,mb4.6,baz=246,slow=8.7,SNR=49
KSRS PcP PcP 20 42 31.0 +0.1
comp=Z,2.1nm,0.7s,baz=243,slow=5.5,SNR=4.1
KSRS LR LR 21 00 17.5
comp=Z,436nm,18.8s,MS4.4,baz=238,slow=40
IANJ Anjilo 42.11 312 *e*P **P 20 40 38.8 +1.0**
IZEF Zefreh 42.27 307 *e*P **P 20 40 39.8 +0.6**
IGAR Gharneh 42.32 307 *e*P **P 20 40 41.1 +1.5**
IRK Irkutsk 42.37 11 *e*P **P 20 40 39.0 -0.6**
IRK *e* 20 42 22.5
IRK pmax pmax
comp=Z,55nm,1.7s,mb4.9
ISHM Shahmirzad 42.72 312 *e*P **P 20 40 44.5 +1.8**
ILAS Lasjerd 42.78 311 *e*P **P 20 40 44.6 +1.4**
ISFB Sefidab 42.90 309 *e*P **P 20 40 45.5 +1.3**
ZAA0 Zalesovo Array 43.22 354 *e*P **P 20 40 46.5 +0.1**
ZALV Zalesovo Beam 43.22 354 P **P 20 40 46.6 +0.2**
comp=Z,56nm,0.6s,mb5.5,baz=174,slow=9.6,SNR=270
ZALV LR LR 21 02 41.2
comp=Z,162nm,18.5s,MS4.0,baz=355,slow=42
ZALV Zalesovo Beam 43.22 354 P **P 20 40 46.7 +0.3**
IPIR Pirpir 43.33 306 *e*P **P 20 40 49.7 +2.0**
IDMV Damavand 43.55 311 *e*P **P 20 40 50.5 +1.0**
CN2 Changchun 43.74 35⇑P **P 20 40 51.0 +0.2**
CN2 *e*pP pP 20 41 00.9 +1.0
CN2 *e*S **S 20 47 19.0 -0.2**
CN2 pmax pmax
comp=Z,70nm,0.7s,mb5.5
CN2 LR LR
comp=N,200nm,16.0s,MS4.3
CN2 LR LR
comp=E,200nm,16.0s,MS4.3
CN2 LR LR
comp=Z,400nm,21.0s,MS4.3
FITZ Fitzroy Crossi 44.16 131 P **P 20 40 53.7 -0.9**
comp=Z,26nm,0.8s,mb5.0,baz=311,slow=5.0,SNR=46
FITZ pP pP 20 41 03.2 -0.3
comp=Z,96nm,0.9s,baz=285,slow=3.7,SNR=31
FITZ PcP PcP 20 42 39.6 +0.3
comp=Z,9.4nm,0.8s,baz=248,slow=3.7,SNR=4.1
FITZ LR LR 20 59 13.4
comp=Z,138nm,20.4s,MS3.9,baz=296,slow=36
FITZ Fitzroy Crossi 44.16 131 *e*P **P 20 40 53.5 -1.0**
comp=Z,100nm,0.9s,mb5.5
FITZ Fitzroy Crossi 44.16 131 P **P 20 40 54.1 -0.5**
comp=Z,2μmcomp=Z,236nm,1.1s,mb5.8
IR3 Iran Long-Peri 44.26 310 *e*P **P 20 40 56.2 +1.0**
NVS Novosibirsk 44.27 353⇑*i*P **P 20 40 54.8 -0.1**
NVS pmax pmax
comp=Z,54nm,1.1s,mb5.2
NVS pmax pmax
comp=N,24nm,0.7s
NVS pmax pmax
comp=E,13nm,0.6s
HIA Hailar 44.66 26 *e*P **P 20 40 57.8 -0.3**
comp=E,16nm,0.8s,mb4.9
HIA Hailar 44.66 26 *e*P **P 20 40 57.8 -0.3**
HIA pmax pmax
comp=Z,16nm,0.8s
RDF Al-Radifah 44.97 300 *e*P **P 20 41 01.6 +0.7**
RDF AMb AMB 20 41 04.7
comp=Z,53nm,1.3s,mb5.2
UMR Umm Al-Rimmam 44.98 301 *e*P **P 20 41 01.1 +0.1**
UMR AMb AMB 20 41 02.3
comp=Z,43nm,0.9s,mb5.3
IRAZ Razeghan 45.06 310 *e*P **P 20 41 02.8 +1.2**
KNA Kununurra 45.21 125 P **P 20 41 01.7 -1.2**
comp=Z,410nmcomp=Z,67nm,0.9s,mb5.5
NAY Al-Naaiem 45.31 300 *e*P **P 20 41 03.8 +0.2**
NAY AMb AMB 20 41 04.9
comp=Z,23nm,0.6s,mb5.2
MIB Mutribah 45.36 301 *e*P **P 20 41 04.1 +0.1**
MIB AMb AMB 20 41 05.6
comp=Z,38nm,0.7s,mb5.3
BRVK Borovoye 45.39 342 *e*P **P 20 41 04.0 +0.1**
comp=Z,33nm,1.0s,mb5.1
BRVK Borovoye 45.39 342*d i*P **P 20 41 03.6 -0.3**
BRVK pmax pmax
comp=Z,40nm,1.1s,mb5.2
BRVK Borovoye 45.39 342 P **P 20 41 04.7 +0.8**
comp=Z,185nm,0.7s,mb6.0,SNR=15
BRVK Borovoye 45.39 342 P **P 20 41 04.3 +0.4**
SNR=9.7
MEEK Meekatharra 45.57 146 *e*P **P 20 41 05.0 -0.6**
MEEK *e*pP pP 20 41 15.6 +0.9
BAKI Biak 45.67 103 P **P 20 41 07.2 +0.5**
comp=Z,2μmcomp=Z,53nm,1.1s,mb5.4
AB31 Akbulak array 46.42 331 *i* P **P 20 41 12.7 +0.6**
AB31 pmax pmax
comp=Z,25nm,0.5s,mb5.4
ABKAR Akbulak array 46.42 331 *e*P **P 20 41 12.8 +0.7**
comp=Z,29nm,0.7s,mb5.3
MDJ Mudanjiang 46.62 37 P **P 20 41 13.4 -0.4**
MDJ pP pP 20 41 22.4 -0.4
MDJ sP sP 20 41 26.1 -0.3
MDJ PP PP 20 43 02.8 -0.8
MDJ ScP ScP 20 46 38.0 -1.0
MDJ PcS PcS 20 46 41.6 -0.4
MDJ S **S 20 48 01.4 +0.4**
MDJ sS sS 20 48 16.5 +0.6
MDJ pmax pmax
comp=Z,19nm,1.7s,mb4.8
MDJ LR LR
comp=N,190nm,18.6s,MS4.2
MDJ LR LR
comp=E,180nm,18.1s,MS4.2
MDJ LR LR
comp=Z,350nm,18.4s,MS4.3
MDJ Mudanjiang 46.62 37 *e*P **P 20 41 14.1 +0.3**
comp=Z,12nm,0.9s,mb4.8
VLA Vladivostok 47.23 40*de*P **P 20 41 16.1 -2.4**
VLA *e* 20 42 46.6
VLA S **S 20 48 08.2 -1.5**
VLA pmax pmax
comp=Z,39nm,1.2s,mb5.2
AKTO Aktyubinsk 48.14 331 *i* P **P 20 41 24.8 -0.6**
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MAJO Matsushiro 48.88 51 *e*P **P 20 41 31.1 -0.3**
comp=Z,10nm,0.8s,mb4.9
MAJO Matsushiro 48.88 51 *e*P **P 20 41 31.1 -0.3**
MAJO pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
MAT Matsushiro 48.88 51 P **P 20 41 30.7 -0.7**
MAT S **S 20 48 34.0 +0.7**
MJAR Matsushiro Arr 48.88 51 P **P 20 41 31.5 +0.1**
comp=Z,5.2nm,0.8s,mb4.6,baz=221,slow=6.5,SNR=22
MJAR PcP PcP 20 42 55.8 +0.1
comp=Z,9.3nm,0.8s,baz=244,slow=4.2,SNR=16
MJAR LR LR 21 04 43.4
comp=Z,204nm,18.3s,MS4.2,baz=265,slow=39
MJAR Matsushiro Arr 48.88 51 P **P 20 41 31.5 +0.1**
MJAR 20 42 55.8
BOD Bodaibo 49.72 15⇑*i*P **P 20 41 37.3 -0.1**
BOD pmax pmax
comp=Z,52nm,1.1s,mb5.5
CBIJ Chichi jima 49.90 64 P **P 20 41 39.6 +0.3**
comp=Z,105nm,0.8s,mb5.9,baz=234,slow=17,SNR=5.2
NWAO Narrogin (SRO) 49.95 152 LR LR 21 01 23.3
comp=Z,306nm,19.5s,MS4.3,baz=358,slow=34
KLR Kul'dur 50.47 33 *e*P **P 20 41 38.8 -4.5**
KLR pmax pmax
comp=Z,45nm,1.6s,mb5.2
GNI Garni 50.64 313 *e*P **P 20 41 46.2 +1.5**
comp=Z,69nm,1.2s,mb5.5
GNI Garni 50.64 313*d i*P **P 20 41 46.1 +1.4**
GNI pmax pmax
comp=Z,74nm,1.3s
GNI Garni 50.64 313 P **P 20 41 47.1 +2.4**
SNR=10.0
DGRG David-gareji 50.69 315 P **P 20 41 46.0 +0.9**
MTA Mtatsminda 51.19 315 P **P 20 41 49.8 +1.0**
TBLG Delisi 51.24 315 P **P 20 41 50.3 +1.1**
TBLG Delisi 51.24 315 P **P 20 41 50.4 +1.2**
SVE Sverdlovsk 51.69 339⇑*e*P **P 20 41 53.0 +0.7**
SVE pmax pmax
comp=Z,103nm,1.3s,mb5.6
SVE MLR MLR
comp=Z,1μm,21.0s,MS4.8
GOR Gori 51.77 315 P **P 20 41 54.5 +1.4**
GUMO Guam 51.83 81 P **P 20 41 53.7 -0.3**
comp=Z,186nm,1.2s,mb5.9,baz=36,slow=8.7,SNR=3.9
GUMO Guam 51.83 81 P **P 20 41 53.8 -0.2**
HABR Khabarovsk 51.88 35 *e*P **P 20 41 51.8 -2.1**
HABR *e**SP sP 20 42 05.5 -1.1
HABR 20 43 50.1
HABR *e*S **S 20 49 13.2 -1.3**
HABR *e**SS sS 20 49 30.0 +0.4
HABR 20 51 38.7
HABR *e*SS SS 20 52 51.1 -0.4
HABR *e*SSS 20 54 32.9
HABR pmax pmax
comp=N,103nm,2.8s
HABR pmax pmax
comp=Z,200nm,2.8s,mb5.5
HABR pmax pmax
comp=E,71nm,1.7s
HABR MLR MLR
comp=Z,410nm,19.0s,MS4.5
WRA Warramunga Arr 51.93 126 P **P 20 41 53.9 -0.8**
comp=Z,3.2nm,0.4s,mb4.7,baz=300,slow=10.0,SNR=107
WRA pP pP 20 42 03.8 -0.1
comp=Z,28nm,0.7s,baz=306,slow=8.5,SNR=36
WRA PcP PcP 20 43 06.8 -0.2
comp=Z,6.6nm,0.7s,baz=316,slow=2.9,SNR=7.3
WRA S **S 20 49 11.1 -4.9**
comp=Z,3.6nm,1.1s,baz=298,slow=16,SNR=7.1
WRA Warramunga Arr 51.93 126 P **P 20 41 53.9 -0.8**
WRA *PP pP 20 42 03.8 0.0
WRA 20 43 06.9
WRA S **S 20 49 11.1 -4.9**
WB2 Warramunga Arr 51.94 126 *e*P **P 20 41 53.9 -0.8**
ARU Arti 52.15 337 *e*P **P 20 41 55.7 0.0**
comp=Z,41nm,0.9s,mb5.4
ARU Arti 52.15 337*d i*P **P 20 41 55.8 +0.1**
ARU *e* 20 43 04.7
ARU *e* 20 43 51.6
ARU S **S 20 49 20.6 +2.6**
ARU SS SS 20 52 56.2 +0.7
ARU pmax pmax
comp=Z,64nm,1.2s,mb5.4
ARU Arti 52.15 337 P **P 20 41 55.9 +0.2**
comp=Z,246nm,1.0s,mb6.1,SNR=16
ZEI Tsey 52.22 316 *e*P **P 20 41 56.8 +0.3**
ZEI pmax pmax
comp=Z,20nm,0.9s,mb5.0
CLNS Chul'man 52.39 22 *e*P **P 20 41 57.9 +0.4**
CLNS *e* 20 43 12.0
CLNS *e* 20 43 57.7
CLNS *e*S **S 20 49 13.9 -7.3**
CLNS pmax pmax
comp=Z,61nm,1.0s,mb5.5
CLNS pmax pmax
comp=E,39nm,1.1s
CLNS pmax pmax
comp=N,31nm,1.1s
CLNS pmax pmax
comp=N,4.0nm,1.2s
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CLNS smax
comp=N,57nm,14.3s
CLNS smax
comp=E,116nm,13.3s
CLNS MLR MLR
comp=E,483nm,18.0s,MS4.6
CLNS MLR MLR
comp=Z,152nm,19.0s,MS4.1
CLNS MLR MLR
comp=N,208nm,17.0s,MS4.6
KIV Kislovodsk 53.49 317 *e*P **P 20 42 06.2 +0.3**
comp=N,100nm,1.1s,mb5.7
KIV Kislovodsk 53.49 317 *e*P **P 20 42 06.2 +0.4**
KIV pmax pmax
comp=Z,75nm,1.0s,mb5.6
KIV MLR MLR
comp=Z,132nm,17.0s,MS4.1
KIV Kislovodsk 53.49 317 P **P 20 42 06.3 +0.5**
comp=Z,404nm,0.8s,mb6.4,SNR=8.7
KIV Kislovodsk 53.49 317 P **P 20 42 07.4 +1.6**
SNR=7.0
ASAR Alice Springs 53.66 130 P **P 20 42 06.9 -0.5**
comp=Z,10nm,0.8s,mb4.8,baz=309,slow=7.2,SNR=100
ASAR pP pP 20 42 16.4 -0.2
comp=Z,24nm,0.8s,baz=307,slow=5.8,SNR=26
ASAR PcP PcP 20 43 13.4 -0.1
comp=Z,12nm,0.7s,baz=311,slow=3.9,SNR=15
ASAR pPcP 20 43 25.2
comp=Z,6.2nm,0.7s,baz=314,slow=4.0,SNR=5.1
ASAR S **S 20 49 34.0 -5.6**
comp=Z,1.1nm,0.9s,baz=298,slow=13,SNR=8.4
ASAR Alice Springs 53.66 130 P **P 20 42 06.9 -0.5**
ASAR *PP pP 20 42 16.4 -0.2
ASAR 20 43 13.5
ASAR S **S 20 49 34.0 -5.5**
FORT Forrest 54.19 141 *e*P **P 20 42 09.6 -1.5**
comp=Z,10nm,0.7s,mb4.9
FORT *e*pP pP 20 42 21.7 +1.4
FORT Forrest 54.19 141 P **P 20 42 09.4 -1.7**
comp=Z,46nm,0.9s,mb5.4
MALT Malatya 54.72 309 *e*P **P 20 42 15.3 +0.3**
comp=Z,28nm,1.2s,mb5.2
MALT Malatya 54.72 309⇑P **P 20 42 14.6 -0.3**
MALT Malatya 54.72 309⇑*i*P **P 20 42 14.6 -0.3**
MALT Malatya 54.72 309 P **P 20 42 15.3 +0.3**
comp=Z,19nm,1.1s,mb5.0
SOKR Solikamsk 55.09 339*c i*P **P 20 42 18.2 +1.0**
SOKR pmax pmax
comp=Z,70nm,1.1s,mb5.6
SOKR MLR MLR
comp=Z,690nm,19.0s,MS4.8
KMBO Kilima Mbogo 55.56 261 P **P 20 42 23.3 +1.9**
comp=Z,1.6nm,0.8s,baz=180,slow=20,SNR=5.0
KMBO Kilima Mbogo 55.56 261 P **P 20 42 23.3 +1.9**
KMBO Kilima Mbogo 55.56 261 P **P 20 42 23.3 +1.9**
YSS Yuzh-Sakhalins 55.82 40⇓*i*P **P 20 42 22.7 0.0**
YSS *e* 20 42 35.5
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.7
YUK Yuzh-Kuril'sk 56.84 44⇓*i*P **P 20 42 24.7 -5.4**
YUK pmax pmax
comp=N,40nm,2.5s
YUK pmax pmax
comp=E,50nm,2.5s
YUK pmax pmax
comp=Z,40nm,2.5s,mb5.0
YUK MLR MLR
comp=Z,420nm,17.0s,MS4.6
ANN Anapa 57.31 317 *e*P pP 20 42 44.3 +1.7
YAK Yakutsk 57.83 20 *e*P **P 20 42 36.2 -0.5**
comp=Z,99nm,0.8s,mb5.9
YAK Yakutsk 57.83 20*d i*P **P 20 42 35.8 -0.9**
YAK *e**PP pP 20 42 47.1 +1.1
YAK *e* 20 43 26.9
YAK *e* 20 44 49.5
YAK *e*S **S 20 50 29.3 -4.7**
YAK *e* 20 52 25.7
YAK *e*SS SS 20 54 20.0 -4.9
YAK pmax pmax
comp=Z,78nm,0.9s,mb5.7
YAK pmax pmax
comp=N,26nm,1.1s
YAK pmax pmax
comp=E,31nm,1.1s
YAK pmax pmax
comp=Z,35nm,2.2s,mb5.0
YAK smax
comp=N,137nm,3.1s
YAK smax
comp=E,113nm,2.8s
YAK MLR MLR
comp=Z,263nm,20.0s,MS4.3
YAK MLR MLR
comp=E,200nm,23.0s,MS4.3
YAK MLR MLR
comp=N,118nm,18.0s,MS4.3
VORD Divnogorie 58.37 324 *e*P **P 20 42 39.7 -1.0**
VORD pmax pmax
comp=Z,40nm,0.8s,mb5.5
VORD pmax pmax
comp=N,30nm,1.5s
VORD pmax pmax
comp=E,50nm,0.9s
VSR Storozhevoye 58.54 324 *e*P **P 20 42 41.0 -0.9**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=Z,40nm,0.9s,mb5.5
VSR pmax pmax
comp=E,30nm,0.7s
PMG Port Moresby 58.66 108*de*P **P 20 42 43.0 -0.3**
PMG pmax pmax
comp=Z,19nm,1.0s
BR131 Keskin Array S 58.68 310 *e*P **P 20 42 42.3 -0.8**
comp=Z,11nm,0.8s,mb4.9
BRTR Keskin Array B 58.68 310 P **P 20 42 42.0 -1.1**
comp=Z,12nm,0.8s,mb5.0,baz=123,slow=7.7,SNR=45
BRTR PcP PcP 20 43 32.7 -0.1
comp=Z,4.6nm,0.9s,baz=120,slow=4.4,SNR=4.1
BRTR LR LR 21 11 18.0
comp=Z,112nm,18.6s,MS4.0,baz=91,slow=39
BRTR Keskin Array B 58.68 310 P **P 20 42 42.0 -1.1**
BRTR Keskin Array B 58.68 310 P **P 20 42 42.0 -1.0**
PRGR Permogore 60.60 337⇓*i*P **P 20 42 55.9 +0.1**
PRGR pmax pmax
comp=Z,129nm,0.8s,mb6.1
BBOO Buckleboo 60.64 138 *e*P **P 20 42 56.1 -0.5**
comp=Z,98nm,0.9s,mb5.9
MOS Moscow 61.24 328 *e*P **P 20 42 59.7 -0.7**
MOS pmax pmax
comp=Z,135nm,1.3s,mb5.9
OBN Obninsk 61.54 328 *e*P **P 20 43 02.1 -0.2**
comp=Z,47nm,0.8s,mb5.7
OBN Obninsk 61.54 328*oe*P **P 20 43 01.9 -0.5**
OBN *e**PP pP 20 43 11.6 -0.1
OBN *e**SP sP 20 43 17.3 +2.0
OBN *e* 20 43 43.0
OBN *e* 20 51 20.6
OBN pmax pmax
comp=Z,83nm,1.2s,mb5.7
CTA Charters Tower 61.83 120 P **P 20 43 05.0 0.0**
comp=Z,3.4nm,0.6s,mb4.7,baz=291,slow=5.9,SNR=3.2
CTA pP pP 20 43 14.8 +0.5
comp=Z,15nm,1.0s,baz=300,slow=9.7,SNR=6.9
CTA Charters Tower 61.83 120 *e*P **P 20 43 04.8 -0.1**
comp=Z,5.4nm,1.0s,mb4.6
CTA *e*pP pP 20 43 15.7 +1.5
CTA Charters Tower 61.83 120 P **P 20 43 05.0 0.0**
CTA pP pP 20 43 14.8 +0.5
CTA Charters Tower 61.83 120 P **P 20 43 05.0 +0.1**
CTA *PP pP 20 43 14.8 +0.6
CTAO Charters Tower 61.83 120 *e*P **P 20 43 05.1 +0.2**
comp=Z,33nm,1.3s,mb5.3
CTAO Charters Tower 61.83 120 *e*P **P 20 43 05.1 +0.2**
CTAO pmax pmax
comp=Z,33nm,1.3s,mb5.3
CTAO Charters Tower 61.83 120 P **P 20 43 05.9 +1.0**
comp=Z,21nm,1.3s,mb5.1
KLMR Klimovskoe 62.67 334 *e*P **P 20 43 08.8 -1.1**
KLMR pmax pmax
comp=Z,124nm,1.6s,mb5.8
TLCR 63.31 315⇑*i*P **P 20 43 14.1 -0.3**
TIRR Tirgusor 63.45 314 ⇓P **P 20 43 12.8 -2.5**
TIRR Tirgusor 63.45 314⇓*i*P **P 20 43 12.8 -2.5**
KIS Kishinev 63.69 317 *e*P **P 20 43 15.0 -1.9**
KIS Kishinev 63.69 317 *e*P **P 20 43 15.0 -1.9**
CFR Carcaliu 63.78 315 ⇑P **P 20 43 15.5 -2.0**
CFR Carcaliu 63.78 315⇑*i*P **P 20 43 15.5 -2.0**
STKA Stephens Creek 63.90 134 P **P 20 43 18.2 -0.3**
comp=Z,4.9nm,0.5s,mb4.8,baz=301,slow=5.8,SNR=27
STKA pP pP 20 43 29.6 +1.8
comp=Z,29nm,1.0s,baz=307,slow=6.3,SNR=16
STKA LR LR 21 12 11.4
comp=Z,181nm,21.1s,MS4.2,baz=116,slow=37
STKA Stephens Creek 63.90 134 *e*P **P 20 43 17.9 -0.6**
comp=Z,3.8nm,0.4s,mb4.8
STKA *e*pP pP 20 43 29.4 +1.6
AKASG Malin Array Be 64.31 321 P **P 20 43 19.7 -1.2**
comp=Z,14nm,0.8s,mb5.1,baz=91,slow=4.9,SNR=38
AKASG LR LR 21 16 02.6
comp=Z,161nm,19.3s,MS4.2,baz=75,slow=40
AKASG Malin Array Be 64.31 321 P **P 20 43 19.7 -1.2**
KIEV Kiev 64.31 321 *e*P **P 20 43 19.8 -1.1**
comp=Z,14nm,1.0s,mb5.0
KIEV Kiev 64.31 321 *e*P **P 20 43 19.8 -1.1**
KIEV pmax pmax
comp=Z,14nm,1.0s,mb5.0
TIXI Tiksi 64.67 12 *e*P **P 20 43 21.9 -1.0**
comp=Z,61nm,1.0s,mb5.6
TIXI Tiksi 64.67 12*d i*P **P 20 43 22.1 -0.8**
TIXI *e* 20 45 42.5
TIXI pmax pmax
comp=Z,66nm,1.2s,mb5.5
TIXI MLR MLR
comp=Z,193nm,17.0s,MS4.4
VRI Vrincioaia 64.88 316 ⇓P **P 20 43 24.8 +0.1**
VRI Vrincioaia 64.88 316⇓*i*P **P 20 43 24.8 +0.1**
MLR Muntele Rosu 65.36 315 ⇓P **P 20 43 27.8 0.0**
MLR Muntele Rosu 65.36 315⇓*i*P **P 20 43 27.8 0.0**
DOPR Dopca 65.82 316⇓*i*P **P 20 43 30.8 0.0**
VOIR 65.97 315 ⇑P **P 20 43 31.4 -0.4**
VOIR 65.97 315⇑*i*P **P 20 43 31.4 -0.4**
BURAR Bucovina Array 66.22 317 ⇑P **P 20 43 33.5 +0.2**
BURAR Bucovina Array 66.22 317⇑*i*P **P 20 43 33.5 +0.2**
BUR08 Bucovina Ar. S 66.23 317 *e*P **P 20 43 33.3 -0.1**
PETK Petropavlovsk- 66.87 37 P **P 20 43 36.6 -0.7**
comp=Z,4.2nm,0.7s,mb4.6,baz=224,slow=8.3,SNR=3.7
PETK LR LR 21 16 15.6
comp=Z,106nm,18.1s,MS4.1,baz=75,slow=39
PETK Petropavlovsk- 66.87 37 P **P 20 43 36.7 -0.6**
VTS Vitosha 66.91 312 ⇑P **P 20 43 37.3 -0.5**
VTS Vitosha 66.91 312⇑*i*P **P 20 43 37.3 -0.5**
IDID Didziasalis 66.93 326 *e*P **P 20 43 36.2 -1.5**
IDID AMB AMB 20 43 39.9
comp=Z,30nm,1.2s,mb5.2
SEY Seymchan 67.11 26⇓*e*P **P 20 43 38.1 -0.6**
IIGN Ignalina 67.22 326 *e*P **P 20 43 38.1 -1.5**
IIGN AMB AMB 20 43 40.7
comp=Z,18nm,1.3s,mb4.9
VAY Valandovo 67.25 310 *e*P **P 20 43 38.7 -1.4**
IZAR Zarasai 67.31 326 *e*P **P 20 43 38.4 -1.7**
IZAR AMB AMB 20 43 41.1

comp=Z,14nm,0.7s,mb5.1
ISAL Salakas 67.33 326 *eP* **P 20 43 38.6 -1.6**
ISAL AMB AMB 20 43 41.4
comp=Z,15nm,1.0s,mb5.0
LVV L'vov 67.37 319 *eP* **P 20 43 39.6 -1.0**
LVV *e* 20 44 12.8
GZR Gura Zlata 67.55 315⇑*iP* **P 20 43 41.6 -0.2**
VSU Vasula 67.76 329*d iP* **P 20 43 42.4 -0.5**
VSU pmax pmax
comp=Z,58nm,1.0s,mb5.6
DRGR 67.78 316⇓*P* **P 20 43 43.0 -0.2**
DRGR 67.78 316⇓*iP* **P 20 43 43.0 -0.2**
LVZ Lovozero 67.87 340*d iP* **P 20 43 43.3 -0.1**
LVZ pmax pmax
comp=Z,43nm,0.9s,mb5.5
LVZ Lovozero 67.87 340 P **P 20 43 43.4 0.0**
comp=Z,334nm,0.8s,mb6.4,SNR=6.2
EIDS Eidsvold 68.08 123 *eP* **P 20 43 45.5 0.0**
comp=Z,9.9nm,1.0s,mb4.8
APA Apatity 68.15 339⇑*iP* **P 20 43 45.0 -0.2**
APA pmax pmax
comp=Z,65nm,1.0s,mb5.6
APA MLR MLR
comp=Z,900nm,21.0s,MS5.0
SKO Skopje 68.16 311 *eP* **P 20 43 43.2 -2.6**
KWP Kalwaria Pacla 68.19 319 *eP* **P 20 43 45.5 -0.2**
KWP Kalwaria Pacla 68.19 319 *eP* **P 20 43 45.2 -0.6**
comp=Z,39nm,1.0s,mb5.4
KWP Kalwaria Pacla 68.19 319 *eP* **P 20 43 45.5 -0.3**
KWP Kalwaria Pacla 68.19 319⇑*iP* **P 20 43 45.5 -0.3**
LSZ Lusaka 68.20 249 *eP* **P 20 43 47.5 +1.1**
comp=Z,11nm,1.0s,mb4.8
LSZ Lusaka 68.20 249 *eP* **P 20 43 47.5 +1.1**
LSZ pmax pmax
comp=Z,11nm,1.0s,mb4.8
KRUS Krusevo 68.25 310 *eP* **P 20 43 44.5 -1.9**
UZH Uzhgorod 68.31 318 *eP* **P 20 43 44.7 -1.9**
UZH *i* pP 20 43 54.5 -1.5
UZH *i* 20 44 00.5
UZH *e* 20 44 14.3
KOLS Kolonicke sedl 68.37 318 *eP* **P 20 43 47.2 +0.3**
comp=Z,8.4nm,1.0s,mb4.7
KOLS Kolonicke sedl 68.37 318 *eP* **P 20 43 47.2 +0.3**
KOLS pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KOLS Kolonicke sedl 68.37 318 *eP* **P 20 43 47.2 +0.3**
BZS Buzias 68.39 315⇓*P* **P 20 43 46.3 -0.8**
BZS Buzias 68.39 315⇓*iP* **P 20 43 46.3 -0.8**
SUW Suwalki 68.66 324 *eP* **P 20 43 47.7 -0.9**
SUW Suwalki 68.66 324 *eP* **P 20 43 47.6 -1.0**
comp=Z,101nm,1.0s,mb5.7
SUW Suwalki 68.66 324 *eP* **P 20 43 47.7 -0.9**
CRVS Cervenica-Dubn 68.89 318 *eP* **P 20 43 50.5 +0.3**
comp=Z,19nm,1.1s,mb4.9
CRVS Cervenica-Dubn 68.89 318 *eP* **P 20 43 50.5 +0.3**
CRVS pmax pmax
comp=Z,19nm,1.1s,mb4.9
CRVS Cervenica-Dubn 68.89 318 *eP* **P 20 43 50.5 +0.3**
FINES FINESS Array B 68.91 332 P **P 20 43 49.9 -0.1**
comp=Z,34nm,0.8s,mb5.3,baz=103,slow=8.2,SNR=94
FINES LR LR 21 19 24.8
comp=Z,288nm,19.9s,MS4.5,baz=300,slow=41
FINES FINESS Array B 68.91 332 P **P 20 43 49.9 -0.1**
FINES LR LR 21 19 24.8
FINES FINESS Array B 68.91 332 P **P 20 43 49.9 -0.1**
KAF Kangasniemi 68.99 333 *eP* **P 20 43 50.3 -0.2**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.5
KAF Kangasniemi 68.99 333 *ep* **P 20 43 50.3 -0.2**
comp=Z,2.4nm,0.3s,mb4.6
KECS Kecovo 69.48 318 *eP* **P 20 43 53.7 -0.2**
comp=Z,7.3nm,0.9s,mb4.6
KECS Kecovo 69.48 318 *eP* **P 20 43 53.7 -0.2**
KECS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KECS Kecovo 69.48 318 *eP* **P 20 43 53.7 -0.2**
NIE Niedzica 69.71 319 *eP* **P 20 43 55.7 +0.5**
NIE Niedzica 69.71 319 *eP* **P 20 43 55.7 +0.5**
PSZ Piszkesteto 69.81 317 *eP* **P 20 43 55.2 -0.7**
comp=Z,14nm,1.1s,mb4.8
PSZ Piszkesteto 69.81 317⇑*P* **P 20 43 55.3 -0.6**
PSZ Piszkesteto 69.81 317⇑*iP* **P 20 43 55.3 -0.6**
PSZ Piszkesteto 69.81 317⇓*eP* **P 20 43 55.5 -0.4**
OJC Ojcow 70.13 319 *i P* **P 20 43 57.5 -0.3**
OJC Ojcow 70.13 319⇓*iP* **P 20 43 57.5 -0.3**
PKSM Moragy 70.51 315⇓*P* **P 20 43 59.3 -0.9**
PKSM Moragy 70.51 315⇓*iP* **P 20 43 59.3 -0.9**
VYHS Vyhne 70.58 318 *eP* **P 20 43 59.9 -0.7**
comp=Z,6.1nm,1.1s,mb4.4
VYHS Vyhne 70.58 318 *eP* **P 20 43 59.9 -0.7**
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
VYHS Vyhne 70.58 318 *eP* **P 20 43 59.9 -0.7**
ARMA Armidale 70.67 128 *eP* **P 20 44 02.5 +1.1**
ARMA *ep*P pP 20 44 14.0 +3.1
ARMA Armidale 70.67 128 *eP* **P 20 44 02.7 +1.3**
comp=Z,24nm,0.9s,mb5.1
HNR Honiara 70.73 104 P **P 20 44 02.0 -0.1**
comp=Z,28nm,0.4s,mb5.5,baz=225,slow=11,SNR=2.9
HNR Honiara 70.73 104 P **P 20 44 02.0 -0.1**
OKC Ostrava-Krasne 71.15 319 *eP* **P 20 44 04.0 0.0**
OKC Ostrava-Krasne 71.15 319 *eP* **P 20 44 04.0 0.0**
KEV Kevo 71.16 341 *eP* **P 20 44 02.7 -1.0**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
KEV Kevo 71.16 341 *ep* **P 20 44 02.7 -1.0**
comp=Z,2.1nm,0.4s,mb4.4
MORC Moravsky Berou 71.54 319 *eP* **P 20 44 06.1 -0.3**
comp=Z,24nm,1.1s,mb5.0
MORC Moravsky Berou 71.54 319⇓*P* **P 20 44 06.0 -0.4**
MORC Moravsky Berou 71.54 319⇓*iP* **P 20 44 06.0 -0.4**
ARCES ARCESS Array B 71.58 340 P **P 20 44 06.5 +0.2**
comp=Z,29nm,0.8s,mb5.3,baz=93,slow=5.8,SNR=91
ARCES LR LR 21 17 54.5
comp=Z,490nm,19.2s,MS4.8,baz=292,slow=38
ARCES ARCESS Array B 71.58 340 P **P 20 44 06.5 +0.3**
ARE0 ARCESS Array S 71.58 340 *eP* **P 20 44 06.6 +0.3**
ZST Bratislava 71.70 317 *eP* **P 20 44 07.6 +0.2**
comp=Z,19nm,0.8s,mb5.1
ZST Bratislava 71.70 317 *eP* **P 20 44 07.6 +0.2**
ZST pmax pmax
comp=Z,19nm,0.8s,mb5.1
ZST Bratislava 71.70 317 *eP* **P 20 44 07.6 +0.2**
SOP Sopron 72.04 317⇓*eP* **P 20 44 08.8 -0.6**
CEL Celeste 72.25 307 *eP* **P 20 44 11.1 +0.1**
comp=Z,56nm,1.0s,mb5.5
DPC Dobruska-Polom 72.36 319 *eP* **P 20 44 11.7 +0.4**
DPC Dobruska-Polom 72.36 319 *eP* **P 20 44 11.7 +0.4**
KSP Ksiaz 72.42 320 *eP* **P 20 44 11.8 +0.2**
CONA Conrad Observa 72.52 317⇓*iP* **P 20 44 11.8 -0.5**
comp=Z,9.1nm,1.0s,mb4.7
UPC Upice 72.57 320 *eP* **P 20 44 12.7 +0.1**
UPC Upice 72.57 320 *eP* **P 20 44 12.7 +0.1**
ARSA Arzberg 72.72 316 *i P* **P 20 44 13.3 -0.2**
comp=Z,12nm,0.9s,mb4.8,SNR=8.8
BOJS Bojanci 72.84 314 *i P* **P 20 44 13.5 -0.8**
TREC Trest 72.84 318 *eP* **P 20 44 14.2 0.0**
TREC Trest 72.84 318 *eP* **P 20 44 14.2 0.0**
PERS Pernice 72.97 315 *i P* **P 20 44 14.6 -0.4**
SOKA Soboth 73.03 316⇓*iP* **P 20 44 14.9 -0.5**
comp=Z,27nm,1.2s,mb5.0
OBKA Obir 73.36 315⇑*iP* **P 20 44 17.0 -0.2**
comp=Z,25nm,1.4s,mb4.9
LJU Ljubljana 73.36 315 *i P* **P 20 44 16.7 -0.6**
PRU Pruhonice 73.49 319 *eP* **P 20 44 18.7 +0.7**
PRU Pruhonice 73.49 319 *eP* **P 20 44 18.7 +0.7**
PVCC Panska Ves 73.50 320 *eP* **P 20 44 18.2 +0.2**
PVCC Panska Ves 73.50 320 *eP* **P 20 44 18.2 +0.2**
BSD Bornholm Skovb 73.57 324 *i P* **P 20 44 16.8 -1.6**
BSD pmax pmax
comp=Z,22nm,1.0s,mb5.0
BSD Bornholm Skovb 73.57 324 *i P* **P 20 44 16.8 -1.6**
comp=Z,22nm,1.0s,mb5.0
MOA Molln 73.59 317⇓*iP* **P 20 44 17.8 -0.8**
comp=Z,12nm,1.1s,mb4.7,SNR=6.6
JAVS Javornik 73.68 315 *i P* **P 20 44 18.2 -1.0**
VOY Vojsko 73.80 315 *eP* **P 20 44 19.2 -0.7**
BRG Berggiesshubel 73.91 320 *eP* **P 20 44 20.5 +0.1**
comp=Z,25nm,1.1s,mb5.1
BRG Berggiesshubel 73.91 320⇓*iP* **P 20 44 20.5 0.0**
comp=Z,18nm,0.8s,mb5.0
BRG *e* 20 44 36.3
comp=Z,10nm,1.2s
GEC2 GERESS Array S 73.99 318 *eP* **P 20 44 20.9 -0.1**
comp=Z,26nm,1.2s,mb5.0
GEC2 GERESS Array S 73.99 318 *eP* **P 20 44 20.9 -0.1**
GEC2 pmax pmax
comp=Z,26nm,1.2s,mb5.0
GERES GERESS Array B 73.99 318 P **P 20 44 20.7 -0.2**
comp=Z,10nm,0.8s,mb4.8,baz=90,slow=5.3,SNR=84
GERES pP pP 20 44 30.2 -0.3
comp=Z,4.6nm,0.9s,baz=84,slow=4.2,SNR=6.7
GERES GERESS Array B 73.99 318 P **P 20 44 20.7 -0.3**
GERES *PP pP 20 44 30.2 -0.3
BILL Bilibino 74.08 22 *eP* **P 20 44 22.9 +1.8**
BILL *e* 20 44 34.0
BILL pmax pmax
comp=N,48nm,1.1s
RUE Ruedersdorf 74.08 322 *eP* **P 20 44 21.4 0.0**
comp=Z,60nm,1.0s,mb5.5
RUE Ruedersdorf 74.08 322 *eP* **P 20 44 21.6 +0.1**
comp=Z,28nm,0.8s,mb5.2
KHC Kasperske Hory 74.08 318 *eP* **P 20 44 21.2 -0.3**
KBA Koelnbreinsper 74.20 316⇓*iP* **P 20 44 21.4 -0.8**
comp=Z,7.2nm,0.7s,mb4.7
FBE Freiberg 74.28 320 *eP* **P 20 44 23.1 +0.5**
comp=Z,44nm,1.0s,mb5.3
WET Wettzell 74.54 318 *eP* **P 20 44 24.0 -0.2**
comp=Z,23nm,1.2s,mb5.0
WET Wettzell 74.54 318 *eP* **P 20 44 24.0 -0.2**
WET pmax pmax
comp=Z,23nm,1.2s,mb5.0
RJOB Jochberg 74.58 317 *eP* **P 20 44 23.5 -0.9**
comp=Z,18nm,1.2s,mb4.9
ABTA Abfaltersbach 74.76 316⇓*iP* **P 20 44 24.4 -1.1**
comp=Z,11nm,1.1s,mb4.7
TANN Tannenbergstha 74.84 319 *eP* **P 20 44 25.7 -0.1**
comp=Z,12nm,1.2s,mb4.7
NKC Novy Kostel 74.84 319 *eP* **P 20 44 26.1 +0.2**
NKC Novy Kostel 74.84 319 *eP* **P 20 44 26.1 +0.2**
WERN Wernitzgruen 74.89 319 *eP* **P 20 44 26.3 +0.2**
comp=Z,12nm,0.9s,mb4.8
GUNZ Gunzen 74.92 319 *eP* **P 20 44 26.4 +0.1**
comp=Z,25nm,1.3s,mb5.0
WERD Werda 74.94 319 *eP* **P 20 44 26.4 0.0**
comp=Z,21nm,1.2s,mb4.9
ROTZ Rotzenmuhle 74.99 319 *eP* **P 20 44 27.0 +0.3**
comp=Z,27nm,1.1s,mb5.1
NEUB Neuenburg 75.28 320 *eP* **P 20 44 28.1 -0.3**
comp=Z,24nm,1.0s,mb5.1
BOSA Boshof 75.33 236 P **P 20 44 30.0 +1.0**
comp=Z,14nm,0.8s,mb4.9,baz=51,slow=7.6,SNR=13
BOSA LR LR 21 14 33.2
comp=Z,255nm,18.4s,MS4.6,baz=166,slow=33
BOSA Boshof 75.33 236 P **P 20 44 30.0 +1.0**
BOSA LR LR 21 14 33.2
BOSA Boshof 75.33 236 P **P 20 44 30.0 +0.9**
WTTA Wattenberg 75.36 316⇑*iP* **P 20 44 27.8 -1.1**
comp=Z,31nm,1.3s,mb5.1
MOX Moxa 75.38 320 *eP* **P 20 44 28.4 -0.6**
comp=Z,48nm,1.9s,mb5.1
MOX Moxa 75.38 320 *eP* **P 20 44 28.9 -0.1**
comp=Z,12nm,0.8s,mb4.9
MOX Moxa 75.38 320 *eP* **P 20 44 28.4 -0.6**
MOX pmax pmax
comp=Z,48nm,1.9s,mb5.1
GRA1 Grafenberg Arr 75.63 319 *eP* **P 20 44 30.6 +0.2**
comp=Z,37nm,1.1s,mb5.2
GRF Grafenberg Arr 75.63 319 *eP* **P 20 44 30.6 +0.2**
comp=Z,37nm,1.1s,mb5.2
GRF Grafenberg Arr 75.63 319 *eP* **P 20 44 30.6 +0.2**
GRF pmax pmax
comp=Z,37nm,1.1s,mb5.2
GRF Grafenberg Arr 75.63 319 *eP* **P 20 44 30.6 +0.2**
GRF pmax pmax
comp=Z,37nm,1.1s,mb5.2
GRFO Grafenberg 75.63 319 *eP* **P 20 44 30.6 +0.2**
comp=Z,31nm,1.2s,mb5.1
GRFO Grafenberg 75.63 319 *eP* **P 20 44 30.6 +0.2**
GRFO pmax pmax
comp=Z,31nm,1.2s,mb5.1
MOTA Moosalm 75.72 316⇓*iP* **P 20 44 29.7 -1.3**
comp=Z,26nm,1.1s,mb5.1,SNR=11
NB2 NORSAR Subarra 75.91 330 P **P 20 44 30.8 -1.0**
comp=Z,24nm,0.9s,mb5.1,baz=91,slow=5.9
NOA NORSAR Array B 75.91 330 P **P 20 44 31.1 -0.7**
comp=Z,14nm,0.8s,mb5.0,baz=93,slow=5.8,SNR=39
NOA LR LR 21 25 19.4
comp=Z,134nm,19.2s,MS4.3,baz=90,slow=42
NOA NORSAR Array B 75.91 330 P **P 20 44 31.1 -0.7**
RETA Reutte 75.95 316⇓*iP* **P 20 44 31.5 -0.8**
comp=Z,28nm,1.3s,mb5.0
FETA Feichten 75.98 316⇓*iP* **P 20 44 31.7 -0.8**
comp=Z,19nm,1.0s,mb5.0,SNR=12
NAO01 NORSAR Array S 76.06 330 *eP* **P 20 44 32.2 -0.5**
comp=Z,14nm,0.8s,mb4.9
CLZ Clausthal 76.17 321 *eP* **P 20 44 33.4 0.0**
comp=Z,27nm,1.0s,mb5.1
CLZ Clausthal 76.17 321 *eP* **P 20 44 33.4 0.0**
CLZ pmax pmax
comp=Z,27nm,1.0s,mb5.1
BSEG Bad Segeberg 76.20 323 *eP* **P 20 44 33.9 +0.3**
comp=Z,74nm,1.1s,mb5.5
BSEG Bad Segeberg 76.20 323 *eP* **P 20 44 33.9 +0.3**
BSEG pmax pmax
comp=Z,74nm,1.1s,mb5.5
NRDL Niedersach Rie 76.33 321 *eP* **P 20 44 34.3 0.0**
comp=Z,25nm,1.2s,mb5.0
DAVA Damuels 76.56 316⇓*iP* **P 20 44 35.3 -0.5**
comp=Z,38nm,1.2s,mb5.2,SNR=16
MUD Monsted U'grnd 76.86 326 *i P* **P 20 44 37.2 -0.1**
MUD pmax pmax
comp=Z,21nm,1.0s,mb5.0
MUD Monsted U'grnd 76.86 326 *i P* **P 20 44 37.2 -0.1**
comp=Z,21nm,1.0s,mb5.0
TUE Stuetta 76.95 315 *eP* **P 20 44 37.8 -0.2**
comp=Z,28nm,1.3s,mb5.0
SPAK Spaichingen-Ko 77.27 317 *eP* **P 20 44 39.3 -0.4**
PGF Pioggiola 77.39 311 *eP* **P 20 44 39.8 -0.8**
comp=Z,26nm,1.1s,mb4.8
PGF Pioggiola 77.39 311 *eP* **P 20 44 39.8 -0.8**
comp=Z,13nm,1.1s,mb4.8
PGF Pioggiola 77.39 311 *eP* **P 20 44 39.8 -0.8**
PGF pmax pmax
comp=Z,13nm,1.1s,mb4.8
TNS Taunus Mts 77.41 319 *eP* **P 20 44 40.5 0.0**
comp=Z,25nm,1.0s,mb5.1
TNS Taunus Mts 77.41 319 *eP* **P 20 44 40.5 0.0**
TNS pmax pmax
comp=Z,25nm,1.0s,mb5.1
BFO Black Forest 77.56 317 *eP* **P 20 44 40.7 -0.7**
comp=Z,14nm,1.0s,mb4.8
BFO Black Forest 77.56 317 *eP* **P 20 44 40.7 -0.7**
BFO pmax pmax
comp=Z,14nm,1.0s,mb4.8
BFO Black Forest 77.56 317 P **P 20 44 40.8 -0.6**
comp=Z,72nm,0.8s,mb5.7,SNR=6.8
KEST Kesra 77.60 304 P **P 20 44 41.8 -0.1**
comp=Z,8.7nm,0.9s,mb4.7,baz=334,slow=2.0,SNR=23
KEST LR LR 21 23 36.2
comp=Z,57nm,18.1s,MS3.9,baz=234,slow=39
KEST Kesra 77.60 304 *eP* **P 20 44 41.9 +0.1**
IBBN Ibbenburen 77.77 321 *eP* **P 20 44 42.6 +0.1**
comp=Z,38nm,1.4s,mb5.1
FELD Feldberg im Sc 77.80 317 *eP* **P 20 44 41.9 -0.8**
LANF Langenberg 77.88 318 *eP* **P 20 44 43.0 -0.1**
LANF Langenberg 77.88 318 *eP* **P 20 44 43.0 -0.1**
BUG Bochum--Univer 78.11 320 *eP* **P 20 44 44.2 -0.1**
comp=Z,26nm,1.3s,mb5.0
CDF Champ du Feu 78.26 317⇓*iP* **P 20 44 44.7 -0.6**
comp=Z,30nm,1.0s,mb4.9
CDF Champ du Feu 78.26 317⇓*iP* **P 20 44 44.7 -0.6**
comp=Z,15nm,1.0s,mb4.9
CDF Champ du Feu 78.26 317⇓*iP* **P 20 44 44.7 -0.6**
CDF pmax pmax
comp=Z,15nm,1.0s,mb4.9
RUP Ruppelstein 78.33 319 *eP* **P 20 44 45.6 0.0**
RUP Ruppelstein 78.33 319 *eP* **P 20 44 45.6 0.0**
ECH Echery 78.35 317 *eP* **P 20 44 45.2 -0.5**
comp=Z,3.5nm,0.9s,mb4.3
ECH Echery 78.35 317 *eP* **P 20 44 45.3 -0.5**
ECH pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
SAOF Saorge 78.35 313 *eP* **P 20 44 47.3 +1.4**
SAOF Saorge 78.35 313 *eP* **P 20 44 47.3 +1.4**
MOF Molkenrain 78.39 317 *eP* **P 20 44 45.4 -0.6**
MOF Molkenrain 78.39 317 *eP* **P 20 44 45.4 -0.6**
SBF Sospel 78.45 313 *eP* **P 20 44 45.7 -0.7**
comp=Z,44nm,1.0s,mb5.0
SBF Sospel 78.45 313 *eP* **P 20 44 45.7 -0.7**
comp=Z,22nm,1.0s,mb5.0
SBF Sospel 78.45 313 *eP* **P 20 44 45.7 -0.7**
SBF pmax pmax
comp=Z,22nm,1.0s,mb5.0
LOMF Lomont 78.63 316 *eP* **P 20 44 46.2 -1.1**
LOMF Lomont 78.63 316 *eP* **P 20 44 46.2 -1.1**
LPG La Plagne 78.81 314⇓*iP* **P 20 44 48.3 -0.1**
comp=Z,40nm,0.7s,mb5.1
LPG La Plagne 78.81 314⇓*iP* **P 20 44 48.3 -0.1**
comp=Z,20nm,0.7s,mb5.2
LPG La Plagne 78.81 314⇓*iP* **P 20 44 48.3 -0.1**
LPG pmax pmax
comp=Z,20nm,0.7s,mb5.2
LPL La Plagne 78.83 314⇓*iP* **P 20 44 48.4 0.0**
comp=Z,52nm,0.7s,mb5.3
LPL La Plagne 78.83 314⇓*iP* **P 20 44 48.4 0.0**
comp=Z,26nm,0.7s,mb5.3
LPL La Plagne 78.83 314⇓*iP* **P 20 44 48.4 0.0**
LPL pmax pmax
comp=Z,26nm,0.7s,mb5.3
CALN Calern 78.85 313 *eP* **P 20 44 48.6 0.0**
CALN Calern 78.85 313 *eP* **P 20 44 48.6 0.0**
MBDF Montbardon 78.86 314⇓*iP* **P 20 44 47.6 -1.0**
comp=Z,26nm,0.9s,mb4.8
MBDF Montbardon 78.86 314⇓*iP* **P 20 44 47.6 -1.0**
comp=Z,13nm,0.9s,mb4.9
MBDF Montbardon 78.86 314⇓*iP* **P 20 44 47.6 -1.0**
MBDF pmax pmax
comp=Z,13nm,0.9s,mb4.9
RSL Roselend 78.89 315 *eP* **P 20 44 48.6 -0.2**
RSL Roselend 78.89 315 *eP* **P 20 44 48.6 -0.2**
BNI Bardonecchia 78.90 314 *eP* **P 20 44 48.0 -0.8**
comp=Z,14nm,0.8s,mb5.0
BNI Bardonecchia 78.90 314 *eP* **P 20 44 48.0 -0.9**
BNI pmax pmax
comp=Z,14nm,0.8s,mb4.9
HAU Haudompre 78.91 317⇓*iP* **P 20 44 48.2 -0.6**
comp=Z,59nm,1.0s,mb5.2
HAU *e*MLR MLR
comp=Z,108nm,18.8s,MS3.9
HAU Haudompre 78.91 317⇓*iP* **P 20 44 48.2 -0.6**
comp=Z,29nm,1.0s,mb5.2
HAU LR LR
comp=Z,110nm,18.8s,MS4.2
HAU Haudompre 78.91 317⇓*iP* **P 20 44 48.2 -0.6**
HAU pmax pmax
comp=Z,29nm,1.0s,mb5.2
HAU MLR MLR
comp=Z,110nm,18.8s,MS4.2
WLF Walferdange 78.92 319 P **P 20 44 49.5 +0.6**
comp=Z,15nm,1.5s,mb4.7
WLF Walferdange 78.92 319 *eP* **P 20 44 49.0 +0.1**
comp=Z,31nm,1.4s,mb5.0
MEM Membach 78.95 320 P **P 20 44 49.0 0.0**
FRF La Foret Royal 79.04 312⇓*iP* **P 20 44 49.1 -0.6**
comp=Z,29nm,0.9s,mb4.9
FRF La Foret Royal 79.04 312⇓*iP* **P 20 44 49.1 -0.6**
comp=Z,15nm,0.9s,mb4.9
FRF La Foret Royal 79.04 312⇓*iP* **P 20 44 49.1 -0.6**
FRF pmax pmax
comp=Z,15nm,0.9s,mb4.9
THEF They Montfort 79.13 317 *eP* **P 20 44 49.5 -0.6**
THEF They Montfort 79.13 317 *eP* **P 20 44 49.5 -0.6**
LMR La Mourre 79.16 312⇓*iP* **P 20 44 49.7 -0.6**
comp=Z,13nm,0.9s,mb4.5
LMR La Mourre 79.16 312⇓*iP* **P 20 44 49.7 -0.6**
comp=Z,6.7nm,0.9s,mb4.6
LMR La Mourre 79.16 312⇓*iP* **P 20 44 49.7 -0.6**
LMR pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CABF La Chapelle 79.19 316⇓*iP* **P 20 44 50.4 0.0**
comp=Z,39nm,0.8s,mb5.1
CABF La Chapelle 79.19 316⇓*iP* **P 20 44 50.4 0.0**
comp=Z,20nm,0.8s,mb5.1
CABF La Chapelle 79.19 316⇓*iP* **P 20 44 50.4 0.0**
CABF pmax pmax
comp=Z,20nm,0.8s,mb5.1
BCLA Clavier 79.41 319 P **P 20 44 51.1 -0.5**
comp=Z,7.8nm,1.2s,mb4.5
ORIF Oris-en-Rattie 79.47 314⇓*iP* **P 20 44 51.2 -0.8**
comp=Z,22nm,0.9s,mb4.8
ORIF *e*MLR MLR
comp=Z,160nm,19.5s,MS4.1
ORIF Oris-en-Rattie 79.47 314⇓*iP* **P 20 44 51.2 -0.8**
comp=Z,11nm,0.9s,mb4.8
ORIF Oris-en-Rattie 79.47 314⇓*iP* **P 20 44 51.2 -0.8**
ORIF pmax pmax
comp=Z,11nm,0.9s,mb4.8
MEZF Maizieres J'vi 79.73 318⇓*iP* **P 20 44 52.9 -0.4**
comp=Z,51nm,1.1s,mb5.1
MEZF Maizieres J'vi 79.73 318⇓*iP* **P 20 44 52.9 -0.4**
comp=Z,51nm,1.1s,mb5.4
GIVF Givet 79.75 319 *eP* **P 20 44 53.1 -0.3**
comp=Z,7.0nm,0.5s,mb4.5
GIVF Givet 79.75 319 *eP* **P 20 44 53.1 -0.3**
comp=Z,3.5nm,0.5s,mb4.5
GIVF Givet 79.75 319 *eP* **P 20 44 53.1 -0.3**
GIVF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
SFTF Sexfontaines 79.77 317⇓*iP* **P 20 44 52.9 -0.6**
comp=Z,105nm,1.0s,mb5.4
SFTF Sexfontaines 79.77 317⇓*iP* **P 20 44 52.9 -0.6**
comp=Z,105nm,1.0s,mb5.7
SMRF Simiane la Rot 79.78 313⇓*iP* **P 20 44 53.7 0.0**
comp=Z,22nm,0.9s,mb4.8
SMRF Simiane la Rot 79.78 313⇓*iP* **P 20 44 53.7 0.0**
comp=Z,22nm,0.9s,mb5.1
DOU Dourbes 79.89 319 P **P 20 44 54.2 0.0**
OG26 St.-Nazaire-De 79.91 314 *eP* **P 20 44 54.3 -0.1**
OCF Saint Nazaire 79.92 314 *eP* **P 20 44 54.3 -0.1**
BAIF Baives 80.14 319⇓*iP* **P 20 44 55.3 -0.2**
comp=Z,34nm,0.9s,mb5.0
BAIF Baives 80.14 319⇓*iP* **P 20 44 55.3 -0.2**
comp=Z,17nm,0.9s,mb5.0
BAIF Baives 80.14 319⇓*iP* **P 20 44 55.3 -0.2**
BAIF pmax pmax
comp=Z,17nm,0.9s,mb5.0
DZM Mont Dzumac 80.17 115 *eP* **P 20 44 57.3 +1.1**
comp=Z,27nm,1.0s,mb5.1
DZM *e*LR LR 21 09 57.4
comp=Z,184nm,24.5s
VIVF Saint-Julien-I 80.33 314⇓*iP* **P 20 44 56.4 -0.3**
comp=Z,59nm,0.9s,mb5.2
VIVF Saint-Julien-I 80.33 314⇓*iP* **P 20 44 56.4 -0.3**
comp=Z,29nm,0.9s,mb5.2
VIVF Saint-Julien-I 80.33 314⇓*iP* **P 20 44 56.4 -0.3**
VIVF pmax pmax
comp=Z,29nm,0.9s,mb5.2
SSB Saint Sauveur 80.38 314 *eP* **P 20 44 56.7 -0.2**
SSB Saint Sauveur 80.38 314 *eP* **P 20 44 56.7 -0.2**
LOR Lormes 80.65 316 *eP* **P 20 44 57.7 -0.6**
comp=Z,75nm,1.1s,mb5.2
LOR *e*MLR MLR
comp=Z,126nm,18.2s,MS4.0
LOR Lormes 80.65 316 *eP* **P 20 44 57.7 -0.6**
comp=Z,38nm,1.1s,mb5.2
LOR LR LR
comp=Z,130nm,18.3s,MS4.3
LOR Lormes 80.65 316 *eP* **P 20 44 57.7 -0.6**
LOR pmax pmax
comp=Z,38nm,1.1s,mb5.2
LOR MLR MLR
comp=Z,130nm,18.3s,MS4.3
SMF Signal de Mont 80.73 316⇓*iP* **P 20 44 58.1 -0.6**
comp=Z,38nm,0.8s,mb5.1
SMF Signal de Mont 80.73 316⇓*iP* **P 20 44 58.1 -0.6**
comp=Z,19nm,0.8s,mb5.1
SMF Signal de Mont 80.73 316⇓*iP* **P 20 44 58.1 -0.6**
SMF pmax pmax
comp=Z,19nm,0.8s,mb5.1
SSF Saint Saulge 80.91 316⇓*iP* **P 20 44 59.2 -0.5**
comp=Z,22nm,0.8s,mb4.8
SSF Saint Saulge 80.91 316⇓*iP* **P 20 44 59.2 -0.5**
comp=Z,11nm,0.8s,mb4.8
SSF Saint Saulge 80.91 316⇓*iP* **P 20 44 59.2 -0.5**
SSF pmax pmax
comp=Z,11nm,0.8s,mb4.8
PLDF La Plantade 80.95 315 *eP* **P 20 44 59.7 -0.2**
PLDF La Plantade 80.95 315 *eP* **P 20 44 59.7 -0.2**
LASF Ste Croix 81.00 313⇓*iP* **P 20 45 00.3 +0.1**
comp=Z,81nm,1.2s,mb5.2
AVF Avril sur Loir 81.05 316⇓*iP* **P 20 44 59.8 -0.6**
comp=Z,27nm,0.8s,mb4.9
AVF Avril sur Loir 81.05 316⇓*iP* **P 20 44 59.8 -0.6**
comp=Z,14nm,0.8s,mb4.9
AVF Avril sur Loir 81.05 316⇓*iP* **P 20 44 59.8 -0.6**
AVF pmax pmax

comp=Z,14nm,0.8s,mb4.9
MAW Mawson 81.12 191 P **P 20 45 01.0 +0.8**
comp=Z,3.0nm,1.0s,mb4.2,baz=28,slow=8.5,SNR=5.2
MAW LR LR 21 13 17.0
comp=Z,118nm,21.7s,MS4.2,baz=194,slow=30
MAW Mawson 81.12 191 *e*P **P 20 45 01.1 +0.9**
comp=Z,1.1nm,0.9s,mb3.8
MAW Mawson 81.12 191 *e*P **P 20 45 01.1 +0.9**
MAW pmax pmax
comp=Z,1.0nm,0.9s
AGO Saint Aguolin 81.28 315 *e*P **P 20 45 01.6 -0.1**
LBL Lubilhac 81.30 314 *e*P **P 20 45 01.8 0.0**
LBL Lubilhac 81.30 314 *e*P **P 20 45 01.8 0.0**
PYM Petit Puy Mans 81.40 315 *e*P **P 20 45 02.3 -0.1**
PYM Petit Puy Mans 81.40 315 *e*P **P 20 45 02.3 -0.1**
BGF Bois d'Agland 81.42 316⇓*i*P **P 20 45 02.2 -0.2**
comp=Z,43nm,0.9s,mb5.1
BGF Bois d'Agland 81.42 316⇓*i*P **P 20 45 02.2 -0.2**
comp=Z,22nm,0.9s,mb5.1
BGF Bois d'Agland 81.42 316⇓*i*P **P 20 45 02.2 -0.2**
BGF pmax pmax
comp=Z,22nm,0.9s,mb5.1
HYF Humbligny 81.47 316 *e*P **P 20 45 02.8 +0.1**
TCF Toulx Ste Croi 81.89 316⇓*i*P **P 20 45 04.8 -0.1**
comp=Z,43nm,1.2s,mb5.0
TCF Toulx Ste Croi 81.89 316⇓*i*P **P 20 45 04.8 -0.1**
comp=Z,22nm,1.2s,mb5.0
TCF Toulx Ste Croi 81.89 316⇓*i*P **P 20 45 04.8 -0.1**
TCF pmax pmax
comp=Z,22nm,1.2s,mb5.0
LRDF Laroque-de-Fa 82.09 312 *e*P **P 20 45 05.8 -0.2**
CAF Calviac 82.17 314⇓*i*P **P 20 45 06.5 +0.1**
comp=Z,20nm,0.8s,mb4.8
CAF Calviac 82.17 314⇓*i*P **P 20 45 06.5 +0.1**
comp=Z,9.9nm,0.8s,mb4.8
CAF Calviac 82.17 314⇓*i*P **P 20 45 06.5 +0.1**
CAF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MTLF Montolieu 82.27 313⇓*i*P **P 20 45 06.9 -0.1**
comp=Z,50nm,0.9s,mb5.1
MTLF Montolieu 82.27 313⇓*i*P **P 20 45 06.9 -0.1**
comp=Z,25nm,0.9s,mb5.2
MTLF Montolieu 82.27 313⇓*i*P **P 20 45 06.9 -0.1**
MTLF pmax pmax
comp=Z,25nm,0.9s,mb5.1
ETOS Mallorca 82.31 309 P **P 20 45 07.7 +0.4**
comp=Z,39nm,2.9s,mb4.8
CFON Fontmartina 82.32 311 P **P 20 45 09.5 +2.3**
comp=Z,14nm,1.0s,mb4.8
TAM Tamanrasset 82.44 292 *e*P **P 20 45 09.3 +1.0**
comp=Z,34nm,1.4s,mb5.1
TAM Tamanrasset 82.44 292 *e*P **P 20 45 09.3 +1.0**
TAM pmax pmax
comp=Z,34nm,1.4s,mb5.1
RJF Les Rejaudoux 82.50 315⇓*i*P **P 20 45 08.3 +0.2**
comp=Z,43nm,0.9s,mb5.1
RJF *e*MLR MLR
comp=Z,146nm,17.2s,MS4.1
RJF Les Rejaudoux 82.50 315⇓*i*P **P 20 45 08.3 +0.2**
comp=Z,21nm,0.9s,mb5.1
RJF LR LR
comp=Z,150nm,17.3s,MS4.4
RJF Les Rejaudoux 82.50 315⇓*i*P **P 20 45 08.3 +0.2**
RJF pmax pmax
comp=Z,21nm,0.9s,mb5.1
RJF MLR MLR
comp=Z,150nm,17.3s,MS4.4
VALF Valcebollere 82.54 312 *e*P **P 20 45 08.9 +0.5**
CLLI Llivia 82.56 312 P **P 20 45 09.0 +0.5**
EMIR Miracle 82.97 311 P **P 20 45 11.1 +0.4**
comp=Z,37nm,0.7s,mb5.5
LFF La Frestale 83.10 314⇓*i*P **P 20 45 11.4 +0.2**
comp=Z,32nm,0.9s,mb5.0
LFF La Frestale 83.10 314⇓*i*P **P 20 45 11.4 +0.2**
comp=Z,16nm,0.9s,mb5.1
LFF La Frestale 83.10 314⇓*i*P **P 20 45 11.4 +0.2**
LFF pmax pmax
comp=Z,16nm,0.9s,mb5.0
LDF La Druitiere 83.13 318⇓*i*P **P 20 45 10.8 -0.6**
comp=Z,12nm,0.7s,mb4.7
LDF La Druitiere 83.13 318⇓*i*P **P 20 45 10.8 -0.6**
comp=Z,5.8nm,0.7s,mb4.7
LDF La Druitiere 83.13 318⇓*i*P **P 20 45 10.8 -0.6**
LDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
MLS Moulis 83.14 312 *e*P **P 20 45 10.9 -0.6**
CSOR Sort 83.19 312 P **P 20 45 12.2 +0.4**
comp=Z,37nm,1.2s,mb5.3
FLN La Foliniere 83.34 318⇓*i*P **P 20 45 11.7 -0.7**
comp=Z,65nm,1.1s,mb5.3
FLN *e*MLR MLR
comp=Z,171nm,21.0s,MS4.1
FLN La Foliniere 83.34 318⇓*i*P **P 20 45 11.7 -0.7**
comp=Z,32nm,1.1s,mb5.3
FLN LR LR
comp=Z,170nm,21.0s,MS4.4
FLN La Foliniere 83.34 318⇓*i*P **P 20 45 11.7 -0.7**
FLN pmax pmax
comp=Z,32nm,1.1s,mb5.3
FLN MLR MLR
comp=Z,170nm,21.0s,MS4.4
EPOB Poblet 83.39 311 P **P 20 45 12.8 0.0**
comp=Z,26nm,0.7s,mb5.4
MFF Saint Martin d 83.46 316⇓*i*P **P 20 45 12.6 -0.5**
comp=Z,51nm,0.9s,mb5.3
MFF Saint Martin d 83.46 316⇓*i*P **P 20 45 12.6 -0.5**
comp=Z,26nm,0.9s,mb5.3
MFF Saint Martin d 83.46 316⇓*i*P **P 20 45 12.6 -0.5**
MFF pmax pmax
comp=Z,26nm,0.9s,mb5.3
GRR Gorron 83.65 318 *e*P **P 20 45 13.4 -0.6**
GRR Gorron 83.65 318 *e*P **P 20 45 13.4 -0.6**
EPF Esparros 83.67 312 *e*P **P 20 45 13.4 -0.9**
comp=Z,6.3nm,0.8s,mb4.5
EPF Esparros 83.67 312 *e*P **P 20 45 13.4 -0.9**
comp=Z,3.2nm,0.8s,mb4.5
EPF Esparros 83.67 312 *e*P **P 20 45 13.4 -0.9**
EPF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
RESF Ens 83.71 312 *e*P **P 20 45 14.5 +0.1**
EBIE Bielsa 83.87 312 P **P 20 45 15.6 +0.3**
comp=Z,8.9nm,0.8s,mb5.0
ERTA Horta de San J 84.01 310 P **P 20 45 16.2 +0.2**
comp=Z,14nm,0.8s,mb5.1
ETSF Etsaut 84.35 312 *e*P **P 20 45 17.9 +0.2**
comp=Z,27nm,1.0s,mb5.0
ETSF Etsaut 84.35 312 *e*P **P 20 45 17.9 +0.2**
comp=Z,14nm,1.0s,mb5.0
ETSF Etsaut 84.35 312 *e*P **P 20 45 17.9 +0.2**
ETSF pmax pmax
comp=Z,14nm,1.0s,mb5.0
ESAC San Caprasio 84.48 311 P **P 20 45 18.4 0.0**
comp=Z,34nm,0.9s,mb5.5
EMOS Mosqueruela 84.71 310 P **P 20 45 21.0 +1.4**
comp=Z,29nm,0.8s,mb5.5
SGMF Saint Gilles 84.79 318 *e*P **P 20 45 19.2 -0.6**
SGMF Saint Gilles 84.79 318 *e*P **P 20 45 19.2 -0.6**
SJPF Ste Jean 84.79 313⇓*i*P **P 20 45 20.0 +0.1**
comp=Z,32nm,1.1s,mb5.1
SJPF Ste Jean 84.79 313⇓*i*P **P 20 45 20.0 +0.1**
comp=Z,16nm,1.1s,mb5.1
SJPF Ste Jean 84.79 313⇓*i*P **P 20 45 20.0 +0.1**
SJPF pmax pmax
comp=Z,16nm,1.1s,mb5.1
EALK Alkurruntz 84.97 313 P **P 20 45 20.8 -0.1**
comp=Z,12nm,0.9s,mb5.0
ECHE Chera 85.22 309 P **P 20 45 23.2 +1.1**
comp=Z,13nm,0.8s,mb5.1
ECHE Chera 85.22 309 P **P 20 45 23.2 +1.0**
ECHE pmax pmax
comp=Z,13nm,0.8s,mb5.1
QUIF Quistinic 85.25 318 *e*P **P 20 45 21.3 -0.8**
QUIF Quistinic 85.25 318 *e*P **P 20 45 21.3 -0.8**
EMUR La Murta 85.74 308 P **P 20 45 23.0 -1.8**
comp=Z,46nm,2.0s,mb5.4
ETOB Tobarra 85.83 308 P **P 20 45 25.5 +0.3**
comp=Z,7.0nm,0.8s,mb4.9
ELAN Lanestosa 86.36 313 P **P 20 45 28.0 +0.3**
comp=Z,7.3nm,0.8s,mb5.0
EHUE Huescar 86.80 308 P **P 20 45 29.6 -0.4**
comp=Z,15nm,1.7s,mb5.0
EHUE Huescar 86.80 308 P **P 20 45 29.6 -0.4**
EHUE pmax pmax
comp=Z,15nm,1.7s,mb5.0
EBER Berja 87.21 307 P **P 20 45 32.7 +0.7**
comp=Z,4.5nm,0.6s,mb4.9
ESDC Sonseca Array 87.47 310 P **P 20 45 33.1 -0.1**
comp=Z,2.4nm,0.6s,mb4.6,baz=63,slow=4.1,SNR=17
ESDC Sonseca Array 87.47 310 P **P 20 45 33.1 -0.1**
comp=Z,3.4nm,0.7s,mb4.7
ESLA Sonseca Array 87.47 310 *e*P **P 20 45 33.2 0.0**
EBAN Banos Encina 87.65 308 P **P 20 45 34.3 +0.1**
comp=Z,18nm,1.0s,mb5.2
EBAN Banos Encina 87.65 308 P **P 20 45 34.3 +0.2**
EBAN pmax pmax
comp=Z,18nm,1.0s,mb5.3
TOA0 Torodi Ar. Sit 87.66 283 *e*P **P 20 45 35.0 +0.4**
TORD Torodi Ar. Bea 87.66 283 P **P 20 45 35.0 +0.4**
comp=Z,6.3nm,1.0s,mb4.8,baz=89,slow=4.9,SNR=21
TORD pP pP 20 45 44.4 +0.1
comp=Z,3.6nm,0.8s,baz=76,slow=3.8,SNR=9.7
TORD PP PP 20 48 59.2 -1.0
comp=Z,0.7nm,1.0s,baz=81,slow=8.1,SNR=3.2
TORD Torodi Ar. Bea 87.66 283 P **P 20 45 35.0 +0.4**
TORD pP pP 20 45 44.4 +0.1
TORD PP PP 20 48 59.2 -1.0
EGUA Guajares 87.76 307 P **P 20 45 34.2 -0.4**
EGUA Guajares 87.76 307 P **P 20 45 34.2 -0.5**
EADA Adamuz 88.26 308 P **P 20 45 35.9 -1.1**
comp=Z,9.0nm,1.1s,mb4.9
EPLA Plasencia 88.98 311 P **P 20 45 40.0 -0.4**
comp=Z,6.2nm,1.1s,mb4.8
EPLA Plasencia 88.98 311 P **P 20 45 40.0 -0.4**
EPLA pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
EJIF Jimena Fronter 89.33 307 P **P 20 45 41.4 -0.7**
comp=Z,8.6nm,1.7s,mb4.8
EJIF Jimena Fronter 89.33 307 P **P 20 45 41.4 -0.7**
EJIF pmax pmax
comp=Z,9.0nm,1.7s,mb4.8
MVO Moncorvo 89.42 312 *e*P **P 20 45 42.9 +0.5**
comp=Z,30nm,1.8s,mb5.3
MVO Moncorvo 89.42 312 P **P 20 45 42.4 0.0**
ESPR Espera 89.54 307 P **P 20 45 44.2 +1.1**
comp=Z,3.5nm,0.7s,mb4.8
RPZ Rata Peaks 89.85 135 P **P 20 45 43.6 -0.6**
comp=Z,15nm,0.9s,mb5.3,baz=330,slow=10.0,SNR=3.5
EMIN Mina Concepcio 89.96 308 P **P 20 45 45.3 +0.3**
comp=Z,8.2nm,0.9s,mb5.1
MTE Manteigas 89.98 311 *e*P **P 20 45 45.9 +0.8**
comp=Z,29nm,1.4s,mb5.4
MTE Manteigas 89.98 311 *e*P **P 20 45 45.9 +0.8**
comp=Z,19nm,1.4s,mb5.2
EBAD Badajoz 89.99 309 P **P 20 45 45.3 +0.2**
comp=Z,7.8nm,0.8s,mb5.1
PCAB Cabril 90.01 312 *e*P **P 20 45 45.7 +0.5**
comp=Z,33nm,1.9s,mb5.3
TTA Tatalina 90.07 25 *e*P **P 20 45 46.0 +1.0**
comp=Z,45nm,1.4s,mb5.6
TTA Tatalina 90.07 25 *e*P **P 20 45 46.0 +1.0**
TTA pmax pmax
comp=Z,45nm,1.4s,mb5.6
PCBR Castelo Branco 90.07 311 *e*P **P 20 45 46.1 +0.6**
comp=Z,25nm,1.3s,mb5.4
PMRV Marv??o 90.11 310 *e*P **P 20 45 46.0 +0.3**
comp=Z,20nm,1.2s,mb5.3
PBAR Barrancos 90.15 309 *e*P **P 20 45 46.3 +0.4**
comp=Z,46nm,1.2s,mb5.7
PVIS Viseu 90.16 311 *e*P **P 20 45 46.9 +1.0**
comp=Z,23nm,1.7s,mb5.2
PESTR Estremoz 90.40 310 *e*P **P 20 45 47.6 +0.6**
SUMG Summit 90.61 347 *e*P **P 20 45 47.8 +0.5**
comp=Z,27nm,1.0s,mb5.5
SUMG Summit 90.61 347 *i*P **P 20 45 47.4 +0.1**
comp=Z,20nm,0.9s,mb5.5
EGRO El Granado 90.64 308 P **P 20 45 48.8 +0.6**
comp=Z,14nm,0.9s,mb5.3
EVO Evora 90.80 309 *e*P **P 20 45 49.6 +0.7**
comp=Z,22nm,1.1s,mb5.1
EVO *e*MLR MLR
comp=Z,106nm,20.2s,MS4.0
EVO Evora 90.80 309 *e*P **P 20 45 49.6 +0.7**
comp=Z,20nm,1.2s,mb5.3
PBEJ Beja 90.82 309 *e*P **P 20 45 49.8 +0.8**
comp=Z,25nm,1.2s,mb5.4
PTOM Tomar 90.83 311 *e*P **P 20 45 50.4 +1.4**
comp=Z,50nm,1.3s,mb5.7
PVAQ Vaqueiros 90.86 308 *e*P **P 20 45 49.9 +0.7**
comp=Z,39nm,1.4s,mb5.5
PCVE Castro Verde 91.05 309 *e*P **P 20 45 50.8 +0.7**
comp=Z,22nm,1.8s,mb5.2
PBDV Barranco-do-Ve 91.06 308 *e*P **P 20 45 51.1 +0.9**
comp=Z,49nm,1.4s,mb5.6
BPAW Bear Paw Mtn. 91.55 23 *e*P **P 20 45 52.4 +0.6**
comp=Z,38nm,1.1s,mb5.6
PTEO Sao Teotonio 91.60 309 *e*P **P 20 45 53.5 +0.9**
comp=Z,28nm,1.5s,mb5.4
MORF Marmelete 91.60 308 *e*P **P 20 45 54.4 +1.7**
comp=Z,33nm,1.5s,mb5.4
PFVI Vila Bisbo 91.78 308 *e*P **P 20 45 54.4 +0.9**
PFVI Vila Bisbo 91.78 308 P **P 20 45 54.2 +0.7**
MCK McKinley 92.52 23 *e*P **P 20 45 56.3 0.0**
comp=Z,12nm,0.8s,mb5.4
MCK McKinley 92.52 23 *e*P **P 20 45 56.3 0.0**
MCK pmax pmax
comp=Z,12nm,0.8s,mb5.4
ILAR Eielson Array 92.73 22 P **P 20 45 56.2 -1.1**
comp=Z,6.6nm,0.7s,mb5.2,baz=298,slow=4.2,SNR=63
ILAR PP PP 20 49 32.1 -6.8
comp=Z,0.9nm,0.9s,baz=300,slow=8.8,SNR=4.5
ILAR LR LR 21 36 02.2
comp=Z,145nm,18.5s,MS4.5,baz=312,slow=41
ILAR Eielson Array 92.73 22 P **P 20 45 56.2 -1.1**
OHAK Old Harbor 93.79 30 *e*P **P 20 46 02.6 +0.3**
KDAK Kodiak Island 93.87 29 P **P 20 46 02.9 +0.2**
comp=Z,16nm,0.8s,mb5.5,baz=297,slow=12,SNR=5.7
KDAK Kodiak Island 93.87 29 *i*P **P 20 46 03.0 +0.3**
DOT Dot Lake 94.38 22 *e*P **P 20 46 04.7 -0.2**
comp=Z,23nm,0.9s,mb5.6
INK Inuvik 94.64 15 P **P 20 46 04.8 -1.2**
comp=Z,4.1nm,0.8s,mb4.9,baz=326,slow=6.0,SNR=4.1
INK Inuvik 94.64 15 P **P 20 46 04.8 -1.2**
DBIC Dimbokro 95.25 278 LR LR 21 31 03.2
comp=Z,96nm,18.4s,MS4.3,baz=46,slow=37
HUMO Hull Mountain 117.89 28 *e*PKPdf PKPdf 20 51 32.8 +0.6
EGMT Eagleton 118.21 16 *e*PKPdf PKPdf 20 51 32.7 +0.1
ULM Lac du Bonnet 118.66 6 PKP PKPdf 20 51 31.5 -1.9
comp=Z,4.1nm,0.9s,baz=292,slow=5.4,SNR=3.5
ULM Lac du Bonnet 118.66 6 PKP PKPdf 20 51 31.5 -1.9
PPT Papeete 120.35 104 *e*LR LR 21 28 27.3
comp=Z,84nm,23.0s
LOHW Long Hollow 121.95 19 *e*PKPdf PKPdf 20 51 40.5 +0.5
RRI2 Red Ridge 121.95 20 *e*PKPdf PKPdf 20 51 40.4 +0.5
REDW Red Top Meadow 122.10 19 *e*PKPdf PKPdf 20 51 40.9 +0.6
AHID Auburn Hatcher 122.55 20 PFAKE 20 51 50.0 +8.9
AHID LR LR
comp=Z,137nm,20.0s,MS4.6
WAKR Walker 122.77 29 *e*PKPdf PKPdf 20 51 42.7 +1.0
PDAR Pinedale Array 123.05 19 PKP PKPdf 20 51 41.8 -0.3
comp=Z,4.2nm,0.8s,baz=9.8,slow=1.5,SNR=19
PDAR PP PP 20 53 20.1 -0.1
comp=Z,0.9nm,0.5s,baz=347,slow=4.6,SNR=4.0
RSSD Black Hills 123.30 14 *e*PKPdf PKPdf 20 51 42.5 0.0
RSSD Black Hills 123.30 14 *e*PKIKP PKPdf 20 51 42.5 0.0
NVAR Mina Array Bea 123.36 28 PKP PKPdf 20 51 43.9 +1.1
comp=Z,7.9nm,0.7s,baz=294,slow=1.8,SNR=37
NVAR pPKP pPKPdf 20 51 53.0 +0.3
comp=Z,3.3nm,0.8s,baz=316,slow=1.1,SNR=6.6
DUG Dugway 124.20 23 *e*PKPdf PKPdf 20 51 45.2 +0.8
DUG Dugway 124.20 23 *e*PKIKP PKPdf 20 51 45.2 +0.8
ECSD EROS Data Cent 125.01 7 *e*PKPdf PKPdf 20 51 45.5 -0.3
ECSD *e* 20 51 55.2
TMUT Trail Mountain 125.58 22 *e*PKPdf PKPdf 20 51 47.9 +0.9
PHWY Pilot Hill 125.59 16 *e*PKPdf PKPdf 20 51 46.7 -0.3
MSU Marysvale 125.90 23 *e*PKPdf PKPdf 20 51 49.2 +1.5
MSU Marysvale 125.90 23 *e*PKIKP PKPdf 20 51 49.2 +1.5
ANMO Albuquerque 131.15 20 *e*PKPdf PKPdf 20 51 58.9 +1.2
ANMO Albuquerque 131.15 20 *e*PKIKP PKPdf 20 51 58.9 +1.1
BNM Barren Site 131.82 21 *e*PKPdf PKPdf 20 51 59.9 +0.8
TUC Tucson 131.83 26 *e*PKPdf PKPdf 20 52 00.1 +0.9
TUC Tucson 131.83 26 *e*PKIKP PKPdf 20 52 00.1 +1.0
CPRX Cap Rock 133.75 18 *e*PKPdf PKPdf 20 52 03.4 +0.6
GDL2 Guadalupe Moun 134.36 19 *e*PKPdf PKPdf 20 52 04.6 +0.7
MIAR Mount Ida 134.44 6 *e*PKPdf PKPdf 20 52 04.0 0.0
MIAR Mount Ida 134.44 6 *e*PKIKP PKPdf 20 52 04.0 0.0
MNTX Cornudas Mount 134.48 21 *e*PKPdf PKPdf 20 52 03.7 -0.4
TXAR Lajitas Array 137.23 20 PKhKP PKPpre 20 51 58.1
comp=Z,0.4nm,0.6s,baz=37,slow=0.3,SNR=4.4
TXAR PKP PKPdf 20 52 09.7 +0.3
comp=Z,2.2nm,0.6s,baz=180,slow=0.7,SNR=14
TXAR PP PP 20 54 51.6 -0.9
comp=Z,0.3nm,0.4s,baz=15,slow=5.2,SNR=3.5
TXAR Lajitas Array 137.23 20 PKHKP PKPpre 20 51 58.2
TXAR 20 52 09.7
TXAR 20 54 51.6
JCT Junction City 137.29 15 *e*PKPdf PKPdf 20 52 09.5 +0.1
JCT Junction City 137.29 15 *e*PKIKP PKPdf 20 52 09.5 +0.1
BDFB Brasilia 140.68 259 PKP PKPdf 20 52 15.8 -0.1
comp=Z,3.6nm,0.6s,baz=186,slow=3.4,SNR=4.8
BDFB Brasilia 140.68 259 PKIKP PKPdf 20 52 15.8 -0.1
CELP Cerrillos 144.10 323 *e*PKPpre PKPdf 20 52 19.4 -2.6
OBIP Obispado Ponce 144.14 323 *e*PKPpre PKPdf 20 52 19.7 -2.4
LSP Las Mesas 144.32 324 PKPpre PKPdf 20 52 19.9 -2.4
CRPR Cabo Rojo, PR 144.46 324 *e*PKPdf PKPdf 20 52 21.2 -1.4
SDDR Presa de Saban 145.88 331 *e*PKPdf PKPdf 20 52 25.9 +0.9
PLCA Paso Flores 146.53 205 PKPbc PKPbc 20 52 27.0 +0.1
comp=Z,5.6nm,0.9s,baz=116,slow=3.7,SNR=7.4
PLCA Paso Flores 146.53 205 PKPbc PKPbc 20 52 27.0 +0.1
PLCA Paso Flores 146.53 205 PKP2 PKPab 20 52 27.0 -0.9
CPUP Villa Florida 147.14 238 PKPbc PKPbc 20 52 27.6 -1.5
comp=Z,1.9nm,0.4s,baz=55,slow=4.2,SNR=9.6
CPUP Villa Florida 147.14 238 *e*PKPdf PKPdf 20 52 26.4 -0.5
CPUP Villa Florida 147.14 238 *e*PKIKP PKPdf 20 52 26.4 -0.5
TEIG Tepich 148.99 0 *e*PKPbc PKPbc 20 52 34.1 -0.1
MTDJ Mount Denham 149.13 340 *e*PKPbc PKPbc 20 52 34.4 -0.2
SDV Santo Domingo 153.65 318 *e*PKPdf PKPdf 20 52 37.0 -0.4
SDV *e*PKPbc PKPbc 20 52 44.6 -0.6
ROSC El Rosal 159.07 318 PKP PKPdf 20 52 45.4 +0.8
comp=Z,3.8nm,0.3s,baz=82,slow=24,SNR=3.7
ROSC PKPab PKPab 20 53 21.0 0.0
comp=Z,11nm,0.8s,baz=77,slow=21,SNR=5.2
LPAZ La Paz 159.81 253 PKP PKPdf 20 52 46.1 +0.8
comp=Z,2.4nm,0.9s,baz=74,slow=3.3,SNR=8.2
LPAZ PKPab PKPab 20 53 25.0 +0.6
comp=Z,4.6nm,1.0s,baz=101,slow=4.7,SNR=7.9
LPAZ La Paz 159.81 253 PKIKP PKPdf 20 52 46.1 +0.8
LPAZ 20 53 25.0
OTAV Otavalo 165.24 318 *e*PKPdf PKPdf 20 52 51.3 +0.5

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*IDC **18** 20:33:14.2±2.0, 25°.20N×96°.47E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.4/26, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=77.5km s-min=30.6km az=73.0*
*ISCJB **18** 20:33:16.7±1.0, 25°.1N±0°.1×96°.5E±0°.3, h33km, mb3.4/3, Error ellipse: s-maj=36.5km s-min=13.7km az=155.9*
*NEIC **18** 20:33:19.1±0.8, 25°.20N×96°.65E, h35km, Error ellipse: s-maj=27.7km s-min=11.7km az=66.0*
ISC 18 20:33:18.9±1.0, 25°.2N±0°.1×96°.6E±0°.3, h35km, n7, σ0§18/7, mb3.4/3, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.61**	**314**	*e*P		**Pn**	**20 34 53.8**	**+0.2**
	3.6nm,0.4s							
CMAR	**Chiang Mai Arr**	**7.03**	**161**	Pn		**Pn**	**20 34 59.4**	**0.0**
	0.4nm,0.3s,baz=334,slow=13,SNR=7.1							
SONM	**Songino Array**	**23.92**	**16**	P		**P**	**20 38 29.7**	**+0.2**
	0.3nm,0.6s,mb2.9,baz=201,slow=10,SNR=3.1							
MK31	**Makanchi Array**	**24.41**	**336**	*e*P		**P**	**20 38 33.7**	**-0.2**
MKAR	**Makanchi Array**	**24.41**	**336**	P		**P**	**20 38 33.7**	**-0.2**
	1.9nm,0.7s,mb3.6,baz=145,slow=9.3,SNR=19							
MKAR	**Makanchi Array**	**24.41**	**336**	P		**P**	**20 38 33.7**	**-0.2**
ZALV	**Zalesovo Beam**	**30.06**	**346**	P		**P**	**20 39 24.5**	**0.0**
	1.0nm,0.5s,mb3.8,baz=170,slow=7.6,SNR=7.2							

GUC 18 20:34:16.2±0.5, 22°.15S×69°.85W, h49km±3km, ML3.8, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.10**	**117**	⇓*i*P		Pn	20 34 24.6	+0.7
MACH				*i*S		Sn	20 34 30.7	+1.4
TOCH	**Tocopilla**	**0.33**	**280**	⇑*i*P		Pn	20 34 25.5	-0.1
TOCH				*i*S		Sn	20 34 32.5	+0.3
TOCH				AML		AML	20 34 32.8	
	comp=N,31μm,0.3s							
MECH	**Mejillones**	**1.10**	**210**	*e*P		Pn	20 34 35.8	+0.6
MECH				*i*S		Sn	20 34 50.7	+1.4
MECH				AML		AML	20 34 53.2	
	comp=N,1μm,0.3s							
ANCH	**Antofagasta**	**1.61**	**199**	⇑*i*P		Pn	20 34 42.4	+0.2
ANCH				*i*S		Sn	20 35 03.0	+1.2

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*NEIC **18** 20:55:43.9, 15°.08N×93°.67W, h38km, MD4.1(MEX), After MEX.*
MEX 18 20:55:43.9±0.8, 15°.08N×93°.67W, h38km±12km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCIG		**0.76**	**35**	*e*P		Pn	20 55 56.1	-2.0
PCIG				*i*S		Sn	20 56 05.9	-2.4
THIG		**1.36**	**97**	*i*P		Pn	20 56 05.6	-0.8
THIG				*i*S		Sn	20 56 20.7	-2.6
TGIG		**1.77**	**17**	*e*P		Pn	20 56 10.3	-1.7
TGIG				*i*S		Sn	20 56 30.4	-2.8
CCIG	**Comitan**	**1.90**	**51**	*e*P		Pn	20 56 12.9	-0.9
CCIG				*i*S		Sn	20 56 35.4	-1.1
CCIG	**Comitan**	**1.90**	**51**	*e*P		Pn	20 56 12.9	-0.9
CCIG				*i*S		Sn	20 56 35.4	-1.1
SCX	**San Cristobal**	**1.92**	**31**	*i*P		Pn	20 56 13.6	-0.5
SCX	**San Cristobal**	**1.92**	**31**	*i*P		Pn	20 56 13.6	-0.5
HUIG	**Huatulco**	**2.45**	**286**	*i*P		Pn	20 56 20.7	-0.8
HUIG				*i*S		Sn	20 56 48.0	-2.2
HUIG	**Huatulco**	**2.45**	**286**	*i*P		Pn	20 56 20.7	-0.8
HUIG				*i*S		Sn	20 56 48.0	-2.2
VHO	**Vista Hermosa**	**3.55**	**304**	*i*P		Pn	20 56 37.7	+1.2
VHO				*i*S		Sn	20 57 15.7	-1.7
VHO	**Vista Hermosa**	**3.55**	**304**	*i*P		Pn	20 56 37.7	+1.2
VHO				*i*S		Sn	20 57 15.7	-1.7
PNIG	**Pinotepa**	**4.49**	**287**	*i*P		Pn	20 56 48.4	-1.0
PNIG				*i*S		Sn	20 57 38.5	-1.9
PNIG	**Pinotepa**	**4.49**	**287**	*i*P		Pn	20 56 48.4	-1.0
PNIG				*i*S		Sn	20 57 38.5	-1.9

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*ISCJB **18** 21:07:41.5±0.3, 11°.86N±0°.04×86°.22W±0°.05, h106km±3km, mb3.8/7, Error ellipse: s-maj=10.2km s-min=3.3km az=138.4*
*IDC **18** 21:07:42.8±1.2, 11°.88N×86°.19W, h105km±19km, mb3.6/5, mb1 3.8/7, mb1mx3.5/25, mbtmp3.6/7, MS2.9/1, Ms1 2.9/1, ms1mx2.3/35, Error ellipse: s-maj=35.1km s-min=14.4km az=44.0*
*NEIC **18** 21:07:42.8±0.5, 11°.84N×86°.21W, h108km±6km, mb3.8/3, Error ellipse: s-maj=8.7km s-min=5.3km az=46.0*
*CASC **18** 21:07:42.5±2.2, 11°.73N×86°.34W, h91km±9km, MD4.0, ML4.4*
ISC 18 21:07:42.5±0.3, 11°.84N±0°.04×86°.22W±0°.05, h100km±3km, n51, σ0§85/63, mb3.8/7, 1C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MASN	**Masaya**	**0.16**	**25**	*e*P		**Pn**	**21 07 56.5**	**-0.1**
CRUN	**El Crucero**	**0.16**	**331**	*e*P		**Pn**	**21 07 57.1**	**+0.5**
TICN	**Ticuantepe**	**0.19**	**357**	*i*P		**Pn**	**21 07 56.4**	**-0.3**
MGAN	**Managua**	**0.30**	**355**	*e*P		**Pn**	**21 07 57.0**	**-0.2**
MGAN				*e*S		**Sn**	**21 08 08.4**	**+0.4**
XAVN	**Gruta Xavier**	**0.32**	**341**	*e*P		**Pn**	**21 07 56.9**	**-0.3**
CSAN		**0.39**	**330**	*e*P		**Pn**	**21 07 57.3**	**-0.3**
COPN	**Copaltepe**	**0.49**	**313**	⇓*i*P		**Pn**	**21 07 57.3**	**-1.0**
HUEN		**0.49**	**6**	⇓*i*P		**Pn**	**21 07 58.6**	**+0.3**
HUEN				*e*S		**Sn**	**21 08 10.7**	**+0.7**
MOMN	**Momotombo**	**0.64**	**331**	*e*P		**Pn**	**21 07 59.4**	**-0.1**
MOMN				*e*S		**Sn**	**21 08 12.7**	**+0.7**
CNGN	**Cerro Negro**	**0.80**	**324**	⇑*i*P		**Pn**	**21 08 00.4**	**-0.5**
CNGN				*e*S		**Sn**	**21 08 14.8**	**+0.1**
CNGN				AML		AML	21 08 15.4	
	comp=N,6μm,0.6s							
CRIN	**San Cristobal**	**1.18**	**316**	*e*P		**Pn**	**21 08 03.7**	**-1.2**
CRIN				*e*S		**Sn**	**21 08 22.0**	**+0.2**
CRIN				AML		AML	21 08 22.9	
	comp=N,10μm,0.3s							
GBS3	**Finca Las lm¯¡**	**1.29**	**144**	*i*P		**Pn**	**21 08 05.4**	**-0.9**
GB1A	**Boringuen Arri**	**1.30**	**142**	⇓*i*P		**Pn**	**21 08 06.3**	**-0.1**
LAPC	**Finca la Perla**	**1.32**	**144**	*i*P		**Pn**	**21 08 05.7**	**-0.9**
LAPC				*i*S		**Sn**	**21 08 23.2**	**-1.6**
NY14	**Universidad de**	**1.37**	**150**	*i*P		**Pn**	**21 08 06.5**	**-0.7**
LIM1	**Limonal**	**1.48**	**140**	*i*P		**Pn**	**21 08

comp=N,25nm,0.3s,baz=310,slow=3.3,SNR=28
JTS S **Sn** **21 08 41.1 +1.5**
comp=N,53nm,0.3s,baz=299,slow=19,SNR=11
CNCH Conchagua 2.12 312 *e*P **Pn** **21 08 16.4 -0.3**
JCR Jicaral 2.26 151 *e*P **Pn** **21 08 18.9 +0.3**
TGUH Tegucigalpa,Un 2.43 335 *e*Pn **Pn** **21 08 22.0 +1.3**
TGUH *e*Sn **Sn** **21 08 48.7 -1.3**
CGA2 Cerro Gallo 2 2.50 136 *e*P **Pn** **21 08 23.5 +1.8**
BLLM Bellamira 2.53 309 *e*P **Pn** **21 08 22.0 0.0**
PRS1 Puriscal 2.63 134 *e*P **Pn** **21 08 25.2 +1.8**
LAJ Bijagual 2.85 133 *e*P **Pn** **21 08 24.8 -1.5**
URSC Urasca 3.12 130 *e*P **Pn** **21 08 31.0 +1.1**
LFRS El Faro 3.29 303 *e*P **Pn** **21 08 32.2 0.0**
ACR Cerro Adams 4.37 136 *e*P **Pn** **21 08 48.2 +1.4**
ACR *e*S **Sn** **21 09 35.5 -1.1**
IXG Ixpaco 4.73 300 *e*P **Pn** **21 08 52.2 +0.6**
IXG *e*S **Sn** **21 09 41.3 -4.1**
APG El Apazote 5.19 308 P **Pn** **21 08 59.1 +1.3**
comp=N,1.2nm,0.3s,baz=124,slow=8.7,SNR=16
APG S **Sn** **21 09 42.4 -14**
comp=N,1.2nm,0.3s,baz=106,slow=15,SNR=3.1
FUG Fuego 3 5.19 300 *e*P **Pn** **21 08 59.3 +1.4**
FUG *e*S **Sn** **21 09 55.2 -1.3**
TP2 Tecpan 2 5.51 303 *e*P **Pn** **21 09 04.3 +2.1**
TP2 *e*S **Sn** **21 10 04.7 +0.4**
BCIP Isla Barro Col 6.82 112 *e*Pn **Pn** **21 09 20.6 +0.6**
CMIG Matias Romero 9.88 303 P **Pn** **21 10 00.4 -1.2**
comp=N,0.7nm,0.3s,baz=151,slow=10,SNR=19
CMIG S **Sn** **21 11 42.5 -8.1**
comp=N,0.2nm,0.3s,baz=90,slow=20,SNR=1.9
CMIG LR LR 21 14 01.0
comp=N,67nm,21.8s,baz=17,slow=38
MTDJ Mount Denham 10.52 52 *e*Pn **Pn** **21 10 10.3 0.0**
comp=N,22nm,0.8s
PAYG Puerto Ayora 13.07 198 *e*Pn **Pn** **21 10 45.0 +0.4**
OTAV Otavalo 13.87 146 Pn **Pn** **21 10 55.4 +0.4**
SDV Santo Domingo 15.61 99 *e*Pn **Pn** **21 11 16.9 -0.2**
comp=N,10.0nm,1.0s
JCT Junction City 22.41 328 *e*P **P** **21 12 32.8 -0.3**
comp=N,2.8nm,0.5s,mb3.9
TXAR Lajitas Array 23.81 320 P **P** **21 12 46.1 -0.2**
comp=N,1.4nm,0.5s,mb3.6,baz=136,slow=9.4,SNR=23
TXAR pP 21 13 09.5
comp=N,1.0nm,0.6s,baz=136,slow=9.8,SNR=5.6
TXAR Lajitas Array 23.81 320 P **P** **21 12 46.1 -0.2**
TXAR pP 21 13 09.5
WMOK Wichita Mounta 25.49 335 *e*P **P** **21 13 01.0 -0.6**
comp=N,1.7nm,0.7s,mb3.6
AAM Ann Arbor 30.43 4 P **P** **21 13 45.6 +0.1**
SADO Sadowa 33.37 9 P **P** **21 14 10.9 -0.3**
comp=N,3.0nm,0.4s,mb4.5,baz=194,slow=12,SNR=3.3
PDAR Pinedale Array 36.88 331 P **P** **21 14 41.4 0.0**
comp=N,0.3nm,0.6s,mb3.4,baz=159,slow=7.7,SNR=2.3
NVAR Mina Array Bea 38.95 318 P **P** **21 14 59.4 +0.6**
comp=N,0.4nm,0.5s,mb3.5,baz=93,slow=8.4,SNR=2.6
SCHQ Schefferville 45.52 16 P **P** **21 15 50.8 -1.1**
comp=N,3.3nm,0.4s,mb4.4,baz=223,slow=6.8,SNR=14
ASAR Alice Springs 140.15 247 PKhKP PKPpre 21 26 52.2
comp=N,0.4nm,0.6s,baz=112,slow=2.4,SNR=4.6
WRA Warramunga Arr 140.25 253 PKhKP PKPpre 21 26 51.8
comp=N,0.6nm,1.0s,baz=88,slow=3.6,SNR=7.7
WRA PKP PKPdf 21 26 59.4 -1.2
comp=N,0.7nm,0.6s,baz=91,slow=2.1,SNR=17
FITZ Fitzroy Crossi 148.63 255 PKPbc PKPbc 21 27 17.9 -1.1
comp=N,2.2nm,0.8s,baz=127,slow=0.6,SNR=4.2

*IDC **18** 21:37:54.2±0.6, 2°.63N×126°.54E, h0km, mb4.3/20, mb1 4.3/20, mb1mx4.3/25, mbtmp4.3/20, MS3.0/1, Ms1 3.2/1, ms1mx2.4/29, Error ellipse: s-maj=25.8km s-min=12.4km az=79.0*
*BJI **18** 21:37:56.2, 2°.60N×126°.60E, h25km, mB4.9/6, mb4.6/11*
*NEIC **18** 21:37:59.2±1.1, 2°.64N×126°.59E, h36km±9km, mb4.4/10, Error ellipse: s-maj=8.3km s-min=4.7km az=69.0*
*DJA **18** 21:38:00, 2°.85N×127°.41E, h35km, mb4.6/10*
*ISCJB **18** 21:38:02.1±1.3, 2°.66N±0°.06×126°.62E±0°.08, h77km±12km, mb4.2/29, Error ellipse: s-maj=13.0km s-min=8.8km az=160.7*
ISC 18 21:38:03.9±1.1, 2°.64N±0°.06×126°.66E±0°.08, h80km±11km, n59, σ0°85/56, mb4.2/29, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.98**	**159**	P	**Pn**	**21 38 34.5**	**-1.2**
MRSI	**Marisa**	**5.18**	**246**	P	**Pn**	**21 39 24.8**	**+5.8**
	932nm112nm,0.6s						
LUWI	**Luwuk**	**5.34**	**227**	P	**Pn**	**21 39 28.3**	**+7.2**
	0.6nm1μm147nm,0.7s						
NLAI	**Namlea**	**5.86**	**176**	P	**Pn**	**21 39 28.9**	**+0.7**
	1.0nm25nm,1.3s						
KDI	**Kendari**	**7.70**	**212**	P	**Pn**	**21 39 54.9**	**+1.5**
	640nm18nm,0.7s						
MSSI	**Masamba**	**8.17**	**231**	P	**Pn**	**21 40 08.2**	**+8.4**
	7μm171nm,0.5s						
MYLDM	**Lahad Datu**	**8.52**	**287**	P	**Pn**	**21 40 09.7**	**+5.1**
	60nm,1.0s						
TTSI	**Tana Toraja**	**8.87**	**230**	P	**Pn**	**21 40 10.4**	**+1.1**
KAPI	**Kappang**	**10.27**	**222**	Pn	**Pn**	**21 40 23.8**	**-4.6**
KKM	**Kota Kinabalu**	**10.95**	**288**	*e*Pn	**Pn**	**21 40 32.6**	**-5.1**
	9.1nm,0.5s						
SBUM	**Sibu**	**14.43**	**270**	P	**Pn**	**21 41 31.7**	**+7.4**
	11nm,1.4s						
KSM	**Kuching**	**16.38**	**266**	*e*Pn	**Pn**	**21 41 45.8**	**-3.4**
	18nm,1.1s						
KSM	**Kuching**	**16.38**	**266**	P	Px	21 41 59.2	
	12nm,1.1s						
KNA	**Kununurra**	**18.39**	**174**	P	**Pn**	**21 42 12.9**	**-0.7**
	40nm,0.9s						
QIZ	**Qiongzhong**	**23.16**	**316**	*e*P	**P**	**21 43 01.8**	**-1.9**
	27nm,1.2s,mb4.5						
WRA	**Warramunga Arr**	**23.67**	**162**	P	**P**	**21 43 07.4**	**-0.9**
	4.8nm,0.5s,mb4.1,baz=345,slow=11,SNR=70						
WB2	**Warramunga Arr**	**23.68**	**162**	*e*P	**P**	**21 43 07.7**	**-0.6**
JOW	**Kunigami**	**24.11**	**4**	P	**P**	**21 43 12.5**	**+0.3**
	17nm,1.0s,mb4.3,baz=183,slow=11,SNR=3.3						
MBWA	**Marble Bar**	**24.61**	**196**	*e*P	**P**	**21 43 16.1**	**-0.7**
KULM	**Kulim**	**26.08**	**277**	P	**P**	**21 43 29.2**	**-1.1**
ASAR	**Alice Springs**	**27.08**	**165**	P	**P**	**21 43 39.0**	**-0.2**
	1.0nm,0.3s,mb3.8,baz=349,slow=12,SNR=19						
TPTI	**Tepoto**	**29.45**	**272**	P	**P**	**21 43 56.5**	**-3.9**
CMAR	**Chiang Mai Arr**	**31.37**	**302**	P	**P**	**21 44 16.5**	**-0.8**
	0.4nm,0.3s,mb3.6,baz=128,slow=5.8,SNR=6.1						
CMAR				LR	LR	21 56 48.8	
	comp=Z,27nm,21.0s,baz=215,slow=36						
KSRS	**Korea Array**	**34.67**	**2**	P	**P**	**21 44 46.2**	**+0.4**
	3.5nm,0.6s,mb4.4,baz=180,slow=9.7,SNR=19						
HNR	**Honiara**	**35.27**	**110**	P	**P**	**21 44 51.1**	**-0.2**
MAJO	**Matsushiro**	**35.38**	**16**	*e*P	**P**	**21 44 51.5**	**-0.5**
	4.0nm,0.7s,mb4.4						
MJAR	**Matsushiro Arr**	**35.38**	**16**	P	**P**	**21 44 50.8**	**-1.2**
	1.8nm,0.8s,mb4.0,baz=202,slow=9.8,SNR=8.0						
NWAO	**Narrogin (SRO)**	**36.48**	**193**	P	**P**	**21 45 01.6**	**+0.2**
	15nm,1.0s,mb4.8,baz=21,slow=8.6,SNR=2.5						
STKA	**Stephens Creek**	**37.14**	**159**	P	**P**	**21 45 07.5**	**+0.5**
	9.4nm,0.9s,mb4.7,baz=337,slow=7.2,SNR=15						
STKA	**Stephens Creek**	**37.14**	**159**	*e*P	**P**	**21 45 07.4**	**+0.4**
	1.1nm,0.7s,mb3.9						
BJT	**Baijiatuau**	**38.41**	**347**	*e*P	**P**	**21 45 16.9**	**-0.7**
	8.0nm,0.4s,mb4.9						
LZH	**Lanzhou**	**39.41**	**330**	*e*P	**P**	**21 45 26.0**	**0.0**
LZH				pP	pP	21 45 30.0	-15
LZH				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.7						
ASAJ	**Asahikawa**	**43.65**	**17**	P	**P**	**21 46 01.7**	**+1.2**
	comp=Z,5.3nm,0.6s,mb4.4,baz=204,slow=20,SNR=2.8						
ULN	**Ulaanbaatar**	**48.13**	**342**	*e*P	**P**	**21 46 36.0**	**+0.2**
	comp=Z,2.5nm,0.9s,mb4.0						
SONM	**Songino Array**	**48.30**	**342**	P	**P**	**21 46 37.1**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.1,baz=158,slow=7.9,SNR=16						
PETK	**Petropavlovsk-**	**56.46**	**22**	P	**P**	**21 47 39.8**	**+2.4**
	comp=Z,1.6nm,0.5s,mb4.3,baz=190,slow=5.5,SNR=5.3						
MK31	**Makanchi Array**	**58.41**	**326**	*e*P	**P**	**21 47 50.7**	**-0.5**
MKAR	**Makanchi Array**	**58.41**	**326**	P	**P**	**21 47 51.0**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.2,baz=120,slow=7.2,SNR=21						
TKM2	**Tokmak 2**	**60.51**	**319**	*e*P	**P**	**21 48 05.5**	**-0.2**
ZALV	**Zalesovo Beam**	**61.52**	**333**	P	**P**	**21 48 11.4**	**-0.9**
	comp=Z,0.9nm,0.5s,mb4.1,baz=107,slow=5.7,SNR=5.0						
KBL	**Kabul**	**62.13**	**308**	*e*P	**P**	**21 48 17.0**	**+0.2**
	comp=Z,3.1nm,0.7s,mb4.5						
KURK	**Kurchatov**	**62.62**	**328**	*e*P	**P**	**21 48 19.6**	**-0.1**
	comp=Z,6.0nm,0.6s,mb4.7						
KURK				*e*PP	PP	21 50 35.8	-2.5
BVAR	**Borovoye Array**	**68.19**	**327**	P	**P**	**21 48 56.4**	**+0.7**
	comp=Z,0.6nm,0.4s,mb3.8,baz=142,slow=7.5,SNR=7.6						
ABKAR	**Akbulak array**	**72.95**	**321**	P	**P**	**21 49 17.6**	**-7.1**
	comp=Z,0.7nm,0.4s,mb3.8						
AKTK	**Aktyubinsk**	**74.47**	**322**	P	**P**	**21 49 34.5**	**+0.9**
AKTO	**Aktyubinsk**	**74.47**	**322**	P	**P**	**21 49 34.5**	**+0.9**
	comp=Z,2.1nm,0.5s,mb4.1,baz=115,slow=8.8,SNR=8.1						
ARU	**Arti**	**75.81**	**328**	*e*P	**P**	**21 49 40.7**	**-0.5**
	comp=Z,3.8nm,0.7s,mb4.2						
GNI	**Garni**	**82.12**	**310**	*e*P	**P**	**21 50 16.4**	**+0.3**
KIV	**Kislovodsk**	**83.83**	**314**	*e*P	**P**	**21 50 24.2**	**-0.6**
ILAR	**Eielson Array**	**86.11**	**25**	P	**P**	**21 50 35.9**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=239,slow=5.0,SNR=6.7						
MALT	**Malatya**	**86.99**	**308**	*e*P	**P**	**21 50 40.1**	**-0.5**
EIL	**Elat**	**90.19**	**300**	P	**P**	**21 50 56.5**	**+0.6**
	comp=Z,4.0nm,0.8s,mb4.6,baz=18,slow=3.2,SNR=3.9						
BRTR	**Keskin Array B**	**90.66**	**310**	P	**P**	**21 50 58.6**	**+0.7**
	comp=Z,1.2nm,0.9s,mb4.0,baz=96,slow=12,SNR=3.1						
ARCES	**ARCESS Array B**	**91.44**	**340**	P	**P**	**21 51 01.3**	**+0.4**
	comp=Z,0.9nm,0.6s,mb4.1,baz=80,slow=6.5,SNR=3.0						
ARCES	**ARCESS Array B**	**91.44**	**340**	P	**P**	**21 51 01.3**	**+0.4**
QSPA	**South Pole Qui**	**92.55**	**180**	P	**P**	**21 51 06.7**	**+0.9**
FINES	**FINESS Array B**	**92.75**	**332**	P	**P**	**21 51 08.2**	**+1.1**
	comp=Z,1.4nm,0.9s,mb4.3,baz=56,slow=5.2,SNR=3.1						
TXAR	**Lajitas Array**	**122.31**	**53**	PKP	PKPdf	21 56 51.8	+1.3
	comp=Z,0.1nm,0.6s,baz=197,slow=2.8,SNR=2.9						
TORD	**Torodi Ar. Bea**	**123.18**	**287**	PKP	PKPdf	21 56 53.7	+1.2
	comp=Z,0.5nm,0.9s,baz=28,slow=3.4,SNR=2.6						

*ISCJB **18** 21:39:38.1±0.6, 50°.43N±0°.04×18°.87E±0°.03, h0km, Error ellipse: s-maj=6.2km s-min=2.8km az=13.8*
*CSEM **18** 21:39:39.2±0.2, 50°.43N×18°.87E, h2km, ML2.7/6, Error ellipse: s-maj=5.4km s-min=2.2km az=11.0*
*IPEC **18** 21:39:39.4±0.2, 50°.40N×18°.92E, h0km±1km, ML1.8/3, Error ellipse: s-maj=2.6km s-min=1.2km az=171.0*
*WAR **18** 21:39:39.6, 50°.36N×18°.93E*
*PRU **18** 21:39:40.3, 50°.40N×18°.86E, h0km*
*IDC **18** 21:39:40.9±1.6, 50°.32N×18°.87E, h0km, mb1 3.2/3, mb1mx3.1/23, mbtmp3.1/3, ML2.4/3, Error ellipse: s-maj=28.8km s-min=11.5km az=140.0*
ISC 18 21:39:39.2±0.6, 50°.42N±0°.04×18°.88E±0°.03, h0km, n29, σ1°08/50, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.62**	**108**	*e*Pg	**Pg**	**21 39 51.2**	**+0.1**
OJC				*e*Sg	**Sg**	**21 39 59.6**	**+0.5**
OJC	**Ojcow**	**0.62**	**108**	*e*Pg	**Pg**	**21 39 50.8**	**-0.3**
	baz=288						
OJC				*e*Sg	**Sg**	**21 39 59.6**	**+0.5**
OKC	**Ostrava-Krasne**	**0.75**	**219**	*e*PG	**Pg**	**21 39 54.0**	**+0.4**
OKC				*e*SG	**Sg**	**21 40 03.9**	**+0.6**
	comp=Z,26nm,0.9s						
OKC	**Ostrava-Krasne**	**0.75**	**219**	*e*Pg	**Pg**	**21 39 53.8**	**+0.2**
	baz=41						
OKC				Sg	**Sg**	**21 40 03.9**	**+0.6**
	comp=Z,26nm,0.9s						
MORC	**Moravsky Berou**	**1.07**	**234**	*e*Pg	**Pg**	**21 40 00.2**	**+0.4**
	baz=54						
MORC				*e*Sg	**Sg**	**21 40 13.6**	**-0.1**
	comp=Z,23nm,0.4s,baz=54						
NIE	**Niedzica**	**1.36**	**137**	*e*Pg	**Pg**	**21 40 05.4**	**+0.1**
NIE				*e*Sg	**Sg**	**21 40 22.5**	**-0.5**
NIE	**Niedzica**	**1.36**	**137**	*e*Pg	**Pg**	**21 40 05.4**	**+0.1**
NIE				*e*Sg	**Sg**	**21 40 22.5**	**-0.5**
DPC	**Dobruska-Polom**	**1.64**	**269**	*e*PG	**Pg**	**21 40 09.6**	**-1.0**
DPC				*e*SG	**Sg**	**21 40 32.0**	**+0.1**
	comp=Z,9.5nm,0.4s						
DPC	**Dobruska-Polom**	**1.64**	**269**	Pg	**Pg**	**21 40 09.6**	**-1.0**
DPC				Sg	**Sg**	**21 40 32.0**	**+0.1**
	comp=Z,9.5nm,0.4s						
KSP	**Ksiaz**	**1.70**	**285**	*e*Pg	**Pg**	**21 40 11.9**	**+0.1**
KSP				*e*Sg	**Sg**	**21 40 35.6**	**+1.7**
KSP	**Ksiaz**	**1.70**	**285**	*e*Pg	**Pg**	**21 40 11.9**	**+0.1**
KSP				*e*Sg	**Sg**	**21 40 35.6**	**+1.7**
VRAC	**Vranov**	**1.85**	**234**	Pn	**Pn**	**21 40 12.6**	**+0.4**
	comp=Z,2.8nm,0.3s,baz=51,slow=14,SNR=14						
VRAC				Lg		21 40 37.5	
	comp=Z,2.8nm,0.3s,baz=141,slow=21,SNR=10						
VRAC	**Vranov**	**1.85**	**234**	*e*Pn	**Pn**	**21 40 12.4**	**+0.2**
	baz=53						
VRAC				*e*Sg	**Sg**	**21 40 37.6**	**-1.1**
	comp=Z,6.3nm,0.2s,baz=53						
VYHS	**Vyhne**	**1.93**	**181**	*e*PN	**Pn**	**21 40 12.7**	**-0.5**
VYHS				*e*SN	**Sn**	**21 40 36.8**	**-1.3**
VYHS	**Vyhne**	**1.93**	**181**	*e*Pn	**Pn**	**21 40 12.7**	**-0.5**
VYHS				*e*Sn	**Sn**	**21 40 36.8**	**-1.3**
KRUC	**Moravsky**	**2.11**	**231**	*e*Pn	**Pn**	**21 40 16.2**	**+0.5**
	baz=50						
KRUC				*e*Sn	**Sn**	**21 40 44.1**	**+1.5**
	comp=Z,3.2nm,0.2s,baz=50						
KECS	**Kecovo**	**2.20**	**151**	*e*PN	**Pn**	**21 40 16.3**	**-0.7**
KECS				*e*SN	**Sn**	**21 40 45.0**	**+0.1**
CRVS	**Cervenica-Dubn**	**2.26**	**131**	*e*PN	**Pn**	**21 40 21.4**	**+3.6**
CRVS				*e*		21 40 51.2	
CRVS	**Cervenica-Dubn**	**2.26**	**131**	*e*Pn	**Pn**	**21 40 21.4**	**+3.6**
KOLS	**Kolonicke sedl**	**2.66**	**123**	*e*PG	**Pg**	**21 40 31.0**	**+0.9**
KOLS				*e*		21 41 04.5	
KOLS	**Kolonicke sedl**	**2.66**	**123**	*e*Pg	**Pg**	**21 40 31.0**	**+0.9**
PRU	**Pruhonice**	**2.82**	**263**	*e*PG	**Pg**	**21 40 30.6**	**-2.7**
PRU				*e*SG	**Sg**	**21 41 08.6**	**-1.2**
	comp=Z,7.2nm,0.8s						
PRU	**Pruhonice**	**2.82**	**263**	Pg	**Pg**	**21 40 30.6**	**-2.7**
PRU				Sg	**Sg**	**21 41 08.6**	**-1.2**
	comp=Z,7.2nm,0.8s						
BRG	**Berggiesshubel**	**3.18**	**280**	PG	**Pg**	**21 40 40.9**	**+0.8**
BRG				SG	**Sg**	**21 41 22.4**	**+1.2**
	comp=Z,2.8nm,0.5s						
GERES	**GERESS Array B**	**3.72**	**247**	Pn	**Pn**	**21 40 37.9**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=64,slow=11,SNR=4.1						
GERES				Pg	**Pg**	**21 40 47.5**	**-2.9**
	comp=Z,0.7nm,0.3s,baz=63,slow=17,SNR=17						
GERES				Sn	**Sn**	**21 41 24.0**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=63,slow=20,SNR=3.2						
GERES				Lg		21 41 36.9	
	comp=Z,1.1nm,0.3s,baz=63,slow=28,SNR=8.2						
NKC	**Novy Kostel**	**4.13**	**270**	*e*SG	**Sg**	**21 41 50.4**	**-1.3**
NKC	**Novy Kostel**	**4.13**	**270**	Sg	**Sg**	**21 41 50.4**	**-1.3**
FINES	**FINESS Array B**	**11.75**	**17**	Pn	**Pn**	**21 42 25.7**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=197,slow=13,SNR=4.2						
BRTR	**Keskin Array B**	**14.90**	**130**	Pn	**Pn**	**21 43 12.2**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=319,slow=12,SNR=2.3						

*ISCJB **18** 21:42:15.3±0.6, 17°.57N±0°.05×40°.27E±0°.06, h10km, mb3.8/11, MS3.7/16, Error ellipse: s-maj=9.2km s-min=5.9km az=42.8*
*SGS **18** 21:42:16.1, 17°.63N×40°.07E, h28km*
*CSEM **18** 21:42:16.6±1.1, 17°.60N×40°.16E, h30km, ML3.8, Error ellipse: s-maj=36.9km s-min=12.9km az=33.0*
*IDC **18** 21:42:19.1±1.2, 18°.05N×40°.03E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, ML3.7/1, MS3.7/20, Ms1 3.7/20, ms1mx3.5/43, Error ellipse: s-maj=26.8km s-min=21.5km az=47.0*
*NEIC **18** 21:42:22.2±0.8, 18°.42N×39°.94E, h10km, mb3.8/6, Error ellipse: s-maj=17.2km s-min=11.5km az=180.0*
ISC 18 21:42:16.8±0.6, 17°.56N±0°.06×40°.31E±0°.06, h10km, n62, σ1°43/52, mb3.8/11, MS3.7/16, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRSS	**Farasan al Kab**	**1.91**	**115**	P	**Pn**	**21 42 48.6**	**-0.7**
FRSS	**Farasan al Kab**	**1.91**	**115**	P	**Pn**	**21 42 48.7**	**-0.6**
FRSS				S	**Sn**	**21 43 13.6**	**+0.2**
NAMS	**An Nimas**	**2.41**	**48**	P	**Pn**	**21 42 54.5**	**-1.8**
NAMS	**An Nimas**	**2.41**	**48**	P	**Pn**	**21 42 54.5**	**-1.8**
WBHS	**Wadi 'Ibn Hash**	**2.53**	**65**	P	**Pn**	**21 42 59.1**	**+1.2**
WBHS	**Wadi 'Ibn Hash**	**2.53**	**65**	P	**Pn**	**21 42 59.1**	**+1.2**
JAZS	**Jizan**	**2.54**	**101**	P	**Pn**	**21 42 57.0**	**-1.0**
JAZS	**Jizan**	**2.54**	**101**	P	**Pn**	**21 42 57.0**	**-1.0**
DJNS	**Zahran al Janu**	**3.09**	**87**	P	**Pn**	**21 43 05.8**	**+0.2**
DJNS	**Zahran al Janu**	**3.09**	**87**	P	**Pn**	**21 43 05.8**	**+0.2**
DJNS				S	**Sn**	**21 43 41.2**	**-1.4**
TATS	**Tathlith**	**3.59**	**56**	P	**Pn**	**21 43 12.6**	**0.0**
TATS	**Tathlith**	**3.59**	**56**	P	**Pn**	**21 43 12.6**	**0.0**
ATD	**Arta Tunnel**	**6.47**	**157**	Pn	**Pb**	**21 44 03.7**	**-5.9**
	1.3nm,0.3s,baz=302,slow=19,SNR=6.3						
ATD				Sn	**Sb**	**21 45 26.8**	**-0.3**
	0.5nm,0.3s,baz=135,slow=19,SNR=1.9						
ATD				LR	LR	21 46 15.0	
	comp=Z,294nm,21.1s,baz=252,slow=34						
ATD	**Arta Tunnel**	**6.47**	**157**	Pn	**Pb**	**21 44 03.7**	**-5.9**
ATD				Sn	**Sb**	**21 45 26.8**	**-0.3**
ATD				LR	LR	21 46 15.0	
ATD	**Arta Tunnel**	**6.47**	**157**	Pn	**Pb**	**21 44 03.7**	**-5.9**
ATD				Sn	**Sb**	**21 45 26.8**	**-0.2**
AAE	**Adis Abeba**	**8.61**	**190**	*e*P	Px	21 44 37.1	
AAE				*e*S	Sx	21 46 35.4	
EIL	**Elat**	**13.02**	**339**	LR	LR	21 49 23.3	
	comp=Z,272nm,19.4s,baz=95,slow=34						
MMAI	**Mount Meron Ar**	**16.02**	**345**	LR	LR	21 51 33.9	
	comp=Z,176nm,18.3s,baz=165,slow=36						
CSS	**Prodhromos**	**18.42**	**342**	*e*Pn	**Pn**	**21 46 26.1**	**-6.2**
	1.6nm,0.4s						
CSS	**Prodhromos**	**18.42**	**342**	*e*Pn	**Pn**	**21 46 26.0**	**-6.3**
	1.6nm,0.4s						
KMBO	**Kilima Mbogo**	**18.81**	**190**	LR	LR	21 53 47.1	
	comp=Z,297nm,20.1s,baz=360,slow=36						
MALT	**Malatya**	**20.75**	**356**	*e*P	**P**	**21 46 53.6**	**-4.0**
	0.9nm,0.5s						
MALT	**Malatya**	**20.75**	**356**	*e*P	**P**	**21 46 53.6**	**-4.0**
	0.9nm,0.5s						
BR131	**Keskin Array S**	**22.84**	**347**	*e*P	**P**	**21 47 15.2**	**-4.9**
	3.4nm,1.0s,mb3.7						
BR131	**Keskin Array S**	**22.84**	**347**	*e*P	**P**	**21 47 15.2**	**-4.8**
	3.4nm,1.0s,mb3.7						
BRTR	**Keskin Array B**	**22.84**	**347**	P	**P**	**21 47 18.6**	**-1.4**
	1.4nm,1.1s,mb3.3,baz=186,slow=5.8,SNR=3.3						
BRTR	**Keskin Array B**	**22.84**	**347**	P	**P**	**21 47 18.6**	**-1.4**
GNI	**Garni**	**22.84**	**9**	LR	LR	21 56 12.8	
	comp=Z,100nm,21.6s,MS3.2,baz=217,slow=37						
GNI	**Garni**	**22.84**	**9**	*e*P	**P**	**21 47 17.3**	**-2.7**
	2.8nm,0.8s,mb3.7						
GNI	**Garni**	**22.84**	**9**	*e*P	**P**	**21 47 17.3**	**-2.7**
	2.8nm,0.8s,mb3.7						
KBL	**Kabul**	**30.71**	**51**	*e*P	**P**	**21 48 35.1**	**+3.1**
	2.5nm,0.8s,mb4.1						
KEST	**Kesra**	**32.88**	**310**	LR	LR	22 03 54.8	
	comp=Z,27nm,19.6s,MS3.0,baz=249,slow=40						
KEST	**Kesra**	**32.88**	**310**	P	**P**	**21 48 49.3**	**-1.7**
AKTO	**Aktyubinsk**	**35.74**	**19**	LR	LR	22 05 52.3	
	comp=Z,124nm,19.8s,MS3.7,baz=35,slow=40						
TOA0	**Torodi Ar. Sit**	**37.45**	**269**	*e*P	**P**	**21 49 35.0**	**+4.3**
TORD	**Torodi Ar. Bea**	**37.45**	**269**	P	**P**	**21 49 31.7**	**+1.0**
	0.8nm,0.8s,mb3.6,baz=78,slow=7.5,SNR=4.0						
TORD				LR	LR	22 05 51.4	
	comp=Z,98nm,18.7s,MS3.6,baz=85,slow=38						
GERES	**GERESS Array B**	**37.95**	**331**	P	**P**	**21 49 33.9**	**-0.6**
	0.1nm,0.3s,mb3.0,baz=152,slow=4.4,SNR=2.7						
GERES	**GERESS Array B**	**37.95**	**331**	P	**P**	**21 49 33.8**	**-0.7**
GRFO	**Grafenberg**	**39.70**	**330**	*e*P	**P**	**21 49 47.0**	**-2.2**
	2.2nm,0.5s,mb4.1						
GRFO	**Grafenberg**	**39.70**	**330**	*e*P	**P**	**21 49 47.0**	**-2.2**
	2.2nm,0.5s,mb4.1						
FINES	**FINESS Array B**	**44.99**	**350**	P	**P**	**21 50 32.5**	**+0.5**
	1.9nm,1.0s,mb3.9,baz=167,slow=2.4,SNR=2.4						
FINES	**FINESS Array B**	**44.99**	**350**	P	**P**	**21 50 32.5**	**+0.5**
FINES	**FINESS Array B**	**44.99**	**350**	P	**P**	**21 50 32.5**	**+0.5**
MK31	**Makanchi Array**	**45.16**	**40**	*e*P	**P**	**21 50 35.7**	**+2.0**
MK31	**Makanchi Array**	**45.16**	**40**	*e*P	**P**	**21 50 35.7**	**+2.0**
MKAR	**Makanchi Array**	**45.16**	**40**	P	**P**	**21 50 35.4**	**+1.7**
	0.7nm,1.0s,mb3.5,baz=229,slow=8.2,SNR=3.7						
MKAR				LR	LR	22 12 00.3	
	comp=Z,149nm,18.1s,MS4.0,baz=216,slow=40						
MKAR	**Makanchi Array**	**45.16**	**40**	P	**P**	**21 50 35.4**	**+1.7**
DBIC	**Dimbokro**	**45.36**	**262**	LR	LR	22 09 09.8	
	comp=Z,123nm,19.0s,MS3.9,baz=50,slow=36						
NOA	**NORSAR Array B**	**48.12**	**341**	LR	LR	22 11 07.7	
	comp=Z,54nm,18.7s,MS3.5,baz=320,slow=36						
BOSA	**Boshof**	**48.15**	**198**	LR	LR	22 10 52.1	
	comp=Z,151nm,18.1s,MS

Error ellipse: s-maj=10.2km s-min=7.0km az=52.0
*DJA **18** 21:45:20,2.57N×99.02E,h159km,MLv3.5/10*
ISC 18 21:45:19.8±0.3,2.60N±0.04×99.01E±0.06,h173km±3km,
n38,σ0.78/43,mb3.6/12,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.22**	**336**	P	**Pn**	**21 45 43.4**	**+0.5**
	23nm,0.3s,baz=350,slow=7.3,SNR=84						
PSI				S	**Sn**	**21 46 00.5**	**-0.2**
	26nm,0.3s,baz=320,slow=23,SNR=26						
TSI	**Tuntungan**	**1.00**	**334**	P	**Pn**	**21 45 47.5**	**+0.7**
MNSI	**Mandailing Nat**	**1.88**	**162**	P	**Pn**	**21 45 55.7**	**+0.6**
MNSI				S	**Sn**	**21 46 22.0**	**-0.4**
TPTI		**1.94**	**290**	P	**Pn**	**21 45 56.8**	**+1.1**
TPTI				S	**Sn**	**21 46 23.2**	**-0.3**
IPM	**Ipoh**	**2.74**	**47**	P	**Pn**	**21 46 04.3**	**-0.7**
BKNI	**Bangkinang**	**3.03**	**138**	P	**Pn**	**21 46 09.0**	**+0.5**
KULM	**Kulim**	**3.13**	**31**	P	**Pn**	**21 46 08.4**	**-1.4**
PPI	**Padang Panjang**	**3.34**	**155**	P	**Pn**	**21 46 13.2**	**+0.9**
PDSI	**Padang**	**3.78**	**157**	P	**Pn**	**21 46 18.0**	**+0.1**
PDSI				S	**Sn**	**21 47 02.5**	**-0.7**
SISI	**Saibi**	**3.90**	**179**	P	**Pn**	**21 46 18.2**	**-1.2**
SISI				S	**Sn**	**21 47 04.8**	**-1.2**
SDSI	**Sungai Dareh**	**4.26**	**145**	P	**Pn**	**21 46 25.1**	**+1.1**
CMAR	**Chiang Mai Arr**	**15.76**	**360**	P	**Pn**	**21 48 53.6**	**+1.1**
	0.3nm,0.3s,baz=192,slow=11,SNR=16						
KKM	**Kota Kinabalu**	**17.49**	**78**	*e*P	**Pn**	**21 49 14.3**	**+0.9**
	4.3nm,0.6s						
PALK	**Pallekele**	**18.82**	**285**	*e*P	**P**	**21 49 26.4**	**-0.1**
QIZ	**Qiongzhong**	**19.47**	**32**	*e*P	**P**	**21 49 32.9**	**-0.5**
	2.4nm,0.6s						
KAPI	**Kappang**	**22.06**	**110**	*e*P	**P**	**21 50 01.2**	**+0.1**
BKSI	**Bulukumba**	**22.51**	**110**	P	**P**	**21 50 07.1**	**+1.9**
NACB	**Ninganchiao**	**30.59**	**44**	*e*P	**P**	**21 51 17.6**	**0.0**
BJT	**Baijiatuao**	**40.37**	**20**	P	**P**	**21 52 40.1**	**-0.5**
WRA	**Warramunga Arr**	**41.28**	**124**	P	**P**	**21 52 47.3**	**-1.2**
	0.4nm,0.5s,mb3.3,baz=304,slow=9.1,SNR=8.7						
WB2	**Warramunga Arr**	**41.29**	**124**	*e*P	**P**	**21 52 47.7**	**-0.8**
ASAR	**Alice Springs**	**42.84**	**130**	P	**P**	**21 53 01.9**	**+0.9**
	0.2nm,0.3s,mb3.2,baz=300,slow=7.7,SNR=7.1						
KZA	**Kyzart**	**44.70**	**335**	P	**P**	**21 53 15.6**	**0.0**
UCH	**Uchtor**	**45.14**	**334**	*e*P	**P**	**21 53 19.9**	**+0.9**
	1.9nm,0.8s,mb3.8						
SONM	**Songino Array**	**45.51**	**7**	P	**P**	**21 53 22.2**	**+0.4**
	0.2nm,0.5s,mb3.0,baz=183,slow=11,SNR=2.8						
EKS2	**Erkin-Say**	**45.81**	**334**	*e*P	**P**	**21 53 23.9**	**-0.4**
	5.6nm,1.3s,mb4.0						
MKAR	**Makanchi Array**	**46.36**	**344**	P	**P**	**21 53 28.4**	**-0.1**
	0.4nm,0.4s,mb3.4,baz=159,slow=8.6,SNR=12						
MKAR	**Makanchi Array**	**46.36**	**344**	P	**P**	**21 53 28.4**	**-0.1**
TLY	**Talaya**	**49.06**	**4**	*e*P	**P**	**21 53 47.8**	**-1.4**
	1.6nm,0.3s,mb4.1						
HIA	**Hailar**	**49.75**	**18**	P	**P**	**21 53 53.3**	**-1.2**
KURK	**Kurchatov**	**50.95**	**343**	*e*P	**P**	**21 54 03.4**	**0.0**
ZALV	**Zalesovo Beam**	**52.50**	**349**	P	**P**	**21 54 14.6**	**-0.2**
	0.5nm,0.5s,mb3.4,baz=167,slow=8.3,SNR=2.9						
STKA	**Stephens Creek**	**52.98**	**134**	*e*P	**P**	**21 54 19.9**	**+1.1**
BVAR	**Borovoye Array**	**55.56**	**339**	P	**P**	**21 54 36.5**	**-0.5**
	0.6nm,0.6s,mb3.6,baz=142,slow=8.5,SNR=3.6						
CASY	**Casey**	**69.22**	**175**	*e*P	**P**	**21 56 07.1**	**-0.3**
	2.2nm,0.7s,mb4.0						
BRTR	**Keskin Array B**	**69.53**	**312**	P	**P**	**21 56 10.3**	**+0.4**
	1.3nm,0.9s,mb3.7,baz=123,slow=5.3,SNR=3.3						
BOSA	**Boshof**	**77.04**	**240**	P	**P**	**21 56 54.7**	**+0.6**
FINES	**FINESS Array B**	**79.61**	**332**	P	**P**	**21 57 07.3**	**-0.2**
	1.8nm,0.9s,mb3.7,baz=100,slow=7.9,SNR=5.0						

*MOS **18** 21:52:17.5±1.0,36.49N×71.24E,h229km,mb4.1/10,Error ellipse: s-maj=11.8km s-min=7.1km az=96.7*
*ISCJB **18** 21:52:17.4±0.3,36.49N±0.02×71.24E±0.04,h224km±4km, mb4.0/15,Error ellipse: s-maj=5.8km s-min=3.7km az=162.6*
*BJI **18** 21:52:18.6,36.46N×71.32E,h217km,mb4.5/4*
*NEIC **18** 21:52:18.3±0.6,36.49N×71.28E,h220km±6km,mb5.0/14, Error ellipse: s-maj=7.4km s-min=4.8km az=51.0*
*IDC **18** 21:52:18.1±6.1,36.37N×71.16E,h230km±60km,mb3.5/7, mb1 3.8/11,mb1mx3.4/27,mbtmp3.7/11,Error ellipse: s-maj=31.0km s-min=12.9km az=33.0*
*NNC **18** 21:52:23.5±1.7,36.92N×71.12E,h211km±14km,mb3.4, mpv4.7,Error ellipse: s-maj=14.2km s-min=8.3km az=3.0*
ISC 18 21:52:18.3±0.3,36.51N±0.02×71.25E±0.04,h219km±4km, n116,σ1§15/144,mb4.0/15,11C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.66**	**223**	*e*Pn	**Pn**	**21 53 05.7**	**+0.5**
KBL				*e*Sn	**S**	**21 53 41.0**	**-0.9**
KBL	**Kabul**	**2.66**	**223**	*e*PN	**Pn**	**21 53 05.7**	**+0.5**
KBL				*e*		21 53 41.0	
CEP	**Cherat**	**2.73**	**168**	⇓P	**Pn**	**21 53 06.8**	**+0.8**
CEP				S	**S**	**21 53 43.0**	**-0.4**
CHCP	**Chirah Chowk**	**3.29**	**149**	P	**Pn**	**21 53 13.3**	**+1.0**
THW	**Thamme Wali**	**3.73**	**174**	⇓P	**Pn**	**21 53 17.8**	**+0.3**
KSH	**Kashi**	**4.79**	**50**	P	**Pn**	**21 53 26.8**	**-3.7**
KSH				S	**S**	**21 54 17.5**	**-10**
KSH				smax			
	comp=N,340nm,0.4s						
KSH				smax			
	comp=E,190nm,0.2s						
AML	**Almayashu**	**5.93**	**18**	P	**Pn**	**21 53 45.8**	**+1.0**
	SNR=88						
AML	**Almayashu**	**5.93**	**18**	*e*Pn	**Pn**	**21 53 45.8**	**+1.0**
AML				*e*Sn	**S**	**21 54 51.3**	**-2.3**
UCH	**Uchtor**	**6.25**	**23**	Pn	**Pn**	**21 53 49.5**	**+0.6**
EKS2	**Erkin-Say**	**6.45**	**17**	P	**Pn**	**21 53 52.2**	**+0.8**
	SNR=24						
EKS2	**Erkin-Say**	**6.45**	**17**	*e*Pn	**Pn**	**21 53 52.2**	**+0.8**
EKS2				*e*Sn	**S**	**21 55 01.7**	**-4.0**
AAK	**Ala-Archa**	**6.61**	**21**	P	**Pn**	**21 53 54.5**	**+1.0**
	SNR=51						
KK31	**Karatay Array**	**6.61**	**355**	⇑P	**Pn**	**21 53 53.7**	**+0.2**
	comp=E,25nm,0.6s,baz=173,slow=12,SNR=260						
KK31				⇓S	**S**	**21 55 04.8**	**-4.7**
	comp=E,15nm,0.3s,baz=175,slow=21,SNR=17						
KKAR	**Karatay Array**	**6.61**	**355**	*e*Pn	**Pn**	**21 53 53.0**	**-0.5**
KKAR				*e*Sn	**S**	**21 55 05.1**	**-4.4**
KKAR	**Karatay Array**	**6.61**	**355**	*e*PN	**Pn**	**21 53 53.0**	**-0.5**
BHK	**Bhakra**	**6.65**	**138**	*e*S	**S**	**21 55 04.6**	**-6.0**
KBK	**Karagaybulak**	**6.77**	**24**	P	**Pn**	**21 53 56.9**	**+1.3**
	SNR=33						
KBK	**Karagaybulak**	**6.77**	**24**	*e*Pn	**Pn**	**21 53 56.9**	**+1.2**
SDNR	**Sundarnagar**	**6.89**	**135**	*e*PKP	**Pn**	**21 53 57.0**	**-0.3**
SDNR				*ex*	**x**	21 55 11.5	
ULHL	**Ulahol**	**6.91**	**32**	P	**Pn**	**21 53 57.9**	**+0.5**
	SNR=15						
CHMS	**Chumysh**	**7.02**	**22**	P	**Pn**	**21 53 58.9**	**+0.1**
	SNR=13						
USP	**Ospenovka**	**7.20**	**19**	P	**Pn**	**21 54 00.7**	**-0.4**
	SNR=28						
TKM2	**Tokmak 2**	**7.23**	**26**	⇑P	**Pn**	**21 54 02.4**	**+0.9**
	comp=E,78nm,1.1s						
TKM2				⇑S	**S**	**21 55 22.5**	**-1.3**
	comp=E,50nm,1.1s						
TKM2	**Tokmak 2**	**7.23**	**26**	P	**Pn**	**21 54 02.1**	**+0.7**
	SNR=71						
TKM2	**Tokmak 2**	**7.23**	**26**	*e*Pn	**Pn**	**21 54 02.3**	**+0.9**
TKM2				*e*Sn	**S**	**21 55 23.3**	**-0.5**
TKM2	**Tokmak 2**	**7.23**	**26**	*e*PN	**Pn**	**21 54 02.3**	**+0.8**
TKM2				*e*		21 55 23.3	
SMLA	**Simla**	**7.28**	**136**	*i* P	**Pn**	**21 54 01.8**	**-0.5**
SMLA				*i* S	**S**	**21 55 18.4**	**-7.0**
SMLA				⇓		21 55 23.9	
	comp=E,2μm,0.4s						
SMLA				⇓		21 55 24.0	
	comp=N,3μm,0.4s						
KLP	**Kalpa**	**7.64**	**128**	*e*S	**S**	**21 55 27.9**	**-5.9**
KLP				AML	AML	21 55 38.1	
	comp=N,555nm,0.9s						
KLP				AML	AML	21 55 41.0	
	comp=E,555nm,0.7s						
JOSI	**Joshimath**	**9.13**	**128**	*e*PKP	**Pn**	**21 54 26.0**	**-0.1**
JOSI				*e*S	**S**	**21 56 01.0**	**-7.9**
KHET	**Khetri**	**9.25**	**154**	*e*PKP	**Pn**	**21 54 24.5**	**-3.2**
KHET				*e*S	**S**	**21 56 02.5**	**-9.3**
NDI	**New Delhi**	**9.28**	**145**	*ex*	**S**	**21 56 10.0**	**-2.5**
SONA	**Sohna**	**9.60**	**147**	*e*S	**S**	**21 56 10.0**	**-10**
MK31	**Makanchi Array**	**13.17**	**35**	P	**Pn**	**21 55 19.7**	**+2.6**
	comp=E,2.0nm,0.4s,baz=215,slow=15,SNR=96						
MK31				⇓S	**S**	**21 57 44.2**	**+0.6**
	comp=E,5.8nm,1.0s,baz=218,slow=13						
MK31	**Makanchi Array**	**13.17**	**35**	*e*Pn	**Pn**	**21 55 17.3**	**+0.2**
MK31				*e*Sn	**S**	**21 57 46.2**	**+2.6**
MK31	**Makanchi Array**	**13.17**	**35**	*e*P	**Pn**	**21 55 17.3**	**+0.2**
MK31				*e*		21 57 46.2	
MKAR	**Makanchi Array**	**13.17**	**35**	P	**Pn**	**21 55 16.5**	**-0.6**
	comp=E,1.3nm,0.3s,baz=216,slow=15,SNR=35						
MKAR				S	**S**	**21 57 44.1**	**+0.6**
	comp=E,0.0nm,0.3s,baz=225,slow=16,SNR=2.7						
MKAR	**Makanchi Array**	**13.17**	**35**	P	**Pn**	**21 55 16.5**	**-0.6**
MKAR				S	**S**	**21 57 44.1**	**+0.6**
MKAR	**Makanchi Array**	**13.17**	**35**	P	**Pn**	**21 55 16.5**	**-0.6**
MKAR				S	**S**	**21 57 44.1**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DANN	**Dangsing**	**13.33**	**124**	*e*P	**Pn**	**21 55 18.1**	**-1.1**
	comp=Z,77nm,0.7s						
GKN	**Gorkha**	**14.14**	**123**	*e*P	**Pn**	**21 55 28.6**	**-0.7**
	comp=Z,41nm,0.3s						
DMN	**Daman**	**14.71**	**123**	*e*P	**Pn**	**21 55 35.4**	**-0.8**
	comp=Z,45nm,0.4s						
KKN	**Kakani**	**14.71**	**122**	*e*P	**Pn**	**21 55 35.6**	**-0.7**
	comp=Z,90nm,0.5s						
KKN	**Kakani**	**14.71**	**122**	*e*P	**Pn**	**21 55 35.6**	**-0.7**
KKN				pmax	pmax		
	comp=Z,90nm,0.5s						
PKI	**Pulchoki**	**14.94**	**123**	*e*P	**Pn**	**21 55 38.5**	**-0.5**
	comp=Z,67nm,0.6s						
PKI	**Pulchoki**	**14.94**	**123**	*e*P	**Pn**	**21 55 38.5**	**-0.5**
PKI				pmax	pmax		
	comp=Z,67nm,0.6s						
GUN	**Gumba**	**15.05**	**121**	*e*P	**Pn**	**21 55 40.2**	**-0.1**
	comp=Z,50nm,0.4s						
KURBB	**Kurchatov Arra**	**15.05**	**18**	⇑P	**Pn**	**21 55 41.0**	**+0.9**
	comp=Z,1.5nm,0.6s						
KURK	**Kurchatov**	**15.16**	**18**	*e*Pn	**Pn**	**21 55 40.3**	**-1.1**
	comp=Z,7.2nm,0.8s						
KURK				S	**S**	**21 58 25.9**	**-3.2**
KURK	**Kurchatov**	**15.16**	**18**	*c i*P	**Pn**	**21 55 40.2**	**-1.2**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AB31	**Akbulak array**	**15.17**	**331**	P	**Pn**	**21 55 41.9**	**+0.3**
	comp=Z,2.4nm,0.3s,baz=134,slow=14,SNR=176						
AB31				⇑S	**S**	**21 58 27.2**	**-2.2**
	comp=Z,5.1nm,0.8s,baz=153,slow=21,SNR=5.0						
ABKAR	**Akbulak array**	**15.17**	**331**	*e*Pn	**Pn**	**21 55 40.3**	**-1.3**
ABKAR				*e*S	**S**	**21 58 22.8**	**-6.6**
VOSK	**Vostochnaya**	**16.21**	**359**	⇑P	**P**	**21 55 53.8**	**+0.7**
	comp=Z,7.3nm,0.6s						
BVA0	**Borovoye Array**	**16.53**	**358**	⇑P	**P**	**21 55 57.8**	**+1.3**
	comp=Z,1.3nm,0.4s						
BVAR	**Borovoye Array**	**16.53**	**358**	P	**P**	**21 55 57.1**	**+0.6**
	comp=Z,7.2nm,0.3s,baz=162,slow=12,SNR=63						
BVAR	**Borovoye Array**	**16.53**	**358**	P	**P**	**21 55 57.1**	**+0.6**
BVAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
BRVK	**Borovoye**	**16.56**	**358**	⇑P	**P**	**21 55 57.7**	**+0.8**
	comp=Z,21nm,0.5s						
BRVK	**Borovoye**	**16.56**	**358**	*e*P	**P**	**21 55 57.5**	**+0.7**
	comp=Z,21nm,0.5s						
BRVK	**Borovoye**	**16.56**	**358**	*c i*P	**P**	**21 55 57.5**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,21nm,0.9s						
TAPN	**Taplejung**	**16.68**	**119**	*e*P	**P**	**21 56 00.0**	**+1.6**
	comp=Z,54nm,0.6s						
ODAN	**Odare**	**16.75**	**120**	*e*P	**P**	**21 56 00.7**	**+1.4**
	comp=Z,33nm,0.5s						
AKTK	**Aktyubinsk**	**16.87**	**330**	P	**P**	**21 56 01.1**	**+0.8**
AKTK				S	**S**	**21 59 02.4**	**-2.5**
AKTO	**Aktyubinsk**	**16.87**	**330**	P	**P**	**21 56 01.1**	**+0.8**
	comp=Z,6.7nm,0.3s,baz=137,slow=10,SNR=71						
AKTO				S	**S**	**21 59 02.4**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=139,slow=19,SNR=3.5						
AKTO	**Aktyubinsk**	**16.87**	**330**	P	**P**	**21 56 01.1**	**+0.8**
AKTO				S	**S**	**21 59 02.4**	**-2.5**
AKTO				pmax	pmax		
	comp=Z,7.0nm,0.3s						
LSA	**Lhasa**	**17.99**	**106**	*e*P	**P**	**21 56 15.6**	**+2.9**
LSA	**Lhasa**	**17.99**	**106**	*e*P	**P**	**21 56 15.3**	**+2.6**
	comp=Z,8.7nm,0.6s						
LSA	**Lhasa**	**17.99**	**106**	*e*P	**P**	**21 56 15.4**	**+2.7**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ZAA0	**Zalesovo Array**	**19.83**	**24**	*e*P	**P**	**21 56 31.5**	**-0.7**
ZAA0				*e*S	**S**	**22 00 02.1**	**-1.0**
ZALV	**Zalesovo Beam**	**19.83**	**24**	P	**P**	**21 56 31.9**	**-0.3**
	comp=Z,3.2nm,0.3s,baz=214,slow=11,SNR=28						
ZALV				S	**S**	**22 00 02.0**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=215,slow=22,SNR=5.8						
ZALV	**Zalesovo Beam**	**19.83**	**24**	P	**P**	**21 56 31.9**	**-0.3**
ZALV				S	**S**	**22 00 02.0**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NVS	**Novosibirsk**	**20.10**	**20**	*e*P	**P**	**21 56 35.5**	**+0.3**
NVS				pmax	pmax		
	comp=N,5.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SVE	**Sverdlovsk**	**21.54**	**344**	⇓*e*P	**P**	**21 56 50.9**	**+0.6**
SVE				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
ARU	**Arti**	**21.69**	**341**	*e*P	**P**	**21 56 51.9**	**+0.2**
	comp=Z,7.4nm,0.6s,mb4.4						
ARU				S	**S**	**22 00 33.6**	**-2.4**
ARU	**Arti**	**21.69**	**341**	*c i*P	**P**	**21 56 51.7**	**0.0**
ARU				S	**S**	**22 00 39.1**	**+3.1**
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
GTA	**Gaotai**	**22.67**	**74**	*e*P	**P**	**21 57 02.9**	**+2.0**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
KIV	**Kislovodsk**	**22.96**	**298**	P	**P**	**21 57 03.1**	**-0.3**
KIV	**Kislovodsk**	**22.96**	**298**	P	**P**	**21 57 03.1**	**-0.3**
SONM	**Songino Array**	**28.17**	**55**	P	**P**	**21 57 51.3**	**+1.1**
	comp=Z,0.7nm,0.8s,mb3.3,baz=266,slow=6.8,SNR=6.6						
SONM	**Songino Array**	**28.17**	**55**	P	**P**	**21 57 51.3**	**+1.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BR131	**Keskin Array S**	**29.62**	**288**	P	**P**	**21 58 03.7**	**+0.6**
CHTO	**Chiang Mai**	**30.05**	**118**	*e*P	**P**	**21 58 13.7**	**+6.6**
CHTO	**Chiang Mai**	**30.05**	**118**	*e*P	**P**	**21 58 13.7**	**+6.6**
OBN	**Obninsk**	**30.06**	**319**	P	**P**	**21 58 06.0**	**-0.8**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s						
CMAR	**Chiang Mai Arr**	**30.29**	**119**	P	**P**	**21 58 09.2**	**0.0**
	comp=Z,1.8nm,0.8s,mb3.8,baz=301,slow=8.6,SNR=12						
CMAR	**Chiang Mai Arr**	**30.29**	**119**	P	**P**	**21 58 09.2**	**0.0**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PALK	**Pallekele**	**30.35**	**161**	*e*P	**P**	**21 58 16.9**	**+7.1**
PALK	**Pallekele**	**30.35**	**161**	*e*P	**P**	**21 58 16.9**	**+7.1**
CSS	**Prodhromos**	**30.69**	**279**	*e*P	**P**	**21 58 13.8**	**+1.3**
TIRR	**Tirgusor**	**33.22**	**297**	*e*P	**P**	**21 58 34.7**	**+0.2**
	comp=Z,45nm,1.3s,mb4.8						
TIRR	**Tirgusor**	**33.22**	**297**	*e*P	**P**	**21 58 34.7**	**+0.2**
TIRR				pmax	pmax		
	comp=Z,45nm,1.3s,mb4.8						
HIA	**Hailar**	**37.13**	**54**	P	**P**	**21 59 12.2**	**+4.4**
HIA	**Hailar**	**37.13**	**54**	P	**P**	**21 59 12.2**	**+4.5**
FINES	**FINESS Array B**	**37.59**	**326**	P	**P**	**21 59 11.3**	**-0.1**
	comp=Z,1.4nm,0.4s,mb3.9,baz=120,slow=9.5,SNR=20						
FINES	**FINESS Array B**	**37.59**	**326**	P	**P**	**21 59 11.3**	**-0.1**
FINES	**FINESS Array B**	**37.59**	**326**	P	**P**	**21 59 11.3**	**-0.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KAF	**Kangasniemi**	**37.73**	**327**	*e*P	**P**	**21 59 09.1**	**-3.5**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
PSZ	**Piszkesteto**	**39.03**	**303**	P	**P**	**21 59 24.3**	**+0.7**
PSZ	**Piszkesteto**	**39.03**	**303**	P	**P**	**21 59 24.3**	**+0.7**
KEV	**Kevo**	**40.87**	**338**	P	**P**	**21 59 38.6**	**+0.2**
KEV	**Kevo**	**40.87**	**338**	P	**P**	**21 59 38.6**	**+0.2**
ARCES	**ARCESS Array B**	**41.21**	**338**	P	**P**	**21 59 41.4**	**+0.2**
	comp=Z,1.5nm,0.3s,mb3.8,baz=116,slow=8.1,SNR=19						
ARCES	**ARCESS Array B**	**41.21**	**338**	P	**P**	**21 59 41.4**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
YAK	**Yakutsk**	**43.84**	**35**	*e*P	**P**	**22 00 03.5**	**+1.1**
	comp=Z,13nm,0.5s,mb4.5						
YAK	**Yakutsk**	**43.84**	**35**	*e*P	**P**	**22 00 03.6**	**+1.2**
YAK				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.5						
AQU	**L'Aquila**	**44.32**	**296**	P	**P**	**22 00 08.1**	**+1.6**
AQU	**L'Aquila**	**44.32**	**296**	P	**P**	**22 00 08.1**	**+1.6**
NB2	**NORSAR Subarra**	**44.49**	**323**	P	**P**	**22 00 06.8**	**-0.8**
	comp=Z,0.7nm,0.5s,mb3.2,baz=96,slow=7.4						
NOA	**NORSAR Array B**	**44.49**	**323**	P	**P**	**22 00 06.7**	**-0.9**
	comp=Z,1.1nm,0.5s,mb3.4,baz=96,slow=7.7,SNR=5.1						
NOA	**NORSAR Array B**	**44.49**	**323**	P	**P**	**22 00 06.7**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VSL	**Villasalto**	**48.00**	**293**	P	**P**	**22 00 36.5**	**+1.3**
YSS	**Yuzh-Sakhalins**	**52.66**	**55**	*e*P	**P**	**22 01 15.1**	**+5.2**
YSS	**Yuzh-Sakhalins**	**52.66**	**55**	*e*P	**P**	**22 01 15.1**	**+5.2**
TORD	**Torodi Ar. Bea**	**65.92**	**269**	P	**P**	**22 02 38.0**	**-3.1**
	comp=Z,0.3nm,0.4s,mb3.3,baz=43,slow=5.7,SNR=4.5						
WRA	**Warramunga Arr**	**81.83**	**122**	P	**P**	**22 04 11.0**	**-2.1**
	comp=Z,0.9nm,0.3s,mb3.8,baz=325,slow=4.9,SNR=62						
WRA	**Warramunga Arr**	**81.83**	**122**	P	**P**	**22 04 11.0**	**-2.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**84.10**	**125**	P	**P**	**22 04 22.6**	**-2.1**
	comp=Z,1.4nm,0.6s,mb3.9,baz=314,slow=5.1,SNR=22						
ASAR	**Alice Springs**	**84.10**	**125**	*e*P	**P**	**22 04 22.8**	**-1.8**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*IDC **18** 21:59:47.5±1.8,15.20S×173.45W,h0km,mb3.7/5, mb1 4.0/6,mb1mx3.8/19,mbtmp3.8/6,Error ellipse: s-maj=146.5km s-min=19.5km az=149.0*
*ISCJB **18** 21:59:49.8±0.5,15.25S±0.1×173.5W±0.1,h33km,mb3.8/8, Error ellipse: s-maj=18.1km s-min=11.9km az=147.6*
*NEIC **18** 21:59:52.2±0.5,15.24S×173.55W,h35km,mb4.2/4,Error ellipse: s-maj=16.9km s-min=14.7km az=152.0*
ISC 18 21:59:51.8±0.5,15.25±0.1×173.4W±0.1,h35km,n19, σ1§12/19,mb3.8/8,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.03**	**53**	Pn	**Pn**	**22 00 21.9**	**-1.6**
	133nm,0.3s,baz=81,slow=1.3,SNR=48						
AFI				Sn	**Sn**	**22 00 41.4**	**-6.1**
	93nm,0.3s,baz=68,slow=21,SNR=5.0						
URZ	**Urewera**	**24.49**	**198**	*e*P	**P**	**22 05 06.5**	**-1.2**
	5.5nm,0.7s,mb4.1						
STKA	**Stephens Creek**	**44.13**	**240**	P	**P**	**22 07 57.3**	**+0.2**
	2.7nm,0.9s,mb4.0,baz=85,slow=11,SNR=3.4						
STKA	**Stephens Creek**	**44.13**	**240**	*e*P	**P**	**22 07 55.3**	**-1.8**
	0.3nm,0.7s,mb3.1						
WB2	**Warramunga Arr**	**49.85**	**257**	*e*P	**P**	**22 08 43.3**	**+1.4**
WRA	**Warramunga Arr**	**49.86**	**257**	P	**P**	**22 08 42.7**	**+0.7**
	0.3nm,0.5s,mb3.6,baz=92,slow=7.5,SNR=7.8						
WRA	**Warramunga Arr**	**49.86**	**257**	P	**P**	**22 08 42.7**	**+0.7**
ASAR	**Alice Springs**	**50.15**	**252**	P	**P**	**22 08 44.3**	**+0.2**
	0.7nm,0.6s,mb3.9,baz=88,slow=8.4,SNR=9.0						
RPN	**Rapa Nui**	**60.42**	**113**	P	**P**	**22 09 58.8**	**+0.7**
MBWA	**Marble Bar**	**63.39**	**254**	*e*P	**P**	**22 10 17.5**	**-0.7**
SBA	**Scott Base**	**63.49**	**185**	P	**P**	**22 10 17.4**	**-0.5**
MAJO	**Matsushiro**	**68.72**	**320**	*e*P	**P**	**22 10 51.3**	**-0.8**
	2.1nm,0.3s,mb4.5						
KKM	**Kota Kinabalu**	**72.79**	**281**	P	**P**	**22 11 18.4**	**+1.1**
YHNB	**Yeheng**	**74.88**	**301**	*e*P	**P**	**22 11 28.0**	**-1.3**
QSPA	**South Pole Qui**	**74.89**	**180**	*e*P	**P**	**22 11 28.6**	**+0.1**
	1.5nm,0.7s,mb4.0						
TXAR	**Lajitas Array**	**80.50**	**56**	P	**P**	**22 12 03.0**	**+2.4**
	0.3nm,0.5s,mb3.5,baz=236,slow=7.2,SNR=4.3						
PDAR	**Pinedale Array**	**82.11**	**42**	P	**P**	**22 12 10.5**	**+1.7**
	0.4nm,0.6s,mb3.5,baz=255,slow=3.5,SNR=3.1						
BJT	**Baijiatuao**	**85.27**	**313**	*e*P	**P**	**22 12 24.6**	**-0.4**
	5.6nm,0.3s						
GERES	**GERESS Array B**	**145.89**	**352**	PKPbc	PKPbc	22 19 29.0

AKTO Lg 22 08 16.4
comp=E,0.1nm,0.3s,baz=87,slow=18,SNR=3.8
VOSK Vostochnaya 14.57 5 ⇑P Pn 22 03 45.9 -0.2
comp=E,1.7nm,0.6s
BVA0 Borovoye Array 14.84 4 ⇑P Pn 22 03 49.3 -0.4
comp=E,0.3nm,0.3s
BVAR Borovoye Array 14.84 4 Pn **Pn 22 03 48.9 -0.8**
comp=E,0.2nm,0.3s,baz=165,slow=15,SNR=5.6
BVAR Sn **Sn 22 06 44.9 +11**
comp=E,0.1nm,0.3s,baz=172,slow=23,SNR=2.5
BVAR Lg 22 08 22.0
comp=E,0.1nm,0.3s,baz=213,slow=26,SNR=3.2
BRVK Borovoye 14.87 3 *e*Pn **Pn 22 03 51.5 +1.3**
BRVK Sn **Sn 22 06 34.0 -0.7**
GNI Garni 18.81 283 P **Pn 22 04 39.9 -0.2**
comp=E,0.1nm,0.3s,baz=153,slow=14,SNR=2.2
GNI Garni 18.81 283 *e*P **Pn 22 04 39.9 -0.3**
comp=E,3.2nm,0.7s
ZAA0 Zalesovo Array 19.14 30 *e*P **Pn 22 04 42.0 -2.0**
ZALV Zalesovo Beam 19.14 30 P **Pn 22 04 42.5 -1.6**
comp=E,1.2nm,0.3s,baz=228,slow=10,SNR=29
ARU Arti 19.47 343 *e*Pn **Pn 22 04 47.2 -0.7**
comp=E,6.6nm,0.5s
LSA Lhasa 20.29 108 *e*Pn **P 22 04 59.0 +3.0**
MALT Malatya 23.87 280 *e*Pn **P 22 05 35.1 +1.4**
CSS Prodhromos 28.63 274 *e*P **P 22 06 16.7 +0.1**
comp=E,8.5nm,1.0s,mb4.4
SONM Songino Array 28.80 58 P **P 22 06 17.7 -0.4**
comp=E,0.2nm,0.4s,mb3.2,baz=269,slow=9.3,SNR=2.8
EIL Elat 29.29 263 LR LR 22 20 28.5
comp=E,35nm,21.8s,baz=280,slow=41
FINES FINESS Array B 35.11 325 P **P 22 07 14.9 +1.7**
comp=E,0.8nm,0.6s,mb3.8,baz=125,slow=8.8,SNR=8.2
BJT Baijiatuan 36.39 72 *e*P **P 22 07 23.5 -0.9**
ARCES ARCESS Array B 38.91 337 P **P 22 07 47.5 +2.1**
comp=E,1.9nm,0.6s,mb4.0,baz=110,slow=7.5,SNR=16
NB2 NORSAR Subarra 41.99 322 P **P 22 08 12.1 +1.1**
comp=Z,0.3nm,0.3s,mb3.4,baz=95,slow=7.9
NOA NORSAR Array B 41.99 322 P **P 22 08 12.3 +1.3**
comp=Z,1.0nm,0.9s,mb3.5,baz=98,slow=7.9,SNR=6.2
YULB Yu-li 46.79 93 P **P 22 08 48.5 -1.4**
KKM Kota Kinabalu 53.46 114 P **P 22 09 38.3 -2.3**
ESDC Sonseca Array 55.18 296 P **P 22 09 53.1 +0.2**
comp=Z,0.4nm,0.6s,mb3.6,baz=49,slow=5.1,SNR=3.4
TORD Torodi Ar. Bea 64.11 267 P **P 22 10 54.9 +0.2**
comp=Z,0.4nm,0.4s,mb3.8,baz=50,slow=5.9,SNR=7.3
ILAR Eielson Array 73.57 15 P **P 22 11 52.5 -0.3**
comp=Z,0.9nm,0.9s,mb3.7,baz=326,slow=5.8,SNR=8.1
WRA Warramunga Arr 84.32 121 P **P 22 12 49.7 -2.7**
comp=Z,0.3nm,0.7s,mb3.5,baz=324,slow=4.5,SNR=3.8
WB2 Warramunga Arr 84.33 121 *e*P **P 22 12 51.2 -1.2**

NIED ***18*** *22:23:00,33.°80N×132.°30E,h56km,Mw3.8 Best double couple: M₀4.95000×10¹⁴ NP1:φ₀177.00000°,δ62.00000°, λ-73.00000°. NP2:φ₀323.00000°,δ33.00000°, λ-119.00000°.*
ISCJB ***18*** *22:23:30.5±0.3,33.°78N±0.°03×132.°30E±0.°04,h63km±3km, mb3.8/15,Error ellipse: s-maj=5.7km s-min=4.4km az=176.1*
JMA ***18*** *22:23:31.8,33.°78N×132.°31E,h52km±1km,M3.8 Broadband fault plane solution: P waves. NP1: φ₀316.00000°,δ31.00000°,λ-120.00000°. NP2: φ₀170.00000°,δ64.00000°,λ-73.00000°. Principal axes: T Plg17.0000°, Azm248.0000°; N Plg15.0000°, Azm343.0000°; P Plg67.0000°, Azm111.0000°;*
JMA Felt II J1.
IDC ***18*** *22:23:31.8±1.0,33.°81N×132.°03E,h54km±9km,mb3.4/8, mb1 3.5/8,mb1mx3.4/26,mbtmp3.4/8,MS2.6/1,Ms1 2.6/1, ms1mx2.0/25 Error ellipse: s-maj=29.0km s-min=15.7km az=64.0*
NEIC ***18*** *22:23:32.3±0.6,33.°82N×132.°21E,h59km±6km,mb4.1/9, Error ellipse: s-maj=7.8km s-min=5.8km az=130.0*
NEIC Recorded [2 JMA] in Hiroshima and [1 JMA] in Yamaguchi, Honshu. Also recorded [1 JMA] in Oita, Kyushu and Ehime, Shikoku.

ISC 18 22:23:31.7±0.3,33.°78N±0.°03×132.°30E±0.°04,h54km±3km, n47,σ0°77/58,mb3.8/15,8C-1D,Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNA	**Nagahama**	**0.27**	**145**	⇑P	**Pn**	**22 23 40.6**	**-0.4**
JNA				S	**Sn**	**22 23 47.0**	**-0.6**
JHM	**Kurahashi**	**0.41**	**28**	⇑P	**Pn**	**22 23 42.1**	**-0.1**
JHM				S	**Sn**	**22 23 49.5**	**-0.3**
JET	**Tanbara**	**0.63**	**90**	⇑P	**Pn**	**22 23 44.5**	**-0.2**
JET				S	**Sn**	**22 23 54.4**	**+0.2**
UWA2	**Uwa jima 2**	**0.63**	**154**	⇑P	**Pn**	**22 23 44.9**	**+0.2**
UWA2				S	**Sn**	**22 23 54.3**	**+0.1**
JKU	**Kubokawa**	**0.80**	**126**	⇑P	**Pn**	**22 23 46.6**	**-0.2**
JKU				*e*S	**Sn**	**22 23 57.4**	**-0.5**
JHT	**Toyohira**	**0.89**	**7**	⇑P	**Pn**	**22 23 48.1**	**+0.1**
JHT				*e*S	**Sn**	**22 24 00.1**	**+0.1**
JTO	**Tosashimizu**	**1.01**	**155**	⇓P	**Pn**	**22 23 49.7**	**0.0**
JTO				*e*S	**Sn**	**22 24 03.4**	**+0.5**
JGT	**Gotsu**	**1.25**	**1**	P	**Pn**	**22 23 53.2**	**+0.4**
JGT				S	**Sn**	**22 24 09.6**	**+1.0**
JMN	**Monobe**	**1.32**	**92**	P	**Pn**	**22 23 53.1**	**-0.7**
JMN				*e*S	**Sn**	**22 24 09.0**	**-1.4**
JNU	**Nakatsue**	**1.35**	**241**	⇑*e*Pn	**Pn**	**22 23 54.9**	**+0.6**
JNU				*e*Sn	**Sn**	**22 24 11.7**	**+0.5**
JHS	**Saijyo**	**1.39**	**29**	⇑P	**Pn**	**22 23 54.8**	**0.0**
JHS				*e*S	**Sn**	**22 24 11.8**	**-0.3**
KSRS	**Korea Array**	**5.11**	**317**	P	**Pn**	**22 24 46.0**	**+0.3**
0.4nm,0.3s,baz=137,slow=15,SNR=3.6							
KSRS				S	**Sn**	**22 25 42.8**	**-0.6**
0.9nm,0.3s,baz=136,slow=25,SNR=6.5							
MAJO	**Matsushiro**	**5.57**	**59**	*e*Pn	**Pn**	**22 24 52.7**	**+0.7**
24nm,0.5s							
MAT	**Matsushiro**	**5.57**	**59**	P	**Pn**	**22 24 53.6**	**+1.6**
MJAR	**Matsushiro Arr**	**5.57**	**59**	P	**Pn**	**22 24 54.1**	**+2.1**
12nm,0.3s,baz=241,slow=13,SNR=102							
JHJ	**Hachijo jima 2**	**6.29**	**94**	P	**Pn**	**22 25 01.5**	**-0.4**
15nm,0.3s,baz=253,slow=19,SNR=8.0							
CBIJ	**Chichi jima**	**10.82**	**125**	LR	LR	22 29 40.1	
comp=Z,29nm,18.6s,baz=61,slow=33							
TATO	**Taipei**	**12.87**	**230**	Pn	**Pn**	**22 26 31.2**	**-0.6**
YHNB	**Yeheng**	**13.16**	**229**	Pn	**Pn**	**22 26 36.1**	**+0.3**
YSS	**Yuzh-Sakhalins**	**15.37**	**28**	*e*Pn	**Pn**	**22 27 04.9**	**-0.1**
15nm,0.3s							
ULN	**Ulaanbaatar**	**23.59**	**314**	*e*P	**P**	**22 28 37.9**	**+0.4**
1.0nm,0.7s,mb3.4							
SONM	**Songino Array**	**23.97**	**314**	P	**P**	**22 28 38.8**	**-2.1**
0.7nm,0.6s,mb3.3,baz=129,slow=9.4,SNR=5.5							
SONM				pP		22 28 52.9	
0.7nm,0.5s,baz=124,slow=10,SNR=5.1							
CHTO	**Chiang Mai**	**33.23**	**252**	*e*P	**P**	**22 30 03.6**	**-0.1**
0.5nm,0.3s,mb3.9							
LSA	**Lhasa**	**35.06**	**275**	P	**P**	**22 30 21.0**	**+1.4**
MKAR	**Makanchi Array**	**39.65**	**304**	P	**P**	**22 30 55.8**	**-2.4**
0.2nm,0.7s,mb3.0,baz=89,slow=9.4,SNR=2.9							
KURK	**Kurchatov**	**42.20**	**310**	*e*P	**P**	**22 31 18.6**	**-0.4**
0.7nm,0.7s,mb3.4							
TKM2	**Tokmak 2**	**44.65**	**299**	*e*P	**P**	**22 31 39.8**	**+0.9**
3.5nm,1.2s,mb4.1							
BVAR	**Borovoye Array**	**47.31**	**314**	P	**P**	**22 31 59.3**	**-0.4**
0.8nm,0.5s,mb3.9,baz=105,slow=8.1,SNR=7.3							
BVAR				pP	pP	22 32 12.7	-1.3
0.4nm,0.5s,baz=92,slow=7.4,SNR=2.6							
BRVK	**Borovoye**	**47.38**	**314**	*e*P	**P**	**22 31 59.9**	**-0.3**
1.0nm,0.4s,mb4.1							
WB2	**Warramunga Arr**	**53.46**	**178**	*e*P	**P**	**22 32 46.1**	**-0.2**
WRA	**Warramunga Arr**	**53.46**	**178**	P	**P**	**22 32 46.1**	**-0.2**
0.5nm,0.5s,mb3.7,baz=355,slow=8.0,SNR=7.5							
WRA				pP	pP	22 33 01.4	+0.5
0.4nm,0.8s,baz=358,slow=7.8,SNR=1.9							
WRA	**Warramunga Arr**	**53.46**	**178**	P	**P**	**22 32 46.1**	**-0.2**
WRA				pP	pP	22 33 01.4	+0.5
ARU	**Arti**	**53.86**	**319**	*e*P	**P**	**22 32 48.1**	**-0.9**
1.4nm,0.5s,mb4.2							
PALK	**Pallekele**	**54.34**	**253**	P	**P**	**22 32 53.2**	**+0.1**
CTAO	**Charters Tower**	**55.20**	**164**	P	**P**	**22 32 59.2**	**+0.2**
COLA	**College**	**55.73**	**31**	P	**P**	**22 33 01.9**	**-0.5**
MBWA	**Marble Bar**	**55.93**	**194**	*e*P	**P**	**22 33 04.4**	**+0.1**
3.6nm,0.9s,mb4.4							
ASAR	**Alice Springs**	**57.15**	**178**	P	**P**	**22 33 13.6**	**+0.8**
0.3nm,0.5s,mb3.5,baz=12,slow=13,SNR=6.2							
ASAR	**Alice Springs**	**57.15**	**178**	P	**P**	**22 33 13.6**	**+0.7**
STKA	**Stephens Creek**	**65.89**	**171**	P	**P**	**22 34 12.3**	**+0.6**
3.0nm,1.1s,mb4.2,baz=339,slow=8.6,SNR=3.1							
STKA	**Stephens Creek**	**65.89**	**171**	*e*P	**P**	**22 34 12.4**	**+0.8**
OBN	**Obninsk**	**66.10**	**321**	*e*P	**P**	**22 34 11.8**	**-1.0**
KIV	**Kislovodsk**	**67.24**	**308**	*e*P	**P**	**22 34 21.1**	**+0.8**
RES	**Resolute Bay**	**67.47**	**12**	*e*P	**P**	**22 34 21.3**	**-0.1**
14nm,0.7s							
NWAO	**Narrogin (SRO)**	**67.85**	**194**	P	**P**	**22 34 23.8**	**-0.3**
FINES	**FINESS Array B**	**68.06**	**330**	P	**P**	**22 34 24.4**	**-0.9**
0.6nm,0.4s,mb4.0,baz=69,slow=7.6,SNR=6.2							
NVAR	**Mina Array Bea**	**82.81**	**48**	P	**P**	**22 35 51.9**	**+1.7**
0.3nm,0.5s,mb3.5,baz=297,slow=4.0,SNR=2.8							

WEL ***18*** *22:27:14.5±0.9,37.°62S×178.°72E,h20km±4km,ML3.9/9, Error ellipse: s-maj=7.2km s-min=4.5km az=90.0*
NEIC ***18*** *22:27:14.5,37.°62S×178.°72E,h20km,ML3.9(WEL),After WEL.*
IDC ***18*** *22:27:18.3±4.4,38.°41S×178.°73E,h70km±26km,mb3.4/2, mb1 3.8/3,mb1mx3.6/15,mbtmp3.6/3,Error ellipse: s-maj=40.9km s-min=29.5km az=87.0*

ISC 18 22:27:12.9±1.6,37.°64S±0.°06×178.°8E±0.°1,h22km±8km, n28,σ1°05/32,mb3.5/2,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.41**	**281**	P*	**Pb**	**22 27 21.6**	**+0.1**
MXZ				S*	**Sb**	**22 27 25.9**	**-1.5**
PUZ	**Puketiti**	**0.62**	**226**	P*	**Pb**	**22 27 25.9**	**+0.9**
PUZ				S*	**Sb**	**22 27 33.2**	**-0.1**
CNGZ	**Carnagh Statio**	**0.97**	**210**	P*	**Pb**	**22 27 33.0**	**+2.0**
MWZ	**Matawai**	**1.23**	**235**	PN	**Pn**	**22 27 35.2**	**+0.4**
MWZ				SN	**Sn**	**22 27 51.6**	**+0.8**
PRGZ	**Paritu Road**	**1.48**	**210**	PN	**Pn**	**22 27 38.7**	**+0.5**
URZ	**Urewera**	**1.49**	**245**	PN	**Pn**	**22 27 39.2**	**+0.9**
URZ	**Urewera**	**1.49**	**245**	P	**Pn**	**22 27 39.2**	**+0.9**
24nm,0.3s,baz=89,slow=7.1,SNR=59							
URZ				S	**Sn**	**22 27 57.0**	**-0.1**
42nm,0.3s,baz=332,slow=24,SNR=29							
KNZ	**Kokohu**	**1.65**	**213**	PN	**Pn**	**22 27 40.5**	**0.0**
MHGZ	**Mahia Peninsul**	**1.67**	**205**	PN	**Pn**	**22 27 41.5**	**+0.7**
OPRZ	**Ohinepanea**	**1.81**	**263**	PN	**Pn**	**22 27 42.7**	**0.0**
TARZ	**Mount Tarawera**	**1.92**	**251**	*e*PN	**Pn**	**22 27 45.3**	**+1.0**
NMHZ	**Naumai**	**2.15**	**227**	PN	**Pn**	**22 27 48.8**	**+1.4**
BKZ	**Black Stump Fm**	**2.38**	**229**	PN	**Pn**	**22 27 51.2**	**+0.6**
MCHZ	**McNeill Hill**	**2.45**	**222**	PN	**Pn**	**22 27 52.2**	**+0.7**
KUZ	**Kuaotunu**	**2.63**	**289**	PN	**Pn**	**22 27 54.0**	**0.0**
KAHZ	**Kahuranaki**	**2.63**	**215**	PN	**Pn**	**22 27 53.2**	**-0.8**
PXZ	**Pawanui**	**2.83**	**212**	PN	**Pn**	**22 27 54.9**	**-1.9**
BHHZ	**Black Hill Sta**	**2.84**	**229**	PN	**Pn**	**22 27 57.0**	**+0.1**
MKAZ	**Moumakai**	**2.96**	**279**	PN	**Pn**	**22 27 59.1**	**+0.6**
WNVZ	**Wahianoa**	**3.04**	**235**	PN	**Pn**	**22 27 59.8**	**+0.2**
DVHZ	**Dannevirke**	**3.37**	**217**	PN	**Pn**	**22 28 02.8**	**-1.3**
BFZ	**Birch Farm**	**3.64**	**213**	PN	**Pn**	**22 28 05.7**	**-2.1**
MRZ	**Mangatainoka R**	**3.93**	**219**	*e*PN	**Pn**	**22 28 09.9**	**-2.0**
OGWZ	**Otaki Gorge**	**4.25**	**221**	*e*PN	**Pn**	**22 28 14.0**	**-2.3**
RPZ	**Rata Peaks**	**8.46**	**222**	P	**Pn**	**22 29 10.4**	**-3.7**
0.4nm,0.3s,baz=45,slow=13,SNR=2.5							
RPZ				S	**Sn**	**22 30 37.4**	**-11**
0.5nm,0.3s,baz=158,slow=17,SNR=3.9							
ASAR	**Alice Springs**	**40.70**	**277**	P	**P**	**22 34 52.4**	**+0.5**
0.6nm,0.5s,mb3.5,baz=118,slow=7.9,SNR=10							
WRA	**Warramunga Arr**	**42.35**	**282**	P	**P**	**22 35 05.4**	**0.0**
0.5nm,0.3s,mb3.6,baz=124,slow=8.0,SNR=20							
ARCES	**ARCESS Array B**	**144.96**	**344**	PKPbc	PKPdf	22 46 48.0	+0.9
1.3nm,0.9s,baz=20,slow=3.0,SNR=3.7							

ISCJB ***18*** *22:37:55.6±0.9,15.°5S±0.°1×175.°5W±0.°1,h292km±11km, mb3.9/17,Error ellipse: s-maj=20.7km s-min=11.4km az=135.0*
IDC ***18*** *22:37:57.5±2.0,15.°44S×175.°50W,h298km±22km,mb3.3/9, mb1 3.5/10,mb1mx3.4/19,mbtmp3.3/10,Error ellipse: s-maj=36.2km s-min=13.5km az=142.0*
NEIC ***18*** *22:37:58.6±0.9,15.°47S×175.°40W,h314km±10km,mb4.3/8, Error ellipse: s-maj=17.1km s-min=10.4km az=145.0*

ISC 18 22:37:56.4±0.9,15.°4S±0.°1×175.°5W±0.°1,h285km±11km, n26,σ0°62/27,mb3.9/17,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.93**	**68**	P	**Pn**	**22 39 02.3**	**+1.1**
14nm,0.3s,baz=26,slow=21,SNR=5.9							
AFI				S	**S**	**22 39 52.1**	**-0.8**
30nm,0.3s,baz=17,slow=23,SNR=8.7							
AFI	**Afiamalu**	**3.93**	**68**	*e*Pn	**Pn**	**22 39 02.2**	**+1.1**
AFI				S	**S**	**22 39 52.1**	**-0.8**
MSVF	**Nonsavu**	**6.57**	**249**	*e*Pn	**Pn**	**22 39 39.2**	**+6.9**
22nm,0.8s							
RAO	**Raoul Island**	**13.93**	**189**	*e*P	**Pn**	**22 41 02.2**	**-0.4**
URZ	**Urewera**	**23.65**	**195**	P	**P**	**22 42 43.9**	**+1.4**
3.4nm,0.6s,mb3.9,baz=6.3,slow=15,SNR=3.2							
URZ	**Urewera**	**23.65**	**195**	P	**P**	**22 42 43.3**	**+0.8**
HNR	**Honiara**	**24.67**	**281**	*e*P	**P**	**22 42 51.6**	**-0.4**
19nm,0.3s,mb5.0							
PMG	**Port Moresby**	**36.89**	**275**	*e*P	**P**	**22 44 38.7**	**+0.1**
6.7nm,0.8s,mb4.1							
STKA	**Stephens Creek**	**42.25**	**239**	P	**P**	**22 45 22.1**	**-0.2**
5.4nm,1.2s,mb3.7,baz=296,slow=10,SNR=4.0							
STKA	**Stephens Creek**	**42.25**	**239**	*e*P	**P**	**22 45 22.2**	**-0.2**
0.8nm,0.8s,mb3.0							
WB2	**Warramunga Arr**	**47.83**	**257**	*e*P	**P**	**22 46 06.3**	**+0.2**
WRA	**Warramunga Arr**	**47.84**	**257**	P	**P**	**22 46 06.3**	**0.0**
0.9nm,0.3s,mb3.6,baz=95,slow=6.4,SNR=28							
WRA				PcP	PcP	22 47 29.3	-0.9
0.3nm,0.4s,baz=94,slow=3.9,SNR=4.9							
ASAR	**Alice Springs**	**48.15**	**252**	P	**P**	**22 46 08.7**	**+0.1**
14nm,0.5s,mb4.5,baz=87,slow=7.8,SNR=223							
MBWA	**Marble Bar**	**61.38**	**254**	*e*P	**P**	**22 47 42.6**	**-0.4**
2.5nm,0.5s,mb4.0							
NWAO	**Narrogin (SRO)**	**62.82**	**241**	*e*P	**P**	**22 47 52.4**	**0.0**
1.4nm,0.6s,mb3.8							
SBA	**Scott Base**	**63.07**	**184**	P	**P**	**22 47 53.0**	**-0.2**
KKM	**Kota Kinabalu**	**70.87**	**282**	*e*P	**P**	**22 48 43.2**	**-0.1**
5.7nm,0.9s,mb4.2							
PETK	**Petropavlovsk-**	**72.05**	**343**	P	**P**	**22 48 50.3**	**+1.0**
0.6nm,0.4s,mb3.6,baz=95,slow=7.0,SNR=2.4							
SSLB	**Suanglung**	**73.27**	**301**	*e*P	**P**	**22 48 56.6**	**-0.5**
6.0nm,0.6s,mb4.4							
YBH	**Yreka Blue Hor**	**74.87**	**38**	P	**P**	**22 49 07.1**	**+1.1**
1.1nm,0.6s,mb3.7,baz=225,slow=4.3,SNR=3.8							
NVAR	**Mina Array Bea**	**75.73**	**43**	P	**P**	**22 49 11.3**	**+0.3**
0.4nm,0.5s,mb3.3,baz=239,slow=10,SNR=3.1							
TXAR	**Lajitas Array**	**82.34**	**57**	P	**P**	**22 49 45.5**	**-1.4**
0.2nm,0.7s,mb3.0,baz=286,slow=6.5,SNR=2.7							
ILAR	**Eielson Array**	**82.88**	**12**	P	**P**	**22 49 49.1**	**+0.3**
0.4nm,0.5s,mb3.5,baz=223,slow=5.3,SNR=7.5							
PDAR	**Pinedale Array**	**83.66**	**43**	P	**P**	**22 49 52.8**	**-0.5**
0.4nm,0.6s,mb3.5,baz=222,slow=3.6,SNR=3.1							
BJT	**Baijiatuan**	**84.00**	**314**	*e*P	**P**	**22 49 54.7**	**-0.4**
5.6nm,0.4s,mb4.8							
BRTR	**Keskin Array B**	**144.86**	**319**	PKP	PKPdf	22 56 57.1	-2.6
2.0nm,1.0s,baz=27,slow=2.8,SNR=3.9							

MAN 18 22:51:18,17.°45N×122.°20E,h3km,mb3.8,ML2.5,MS2.1, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**0.44**	**305**	⇑*e*P	Pg	22 51 28.0	+1.6
CVP				*i* S	Sg	22 51 38.9	+6.7
PALP	**Palanan**	**0.44**	**150**	*e*P	Pg	22 51 27.2	+0.7
PALP				*e*S	Sg	22 51 34.1	+1.9
APYP	**Conner**	**1.00**	**294**	*e*P	Pg	22 51 38.7	+1.5
BALP	**Baler**	**1.80**	**199**	*e*P	Pn	22 51 50.3	+0.4

TRN ***18*** *22:54:41.4,10.°73N×61.°69W,h3km,MD2.7*
FUNV ***18*** *22:54:44.6,10.°72N×61.°72W,h4km,MW2.4*

ISC 18 22:54:43.0±0.7,10.°70N±0.°08×61.°66W±0.°03,h3km±10km, n7,σ0°74/13,1C,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.26**	**102**	⇑*e*P	**Pg**	**22 54 47.4**	**-0.6**
TRN				*e*S	**Sg**	**22 54 50.8**	**-0.5**
GUIV	**Guiria**	**0.56**	**264**	*e*P	**Pg**	**22 54 53.6**	**-0.1**
GUIV				*e*S	**Sg**	**22 55 01.5**	**+0.6**
TBH	**Brigand Hill**	**0.62**	**110**	*e*P	**Pg**	**22 54 54.9**	**-0.1**
TBH				*e*S	**Sg**	**22 55 03.8**	**+0.8**
TOSP	**Speyside**	**1.25**	**62**	*e*P	**Pg**	**22 55 05.3**	**-1.7**
TOSP				*e*S	**Sg**	**22 55 24.9**	**+1.6**
GUNV	**Guanoco**	**1.37**	**247**	*e*P	**Pn**	**22 55 09.3**	**+0.3**
GUNV				*e*S	**Sg**	**22 55 27.0**	**-0.1**
CRUV	**Carupano**	**1.55**	**269**	*e*P	**Pn**	**22 55 11.8**	**+0.4**
ITEV	**Isla Los Testi**	**1.58**	**294**	*e*P	**Pn**	**22 55 11.9**	**0.0**
ITEV				*e*S	**Sn**	**22 55 32.5**	**-0.5**

ISCJB ***18*** *23:57:37.6±0.4,38.°08N±0.°02×27.°52E±0.°03,h0km±8km, Error ellipse: s-maj=4.6km s-min=3.4km az=178.2*
DDA ***18*** *23:57:37.9,38.°07N×27.°48E,h7km±4km,Md2.4*
ISK ***18*** *23:57:37.6,38.°09N×27.°53E,h6km,MD2.8*
CSEM ***18*** *23:57:38.2±0.1,38.°07N×27.°48E,h2km,MD2.8,Error ellipse: s-maj=3.5km s-min=2.4km az=88.0*

ISC 18 23:57:38.3±0.4,38.°08N±0.°02×27.°50E±0.°04,h6km±6km, n28,σ0°54/50,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.37**	**329**	PG	**Pg**	**23 57 45.8**	**+0.2**
IZM				*e*SG	**Sg**	**23 57 50.9**	**+0.4**
IZM	**Izmir**	**0.37**	**329**	*i* Pg	**Pg**	**23 57 45.8**	**+0.3**
IZM				*e*Sg	**Sg**	**23 57 50.9**	**+0.5**
GCAM	**G?zelcaml?**	**0.43**	**210**	*i* P	**Pg**	**23 57 46.2**	**-0.4**
GCAM				*i* S	**Sg**	**23 57 52.1**	**-0.2**
GCAM	**G?zelcaml?**	**0.43**	**210**	*i* P	**Pg**	**23 57 46.2**	**-0.4**
GCAM				*i* S	**Sg**	**23 57 52.1**	**-0.2**
BLCB	**Balcova**	**0.48**	**310**	*e*PG	**Pg**	**23 57 47.5**	**0.0**
BLCB				*e*SG	**Sg**	**23 57 54.5**	**+0.7**
BLCB	**Balcova**	**0.48**	**310**	*e*Pg	**Pg**	**23 57 47.5**	**0.0**
BLCB				*e*Sg	**Sg**	**23 57 54.5**	**+0.8**
AYDN	**Tasoluk**	**0.51**	**144**	*i* P	**Pg**	**23 57 48.5**	**+0.3**
AYDN				*i* S	**Sg**	**23 57 55.1**	**+0.3**
AYDN	**Tasoluk**	**0.51**	**144**	*i* P	**Pg**	**23 57 48.5**	**+0.4**
AYDN				*i* S	**Sg**	**23 57 55.1**	**+0.3**
URLA	**Izmir**	**0.77**	**292**	*i* P	**Pg**	**23 57 51.4**	**-1.7**
URLA				*i* S	**Sg**	**23 58 02.9**	**-0.2**
URLA	**Izmir**	**0.77**	**292**	*i* P	**Pg**	**23 57 51.4**	**-1.7**
URLA				*i* S	**Sg**	**23 58 02.8**	**-0.3**
MLSB	**Milas**	**0.81**	**164**	*e*PG	**Pg**	**23 57 53.5**	**-0.4**
MLSB	**Milas**	**0.81**	**164**	*e*Pg	**Pg**	**23 57 53.5**	**-0.3**
AKHS	**Akhisar**	**0.84**	**17**	*i* P	**Pg**	**23 57 54.4**	**0.0**
AKHS				*i* S	**Sg**	**23 58 06.0**	**+0.7**
AKHS	**Akhisar**	**0.84**	**17**	*i* P	**Pg**	**23 57 54.4**	**0.0**
AKHS				*i* S	**Sg**	**23 58 06.0**	**+0.7**
KULA	**Kula-Manisa**	**1.01**	**64**	*e*PG	**Pg**	**23 57 57.9**	**+0.2**
KULA				*e*SG	**Sg**	**23 58 10.4**	**-0.3**
KULA	**Kula-Manisa**	**1.01**	**64**	*e*Pg	**Pg**	**23 57 57.9**	**+0.2**
KULA				*e*Sg	**Sg**	**23 58 10.4**	**-0.4**
BDRM	**Kayabasi**	**1.01**	**183**	*i* P	**Pg**	**23 57 57.3**	**-0.4**
BDRM				*i* S	**Sg**	**23 58 11.3**	**+0.6**
BDRM	**Kayabasi**	**1.01**	**183**	*i* P	**Pg**	**23 57 57.3**	**-0.4**
BDRM				*i* S	**Sg**	**23 58 11.4**	**+0.6**
BODT	**Bodrum**	**1.02**	**189**	*e*PG	**Pg**	**23 57 58.0**	**+0.1**
BODT	**Bodrum**	**1.02**	**189**	*e*Pg	**Pg**	**23 57 58.0**	**+0.1**
DAT	**Datca**	**1.35**	**177**	*e*PN	**Pn**	**23 58 04.1**	**+0.6**
DAT	**Datca**	**1.35**	**177**	*e*Pn	**Pn**	**23 58 04.1**	**+0.6**
DEMI	**Demirci**	**1.35**	**44**	*i* P	**Pn**	**23 58 04.1**	**+0.4**
DEMI				*i* S	**Sb**	**23 58 20.5**	**-1.1**
DEMI	**Demirci**	**1.35**	**44**	*i* P	**Pn**	**23 58 04.1**	**+0.4**
DEMI				*i* S	**Sb**	**23 58 20.5**	**-1.1**
BALY	**Balya**	**1.66**	**3**	*i* P	**Pn**	**23 58 07.8**	**-0.1**
BALY				*i* S	**Sn**	**23 58 29.9**	**+0.4**
BALY	**Balya**	**1.66**	**3**	*i* P	**Pn**	**23 58 07.8**	**-0.1**
BALY				*i* S	**Sn**	**23 58 29.9**	**+0.4**
DURS	**Dursunbey**	**1.70**	**26**	*i* P	**Pg**	**23 58 10.7**	**-0.2**
DURS				*i* S	**Sg**	**23 58 32.7**	**-0.2**
DURS	**Dursunbey**	**1.70**	**26**	*i* P	**Pg**	**23 58 10.7**	**-0.2**
DURS				*i* S	**Sg**	**23 58 32.7**	**-0.2**

MAN 19 00:48:42,17.°08N×119.°64E,h32km,mb4.5,ML3.3,MS3.2, 2C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.74**	**159**	*e*P	Pn	00 48 57.2	+0.9
SIPP	**Brgy,

WRA	Warramunga Arr	62.35	191	P	P	01 08 42.0	-1.6
FINES	FINESS Array B	65.52	332	P	P	01 09 03.9	-0.1
	comp=Z,1.3nm,0.7s,mb4.0,baz=56,slow=7.4,SNR=8.5						
FINES	FINESS Array B	65.52	332	P	P	01 09 03.9	-0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISCJB **19** 01:16:20.6±1.3, 30°.3S±0°.2×179°.2W±0°.2, h400km, mb4.4/9, Error ellipse: s-maj=33.9km s-min=18.4km az=135.1*
*IDC **19** 01:16:22.7±7.0, 30°.37S×179°.07W, h416km±68km, mb4.2/8, mb1 4.2/8, mb1mx3.8/19, mbtmp4.2/8, Error ellipse: s-maj=40.1km s-min=16.8km az=63.0*
*NEIC **19** 01:16:24.9±6.5, 30°.41S×179°.22W, h438km±64km, mb4.2/3, Error ellipse: s-maj=44.9km s-min=19.0km az=67.0*

ISC 19 01:16:22.1±1.3, 30°.4S±0°.2×179°.2W±0°.2, h400km, n22, σ0°80/12, mb4.4/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	28.51	313	P	P	01 21 42.3	-0.7
	62nm,0.3s,mb5.4,baz=194,slow=11,SNR=5.3						
CTA	Charters Tower	32.78	280	P	P	01 22 20.0	0.0
	16nm,0.5s,mb4.6,baz=104,slow=11,SNR=27						
CTAO	Charters Tower	32.78	280	eP	P	01 22 20.0	0.0
	14nm,0.5s,mb4.5						
STKA	Stephens Creek	33.48	257	P	P	01 22 26.6	+0.6
	9.0nm,0.5s,mb4.4,baz=100,slow=10,SNR=26						
ASAR	Alice Springs	42.08	267	P	P	01 23 37.0	0.0
	4.7nm,0.4s,mb4.2,baz=103,slow=7.6,SNR=77						
WB2	Warramunga Arr	43.06	273	eP	P	01 23 44.3	-0.4
WRA	Warramunga Arr	43.07	273	P	P	01 23 44.8	-0.1
	10nm,0.3s,mb4.7,baz=110,slow=8.1,SNR=329						
CASY	Casey	54.69	208	eP	P	01 25 07.6	-3.6
	4.2nm,0.6s,mb3.9						
QSPA	South Pole Qui	59.75	180	P	P	01 25 47.0	+1.1
	5.4nm,0.7s,mb4.1,baz=233,slow=1.0,SNR=5.0						
PMSA	Palmer Station	72.72	156	P	P	01 27 06.1	-1.3
	2.9nm,0.4s,mb4.1,baz=340,slow=2.2,SNR=8.9						
PMSA	Palmer Station	72.72	156	eP	P	01 27 06.9	-0.5
	3.0nm,0.5s,mb4.1						
MJAR	Matsushiro Arr	77.63	326	P	P	01 27 36.4	+1.0
	1.9nm,0.3s,mb4.2,baz=142,slow=6.2,SNR=2.9						
BRVK	Borovoye	125.73	316	ePKPdf	PKPdf	01 34 35.5	-0.9
JOF	Joensuu	142.00	338	epkp	PKPdf	01 35 08.3	+1.9
KAF	Kangasniemi	144.16	340	epkp	PKPdf	01 35 05.5	-4.7
FINES	FINESS Array B	144.75	339	PKP	PKPdf	01 35 08.8	-2.4
	6.9nm,0.6s,baz=53,slow=3.9,SNR=52						
NOA	NORSAR Array B	148.55	350	PKPbc	PKPbc	01 35 20.0	-1.8
	1.3nm,0.7s,baz=9.7,slow=3.9,SNR=5.9						
NOA	NORSAR Array B	148.55	350	PKPbc	PKPbc	01 35 20.0	-1.8
HFS	Hagfors	148.99	347	PKPbc	PKPbc	01 35 20.9	-2.0
	6.0nm,0.9s,baz=66,slow=7.0,SNR=6.2						
AKASG	Malin Array Be	150.64	322	PKPbc	PKPbc	01 35 26.4	-0.8
	1.6nm,0.4s,baz=47,slow=3.3,SNR=8.7						
BRTR	Keskin Array B	151.68	298	PKPbc	PKPbc	01 35 29.6	-0.3
	1.1nm,0.9s,baz=39,slow=5.5,SNR=3.5						
TORD	Torodi Ar. Bea	162.85	183	PKPab	PKPab	01 36 26.0	-3.1
	0.4nm,0.5s,baz=175,slow=2.9,SNR=3.4						

*ISCJB **19** 01:25:16.7±0.2, 37°.42N±0°.01×113°.13W±0°.02, h10km, Error ellipse: s-maj=2.2km s-min=1.9km az=136.7*
*NEIC **19** 01:25:16.0, 37°.42N×113°.13W, h1km, ML2.5(SLC), After SLC.*

ISC 19 01:25:16.4±0.2, 37°.43N±0°.01×113°.12W±0°.02, h10km, n53, σ1°17/94, 31C-26D, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCUT	Cedar City	0.23	302	ePg	Pg	01 25 20.9	-0.2
S14A	Cedar City	0.33	353	↑P	Pg	01 25 23.2	+0.2
	baz=0.3						
S14A				↑S	Sg	01 25 28.3	+0.8
	baz=0.3						
T14A	Hurricane	0.37	176	P	Pg	01 25 23.0	-0.6
	baz=0.4,SNR=245						
T14A				↑S	Sg	01 25 27.4	-1.1
	baz=0.4						
ARUT	Antelope Range	0.44	324	ePg	Pg	01 25 24.9	-0.1
S13A	Holt Ranch, En	0.61	284	↑P	Pg	01 25 28.2	0.0
	baz=0.6,SNR=129						
S13A				↓S	Sg	01 25 36.5	+0.3
	baz=0.6						
S15A	Panguitch	0.65	68	↓P	Pg	01 25 29.1	+0.2
	baz=0.7						
S15A				↑S	Sg	01 25 37.6	+0.2
	baz=0.7						
T15A	Red Dirt Ranch	0.72	125	↑P	Pg	01 25 29.5	-0.7
	baz=0.7,SNR=59						
T15A				↓S	Sg	01 25 38.9	-0.7
	baz=0.7						
T13A	Saint George	0.75	237	P	Pg	01 25 30.4	-0.4
	baz=0.7,SNR=707						
T13A				↓S	Sg	01 25 40.3	-0.4
	baz=0.7						
R13A	O'Grain Ranch,	1.01	318	↑P	Pg	01 25 36.0	+0.2
	baz=1.0,SNR=225						
R13A				↑S	Sg	01 25 50.2	+1.4
	baz=1.0						
U14A	Mt Trumbull	1.01	183	P	Pg	01 25 34.7	-1.2
	baz=1.0,SNR=185						
R15A	Junction	1.02	40	↑P	Pg	01 25 35.9	-0.2
	baz=1.0						
R15A				↑S	Sg	01 25 50.3	+0.9
	baz=1.0						
U13A	Pakoon Wash	1.22	214	P	Pn	01 25 38.7	-0.7
	baz=1.2,SNR=116						
S16A	Weppner Ranch,	1.24	76	↑P	Pn	01 25 39.6	-0.2
	baz=1.3						
MSU	Marysvale	1.31	34	ePg	Pg	01 25 41.2	-0.3
MSU				eSg	Sg	01 25 58.6	+0.1
T12A	Moapa	1.46	242	↑P	Pn	01 25 43.0	+0.3
	baz=1.4,SNR=11						
T12A				↑S	Sn	01 26 02.4	+0.5
	baz=1.4						
U12A	Valley of Fire	1.51	229	↑P	Pn	01 25 43.9	+0.4
	baz=1.5,SNR=24						
U12A				↑S	Sn	01 26 03.7	+0.4
	baz=1.5						
R16A	Teasdale	1.55	56	↓P	Pn	01 25 44.9	+0.9
	baz=1.6						
R16A				↓S	Sn	01 26 04.8	+0.7
	baz=1.6						
Q14A	Sevier Lake (B	1.56	355	↓P	Pn	01 25 45.2	+1.0
	baz=1.6						
V13A	Grand Canyon W	1.72	204	↑Pb	Pb	01 25 47.3	-0.8
	baz=1.7,SNR=39						
V15A	Kaibab Nationa	1.78	154	↑Pb	Pb	01 25 48.2	-0.9
	baz=1.8,SNR=154						
V15A				↓S	Sn	01 26 10.8	+1.0
	baz=1.8						
V14A	Boquillas Ranc	1.79	180	↑Pb	Pb	01 25 48.5	-0.8
	baz=1.8,SNR=78						
S17A	Black Ridge (B	1.85	83	↑Pb	Pb	01 25 50.2	-0.1
	baz=1.9,SNR=168						
S17A				↑Sb	Sb	01 26 14.0	+0.5
	baz=1.9						
SHPR	Sheep Range	1.88	241	ePn	Pn	01 25 49.5	+0.9
SHPR				eSg	Sg	01 26 14.5	-2.3
T17A	Navajo Res., N	1.90	102	↑Pg	Pg	01 25 51.5	-1.3
	baz=1.9,SNR=32						
T17A				↓Sb	Sb	01 26 15.6	+0.8
	baz=1.9						
U16A	Tuba City	2.05	128	↓Pb	Pb	01 25 53.4	-0.3
	baz=2.0,SNR=90						
U16A				↑Sb	Sb	01 26 19.8	+0.6
	baz=2.0						
U17A	Shonto	2.13	112	↑Pb	Pb	01 25 55.2	+0.1
	baz=2.1						
U17A				↓Sb	Sb	01 26 22.4	+0.9
	baz=2.1						
Q16A	Castle Valley	2.13	45	↓Pb	Pb	01 25 55.7	+0.6
	baz=2.1						
R17A	Hanksville Air	2.14	62	↓Pb	Pb	01 25 55.7	+0.4
	baz=2.2,SNR=66						
R17A				↓Sb	Sb	01 26 23.6	+1.7
	baz=2.2						
P14A	Drum Mountains	2.16	1	↓Pb	Pb	01 25 56.0	+0.5
	baz=2.2						
P14A				↓Sb	Sb	01 26 24.7	+2.4
	baz=2.2						
R11A	Troy Canyon, C	2.16	296	↓Pb	Pb	01 25 55.6	+0.1
	baz=2.2,SNR=72						
V12A	Nelson	2.20	220	↓Pb	Pb	01 25 56.1	-0.2
	baz=2.2						
V12A				↑Sb	Sb	01 26 24.5	+1.0
	baz=2.2						
W14A	Seligman	2.21	179	↑Pb	Pb	01 25 55.9	-0.6
	baz=2.2						
W14A				↑Sb	Sb	01 26 25.0	+1.1
	baz=2.2						
W15A	Williams	2.35	163	↓Pb	Pb	01 25 58.6	-0.2
	baz=2.3						
W15A				↓Sb	Sb	01 26 28.4	+0.6
	baz=2.3						
TMUT	Trail Mountain	2.39	38	ePg	Pg	01 26 00.5	-1.7
TMUT				eSg	Sg	01 26 31.8	-1.4
W13A	Hualapai Mount	2.41	195	↑Sb	Sb	01 26 30.6	+1.0
	baz=2.4						
S18A	Hurst Farm, Bl	2.50	83	↓Pb	Pb	01 26 00.9	-0.4
	baz=2.5,SNR=40						
S18A				↑Sb	Sb	01 26 33.0	+1.0
	baz=2.5						
V17A	Tonalea, Kykot	2.60	133	↑Pb	Pb	01 26 02.3	-0.8
	baz=2.6,SNR=53						
V17A				↓Sb	Sb	01 26 35.7	+0.6
	baz=2.6						
SRU	San Rafael	2.64	50	↓Sb	Sb	01 26 38.8	+2.5
	baz=2.7						
SRU	San Rafael	2.64	50	ePn	Pn	01 26 00.1	+1.1
SRU				ePg	Pg	01 26 05.2	-1.8
SRU				eSg	Sg	01 26 38.6	-2.6
NLU	North Lily Min	2.65	18	ePn	Pn	01 26 01.0	+1.9
NLU				ePg	Pg	01 26 06.4	-0.8
NLU				eSg	Sg	01 26 40.0	-1.4
W16A	Flagstaff	2.66	151	↑Sb	Sb	01 26 37.7	+1.0
	baz=2.7						
U10A	Ash Meadows, A	2.77	250	↓Sb	Sb	01 26 41.5	+1.7
	baz=2.7						
DUG	Dugway	2.77	5	↑Sb	Sb	01 26 44.0	+4.0
	baz=2.8						
DUG	Dugway	2.77	5	ePn	Pn	01 26 01.4	+0.6
DUG				ePg	Pg	01 26 06.6	-2.8
DUG				eSg	Sg	01 26 43.2	-2.2
U18A	Rough Rock, Ch	2.79	110	↓Sb	Sb	01 26 41.5	+1.0
	baz=2.8						
LDFC	Landfair	2.85	215	ePg	Pg	01 26 08.6	-2.3
LDFC				eSn	Sn	01 26 36.6	+0.4
Q18A	Rafter H Ranch	2.88	54	↓Sb	Sb	01 26 45.2	+2.0
	baz=2.9						
PV04	Paradox Valley	3.47	73	ePn	Pn	01 26 13.6	+3.2
PV04				ePg	Pg	01 26 19.8	-3.0
PV04				eSg	Sg	01 27 03.4	-4.4
BGU	Big Grassy Mou	3.49	1	ePg	Pg	01 26 22.2	-1.0
BGU				eSg	Sg	01 27 06.7	-1.7
PV01	Paradox Valley	3.67	78	ePn	Pn	01 26 15.7	+2.6
PV01				ePg	Pg	01 26 23.7	-3.0
PV01				eSg	Sg	01 27 11.0	-3.2
SMCO	Snowmass	5.14	68	ePg	Pg	01 26 50.1	-4.6
	1.3nm,0.5s						
LAZ	Ladron	5.71	120	ePn	Pn	01 26 44.9	+3.6
	1.2nm,0.8s						
LAZ				ePg	Pg	01 27 03.1	-2.7
LAZ				eSg	Sg	01 28 11.7	-8.2
ANMO	Albuquerque	5.92	113	ePn	Pn	01 26 49.1	+5.0
	1.4nm,0.8s						
ANMO				ePg	Pg	01 27 08.2	-1.7

IDC 19 01:45:19.5±2.3, 5°.41S×129°.60E, h0km, mb4.1/2, mb1 3.8/5, mb1mx3.7/17, mbtmp3.6/5, ML3.1/3, Error ellipse: s-maj=91.2km s-min=25.9km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.20	197	Pn	Pn	01 48 27.7	-0.5
	0.1nm,0.3s,baz=27,slow=14,SNR=4.0						
WRA	Warramunga Arr	15.16	163	Pn	Pn	01 48 53.5	-1.6
	0.1nm,0.3s,baz=348,slow=13,SNR=6.7						
ASAR	Alice Springs	18.62	168	P	Pn	01 49 39.6	+0.8
	0.1nm,0.3s,baz=356,slow=11,SNR=4.1						
CMAR	Chiang Mai Arr	38.42	309	P	P	01 52 42.1	-1.0
	1.0nm,0.3s,baz=138,slow=8.3,SNR=4.4						
MKAR	Makanchi Array	66.69	327	P	P	01 56 13.0	+0.8
	0.6nm,0.6s,baz=127,slow=8.3,SNR=6.0						

DJA 19 02:00:30.0, 0°.39N×123°.85E, h24km, MLv3.7/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.23	35	P	Pb	02 00 37.7	+1.8
LUWI	Luwuk	1.79	217	P	Pn	02 00 58.7	-0.7
LUWI				S	Sn	02 01 20.3	-1.0
MRSI	Marisa	1.91	273	P	Pn	02 01 03.6	+2.5
MRSI				S	Sn	02 01 26.2	+1.8
TOLI	Toli-Toli	3.14	283	P	Pn	02 01 18.3	+0.3

*GII **19** 02:23:46.9±0.0, 35°.59N×37°.25E, h11km*
*ISCJB **19** 02:23:51.7±0.7, 34°.63N±0°.02×38°.05E±0°.04, h28km±5km, Error ellipse: s-maj=6.1km s-min=3.2km az=26.8*
*NSSC **19** 02:23:51, 34°.62N×38°.06E, h18km±2km*
*CSEM **19** 02:23:51.3±0.2, 34°.63N×38°.06E, h20km, Mc2.3, Error ellipse: s-maj=4.7km s-min=2.6km az=117.0*
*GRAL **19** 02:23:54.7±0.3, 34°.70N×37°.98E, h34km±999km, MD3.6*

ISC 19 02:23:51.1±0.7, 34°.65N±0°.02×38°.05E±0°.04, h18km±4km, n62, σ1°02/100, 16D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABH	Abou Rabah	0.72	253	↑P	Pg	02 24 05.0	-0.3
RABH				↑S	Sg	02 24 15.0	0.0
RABH	Abou Rabah	0.72	253	↑iP	Pg	02 24 05.7	+0.4
RABH				↑iS	Sg	02 24 15.1	+0.1
ROOS	tl_alroos	0.79	233	↑P	Pg	02 24 05.0	-1.5
ROOS				↑S	Sg	02 24 16.0	-0.9
ROOS	tl_alroos	0.79	233	↑iP	Pg	02 24 05.5	-1.0
ROOS				↑iS	Sg	02 24 16.4	-0.5
JHLN	Al Jahlan	1.07	17	↓P	Pg	02 24 10.0	-2.0
JHLN				↓S	Sg	02 24 25.0	-1.1
JHLN	Al Jahlan	1.07	17	↓iP	Pg	02 24 10.7	-1.3
JHLN				↓iS	Sg	02 24 25.2	-0.9
KFRA	Kufra	1.17	299	↑P	Pn	02 24 12.0	-0.6
KFRA				↑S	Sb	02 24 28.0	+0.3
KFRA	Kufra	1.17	299	↑iP	Pn	02 24 12.8	+0.2
KFRA				↑iS	Sb	02 24 28.6	+0.9
HAWK	Haweek	1.36	265	↑P	Pn	02 24 14.0	-1.2
HAWK				↑S	Sn	02 24 32.0	-0.8
HAWK	Haweek	1.36	265	↑iP	Pn	02 24 14.5	-0.7
HAWK				↑iS	Sn	02 24 32.1	-0.7
MARH	Ras Al Marh	1.43	245	↑P	Pn	02 24 15.0	-1.2
MARH				↑S	Sn	02 24 34.0	-0.6
MARH	Ras Al Marh	1.43	245	↑iP	Pn	02 24 16.0	-0.2
MARH				↑iS	Sn	02 24 34.6	0.0
BIDA	Albida	1.47	285	↑P	Pn	02 24 17.0	+0.3
BIDA				↑S	Sn	02 24 35.0	-0.4
BIDA	Albida	1.47	285	↑iP	Pn	02 24 17.4	+0.7
BIDA				↑iS	Sn	02 24 35.4	0.0
SLMH	Al Salmeh	1.57	357	↑P	Pn	02 24 18.0	-0.1
SLMH				↑S	Sn	02 24 38.0	0.0
SLMH	Al Salmeh	1.57	357	↑iP	Pn	02 24 18.2	+0.1
SLMH				↑iS	Sn	02 24 38.1	+0.1
WRDH	Warideh	1.59	303	↑P	Pn	02 24 18.0	-0.4
WRDH				↑S	Sn	02 24 38.0	-0.6
WRDH	Warideh	1.59	303	↑iP	Pn	02 24 18.7	+0.3
WRDH				↑iS	Sn	02 24 38.1	-0.5
MNKR	ALMNKUR	1.64	37	↑P	Pn	02 24 19.0	-0.1
MNKR				↑S	Sn	02 24 38.0	-1.7
MNKR	ALMNKUR	1.64	37	↑iP	Pn	02 24 19.4	+0.3
MNKR				↑iS	Sn	02 24 38.9	-0.8
SLNF	Slenfeh	1.77	303	↓P	Pn	02 24 21.0	+0.1
SLNF				↓S	Sn	02 24 43.0	+0.1
SLNF	Slenfeh	1.77	303	↓iP	Pn	02 24 21.0	+0.1
SLNF				↓iS	Sn	02 24 43.7	+0.8
HWQ	Hawqa	1.77	259	eP	Pn	02 24 21.7	+0.8
HWQ	Hawqa	1.77	259	eP	Pn	02 24 21.7	+0.8
ZALF	Zalf	1.82	199	↓P	Pn	02 24 20.0	-1.5
ZALF				↓S	Sn	02 24 43.0	-1.1
ZALF	Zalf	1.82	199	↓iP	Pn	02 24 20.7	-0.8
ZALF				↓iS	Sn	02 24 43.0	-1.1
QASN	Qassioun	1.84	233	↑P	Pn	02 24 22.0	+0.2
QASN				↑S	Sn	02 24 44.0	-0.7
QASN	Qassioun	1.84	233	↑iP	Pn	02 24 22.6	+0.8
QASN				↑iS	Sn	02 24 44.3	-0.4
TOTH	TOTAH	1.86	227	↑P	Pn	02 24 22.0	0.0
TOTH				↑S	Sn	02 24 44.0	-1.0
TOTH	TOTAH	1.86	227	↑iP	Pn	02 24 22.6	+0.6
TOTH				↑iS	Sn	02 24 44.2	-0.8
BTCH	Batrach	1.90	317	↑P	Pn	02 24 23.0	+0.3
BTCH				↑S	Sn	02 24 46.0	-0.2
BTCH	Batrach	1.90	317	↑iP	Pn	02 24 23.4	+0.7
BTCH				↑iS	Sn	02 24 46.2	0.0
YAYL	Yayladag	2.10	312	iP	Pn	02 24 25.7	+0.2
YAYL	Yayladag	2.10	312	iP	Pn	02 24 25.7	+0.2
BHL	Bhannes	2.11	250	eP	Pn	02 24 26.6	+1.0
BHL				eS	Sn	02 24 50.2	-1.3
BHL	Bhannes	2.11	250	eP	Pn	02 24 26.6	+1.0
BHL				eS	Sn	02 24 50.2	-1.2
BRBR	Barbar	2.13	235	↑P	Pn	02 24 26.0	+0.2
BRBR				↑S	Sn	02 24 51.0	-0.8
BRBR	Barbar	2.13	235	↑iP	Pn	02 24 26.8	+1.0
BRBR				↑iS	Sn	02 24 51.5	-0.3
RCY	Rachaya	2.18	239	eP	Pn	02 24 27.5	+1.0
RCY				eS	Sn	02 24 51.8	-1.3
RCY	Rachaya	2.18	239	eP	Pn	02 24 27.5	+1.0
RCY				eS	Sn	02 24 51.8	-1.3
SALA	Sala	2.22	210	↓P	Pn	02 24 26.0	-1.0
SALA				↓S	Sn	02 24 52.0	-2.0
SALA	Sala	2.22	210	↓iP	Pn	02 24 26.9	-0.1
SALA				↓iS	Sn	02 24 52.8	-1.2
HRI	Mount Hermon	2.36	235	Pn	Pn	02 24 30.2	+1.2
COBT	Iskenderun	2.37	323	iP	Pn	02 24 28.3	-0.8
COBT	Iskenderun	2.37	323	iP	Pn	02 24 28.3	-0.9
KSDI	Kefar Szold	2.46	235	Pn	Pn	02 24 31.2	+0.9
KSDI	Kefar Szold	2.46	235	Sn	Sb	02 25 04.7	0.0
KSHT	Keshet	2.49	229	Pn	Pn	02 24 33.4	+2.6
GZT	Gaziantep	2.73	352	iP	Pn	02 24 33.5	-0.6
MMA0	Mount Meron ar	2.73	234	Pn	Pn	02 24 35.2	+1.1
MMA0	Mount Meron ar	2.73	234	Sn	Sb	02 25 12.5	-0.2
ATAB	Bozova	2.83	4	eP	Pb	02 24 42.2	+1.1
MMLI	Mount Malkishu	3.11	226	Pn	Pn	02 24 41.3	+2.0
HMDT	Nahal Hemdat	3.18	222	Pn	Pn	02 24 43.8	+3.5
HMDT	Nahal Hemdat	3.18	222	Sn	Sb	02 25 27.7	+2.1
ANDN	Andirin	3.24	335	iP	Pn	02 24 44.0	+3.0
ANDN	Andirin	3.24	335	iP	Pn	02 24 44.0	+3.0
OFRI	'Ofer	3.25	233	Pn	Pn	02 24 41.8	+0.5
SLTI	Sal'it	3.47	227	Pn	Pn	02 24 46.5	+2.2
SLTI	Sal'it	3.47	227	Sn	Sb	02 25 32.7	-1.2
DSI	Dead Sea	3.79	217	Pn	Pn	02 24 52.3	+3.5
MZDA	Masada	4.02	215	Pn	Pn	02 24 56.8	+5.0

IDC 19 02:26:14.4±1.6, 27°.92N×94°.58W, h0km, mb3.9/3, mb1 3.9/5, mb1mx3.6/26, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=41.2km s-min=23.4km az=8.0, Gulf of Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	8.11	282	Pn	Pn	02 28 15.6	+2.1
	0.1nm,0.3s,baz=106,slow=14,SNR=6.3						
TXAR				Sn	Sn	02 29 43.0	-2.8
	0.5nm,0.3s,baz=116,slow=25,SNR=10						
TEIG	Tepich	9.58	142	Pn	Pn	02 28 34.2	+0.7
	1.6nm,0.3s,baz=326,slow=4.0,SNR=11						
TEIG				Sn	Sn	02 30 13.5	-8.4
	0.5nm,0.3s,baz=56,slow=20,SNR=4.7						
ILAR	Eielson Array	49.25	333	P	P	02 35 05.5	+1.2
	0.8nm,0.7s,baz=107,slow=6.8,SNR=10						
ARCES	ARCESS Array B	73.74	18	P	P	02 37 49.1	-0.8
	1.4nm,0.9s,baz=289,slow=5.6,SNR=3.0						
FINES	FINESS Array B	78.95	25	P	P	02 38 19.2	-0.3
	1.3nm,1.0s,baz=308,slow=5.1,SNR=3.4						

*ISCJB **19** 02:41:29.9±0.9, 6°.6N±0°.1×126°.4E±0°.1, h83km±8km, mb3.7/5, Error ellipse: s-maj=23.6km s-min=14.1km az=33.4*
*IDC **19** 02:41:29.3±4.6, 6°.75N×126°.66E, h65km±39km, mb3.5/5, mb1 3.7/5, mb1mx3.4/22, mbtmp3.5/5, MS3.5/1, Ms1 3.4/1, ms1mx2.2/26, Error ellipse: s-maj=68.9km s-min=17.4km az=64.0*
*MAN **19** 02:41:32, 6°.75N×126°.28E, h64km, mb4.9, ML3.8, MS3.8*

ISC 19 02:41:31.0±0.9, 6°.6N±0°.1×126°.4E±0°.1, h77km±8km, n12, σ0°88/15, mb3.7/5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.36	335	eP	Pn	02 41 43.8	+0.4
MATI				eS	Sn	02 41 51.6	-0.9
DAV	Davao City (W)	0.94	299	P	Pn	02 41 49.1	-0.1
	427nm,0.3s,baz=239,slow=4.6,SNR=18						
DAV				S	Sn	02 42 04.0	+1.3
	161nm,0.3s,baz=51,slow=23,SNR=6.7						
DMPH	Davao City--Mi	1.01	298	eP	Pn	02 41 49.9	-0.1
DMPH				iS	Sn	02 42 06.0	+1.8
KCP	Kidapawan	1.37	287	↓eP	Pn	02 41 53.1	-1.4
KCP				iS	Sn	02 42 10.5	-1.8
BUKP	Musuan	1.84	313	eP	Pn	02 42 01.2	+0.5
PAGZ	Pagadian	3.25	292	eP	Pn	02 42 19.6	0.0
FITZ	Fitzroy Crossi	24.57	182	P	P	02 46 44.2	+0.4
	1.2nm,0.7s,mb3.5,baz=4.4,slow=10,SNR=5.4						
WRA	Warramunga Arr	27.52	164	P	P	02 47 10.1	-0.4
	0.5nm,0.5s,mb3.3,baz=345,slow=11,SNR=13						
ASAR	Alice Springs	30.97	167	P	P	02 47 41.8	+0.8
	0.4nm,0.5s,mb3.4,baz=343,slow=7.5,SNR=7.9						
STKA	Stephens Creek	40.92	160	LR	LR	03 04 32.1	
	comp=Z,67nm,21.9s,baz=12,slow=34						
MKAR	Makanchi Array	55.03	324	P	P	02 50 54.4	-0.3
	0.9nm,0.4s,mb4.1,baz=123,slow=6.7,SNR=16						
ARCES	ARCESS Array B	87.65	340	P	P	02 54 10.3	-0.2
	2.8nm,1.2s,mb4.2,baz=78,slow=6.0,SNR=3.3						

FUNV 19 02:43:00.3, 12°.77N×71°.94W, h4km, MW3.7, 1D, Near north coast of Colombia

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

OTVZ	Oturere	0.56	192	PN	Pn	03 06 47.7	+0.3
NGZ	Ngauruhoe	0.59	196	PN	Pn	03 06 47.7	+0.1
WPVZ	Whakapapa	0.63	199	PN	Pn	03 06 48.2	+0.3
TUVZ	Tukino	0.67	191	⇑PN	Pn	03 06 48.5	+0.4
DRZ	Dome Shelter	0.69	196	PN	Pn	03 06 48.9	+0.6
WNVZ	Wahianoa	0.73	193	PN	Pn	03 06 48.9	+0.4
HIZ	Hauiti	0.76	277	PN	Pn	03 06 48.2	-0.5
BKZ	Black Stump Fm	0.77	136	PN	Pn	03 06 48.9	+0.1
BKZ				SN	Sn	03 07 06.1	0.0
PKVZ	Pokaka	0.77	208	PN	Pn	03 06 48.8	+0.1
MOVZ	Moawhango	0.80	183	PN	Pn	03 06 48.9	0.0
MOVZ				SN	Sn	03 07 06.0	-0.5
MTVZ	Mangateitei	0.82	199	PN	Pn	03 06 49.3	+0.1
BHHZ	Black Hill Sta	0.90	168	PN	Pn	03 06 49.8	0.0
BHHZ				SN	Sn	03 07 07.3	-0.5
NMHZ	Naumai	0.92	122	PN	Pn	03 06 50.9	+1.1
VRZ	Vera Road	0.97	238	PN	Pn	03 06 49.9	-0.5
RAHZ	Arahi	1.04	107	PN	Pn	03 06 51.7	+0.8
MCHZ	McNeill Hill	1.08	141	PN	Pn	03 06 52.3	+1.0
URZ	Urewera	1.08	71	PN	Pn	03 06 50.6	-0.7
URZ				SN	Sn	03 07 09.4	-1.1
PNHZ	Pukenui	1.33	167	PN	Pn	03 06 53.6	-0.1
MWZ	Matawai	1.37	79	PN	Pn	03 06 53.7	-0.4
CKHZ	Cape Kidnapper	1.44	137	PN	Pn	03 06 55.2	+0.5
KAHZ	Kahuranaki	1.44	145	PN	Pn	03 06 55.3	+0.5
TSZ	Takapari Road	1.45	176	PN	Pn	03 06 54.6	-0.3
NEZ	North Egmont	1.49	243	PN	Pn	03 06 55.3	0.0
KNZ	Kokohu	1.51	106	PN	Pn	03 06 55.6	+0.1
DFE	Dawson Falls	1.51	241	PN	Pn	03 06 55.3	-0.2
WPHZ	Waipukurau	1.53	162	PN	Pn	03 06 55.6	-0.1
PKE	Pukeiti	1.54	247	PN	Pn	03 06 56.0	+0.2
PXZ	Pawanui	1.63	150	PN	Pn	03 06 56.7	-0.1
PXZ				SN	Sn	03 07 20.0	-0.5
PRGZ	Paritu Road	1.65	102	PN	Pn	03 06 57.0	0.0
DVHZ	Dannevirke	1.71	171	PN	Pn	03 06 56.9	-0.7
MHGZ	Mahia Peninsul	1.72	109	PN	Pn	03 06 58.2	+0.4
PRHZ	Porangahau	1.77	159	PN	Pn	03 06 58.1	-0.3
POWZ	Post Office Ro	1.78	181	PN	Pn	03 06 57.5	-0.9
PUZ	Puketiti	2.00	75	PN	Pn	03 06 60.0	-1.0
MRZ	Mangatainoka R	2.06	185	PN	Pn	03 07 00.2	-1.5
MRZ				SN	Sn	03 07 26.4	-2.7
BFZ	Birch Farm	2.09	171	PN	Pn	03 07 00.9	-1.2
TIWZ	Tintock	2.16	179	PN	Pn	03 07 01.6	-1.3
MXZ	Matakaoa Point	2.23	63	PN	Pn	03 07 02.8	-1.0
OGWZ	Otaki Gorge	2.26	192	PN	Pn	03 07 02.4	-1.6
HOWZ	Holdsworth Sta	2.29	186	PN	Pn	03 07 02.5	-2.0
KIW	Kapiti Island	2.35	197	PN	Pn	03 07 03.1	-2.1
TMWZ	Te Maipa	2.49	179	PN	Pn	03 07 04.0	-3.0
MTW	Mount Morrison	2.55	185	PN	Pn	03 07 05.4	-2.3
CAW	Cannon Point	2.56	193	PN	Pn	03 07 05.6	-2.1
DUWZ	D'Urville Isla	2.63	213	PN	Pn	03 07 06.1	-2.5
PAWZ	Paruwai Farm	2.78	186	PN	Pn	03 07 07.9	-2.6
TRWZ	Traveller	2.79	182	PN	Pn	03 07 08.2	-2.3
SNZO	South Karori	2.83	197	PN	Pn	03 07 08.3	-2.8
MSWZ	Moikau Station	2.83	189	PN	Pn	03 07 08.5	-2.7
TCW	Tory Channel	2.85	204	PN	Pn	03 07 08.8	-2.6
PLWZ	Palliser	2.98	188	PN	Pn	03 07 10.1	-3.0
TUWZ	Tuamarina	3.16	206	PN	Pn	03 07 12.4	-2.9
NNZ	Nelson	3.21	215	PN	Pn	03 07 12.7	-3.2
QRZ	Quartz Range	3.36	228	PN	Pn	03 07 13.9	-4.0
BSWZ	Blackbirch Sta	3.44	205	PN	Pn	03 07 15.9	-3.0
THZ	Tophouse	3.85	214	PN	Pn	03 07 20.5	-3.8
KHZ	Kahutara	4.18	204	PN	Pn	03 07 25.0	-3.5
DSZ	Denniston Nort	4.38	223	PN	Pn	03 07 26.3	-4.9
LTZ	Lake Taylor	4.96	212	PN	Pn	03 07 34.3	-4.5
LBZ	Lake Benmore	7.15	214	PN	Pn	03 08 02.1	-5.9
ODZ	Otahua Downs	7.50	209	PN	Pn	03 08 07.6	-5.0

PGC 19 03:06:31.5±23.0, 51°.21N×130°.86W, h10km, ML2.9/10, Mw3.5, 8D, 216km Wsw of Bella Bella, Bc Queen Charlotte Islands Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNB	Barry Inlet	1.47	338	⇓Pn	Pn	03 06 56.0	-2.1
BNB				⇓Sn	Sn	03 07 13.4	-4.0
HOLB	Holberg	1.82	107	⇑Pn	Pn	03 07 00.8	-2.1
BBB	Bella Bella	1.97	59	⇑Pn	Pn	03 07 02.3	-2.5
MOBC	Moresby Island	2.05	341	⇑Pn	Pn	03 07 04.4	-1.7
MOBC				⇓Sn	Sn	03 07 29.1	-2.6
PHC	Port Hardy	2.23	102	⇓Pn	Pn	03 07 05.9	-2.5
DIB	Dawson Inlet,	2.23	334	⇓Pn	Pn	03 07 06.6	-1.8
MAYB	Maynard	2.48	108	⇓Pn	Pn	03 07 10.7	-1.2
WOSB	Woss	2.92	109	⇑Pn	Pn	03 07 17.5	-0.5
NDB	Naden	3.03	336	⇓Pn	Pn	03 07 17.0	-2.4
NCRB	Newcastle Ridg	3.15	103	⇑Pn	Pn	03 07 19.9	-1.3

WEL 19 03:18:55.6±0.9, 35°.73S×178°.47E, h298km±13km, ML3.5/5, Error ellipse: s-maj=25.2km s-min=19.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.84	184	PN	Pn	03 19 40.8	+0.1
PUZ	Puketiti	2.35	184	PN	Pn	03 19 45.6	+0.6
PUZ				SN	S	03 20 22.5	-1.8
MWZ	Matawai	2.71	196	PN	Pn	03 19 49.0	+0.8
URZ	Urewera	2.75	203	PN	Pn	03 19 48.9	+0.3
URZ				SN	S	03 20 31.5	+0.5
BKZ	Black Stump Fm	3.77	204	PN	Pn	03 19 59.7	+0.6
BHHZ	Black Hill Sta	4.21	206	PN	Pn	03 20 04.2	+0.3
MRZ	Mangatainoka R	5.42	204	PN	Pn	03 20 17.5	-0.4

*SZGRF **19** 03:23:42.1, 17°.87S×177°.13W, h33km, Fiji Islands region*
*MOS **19** 03:24:39.3±1.1, 17°.40S×178°.61W, h546km, mb4.6/12, Error ellipse: s-maj=14.0km s-min=10.6km az=163.8*
*ISCJB **19** 03:24:39.4±0.7, 17°.55S±0°.07×178°.59W±0°.04, h556km±8km, mb4.4/75, Error ellipse: s-maj=12.0km s-min=4.2km az=161.1*
*IDC **19** 03:24:39.9±1.0, 17°.52S×178°.56W, h552km±11km, mb3.9/17, mb1 4.0/19, mb1mx4.0/22, mbtmp3.9/19, Error ellipse: s-maj=15.6km s-min=8.6km az=154.0*
*NEIC **19** 03:24:42.0±0.5, 17°.59S×178°.56W, h580km±6km, mb4.4/41, Error ellipse: s-maj=8.3km s-min=4.5km az=161.0*
*BJI **19** 03:24:43.0, 17°.07S×178°.62W, h580km, mB4.7/13, mb4.5/23*
*DJA **19** 03:24:49, 17°.93S×179°.23W, h621km, mb4.9/21*
ISC 19 03:24:40.0±0.7, 17°.54S±0°.07×178°.55W±0°.04, h551km±8km, n431, σ0°.60/280, mb4.4/75, 89C-88D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.25	266	⇑iPn	P	03 26 01.8	+5.1
MSVF	Nonsavu	3.25	266	⇑iP	P	03 26 01.8	+5.1
AFI	Afiamalu	7.45	62	P	P	03 26 30.9	-1.6
	26nm,0.3s,baz=57,slow=5.1,SNR=12						
AFI				S	S	03 28 04.2	-0.3
	11nm,0.3s,baz=136,slow=23,SNR=2.2						
AFI	Afiamalu	7.45	62	eP	P	03 26 31.6	-0.9
	154nm,0.6s						
AFI	Afiamalu	7.45	62	eP	P	03 26 31.6	-0.9
AFI				pmax	pmax		
	comp=Z,154nm,0.6s						
DZM	Mont Dzumac	14.82	250	eLR	LR	03 30 25.0	
	comp=Z,1μm,24.7s						
DZM	Mont Dzumac	14.82	250	eP	P	03 27 49.0	+1.3
RAR	Rarotonga	18.08	105	P	P	03 28 19.1	+0.5
	comp=Z,1.7nm,0.3s,baz=276,slow=9.3,SNR=3.1						
RAR	Rarotonga	18.08	105	P	P	03 28 19.2	+0.5
URZ	Urewera	20.99	190	P	P	03 28 44.6	-0.2
	comp=Z,3.8nm,0.3s,baz=307,slow=7.5,SNR=3.5						
URZ				S	S	03 31 56.6	-6.0
	comp=Z,17nm,0.8s,baz=202,slow=23,SNR=6.0						
PPT	Papeete	27.61	94	eLR	LR	03 36 29.7	
	comp=Z,656nm,27.5s						
PPT	Papeete	27.61	94	P	P	03 29 44.2	+0.4
	comp=Z,28nm,0.6s,mb5.1,baz=229,slow=15,SNR=5.0						
PPT	Papeete	27.61	94	P	P	03 29 44.2	+0.4
TBI	Tubuai	27.83	107	eLR	LR	03 36 38.2	
	comp=Z,386nm,29.5s						
EIDS	Eidsvold	29.27	249	eP	P	03 29 57.7	-0.4
	comp=Z,26nm,1.0s,mb4.8						
ARMA	Armidale	30.01	239	eP	P	03 30 05.5	+1.0
	comp=Z,26nm,0.8s,mb4.8						
CTA	Charters Tower	33.38	260	P	P	03 30 33.3	-0.1
	comp=Z,24nm,0.6s,mb4.9,baz=87,slow=12,SNR=20						
CTA				ScP	ScP	03 35 50.6	-0.6
	comp=Z,7.1nm,0.9s,baz=27,slow=3.2,SNR=4.7						
CTA	Charters Tower	33.38	260	P	P	03 30 33.3	0.0
CTAO	Charters Tower	33.38	260	⇓iP	P	03 30 33.2	-0.1
	comp=Z,36nm,0.9s,mb4.9						
CTAO	Charters Tower	33.38	260	⇓iP	P	03 30 33.2	-0.1
CTAO				pmax	pmax		
	comp=Z,36nm,0.9s,mb4.9						
CTAO	Charters Tower	33.38	260	P	P	03 30 33.0	-0.3
	comp=Z,49nm,1.6s,mb4.8						
CAN	Canberra	33.82	232	eP	P	03 30 37.2	+0.4
	comp=Z,27nm,0.9s,mb4.8						
CAN	Canberra	33.82	232	eP	P	03 30 37.3	+0.4
CAN				pmax	pmax		
	comp=Z,27nm,0.9s,mb4.8						
PMG	Port Moresby	34.27	279	⇓iP	P	03 30 42.2	+1.3
	comp=Z,137nm,1.0s,mb5.4						
PMG	Port Moresby	34.27	279	diP	P	03 30 42.3	+1.4
PMG				pmax	pmax		
	comp=Z,122nm,0.8s						
PMG	Port Moresby	34.27	279	P	P	03 30 42.4	+1.5
	comp=Z,1μmcomp=Z,152nm,0.9s,mb5.5						
COEN	Coen	36.97	270	⇓iP	P	03 31 04.1	+0.8
	comp=Z,399nm,0.7s						
COEN	Coen	36.97	270	P	P	03 31 04.4	+1.1
	comp=Z,305nm,0.8s						
STKA	Stephens Creek	38.69	241	P	P	03 31 17.5	+0.4
	comp=Z,36nm,0.6s,mb5.1,baz=88,slow=9.5,SNR=33						
STKA	Stephens Creek	38.69	241	eP	P	03 31 17.6	+0.5
	comp=Z,17nm,1.0s,mb4.5						
STKA	Stephens Creek	38.69	241	eP	P	03 31 17.6	+0.5
STKA				pmax	pmax		
	comp=Z,17nm,1.0s						
BBOO	Buckleboo	43.47	241	eP	P	03 31 54.3	-0.6
	comp=Z,184nm,0.9s,mb5.6						
WB2	Warramunga Arr	44.56	259	⇓iP	P	03 32 02.3	-1.2
WRA	Warramunga Arr	44.57	259	P	P	03 32 02.5	-1.2
	comp=Z,26nm,0.5s,mb5.0,baz=94,slow=6.8,SNR=656						
WRA				PcP	PcP	03 33 33.9	-0.8
	comp=Z,3.9nm,0.8s,baz=86,slow=4.7,SNR=5.3						
WRA				ScP	ScP	03 36 33.8	-0.8
	comp=Z,2.6nm,0.9s,baz=91,slow=4.3,SNR=6.7						
WRA				S	S	03 38 00.6	+0.9
	comp=Z,1.3nm,1.0s,baz=92,slow=13,SNR=4.1						
WRA	Warramunga Arr	44.57	259	P	P	03 32 02.5	-1.1
WRA						03 33 33.9	
WRA				S	S	03 38 00.6	+0.9
ASAR	Alice Springs	44.76	254	P	P	03 32 04.8	-0.3
	comp=Z,196nm,0.5s,baz=88,slow=8.3,SNR=1699						
ASAR				PcP	PcP	03 33 34.4	-1.0
	comp=Z,1.1nm,0.7s,baz=102,slow=3.8,SNR=4.2						
ASAR				ScP	ScP	03 36 34.8	-0.6
	comp=Z,2.0nm,1.0s,baz=88,slow=4.1,SNR=4.5						
ASAR				S	S	03 38 00.5	-1.9
	comp=Z,1.3nm,0.9s,baz=89,slow=17,SNR=5.5						
ASAR	Alice Springs	44.76	254	P	P	03 32 04.8	-0.3
ASAR						03 33 34.4	
ASAR				S	S	03 38 00.5	-1.9
BAKI	Biak	47.42	285	P	P	03 32 26.1	+0.7
	comp=Z,1μmcomp=Z,94nm,0.8s,mb5.4						
KAKA	Kakadu	47.46	269	eP	P	03 32 24.9	-0.8
	comp=Z,160nm,0.5s						
TLE	Tual	49.02	278	P	P	03 32 38.0	+0.7
	comp=Z,94nm,1.0s,mb5.3						
FORT	Forrest	50.04	244	eP	P	03 32 43.4	-1.1
	comp=Z,78nm,0.7s,mb5.2						
KNA	Kununurra	50.38	264	P	P	03 32 46.9	-0.3
	comp=Z,2μmcomp=Z,261nm,0.8s						
NLAI	Namlea	55.11	278	P	P	03 33 21.0	0.0
	comp=Z,828nmcomp=Z,69nm,1.6s,mb4.6						
MBWA	Marble Bar	58.03	256	eP	P	03 33 39.8	-1.2
	comp=Z,20nm,0.7s,mb4.5						
MBWA	Marble Bar	58.03	256	P	P	03 33 40.2	-0.8
	comp=Z,41nm,1.1s,mb4.6						
KDI	Kendari	59.13	276	P	P	03 33 48.2	-0.3
	comp=Z,19nm,1.4s,mb4.1						
BKSI	Bulukumba	61.09	274	P	P	03 34 02.5	+1.0
	comp=Z,24nm,1.2s,mb4.4						
MRSI	Marisa	61.21	281	P	P	03 34 02.5	+0.2
	comp=Z,26nm,1.2s,mb4.4						
BMNI	Bima	61.57	270	P	P	03 34 03.7	-0.9
	comp=Z,2μmcomp=Z,151nm,0.6s,mb5.6						
TTSI	Tana Toraja	62.07	276	P	P	03 34 05.5	-2.3
KBKI	Kotabaru	65.46	274	P	P	03 34 30.6	+1.2
	comp=Z,28nm,1.2s,mb4.5						
MYLDM	Lahad Datu	66.09	284	P	P	03 34 34.7	+1.3
	comp=Z,37nm,1.1s,mb4.8						
MJAR	Matsushiro Arr	67.54	323	P	P	03 34 41.1	-0.7
	comp=Z,6.9nm,0.8s,mb4.2,baz=164,slow=6.3,SNR=18						
MJAR	Matsushiro Arr	67.54	323	P	P	03 34 41.1	-0.7
MAJO	Matsushiro	67.54	323	eP	P	03 34 41.2	-0.6
	comp=Z,12nm,0.9s,mb4.4						
MAJO	Matsushiro	67.54	323	eP	P	03 34 41.2	-0.6
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
MAT	Matsushiro	67.54	323	P	P	03 34 41.1	-0.7
JOW	Kunigami	67.89	309	P	P	03 34 44.6	+0.5
	comp=Z,8.2nm,0.7s,mb4.3,baz=124,slow=11,SNR=3.5						
KKM	Kota Kinabalu	68.53	284	eP	P	03 34 48.0	-0.3
	comp=Z,16nm,0.7s,mb4.7						
KKM	Kota Kinabalu	68.53	284	P	P	03 34 48.9	+0.6
	comp=Z,28nm,1.0s,mb4.8						
ASAJ	Asahikawa	70.89	331	P	P	03 35 01.6	-0.1
	comp=Z,7.9nm,0.6s,mb4.4,baz=59,slow=9.4,SNR=4.4						
STKI	Sintang	70.95	276	P	P	03 35 03.9	+1.1
	comp=Z,54nm,0.5s,mb5.3						
SBUM	Sibu	71.02	279	P	P	03 35 03.6	+0.4
	comp=Z,368nmcomp=Z,14nm,1.5s,mb4.3						
TPUB	Ta-pu	71.95	302	eP	P	03 35 06.8	-1.5
YHNB	Yeheng	72.02	304	eP	P	03 35 08.6	-0.2
	comp=Z,40nm,1.3s,mb4.7						
KSM	Kuching	72.51	277	eP	P	03 35 11.9	+0.1
	comp=Z,51nm,1.0s,mb4.9						
KSM	Kuching	72.51	277	P	P	03 35 12.4	+0.6
	comp=Z,51nm,0.9s,mb4.9						
QSPA	South Pole Qui	72.51	180	eP	P	03 35 11.5	+0.9
	comp=Z,6.6nm,0.7s,mb4.2						
LEM	Lembang	72.59	268	P	P	03 35 12.9	+0.6
	comp=Z,102nm,0.9s,mb5.2						
PETK	Petropavlovsk-	73.30	345	P	P	03 35 15.0	-0.4
	comp=Z,7.8nm,0.9s,mb4.1,baz=125,slow=7.9,SNR=6.2						
PETK	Petropavlovsk-	73.30	345	P	P	03 35 15.0	-0.4
KSRS	Korea Array	74.34	318	P	P	03 35 22.2	+0.5
	comp=Z,2.4nm,0.7s,mb3.8,baz=128,slow=6.4,SNR=10						
KASI	Kota Agung	75.94	269	P	P	03 35 29.8	-1.4
MDSI	Maura Dua	76.54	270	P	P	03 35 33.3	-1.2
HABR	Khabarovsk	77.63	330	P	P	03 35 38.8	-0.8
HABR				e		03 35 46.1	
HABR				e*PP	pP	03 37 39.9	+3.8
HABR				e*SP	sP	03 38 39.6	+7.0
HABR				PPP		03 40 36.6	
HABR				S	S	03 44 43.9	-2.6
HABR						03 45 03.8	
HABR				SS	SS	03 50 01.2	-1.3
HABR				pmax	pmax		
	comp=E,30nm,1.0s						
HABR				pmax	pmax		
	comp=N,21nm,0.7s						
HABR				pmax	pmax		
	comp=Z,28nm,0.6s,mb4.8						
HABR				MLR	MLR		
	comp=Z,194nm,17.0s						
ISA	Isabella	77.66	46	⇑P	P	03 35 39.9	-0.2
	baz=78						
MONP	Monument Peak	77.68	50	⇑P	P	03 35 40.3	0.0
	baz=78						
MDJ	Mudanjiang	77.81	325	P	P	03 35 41.1	+0.4
MDJ				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,91nm,5.6s						
MDJ	Mudanjiang	77.81	325	eP	P	03 35 41.2	+0.6
	comp=Z,16nm,0.8s,mb4.4						
BELC	Belle Mtn. Jos	78.54	49	⇑P	P	03 35 44.9	0.0
	baz=79						
MPMC	Manual Prospec	78.55	46	⇑P	P	03 35 44.5	-0.3
	baz=79						
GSC	Goldstone	78.63	47	⇓P	P	03 35 44.8	-0.5
	baz=79						
HUMO	Hull Mountain	78.70	38	eP	P	03 35 45.5	0.0
	comp=Z,6.3nm,1.1s,mb3.9						
HEC	Hector,Ludlow	78.73	48	⇓P	P	03 35 45.1	-0.7
	baz=79						
GRAC	Grapevine Rang	79.12	46	⇓P	P	03 35 48.1	+0.2
	baz=79						
GMRC	Granite Mounta	79.18	48	⇑P	P	03 35 48.4	+0.2
	baz=79						
FURC	Furnace Creek,	79.20	46	⇓P	P	03 35 48.4	+0.2
	baz=79						
NVAR	Mina Array Bea	79.25	44	P	P	03 35 48.3	-0.2
	comp=Z,2.8nm,0.8s,mb3.6,baz=225,slow=9.2,SNR=18						
SHOC	Shoshone	79.31	47	⇑P	P	03 35 48.9	0.0
	baz=80						
TUQ	Turquoise Moun	79.32	48	⇓P	P	03 35 48.9	-0.1
	baz=80						
Y12C	Blythe	79.48	50	⇓P	P	03 35 49.7	-0.1
	baz=80						
Z13A	Yuma Proving G	79.85	50	⇓P	P	03 35 51.5	-0.3
	baz=80						
MOD	Modoc	79.89	40	eP	P	03 35 51.6	-0.2
	comp=Z,2.9nm,0.7s,mb3.7						
214A	Organ Pipe Nat	79.89	52	⇓P	P	03 35 51.8	-0.2
	baz=80						
K05A	Summer Lake	80.00	39	⇓P	P	03 35 52.7	+0.4
	baz=80						
Y13A	Salome	80.02	50	⇑P	P	03 35 52.5	-0.2
	baz=80						
SDSI	Sungai Dareh	80.21	272	P	P	03 35 53.3	-0.8
WHN	Wuhan	80.28	306	P	P	03 35 54.8	+0.7
H04A	Detroit Lake	80.38	37	⇓P	P	03 35 54.8	+0.5
	baz=81						
W13A	Hualapai Mount	80.60	49	⇑P	P	03 35 55.7	+0.1
	baz=81						
U12A	Valley of Fire	80.79	47	⇑P	P	03 35 56.8	+0.2
	baz=81						
V13A	Grand Canyon W	80.90	48	⇑P	P	03 35 57.1	-0.1
	baz=81						
216A	Three Points,	80.94	52	⇑P	P	03 35 58.2	+0.7
	baz=81						
X14A	Yava	81.02	50	⇓P	P	03 35 57.8	0.0
	baz=81						
R11A	Troy Canyon, C	81.03	45	⇑P	P	03 35 57.5	-0.3
	baz=81						
Y15A	Casa Rosa Ranc	81.18	50	⇑P	P	03 35 59.0	+0.3
	baz=81,SNR=7.0						
U13A	Pakoon Wash	81.19	47	⇑P	P	03 35 59.0	+0.4
	baz=81,SNR=9.0						
WVOR	Wild Horse Val	81.22	40	eP	P	03 35 58.0	-0.7
	comp=Z,4.9nm,0.9s,mb3.9						
WVOR	Wild Horse Val	81.22	40	eP	P	03 35 58.0	-0.6
WVOR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
W14A	Seligman	81.23	49	⇓P	P	03 35 58.9	0.0
	baz=81						
217A	Green Valley	81.32	53	⇑P	P	03 35 59.7	+0.3
	baz=82,SNR=6.0						
V14A	Boquillas Ranc	81.42	49	⇓P	P	03 35 59.9	+0.1
	baz=82,SNR=7.3						
X15A	Humboldt	81.50	50	⇑P	P	03 36 00.5	+0.2
	baz=82,SNR=7.4						
T13A	Saint George	81.52	47	⇑P	P	03 36 00.5	+0.2
	baz=82						
TUC	Tucson	81.58	52	eP	P	03 36 00.6	-0.1
	comp=Z,13nm,1.4s,mb4.2						
TUC	Tucson	81.58	52	eP	P	03 36 00.6	-0.2
TUC				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.2						
I07A	Izee	81.61	39	P	P	03 36 00.5	-0.1
	baz=82,SNR=8.0						
117A	Oracle	81.73	52	⇓P	P	03 36 01.7	+0.2
	baz=82,SNR=5.6						
U14A	Mt Trumbull	81.74	48	⇑P	P	03 36 01.9	+0.5
	baz=82,SNR=14						
Y16A	Circle Bar Ran	81.78	51	⇓P	P	03 36 01.9	+0.1
	baz=82,SNR=8.9						
318A	Bisbee	81.80	53	⇓P	P	03 36 02.5	+0.6
	baz=82						
J08A	Circle Bar Ran	81.82	40	⇑P	P	03 36 01.6	-0.1
	baz=82						
D05A	Enumclaw	81.98	35	⇓P	P	03 36 03.1	+0.7
	baz=82						
218A	Dragoon	81.99	53	P	P	03 36 03.4	+0.6
	baz=82,SNR=9.8						
R13A	O'Grain Ranch,	82.05	46	⇓P	P	03 36 03.5	+0.5
	baz=82						
X16A	Lo Mia Camp, P	82.05	50	⇓P	P	03 36 03.4	+0.3
	baz=82,SNR=11						
Y17A	Roosevelt	82.16	51	⇓P	P	03 36 04.5	+0.8
	baz=82						
V15A	Kaibab Nationa	82.17	49	⇓P	P	03 36 03.8	+0.2
	baz=82						
IPM	Ipoh	82.25	277	eP	P	03 36 04.6	0.0
	comp=Z,58nm,1.3s,mb4.8						
W16A	Flagstaff	82.30	50	⇑P	P	03 36 04.6	+0.2
	baz=82						
319A	Douglas	82.32	54	⇑P	P	03 36 04.8	+0.3
	baz=82						
118A	Homack Ranch,	82.35	52	⇓P	P	03 36 04.8	+0.1
	baz=82						
U15A	North Rim	82.38	48	⇑P	P	03 36 05.1	+0.4
	baz=83,SNR=17						
X17A	Forest Lakes	82.48	51	⇑P	P	03 36 05.9	+0.6
	baz=83,SNR=5.4						
T15A	Red Dirt Ranch	82.59	48	⇑P	P	03 36 05.9	+0.1
	baz=83						
G08A	Pilot Rock	82.60	38	⇑P	P	03 36 05.0	-0.6
	baz=83,SNR=10.0						
219A	White Tail Can	82.61	53	⇑P	P	03 36 06.0	+0.1
	baz=83						
Y18A	Canyon Day Jun	82.80	51	⇓P	P	03 36 07.4	+0.4
	baz=83,SNR=6.5						
KULM	Kulim	82.85

baz=85,SNR=6.5
G12A Big Creek, Yel 84.68 39 ⇓P P 03 36 15.6 -0.3
baz=85
GYA Guiyang 84.74 300 *e*P **P 03 36 16.0 -0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
I13A Wildhorse Cree 84.81 41 ⇓P P 03 36 17.0 +0.4
baz=85
SRU San Rafael 84.86 46 ⇓P P 03 36 15.8 -1.1
baz=85
J14A Carey 84.89 42 ⇓P P 03 36 17.5 +0.5
baz=85
Z22A Elephant Butte 84.89 53 ⇓P P 03 36 16.8 -0.5
baz=85
H13A Challis 85.05 40 ⇓P P 03 36 18.2 +0.5
baz=85
F12A Elk City 85.05 39 ⇑P P 03 36 17.0 -0.7
baz=85,SNR=9.4
E12A Beaver Dam Sad 85.20 38 ⇓P P 03 36 18.8 +0.4
baz=85
K15A Arbon 85.21 43 ⇑P P 03 36 18.1 -0.4
baz=85
O17A Robinson Place 85.22 45 ⇑P P 03 36 18.7 0.0
baz=85,SNR=5.7
I14A Mackay 85.23 41 ⇓P P 03 36 19.0 +0.3
baz=86,SNR=7.0
324A Moseley Ranch, 85.30 55 ⇑P P 03 36 18.7 -0.5
baz=86
NEW Newport 85.30 36 *e*P **P 03 36 19.6 +0.7**
comp=Z,1.6nm,0.6s,mb3.7
NEW Newport 85.30 36 *e*P **P 03 36 19.6 +0.8**
NEW pmax pmax
comp=Z,2.0nm,0.6s
425A Indio Mountain 85.42 56 ⇓P P 03 36 20.1 +0.2
baz=86
COLA College 85.45 13 *e*P **P 03 36 18.8 -0.4**
comp=Z,2.9nm,0.5s,mb4.1
COLA College 85.45 13 *e*P **P 03 36 18.8 -0.4**
COLA pmax pmax
comp=Z,3.0nm,0.5s,mb4.1
MNTX Cornudas Mount 85.48 55 ⇑P P 03 36 20.0 -0.1
baz=86
MNTX Cornudas Mount 85.48 55 *e*P **P 03 36 19.5 -0.7**
comp=Z,3.5nm,1.1s,mb3.8
224A Cornudas Mount 85.52 55 ⇓P P 03 36 20.6 +0.3
baz=86
C11A Tepee Creek (N 85.56 37 ⇓P P 03 36 19.4 -0.7
baz=86
ILAR Eielson Array 85.56 13 P **P 03 36 18.0 -1.7**
comp=Z,2.3nm,0.8s,mb3.9,baz=233,slow=5.7,SNR=19
ILAR Eielson Array 85.56 13 P **P 03 36 18.0 -1.7**
J15A Blackfoot 85.61 42 ⇑P P 03 36 20.6 +0.2
baz=86,SNR=8.5
626A Big Bend Ranch 85.62 57 ⇓P P 03 36 21.0 +0.1
baz=86
F13A Darby 85.62 39 ⇑P P 03 36 19.4 -1.1
baz=86
H14A Leadore 85.62 41 ⇑P P 03 36 20.0 -0.5
baz=86
325A Bean Ranch, Si 85.67 55 ⇑P P 03 36 20.8 -0.2
baz=86
U21A Nageezi 85.71 50 ⇓P P 03 36 20.5 -0.6
baz=86
526A Mary Lane Ranc 85.85 57 ⇑P P 03 36 22.3 +0.3
baz=86
G14A Jackson 85.88 40 ⇑P P 03 36 21.4 -0.3
baz=86
TXAR Lajitas Array 85.91 58 P **P 03 36 22.6 +0.3**
comp=Z,2.2nm,0.7s,mb3.9,baz=222,slow=6.9,SNR=27
TXAR Lajitas Array 85.91 58 P **P 03 36 22.6 +0.3**
XAN Xi'an 85.94 307 P **P 03 36 22.9 +0.7**
XAN pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
XAN pmax pmax
comp=Z,27nm,6.6s
ANMO Albuquerque 85.97 52 *e*P **P 03 36 22.4 0.0**
comp=Z,4.1nm,1.2s,mb3.9
ANMO Albuquerque 85.97 52 *e*P **P 03 36 22.4 0.0**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
MCMT McKenzie Canyo 86.05 41 *e*P **P 03 36 22.5 0.0**
comp=Z,3.5nm,1.1s,mb3.9
BILL Bilibino 86.06 354 *e*P **P 03 36 23.0 +1.0**
BILL *e* 03 39 50.8
BILL *e*SS SS 03 52 05.3 -0.1
BILL pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
H15A Lima 86.07 41 ⇑P P 03 36 23.4 +0.7
baz=86
J16A Bone 86.08 42 ⇓P P 03 36 23.0 +0.3
baz=86
426A McDonald Obser 86.14 56 ⇓P P 03 36 23.6 +0.3
baz=86
627A Terlingua Ranc 86.18 58 ⇑P P 03 36 24.1 +0.6
baz=86
D13A Huson 86.21 38 ⇓P P 03 36 23.7 +0.5
baz=86
527A Woodward Ranch 86.27 57 ⇓P P 03 36 23.8 -0.1
baz=86
RRI2 Red Ridge 86.30 42 *e*P **P 03 36 23.6 -0.2**
comp=Z,11nm,1.3s,mb4.3
Y24A Capitan 86.33 53 ⇑P P 03 36 23.9 -0.2
baz=86
G15A Dillon 86.44 40 ⇓P P 03 36 24.2 -0.1
baz=87
E14A Clinton 86.44 39 ⇓P P 03 36 23.8 -0.5
baz=87
I16A Newdale 86.45 42 ⇓P P 03 36 24.8 +0.4
baz=87
628A Black Gap, Mar 86.60 58 ⇑P P 03 36 25.6 +0.1
baz=87
TPAW Teton Pass 86.61 42 *e*P **P 03 36 25.0 -0.2**
comp=Z,18nm,1.8s,mb4.4
REDW Red Top Meadow 86.61 43 *e*P **P 03 36 25.0 -0.2**
comp=Z,12nm,1.3s,mb4.4
R21A Cimarron 86.62 48 ⇓P P 03 36 24.9 -0.5
baz=87
427A Hayter Ranch, 86.70 56 ⇓P P 03 36 25.4 -0.6
baz=87
SNOW Snow King Moun 86.72 42 *e*P **P 03 36 26.1 +0.4**
comp=Z,9.4nm,1.2s,mb4.3
U23A El Rito 86.74 50 ⇓P P 03 36 25.8 -0.2
baz=87
K18A Toltan Ranch, 86.80 43 ⇑P P 03 36 26.3 +0.2
baz=87
IMW Indian Meadow 86.81 42 *e*P **P 03 36 25.9 -0.2**
comp=Z,3.0nm,0.8s,mb4.0
MOOW Moose Ponds 86.86 42 *e*P **P 03 36 26.3 -0.1**
comp=Z,2.0nm,1.0s,mb3.7
S22A 4UR Ranch, Cre 86.87 49 ⇓P P 03 36 26.2 -0.3
baz=87
LOHW Long Hollow 86.89 42 *e*P **P 03 36 26.1 -0.4**
comp=Z,2.0nm,0.6s,mb3.9
HHC Hu-ho-hao-te 86.92 314 *e*P **P 03 36 28.5 +1.8**
HHC SKS 03 45 58.3
HHC S S 03 46 17.4 -1.9
HHC pmax pmax
comp=Z,14nm,1.1s,mb4.5
HHC pmax pmax
comp=Z,130nm,5.6s
528A Cox Ranch, San 86.93 57 ⇓P P 03 36 26.9 -0.2
baz=87
H16A Russell Place, 86.99 41 ⇑P P 03 36 27.5 +0.5
baz=87
FLWY Flagg Ranch 87.05 42 *e*P **P 03 36 27.6 +0.3**
comp=Z,25nm,1.6s,mb4.6
J18A Kendall Valley 87.08 43 ⇓P P 03 36 27.3 -0.2
baz=87
R22A Saguache, Gunn 87.12 49 ⇓P P 03 36 28.5 +0.7
baz=87
BW06 Boulder Array 87.18 43 ⇓P P 03 36 27.2 -0.7
baz=87
BW06 Boulder Array 87.18 43 *e*P **P 03 36 27.2 -0.7**
comp=Z,6.1nm,1.1s,mb4.1
PDAR Pinedale Array 87.18 43 P **P 03 36 27.3 -0.6**
comp=Z,1.6nm,0.5s,mb3.9,baz=221,slow=3.8,SNR=16
B14A Marquette Ranc 87.54 37 ⇓P P 03 36 28.9 -0.6
baz=88
KMI Kunming 87.55 297 P **P 03 36 30.9 +0.9**
KMI pmax pmax
comp=Z,12nm,1.1s,mb4.5
W25A X Bar L Ranch, 87.58 52 ⇓P P 03 36 29.4 -0.6
baz=88
E16A East Helena 87.59 39 ⇑P P 03 36 29.2 -0.5
baz=88
C15A Salmond Ranch, 87.64 38 ⇓P P 03 36 30.1 +0.2
baz=88
L20A Wamsutter 87.65 45 ⇓P P 03 36 30.6 +0.5
baz=88
J19A Crowheart 87.73 43 ⇑P P 03 36 30.0 -0.5
baz=88
SDCO Great Sand Dun 87.83 49 ⇓P P 03 36 30.9 -0.2
baz=88
SDCO Great Sand Dun 87.83 49 *e*P **P 03 36 31.0 -0.1**
comp=Z,4.3nm,1.6s,mb3.9
F17A Fitzpatrick Pl 87.92 40 ⇓P P 03 36 31.4 +0.1
baz=88
O22A Kremmling 88.08 47 ⇑P P 03 36 32.5 +0.3
baz=88
I19A Meeteetse 88.12 43 ⇑P P 03 36 32.6 +0.4
baz=88
J20A Shoshoni 88.41 43 ⇑P P 03 36 33.6 0.0
baz=89
N22A Wattenberg Ran 88.41 46 ⇓P P 03 36 33.9 +0.2
baz=89
D17A Six Diamond Ra 88.48 39 ⇓P P 03 36 34.1 +0.2
baz=89
CMAR Chiang Mai Arr 88.64 290 P **P 03 36 35.4 +0.1**
comp=Z,4.7nm,0.8s,mb4.3,baz=110,slow=2.7,SNR=19
CMAR Chiang Mai Arr 88.64 290 P **P 03 36 35.4 +0.1**
K21A Alcova 88.65 44 ⇓P P 03 36 34.4 -0.3
baz=89
CHTO Chiang Mai 88.75 290 *e*P **P 03 36 35.9 +0.1**
comp=Z,11nm,1.0s,mb4.7
CHTO Chiang Mai 88.75 290 *e*P **P 03 36 35.9 +0.1**
CHTO pmax pmax
comp=Z,11nm,1.0s,mb4.6
CHTO Chiang Mai 88.75 290 P **P 03 36 36.5 +0.7**
J21A Lysite 88.82 44 ⇑P P 03 36 35.9 +0.3
baz=89
A17A Triple J Farms 89.32 38 ⇑P P 03 36 37.3 -0.4
baz=90
L23A Garrett 89.47 45 ⇑P P 03 36 38.6 0.0
baz=90
SYO Sycowa Base 89.48 193 *e*P **P 03 36 36.4 -1.8**
J22A Midwest 89.49 44 ⇑P P 03 36 38.2 -0.5
baz=90
C19A Slack Wire Ran 89.74 39 ⇓P P 03 36 39.9 +0.2
baz=90
A18A Metzger Ranch, 89.80 38 ⇑P P 03 36 39.6 -0.4
baz=90
C20A Veseth Ranch, 90.36 40 ⇓P P 03 36 43.0 +0.4
baz=91
LZH Lanzhou 90.56 308 *e*P **P 03 36 46.5 +2.7**
LZH pmax pmax
comp=Z,25nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,140nm,4.0s
RSSD Black Hills 91.40 44 *e*P **P 03 36 47.1 -0.3**
comp=Z,5.2nm,1.2s,mb4.3
RSSD Black Hills 91.40 44 *e*P **P 03 36 47.1 -0.3**
RSSD pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
C23A Lambert 92.13 40 ⇓P P 03 36 50.8 +0.1
baz=92
B23A Brockton 92.51 40 ⇑P P 03 36 52.4 -0.1
baz=93
SONM Songino Array 93.19 319 P **P 03 36 54.7 -0.9**
comp=Z,1.1nm,0.8s,mb4.0,baz=109,slow=3.2,SNR=6.4
SONM Songino Array 93.19 319 P **P 03 36 54.7 -0.9**
MKAR Makanchi Array 108.79 314 PKiKP PKiKP 03 42 05.1 -1.6
comp=Z,0.4nm,0.5s,baz=64,slow=3.4,SNR=3.2
KURK Kurchatov 111.47 318 *i* PKIKP PKiKP 03 42 11.1 -0.6
BVAR Borovoye Array 116.48 321 PKP PKPdf 03 42 19.8 -1.5
comp=Z,1.4nm,0.7s,baz=93,slow=3.0,SNR=7.0
BVAR Borovoye Array 116.48 321 PKIKP PKPdf 03 42 19.8 -1.4
BRVK Borovoye 116.54 321 *e*PKPdf PKPdf 03 42 21.1 -0.3
BRVK Borovoye 116.54 321 ⇑*i*PKIKP PKPdf 03 42 20.5 -0.8
ARU Arti 122.47 326 *i* PKIKP PKPdf 03 42 32.3 -0.4
ARU 03 44 19.3
ARU 03 48 35.0
ABKAR Akbulak array 123.58 318 *e*PKPdf PKPdf 03 42 33.8 -1.2
AKTK Aktyubinsk 124.51 320 PKP PKPdf 03 42 38.4 +1.7
AKTO Aktyubinsk 124.51 320 PKP PKPdf 03 42 38.4 +1.7
comp=Z,0.5nm,0.4s,baz=342,slow=5.6,SNR=5.2
ARCES ARCESS Array B 125.94 350 PKP PKPdf 03 42 38.8 -0.2
comp=Z,2.7nm,0.8s,baz=34,slow=3.4,SNR=4.4
ARCES ARCESS Array B 125.94 350 PKIKP PKPdf 03 42 38.8 -0.1
FINES FINESS Array B 132.80 344 SKPbc SKPbc 03 45 27.1 -1.4
comp=Z,3.4nm,0.8s,baz=35,slow=7.0,SNR=7.2
OBN Obninsk 133.92 333 *e*PKIKP PKPdf 03 42 56.5 +2.0
OBN *e* 03 45 31.0
OBN *e*PS PS 03 55 57.0 -3.7
OBN pmax pmax
comp=Z,5.0nm,0.8s
KIV Kislovodsk 136.50 316 *e*PKIKP PKPdf 03 42 58.1 -1.5
KIV *e* 03 45 46.1
KIV *e*PS 03 56 21.7
KIV pmax pmax
comp=Z,7.0nm,0.8s
AKASG Malin Array Be 140.18 332 PKP PKPdf 03 43 06.5 +0.4
comp=Z,0.4nm,0.3s,baz=40,slow=2.1,SNR=4.1
AKASG SKPbc SKPbc 03 45 48.6 -2.0
comp=Z,0.7nm,0.5s,baz=25,slow=3.6,SNR=4.2
AKASG Malin Array Be 140.18 332 PKIKP PKPdf 03 43 06.5 +0.4
LVV L'vov 143.02 336 *e*PKIKP PKPdf 03 43 09.6 -1.6
KWP Kalwaria Pacla 143.69 337 *e*PKP PKPdf 03 43 10.6 -1.8
KWP Kalwaria Pacla 143.69 337 *e*PKPdf PKPdf 03 43 10.4 -2.0
KWP Kalwaria Pacla 143.69 337 ⇑PKIKP PKPdf 03 43 10.8 -1.6
KWP Kalwaria Pacla 143.69 337 ⇑*i*P PKPdf 03 43 10.8 -1.6
RUE Ruedersdorf 143.81 347 *e*PKPbc PKPdf 03 43 12.6 +0.1
BUR08 Bucovina Ar. S 144.22 332 *e*PKPdf PKPdf 03 43 12.8 -0.6
OJC Ojcow 144.23 340 *e*PKPdf PKPdf 03 43 13.3 0.0
OJC Ojcow 144.23 340 *e*PKIKP PKPdf 03 43 13.3 0.0
BURAR Bucovina Array 144.23 332 ⇑PKIKP PKPdf 03 43 12.9 -0.5
BURAR Bucovina Array 144.23 332 ⇑*i*P PKPdf 03 43 12.9 -0.5
TESR 144.38 330 ⇑*i*P PKPdf 03 43 12.4 -1.3
KOLS Kolonicke sedl 144.42 336 *e*PKP PKPdf 03 43 13.3 -0.4
KOLS Kolonicke sedl 144.42 336 *e*PKIKP PKPdf 03 43 13.3 -0.4
KOLS Kolonicke sedl 144.42 336 *e*PKP PKPdf 03 43 13.3 -0.4
BR131 Keskin Array S 144.43 315 *e*PKPdf PKPdf 03 43 13.0 -1.0
BRTR Keskin Array B 144.43 315 PKP PKPdf 03 43 13.2 -0.8
comp=Z,9.3nm,0.8s,baz=138,slow=3.7,SNR=21
BRTR Keskin Array B 144.43 315 PKIKP PKPdf 03 43 13.3 -0.7
NRDL Niedersach Rie 144.47 351 *e*PKPbc PKPdf 03 43 14.3 +0.7
UZH Uzhgorod 144.66 336 ⇓*i*PKIKP PKPdf 03 43 14.0 -0.1
KSP Ksiaz 144.73 344 *e*PKP PKPdf 03 43 15.2 +1.1
NIE Niedzica 144.74 339 *e*PKP PKPdf 03 43 14.4 +0.2
NIE Niedzica 144.74 339 *e*PKIKP PKPdf 03 43 14.4 +0.2
CRVS Cervenica-Dubn 144.75 337 *e*PKP PKPdf 03 43 15.1 +0.9
CRVS Cervenica-Dubn 144.75 337 *e*PKIKP PKPdf 03 43 15.1 +0.9
CRVS Cervenica-Dubn 144.75 337 *e*PKP PKPdf 03 43 15.1 +0.9
VRI Vrincioaia 144.80 329 ⇑PKIKP PKPdf 03 43 16.7 +2.3
VRI Vrincioaia 144.80 329 ⇑*i*P PKPdf 03 43 16.6 +2.2
IBBN Ibbenburen 144.96 353 *e*PKPbc PKPdf 03 43 16.1 +1.6
OKC Ostrava-Krasne 145.09 341 *e*PKIKP PKPdf 03 43 15.3 +0.5
OKC Ostrava-Krasne 145.09 341 *e*PKP PKPdf 03 43 15.3 +0.5
UPC Upice 145.11 344 *e*PKIKP PKPdf 03 43 15.2 +0.4
UPC Upice 145.11 344 *e*PKP PKPdf 03 43 15.2 +0.4
DPC Dobruska-Polom 145.16 343 *e*PKIKP PKPdf 03 43 15.5 +0.6
DPC Dobruska-Polom 145.16 343 *e*PKP PKPdf 03 43 15.5 +0.6
BRG Berggiesshubel 145.28 346 *e*PKPbc PKPbc 03 43 17.3 +1.1
BRG Berggiesshubel 145.28 346 *e*PKP PKPdf 03 43 15.7 +0.6
comp=Z,6.3nm,0.9s
BRG *e* 03 43 18.1
comp=Z,11nm,0.9s
BRG *e* 03 43 38.3
comp=Z,4.8nm,1.0s
MORC Moravsky Berou 145.33 342 *e*PKPbc PKPbc 03 43 15.5 -0.9
MORC Moravsky Berou 145.33 342 ⇓PKIKP PKPdf 03 43 15.9 +0.7
MORC Moravsky Berou 145.33 342 ⇓*i*P PKPdf 03 43 15.9 +0.7
FBE Freiberg 145.37 347 *e*PKPbc PKPbc 03 43 17.9 +1.5
NEUB Neuenburg 145.42 349 *e*PKPbc PKPbc 03 43 17.6 +1.0
MLR Muntele Rosu 145.45 329 ⇑PKIKP PKPdf 03 43 16.5 +0.9
MLR Muntele Rosu 145.45 329 ⇑*i*P PKPdf 03 43 16.5 +0.9
PVCC Panska Ves 145.46 345 *e*PKP2 PKPab 03 43 16.9 -1.1
PVCC Panska Ves 145.46 345 *e*PKP PKPdf 03 43 16.9 +1.5
KECS Kecovo 145.46 337 *e*PKP PKPab 03 43 17.7 -0.4
KECS Kecovo 145.46 337 *e*PKP2 PKPab 03 43 17.7 -0.4
KECS Kecovo 145.46 337 *e*PKP PKPab 03 43 17.7 -0.4
VOIR 145.93 330 ⇑PKP2 PKPab 03 43 20.5 +0.4
VOIR 145.93 330 ⇑*i*P PKPab 03 43 20.5 +0.4
DRGR 145.96 334 ⇑PKIKP PKPdf 03 43 17.8 +1.4
DRGR 145.96 334 ⇑*i*P PKPdf 03 43 17.8 +1.4
PRU Pruhonice 145.96 345 *e*PKIKP PKPdf 03 43 15.7 -0.6
PRU Pruhonice 145.96 345 *e*PKP PKPdf 03 43 15.7 -0.6
MOX Moxa 145.99 348 *e*PKP PKPdf 03 43 16.4 +0.1
MOX Moxa 145.99 348 *e*PKIKP PKPdf 03 43 16.4 +0.1
VRAC Vranov 146.03 342 PKPbc PKPbc 03 43 18.4 +0.1
comp=Z,6.5nm,0.9s,baz=57,slow=2.5,SNR=4.5
VRAC Vranov 146.03 342 ⇑PKP2 PKPab 03 43 20.2 -0.1
VRAC Vranov 146.03 342 ⇑*i*P PKPab 03 43 20.2 -0.1
VYHS Vyhne 146.03 339 *e*PKP PKPdf 03 43 17.6 +1.2
VYHS Vyhne 146.03 339 *e*PKIKP PKPdf 03 43 17.6 +1.2
VYHS Vyhne 146.03 339 *e*PKP PKPdf 03 43 17.6 +1.2
TANN Tannenbergstha 146.04 347 *e*PKPbc PKPbc 03 43 19.5 +1.1
WERD Werda 146.04 348 *e*PKPbc PKPbc 03 43 19.5 +1.1
GUNZ Gunzen 146.11 347 *e*PKPbc PKPbc 03 43 19.7 +1.1
PSZ Piszkesteto 146.15 338 *e*PKPbc PKPbc 03 43 18.2 -0.6
PSZ Piszkesteto 146.15 338 ⇑PKP2 PKPab 03 43 19.7 -1.2
PSZ Piszkesteto 146.15 338 ⇑*i*P PKPab 03 43 19.7 -1.2
NKC Novy Kostel 146.21 347 *e*PKIKP PKPdf 03 43 17.0 +0.3
NKC Novy Kostel 146.21 347 *e*PKP PKPdf 03 43 17.0 +0.3
TREC Trest 146.35 343 *e*PKIKP PKPbc 03 43 18.6 -0.7
TREC Trest 146.35 343 *e*PKP PKPbc 03 43 18.6 -0.7
ROTZ Rotzenmuhle 146.71 347 *e*PKPbc PKPbc 03 43 21.5 +1.3
MEM Membach 146.81 355 PKPbc PKPbc 03 43 21.1 +0.7
TNS Taunus Mts 146.92 352 *e*PKPbc PKPbc 03 43 21.7 +0.9
TNS Taunus Mts 146.92 352 *e*PKP2 PKPbc 03 43 21.7 +0.9
GRA1 Grafenberg Arr 146.98 348 *e*PKPbc PKPbc 03 43 22.3 +1.4
GRF Grafenberg Arr 146.98 348 *e*PKPbc PKPbc 03 43 22.3 +1.4
GRF Grafenberg Arr 146.98 348 *e*PKP2 PKPbc 03 43 22.3 +1.4
GRF Grafenberg Arr 146.98 348 *e*PKP2 PKPbc 03 43 22.3 +1.4
KHC Kasperske Hory 146.99 345 *e*PKP PKPdf 03 43 18.6 +0.6
GZR Gura Zlata 147.02 332 ⇑PKHKP PKPbc 03 43 21.9 +0.7
GZR Gura Zlata 147.02 332 ⇑*i*P PKPbc 03 43 21.9 +0.7
GEC2 GERESS Array S 147.23 345 *e*PKPbc PKPbc 03 43 22.7 +1.1
GEC2 GERESS Array S 147.23 345 *e*PKP2 PKPbc 03 43 22.7 +1.1
GERES GERESS Array B 147.23 345 PKPbc PKPbc 03 43 20.9 -0.7
comp=Z,5.4nm,0.8s,baz=11,slow=2.7,SNR=28
GERES GERESS Array B 147.23 345 PKIKP PKPbc 03 43 20.9 -0.7
GIVF Givet 147.41 356 *e*PKP1 PKPbc 03 43 20.8 -1.3
comp=Z,33nm,0.9s
DOU Dourbes 147.43 356 PKPbc PKPbc 03 43 22.9 +0.8
CONA Conrad Observa 147.48 342 ⇑*i*PKiKP PKiKP 03 43 22.1 -1.8
comp=Z,12nm,1.1s
BAIF Baives 147.49 357 *e*PKP1 PKPbc 03 43 21.1 -1.2
comp=Z,28nm,0.9s
WLF Walferdange 147.74 354 PKPbc PKPbc 03 43 22.3 -0.6
WLF Walferdange 147.74 354 *e*PKPbc PKPbc 03 43 24.4 +1.5
WLF Walferdange 147.74 354 *e*PKPbc PKPbc 03 43 22.3 -0.6
WLF Walferdange 147.74 354 *e*PKP2 PKPbc 03 43 22.3 -0.6
MOA Molln 148.00 344 ⇓*i*PKPbc PKPbc 03 43 23.1 -0.6
comp=Z,10nm,1.1s
PKSM Moragy 148.05 337 ⇑PKHKP PKPbc 03 43 22.9 -0.9
PKSM Moragy 148.05 337 ⇑*i*P PKPbc 03 43 22.9 -0.9
BFO Black Forest 148.78 351 *e*PKPbc PKPbc 03 43 26.3 +0.7
BFO *e*PKPab PKPab 03 43 32.3 +0.7
BFO Black Forest 148.78 351 *e*PKP2 PKPab 03 43 32.3 +0.7
FLN La Foliniere 148.82 2 *e*PKP1 PKPbc 03 43 24.0 -1.6
comp=Z,55nm,1.0s
CDF Champ du Feu 148.85 352 *e*PKP1 PKPbc 03 43 24.4 -1.3
comp=Z,15nm,0.9s
SOKA Soboth 148.85 342 ⇑*i*PKPbc PKPbc 03 43 23.2 -2.6
comp=Z,9.0nm,1.4s
VTS Vitosha 148.91 328 ⇓PKHKP PKPbc 03 43 25.4 -0.7
VTS Vitosha 148.91 328 ⇓*i*P PKPbc 03 43 25.4 -0.7
MEZF Maizieres J'vi 148.98 355 *e*PKP1 PKPbc 03 43 25.2 -0.8
LDF La Druitiere 149.00 2 *e*PKP1 PKPbc 03 43 24.3 -1.8
comp=Z,5.2nm,0.7s
ROSF Rostrenen 149.05 6 *e*PKP1 PKPbc 03 43 24.8 -1.4
GRR Gorron 149.18 3 *e*PKP1 PKPbc 03 43 25.0 -1.5
comp=Z,21nm,0.8s
SGMF Saint Gilles 149.20 5 *e*PKP1 PKPbc 03 43 24.7 -1.9
comp=Z,57nm,1.3s
WTTA Wattenberg 149.20 346 ⇑*i*PKiKP PKPbc 03 43 26.0 -0.6
comp=Z,11nm,0.6s
SFTF Sexfontaines 149.28 355 *e*PKP1 PKPbc 03 43 25.7 -1.1
comp=Z,38nm,0.9s
HAU Haudompre 149.36 354 *e*PKP1 PKPbc 03 43 25.5 -1.5
comp=Z,15nm,0.9s
QUIF Quistinic 149.47 6 *e*PKP1 PKPbc 03 43 25.6 -1.6
comp=Z,61nm,1.3s
HINF Hinteralfeld 149.49 353 *e*PKP1 PKPbc 03 43 25.6 -1.7
comp=Z,15nm,1.0s
DAVOX Davos/Dischmat 150.02 348 PKPbc PKPbc 03 43 27.9 -0.7
comp=Z,16nm,0.9s,baz=15,slow=7.0,SNR=15
DAVOX Davos/Dischmat 150.02 348 PKHKP PKPbc 03 43 27.9 -0.7
LOR Lormes 150.29 357 *e*PKP1 PKPbc 03 43 27.8 -1.4
comp=Z,14nm,0.8s
HYF Humbligny 150.34 358 *e*PKP1 PKPbc 03 43 28.2 -1.1
TUE Stuetta 150.42 349 *e*PKPdf PKPdf 03 43 22.9 -0.7
TUE *e*PKPbc PKPbc 03 43 29.0 -0.5
SSF Saint Saulge 150.52 357 *e*PKP1 PKPbc 03 43 28.4 -1.3
comp=Z,18nm,0.9s
CABF La Chapelle 150.76 353 *e*PKP1 PKPbc 03 43 29.5 -0.8
comp=Z,28nm,1.0s
AVF Avril sur Loir 150.79 357 *e*PKP1 PKPbc 03 43 28.6 -1.8
comp=Z,9.4nm,1.0s
MFF Saint Martin d 150.99 2 *e*PKP1 PKPbc 03 43 29.1 -1.7
comp=Z,13nm,0.8s
BGF Bois d'Agland 151.05 358 *e*PKP1 PKPbc 03 43 29.5 -1.4
comp=Z,13nm,0.7s
TCF Toulx Ste Croi 151.33 359 *e*PKP1 PKPbc 03 43 30.0 -1.6
comp=Z,11nm,0.9s
LPL La Plagne 151.76 352 *e*PKP1 PKPbc 03 43 31.9 -0.7
LPG La Plagne 151.78 352 *e*PKP1 PKPbc 03 43 32.0 -0.6
comp=Z,13nm,1.1s
BNI Bardonecchia 152.23 352 *e*PKPdf PKPdf 03 43 26.7 +0.4
BNI *e*PKPbc PKPbc 03 43 33.6 0.0
BNI Bardonecchia 152.23 352 *e*PKIKP PKPdf 03 43 26.7 +0.4
RJF Les Rejaudoux 152.32 360 *e*PKP1 PKPbc 03 43 32.9 -0.9
comp=Z,8.6nm,0.9s
MBDF Montbardon 152.53 352 *e*PKP1 PKPbc 03 43 33.1 -1.2
comp=Z,5.8nm,0.8s
CAF Calviac 152.70 359 *e*PKP1 PKPbc 03 43 33.2 -1.5
LASF Ste Croix 153.47 356 *e*PKP1 PKPbc 03 43 35.2 -1.2
comp=Z,14nm,1.0s
MTLF Montolieu 154.28 359 *e*PKP1 PKPbc 03 43 36.6 -1.5
MDT Midelt 163.84 19 PKPab PKPab 03 44 37.7 +0.8
comp=Z,1.7nm,0.9s,baz=323,slow=6.8,SNR=4.1

TAP 19 03:29:56.6, 21.07N×120.19E, h68km, ML3.8, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWK1	**Hengchun**	**1.04**	**33**	*i* P	Pn	03 30 15.8	+0.3
TWK1	baz=33			*i* S	Sn	03 30 29.9	+0.3
TSEB	**Hengchuen, Pin**	**1.05**	**39**	*i* P	Pn	03 30 15.7	0.0
TSEB	baz=36			*i* S	Sn	03 30 30.2	+0.3
HEN	**Hengchun**	**1.06**	**29**	*i* P	Pn	03 30 16.3	+0.5
HEN	baz=29			*i* S	Sn	03 30 30.8	+0.8
TWP	**Hsiaoliuchiu**	**1.28**	**7**	P	Pn	03 30 19.2	+0.6
TWP	baz=7.0			*e*S	Sn	03 30 35.6	+0.6
SCZT	**Fangliau**	**1.35**	**17**	*i* P	Pn	03 30 19.8	+0.3
SCZT	baz=17			*i* S	Sn	03 30 36.9	+0.1
TAW	**Tawu**	**1.44**	**27**	*i* P	Pn	03 30 21.2	+0.5
TAW	baz=27			S	Sn	03 30 39.0	+0.3
EAST	**Anshuo**	**1.44**	**25**	*i* P	Pn	03 30 21.3	+0.5
EAST	baz=25			*i* S	Sn	03 30 39.2	+0.4
KAU	**Kaohsiung**	**1.49**	**4**	*e*S	Sn	03 30 41.9	+1.8
LAY	baz=4.0 **Lan-yu**	**1.59**	**53**	*e*P	Pn	03 30 22.1	-0.7
LAY	baz=52			*e*S	Sn	03 30 41.9	-0.5
ECL	**Taimali**	**1.67**	**25**	*i* P	Pn	03 30 24.4	+0.5
ECL	baz=25			*e*S	Sn	03 30 45.2	+0.8
TWM1	**Houshan**	**1.75**	**7**	P	Pn	03 30 25.7	+0.7
TWM1	baz=7.0			*e*S	Sn	03 30 47.1	+0.7
TTN	**Taitung**	**1.89**	**28**	*e*P	Pn	03 30 28.2	+1.4
TTN	baz=28			*e*S	Sn	03 30 50.3	+0.6
TWG	**Pinlang**	**1.92**	**25**	P	Pn	03 30 28.3	+1.1
TWG	baz=25			S	Sn	03 30 51.0	+0.6

SGST	**Jiashian**	**2.03**	**10**	*e*P	Pn	03 30 29.6	+0.9
	baz=10.0						
SGST				*e*S	Sn	03 30 53.2	+0.2
	baz=10.0						
CHN1	**Nanshi**	**2.12**	**8**	*i* P	Pn	03 30 30.8	+0.9
	baz=8.0						
CHN1				*i* S	Sn	03 30 56.2	+0.9
	baz=8.0						
STYT	**Tauyuan**	**2.14**	**14**	*e*P	Pn	03 30 31.3	+1.1
	baz=14						
STYT				*e*S	Sn	03 30 56.4	+0.6
	baz=14						
WTP	**Ta-pu**	**2.20**	**10**	P	Pn	03 30 31.7	+0.8
	baz=10.0						
ELDTW	**Lidau**	**2.24**	**20**	*e*P	Pn	03 30 32.4	+0.9
	baz=20						
ELDTW				*e*S	Sn	03 30 58.8	+0.7
	baz=20						
TWF1	**Yuli**	**2.49**	**24**	*i* P	Pn	03 30 36.6	+1.7
	baz=24						
TWF1				S	Sn	03 31 04.6	+0.4
	baz=24						
ALS	**Alishan**	**2.49**	**13**	S	Sn	03 31 05.0	+0.8
	baz=13						
YUS	**Yu-Shan**	**2.50**	**16**	*i* P	Pn	03 30 36.7	+1.6
	baz=16						
YUS				*e*S	Sn	03 31 05.3	+0.8
	baz=16						
PNG	**Penghu**	**2.55**	**347**	*e*P	Pn	03 30 37.0	+1.3
	baz=346						
PNG				*e*S	Sn	03 31 06.4	+0.8
	baz=346						
EHY	**Hungye**	**2.64**	**23**	*i* P	Pn	03 30 38.0	+1.2
	baz=23						
EHY				S	Sn	03 31 08.5	+0.7
	baz=23						
SMLT	**Sun Moon Lake**	**2.87**	**13**	*e*P	Pn	03 30 41.2	+1.1
	baz=13						
SMLT				*e*S	Sn	03 31 12.8	-0.7
	baz=13						
TYC	**Yuchr**	**2.88**	**12**	P	Pn	03 30 41.4	+1.2
	baz=12						
TYC				*e*S	Sn	03 31 13.8	0.0
	baz=12						
ESL	**Shilin**	**2.96**	**23**	*e*P	Pn	03 30 42.3	+1.1
	baz=22						
ESL				*e*S	Sn	03 31 15.8	+0.2
	baz=22						
WHF	**Hehuan Shan**	**3.21**	**18**	P	Pn	03 30 45.9	+1.1
	baz=18						
WHF				*e*S	Sn	03 31 21.5	-0.4
	baz=18						
TWQ1	**Liyutan**	**3.30**	**9**	*e*S	Sn	03 31 24.0	0.0
	baz=9.0						
NSTT	**Nanjuang**	**3.62**	**12**	*e*P	Pn	03 30 51.3	+1.0
	baz=12						
NSTT				*e*S	Sn	03 31 31.0	-0.7
	baz=12						
KNM	**Kinmen**	**3.70**	**334**	*e*P	Pn	03 30 52.9	+1.5
	baz=332						
KNM				S	Sn	03 31 33.8	0.0
	baz=332						
NSK	**Sanguang**	**3.74**	**16**	*e*P	Pn	03 30 53.5	+1.5
	baz=16						
NSK				*e*S	Sn	03 31 33.8	-1.0
	baz=16						
ENTT	**Nioudou**	**3.77**	**19**	*e*P	Pn	03 30 54.0	+1.7
	baz=19						
ENTT				*e*S	Sn	03 31 34.5	-1.0
	baz=19						

*TIR **19** 03:30:21.8, 42°.33N×18°.28E, h14km, ML2.5*
*ISCJB **19** 03:30:30.5±0.6, 42°.47N±0°.02×18°.43E±0°.04, h12km±2km, Error ellipse: s-maj=5.2km s-min=3.4km az=142.8*
*CSEM **19** 03:30:30.7±0.2, 42°.45N×18°.46E, h10km, ML2.2/8, Error ellipse: s-maj=5.1km s-min=3.2km az=52.0*
*BEO **19** 03:30:30.4±0.6, 42°.47N×18°.44E, h4km±3km, ML2.4/6*
*PDG **19** 03:30:31.3±0.3, 42°.45N×18°.52E, h15km±1km, MD2.3/1, ML2.2/8, Error ellipse: s-maj=0.6km s-min=1.2km az=0.0*
ISC 19 03:30:30.9±0.6, 42°.45N±0°.03×18°.41E±0°.04, h11km±2km, n51, σ1°09/95, 14C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HCY	**Herceg Novi**	**0.06**	**91**	⇑*i*P*g*	**Pg**	**03 30 33.9**	**+0.8**
HCY				*e*S*g*	**Sg**	**03 30 36.3**	**+1.6**
HCY	**Herceg Novi**	**0.06**	**91**	⇑*i*P*g*	**Pg**	**03 30 33.9**	**+0.8**
HCY				*e*S*g*	**Sg**	**03 30 36.3**	**+1.6**
BUM	**Brajici-Budva**	**0.39**	**112**	⇓*i*P*g*	**Pg**	**03 30 37.4**	**-1.1**
BUM				*e*S*g*	**Sg**	**03 30 43.2**	**-0.5**
BUM	**Brajici-Budva**	**0.39**	**112**	⇓*i*P*g*	**Pg**	**03 30 37.4**	**-1.1**
BUM				*e*S*g*	**Sg**	**03 30 43.2**	**-0.5**
BRY	**Bratogost**	**0.46**	**12**	⇓*i*P*g*	**Pg**	**03 30 39.6**	**-0.3**
BRY				*e*S*g*	**Sg**	**03 30 47.9**	**+1.9**
BRY	**Bratogost**	**0.46**	**12**	⇓*i*P*g*	**Pg**	**03 30 39.6**	**-0.3**
BRY				*e*S*g*	**Sg**	**03 30 47.9**	**+1.9**
NKY	**Niksic**	**0.56**	**50**	⇓*i*P*g*	**Pg**	**03 30 40.7**	**-1.1**
NKY				*e*S*g*	**Sg**	**03 30 49.4**	**+0.1**
NKY	**Niksic**	**0.56**	**50**	⇓*i*P*g*	**Pg**	**03 30 40.7**	**-1.1**
NKY				*e*S*g*	**Sg**	**03 30 49.4**	**+0.1**
PDG	**Podgorica**	**0.63**	**91**	⇓*i*P*g*	**Pg**	**03 30 41.1**	**-1.9**
PDG				*e*S*g*	**Sg**	**03 30 50.4**	**-0.9**
PDG	**Podgorica**	**0.63**	**91**	⇓*i*P*g*	**Pg**	**03 30 41.1**	**-1.9**
PDG				*e*S*g*	**Sg**	**03 30 50.3**	**-1.0**
TTG	**Podgorica**	**0.63**	**91**	⇓*i*P*g*	**Pg**	**03 30 41.1**	**-1.9**
TTG				*e*S*g*	**Sg**	**03 30 50.3**	**-1.0**
STON	**Ston**	**0.68**	**309**	*e*P*g*	**Pg**	**03 30 43.4**	**-0.5**
STON				S*g*	**Sg**	**03 30 54.8**	**+2.0**
STON	**Ston**	**0.68**	**309**	*e*P*g*	**Pg**	**03 30 43.4**	**-0.5**
STON				S*g*	**Sg**	**03 30 54.7**	**+1.9**
ULC	**Ulcinj**	**0.79**	**128**	⇑*i*P*g*	**Pg**	**03 30 45.1**	**-1.0**
ULC				*e*S*g*	**Sg**	**03 30 56.3**	**-0.1**
ULC	**Ulcinj**	**0.79**	**128**	⇑*i*P*g*	**Pg**	**03 30 45.1**	**-1.0**
ULC				*e*S*g*	**Sg**	**03 30 56.3**	**-0.1**
UPM	**Unac-Piva**	**0.84**	**26**	⇑*i*P*g*	**Pg**	**03 30 45.9**	**-1.1**
UPM				*e*S*g*	**Sg**	**03 30 59.5**	**+1.6**
UPM	**Unac-Piva**	**0.84**	**26**	⇑*i*P*g*	**Pg**	**03 30 45.9**	**-1.1**
UPM				*e*S*g*	**Sg**	**03 30 59.5**	**+1.6**
PLE	**Pljevlja**	**1.14**	**39**	⇑*i*P*g*	**Pg**	**03 30 51.8**	**-0.9**
PLE				*e*S*g*	**Sg**	**03 31 09.1**	**+1.6**
PLE	**Pljevlja**	**1.14**	**39**	⇑*i*P*g*	**Pg**	**03 30 51.8**	**-0.9**
PLE				*e*S*g*	**Sg**	**03 31 09.1**	**+1.6**
PVY	**Plav**	**1.16**	**82**	⇓*i*P*g*	**Pg**	**03 30 51.8**	**-1.4**
PVY				*e*S*g*	**Sg**	**03 31 08.7**	**+0.4**
PVY	**Plav**	**1.16**	**82**	⇓*i*P*g*	**Pg**	**03 30 51.8**	**-1.4**
PVY				*e*S*g*	**Sg**	**03 31 08.7**	**+0.4**
PUK	**Puka**	**1.17**	**110**	*i* PN	**Pn**	**03 30 52.4**	**-0.8**
PUK				*i* SN	**Sn**	**03 31 10.0**	**+0.8**
PUK	**Puka**	**1.17**	**110**	*i* Pn	**Pn**	**03 30 52.3**	**-0.9**
PUK				*i* Sn	**Sn**	**03 31 10.0**	**+0.9**
BEY	**Berane**	**1.17**	**68**	⇑*i*P*g*	**Pg**	**03 30 52.1**	**-1.3**
BEY				*e*S*g*	**Sg**	**03 31 09.5**	**+0.8**
IVA	**Berane**	**1.17**	**68**	⇑*i*P*g*	**Pg**	**03 30 52.1**	**-1.3**
IVA				*e*S*g*	**Sg**	**03 31 09.5**	**+0.8**
BCI	**Bajram Curri**	**1.23**	**93**	*i* PN	**Pn**	**03 30 53.1**	**-0.9**
BCI				*i* SN	**Sn**	**03 31 12.2**	**+1.7**
BCI	**Bajram Curri**	**1.23**	**93**	*i* Pn	**Pn**	**03 30 53.1**	**-0.9**
BCI				*i* Sn	**Sn**	**03 31 12.2**	**+1.7**
TIR	**Tirane**	**1.54**	**135**	*e*Pn	**Pn**	**03 30 58.5**	**+0.2**
TIR				*e*Sn	**Sn**	**03 31 19.2**	**+0.8**
TIR	**Tirane**	**1.54**	**135**	*e*Pn	**Pn**	**03 30 58.5**	**+0.2**
TIR				*e*Sn	**Sn**	**03 31 19.2**	**+0.8**
PHP	**Peshkopia**	**1.69**	**116**	*i* PN	**Pn**	**03 31 00.3**	**-0.1**
PHP				*i* SN	**Sn**	**03 31 24.7**	**+2.7**
PHP	**Peshkopia**	**1.69**	**116**	*i* Pn	**Pn**	**03 31 00.3**	**0.0**
PHP				*i* Sn	**Sn**	**03 31 24.7**	**+2.7**
DIVS	**Divibare**	**2.01**	**34**	*e*Pn	**Pn**	**03 31 04.8**	**+0.1**
DIVS				*e*Sn	**Sn**	**03 31 30.9**	**+1.0**
DIVS	**Divibare**	**2.01**	**34**	*e*Pn	**Pn**	**03 31 04.8**	**+0.1**
DIVS				*e*Sn	**Sn**	**03 31 30.9**	**+1.0**
BLY	**Banja Luka**	**2.47**	**339**	*e*Pn	**Pn**	**03 31 12.0**	**+1.0**
BLY				*e*S*g*	**Sg**	**03 31 49.0**	**-1.1**
BLY	**Banja Luka**	**2.47**	**339**	*e*Pn	**Pn**	**03 31 12.0**	**+1.0**
BLY				*e*S*g*	**Sg**	**03 31 49.0**	**-1.1**
BARS	**Barje**	**2.54**	**81**	*e*Pn	**Pn**	**03 31 11.9**	**-0.1**
BARS				*e*Sn	**Sn**	**03 31 42.8**	**0.0**
BARS	**Barje**	**2.54**	**81**	*e*Pn	**Pn**	**03 31 11.9**	**-0.1**
BARS				*e*Sn	**Sn**	**03 31 42.8**	**0.0**
FRGS	**Fruska Gora**	**2.89**	**20**	*e*Pn	**Pn**	**03 31 16.8**	**0.0**
FRGS				*e*Sn	**Sn**	**03 31 51.0**	**-0.6**
ZAPS	**Zavoj**	**3.21**	**74**	*e*Pn	**Pn**	**03 31 21.7**	**+0.5**
ZAPS				*e*Sn	**Sn**	**03 31 59.8**	**+0.3**
VTS	**Vitosha**	**3.55**	**86**	S	**Sn**	**03 32 10.0**	**+2.2**
VTS	**Vitosha**	**3.55**	**86**	S	**Sn**	**03 32 10.0**	**+2.2**
PKSM	**Moragy**	**3.77**	**2**	*e*Pn	**Pn**	**03 31 29.1**	**+0.3**
PKSM				*e*Sn	**Sn**	**03 32 12.6**	**-0.5**
PKSM	**Moragy**	**3.77**	**2**	⇑*i*P	**Pn**	**03 31 29.0**	**+0.2**
PKSM	**Moragy**	**3.77**	**2**	⇑*i*P	**Pn**	**03 31 29.0**	**+0.2**
PKSM				S	**Sn**	**03 32 12.8**	**-0.3**
BZS	**Buzias**	**3.92**	**35**	*e*Pn	**Pn**	**03 31 30.8**	**-0.2**
BZS				*e*Sn	**Sn**	**03 32 15.1**	**-1.8**
BZS	**Buzias**	**3.92**	**35**	⇑*i*P	**Pn**	**03 31 30.8**	**-0.2**
BZS	**Buzias**	**3.92**	**35**	⇑*i*P	**Pn**	**03 31 30.8**	**-0.2**
BZS				S	**Sn**	**03 32 15.2**	**-1.7**
GZR	**Gura Zlata**	**4.31**	**45**	⇓*i*P	**Pn**	**03 31 36.9**	**+0.5**
GZR	**Gura Zlata**	**4.31**	**45**	⇓*i*P	**Pn**	**03 31 36.9**	**+0.5**
GZR				S	**Sn**	**03 32 25.4**	**-1.2**
DRGR		**5.32**	**34**	S	**Sn**	**03 32 49.2**	**-2.1**
DRGR		**5.32**	**34**	S	**Sn**	**03 32 49.2**	**-2.1**

*TAP **19** 03:43:44.8, 25°.27N×122°.16E, h223km, ML3.8, C*
*ISCJB **19** 03:43:46.0±0.7, 25°.22N±0°.07×122°.24E±0°.03, h204km±5km, Error ellipse: s-maj=11.4km s-min=4.3km az=166.8*
*JMA **19** 03:43:46.6±0.2, 25°.22N×122°.25E, h203km±4km, M3.1*
ISC 19 03:43:46.3±0.7, 25°.22N±0°.07×122°.24E±0°.03, h204km±5km, n35, σ0°44/57, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.31**	**228**	*i* P	**Pn**	**03 44 13.7**	**+0.3**
	baz=204						
TWB1				S	**Sn**	**03 44 35.0**	**+0.7**
	baz=204						
NWF	**Wu-fen Shan**	**0.44**	**251**	*i* P	**Pn**	**03 44 14.0**	**+0.2**
	baz=251						
NWF				S	**Sn**	**03 44 35.2**	**+0.3**
	baz=251						
TWY	**Chenhua**	**0.58**	**276**	*e*P	**Pn**	**03 44 14.2**	**0.0**
	baz=263						
TWA	**Mucha**	**0.64**	**248**	*e*P	**Pn**	**03 44 15.1**	**+0.6**
	baz=246						
TWC	**Suao**	**0.70**	**211**	*i* P	**Pn**	**03 44 14.9**	**+0.1**
	baz=206						
TWC				*e*S	**Sn**	**03 44 36.2**	**-0.7**
	baz=206						
TWE	**Neicheng**	**0.72**	**227**	P	**Pn**	**03 44 15.2**	**+0.3**
	baz=221						
TWE				S	**Sn**	**03 44 37.5**	**+0.5**
	baz=221						
ENTT	**Nioudou**	**0.84**	**227**	*i* P	**Pn**	**03 44 15.6**	**0.0**
	baz=229						
ENTT				S	**Sn**	**03 44 38.5**	**+0.3**
	baz=229						
ENA	**Nanau**	**0.91**	**210**	*i* P	**Pn**	**03 44 16.4**	**+0.4**
	baz=208						
ENA				S	**Sn**	**03 44 39.6**	**+0.6**
	baz=208						
NSK	**Sanguang**	**0.97**	**236**	P	**Pn**	**03 44 15.9**	**-0.4**
	baz=237						
NSK				*e*S	**Sn**	**03 44 38.6**	**-0.9**
	baz=237						
YOJ	**Yonaguni jima**	**1.03**	**137**	P	**Pn**	**03 44 16.8**	**0.0**
YOJ				*e*S	**Sn**	**03 44 40.6**	**+0.3**
NSTT	**Nanjuang**	**1.27**	**243**	*i* P	**Pn**	**03 44 18.2**	**-0.3**
	baz=236						
NSTT				S	**Sn**	**03 44 42.7**	**-0.7**
	baz=236						
TWD	**Chiawan**	**1.28**	**208**	*e*P	**Pn**	**03 44 17.7**	**-0.9**
	baz=213						
TWD				*e*S	**Sn**	**03 44 43.1**	**-0.5**
	baz=213						
WHF	**Hehuan Shan**	**1.39**	**220**	*i* P	**Pn**	**03 44 20.1**	**+0.6**
	baz=214						
WHF				S	**Sn**	**03 44 45.4**	**+0.2**
	baz=214						
NSY	**Sanyi**	**1.56**	**240**	*e*P	**Pn**	**03 44 21.1**	**+0.1**
	baz=242						
TWQ1	**Liyutan**	**1.59**	**237**	*e*P	**Pn**	**03 44 21.0**	**-0.3**
	baz=228						
IRIF	**Iriomote-Funau**	**1.61**	**123**	P	**Pn**	**03 44 21.5**	**+0.1**
IRIF				*e*S	**Sn**	**03 44 48.8**	**+0.1**
SMLT	**Sun Moon Lake**	**1.81**	**223**	*e*P	**Pn**	**03 44 23.1**	**-0.1**
	baz=227						
TYC	**Yuchr**	**1.82**	**224**	P	**Pn**	**03 44 23.0**	**-0.3**
	baz=227						
TYC				*e*S	**Sn**	**03 44 51.7**	**-0.4**
	baz=227						
HATJ	**Hateruma jima**	**1.83**	**129**	P	**Pn**	**03 44 23.9**	**+0.4**
HATJ				*e*S	**Sn**	**03 44 52.6**	**+0.2**
JKRS	**Kuro-shima**	**1.88**	**121**	P	**Pn**	**03 44 24.4**	**+0.4**
JKRS				*e*S	**Sn**	**03 44 53.2**	**0.0**
EHY	**Hungye**	**1.90**	**206**	*e*P	**Pn**	**03 44 24.4**	**+0.2**
	baz=200						
JIJ	**Ishigaki jima**	**1.93**	**116**	P	**Pn**	**03 44 24.2**	**-0.2**
JIJ				*e*S	**Sn**	**03 44 53.0**	**-1.0**
TWF1	**Yuli**	**2.05**	**205**	*e*P	**Pn**	**03 44 25.9**	**+0.2**
	baz=201						
YUS	**Yu-Shan**	**2.08**	**215**	P	**Pn**	**03 44 26.6**	**+0.5**
	baz=210						
YUS				*e*S	**Sn**	**03 44 56.9**	**-0.1**
	baz=210						
ALS	**Alishan**	**2.15**	**218**	P	**Pn**	**03 44 26.8**	**+0.1**
	baz=222						
ALS				*e*S	**Sn**	**03 44 57.8**	**-0.3**
	baz=222						
JTJ	**Tarama**	**2.31**	**104**	P	**Pn**	**03 44 28.6**	**+0.2**
JTJ				*e*S	**Sn**	**03 45 00.9**	**-0.2**
STYT	**Tauyuan**	**2.46**	**214**	*e*P	**Pn**	**03 44 29.9**	**-0.1**
	baz=212						
WTP	**Ta-pu**	**2.46**	**217**	*e*P	**Pn**	**03 44 29.8**	**-0.3**
	baz=222						
CHN1	**Nanshi**	**2.56**	**218**	*e*P	**Pn**	**03 44 30.8**	**-0.4**
	baz=222						
SGST	**Jiashian**	**2.61**	**216**	*e*P	**Pn**	**03 44 31.6**	**-0.2**
	baz=221						
TTN	**Taitung**	**2.65**	**202**	*e*P	**Pn**	**03 44 32.9**	**+0.6**
	baz=202						
JMJ	**Miyako jima 2**	**2.80**	**98**	P	**Pn**	**03 44 34.5**	**+0.7**
JMJ				*e*S	**Sn**	**03 45 11.2**	**+0.3**
JOGS	**Gusukube**	**2.91**	**98**	P	**Pn**	**03 44 35.7**	**+0.6**
JOGS				*e*S	**Sn**	**03 45 13.3**	**+0.1**
JKE	**Kume jima 2**	**4.24**	**74**	P	**Pn**	**03 44 50.8**	**-0.5**
JKE				*e*S	**Sn**	**03 45 41.9**	**-0.5**
JAGN	**Aguni-jima**	**4.71**	**72**	*e*S	**Sn**	**03 45 52.0**	**-0.9**

*CRAAG **19** 04:04:24.4, 35°.77N×4°.23E, MI3.8*
*MDD **19** 04:04:28.1±1.3, 35°.74N×4°.27E, h0km, mb4.0/8, Error ellipse: s-maj=21.7km s-min=6.6km az=8.0, PRIMO*
*NEIC **19** 04:04:28.6, 35°.89N×4°.36E, h0km, MG3.7(MDD), After MDD.*
*CSEM **19** 04:04:29.1±0.6, 35°.88N×4°.27E, h10km, ML3.8, Error ellipse: s-maj=20.3km s-min=6.9km az=2.0*
ISC 19 04:04:29.8±1.0, 35°.96N±0°.10×4°.25E±0°.05, h11km±6km, n66, σ1°15/82, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKET	**Djebel Ketaf**	**0.31**	**286**	P	**Pg**	**04 04 37.3**	**+1.3**
AKET	**Djebel Ketaf**	**0.31**	**286**	P	**Pg**	**04 04 37.3**	**+1.3**
AKET	**Djebel Ketaf**	**0.31**	**286**	P	**Pg**	**04 04 37.3**	**+1.3**
AKET	**Djebel Ketaf**	**0.31**	**286**	P	**Pg**	**04 04 37.3**	**+1.3**
SET	**Setif**	**0.96**	**75**	P	**Pg**	**04 04 47.1**	**-1.2**
SET	**Setif**	**0.96**	**75**	Pn	**Pg**	**04 04 47.1**	**-1.2**
SET	**Setif**	**0.96**	**75**	Pn	**Pg**	**04 04 47.1**	**-1.2**
SET	**Setif**	**0.96**	**75**	P	**Pg**	**04 04 47.1**	**-1.2**
ABMS	**Boumerdes**	**1.00**	**322**	P	**Pg**	**04 04 48.8**	**-0.3**
ABMS	**Boumerdes**	**1.00**	**322**	Pn	**Pg**	**04 04 48.8**	**-0.3**
ABMS	**Boumerdes**	**1.00**	**322**	Pn	**Pg**	**04 04 48.8**	**-0.3**
ABMS	**Boumerdes**	**1.00**	**322**	P	**Pg**	**04 04 48.8**	**-0.3**
EMHD	**Djebel Mahouad**	**1.07**	**283**	P	**Pg**	**04 04 48.8**	**-1.7**
EMHD	**Djebel Mahouad**	**1.07**	**283**	Pn	**Pg**	**04 04 48.8**	**-1.7**
EMHD	**Djebel Mahouad**	**1.07**	**283**	Pn	**Pg**	**04 04 48.8**	**-1.7**
EMHD	**Djebel Mahouad**	**1.07**	**283**	P	**Pg**	**04 04 48.8**	**-1.7**
ABA	**Alger-Bouzarea**	**1.29**	**311**	P	**Pn**	**04 04 54.2**	**+0.5**
ABA	**Alger-Bouzarea**	**1.29**	**311**	Pn	**Pn**	**04 04 54.2**	**+0.5**
ABA	**Alger-Bouzarea**	**1.29**	**311**	Pn	**Pn**	**04 04 54.2**	**+0.5**
ABA	**Alger-Bouzarea**	**1.29**	**311**	P	**Pn**	**04 04 54.2**	**+0.5**
DFRA	**Djebel Bou Aff**	**1.44**	**66**	P	**Pn**	**04 04 57.0**	**+1.2**
DFRA	**Djebel Bou Aff**	**1.44**	**66**	Pn	**Pn**	**04 04 57.0**	**+1.2**
DFRA	**Djebel Bou Aff**	**1.44**	**66**	Pn	**Pn**	**04 04 57.0**	**+1.2**
DFRA	**Djebel Bou Aff**	**1.44**	**66**	P	**Pn**	**04 04 57.0**	**+1.2**
CASM	**Ain Smara**	**1.84**	**80**	P	**Pn**	**04 05 00.0**	**-1.3**
CASM	**Ain Smara**	**1.84**	**80**	Pn	**Pn**	**04 05 00.0**	**-1.3**
CASM	**Ain Smara**	**1.84**	**80**	Pn	**Pn**	**04 05 00.0**	**-1.3**
CASM	**Ain Smara**	**1.84**	**80**	P	**Pn**	**04 05 00.0**	**-1.3**
EIBI	**Ibiza**	**3.83**	**324**	P	**Pn**	**04 05 29.1**	**+0.4**
EIBI				S	**Sn**	**04 06 13.5**	**-0.1**
EIBI	**Ibiza**	**3.83**	**324**	Pn	**Pn**	**04 05 29.1**	**+0.4**
	1.2nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**04 06 13.5**	**-0.1**
	0.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.83**	**324**	Pn	**Pn**	**04 05 29.1**	**+0.4**
	1.2nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**04 06 13.5**	**-0.1**
	0.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.83**	**324**	P	**Pn**	**04 05 29.1**	**+0.4**
	1.2nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**04 06 13.5**	**-0.2**
	0.6nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.96**	**344**	P	**Pn**	**04 05 30.4**	**0.0**
ETOS	**Mallorca**	**3.96**	**344**	Pn	**Pn**	**04 05 30.4**	**0.0**
	1.3nm,0.2s,SNR=10						
ETOS	**Mallorca**	**3.96**	**344**	Pn	**Pn**	**04 05 30.4**	**0.0**
	1.3nm,0.2s,SNR=10						
EMUR	**La Murta**	**4.78**	**295**	P	**Pn**	**04 05 41.3**	**-0.4**
EMUR				S	**Sn**	**04 06 37.0**	**-0.1**
EMUR	**La Murta**	**4.78**	**295**	Pn	**Pn**	**04 05 41.3**	**-0.4**
	6.7nm,0.4s,SNR=7.8						
EMUR				Sn	**Sn**	**04 06 35.5**	**-1.5**
	0.4nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**4.78**	**295**	Pn	**Pn**	**04 05 41.3**	**-0.4**
	6.7nm,0.4s,SNR=7.8						
EMUR				Sn	**Sn**	**04 06 35.5**	**-1.5**
	0.4nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**4.78**	**295**	P	**Pn**	**04 05 41.3**	**-0.4**
	6.7nm,0.4s,SNR=7.8						
EMUR				S	**Sn**	**04 06 37.0**	**-0.1**
	0.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.34**	**302**	P	**Pn**	**04 05 50.2**	**+0.9**
ETOB				S	**Sn**	**04 06 49.2**	**-1.6**
ETOB	**Tobarra**	**5.34**	**302**	Pn	**Pn**	**04 05 50.2**	**+0.9**
	1.0nm,0.2s,SNR=7.7						
ETOB				Sn	**Sn**	**04 06 49.2**	**-1.6**
	0.1nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**5.34**	**302**	Pn	**Pn**	**04 05 50.2**	**+0.9**
	1.0nm,0.2s,SNR=7.7						
ETOB				Sn	**Sn**	**04 06 49.2**	**-1.6**
	0.1nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**5.34**	**302**	P	**Pn**	**04 05 50.2**	**+0.8**
	1.0nm,0.2s,SNR=7.7						
EHUE	**Huescar**	**5.79**	**291**	P	**Pn**	**04 05 57.5**	**+2.1**
EHUE	**Huescar**	**5.79**	**291**	Pn	**Pn**	**04 05 57.1**	**+1.6**
	1.1nm,0.3s,SNR=7.9						
EHUE				Sn	**Sn**	**04 06 59.4**	**-2.4**
	1.0nm,0.3s,SNR=4.0						
EHUE	**Huescar**	**5.79**	**291**	Pn	**Pn**	**04 05 57.1**	**+1.6**
	1.1nm,0.3s,SNR=7.9						
EHUE				Sn	**Sn**	**04 06 59.4**	**-2.4**
	1.0nm,0.3s,SNR=4.0						
EHUE	**Huescar**	**5.79**	**291**	P	**Pn**	**04 05 57.1**	**+1.6**
	1.1nm,0.3s,SNR=7.9						
EBER	**Berja**	**5.83**	**281**	P	**Pn**	**04 05 54.9**	**-1.2**
EBER	**Berja**	**5.83**	**281**	Pn	**Pn**	**04 05 54.8**	**-1.2**
	1.9nm,0.3s,SNR=6.8						
EBER	**Berja**	**5.83**	**281**	Pn	**Pn**	**04 05 54.8**	**-1.2**
	1.9nm,0.3s,SNR=6.8						
EBER	**Berja**	**5.83**	**281**	P	**Pn**	**04 05 54.8**	**-1.3**
	1.9nm,0.3s,SNR=6.8						
CFON	**Fontmartina**	**5.96**	**347**	P	**Pn**	**04 05 58.7**	**+0.8**
CFON	**Fontmartina**	**5.96**	**347**	Pn	**Pn**	**04 05 58.7**	**+0.8**
	0.5nm,0.2s,SNR=4.0						
CFON	**Fontmartina**	**5.96**	**347**	Pn	**Pn**	**04 05 58.7**	**+0.8**
	0.5nm,0.2s,SNR=4.0						
CFON	**Fontmartina**	**5.96**	**347**	P	**Pn**	**04 05 58.7**	**+0.8**
	0.5nm,0.2s,SNR=4.0						
EVIA	**Vianos**	**6.01**	**298**	P	**Pn**	**04 06 00.9**	**+2.3**
EVIA	**Vianos**	**6.01**	**298**	Pn	**Pn**	**04 05 59.8**	**+1.3**
	2.8nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**6.01**	**298**	Pn	**Pn**	**04 05 59.8**	**+1.3**
	2.8nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**6.01**	**298**	P	**Pn**	**04 06 00.9**	**+2.4**
	2.8nm,0.4s,SNR=7.9						
EQES	**Quesada**	**6.15**	**290**	P	**Pn**	**04 06 01.3**	**+0.8**
EQES	**Quesada**	**6.15**	**290**	Pn	**Pn**	**04 06 01.3**	**+0.8**
	6.8nm,0.4s,SNR=28						
EQES				Sn	**Sn**	**04 07 12.0**	**+1.3**
	2

ATAH Atahualpa 18.68 156 LR LR 05 24 42.1
comp=Z,95nm,21.7s,baz=154,slow=33
TXAR Lajitas Array 25.35 321 P **P 05 19 30.8 +1.9**
1.2nm,0.7s,mb3.5,baz=139,slow=8.7,SNR=14
PDAR Pinedale Array 38.55 332 P **P 05 21 24.9 +0.6**
1.0nm,1.0s,mb3.5,baz=120,slow=11,SNR=4.5
NVAR Mina Array Bea 40.47 320 P **P 05 21 43.5 +3.1**
2.2nm,0.7s,mb4.0,baz=129,slow=7.4,SNR=18
ILAR Eielson Array 68.77 336 P **P 05 25 05.2 -0.1**
0.6nm,0.7s,mb3.6,baz=140,slow=4.7,SNR=7.3

IDC 19 05:16:32.1±3.9, 17°.49N×145°.53E, h166km±33km, mb3.3/4, mb1 3.7/5, mb1mx3.2/23, mbtmp3.3/5, Error ellipse: s-maj=113.7km s-min=23.5km az=113.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.93**	**189**	P	Pn	05 17 31.0	-1.0
	2.3nm,0.3s,baz=14,slow=17,SNR=2.2						
GUMO				S	Sn	05 18 19.6	+1.0
	17nm,0.3s,baz=343,slow=19,SNR=6.1						
WRA	**Warramunga Arr**	**38.79**	**197**	P	P	05 23 40.5	-0.3
	0.6nm,0.7s,baz=24,slow=8.5,SNR=9.9						
ILAR	**Eielson Array**	**64.79**	**26**	P	P	05 26 52.5	-0.2
	0.5nm,0.6s,baz=246,slow=6.1,SNR=12						
NVAR	**Mina Array Bea**	**84.00**	**52**	P	P	05 28 45.3	+1.1
	0.7nm,0.5s,baz=266,slow=6.1,SNR=9.1						
PDAR	**Pinedale Array**	**88.78**	**45**	P	P	05 29 07.4	+0.2
	0.4nm,0.4s,baz=306,slow=2.1,SNR=3.5						

*INMG **19** 05:21:07.1±0.9, 36°.57N×7°.16W, h16km±3km, ML1.1, Error ellipse: s-maj=5.1km s-min=3.7km az=5.0*
*MDD **19** 05:21:07.0±1.7, 36°.51N×7°.12W, h29km±32km, mbLg1.5/10, Error ellipse: s-maj=23.5km s-min=8.3km az=170.0, PRIMO*
*CSEM **19** 05:21:08.0±0.6, 36°.59N×7°.17W, h40km, ML1.1, Error ellipse: s-maj=10.9km s-min=5.8km az=166.0*
ISC 19 05:21:06.8±1.4, 36°.56N±0°.08×7°.12W±0°.06, h55km±27km, n50, σ0°42/82, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.94**	**317**	*e*P	**Pn**	**05 21 23.4**	**-0.4**
PBDV				*e*S	**Sn**	**05 21 36.0**	**-0.4**
PBDV				A		05 21 38.3	
	2.3nm,0.1s						
PBDV	**Barranco-do-Ve**	**0.94**	**317**	P	**Pn**	**05 21 23.4**	**-0.4**
PBDV				S	**Sn**	**05 21 36.0**	**-0.4**
	2.3nm,0.1s						
PBDV	**Barranco-do-Ve**	**0.94**	**317**	P	**Pn**	**05 21 23.4**	**-0.4**
PBDV				S	**Sn**	**05 21 36.0**	**-0.4**
	2.3nm,0.1s						
PBDV	**Barranco-do-Ve**	**0.94**	**317**	*e*P	**Pn**	**05 21 23.4**	**-0.4**
PBDV				*e*S	**Sn**	**05 21 36.0**	**-0.4**
	2.3nm,0.1s						
PVAQ	**Vaqueiros**	**0.96**	**331**	*e*P	**Pn**	**05 21 24.1**	**-0.1**
PVAQ				*e*S	**Sn**	**05 21 36.8**	**-0.2**
PVAQ				A		05 21 38.6	
	5.0nm,0.3s						
PVAQ	**Vaqueiros**	**0.96**	**331**	P	**Pn**	**05 21 24.1**	**-0.1**
PVAQ				S	**Sn**	**05 21 36.8**	**-0.2**
	5.0nm,0.3s						
PVAQ	**Vaqueiros**	**0.96**	**331**	P	**Pn**	**05 21 24.1**	**-0.1**
PVAQ				S	**Sn**	**05 21 36.8**	**-0.2**
	5.0nm,0.3s						
PVAQ	**Vaqueiros**	**0.96**	**331**	*e*P	**Pn**	**05 21 24.1**	**-0.1**
PVAQ				*e*S	**Sn**	**05 21 36.8**	**-0.2**
	5.0nm,0.3s						
EGRO	**El Granado**	**1.01**	**344**	P	**Pn**	**05 21 25.0**	**+0.2**
	0.7nm,0.1s,SNR=14						
EGRO				S	**Sn**	**05 21 38.8**	**+0.7**
	4.0nm,0.1s,SNR=13

RDF	Al-Radifah	7.48 285	eP	Pn	06 00 44.7	-0.6
RDF			eS	Sn	06 02 05.7	-4.9
UMR	Umm Al-Rimmam	7.48 290	eP	Pn	06 00 44.4	-0.9
UMR			eS	Sn	06 02 05.5	-5.2
UMR	Umm Al-Rimmam	7.48 290	eP	Pn	06 00 44.4	-0.9
UMR			eS	Sn	06 02 05.5	-5.1
NAY	Al-Naaiem	7.81 287	eP	Pn	06 00 48.8	-1.0
NAY			eS	Sn	06 02 14.0	-4.7
NAY			AML	AML	06 02 15.0	
	comp=Z,2.2nm,0.4s					
NAY	Al-Naaiem	7.81 287	eP	Pn	06 00 48.8	-1.0
NAY			eS	Sn	06 02 14.0	-4.7
MIB	Mutribah	7.87 291	eP	Pn	06 00 49.4	-1.2
MIB			eS	Sn	06 02 14.4	-5.7
MIB			AML	AML	06 02 17.4	
	comp=Z,18nm,0.6s					
MIB	Mutribah	7.87 291	eP	Pn	06 00 49.4	-1.2
MIB			eS	Sn	06 02 14.4	-5.7
IGHG	Ghaleghazi	10.61 314	ePn	Pn	06 01 27.0	-1.2

*IDC **19** 06:00:15.9±3.1,23°.24S×70°.14W,h0km,mb4.3/2, mb1 4.2/3,mb1mx3.8/14,mbtmp4.2/3,ML4.0/1,Error ellipse: s-maj=79.3km s-min=48.0km az=49.0*
*ISCJB **19** 06:00:41.7±0.8,21°.7S±0°.1×69°.1W±0°.2,h159km±12km, mb3.7/3,Error ellipse: s-maj=36.9km s-min=14.3km az=18.0.*
*GUC **19** 06:00:43.2±0.8,21°.84S×68°.77W,h119km±15km,ML3.6*
ISC 19 06:00:42.7±0.8,**21°.7S**±0°.1×**69°.1W**±0°.2,**h155**km±12km,**n8, σ0°64/12,mb3.7/3,1C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	Maria Elena	0.79	230	⇑iP	Pn	06 01 05.5	-0.8
MACH				i S	Sn	06 01 23.4	-1.0
TOCH	Tocopilla	1.10	248	⇓iP	Pn	06 01 09.3	+0.5
TOCH				eS	Sn	06 01 29.1	+0.5
TOCH				AML	AML	06 01 37.0	
	comp=N,873nm,0.1s						
MECH	Mejillones	1.88	221	eP	Pn	06 01 17.2	+0.5
MECH				eS	Sn	06 01 43.2	+0.3
MECH				AML	AML	06 01 55.8	
	comp=N,584nm,0.4s						
ANCH	Antofagasta	2.32	211	eP	Pn	06 01 22.8	+0.9
ANCH				eS	Sn	06 01 51.6	-0.6
LPAZ	La Paz	5.45	10	Pn	Pn	06 02 02.6	+0.4
	comp=N,1.3nm,0.3s,baz=192,slow=6.7,SNR=60						
DBIC	Dimbokro	68.96	73	P	P	06 11 31.7	0.0
	comp=N,2.3nm,0.6s,mb4.1,baz=228,slow=7.8,SNR=4.5						
ULM	Lac du Bonnet	75.44	343	P	P	06 12 08.3	-1.0
	comp=N,1.7nm,0.7s,mb3.8,baz=170,slow=7.3,SNR=2.6						
TORD	Torodi Ar. Bea	77.59	70	P	P	06 12 22.6	+0.3
	comp=N,0.2nm,0.3s,mb3.2,baz=238,slow=5.8,SNR=6.2						

CASC 19 06:20:06.9±1.6,**12°.92N**×**89°.06W,h35**km±999km,**MD3.7, ML3.7,1C,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	El Faro	0.70	0	⇑iP	Pn	06 20 20.5	+0.2
LFRS				eS	Sn	06 20 30.4	+0.5
SNVI	San Vicente	0.72	18	eP	Pn	06 20 21.0	+0.4
SNVI				eS	Sn	06 20 31.5	+1.1
SNET	Serv Nac Est T	0.78	348	eP	Pn	06 20 21.5	+0.1
SNET				eS	Sn	06 20 32.0	+0.1
SNET				AML	AML	06 20 35.0	
	comp=Z,2μm,0.2s						
LBRS	Las Brisas	0.81	1	eP	Pn	06 20 22.4	+0.5
LFU	La Fuente	0.82	356	eP	Pn	06 20 22.6	+0.6
BOQS	Boqueron	0.84	345	eP	Pn	06 20 22.6	+0.4
BOQS				eS	Sn	06 20 34.2	+0.9
VSM	San Miguel	0.92	57	eP	Pn	06 20 24.3	+1.0
VSM				eS	Sn	06 20 37.7	+2.4
BLLM	Bellamira	0.95	57	eP	Pn	06 20 24.4	+0.5
BLLM				eS	Sn	06 20 36.4	+0.2
SBLS	San Blas	1.06	329	eP	Pn	06 20 26.4	+1.1
SBLS				eS	Sn	06 20 40.3	+1.5
SNJE	San Jose	1.08	331	eP	Pn	06 20 26.1	+0.6
SNJE				eS	Sn	06 20 39.8	+0.5
RTR	El Retiro	1.12	330	eP	Pn	06 20 27.0	+0.8
CAHU	Cacacuatique	1.18	44	eP	Pn	06 20 27.1	+0.2
CNCH	Conchagua	1.25	73	eP	Pn	06 20 28.1	+0.3
CNCH				eS	Sn	06 20 45.1	+1.7
RBDL	Robledal	1.33	333	eP	Pn	06 20 29.2	+0.2
MTO2	Montecristo 2	1.50	349	eP	Pn	06 20 31.3	0.0
CRIN	San Cristobal	1.98	96	eP	Pn	06 20 37.6	-0.2
CSAN		2.68	106	eP	Pn	06 20 47.4	-0.2
CSAN				eS	Sn	06 21 18.1	-0.7
XAVN	Gruta Xavier	2.78	106	eP	Pn	06 20 48.4	-0.6

*ISCJB **19** 06:32:22.8±1.1,17°.7S±0°.3×178°.7W±0°.2,h577km±14km, mb3.8/15,Error ellipse: s-maj=47.8km s-min=12.0km az=152.6*
*IDC **19** 06:32:23.8±1.6,17°.84S×178°.60W,h582km±18km, mb3.5/11,mb1 3.7/12,mb1mx3.6/19,mbtmp3.5/12,Error ellipse: s-maj=36.9km s-min=9.8km az=152.0*
*NEIC **19** 06:32:25.2±0.9,17°.88S×178°.50W,h597km±8km,mb3.7/4, Error ellipse: s-maj=36.9km s-min=11.7km az=153.0*
ISC 19 06:32:23.3±1.2,**17°.8S**±0°.3×**178°.6W**±0°.2,**h569**km±13km, **n32,σ0°76/24,mb3.8/15,1C-1D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.16	270	ePn	P	06 33 47.3	+6.5
AFI	Afiamalu	7.63	61	P	P	06 34 18.5	+0.3
	2.2nm,0.3s,baz=239,slow=19,SNR=4.5						
AFI				S	S	06 35 50.7	-1.5
	0.9nm,0.3s,baz=18,slow=20,SNR=1.9						
AFI	Afiamalu	7.63	61	ePn	P	06 34 19.3	+1.1
AFI				S	S	06 35 50.7	-1.5
STKA	Stephens Creek	38.51	241	P	P	06 38 58.2	+0.6
	2.8nm,0.9s,mb3.8,baz=44,slow=13,SNR=3.1						
WRA	Warramunga Arr	44.44	259	P	P	06 39 44.7	+0.1
	1.6nm,0.4s,mb3.9,baz=96,slow=7.2,SNR=80						
WRA				PcP	PcP	06 41 14.7	-1.1
	0.2nm,0.9s,baz=91,slow=3.4,SNR=5.6						
WRA				S	S	06 45 37.2	-1.7
	0.4nm,0.7s,baz=97,slow=13,SNR=3.7						
WRA	Warramunga Arr	44.44	259	P	P	06 39 44.7	+0.1
WRA				PcP	PcP	06 41 14.7	-1.1
WRA				S	S	06 45 37.2	-1.7
ASAR	Alice Springs	44.62	254	P	P	06 39 46.4	+0.4
	5.7nm,0.5s,mb4.3,baz=86,slow=9.0,SNR=125						
ASAR				PcP	PcP	06 41 15.7	-0.7
	0.9nm,0.5s,baz=102,slow=3.7,SNR=8.8						
ASAR				S	S	06 45 39.1	-2.2
	0.7nm,0.8s,baz=92,slow=15,SNR=5.1						
MJAR	Matsushiro Arr	67.66	323	P	P	06 42 25.0	+0.7
	1.1nm,0.3s,mb3.9,baz=164,slow=7.5,SNR=4.3						
PETK	Petropavlovsk-	73.49	345	P	P	06 42 59.3	+1.1
	4.5nm,0.6s,mb4.1,baz=111,slow=8.1,SNR=5.0						
ISA	Isabella	77.88	46	eP	P	06 43 23.0	+0.1
	1.2nm,0.8s,mb3.3						
KDAK	Kodiak Island	78.32	14	P	P	06 43 24.2	-0.5
	17nm,1.1s,mb4.3,baz=157,slow=13,SNR=3.0						
YBH	Yreka Blue Hor	78.55	39	P	P	06 43 26.4	+0.1
	1.7nm,0.6s,mb3.6,baz=134,slow=0.8,SNR=9.6						
NVAR	Mina Array Bea	79.47	44	P	P	06 43 31.2	-0.1
	1.4nm,0.7s,mb3.4,baz=222,slow=8.8,SNR=13						
MOD	Modoc	80.12	40	eP	P	06 43 34.6	0.0
	1.1nm,0.6s,mb3.4						
ETW	Entiat	83.37	35	eP	P	06 43 51.0	0.0
	1.5nm,0.6s,mb3.7						
ILAR	Eielson Array	85.80	13	P	P	06 44 01.3	-1.1
	1.1nm,0.5s,mb3.8,baz=223,slow=4.9,SNR=29						
TXAR	Lajitas Array	86.10	58	P	P	06 44 05.2	+0.4
	1.5nm,0.7s,mb3.7,baz=223,slow=5.7,SNR=20						
RRI2	Red Ridge	86.52	42	eP	P	06 44 06.9	+0.5
	2.0nm,0.7s,mb3.9						
PDAR	Pinedale Array	87.40	44	P	P	06 44 10.2	-0.3
	1.2nm,0.6s,mb3.7,baz=215,slow=2.9,SNR=12						
MKAR	Makanchi Array	108.88	314	PKiKP	PKiKP	06 49 46.6	-1.8
	0.4nm,0.5s,baz=71,slow=0.4,SNR=6.8						
ARCES	ARCESS Array B	126.14	350	PKP	PKPdf	06 50 19.1	-1.6
	4.8nm,1.1s,baz=333,slow=1.4,SNR=5.3						
FINES	FINESS Array B	132.99	344	PKP	PKPdf	06 50 32.4	-1.5
	1.0nm,0.5s,baz=91,slow=7.0,SNR=2.9						
AKASG	Malin Array Be	140.33	332	PKP	PKPdf	06 50 48.3	+0.5
	0.5nm,0.4s,baz=38,slow=2.9,SNR=3.4						
BRTR	Keskin Array B	144.53	315	PKP	PKPdf	06 50 55.5	-0.1
	1.5nm,0.5s,baz=102,slow=2.9,SNR=6.7						
CRVS	Cervenica-Dubn	144.92	337	eP	PKPdf	06 50 56.5	+0.6
CRVS	Cervenica-Dubn	144.92	337	ePKP	PKPdf	06 50 56.4	+0.5
CLL	Collm	145.28	347	⇓iPKPbc	PKPbc	06 50 57.3	-0.3
	comp=Z,13nm,0.8s						
CLL				⇑iPKPab	PKPab	06 50 58.8	0.0
BRG	Berggiesshubel	145.48	346	eP	PKPdf	06 50 57.9	+1.1
	comp=Z,5.5nm,0.7s						
VYHS	Vyhne	146.21	339	eP	PKPbc	06 51 00.3	0.0
VYHS	Vyhne	146.21	339	ePKP	PKPbc	06 51 00.3	0.0
GERES	GERESS Array B	147.42	345	PKPbc	PKPbc	06 51 03.0	-0.6
	comp=Z,3.2nm,0.6s,baz=35,slow=3.3,SNR=18						
GERES	GERESS Array B	147.42	345	PKPbc	PKPbc	06 51 03.0	-0.6

*ISCJB **19** 06:47:39.4±1.3,19°.03N±0°.06×145°.4E±0°.2,h230km±12km, mb3.6/11,Error ellipse: s-maj=28.6km s-min=9.0km az=173.2*
*IDC **19** 06:47:40.9±2.2,18°.99N×145°.41E,h232km±21km, mb3.5/10,mb1 3.7/12,mb1mx3.5/24,mbtmp3.5/12,Error ellipse: s-maj=25.0km s-min=11.7km az=91.0*
*NEIC **19** 06:47:44.9±1.4,18°.90N×145°.45E,h271km±14km,mb3.7/3, Error ellipse: s-maj=20.4km s-min=10.3km az=79.0*
ISC 19 06:47:40.6±1.4,**18°.99N**±0°.07×**145°.5E**±0°.2,**h228**km±13km, **n22,σ1°05/24,mb3.6/11,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.40	186	P	Pn	06 49 01.7	+0.9
	5.0nm,0.3s,baz=324,slow=19,SNR=5.6						
GUMO				S	S	06 50 00.1	-4.5
	8.3nm,0.3s,baz=163,slow=19,SNR=3.4						
GUMO	Guam	5.40	186	ePn	Pn	06 49 04.5	+3.7
GUMO				eS	S	06 50 04.1	-0.4
CBIJ	Chichi jima	8.62	340	P	Pn	06 49 40.9	-0.9
	6.9nm,0.3s,baz=279,slow=19,SNR=7.6						
CBIJ				S	S	06 51 13.7	-5.5
	11nm,0.3s,baz=279,slow=23,SNR=6.7						
JOW	Kunigami	17.65	299	P	P	06 51 34.0	+3.2
	baz=125,slow=12						
JOW	Kunigami	17.65	299	eP	P	06 51 33.6	+2.8
	5.3nm,0.5s						
MJAR	Matsushiro Arr	18.62	341	P	P	06 51 44.9	+3.7
	0.9nm,0.3s,baz=309,slow=6.1,SNR=5.0						
WB2	Warramunga Arr	40.19	196	eP	P	06 54 54.9	-0.1
WRA	Warramunga Arr	40.20	196	P	P	06 54 55.0	-0.1
	6.8nm,0.7s,mb4.2,baz=13,slow=8.9,SNR=146						
SONM	Songino Array	42.79	321	P	P	06 55 15.9	+0.2
	0.6nm,0.6s,mb3.2,baz=107,slow=7.7,SNR=2.0						
ASAR	Alice Springs	43.87	195	P	P	06 55 24.6	0.0
	1.9nm,0.6s,mb3.6,baz=16,slow=7.9,SNR=34						
STKA	Stephens Creek	50.71	184	P	P	06 56 15.7	-1.5
	0.6nm,0.3s,mb3.5,baz=12,slow=9.3,SNR=5.1						
STKA	Stephens Creek	50.71	184	eP	P	06 56 17.2	0.0
	0.1nm,0.3s,mb2.7						
MKAR	Makanchi Array	58.11	314	P	P	06 57 10.7	+0.5
	0.5nm,0.5s,mb3.4,baz=91,slow=8.8,SNR=5.4						
ILAR	Eielson Array	63.48	26	P	P	06 57 45.5	-0.6
	0.6nm,0.6s,mb3.4,baz=260,slow=5.5,SNR=8.6						
ABKAR	Akbulak array	72.98	317	eP	P	06 58 45.2	0.0
	1.1nm,0.5s,mb3.7						
YKA	Yellowknife Ar	77.84	28	P	P	06 59 12.9	+0.3
	0.7nm,0.5s,mb3.5,baz=285,slow=5.5,SNR=3.7						
ARCES	ARCESS Array B	82.16	342	P	P	06 59 35.4	-0.2
	1.4nm,0.8s,mb3.7,baz=52,slow=7.9,SNR=3.5						
NVAR	Mina Array Bea	83.13	52	P	P	06 59 42.9	+1.7
	0.9nm,0.6s,mb3.7,baz=268,slow=5.5,SNR=11						
NVAR	Mina Array Bea	83.13	52	P	P	06 59 42.9	+1.7
FINES	FINESS Array B	86.54	335	P	P	06 59 55.4	-2.2
	1.2nm,0.4s,mb4.0,baz=64,slow=4.4,SNR=5.9						
FINES	FINESS Array B	86.54	335	P	P	06 59 55.4	-2.2
LPAZ	La Paz	147.89	91	PKPbc	PKPbc	07 07 00.0	+0.4
	0.8nm,0.8s,baz=205,slow=3.0,SNR=4.6						

SKHL 19 06:47:41.3±0.6,**54°.37N**×**122°.43E,h25**km±9km,**mb4.1/8, 1C,Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUP	Tupik	1.45	273	ePn	Pn	06 48 06.5	+0.6
TUP				⇑iPg	Pn	06 48 08.2	+2.3
TUP				AMB	AMB	06 48 15.0	
	45nm,0.2s						
TUP				eSg	Sn	06 48 27.0	+3.0
TUP				A		06 48 27.6	
	777nm,0.4s						
KROS	Kirovskiy	2.66	87	ePn	Pn	06 48 23.0	+0.6
KROS				ePg	Pn	06 48 28.9	+6.5
KROS				AMB	AMB	06 48 32.7	
	6.0nm,0.5s						
KROS				AMB	AMB	06 48 32.7	
	16nm,0.5s						
KROS				AMB	AMB	06 48 32.7	
	19nm,0.5s						
KROS				i Sn	Sn	06 48 53.2	-0.6
KROS				eSg	Sn	06 49 03.7	+10
KROS				A		06 49 07.4	
	220nm,0.5s						
KROS				A		06 49 07.4	
	140nm,0.5s						
KROS				A		06 49 07.4	
	150nm,0.5s						
CLNS	Chul'man	2.84	28	ePn	Pn	06 48 27.4	+2.4
CLNS				ePg	Pn	06 48 34.7	+10
CLNS				AMB	AMB	06 48 37.4	
	28nm,0.2s						
CLNS				eSn	Sn	06 48 59.4	+1.1
CLNS				eSg	Sn	06 49 12.5	+14
CLNS				A		06 49 18.0	
	85nm,0.3s						
ZEA	Zeya	2.91	101	ePg	Pn	06 48 33.5	+7.6
ZEA				AMB	AMB	06 48 40.0	
	30nm,0.3s						
ZEA				eSg	Sn	06 49 11.2	+11
ZEA				A		06 49 12.6	
	160nm,0.5s						
CRS	Chara	3.46	319	ePn	Pn	06 48 36.1	+2.6
CRS				ePg	Pn	06 48 43.7	+10
CRS				AMB	AMB	06 48 47.2	
	42nm,0.7s						
CRS				eSg	Sn	06 49 29.7	+16
CRS				A		06 49 45.3	
	85nm,1.2s						
BMKR	Bomnak	3.75	82	ePn	Pn	06 48 38.5	+1.0
BMKR				ePg	Pn	06 48 49.7	+12
BMKR				AMB	AMB	06 48 51.2	
	15nm,0.5s						
BMKR				eSg	Sn	06 49 38.2	+17
BMKR				A		06 49 42.2	
	150nm,0.5s						
EKMR	Ekimchan	6.38	98	ePn	Pn	06 49 13.6	0.0
EKMR				AMB	AMB	06 49 16.5	
	5.0nm,0.3s						
EKMR				eSg	Sn	06 50 59.0	+33
EKMR				A		06 51 13.9	
	8.0nm,0.5s						
EKMR				A		06 51 13.9	
	15nm,0.5s						
KLR	Kul'dur	7.73	128	eSg	Sn	06 51 44.7	+46
GRNR	Gornyy	9.25	107	eSg	Sn	06 52 33.2	+57

*ISK **19** 07:00:44.8,37°.78N×30°.52E,h4km,MD3.1*
*ISCJB **19** 07:00:45.9±0.4,37°.79N±0°.02×30°.53E±0°.04,h10km,Error ellipse: s-maj=4.1km s-min=3.3km az=178.9*
*CSEM **19** 07:00:45.4±0.2,37°.78N×30°.51E,h5km,MD3.1,Error ellipse: s-maj=3.7km s-min=3.4km az=79.0*
*DDA **19** 07:00:45.9,37°.80N×30°.50E,h18km±4km,Md3.1*
ISC 19 07:00:46.1±0.5,**37°.79N**±0°.02×**30°.52E**±0°.03,**h4**km±5km, **n42,σ1°19/65,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	Bucak	0.33	170	PG	Pg	07 00 51.9	-0.6
BCK				eSG	Sg	07 00 57.1	+0.3
BCK	Bucak	0.33	170	i Pg	Pg	07 00 51.9	-0.6
BCK				eSg	Sg	07 00 57.1	+0.3
SUTC	Sutluce-Ispart	0.49	129	PG	Pg	07 00 55.0	-0.6
SUTC				eSG	Sg	07 01 03.0	+1.0
SUTC	Sutluce-Ispart	0.49	129	i Pg	Pg	07 00 55.0	-0.6
SUTC				eSg	Sg	07 01 03.0	+1.0
SHUT	Suhut-Afyon	0.76	2	ePG	Pg	07 01 00.3	-0.4
SHUT				eSG	Sg	07 01 11.5	+0.9
SHUT	Suhut-Afyon	0.76	2	ePg	Pg	07 01 00.3	-0.4
SHUT				eSg	Sg	07 01 11.5	+0.9
KORT	Korkueli	0.80	190	i P	Pg	07 01 00.5	-0.9
KORT				i S	Sg	07 01 13.8	+2.0
KORT	Korkueli	0.80	190	i P	Pg	07 01 00.5	-0.9
KORT				i S	Sg	07 01 13.8	+2.0
GOLH	Golhisar	0.94	234	i P	Pg	07 01 02.5	-1.7
GOLH				i S	Sg	07 01 18.0	+1.7
GOLH	Golhisar	0.94	234	i P	Pg	07 01 02.5	-1.6
GOLH				i S	Sg	07 01 18.0	+1.7
KHL	Karahalli	0.95	304	ePG	Pg	07 01 03.6	-0.6
KHL	Karahalli	0.95	304	ePg	Pg	07 01 03.6	-0.7
BOLV	Bolvadin	0.99	20	i P	Pg	07 01 03.8	-1.2
BOLV				i S	Sg	07 01 19.1	+1.3
BOLV	Bolvadin	0.99	20	i P	Pg	07 01 03.8	-1.2
BOLV				i S	Sg	07 01 19.1	+1.3
KHAL	Karahalli	1.00	306	i P	Pg	07 01 05.5	+0.3
KHAL				i S	Sg	07 01 22.5	+4.4
KHAL	Karahalli	1.00	306	i P	Pg	07 01 05.5	+0.3
KHAL				i S	Sg	07 01 22.5	+4.4
ELL	Elmali	1.15	205	ePN	Pn	07 01 07.3	-1.6
ELL	Elmali	1.15	205	ePn	Pn	07 01 07.3	-1.6
DNZL	Cakiroluk	1.17	266	i P	Pg	07 01 06.5	-2.1
DNZL				i S	Sg	07 01 25.6	+1.8
DNZL	Cakiroluk	1.17	266	i P	Pg	07 01 06.5	-2.0
DNZL				i S	Sg	07 01 25.6	+1.9
KDHN	Kadinhani	1.46	59	i P	Pn	07 01 12.5	-0.7
KDHN				i S	Sb	07 01 34.7	+2.1
KDHN	Kadinhani	1.46	59	i P	Pn	07 01 12.5	-0.7
KDHN				i S	Sb	07 01 34.7	+2.1
KONT	Konya--Tatoy	1.47	83	ePN	Pn	07 01 12.9	-0.4
KONT	Konya--Tatoy	1.47	83	ePn	Pn	07 01 12.9	-0.4
KIZT	Kizilcal	1.53	44	ePN	Pn	07 01 13.8	-0.3
KIZT	Kizilcal	1.53	44	ePn	Pn	07 01 13.8	-0.3
GDZ	Gediz	1.53	328	i P	Pn	07 01 13.3	-0.9
GDZ				i S	Sn	07 01 37.5	+2.9
GDZ	Gediz	1.53	328	i P	Pn	07 01 13.3	-0.9
GDZ				i S	Sn	07 01 37.5	+2.9
FETY	Fethiye	1.63	225	ePN	Pn	07 01 15.0	-0.5
FETY	Fethiye	1.63	225	ePn	Pn	07 01 15.0	-0.5
KULA	Kula-Manisa	1.63	297	ePN	Pn	07 01 15.3	-0.3
KULA	Kula-Manisa	1.63	297	ePn	Pn	07 01 15.4	-0.2
AKAS	Kas	1.72	205	i P	Pn	07 01 12.3	-4.5
AKAS				i S	Sn	07 01 41.7	+2.6
AKAS	Kas	1.72	205	i P	Pn	07 01 12.3	-4.5
AKAS				i S	Sn	07 01 41.7	+2.5
HDMB	Hadim	1.77	117	ePN	Pn	07 01 17.0	-0.5
HDMB	Hadim	1.77	117	ePn	Pn	07 01 17.0	-0.5
DEMI	Demirci	1.89	312	i P	Pn	07 01 18.7	-0.4
DEMI				i S	Sn	07 01 49.6	+6.2
DEMI	Demirci	1.89	312	i P	Pn	07 01 18.7	-0.4
AYDN	Tasoluk	2.10	267	i P	Pn	07 01 21.5	-0.5
AYDN	Tasoluk	2.10	267	i P	Pn	07 01 21.5	-0.5
DURS	Dursunbey	2.41	319	i P	Pn	07 01 26.5	+0.1
DURS	Dursunbey	2.41	319	i P	Pn	07 01 26.5	+0.1

*IDC **19** 07:12:35.8±0.7,12°.17N×141°.35E,h0km,mb3.8/12, mb1 4.0/13,mb1mx4.0/22,mbtmp3.9/13,ML4.4/1,MS3.0/2, Ms1 3.0/2,ms1mx2.5/26,Error ellipse: s-maj=24.9km s-min=16.0km az=84.0*
*ISCJB **19** 07:12:40.2±2.9,12°.12N±0°.09×141°.2E±0°.1,h44km±29km, mb3.9/14,Error ellipse: s-maj=20.4km s-min=14.6km az=0.9*
*NEIC **19** 07:12:43.1±1.6,12°.14N×141°.38E,h55km±16km,mb4.7/2, Error ellipse: s-maj=14.6km s-min=9.3km az=83.0*
ISC 19 07:12:43.3±2.7,**12°.13N**±0°.09×**141°.3E**±0°.1,**h56**km±28km, **n18,σ0°86/19,mb3.9/14,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.78	67	Pn	Pn	07 13 36.1	-2.8
	29nm,0.3s,baz=273,slow=8.2,SNR=19						
GUMO				Sn	Sn	07 14 23.4	+1.3
	baz=49,slow=20,SNR=2.3						
GUMO				LR	LR	07 15 02.0	
	comp=Z,193nm,18.6s,baz=243,slow=39						
GUMO	Guam	3.78	67	ePn	Pn	07 13 37.8	-1.2
GUMO				Sn	Sn	07 14 23.4	+1.3
GUMO				LR	LR	07 15 02.0	
MJAR	Matsushiro Arr	24.46	354	P	P	07 17 56.9	0.0
	1.5nm,0.7s,mb3.5,baz=182,slow=12,SNR=4.9						
KSRS	Korea Array	27.92	337	P	P	07 18 26.5	-1.6
	0.9nm,0.6s,mb3.6,baz=169,slow=12,SNR=3.0						
KSRS				LR	LR	07 29 27.0	
	comp=Z,24nm,18.7s,baz=155,slow=36						
WRA	Warramunga Arr	32.60	192	P	P	07 19 09.2	-0.5
	2.0nm,0.7s,mb4.2,baz=12,slow=9.6,SNR=20						
BJT	Baijiatuau	35.54	326	eP	P	07 19 36.3	+1.3
	6.5nm,0.5s,mb4.8						
ASAR	Alice Springs	36.30	191	P	P	07 19 41.7	+0.1
	0.9nm,0.7s,mb3.8,baz=18,slow=12,SNR=16						
CMAR	Chiang Mai Arr	41.26	284	P	P	07 20 23.4	+0.1
	0.6nm,0.3s,mb3.6,baz=82,slow=6.5,SNR=4.6						
STKA	Stephens Creek	43.76	180	P	P	07 20 44.1	+0.8
	1.6nm,0.6s,mb3.9,baz=350,slow=11,SNR=3.1						
SONM	Songino Array	46.00	328	P	P	07 21 01.8	+0.8
	1.4nm,0.9s,mb3.9,baz=135,slow=11,SNR=7.4						
MKAR	Makanchi Array	60.15	317	P	P	07 22 45.3	+0.2
	0.6nm,0.8s,mb3.7,baz=97,slow=8.7,SNR=6.1						
ZALV	Zalesovo Beam	60.81	326	P	P	07 22 49.7	+0.2
	0.5nm,0.3s,mb4.1,baz=99,slow=9.3,SNR=3.3						
ZALV	Zalesovo Beam	60.81	326	P	P	07 22 49.7	+0.1
KURK	Kurchatov	63.48	321	eP	P	07 23 07.5	+0.1
	4.3nm,0.8s,mb4.6						
BVAR	Borovoye Array	68.92	322	P	P	07 23 42.5	+0.2
	0.8nm,0.5s,mb3.9,baz=101,slow=7.9,SNR=5.9						
ILAR	Eielson Array	71.37	25	P	P	07 23 55.8	-1.3
	0.3nm,0.7s

JKE				*eS*	**Sn**	**07 17 53.6**	**+0.5**
JAGN	**Aguni-jima**	**4.07**	**69**	P	**Pn**	**07 17 16.6**	**+0.3**
JAGN				*eS*	**Sn**	**07 18 02.8**	**-1.2**
JJT2	**Tamagusuku 2**	**4.39**	**77**	P	**Pn**	**07 17 21.2**	**+0.7**
JIH	**Iheya**	**4.83**	**67**	P	**Pn**	**07 17 26.2**	**-0.1**
JIH				*eS*	**Sn**	**07 18 19.4**	**-2.5**
JOW	**Kunigami**	**5.02**	**70**	P	**Pn**	**07 17 28.0**	**-0.8**
baz=108,slow=19							
JOW				S	**Sn**	**07 18 21.6**	**-4.8**
baz=143,slow=20							
JOW				LR	LR	07 19 42.8	
comp=Z,2μm,18.4s,baz=66,slow=40							
JOW	**Kunigami**	**5.02**	**70**	*e*Pn	**Pn**	**07 17 28.2**	**-0.6**
JOW				*e*Sn	**Sn**	**07 18 17.4**	**-9.1**
JOW				S	**Sn**	**07 18 21.6**	**-4.8**
JOW	**Kunigami**	**5.02**	**70**	P	**Pn**	**07 17 28.3**	**-0.5**
JOW				*eS*	**Sn**	**07 18 22.5**	**-3.9**
JTK	**Tokunoshima**	**5.93**	**63**	P	**Pn**	**07 17 40.0**	**-0.8**
JTK				*eS*	**Sn**	**07 18 43.5**	**-4.5**
JAM	**Amami Oshima**	**6.72**	**60**	P	**Pn**	**07 17 49.7**	**-1.6**
JMZ	**Minamidaito 2**	**7.46**	**83**	P	**Pn**	**07 17 59.0**	**-2.1**
JMZ				*eS*	**Sn**	**07 19 16.0**	**-8.5**
KSRS	**Korea Array**	**12.93**	**18**	P	**Pn**	**07 19 14.2**	**+1.3**
baz=192,slow=11,SNR=2.6							
MJAR	**Matsushiro Arr**	**17.26**	**45**	LR	LR	07 26 18.0	
comp=Z,24nm,21.9s,baz=205,slow=35							
MKAR	**Makanchi Array**	**38.80**	**314**	P	**P**	**07 23 23.9**	**-0.4**
0.8nm,0.5s,mb3.6,baz=95,slow=7.5,SNR=14							
KURK	**Kurchatov**	**42.41**	**319**	*e*P	**P**	**07 23 55.7**	**+1.8**
2.2nm,0.5s,mb4.0							
WRA	**Warramunga Arr**	**46.19**	**165**	P	**P**	**07 24 24.2**	**0.0**
2.5nm,0.5s,mb4.1,baz=348,slow=8.9,SNR=35							
BVAR	**Borovoye Array**	**47.96**	**320**	P	**P**	**07 24 37.1**	**-0.5**
1.1nm,0.4s,mb3.9,baz=106,slow=7.9,SNR=5.4							
BRVK	**Borovoye**	**48.03**	**320**	*e*P	**P**	**07 24 37.7**	**-0.4**
2.3nm,0.4s,mb4.2							
ASAR	**Alice Springs**	**49.70**	**167**	P	**P**	**07 24 51.9**	**+0.8**
0.5nm,0.6s,mb3.4,baz=352,slow=12,SNR=6.6							
ARCES	**ARCESS Array B**	**69.23**	**338**	P	**P**	**07 27 04.4**	**+0.1**
3.5nm,1.1s,mb4.0,baz=64,slow=6.1,SNR=3.0							
BRTR	**Keskin Array B**	**73.91**	**307**	P	**P**	**07 27 32.6**	**-0.3**
0.5nm,0.5s,mb3.5,baz=100,slow=2.7,SNR=3.3							

ISCJB ***19*** *07:21:38.7±1.9, 52°.01N±0°.08×172°.92E±0°.08, h28km±12km, mb4.1/19, Error ellipse: s-maj=14.1km s-min=7.2km az=165.1*

NEIC ***19*** *07:21:38.5, 52°.00N×172°.97E, h19km, ML3.8(AEIC), After AEIC.*

MOS ***19*** *07:21:39.3±0.8, 52°.12N×172°.98E, h30km, mb4.4/13, Error ellipse: s-maj=17.9km s-min=10.9km az=94.2*

KRSC ***19*** *07:21:39.1±4.3, 52°.15N×172°.48E, h5km±5km, ML4.4*

IDC ***19*** *07:21:41.7±0.9, 52°.12N×173°.07E, h31km±4km, mb3.8/17, mb1 4.1/18, mb1mx3.9/29, mbtmp3.9/18, ML3.5/1, MS2.7/2, Ms1 2.7/2, ms1mx2.5/30, Error ellipse: s-maj=21.2km s-min=14.3km az=2.0*

ISC 19 07:21:40.7±1.8, 52°.06N±0°.09×173°.03E±0°.07, h26km±11km, h31km±.8km: pP-P, n50, σ0°.77/56, mb4.1/19, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**0.82**	**6**	P	**Pb**	**07 21 55.1**	**-1.3**
FX1				S	**Sb**	**07 22 07.9**	**+0.9**
FX1	**Attu Island--F**	**0.82**	**6**	P	**Pb**	**07 21 55.1**	**-1.3**
FX1				S	**Sb**	**07 22 07.9**	**+0.9**
SMY	**Shemya**	**0.94**	**44**	P	**Pn**	**07 21 56.7**	**-1.4**
SMY				S	**Sb**	**07 22 11.2**	**+1.0**
SMY	**Shemya**	**0.94**	**44**	P	**Pn**	**07 21 56.7**	**-1.4**
SMY				S	**Sb**	**07 22 11.2**	**+1.0**
AMKA	**Amchitka**	**3.96**	**98**	P	**Pn**	**07 22 39.4**	**-0.3**
MKZ	**Mys Kozlova**	**7.21**	**295**	*e*P	**Pn**	**07 23 24.2**	**-0.1**
MKZ				*i* S	**Sn**	**07 24 40.8**	**-4.5**
MKZ	**Mys Kozlova**	**7.21**	**295**	P	**Pn**	**07 23 24.2**	**-0.1**
MKZ				S	**Sn**	**07 24 40.8**	**-4.5**
KBTR	**Krutoberegovo**	**7.29**	**309**	*e*P	**Pn**	**07 23 26.0**	**+0.6**
KBTR	**Krutoberegovo**	**7.29**	**309**	P	**Pn**	**07 23 26.0**	**+0.6**
AVH	**Avacha**	**8.77**	**284**	*e*P	**Pn**	**07 23 45.5**	**-0.2**
GNL	**Ganaly**	**9.27**	**286**	*e*P	**Pn**	**07 23 52.3**	**-0.2**
PETK	**Petropavlovsk-**	**9.39**	**282**	Pn	**Pn**	**07 23 54.2**	**+0.1**
0.5nm,0.3s,baz=95,slow=18,SNR=11							
PETK				Sn	**Sn**	**07 25 33.1**	**-5.7**
0.1nm,0.3s,baz=106,slow=26,SNR=2.6							
PETK				LR	LR	07 27 18.9	
comp=Z,32nm,18.4s,baz=316,slow=36							
PETK	**Petropavlovsk-**	**9.39**	**282**	P	**Pn**	**07 23 54.3**	**+0.1**
PETK						07 25 33.1	
PETK				pmax	pmax		
comp=Z,1.0nm,0.3s							
PETK				MLR	MLR		
comp=Z,32nm,18.4s							
BILL	**Bilibino**	**16.36**	**351**	*e*P	**Pn**	**07 25 35.2**	**+7.0**
BILL				pmax	pmax		
comp=Z,4.0nm,0.7s							
KDAK	**Kodiak Island**	**20.41**	**60**	P	**P**	**07 26 14.1**	**-1.3**
comp=Z,5.3nm,0.3s,baz=294,slow=16,SNR=14							
KDAK	**Kodiak Island**	**20.41**	**60**	P	**P**	**07 26 14.1**	**-1.4**
KDAK				pmax	pmax		
comp=Z,5.0nm,0.3s							
ILAR	**Eielson Array**	**24.05**	**43**	P	**P**	**07 26 51.7**	**-1.5**
comp=Z,2.1nm,0.6s,mb3.8,baz=251,slow=8.9,SNR=52							
ILAR	**Eielson Array**	**24.05**	**43**	P	**P**	**07 26 51.7**	**-1.5**
ILAR				pmax	pmax		
comp=Z,2.0nm,0.6s							
YKA	**Yellowknife Ar**	**38.41**	**45**	P	**P**	**07 28 59.6**	**+0.2**
comp=Z,2.0nm,0.6s,mb4.0,baz=286,slow=8.2,SNR=3.9							
YKA	**Yellowknife Ar**	**38.41**	**45**	P	**P**	**07 28 59.6**	**+0.2**
YKA				pmax	pmax		
comp=Z,2.0nm,0.6s							
GUMO	**Guam**	**44.53**	**221**	LR	LR	07 47 37.9	
comp=Z,12nm,18.6s,baz=257,slow=35							
NVAR	**Mina Array Bea**	**48.45**	**78**	P	**P**	**07 30 21.3**	**+0.7**
comp=Z,0.6nm,0.7s,mb3.7,baz=292,slow=7.6,SNR=6.8							
SPITS	**Spitsbergen Ar**	**49.24**	**354**	P	**P**	**07 30 25.5**	**-0.7**
comp=Z,4.5nm,0.6s,mb4.7,baz=32,slow=7.6,SNR=3.2							
SPITS	**Spitsbergen Ar**	**49.24**	**354**	P	**P**	**07 30 25.5**	**-0.7**
SPITS				pmax	pmax		
comp=Z,5.0nm,0.6s							
PDAR	**Pinedale Array**	**50.85**	**68**	P	**P**	**07 30 39.1**	**+0.3**
comp=Z,0.9nm,0.8s,mb3.8,baz=319,slow=4.3,SNR=7.2							
ULM	**Lac du Bonnet**	**53.45**	**53**	P	**P**	**07 31 00.1**	**+2.1**
comp=Z,1.8nm,0.5s,mb4.3,baz=292,slow=7.0,SNR=3.4							
MKAR	**Makanchi Array**	**55.52**	**304**	P	**P**	**07 31 12.9**	**-0.2**
comp=Z,0.9nm,0.7s,mb3.9,baz=57,slow=6.2,SNR=4.9							
MKAR	**Makanchi Array**	**55.52**	**304**	P	**P**	**07 31 12.9**	**-0.2**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
ARCES	**ARCESS Array B**	**56.41**	**347**	P	**P**	**07 31 19.1**	**0.0**
comp=Z,1.0nm,0.7s,mb4.0,baz=23,slow=8.0,SNR=1.2							
ARCES	**ARCESS Array B**	**56.41**	**347**	P	**P**	**07 31 19.2**	**0.0**
ARCES				pmax	pmax		
comp=Z,1.0nm,0.7s							
BVAR	**Borovoye Array**	**56.95**	**315**	P	**P**	**07 31 23.5**	**+0.2**
comp=Z,1.8nm,0.6s,mb4.3,baz=65,slow=8.0,SNR=4.9							
BVAR				pP	pP	07 31 33.1	+1.7
comp=Z,1.5nm,0.6s,baz=49,slow=7.7,SNR=4.9							
BVAR	**Borovoye Array**	**56.95**	**315**	P	**P**	**07 31 23.5**	**+0.2**
BVAR				*PP	pP	07 31 33.1	+1.8
BVAR				pmax	pmax		
comp=Z,2.0nm,0.6s							
BVAR				pmax	pmax		
comp=Z,2.0nm,0.6s							
JOF	**Joensuu**	**61.47**	**341**	*e*P	**P**	**07 31 54.4**	**+0.1**
JOF				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.8							
SCHQ	**Schefferville**	**62.47**	**34**	P	**P**	**07 32 00.2**	**-0.9**
comp=Z,3.1nm,0.7s,mb4.6,baz=250,slow=7.1,SNR=3.7							
KAF	**Kangasniemi**	**63.15**	**343**	*e*P	**P**	**07 32 05.0**	**-0.6**
KAF				pmax	pmax		
comp=Z,3.0nm,0.5s,mb4.7							
TXAR	**Lajitas Array**	**63.50**	**76**	P	**P**	**07 32 09.2**	**+0.8**
comp=Z,0.9nm,0.5s,mb4.2,baz=297,slow=4.2,SNR=19							
TXAR				pP	pP	07 32 18.1	+1.6
comp=Z,4.3nm,0.7s,baz=309,slow=4.5,SNR=25							
TXAR	**Lajitas Array**	**63.50**	**76**	P	**P**	**07 32 09.3**	**+0.9**
TXAR				*PP	pP	07 32 18.1	+1.5
TXAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
TXAR				pmax	pmax		
comp=Z,4.0nm,0.7s							
FINES	**FINESS Array B**	**63.82**	**343**	P	**P**	**07 32 10.5**	**+0.5**
comp=Z,3.3nm,0.7s,mb4.5,baz=22,slow=6.2,SNR=7.9							
FINES				pP	pP	07 32 19.8	+1.6
comp=Z,5.2nm,0.8s,baz=27,slow=6.4,SNR=7.0							
FINES	**FINESS Array B**	**63.82**	**343**	P	**P**	**07 32 10.5**	**+0.5**
FINES				*PP	pP	07 32 19.8	+1.6
FINES				pmax	pmax		
comp=Z,3.0nm,0.7s							
FINES				pmax	pmax		
comp=Z,5.0nm,0.8s							
NB2	**NORSAR Subarra**	**66.31**	**350**	P	**P**	**07 32 26.6**	**+0.4**
comp=Z,4.3nm,0.9s,mb4.5,baz=11,slow=6.5							
NOA	**NORSAR Array B**	**66.31**	**350**	P	**P**	**07 32 26.8**	**+0.6**
comp=Z,1.8nm,0.7s,mb4.2,baz=12,slow=6.3,SNR=4.5							
NOA				pP	pP	07 32 35.8	+1.4
comp=Z,3.8nm,0.8s,baz=13,slow=6.5,SNR=8.5							
NOA	**NORSAR Array B**	**66.31**	**350**	P	**P**	**07 32 26.8**	**+0.6**
NOA				*PP	pP	07 32 35.8	+1.4
NOA				pmax	pmax		
comp=Z,2.0nm,0.7s							
NOA				pmax	pmax		
comp=Z,4.0nm,0.8s							
AKASG	**Malin Array Be**	**73.12**	**337**	P	**P**	**07 33 08.5**	**+0.2**
comp=Z,0.3nm,0.3s,mb3.6,baz=23,slow=5.9,SNR=2.2							
AKASG	**Malin Array Be**	**73.12**	**337**	P	**P**	**07 33 08.5**	**+0.2**
GERES	**GERESS Array B**	**77.94**	**346**	P	**P**	**07 33 36.1**	**+0.2**
comp=Z,0.7nm,0.6s,mb3.8,baz=44,slow=5.9,SNR=4.2							
GERES	**GERESS Array B**	**77.94**	**346**	P	**P**	**07 33 36.1**	**+0.2**
GERES				pmax	pmax		
comp=Z,1.0nm,0.6s							
WRA	**Warramunga Arr**	**79.24**	**217**	P	**P**	**07 33 43.6**	**+0.3**
comp=Z,0.5nm,0.8s,mb3.5,baz=33,slow=6.8,SNR=4.6							
WRA	**Warramunga Arr**	**79.24**	**217**	P	**P**	**07 33 43.7**	**+0.3**
WRA				pmax	pmax		
comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**82.81**	**216**	P	**P**	**07 34 02.7**	**+0.4**
comp=Z,0.2nm,0.7s,mb3.3,baz=28,slow=6.4,SNR=3.3							
ASAR	**Alice Springs**	**82.81**	**216**	P	**P**	**07 34 02.7**	**+0.4**

NEIC ***19*** *07:37:52.0, 15°.64N×93°.78W, h81km, MD4.1(MEX), After MEX.*

MEX 19 07:37:52.0±0.4, 15°.64N×93°.78W, h81km±4km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.54**	**83**	*e*P	Pn	07 38 04.9	-1.4
PCIG				*i* S	Sn	07 38 15.5	-1.4
TGIG		**1.29**	**29**	*e*P	Pn	07 38 13.5	-1.2
TGIG				*i* S	Sn	07 38 30.0	-1.8
SCX	**San Cristobal**	**1.55**	**45**	*i* P	Pn	07 38 16.6	-1.4
SCX				*i* S	Sn	07 38 36.7	-1.0
SCX	**San Cristobal**	**1.55**	**45**	*i* P	Pn	07 38 16.6	-1.4
SCX				*i* S	Sn	07 38 36.7	-1.0
THIG		**1.63**	**116**	*i* P	Pn	07 38 17.7	-1.4
THIG				*i* S	Sn	07 38 38.0	-1.7
CCIG	**Comitan**	**1.70**	**68**	*e*P	Pn	07 38 19.3	-0.8
CCIG				*i* S	Sn	07 38 40.5	-0.7
CCIG	**Comitan**	**1.70**	**68**	*e*P	Pn	07 38 19.3	-0.8
CCIG				*i* S	Sn	07 38 40.5	-0.7
CMIG	**Matias Romero**	**1.79**	**324**	*i* P	Pn	07 38 21.2	+0.1
CMIG				*i* S	Sn	07 38 41.7	-1.6
CMIG	**Matias Romero**	**1.79**	**324**	*i* P	Pn	07 38 20.0	-1.1
CMIG				*i* S	Sn	07 38 41.7	-1.6
HUIG	**Huatulco**	**2.25**	**274**	*i* P	Pn	07 38 26.1	-1.1
HUIG				*i* S	Sn	07 38 51.6	-2.5
HUIG	**Huatulco**	**2.25**	**274**	*i* P	Pn	07 38 26.1	-1.1
HUIG				*i* S	Sn	07 38 51.6	-2.5
VHO	**Vista Hermosa**	**3.17**	**297**	*i* P	Pn	07 38 39.1	-0.6
VHO				*i* S	Sn	07 39 15.7	-0.8
VHO	**Vista Hermosa**	**3.17**	**297**	*i* P	Pn	07 38 39.1	-0.6
VHO				*i* S	Sn	07 39 15.7	-0.8
PNIG	**Pinotepa**	**4.25**	**281**	*i* P	Pn	07 38 54.3	0.0
PNIG				*i* S	Sn	07 39 42.2	-0.5
PNIG	**Pinotepa**	**4.25**	**281**	*i* P	Pn	07 38 54.3	0.0
PNIG				*i* S	Sn	07 39 42.2	-0.5

ISCJB ***19*** *07:37:52.6±0.8, 2°.43S±0°.06×100°.00E±0°.07, h41km, mb3.9/5, Error ellipse: s-maj=9.9km s-min=7.8km az=160.9*

DJA ***19*** *07:37:53, 2°.38S×100°.08E, h22km, MLv3.8/4*

IDC ***19*** *07:37:55.6±2.6, 2°.23S×100°.18E, h41km±8km, mb3.6/6, mb1 3.8/6, mb1mx3.5/20, mbtmp3.6/6, Error ellipse: s-maj=108.4km s-min=15.6km az=56.0*

ISC 19 07:37:54.6±0.8, 2°.38S±0°.06×100°.03E±0°.06, h43km, h43km±3.0km: pP-P, n13, σ0°.88/16, mb3.9/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.41**	**318**	P	**Pn**	**07 38 17.3**	**-0.5**
SISI				S	**Sn**	**07 38 36.7**	**+1.5**
PDSI	**Padang**	**1.52**	**16**	P	**Pn**	**07 38 18.0**	**-1.3**
PDSI				S	**Sn**	**07 38 37.8**	**-0.1**
PPI	**Padang Panjang**	**1.94**	**11**	P	**Pn**	**07 38 24.3**	**-0.9**
PPI				S	**Sn**	**07 38 48.9**	**+0.5**
SDSI	**Sungai Dareh**	**2.00**	**44**	P	**Pn**	**07 38 26.2**	**+0.2**
SDSI				S	**Sn**	**07 38 50.8**	**+1.0**
KSI	**Kapahiang**	**2.85**	**116**	P	**Pn**	**07 38 36.5**	**-1.1**
MNSI	**Mandailing Nat**	**3.19**	**352**	P	**Pn**	**07 38 41.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**20.73**	**357**	P	**P**	**07 42 30.9**	**-0.8**
1.2nm,0.4s,baz=185,slow=10.0,SNR=4.0							
WRA	**Warramunga Arr**	**37.77**	**120**	P	**P**	**07 45 07.7**	**+0.8**
0.8nm,0.5s,mb3.8,baz=303,slow=8.4,SNR=17							
WRA				pP	pP	07 45 18.4	-0.3
0.8nm,0.6s,baz=302,slow=9.1,SNR=7.0							
ASAR	**Alice Springs**	**39.00**	**126**	P	**P**	**07 45 18.6**	**+1.4**
0.3nm,0.3s,mb3.5,baz=306,slow=7.7,SNR=8.9							
ASAR				pP	pP	07 45 29.4	+0.3
0.7nm,0.6s,baz=302,slow=8.1,SNR=4.9							
SONM	**Songino Array**	**50.31**	**6**	P	**P**	**07 46 47.4**	**+0.5**
1.1nm,0.6s,mb4.1,baz=187,slow=9.5,SNR=7.7							
MKAR	**Makanchi Array**	**51.40**	**344**	P	**P**	**07 46 55.1**	**0.0**
1.3nm,0.6s,mb4.0,baz=145,slow=8.4,SNR=11							
MKAR				pP	pP	07 47 08.2	+0.9
0.9nm,0.6s,baz=158,slow=8.6,SNR=4.9							
ZALV	**Zalesovo Beam**	**57.54**	**349**	P	**P**	**07 47 39.2**	**-0.3**
0.7nm,0.3s,mb4.2,baz=193,slow=6.1,SNR=4.1							
TXAR	**Lajitas Array**	**144.98**	**38**	PKP	PKPdf	07 57 28.4	+0.5
0.6nm,0.6s,baz=304,slow=1.2,SNR=9.1							

IDC 19 08:56:06.1±1.0, 22°.36N×45°.28W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.7/25, mbtmp3.6/5, MS3.4/7, Ms1 3.4/7, ms1mx3.1/42, Error ellipse: s-maj=33.9km s-min=25.5km az=37.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**20.03**	**262**	LR	LR	09 06 50.9	
comp=Z,87nm,20.1s,baz=79,slow=32							
ROSC	**El Rosal**	**33.05**	**243**	LR	LR	09 15 28.1	
comp=Z,30nm,19.9s,baz=182,slow=35							
TKL	**Tuckaleechee C**	**35.95**	**300**	LR	LR	09 14 46.7	
comp=Z,56nm,20.8s,baz=58,slow=31							
MDT	**Midelt**	**37.32**	**65**	LR	LR	09 14 37.9	
comp=Z,44nm,21.4s,baz=334,slow=30							
LPAZ	**La Paz**	**44.45**	**212**	P	P	09 04 20.4	+1.4
0.9nm,0.8s,baz=22,slow=5.4,SNR=4.2							
TORD	**Torodi Ar. Bea**	**45.51**	**93**	P	P	09 04 27.4	-0.2
161nm,0.4s,baz=303,slow=9.8,SNR=3.2							
TXAR	**Lajitas Array**	**52.55**	**291**	P	P	09 05 20.9	-0.6
0.1nm,0.5s,baz=101,slow=6.5,SNR=3.5							
TXAR				LR	LR	09 27 48.3	
comp=Z,41nm,18.4s,baz=5.0,slow=36							
PDAR	**Pinedale Array**	**56.51**	**307**	P	P	09 05 50.6	+0.5
0.6nm,0.7s,baz=99,slow=7.9,SNR=5.4							
PDAR				LR	LR	09 26 43.6	
comp=Z,45nm,18.9s,baz=240,slow=32							
NVAR	**Mina Array Bea**	**63.49**	**303**	P	P	09 06 37.8	-0.4
0.2nm,0.6s,baz=96,slow=7.3,SNR=2.6							
ILAR	**Eielson Array**	**74.81**	**334**	P	P	09 07 48.6	+0.7
1.1nm,0.8s,baz=72,slow=4.6,SNR=13							
AKTO	**Aktyubinsk**	**81.10**	**39**	LR	LR	09 41 17.7	
comp=Z,65nm,20.1s,baz=177,slow=33							
PMSA	**Palmer Station**	**88.06**	**188**	P	P	09 08 57.3	-0.5
7.3nm,1.0s,baz=32,slow=15,SNR=5.3							

ISCJB ***19*** *08:58:03.9±0.4, 16°.91S±0°.08×16°.57W±0°.08, h10km, mb4.5/30, MS3.6/5, Error ellipse: s-maj=12.9km s-min=10.1km az=145.9*

IDC ***19*** *08:58:03.3±0.6, 16°.95S×16°.57W, h0km, mb4.2/16, mb1 4.3/16, mb1mx4.2/23, mbtmp4.2/16, MS3.6/5, Ms1 3.6/5, ms1mx3.3/29, Error ellipse: s-maj=20.7km s-min=15.0km az=155.0*

NEIC ***19*** *08:58:05.5±0.4, 17°.00S×16°.50W, h10km, mb4.8/10, Error ellipse: s-maj=13.9km s-min=10.8km az=152.0*

ISC 19 08:58:05.7±0.4, 16°.95S±0°.08×16°.58W±0°.08, h10km, n48, σ1°.10/44, mb4.5/30, MS3.6/5, 3C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**21.91**	**298**	P	**P**	**09 02 58.0**	**-1.3**
9.4nm,0.9s,mb4.2,baz=135,slow=8.6,SNR=3.2							
RCBR	**Riachuelo**	**21.91**	**298**	*e*P	**P**	**09 03 02.2**	**+2.9**
113nm,1.6s,mb5.0							
LIC	**Lamto**	**25.70**	**27**	*e*P	**P**	**09 03 45.1**	**+8.8**
62nm,1.1s,mb5.0							
KIC	**Kosan Boka**	**25.95**	**28**	*e*P	**P**	**09 03 43.3**	**+4.8**
80nm,1.6s,mb5.0							
TIC	**Toumodi**	**26.08**	**27**	*e*P	**P**	**09 03 44.4**	**+4.7**
15nm,0.2s,mb5.2							
DBIC	**Dimbokro**	**26.17**	**27**	P	**P**	**09 03 40.0**	**-0.6**
5.8nm,1.0s,mb4.1,baz=189,slow=12,SNR=4.2							
DBIC	**Dimbokro**	**26.17**	**27**	*e*P	**P**	**09 03 41.8**	**+1.2**
12nm,1.1s,mb4.3							
BDFB	**Brasilia**	**30.19**	**268**	LR	LR	09 13 58.4	
comp=Z,168nm,20.7s,MS3.7,baz=177,slow=32							
BBTS	**Babate**	**31.41**	**0**	LR	LR	09 15 17.2	
comp=Z,120nm,18.1s,MS3.6,baz=292,slow=33							
TORD	**Torodi Ar. Bea**	**34.93**	**32**	P	**P**	**09 04 57.2**	**-0.7**
9.1nm,1.0s,mb4.7,baz=218,slow=8.5,SNR=19							
TORD	**Torodi Ar. Bea**	**34.93**	**32**	P	**P**	**09 04 57.2**	**-0.7**
SUR	**Sutherland**	**37.07**	**122**	P	**P**	**09 05 14.4**	**-1.8**
7.5nm,0.6s,mb4.7,baz=341,slow=11,SNR=7.0							
CPUP	**Villa Florida**	**38.88**	**249**	P	**P**	**09 05 30.8**	**-0.8**
0.2nm,0.3s,mb3.3,baz=62,slow=17,SNR=2.1							
CPUP				LR	LR	09 20 06.3	
comp=Z,44nm,20.3s,MS3.3,baz=235,slow=34							
CPUP	**Villa Florida**	**38.88**	**249**	P	**P**	**09 05 30.8**	**-0.8**
CPUP				LR	LR	09 20 06.3	
BOSA	**Boshof**	**40.09**	**114**	P	**P**	**09 05 41.4**	**-0.2**
3.0nm,0.6s,mb4.2,baz=292,slow=18,SNR=9.2							
BOSA				LR	LR	09 19 22.5	
comp=Z,105nm,21.0s,MS3.7,baz=347,slow=32							
BOSA	**Boshof**	**40.09**	**114**	P	**P**	**09 05 41.4**	**-0.2**
BOSA				LR	LR	09 19 22.5	
LSZ	**Lusaka**	**42.97**	**94**	*e*P	**P**	**09 06 05.6**	**+0.2**
8.1nm,1.0s,mb4.4							
CFAA	**Coronel Fontan**	**48.88**	**243**	P	**P**	**09 06 51.1**	**-0.8**
0.3nm,0.7s,mb3.4,baz=233,slow=4.8,SNR=3.9							
LPAZ	**La Paz**	**49.29**	**263**	P	**P**	**09 06 55.4**	**+0.1**
1.1nm,0.9s,mb3.9,baz=45,slow=4.3,SNR=3.5							
LPAZ	**La Paz**	**49.29**	**263**	*e*P	**P**	**09 06 56.1**	**+0.8**
6.6nm,1.4s,mb4.5							
MDT	**Midelt**	**50.79**	**13**	P	**P**	**09 07 06.7**	**+0.5**
3.1nm,1.0s,mb4.2,baz=195,slow=6.0,SNR=4.5							
PLCA	**Paso Flores**	**51.97**	**231**	P	**P**	**09 07 14.3**	**-0.8**
2.3nm,1.1s,mb4.0,baz=132,slow=7.3,SNR=2.8							
PLCA	**Paso Flores**	**51.97**	**231**	P	**P**	**09 07 14.3**	**-0.8**
KMBO	**Kilima Mbogo**	**55.22**	**79**	P	**P**	**09 07 39.9**	**+0.5**
0.9nm,0.3s,mb4.3,baz=180,slow=24,SNR=5.4							
KEST	**Kesra**	**57.86**	**25**	P	**P**	**09 07 58.5**	**+0.8**
2.7nm,0.8s,mb4.3,baz=207,slow=6.4,SNR=6.9							
KEST	**Kesra**	**57.86**	**25**	*e*P	**P**	**09 07 59.1**	**+1.4**
SDV	**Santo Domingo**	**59.29**	**291**	*e*P	**P**	**09 08 10.6**	**+2.5**
7.9nm,0.8s,mb4.8							
DAVOX	**Davos/Dischmat**	**67.76**	**19**	LR	LR	09 36 25.0	
comp=Z,57nm,19.2s,MS3.8,baz=266,slow=34							
RER	**Riviere de l'E**	**67.96**	**106**	*e*P	**P**	**09 09 08.3**	**+2.9**
2.8nm,0.7s,mb4.4							
DAVA	**Damuels**	**68.21**	**19⇑**	*i*P	**P**	**09 09 06.4**	**+0.1**
16nm,1.2s,mb5.0							
FETA	**Feichten**	**68.25**	**20⇑**	*i*P	**P**	**09 09 06.7**	**+0.1**
7.9nm,1.1s,mb4.7							
BFO	**Black Forest**	**68.68**	**18**	*e*P	**P**	**09 09 09.1**	**-0.1**
5.5nm,0.9s,mb4.5							
WTTA	**Wattenberg**	**68.76**	**20⇑**	*i*P	**P**	**09 09 10.1**	**+0.4**
7.9nm,1.1s,mb4.6							
GERES	**GERESS Array B**	**70.82**	**21**	P	**P**	**09 09 19.9**	**-2.5**
1.7

comp=Z,6.5nm,0.2s
JOF eS Sn 09 33 17.0 -0.1
JOF Joensuu 1.89 19 Pg Pn 09 32 52.6 0.0
JOF S Sn 09 33 16.9 -0.2
FIA0 FINESS Array S 1.89 281 Pg Pn 09 32 53.1 +0.4
baz=111,slow=16
FIA0 Lg 09 33 18.8
baz=104,slow=28
FIA0 Rg 09 33 29.9
baz=95,slow=37
FIA0 FINESS Array S 1.89 281 eP Pn 09 32 53.0 +0.3
FIA0 eSG Sn 09 33 19.5 +2.3
FIA0 MSG 09 33 19.5
comp=Z,7.2nm,0.2s
FIA0 eRG 09 33 29.7
FIA0 FINESS Array S 1.89 281 Pg Pn 09 32 53.1 +0.4
baz=111,slow=15,SNR=119
FIA0 Lg 09 33 18.8
baz=104,slow=26,SNR=6.3
FINES FINESS Array B 1.89 281 Pn Pn 09 32 53.1 +0.5
comp=Z,1.7nm,0.3s,baz=102,slow=17,SNR=50
FINES Lg 09 33 18.2
comp=Z,3.0nm,0.3s,baz=100,slow=31,SNR=14
FINES Rg 09 33 30.4
comp=Z,34nm,0.9s,baz=102,slow=29,SNR=37
KAF Kangasniemi 1.99 301 ePB Pn 09 32 55.6 +1.5
KAF eSG Sn 09 33 22.4 +2.8
KAF MSG 09 33 22.4
comp=Z,8.0nm,0.2s
KAF Kangasniemi 1.99 301 Pb Pn 09 32 55.5 +1.5
PVF Pernaja 2.09 255 eP Pn 09 32 55.3 -0.1
PVF eSG Sn 09 33 25.4 +3.3
PVF MSG 09 33 25.4
comp=Z,7.2nm,0.2s
PVF Pernaja 2.09 255 P Pn 09 32 55.3 -0.1
PVF Sg Sn 09 33 25.3 +3.2
comp=Z,7.2nm,0.2s
SUF Sumiainen 2.39 313 ePB Pn 09 33 01.7 +2.2
SUF MSG 09 33 34.6
comp=Z,8.3nm,0.1s
SUF eSG Sg 09 33 34.6 -1.2
SUF Sumiainen 2.39 313 Pb Pn 09 33 01.7 +2.2
KEF Keuruu 2.63 295 eP Pn 09 33 04.6 +1.9
KEF MSG 09 33 39.0
comp=Z,2.2nm,0.4s
KEF eSB Sn 09 33 39.0 +3.7
MEF Metsahovi 2.89 254 eP Pn 09 33 06.9 +0.5
MEF eSG Sg 09 33 49.5 -2.4
MEF MSG 09 33 49.5
comp=Z,12nm,0.2s
MEF Metsahovi 2.89 254 P Pn 09 33 06.8 +0.5
MEF Sg Sg 09 33 49.4 -2.4
comp=Z,12nm,0.2s
VAF Ylistaro 3.91 302 eP Pn 09 33 21.5 +1.1
baz=124
MTSE Matsula 3.94 234 eP Pn 09 33 21.2 +0.5
MTSE Matsula 3.94 234 P Pn 09 33 21.2 +0.5
RAF Rauma 3.98 272 eP Pn 09 33 22.5 +1.2
baz=90
RAF eSG Sg 09 34 26.0 -0.9
RAF MSG 09 34 26.0
comp=Z,3.3nm,0.2s
RAF Rauma 3.98 272 P Pn 09 33 22.4 +1.1
RAF Sg Sg 09 34 25.9 -0.9
comp=Z,3.3nm,0.2s
GRAU Graesoe 5.66 267 eP Pn 09 33 43.4 -1.0
GRAU eS Sn 09 34 47.5 -2.4
GRAU Graesoe 5.66 267 P Pn 09 33 43.7 -0.7
GRAU S Sn 09 34 47.5 -2.4
NRTU Norrtaelje 5.80 260 eP Pn 09 33 46.4 +0.1
NRTU Norrtaelje 5.80 260 P Pn 09 33 46.3 0.0
FORU Forsmark 5.82 268 eP Pn 09 33 47.6 +1.1
FORU Forsmark 5.82 268 P Pn 09 33 46.5 -0.1
HASU Hassela 6.43 285 P Pn 09 33 56.2 +1.2
GOTU Gotland 6.76 244 P Pn 09 33 59.0 -0.5
ROTU Roteberg 6.82 278 eP Pn 09 33 59.9 -0.4
ROTU Roteberg 6.82 278 P Pn 09 33 59.8 -0.5
FALU Falun 6.94 271 eP Pn 09 34 01.7 -0.2
FALU Falun 6.94 271 P Pn 09 34 01.6 -0.3
LNKU Linkoeping 7.87 255 eP Pn 09 34 15.0 +0.3
LNKU Linkoeping 7.87 255 P Pn 09 34 15.0 +0.3
HFS Hagfors 8.05 270 Pn Pn 09 34 16.8 -0.4
baz=89,slow=14
HFS Sn Sn 09 35 43.2 -5.7
baz=93,slow=22
HFS Hagfors 8.05 270 Pn Pn 09 34 16.3 -0.9
comp=Z,0.2nm,0.3s,baz=101,slow=15,SNR=12
HFS Sn Sn 09 35 41.1 -7.7
comp=Z,0.1nm,0.3s,baz=96,slow=29,SNR=2.6
HFS Hagfors 8.05 270 eP Pn 09 34 16.8 -0.4
HFS eS Sn 09 35 43.2 -5.7
HFS Hagfors 8.05 270 P Pn 09 34 16.7 -0.5
UDD Uddeholm 8.11 270 eP Pn 09 34 16.6 -1.4
ARA0 ARCESS Array S 8.62 350 Pn Pn 09 34 23.3 -1.7
baz=163,slow=14
ARA0 Sn Sn 09 35 58.4 -4.3
baz=170,slow=28
ARA0 ARCESS Array S 8.62 350 eP Pn 09 34 23.3 -1.7
ARA0 eS Sn 09 35 58.4 -4.3
ARA0 ARCESS Array S 8.62 350 Pn Pn 09 34 23.3 -1.6
baz=163,slow=13,SNR=8.3
ARA0 Sn Sn 09 35 58.4 -4.3
baz=170,slow=25
ARCES ARCESS Array B 8.62 350 Pn Pn 09 34 23.8 -1.2
comp=Z,0.1nm,0.3s,baz=160,slow=13,SNR=4.0
ARCES Sn Sn 09 35 58.5 -4.2
comp=Z,0.1nm,0.3s,baz=168,slow=22,SNR=3.5
NB2 NORSAR Subarra 9.07 278 Pn Pn 09 34 30.3 -0.8
baz=82,slow=14
NB2 NORSAR Subarra 9.07 278 eP Pn 09 34 30.3 -0.8
NB2 NORSAR Subarra 9.07 278 P Pn 09 34 30.3 -0.9
NOA NORSAR Array B 9.07 278 Pn Pn 09 34 28.4 -2.8
comp=Z,0.2nm,0.3s,baz=88,slow=14,SNR=5.7

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*ISCJB **19** 09:34:20.2±0.7, 1°.2N±0°.1×27°.0W±0°.1, h10km, mb4.1/12, MS3.8/13, Error ellipse: s-maj=23.1km s-min=11.7km az=143.3*
*IDC **19** 09:34:21.0±0.8, 1°.34N×27°.08W, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.9/24, mbtmp4.0/9, ML4.3/1, MS3.8/15, Ms1 3.8/15, ms1mx3.7/23, Error ellipse: s-maj=37.1km s-min=17.2km az=146.0*
*NEIC **19** 09:34:21.6±0.6, 1°.17N×27°.05W, h10km, mb4.7/3, Error ellipse: s-maj=23.2km s-min=10.5km az=140.0*
ISC 19 09:34:21.4±0.6, 1°.1N±0°.1×27°.0W±0°.1, h10km, n29, σ1°02/18, mb4.1/12, MS3.8/13, 1D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**11.25**	**232**	Pn	**Pn**	**09 36 59.8**	**-2.6**
	1.4nm,0.3s,baz=45,slow=14,SNR=30						
RCBR				Sn	**Sn**	**09 38 53.8**	**-15**
	0.2nm,0.3s,baz=330,slow=20,SNR=3.8						
RCBR				LR	LR	09 40 12.8	
	comp=Z,624nm,20.7s,baz=10,slow=31						
SACV	**Santiago Islan**	**14.19**	**13**	ePn	**Pn**	**09 37 42.1**	**-0.5**
	32nm,0.6s						
BBTS	**Babate**	**16.98**	**37**	Pn	**Pn**	**09 38 18.0**	**-1.2**
	1.2nm,0.3s,baz=243,slow=0.6,SNR=2.0						
BBTS				LR	LR	09 43 35.4	
	comp=Z,287nm,18.4s,baz=150,slow=33						
BBTS	**Babate**	**16.98**	**37**	Pn	**Pn**	**09 38 18.0**	**-1.2**
BBTS				LR	LR	09 43 35.4	
LIC	**Lamto**	**22.49**	**76**	eP	**P**	**09 39 26.3**	**+5.0**
	58nm,1.1s,mb4.9						
TIC	**Toumodi**	**22.59**	**75**	eP	**P**	**09 39 27.1**	**+4.8**
	26nm,1.0s,mb4.6						
DBIC	**Dimbokro**	**22.75**	**75**	P	**P**	**09 39 23.5**	**-0.6**
	12nm,1.1s,mb4.2,baz=229,slow=12,SNR=9.0						
DBIC				LR	LR	09 45 49.0	
	comp=Z,155nm,20.3s,MS3.4,baz=112,slow=30						
KIC	**Kosan Boka**	**22.80**	**76**	eP	**P**	**09 39 24.2**	**-0.3**
	23nm,1.0s,mb4.6						
BDFB	**Brasilia**	**26.62**	**231**	P	**P**	**09 40 00.7**	**+0.4**
	2.0nm,0.5s,mb3.9,baz=348,slow=22,SNR=3.1						
BDFB				LR	LR	09 49 23.3	
	comp=Z,426nm,19.3s,MS4.0,baz=17,slow=34						
TORD	**Torodi Ar. Bea**	**30.82**	**66**	P	**P**	**09 40 38.4**	**+0.5**
	10nm,0.8s,mb4.7,baz=254,slow=9.3,SNR=31						
TORD				LR	LR	09 50 52.4	
	comp=Z,133nm,21.9s,MS3.6,baz=275,slow=32						
MDT	**Midelt**	**37.93**	**31**	P	**P**	**09 41 38.3**	**-0.9**
	1.0nm,0.8s,mb3.6,baz=270,slow=5.1,SNR=2.1						
CPUP	**Villa Florida**	**40.01**	**225**	LR	LR	09 57 56.6	
	comp=Z,262nm,18.9s,MS4.1,baz=43,slow=35						
ESDC	**Sonseca Array**	**43.76**	**26**	LR	LR	10 00 22.0	
	comp=Z,55nm,19.3s,MS3.5,baz=0.0,slow=36						
LPAZ	**La Paz**	**44.13**	**245**	P	**P**	**09 42 32.1**	**+1.6**
	2.7nm,0.8s,mb4.0,baz=5.9,slow=2.9,SNR=9.5						
LPAZ				LR	LR	10 00 31.6	
	comp=Z,155nm,19.0s,MS3.9,baz=73,slow=36						
ROSC	**El Rosal**	**47.42**	**276**	LR	LR	10 01 13.8	
	comp=Z,54nm,20.9s,MS3.5,baz=158,slow=34						
KEST	**Kesra**	**48.21**	**40**	LR	LR	10 03 28.3	
	comp=Z,57nm,19.8s,MS3.6,baz=229,slow=36						
PLCA	**Paso Flores**	**57.44**	**218**	LR	LR	10 08 21.6	
	comp=Z,102nm,18.7s,MS4.0,baz=35,slow=35						
BOSA	**Boshof**	**58.04**	**125**	LR	LR	10 03 11.7	
	comp=Z,127nm,18.7s,MS4.1,baz=96,slow=30						
GERES	**GERESS Array B**	**59.00**	**30**	P	**P**	**09 44 22.3**	**+1.0**
	0.3nm,0.3s,mb3.8,baz=215,slow=1.6,SNR=5.2						
GERES	**GERESS Array B**	**59.00**	**30**	P	**P**	**09 44 22.3**	**+1.0**
NOA	**NORSAR Array B**	**66.49**	**19**	LR	LR	10 12 41.8	
	comp=Z,57nm,18.2s,MS3.8,baz=285,slow=35						
BRTR	**Keskin Array B**	**67.03**	**47**	P	**P**	**09 45 16.0**	**+1.1**
	0.4nm,0.6s,mb3.7,baz=257,slow=3.9,SNR=2.9						
BRTR				LR	LR	10 15 29.6	
	comp=Z,60nm,20.7s,MS3.8,baz=54,slow=37						
AKASG	**Malin Array Be**	**68.39**	**35**	P	**P**	**09 45 24.1**	**+0.8**
	0.3nm,0.3s,mb3.6,baz=248,slow=4.9,SNR=4.2						
FINES	**FINESS Array B**	**72.22**	**24**	LR	LR	10 16 01.6	
	comp=Z,113nm,19.4s,MS4.2,baz=277,slow=35						
TXAR	**Lajitas Array**	**77.86**	**300**	P	**P**	**09 46 19.9**	**+0.1**
	0.2nm,0.8s,mb3.1,baz=101,slow=6.5,SNR=3.5						
AKTO	**Aktyubinsk**	**85.97**	**40**	⇓Lg		09 46 10.2	
	0.9nm,0.9s						
ASAR	**Alice Springs**	**150.90**	**142**	PKP	PKPdf	09 54 11.3	+1.7
	0.2nm,0.8s,baz=332,slow=40,SNR=3.0						
ASAR				PKPbc	PKPbc	09 54 17.9	+2.7
	0.7nm,0.8s,baz=196,slow=2.1,SNR=7.3						
WRA	**Warramunga Arr**	**153.83**	**137**	PKPab	PKPab	09 54 37.9	+3.1
	0.5nm,0.7s,baz=219,slow=3.4,SNR=5.1						
WRA	**Warramunga Arr**	**153.83**	**137**	PKPab	PKPab	09 54 37.9	+3.1

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*IDC **19** 09:47:13.8±0.6, 15°.20S×173°.34W, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.3/21, mbtmp4.2/11, MS3.6/12, Ms1 3.6/12, ms1mx3.5/23, Error ellipse: s-maj=29.3km s-min=14.5km az=133.0*
*ISCJB **19** 09:47:17.4±0.3, 15°.23S±0°.10×173°.52W±0°.09, h33km, mb4.5/47, MS3.7/13, Error ellipse: s-maj=17.7km s-min=7.5km az=139.2*
*NEIC **19** 09:47:19.2±0.2, 15°.24S×173°.47W, h35km, mb4.6/34, Error ellipse: s-maj=13.4km s-min=4.8km az=137.0*
*BJI **19** 09:47:28.2, 15°.20S×173°.50W, h65km, mB5.1/7, mb5.0/11, Ms4.7/4, Ms7 4.4/4*
ISC 19 09:47:19.4±0.3, 15°.23S±0°.10×173°.51W±0°.09, h35km, n318, σ0°40/311, mb4.5/47, MS3.7/13, 112C-107D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.13**	**52**	Pn	**Pn**	**09 47 46.6**	**-6.0**
	341nm,0.3s,baz=71,slow=0.8,SNR=329						
AFI				Sn	**Sn**	**09 48 05.4**	**-12**
	2μm,0.3s,baz=50,slow=22,SNR=35						
AFI	**Afiamalu**	**2.13**	**52**	ePn	**Pn**	**09 47 46.7**	**-5.8**
AFI				eSn	**Sn**	**09 48 05.6**	**-12**
MSVF	**Nonsavu**	**8.47**	**252**	ePn	**Pn**	**09 49 33.0**	**+13**
URZ	**Urewera**	**24.39**	**198**	P	**P**	**09 52 34.3**	**-0.1**
	7.7nm,0.4s,mb4.5,baz=337,slow=6.3,SNR=9.0						
HNR	**Honiara**	**26.55**	**279**	LR	LR	10 01 57.2	
	comp=Z,80nm,18.7s,MS3.3,baz=215,slow=33						
RPZ	**Rata Peaks**	**31.30**	**202**	P	**P**	**09 53 36.7**	**+0.5**
	5.4nm,0.6s,mb4.5,baz=47,slow=4.2,SNR=5.0						
ARMA	**Armidale**	**35.34**	**239**	eP	**P**	**09 54 10.2**	**-1.3**
	18nm,1.4s,mb4.8						
STKA	**Stephens Creek**	**44.03**	**240**	P	**P**	**09 55 23.5**	**-0.3**
	2.2nm,0.8s,mb4.0,baz=134,slow=12,SNR=8.4						
STKA	**Stephens Creek**	**44.03**	**240**	P	**P**	**09 55 23.5**	**-0.3**
WB2	**Warramunga Arr**	**49.77**	**257**	eP	**P**	**09 56 08.4**	**-0.4**
WRA	**Warramunga Arr**	**49.78**	**257**	P	**P**	**09 56 09.9**	**+0.9**
	0.9nm,0.4s,mb4.1,baz=92,slow=6.8,SNR=59						
WRA				LR	LR	10 13 19.3	
	comp=Z,76nm,19.9s,MS3.7,baz=130,slow=31						
WRA	**Warramunga Arr**	**49.78**	**257**	P	**P**	**09 56 09.9**	**+0.9**
WRA				LR	LR	10 13 19.3	
ASAR	**Alice Springs**	**50.06**	**252**	P	**P**	**09 56 11.7**	**+0.6**
	1.4nm,0.4s,mb4.4,baz=88,slow=7.9,SNR=61						
GUMO	**Guam**	**50.15**	**303**	LR	LR	10 13 13.1	
	comp=Z,61nm,19.8s,MS3.6,baz=88,slow=31						
CBIJ	**Chichi jima**	**60.16**	**314**	LR	LR	10 18 33.5	
	comp=Z,43nm,19.7s,MS3.6,baz=63,slow=31						
MJAR	**Matsushiro Arr**	**68.74**	**320**	LR	LR	10 22 01.0	
	comp=Z,46nm,20.6s,MS3.7,baz=110,slow=30						
PETK	**Petropavlovsk-**	**72.43**	**342**	LR	LR	10 27 50.1	
	comp=Z,27nm,20.4s,MS3.5,baz=277,slow=34						
MPMC	**Manual Prospec**	**73.49**	**44**	⇓P	**P**	**09 58 48.4**	**-0.2**
	baz=74						
YBH	**Yreka Blue Hor**	**73.53**	**37**	eP	**P**	**09 58 49.3**	**+0.6**
	5.2nm,1.1s,mb4.4						
GSC	**Goldstone**	**73.55**	**45**	⇓P	**P**	**09 58 48.8**	**-0.1**
	baz=74						
WCN	**Washoe City**	**73.85**	**41**	eP	**P**	**09 58 51.6**	**+1.0**
	40nm,2.7s,mb4.9						
HUMO	**Hull Mountain**	**73.94**	**36**	eP	**P**	**09 58 51.3**	**+0.3**
	6.5nm,1.3s,mb4.4						
IRM	**Iron Mountain**	**74.10**	**47**	⇓P	**P**	**09 58 51.7**	**-0.5**
	baz=74						
FURC	**Furnace Creek,**	**74.14**	**44**	⇑P	**P**	**09 58 51.7**	**-0.7**
	baz=74						
TUQ	**Turquoise Moun**	**74.23**	**46**	⇓P	**P**	**09 58 52.4**	**-0.5**
	baz=74						
NVAR	**Mina Array Bea**	**74.28**	**42**	P	**P**	**09 58 52.6**	**-0.6**
	1.0nm,0.7s,mb3.9,baz=226,slow=9.6,SNR=9.6						
U10A	**Ash Meadows, A**	**74.47**	**45**	⇓P	**P**	**09 58 53.9**	**-0.5**
	baz=75						
Z13A	**Yuma Proving G**	**74.68**	**49**	⇓P	**P**	**09 58 54.5**	**-1.2**
	baz=75						
214A	**Organ Pipe Nat**	**74.69**	**50**	⇑P	**P**	**09 58 55.2**	**-0.4**
	baz=75						
QSPA	**South Pole Qui**	**74.81**	**180**	P	**P**	**09 58 56.4**	**+0.7**
	5.7nm,1.0s,mb4.5,baz=37,slow=3.3,SNR=11						
QSPA	**South Pole Qui**	**74.81**	**180**	eP	**P**	**09 58 56.2**	**+0.5**
	3.8nm,1.0s,mb4.3						
PDMCI	**Parker Dam,Lak**	**74.89**	**48**	⇑P	**P**	**09 58 56.5**	**-0.2**
	baz=75						
MOD	**Modoc**	**75.06**	**38**	eP	**P**	**09 58 56.6**	**-1.0**
	4.0nm,1.0s,mb4.3						
K05A	**Summer Lake**	**75.20**	**37**	⇑P	**P**	**09 58 59.0**	**+0.6**
	baz=75,SNR=5.6						
X13A	**Yucca**	**75.26**	**47**	⇑P	**P**	**09 58 58.5**	**-0.4**
	baz=75,SNR=5.1						
SHPR	**Sheep Range**	**75.32**	**45**	eP	**P**	**09 58 59.3**	**+0.1**
W13A	**Hualapai Mount**	**75.47**	**47**	⇑P	**P**	**09 59 00.1**	**0.0**
	baz=76						
H04A	**Detroit Lake**	**75.68**	**35**	P	**P**	**09 59 00.7**	**-0.4**
	baz=76,SNR=6.2						
U12A	**Valley of Fire**	**75.70**	**45**	⇑P	**P**	**09 59 02.0**	**+0.5**
	baz=76						
216A	**Three Points,**	**75.72**	**51**	⇑P	**P**	**09 59 01.3**	**-0.3**
	baz=76						
V13A	**Grand Canyon W**	**75.79**	**46**	⇓P	**P**	**09 59 02.1**	**+0.2**
	baz=76						
X14A	**Yava**	**75.87**	**48**	⇓P	**P**	**09 59 02.3**	**-0.1**
	baz=76						
KSRS	**Korea Array**	**75.96**	**316**	P	**P**	**09 59 02.8**	**-0.1**
	0.3nm,0.3s,mb3.7,baz=227,slow=9.9,SNR=2.5						
KSRS				LR	LR	10 27 34.5	
	comp=Z,18nm,19.1s,MS3.4,baz=345,slow=32						
Y15A	**Casa Rosa Ranc**	**76.01**	**49**	⇓P	**P**	**09 59 03.2**	**-0.1**
	baz=76,SNR=9.0						
U13A	**Pakoon Wash**	**76.09**	**46**	⇑P	**P**	**09 59 03.9**	**+0.3**
	baz=76,SNR=9.4						
217A	**Green Valley**	**76.09**	**51**	⇑P	**P**	**09 59 03.5**	**-0.2**
	baz=76,SNR=5.1						
W14A	**Seligman**	**76.10**	**47**	P	**P**	**09 59 04.1**	**+0.4**
	baz=76,SNR=5.6						
V14A	**Boquillas Ranc**	**76.30**	**47**	⇑P	**P**	**09 59 05.0**	**+0.1**
	baz=76,SNR=7.4						
X15A	**Humboldt**	**76.34**	**48**	⇓P	**P**	**09 59 05.0**	**-0.1**
	baz=76						
WVOR	**Wild Horse Val**	**76.37**	**39**	eP	**P**	**09 59 05.1**	**0.0**
	5.6nm,1.1s,mb4.4						
117A	**Oracle**	**76.52**	**51**	⇓P	**P**	**09 59 06.2**	**0.0**
	baz=77,SNR=5.7						
318A	**Bisbee**	**76.56**	**52**	⇑P	**P**	**09 59 06.1**	**-0.3**
	baz=77						
U14A	**Mt Trumbull**	**76.64**	**46**	⇓P	**P**	**09 59 07.0**	**+0.3**
	baz=77,SNR=11						
S13A	**Holt Ranch, En**	**76.76**	**45**	⇓P	**P**	**09 59 07.7**	**+0.3**
	baz=77,SNR=6.0						
218A	**Dragoon**	**76.77**	**51**	⇓P	**P**	**09 59 07.6**	**0.0**
	baz=77						
I07A	**Izee**	**76.83**	**37**	⇓P	**P**	**09 59 08.0**	**+0.4**
	baz=77,SNR=9.1						
X16A	**Lo Mia Camp, P**	**76.89**	**49**	⇑P	**P**	**09 59 08.5**	**+0.3**
	baz=77,SNR=9.7						
R13A	**O'Grain Ranch,**	**77.00**	**44**	⇑P	**P**	**09 59 09.2**	**+0.4**
	baz=77						
J08A	**Circle Bar Ran**	**77.00**	**38**	⇓P	**P**	**09 59 08.7**	**+0.1**
	baz=77						
T14A	**Hurricane**	**77.03**	**46**	⇑P	**P**	**09 59 09.1**	**+0.1**
	baz=77						
V15A	**Kaibab Nationa**	**77.04**	**47**	⇑P	**P**	**09 59 09.3**	**+0.3**
	baz=77,SNR=8.2						
319A	**Douglas**	**77.07**	**52**	⇓P	**P**	**09 59 09.1**	**-0.2**
	baz=77						
CCUT	**Cedar City**	**77.09**	**45**	eP	**P**	**09 59 09.8**	**+0.6**
	13nm,1.8s,mb4.5						
118A	**Homack Ranch,**	**77.13**	**51**	⇑P	**P**	**09 59 09.8**	**+0.2**
	baz=77,SNR=5.3						
U15A	**North Rim**	**77.26**	**46**	⇑P	**P**	**09 59 10.4**	**+0.1**
	baz=77,SNR=6.0						
X17A	**Forest Lakes**	**77.31**	**49**	⇑P	**P**	**09 59 10.9**	**+0.4**
	baz=77,SNR=6.7						
219A	**White Tail Can**	**77.37**	**52**	⇓P	**P**	**09 59 10.8**	**-0.1**
	baz=78						
T15A	**Red Dirt Ranch**	**77.49**	**46**	⇓P	**P**	**09 59 11.8**	**+0.3**
	baz=78,SNR=5.6						
320A	**Kipp Ranch, An**	**77.63**	**53**	⇑P	**P**	**09 59 12.6**	**+0.1**
	baz=78						
119A	**Ashpeak Ranch,**	**77.69**	**51**	⇓P	**P**	**09 59 13.2**	**+0.5**
	baz=78						
S15A	**Panguitch**	**77.84**	**45**	⇑P	**P**	**09 59 14.4**	**+1.0**
	baz=78,SNR=6.0						
G08A	**Pilot Rock**	**77.86**	**36**	⇓P	**P**	**09 59 13.5**	**+0.1**
	baz=78,SNR=10						
Q14A	**Sevier Lake (B**	**77.88**	**44**	P	**P**	**09 59 14.0**	**+0.3**
	baz=78,SNR=5.8						
220A	**Playas Peak, P**	**77.89**	**52**	⇓P	**P**	**09 59 14.0**	**+0.1**
	baz=78,SNR=6.1						
V17A	**Tonalea, Kykot**	**77.93**	**48**	⇑P	**P**	**09 59 14.3**	**+0.3**
	baz=78						
X18A	**Snowflake**	**78.02**	**49**	⇑P	**P**	**09 59 14.6**	**+0.1**
	baz=78						
T16A	**Glen Canyon Da**	**78.09**	**46**	⇓P	**P**	**09 59 15.2**	**+0.4**
	baz=78						
HAWA	**Hanford**	**78.20**	**35**	eP	**P**	**09 59 15.3**	**+0.1**
	9.0nm,1.3s,mb4.5						
Y19A	**Nutrioso**	**78.27**	**50**	⇑P	**P**	**09 59 16.0**	**+0.1**
	baz=78,SNR=10.0						
P14A	**Drum Mountains**	**78.33**	**43**	⇓P	**P**	**09 59 15.9**	**-0.2**
	baz=78,SNR=8.2						
Z20A	**Nine Sixteen R**	**78.38**	**51**	⇓P	**P**	**09 59 16.7**	**+0.2**
	baz=78,SNR=5.9						
MSU	**Marysvale**	**78.38**	**45**	eP	**P**	**09 59 17.2**	**+0.8**
S16A	**Weppner Ranch,**	**78.39**	**46**	⇓P	**P**	**09 59 16.7**	**+0.2**
	baz=78,SNR=8.0						
X19A	**St. Johns**	**78.46**	**49**	⇑P	**P**	**09 59 17.3**	**+0.4**
	baz=79,SNR=6.5						
ETW	**Entiat**	**78.50**	**34**	eP	**P**	**09 59 16.9**	**+0.1**
T17A	**Navajo Res., N**	**78.58**	**47**	P	**P**	**09 59 18.4**	**+0.8**
	baz=79,SNR=5.5						
V18A	**Ganado**	**78.59**	**48**	⇑P	**P**	**09 59 17.7**	**+0.1**
	baz=79,SNR=5.3						
MFID	**Camas Ranch**	**78.62**	**39**	⇑P	**P**	**09 59 17.5**	**-0.2**
	baz=79,SNR=5.3						
R16A	**Teasdale**	**78.74**	**45**	⇑P	**P**	**09 59 19.0**	**+0.6**
	baz=79,SNR=6.5						
DUG	**Dugway**	**78.81**	**43**	eP	**P**	**09 59 18.1**	**-0.7**
	5.5nm,1.2s,mb4.4						
S17A	**Black Ridge (B**	**78.89**	**46**	⇓P	**P**	**09 59 19.0**	**-0.2**
	baz=79,SNR=6.2						
Y20A	**Horse Springs,**	**78.89**	**50**	⇑P	**P**	**09 59 19.6**	**+0.2**
	baz=79,SNR=8.5						
D08A	**Wollman Farm,**	**78.94**	**35**	⇑P	**P**	**09 59 19.2**	**-0.1**
	baz=79,SNR=5.1						
U18A	**Rough Rock, Ch**	**78.97**	**47**	⇑P	**P**	**09 59 20.0**	**+0.3**
	baz=79,SNR=6.2						
X20A	**Quemado**	**79.09**	**50**	P	**P**	**09 59 20.4**	**0.0**
	baz=79,SNR=5.0						
Z21A	**St. Cloud Mine**	**79.15**	**51**	⇓P	**P**	**09 59 21.6**	**+0.8**
	baz=79,SNR=5.5						
F10A	**Beach Ranch, E**	**79.25**	**36**	⇑P	**P**	**09 59 20.6**	**-0.4**
	baz=79,SNR=7.4						
OD2	**Odessa Site #2**	**79.25**	**34**	eP	**P**	**09 59 20.9**	**-0.1**
I12A	**Atlanta**	**79.25**	**39**	⇓P	**P**	**09 59 21.4**	**+0.3**
	baz=79,SNR=12						
T18A	**Mexican Hat**	**79.30**	**47**	⇓P	**P**	**09 59 21.9**	**+0.3**
	baz=79,SNR=23						
R17A	**Hanksville Air**	**79.34**	**45**	⇑P	**P**	**09 59 21.7**	**0.0**
	baz=80,SNR=9.7						
W20A	**Ramah**	**79.35**	**49**	⇑P	**P**	**09 59 22.2**	**+0.3**
	baz=80,SNR=11						
U19A	**Dine' College,**	**79.38**	**48**	⇓P	**P**	**09 59 22.1**	**+0.1**
	baz=80,SNR=11						
TMUT	**Trail Mountain**	**79.43**	**44**	eP	**P**	**09 59 22.8**	**+0.6**
	5.0nm,0.9s,mb4.4						
Y21A	**Point of Rocks**	**79.46**	**50**	⇓P	**P**	**09 59 22.9**	**+0.4**
	baz=80						
L14A	**Malta**	**79.49**	**41**	⇓P	**P**	**09 59 22.3**	**-0.1**
	baz=80						
HLID	**Hailey**	**79.56**	**39**	⇑P	**P**	**09 59 23.3**	**+0.5**
	baz=80,SNR=14						
HLID	**Hailey**	**79.56**	**39**	eP	**P**	**09 59 23.0**	**+0.2**
	8.6nm,1.0s,mb4.6						
X21A	**Alamocita Cree**	**79.57**	**50**	⇓P	**P**	**09 59 23.2**	**+0.1**
	baz=80						
SPUT	**South Promonto**	**79.62**	**42**	eP	**P**	**09 59 22.5**	**-0.7**
	12nm,1.4s,mb4.6						
J13A	**Cove Ranch, Pi**	**79.62**	**40**	⇓P	**P**	**09 59 23.6**	**+0.4**
	baz=80,SNR=12						
Z22A	**Elephant Butte**	**79.66**	**51**	⇓P	**P**	**09 59 23.6**	**0.0**
	baz=80						
O16A	**Springville**	**79.68**	**43**	⇑P	**P**	**09 59 23.5**	**-0.1**
	baz=80						
M15A	**Larsen Ranch,**	**79.70**	**42**	⇑P	**P**	**09 59 23.7**	**+0.1**
	baz=80			

baz=80
HWUT Hardware Ranch 80.34 42 *e*P **P 09 59 26.0 -1.1**
4.5nm,1.3s,mb4.2
I14A Mackay 80.35 39 ⇓P **P 09 59 27.2 +0.2**
baz=80
LPM Los Pinos Moun 80.37 51 *e*P **P 09 59 27.6 +0.2**
9.1nm,1.3s,mb4.5
325A Bean Ranch, Si 80.40 54 P **P 09 59 26.8 -0.8**
baz=80,SNR=7.1
G13A Cobalt 80.50 38 ⇑P **P 09 59 27.6 -0.2**
baz=81,SNR=6.8
U21A Nageezi 80.55 48 P **P 09 59 28.7 +0.4**
baz=81,SNR=16
526A Mary Lane Ranc 80.56 55 ⇑P **P 09 59 28.2 -0.3**
baz=81,SNR=6.6
PV04 Paradox Valley 80.57 46 *e*P **P 09 59 29.1 +0.8**
Q19A Hogan Spring (80.59 45 ⇓P **P 09 59 28.1 -0.4**
baz=81
TXAR Lajitas Array 80.61 56 P **P 09 59 28.6 -0.2**
2.5nm,1.0s,mb4.1,baz=217,slow=6.1,SNR=17
TXAR LR LR 10 26 50.4
comp=Z,37nm,19.7s,MS3.7,baz=185,slow=30
L16A Fish Haven 80.63 42 ⇓P **P 09 59 28.2 -0.4**
baz=81
Y23A Lovelace Mesa, 80.64 51 ⇓P **P 09 59 28.4 -0.4**
baz=81
PV01 Paradox Valley 80.68 46 *e*P **P 09 59 28.6 -0.4**
1um,1.3s
S20A Disappointment 80.69 47 ⇑P **P 09 59 29.0 0.0**
baz=81,SNR=5.5
J15A Blackfoot 80.70 40 P **P 09 59 29.6 +0.6**
baz=81,SNR=9.7
H14A Leadore 80.77 39 ⇓P **P 09 59 29.2 -0.1**
baz=81,SNR=6.3
ANMO Albuquerque 80.78 50 *e*P **P 09 59 29.3 -0.3**
4.2nm,1.1s,mb4.3
F13A Darby 80.82 37 ⇑P **P 09 59 29.1 -0.4**
baz=81,SNR=5.5
R20A Redvale 80.84 46 ⇓P **P 09 59 29.6 -0.2**
baz=81
426A McDonald Obser 80.85 55 ⇓P **P 09 59 30.0 -0.1**
baz=81,SNR=8.4
C11A Tepee Creek (N 80.86 35 ⇓P **P 09 59 29.7 0.0**
baz=81
627A Terlingua Ranc 80.88 56 ⇓P **P 09 59 29.5 -0.7**
baz=81,SNR=8.3
CN2 Changchun 80.89 320 *e*P **P 09 59 37.4 +7.5**
CN2 *e*S S 10 09 39.5 +3.5
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
T21A Navajo Lake 80.89 48 ⇑P **P 09 59 30.3 +0.1**
baz=81
D12A Red Ives Fores 80.92 36 ⇑P **P 09 59 29.7 -0.4**
baz=81
K16A Soda Springs 80.94 41 ⇓P **P 09 59 30.5 +0.3**
baz=81
527A Woodward Ranch 80.97 55 ⇓P **P 09 59 30.1 -0.6**
baz=81,SNR=6.2
MCK McKinley 80.97 11 *e*P **P 09 59 29.8 -0.2**
comp=Z,14nm,1.1s,mb4.8
G14A Jackson 81.04 38 ⇑P **P 09 59 31.0 +0.3**
baz=81,SNR=10
W23A Werner Place, 81.09 50 ⇑P **P 09 59 31.3 0.0**
baz=81,SNR=6.0
Y24A Capitan 81.10 51 ⇓P **P 09 59 31.5 +0.1**
baz=81,SNR=8.6
U22A Llaves 81.11 49 ⇓P **P 09 59 31.2 -0.1**
baz=81
J16A Bone 81.15 41 ⇓P **P 09 59 31.5 +0.1**
baz=81
125A Gardner Draw, 81.17 53 ⇓P **P 09 59 31.5 -0.2**
baz=81
MCMT McKenzie Canyo 81.19 39 *e*P **P 09 59 31.6 +0.1**
comp=Z,4.3nm,1.1s,mb4.3
H15A Lima 81.20 39 ⇓P **P 09 59 32.1 +0.5**
baz=81,SNR=6.2
GDL2 Guadalupe Moun 81.21 53 *e*P **P 09 59 32.0 +0.1**
comp=Z,86nm,1.2s,mb5.6
M18A Lyman 81.23 43 ⇓P **P 09 59 32.0 +0.2**
baz=81
Q20A Ridgley Place, 81.25 46 ⇓P **P 09 59 32.1 +0.1**
baz=81,SNR=5.8
E13A Victor 81.26 37 P **P 09 59 31.3 -0.6**
baz=81,SNR=13
628A Black Gap, Mar 81.29 56 ⇑P **P 09 59 31.8 -0.6**
baz=81
V23A Ortiz Mt. (NFS 81.32 49 ⇑P **P 09 59 33.1 +0.6**
baz=81,SNR=7.2
K17A Gardner Place, 81.33 41 ⇓P **P 09 59 32.4 +0.1**
baz=82
226A Malaga, Loving 81.35 54 ⇓P **P 09 59 32.4 -0.3**
baz=82,SNR=5.2
T22A Edith 81.36 48 ⇓P **P 09 59 32.7 +0.1**
baz=82
RRI2 Red Ridge 81.38 41 *e*P **P 09 59 32.8 +0.3**
comp=Z,8.0nm,1.0s,mb4.6
Z25A Roswell 81.38 52 ⇑P **P 09 59 32.8 0.0**
baz=82,SNR=5.1
F14A Wisdom 81.40 38 ⇑P **P 09 59 32.8 +0.2**
baz=82
427A Hayter Ranch, 81.42 55 ⇑P **P 09 59 32.9 -0.2**
baz=82
P20A De Beque 81.44 45 ⇑P **P 09 59 33.0 +0.1**
baz=82
D13A Huson 81.46 36 ⇑P **P 09 59 32.2 -0.7**
baz=82,SNR=8.4
R21A Cimarron 81.50 47 ⇓P **P 09 59 33.9 +0.5**
baz=82,SNR=6.0
I16A Newdale 81.54 40 ⇑P **P 09 59 34.1 +0.7**
baz=82,SNR=8.5
U23A El Rito 81.57 49 P **P 09 59 34.0 +0.2**
baz=82,SNR=7.8
G15A Dillon 81.58 39 ⇓P **P 09 59 33.8 +0.2**
baz=82,SNR=7.2
CLNB Carlsbad 81.61 53 *e*P **P 09 59 33.3 -0.7**
comp=Z,3.8nm,0.6s,mb4.5
DLMT Dillon 81.62 39 *e*P **P 09 59 34.2 +0.4**
comp=Z,5.7nm,1.0s,mb4.5
528A Cox Ranch, San 81.64 56 ⇑P **P 09 59 33.9 -0.3**
baz=82,SNR=5.8
E14A Clinton 81.65 37 ⇓P **P 09 59 33.8 -0.1**
baz=82,SNR=9.4
W24A Lazy 6 Ranch, 81.67 50 ⇓P **P 09 59 34.0 -0.3**
baz=82,SNR=5.2
REDW Red Top Meadow 81.68 41 *e*P **P 09 59 34.3 +0.1**
comp=Z,5.9nm,1.1s,mb4.4
TPAW Teton Pass 81.68 41 *e*P **P 09 59 34.5 +0.4**
comp=Z,8.9nm,1.1s,mb4.6
BSMT Bassoo Peak 81.69 36 *e*P **P 09 59 33.6 -0.5**
Q21A Lamborn Mesa, 81.70 46 ⇓P **P 09 59 34.5 +0.1**
baz=82,SNR=6.0
S22A 4UR Ranch, Cre 81.73 47 ⇑P **P 09 59 35.0 +0.4**
baz=82,SNR=9.2
J17A Brown Place, J 81.77 41 ⇓P **P 09 59 34.6 0.0**
baz=82
SNOW Snow King Moun 81.79 41 *e*P **P 09 59 34.7 0.0**
comp=Z,7.3nm,1.0s,mb4.6
K18A Toltan Ranch, 81.84 42 ⇓P **P 09 59 34.8 -0.2**
baz=82,SNR=7.5
O20A White River Ci 81.84 45 ⇓P **P 09 59 35.4 +0.3**
baz=82
IMW Indian Meadow 81.89 40 *e*P **P 09 59 35.2 0.0**
comp=Z,11nm,1.3s,mb4.6
F15A Butte 81.94 38 ⇓P **P 09 59 35.1 -0.3**
baz=82
428A Kincaid Ranch, 81.94 55 ⇑P **P 09 59 35.8 0.0**
baz=82
Z26A Caprock 81.94 52 ⇓P **P 09 59 35.4 -0.4**
baz=82,SNR=7.1
LRM Limekiln Ridge 81.95 38 *e*P **P 09 59 35.1 -0.4**
V24A Rampart Ranch, 81.98 50 ⇓P **P 09 59 35.9 0.0**
baz=82
R22A Saguache, Gunn 82.00 47 ⇑P **P 09 59 36.8 +0.8**
baz=82,SNR=7.9
G16A Moss Hill, Enn 82.03 39 ⇓P **P 09 59 36.0 +0.1**
baz=82
CHMT Chamberlain Mo 82.05 37 *e*P **P 09 59 35.6 -0.4**
328A Wristen Ranch, 82.09 55 ⇓P **P 09 59 35.8 -0.8**
baz=82
H16A Russell Place, 82.10 40 ⇓P **P 09 59 37.2 +0.9**
baz=82,SNR=12
J18A Kendall Valley 82.13 41 ⇓P **P 09 59 36.6 0.0**
baz=82,SNR=8.8
FLWY Flagg Ranch 82.13 40 *e*P **P 09 59 37.3 +0.8**
comp=Z,11nm,1.1s,mb4.7
N20A Spence Gulch, 82.15 44 ⇑P **P 09 59 36.9 +0.3**
baz=82
E15A Deer Lodge 82.15 38 ⇑P **P 09 59 37.0 +0.5**
baz=82
Q22A Crested Butte, 82.17 46 ⇑P **P 09 59 37.4 +0.6**
baz=82,SNR=7.9
127A Arkansas Junct 82.18 53 ⇓P **P 09 59 36.8 -0.2**
baz=82
BW06 Boulder Array 82.21 42 ⇑P **P 09 59 36.5 -0.5**
baz=82,SNR=5.5
PDAR Pinedale Array 82.21 42 P **P 09 59 36.1 -0.8**
comp=Z,1.9nm,0.9s,mb4.0,baz=245,slow=3.1,SNR=14
PDAR LR LR 10 27 12.9
comp=Z,53nm,20.0s,MS3.9,baz=6.9,slow=29
COLA College 82.21 11 *e*P **P 09 59 36.3 -0.2**
comp=Z,5.1nm,0.9s,mb4.5
SMCO Snowmass 82.27 46 *e*P **P 09 59 37.8 +0.5**
comp=Z,12nm,1.4s,mb4.7
ILAR Eielson Array 82.30 11 P **P 09 59 36.5 -0.4**
comp=Z,1.1nm,0.8s,mb3.8,baz=205,slow=5.7,SNR=14
ILAR LR LR 10 32 57.5
comp=Z,30nm,18.1s,MS3.7,baz=274,slow=33
S23A Nye Farm, Mont 82.31 48 ⇓P **P 09 59 37.9 +0.3**
baz=82
BOZ Bozeman (W) 82.35 39 ⇓P **P 09 59 37.7 0.0**
baz=82,SNR=6.1
BOZ Bozeman (W) 82.35 39 *e*P **P 09 59 37.8 +0.2**
comp=Z,9.8nm,1.4s,mb4.5
A13A Flathead Natio 82.49 35 ⇑P **P 09 59 38.0 -0.2**
baz=83
I18A Diamond G Ranc 82.50 41 ⇑P **P 09 59 38.4 0.0**
baz=83
V25A Rancho No Teng 82.52 50 ⇑P **P 09 59 38.6 -0.1**
baz=83,SNR=9.5
D15A Lincoln 82.55 37 P **P 09 59 38.6 0.0**
baz=83,SNR=9.9
X26A CR and CF Fran 82.59 51 ⇑P **P 09 59 39.0 -0.1**
baz=83
P22A Eagle 82.61 46 ⇑P **P 09 59 38.9 -0.2**
baz=83
N21A Black Mountain 82.61 44 ⇑P **P 09 59 39.4 +0.3**
baz=83,SNR=6.9
L20A Wamsutter 82.64 43 P **P 09 59 39.7 +0.4**
baz=83,SNR=7.0
SDCO Great Sand Dun 82.68 48 ⇑P **P 09 59 39.6 0.0**
SDCO Great Sand Dun 82.68 48 *e*P **P 09 59 39.5 0.0**
comp=Z,20nm,2.0s,mb4.8
T24A Torres, Weston 82.72 49 ⇑P **P 09 59 40.3 +0.6**
baz=83,SNR=8.1
J19A Crowheart 82.78 42 ⇓P **P 09 59 39.5 -0.4**
baz=83,SNR=5.6
E16A East Helena 82.78 38 ⇓P **P 09 59 39.8 -0.1**
baz=83,SNR=10
HRY Holter Researc 82.78 38 *e*P **P 09 59 39.5 -0.3**
Y27A Causey 82.81 52 ⇓P **P 09 59 39.5 -0.7**
baz=83
S24A Houchin Ranch, 82.84 48 ⇓P **P 09 59 40.7 +0.4**
baz=83
C15A Salmond Ranch, 82.88 36 P **P 09 59 39.7 -0.6**
baz=83,SNR=7.6
U25A Circle Dot Ran 82.90 49 ⇑P **P 09 59 40.5 -0.2**
baz=83,SNR=9.8
K20A Yellowstone Ra 82.95 42 ⇓P **P 09 59 40.2 -0.6**
baz=83,SNR=5.7
Q23A Hartsel 82.95 47 ⇑P **P 09 59 41.1 +0.2**
baz=83,SNR=6.5
O22A Kremmling 83.01 45 ⇑P **P 09 59 41.3 +0.2**
baz=83,SNR=9.5
A14A Double T Ranch 83.06 35 ⇑P **P 09 59 40.8 -0.4**
baz=83
F17A Fitzpatrick Pl 83.07 39 ⇑P **P 09 59 41.9 +0.6**
baz=83,SNR=5.5
M21A Separation Pea 83.11 44 ⇑P **P 09 59 41.5 -0.2**
baz=83,SNR=7.5
D16A Dana Ranch, Ca 83.11 37 ⇓P **P 09 59 41.5 0.0**
baz=83,SNR=5.4
MSTX Muleshoe 83.14 52 ⇑P **P 09 59 41.5 -0.5**
baz=83,SNR=7.0
R24A Sanders Place, 83.17 48 ⇑P **P 09 59 42.3 +0.2**
baz=83
I19A Meeteetse 83.18 41 ⇓P **P 09 59 42.3 +0.3**
baz=83,SNR=7.3
RWWY Rawlins 83.25 44 *e*P **P 09 59 41.9 -0.4**
comp=Z,8.9nm,1.2s,mb4.7
N22A Wattenberg Ran 83.35 45 ⇑P **P 09 59 43.3 +0.4**
baz=84
W27A Bowe Ranch, En 83.36 51 ⇓P **P 09 59 42.5 -0.6**
baz=84,SNR=8.2
U26A Atchley Ranch, 83.39 50 ⇓P **P 09 59 42.6 -0.6**
baz=84,SNR=8.2
C16A Fuhringer Ranc 83.39 37 ⇑P **P 09 59 42.4 -0.5**
baz=84,SNR=7.5
S25A Robets Cordova 83.41 48 ⇑P **P 09 59 43.3 0.0**
baz=84,SNR=7.2
J20A Shoshoni 83.44 42 ⇓P **P 09 59 43.5 +0.1**
baz=84,SNR=6.6
G18A Lazy EL Ranch, 83.45 40 ⇑P **P 09 59 43.8 +0.5**
baz=84
A15A Johnson Ranch, 83.45 35 ⇑P **P 09 59 42.4 -0.8**
baz=84,SNR=6.9
Q24A Divide 83.45 47 ⇓P **P 09 59 43.8 +0.3**
baz=84,SNR=6.0
O23A Lake Granby, G 83.46 45 ⇑P **P 09 59 43.4 -0.1**
baz=84
ISCO Idaho Springs 83.49 46 ⇓P **P 09 59 43.6 0.0**
baz=84
H19A Powell 83.49 40 ⇓P **P 09 59 43.8 +0.2**
baz=84,SNR=7.4
RLMT Red Lodge 83.53 40 ⇑P **P 09 59 44.1 +0.3**
baz=84,SNR=6.0
RLMT Red Lodge 83.53 40 *e*P **P 09 59 44.3 +0.5**
comp=Z,11nm,1.1s,mb4.9
GCMT Greycliff 83.61 39 *e*P **P 09 59 44.0 -0.1**
K21A Alcova 83.65 43 ⇑P **P 09 59 43.9 -0.5**
baz=84,SNR=6.8
D17A Six Diamond Ra 83.68 38 ⇑P **P 09 59 44.6 +0.2**
baz=84,SNR=10.0
I20A Worland 83.69 41 ⇑P **P 09 59 44.4 -0.2**
baz=84,SNR=11
R25A Fountain Ranch 83.72 48 ⇑P **P 09 59 44.4 -0.5**
baz=84
N23A Red Feather La 83.74 45 ⇑P **P 09 59 45.1 +0.1**
baz=84,SNR=5.3
E18A Harlowton 83.85 38 ⇑P **P 09 59 45.9 +0.6**
baz=84,SNR=7.8
J21A Lysite 83.85 42 ⇓P **P 09 59 45.5 +0.1**
baz=84,SNR=23
C17A Wharram Farm, 83.88 37 ⇑P **P 09 59 45.3 -0.1**
baz=84,SNR=13
L22A Ellis Ranch, M 83.92 44 P **P 09 59 45.8 0.0**
baz=84
H20A Greybull 84.03 41 ⇑P **P 09 59 46.2 -0.1**
baz=84,SNR=5.3
A16A West Butte Ran 84.07 36 ⇓P **P 09 59 46.0 -0.4**
baz=84,SNR=12
F19A Roth Farm, Mol 84.09 39 ⇑P **P 09 59 46.5 0.0**
baz=84,SNR=9.5
I21A Big Trails, Te 84.16 42 ⇓P **P 09 59 46.6 -0.4**
baz=84,SNR=8.8
D18A Linhart Farms, 84.22 38 ⇓P **P 09 59 47.7 +0.5**
baz=84,SNR=5.8
PHWY Pilot Hill 84.25 45 *e*P **P 09 59 46.7 -0.8**
AMTX Amarillo 84.33 52 P **P 09 59 47.5 -0.5**
baz=84,SNR=5.6
AMTX Amarillo 84.33 52 *e*P **P 09 59 47.5 -0.6**
comp=Z,13nm,0.9s,mb5.1
P25A Willow Gulch B 84.38 47 ⇓P **P 09 59 48.2 0.0**
baz=84,SNR=7.5
L23A Garrett 84.44 44 ⇓P **P 09 59 48.1 -0.4**
baz=85,SNR=6.0
E19A Rath Farm, Rou 84.47 39 ⇑P **P 09 59 48.7 +0.2**
baz=85,SNR=8.1
J22A Midwest 84.51 42 ⇑P **P 09 59 48.2 -0.6**
baz=85,SNR=9.0
A17A Triple J Farms 84.58 36 ⇓P **P 09 59 49.0 0.0**
baz=85,SNR=16
H21A Big Horn, Sher 84.70 41 ⇑P **P 09 59 49.5 -0.2**
baz=85
D19A Cripps Ranch, 84.76 38 P **P 09 59 50.4 +0.4**
baz=85,SNR=7.3
E20A Meyer Farm, Mu 84.89 39 ⇑P **P 09 59 50.8 +0.1**
baz=85,SNR=5.9
C19A Slack Wire Ran 84.93 38 ⇓P **P 09 59 51.1 +0.3**
baz=85,SNR=8.9
A18A Metzger Ranch, 85.05 36 ⇑P **P 09 59 50.9 -0.5**
baz=85,SNR=5.3
D20A Manuel Ranch, 85.17 39 ⇓P **P 09 59 52.3 +0.3**
baz=85,SNR=8.3
BJI Beijing 85.27 314 P **P 10 00 00.4 +7.7**
BJI S S 10 10 19.1 -1.6
BJI pmax pmax
comp=Z,5.0nm,0.4s,mb5.0
BJI pmax pmax
comp=Z,81nm,5.1s
BJI LR LR
comp=N,130nm,24.6s,MS4.3
BJI LR LR
comp=E,110nm,27.6s,MS4.3
BJI LR LR
comp=Z,25nm,21.6s
C20A Veseth Ranch, 85.54 38 ⇓P **P 09 59 54.1 +0.2**
baz=86,SNR=6.8
D21A La Casta Ranch 85.85 39 ⇓P **P 09 59 55.4 0.0**
baz=86
C21A Desert Coulee 86.14 38 ⇓P **P 09 59 57.1 +0.3**
baz=86
A20A Cobblestone Ra 86.14 37 ⇓P **P 09 59 56.7 -0.1**
baz=86,SNR=5.4
GYA Guiyang 87.87 298 *e*P **P 10 00 15.8 +10**
GYA pmax pmax
comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 88.83 313 *e*P **P 10 00 19.1 +9.2**
HHC pP pP 10 00 36.3 +15
HHC sP sP 10 00 42.9 +18
HHC PP PP 10 03 52.0 +12
HHC SKS 10 10 41.9
HHC S S 10 10 59.3 +4.3
HHC sS sS 10 11 29.0 +16
HHC SS SS 10 16 55.5 +7.4
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,84nm,5.6s
HHC LR LR
comp=N,160nm,19.2s
HHC LR LR
comp=E,130nm,19.4s
HHC LR LR
comp=Z,120nm,17.1s
YKA Yellowknife Ar 89.98 23 LR LR 10 34 29.9
comp=Z,5.5nm,18.5s,MS3.0,baz=30,slow=32
KMI Kunming 90.85 296 P **P 10 00 27.8 +8.0**
KMI pP pP 10 00 45.1 +14
KMI sP sP 10 00 53.8 +19
KMI pmax pmax
comp=Z,10.0nm,0.7s
CD2 Chengdu 91.63 301 *e*P **P 10 00 33.3 +10**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,100nm,8.0s
ULM Lac du Bonnet 93.87 39 LR LR 10 33 56.9
comp=Z,94nm,20.1s,MS4.2,baz=112,slow=30
BRTR Keskin Array B 145.96 321 PKPbc PKPbc 10 06 57.4 +1.7
comp=Z,4.2nm,1.0s,baz=24,slow=1.6,SNR=9.2
GERES GERESS Array B 145.96 351 PKPbc PKPbc 10 06 56.1 +0.8
comp=Z,0.3nm,0.4s,baz=31,slow=8.0,SNR=5.0

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*NIED **19** 10:01:00,28.°30N×128.°20E,h5km,Mw4.0 Best double couple: M0=1.22000×10^15 NP1:φ=64.00000°,δ=60.00000°, λ=-80.00000°. NP2:φ=225.00000°,δ=31.00000°, λ=-107.00000°.*
*BJI **19** 10:01:42.4,28.°08N×128.°52E,h20km,mB4.4/1,mb4.1/5*
*JMA **19** 10:01:43.8±0.6,28.°30N×128.°17E,h1km±5km,M3.7*
*NEIC **19** 10:01:43.9,28.°30N×128.°17E,h1km,MG3.7(JMA),After JMA.*
*ISCJB **19** 10:01:45.0±2.6,28.°29N±0.°06×128.°14E±0.°05, h15km±23km,Error ellipse: s-maj=11.5km s-min=6.7km az=152.9*

ISC 19 10:01:44.6±1.4,28.°24N±0.°06×128.°18E±0.°06,h0km±11km, n14,σ1=02/17,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.82**	**123**	P	**Pg**	**10 02 00.5**	**+0.2**
JTK				*e*S	**Sg**	**10 02 12.2**	**+1.3**
JIH	**Iheya**	**1.22**	**189**	P	**Pg**	**10 02 08.1**	**+0.2**
JAM	**Amami Oshima**	**1.27**	**82**	P	**Pg**	**10 02 07.7**	**-1.3**
JAM				*e*S	**Sg**	**10 02 24.5**	**-0.9**
JOW	**Kunigami**	**1.41**	**177**	*e*Pn	**Pn**	**10 02 10.9**	**-0.6**
JOW				*e*Sn	**Sn**	**10 02 29.7**	**-1.0**
JOW	**Kunigami**	**1.41**	**177**	P	**Pn**	**10 02 10.9**	**-0.6**
JZK	**Kikaishima**	**1.58**	**87**	P	**Pn**	**10 02 13.9**	**0.0**
JAGN	**Aguni-jima**	**1.84**	**207**	P	**Pn**	**10 02 17.2**	**-0.3**
JJT2	**Tamagusuku 2**	**2.13**	**190**	P	**Pn**	**10 02 22.9**	**+1.5**
JKE	**Kume jima 2**	**2.27**	**213**	P	**Pn**	**10 02 23.5**	**+0.1**
JTN	**Tanegashima 3**	**3.43**	**45**	P	**Pn**	**10 02 42.0**	**+2.7**
JNU	**Nakatsue** 8.7nm,0.8s	**5.39**	**25**	Pn	**Pn**	**10 03 06.2**	**-0.1**
YHNB	**Yeheng** 22nm,0.8s	**7.06**	**241**	Pn	**Pn**	**10 03 29.1**	**-0.2**
NACB	**Ninganchiao**	**7.17**	**237**	Pn	**Pn**	**10 03 29.0**	**-1.7**
SSLB	**Suanglung** 23nm,0.9s	**7.87**	**237**	*e*Pn	**Pn**	**10 03 41.6**	**+1.2**

IDC 19 10:11:18.2±7.4,16.°94S×175.°33W,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.7/16,mbtmp3.7/3,Error ellipse: s-maj=324.9km s-min=36.7km az=141.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=96,slow=8.2,SNR=17	**47.70**	**258**	P	P	10 19 56.4	-0.6
ASAR	**Alice Springs** 1.3nm,0.5s,baz=86,slow=7.9,SNR=34	**47.88**	**253**	P	P	10 19 59.0	+0.6
ILAR	**Eielson Array** 0.5nm,1.0s,baz=225,slow=5.7,SNR=5.6	**84.31**	**12**	P	P	10 23 51.6	0.0

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*PRU **19** 10:26:43.4,50.°40N×18.°83E,h0km*

WAR 19 10:26:44.4,50.°23N×18.°91E,1C-1D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.57**	**90**	*e*Pg	Pg	10 26 55.8	+0.5
OJC				*e*Sg	Sg	10 27 03.7	+1.0
DPC	**Dobruska-Polom**	**1.67**	**275**	*e*PG	Pn	10 27 12.3	-2.5
DPC				*e*SG	Sn	10 27 34.4	-2.4
DPC	**Dobruska-Polom**	**1.67**	**275**	Pg	Pn	10 27 12.3	-2.5
DPC				Sg	Sn	10 27 34.4	-2.4
CONA	**Conrad Observa** comp=Z,3.4nm,0.4s	**3.05**	**222**	⇓*i*Sg	Sn	10 28 14.0	+2.9
CONA	**Conrad Observa** comp=Z,3.4nm,0.4s	**3.05**	**222**	Sg	Sn	10 28 14.0	+3.0
MOA	**Molln** comp=Z,3.9nm,0.4s	**3.87**	**234**	⇑*i*Sg	Pg	10 28 05.6	+7.0
MOA	**Molln** comp=Z,3.9nm,0.4s	**3.87**	**234**	Sg	Pg	10 28 05.6	+7.0

DJA 19 10:44:39,9.°14S×116.°52E,h118km,MLv3.7/7,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTNI	**Mataram**	**0.61**	**325**	P	Pn	10 44 59.3	+1.8
MTNI				S	Sn	10 45 14.1	+2.7
KHKI	**Kahang-Kahang**	**1.19**	**310**	P	Pn	10 45 03.7	+0.9
KHKI				S	Sn	10 45 22.3	+1.5
IGBI	**Denpasar**	**1.40**	**283**	P	Pn	10 45 07.4	+2.3
IGBI				S	Sn	10 45 26.3	+1.4
SRBI	**Singaraja**	**1.66**	**309**	P	Pn	10 45 09.6	+1.3
SRBI				S	Sn	10 45 32.9	+2.3
NBBI	**Negara**	**2.03**	**292**	P	Pn	10 45 13.5	+0.8
BMNI	**Bima**	**2.23**	**75**	P	Pn	10 45 16.8	+1.6
BMNI				S	Sn	10 45 43.3	+0.3
JAGI	**Jajag, Banyuwa**	**2.43**	**286**	P	Pn	10 45 17.8	-0.1
JAGI				S	Sn	10 45 47.2	-0.5
GMJI	**Gumukmas**	**3.16**	**286**	P	Pn	10 45 27.3	-0.1

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*ISK **19** 10:47:06.8,39.°45N×28.°21E,h19km,ML2.1*
*ISCJB **19** 10:47:07.4±0.5,39.°45N±0.°03×28.°16E±0.°04,h13km±4km, Error ellipse: s-maj=6.5km s-min=3.8km az=40.9*
*CSEM **19** 10:47:07.4±0.1,39.°46N×28.°18E,h15km,MD2.8,Error ellipse: s-maj=3.4km s-min=1.6km az=44.0*
*DDA **19** 10:47:08.0,39.°46N×28.°16E,h7km±5km,Md2.8*

ISC 19 10:47:07.9±0.5, 39°46N±0°03×28°18E±0°04, h19km±4km, n38, σ1°04/55, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.27**	**58**	*i* P	**Pg**	**10 47 13.5**	**-0.5**
DURS				*i* S	**Sg**	**10 47 18.7**	**+0.5**
DURS	**Dursunbey**	**0.27**	**58**	*i* P	**Pg**	**10 47 13.5**	**-0.5**
DURS				*i* S	**Sg**	**10 47 18.7**	**+0.5**
BALB	**Balikesir**	**0.29**	**309**	PG	**Pg**	**10 47 13.7**	**-0.6**
BALB				*e*SG	**Sg**	**10 47 19.6**	**+0.9**
BALB	**Balikesir**	**0.29**	**309**	*i* Pg	**Pg**	**10 47 13.7**	**-0.7**
BALB				*e*Sg	**Sg**	**10 47 19.6**	**+0.8**
BALY	**Balya**	**0.51**	**304**	*i* P	**Pg**	**10 47 17.2**	**-1.1**
BALY				*i* S	**Sg**	**10 47 26.9**	**+1.7**
BALY	**Balya**	**0.51**	**304**	*i* P	**Pg**	**10 47 17.2**	**-1.1**
BALY				*i* S	**Sg**	**10 47 26.9**	**+1.7**
DEMI	**Demirci**	**0.59**	**134**	*i* P	**Pb**	**10 47 19.6**	**0.0**
DEMI				*i* S	**Sb**	**10 47 29.1**	**+1.5**
DEMI	**Demirci**	**0.59**	**134**	*i* P	**Pb**	**10 47 19.6**	**0.0**
DEMI				*i* S	**Sb**	**10 47 29.1**	**+1.5**
GONE	**Gonen-Balikesi**	**0.70**	**328**	*e*PG	**Pg**	**10 47 21.1**	**-0.6**
GONE				*e*SG	**Sg**	**10 47 32.0**	**+0.9**
GONE	**Gonen-Balikesi**	**0.70**	**328**	*e*Pg	**Pg**	**10 47 21.1**	**-0.6**
GONE				*e*Sg	**Sg**	**10 47 32.0**	**+1.0**
KCTX	**Karacabey (Bur**	**0.82**	**10**	*e*PG	**Pg**	**10 47 23.8**	**-0.1**
KCTX	**Karacabey (Bur**	**0.82**	**10**	*e*Pg	**Pg**	**10 47 23.8**	**-0.2**
ULDT	**Uludag**	**1.01**	**47**	*i* P	**Pb**	**10 47 25.0**	**-1.8**
ULDT				*i* S	**Sb**	**10 47 42.2**	**+2.5**
ULDT	**Uludag**	**1.01**	**47**	*i* P	**Pb**	**10 47 25.0**	**-1.8**
ULDT				*i* S	**Sb**	**10 47 42.2**	**+2.5**
KULA	**Kula-Manisa**	**1.01**	**158**	*e*PG	**Pg**	**10 47 26.9**	**-0.7**
KULA				*e*SG	**Sg**	**10 47 40.4**	**-0.5**
KULA	**Kula-Manisa**	**1.01**	**158**	*e*Pg	**Pg**	**10 47 26.9**	**-0.7**
KULA				*e*Sg	**Sg**	**10 47 40.4**	**-0.5**
GDZ	**Gediz**	**1.08**	**110**	*i* P	**Pb**	**10 47 27.8**	**-0.1**
GDZ				*i* S	**Sb**	**10 47 43.5**	**+1.8**
GDZ	**Gediz**	**1.08**	**110**	*i* P	**Pb**	**10 47 27.8**	**-0.2**
GDZ				*i* S	**Sb**	**10 47 43.5**	**+1.8**
ARMT	**Armutlu**	**1.23**	**25**	*e*PN	**Pn**	**10 47 29.1**	**-1.0**
ARMT	**Armutlu**	**1.23**	**25**	*e*Pn	**Pn**	**10 47 29.1**	**-1.0**
LPK	**Lapseki**	**1.42**	**310**	*e*PN	**Pn**	**10 47 32.6**	**-0.1**
LPK	**Lapseki**	**1.42**	**310**	*e*Pn	**Pn**	**10 47 32.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.45**	**328**	*e*PN	**Pn**	**10 47 33.4**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.45**	**328**	*e*Pn	**Pn**	**10 47 33.4**	**+0.3**
CAVI	**Cavuskoy**	**1.48**	**59**	*e*PN	**Pn**	**10 47 32.5**	**-1.1**
CAVI	**Cavuskoy**	**1.48**	**59**	*e*Pn	**Pn**	**10 47 32.5**	**-1.1**
KHAL	**Karahalli**	**1.49**	**136**	*i* P	**Pn**	**10 47 35.8**	**+2.0**
KHAL				*i* S	**Sn**	**10 47 58.5**	**+5.8**
KHAL	**Karahalli**	**1.49**	**136**	*i* P	**Pn**	**10 47 35.8**	**+2.0**
ADVT	**Abdulvahap**	**1.55**	**50**	*e*PN	**Pn**	**10 47 33.6**	**-0.9**
ADVT	**Abdulvahap**	**1.55**	**50**	*e*Pn	**Pn**	**10 47 33.6**	**-0.9**
ALT	**Altintas**	**1.56**	**104**	*e*PN	**Pn**	**10 47 33.3**	**-1.3**
ALT	**Altintas**	**1.56**	**104**	*e*Pn	**Pn**	**10 47 33.3**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.61**	**306**	*e*PN	**Pn**	**10 47 35.6**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.61**	**306**	*e*Pn	**Pn**	**10 47 35.7**	**+0.3**
ERIK	**Erikli-Kesan**	**1.76**	**314**	*e*PN	**Pn**	**10 47 37.3**	**-0.1**
ERIK	**Erikli-Kesan**	**1.76**	**314**	*e*Pn	**Pn**	**10 47 37.3**	**-0.1**
GULT	**Gulveren**	**2.05**	**61**	*e*PN	**Pn**	**10 47 41.2**	**-0.1**
GULT	**Gulveren**	**2.05**	**61**	*e*Pn	**Pn**	**10 47 41.2**	**-0.1**

*ISCJB **19** 10:56:31.4±1.1, 24°02N±0°02×122°35E±0°02, h15km±8km, Error ellipse: s-maj=3.3km s-min=2.6km az=160.7*
*TAP **19** 10:56:31.3, 24°05N×122°30E, h14km±1km, ML2.8, D*
*JMA **19** 10:56:32.7±0.3, 24°16N×122°34E, h27km, M1.9*

ISC 19 10:56:31.0±0.5, 24°04N±0°02×122°34E±0°02, h12km±3km, n35, σ0°66/63, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.67**	**306**	*i* P	**Pg**	**10 56 44.0**	**-0.1**
	baz=306						
ENA				S	**Sg**	**10 56 53.4**	**+0.5**
	baz=306						
TWD	**Chiawan**	**0.68**	**274**	*e*P	**Pg**	**10 56 44.3**	**+0.1**
	baz=272						
TWD				S	**Sg**	**10 56 54.0**	**+0.8**
	baz=272						
TWC	**Suao**	**0.72**	**322**	P	**Pg**	**10 56 44.9**	**-0.2**
	baz=323						
TWC				*e*S	**Sg**	**10 56 53.2**	**-1.4**
	baz=323						
YOJ	**Yonaguni jima**	**0.74**	**55**	P	**Pg**	**10 56 45.6**	**+0.1**
YOJ				*e*S	**Sg**	**10 56 54.7**	**-0.5**
ESL	**Shilin**	**0.86**	**255**	P	**Pg**	**10 56 47.4**	**-0.2**
	baz=253						
ESL				*e*S	**Sg**	**10 56 59.2**	**+0.4**
	baz=253						
TWE	**Neicheng**	**0.92**	**318**	P	**Pg**	**10 56 48.6**	**-0.1**
	baz=319						
TWE				S	**Sg**	**10 57 00.8**	**+0.1**
	baz=319						
ENTT	**Nioudou**	**0.93**	**311**	*i* P	**Pg**	**10 56 48.9**	**0.0**
	baz=311						
ENTT				S	**Sg**	**10 57 00.3**	**-0.7**
	baz=311						
WHF	**Hehuan Shan**	**0.99**	**277**	*i* P	**Pg**	**10 56 50.0**	**-0.1**
	baz=275						
WHF				S	**Sg**	**10 57 04.0**	**+1.1**
	baz=275						
TWB1	**Santiao Chiao**	**1.02**	**342**	P	**Pb**	**10 56 50.4**	**-0.2**
	baz=343						
TWB1				*e*S	**Sg**	**10 57 04.2**	**+0.3**
	baz=343						
EHY	**Hungye**	**1.07**	**241**	P	**Pb**	**10 56 50.9**	**-0.6**
	baz=238						
EHY				*e*S	**Sb**	**10 57 04.9**	**-0.6**
	baz=238						
NSK	**Sanguang**	**1.10**	**306**	*i* P	**Pb**	**10 56 52.1**	**+0.1**
	baz=306						
NSK				S	**Sb**	**10 57 05.8**	**-0.5**
	baz=306						
NWF	**Wu-fen Shan**	**1.15**	**334**	*e*P	**Pb**	**10 56 52.8**	**0.0**
	baz=334						
NWF				S	**Sb**	**10 57 08.1**	**+0.3**
	baz=334						
TWA	**Mucha**	**1.17**	**324**	*e*S	**Sb**	**10 57 08.4**	**+0.2**
	baz=324						
TWF1	**Yuli**	**1.17**	**235**	P	**Pb**	**10 56 52.2**	**-1.0**
	baz=232						
TWF1				S	**Sb**	**10 57 07.6**	**-0.8**
	baz=232						
CHKT	**Chengkung**	**1.29**	**224**	*e*P	**Pn**	**10 56 54.9**	**0.0**
	baz=222						
CHKT				*e*S	**Sb**	**10 57 11.4**	**-0.4**
	baz=222						
IRIF	**Iriomote-Funau**	**1.30**	**77**	P	**Pn**	**10 56 55.4**	**+0.3**
IRIF				*e*S	**Sb**	**10 57 12.2**	**0.0**
SMLT	**Sun Moon Lake**	**1.33**	**264**	P	**Pn**	**10 56 55.1**	**-0.3**
	baz=262						
SMLT				*e*S	**Sb**	**10 57 12.4**	**-0.4**
	baz=262						
HATJ	**Hateruma jima**	**1.34**	**89**	P	**Pn**	**10 56 55.7**	**+0.1**
HATJ				*e*S	**Sb**	**10 57 13.7**	**+0.5**
TWS1	**Kuangyinshan**	**1.35**	**322**	*e*S	**Sb**	**10 57 13.7**	**+0.1**
	baz=322						
NSTT	**Nanjuang**	**1.36**	**296**	*e*S	**Sb**	**10 57 13.3**	**-0.4**
	baz=296						
TYC	**Yuchr**	**1.36**	**265**	P	**Pn**	**10 56 55.5**	**-0.4**
	baz=263						
TYC				*e*S	**Sb**	**10 57 13.0**	**-0.9**
	baz=263						
YUS	**Yu-Shan**	**1.38**	**247**	P	**Pn**	**10 56 56.4**	**+0.3**
	baz=245						
YUS				S	**Sn**	**10 57 13.4**	**-0.9**
	baz=245						
TWY	**Chenhua**	**1.41**	**332**	*e*S	**Sn**	**10 57 15.3**	**+0.3**
	baz=332						
TWQ1	**Liyutan**	**1.46**	**283**	*e*S	**Sn**	**10 57 17.4**	**+1.0**
	baz=281						
ELDTW	**Lidau**	**1.48**	**235**	*e*P	**Pn**	**10 56 57.0**	**-0.4**
	baz=233						
ELDTW				*e*S	**Sn**	**10 57 14.1**	**-2.6**
	baz=233						
ALS	**Alishan**	**1.50**	**250**	*e*P	**Pn**	**10 56 58.2**	**+0.5**
	baz=248						
ALS				*e*S	**Sn**	**10 57 17.3**	**0.0**
	baz=248						
TCU	**Taichung**	**1.52**	**275**	*e*S	**Sn**	**10 57 18.1**	**+0.3**
	baz=273						
JKRS	**Kuro-shima**	**1.54**	**82**	P	**Pn**	**10 56 58.5**	**+0.2**
JKRS				*e*S	**Sn**	**10 57 18.1**	**-0.1**
JIJ	**Ishigaki jima**	**1.68**	**78**	P	**Pn**	**10 57 00.1**	**-0.1**
JIJ				*e*S	**Sn**	**10 57 20.8**	**-0.9**
TWG	**Pinlang**	**1.68**	**224**	*e*P	**Pn**	**10 57 00.9**	**+0.6**
	baz=222						
TWG				S	**Sn**	**10 57 20.2**	**-1.4**
	baz=222						
WTP	**Ta-pu**	**1.77**	**244**	*e*P	**Pn**	**10 57 01.8**	**+0.3**
	baz=242						
WTP				*e*S	**Sn**	**10 57 25.0**	**+1.1**
	baz=242						
CHN1	**Nanshi**	**1.86**	**243**	*e*P	**Pn**	**10 57 04.6**	**+1.8**
	baz=242						
CHN1				*e*S	**Sn**	**10 57 27.2**	**+0.9**
	baz=242						
ECL	**Taimali**	**1.92**	**222**	*e*P	**Pn**	**10 57 04.5**	**+1.0**
	baz=220						
ECL				*e*S	**Sn**	**10 57 27.6**	**+0.1**
	baz=220						
EAST	**Anshuo**	**2.14**	**220**	*e*P	**Pn**	**10 57 07.7**	**+1.1**
	baz=218						
EAST				*e*S	**Sn**	**10 57 33.7**	**+0.6**
	baz=218						
PNG	**Penghu**	**2.59**	**260**	*e*S	**Sn**	**10 57 44.4**	**+0.2**
	baz=259						

*ISK **19** 11:01:20.2, 38°53N×37°15E, h12km, MD3.0*
*ISCJB **19** 11:01:22.4±0.5, 38°37N±0°03×37°21E±0°04, h10km, Error ellipse: s-maj=5.2km s-min=3.7km az=29.1*
*CSEM **19** 11:01:22.2±0.3, 38°47N×37°19E, h30km, MD3.0, Error ellipse: s-maj=8.7km s-min=6.1km az=21.0*
*DDA **19** 11:01:23.3, 38°31N×37°09E, h19km±6km, Md3.0*

ISC 19 11:01:23.0±0.5, 38°36N±0°04×37°20E±0°04, h10km, n25, σ1°03/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARI	**SarD1z-Kayseri**	**0.51**	**310**	*e*PG	**Pg**	**11 01 31.9**	**-1.0**
SARI				*e*SG	**Sg**	**11 01 40.9**	**+1.4**
SARI	**SarD1z-Kayseri**	**0.51**	**310**	*e*Pg	**Pg**	**11 01 31.9**	**-1.0**
SARI				*e*Sg	**Sg**	**11 01 40.9**	**+1.3**
AKCD	**Akcadag**	**0.57**	**96**	*i* P	**Pg**	**11 01 35.1**	**+1.0**
AKCD				*i* S	**Sg**	**11 01 47.0**	**+5.2**
AKCD	**Akcadag**	**0.57**	**96**	*i* P	**Pg**	**11 01 35.2**	**+1.0**
PINB	**Pinarbasi**	**0.70**	**297**	*i* P	**Pg**	**11 01 35.2**	**-1.3**
PINB				*i* S	**Sg**	**11 01 46.5**	**+0.9**
PINB	**Pinarbasi**	**0.70**	**297**	*i* P	**Pg**	**11 01 35.2**	**-1.3**
PINB				*i* S	**Sg**	**11 01 46.5**	**+0.8**
KMRS	**Kahramanmaras**	**0.88**	**195**	*e*PG	**Pg**	**11 01 40.5**	**+0.5**
KMRS				*e*SG	**Sg**	**11 01 55.1**	**+3.6**
KMRS	**Kahramanmaras**	**0.88**	**195**	*e*Pg	**Pg**	**11 01 40.5**	**+0.5**
KMRS				*e*Sg	**Sg**	**11 01 55.1**	**+3.6**
MYA	**Malataya**	**0.97**	**91**	*e*PG	**Pg**	**11 01 40.5**	**-1.2**
MYA				*e*SG	**Sg**	**11 01 54.6**	**+0.4**
MYA	**Malataya**	**0.97**	**91**	*e*Pg	**Pg**	**11 01 40.5**	**-1.1**
MYA				*e*Sg	**Sg**	**11 01 54.6**	**+0.4**
MALT	**Malatya**	**0.97**	**92**	*e*PG	**Pg**	**11 01 41.1**	**-0.6**
MALT	**Malatya**	**0.97**	**92**	*e*Pg	**Pg**	**11 01 41.1**	**-0.6**
GZT	**Gaziantep**	**1.04**	**164**	*i* P	**Pg**	**11 01 43.9**	**+0.8**
GZT				*i* S	**Sg**	**11 01 57.0**	**+0.4**
GAZ	**Gaziantep**	**1.18**	**179**	*e*PN	**Pg**	**11 01 45.5**	**-0.3**
GAZ	**Gaziantep**	**1.18**	**179**	*e*Pn	**Pg**	**11 01 45.5**	**-0.3**
KEMA	**Kemaliye**	**1.36**	**48**	*e*P	**Pg**	**11 01 50.7**	**+1.5**
KEMA				*i* S	**Sg**	**11 02 11.9**	**+5.0**
KOZT	**Kozan**	**1.39**	**231**	*e*PN	**Pn**	**11 01 47.2**	**-1.3**
SVSK	**Karacayir**	**1.56**	**354**	*e*PN	**Pn**	**11 01 45.7**	**-5.1**
SVSK	**Karacayir**	**1.56**	**354**	*e*Pn	**Pn**	**11 01 45.7**	**-5.2**
URFA	**Urfa**	**1.58**	**125**	*e*PN	**Pn**	**11 01 51.1**	**0.0**
URFA	**Urfa**	**1.58**	**125**	*e*Pn	**Pn**	**11 01 51.1**	**0.0**
SVRC	**Sivrice-ELAZID**	**1.66**	**89**	*e*PN	**Pn**	**11 01 50.8**	**-1.4**
SVRC	**Sivrice-ELAZID**	**1.66**	**89**	*e*Pn	**Pn**	**11 01 50.8**	**-1.4**
YOZ	**Yozgat**	**1.94**	**312**	*e*PN	**Pn**	**11 01 51.7**	**-4.4**
YOZ	**Yozgat**	**1.94**	**312**	*e*Pn	**Pn**	**11 01 51.7**	**-4.4**

*IDC **19** 11:04:31.8±7.1, 7°30N×73°57W, h149km±102km, mb1 3.9/1, mb1mx3.0/23, mbtmp4.2/1, Error ellipse: s-maj=925.9km s-min=78.7km az=110.0*
*ISCJB **19** 11:04:33.5±0.8, 6°87N±0°07×72°91W±0°09, h159km±10km, Error ellipse: s-maj=16.4km s-min=7.9km az=37.6*
*FUNV **19** 11:04:37.8, 7°04N×72°87W, h155km, MW4.0*

ISC 19 11:04:34.3±0.8, 6°87N±0°07×72°91W±0°09, h157km±10km, n24, σ0°87/27, 10C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.15**	**31**	⇑*i*P	**Pn**	**11 05 02.4**	**+1.4**
CAPV				*e*S	**Sn**	**11 05 20.5**	**-1.0**
ROSC	**El Rosal**	**2.45**	**215**	P	**Pn**	**11 05 14.0**	**-1.2**
	59nm,0.3s,baz=272,slow=18,SNR=92						
ROSC				S	**Sn**	**11 05 46.9**	**+0.2**
	82nm,0.3s,baz=253,slow=19,SNR=15						
SOCV	**Socops**	**2.47**	**55**	⇑*i*P	**Pn**	**11 05 17.1**	**+1.7**
SOCV				*e*P	Sx	11 05 17.1	
SOCV				*e*S	**Sn**	**11 05 45.7**	**-1.5**
VIGV	**El Vigia**	**2.48**	**38**	⇑*i*P	**Pn**	**11 05 16.9**	**+1.3**
VIGV				*e*S	Sx	11 05 44.1	
ELOV	**Elorza**	**3.40**	**88**	⇑*i*P	**Pn**	**11 05 28.4**	**+1.3**
VIRV	**Villa del Rosa**	**3.65**	**8**	⇓*i*P	**Pn**	**11 05 29.2**	**-1.0**
VIRV				*e*S	**Sn**	**11 06 08.5**	**-5.1**
QARV	**Quebrada Arrib**	**4.07**	**35**	⇑*i*P	**Pn**	**11 05 36.7**	**+1.0**
QARV				*e*S	Sx	11 06 18.0	
SANV	**Sanarito**	**4.24**	**52**	*e*P	**Pn**	**11 05 38.6**	**+0.7**
SANV				*e*S	Sx	11 06 23.6	
CURV	**Curarigua**	**4.27**	**43**	⇑*i*P	**Pn**	**11 05 39.0**	**+0.7**
CURV				*e*S	Sx	11 06 22.8	
DABV	**Dabajuro**	**4.61**	**29**	*e*P	**Pn**	**11 05 43.0**	**+0.3**
DABV				*e*S	**Sn**	**11 06 30.4**	**-5.7**
TEPV	**Terepaima**	**4.79**	**50**	⇑*e*P	**Pn**	**11 05 45.8**	**+0.7**
SIQV	**Siquisique**	**4.85**	**39**	⇑*e*P	**Pn**	**11 05 45.6**	**-0.3**
BAUV	**El Baul**	**5.24**	**67**	⇑*i*P	**Pn**	**11 05 50.5**	**-0.6**
MAPV	**Macapo**	**5.30**	**56**	⇑*i*P	**Pn**	**11 05 52.1**	**+0.3**
IMOV	**Isla Los Monje**	**5.80**	**20**	*e*P	**Pn**	**11 05 57.9**	**-0.5**
MONV	**Montecano**	**5.83**	**30**	*e*P	**Pn**	**11 05 58.5**	**-0.3**
TURV	**Turiamo**	**6.15**	**54**	*e*P	**Pn**	**11 06 02.8**	**-0.3**
CAOV	**Caicara del Or**	**6.55**	**86**	*e*P	**Pn**	**11 06 08.1**	**-0.3**
MERV	**Las Mercedes**	**6.96**	**70**	*e*P	**Pn**	**11 06 13.3**	**-0.5**
BIRV	**Birongo**	**7.48**	**61**	*e*P	**Pn**	**11 06 20.0**	**-0.8**
CUPV	**Cecpira**	**7.72**	**65**	*e*P	**Pn**	**11 06 23.2**	**-0.8**
PCRV	**Puerto La Cruz**	**8.82**	**68**	*e*P	**Pn**	**11 06 38.3**	**-0.3**
ASAR	**Alice Springs**	**149.31**	**234**	PKPbc	PKPbc	11 24 02.6	-2.8
	0.6nm,0.7s,baz=122,slow=3.7,SNR=13						
WRA	**Warramunga Arr**	**150.54**	**241**	PKPbc	PKPbc	11 24 05.6	-2.9
	0.4nm,0.4s,baz=108,slow=2.5,SNR=21						

*THE **19** 11:19:11.9, 43°76N×19°20E, h0km±11km, Error ellipse: s-maj=18.0km s-min=2.2km az=305.0*
*ISCJB **19** 11:19:12.5±0.3, 43°60N±0°01×19°55E±0°02, h5km±2km, Error ellipse: s-maj=2.5km s-min=1.9km az=15.5*
*BEO **19** 11:19:13.4±0.3, 43°58N×19°51E, h6km±2km, ML3.7/14*
*CSEM **19** 11:19:13.1±0.1, 43°58N×19°59E, h2km, ML3.5/7, Error ellipse: s-maj=3.0km s-min=2.2km az=95.0*
*NEIC **19** 11:19:13.1, 43°58N×19°55E, h3km, ML3.5(PDG), After PDG.*
*PDG **19** 11:19:13.1±0.7, 43°58N×19°55E, h3km±2km, MD3.5/9, ML3.5/7, Error ellipse: s-maj=1.0km s-min=1.8km az=0.0*
*SKO **19** 11:19:15.5, 43°62N×19°60E, h10km, M2.7, ML3.3*
*PRU **19** 11:19:16.0, 43°70N×19°53E, h2km*
*TIR **19** 11:19:20.2±9.7, 43°00N×19°44E, h0km±64km, ML4.0*

ISC 19 11:19:13.7±0.3, 43°60N±0°01×19°56E±0°02, h4km±2km, n158, σ1°23/247, 27C-37D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLE	**Pljevlja**	**0.29**	**204**	⇓*i*Pg	**Pg**	**11 19 18.4**	**-0.8**
PLE				*e*Sg	**Sg**	**11 19 22.4**	**-0.6**
PLE	**Pljevlja**	**0.29**	**204**	⇓*i*Pg	**Pg**	**11 19 18.4**	**-0.8**
PLE				*e*Sg	**Sg**	**11 19 22.4**	**-0.6**
BBLS	**Lazići**	**0.29**	**338**	⇑*i*Pg	**Pg**	**11 19 19.5**	**+0.2**
BBLS				*e*Sg	**Sg**	**11 19 23.9**	**+0.8**
BBLS	**Lazići**	**0.29**	**338**	⇑*i*Pg	**Pg**	**11 19 19.5**	**+0.2**
BBLS				*e*Sg	**Sg**	**11 19 23.9**	**+0.8**
DIVS	**Divibare**	**0.59**	**32**	⇓*i*Pg	**Pg**	**11 19 25.0**	**-0.1**
DIVS				*e*Sg	**Sg**	**11 19 34.3**	**+1.5**
DIVS	**Divibare**	**0.59**	**32**	P	**Pg**	**11 19 24.8**	**-0.3**
DIVS				S	**Sg**	**11 19 34.3**	**+1.5**
DIVS	**Divibare**	**0.59**	**32**	P	**Pg**	**11 19 24.8**	**-0.3**
DIVS				S	**Sg**	**11 19 34.3**	**+1.5**
UPM	**Unac-Piva**	**0.61**	**230**	⇓*i*Pg	**Pg**	**11 19 24.4**	**-1.0**
UPM				*e*Sg	**Sg**	**11 19 33.2**	**-0.1**
UPM	**Unac-Piva**	**0.61**	**230**	⇓*i*Pg	**Pg**	**11 19 24.4**	**-1.0**
UPM				*e*Sg	**Sg**	**11 19 33.2**	**-0.1**
BEY	**Berane**	**0.77**	**161**	⇑*i*Pg	**Pg**	**11 19 27.1**	**-1.2**
BEY				*e*Sg	**Sg**	**11 19 38.7**	**+0.5**
IVA	**Berane**	**0.77**	**161**	⇑*i*Pg	**Pg**	**11 19 27.1**	**-1.2**
IVA				*e*Sg	**Sg**	**11 19 38.7**	**+0.5**
IVA	**Berane**	**0.77**	**161**	⇑*i*Pg	**Pg**	**11 19 27.1**	**-1.2**
IVA				*e*Sg	**Sg**	**11 19 38.7**	**+0.5**
TRUS	**Trudelj**	**0.88**	**44**	⇓*i*Pg	**Pg**	**11 19 29.4**	**-1.1**
TRUS				*e*Sg	**Sg**	**11 19 43.4**	**+1.5**
TRUS	**Trudelj**	**0.88**	**44**	⇓*i*Pg	**Pg**	**11 19 29.4**	**-1.1**
TRUS				*e*Sg	**Sg**	**11 19 43.4**	**+1.5**
NKY	**Niksic**	**0.88**	**208**	⇓*i*Pg	**Pg**	**11 19 29.0**	**-1.5**
NKY				*e*Sg	**Sg**	**11 19 42.6**	**+0.6**
NKY	**Niksic**	**0.88**	**208**	⇓*i*Pg	**Pg**	**11 19 29.0**	**-1.5**
NKY				*e*Sg	**Sg**	**11 19 42.6**	**+0.6**
GRUS	**Gruza**	**0.89**	**70**	*e*Pg	**Pg**	**11 19 29.6**	**-1.1**
GRUS				*e*Sg	**Sg**	**11 19 43.0**	**+0.7**
GRUS	**Gruza**	**0.89**	**70**	*e*Pg	**Pg**	**11 19 29.6**	**-1.1**
GRUS				*e*Sg	**Sg**	**11 19 43.0**	**+0.7**
BRY	**Bratogost**	**1.01**	**227**	*e*Pg	**Pg**	**11 19 31.0**	**-2.1**
BRY				*e*Sg	**Sg**	**11 19 47.3**	**+1.1**
BRY	**Bratogost**	**1.01**	**227**	*e*Pg	**Pg**	**11 19 31.0**	**-2.1**
BRY				*e*Sg	**Sg**	**11 19 47.3**	**+1.1**
PVY	**Plav**	**1.05**	**163**	⇑*i*Pg	**Pg**	**11 19 31.9**	**-1.8**
PVY				*e*Sg	**Sg**	**11 19 48.5**	**+1.3**
PVY	**Plav**	**1.05**	**163**	⇑*i*Pg	**Pg**	**11 19 31.9**	**-1.8**
PVY				*e*Sg	**Sg**	**11 19 48.5**	**+1.3**
PDG	**Podgorica**	**1.19**	**191**	⇓*i*Pg	**Pg**	**11 19 33.9**	**-2.4**
PDG				*e*Sg	**Sg**	**11 19 49.4**	**-2.3**
PDG	**Podgorica**	**1.19**	**191**	⇓*i*Pg	**Pg**	**11 19 33.9**	**-2.4**
PDG				*e*Sg	**Sg**	**11 19 52.1**	**+0.4**
TTG	**Podgorica**	**1.19**	**191**	⇓*i*Pg	**Pg**	**11 19 33.9**	**-2.4**
TTG				*e*Sg	**Sg**	**11 19 52.1**	**+0.4**
TTG	**Podgorica**	**1.19**	**191**	⇓*i*Pg	**Pg**	**11 19 33.9**	**-2.4**
TTG				*e*Sg	**Sg**	**11 19 52.1**	**+0.4**
SELS	**Selova**	**1.20**	**108**	⇓*i*Pg	**Pg**	**11 19 34.3**	**-2.3**
SELS				*e*Sg	**Sg**	**11 19 52.6**	**+0.4**
SELS	**Selova**	**1.20**	**108**	⇓*i*Pg	**Pg**	**11 19 34.3**	**-2.3**
SELS				*e*Sg	**Sg**	**11 19 52.6**	**+0.4**
BCI	**Bajram Curri**	**1.28**	**163**	*i* PG	**Pn**	**11 19 36.3**	**-2.0**
BCI				*i* SG	**Sg**	**11 19 55.1**	**+0.2**
BCI	**Bajram Curri**	**1.28**	**163**	*i* Pg	**Pn**	**11 19 36.3**	**-2.0**
	SNR=90						
BCI				*i* Sg	**Sg**	**11 19 55.1**	**+0.2**
	SNR=90						
SVIS	**Svilajnac**	**1.37**	**60**	⇓*i*Pg	**Pn**	**11 19 39.0**	**-0.5**
SVIS				*e*Sg	**Sn**	**11 19 58.6**	**+0.4**
BUM	**Brajici-Budva**	**1.38**	**201**	⇓*i*Pg	**Pn**	**11 19 38.1**	**-1.5**
BUM				*e*Sg	**Sg**	**11 19 59.6**	**+1.6**
BUM	**Brajici-Budva**	**1.38**	**201**	⇓*i*Pg	**Pn**	**11 19 38.1**	**-1.5**
BUM				*e*Sg	**Sg**	**11 19 59.6**	**+1.6**
BEO	**Beograd**	**1.38**	**28**	*e*Pg	**Pn**	**11 19 39.8**	**+0.1**
BEO				*e*Sg	**Sn**	**11 19 57.1**	**-1.2**
BEO	**Beograd**	**1.38**	**28**	*e*Pg	**Pn**	**11 19 39.8**	**+0.1**
BEO				*e*Sg	**Sn**	**11 19 57.1**	**-1.2**
HCY	**Herceg Novi**	**1.38**	**214**	⇑*i*Pg	**Pn**	**11 19 37.8**	**-1.9**
HCY				*e*Sg	**Sg**	**11 19 59.5**	**+1.4**
HCY	**Herceg Novi**	**1.38**	**214**	⇑*i*Pg	**Pn**	**11 19 37.8**	**-1.9**
HCY				*e*Sg	**Sg**	**11 19 59.5**	**+1.4**
STON	**Ston**	**1.54**	**243**	*i* Pn	**Pn**	**11 19 40.5**	**-1.3**
STON				Sn	**Sn**	**11 20 01.6**	**-0.6**
STON	**Ston**	**1.54**	**243**	*i* Pn	**Pn**	**11 19 40.4**	**-1.4**
STON				Sn	**Sn**	**11 20 01.4**	**-0.6**
PUK	**Puka**	**1.57**	**171**	*i* PG	**Pn**	**11 19 41.9**	**-0.3**
PUK				*i* SG	**Sn**	**11 20 03.5**	**+0.5**
PUK	**Puka**	**1.57**	**171**	*i* Pg	**Pn**	**11 19 41.9**	**-0.

SOKA	**Soboth**	**4.44 316**	⇑*i*Pn	**Pn**	**11 20 21.7**	**-0.1**
SOKA			⇑*i*Sn	**Sn**	**11 21 09.2**	**-4.7**
SOKA	**Soboth**	**4.44 316**	*e*Pn	**Pn**	**11 20 21.7**	**0.0**
JAVS	**Javornik**	**4.54 302**	*i* Pn	**Pn**	**11 20 23.5**	**+0.5**
JAVS			*i* Sn	**Sn**	**11 21 13.2**	**-3.0**
JAVS	**Javornik**	**4.54 302**	*i* Pn	**Pn**	**11 20 23.5**	**+0.5**
JAVS			*i* Sn	**Sn**	**11 21 13.1**	**-3.0**
OBKA	**Obir**	**4.59 311**	⇑*i*Pn	**Pn**	**11 20 24.2**	**+0.5**
OBKA	**Obir**	**4.59 311**	Pn	**Pn**	**11 20 24.2**	**+0.5**
SOP	**Sopron**	**4.60 334**	*e*Sn	**Sn**	**11 21 18.5**	**+0.9**
SOP	**Sopron**	**4.60 334**	*e*Sn	**Sn**	**11 21 18.5**	**+0.9**
ARSA	**Arzberg**	**4.63 324**	⇑*i*Pn	**Pn**	**11 20 24.5**	**+0.3**
ARSA			⇓*i*Sn	**Sn**	**11 21 13.6**	**-4.7**
ARSA	**Arzberg**	**4.63 324**	Pn	**Pn**	**11 20 24.5**	**+0.2**
VOY	**Vojsko**	**4.71 303**	*e*Pn	**Pn**	**11 20 26.5**	**+1.1**
VOY			*e*		11 20 38.9	
VOY			*e*(Sn)	**Sn**	**11 21 22.5**	**+2.2**
VOY			*e*		11 21 47.1	
VOY	**Vojsko**	**4.71 303**	*e*Pn	**Pn**	**11 20 26.5**	**+1.1**
ZST	**Bratislava**	**4.91 340**	*e*SN	**Sn**	**11 21 22.0**	**-3.3**
ZST	**Bratislava**	**4.91 340**	*e*Sn	**Sn**	**11 21 22.0**	**-3.3**
VYHS	**Vyhne**	**4.92 354**	*e*Pn	**Pn**	**11 20 27.8**	**-0.5**
VYHS			*e*Sn	**Sn**	**11 21 24.3**	**-1.4**
VYHS	**Vyhne**	**4.92 354**	*e*PN	**Pn**	**11 20 27.8**	**-0.5**
VYHS			*e*SN	**Sn**	**11 21 24.3**	**-1.4**
VYHS	**Vyhne**	**4.92 354**	*e*Pn	**Pn**	**11 20 27.8**	**-0.5**
VYHS			*e*Sn	**Sn**	**11 21 24.3**	**-1.4**
KECS	**Kecovo**	**4.93 7**	*e*Pn	**Pn**	**11 20 28.5**	**+0.1**
KECS			*e*Sn	**Sn**	**11 21 25.9**	**0.0**
KECS	**Kecovo**	**4.93 7**	*e*PN	**Pn**	**11 20 28.5**	**+0.1**
KECS			*e*SN	**Sn**	**11 21 25.9**	**0.0**
CONA	**Conrad Observa**	**5.04 330**	⇑*i*Pn	**Pn**	**11 20 29.4**	**-0.6**
CONA			⇓*i*Sn	**Sn**	**11 21 32.6**	**-6.1**
CONA	**Conrad Observa**	**5.04 330**	Pn	**Pn**	**11 20 29.4**	**-0.6**
CRVS	**Cervenica-Dubn**	**5.47 13**	*e*Pn	**Pn**	**11 20 36.0**	**+0.2**
CRVS			*e*Pg	**Pg**	**11 21 01.1**	**+2.7**
CRVS			*e*Sn	**Sn**	**11 21 37.1**	**-2.0**
CRVS			*e*Sg	**Sg**	**11 22 09.7**	**+0.5**
CRVS	**Cervenica-Dubn**	**5.47 13**	*e*PN	**Pn**	**11 20 36.0**	**+0.2**
CRVS			*e*PG	**Pg**	**11 21 01.1**	**+2.7**
CRVS			*e*SN	**Sn**	**11 21 37.1**	**-2.0**
CRVS			*e*SG	**Sg**	**11 22 09.7**	**+0.5**
CRVS	**Cervenica-Dubn**	**5.47 13**	*e*Pn	**Pn**	**11 20 36.0**	**+0.2**
CRVS			*e*Sn	**Sn**	**11 21 37.1**	**-2.0**
CRVS			*e*Sg	**Sg**	**11 22 09.7**	**+0.5**
MOA	**Molln**	**5.64 321**	⇓*i*Pn	**Pn**	**11 20 38.1**	**-0.1**
MOA			⇑*i*Sn	**Sn**	**11 21 39.0**	**-4.3**
MOA	**Molln**	**5.64 321**	Pn	**Pn**	**11 20 38.1**	**0.0**
KOLS	**Kolonicke sedl**	**5.66 18**	*e*Pn	**Pn**	**11 20 40.6**	**+2.1**
KOLS			*e*Pg	**Pg**	**11 21 05.8**	**+3.7**
KOLS			*e*Sg	**Sg**	**11 22 14.4**	**-1.0**
KOLS	**Kolonicke sedl**	**5.66 18**	*e*PN	**Pn**	**11 20 40.6**	**+2.1**
KOLS			*e*PG	**Pg**	**11 21 05.8**	**+3.7**
KOLS			*e*SG	**Sg**	**11 22 14.4**	**-1.0**
KOLS	**Kolonicke sedl**	**5.66 18**	*e*Pn	**Pn**	**11 20 40.6**	**+2.1**
KOLS			*e*Sg	**Sg**	**11 22 14.4**	**-1.0**
ABTA	**Abfaltersbach**	**5.89 305**	⇓*i*Pn	**Pn**	**11 20 42.6**	**+0.9**
ABTA	**Abfaltersbach**	**5.89 305**	Pn	**Pn**	**11 20 42.6**	**+1.0**
KHC	**Kasperske Hory**	**6.91 325**	*e*PN	**Pn**	**11 20 58.3**	**+2.7**
KHC			*e*x	x	11 21 04.6	
KHC			*e*SN	**Sn**	**11 22 13.7**	**-0.8**
DPC	**Dobruska-Polom**	**7.11 343**	*e*PN	**Pn**	**11 20 59.4**	**+1.1**
DPC	**Dobruska-Polom**	**7.11 343**	Pn	**Pn**	**11 20 59.4**	**+1.1**
PGF	**Pioggiola**	**7.80 266**	*e*P	**Pn**	**11 21 08.8**	**+1.0**
	comp=N,14nm,0.8s					
PGF	**Pioggiola**	**7.80 266**	*e*P	**Pn**	**11 21 08.8**	**+1.0**
	comp=N,7.1nm,0.8s					
PGF	**Pioggiola**	**7.80 266**	*e*P	**Pn**	**11 21 08.8**	**+1.0**
	comp=N,7.1nm,0.8s					
SBF	**Sospel**	**8.78 276**	*e*P	**Pn**	**11 21 18.7**	**-2.6**
MBDF	**Montbardon**	**9.26 281**	*e*P	**Pn**	**11 21 29.9**	**+2.1**
	comp=N,6.6nm,0.6s					
MBDF	**Montbardon**	**9.26 281**	*e*P	**Pn**	**11 21 29.9**	**+2.1**
	comp=N,3.3nm,0.6s					
MBDF	**Montbardon**	**9.26 281**	*e*P	**Pn**	**11 21 29.9**	**+2.1**
	comp=N,3.3nm,0.6s					
LPG	**La Plagne**	**9.34 286**	*e*P	**Pn**	**11 21 31.3**	**+2.4**
	comp=N,8.0nm,0.7s					
LPG	**La Plagne**	**9.34 286**	*e*P	**Pn**	**11 21 31.3**	**+2.4**
	comp=N,4.0nm,0.7s					
LPG	**La Plagne**	**9.34 286**	*e*P	**Pn**	**11 21 31.3**	**+2.4**
	comp=N,4.0nm,0.7s					
LPL	**La Plagne**	**9.36 286**	*e*P	**Pn**	**11 21 31.4**	**+2.3**
LPL	**La Plagne**	**9.36 286**	*e*P	**Pn**	**11 21 31.4**	**+2.3**
CDF	**Champ du Feu**	**9.80 304**	*e*P	**Pn**	**11 21 36.2**	**+0.9**
CDF	**Champ du Feu**	**9.80 304**	*e*P	**Pn**	**11 21 36.2**	**+0.9**
HINF	**Hinteralfeld**	**9.84 300**	*e*P	**Pn**	**11 21 36.3**	**+0.6**
HINF	**Hinteralfeld**	**9.84 300**	*e*P	**Pn**	**11 21 36.3**	**+0.6**
ORIF	**Oris-en-Rattie**	**9.90 282**	*e*P	**Pn**	**11 21 36.2**	**-0.4**
	comp=N,6.7nm,0.6s					
ORIF	**Oris-en-Rattie**	**9.90 282**	*e*P	**Pn**	**11 21 36.2**	**-0.4**
	comp=N,3.3nm,0.6s					
ORIF	**Oris-en-Rattie**	**9.90 282**	*e*P	**Pn**	**11 21 36.2**	**-0.4**
	comp=N,3.3nm,0.6s					
HAU	**Haudompre**	**10.22 300**	*e*P	**Pn**	**11 21 41.0**	**0.0**
HAU	**Haudompre**	**10.22 300**	*e*P	**Pn**	**11 21 41.0**	**0.0**

*ISCJB **19** 11:26:46.6±0.5, 37°.94N±0°.02×30°.95E±0°.04, h4km±6km,*
Error ellipse: s-maj=5.1km s-min=3.9km az=23.4
*CSEM **19** 11:26:46.4±0.1, 37°.93N×30°.92E, h10km, MD2.9, Error*
ellipse: s-maj=3.5km s-min=2.8km az=94.0
*ISK **19** 11:26:46.1, 37°.93N×30°.91E, h9km, MD2.9*
*DDA **19** 11:26:47.5, 37°.96N×30°.98E, h7km±3km, Md2.9*
ISC 19 11:26:47.2±0.5, 37°.93N±0°.03×30°.93E±0°.04, h10km±6km,
n22, σ0s98/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUTC	**Sutluce-Ispart**	**0.46**	**173**	*e*PG	**Pg**	**11 26 55.8**	**-0.3**
SUTC				*e*SG	**Sg**	**11 27 03.1**	**+1.0**
SUTC	**Sutluce-Ispart**	**0.46**	**173**	*e*Pg	**Pg**	**11 26 55.8**	**-0.3**
SUTC				*e*Sg	**Sg**	**11 27 03.1**	**+1.0**
BCK	**Bucak**	**0.54**	**210**	*e*PG	**Pg**	**11 26 56.7**	**-0.9**
BCK				*e*SG	**Sg**	**11 27 04.5**	**-0.2**
BCK	**Bucak**	**0.54**	**210**	*e*Pg	**Pg**	**11 26 56.7**	**-0.9**
BCK				*e*Sg	**Sg**	**11 27 04.5**	**-0.2**
SHUT	**Suhut-Afyon**	**0.69**	**335**	*e*PG	**Pg**	**11 26 59.9**	**-0.6**
SHUT				*e*SG	**Sg**	**11 27 09.7**	**+0.2**
SHUT	**Suhut-Afyon**	**0.69**	**335**	*e*Pg	**Pg**	**11 26 59.9**	**-0.6**
SHUT				*e*Sg	**Sg**	**11 27 09.7**	**+0.2**
BOLV	**Bolvadin**	**0.79**	**1**	*i* P	**Pg**	**11 27 01.9**	**-0.5**
BOLV				*i* S	**Sg**	**11 27 13.6**	**+0.9**
BOLV	**Bolvadin**	**0.79**	**1**	*i* P	**Pg**	**11 27 01.9**	**-0.5**
BOLV				*i* S	**Sg**	**11 27 13.6**	**+0.9**
KORT	**Korkueli**	**1.03**	**207**	*i* P	**Pg**	**11 27 07.8**	**+0.8**
KORT				*i* S	**Sg**	**11 27 24.1**	**+3.6**
KORT	**Korkueli**	**1.03**	**207**	*i* P	**Pg**	**11 27 07.8**	**+0.7**
KORT				*i* S	**Sg**	**11 27 24.1**	**+3.6**
KDHN	**Kadinhani**	**1.11**	**57**	*i* P	**Pg**	**11 27 07.3**	**-1.2**
KDHN				*i* S	**Sg**	**11 27 23.0**	**+0.2**
KDHN	**Kadinhani**	**1.11**	**57**	*i* P	**Pg**	**11 27 07.3**	**-1.1**
KDHN				*i* S	**Sg**	**11 27 23.0**	**+0.2**
KONT	**Konya--Tatoy**	**1.13**	**89**	*e*PN	**Pg**	**11 27 07.8**	**-1.2**
KONT				*e*SN	**Sg**	**11 27 25.1**	**+1.4**
KONT	**Konya--Tatoy**	**1.13**	**89**	*e*Pn	**Pg**	**11 27 07.8**	**-1.1**
KONT				*e*Sn	**Sg**	**11 27 25.1**	**+1.5**
KHL	**Karahalli**	**1.18**	**290**	*e*PN	**Pn**	**11 27 08.8**	**-0.9**
KHL	**Karahalli**	**1.18**	**290**	*e*Pn	**Pn**	**11 27 08.8**	**-0.9**
KIZT	**Kizilcal**	**1.21**	**38**	*e*PN	**Pn**	**11 27 09.4**	**-0.7**
KIZT				*e*SN	**Sn**	**11 27 27.6**	**+1.1**
KIZT	**Kizilcal**	**1.21**	**38**	*e*Pn	**Pn**	**11 27 09.4**	**-0.7**
KIZT				*e*Sn	**Sn**	**11 27 27.6**	**+1.1**
KHAL	**Karahalli**	**1.22**	**292**	*i* P	**Pn**	**11 27 09.3**	**-0.9**
KHAL				*i* S	**Sb**	**11 27 28.6**	**+2.6**
KHAL	**Karahalli**	**1.22**	**292**	*i* P	**Pn**	**11 27 09.3**	**-0.9**
KHAL				*i* S	**Sb**	**11 27 28.5**	**+2.5**
HDMB	**Hadim**	**1.57**	**127**	*e*PN	**Pn**	**11 27 14.7**	**-0.4**
HDMB	**Hadim**	**1.57**	**127**	*e*Pn	**Pn**	**11 27 14.7**	**-0.4**

IDC 19 11:31:04.0±1.6, 3°.26S×139°.67E, h0km, mb3.8/3,
mb1 4.3/4, mb1mx3.9/12, mbtmp4.0/4, ML4.2/1, MS3.0/4,
Ms1 3.0/4, ms1mx2.7/18, Error ellipse: s-maj=78.8km
s-min=28.0km az=99.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.38**	**197**	P	Pn	11 35 06.5	-1.5
	1.0nm,0.3s,baz=16,slow=13,SNR=38						
WRA				S	Sn	11 38 08.9	-13
	0.4nm,0.3s,baz=9.4,slow=22,SNR=4.2						
GUMO	**Guam**	**17.52**	**17**	LR	LR	11 41 41.9	
	comp=Z,30nm,19.0s,baz=270,slow=36						
ASAR	**Alice Springs**	**21.04**	**195**	P	P	11 35 50.1	+0.6
	11nm,0.7s,baz=23,slow=11,SNR=64						
ASAR				S	S	11 39 38.4	-6.3
	1.2nm,0.8s,baz=12,slow=28,SNR=4.9						
STKA	**Stephens Creek**	**28.52**	**177**	LR	LR	11 48 18.2	
	comp=Z,52nm,20.0s,baz=24,slow=36						
KSRS	**Korea Array**	**41.95**	**346**	LR	LR	11 53 50.2	
	comp=Z,18nm,19.6s,baz=150,slow=33						
PETK	**Petropavlovsk-**	**58.18**	**13**	LR	LR	12 05 57.3	
	comp=Z,17nm,19.6s,baz=272,slow=36						
MKAR	**Makanchi Array**	**70.81**	**322**	P	P	11 42 22.9	+0.5
	0.3nm,0.3s,baz=116,slow=6.6,SNR=3.6						
ILAR	**Eielson Array**	**85.94**	**24**	P	P	11 43 45.5	-0.2
	0.2nm,0.5s,baz=260,slow=4.1,SNR=5.6						

*ISCJB **19** 11:50:33.0±0.8, 38°.98N±0°.04×38°.18E±0°.07, h29km±7km,*
Error ellipse: s-maj=9.4km s-min=6.0km az=6.1
*CSEM **19** 11:50:32.5±0.1, 38°.95N×38°.17E, h26km±1km, MD3.0,*
Error ellipse: s-maj=3.2km s-min=2.1km az=82.0
*ISK **19** 11:50:32.0, 38°.95N×38°.13E, h25km, MD2.8*
*DDA **19** 11:50:33.8, 38°.92N×38°.27E, h7km±1km, Md3.0*
ISC 19 11:50:33.1±0.8, 38°.97N±0°.04×38°.18E±0°.07, h26km±7km,
n16, σ0s62/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.38**	**39**	*i* P	**Pb**	**11 50 41.5**	**+0.1**
KEMA				*i* S	**Sb**	**11 50 47.6**	**+0.5**
KEMA	**Kemaliye**	**0.38**	**39**	*i* P	**Pb**	**11 50 41.5**	**+0.1**
KEMA				*i* S	**Sb**	**11 50 47.6**	**+0.5**
MYA	**Malataya**	**0.68**	**164**	*e*PG	**Pb**	**11 50 45.8**	**-0.5**
MYA				*e*SG	**Sb**	**11 50 56.2**	**+1.0**
MYA	**Malataya**	**0.68**	**164**	*e*Pg	**Pb**	**11 50 45.8**	**-0.5**
MYA				*e*Sg	**Sb**	**11 50 56.2**	**+1.0**
MALT	**Malatya**	**0.69**	**164**	*e*PG	**Pb**	**11 50 46.0**	**-0.5**
MALT				*e*SG	**Sb**	**11 50 55.8**	**+0.2**
MALT	**Malatya**	**0.69**	**164**	*e*Pg	**Pb**	**11 50 46.0**	**-0.5**
MALT				*e*Sg	**Sb**	**11 50 55.8**	**+0.2**
AKCD	**Akcadag**	**0.71**	**197**	*i* P	**Pb**	**11 50 46.2**	**-0.6**
AKCD				*i* S	**Sb**	**11 50 57.1**	**+0.9**
AKCD	**Akcadag**	**0.71**	**197**	*i* P	**Pb**	**11 50 46.2**	**-0.6**
AKCD				*i* S	**Sb**	**11 50 57.1**	**+0.9**
ELZG	**Elazig**	**0.79**	**127**	*i* P	**Pb**	**11 50 47.5**	**-0.7**
ELZG				*i* S	**Sb**	**11 50 57.6**	**-0.8**
ELZG	**Elazig**	**0.79**	**127**	*i* P	**Pb**	**11 50 47.5**	**-0.7**
ELZG				*i* S	**Sb**	**11 50 57.7**	**-0.8**
SVRC	**Sivrice-ELAZID**	**1.06**	**124**	*e*PN	**Pn**	**11 50 51.9**	**-0.4**
SVRC				*e*SN	**Sn**	**11 51 06.7**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.06**	**124**	*e*Pn	**Pn**	**11 50 51.9**	**-0.4**
SVRC				*e*Sn	**Sn**	**11 51 06.7**	**+0.5**
SVSK	**Karacayir**	**1.31**	**316**	*e*PN	**Pn**	**11 50 55.3**	**-0.5**
SVSK	**Karacayir**	**1.31**	**316**	*e*Pn	**Pn**	**11 50 55.3**	**-0.5**
BAYT	**Ayd¨–ntepe-Bay**	**2.07**	**46**	*e*PN	**Pn**	**11 51 07.1**	**+0.9**
BAYT	**Ayd¨–ntepe-Bay**	**2.07**	**46**	*e*Pn	**Pn**	**11 51 07.1**	**+0.9**

*ISCJB **19** 11:54:11.8±0.5, 15°.36N±0°.04×94°.25W±0°.03, h55km±4km,*
mb4.2/30, MS3.2/5, Error ellipse: s-maj=7.4km
s-min=3.4km az=32.1
*MEX **19** 11:54:12.5±1.5, 15°.33N×94°.32W, h20km±7km, MD4.1*
*NEIC **19** 11:54:12.8±0.5, 15°.32N×94°.29W, mb4.3/20, MD4.1(MEX),*
Error ellipse: s-maj=11.6km s-min=6.6km az=212.0
*IDC **19** 11:54:13.3±0.8, 15°.45N×94°.17W, h68km±6km, mb3.8/14,*
mb1 4.0/17, mb1mx3.9/25, mbtmp3.8/17, MS3.2/7,
Ms1 3.2/7, ms1mx3.0/30, Error ellipse: s-maj=16.8km
s-min=9.1km az=33.0
*CASC **19** 11:54:16.8±1.3, 15°.26N×93°.99W, h64km±132km, MD4.3,*
mb4.3(NEIC)
*SSS **19** 11:54:16.5, 14°.95N×94°.03W, h103km*
ISC 19 11:54:13.1±0.4, 15°.42N±0°.04×94°.25W±0°.03, h44km±4km,
h64km±.6km: pP-P, n202, σ1s12/220, mb4.2/30, MS3.2/5,
60C-49D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.04**	**74**	*i* P	**Pn**	**11 54 30.0**	**-1.2**
PCIG				*i* S	**Sn**	**11 54 42.9**	**-1.7**
TGIG		**1.73**	**39**	*i* P	**Pn**	**11 54 40.4**	**-0.3**
TGIG				*i* S	**Sn**	**11 55 01.3**	**-0.3**
CMIG	**Matias Romero**	**1.77**	**340**	P	**Pn**	**11 54 40.2**	**-1.1**
	109nm,0.3s,baz=162,slow=10.0,SNR=779						
CMIG				S	**Sn**	**11 55 01.5**	**-1.1**
	605nm,0.3s,baz=93,slow=19,SNR=29						
HUIG	**Huatulco**	**1.82**	**281**	*e*P	**Pn**	**11 54 39.0**	**-2.9**
HUIG				*i* S	**Sn**	**11 54 58.5**	**-5.4**
HUIG	**Huatulco**	**1.82**	**281**	*e*P	**Pn**	**11 54 39.0**	**-2.9**
HUIG				*i* S	**Sn**	**11 54 59.9**	**-3.9**
THIG		**1.99**	**105**	*e*P	**Pn**	**11 54 42.6**	**-1.7**
THIG				*i* S	**Sn**	**11 55 06.0**	**-1.9**
SCX	**San Cristobal**	**2.03**	**50**	*i* P	**Pn**	**11 54 44.5**	**-0.4**
SCX				*i* S	**Sn**	**11 55 11.4**	**+2.4**
SCX	**San Cristobal**	**2.03**	**50**	*i* P	**Pn**	**11 54 44.5**	**-0.4**
SCX				*i* S	**Sn**	**11 55 11.4**	**+2.4**
CCIG	**Comitan**	**2.21**	**67**	*e*P	**Pn**	**11 54 47.8**	**+0.5**
CCIG				*i* S	**Sn**	**11 55 14.5**	**+1.1**
CCIG	**Comitan**	**2.21**	**67**	*e*P	**Pn**	**11 54 47.8**	**+0.5**
CCIG				*i* S	**Sn**	**11 55 14.5**	**+1.1**
JAT	**Jato**	**2.76**	**113**	⇓*e*P	**Pn**	**11 54 55.3**	**+0.4**
OXX	**Oaxaca**	**2.89**	**305**	*e*P	**Pn**	**11 54 57.6**	**+0.9**
OXX				*i* S	**Sn**	**11 55 27.1**	**-3.1**
OXX	**Oaxaca**	**2.89**	**305**	*e*P	**Pn**	**11 54 57.6**	**+0.9**
OXX				*i* S	**Sn**	**11 55 27.1**	**-3.1**
VHO	**Vista Hermosa**	**2.89**	**305**	*i* P	**Pn**	**11 54 57.2**	**+0.5**
VHO				*i* S	**Sn**	**11 55 28.3**	**-2.0**
VHO	**Vista Hermosa**	**2.89**	**305**	*i* P	**Pn**	**11 54 57.2**	**+0.5**
VHO				*i* S	**Sn**	**11 55 28.3**	**-2.0**
TP2	**Tecpan 2**	**3.19**	**101**	*e*P	**Pn**	**11 55 02.6**	**+1.9**
FG6		**3.37**	**104**	*e*P	**Pn**	**11 55 04.5**	**+1.2**
FUG	**Fuego 3**	**3.44**	**106**	*e*P	**Pn**	**11 55 04.8**	**+0.6**
PCG	**Pacaya**	**3.67**	**106**	*e*P	**Pn**	**11 55 08.9**	**+1.6**
APG	**El Apazote**	**3.68**	**96**	P	**Pn**	**11 55 07.9**	**+0.3**
	45nm,0.3s,baz=300,slow=10,SNR=205						
APG				S	**Sn**	**11 55 50.1**	**+0.4**
	71nm,0.3s,baz=338,slow=20,SNR=6.7						
PNIG	**Pinotepa**	**3.85**	**285**	*e*P	**Pn**	**11 55 07.9**	**-2.0**
PNIG				*i* S	**Sn**	**11 55 50.4**	**-3.5**
PNIG	**Pinotepa**	**3.85**	**285**	*e*P	**Pn**	**11 55 07.9**	**-2.0**
PNIG				*i* S	**Sn**	**11 55 50.4**	**-3.5**
TPIG	**Tehuac#an**	**4.21**	**315**	*e*P	**Pn**	**11 55 14.5**	**-0.3**
TPIG				*i* S	**Sn**	**11 56 00.1**	**-2.7**
MRL	**Marmol**	**4.42**	**94**	*e*P	**Pn**	**11 55 18.4**	**+0.7**
RBDL	**Robledal**	**4.61**	**106**	*e*P	**Pn**	**11 55 20.8**	**+0.5**
RBDL				*e*S	**Sn**	**11 56 11.3**	**-1.2**
RTR	**El Retiro**	**4.71**	**108**	*e*P	**Pn**	**11 55 22.1**	**+0.5**
SBLS	**San Blas**	**4.75**	**109**	*e*P	**Pn**	**11 55 23.5**	**+1.3**
SNJE	**San Jose**	**4.76**	**108**	*e*P	**Pn**	**11 55 22.6**	**+0.3**
BOQS	**Boqueron**	**5.10**	**109**	*e*P	**Pn**	**11 55 28.2**	**+1.2**
BOQS				*e*S	**Sn**	**11 56 22.8**	**-1.9**
LBRS	**Las Brisas**	**5.31**	**108**	*e*P	**Pn**	**11 55 30.5**	**+0.5**
LFRS	**El Faro**	**5.34**	**109**	*e*P	**Pn**	**11 55 30.0**	**-0.3**
ACX	**Acapulco**	**5.58**	**286**	*i* P	**Pn**	**11 55 31.2**	**-2.3**
ACX	**Acapulco**	**5.58**	**286**	*i* P	**Pn**	**11 55 31.2**	**-2.3**
TGUH	**Tegucigalpa,Un**	**6.89**	**100**	*e*Pn	**Pn**	**11 55 53.8**	**+2.2**
TEIG	**Tepich**	**7.43**	**49**	P	**Pn**	**11 55 57.0**	**-2.0**
	132nm,0.3s,baz=252,slow=0.7,SNR=67						
TEIG				S	**Sn**	**11 57 20.3**	**-1.7**
	52nm,0.3s,baz=26,slow=18,SNR=16						
TEIG				LR	LR	11 59 12.7	
	comp=Z,278nm,20.5s,baz=351,slow=41						
TEIG	**Tepich**	**7.43**	**49**	*e*Pn	**Pn**	**11 55 57.1**	**-1.9**
JTS	**JuntasAbangare**	**10.40**	**118**	P	**Pn**	**11 56 40.3**	**+0.5**
	4.1nm,0.3s,baz=324,slow=19,SNR=10						
JTS				LR	LR	12 00 27.4	
	comp=Z,106nm,21.5s,baz=208,slow=36						
JTS	**JuntasAbangare**	**10.40**	**118**	*e*Pn	**Pn**	**11 56 41.3**	**+1.5**
JCT	**Junction City**	**15.83**	**342**	*e*P	**Pn**	**11 57 55.6**	**+2.7**
	13nm,0.5s						
628A	**Black Gap, Mar**	**16.10**	**332**	⇑P	**Pn**	**11 57 57.3**	**+0.9**
	baz=16						
627A	**Terlingua Ranc**	**16.31**	**330**	⇓P	**Pn**	**11 58 00.7**	**+1.7**
	baz=16,SNR=11						
TXAR	**Lajitas Array**	**16.34**	**329**	P	**Pn**	**11 58 00.5**	**+1.1**
	0.2nm,0.3s,baz=152,slow=11,SNR=14						
TXAR	**Lajitas Array**	**16.34**	**329**	P	**Pn**	**11 58 00.5**	**+1.1**
626A	**Big Bend Ranch**	**16.75**	**329**	⇑P	**Pn**	**11 58 05.8**	**+1.2**
	baz=17						
527A	**Woodward Ranch**	**16.99**	**331**	⇑P	**Pn**	**11 58 08.6**	**+1.0**
	baz=17						
428A	**Kincaid Ranch,**	**17.08**	**335**	⇑P	**Pn**	**11 58 09.6**	**+0.9**
	baz=17						
526A	**Mary Lane Ranc**	**17.15**	**330**	⇑P	**Pn**	**11 58 10.4**	**+0.8**
	baz=17						
427A	**Hayter Ranch,**	**17.50**	**333**	⇑P	**Pn**	**11 58 14.3**	**+0.5**
	baz=18						
426A	**McDonald Obser**	**17.63**	**331**	⇓P	**Pn**	**11 58 17.0**	**+1.5**
	baz=18,SNR=10.0						
328A	**Wristen Ranch,**	**17.71**	**335**	⇑P	**Pn**	**11 58 18.3**	**+1.9**
	baz=18,SNR=8.8						
326A	**Caldwell Ranch**	**18.15**	**332**	⇓P	**Pn**	**11 58 22.4**	**+0.5**
	baz=18						
425A	**Indio Mountain**	**18.18**	**329**	⇓P	**Pn**	**11 58 22.7**	**+0.4**
	baz=18						
325A	**Bean Ranch, Si**	**18.66**	**330**	⇑P	**Pn**	**11 58 27.1**	**-0.9**
	baz=19						
324A	**Moseley Ranch,**	**18.96**	**329**	⇓P	**Pn**	**11 58 30.6**	**-1.1**
	baz=19						
MIAR	**Mount Ida**	**19.05**	**2**	*e*P	**Pn**	**11 58 30.7**	**-2.1**
	9.9nm,0.8s						
GDL2	**Guadalupe Moun**	**19.07**	**333**	*e*Pn	**Pn**	**11 58 33.0**	**0.0**
MNTX	**Cornudas Mount**	**19.12**	**330**	⇑P	**Pn**	**11 58 32.0**	**-1.6**
	baz=19						
126A	**Clayton Basin,**	**19.31**	**334**	⇓P	**Pn**	**11 58 34.8**	**-1.0**
	baz=19						
224A	**Cornudas Mount**	**19.50**	**330**	⇓P	**Pn**	**11 58 36.4**	**-1.7**
	baz=20						
125A	**Gardner Draw,**	**19.59**	**333**	⇓P	**Pn**	**11 58 37.9**	**-1.3**
	baz=20						
WMOK	**Wichita Mounta**	**19.66**	**349**	*e*P	**Pn**	**11 58 38.1**	**-1.9**
	7.7nm,0.9s						
Z26A	**Caprock**	**19.84**	**335**	⇓P	**Pn**	**11 58 39.9**	**-2.2**
	baz=20						
124A	**Stringfield Ra**	**19.99**	**331**	⇑P	**Pn**	**11 58 41.2**	**-2.6**
	baz=20						
MSTX	**Muleshoe**	**20.01**	**339**	⇓P	**P**	**11 58 41.5**	**-0.6**
	baz=20						
Y27A	**Causey**	**20.07**	**338**	⇑P	**P**	**11 58 42.4**	**-0.3**
	baz=20						
Z25A	**Roswell**	**20.15**	**334**	⇓P	**P**	**11 58 43.3**	**-0.3**
	baz=20						
Y26A	**Elida**	**20.35**	**337**	⇑P	**P**	**11 58 45.7**	**-0.1**
	baz=20						
Z24A	**Sheeppen Canyo**	**20.47**	**333**	⇑P	**P**	**11 58 48.2**	**+1.0**
	baz=21,SNR=6.6						
AMTX	**Amarillo**	**20.50**	**342**	⇑P	**P**	**11 58 46.8**	**-0.6**
	baz=21,SNR=13						
AMTX	**Amarillo**	**20.50**	**342**	*e*P	**P**	**11 58 46.8**	**-0.6**
	20nm,0.6s						
320A	**Kipp Ranch, An**	**20.52**	**323**	⇑P	**P**	**11 58 48.9**	**+1.2**
	baz=21,SNR=6.4						
Y25A	**Mesa, Roswell**	**20.69**	**335**	⇑P	**P**	**11 58 51.2**	**+1.7**
	baz=21						
X27A	**F and S Farms,**	**20.73**	**339**	⇓P	**P**	**11 58 49.4**	**

baz=26
P25A **Willow Gulch B** 25.52 342 ⇓P P 11 59 39.3 +1.7
baz=26
T18A **Mexican Hat** 25.69 330 ⇑P P 11 59 39.5 +0.4
baz=26
S19A **Harvey Farm, M** 25.84 332 ⇑P P 11 59 42.0 +1.6
baz=26
PV01 **Paradox Valley** 25.92 334 *e*P P 11 59 40.8 -0.3
457nm,1.0s
T17A **Navajo Res., N** 26.04 329 ⇑P P 11 59 41.0 -1.2
baz=26
SMCO **Snowmass** 26.17 337 *e*P P 11 59 44.6 +1.3
4.8nm,1.0s,mb4.0
ISCO **Idaho Springs** 26.24 340 *e*P P 11 59 44.1 +0.1
15nm,1.9s,mb4.2
R19A **Curley Farm, L** 26.35 333 ⇑P P 11 59 44.4 -0.6
baz=26
U15A **North Rim** 26.38 326 ⇑P P 11 59 45.5 +0.1
baz=26
BC3 **Big Chuckawall** 26.39 317 ⇓P P 11 59 44.6 -0.8
baz=26
U14A **Mt Trumbull** 26.86 325 ⇑P P 11 59 50.0 +0.3
baz=27
T15A **Red Dirt Ranch** 26.87 327 ⇑P P 11 59 50.4 +0.6
baz=27
Q19A **Hogan Spring (** 26.90 333 ⇑P P 11 59 49.7 -0.3
baz=27
R17A **Hanksville Air** 27.11 331 ⇓P P 11 59 51.8 -0.1
baz=27
CCUT **Cedar City** 27.79 326 *e*P P 11 59 59.2 +1.3
50nm,2.9s,mb4.6
N20A **Spence Gulch,** 28.09 337 ⇓P P 12 00 00.9 +0.3
baz=28
M21A **Separation Pea** 28.45 339 ⇑P P 12 00 03.4 -0.4
baz=29
R13A **O'Grain Ranch,** 28.58 326 ⇓P P 12 00 05.6 +0.7
baz=29
J21A **Lysite** 30.03 341 ⇓P P 12 00 18.3 +0.6
baz=30
PDAR **Pinedale Array** 30.25 337 P P 12 00 18.9 -0.8
0.7nm,0.8s,mb3.4,baz=133,slow=8.3,SNR=6.5
PDAR pP pP 12 00 34.0 +2.5
0.6nm,0.8s,baz=139,slow=9.2,SNR=3.9
PDAR sP sP 12 00 43.2 +6.3
0.7nm,0.9s,baz=152,slow=6.7,SNR=3.1
PDAR PcP PcP 12 03 16.1 -3.5
0.2nm,0.5s,baz=116,slow=4.1,SNR=2.4
K18A **Toltan Ranch,** 30.32 337 ⇑P P 12 00 20.5 +0.1
baz=30
L14A **Malta** 31.16 332 P P 12 00 27.9 +0.1
baz=31,SNR=8.2
NVAR **Mina Array Bea** 31.21 322 P P 12 00 28.5 +0.2
3.2nm,1.0s,mb4.1,baz=135,slow=8.3,SNR=18
NVAR pP pP 12 00 43.8 +3.7
2.9nm,1.1s,baz=137,slow=8.8,SNR=4.7
NVAR PcP PcP 12 03 20.4 -1.9
0.7nm,0.8s,baz=147,slow=1.8,SNR=4.6
NVAR pPcP 12 03 37.5
1.1nm,0.9s,baz=148,slow=3.4,SNR=5.6
H20A **Greybull** 31.23 341 ⇑P P 12 00 27.5 -0.8
baz=31
REDW **Red Top Meadow** 31.25 336 *e*P P 12 00 28.1 -0.5
4.6nm,1.0s,mb4.3
SNOW **Snow King Moun** 31.30 337 *e*P P 12 00 28.8 -0.2
8.4nm,0.9s,mb4.6
LOHW **Long Hollow** 31.37 337 *e*P P 12 00 28.9 -0.8
1.9nm,0.8s,mb4.0
K15A **Arbon** 31.38 334 ⇑P P 12 00 29.6 0.0
baz=32
TPAW **Teton Pass** 31.40 336 *e*P P 12 00 29.7 -0.2
8.6nm,1.4s,mb4.4
H19A **Powell** 31.71 340 ⇓P P 12 00 32.8 +0.2
baz=32
J15A **Blackfoot** 31.92 335 ⇓P P 12 00 34.1 -0.4
baz=32
I16A **Newdale** 31.93 336 ⇑P P 12 00 34.9 +0.4
baz=32
H18A **Shoshone NF, C** 31.95 339 ⇑P P 12 00 34.3 -0.4
baz=32,SNR=8.2
F19A **Roth Farm, Mol** 32.75 341 ⇓P P 12 00 40.8 -0.9
baz=33
AGMN **Agassiz Nation** 32.81 358 *e*P P 12 00 39.3 -2.9
4.9nm,0.6s,mb4.6
HLID **Hailey** 32.90 333 ⇑P P 12 00 42.2 -0.8
baz=33
F18A **Big Timber** 33.05 340 ⇓P P 12 00 42.8 -1.5
baz=33
D22A **Cohagen** 33.15 345 ⇓P P 12 00 44.5 -0.7
baz=33
MCMT **McKenzie Canyo** 33.27 336 *e*P P 12 00 45.8 -0.4
1.0nm,0.8s,mb3.8
F17A **Fitzpatrick Pl** 33.37 339 ⇑P P 12 00 47.1 +0.1
baz=34,SNR=6.1
G15A **Dillon** 33.41 336 ⇑P P 12 00 47.0 -0.4
baz=34
I12A **Atlanta** 33.41 332 ⇑P P 12 00 47.1 -0.3
baz=34
H13A **Challis** 33.63 334 ⇓P P 12 00 48.8 -0.6
baz=34
C22A **Vida** 33.64 346 ⇑P P 12 00 48.3 -1.1
baz=34
E18A **Harlowton** 33.69 340 ⇓P P 12 00 49.0 -0.9
baz=34
H12A **Diamond D Ranc** 33.88 333 ⇓P P 12 00 51.1 -0.5
baz=34,SNR=7.2
D19A **Cripps Ranch,** 33.91 342 ⇑P P 12 00 50.8 -1.0
baz=34
E17A **Martinsdale** 33.92 339 ⇓P P 12 00 50.9 -0.9
baz=34
WVOR **Wild Horse Val** 34.11 327 *e*P P 12 00 53.1 -0.5
4.5nm,1.0s,mb4.3
D18A **Linhart Farms,** 34.22 341 ⇑P P 12 00 54.2 -0.2
baz=34
J08A **Circle Bar Ran** 34.68 328 ⇓P P 12 00 58.5 0.0
baz=35,SNR=7.4
ULM **Lac du Bonnet** 34.76 358 P P 12 00 55.3 -3.8
2.8nm,0.6s,mb4.4,baz=171,slow=11,SNR=5.4
C17A **Wharram Farm,** 34.91 340 ⇑P P 12 00 59.5 -0.9
baz=35
F12A **Elk City** 35.01 334 ⇓P P 12 01 00.8 -0.5
baz=35,SNR=5.1
H04A **Detroit Lake** 37.53 327 ⇓P P 12 01 21.6 -1.3
baz=38
LPAZ **La Paz** 40.72 140 P P 12 01 47.8 -2.0
0.3nm,0.4s,mb3.3,baz=6.3,slow=9.2,SNR=2.1
LPAZ LR LR 12 18 40.9
comp=Z,31nm,19.9s,MS3.2,baz=206,slow=36
YKA **Yellowknife Ar** 49.16 348 P P 12 02 54.1 -2.2
2.8nm,0.9s,mb4.3,baz=147,slow=7.8,SNR=5.2
YKA LR LR 12 28 12.1
comp=Z,3.8nm,18.2s,MS2.4,baz=5.0,slow=42
CPUP **Villa Florida** 54.88 139 P P 12 03 35.3 -4.0
0.3nm,0.4s,mb3.7,baz=270,slow=2.9,SNR=3.0
BDFB **Brasilia** 55.12 122 P P 12 03 37.6 -3.7
2.1nm,0.3s,mb4.6,baz=290,slow=23,SNR=3.1
PLCA **Paso Flores** 60.04 159 P P 12 04 13.3 -2.1
4.3nm,0.9s,mb4.5,baz=323,slow=9.6,SNR=7.3
PLCA **Paso Flores** 60.04 159 P P 12 04 13.3 -2.1
ILAR **Eielson Array** 60.68 337 P P 12 04 17.1 -2.5
1.2nm,0.8s,mb4.0,baz=141,slow=4.4,SNR=14
ILAR pP pP 12 04 34.0 +1.7
0.6nm,0.7s,baz=143,slow=5.2,SNR=3.9
ILAR LR LR 12 33 06.2
comp=Z,43nm,20.4s,MS3.6,baz=118,slow=38
NOA **NORSAR Array B** 83.94 28 P P 12 06 35.2 -3.1
0.9nm,0.6s,mb4.1,baz=293,slow=4.7,SNR=3.6
ARCES **ARCESS Array B** 85.47 18 P P 12 06 42.2 -3.6
1.8nm,0.7s,mb4.3,baz=286,slow=6.2,SNR=9.3
ARCES **ARCESS Array B** 85.47 18 P P 12 06 42.2 -3.6
DBIC **Dimbokro** 87.67 84 P P 12 06 55.1 -2.6
2.7nm,0.6s,mb4.6,baz=112,slow=6.1,SNR=3.9
DBIC LR LR 12 42 30.2
comp=Z,29nm,18.0s,MS3.7,baz=90,slow=33
DBIC **Dimbokro** 87.67 84 P P 12 06 55.1 -2.6
DBIC LR LR 12 42 30.2
GERES **GERESS Array B** 89.89 39 P P 12 07 05.0 -2.5
0.7nm,0.7s,mb4.1,baz=337,slow=3.0,SNR=4.4
GERES **GERESS Array B** 89.89 39 P P 12 07 05.0 -2.5
STKA **Stephens Creek** 126.83 242 PKP PKPdf 12 13 09.8 -2.7
1.7nm,0.9s,baz=157,slow=7.7,SNR=3.3
WRA **Warramunga Arr** 133.61 257 PKP PKPdf 12 13 22.5 -3.1
0.3nm,0.5s,baz=78,slow=2.6,SNR=7.4
ASAR **Alice Springs** 134.06 252 PKP PKPdf 12 13 23.6 -2.8
0.3nm,0.7s,baz=66,slow=2.1,SNR=5.0
CMAR **Chiang Mai Arr** 143.91 338 PKP PKPdf 12 13 40.0 -4.6
0.8nm,0.7s,baz=340,slow=2.6,SNR=5.9

2008 SEP

MOS ***19*** *11:59:52.1±0.5,54°.91N×113°.08E,h10km,mb4.3/1,Error ellipse: s-maj=28.2km s-min=16.9km az=101.7*

BYKL 19 11:59:52.8±0.3,54°.93N×113°.02E,h11km±6km,9C-12D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UKT	**Uakit**	**0.66**	**32**	⇓*i*Pg	Pg	12 00 06.0	+0.4
UKT				*e*Sg	Sg	12 00 14.6	+0.4
UKT				Pmax			
	38nm,0.3s						
UKT				Smax			
	525nm,0.3s						
YLYR	**Ulyunkhan**	**1.07**	**268**	⇑*i*PG	Pg	12 00 11.9	-1.5
YLYR				*e*		12 00 25.5	
YLYR				pmax	pmax		
	comp=Z,60nm,0.1s						
YLYR				smax			
	comp=N,686nm,0.4s						
YLYR	**Ulyunkhan**	**1.07**	**268**	⇓*i*Pg	Pg	12 00 11.9	-1.5
YLYR				*e*Pb	Pb	12 00 14.3	+0.9
YLYR				*e*Sg	Sg	12 00 26.7	-0.7
YLYR				*e*Sb	Sb	12 00 30.2	+2.8
YLYR				max			
	comp=N,72nm,0.3s						
YLYR				max			
	comp=N,680nm,0.5s						
KMO	**Kumora**	**1.41**	**313**	*e*PG	Pg	12 00 18.1	-1.8
KMO				*e*		12 00 37.5	
KMO				pmax	pmax		
	comp=Z,149nm,0.3s						
KMO				smax			
	comp=E,367nm,0.5s						
KMO	**Kumora**	**1.41**	**313**	⇑*i*Pg	Pg	12 00 17.5	-2.4
KMO				*e*Pb	Pb	12 00 19.0	-0.1
KMO				*e*Sg	Sg	12 00 37.1	-1.1
KMO				*e*Sb	Sb	12 00 39.7	+2.6
KMO				max			
	comp=E,151nm,0.3s						
KMO				max			
	comp=E,469nm,0.7s						
YOA	**Uoyan**	**1.41**	**329**	⇓*i*PG	Pg	12 00 18.5	-1.4
YOA				*i*		12 00 38.5	
YOA				pmax	pmax		
	comp=Z,276nm,0.2s						
YOA				smax			
	comp=E,664nm,0.4s						
YOA	**Uoyan**	**1.41**	**329**	⇓*i*Pg	Pg	12 00 18.5	-1.4
YOA				*i* Sg	Sg	12 00 38.5	+0.3
YOA				Pmax			
	comp=E,275nm,0.4s						
YOA				Smax			
	comp=E,649nm,0.3s						
NIZ	**Nizh Angarsk**	**2.16**	**295**	*e*PN	Pn	12 00 30.0	+1.3
NIZ				*e*		12 00 31.8	
NIZ				*e*		12 00 58.3	
NIZ				pmax	pmax		
	comp=Z,36nm,0.5s						
NIZ				smax			
	comp=N,231nm,0.5s						
NIZ	**Nizh Angarsk**	**2.16**	**295**	⇓*i*Pg	Pg	12 00 30.2	-4.0
NIZ				*e*		12 00 33.8	
NIZ				*e*Sg	Sg	12 00 59.6	-2.5
NIZ				max			
	comp=N,33nm,0.5s						
NIZ				Smax			
	comp=N,231nm,0.4s						
NLYR	**Nelyaty**	**2.18**	**43**	*e*Pn	Pn	12 00 29.4	+0.5
NLYR				⇓*i*Pg	Pg	12 00 31.2	-3.4
NLYR				*i* Sg	Sg	12 01 01.2	-1.6
NLYR				Pmax			
	comp=N,177nm,0.5s						
NLYR				Smax			
	comp=N,261nm,0.7s						
SYVR	**Suvo**	**2.18**	**235**	⇓*i*Pn	Pn	12 00 29.8	+0.8
SYVR				⇑*i*Pg	Pg	12 00 31.5	-3.1
	comp=N,20nm,0.7s						
SYVR				⇑*i*Pg	Pg	12 00 31.5	-3.1
	comp=N,32nm,0.7s						
SYVR				⇓*i*Pg	Pg	12 00 31.5	-3.1
	comp=N,49nm,0.7s						
SYVR				*i* Sg	Sg	12 01 01.6	-1.2
SYVR				*e*		12 01 03.4	
SYVR				Pmax			
	comp=N,68nm,0.4s						
SYVR				max			
	comp=N,132nm,1.0s						
CIT	**Chita**	**2.93**	**174**	*e*Pg	Pg	12 00 45.2	-3.7
CIT				*e*Sg	Sg	12 01 23.8	-3.1
CIT				Pmax			
	comp=N,61nm,0.2s						
CIT				Smax			
	comp=N,638nm,0.2s						
BOD	**Bodaibo**	**2.95**	**10**	*e*PN	Pn	12 00 40.7	+1.2
BOD				*e*		12 00 45.5	
BOD				*e*S	Sn	12 01 14.6	-0.2
BOD				*e*		12 01 22.2	
BOD				pmax	pmax		
	comp=Z,18nm,0.4s						
BOD				smax			
	comp=E,298nm,0.7s						
BOD	**Bodaibo**	**2.95**	**10**	*e*Pn	Pn	12 00 39.4	-0.1
BOD				*e*		12 00 42.0	
BOD				*e*Pg	Pg	12 00 44.1	-5.1
BOD				*e*Sn	Sn	12 01 14.7	-0.1
BOD				*i* Sg	Sg	12 01 22.4	-5.0
BOD				Pmax			
	comp=E,14nm,0.6s						
BOD				Smax			
	comp=E,317nm,1.9s						
MXMB	**Maximikha**	**3.02**	**238**	⇓*i*Pn	Pn	12 00 41.3	+0.8
MXMB				*e*Pg	Pg	12 00 45.6	-5.0
MXMB				*e*PgPg		12 00 50.1	
MXMB				*i* Sg	Sg	12 01 26.2	-3.5
MXMB				max			
	comp=E,44nm,0.5s						
MXMB				Smax			
	comp=E,182nm,1.2s						
OGRR	**Ongureny**	**3.43**	**250**	⇓*i*Pn	Pn	12 00 46.8	+0.7
OGRR				*e*Pg	Pg	12 00 54.3	-4.2
OGRR				*e*		12 01 23.1	
OGRR				*i* Sg	Sg	12 01 38.9	-4.0
OGRR				*e*SgSg		12 01 41.7	
OGRR				Pmax			
	comp=E,15nm,0.6s						
OGRR				Smax			
	comp=E,52nm,0.6s						
CRS	**Chara**	**3.55**	**54**	*e*PN	Pn	12 00 48.9	+1.1
CRS				*e*		12 00 55.4	
CRS				*e*		12 01 41.2	
CRS				pmax	pmax		
	comp=Z,42nm,1.0s						
CRS				smax			
	comp=E,124nm,1.0s						
CRS	**Chara**	**3.55**	**54**	*e*Pn	Pn	12 00 48.6	+0.8
CRS				⇑*i*		12 00 50.5	
CRS				⇑*i*Pg	Pg	12 00 55.8	-5.0
CRS				*i* Sg	Sg	12 01 42.7	-4.1
CRS				Pmax			
	comp=E,42nm,1.4s						
CRS				Smax			
	comp=E,124nm,1.0s						
TUP	**Tupik**	**4.06**	**94**	*e*PN	Pn	12 01 03.5	+8.8
TUP				*e*S	Sn	12 01 41.0	-1.1
TUP				*e*		12 01 56.6	
TUP				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TUP				smax			
	comp=N,290nm,1.0s						
TUP	**Tupik**	**4.06**	**94**	⇓*i*Pn	Pn	12 00 54.8	+0.1
TUP				*e*Pg	Pg	12 01 03.5	-6.9
TUP				*e*Sg	Sg	12 01 57.5	-5.5
TUP				*e*		12 02 01.6	
TUP				Pmax			
	comp=N,10.0nm,0.3s						
TUP				max			
	comp=N,319nm,1.1s						
ZRHB	**Zarechye**	**4.22**	**238**	*e*Pg	Pg	12 01 08.3	-5.2
ZRHB				*e*Sg	Sg	12 02 04.8	-3.3
ZRHB				Pmax			
	comp=N,60nm,1.3s						
ZRHB				Smax			
	comp=N,358nm,1.0s						
KHNR	**Khani**	**4.39**	**60**	*e*Sg	Sg	12 02 08.5	-5.2
UUDB	**Ulan-Yde**	**4.44**	**228**	⇑*i*Pg	Pg	12 01 12.8	-4.9

UUDB				*e*		12 01 16.0	
UUDB				*i* Sg	Sg	12 02 10.7	-4.4
UUDB				Pmax			
	comp=N,56nm,0.6s						
UUDB				Smax			
	comp=N,93nm,1.3s						
TRG	**Tyrgan**	**4.51**	**244**	⇓*i*Pn	Pn	12 01 01.7	+0.8
TRG				*e*Pg	Pg	12 01 11.7	-7.4
TRG				*e*Sg	Sg	12 02 11.3	-6.2
TRG				Pmax			
	comp=N,6.0nm,0.4s						
TRG				Smax			
	comp=N,38nm,1.2s						
KAB	**Kabansk**	**4.77**	**235**	*e*Sg	Sg	12 02 22.3	-3.6
KAB				*e*		12 02 35.4	
KAB				max			
	comp=N,451nm,1.1s						
HRMR	**Khuramsha**	**4.92**	**230**	*e*Pn	Pn	12 01 07.1	+0.6
HRMR				*e*		12 01 18.8	
HRMR				*e*Pg	Pg	12 01 20.4	-6.5
HRMR				*e*Sg	Sg	12 02 25.3	-5.2
HRMR				*e*		12 02 33.5	
HRMR				Pmax			
	comp=N,41nm,0.5s						
HRMR				max			
	comp=N,329nm,1.0s						
KPC	**Khapcheranga**	**5.25**	**185**	*e*PN	Pn	12 01 27.0	+16
KPC				*e*		12 02 35.0	
KPC				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KPC				smax			
	comp=E,104nm,0.5s						
KPC	**Khapcheranga**	**5.25**	**185**	⇑*i*Pn	Pn	12 01 11.7	+0.6
KPC				*e*Pg	Pg	12 01 26.4	-6.9
KPC				*e*		12 01 29.7	
KPC				*e*Sg	Sg	12 02 35.5	-5.7
KPC				max			
	comp=E,4.0nm,0.3s						
KPC				Smax			
	comp=E,103nm,1.1s						
LSTR	**Listvyanka**	**5.78**	**241**	*e*	Pn	12 01 57.4	+39
LSTR				*e*Sg	Sg	12 02 52.6	-5.5
LSTR				Smax			
	comp=E,46nm,1.8s						
TLY	**Talaya**	**6.49**	**244**	*e*	Pn	12 01 30.1	+1.9
TLY				*e*Sg	Sg	12 03 14.3	-6.7
TLY				Smax			
	comp=E,23nm,1.5s						
TNDR	**Tynda**	**6.73**	**83**	*e*Sg	Sg	12 03 22.0	-6.6
IENR	**Iengra**	**6.84**	**74**	⇑*i*Pg	Pg	12 01 55.6	-8.0
IENR				*e*		12 03 06.0	
IENR				*i* Sg	Sg	12 03 25.8	-6.2
CLNS	**Chul'man**	**6.95**	**69**	*e*	Sb	12 03 12.9	-3.3
CLNS				*e*Sg	Sg	12 03 27.7	-7.9
ZAK	**Zakamensk**	**7.47**	**236**	*e*Sg	Sg	12 03 45.6	-6.7
ZAK				Smax			
	comp=E,9.0nm,1.0s						
MOY	**Mondy**	**7.91**	**251**	*e*	Pn	12 02 14.2	+27
MOY				*e*		12 02 31.2	
MOY				*e*Sg	Sn	12 03 56.8	+40
MOY				Smax			
	comp=E,25nm,1.7s						
ULN	**Ulaanbaatar**	**8.00**	**210**	*e*	Sb	12 03 35.9	-10
ULN				*e*Sg	Sn	12 04 01.8	+43
ORL	**Orlik**	**8.19**	**258**	*e*	Pn	12 01 53.7	+2.2
ORL				*e*		12 02 02.7	
ORL				Pg	Pn	12 02 18.6	+27
ORL				*e*Sg	Sn	12 04 04.7	+41
ORL				max			
	comp=E,2.0nm,0.3s						
ORL				Smax			
	comp=E,30nm,1.5s						

ISK ***19*** *12:17:48.2,38°.93N×41°.26E,h20km,MD2.8*
CSEM ***19*** *12:17:48.4±0.2,38°.90N×41°.27E,h18km±1km,MD2.8, Error ellipse: s-maj=5.1km s-min=3.0km az=162.0*
ISCJB ***19*** *12:17:49.4±0.8,39°.08N±0°.04×41°.20E±0°.06,h12km±4km, Error ellipse: s-maj=8.4km s-min=6.1km az=171.4*
DDA ***19*** *12:17:50.6,39°.01N×41°.10E,h8km,Md2.9*

ISC 19 12:17:49.7±0.9,39°.06N±0°.04×41°.22E±0°.07,h13km±4km, n14,σ1°.13/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.12**	**207**	*i* P	**Pg**	**12 17 52.4**	**-0.5**
BNGL				*i* S	**Sg**	**12 17 54.4**	**-0.6**
BINT	**Bingol**	**0.59**	**253**	*e*PG	**Pg**	**12 18 00.5**	**-0.8**
BINT				*e*SG	**Sg**	**12 18 09.6**	**+0.4**
BINT	**Bingol**	**0.59**	**253**	*e*Pg	**Pg**	**12 18 00.5**	**-0.8**
BINT				*e*Sg	**Sg**	**12 18 09.6**	**+0.5**
KOPT	**Kop Dagi**	**1.11**	**330**	*i* P	**Pg**	**12 18 11.7**	**+0.6**
KOPT				*i* S	**Sg**	**12 18 27.7**	**+2.1**
KOPT	**Kop Dagi**	**1.11**	**330**	*i* P	**Pg**	**12 18 11.7**	**+0.6**
KOPT				*i* S	**Sg**	**12 18 27.7**	**+2.1**
BEST	**Besiri**	**1.16**	**178**	*i* P	**Pb**	**12 18 12.1**	**+0.5**
BEST				*i* S	**Sb**	**12 18 28.1**	**+1.5**
DIYA	**Diyarbakir**	**1.42**	**218**	*i* P	**Pn**	**12 18 16.4**	**+1.3**
DIYA				*i* S	**Sn**	**12 18 34.7**	**+1.0**
DIYA	**Diyarbakir**	**1.42**	**218**	*i* P	**Pn**	**12 18 16.4**	**+1.2**
PTK	**Pertek**	**1.43**	**264**	*e*PN	**Pn**	**12 18 14.1**	**-1.2**
PTK				*e*SN	**Sn**	**12 18 32.9**	**-1.1**
PTK	**Pertek**	**1.43**	**264**	*e*Pn	**Pn**	**12 18 14.1**	**-1.2**
PTK				*e*Sn	**Sn**	**12 18 32.9**	**-1.1**
AGRB	**Hanur-Agry**	**1.47**	**69**	*e*PN	**Pn**	**12 18 14.7**	**-1.3**
AGRB	**Hanur-Agry**	**1.47**	**69**	*e*Pn	**Pn**	**12 18 14.7**	**-1.2**
SVRC	**Sivrice-ELAZID**	**1.64**	**246**	*e*PN	**Pn**	**12 18 16.5**	**-1.7**
SVRC	**Sivrice-ELAZID**	**1.64**	**246**	*e*Pn	**Pn**	**12 18 16.5**	**-1.7**

MAN 19 12:38:56,9°.02N×125°.64E,h28km,mb4.2,ML3.0,MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.05**	**199**	*e*P	Pb	12 39 02.1	+1.4
BUTP				*e*S	Sb	12 39 07.2	+3.1
SCPH	**Surigao**	**0.78**	**349**	*e*P	Pb	12 39 11.9	+0.9
SCPH				*e*S	Sb	12 39 23.4	+2.3
BUKP	**Musuan**	**1.26**	**207**	*e*P	Pn	12 39 20.7	+2.9
BUKP				*e*S	Sn	12 39 31.4	-2.5

CASC 19 12:50:43.4±3.7,9°.13N×82°.62W,h14km±15km,MD3.8, 2C-4D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTCR	**Cotoan**	**0.27**	**212**	⇓*i*P	Pg	12 50 49.1	-0.1
TBS2		**0.34**	**187**	*e*P	Pg	12 50 56.3	+6.0
TBS2				*e*S	Sg	12 51 00.9	+5.9
BRU2	**Volcan**	**0.34**	**193**	*e*P	Pg	12 50 51.3	+0.9
BRU2				*e*S	Sg	12 50 56.6	+1.4
ACR	**Cerro Adams**	**0.72**	**229**	⇓*i*P	Pg	12 50 56.6	-0.9
ACR				*e*S	Sg	12 51 09.6	+2.5
URSC	**Urasca**	**1.34**	**301**	⇑*e*P	Pn	12 51 06.4	-1.3
URSC				*e*S	Sn	12 51 23.4	-2.0
QCR	**Quepos**	**1.56**	**281**	*e*P	Pn	12 51 09.9	-0.7
QCR				*e*S	Sn	12 51 29.8	-0.8
SJS	**Escuela Geolog**	**1.63**	**300**	*e*P	Pn	12 51 12.0	+0.3
SJS				*e*S	Sn	12 51 32.5	+0.1
LAJ	**Bijagual**	**1.66**	**296**	⇓*i*P	Pn	12 51 18.0	+6.0
LAJ				*e*S	Sn	12 51 43.5	+10
PRS1	**Puriscal**	**1.88**	**297**	⇓*i*P	Pn	12 51 15.6	+0.5
PRS1				*e*S	Sn	12 51 40.0	+1.5
CGA2	**Cerro Gallo 2**	**2.03**	**296**	⇑*i*P	Pn	12 51 18.3	+1.2
CGA2				*e*S	Sn	12 51 43.5	+1.2
JCR	**Jicaral**	**2.56**	**286**	*e*P	Pn	12 51 24.9	+0.4
JCR				*e*S	Sn	12 51 54.0	-1.5

IDC 19 12:54:04.1±8.9,31°.70N×86°.97E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.2/25,mbtmp3.4/3,ML2.9/1,Error ellipse: s-maj=439.7km s-min=31.4km az=69.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.49**	**348**	Pn	Pn	12 57 43.4	-0.4
	0.0nm,0.3s,baz=168,slow=13,SNR=5.7						
ZALV	**Zalesovo Beam**	**22.29**	**357**	P	P	12 59 02.2	-0.5
	0.4nm,0.4s,baz=188,slow=9.6,SNR=3.5						
WRA	**Warramunga Arr**	**68.55**	**132**	P	P	13 05 08.8	+0.1
	0.2nm,0.7s,baz=324,slow=6.3,SNR=4.8						

BJI ***19*** *13:04:49.2, 4.87N×94.29E, h44km, mB4.8/24, mb4.7/36, Ms4.4/26, Ms7 4.1/25*
MOS ***19*** *13:04:50.9±1.0, 5.27N×94.34E, h33km, mb4.9/32, Error ellipse: s-maj=11.9km s-min=5.6km az=114.3*
ISCJB ***19*** *13:04:51.6±0.3, 5.28N±0.05×94.39E±0.04, h39km, mb4.6/79, MS3.9/17, Error ellipse: s-maj=8.4km s-min=4.6km az=33.6*
NEIC ***19*** *13:04:52.5±0.3, 5.25N×94.32E, h35km, mb4.7/38, Error ellipse: s-maj=8.7km s-min=5.4km az=214.0*
NEIC Felt [II] at Banda Aceh.
IDC ***19*** *13:04:54.0±0.7, 5.31N×94.46E, h49km±5km, mb4.2/18, mb1 4.3/20, mb1mx4.2/27, mbtmp4.2/20, MS3.6/9, Ms1 3.6/9, ms1mx3.3/27, Error ellipse: s-maj=22.0km s-min=9.8km az=46.0*
DJA ***19*** *13:05:22, 3.83N×96.53E, h51km, MLv3.8/4*
ISC 19 13:04:53.5±0.3, 5.26N±0.05×94.33E±0.04, h41km, h41km±2.9km:pP-P,n203,σ1§10/203,mb4.6/79,MS3.9/17, 5C-2D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**3.46**	**125**	P	**Pn**	**13 05 45.2**	**+0.3**
TPTI				S	Px	13 05 50.8	
TSI	**Tuntungan**	**4.56**	**112**	P	**Pn**	**13 06 02.6**	**+2.6**
PSI	**Prapat**	**5.19**	**118**	P	**Pn**	**13 06 10.2**	**+1.6**
8.5nm,0.3s,baz=296,slow=14,SNR=41							
PSI				S	**Sn**	**13 07 06.3**	**-0.9**
baz=299,slow=19,SNR=1.9							
PSI				LR	LR	13 08 28.0	
comp=Z,392nm,20.3s,baz=285,slow=42							
PSI	**Prapat**	**5.19**	**118**	P	**Pn**	**13 06 10.2**	**+1.6**
PSI				S	**Sn**	**13 07 06.3**	**-0.9**
KULM	**Kulim**	**6.29**	**89**	*e*Pn	**Pn**	**13 06 23.9**	**+0.2**
KULM	**Kulim**	**6.29**	**89**	P	**Pn**	**13 06 23.7**	**0.0**
SNG	**Songkhla**	**6.53**	**73**	P	**Pn**	**13 06 27.0**	**-0.1**
360nm,0.9s							
IPM	**Ipoh**	**6.71**	**96**	*e*Pn	**Pn**	**13 06 29.4**	**-0.1**
IPM	**Ipoh**	**6.71**	**96**	P	**Pn**	**13 06 29.8**	**+0.3**
MNSI	**Mandailing Nat**	**6.86**	**130**	P	**Pn**	**13 06 24.2**	**-7.4**
PALK	**Pallekele**	**13.70**	**279**	*e*Pn	**Pn**	**13 08 02.8**	**-2.4**
PALK				*e*Sn	**Sn**	**13 10 21.5**	**-15**
PALK	**Pallekele**	**13.70**	**279**	*e*P	**Pn**	**13 08 02.8**	**-2.4**
CMAR	**Chiang Mai Arr**	**13.87**	**19**	P	**Pn**	**13 08 08.7**	**+1.1**
4.3nm,0.3s,baz=208,slow=14,SNR=114							
CMAR				LR	LR	13 13 03.2	
comp=Z,133nm,21.2s,baz=205,slow=36							
CMAR	**Chiang Mai Arr**	**13.87**	**19**	P	**Pn**	**13 08 08.7**	**+1.1**
CHG	**Chiang Mai**	**14.21**	**18**	⇓P	**Pn**	**13 08 15.8**	**+3.7**
36nm,0.6s							
CHTO	**Chiang Mai**	**14.21**	**18**	*e*Pn	**Pn**	**13 08 13.6**	**+1.4**
CHTO	**Chiang Mai**	**14.21**	**18**	*e*P	**Pn**	**13 08 13.6**	**+1.5**
QIZ	**Qiongzhong**	**20.40**	**47**	P	**P**	**13 09 29.1**	**+2.1**
QIZ				S	**S**	**13 13 19.4**	**+5.9**
QIZ				pmax	pmax		
comp=Z,8.0nm,1.2s							
QIZ				LR	LR		
comp=N,190nm,16.6s,MS3.6							
QIZ				LR	LR		
comp=E,95nm,15.6s,MS3.6							
QIZ				LR	LR		
comp=Z,220nm,19.9s,MS3.5							
KMI	**Kunming**	**21.34**	**21**	P	**P**	**13 09 38.4**	**+1.3**
KMI				pP		13 09 50.4	
KMI				sP	sP	13 09 55.6	+3.0
KMI				PP		13 10 07.8	
KMI				S	**S**	**13 13 35.4**	**+3.5**
KMI				sS	sS	13 13 50.8	+2.4
KMI				SS		13 14 12.3	
KMI				pmax	pmax		
comp=Z,13nm,1.1s,mb4.2							
KMI				LR	LR		
comp=N,110nm,18.6s,MS3.5							
KMI				LR	LR		
comp=E,110nm,16.6s,MS3.5							
KMI				LR	LR		
comp=Z,140nm,22.9s							
KKM	**Kota Kinabalu**	**21.79**	**87**	*e*P	**P**	**13 09 40.5**	**-1.6**
comp=Z,5.7nm,0.8s,mb4.0							
ODAN	**Odare**	**22.48**	**344**	*e*P	**P**	**13 09 47.7**	**-1.6**
comp=Z,30nm,0.5s,mb5.0							
TAPN	**Taplejung**	**22.86**	**345**	*e*P	**P**	**13 09 51.0**	**-2.3**
comp=Z,15nm,0.4s,mb4.7							
PKI	**Pulchoki**	**23.76**	**340**	*e*P	**P**	**13 10 01.6**	**-0.6**
comp=Z,24nm,0.5s,mb4.9							
PKI	**Pulchoki**	**23.76**	**340**	*e*P	**P**	**13 10 01.6**	**-0.6**
PKI				pmax	pmax		
comp=Z,25nm,0.5s,mb4.9							
DMN	**Daman**	**23.90**	**339**	*e*P	**P**	**13 10 02.9**	**-0.6**
comp=Z,18nm,0.5s,mb4.7							
GUN	**Gumba**	**23.92**	**341**	*e*P	**P**	**13 10 02.2**	**-1.5**
comp=Z,38nm,0.5s,mb5.1							
KKN	**Kakani**	**24.01**	**340**	*e*P	**P**	**13 10 03.6**	**-0.9**
comp=Z,33nm,0.7s,mb4.9							
KKN	**Kakani**	**24.01**	**340**	*e*P	**P**	**13 10 03.6**	**-0.9**
KKN				pmax	pmax		
comp=Z,33nm,0.7s,mb4.9							
GYA	**Guiyang**	**24.15**	**28**	⇑*i*P	**P**	**13 10 05.9**	**+0.1**
GYA				pP		13 10 16.8	
GYA				PP		13 10 44.1	
GYA				PcP	PcP	13 13 48.0	+1.9
GYA				S	**S**	**13 14 22.3**	**+1.1**
GYA				sS	sS	13 14 40.0	+0.3
GYA				ScP	ScP	13 17 21.0	-0.6
GYA				pmax	pmax		
comp=Z,40nm,0.7s,mb5.0							
GYA				pmax	pmax		
comp=Z,90nm,4.6s							
GYA				LR	LR		
comp=N,580nm,16.1s,MS4.2							
GYA				LR	LR		
comp=E,460nm,17.6s,MS4.2							
GYA				LR	LR		
comp=Z,540nm,16.8s,MS4.1							
GKN	**Gorkha**	**24.43**	**339**	*e*P	**P**	**13 10 08.4**	**+0.1**
comp=Z,25nm,0.3s,mb5.1							
LSA	**Lhasa**	**24.50**	**353**	P	**P**	**13 10 09.9**	**+1.0**
LSA	**Lhasa**	**24.50**	**353**	*e*P	**P**	**13 10 09.7**	**+0.8**
comp=Z,26nm,0.6s,mb4.8							
LSA	**Lhasa**	**24.50**	**353**	*e*P	**P**	**13 10 09.7**	**+0.8**
LSA				pmax	pmax		
comp=Z,26nm,0.6s,mb4.8							
KOLN	**Koldanda**	**24.61**	**337**	*e*P	**P**	**13 10 10.5**	**+0.6**
comp=Z,35nm,0.6s,mb5.1							
DANN	**Dangsing**	**25.07**	**338**	*e*P	**P**	**13 10 14.3**	**+0.2**
comp=Z,70nm,0.5s,mb5.4							
CD2	**Chengdu**	**27.02**	**18**	*e*P	**P**	**13 10 34.8**	**+3.1**
CD2				pP	pP	13 10 44.3	+1.4
CD2				sP	sP	13 10 48.3	+0.4
CD2				PP		13 11 22.6	
CD2				S	**S**	**13 15 11.0**	**+4.4**
CD2				sS	sS	13 15 26.0	+0.7
CD2				SS		13 16 29.0	
CD2				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.4							
CD2				pmax	pmax		
comp=Z,30nm,5.2s							
CD2				LR	LR		
comp=N,140nm,13.2s,MS3.9							
CD2				LR	LR		
comp=E,150nm,13.2s,MS3.9							
CD2				LR	LR		
comp=Z,280nm,14.4s,MS4.0							
KAPI	**Kappang**	**27.36**	**111**	P	**P**	**13 10 32.8**	**-2.2**
comp=Z,6.1nm,0.3s,mb4.5,baz=287,slow=6.4,SNR=7.2							
KAPI				LR	LR	13 21 21.5	
comp=Z,95nm,19.7s,MS3.4,baz=314,slow=36							
KAPI	**Kappang**	**27.36**	**111**	*e*P	**P**	**13 10 32.9**	**-2.1**
comp=Z,7.0nm,0.5s,mb4.5							
ENH	**Enshi**	**28.69**	**28**	*e*P	**P**	**13 10 45.0**	**-1.7**
comp=Z,11nm,0.8s,mb4.6							
XAN	**Xi'an**	**31.68**	**23**	P	**P**	**13 11 11.4**	**-1.7**
XAN				pmax	pmax		
comp=Z,8.0nm,0.7s,mb4.7							
XAN				pmax	pmax		
comp=Z,15nm,8.4s							
LZH	**Lanzhou**	**31.91**	**15**	*e*P	**P**	**13 11 18.5**	**+3.5**
LZH				pP	pP	13 11 27.5	+1.2
LZH				sP	sP	13 11 32.5	+1.2
LZH				pmax	pmax		
comp=Z,15nm,1.0s,mb4.8							
LZH				LR	LR		
comp=N,180nm,6.6s							
LZH				LR	LR		
comp=E,140nm,8.8s							
LZH				LR	LR		
comp=Z,120nm,5.9s							
GTA	**Gaotai**	**34.36**	**8**	*e*P	**P**	**13 11 35.9**	**-0.5**
GTA				pP	pP	13 11 44.9	-2.9
GTA				pmax	pmax		
comp=Z,11nm,0.9s,mb4.8							
KSH	**Kashi**	**37.93**	**337**	*e*P	**P**	**13 12 05.5**	**-1.4**
KSH				*e*pP	pP	13 12 15.3	-3.1
KSH				*e*sP	sP	13 12 19.3	-4.0
KSH				*e*PP	PP	13 13 33.8	-0.4
KSH				*e*PcP	PcP	13 14 24.4	+2.1
KSH				*e*S	**S**	**13 17 51.4**	**-4.5**
KSH				*e*ScP	ScP	13 18 07.8	+0.9
KSH				*e*PcS	PcS	13 18 11.6	+0.5
KSH				pmax	pmax		
comp=Z,2.0nm,0.3s,mb4.3							
KSH				pmax	pmax		
comp=Z,92nm,4.7s							
KSH				LR	LR		
comp=N,360nm,6.0s							
KSH				LR	LR		
comp=E,300nm,6.3s							
KSH				LR	LR		
comp=Z,300nm,5.1s							
HHC	**Hu-ho-hao-te**	**38.66**	**21**	*e*P	**P**	**13 12 15.9**	**+2.8**
HHC				pP	pP	13 12 25.8	+1.3
HHC				sP	sP	13 12 29.8	+0.4
HHC				PP	PP	13 13 50.8	+8.6
HHC				PcP	PcP	13 14 26.0	+1.4
HHC				ScP	ScP	13 18 10.3	+0.7
HHC				S	**S**	**13 18 12.5**	**+5.6**
HHC				sS	sS	13 18 28.1	+2.1
HHC				SS	SS	13 20 57.8	-0.7
HHC				ScS	ScS	13 22 20.5	+0.4
HHC				pmax	pmax		
comp=Z,14nm,1.1s,mb4.6							
HHC				pmax	pmax		
comp=Z,68nm,6.7s							
HHC				LR	LR		
comp=N,150nm,15.9s,MS4.1							
HHC				LR	LR		
comp=E,140nm,14.5s,MS4.1							
HHC				LR	LR		
comp=Z,180nm,13.8s,MS4.0							
JOW	**Kunigami**	**38.82**	**53**	*e*P	**P**	**13 12 14.3**	**-0.4**
comp=Z,115nm,2.9s,mb5.1							
WMQ	**Urumqi**	**38.85**	**352**	*e*P	**P**	**13 12 15.0**	**+0.4**
WMQ				pP	pP	13 12 25.0	-1.1
WMQ				sP	sP	13 12 29.0	-2.0
WMQ				PP	PP	13 13 49.0	+4.8
WMQ				S	**S**	**13 18 12.0**	**+2.3**
WMQ				SS	SS	13 20 56.0	-6.2
WMQ				pmax	pmax		
comp=Z,16nm,0.8s,mb4.8							
WMQ				pmax	pmax		
comp=Z,75nm,4.0s							
WMQ				LR	LR		
comp=N,71nm,15.0s,MS3.9							
WMQ				LR	LR		
comp=E,120nm,15.0s,MS3.9							
WMQ				LR	LR		
comp=Z,65nm,15.0s,MS3.6							
BJI	**Beijing**	**39.83**	**26**	P	**P**	**13 12 23.0**	**+0.2**
BJI				S	**S**	**13 18 30.8**	**+6.3**
BJI				pmax	pmax		
comp=Z,15nm,0.6s,mb4.9							
BJI				pmax	pmax		
comp=Z,83nm,5.1s							
BJI				LR	LR		
comp=N,110nm,25.6s,MS3.8							
BJI				LR	LR		
comp=E,150nm,24.3s,MS3.8							
BJI				LR	LR		
comp=Z,60nm,28.1s,MS3.3							
TKM2	**Tokmak 2**	**41.02**	**339**	*e*P	**P**	**13 12 33.4**	**+0.8**
comp=Z,5.2nm,0.4s,mb4.5							
TKM2	**Tokmak 2**	**41.02**	**339**	*e*P	**P**	**13 12 33.4**	**+0.8**
TKM2				pmax	pmax		
comp=Z,5.0nm,0.4s,mb4.5							
KBK	**Karagaybulak**	**41.02**	**338**	*e*P	**P**	**13 12 33.4**	**+0.7**
comp=Z,10nm,0.6s,mb4.6							
KBK	**Karagaybulak**	**41.02**	**338**	*e*P	**P**	**13 12 33.4**	**+0.7**
KBK				pmax	pmax		
comp=Z,11nm,0.6s,mb4.7							
AML	**Almayashu**	**41.06**	**336**	*e*P	**P**	**13 12 33.3**	**+0.4**
comp=Z,10nm,0.5s,mb4.7							
AML	**Almayashu**	**41.06**	**336**	*e*P	**P**	**13 12 33.3**	**+0.3**
AML				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.7							
AAK	**Ala-Archa**	**41.17**	**338**	*e*P	**P**	**13 12 34.9**	**+0.9**
comp=Z,62nm,2.3s,mb4.8							
AAK	**Ala-Archa**	**41.17**	**338**	*e*P	**P**	**13 12 34.9**	**+1.0**
AAK				pmax	pmax		
comp=Z,62nm,2.3s,mb4.8							
EKS2	**Erkin-Say**	**41.48**	**337**	*e*P	**P**	**13 12 37.3**	**+0.9**
comp=Z,7.0nm,0.8s,mb4.3							
EKS2	**Erkin-Say**	**41.48**	**337**	*e*P	**P**	**13 12 37.3**	**+0.9**
EKS2				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.3							
MK31	**Makanchi Array**	**42.67**	**348**	*e*P	**P**	**13 12 46.1**	**+0.1**
MK31				pmax	pmax		
comp=Z,17nm,0.5s,mb5.0							
MKAR	**Makanchi Array**	**42.67**	**348**	P	**P**	**13 12 46.2**	**+0.2**
comp=Z,23nm,0.5s,mb5.1,baz=168,slow=7.7,SNR=182							
MKAR				LR	LR	13 32 56.7	
comp=Z,68nm,18.6s,MS3.6,baz=161,slow=40							
MKAR	**Makanchi Array**	**42.67**	**348**	P	**P**	**13 12 46.2**	**+0.2**
KK31	**Karatay Array**	**43.18**	**334**	P	**P**	**13 12 50.5**	**+0.2**
KK31				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.4							
KKAR	**Karatay Array**	**43.18**	**334**	*e*P	**P**	**13 12 50.5**	**+0.2**
KKAR	**Karatay Array**	**43.18**	**334**	*e*P	**P**	**13 12 50.5**	**+0.2**
SONM	**Songino Array**	**43.66**	**12**	P	**P**	**13 12 53.1**	**-0.9**
comp=Z,2.9nm,0.5s,mb4.2,baz=194,slow=8.2,SNR=18							
SONM				PcP	PcP	13 14 41.0	+0.2
comp=Z,2.4nm,0.5s,baz=190,slow=3.8,SNR=5.7							
SONM				LR	LR	13 34 33.9	
comp=Z,61nm,19.5s,MS3.5,baz=214,slow=41							
SONM	**Songino Array**	**43.66**	**12**	P	**P**	**13 12 53.1**	**-1.0**
SONM						13 14 41.0	
ULN	**Ulaanbaatar**	**43.83**	**12**	*e*P	**P**	**13 12 54.2**	**-1.2**
comp=Z,4.0nm,0.6s,mb4.3							
ULN	**Ulaanbaatar**	**43.83**	**12**	*e*P	**P**	**13 12 54.2**	**-1.2**
ULN				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.3							
KSRS	**Korea Array**	**44.33**	**39**	P	**P**	**13 12 57.8**	**-1.8**
comp=Z,1.6nm,0.7s,mb3.9,baz=213,slow=9.4,SNR=7.9							
KSRS				LR	LR	13 31 31.8	
comp=Z,60nm,19.0s,MS3.5,baz=332,slow=36							
ZAK	**Zakamensk**	**45.60**	**8**	*e*P	**P**	**13 13 08.2**	**-1.2**
ZAK				*e*		13 14 45.6	
ZAK				pmax	pmax		
comp=Z,2.0nm,1.2s,mb3.9							
WRA	**Warramunga Arr**	**46.62**	**124**	P	**P**	**13 13 17.6**	**-0.4**
comp=Z,9.8nm,0.7s,mb4.9,baz=303,slow=9.3,SNR=102							
WRA				pP	pP	13 13 29.9	+0.2
comp=Z,8.9nm,0.6s,baz=303,slow=9.0,SNR=9.6							
WRA	**Warramunga Arr**	**46.62**	**124**	P	**P**	**13 13 17.7**	**-0.3**
WRA				*PP	pP	13 13 29.9	+0.2
CN2	**Changchun**	**47.15**	**31**	*e*P	**P**	**13 13 19.3**	**-2.4**
CN2				*e*S	**S**	**13 20 18.1**	**+6.7**
CN2				pmax	pmax		
comp=Z,10.0nm,0.4s,mb5.1							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,200nm,10.0s,MS4.5							
CN2				LR	LR		
comp=E,200nm,10.0s,MS4.5							
CN2				LR	LR		
comp=Z,200nm,10.0s,MS4.4							
KURK	**Kurchatov**	**47.18**	**346**	*e*P	**P**	**13 13 22.3**	**+0.4**
comp=Z,15nm,0.8s,mb5.0							
KURK	**Kurchatov**	**47.18**	**346**	*e*P	**P**	**13 13 22.3**	**+0.4**
KURK				pmax	pmax		
comp=Z,15nm,0.8s,mb5.0							
ASAR	**Alice Springs**	**48.12**	**128**	P	**P**	**13 13 29.3**	**-0.3**
comp=Z,1.9nm,0.4s,mb4.5,baz=300,slow=7.6,SNR=44							
ASAR				pP	pP	13 13 42.5	+1.1
comp=Z,4.1nm,0.5s,baz=302,slow=7.4,SNR=9.4							
ASAR	**Alice Springs**	**48.12**	**128**	P	**P**	**13 13 29.3**	**-0.3**
ASAR				*PP	pP	13 13 42.5	+1.2
ZALV	**Zalesovo Beam**	**49.16**	**353**	P	**P**	**13 13 37.1**	**0.0**
comp=Z,15nm,0.5s,mb5.3,baz=182,slow=7.1,SNR=77							
ZALV	**Zalesovo Beam**	**49.16**	**353**	P	**P**	**13 13 37.1**	**0.0**
NVS	**Novosibirsk**	**50.24**	**352**	⇑*i*P	**P**	**13 13 43.8**	**-1.5**
NVS				*e*	pP	13 13 56.1	-1.0
NVS				*e*S	**S**	**13 20 51.4**	**-3.3**
NVS				pmax	pmax		
comp=Z,9.0nm,0.5s,mb5.1							
NVS				pmax	pmax		
comp=N,4.0nm,0.4s							
NVS				smax			
comp=E,12nm,1.8s							
BVAR	**Borovoye Array**	**51.52**	**342**	P	**P**	**13 13 54.6**	**-0.3**
comp=E,4.7nm,0.5s,mb4.7,baz=146,slow=9.3,SNR=28							
BVAR	**Borovoye Array**	**51.52**	**342**	P	**P**	**13 13 54.6**	**-0.3**
BRVK	**Borovoye**	**51.58**	**342**	*e*P	**P**	**13 13 55.1**	**-0.3**
comp=E,4.8nm,0.6s,mb4.6							
BRVK	**Borovoye**	**51.58**	**342**	*e*P	**P**	**13 13 55.1**	**-0.3**
BRVK				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.6							
AB31	**Akbulak array**	**52.61**	**332**	P	**P**	**13 14 03.1**	**-0.1**
AB31				pmax	pmax		
comp=Z,2.0nm,0.3s,mb4.5							
ABKAR	**Akbulak array**	**52.61**	**332**	*e*P	**P**	**13 14 03.1**	**0.0**
comp=Z,2.7nm,0.3s,mb4.7							
AKTK	**Aktyubinsk**	**54.33**	**332**	P	**P**	**13 14 14.9**	**-0.9**
AKTO	**Aktyubinsk**	**54.33**	**332**	P	**P**	**13 14 14.9**	**-0.9**
comp=Z,2.5nm,0.6s,mb4.3,baz=102,slow=8.4,SNR=6.6							
BOD	**Bodaibo**	**54.64**	**13**	*e*P	**P**	**13 14 16.8**	**-1.0**
BOD				*e*	pP	13 14 26.7	-3.0
BOD				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.5							
BOD				pmax	pmax		
comp=Z,8.0nm,1.0s,mb4.7							
SVE	**Sverdlovsk**	**57.89**	**339**	⇑*e*P	sP	13 14 55.8	-2.0
SVE				pmax	pmax		
comp=Z,32nm,1.2s,mb5.2							
STKA	**Stephens Creek**	**58.19**	**133**	P	**P**	**13 14 43.6**	**+0.1**
comp=Z,1.5nm,0.7s,mb4.1,baz=173,slow=8.1,SNR=3.4							
STKA	**Stephens Creek**	**58.19**	**133**	P	**P**	**13 14 43.7**	**+0.1**
ARU	**Arti**	**58.36**	**338**	P	**P**	**13 14 43.6**	**-0.7**
comp=Z,16nm,1.0s,mb5.0							
ARU	**Arti**	**58.36**	**338**	*c i*P	**P**	**13 14 43.7**	**-0.7**
ARU				S	**S**	**13 22 44.8**	**+0.8**
ARU				SS	SS	13 26 32.2	-4.4
ARU				pmax	pmax		
comp=Z,6.0nm,1.2s,mb4.5							
BRTR	**Keskin Array B**	**64.29**	**312**	P	**P**	**13 15 24.6**	**-0.2**
comp=Z,2.2nm,0.6s,mb4.3,baz=129,slow=7.0,SNR=11							
BRTR	**Keskin Array B**	**64.29**	**312**	P	**P**	**13 15 24.6**	**-0.2**
PRGR	**Permogore**	**66.81**	**337**	*e*P	sP	13 15 53.0	-4.5
PRGR				*e*SP	PcP	13 16 07.1	-2.1
PRGR				pmax	pmax		
comp=Z,12nm,0.7s,mb5.0							
OBN	**Obninsk**	**67.69**	**328**	⇓*e*P	**P**	**13 15 45.8**	**-0.5**
OBN				*e*PP	pP	13 15 56.4	-2.1
OBN				pmax	pmax		
comp=Z,25nm,1.5s,mb5.0							
OBN				MLR	MLR		
comp=Z,100nm,15.0s,MS4.2							
KLMR	**Klimovskoe**	**68.88**	**335**	*e*P	sP	13 16 06.6	-4.0
KLMR				pmax	pmax		
comp=Z,12nm,1.4s,mb4.6							
TIXI	**Tiksi**	**69.75**	**11**	*e*P	**P**	**13 15 57.2**	**-1.6**
comp=Z,8.2nm,0.8s,mb4.7							
TIXI	**Tiksi**	**69.75**	**11**	*e*P	**P**	**13 15 57.2**	**-1.6**
TIXI				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.7							
PETK	**Petropavlovsk-**	**70.02**	**35**	LR	LR	13 51 40.4	
comp=Z,24nm,18.3s,MS3.5,baz=84,slow=40							
AKASG	**Malin Array Be**	**70.32**	**322**	P	**P**	**13 16 01.5**	**-1.3**
comp=Z,2.4nm,0.5s,mb4.4,baz=95,slow=5.3,SNR=6.8							
AKASG	**Malin Array Be**	**70.32**	**322**	P	**P**	**13 16 01.5**	**-1.3**
JOF	**Joensuu**	**73.28**	**335**	*e*P	**P**	**13 16 18.6**	**-1.7**
JOF				pmax	pmax		
comp=Z,1.0nm,0.5s,mb4.0							
JOF	**Joensuu**	**73.28**	**335**	*e*p	**P**	**13 16 18.6**	**-1.7**
comp=Z,1.0nm,0.5s,mb4.0							
KOLS	**Kolonicke sedl**	**74.30**	**319**	*e*P	**P**	**13 16 28.0**	**+1.5**
comp=Z,3.1nm,1.0s,mb4.2							
KOLS	**Kolonicke sedl**	**74.30**	**319**	*e*P	**P**	**13 16 28.0**	**+1.5**
KOLS				pmax	pmax		
comp=Z,3.0nm,1.0s,mb4.2							
KOLS	**Kolonicke sedl**	**74.30**	**319**	*e*P	**P**	**13 16 28.0**	**+1.5**
APA	**Apatity**	**74.35**	**340**	⇑*e*P	sP	13 16 43.6	+0.1
APA				MLR	MLR		
comp=Z,600nm,17.0s,MS5.0							
BOSA	**Boshof**	**74.38**	**239**	P	**P**	**13 16 28.6**	**+1.3**
comp=Z,9.4nm,1.2s,mb4.6,baz=83,slow=8.1,SNR=3.2							
BOSA				LR	LR	13 46 42.6	
comp=Z,75nm,18.1s,MS4.0,baz=153,slow=34							
BOSA	**Boshof**	**74.38**	**239**	P	**P**	**13 16 28.7**	**+1.3**
CRVS	**Cervenica-Dubn**	**74.82**	**319**	*e*P	**P**	**13 16 31.2**	**+1.6**
comp=Z,7.1nm,1.3s,mb4.4							
CRVS	**Cervenica-Dubn**	**74.82**	**319**	*e*P	**P**	**13 16 31.2**	**+1.6**
CRVS				pmax	pmax		
comp=Z,7.0nm,1.3s,mb4.4							
CRVS	**Cervenica-Dubn**	**74.82**	**319**	*e*P	**P**	**13 16 31.2**	**+1.6**
FINES	**FINESS Array B**	**75.10**	**332**	P	**P**	**13 16 30.3**	**-0.6**
comp=Z,1.3nm,0.4s,mb4.2,baz=80,slow=5.0,SNR=8.1							
FINES	**FINESS Array B**	**75.10**	**332**	P	**P**	**13 16 30.3**	**-0.6**
KAF	**Kangasniemi**	**75.20**	**333**	*e*P	**P**	**13 16 28.8**	**-2.7**
KAF				pmax	pmax		
comp=Z,2.0nm,0.5s,mb4.3							
KAF	**Kangasniemi**	**75.20**	**333**	*e*p	**P**	**13 16 28.8**	**-2.7**
comp=Z,1.6nm,0.5s,mb4.2							
KECS	**Kecovo**	**75.39**	**319**	*e*P	**P**	**13 16 33.6**	**+0.7**
comp=Z,1.6nm,0.8s,mb4.0							
KECS	**Kecovo**	**75.39**	**319**	*e*P	**P**	**13 16 33.6**	**+0.7**
KECS				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.1							
KECS	**Kecovo**	**75.39**	**319**	*e*P	**P**	**13 16 33.6**	**+0.7**
OJC	**Ojcow**	**76.09**	**320**	*e*P	**P**	**13 16 37.4**	**+0.5**
OJC	**Ojcow**	**76.09**	**320**	*e*P	**P**	**13 16 37.4**	**+0.5**
VYHS	**Vyhne**	**76.48**	**319**	*e*P	**P**	**13 16 39.2**	**+0.1**
comp=Z,1.3nm,0.6s,mb4.0							
VYHS	**Vyhne**	**76.48**	**319**	*e*P	**P**	**13 16 39.2**	**+0.1**
VYHS				pmax	pmax		
comp=Z,1.0nm,0.6s,mb3.9							
VYHS	**Vyhne**	**76.48**	**319**	*e*P	**P**	**13 16 39.2**	**+0.1**
VYHS	**Vyhne**	**76.48**	**319**	*e*P	**P**	**13 16 39.2**	**+0.1**
comp=Z,1.3nm,0.6s,mb4.

LPG	La Plagne	84.59	315	*e*P		P	13 17 23.3	+0.7
	comp=Z,6.8nm,0.3s,mb5.0							
LPG	La Plagne	84.59	315	*e*P		P	13 17 23.3	+0.7
	comp=Z,3.4nm,0.3s,mb5.0							
LPG	La Plagne	84.59	315	*e*P		P	13 17 23.3	+0.7
LPG					pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.9							
LPG	La Plagne	84.59	315	*e*P		P	13 17 23.3	+0.7
	comp=Z,6.0nm,0.3s,mb5.3							
LPL	La Plagne	84.61	315	*e*P		P	13 17 23.3	+0.6
	comp=Z,3.0nm,0.4s,mb4.5							
LPL	La Plagne	84.61	315	*e*P		P	13 17 23.3	+0.6
	comp=Z,1.5nm,0.4s,mb4.5							
LPL	La Plagne	84.61	315	*e*P		P	13 17 23.3	+0.6
LPL					pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6							
LPL	La Plagne	84.61	315	*e*P		P	13 17 23.3	+0.6
	comp=Z,3.0nm,0.4s,mb4.8							
CABF	La Chapelle	85.01	316	*e*P		P	13 17 25.2	+0.5
	comp=Z,5.1nm,0.6s,mb4.5							
CABF	La Chapelle	85.01	316	*e*P		P	13 17 25.2	+0.5
	comp=Z,2.5nm,0.6s,mb4.5							
CABF	La Chapelle	85.01	316	*e*P		P	13 17 25.2	+0.5
CABF					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6							
LOR	Lormes	86.50	317	*e*P		P	13 17 32.2	+0.1
	comp=Z,4.5nm,0.6s,mb4.6							
LOR	Lormes	86.50	317	*e*P		P	13 17 32.2	+0.1
	comp=Z,2.3nm,0.6s,mb4.6							
LOR	Lormes	86.50	317	*e*P		P	13 17 32.2	+0.1
LOR					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5							
LOR	Lormes	86.50	317	*e*P		P	13 17 32.2	+0.1
	comp=Z,4.0nm,0.6s,mb4.8							
SMF	Signal de Mont	86.56	316	*e*P		P	13 17 32.4	0.0
	comp=Z,4.9nm,0.6s,mb4.6							
SMF	Signal de Mont	86.56	316	*e*P		P	13 17 32.4	0.0
	comp=Z,2.5nm,0.6s,mb4.6							
SMF	Signal de Mont	86.56	316	*e*P		P	13 17 32.4	0.0
SMF					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5							
SMF	Signal de Mont	86.56	316	*e*P		P	13 17 32.4	0.0
	comp=Z,4.0nm,0.6s,mb4.8							
SSF	Saint Saulge	86.76	317	*e*P		P	13 17 34.0	+0.6
	comp=Z,3.4nm,0.5s,mb4.5							
SSF	Saint Saulge	86.76	317	*e*P		P	13 17 34.0	+0.6
	comp=Z,1.7nm,0.5s,mb4.5							
SSF	Saint Saulge	86.76	317	*e*P		P	13 17 34.0	+0.6
SSF					pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.6							
SSF	Saint Saulge	86.76	317	*e*P		P	13 17 34.0	+0.6
	comp=Z,3.0nm,0.5s,mb4.8							
BGF	Bois d'Agland	87.25	316	*e*P		P	13 17 36.2	+0.4
	comp=Z,5.7nm,0.5s,mb4.8							
BGF	Bois d'Agland	87.25	316	*e*P		P	13 17 36.2	+0.4
	comp=Z,2.8nm,0.5s,mb4.8							
BGF	Bois d'Agland	87.25	316	*e*P		P	13 17 36.2	+0.4
BGF					pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.8							
BGF	Bois d'Agland	87.25	316	*e*P		P	13 17 36.2	+0.4
	comp=Z,5.0nm,0.5s,mb5.0							
TCF	Toulx Ste Croi	87.71	316	*e*P		P	13 17 38.4	+0.4
TCF	Toulx Ste Croi	87.71	316	*e*P		P	13 17 38.4	+0.4
TCF	Toulx Ste Croi	87.71	316	*e*P		P	13 17 38.4	+0.4
RJF	Les Rejaudoux	88.28	315	*e*P		P	13 17 41.5	+0.8
	comp=Z,3.4nm,0.5s,mb4.5							
RJF	Les Rejaudoux	88.28	315	*e*P		P	13 17 41.5	+0.8
	comp=Z,1.7nm,0.5s,mb4.5							
RJF	Les Rejaudoux	88.28	315	*e*P		P	13 17 41.5	+0.8
RJF					pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.6							
RJF	Les Rejaudoux	88.28	315	*e*P		P	13 17 41.5	+0.8
	comp=Z,3.0nm,0.5s,mb4.8							
LFF	La Frestale	88.87	315	*e*P		P	13 17 43.4	-0.1
LFF	La Frestale	88.87	315	*e*P		P	13 17 43.4	-0.1
FLN	La Foliniere	89.26	319	*e*P		P	13 17 45.5	+0.3
FLN	La Foliniere	89.26	319	*e*P		P	13 17 45.5	+0.3
ESK	Eskdalemuir	90.00	325	*i* P		P	13 17 51.0	+2.4
ILAR	Eielson Array	97.08	22	P		P	13 18 20.2	-0.7
	comp=Z,0.2nm,0.5s,mb3.8,baz=294,slow=3.8,SNR=6.3							
ILAR				pP		pP	13 18 33.7	+0.1
	comp=Z,0.3nm,0.5s,baz=298,slow=4.3,SNR=3.3							
ILAR				PP		PP	13 22 19.8	+3.1
	comp=Z,0.2nm,0.8s,baz=299,slow=5.2,SNR=4.2							
ILAR	Eielson Array	97.08	22	P		P	13 18 20.2	-0.7
ILAR				*PP		pP	13 18 33.7	+0.1
ILAR							13 22 19.8	
ULM	Lac du Bonnet	124.02	8	PKP		PKPdf	13 23 46.2	-1.2
	comp=Z,3.9nm,0.8s,baz=57,slow=5.1,SNR=3.0							
ULM	Lac du Bonnet	124.02	8	PKIKP		PKPdf	13 23 46.3	-1.1
NVAR	Mina Array Bea	127.04	32	PKP		PKPdf	13 23 52.8	-0.8
	comp=Z,0.4nm,0.6s,baz=307,slow=1.7,SNR=5.0							
PDAR	Pinedale Array	127.51	22	PKP		PKPdf	13 23 53.9	-0.5
	comp=Z,0.7nm,0.7s,baz=98,slow=3.0,SNR=5.1							
TXAR	Lajitas Array	141.50	26	PKhKP		PKPpre	13 24 14.5	
	comp=Z,0.5nm,0.4s,baz=328,slow=0.8,SNR=12							
TXAR				PKP		PKPdf	13 24 19.3	-1.5
	comp=Z,0.5nm,0.4s,baz=225,slow=1.1,SNR=13							
TXAR	Lajitas Array	141.50	26	PKP		PKPpre	13 24 14.5	
TXAR				PKP		PKPdf	13 24 19.3	-1.5
TXAR	Lajitas Array	141.50	26	PKHKP		PKPpre	13 24 14.5	
TXAR							13 24 19.3	
CPUP	Villa Florida	145.77	229	PKPbc		PKPbc	13 24 27.6	-1.2
	comp=Z,0.6nm,0.5s,baz=126,slow=6.1,SNR=3.5							
CPUP	Villa Florida	145.77	229	PKP2		PKPab	13 24 27.6	-1.6

*THE **19** 13:14:48.9,41°.14N×20°.19E,h0km±2km,ML2.8/3,Error ellipse: s-maj=2.5km s-min=0.9km az=22.0*
*CSEM **19** 13:14:48.6±0.1,41°.09N×20°.12E,h2km,ML3.4,Error ellipse: s-maj=4.9km s-min=2.5km az=52.0*
*NEIC **19** 13:14:49.0,41°.15N×20°.16E,h3km,ML3.4(PDG),After PDG.*
*PDG **19** 13:14:49.0±0.4,41°.15N×20°.16E,h3km±1km,MD3.4/3, ML3.4/10,Error ellipse: s-maj=2.4km s-min=3.2km az=0.0*
*TIR **19** 13:14:48.6±3.4,41°.15N×20°.25E,h20km±115km,ML3.6*
*ISCJB **19** 13:14:48.5±0.4,41°.12N±0°.02×20°.13E±0°.02,h2km±3km, Error ellipse: s-maj=3.6km s-min=2.0km az=142.6*
*SKO **19** 13:14:49.4,41°.11N×20°.12E,h6km,M2.6,ML2.9*
*BEO **19** 13:14:49.2±0.8,41°.08N×20°.06E,h7km±3km,ML3.0/4*
*ATH **19** 13:14:55.3,41°.05N×20°.50E,h33km±3km,MD3.6/10*

ISC 19 13:14:49.3±0.4,41°.10N±0°.02×20°.13E±0°.03,h5km±3km, n104,σ1§29/174,10C-10D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.32	321	⇑*i*Pg	Pg	13 14 54.5	-1.0
TIR				*e*Sg	Sg	13 15 01.1	+1.5
TIR	Tirane	0.32	321	*e*Pg	Pg	13 14 54.6	-0.9
TIR				*e*S	Sg	13 15 00.1	+0.4
TIR	Tirane	0.32	321	P	Pg	13 14 54.3	-1.2
TIR				S	Sg	13 15 00.4	+0.8
TIR	Tirane	0.32	321	P	Pg	13 14 54.3	-1.2
TIR	Tirane	0.32	321	*e*Pg	Pg	13 14 54.6	-0.9
TIR				*e*S	Sg	13 15 00.1	+0.5
TIR				*e*Sg	Sg	13 15 01.1	+1.5
KBN	Korca	0.69	133	*i* PG	Pg	13 15 02.0	-0.6
KBN				*i* SG	Sg	13 15 14.1	+2.6
KBN	Korca	0.69	133	*i* Pg	Pg	13 15 02.0	-0.6
	SNR=98						
KBN				*i* Sg	Sg	13 15 14.1	+2.6
	SNR=98						
TPE	Tepelena	0.81	186	*i* PG	Pg	13 15 04.1	-0.8
TPE	Tepelena	0.81	186	*i* Pg	Pg	13 15 04.1	-0.7
	SNR=96						
KRUS	Krusevo	0.89	72	*e*Pg	Pg	13 15 04.7	-1.7
KRUS				*e*Sg	Sg	13 15 17.2	-0.7
KRUS				*e*Lg		13 15 18.7	
	comp=Z,190nm,0.7s						
BIA	Bitola	0.91	95	P	Pg	13 15 05.0	-1.8
BIA				S	Sg	13 15 17.8	-0.7
BIA	Bitola	0.91	95	*e*Pg	Pg	13 15 05.1	-1.7
BIA				*e*Sg	Sg	13 15 18.1	-0.4
BIA				*e*Lg		13 15 19.0	
	comp=N,110nm,0.3s						
BIA				*e*Lg		13 15 19.7	
	comp=E,158nm,0.5s						
BIA	Bitola	0.91	95	P	Pg	13 15 05.0	-1.8
BIA				S	Sg	13 15 17.8	-0.7
PUK	Puka	0.96	350	*i* PG	Pg	13 15 06.7	-1.0
PUK				*i* SG	Sg	13 15 21.5	+1.3
PUK	Puka	0.96	350	*i* Pg	Pg	13 15 06.7	-1.0
	SNR=95						
PUK				*i* Sg	Sg	13 15 21.5	+1.3
	SNR=95						
NEST	Nestorio	0.98	134	P	Pg	13 15 06.8	-1.3
NEST	Nestorio	0.98	134	P	Pg	13 15 06.8	-1.3
LSK	Leskovik	1.01	159	*i* PG	Pg	13 15 07.3	-1.5
LSK				*i* SG	Sg	13 15 25.4	+3.5
LSK	Leskovik	1.01	159	*i* Pg	Pg	13 15 07.3	-1.5
	SNR=94						
ULC	Ulcinj	1.08	323	⇓*i*Pg	Pg	13 15 08.5	-1.6
ULC				*e*Sg	Sg	13 15 25.5	+1.3
ULC	Ulcinj	1.08	323	⇓*i*Pg	Pg	13 15 08.5	-1.6
ULC				*e*Sg	Sg	13 15 25.5	+1.3
SRN	Sarande	1.22	185	*i* PG	Pg	13 15 14.6	+1.8
SRN				*i* SG	Sg	13 15 34.3	+5.7
SRN	Sarande	1.22	185	*i* Pg	Pg	13 15 14.6	+1.8
	SNR=93						
BCI	Bajram Curri	1.27	358	*i* PG	Pn	13 15 11.8	-1.8
BCI				*i* SG	Sg	13 15 31.3	+1.3
BCI	Bajram Curri	1.27	358	*i* Pg	Pn	13 15 11.8	-1.8
	SNR=94						
BCI				*i* Sg	Sg	13 15 31.3	+1.3
	SNR=94						
SKO	Skopje	1.31	48	*e*Pg	Pn	13 15 14.2	-0.1
SKO				*e*Sg	Sn	13 15 32.3	+0.1
SKO	Skopje	1.31	48	*e*Pg	Pn	13 15 12.3	-2.0
SKO				*e*Sg	Sn	13 15 31.8	-0.4
SKO				*e*Lg		13 15 33.8	
	comp=N,288nm,0.5s						
SKO				*e*Lg		13 15 34.7	
	comp=E,159nm,0.4s						
SKO	Skopje	1.31	48	*e*Pg	Pn	13 15 14.2	-0.1
SKO				*e*Sg	Sn	13 15 32.3	+0.1
PDG	Podgorica	1.48	334	*e*Pg	Pn	13 15 15.5	-1.0
PDG				*e*Sg	Sn	13 15 35.7	-0.5
PDG	Podgorica	1.48	334	*e*Pg	Pn	13 15 15.5	-1.0
PDG				*e*Sg	Sg	13 15 38.0	+1.2
TTG	Podgorica	1.48	334	⇓*i*Pg	Pn	13 15 15.2	-1.3
TTG				*e*Sg	Sg	13 15 38.1	+1.2
TTG	Podgorica	1.48	334	⇓*i*Pg	Pn	13 15 15.2	-1.3
TTG				*e*Sg	Sg	13 15 38.0	+1.2
KZN	Kozani	1.48	122	*e*PB	Pb	13 15 17.2	-0.1
KZN				*e*SN	Sn	13 15 35.0	-1.2
KZN	Kozani	1.48	122	P	Pn	13 15 15.2	-1.3
KZN				S	Sn	13 15 36.4	+0.2
KZN	Kozani	1.48	122	P	Pn	13 15 15.2	-1.3
KZN	Kozani	1.48	122	*e*Pb	Pb	13 15 17.2	-0.1
KZN				*e*Sn	Sn	13 15 35.0	-1.2
KZN				S	Sn	13 15 36.4	+0.2
PVY	Plav	1.50	356	⇓*i*Pg	Pn	13 15 15.5	-1.3
PVY				*e*Sg	Sg	13 15 39.0	+1.5
PVY	Plav	1.50	356	⇓*i*Pg	Pn	13 15 15.5	-1.3
PVY				*e*Sg	Sg	13 15 39.0	+1.5
BUM	Brajici-Budva	1.51	323	⇑*i*Pg	Pg	13 15 17.2	-1.1
BUM				*e*Sg	Sg	13 15 39.3	+1.4
BUM	Brajici-Budva	1.51	323	⇑*i*Pg	Pg	13 15 17.2	-1.1
BUM				*e*Sg	Sg	13 15 39.3	+1.4
JAN	Janina	1.54	159	*e*PB	Pb	13 15 19.7	+1.3
JAN				*e*SN	Sn	13 15 39.0	+1.2
JAN	Janina	1.54	159	*e*Pb	Pb	13 15 19.7	+1.3
JAN				*e*Sn	Sn	13 15 39.0	+1.2
GRG	Griva	1.73	94	P	Pn	13 15 19.3	-0.6
GRG	Griva	1.73	94	P	Pn	13 15 19.3	-0.6
BEY	Berane	1.78	355	*e*Pn	Pn	13 15 20.8	+0.1
BEY				*e*Sn	Sg	13 15 47.5	+1.0
IVA	Berane	1.78	355	*e*Pn	Pn	13 15 20.8	+0.1
IVA				*e*Sn	Sg	13 15 47.5	+1.0
IVA	Berane	1.78	355	*e*Pn	Pn	13 15 20.8	+0.1
HCY	Herceg Novi	1.82	318	⇑*i*Pn	Pn	13 15 20.8	-0.4
HCY				*e*Sn	Sg	13 15 48.1	+0.4
HCY	Herceg Novi	1.82	318	⇑*i*Pn	Pn	13 15 20.8	-0.4
HCY				*e*Sn	Sg	13 15 48.1	+0.4
VAY	Valandovo	1.86	82	*e*Pn	Pn	13 15 23.3	+1.6
VAY				*e*Sg	Sg	13 15 49.1	+0.2
VAY				*e*Lg		13 15 50.2	
	comp=E,42nm,0.6s						
VAY				*e*Lg		13 15 50.9	
	comp=N,143nm,1.0s						
NKY	Niksic	1.91	334	⇑*i*Pn	Pn	13 15 22.8	+0.4
NKY				*e*Sn	Sg	13 15 52.0	+1.4
NKY	Niksic	1.91	334	⇑*i*Pn	Pn	13 15 22.8	+0.4
NKY				*e*Sn	Sg	13 15 52.0	+1.4
LIT	Litokhoron	2.06	118	*e*PB	Pb	13 15 26.4	-0.7
LIT				*e*SN	Sn	13 15 47.7	-2.8
LIT	Litokhoron	2.06	118	P	Pn	13 15 23.1	-1.4
LIT				S	Sn	13 15 50.9	+0.4
LIT	Litokhoron	2.06	118	P	Pn	13 15 23.1	-1.4
LIT	Litokhoron	2.06	118	*e*Pb	Pb	13 15 26.4	-0.7
LIT				*e*Sn	Sn	13 15 47.7	-2.8
LIT				S	Sn	13 15 50.9	+0.4
THL	Klokotos Trika	2.11	136	*e*PB	Pb	13 15 27.6	-0.3
THL				*e*SN	Sn	13 15 50.1	-1.6
THL	Klokotos Trika	2.11	136	P	Pn	13 15 24.4	-0.7
THL				S	Sn	13 15 52.8	+1.1
THL	Klokotos Trika	2.11	136	P	Pn	13 15 24.4	-0.7
THL	Klokotos Trika	2.11	136	*e*Pb	Pb	13 15 27.6	-0.3
THL				*e*Sn	Sn	13 15 50.1	-1.6
THL				S	Sn	13 15 52.8	+1.1
BARS	Barje	2.13	36	*e*Pg	Pn	13 15 27.7	+2.2
BARS				*e*Sn	Sn	13 15 53.3	+1.1
BARS	Barje	2.13	36	*e*Pg	Pn	13 15 27.7	+2.2
BARS				*e*Sn	Sn	13 15 53.3	+1.1
BRY	Bratogost	2.15	327	⇓*i*Pn	Pn	13 15 26.7	+0.9
BRY				*e*Sn	Sg	13 15 56.9	-1.5
BRY	Bratogost	2.15	327	⇓*i*Pn	Pn	13 15 26.7	+0.9
BRY				*e*Sn	Sg	13 15 56.9	-1.5
UPM	Unac-Piva	2.29	337	⇑*i*Pn	Pn	13 15 29.0	+1.3
UPM				*e*Sn	Sg	13 15 59.1	-3.7
UPM	Unac-Piva	2.29	337	⇑*i*Pn	Pn	13 15 29.0	+1.3
UPM				*e*Sn	Sg	13 15 59.1	-3.7
PLE	Pljevlja	2.29	347	⇓*i*Pn	Pn	13 15 30.1	+2.4
PLE				*e*Sn	Sg	13 16 01.0	-2.0
PLE	Pljevlja	2.29	347	⇓*i*Pn	Pn	13 15 30.1	+2.4
PLE				*e*Sn	Sg	13 16 01.0	-2.0
LKD2	Lefkada island	2.34	170	P	Pn	13 15 29.1	+0.7
LKD2	Lefkada island	2.34	170	P	Pn	13 15 29.1	+0.7
SOH	Sokhos	2.46	95	*e*PN	Pn	13 15 31.2	+1.2
SOH				*e*SN	Sn	13 15 57.6	-2.8
SOH	Sokhos	2.46	95	*e*Pn	Pn	13 15 31.2	+1.2
SOH				*e*Sn	Sn	13 15 57.6	-2.8
STON	Ston	2.53	315	*i* Pn	Pn	13 15 29.3	-1.7
STON				Sn	Sn	13 16 01.4	-0.8
STON	Ston	2.53	315	*i* Pn	Pn	13 15 29.3	-1.7
STON				Sn	Sn	13 16 01.3	-0.9
EVR	Evrytania	2.53	149	*e*PB	Pb	13 15 34.7	-0.5
EVR	Evrytania	2.53	149	*e*Pb	Pb	13 15 34.7	-0.5
PLG	Polygyros	2.62	105	*e*PN	Pn	13 15 33.9	+1.6
PLG	Polygyros	2.62	105	*e*Pn	Pn	13 15 33.9	+1.6
AGG	Agios Georgios	2.68	140	*e*PN	Pn	13 15 34.9	+1.9
AGG	Agios Georgios	2.68	140	*e*Pn	Pn	13 15 34.9	+1.9
VTS	Vitosha	2.74	56	*e*Pn	Pn	13 15 34.4	+0.5
VTS	Vitosha	2.74	56	*e*Pn	Pn	13 15 34.4	+0.5
BBLS	Lazići	2.81	349	*e*Pn	Pn	13 15 35.8	+0.9
BBLS				*e*Sg	Sg	13 16 18.4	-1.3
BBLS	Lazići	2.81	349	*e*Pn	Pn	13 15 35.8	+0.9
BBLS				*e*Sg	Sg	13 16 18.4	-1.3
GRUS	Gruza	2.82	9	*e*Pn	Pn	13 15 34.3	-0.7
GRUS	Gruza	2.82	9	*e*Pn	Pn	13 15 34.3	-0.7
ZAPS	Zavoj	2.86	40	⇑*i*Pn	Pn	13 15 36.9	+1.4
CDT	Castel del Mon	2.91	271	*e*Pn	Pn	13 15 35.3	-0.9
CDT				*e*Sn	Sn	13 16 12.2	+0.6
NEO	Neokhori	2.97	126	*e*PN	Pn	13 15 38.4	+1.3
NEO	Neokhori	2.97	126	*e*Pn	Pn	13 15 38.4	+1.3
DIVS	Divibare	3.00	358	*e*Pn	Pn	13 15 38.8	+1.4
DIVS				*e*Sg	Sg	13 16 26.1	+0.5
DIVS	Divibare	3.00	358	*e*Pn	Pn	13 15 38.8	+1.4
DIVS				*e*Sg	Sg	13 16 26.1	+0.5
EFP	Efpalio	3.00	152	*e*PN	Pn	13 15 41.3	+3.8
RLS	Riolos of Patr	3.21	161	*e*PN	Pn	13 15 44.0	+3.7
RLS	Riolos of Patr	3.21	161	*e*Pn	Pn	13 15 44.0	+3.7
LKR	Lokris	3.30	137	*e*PN	Pn	13 15 42.8	+1.3
LKR	Lokris	3.30	137	*e*Pn	Pn	13 15 42.8	+1.3
CUC	Castrocucco	3.47	253	*e*Pn	Pn	13 15 43.0	-0.8
CUC	Castrocucco	3.47	253	*e*Pn	Pn	13 15 43.0	-0.9
GUR	Goura	3.59	151	*e*PN	Pn	13 15 49.0	+3.4
GUR	Goura	3.59	151	*e*Pn	Pn	13 15 49.0	+3.4
FRGS	Fruska Gora	4.06	357	*e*Pn	Pn	13 15 50.3	-1.7
NVLJ	Novalja	5.19	314	*i* Pn	Pn	13 16 06.5	-1.0
NVLJ				Sn	Sn	13 17 05.1	-2.5
NVLJ	Novalja	5.19	314	*i* Pn	Pn	13 16 06.5	-1.0
NVLJ				Sn	Sn	13 17 05.1	-2.6

*NEIC **19** 13:31:49.6,17°.85N×99°.21W,h49km,MD3.5(MEX),After MEX.*

MEX 19 13:31:49.6±0.6,17°.85N×99°.21W,h49km±10km,MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	Mezcala	0.40	281	*e*P	Pn	13 31 57.8	-1.8
MEIG				*i* S	Sn	13 32 05.3	-1.4
PLIG	Platanillo	0.61	333	*i* P	Pn	13 32 00.5	-1.6
PLIG				*i* S	Sn	13 32 09.6	-1.5
PLIG	Platanillo	0.61	333	*i* P	Pn	13 32 00.5	-1.6
PLIG				*i* S	Sn	13 32 09.6	-1.5
ACX	Acapulco	1.16	213	*i* P	Pn	13 32 08.4	-1.0
ACX				*i* S	Sn	13 32 21.9	-2.1
ACX	Acapulco	1.16	213	*i* P	Pn	13 32 08.4	-1.0
ACX				*i* S	Sn	13 32 21.9	-2.1
CAIG	El Cayaco	1.29	232	*i* P	Pn	13 32 09.6	-1.6
CAIG				*i* S	Sn	13 32 25.5	-1.8
CAIG	El Cayaco	1.29	232	*i* P	Pn	13 32 09.6	-1.6
CAIG				*i* S	Sn	13 32 25.5	-1.8
PNIG	Pinotepa	1.78	144	*i* P	Pn	13 32 16.8	-1.2
PNIG				*i* S	Sn	13 32 37.0	-2.4
PNIG	Pinotepa	1.78	144	*i* P	Pn	13 32 16.8	-1.2
PNIG				*i* S	Sn	13 32 37.0	-2.4
ZIIG	Zihuatanejo	2.16	264	*i* P	Pn	13 32 22.6	-0.6
ZIIG				*i* S	Sn	13 32 46.3	-2.5
ZIIG	Zihuatanejo	2.16	264	*i* P	Pn	13 32 22.6	-0.6
ZIIG				*i* S	Sn	13 32 46.3	-2.5

*IDC **19** 13:32:21.0±2.3,30°.63N×83°.32E,h0km,mb3.5/4, mb1 3.6/5,mb1mx3.4/26,mbtmp3.5/5,ML3.1/1,MS3.3/1, Ms1 3.3/1,ms1mx2.4/24,Error ellipse: s-maj=74.0km s-min=26.7km az=69.0*
*NEIC **19** 13:32:22.2±1.3,30°.68N×83°.28E,h10km,mb3.7/4,Error ellipse: s-maj=29.0km s-min=12.6km az=47.0*
*ISCJB **19** 13:32:25.8±1.6,30°.7N±0°.1×83°.4E±0°.1,h48km±18km, mb3.5/7,Error ellipse: s-maj=18.7km s-min=13.2km az=35.6*

ISC 19 13:32:28.0±1.3,30°.79N±0°.10×83°.4E±0°.1,h53km±15km, n15,σ1§19/14,mb3.5/7,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	4.64	266	*ex*	Pn	13 33 36.0	+0.4
LSA	Lhasa	6.78	97	Pn	Pn	13 34 04.7	-0.2
TKM2	Tokmak 2	13.62	335	P	Pn	13 35 38.2	-0.1
MK31	Makanchi Array	16.01	357	*e*P	Pn	13 36 11.4	+1.9
MKAR	Makanchi Array	16.01	357	Pn	Pn	13 36 07.9	-1.6
	0.1nm,0.3s,baz=174,slow=15,SNR=3.0						
KURK	Kurchatov	20.23	351	*e*P	P	13 36 56.1	-2.3
	2.5nm,0.9s						
ZALV	Zalesovo Beam	23.17	2	P	P	13 37 29.6	-0.2
	0.5nm,0.5s,mb3.2,baz=184,slow=12,SNR=4.5						
BVAR	Borovoye Array	24.17	341	P	P	13 37 40.3	+1.3
	0.7nm,0.6s,mb3.3,baz=134,slow=11,SNR=3.8						
BRVK	Borovoye	24.23	340	*e*P	P	13 37 38.0	-1.5
	1.1nm,0.4s,mb3.6						
SONM	Songino Array	24.47	39	P	P	13 37 44.1	+2.3
	0.9nm,0.8s,mb3.3,baz=234,slow=7.9,SNR=4.5						
ULN	Ulaanbaatar	24.85	40	*e*P	P	13 37 45.5	+0.2
	1.4nm,0.8s,mb3.5						
ABKAR	Akbulak array	25.58	323	*e*P	P	13 37 52.5	+0.6
	1.4nm,0.7s,mb3.6						
KSRS	Korea Array	37.17	67	LR	LR	13 55 57.3	
	comp=Z,42nm,19.5s,baz=212,slow=38						
WRA	Warramunga Arr	70.27	129	P	P	13 43 36.0	+0.1
	0.9nm,1.0s,mb3.6,baz=324,slow=6.3,SNR=8.5						
WB2	Warramunga Arr	70.27	129	*e*P	P	13 43 35.0	-0.9

*IDC **19** 13:56:14.8±0.8,4°.87N×126°.68E,h0km,mb4.2/8, mb1 4.3/8,mb1mx4.0/20,mbtmp4.2/8,MS2.7/1,Ms1 2.7/1, ms1mx2.4/22,Error ellipse: s-maj=62.5km s-min=17.5km az=73.0*
*NEIC **19** 13:56:19.8±0.5,4°.79N×126°.47E,h35km,mb4.1/5,Error ellipse: s-maj=37.3km s-min=9.8km az=67.0*
*ISCJB **19** 13:56:26.2±1.1,4°.7N±0°.1×126°.4E±0°.2,h11km±9km, mb4.0/12,Error ellipse: s-maj=31.1km s-min=12.2km az=156.5*

**ISC 19 13:56:27.2

s-min=13.3km az=137.0
*MOS **19** 14:07:13.0±1.0, 47°.00N×152°.85E, h68km, mb4.4/10, Error ellipse: s-maj=18.2km s-min=8.3km az=58.8*
ISC 19 14:07:14.1±0.7, 46°.98N±0°.08×152°.8E±0°.1, h60km±7km, h48km±1.3km: pP-P, n75, σ1°21/84, mb4.0/16, 2C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.86**	**245**	⇓*i*PN	**Pn**	**14 08 11.3**	**+0.4**
KUR				*i* S	**Sn**	**14 08 57.5**	**+2.6**
KUR				pmax	pmax		
	comp=N,140nm,0.9s						
KUR				pmax	pmax		
	comp=Z,260nm,0.9s						
KUR				smax			
	comp=N,710nm,0.9s						
KUR				smax			
	comp=E,570nm,0.9s						
KUR	**Kuril'sk**	**3.86**	**245**	⇓*i*P	**Pn**	**14 08 11.3**	**+0.4**
KUR				AMB	AMB	14 08 14.0	
	comp=E,140nm,0.9s						
KUR				AMB	AMB	14 08 14.0	
	comp=E,260nm,0.9s						
KUR				*i* S	**Sn**	**14 08 57.5**	**+2.6**
KUR				A		14 09 13.2	
	comp=E,430nm,0.8s						
KUR				A		14 09 13.2	
	comp=E,600nm,0.8s						
SKR	**Severo-Kuril's**	**4.30**	**29**	*e*PN	**Pn**	**14 08 18.0**	**+1.1**
SKR				*e*S	**Sn**	**14 09 07.0**	**+1.3**
SKR				pmax	pmax		
	comp=Z,210nm,0.5s						
SKR				pmax	pmax		
	comp=N,100nm,0.4s						
SKR				smax			
	comp=N,80nm,0.5s						
SKR				smax			
	comp=E,160nm,0.5s						
SKR	**Severo-Kuril's**	**4.30**	**29**	*e*P	**Pn**	**14 08 18.0**	**+1.1**
SKR				AMB	AMB	14 08 20.0	
	comp=E,210nm,0.5s						
SKR				AMB	AMB	14 08 20.0	
	comp=E,100nm,0.4s						
SKR				*e*S	**Sn**	**14 09 07.0**	**+1.3**
YUK	**Yuzh-Kuril'sk**	**5.70**	**241**	⇑*i*PN	**Pn**	**14 08 36.9**	**+0.7**
YUK				*i* S	**Sn**	**14 09 42.1**	**+1.9**
YUK				pmax	pmax		
	comp=N,50nm,0.4s						
YUK				pmax	pmax		
	comp=E,70nm,0.4s						
YUK				pmax	pmax		
	comp=Z,120nm,0.4s						
YUK				smax			
	comp=E,60nm,0.4s						
YUK				smax			
	comp=N,220nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.70**	**241**	⇑*i*P	**Pn**	**14 08 36.9**	**+0.7**
YUK				AMB	AMB	14 09 05.0	
	comp=N,380nm,0.6s						
YUK				*i* S	**Sn**	**14 09 42.1**	**+1.9**
YUK				A		14 09 55.0	
	comp=N,220nm,0.5s						
YUK				A		14 09 55.0	
	comp=N,60nm,0.5s						
NEM2	**Nemuro 2**	**6.17**	**237**	P	**Pn**	**14 08 40.4**	**-2.1**
NEM2				*e*S	**Sn**	**14 09 47.2**	**-4.4**
JRA	**Rausu**	**6.21**	**243**	P	**Pn**	**14 08 44.4**	**+1.4**
JNK	**Nakash**	**6.64**	**242**	P	**Pn**	**14 08 49.2**	**+0.2**
YSS	**Yuzh-Sakhalins**	**6.88**	**273**	P	**Pn**	**14 08 55.6**	**+3.4**
YSS	**Yuzh-Sakhalins**	**6.88**	**273**	PN	**Pn**	**14 08 55.6**	**+3.4**
YSS	**Yuzh-Sakhalins**	**6.88**	**273**	*e*P	**Pn**	**14 09 02.3**	**+10**
PEA0B	**Petropavlovsk-**	**6.89**	**25**	*e*Pn	**Pn**	**14 08 51.2**	**-1.1**
PETK	**Petropavlovsk-**	**6.89**	**25**	P	**Pn**	**14 08 51.8**	**-0.5**
	comp=N,1.5nm,0.3s,baz=180,slow=11,SNR=29						
PETK				S	**Sn**	**14 10 22.5**	**+13**
	baz=171,slow=19,SNR=2.0						
PETK				LR	LR	14 11 44.6	
	comp=N,59nm,18.4s,baz=234,slow=39						
PETK	**Petropavlovsk-**	**6.89**	**25**	*e*PN	**Pn**	**14 08 51.8**	**-0.5**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JTKR	**Abashiri--Toko**	**6.94**	**248**	P	**Pn**	**14 08 54.5**	**+1.4**
JAK	**Akkeshi**	**7.00**	**238**	P	**Pn**	**14 08 51.7**	**-2.2**
JAK				*e*S	**Sn**	**14 10 07.6**	**-4.4**
PET	**Petropavlovsk**	**7.12**	**30**	*e*Pn	**Pn**	**14 08 54.4**	**-1.1**
PET	**Petropavlovsk**	**7.12**	**30**	*e*PN	**Pn**	**14 08 55.0**	**-0.5**
PET				pmax	pmax		
	comp=Z,28nm,0.7s						
PET				MLR	MLR		
	comp=Z,200nm,22.0s						
JAR	**Ashorobuto**	**7.38**	**243**	P	**Pn**	**14 08 59.6**	**+0.5**
JOB	**Onbets**	**7.56**	**241**	P	**Pn**	**14 09 00.9**	**-0.7**
ASAJ	**Asahikawa**	**7.72**	**252**	P	**Pn**	**14 09 06.8**	**+3.0**
	comp=Z,1.0nm,0.3s,baz=118,slow=10,SNR=6.0						
ASAJ	**Asahikawa**	**7.72**	**252**	*e*Pn	**Pn**	**14 09 06.8**	**+3.0**
ASAJ	**Asahikawa**	**7.72**	**252**	PN	**Pn**	**14 09 06.8**	**+3.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.72**	**252**	P	**Pn**	**14 09 06.9**	**+3.2**
JKK2	**Kamakawa 2**	**7.73**	**250**	P	**Pn**	**14 09 05.9**	**+2.0**
JCH	**Churui**	**8.01**	**240**	P	**Pn**	**14 09 06.2**	**-1.5**
JCH				*e*S	**Sn**	**14 10 32.3**	**-4.5**
JEM	**Erimo**	**8.50**	**238**	P	**Pn**	**14 09 13.7**	**-0.7**
ERM	**Erimo**	**8.50**	**238**	*e*Pn	**Pn**	**14 09 14.0**	**-0.4**
ERM				*e*Sn	**Sn**	**14 10 44.7**	**-4.1**
ERM	**Erimo**	**8.50**	**238**	*e*PN	**Pn**	**14 09 14.0**	**-0.4**
ERM	**Erimo**	**8.50**	**238**	*e*P	**Pn**	**14 09 13.6**	**-0.8**
JBT2	**Biratori 2**	**8.52**	**244**	P	**Pn**	**14 09 14.5**	**-0.2**
JNBK	**Urakawa-nobuka**	**8.57**	**240**	P	**Pn**	**14 09 13.3**	**-2.1**
JNB	**Noboribetsu**	**9.51**	**246**	P	**Pn**	**14 09 27.5**	**-0.8**
JKB	**Kayabe**	**9.84**	**243**	P	**Pn**	**14 09 30.8**	**-1.9**
JANG	**Nango**	**10.51**	**235**	P	**Pn**	**14 09 37.3**	**-4.6**
JRG	**Rokugo**	**11.67**	**234**	P	**Pn**	**14 09 54.0**	**-3.8**
MJAR	**Matsushiro Arr**	**15.06**	**231**	P	**Pn**	**14 10 44.5**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=236,slow=18,SNR=6.4						
MJAR	**Matsushiro Arr**	**15.06**	**231**	P	**Pn**	**14 10 44.5**	**+1.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	**20.01**	**327**	P	**P**	**14 11 39.9**	**-1.6**
	comp=Z,16nm,0.7s						
YAK				*e*		14 11 55.6	
YAK	**Yakutsk**	**20.01**	**327**	*e*P	pP	14 11 51.9	-2.6
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
KSRS	**Korea Array**	**20.67**	**252**	P	**P**	**14 11 50.1**	**+1.3**
	comp=E,0.9nm,0.6s,baz=68,slow=9.7,SNR=3.4						
KSRS				pP		14 12 00.9	
	comp=E,1.3nm,0.8s,baz=55,slow=11,SNR=3.5						
KSRS	**Korea Array**	**20.67**	**252**	P	**P**	**14 11 50.1**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL	**Bilibino**	**22.21**	**13**	*e*P	**P**	**14 12 04.9**	**-0.1**
BILL				*e*		14 16 00.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.6						
BILL				MLR	MLR		
	comp=Z,100nm,14.0s						
COLA	**College**	**36.08**	**39**	P	**P**	**14 14 08.5**	**-1.0**
	comp=Z,2.7nm,0.7s,mb4.3						
COLA	**College**	**36.08**	**39**	P	**P**	**14 14 08.5**	**-1.0**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
ILAR	**Eielson Array**	**36.50**	**39**	P	**P**	**14 14 13.2**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=263,slow=6.9,SNR=10.0						
ILAR				pP	pP	14 14 25.1	-3.0
	comp=Z,0.9nm,0.8s,baz=262,slow=7.8,SNR=4.5						
ILAR	**Eielson Array**	**36.50**	**39**	P	**P**	**14 14 13.3**	**+0.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**41.57**	**33**	P	**P**	**14 14 56.2**	**+0.9**
	comp=Z,4.6nm,0.8s,mb4.2,baz=285,slow=3.7,SNR=7.2						
INK	**Inuvik**	**41.57**	**33**	P	**P**	**14 14 56.2**	**+0.9**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BBB	**Bella Bella**	**49.14**	**53**	LR	LR	14 34 20.2	
	comp=Z,29nm,19.1s,baz=95,slow=33						
YKA	**Yellowknife Ar**	**50.86**	**37**	P	**P**	**14 16 07.9**	**-0.3**
	comp=Z,2.9nm,0.9s,mb4.2,baz=300,slow=7.3,SNR=5.0						
YKA	**Yellowknife Ar**	**50.86**	**37**	P	**P**	**14 16 07.9**	**-0.4**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YBH	**Yreka Blue Hor**	**57.82**	**62**	P	**P**	**14 16 59.8**	**+0.7**
	comp=Z,0.8nm,0.6s,mb3.9,baz=286,slow=7.4,SNR=3.6						
YBH	**Yreka Blue Hor**	**57.82**	**62**	P	**P**	**14 16 59.8**	**+0.7**
YBH				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LRM	**Limekiln Ridge**	**61.22**	**53**	*e*P	**P**	**14 17 23.1**	**+0.7**
NVAR	**Mina Array Bea**	**62.51**	**62**	P	**P**	**14 17 31.7**	**+0.5**
	comp=Z,1.2nm,0.8s,mb4.1,baz=295,slow=7.6,SNR=10.0						
RRI2	**Red Ridge**	**63.42**	**54**	*e*P	**P**	**14 17 38.3**	**+1.2**
	comp=Z,3.6nm,0.8s,mb4.5						
FINES	**FINESS Array B**	**63.74**	**335**	P	**P**	**14 17 39.4**	**+0.4**
	comp=Z,2.5nm,0.7s,mb4.3,baz=34,slow=8.0,SNR=6.9						
FINES	**FINESS Array B**	**63.74**	**335**	P	**P**	**14 17 39.4**	**+0.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PDAR	**Pinedale Array**	**64.78**	**54**	P	**P**	**14 17 46.5**	**+0.5**
	comp=Z,1.7nm,0.8s,mb4.1,baz=335,slow=2.0,SNR=15						
PDAR				pP	pP	14 17 59.5	-2.8
	comp=Z,0.3nm,0.4s,baz=329,slow=1.7,SNR=3.4						
OBN	**Obninsk**	**65.00**	**325**	P	**P**	**14 17 46.3**	**-1.0**
OBN				*e*		14 18 17.6	
OBN				*e*		14 20 08.4	
OBN				*e*SS	SS	14 30 35.4	-0.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
NB2	**NORSAR Subarra**	**67.94**	**341**	P	**P**	**14 18 06.2**	**+0.2**
	comp=Z,1.4nm,0.6s,mb4.2,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**67.94**	**341**	P	**P**	**14 18 06.5**	**+0.6**
	comp=Z,2.2nm,0.7s,mb4.3,baz=27,slow=6.4,SNR=7.3						
NOA	**NORSAR Array B**	**67.94**	**341**	P	**P**	**14 18 06.5**	**+0.5**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**68.67**	**199**	P	**P**	**14 18 09.6**	**-1.3**
	comp=Z,0.2nm,0.8s,mb3.1,baz=14,slow=6.8,SNR=4.8						
WRA				pP	pP	14 18 22.8	-4.5
	comp=Z,0.6nm,0.9s,baz=17,slow=6.4,SNR=3.4						
WRA	**Warramunga Arr**	**68.67**	**199**	P	**P**	**14 18 09.6**	**-1.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	**Malin Array Be**	**71.24**	**326**	P	**P**	**14 18 25.5**	**-1.0**
	comp=Z,1.0nm,0.4s,mb4.1,baz=35,slow=6.0,SNR=4.1						
AKASG	**Malin Array Be**	**71.24**	**326**	P	**P**	**14 18 25.5**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**72.36**	**198**	P	**P**	**14 18 33.2**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=14,slow=5.3,SNR=5.8						
ASAR	**Alice Springs**	**72.36**	**198**	*e*P	**P**	**14 18 34.7**	**+1.3**
CLL	**Collm**	**76.17**	**335**	*e*P	**P**	**14 18 54.0**	**-1.3**
CLL	**Collm**	**76.17**	**335**	*e*P	**P**	**14 18 54.0**	**-1.3**
TXAR	**Lajitas Array**	**77.56**	**60**	P	**P**	**14 19 03.5**	**0.0**
	comp=Z,1.2nm,0.4s,mb4.1,baz=300,slow=4.8,SNR=18						
TXAR				pP	pP	14 19 17.6	-2.6
	comp=Z,1.6nm,0.6s,baz=301,slow=4.1,SNR=9.0						
TXAR	**Lajitas Array**	**77.56**	**60**	P	**P**	**14 19 03.5**	**0.0**
TXAR				*PP	pP	14 19 17.6	-2.6
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						

*IDC **19** 14:33:19.6±5.7, 15°.23S×166°.32E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.6/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/21, Error ellipse: s-maj=278.7km s-min=34.4km az=144.0*
*ISCJB **19** 14:33:23.1±1.5, 15°.3S±0°.2×166°.2E±0°.2, h33km, mb3.5/3, Error ellipse: s-maj=33.0km s-min=23.0km az=173.5*
ISC 19 14:33:25.0±1.5, 15°.3S±0°.2×166°.3E±0°.2, h35km, n5, σ0°53/5, mb3.5/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.77**	**179**	*e*P	**Pn**	**14 35 01.8**	**0.0**
DZM				*e*S	**Sn**	**14 36 10.4**	**-7.3**
HNR	**Honiara**	**8.49**	**312**	LR	LR	14 38 23.4	
	comp=Z,74nm,19.7s,baz=94,slow=36						
WRA	**Warramunga Arr**	**30.79**	**257**	P	**P**	**14 39 37.0**	**-0.5**
	0.2nm,0.7s,mb3.1,baz=88,slow=9.0,SNR=4.9						
ASAR	**Alice Springs**	**31.61**	**250**	P	**P**	**14 39 45.2**	**+0.5**
	0.8nm,0.6s,mb3.7,baz=79,slow=9.1,SNR=14						
ILAR	**Eielson Array**	**87.33**	**18**	P	**P**	**14 46 07.8**	**0.0**
	0.5nm,0.8s,mb3.8,baz=233,slow=5.4,SNR=6.7						

*IDC **19** 14:43:04.8±1.6, 7°.06S×144°.55E, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.8/13, mbtmp3.8/7, ML3.2/2, Error ellipse: s-maj=51.5km s-min=25.3km az=95.0*
*ISCJB **19** 14:43:09.0±0.8, 7°.09S±0°.09×144°.24E±0°.08, h33km, mb3.5/5, Error ellipse: s-maj=13.9km s-min=9.8km az=41.9*
*NEIC **19** 14:43:11.2±0.8, 7°.09S×144°.15E, h35km, Error ellipse: s-maj=17.6km s-min=14.0km az=92.0*
ISC 19 14:43:11.1±0.8, 7°.13S±0°.09×144°.21E±0°.08, h35km, n11, σ1°09/12, mb3.5/5, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.69**	**128**	*e*P	**Pn**	**14 44 07.7**	**+2.1**
PMG				S	**Sn**	**14 44 47.1**	**-0.8**
COEN	**Coen**	**6.86**	**188**	Pn	**Pn**	**14 44 53.0**	**+3.8**
WB2	**Warramunga Arr**	**15.93**	**216**	*e*Pn	**Pn**	**14 46 52.6**	**0.0**
WRA	**Warramunga Arr**	**15.94**	**216**	Pn	**Pn**	**14 46 51.9**	**-0.8**
	0.0nm,0.3s,baz=34,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**19.19**	**210**	P	**Pn**	**14 47 32.6**	**-0.4**
	0.3nm,0.3s,baz=44,slow=8.8,SNR=49						
STKA	**Stephens Creek**	**24.74**	**185**	P	**P**	**14 48 29.7**	**+0.4**
	4.1nm,1.1s,mb3.9,baz=350,slow=11,SNR=3.0						
STKA	**Stephens Creek**	**24.74**	**185**	P	**P**	**14 48 29.8**	**+0.5**
	0.3nm,0.7s,mb2.9						
CMAR	**Chiang Mai Arr**	**51.38**	**300**	P	**P**	**14 52 13.8**	**+1.0**
	1.4nm,0.7s,mb4.0,baz=125,slow=5.4,SNR=9.7						
MKAR	**Makanchi Array**	**76.62**	**321**	P	**P**	**14 54 58.8**	**+0.6**
	0.1nm,0.3s,mb3.2,baz=132,slow=6.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**78.51**	**329**	P	**P**	**14 55 08.2**	**-0.3**
	0.3nm,0.4s,mb3.6,baz=102,slow=6.1,SNR=2.4						
ILAR	**Eielson Array**	**87.61**	**24**	P	**P**	**14 55 53.2**	**-2.1**
	0.3nm,1.0s,mb3.5,baz=226,slow=2.4,SNR=4.3						

TRN 19 14:45:28.9, 13°.84N×60°.39W, h17km, MD3.7, M3.1 (FDF), 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCLT	**Moule a Chique**	**0.56**	**256**	*e*P	Pg	14 45 42.4	+2.5
MCLT				*e*S	Sg	14 45 51.2	+3.8
SLW	**Petit Monier**	**0.56**	**288**	*e*P	Pg	14 45 42.6	+2.5
SLW				*e*S	Sg	14 45 51.5	+3.9
SLPE	**Piton Saint Es**	**0.59**	**270**	*e*P	Pg	14 45 43.7	+3.1
SLB	**Belfond**	**0.64**	**269**	⇑*i*P	Pg	14 45 44.8	+3.4
SLB				*e*S	Sg	14 45 54.5	+4.5
SLDE	**Delcer**	**0.65**	**267**	*e*P	Pg	14 45 44.8	+3.1
SLDE				*e*S	Sg	14 45 55.1	+4.6
MVM	**Montagne Vaucl**	**0.86**	**325**	*e*P	Pb	14 45 46.8	+1.3
MVM				*e*S	Sb	14 45 58.9	+2.2
SSV	**Crater Summit**	**0.94**	**237**	*e*P	Pb	14 45 49.0	+2.3
SSV				*e*S	Sb	14 46 03.1	+4.2
BIM	**Bigot**	**0.94**	**315**	*e*P	Pb	14 45 48.1	+1.3
BIM				*e*S	Sb	14 46 00.9	+1.9
SVV	**Soufriere Volc**	**0.96**	**237**	*e*P	Pb	14 45 49.4	+2.3
SVV				*e*S	Sb	14 46 03.4	+3.8
SVB	**Belmont**	**1.02**	**236**	*e*P	Pb	14 45 49.5	+1.4
SVB				*e*S	Sb	14 46 04.2	+3.1
FDF	**Fort de France**	**1.15**	**320**	*e*P	Pn	14 45 51.3	+1.0
FDF				*e*S	Sb	14 46 05.8	+0.7
DLPL	**La Plaine**	**1.70**	**331**	*e*S	Sn	14 46 20.5	+1.4

*ISCJB **19** 14:47:00.3±0.6, 38°.36N±0°.04×38°.10E±0°.04, h8km±6km, Error ellipse: s-maj=6.6km s-min=5.0km az=19.7*
*ISK **19** 14:47:00.5, 38°.29N×38°.10E, h9km, MD2.8*
*CSEM **19** 14:47:00.5, 38°.29N×38°.10E, h9km, MD2.8, After ISK*
ISC 19 14:47:00.7±0.6, 38°.37N±0°.04×38°.09E±0°.04, h8km±6km, n15, σ0°79/26, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.15**	**242**	⇑*i*P	**Pg**	**14 47 03.9**	**0.0**
AKCD				*i* S	**Sg**	**14 47 06.9**	**+1.0**
MYA	**Malataya**	**0.27**	**98**	*e*PG	**Pg**	**14 47 05.9**	**-0.1**
MYA				*e*SG	**Sg**	**14 47 10.4**	**+0.8**
MYA	**Malataya**	**0.27**	**98**	*e*Pg	**Pg**	**14 47 05.9**	**-0.1**
MYA				*e*Sg	**Sg**	**14 47 10.4**	**+0.8**
MALT	**Malatya**	**0.27**	**101**	*e*PG	**Pg**	**14 47 05.7**	**-0.4**
MALT				*e*SG	**Sg**	**14 47 10.4**	**+0.7**
MALT	**Malatya**	**0.27**	**101**	*e*Pg	**Pg**	**14 47 05.7**	**-0.4**
MALT				*e*Sg	**Sg**	**14 47 10.4**	**+0.7**
DARE	**Darende-Malaty**	**0.63**	**339**	*e*PG	**Pg**	**14 47 11.9**	**-0.8**
DARE				*e*SG	**Sg**	**14 47 20.1**	**-0.8**
DARE	**Darende-Malaty**	**0.63**	**339**	*e*Pg	**Pg**	**14 47 11.9**	**-0.9**
DARE				*e*Sg	**Sg**	**14 47 20.1**	**-0.8**
SVRC	**Sivrice-ELAZID**	**0.96**	**89**	*e*PG	**Pg**	**14 47 18.9**	**-0.2**
SVRC	**Sivrice-ELAZID**	**0.96**	**89**	*e*Pg	**Pg**	**14 47 18.9**	**-0.2**
URFA	**Urfa**	**1.09**	**148**	*e*PG	**Pg**	**14 47 20.6**	**-1.1**
URFA				*e*SG	**Sg**	**14 47 35.2**	**-0.6**
URFA	**Urfa**	**1.09**	**148**	*e*Pg	**Pg**	**14 47 20.6**	**-1.0**
URFA				*e*Sg	**Sg**	**14 47 35.2**	**-0.6**
KMRS	**Kahramanmaras**	**1.27**	**228**	*e*PN	**Pn**	**14 47 24.9**	**+0.1**
KMRS				*e*SN	**Sn**	**14 47 41.7**	**-0.4**
KMRS	**Kahramanmaras**	**1.27**	**228**	*e*Pn	**Pn**	**14 47 24.9**	**+0.1**
KMRS				*e*Sn	**Sn**	**14 47 41.7**	**-0.4**
SVSK	**Karacayir**	**1.77**	**332**	*e*PN	**Pn**	**14 47 33.6**	**+2.0**
SVSK	**Karacayir**	**1.77**	**332**	*e*Pn	**Pn**	**14 47 33.6**	**+2.0**

*ISCJB **19** 15:05:47.9±0.5, 39°.43N±0°.02×33°.07E±0°.03, h2km±3km, Error ellipse: s-maj=4.6km s-min=3.4km az=140.9*
*ISK **19** 15:05:47.4, 39°.46N×33°.07E, h3km, MD3.2*
*DDA **19** 15:05:48.2, 39°.42N×33°.13E, h7km±3km, Md3.2*
*CSEM **19** 15:05:48.0±0.1, 39°.43N×33°.04E, h2km, MD3.2, Error ellipse: s-maj=1.8km s-min=1.7km az=98.0*
ISC 19 15:05:48.5±0.4, 39°.45N±0°.02×33°.06E±0°.03, h3km±3km, n50, σ0°93/73, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Af¨ar-Bala (A**	**0.01**	**92**	*e*PG	**Pg**	**15 05 48.0**	**-1.0**
AFSR				*e*SG	**Sg**	**15 05 49.1**	**-0.2**
AFSR	**Af¨ar-Bala (A**	**0.01**	**92**	*e*Pg	**Pg**	**15 05 48.0**	**-1.0**
AFSR				*e*Sg	**Sg**	**15 05 49.1**	**-0.3**
BBAL	**Bala**	**0.11**	**26**	⇓*i*P	**Pg**	**15 05 50.9**	**+0.3**
BBAL				*i* S	**Sg**	**15 05 53.4**	**+1.3**
LOD	**Lodumlu**	**0.50**	**333**	*e*PG	**Pg**	**15 05 57.6**	**-0.4**
LOD				*e*SG	**Sg**	**15 06 04.5**	**0.0**
LOD	**Lodumlu**	**0.50**	**333**	*e*Pg	**Pg**	**15 05 57.6**	**-0.4**
LOD				*e*Sg	**Sg**	**15 06 04.5**	**0.0**
CDAG	**Cicekdag**	**1.03**	**80**	⇑*i*P	**Pg**	**15 06 06.9**	**-1.3**
CDAG				*i* S	**Sg**	**15 06 21.7**	**+0.2**
CDAG	**Cicekdag**	**1.03**	**80**	*i* P	**Pg**	**15 06 06.9**	**-1.3**
CDAG				*i* S	**Sg**	**15 06 21.7**	**+0.2**
ELDT	**Eldivan**	**1.08**	**15**	*e*P	**Pg**	**15 06 09.5**	**+0.4**
ELDT				*i* S	**Sg**	**15 06 26.0**	**+2.8**
ELDT	**Eldivan**	**1.08**	**15**	*e*P	**Pg**	**15 06 09.5**	**+0.3**
ELDT				*i* S	**Sg**	**15 06 26.0**	**+2.9**
KIZT	**Kizilcal**	**1.08**	**239**	*e*PN	**Pg**	**15 06 09.0**	**-0.2**
KIZT				*e*SN	**Sg**	**15 06 24.5**	**+1.4**
KIZT	**Kizilcal**	**1.08**	**239**	*e*Pn	**Pg**	**15 06 09.0**	**-0.1**
KIZT				*e*Sn	**Sg**	**15 06 24.5**	**+1.4**
KDHN	**Kadinhani**	**1.18**	**219**	*e*P	**Pg**	**15 06 10.5**	**-0.6**
KDHN				*i* S	**Sg**	**15 06 28.4**	**+2.0**
KDHN	**Kadinhani**	**1.18**	**219**	*e*P	**Pg**	**15 06 10.5**	**-0.6**
KDHN				*i* S	**Sg**	**15 06 28.4**	**+2.0**
SVRH	**Sivrihisar-ESK**	**1.19**	**270**	*e*PN	**Pn**	**15 06 11.1**	**-0.9**
SVRH				*e*SN	**Sn**	**15 06 28.9**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.19**	**270**	*e*Pn	**Pn**	**15 06 11.1**	**-0.9**
SVRH				*e*Sn	**Sn**	**15 06 28.9**	**+0.2**
CANT	**Cankiri**	**1.23**	**20**	*e*PN	**Pn**	**15 06 11.1**	**-1.5**
CANT				*e*SN	**Sn**	**15 06 29.2**	**-0.5**
SULT	**Sultanhani-AKS**	**1.30**	**164**	*e*PN	**Pn**	**15 06 12.9**	**-0.5**
SULT	**Sultanhani-AKS**	**1.30**	**164**	*e*Pn	**Pn**	**15 06 12.9**	**-0.5**
SGKT	**Sivrigoynuk**	**1.36**	**326**	⇑*i*P	**Pn**	**15 06 14.1**	**-0.3**
SGKT				*i* S	**Sg**	**15 06 40.8**	**+8.5**
SGKT	**Sivrigoynuk**	**1.36**	**326**	*i* P	**Pn**	**15 06 14.1**	**-0.3**
CORM	**Corum**	**1.41**	**58**	*e*PN	**Pn**	**15 06 13.7**	**-1.3**
CORM				*e*SN	**Sn**	**15 06 34.6**	**+0.5**
CORM	**Corum**	**1.41**	**58**	*e*Pn	**Pn**	**15 06 13.7**	**-1.3**
CORM				*e*Sn	**Sn**	**15 06 34.6**	**+0.5**
AVNT	**Avonos**	**1.55**	**115**	*e*P	**Pn**	**15 06 16.2**	**-0.7**
AVNT				*i* S	**Sn**	**15 06 39.4**	**+1.9**
KONT	**Konya--Tatoy**	**1.60**	**200**	*e*PN	**Pn**	**15 06 17.3**	**-0.2**
KONT	**Konya--Tatoy**	**1.60**	**200**	*e*Pn	**Pn**	**15 06 17.3**	**-0.3**
ESKT	**Eskisehir**	**1.71**	**273**	*e*P	**Pn**	**15 06 18.1**	**-1.1**
ESKT				*i* S	**Sn**	**15 06 47.1**	**+5.6**
SEYT	**Eskypehyr**	**1.71**	**273

KMO pmax pmax
comp=Z,146nm,0.2s
KMO smax
comp=E,796nm,0.8s
KMO Kumora 1.42 314 ⇑*i*Pg Pg 15 17 10.1 -2.0
comp=E,10.0nm,0.8s
KMO ⇓*i*Pg Pg 15 17 10.1 -2.0
comp=E,13nm,0.8s
KMO ⇑*i*Pg Pg 15 17 10.1 -2.0
comp=E,76nm,0.8s
KMO *e*Sg Sg 15 17 30.1 -0.4
KMO *e* 15 17 33.2
KMO Pmax
comp=E,239nm,0.4s
KMO max
comp=E,798nm,0.8s
YOA Uoyan 1.42 329 ⇓*i*PG Pg 15 17 10.7 -1.5
YOA *e* 15 17 30.9
YOA pmax pmax
comp=Z,418nm,0.3s
YOA smax
comp=N,1μm,0.4s
YOA Uoyan 1.42 329 ⇑*i*Pg Pg 15 17 10.7 -1.5
YOA *e*Pb Pb 15 17 12.1 +0.6
YOA *i* Sg Sg 15 17 30.4 -0.2
YOA *e* 15 17 34.1
YOA max
comp=N,329nm,0.2s
YOA max
comp=N,1μm,0.4s
NIZ Nizh Angarsk 2.16 295 *e*PN Pn 15 17 22.6 +1.7
NIZ *e* 15 17 24.4
NIZ *e* 15 17 51.9
NIZ pmax pmax
comp=Z,63nm,0.5s
NIZ smax
comp=N,402nm,0.5s
NIZ Nizh Angarsk 2.16 295 ⇓*i*Pg Pg 15 17 22.7 -3.6
NIZ *i* Sg Sg 15 17 52.0 -2.4
NIZ Pmax
comp=N,63nm,0.5s
NIZ Smax
comp=N,403nm,0.4s
SYVR Suvo 2.18 236 *e*PN Pn 15 17 22.3 +1.2
SYVR *e* 15 17 23.9
SYVR *e* 15 17 53.8
SYVR pmax pmax
comp=Z,164nm,0.3s
SYVR smax
comp=N,220nm,0.4s
SYVR Suvo 2.18 236 *e*Pn Pn 15 17 21.5 +0.4
SYVR ⇑*i*Pg Pg 15 17 24.1 -2.5
SYVR *i* Sg Sg 15 17 54.0 -0.7
SYVR *e* 15 17 55.7
SYVR Pmax
comp=N,125nm,0.3s
SYVR max
comp=N,289nm,0.8s
CIT Chita 2.92 174 *e*PN Pn 15 17 32.3 +1.0
CIT *e* 15 17 38.3
CIT *e* 15 18 15.4
CIT pmax pmax
comp=Z,69nm,0.2s
CIT smax
comp=E,713nm,1.6s
CIT Chita 2.92 174 *e*Pg Pg 15 17 37.0 -3.8
CIT *e*Sg Sg 15 18 15.8 -2.9
CIT Pmax
comp=E,72nm,0.2s
CIT Smax
comp=E,976nm,0.2s
BOD Bodaibo 2.96 10 *e*PN Pn 15 17 32.8 +1.0
BOD *e* 15 17 37.7
BOD *e*S Sn 15 18 07.1 -0.2
BOD *e* 15 18 14.5
BOD pmax pmax
comp=Z,24nm,0.2s
BOD smax
comp=E,437nm,0.7s
BOD Bodaibo 2.96 10 *e*Pn Pn 15 17 31.6 -0.2
BOD *e* 15 17 34.6
BOD *e*Pg Pg 15 17 36.8 -4.7
BOD *e*Sn Sn 15 18 07.8 +0.5
BOD *i* Sg Sg 15 18 15.1 -4.7
BOD Pmax
comp=E,24nm,0.2s
BOD Smax
comp=E,470nm,1.5s
MXMB Maximikha 3.02 238 *e*Pn Pn 15 17 33.2 +0.6
MXMB Pg Pg 15 17 38.2 -4.4
MXMB *i* Sg Sg 15 18 19.0 -2.7
MXMB Pmax
comp=E,46nm,0.1s
MXMB Smax
comp=E,360nm,0.8s
OGRR Ongureny 3.43 250 *e*PN Pn 15 17 39.4 +1.1
OGRR *e* 15 17 47.1
OGRR *e* 15 18 31.2
OGRR pmax pmax
comp=Z,20nm,0.4s
OGRR smax
comp=N,123nm,0.6s
OGRR Ongureny 3.43 250 *e*Pn Pn 15 17 39.0 +0.7
OGRR *e*Pg Pg 15 17 45.5 -5.0
OGRR *e*Sn Sn 15 18 20.2 +1.3
OGRR *e*Sg Sg 15 18 31.7 -3.2
OGRR *e*SgSg 15 18 34.2
OGRR Pmax
comp=N,20nm,0.3s
OGRR Smax
comp=N,123nm,0.4s
CRS Chara 3.56 54 *e*PN Pn 15 17 41.6 +1.5
CRS *e* 15 17 47.5
CRS *e* 15 18 35.0
CRS pmax pmax
comp=Z,58nm,0.9s
CRS smax
comp=E,187nm,1.0s
CRS Chara 3.56 54 *e* Pn 15 17 42.1 +2.0
CRS ⇑*i*Pg Pg 15 17 48.4 -4.6
CRS *i* Sg Sg 15 18 35.3 -3.8
CRS *e*SgSg 15 18 37.6
CRS Pmax
comp=E,58nm,1.4s
CRS max
comp=E,187nm,1.0s
TUP Tupik 4.06 94 *e*PN Pn 15 17 56.1 +9.2
TUP *e*S Sn 15 18 33.4 -1.0
TUP *e* 15 18 49.4
TUP pmax pmax
comp=Z,19nm,0.4s
TUP smax
comp=N,459nm,1.0s
TUP Tupik 4.06 94 *e*Pn Pn 15 17 47.5 +0.6
TUP *e*Pg Pg 15 17 56.0 -6.5
TUP *e* 15 17 59.3
TUP *e*Sg Sg 15 18 50.0 -5.0
TUP *e* 15 19 06.7
TUP max
comp=N,14nm,0.3s
TUP max
comp=N,491nm,1.1s
ZRHB Zarechye 4.21 238 *e*Pg Pg 15 18 00.1 -5.4
ZRHB *e* 15 18 05.2
ZRHB *e* 15 18 32.9
ZRHB *e*Sg Sg 15 18 56.0 -4.1
ZRHB Pmax
comp=N,69nm,0.6s
ZRHB Smax
comp=N,547nm,1.0s
KHNR Khani 4.40 60 *e*Pg Pg 15 18 02.6 -6.5
KHNR *e*Sg Sg 15 19 02.2 -3.8
UUDB Ulan-Yde 4.43 229 ⇓*i*Pn Pn 15 17 53.0 +0.9
UUDB *e*Pg Pg 15 18 05.3 -4.4
UUDB *e*Sg Sg 15 19 03.3 -3.7
UUDB Pmax
comp=N,88nm,0.7s
UUDB Smax
comp=N,132nm,1.2s
TRG Tyrgan 4.50 244 ⇑*i*Pn Pn 15 17 54.0 +0.9
TRG *e*Pg Pg 15 18 04.5 -6.6
TRG *e* 15 18 06.2
TRG *e* 15 19 01.7
TRG *e*Sg Sg 15 19 05.1 -4.3
TRG max
comp=N,8.0nm,0.4s
TRG Smax
comp=N,69nm,1.0s
KAB Kabansk 4.77 236 *e* Pn 15 18 09.6 +13
KAB *e* 15 18 11.6
KAB *e*Sg Sg 15 19 10.7 -7.1
KAB *e* 15 19 14.4
KAB max
comp=N,501nm,1.7s
HRMR Khuramsha 4.91 230 ⇓*i*Pn Pn 15 17 59.8 +1.1
HRMR ⇑*i*Pg Pg 15 18 12.9 -6.0
HRMR *i* Sg Sg 15 19 17.9 -4.5
HRMR Pmax
comp=N,60nm,0.6s
HRMR max
comp=N,364nm,1.3s
KPC Khapcheranga 5.24 185 *e*PN Pn 15 18 19.5 +16
KPC *e* 15 19 27.5
KPC pmax pmax
comp=Z,7.0nm,0.2s
KPC smax
comp=E,157nm,0.5s
KPC Khapcheranga 5.24 185 *e*Pn Pn 15 18 03.7 +0.5
KPC *e*Pg Pg 15 18 19.5 -5.7
KPC *e* 15 18 24.4
KPC *e*Sg Sg 15 19 28.0 -5.0
KPC *e* 15 19 33.8
KPC max
comp=E,6.0nm,0.4s
KPC max
comp=E,157nm,0.5s
LSTR Listvyanka 5.77 241 *e* Pn 15 18 05.9 -4.6
LSTR Pg Pg 15 18 28.1 -7.3
LSTR *e* 15 18 36.4
LSTR *e* 15 19 29.6
LSTR *e*Sg Sg 15 19 44.6 -5.5
LSTR Pmax
comp=E,5.0nm,0.6s
LSTR Smax
comp=E,76nm,1.8s
IRK Irkutsk 5.86 246 *e* Pn 15 19 09.9 +58
IRK *e*Sg Sg 15 19 45.3 -7.6
IRK Smax
comp=E,155nm,0.8s
TLY Talaya 6.49 244 *e*Sg Sg 15 20 04.9 -8.1
TLY Smax
comp=E,34nm,1.6s
TNDR Tynda 6.73 83 *e* Pn 15 19 16.4 +53
TNDR *e* 15 19 46.7
TNDR *e*Sg Sg 15 20 13.5 -7.3
IENR Iengra 6.84 74 *e* Pn 15 18 33.1 +8.0
IENR *e*Pg Pg 15 18 47.8 -7.9
IENR *e* 15 19 56.5
IENR *i* Sg Sg 15 20 18.4 -5.8
IENR *e* 15 20 24.3
CLNS Chul'man 6.95 69 *e* Pb 15 19 47.6 +62
CLNS *e* 15 20 09.5
CLNS *e*Sg Sg 15 20 18.9 -8.9
CLNS *e* 15 20 21.6
ARS Arshan 7.01 249 Pg Pg 15 18 49.3 -10
ARS *i* Sg Sg 15 20 19.8 -10
ARS Pmax
comp=E,4.0nm,0.1s
ARS Smax
comp=E,96nm,0.8s
HIA Hailar 7.01 141 *e* Sg 15 20 18.5 -11
HIA *e*Sg Sg 15 20 22.3 -7.5
ZAK Zakamensk 7.46 236 *e* Pn 15 18 49.7 +16
ZAK *e* 15 18 56.7
ZAK *e*Pg Pg 15 18 59.6 -8.1
ZAK *e* 15 19 04.6
ZAK *e*Sg Sg 15 20 37.0 -7.2
ZAK Pmax
comp=E,1.0nm,0.3s
ZAK Smax
comp=E,14nm,1.4s
MOY Mondy 7.91 251 *e* Pn 15 18 56.9 +17
MOY *e*Pg Pn 15 19 06.2 +26
MOY *e*Sg Sn 15 20 49.5 +40
MOY Pmax
comp=E,4.0nm,0.8s
MOY Smax
comp=E,33nm,1.6s
ORL Orlik 8.19 258 ⇑*i*Pn Pn 15 18 45.2 +1.6
ORL *e* 15 18 55.0
ORL *e* 15 20 20.4
ORL *e* 15 20 35.7
ORL *e*Sg Sn 15 20 57.2 +41
ORL max
comp=E,4.0nm,1.1s
ORL Smax
comp=E,49nm,1.3s

*IDC **19** 15:36:59.3±0.7, 6°.31S×147°.34E, h0km, mb4.3/14, mb1 4.4/15, mb1mx4.4/18, mbtmp4.3/15, ML4.0/1, MS3.8/13, Ms1 3.8/13, ms1mx3.8/21, Error ellipse: s-maj=21.7km s-min=9.7km az=114.0*
*BJI **19** 15:37:02.6, 6°.40S×147°.20E, h43km, mB4.9/6, mb4.4/12, Ms4.4/1, Ms7 4.3/1*
*ISCJB **19** 15:37:06.5±1.6, 6°.43S±0°.07×147°.26E±0°.06, h70km±16km, mb4.3/24, Error ellipse: s-maj=12.6km s-min=8.5km az=31.5*
*NEIC **19** 15:37:07.6±1.1, 6°.40S×147°.24E, h63km±11km, mb4.4/5, Error ellipse: s-maj=9.5km s-min=8.7km az=121.0*
*DJA **19** 15:37:16, 7°.04S×146°.56E, h82km, mb5.1/13*
ISC 19 15:37:07.7±1.2, 6°.41S±0°.06×147°.29E±0°.05, h64km±12km, n58, σ0°97/46, mb4.4/24, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.98**	**182**	*e*P	**Pn**	**15 37 52.8**	**+0.2**
PMG	**Port Moresby**	**2.98**	**182**	P	**Pn**	**15 37 53.4**	**+0.8**
MMPI	**Merauke**	**7.15**	**253**	P	**Pn**	**15 38 45.6**	**-4.0**
1.2nm343nm,1.2s							
COEN	**Coen**	**8.52**	**208**	*e*P	**Pn**	**15 39 07.8**	**-0.6**
95nm,0.4s							
COEN				*e*S	**Sn**	**15 40 38.4**	**-4.8**
BAKI	**Biak**	**12.30**	**294**	S	**Sn**	**15 42 15.8**	**+0.3**
HNR	**Honiara**	**12.89**	**104**	Pn	**Pn**	**15 40 09.1**	**+1.0**
1.2nm,0.3s,baz=168,slow=19,SNR=2.5							
TLE	**Tual**	**14.49**	**272**	P	**Pn**	**15 40 33.8**	**+4.3**
BNDI	**Bandanaira**	**17.41**	**275**	P	**Pn**	**15 41 06.7**	**+0.3**
119nm,1.4s							
WB2	**Warramunga Arr**	**18.41**	**222**	*e*P	**Pn**	**15 41 17.7**	**-0.8**
WRA	**Warramunga Arr**	**18.42**	**222**	P	**Pn**	**15 41 17.1**	**-1.6**
0.5nm,0.3s,baz=48,slow=11,SNR=65							
WRA				S	**S**	**15 44 46.8**	**+2.1**
baz=42,slow=22,SNR=5.5							
WRA				LR	LR	15 48 47.5	
comp=Z,503nm,21.8s,baz=15,slow=38							
WRA				ScP	ScP	15 49 22.7	+5.9
baz=15,slow=2.3,SNR=4.6							
WRA	**Warramunga Arr**	**18.42**	**222**	P	**Pn**	**15 41 17.1**	**-1.6**
WRA				S	**S**	**15 44 46.8**	**+2.1**
WRA				LR	LR	15 48 47.5	
WRA				ScP	ScP	15 49 22.7	+5.9
EIDS	**Eidsvold**	**19.20**	**170**	*e*P	**Pn**	**15 41 25.5**	**-2.4**
8.1nm,0.7s							
GUMO	**Guam**	**20.01**	**353**	LR	LR	15 48 44.6	
comp=Z,263nm,19.0s,baz=214,slow=35							
NLAI	**Namlea**	**20.36**	**278**	P	**P**	**15 41 37.5**	**-1.7**
938nm64nm,0.9s							
ASAR	**Alice Springs**	**21.45**	**215**	P	**P**	**15 41 51.6**	**+0.8**
4.3nm,0.5s,mB4.1,baz=42,slow=8.1,SNR=34							
ASAR				S	**S**	**15 45 51.3**	**+6.1**
8.4nm,1.1s,baz=37,slow=19,SNR=7.0							
MNI	**Manado**	**23.73**	**288**	P	**P**	**15 42 14.3**	**+0.1**
2μm202nm,1.1s,mb5.5							
ARMA	**Armidale**	**24.23**	**171**	*e*P	**P**	**15 42 18.8**	**+0.2**
18nm,1.0s,mb4.5							
KMSI	**Cibinong**	**24.27**	**286**	P	**P**	**15 42 19.6**	**+0.4**
388nm,1.2s							
BBSI	**Bau Bau**	**24.60**	**271**	P	**P**	**15 42 22.3**	**+0.1**
580nm31nm,1.7s,mb4.5							
KDI	**Kendari**	**24.69**	**274**	P	**P**	**15 42 22.9**	**-0.1**
14nm,1.1s,mb4.4							
MMRI	**Maumere**	**24.93**	**263**	P	**P**	**15 42 24.8**	**-0.4**
66nm,0.8s,mb5.2							
LUWI	**Luwuk**	**25.03**	**281**	P	**P**	**15 42 28.0**	**+1.9**
2μm258nm,1.2s							
DAV	**Davao City (W)**	**25.46**	**301**	LR	LR	15 52 28.2	
comp=Z,89nm,20.6s,baz=205,slow=36							
STKA	**Stephens Creek**	**25.89**	**191**	P	**P**	**15 42 33.7**	**0.0**
13nm,1.0s,mb4.4,baz=335,slow=9.1,SNR=9.4							
STKA				LR	LR	15 53 17.1	
comp=Z,358nm,20.7s,baz=283,slow=38							
STKA	**Stephens Creek**	**25.89**	**191**	*e*P	**P**	**15 42 34.0**	**+0.3**
5.8nm,1.2s,mb4.0							
STKA				LR	LR	15 53 17.1	
MRSI	**Marisa**	**26.21**	**284**	P	**P**	**15 42 40.3**	**+3.6**
42nm,1.2s,mb4.8							
KAPI	**Kappang**	**27.43**	**271**	P	**P**	**15 42 46.7**	**-1.1**
4.1nm,0.3s,mb4.4,baz=120,slow=8.1,SNR=3.7							
TTSI	**Tana Toraja**	**27.57**	**276**	P	**P**	**15 42 50.0**	**+0.9**
CBIJ	**Chichi jima**	**33.67**	**352**	LR	LR	15 54 59.1	
comp=Z,213nm,20.6s,baz=148,slow=32							
RPZ	**Rata Peaks**	**42.62**	**154**	P	**P**	**15 44 58.5**	**+0.8**
6.4nm,0.8s,mb4.4,baz=0.0,slow=20,SNR=4.0							
MJAR	**Matsushiro Arr**	**43.56**	**349**	P	**P**	**15 45 05.4**	**+0.1**
3.7nm,0.4s,mb4.5,baz=184,slow=8.1,SNR=4.2							
MJAR				LR	LR	16 01 31.5	
comp=Z,123nm,18.3s,baz=205,slow=34							
KSRS	**Korea Array**	**47.23**	**339**	P	**P**	**15 45 34.5**	**+0.2**
3.5nm,1.0s,mb4.2,baz=155,slow=9.8,SNR=10							
KSRS				LR	LR	16 02 45.5	
comp=Z,134nm,19.6s,baz=159,slow=33							
PSI	**Prapat**	**49.15**	**279**	P	**P**	**15 45 49.4**	**-0.2**
3.2nm,0.3s,mb4.8,baz=178,slow=8.9,SNR=3.9							
CMAR	**Chiang Mai Arr**	**53.69**	**298**	P	**P**	**15 46 23.9**	**+0.4**
1.5nm,0.8s,mb4.0,baz=112,slow=5.8,SNR=7.3							
XAN	**Xi'an**	**54.18**	**321**	P	**P**	**15 46 25.6**	**-1.1**
XAN				pmax	pmax		
comp=Z,1.0nm,1.2s,mb3.6							
XAN				pmax	pmax		
comp=Z,20nm,6.2s							
PETK	**Petropavlovsk-**	**59.94**	**7**	P	**P**	**15 47 08.1**	**+1.0**
comp=Z,4.8nm,0.7s,mb4.6,baz=160,slow=7.4,SNR=4.7							
PETK				LR	LR	16 09 22.3	
comp=Z,91nm,18.8s,baz=214,slow=32							
PETK	**Petropavlovsk-**	**59.94**	**7**	P	**P**	**15 47 08.1**	**+1.0**
PETK				LR	LR	16 09 22.3	
GTA	**Gaotai**	**63.24**	**320**	*e*P	**P**	**15 47 30.1**	**+0.6**
GTA				pP	pP	15 47 37.3	-9.3
GTA				pmax	pmax		
comp=Z,2.0nm,1.1s,mb4.2							
ULN	**Ulaanbaatar**	**64.60**	**331**	*e*P	**P**	**15 47 38.4**	**+0.1**
comp=Z,5.6nm,0.8s,mb4.7							
SONM	**Songino Array**	**64.90**	**331**	P	**P**	**15 47 40.8**	**+0.6**
comp=Z,3.0nm,1.1s,mb4.2,baz=150,slow=6.2,SNR=10							
SONM				LR	LR	16 15 05.9	
comp=Z,94nm,18.9s,baz=140,slow=35							
MKAR	**Makanchi Array**	**77.99**	**320**	P	**P**	**15 48 59.0**	**-0.2**
comp=Z,1.0nm,0.7s,mb3.8,baz=126,slow=6.2,SNR=9.1							
ZALV	**Zalesovo Beam**	**79.51**	**328**	P	**P**	**15 49 05.7**	**-1.6**
comp=Z,1.6nm,0.7s,mb4.1,baz=109,slow=5.3,SNR=7.6							
ILAR	**Eielson Array**	**85.74**	**23**	P	**P**	**15 49 38.4**	**-1.1**
comp=Z,2.2nm,0.9s,mb4.4,baz=253,slow=5.0,SNR=21							
ILAR				LR	LR	16 21 26.0	
comp=Z,49nm,20.6s,baz=248,slow=31							
BVAR	**Borovoye Array**	**87.27**	**324**	P	**P**	**15 49 46.2**	**-1.0**
comp=Z,0.8nm,0.6s,mb4.1,baz=116,slow=6.8,SNR=5.5							
EGAK	**Eagle**	**88.02**	**24**	*e*P	**P**	**15 49 51.1**	**+0.6**
comp=Z,4.9nm,1.0s,mb4.7							
YBH	**Yreka Blue Hor**	**94.22**	**49**	LR	LR	16 23 00.6	
comp=Z,173nm,22.0s,baz=314,slow=29							
AKTO	**Aktyubinsk**	**94.42**	**320**	LR	LR	16 33 59.3	
comp=Z,68nm,18.5s,baz=303,slow=36							
YKA	**Yellowknife Ar**	**99.40**	**28**	LR	LR	16 29 33.8	
comp=Z,6.2nm,19.9s,baz=165,slow=32							
PLCA	**Paso Flores**	**121.63**	**147**	PKP	PKPdf	15 55 55.4	+0.8
comp=Z,0.5nm,0.5s,baz=263,slow=3.3,SNR=4.1							
LPAZ	**La Paz**	**138.32**	**123**	PKP	PKPdf	15 56 27.4	+0.6
comp=Z,1.1nm,0.7s,baz=33,slow=1.5,SNR=3.7							
LPAZ	**La Paz**	**138.32**	**123**	PKP	PKPdf	15 56 27.4	+0.6
SDV	**Santo Domingo**	**142.35**	**84**	*e*PKPdf	PKPdf	15 56 32.6	-1.6
TORD	**Torodi Ar. Bea**	**145.47**	**284**	PKPbc	PKPbc	15 56 40.9	+1.2
comp=Z,17nm,0.8s,baz=86,slow=3.9,SNR=46							
KIC	**Kosan Boka**	**152.20**	**271**	*e*PKP1	PKPbc	15 56 58.3	+1.1
comp=Z,26nm,1.1s							
DBIC	**Dimbokro**	**152.33**	**272**	PKPbc	PKPbc	15 56 58.6	+1.1
comp=Z,3.9nm,0.9s,baz=106,slow=7.5,SNR=3.9							
LIC	**Lamto**	**152.49**	**271**	*e*PKP1	PKPbc	15 56 58.8	+0.9
comp=Z,50nm,1.5s							
TIC	**Toumodi**	**152.49**	**272**	*e*PKP1	PKPbc	15 56 57.9	0.0
comp=Z,5.1nm,0.2s							
BDFB	**Brasilia**	**153.36**	**145**	PKPbc	PKPbc	15 57 00.9	+1.2
comp=Z,1.4nm,0.4s,baz=79,slow=5.2,SNR=2.7							

*ISCJB **19** 15:38:27.4±0.8, 36°.81N±0°.06×71°.0E±0°.1, h213km±8km, mb3.6/4, Error ellipse: s-maj=16.8km s-min=7.6km az=29.2*
*NEIC **19** 15:38:28.2±0.9, 36°.76N×71°.06E, h211km±11km, mb3.6/1, Error ellipse: s-maj=19.7km s-min=11.2km az=137.0*
*IDC **19** 15:38:29.2±8.8, 36°.87N×71°.01E, h204km±58km, mb3.5/3, mb1 3.2/7, mb1mx3.0/28, mbtmp3.1/7, Error ellipse: s-maj=86.3km s-min=45.8km az=171.0*
*NNC **19** 15:38:36.4±8.5, 37°.39N×71°.42E, h252km±123km, mb2.0, mpv3.2, Error ellipse: s-maj=126.1km s-min=47.4km az=35.0*
ISC 19 15:38:28.5±0.7, 36°.83N±0°.06×71°.0E±0°.1, h203km±7km, n20, σ1°17/25, mb3.6/4, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.79**	**216**	*e*Pn	**Pn**	**15 39 16.0**	**+0.1**
KBL				*e*Sn	**Sn**	**15 39 52.2**	**-0.6**
KSH	**Kashi**	**4.74**	**54**	Pn	**Pn**	**15 39 34.6**	**-4.9**
KSH				Sn	**Sn**	**15 40 21.4**	**-14**
KSH				smax			
comp=N,31nm,0.5s							
KSH				smax			
comp=E,29nm,0.6s							
EKS2	**Erkin-Say**	**6.20**	**19**	*e*Pn	**Pn**	**15 39 59.3**	**+1.0**
EKS2				*e*Sn	**Sn**	**15 41 07.4**	**-2.0**
KK31	**Karatay Array**	**6.28**	**357**	⇑P	**Pn**	**15 40 01.6**	**+2.4**
comp=E,0.4nm,0.3s,baz=176,slow=12,SNR=3.0							
KK31				⇓S	**Sn**	**15 41 09.8**	**-1.4**
comp=E,0.8nm,0.3s,baz=184,slow=24,SNR=8.1							
AAK	**Ala-Archa**	**6.38**	**24**	P	**Pn**	**15 40 02.1**	**+1.5**
comp=E,0.0nm,0.3s,baz=148,slow=6.0,SNR=8.1							
AAK				S	**Sn**	**15 41 14.5**	**+0.8**
comp=E,0.0nm,0.3s,baz=318,slow=24,SNR=17							
TKM2	**Tokmak 2**	**7.03**	**29**	⇓P	**Pn**	**15 40 09.3**	**+0.4**
comp=E,3.5nm,0.7s							
TKM2	**Tokmak 2**	**7.03**	**29**	*e*P	**Pn**	**15 40 09.7**	**+0.7**
MKAR	**Makanchi Array**	**13.02**	**37**	P	**Pn**	**15 41 24.9**	**-1.0**
comp=E,0.1nm,0.3s,baz=212,slow=14,SNR=2.6							
AB31	**Abkulak array**	**14.80**	**330**	⇑P	**Pn**	**15 41 50.0**	**+2.0**
comp=E,0.1nm,0.2s,baz=130,slow=13,SNR=6.3							
ABKAR	**Abkulak array**	**14.80**	**330**	*e*P	**Pn**	**15 41 47.2**	**-0.8**
AKTK	**Aktyubinsk**	**16.50**	**330**	P	**P**	**15 42 06.5**	**-1.0**
AKTO	**Aktyubinsk**	**16.50**	**330**	P	**P**	**15 42 06.5**	**-1.0**
comp=E,0.3nm,0.3s,baz=129,slow=9.3,SNR=4.2							
ZALV	**Zalesovo Beam**	**19.61**	**25**	P	**P**	**15 42 41.5**	**+0.3**
comp=E,0.2nm,0.3s,baz=231,slow=9.1,SNR=2.7							
ULN	**Ulaanbaatar**	**28.58**	**56**	*e*P	**P**	**15 44 03.9**	**-1.5**
comp=E,0.6nm,0.5s,mb3.5							
FINES	**FINESS Array B**	**37.22**	**326**	P	**P**	**15 45 20.7**	**+0.7**
comp=E,3.3nm,1.1s,mb3.8,baz=114,slow=9.2,SNR=3.5							
ARCES	**ARCESS Array B**	**40.85**	**337**	P	**P**	**15 45 50.9**	**+1.0**
comp=E,3.1nm,0.9s,mb3.7,baz=100,slow=6.4,SNR=4.0							
ARCES	**ARCESS Array B**	**40.85**	**337**	P	**P**	**15 45 50.9**	**+1.0**
NB2	**NORSAR Subarra**	**44.13**	**323**	P	**P**	**15 46 16.4**	**0.0**
comp=Z,1.3nm,0.7s,mb3.4,baz=97,slow=7.9							
NOA	**NORSAR Array B**	**44.13**	**323**	P	**P**	**15 46 15.9**	**-0.5**
comp=Z,1.1nm,0.6s,mb3.4,baz=97,slow=7.7,SNR=3.8							
NOA				pP	pP	15 47 01.8	+1.8
comp=Z,0.9nm,0.8s,baz=104,slow=9.2,SNR=3.4							
NOA	**NORSAR Array B**	**44.13**	**323**	P	**P**	**15 46 15.9**	**-0.5**
NOA				pP	pP	15 47 01.8	+1.8

IDC 19 15:43:24.7±1.5, 2°.57S×139°.39E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.6/13, mbtmp3.7/4, ML4.0/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/23, Error ellipse: s-maj=70.4km s-min=26.1km az=97.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.96**	**196**	P	Pn	15 47 35.5	-0.4
0.5nm,0.3s,baz=17,slow=13,SNR=16							
WRA				S	Sn	15 50 43.6	-13
0.1nm,0.3s,baz=18,slow=23,SNR=3.8							
ASAR	**Alice Springs**	**21.64**	**194**	P	P	15 48 17.2	+0.5

1.0nm,0.5s,baz=21,slow=11,SNR=7.0
JOW Kunigami 31.14 341 LR LR 15 59 23.6
comp=Z,117nm,21.1s,slow=31
MKAR Makanchi Array 70.09 322 P P 15 54 38.9 +0.1
0.3nm,0.2s,baz=99,slow=6.3,SNR=2.6
ILAR Eielson Array 85.42 24 P P 15 56 03.8 0.0
0.3nm,0.8s,baz=244,slow=5.0,SNR=3.7

*ISCJB **19** 16:09:01.9±1.2, 16°.9S±0°.2×16°.0W±0°.3, h10km, mb4.0/7, MS3.5/4, Error ellipse: s-maj=37.6km s-min=22.2km az=12.1*
*NEIC **19** 16:09:03.4±1.2, 16°.94S×15°.98W, h10km, mb4.2/3, Error ellipse: s-maj=36.8km s-min=21.2km az=102.0*
*IDC **19** 16:09:05.1±6.7, 16°.70S×15°.49W, h0km, mb4.1/3, mb1 4.1/3, mb1mx3.7/18, mbtmp4.1/3, MS3.5/4, Ms1 3.5/4, ms1mx3.1/30, Error ellipse: s-maj=176.0km s-min=38.1km az=68.0*
ISC 19 16:09:03.6±1.2, 16°.9S±0°.2×16°.0W±0°.3, h10km, n11, σ0°82/8, mb4.0/7, MS3.5/4, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**30.76**	**268**	LR	LR	16 25 24.7	
	comp=Z,69nm,18.6s,MS3.3,baz=295,slow=31						
TORD	**Torodi Ar. Bea**	**34.62**	**31**	**P**	**P**	**16 15 51.9**	**-1.3**
	3.1nm,0.8s,mb4.3,baz=202,slow=11,SNR=7.6						
TORD				LR	LR	16 27 32.2	
	comp=Z,47nm,19.4s,MS3.2,baz=345,slow=32						
BOSA	**Boshof**	**39.58**	**115**	P	**P**	**16 16 35.5**	**+0.2**
	2.6nm,0.9s,mb4.0,baz=276,slow=14,SNR=2.6						
BOSA	**Boshof**	**39.58**	**115**	P	**P**	**16 16 35.5**	**+0.2**
LSZ	**Lusaka**	**42.40**	**94**	P	**P**	**16 16 58.4**	**-0.2**
	3.2nm,1.0s,mb3.9						
LPAZ	**La Paz**	**49.85**	**263**	LR	LR	16 38 29.1	
	comp=Z,37nm,18.3s,MS3.4,baz=131,slow=35						
ROSC	**El Rosal**	**61.57**	**285**	LR	LR	16 45 24.8	
	comp=Z,81nm,18.8s,MS3.9,baz=53,slow=35						
BRTR	**Keskin Array B**	**72.90**	**38**	**P**	**P**	**16 20 34.5**	**+1.6**
	1.5nm,0.8s,mb4.0,baz=211,slow=6.3,SNR=7.9						
QSPA	**South Pole Qui**	**73.24**	**180**	*eP*	**P**	**16 20 33.7**	**-0.8**
	4.7nm,1.1s,mb4.3						
AKASG	**Malin Array Be**	**78.14**	**27**	P	**P**	**16 21 02.9**	**+0.1**
	0.4nm,0.4s,mb3.7,baz=219,slow=5.7,SNR=4.7						
SBA	**Scott Base**	**85.39**	**181**	P	**P**	**16 21 41.1**	**+0.4**
	1.6nm,0.9s,mb4.2						

DJA 19 16:15:30, 8°.89S×111°.26E, h36km, MLv3.6/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.70**	**353**	P	Pn	16 15 44.8	+1.4
PWJI	**Pagerwojo**	**1.02**	**32**	P	Pn	16 15 46.6	-1.2
PWJI				S	Sn	16 16 00.6	-0.2
UGM	**Wanagama**	**1.21**	**323**	S	Sn	16 16 04.8	-0.9
KRKI	**Karangkates**	**1.39**	**58**	P	Pn	16 15 52.7	-0.1
NGJI	**Ngawi**	**1.53**	**8**	P	Pn	16 16 01.5	+6.7
SMRI	**Semarang**	**2.00**	**336**	P	Pn	16 16 01.6	+0.3
BJII	**Banjamegara**	**2.18**	**315**	P	Pn	16 16 03.4	-0.4
GMJI	**Gumukmas**	**2.25**	**74**	P	Pn	16 16 03.7	-1.0

*IDC **19** 16:21:09.5±6.5, 31°.68S×179°.75E, h397km±71km, mb2.6/2, mb1 3.0/3, mb1mx2.9/15, mbtmp2.9/3, Error ellipse: s-maj=79.6km s-min=38.4km az=11.0*
ISC 19 16:21:16.3±1.7, 32°.1S±0°.2×179°.3E±0°.5, h448km±42km, n19, σ0°74/22, mb3.0/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**6.41**	**193**	*e*PN	**P**	**16 22 55.0**	**+0.4**
MWZ				SN	**S**	**16 24 14.9**	**-0.2**
URZ	**Urewera**	**6.42**	**196**	P	**P**	**16 22 52.7**	**-2.0**
	5.2nm,0.3s,baz=248,slow=3.2,SNR=42						
URZ				S	**S**	**16 24 15.3**	**0.0**
	4.4nm,0.3s,baz=339,slow=8.4,SNR=21						
URZ	**Urewera**	**6.42**	**196**	*e*PN	**P**	**16 22 53.9**	**-0.8**
CNGZ	**Carnagh Statio**	**6.46**	**188**	PN	**P**	**16 22 55.8**	**+0.8**
NMHZ	**Naumai**	**7.29**	**195**	PN	**P**	**16 23 05.1**	**+1.2**
BKZ	**Black Stump Fm**	**7.43**	**197**	PN	**P**	**16 23 05.0**	**-0.4**
BKZ				SN	**S**	**16 24 35.3**	**+0.4**
MCHZ	**McNeill Hill**	**7.65**	**195**	PN	**P**	**16 23 08.3**	**+0.6**
BHHZ	**Black Hill Sta**	**7.85**	**199**	PN	**P**	**16 23 08.7**	**-1.2**
KAHZ	**Kahuranaki**	**7.95**	**194**	*e*PN	**P**	**16 23 11.0**	**+0.1**
PXZ	**Pawanui**	**8.18**	**193**	PN	**P**	**16 23 13.6**	**+0.1**
BFZ	**Birch Farm**	**8.93**	**195**	*e*PN	**P**	**16 23 21.4**	**-0.1**
BFZ				SN	**S**	**16 25 04.5**	**-0.1**
MRZ	**Mangatainoka R**	**9.08**	**198**	*e*PN	**P**	**16 23 21.4**	**-1.8**
TIWZ	**Tintock**	**9.11**	**197**	*e*PN	**P**	**16 23 24.1**	**+0.6**
TUWZ	**Tuamarina**	**10.27**	**203**	PN	**P**	**16 23 35.6**	**-0.6**
QRZ	**Quartz Range**	**10.29**	**210**	PN	**P**	**16 23 37.3**	**+0.9**
THZ	**Tophouse**	**10.93**	**206**	PN	**P**	**16 23 43.7**	**+0.4**
ASAR	**Alice Springs**	**40.75**	**270**	P	**P**	**16 28 17.3**	**+0.4**
	0.3nm,0.8s,mb2.8,baz=108,slow=7.5,SNR=5.5						
ASAR				PcP	PcP	16 30 07.5	-0.4
	0.6nm,1.0s,baz=126,slow=3.6,SNR=3.3						
WRA	**Warramunga Arr**	**41.89**	**276**	P	**P**	**16 28 25.7**	**-0.4**
	0.3nm,0.3s,mb3.2,baz=111,slow=8.0,SNR=20						
FINES	**FINESS Array B**	**145.85**	**337**	PKPbc	PKPbc	16 40 00.7	-3.1
	0.9nm,0.4s,baz=53,slow=4.7,SNR=10						

*IDC **19** 16:29:29.4±0.8, 31°.14N×103°.69E, h0km, mb3.9/10, mb1 3.9/12, mb1mx3.8/27, mbtmp3.9/12, ML3.2/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/38, Error ellipse: s-maj=26.6km s-min=15.0km az=48.0*
*BJI **19** 16:29:30.4, 31°.18N×103°.80E, h11km, mB4.6/3, mb4.3/9, ML4.1/18, Ms3.9/10, Ms7 3.6/9*
*NEIC **19** 16:29:31.0±0.3, 31°.15N×103°.69E, h10km, mb4.5/3, Error ellipse: s-maj=6.7km s-min=5.3km az=195.0*
ISC 19 16:29:30.4±0.9, 31°.24N±0°.03×103°.71E±0°.04, h4km±6km, n28, σ0°97/37, mb3.8/9, MS3.2/3, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**173**	⇑*i*P*g*	**Pg**	**16 29 37.6**	**+0.8**
CD2				Sg	**Sg**	**16 29 44.4**	**+3.3**
CD2				smax			
	comp=N,34μm,0.5s						
CD2				smax			
	comp=E,57μm,0.5s						
LZH	**Lanzhou**	**4.83**	**1**	Pg	**Pg**	**16 31 00.6**	**-2.4**
LZH				Sg	**Sg**	**16 32 06.1**	**+0.4**
LZH				smax			
	comp=N,95nm,1.0s						
LZH				smax			
	comp=E,110nm,0.8s						
LZH				LR	LR		
	comp=N,490nm,6.2s						
LZH				LR	LR		
	comp=E,1μm,9.7s						
LZH				LR	LR		
	comp=Z,450nm,5.4s						
ENH	**Enshi**	**5.07**	**100**	*e*Pn	**Pn**	**16 30 47.6**	**+0.5**
	comp=Z,83nm,0.4s						
ENH				*e*Sn	**Sn**	**16 31 46.6**	**+0.5**
XAN	**Xi'an**	**5.21**	**56**	Pn	**Pn**	**16 30 48.6**	**-0.5**
XAN				Pg	**Pg**	**16 31 03.9**	**-6.3**
XAN				Sn	**Sn**	**16 31 52.8**	**+3.2**
XAN				Sg	**Sg**	**16 32 11.8**	**-5.9**
XAN				smax			
	comp=N,230nm,0.9s						
XAN				smax			
	comp=E,120nm,0.9s						
XAN				LR	LR		
	comp=N,290nm,7.2s						
XAN				LR	LR		
	comp=E,74nm,8.9s						
XAN				LR	LR		
	comp=Z,51nm,8.1s						
GYA	**Guiyang**	**5.42**	**151**	Pn	**Pn**	**16 30 53.3**	**+1.3**
GYA				Sn	**Sn**	**16 31 55.8**	**+0.9**
GYA				Sg	**Sg**	**16 32 23.5**	**-1.1**
GYA				smax			
	comp=N,270nm,0.9s						
GYA				smax			
	comp=E,270nm,0.8s						
KMI	**Kunming**	**6.15**	**188**	Pn	**Pn**	**16 31 02.3**	**+0.2**
KMI				Sn	**Sn**	**16 32 12.8**	**-0.1**
KMI				smax			
	comp=N,29nm,0.7s						
KMI				smax			
	comp=E,40nm,0.7s						
KMI				LR	LR		
	comp=N,360nm,10.8s						
KMI				LR	LR		
	comp=E,790nm,10.8s						
KMI				LR	LR		
	comp=Z,180nm,10.5s						
GTA	**Gaotai**	**8.75**	**340**	*e*P	**Pn**	**16 31 41.0**	**+3.3**
GTA				pP		16 31 45.3	
GTA				sP		16 31 48.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
WHN	**Wuhan**	**9.17**	**92**	P	**Pn**	**16 31 42.5**	**-1.0**
WHN				S	**Sn**	**16 33 22.9**	**-4.2**
WHN				LR	LR		
	comp=N,1μm,6.4s						
WHN				LR	LR		
	comp=E,620nm,5.0s						
WHN				LR	LR		
	comp=Z,640nm,5.5s						
CM31	**Chiang Mai Arr**	**13.44**	**200**	P	**Pn**	**16 32 50.6**	**+8.6**
	comp=Z,3.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.44**	**200**	Pn	**Pn**	**16 32 40.6**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=215,slow=30,SNR=2.9						
ODAN	**Odare**	**14.92**	**257**	*e*P	**Pn**	**16 33 01.9**	**-0.3**
	comp=Z,6.2nm,0.6s						
KKN	**Kakani**	**16.41**	**263**	*e*P	**Pn**	**16 33 21.3**	**-0.3**
	comp=Z,31nm,0.8s						
DMN	**Daman**	**16.61**	**262**	*e*P	**Pn**	**16 33 24.1**	**0.0**
	comp=Z,28nm,1.0s						
SONM	**Songino Array**	**16.70**	**6**	Pn	**Pn**	**16 33 25.5**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=5.5						
SONM				LR	LR	16 40 39.4	
	comp=Z,98nm,19.9s,baz=176,slow=40						
GKN	**Gorkha**	**16.89**	**264**	*e*P	**Pn**	**16 33 27.3**	**-0.5**
	comp=Z,39nm,0.8s						
KSRS	**Korea Array**	**20.90**	**66**	P	**P**	**16 34 14.0**	**+0.2**
	comp=Z,5.3nm,0.6s,baz=259,slow=9.8,SNR=29						
KSRS				LR	LR	16 42 32.9	
	comp=Z,21nm,18.7s,MS2.5,baz=230,slow=37						
JOW	**Kunigami**	**21.91**	**95**	P	**P**	**16 34 25.4**	**+0.7**
	comp=Z,3.9nm,0.3s,mb4.3,baz=180,slow=4.0						
MK31	**Makanchi Array**	**22.66**	**319**	*e*P	**P**	**16 34 33.3**	**+0.8**
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**16 34 32.9**	**+0.4**
	comp=Z,6.3nm,1.0s,mb4.0,baz=127,slow=11,SNR=27						
AAK	**Ala-Archa**	**25.85**	**304**	P	**P**	**16 35 03.5**	**+0.6**
	comp=Z,2.1nm,0.7s,mb3.8,baz=134,slow=4.5,SNR=6.6						
AAK				LR	LR	16 46 44.6	
	comp=Z,91nm,20.3s,MS3.3,baz=151,slow=40						
ZALV	**Zalesovo Beam**	**26.45**	**335**	P	**P**	**16 35 08.8**	**+0.6**
	comp=Z,1.9nm,0.7s,mb3.7,baz=129,slow=8.1,SNR=11						
BVAR	**Borovoye Array**	**32.48**	**322**	P	**P**	**16 36 02.1**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.6,baz=116,slow=6.9,SNR=5.5						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**16 39 17.6**	**+0.2**
	comp=Z,0.4nm,0.4s,mb3.8,baz=72,slow=8.4,SNR=2.8						
WRA	**Warramunga Arr**	**58.77**	**146**	P	**P**	**16 39 28.6**	**-1.1**
	comp=Z,1.8nm,0.6s,mb4.3,baz=328,slow=9.0,SNR=24						
WB2	**Warramunga Arr**	**58.78**	**146**	*e*P	**P**	**16 39 28.2**	**-1.6**
ASAR	**Alice Springs**	**61.78**	**148**	P	**P**	**16 39 49.5**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.8,baz=339,slow=6.8,SNR=14						
ILAR	**Eielson Array**	**69.86**	**26**	P	**P**	**16 40 41.3**	**-0.6**
	comp=Z,0.2nm,0.6s,mb3.2,baz=310,slow=4.6,SNR=3.4						
KMBO	**Kilima Mbogo**	**70.61**	**256**	LR	LR	17 13 10.6	
	comp=Z,49nm,19.7s,MS3.8,baz=91,slow=37						

*ISCJB **19** 16:31:30.6±0.4, 31°.90N±0°.03×104°.28E±0°.06, h10km, mb3.9/11, Error ellipse: s-maj=7.4km s-min=4.2km az=3.8*
*IDC **19** 16:31:30.4±0.8, 31°.81N×104°.16E, h0km, mb3.8/12, mb1 3.9/14, mb1mx3.8/28, mbtmp3.8/14, ML3.3/2, Error ellipse: s-maj=32.4km s-min=15.1km az=58.0*
*BJI **19** 16:31:31.5, 32°.01N×104°.62E, h26km, ML3.6/8, Ms3.1/1, Ms7 3.0/1*
*NEIC **19** 16:31:31.8±0.3, 31°.83N×104°.27E, h10km, Error ellipse: s-maj=10.5km s-min=6.1km az=65.0*
ISC 19 16:31:32.6±0.4, 31°.89N±0°.03×104°.25E±0°.06, h10km, n24, σ1°12/29, mb3.9/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.06**	**203**	Pg	**Pg**	**16 31 54.0**	**+1.0**
CD2				Sg	**Sg**	**16 32 07.1**	**+0.3**
CD2				smax			
	comp=N,7μm,0.5s						
CD2				smax			
	comp=E,4μm,0.6s						
LZH	**Lanzhou**	**4.20**	**356**	Pg	**Pg**	**16 32 58.1**	**+5.1**
LZH				Sn	**Sn**	**16 33 29.9**	**+4.2**
LZH				Sg	**Sg**	**16 33 51.1**	**+3.7**
LZH				smax			
	comp=N,130nm,0.8s						
LZH				smax			
	comp=E,110nm,0.6s						
LZH				LR	LR		
	comp=N,430nm,6.0s						
LZH				LR	LR		
	comp=E,250nm,4.1s						
LZH				LR	LR		
	comp=Z,260nm,7.8s						
ENH	**Enshi**	**4.78**	**108**	P	**Pn**	**16 32 42.9**	**-1.8**
ENH				*e*Sn	**Sn**	**16 33 41.6**	**+1.6**
KMI	**Kunming**	**6.87**	**191**	Pn	**Pn**	**16 33 16.1**	**+2.7**
KMI				Sn	**Sn**	**16 34 34.3**	**+2.6**
KMI				smax			
	comp=N,20nm,1.0s						
KMI				smax			
	comp=E,19nm,1.2s						
KMI				LR	LR		
	comp=N,120nm,11.1s						
KMI				LR	LR		
	comp=E,160nm,13.6s						
KMI				LR	LR		
	comp=Z,140nm,14.1s						
CM31	**Chiang Mai Arr**	**14.21**	**201**	P	**Pn**	**16 34 55.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**14.21**	**201**	Pn	**Pn**	**16 34 52.4**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=6.2,slow=11,SNR=4.0						
SONM	**Songino Array**	**16.01**	**5**	Pn	**Pn**	**16 35 19.2**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=186,slow=8.1,SNR=2.0						
ULN	**Ulaanbaatar**	**16.10**	**7**	P	**Pn**	**16 35 18.3**	**-0.6**
	comp=Z,1.8nm,0.9s						
KSRS	**Korea Array**	**20.23**	**68**	P	**P**	**16 36 08.8**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=256,slow=9.9,SNR=4.7						
MK31	**Makanchi Array**	**22.47**	**318**	P	**P**	**16 36 31.0**	**-0.8**
MKAR	**Makanchi Array**	**22.47**	**318**	P	**P**	**16 36 32.5**	**+0.7**
	comp=Z,0.7nm,0.6s,mb3.3,baz=112,slow=12,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.07**	**333**	P	**P**	**16 37 05.7**	**-0.3**
	comp=Z,1.7nm,0.7s,mb3.7,baz=126,slow=10,SNR=4.7						
ZALV	**Zalesovo Beam**	**26.07**	**333**	P	**P**	**16 37 05.7**	**-0.3**
AKTK	**Aktyubinsk**	**38.69**	**312**	P	**P**	**16 38 56.3**	**-0.1**
AKTO	**Aktyubinsk**	**38.69**	**312**	P	**P**	**16 38 56.3**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.7,baz=102,slow=14,SNR=4.1						
ARCES	**ARCESS Array B**	**56.59**	**336**	P	**P**	**16 41 14.7**	**-0.4**
	comp=Z,1.8nm,0.8s,mb4.1,baz=50,slow=8.4,SNR=3.3						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**16 41 17.6**	**-0.4**
	comp=Z,1.1nm,0.4s,mb4.2,baz=88,slow=7.3,SNR=14						
WRA	**Warramunga Arr**	**59.06**	**147**	P	**P**	**16 41 32.2**	**-0.8**
	comp=Z,2.2nm,0.6s,mb4.3,baz=339,slow=7.5,SNR=8.4						
WB2	**Warramunga Arr**	**59.07**	**147**	*e*P	**P**	**16 41 32.0**	**-1.0**
ASAR	**Alice Springs**	**62.10**	**149**	P	**P**	**16 41 53.2**	**-0.5**
	comp=Z,0.8nm,0.5s,mb4.1,baz=335,slow=6.6,SNR=11						
HFS	**Hagfors**	**63.19**	**326**	P	**P**	**16 41 59.7**	**-0.9**
	comp=Z,1.0nm,0.5s,mb4.2,baz=93,slow=5.8,SNR=4.5						
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**16 42 05.3**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.8,baz=51,slow=4.9,SNR=3.0						
ILAR	**Eielson Array**	**69.08**	**26**	P	**P**	**16 42 37.9**	**-0.4**
	comp=Z,0.1nm,0.4s,mb3.1,baz=308,slow=4.1,SNR=3.0						
STKA	**Stephens Creek**	**72.60**	**147**	P	**P**	**16 42 59.0**	**-1.0**
	comp=Z,2.2nm,0.9s,mb4.1,baz=179,slow=18,SNR=3.6						

*HLW **19** 16:48:13.8, 35°.48N×28°.96E, h33km±29km, Md3.6, Ml3.5*
*IDC **19** 16:48:15.2±1.9, 35°.08N×29°.03E, h0km, mb3.9/7, mb1 3.9/14, mb1mx3.8/31, mbtmp3.9/14, ML4.0/6, Error ellipse: s-maj=37.7km s-min=17.7km az=41.0*
*NEIC **19** 16:48:17.0±0.6, 35°.11N×29°.05E, h10km, mb3.9/4, MD3.8(ISK), ML3.6(NIC), Error ellipse: s-maj=10.7km s-min=4.9km az=204.0*
*ISCJB **19** 16:48:18.3±0.3, 35°.05N±0°.02×29°.11E±0°.02, h44km±5km, mb3.8/9, Error ellipse: s-maj=3.4km s-min=2.6km az=30.7*
*DDA **19** 16:48:19.4, 35°.47N×29°.31E, h20km±3km, Md3.6*
*ISK **19** 16:48:19.8, 35°.26N×29°.13E, h32km, MD3.8*
*CSEM **19** 16:48:19.6±0.1, 35°.10N×29°.11E, h30km, MD3.6, Mw3.5, Error ellipse: s-maj=2.9km s-min=1.9km az=47.0*
*ATH **19** 16:48:20.7, 35°.33N×28°.89E, h28km±8km, MD3.9/10*
*NIC **19** 16:48:22.8±0.2, 34°.90N×29°.38E, h40km, ML3.6, MW3.5*
ISC 19 16:48:19.9±0.2, 35°.09N±0°.02×29°.10E±0°.02, h38km±6km, n191, σ1°04/237, mb3.8/9, 2C-3D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**1.13**	**20**	*e*PN	**Pn**	**16 48 40.0**	**+0.7**
AKAS	**Kas**	**1.22**	**20**	⇓*i*P	**Pn**	**16 48 40.0**	**-0.5**
AKAS				*i* S	**Sn**	**16 49 05.2**	**+10**
AKAS	**Kas**	**1.22**	**20**	*i* P	**Pn**	**16 48 40.0**	**-0.5**
AKAS				*i* S	**Sn**	**16 49 05.2**	**+10**
ARG	**Arkhangelos**	**1.38**	**325**	*e*PN	**Pn**	**16 48 41.7**	**-1.0**
ARG				*e*SN	**Sn**	**16 48 56.6**	**-3.1**
ARG	**Arkhangelos**	**1.38**	**325**	*e*Pn	**Pn**	**16 48 41.7**	**-1.0**
ARG				*e*Sn	**Sn**	**16 48 56.6**	**-3.1**
FETY	**Fethiye**	**1.54**	**360**	*e*PN	**Pn**	**16 48 43.0**	**-2.0**
FETY	**Fethiye**	**1.54**	**360**	Pn	**Pn**	**16 48 42.6**	**-2.4**
FETY	**Fethiye**	**1.54**	**360**	*e*Pn	**Pn**	**16 48 43.0**	**-2.0**
KARP	**Karpathos**	**1.65**	**287**	*e*PN	**Pn**	**16 48 47.0**	**+0.6**
KARP				*e*SN	**Sn**	**16 49 05.0**	**-1.4**
KARP	**Karpathos**	**1.65**	**287**	*e*Pn	**Pn**	**16 48 47.0**	**+0.6**
KARP				*e*Sn	**Sn**	**16 49 05.0**	**-1.4**
ELL	**Elmali**	**1.78**	**21**	*e*PN	**Pn**	**16 48 49.1**	**+0.8**
ELL	**Elmali**	**1.78**	**21**	Pn	**Pn**	**16 48 47.0**	**-1.2**
ELL	**Elmali**	**1.78**	**21**	*e*Pn	**Pn**	**16 48 49.1**	**+0.9**
TURN	**Turunc**	**1.83**	**347**	*e*P	**Pn**	**16 48 48.3**	**-0.5**
TURN				*i* S	**Sn**	**16 49 12.8**	**+2.1**
TURN	**Turunc**	**1.83**	**347**	*e*P	**Pn**	**16 48 48.3**	**-0.5**
TURN				*i* S	**Sn**	**16 49 12.9**	**+2.2**
DAT	**Datca**	**2.05**	**323**	*e*PN	**Pn**	**16 48 51.7**	**-0.3**
DAT				*e*SN	**Sn**	**16 49 14.1**	**-2.2**
DAT	**Datca**	**2.05**	**323**	*e*Pn	**Pn**	**16 48 51.7**	**-0.2**
DAT				*e*Sn	**Sn**	**16 49 14.1**	**-2.2**
GLHS	**Glhisar (BURDU**	**2.09**	**9**	*e*PN	**Pn**	**16 48 52.0**	**-0.4**
GLHS				*e*SN	**Sn**	**16 49 13.2**	**-4.1**
GLHS	**Glhisar (BURDU**	**2.09**	**9**	Pn	**Pn**	**16 48 51.2**	**-1.2**
GLHS	**Glhisar (BURDU**	**2.09**	**9**	*e*Pn	**Pn**	**16 48 52.0**	**-0.5**
GLHS				*e*Sn	**Sn**	**16 49 13.2**	**-4.0**
YER	**Yerkesik**	**2.15**	**342**	*e*PN	**Pn**	**16 48 52.2**	**-1.1**
YER	**Yerkesik**	**2.15**	**342**	*e*Pn	**Pn**	**16 48 52.2**	**-1.0**
KORT	**Korkueli**	**2.16**	**28**	⇓*i*P	**Pn**	**16 48 55.2**	**+1.7**
KORT				*i* S	**Sn**	**16 49 21.8**	**+2.7**
KORT	**Korkueli**	**2.16**	**28**	*i* P	**Pn**	**16 48 55.2**	**+1.7**
KORT				*i* S	**Sn**	**16 49 21.8**	**+2.8**
GOLH	**Golhisar**	**2.18**	**10**	⇓*i*P	**Pn**	**16 48 54.5**	**+0.8**
GOLH				*i* S	**Sn**	**16 49 21.2**	**+1.8**
GOLH	**Golhisar**	**2.18**	**10**	*i* P	**Pn**	**16 48 54.5**	**+0.8**
GOLH				*i* S	**Sn**	**16 49 21.2**	**+1.8**
ANTB	**Antalya**	**2.21**	**34**	*e*PN	**Pn**	**16 48 53.0**	**-1.0**
ANTB	**Antalya**	**2.21**	**34**	*e*Pn	**Pn**	**16 48 53.0**	**-1.0**
ZKR	**Zakros**	**2.36**	**272**	*e*PN	**Pn**	**16 48 56.7**	**+0.5**
ZKR				*e*SN	**Sn**	**16 49 24.5**	**+0.5**
ZKR	**Zakros**	**2.36**	**272**	*e*Pn	**Pn**	**16 48 56.7**	**+0.5**
ZKR				*e*Sn	**Sn**	**16 49 24.5**	**+0.5**
BDRM	**Kayabasi**	**2.39**	**326**	*e*P	**Pn**	**16 48 56.4**	**-0.2**
BDRM				*i* S	**Sn**	**16 49 19.4**	**-5.1**
BDRM	**Kayabasi**	**2.39**	**326**	*e*P	**Pn**	**16 48 56.3**	**-0.2**
BDRM				*i* S	**Sn**	**16 49 19.4**	**-5.1**
BODT	**Bodrum**	**2.45**	**324**	*e*PN	**Pn**	**16 48 56.4**	**-0.9**
BODT	**Bodrum**	**2.45**	**324**	*e*Pn	**Pn**	**16 48 56.4**	**-0.9**
MLSB	**Milas**	**2.45**	**335**	*e*PN	**Pn**	**16 48 56.5**	**-0.9**
MLSB	**Milas**	**2.45**	**335**	*e*Pn	**Pn**	**16 48 56.5**	**-0.9**
DNZL	**Cakiroluk**	**2.60**	**359**	*e*P	**Pn**	**16 48 59.8**	**+0.3**
DNZL				*i* S	**Sn**	**16 49 29.4**	**-0.3**
DNZL	**Cakiroluk**	**2.60**	**359**	*e*P	**Pn**	**16 48 59.8**	**+0.4**
DNZL				*i* S	**Sn**	**16 49 29.4**	**-0.4**
BCK	**Bucak**	**2.66**	**27**	*e*PN	**Pn**	**16 49 00.2**	**-0.1**
BCK	**Bucak**	**2.66**	**27**	*e*Pn	**Pn**	**16 49 00.2**	**-0.1**
DENT	**Denizli**	**2.66**	**359**	*e*PN	**Pn**	**16 48 59.4**	**-0.9**
DENT	**Denizli**	**2.66**	**359**	*e*Pn	**Pn**	**16 48 59.4**	**-0.9**
PPCY	**Paphos**	**2.67**	**93**	P	**Pn**	**16 49 00.5**	**0.0**
PPCY	**Paphos**	**2.67**	**93**	P	**Pn**	**16 49 00.5**	**0.0**
AYDN	**Tasoluk**	**2.75**	**339**	*e*P	**Pn**	**16 49 02.7**	**+1.1**
AYDN				*i* S	**Sn**	**16 49 33.6**	**+0.1**
AYDN	**Tasoluk**	**2.75**	**339**	*e*P	**Pn**	**16 49 02.7**	**+1.2**
AYDN				*i* S	**Sn**	**16 49 33.6**	**+0.1**
GAZI	**Gazipasa**	**2.86**	**65**	*e*P	**Pn**	**16 49 03.5**	**+0.5**
GAZI				*i* S	**Sn**	**16 49 35.5**	**-0.7**
GAZI	**Gazipasa**	**2.86**	**65**	*e*P	**Pn**	**16 49 03.5**	**+0.5**
GAZI				*i* S	**Sn**	**16 49 35.5**	**-0.7**
NPS	**Neapolis**	**2.86**	**275**	*e*PN	**Pn**	**16 49 04.0**	**+1.0**
NPS				*e*SN	**Sn**	**16 49 35.8**	**-0.4**
NPS	**Neapolis**	**2.86**	**275**	*e*Pn	**Pn**	**16 49 04.0**	**+1.0**
NPS				*e*Sn	**Sn**	**16 49 35.8**	**-0.4**
ALFC	**Alevga**	**2.87**	**88**	⇑P	**Pn**	**16 49 03.3**	**+0.1**
	15nm,0.1s						
ALFC				S	**S

HNAT	Natroun	5.59	166	P		Pn	16 49 41.0 +0.5
AMAG	Maghara	5.62	141	P		Pn	16 49 40.9 -0.1
	baz=142						
AMAG	Maghara	5.62	141	P		Pn	16 49 40.8 -0.2
MMAI	Mount Meron Ar	5.63	110	Pn		Pn	16 49 40.7 -0.3
	6.8nm,0.3s,baz=292,slow=12,SNR=38						
MMAI				Sn		Sn	16 50 43.6 -0.8
	16nm,0.3s,baz=322,slow=30,SNR=13						
KOT	Kottamia	5.64	155	P		Pn	16 49 42.1 +0.8
	baz=155						
KOT	Kottamia	5.64	155	P		Pn	16 49 42.1 +0.9
HHAG	Hagoal	5.71	153	AMP			16 50 00.0
	comp=E,30μm,0.2s,logA/T=5.2,baz=153						
LTK	Loutraki	5.74	302	ePN		Pn	16 49 44.1 +1.5
LTK	Loutraki	5.74	302	ePn		Pn	16 49 44.1 +1.5
BR131	Keskin Array S	5.87	37	ePn		Pn	16 49 45.3 +0.9
BR131				eSn		Sn	16 50 49.9 -0.5
BR131	Keskin Array S	5.87	37	ePn		Pn	16 49 45.3 +0.9
BR131				eSn		Sn	16 50 49.9 -0.5
BRTR	Keskin Array B	5.87	37	Pn		Pn	16 49 45.5 +1.1
	comp=E,1.4nm,0.3s,baz=204,slow=15,SNR=45						
BRTR				Sn		Sn	16 50 49.4 -1.1
	comp=E,1.1nm,0.3s,baz=206,slow=25,SNR=10						
BRTR	Keskin Array B	5.87	37	Pn		Pn	16 49 45.5 +1.1
BRTR				Sn		Sn	16 50 49.4 -1.0
GLL	Jalalah	5.92	157	P		Pn	16 49 44.9 -0.2
	baz=157						
GLL	Jalalah	5.92	157	P		Pn	16 49 44.9 -0.2
SUZ		6.11	148	P		Pn	16 49 48.1 +0.4
	baz=148						
SUZ		6.11	148	P		Pn	16 49 48.1 +0.4
GUR	Goura	6.14	300	ePN		Pn	16 49 49.3 +1.2
GUR	Goura	6.14	300	ePn		Pn	16 49 49.3 +1.2
ZAF		6.48	152	P		Pn	16 49 53.2 +0.3
	baz=152						
ZAF		6.48	152	P		Pn	16 49 53.2 +0.3
AWBH		6.75	181	P		Pn	16 49 56.1 -0.3
	baz=181						
AWBH		6.75	181	P		Pn	16 49 56.1 -0.4
ASF	Jabal al Asfar	7.12	112	Pn		Pn	16 50 02.6 +1.0
	comp=E,0.6nm,0.3s,baz=171,slow=9.4,SNR=4.3						
ASF				Sn		Sn	16 51 24.1 +2.8
	comp=E,1.3nm,0.3s,baz=172,slow=17,SNR=5.6						
EIL	Elat	7.33	136	Pn		Pn	16 50 03.8 -0.6
	comp=E,5.1nm,0.3s,baz=331,slow=6.0,SNR=60						
EIL				Sn		Sn	16 51 24.6 -1.7
	comp=E,4.4nm,0.3s,baz=58,slow=16,SNR=8.1						
EIL	Elat	7.33	136	Pn		Pn	16 50 03.8 -0.6
EIL				Sn		Sn	16 51 24.5 -1.8
HBST	Basata	7.55	139	P		Pn	16 50 07.5 0.0
	baz=140						
HBST				AMP			16 51 00.0
	comp=N,60μm,0.6s,logA/T=5.0,baz=140						
HBST				S		Sn	16 51 28.3 -3.6
	baz=140						
HBST	Basata	7.55	139	P		Pn	16 50 07.6 +0.1
TR2		7.75	148	P		Pn	16 50 10.2 -0.1
	baz=148						
TR2		7.75	148	P		Pn	16 50 10.2 -0.1
HKAT	Jabal Katrina	7.75	146	P		Pn	16 50 10.5 +0.2
	baz=147						
HKAT	Jabal Katrina	7.75	146	P		Pn	16 50 10.5 +0.2
HDHB	Dhahab	7.89	142	P		Pn	16 50 12.2 0.0
	baz=143						
HDHB	Dhahab	7.89	142	P		Pn	16 50 12.1 -0.1
HFRF	Wahat Farafira	7.94	185	P		Pn	16 50 12.8 -0.1
	baz=185						
HFRF	Wahat Farafira	7.94	185	P		Pn	16 50 12.8 -0.1
HSFG		9.45	153	P		Pn	16 50 34.0 +0.5
	baz=153						
HSFG		9.45	153	P		Pn	16 50 34.0 +0.5
HDK2	Wahat Dakhilah	10.73	181	S		Sn	16 52 44.0 -5.9
	baz=181						
CUC	Castrocucco	11.62	299	ePn		Pn	16 51 02.3 -0.9
CUC				eSn		Sn	16 53 08.5 -3.2
CUC	Castrocucco	11.62	299	ePn		Pn	16 51 02.3 -0.9
AKASG	Malin Array Be	15.61	0	Pn		Pn	16 51 57.7 +0.7
	comp=N,0.5nm,0.3s,baz=187,slow=8.7,SNR=3.6						
AKASG	Malin Array Be	15.61	0	Pn		Pn	16 51 57.7 +0.7
AKASG	Malin Array Be	15.61	0	Pn		Pn	16 51 57.7 +0.7
KEST	Kesra	16.12	278	Pn		Pn	16 52 03.4 -0.3
	comp=N,0.0nm,0.3s,baz=203,slow=14,SNR=2.2						
VRAC	Vranov	16.93	331	Pn		Pn	16 52 14.7 +0.9
	comp=N,0.3nm,0.3s,baz=225,slow=7.3,SNR=3.5						
VRAC	Vranov	16.93	331	Pn		Pn	16 52 14.7 +0.9
BRG	Berggiesshubel	19.22	330	e(P)		Pn	16 52 40.5 -1.3
	comp=N,2.8nm,0.9s						
BRG				e			16 52 47.6
	comp=N,3.5nm,0.9s						
MBDF	Montbardon	19.59	306	eP		Pn	16 52 46.8 +0.5
MBDF	Montbardon	19.59	306	eP		Pn	16 52 46.8 +0.5
LPG	La Plagne	19.91	308	eP		Pn	16 52 49.9 -0.1
LPG	La Plagne	19.91	308	eP		Pn	16 52 49.9 -0.1
LPL	La Plagne	19.93	308	eP		Pn	16 52 49.0 -1.2
	comp=N,2.8nm,0.5s						
LPL	La Plagne	19.93	308	eP		Pn	16 52 49.0 -1.2
	comp=N,1.4nm,0.5s						
LPL	La Plagne	19.93	308	eP		Pn	16 52 49.0 -1.2
	comp=N,1.4nm,0.5s						
CLL	Collm	19.94	329	i (PP)			16 52 59.8
ORIF	Oris-en-Rattie	20.26	306	eP		P	16 52 53.1 +1.2
	comp=N,11nm,1.0s						
ORIF	Oris-en-Rattie	20.26	306	eP		P	16 52 53.1 +1.2
	comp=N,5.7nm,1.0s						
ORIF	Oris-en-Rattie	20.26	306	eP		P	16 52 53.1 +1.2
	comp=N,5.7nm,1.0s						
CABF	La Chapelle	20.79	311	eP		P	16 52 59.8 +2.1
CABF	La Chapelle	20.79	311	eP		P	16 52 59.8 +2.1
LDF	La Druitiere	25.43	311	eP		P	16 53 41.7 -2.2
	comp=N,2.8nm,0.4s,mb3.8						
LDF	La Druitiere	25.43	311	eP		P	16 53 41.7 -2.2
	comp=N,1.4nm,0.4s,mb3.8						
FLN	La Foliniere	25.71	311	eP		P	16 53 44.3 -2.2
GRR	Gorron	25.82	310	eP		P	16 53 45.8 -1.6
	comp=N,11nm,0.7s,mb4.2						
GRR	Gorron	25.82	310	eP		P	16 53 45.8 -1.6
	comp=N,5.5nm,0.7s,mb4.2						
GRR	Gorron	25.82	310	eP		P	16 53 45.8 -1.6
	comp=N,5.5nm,0.7s,mb4.2						
AKTK	Aktyubinsk	25.98	45	P		P	16 53 48.8 0.0
AKTK	Aktyubinsk	25.98	45	P		P	16 53 48.8 0.0
AKTO	Aktyubinsk	25.98	45	P		P	16 53 48.8 0.0
	comp=N,0.8nm,0.6s,mb3.4,baz=246,slow=12,SNR=4.7						
FINES	FINESS Array B	26.45	357	P		P	16 53 52.7 -0.2
	comp=N,1.7nm,0.8s,mb3.6,baz=160,slow=6.1,SNR=4.5						
FINES	FINESS Array B	26.45	357	P		P	16 53 52.7 -0.2
FINES	FINESS Array B	26.45	357	P		P	16 53 52.7 -0.3
HFS	Hagfors	26.99	343	P		P	16 53 58.2 +0.4
	comp=N,2.3nm,0.9s,mb3.7,baz=157,slow=7.8,SNR=3.8						
HFS	Hagfors	26.99	343	P		P	16 53 58.2 +0.4
ARCES	ARCESS Array B	34.56	358	P		P	16 55 04.8 +0.3
	comp=N,5.1nm,1.1s,mb4.3,baz=164,slow=9.9,SNR=3.3						
ARCES	ARCESS Array B	34.56	358	P		P	16 55 04.8 +0.3
ARCES	ARCESS Array B	34.56	358	P		P	16 55 04.8 +0.3
MKAR	Makanchi Array	41.12	57	P		P	16 56 00.9 +0.9
	comp=N,1.4nm,0.6s,mb3.8,baz=267,slow=7.8,SNR=16						
MKAR	Makanchi Array	41.12	57	P		P	16 56 00.9 +0.8
ZALV	Zalesovo Beam	42.73	46	P		P	16 56 13.5 +0.4
	comp=N,1.0nm,0.7s,mb3.7,baz=260,slow=10,SNR=4.7						
SONM	Songino Array	57.02	52	P		P	16 58 04.0 +2.2
	comp=N,0.3nm,0.5s,mb3.6,baz=317,slow=9.8,SNR=3.2						
SONM	Songino Array	57.02	52	P		P	16 58 04.0 +2.2

*BJI **19** 17:16:56.7, 4°.50N×96°.90E, h15km, mB4.8/5, mb4.7/13, Ms4.6/1, Ms7 4.6/1*
*IDC **19** 17:17:11.8±1.1, 4°.51N×96°.83E, h146km±9km, mb4.0/14, mb1 4.1/16, mb1mx3.9/23, mbtmp4.0/16, Error ellipse: s-maj=19.1km s-min=9.3km az=56.0*
*ISCJB **19** 17:17:12.9±0.8, 4°.59N±0°.06×96°.98E±0°.07, h169km±8km, mb4.4/43, Error ellipse: s-maj=11.7km s-min=9.3km az=150.7*
*NEIC **19** 17:17:12.7±0.9, 4°.50N×96°.86E, h156km±8km, mb4.4/26, Error ellipse: s-maj=11.3km s-min=6.8km az=64.0*
ISC 19 17:17:13.8±0.8, 4°.57N±0°.06×96°.96E±0°.07, h161km±8km, n69, σ0°92/69, mb4.4/43, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.63	132	P		Pn	17 17 57.5 +0.4
	16nm,0.3s,baz=287,slow=12,SNR=54						
PSI				S		Sn	17 18 29.6 +2.3
	23nm,0.3s,baz=313,slow=10,SNR=12						
PSI	Prapat	2.63	132	P		Pn	17 17 57.5 +0.4
PSI				S		Sn	17 18 29.6 +2.3
KULM	Kulim	3.74	79	ePn		Pn	17 18 10.5 -0.5
IPM	Ipoh	4.05	91	ePn		Pn	17 18 14.5 -0.5
KSM	Kuching	13.68	103	ePn		Pn	17 20 26.2 +4.9
CM31	Chiang Mai Arr	13.94	8	ePn		Pn	17 20 29.6 +5.1
	22nm,0.8s						
CMAR	Chiang Mai Arr	13.94	8	P		Pn	17 20 24.8 +0.3
	0.8nm,0.3s,baz=197,slow=12,SNR=52						
CMAR				ScP		ScP	17 28 52.4 -0.2
	0.1nm,0.3s,baz=212,slow=2.5,SNR=5.3						
CHTO	Chiang Mai	14.29	8	eP		Pn	17 20 31.0 +2.1
	12nm,1.0s						
PALK	Pallekele	16.39	280	P		Pn	17 20 56.9 +2.0
	35nm,1.4s						
QIZ	Qiongzhong	19.10	40	eP		P	17 21 26.1 +1.8
	18nm,1.1s						
SHL	Shillong	21.44	347	ePKP		P	17 21 52.8 +3.5
ODAN	Odare	23.98	339	eP		P	17 22 13.5 0.0
	20nm,0.6s,mb4.9						
TAPN	Taplejung	24.31	340	eP		P	17 22 16.5 0.0
	20nm,0.6s,mb4.8						
GUN	Gumba	25.50	337	eP		P	17 22 26.9 -0.4
	34nm,0.6s,mb5.1						
DMN	Daman	25.55	335	eP		P	17 22 27.0 -0.7
	8.2nm,0.4s,mb4.7						
LSA	Lhasa	25.59	348	P		P	17 22 28.9 +0.8
LSA	Lhasa	25.59	348	eP		P	17 22 28.9 +0.8
	5.2nm,0.4s,mb4.5						
KKN	Kakani	25.63	336	eP		P	17 22 28.0 -0.5
	12nm,0.6s,mb4.7						
GKN	Gorkha	26.09	335	eP		P	17 22 31.8 -0.8
	10nm,0.3s,mb5.0						
ENH	Enshi	28.17	23	eP		P	17 22 51.1 -0.1
	6.4nm,0.8s,mb4.4						
XAN	Xi'an	31.36	19	P		P	17 23 19.5 +0.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
XAN				pmax	pmax		
	comp=Z,18nm,9.0s						
GTA	Gaotai	34.78	4	eP		P	17 23 49.4 +0.5
GTA				pP	pP		17 23 53.9 -29
GTA				sP	sP		17 23 56.9 -45
GTA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
JOW	Kunigami	37.20	50	P		P	17 24 10.9 +1.3
BJT	Baijiatuau	39.32	23	eP		P	17 24 28.6 +1.5
	comp=Z,16nm,0.6s,mb4.8						
KSH	Kashi	39.64	334	eP		P	17 24 28.3 -1.5
KSH				ePP	pP		17 24 34.3 -30
KSH				eSP	sP		17 24 40.3 -43
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
TKM2	Tokmak 2	42.64	337	eP		P	17 24 53.3 -0.9
	comp=Z,3.1nm,0.5s,mb4.2						
EKS2	Erkin-Say	43.16	335	eP		P	17 24 58.6 +0.1
	comp=Z,3.1nm,0.6s,mb4.1						
KSRS	Korea Array	43.26	37	P		P	17 24 59.9 +0.5
	comp=Z,1.9nm,0.6s,mb3.9,baz=220,slow=8.9,SNR=12						
SONM	Songino Array	43.86	9	P		P	17 25 04.8 +0.8
	comp=Z,3.5nm,0.5s,mb4.2,baz=191,slow=9.5,SNR=24						
SONM				PcP	PcP		17 26 47.5 +0.2
	comp=Z,0.5nm,0.5s,baz=173,slow=5.0,SNR=3.9						
SONM				ScP	ScP		17 30 23.8 -0.2
	comp=Z,0.2nm,0.5s,baz=191,slow=6.1,SNR=3.0						
MKAR	Makanchi Array	43.94	345	P		P	17 25 04.2 -0.4
	comp=Z,4.3nm,0.3s,mb4.5,baz=161,slow=8.6,SNR=143						
MK31	Makanchi Array	43.94	345	eP		P	17 25 03.9 -0.7
ULN	Ulaanbaatar	44.00	10	eP		P	17 25 04.8 -0.3
	comp=Z,1.1nm,0.5s,mb3.7						
WRA	Warramunga Arr	44.08	125	P		P	17 25 05.9 -0.3
	comp=Z,3.3nm,0.5s,mb4.3,baz=303,slow=9.2,SNR=68						
WRA				PcP	PcP		17 26 48.6 -0.1
	comp=Z,0.3nm,0.3s,baz=316,slow=2.7,SNR=5.3						
WRA				ScP	ScP		17 30 25.6 0.0
	comp=Z,0.8nm,0.6s,baz=317,slow=3.4,SNR=13						
ASAR	Alice Springs	45.66	130	P		P	17 25 18.8 +0.2
	comp=Z,2.9nm,0.4s,mb4.3,baz=302,slow=7.6,SNR=100						
ASAR				PcP	PcP		17 26 54.7 +0.6
	comp=Z,0.2nm,0.4s,baz=307,slow=3.1,SNR=2.9						
ASAR				ScP	ScP		17 30 32.1 +0.1
	comp=Z,0.8nm,0.8s,baz=306,slow=4.3,SNR=9.3						
KURK	Kurchatov	48.50	345	eP		P	17 25 39.6 -0.5
	comp=Z,2.6nm,0.3s,mb4.3						
ZALV	Zalesovo Beam	50.22	351	P		P	17 25 52.7 -0.4
	comp=Z,3.9nm,0.4s,mb4.4,baz=170,slow=7.3,SNR=23						
ZALV	Zalesovo Beam	50.22	351	P		P	17 25 52.7 -0.4
RDF	Al-Radifah	52.65	303	eP		P	17 26 12.1 +0.4
RDF				AMb	AMB		17 26 14.5
	comp=Z,26nm,1.1s,mb4.9						
NAY	Al-Naaiem	53.01	303	eP		P	17 26 14.3 0.0
NAY				AMb	AMB		17 26 14.8
	comp=Z,8.1nm,0.6s,mb4.7						
BVAR	Borovoye Array	53.01	340	P		P	17 26 12.7 -1.2
	comp=Z,1.6nm,0.4s,mb4.1,baz=135,slow=9.6,SNR=8.7						
MIB	Mutribah	53.10	304	eP		P	17 26 15.0 +0.1
MIB				AMb	AMB		17 26 15.5
	comp=Z,21nm,0.6s,mb5.0						
ABKAR	Abkulak array	54.46	331	eP		P	17 26 23.7 -0.7
	comp=Z,1.7nm,0.4s,mb4.1						
STKA	Stephens Creek	55.81	134	P		P	17 26 34.9 +0.4
	comp=Z,3.8nm,0.6s,mb4.4,baz=253,slow=24,SNR=11						
STKA	Stephens Creek	55.81	134	eP		P	17 26 34.2 -0.3
	comp=Z,0.9nm,0.7s,mb3.7						
ARU	Arti	60.01	337	P		P	17 26 59.7 -3.5
	comp=Z,2.7nm,0.8s,mb4.1						
YAK	Yakutsk	62.28	17	P		P	17 27 17.4 -1.0
BR131	Keskin Array S	66.70	311	eP		P	17 27 46.6 -1.0
	comp=Z,5.7nm,0.9s,mb4.4						
BRTR	Keskin Array B	66.70	311	P		P	17 27 46.9 -0.7
	comp=Z,3.9nm,0.7s,mb4.3,baz=128,slow=7.4,SNR=22						
PETK	Petropavlovsk-	69.09	34	P		P	17 28 02.1 -0.1
	comp=Z,3.4nm,0.9s,mb4.1,baz=196,slow=2.4,SNR=4.5						
AKASG	Malin Array Be	72.47	322	P		P	17 28 21.1 -1.6
	comp=Z,1.4nm,0.4s,mb4.1,baz=95,slow=5.7,SNR=12						
JOF	Joensuu	75.02	334	ep		P	17 28 36.0 -1.3
	comp=Z,2.8nm,0.5s,mb4.2						
LBTB	Lobatse	75.18	243	eP		P	17 28 41.0 +2.0
	comp=Z,6.9nm,0.8s,mb4.3						
BOSA	Boshof	76.27	239	P		P	17 28 45.9 +0.8
	comp=Z,1.8nm,0.6s,mb3.9,baz=108,slow=6.0,SNR=4.6						
FINES	FINESS Array B	76.92	332	P		P	17 28 47.5 -0.6
	comp=Z,1.8nm,0.6s,mb3.9,baz=101,slow=5.9,SNR=16						
KAF	Kangasniemi	76.99	333	ep		P	17 28 47.4 -1.1
	comp=Z,2.8nm,0.6s,mb4.1						
KEV	Kevo	78.86	341	ep		P	17 29 07.1 +8.4
	comp=Z,14nm,1.3s,mb4.4						
ARCES	ARCESS Array B	79.30	340	P		P	17 29 00.9 -0.1
	comp=Z,1.4nm,0.5s,mb3.9,baz=95,slow=5.9,SNR=18						
SBF	Sospel	86.53	314	eP		P	17 29 38.9 +0.1
	comp=Z,13nm,0.6s,mb4.6						
SBF	Sospel	86.53	314	eP		P	17 29 38.9 +0.1
	comp=Z,6.3nm,0.6s,mb4.6						
LPG	La Plagne	86.92	315	eP		P	17 29 41.2 +0.5
	comp=Z,8.6nm,0.8s,mb4.3						
LPG	La Plagne	86.92	315	eP		P	17 29 41.2 +0.5
	comp=Z,4.3nm,0.8s,mb4.3						
LPL	La Plagne	86.93	315	eP		P	17 29 41.2 +0.5
	comp=Z,5.4nm,0.6s,mb4.2						
LPL	La Plagne	86.93	315	eP		P	17 29 41.2 +0.5
	comp=Z,2.7nm,0.6s,mb4.2						
CABF	La Chapelle	87.31	316	eP		P	17 29 42.9 +0.4
ORIF	Oris-en-Rattie	87.57	315	eP		P	17 29 44.3 +0.5
SMF	Signal de Mont	88.86	317	eP		P	17 29 50.8 +1.0
	comp=Z,3.1nm,0.5s,mb4.2						
SMF	Signal de Mont	88.86	317	eP		P	17 29 50.8 +1.0
	comp=Z,1.5nm,0.5s,mb4.2						
TXAR	Lajitas Array	140.90	29	PKP	PKPdf		17 36 25.5 +0.1
	comp=Z,0.3nm,0.7s,baz=343,slow=3.9,SNR=3.5						
PLCA	Paso Flores	142.29	196	PKP	PKPdf		17 36 24.5 -3.0
	comp=Z,0.8nm,0.5s,baz=46,slow=2.5,SNR=3.2						

*ISCJB **19** 17:21:44.9±0.5, 38°.89N±0°.03×27°.88E±0°.04, h8km±4km, Error ellipse: s-maj=5.5km s-min=4.6km az=175.6*
*DDA **19** 17:21:44.8, 38°.93N×27°.86E, h10km±1km, Md3.1*
*ISK **19** 17:21:44.6, 38°.89N×27°.88E, h6km, MD2.7*
*CSEM **19** 17:21:45.1±0.1, 38°.90N×27°.87E, h5km, MD3.1, Error ellipse: s-maj=2.8km s-min=2.4km az=108.0*
ISC 19 17:21:45.3±0.5, 38°.90N±0°.03×27°.87E±0°.04, h8km±5km, n23, σ0°57/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.05	243	eP		Pg	17 21 47.1 +0.1
AKHS				i S		Sg	17 21 48.9 +0.6
AKHS	Akhisar	0.05	243	eP		Pg	17 21 47.1 +0.1
AKHS				i S		Sg	17 21 48.9 +0.6
DEMI	Demirci	0.68	78	eP		Pg	17 21 57.9 -0.5
DEMI				i S		Sg	17 22 06.8 -0.4
DEMI	Demirci	0.68	78	eP		Pg	17 21 57.9 -0.5
DEMI				i S		Sg	17 22 06.8 -0.5
IZM	Izmir	0.69	223	ePG		Pg	17 21 58.1 -0.5
IZM				eSG		Sg	17 22 08.3 +0.7
IZM	Izmir	0.69	223	ePg		Pg	17 21 58.2 -0.4
IZM				eSg		Sg	17 22 08.3 +0.7
KULA	Kula-Manisa	0.73	122	ePG		Pg	17 21 59.0 -0.4
KULA				eSG		Sg	17 22 08.9 0.0
KULA	Kula-Manisa	0.73	122	ePg		Pg	17 21 59.1 -0.3
KULA				eSg		Sg	17 22 08.9 0.0
BALB	Balikesir	0.74	1	ePG		Pg	17 21 59.8 +0.2
BALB				eSG		Sg	17 22 09.7 +0.4
BALB	Balikesir	0.74	1	ePg		Pg	17 21 59.8 +0.2
BALB				eSg		Sg	17 22 09.7 +0.5
BLCB	Balcova	0.82	232	ePG		Pg	17 22 00.8 -0.4
BLCB	Balcova	0.82	232	ePg		Pg	17 22 00.8 -0.4
DURS	Dursunbey	0.84	34	eP		Pg	17 22 01.1 -0.5
DURS				i S		Sg	17 22 13.9 +1.3
DURS	Dursunbey	0.84	34	eP		Pg	17 22 01.1 -0.5
BALY	Balya	0.86	347	eP		Pg	17 22 01.0 -0.9
BALY				i S		Sg	17 22 12.7 -0.4
BALY	Balya	0.86	347	eP		Pg	17 22 01.0 -0.9
BALY				i S		Sg	17 22 12.7 -0.4
AYVA	Ayvalik	1.00	294	eP		Pg	17 22 04.0 -0.6
AYVA				i S		Sg	17 22 17.7 +0.1
GONE	Gonen-Balikesi	1.15	353	ePN		Pn	17 22 07.6 -0.1
GONE	Gonen-Balikesi	1.15	353	ePn		Pn	17 22 07.6 -0.1
KCTX	Karacabey (Bur	1.42	15	ePN		Pn	17 22 12.0 +0.7
KCTX	Karacabey (Bur	1.42	15	ePn		Pn	17 22 12.0 +0.7
KHL	Karahalli	1.42	113	ePN		Pn	17 22 12.1 +0.8
KHL	Karahalli	1.42	113	ePn		Pn	17 22 12.1 +0.7

IDC 19 17:22:59.5±2.9, 10°.37S×113°.31E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.5/3, Error ellipse: s-maj=152.2km s-min=26.0km az=46.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.40	118	P		P	17 28 00.5 +0.7
	0.8nm,0.7s,baz=292,slow=11,SNR=7.0						
ASAR	Alice Springs	23.68	127	P		P	17 28 12.3 -0.9
	0.9nm,1.1s,baz=300,slow=10,SNR=4.9						
MKAR	Makanchi Array	63.29	337	P		P	17 33 30.3 +0.2
	0.5nm,0.5s,baz=144,slow=8.0,SNR=8.3						

*PGC **19** 17:23:32.5±4.5, 58°.57N×140°.35W, h10km, ML3.5/4, 94km southwest of Yakutat, Ak Off Coast Of Southeastern Alaska*
NEIC 19 17:23:35.9, 58°.67N×140°.51W, h25km, ML3.5(PGC), ML3.3(AEIC), 10D, After AEIC., Off coast of southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKU2	Yakutat	0.95	27	P		Pn	17 23 50.4 -3.2
PNL	Peninsula	1.15	29	P		Pn	17 23 53.0 -3.4
PNL				S		Sn	17 24 07.6 -3.8
DHAK	Deception Hill	1.26	70	P		Pn	17 23 54.8 -3.2
PCA	Pinnacle	1.43	5	P		Pn	17 23 57.5 -2.8
PLBC	Pleasant Camp	2.28	68	⇓Pn		Pn	17 24 09.2 -2.7
PLBC				⇓Sn		Sn	17 24 37.3 -1.9
HYT	Haines Junctio	2.64	34	⇑Pn		Pn	17 24 15.4 -1.5
SKAG	Skagway	2.79	71	P		Pn	17 24 16.3 -2.6
SIT	Sitka	3.21	118	P		Pn	17 24 24.4 -0.3
WHY	Whitehorse	3.48	53	P		Pn	17 24 26.3 -2.1
WHY	Whitehorse	3.48	53	⇓Pn		Pn	17 24 25.0 -3.4
BCA3	Beaver Creek A	4.45	353	P		Pn	17 24 40.4 -1.4
RC01	Rabbit Creek A	5.24	301	ePn		Pn	17 24 50.1 -2.5
RC01				eSn		Sn	17 25 47.1 -5.0
DOT	Dot Lake	5.28	343	ePn		Pn	17 24 51.9 -1.2
DAWY	Dawson	5.44	5	ePn		Pn	17 24 53.8 -1.4
DAWY	Dawson	5.44	5	⇓Pn		Pn	17 24 54.2 -1.0
DLBC	Dease Lake	5.50	88	P		Pn	17 24 53.4 -2.6
DLBC	Dease Lake	5.50	88	⇑Pn		Pn	17 24 53.4 -2.7
NDB	Naden	6.33	135	⇓Pn		Pn	17 25 01.9 -5.6
NDB				⇓Sn		Sn	17 26 09.9 -9.0
DIB	Dawson Inlet,	7.10	137	⇓Pn		Pn	17 25 13.2 -4.9
DIB				⇑Sn		Sn	17 26 27.6 -10
MOBC	Moresby Island	7.33	135	⇓Pn		Pn	17 25 16.5 -4.8
MOBC				⇓Sn		Sn	17 26 34.4 -9.1
BNB	Barry Inlet	7.86	137	⇓Pn		Pn	17 25 24.0 -4.5

*

-2.4500, Plg19.0000°, Azm101.0000°; Data Used: II IC G IU CN.
*NEIC **19** 17:29:52.7±1.7,24°.52S×175°.78W,h44km±14km,mb4.8/22 Error ellipse: s-maj=12.7km s-min=9.7km az=129.0*
ISC 19 17:29:51.8±2.5,24°.56S±0°.07×175°.72W±0°.07, h35km±17km,h44km±2.8km:pP-P,n106,σ0°98/66,mb4.8/44, MS4.3/24,7C,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.94**	**318**	⇑*e*Pn	**Pn**	**17 31 59.1**	**+0.6**
	162nm,1.2s						
AFI	**Afiamalu**	**11.23**	**20**	Pn	**Pn**	**17 32 20.9**	**-9.0**
	4.7nm,0.3s,baz=160,slow=8.1,SNR=7.0						
AFI				Sn	**Sn**	**17 34 16.9**	**-17**
	2.9nm,0.3s,baz=95,slow=20,SNR=3.0						
AFI	**Afiamalu**	**11.23**	**20**	*e*Pn	**Pn**	**17 32 19.7**	**-10**
URZ	**Urewera**	**14.95**	**202**	Pn	**Pn**	**17 33 24.7**	**+4.1**
	0.2nm,0.3s,baz=148,slow=10,SNR=2.3						
URZ				Sn	**Sn**	**17 36 04.3**	**-0.7**
	1.5nm,0.3s,baz=77,slow=24,SNR=6.6						
URZ				LR	LR	17 37 58.2	
	comp=Z,512nm,20.8s,baz=232,slow=32						
URZ	**Urewera**	**14.95**	**202**	*e*Pn	**Pn**	**17 33 22.1**	**+1.6**
URZ				*e*Sn	**Sn**	**17 35 51.2**	**-14**
RAR	**Rarotonga**	**15.07**	**80**	Pn	**Pn**	**17 33 13.8**	**-8.3**
	5.2nm,0.3s,baz=244,slow=9.3,SNR=12						
RAR				Sn	Sn	17 35 44.1	-24
	1.5nm,0.3s,baz=71,slow=21,SNR=3.1						
RAR				LR	LR	17 38 25.2	
	comp=Z,817nm,18.2s,baz=271,slow=34						
RAR	**Rarotonga**	**15.07**	**80**	*e*Pn	**Pn**	**17 33 12.3**	**-10**
RAR				*e*Sn	Sn	17 35 43.4	-25
DZM	**Mont Dzumac**	**16.57**	**275**	*e*P	**Pn**	**17 33 45.9**	**+4.4**
	142nm,1.4s						
DZM				*e*LR	LR	17 37 32.3	
	948nm,24.1s						
SNZO	**South Karori**	**18.51**	**203**	*e*P	**Pn**	**17 34 05.1**	**-0.3**
SNZO				*e*Sn	**Sn**	**17 37 18.4**	**-13**
RPZ	**Rata Peaks**	**21.96**	**206**	P	**P**	**17 34 46.8**	**+4.3**
	5.0nm,0.7s,mb4.1,baz=50,slow=17,SNR=5.2						
RPZ				S	**S**	**17 38 40.0**	**-3.0**
	8.7nm,1.1s,baz=51,slow=19,SNR=2.9						
PPT	**Papeete**	**25.34**	**79**	LR	LR	17 43 18.9	
	comp=Z,592nm,19.1s,MS4.1,baz=292,slow=32						
HNR	**Honiara**	**27.64**	**299**	LR	LR	17 44 53.3	
	comp=Z,363nm,19.3s,MS4.0,baz=161,slow=33						
STKA	**Stephens Creek**	**38.12**	**249**	P	**P**	**17 37 08.8**	**+1.2**
	4.6nm,1.0s,mb4.2,baz=333,slow=23,SNR=2.9						
STKA				LR	LR	17 52 12.1	
	comp=Z,640nm,19.0s,MS4.5,baz=45,slow=35						
STKA	**Stephens Creek**	**38.12**	**249**	P	**P**	**17 37 08.8**	**+1.2**
STKA				LR	LR	17 52 12.1	
PMG	**Port Moresby**	**38.41**	**287**	*e*P	**P**	**17 37 07.3**	**-2.9**
	57nm,0.9s,mb5.3						
ASAR	**Alice Springs**	**45.78**	**260**	P	**P**	**17 38 10.1**	**-0.2**
	7.1nm,0.8s,mb4.6,baz=99,slow=8.4,SNR=52						
ASAR				S	**S**	**17 44 53.7**	**+2.0**
	0.7nm,0.9s,baz=95,slow=15,SNR=3.6						
WB2	**Warramunga Arr**	**46.24**	**265**	*e*P	**P**	**17 38 12.2**	**-1.7**
WRA	**Warramunga Arr**	**46.25**	**265**	P	**P**	**17 38 12.6**	**-1.5**
	7.3nm,0.8s,mb4.7,baz=103,slow=8.3,SNR=37						
WRA				S	**S**	**17 44 57.5**	**-1.1**
	1.2nm,1.0s,baz=104,slow=14,SNR=4.1						
WRA				LR	LR	17 57 18.9	
	comp=Z,435nm,20.1s,MS4.4,baz=100,slow=36						
SBA	**Scott Base**	**53.99**	**185**	*e*P	**P**	**17 39 17.5**	**+5.7**
	4.9nm,0.7s,mb4.5						
GUMO	**Guam**	**54.02**	**310**	LR	LR	17 58 52.2	
	comp=Z,109nm,20.8s,MS3.9,baz=124,slow=33						
CASY	**Casey**	**61.24**	**206**	*e*P	**P**	**17 40 02.5**	**-0.4**
	26nm,0.9s,mb5.4						
CBIJ	**Chichi jima**	**65.48**	**319**	LR	LR	18 06 18.1	
	comp=Z,138nm,19.3s,MS4.2,baz=153,slow=34						
QSPA	**South Pole Qui**	**65.53**	**180**	P	**P**	**17 40 35.7**	**+4.6**
	2.5nm,0.7s,mb4.3,baz=52,slow=0.9,SNR=8.4						
QSPA	**South Pole Qui**	**65.53**	**180**	P	**P**	**17 40 29.3**	**-1.8**
	12nm,1.2s,mb4.8						
MAJO	**Matsushiro**	**74.71**	**323**	*e*P	**P**	**17 41 26.2**	**-1.7**
	6.1nm,0.7s,mb4.6						
KSM	**Kuching**	**76.07**	**278**	*e*P	**P**	**17 41 36.1**	**-0.2**
	18nm,1.0s,mb5.0						
TPUB	**Ta-pu**	**77.94**	**303**	*e*P	**P**	**17 41 44.0**	**-2.5**
	18nm,0.8s,mb5.1						
ASAJ	**Asahikawa**	**78.28**	**331**	P	**P**	**17 41 47.4**	**-0.6**
	13nm,0.8s,mb4.9,baz=185,slow=10,SNR=4.8						
YSS	**Yuzh-Sakhalins**	**80.45**	**333**	*e*P	**P**	**17 41 59.7**	**0.0**
	34nm,0.9s,mb5.3						
ISA	**Isabella**	**80.72**	**44**	*e*P	**P**	**17 42 01.5**	**0.0**
	7.4nm,1.2s,mb4.5						
PETK	**Petropavlovsk-**	**80.73**	**344**	P	**P**	**17 42 00.4**	**-0.6**
	5.9nm,0.8s,mb4.6,baz=138,slow=9.8,SNR=6.0						
CMB	**Columbia Colle**	**81.06**	**41**	*e*P	**P**	**17 42 02.6**	**-0.7**
	6.7nm,1.1s,mb4.5						
KSRS	**Korea Array**	**81.31**	**318**	P	**P**	**17 42 05.3**	**+0.8**
	2.6nm,0.9s,mb4.2,baz=126,slow=5.4,SNR=8.0						
KSRS				LR	LR	18 14 27.1	
	comp=Z,92nm,18.4s,MS4.2,baz=295,slow=33						
WAKR	**Walker**	**81.94**	**41**	*e*P	**P**	**17 42 07.8**	**0.0**
	8.7nm,1.1s,mb4.6						
YBH	**Yreka Blue Hor**	**82.19**	**37**	LR	LR	18 13 22.9	
	comp=Z,164nm,19.1s,MS4.4,baz=151,slow=32						
LDFC	**Landfair**	**82.53**	**46**	*e*P	**P**	**17 42 11.4**	**+0.4**
	12nm,0.8s,mb5.0						
NVAR	**Mina Array Bea**	**82.58**	**42**	P	**P**	**17 42 11.8**	**+0.6**
	4.3nm,0.9s,mb4.5,baz=220,slow=8.7,SNR=24						
SYO	**Syowa Base**	**83.23**	**192**	⇑*e*PcP	PcP	17 42 15.4	-3.3
SHPR	**Sheep Range**	**83.36**	**45**	*e*P	**P**	**17 42 15.8**	**+0.6**
	5.7nm,1.3s,mb4.4						
TUC	**Tucson**	**83.87**	**50**	*e*P	**P**	**17 42 19.3**	**+1.3**
	2.8nm,0.6s,mb4.6						
TUC				*e*	pP	17 42 31.8	+2.7
WVOR	**Wild Horse Val**	**84.93**	**39**	*e*P	**P**	**17 42 22.8**	**-0.3**
	7.2nm,1.2s,mb4.7						
PLCA	**Paso Flores**	**84.97**	**133**	LR	LR	18 14 32.2	
	comp=Z,119nm,19.0s,MS4.3,baz=170,slow=31						
MDJ	**Mudanjiang**	**85.03**	**324**	P	**P**	**17 42 24.3**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
MDJ				pmax	pmax		
	comp=Z,66nm,6.9s						
MSU	**Marysvale**	**86.45**	**45**	*e*P	**P**	**17 42 31.0**	**+0.2**
	comp=Z,9.0nm,1.4s,mb4.8						
WHN	**Wuhan**	**86.53**	**306**	P	**P**	**17 42 31.8**	**+0.4**
CN2	**Changchun**	**86.78**	**322**	*e*P	**P**	**17 42 31.9**	**-0.4**
CN2				*e*S	S	17 53 06.5	-0.9
CN2				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.2						
PSI	**Prapat**	**86.93**	**274**	P	**P**	**17 42 33.5**	**-0.2**
	comp=Z,21nm,1.1s,mb5.3,baz=162,slow=4.3,SNR=8.0						
BBB	**Bella Bella**	**87.01**	**27**	LR	LR	18 15 10.8	
	comp=Z,114nm,19.2s,MS4.3,baz=65,slow=31						
ETW	**Entiat**	**87.39**	**34**	*e*P	**P**	**17 42 33.8**	**-1.3**
	comp=Z,6.1nm,1.0s,mb4.8						
MNTX	**Cornudas Mount**	**87.42**	**53**	*e*P	**P**	**17 42 35.2**	**-0.5**
	comp=Z,4.3nm,1.0s,mb4.6						
TXAR	**Lajitas Array**	**87.51**	**56**	P	**P**	**17 42 36.2**	**0.0**
	comp=Z,2.2nm,1.0s,mb4.3,baz=205,slow=5.5,SNR=10						
TXAR				LR	LR	18 17 00.6	
	comp=Z,182nm,18.3s,MS4.5,baz=50,slow=32						
ANMO	**Albuquerque**	**88.33**	**50**	LR	LR	18 16 16.7	
	comp=Z,255nm,18.6s,MS4.7,baz=318,slow=32						
GDL2	**Guadalupe Moun**	**88.42**	**53**	*e*P	**P**	**17 42 41.5**	**+1.0**
	comp=Z,4.2nm,1.2s,mb4.5						
CMIG	**Matias Romero**	**88.97**	**71**	LR	LR	18 15 38.2	
	comp=Z,138nm,19.2s,MS4.4,baz=145,slow=31						
TRF	**Thorofare Moun**	**89.99**	**11**	*e*P	**P**	**17 42 45.6**	**-1.4**
	comp=Z,7.3nm,0.9s,mb5.0						
BJI	**Beijing**	**90.24**	**315**	P	**P**	**17 42 49.6**	**+0.8**
BJI				S	S	17 53 40.3	0.0
BJI				SS	SS	17 59 42.3	+1.4
BJI				pmax	pmax		
	comp=Z,18nm,0.3s,mb5.9						
BJI				pmax	pmax		
	comp=Z,110nm,4.7s						
BJI				LR	LR		
	comp=N,100nm,24.7s,MS4.3						
BJI				LR	LR		
	comp=E,92nm,25.1s,MS4.3						
BJI				LR	LR		
	comp=Z,49nm,26.3s,MS3.8						
GYA	**Guiyang**	**90.46**	**299**	P	**P**	**17 42 50.0**	**-0.1**
GYA				pP	pP	17 43 05.3	+4.1
GYA				sP	sP	17 43 11.0	+5.8
GYA				PP	PP	17 46 27.4	+2.1
GYA				SKS		17 53 14.5	
GYA				S	S	17 53 38.9	-4.1
GYA				SS	SS	17 59 43.8	-0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,90nm,5.3s						
GYA				LR	LR		
	comp=N,480nm,18.1s,MS5.0						
GYA				LR	LR		
	comp=E,360nm,19.6s,MS5.0						
GYA				LR	LR		
	comp=Z,440nm,18.8s,MS4.9						
PDAR	**Pinedale Array**	**90.50**	**42**	P	**P**	**17 42 49.6**	**-0.3**
	comp=Z,1.0nm,0.8s,mb4.2,baz=238,slow=2.8,SNR=7.9						
PDAR				LR	LR	18 18 24.7	
	comp=Z,82nm,19.1s,MS4.2,baz=125,slow=32						
ILAR	**Eielson Array**	**91.81**	**12**	P	**P**	**17 42 54.5**	**-0.9**
	comp=Z,1.5nm,1.0s,mb4.3,baz=219,slow=6.1,SNR=9.1						
ILAR				LR	LR	18 25 37.3	
	comp=Z,100nm,18.1s,MS4.3,baz=324,slow=37						
XAN	**Xi'an**	**92.25**	**306**	P	**P**	**17 42 59.1**	**+0.9**
XAN				pP	pP	17 43 10.9	+1.6
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
XAN				pmax	pmax		
	comp=Z,10.0nm,4.2s						
KMI	**Kunming**	**93.04**	**296**	P	**P**	**17 43 03.5**	**+1.4**
KMI				pP	pP	17 43 16.0	+2.8
KMI				sP	sP	17 43 22.9	+5.7
KMI				PP	PP	17 46 49.0	+3.3
KMI				S	S	17 54 03.8	-2.5
KMI				sS	sS	17 54 27.6	+2.9
KMI				SS	SS	18 00 19.5	-2.3
KMI				pmax	pmax		
	comp=Z,13nm,1.3s,mb5.2						
KMI				pmax	pmax		
	comp=Z,93nm,5.8s						
KMI				LR	LR		
	comp=N,93nm,18.7s,MS4.4						
KMI				LR	LR		
	comp=E,100nm,19.8s,MS4.4						
KMI				LR	LR		
	comp=Z,110nm,18.1s,MS4.3						
CHRT	**Chiangrai**	**93.29**	**290**	⇑P	**P**	**17 43 04.0**	**+0.6**
CM31	**Chiang Mai Arr**	**93.43**	**289**	*e*P	**P**	**17 43 05.2**	**+1.1**
	comp=Z,12nm,0.9s,mb5.3						
CMAR	**Chiang Mai Arr**	**93.43**	**289**	P	**P**	**17 43 05.2**	**+1.2**
	comp=Z,9.4nm,0.9s,mb5.2,baz=132,slow=3.2,SNR=35						
CMAR				LR	LR	18 25 24.3	
	comp=Z,46nm,18.9s,MS4.0,baz=171,slow=36						
CHG	**Chiang Mai**	**93.58**	**289**	⇑P	**P**	**17 43 06.5**	**+1.8**
	comp=Z,42nm,0.9s,mb5.9						
CHTO	**Chiang Mai**	**93.58**	**289**	*e*P	**P**	**17 43 06.1**	**+1.4**
	comp=Z,15nm,1.0s,mb5.4						
HHC	**Hu-ho-hao-te**	**93.67**	**313**	*e*P	**P**	**17 43 04.3**	**-0.3**
HHC				pP	pP	17 43 21.5	+5.8
HHC				PP	PP	17 46 53.0	+2.7
HHC				SKS		17 53 31.5	
HHC				S	S	17 54 05.6	-5.5
HHC				SS	SS	18 00 30.0	-0.3
HHC				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.5						
HHC				pmax	pmax		
	comp=Z,93nm,6.5s						
HHC				LR	LR		
	comp=N,130nm,17.8s,MS4.6						
HHC				LR	LR		
	comp=E,130nm,17.6s,MS4.6						
HHC				LR	LR		
	comp=Z,100nm,16.5s,MS4.4						
ATAH	**Atahualpa**	**93.68**	**99**	LR	LR	18 16 08.7	
	comp=Z,133nm,20.2s,MS4.4,baz=205,slow=30						
CD2	**Chengdu**	**94.73**	**302**	*e*P	**P**	**17 43 09.8**	**+0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.6						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
LZH	**Lanzhou**	**96.88**	**306**	*e*P	**P**	**17 43 20.0**	**+0.6**
LZH				pP	pP	17 43 32.5	+2.0
LZH				sP	sP	17 43 38.5	+4.0
LZH				pmax	pmax		
	comp=Z,18nm,1.5s,mb5.3						
LPAZ	**La Paz**	**98.57**	**112**	LR	LR	18 22 14.6	
	comp=Z,83nm,19.3s,MS4.2,baz=129,slow=32						
SONM	**Songino Array**	**100.18**	**318**	LR	LR	18 30 24.7	
	comp=Z,66nm,18.0s,MS4.2,baz=304,slow=36						
WMQ	**Urumqi**	**111.15**	**310**	*e*Pdif	Pdif	17 44 25.0	+2.2
WMQ				PP	PP	17 49 06.0	+4.5
WMQ				SS	SS	18 04 32.0	+0.2
WMQ				AMB	AMB		
	comp=Z,76nm,10.0s						
WMQ				LR	LR		
	comp=N,50nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=E,68nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,57nm,20.0s,MS4.2						
ZALV	**Zalesovo Beam**	**114.95**	**320**	PKP	PKiKP	17 48 28.4	-0.2
	comp=Z,0.7nm,0.6s,baz=137,slow=0.2,SNR=4.9						
MKAR	**Makanchi Array**	**115.49**	**312**	PKP	PKPdf	17 48 29.3	-0.5
	comp=Z,0.8nm,0.8s,baz=59,slow=4.7,SNR=5.7						
KKAR	**Karatay Array**	**123.38**	**307**	*e*PKPdf	PKPdf	17 48 44.9	-0.2
BVAR	**Borovoye Array**	**123.52**	**319**	PKP	PKPdf	17 48 45.1	+0.1
	comp=Z,1.3nm,0.7s,baz=52,slow=2.4,SNR=9.8						
AKTK	**Aktyubinsk**	**131.47**	**317**	PKP	PKPdf	17 49 01.0	+0.7
AKTO	**Aktyubinsk**	**131.47**	**317**	PKP	PKPdf	17 49 01.0	+0.7
	comp=Z,1.1nm,0.7s,baz=82,slow=6.8,SNR=5.1						
FINES	**FINESS Array B**	**140.25**	**344**	PKP	PKPdf	17 49 18.7	+2.4
	comp=Z,1.3nm,0.7s,baz=48,slow=2.1,SNR=3.2						
NACGM	**Naroch**	**145.42**	**337**	*e*	PKPdf	17 49 22.0	-3.6
SUW	**Suwalki**	**147.37**	**339**	*e*PKPdf	PKPdf	17 49 27.3	-1.6
SUW				*e*PKPbc	PKPbc	17 49 32.5	+1.1
AKASG	**Malin Array Be**	**147.57**	**330**	PKPbc	PKPbc	17 49 31.4	-0.7
	comp=Z,4.7nm,0.7s,baz=41,slow=3.4,SNR=16						
AKBB	**Malin Array Si**	**147.57**	**330**	*e*PKPdf	PKPdf	17 49 30.9	+1.5
KIEV	**Kiev**	**147.58**	**330**	*e*PKPdf	PKPdf	17 49 30.8	+1.3
MALT	**Malatya**	**148.00**	**304**	*e*PKPbc	PKPbc	17 49 34.7	+1.0
BR131	**Keskin Array S**	**151.07**	**309**	*e*PKPbc	PKPbc	17 49 41.2	0.0
BRTR	**Keskin Array B**	**151.07**	**309**	PKPbc	PKPbc	17 49 41.4	+0.2
	comp=Z,4.0nm,0.8s,baz=133,slow=4.2,SNR=21						
BUR08	**Bucovina Ar. S**	**151.60**	**329**	*e*PKPbc	PKPbc	17 49 40.2	-2.0
OJC	**Ojcow**	**151.69**	**339**	*e*PX	PKPbc	17 49 43.1	+0.8
KOLS	**Kolonicke sedl**	**151.87**	**334**	*e*PKP	PKPbc	17 49 43.8	+1.1
KOLS	**Kolonicke sedl**	**151.87**	**334**	*e*PKP	PKPbc	17 49 43.8	+1.1
CRVS	**Cervenica-Dubn**	**152.21**	**335**	*e*PKP	PKPbc	17 49 44.1	+0.6
CRVS	**Cervenica-Dubn**	**152.21**	**335**	*e*PKP	PKPbc	17 49 44.1	+0.6
EIL	**Elat**	**152.28**	**287**	PKPbc	PKPbc	17 49 45.0	+0.7
	comp=Z,2.9nm,0.8s,baz=120,slow=10,SNR=4.3						
EIL				PKPab	PKPab	17 49 55.7	+1.4
	comp=Z,5.5nm,0.7s,baz=323,slow=2.7,SNR=6.8						
EIL	**Elat**	**152.28**	**287**	PKPbc	PKPbc	17 49 45.0	+0.7
EIL				PKPab	PKPab	17 49 55.7	+1.4
CLL	**Collm**	**152.47**	**348**	*i* PKPbc	PKPbc	17 49 44.4	+0.4
	comp=Z,10.0nm,0.9s						
UPC	**Upice**	**152.55**	**344**	⇑*e*PKP	PKPbc	17 49 44.8	+0.6
UPC				*e*PKPAB	PKPab	17 49 54.5	-0.2
OKC	**Ostrava-Krasne**	**152.55**	**340**	⇑*e*PKP	PKPbc	17 49 44.6	+0.4
DPC	**Dobruska-Polom**	**152.61**	**343**	⇑*e*PKP	PKPbc	17 49 44.7	+0.3
DPC				*e*PKPAB	PKPab	17 49 55.5	+0.6
BRG	**Berggiesshubel**	**152.69**	**347**	*e*PKP	PKPbc	17 49 44.9	+0.4
	comp=Z,8.7nm,0.9s						
KECS	**Kecovo**	**152.92**	**336**	*e*PKP	PKPab	17 49 57.6	+1.3
KECS	**Kecovo**	**152.92**	**336**	*e*PKP	PKPab	17 49 57.6	+1.3
VYHS	**Vyhne**	**153.50**	**338**	*e*PKP	PKPab	17 49 59.4	+0.7
VYHS	**Vyhne**	**153.50**	**338**	*e*PKP	PKPab	17 49 59.4	+0.7
KHC	**Kasperske Hory**	**154.41**	**346**	*e*PKPAB	PKPab	17 50 02.0	-0.6
KHC				*ex*	x	17 50 10.9	

*ATH **19** 17:41:43.9,37°.95N×21°.45E,h23km±1km,MD3.2/8*
*CSEM **19** 17:41:43.9±0.2,37°.89N×21°.44E,h20km,MD3.2, Error ellipse: s-maj=5.1km s-min=3.9km az=12.0*
*THE **19** 17:41:43.9,37°.90N×21°.45E,h14km,ML2.2/6, Error ellipse: s-maj=0.8km s-min=0.5km az=101.0*
*ISCJB **19** 17:41:44.3±0.7,37°.90N±0°.04×21°.43E±0°.04,h16km±7km, Error ellipse: s-maj=7.0km s-min=4.7km az=7.7*
ISC 19 17:41:44.3±0.6,37°.92N±0°.04×21°.44E±0°.03,h17km±4km, n39,σ0°94/60,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**10**	*e*PB	**Pg**	**17 41 48.6**	**+0.3**
RLS				*e*SB	**Sg**	**17 41 52.2**	**+1.1**
RLS	**Riolos of Patr**	**0.14**	**10**	*e*Pb	**Pg**	**17 41 48.6**	**+0.3**
RLS				*e*Sb	**Sg**	**17 41 52.2**	**+1.1**
LAKA	**Lakka**	**0.54**	**53**	P	**Pg**	**17 41 54.5**	**-0.5**
LAKA				S	**Sg**	**17 42 02.5**	**+0.3**
LAKA	**Lakka**	**0.54**	**53**	P	**Pg**	**17 41 54.5**	**-0.5**
LAKA				S	**Sg**	**17 42 02.5**	**+0.3**
KFL	**Anninata**	**0.55**	**291**	P	**Pg**	**17 41 55.1**	**-0.1**
KFL	**Anninata**	**0.55**	**291**	P	**Pg**	**17 41 55.1**	**-0.1**
EFP	**Efpalio**	**0.63**	**36**	*e*PN	**Pg**	**17 41 55.9**	**-0.8**
EFP				*e*SN	**Sg**	**17 42 05.0**	**-0.2**
EFP	**Efpalio**	**0.63**	**36**	P	**Pg**	**17 41 56.0**	**-0.7**
EFP				S	**Sg**	**17 42 05.7**	**+0.5**
EFP	**Efpalio**	**0.63**	**36**	P	**Pg**	**17 41 56.0**	**-0.7**
EFP				*e*Sn	**Sg**	**17 42 05.0**	**-0.2**
EFP				S	**Sg**	**17 42 05.7**	**+0.5**
TRIZ	**Trizonia**	**0.67**	**48**	P	**Pg**	**17 41 56.9**	**-0.7**
TRIZ				S	**Sg**	**17 42 06.7**	**+0.2**
TRIZ	**Trizonia**	**0.67**	**48**	P	**Pg**	**17 41 56.9**	**-0.7**
TRIZ				S	**Sg**	**17 42 06.7**	**+0.2**
VLS	**Valsamata**	**0.72**	**291**	*e*PN	**Pb**	**17 41 57.4**	**-0.9**
VLS				*e*SN	**Sg**	**17 42 08.9**	**+1.0**
VLS	**Valsamata**	**0.72**	**291**	P	**Pb**	**17 41 57.4**	**-0.9**
VLS	**Valsamata**	**0.72**	**291**	P	**Pb**	**17 41 57.4**	**-0.9**
VLS				*e*Sn	**Sg**	**17 42 08.9**	**+1.0**
GUR	**Goura**	**0.72**	**88**	*e*PB	**Pb**	**17 41 57.0**	**-1.4**
GUR				*e*SN	**Sg**	**17 42 07.5**	**-0.4**
GUR	**Goura**	**0.72**	**88**	P	**Pb**	**17 41 57.0**	**-1.4**
GUR	**Goura**	**0.72**	**88**	P	**Pb**	**17 41 57.0**	**-1.4**
GUR				*e*Sn	**Sg**	**17 42 07.5**	**-0.4**
KALE	**Kalithea**	**0.73**	**49**	P	**Pg**	**17 41 58.0**	**-0.6**
KALE				S	**Sg**	**17 42 08.8**	**+0.5**
KALE	**Kalithea**	**0.73**	**49**	P	**Pg**	**17 41 58.0**	**-0.6**
KALE				S	**Sg**	**17 42 08.8**	**+0.5**
ITM	**Ithomi**	**0.83**	**152**	P	**Pb**	**17 41 59.2**	**-1.1**
ITM	**Ithomi**	**0.83**	**152**	P	**Pb**	**17 41 59.2**	**-1.1**
VLX	**Vlachokerasia**	**0.93**	**126**	*e*PN	**Pn**	**17 42 01.7**	**-0.9**
VLX	**Vlachokerasia**	**0.93**	**126**	*e*Pn	**Pn**	**17 42 01.7**	**-0.9**
DSF	**Desfina**	**0.99**	**60**	P	**Pb**	**17 42 02.4**	**-0.6**
DSF	**Desfina**	**0.99**	**60**	P	**Pb**	**17 42 02.4**	**-0.6**
LKD2	**Lefkada island**	**1.06**	**325**	P	**Pg**	**17 42 03.8**	**-1.1**
LKD2				S	**Sg**	**17 42 19.5**	**+0.7**
LKD2	**Lefkada island**	**1.06**	**325**	P	**Pg**	**17 42 03.8**	**-1.1**
LKD2				S	**Sg**	**17 42 19.5**	**+0.7**
LTK	**Loutraki**	**1.22**	**85**	*e*PN	**Pn**	**17 42 06.9**	**+0.4**
LTK	**Loutraki**	**1.22**	**85**	P	**Pn**	**17 42 05.5**	**-1.0**
LTK	**Loutraki**	**1.22**	**85**	P	**Pn**	**17 42 05.5**	**-1.0**
LTK	**Loutraki**	**1.22**	**85**	*e*Pn	**Pn**	**17 42 06.9**	**+0.4**
AGG	**Agios Georgios**	**1.31**	**32**	P	**Pn**	**17 42 06.8**	**-1.0**
AGG				S	**Sn**	**17 42 24.9**	**0.0**
AGG	**Agios Georgios**	**1.31**	**32**	P	**Pn**	**17 42 06.8**	**-1.0**
AGG				S	**Sn**	**17 42 24.9**	**0.0**
DID	**Didima**	**1.49**	**105**	*e*PN	**Pn**	**17 42 12.0**	**+1.8**
DID				*e*SN	**Sn**	**17 42 31.2**	**+1.9**
VLI	**Veliai**	**1.69**	**135**	*e*PN	**Pn**	**17 42 15.3**	**+2.2**
THL	**Klokotos Trika**	**1.71**	**15**	*e*PN	**Pn**	**17 42 13.4**	**+0.1**
THL	**Klokotos Trika**	**1.71**	**15**	*e*Pn	**Pn**	**17 42 13.4**	**+0.1**
VLY	**Voula,Athens**	**1.87**	**91**	*e*PN	**Pn**	**17 42 16.5**	**+1.0**
VLY	**Voula,Athens**	**1.87**	**91**	*e*Pn	**Pn**	**17 42 16.5**	**+1.0**

IDC 19 17:51:43.4±9.8,24°.15S×177°.08W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.8/16,mbtmp3.8/3,Error ellipse: s-maj=320.0km s-min=98.6km az=142.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.63**	**260**	P	P	17 59 58.6	+0.7
	0.7nm,0.8s,baz=89,slow=7.4,SNR=10						
WRA	**Warramunga Arr**	**45.05**	**265**	P	P	18 00 00.5	-0.8
	1.0nm,0.8s,baz=105,slow=8.3,SNR=8.9						
CMAR	**Chiang Mai Arr**	**92.12**	**289**	P	P	18 04 55.1	-0.1
	1.1nm,0.8s,baz=108,slow=2.9,SNR=5.2						

*IDC **19** 18:07:33.4±2.2,43°.25N×105°.20W,h0km,mb3.9/4, mb1 4.1/6,mb1mx3.7/26,mbtmp4.0/6,ML3.7/2,Error ellipse: s-maj=52.2km s-min=7.1km az=154.0*
*ISCJB **19** 18:07

K19A	Absolon Red Bu	2.76 253	⇑Pn	Pn	18 08 22.3	+0.2
	baz=2.8,SNR=106					
K19A			⇓Sb	Sb	18 09 00.1	-1.1
	baz=2.8					
J19A	Crowheart	2.79 262	⇑Pn	Pn	18 08 23.8	+1.1
	baz=2.8,SNR=74					
J19A			⇓Sb	Sb	18 09 02.4	+0.2
	baz=2.8					
L20A	Wamsutter	2.82 234	⇓Pn	Pn	18 08 24.3	+1.3
	baz=2.9,SNR=42					
N23A	Red Feather La	2.84 190	⇑Pn	Pn	18 08 24.8	+1.5
	baz=2.9					
N23A			⇑Sb	Sb	18 09 03.5	-0.1
	baz=2.9					
H19A	Powell	2.85 291	⇓Pn	Pn	18 08 23.9	+0.5
	baz=2.8,SNR=38					
F20A	Billings	2.94 317	Pn	Pn	18 08 24.2	-0.5
	baz=2.9,SNR=80					
N22A	Wattenberg Ran	3.02 197	⇑Pb	Pb	18 08 30.2	-1.1
	baz=3.1					
N22A			⇓Sb	Sb	18 09 09.7	+0.9
	baz=3.1					
LAO	LASA Array	3.07 348	*e*Pn	Pn	18 08 25.8	-0.6
M20A	Sweetwater, Wa	3.08 225	⇑Pb	Pb	18 08 31.6	-0.9
	baz=3.1,SNR=15					
M20A			⇑Sb	Sb	18 09 11.1	+0.5
	baz=3.1					
RLMT	Red Lodge	3.21 298	⇑Pn	Pn	18 08 28.6	+0.3
	baz=3.2,SNR=68					
RLMT	Red Lodge	3.21 298	*e*Pn	Pn	18 08 28.2	-0.1
BW06	Boulder Array	3.27 255	⇑Pn	Pn	18 08 29.7	+0.4
	baz=3.3,SNR=20					
BW06	Boulder Array	3.27 255	*e*Pn	Pn	18 08 29.3	+0.1
PDAR	Pinedale Array	3.27 255	Pn	Pn	18 08 29.5	+0.3
	3.9nm,0.3s,baz=73,slow=12,SNR=69					
PDAR			Pg	Pg	18 08 34.2	-5.3
	14nm,0.3s,baz=75,slow=22,SNR=50					
PDAR			Lg		18 09 14.6	
	18nm,0.3s,baz=72,slow=28,SNR=13					
I18A	Diamond G Ranc	3.30 272	⇑Pn	Pn	18 08 31.0	+1.3
	baz=3.3,SNR=22					
I18A			⇑Sb	Sb	18 09 16.5	-0.4
	baz=3.3					
H18A	Shoshone NF, C	3.32 289	⇓Pn	Pn	18 08 29.6	-0.2
	baz=3.3					
N21A	Black Mountain	3.38 211	⇑Pn	Pn	18 08 32.0	+1.3
	baz=3.4					
F19A	Roth Farm, Mol	3.40 311	⇑Pn	Pn	18 08 31.2	+0.3
	baz=3.4,SNR=145					
L19A	Farson	3.41 244	⇓Pn	Pn	18 08 32.7	+1.6
	baz=3.4,SNR=17					
G18A	Lazy EL Ranch,	3.48 299	⇑Sb	Sb	18 09 23.3	+1.4
	baz=3.5					
O23A	Lake Granby, G	3.52 188	⇑Sb	Sb	18 09 24.1	+1.2
	baz=3.6					
N20A	Spence Gulch,	3.62 219	⇑Pn	Pn	18 08 35.1	+1.0
	baz=3.7					
OGNE	Ogallala	3.64 138	*e*Pn	Pn	18 08 35.6	+1.2
K18A	Toltan Ranch,	3.65 255	⇓Pn	Pn	18 08 35.9	+1.5
	baz=3.7,SNR=27					
O22A	Kremmling	3.66 196	⇓Sb	Sb	18 09 28.5	+1.4
	baz=3.7					
E19A	Rath Farm, Rou	3.73 319	⇑Pn	Pn	18 08 35.0	-0.5
	baz=3.7,SNR=16					
GCMT	Greycliff	3.77 305	*e*Pn	Pn	18 08 36.2	+0.1
LKWY	Lake	3.80 285	*e*Pn	Pn	18 08 38.3	+1.8
F18A	Big Timber	3.86 306	⇓Pn	Pn	18 08 37.8	+0.5
	baz=3.9					
LOHW	Long Hollow	3.88 271	*e*Pn	Pn	18 08 38.1	+0.6
ISCO	Idaho Springs	3.90 184	*e*Pn	Pn	18 08 39.0	+1.1
MOOW	Moose Ponds	3.98 273	*e*Pn	Pn	18 08 39.7	+0.8
SNOW	Snow King Moun	4.00 269	*e*Pn	Pn	18 08 38.8	-0.4
YNR	Norris Junctio	4.03 287	*e*Pn	Pn	18 08 42.3	+2.7
REDW	Red Top Meadow	4.08 267	*e*Pn	Pn	18 08 39.4	-0.9
YFT	Old Faithful	4.09 283	*e*Pn	Pn	18 08 42.7	+2.3
IMW	Indian Meadow	4.12 275	*e*Pn	Pn	18 08 41.4	+0.6
TPAW	Teton Pass	4.14 269	*e*Pn	Pn	18 08 41.8	+0.6
DCID1	Drake Creek	4.30 271	Pn	Pn	18 08 43.1	-0.2
AHID	Auburn Hatcher	4.37 260	*e*Pn	Pn	18 08 46.0	+1.7
RRI2	Red Ridge	4.42 268	*e*Pn	Pn	18 08 45.5	+0.5
QLMT	Earthquake Lak	4.57 287	*e*Pn	Pn	18 08 47.2	+0.1
SMCO	Snowmass	4.69 196	P	Pb	18 09 00.9	+1.1
DGMT	Dagmar	4.83 8	*e*Pn	Pn	18 08 51.6	+1.0
BOZ	Bozeman (W)	4.94 295	*e*Pn	Pn	18 08 51.2	-1.0
HWUT	Hardware Ranch	5.10 248	*e*Pn	Pn	18 08 54.0	-0.2
	17nm,0.4s					
EGMT	Eagleton	5.35 326	*e*Pn	Pn	18 08 57.2	-0.4
	30nm,0.4s					
DLMT	Dillon	5.50 290	*e*Pn	Pn	18 09 01.4	+1.5
	6.7nm,0.6s					
HRY	Holter Researc	5.54 305	*e*Pn	Pn	18 09 00.4	+0.1
	15nm,0.4s					
JLU	Jordanelle	5.54 238	Pn	Pn	18 08 59.9	-0.5
	5.3nm,0.5s					
LRM	Limekiln Ridge	5.54 295	*e*Pn	Pn	18 09 00.3	-0.1
	34nm,0.4s					
LRM			*e*Pn	Pb	18 09 12.5	-1.8
MCMT	McKenzie Canyo	5.57 284	*e*Pn	Pn	18 09 02.5	+1.8
	2.6nm,0.4s					
SPUT	South Promonto	5.82 248	*e*Pn	Pn	18 09 05.0	+0.8
	6.8nm,0.5s					
HVU	Hansel Valley	5.86 253	*e*Pn	Pn	18 09 04.1	-0.5
	8.3nm,0.6s					
SDCO	Great Sand Dun	5.95 182	*e*Pn	Pn	18 09 06.9	+1.0
	1.0nm,0.4s					
MPU	Maple Canyon	6.01 234	Pn	Pn	18 09 07.2	+0.4
	13nm,0.7s					
TMUT	Trail Mountain	6.26 227	*e*Pn	Pn	18 09 11.0	+0.7
	51nm,0.8s					
ECSD	EROS Data Cent	6.27 87	*e*Pn	Pn	18 09 09.4	-0.9
	8.9nm,0.5s					
BGU	Big Grassy Mou	6.39 247	*e*Pn	Pn	18 09 11.5	-0.6
	4.0nm,0.8s					
CHMT	Chamberlain Mo	6.49 303	*e*Pn	Pn	18 09 13.3	0.0
	2.9nm,0.4s					
HLID	Hailey	6.64 272	*e*Pn	Pn	18 09 16.4	+0.9
	2.0nm,0.4s					
MSO	Missoula	6.88 300	*e*Pn	Pn	18 09 17.8	-1.0
	2.2nm,0.4s					
SWMT	Swartz Lake	7.22 305	*e*Pn	Pn	18 09 22.9	-0.5
	2.6nm,0.5s					
YBMT	Yellow Bay	7.40 307	*e*Pn	Pn	18 09 26.7	+0.8
	4.8nm,0.3s					
AGMN	Agassiz Nation	8.00 52	*e*Pn	Pn	18 09 32.5	-1.6
	18nm,0.5s					
ARUT	Antelope Range	8.56 229	*e*Pn	Pn	18 09 42.8	+0.9
	2.9nm,0.4s					
CCUT	Cedar City	8.69 228	*e*Pn	Pn	18 09 44.0	+0.4
	1.4nm,0.5s					
ULM	Lac du Bonnet	9.17 41	Pn	Pn	18 09 48.4	-1.7
	3.7nm,0.3s,baz=232,slow=11,SNR=17					
ULM			Pg	Pn	18 10 23.1	+33
	1.5nm,0.3s,baz=236,slow=15,SNR=2.9					
ULM			Sn	Sn	18 11 30.7	-3.2
	1.2nm,0.3s,baz=146,slow=6.8,SNR=3.3					
ULM			Lg		18 12 28.2	
	0.4nm,0.3s,baz=137,slow=20,SNR=3.1					
ARCES	ARCESS Array B	61.46 18	P	P	18 17 53.5	-0.9
	1.0nm,0.5s,mb4.2,baz=342,slow=5.7,SNR=14					
ZALV	Zalesovo Beam	82.35 354	P	P	18 19 59.0	-1.1
	0.8nm,0.4s,mb4.2,baz=350,slow=3.4,SNR=3.7					
SONM	Songino Array	84.68 339	P	P	18 20 12.5	+0.4
	0.3nm,0.5s,mb3.8,baz=26,slow=2.7,SNR=3.7					
MKAR	Makanchi Array	89.65 355	P	P	18 20 35.9	-0.3
	0.5nm,0.8s,mb3.8,baz=20,slow=4.6,SNR=3.8					

*ISCJB **19** 18:08:52.6±0.3, 18°.35N±0°.09×66°.02W±0°.03, h132km±3km, mb3.8/9, Error ellipse: s-maj=15.7km s-min=4.5km az=7.6*
*IDC **19** 18:08:53.0±0.5, 18°.23N×65°.94W, h128km±4km, mb3.6/9, mb1 3.8/9, mb1mx3.5/25, mbtmp3.6/9, Error ellipse: s-maj=19.3km s-min=10.1km az=26.0*
*RSPR **19** 18:08:54.5, 18°.47N×66°.04W, h120km, MD3.8/17*
*NEIC **19** 18:08:54.5, 18°.47N×66°.04W, h120km, MD3.8(RSPR), After RSPR.*
NEIC Felt [IV] at Guaynabo. Also felt at Bayamon, Dorado, Mayaguez, Naranjito, San Juan, Trujillo Alto and Toa Alta.

ISC 19 18:08:53.7±0.3, 18°.35N±0°.09×66°.02W±0°.03, h126km±3km, n42, σ0°.73/53, mb4.0/9, 9C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUMP	Col San Antoni	0.26	141	⇓*e*P	Pn	18 09 11.7	+0.4
HUMP				*e*S	Sn	18 09 24.9	+0.4
SJG	San Juan	0.26	207	⇓*e*P	Pn	18 09 11.2	-0.1
SJG	San Juan	0.26	207	*e*S	Sn	18 09 24.6	0.0
SJG	San Juan	0.26	207	⇓*i*P	Pn	18 09 11.3	0.0
SJG	San Juan	0.26	207	P	Pn	18 09 11.4	+0.1
	227nm,0.3s,baz=61,slow=2.2,SNR=122						
SJG				S	Sn	18 09 25.2	+0.7
	480nm,0.3s,baz=246,slow=22,SNR=62						
SJG	San Juan	0.26	207	⇓*e*P	Pn	18 09 11.2	-0.1
SJG				*e*S	Sn	18 09 24.6	0.0
CELP	Cerrillos	0.59	243	⇑*i*P	Pn	18 09 13.2	+0.2
OBIP	Obispado Ponce	0.63	242	⇑*i*P	Pn	18 09 13.4	+0.2
OBIP				*e*S	Sn	18 09 28.5	+0.6
ICM	Isla Caja Muer	0.66	227	⇑*e*P	Pn	18 09 13.6	+0.2
ICM				*e*S	Sn	18 09 28.1	-0.1
AOPR	Arecibo Observ	0.69	270	⇑*e*P	Pn	18 09 13.5	-0.2
AOPR				*e*S	Sn	18 09 28.3	-0.5
LRS	Lares	0.78	266	⇑*i*P	Pn	18 09 14.2	-0.2
GBPR	Guanica, Bosqu	0.90	246	⇓*i*P	Pn	18 09 15.6	+0.3
STVI	Saint Thomas	1.01	90	⇑*e*P	Pn	18 09 16.6	+0.1
STVI				*e*S	Sn	18 09 34.3	+0.7
LSP	Las Mesas	1.02	261	⇓*i*P	Pn	18 09 16.6	0.0
AGPR	Aguadilla, PR	1.04	277	⇑*i*P	Pn	18 09 16.4	-0.3
AGPR				*e*S	Sn	18 09 33.5	-0.6
MPR	Mayaguez	1.07	263	⇑*e*P	Pn	18 09 16.9	-0.1
MPR				*e*S	Sn	18 09 34.6	+0.1
CRPR	Cabo Rojo, PR	1.09	252	⇑*e*P	Pn	18 09 17.7	+0.5
CRPR				*e*S	Sn	18 09 35.1	+0.2
CDVI	St. Croix	1.33	116	*e*Pn	Pn	18 09 19.3	-0.4
CDVI				*e*Sn	Sn	18 09 38.5	-1.0
TBVI	Tortola	1.34	87	⇑*i*P	Pn	18 09 19.9	+0.1
IMO	Isla Mona	1.81	263	⇓*e*P	Pn	18 09 25.3	+0.1
SABA	Saba	2.74	105	⇑*e*P	Pn	18 09 37.6	+0.8
SMRT	St. Maarten	2.82	96	⇓*e*P	Pn	18 09 37.4	-0.5
SKI	Saint Kitts	3.29	107	*e*P	Pn	18 09 44.1	+0.2
SKI				*e*S	Sn	18 10 23.8	+1.0
ANWB	Willy Bob	4.09	99	*e*Pn	Pn	18 09 52.1	-2.4
ANWB				*e*Sn	Sn	18 10 37.2	-4.6
LZG	Guadaloupe-1	4.61	118	*e*P	Pn	18 10 01.9	+0.3
SDDR	Presa de Saban	5.03	278	⇑*e*P	Pn	18 10 07.1	-0.1
SDDR				*e*S	Sn	18 11 03.0	-1.4
DEG	La Desirade	5.15	112	*e*P	Pn	18 10 07.1	-1.7
TGUH	Tegucigalpa,Un	20.84	261	*e*Pn	P	18 13 18.0	-7.6
APG	El Apazote	23.64	266	P	P	18 13 55.0	+1.3
	3.8nm,0.6s,mb3.9,baz=328,slow=18,SNR=5.7						
APG	El Apazote	23.64	266	P	P	18 13 55.0	+1.3
LPAZ	La Paz	34.48	184	P	P	18 15 29.2	-0.5
	0.5nm,0.4s,mb3.7,baz=340,slow=3.0,SNR=3.6						
TXAR	Lajitas Array	35.98	295	P	P	18 15 43.8	+1.2
	0.8nm,0.5s,mb3.9,baz=109,slow=9.9,SNR=9.8						
SCHQ	Schefferville	36.42	359	P	P	18 15 47.0	+1.0
	4.9nm,0.9s,mb4.5,baz=230,slow=7.2,SNR=3.9						
NVAR	Mina Array Bea	49.46	305	P	P	18 17 32.2	+1.1
	1.1nm,0.6s,mb4.0,baz=92,slow=8.0,SNR=8.3						
YBH	Yreka Blue Hor	53.28	309	P	P	18 17 58.7	-0.8
	1.0nm,0.7s,mb4.0,baz=127,slow=10,SNR=3.8						
YKA	Yellowknife Ar	55.33	335	P	P	18 18 13.0	-1.0
	1.3nm,0.6s,mb4.2,baz=140,slow=8.8,SNR=3.2						
YKA	Yellowknife Ar	55.33	335	P	P	18 18 13.0	-1.1
ILAR	Eielson Array	69.68	333	P	P	18 19 48.5	-0.8
	0.2nm,0.4s,mb3.3,baz=104,slow=4.2,SNR=5.8						
ARCES	ARCESS Array B	73.50	22	P	P	18 20 12.7	+0.5
	5.3nm,1.0s,mb4.2,baz=294,slow=6.8,SNR=5.7						
STKA	Stephens Creek	151.69	236	PKPbc	PKPbc	18 28 32.9	-0.9
	1.7nm,0.7s,baz=101,slow=5.2,SNR=4.3						
STKA				PKPab	PKPab	18 28 40.5	-2.5
	4.0nm,0.9s,baz=116,slow=17,SNR=3.1						
ASAR	Alice Springs	160.66	251	PKPab	PKPab	18 29 19.9	-1.9
	0.4nm,0.6s,baz=107,slow=4.2,SNR=11						
WRA	Warramunga Arr	160.70	262	PKPab	PKPab	18 29 19.9	-2.1
	0.4nm,0.9s,baz=80,slow=4.1,SNR=4.1						

BUC 19 18:10:47.8±2.7, 47°.86N×23°.50E, h3km, MD2.6/2, 4C-4D, Error ellipse: s-maj=24.1km s-min=6.9km az=134.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMR	Baia Mare	0.19	180	⇓*i*P	Pg	18 10 51.5	+0.1
BMR				*i* S	Sg	18 10 55.0	+1.2
BMR	Baia Mare	0.19	180	⇓*i*P	Pg	18 10 51.5	+0.1
BMR				S	Sg	18 10 55.0	+1.2
BURAR	Bucovina Array	1.19	101	⇓*i*P	Pg	18 11 11.3	+0.8
BURAR				*i* S	Sg	18 11 28.6	+2.7
BURAR	Bucovina Array	1.19	101	⇓*i*P	Pg	18 11 11.3	+0.8
BURAR				S	Sg	18 11 28.6	+2.7
KOLS	Kolonicke sedl	1.35	323	*e*PG	Pg	18 11 11.9	-1.7
KOLS				*e*SG	Sg	18 11 29.6	-1.5
CRVS	Cervenica-Dubn	1.71	308	*e*PN	Pn	18 11 18.2	-0.3
CRVS				*e*SN	Sn	18 11 40.1	-0.7
KECS	Kecovo	2.11	288	*e*PN	Pn	18 11 19.7	-4.3
KECS				*e*SN	Sn	18 11 48.5	-2.2
GZR	Gura Zlata	2.52	192	⇑*i*P	Pn	18 11 31.9	+2.3
GZR	Gura Zlata	2.52	192	⇑*i*P	Pn	18 11 31.9	+2.3
BZS	Buzias	2.59	211	⇑*i*P	Pn	18 11 32.6	+2.0
BZS				*i* S	Sn	18 12 05.8	+3.3
BZS	Buzias	2.59	211	⇑*i*P	Pn	18 11 32.6	+2.0
BZS	Buzias	2.59	211	S	Sn	18 12 05.8	+3.3
VOIR		2.65	156	*i* S	Sn	18 12 04.6	+0.6
VOIR		2.65	156	S	Sn	18 12 04.6	+0.6

IDC 19 18:11:38.8±5.0, 4°.88S×144°.09E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.6/14, mbtmp3.5/4, ML3.7/1, MS2.2/1, Ms1 2.2/1, ms1mx2.1/14, Error ellipse: s-maj=133.6km s-min=30.8km az=92.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.73	212	P	Pn	18 15 47.3	0.0
	0.3nm,0.3s,baz=39,slow=12,SNR=23						
ASAR	Alice Springs	21.10	207	P	P	18 16 25.2	+0.2
	1.6nm,0.9s,baz=31,slow=12,SNR=15						
TGY	Tagaytay City	29.72	310	LR	LR	18 29 17.8	
	comp=Z,3.8nm,18.8s,baz=0.7,slow=36						
CMAR	Chiang Mai Arr	50.17	299	P	P	18 20 37.0	+0.4
	0.3nm,0.6s,baz=130,slow=7.0,SNR=3.6						
MKAR	Makanchi Array	74.80	321	P	P	18 23 20.6	-0.3
	0.2nm,0.5s,baz=101,slow=7.5,SNR=4.5						

*ISCJB **19** 18:17:13.9±0.7, 37°.99N±0°.04×21°.50E±0°.05, h15km±7km, Error ellipse: s-maj=7.3km s-min=6.1km az=147.5*
*THE **19** 18:17:13.6, 37°.99N×21°.51E, h22km±2km, ML2.0/6, Error ellipse: s-maj=2.3km s-min=0.6km az=72.0*
*ATH **19** 18:17:13.9, 38°.00N×21°.50E, h17km, MD3.0/10*
*CSEM **19** 18:17:13.3±0.2, 37°.99N×21°.49E, h20km, MD3.0, Error ellipse: s-maj=4.3km s-min=3.9km az=161.0*

ISC 19 18:17:13.3±0.7, 37°.98N±0°.04×21°.50E±0°.04, h17km±5km, n34, σ0°.61/53, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.08	344	*e*PB	Pg	18 17 17.2	+0.5
RLS				*e*SB	Sg	18 17 19.6	+0.6
RLS	Riolos of Patr	0.08	344	*e*Pb	Pg	18 17 17.2	+0.5
RLS				*e*Sb	Sg	18 17 19.6	+0.6
UPR	University Cam	0.38	37	*e*PB	Pg	18 17 21.4	+0.2
UPR				*e*SB	Sg	18 17 27.1	+0.5
UPR	University Cam	0.38	37	P	Pg	18 17 21.2	0.0
UPR				S	Sg	18 17 27.3	+0.7
UPR	University Cam	0.38	37	*e*Pb	Pg	18 17 21.4	+0.2
UPR				*e*Sb	Sg	18 17 27.1	+0.5
LAKA	Lakka	0.46	55	P	Pg	18 17 22.2	-0.5
LAKA				S	Sg	18 17 29.1	+0.1
LAKA	Lakka	0.46	55	P	Pg	18 17 22.2	-0.5
LAKA				S	Sg	18 17 29.1	+0.1
EFP	Efpalio	0.55	36	*e*PN	Pg	18 17 23.9	-0.4
EFP				*e*SN	Sg	18 17 31.6	-0.2
EFP	Efpalio	0.55	36	P	Pg	18 17 23.9	-0.4
EFP				S	Sg	18 17 32.2	+0.4
EFP	Efpalio	0.55	36	P	Pg	18 17 23.9	-0.4
EFP				S	Sg	18 17 32.2	+0.4
TRIZ	Trizonia	0.60	49	P	Pg	18 17 24.6	-0.6
TRIZ				S	Sg	18 17 33.3	+0.1
TRIZ	Trizonia	0.60	49	P	Pg	18 17 24.6	-0.6
TRIZ				S	Sg	18 17 33.3	+0.1
KALE	Kalithea	0.66	51	P	Pg	18 17 25.5	-0.7
KALE				S	Sg	18 17 35.1	+0.1
KALE	Kalithea	0.66	51	P	Pg	18 17 25.5	-0.7
KALE				S	Sg	18 17 35.1	+0.1
GUR	Goura	0.67	93	*e*PB	Pg	18 17 25.9	-0.6
GUR				*e*SN	Sg	18 17 35.8	+0.4
GUR	Goura	0.67	93	P	Pg	18 17 25.9	-0.6
GUR				S	Sg	18 17 35.8	+0.4
GUR	Goura	0.67	93	P	Pg	18 17 25.9	-0.6
GUR				S	Sg	18 17 35.8	+0.4
VLS	Valsamata	0.74	286	*e*PN	Pg	18 17 28.4	+0.5
VLS	Valsamata	0.74	286	*e*Pn	Pg	18 17 28.4	+0.5
ITM	Ithomi	0.87	157	P	Pg	18 17 29.9	-0.3
ITM	Ithomi	0.87	157	P	Pg	18 17 29.9	-0.3
DSF	Desfina	0.92	62	P	Pg	18 17 29.9	-1.3
DSF				S	Sg	18 17 43.3	-0.1
DSF	Desfina	0.92	62	P	Pg	18 17 29.9	-1.3
DSF				S	Sg	18 17 43.3	-0.1
VLX	Vlachokerasia	0.93	131	*e*PN	Pg	18 17 31.8	+0.5
VLX	Vlachokerasia	0.93	131	*e*Pn	Pg	18 17 31.8	+0.5
EVR	Evrytania	0.97	15	*e*PN	Pg	18 17 32.4	+0.2
EVR	Evrytania	0.97	15	*e*Pn	Pg	18 17 32.4	+0.2
LKD2	Lefkada island	1.04	321	P	Pg	18 17 32.1	-1.5
LKD2	Lefkada island	1.04	321	P	Pg	18 17 32.1	-1.5
LTK	Loutraki	1.16	87	*e*PN	Pn	18 17 35.6	+0.8
LTK	Loutraki	1.16	87	*e*Pn	Pn	18 17 35.6	+0.8
AGG	Agios Georgios	1.23	32	*e*PN	Pn	18 17 36.7	+1.0
AGG	Agios Georgios	1.23	32	*e*Pn	Pn	18 17 36.7	+1.0
DID	Didima	1.46	108	*e*PN	Pg	18 17 41.5	+0.1

IDC 19 18:21:42.1±3.7, 16°.78S×174°.91W, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.7/16, mbtmp4.1/3, Error ellipse: s-maj=173.0km s-min=78.4km az=156.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.10	241	P	P	18 29 36.7	+0.6
	3.1nm,0.9s,baz=96,slow=9.7,SNR=3.8						
WRA	Warramunga Arr	48.13	258	P	P	18 30 23.9	-0.3
	0.5nm,0.4s,baz=95,slow=7.0,SNR=34						
WRA				PcP	PcP	18 31 52.0	0.0
	0.1nm,0.4s,baz=92,slow=3.5,SNR=4.3						
ASAR	Alice Springs	48.31	253	P	P	18 30 25.3	-0.3
	1.7nm,0.5s,baz=93,slow=7.8,SNR=60						
ASAR				PcP	PcP	18 31 52.2	-0.4
	0.4nm,0.5s,baz=102,slow=4.5,SNR=5.7						

*IDC **19** 18:34:17.1±0.5, 23°.87S×176°.20W, h0km, mb4.9/18, mb1 5.0/19, mb1mx5.0/22, mbtmp4.9/19, ML3.8/1, MS4.5/17, Ms1 4.5/17, ms1mx4.4/28, Error ellipse: s-maj=17.3km s-min=12.8km az=156.0*
*ISCJB **19** 18:34:18.0±2.3, 23°.90S±0°.06×176°.04W±0°.04, h15km±15km, mb5.1/94, MS4.6/29, Error ellipse: s-maj=9.8km s-min=5.6km az=161.1*
*NEIC **19** 18:34:17.9±3.0, 23°.89S×175°.93W, h8km±18km, mb5.2/70, Error ellipse: s-maj=7.1km s-min=5.6km az=146.0*
*BJI **19** 18:34:20.8, 23°.90S×175°.90W, h40km, mb5.3/26, mb5.5/39, Ms5.0/30, Ms7 4.7/30*
*SZGRF **19** 18:34:21.4, 24°.10S×175°.50W, h33km, South of Tonga Islands*
*MOS **19** 18:34:21.7±1.3, 23°.63S×176°.01W, h33km, mb5.4/35, Error ellipse: s-maj=12.3km s-min=10.7km az=91.5*
*GCMT **19** 18:34:22.5±0.2, 23°.96S×175°.33W, h22km, MW5.2, Moment Tensor Solution. s58,c86; s78,c120; Moment tensor: Scale 10^{16}Nm; M_{rr}6.02±.21; $M_{\theta\theta}$-0.74±.14; $M_{\phi\phi}$-5.28±.14; $M_{r\theta}$1.65±.25; $M_{\theta\phi}$-1.93±.10; $M_{r\phi}$3.78±.20; Best double couple: $M_0$7.30000×10^{16} NP1:ϕ_s198.00000°, δ28.00000°, λ87.00000°. NP2:ϕ_{sp}22.00000°, δ62.00000°, λ92.00000°. Principal axes: T 7.3000, Plg73.0000°, Azm296.0000°; N -0.0400, Plg2.0000°, Azm201.0000°; P -7.2700, Plg17.0000°, Azm111.0000°; Data Used: II IU IC G CN.*

ISC 19 18:34:20.6±2.4, 23°.88S±0°.06×176°.02W±0°.04, h21km±16km, h33km±2.6km: pP-P, n543, σ0°.75/338, mb5.1/94, MS4.6/29, 101C-86D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.61	197	*e*Pn	Pn	18 35 43.3	+0.4
RAO				*e*Sn	Sn	18 36 40.2	-6.6
RAO	Raoul Island	5.61	197	*e*P	Pn	18 35 43.3	+0.4
MSVF	Nonsavu	8.25	317	*e*P	Pn	18 36 25.8	+6.6
	567nm,1.1s						
MSVF	Nonsavu	8.25	317	Pn	Pn	18 36 26.0	+6.8
	3μm,1.0s						
AFI	Afiamalu	10.70	23	Pn	Pn	18 36 46.3	-6.5
	11nm,0.3s,baz=210,slow=10,SNR=11						
AFI				Sn	Sn	18 38 39.1	-13
	9.3nm,0.3s,baz=34,slow=21,SNR=4.2						
AFI	Afiamalu	10.70	23	*e*P	Pn	18 36 46.6	-6.2
	193nm,1.0s						
AFI				*e*Sn	Sn	18 38 24.0	-28
AFI	Afiamalu	10.70	23	*e*P	Pn	18 36 46.6	-6.2
AFI				pmax	pmax		
	comp=Z,193nm,1.0s						
RAR	Rarotonga	15.25	83	Pn	Pn	18 37 44.5	-10
	comp=Z,13nm,0.3s,baz=255,slow=7.6,SNR=30						
RAR				Sn	Sn	18 40 14.2	-29
	comp=Z,2.9nm,0.3s,baz=71,slow=17,SNR=5.9						
RAR	

STKA Stephens Creek 38.11 248 *eP* **P 18 41 38.7 +0.4**
comp=Z,5.5nm,1.1s,mb4.2
COEN Coen 39.72 277 *eP* **P 18 41 52.4 +0.5**
comp=Z,171nm,1.0s,mb5.7
ASAR Alice Springs 45.62 260 P **P 18 42 39.1 -0.7**
comp=Z,27nm,1.0s,mb5.1,baz=93,slow=8.0,SNR=72
ASAR PcP PcP 18 44 18.9 +0.9
comp=Z,3.8nm,0.9s,baz=111,slow=5.1,SNR=3.4
ASAR S **S 18 49 19.6 -2.0**
comp=Z,1.8nm,1.0s,baz=97,slow=15,SNR=5.1
ASAR Alice Springs 45.62 260 P **P 18 42 39.2 -0.6**
ASAR 18 44 18.9
ASAR S **S 18 49 19.6 -2.0**
WB2 Warramunga Arr 46.03 265 *eP* **P 18 42 41.9 -1.1**
WRA Warramunga Arr 46.04 265 P **P 18 42 42.2 -0.9**
comp=Z,26nm,0.9s,mb5.1,baz=91,slow=6.2,SNR=130
WRA PcP PcP 18 44 20.4 +1.0
comp=Z,7.0nm,1.0s,baz=96,slow=4.6,SNR=5.8
WRA S **S 18 49 25.2 -2.4**
comp=Z,6.4nm,1.1s,baz=104,slow=14,SNR=9.1
WRA LR LR 19 01 10.6
comp=Z,1μm,18.8s,MS5.0,baz=100,slow=35
WRA Warramunga Arr 46.04 265 P **P 18 42 42.2 -0.9**
WRA PcP PcP 18 44 20.4 +1.0
WRA S **S 18 49 25.2 -2.4**
WRA LR LR 19 01 10.6
WRA Warramunga Arr 46.04 265 P **P 18 42 42.3 -0.8**
WRA 18 44 20.5
WRA S **S 18 49 25.2 -2.4**
SBA Scott Base 54.65 184 *eP* **P 18 43 49.8 +2.4**
comp=Z,23nm,1.1s,mb5.1
SBA Scott Base 54.65 184 *eP* **P 18 43 49.8 +2.4**
SBA pmax pmax
comp=Z,23nm,1.1s,mb5.1
CASY Casey 61.73 206 *eP* **P 18 44 36.1 -1.0**
comp=Z,24nm,1.0s,mb5.3
QSPA South Pole Qui 66.21 180 P **P 18 45 07.0 +0.6**
comp=Z,8.8nm,0.7s,mb4.9,baz=32,slow=2.2,SNR=34
QSPA South Pole Qui 66.21 180 *eP* **P 18 45 07.0 +0.6**
comp=Z,15nm,1.0s,mb5.0
MIR Mirnyy 68.73 205⇓*iP* **P 18 45 23.6 +1.1**
MIR pmax pmax
comp=Z,52nm,1.2s,mb5.3
JOW Kunigami 73.73 310 P **P 18 45 53.4 +0.1**
comp=Z,20nm,0.9s,mb5.0,baz=90,slow=30,SNR=19
JOW Kunigami 73.73 310 *eP* **P 18 45 53.3 0.0**
comp=Z,7.4nm,0.9s,mb4.6
MJAR Matsushiro Arr 74.00 323 P **P 18 45 53.1 -1.7**
comp=Z,6.3nm,0.9s,mb4.5,baz=171,slow=6.4,SNR=9.3
MJAR LR LR 19 13 51.1
comp=Z,300nm,21.2s,MS4.5,baz=215,slow=32
MJAR Matsushiro Arr 74.00 323 P **P 18 45 53.1 -1.6**
MAJO Matsushiro 74.00 323 *eP* **P 18 45 54.0 -0.7**
comp=Z,16nm,1.2s,mb4.8
MAJO Matsushiro 74.00 323 *eP* **P 18 45 54.0 -0.7**
MAJO pmax pmax
comp=Z,15nm,1.2s,mb4.8
YULB Yu-li 76.87 303 *eP* **P 18 46 09.7 -1.9**
comp=Z,13nm,1.1s,mb4.8
NACB Ninganchiao 77.08 304 *eP* **P 18 46 12.0 -0.6**
comp=Z,33nm,0.9s,mb5.3
TPUB Ta-pu 77.34 303 *eP* **P 18 46 11.8 -2.4**
comp=Z,44nm,0.9s,mb5.4
SSLB Suanglung 77.35 303 *eP* **P 18 46 13.0 -1.2**
comp=Z,18nm,0.8s,mb5.0
YHNB Yeheng 77.52 304 *eP* **P 18 46 14.3 -0.8**
comp=Z,13nm,1.1s,mb4.8
ASAJ Asahikawa 77.56 331 P **P 18 46 15.1 +0.2**
comp=Z,30nm,1.0s,mb5.2,baz=247,slow=10,SNR=7.1
ASAJ Asahikawa 77.56 331 *eP* **P 18 46 15.9 +1.1**
comp=Z,11nm,1.1s,mb4.7
PET Petropavlovsk 79.69 345 *eP* **P 18 46 27.5 +1.1**
PET *eS* S 18 56 30.9 +3.5
PET pmax pmax
comp=Z,200nm,10.3s
PET pmax pmax
comp=Z,300nm,8.8s
PET MLR MLR
comp=Z,300nm,18.0s,MS4.7
YSS Yuzh-Sakhalins 79.72 333 *eP* **P 18 46 27.5 +0.8**
comp=Z,58nm,1.0s,mb5.5
YSS Yuzh-Sakhalins 79.72 333⇑*iP* **P 18 46 27.5 +0.8**
YSS *e* pP 18 46 32.0 -1.5
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.5
PEA0B Petropavlovsk- 80.00 344 *eP* **P 18 46 28.9 +0.8**
PETK Petropavlovsk- 80.00 344 P **P 18 46 27.5 -0.6**
comp=Z,34nm,0.9s,mb5.3,baz=132,slow=9.2,SNR=27
PETK LR LR 19 17 29.7
comp=Z,238nm,19.1s,MS4.6,baz=173,slow=32
PETK Petropavlovsk- 80.00 344 P **P 18 46 27.5 -0.6**
MONP Monument Peak 80.09 47⇓P **P 18 46 29.0 -0.1**
baz=80
EDW2 Edwards Air Fo 80.25 45⇑P **P 18 46 29.7 -0.2**
baz=80,SNR=5.8
ISA Isabella 80.43 44⇓P **P 18 46 30.8 0.0**
baz=81,SNR=13
ISA Isabella 80.43 44 *eP* **P 18 46 30.3 -0.5**
comp=Z,28nm,1.3s,mb5.0
ISA Isabella 80.43 44 *eP* **P 18 46 30.3 -0.5**
ISA pmax pmax
comp=Z,28nm,1.3s,mb5.0
SWSC Sam W. Stewart 80.54 48⇑P **P 18 46 31.7 +0.2**
baz=81
KSRS Korea Array 80.62 318 P **P 18 46 31.2 -0.6**
comp=Z,7.3nm,1.1s,mb4.5,baz=141,slow=5.7,SNR=11
KSRS LR LR 19 17 02.7
comp=Z,343nm,20.5s,MS4.7,baz=168,slow=32
CMB Columbia Colle 80.73 41 *eP* **P 18 46 31.4 -1.0**
comp=Z,16nm,1.3s,mb4.8
CMB Columbia Colle 80.73 41 *eP* **P 18 46 31.4 -1.0**
CMB pmax pmax
comp=Z,15nm,1.3s,mb4.8
KRMB Red Mountain 81.01 37 *eP* **P 18 46 33.5 -0.3**
comp=Z,16nm,1.5s,mb4.7
BELC Belle Mtn. Jos 81.03 47⇓P **P 18 46 33.9 -0.2**
baz=81
BC3 Big Chuckawall 81.19 47⇓P **P 18 46 34.8 -0.2**
baz=81
SSE Sheshan 81.25 309 P **P 18 46 32.6 -2.7**
SSE S S 18 56 46.5 +1.7
SSE SS SS 19 02 05.1 +4.1
SSE pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SSE pmax pmax
comp=Z,110nm,5.1s
SSE LR LR
comp=N,56nm,30.1s,MS3.8
SSE LR LR
comp=E,42nm,30.1s,MS3.8
SSE LR LR
comp=Z,61nm,28.6s,MS3.8
GLA Glamis 81.26 48⇑P **P 18 46 35.3 -0.1**
baz=81
GLA Glamis 81.26 48 *eP* **P 18 46 34.6 -0.8**
comp=Z,30nm,1.4s,mb5.0
GLA Glamis 81.26 48 *eP* **P 18 46 34.6 -0.8**
GLA pmax pmax
comp=Z,30nm,1.4s,mb5.0
GSC Goldstone 81.28 45⇑P **P 18 46 35.2 -0.2**
baz=81
GSC Goldstone 81.28 45 *eP* **P 18 46 34.4 -1.0**
comp=Z,8.8nm,1.0s,mb4.6
GSC Goldstone 81.28 45 *eP* **P 18 46 34.4 -1.0**
GSC pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MPMC Manual Prospec 81.30 44⇓P **P 18 46 35.7 +0.2**
baz=82,SNR=15
HEC Hector,Ludlow 81.31 46⇓P **P 18 46 35.2 -0.4**
baz=82
WAKR Walker 81.61 41 *eP* **P 18 46 36.3 -0.7**
comp=Z,28nm,1.4s,mb5.0
IRM Iron Mountain 81.69 47⇑P **P 18 46 37.7 +0.1**
baz=82,SNR=14
GMRC Granite Mounta 81.72 46⇓P **P 18 46 37.7 0.0**
baz=82,SNR=6.5
YBH Yreka Blue Hor 81.81 37 *eP* **P 18 46 37.2 -0.9**
comp=Z,6.7nm,1.1s,mb4.5
YBH Yreka Blue Hor 81.81 37 *eP* **P 18 46 37.2 -0.9**
YBH pmax pmax
comp=Z,7.0nm,1.1s
113A Mohawk Valley, 81.83 49⇑P **P 18 46 38.5 +0.2**
baz=82
Y12C Blythe 81.88 48⇑P **P 18 46 38.4 -0.2**
baz=82
WCN Washoe City 81.92 41 *eP* **P 18 46 37.6 -1.1**
comp=Z,12nm,1.1s,mb4.7
WCN Washoe City 81.92 41 *eP* **P 18 46 37.6 -1.1**
WCN pmax pmax
comp=Z,12nm,1.1s,mb4.7
TUQ Turquoise Moun 81.94 46⇓P **P 18 46 38.8 0.0**
baz=82
214A Organ Pipe Nat 82.03 50⇓P **P 18 46 39.5 0.0**
baz=82
VLA Vladivostok 82.08 324⇓*iP* **P 18 46 39.9 +0.5**
VLA pmax pmax
comp=Z,20nm,1.1s,mb5.0
VLA pmax pmax
comp=Z,1.0nm,45.7s
Z13A Yuma Proving G 82.15 49⇑P **P 18 46 40.2 +0.2**
baz=82
NVAR Mina Array Bea 82.25 42 P **P 18 46 40.5 +0.1**
comp=Z,7.5nm,1.0s,mb4.6,baz=223,slow=7.6,SNR=30
LDFC Landfair 82.26 46 *eP* **P 18 46 40.7 +0.2**
comp=Z,37nm,1.3s,mb5.2
U10A Ash Meadows, A 82.26 45⇑P **P 18 46 40.8 +0.2**
baz=82
HUMO Hull Mountain 82.27 37 *eP* **P 18 46 39.9 -0.5**
comp=Z,29nm,1.6s,mb5.0
114A Black Gap (USA 82.43 49⇓P **P 18 46 42.1 +0.6**
baz=83
PDMCI Parker Dam,Lak 82.45 47⇓P **P 18 46 42.1 +0.5**
baz=83
Z14A Wintersburg 82.73 49⇓P **P 18 46 43.6 +0.6**
baz=83
V12A Nelson 82.81 46⇓P **P 18 46 43.3 -0.1**
baz=83,SNR=5.3
X13A Yucca 82.83 47⇓P **P 18 46 43.3 -0.3**
baz=83,SNR=12
Y14A Wickenburg 83.02 48⇓P **P 18 46 44.6 +0.1**
baz=83,SNR=9.2
SHPR Sheep Range 83.07 45 *eP* **P 18 46 44.4 -0.3**
comp=Z,29nm,1.7s,mb5.0
W13A Hualapai Mount 83.09 47⇑P **P 18 46 45.2 +0.3**
baz=83
217A Green Valley 83.34 51⇑P **P 18 46 46.1 -0.2**
baz=84,SNR=12
X14A Yava 83.40 48⇓P **P 18 46 46.7 +0.2**
baz=84,SNR=7.3
U12A Valley of Fire 83.43 46⇑P **P 18 46 47.1 +0.5**
baz=84
V13A Grand Canyon W 83.46 46 P **P 18 46 47.0 +0.3**
baz=84,SNR=12
K05A Summer Lake 83.48 37⇑P **P 18 46 46.7 0.0**
baz=84
Y15A Casa Rosa Ranc 83.48 49⇓P **P 18 46 47.2 +0.3**
baz=84,SNR=16
TUC Tucson 83.65 51 *eP* **P 18 46 47.7 -0.2**
comp=Z,22nm,1.3s,mb5.1
TUC Tucson 83.65 51 *eP* **P 18 46 47.7 -0.2**
TUC pmax pmax
comp=Z,22nm,1.3s,mb5.1
W14A Seligman 83.69 47⇓P **P 18 46 47.9 -0.1**
baz=84,SNR=17
318A Bisbee 83.75 52⇓P **P 18 46 48.1 -0.3**
baz=84,SNR=7.9
Z16A Peralta Trail, 83.77 50⇓P **P 18 46 48.8 +0.4**
baz=84
U13A Pakoon Wash 83.80 46⇑P **P 18 46 48.9 +0.4**
baz=84,SNR=19
117A Oracle 83.83 50⇓P **P 18 46 49.1 +0.4**
baz=84,SNR=11
SYO Syowa Base 83.84 192⇓*eP* **P 18 46 46.5 -1.8**
SYO Syowa Base 83.84 192⇓/PcP PcP 18 46 49.9 -2.4
X15A Humboldt 83.85 48⇓P **P 18 46 49.3 +0.4**
baz=84
R11A Troy Canyon, C 83.89 43⇓P **P 18 46 48.7 -0.3**
baz=84
QIZ Qiongzhong 83.90 294 P **P 18 46 48.1 -1.3**
QIZ pP pP 18 47 02.9 +6.7
QIZ S S 18 57 06.8 -5.5
QIZ pmax pmax
comp=Z,120nm,10.5s
QIZ LR LR
comp=N,120nm,17.2s,MS4.4
QIZ LR LR
comp=E,55nm,13.5s,MS4.4
QIZ LR LR
comp=Z,180nm,21.4s
V14A Boquillas Ranc 83.92 47⇓P **P 18 46 49.8 +0.7**
baz=84,SNR=15
218A Dragoon 84.00 51⇑P **P 18 46 50.1 +0.5**
baz=84,SNR=13
Y16A Circle Bar Ran 84.03 49⇓P **P 18 46 50.5 +0.7**
baz=84,SNR=5.8
H04A Detroit Lake 84.08 35⇓P **P 18 46 49.4 -0.3**
baz=84
BMN Battle Mountai 84.15 41 P **P 18 46 49.2 -1.0**
comp=Z,21nm,1.6s,mb5.0
BMN Battle Mountai 84.15 41 P **P 18 46 49.2 -1.0**
BMN pmax pmax
comp=Z,21nm,1.6s,mb5.0
T13A Saint George 84.18 45⇓P **P 18 46 50.6 +0.2**
baz=84,SNR=6.5
319A Douglas 84.23 52⇓P **P 18 46 51.4 +0.6**
baz=84,SNR=5.8
HABR Khabarovsk 84.27 330*c iP* **P 18 46 51.4 +0.8**
HABR *e**PP pP 18 47 00.7 +3.2
HABR *e**SP sP 18 47 04.7 +4.8
HABR 18 50 05.9
HABR *e*PPP 18 51 58.6
HABR *e*S S 18 57 12.0 -2.8
HABR *e*SS SS 19 02 48.5 +3.2
HABR pmax pmax
comp=Z,69nm,1.5s,mb5.6
HABR pmax pmax
comp=E,40nm,2.1s
HABR pmax pmax
comp=N,10.0nm,1.2s
HABR MLR MLR
comp=Z,145nm,21.0s,MS4.3
U14A Mt Trumbull 84.31 46 P **P 18 46 51.6 +0.5**
baz=84,SNR=29
MDJ Mudanjiang 84.32 324 P **P 18 46 52.1 +1.1**
MDJ pmax pmax
comp=Z,30nm,1.1s,mb5.3
MDJ pmax pmax
comp=Z,160nm,6.2s
MDJ Mudanjiang 84.32 324 *eP* **P 18 46 51.3 +0.3**
comp=Z,38nm,1.0s,mb5.5
X16A Lo Mia Camp, P 84.36 49⇓P **P 18 46 52.0 +0.6**
baz=84,SNR=18
Y17A Roosevelt 84.37 49⇑P **P 18 46 51.9 +0.4**
baz=84,SNR=8.5
118A Homack Ranch, 84.41 51⇑P **P 18 46 52.7 +1.0**
baz=84
S13A Holt Ranch, En 84.54 45⇓P **P 18 46 52.6 +0.3**
baz=85,SNR=13
WVOR Wild Horse Val 84.57 39 *eP* **P 18 46 51.6 -0.7**
comp=Z,13nm,1.1s,mb5.0
WVOR Wild Horse Val 84.57 39 *eP* **P 18 46 51.6 -0.7**
WVOR pmax pmax
comp=Z,13nm,1.1s,mb5.0
219A White Tail Can 84.57 52⇑P **P 18 46 53.0 +0.5**
baz=85,SNR=12
V15A Kaibab Nationa 84.64 47⇑P **P 18 46 53.5 +0.7**
baz=85,SNR=14
T14A Hurricane 84.75 46⇓P **P 18 46 53.7 +0.4**
baz=85,SNR=5.7
320A Kipp Ranch, An 84.75 53⇓P **P 18 46 54.4 +0.9**
baz=85,SNR=10.0
CCUT Cedar City 84.85 45 *eP* **P 18 46 53.8 0.0**
comp=Z,21nm,1.3s,mb5.1
U15A North Rim 84.91 47⇓P **P 18 46 55.0 +0.8**
baz=85,SNR=25
ARUT Antelope Range 84.93 45 *eP* **P 18 46 54.1 -0.1**
comp=Z,22nm,1.4s,mb5.1
ARUT Antelope Range 84.93 45 *eP* **P 18 46 54.1 -0.1**
ARUT pmax pmax
comp=Z,22nm,1.4s,mb5.1
119A Ashpeak Ranch, 84.95 51⇑P **P 18 46 55.3 +0.9**
baz=85,SNR=10
Y18A Canyon Day Jun 84.98 50⇑P **P 18 46 55.4 +0.8**
baz=85,SNR=10
220A Playas Peak, P 85.05 52 P **P 18 46 55.6 +0.6**
baz=85,SNR=16
NLWA Neilton Lookou 85.05 33 *eP* **P 18 46 54.5 -0.1**
comp=Z,11nm,1.1s,mb4.9
I07A Izee 85.13 37⇑P **P 18 46 55.2 +0.1**
baz=85
T15A Red Dirt Ranch 85.18 46⇑P **P 18 46 56.0 +0.5**
baz=85,SNR=12
G06A Carlson Farm, 85.27 36⇑P **P 18 46 55.4 -0.3**
baz=86
120A U Bar Ranch, L 85.31 51⇓P **P 18 46 57.4 +1.1**
baz=85,SNR=11
IPM Ipoh 85.37 277 *eP* **P 18 46 57.7 +0.7**
comp=Z,14nm,0.8s,mb5.1
V17A Tonalea, Kykot 85.47 48⇓P **P 18 46 57.3 +0.4**
baz=86,SNR=22
U16A Tuba City 85.53 47⇑P **P 18 46 57.9 +0.6**
baz=86,SNR=7.2
Y19A Nutrioso 85.62 50 P **P 18 46 58.9 +1.1**
baz=86,SNR=22
PLCA Paso Flores 85.64 133 P **P 18 46 57.5 -0.4**
comp=Z,3.1nm,1.1s,mb4.5,baz=253,slow=9.7,SNR=3.1
PLCA LR LR 19 19 10.8
comp=Z,153nm,18.4s,MS4.4,baz=273,slow=31
PLCA Paso Flores 85.64 133 *eP* **P 18 46 55.9 -2.0**
comp=Z,11nm,1.3s,mb4.9
PLCA Paso Flores 85.64 133 *eP* **P 18 46 55.9 -2.0**
PLCA pmax pmax
comp=Z,11nm,1.3s
Z20A Nine Sixteen R 85.64 51⇑P **P 18 46 58.6 +0.7**
baz=86,SNR=15
Q14A Sevier Lake (B 85.73 44⇑P **P 18 46 58.3 +0.1**
baz=86
X19A St. Johns 85.85 50⇑P **P 18 46 59.6 +0.7**
baz=86,SNR=11
WHN Wuhan 85.91 306 P **P 18 47 00.6 +1.3**
KULM Kulim 86.04 278 *eP* **P 18 47 00.8 +0.5**
comp=Z,26nm,1.1s,mb5.4
CN2 Changchun 86.08 322 *eP* **P 18 47 00.1 +0.3**
CN2 *e*S S 18 57 33.5 +0.6
CN2 pmax pmax
comp=Z,40nm,1.3s,mb5.5
CN2 LR LR
comp=N,200nm,20.0s,MS4.7
CN2 LR LR
comp=E,200nm,20.0s,MS4.7
CN2 LR LR
comp=Z,200nm,19.0s,MS4.5
S16A Weppner Ranch, 86.10 46⇓P **P 18 47 00.0 0.0**
baz=86
V18A Ganado 86.10 48⇑P **P 18 47 00.7 +0.6**
baz=86,SNR=7.2
MSU Marysvale 86.16 45 *eP* **P 18 47 00.4 +0.1**
comp=Z,16nm,1.4s,mb5.0
MSU Marysvale 86.16 45 *eP* **P 18 47 00.4 +0.1**
MSU pmax pmax
comp=Z,16nm,1.4s,mb5.1
G08A Pilot Rock 86.20 36⇑P **P 18 47 00.1 -0.3**
baz=86
Y20A Horse Springs, 86.22 50 P **P 18 47 01.8 +1.1**
baz=86,SNR=25
T17A Navajo Res., N 86.22 47⇓P **P 18 47 00.6 -0.1**
baz=86
KLR Kul'dur 86.36 329 *eP* **P 18 46 57.7 -3.3**
KLR pmax pmax
comp=Z,38nm,1.2s,mb5.5
X20A Quemado 86.47 50 P **P 18 47 02.8 +0.9**
baz=87,SNR=9.9
U18A Rough Rock, Ch 86.53 48⇑P **P 18 47 02.6 +0.4**
baz=87
Y21A Point of Rocks 86.76 51 P **P 18 47 04.5 +1.1**
baz=87,SNR=14
W20A Ramah 86.77 49⇑P **P 18 47 04.2 +0.8**
baz=87,SNR=9.8
Z22A Elephant Butte 86.88 52 P **P 18 47 04.5 +0.5**
baz=87,SNR=12
U19A Dine' College, 86.91 48⇑P **P 18 47 04.2 +0.1**
baz=87,SNR=6.1
X21A Alamocita Cree 86.91 50 P **P 18 47 04.8 +0.7**
baz=87,SNR=11
T18A Mexican Hat 86.92 47 P **P 18 47 04.1 0.0**
baz=87,SNR=14
ETW Entiat 86.97 34 *eP* **P 18 47 03.1 -1.0**
comp=Z,16nm,1.2s,mb5.1
324A Moseley Ranch, 87.04 54⇓P **P 18 47 04.4 -0.4**
baz=87,SNR=17
425A Indio Mountain 87.08 55⇓P **P 18 47 05.2 +0.2**
baz=87,SNR=15
626A Big Bend Ranch 87.11 56⇓P **P 18 47 04.7 -0.5**
baz=87,SNR=14
MNTX Cornudas Mount 87.24 54⇓P **P 18 47 05.4 -0.3**
baz=87,SNR=23
MNTX Cornudas Mount 87.24 54 *eP* **P 18 47 05.0 -0.8**
comp=Z,27nm,1.4s,mb5.3
224A Cornudas Mount 87.33 53 P **P 18 47 06.5 +0.3**
baz=87,SNR=11
LAZ Ladron 87.35 51 *eP* **P 18 47 05.5 -0.7**
comp=Z,18nm,1.7s,mb5.0
TXAR Lajitas Array 87.36 56 P **P 18 47 05.5 -0.9**
comp=Z,5.5nm,1.0s,mb4.8,baz=216,slow=6.2,SNR=38
TXAR LR LR 19 20 55.2
comp=Z,320nm,18.0s,MS4.8,baz=270,slow=32
TXAR Lajitas Array 87.36 56 P **P 18 47 05.5 -0.9**
325A Bean Ranch, Si 87.38 54 P **P 18 47 06.1 -0.4**
baz=88,SNR=14
526A Mary Lane Ranc 87.39 56⇑P **P 18 47 06.2 -0.3**
baz=88,SNR=16
E09A Wood Farm, Sta 87.42 36⇑P **P 18 47 06.0 -0.3**
baz=88
SRU San Rafael 87.57 45⇑P **P 18 47 06.7 -0.5**
baz=88,SNR=5.6
BNM Barren Site 87.58 51 *eP* **P 18 47 07.0 -0.3**
comp=Z,29nm,1.8s,mb5.2
R18A Canyonlands Na 87.58 46⇓P **P 18 47 07.0 -0.3**
baz=88,SNR=6.6
627A Terlingua Ranc 87.63 56⇑P **P 18 47 07.2 -0.5**
baz=88,SNR=13
LPM Los Pinos Moun 87.66 51 *eP* **P 18 47 07.6 -0.1**
comp=Z,13nm,1.4s,mb5.0
OD2 Odessa Site #2 87.68 35 *eP* **P 18 47 07.2 -0.2**
comp=Z,3.8nm,0.6s,mb4.8
124A Stringfield Ra 87.69 53⇑P **P 18 47 08.6 +0.7**
baz=88,SNR=8.2
HLID Hailey 87.71 40⇓P **P 18 47 07.6 -0.1**
baz=88
HLID Hailey 87.71 40 *eP* **P 18 47 06.4 -1.3**
comp=Z,9.0nm,1.5s,mb4.8
426A McDonald Obser 87.74 55⇑P **P 18 47 07.8 -0.4**
baz=88,SNR=13
S19A Harvey Farm, M 87.74 47⇑P **P 18 47 07.7 -0.3**
baz=88
527A Woodward Ranch 87.80 56⇓P **P 18 47 08.1 -0.3**
baz=88,SNR=11
Q18A Rafter H Ranch 87.82 45⇓P **P 18 47 08.2 -0.1**
baz=88
225A Deer Hill, Car 87.86 54⇑P **P 18 47 09.0 +0.2**
baz=88
Y23A Lovelace Mesa, 87.88 51⇓P **P 18 47 08.7 -0.1**
baz=88,SNR=6.4
TTA Tatalina 87.96 9 *eP* **P 18 47 08.3 -0.1**
comp=Z,46nm,1.3s,mb5.5
TTA Tatalina 87.96 9 *eP* **P 18 47 08.3 -0.2**
TTA pmax pmax
comp=Z,45nm,1.3s,mb5.5
628A Black Gap, Mar 88.03 57⇑P **P 18 47 09.5 -0.1**
baz=88,SNR=6.4
O17A Robinson Place 88.03 44 P **P 18 47 09.8 +0.4**
baz=88,SNR=5.8
P18A Preston Nutter 88.03 45⇓P **P 18 47 09.5 +0.1**
baz=88
U21A Nageezi 88.04 49⇑P **P 18 47 09.6 +0.1**
baz=88,SNR=7.7
Z24A Sheeppen Canyo 88.07 52⇓P **P 18 47 10.3 +0.6**
baz=88
ANMO Albuquerque 88.11 50 *eP* **P 18 47 07.4 -2.4**
comp=Z,21nm,1.4s,mb5.2
ANMO Albuquerque 88.11 50 *eP* **P 18 47 07.4 -2.5**
ANMO pmax pmax
comp=Z,21nm,1.4s
X23A Hourglass Bar 88.11 51⇑P **P 18 47 10.6 +0.7**
baz=88
GDL2 Guadalupe Moun 88.24 54 *eP* **P 18 47 10.0 -0.6**
comp=Z,9.3nm,1.1s,mb4.9
125A Gardner Draw, 88.25 53⇓P **P 18 47 10.8 +0.3**
baz=88,SNR=6.6
427A Hayter Ranch, 88.30 55⇑P **P 18 47 11.3 +0.5**
baz=88,SNR=13
Y24A Capitan 88.32 52⇑P **P 18 47 10.9 0.0**
baz=88,SNR=18
528A Cox Ranch, San 88.43 56 P **P 18 47 11.3 -0.2**
baz=88,SNR=9.8
F12A Elk City 88.54 38 P **P 18 47 11.2 -0.4**
baz=89,SNR=7.5
428A Kincaid Ranch, 88.78 56⇓P **P 18 47 13.6 +0.5**
baz=89
Y25A Mesa, Roswell 88.85 52⇑P **P 18 47 13.2 -0.2**
baz=89,SNR=10.0
W24A Lazy 6 Ranch, 88.98 51⇓P **P 18 47 13.7 -0.3**

baz=89
U23A El Rito 89.00 49 ⇑P P 18 47 14.6 +0.6
baz=89,SNR=5.9
Z26A Caprock 89.05 53 ⇑P P 18 47 14.3 0.0
baz=89
F13A Darby 89.08 38 ⇑P P 18 47 13.8 -0.3
baz=89
C11A Tepee Creek (N 89.25 36 ⇓P P 18 47 14.6 -0.3
baz=89
D12A Red Ives Fores 89.26 37 ⇑P P 18 47 14.7 -0.3
baz=89
S22A 4UR Ranch, Cre 89.29 48 ⇑P P 18 47 15.7 +0.3
baz=89,SNR=6.9
H15A Lima 89.36 40 ⇓P P 18 47 15.9 +0.4
baz=90
MCMT McKenzie Canyo 89.36 39 *eP* **P 18 47 15.1 -0.4**
comp=Z,5.1nm,1.5s,mb4.6
TRF Thorofare Moun 89.37 11 *eP* **P 18 47 14.0 -1.1**
comp=Z,17nm,0.8s,mb5.4
ENH Enshi 89.44 304 *eP* **P 18 47 17.2 +1.0**
comp=Z,110nm,1.3s,mb6.0
BJT Baijiatuau 89.56 315 *eP* **P 18 47 17.2 +0.7**
comp=Z,58nm,1.5s,mb5.7
BJT Baijiatuau 89.56 315 *eP* **P 18 47 17.2 +0.6**
BJT pmax pmax
comp=Z,58nm,1.5s
BJI Beijing 89.57 315 P **P 18 47 17.4 +0.8**
BJI S S 18 58 08.3 +1.9
BJI SS SS 19 04 06.4 +3.2
BJI pmax pmax
comp=Z,20nm,0.8s,mb5.5
BJI pmax pmax
comp=Z,83nm,4.2s
BJI LR LR
comp=N,150nm,20.5s,MS4.5
BJI LR LR
comp=E,150nm,20.9s,MS4.5
BJI LR LR
comp=Z,170nm,26.7s
W25A X Bar L Ranch, 89.66 51 ⇑P P 18 47 16.8 -0.4
baz=90
G15A Dillon 89.77 39 ⇑P P 18 47 17.7 +0.3
baz=90,SNR=5.5
V25A Rancho No Teng 89.86 50 ⇓P P 18 47 17.5 -0.6
baz=90
MCK McKinley 89.88 12 *eP* **P 18 47 16.7 -0.7**
comp=Z,32nm,1.1s,mb5.6
MCK McKinley 89.88 12 *eP* **P 18 47 16.7 -0.8**
MCK pmax pmax
comp=Z,32nm,1.1s,mb5.6
PAX Paxson 89.88 13 *eP* **P 18 47 16.5 -1.0**
comp=Z,14nm,1.2s,mb5.2
PAX Paxson 89.88 13 *eP* **P 18 47 16.5 -1.0**
PAX pmax pmax
comp=Z,13nm,1.2s,mb5.1
GYA Guiyang 89.89 299 P **P 18 47 20.0 +1.5**
GYA pP pP 18 47 30.4 +5.1
GYA sP sP 18 47 36.8 +9.0
GYA PP PP 18 50 54.5 +2.9
GYA SKS 18 57 45.3
GYA S S 18 58 07.3 -2.8
GYA SS SS 19 04 09.9 +1.4
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,120nm,5.8s
GYA LR LR
comp=N,580nm,18.9s,MS5.2
GYA LR LR
comp=E,560nm,19.0s,MS5.2
GYA LR LR
comp=Z,640nm,18.6s,MS5.1
E14A Clinton 89.92 38 ⇓P P 18 47 17.9 -0.2
baz=90
Y27A Causey 89.94 53 ⇓P P 18 47 18.1 -0.4
baz=90
L19A Farson 89.94 43 ⇑P P 18 47 18.2 -0.1
baz=90
IMW Indian Meadow 89.96 41 *eP* **P 18 47 18.4 0.0**
comp=Z,9.5nm,1.3s,mb5.0
SEY Seymchan 90.07 346 ⇓*iP* **P 18 47 18.7 +0.3**
J18A Kendall Valley 90.14 42 P **P 18 47 19.1 -0.1**
baz=90,SNR=5.9
F15A Butte 90.15 39 ⇓P P 18 47 19.3 +0.2
baz=90
BW06 Boulder Array 90.18 42 ⇑P P 18 47 19.1 -0.3
baz=90
PDAR Pinedale Array 90.18 42 P **P 18 47 18.6 -0.8**
comp=Z,1.2nm,1.0s,mb4.2,baz=156,slow=4.0,SNR=8.5
PDAR LR LR 19 22 19.3
comp=Z,219nm,18.7s,MS4.6,baz=251,slow=32
SDCO Great Sand Dun 90.20 48 ⇓P P 18 47 19.5 -0.1
baz=90
G16A Moss Hill, Enn 90.20 40 ⇓P P 18 47 19.2 -0.2
baz=90
H16A Russell Place, 90.23 40 ⇑P P 18 47 20.5 +0.9
baz=90,SNR=6.1
MSTX Muleshoe 90.27 53 ⇓P P 18 47 19.5 -0.5
baz=90
U25A Circle Dot Ran 90.28 50 ⇑P P 18 47 19.8 -0.2
baz=90
DLBC Dease Lake 90.45 22 *eP* **P 18 47 20.1 -0.1**
BOZ Bozeman (W) 90.54 39 ⇓P P 18 47 20.8 -0.2
baz=91,SNR=12
BOZ Bozeman (W) 90.54 39 *eP* **P 18 47 20.1 -0.9**
comp=Z,12nm,1.3s,mb5.1
BOZ Bozeman (W) 90.54 39 *eP* **P 18 47 20.1 -0.9**
BOZ pmax pmax
comp=Z,12nm,1.3s,mb5.1
W27A Bowe Ranch, En 90.58 52 ⇓P P 18 47 21.2 -0.2
baz=91
NST Nakhon Sawan 90.77 287 P **P 18 47 25.0 +2.2**
DOT Dot Lake 90.78 14 *eP* **P 18 47 21.4 -0.3**
comp=Z,120nm,1.2s,mb6.1
D15A Lincoln 90.82 38 ⇑P P 18 47 21.8 -0.5
baz=91
K20A Yellowstone Ra 90.88 43 ⇑P P 18 47 22.2 -0.4
baz=91
S25A Robets Cordova 90.89 49 ⇑P P 18 47 22.2 -0.6
baz=91
A13A Flathead Natio 90.89 35 ⇓P P 18 47 22.4 -0.2
baz=91
HRY Holter Researc 91.02 38 *eP* **P 18 47 22.0 -1.2**
comp=Z,2.6nm,0.7s,mb4.7
COLA College 91.12 12 *eP* **P 18 47 22.0 -1.2**
comp=Z,26nm,1.1s,mb5.5
COLA College 91.12 12 *eP* **P 18 47 22.0 -1.2**
COLA pmax pmax
comp=Z,26nm,1.1s,mb5.5
O23A Lake Granby, G 91.16 46 ⇓P P 18 47 24.0 0.0
baz=91
B14A Marquette Ranc 91.17 36 ⇓P P 18 47 23.4 -0.4
baz=91,SNR=7.5
ILAR Eielson Array 91.20 12 P **P 18 47 22.7 -0.9**
comp=Z,7.2nm,1.0s,mb4.9,baz=220,slow=4.9,SNR=36
PP PP
ILAR 18 51 07.8 +6.7
comp=Z,0.8nm,0.9s,baz=226,slow=6.7,SNR=4.3
ILAR Eielson Array 91.20 12 P **P 18 47 22.7 -0.9**
ILAR 18 51 07.8
I19A Meeteetse 91.21 42 ⇓P P 18 47 24.3 +0.1
baz=91
J20A Shoshoni 91.41 43 ⇑P P 18 47 25.2 +0.1
baz=92
A14A Double T Ranch 91.44 36 P **P 18 47 24.8 -0.3**
baz=92,SNR=6.3
B15A Bradely Ranch, 91.53 37 ⇑P P 18 47 26.0 +0.5
baz=92
K21A Alcova 91.55 43 ⇓P P 18 47 25.9 +0.2
baz=92
H19A Powell 91.56 41 ⇓P P 18 47 25.9 +0.2
baz=92
G18A Lazy EL Ranch, 91.56 40 ⇓P P 18 47 25.3 -0.5
baz=92
XAN Xi'an 91.62 307 P **P 18 47 27.8 +1.5**
XAN pmax pmax
comp=Z,11nm,1.0s,mb5.1
XAN pmax pmax
comp=Z,23nm,4.9s
CFAA Coronel Fontan 91.64 126 LR LR 19 24 17.6
comp=Z,27nm,18.2s,MS3.7,baz=353,slow=33
F18A Big Timber 91.79 40 ⇑P P 18 47 26.9 +0.1
baz=92
J21A Lysite 91.80 43 ⇑P P 18 47 26.7 -0.2
baz=92
A15A Johnson Ranch, 91.82 36 ⇓P P 18 47 26.4 -0.4
baz=92
D17A Six Diamond Ra 91.92 38 P **P 18 47 27.5 +0.2**
baz=92,SNR=7.6
M23A Laramie 91.93 45 ⇓P P 18 47 27.7 +0.1
baz=92
E18A Harlowton 92.04 39 ⇓P P 18 47 28.2 +0.3
baz=92,SNR=6.0
I21A Big Trails, Te 92.14 42 ⇓P P 18 47 27.8 -0.7
baz=92
C17A Wharram Farm, 92.14 38 P **P 18 47 28.1 -0.2**
baz=92,SNR=5.9
EGAK Eagle 92.40 14 *eP* **P 18 47 28.5 -0.6**
comp=Z,22nm,1.2s,mb5.3
A16A West Butte Ran 92.42 37 ⇑P P 18 47 29.4 -0.2
baz=93
HIA Hailar 92.49 324 *eP* **P 18 47 30.4 +0.4**
comp=Z,12nm,1.0s,mb5.2
HIA Hailar 92.49 324 *eP* **P 18 47 30.4 +0.4**
HIA pmax pmax
comp=Z,12nm,1.0s
KMI Kunming 92.50 296 P **P 18 47 32.9 +2.3**
KMI pP pP 18 47 43.4 +5.9
KMI sP sP 18 47 47.9 +8.0
KMI PP PP 18 51 17.3 +5.1
KMI SKS 18 58 03.0
KMI S S 18 58 31.1 -2.7
KMI sS sS 18 58 49.4 +4.2
KMI SS SS 19 04 48.8 +2.7
KMI pmax pmax
comp=E,240nm,18.0s,MS4.8
comp=Z,32nm,1.1s,mb5.6
KMI pmax pmax
comp=Z,65nm,3.5s
KMI LR LR
comp=N,110nm,16.5s,MS4.8
KMI LR LR
comp=E,240nm,18.0s,MS4.8
KMI LR LR
comp=Z,280nm,18.8s,MS4.7
BILL Bilibino 92.58 353 *eP* **P 18 47 29.2 -0.7**
BILL Bilibino 92.58 353 ⇑*eP* **P 18 47 30.8 +0.9**
BILL pmax pmax
comp=Z,20nm,1.6s,mb5.3
CHRT Chiangrai 92.80 290 ⇑P P 18 47 33.0 +0.9
comp=Z,316nm,0.8s
CM31 Chiang Mai Arr 92.95 289 *eP* **P 18 47 34.7 +1.9**
comp=Z,53nm,1.0s,mb5.9
CMAR Chiang Mai Arr 92.95 289 P **P 18 47 33.7 +0.9**
comp=Z,40nm,0.9s,mb5.8,baz=133,slow=3.1,SNR=130
CMAR LR LR 19 28 30.9
comp=Z,58nm,19.4s,MS4.0,baz=105,slow=35
CMAR Chiang Mai Arr 92.95 289 P **P 18 47 33.7 +0.9**
D19A Cripps Ranch, 92.96 39 ⇑P P 18 47 32.3 +0.2
baz=93
HHC Hu-ho-hao-te 93.01 314 *eP* **P 18 47 33.5 +0.9**
HHC PP PP 18 51 20.5 +4.6
HHC SKS 18 58 01.4
HHC S S 18 58 33.9 -3.8
HHC SS SS 19 04 55.3 +2.5
HHC pmax pmax
comp=Z,36nm,1.0s,mb5.8
HHC pmax pmax
comp=Z,97nm,6.1s
HHC LR LR
comp=N,150nm,15.0s,MS4.8
HHC LR LR
comp=E,200nm,15.4s,MS4.8
HHC LR LR
comp=Z,210nm,17.5s,MS4.7
CHG Chiang Mai 93.09 289 ⇑P P 18 47 35.4 +1.9
comp=Z,62nm,1.1s,mb6.0
CHTO Chiang Mai 93.09 289 *eP* **P 18 47 35.0 +1.5**
comp=Z,62nm,1.0s,mb6.0
CHTO Chiang Mai 93.09 289 *eP* **P 18 47 35.0 +1.5**
CHTO pmax pmax
comp=Z,62nm,1.0s,mb6.0
C19A Slack Wire Ran 93.17 38 ⇑P P 18 47 33.4 +0.3
baz=93,SNR=5.3
NNA Nana 93.43 105 LR LR 19 21 47.0
comp=Z,412nm,18.4s,MS4.9,baz=311,slow=30
ATAH Atahualpa 94.07 100 LR LR 19 22 09.0
comp=Z,393nm,18.2s,MS4.9,baz=202,slow=30
CD2 Chengdu 94.14 302 *eP* **P 18 47 39.8 +1.8**
CD2 pP pP 18 47 50.4 +5.5
CD2 sP sP 18 47 54.5 +7.2
CD2 PP PP 18 51 30.0 +5.0
CD2 SKS 18 58 10.4
CD2 S S 18 58 45.6 -2.4
CD2 sS sS 18 59 03.3 +3.8
CD2 SS SS 19 05 10.9 +1.5
CD2 pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
CD2 pmax pmax
comp=Z,30nm,6.2s
CD2 LR LR
comp=N,200nm,16.8s,MS4.9
CD2 LR LR
comp=E,210nm,13.2s,MS4.9
CD2 LR LR
comp=Z,230nm,19.2s
RSSD Black Hills 94.32 43 *eP* **P 18 47 36.2 -2.3**
comp=Z,5.1nm,1.0s,mb4.9
RSSD Black Hills 94.32 43 *eP* **P 18 47 36.2 -2.3**
RSSD pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
YAK Yakutsk 95.92 337 *eP* **P 18 47 44.5 -0.9**
comp=Z,13nm,0.9s,mb5.3
YAK Yakutsk 95.92 337 *eP* **P 18 47 43.8 -1.6**
YAK pmax pmax
comp=Z,14nm,1.0s,mb5.3
LZH Lanzhou 96.26 307 *eP* **P 18 47 49.5 +1.9**
LZH pP pP 18 47 58.5 +4.0
LZH sP sP 18 48 01.0 +4.1
LZH pmax pmax
comp=Z,15nm,1.0s,mb5.4
LZH LR LR
comp=N,180nm,12.3s
LZH LR LR
comp=E,410nm,18.0s
LZH LR LR
comp=Z,200nm,15.0s,MS4.7
LPAZ La Paz 99.08 112 LR LR 19 25 49.9
comp=Z,210nm,18.7s,MS4.7,baz=44,slow=31
ULN Ulaanbaatar 99.10 318 *eP* **P 18 47 59.8 -0.3**
comp=Z,1.7nm,0.8s,mb4.6
ULN Ulaanbaatar 99.10 318 *eP* **P 18 47 59.8 -0.3**
ULN pmax pmax
comp=Z,2.0nm,0.8s,mb4.7
SONM Songino Array 99.49 318 P **P 18 48 02.1 +0.3**
comp=Z,0.9nm,0.7s,mb4.4,baz=150,slow=2.2,SNR=7.8
SONM PP PP 18 52 10.0 +4.2
comp=Z,1.0nm,1.0s,baz=142,slow=7.5,SNR=4.9
SONM LR LR 19 33 15.6
comp=Z,155nm,18.7s,MS4.5,baz=124,slow=36
SONM Songino Array 99.49 318 P **P 18 48 02.1 +0.3**
SONM 18 52 10.0
GTA Gaotai 100.51 308 *eP* Pdif 18 48 08.0 +1.5
GTA pmax pmax
comp=Z,3.0nm,1.2s
ZAK Zakamensk 102.39 320 *eP* Pdif 18 48 12.7 -2.1
ZAK pmax pmax
comp=Z,1.0nm,1.2s
WMQ Urumqi 110.50 310 Pdif Pdif 18 48 52.0 +1.1
WMQ PP PP 18 53 32.0 +4.3
WMQ SKS SKSdf 18 59 58.0 -4.3
WMQ SS SS 19 08 56.0 +0.7
WMQ AMB AMB
comp=Z,94nm,10.0s
WMQ LR LR
comp=N,75nm,20.0s,MS4.6
WMQ LR LR
comp=E,160nm,20.0s,MS4.6
WMQ LR LR
comp=Z,210nm,20.0s,MS4.7
ZALV Zalesovo Beam 114.26 320 PKP PKiKP 18 52 56.6 -1.6
comp=Z,0.9nm,0.6s,baz=116,slow=3.4,SNR=6.0
ZALV Zalesovo Beam 114.26 320 PKIKP PKiKP 18 52 56.7 -1.6
MKAR Makanchi Array 114.83 312 PKP PKiKP 18 52 58.1 -1.5
comp=Z,2.8nm,0.9s,baz=83,slow=3.8,SNR=13
MKAR Makanchi Array 114.83 312 PKIKP PKiKP 18 52 58.1 -1.5
NVS Novosibirsk 115.28 321 *ePKIKP* PKPdf 18 52 57.0 -3.2
KURK Kurchatov 117.70 316 *ePKPdf* PKPdf 18 53 03.4 -1.6
KURK Kurchatov 117.70 316 *dPKIKP* PKPdf 18 53 03.9 -1.1
KKAR Karatay Array 122.75 307 *ePKPdf* PKPdf 18 53 14.0 -1.0
KKAR Karatay Array 122.75 307 *ePKIKP* PKPdf 18 53 14.0 -1.0
BRVK Borovoye 122.89 319 ⇑*iPKIKP* PKPdf 18 53 13.9 -1.0
BRVK pmax pmax
comp=Z,11nm,1.2s
KBL Kabul 123.08 297 *ePKPdf* PKPdf 18 53 15.6 -0.3
KBL Kabul 123.08 297 *ePKIKP* PKPdf 18 53 15.6 -0.3
SVE Sverdlovsk 127.80 324 *ePKIKP* PKPdf 18 53 23.7 -0.5
SVE pmax pmax
comp=Z,22nm,1.6s
ARU Arti 129.01 324 *ePKPdf* PKPdf 18 53 25.8 -0.7
ARU Arti 129.01 324 *i PKIKP* PKPdf 18 53 26.6 +0.1
ARU 18 55 36.4
ARU 19 00 31.4
ABKAR Akbulak array 129.78 315 *ePKPdf* PKPdf 18 53 28.0 -0.2
ARCES ARCESS Array B 132.56 350 PKP PKPdf 18 53 34.0 +1.1
comp=Z,2.6nm,0.9s,baz=274,slow=4.6,SNR=4.1
ARCES ARCESS Array B 132.56 350 PKIKP PKPdf 18 53 34.0 +1.1
APA Apatity 132.66 345 ⇑*iPKHKP* PKPpre 18 53 08.3
APA MLR MLR
comp=Z,400nm,22.0s,MS5.1
LSZ Lusaka 134.46 214 *ePKPdf* PKPdf 18 53 37.8 -0.3
LSZ Lusaka 134.46 214 *ePKIKP* PKPdf 18 53 37.8 -0.3
KLMR Klimovskoe 135.70 336 *ePKHKP* PKPpre 18 53 25.7
KLMR pmax pmax
comp=Z,9.0nm,1.3s
KMBO Kilima Mbogo 139.23 237 PKP PKPdf 18 53 48.0 +0.9
comp=Z,1.1nm,0.5s,baz=180,slow=24,SNR=5.4
KMBO Kilima Mbogo 139.23 237 PKP PKPdf 18 53 48.0 +0.9
KMBO Kilima Mbogo 139.23 237 PKIKP PKPdf 18 53 48.0 +1.0
FINES FINESS Array B 139.51 344 PKP PKPdf 18 53 47.6 +1.6
comp=Z,3.8nm,1.0s,baz=94,slow=6.1,SNR=4.8
FINES FINESS Array B 139.51 344 PKIKP PKPdf 18 53 47.6 +1.6
OBN Obninsk 140.59 331 ⇑*iPKIKP* PKPdf 18 53 48.7 +0.5
OBN pmax pmax
comp=Z,17nm,1.2s
ZEI Tsey 142.12 310 *ePKIKP* PKPdf 18 53 53.0 +1.7
ZEI pmax pmax
comp=Z,12nm,1.3s
NOA NORSAR Array B 142.53 354 PKhKP PKPpre 18 53 47.9
comp=Z,1.0nm,0.7s,baz=328,slow=2.5,SNR=4.8
NOA PKP PKPdf 18 53 52.8 +1.4
comp=Z,0.7nm,0.7s,baz=340,slow=3.3,SNR=3.9
NOA PKKP 19 03 12.3
comp=Z,0.7nm,0.7s,baz=162,slow=1.8,SNR=3.4
NOA NORSAR Array B 142.53 354 PKP PKPpre 18 53 47.9
NOA PKP PKPdf 18 53 52.8 +1.4
NOA PKKP 19 03 12.3
NOA NORSAR Array B 142.53 354 PKIKP PKPpre 18 53 47.9
NOA 18 53 52.8
KIV Kislovodsk 142.59 312 *ePKIKP* PKPdf 18 53 50.6 -1.5
KIV *e* 18 57 05.2
KIV pmax pmax
comp=Z,11nm,1.2s
IZAR Zarasai 144.19 339 *eP* PKPdf 18 53 51.9 -2.6
IZAR AMB AMB 18 53 53.0
comp=Z,5.9nm,1.4s
ISAL Salakas 144.38 338 *eP* PKPdf 18 53 52.2 -2.7
ISAL AMB AMB 18 53 55.2
comp=Z,11nm,2.3s
IIGN Ignalina 144.52 338 *eP* PKPdf 18 53 52.5 -2.7
IIGN AMB AMB 18 53 55.5
comp=Z,12nm,1.4s
NACGM Naroch 144.69 337 *e* PKPdf 18 53 50.0 -5.4
ERZM Erzurum 144.75 306 *eP* PKPdf 18 53 55.5 -0.5
BNGL BINGOL 145.16 304 ⇑*iP* PKPbc 18 53 56.5 +0.1
BEST Besiri 145.32 303 ⇓*iP* PKPbc 18 53 57.5 +0.6
SUW Suwalki 146.63 339 *ePKP* PKPdf 18 53 59.8 +1.0
SUW Suwalki 146.63 339 *ePKPdf* PKPdf 18 53 59.7 +0.9
SUW Suwalki 146.63 339 *ePKP2* PKPdf 18 53 59.8 +1.0
AKASG Malin Array Be 146.84 330 PKPbc PKPbc 18 54 00.3 -0.8
comp=Z,33nm,0.9s,baz=40,slow=3.8,SNR=69
AKASG Malin Array Be 146.84 330 PKP2 PKPbc 18 54 00.3 -0.8
AKBB Malin Array Si 146.84 330 *ePKPdf* PKPdf 18 54 00.0 +0.8
AKBB Malin Array Si 146.84 330 *ePKP2* PKPbc 18 54 00.0 -1.1
KIEV Kiev 146.86 330 *ePKPdf* PKPdf 18 53 60.0 +0.7
KIEV Kiev 146.86 330 *ePKP2* PKPdf 18 54 00.0 +0.7
MALT Malatya 147.39 304 *ePKPbc* PKPbc 18 54 03.0 -0.1
MALT Malatya 147.39 304 *ePKP2* PKPbc 18 54 03.0 -0.1
SIM Simferopol' 147.74 318 *ePKP2* PKPbc 18 54 04.6 +0.8
SIM pmax pmax
comp=Z,35nm,0.7s
ESK Eskdalemuir 148.15 8 *i PKP2* PKPbc 18 54 04.6 +0.1
GKP Gorka Klasztor 148.98 344 *ePKP* PKPbc 18 54 06.8 +0.1
GKP Gorka Klasztor 148.98 344 *ePKP2* PKPbc 18 54 06.8 +0.1
CTKT Corum 149.26 310 *eP* PKPbc 18 54 07.9 +0.1
COBT Iskenderun 149.54 302 ⇑*iP* PKPbc 18 54 08.9 +0.2
HLG Helgoland 149.59 355 *ePKPbc* PKPbc 18 54 08.6 +0.4
LVV L'vov 149.73 334 *i PKP2* PKPbc 18 54 07.6 -1.1
AVNT Avonos 149.90 307 ⇑*iP* PKPbc 18 54 09.3 -0.2
KWP Kalwaria Pacla 150.41 335 *ePKP* PKPbc 18 54 10.3 0.0
KWP Kalwaria Pacla 150.41 335 *ePKPbc* PKPbc 18 54 10.3 -0.1
KWP Kalwaria Pacla 150.41 335 *ePKIKP* PKPbc 18 54 10.3 0.0
KWP Kalwaria Pacla 150.41 335 ⇓*iP* PKPbc 18 54 11.1 +0.8
BR131 Keskin Array S 150.43 309 *ePKPdf* PKPdf 18 54 04.7 -0.7
BR131 *ePKPbc* PKPbc 18 54 10.6 -0.2
BRTR Keskin Array B 150.43 309 PKP PKPdf 18 54 04.8 -0.6
comp=Z,3.7nm,1.1s,baz=98,slow=2.9,SNR=7.7
BRTR PKPbc PKPbc 18 54 10.2 -0.6
comp=Z,14nm,0.9s,baz=66,slow=1.5,SNR=19
BRTR PKPab PKPab 18 54 18.4 +1.1
comp=Z,27nm,1.2s,baz=132,slow=1.8,SNR=12
BRTR Keskin Array B 150.43 309 PKIKP PKPdf 18 54 04.9 -0.5
BRTR 18 54 10.2
BRTR 18 54 18.4
GULE Gulek 150.46 304 *eP* PKPbc 18 54 11.8 +0.9
RUE Ruedersdorf 150.48 348 *ePKPbc* PKPbc 18 54 10.5 +0.1
RUE Ruedersdorf 150.48 348 *ePKPbc* PKPbc 18 54 10.4 0.0
BUR08 Bucovina Ar. S 150.88 330 *ePKPdf* PKPdf 18 54 05.7 -0.2
BUR08 *ePKPbc* PKPbc 18 54 11.9 +0.4
BURAR Bucovina Array 150.89 330 ⇑*iPKIKP* PKPbc 18 54 12.8 +1.2
BURAR Bucovina Array 150.89 330 ⇑*iP* PKPbc 18 54 12.8 +1.2
OJC Ojcow 150.96 339 *ePKP* PKPbc 18 54 11.6 0.0
OJC Ojcow 150.96 339 *ePKIKP* PKPbc 18 54 11.6 0.0
NRDL Niedersach Rie 151.05 352 *ePKPbc* PKPbc 18 54 11.8 0.0
KOLS Kolonicke sedl 151.13 335 *ePKP* PKPdf 18 54 06.7 +0.5
KOLS *e* 18 54 12.8
KOLS Kolonicke sedl 151.13 335 *ePKIKP* PKPdf 18 54 06.7 +0.5
KOLS *e* 18 54 12.8
KOLS Kolonicke sedl 151.13 335 *ePKP* PKPdf 18 54 06.7 +0.5
KOLS *e* 18 54 12.8
UZH Uzhgorod 151.37 334 ⇑*iPKIKP* PKPbc 18 54 13.0 +0.4
UZH *e* 18 54 19.4
UZH *e* 18 54 25.8
TIRR Tirgusor 151.38 322 *ePKPbc* PKPbc 18 54 12.3 -0.5
TIRR Tirgusor 151.38 322 *ePKIKP* PKPbc 18 54 12.3 -0.5
TIRR Tirgusor 151.38 322 ⇑*iP* PKPbc 18 54 13.5 +0.7
VRI Vrincioaia 151.38 326 ⇓*PKIKP* PKPbc 18 54 12.7 -0.1
VRI Vrincioaia 151.38 326 ⇓*iP* PKPbc 18 54 12.7 -0.1
KSP Ksiaz 151.44 344 *ePKP* PKPbc 18 54 13.5 +0.7
NIE Niedzica 151.47 337 *ePKP* PKPbc 18 54 13.6 +0.8
NIE Niedzica 151.47 337 *ePKIKP* PKPbc 18 54 13.6 +0.8
IBBN Ibbenburen 151.47 355 *ePKPbc* PKPbc 18 54 12.6 -0.2
CRVS Cervenica-Dubn 151.47 335 *ePKP* PKPdf 18 54 08.8 +2.1
CRVS *e* 18 54 13.5
CRVS Cervenica-Dubn 151.47 335 *ePKIKP* PKPdf 18 54 08.8 +2.1
CRVS *e* 18 54 13.5
CRVS Cervenica-Dubn 151.47 335 *ePKP* PKPdf 18 54 08.8 +2.1
CRVS *e* 18 54 13.5
CLZ Clausthal 151.66 352 *ePKPbc* PKPbc 18 54 13.5 +0.3
CLZ Clausthal 151.66 352 *ePKIKP* PKPbc 18 54 13.5 +0.3
CLL Collm 151.75 348 ⇑*iPKIKP* PKPbc 18 54 13.4 0.0
CLL *e* 18 54 21.0
CLL pmax pmax
comp=Z,44nm,1.1s
CLL pmax pmax
comp=Z,45nm,1.5s
CLL Collm 151.75 348 *ePKPdf* PKPdf 18 54 06.0 -1.1
CLL ⇑*iPKPbc* PKPbc 18 54 13.4 0.0
comp=Z,44nm,1.1s
CLL *ePKPab* PKPab 18 54 21.0 -1.2
comp=Z,45nm,1.5s
CLL LmV 20 12 00.0
comp=Z,200nm,18.8s
OKC Ostrava-Krasne 151.82 340 *ePKIKP* PKPbc 18 54 13.5 -0.1
OKC *e* 18 54 22.9
OKC Ostrava-Krasne 151.82 340 ⇑*ePKP* PKPbc 18 54 13.5 -0.1
OKC *ePKPAB* PKPab 18 54 22.9 +0.3
UPC Upice 151.82 344 *ePKIKP* PKPbc 18 54 13.6 0.0
UPC Upice 151.82 344 ⇑*ePKP* PKPbc 18 54 13.6 0.0
WTSB Winterswijk 151.88 356 *i PKiKP* PKPbc 18 54 13.1 -0.6
comp=Z,33nm,1.4s
WTSB Winterswijk 151.88 356 *ePKPpre* PKPab 18 54 21.8 -1.0
comp=Z,50nm,2.0s
DPC Dobruska-Polom 151.88 343 *ePKIKP* PKPdf 18 54 07.3 0.0
DPC *e* 18 54 14.2
DPC *e* 18 54 23.6
DPC Dobruska-Polom 151.88 343 *ePKPDF* PKPdf 18 54 07.3 0.0

DPC			⇑*e*PKP	PKPbc	18 54 14.2	+0.4
DPC			*e*PKPAB	PKPab	18 54 23.6	+0.7
BRG	**Berggiesshubel**	**151.97 347**	*e*PKPdf	PKPdf	18 54 07.6	+0.2
BRG			*e*PKPbc	PKPbc	18 54 14.1	+0.2
BRG	**Berggiesshubel**	**151.97 347**	*e*PKP	PKPdf	18 54 07.3	-0.1
	comp=Z,5.8nm,1.0s					
BRG	**Berggiesshubel**	**151.97 347**	*i* PKP	PKPbc	18 54 13.9	-0.1
	comp=Z,32nm,1.1s					
MLR	**Muntele Rosu**	**152.04 326**	⇓PKIKP	PKPbc	18 54 12.9	-1.4
MLR	**Muntele Rosu**	**152.04 326**	⇓*i*P	PKPbc	18 54 12.9	-1.4
MORC	**Moravsky Berou**	**152.06 341**	*e*PKPbc	PKPbc	18 54 13.7	-0.5
MORC	**Moravsky Berou**	**152.06 341**	⇑PKIKP	PKPbc	18 54 14.6	+0.4
MORC	**Moravsky Berou**	**152.06 341**	⇑*i*P	PKPbc	18 54 14.6	+0.4
NEUB	**Neuenburg**	**152.06 350**	*e*PKPbc	PKPbc	18 54 14.2	+0.1
ERMK	**Ermenek**	**152.07 304**	*e*P	PKPdf	18 54 10.1	+2.0
PVCC	**Panska Ves**	**152.15 345**	*e*PKIKP	PKPbc	18 54 14.7	+0.3
PVCC			*e*		18 54 24.4	
PVCC	**Panska Ves**	**152.15 345**	⇑*e*PKP	PKPbc	18 54 14.7	+0.3
PVCC			*e*PKPAB	PKPab	18 54 24.4	+0.4
KECS	**Kecovo**	**152.19 336**	*e*PKP	PKPbc	18 54 15.0	+0.5
KECS			*e*		18 54 25.1	
KECS	**Kecovo**	**152.19 336**	*e*PKIKP	PKPbc	18 54 15.0	+0.5
KECS			*e*		18 54 25.1	
KECS	**Kecovo**	**152.19 336**	*e*PKP	PKPbc	18 54 15.0	+0.5
KECS			*e*		18 54 25.0	
CSS	**Prodhromos**	**152.25 300**	*e*PKPbc	PKPbc	18 54 13.7	-1.5
VOIR		**152.53 327**	⇑PKIKP	PKPbc	18 54 16.4	+1.0
VOIR		**152.53 327**	⇑*i*P	PKPbc	18 54 16.4	+1.0
MOX	**Moxa**	**152.63 349**	*e*PKP	PKPbc	18 54 15.3	-0.1
	comp=Z,16nm,1.4s					
MOX			*e*		18 54 22.2	
PRU	**Pruhonice**	**152.66 345**	*e*PKIKP	PKPbc	18 54 15.8	+0.3
PRU			*e*		18 54 26.9	
PRU	**Pruhonice**	**152.66 345**	⇑*e*PKP	PKPbc	18 54 15.8	+0.3
PRU			*e*PKPAB	PKPab	18 54 26.9	+0.8
WERD	**Werda**	**152.70 348**	*e*PKPdf	PKPdf	18 54 08.4	-0.1
WERD			*e*PKPbc	PKPbc	18 54 15.6	0.0
WERD			*e*PKPab	PKPab	18 54 26.4	+0.1
TANN	**Tannenbergstha**	**152.70 348**	*e*PKPdf	PKPdf	18 54 08.6	+0.1
TANN			*e*PKPbc	PKPbc	18 54 15.6	0.0
TANN			*e*PKPab	PKPab	18 54 26.3	0.0
VYHS	**Vyhne**	**152.76 338**	*e*PKP	PKPbc	18 54 15.6	-0.2
VYHS			*e*		18 54 27.8	
VYHS	**Vyhne**	**152.76 338**	*e*PKIKP	PKPbc	18 54 15.6	-0.2
VYHS			*e*		18 54 27.8	
VYHS	**Vyhne**	**152.76 338**	*e*PKP	PKPbc	18 54 15.6	-0.2
VYHS			*e*		18 54 27.8	
GUNZ	**Gunzen**	**152.78 348**	*e*PKPdf	PKPdf	18 54 08.7	+0.1
GUNZ			*e*PKPbc	PKPbc	18 54 15.7	-0.1
GUNZ			*e*PKPab	PKPab	18 54 26.8	+0.2
WERN	**Wernitzgruen**	**152.84 348**	*e*PKPdf	PKPdf	18 54 08.9	+0.2
WERN			*e*PKPbc	PKPbc	18 54 16.2	+0.3
WERN			*e*PKPab	PKPab	18 54 27.2	+0.3
PSZ	**Piszkesteto**	**152.88 336**	*e*PKPbc	PKPbc	18 54 16.1	0.0
PSZ			*e*PKPab	PKPab	18 54 28.2	+1.1
PSZ	**Piszkesteto**	**152.88 336**	⇑PKIKP	PKPbc	18 54 17.0	+0.9
PSZ	**Piszkesteto**	**152.88 336**	⇑*i*P	PKPbc	18 54 17.0	+0.9
NKC	**Novy Kostel**	**152.88 348**	*e*PKIKP	PKPbc	18 54 16.1	+0.1
NKC			*e*		18 54 26.3	
NKC	**Novy Kostel**	**152.88 348**	⇑*e*PKP	PKPbc	18 54 16.1	+0.1
NKC			*e*PKPAB	PKPab	18 54 26.3	-0.7
HGN	**Heimansgroeve**	**153.12 357**	*e*PKIKP	PKIKP	18 54 16.4	-0.3
HGN	**Heimansgroeve**	**153.12 357**	*e*PKPpre	PKPab	18 54 26.8	-1.2
	comp=Z,15nm,1.6s					
MEM	**Membach**	**153.27 357**	PKPbc	PKPbc	18 54 16.6	-0.2
ROTZ	**Rotzenmuhle**	**153.37 348**	*e*PKPbc	PKPbc	18 54 17.1	0.0
SNF	**Seneffe**	**153.42 360**	PKPab	PKPab	18 54 28.9	-0.4
TNS	**Taunus Mts**	**153.47 354**	*e*PKPab	PKPab	18 54 29.7	+0.2
TNS	**Taunus Mts**	**153.47 354**	*e*PKP2	PKPab	18 54 29.7	+0.2
BCLA	**Clavier**	**153.49 358**	PKP	PKPdf	18 54 06.2	-3.5
BCLA			PKPab	PKPab	18 54 29.6	0.0
ZST	**Bratislava**	**153.59 340**	*e*PKP	PKPab	18 54 31.7	+1.6
ZST	**Bratislava**	**153.59 340**	*e*PKP2	PKPab	18 54 31.7	+1.6
ZST	**Bratislava**	**153.59 340**	*e*PKP	PKPab	18 54 31.7	+1.6
GRA1	**Grafenberg Arr**	**153.62 349**	*e*PKPdf	PKPdf	18 54 10.2	+0.3
GRF	**Grafenberg Arr**	**153.62 349**	*e*PKPdf	PKPdf	18 54 10.2	+0.3
GRF	**Grafenberg Arr**	**153.62 349**	*e*PKIKP	PKPdf	18 54 10.2	+0.3
GRF	**Grafenberg Arr**	**153.62 349**	*e*PKIKP	PKPdf	18 54 10.2	+0.3
KHC	**Kasperske Hory**	**153.69 346**	*e*PKPdf	PKPdf	18 54 08.1	-0.9
KHC			*e*PKPbc	PKPbc	18 54 17.7	-0.1
KHC	**Kasperske Hory**	**153.69 346**	*e*PKIKP	PKPdf	18 54 09.5	-0.5
KHC			*e*		18 54 17.9	
KHC			*e*		18 54 30.3	
KHC	**Kasperske Hory**	**153.69 346**	*e*PKPDF	PKPdf	18 54 09.5	-0.5
KHC			⇑*e*PKP	PKPbc	18 54 17.9	+0.1
KHC			*e*PKPAB	PKPab	18 54 30.3	-0.2
GIVF	**Givet**	**153.82 359**	*e*PKP2	PKPab	18 54 30.5	-0.5
DOU	**Dourbes**	**153.83 359**	PKPbc	PKPbc	18 54 17.9	-0.2
DOU			PKPab	PKPab	18 54 31.3	+0.2
WET	**Wettzell**	**153.83 347**	*e*PKPdf	PKPdf	18 54 10.0	-0.2
WET	**Wettzell**	**153.83 347**	*e*PKIKP	PKPdf	18 54 10.0	-0.2
BAIF	**Baives**	**153.87 360**	*e*PKP2	PKPab	18 54 31.0	-0.2
	comp=Z,35nm,1.2s					
GEC2	**GERESS Array S**	**153.93 345**	*e*PKPdf	PKPdf	18 54 10.1	-0.3
GEC2	**GERESS Array S**	**153.93 345**	*e*PKIKP	PKPdf	18 54 10.1	-0.3
CONA	**Conrad Observa**	**154.21 341**	⇑*i*PKPdf	PKPdf	18 54 10.2	-0.6
	comp=Z,8.2nm,1.3s					
WLF	**Walferdange**	**154.21 357**	PKPab	PKPab	18 54 34.1	+1.5
SOP	**Sopron**	**154.22 340**	*e*PKP	PKPab	18 54 32.8	0.0
FLN	**La Foliniere**	**154.92 7**	*e*PKP2	PKPab	18 54 34.8	-0.9
	comp=Z,89nm,1.2s					
LDF	**La Druitiere**	**155.12 6**	*e*PKP2	PKPab	18 54 35.5	-1.1
	comp=Z,13nm,1.0s					
GRR	**Gorron**	**155.24 8**	*e*PKP2	PKPab	18 54 36.5	-0.6
	comp=Z,51nm,1.2s					
QUIF	**Quistinic**	**155.35 12**	*e*PKP2	PKPab	18 54 36.4	-1.2
	comp=Z,57nm,1.5s					
CDF	**Champ du Feu**	**155.38 355**	*e*PKP2	PKPab	18 54 37.3	-0.4
	comp=Z,41nm,1.5s					
MEZF	**Maizieres J'vi**	**155.41 358**	*e*PKP2	PKPab	18 54 37.6	-0.2
	comp=Z,28nm,1.1s					
SOKA	**Soboth**	**155.58 341**	⇓*i*PKPdf	PKPdf	18 54 10.8	-1.9
	comp=Z,2.5nm,1.2s					
PERS	**Pernice**	**155.59 341**	*i* PKPbc	PKPab	18 54 38.8	+0.2
SFTF	**Sexfontaines**	**155.71 358**	*e*PKP2	PKPab	18 54 38.8	-0.3
	comp=Z,72nm,1.2s					
HAU	**Haudompre**	**155.85 356**	*e*PKP2	PKPab	18 54 39.4	-0.3
HINF	**Hinteralfeld**	**156.00 355**	*e*PKP2	PKPab	18 54 39.8	-0.6
	comp=Z,23nm,1.3s					
VISS	**Visnje**	**156.43 341**	*i* PKPbc	PKPab	18 54 42.0	-0.3
BOJS	**Bojanci**	**156.57 340**	*i* PKPbc	PKPab	18 54 41.9	-1.0
JAVS	**Javornik**	**156.57 342**	*i* PKPbc	PKPab	18 54 41.5	-1.4
LOR	**Lormes**	**156.66 0**	*e*PKP2	PKPab	18 54 42.6	-0.6
	comp=Z,27nm,1.3s					
SSF	**Saint Saulge**	**156.87 1**	*e*PKP2	PKPab	18 54 43.7	-0.4
	comp=Z,26nm,1.1s					
MFF	**Saint Martin d**	**157.09 7**	*e*PKP2	PKPab	18 54 44.4	-0.7
	comp=Z,44nm,1.2s					
AVF	**Avril sur Loir**	**157.13 1**	*e*PKP2	PKPab	18 54 44.5	-0.8
	comp=Z,26nm,1.2s					
CABF	**La Chapelle**	**157.26 356**	*e*PKP2	PKPab	18 54 45.6	-0.2
SMF	**Signal de Mont**	**157.28 0**	*e*PKP2	PKPab	18 54 45.4	-0.5
	comp=Z,66nm,1.4s					
BGF	**Bois d'Agland**	**157.35 2**	*e*PKP2	PKPab	18 54 45.6	-0.6
	comp=Z,18nm,1.2s					
TCF	**Toulx Ste Croi**	**157.60 3**	*e*PKP2	PKPab	18 54 46.5	-0.8
	comp=Z,9.8nm,1.0s					
LPL	**La Plagne**	**158.30 355**	*e*PKP2	PKPab	18 54 51.1	+0.8
	comp=Z,33nm,1.4s					
LPG	**La Plagne**	**158.32 355**	*e*PKP2	PKPab	18 54 51.2	+0.8
	comp=Z,18nm,1.0s					
RJF	**Les Rejaudoux**	**158.53 5**	*e*PKP2	PKPab	18 54 50.5	-0.8
	comp=Z,30nm,1.2s					
LFF	**La Frestale**	**158.83 6**	*e*PKP2	PKPab	18 54 52.0	-0.6
	comp=Z,40nm,1.2s					
CAF	**Calviac**	**158.95 4**	*e*PKP2	PKPab	18 54 52.7	-0.4
ORIF	**Oris-en-Rattie**	**158.96 356**	*e*PKP2	PKPab	18 54 53.5	+0.3
VIVF	**Saint-Julien-l**	**159.07 359**	*e*PKP2	PKPab	18 54 53.6	-0.1
	comp=Z,22nm,1.2s					
MTLF	**Montolieu**	**160.54 4**	*e*PKP2	PKPab	18 54 59.7	-0.4
	comp=Z,66nm,1.7s					
ETSF	**Etsaut**	**160.66 10**	*e*PKP2	PKPab	18 55 00.3	-0.4
	comp=Z,24nm,1.3s					
EVO	**Evora**	**162.18 32**	*e*PKP2	PKPab	18 55 03.2	-4.3
	comp=Z,23nm,1.3s					
ESDC	**Sonseca Array**	**162.88 21**	PKP	PKPdf	18 54 21.3	-0.1
	comp=Z,1.3nm,0.9s,baz=355,slow=4.8,SNR=5.5					
ESDC			PKPab	PKPab	18 55 10.4	-0.1
	comp=Z,1.3nm,1.0s,baz=338,slow=3.6,SNR=5.4					
KEST	**Kesra**	**167.31 340**	PKPab	PKPab	18 55 29.9	-0.2
	comp=Z,3.8nm,1.0s,baz=325,slow=4.0,SNR=5.5					
TORD	**Torodi Ar. Bea**	**169.11 168**	PKP	PKPdf	18 54 26.3	-0.8
	comp=Z,5.5nm,1.1s,baz=356,slow=2.4,SNR=10					
TORD			PKPab	PKPab	18 55 39.5	+1.1
	comp=Z,2.1nm,0.8s,baz=187,slow=4.0,SNR=4.7					
TORD	**Torodi Ar. Bea**	**169.11 168**	PKP	PKPdf	18 54 26.3	-0.9
TORD			PKPab	PKPab	18 55 39.5	+1.1

*ISCJB **19** 18:46:00.9±0.4, 39°.53N±0°.02×28°.85E±0°.03, h6km±5km, Error ellipse: s-maj=4.0km s-min=3.7km az=175.7*
*DDA **19** 18:46:01.0, 39°.56N×28°.82E, h7km±4km, Md3.1*
*ISK **19** 18:46:00.8, 39°.53N×28°.86E, h12km, MD2.9*
*CSEM **19** 18:46:01.2±0.1, 39°.53N×28°.85E, h10km, MD2.9, Error ellipse: s-maj=3.0km s-min=2.8km az=85.0*

ISC 19 18:46:01.6±0.4, 39°.52N±0°.02×28°.84E±0°.03, h12km±5km, n37, σ0§78/59, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.29**	**286**	⇑*i*P	**Pg**	**18 46 06.7**	**-0.8**
DURS				*i* S	**Sg**	**18 46 10.5**	**-1.0**
DURS	**Dursunbey**	**0.29**	**286**	*i* P	**Pg**	**18 46 06.7**	**-0.8**
DURS				*i* S	**Sg**	**18 46 10.5**	**-1.0**
DEMI	**Demirci**	**0.49**	**191**	⇑*i*P	**Pg**	**18 46 11.5**	**+0.4**
DEMI				*i* S	**Sg**	**18 46 18.7**	**+1.2**
DEMI	**Demirci**	**0.49**	**191**	*i* P	**Pg**	**18 46 11.5**	**+0.4**
DEMI				*i* S	**Sg**	**18 46 18.7**	**+1.2**
GDZ	**Gediz**	**0.66**	**131**	*e*P	**Pg**	**18 46 13.7**	**-0.7**
GDZ				*i* S	**Sg**	**18 46 22.8**	**-0.2**
GDZ	**Gediz**	**0.66**	**131**	*e*P	**Pg**	**18 46 13.7**	**-0.7**
GDZ				*i* S	**Sg**	**18 46 22.8**	**-0.2**
BALB	**Balikesir**	**0.75**	**279**	*e*PG	**Pg**	**18 46 16.6**	**+0.6**
BALB				*e*SG	**Sg**	**18 46 26.7**	**+0.9**
BALB	**Balikesir**	**0.75**	**279**	*e*Pg	**Pg**	**18 46 16.6**	**+0.5**
BALB				*e*Sg	**Sg**	**18 46 26.7**	**+0.8**
KCTX	**Karacabey (Bur**	**0.83**	**334**	*e*PG	**Pg**	**18 46 16.4**	**-1.2**
KCTX				*e*SG	**Sg**	**18 46 30.1**	**+1.6**
KCTX	**Karacabey (Bur**	**0.83**	**334**	*e*Pg	**Pg**	**18 46 16.4**	**-1.2**
KCTX				*e*Sg	**Sg**	**18 46 30.1**	**+1.6**
MDNY	**Mudanya-Bursa**	**0.85**	**2**	*e*PG	**Pg**	**18 46 17.4**	**-0.6**
MDNY				*e*SG	**Sg**	**18 46 29.5**	**+0.4**
MDNY	**Mudanya-Bursa**	**0.85**	**2**	*e*Pg	**Pg**	**18 46 17.4**	**-0.6**
MDNY				*e*Sg	**Sg**	**18 46 29.5**	**+0.5**
GEMT	**Gemlik**	**0.95**	**16**	*e*PG	**Pg**	**18 46 19.2**	**-0.8**
GEMT				*e*SG	**Sg**	**18 46 32.9**	**+0.5**
GEMT	**Gemlik**	**0.95**	**16**	*e*Pg	**Pg**	**18 46 19.2**	**-0.7**
GEMT				*e*Sg	**Sg**	**18 46 32.9**	**+0.5**
BALY	**Balya**	**0.96**	**284**	*e*P	**Pg**	**18 46 20.3**	**+0.1**
BALY				*i* S	**Sg**	**18 46 33.0**	**+0.2**
BALY	**Balya**	**0.96**	**284**	*e*P	**Pg**	**18 46 20.3**	**+0.1**
BALY				*i* S	**Sg**	**18 46 33.0**	**+0.3**
KULA	**Kula-Manisa**	**1.01**	**188**	*e*PG	**Pg**	**18 46 21.3**	**+0.2**
KULA	**Kula-Manisa**	**1.01**	**188**	*e*Pg	**Pg**	**18 46 21.3**	**+0.2**
CAVI	**Cavuskoy**	**1.03**	**48**	*e*PG	**Pg**	**18 46 20.2**	**-1.2**
CAVI				*e*SG	**Sg**	**18 46 35.4**	**+0.6**
CAVI	**Cavuskoy**	**1.03**	**48**	*e*Pg	**Pg**	**18 46 20.3**	**-1.1**
CAVI				*e*Sg	**Sg**	**18 46 35.4**	**+0.5**
GONE	**Gonen-Balikesi**	**1.03**	**301**	*e*PG	**Pg**	**18 46 20.7**	**-0.7**
GONE	**Gonen-Balikesi**	**1.03**	**301**	*e*Pg	**Pg**	**18 46 20.7**	**-0.7**
ARMT	**Armutlu**	**1.04**	**1**	*e*PG	**Pg**	**18 46 21.4**	**-0.3**
ARMT				*e*SG	**Sg**	**18 46 36.1**	**+0.8**
ARMT	**Armutlu**	**1.04**	**1**	*e*Pg	**Pg**	**18 46 21.4**	**-0.3**
ARMT				*e*Sg	**Sg**	**18 46 36.1**	**+0.8**
BNT	**Bandirma**	**1.09**	**320**	*e*PN	**Pn**	**18 46 22.6**	**0.0**
ADVT	**Abdulvahap**	**1.15**	**37**	*e*PN	**Pn**	**18 46 22.5**	**-0.9**
ADVT	**Abdulvahap**	**1.15**	**37**	*e*Pn	**Pn**	**18 46 22.5**	**-0.9**
BORA	**Eskisehir**	**1.30**	**73**	*e*P	**Pn**	**18 46 25.2**	**-0.3**
BORA				*i* S	**Sb**	**18 46 44.9**	**+2.4**
BORA	**Eskisehir**	**1.30**	**73**	*e*P	**Pn**	**18 46 25.2**	**-0.3**
BORA				*i* S	**Sb**	**18 46 44.9**	**+2.4**
KHL	**Karahalli**	**1.31**	**156**	*e*PN	**Pn**	**18 46 25.6**	**-0.1**
KHL	**Karahalli**	**1.31**	**156**	*e*Pn	**Pn**	**18 46 25.6**	**0.0**
HRT	**Hereke**	**1.45**	**26**	*e*PN	**Pn**	**18 46 27.2**	**-0.3**
HRT	**Hereke**	**1.45**	**26**	*e*Pn	**Pn**	**18 46 27.2**	**-0.3**
GULT	**Gulveren**	**1.58**	**54**	*e*PN	**Pn**	**18 46 29.1**	**-0.3**
GULT	**Gulveren**	**1.58**	**54**	*e*Pn	**Pn**	**18 46 29.1**	**-0.2**
CTKS	**Kestanelik-??a**	**1.73**	**352**	*e*PN	**Pn**	**18 46 31.6**	**+0.1**
CTKS	**Kestanelik-??a**	**1.73**	**352**	*e*Pn	**Pn**	**18 46 31.6**	**+0.1**

*ISCJB **19** 19:18:11.9±0.7, 13°.25N±0°.09×144°.2E±0°.2, h132km±11km, mb4.0/18, Error ellipse: s-maj=30.3km s-min=13.1km az=167.2*
*IDC **19** 19:18:13.1±0.7, 13°.27N×144°.19E, h122km±11km, mb3.7/10, mb1 3.7/10, mb1mx3.6/23, mbtmp3.7/10, MS3.3/1, Ms1 3.3/1, ms1mx2.2/24, Error ellipse: s-maj=32.2km s-min=13.2km az=74.0*
*NEIC **19** 19:18:13.1±0.8, 13°.25N×144°.13E, h125km±9km, mb4.4/9, Error ellipse: s-maj=16.8km s-min=8.5km az=72.0*

ISC 19 19:18:13.1±0.7, 13°.25N±0°.09×144°.2E±0°.2, h125km±12km, n27, σ0§74/28, mb4.2/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.77**	**64**	P	**Pn**	**19 18 33.5**	**+0.1**
	447nm,0.3s,baz=188,slow=3.6,SNR=807						
GUMO				S	**Sn**	**19 18 48.9**	**0.0**
	762nm,0.3s,baz=9.9,slow=23,SNR=48						
GUMO	**Guam**	**0.77**	**64**	P	**Pn**	**19 18 33.5**	**+0.1**
GUMO				*e*Sn	**Sn**	**19 18 48.4**	**-0.5**
GUMO				S	**Sn**	**19 18 48.9**	**0.0**
JOW	**Kunigami**	**20.10**	**315**	P	**P**	**19 22 38.9**	**+1.9**
	5.3nm,0.3s,baz=130,slow=15,SNR=8.3						
JOW	**Kunigami**	**20.10**	**315**	P	**P**	**19 22 38.9**	**+1.9**
YULB	**Yu-li**	**23.90**	**298**	*e*P	**P**	**19 23 14.0**	**-1.4**
	7.7nm,0.8s,mb4.1						
SSLB	**Suanglung**	**24.34**	**299**	*e*P	**P**	**19 23 18.8**	**-0.5**
	14nm,0.8s,mb4.3						
HNR	**Honiara**	**27.45**	**144**	LR	LR	19 34 13.1	
	comp=Z,53nm,18.0s,baz=220,slow=35						
WB2	**Warramunga Arr**	**34.36**	**196**	*e*P	**P**	**19 24 47.9**	**-0.2**
WRA	**Warramunga Arr**	**34.37**	**197**	P	**P**	**19 24 48.5**	**+0.4**
	3.9nm,0.7s,mb4.4,baz=19,slow=9.4,SNR=46						
WRA				PcP	PcP	19 27 21.9	+0.5
	0.7nm,0.6s,baz=11,slow=3.3,SNR=7.0						
KSM	**Kuching**	**35.49**	**254**	*e*P	**P**	**19 24 57.6**	**-0.4**
	3.1nm,0.6s,mb4.3						
ENH	**Enshi**	**36.20**	**304**	*e*P	**P**	**19 25 03.3**	**-0.5**
	6.0nm,0.7s,mb4.6						
BJT	**Baijiatuau**	**36.28**	**322**	*e*P	**P**	**19 25 04.6**	**+0.3**
	5.8nm,0.4s,mb4.9						
ASAR	**Alice Springs**	**38.03**	**195**	P	**P**	**19 25 19.7**	**+0.4**
	0.5nm,0.4s,mb3.7,baz=16,slow=12,SNR=27						
ASAR				PcP	PcP	19 27 33.0	+0.8
	0.4nm,0.6s,baz=43,slow=2.6,SNR=5.1						
KULM	**Kulim**	**43.60**	**264**	P	**P**	**19 26 05.0**	**-0.3**
	1.5nm,0.4s,mb4.1						
CMAR	**Chiang Mai Arr**	**43.72**	**283**	P	**P**	**19 26 07.0**	**+0.9**
	1.4nm,0.6s,mb3.9,baz=83,slow=6.5,SNR=13						
STKA	**Stephens Creek**	**44.93**	**183**	P	**P**	**19 26 15.5**	**0.0**
	0.9nm,0.4s,mb3.8,baz=32,slow=9.5,SNR=6.8						
STKA	**Stephens Creek**	**44.93**	**183**	P	**P**	**19 26 15.5**	**0.0**
ULN	**Ulaanbaatar**	**46.27**	**326**	*e*P	**P**	**19 26 25.9**	**+0.1**
	1.0nm,0.6s,mb3.7						
SONM	**Songino Array**	**46.62**	**325**	P	**P**	**19 26 29.3**	**+0.8**
	1.3nm,0.6s,mb3.9,baz=146,slow=8.7,SNR=15						
LSA	**Lhasa**	**51.54**	**297**	*e*P	**P**	**19 27 07.5**	**+1.1**
	2.7nm,0.4s,mb4.6						
MKAR	**Makanchi Array**	**61.26**	**316**	P	**P**	**19 28 15.2**	**+0.2**
	1.7nm,0.6s,mb4.2,baz=93,slow=8.6,SNR=22						
ZALV	**Zalesovo Beam**	**61.50**	**325**	P	**P**	**19 28 15.9**	**-0.5**
	0.5nm,0.4s,mb3.9,baz=109,slow=8.0,SNR=3.5						
KURK	**Kurchatov**	**64.40**	**320**	*e*P	**P**	**19 28 34.9**	**-0.9**
	3.5nm,0.7s,mb4.3						
BVAR	**Borovoye Array**	**69.77**	**322**	P	**P**	**19 29 08.5**	**-1.1**
	1.0nm,0.5s,mb3.9,baz=119,slow=6.7,SNR=6.0						
KBL	**Kabul**	**70.43**	**302**	P	**P**	**19 29 13.2**	**-0.8**
FINES	**FINESS Array B**	**91.18**	**335**	P	**P**	**19 31 04.5**	**+0.9**
	1.2nm,0.8s,mb4.1,baz=204,slow=36,SNR=3.2						
CFAA	**Coronel Fontan**	**145.11**	**127**	PKPbc	PKPbc	19 37 36.8	+0.7
	0.3nm,0.7s,baz=222,slow=6.2,SNR=4.2						

IDC 19 19:21:24.8±1.4, 46°.93N×155°.51E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.4/24, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=79.2km s-min=24.4km az=115.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.34**	**12**	Pn	Pn	19 22 58.8	-0.7
	0.9nm,0.3s,baz=175,slow=14,SNR=5.5						
PETK				Sn	Sn	19 24 15.2	+2.6
	0.7nm,0.3s,baz=30,slow=45,SNR=3.0						
WRA	**Warramunga Arr**	**69.25**	**201**	P	P	19 32 33.0	-0.5
	0.3nm,0.8s,baz=23,slow=6.6,SNR=2.7						
ASAR	**Alice Springs**	**72.93**	**201**	P	P	19 32 56.3	+0.6
	0.3nm,0.7s,baz=22,slow=5.9,SNR=4.9						
TXAR	**Lajitas Array**	**75.96**	**62**	P	P	19 33 13.8	+0.3
	1.6nm,0.5s,baz=304,slow=4.6,SNR=22						

*ISCJB **19** 19:23:13.4±0.7, 50°.30N±0°.05×18°.68E±0°.05, h0km, Error ellipse: s-maj=7.1km s-min=4.2km az=175.4*
*CSEM **19** 19:23:13.7±0.2, 50°.33N×18°.66E, h2km, ML2.5/6, Error ellipse: s-maj=6.0km s-min=3.2km az=171.0*
*IPEC **19** 19:23:14.1±0.2, 50°.28N×18°.72E, h2km±1km, ML1.8/3, Error ellipse: s-maj=2.3km s-min=1.1km az=167.0*
*WAR **19** 19:23:14.1, 50°.24N×18°.75E*
*PRU **19** 19:23:14.0, 50°.34N×18°.66E, h0km*

ISC 19 19:23:14.1±0.7, 50°.28N±0°.05×18°.68E±0°.04, h0km, n15, σ0§90/24, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.56**	**218**	*e*PG	**Pg**	**19 23 25.3**	**+0.4**
OKC				*e*SG	**Sg**	**19 23 33.2**	**+1.1**
	comp=Z,14nm,0.4s						
OKC	**Ostrava-Krasne**	**0.56**	**218**	Pg	**Pg**	**19 23 25.3**	**+0.4**
OKC				Sg	**Sg**	**19 23 33.2**	**+1.1**
	comp=Z,14nm,0.4s						
OJC	**Ojcow**	**0.72**	**95**	*e*Pg	**Pg**	**19 23 27.6**	**-0.4**
OJC				*e*Sg	**Sg**	**19 23 36.9**	**-0.4**
OJC	**Ojcow**	**0.72**	**95**	*e*Pg	**Pg**	**19 23 27.4**	**-0.6**
	baz=276						
MORC	**Moravsky Berou**	**0.89**	**236**	*e*Pg	**Pg**	**19 23 31.2**	**0.0**
	baz=56						
MORC				*e*Sg	**Sg**	**19 23 43.0**	**+0.3**
	comp=Z,19nm,0.6s,baz=56						
DPC	**Dobruska-Polom**	**1.51**	**273**	*e*PG	**Pg**	**19 23 42.3**	**-0.8**
DPC				*e*SG	**Sg**	**19 24 02.2**	**-0.5**
	comp=Z,7.9nm,0.5s						
DPC	**Dobruska-Polom**	**1.51**	**273**	Pg	**Pg**	**19 23 42.3**	**-0.8**
DPC	**Dobruska-Polom**	**1.51**	**273**	*e*Pn	**Pn**	**19 23 42.6**	**+0.2**
	baz=92						
DPC				Sg	**Sg**	**19 24 02.2**	**-0.5**
	comp=Z,7.9nm,0.5s						
KSP	**Ksiaz**	**1.62**	**291**	*e*Pg	**Pg**	**19 23 46.5**	**+1.3**
KSP				*e*Sg	**Sg**	**19 24 07.7**	**+1.5**
VRAC	**Vranov**	**1.67**	**235**	*e*Pn	**Pn**	**19 23 44.7**	**+0.2**
VRAC				*e*Sg	**Sg**	**19 24 07.0**	**-0.6**
	comp=Z,9.0nm,0.5s,baz=54						
KRUC	**Moravsky**	**1.92**	**231**

BJI LR LR
comp=N,500nm,13.7s
BJI LR LR
comp=E,330nm,12.0s
BJI LR LR
comp=Z,190nm,17.2s
ENH Enshi 17.49 287 *e*Pn **Pn 19 31 57.0 +1.1**
comp=Z,9.4nm,0.6s
CN2 Changchun 17.60 352 *e*P **Pn 19 32 00.0 +2.9**
CN2 *e*S **Sn 19 35 16.6 +3.8**
CN2 pmax pmax
comp=Z,10.0nm,0.4s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,700nm,14.0s
CN2 LR LR
comp=E,300nm,14.0s
CN2 LR LR
comp=Z,700nm,13.0s
QIZ Qiongzhong 19.00 251 P **Pn 19 32 11.6 -2.7**
QIZ S **Sn 19 35 42.8 -4.1**
QIZ pmax pmax
comp=Z,4.0nm,1.3s
QIZ pmax pmax
comp=Z,81nm,10.9s
QIZ LR LR
comp=N,250nm,21.2s
QIZ LR LR
comp=E,66nm,22.1s
QIZ LR LR
comp=Z,210nm,14.0s
GUMO Guam 19.67 127 LR LR 19 38 07.7
comp=Z,84nm,21.0s,baz=217,slow=31
GYA Guiyang 19.88 275 *e*P **Pn 19 32 22.8 -2.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 20.34 320 *e*P **P 19 32 30.8 +2.7**
HHC pP 19 32 39.6
HHC sP sP 19 32 44.1 +9.2
HHC PP 19 32 51.8
HHC S **S 19 36 14.8 -0.7**
HHC sS sS 19 36 28.3 +5.4
HHC PcP PcP 19 36 41.4 +0.5
HHC SS 19 36 45.0
HHC ScP ScP 19 40 13.3 -3.4
HHC pmax pmax
comp=Z,15nm,1.1s
HHC pmax pmax
comp=Z,170nm,6.3s
HHC LR LR
comp=N,580nm,11.5s,MS4.3
HHC LR LR
comp=E,480nm,11.1s,MS4.3
HHC LR LR
comp=Z,640nm,11.1s,MS4.2
ASAJ Asahikawa 20.90 29 P **P 19 32 35.4 +1.3**
comp=Z,10nm,0.8s,baz=207,slow=9.0,SNR=4.7
ASAJ Asahikawa 20.90 29 P **P 19 32 35.4 +1.3**
ASAJ pmax pmax
comp=Z,10.0nm,0.8s
CD2 Chengdu 22.47 287 *e*P **P 19 32 48.5 -2.6**
CD2 pP 19 32 57.8
CD2 sP sP 19 33 01.8 +3.9
CD2 PP 19 33 16.3
CD2 S **S 19 36 48.0 -10**
CD2 sS sS 19 37 02.5 -2.6
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
CD2 pmax pmax
comp=Z,20nm,6.2s
CD2 LR LR
comp=N,350nm,12.0s,MS4.3
CD2 LR LR
comp=E,680nm,13.2s,MS4.3
CD2 LR LR
comp=Z,600nm,13.2s,MS4.2
HABR Khabarovsk 22.58 11 *e*P **P 19 33 00.1 +8.0**
HABR *e**SP sP 19 33 04.4 +5.5
HABR *e* 19 33 15.5
HABR *e* 19 36 42.5
HABR *e*S **S 19 36 57.7 -1.6**
HABR *e**SS sS 19 37 13.6 +6.8
HABR *e*SS 19 37 30.3
HABR *e*SSS 19 37 44.1
HABR *e* 19 44 02.3
HABR pmax pmax
comp=Z,33nm,2.8s,mb4.3
HABR pmax pmax
comp=N,21nm,2.0s
HABR pmax pmax
comp=E,52nm,3.0s
HABR MLR MLR
comp=Z,87nm,15.0s,MS3.3
YSS Yuzh-Sakhalins 23.30 25 *e*P **P 19 33 00.5 +0.9**
comp=Z,54nm,1.1s,mb4.9
YSS Yuzh-Sakhalins 23.30 25 *e*P **P 19 33 00.5 +0.8**
YSS pmax pmax
comp=Z,54nm,1.1s,mb4.9
LZH Lanzhou 23.42 300 *e*P **P 19 33 01.0 -0.1**
LZH pP 19 33 03.3
LZH sP sP 19 33 06.0 -2.0
LZH S **S 19 37 10.0 -3.5**
LZH sS sS 19 37 19.0 -2.6
LZH pmax pmax
comp=Z,20nm,1.2s,mb4.4
LZH pmax pmax
comp=Z,100nm,4.9s
LZH LR LR
comp=N,380nm,9.9s
LZH LR LR
comp=E,390nm,9.9s
LZH LR LR
comp=Z,480nm,12.6s,MS4.2
KMI Kunming 23.55 273 P **P 19 33 01.6 -0.9**
KMI pP 19 33 05.8
KMI sP sP 19 33 09.0 -0.4
KMI PP 19 33 34.0
KMI S **S 19 37 10.9 -4.8**
KMI sS sS 19 37 18.9 -5.0
KMI SS 19 37 58.8
KMI pmax pmax
comp=Z,4.0nm,0.9s,mb3.9
KMI LR LR
comp=N,140nm,12.5s
KMI LR LR
comp=E,420nm,9.8s
KMI LR LR
comp=Z,420nm,12.9s,MS4.1
ULN Ulaanbaatar 27.44 327 *e*P **P 19 33 39.2 +1.7**
comp=Z,8.3nm,0.9s,mb4.3
ULN Ulaanbaatar 27.44 327 *e*P **P 19 33 39.3 +1.8**
ULN pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
GTA Gaotai 27.51 305 *e*P **P 19 33 37.8 -0.5**
GTA pP pP 19 33 46.8 +3.6
GTA sP sP 19 33 50.8 +5.5
GTA S **S 19 38 18.0 -0.5**
GTA sS sS 19 38 26.6 -0.1
GTA SS 19 39 38.1
GTA pmax pmax
comp=Z,15nm,0.7s,mb4.7
GTA pmax pmax
comp=Z,80nm,3.9s
GTA LR LR
comp=N,270nm,12.6s,MS4.2
GTA LR LR
comp=E,330nm,11.4s,MS4.2
GTA LR LR
comp=Z,480nm,11.4s,MS4.3
SONM Songino Array 27.74 326 P **P 19 33 41.7 +1.4**
comp=Z,5.8nm,0.6s,mb4.4,baz=138,slow=10,SNR=40
SONM LR LR 19 46 44.4
comp=Z,210nm,18.8s,MS3.7,baz=166,slow=41
SONM Songino Array 27.74 326 P **P 19 33 41.7 +1.5**
SONM pmax pmax
comp=Z,6.0nm,0.6s
SONM MLR MLR
comp=Z,210nm,18.8s
CM31 Chiang Mai Arr 28.71 260 P **P 19 33 51.1 +1.9**
comp=Z,1.0nm,0.5s,mb3.8
CM31 *e* 19 34 02.8
CMAR Chiang Mai Arr 28.71 260 P **P 19 33 50.0 +0.9**
comp=Z,0.8nm,0.8s,mb3.5,baz=58,slow=7.8,SNR=5.2
CMAR LR LR 19 46 55.5
comp=Z,56nm,18.1s,MS3.2,baz=195,slow=40
CMAR Chiang Mai Arr 28.71 260 P **P 19 33 50.1 +0.9**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR MLR MLR
comp=Z,56nm,18.1s
PETK Petropavlovsk- 34.28 31 LR LR 19 47 16.4
comp=Z,56nm,21.1s,MS3.3,baz=24,slow=34
YAK Yakutsk 35.65 1 P **P 19 34 48.9 -0.6**
YAK Yakutsk 35.65 1 P **P 19 34 48.9 -0.6**
TAPN Taplejung 36.61 281 *e*P **P 19 34 58.2 0.0**
comp=Z,16nm,0.8s,mb4.9
ODAN Odare 36.96 280 *e*P **P 19 35 01.8 +0.6**
comp=Z,27nm,0.5s,mb5.3
WMQ Urumqi 37.47 308 P **P 19 35 05.0 -0.3**
WMQ sP sP 19 35 12.0 -0.3
WMQ PP PP 19 36 34.0 +3.3
WMQ S **S 19 40 54.0 +0.8**
WMQ ScP ScP 19 41 09.0 -1.2
WMQ SS SS 19 43 25.0 -13
WMQ pmax pmax
comp=Z,14nm,0.8s,mb4.8
WMQ LR LR
comp=N,59nm,15.0s,MS3.7
WMQ LR LR
comp=E,77nm,15.0s,MS3.7
WMQ LR LR
comp=Z,93nm,15.0s,MS3.7
PKI Pulchoki 38.60 282 *e*P **P 19 35 16.0 +1.0**
comp=Z,20nm,0.6s,mb5.0
PKI Pulchoki 38.60 282 *e*P **P 19 35 16.0 +1.0**
PKI pmax pmax
comp=Z,20nm,0.6s,mb5.0
KKN Kakani 38.68 282 *e*P **P 19 35 16.3 +0.6**
comp=Z,10nm,0.4s,mb4.9
DMN Daman 38.86 282 *e*P **P 19 35 17.8 +0.6**
comp=Z,16nm,0.8s,mb4.8
GKN Gorkha 39.21 283 *e*P **P 19 35 20.4 +0.2**
comp=Z,13nm,0.5s,mb4.9
SEY Seymchan 39.72 17 ⇓ *i*P **P 19 35 25.7 +1.8**
DANN Dangsing 39.93 283 *e*P **P 19 35 27.0 +0.9**
comp=Z,26nm,0.6s,mb5.2
MK31 Makanchi Array 41.86 312 *e*P **P 19 35 40.6 -1.2**
MK31 Makanchi Array 41.86 312 *e*P **P 19 35 40.6 -1.2**
MKAR Makanchi Array 41.86 312 P **P 19 35 41.2 -0.6**
comp=Z,1.2nm,0.5s,mb3.8,baz=93,slow=9.6,SNR=20
MKAR PcP PcP 19 37 38.2 +0.8
comp=Z,0.8nm,0.8s,baz=83,slow=3.8,SNR=3.7
MKAR Makanchi Array 41.86 312 P **P 19 35 41.2 -0.6**
MKAR PcP PcP 19 37 38.2 +0.8
MKAR Makanchi Array 41.86 312 P **P 19 35 41.2 -0.6**
MKAR 19 37 38.3
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 42.47 323 P **P 19 35 45.4 -1.3**
comp=Z,4.0nm,0.5s,mb4.3,baz=108,slow=8.4,SNR=25
ZALV Zalesovo Beam 42.47 323 P **P 19 35 45.4 -1.3**
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
KURK Kurchatov 45.10 316 *e*P **P 19 36 06.7 -1.2**
comp=Z,6.9nm,1.3s,mb4.3
KURK Kurchatov 45.10 316 ⇓ *e*P **P 19 36 06.9 -1.0**
KURK pmax pmax
comp=Z,10.0nm,2.0s,mb4.3
TIXI Tiksi 45.31 0 *e*P **P 19 36 08.0 -1.2**
comp=Z,5.7nm,0.7s,mb4.5
TIXI Tiksi 45.31 0 *e*P **P 19 36 08.0 -1.2**
TIXI pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
TKM2 Tokmak 2 46.06 305 *e*P **P 19 36 16.7 +1.1**
comp=Z,7.9nm,0.8s,mb4.7
TKM2 Tokmak 2 46.06 305 *e*P **P 19 36 16.7 +1.1**
TKM2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
WRA Warramunga Arr 46.35 173 P **P 19 36 18.9 +1.0**
comp=Z,0.8nm,0.5s,mb4.0,baz=352,slow=8.3,SNR=5.5
WRA Warramunga Arr 46.35 173 P **P 19 36 18.9 +0.9**
WRA pmax pmax
comp=Z,1.0nm,0.5s
BILL Bilibino 47.35 18 *e*P **P 19 36 27.6 +2.3**
BILL *e*SS SS 19 46 40.9 -4.6
BILL pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
EKS2 Erkin-Say 47.38 305 *e*P **P 19 36 24.7 -1.3**
comp=Z,3.0nm,0.8s,mb4.3
KKAR Karatay Array 49.79 305 *e*P **P 19 36 45.3 +0.8**
comp=Z,3.4nm,0.7s,mb4.5
KKAR Karatay Array 49.79 305 *e*P **P 19 36 45.3 +0.8**
KKAR pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
ASAR Alice Springs 49.99 174 P **P 19 36 47.2 +1.1**
comp=Z,0.6nm,0.5s,mb3.9,baz=4.0,slow=14,SNR=8.3
ASAR Alice Springs 49.99 174 P **P 19 36 47.2 +1.1**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR Borovoye Array 50.54 318 P **P 19 36 50.2 +0.2**
comp=Z,2.2nm,0.7s,mb4.2,baz=97,slow=12,SNR=7.8
BVAR Borovoye Array 50.54 318 P **P 19 36 50.2 +0.2**
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BRVK Borovoye 50.61 318 *e*P **P 19 36 48.1 -2.4**
comp=Z,8.8nm,0.8s,mb4.7
BRVK Borovoye 50.61 318 ⇓ *e*P **P 19 36 50.4 -0.1**
BRVK pmax pmax
comp=Z,13nm,2.0s,mb4.5
KBL Kabul 51.56 294 *e*P **P 19 36 59.0 +1.0**
comp=Z,8.8nm,0.8s,mb4.7
KBL *e* 19 37 05.8
KBL Kabul 51.56 294 *e*P **P 19 36 59.0 +1.0**
KBL *e* 19 37 05.8
KBL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ABKAR Akbulak array 56.96 313 *e*P **P 19 37 36.8 -0.2**
comp=Z,2.4nm,0.6s,mb4.4
ARU Arti 57.63 322 *e*P **P 19 37 40.4 -1.3**
comp=Z,3.7nm,0.7s,mb4.5
ARU Arti 57.63 322 *c i*P **P 19 37 41.2 -0.5**
ARU *e* 19 39 46.0
ARU S **S 19 45 37.6 -1.4**
ARU SS SS 19 49 23.9 -5.0
ARU pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
STKA Stephens Creek 59.19 167 P **P 19 37 55.9 +3.1**
comp=Z,2.3nm,0.8s,mb4.2,baz=284,slow=17,SNR=3.2
MCK McKinley 63.26 30 P **P 19 38 21.1 +1.1**
comp=Z,7.5nm,1.0s,mb4.8
MCK McKinley 63.26 30 P **P 19 38 21.1 +1.1**
MCK pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
ILAR Eielson Array 64.04 28 P **P 19 38 25.5 +0.4**
comp=Z,0.8nm,0.8s,mb3.8,baz=259,slow=6.3,SNR=5.3
ILAR Eielson Array 64.04 28 P **P 19 38 25.5 +0.4**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
ZEI Tsey 69.09 308 *e*P **P 19 38 57.4 -0.4**
ZEI pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KIV Kislovodsk 69.58 310 *e*P **P 19 39 01.5 +0.7**
comp=Z,4.5nm,0.7s,mb4.5
KIV Kislovodsk 69.58 310 ⇑ *e*P **P 19 39 01.8 +0.9**
KIV pmax pmax
comp=Z,11nm,1.2s,mb4.7
OBN Obninsk 70.06 322 *e*P **P 19 39 05.6 +2.0**
OBN pmax pmax
comp=Z,1.0nm,0.9s,mb3.8
ARCES ARCESS Array B 70.08 339 P **P 19 39 03.2 -0.2**
comp=Z,3.5nm,1.0s,mb4.2,baz=60,slow=7.2,SNR=3.8
ARCES ARCESS Array B 70.08 339 P **P 19 39 03.3 -0.1**
ARCES pmax pmax
comp=Z,4.0nm,1.0s
JOF Joensuu 70.19 331 *e*P **P 19 39 03.3 -0.9**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KAF Kangasniemi 72.64 331 *e*P **P 19 39 11.7 -7.4**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
FINES FINESS Array B 73.01 331 P **P 19 39 20.8 -0.5**
comp=Z,2.9nm,0.7s,mb4.3,baz=77,slow=6.5,SNR=13
FINES FINESS Array B 73.01 331 P **P 19 39 20.8 -0.5**
FINES pmax pmax
comp=Z,3.0nm,0.7s
MALT Malatya 74.49 305 *e*P **P 19 39 30.1 -0.2**
comp=Z,3.2nm,0.8s,mb4.3
MALT Malatya 74.49 305 *e*P **P 19 39 30.1 -0.3**
MALT pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
AKASG Malin Array Be 75.79 320 P **P 19 39 37.7 +0.1**
comp=Z,2.8nm,0.5s,mb4.4,baz=56,slow=6.1,SNR=11
AKASG Malin Array Be 75.79 320 P **P 19 39 37.7 +0.1**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
BR131 Keskin Array S 77.39 308 *e*P **P 19 39 47.3 +0.4**
comp=Z,2.4nm,0.7s,mb4.2
BRTR Keskin Array B 77.39 308 P **P 19 39 47.9 +1.0**
comp=Z,3.2nm,0.8s,mb4.3,baz=97,slow=5.1,SNR=17
BRTR Keskin Array B 77.39 308 *c e*P **P 19 39 47.9 +1.0**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
SUW Suwalki 77.67 324 *e*P **P 19 39 48.2 +0.1**
SUW Suwalki 77.67 324 *e*P **P 19 39 48.2 0.0**
NB2 NORSAR Subarra 79.43 334 P **P 19 39 57.5 -0.2**
comp=Z,1.5nm,0.7s,mb4.0,baz=51,slow=5.6
NOA NORSAR Array B 79.43 334 P **P 19 39 57.9 +0.1**
comp=Z,2.4nm,0.8s,mb4.2,baz=51,slow=5.4,SNR=7.2
NOA NORSAR Array B 79.43 334 P **P 19 39 57.9 +0.2**
NOA pmax pmax
comp=Z,2.0nm,0.8s
BUR08 Bucovina Ar. S 79.50 318 *e*P **P 19 39 59.2 +0.8**
CRVS Cervenica-Dubn 81.08 320 *e*P **P 19 40 09.1 +2.2**
comp=Z,4.2nm,1.2s,mb4.2
CRVS Cervenica-Dubn 81.08 320 *e*P **P 19 40 09.1 +2.2**
CRVS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
OJC Ojcow 81.35 322 *e*P **P 19 40 09.1 +0.8**
VYHS Vyhne 82.78 321 *e*P **P 19 40 17.1 +1.2**
comp=Z,1.8nm,0.7s,mb4.2
VYHS Vyhne 82.78 321 *e*P **P 19 40 17.1 +1.2**
VYHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
MORC Moravsky Berou 82.82 323 *e*P **P 19 40 14.9 -1.1**
comp=Z,3.3nm,1.1s,mb4.3
MORC Moravsky Berou 82.82 323 *e*P **P 19 40 14.9 -1.1**
MORC pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
DPC Dobruska-Polom 83.17 323 *e*P **P 19 40 18.9 +1.1**
DPC Dobruska-Polom 83.17 323 *e*P **P 19 40 18.9 +1.1**
CLL Collm 84.35 325 *i*P **P 19 40 24.7 +0.8**
CLL pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
NKC Novy Kostel 85.27 325 *e*P **P 19 40 28.7 +0.2**
NKC Novy Kostel 85.27 325 *e*P **P 19 40 28.7 +0.2**
KHC Kasperske Hory 85.32 323 *e*P **P 19 40 29.6 +0.8**
KHC Kasperske Hory 85.32 323 *e*P **P 19 40 29.6 +0.8**
FFC Flin Flon 88.20 27 P **P 19 40 41.1 -1.7**
comp=Z,61nm,1.8s,mb5.5
FFC Flin Flon 88.20 27 P **P 19 40 41.1 -1.6**
FFC pmax pmax
comp=Z,61nm,1.8s,mb5.5

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*ISCJB **19** 19:28:46.8±2.1, 7°.0S±0°.1×155°.71E±0°.10, h56km±20km, mb4.1/1,1, Error ellipse: s-maj=22.2km s-min=15.9km az=167.9*
*NEIC **19** 19:28:48.6±1.1, 7°.06S×155°.78E, h61km±11km, mb4.6/3, Error ellipse: s-maj=12.8km s-min=9.4km az=174.0*
*IDC **19** 19:28:49.1±4.3, 7°.04S×155°.72E, h61km±42km, mb3.7/8, mb1 3.9/9, mb1mx3.8/16, mbtmp3.8/9, ML4.2/1, Error ellipse: s-maj=34.0km s-min=21.5km az=131.0*

ISC 19 19:28:49.1±1.7, 7°.1S±0°.1×155°.73E±0°.10, h63km±17km, n20, σ0s66/18, mb4.1/11, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.79**	**120**	P		**Pn**	**19 29 59.8**	**+1.0**
9.5nm,0.3s,baz=215,slow=4.5,SNR=7.1								
HNR	**Honiara**	**4.79**	**120**	*e*Pn		**Pn**	**19 29 57.6**	**-1.2**
PMG	**Port Moresby**	**8.80**	**254**	P		**Pn**	**19 30 53.9**	**+0.2**
WB2	**Warramunga Arr**	**24.38**	**236**	*e*P		**P**	**19 34 01.6**	**0.0**
WRA	**Warramunga Arr**	**24.39**	**236**	P		**P**	**19 34 01.9**	**+0.1**
5.6nm,0.7s,mb4.1,baz=59,slow=10,SNR=43								
WRA				PcP		PcP	19 37 41.4	+1.6
0.3nm,0.5s,baz=59,slow=2.8,SNR=4.0								
ASAR	**Alice Springs**	**26.69**	**229**	P		**P**	**19 34 22.0**	**-0.5**
0.9nm,0.5s,mb3.6,baz=57,slow=10,SNR=45								
ASAR				PcP		PcP	19 37 45.7	+0.7
0.5nm,0.6s,baz=72,slow=3.1,SNR=5.0								
STKA	**Stephens Creek**	**28.00**	**206**	P		**P**	**19 34 34.2**	**+0.1**
3.6nm,0.9s,mb4.0,baz=41,slow=13,SNR=5.6								
STKA	**Stephens Creek**	**28.00**	**206**	*e*P		**P**	**19 34 34.2**	**0.0**
KULM	**Kulim**	**56.32**	**281**	*e*P		**P**	**19 38 22.5**	**-1.6**
19nm,1.2s,mb5.0								
CM31	**Chiang Mai Arr**	**61.47**	**295**	*e*P		**P**	**19 38 60.0**	**+0.3**
3.7nm,0.7s,mb4.6								
CMAR	**Chiang Mai Arr**	**61.47**	**295**	P		**P**	**19 39 00.3**	**+0.6**
2.4nm,0.7s,mb4.4,baz=124,slow=5.4,SNR=18								
SONM	**Songino Array**	**69.78**	**327**	P		**P**	**19 39 53.7**	**+1.0**
0.8nm,0.8s,mb3.7,baz=134,slow=5.4,SNR=4.5								
SONM				pP		pP	19 40 08.1	-1.6
1.5nm,0.9s,baz=127,slow=5.1,SNR=5.8								
QSPA	**South Pole Qui**	**82.92**	**180**	*e*P		**P**	**19 41 07.3**	**+0.7**
3.1nm,1.0s,mb4.3								
ILAR	**Eielson Array**	**83.16**	**21**	P		**P**	**19 41 07.3**	**-0.7**
0.3nm,0.5s,mb3.6,baz=240,slow=5.2,SNR=7.0								
MK31	**Makanchi Array**	**83.93**	**319**	*e*P		**P**	**19 41 12.4**	**+0.1**
MKAR	**Makanchi Array**	**83.93**	**319**	P		**P**	**19 41 12.4**	**+0.1**
1.0nm,0.7s,mb4.0,baz=107,slow=6.5,SNR=6.6								
ZALV	**Zalesovo Beam**	**84.64**	**326**	P		**P**	**19 41 15.5**	**-0.2**
0.6nm,0.5s,mb4.0,baz=123,slow=7.3,SNR=4.2								
ZALV	**Zalesovo Beam**	**84.64**	**326**	P		**P**	**19 41 15.5**	**-0.2**
FINES	**FINESS Array B**	**114.29**	**336**	PKP		PKiKP	19 47 20.6	-0.7
0.6nm,0.6s,baz=75,slow=4.5,SNR=5.2								
AKASG	**Malin Array Be**	**118.01**	**325**	PKP		PKPdf	19 47 28.7	-0.1
1.0nm,0.5s,baz=1.8,slow=33,SNR=4.6								

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*NIED **19** 19:29:00, 26°.40N×129°.00E, h11km, Mw4.2 Best double couple: M0=2.01000×10^15 NP1:φs=42.00000°, δ=59.00000°, λ=98.00000°. NP2:φs=207.00000°, δ=32.00000°, λ=77.00000°.*

JMA 19 19:29:09.5±0.2, 26°.37N×128°.97E, h32km±4km, M3.8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.77**	**307**	P		Pn	19 29 23.9	-0.3
JIH	**Iheya**	**1.11**	**307**	P		Pn	19 29 29.5	+0.6
JIH				*e*S		Sn	19 29 43.2	+0.1
JJT2	**Tamagusuku 2**	**1.12**	**258**	P		Pn	19 29 29.4	+0.4
NAH1	**Naha**	**1.16**	**262**	*e*S		Sn	19 29 44.8	+0.5
JTK	**Tokunoshima**	**1.41**	**359**	P		Pn	19 29 33.8	+0.8
JTK				*e*S		Sn	19 29 50.8	+0.4
JAGN	**Aguni-jima**	**1.56**	**278**	P		Pn	19 29 35.8	+0.7
JAGN				*e*S		Sn	19 29 55.4	+1.2
JKE	**Kume jima 2**	**1.96**	**269**	P		Pn	19 29 40.7	+0.2
JKE				*e*S		Sn	19 30 04.9	+0.9
JMZ	**Minamidaito 2**	**2.10**	**105**	P		Pn	19 29 43.8	+1.4
JMZ				*e*S		Sn	19 30 06.8	-0.6
JAM	**Amami Oshima**	**2.11**	**15**	P		Pn	19 29 43.7	+1.1

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*ISCJB **19** 19:43:58.5±0.4, 24°.47N±0°.02×121°.98E±0°.02, h10km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=145.0*
*TAP **19** 19:43:59.1, 24°.49N×121°.90E, h12km, ML2.8, D*
*JMA **19** 19:43:59.5±0.3, 24°.76N×121°.98E, h42km, M2.0*

ISC 19 19:43:58.9±0.4, 24°.47N±0°.02×121°.97E±0°.02, h13km±3km, n32, σ0s50/63, 3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.17**	**321**	⇓ *i*P		**Pg**	**19 44 02.9**	**0.0**
baz=344								
TWC				S		**Sg**	**19 44 05.2**	**-0.5**
baz=344								
ENA	**Nanau**	**0.21**	**258**	*i* P		**Pg**	**19 44 03.3**	**-0.3**
baz=245								
ENA				*i* S		**Sg**	**19 44 06.3**	**-0.4**
baz=245								
ILA	**Ilan**	**0.35**	**325**	P		**Pg**	**19 44 06.4**	**+0.4**
baz=334								
ILA				S		**Sg**	**19 44 11.3**	**+0.4**
baz=334								
TWE	**Neicheng**	**0.37**	**312**	⇓ *i*P		**Pg**	**19 44 06.3**	**0.0**
baz=319								
TWE				S		**Sg**	**19 44 10.7**	**-0.6**
baz=319								
ENTT	**Nioudou**	**0.40**	**294**	⇓ *i*P		**Pg**	**19 44 06.8**	**-0.1**
baz=296								
ENTT				S		**Sg**	**19 44 12.0**	**-0.4**

baz=296
TWD Chiawan 0.52 221 P **Pg 19 44 08.9 -0.1**
TWD baz=213 eS **Sg 19 44 16.2 +0.2**
baz=213
TWB1 Santiao Chiao 0.53 2 P **Pg 19 44 09.7 +0.3**
TWB1 baz=10.0 S **Sg 19 44 16.2 -0.2**
baz=10.0
NSK Sanguang 0.59 290 P **Pg 19 44 10.4 0.0**
NSK baz=290 S **Sg 19 44 17.4 -0.9**
baz=290
TWA Mucha 0.61 325 P **Pg 19 44 11.3 +0.4**
TWA baz=330 S **Sg 19 44 19.4 +0.4**
baz=330
NWF Wu-fen Shan 0.62 344 P **Pg 19 44 11.6 +0.6**
NWF baz=349 S **Sg 19 44 19.7 +0.6**
baz=349
TAP1 Taipei 0.69 324 eP **Pg 19 44 12.7 +0.4**
TAP1 baz=327 eS **Sg 19 44 22.1 +0.6**
baz=327
WHF Hehuan Shan 0.72 243 eP **Pg 19 44 12.4 -0.5**
WHF baz=238 eS **Sg 19 44 21.9 -0.5**
baz=238
TWS1 Kuangyinshan 0.80 321 eP **Pg 19 44 14.7 +0.3**
TWS1 baz=324 eS **Sg 19 44 25.2 +0.3**
baz=324
ESL Shilin 0.82 217 eP **Pg 19 44 14.3 -0.4**
ESL baz=211 eS **Sg 19 44 26.6 +1.0**
baz=211
TWY Chenhua 0.87 337 eP **Pg 19 44 15.7 0.0**
TWY baz=341 eS **Sg 19 44 26.9 -0.1**
baz=341
NSTT Nanjuang 0.90 280 eP **Pg 19 44 15.6 -0.6**
NSTT baz=279 eS **Sg 19 44 27.3 -0.6**
baz=279
YOJ Yonaguni jima 0.95 91 P **Pb 19 44 17.1 -0.1**
YOJ eS **Sb 19 44 29.8 +0.2**
TWQ1 Liyutan 1.10 264 eP **Pb 19 44 19.2 -0.5**
TWQ1 baz=262 eS **Sb 19 44 33.8 -0.1**
baz=262
EHY Hungye 1.13 212 eP **Pb 19 44 20.6 +0.3**
EHY baz=207 eS **Sb 19 44 35.9 +1.0**
baz=207
SMLT Sun Moon Lake 1.14 239 eP **Pb 19 44 20.6 +0.2**
SMLT baz=236 eS **Sb 19 44 35.0 -0.1**
baz=236
TYC Yuchr 1.16 241 eP **Pn 19 44 20.7 -0.1**
TYC baz=238 eS **Sb 19 44 35.6 -0.2**
baz=238
TWF1 Yuli 1.28 209 eP **Pn 19 44 22.7 +0.4**
TWF1 baz=205 eS **Sb 19 44 39.6 +0.5**
baz=205
YUS Yu-Shan 1.35 224 eP **Pn 19 44 24.2 +0.8**
YUS baz=220 eS **Sn 19 44 41.6 +0.4**
baz=220
ALS Alishan 1.43 228 eP **Pn 19 44 25.4 +0.9**
ALS baz=225 eS **Sn 19 44 42.9 -0.3**
baz=225
ELDTW Lidau 1.55 214 eP **Pn 19 44 25.8 -0.4**
ELDTW baz=211 eS **Sn 19 44 45.8 -0.3**
baz=211
IRIF Iriomote-Funau 1.61 95 P **Pn 19 44 26.3 -0.7**
IRIF eS **Sn 19 44 46.7 -0.9**
CHY Chiayi 1.72 236 eP **Pn 19 44 28.4 -0.1**
CHY baz=233 eS **Sn 19 44 50.1 -0.1**
baz=233
HATJ Hateruma jima 1.73 104 P **Pn 19 44 29.1 +0.5**
HATJ eS **Sn 19 44 51.1 +0.6**
CHN1 Nanshi 1.84 226 eP **Pn 19 44 31.0 +0.9**
CHN1 baz=223 eS **Sn 19 44 52.5 -0.8**
baz=223
JKRS Kuro-shima 1.88 97 P **Pn 19 44 30.5 -0.1**
JKRS eS **Sn 19 44 53.7 -0.4**
JIJ Ishigaki jima 1.98 93 P **Pn 19 44 31.8 -0.3**
JIJ eS **Sn 19 44 55.6 -1.2**
JTJ Tarama 2.49 86 P **Pn 19 44 39.5 +0.4**

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*IDC **19** 19:46:49.0±1.0, 28°.48N×86°.50E, h0km, mb3.9/10, mb1 4.1/12, mb1mx3.9/25, mbtmp3.9/12, ML4.5/2, Error ellipse: s-maj=38.0km s-min=16.7km az=54.0*
*BJI **19** 19:46:49.5, 28°.39N×86°.59E, h15km, mB4.5/1, mb4.3/7, ML4.0/1*
*NDI **19** 19:46:56.7±2.8, 28°.45N×86°.42E, h10km, ML4.0, mb4.0(NEIC)*
*DMN **19** 19:46:56.8±0.0, 28°.71N×86°.66E, h60km, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **19** 19:46:57.9±0.5, 28°.58N×86°.67E, h69km±8km, mb4.0/11, Error ellipse: s-maj=9.5km s-min=5.8km az=206.0*
*ISCJB **19** 19:46:57.5±0.4, 28°.59N±0°.05×86°.56E±0°.03, h87km±6km, mb4.0/16, Error ellipse: s-maj=8.3km s-min=4.2km az=21.2*
ISC 19 19:46:58.1±0.4,**28°.67N**±0°.04×**86°.60E**±0°.03,**h65**km±6km, **n63**,σ1§**00**/86,**mb4.0**/16,**2D**,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.99**	**220**		ePg	**Pn**	**19 47 17.3**	**+1.1**
GUN					eSg	**Sn**	**19 47 31.5**	**+1.8**
	15μm,0.5s							
KKN	**Kakani**	**1.46**	**233**		ePg	**Pn**	**19 47 23.3**	**+0.9**
KKN					eSg	**Sn**	**19 47 41.5**	**+0.9**
	2μm,0.2s							
PKI	**Pulchoki**	**1.52**	**224**		ePg	**Pn**	**19 47 24.2**	**+1.0**
PKIN	**Phulchoki**	**1.52**	**225**		ePg	**Pn**	**19 47 24.2**	**+1.0**
TAPN	**Taplejung**	**1.64**	**143**		ePg	**Pn**	**19 47 24.5**	**-0.3**
TAPN					eSg	**Sn**	**19 47 44.7**	**-0.3**
	3μm,0.5s							
DMN	**Daman**	**1.69**	**232**		ePg	**Pn**	**19 47 25.5**	**0.0**
DMN					eSg	**Sn**	**19 47 47.4**	**+1.2**
	3μm,0.5s							
GKN	**Gorkha**	**1.85**	**249**		ePg	**Pn**	**19 47 27.8**	**+0.1**
GKN					eSg	**Sn**	**19 47 50.9**	**+0.8**
	4μm,0.3s							
ODAN	**Odare**	**1.94**	**159**		ePg	**Pn**	**19 47 28.4**	**-0.4**
ODAN					eSg	**Sn**	**19 47 50.6**	**-1.5**
	3μm,0.4s							
DANN	**Dangsing**	**2.52**	**263**		ePg	**Pn**	**19 47 36.4**	**-0.3**
SLGI	**Shiliguri**	**2.54**	**140**		ePKP	**Pn**	**19 47 36.5**	**-0.5**
KOLN	**Koldanda**	**2.80**	**252**		ePg	**Pn**	**19 47 39.7**	**-0.8**
KOLN					eSg	**Sn**	**19 48 11.7**	**-1.3**
	456nm,0.2s							
KOLN	**Koldanda**	**2.80**	**252**		ePg	**Pn**	**19 47 39.7**	**-0.8**
KOLN					eSg	Px	19 47 50.9	
KOLN					eSg	**Sn**	**19 48 11.7**	**-1.3**
PYUN	**Piuthan**	**3.23**	**261**		eSg	**Sn**	**19 48 23.3**	**-0.4**
	1μm,0.4s							
LSA	**Lhasa**	**4.11**	**74**		Pg	**Pn**	**19 47 59.4**	**+1.0**
LSA					smax			
	comp=N,130nm,0.5s							
LSA					smax			
	comp=E,450nm,0.5s							
LSA	**Lhasa**	**4.11**	**74**		ePn	**Pn**	**19 47 59.0**	**+0.6**
LSA					eSn	**Sn**	**19 48 44.2**	**-0.9**
BOK	**Bokaro**	**4.90**	**188**		ePKP	**Pn**	**19 48 13.0**	**+3.7**
BOK					eS	**Sn**	**19 49 05.0**	**+0.3**
ALBI	**Allahabad**	**5.43**	**233**		ex	**Pn**	**19 48 11.0**	**-5.5**
SHL	**Shillong**	**5.63**	**122**	⇓	iPN	**Pn**	**19 48 21.2**	**+1.9**
SHL					eSN	**Sn**	**19 49 22.0**	**-0.6**
PTH	**Pithoragarh**	**5.65**	**280**		ePKP	**Pn**	**19 48 20.2**	**+0.7**
PTH					ex	**Sn**	**19 49 23.8**	**+0.7**
JOSI	**Joshimath**	**6.41**	**289**		ePKP	**Pn**	**19 48 30.1**	**+0.2**
JOSI					eS	**Sn**	**19 49 38.4**	**-3.3**
JOSI					AML	AML	19 49 45.1	
	comp=N,355nm,1.0s							
DDI	**Dehra Dun**	**7.63**	**285**		ePKP	**Pn**	**19 48 47.0**	**+0.5**
DDI					eS	**Sn**	**19 50 04.4**	**-7.0**
AGRA	**Agra**	**7.79**	**261**		eS	**Sn**	**19 50 09.2**	**-6.2**
AGRA					AML	AML	19 50 13.1	
	comp=N,144nm,0.1s							
NDI	**New Delhi**	**8.24**	**272**		ePKP	**Pn**	**19 48 51.0**	**-4.0**
NDI					eS	**Sn**	**19 50 16.0**	**-11**
AYAN	**Aya Nagar**	**8.33**	**271**		ePKP	**Pn**	**19 48 54.6**	**-1.6**
AYAN					eS	**Sn**	**19 50 20.9**	**-7.9**
AYAN					AML	AML	19 50 26.1	
	comp=Z,50nm,0.1s							
SMLA	**Simla**	**8.54**	**289**		i P	**Pn**	**19 48 58.8**	**-0.3**
SMLA					i S	**Sn**	**19 50 28.9**	**-5.1**
SMLA					⇓		19 50 31.5	
	comp=E,2μm,0.5s							
SMLA							19 50 31.5	
	comp=N,1μm,0.5s							
SDNR	**Sundarnagar**	**8.80**	**291**		ePKP	**Pn**	**19 49 02.5**	**-0.1**
SDNR					ex	**Sn**	**19 50 38.5**	**-1.8**
KHET	**Khetri**	**9.53**	**269**		ePKP	**Pn**	**19 49 10.6**	**-1.9**
KHET					eS	**Sn**	**19 50 49.6**	**-8.4**
KHET					AML	AML	19 50 53.7	
	comp=E,67nm,0.4s							
BHPL	**Bhopal**	**9.87**	**239**		ePKP	**Pn**	**19 49 12.8**	**-4.4**
BHPL					eS	**Sn**	**19 50 55.4**	**-11**
BHPL					AML	AML	19 51 02.1	
	comp=E,40nm,0.2s							
BHPL					AML	AML	19 51 02.3	
	comp=N,98nm,0.3s							
AJM	**Ajmer**	**10.83**	**261**		ex	**Pn**	**19 49 25.1**	**-5.3**
AJM					eS	**Sn**	**19 51 18.3**	**-12**
HYB	**Hyderabad**	**13.42**	**215**		i P	**Pn**	**19 50 04.5**	**-1.2**
LATR	**Latur**	**13.74**	**224**		ePKP	**Pn**	**19 50 05.4**	**-4.5**
LATR					eS	**Sn**	**19 52 26.0**	**-15**
CHTO	**Chiang Mai**	**14.96**	**128**		ePn	**Pn**	**19 50 21.5**	**-4.4**
CMAR	**Chiang Mai Arr**	**15.20**	**129**		Pn	**Pn**	**19 50 25.0**	**-3.9**
	comp=N,0.4nm,0.3s,baz=305,slow=11,SNR=3.9							
POO	**Poona**	**15.43**	**232**		ex	**Pn**	**19 50 25.0**	**-6.9**
KBL	**Kabul**	**16.05**	**296**		ePn	**Pn**	**19 50 36.4**	**-3.3**
	comp=N,10nm,0.6s							
KBL					eSn	**Sn**	**19 53 26.0**	**-11**
KAD	**Karad**	**16.07**	**228**		ex	**Pn**	**19 50 34.5**	**-5.4**
TKM2	**Tokmak 2**	**16.76**	**331**		ePn	**Pn**	**19 50 48.0**	**-0.5**
	comp=N,4.1nm,0.5s							
EKS2	**Erkin-Say**	**17.39**	**327**		Pn	**Pn**	**19 50 57.2**	**+1.0**
	comp=N,5.5nm,0.6s							
MK31	**Makanchi Array**	**18.40**	**351**		eP	**Pn**	**19 51 08.5**	**-0.1**
MKAR	**Makanchi Array**	**18.40**	**351**		P	**Pn**	**19 51 08.7**	**+0.1**
	comp=N,2.1nm,0.3s,baz=172,slow=11,SNR=112							
KKAR	**Karatay Array**	**19.37**	**322**		eP	**Pn**	**19 51 19.3**	**-0.8**
	comp=N,2.8nm,0.5s							
ENH	**Enshi**	**19.99**	**80**		P	**P**	**19 51 23.9**	**-1.4**
	comp=N,3.2nm,0.7s							
KURK	**Kurchatov**	**22.83**	**347**		eP	**P**	**19 51 56.5**	**+1.1**
	comp=N,20nm,0.9s,mb4.5							
SONM	**Songino Array**	**24.52**	**33**		P	**P**	**19 52 12.9**	**+1.6**
	comp=N,1.5nm,0.6s,mb3.6,baz=225,slow=9.6,SNR=12							
ULN	**Ulaanbaatar**	**24.87**	**34**		eP	**P**	**19 52 14.8**	**+0.4**
	comp=N,2.9nm,0.9s,mb3.7							
ZALV	**Zalesovo Beam**	**25.29**	**358**		P	**P**	**19 52 18.9**	**+0.7**
	comp=N,1.9nm,0.4s,mb3.9,baz=177,slow=8.7,SNR=12							
BVAR	**Borovoye Array**	**27.11**	**338**		P	**P**	**19 52 35.2**	**+0.5**
	comp=N,0.9nm,0.4s,mb3.6,baz=150,slow=11,SNR=5.9							
BRVK	**Borovoye**	**27.18**	**338**		P	**P**	**19 52 33.9**	**-1.3**
ABKAR	**Akbulak array**	**28.94**	**323**		eP	**P**	**19 52 51.9**	**+0.9**
	comp=N,2.6nm,0.6s,mb4.0							
ARU	**Arti**	**34.13**	**332**		eP	**P**	**19 53 37.5**	**+1.0**
	comp=N,3.8nm,0.4s,mb4.6							
AKASG	**Malin Array Be**	**47.96**	**314**		P	**P**	**19 55 29.6**	**-0.5**
	comp=N,2.3nm,0.5s,mb4.3,baz=85,slow=6.7,SNR=12							
FINES	**FINESS Array B**	**51.22**	**328**		P	**P**	**19 55 55.0**	**+0.3**
	comp=N,1.0nm,0.4s,mb4.2,baz=107,slow=7.6,SNR=25							
FINES	**FINESS Array B**	**51.22**	**328**		P	**P**	**19 55 55.0**	**+0.3**
KEV	**Kevo**	**52.97**	**338**		eP	**P**	**19 56 08.0**	**+0.4**
	comp=N,5.7nm,0.7s,mb4.7							
ARCES	**ARCESS Array B**	**53.40**	**337**		P	**P**	**19 56 11.6**	**+0.9**
	comp=N,3.5nm,0.7s,mb4.5,baz=112,slow=9.7,SNR=12							
ARCES	**ARCESS Array B**	**53.40**	**337**		P	**P**	**19 56 11.6**	**+0.9**
ARE0	**ARCESS Array S**	**53.40**	**337**		P	**P**	**19 56 11.2**	**+0.5**
MORC	**Moravsky Berou**	**55.45**	**313**		P	**P**	**19 56 27.4**	**+1.5**
	comp=N,1.2nm,0.7s,mb4.0							
NB2	**NORSAR Subarra**	**58.34**	**326**		P	**P**	**19 56 45.7**	**-0.4**
	comp=Z,1.0nm,0.7s,mb4.0,baz=87,slow=6.9							
NOA	**NORSAR Array B**	**58.34**	**326**		P	**P**	**19 56 46.0**	**-0.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=87,slow=6.8,SNR=6.2							
WRA	**Warramunga Arr**	**66.79**	**131**		P	**P**	**19 57 42.6**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.7,baz=326,slow=6.5,SNR=12							
ASAR	**Alice Springs**	**69.16**	**134**		P	**P**	**19 57 57.4**	**-0.4**
	comp=Z,0.2nm,0.5s,mb3.2,baz=319,slow=5.7,SNR=5.0							
ILAR	**Eielson Array**	**78.04**	**21**		P	**P**	**19 58 48.5**	**-0.8**
	comp=Z,0.4nm,0.6s,mb3.3,baz=311,slow=4.8,SNR=7.8							

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*TIR **19** 20:12:13.8, 43°.45N×19°.56E, h7km, ML2.5*
*ISCJB **19** 20:12:16.6±0.3, 43°.57N±0°.01×19°.56E±0°.02, h10km, Error ellipse: s-maj=2.5km s-min=1.8km az=28.6*
*CSEM **19** 20:12:16.8±0.1, 43°.56N×19°.52E, h2km, ML2.3/10, Error ellipse: s-maj=2.9km s-min=2.0km az=113.0*
*BEO **19** 20:12:17.7±0.2, 43°.56N×19°.50E, h4km±2km, ML2.6/16*
*PDG **19** 20:12:17.7±0.1, 43°.52N×19°.55E, h9km, MD2.3/1, ML2.3/10, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*
ISC 19 20:12:17.5±0.3,**43°.57N**±0°.01×**19°.54E**±0°.02,**h6**km±4km, **n58**,σ0§**94**/110,**10C-13D**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLE	**Pljevlja**	**0.26**	**203**	⇓	iPg	**Pg**	**20 12 22.0**	**-0.6**
PLE					eSg	**Sg**	**20 12 25.8**	**-0.3**
PLE	**Pljevlja**	**0.26**	**203**	⇓	iPg	**Pg**	**20 12 22.0**	**-0.6**
PLE					eSg	**Sg**	**20 12 25.8**	**-0.3**
BBLS	**Lazići**	**0.31**	**342**	⇑	iPg	**Pg**	**20 12 23.3**	**-0.3**
BBLS					eSg	**Sg**	**20 12 27.8**	**+0.1**
BBLS	**Lazići**	**0.31**	**342**	⇑	iPg	**Pg**	**20 12 23.3**	**-0.3**
BBLS					eSg	**Sg**	**20 12 27.8**	**+0.1**
SJES	**Sjenica**	**0.44**	**134**		ePg	**Pg**	**20 12 25.0**	**-1.1**
SJES					eSg	**Sg**	**20 12 31.8**	**-0.1**
UPM	**Unac-Piva**	**0.58**	**231**	⇓	iPg	**Pg**	**20 12 28.3**	**-0.5**
UPM					eSg	**Sg**	**20 12 37.2**	**+0.8**
UPM	**Unac-Piva**	**0.58**	**231**	⇓	iPg	**Pg**	**20 12 28.3**	**-0.5**
UPM					eSg	**Sg**	**20 12 37.2**	**+0.8**
DIVS	**Divibare**	**0.62**	**32**	⇓	iPg	**Pg**	**20 12 28.8**	**-0.7**
DIVS					eSg	**Sg**	**20 12 37.9**	**+0.3**
DIVS	**Divibare**	**0.62**	**32**	⇓	iPg	**Pg**	**20 12 28.8**	**-0.7**
DIVS					eSg	**Sg**	**20 12 37.9**	**+0.3**
BEY	**Berane**	**0.75**	**159**	⇑	iPg	**Pg**	**20 12 30.7**	**-1.1**
BEY					eSg	**Sg**	**20 12 41.6**	**+0.1**
IVA	**Berane**	**0.75**	**159**	⇑	iPg	**Pg**	**20 12 30.7**	**-1.1**
IVA					eSg	**Sg**	**20 12 41.6**	**+0.1**
NKY	**Niksic**	**0.85**	**208**	⇑	iPg	**Pg**	**20 12 32.9**	**-1.0**
NKY					eSg	**Sg**	**20 12 45.7**	**+0.8**
NKY	**Niksic**	**0.85**	**208**	⇑	iPg	**Pg**	**20 12 32.9**	**-1.0**
NKY					eSg	**Sg**	**20 12 45.7**	**+0.8**
TRUS	**Trudelj**	**0.91**	**44**		ePg	**Pg**	**20 12 33.3**	**-1.6**
TRUS					eSg	**Sg**	**20 12 47.5**	**+0.8**
TRUS	**Trudelj**	**0.91**	**44**		ePg	**Pg**	**20 12 33.3**	**-1.6**
TRUS					eSg	**Sg**	**20 12 47.5**	**+0.8**
GRUS	**Gruza**	**0.91**	**69**		ePg	**Pg**	**20 12 35.3**	**+0.3**
GRUS					eSg	**Sg**	**20 12 48.6**	**+1.7**
GRUS	**Gruza**	**0.91**	**69**		ePg	**Pg**	**20 12 35.3**	**+0.3**
GRUS					eSg	**Sg**	**20 12 48.6**	**+1.7**
BRY	**Bratogost**	**0.99**	**228**	⇓	iPg	**Pg**	**20 12 35.3**	**-1.1**
BRY					eSg	**Sg**	**20 12 50.5**	**+1.3**
BRY	**Bratogost**	**0.99**	**228**	⇓	iPg	**Pg**	**20 12 35.3**	**-1.1**
BRY					eSg	**Sg**	**20 12 50.5**	**+1.3**
PVY	**Plav**	**1.03**	**162**	⇑	iPg	**Pg**	**20 12 35.5**	**-1.7**
PVY					eSg	**Sg**	**20 12 50.6**	**+0.1**
PVY	**Plav**	**1.03**	**162**	⇑	iPg	**Pg**	**20 12 35.5**	**-1.7**
PVY					eSg	**Sg**	**20 12 50.6**	**+0.1**
PDG	**Podgorica**	**1.16**	**190**		ePg	**Pg**	**20 12 38.7**	**-1.0**
PDG					eSg	**Sg**	**20 12 53.1**	**-1.6**
PDG	**Podgorica**	**1.16**	**190**		ePg	**Pg**	**20 12 38.7**	**-1.0**
PDG					eSg	**Sg**	**20 12 53.1**	**-1.6**
TTG	**Podgorica**	**1.16**	**190**		ePg	**Pg**	**20 12 38.6**	**-1.1**
TTG					eSg	**Sg**	**20 12 55.6**	**+0.9**
SELS	**Selova**	**1.21**	**106**		ePg	**Pg**	**20 12 39.3**	**-1.3**
SELS					eSg	**Sg**	**20 12 56.8**	**+0.5**
SELS	**Selova**	**1.21**	**106**		ePg	**Pg**	**20 12 39.3**	**-1.3**
SELS					eSg	**Sg**	**20 12 56.8**	**+0.5**
BCI	**Bajram Curri**	**1.26**	**162**		i PG	**Pn**	**20 12 40.1**	**-1.6**
BCI	**Bajram Curri**	**1.26**	**162**		i Pg	**Pn**	**20 12 40.1**	**-1.6**
	SNR=127							
BUM	**Brajici-Budva**	**1.35**	**200**	⇓	iPg	**Pn**	**20 12 42.0**	**-0.9**
BUM					eSg	**Sg**	**20 13 02.6**	**+1.7**
BUM	**Brajici-Budva**	**1.35**	**200**	⇓	iPg	**Pn**	**20 12 42.0**	**-0.9**
HCY	**Herceg Novi**	**1.35**	**215**	⇓	iPg	**Pn**	**20 12 42.1**	**-0.8**
HCY					eSg	**Sg**	**20 13 02.9**	**+1.9**
HCY	**Herceg Novi**	**1.35**	**215**	⇓	iPg	**Pn**	**20 12 42.1**	**-0.8**
SVIS	**Svilajnac**	**1.40**	**60**		ePg	**Pg**	**20 12 43.6**	**-0.7**
SVIS					eSg	**Sg**	**20 13 03.8**	**+1.3**
BEO	**Beograd**	**1.41**	**28**		ePg	**Pn**	**20 12 43.4**	**-0.3**
BEO					eSg	**Sg**	**20 13 03.2**	**+0.3**
BEO	**Beograd**	**1.41**	**28**		ePg	**Pn**	**20 12 43.4**	**-0.3**
BEO					eSg	**Sg**	**20 13 03.2**	**+0.3**
STON	**Ston**	**1.51**	**243**		ePn	**Pn**	**20 12 43.5**	**-1.6**
STON					Sn	**Sn**	**20 13 06.7**	**+1.6**
STON	**Ston**	**1.51**	**243**		ePn	**Pn**	**20 12 43.5**	**-1.6**
STON					Sn	**Sn**	**20 13 06.7**	**+1.6**
PUK	**Puka**	**1.55**	**170**		i PG	**Pn**	**20 12 45.7**	**+0.1**
PUK					i SG	**Sg**	**20 13 07.6**	**+0.3**
PUK	**Puka**	**1.55**	**170**		i Pg	**Pn**	**20 12 45.7**	**+0.1**
	SNR=128							
PUK					i Sg	**Sg**	**20 13 07.6**	**+0.3**
	SNR=128							
FRGS	**Fruska Gora**	**1.60**	**7**		ePn	**Pn**	**20 12 45.8**	**-0.5**
FRGS					eSg	**Sg**	**20 13 08.5**	**-0.4**
ULC	**Ulcinj**	**1.62**	**188**	⇑	iPg	**Pn**	**20 12 46.7**	**+0.1**
ULC					eSg	**Sg**	**20 13 09.8**	**+0.3**
ULC	**Ulcinj**	**1.62**	**188**	⇑	iPg	**Pn**	**20 12 46.7**	**+0.1**
ULC					eSg	**Sg**	**20 13 09.8**	**+0.3**
BOLS	**Boljevac**	**1.77**	**81**		ePn	**Pn**	**20 12 49.3**	**+0.6**
BOLS					eSg	**Sg**	**20 13 14.6**	**+0.1**
BOLS	**Boljevac**	**1.77**	**81**		ePn	**Pn**	**20 12 49.3**	**+0.6**
BOLS					eSg	**Sg**	**20 13 14.6**	**+0.1**
BARS	**Barje**	**1.83**	**114**		ePn	**Pn**	**20 12 49.4**	**-0.1**
BARS					eSg	**Sg**	**20 13 16.5**	**+0.2**
BARS	**Barje**	**1.83**	**114**		ePn	**Pn**	**20 12 49.4**	**-0.1**
BARS					eSg	**Sg**	**20 13 16.5**	**+0.2**
BLY	**Banja Luka**	**2.06**	**306**		ePn	**Pn**	**20 12 53.2**	**+0.5**
BLY					eSg	**Sg**	**20 13 25.2**	**+1.4**
BLY	**Banja Luka**	**2.06**	**306**		ePn	**Pn**	**20 12 53.2**	**+0.5**
BLY					eSg	**Sg**	**20 13 25.2**	**+1.4**
TIR	**Tirane**	**2.23**	**174**		eSg	**Sg**	**20 13 29.9**	**+0.6**
TIR	**Tirane**	**2.23**	**174**		eSg	**Sg**	**20 13 29.9**	**+0.6**
ZAPS	**Zavoj**	**2.28**	**96**		ePn	**Pn**	**20 12 57.1**	**+1.5**
ZAPS					eSg	**Sg**	**20 13 30.4**	**-0.2**
BZS	**Buzias**	**2.53**	**35**		ePn	**Pn**	**20 12 58.2**	**-0.9**
BZS					eSg	**Sg**	**20 13 39.5**	**+0.7**
BZS	**Buzias**	**2.53**	**35**	⇓	iP	**Pn**	**20 13 04.7**	**+5.6**
BZS					S	**Sn**	**20 13 39.8**	**+10**
BZS	**Buzias**	**2.53**	**35**		ePn	**Pn**	**20 12 58.2**	**-0.9**
BZS					eSg	**Sg**	**20 13 39.5**	**+0.7**
PKSM	**Moragy**	**2.72**	**347**		ePn	**Pn**	**20 13 01.0**	**-0.7**
PKSM					eSg	**Sg**	**20 13 44.3**	**-0.5**
PKSM	**Moragy**	**2.72**	**347**		ePn	**Pn**	**20 13 01.0**	**-0.7**
PKSM					eSg	**Sg**	**20 13 44.3**	**-0.5**
VTS	**Vitosha**	**2.86**	**109**		ePn	**Pn**	**20 13 05.4**	**+1.7**
VTS					eSg	**Sg**	**20 13 49.9**	**+0.5**
VTS	**Vitosha**	**2.86**	**109**		ePn	**Pn**	**20 13 05.4**	**+1.7**
VTS					eSg	**Sg**	**20 13 49.9**	**+0.5**

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*IDC **19** 20:20:54.9±2.9, 36°.15N×142°.01E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.4/24, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=66.0km s-min=29.2km az=46.0*
*ISCJB **19** 20:20:57.0±1.0, 36°.27N±0°.05×142°.02E±0°.08, h33km, mb3.4/2, Error ellipse: s-maj=9.5km s-min=6.6km az=24.5*
*JMA **19** 20:20:57.6±0.2, 36°.35N×141°.82E, h80km±4km, M3.0*
ISC 19 20:20:58.3±1.0,**36°.29N**±0°.05×**142°.01E**±0°.08,**h35**km,**n16**, σ1§**19**/22,**mb3.4**/2,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.10**	**238**		P	**Pn**	**20 21 16.9**	**-0.2**
CHOJ					S	**Sn**	**20 21 32.5**	**+1.4**
JHO	**Hitachi**	**1.20**	**286**		P	**Pn**	**20 21 16.8**	**-1.7**
ONAJ	**Iwakimizuishiy**	**1.26**	**310**		P	**Pn**	**20 21 18.2**	**-1.2**
JFK	**Kawauchi**	**1.41**	**320**		P	**Pn**	**20 21 20.4**	**-1.0**
JFT	**Otama**	**1.81**	**313**		P	**Pn**	**20 21 26.8**	**-0.2**
JFT					eS	**Sn**	**20 21 49.5**	**+0.8**
JMM	**Marumori**	**1.85**	**329**		P	**Pn**	**20 21 26.5**	**-0.9**
BSO3	**Boso 3**	**1.92**	**220**		eS	**Sn**	**20 21 50.0**	**-1.3**
JAG	**Ashikaga**	**2.06**	**275**		P	**Pn**	**20 21 29.4**	**-1.0**
JAG					eS	**Sn**	**20 21 53.3**	**-1.6**
JRY	**Ryogami san**	**2.53**	**265**		P	**Pn**	**20 21 36.4**	**-0.4**
JRY					eS	**Sn**	**20 22 04.8**	**-1.5**
JMK	**Ichinoseki**	**2.73**	**347**		P	**Pn**	**20 21 39.4**	**-0.2**
JYN	**Shimob**	**2.92**	**255**		P	**Pn**	**20 21 43.0**	**+0.8**
JYK	**Kaneyama**	**2.93**	**334**		P	**Pn**	**20 21 43.3**	**+1.0**
MJAR	**Matsushiro Arr**	**3.07**	**276**		Pn	**Pn**	**20 21 44.8**	**+0.5**
	4.3nm,0.3s,baz=95,slow=15,SNR=28							
MJAR					Sn	**Sn**	**20 22 22.4**	**+2.6**
	1.3nm,0.3s,baz=31,slow=38,SNR=3.5							
MAT	**Matsushiro**	**3.07**	**276**		P	**Pn**	**20 21 45.1**	**+0.8**
MAT					S	**Sn**	**20 22 21.1**	**+1.3**
SONM	**Songino Array**	**28.60**	**305**		P	**P**	**20 26 53.6**	**+2.7**
	0.3nm,0.6s,mb3.2,baz=94,slow=9.2,SNR=4.9							
WRA	**Warramunga Arr**	**56.39**	**189**		P	**P**	**20 30 37.0**	**+0.9**
	0.4nm,0.8s,mb3.5,baz=6.8,slow=7.1,SNR=3.1							

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*IDC **19** 20:28:00.7±0.8, 12°.99N×124°.60E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.8/19, mbtmp3.7/8, Error ellipse: s-maj=39.7km s-min=17.1km az=71.0*
*MAN **19** 20:28:03, 13°.04N×124°.27E

*IDC **19** 20:32:25.3±0.5, 23°.67N×142°.96E, h0km, mb4.2/18, mb1 4.4/21, mb1mx4.4/26, mbtmp4.2/21, ML4.1/3, MS3.6/5, Ms1 3.6/5, ms1mx3.1/37, Error ellipse: s-maj=19.6km s-min=13.9km az=91.0*

*BJI **19** 20:32:25.0, 23°.70N×143°.00E, h15km, mB4.7/18, mb4.6/25, Ms4.0/14, Ms7 3.7/13*

*MOS **19** 20:32:28.9±1.1, 23°.70N×142°.92E, h33km, mb4.8/27, Error ellipse: s-maj=13.0km s-min=9.0km az=105.8*

*NEIC **19** 20:32:28.1±0.3, 23°.74N×142°.97E, h15km, mb4.7/37, Error ellipse: s-maj=9.2km s-min=7.8km az=173.0*

*ISCJB **19** 20:32:30.3±0.2, 23°.81N±0°.04×142°.86E±0°.04, h33km, mb4.6/66, MS3.6/7, Error ellipse: s-maj=6.1km s-min=4.2km az=39.8*

ISC 19 20:32:32.0±0.2, 23°.80N±0°.04×142°.91E±0°.04, h35km, n268, σ0.76/273, mb4.6/66, MS3.6/7, 57C-70D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.90**	**347**	P	**Pn**	**20 33 16.2**	**+0.6**
JHHJ				S	**Sn**	**20 33 49.9**	**+0.7**
CBIJ	**Chichi jima**	**3.35**	**349**	Pn	**Pn**	**20 33 22.5**	**+0.7**
	49nm,0.3s,baz=323,slow=23,SNR=31						
CBIJ				Sn	**Sn**	**20 34 01.3**	**+0.9**
	159nm,0.3s,baz=289,slow=22,SNR=14						
CBIJ	**Chichi jima**	**3.35**	**349**	P	**Pn**	**20 33 22.6**	**+0.8**
CBIJ				*e*S	**Sn**	**20 34 00.5**	**+0.1**
GUMO	**Guam**	**10.32**	**169**	LR	LR	20 38 31.7	
	comp=Z,203nm,18.2s,baz=116,slow=36						
BSO1	**Boso 1**	**10.95**	**352**	P	**Pn**	**20 35 06.5**	**+0.4**
BSO3	**Boso 3**	**11.16**	**350**	P	**Pn**	**20 35 09.2**	**+0.2**
BSO4	**Boso 4**	**11.38**	**349**	P	**Pn**	**20 35 12.0**	**0.0**
JOD2	**Odawara 2**	**11.90**	**345**	P	**Pn**	**20 35 17.8**	**-1.3**
JNY	**Yasuok**	**12.33**	**340**	P	**Pn**	**20 35 23.4**	**-1.6**
JHU	**Hanno**	**12.42**	**346**	P	**Pn**	**20 35 23.1**	**-3.1**
JHU				*e*S	**Sn**	**20 37 35.6**	**-7.7**
JRY	**Ryogami san**	**12.66**	**345**	P	**Pn**	**20 35 27.9**	**-1.6**
JRY				S	**Sn**	**20 37 42.8**	**-6.5**
JHO	**Hitachi**	**12.93**	**352**	P	**Pn**	**20 35 31.0**	**-2.2**
JHO				S	**Sn**	**20 37 46.5**	**-9.3**
JAG	**Ashikaga**	**12.93**	**347**	P	**Pn**	**20 35 30.2**	**-3.1**
MJAR	**Matsushiro Arr**	**13.33**	**343**	Pn	**Pn**	**20 35 37.7**	**-1.0**
	0.9nm,0.3s,baz=161,slow=11,SNR=14						
MJAR	**Matsushiro Arr**	**13.33**	**343**	P	**Pn**	**20 35 37.7**	**-1.0**
MAJO	**Matsushiro**	**13.33**	**343**	*e*Pn	**Pn**	**20 35 33.7**	**-5.0**
MAJO	**Matsushiro**	**13.33**	**343**	*e*P	**Pn**	**20 35 33.7**	**-5.0**
MAT	**Matsushiro**	**13.33**	**343**	P	**Pn**	**20 35 38.6**	**-0.1**
JOW	**Kunigami**	**13.58**	**286**	*e*Pn	**Pn**	**20 35 47.7**	**+5.6**
	10nm,0.6s						
KSRS	**Korea Array**	**18.72**	**320**	P	**Pn**	**20 36 48.0**	**-0.1**
	0.2nm,0.3s,baz=139,slow=10,SNR=8.4						
KSRS				LR	LR	20 43 31.9	
	comp=Z,158nm,19.3s,baz=267,slow=35						
ASAJ	**Asahikawa**	**20.27**	**359**	P	**P**	**20 37 06.2**	**+1.8**
	5.5nm,0.9s,baz=238,slow=4.4,SNR=1.9						
DAV	**Davao City (W)**	**23.53**	**228**	LR	LR	20 45 05.4	
	comp=Z,149nm,18.2s,MS3.5,baz=182,slow=32						
HABR	**Khabarovsk**	**25.40**	**348**	*e*P	**P**	**20 38 04.0**	**+8.0**
HABR						20 38 30.5	
HABR				*e*		20 41 24.7	
HABR				*e*S	**S**	**20 42 19.9**	**-0.3**
HABR				*e**SS	sS	20 42 36.7	-0.1
HABR						20 48 50.8	
HABR				pmax	pmax		
	comp=E,31nm,1.6s						
HABR				pmax	pmax		
	comp=N,14nm,0.8s						
HABR				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.6						
HABR				MLR	MLR		
	comp=Z,75nm,16.0s,MS3.3						
BJI	**Beijing**	**27.73**	**312**	P	**P**	**20 38 19.4**	**+2.3**
BJI				S	**S**	**20 42 50.8**	**-6.5**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
BJI				pmax	pmax		
	comp=Z,95nm,5.0s						
BJI				LR	LR		
	comp=N,77nm,28.8s,MS3.3						
BJI				LR	LR		
	comp=E,100nm,27.8s,MS3.3						
BJI				LR	LR		
	comp=Z,52nm,23.9s,MS3.0						
ENH	**Enshi**	**30.39**	**290**	P	**P**	**20 38 41.6**	**+0.7**
	comp=Z,2.8nm,0.6s,mb4.2						
KKM	**Kota Kinabalu**	**31.15**	**240**	P	**P**	**20 38 41.1**	**-6.6**
HHC	**Hu-ho-hao-te**	**31.26**	**310**	*e*P	**P**	**20 38 48.9**	**+0.5**
HHC				pP	pP	20 38 53.4	-5.1
HHC				sP	sP	20 38 55.9	-6.8
HHC				PP	PP	20 39 52.8	-6.5
HHC				PcP	PcP	20 41 41.1	-1.2
HHC				S	**S**	**20 43 53.4**	**+0.8**
HHC				sS	sS	20 44 02.9	-6.3
HHC				ScP	ScP	20 45 22.3	-0.4
HHC				ScS	ScS	20 49 19.4	-0.6
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
HHC				pmax	pmax		
	comp=Z,77nm,6.2s						
HHC				LR	LR		
	comp=N,86nm,11.8s,MS3.9						
HHC				LR	LR		
	comp=E,150nm,13.2s,MS3.9						
HHC				LR	LR		
	comp=Z,120nm,15.9s,MS3.7						
GYA	**Guiyang**	**32.86**	**282**	*e*P	**P**	**20 39 03.6**	**+1.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2	**Chengdu**	**35.35**	**290**	*e*P	**P**	**20 39 25.8**	**+1.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				pmax	pmax		
	comp=Z,100nm,5.2s						
LZH	**Lanzhou**	**35.77**	**299**	*e*P	**P**	**20 39 30.0**	**+2.2**
LZH				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
KMI	**Kunming**	**36.50**	**281**	P	**P**	**20 39 33.9**	**-0.2**
KMI				SS	SS	20 47 40.6	-14
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
KMI				pmax	pmax		
	comp=Z,96nm,4.7s						
KMI				LR	LR		
	comp=N,68nm,17.1s,MS3.7						
KMI				LR	LR		
	comp=E,93nm,18.2s,MS3.7						
KMI				LR	LR		
	comp=Z,100nm,17.7s,MS3.6						
SONM	**Songino Array**	**37.58**	**319**	P	**P**	**20 39 42.9**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=124,slow=9.2,SNR=3.1						
SONM				PcP	PcP	20 41 59.7	-0.6
	comp=Z,0.7nm,0.7s,baz=129,slow=4.0,SNR=4.6						
SONM				LR	LR	20 56 10.2	
	comp=Z,111nm,18.6s,MS3.7,baz=96,slow=38						
SONM	**Songino Array**	**37.58**	**319**	P	**P**	**20 39 42.9**	**-0.1**
SONM				PcP	PcP	20 41 59.7	-0.6
SONM				LR	LR	20 56 10.2	
SONM	**Songino Array**	**37.58**	**319**	P	**P**	**20 39 42.9**	**-0.1**
SONM						20 41 59.7	
CMAR	**Chiang Mai Arr**	**41.23**	**271**	P	**P**	**20 40 12.8**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=61,slow=7.4,SNR=3.0						
CMAR				LR	LR	20 56 05.9	
	comp=Z,75nm,19.9s,baz=145,slow=34						
CMAR	**Chiang Mai Arr**	**41.23**	**271**	P	**P**	**20 40 12.8**	**-1.0**
WB2	**Warramunga Arr**	**44.27**	**192**	*e*P	**P**	**20 40 36.2**	**-2.1**
WRA	**Warramunga Arr**	**44.27**	**192**	P	**P**	**20 40 36.2**	**-2.1**
	comp=Z,2.9nm,0.4s,mb4.4,baz=16,slow=9.5,SNR=66						
WRA				PcP	PcP	20 42 21.2	-1.2
	comp=Z,2.9nm,0.8s,baz=3.1,slow=3.4,SNR=8.9						
WRA	**Warramunga Arr**	**44.27**	**192**	P	**P**	**20 40 36.2**	**-2.1**
WRA				PcP	PcP	20 42 21.2	-1.2
WRA	**Warramunga Arr**	**44.27**	**192**	P	**P**	**20 40 36.2**	**-2.1**
WRA						20 42 21.2	
LSA	**Lhasa**	**46.29**	**289**	*e*P	**P**	**20 40 53.4**	**-1.0**
	comp=Z,7.5nm,1.1s,mb4.5						
LSA	**Lhasa**	**46.29**	**289**	*e*P	**P**	**20 40 53.4**	**-1.0**
LSA				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
ASAR	**Alice Springs**	**47.98**	**191**	P	**P**	**20 41 05.2**	**-2.3**
	comp=Z,0.9nm,0.6s,mb4.0,baz=18,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**47.98**	**191**	P	**P**	**20 41 05.2**	**-2.3**
WMQ	**Urumqi**	**49.07**	**308**	*e*P	**P**	**20 41 16.0**	**+0.2**
WMQ				pP	pP	20 41 21.0	-5.2
WMQ				sP	sP	20 41 23.0	-7.4
WMQ				PP	PP	20 43 10.0	+0.6
WMQ				S	**S**	**20 48 19.0**	**+0.7**
WMQ				sS	sS	20 48 27.0	-8.5
WMQ				SS	SS	20 51 45.0	-4.4
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,63nm,4.0s						
WMQ				LR	LR		
	comp=N,59nm,16.0s,MS3.9						
WMQ				LR	LR		
	comp=E,65nm,16.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,71nm,16.0s,MS3.8						
TAPN	**Taplejung**	**49.59**	**286**	*e*P	**P**	**20 41 24.0**	**+4.1**
	comp=Z,19nm,1.0s,mb5.1						
ODAN	**Odare**	**49.94**	**286**	*e*P	**P**	**20 41 24.1**	**+1.4**
	comp=Z,12nm,0.7s,mb5.0						
KKN	**Kakani**	**51.65**	**287**	*e*P	**P**	**20 41 37.0**	**+1.5**
	comp=Z,5.1nm,0.5s,mb4.7						
KKN	**Kakani**	**51.65**	**287**	*e*P	**P**	**20 41 37.0**	**+1.5**
KKN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
GKN	**Gorkha**	**52.17**	**288**	*e*P	**P**	**20 41 40.2**	**+0.8**
	comp=Z,30nm,1.2s,mb5.1						
ZALV	**Zalesovo Beam**	**52.42**	**321**	P	**P**	**20 41 39.7**	**-1.1**
	comp=Z,0.5nm,0.3s,mb3.9,baz=102,slow=4.9,SNR=2.7						
ZALV				PcP	PcP	20 42 49.7	-1.6
	comp=Z,2.5nm,0.6s,baz=113,slow=4.1,SNR=7.6						
ZALV	**Zalesovo Beam**	**52.42**	**321**	P	**P**	**20 41 39.7**	**-1.1**
ZALV				PcP	PcP	20 42 49.7	-1.6
ZALV	**Zalesovo Beam**	**52.42**	**321**	P	**P**	**20 41 39.7**	**-1.1**
ZALV						20 42 49.7	
DANN	**Dangsing**	**52.88**	**288**	*e*P	**P**	**20 41 45.6**	**+1.0**
	comp=Z,28nm,0.6s,mb5.4						
MKAR	**Makanchi Array**	**53.11**	**312**	P	**P**	**20 41 45.7**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.7,baz=90,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**53.11**	**312**	*e*P	**P**	**20 41 47.5**	**+1.5**
STKA	**Stephens Creek**	**55.37**	**181**	P	**P**	**20 41 59.3**	**-3.2**
	comp=Z,3.6nm,0.7s,mb4.5,baz=1.3,slow=9.9,SNR=6.3						
STKA	**Stephens Creek**	**55.37**	**181**	*e*P	**P**	**20 41 59.4**	**-3.1**
	comp=Z,0.8nm,0.7s,mb3.9						
STKA	**Stephens Creek**	**55.37**	**181**	*e*P	**P**	**20 41 59.4**	**-3.1**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**55.78**	**316**	*e*P	**P**	**20 42 05.5**	**+0.2**
	comp=Z,5.2nm,1.1s,mb4.5						
KURK	**Kurchatov**	**55.78**	**316**	*e*P	**P**	**20 42 05.6**	**+0.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
KDAK	**Kodiak Island**	**56.63**	**35**	P	**P**	**20 42 10.3**	**-1.0**
	comp=Z,4.8nm,0.7s,mb4.7,baz=270,slow=7.1,SNR=5.4						
KDAK	**Kodiak Island**	**56.63**	**35**	P	**P**	**20 42 10.3**	**-1.0**
TKM2	**Tokmak 2**	**57.88**	**307**	P	**P**	**20 42 21.6**	**+1.2**
TKM2	**Tokmak 2**	**57.88**	**307**	P	**P**	**20 42 21.6**	**+1.2**
PMR	**Palmer**	**58.88**	**31**	*e*P	**P**	**20 42 26.4**	**-0.7**
	comp=Z,13nm,0.8s,mb5.0						
PMR	**Palmer**	**58.88**	**31**	*e*P	**P**	**20 42 26.4**	**-0.7**
PMR				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
MCK	**McKinley**	**59.27**	**29**	P	**P**	**20 42 25.7**	**-4.0**
MCK	**McKinley**	**59.27**	**29**	P	**P**	**20 42 25.7**	**-4.0**
SML	**Sawmill**	**59.29**	**31**	*e*P	**P**	**20 42 29.2**	**-0.7**
	comp=Z,3.3nm,0.8s,mb4.4						
SML	**Sawmill**	**59.29**	**31**	*e*P	**P**	**20 42 29.2**	**-0.7**
SML				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**60.30**	**28**	P	**P**	**20 42 35.5**	**-1.2**
	comp=Z,4.2nm,0.9s,mb4.5,baz=261,slow=5.9,SNR=36						
ILAR	**Eielson Array**	**60.30**	**28**	P	**P**	**20 42 35.6**	**-1.1**
BRVK	**Borovoye**	**60.99**	**319**	*e*P	**P**	**20 42 41.5**	**-0.2**
	comp=Z,5.9nm,1.0s,mb4.7						
BRVK				*e*		20 42 56.6	
BRVK	**Borovoye**	**60.99**	**319**	⇓*e*P	**P**	**20 42 42.0**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
KKAR	**Karatay Array**	**61.57**	**307**	*e*P	**P**	**20 42 46.0**	**+0.2**
	comp=Z,2.0nm,0.6s,mb4.4						
KKAR	**Karatay Array**	**61.57**	**307**	*e*P	**P**	**20 42 46.1**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
EGAK	**Eagle**	**62.74**	**28**	*e*P	**P**	**20 42 52.3**	**-1.0**
	comp=Z,6.8nm,1.2s,mb4.7						
DAWY	**Dawson**	**63.50**	**29**	*e*P	**P**	**20 42 58.1**	**-0.2**
KBL	**Kabul**	**64.12**	**298**	*e*P	**P**	**20 43 03.5**	**+0.6**
	comp=Z,3.6nm,0.8s,mb4.5						
KBL	**Kabul**	**64.12**	**298**	*e*P	**P**	**20 43 03.5**	**+0.6**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
INK	**Inuvik**	**65.75**	**24**	P	**P**	**20 43 12.2**	**-0.8**
	comp=Z,1.9nm,0.5s,mb4.3,baz=285,slow=12,SNR=4.4						
INK	**Inuvik**	**65.75**	**24**	P	**P**	**20 43 11.6**	**-1.3**
	comp=Z,2.3nm,0.6s,mb4.4						
INK	**Inuvik**	**65.75**	**24**	P	**P**	**20 43 11.6**	**-1.3**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARU	**Arti**	**67.44**	**323**	*e*P	**P**	**20 43 23.8**	**-0.1**
	comp=Z,5.1nm,0.8s,mb4.6						
ARU	**Arti**	**67.44**	**323**	*c i*P	**P**	**20 43 24.0**	**+0.1**
ARU				*e*		20 45 48.9	
ARU				S	S	20 52 20.1	+2.9
ARU				SS	SS	20 56 36.9	-0.3
ARU				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.7						
ABKAR	**Akbulak array**	**67.88**	**315**	*e*P	**P**	**20 43 26.2**	**-0.5**
	comp=Z,1.0nm,0.5s,mb4.1						
DLBC	**Dease Lake**	**68.53**	**34**	P	**P**	**20 43 30.4**	**-0.3**
	comp=Z,3.3nm,0.7s,mb4.4,baz=270,slow=5.1,SNR=5.8						
DLBC	**Dease Lake**	**68.53**	**34**	P	**P**	**20 43 30.4**	**-0.3**
PRGR	**Permogore**	**72.72**	**330**	P	**P**	**20 43 53.6**	**-2.6**
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
YKA	**Yellowknife Ar**	**74.72**	**28**	P	**P**	**20 44 07.0**	**-0.9**
	comp=Z,4.1nm,0.7s,mb4.5,baz=289,slow=6.0,SNR=5.5						
YKA	**Yellowknife Ar**	**74.72**	**28**	P	**P**	**20 44 07.1**	**-0.8**
JCW	**Jim Creek**	**75.93**	**43**	*e*P	**P**	**20 44 15.5**	**+0.4**
	comp=Z,12nm,0.9s,mb4.8						
ARCES	**ARCESS Array B**	**76.86**	**341**	P	**P**	**20 44 20.2**	**+0.2**
	comp=Z,1.6nm,0.6s,mb4.1,baz=78,slow=8.7,SNR=16						
ARCES	**ARCESS Array B**	**76.86**	**341**	P	**P**	**20 44 20.2**	**+0.2**
H04A	**Detroit Lake**	**76.98**	**47**	⇑P	**P**	**20 44 21.4**	**+0.3**
	baz=77						
ETW	**Entiat**	**77.14**	**44**	*e*P	**P**	**20 44 21.7**	**-0.3**
	comp=Z,2.4nm,0.6s,mb4.3						
B08A	**Colville Reser**	**77.50**	**43**	⇓P	**P**	**20 44 23.3**	**-0.6**
	baz=77						
YBH	**Yreka Blue Hor**	**77.66**	**50**	*e*P	**P**	**20 44 25.2**	**+0.2**
	comp=Z,1.9nm,0.8s,mb4.1						
YBH	**Yreka Blue Hor**	**77.66**	**50**	*e*P	**P**	**20 44 25.2**	**+0.2**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
G06A	**Carlson Farm,**	**77.81**	**46**	⇓P	**P**	**20 44 25.9**	**+0.1**
	baz=78						
JOF	**Joensuu**	**78.32**	**334**	*e*P	**P**	**20 44 26.8**	**-1.4**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
K05A	**Summer Lake**	**78.56**	**48**	⇑P	**P**	**20 44 30.4**	**+0.4**
	baz=78						
NEW	**Newport**	**78.89**	**42**	⇓P	**P**	**20 44 31.0**	**-0.7**
	baz=79						
NEW	**Newport**	**78.89**	**42**	*e*P	**P**	**20 44 31.1**	**-0.6**
	comp=Z,3.2nm,0.8s,mb4.3						
NEW	**Newport**	**78.89**	**42**	*e*P	**P**	**20 44 31.1**	**-0.6**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
E09A	**Wood Farm, Sta**	**78.94**	**44**	⇑P	**P**	**20 44 31.9**	**-0.1**
	baz=79						
C11A	**Tepee Creek (N**	**79.60**	**42**	⇑P	**P**	**20 44 35.8**	**+0.2**
	baz=79						
OBN	**Obninsk**	**79.61**	**326**	*e*P	**P**	**20 44 35.8**	**+0.3**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
J08A	**Circle Bar Ran**	**79.95**	**47**	⇑P	**P**	**20 44 37.8**	**+0.2**
	baz=80						
B13A	**Whitefish**	**80.47**	**41**	⇑P	**P**	**20 44 39.9**	**-0.4**
	baz=80						
E12A	**Beaver Dam Sad**	**80.61**	**43**	⇑P	**P**	**20 44 41.4**	**+0.3**
	baz=80						
CMB	**Columbia Colle**	**80.69**	**53**	*e*P	**P**	**20 44 40.3**	**-1.4**
	comp=Z,3.1nm,0.6s,mb4.4						
CMB				*e*		20 44 56.5	
CMB	**Columbia Colle**	**80.69**	**53**	*e*P	**P**	**20 44 40.3**	**-1.3**
CMB				*e*		20 44 56.5	
CMB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
C13A	**Hot Springs**	**80.70**	**42**	P	**P**	**20 44 41.9**	**+0.4**
	baz=80,SNR=5.5						
KAF	**Kangasniemi**	**80.72**	**335**	*e*P	**P**	**20 44 39.5**	**-1.8**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
KIV	**Kislovodsk**	**80.79**	**314**	P	**P**	**20 44 39.6**	**-2.5**
	comp=Z,12nm,1.0s,mb4.8						
KIV	**Kislovodsk**	**80.79**	**314**	⇓*e*P	**P**	**20 44 40.3**	**-1.7**
KIV				*e*SS	SS	21 00 02.9	+2.1
KIV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
A14A	**Double T Ranch**	**80.84**	**40**	⇑P	**P**	**20 44 42.7**	**+0.5**
	baz=81						
JTMT	**Jette**	**80.85**	**42**	*e*P	**P**	**20 44 41.0**	**-1.3**
	comp=Z,6.6nm,1.1s,mb4.5						
D13A	**Huson**	**81.02**	**42**	⇓P	**P**	**20 44 43.3**	**+0.1**
	baz=81						
F12A	**Elk City**	**81.08**	**44**	⇑P	**P**	**20 44 43.9**	**+0.3**
	baz=81						
C14A	**Swan Lake**	**81.16**	**42**	⇓P	**P**	**20 44 44.2**	**+0.3**
	baz=81						
FINES	**FINESS Array B**	**81.19**	**334**	P	**P**	**20 44 43.0**	**-0.8**
	comp=Z,1.7nm,0.4s,mb4.3,baz=71,slow=6.0,SNR=29						
FINES	**FINESS Array B**	**81.19**	**334**	P	**P**	**20 44 43.0**	**-0.8**
B14A	**Marquette Ranc**	**81.19**	**41**	⇓P	**P**	**20 44 44.6**	**+0.5**
	baz=81						
A15A	**Johnson Ranch,**	**81.25**	**40**	⇓P	**P**	**20 44 44.3**	**-0.1**
	baz=81						
G12A	**Big Creek, Yel**	**81.30**	**45**	⇓P	**P**	**20 44 44.3**	**-0.5**
	baz=81						
B15A	**Bradely Ranch,**	**81.64**	**41**	⇑P	**P**	**20 44 46.7**	**+0.2**
	baz=82						
F13A	**Darby**	**81.66**	**44**	⇓P	**P**	**20 44 46.2**	**-0.5**
	baz=82						
MFID	**Camas Ranch**	**81.69**	**46**	⇓P	**P**	**20 44 47.3**	**+0.4**
	baz=82,SNR=6.9						
H12A	**Diamond D Ranc**	**81.85**	**45**	⇑P	**P**	**20 44 47.1**	**-0.5**
	baz=82						
C15A	**Salmond Ranch,**	**81.85**	**41**	⇓P	**P**	**20 44 47.8**	**+0.2**
	baz=82						
A16A	**West Butte Ran**	**81.93**	**40**	⇓P	**P**	**20 44 47.9**	**-0.1**
	baz=82						
G13A	**Cobalt**	**82.02**	**44**	⇓P	**P**	**20 44 48.4**	**-0.1**
	baz=82,SNR=9.0						
NVAR	**Mina Array Bea**	**82.04**	**52**	P	**P**	**20 44 49.0**	**+0.2**
	comp=Z,2.9nm,0.8s,mb4.3,baz=295,slow=7.5,SNR=14						
B16A	**M & M Farms, S**	**82.11**	**40**	⇓P	**P**	**20 44 48.8**	**-0.1**
	baz=82						
HLID	**Hailey**	**82.56**	**46**	⇓P	**P**	**20 44 51.8**	**+0.4**
	baz=82						
I13A	**Wildhorse Cree**	**82.60**	**45**	⇑P	**P**	**20 44 52.3**	**+0.7**
	baz=82,SNR=5.1						
B17A	**L&G Farms, Che**	**82.70**	**40**	⇑P	**P**	**20 44 51.9**	**-0.2**
	baz=82						
H14A	**Leadore**	**82.78**	**44**	⇓P	**P**	**20 44 52.6**	**+0.1**
	baz=83						
F15A	**Butte**	**82.79**	**43**	⇓P	**P**	**20 44 52.9**	**+0.4**
	baz=83,SNR=5.6						
LRM	**Limekiln Ridge**	**82.82**	**43**	*e*P	**P**	**20 44 52.1**	**-0.6**
	comp=Z,40nm,0.9s,mb5.5						
D16A	**Dana Ranch, Ca**	**82.83**	**42**	⇑P	**P**	**20 44 53.1**	**+0.4**
	baz=83						
A18A	**Metzger Ranch,**	**82.97**	**39**	⇓P	**P**	**20 44 53.6**	**+0.2**
	baz=83						
MIB	**Mutribah**	**83.04**	**299**	*e*P	**P**	**20 44 54.2**	**0.0**
MIB				AMb	AMB	20 44 55.4	
	comp=Z,43nm,1.0s,mb5.5						
RDF	**Al-Radifah**	**83.22**	**298**	*e*P	**P**	**20 44 54.6**	**-0.5**
RDF				AMb	AMB	20 44 56.5	
	comp=Z,13nm,0.5s,mb5.2						
J14A	**Carey**	**83.25**	**46**	⇓P	**P**	**20 44 55.8**	**+0.8**
	baz=83,SNR=6.7						
NAY	**Al-Naaiem**	**83.34**	**299**	*e*P	**P**	**20 44 55.7**	**0.0**
NAY				AMb	AMB	20 44 57.4	
	comp=Z,25nm,1.0s,mb5.2						
BOZ	**Bozeman (W)**	**83.41**	**43**	⇓P	**P**	**20 44 55.9**	**+0.1**
	baz=83						
G16A	**Moss Hill, Enn**	**83.50**	**43**	⇓P	**P**	**20 44 56.4**	**+0.2**
	baz=83						
MPMC	**Manual Prospec**	**83.60**	**54**	⇑P	**P**	**20 44 56.8**	**-0.1**
	baz=83						
J15A	**Blackfoot**	**83.93**	**45**	⇑P	**P**	**20 44 59.2**	**+0.8**
	baz=84,SNR=6.0						
R11A	**Troy Canyon, C**	**84.01**	**51**	⇑P	**P**	**20 44 59.2**	**+0.2**
	baz=84						
E18A	**Harlowton**	**84.04**	**42**	⇓P	**P**	**20 44 59.7**	**+0.8**
	baz=84						
FFC	**Flin Flon**	**84.18**	**32**	*e*P	**P**	**20 44 59.6**	**+0.1**
	comp=Z,10.0nm,0.8s,mb5.0						
FFC	**Flin Flon**	**84.18**	**32**	*e*P	**P**	**20 44 59.6**	**+0.1**
FFC				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
GSC	**Goldstone**	**84.43**	**54**	⇓P	**P**	**20 45 00.8**	**-0.3**
	baz=84						
GSC	**Goldstone**	**84.43**	**54**	*e*P	**P**	**20 45 00.7**	**-0.5**
	comp=Z,3.8nm,0.7s,mb4.6						
GSC	**Goldstone**	**84.43**	**54**	*e*P	**P**	**20 45 00.7**	**-0.5**
GSC				pmax	pmax		
	comp=

P15A	Leamington	85.78	49	⇑P	P	20 45 07.8	-0.1
	baz=86						
T13A	Saint George	85.79	51	⇑P	P	20 45 07.6	-0.3
	baz=86						
M17A	Scullys Gap (B	85.98	46	⇓P	P	20 45 08.7	-0.1
	baz=86						
U13A	Pakoon Wash	86.02	52	⇓P	P	20 45 09.5	+0.4
	baz=86,SNR=9.9						
DAU	Daniels Canyon	86.08	47	eP	P	20 45 09.6	+0.2
	comp=Z,7.6nm,0.9s,mb4.9						
DAU	Daniels Canyon	86.08	47	eP	P	20 45 09.6	+0.2
DAU				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
PDAR	Pinedale Array	86.08	45	P	P	20 45 08.8	-0.5
	comp=Z,0.9nm,0.6s,mb4.2,baz=305,slow=3.2,SNR=9.2						
DVTC	Desert V Tower	86.09	56	⇓P	P	20 45 09.2	-0.3
	baz=86						
IRM	Iron Mountain	86.15	54	⇓P	P	20 45 09.6	-0.2
	baz=86						
J19A	Crowheart	86.17	44	⇑P	P	20 45 09.9	+0.2
	baz=86						
C23A	Lambert	86.22	39	⇓P	P	20 45 09.9	+0.1
	baz=86						
V13A	Grand Canyon W	86.26	52	⇓P	P	20 45 10.4	+0.1
	baz=86						
MSU	Marysvale	86.34	49	eP	P	20 45 10.5	-0.2
	comp=Z,4.8nm,1.1s,mb4.6						
MSU	Marysvale	86.34	49	eP	P	20 45 10.5	-0.1
MSU				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.7						
G21A	Lodge Grass	86.34	42	⇓P	P	20 45 09.7	-0.8
	baz=86						
K19A	Absolon Red Bu	86.51	44	⇓P	P	20 45 10.9	-0.5
	baz=86						
O17A	Robinson Place	86.54	47	⇑P	P	20 45 11.9	+0.3
	baz=86,SNR=5.2						
U14A	Mt Trumbull	86.58	52	⇓P	P	20 45 12.1	+0.2
	baz=86,SNR=5.7						
Q16A	Castle Valley	86.84	49	⇑P	P	20 45 13.3	+0.1
	baz=87						
GLA	Glamis	86.88	55	⇓P	P	20 45 13.1	-0.3
	baz=87						
T15A	Red Dirt Ranch	86.88	51	⇓P	P	20 45 13.3	-0.1
	baz=87						
NB2	NORSAR Subarra	86.91	339	P	P	20 45 11.4	-1.6
	comp=Z,1.2nm,0.7s,mb4.2,baz=51,slow=4.6						
NOA	NORSAR Array B	86.91	339	P	P	20 45 11.1	-1.8
	comp=Z,2.0nm,0.9s,mb4.4,baz=49,slow=4.8,SNR=4.7						
NOA	NORSAR Array B	86.91	339	P	P	20 45 11.1	-1.9
R16A	Teasdale	86.92	49	⇓P	P	20 45 14.3	+0.7
	baz=87,SNR=7.4						
X13A	Yucca	86.94	54	⇓P	P	20 45 13.8	+0.1
	baz=87						
V14A	Boquillas Ranc	87.00	52	⇑P	P	20 45 14.4	+0.5
	baz=87,SNR=6.8						
J21A	Lysite	87.14	43	⇓P	P	20 45 14.7	+0.2
	baz=87						
SRU	San Rafael	87.20	48	⇑P	P	20 45 14.7	-0.1
	baz=87						
W14A	Seligman	87.20	53	⇓P	P	20 45 15.4	+0.4
	baz=87,SNR=6.5						
U15A	North Rim	87.22	51	⇑P	P	20 45 15.5	+0.6
	baz=87,SNR=7.8						
Y13A	Salome	87.29	54	⇑P	P	20 45 15.3	-0.1
	baz=87						
V15A	Kaibab Nationa	87.58	52	⇓P	P	20 45 16.9	+0.1
	baz=87						
Z13A	Yuma Proving G	87.69	55	⇓P	P	20 45 17.1	-0.3
	baz=88,SNR=8.4						
113A	Mohawk Valley,	87.80	55	⇑P	P	20 45 17.3	-0.5
	baz=88						
Y14A	Wickenburg	87.84	54	⇑P	P	20 45 17.8	-0.2
	baz=88,SNR=7.2						
L21A	Rawlins	87.89	45	⇓P	P	20 45 17.8	-0.3
	baz=88						
R18A	Canyonlands Na	87.97	49	⇑P	P	20 45 18.2	-0.4
	baz=88						
X15A	Humboldt	88.15	53	⇓P	P	20 45 20.2	+0.7
	baz=88						
Y15A	Casa Rosa Ranc	88.33	54	P	P	20 45 20.6	+0.3
	baz=88,SNR=9.6						
114A	Black Gap (USA	88.47	55	⇓P	P	20 45 21.2	+0.1
	baz=88						
BR131	Keskin Array S	88.72	313	eP	P	20 45 20.7	-1.4
	comp=Z,1.2nm,0.6s,mb4.4						
BRTR	Keskin Array B	88.72	313	P	P	20 45 21.0	-1.1
	comp=Z,2.0nm,0.7s,mb4.6,baz=64,slow=6.6,SNR=12						
BRTR	Keskin Array B	88.72	313	ceP	P	20 45 21.3	-0.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
Q20A	Ridgley Place,	88.79	48	⇑P	P	20 45 22.5	+0.1
	baz=89						
214A	Organ Pipe Nat	88.89	55	⇑P	P	20 45 23.3	+0.3
	baz=89,SNR=5.7						
Y16A	Circle Bar Ran	88.99	53	⇑P	P	20 45 23.1	-0.4
	baz=89						
PV01	Paradox Valley	89.01	48	eP	P	20 45 23.1	-0.3
	comp=Z,184nm,0.7s						
217A	Green Valley	90.48	55	⇑P	P	20 45 31.0	+0.5
	baz=90						
W20A	Ramah	90.55	51	⇑P	P	20 45 30.5	-0.2
	baz=90						
X20A	Quemado	90.83	51	⇑P	P	20 45 32.8	+0.7
	baz=91						
218A	Dragoon	90.96	54	⇑P	P	20 45 32.9	+0.2
	baz=91						
Y20A	Horse Springs,	91.24	52	⇑P	P	20 45 34.5	+0.5
	baz=91						
V22A	San Miguel Ran	91.27	50	⇓P	P	20 45 34.4	+0.4
	baz=91						
SDCO	Great Sand Dun	91.29	48	⇑P	P	20 45 34.6	+0.4
	baz=91						
R24A	Sanders Place,	91.30	47	⇓P	P	20 45 35.4	+1.2
	baz=91						
X21A	Alamocita Cree	91.39	51	⇓P	P	20 45 35.5	+0.8
	baz=91						
Z20A	Nine Sixteen R	91.47	53	⇑P	P	20 45 35.9	+0.8
	baz=91						
219A	White Tail Can	91.53	54	⇑P	P	20 45 35.9	+0.6
	baz=91						
S24A	Houchin Ranch,	91.54	47	⇑P	P	20 45 36.1	+0.8
	baz=91						
U23A	El Rito	91.56	49	⇓P	P	20 45 36.0	+0.7
	baz=91						
120A	U Bar Ranch, L	91.72	53	⇓P	P	20 45 37.1	+0.8
	baz=92						
S25A	Robets Cordova	92.06	47	⇓P	P	20 45 37.4	-0.2
	baz=92						
ANMO	Albuquerque	92.08	50	eP	P	20 45 38.0	+0.2
	comp=Z,2.4nm,1.1s,mb4.4						
ANMO	Albuquerque	92.08	50	eP	P	20 45 38.0	+0.2
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
220A	Playas Peak, P	92.12	54	⇓P	P	20 45 38.2	+0.2
	baz=92						
T25A	Trinidad	92.35	48	⇓P	P	20 45 39.3	+0.3
	baz=92						
121A	Cookes Peak, D	92.35	53	⇑P	P	20 45 39.2	0.0
	baz=92						
Z22A	Elephant Butte	92.58	52	⇑P	P	20 45 40.6	+0.4
	baz=92						
W24A	Lazy 6 Ranch,	92.68	50	⇓P	P	20 45 41.2	+0.6
	baz=92						
Y23A	Lovelace Mesa,	92.89	51	⇑P	P	20 45 42.2	+0.6
	baz=93						
V25A	Rancho No Teng	92.90	49	⇓P	P	20 45 41.8	+0.2
	baz=93						
PLCA	Paso Flores	147.30	129	PKPbc	PKPbc	20 52 10.8	-1.1
	comp=Z,3.4nm,0.8s,baz=242,slow=1.2,SNR=10						
LPAZ	La Paz	149.94	81	PKPbc	PKPbc	20 52 18.3	-1.1
	comp=Z,2.3nm,0.8s,baz=327,slow=1.9,SNR=8.5						
LPAZ	La Paz	149.94	81	PKPbc	PKPbc	20 52 18.3	-1.1

*JMA **19** 20:32:49.6±0.2, 41°.74N×144°.31E, h26km±3km, M3.7*
*IDC **19** 20:32:51.0±10.0, 41°.82N×143°.70E, h0km, mb3.7/3, mb1 3.5/4, mb1mx3.3/23, mbtmp3.6/4, Error ellipse: s-maj=187.8km s-min=44.4km az=97.0*

ISC 19 20:32:49.1±2.9, 41°.7N±0°.1×144°.4E±0°.2, h21km±18km, n10, σ0=96/12, mb3.5/3, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	Erimo	0.97	287	P	Pb	20 33 07.3	+0.1
JCH	Churui	1.17	319	P	Pn	20 33 09.4	-0.7
JOB	Onbets	1.24	340	P	Pn	20 33 10.7	-0.4
JAK	Akkeshi	1.27	10	P	Pn	20 33 11.3	-0.3
JAK				eS	Sn	20 33 28.0	0.0
JNBK	Urakawa-nobuka	1.34	294	P	Pn	20 33 12.6	+0.1
ASAJ	Asahikawa	2.72	331	Pn	Pn	20 33 32.6	+1.1
	1.3nm,0.3s,baz=183,slow=11,SNR=10						
ASAJ				Sn	Sn	20 34 03.4	-0.3
	6.2nm,0.3s,baz=137,slow=18,SNR=5.6						
WHN	Wuhan	26.59	255	P	P	20 38 22.6	-3.1
SONM	Songino Array	27.45	296	P	P	20 38 33.8	+0.5
	0.4nm,0.5s,mb3.2,baz=84,slow=9.2,SNR=5.4						
ZALV	Zalesovo Beam	40.63	308	P	P	20 40 26.9	-0.2
	0.6nm,0.3s,mb3.7,baz=69,slow=7.9,SNR=4.0						
MKAR	Makanchi Array	43.75	299	P	P	20 40 55.4	+2.7
	0.4nm,0.2s,mb3.7,baz=76,slow=8.0,SNR=5.2						

*NNC **19** 20:57:38.5±0.5, 42°.12N×76°.05E, h0km, mb2.6, mpv2.6, Error ellipse: s-maj=3.2km s-min=1.7km az=2.0*
*KNET **19** 20:57:38.9±0.4, 42°.15N×76°.01E, h0km, ml2.2, Error ellipse: s-maj=3.4km s-min=1.9km az=168.0*
*ISCJB **19** 20:57:39.4±1.2, 42°.11N±0°.07×76°.07E±0°.06, h10km, Error ellipse: s-maj=11.1km s-min=4.7km az=157.1*

ISC 19 20:57:39.7±1.0, 42°.14N±0°.06×76°.07E±0°.05, h10km, n11, σ0=92/17, 9C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	0.17	50	⇑P	Pg	20 57 42.7	-0.7
	87nm,0.2s,SNR=502						
ULHL				⇓S	Sg	20 57 45.5	-0.3
	904nm,0.1s						
KZA	Kyzart	0.61	265	⇓P	Pg	20 57 50.4	-1.1
	11nm,0.1s,SNR=11						
KZA				⇑S	Sg	20 57 59.0	-0.5
	58nm,0.2s						
TKM2	Tokmak 2	0.86	336	⇓P	Pg	20 57 55.3	-0.9
	6.3nm,0.2s						
TKM2				⇓S	Sg	20 58 07.5	+0.1
	20nm,0.3s						
TKM2	Tokmak 2	0.86	336	⇓P	Pg	20 57 55.4	-0.8
	38nm,0.1s,SNR=291						
TKM2				⇑S	Sg	20 58 07.7	+0.4
	37nm,0.1s						
KBK	Karagaybulak	0.98	302	⇓P	Pg	20 57 57.5	-0.9
	11nm,0.1s,SNR=35						
KBK				⇑S	Sg	20 58 11.5	+0.2
	68nm,0.2s						
AAK	Ala-Archa	1.27	294	⇑P	Pn	20 58 02.4	-1.1
	4.2nm,0.1s,SNR=8.7						
AAK				⇑S	Sb	20 58 19.4	-0.6
	50nm,0.3s						
KNDC	Almaty	1.27	31	⇑S	Sb	20 58 20.5	+0.5
	28nm,0.3s						
USP	Ospenovka	1.61	315	⇑P	Pn	20 58 08.9	+0.7
	5.4nm,0.1s,SNR=22						
AML	Almayashu	1.77	271	⇓P	Pn	20 58 11.3	+1.0
	9.2nm,0.2s,SNR=28						
EKS2	Erkin-Say	1.77	288	⇑P	Pn	20 58 12.2	+1.8
	2.3nm,0.2s,SNR=12						
KK31	Karatay Array	4.21	285	⇓Pg	Pb	20 58 55.5	+1.7
	0.2nm,0.4s						
KK31				⇓Lg		20 59 50.7	
	0.9nm,0.4s,baz=103,slow=29,SNR=6.7						

*ISCJB **19** 21:04:38.5±0.5, 36°.53N±0°.02×25°.81E±0°.03, h11km±4km, Error ellipse: s-maj=4.7km s-min=3.9km az=30.5*
*ATH **19** 21:04:38.2, 36°.54N×25°.83E, h28km±1km, MD3.5/9*
*CSEM **19** 21:04:38.4±0.1, 36°.52N×25°.82E, h8km, ML2.3/3, Error ellipse: s-maj=2.7km s-min=2.4km az=112.0*
*THE **19** 21:04:39.2, 36°.52N×25°.77E, h3km, ML2.3/3, Error ellipse: s-maj=0.8km s-min=0.4km az=262.0*

ISC 19 21:04:39.0±0.5, 36°.52N±0°.03×25°.80E±0°.03, h12km±4km, n39, σ0=70/61, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR2	Thira island,	0.30	256	P	Pg	21 04 45.0	-0.1
THR2	Thira island,	0.30	256	P	Pg	21 04 45.0	-0.1
THR1	Thera Island	0.31	241	P	Pg	21 04 44.9	-0.4
THR1				S	Sg	21 04 49.4	-0.1
THR1	Thera Island	0.31	241	P	Pg	21 04 44.9	-0.4
THR1				S	Sg	21 04 49.4	-0.1
THR3	Thira Island,	0.34	251	P	Pg	21 04 45.5	-0.3
THR3	Thira Island,	0.34	251	P	Pg	21 04 45.5	-0.3
THR5	Thira Island,	0.38	254	P	Pg	21 04 46.4	-0.1
THR5	Thira Island,	0.38	254	P	Pg	21 04 46.4	-0.1
APE	Apeiranthos	0.59	339	ePN	Pg	21 04 49.9	-0.5
APE				eSN	Sg	21 04 59.6	+1.4
APE	Apeiranthos	0.59	339	P	Pg	21 04 49.9	-0.5
APE				S	Sg	21 04 59.1	+0.9
APE	Apeiranthos	0.59	339	P	Pg	21 04 49.9	-0.5
APE				S	Sg	21 04 59.1	+0.9
NIS1	Nisyros Isl.	1.11	85	P	Pg	21 05 00.4	0.0
NIS1				S	Sg	21 05 16.6	+1.7
NIS1	Nisyros Isl.	1.11	85	P	Pg	21 05 00.4	0.0
LAST	Lasithi	1.38	191	ePN	Pn	21 05 03.4	-0.7
LAST				eSN	Sn	21 05 22.3	0.0
LAST	Lasithi	1.38	191	P	Pn	21 05 03.9	-0.2
LAST				S	Sn	21 05 23.1	+0.8
LAST	Lasithi	1.38	191	ePn	Pn	21 05 03.4	-0.7
LAST	Lasithi	1.38	191	P	Pn	21 05 03.9	-0.2
LAST				eSn	Sn	21 05 22.3	0.0
LAST				S	Sn	21 05 23.1	+0.8
ZKR	Zakros	1.44	166	ePN	Pn	21 05 04.4	-0.5
ZKR				eSN	Sn	21 05 23.9	+0.1
ZKR	Zakros	1.44	166	P	Pn	21 05 04.8	-0.1
ZKR	Zakros	1.44	166	ePn	Pn	21 05 04.4	-0.5
ZKR	Zakros	1.44	166	P	Pn	21 05 04.8	-0.1
ZKR				eSn	Sn	21 05 23.9	+0.1
SMG	Samos	1.45	35	ePN	Pn	21 05 03.7	-1.3
SMG				eSN	Sn	21 05 23.3	-0.6
SMG	Samos	1.45	35	ePn	Pn	21 05 03.7	-1.3
SMG				eSn	Sn	21 05 23.3	-0.6
KARP	Karpathos	1.47	131	ePN	Pn	21 05 05.1	-0.2
KARP	Karpathos	1.47	131	ePn	Pn	21 05 05.1	-0.2
SIVA	Sivas	1.70	208	ePN	Pn	21 05 08.9	+0.4
SIVA				eSN	Sn	21 05 31.0	+0.8
SIVA	Sivas	1.70	208	P	Pn	21 05 08.5	0.0
SIVA	Sivas	1.70	208	P	Pn	21 05 08.5	0.0
SIVA	Sivas	1.70	208	ePn	Pn	21 05 08.9	+0.4
SIVA				eSn	Sn	21 05 31.0	+0.8
VAM	Vamos	1.71	230	ePN	Pn	21 05 09.6	+1.0
VAM	Vamos	1.71	230	ePn	Pn	21 05 09.6	+1.0
CHOS	Chios island	1.87	6	P	Pn	21 05 10.9	0.0
CHOS				S	Sn	21 05 35.5	+1.1
CHOS	Chios island	1.87	6	P	Pn	21 05 10.9	0.0
CHOS				S	Sn	21 05 35.5	+1.1
ARG	Arkhangelos	1.90	99	ePN	Pn	21 05 11.1	-0.1
ARG				eSN	Sn	21 05 34.2	-0.9
ARG	Arkhangelos	1.90	99	ePn	Pn	21 05 11.1	-0.1
ARG				eSn	Sn	21 05 34.2	-0.9
NAIG	Nisos Aigina	2.22	304	ePb	Pb	21 05 17.8	-1.3
DID	Didima	2.27	296	ePN	Pn	21 05 16.2	-0.2
DID	Didima	2.27	296	P	Pn	21 05 16.2	-0.2
DID				S	Sn	21 05 44.9	+0.6
DID	Didima	2.27	296	P	Pn	21 05 16.2	-0.2
DID				S	Sn	21 05 44.9	+0.6

*IDC **19** 21:13:17.5±1.1, 31°.07N×103°.66E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.5/24, mbtmp3.5/7, ML3.2/2, Error ellipse: s-maj=35.8km s-min=20.2km az=65.0*
*BJI **19** 21:13:19.2, 31°.25N×103°.74E, h17km, ML3.3/14*
*NEIC **19** 21:13:19.2±0.6, 31°.06N×103°.55E, h10km, Error ellipse: s-maj=14.1km s-min=9.8km az=73.0*

ISC 19 21:13:20.2±0.9, 31°.18N±0°.03×103°.59E±0°.06, h14km±6km, n12, σ1=20/19, mb3.5/5, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.31	151	i/iPg	Pg	21 13 26.0	-0.6
CD2				Sg	Sg	21 13 33.0	+2.1
CD2				smax			
	comp=N,4μm,0.6s						
CD2				smax			
	comp=E,3μm,0.6s						
LZH	Lanzhou	4.90	2	Pg	Pg	21 14 53.3	-0.7
LZH				Sg	Sb	21 15 45.9	+1.4
LZH				smax			
	comp=N,21nm,0.9s						
LZH				smax			
	comp=E,32nm,1.0s						
LZH				LR	LR		
	comp=N,170nm,8.2s						
LZH				LR	LR		
	comp=E,200nm,6.9s						
LZH				LR	LR		
	comp=Z,250nm,9.8s						
ENH	Enshi	5.16	99	ePn	Pn	21 14 37.4	+0.4
	comp=Z,20nm,0.4s						
ENH				eSn	Sn	21 15 36.5	+0.2
XAN	Xi'an	5.33	56	Pn	Pn	21 14 37.4	-1.9
XAN				Pg	Pb	21 14 52.3	-0.8
XAN				Sn	Sn	21 15 41.8	+1.4
XAN				Sg	Sg	21 16 01.5	-10
XAN				smax			
	comp=N,39nm,0.8s						
XAN				smax			
	comp=E,21nm,0.8s						
KMI	Kunming	6.08	187	Pn	Pn	21 14 49.8	+0.1
KMI				Sn	Sn	21 16 00.9	+1.9
KMI				smax			
	comp=N,10.0nm,0.8s						
KMI				smax			
	comp=E,11nm,1.2s						
CMAR	Chiang Mai Arr	13.35	199	Pn	Pn	21 16 27.5	-1.8
	comp=E,0.0nm,0.3s,baz=6.0,slow=9.1,SNR=2.9						
SONM	Songino Array	16.77	7	Pn	Pn	21 17 15.6	+1.0
	comp=E,0.1nm,0.3s,baz=190,slow=7.3,SNR=6.0						
KSRS	Korea Array	21.02	66	P	P	21 18 02.2	-1.2
	comp=E,2.4nm,0.7s,mb3.6,baz=259,slow=10.0,SNR=7.9						
MKAR	Makanchi Array	22.63	320	P	P	21 18 21.1	+0.6
	comp=E,0.3nm,0.3s,mb3.2,baz=121,slow=12,SNR=7.3						
ZALV	Zalesovo Beam	26.46	335	P	P	21 18 57.3	+0.8
	comp=E,0.3nm,0.4s,mb3.2,baz=151,slow=9.1,SNR=4.4						
WRA	Warramunga Arr	58.78	146	P	P	21 23 16.7	-1.3
	comp=E,0.4nm,0.4s,mb3.8,baz=326,slow=9.1,SNR=8.6						
ASAR	Alice Springs	61.79	148	P	P	21 23 37.1	-1.4
	comp=E,0.3nm,0.6s,mb3.6,baz=340,slow=6.6,SNR=3.7						

*NEIC **19** 21:13:26.8, 16°.60N×98°.82W, h16km, MD4.1(MEX), After MEX.*

MEX 19 21:13:26.8±0.9, 16°.60N×98°.82W, h16km±8km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.70	107	eP	Pg	21 13 38.6	-1.9
PNIG				i S	Sg	21 13 46.3	-3.5
PNIG	Pinotepa	0.70	107	eP	Pg	21 13 38.6	-1.9
PNIG				i S	Sg	21 13 46.3	-3.5
ACX	Acapulco	1.03	285	eP	Pb	21 13 43.1	-3.1
ACX				i S	Sb	21 13 55.6	-3.8
ACX	Acapulco	1.03	285	eP	Pb	21 13 43.1	-3.1
ACX				i S	Sb	21 13 55.6	-3.8
CAIG	El Cayaco	1.45	288	eP	Pn	21 13 49.1	-3.3
CAIG				i S	Sn	21 14 05.5	-5.7
CAIG	El Cayaco	1.45	288	eP	Pn	21 13 49.1	-3.3
CAIG				i S	Sn	21 14 05.5	-5.7
MEIG	Mezcala	1.52	330	eP	Pn	21 13 50.3	-3.1
MEIG				i S	Sn	21 14 08.1	-4.8
UTMO	Huajuapan	1.57	38	eP	Pn	21 13 50.0	-4.0
UTMO				i S	Sn	21 14 09.9	-4.0
PLIG	Platanillo	1.90	340	eP	Pn	21 13 55.4	-3.1
PLIG				i S	Sn	21 14 16.7	-5.4
PLIG	Platanillo	1.90	340	eP	Pn	21 13 55.4	-3.1
PLIG				i S	Sn	21 14 16.7	-5.4
VHO	Vista Hermosa	2.06	76	eP	Pn	21 13 57.7	-3.0
VHO				i S	Sn	21 14 21.4	-4.6
VHO	Vista Hermosa	2.06	76	eP	Pn	21 13 57.7	-3.0
VHO				i S	Sn	21 14 21.4	-4.6
OXX	Oaxaca	2.07	76	eP	Pn	21 13 54.0	-6.9
OXX	Oaxaca	2.07	76	eP	Pn	21 13 54.0	-6.9
YAIG	Yautepec	2.26	354	eP	Pn	21 14 01.4	-2.2
YAIG				i S	Sn	21 14 26.8	-4.4
YAIG	Yautepec	2.26	354	eP	Pn	21 14 01.4	-2.2
YAIG				i S	Sn	21 14 26.8	-4.4
ZIIG	Zihuatanejo	2.72	292	i P	Pn	21 14 07.4	-2.4
ZIIG				i S	Sn	21 14 37.6	-4.7
ZIIG	Zihuatanejo	2.72	292	i P	Pn	21 14 07.4	-2.4
ZIIG				i S	Sn	21 14 37.6	-4.7
MOIG	Morelia	3.80	324	eP	Pn	21 14 25.2	+0.6
MOIG				i S	Sn	21 15 04.5	-4.6
MOIG	Morelia	3.80	324	eP	Pn	21 14 25.2	+0.6
MOIG				i S	Sn	21 15 04.5	-4.6
MMIG	Aquila	4.63	292	eP	Pn	21 14 34.6	-1.5
MMIG				i S	Sn	21 15 24.2	-5.4

*ISCJB **19** 21:17:33.2±0.4, 7°.09S±0°.06×12°.99W±0°.07, h10km, mb4.7/82, MS4.4/37, Error ellipse: s-maj=10.8km s-min=7.8km az=17.5*
*IDC **19** 21:17:33.3±0.6, 7°.08S×12°.98W, h0km, mb4.3/18, mb1 4.4/19, mb1mx4.3/27, mbtmp4.3/19, ML3.5/1, MS4.4/28, Ms1 4.4/28, ms1mx4.4/30, Error ellipse: s-maj=19.1km s-min=14.8km az=128.0*
*BJI **19** 21:17:34.1, 6°.84S×13°.22W, h13km, mB5.6/6, Ms4.9/7, Ms7 4.6/7*
*NEIC **19** 21:17:35.2±0.4, 7°.11S×13°.00W, h10km, mb4.8/58, MS4.5/3, Error ellipse: s-maj=9.5km s-min=7.2km az=115.0*
*GCMT **19** 21:17:38.3±0.2, 7°.08S×13°.05W, h12km, MW5.1, Moment Tensor Solution. s37,c52; s92,c160; Moment tensor: Scale 10^{16}Nm; M_{rr}=5.29±.10; $M_{\theta\theta}$0.20±.10; $M_{\phi\phi}$5.10±.09; $M_{r\theta}$0.63±.33; $M_{\theta\phi}$-1.30±.08; $M_{r\phi}$0.09±.28; Best double couple: M_0=5.40000×10^{16} NP1:ϕ_s173.00000°, δ45.00000°, λ-80.00000°. NP2:ϕ_s339.00000°, δ46.00000°, λ-100.00000°. Principal axes: T 5.4200, Plg0.0000°, Azm76.0000°; N -0.0500, Plg7.0000°, Azm346.0000°; P -5.3700, Plg83.0000°, Azm169.0000°; Data Used: II IU IC G CN.*

ISC 19 21:17:35.3±0.4, 7°.11S±0°.06×12°.98W±0°.07, h10km, n178, σ0=93/154, mb4.7/82, MS4.4/37, 4C-9D, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	Lamto	15.44	31	eP	Pn	21 21 12.4	-0.9
	122nm,1.1s						
LIC	Lamto	15.44	31	eP	Pn	21 21 12.5	-0.8
	99nm,1.1s,baz=220						
LIC				eMLR	MLR		
	comp=Z,1μm,18.2s						
KIC	Kosan Boka	15.71	32	eP	Pn	21 21 15.9	-0.9
	comp=Z,48nm,0.9s						
TIC	Toumodi	15.80	30	eP	Pn	21 21 17.0	-1.1
	comp=Z,77nm,0.9s						
DBIC	Dimbokro	15.91	31	Pn	Pn	21 21 17.6	-1.8
	comp=Z,0.2nm,0.3s,baz=191,slow=14,SNR=6.6						
DBIC				LR	LR	21 26 08.1	
	comp=Z,1μm,18.7s,baz=192,slow=32						
DBIC	Dimbokro	15.91	31	ePn	Pn	21 21 19.7	+0.3
	comp=Z,22nm,0.9s						
BBTS	Babate

BOSA Boshof 41.93 125 P P 21 25 26.1 -0.2
comp=Z,19nm,1.0s,mb4.7,baz=299,slow=9.5,SNR=9.0
BOSA LR LR 21 39 42.8
comp=Z,742nm,19.8s,MS4.6,baz=293,slow=32
EJIF Jimena Fronter 43.90 9 P P 21 25 41.6 -0.5
comp=Z,47nm,2.3s,mb4.8
EMIJ Mijas 44.12 9 P P 21 25 44.1 +0.1
comp=Z,91nm,7.1s
ESPR Espera 44.26 8 P P 21 25 44.3 -0.7
comp=Z,50nm,2.2s,mb4.8
ERON Agron 44.73 10 P P 21 25 48.1 -0.7
comp=Z,176nm,2.2s,mb5.5
EBER Berja 44.79 11 P P 21 25 49.1 -0.1
comp=Z,126nm,4.1s
ELOJ Sierra Loja 44.80 10 P P 21 25 48.8 -0.5
comp=Z,2.9nm,0.6s,mb4.3
ECOG Cogollos-Vega 45.03 11 P P 21 25 51.3 +0.2
comp=Z,8.6nm,0.6s,mb4.8
EMIN Mina Concepcio 45.03 7 P P 21 25 50.2 -1.0
comp=Z,5.1nm,0.8s,mb4.4
ELUQ Luque 45.18 10 P P 21 25 52.3 0.0
comp=Z,10nm,1.0s,mb4.6
EQES Quesada 45.63 11 P P 21 25 55.6 -0.3
comp=Z,1.4nm,0.6s,mb4.1
EVO Evora 45.65 5 *eP* **P 21 25 55.8 -0.2**
comp=Z,12nm,0.9s,mb4.5
EVO *e*MLR MLR
comp=Z,201nm,22.0s,MS3.7
EADA Adamuz 45.72 9 P P 21 25 56.0 -0.7
comp=Z,5.0nm,0.8s,mb4.5
EHUE Huescar 45.73 11 P P 21 25 57.3 +0.6
comp=Z,87nm,4.6s
EBAN Banos Encina 45.85 10 P P 21 25 56.6 -1.1
comp=Z,398nm,7.2s
EBAD Badajoz 45.97 6 P P 21 25 56.3 -2.3
comp=Z,69nm,4.0s
CPUP Villa Florida 46.28 240 LR LR 21 43 47.6
comp=Z,724nm,18.5s,MS4.7,baz=64,slow=34
PMRV Marv??o 46.59 6 *eP* **P 21 26 03.9 +0.4**
ESDC Sonseca Array 47.29 9 P P 21 26 08.6 -0.3
comp=Z,1.5nm,1.0s,mb3.9,baz=188,slow=7.8,SNR=6.4
ESDC PP PP 21 27 58.5 -1.7
comp=Z,1.8nm,1.1s,baz=189,slow=10.0,SNR=4.1
ESDC LR LR 21 45 31.8
comp=Z,156nm,20.0s,MS4.0,baz=180,slow=36
ESDC Sonseca Array 47.29 9 P P 21 26 08.5 -0.4
comp=Z,0.6nm,0.6s,mb3.7
EPLA Plasencia 47.37 7 P P 21 26 07.9 -1.6
comp=Z,7.8nm,0.8s,mb4.7
KEST Kesra 47.52 25 P P 21 26 10.9 +0.1
comp=Z,5.2nm,1.0s,mb4.5,baz=194,slow=6.6,SNR=8.2
KEST LR LR 21 46 19.1
comp=Z,288nm,19.6s,MS4.2,baz=195,slow=36
KEST Kesra 47.52 25 *eP* **P 21 26 12.0 +1.2**
MTE Manteigas 47.54 6 *eP* **P 21 26 12.4 +1.5**
MTE Manteigas 47.54 6 *eP* **P 21 26 12.3 +1.4**
comp=Z,15nm,1.2s,mb4.9
GUD Guadarrama 48.21 9 P P 21 26 15.5 -0.5
comp=Z,134nm,4.2s
MVO Moncorvo 48.35 6 *eP* **P 21 26 17.9 +0.8**
comp=Z,28nm,1.4s,mb5.1
ELOB Lobios 48.95 5 P P 21 26 19.9 -1.8
comp=Z,5.1nm,0.6s,mb4.7
PBRG Braganca 49.01 6 *eP* **P 21 26 23.8 +1.6**
comp=Z,22nm,1.6s,mb4.9
KMBO Kilima Mbogo 50.42 86 P P 21 26 35.0 +1.4
comp=Z,1.8nm,0.8s,mb4.2,baz=180,slow=24,SNR=6.8
KMBO LR LR 21 46 31.2
comp=Z,876nm,19.4s,MS4.8,baz=92,slow=34
ELAN Lanestosa 50.85 9 P P 21 26 37.0 +0.9
comp=Z,7.4nm,1.0s,mb4.6
ETSF Etsaut 51.04 12 *eP* **P 21 26 37.6 0.0**
comp=Z,16nm,1.2s,mb4.5
ETSF Etsaut 51.04 12 *eP* **P 21 26 37.6 0.0**
comp=Z,7.8nm,1.2s,mb4.5
SJPF Ste Jean 51.12 11 *eP* **P 21 26 39.0 +0.8**
comp=Z,48nm,1.5s,mb4.9
SJPF Ste Jean 51.12 11 *eP* **P 21 26 39.0 +0.8**
comp=Z,24nm,1.5s,mb4.9
VAE Valguarnera 51.21 28 LR LR 21 47 52.3
comp=Z,419nm,18.2s,MS4.5,baz=290,slow=36
MTLF Montolieu 52.08 14 *eP* **P 21 26 46.6 +1.2**
LASF Ste Croix 53.18 15 *eP* **P 21 26 54.7 +1.2**
comp=Z,137nm,1.8s,mb5.3
LMR La Mourre 53.23 18 *eP* **P 21 26 54.5 +0.6**
comp=Z,66nm,1.4s,mb5.1
LMR La Mourre 53.23 18 *eP* **P 21 26 54.5 +0.6**
comp=Z,33nm,1.4s,mb5.1
PGF Pioggiola 53.33 20 *eP* **P 21 26 55.5 +0.8**
comp=Z,58nm,1.2s,mb5.1
PGF Pioggiola 53.33 20 *eP* **P 21 26 55.5 +0.8**
comp=Z,29nm,1.2s,mb5.1
FRF La Foret Royal 53.48 18 *eP* **P 21 26 56.3 +0.5**
comp=Z,45nm,1.3s,mb5.0
FRF La Foret Royal 53.48 18 *eP* **P 21 26 56.3 +0.5**
comp=Z,23nm,1.3s,mb4.9
SMRF Simiane la Rot 53.55 17 *eP* **P 21 26 56.4 +0.2**
comp=Z,43nm,1.3s,mb4.9
SMRF Simiane la Rot 53.55 17 *eP* **P 21 26 56.4 +0.2**
comp=Z,43nm,1.3s,mb5.2
RJF Les Rejaudoux 53.78 13 *eP* **P 21 26 57.3 -0.6**
comp=Z,21nm,1.2s,mb4.7
RJF *e*MLR MLR
comp=Z,396nm,20.8s,MS4.2
RJF Les Rejaudoux 53.78 13 *eP* **P 21 26 57.3 -0.6**
comp=Z,11nm,1.2s,mb4.7
RJF LR LR
comp=Z,400nm,20.8s,MS4.5
VIVF Saint-Julien-l 54.12 15 *eP* **P 21 27 01.2 +0.8**
ORIF Oris-en-Rattie 54.50 16 *eP* **P 21 27 04.4 +1.2**
comp=Z,35nm,1.3s,mb4.9
ORIF *e*MLR MLR
comp=Z,723nm,18.0s,MS4.5
ORIF Oris-en-Rattie 54.50 16 *eP* **P 21 27 04.4 +1.2**
comp=Z,18nm,1.3s,mb4.9
MBDF Montbardon 54.58 17 *eP* **P 21 27 05.1 +1.3**
comp=Z,37nm,1.2s,mb5.0
MBDF Montbardon 54.58 17 *eP* **P 21 27 05.1 +1.3**
comp=Z,18nm,1.2s,mb5.0
LPAZ La Paz 54.63 255 P P 21 27 04.9 +0.2
comp=Z,1.5nm,0.7s,mb4.1,baz=102,slow=1.8,SNR=7.5
LPAZ LR LR 21 49 38.3
comp=Z,537nm,19.8s,MS4.6,baz=74,slow=35
MFF Saint Martin d 54.69 11 *eP* **P 21 27 05.4 +0.9**
BNI Bardonecchia 54.85 17 *eP* **P 21 27 06.3 +0.6**
comp=Z,8.9nm,0.9s,mb4.8
TCF Toulx Ste Croi 54.86 13 *eP* **P 21 27 06.6 +0.8**
comp=Z,26nm,1.3s,mb4.8
TCF Toulx Ste Croi 54.86 13 *eP* **P 21 27 06.6 +0.8**
comp=Z,13nm,1.3s,mb4.8
LPG La Plagne 55.28 17 *eP* **P 21 27 10.3 +1.5**
comp=Z,25nm,1.0s,mb4.9
LPG La Plagne 55.28 17 *eP* **P 21 27 10.3 +1.5**
comp=Z,12nm,1.0s,mb4.9
LPL La Plagne 55.29 17 *eP* **P 21 27 10.1 +1.2**
comp=Z,35nm,1.3s,mb5.0
LPL La Plagne 55.29 17 *eP* **P 21 27 10.1 +1.2**
comp=Z,18nm,1.3s,mb4.9
QUIF Quistinic 55.47 8 *eP* **P 21 27 10.5 +0.4**
comp=Z,62nm,1.6s,mb5.1
QUIF Quistinic 55.47 8 *eP* **P 21 27 10.5 +0.4**
comp=Z,31nm,1.5s,mb5.1
SMF Signal de Mont 55.58 14 *eP* **P 21 27 12.1 +1.2**
AVF Avril sur Loir 55.60 14 *eP* **P 21 27 12.2 +1.1**
ROSF Rostrenen 55.87 8 *eP* **P 21 27 13.0 0.0**
comp=Z,48nm,1.2s,mb5.1
ROSF Rostrenen 55.87 8 *eP* **P 21 27 13.0 0.0**
comp=Z,24nm,1.2s,mb5.1
SSF Saint Saulge 55.89 14 *eP* **P 21 27 13.5 +0.4**
comp=Z,20nm,1.2s,mb4.7
SSF Saint Saulge 55.89 14 *eP* **P 21 27 13.5 +0.4**
comp=Z,10nm,1.2s,mb4.7
CABF La Chapelle 56.12 16 *eP* **P 21 27 14.9 +0.1**
comp=Z,27nm,1.1s,mb4.9
CABF La Chapelle 56.12 16 *eP* **P 21 27 14.9 +0.1**
comp=Z,13nm,1.1s,mb4.9
LOR Lormes 56.16 14 *eP* **P 21 27 15.8 +0.7**
comp=Z,9.7nm,1.0s,mb4.5
LOR *e*MLR MLR
comp=Z,482nm,19.5s,MS4.3
LOR Lormes 56.16 14 *eP* **P 21 27 15.8 +0.7**
comp=Z,4.8nm,1.0s,mb4.5
LOR LR LR
comp=Z,480nm,19.5s,MS4.6
LDF La Druitiere 56.61 10 *eP* **P 21 27 18.9 +0.6**
comp=Z,7.3nm,1.0s,mb4.4
LDF La Druitiere 56.61 10 *eP* **P 21 27 18.9 +0.6**
comp=Z,3.7nm,1.0s,mb4.4

FLN La Foliniere 56.71 10 *eP* **P 21 27 19.8 +0.8**
comp=Z,51nm,1.4s,mb5.1
FLN *e*MLR MLR
comp=Z,359nm,22.5s,MS4.1
FLN La Foliniere 56.71 10 *eP* **P 21 27 19.8 +0.8**
comp=Z,26nm,1.4s,mb5.1
FLN LR LR
comp=Z,360nm,22.5s,MS4.4
CFAA Coronel Fontan 56.86 237 P P 21 27 19.8 -0.7
comp=Z,0.2nm,0.4s,mb3.5,baz=79,slow=10,SNR=3.7
CFAA Coronel Fontan 56.86 237 P P 21 27 19.8 -0.7
SFTF Sexfontaines 57.32 14 *eP* **P 21 27 24.5 +1.2**
DAVOX Davos/Dischmat 57.38 18 P P 21 27 22.2 -1.5
comp=Z,2.8nm,0.5s,mb4.5,baz=211,slow=18,SNR=6.7
DAVOX LR LR 21 52 26.8
comp=Z,396nm,19.6s,MS4.5,baz=215,slow=36
HINF Hinteralfeld 57.43 16 *eP* **P 21 27 24.1 0.0**
HAU Haudompre 57.47 15 *eP* **P 21 27 24.3 -0.1**
comp=Z,13nm,0.9s,mb4.7
HAU *e*MLR MLR
comp=Z,292nm,21.0s,MS4.1
HAU Haudompre 57.47 15 *eP* **P 21 27 24.3 -0.1**
comp=Z,6.4nm,0.9s,mb4.7
HAU LR LR
comp=Z,290nm,21.0s,MS4.4
MEZF Maizieres J'vi 57.60 14 *eP* **P 21 27 25.5 +0.2**
DAVA Damuels 57.83 18 ⇓*iP* **P 21 27 26.1 -0.8**
comp=Z,18nm,1.0s,mb5.0
CDF Champ du Feu 58.09 16 *eP* **P 21 27 27.3 -1.4**
comp=Z,14nm,1.0s,mb4.7
CDF Champ du Feu 58.09 16 *eP* **P 21 27 27.3 -1.4**
comp=Z,7.1nm,1.0s,mb4.7
MOTA Moosalm 58.27 19 ⇓*iP* **P 21 27 29.1 -0.8**
comp=Z,19nm,1.2s,mb5.0
BFO Black Forest 58.31 17 *eP* **P 21 27 29.4 -0.8**
comp=Z,9.7nm,1.1s,mb4.8
WTTA Wattenberg 58.37 19 ⇑*iP* **P 21 27 30.4 -0.3**
comp=Z,23nm,1.5s,mb5.0
BAIF Baives 58.87 13 *eP* **P 21 27 32.8 -1.3**
comp=Z,28nm,1.2s,mb4.9
BAIF Baives 58.87 13 *eP* **P 21 27 32.8 -1.3**
comp=Z,14nm,1.2s,mb4.9
VTS Vitosha 59.43 30 ⇓*iP* **P 21 27 39.8 +1.6**
KHC Kasperske Hory 60.64 20 *eP* **P 21 27 47.2 +0.9**
comp=Z,23nm,1.9s,mb5.0
KHC Kasperske Hory 60.64 20 *eP* **P 21 27 45.2 -1.1**
KHC AMS AMS 21 53 50.0
comp=Z,500nm,20.5s
PLCA Paso Flores 61.03 227 LR LR 21 51 11.2
comp=Z,265nm,18.1s,MS4.4,baz=273,slow=33
NKC Novy Kostel 61.23 18 *eP* **P 21 27 50.2 -0.1**
NKC AMS AMS 21 54 50.0
comp=Z,500nm,17.5s
MOX Moxa 61.34 18 *eP* **P 21 27 50.8 -0.2**
comp=Z,10.0nm,1.4s,mb4.8
PRU Pruhonice 61.70 20 *eP* **P 21 27 53.2 -0.3**
PRU *ex* x 21 28 00.5
VRAC Vranov 61.84 21 LR LR 21 53 48.3
comp=Z,313nm,21.6s,MS4.4,baz=215,slow=35
PSZ Piszkesteto 61.99 24 *eP* **P 21 27 55.9 +0.4**
comp=Z,7.4nm,1.1s,mb4.7
VYHS Vyhne 62.02 23 *eP* **P 21 27 56.0 +0.3**
comp=Z,4.8nm,1.3s,mb4.5
VYHS Vyhne 62.02 23 *eP* **P 21 27 56.0 +0.3**
PVCC Panska Ves 62.17 19 *eP* **P 21 27 56.4 -0.3**
BRG Berggiesshubel 62.26 19 *eP* **P 21 27 56.9 -0.4**
comp=Z,2.0nm,0.8s,mb4.3
BRG *e* 21 28 09.8
comp=Z,8.2nm,1.3s
DRGR 62.33 27 ⇓*iP* **P 21 27 58.0 +0.2**
CLL Collm 62.34 18 P P **21 28 03.0 +5.2**
CLL Collm 62.34 18 *e*(P) P **21 28 01.0 +3.2**
ROSC El Rosal 62.37 279 LR LR 21 53 16.3
comp=Z,597nm,18.6s,MS4.8,baz=176,slow=34
MORC Moravsky Berou 62.58 22 *eP* **P 21 27 58.8 -0.6**
comp=Z,5.6nm,1.1s,mb4.6
MORC *e*pP pP 21 28 07.2 +4.6
DPC Dobruska-Polom 62.61 21 *eP* **P 21 27 58.9 -0.7**
DPC *ex* x 21 28 06.6
KECS Kecovo 62.68 24 *eP* **P 21 28 02.6 +2.5**
comp=Z,3.9nm,1.2s,mb4.4
KECS Kecovo 62.68 24 *eP* **P 21 28 02.6 +2.5**
OKC Ostrava-Krasne 62.85 22 *eP* **P 21 28 00.5 -0.7**
MLR Muntele Rosu 62.89 30 ⇑*iP* **P 21 28 00.8 -0.8**
CRVS Cervenica-Dubn 63.41 25 *eP* **P 21 28 06.0 +1.0**
comp=Z,26nm,1.7s,mb5.1
CRVS Cervenica-Dubn 63.41 25 *eP* **P 21 28 06.0 +1.0**
BR131 Keskin Array S 63.42 39 *eP* **P 21 28 06.4 +1.2**
comp=Z,7.5nm,1.1s,mb4.7
BRTR Keskin Array B 63.42 39 P P 21 28 05.9 +0.6
comp=Z,7.4nm,1.1s,mb4.7,baz=228,slow=5.5,SNR=16
BRTR LR LR 21 57 35.3
comp=Z,55nm,20.3s,MS3.7,baz=42,slow=38
VRI Vrincioaia 63.55 30 ⇑*iP* **P 21 28 05.4 -0.5**
KOLS Kolonicke sedl 63.77 25 *eP* **P 21 28 08.0 +0.6**
comp=Z,98nm,3.5s
KOLS Kolonicke sedl 63.77 25 *eP* **P 21 28 08.0 +0.6**
BURAR Bucovina Array 64.08 28 ⇓*iP* **P 21 28 14.3 +4.9**
KWP Kalwaria Pacla 64.49 25 ⇓*iP* **P 21 28 11.4 -0.7**
SNAA Sanae 64.80 176 P P 21 28 13.8 0.0
comp=Z,4.0nm,0.9s,mb4.4,baz=342,slow=9.2,SNR=18
MALT Malatya 65.73 42 *eP* **P 21 28 21.4 +1.0**
comp=Z,8.3nm,1.2s,mb4.6
MALT Malatya 65.73 42 ⇑*iP* **P 21 28 21.7 +1.3**
KIEV Kiev 68.11 27 *eP* **P 21 28 34.5 -0.8**
comp=Z,17nm,1.1s,mb5.0
AKASG Malin Array Be 68.13 27 P P 21 28 33.7 -1.7
comp=Z,1.2nm,0.4s,mb4.3,baz=227,slow=6.7,SNR=13
AKASG LR LR 21 59 59.0
comp=Z,219nm,20.2s,MS4.4,baz=240,slow=37
AKBB Malin Array Si 68.13 27 *eP* **P 21 28 34.5 -0.8**
NOA NORSAR Array B 70.54 12 P P 21 28 48.4 -1.7
comp=Z,0.9nm,0.8s,mb3.7,baz=212,slow=9.3,SNR=2.6
NOA LR LR 22 00 44.3
comp=Z,132nm,19.1s,MS4.2,baz=215,slow=37
SYO Syowa Base 70.60 162‖*eP* **P 21 28 49.6 -0.8**
SYO Syowa Base 70.60 162‖*e*pP pP 21 28 50.7 -3.0
SYO Syowa Base 70.60 162‖*e*X PcP 21 29 08.6 -2.9
GNI Garni 70.90 43 *eP* **P 21 28 54.5 +1.7**
comp=Z,16nm,1.2s,mb4.8
BORG Borgarnes 71.94 356 LR LR 21 56 39.5
comp=Z,164nm,20.1s,MS4.3,baz=168,slow=33
FINES FINESS Array B 74.79 18 P P 21 29 14.7 -0.6
comp=Z,1.9nm,0.8s,mb4.1,baz=208,slow=4.7,SNR=12
FINES LR LR 22 03 31.8
comp=Z,145nm,18.9s,MS4.3,baz=310,slow=37
KAF Kangasniemi 75.37 18 *ep* **P 21 29 18.0 -0.7**
comp=Z,2.6nm,0.6s,mb4.3
JOF Joensuu 77.54 19 *ep* **P 21 29 29.1 -1.9**
comp=Z,2.0nm,0.6s,mb4.2
ALLY Alegheny Colle 78.05 315 *eP* **P 21 29 31.8 -2.5**
comp=Z,40nm,0.7s,mb5.5
ARCES ARCESS Array B 80.91 13 P P 21 29 50.0 +0.8
comp=Z,2.6nm,0.8s,mb4.2,baz=224,slow=5.0,SNR=5.0
ARCES LR LR 22 08 36.3
comp=Z,178nm,19.8s,MS4.4,baz=3.3,slow=38
QSPA South Pole Qui 83.00 180 *eP* **P 21 30 00.5 +0.3**
comp=Z,83nm,2.0s,mb5.4
AKTK Aktyubinsk 83.56 37 P P 21 30 03.6 0.0
AKTO Aktyubinsk 83.56 37 P P 21 30 03.6 0.0
comp=Z,1.3nm,0.8s,mb4.1,baz=222,slow=5.2,SNR=4.6
KBL Kabul 87.46 55 *eP* **P 21 30 23.4 0.0**
comp=Z,3.9nm,1.1s,mb4.5
BVAR Borovoye Array 91.65 37 P P 21 30 41.6 -1.1
comp=Z,0.4nm,0.7s,mb3.9,baz=256,slow=3.0,SNR=2.8
TXAR Lajitas Array 94.04 299 P P 21 30 54.0 -0.3
comp=Z,0.5nm,0.8s,mb4.0,baz=110,slow=7.8,SNR=4.8
MKAR Makanchi Array 98.74 44 LR LR 22 22 46.4
comp=Z,124nm,18.7s,MS4.4,baz=268,slow=40
PDAR Pinedale Array 99.61 312 LR LR 22 09 28.5
comp=Z,312nm,21.6s,MS4.8,baz=103,slow=31
WMQ Urumqi 102.59 47 *eP* Pdif 21 31 33.0 +0.9
WMQ PP PP 21 35 49.0 +3.4
WMQ SKS 21 42 11.0
WMQ S Sdif 21 43 14.0 -2.9
WMQ SS SS 21 50 25.0 +0.2
WMQ LR LR
comp=N,90nm,22.0s,MS4.5
WMQ LR LR
comp=E,130nm,22.0s,MS4.5
WMQ LR LR
comp=Z,110nm,22.0s,MS4.3
LZH Lanzhou 115.78 53 *e*PKP PKPdf 21 36 14.0 -4.5
LZH sPKP 21 36 24.5
KMI Kunming 116.25 66 PKP PKPdf 21 36 18.8 -1.0
KMI PP PP 21 37 29.3 +3.9

KMI SS SS 21 53 32.5 +2.8
KMI AMB AMB
comp=Z,64nm,4.2s
KMI LR LR
comp=N,110nm,20.9s,MS4.6
KMI LR LR
comp=E,110nm,22.2s,MS4.6
KMI LR LR
comp=Z,170nm,23.5s,MS4.6
CD2 Chengdu 116.53 59 *e*PKP PKPdf 21 36 19.0 -1.1
GYA Guiyang 119.64 64 *e*Pdif Pdif 21 32 47.8 -0.1
GYA PKP PKPdf 21 36 25.0 -1.3
GYA PP PP 21 37 51.0 +2.1
GYA AMB AMB
comp=Z,110nm,7.8s
BJI Beijing 124.05 46 PKP PKPdf 21 36 33.3 -1.0
BJI SS SS 21 55 09.3 +0.7
BJI LR LR
comp=N,99nm,26.5s,MS4.6
BJI LR LR
comp=E,140nm,25.2s,MS4.6
BJI LR LR
comp=Z,100nm,26.5s,MS4.3
TAOE Nuku Hiva Isla 125.01 254 *e*LR LR 22 16 14.5
comp=Z,340nm,33.1s
TBI Tubuai 127.80 233 *e*LR LR 22 17 31.3
comp=Z,289nm,35.8s
CN2 Changchun 128.49 38 *e*PKP PKPdf 21 36 45.3 +2.6
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,24.0s,MS4.9
CN2 LR LR
comp=E,200nm,24.0s,MS4.9
CN2 LR LR
comp=Z,200nm,20.0s,MS4.8
PPT Papeete 130.61 240 *e*LR LR 22 18 49.5
comp=Z,254nm,28.2s

NIED ***19*** *21:19:00,41°.90N×143°.00E,h44km,Mw3.9 Best double couple: M0=8.76000×10^14 NP1:φ=311.00000°,δ=87.00000°, λ=64.00000°. NP2:φ=214.00000°,δ=26.00000°,λ=172.00000°.*
IDC ***19*** *21:19:07.0±0.7,41°.78N×143°.03E,h0km,mb3.8/12, mb1 4.0/14,mb1mx3.9/25,mbtmp3.8/14,ML3.8/2,MS2.6/2, Ms1 2.6/2,ms1mx2.3/33,Error ellipse: s-maj=20.8km s-min=16.7km az=112.0*
ISCJB ***19*** *21:19:11.9±0.6,41°.76N±0°.05×143°.01E±0°.08,h46km±5km, mb3.8/13,Error ellipse: s-maj=10.9km s-min=7.1km az=28.8*
MOS ***19*** *21:19:12.0±1.1,41°.80N×142°.95E,h52km,mb4.3/7,Error ellipse: s-maj=19.0km s-min=11.1km az=78.7*
NEIC ***19*** *21:19:13.9±1.1,41°.80N×142°.99E,h49km±10km,mb3.9/1, Error ellipse: s-maj=13.9km s-min=9.0km az=107.0*
NEIC Recorded [2 JMA] in southern Hokkaido.
JMA ***19*** *21:19:13.4±0.2,41°.86N×143°.03E,h42km±1km,M3.8*
JMA Felt II J1.
ISC 19 21:19:13.5±0.6,41°.82N±0°.05×143°.00E±0°.08,h42km±5km, n44,σ0=83/47,mb3.8/13,3C-2D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.23**	**32**	⇑P	**Pn**	**21 19 20.6**	**-0.6**
JEM				*e*S	**Sn**	**21 19 26.2**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.49**	**339**	⇑P	**Pn**	**21 19 23.7**	**-0.5**
JNBK				*e*S	**Sn**	**21 19 31.6**	**-0.2**
JCH	**Churui**	**0.84**	**19**	⇑P	**Pn**	**21 19 28.4**	**-0.4**
JBT2	**Biratori 2**	**1.06**	**334**	P	**Pn**	**21 19 31.8**	**-0.1**
JOB	**Onbets**	**1.25**	**30**	⇓P	**Pn**	**21 19 34.8**	**+0.4**
JFR	**Furan**	**1.37**	**348**	P	**Pn**	**21 19 35.4**	**-0.8**
ASAJ	**Asahikawa**	**2.31**	**353**	Pn	**Pn**	**21 19 49.0**	**0.0**
ASAJ	16nm,0.3s,baz=214,slow=16,SNR=79			Sn	**Sn**	**21 20 19.2**	**+3.0**
	13nm,0.3s,baz=288,slow=20,SNR=7.8						
ASAJ	**Asahikawa**	**2.31**	**353**	*e*Pn	**Pn**	**21 19 49.8**	**+0.8**
ASAJ	**Asahikawa**	**2.31**	**353**	P	**Pn**	**21 19 49.0**	**0.0**
ASAJ						21 20 19.2	
ASAJ				pmax	pmax		
	comp=Z,16nm,0.3s						
ASAJ				smax			
	comp=N,13nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.05**	**43**	⇓*iP*	**Pn**	**21 19 59.6**	**+0.4**
YUK				*i*S	**Sn**	**21 20 34.8**	**+0.3**
YUK				pmax	pmax		
	comp=Z,292nm,0.4s						
YUK				pmax	pmax		
	comp=E,26nm,0.2s						
YUK				pmax	pmax		
	comp=N,830nm,1.2s						
YUK				pmax	pmax		
	comp=Z,80nm,0.4s						
YUK				smax			
	comp=N,340nm,0.7s						
YUK				smax			
	comp=E,640nm,0.7s						
YUK				smax			
	comp=E,614nm,0.7s						
YUK				smax			
	comp=N,289nm,0.3s						
MAJO	**Matsushiro**	**6.45**	**217**	*e*Pn	**Pn**	**21 20 47.2**	**+1.4**
	comp=N,11nm,0.5s						
MAJO	**Matsushiro**	**6.45**	**217**	*e*P	**Pn**	**21 20 47.2**	**+1.3**
MAJO				pmax	pmax		
	comp=Z,11nm,0.5s						
MAT	**Matsushiro**	**6.45**	**217**	P	**Pn**	**21 20 47.4**	**+1.5**
MAT				*e*S	**Sn**	**21 21 53.0**	**-5.2**
MJAR	**Matsushiro Arr**	**6.45**	**217**	Pn	**Pn**	**21 20 45.2**	**-0.7**
	comp=Z,1.6nm,0.3s,baz=28,slow=13,SNR=15						
MJAR	**Matsushiro Arr**	**6.45**	**217**	P	**Pn**	**21 20 45.2**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS	**Korea Array**	**12.41**	**254**	LR	LR	21 26 28.1	
	comp=Z,37nm,21.6s,baz=65,slow=35						
PETK	**Petropavlovsk-**	**15.01**	**36**	LR	LR	21 29 36.8	
	comp=Z,19nm,19.4s,baz=17,slow=42						
SONM	**Songino Array**	**26.47**	**296**	P	**P**	**21 24 46.6**	**+0.2**
	comp=Z,0.2nm,0.5s,mb2.9,baz=78,slow=11,SNR=3.3						
SONM	**Songino Array**	**26.47**	**296**	P	**P**	**21 24 46.6**	**+0.2**
ZALV	**Zalesovo Beam**	**39.75**	**308**	P	**P**	**21 26 41.7**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.4,baz=90,slow=10,SNR=2.9						
ZALV	**Zalesovo Beam**	**39.75**	**308**	P	**P**	**21 26 41.7**	**-0.1**
MKAR	**Makanchi Array**	**42.78**	**298**	P	**P**	**21 27 05.4**	**-1.3**
	comp=Z,0.3nm,0.2s,mb3.6,baz=72,slow=6.2,SNR=2.9						
MKAR	**Makanchi Array**	**42.78**	**298**	P	**P**	**21 27 05.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**44.03**	**252**	P	**P**	**21 27 16.5**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.3,baz=41,slow=7.2,SNR=2.8						
CMAR	**Chiang Mai Arr**	**44.03**	**252**	P	**P**	**21 27 16.5**	**-0.6**
KURK	**Kurchatov**	**44.09**	**305**	*e*P	**P**	**21 27 17.6**	**+0.4**
	comp=Z,1.5nm,0.6s,mb3.9						
KURK	**Kurchatov**	**44.09**	**305**	*e*P	**P**	**21 27 17.6**	**+0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
ILAR	**Eielson Array**	**44.84**	**35**	P	**P**	**21 27 22.1**	**-0.9**
	comp=Z,1.0nm,0.6s,mb3.8,baz=263,slow=5.3,SNR=13						
ILAR	**Eielson Array**	**44.84**	**35**	P	**P**	**21 27 22.1**	**-0.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**48.37**	**310**	P	**P**	**21 27 50.5**	**-0.2**
	comp=Z,0.4nm,0.4s,mb3.8,baz=72,slow=9.2,SNR=3.3						
BVAR	**Borovoye Array**	**48.37**	**310**	P	**P**	**21 27 50.5**	**-0.3**
WRA	**Warramunga Arr**	**61.97**	**189**	P	**P**	**21 29 28.2**	**-0.9**
	comp=Z,1.1nm,0.4s,mb4.3,baz=6.4,slow=6.9,SNR=32						
WRA	**Warramunga Arr**	**61.97**	**189**	P	**P**	**21 29 28.2**	**-0.9**
WRA	**Warramunga Arr**	**61.97**	**189**	P	**P**	**21 29 28.2**	**-0.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**65.17**	**332**	P	**P**	**21 29 48.9**	**-0.9**
	comp=Z,1.6nm,0.6s,mb4.2,baz=51,slow=9.1,SNR=5.5						
FINES	**FINESS Array B**	**65.17**	**332**	P	**P**	**21 29 48.9**	**-0.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**65.70**	**189**	P	**P**	**21 29 53.1**	**-0.4**
	comp=Z,0.6nm,0.7s,mb3.8,baz=9.7,slow=6.6,SNR=8.6						
ASAR	**Alice Springs**	**65.70**	**189**	P	**P**	**21 29 53.2**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**71.19**	**55**	P	**P**	**21 30 28.7**	**+0.8**
	comp=Z,1.8nm,0.7s,mb4.1,baz=287,slow=7.4,SNR=6.4						
NVAR	**Mina Array Bea**	**71.19**	**55**	P	**P**	**21 30 28.7**	**+0.7**
PDAR	**Pinedale Array**	**73.48**	**47**	P	**P**	**21 30 41.3**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.6,baz=298,slow=1.9,SNR=4.3						
TXAR	**Lajitas Array**	**86.26**	**53**	P	**P**	**21 31 51.2**	**+0.4**
	comp=Z,0.9nm,0.8s,mb4.1,baz=317,slow=3.8,SNR=8.0						

TXAR	**Lajitas Array**	**86.26**	**53**	P		**P**	**21 31 51.2**	**+0.4**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
KEST	**Kesra**	**91.92**	**324**	*e*P		**P**	**21 32 19.4**	**+2.0**

*ISCJB **19** 21:23:40.2±0.7, 7.°1S±0.°1×13.°1W±0.°2, h10km, mb4.2/13, Error ellipse: s-maj=24.8km s-min=13.5km az=34.8*
*IDC **19** 21:23:40.6±0.8, 7.°07S×13.°11W, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.0/23, mbtmp4.1/10, ML3.4/1, Error ellipse: s-maj=32.5km s-min=16.8km az=127.0*
*NEIC **19** 21:23:42.2±0.5, 7.°03S×13.°12W, h10km, mb4.4/3, Error ellipse: s-maj=18.9km s-min=10.6km az=125.0*

ISC 19 21:23:42.4±0.7, 7.°0S±0.°1×13.°1W±0.°2, h10km, n16, σ0§79/16, mb4.2/13, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**15.90**	**31**	P	**Pn**	**21 27 25.7**	**-0.7**
	0.1nm,0.3s,baz=203,slow=13,SNR=2.4						
BBTS	**Babate**	**21.82**	**351**	P	**P**	**21 28 35.1**	**+0.1**
	17nm,0.7s,mb4.6,baz=34,slow=1.3,SNR=5.3						
TORD	**Torodi Ar. Bea**	**24.85**	**36**	P	**P**	**21 29 04.8**	**-0.4**
	5.0nm,0.7s,mb4.1,baz=225,slow=11,SNR=14						
MSKU	**Masuku**	**27.14**	**80**	P	**P**	**21 29 27.1**	**+0.9**
	1.4nm,0.5s,mb3.8,baz=270,slow=17,SNR=4.3						
KEST	**Kesra**	**47.49**	**25**	P	**P**	**21 32 18.9**	**+1.1**
	2.3nm,0.8s,mb4.2,baz=296,slow=2.4,SNR=6.9						
LPAZ	**La Paz**	**54.54**	**255**	P	**P**	**21 33 12.5**	**+1.3**
	0.8nm,0.7s,mb3.9,baz=35,slow=14,SNR=3.2						
PLCA	**Paso Flores**	**61.00**	**227**	P	**P**	**21 33 55.1**	**-1.1**
	2.1nm,0.9s,mb4.2,baz=91,slow=3.5,SNR=1.8						
BRG	**Berggiesshubel**	**62.22**	**19**	*e*P	**P**	**21 34 10.8**	**+6.7**
	4.3nm,1.1s,mb4.5						
MORC	**Moravsky Berou**	**62.54**	**22**	*e*P	**P**	**21 34 06.7**	**+0.3**
	2.2nm,0.8s,mb4.3						
BR131	**Keskin Array S**	**63.43**	**39**	*e*P	**P**	**21 34 13.7**	**+1.2**
	1.2nm,0.7s,mb4.1						
BRTR	**Keskin Array B**	**63.43**	**39**	P	**P**	**21 34 13.4**	**+0.9**
	2.7nm,0.9s,mb4.3,baz=240,slow=6.1,SNR=12						
SNAA	**Sanae**	**64.89**	**176**	P	**P**	**21 34 21.0**	**-0.4**
	1.1nm,0.9s,mb3.9,baz=312,slow=12,SNR=5.4						
KIEV	**Kiev**	**68.10**	**27**	*e*P	**P**	**21 34 42.0**	**-0.3**
	1.2nm,0.4s,mb4.3						
AKASG	**Malin Array Be**	**68.11**	**27**	*e*P	**P**	**21 34 41.5**	**-0.9**
	0.4nm,0.3s,mb3.9,baz=226,slow=7.9,SNR=12						
AKBB	**Malin Array Si**	**68.11**	**27**	*e*P	**P**	**21 34 41.9**	**-0.5**
FINES	**FINESS Array B**	**74.75**	**18**	P	**P**	**21 35 21.8**	**-0.4**
	3.7nm,1.1s,mb4.2,baz=208,slow=2.7,SNR=3.9						

IDC 19 21:35:32.9±1.6, 12.°32S×167.°31E, h0km, mb4.1/5, mb1 4.4/5, mb1mx4.0/16, mbtmp4.1/5, Error ellipse: s-maj=89.8km s-min=24.7km az=142.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.63**	**226**	P	P	21 41 49.6	+0.6
	1.6nm,0.4s,baz=53,slow=10.0,SNR=3.0						
WRA	**Warramunga Arr**	**32.52**	**252**	P	P	21 42 05.5	-0.3
	1.1nm,0.4s,baz=84,slow=9.1,SNR=26						
ASAR	**Alice Springs**	**33.63**	**246**	P	P	21 42 15.5	0.0
	1.9nm,0.6s,baz=71,slow=9.3,SNR=28						
ILAR	**Eielson Array**	**84.23**	**18**	P		21 48 06.3	+0.4
	2.4nm,0.6s,baz=232,slow=5.2,SNR=47						
TXAR	**Lajitas Array**	**95.09**	**61**	P	P	21 48 57.8	-0.6
	0.2nm,0.8s,baz=224,slow=5.0,SNR=2.7						

*ISCJB **19** 21:38:26.6±0.5, 33.°00N±0.°03×115.°85W±0.°04, h11km±6km, Error ellipse: s-maj=5.5km s-min=4.5km az=173.2*
*NEIC **19** 21:38:28.9, 32.°92N×115.°88W, h7km, ML3.1(PAS), After PAS.*
NEIC Felt in the Ocotillo area.
*ECX **19** 21:38:29.1±0.6, 32.°91N×115.°87W, h4km±2km, MD3.0, ML3.1*

ISC 19 21:38:27.3±0.5, 32.°97N±0.°03×115.°85W±0.°04, h14km±5km, n14, σ0§80/22, 5C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRR	**Carrizo Plain**	**0.13**	**230**	⇑*i*P	**Pg**	**21 38 31.2**	**+0.4**
COK	**Cook Ranch**	**0.16**	**139**	⇑*i*P	**Pg**	**21 38 32.0**	**+0.7**
YUH	**Yuha Desert**	**0.33**	**191**	⇓*i*P	**Pg**	**21 38 34.0**	**0.0**
SGL	**Mount Signal**	**0.34**	**162**	⇓*i*P	**Pg**	**21 38 34.4**	**+0.2**
RMX	**La Rumorosa**	**0.41**	**208**	*e*P	**Pg**	**21 38 35.4**	**-0.2**
RMX				*e*S	**Sg**	**21 38 40.7**	**-0.5**
BAR	**Barrett**	**0.75**	**248**	*e*Pg	**Pg**	**21 38 41.7**	**-0.2**
BAR				*e*Sg	**Sg**	**21 38 51.4**	**-0.4**
PFO	**Pinyon Flat Ob**	**0.81**	**322**	*e*Pg	**Pg**	**21 38 43.6**	**+0.5**
PFO				*e*Sg	**Sg**	**21 38 54.7**	**+0.9**
GLA	**Glamis**	**0.86**	**84**	*e*Pg	**Pg**	**21 38 43.9**	**-0.2**
GLA				*e*Sg	**Sg**	**21 38 55.4**	**0.0**
CBX	**Cerro Bola**	**0.95**	**227**	⇑*e*	**Sb**	**21 38 59.5**	**+1.7**
	comp=N,2μm,0.6s						
RDX	**Rancho Dawling**	**1.04**	**184**	⇑*e*	**Pb**	**21 38 46.2**	**-0.9**
RDX				*i*S	**Sb**	**21 38 59.4**	**-1.1**
RDX				⇑*e*		21 39 04.1	
	comp=N,209nm,0.3s						
RDX				⇓*e*		21 39 06.5	
	comp=E,307nm,0.7s						
PBX	**Punta Banda**	**1.43**	**211**	*e*P	**Pn**	**21 38 52.6**	**-0.1**
PBX				⇓*e*		21 39 12.9	
	comp=E,241nm,0.4s						
ECNX	**Esteban Cantu**	**1.45**	**206**	*e*P	**Pn**	**21 38 53.6**	**+0.6**
GSC	**Goldstone**	**2.46**	**341**	*e*Pg	**Pg**	**21 39 14.4**	**0.0**
GSC				*e*Sg	**Sg**	**21 39 45.7**	**-0.6**
ISA	**Isabella**	**3.45**	**322**	*e*Pn	**Pn**	**21 39 24.2**	**+3.6**
ISA				*e*Pg	**Pg**	**21 39 33.9**	**+0.4**
ISA				*e*Sg	**Sg**	**21 40 16.1**	**-2.1**

*NIED **19** 22:01:00, 33.°90N×135.°40E, h53km, Mw3.7 Best double couple: M0 3.83000×10^14 NP1:φs 340.00000°, δ76.00000°, λ-59.00000°. NP2:φs 92.00000°, δ34.00000°, λ-154.00000°.*
*IDC **19** 22:01:03.5±0.9, 33.°84N×135.°18E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.6/26, mbtmp3.7/8, ML3.8/2, Error ellipse: s-maj=21.5km s-min=16.8km az=129.0*
*ISCJB **19** 22:01:08.3±0.4, 33.°89N±0.°04×135.°40E±0.°03, h60km±3km, mb3.7/8, Error ellipse: s-maj=6.2km s-min=4.7km az=174.3*
*JMA **19** 22:01:09.7, 33.°91N×135.°42E, h50km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs 327.00000°, δ48.00000°, λ-51.00000°. NP2:φs 97.00000°, δ55.00000°, λ-125.00000°. Principal axes: T Plg4.0000°, Azm211.0000°; N Plg28.0000°, Azm119.0000°; P Plg62.0000°, Azm308.0000°;*
JMA Felt I J1.
*NEIC **19** 22:01:10.3±0.9, 33.°94N×135.°45E, h61km±11km, mb3.8/2 Error ellipse: s-maj=15.2km s-min=9.4km az=115.0*

ISC 19 22:01:09.6±0.4, 33.°91N±0.°04×135.°40E±0.°03, h51km±4km, n25, σ0§54/39, mb3.7/8, 7C-2D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.07**	**216**	⇓P	**Pn**	**22 01 17.4**	**0.0**
JWM				S	**Sn**	**22 01 22.8**	**-0.2**
JWY	**Kouya**	**0.35**	**27**	⇑P	**Pn**	**22 01 19.4**	**+0.1**
JWY				S	**Sn**	**22 01 26.4**	**+0.2**
JWZ	**Kozaga**	**0.46**	**145**	⇓P	**Pn**	**22 01 20.3**	**-0.1**
JWZ				S	**Sn**	**22 01 28.1**	**0.0**
JAJ2	**Tsuna**	**0.67**	**320**	⇑P	**Pn**	**22 01 23.1**	**+0.1**
JAJ2				S	**Sn**	**22 01 33.0**	**+0.3**
JHE	**Heguri**	**0.78**	**17**	⇑P	**Pn**	**22 01 24.4**	**0.0**
JHE				S	**Sn**	**22 01 35.1**	**-0.1**
JKN2	**Miekihoku**	**0.80**	**65**	P	**Pn**	**22 01 24.4**	**-0.2**
JKN2				*e*S	**Sn**	**22 01 35.3**	**-0.2**
JAI	**Aioi**	**0.80**	**262**	⇑P	**Pn**	**22 01 24.5**	**-0.1**
JAI				S	**Sn**	**22 01 35.3**	**-0.4**
TSUJ	**Tsu 2**	**1.16**	**46**	⇑P	**Pn**	**22 01 29.1**	**-0.4**
TSUJ				*e*S	**Sn**	**22 01 43.6**	**-0.7**
JKS	**Kasai**	**1.17**	**337**	⇑P	**Pn**	**22 01 29.5**	**-0.1**
JKS				S	**Sn**	**22 01 44.0**	**-0.5**
JIE	**Ise**	**1.19**	**65**	⇑P	**Pn**	**22 01 29.9**	**+0.1**
JIE				S	**Sn**	**22 01 44.5**	**-0.3**
MAJO	**Matsushiro**	**3.49**	**40**	*e*Pn	**Pn**	**22 02 02.0**	**+0.7**
MAT	**Matsushiro**	**3.49**	**40**	P	**Pn**	**22 02 01.5**	**+0.2**
MAT				*e*S	**Sn**	**22 02 43.4**	**+2.0**
MJAR	**Matsushiro Arr**	**3.49**	**40**	Pn	**Pn**	**22 02 01.0**	**-0.4**
	3.4nm,0.3s,baz=223,slow=14,SNR=18						
MJAR				Pg	**Pn**	**22 02 11.7**	**+10**
	7.2nm,0.3s,baz=211,slow=17,SNR=23						
MJAR				Lg		22 02 58.0	
	3.9nm,0.3s,baz=225,slow=30,SNR=6.9						
JHJ	**Hachijo jima 2**	**3.74**	**101**	Pn	**Pn**	**22 02 05.1**	**+0.3**
	35nm,0.3s,baz=243,slow=14,SNR=5.0						
JHJ				Sn	**Sn**	**22 02 47.1**	**-0.5**
	26nm,0.3s,baz=66,slow=20,SNR=3.7						
KSRS	**Korea Array**	**7.04**	**302**	Pn	**Pn**	**22 02 50.1**	**+0.1**
	0.6nm,0.3s,baz=122,slow=14,SNR=4.2						
KSRS				Sn	**Sn**	**22 04 08.6**	**-0.1**
	0.4nm,0.3s,baz=122,slow=24,SNR=3.6						
JOW	**Kunigami**	**9.36**	**223**	Pn	**Pn**	**22 03 23.0**	**+1.2**
	baz=24,slow=19						
SONM	**Songino Array**	**25.80**	**311**	P	**P**	**22 06 35.2**	**-0.4**
	0.9nm,0.6s,mb3.5,baz=132,slow=9.0,SNR=6.6						
MK31	**Makanchi Array**	**41.72**	**304**	*e*P	**P**	**22 08 53.4**	**+0.1**
MKAR	**Makanchi Array**	**41.72**	**304**	P	**P**	**22 08 54.0**	**+0.7**
	0.7nm,0.4s,mb3.6,baz=94,slow=9.9,SNR=9.8						
WRA	**Warramunga Arr**	**53.55**	**181**	P	**P**	**22 10 24.5**	**-0.8**
	0.5nm,0.6s,mb3.6,baz=358,slow=7.7,SNR=8.4						
KBL	**Kabul**	**53.94**	**291**	*e*P	**P**	**22 10 28.1**	**0.0**
	1.5nm,0.8s,mb4.0						
ABKAR	**Akbulak array**	**56.20**	**310**	*e*P	**P**	**22 10 43.9**	**-0.3**
	0.2nm,0.4s,mb3.5						
ASAR	**Alice Springs**	**57.27**	**182**	P	**P**	**22 10 52.6**	**+0.7**
	0.3nm,0.9s,mb3.3,baz=9.5,slow=13,SNR=4.4						
FINES	**FINESS Array B**	**69.23**	**331**	P	**P**	**22 12 09.7**	**-1.0**
	2.1nm,1.0s,mb4.0,baz=61,slow=7.8,SNR=3.6						
NVAR	**Mina Array Bea**	**80.77**	**50**	P	**P**	**22 13 21.8**	**+4.2**
	1.0nm,0.5s,mb4.0,baz=324,slow=4.5,SNR=5.6						

*ISK **19** 22:06:06.1, 36.°94N×43.°63E, h5km, MD3.3*
*DDA **19** 22:06:12.4, 37.°29N×43.°64E, h2km±8km, Md3.2*
*CSEM **19** 22:06:12.3±2.4, 37.°28N×43.°71E, h2km, MD3.2, Error ellipse: s-maj=73.3km s-min=19.4km az=128.0*

ISC 19 22:06:03.0±1.7, 36.°78N±0.°07×43.°75E±0.°07, h3km±7km, n21, σ0§89/36, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**0.48**	**346**	*e*Pg	**Pg**	**22 06 12.5**	**+0.3**
CUKT				*e*Sg	**Sg**	**22 06 18.9**	**+0.4**
CUKT	**Cukurca**	**0.48**	**346**	*e*Pg	**Pg**	**22 06 12.5**	**+0.3**
CUKT				*e*Sg	**Sg**	**22 06 19.0**	**+0.5**
HAKT	**HAKKARI**	**0.78**	**357**	*e*P	**Pg**	**22 06 16.6**	**-1.3**
HAKT				*i*S	**Sg**	**22 06 28.0**	**0.0**
HAKT	**HAKKARI**	**0.78**	**357**	*e*P	**Pg**	**22 06 16.6**	**-1.3**
HAKT				*i*S	**Sg**	**22 06 28.0**	**0.0**
HKR	**Hakkari**	**0.80**	**359**	*e*PG	**Pg**	**22 06 19.2**	**+0.9**
HKR				*e*SG	**Sg**	**22 06 29.7**	**+1.1**
HKR	**Hakkari**	**0.80**	**359**	*e*Pg	**Pg**	**22 06 19.2**	**+0.9**
HKR				*e*Sg	**Sg**	**22 06 29.7**	**+1.0**
VANT	**Van**	**1.69**	**347**	*e*PN	**Pn**	**22 06 35.4**	**+2.0**
VANT	**Van**	**1.69**	**347**	*e*Pn	**Pn**	**22 06 35.4**	**+2.0**
TVAN	**Van**	**1.77**	**351**	*e*P	**Pn**	**22 06 35.2**	**+0.7**
TVAN				*i*S	**Sn**	**22 06 56.7**	**-0.8**
TVAN	**Van**	**1.77**	**351**	*e*P	**Pn**	**22 06 35.2**	**+0.7**
TVAN				*i*S	**Sn**	**22 06 56.7**	**-0.8**
VANB	**Van**	**1.84**	**351**	*e*PN	**Pg**	**22 06 37.6**	**-0.5**
VANB				*e*SN	**Sg**	**22 07 01.0**	**-1.0**
VANB	**Van**	**1.84**	**351**	*e*Pn	**Pg**	**22 06 37.7**	**-0.5**
VANB				*e*Sn	**Sg**	**22 07 01.0**	**-1.0**
BEST	**Besiri**	**2.27**	**300**	*e*P	**Pg**	**22 06 46.6**	**+0.1**
BEST				*i*S	**Sg**	**22 07 17.0**	**+1.1**
MARD	**Mardin**	**2.44**	**284**	*e*P	**Pb**	**22 06 47.1**	**-0.4**
MARD				*i*S	**Sb**	**22 07 18.1**	**+0.2**
AGRB	**Hanur-Agry**	**2.86**	**348**	*e*PN	**Pb**	**22 06 52.5**	**-2.1**
AGRB	**Hanur-Agry**	**2.86**	**348**	*e*Pn	**Pb**	**22 06 52.5**	**-2.1**
BNGL	**BINGOL**	**2.99**	**317**	*e*P	**Pb**	**22 06 56.9**	**0.0**
BNGL				*i*S	**Sb**	**22 07 33.9**	**0.0**
DIYA	**Diyarbakir**	**3.11**	**293**	*e*P	**Pg**	**22 07 02.2**	**-0.4**
DIYA				*i*S	**Sg**	**22 07 42.3**	**-0.6**
DIYA	**Diyarbakir**	**3.11**	**293**	*e*P	**Pg**	**22 07 02.2**	**-0.4**
DIYA				*i*S	**Sg**	**22 07 42.3**	**-0.6**
GNI	**Garni**	**3.45**	**13**	*e*PN	**Pn**	**22 07 02.0**	**+4.3**
GNI	**Garni**	**3.45**	**13**	*e*Pn	**Pn**	**22 07 02.0**	**+4.3**

*IDC **19** 22:15:38.4±7.0, 34.°53N×69.°92E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.3/26, mbtmp3.5/5, ML3.0/2, Error ellipse: s-maj=219.8km s-min=26.1km az=96.0*
*ISCJB **19** 22:15:46.7±0.8, 34.°59N±0.°05×70.°64E±0.°09, h50km±12km, mb3.4/3, Error ellipse: s-maj=13.2km s-min=6.8km az=159.0*
*NEIC **19** 22:15:46.6±1.0, 34.°47N×70.°68E, h35km, mb3.3/1, Error ellipse: s-maj=16.8km s-min=14.8km az=129.0*

ISC 19 22:15:47.9±0.8, 34.°50N±0.°05×70.°59E±0.°09, h49km±12km, n13, σ1§20/18, mb3.4/3, 2D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.28**	**272**	*e*Pg	**Pn**	**22 16 08.7**	**-0.6**
CEP	**Cherat**	**1.28**	**121**	⇓P	**Pn**	**22 16 06.8**	**-2.5**
CEP				S	**Sn**	**22 16 25.0**	**-0.4**
THW	**Thamme Wali**	**1.95**	**150**	P	**Pn**	**22 16 20.6**	**+2.1**
CHCP	**Chirah Chowk**	**2.37**	**110**	P	**Pn**	**22 16 25.2**	**+1.0**
KSH	**Kashi**	**6.60**	**39**	Pn	**Pn**	**22 17 18.1**	**-4.2**
KSH				Sn	**Sn**	**22 18 27.5**	**-8.7**
KSH				smax			
	comp=N,18nm,0.4s						
KSH				smax			
	comp=E,15nm,0.2s						
KK31	**Karatay Array**	**8.59**	**360**	P	**Pn**	**22 17 50.2**	**+0.7**
	comp=E,0.8nm,0.5s,baz=181,slow=12,SNR=18						
KK31				⇓S	**Sn**	**22 19 24.1**	**-0.9**
	comp=E,1.1nm,0.5s,baz=181,slow=22,SNR=7.5						
KKAR	**Karatay Array**	**8.59**	**360**	*e*Pn	**Pn**	**22 17 50.3**	**+0.8**
	comp=E,1.3nm,0.4s						
KKAR				*e*Sn	**Sn**	**22 19 25.2**	**+0.2**
AAK	**Ala-Archa**	**8.68**	**19**	Pn	**Pn**	**22 17 50.0**	**-0.6**
	comp=E,0.0nm,0.3s,baz=197,slow=11,SNR=2.5						
AAK				Sn	**Sn**	**22 19 29.3**	**+2.2**
	comp=E,0.0nm,0.3s,baz=120,slow=20,SNR=2.5						
MKAR	**Makanchi Array**	**15.13**	**32**	Pn	**Pn**	**22 19 17.7**	**-0.6**
	comp=E,0.1nm,0.3s,baz=216,slow=12,SNR=3.1						
ABKAR	**Akbulak array**	**16.72**	**335**	*e*P	**Pn**	**22 19 38.9**	**+0.5**
	comp=E,1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**21.88**	**23**	P	**P**	**22 20 33.8**	**-2.5**
	comp=E,0.4nm,0.3s,mb3.3,baz=224,slow=8.1,SNR=2.7						
WRA	**Warramunga Arr**	**81.22**	**121**	P	**P**	**22 27 59.0**	**+0.2**
	comp=E,0.4nm,0.9s,mb3.3,baz=320,slow=5.4,SNR=4.5						
ASAR	**Alice Springs**	**83.39**	**124**	P	**P**	**22 28 10.6**	**+0.6**
	comp=E,0.3nm,0.7s,mb3.4,baz=308,slow=6.3,SNR=3.3						

CASC 19 22:26:36.1±2.5, 8.°93N×82.°83W, h16km±10km, MD3.5, 1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTCR	**Cotoan**	**0.07**	**114**	*e*P	Pg	22 26 40.0	+0.8
BRU2	**Volcan**	**0.19**	**134**	*e*P	Pg	22 26 41.9	+1.3
BRU2				*e*S	Sg	22 26 46.2	+2.4
TBS2		**0.21**	**128**	*e*P	Pg	22 26 41.8	+0.7
TBS2				*e*S	Sg	22 26 46.3	+1.8
ACR	**Cerro Adams**	**0.43**	**231**	⇓*e*P	Pg	22 26 44.5	-0.4
ACR				*e*S	Sg	22 26 50.5	-0.2
URSC	**Urasca**	**1.30**	**314**	*e*P	Pn	22 26 59.5	-0.2
URSC				*e*S	Sb	22 27 16.9	+0.2
LAJ	**Bijagual**	**1.58**	**306**	*e*P	Pn	22 27 08.5	+5.0
LAJ				*e*S	Sn	22 27 32.5	+8.9
PRS1	**Puriscal**	**1.80**	**306**	*e*P	Pn	22 27 06.7	+0.2
PRS1				*e*S	Sn	22 27 29.5	+0.5
CGA2	**Cerro Gallo 2**	**1.94**	**304**	*e*P	Pn	22 27 09.1	+0.7
CGA2				*e*S	Sn	22 27 33.1	+0.5

*ISCJB **19** 22:31:44.4±0.8, 36.°51N±0.°03×25.°81E±0.°05, h12km±6km, Error ellipse: s-maj=7.0km s-min=4.2km az=7.6*
*ATH **19** 22:31:44.4, 36.°52N×25.°81E, h30km±2km, MD3.5/10*
*CSEM **19** 22:31:44.1±0.2, 36.°55N×25.°84E, h10km, MD3.5, Error ellipse: s-maj=4.9km s-min=4.5km az=110.0*
*THE **19** 22:31:45.5, 36.°51N×25.°70E, h21km±7km, Error ellipse: s-maj=7.9km s-min=0.8km az=242.0*

ISC 19 22:31:44.5±0.8, 36.°51N±0.°03×25.°83E±0.°06, h10km±7km, n33, σ0§80/54, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR2	**Thira island,**	**0.32**	**259**	P	**Pg**	**22 31 51.1**	**+0.2**
THR2				S	**Sg**	**22 31 55.2**	**-0.1**
THR2	**Thira island,**	**0.32**	**259**	P	**Pg**	**22 31 51.1**	**+0.2**
THR2				S	**Sg**	**22 31 55.2**	**-0.1**
THR1	**Thera Island**	**0.33**	**245**	P	**Pg**	**22 31 51.1**	**+0.1**
THR1				S	**Sg**	**22 31 55.7**	**+0.2**
THR1	**Thera Island**	**0.33**	**245**	P	**Pg**	**22 31 51.1**	**+0.1**
THR1				S	**Sg**	**22 31 55.7**	**+0.2**
THR3	**Thira Island,**	**0.36**	**254**	P	**Pg**	**22 31 51.7**	**+0.1**
THR3	**Thira Island,**	**0.36**	**254**	P	**Pg**	**22 31 51.7**	**+0.1**
THR5	**Thira Island,**	**0.40**	**256**	P	**Pg**	**22 31 52.6**	**+0.3**
THR5				S	**Sg**	**22 31 56.9**	**-0.7**
THR5	**Thira Island,**	**0.40**	**256**	P	**Pg**	**22 31 52.6**	**+0.3**
THR5				S	**Sg**	**22 31 56.9**	**-0.7**
APE	**Apeiranthos**	**0.60**	**337**	*e*PN	**Pg**	**22 31 56.0**	**-0.3**
APE				*e*SN	**Sg**	**22 32 06.3**	**+2.1**
APE	**Apeiranthos**	**0.60**	**337**	P	**Pg**	**22 31 56.0**	**-0.3**
APE				S	**Sg**	**22 32 05.5**	**+1.3**
APE	**Apeiranthos**	**0.60**	**337**	P	**Pg**	**22 31 56.0**	**-0.3**
APE				S	**Sg**	**22 32 05.5**	**+1.3**
NPS	**Neapolis**	**1.26**	**188**	*e*PN	**Pn**	**22 32 07.6**	**-0.5**
NPS				*e*SN	**Sn**	**22 32 24.1**	**-0.9**
NPS	**Neapolis**	**1.26**	**188**	*e*Pn	**Pn**	**22 32 07.6**	**-0.5**
NPS				*e*Sn	**Sn**	**22 32 24.1**	**-0.9**
LAST	**Lasithi**	**1.38**	**192**	*e*PB	**Pb**	**22 32 09.0**	**-1.3**
LAST				*e*SN	**Sn**	**22 32 28.0**	**0.0**
LAST	**Lasithi**	**1.38**	**192**	*e*Pb	**Pb**	**22 32 09.0**	**-1.3**
LAST				*e*Sn	**Sn**	**22 32 28.0**	**0.0**
ZKR	**Zakros**	**1.43**	**167**	*e*PN	**Pn**	**22 32 11.1**	**+0.6**
ZKR				*e*SN	**Sn**	**22 32 30.3**	**+1.0**
ZKR	**Zakros**	**1.43**	**167**	*e*Pn	**Pn**	**22 32 11.1**	**+0.6**
ZKR				*e*Sn	**Sn**	**22 32 30.3**	**+1.0**
SMG	**Samos**	**1.44**	**34**	*e*PB	**Pb**	**22 32 09.6**	**-1.9**
SMG				*e*SN	**Sn**	**22 32 30.3**	**+0.7**
SMG	**Samos**	**1.44**	**34**	*e*Pb	**Pb**	**22 32 09.6**	**-1.9**
SMG				*e*Sn	**Sn**	**22 32 30.3**	**+0.7**
KARP	**Karpathos**	**1.45**	**131**	*e*PN	**Pn**	**22 32 11.1**	**+0.4**
KARP				*e*SN	**Sn**	**22 32 29.2**	**-0.5**
KARP	**Karpathos**	**1.45**	**131**	*e*Pn	**Pn**	**22 32 11.1**	**+0.4**
KARP				*e*Sn	**Sn**	**22 32 29.2**	**-0.5**
SIVA	**Sivas**	**1.70**	**209**	*e*Pn	**Pn**	**22 32 15.9**	**+1.6**
VAM	**Vamos**	**1.72**	**231**	*e*PN	**Pn**	**22 32 14.8**	**+0.3**
VAM	**Vamos**	**1.72**	**231**	*e*Pn	**Pn**	**22 32 14.8**	**+0.3**
ARG	**Arkhangelos**	**1.88**	**98**	*e*PB	**Pn**	**22 32 17.3**	**+0.6**
ARG				*e*SN	**Sn**	**22 32 40.2**	**-0.2**
ARG	**Arkhangelos**	**1.88**	**98**	*e*Pn	**Pn**	**22 32 17.3**	**+0.6**
ARG				*e*Sn	**Sn**	**22 32 40.2**	**-0.2**
CHOS	**Chios island**	**1.88**	**5**	*e*PN	**Pn**	**22 32 16.3**	**-0.4**
CHOS	**Chios island**	**1.88**	**5**	*e*Pb	**Pn**	**22 32 16.3**	**-0.4**
KARN	**Karanos**	**1.90**	**235**	*e*PB	**Pn**	**22 32 17.8**	**+0.8**
KARN	**Karanos**	**1.90**	**235**	*e*Pn	**Pn**	**22 32 17.8**	**+0.8**
NAIG	**Nisos Aigina**	**2.25**	**304**	*e*Pb	**Pb**	**22 32 23.7**	**-1.4**
DID	**Didima**	**2.30**	**296**	*e*PN	**Pn**	**22 32 22.1**	**-0.3**
DID	**Didima**	**2.30**	**296**	*e*Pn	**Pn**	**22 32 22.1**	**-0.3**

*IDC **19** 22:37:50.2±6.6, 28.°62S×178.°27W, h116km±57km, mb3.6/5, mb1 3.8/6, mb1mx3.6/16, mbtmp3.6/6, Error ellipse: s-maj=35.8km s-min=25.5km az=25.0*

ISC 19 22:37:52.3±5.4, 28.°9S±0.°2×178.°4W±0.°2, h127km±48km, n14, σ2§02/8, mb3.9/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**9.54**	**196**	SN	**Sn**	**22 41 49.6**	**-2.3**
URZ	**Urewera**	**10.04**	**201**	P	**Pn**	**22 40 15.4**	**+2.2**
	0.4nm,0.3s,baz=32,slow=19,SNR=4.0						
URZ				S	**Sn**	**22 42 03.2**	**-0.7**
	4.7nm,0.3s,baz=304,slow=18,SNR=19						
PXZ	**Pawanui**	**11.75**	**198**	SN	Sx	22 42 36.7	
BFZ	**Birch Farm**	**12.53**	**199**	SN	Sx	22 42 54.8	
MRZ	**Mangatainoka R**	**12.71**	**201**	*e*SN	Sx	22 42 58.6	
TIWZ	**Tintock**	**12.72**	**200**	SN	Sx	22 42 60.0	
TCW	**Tory Channel**	**13.65**	**204**	*e*SN	Sx	22 43 20.1	
STKA	**Stephens Creek**	**34.53**	**255**	P	**P**	**22 44 29.6**	**+1.0**
	3.9nm,0.9s,mb4.2,baz=90,slow=10,SNR=5.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.80**	**292**	Pn	**Pn**	**22 50 14.3**	**+1.1**
	448nm,0.3s,baz=142,slow=5.3,SNR=145						
HNR				Sn	**Sn**	**22 51 09.0**	**+0.8**
	220nm,0.3s,baz=37,slow=22,SNR=7.7						
HNR	**Honiara**	**4.80**	**292**	⇑*i*Pn	**Pn**	**22 50 14.2**	**+1.0**
HNR				*e*Sn	**Sn**	**22 51 08.9**	**+0.6**
HNR	**Honiara**	**4.80**	**292**	P	**Pn**	**22 50 14.3**	**+1.0**
HNR						22 51 09.0	
HNR				pmax	pmax		
	comp=Z,448nm,0.3s						
HNR				smax			
	comp=N,220nm,0.3s						
DZM	**Mont Dzumac**	**10.92**	**170**	*e*Pn	**Pn**	**22 51 37.4**	**+0.1**
	comp=N,37nm,0.3s						
DZM				*e*Sn	**Sn**	**22 53 29.4**	**-9.5**
	comp=N,26nm,0.3s						
DZM				*e*LR	LR	22 54 10.4	
	comp=N,13μm,23.6s						
DZM	**Mont Dzumac**	**10.92**	**170**	*e*P	**Pn**	**22 51 36.2**	**-1.2**
DZM				*e*S	**Sn**	**22 53 35.9**	**-3.0**
DZM				AMP		22 53 39.9	
	comp=Z,471nm,6.7s						
NOUC	**Port Laguerre**	**10.93**	**171**	*e*P	**Pn**	**22 51 36.5**	**-0.9**
NOUC				*e*S	**Sn**	**22 53 35.7**	**-3.4**
NOUC				AMP		22 53 42.7	
	comp=Z,30nm,2.8s						
BAYA	**Yate Dam**	**11.08**	**168**	*e*S	**Sn**	**22 53 41.0**	**-1.8**
MSVF	**Nonsavu**	**14.64**	**118**	*e*Pn	**Pn**	**22 52 29.1**	**+0.9**
MSVF	**Nonsavu**	**14.64**	**118**	Pn	**Pn**	**22 52 29.5**	**+1.2**
	comp=Z,390nm,2.2s,SNR=20						
PMG	**Port Moresby**	**17.12**	**275**	*e*Pn	**Pn**	**22 53 01.7**	**+1.3**
	comp=Z,323nm,1.3s						
PMG	**Port Moresby**	**17.12**	**275**	⇓*i*P	**Pn**	**22 53 01.4**	**+1.0**
PMG				pmax	pmax		
	comp=Z,106nm,1.2s						
CTAO	**Charters Tower**	**19.59**	**241**	*e*P	**Pn**	**22 53 30.6**	**+0.1**
	comp=Z,299nm,1.2s						
CTAO	**Charters Tower**	**19.59**	**241**	*e*P	**Pn**	**22 53 30.6**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,299nm,1.2s						
COEN	**Coen**	**20.94**	**260**	⇑*i*P	**P**	**22 53 45.3**	**+1.4**
	comp=Z,4μm,1.1s						
ARMA	**Armidale**	**22.48**	**210**	⇓*i*P	**P**	**22 54 01.1**	**+0.8**
	comp=Z,162nm,1.3s,mb5.3						
AFI	**Afiamalu**	**23.34**	**99**	P	**P**	**22 54 09.8**	**+0.3**
	comp=Z,132nm,0.9s,mb5.4,baz=46,slow=3.0,SNR=9.4						
AFI				LR	LR	23 01 15.2	
	comp=Z,4μm,20.2s,MS4.9,baz=278,slow=32						
AFI	**Afiamalu**	**23.34**	**99**	*e*P	**P**	**22 54 09.5**	**0.0**
	comp=Z,158nm,1.0s,mb5.4						
AFI				LR	LR		
	comp=Z,5μm,21.0s,MS5.0						
AFI	**Afiamalu**	**23.34**	**99**	*e*P	**P**	**22 54 09.5**	**0.0**
AFI				pmax	pmax		
	comp=Z,158nm,1.0s,mb5.4						
AFI				MLR	MLR		
	comp=Z,5μm,21.0s,MS5.0						
RAO	**Raoul Island**	**24.31**	**140**	*e*P	**P**	**22 54 20.1**	**+1.7**
	comp=Z,1μm,1.1s,mb6.3						
RAO				LR	LR		
	comp=Z,3μm,19.0s,MS4.9						
RAO	**Raoul Island**	**24.31**	**140**	*e*P	**P**	**22 54 20.1**	**+1.7**
RAO				pmax	pmax		
	comp=Z,1μm,1.1s,mb6.3						
RAO				MLR	MLR		
	comp=Z,3μm,19.0s,MS4.9						
OUZ	**Omahuta**	**25.26**	**162**	*e*P	**P**	**22 54 28.6**	**+1.7**
	comp=Z,149nm,1.2s,mb5.4						
CAN	**Canberra**	**27.77**	**208**	PFAKE		22 55 00.0	+10
CAN				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
URZ	**Urewera**	**29.17**	**159**	P	**P**	**22 55 01.6**	**-0.5**
	comp=Z,16nm,0.8s,mb4.8,baz=49,slow=5.7,SNR=5.7						
URZ				PcP	PcP	22 58 08.7	-0.7
	comp=Z,16nm,0.9s,baz=357,slow=2.7,SNR=5.5						
URZ				LR	LR	23 05 33.2	
	comp=Z,3μm,18.7s,MS4.9,baz=96,slow=34						
URZ	**Urewera**	**29.17**	**159**	*e*P	**P**	**22 55 03.3**	**+1.2**
	comp=Z,43nm,1.0s,mb5.1						
URZ				*e*PcP	PcP	22 58 08.8	-0.6
STKA	**Stephens Creek**	**29.43**	**222**	P	**P**	**22 55 05.0**	**+0.6**
	comp=Z,8.5nm,0.7s,mb4.6,baz=26,slow=10.0,SNR=12						
STKA				PcP	PcP	22 58 10.4	+0.3
	comp=Z,21nm,0.9s,baz=12,slow=6.0,SNR=5.6						
STKA				LR	LR	23 06 01.3	
	comp=Z,5μm,18.1s,MS5.2,baz=40,slow=35						
STKA	**Stephens Creek**	**29.43**	**222**	*e*P	**P**	**22 55 05.4**	**+1.0**
WB2	**Warramunga Arr**	**30.21**	**250**	*e*P	**P**	**22 55 11.1**	**-0.5**
WRA	**Warramunga Arr**	**30.23**	**250**	P	**P**	**22 55 11.7**	**0.0**
	comp=Z,129nm,1.2s,mb5.5,baz=78,slow=8.9,SNR=249						
WRA				PcP	PcP	22 58 13.0	+0.6
	comp=Z,7.3nm,1.1s,baz=72,slow=2.0,SNR=6.3						
WRA				S	**S**	**23 00 09.5**	**-0.8**
	comp=Z,20nm,1.2s,baz=78,slow=16,SNR=8.7						
WRA				LR	LR	23 06 02.1	
	comp=Z,4μm,21.5s,MS5.0,baz=70,slow=34						
WRA				P3KPbc		23 27 04.9	
	comp=Z,0.7nm,0.8s,baz=251,slow=2.4,SNR=5.3						
WRA	**Warramunga Arr**	**30.23**	**250**	P	**P**	**22 55 11.7**	**0.0**
WRA				PcP	PcP	22 58 13.0	+0.6
WRA				S	**S**	**23 00 09.5**	**-0.8**
WRA				LR	LR	23 06 02.1	
WRA				*e*		23 27 04.9	
WRA	**Warramunga Arr**	**30.23**	**250**	P	**P**	**22 55 11.7**	**+0.1**
WRA						22 58 13.0	
WRA				S	**S**	**23 00 09.5**	**-0.8**
WRA				pmax	pmax		
	comp=Z,129nm,1.2s						
WRA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WRA				smax			
	comp=N,20nm,1.2s						
WRA				MLR	MLR		
	comp=Z,4μm,21.5s						
WAKE	**Wake Island**	**30.42**	**4**	PFAKE		22 55 20.0	+6.7
WAKE				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
SNZO	**South Karori**	**31.26**	**165**	PFAKE		22 55 30.0	+10
SNZO				LR	LR		
	comp=Z,3μm,19.0s,MS4.9						
GUMO	**Guam**	**31.42**	**321**	LR	LR	23 07 55.1	
	comp=Z,3μm,18.4s,MS5.0,baz=144,slow=36						
GUMO	**Guam**	**31.42**	**321**	PFAKE		22 55 30.0	+7.9
GUMO				LR	LR		
	comp=Z,6μm,22.0s,MS5.2						
ASAR	**Alice Springs**	**31.57**	**243**	P	**P**	**22 55 22.9**	**-0.6**
	comp=Z,24nm,0.8s,mb5.1,baz=71,slow=9.7,SNR=134						
ASAR				PcP	PcP	22 58 15.8	-0.2
	comp=Z,5.5nm,0.9s,baz=70,slow=2.8,SNR=6.6						
ASAR	**Alice Springs**	**31.57**	**243**	P	**P**	**22 55 22.9**	**-0.6**
ASAR						22 58 15.8	
ASAR				pmax	pmax		
	comp=Z,24nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KHZ	**Kahutara**	**32.04**	**167**	*e*P	**P**	**22 55 27.5**	**+0.2**
RPZ	**Rata Peaks**	**32.84**	**171**	P	**P**	**22 55 34.0**	**-0.3**
	comp=Z,60nm,0.8s,mb5.5,baz=355,slow=2.1,SNR=30						
RPZ				LR	LR	23 07 12.0	
	comp=Z,3μm,20.6s,MS5.0,baz=345,slow=33						
RPZ	**Rata Peaks**	**32.84**	**171**	*e*P	**P**	**22 55 33.7**	**-0.7**
	comp=Z,232nm,1.4s,mb5.9						
ODZ	**Otahua Downs**	**34.08**	**172**	*e*P	**P**	**22 55 45.1**	**-0.1**
RAR	**Rarotonga**	**35.66**	**111**	LR	LR	23 07 28.4	
	comp=Z,2μm,21.4s,MS4.9,baz=272,slow=31						
RAR	**Rarotonga**	**35.66**	**111**	PFAKE		22 56 10.0	+11
RAR				LR	LR		
	comp=Z,3μm,20.0s,MS5.1						
NLAI	**Namlea**	**37.87**	**279**	P	**P**	**22 56 17.0**	**-1.0**
	comp=Z,1μmcomp=Z,86nm,1.6s,mb5.2						
JOHN	**Johnston Islan**	**37.88**	**43**	PFAKE		22 56 30.0	+12
JOHN				LR	LR		
	comp=Z,2μm,21.0s,MS4.9						
LBMI	**Labuha**	**38.19**	**283**	P	**P**	**22 56 20.9**	**+0.2**
	comp=Z,2μmcomp=Z,106nm,1.6s,mb5.3						
XMAS	**Kiritimati**	**40.12**	**73**	PFAKE		22 56 50.0	+13
XMAS				LR	LR		
	comp=Z,3μm,20.0s,MS5.1						
MMRI	**Maumere**	**41.64**	**270**	P	**P**	**22 56 48.0**	**-1.5**
	comp=Z,3μmcomp=Z,192nm,1.1s,mb5.6						
BBSI	**Bau Bau**	**41.80**	**274**	P	**P**	**22 56 51.0**	**+0.2**
	comp=Z,2μmcomp=Z,98nm,1.7s,mb5.2						
LUWI	**Luwuk**	**42.61**	**281**	P	**P**	**22 56 56.8**	**-0.6**
	comp=Z,1μmcomp=Z,98nm,1.4s,mb5.3						
DAV	**Davao City (W)**	**42.76**	**293**	LR	LR	23 15 01.1	
	comp=Z,1μm,18.0s,MS4.9,baz=285,slow=36						
DAV	**Davao City (W)**	**42.76**	**293**	PFAKE		22 57 10.0	+11
DAV				LR	LR		
	comp=Z,2μm,22.0s,MS5.0						
MRSI	**Marisa**	**43.83**	**283**	P	**P**	**22 57 05.3**	**-1.9**
	comp=Z,561nmcomp=Z,22nm,1.2s,mb4.8						
BKSI	**Bulukumba**	**44.23**	**274**	P	**P**	**22 57 11.3**	**+0.9**
	comp=Z,676nmcomp=Z,29nm,1.1s,mb4.9						
KAPI	**Kappang**	**44.65**	**274**	P	**P**	**22 57 11.9**	**-1.9**
	comp=Z,14nm,0.8s,mb4.8,baz=97,slow=9.3,SNR=5.0						
KAPI	**Kappang**	**44.65**	**274**	*e*P	**P**	**22 57 11.7**	**-2.1**
	comp=Z,146nm,1.8s,mb5.5						
KAPI				LR	LR		
	comp=Z,830nm,20.0s,MS4.7						
KAPI	**Kappang**	**44.65**	**274**	P	**P**	**22 57 11.5**	**-2.3**
PPT	**Papeete**	**44.87**	**104**	*e*S	**S**	**23 03 56.2**	**+3.7**
	comp=Z,1μm,27.8s						
PPT				*e*LQ		23 08 01.0	
	comp=Z,3μm,30.0s						
PPT				*e*LR	LR	23 09 50.7	
	comp=Z,6μm,28.5s,baz=280						
PPT	**Papeete**	**44.87**	**104**	LR	LR	23 11 33.7	
	comp=Z,2μm,21.6s,MS4.9,baz=258,slow=30						
TBI	**Tubuai**	**45.42**	**112**	*e*S	**S**	**23 04 00.4**	**+0.1**
	comp=Z,1μm,28.8s						
TBI				*e*LR	LR	23 10 07.1	
	comp=Z,8μm,29.8s,baz=286						
TGY	**Tagaytay City**	**49.97**	**299**	P	**P**	**22 57 55.4**	**+0.2**
	comp=Z,128nm,0.3s,mb6.5,baz=168,slow=18,SNR=3.4						
TGY				LR	LR	23 16 48.3	
	comp=Z,6.3nm,18.2s,baz=325,slow=33						
TGY	**Tagaytay City**	**49.97**	**299**	P	**P**	**22 57 55.4**	**+0.2**
TGY				pmax	pmax		
	comp=Z,128nm,0.3s						
TGY				MLR	MLR		
	comp=Z,6.0nm,18.2s						
KKM	**Kota Kinabalu**	**50.99**	**287**	⇑*i*P	**P**	**22 58 01.9**	**-1.1**
	comp=Z,29nm,0.9s,mb5.2						
KKM				LR	LR		
	comp=Z,1μm,22.0s,MS4.8						
JOW	**Kunigami**	**51.65**	**318**	LR	LR	23 16 48.8	
	comp=Z,1μm,21.4s,MS4.9,baz=302,slow=32						
JOW	**Kunigami**	**51.65**	**318**	*e*P	**P**	**22 58 07.9**	**+0.2**
	comp=Z,22nm,1.2s,mb5.0						
MJAR	**Matsushiro Arr**	**53.59**	**334**	P	**P**	**22 58 20.8**	**-1.0**
	comp=Z,22nm,0.9s,mb5.1,baz=167,slow=7.5,SNR=23						
MJAR	**Matsushiro Arr**	**53.59**	**334**	P	**P**	**22 58 20.8**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,22nm,0.9s						
MAJO	**Matsushiro**	**53.59**	**334**	*e*P	**P**	**22 58 20.9**	**-0.9**
	comp=Z,26nm,0.8s,mb5.2						
MAJO				LR	LR		
	comp=Z,2μm,21.0s,MS5.1						
MAJO	**Matsushiro**	**53.59**	**334**	*e*P	**P**	**22 58 21.0**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.1						
MAT	**Matsushiro**	**53.59**	**334**	P	**P**	**22 58 20.4**	**-1.4**
MAT				S	**S**	**23 05 54.0**	**-0.2**
YULB	**Yu-li**	**54.49**	**309**	*e*P	**P**	**22 58 27.8**	**-0.9**
	comp=Z,18nm,0.8s,mb5.1						
JNU	**Nakatsue**	**54.52**	**325**	*e*P	**P**	**22 58 28.4**	**-0.3**
	comp=Z,20nm,0.9s,mb5.2						
TAOE	**Nuku Hiva Isla**	**54.53**	**93**	*e*S	**S**	**23 06 06.7**	**-1.0**
	comp=Z,921nm,27.3s						
TAOE				*e*SS	SS	23 09 51.4	+0.8
	comp=Z,537nm,27.5s						
TAOE				*e*LR	LR	23 14 05.2	
	comp=Z,3μm,29.4s,baz=270						
TPUB	**Ta-pu**	**54.94**	**309**	*e*P	**P**	**22 58 31.1**	**-0.9**
	comp=Z,38nm,0.9s,mb5.4						
SSLB	**Suanglung**	**54.97**	**310**	*e*P	**P**	**22 58 32.1**	**-0.1**
	comp=Z,29nm,0.9s,mb5.3						
YHNB	**Yeheng**	**55.16**	**311**	*e*P	**P**	**22 58 33.1**	**-0.3**
	comp=Z,45nm,1.1s,mb5.4						
YHNB				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
TATO	**Taipei**	**55.25**	**311**	PFAKE		22 58 50.0	+16
TATO				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
KSM	**Kuching**	**55.29**	**280**	*e*P	**P**	**22 58 33.5**	**-1.3**
	comp=Z,14nm,0.8s,mb5.0						
KSM				LR	LR		
	comp=Z,468nm,22.0s,MS4.5						
ERM	**Erimo**	**56.51**	**341**	PFAKE		22 58 50.0	+7.2
ERM				LR	LR		
	comp=Z,1μm,21.0s,MS4.9						
QZH	**Quanzhou**	**57.40**	**309**	⇑*i*P	**P**	**22 58 50.0**	**+0.5**
QZH				S	**S**	**23 06 48.0**	**+2.5**
QZH				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.6						
QZH				LR	LR		
	comp=N,3μm,22.0s						
QZH				LR	LR		
	comp=E,1μm,16.2s						
QZH				LR	LR		
	comp=Z,2μm,21.4s,MS5.2						
YUK	**Yuzh-Kuril'sk**	**57.57**	**344**	⇓*i*P	**P**	**22 58 51.8**	**+1.5**
YUK				*i* S	**S**	**23 06 34.9**	**-12**
ASAJ	**Asahikawa**	**58.59**	**342**	*e*P	**P**	**22 58 57.8**	**+0.4**
	comp=Z,27nm,1.0s,mb5.2						
RKT	**Rikitea**	**58.70**	**110**	*e*S	**S**	**23 07 02.5**	**-0.2**
	comp=Z,925nm,30.2s						
RKT				*e*LR	LR	23 16 09.9	
	comp=Z,8μm,27.8s,baz=276						
SSE	**Sheshan**	**59.13**	**317**	P	**P**	**22 59 00.9**	**-0.6**
SSE				S	**S**	**23 07 03.0**	**-4.9**
SSE				SS	SS	23 11 01.5	-1.1
SSE				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
SSE				pmax	pmax		
	comp=Z,300nm,9.7s						
SSE				LR	LR		
	comp=N,450nm,27.4s,MS4.7						
SSE				LR	LR		
	comp=E,690nm,27.5s,MS4.7						
SSE				LR	LR		
	comp=Z,1μm,28.5s,MS4.8						
KSRS	**Korea Array**	**59.35**	**327**	P	**P**	**22 59 03.1**	**+0.3**
	comp=Z,8.5nm,0.9s,mb4.8,baz=143,slow=7.0,SNR=25						
KSRS				LR	LR	23 22 24.7	
	comp=Z,905nm,18.1s,MS4.9,baz=140,slow=34						
KSRS	**Korea Array**	**59.35**	**327**	P	**P**	**22 59 03.2**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
KSRS				MLR	MLR		
	comp=Z,905nm,18.1s,MS4.9						
INCN	**Inchon**	**60.07**	**326**	PFAKE		22 59 20.0	+12
INCN				LR	LR		
	comp=Z,1μm,21.0s,MS5.0						
GZH	**Guangzhou**	**60.56**	**305**	P	**P**	**22 59 14.5**	**+3.0**
GZH				S	**S**	**23 07 30.4**	**+3.8**
GZH				LR	LR		
	comp=N,780nm,25.4s,MS4.9						
GZH				LR	LR		
	comp=E,700nm,26.6s,MS4.9						
GZH				LR	LR		
	comp=Z,2μm,23.4s,MS5.1						
YSS	**Yuzh-Sakhalins**	**61.11**	**343**	*e*P	**P**	**22 59 15.2**	**+0.4**
	comp=Z,86nm,1.2s,mb5.8						
YSS				LR	LR		
	comp=Z,366nm,20.0s,MS4.5						
YSS	**Yuzh-Sakhalins**	**61.11**	**343**	*e*P	**P**	**22 59 15.0**	**+0.3**
YSS				*e**PP	pP	22 59 27.0	+5.5
YSS				*e*		23 01 32.0	
YSS				*e*S	**S**	**23 07 30.0**	**-2.7**
YSS				*e*SSS		23 14 12.0	
YSS				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.5						
YSS				MLR	MLR		
	comp=Z,1μm,17.0s,MS5.0						
YSS				MLR	MLR		
	comp=N,1μm,19.0s,MS5.1						
YSS				MLR	MLR		
	comp=E,700nm,20.0s,MS5.1						
QIZ	**Qiongzhong**	**61.67**	**299**	P	**P**	**22 59 19.1**	**0.0**
QIZ				sP	sP	22 59 32.6	+4.2
QIZ				S	**S**	**23 07 41.9**	**+1.0**
QIZ				sS	sS	23 07 53.3	+1.3
QIZ				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.1						
QIZ				LR	LR		
	comp=N,320nm,24.8s,MS4.6						
QIZ				LR	LR		
	comp=E,360nm,25.0s,MS4.6						
QIZ				LR	LR		
	comp=Z,1μm,25.7s,MS5.0						
QIZ	**Qiongzhong**	**61.67**	**299**	⇑*i*P	**P**	**22 59 19.8**	**+0.7**
	comp=Z,54nm,1.4s,mb5.5						
QIZ				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
VLA	**Vladivostok**	**61.75**	**333**	⇓*e*P	**P**	**22 59 16.4**	**-2.8**
VLA				*e*		22 59 58.4	
VLA						23 01 32.2	
VLA				S	**S**	**23 07 33.4**	**-7.6**
VLA				pmax	pmax		
	comp=Z,43nm,1.6s,mb5.3						
SKR	**Severo-Kuril's**	**62.11**	**354**	*e*P	**P**	**22 59 26.0**	**+4.6**
SKR				*e*PPP		23 03 12.0	
SKR				*e*S	**S**	**23 07 52.0**	**+6.8**
SKR				*e*SS	SS	23 11 50.0	+1.4
SKR				smax			
	comp=N,1μm,12.0s						
SKR				MLR	MLR		
	comp=N,1μm,14.0s,MS5.4						
SKR				MLR	MLR		
	comp=E,1μm,14.0s,MS5.4						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s,MS5.2						
WHN	**Wuhan**	**63.59**	**312**	P	**P**	**22 59 31.5**	**-0.2**
WHN				PP	PP	23 01 52.5	+0.6
WHN				SS	SS	23 12 14.3	+1.7
WHN				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
WHN				LR	LR		
	comp=N,2μm,16.6s						
WHN				LR	LR		
	comp=E,2μm,21.9s						
WHN				LR	LR		
	comp=Z,3μm,22.6s						
DL2	**Dalian**	**63.90**	**324**	⇑P	**P**	**22 59 33.9**	**+0.4**
DL2				S	**S**	**23 08 09.3**	**+1.2**
DL2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
DL2				pmax	pmax		
	comp=Z,180nm,9.4s						
DL2				LR	LR		
	comp=N,480nm,24.2s,MS4.8						
DL2				LR	LR		
	comp=E,500nm,21.9s,MS4.8						
DL2				LR	LR		
	comp=Z,750nm,29.9s						
MDJ	**Mudanjiang**	**63.95**	**333**	P	**P**	**22 59 34.4**	**+0.6**
MDJ				pP	pP	22 59 43.4	+2.8
MDJ				sP	sP	22 59 47.4	+4.3
MDJ				PP	PP	23 01 56.3	+1.5
MDJ				S	**S**	**23 08 11.0**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
MDJ				pmax	pmax		
	comp=Z,220nm,4.1s						
MDJ				LR	LR		
	comp=N,750nm,19.3s,MS4.9						
MDJ				LR	LR		
	comp=E,230nm,16.5s,MS4.9						
MDJ				LR	LR		
	comp=Z,780nm,21.5s,MS4.9						
MDJ	**Mudanjiang**	**63.95**	**333**	*e*P	**P**	**22 59 33.9**	**+0.1**
	comp=Z,116nm,1.7s,mb5.6						
MDJ				LR	LR		
	comp=Z,544nm,21.0s,MS4.7						
PET	**Petropavlovsk**	**64.22**	**356**	PFAKE		22 59 50.0	+15
PET				LR	LR		
	comp=Z,752nm,21.0s,MS4.8						
PET	**Petropavlovsk**	**64.22**	**356**	*e*P	**P**	**22 59 35.7**	**+0.4**
PET				*e**PP	pP	22 59 51.4	+9.3
PET				*e*S	**S**	**23 08 08.4**	**-3.1**
PET				*e*SS	SS	23 12 18.2	-3.3
PET				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.3						
PET				pmax	pmax		
	comp=Z,300nm,14.9s						
PEA0B	**Petropavlovsk-**	**64.37**	**355**	*e*P	**P**	**22 59 35.9**	**-0.5**
PETK	**Petropavlovsk-**	**64.37**	**355**	P	**P**	**22 59 36.0**	**-0.3**
	comp=Z,26nm,0.9s,mb5.3,baz=150,slow=7.2,SNR=16						
PETK				LR	LR	23 22 09.0	
	comp=Z,705nm,20.9s,MS4.8,baz=178,slow=31						
PETK	**Petropavlovsk-**	**64.37**	**355**	P	**P**	**22 59 36.1**	**-0.2**
PETK				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.3						
PETK				MLR	MLR		
	comp=Z,705nm,20.9s,MS4.8						
SNY	**Shenyang**	**64.82**	**327**	⇑P	**P**	**22 59 41.0**	**+1.5**
SNY				S	**S**	**23 08 21.9**	**+2.5**
SNY				pmax	pmax		
	comp=Z,620nm,2.5s,mb6.2						
HABR	**Khabarovsk**	**64.92**	**339**	*e*P	**P**	**22 59 39.0**	**-1.0**
HABR				*e**PP	pP	22 59 53.5	+6.7
HABR				*e*		23 01 59.6	
HABR				S	**S**	**23 08 14.4**	**-5.9**
HABR				*e*S	**S**	**23 08 31.9**	**+12**
HABR				*e**SS	sS	23 08 41.0	+9.5
HABR				*e*		23 09 26.7	
HABR				*e*SS	SS	23 12 25.1	-7.5
HABR				*e*SSS		23 15 27.4	
HABR				pmax	pmax		
	comp=N,78nm,2.6s						
HABR				pmax	pmax		
	comp=Z,145nm,1.7s,mb5.7						
HABR				pmax	pmax		
	comp=E,37nm,1.2s						
HABR				MLR	MLR		
	comp=Z,459nm,18.0s,MS4.7						
ADK	**Adak**	**64.96**	**13**	PFAKE		22 59 50.0	+10
ADK				LR	LR		
	comp=Z,593nm,22.0s,MS4.7						
IPM	**Ipoh**	**65.02**	**280**	*e*P	**P**	**22 59 41.9**	**+0.5**
	comp=Z,70nm,1.3s,mb5.5						
CN2	**Changchun**	**65.28**	**330**	*e*P	**P**	**22 59 42.8**	**+0.3**
CN2				*e*S	S	23 08 17.3	-7.7
CN2				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
CN2				LR	LR		
	comp=N,500nm,20.0s,MS4.9						
CN2				LR	LR		
	comp=E,600nm,20.0s,MS4.9						
CN2				LR	LR		
	comp=Z,700nm,23.0s,MS4.8						
KULM	**Kulim**	**65.58**	**281**	*e*P	**P**	**22 59 45.0**	**0.0**
	comp=Z,15nm,0.8s,mb5.1						
KULM				LR	LR		
	comp=Z,334nm,22.0s,MS4.5						
CASY	**Casey**	**65.73**	**201**	*e*P	**P**	**22 59 45.0**	**0.0**
	comp=Z,84nm,1.3s,mb5.6						
COCO	**West Island**	**66.06**	**262**	PFAKE		23 00 00.0	+12
COCO				LR	LR		
	comp=Z,1μm,21.0s,MS5.1						
SBA	**Scott Base**	**66.60**	**179**	*e*P	**P**	**22 59 51.8**	**+1.3**
	comp=Z,78nm,1.2s,mb5.6						
SBA				LR	LR		
	comp=Z,411nm,19.0s,MS4.7						
SBA	**Scott Base**	**66.60**	**179**	*e*P	**P**	**22 59 51.8**	**+1.3**
SBA				pmax	pmax		
	comp=Z,78nm,1.2s,mb5.6						
SBA				MLR	MLR		
	comp=Z,411nm,19.0s,MS4.7						
PSI	**Prapat

GYA LR LR
comp=E,760nm,20.0s,MS5.1
GYA LR LR
comp=Z,940nm,18.9s,MS5.0
BJT Baijiatuau 67.85 322 PFAKE 23 00 10.0 +11
BJT LR LR
comp=Z,1μm,20.0s,MS5.1
BJI Beijing 67.86 322 P **P** **22 59 58.8 -0.2**
BJI S S 23 08 53.3 -3.1
BJI pmax pmax
comp=Z,19nm,2.0s,mb4.8
BJI LR LR
comp=N,1μm,26.9s,MS5.0
BJI LR LR
comp=E,780nm,28.3s,MS5.0
BJI LR LR
comp=Z,2μm,36.9s
NIKO Nikolski 67.94 17 *e*P **P** **22 59 58.2 -1.0**
comp=Z,54nm,0.8s,mb5.6
NST Nakhon Sawan 69.06 292 P **P** **23 00 08.0 +0.9**
XAN Xi'an 69.34 313 P **P** **23 00 08.4 0.0**
XAN pP pP 23 00 18.8 +3.6
XAN sP sP 23 00 22.3 +4.5
XAN S S 23 09 11.0 -3.2
XAN sS sS 23 09 28.3 +2.8
XAN SS SS 23 13 39.3 -2.4
XAN pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
XAN pmax pmax
comp=Z,52nm,4.7s
XAN LR LR
comp=N,390nm,22.3s,MS4.8
XAN LR LR
comp=E,360nm,19.4s,MS4.8
XAN LR LR
comp=Z,410nm,22.3s,MS4.6
KMI Kunming 70.16 302 P **P** **23 00 14.6 +0.9**
KMI pP pP 23 00 26.3 +5.8
KMI sP sP 23 00 30.3 +7.3
KMI PcP PcP 23 00 35.8 +0.3
KMI PP PP 23 02 50.3 +1.1
KMI S S 23 09 25.3 +1.1
KMI sS sS 23 09 44.0 +8.5
KMI SKS 23 10 08.8
KMI pmax pmax
comp=Z,28nm,1.0s,mb5.2
KMI LR LR
comp=N,220nm,21.2s,MS5.0
KMI LR LR
comp=E,820nm,21.2s,MS5.0
KMI LR LR
comp=Z,1μm,22.9s,MS5.1
CHRT Chiangrai 70.77 296 ⇑P **P** **23 00 17.0 -0.5**
CM31 Chiang Mai Arr 71.04 294 *e*P **P** **23 00 20.1 +0.9**
comp=Z,3.2nm,0.4s,mb4.6
CM31 LR LR
comp=Z,463nm,19.0s,MS4.8
CMAR Chiang Mai Arr 71.04 294 P **P** **23 00 20.1 +0.9**
comp=Z,8.2nm,0.9s,mb4.7,baz=114,slow=4.7,SNR=30
CMAR PKPPKP 23 28 14.7
comp=Z,1.1nm,0.4s,baz=284,slow=4.0,SNR=5.5
CMAR Chiang Mai Arr 71.04 294 P **P** **23 00 20.1 +0.9**
CMAR pmax pmax
comp=Z,8.0nm,0.9s
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CHG Chiang Mai 71.16 294 ⇑P **P** **23 00 20.3 +0.4**
comp=Z,22nm,1.5s,mb4.9
CHTO Chiang Mai 71.16 294 *e*P **P** **23 00 19.6 -0.3**
comp=Z,77nm,1.8s,mb5.3
CHTO LR LR
comp=Z,662nm,21.0s,MS4.9
CHTO Chiang Mai 71.16 294 *e*P **P** **23 00 19.6 -0.3**
CHTO pmax pmax
comp=Z,77nm,1.8s,mb5.3
CHTO MLR MLR
comp=Z,662nm,21.0s,MS4.9
HHC Hu-ho-hao-te 71.18 320 *e*P **P** **23 00 21.4 +1.8**
HHC pP pP 23 00 31.6 +5.2
HHC sP sP 23 00 36.0 +7.1
HHC PcP PcP 23 00 41.3 +1.8
HHC PP PP 23 03 02.3 +4.6
HHC S S 23 09 35.6 +0.1
HHC sS sS 23 09 53.1 +6.3
HHC ScS ScS 23 10 17.8 -5.1
HHC pmax pmax
comp=Z,19nm,1.3s,mb4.9
HHC pmax pmax
comp=Z,420nm,7.5s
HHC LR LR
comp=N,780nm,21.6s,MS5.1
HHC LR LR
comp=E,680nm,20.0s,MS5.1
HHC LR LR
comp=Z,1μm,21.1s,MS5.1
CD2 Chengdu 71.73 308 *e*P **P** **23 00 23.6 +0.5**
CD2 pP pP 23 00 33.9 +3.9
CD2 sP sP 23 00 37.9 +5.4
CD2 PP PP 23 03 05.0 +2.3
CD2 S S 23 09 40.5 -1.8
CD2 sS sS 23 09 57.6 +4.0
CD2 SS SS 23 14 18.6 -0.1
CD2 pmax pmax
comp=Z,40nm,1.4s,mb5.2
CD2 pmax pmax
comp=Z,590nm,7.2s
CD2 LR LR
comp=N,750nm,24.0s,MS5.1
CD2 LR LR
comp=E,870nm,21.6s,MS5.1
CD2 LR LR
comp=Z,820nm,24.0s,MS4.9
HIA Hailar 71.94 331 *e*P **P** **23 00 24.0 +0.1**
comp=Z,34nm,1.0s,mb5.2
HIA LR LR
comp=Z,712nm,21.0s,MS4.9
HIA Hailar 71.94 331 *e*P **P** **23 00 24.0 +0.1**
HIA pmax pmax
comp=Z,34nm,1.0s
HIA MLR MLR
comp=Z,712nm,21.0s
BTO Baotou 72.02 319 *e*P **P** **23 00 24.8 +0.2**
MIR Mirnyy 72.38 203 ⇓*i*P **P** **23 00 27.0 +0.6**
MIR pmax pmax
comp=Z,144nm,1.4s,mb5.7
LZH Lanzhou 73.97 313 *e*P **P** **23 00 37.4 +1.1**
LZH S S 23 10 06.3 -1.3
LZH sS sS 23 10 20.0 +1.1
LZH pmax pmax
comp=Z,49nm,1.1s,mb5.3
LZH pmax pmax
comp=Z,180nm,4.0s
LZH LR LR
comp=N,900nm,18.8s,MS5.4
LZH LR LR
comp=E,2μm,19.2s,MS5.4
LZH LR LR
comp=Z,1μm,19.2s,MS5.3
SEY Seymchan 74.55 354 ⇓*i*P **P** **23 00 38.8 -0.3**
CIT Chita 76.72 330 *e*P **P** **23 00 52.0 +0.3**
CIT *e* 23 01 04.7
CIT pmax pmax
comp=Z,180nm,2.1s,mb5.6
KDAK Kodiak Island 77.24 22 PFAKE 23 01 10.0 +15
KDAK LR LR
comp=Z,537nm,19.0s,MS4.9
ULN Ulaanbaatar 77.73 325 *e*P **P** **23 00 58.1 +0.6**
comp=Z,22nm,1.0s,mb5.0
ULN LR LR
comp=Z,1μm,22.0s,MS5.1
ULN Ulaanbaatar 77.73 325 *e*P **P** **23 00 58.1 +0.6**
ULN pmax pmax
comp=Z,22nm,1.0s,mb5.0
ULN MLR MLR
comp=Z,1μm,22.0s,MS5.1
YAK Yakutsk 77.95 344 *e*P **P** **23 00 57.8 -0.6**
YAK LR LR
comp=Z,885nm,20.0s,MS5.1
YAK Yakutsk 77.95 344 *e*P **P** **23 00 57.8 -0.6**
YAK *e* pP 23 01 05.6 +0.3
YAK *e**PP pP 23 01 08.5 +3.2
YAK *e* 23 03 54.8
YAK *e*S S 23 10 50.5 +0.2
YAK *e**SS sS 23 11 03.1 +1.4
YAK *e* 23 11 15.5
YAK pmax pmax
comp=Z,46nm,1.3s,mb5.2
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=Z,11nm,0.5s,mb5.0
YAK smax
comp=N,274nm,5.3s
YAK smax
comp=E,92nm,4.1s
YAK MLR MLR
comp=N,572nm,21.0s
YAK MLR MLR
comp=Z,780nm,18.0s,MS5.1
SONM Songino Array 78.09 324 P **P** **23 01 00.2 +0.6**
comp=Z,9.8nm,0.9s,mb4.7,baz=132,slow=5.8,SNR=35
SONM PKPPKP 23 28 02.6
comp=Z,0.9nm,0.8s,baz=169,slow=1.5,SNR=5.0
SONM LR LR 23 33 00.5
comp=Z,1μm,20.5s,MS5.1,baz=119,slow=34
SONM Songino Array 78.09 324 P **P** **23 01 00.2 +0.7**
SONM pmax pmax
comp=Z,10.0nm,1.0s
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM MLR MLR
comp=Z,1μm,20.5s
GTA Gaotai 78.30 314 P **P** **23 01 02.3 +1.4**
GTA pP pP 23 01 12.5 +4.7
GTA sP sP 23 01 16.9 +6.6
GTA S S 23 10 58.9 +3.8
GTA pmax pmax
comp=Z,15nm,1.1s,mb4.8
GTA LR LR
comp=N,460nm,22.9s,MS5.1
GTA LR LR
comp=E,800nm,21.4s,MS5.1
GTA LR LR
comp=Z,900nm,22.1s,MS5.0
SVW2 Sparrevohn 78.71 19 *e*P **P** **23 01 03.1 +0.5**
comp=Z,70nm,1.6s,mb5.3
QSPA South Pole Qui 78.75 180 LR LR 23 32 51.8
comp=Z,694nm,18.4s,MS5.0,baz=35,slow=33
QSPA South Pole Qui 78.75 180 ⇑*i*P **P** **23 01 03.4 +0.8**
comp=Z,174nm,1.2s,mb5.9
QSPA LR LR
comp=Z,948nm,19.0s,MS5.2
BILL Bilibino 79.10 1 *e*P **P** **23 01 04.4 -0.3**
comp=Z,100nm,1.4s,mb5.5
BILL LR LR
comp=Z,453nm,21.0s,MS4.8
BILL Bilibino 79.10 1 ⇓*i*P **P** **23 01 04.3 -0.3**
BILL *e* 23 01 13.1
BILL *e* 23 04 01.7
BILL pmax pmax
comp=Z,109nm,1.7s,mb5.5
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.7
RSO Redoubt South 79.15 20 *e*P **P** **23 01 03.6 -1.4**
comp=Z,52nm,1.0s,mb5.4
SHL Shillong 79.51 299 *e*PKP **P** **23 01 12.0 +4.2**
TTA Tatalina 80.00 17 *e*P **P** **23 01 09.7 +0.1**
TTA Tatalina 80.00 17 *e*P **P** **23 01 09.7 +0.1**
SLKM Skilak Lake 80.05 21 *e*P **P** **23 01 09.0 -1.0**
SLKM Skilak Lake 80.05 21 *e*P **P** **23 01 09.0 -0.9**
BOD Bodaibo 80.19 335 *e*P **P** **23 01 07.8 -2.9**
BOD pmax pmax
comp=Z,14nm,1.8s,mb4.6
RC01 Rabbit Creek A 80.63 21 *e*P **P** **23 01 12.2 -0.9**
comp=Z,32nm,1.2s,mb5.1
ZAK Zakamensk 81.15 325 *e*P **P** **23 01 15.4 -0.7**
ZAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
PMR Palmer 81.19 21 *e*P **P** **23 01 15.4 -0.6**
comp=Z,28nm,1.2s,mb5.1
PMR Palmer 81.19 21 *e*P **P** **23 01 15.4 -0.6**
PMR pmax pmax
comp=Z,28nm,1.2s,mb5.1
LSA Lhasa 81.40 303 P **P** **23 01 17.9 0.0**
LSA Lhasa 81.40 303 *e*P **P** **23 01 19.0 +1.1**
comp=Z,108nm,2.1s,mb5.4
LSA LR LR
comp=Z,1μm,22.0s,MS5.1
LSA Lhasa 81.40 303 *e*P **P** **23 01 19.0 +1.1**
LSA pmax pmax
comp=Z,108nm,2.1s,mb5.4
LSA MLR MLR
comp=Z,1μm,22.0s,MS5.1
IRK Irkutsk 81.55 327 *e*P **P** **23 01 20.2 +2.1**
IRK pmax pmax
comp=Z,35nm,2.2s,mb4.9
TLY Talaya 81.60 327 *e*P **P** **23 01 18.1 -0.3**
comp=Z,15nm,1.0s,mb4.9
TLY LR LR
comp=Z,644nm,19.0s,MS5.0
TLY Talaya 81.60 327 *e*P **P** **23 01 18.1 -0.3**
TLY *e*S S 23 11 37.5 +8.1
TLY pmax pmax
comp=Z,13nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,519nm,19.0s,MS4.9
TLY Talaya 81.60 327 P **P** **23 01 18.9 +0.5**
comp=Z,57nm,1.0s,mb5.5,SNR=6.3
SML Sawmill 81.62 21 *e*P **P** **23 01 18.2 -0.1**
comp=Z,7.4nm,1.3s,mb4.5
SML Sawmill 81.62 21 *e*P **P** **23 01 18.2 -0.1**
SML pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
TRF Thorofare Moun 82.12 19 *e*P **P** **23 01 20.8 -0.1**
comp=Z,12nm,0.8s,mb4.9
BPAW Bear Paw Mtn. 82.37 18 *e*P **P** **23 01 20.3 -1.9**
comp=Z,17nm,1.4s,mb4.8
MCK McKinley 82.75 19 *e*P **P** **23 01 23.2 -1.0**
comp=Z,29nm,1.0s,mb5.3
MCK McKinley 82.75 19 *e*P **P** **23 01 23.2 -1.0**
MCK pmax pmax
comp=Z,29nm,1.0s,mb5.3
VIB Van Inlet 83.54 33 T 00 33 46.0
DIB Dawson Inlet, 83.55 33 T 00 33 46.9
TAPN Taplejung 83.61 299 *e*P **P** **23 01 29.7 +0.2**
comp=Z,132nm,1.7s,mb5.8
MCCM Marconi Confer 83.61 49 PFAKE 23 01 40.0 +11
MCCM LR LR
comp=Z,681nm,19.0s,MS5.0
KIPM Iron Peak 83.74 47 *e*P **P** **23 01 29.1 -0.7**
comp=Z,134nm,1.6s,mb5.8
ODAN Odare 83.75 299 *e*P **P** **23 01 30.5 +0.3**
comp=Z,123nm,1.4s,mb5.8
HOPS Hopland 83.76 48 PFAKE 23 01 40.0 +10
HOPS LR LR
comp=Z,669nm,21.0s,MS5.0
COLA College 83.88 19 *e*P **P** **23 01 28.3 -1.7**
comp=Z,214nm,1.4s,mb6.1
COLA LR LR
comp=Z,480nm,19.0s,MS4.9
COLA College 83.88 19 *e*P **P** **23 01 28.3 -1.7**
COLA pmax pmax
comp=Z,214nm,1.4s,mb6.1
COLA MLR MLR
comp=Z,480nm,19.0s,MS4.9
KHMM Horse Mountain 83.93 46 *e*P **P** **23 01 30.9 +0.1**
comp=Z,34nm,1.3s,mb5.3
MENT Mentasta 83.98 21 *e*P **P** **23 01 30.7 +0.2**
KRMB Red Mountain 84.03 46 *e*P **P** **23 01 31.2 -0.1**
comp=Z,101nm,1.7s,mb5.7
ILAR Eielson Array 84.12 19 P **P** **23 01 29.8 -1.4**
comp=Z,9.0nm,0.9s,mb4.9,baz=224,slow=6.0,SNR=50
ILAR PKKPbc PKKPbc 23 19 45.1 -3.3
comp=Z,1.3nm,1.0s,baz=14,slow=2.9,SNR=7.7
ILAR LR LR 23 33 19.4
comp=Z,418nm,21.1s,MS4.8,baz=69,slow=32
ILAR Eielson Array 84.12 19 P **P** **23 01 29.8 -1.4**
ILAR pmax pmax
comp=Z,9.0nm,0.9s
ILAR pmax pmax
comp=Z,1.0nm,1.0s
ILAR MLR MLR
comp=Z,418nm,21.1s
SAO San Andreas Ge 84.24 51 *e*P **P** **23 01 32.1 -0.4**
comp=Z,39nm,1.3s,mb5.4
SAO LR LR
comp=Z,1μm,20.0s,MS5.3
SAO San Andreas Ge 84.24 51 *e*P **P** **23 01 32.1 -0.4**
SAO pmax pmax
comp=Z,39nm,1.3s,mb5.4
SAO MLR MLR
comp=Z,1μm,20.0s,MS5.3
DOT Dot Lake 84.31 21 *e*P **P** **23 01 31.9 -0.3**
comp=Z,40nm,0.8s,mb5.6
WDC Whiskeytown Da 84.68 47 *e*P **P** **23 01 34.2 -0.4**
comp=Z,52nm,1.4s,mb5.5
WDC LR LR
comp=Z,693nm,21.0s,MS5.0
WDC Whiskeytown Da 84.68 47 *e*P **P** **23 01 34.2 -0.4**
WDC pmax pmax
comp=Z,52nm,1.4s,mb5.5
WDC MLR MLR
comp=Z,693nm,21.0s,MS5.0
COLD Coldfoot 84.85 16 *e*P **P** **23 01 35.3 +0.4**
comp=Z,19nm,1.2s,mb5.1
PKM Peak Mountain 84.93 53 ⇓P **P** **23 01 36.0 0.0**
baz=85
YBH Yreka Blue Hor 84.94 46 ⇓*i*P **P** **23 01 35.8 -0.1**
comp=Z,43nm,1.3s,mb5.4
YBH LR LR
comp=Z,614nm,20.0s,MS5.0
YBH Yreka Blue Hor 84.94 46 ⇓*i*P **P** **23 01 35.8 -0.1**
YBH pmax pmax
comp=Z,43nm,1.3s
YBH MLR MLR
comp=Z,614nm,20.0s
HUMO Hull Mountain 85.07 45 ⇓*i*P **P** **23 01 36.3 -0.2**
comp=Z,39nm,1.2s,mb5.4
HUMO LR LR
comp=Z,620nm,19.0s,MS5.0
GUN Gumba 85.32 300 *e*P **P** **23 01 38.3 +0.2**
comp=Z,127nm,1.3s,mb5.9
PALK Pallekele 85.33 278 *e*P **P** **23 01 39.2 +0.7**
comp=Z,47nm,1.1s,mb5.5
PALK Pallekele 85.33 278 *e*P **P** **23 01 39.2 +0.7**
PALK pmax pmax
comp=Z,47nm,1.1s,mb5.5
CMB Columbia Colle 85.44 50 ⇓*i*P **P** **23 01 37.9 -0.6**
comp=Z,35nm,1.4s,mb5.3
CMB LR LR
comp=Z,828nm,20.0s,MS5.1
CMB Columbia Colle 85.44 50 ⇓*i*P **P** **23 01 37.9 -0.6**
CMB pmax pmax
comp=Z,35nm,1.4s,mb5.3
CMB MLR MLR
comp=Z,828nm,20.0s,MS5.1
PKI Pulchoki 85.64 299 *e*P **P** **23 01 39.6 -0.1**
comp=Z,66nm,1.2s,mb5.7
PKI Pulchoki 85.64 299 *e*P **P** **23 01 39.6 -0.1**
PKI pmax pmax
comp=Z,66nm,1.2s,mb5.7
KKN Kakani 85.80 299 *e*P **P** **23 01 40.3 -0.2**
comp=Z,109nm,1.6s,mb5.8
KKN Kakani 85.80 299 *e*P **P** **23 01 40.3 -0.2**
KKN pmax pmax
comp=Z,109nm,1.6s,mb5.8
DMN Daman 85.90 299 *e*P **P** **23 01 40.8 -0.2**
comp=Z,126nm,1.3s,mb6.0
EGAK Eagle 86.01 20 ⇓*i*P **P** **23 01 40.5 -0.2**
comp=Z,63nm,1.1s,mb5.8
EGAK LR LR
comp=Z,440nm,20.0s,MS4.8
E03A Lebam 86.04 41 ⇓P **P** **23 01 40.9 -0.4**
baz=86,SNR=7.6
TIXI Tiksi 86.06 349 *e*P **P** **23 01 39.9 -1.0**
comp=Z,44nm,1.5s,mb5.5
TIXI LR LR
comp=Z,443nm,19.0s,MS4.9
TIXI Tiksi 86.06 349 *e*P **P** **23 01 39.9 -0.9**
TIXI pmax pmax
comp=Z,44nm,1.5s,mb5.5
TIXI MLR MLR
comp=Z,443nm,19.0s,MS4.9
MWC Mount Wilson 86.12 54 ⇓*i*P **P** **23 01 41.4 -0.6**
comp=Z,143nm,1.6s,mb6.0
MWC Mount Wilson 86.12 54 ⇓*i*P **P** **23 01 41.4 -0.6**
MWC pmax pmax
comp=Z,143nm,1.6s,mb6.0
NLWA Neilton Lookou 86.14 40 ⇓*i*P **P** **23 01 41.5 -0.3**
comp=Z,53nm,1.8s,mb5.5
NLWA LR LR
comp=Z,746nm,22.0s,MS5.0
ISA Isabella 86.20 53 ⇓P **P** **23 01 41.7 -0.6**
baz=86
ISA Isabella 86.20 53 ⇓*i*P **P** **23 01 41.7 -0.6**
comp=Z,46nm,1.4s,mb5.5
ISA Isabella 86.20 53 ⇓*i*P **P** **23 01 41.7 -0.6**
ISA pmax pmax
comp=Z,46nm,1.4s,mb5.5
DAWY Dawson 86.21 21 *e*P **P** **23 01 40.9 -0.8**
WAKR Walker 86.30 50 *e*P **P** **23 01 42.2 -0.5**
comp=Z,71nm,1.4s,mb5.7
WCN Washoe City 86.30 49 ⇓P **P** **23 01 42.2 -0.5**
baz=86
WCN Washoe City 86.30 49 *e*P **P** **23 01 41.9 -0.8**
comp=Z,11nm,1.3s,mb4.9
WCN Washoe City 86.30 49 *e*P **P** **23 01 41.9 -0.8**
WCN pmax pmax
comp=Z,11nm,1.3s,mb4.9
H04A Detroit Lake 86.30 43 ⇑P **P** **23 01 41.8 -0.8**
baz=86
EDW2 Edwards Air Fo 86.36 54 ⇑P **P** **23 01 42.3 -0.9**
baz=86
GKN Gorkha 86.41 299 *e*P **P** **23 01 42.8 -0.7**
BFSC Mount Baldy Ra 86.45 54 ⇑P **P** **23 01 43.0 -0.6**
baz=86,SNR=8.9
K05A Summer Lake 86.55 45 ⇑P **P** **23 01 44.3 +0.4**
baz=87
F04A Amboy 86.57 42 ⇓P **P** **23 01 43.6 -0.2**
baz=87
MURC Murrieta 86.64 55 ⇑P **P** **23 01 44.2 -0.3**
baz=87
PAHR Pah Rah Range 86.69 49 ⇓*i*P **P** **23 01 44.4 -0.2**
comp=Z,56nm,1.3s,mb5.6
MOD Modoc 86.70 46 ⇑*i*P **P** **23 01 44.2 -0.5**
comp=Z,32nm,1.5s,mb5.3
MOD LR LR
comp=Z,237nm,19.0s,MS4.6
TDL Tradedollar La 86.84 42 P **P** **23 01 45.6 +0.4**
PGC Sidney 86.85 39 ⇓*i*P **P** **23 01 44.7 -0.5**
comp=Z,4.2nm,1.5s,mb4.5
GNW Green Mountain 86.86 40 ⇓*i*P **P** **23 01 44.9 -0.4**
comp=Z,19nm,1.5s,mb5.1
DAC Darwin (Calif) 87.06 52 PFAKE 23 02 00.0 +13
DAC LR LR
comp=Z,966nm,22.0s,MS5.2
MONP Monument Peak 87.08 56 P **P** **23 01 47.0 +0.3**
baz=87,SNR=13
MPMC Manual Prospec 87.08 53 ⇑P **P** **23 01 46.6 -0.1**
baz=87
NVAR Mina Array Bea 87.12 50 P **P** **23 01 46.6 -0.2**
comp=Z,20nm,1.0s,mb5.3,baz=237,slow=7.0,SNR=48
NVAR PKKPbc PKKPbc 23 19 40.5 +0.6
comp=Z,0.8nm,0.8s,baz=90,slow=3.0,SNR=4.2
NVAR PKPPKP 23 27 49.7
comp=Z,0.3nm,0.5s,baz=123,slow=3.3,SNR=3.9
NVAR Mina Array Bea 87.12 50 P **P** **23 01 46.6 -0.2**
NVAR PKKPbc PKKPbc 23 19 40.5 +0.6
NVAR P'P' 23 27 49.7
DLBC Dease Lake 87.20 29 *e*P **P** **23 01 45.6 -1.0**
LON Longmire 87.24 41 *e*P **P** **23 01 46.0 -1.2**
comp=Z,25nm,1.5s,mb5.2
LON Longmire 87.24 41 *e*P **P** **23 01 46.0 -1.1**
LON pmax pmax
comp=Z,25nm,1.5s,mb5.2
PFO Pinyon Flat Ob 87.24 55 ⇓P **P** **23 01 47.3 -0.2**
baz=87,SNR=5.7
PFO Pinyon Flat Ob 87.24 55 ⇓*i*P **P** **23 01 47.1 -0.4**
comp=Z,26nm,1.3s,mb5.3
PFO LR LR
comp=Z,1μm,19.0s,MS5.3
PFO Pinyon Flat Ob 87.24 55 ⇓*i*P **P** **23 01 47.1 -0.4**
PFO pmax pmax
comp=Z,26nm,1.3s,mb5.3
PFO MLR MLR
comp=Z,1μm,19.0s,MS5.3
DANN Dangsing 87.24 299 *e*P **P** **23 01 47.1 -0.5**
D05A Enumclaw 87.27 41 ⇑P **P** **23 01 47.2 -0.1**
baz=87,SNR=6.4
DVTC Desert V Tower 87.28 56 ⇓P **P** **23 01 47.7 +0.1**
baz=87
VIPM Ingram Point 87.30 44 P **P** **23 01 47.0 -0.5**
VIPM Ingram Point 87.30 44 P **P** **23 01 47.0 -0.5**
GSC Goldstone 87.41 53 P **P** **23 01 48.1 -0.1**
baz=87,SNR=9.8
GSC Goldstone 87.41 53 ⇑*i*P **P** **23 01 48.0 -0.2**
comp=Z,88nm,1.8s,mb5.7

GSC	Goldstone	87.41	53	⇑P	P	23 01 48.0	-0.3
GSC				pmax	pmax		
	comp=Z,87nm,1.8s,mb5.7						
GRAC	Grapevine Rang	87.43	52	⇑P	P	23 01 48.5	+0.2
	baz=88						
G06A	Carlson Farm,	87.52	43	P	P	23 01 48.0	-0.6
	baz=88,SNR=7.6						
SWSC	Sam W. Stewart	87.60	56	⇑P	P	23 01 48.7	-0.5
	baz=88,SNR=11						
HTW	Haystack Looko	87.62	40	P	P	23 01 48.8	-0.1
JCW	Jim Creek	87.65	40	eP	P	23 01 48.5	-0.6
	comp=Z,58nm,1.5s,mb5.6						
HEC	Hector,Ludlow	87.66	54	⇓P	P	23 01 49.5	+0.1
	baz=88,SNR=7.0						
FURC	Furnace Creek,	87.68	52	⇓P	P	23 01 48.8	-0.7
	baz=88						
BELC	Belle Mtn. Jos	87.71	55	P	P	23 01 49.8	+0.1
	baz=88,SNR=24						
I07A	Izee	87.93	44	⇑P	P	23 01 50.4	-0.1
	baz=88						
WVOR	Wild Horse Val	88.04	46	⇓iP	P	23 01 50.8	-0.3
	comp=Z,48nm,1.3s,mb5.6						
WVOR				LR	LR		
	comp=Z,450nm,20.0s,MS4.9						
WVOR	Wild Horse Val	88.04	46	⇓iP	P	23 01 50.8	-0.3
WVOR				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.6						
WVOR				MLR	MLR		
	comp=Z,450nm,20.0s,MS4.9						
BC3	Big Chuckawall	88.06	55	⇑P	P	23 01 51.6	+0.2
	baz=88,SNR=25						
TUQ	Turquoise Moun	88.14	53	⇑P	P	23 01 52.0	+0.3
	baz=88,SNR=9.3						
GMRC	Granite Mounta	88.18	54	⇓P	P	23 01 51.7	-0.3
	baz=88,SNR=23						
WMQ	Urumqi	88.35	315	P	P	23 01 52.0	-0.5
WMQ				pP	pP	23 02 03.0	+3.5
WMQ				sP	sP	23 02 07.0	+5.0
WMQ				PP	PP	23 05 22.0	+1.6
WMQ				SKS		23 12 16.0	
WMQ				S	S	23 12 33.0	-3.7
WMQ				SS	SS	23 18 27.0	+0.1
WMQ				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.4						
WMQ				pmax	pmax		
	comp=Z,88nm,8.0s						
WMQ				LR	LR		
	comp=N,700nm,20.0s,MS5.3						
WMQ				LR	LR		
	comp=E,880nm,20.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
GLA	Glamis	88.42	56	P	P	23 01 53.7	+0.6
	baz=88,SNR=21						
GLA	Glamis	88.42	56	⇓iP	P	23 01 53.6	+0.5
	comp=Z,137nm,1.4s,mb6.0						
GLA	Glamis	88.42	56	⇓iP	P	23 01 53.6	+0.5
GLA				pmax	pmax		
	comp=Z,137nm,1.4s,mb6.0						
J08A	Circle Bar Ran	88.43	45	⇑P	P	23 01 53.0	+0.2
	baz=88						
IRM	Iron Mountain	88.43	55	⇓P	P	23 01 53.3	+0.2
	baz=88,SNR=42						
ETW	Entiat	88.47	41	eP	P	23 01 52.5	-0.5
	comp=Z,38nm,1.4s,mb5.4						
BMN	Battle Mountai	88.49	48	⇓iP	P	23 01 53.0	-0.2
	comp=Z,52nm,1.6s,mb5.5						
BMN				LR	LR		
	comp=Z,389nm,19.0s,MS4.8						
BMN	Battle Mountai	88.49	48	⇓iP	P	23 01 53.0	-0.3
BMN				pmax	pmax		
	comp=Z,52nm,1.6s,mb5.5						
BMN				MLR	MLR		
	comp=Z,389nm,19.0s,MS4.8						
RSW	Rattlesnake Hi	88.58	42	eP	P	23 01 53.4	-0.1
	comp=Z,4.9nm,0.3s,mb5.3						
HAWA	Hanford	88.61	42	⇓iP	P	23 01 53.2	-0.5
	comp=Z,31nm,1.4s,mb5.5						
HAWA				LR	LR		
	comp=Z,400nm,20.0s,MS4.8						
V11A	Goodsprings	88.63	53	⇑P	P	23 01 54.0	-0.1
	baz=89,SNR=16						
G08A	Pilot Rock	88.66	43	⇑P	P	23 01 53.6	-0.4
	baz=89,SNR=24						
LDFC	Landfair	88.69	54	eP	P	23 01 55.0	+0.7
	comp=Z,227nm,1.6s,mb6.2						
Y12C	Blythe	88.83	55	P	P	23 01 55.3	+0.2
	baz=89,SNR=19						
E08A	Dider Farm, El	88.96	42	⇑P	P	23 01 55.6	+0.3
	baz=89,SNR=5.9						
SHPR	Sheep Range	89.02	53	eP	P	23 01 55.9	+0.1
	comp=Z,84nm,1.5s,mb5.8						
V12A	Nelson	89.06	53	P	P	23 01 56.1	+0.1
	baz=89,SNR=20						
R11A	Troy Canyon, C	89.16	51	P	P	23 01 56.3	-0.1
	baz=89,SNR=43						
113A	Mohawk Valley,	89.21	57	⇑P	P	23 01 57.3	+0.5
	baz=89						
D08A	Wollman Farm,	89.22	42	⇓P	P	23 01 56.5	0.0
	baz=89						
PDMCI	Parker Dam,Lak	89.28	55	⇑P	P	23 01 57.5	+0.4
	baz=89,SNR=16						
B08A	Colville Reser	89.34	40	⇓P	P	23 01 56.7	-0.4
	baz=89						
Z13A	Yuma Proving G	89.40	56	P	P	23 01 58.1	+0.4
	baz=89,SNR=54						
Y13A	Salome	89.41	55	⇓P	P	23 01 58.4	+0.7
	baz=89,SNR=17						
T12A	Moapa	89.42	52	⇓P	P	23 01 58.3	+0.6
	baz=89						
OD2	Odessa Site #2	89.45	41	eP	P	23 01 57.0	-0.6
	comp=Z,83nm,1.7s,mb5.8						
U12A	Valley of Fire	89.48	53	⇑P	P	23 01 58.2	+0.2
	baz=90,SNR=12						
E09A	Wood Farm, Sta	89.57	42	⇑P	P	23 01 57.7	-0.4
	baz=90,SNR=10.0						
X13A	Yucca	89.60	55	⇑P	P	23 01 58.6	0.0
	baz=90,SNR=28						
W13A	Hualapai Mount	89.67	54	⇓P	P	23 01 59.2	+0.3
	baz=90						
V13A	Grand Canyon W	89.78	53	⇑P	P	23 01 59.4	0.0
	baz=90,SNR=47						
214A	Organ Pipe Nat	89.81	57	⇑P	P	23 02 00.2	+0.5
	baz=90						
U13A	Pakoon Wash	89.93	53	⇑P	P	23 02 00.4	+0.3
	baz=90,SNR=23						
114A	Black Gap (USA	89.93	57	⇓P	P	23 02 00.6	+0.4
	baz=90						
Z14A	Wintersburg	90.02	56	⇑P	P	23 02 01.3	+0.7
	baz=90						
F10A	Beach Ranch, E	90.02	43	⇓P	P	23 01 59.9	-0.4
	baz=90,SNR=23						
Y14A	Wickenburg	90.11	56	P	P	23 02 01.1	+0.1
	baz=90,SNR=14						
T13A	Saint George	90.12	52	P	P	23 02 01.5	+0.5
	baz=90,SNR=51						
S13A	Holt Ranch, En	90.29	52	P	P	23 02 02.3	+0.5
	baz=90,SNR=41						
MFID	Camas Ranch	90.30	46	⇑P	P	23 02 01.5	-0.1
	baz=90,SNR=20						
X14A	Yava	90.32	55	P	P	23 02 02.6	+0.6
	baz=90,SNR=32						
W14A	Seligman	90.34	54	P	P	23 02 02.6	+0.5
	baz=90,SNR=25						
R13A	O'Grain Ranch,	90.35	51	P	P	23 02 02.8	+0.7
	baz=90,SNR=25						
V14A	Boquillas Ranc	90.42	54	P	P	23 02 02.9	+0.5
	baz=90,SNR=60						
115A	Sonoran Desert	90.46	57	⇑P	P	23 02 03.1	+0.5
	baz=90						
INK	Inuvik	90.51	19	eP	P	23 02 01.6	-0.5
	comp=Z,7.7nm,1.1s,mb5.0						
INK	Inuvik	90.51	19	eP	P	23 02 01.6	-0.5
INK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
U14A	Mt Trumbull	90.54	53	⇓P	P	23 02 04.0	+1.0
	baz=91,SNR=33						
Y15A	Casa Rosa Ranc	90.65	56	⇑P	P	23 02 04.3	+0.7
	baz=91						
ARUT	Antelope Range	90.66	52	eP	P	23 02 04.0	+0.5
	comp=Z,43nm,1.3s,mb5.6						
ARUT	Antelope Range	90.66	52	eP	P	23 02 04.0	+0.5
ARUT				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.6						
CCUT	Cedar City	90.67	52	⇓iP	P	23 02 03.9	+0.4
	comp=Z,48nm,1.2s,mb5.7						
NEW	Newport	90.73	41	⇑P	P	23 02 03.1	-0.4
	baz=91,SNR=6.9						
NEW	Newport	90.73	41	⇓iP	P	23 02 02.6	-1.0
	comp=Z,45nm,1.8s,mb5.5						
NEW				LR	LR		
	comp=Z,361nm,21.0s,MS4.8						
NEW	Newport	90.73	41	⇓iP	P	23 02 02.6	-0.9
NEW				pmax	pmax		
	comp=Z,45nm,1.8s						
NEW				MLR	MLR		
	comp=Z,361nm,21.0s						
T14A	Hurricane	90.77	52	P	P	23 02 04.5	+0.5
	baz=91,SNR=30						
X15A	Humboldt	90.85	55	P	P	23 02 05.0	+0.6
	baz=91,SNR=32						
116A	Eloy	90.86	57	⇑P	P	23 02 05.1	+0.5
	baz=91						
S14A	Cedar City	90.86	52	⇓P	P	23 02 05.0	+0.6
	baz=91,SNR=7.5						
I12A	Atlanta	90.88	46	P	P	23 02 04.7	+0.3
	baz=91,SNR=41						
216A	Three Points,	90.94	58	⇓P	P	23 02 05.8	+0.9
	baz=91,SNR=20						
W15A	Williams	90.98	54	⇓P	P	23 02 06.3	+1.2
	baz=91,SNR=15						
Q14A	Sevier Lake (B	91.07	51	P	P	23 02 05.8	+0.5
	baz=91,SNR=67						
G12A	Big Creek, Yel	91.09	44	⇑P	P	23 02 05.0	-0.3
	baz=91						
C11A	Tepee Creek (N	91.17	41	⇓P	P	23 02 05.8	+0.1
	baz=91						
V15A	Kaibab Nationa	91.20	54	⇓P	P	23 02 06.5	+0.4
	baz=91,SNR=32						
SYO	Syowa Base	91.21	197	⇑eP	P	23 02 03.8	-1.7
U15A	North Rim	91.24	53	P	P	23 02 07.0	+0.8
	baz=91,SNR=62						
E12A	Beaver Dam Sad	91.25	43	⇓P	P	23 02 05.5	-0.5
	baz=91						
H12A	Diamond D Ranc	91.27	45	⇑P	P	23 02 06.3	+0.2
	baz=91,SNR=7.1						
F12A	Elk City	91.30	44	P	P	23 02 05.8	-0.5
	baz=91,SNR=34						
T15A	Red Dirt Ranch	91.30	53	⇑P	P	23 02 07.2	+0.7
	baz=91,SNR=16						
HLID	Hailey	91.33	46	P	P	23 02 06.8	+0.3
	baz=91,SNR=33						
HLID	Hailey	91.33	46	⇓iP	P	23 02 06.7	+0.3
	comp=Z,41nm,1.3s,mb5.6						
HLID				LR	LR		
	comp=Z,501nm,20.0s,MS5.0						
Y16A	Circle Bar Ran	91.33	56	⇓P	P	23 02 07.2	+0.5
	baz=91						
P14A	Drum Mountains	91.36	50	⇓P	P	23 02 06.7	0.0
	baz=91,SNR=22						
217A	Green Valley	91.42	58	P	P	23 02 07.9	+0.7
	baz=91,SNR=26						
J13A	Cove Ranch, Pi	91.46	46	⇑P	P	23 02 07.8	+0.7
	baz=92,SNR=23						
X16A	Lo Mia Camp, P	91.48	55	⇑P	P	23 02 08.3	+0.9
	baz=92,SNR=23						
W16A	Flagstaff	91.55	55	⇓P	P	23 02 08.5	+0.8
	baz=92,SNR=10						
D12A	Red Ives Fores	91.56	42	⇑P	P	23 02 07.3	-0.2
	baz=92						
TUC	Tucson	91.56	58	⇓iP	P	23 02 08.1	+0.3
	comp=Z,13nm,1.1s,mb5.2						
TUC				LR	LR		
	comp=Z,762nm,19.0s,MS5.2						
TUC	Tucson	91.56	58	⇓iP	P	23 02 08.1	+0.3
TUC				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.2						
TUC				MLR	MLR		
	comp=Z,762nm,19.0s,MS5.2						
I13A	Wildhorse Cree	91.62	46	P	P	23 02 08.3	+0.5
	baz=92,SNR=73						
C12B	Naegeli Ranch,	91.65	42	⇓P	P	23 02 07.9	0.0
	baz=92,SNR=5.6						
117A	Oracle	91.66	57	P	P	23 02 08.9	+0.6
	baz=92,SNR=19						
H13A	Challis	91.69	45	⇑P	P	23 02 08.4	+0.3
	baz=92						
DUG	Dugway	91.69	49	⇓P	P	23 02 08.5	+0.3
	baz=92,SNR=16						
DUG	Dugway	91.69	49	⇓iP	P	23 02 07.9	-0.4
	comp=Z,51nm,1.6s,mb5.6						
DUG				LR	LR		
	comp=Z,418nm,19.0s,MS4.9						
DUG	Dugway	91.69	49	⇓iP	P	23 02 07.9	-0.3
DUG				pmax	pmax		
	comp=Z,51nm,1.6s,mb5.6						
DUG				MLR	MLR		
	comp=Z,418nm,19.0s,MS4.9						
BGU	Big Grassy Mou	91.70	49	⇓iP	P	23 02 08.2	-0.1
	comp=Z,84nm,1.7s,mb5.8						
MVU	Marysvale	91.77	51	PFAKE		23 02 20.0	+11
MVU				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
MSU	Marysvale	91.80	51	eP	P	23 02 09.3	+0.6
	comp=Z,70nm,1.3s,mb5.8						
MSU	Marysvale	91.80	51	eP	P	23 02 09.3	+0.5
MSU				pmax	pmax		
	comp=Z,70nm,1.3s,mb5.8						
L14A	Malta	91.80	48	P	P	23 02 09.1	+0.4
	baz=92,SNR=23						
Y17A	Roosevelt	91.81	56	P	P	23 02 09.5	+0.6
	baz=92,SNR=8.8						
G13A	Cobalt	91.83	44	⇑P	P	23 02 09.0	+0.2
	baz=92,SNR=33						
J14A	Carey	91.91	46	⇓P	P	23 02 09.6	+0.5
	baz=92,SNR=12						
F13A	Darby	91.93	44	⇑P	P	23 02 08.8	-0.3
	baz=92,SNR=44						
K14A	Jones Ranch, D	91.97	47	P	P	23 02 09.9	+0.4
	baz=92,SNR=21						
X17A	Forest Lakes	91.97	56	P	P	23 02 10.7	+1.0
	baz=92,SNR=15						
318A	Bisbee	92.04	59	⇑P	P	23 02 10.9	+0.9
	baz=92,SNR=16						
S16A	Weppner Ranch,	92.07	52	⇑P	P	23 02 10.3	+0.3
	baz=92,SNR=22						
HVU	Hansel Valley	92.08	48	⇓iP	P	23 02 10.1	+0.1
	comp=Z,76nm,1.3s,mb5.9						
HVU	Hansel Valley	92.08	48	⇓iP	P	23 02 10.1	+0.1
HVU				pmax	pmax		
	comp=Z,76nm,1.3s,mb5.9						
I14A	Mackay	92.09	46	⇑P	P	23 02 10.8	+0.8
	baz=92,SNR=24						
U16A	Tuba City	92.10	54	⇑P	P	23 02 11.3	+1.1
	baz=92,SNR=7.7						
BSMT	Bassoo Peak	92.13	42	eP	P	23 02 09.7	-0.4
	comp=Z,30nm,1.5s,mb5.4						
D13A	Huson	92.16	42	⇑P	P	23 02 09.6	-0.6
	baz=92,SNR=6.5						
E13A	Victor	92.19	43	⇓P	P	23 02 09.8	-0.6
	baz=92,SNR=15						
NLU	North Lily Min	92.19	50	⇓iP	P	23 02 10.8	+0.3
	comp=Z,32nm,1.3s,mb5.5						
SPUT	South Promonto	92.22	48	⇓iP	P	23 02 10.4	-0.2
	comp=Z,75nm,1.9s,mb5.7						
C13A	Hot Springs	92.23	42	⇑P	P	23 02 10.1	-0.5
	baz=92						
M15A	Larsen Ranch,	92.25	48	⇓P	P	23 02 10.9	+0.1
	baz=92						
V17A	Tonalea, Kykot	92.25	54	⇓P	P	23 02 11.4	+0.5
	baz=92,SNR=34						
R16A	Teasdale	92.28	52	⇓P	P	23 02 11.8	+0.8
	baz=92,SNR=20						
118A	Homack Ranch,	92.30	57	⇑P	P	23 02 12.0	+0.8
	baz=92,SNR=14						
H14A	Leadore	92.31	45	⇑P	P	23 02 11.7	+0.7
	baz=92,SNR=26						
G14A	Jackson	92.39	44	⇑P	P	23 02 11.9	+0.5
	baz=92,SNR=16						
L15A	Malad City	92.42	48	⇓P	P	23 02 11.7	+0.1
	baz=92,SNR=5.9						
JTMT	Jette	92.44	42	eP	P	23 02 10.6	-0.9
	comp=Z,11nm,1.4s,mb5.0						
MSO	Missoula	92.44	43	PFAKE		23 02 20.0	+8.5
MSO				LR	LR		
	comp=Z,198nm,20.0s,MS4.6						
K15A	Arbon	92.46	47	⇑P	P	23 02 12.3	+0.6
	baz=92,SNR=12						
B13A	Whitefish	92.47	41	⇓P	P	23 02 11.4	-0.2
	baz=92,SNR=5.7						
Y18A	Canyon Day Jun	92.48	56	⇑P	P	23 02 12.7	+0.6
	baz=92,SNR=11						
T17A	Navajo Res., N	92.53	53	⇓P	P	23 02 12.9	+0.7
	baz=93,SNR=10						
MPU	Maple Canyon	92.54	50	⇓iP	P	23 02 12.2	0.0
	comp=Z,50nm,1.5s,mb5.7						
SWMT	Swartz Lake	92.57	42	eP	P	23 02 11.4	-0.7
	comp=Z,7.1nm,1.3s,mb4.9						
319A	Douglas	92.62	59	⇑P	P	23 02 13.1	+0.4
	baz=93,SNR=7.1						
A13A	Flathead Natio	92.64	41	⇑P	P	23 02 12.2	-0.2
	baz=93						
E14A	Clinton	92.65	43	⇑P	P	23 02 12.2	-0.3
	baz=93						
Q16A	Castle Valley	92.65	51	⇑P	P	23 02 13.5	+0.8
	baz=93,SNR=14						
S17A	Black Ridge (B	92.67	52	⇓P	P	23 02 12.2	-0.6
	baz=93						
O16A	Springville	92.68	50	⇓P	P	23 02 12.8	0.0
	baz=93						
J15A	Blackfoot	92.69	46	P	P	23 02 13.5	+0.7
	baz=93,SNR=14						
TMUT	Trail Mountain	92.70	51	eP	P	23 02 13.4	+0.5
	comp=Z,14nm,1.2s,mb5.3						
TMUT				epP	pP	23 02 23.5	+3.6
X18A	Snowflake	92.70	55	⇑P	P	23 02 13.8	+0.7
	baz=93,SNR=8.1						
MCMT	McKenzie Canyo	92.72	45	eP	P	23 02 13.1	+0.2
	comp=Z,14nm,1.3s,mb5.2						
219A	White Tail Can	92.77	58	⇑P	P	23 02 13.8	+0.4
	baz=93,SNR=15						
D14A	Greenough	92.79	43	⇓P	P	23 02 12.2	-0.9
	baz=93,SNR=8.2						
C14A	Swan Lake	92.79	42	⇓P	P	23 02 12.5	-0.6
	baz=93						
JLU	Jordanelle	92.80	49	eP	P	23 02 13.6	+0.3
	comp=Z,72nm,1.8s,mb5.8						
JLU				epP	pP	23 02 22.2	+1.9
MK31	Makanchi Array	92.81	317	eP	P	23 02 13.2	-0.1
MK31	Makanchi Array	92.81	317	eP	P	23 02 13.2	-0.1
MKAR	Makanchi Array	92.81	317	P	P	23 02 13.0	-0.3
	comp=Z,7.4nm,0.9s,mb5.1,baz=99,slow=6.4,SNR=33						
MKAR				S	SKSac	23 12 42.8	-3.1
	comp=Z,0.3nm,0.2s,baz=88,slow=7.1,SNR=3.7						
MKAR				PKKP	PKKPbc	23 19 23.2	-2.8
	comp=Z,2.1nm,0.8s,baz=298,slow=2.6,SNR=11						
MKAR				PKPPKP		23 27 36.0	
	comp=Z,0.2nm,0.2s,baz=289,slow=3.7,SNR=3.5						
MKAR				LR	LR	23 45 30.9	
	comp=Z,415nm,19.9s,MS4.9,baz=102,slow=36						
MKAR	Makanchi Array	92.81	317	P	P	23 02 13.0	-0.3
MKAR				S	SKSac	23 12 42.8	-3.1
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,415nm,20.0s						
H15A	Lima	92.82	45	⇓P	P	23 02 14.2	+0.9
	baz=93,SNR=6.4						
SLMT	Seeley Lake	92.84	43	eP	P	23 02 12.3	-1.0
	comp=Z,16nm,1.4s,mb5.3						
N16A	Rees Ranch, Co	92.87	49	⇑P	P	23 02 14.3	+0.6
	baz=93,SNR=9.9						
119A	Ashpeak Ranch,	92.88	57	⇑P	P	23 02 14.7	+0.7
	baz=93,SNR=10						
R17A	Hanksville Air	92.90	52	⇓P	P	23 02 14.5	+0.6
	baz=93,SNR=9.0						
DAU	Daniels Canyon	92.90	50	eP	P	23 02 14.4	+0.6
	comp=Z,18nm,1.3s,mb5.3						
DAU	Daniels Canyon	92.90	50	eP	P	23 02 14.4	+0.6
DAU				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.3						
CHMT	Chamberlain Mo	92.92	43	eP	P	23 02 12.8	-0.9
	comp=Z,26nm,1.4s,mb5.5						
HWUT	Hardware Ranch	92.93	48	⇓iP	P	23 02 13.3	-0.6
	comp=Z,13nm,1.1s,mb5.3						
HWUT				LR	LR		
	comp=Z,485nm,20.0s,MS5.0						
V18A	Ganado	92.96	54	⇑P	P	23 02 15.0	+0.8
	baz=93,SNR=5.1						
WALA	Waterton Lakes	92.99	41	eP	P	23 02 13.8	-0.2
	comp=Z,1.2nm,1.4s,mb4.1						
ZALV	Zalesovo Beam	92.99	324	P	P	23 02 12.5	-1.3
	comp=Z,5.3nm,0.8s,mb5.0,baz=108,slow=4.8,SNR=27						
ZALV				LR	LR	23 43 01.5	
	comp=Z,413nm,21.9s,MS4.8,baz=83,slow=35						
ZALV	Zalesovo Beam	92.99	324	P	P	23 02 12.5	-1.4
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb5.0						
ZALV				MLR	MLR		
	comp=Z,413nm,21.9s,MS4.8						
DLMT	Dillon	93.02	44	⇓iP	P	23 02 14.2	0.0
	comp=Z,72nm,1.3s,mb5.9						
G15A	Dillon	93.05	45	P	P	23 02 14.4	+0.1
	baz=93,SNR=32						
U18A	Rough Rock, Ch	93.15	54	⇑P	P	23 02 14.7	-0.3
	baz=93,SNR=5.2						
Y19A	Nutrioso	93.16	56	P	P	23 02 16.1	+1.0
	baz=93,SNR=19						
K16A	Soda Springs	93.17	47	⇑P	P	23 02 15.7	+0.7
	baz=93,SNR=8.5						
SRU	San Rafael	93.19	51	⇑P	P	23 02 14.9	-0.3
	baz=93						
SRU	San Rafael	93.19	51	eP	P	23 02 15.1	-0.1
	comp=Z,13nm,1.2s,mb5.2						
SRU	San Rafael	93.19	51	eP	P	23 02 15.1	-0.1
SRU				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.2						
F15A	Butte	93.19	44	⇓P	P	23 02 14.6	-0.4
	baz=93,SNR=17						
LRM	Limekiln Ridge	93.22	44	eP	P	23 02 14.8	-0.4
	comp=Z,311nm,1.4s,mb6.5						
X19A	St. Johns	93.22	56	⇑P	P	23 02 15.9	+0.4
	baz=93,SNR=6.6						
E15A	Deer Lodge	93.22	43	⇓P	P	23 02 14.8	-0.3
	baz=93,SNR=18						
B14A	Marquette Ranc	93.24	41	⇑P	P	23 02 14.9	-0.3
	baz=93,SNR=15						
320A	Kipp Ranch, An	93.25	59	⇑P	P	23 02 16.4	+0.7
	baz=93,SNR=8.9						
O17A	Robinson Place	93.25	50	⇑P	P	23 02 16.4	+1.0
	baz=93,SNR=8.1						
J16A	Bone	93.25	47	P	P	23 02 15.9	+0.5
	baz=93,SNR=15						
W19A	Sanders	93.27	55	P	P	23 02 16.1	+0.5
	baz=93,SNR=6.5						
A14A	Double T Ranch	93.28	41	⇑P	P	23 02 15.1	-0.2
	baz=93,SNR=6.8						
T18A	Mexican Hat	93.29	53	⇓P	P	23 02 16.2	+0.5
	baz=93,SNR=7.5						
S18A	Hurst Farm, Bl	93.31	52	⇓P	P	23 02 15.4	-0.4
	baz=93,SNR=6.9						
220A	Playas Peak, P	93.36	58	⇓P	P	23 02 16.4	+0.3
	baz=93,SNR=7.9						
120A	U Bar Ranch, L	93.39	58	⇓P	P	23 02 16.8	+0.5
	baz=93,SNR=5.3						
D15A	Lincoln	93.44	43	⇓P	P	23 02 15.9	-0.2
	baz=94,SNR=7.5						
I16A	Newdale	93.47	46	⇓P	P	23 02 17.2	+0.9
	baz=94,SNR=8.2						
RRI2	Red Ridge	93.47	47	⇓iP	P	23 02 16.3	-0.1
	comp=Z,48nm,1.6s,mb5.7						
P18A	Preston Nutter	93.50	50	⇓P	P

comp=Z,461nm,21.0s,MS4.9
TPAW Teton Pass 93.77 47 *e*P **P 23 02 17.3 -0.5**
comp=Z,13nm,1.4s,mb5.2
F16A Kennard Place, 93.77 44 ⇑P **P 23 02 18.2 +0.5**
baz=94,SNR=12
H16A Russell Place, 93.81 45 ⇓P **P 23 02 18.9 +1.0**
baz=94,SNR=11
REDW Red Top Meadow 93.81 47 ⇓*i*P **P 23 02 17.9 0.0**
comp=Z,29nm,1.5s,mb5.5
HRY Holter Researc 93.83 43 *e*P **P 23 02 17.8 -0.2**
comp=Z,82nm,1.8s,mb5.9
IMW Indian Meadow 93.86 46 ⇓*i*P **P 23 02 18.1 0.0**
comp=Z,20nm,1.3s,mb5.4
Y20A Horse Springs, 93.86 56 ⇑P **P 23 02 19.2 +0.8**
baz=94,SNR=9.1
E16A East Helena 93.90 43 ⇑P **P 23 02 18.4 +0.2**
baz=94,SNR=16
J17A Brown Place, J 93.91 47 ⇑P **P 23 02 18.6 +0.2**
baz=94
MOOW Moose Ponds 93.97 46 ⇓*i*P **P 23 02 18.2 -0.5**
comp=Z,11nm,1.3s,mb5.1
W20A Ramah 93.99 55 ⇓P **P 23 02 19.0 0.0**
baz=94
R19A Curley Farm, L 93.99 52 ⇑P **P 23 02 19.3 +0.4**
baz=94,SNR=5.4
M18A Lyman 93.99 49 ⇑P **P 23 02 19.4 +0.6**
baz=94
YMR Madison River 94.00 45 *e*P **P 23 02 19.6 +0.8**
comp=Z,28nm,1.2s,mb5.6
221A Mesquite Ranch 94.00 58 ⇓P **P 23 02 19.2 +0.1**
baz=94,SNR=6.4
LOHW Long Hollow 94.04 46 *e*P **P 23 02 18.5 -0.4**
comp=Z,14nm,1.3s,mb5.2
FLWY Flagg Ranch 94.07 46 *e*P **P 23 02 19.6 +0.5**
comp=Z,15nm,1.3s,mb5.3
D16A Dana Ranch, Ca 94.08 43 ⇓P **P 23 02 19.1 0.0**
baz=94
121A Cookes Peak, D 94.09 58 ⇓P **P 23 02 19.9 +0.4**
baz=94,SNR=6.0
NVS Novosibirsk 94.11 325 *e*P **P 23 02 17.0 -2.0**
NVS *e*S SKSac 23 12 53.4 +0.7
NVS pmax pmax
comp=E,47nm,2.0s
NVS pmax pmax
comp=Z,101nm,2.0s,mb5.9
NVS smax
comp=E,86nm,2.9s
C16A Fuhringer Ranc 94.12 42 P **P 23 02 19.0 -0.2**
baz=94,SNR=8.0
N18A Larsen Ranch, 94.20 49 ⇓P **P 23 02 19.3 -0.5**
baz=94
K18A Toltan Ranch, 94.25 48 ⇓P **P 23 02 20.3 +0.3**
baz=94
Z21A St. Cloud Mine 94.33 57 ⇓P **P 23 02 20.8 +0.2**
baz=94,SNR=11
LKWY Lake 94.37 46 PFAKE 23 02 30.0 +10
LKWY LR LR
comp=Z,745nm,20.0s,MS5.2
E17A Martinsdale 94.44 44 ⇑P **P 23 02 20.9 +0.1**
baz=94,SNR=5.1
X21A Alamocita Cree 94.44 56 ⇑P **P 23 02 21.6 +0.5**
baz=94,SNR=5.9
Y21A Point of Rocks 94.45 56 ⇓P **P 23 02 21.8 +0.7**
baz=94,SNR=6.8
F17A Fitzpatrick Pl 94.46 44 ⇑P **P 23 02 21.4 +0.5**
baz=94,SNR=10.0
O19A Miners Draw (B 94.48 50 ⇓P **P 23 02 21.7 +0.6**
baz=94,SNR=5.5
PV01 Paradox Valley 94.50 52 *e*P **P 23 02 21.0 -0.2**
comp=Z,726nm,1.1s
222A Williams Famil 94.58 58 ⇑P **P 23 02 22.1 +0.3**
baz=95
S20A Disappointment 94.60 53 ⇑P **P 23 02 22.0 +0.3**
baz=95
I18A Diamond G Ranc 94.62 47 ⇑P **P 23 02 21.6 0.0**
baz=95,SNR=9.5
BW06 Boulder Array 94.62 47 ⇓P **P 23 02 21.2 -0.5**
baz=95,SNR=11
BW06 Boulder Array 94.62 47 *e*P **P 23 02 20.8 -0.9**
comp=Z,13nm,1.2s,mb5.2
BW06 LR LR
comp=Z,309nm,20.0s,MS4.8
PDAR Pinedale Array 94.62 47 P **P 23 02 21.1 -0.6**
comp=Z,6.3nm,1.1s,mb5.0,baz=250,slow=3.0,SNR=33
PDAR PKPPKP 23 27 32.7
comp=Z,0.6nm,1.0s,baz=108,slow=4.8,SNR=4.7
PDAR LR LR 23 39 57.5
comp=Z,239nm,18.1s,MS4.7,baz=250,slow=32
L19A Farson 94.64 48 ⇓P **P 23 02 22.0 +0.2**
baz=95,SNR=5.3
R20A Redvale 94.65 52 ⇓P **P 23 02 22.2 +0.3**
baz=95
C17A Wharram Farm, 94.73 43 ⇑P **P 23 02 21.8 -0.3**
baz=95,SNR=5.5
B17A L&G Farms, Che 94.84 42 ⇑P **P 23 02 22.2 -0.3**
baz=95,SNR=6.9
Q20A Ridgley Place, 94.86 51 ⇑P **P 23 02 23.4 +0.5**
baz=95
P20A De Beque 94.88 51 ⇑P **P 23 02 23.9 +0.9**
baz=95
U21A Nageezi 94.90 54 P **P 23 02 23.3 +0.2**
baz=95,SNR=30
Z22A Elephant Butte 94.90 57 P **P 23 02 23.2 0.0**
baz=95,SNR=11
LAZ Ladron 94.96 56 *e*P **P 23 02 22.4 -1.0**
comp=Z,3.1nm,1.1s,mb4.7
A17A Triple J Farms 95.03 41 ⇑P **P 23 02 23.3 -0.1**
baz=95
E18A Harlowton 95.09 44 ⇓P **P 23 02 24.5 +0.7**
baz=95,SNR=12
F18A Big Timber 95.11 44 ⇓P **P 23 02 24.2 +0.4**
baz=95,SNR=5.4
K19A Absolon Red Bu 95.15 48 ⇑P **P 23 02 23.4 -0.7**
baz=95
N20A Spence Gulch, 95.22 50 ⇓P **P 23 02 24.3 -0.2**
baz=95
RLMT Red Lodge 95.27 45 *e*P **P 23 02 21.3 -3.3**
comp=Z,13nm,1.4s,mb5.2
RLMT LR LR
comp=Z,652nm,19.0s,MS5.1
R21A Cimarron 95.33 52 ⇓P **P 23 02 26.3 +1.2**
baz=95,SNR=6.8
BNM Barren Site 95.33 56 *e*P **P 23 02 24.7 -0.4**
comp=Z,6.1nm,1.0s,mb5.0
LPM Los Pinos Moun 95.36 56 *e*P **P 23 02 25.7 +0.4**
comp=Z,1.3nm,0.7s,mb4.5
EGMT Eagleton 95.47 42 ⇓P **P 23 02 25.3 -0.2**
baz=96,SNR=5.0
EGMT Eagleton 95.47 42 PFAKE 23 02 40.0 +15
EGMT LR LR
comp=Z,322nm,19.0s,MS4.8
B18A Beardsley Farm 95.53 42 ⇓P **P 23 02 25.2 -0.5**
baz=96
ANMO Albuquerque 95.61 56 *e*P **P 23 02 25.8 -0.6**
comp=Z,9.8nm,1.1s,mb5.2
ANMO LR LR
comp=Z,448nm,20.0s,MS4.9
ANMO Albuquerque 95.61 56 *e*P **P 23 02 25.8 -0.6**
ANMO pmax pmax
comp=Z,10.0nm,1.1s
ANMO MLR MLR
comp=Z,448nm,20.0s
F19A Roth Farm, Mol 95.63 45 ⇓P **P 23 02 25.8 -0.4**
baz=96
YKA Yellowknife Ar 95.74 27 P **P 23 02 24.6 -1.7**
comp=Z,3.9nm,0.8s,mb4.9,baz=251,slow=4.2,SNR=5.6
YKA LR LR 23 37 59.1
comp=Z,25nm,21.4s,MS3.7,baz=120,slow=31
YKA Yellowknife Ar 95.74 27 P **P 23 02 24.6 -1.7**
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA MLR MLR
comp=Z,25nm,21.4s
S22A 4UR Ranch, Cre 95.78 53 ⇑P **P 23 02 27.1 0.0**
baz=96
J20A Shoshoni 95.79 47 ⇓P **P 23 02 26.7 -0.3**
baz=96
324A Moseley Ranch, 95.83 59 ⇓P **P 23 02 27.0 -0.5**
baz=96
E19A Rath Farm, Rou 95.84 44 ⇓P **P 23 02 27.3 +0.1**
baz=96
C19A Slack Wire Ran 95.89 43 ⇓P **P 23 02 27.3 -0.1**
baz=96
224A Cornudas Mount 95.90 59 ⇓P **P 23 02 27.7 -0.1**
baz=96
D19A Cripps Ranch, 95.90 43 ⇑P **P 23 02 27.6 +0.2**
baz=96
MNTX Cornudas Mount 95.95 59 ⇓P **P 23 02 27.4 -0.6**
baz=96
MNTX Cornudas Mount 95.95 59 *e*P **P 23 02 27.5 -0.5**
comp=Z,7.0nm,1.1s,mb5.0
MNTX LR LR
comp=Z,880nm,20.0s,MS5.2
V23A Ortiz Mt. (NFS 95.96 55 ⇓P **P 23 02 28.0 0.0**
baz=96
KURK Kurchatov 96.00 320 *e*P **P 23 02 26.7 -1.1**
comp=Z,32nm,1.8s,mb5.4
KURK LR LR
comp=Z,890nm,21.0s,MS5.2
KURK Kurchatov 96.00 320 *e*P **P 23 02 26.7 -1.1**
KURK pmax pmax
comp=Z,31nm,1.8s,mb5.4
KURK MLR MLR
comp=Z,890nm,21.0s,MS5.2
U23A El Rito 96.05 54 ⇓P **P 23 02 28.4 0.0**
baz=96,SNR=7.1
L21A Rawlins 96.08 49 ⇑P **P 23 02 27.7 -0.7**
baz=96
B19A Brinkman Farms 96.08 42 ⇓P **P 23 02 28.8 +0.6**
baz=96
425A Indio Mountain 96.14 60 ⇓P **P 23 02 28.7 -0.2**
baz=96
325A Bean Ranch, Si 96.25 59 ⇓P **P 23 02 28.7 -0.7**
baz=96
J21A Lysite 96.25 47 ⇑P **P 23 02 28.6 -0.5**
baz=96
K21A Alcova 96.27 48 ⇓P **P 23 02 28.7 -0.5**
baz=96
E20A Meyer Farm, Mu 96.30 44 ⇑P **P 23 02 29.4 +0.1**
baz=96
W24A Lazy 6 Ranch, 96.50 56 ⇑P **P 23 02 29.7 -0.7**
baz=96
C20A Veseth Ranch, 96.58 43 ⇓P **P 23 02 30.1 -0.4**
baz=97
626A Big Bend Ranch 96.67 61 ⇓P **P 23 02 30.9 -0.4**
baz=97
V24A Rampart Ranch, 96.69 55 ⇑P **P 23 02 31.1 -0.1**
baz=97
TKM2 Tokmak 2 96.74 312 PFAKE 23 02 40.0 +8.7
TKM2 LR LR
comp=Z,520nm,20.0s,MS5.0
526A Mary Lane Ranc 96.79 61 ⇑P **P 23 02 31.4 -0.4**
baz=97
A20A Cobblestone Ra 96.82 42 ⇓P **P 23 02 31.1 -0.4**
baz=97
SDCO Great Sand Dun 96.82 53 PFAKE 23 02 40.0 +8.2
SDCO LR LR
comp=Z,438nm,19.0s,MS5.0
GDL2 Guadalupe Moun 96.89 59 *e*P **P 23 02 31.9 -0.4**
comp=Z,1.7nm,0.7s,mb4.6
426A McDonald Obser 96.94 60 ⇓P **P 23 02 32.3 -0.2**
baz=97
TXAR Lajitas Array 97.04 62 P **P 23 02 32.4 -0.6**
comp=Z,1.1nm,0.7s,mb4.4,baz=235,slow=4.4,SNR=13
TXAR PP PP 23 06 26.9 -2.2
comp=Z,0.4nm,0.9s,baz=245,slow=9.0,SNR=4.9
TXAR LR LR 23 38 33.0
comp=Z,968nm,19.9s,MS5.3,baz=285,slow=31
TXAR Lajitas Array 97.04 62 P **P 23 02 32.4 -0.6**
TXAR PP PP 23 06 26.9 -2.2
TXAR LR LR 23 38 33.0
TXAR Lajitas Array 97.04 62 P **P 23 02 32.4 -0.6**
TXAR 23 06 26.9
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR MLR MLR
comp=Z,968nm,19.9s
ISCO Idaho Springs 97.05 51 ⇑P **P 23 02 33.0 +0.2**
baz=97
ISCO Idaho Springs 97.05 51 PFAKE 23 02 40.0 +7.2
ISCO LR LR
comp=Z,946nm,20.0s,MS5.3
226A Malaga, Loving 97.09 59 ⇓P **P 23 02 32.8 -0.4**
baz=97
NIL Nilore 97.14 303 PFAKE 23 02 40.0 +6.6
NIL LR LR
comp=Z,406nm,19.0s,MS4.9
527A Woodward Ranch 97.21 61 ⇓P **P 23 02 33.3 -0.5**
baz=97
V25A Rancho No Teng 97.23 55 ⇓P **P 23 02 33.5 -0.3**
baz=97
W25A X Bar L Ranch, 97.27 56 ⇑P **P 23 02 33.3 -0.6**
baz=97
627A Terlingua Ranc 97.30 61 ⇑P **P 23 02 33.1 -1.1**
baz=97
L23A Garrett 97.33 49 ⇓P **P 23 02 34.3 +0.3**
baz=97
Z26A Caprock 97.37 58 ⇑P **P 23 02 34.4 -0.1**
baz=97
UCH Uchtor 97.42 311 PFAKE 23 02 50.0 +16
UCH LR LR
comp=Z,56nm,20.0s,MS4.0
A21A Bergtoll Ranch 97.49 42 ⇓P **P 23 02 34.3 -0.2**
baz=98
AAK Ala-Archa 97.50 312 PFAKE 23 02 50.0 +15
AAK LR LR
comp=Z,577nm,21.0s,MS5.0
LAO LASA Array 97.62 44 *e*P **P 23 02 35.5 +0.3**
comp=Z,60nm,1.8s,mb5.8
LAO LR LR
comp=Z,440nm,20.0s,MS5.0
S25A Robets Cordova 97.64 53 ⇑P **P 23 02 35.1 -0.4**
baz=98
628A Black Gap, Mar 97.73 62 ⇓P **P 23 02 36.5 +0.3**
baz=98
V26A Tequesquite Ra 97.90 55 ⇑P **P 23 02 36.5 -0.2**
baz=98
528A Cox Ranch, San 97.92 61 ⇓P **P 23 02 36.4 -0.5**
baz=98
AML Almayashu 98.01 311 PFAKE 23 02 50.0 +13
AML LR LR
comp=Z,500nm,21.0s,MS5.0
U26A Atchley Ranch, 98.01 55 ⇑P **P 23 02 37.4 +0.2**
baz=98
EKS2 Erkin-Say 98.02 312 PFAKE 23 02 50.0 +13
EKS2 LR LR
comp=Z,589nm,21.0s,MS5.0
RSSD Black Hills 98.81 47 *e*P **P 23 02 40.1 -0.5**
comp=Z,1.6nm,0.4s,mb4.9
RSSD Black Hills 98.81 47 *e*P **P 23 02 40.2 -0.4**
RSSD pmax pmax
comp=Z,2.0nm,0.4s,mb5.0
DGMT Dagmar 99.21 42 PFAKE 23 02 50.0 +7.7
DGMT LR LR
comp=Z,410nm,20.0s,MS4.9
AMTX Amarillo 99.48 56 *e*P **P 23 02 42.0 -1.8**
comp=Z,12nm,1.2s,mb5.3
AMTX LR LR
comp=Z,539nm,20.0s,MS5.0
OGNE Ogallala 99.91 50 PFAKE 23 03 00.0 +15
OGNE LR LR
comp=Z,546nm,20.0s,MS5.1
JCT Junction City 100.52 61 *e*Pdif Pdif 23 02 48.3 +0.3
comp=Z,2.9nm,0.7s
JCT LR LR
comp=Z,1μm,20.0s,MS5.4
JCT Junction City 100.52 61 *e*P Pdif 23 02 48.3 +0.2
JCT pmax pmax
comp=Z,3.0nm,0.7s
JCT MLR MLR
comp=Z,1μm,20.0s,MS5.4
FFC Flin Flon 101.15 36 *e*Pdif Pdif 23 02 49.7 -1.2
FFC LR LR
comp=Z,498nm,19.0s,MS5.0
FFC Flin Flon 101.15 36 *e*P Pdif 23 02 49.7 -1.2
FFC MLR MLR
comp=Z,498nm,19.0s,MS5.0
BRVK Borovoye 101.41 322 *e*Pdif Pdif 23 02 49.7 -2.3
comp=Z,18nm,1.6s
BRVK LR LR
comp=Z,780nm,21.0s,MS5.2
BRVK Borovoye 101.41 322 *e*P Pdif 23 02 49.7 -2.3
BRVK pmax pmax
comp=Z,18nm,1.6s
BRVK MLR MLR
comp=Z,780nm,21.0s,MS5.2
CBKS Cedar Bluff 101.45 52 PFAKE 23 03 00.0 +7.8
CBKS LR LR
comp=Z,357nm,20.0s,MS4.9
WMOK Wichita Mounta 101.84 57 *e*Pdif Pdif 23 02 54.3 +0.4
WMOK LR LR
comp=Z,840nm,20.0s,MS5.3
WMOK Wichita Mounta 101.84 57 *e*P Pdif 23 02 54.3 +0.4
WMOK MLR MLR
comp=Z,840nm,20.0s,MS5.3
KVTX Kingsville 101.84 64 PFAKE 23 03 10.0 +16
KVTX LR LR
comp=Z,521nm,20.0s,MS5.0
KSU1 Kansas State U 103.91 52 PFAKE 23 03 10.0 +6.9
KSU1 LR LR
comp=Z,644nm,19.0s,MS5.2
ECSD EROS Data Cent 104.12 48 PFAKE 23 03 20.0 +16
ECSD LR LR
comp=Z,569nm,21.0s,MS5.1
ULM Lac du Bonnet 104.74 41 PFAKE 23 03 20.0 +13
ULM LR LR
comp=Z,480nm,19.0s,MS5.1
AGMN Agassiz Nation 104.75 43 PFAKE 23 03 20.0 +13
AGMN LR LR
comp=Z,409nm,21.0s,MS4.9
PAYG Puerto Ayora 104.82 94 PFAKE 23 03 20.0 +13
PAYG LR LR
comp=Z,326nm,19.0s,MS4.9
NATX Nacogdoches 105.03 60 PFAKE 23 03 20.0 +12
NATX LR LR
comp=Z,1μm,20.0s,MS5.4
MIAR Mount Ida 106.11 57 PFAKE 23 07 40.0 +15
MIAR LR LR
comp=Z,1μm,21.0s,MS5.4
SCIA State Center 106.58 50 PFAKE 23 07 40.0 +14
SCIA LR LR
comp=Z,615nm,19.0s,MS5.2
PLCA Paso Flores 107.54 139 PFAKE 23 07 40.0 +12
PLCA LR LR
comp=Z,546nm,19.0s,MS5.1
EYMN Ely 107.68 43 PFAKE 23 07 40.0 +12
EYMN LR LR
comp=Z,500nm,19.0s,MS5.1
ABKAR Akbulak array 107.92 318 *e*PKP PKiKP 23 07 26.6 -1.6
ARU Arti 108.09 326 PFAKE 23 07 40.0 +12
ARU LR LR
comp=Z,851nm,22.0s,MS5.3
VBMS Vicksburg 108.57 60 PFAKE 23 07 40.0 +10
VBMS LR LR
comp=Z,1μm,21.0s,MS5.4
JFWS Jewell Farm 108.77 48 PFAKE 23 07 40.0 +10
JFWS LR LR
comp=Z,500nm,19.0s,MS5.1
COWI Conover 109.39 45 PFAKE 23 07 40.0 +8.9
COWI LR LR
comp=Z,473nm,21.0s,MS5.0
OXF Oxford 109.54 57 PFAKE 23 07 40.0 +8.3
OXF LR LR
comp=Z,647nm,19.0s,MS5.2
HDIL Hopedale 109.56 51 PFAKE 23 07 40.0 +8.4
HDIL LR LR
comp=Z,887nm,21.0s,MS5.3
TEIG Tepich 109.88 72 PFAKE 23 07 40.0 +7.2
TEIG LR LR
comp=Z,548nm,21.0s,MS5.1
TGUH Tegucigalpa,Un 110.20 79 PFAKE 23 07 40.0 +6.5
TGUH LR LR
comp=Z,958nm,21.0s,MS5.3
KBS Kingsbay 111.01 355 PFAKE 23 07 40.0 +6.7
KBS LR LR
comp=Z,376nm,20.0s,MS5.0
ABPO Ambohimpanom 111.22 244 PFAKE 23 07 50.0 +15
ABPO LR LR
comp=Z,746nm,22.0s,MS5.2
BRAL Brewton 111.50 61 PFAKE 23 07 50.0 +14
BRAL LR LR
comp=Z,835nm,20.0s,MS5.3
LRAL Lakeview Retre 111.55 59 PFAKE 23 07 50.0 +14
LRAL LR LR
comp=Z,1μm,20.0s,MS5.5
JTS JuntasAbangare 111.96 83 PFAKE 23 07 50.0 +13
JTS LR LR
comp=Z,800nm,21.0s,MS5.3
LCO Las Campanas 113.41 128 PFAKE 23 07 50.0 +11
LCO LR LR
comp=Z,671nm,21.0s,MS5.2
AAM Ann Arbor 113.66 49 PFAKE 23 07 50.0 +11
AAM LR LR
comp=Z,985nm,19.0s,MS5.4
CFAA Coronel Fontan 113.96 132 PP PP 23 08 29.4 -4.2
comp=Z,0.1nm,0.3s,baz=231,slow=5.2,SNR=3.3
ACSO Alum Creek Sta 114.39 51 PFAKE 23 07 50.0 +9.2
ACSO LR LR
comp=Z,739nm,20.0s,MS5.3
TRQA Tornquist 114.50 141 PFAKE 23 07 50.0 +8.9
TRQA LR LR
comp=Z,583nm,19.0s,MS5.2
GOGA Godfrey 114.50 58 PFAKE 23 07 50.0 +8.8
GOGA LR LR
comp=Z,968nm,20.0s,MS5.4
LVZ Lovozero 114.66 341 PFAKE 23 07 50.0 +10
LVZ LR LR
comp=Z,599nm,21.0s,MS5.2
NNA Nana 114.89 109 PFAKE 23 07 50.0 +7.5
NNA LR LR
comp=Z,687nm,20.0s,MS5.3
KEV Kevo 115.68 345 PFAKE 23 07 50.0 +7.6
KEV LR LR
comp=Z,527nm,19.0s,MS5.2
ARCES ARCESS Array B 116.22 345 PKP PKPdf 23 07 42.5 -0.9
comp=Z,2.2nm,0.5s,baz=106,slow=2.1,SNR=18
ARCES ARCESS Array B 116.22 345 PKIKP PKPdf 23 07 42.6 -0.8
ARCES pmax pmax
comp=Z,2.0nm,0.5s
KLMR Klimovskoe 116.37 333 *e*PKIKP PKPdf 23 07 42.4 -1.5
KLMR pmax pmax
comp=Z,15nm,1.5s
ERPA Erie 116.39 49 PFAKE 23 08 00.0 +15
ERPA LR LR
comp=Z,721nm,20.0s,MS5.3
BLA Blacksburg 116.70 54 PFAKE 23 08 00.0 +15
BLA LR LR
comp=Z,712nm,21.0s,MS5.3
BCIP Isla Barro Col 116.80 85 PFAKE 23 08 00.0 +14
BCIP LR LR
comp=Z,369nm,20.0s,MS5.0
MCWV Mont Chateau 116.85 51 PFAKE 23 08 00.0 +14
MCWV LR LR
comp=Z,2μm,20.0s,MS5.7
NHSC New Hope 117.27 59 PFAKE 23 08 00.0 +13
NHSC LR LR
comp=Z,1μm,22.0s,MS5.5
JOF Joensuu 118.65 338 *e*PKIKP PKPdf 23 07 46.8 -1.5
JOF Joensuu 118.65 338 *e*pkp PKPdf 23 07 46.8 -1.5
CNNC Cliffs of the 118.95 56 PFAKE 23 08 00.0 +10
CNNC LR LR
comp=Z,729nm,20.0s,MS5.3
CBN Corbin 118.97 53 PFAKE 23 08 00.0 +10
CBN LR LR
comp=Z,450nm,21.0s,MS5.1
BINY Binghamton 119.30 48 PFAKE 23 08 00.0 +10
BINY LR LR
comp=Z,743nm,19.0s,MS5.3
LONY Lake Ozonia 119.75 45 PFAKE 23 08 00.0 +9.1
LONY LR LR
comp=Z,632nm,21.0s,MS5.2
GNI Garni 119.82 310 *e*PKPdf PKPdf 23 07 52.6 +1.4
GNI LR LR
comp=Z,269nm,20.0s,MS4.9
GNI Garni 119.82 310 *e*PKIKP PKPdf 23 07 52.6 +1.4
GNI MLR MLR
comp=Z,269nm,20.0s
MTDJ Mount Denham 119.88 75 PFAKE 23 08 00.0 +8.1
MTDJ LR LR
comp=Z,381nm,20.0s,MS5.0
ZEI Tsey 119.90 313 *e*PKIKP PKPdf 23 07 51.4 +0.1
ZEI pmax pmax
comp=Z,8.0nm,0.9s
NCB Newcomb 120.16 46 PFAKE 23 08 00.0 +8.3
NCB LR LR
comp=Z,2μm,22.0s,MS5.8
OBN Obninsk 120.33 328 PFAKE 23 08 00.0 +8.3
OBN LR LR
comp=Z,739nm,20.0s,MS5.3
KIV Kislovodsk 120.48 315 PFAKE 23 08 00.0 +7.6
KIV LR LR
comp=Z,534nm,21.0s,MS5.2
KIV Kislovodsk 120.48 315 *e*PKIKP PKPdf 23 07 56.1 +3.7
KIV *e*PS PS 23 19 06.6 -3.8
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,400nm,17.0s,MS5.1
SCHQ Schefferville 120.87 32 PFAKE 23 08 00.0 +7.2
SCHQ LR LR

comp=Z,849nm,21.0s,MS5.4
KAF Kangasniemi 120.98 339 *e*PKIKP PKPdf 23 07 50.5 -2.3
KAF Kangasniemi 120.98 339 *e*pkp PKPdf 23 07 50.5 -2.3
LPAZ La Paz 121.22 117 PKP PKPdf 23 07 55.1 +0.5
comp=Z,7.5nm,0.9s,baz=349,slow=1.7,SNR=24
LPAZ La Paz 121.22 117 *e*PKPdf PKPdf 23 07 55.3 +0.7
LPAZ LR LR
comp=Z,573nm,20.0s,MS5.2
LPAZ La Paz 121.22 117 PKIKP PKPdf 23 07 55.1 +0.5
LPAZ pmax pmax
comp=Z,8.0nm,0.9s
FINES FINESS Array B 121.50 338 PKP PKPdf 23 07 51.9 -1.9
comp=Z,6.1nm,0.9s,baz=22,slow=2.1,SNR=9.8
FINES FINESS Array B 121.50 338 PKIKP PKPdf 23 07 51.9 -1.9
FINES pmax pmax
comp=Z,6.0nm,0.9s
LBNH Lisbon 121.68 45 PFAKE 23 08 10.0 +15
LBNH LR LR
comp=Z,686nm,20.0s,MS5.3
PKME Peaks-Kenny Pk 123.16 43 PFAKE 23 08 10.0 +13
PKME LR LR
comp=Z,582nm,20.0s,MS5.2
ANN Anapa 123.83 317 *e*PKIKP PKPdf 23 08 08.3 +10
ANN pmax pmax
comp=Z,82nm,1.1s
ANN MLR MLR
comp=N,908nm,21.0s,MS5.5
ANN MLR MLR
comp=E,698nm,21.0s,MS5.5
ANN MLR MLR
comp=Z,823nm,21.0s,MS5.4
BOSA Boshof 124.09 224 PKP PKPdf 23 08 00.1 +0.3
comp=Z,16nm,0.9s,baz=131,slow=2.4,SNR=13
BOSA Boshof 124.09 224 *e*PKPdf PKPdf 23 08 00.6 +0.7
BOSA Boshof 124.09 224 PKIKP PKPdf 23 08 00.1 +0.3
BOSA pmax pmax
comp=Z,17nm,0.9s
SUR Sutherland 124.41 217 *e*PKPdf PKPdf 23 08 01.4 +1.1
CPUP Villa Florida 124.81 133 PKP PKPdf 23 08 00.9 -0.4
comp=Z,14nm,0.9s,baz=281,slow=1.0,SNR=24
CPUP Villa Florida 124.81 133 *e*PKPdf PKPdf 23 08 01.0 -0.3
CPUP Villa Florida 124.81 133 PKIKP PKPdf 23 08 00.9 -0.4
CPUP pmax pmax
comp=Z,14nm,0.9s
IZAR Zarasai 125.00 333 *e*P PKPdf 23 08 00.2 -0.5
IZAR AMB AMB 23 08 01.6
comp=Z,4.2nm,1.0s
MALT Malatya 125.01 309 *e*PKPdf PKPdf 23 08 01.4 +0.2
MALT LR LR
comp=Z,463nm,22.0s,MS5.1
MALT Malatya 125.01 309 *e*PKIKP PKPdf 23 08 01.4 +0.2
MALT MLR MLR
comp=Z,463nm,22.0s,MS5.1
MALT Malatya 125.01 309⇑ *i*P PKPdf 23 08 02.1 +0.9
IDID Didziasalis 125.03 332 *e*P PKPdf 23 07 54.8 -5.9
IIGN Ignalina 125.25 332 *e*P PKPdf 23 08 00.7 -0.5
IIGN AMB AMB 23 08 02.2
comp=Z,7.3nm,1.2s
SDV Santo Domingo 125.77 87 *e*PKPdf PKPdf 23 08 02.9 -0.5
SDV LR LR
comp=Z,117nm,20.0s,MS4.5
SDDR Presa de Saban 125.82 75 PFAKE 23 08 10.0 +6.7
SDDR LR LR
comp=Z,630nm,19.0s,MS5.3
LBTB Lobatse 126.07 228 *e*PKPdf PKPdf 23 08 03.9 +0.1
LBTB LR LR
comp=Z,1μm,19.0s,MS5.6
LBTB Lobatse 126.07 228 *e*PKIKP PKPdf 23 08 03.9 +0.2
LBTB MLR MLR
comp=Z,1μm,19.0s,MS5.6
KMBO Kilima Mbogo 126.11 260 PKP PKPdf 23 08 05.1 +1.0
comp=Z,1.5nm,0.9s,baz=180,slow=24,SNR=6.5
KMBO Kilima Mbogo 126.11 260 PKP PKPdf 23 08 05.1 +1.0
KMBO Kilima Mbogo 126.11 260 PKIKP PKPdf 23 08 05.1 +1.0
KMBO pmax pmax
comp=Z,2.0nm,0.9s
AKASG Malin Array Be 126.34 326 PKP PKPdf 23 08 02.8 -0.6
comp=Z,2.3nm,0.6s,baz=68,slow=2.0,SNR=14
AKASG Malin Array Be 126.34 326*c i*PKIKP PKPdf 23 08 03.0 -0.4
AKASG pmax pmax
comp=Z,2.0nm,0.6s
KIEV Kiev 126.36 326 PFAKE 23 08 10.0 +6.6
KIEV LR LR
comp=Z,562nm,22.0s,MS5.2
NOA NORSAR Array B 126.57 344 PKP PKPdf 23 08 02.6 -0.9
comp=Z,4.1nm,0.9s,baz=35,slow=1.9,SNR=7.8
NOA NORSAR Array B 126.57 344 PKIKP PKPdf 23 08 02.6 -0.9
NOA pmax pmax
comp=Z,4.0nm,0.9s
HFS Hagfors 126.61 342 PKP PKPdf 23 08 02.5 -1.1
comp=Z,4.4nm,1.0s,baz=43,slow=6.5,SNR=3.5
HFS Hagfors 126.61 342 PKIKP PKPdf 23 08 02.5 -1.1
HFS pmax pmax
comp=Z,4.0nm,1.0s
BR131 Keskin Array S 128.17 312 *e*PKPdf PKPdf 23 08 07.0 -0.2
BR131 LR LR
comp=Z,235nm,19.0s,MS4.9
BRTR Keskin Array B 128.17 312 PKP PKPdf 23 08 06.8 -0.4
comp=Z,3.1nm,0.9s,baz=97,slow=2.9,SNR=13
BRTR PP PP 23 10 09.9 -0.9
comp=Z,2.0nm,1.1s,baz=98,slow=6.5,SNR=3.8
BRTR Keskin Array B 128.17 312*c i*PKIKP PKPdf 23 08 07.3 +0.1
BRTR pmax pmax
comp=Z,3.0nm,0.9s
KONO Kongsberg 128.18 344 PFAKE 23 08 20.0 +13
KONO LR LR
comp=Z,424nm,19.0s,MS5.2
KIS Kishinev 128.43 322 *e*PKP PKPdf 23 08 10.0 +2.5
KIS LRM 00 04 40.0
comp=Z,400nm,20.0s
KIS Kishinev 128.43 322 *e*PKIKP PKPdf 23 08 10.0 +2.5
KIS MLR MLR
comp=Z,400nm,22.0s,MS5.1
LSZ Lusaka 129.30 240 *e*PKPdf PKPdf 23 08 10.3 +0.2
LSZ Lusaka 129.30 240 *e*PKIKP PKPdf 23 08 10.3 +0.2
CSS Prodhromos 129.84 306 PFAKE 23 08 20.0 +9.4
CSS LR LR
comp=Z,320nm,20.0s,MS5.0
BUR08 Bucovina Ar. S 130.20 325 *e*PKPdf PKPdf 23 08 12.5 +1.7
BURAR Bucovina Array 130.21 325⇑ *i*P PKPdf 23 08 12.4 +1.5
BBSR BB Station 130.26 57 PFAKE 23 08 20.0 +8.5
BBSR LR LR
comp=Z,524nm,21.0s,MS5.2
KWP Kalwaria Pacla 130.41 328 *e*PKPdf PKPdf 23 08 11.2 0.0
KWP LR LR
comp=Z,631nm,20.0s,MS5.3
KWP Kalwaria Pacla 130.41 328 *e*PKIKP PKPdf 23 08 11.2 0.0
KWP MLR MLR
comp=Z,631nm,20.0s,MS5.3
KWP Kalwaria Pacla 130.41 328⇑ *i*P PKPdf 23 08 13.0 +1.8
SJG San Juan 130.69 76 *e*PKPdf PKPdf 23 08 12.3 -0.3
SJG LR LR
comp=Z,367nm,21.0s,MS5.1
SJG San Juan 130.69 76 *e*PKIKP PKPdf 23 08 12.3 -0.3
SJG MLR MLR
comp=Z,367nm,21.0s
KOLS Kolonicke sedl 131.06 328 *e*PKP PKPdf 23 08 13.4 +1.0
KOLS *e* 23 11 40.9
KOLS Kolonicke sedl 131.06 328 *e*PKIKP PKPdf 23 08 13.4 +1.0
KOLS Kolonicke sedl 131.06 328 *e*PKP PKPdf 23 08 13.4 +1.0
KOLS *e*SKP 23 11 40.9
UZH Uzhgorod 131.24 327 *e*PKIKP PKPdf 23 08 13.0 +0.2
UZH *e* 23 08 19.6
UZH *e* 23 08 28.6
CRVS Cervenica-Dubn 131.51 328 *e*PKP PKPdf 23 08 14.0 +0.7
CRVS *e* 23 11 42.7
CRVS Cervenica-Dubn 131.51 328 *e*PKIKP PKPdf 23 08 14.0 +0.7
CRVS Cervenica-Dubn 131.51 328 *e*PKP PKPdf 23 08 14.0 +0.7
CRVS *e*SKP 23 11 42.7
NIE Niedzica 131.77 329 *e*PKP PKPdf 23 08 14.4 +0.6
NIE Niedzica 131.77 329 *e*PKIKP PKPdf 23 08 14.4 +0.6
DRGR 132.09 325⇑ *i*P PKPdf 23 08 14.2 -0.3
KECS Kecovo 132.27 328 *e*PKP PKPdf 23 08 18.1 +3.4
KECS *e* 23 11 46.1
KECS Kecovo 132.27 328 *e*PKIKP PKPdf 23 08 18.1 +3.4
KECS Kecovo 132.27 328 *e*PKP PKPdf 23 08 18.1 +3.4
KECS *e*SKP 23 11 46.1
MBAR Mbarara 132.53 259 PFAKE 23 08 30.0 +14
MBAR LR LR
comp=Z,453nm,19.0s,MS5.2
OKC Ostrava-Krasne 132.56 331 *e*PKIKP PKPdf 23 08 16.5 +1.3
OKC MLR MLR
comp=Z,400nm,17.6s,MS5.2
OKC Ostrava-Krasne 132.56 331 *e*PKPdf PKPdf 23 08 16.5 +1.3
OKC AMS AMS 00 05 00.0
comp=Z,400nm,17.6s
MORC Moravsky Berou 132.89 331 *e*PKPdf PKPdf 23 08 15.9 +0.1
MORC Moravsky Berou 132.89 331 *e*PKIKP PKPdf 23 08 16.0 +0.1
MORC Moravsky Berou 132.89 331⇑ *i*P PKPdf 23 08 16.3 +0.4
PSZ Piszkesteto 132.94 328 *e*PKPdf PKPdf 23 08 15.0 -1.0
PSZ LR LR
comp=Z,558nm,22.0s,MS5.2
PSZ Piszkesteto 132.94 328 *e*PKIKP PKPdf 23 08 15.0 -1.0
PSZ MLR MLR
comp=Z,558nm,22.0s,MS5.2
PSZ Piszkesteto 132.94 328⇑ *i*P PKPdf 23 08 15.5 -0.5
PSZ Piszkesteto 132.94 328 *e*PKP PKPdf 23 08 15.0 -1.0
DPC Dobruska-Polom 133.06 332 *e*PKIKP PKPdf 23 08 16.1 -0.1
DPC *e* 23 08 27.8
DPC MLR MLR
comp=Z,500nm,23.1s,MS5.2
DPC Dobruska-Polom 133.06 332 *e*PKPdf PKPdf 23 08 16.1 -0.1
DPC *e*pPKP pPKPdf 23 08 27.8 +4.4
DPC AMS AMS 00 09 10.0
comp=Z,500nm,23.1s
UPC Upice 133.08 333 *e*PKIKP PKPdf 23 08 15.9 -0.3
UPC *e* 23 08 21.3
UPC Upice 133.08 333 *e*PKPdf PKPdf 23 08 15.9 -0.3
UPC *ex* x 23 08 21.3
VYHS Vyhne 133.11 329 *e*PKP PKPdf 23 08 17.5 +1.2
VYHS *e*PP PP 23 10 44.0 +1.8
VYHS *e* 23 11 48.4
VYHS Vyhne 133.11 329 *e*PKIKP PKPdf 23 08 17.5 +1.2
VYHS *e* 23 10 44.0
VYHS Vyhne 133.11 329 *e*PKP PKPdf 23 08 17.5 +1.2
VYHS *e*PP PP 23 10 44.0 +1.8
VYHS *e*SKP 23 11 48.3
BZS Buzias 133.39 324⇓ *i*P PKPdf 23 08 16.9 0.0
SPB Sao Paulo 133.39 138 PFAKE 23 08 30.0 +12
SPB LR LR
comp=Z,455nm,19.0s,MS5.2
VRAC Vranov 133.66 331 PKP PKPdf 23 08 16.9 -0.4
comp=Z,2.0nm,0.8s,baz=17,slow=2.4,SNR=5.3
VRAC PP PP 23 10 47.1 +1.5
comp=Z,0.8nm,0.4s,baz=85,slow=7.3,SNR=4.9
VRAC Vranov 133.66 331 PKIKP PKPdf 23 08 16.9 -0.4
VRAC 23 10 47.1
VRAC pmax pmax
comp=Z,2.0nm,0.8s
VRAC pmax pmax
comp=Z,1.0nm,0.4s
VRAC Vranov 133.66 331⇑ *i*P PKPdf 23 08 17.0 -0.3
BUD Budapest 133.67 328⇓ *e*PKP PKPdf 23 08 16.8 -0.6
PVCC Panska Ves 133.71 334 *e*PKIKP PKPdf 23 08 17.4 0.0
PVCC MLR MLR
comp=Z,600nm,21.0s,MS5.3
PVCC Panska Ves 133.71 334 *e*PKPdf PKPdf 23 08 17.4 0.0
PVCC AMS AMS 00 08 10.0
comp=Z,600nm,21.0s
BRG Berggiesshubel 133.72 334 *e*P PKPdf 23 08 18.0 +0.6
comp=Z,11nm,1.4s
CLL Collm 133.78 335 *e*PKP PKPdf 23 08 18.0 +0.5
CLL Collm 133.78 335 *e*PKIKP PKPdf 23 08 18.0 +0.5
CLL pmax pmax
comp=Z,13nm,1.2s
CLL Collm 133.78 335 *e*PKPdf PKPdf 23 08 18.0 +0.5
comp=Z,13nm,1.2s
CLL *e*PP PP 23 10 50.0 +3.7
CLL *e*SS SS 23 28 30.0 -1.5
CLL LmV 00 05 00.0
comp=Z,400nm,21.4s
VTS Vitosha 134.09 320⇑ *i*P PKPdf 23 08 19.0 +0.6
PRU Pruhonice 134.11 333 *e*PKIKP PKPdf 23 08 18.6 +0.4
PRU MLR MLR
comp=Z,600nm,19.2s,MS5.3
PRU Pruhonice 134.11 333 *e*PKPdf PKPdf 23 08 18.6 +0.4
PRU AMS AMS 00 08 30.0
comp=Z,600nm,19.2s
TREC Trest 134.19 332 AMS AMS 00 06 50.0
comp=Z,600nm,20.4s
PKSM Moragy 134.68 327⇑ *i*P PKPdf 23 08 19.1 -0.2
SOP Sopron 134.79 330⇓ *e*PKP PKPdf 23 08 19.3 -0.2
NKC Novy Kostel 134.83 335 *e*PKIKP PKPdf 23 08 19.3 -0.2
NKC MLR MLR
comp=Z,500nm,21.0s,MS5.2
NKC Novy Kostel 134.83 335 *e*PKPdf PKPdf 23 08 19.3 -0.2
NKC AMS AMS 00 07 50.0
comp=Z,500nm,21.0s
MOX Moxa 134.85 336 *e*(P) PKPdf 23 08 20.9 +1.4
MOX
comp=Z,400nm,22.0s
MOX Moxa 134.85 336 PKIKP PKPdf 23 08 20.9 +1.4
MOX MLR MLR
comp=Z,400nm,22.0s,MS5.1
ANWB Willy Bob 134.86 76 PFAKE 23 08 30.0 +10
ANWB LR LR
comp=Z,534nm,21.0s,MS5.2
GRGR Grenville 134.88 84 PFAKE 23 08 30.0 +9.4
GRGR LR LR
comp=Z,292nm,20.0s,MS5.0
CONA Conrad Observa 134.97 330⇓ *i*PKIKP PKiKP 23 08 20.6 -0.7
comp=Z,9.2nm,1.2s
EKA Eskdalemuir Ar 134.97 350 PKP PKPdf 23 08 20.0 +0.4
comp=Z,2.3nm,1.0s,baz=28,slow=3.8,SNR=4.5
EKA Eskdalemuir Ar 134.97 350 PKIKP PKPdf 23 08 20.0 +0.4
EKA pmax pmax
comp=Z,2.0nm,1.0s
ESK Eskdalemuir 134.99 350 PFAKE 23 08 30.0 +10
ESK LR LR
comp=Z,410nm,19.0s,MS5.2
KHC Kasperske Hory 135.17 333 *e*PKPdf PKPdf 23 08 19.6 -0.6
KHC Kasperske Hory 135.17 333 *e*PKIKP PKPdf 23 08 20.0 -0.2
KHC *e* 23 08 32.1
KHC MLR MLR
comp=Z,600nm,19.1s,MS5.3
KHC Kasperske Hory 135.17 333 *e*PKPdf PKPdf 23 08 20.0 -0.2
KHC *ex* x 23 08 25.3
KHC *e*pPKP pPKPdf 23 08 32.1 +4.7
KHC AMS AMS 00 09 10.0
comp=Z,600nm,19.1s
FDF Fort de France 135.48 80 PFAKE 23 08 30.0 +8.3
FDF LR LR
comp=Z,468nm,19.0s,MS5.2
PERS Pernice 136.23 329 *i* PKPbc PKPdf 23 08 21.9 -0.3
TIR Tirane 136.86 320 PFAKE 23 08 40.0 +16
TIR LR LR
comp=Z,414nm,20.0s,MS5.2
BOJS Bojanci 136.93 328 *i* PKPbc PKPdf 23 08 25.1 +1.5
VISS Visnje 136.94 329 *i* PKPbc PKPdf 23 08 24.4 +0.8
MEM Membach 136.96 340 PKP PKPdf 23 08 25.0 +1.5
BBGH Gun Hill 136.97 83 PFAKE 23 08 40.0 +15
BBGH LR LR
comp=Z,688nm,20.0s,MS5.4
RUP Ruppelstein 137.36 338 PKP PKPdf 23 08 24.8 +0.6
RUP Ruppelstein 137.36 338 PKIKP PKPdf 23 08 24.8 +0.6
WLF Walferdange 137.71 339 PKP PKPdf 23 08 25.7 +0.9
WLF Walferdange 137.71 339 *e*PKPdf PKPdf 23 08 25.0 +0.1
WLF LR LR
comp=Z,468nm,20.0s,MS5.2
WLF Walferdange 137.71 339 *e*PKIKP PKPdf 23 08 25.0 +0.1
WLF MLR MLR
comp=Z,468nm,20.0s,MS5.2
GIVF Givet 137.79 341 *e*PKP1 PKPdf 23 08 24.4 -0.6
GIVF Givet 137.79 341 *e*PKIKP PKPdf 23 08 24.4 -0.6
DOU Dourbes 137.87 341 PKP PKPdf 23 08 23.4 -1.8
BFO Black Forest 138.00 336 PFAKE 23 08 40.0 +15
BFO LR LR
comp=Z,470nm,20.0s,MS5.2
BAIF Baives 138.02 341 *e*PKP1 PKPdf 23 08 24.7 -0.7
BAIF Baives 138.02 341 *e*PKIKP PKPdf 23 08 24.7 -0.7
BDFB Brasilia 138.19 129 PKhKP PKPpre 23 08 21.2
comp=Z,1.5nm,0.3s,baz=185,slow=5.0,SNR=4.3
BDFB PKP PKPdf 23 08 26.9 +0.1
comp=Z,20nm,1.0s,baz=169,slow=5.2,SNR=4.2
BDFB Brasilia 138.19 129 PKIKP PKPpre 23 08 21.2
BDFB 23 08 26.9
CDF Champ du Feu 138.34 337 *e*PKP1 PKPdf 23 08 25.1 -1.0
comp=Z,10.0nm,0.9s
CDF Champ du Feu 138.34 337 *e*PKIKP PKPdf 23 08 25.1 -1.0
FELD Feldberg im Sc 138.49 336 PKP PKPdf 23 08 25.8 -0.6
ECH Echery 138.55 337 PKP PKPdf 23 08 26.3 -0.2
ECH LR LR
comp=Z,467nm,20.0s,MS5.2
ECH Echery 138.55 337 PKIKP PKPdf 23 08 26.3 -0.2
ECH MLR MLR
comp=Z,467nm,20.0s,MS5.2
DAVOX Davos/Dischmat 138.57 334 PKP PKPdf 23 08 26.2 -0.4
comp=Z,8.2nm,0.9s,baz=22,slow=6.3,SNR=7.8
DAVOX Davos/Dischmat 138.57 334 PKIKP PKPdf 23 08 26.2 -0.4
HINF Hinteralfeld 138.99 337 *e*PKP1 PKPdf 23 08 26.3 -1.0
HINF Hinteralfeld 138.99 337 *e*PKIKP PKPdf 23 08 26.3 -1.0
HAU Haudompre 139.03 338 *e*PKP1 PKPdf 23 08 26.8 -0.5
HAU *e*MLR MLR
comp=Z,469nm,22.5s,MS4.9
HAU Haudompre 139.03 338 *e*PKP PKPdf 23 08 26.8 -0.5
HAU LR LR
comp=Z,470nm,22.5s,MS5.2
HAU Haudompre 139.03 338 *e*PKIKP PKPdf 23 08 26.8 -0.5
HAU MLR MLR
comp=Z,470nm,22.5s,MS5.2
TUE Stuetta 139.05 334 PFAKE 23 08 40.0 +13
TUE LR LR
comp=Z,628nm,21.0s,MS5.3
MEZF Maizieres J'vi 139.08 339 *e*PKP1 PKPdf 23 08 26.8 -0.6
comp=Z,53nm,1.2s
SFTF Sexfontaines 139.34 339 *e*PKP1 PKPdf 23 08 27.3 -0.6
AQU L'Aquila 140.04 326 PFAKE 23 08 40.0 +11
AQU LR LR
comp=Z,494nm,21.0s,MS5.2
CUC Castrocucco 140.15 321 PFAKE 23 08 40.0 +10
CUC LR LR
comp=Z,223nm,19.0s,MS4.9
CABF La Chapelle 140.28 337 *e*PKP1 PKPdf 23 08 29.3 -0.4
comp=Z,68nm,1.6s
CABF La Chapelle 140.28 337 *e*PKIKP PKPdf 23 08 29.3 -0.4
VLC Villacollemand 140.32 330 PFAKE 23 08 40.0 +10
VLC LR LR
comp=Z,459nm,19.0s,MS5.2
LOR Lormes 140.55 339 *e*PKP1 PKPdf 23 08 29.3 -0.8
LOR *e*MLR MLR
comp=Z,534nm,21.0s,MS5.0
LOR Lormes 140.55 339 *e*PKP PKPdf 23 08 29.3 -0.8
LOR LR LR
comp=Z,530nm,21.0s,MS5.3
LOR Lormes 140.55 339 *e*PKIKP PKPdf 23 08 29.3 -0.8
LOR MLR MLR
comp=Z,530nm,21.0s,MS5.3
FLN La Foliniere 140.56 344 *e*PKP1 PKPdf 23 08 29.9 -0.2
comp=Z,20nm,0.8s
FLN *e*MLR MLR
comp=Z,650nm,22.8s,MS5.0
FLN La Foliniere 140.56 344 *e*PKP PKPdf 23 08 29.9 -0.2
FLN LR LR
comp=Z,650nm,22.8s,MS5.3
FLN La Foliniere 140.56 344 *e*PKIKP PKPdf 23 08 29.9 -0.2
FLN MLR MLR
comp=Z,650nm,22.8s,MS5.3
SSF Saint Saulge 140.85 339 *e*PKP1 PKPdf 23 08 29.9 -0.8
comp=Z,21nm,1.1s
SSF Saint Saulge 140.85 339 *e*PKIKP PKPdf 23 08 29.9 -0.8
LPL La Plagne 140.91 335 *e*PKP1 PKPdf 23 08 30.3 -0.6
comp=Z,33nm,1.3s
LPL La Plagne 140.91 335 *e*PKIKP PKPdf 23 08 30.3 -0.6
LPG La Plagne 140.92 335 *e*PKP1 PKPdf 23 08 30.6 -0.3
comp=Z,26nm,1.2s
LPG La Plagne 140.92 335 *e*PKIKP PKPdf 23 08 30.6 -0.3
SMF Signal de Mont 141.09 339 *e*PKP1 PKPdf 23 08 30.3 -0.8
comp=Z,12nm,0.9s
SMF Signal de Mont 141.09 339 *e*PKIKP PKPdf 23 08 30.3 -0.8
AVF Avril sur Loir 141.14 339 *e*PKP1 PKPdf 23 08 30.3 -0.9
comp=Z,19nm,1.3s
AVF Avril sur Loir 141.14 339 *e*PKIKP PKPdf 23 08 30.3 -0.9
BNI Bardonecchia 141.31 335 *e*PKPdf PKPdf 23 08 34.2 +2.6
BNI LR LR
comp=Z,759nm,20.0s,MS5.5
BNI Bardonecchia 141.31 335 *e*PKIKP PKPdf 23 08 34.2 +2.6
BNI MLR MLR
comp=Z,759nm,20.0s,MS5.5
BGF Bois d'Agland 141.52 340 *e*PKP1 PKPdf 23 08 31.0 -0.9
comp=Z,37nm,1.2s
BGF Bois d'Agland 141.52 340 *e*PKIKP PKPdf 23 08 31.0 -0.9
MBDF Montbardon 141.53 334 *e*PKP1 PKPdf 23 08 31.0 -1.0
MBDF Montbardon 141.53 334 *e*PKIKP PKPdf 23 08 31.0 -1.0
ORIF Oris-en-Rattie 141.75 335 *e*PKP1 PKPdf 23 08 31.3 -1.1
comp=Z,26nm,1.1s
ORIF *e*MLR MLR
comp=Z,613nm,22.2s,MS5.0
ORIF Oris-en-Rattie 141.75 335 *e*PKIKP PKPdf 23 08 31.3 -1.1
TCF Toulx Ste Croi 141.97 340 *e*PKP1 PKPdf 23 08 31.7 -1.0
comp=Z,13nm,0.9s
TCF Toulx Ste Croi 141.97 340 *e*PKIKP PKPdf 23 08 31.7 -1.0
PGF Pioggiola 142.20 330 *e*PKP1 PKPdf 23 08 32.3 -1.0
PGF Pioggiola 142.20 330 *e*PKIKP PKPdf 23 08 32.3 -1.0
VIVF Saint-Julien-I 142.29 336 *e*PKP1 PKPdf 23 08 32.8 -0.5
comp=Z,32nm,1.3s
VIVF Saint-Julien-I 142.29 336 *e*PKIKP PKPdf 23 08 32.8 -0.5
LBL Lubilhac 142.51 338 PKP PKPdf 23 08 31.4 -2.3
LBL Lubilhac 142.51 338 PKIKP PKPdf 23 08 31.4 -2.3
FRF La Foret Royal 142.52 333 *e*PKP1 PKPdf 23 08 32.5 -1.3
comp=Z,55nm,1.3s
FRF La Foret Royal 142.52 333 *e*PKIKP PKPdf 23 08 32.5 -1.3
SMRF Simiane la Rot 142.65 335 *e*PKP1 PKPdf 23 08 33.6 -0.4
RJF Les Rejaudoux 143.06 340 *e*PKP1 PKPdf 23 08 30.7 -4.0
RJF *e*MLR MLR
comp=Z,473nm,22.2s,MS4.9
RJF Les Rejaudoux 143.06 340 *e*PKP PKPdf 23 08 30.7 -4.0
RJF LR LR
comp=Z,470nm,22.3s,MS5.2
RJF Les Rejaudoux 143.06 340 *e*PKIKP PKPdf 23 08 30.7 -4.0
RJF MLR MLR
comp=Z,470nm,22.3s,MS5.2
CAF Calviac 143.21 339 *e*PKP1 PKPdf 23 08 31.3 -3.7
CAF Calviac 143.21 339 *e*PKIKP PKPdf 23 08 31.3 -3.7
LASF Ste Croix 143.26 336 *e*PKP1 PKPdf 23 08 34.4 -0.7
comp=Z,82nm,1.5s
WDD Wield Dalam 143.40 317 PFAKE 23 08 50.0 +14
WDD LR LR
comp=Z,269nm,20.0s,MS5.0
LFF La Frestale 143.64 340 *e*PKP1 PKPdf 23 08 32.5 -3.2
comp=Z,63nm,1.2s
LFF La Frestale 143.64 340 *e*PKIKP PKPdf 23 08 32.5 -3.2
VSL Villasalto 144.22 326 PFAKE 23 08 50.0 +13
VSL LR LR
comp=Z,240nm,20.0s,MS5.0
MTLF Montolieu 144.52 337 *e*PKP1 PKPdf 23 08 35.8 -1.5
comp=Z,117nm,1.3s
MTLF Montolieu 144.52 337 *e*PKIKP PKPdf 23 08 35.8 -1.5
LRDF Laroque-de-Fa 144.74 337 PKP PKPdf 23 08 36.6 -1.1
LRDF Laroque-de-Fa 144.74 337 PKP PKPdf 23 08 35.6 -2.1
FILF Fillols 145.05 336 PKP PKPdf 23 08 37.4 -0.9
CARF Carcanieres 145.09 337 PKP PKPdf 23 08 37.9 -0.4
CARF Carcanieres 145.09 337 PKP PKPdf 23 08 37.4 -0.9
MLS Moulis 145.26 338 PKP PKPdf 23 08 37.9 -0.7
MLS Moulis 145.26 338 PKP PKPdf 23 08 37.5 -1.1
VALF Valcebollere 145.40 337 PKP PKPdf 23 08 38.8 -0.1
SALF Salau 145.40 338 PKP PKPdf 23 08 38.2 -0.7
SALF Salau 145.40 338 PKP PKPdf 23 08 40.1 +1.2
EPF Esparros 145.47 339 *e*PKP1 PKPbc 23 08 38.3 -0.6
EPF Esparros 145.47 339 *e*PKIKP PKPdf 23 08 38.3 -0.7
RESF Ens 145.66 339 PKP PKPdf 23 08 40.0 +0.7
RESF Ens 145.66 339 PKP PKPdf 23 08 41.1 +1.8
REYF Montagne du Re 145.68 340 PKP PKPdf 23 08 39.2 -0.1
REYF Montagne du Re 145.68 340 PKP PKPdf 23 08 40.3 +1.0
VIEF Viey 145.70 340 PKP PKPdf 23 08 40.5 +1.1
VIEF Viey 145.70 340 PKP PKPdf 23 08 41.2 +1.8
ORDF Ordiarp 145.73 341 PKP PKPdf 23 08 39.0 -0.4
ORDF Ordiarp 145.73 341 PKP PKPdf 23 08 38.7 -0.7
ATE Arette 145.77 341 PKP PKPdf 23 08 39.8 +0.3
ATE Arette 145.77 341 PKP PKPdf 23 08 40.5 +1.0
OSSF Osses 145.79 341 PKP PKPdf 23 08 38.7 -0.8
OSSF Osses 145.79 341 PKP PKPdf 23 08 40.1 +0.6
ETSF Etsaut 145.89 340 *e*PKP1 PKPbc 23 08 40.5 +0.2
comp=Z,109nm,1.3s
ETSF Etsaut 145.89 340 *e*PKP2 PKPab 23 08 40.5 -0.2
LARF Larrau 145.90 341 PKP PKPdf 23 08 38.0 -1.7
LARF Larrau 145.90 341 PKP PKPdf 23 08 37.9 -1.8
SJPF Ste Jean 145.91 341 *e*PKP1 PKPbc 23 08 40.1 -0.2
comp=Z,92nm,1.6s
SJPF Ste Jean 145.91 341 *e*PKP2 PKPab 23 08 40.1 -0.7
KEST Kesra 146.81 321 *e*PKPbc PKPbc 23 08 43.5 +0.2
comp=Z,9.9nm,1.0s,baz=211,slow=1.5,SNR=12
KEST Kesra 146.81 321 *e*PKPbc PKPbc 23 08 43.8 +0.5
CMAH Djebel Manchou 147.34 324 P PKPdf 23 08 41.0 -1.3
ABSA Djebel Ababsia 147.55 324 P PKPdf 23 08 39.0 -3.7
CKFL Kef-Lekhel 147.90 325 P PKPdf 23 08 45.0 +1.7
CASM Ain Smara 148.13 325 P PKPbc 23 08 46.0 -0.9
DFRA Djebel Bou Aff 148.26 326 P PKPbc 23 08 47.0 -0.2
PBRG Braganca 148.61 347 *e*PKPbc PKPbc 23 08 47.2 -0.7
SET Setif 148.78 326 P PKPab 23 08 50.0 -2.3
PCAB Cabril 148.96 349 *e*PKPbc PKPbc 23 08 48.9 +0.1
MVO Moncorvo 149.28 347 *e*PKPbc PKPbc 23 08 49.4 -0.3
PVRL Vila Real 149.32 348 *e*PKPbc PKPbc 23 08 50.0 +0.3

ESDC	**Sonseca Array**	**149.89 342**	PKPbc	PKPbc	23 08 51.1	-0.1
	comp=Z,8.9nm,1.0s,baz=10,slow=1.6,SNR=27					
ESLA	**Sonseca Array**	**149.89 342**	*e*PKPbc	PKPbc	23 08 50.8	-0.5
ESLA			LR	LR		
	comp=Z,2μm,21.0s,MS6.0					
PVIS	**Viseu**	**149.89 348**	*e*PKPbc	PKPbc	23 08 51.5	+0.3
EMHD	**Djebel Mahouad**	**150.06 329**	P	PKPbc	23 08 51.5	-0.2
PAB	**San Pablo**	**150.12 342**	*e*PKPbc	PKPbc	23 08 51.8	0.0
PAB			LR	LR		
	comp=Z,350nm,20.0s,MS5.2					
PAB	**San Pablo**	**150.12 342**	*e*PKP2	PKPbc	23 08 51.8	0.0
PAB			MLR	MLR		
	comp=Z,350nm,20.0s,MS5.2					
MTE	**Manteigas**	**150.13 348**	*e*PKPbc	PKPbc	23 08 51.8	0.0
MTE	**Manteigas**	**150.13 348**	*e*PKPbc	PKPbc	23 08 51.7	0.0
MTE			LR	LR		
	comp=Z,544nm,22.0s,MS5.3					
EBNR	**Beni Rached**	**150.69 331**	P	PKPbc	23 08 53.5	+0.3
CART	**Cartagena**	**150.71 336**	*e*PKPbc	PKPbc	23 08 52.7	-0.6
ECHA	**Ech Chlef**	**150.88 331**	P	PKPbc	23 08 54.2	+0.5
PMRV	**Marv??o**	**151.03 347**	*e*PKPbc	PKPbc	23 08 53.8	-0.1
PTOM	**Tomar**	**151.06 349**	*e*PKPbc	PKPbc	23 08 53.9	-0.1
EANR	**`Ain N'Sour**	**151.17 331**	P	PKPbc	23 08 56.0	+1.6
SHEL	**Horse Pasture**	**151.27 200**	*e*PKPbc	PKPbc	23 08 56.3	+1.2
SHEL			LR	LR		
	comp=Z,667nm,21.0s,MS5.4					
SHEL	**Horse Pasture**	**151.27 200**	*e*PKIKP	PKPbc	23 08 56.3	+1.1
SHEL			MLR	MLR		
	comp=Z,667nm,21.0s,MS5.4					
ETRT	**Tiaret**	**151.52 330**	P	PKPbc	23 08 58.5	+3.3
PESTR	**Estremoz**	**151.61 347**	*e*PKPbc	PKPbc	23 08 54.8	-0.5
PMAFR	**Mafra**	**151.86 350**	*e*PKPbc	PKPbc	23 08 55.7	-0.2
EVO	**Evora**	**152.02 347**	*e*PKIKP	PKPdf	23 08 50.3	+0.6
	comp=Z,56nm,1.2s					
EVO			*e*MLR	MLR		
	comp=Z,506nm,22.0s,MS5.0					
EVO	**Evora**	**152.02 347**	*e*PKPbc	PKPbc	23 08 56.0	-0.2
PBAR	**Barrancos**	**152.14 346**	*e*PKPbc	PKPbc	23 08 56.3	-0.2
PBEJ	**Beja**	**152.47 347**	*e*PKPbc	PKPbc	23 08 57.3	0.0
PCVE	**Castro Verde**	**152.89 347**	*e*PKPbc	PKPbc	23 08 59.0	+0.8
PVAQ	**Vaqueiros**	**153.03 346**	*e*PKPbc	PKPbc	23 08 58.6	+0.1
PBDV	**Barranco-do-Ve**	**153.24 346**	*e*PKPbc	PKPbc	23 08 59.8	+0.8
SFS	**San Fernando**	**153.52 343**	PFAKE		23 09 00.0	+8.0
SFS			LR	LR		
	comp=Z,770nm,20.0s,MS5.5					
PFVI	**Vila Bisbo**	**153.54 348**	*e*PKPbc	PKPbc	23 09 00.6	+0.9
RCBR	**Riachuelo**	**153.57 129**	PKPbc	PKPbc	23 08 59.8	-0.6
	comp=Z,32nm,1.0s,baz=211,slow=1.2,SNR=6.1					
RCBR	**Riachuelo**	**153.57 129**	*e*PKPdf	PKPdf	23 08 52.9	+0.2
RCBR			PKPbc	PKPbc	23 08 59.8	-0.6
RCBR			*e*PKPbc	PKPbc	23 09 00.2	-0.3
RCBR			LR	LR		
	comp=Z,720nm,20.0s,MS5.5					
RTC	**Rabat Centre**	**156.02 342**	PFAKE		23 09 10.0	+15
RTC			LR	LR		
	comp=Z,421nm,20.0s,MS5.3					
MDT	**Midelt**	**156.31 337**	PKPab	PKPab	23 09 24.6	+0.7
	comp=Z,3.9nm,0.8s,baz=70,slow=3.6,SNR=3.7					
TAM	**Tamanrasset**	**156.86 302**	*e*PKPdf	PKPdf	23 08 57.9	+1.0
TAM			LR	LR		
	comp=Z,342nm,19.0s,MS5.2					
TAM	**Tamanrasset**	**156.86 302**	*e*PKIKP	PKPdf	23 08 57.9	+1.0
TAM			MLR	MLR		
	comp=Z,342nm,19.0s,MS5.2					
TORD	**Torodi Ar. Bea**	**163.05 278**	PKP	PKPdf	23 09 03.7	-0.4
	comp=Z,11nm,1.0s,baz=46,slow=1.1,SNR=26					
TORD			PKPab	PKPab	23 09 53.8	-0.1
	comp=Z,5.4nm,1.0s,baz=73,slow=3.5,SNR=5.9					
TORD			PP	PP	23 13 38.6	-0.5
	comp=Z,3.7nm,1.3s,baz=134,slow=6.4,SNR=4.3					
KIC	**Kosan Boka**	**168.27 246**	*e*PKIKP	PKPdf	23 09 07.3	-1.1
	comp=Z,52nm,1.1s					
LIC	**Lamto**	**168.47 245**	*e*PKIKP	PKPdf	23 09 07.5	-1.1
	comp=Z,56nm,1.1s					
LIC	**Lamto**	**168.47 245**	*e*PKIKP	PKPdf	23 09 08.0	-0.6
	comp=Z,47nm,1.1s					
LIC			*e*MLR	MLR		
	comp=Z,887nm,18.2s					
LIC	**Lamto**	**168.47 245**	*e*PKPdf	PKPdf	23 09 08.0	-0.6
LIC			LR	LR		
	comp=Z,440nm,18.3s					
DBIC	**Dimbokro**	**168.50 248**	PKP	PKPdf	23 09 08.2	-0.3
	comp=Z,16nm,0.9s,baz=57,slow=2.4,SNR=8.3					
DBIC	**Dimbokro**	**168.50 248**	*e*PKPdf	PKPdf	23 09 08.1	-0.4
DBIC			*e*PKPab	PKPab	23 10 18.6	+0.7
DBIC			LR	LR		
	comp=Z,462nm,20.0s					
DBIC	**Dimbokro**	**168.50 248**	*e*PKIKP	PKPdf	23 09 08.1	-0.5
DBIC			*e*		23 10 18.6	
DBIC			MLR	MLR		
	comp=Z,462nm,20.0s					
TIC	**Toumodi**	**168.64 247**	*e*PKIKP	PKPdf	23 09 07.8	-0.9
	comp=Z,102nm,1.3s					
TIC	**Toumodi**	**168.64 247**	*e*PKIKP	PKPdf	23 09 07.8	-0.9
SACV	**Santiago Islan**	**171.32 64**	PFAKE		23 09 20.0	+10
SACV			LR	LR		
	comp=Z,570nm,21.0s					

PRE 19 23:00:12.1±3.0, 26°.44S×27°.67E, h2km, ML2.2, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERPM	**east rand prop**	**0.52**	**79**	*e*P	Pg	23 00 23.2	+1.2
ERPM				*e*S	Sg	23 00 29.8	+1.0
ERPM				AML	AML	23 00 30.8	
	comp=Z,31nm,0.2s						
ERPM	**east rand prop**	**0.52**	**79**	*e*P	Pg	23 00 23.4	+1.3
ERPM				*e*S	Sg	23 00 30.0	+1.2
ERPM				AML	AML	23 00 30.7	
	comp=Z,31nm,0.2s						
PRYS	**Parys**	**0.56**	**210**	*e*P	Pg	23 00 23.3	+0.5
PRYS				*e*S	Sg	23 00 30.3	+0.2
PRYS				AML	AML	23 00 31.4	
	comp=Z,44nm,0.2s						
PRYS	**Parys**	**0.56**	**210**	*e*P	Pg	23 00 24.0	+1.2
PRYS				*e*S	Sg	23 00 30.4	+0.3
PRYS				AML	AML	23 00 31.3	
	comp=Z,44nm,0.2s						
SLR	**Silverton**	**0.89**	**38**	*e*P	Pg	23 00 28.8	-0.4
SLR				*e*S	Sg	23 00 40.9	+0.2
SLR				AML	AML	23 00 47.8	
	comp=Z,18nm,0.2s						
SLR	**Silverton**	**0.89**	**38**	*e*P	Pg	23 00 29.4	+0.2
SLR				*e*S	Sg	23 00 41.3	+0.6
SLR				AML	AML	23 00 47.8	
	comp=Z,18nm,0.2s						
BFSD	**Buffelsfontein**	**0.90**	**242**	*e*P	Pg	23 00 28.6	-0.8
BFSD				*e*S	Sg	23 00 40.5	-0.6
BFSD				AML	AML	23 00 47.1	
	comp=Z,43nm,0.1s						
KSR	**Koster**	**0.91**	**310**	*e*P	Pg	23 00 27.6	-2.0
KSR				*e*S	Sg	23 00 39.1	-2.4
KSR				AML	AML	23 00 48.8	
	comp=Z,26nm,0.1s						
KSR	**Koster**	**0.91**	**310**	*e*P	Pg	23 00 32.0	+2.4
KSR				*e*S	Sg	23 00 40.6	-0.9
KSR				AML	AML	23 00 48.7	
	comp=Z,26nm,0.1s						
SEK	**Senekal**	**1.88**	**181**	*e*P	Pn	23 00 46.2	+1.0
SEK				*e*S	Sn	23 01 10.9	+1.4
SEK				AML	AML	23 01 13.8	
	comp=Z,12nm,0.3s						
SEK	**Senekal**	**1.88**	**181**	*e*P	Pn	23 00 47.2	+2.0
SEK				*e*S	Sn	23 01 10.8	+1.3
SEK				AML	AML	23 01 12.1	
	comp=Z,15nm,0.2s						
SWZ	**Schweizer**	**2.22**	**250**	*e*P	Pn	23 00 50.2	+0.3
SWZ				*e*S	Sn	23 01 17.9	-0.1
SWZ				AML	AML	23 01 21.7	
	comp=Z,16nm,0.2s						
SWZ	**Schweizer**	**2.22**	**250**	*e*P	Pn	23 00 51.7	+1.8
SWZ				*e*S	Sn	23 01 20.2	+2.3
SWZ				AML	AML	23 01 21.6	
	comp=Z,16nm,0.2s						
POGA	**Pongola**	**3.64**	**106**	*e*P	Pn	23 01 09.7	+0.3
POGA				*e*S	Sn	23 01 54.4	+1.5
POGA				AML	AML	23 02 10.3	
	comp=Z,6.4nm,0.4s						
PKA	**Prieska**	**5.41**	**232**	*e*P	Pn	23 01 32.8	-0.9
PKA				*e*S	Sn	23 02 33.2	-3.4
PKA				AML	AML	23 03 11.9	
	comp=Z,3.3nm,0.5s						

IDC 19 23:03:18.4±1.4, 11°.36S×164°.57E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.9/17, mbtmp3.9/7, ML4.5/1, Error ellipse: s-maj=46.6km s-min=24.0km az=141.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.93**	**292**	Pn	Pn	23 04 33.8	0.0
	19nm,0.3s,baz=134,slow=10,SNR=5.6						
HNR				Sn	Sn	23 05 29.1	-2.6
	11nm,0.3s,baz=90,slow=20,SNR=3.5						
STKA	**Stephens Creek**	**29.43**	**223**	P	P	23 09 24.6	+0.7
	4.0nm,1.1s,baz=45,slow=5.7,SNR=3.1						
WRA	**Warramunga Arr**	**30.29**	**250**	P	P	23 09 31.4	-0.3
	0.7nm,0.5s,baz=78,slow=9.0,SNR=9.8						
ASAR	**Alice Springs**	**31.62**	**243**	P	P	23 09 42.9	-0.4
	0.6nm,0.7s,baz=62,slow=9.8,SNR=4.5						
SONM	**Songino Array**	**78.24**	**324**	P	P	23 15 20.7	+0.7
	0.3nm,0.6s,baz=128,slow=4.4,SNR=2.3						
ILAR	**Eielson Array**	**84.17**	**19**	P	P	23 15 50.8	-0.4
	0.3nm,0.6s,baz=239,slow=6.2,SNR=4.3						
NVAR	**Mina Array Bea**	**87.11**	**50**	P	P	23 16 06.7	+0.3
	0.2nm,0.3s,baz=246,slow=6.8,SNR=3.0						

KRSC 19 23:04:01.1±0.7, 52°.68N×160°.06E, h40km±29km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.42**	**357**	*e*P	Pn	23 04 11.2	+0.4
SPN				*e*S	Sn	23 04 17.9	+0.4
NLC	**Nalytchevo**	**0.66**	**319**	*e*P	Pn	23 04 14.1	+0.2
NLC				*e*S	Sn	23 04 23.6	+0.6
PET	**Petropavlovsk**	**0.92**	**293**	*e*P	Pn	23 04 17.5	0.0
PET				*e*S	Sn	23 04 29.0	-0.5
AVH	**Avacha**	**0.99**	**307**	*e*P	Pn	23 04 19.4	+0.9
AVH				*e*S	Sn	23 04 33.0	+1.7
GRL	**Gorelyy**	**1.22**	**265**	*e*P	Pn	23 04 22.5	+0.9
GRL				*e*S	Sn	23 04 37.8	+1.0
KII	**Karymskiy**	**1.41**	**345**	*e*P	Pn	23 04 26.8	+2.6
KII				*e*S	Sn	23 04 45.3	+3.8
GNL	**Ganaly**	**1.63**	**309**	*e*P	Pn	23 04 29.2	+2.0
GNL				*e*S	Sn	23 04 50.1	+3.1
MKZ	**Mys Kozlova**	**2.13**	**27**	*e*P	Pn	23 04 34.5	+0.4
MKZ				*e*S	Sn	23 04 59.1	-0.1
KMNR	**Kamenistaya**	**3.08**	**2**	*e*P	Pn	23 04 48.9	+1.7
KBTR	**Krutoberegovo**	**3.88**	**23**	*e*P	Pn	23 05 01.2	+3.0
KBTR				*e*S	Sn	23 05 45.9	+3.4
BKI	**Bering**	**4.31**	**52**	S	Sn	23 05 53.2	+0.2

IDC 19 23:08:09.6±1.9, 2°.15N×128°.44E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, MS4.5/2, Ms1 4.5/2, ms1mx3.3/32, Error ellipse: s-maj=143.8km s-min=23.5km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.71**	**165**	P	P	23 13 13.0	-0.1
	1.3nm,0.8s,baz=346,slow=10,SNR=7.8						
ASAR	**Alice Springs**	**26.21**	**169**	P	P	23 13 46.0	-0.2
	0.7nm,0.8s,baz=350,slow=16,SNR=6.2						
STKA	**Stephens Creek**	**36.07**	**161**	P	P	23 15 13.1	0.0
	2.1nm,0.5s,baz=338,slow=9.8,SNR=6.6						
MKAR	**Makanchi Array**	**59.82**	**325**	P	P	23 18 17.0	+0.3
	0.2nm,0.2s,baz=112,slow=8.2,SNR=2.3						
ASF	**Jabal al Asfar**	**90.17**	**302**	LR	LR	00 08 45.4	
	comp=Z,234nm,21.4s,baz=314,slow=40						
EIL	**Elat**	**91.98**	**300**	LR	LR	00 08 14.2	
	comp=Z,220nm,20.2s,baz=87,slow=39						

*ATH **19** 23:14:30.9, 39°.00N×19°.64E, h18km±1km, MD3.6/7*
*CSEM **19** 23:14:32.7±0.4, 38°.95N×19°.72E, h10km, ML1.9/4, Error ellipse: s-maj=9.0km s-min=3.9km az=88.0*
*THE **19** 23:14:34.3, 38°.94N×19°.83E, h12km±1km, ML1.9/4, Error ellipse: s-maj=1.5km s-min=0.6km az=82.0*

ISC 19 23:14:32.7±1.3, 38°.96N±0°.03×19°.71E±0°.09, h8km±5km, n47, σ0°66/65, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.75**	**40**	P	**Pg**	**23 14 47.6**	**+0.5**
IGT				S	**Sg**	**23 14 57.4**	**+0.5**
IGT	**Igoumenitsa**	**0.75**	**40**	P	**Pg**	**23 14 47.6**	**+0.5**
IGT				S	**Sg**	**23 14 57.4**	**+0.5**
LKD2	**Lefkada island**	**0.76**	**102**	P	**Pg**	**23 14 47.1**	**-0.1**
LKD2				S	**Sg**	**23 14 57.0**	**-0.1**
LKD2	**Lefkada island**	**0.76**	**102**	P	**Pg**	**23 14 47.1**	**-0.1**
LKD2				S	**Sg**	**23 14 57.0**	**-0.1**
VLS	**Valsamata**	**1.04**	**138**	*e*PN	**Pg**	**23 14 52.1**	**-0.5**
VLS	**Valsamata**	**1.04**	**138**	P	**Pg**	**23 14 52.4**	**-0.2**
VLS				S	**Sg**	**23 15 06.4**	**+0.3**
VLS	**Valsamata**	**1.04**	**138**	*e*Pn	**Pg**	**23 14 52.1**	**-0.5**
VLS	**Valsamata**	**1.04**	**138**	P	**Pg**	**23 14 52.4**	**-0.2**
VLS				S	**Sg**	**23 15 06.4**	**+0.3**
KFL	**Anninata**	**1.19**	**135**	P	**Pb**	**23 14 54.9**	**-0.6**
KFL				S	**Sb**	**23 15 10.6**	**-0.5**
KFL	**Anninata**	**1.19**	**135**	P	**Pb**	**23 14 54.9**	**-0.6**
KFL				S	**Sb**	**23 15 10.6**	**-0.5**
EVR	**Evrytania**	**1.64**	**91**	*e*PN	**Pn**	**23 15 01.9**	**+0.2**
EVR	**Evrytania**	**1.64**	**91**	*e*Pn	**Pn**	**23 15 01.9**	**+0.2**
RLS	**Riolos of Patr**	**1.64**	**122**	*e*PN	**Pn**	**23 15 02.0**	**+0.2**
RLS				*e*SN	**Sn**	**23 15 24.6**	**+1.5**
RLS	**Riolos of Patr**	**1.64**	**122**	*e*Pn	**Pn**	**23 15 02.0**	**+0.2**
RLS				*e*Sn	**Sn**	**23 15 24.6**	**+1.5**
NEST	**Nestorio**	**1.79**	**35**	P	**Pn**	**23 15 04.0**	**+0.2**
NEST				S	**Sn**	**23 15 26.9**	**+0.3**
NEST	**Nestorio**	**1.79**	**35**	P	**Pn**	**23 15 04.0**	**+0.2**
NEST				S	**Sn**	**23 15 26.9**	**+0.3**
EFP	**Efpalio**	**1.80**	**106**	*e*PN	**Pn**	**23 15 04.0**	**+0.1**
EFP				*e*SN	**Sn**	**23 15 28.3**	**+1.5**
EFP	**Efpalio**	**1.80**	**106**	*e*Pn	**Pn**	**23 15 04.0**	**+0.1**
EFP				*e*Sn	**Sn**	**23 15 28.3**	**+1.5**
THL	**Klokotos Trika**	**1.89**	**70**	*e*PN	**Pn**	**23 15 04.8**	**-0.4**
THL	**Klokotos Trika**	**1.89**	**70**	P	**Pn**	**23 15 04.8**	**-0.4**
THL				S	**Sn**	**23 15 28.4**	**-0.7**
THL	**Klokotos Trika**	**1.89**	**70**	P	**Pn**	**23 15 04.8**	**-0.4**
THL				S	**Sn**	**23 15 28.4**	**-0.7**
LAKA	**Lakka**	**1.92**	**111**	P	**Pn**	**23 15 04.8**	**-0.7**
LAKA	**Lakka**	**1.92**	**111**	P	**Pn**	**23 15 04.8**	**-0.7**
TRIZ	**Trizonia**	**1.94**	**107**	P	**Pn**	**23 15 04.9**	**-1.0**
TRIZ	**Trizonia**	**1.94**	**107**	P	**Pn**	**23 15 04.9**	**-1.0**
KALE	**Kalithea**	**1.98**	**106**	P	**Pn**	**23 15 06.3**	**-0.1**
KALE	**Kalithea**	**1.98**	**106**	P	**Pn**	**23 15 06.3**	**-0.1**
AGG	**Agios Georgios**	**2.04**	**87**	*e*PN	**Pn**	**23 15 07.4**	**+0.1**
AGG	**Agios Georgios**	**2.04**	**87**	P	**Pn**	**23 15 07.0**	**-0.3**
AGG	**Agios Georgios**	**2.04**	**87**	P	**Pn**	**23 15 07.0**	**-0.3**
AGG	**Agios Georgios**	**2.04**	**87**	*e*Pn	**Pn**	**23 15 07.4**	**+0.1**
DSF	**Desfina**	**2.27**	**103**	P	**Pn**	**23 15 10.0**	**-0.4**
DSF	**Desfina**	**2.27**	**103**	P	**Pn**	**23 15 10.0**	**-0.4**
GUR	**Goura**	**2.30**	**115**	*e*PN	**Pn**	**23 15 11.0**	**+0.2**
GUR	**Goura**	**2.30**	**115**	P	**Pn**	**23 15 10.6**	**-0.2**
GUR				S	**Sn**	**23 15 38.1**	**-1.2**
GUR	**Goura**	**2.30**	**115**	P	**Pn**	**23 15 10.6**	**-0.2**
GUR	**Goura**	**2.30**	**115**	*e*Pn	**Pn**	**23 15 11.0**	**+0.2**
GUR				S	**Sn**	**23 15 38.1**	**-1.2**
LIT	**Litokhoron**	**2.44**	**61**	P	**Pn**	**23 15 12.0**	**-0.7**
LIT	**Litokhoron**	**2.44**	**61**	P	**Pn**	**23 15 12.0**	**-0.7**
ITM	**Ithomi**	**2.49**	**135**	*e*PN	**Pn**	**23 15 13.7**	**+0.3**
ITM	**Ithomi**	**2.49**	**135**	*e*Pn	**Pn**	**23 15 13.7**	**+0.3**
LKR	**Lokris**	**2.59**	**96**	P	**Pn**	**23 15 14.2**	**-0.6**
LKR	**Lokris**	**2.59**	**96**	P	**Pn**	**23 15 14.2**	**-0.6**
VLI	**Veliai**	**3.39**	**130**	*e*PN	**Pn**	**23 15 26.9**	**+1.1**
VLI	**Veliai**	**3.39**	**130**	*e*Pn	**Pn**	**23 15 26.9**	**+1.1**
KYTH	**Kithira**	**3.75**	**134**	*e*PN	**Pn**	**23 15 31.8**	**+1.0**
KYTH	**Kithira**	**3.75**	**134**	*e*Pn	**Pn**	**23 15 31.8**	**+1.0**

IDC 19 23:16:24.9±5.0, 23°.09S×171°.55E, h0km, mb3.5/2, mb1 3.7/2, mb1mx3.6/14, mbtmp3.5/2, Error ellipse: s-maj=243.8km s-min=69.8km az=162.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**34.50**	**261**	P	P	23 23 14.2	-0.7
	0.4nm,0.7s,baz=85,slow=9.1,SNR=4.9						
WRA	**Warramunga Arr**	**34.70**	**268**	P	P	23 23 17.2	+0.5
	0.3nm,0.3s,baz=102,slow=9.1,SNR=33						
FINES	**FINESS Array B**	**134.95**	**337**	PKP	PKPdf	23 35 45.0	-0.4
	1.1nm,0.8s,baz=49,slow=2.6,SNR=5.0						

*ISCJB **19** 23:20:58.8±0.8, 31°.47S±0°.08×66°.4W±0°.1, h138km±9km, mb3.9/8, Error ellipse: s-maj=15.4km s-min=12.5km az=156.9*
*IDC **19** 23:20:59.9±1.2, 31°.41S×66°.48W, h135km±13km, mb4.0/5, mb1 3.8/8, mb1mx3.7/17, mbtmp3.8/8, Error ellipse: s-maj=22.2km s-min=18.9km az=131.0*
*NEIC **19** 23:20:59.9±0.6, 31°.48S×66°.41W, h135km±7km, mb3.8/2, Error ellipse: s-maj=10.5km s-min=8.3km az=69.0*

ISC 19 23:20:59.8±0.7, 31°.46S±0°.08×66°.4W±0°.1, h131km±9km, n22, σ0°73/19, mb3.9/8, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**1.58**	**264**	P	**Pn**	**23 21 29.2**	**+0.4**
	25nm,0.3s,baz=81,slow=10,SNR=1303						
CFAA				S	**Sn**	**23 21 50.4**	**-0.6**
	30nm,0.3s,baz=197,slow=24,SNR=47						
CFAA	**Coronel Fontan**	**1.58**	**264**	P	**Pn**	**23 21 29.2**	**+0.4**
CFAA				S	**Sn**	**23 21 50.4**	**-0.6**
LCO	**Las Campanas**	**4.45**	**302**	*e*Pn	**Pn**	**23 22 06.0**	**+0.4**
TRQA	**Tornquist**	**7.51**	**152**	*e*Pn	**Pn**	**23 22 46.2**	**-0.4**
	16nm,0.5s						
CPUP	**Villa Florida**	**9.45**	**60**	P	**Pn**	**23 23 12.4**	**-0.4**
	3.5nm,0.3s,baz=219,slow=12,SNR=23						
PLCA	**Paso Flores**	**9.84**	**199**	P	**Pn**	**23 23 18.1**	**+0.3**
	0.1nm,0.3s,baz=41,slow=11,SNR=2.4						
LPAZ	**La Paz**	**15.19**	**354**	P	**Pn**	**23 24 28.1**	**+0.6**
	0.1nm,0.3s,baz=204,slow=6.9,SNR=6.0						
LPAZ	**La Paz**	**15.19**	**354**	*e*P	**Pn**	**23 24 29.6**	**+2.1**
	7.2nm,0.7s						
QSPA	**South Pole Qui**	**58.77**	**180**	P	**P**	**23 30 44.2**	**+0.7**
	0.7nm,0.6s,mb3.7,baz=153,slow=3.5,SNR=6.9						
DBIC	**Dimbokro**	**69.85**	**68**	P	**P**	**23 31 55.6**	**-1.0**
	5.7nm,1.1s,mb4.2,baz=211,slow=5.9,SNR=3.1						
TXAR	**Lajitas Array**	**70.08**	**326**	P	**P**	**23 31 56.2**	**-1.4**
	0.2nm,0.7s,mb2.9,baz=180,slow=8.6,SNR=3.7						
SUR	**Sutherland**	**71.82**	**117**	P	**P**	**23 32 09.4**	**+1.0**
	11nm,1.1s,mb4.5,baz=297,slow=2.3,SNR=3.9						
SUR	**Sutherland**	**71.82**	**117**	P	**P**	**23 32 09.4**	**+1.0**
MNTX	**Cornudas Mount**	**72.86**	**326**	*e*P	**P**	**23 32 13.8**	**-0.5**
	0.8nm,0.8s,mb3.5						
BOSA	**Boshof**	**76.95**	**116**	P	**P**	**23 32 38.1**	**0.0**
	6.7nm,1.2s,mb4.2,baz=240,slow=8.1,SNR=4.2						
TORD	**Torodi Ar. Bea**	**78.86**	**67**	P	**P**	**23 32 49.2**	**+0.4**
	1.6nm,0.5s,mb3.9,baz=284,slow=6.8,SNR=12						
LBTB	**Lobatse**	**78.97**	**113**	P	**P**	**23 32 49.1**	**-0.2**
	3.2nm,0.9s,mb3.9,baz=1.7,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	**125.15**	**204**	PKP	PKPdf	23 39 44.0	-1.3
	0.2nm,0.9s,baz=163,slow=2.2,SNR=3.9						
ZALV	**Zalesovo Beam**	**149.50**	**34**	PKPbc	PKPbc	23 40 32.2	-0.8
	0.3nm,0.3s,baz=318,slow=2.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**149.50**	**34**	PKPbc	PKPbc	23 40 32.2	-0.8
MKAR	**Makanchi Array**	**151.52**	**48**	PKPbc	PKPbc	23 40 38.5	+0.4
	0.2nm,0.2s,baz=270,slow=1.2,SNR=3.5						
MKAR				PKPab	PKPab	23 40 47.5	+0.4
	0.2nm,0.2s,baz=289,slow=4.4,SNR=3.2						
MKAR	**Makanchi Array**	**151.52**	**48**	PKPbc	PKPbc	23 40 38.5	+0.4
MKAR				PKPab	PKPab	23 40 47.5	+0.4

IDC 19 23:21:54.5±10.0, 3°.32S×127°.85E, h0km, mb3.7/2, mb1 3.7/3, mb1mx3.4/18, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=173.4km s-min=147.8km az=99.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.69**	**160**	P	Pn	23 26 03.1	+0.7
	0.1nm,0.3s,baz=341,slow=12,SNR=5.5						
ASAR	**Alice Springs**	**21.05**	**164**	P	P	23 26 40.6	+0.4
	0.4nm,0.5s,baz=349,slow=12,SNR=6.8						
STKA	**Stephens Creek**	**31.21**	**157**	P	P	23 28 15.2	-0.5
	6.0nm,1.1s,baz=350,slow=6.1,SNR=2.9						

*ISCJB **19** 23:35:53.4±0.5, 50°.06N±0°.04×19°.11E±0°.03, h0km, Error ellipse: s-maj=6.2km s-min=2.8km az=5.5*
*CSEM **19** 23:35:53.6±0.3, 50°.17N×19°.06E, h2km, ML2.6/5, Error ellipse: s-maj=8.0km s-min=3.1km az=6.0*
*IPEC **19** 23:35:53.7±0.2, 50°.19N×19°.08E, h0km±1km, ML1.8/3, Error ellipse: s-maj=2.8km s-min=1.1km az=167.0*
*WAR **19** 23:35:54.1, 50°.08N×19°.15E*
*PRU **19** 23:35:54.4, 50°.15N×19°.07E, h0km*

ISC 19 23:35:54.0±0.5, 50°.08N±0°.04×19°.09E±0°.03, h0km, n28, σ0°80/45, Poland

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

az=28.0

ISC 19 23:51:58.1±0.5,**36°68N**±0°.03×**69°79E**±0°.08,**h132**km±11km, **n23**,σ0°91/30,**3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.22**	**196**	*e*Pn	**Pn**	**23 52 35.2**	**+0.4**
KBL				*e*Sn	**Sn**	**23 53 03.7**	**+0.7**
CEP	**Cherat**	**3.33**	**148**	⇑P	**Pn**	**23 52 48.8**	**-0.3**
CEP				S	**Sn**	**23 53 28.0**	**-0.5**
CHCP	**Chirah Chowk**	**4.14**	**136**	P	**Pn**	**23 52 59.6**	**-0.1**
THW	**Thamme Wali**	**4.19**	**157**	P	**Pn**	**23 52 58.9**	**-1.5**
KSH	**Kashi**	**5.64**	**58**	Pn	**Pn**	**23 53 18.8**	**-0.9**
KSH				Sn	**Sn**	**23 54 17.4**	**-5.9**
KSH				smax			
	comp=N,110nm,1.3s						
KSH				smax			
	comp=E,50nm,1.1s						
KK31	**Karatay Array**	**6.44**	**5**	⇑P	**Pn**	**23 53 31.8**	**+1.3**
	comp=E,1.7nm,0.2s,baz=163,slow=7.7,SNR=143						
KK31				S	**Sn**	**23 54 41.7**	**-0.9**
	comp=E,4.1nm,0.3s,baz=196,slow=20,SNR=21						
KKAR	**Karatay Array**	**6.44**	**5**	*e*Pn	**Pn**	**23 53 31.6**	**+1.2**
	comp=E,8.4nm,0.3s						
KKAR				*e*Sn	**Sn**	**23 54 41.3**	**-1.3**
EKS2	**Erkin-Say**	**6.72**	**26**	*e*Pn	**Pn**	**23 53 35.6**	**+1.4**
EKS2				*e*Sn	**Sn**	**23 54 48.6**	**-0.7**
AAK	**Ala-Archa**	**6.97**	**30**	P	**Pn**	**23 53 37.9**	**+0.4**
	comp=E,0.1nm,0.3s,baz=207,slow=16,SNR=16						
AAK				S	**Sn**	**23 54 55.7**	**+0.5**
	comp=E,0.0nm,0.3s,baz=137,slow=21,SNR=13						
TKM2	**Tokmak 2**	**7.67**	**34**	*e*Pn	**Pn**	**23 53 47.8**	**+0.8**
MK31	**Makanchi Array**	**13.74**	**39**	⇓P	**Pn**	**23 55 11.7**	**+4.6**
	comp=E,0.2nm,0.3s,baz=0.0,slow=0.1,SNR=4.7						
MK31	**Makanchi Array**	**13.74**	**39**	*e*P	**Pn**	**23 55 10.9**	**+3.8**
MKAR	**Makanchi Array**	**13.74**	**39**	P	**Pn**	**23 55 06.5**	**-0.7**
	comp=E,0.1nm,0.3s,baz=215,slow=10,SNR=2.2						
AB31	**Akbulak array**	**14.47**	**333**	P	**Pn**	**23 55 16.0**	**-0.5**
	comp=E,0.4nm,0.3s,baz=162,slow=13,SNR=51						
AB31				⇑S	**Sn**	**23 57 55.4**	**-1.1**
	comp=E,0.2nm,0.3s,baz=158,slow=23,SNR=3.7						
ABKAR	**Akbulak array**	**14.47**	**333**	*e*P	**Pn**	**23 55 16.5**	**0.0**
	comp=E,1.2nm,0.3s						
KURBB	**Kurchatov Arra**	**15.29**	**22**	⇓P	**Pn**	**23 55 28.6**	**+1.9**
	comp=E,0.3nm,0.7s						
KURK	**Kurchatov**	**15.40**	**22**	⇓P	**Pn**	**23 55 28.2**	**+0.2**
	comp=E,0.5nm,0.5s						
KURK	**Kurchatov**	**15.40**	**22**	*e*P	**Pn**	**23 55 29.2**	**+1.2**
	comp=E,1.7nm,0.8s						
BVAR	**Borovoye Array**	**16.35**	**1**	P	**Pn**	**23 55 40.3**	**+0.6**
	comp=E,0.2nm,0.3s,baz=180,slow=9.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**20.17**	**26**	P	**P**	**23 56 21.3**	**-0.6**
	comp=E,2.1nm,0.5s,baz=219,slow=11,SNR=11						
ZALV	**Zalesovo Beam**	**20.17**	**26**	P	**P**	**23 56 21.3**	**-0.6**
ARCES	**ARCESS Array B**	**40.61**	**338**	P	**P**	**23 59 23.8**	**-0.6**
	comp=E,1.6nm,0.8s,baz=121,slow=8.7,SNR=3.0						
TGY	**Tagaytay City**	**50.70**	**102**	LR	LR	00 23 14.7	
	comp=E,2.0nm,21.3s,baz=239,slow=37						

TIR ***19*** *23:53:08.7±2.1, 43°52N×19°60E, h29km±49km, ML2.6*
ISCJB ***19*** *23:53:08.4±0.3, 43°59N±0°.01×19°59E±0°.02, h5km±3km, Error ellipse: s-maj=3.2km s-min=2.1km az=21.9*
CSEM ***19*** *23:53:08.8±0.1, 43°56N×19°59E, h5km, ML2.7/9, Error ellipse: s-maj=2.9km s-min=1.9km az=103.0*
BEO ***19*** *23:53:09.5±0.3, 43°57N×19°52E, h8km±2km, ML2.9/13*
PDG ***19*** *23:53:09.6±0.3, 43°52N×19°56E, h11km±1km, MD2.7/3, ML2.7/9, Error ellipse: s-maj=0.7km s-min=1.3km az=0.0*
NEIC ***19*** *23:53:09.6, 43°52N×19°56E, h11km, ML2.7(PDG), After PDG.*

ISC 19 23:53:09.4±0.3,**43°57N**±0°.01×**19°58E**±0°.03,**h6**km±3km, **n78**,σ1°01/130,**34C-19D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLE	**Pljevlja**	**0.28**	**210**	⇓*i*Pg	**Pg**	**23 53 14.3**	**-0.5**
PLE				*e*Sg	**Sg**	**23 53 18.6**	**+0.1**
PLE	**Pljevlja**	**0.28**	**210**	⇓*i*Pg	**Pg**	**23 53 14.3**	**-0.5**
PLE				*e*Sg	**Sg**	**23 53 18.6**	**+0.1**
BBLS	**Lazići**	**0.32**	**336**	⇑*i*Pg	**Pg**	**23 53 15.7**	**0.0**
BBLS				*e*Sg	**Sg**	**23 53 20.2**	**+0.2**
BBLS	**Lazići**	**0.32**	**336**	⇑*i*Pg	**Pg**	**23 53 15.7**	**0.0**
BBLS				*e*Sg	**Sg**	**23 53 20.2**	**+0.2**
SJES	**Sjenica**	**0.42**	**137**	*e*Pg	**Pg**	**23 53 17.3**	**-0.2**
SJES				*e*Sg	**Sg**	**23 53 24.1**	**+1.1**
DIVS	**Divibare**	**0.60**	**29**	⇓*i*Pg	**Pg**	**23 53 21.2**	**+0.1**
DIVS				*e*Sg	**Sg**	**23 53 29.2**	**+0.3**
DIVS	**Divibare**	**0.60**	**29**	⇓*i*Pg	**Pg**	**23 53 21.2**	**+0.1**
DIVS				*e*Sg	**Sg**	**23 53 29.2**	**+0.3**
UPM	**Unac-Piva**	**0.61**	**233**	⇑*i*Pg	**Pg**	**23 53 20.4**	**-0.8**
UPM				*e*Sg	**Sg**	**23 53 29.4**	**+0.2**
UPM	**Unac-Piva**	**0.61**	**233**	⇑*i*Pg	**Pg**	**23 53 20.4**	**-0.8**
UPM				*e*Sg	**Sg**	**23 53 29.4**	**+0.2**
BEY	**Berane**	**0.73**	**162**	⇓*i*Pg	**Pg**	**23 53 22.8**	**-0.7**
BEY				*e*Sg	**Sg**	**23 53 33.4**	**+0.3**
IVA	**Berane**	**0.73**	**162**	⇓*i*Pg	**Pg**	**23 53 22.8**	**-0.7**
IVA				*e*Sg	**Sg**	**23 53 33.4**	**+0.3**
IVA	**Berane**	**0.73**	**162**	⇓*i*Pg	**Pg**	**23 53 22.8**	**-0.7**
IVA				*e*Sg	**Sg**	**23 53 33.4**	**+0.3**
NKY	**Niksic**	**0.87**	**210**	⇑*i*Pg	**Pg**	**23 53 25.0**	**-1.1**
NKY				*e*Sg	**Sg**	**23 53 37.6**	**+0.2**
NKY	**Niksic**	**0.87**	**210**	⇑*i*Pg	**Pg**	**23 53 25.0**	**-1.1**
NKY				*e*Sg	**Sg**	**23 53 37.6**	**+0.2**
GRUS	**Gruza**	**0.88**	**68**	*e*Pg	**Pg**	**23 53 26.6**	**+0.3**
GRUS				*e*Sg	**Sg**	**23 53 40.5**	**+2.8**
GRUS	**Gruza**	**0.88**	**68**	*e*Pg	**Pg**	**23 53 26.6**	**+0.3**
GRUS				*e*Sg	**Sg**	**23 53 40.5**	**+2.8**
TRUS	**Trudelj**	**0.88**	**42**	⇓*i*Pg	**Pg**	**23 53 25.5**	**-0.9**
TRUS	**Trudelj**	**0.88**	**42**	⇓*i*Pg	**Pg**	**23 53 25.5**	**-0.9**
BRY	**Bratogost**	**1.01**	**229**	⇑*i*Pg	**Pg**	**23 53 27.2**	**-1.6**
BRY				*e*Sg	**Sg**	**23 53 42.8**	**+0.8**
BRY	**Bratogost**	**1.01**	**229**	⇑*i*Pg	**Pg**	**23 53 27.2**	**-1.6**
BRY				*e*Sg	**Sg**	**23 53 42.8**	**+0.8**
PVY	**Plav**	**1.02**	**164**	⇑*i*Pg	**Pg**	**23 53 27.5**	**-1.4**
PVY				*e*Sg	**Sg**	**23 53 42.5**	**+0.4**
PVY	**Plav**	**1.02**	**164**	⇑*i*Pg	**Pg**	**23 53 27.5**	**-1.4**
PVY				*e*Sg	**Sg**	**23 53 42.5**	**+0.4**
PDG	**Podgorica**	**1.17**	**192**	⇑*i*Pg	**Pg**	**23 53 29.9**	**-1.8**
PDG				*e*Sg	**Sg**	**23 53 47.9**	**+1.1**
PDG	**Podgorica**	**1.17**	**192**	⇑*i*Pg	**Pg**	**23 53 29.9**	**-1.8**
PDG				*e*Sg	**Sg**	**23 53 47.5**	**+0.7**
TTG	**Podgorica**	**1.17**	**192**	⇑*i*Pg	**Pg**	**23 53 29.7**	**-2.0**
TTG				*e*Sg	**Sg**	**23 53 47.5**	**+0.7**
TTG	**Podgorica**	**1.17**	**192**	⇑*i*Pg	**Pg**	**23 53 29.7**	**-2.0**
TTG				*e*Sg	**Sg**	**23 53 47.5**	**+0.7**
SELS	**Selova**	**1.17**	**107**	⇑*i*Pg	**Pg**	**23 53 30.6**	**-1.3**
SELS				*e*Sg	**Sg**	**23 53 46.5**	**-0.6**
SELS	**Selova**	**1.17**	**107**	⇑*i*Pg	**Pg**	**23 53 30.6**	**-1.3**
SELS				*e*Sg	**Sg**	**23 53 46.5**	**-0.6**
BCI	**Bajram Curri**	**1.25**	**163**	*i* PG	**Pn**	**23 53 32.5**	**-1.0**
BCI				*i* SG	**Sg**	**23 53 46.7**	**-3.0**
BCI	**Bajram Curri**	**1.25**	**163**	*i* Pg	**Pn**	**23 53 32.5**	**-0.9**
	SNR=96						
BCI				*i* Sg	**Sg**	**23 53 46.7**	**-3.0**
	SNR=96						
BUM	**Brajici-Budva**	**1.36**	**202**	⇓*i*Pg	**Pn**	**23 53 34.3**	**-0.6**
BUM				*e*Sg	**Sg**	**23 53 55.0**	**+1.7**
BUM	**Brajici-Budva**	**1.36**	**202**	⇓*i*Pg	**Pn**	**23 53 34.3**	**-0.6**
BUM				*e*Sg	**Sg**	**23 53 55.0**	**+1.7**
SVIS	**Svilajnac**	**1.37**	**59**	⇓*i*Pg	**Pg**	**23 53 35.1**	**-0.6**
SVIS				*e*Sg	**Sg**	**23 53 54.9**	**+1.5**
HCY	**Herceg Novi**	**1.38**	**216**	*e*Pg	**Pn**	**23 53 34.8**	**-0.3**
HCY				*e*Sg	**Sg**	**23 53 55.4**	**+1.8**
HCY	**Herceg Novi**	**1.38**	**216**	*e*Pg	**Pn**	**23 53 34.8**	**-0.3**
HCY				*e*Sg	**Sg**	**23 53 55.4**	**+1.8**
BEO	**Beograd**	**1.39**	**27**	*e*Pg	**Pg**	**23 53 36.3**	**+0.2**
BEO				*e*Sg	**Sg**	**23 53 53.3**	**-0.9**
BEO	**Beograd**	**1.39**	**27**	*e*Pg	**Pg**	**23 53 36.3**	**+0.2**
BEO				*e*Sg	**Sg**	**23 53 53.3**	**-0.9**
PUK	**Puka**	**1.54**	**171**	*i* PG	**Pn**	**23 53 37.9**	**+0.5**
PUK				*i* SG	**Sg**	**23 53 58.5**	**-0.5**
PUK	**Puka**	**1.54**	**171**	*i* Pg	**Pn**	**23 53 37.9**	**+0.5**
	SNR=94						
PUK				*i* Sg	**Sg**	**23 53 58.5**	**-0.5**
	SNR=94						
STON	**Ston**	**1.54**	**244**	*e*Pn	**Pn**	**23 53 36.5**	**-0.9**
STON				Sn	**Sn**	**23 53 58.1**	**+0.4**
STON	**Ston**	**1.54**	**244**	*e*Pn	**Pn**	**23 53 36.5**	**-0.9**
STON				Sn	**Sn**	**23 53 58.1**	**+0.4**
FRGS	**Fruska Gora**	**1.59**	**6**	⇓*i*Pn	**Pn**	**23 53 37.6**	**-0.5**
FRGS				*e*Sg	**Sg**	**23 54 01.2**	**+0.5**
ULC	**Ulcinj**	**1.62**	**189**	⇑*i*Pn	**Pn**	**23 53 38.9**	**+0.4**
ULC				*e*Sn	**Sn**	**23 54 01.7**	**+2.0**
ULC	**Ulcinj**	**1.62**	**189**	⇑*i*Pn	**Pn**	**23 53 38.9**	**+0.4**
ULC				*e*Sn	**Sn**	**23 54 01.7**	**+2.0**
BOLS	**Boljevac**	**1.74**	**81**	⇑*i*Pn	**Pn**	**23 53 39.9**	**-0.2**
BOLS	**Boljevac**	**1.74**	**81**	⇑*i*Pn	**Pn**	**23 53 39.9**	**-0.2**
BARS	**Barje**	**1.80**	**114**	*e*Pn	**Pn**	**23 53 41.4**	**+0.5**
BARS				*e*Sg	**Sg**	**23 54 09.2**	**+2.1**
BARS	**Barje**	**1.80**	**114**	*e*Pn	**Pn**	**23 53 41.4**	**+0.5**
BARS				*e*Sg	**Sg**	**23 54 09.2**	**+2.1**
BLY	**Banja Luka**	**2.09**	**305**	⇑*i*Pn	**Pn**	**23 53 45.4**	**+0.5**
BLY	**Banja Luka**	**2.09**	**305**	⇑*i*Pn	**Pn**	**23 53 45.4**	**+0.5**
TIR	**Tirane**	**2.23**	**175**	*e*Pn	**Pn**	**23 53 45.1**	**-1.8**
TIR	**Tirane**	**2.23**	**175**	*e*Pn	**Pn**	**23 53 45.1**	**-1.8**
ZAPS	**Zavoj**	**2.24**	**97**	⇑*i*Pn	**Pn**	**23 53 48.3**	**+1.3**
RHK3	**Tenkes**	**2.50**	**338**	⇓*e*Pn	**Pn**	**23 53 50.4**	**-0.2**
BZS	**Buzias**	**2.51**	**35**	*e*Pn	**Pn**	**23 53 50.2**	**-0.5**
BZS	**Buzias**	**2.51**	**35**	⇓*i*P	**Pn**	**23 53 50.2**	**-0.5**
BZS	**Buzias**	**2.51**	**35**	S	**Sg**	**23 54 32.1**	**+2.1**
BZS	**Buzias**	**2.51**	**35**	⇓*i*P	**Pn**	**23 53 50.2**	**-0.5**
PKSM	**Moragy**	**2.73**	**346**	⇓*i*Pn	**Pn**	**23 53 52.7**	**-0.9**
PKSM	**Moragy**	**2.73**	**346**	⇑*i*P	**Pn**	**23 53 53.0**	**-0.6**
PKSM	**Moragy**	**2.73**	**346**	S	**Sg**	**23 54 36.8**	**-0.1**
PKSM	**Moragy**	**2.73**	**346**	⇓*i*Pn	**Pn**	**23 53 52.7**	**-0.9**
PKSM	**Moragy**	**2.73**	**346**	⇑*i*P	**Pn**	**23 53 53.0**	**-0.6**
GZR	**Gura Zlata**	**2.92**	**50**	⇑*i*P	**Pn**	**23 53 56.7**	**+0.3**
GZR	**Gura Zlata**	**2.92**	**50**	⇑*i*P	**Pn**	**23 53 56.7**	**+0.3**
GZR				S	**Sn**	**23 54 31.3**	**-0.5**
PKS9	**Tamasi**	**3.15**	**343**	*e*Pn	**Pn**	**23 53 57.4**	**-2.2**
BEHE	**Becsehely**	**3.52**	**326**	⇓*e*Pn	**Pn**	**23 54 05.3**	**+0.8**
NVLJ	**Novalja**	**3.54**	**288**	*e*Pn	**Pn**	**23 54 05.5**	**+0.7**
NVLJ				Sn	**Sn**	**23 54 49.2**	**+2.2**
NVLJ	**Novalja**	**3.54**	**288**	*e*Pn	**Pn**	**23 54 05.5**	**+0.7**
NVLJ				Sn	**Sn**	**23 54 49.1**	**+2.2**
DRGR		**3.91**	**33**	⇑*i*P	**Pn**	**23 54 09.2**	**-0.7**
DRGR		**3.91**	**33**	⇑*i*P	**Pn**	**23 54 09.2**	**-0.7**
DRGR				S	**Sn**	**23 54 55.2**	**-0.8**
BUD	**Budapest**	**3.93**	**354**	⇑*e*Pn	**Pn**	**23 54 10.1**	**-0.1**
BUD				*e*Sn	**Sn**	**23 55 00.8**	**+4.1**
BUD	**Budapest**	**3.93**	**354**	⇑*e*Pn	**Pn**	**23 54 10.1**	**-0.1**
BUD				*e*Sn	**Sn**	**23 55 00.8**	**+4.1**
PENC	**Penc**	**4.23**	**357**	⇑*e*Pn	**Pn**	**23 54 14.3**	**0.0**
PSZ	**Piszkesteto**	**4.35**	**3**	⇑*e*Pn	**Pn**	**23 54 15.8**	**-0.2**
PSZ				*e*Sn	**Sn**	**23 55 06.2**	**-0.8**
PSZ	**Piszkesteto**	**4.35**	**3**	⇑*e*Pn	**Pn**	**23 54 15.8**	**-0.2**
PSZ				*e*Sn	**Sn**	**23 55 06.2**	**-0.8**
SOP	**Sopron**	**4.63**	**334**	*e*Sn	**Sn**	**23 55 15.1**	**+1.3**
SOP	**Sopron**	**4.63**	**334**	*e*Sn	**Sn**	**23 55 15.1**	**+1.3**

IDC ***20*** *00:04:35.0±0.7, 36°43N×71°07E, h172km±6km, mb3.7/13, mb1 3.9/18, mb1mx3.8/28, mbtmp3.8/18, Error ellipse: s-maj=12.2km s-min=10.8km az=100.0*
BJI ***20*** *00:04:36.1, 36°51N×70°97E, h193km, mB4.4/6, mb4.4/18*
ISCJB ***20*** *00:04:36.1±0.3, 36°55N±0°.02×71°03E±0°.04, h191km±4km, mb4.2/26, Error ellipse: s-maj=6.0km s-min=3.6km az=167.4*
NEIC ***20*** *00:04:36.9±0.6, 36°50N×71°02E, h188km±5km, mb4.2/8, Error ellipse: s-maj=7.8km s-min=5.8km az=128.0*
MOS ***20*** *00:04:36.0±0.9, 36°53N×71°02E, h190km, mb4.1/17, Error ellipse: s-maj=12.9km s-min=6.2km az=92.3*
NNC ***20*** *00:04:42.4±4.5, 37°03N×70°86E, h202km±41km, mb3.4, mpv4.9, Error ellipse: s-maj=39.7km s-min=21.1km az=13.0*

ISC 20 00:04:37.1±0.3,**36°57N**±0°.02×**71°03E**±0°.05,**h186**km±4km, **h181**km±4.7km;**pP-P, n117**,σ1°13/142,**mb4.2**/26,**10C-10D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.59**	**219**	Pn	**Pn**	**00 05 21.0**	**-0.3**
KBL	**Kabul**	**2.59**	**219**	PN	**Pn**	**00 05 21.0**	**-0.2**
CEP	**Cherat**	**2.84**	**165**	⇑P	**Pn**	**00 05 25.4**	**+1.3**
CEP				S	**Sn**	**00 06 01.0**	**+0.4**
CHCP	**Chirah Chowk**	**3.44**	**147**	P	**Pn**	**00 05 33.2**	**+1.8**
THW	**Thamme Wali**	**3.81**	**171**	⇑P	**Pn**	**00 05 36.8**	**+0.7**
KSH	**Kashi**	**4.89**	**52**	P	**Pn**	**00 05 47.3**	**-2.3**
KSH				S	**Sn**	**00 06 38.9**	**-7.7**
KSH				smax			
	comp=N,420nm,0.6s						
KSH				smax			
	comp=E,280nm,0.5s						
AML	**Almayashu**	**5.92**	**20**	P	**Pn**	**00 06 04.4**	**+1.4**
	SNR=34						
AML	**Almayashu**	**5.92**	**20**	*e*Pn	**Pn**	**00 06 03.9**	**+0.8**
	comp=E,306nm,0.4s						
AML				*e*Sn	**Sn**	**00 07 09.1**	**-1.7**
EKS2	**Erkin-Say**	**6.44**	**18**	P	**Pn**	**00 06 11.3**	**+1.5**
	SNR=18						
EKS2	**Erkin-Say**	**6.44**	**18**	*e*Pn	**Pn**	**00 06 10.2**	**+0.4**
	comp=E,74nm,0.4s						
EKS2				*e*Sn	**Sn**	**00 07 21.1**	**-1.9**
KK31	**Karatay Array**	**6.54**	**357**	⇓P	**Pn**	**00 06 11.2**	**+0.2**
	comp=E,19nm,0.4s,baz=176,slow=13,SNR=112						
KK31				⇑S	**Sn**	**00 07 21.2**	**-4.0**
	comp=E,72nm,0.5s,baz=182,slow=21,SNR=20						
KK31	**Karatay Array**	**6.54**	**357**	*e*PN	**Pn**	**00 06 10.7**	**-0.3**
KK31				pmax	pmax		
	comp=Z,36nm,0.4s						
KKAR	**Karatay Array**	**6.54**	**357**	*e*Pn	**Pn**	**00 06 11.0**	**0.0**
	comp=Z,45nm,0.4s						
KKAR				*e*Sn	**Sn**	**00 07 20.3**	**-4.9**
KKAR	**Karatay Array**	**6.54**	**357**	*e*PN	**Pn**	**00 06 11.0**	**0.0**
KKAR				pmax	pmax		
	comp=Z,45nm,0.4s						
AAK	**Ala-Archa**	**6.62**	**23**	P	**Pn**	**00 06 13.6**	**+1.5**
	SNR=32						
AAK	**Ala-Archa**	**6.62**	**23**	P	**Pn**	**00 06 13.3**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=170,slow=6.0,SNR=86						
AAK				S	**Sn**	**00 07 27.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=321,slow=22,SNR=22						
AAK	**Ala-Archa**	**6.62**	**23**	*e*Pn	**Pn**	**00 06 13.6**	**+1.5**
AAK				*e*Sn	**Sn**	**00 07 28.1**	**+0.8**
AAK	**Ala-Archa**	**6.62**	**23**	*d* PN	**Pn**	**00 06 13.4**	**+1.3**
AAK				pmax	pmax		
	comp=Z,21nm,0.6s						
KBK	**Karagaybulak**	**6.79**	**25**	P	**Pn**	**00 06 15.9**	**+1.6**
	SNR=26						
KBK	**Karagaybulak**	**6.79**	**25**	*e*Pn	**Pn**	**00 06 15.8**	**+1.5**
BHK	**Bhakra**	**6.82**	**137**	*e*PKP	**Pn**	**00 06 14.2**	**-0.6**
ULHL	**Ulahol**	**6.96**	**34**	P	**Pn**	**00 06 17.7**	**+1.2**
	SNR=11						
CHMS	**Chumysh**	**7.03**	**23**	P	**Pn**	**00 06 18.2**	**+0.8**
	SNR=36						
SDNR	**Sundarnagar**	**7.07**	**134**	*e*PKP	**Pn**	**00 06 17.5**	**-0.6**
SDNR				*e*S	**Sn**	**00 07 32.5**	**-5.5**
USP	**Ospenovka**	**7.20**	**21**	P	**Pn**	**00 06 19.9**	**+0.2**
	SNR=23						
TKM2	**Tokmak 2**	**7.25**	**28**	⇓P	**Pn**	**00 06 21.6**	**+1.2**
	comp=Z,95nm,0.6s						
TKM2				⇑S	**Sn**	**00 07 40.2**	**-2.0**
	comp=Z,20nm,0.8s						
TKM2	**Tokmak 2**	**7.25**	**28**	P	**Pn**	**00 06 21.6**	**+1.2**
	SNR=62						
TKM2	**Tokmak 2**	**7.25**	**28**	*e*Pn	**Pn**	**00 06 21.6**	**+1.2**
TKM2	**Tokmak 2**	**7.25**	**28**	*e*PN	**Pn**	**00 06 21.6**	**+1.2**
SMLA	**Simla**	**7.45**	**135**	*i* P	**Pn**	**00 06 22.1**	**-1.1**
SMLA				*i* x	x	00 07 43.7	
SMLA				⇓		00 07 44.7	
	comp=E,1μm,0.2s						
SMLA						00 07 45.0	
	comp=N,1μm,0.3s						
DDI	**Dehra Dun**	**8.56**	**135**	*ex*	**Pn**	**00 06 30.4**	**-7.3**
DDI				*ex*	x	00 07 44.5	
JOSI	**Joshimath**	**9.31**	**128**	*e*PKP	**Pn**	**00 06 48.0**	**+0.6**
JOSI				*e*S	**Sn**	**00 08 26.5**	**-4.8**
JOSI				AML	AML	00 08 31.1	
	comp=N,398nm,0.9s						
JOSI				AML	AML	00 08 32.5	
	comp=E,264nm,0.6s						
KHET	**Khetri**	**9.39**	**153**	*e*PKP	**Pn**	**00 06 46.8**	**-1.8**
KHET				*e*S	**Sn**	**00 08 25.0**	**-8.4**
KHET				AML	AML	00 08 28.4	
	comp=E,35nm,0.3s						
KHET				AML	AML	00 08 29.8	
	comp=N,35nm,0.4s						
NDI	**New Delhi**	**9.44**	**145**	*e*PKP	**Pn**	**00 06 48.0**	**-1.2**
NDI				*ex*	x	00 08 29.0	
SONA	**Sohna**	**9.75**	**147**	*e*PKP	**Pn**	**00 06 51.3**	**-1.9**
SONA				*e*S	**Sn**	**00 08 31.8**	**-10**
SONA				AML	AML	00 08 38.0	
	comp=E,56nm,0.3s						
SONA				AML	AML	00 08 41.2	
	comp=N,24nm,0.8s						
PTH	**Pithoragarh**	**10.41**	**130**	*e*PKP	**Pn**	**00 07 01.2**	**-0.7**
PTH				*ex*	x	00 08 44.9	
AJM	**Ajmer**	**10.52**	**162**	*e*PKP	**Pn**	**00 07 02.0**	**-1.3**
MK31	**Makanchi Array**	**13.22**	**36**	⇓P	**Pn**	**00 07 38.2**	**+0.6**
	comp=N,1.7nm,0.5s,baz=217,slow=11,SNR=5.1						
MK31	**Makanchi Array**	**13.22**	**36**	*e*Pn	**Pn**	**00 07 38.2**	**+0.7**
MK31	**Makanchi Array**	**13.22**	**36**	*e*P	**Pn**	**00 07 38.3**	**+0.7**
MKAR	**Makanchi Array**	**13.22**	**36**	P	**Pn**	**00 07 38.4**	**+0.8**
	comp=N,0.4nm,0.3s,baz=215,slow=10,SNR=18						
MKAR	**Makanchi Array**	**13.22**	**36**	*ce*P	**Pn**	**00 07 38.7**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMQ	**Urumqi**	**14.64**	**55**	*e*P	**Pn**	**00 07 57.0**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s						
AB31	**Akbulak array**	**15.03**	**331**	P	**Pn**	**00 07 58.5**	**-1.5**
	comp=Z,14nm,0.7s,baz=118,slow=13,SNR=127						
AB31				⇑S	**S**	**00 10 40.9**	**-6.1**
	comp=Z,2.0nm,0.5s,baz=133,slow=34,SNR=5.7						
AB31	**Akbulak array**	**15.03**	**331**	P	**Pn**	**00 07 58.5**	**-1.5**
AB31				pmax	pmax		
	comp=Z,19nm,0.7s						
ABKAR	**Akbulak array**	**15.03**	**331**	*e*Pn	**Pn**	**00 07 58.8**	**-1.3**
ABKAR				*e*S	**S**	**00 10 39.2**	**-7.8**
KURBB	**Kurchatov Arra**	**15.05**	**19**	P	**Pn**	**00 07 58.6**	**-1.6**
	comp=Z,0.8nm,0.5s						
KURK	**Kurchatov**	**15.15**	**19**	⇑P	**Pn**	**00 08 00.5**	**-1.0**
	comp=Z,6.9nm,1.0s						
KURK	**Kurchatov**	**15.15**	**19**	*e*Pn	**Pn**	**00 08 01.1**	**-0.5**
	comp=Z,6.0nm,0.8s						
KURK	**Kurchatov**	**15.15**	**19**	*e*P	**Pn**	**00 08 01.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VOSK	**Vostochnaya**	**16.15**	**360**	⇓P	**Pn**	**00 08 13.1**	**-0.5**
	comp=Z,14nm,0.8s						
BVA0	**Borovoye Array**	**16.46**	**359**	⇑P	**Pn**	**00 08 17.3**	**0.0**
	comp=Z,1.6nm,0.7s						
BVAR	**Borovoye Array**	**16.46**	**359**	P	**Pn**	**00 08 16.9**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=160,slow=14,SNR=35						
BVAR				S	**S**	**00 11 17.9**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=172,slow=22,SNR=4.0						
BVAR	**Borovoye Array**	**16.46**	**359**	P	**Pn**	**00 08 16.9**	**-0.4**
BVAR				S	**S**	**00 11 17.9**	**-1.2**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**16.49**	**358**	*e*P	**Pn**	**00 08 17.9**	**+0.2**
	comp=Z,12nm,0.7s						
BRVK	**Borovoye**	**16.49**	**358**	⇓*i*P	**Pn**	**00 08 18.4**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,21nm,1.2s						
AKTK	**Aktyubinsk**	**16.73**	**330**	P	**Pn**	**00 08 20.7**	**+0.1**
AKTK				S	**S**	**00 11 22.6**	**-2.0**
AKTO	**Aktyubinsk**	**16.73**	**330**	⇓P	**Pn**

KAF pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
KEV Kevo 40.74 338 *eP* **P** **P** **00 11 59.3 +0.1**
ARCES **ARCESS Array B 41.09 338** P **P** **00 12 02.6 +0.5**
comp=Z,2.5nm,0.5s,mb4.1,baz=114,slow=8.6,SNR=25
ARCES **ARCESS Array B 41.09 338** P **P** **00 12 02.6 +0.6**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
CN2 Changchun 41.56 63 *eP* **P** **00 12 07.3 +1.1**
CN2 PP PP 00 13 48.3 +2.2
CN2 *eS* **S** **00 18 08.6 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
CN2 pmax pmax
comp=Z,200nm,3.0s
NB2 NORSAR Subarra 44.34 323 P **P** **00 12 28.0 -0.3**
comp=Z,3.8nm,0.6s,mb4.2,baz=96,slow=7.9
NOA NORSAR Array B 44.34 323 P **P** **00 12 28.0 -0.3**
comp=Z,4.8nm,0.7s,mb4.2,baz=96,slow=7.7,SNR=17
NOA pP pP 00 13 07.8 -0.8
comp=Z,1.0nm,0.8s,baz=97,slow=7.6,SNR=2.0
NOA NORSAR Array B 44.34 323 P **P** **00 12 28.0 -0.3**
NOA *PP pP 00 13 07.9 -0.8
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA pmax pmax
comp=Z,1.0nm,0.8s
KMBO Kilima Mbogo 48.89 228 P **P** **00 13 04.8 +0.6**
comp=Z,2.0nm,0.6s,mb3.9,baz=180,slow=20,SNR=14
KMBO Kilima Mbogo 48.89 228 P **P** **00 13 04.8 +0.6**
KMBO Kilima Mbogo 48.89 228 P **P** **00 13 04.8 +0.6**
KMBO pmax pmax
comp=Z,2.0nm,0.6s
TORD Torodi Ar. Bea 65.74 269 P **P** **00 15 00.0 -2.1**
comp=Z,8.0nm,1.1s,mb4.5,baz=49,slow=6.1,SNR=8.1
INK Inuvik 73.83 9 *eP* **P** **00 15 51.5 +0.9**
comp=Z,2.3nm,0.6s,mb4.1
INK Inuvik 73.83 9 *eP* **P** **00 15 51.6 +0.9**
INK pmax pmax
comp=Z,2.0nm,0.6s
ILAR Eielson Array 74.70 16 P **P** **00 15 55.5 -0.2**
comp=Z,1.1nm,0.9s,mb3.5,baz=317,slow=4.3,SNR=10
ILAR Eielson Array 74.70 16 P **P** **00 15 55.6 -0.2**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
LBTB Lobatse 74.75 222 *eP* **P** **00 15 56.2 -0.3**
comp=Z,3.2nm,0.6s,mb4.1
LBTB Lobatse 74.75 222 *eP* **P** **00 15 56.2 -0.3**
LBTB pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
BOSA Boshof 77.81 220 P **P** **00 16 13.2 -0.5**
comp=Z,4.5nm,0.8s,mb4.1,baz=89,slow=3.3,SNR=8.5
BOSA Boshof 77.81 220 P **P** **00 16 13.2 -0.5**
BOSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
YKA Yellowknife Ar 81.17 3 P **P** **00 16 32.3 +0.9**
comp=Z,2.1nm,0.4s,mb4.1,baz=349,slow=5.3,SNR=12
YKA Yellowknife Ar 81.17 3 P **P** **00 16 32.4 +1.0**
WRA Warramunga Arr 82.01 122 P **P** **00 16 35.3 -1.2**
comp=Z,3.0nm,0.5s,mb4.2,baz=324,slow=5.0,SNR=84
WRA pP pP 00 17 16.5 -5.4
comp=Z,1.7nm,0.7s,baz=323,slow=6.3,SNR=6.2
WRA Warramunga Arr 82.01 122 P **P** **00 16 35.3 -1.1**
WRA pmax pmax
comp=Z,3.0nm,0.5s
WRA pmax pmax
comp=Z,2.0nm,0.7s
WB2 Warramunga Arr 82.02 122 *eP* **P** **00 16 35.1 -1.4**
ASAR Alice Springs 84.28 125 P **P** **00 16 47.0 -1.0**
comp=Z,4.1nm,0.6s,mb4.4,baz=312,slow=4.9,SNR=67
ASAR pP pP 00 17 30.3 -3.3
comp=Z,0.3nm,0.5s,baz=312,slow=5.9,SNR=1.7
ASAR Alice Springs 84.28 125 P **P** **00 16 47.0 -1.0**
ASAR *PP pP 00 17 30.3 -3.4
ASAR pmax pmax
comp=Z,4.0nm,0.6s
PLCA Paso Flores 149.87 250 PKPbc PKPbc 00 24 04.1 -0.8
comp=Z,3.2nm,0.9s,baz=104,slow=2.0,SNR=5.6
PLCA pPKPbc pPKPbc 00 24 48.0 -5.0
comp=Z,1.5nm,0.9s,baz=8.1,slow=7.1,SNR=1.9
PLCA Paso Flores 149.87 250 *e*PKPbc PKPbc 00 24 04.0 -0.9

TIR ***20*** *00:05:17.1±1.8, 42°.97N×19°.76E, h108km±22km, ML3.1*
BEO ***20*** *00:05:19.9±0.3, 43°.56N×19°.48E, h6km±2km, ML3.2/17*
PDG ***20*** *00:05:19.8±0.4, 43°.54N×19°.59E, h13km±1km, MD3.1/9, ML3.1/9, Error ellipse: s-maj=0.6km s-min=1.2km az=0.0*
ISCJB ***20*** *00:05:19.1±0.3, 43°.61N±0°.01×19°.55E±0°.02, h6km±2km, Error ellipse: s-maj=2.8km s-min=2.0km az=18.6*
CSEM ***20*** *00:05:19.6±0.1, 43°.56N×19°.55E, h2km, ML3.1/9, Error ellipse: s-maj=2.9km s-min=2.0km az=93.0*
NEIC ***20*** *00:05:19.8, 43°.54N×19°.59E, h13km, ML3.1(PDG), After PDG.*
PRU ***20*** *00:05:20.9, 43°.54N×19°.65E, h0km*
SKO ***20*** *00:05:23.2, 43°.54N×20°.14E, h4km*
ISC 20 00:05:20.2±0.3, 43°.58N±0°.01×19°.54E±0°.02, h5km±2km, n105, σ1°08/169, 21C-35D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLE	**Pljevlja**	**0.28**	**203**	⇓*i*Pg	**Pg**	**00 05 24.9**	**-0.7**
PLE				*e*Sg	**Sg**	00 05 28.8	-0.4
PLE	**Pljevlja**	**0.28**	**203**	⇓*i*Pg	**Pg**	**00 05 24.9**	**-0.7**
PLE				*e*Sg	**Sg**	00 05 28.8	-0.4
BBLS	**Lazići**	**0.30**	**341**	*e*Pg	**Pg**	**00 05 26.3**	**+0.2**
BBLS				*e*Sg	**Sg**	00 05 30.9	+0.9
BBLS	**Lazići**	**0.30**	**341**	*e*Pg	**Pg**	**00 05 26.3**	**+0.2**
BBLS				*e*Sg	**Sg**	00 05 30.9	+0.9
SJES	**Sjenica**	**0.45**	**136**	*e*Pg	**Pg**	**00 05 27.9**	**-1.0**
SJES				*e*Sg	**Sg**	00 05 35.1	+0.4
UPM	**Unac-Piva**	**0.60**	**231**	⇑*i*Pg	**Pg**	**00 05 31.1**	**-0.6**
UPM				*e*Sg	**Sg**	00 05 40.2	+0.7
UPM	**Unac-Piva**	**0.60**	**231**	⇑*i*Pg	**Pg**	**00 05 31.1**	**-0.6**
UPM				*e*Sg	**Sg**	00 05 40.2	+0.7
DIVS	**Divibare**	**0.61**	**32**	⇓*i*Pg	**Pg**	**00 05 31.8**	**-0.1**
DIVS				*e*Sg	**Sg**	00 05 40.3	+0.5
DIVS				*e*Sg	**Sg**	00 05 41.4	+1.6
DIVS	**Divibare**	**0.61**	**32**	⇓*i*Pg	**Pg**	**00 05 31.8**	**-0.1**
DIVS				*e*Sg	**Sg**	00 05 40.3	+0.5
BEY	**Berane**	**0.76**	**160**	⇑*i*Pg	**Pg**	**00 05 33.6**	**-1.1**
BEY				*e*Sg	**Sg**	00 05 44.0	-0.6
IVA	**Berane**	**0.76**	**160**	⇑*i*Pg	**Pg**	**00 05 33.6**	**-1.1**
IVA				*e*Sg	**Sg**	00 05 44.0	-0.6
IVA	**Berane**	**0.76**	**160**	⇑*i*Pg	**Pg**	**00 05 33.6**	**-1.1**
IVA				*e*Sg	**Sg**	00 05 44.0	-0.6
NKY	**Niksic**	**0.87**	**208**	⇓*i*Pg	**Pg**	**00 05 35.5**	**-1.3**
NKY				*e*Sg	**Sg**	00 05 48.7	+0.6
NKY	**Niksic**	**0.87**	**208**	⇓*i*Pg	**Pg**	**00 05 35.5**	**-1.3**
NKY				*e*Sg	**Sg**	00 05 48.7	+0.6
TRUS	**Trudelj**	**0.89**	**44**	⇓*i*Pg	**Pg**	**00 05 36.1**	**-1.3**
TRUS	**Trudelj**	**0.89**	**44**	⇓*i*Pg	**Pg**	**00 05 36.1**	**-1.3**
GRUS	**Gruza**	**0.90**	**70**	*e*Pg	**Pg**	**00 05 37.9**	**+0.4**
GRUS				*e*Sg	**Sg**	00 05 51.6	+2.3
GRUS	**Gruza**	**0.90**	**70**	*e*Pg	**Pg**	**00 05 37.9**	**+0.4**
GRUS				*e*Sg	**Sg**	00 05 51.6	+2.3
BRY	**Bratogost**	**1.00**	**227**	⇓*i*Pg	**Pg**	**00 05 37.8**	**-1.6**
BRY				*e*Sg	**Sg**	00 05 54.0	+1.7
BRY	**Bratogost**	**1.00**	**227**	⇓*i*Pg	**Pg**	**00 05 37.8**	**-1.6**
PVY	**Plav**	**1.04**	**162**	⇓*i*Pg	**Pg**	**00 05 38.3**	**-1.8**
PVY				*e*Sg	**Sg**	00 05 53.7	+0.2
PVY	**Plav**	**1.04**	**162**	⇓*i*Pg	**Pg**	**00 05 38.3**	**-1.8**
PVY				*e*Sg	**Sg**	00 05 53.7	+0.2
PDG	**Podgorica**	**1.17**	**190**	⇓*i*Pg	**Pg**	**00 05 40.5**	**-2.2**
PDG				*e*Sg	**Sg**	00 05 55.9	-1.9
PDG	**Podgorica**	**1.17**	**190**	⇓*i*Pg	**Pg**	**00 05 40.5**	**-2.2**
PDG				*e*Sg	**Sg**	00 05 55.9	-1.9
TTG	**Podgorica**	**1.17**	**190**	⇓*i*Pg	**Pg**	**00 05 40.5**	**-2.2**
TTG				*e*Sg	**Sg**	00 05 58.6	+0.8
TTG	**Podgorica**	**1.17**	**190**	⇓*i*Pg	**Pg**	**00 05 40.5**	**-2.2**
TTG				*e*Sg	**Sg**	00 05 58.6	+0.8
SELS	**Selova**	**1.21**	**107**	⇑*i*Pg	**Pg**	**00 05 41.3**	**-2.0**
SELS				*e*Sg	**Sg**	00 05 59.8	+0.9
SELS	**Selova**	**1.21**	**107**	⇑*i*Pg	**Pg**	**00 05 41.3**	**-2.0**
SELS				*e*Sg	**Sg**	00 05 59.8	+0.9
BCI	**Bajram Curri**	**1.27**	**162**	*e*PG	**Pn**	**00 05 43.0**	**-1.7**
BCI				*i* SG	**Sg**	00 05 58.2	-3.0
BCI	**Bajram Curri**	**1.27**	**162**	*e*Pg	**Pn**	**00 05 43.0**	**-1.6**
BCI				*i* Sg	**Sg**	00 05 58.2	-3.0
BUM	**Brajici-Budva**	**1.37**	**200**	⇓*i*Pg	**Pn**	**00 05 44.5**	**-1.4**
BUM				*e*Sg	**Sg**	00 06 05.5	+1.4
BUM	**Brajici-Budva**	**1.37**	**200**	⇓*i*Pg	**Pn**	**00 05 44.5**	**-1.4**
HCY	**Herceg Novi**	**1.37**	**214**	⇓*i*Pg	**Pn**	**00 05 44.7**	**-1.2**
HCY				*e*Sg	**Sg**	00 06 06.1	+1.9
HCY	**Herceg Novi**	**1.37**	**214**	⇓*i*Pg	**Pn**	**00 05 44.7**	**-1.2**
HCY				*e*Sg	**Sg**	00 06 06.1	+1.9
SVIS	**Svilajnac**	**1.39**	**60**	*e*Pg	**Pg**	**00 05 46.6**	**-0.2**
SVIS				*e*Sg	**Sg**	00 06 05.9	+1.1
BEO	**Beograd**	**1.40**	**28**	*e*Pg	**Pg**	**00 05 47.4**	**+0.4**
BEO				*e*Sg	**Sg**	00 06 04.0	-1.1
BEO	**Beograd**	**1.40**	**28**	*e*Pg	**Pg**	**00 05 47.4**	**+0.4**
BEO				*e*Sg	**Sg**	00 06 04.0	-1.1
STON	**Ston**	**1.52**	**243**	*i* Pn	**Pn**	**00 05 47.0**	**-1.0**
STON				Sn	**Sn**	00 06 09.0	+0.8
PUK	**Puka**	**1.56**	**170**	*e*PN	**Pn**	**00 05 48.6**	**+0.1**
PUK				*i* SN	**Sn**	00 06 09.8	+0.7
PUK	**Puka**	**1.56**	**170**	*e*Pn	**Pn**	**00 05 48.6**	**0.0**
PUK				*i* Sn	**Sn**	00 06 09.8	+0.7
FRGS	**Fruska Gora**	**1.59**	**7**	*e*Pg	**Pg**	**00 05 48.6**	**-2.0**
FRGS				*e*Sg	**Sg**	00 06 12.8	+1.6
ULC	**Ulcinj**	**1.63**	**188**	⇑*i*Pn	**Pn**	**00 05 49.5**	**0.0**
ULC				*e*Sn	**Sn**	00 06 11.8	+0.9
ULC	**Ulcinj**	**1.63**	**188**	⇑*i*Pn	**Pn**	**00 05 49.5**	**0.0**
ULC				*e*Sn	**Sn**	00 06 11.8	+0.9
BOLS	**Boljevac**	**1.77**	**81**	*e*Pn	**Pn**	**00 05 50.5**	**-0.9**
BOLS	**Boljevac**	**1.77**	**81**	*e*Pn	**Pn**	**00 05 50.5**	**-0.9**
BARS	**Barje**	**1.83**	**114**	*e*Pn	**Pn**	**00 05 52.1**	**-0.2**
BARS				*e*Sg	**Sg**	00 06 20.0	+1.0
BARS	**Barje**	**1.83**	**114**	*e*Pn	**Pn**	**00 05 52.1**	**-0.2**
BARS				*e*Sg	**Sg**	00 06 20.0	+1.0
BLY	**Banja Luka**	**2.06**	**305**	*e*Pn	**Pn**	**00 05 55.7**	**+0.3**
BLY	**Banja Luka**	**2.06**	**305**	*e*Pn	**Pn**	**00 05 55.7**	**+0.3**
ZAPS	**Zavoj**	**2.27**	**97**	*e*Pn	**Pn**	**00 05 58.9**	**+0.6**
ZAPS				*e*Sg	**Sg**	00 06 33.4	+0.2
BZS	**Buzias**	**2.52**	**35**	⇓*i*Pn	**Pn**	**00 06 00.8**	**-0.9**
BZS	**Buzias**	**2.52**	**35**	⇑*i*P	**Pn**	**00 06 00.8**	**-1.1**
BZS	**Buzias**	**2.52**	**35**	S	**Sg**	**00 06 41.1**	**+0.1**
BZS	**Buzias**	**2.52**	**35**	⇑*i*P	**Pn**	**00 06 00.6**	**-1.1**
BZS	**Buzias**	**2.52**	**35**	⇓*i*Pn	**Pn**	**00 06 00.8**	**-0.9**
KRUS	**Krusevo**	**2.55**	**150**	*e*Pn	**Pn**	**00 06 02.3**	**+0.1**
PKSM	**Moragy**	**2.71**	**347**	⇓*i*Pn	**Pn**	**00 06 03.8**	**-0.5**
PKSM	**Moragy**	**2.71**	**347**	⇓*i*P	**Pn**	**00 06 04.0**	**-0.3**
PKSM	**Moragy**	**2.71**	**347**	⇓*e*Pn	**Pn**	**00 06 03.8**	**-0.5**
PKSM	**Moragy**	**2.71**	**347**	⇓*i*P	**Pn**	**00 06 04.0**	**-0.3**
VTS	**Vitosha**	**2.86**	**109**	*e*Pn	**Pn**	**00 06 07.4**	**+1.0**
VTS	**Vitosha**	**2.86**	**109**	⇓*i*P	**Pn**	**00 06 08.0**	**+1.6**
VTS	**Vitosha**	**2.86**	**109**	S	**Sg**	**00 06 53.6**	**+1.5**
VTS	**Vitosha**	**2.86**	**109**	*e*Pn	**Pn**	**00 06 07.4**	**+1.0**
VTS	**Vitosha**	**2.86**	**109**	⇓*i*P	**Pn**	**00 06 08.0**	**+1.6**
GZR	**Gura Zlata**	**2.94**	**51**	⇑*i*P	**Pn**	**00 06 07.2**	**-0.3**
GZR	**Gura Zlata**	**2.94**	**51**	⇑*i*P	**Pn**	**00 06 07.2**	**-0.3**
GZR				S	**Sn**	00 06 42.7	-0.4
PKS6	**Bocsa**	**3.02**	**0**	*e*Pn	**Pn**	**00 06 08.1**	**-0.5**
KBN	**Korca**	**3.10**	**162**	*e*SN	**Pn**	**00 06 10.6**	**+0.9**
KBN				*i* SN	**Sn**	00 06 50.1	+3.0
PKS9	**Tamasi**	**3.13**	**344**	⇑*i*ePn	**Pn**	**00 06 10.2**	**0.0**
NVLJ	**Novalja**	**3.51**	**288**	*e*Pn	**Pn**	**00 06 16.5**	**+1.2**
NVLJ	**Novalja**	**3.51**	**288**	*e*Pn	**Pn**	**00 06 16.4**	**+1.1**
DRGR		**3.91**	**34**	⇑*i*P	**Pn**	**00 06 20.9**	**0.0**
DRGR		**3.91**	**34**	⇑*i*P	**Pn**	**00 06 20.9**	**0.0**
DRGR				S	**Sn**	00 07 04.0	-3.1
BUD	**Budapest**	**3.92**	**355**	⇓*i*ePn	**Pn**	**00 06 20.5**	**-0.5**
BUD				*e*Sg	**Sg**	00 07 34.7	+8.7
BUD	**Budapest**	**3.92**	**355**	⇓*i*ePn	**Pn**	**00 06 20.5**	**-0.5**
PSZ	**Piszkesteto**	**4.34**	**3**	⇓*i*ePn	**Pn**	**00 06 26.2**	**-0.6**
PSZ				*e*Sg	**Sg**	00 07 39.5	-0.1
PSZ	**Piszkesteto**	**4.34**	**3**	⇓*i*ePn	**Pn**	**00 06 26.2**	**-0.6**
SOKA	**Soboth**	**4.45**	**316**	⇑*i*Pn	**Pn**	**00 06 28.6**	**+0.4**
SOKA				⇓*i*Sn	**Sn**	00 07 20.2	0.0
SOKA	**Soboth**	**4.45**	**316**	Pn	**Pn**	**00 06 28.6**	**+0.4**
SOKA				SN	**Sn**	00 07 20.2	-0.1
SOP	**Sopron**	**4.60**	**334**	*e*Pn	**Pn**	**00 06 34.6**	**+4.2**
SOP				*e*Sn	**Sn**	00 07 23.5	-0.7
ARSA	**Arzberg**	**4.63**	**324**	⇑*i*Pn	**Pn**	**00 06 31.1**	**+0.4**
ARSA				⇓*i*Sn	**Sn**	00 07 24.0	-0.8
ARSA	**Arzberg**	**4.63**	**324**	Pn	**Pn**	**00 06 31.1**	**+0.3**
ARSA				Sn	**Sn**	00 07 24.0	-0.9
ZST	**Bratislava**	**4.92**	**341**	*e*Pn	**Pn**	**00 06 37.2**	**+2.5**
ZST				*e*Sn	**Sn**	00 07 29.7	-2.2
ZST	**Bratislava**	**4.92**	**341**	*e*PN	**Pn**	**00 06 37.2**	**+2.5**
ZST				*e*SN	**Sn**	00 07 29.7	-2.2
ZST	**Bratislava**	**4.92**	**341**	*e*Pn	**Pn**	**00 06 37.2**	**+2.5**
ZST				*e*Sn	**Sn**	00 07 29.7	-2.2
VYHS	**Vyhne**	**4.94**	**355**	*e*Pn	**Pn**	**00 06 35.9**	**+1.0**
VYHS				*e*Sn	**Sn**	00 07 32.4	0.0
VYHS	**Vyhne**	**4.94**	**355**	*e*PN	**Pn**	**00 06 35.8**	**+0.9**
VYHS				*e*SN	**Sn**	00 07 32.3	-0.1
VYHS	**Vyhne**	**4.94**	**355**	*e*PN	**Pn**	**00 06 35.9**	**+1.0**
VYHS				*e*Sn	**Sn**	00 07 32.4	0.0
KECS	**Kecovo**	**4.95**	**7**	*e*Pn	**Pn**	**00 06 35.5**	**+0.4**
KECS				*e*Sn	**Sn**	00 07 30.8	-1.8
KECS				*e*Sg	**Sg**	00 08 08.9	+10
KECS	**Kecovo**	**4.95**	**7**	*e*PN	**Pn**	**00 06 35.5**	**+0.4**
KECS				*e*SN	**Sn**	00 07 30.8	-1.8
KECS				*e*		00 08 08.9	
KECS	**Kecovo**	**4.95**	**7**	*e*Pn	**Pn**	**00 06 35.5**	**+0.4**
KECS				*e*Sn	**Sn**	00 07 30.8	-1.8
CRVS	**Cervenica-Dubn**	**5.48**	**13**	*e*SN	**Sn**	**00 07 46.2**	**+0.4**
CRVS				*e*		00 08 32.2	
CRVS	**Cervenica-Dubn**	**5.48**	**13**	*e*Sn	**Sn**	**00 07 46.2**	**+0.4**
KOLS	**Kolonicke sedl**	**5.68**	**19**	*e*Pn	**Pn**	**00 06 45.6**	**+0.5**
KOLS				*e*		00 08 37.3	
KOLS	**Kolonicke sedl**	**5.68**	**19**	*e*PN	**Pn**	**00 06 45.6**	**+0.5**
KOLS				*e*		00 08 37.3	
KOLS	**Kolonicke sedl**	**5.68**	**19**	*e*Pn	**Pn**	**00 06 45.6**	**+0.5**
ABTA	**Abfaltersbach**	**5.89**	**305**	⇑*i*Pn	**Pn**	**00 06 49.0**	**+0.9**
ABTA	**Abfaltersbach**	**5.89**	**305**	Pn	**Pn**	**00 06 49.0**	**+0.9**
WTTA	**Wattenberg**	**6.67**	**306**	⇓*i*Pn	**Pn**	**00 06 59.4**	**+0.6**
WTTA				⇑*i*Sn	**Sn**	00 08 15.3	+0.2
WTTA	**Wattenberg**	**6.67**	**306**	Pn	**Pn**	**00 06 59.4**	**+0.7**
WTTA				Sn	**Sn**	00 08 15.3	+0.2
KHC	**Kasperske Hory**	**6.91**	**325**	*e*PN	**Pn**	**00 07 04.3**	**+2.2**
KHC	**Kasperske Hory**	**6.91**	**325**	Pn	**Pn**	**00 07 04.3**	**+2.2**
MOTA	**Moosalm**	**7.03**	**305**	⇑*i*Pn	**Pn**	**00 07 04.3**	**+0.7**
MOTA	**Moosalm**	**7.03**	**305**	Pn	**Pn**	**00 07 04.3**	**+0.7**

ISCJB ***20*** *00:06:02.6±1.4, 31°.1N±0°.2×83°.7E±0°.2, h10km, mb3.7/6, Error ellipse: s-maj=33.9km s-min=13.3km az=138.8*
IDC ***20*** *00:06:02.9±2.2, 31°.11N×83°.90E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.6/25, mbtmp3.6/7, ML3.2/1, Error ellipse: s-maj=52.7km s-min=29.8km az=47.0*
NEIC ***20*** *00:06:04.7±1.4, 31°.15N×83°.75E, h10km, mb4.1/1, Error ellipse: s-maj=33.4km s-min=12.6km az=47.0*
ISC 20 00:06:04.7±1.4, 31°.2N±0°.2×83°.9E±0°.2, h10km, n10, σ0°93/11, mb3.7/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.46**	**101**	Pg	**Pn**	**00 07 46.3**	**+6.5**
LSA				Sg	**Pg**	**00 08 08.0**	**-0.4**
LSA				smax			
	comp=N,40nm,0.8s						
LSA				smax			
	comp=E,720nm,0.9s						
LSA	**Lhasa**	**6.46**	**101**	*e*Pn	**Pn**	**00 07 42.8**	**+3.0**
	comp=E,6.3nm,0.4s						
MKAR	**Makanchi Array**	**15.67**	**356**	Pn	**Pn**	**00 09 44.7**	**-0.7**
	comp=E,0.1nm,0.3s,baz=177,slow=12,SNR=2.3						
CMAR	**Chiang Mai Arr**	**18.61**	**129**	P	**Pn**	**00 10 22.3**	**-0.1**
	baz=308,slow=8.9,SNR=5.1						
ZALV	**Zalesovo Beam**	**22.80**	**1**	P	**P**	**00 11 07.8**	**+0.5**
	comp=E,0.5nm,0.4s,mb3.3,baz=192,slow=9.7,SNR=1.8						
SONM	**Songino Array**	**23.95**	**40**	P	**P**	**00 11 19.5**	**+0.5**
	comp=E,0.8nm,0.7s,mb3.3,baz=247,slow=7.5,SNR=2.6						
BRVK	**Borovoye**	**24.02**	**340**	*e*P	**P**	**00 11 19.6**	**+0.1**
	comp=E,5.7nm,0.9s,mb4.0						
FINES	**FINESS Array B**	**47.85**	**327**	P	**P**	**00 14 41.9**	**-0.5**
	comp=E,1.2nm,0.6s,mb4.1,baz=116,slow=9.4,SNR=3.8						
ARCES	**ARCESS Array B**	**50.20**	**337**	P	**P**	**00 15 01.6**	**+1.4**
	comp=E,1.8nm,1.0s,mb4.1,baz=98,slow=6.6,SNR=3.5						
ILAR	**Eielson Array**	**76.55**	**20**	P	**P**	**00 17 53.0**	**-1.7**
	comp=E,0.6nm,0.8s,mb3.6,baz=304,slow=4.3,SNR=5.6						

WEL 20 00:10:00.3±0.3, 38°.64S×175°.81E, h141km±2km, ML3.8/17, Error ellipse: s-maj=1.9km s-min=1.7km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATZ	**Rangitukua**	**0.23**	**187**	PN	Pn	00 10 19.4	-0.2
RITZ	**Rihia Road**	**0.34**	**174**	PN	Pn	00 10 20.2	+0.2
KATZ	**Kakaramea**	**0.35**	**195**	PN	Pn	00 10 19.9	0.0
KRVZ	**Karewarewa**	**0.48**	**196**	PN	Pn	00 10 20.4	-0.1
KRVZ				SN	Sn	00 10 36.2	+0.3
WTVZ	**West Tongariro**	**0.51**	**200**	PN	Pn	00 10 20.7	+0.1
TWVZ	**Taurewa**	**0.52**	**214**	PN	Pn	00 10 20.8	+0.1
OTVZ	**Oturere**	**0.54**	**192**	PN	Pn	00 10 21.0	+0.2
OTVZ				SN	Sn	00 10 37.2	+0.7
NGZ	**Ngauruhoe**	**0.56**	**197**	PN	Pn	00 10 21.0	0.0
WPVZ	**Whakapapa**	**0.60**	**200**	PN	Pn	00 10 21.4	+0.2
TUVZ	**Tukino**	**0.64**	**191**	PN	Pn	00 10 21.7	+0.3
TUVZ				SN	Sn	00 10 37.7	+0.1
WNVZ	**Wahianoa**	**0.71**	**193**	PN	Pn	00 10 22.1	+0.2
PKVZ	**Pokaka**	**0.75**	**209**	PN	Pn	00 10 22.2	0.0
PKVZ				SN	Sn	00 10 39.1	+0.3
BKZ	**Black Stump Fm**	**0.75**	**135**	PN	Pn	00 10 21.7	-0.5
BKZ				SN	Sn	00 10 37.9	-0.9
HIZ	**Hauiti**	**0.76**	**279**	PN	Pn	00 10 22.0	-0.2
HIZ				SN	Sn	00 10 39.1	+0.2
MOVZ	**Moawhango**	**0.77**	**183**	PN	Pn	00 10 22.2	-0.2
MOVZ				SN	Sn	00 10 38.0	-1.1
MTVZ	**Mangateitei**	**0.79**	**199**	PN	Pn	00 10 22.6	+0.1
BHHZ	**Black Hill Sta**	**0.87**	**167**	PN	Pn	00 10 23.0	-0.2
NMHZ	**Naumai**	**0.90**	**121**	PN	Pn	00 10 24.0	+0.7
VRZ	**Vera Road**	**0.95**	**239**	PN	Pn	00 10 23.9	+0.1
RAHZ	**Arahi**	**1.04**	**106**	PN	Pn	00 10 24.9	+0.4
MCHZ	**McNeill Hill**	**1.06**	**140**	PN	Pn	00 10 25.6	+0.8
URZ	**Urewera**	**1.09**	**70**	PN	Pn	00 10 24.0	-1.1
WAZ	**Wanganui**	**1.29**	**210**	PN	Pn	00 10 27.0	0.0
PNHZ	**Pukenui**	**1.31**	**167**	PN	Pn	00 10 27.0	-0.1
MWZ	**Matawai**	**1.38**	**78**	PN	Pn	00 10 27.5	-0.4
CKHZ	**Cape Kidnapper**	**1.42**	**136**	PN	Pn	00 10 28.6	+0.3
KAHZ	**Kahuranaki**	**1.42**	**145**	PN	Pn	00 10 28.6	+0.3
TSZ	**Takapari Road**	**1.43**	**175**	PN	Pn	00 10 28.1	-0.2
KNZ	**Kokohu**	**1.51**	**105**	PN	Pn	00 10 29.1	-0.1
WPHZ	**Waipukurau**	**1.51**	**161**	PN	Pn	00 10 29.1	-0.2
PXZ	**Pawanui**	**1.61**	**150**	PN	Pn	00 10 30.1	-0.3
DVHZ	**Dannevirke**	**1.68**	**171**	PN	Pn	00 10 30.6	-0.6
MHGZ	**Mahia Peninsul**	**1.72**	**108**	PN	Pn	00 10 31.5	0.0
PRHZ	**Porangahau**	**1.75**	**159**	PN	Pn	00 10 31.6	-0.3
POWZ	**Post Office Ro**	**1.75**	**181**	PN	Pn	00 10 31.3	-0.7
PUZ	**Puketiti**	**2.00**	**74**	PN	Pn	00 10 33.7	-1.2
MRZ	**Mangatainoka R**	**2.03**	**185**	PN	Pn	00 10 34.1	-1.1
BFZ	**Birch Farm**	**2.07**	**171**	PN	Pn	00 10 34.7	-1.0
TIWZ	**Tintock**	**2.14**	**178**	PN	Pn	00 10 35.4	-1.1
OGWZ	**Otaki Gorge**	**2.23**	**193**	PN	Pn	00 10 36.5	-1.1
MXZ	**Matakaoa Point**	**2.24**	**62**	PN	Pn	00 10 37.0	-0.8
HOWZ	**Holdsworth Sta**	**2.27**	**186**	PN	Pn	00 10 36.4	-1.7
KIW	**Kapiti Island**	**2.33**	**197**	PN	Pn	00 10 37.2	-1.6
TMWZ	**Te Maipa**	**2.47**	**179**	PN	Pn	00 10 39.1	-1.5
MTW	**Mount Morrison**	**2.53**	**185**	PN	Pn	00 10 39.4	-1.9
CAW	**Cannon Point**	**2.53**	**193**	PN	Pn	00 10 39.7	-1.7
DUWZ	**D'Urville Isla**	**2.61**	**213**	PN	Pn	00 10 40.6	-1.7
TRWZ	**Traveller**	**2.76**	**182**	PN	Pn	00 10 42.4	-1.8
SNZO	**South Karori**	**2.80**	**197**

2.8nm,0.3s,SNR=7.9
ESPR Espera 1.26 267 Pg Pg 00 50 58.5 -0.8
0.3nm,0.1s,SNR=7.9
ESPR Espera 1.26 267 Pg Pg 00 50 58.5 -0.8
0.3nm,0.1s,SNR=7.9
EBAN Banos Encina 1.27 18 Pg Pg 00 50 57.2 -2.4
0.5nm,0.2s,SNR=7.9
EBAN Lg 00 51 16.8
1.6nm,0.2s,SNR=7.9
EBAN Banos Encina 1.27 18 Pg Pg 00 50 57.2 -2.4
0.5nm,0.2s,SNR=7.9
EBAN Lg 00 51 16.8
1.6nm,0.2s,SNR=7.9
EQES Quesada 1.29 48 Pg Pg 00 51 00.1 +0.2
0.4nm,0.2s
EQES Lg 00 51 17.4
2.3nm,0.3s,SNR=9.2
EQES Quesada 1.29 48 Pg Pg 00 51 00.1 +0.2
0.4nm,0.2s
EQES Lg 00 51 17.4
2.3nm,0.3s,SNR=9.2
EHUE Huescar 1.60 57 Pg Pg 00 51 05.0 -0.9
0.2nm,0.3s,SNR=7.9
EHUE Lg 00 51 27.5
0.9nm,0.3s,SNR=7.9
EHUE Huescar 1.60 57 Pg Pg 00 51 05.0 -0.9
0.2nm,0.3s,SNR=7.9
EHUE Lg 00 51 27.5
0.9nm,0.3s,SNR=7.9
EMIN Mina Concepcio 2.07 294 Pn Pn 00 51 09.1 -1.6
0.3nm,0.3s
EMIN Lg 00 51 41.6
0.5nm,0.1s,SNR=5.6
EMIN Mina Concepcio 2.07 294 Pn Pn 00 51 09.1 -1.6
0.3nm,0.3s
EMIN Lg 00 51 41.6
0.5nm,0.1s,SNR=5.6

*NEIC **20** 00:53:47.8, 31°.37S×68°.65W, h145km, MD3.4(GUC), After GUC.*
GUC 20 00:53:47.8±0.8, 31°.37S×68°.65W, h145km, MD3.4, ML3.5, 4C-8D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**2.02**	**275**	⇓iP	Pn	00 54 23.3	+0.5
CMCH				*i* S	Sn	00 54 50.6	+0.9
CMCH	**Combarbala**	**2.02**	**275**	⇓iP	Pn	00 54 23.3	+0.5
CMCH				*i* S	Sn	00 54 50.6	+0.9
CMCH				AML	AML	00 54 51.5	
	comp=E,2μm,0.5s						
TLL	**Tololo Astrono**	**2.21**	**302**	⇓iP	Pn	00 54 26.4	+1.4
TLL				*i* S	Sn	00 54 55.2	+1.6
TLL	**Tololo Astrono**	**2.21**	**302**	⇓iP	Pn	00 54 26.4	+1.4
TLL				*i* S	Sn	00 54 55.2	+1.6
TLL				AML	AML	00 54 58.1	
	comp=N,158nm,0.4s						
FCH	**Farellones**	**2.40**	**215**	⇓iP	Pn	00 54 28.5	+1.1
FCH				*i* S	Sn	00 55 01.2	+3.3
FCH				AML	AML	00 55 09.7	
	comp=E,70nm,0.2s						
PEL	**Peldehue**	**2.47**	**224**	⇑iP	Pn	00 54 28.4	+0.1
PEL				*i* S	Sn	00 55 00.2	+0.7
PEL				AML	AML	00 55 01.3	
	comp=E,208nm,0.4s						
CHNG	**Los Chungos**	**2.48**	**257**	*e*P	Pn	00 54 24.2	-4.3
CHNG				*i* S	Sn	00 54 54.6	-5.1
CHNG				AML	AML	00 55 02.4	
	comp=N,82nm,0.6s						
ROCH	**El Roble**	**2.56**	**231**	⇓iP	Pn	00 54 30.4	+1.0
ROCH	**El Roble**	**2.56**	**231**	⇑iP	Pn	00 54 29.6	+0.2
ROCH				⇓iP		00 54 30.4	
ROCH				*i* S	Sn	00 55 02.2	+0.7
ROCH				AML	AML	00 55 06.7	
	comp=N,139nm,0.4s						
CLCH	**Cerro Calan**	**2.58**	**218**	AML	AML	00 55 09.0	
	comp=E,125nm,0.4s						
PCH	**Pirque**	**2.75**	**215**	*e*P	Pn	00 54 32.6	+0.9
PCH				*i* S	Sn	00 55 07.0	+1.4
PCH	**Pirque**	**2.75**	**215**	*e*P	Pn	00 54 32.6	+0.9
PCH				*i* S	Sn	00 55 07.0	+1.4
LMEL	**Las Melosas**	**2.80**	**207**	AML	AML	00 55 17.8	
	comp=N,80nm,0.1s						
LCO	**Las Campanas**	**2.94**	**322**	⇑iP	Pn	00 54 35.0	+0.8
LCO				*i* S	Sn	00 55 11.8	+1.7
LCO	**Las Campanas**	**2.94**	**322**	⇑iP	Pn	00 54 35.0	+0.8
LCO				*i* S	Sn	00 55 11.8	+1.7
LCO				AML	AML	00 55 14.8	
	comp=E,98nm,0.3s						
TACH	**Talagante**	**2.99**	**220**	P	Pn	00 54 34.7	0.0
TACH	**Talagante**	**2.99**	**220**	⇓iP	Pn	00 54 34.7	0.0

DJA 20 01:11:42, 0°.98N×121°.79E, h43km, MLv4.1/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.52**	**163**	P	Pn	01 11 55.1	+1.9
MRSI				S	Sn	01 12 03.8	+2.7
TOLI	**Toli-Toli**	**1.00**	**278**	P	Sn	01 12 23.7	+11
KMSI	**Cibinong**	**2.23**	**100**	P	Pn	01 12 17.4	+1.0
KMSI				S	Sn	01 12 44.0	+1.3
LUWI	**Luwuk**	**2.23**	**154**	P	Pn	01 12 14.6	-2.0
LUWI				S	Sn	01 12 43.0	+0.1

IDC 20 01:13:43.8±12.0, 10°.26S×164°.74E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/16, mbtmp3.7/3, Error ellipse: s-maj=355.0km s-min=44.3km az=119.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.84**	**248**	P	P	01 20 02.2	+0.3
	0.6nm,0.5s,baz=80,slow=9.2,SNR=5.5						
ASAR	**Alice Springs**	**32.28**	**242**	P	P	01 20 14.3	-0.2
	0.6nm,0.5s,baz=66,slow=9.2,SNR=7.5						
SONM	**Songino Array**	**77.45**	**324**	P	P	01 25 41.3	+0.3
	0.9nm,0.5s,baz=122,slow=7.3,SNR=4.5						

*IDC **20** 01:29:42.3±0.9, 23°.68S×175°.94W, h0km, mb4.3/8, mb1 4.5/9, mb1mx4.3/17, mbtmp4.3/9, ML4.3/1, MS3.7/7, Ms1 3.6/7, ms1mx3.3/26, Error ellipse: s-maj=38.4km s-min=21.0km az=146.0*
*NEIC **20** 01:29:46.0±3.0, 23°.89S×175°.24W, h29km±21km, mb4.6/3, Error ellipse: s-maj=16.5km s-min=13.7km az=173.0*
*ISCJB **20** 01:29:50.0±4.5, 24°.0S±0°.2×175°.9W±0°.2, h76km±35km, mb4.2/11, Error ellipse: s-maj=40.5km s-min=19.4km az=141.7*
ISC 20 01:29:52.0±3.0, 24°.0S±0°.2×175°.9W±0°.2, h80km±24km, n32, σ1§17/16, mb4.2/11, 1C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.41**	**316**	*e*Pn	**Pn**	**01 31 51.3**	**+0.2**
	38nm,0.8s						
RAR	**Rarotonga**	**15.12**	**83**	Pn	**Pn**	**01 33 09.1**	**-12**
	3.9nm,0.3s,baz=259,slow=8.9,SNR=5.8						
URZ	**Urewera**	**15.45**	**201**	Pn	**Pn**	**01 33 26.0**	**+0.7**
	1.1nm,0.3s,baz=70,slow=4.2,SNR=5.4						
URZ				Sn	**Sn**	**01 36 02.9**	**-13**
	1.3nm,0.3s,baz=137,slow=19,SNR=5.6						
DZM	**Mont Dzumac**	**16.39**	**273**	*e*LR	LR	01 36 51.7	
	284nm,23.1s						
TBI	**Tubuai**	**24.19**	**94**	*e*LR	LR	01 40 43.4	
	230nm,29.0s						
PPT	**Papeete**	**25.37**	**80**	*e*LR	LR	01 41 12.4	
	250nm,28.0s						
PPT	**Papeete**	**25.37**	**80**	LR	LR	01 43 26.8	
	comp=Z,127nm,20.5s,baz=271,slow=32						
HNR	**Honiara**	**27.23**	**298**	LR	LR	01 44 32.2	
	comp=Z,123nm,18.2s,baz=133,slow=33						
STKA	**Stephens Creek**	**38.21**	**248**	P	**P**	**01 37 04.8**	**+0.8**
	1.6nm,0.5s,mb4.1,baz=98,slow=13,SNR=5.2						
STKA				LR	LR	01 49 42.5	
	comp=Z,20nm,18.1s,baz=207,slow=31						
ASAR	**Alice Springs**	**45.75**	**260**	P	**P**	**01 38 04.8**	**-0.7**
	1.6nm,0.6s,mb4.0,baz=91,slow=7.6,SNR=25						
ASAR				PcP	PcP	01 39 43.3	+1.1
	0.8nm,0.7s,baz=109,slow=4.9,SNR=4.3						
WB2	**Warramunga Arr**	**46.16**	**265**	*e*P	**P**	**01 38 07.0**	**-1.8**
WRA	**Warramunga Arr**	**46.17**	**265**	P	**P**	**01 38 07.4**	**-1.5**
	5.3nm,0.7s,mb4.4,baz=96,slow=8.4,SNR=77						
WRA				PcP	PcP	01 39 45.3	+1.6
	0.8nm,0.6s,baz=102,slow=3.2,SNR=3.2						
WRA				LR	LR	01 57 04.6	
	comp=Z,114nm,20.8s,baz=50,slow=36						
PETK	**Petropavlovsk-**	**80.12**	**344**	P	**P**	**01 41 52.9**	**+0.2**
	4.2nm,0.6s,mb4.5,baz=147,slow=6.4,SNR=3.3						
KSRS	**Korea Array**	**80.78**	**318**	LR	LR	02 13 20.1	
	comp=Z,43nm,19.9s,baz=132,slow=32						
YBH	**Yreka Blue Hor**	**81.80**	**37**	LR	LR	02 11 12.6	
	comp=Z,75nm,18.2s,baz=222,slow=30						
NVAR	**Mina Array Bea**	**82.22**	**42**	P	**P**	**01 42 04.1**	**-0.2**
	0.8nm,0.7s,mb3.7,baz=214,slow=7.6,SNR=4.4						
PLCA	**Paso Flores**	**85.47**	**133**	LR	LR	02 10 43.1	
	comp=Z,79nm,19.8s,baz=126,slow=29						
TXAR	**Lajitas Array**	**87.29**	**56**	P	**P**	**01 42 30.9**	**+0.9**
	0.6nm,0.8s,mb3.6,baz=225,slow=7.5,SNR=3.8						
ANMO	**Albuquerque**	**88.06**	**50**	*e*P	**P**	**01 42 32.4**	**-1.1**
	2.0nm,0.6s,mb4.3						
TRF	**Thorofare Moun**	**89.43**	**11**	*e*P	**P**	**01 42 39.0**	**-0.2**
	1.5nm,0.5s,mb4.3						
ILAR	**Eielson Array**	**91.26**	**12**	P	**P**	**01 42 46.9**	**-0.9**
	0.9nm,0.8s,mb4.0,baz=216,slow=6.3,SNR=9.0						
CMAR	**Chiang Mai Arr**	**93.11**	**289**	P	**P**	**01 42 59.8**	**+2.4**
	3.4nm,0.8s,mb4.8,baz=133,slow=3.4,SNR=13						
CHTO	**Chiang Mai**	**93.25**	**289**	*e*P	**P**	**01 43 00.5**	**+2.4**
	1.7nm,0.4s,mb4.7						
FINES	**FINESS Array B**	**139.64**	**344**	PKP	PKPdf	01 49 12.5	+2.7
	2.3nm,1.1s,baz=61,slow=3.5,SNR=4.7						
AKASG	**Malin Array Be**	**146.99**	**330**	PKPbc	PKPbc	01 49 25.4	+0.2
	4.3nm,0.6s,baz=43,slow=3.4,SNR=15						
KIEV	**Kiev**	**147.00**	**330**	*e*PKPbc	PKPbc	01 49 24.9	-0.3
BR131	**Keskin Array S**	**150.59**	**309**	*e*PKPbc	PKPbc	01 49 35.2	+0.5
BRTR	**Keskin Array B**	**150.59**	**309**	PKPbc	PKPbc	01 49 35.6	+1.0
	1.7nm,0.6s,baz=132,slow=4.1,SNR=12						
BUR08	**Bucovina Ar. S**	**151.02**	**330**	*e*PKPbc	PKPbc	01 49 38.0	+2.6
CLL	**Collm**	**151.86**	**348**	⇑PKPbc	PKPbc	01 49 38.1	+0.9
	comp=Z,4.0nm,0.9s						
CLL				*e*PKPbc	pPKPbc	01 49 44.0	-16
CLL				*e*PKPab	pPKPab	01 49 52.0	-17
BRG	**Berggiesshubel**	**152.09**	**347**	*e*P	PKPbc	01 49 38.7	+0.9
	comp=Z,3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**168.99**	**167**	PKPab	PKPab	01 51 03.8	+2.1
	comp=Z,0.8nm,0.8s,baz=185,slow=5.4,SNR=2.7						

*ISCJB **20** 01:34:07.5±0.5, 37°.88N±0°.02×21°.43E±0°.03, h10km, Error ellipse: s-maj=3.5km s-min=3.0km az=26.3*
*CSEM **20** 01:34:07.8±0.2, 37°.88N×21°.44E, h10km, MD2.8, Error ellipse: s-maj=4.0km s-min=3.2km az=42.0*
*THE **20** 01:34:07.9, 37°.88N×21°.45E, h0km±1km, ML1.8/5, Error ellipse: s-maj=1.1km s-min=0.4km az=236.0*
*ATH **20** 01:34:08.1, 37°.89N×21°.44E, h11km±3km, MD2.8/11*
ISC 20 01:34:08.1±0.5, 37°.87N±0°.02×21°.44E±0°.03, h4km±7km, n51, σ0§84/84, 2C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.19**	**8**	⇑iPG	**Pg**	**01 34 13.0**	**+1.2**
RLS	**Riolos of Patr**	**0.19**	**8**	⇑iPg	**Pg**	**01 34 13.0**	**+1.2**
UPR	**University Cam**	**0.49**	**34**	*e*PB	**Pg**	**01 34 17.5**	**-0.1**
UPR	**University Cam**	**0.49**	**34**	P	**Pg**	**01 34 17.6**	**0.0**
UPR				S	**Sg**	**01 34 24.8**	**+0.7**
UPR	**University Cam**	**0.49**	**34**	*e*Pb	**Pg**	**01 34 17.5**	**-0.1**
UPR				S	**Sg**	**01 34 24.8**	**+0.7**
KFL	**Anninata**	**0.56**	**295**	P	**Pg**	**01 34 18.9**	**0.0**
KFL				S	**Sg**	**01 34 27.7**	**+1.5**
KFL	**Anninata**	**0.56**	**295**	P	**Pg**	**01 34 18.9**	**0.0**
KFL				S	**Sg**	**01 34 27.7**	**+1.5**
LAKA	**Lakka**	**0.56**	**49**	P	**Pg**	**01 34 18.8**	**-0.1**
LAKA				S	**Sg**	**01 34 27.1**	**+0.8**
LAKA	**Lakka**	**0.56**	**49**	P	**Pg**	**01 34 18.8**	**-0.1**
LAKA				S	**Sg**	**01 34 27.1**	**+0.8**
EFP	**Efpalio**	**0.67**	**34**	*e*PG	**Pg**	**01 34 20.3**	**-0.6**
EFP				*e*SB	**Sg**	**01 34 29.8**	**+0.2**
EFP	**Efpalio**	**0.67**	**34**	P	**Pg**	**01 34 20.2**	**-0.7**
EFP				S	**Sg**	**01 34 30.1**	**+0.6**
EFP	**Efpalio**	**0.67**	**34**	*e*Pg	**Pg**	**01 34 20.3**	**-0.6**
EFP				*e*Sb	**Sg**	**01 34 29.8**	**+0.2**
EFP				S	**Sg**	**01 34 30.1**	**+0.6**
TRIZ	**Trizonia**	**0.70**	**45**	P	**Pg**	**01 34 20.8**	**-0.8**
TRIZ				S	**Sg**	**01 34 31.6**	**+0.9**
TRIZ	**Trizonia**	**0.70**	**45**	P	**Pg**	**01 34 20.8**	**-0.8**
TRIZ				S	**Sg**	**01 34 31.6**	**+0.9**
GUR	**Goura**	**0.72**	**85**	*e*PB	**Pg**	**01 34 21.2**	**-0.7**
GUR				*e*SB	**Sg**	**01 34 32.0**	**+0.7**
GUR	**Goura**	**0.72**	**85**	P	**Pg**	**01 34 21.2**	**-0.8**
GUR				S	**Sg**	**01 34 32.2**	**+0.9**
GUR	**Goura**	**0.72**	**85**	*e*Pb	**Pg**	**01 34 21.2**	**-0.7**
GUR				*e*Sb	**Sg**	**01 34 32.0**	**+0.7**
VLS	**Valsamata**	**0.73**	**295**	*e*PG	**Pg**	**01 34 21.8**	**-0.4**
VLS				*e*SB	**Sg**	**01 34 33.3**	**+1.6**
VLS	**Valsamata**	**0.73**	**295**	P	**Pg**	**01 34 21.6**	**-0.6**
VLS				S	**Sg**	**01 34 33.1**	**+1.4**
VLS	**Valsamata**	**0.73**	**295**	P	**Pg**	**01 34 21.6**	**-0.6**
VLS				S	**Sg**	**01 34 33.1**	**+1.4**
KALE	**Kalithea**	**0.76**	**47**	P	**Pg**	**01 34 21.9**	**-0.8**
KALE				S	**Sg**	**01 34 33.0**	**+0.5**
KALE	**Kalithea**	**0.76**	**47**	P	**Pg**	**01 34 21.9**	**-0.8**
KALE				S	**Sg**	**01 34 33.0**	**+0.5**
ITM	**Ithomi**	**0.80**	**150**	*e*PG	**Pg**	**01 34 23.0**	**-0.3**
ITM	**Ithomi**	**0.80**	**150**	P	**Pg**	**01 34 22.8**	**-0.5**
ITM				S	**Sg**	**01 34 34.7**	**+1.1**
ITM	**Ithomi**	**0.80**	**150**	*e*Pg	**Pg**	**01 34 23.0**	**-0.3**
ITM				S	**Sg**	**01 34 34.7**	**+1.1**
VLX	**Vlachokerasia**	**0.90**	**124**	*e*PB	**Pg**	**01 34 25.4**	**0.0**
VLX				*e*SB	**Sg**	**01 34 37.9**	**+0.8**
VLX	**Vlachokerasia**	**0.90**	**124**	P	**Pg**	**01 34 24.8**	**-0.6**
VLX				S	**Sg**	**01 34 37.7**	**+0.6**
VLX	**Vlachokerasia**	**0.90**	**124**	P	**Pg**	**01 34 24.8**	**-0.6**
VLX	**Vlachokerasia**	**0.90**	**124**	*e*Pb	**Pg**	**01 34 25.4**	**0.0**
VLX				S	**Sg**	**01 34 37.7**	**+0.6**
DSF	**Desfina**	**1.01**	**58**	P	**Pg**	**01 34 26.6**	**-1.0**
DSF				S	**Sg**	**01 34 41.4**	**+0.7**
DSF	**Desfina**	**1.01**	**58**	P	**Pg**	**01 34 26.6**	**-1.0**
DSF				S	**Sg**	**01 34 41.4**	**+0.7**
EVR	**Evrytania**	**1.08**	**16**	*e*PN	**Pg**	**01 34 28.4**	**-0.5**
EVR	**Evrytania**	**1.08**	**16**	*e*Pn	**Pg**	**01 34 28.4**	**-0.5**
LKD2	**Lefkada island**	**1.10**	**326**	P	**Pg**	**01 34 28.1**	**-1.1**
LKD2	**Lefkada island**	**1.10**	**326**	P	**Pg**	**01 34 28.1**	**-1.1**
LTK	**Loutraki**	**1.22**	**82**	P	**Pg**	**01 34 30.5**	**-1.0**
LTK	**Loutraki**	**1.22**	**82**	P	**Pg**	**01 34 30.5**	**-1.0**
AGG	**Agios Georgios**	**1.35**	**31**	*e*PG	**Pg**	**01 34 32.6**	**-1.3**
AGG	**Agios Georgios**	**1.35**	**31**	P	**Pn**	**01 34 32.8**	**-0.9**
AGG				S	**Sg**	**01 34 52.1**	**+0.7**
AGG	**Agios Georgios**	**1.35**	**31**	P	**Pn**	**01 34 32.8**	**-0.9**
AGG				S	**Sg**	**01 34 52.1**	**+0.7**
LKR	**Lokris**	**1.46**	**57**	*e*PG	**Pg**	**01 34 34.6**	**-1.4**
LKR	**Lokris**	**1.46**	**57**	P	**Pn**	**01 34 34.7**	**-0.5**
LKR				S	**Sb**	**01 34 55.6**	**+1.0**
LKR	**Lokris**	**1.46**	**57**	P	**Pn**	**01 34 34.7**	**-0.5**
LKR				S	**Sb**	**01 34 55.6**	**+1.0**
DID	**Didima**	**1.48**	**104**	*e*PG	**Pg**	**01 34 35.6**	**-0.8**
DID	**Didima**	**1.48**	**104**	P	**Pn**	**01 34 35.1**	**-0.3**
DID				S	**Sb**	**01 34 55.9**	**+0.7**
DID	**Didima**	**1.48**	**104**	P	**Pn**	**01 34 35.1**	**-0.3**
DID	**Didima**	**1.48**	**104**	*e*Pg	**Pg**	**01 34 35.6**	**-0.8**
DID				S	**Sb**	**01 34 55.9**	**+0.7**
VLI	**Veliai**	**1.66**	**133**	*e*PB	**Pb**	**01 34 40.3**	**+1.0**
VLI	**Veliai**	**1.66**	**133**	*e*Pb	**Pb**	**01 34 40.3**	**+1.0**
THL	**Klokotos Trika**	**1.75**	**15**	*e*PG	**Pg**	**01 34 40.8**	**-0.8**
THL	**Klokotos Trika**	**1.75**	**15**	*e*Pg	**Pg**	**01 34 40.8**	**-0.8**

*NIED **20** 01:36:00, 33°.50N×141°.00E, h41km, Mw3.7 Best double couple: M0:3.44000×10^14 NP1:φs=48.00000°, δ77.00000°, λ125.00000°. NP2:φs=155.00000°, δ37.00000°, λ21.00000°.*
*ISCJB **20** 01:36:15.3±0.8, 33°.42N±0°.04×141°.05E±0°.08, h56km±7km, mb3.8/12, Error ellipse: s-maj=10.6km s-min=6.8km az=173.9*
*JMA **20** 01:36:15.9±0.2, 33°.49N×141°.04E, h53km, M3.7*
*IDC **20** 01:36:17.6±1.9, 33°.37N×140°.95E, h58km±17km, mb3.5/11, mb1 3.8/13, mb1mx3.7/24, mbtmp3.6/13, Error ellipse: s-maj=21.9km s-min=11.4km az=81.0*
*NEIC **20** 01:36:17.9±1.5, 33°.39N×140°.90E, h61km±12km, mb4.0/1, Error ellipse: s-maj=18.0km s-min=11.7km az=79.0*
ISC 20 01:36:16.4±0.8, 33°.41N±0°.04×141°.05E±0°.07, h47km±8km, n32, σ0§68/39, mb3.8/12, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.07**	**254**	P	**Pn**	**01 36 35.3**	**+0.3**
JHJ2				S	**Sn**	**01 36 49.4**	**+0.6**
JHJ	**Hachijo jima 2**	**1.10**	**255**	P	**Pn**	**01 36 35.5**	**+0.1**
	448nm,0.3s,baz=77,slow=23,SNR=115						
JHJ				S	**Sn**	**01 36 48.9**	**-0.5**
	589nm,0.3s,baz=71,slow=22,SNR=40						
BSO1	**Boso 1**	**1.24**	**357**	P	**Pn**	**01 36 36.2**	**-1.1**
JMY	**Miyakejima3**	**1.44**	**298**	P	**Pn**	**01 36 39.8**	**-0.2**
BSO3	**Boso 3**	**1.46**	**342**	P	**Pn**	**01 36 39.4**	**-0.9**
BSO4	**Boso 4**	**1.68**	**340**	P	**Pn**	**01 36 43.4**	**+0.1**
JKO	**Kozu shima**	**1.77**	**296**	P	**Pn**	**01 36 44.1**	**-0.4**
JKO				S	**Sn**	**01 37 05.7**	**-0.1**
JIM2	**Oshima 3**	**1.87**	**315**	P	**Pn**	**01 36 45.1**	**-0.8**
JIM2				S	**Sn**	**01 37 07.3**	**-1.0**
JIZS	**Izushimoda**	**2.22**	**306**	P	**Pn**	**01 36 50.8**	**0.0**
JIZS				S	**Sn**	**01 37 16.9**	**-0.1**
JOD2	**Odawara 2**	**2.46**	**319**	P	**Pn**	**01 36 53.4**	**-0.6**
TK04	**Tokai 4**	**2.81**	**291**	P	**Pn**	**01 36 59.8**	**+1.0**
SHZ3	**Shizuoka 3**	**2.87**	**306**	P	**Pn**	**01 37 00.6**	**+0.9**
JYN	**Shimob**	**2.93**	**316**	P	**Pn**	**01 37 01.2**	**+0.7**
JRY	**Ryogami san**	**3.14**	**326**	P	**Pn**	**01 37 03.3**	**-0.1**
JRY				*e*S	**Sn**	**01 37 38.5**	**-1.1**
MJAR	**Matsushiro Arr**	**3.90**	**324**	P	**Pn**	**01 37 14.9**	**+1.2**
	7.7nm,0.3s,baz=154,slow=12,SNR=31						
MJAR				S	**Sn**	**01 37 59.2**	**+1.0**
	4.9nm,0.3s,baz=143,slow=28,SNR=6.1						
MAJO	**Matsushiro**	**3.90**	**324**	*e*Pn	**Pn**	**01 37 14.1**	**+0.4**
MAT	**Matsushiro**	**3.90**	**324**	P	**Pn**	**01 37 14.8**	**+1.1**
MAT				S	**Sn**	**01 37 59.2**	**+1.0**
CBIJ	**Chichi jima**	**6.37**	**171**	P	**Pn**	**01 37 47.2**	**-0.5**
	10nm,0.3s,baz=285,slow=16,SNR=9.6						
ZALV	**Zalesovo Beam**	**44.20**	**315**	P	**P**	**01 44 20.0**	**-0.5**
	0.4nm,0.3s,mb3.6,baz=106,slow=8.8,SNR=2.9						
MKAR	**Makanchi Array**	**45.87**	**305**	P	**P**	**01 44 33.4**	**-0.5**
	0.4nm,0.5s,mb3.6,baz=93,slow=12,SNR=4.1						
ILAR	**Eielson Array**	**52.73**	**31**	P	**P**	**01 45 26.1**	**+0.1**
	0.4nm,0.8s,mb3.4,baz=256,slow=6.6,SNR=5.2						
WRA	**Warramunga Arr**	**53.44**	**188**	P	**P**	**01 45 31.3**	**-0.4**
	0.6nm,0.3s,mb4.0,baz=6.4,slow=7.6,SNR=21						
WRA	**Warramunga Arr**	**53.44**	**188**	P	**P**	**01 45 31.3**	**-0.4**
ASAR	**Alice Springs**	**57.16**	**188**	P	**P**	**01 45 58.5**	**+0.1**
	0.2nm,0.3s,mb3.6,baz=3.1,slow=7.2,SNR=5.3						
ABKAR	**Akbulak array**	**60.08**	**312**	*e*P	**P**	**01 46 17.5**	**-1.0**
	0.5nm,0.4s,mb3.9						
ARCES	**ARCESS Array B**	**67.28**	**340**	P	**P**	**01 47 05.6**	**0.0**
	2.5nm,1.0s,mb4.2,baz=47,slow=7.9,SNR=4.2						
FINES	**FINESS Array B**	**71.88**	**333**	P	**P**	**01 47 34.2**	**+0.1**
	0.9nm,0.7s,mb3.8,baz=69,slow=6.3,SNR=5.5						
AKASG	**Malin Array Be**	**76.98**	**323**	P	**P**	**01 48 03.6**	**-0.3**
	0.7nm,0.4s,mb4.0,baz=47,slow=6.5,SNR=3.7						
NOA	**NORSAR Array B**	**77.41**	**337**	P	**P**	**01 48 06.0**	**-0.2**
	1.8nm,1.1s,mb3.9,baz=46,slow=4.5,SNR=3.1						
NVAR	**Mina Array Bea**	**77.42**	**52**	P	**P**	**01 48 07.5**	**+0.8**
	0.3nm,0.3s,mb3.7,baz=309,slow=5.7,SNR=2.9						
TXAR	**Lajitas Array**	**92.57**	**52**	P	**P**	**01 49 24.4**	**+1.3**
	0.3nm,0.9s,mb3.7,baz=320,slow=4.0,SNR=3.6						
LPAZ	**La Paz**	**148.66**	**64**	PKPbc	PKPbc	01 55 59.3	+0.4
	0.7nm,0.5s,baz=320,slow=4.4,SNR=3.5						

IDC 20 01:36:25.6±50.0, 16°.53S×173°.61W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/17, mbtmp4.1/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=958.6km s-min=167.4km az=80.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.15**	**34**	LR	LR	01 37 56.5	
	comp=Z,376nm,21.9s,baz=300,slow=29						
STKA	**Stephens Creek**	**43.30**	**241**	P	P	01 44 29.8	+0.4
	1.8nm,0.7s,baz=85,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**49.40**	**258**	P	P	01 45 17.2	-0.2
	0.9nm,0.4s,baz=96,slow=7.0,SNR=46						
ASAR	**Alice Springs**	**49.57**	**253**	P	P	01 45 18.5	-0.3
	2.2nm,0.6s,baz=91,slow=7.8,SNR=25						

IDC 20 01:44:26.2±14.0, 1°.47S×127°.20E, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.6/18, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=223.8km s-min=145.3km az=146.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.64**	**160**	P	Pn	01 48 57.3	-0.6
	0.3nm,0.3s,baz=338,slow=11,SNR=19						
ASAR	**Alice Springs**	**23.00**	**164**	P	P	01 49 32.4	-0.4
	0.7nm,0.4s,baz=346,slow=12,SNR=11						
STKA	**Stephens Creek**	**33.15**	**157**	P	P	01 51 04.5	0.0
	3.9nm,1.1s,baz=326,slow=7.3,SNR=2.6						

IDC 20 02:06:18.9±3.1, 5°.51S×154°.51E, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.8/16, mbtmp4.0/3, Error ellipse: s-maj=127.4km s-min=46.6km az=127.0, Bougainville - Solomon Islands region

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

APG Lg 02 26 43.4
comp=Z,56nm,0.3s,baz=65,slow=14,SNR=5.4
APG El Apazote 1.92 13 Pg **Pg 02 26 25.0 -4.2**
APG Lg 02 26 43.4
SNVI San Vicente 2.06 76 *eP* **Pn 02 26 27.5 +0.5**
MRL Marmol 2.26 31 *eP* **Pn 02 26 31.4 +1.7**
VSM San Miguel 2.57 83 *eP* **Pn 02 26 34.4 +0.3**
BLLM Bellamira 2.61 83 *eP* **Pn 02 26 34.8 +0.3**
CAHU Cacacuatique 2.69 76 *eP* **Pn 02 26 36.0 +0.4**
CNCH Conchagua 2.99 87 *eP* **Pn 02 26 39.9 +0.1**
CCIG Comitan 3.36 339 *eP* **Pn 02 26 40.7 -4.2**
CCIG *i* S **Sn 02 27 24.9 +0.2**
TGUH Tegucigalpa,Un 3.65 75⇑ *ePn* **Pn 02 26 48.2 -0.6**
CMIG Matias Romero 5.51 316 Pn **Pn 02 27 15.7 +1.3**
comp=Z,2.8nm,0.3s,baz=127,slow=8.9,SNR=38
HUIG Huatulco 5.69 298 *i* P **Pn 02 27 13.9 -3.0**
HUIG *i* S **Sb 02 28 34.1 -5.9**
JTS JuntasAbangare 6.47 115 Pn **Pn 02 27 28.5 +0.9**
comp=Z,1.6nm,0.3s,baz=298,slow=23,SNR=9.2
JTS LR LR 02 30 02.1
comp=Z,555nm,21.8s,baz=306,slow=40
JTS JuntasAbangare 6.47 115 *ePn* **Pn 02 27 29.3 +1.7**
VHO Vista Hermosa 6.87 306 *i* P **Pn 02 27 34.0 +0.9**
VHO *i* S **Sn 02 28 58.2 +7.0**
TEIG Tepich 7.50 19 Pn **Pn 02 27 43.0 +1.3**
comp=Z,5.9nm,0.3s,baz=189,slow=6.9,SNR=55
TEIG Tepich 7.50 19 *ePn* **Pn 02 27 43.0 +1.3**
PNIG Pinotepa 7.71 296 *i* P **Pn 02 27 43.7 -0.9**
ROSC El Rosal 18.30 115 P **Pn 02 30 08.9 +2.5**
comp=Z,0.7nm,0.3s,baz=95,slow=21,SNR=8.9
ROSC El Rosal 18.30 115 *eP* **Pn 02 30 09.9 +3.5**
JCT Junction City 19.13 336 *eP* **Pn 02 30 17.2 +0.8**
comp=Z,7.7nm,0.8s
628A Black Gap, Mar 19.72 328 ⇓P **Pn 02 30 23.4 -0.1**
baz=20,SNR=12
627A Terlingua Ranc 19.96 326 ⇓P **Pn 02 30 26.1 -0.2**
baz=20
TXAR Lajitas Array 20.02 326 P **P 02 30 25.7 +0.4**
comp=Z,3.1nm,0.7s,baz=151,slow=12,SNR=29
TXAR PcP PcP 02 34 43.2 +1.9
comp=Z,0.8nm,0.9s,baz=176,slow=3.3,SNR=4.7
TXAR LR LR 02 39 43.5
comp=Z,74nm,18.1s,MS3.1,baz=185,slow=41
TXAR Lajitas Array 20.02 326 P **P 02 30 25.7 +0.4**
TXAR PcP PcP 02 34 43.2 +1.9
TXAR LR LR 02 39 43.5
LRAL Lakeview Retre 20.14 10 *eP* **P 02 30 25.1 -1.4**
comp=Z,14nm,1.0s
528A Cox Ranch, San 20.21 329 ⇓P **P 02 30 28.3 +0.9**
baz=20,SNR=11
SDV Santo Domingo 20.33 100 *eP* **P 02 30 26.7 -2.1**
comp=Z,14nm,0.9s
626A Big Bend Ranch 20.44 325 P **P 02 30 30.6 +0.8**
baz=20,SNR=19
428A Kincaid Ranch, 20.62 330 ⇓P **P 02 30 33.1 +1.3**
baz=21,SNR=13
527A Woodward Ranch 20.62 327 ⇑P **P 02 30 33.0 +1.2**
baz=21,SNR=24
526A Mary Lane Ranc 20.81 326 ⇑P **P 02 30 35.1 +1.3**
baz=21,SNR=21
427A Hayter Ranch, 21.08 329 ⇓P **P 02 30 36.7 0.0**
baz=21,SNR=7.4
328A Wristen Ranch, 21.22 331 ⇑P **P 02 30 38.4 +0.1**
baz=21,SNR=34
426A McDonald Obser 21.25 327 ⇑P **P 02 30 39.2 +0.5**
baz=21,SNR=44
GOGA Godfrey 21.30 17 *eP* **P 02 30 35.3 -3.9**
comp=Z,21nm,0.9s,mb4.5
MIAR Mount Ida 21.46 354 *eP* **P 02 30 38.0 -2.9**
comp=Z,24nm,1.4s,mb4.3
UALR University of 21.59 357 *eP* **P 02 30 40.6 -1.6**
comp=Z,14nm,0.9s,mb4.4
326A Caldwell Ranch 21.74 328 ⇑P **P 02 30 43.9 0.0**
baz=22,SNR=50
425A Indio Mountain 21.86 326 ⇓P **P 02 30 45.1 0.0**
baz=22,SNR=24
227A Bennet, Jal 21.97 331 ⇓P **P 02 30 46.1 -0.3**
baz=22,SNR=8.6
325A Bean Ranch, Si 22.30 327 P **P 02 30 49.2 -0.7**
baz=22,SNR=21
226A Malaga, Loving 22.41 329 ⇓P **P 02 30 50.9 -0.1**
baz=22
SWET Sewanee 22.45 11 *eP* **P 02 30 49.9 -1.5**
324A Moseley Ranch, 22.64 326 ⇓P **P 02 30 52.5 -0.9**
baz=23,SNR=27
GDL2 Guadalupe Moun 22.65 329 *eP* **P 02 30 53.0 -0.5**
WMOK Wichita Mounta 22.67 343 *eP* **P 02 30 49.6 -4.2**
comp=Z,6.6nm,1.0s,mb4.0
MNTX Cornudas Mount 22.78 327 P **P 02 30 53.9 -1.1**
baz=23,SNR=26
MNTX Cornudas Mount 22.78 327 *eP* **P 02 30 53.5 -1.5**
comp=Z,37nm,1.5s,mb4.6
225A Deer Hill, Car 22.81 328 ⇓P **P 02 30 55.0 -0.3**
baz=23,SNR=34
224A Cornudas Mount 23.15 327 ⇑P **P 02 30 58.0 -0.8**
baz=23,SNR=19
125A Gardner Draw, 23.16 329 ⇑P **P 02 30 57.8 -1.2**
baz=23,SNR=8.5
TKL Tuckaleechee C 23.34 15 P **P 02 30 58.7 -2.1**
comp=Z,12nm,0.7s,mb4.4,baz=189,slow=14,SNR=16
TKL LR LR 02 41 07.6
comp=Z,626nm,18.4s,MS4.1,baz=243,slow=40
TKL Tuckaleechee C 23.34 15 *eP* **P 02 30 58.8 -2.0**
Z26A Caprock 23.34 331 ⇓P **P 02 30 59.1 -1.7**
baz=23,SNR=6.2
124A Stringfield Ra 23.60 328 ⇓P **P 02 31 03.0 -0.5**
baz=24,SNR=26
ATAH Atahualpa 23.65 148 P **P 02 31 06.8 +2.6**
comp=Z,5.1nm,0.6s,mb4.1,baz=316,slow=18,SNR=2.4
ATAH LR LR 02 39 15.5
comp=Z,160nm,18.2s,MS3.5,baz=142,slow=34
Z25A Roswell 23.70 330 ⇓P **P 02 31 03.3 -1.1**
baz=24,SNR=8.0
AMTX Amarillo 23.76 338 *eP* **P 02 31 04.0 -1.0**
comp=Z,8.2nm,0.6s,mb4.3
Z24A Sheeppen Canyo 24.05 329 ⇓P **P 02 31 07.7 0.0**
baz=24,SNR=8.4
Y25A Mesa, Roswell 24.21 331 ⇑P **P 02 31 08.6 -0.4**
baz=24,SNR=9.5
320A Kipp Ranch, An 24.32 321 ⇑P **P 02 31 11.2 +1.0**
baz=24
221A Mesquite Ranch 24.35 323 ⇓P **P 02 31 13.1 +2.7**
baz=24,SNR=16
Z23A Rita Site, Whi 24.44 328 ⇓P **P 02 31 11.2 0.0**
baz=24,SNR=7.2
W27A Bowe Ranch, En 24.46 335 ⇓P **P 02 31 11.1 -0.2**
baz=24,SNR=5.4
SIUC Southern Illin 24.54 3 *eP* **P 02 31 09.3 -2.6**
comp=Z,19nm,1.0s,mb4.6
X25A Clemmons Ranch 24.69 332 ⇑P **P 02 31 13.2 -0.3**
baz=25
220A Playas Peak, P 24.72 322 ⇓P **P 02 31 14.7 +0.9**
baz=25,SNR=12
121A Cookes Peak, D 24.74 324 ⇓P **P 02 31 15.1 +1.1**
baz=25,SNR=7.9
319A Douglas 24.82 320 ⇓P **P 02 31 15.5 +0.9**
baz=25,SNR=5.5
Z22A Elephant Butte 24.83 326 ⇑P **P 02 31 15.1 +0.4**
baz=25
Y23A Lovelace Mesa, 24.88 329 ⇑P **P 02 31 15.1 -0.1**
baz=25,SNR=14
W25A X Bar L Ranch, 25.18 333 ⇑P **P 02 31 17.9 0.0**
baz=25
219A White Tail Can 25.23 321 ⇓P **P 02 31 19.4 +1.0**
baz=25,SNR=12
120A U Bar Ranch, L 25.24 323 ⇑P **P 02 31 19.6 +1.1**
baz=25,SNR=7.8
Z21A St. Cloud Mine 25.25 325 ⇓P **P 02 31 20.1 +1.5**
baz=25,SNR=7.5
318A Bisbee 25.31 319 P **P 02 31 20.0 +0.9**
baz=25,SNR=16
WCI Wyandotte Cave 25.34 8 *eP* **P 02 31 15.1 -4.2**
comp=Z,18nm,0.9s,mb4.6
BNM Barren Site 25.34 328 *eP* **P 02 31 19.4 0.0**
comp=Z,7.0nm,0.9s,mb4.2
Y22A Socorro 25.35 327 ⇑P **P 02 31 20.0 +0.5**
baz=25,SNR=10
V26A Tequesquite Ra 25.39 335 ⇑P **P 02 31 20.0 +0.3**
baz=25
LPM Los Pinos Moun 25.47 329 *eP* **P 02 31 20.2 -0.3**
comp=Z,3.2nm,0.9s,mb3.9
W24A Lazy 6 Ranch, 25.60 332 ⇓P **P 02 31 22.5 +0.8**
baz=26
Z20A Nine Sixteen R 25.63 324 ⇓P **P 02 31 23.8 +1.8**
baz=26,SNR=18
218A Dragoon 25.70 320 ⇓P **P 02 31 23.7 +1.0**
baz=26

Y21A Point of Rocks 25.78 327 ⇑P **P 02 31 24.6 +1.2**
baz=26,SNR=17
LAZ Ladron 25.80 328 *eP* **P 02 31 24.2 +0.6**
comp=Z,5.1nm,1.3s,mb3.9
U26A Atchley Ranch, 25.89 336 ⇑P **P 02 31 23.4 -0.9**
baz=26
ANMO Albuquerque 25.89 330 P **P 02 31 24.4 +0.1**
comp=Z,1.3nm,0.6s,mb3.6,baz=146,slow=11,SNR=6.7
ANMO PcP PcP 02 34 55.2 +1.9
comp=Z,1.0nm,0.8s,baz=63,slow=6.8,SNR=3.5
ANMO Albuquerque 25.89 330 *eP* **P 02 31 24.4 0.0**
comp=Z,1.6nm,0.7s,mb3.7
W23A Werner Place, 25.91 330 ⇓P **P 02 31 25.2 +0.6**
baz=26
V24A Rampart Ranch, 25.97 333 ⇓P **P 02 31 25.2 +0.2**
baz=26
217A Green Valley 26.06 319 ⇑P **P 02 31 27.0 +1.0**
baz=26
Y20A Horse Springs, 26.09 325 P **P 02 31 27.6 +1.4**
baz=26,SNR=23
118A Homack Ranch, 26.11 321 ⇓P **P 02 31 27.3 +1.0**
baz=26
X21A Alamocita Cree 26.18 327 ⇓P **P 02 31 28.0 +1.1**
baz=26,SNR=20
TUC Tucson 26.39 320 *eP* **P 02 31 29.2 +0.3**
comp=Z,4.9nm,1.0s,mb4.0
117A Oracle 26.54 320 ⇓P **P 02 31 31.2 +0.9**
baz=27
X20A Quemado 26.63 326 ⇑P **P 02 31 32.2 +1.2**
baz=27,SNR=6.9
U23A El Rito 26.88 332 ⇓P **P 02 31 33.7 +0.4**
baz=27,SNR=6.5
Y18A Canyon Day Jun 26.94 323 ⇓P **P 02 31 35.2 +1.3**
baz=27,SNR=6.2
X19A St. Johns 26.98 325 ⇓P **P 02 31 36.0 +1.7**
baz=27,SNR=5.5
W20A Ramah 27.07 327 ⇓P **P 02 31 35.4 +0.3**
baz=27,SNR=5.9
ACSO Alum Creek Sta 27.89 13 *eP* **P 02 31 39.7 -2.5**
comp=Z,19nm,1.0s,mb4.7
X16A Lo Mia Camp, P 28.22 322 ⇑P **P 02 31 46.3 +0.9**
baz=28
S22A 4UR Ranch, Cre 28.34 333 ⇓P **P 02 31 46.5 +0.2**
baz=28
T19A Beclabito 28.65 329 ⇓P **P 02 31 49.4 +0.3**
baz=29
V17A Tonalea, Kykot 28.70 325 ⇓P **P 02 31 50.5 +1.0**
baz=29,SNR=9.4
T18A Mexican Hat 29.32 328 ⇑P **P 02 31 55.4 +0.3**
baz=29
PV01 Paradox Valley 29.45 331 *eP* **P 02 31 58.2 +2.0**
T17A Navajo Res., N 29.71 327 ⇑P **P 02 31 59.0 +0.5**
baz=30,SNR=6.3
S18A Hurst Farm, Bl 29.81 329 ⇑P **P 02 31 59.5 +0.2**
baz=30,SNR=5.8
V14A Boquillas Ranc 30.05 322 ⇓P **P 02 32 02.7 +1.2**
baz=30,SNR=6.1
U15A North Rim 30.12 324 ⇓P **P 02 32 03.6 +1.4**
baz=30,SNR=6.5
S17A Black Ridge (B 30.18 327 ⇓P **P 02 32 03.0 +0.3**
baz=30
O22A Kremmling 30.25 336 ⇑P **P 02 32 02.7 -0.5**
baz=30
BC3 Big Chuckawall 30.28 317 ⇑P **P 02 32 04.5 +0.9**
baz=30
T15A Red Dirt Ranch 30.59 325 ⇑P **P 02 32 07.6 +1.3**
baz=31
U14A Mt Trumbull 30.63 323 ⇑P **P 02 32 07.7 +1.0**
baz=31
S16A Weppner Ranch, 30.67 327 ⇑P **P 02 32 07.6 +0.6**
baz=31,SNR=5.9
R17A Hanksville Air 30.73 329 ⇑P **P 02 32 07.6 +0.1**
baz=31
LDFC Landfair 30.93 319 *eP* **P 02 32 10.1 +0.8**
comp=Z,12nm,1.0s,mb4.7
T14A Hurricane 31.02 324 ⇑P **P 02 32 10.9 +0.8**
baz=31,SNR=6.2
R16A Teasdale 31.02 328 ⇓P **P 02 32 10.6 +0.4**
baz=31,SNR=8.0
S15A Panguitch 31.05 326 ⇓P **P 02 32 11.1 +0.8**
baz=31,SNR=5.1
U13A Pakoon Wash 31.09 322 ⇓P **P 02 32 12.1 +1.4**
baz=31,SNR=11
V12A Nelson 31.18 320 ⇓P **P 02 32 12.0 +0.5**
baz=31,SNR=5.7
N20A Spence Gulch, 31.52 334 ⇑P **P 02 32 14.0 -0.4**
baz=32
CCUT Cedar City 31.52 324 *eP* **P 02 32 16.3 +1.8**
comp=Z,5.2nm,1.0s,mb4.3
MSU Marysvale 31.56 327 *eP* **P 02 32 14.8 0.0**
comp=Z,2.7nm,1.0s,mb4.0
S13A Holt Ranch, En 31.82 324 ⇑P **P 02 32 18.8 +1.6**
baz=32,SNR=14
Q15A Fillmore 32.03 327 ⇓P **P 02 32 20.0 +1.0**
baz=32
O17A Robinson Place 32.11 331 ⇑P **P 02 32 20.3 +0.6**
baz=32
N18A Larsen Ranch, 32.24 333 ⇑P **P 02 32 21.1 +0.3**
baz=32
R13A O'Grain Ranch, 32.30 325 ⇑P **P 02 32 22.5 +1.2**
baz=32
Q14A Sevier Lake (B 32.49 326 ⇓P **P 02 32 24.1 +1.1**
baz=32,SNR=6.4
DAU Daniels Canyon 32.53 330 *eP* **P 02 32 23.8 +0.4**
P14A Drum Mountains 32.82 327 ⇓P **P 02 32 26.3 +0.4**
baz=33,SNR=7.0
COWI Conover 32.90 2 *eP* **P 02 32 22.7 -3.8**
comp=Z,15nm,0.8s,mb5.0
MPMC Manual Prospec 33.06 318 ⇑P **P 02 32 28.8 +0.7**
baz=33,SNR=7.5
R11A Troy Canyon, C 33.34 323 ⇓P **P 02 32 32.1 +1.6**
baz=33,SNR=9.4
ISA Isabella 33.47 317 *eP* **P 02 32 33.1 +1.4**
comp=Z,7.0nm,1.3s,mb4.4
HWUT Hardware Ranch 33.61 331 *eP* **P 02 32 32.0 -0.8**
comp=Z,4.9nm,0.9s,mb4.4
PDAR Pinedale Array 33.66 335 P **P 02 32 32.4 -0.8**
comp=Z,0.7nm,0.7s,mb3.7,baz=131,slow=6.1,SNR=5.9
PDAR PcP PcP 02 35 12.9 -0.2
comp=Z,0.7nm,0.8s,baz=108,slow=4.8,SNR=5.1
L17A Cokeville 33.68 333 ⇑P **P 02 32 33.1 -0.3**
baz=34
K18A Toltan Ranch, 33.76 334 ⇓P **P 02 32 34.2 +0.2**
baz=34,SNR=5.2
L16A Fish Haven 33.87 332 ⇑P **P 02 32 34.9 -0.1**
baz=34,SNR=7.8
VES Vestal, Richgr 33.98 317 ⇓P **P 02 32 37.4 +1.3**
baz=34,SNR=5.2
I20A Worland 34.09 338 ⇓P **P 02 32 36.8 -0.1**
baz=34
K17A Gardner Place, 34.23 333 ⇑P **P 02 32 38.1 0.0**
baz=34
L15A Malad City 34.30 331 ⇓P **P 02 32 38.5 -0.3**
baz=34,SNR=5.7
I19A Meeteetse 34.49 337 ⇑P **P 02 32 40.2 -0.3**
baz=34
I18A Diamond G Ranc 34.54 335 ⇑P **P 02 32 40.1 -0.7**
baz=34
J17A Brown Place, J 34.63 334 ⇑P **P 02 32 41.4 -0.2**
baz=35,SNR=9.1
REDW Red Top Meadow 34.69 334 *eP* **P 02 32 42.0 -0.2**
comp=Z,10nm,0.8s,mb4.8
SNOW Snow King Moun 34.73 334 *eP* **P 02 32 43.0 +0.5**
comp=Z,11nm,0.7s,mb4.9
L14A Malta 34.73 330 ⇓P **P 02 32 42.4 -0.2**
baz=35,SNR=8.4
LOHW Long Hollow 34.79 335 *eP* **P 02 32 42.5 -0.5**
comp=Z,3.8nm,0.8s,mb4.4
TPAW Teton Pass 34.84 334 *eP* **P 02 32 43.2 -0.2**
comp=Z,22nm,1.6s,mb4.8
RRI2 Red Ridge 34.88 334 *eP* **P 02 32 44.0 +0.2**
comp=Z,19nm,1.7s,mb4.8
MOOW Moose Ponds 34.96 335 *eP* **P 02 32 44.4 -0.1**
comp=Z,33nm,2.9s,mb4.8
NVAR Mina Array Bea 35.02 321 P **P 02 32 46.5 +1.4**
comp=Z,6.6nm,0.7s,mb4.7,baz=133,slow=8.2,SNR=38
NVAR PcP PcP 02 35 19.6 +2.5
comp=Z,1.5nm,0.7s,baz=122,slow=4.6,SNR=5.5
K14A Jones Ranch, D 35.09 331 ⇑P **P 02 32 44.9 -0.8**
baz=35,SNR=10.0
IMW Indian Meadow 35.16 335 *eP* **P 02 32 46.1 -0.1**
comp=Z,16nm,1.9s,mb4.6
H18A Shoshone NF, C 35.29 337 ⇓P **P 02 32 46.8 -0.5**
baz=35,SNR=7.5
AGMN Agassiz Nation 35.31 354 *eP* **P 02 32 44.3 -3.1**
comp=Z,9.9nm,0.6s,mb4.9
J15A Blackfoot 35.41 333 ⇓P **P 02 32 48.1 -0.3**
baz=35

RLMT Red Lodge 35.52 337 *eP* **P 02 32 47.6 -1.6**
comp=Z,2.5nm,0.8s,mb4.2
G18A Lazy EL Ranch, 35.80 337 ⇑P **P 02 32 50.5 -1.1**
baz=36
J14A Carey 35.85 331 ⇓P **P 02 32 51.8 -0.3**
baz=36
CMB Columbia Colle 36.09 319 *eP* **P 02 32 54.9 +0.6**
comp=Z,6.1nm,1.0s,mb4.5
I14A Mackay 36.29 332 ⇑P **P 02 32 56.2 +0.3**
baz=36,SNR=5.7
F18A Big Timber 36.35 338 ⇑P **P 02 32 54.9 -1.4**
baz=36
HLID Hailey 36.46 331 ⇓P **P 02 32 57.0 -0.3**
baz=36,SNR=5.1
HLID Hailey 36.46 331 *eP* **P 02 32 57.1 -0.2**
comp=Z,7.9nm,1.4s,mb4.5
H15A Lima 36.47 334 ⇑P **P 02 32 57.1 -0.3**
baz=36
E19A Rath Farm, Rou 36.49 339 ⇓P **P 02 32 56.7 -0.9**
baz=36
I13A Wildhorse Cree 36.58 331 ⇑P **P 02 32 58.9 +0.5**
baz=37,SNR=9.8
F17A Fitzpatrick Pl 36.71 337 ⇑P **P 02 32 59.2 -0.2**
baz=37
MCMT McKenzie Canyo 36.73 334 *eP* **P 02 33 00.2 +0.6**
comp=Z,4.6nm,0.8s,mb4.4
H14A Leadore 36.79 333 ⇑P **P 02 33 00.1 +0.1**
baz=37
G15A Dillon 36.84 334 ⇓P **P 02 33 00.3 -0.3**
baz=37
BOZ Bozeman (W) 36.88 336 *eP* **P 02 33 00.4 -0.4**
comp=Z,32nm,2.8s,mb4.7
LPAZ La Paz 36.89 142 P **P 02 33 01.9 +0.7**
comp=Z,1.7nm,1.0s,mb3.8,baz=328,slow=9.5,SNR=2.9
LPAZ La Paz 36.89 142 P **P 02 33 01.9 +0.7**
I12A Atlanta 36.97 330 ⇓P **P 02 33 01.7 0.0**
baz=37,SNR=11
MFID Camas Ranch 37.03 329 ⇓P **P 02 33 01.9 -0.3**
baz=37
DLMT Dillon 37.04 334 *eP* **P 02 33 01.2 -1.1**
comp=Z,11nm,1.4s,mb4.5
H13A Challis 37.15 332 ⇓P **P 02 33 03.1 -0.1**
baz=37,SNR=11
ULM Lac du Bonnet 37.24 355 P **P 02 33 00.2 -3.7**
comp=Z,12nm,0.7s,mb4.8,baz=164,slow=8.7,SNR=12
ULM LR LR 02 51 36.8
comp=Z,229nm,18.2s,MS4.0,baz=122,slow=42
ULM Lac du Bonnet 37.24 355 *eP* **P 02 32 59.5 -4.3**
comp=Z,31nm,1.3s,mb5.0
LRM Limekiln Ridge 37.35 335 *eP* **P 02 33 04.5 -0.4**
F15A Butte 37.38 335 ⇑P **P 02 33 05.0 -0.2**
baz=37
H12A Diamond D Ranc 37.41 331 ⇑P **P 02 33 05.3 -0.1**
baz=37,SNR=8.2
G13A Cobalt 37.54 333 ⇓P **P 02 33 05.8 -0.7**
baz=38
OHCM Honcut 37.55 320 *eP* **P 02 33 07.5 +0.9**
WVOR Wild Horse Val 37.81 326 *eP* **P 02 33 08.8 -0.1**
comp=Z,8.2nm,1.1s,mb4.4
G12A Big Creek, Yel 38.07 332 ⇓P **P 02 33 10.5 -0.5**
baz=38
F13A Darby 38.13 333 ⇓P **P 02 33 10.5 -0.9**
baz=38,SNR=7.1
E14A Clinton 38.26 335 ⇑P **P 02 33 11.9 -0.7**
baz=38
J08A Circle Bar Ran 38.35 327 ⇑P **P 02 33 13.6 +0.2**
baz=38,SNR=6.6
D15A Lincoln 38.37 336 ⇓P **P 02 33 12.7 -0.8**
baz=38
MOD Modoc 38.40 324 *eP* **P 02 33 13.8 0.0**
comp=Z,1.3nm,0.9s,mb3.7
F12A Elk City 38.51 332 ⇓P **P 02 33 13.9 -0.8**
baz=38,SNR=19
E13A Victor 38.58 334 ⇑P **P 02 33 14.4 -0.8**
baz=38,SNR=9.5
D14A Greenough 38.80 335 ⇓P **P 02 33 15.6 -1.5**
baz=39
C15A Salmond Ranch, 39.01 337 ⇑P **P 02 33 18.0 -0.8**
baz=39
E12A Beaver Dam Sad 39.16 333 P **P 02 33 18.8 -1.3**
baz=39,SNR=8.2
D13A Huson 39.20 334 ⇓P **P 02 33 19.7 -0.8**
baz=39
I07A Izee 39.39 327 ⇑P **P 02 33 21.4 -0.7**
baz=39,SNR=7.7
D12A Red Ives Fores 39.55 334 ⇓P **P 02 33 22.2 -1.2**
baz=40
F10A Beach Ranch, E 39.59 331 ⇑P **P 02 33 22.7 -1.0**
baz=40,SNR=7.8
JTMT Jette 39.65 335 *eP* **P 02 33 23.0 -1.2**
comp=Z,2.4nm,0.8s,mb4.0
C13A Hot Springs 39.72 335 ⇑P **P 02 33 23.7 -1.0**
baz=40
A14A Double T Ranch 40.30 337 ⇑P **P 02 33 28.4 -1.2**
baz=40,SNR=6.6
C11A Tepee Creek (N 40.55 334 P **P 02 33 30.8 -0.9**
baz=40,SNR=8.7
A13A Flathead Natio 40.65 336 ⇑P **P 02 33 31.9 -0.6**
baz=41
D08A Wollman Farm, 41.18 331 ⇓P **P 02 33 35.8 -1.0**
baz=41
H04A Detroit Lake 41.23 326 P **P 02 33 36.7 -0.6**
baz=41,SNR=6.1
E07A Sunnyside 41.28 330 ⇓P **P 02 33 36.9 -0.8**
baz=41
OD2 Odessa Site #2 41.32 331 *eP* **P 02 33 37.1 -0.9**
HOOD Mount Hood Mea 41.36 327 *eP* **P 02 33 36.3 -2.1**
C09A Chrisman Ranch 41.42 332 ⇑P **P 02 33 38.1 -0.7**
baz=41
LON Longmire 42.39 328 *eP* **P 02 33 46.3 -0.5**
comp=Z,5.5nm,0.9s,mb4.2
D05A Enumclaw 42.78 329 ⇓P **P 02 33 49.2 -0.7**
baz=43
E03A Lebam 43.17 327 ⇓P **P 02 33 52.8 -0.3**
baz=43
JCW Jim Creek 43.43 330 *eP* **P 02 33 53.1 -2.1**
NLWA Neilton Lookou 43.87 328 *eP* **P 02 33 58.9 +0.1**
comp=Z,14nm,1.3s,mb4.5
SCHQ Schefferville 45.68 19 P **P 02 34 08.7 -4.4**
comp=Z,15nm,0.9s,mb4.9,baz=203,slow=3.0,SNR=9.3
SCHQ LR LR 02 54 19.6
comp=Z,386nm,18.5s,MS4.4,baz=140,slow=38
CFAA Coronel Fontan 49.50 154 P **P 02 34 43.1 +0.1**
comp=Z,0.5nm,0.9s,mb3.5,baz=328,slow=4.9,SNR=5.0
CPUP Villa Florida 51.03 140 LR LR 02 56 27.5
comp=Z,69nm,20.6s,MS3.7,baz=90,slow=36
YKA Yellowknife Ar 52.12 346 P **P 02 34 59.9 -2.5**
comp=Z,1.6nm,0.8s,mb4.0,baz=132,slow=6.6,SNR=3.5
YKA LR LR 02 58 43.8
comp=Z,11nm,19.8s,MS2.9,baz=20,slow=38
PLCA Paso Flores 56.80 162 P **P 02 35 36.5 -0.1**
comp=Z,1.3nm,0.9s,mb4.0,baz=318,slow=15,SNR=2.2
PLCA LR LR 02 54 45.2
comp=Z,174nm,19.1s,MS4.2,baz=320,slow=30
KDAK Kodiak Island 64.02 328 LR LR 03 07 14.1
comp=Z,87nm,18.9s,MS4.0,baz=207,slow=39
ILAR Eielson Array 64.06 337 P **P 02 36 23.4 -2.6**
comp=Z,4.0nm,1.0s,mb4.4,baz=136,slow=4.3,SNR=23
TRF Thorofare Moun 64.88 335 *eP* **P 02 36 30.0 -1.4**
comp=Z,4.2nm,0.8s,mb4.5
RSO Redoubt South 64.93 331 *eP* **P 02 36 30.7 -1.1**
comp=Z,14nm,0.7s,mb5.1
BPAW Bear Paw Mtn. 65.41 335 *eP* **P 02 36 32.1 -2.7**
comp=Z,3.8nm,0.8s,mb4.5
BORG Borgarnes 69.53 25 LR LR 03 10 47.5
comp=Z,144nm,18.9s,MS4.2,baz=32,slow=39
BBTS Babate 71.89 79 LR LR 03 02 21.7
comp=Z,260nm,21.8s,MS4.5,baz=103,slow=31
EKA Eskdalemuir Ar 78.05 36 P **P 02 37 45.9 -5.1**
comp=Z,1.6nm,0.8s,mb4.0,baz=245,slow=6.0,SNR=4.1
ESDC Sonseca Array 79.42 52 P **P 02 37 54.1 -4.8**
comp=Z,1.2nm,0.8s,mb3.9,baz=297,slow=6.5,SNR=6.3
TIC Toumodi 84.52 84 *eP* **P 02 38 24.4 -1.8**
comp=Z,105nm,1.8s
LIC Lamto 84.60 85 *eP* **P 02 38 24.8 -1.8**
comp=Z,63nm,1.4s,mb5.5
DBIC Dimbokro 84.67 84 P **P 02 38 25.4 -1.6**
comp=Z,5.6nm,0.6s,mb4.9,baz=280,slow=4.8,SNR=9.4
DBIC Dimbokro 84.67 84 P **P 02 38 25.4 -1.6**
KIC Kosan Boka 84.85 85 *eP* **P 02 38 26.2 -1.7**
comp=Z,23nm,0.7s,mb5.4
CN2 Changchun 114.36 332 *ePKP* PKiKP 02 44 28.9 -3.6
CN2 PP PP 02 45 30.3 +2.8
BJI Beijing 121.43 336 PKP PKPdf 02 44 43.3 -2.9
BJI SS SS 03 02 42.0 -8.3
BJI LR LR
comp=Z,100nm,33.4s
HHC Hu-ho-hao-te 122.41 340 *ePKP* PKPdf 02 44 41.5 -6.6

HHC			PKS		02 48 17.4	
HHC			SKS	SKSdf	02 51 42.4	-18
HHC			SS	SS	03 02 50.1	-13
HHC			AMB	AMB		
	comp=Z,86nm,11.5s					
HHC			LR	LR		
	comp=N,67nm,21.4s					
HHC			LR	LR		
	comp=E,110nm,20.8s					
HHC			LR	LR		
	comp=Z,82nm,21.1s					
LZH	**Lanzhou**	**129.11 345**	*e*PKP	PKPdf	02 44 55.0	-6.1
WRA	**Warramunga Arr**	**136.21 255**	PKP	PKPdf	02 45 14.8	0.0
	comp=Z,0.5nm,0.7s,baz=89,slow=2.9,SNR=6.1					
CMAR	**Chiang Mai Arr**	**147.15 343**	PKPbc	PKPbc	02 45 35.4	-1.1
	comp=Z,4.4nm,0.6s,baz=338,slow=3.8,SNR=16					

CASC 20 02:33:25.6±1.6, 13°.11N×90°.94W, h13km±9km, MD3.7, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.33**	**4**	*e*P	Pn	02 33 49.4	-0.5
JAT	**Jato**	**1.38**	**331**	*e*P	Pn	02 33 50.0	-0.5
FG6		**1.44**	**2**	*e*P	Pn	02 33 50.9	-0.6
FG6				*e*S	Sn	02 34 11.1	+0.9
SBLS	**San Blas**	**1.47**	**60**	*e*P	Pn	02 33 50.8	-1.0
RTR	**El Retiro**	**1.48**	**58**	*e*P	Pn	02 33 51.2	-0.7
RTR				*e*S	Sn	02 34 12.6	+1.5
RBDL	**Robledal**	**1.57**	**50⇑**	*e*P	Pn	02 33 52.6	-0.6
NBG	**Las Nubes**	**1.58**	**21**	*e*P	Pn	02 33 54.1	+0.9
TP2	**Tecpan 2**	**1.67**	**357**	*e*P	Pn	02 33 54.6	+0.1
TP2				*e*S	Sn	02 34 16.7	+1.0
LFRS	**El Faro**	**1.89**	**74**	*e*P	Pn	02 33 57.3	-0.3
MRL	**Marmol**	**2.29**	**32**	*e*P	Pn	02 34 04.5	+1.5

CSEM ***20*** *02:50:05.6±0.1, 36°.96N×4°.29W, h10km, ML1.3, Error ellipse: s-maj=1.8km s-min=1.2km az=6.0*

MDD 20 02:50:06.3±0.4, 36°.95N×4°.29W, h0km, mbLg1.4/18, 1D, Error ellipse: s-maj=3.5km s-min=2.8km az=168.0, PRXIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELOJ	**Sierra Loja**	**0.22**	**29**	⇓Pg	Pg	02 50 10.3	-0.2
	41nm,0.3s,SNR=18						
ELOJ				Lg		02 50 13.8	
	62nm,0.2s,SNR=5.9						
ELOJ	**Sierra Loja**	**0.22**	**29**	Pg	Pg	02 50 10.3	-0.3
	41nm,0.3s,SNR=11						
ELOJ				Lg		02 50 13.8	
	62nm,0.2s,SNR=5.9						
ERON	**Agron**	**0.39**	**80**	Pg	Pg	02 50 12.7	-1.1
	2.6nm,0.5s,SNR=7.9						
ERON				Lg		02 50 18.1	
	7.0nm,0.5s,SNR=7.9						
ERON	**Agron**	**0.39**	**80**	Pg	Pg	02 50 12.7	-1.1
	2.6nm,0.5s,SNR=7.9						
ERON				Lg		02 50 18.1	
	7.0nm,0.5s,SNR=7.9						
EMIJ	**Mijas**	**0.55**	**225**	Pg	Pg	02 50 16.6	-0.2
	0.7nm,0.6s,SNR=7.9						
EMIJ				Lg		02 50 23.8	
	10nm,2.2s,SNR=7.9						
EMIJ	**Mijas**	**0.55**	**225**	Pg	Pg	02 50 16.6	-0.2
	0.7nm,0.6s,SNR=7.9						
EMIJ				Lg		02 50 23.8	
	10nm,2.2s,SNR=7.9						
EGUA	**Guajares**	**0.59**	**101**	Pg	Pg	02 50 17.1	-0.5
	13nm,0.8s,SNR=7.9						
EGUA				Lg		02 50 25.0	
	11nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**0.59**	**101**	Pg	Pg	02 50 17.1	-0.5
	13nm,0.8s,SNR=7.9						
EGUA				Lg		02 50 25.0	
	11nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**0.61**	**2**	Pg	Pg	02 50 17.5	-0.5
	19nm,1.2s,SNR=7.9						
ELUQ				Lg		02 50 26.1	
	52nm,1.5s,SNR=7.9						
ELUQ	**Luque**	**0.61**	**2**	Pg	Pg	02 50 17.5	-0.4
	19nm,1.2s,SNR=7.9						
ELUQ				Lg		02 50 26.1	
	52nm,1.5s,SNR=7.9						
ECOG	**Cogollos-Vega**	**0.66**	**61**	Pg	Pg	02 50 19.1	+0.1
	2.1nm,0.6s,SNR=7.9						
ECOG				Lg		02 50 27.8	
	66nm,1.8s,SNR=7.9						
ECOG	**Cogollos-Vega**	**0.66**	**61**	Pg	Pg	02 50 19.1	+0.1
	2.1nm,0.6s,SNR=7.9						
ECOG				Lg		02 50 27.8	
	66nm,1.8s,SNR=7.9						
EQUE	**Quentar**	**0.72**	**69**	Pg	Pg	02 50 19.8	-0.3
	1.9nm,0.8s,SNR=7.9						
EQUE				Lg		02 50 29.7	
	5.4nm,1.9s,SNR=7.9						
EQUE	**Quentar**	**0.72**	**69**	Pg	Pg	02 50 19.8	-0.4
	1.9nm,0.8s,SNR=7.9						
EQUE				Lg		02 50 29.7	
	5.4nm,1.9s,SNR=7.9						
EBER	**Berja**	**1.12**	**92**	Pg	Pg	02 50 27.5	-0.3
	6.8nm,0.7s,SNR=7.9						
EBER				Lg		02 50 43.1	
	73nm,2.3s,SNR=7.9						
EBER	**Berja**	**1.12**	**92**	Pg	Pg	02 50 27.5	-0.3
	6.8nm,0.7s,SNR=7.9						
EBER				Lg		02 50 43.1	
	73nm,2.3s,SNR=7.9						
EADA	**Adamuz**	**1.23**	**349**	Pg	Pg	02 50 29.5	-0.5
	2.7nm,0.6s,SNR=7.9						
EADA				Lg		02 50 45.3	
	4.5nm,0.7s,SNR=4.8						
EADA	**Adamuz**	**1.23**	**349**	Pg	Pg	02 50 29.5	-0.5
	2.7nm,0.6s,SNR=7.9						
EADA				Lg		02 50 45.3	
	4.5nm,0.7s,SNR=4.8						
ESPR	**Espera**	**1.26**	**267**	Lg		02 50 46.4	
	35nm,2.8s,SNR=7.9						
ESPR	**Espera**	**1.26**	**267**	Lg		02 50 46.4	
	35nm,2.8s,SNR=7.9						
EBAN	**Banos Encina**	**1.27**	**18**	Pg	Pg	02 50 29.7	-1.0
	1.2nm,0.5s,SNR=7.9						
EBAN				Lg		02 50 47.3	
	19nm,1.0s,SNR=7.9						
EBAN	**Banos Encina**	**1.27**	**18**	Pg	Pg	02 50 29.7	-1.0
	1.2nm,0.5s,SNR=7.9						
EBAN				Lg		02 50 47.3	
	19nm,1.0s,SNR=7.9						
EQES	**Quesada**	**1.29**	**48**	Pg	Pg	02 50 30.8	-0.2
	2.0nm,0.4s,SNR=7.9						
EQES				Lg		02 50 47.7	
	20nm,2.4s,SNR=7.9						
EQES	**Quesada**	**1.29**	**48**	Pg	Pg	02 50 30.8	-0.2
	2.0nm,0.4s,SNR=7.9						
EQES				Lg		02 50 47.7	
	20nm,2.4s,SNR=7.9						
ECAB	**El Cabril**	**1.44**	**322**	Pg	Pg	02 50 33.3	-0.5
	0.6nm,0.3s,SNR=7.9						
ECAB				Lg		02 50 51.9	
	0.4nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	**1.44**	**322**	Pg	Pg	02 50 33.3	-0.5
	0.6nm,0.3s,SNR=7.9						
ECAB				Lg		02 50 51.9	
	0.4nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**1.60**	**57**	Lg		02 50 58.1	
	65nm,2.4s,SNR=7.9						
EHUE	**Huescar**	**1.60**	**57**	Lg		02 50 58.1	
	65nm,2.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.07**	**294**	Lg		02 51 11.7	
	12nm,3.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.07**	**294**	Lg		02 51 11.7	
	12nm,3.6s,SNR=7.9						
EVIA	**Vianos**	**2.20**	**40**	Lg		02 51 16.2	
	200nm,4.1s,SNR=7.9						
EVIA	**Vianos**	**2.20**	**40**	Lg		02 51 16.2	
	200nm,4.1s,SNR=7.9						
PBAR	**Barrancos**	**2.50**	**300**	*e*Sn	Sn	02 51 16.5	-2.9
PBAR				*e*Sg	Sg	02 51 25.4	-1.3
PBAR	**Barrancos**	**2.50**	**300**	Sn	Sn	02 51 16.5	-2.9
PBAR				Lg		02 51 25.4	
PBAR	**Barrancos**	**2.50**	**300**	*e*Sn	Sn	02 51 16.5	-2.9
PBAR				*e*Sg	Sg	02 51 25.4	-1.3
ESDC	**Sonseca Array**	**2.73**	**5**	Lg		02 51 33.1	
	1.7nm,2.3s,baz=62,slow=38,SNR=3.5						
ESDC	**Sonseca Array**	**2.73**	**5**	Lg		02 51 33.1	
	1.7nm,2.3s,SNR=3.5						
PVAQ	**Vaqueiros**	**2.77**	**280**	*e*Sn	Sn	02 51 23.0	-3.1
PVAQ	**Vaqueiros**	**2.77**	**280**	Sn	Sn	02 51 23.0	-3.1
PVAQ	**Vaqueiros**	**2.77**	**280**	*e*Sn	Sn	02 51 23.0	-3.1
EBAD	**Badajoz**	**2.81**	**311**	Sn	Sn	02 51 22.2	-4.8
	10nm,1.8s,SNR=5.0						
EBAD				Lg		02 51 36.2	
	29nm,3.5s,SNR=7.9						
EBAD	**Badajoz**	**2.81**	**311**	Lg		02 51 36.2	
	29nm,3.5s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**2.93**	**277**	*e*Sn	Sn	02 51 27.7	-2.2
PBDV	**Barranco-do-Ve**	**2.93**	**277**	Sn	Sn	02 51 27.7	-2.2
PBDV	**Barranco-do-Ve**	**2.93**	**277**	*e*Sn	Sn	02 51 27.7	-2.2
EPLA	**Plasencia**	**3.41**	**336**	Lg		02 51 54.8	
	13nm,5.4s,SNR=7.9						
EPLA	**Plasencia**	**3.41**	**336**	Lg		02 51 54.8	
	13nm,5.4s,SNR=7.9						

MOS ***20*** *02:54:34.9±0.9, 38°.36N×73°.46E, h138km, mb5.4/99, MS4.0/13, Error ellipse: s-maj=5.4km s-min=3.0km az=124.1*

DJA ***20*** *02:54:35, 38°.16N×73°.64E, h132km, mb5.0/13*

BJI ***20*** *02:54:35.5, 38°.49N×73°.51E, h130km, mB4.7/24, mb4.8/42*

ISCJB ***20*** *02:54:35.4±0.1, 38°.23N±0°.02×73°.37E±0°.02, h145km, mb5.3/333, Error ellipse: s-maj=2.5km s-min=2.0km az=17.7*

NEIC ***20*** *02:54:37.0±0.1, 38°.31N×73°.46E, mb5.4/169, Error ellipse: s-maj=3.6km s-min=2.4km az=178.0*

IDC ***20*** *02:54:36.4±0.5, 38°.20N×73°.48E, h144km±4km, mb4.8/33, mb1 4.9/35, mb1mx4.9/35, mbtmp4.8/35, MS3.8/11, Ms1 3.8/11, ms1mx3.6/31, Error ellipse: s-maj=9.6km s-min=7.9km az=9.0*

BGS ***20*** *02:54:38.3±1.4, 38°.30N×73°.14E, h150km, mb5.4*

GCMT ***20*** *02:54:38.6±0.2, 38°.30N×73°.23E, h146km±1km, MW5.3, Moment Tensor Solution. s57,c82; s88,c180; Moment tensor: Scale 10^16 Nm; Mrr=3.17±.16; Mθθ=2.85±.18; Mφφ=0.32±.17; Mrθ=-5.35±.13; Mrφ=-6.90±.15; Mθφ=-3.37±.13; Best double couple: Mo=9.70000×10^16 NP1:φs=347.00000°, δ=54.00000°, λ=-23.00000°. NP2:φs=91.00000°, δ=72.00000°, λ=-141.00000°. Principal axes: T 9.0000, Plg11.0000°, Azm215.0000°; N 1.5000, Plg48.0000°, Azm112.0000°; P -10.5000, Plg40.0000°, Azm315.0000°; Data Used: IU II IC G CN.*

SZGRF ***20*** *02:54:39.7, 37°.29N×73°.11E, h180km, mb5.8, Tajikistan*

NNC ***20*** *02:54:44.5±2.9, 39°.12N×73°.43E, h205km±26km, mb4.5, mpv5.7, Error ellipse: s-maj=30.6km s-min=12.3km az=3.0*

ISC 20 02:54:37.1±0.1, 38°.25N±0°.02×73°.41E±0°.02, h147km, h147km±1.2km; pP-P, n1032, σ0°.83/1040, mb5.3/332, 103C-380D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.36**	**57**	P	**Pn**	**02 55 09.9**	**-6.4**
KSH				S	**Sn**	**02 55 35.3**	**-11**
KSH				smax			
	comp=N,56μm,0.4s						
KSH				smax			
	comp=E,276μm,1.0s						
AML	**Almayashu**	**3.88**	**3**	P	**Pn**	**02 55 33.9**	**-1.7**
	SNR=506						
AML	**Almayashu**	**3.88**	**3⇑**	*i*Pn	**Pn**	**02 55 33.6**	**-2.0**
AML				*e*Sn	**Sn**	**02 56 17.3**	**-3.8**
KZA	**Kyzart**	**4.08**	**20**	P	**Pn**	**02 55 36.4**	**-1.8**
	SNR=110						
KZA	**Kyzart**	**4.08**	**20⇑**	*i*Pn	**Pn**	**02 55 36.1**	**-2.0**
EKS2	**Erkin-Say**	**4.42**	**3**	P	**Pn**	**02 55 41.2**	**-1.5**
	SNR=2866						
EKS2	**Erkin-Say**	**4.42**	**3⇑**	*i*Pn	**Pn**	**02 55 41.1**	**-1.5**
EKS2				*e*Sn	**Sn**	**02 56 29.6**	**-4.1**
AAK	**Ala-Archa**	**4.46**	**10**	P	**Pn**	**02 55 41.4**	**-1.7**
	SNR=532						
AAK	**Ala-Archa**	**4.46**	**10**	P	**Pn**	**02 55 41.7**	**-1.4**
	comp=E,2.8nm,0.3s,baz=172,slow=7.6,SNR=811						
AAK				S	**Sn**	**02 56 31.8**	**-2.8**
	comp=E,3.6nm,0.3s,baz=321,slow=21,SNR=16						
AAK	**Ala-Archa**	**4.46**	**10⇑**	*i*Pn	**Pn**	**02 55 41.4**	**-1.7**
AAK	**Ala-Archa**	**4.46**	**10**	PN	**Pn**	**02 55 41.7**	**-1.4**
AAK				S	**Sn**	**02 56 31.8**	**-2.8**
AAK				pmax	pmax		
	comp=Z,141nm,0.3s						
AAK				smax			
	comp=N,179nm,0.3s						
AAK	**Ala-Archa**	**4.46**	**10**	Pn	**Pn**	**02 55 41.0**	**-2.1**
	comp=N,10μm,0.6s						
AAK	**Ala-Archa**	**4.46**	**10**	P	**Pn**	**02 55 41.3**	**-1.8**
AAK	**Ala-Archa**	**4.46**	**10**	P	**Pn**	**02 55 42.0**	**-1.2**
	SNR=124						
ULHL	**Ulahol**	**4.54**	**28**	P	**Pn**	**02 55 42.4**	**-1.9**
	SNR=330						
KBK	**Karagaybulak**	**4.56**	**14**	P	**Pn**	**02 55 43.0**	**-1.4**
	SNR=52						
KBK	**Karagaybulak**	**4.56**	**14**	*e*Pg	**Pn**	**02 55 43.0**	**-1.4**
CEP	**Cherat**	**4.58**	**196**	P	**Pn**	**02 55 44.1**	**-0.8**
CHCP	**Chirah Chowk**	**4.58**	**182**	P	**Pn**	**02 55 45.0**	**+0.1**
FRU	**Bishkek**	**4.67**	**11⇓**	*i*PN	**Pn**	**02 55 44.0**	**-2.0**
FRU				*i*		02 56 36.0	
FRU				pmax	pmax		
	comp=N,4μm,4.0s						
FRU				pmax	pmax		
	comp=N,19μm,4.0s						
CHMS	**Chumysh**	**4.85**	**12**	P	**Pn**	**02 55 46.6**	**-1.7**
	SNR=173						
TKM2	**Tokmak 2**	**4.95**	**19**	⇑P	**Pn**	**02 55 48.3**	**-1.4**
	comp=N,1μm,0.7s						
TKM2				⇓S	**Sn**	**02 56 37.8**	**-8.6**
	comp=N,2μm,0.7s						
TKM2	**Tokmak 2**	**4.95**	**19**	P	**Pn**	**02 55 48.1**	**-1.6**
	SNR=733						
TKM2	**Tokmak 2**	**4.95**	**19⇑**	*i*Pn	**Pn**	**02 55 48.0**	**-1.7**
TKM2	**Tokmak 2**	**4.95**	**19**	PN	**Pn**	**02 55 48.2**	**-1.5**
TKM2				pmax	pmax		
	comp=Z,1μm,0.7s						
CHM	**Chimkent**	**5.00**	**326⇑**	*i*Pn	**Pn**	**02 55 46.4**	**-3.9**
CHM	**Chimkent**	**5.00**	**326⇑**	*i*PN	**Pn**	**02 55 46.4**	**-4.0**
USP	**Ospenovka**	**5.08**	**9**	P	**Pn**	**02 55 49.4**	**-1.9**
	SNR=213						
KBL	**Kabul**	**5.11**	**225⇑**	*e*Pn	**Pn**	**02 55 50.6**	**-1.3**
KBL				*e*Sn	**Sn**	**02 56 48.8**	**-1.4**
KBL	**Kabul**	**5.11**	**225⇑**	*e*PN	**Pn**	**02 55 50.6**	**-1.3**
KK31	**Karatay Array**	**5.33**	**336**	P	**Pn**	**02 55 52.5**	**-2.2**
	comp=Z,280nm,0.3s,baz=152,slow=14,SNR=4332						
KK31				⇑S	**Sn**	**02 56 49.0**	**-6.3**
	comp=Z,5μm,0.5s,baz=149,slow=21,SNR=47						
KK31	**Karatay Array**	**5.33**	**336**	PN	**Pn**	**02 55 52.4**	**-2.3**
KK31				pmax	pmax		
	comp=Z,590nm,0.3s						
KKAR	**Karatay Array**	**5.33**	**336**	*e*Pn	**Pn**	**02 55 52.3**	**-2.4**
KKAR				*e*Sn	**Sn**	**02 56 49.0**	**-6.3**
KKAR	**Karatay Array**	**5.33**	**336**	*e*PN	**Pn**	**02 55 52.3**	**-2.4**
THW	**Thamme Wali**	**5.61**	**195**	P	**Pn**	**02 55 56.8**	**-1.7**
KNDC	**Almaty**	**5.65**	**27**	⇑P	**Pn**	**02 55 57.7**	**-1.2**
	comp=Z,937nm,0.7s						
KNDC				⇑S	**Sn**	**02 56 56.0**	**-6.9**
	comp=Z,1μm,0.8s						
AAA	**Alma-Ata**	**5.69**	**27**	*e*PN	**Pn**	**02 55 57.6**	**-1.9**
AAA				pmax	pmax		
	comp=Z,7μm,2.4s						
AAA				MLR	MLR		
	comp=Z,14μm,2.0s						
DLH	**Dalhousie**	**6.06**	**159**	*e*PKP	**Pn**	**02 56 02.0**	**-2.6**
DLH				*ex*	**Sn**	**02 57 10.0**	**-3.0**
BHK	**Bhakra**	**7.25**	**159**	*e*PKP	**Pn**	**02 56 17.8**	**-2.6**
BHK				*ex*	x	02 57 35.2	
SDNR	**Sundarnagar**	**7.34**	**155**	*e*PKP	**Pn**	**02 56 18.5**	**-3.1**
SDNR				*ex*	x	02 57 33.5	
SMLA	**Simla**	**7.75**	**155**	*i* P	**Pn**	**02 56 23.0**	**-4.1**
SMLA				*i* x	**Sn**	**02 57 42.9**	**-11**
SMLA				⇓		02 57 50.3	
	comp=E,84μm,0.4s						
SMLA				⇓		02 57 50.4	
	comp=N,84μm,0.4s						
DDI	**Dehra Dun**	**8.79**	**153⇑**	*ix*	**Pn**	**02 56 35.4**	**-5.6**
DDI				*ex*	**Sn**	**02 58 09.0**	**-10**
JOSI	**Joshimath**	**9.20**	**145**	*ex*	**Sn**	**02 58 20.2**	**-8.3**
BHGR	**Bahadurgarh**	**9.98**	**162**	*e*PKP	**Pn**	**02 56 52.7**	**-4.2**
NDI	**New Delhi**	**10.05**	**161**	*ex*	**Pn**	**02 56 51.5**	**-6.3**
NDI				*ex*	x	02 58 35.5	
KHET	**Khetri**	**10.34**	**168**	*i* P	**Pn**	**02 56 57.6**	**-4.1**
KHET				*ex*	x	02 58 44.1	
PTH	**Pithoragarh**	**10.35**	**145**	*ex*	**Pn**	**02 56 56.4**	**-5.4**
PTH				*ex*	x	02 58 45.2	
SONA	**Sohna**	**10.43**	**162**	*e*PKP	**Pn**	**02 56 59.8**	**-3.0**
SONA				*ex*	x	02 58 48.6	
MK31	**Makanchi Array**	**10.76**	**35**	P	**Pn**	**02 57 04.3**	**-2.6**
	comp=N,154nm,0.6s,baz=213,slow=12,SNR=1020						
MK31	**Makanchi Array**	**10.76**	**35⇑**	*e*Pn	**Pn**	**02 57 04.2**	**-2.8**
MK31	**Makanchi Array**	**10.76**	**35⇑**	*e*P	**Pn**	**02 57 04.2**	**-2.7**
MKAR	**Makanchi Array**	**10.76**	**35**	P	**Pn**	**02 57 04.2**	**-2.7**
	comp=N,21nm,0.3s,baz=215,slow=14,SNR=781						
MKAR				LR	LR	03 01 56.2	
	comp=N,563nm,19.2s,baz=220,slow=41						
MKAR	**Makanchi Array**	**10.76**	**35**	P	**Pn**	**02 57 04.3**	**-2.6**
MKAR				pmax	pmax		
	comp=Z,21nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,563nm,19.2s						
AJM	**Ajmer**	**11.78**	**175**	*e*PKP	**Pn**	**02 57 15.8**	**-4.8**
AJM				*ex*	x	02 59 16.7	
ABKT	**Ailbek**	**12.06**	**273**	Pn	**Pn**	**02 57 19.5**	**-4.6**
	comp=Z,1μm,0.4s,SNR=36						
VAN	**Vannovskaya**	**12.07**	**273**	*ce*P	**Pn**	**02 57 18.3**	**-5.9**
WMQ	**Urumqi**	**12.13**	**58⇑**	*i*P	**Pn**	**02 57 22.0**	**-3.0**
WMQ				sP		02 57 55.0	
WMQ				S	**Sn**	**02 59 34.0**	**-4.9**
WMQ				PcP	PcP	03 02 58.0	+2.0
WMQ				LR	LR		
	comp=N,560nm,8.0s						
WMQ				LR	LR		
	comp=E,320nm,8.0s						
WMQ				LR	LR		
	comp=Z,290nm,8.0s						
KURBB	**Kurchatov Arra**	**12.90**	**15**	⇓P	**Pn**	**02 57 29.9**	**-4.9**
	comp=Z,22nm,0.8s						
KURK	**Kurchatov**	**13.00**	**15**	⇑P	**Pn**	**02 57 31.4**	**-4.7**
	comp=Z,142nm,0.9s						
KURK	**Kurchatov**	**13.00**	**15⇑**	*i*Pn	**Pn**	**02 57 31.2**	**-4.9**
KURK	**Kurchatov**	**13.00**	**15**	*c i*P	**Pn**	**02 57 31.5**	**-4.7**
KURK				pmax	pmax		
	comp=Z,187nm,1.0s						
KURK	**Kurchatov**	**13.00**	**15**	Pn	**Pn**	**02 57 31.6**	**-4.6**
	comp=Z,836nm,1.1s						
DANN	**Dangsing**	**13.12**	**136**	*e*P	**Pn**	**02 57 32.8**	**-5.0**
	comp=Z,2μm,0.8s						
KOLN	**Koldanda**	**13.49**	**138**	*e*P	**Pn**	**02 57 38.1**	**-4.5**
	comp=Z,856nm,0.5s						
GKN	**Gorkha**	**13.87**	**134**	*e*P	**Pn**	**02 57 42.7**	**-4.8**
	comp=Z,765nm,0.4s						
KKN	**Kakani**	**14.40**	**133**	*e*P	**Pn**	**02 57 49.4**	**-4.8**
	comp=Z,1μm,0.6s						
KKN	**Kakani**	**14.40**	**133**	*e*Pn	**Pn**	**02 57 49.8**	**-4.3**
KKN				*e*Sn	**Sn**	**03 00 17.2**	**-17**
KKN	**Kakani**	**14.40**	**133**	*e*Pn	**Pn**	**02 57 49.8**	**-4.3**
KKN				*e*Sn	**Sn**	**03 00 17.2**	**-17**
KKN	**Kakani**	**14.40**	**133**	*e*P	**Pn**	**02 57 49.8**	**-4.3**
DMN	**Daman**	**14.44**	**134**	*e*P	**Pn**	**02 57 50.1**	**-4.5**
	comp=Z,634nm,0.5s						
PKIN	**Phulchoki**	**14.63**	**133**	*e*Pn	**Pn**	**02 57 52.2**	**-4.8**
PKIN	**Phulchoki**	**14.63**	**133**	*e*P	**Pn**	**02 57 53.1**	**-3.9**
	comp=Z,915nm,0.6s						
PKI	**Pulchoki**	**14.64**	**133**	*e*P	**Pn**	**02 57 52.9**	**-4.3**
	comp=Z,964nm,0.7s						
PKI	**Pulchoki**	**14.64**	**133**	*e*P	**Pn**	**02 57 52.9**	**-4.3**
PKI				pmax	pmax		
	comp=Z,964nm,0.7s						
GUN	**Gumba**	**14.66**	**131**	*e*P	**Pn**	**02 57 52.8**	**-4.6**
	comp=Z,1μm,0.8s						
AB31	**Akbulak array**	**14.66**	**323**	P	**Pn**	**02 57 53.3**	**-4.0**
	comp=Z,115nm,0.5s,baz=108,slow=13,SNR=1545						
AB31				⇓S	**Sn**	**03 00 25.3**	**-14**
	comp=Z,320nm,0.8s,baz=148,slow=20,SNR=18						
AB31	**Akbulak array**	**14.66**	**323**	*i* P	**Pn**	**02 57 53.2**	**-4.0**
AB31				S	**Sn**	**03 00 24.3**	**-15**
AB31				pmax	pmax		
	comp=Z,136nm,0.5s						
AB31				smax			
	comp=Z,544nm,1.1s						
ABKAR	**Akbulak array**	**14.66**	**323**	⇓*e*Pn	**Pn**	**02 57 52.7**	**-4.5**
ABKAR				*e*Sn	**Sn**	**03 00 22.8**	**-17**
ALBI	**Allahabad**	**14.73**	**149**	*ex*	**Pn**	**02 57 49.5**	**-8.8**
BVA0	**Borovoye Array**	**14.93**	**353**	⇓P	**Pn**	**02 57 57.8**	**-2.7**
	comp=Z,36nm,0.9s						
BVA0	**Borovoye Array**	**14.93**	**353**	P	**Pn**	**02 57 57.7**	**-2.8**
BVA0				pmax	pmax		
	comp=Z,60nm,1.2s						
BVAR	**Borovoye Array**	**14.93**	**353**	P	**Pn**	**02 57 57.5**	**-3.0**
	comp=Z,2.9nm,0.3s,baz=162,slow=12,SNR=84						
BVAR				S	**Sn**	**03 00 37.3**	**-8.7**
	comp=Z,9.1nm,0.3s,baz=166,slow=25,SNR=7.7						
BVAR	**Borovoye Array**	**14.93**	**353**	P	**Pn**	**02 57 57.5**	**-3.0**
BVAR				S	**Sn**	**03 00 37.3**	**-8.7**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR				smax			
	comp=N,9.0nm,0.3s						
BRVK	**Borovoye**	**14.97**	**353**	⇓*i*Pn	**Pn**	**02 57 57.5**	**-3.5**
BRVK				*e*Sn	**Sn**	**03 00 40.8**	**-6.2**
BRVK	**Borovoye**	**14.97**	**353**	⇓*i*P	**Pn**	**02 57 57.5**	**-3.5**
BRVK				*e*		03 00 40.8	
BRVK	**Borovoye**	**14.97**	**353**	Pn	**Pn**	**02 57 57.5**	**-3.5**
	comp=N,2μm,1.0s,SNR=54						
BHPL	**Bhopal**	**15.35**	**166**	*ex*	**Pn**	**02 58 01.9**	**-4.0**
BHPL				AMb	AMB	02 58 04.0	
	comp=Z,89nm,0.8s						
BHPL				*ex*	x	03 00 40.0	
JBP	**Jabalpur**	**16.05**	**158**	*e*PKP	**Pn**	**02 58 13.3**	**-1.3**
JBP				*ex*	x	03 00 55.0	
TAPN	**Taplejung**	**16.18**	**128**	*e*P	**Pn**	**02 58 12.0**	**-4.2**
	comp=Z,734nm,0.6s						
ODAN	**Odare**	**16.34**	**130

SNR=26
POO Poona 19.65 179⇑*i*P P 02 58 54.8 +0.3
LATR Latur 19.95 171 *e*PKP P 02 58 57.4 -0.3
LATR AMb AMB 02 58 58.5
comp=Z,152nm,0.3s
LATR *ex* x 03 02 27.9
ASHO Ashiyiah 20.00 232 P **P 02 58 57.5 -0.8**
SNR=76
NAZ Nazwa, Dubai 20.04 234 P **P 02 58 57.8 -0.8**
SNR=34
SMDO Samad 20.05 225 P **P 02 58 58.5 -0.3**
SNR=29
SHL Shillong 20.09 124⇓*i*x P 02 59 00.0 +0.7
SHL *ex* x 03 02 29.0
MAK Makhachkala 20.19 292 *e*P **P 02 59 00.6 +0.4**
MAK *e**PP 02 59 23.5
MAK *e**SP sP 02 59 39.2 -5.3
MAK *e*S **S 03 02 37.2 -1.4**
MAK *e**SS sS 03 03 18.1 -3.8
MAK pmax pmax
comp=Z,507nm,1.6s
MAK MLR MLR
comp=Z,619nm,13.0s
CAL Calcutta 20.22 136 *ex* **P 02 58 59.2 -1.4**
CAL *ex* **S 03 02 35.4 -4.0**
SVE Sverdlovsk 20.43 340⇑*e*P P 02 59 01.6 -0.9
SVE *e*S **S 03 02 36.7 -6.2**
SVE pmax pmax
comp=Z,445nm,1.0s
ASUD Al Ashush, Dub 20.51 234 P **P 02 59 03.1 -0.6**
SNR=12
GTA Gaotai 20.58 79 ⇑P **P 02 59 05.1 +0.8**
GTA pP 02 59 30.8
GTA sP sP 02 59 46.0 -2.7
GTA S **S 03 02 48.1 +1.9**
GTA pmax pmax
comp=Z,58nm,1.6s
GTA pmax pmax
comp=Z,490nm,4.3s
GTA LR LR
comp=N,410nm,12.8s
GTA LR LR
comp=E,420nm,12.1s
GTA LR LR
comp=Z,440nm,12.6s
ARU Arti 20.71 336⇓*i*P P 02 59 04.3 -1.2
comp=Z,281nm,1.0s
ARU Arti 20.71 336*d*P P 02 59 04.4 -1.1
ARU *e* 02 59 33.9
ARU *e*PPP 02 59 44.4
ARU S **S 03 02 46.9 -1.4**
ARU SS 03 03 28.4
ARU pmax pmax
comp=Z,441nm,1.2s
ARU Arti 20.71 336 P **P 02 59 04.6 -0.9**
comp=Z,2μm,1.2s,SNR=55
ARQ Araqi 20.72 229 P **P 02 59 05.9 -0.1**
SNR=41
KAD Karad 20.87 178 *ex* sP 02 59 48.2 -3.8
KAD *ex* x 03 03 53.7
HYB Hyderabad 21.24 166 *i*P **P 02 59 11.0 -0.5**
comp=Z,220nm,1.0s,mb5.4
HYB *e*S **S 03 03 04.0 +4.8**
TBLG Delisi 22.20 288 P **P 02 59 22.2 +0.7**
VIS Vishakhapatnam 22.22 154 *e*PKP **P 02 59 21.9 +0.1**
VIS AMb AMB 02 59 23.2
comp=Z,89nm,0.2s,mb5.8
VIS *e*S **S 03 03 22.7 +7.0**
GNI Garni 22.27 284 P **P 02 59 22.4 +0.2**
comp=Z,210nm,1.1s,mb5.5,baz=13,slow=4.4,SNR=66
GNI Garni 22.27 284 *e*P **P 02 59 23.3 +1.2**
comp=Z,834nm,1.3s,mb6.0
GNI Garni 22.27 284*d*P P 02 59 23.7 +1.6
GNI pmax pmax
comp=Z,447nm,1.3s
ZEI Tsey 22.83 291 *e*P **P 02 59 28.9 +1.5**
ZEI pmax pmax
comp=Z,127nm,1.0s,mb5.3
ZEI MLR MLR
comp=Z,108nm,15.0s
UMR Umm Al-Rimmam 22.97 256 *e*P **P 02 59 29.6 +0.8**
UMR AMb AMB 02 59 32.8
comp=Z,134nm,1.0s,mb5.3
MIB Mutribah 23.14 256 *e*P **P 02 59 31.3 +1.0**
MIB AMb AMB 02 59 32.8
comp=Z,156nm,0.7s,mb5.5
KBD Kabd 23.17 255 *e*P **P 02 59 31.7 +1.1**
KBD AMb AMB 02 59 41.0
comp=Z,78nm,0.9s,mb5.2
RDF Al-Radifah 23.41 254 *e*P **P 02 59 33.9 +1.1**
RDF AMb AMB 02 59 37.6
comp=Z,80nm,0.7s,mb5.3
NAY Al-Naaiem 23.48 255 *e*P **P 02 59 34.7 +1.3**
NAY AMb AMB 02 59 35.6
comp=Z,136nm,0.8s,mb5.4
MOY Mondy 23.51 46 *e*P **P 02 59 35.5 +2.0**
MOY pmax pmax
comp=Z,49nm,1.9s,mb4.7
KIV Kislovodsk 23.76 294⇓*i*P P 02 59 35.9 0.0
comp=Z,148nm,0.8s,mb5.6
KIV Kislovodsk 23.76 294*d*P P 02 59 36.1 +0.2
KIV *e**PP 03 00 24.4
KIV *i*S **S 03 03 44.2 +3.8**
KIV pmax pmax
comp=Z,96nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,200nm,16.0s
KIV Kislovodsk 23.76 294 P **P 02 59 36.4 +0.5**
SNR=18
LZH Lanzhou 24.30 86 *e*P **P 02 59 42.0 +1.2**
LZH pP 03 00 07.3
LZH sP sP 03 00 22.5 -5.9
LZH S **S 03 03 49.0 0.0**
LZH sS sS 03 04 34.6 -8.1
LZH SS 03 04 50.3
LZH pmax pmax
comp=Z,29nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,130nm,4.0s
ZAK Zakamensk 24.39 51⇑*i*P P 02 59 42.4 +0.9
ZAK *e* 03 00 13.2
ZAK pmax pmax
comp=Z,20nm,1.1s,mb4.6
IRK Irkutsk 25.61 47 *e*P **P 02 59 54.8 +2.3**
IRK *e* 03 00 42.2
IRK pmax pmax
comp=Z,58nm,1.4s,mb5.0
SONM Songino Array 25.77 58 P **P 02 59 54.7 +0.7**
comp=Z,15nm,0.9s,mb4.6,baz=257,slow=9.9,SNR=23
SONM pP pP 03 00 26.6 +2.0
comp=Z,41nm,0.9s,baz=266,slow=8.1,SNR=6.8
SONM sP sP 03 00 43.6 +1.9
comp=Z,85nm,1.0s,baz=258,slow=10,SNR=7.6
SONM Songino Array 25.77 58 P **P 02 59 54.7 +0.7**
SONM *PP pP 03 00 26.6 +2.0
SONM *SP sP 03 00 43.6 +1.9
SONM pmax pmax
comp=Z,15nm,0.9s
SONM pmax pmax
comp=Z,41nm,0.9s
SONM pmax pmax
comp=Z,85nm,1.0s
SOC Sochi 25.90 293 *e*P **P 02 59 54.3 -0.9**
SOC *e**PP pP 03 00 24.8 -1.1
SOC *e*S **S 03 04 13.5 -0.8**
SOC *e**SS sS 03 05 08.9 +0.3
SOC pmax pmax
comp=Z,92nm,1.0s,mb5.4
CD2 Chengdu 25.95 97 *e*P **P 02 59 56.9 +1.1**
CD2 pP pP 03 00 23.8 -2.7
CD2 sP sP 03 00 38.6 -4.9
CD2 PP 03 00 43.1
CD2 S **S 03 04 14.8 -0.5**
CD2 sS sS 03 05 01.4 -8.3
CD2 SS 03 05 30.4
CD2 ScP ScP 03 06 50.3 +4.0
CD2 PcS PcS 03 07 03.4 +1.9
CD2 ScS ScS 03 10 38.4 +2.3
CD2 pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
CD2 pmax pmax
comp=Z,30nm,5.8s
ULN Ulaanbaatar 26.21 58 *e*P **P 02 59 58.3 +0.3**
ULN Ulaanbaatar 26.21 58 *e*P **P 02 59 58.3 +0.3**
ULN Ulaanbaatar 26.21 58 P **P 02 59 58.9 +0.9**
comp=Z,736nmcomp=Z,24nm,1.0s,mb4.8
ULN Ulaanbaatar 26.21 58 P **P 02 59 59.1 +1.2**
SNR=10
VSR Storozhevoye 27.30 309 *e*P **P 03 00 07.0 -0.6**
VSR pmax pmax
comp=Z,100nm,0.7s,mb5.5
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=E,100nm,0.8s
MALT Malatya 27.37 281⇓*i*P P 03 00 10.5 +2.1
comp=E,66nm,1.1s,mb5.2
MALT Malatya 27.37 281 ⇓P **P 03 00 10.8 +2.4**
MALT Malatya 27.37 281⇓*i*P P 03 00 10.8 +2.4
MALT Malatya 27.37 281 P **P 03 00 10.0 +1.6**
comp=E,894nmcomp=E,70nm,1.6s,mb5.0
VOR Voronezh 27.41 311 P **P 03 00 09.0 +0.3**
VOR pmax pmax
comp=Z,200nm,1.0s,mb5.7
KMI Kunming 28.05 109 P **P 03 00 17.9 +3.3**
KMI S **S 03 04 51.4 +3.0**
KMI pmax pmax
comp=Z,61nm,0.9s,mb5.3
KMI pmax pmax
comp=Z,200nm,6.4s
KMI LR LR
comp=N,330nm,10.6s
KMI LR LR
comp=E,190nm,9.6s
KMI LR LR
comp=Z,190nm,10.3s
XAN Xi'an 28.87 87 P pP 03 00 56.4 +3.6
XAN LR LR
comp=N,340nm,13.3s
XAN LR LR
comp=E,84nm,7.6s
XAN LR LR
comp=Z,83nm,14.3s
PRGR Permogore 29.04 333⇓*i*P P 03 00 22.4 -0.6
PRGR *e**PP pP 03 00 54.3 +0.3
PRGR *e**SP sP 03 01 11.6 +0.6
PRGR *e* 03 03 23.3
PRGR pmax pmax
comp=Z,351nm,1.0s,mb6.0
CHRT Chiangrai 29.28 121 P **P 03 00 24.0 -1.5**
comp=Z,737nm,1.0s
HHC Hu-ho-hao-te 29.38 73 *e*P **P 03 00 28.8 +2.6**
HHC pP pP 03 00 55.9 -1.4
HHC sP sP 03 01 11.1 -3.1
HHC PP PP 03 01 28.0 -7.3
HHC PcP PcP 03 03 33.3 +4.7
HHC S **S 03 05 11.6 +2.6**
HHC sS sS 03 05 58.6 -5.0
HHC SS SS 03 06 53.9 -26
HHC ScP ScP 03 07 02.3 +5.7
HHC ScS ScS 03 10 54.6 +3.4
HHC pmax pmax
comp=Z,25nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,83nm,5.3s
HHC LR LR
comp=N,1μm,6.4s
HHC LR LR
comp=E,650nm,5.8s
HHC LR LR
comp=Z,400nm,7.1s
CHTO Chiang Mai 29.47 124 *e*P **P 03 00 30.1 +2.8**
comp=Z,7.5nm,0.6s,mb4.6
CHTO Chiang Mai 29.47 124 *e*P **P 03 00 30.1 +2.9**
CHTO pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
CHTO Chiang Mai 29.47 124 P **P 03 00 26.4 -0.8**
comp=Z,386nmcomp=Z,15nm,1.1s,mb4.6
MOS Moscow 29.58 318 *e*P **P 03 00 26.9 -0.9**
MOS *e* 03 01 08.0
MOS *e* 03 01 34.8
MOS *e*SS SS 03 07 00.2 -23
MOS pmax pmax
comp=Z,215nm,1.3s,mb5.7
MOS pmax pmax
comp=E,130nm,1.2s
MOS pmax pmax
comp=Z,500nm,2.0s,mb5.9
CM31 Chiang Mai Arr 29.73 124 *e*P **P 03 00 31.7 +2.2**
comp=Z,6.5nm,0.6s,mb4.5
CMAR Chiang Mai Arr 29.73 124 P **P 03 00 28.3 -1.2**
comp=Z,1.4nm,0.4s,baz=324,slow=10,SNR=6.2
CMAR PP PP 03 01 24.9 -15
comp=Z,17nm,1.0s,baz=299,slow=9.6,SNR=4.7
CMAR ScP ScP 03 06 58.3 +0.3
comp=Z,4.4nm,0.8s,baz=301,slow=4.5,SNR=10
CMAR Chiang Mai Arr 29.73 124 P **P 03 00 28.3 -1.2**
CMAR 03 06 58.3
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR pmax pmax
comp=Z,17nm,1.0s
CMAR pmax pmax
comp=N,4.0nm,0.8s
OBN Obninsk 29.93 316⇓*i*P P 03 00 30.1 -0.8
comp=N,180nm,1.3s,mb5.6
OBN Obninsk 29.93 316*d*P P 03 00 30.0 -1.0
OBN *e**PP pP 03 01 17.5 +15
OBN *i* 03 01 28.3
OBN *e*S **S 03 05 23.1 +5.7**
OBN pmax pmax
comp=Z,163nm,1.2s,mb5.6
OBN MLR MLR
comp=Z,200nm,16.0s
OBN Obninsk 29.93 316 P **P 03 00 30.0 -1.0**
comp=Z,651nm,1.1s,mb6.3,SNR=7.2
GYA Guiyang 30.29 103⇑*i*P P 03 00 36.8 +2.4
GYA pP pP 03 01 06.0 +0.4
GYA sP sP 03 01 20.6 -1.8
GYA PP PP 03 01 40.3 -5.3
GYA PcP PcP 03 03 33.6 +2.4
GYA S **S 03 05 25.8 +2.2**
GYA sS sS 03 06 15.3 -3.0
GYA ScP ScP 03 07 02.1 +2.3
GYA PcS PcS 03 07 17.0 +1.9
GYA ScS ScS 03 10 56.9 +0.8
GYA pmax pmax
comp=Z,30nm,0.8s,mb5.1
GYA pmax pmax
comp=Z,180nm,4.8s
BDT Bhumibol Dam 30.66 126 P **P 03 00 38.0 +0.3**
ENH Enshi 30.71 94 *e*P **P 03 00 38.6 +0.5**
comp=Z,12nm,0.6s,mb4.8
BR131 Keskin Array S 30.78 285⇓*i*P P 03 00 39.4 +0.8
comp=Z,79nm,0.8s,mb5.5
BRTR Keskin Array B 30.78 285 P **P 03 00 39.5 +0.9**
comp=Z,89nm,0.9s,mb5.5,baz=92,slow=7.9,SNR=337
BRTR PP PP 03 01 39.2 -12
comp=Z,8.7nm,0.8s,baz=94,slow=8.2,SNR=3.8
BRTR Keskin Array B 30.78 285*ce*P P 03 00 39.5 +0.9
BRTR pmax pmax
comp=Z,89nm,0.9s
KLMR Klimovskoe 30.96 328*d*P P 03 00 39.5 -0.4
KLMR *e* 03 01 44.3
KLMR S **S 03 05 37.9 +4.6**
KLMR pmax pmax
comp=Z,342nm,1.5s,mb5.9
KLMR pmax pmax
comp=Z,143nm,5.7s
PALK Pallekele 31.53 166 *i*P **P 03 00 48.1 +2.7**
CSS Prodhromos 32.17 277⇓*i*P P 03 00 50.4 -0.5
comp=Z,12nm,0.9s,mb4.6
NST Nakhon Sawan 32.54 126 P **P 03 00 48.5 -5.8**
BOD Bodaibo 32.78 40 *e*P **P 03 00 56.0 +0.2**
BOD *e* pP 03 01 28.6 +1.4
BOD pmax pmax
comp=Z,24nm,1.1s,mb4.8
BOD pmax pmax
comp=Z,51nm,1.3s,mb5.1
BJI Beijing 32.98 73 P **P 03 00 58.3 +0.4**
BJI S **S 03 06 06.9 +1.7**
BJI pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
BJI pmax pmax
comp=Z,59nm,4.2s
BJI LR LR
comp=N,610nm,16.5s
BJI LR LR
comp=E,420nm,17.6s
BJI LR LR
comp=Z,160nm,20.6s
AKASG Malin Array Be 33.41 306 P **P 03 01 00.8 -0.5**
comp=Z,8.9nm,0.3s,mb5.0,baz=84,slow=7.0,SNR=114
AKASG PP PP 03 02 11.4 -8.3
comp=Z,38nm,1.0s,baz=88,slow=12,SNR=4.8
AKASG PcP PcP 03 03 38.4 -0.9
comp=Z,13nm,0.8s,baz=81,slow=2.7,SNR=5.1
AKASG Malin Array Be 33.41 306 P **P 03 01 00.8 -0.5**
AKASG PP PP 03 02 11.4 -8.3
AKASG PcP PcP 03 03 38.4 -0.9
AKASG Malin Array Be 33.41 306*ce*P P 03 01 00.9 -0.5
AKASG pmax pmax
comp=Z,9.0nm,0.3s
AKBB Malin Array Si 33.41 306⇓*i*P P 03 01 00.8 -0.6
AKBB Malin Array Si 33.41 306⇓*i*P P 03 01 00.8 -0.6
KIEV Kiev 33.41 306⇓*i*P P 03 01 00.5 -0.9
comp=Z,117nm,0.9s,mb5.6
KIEV Kiev 33.41 306⇓*i*P P 03 01 00.5 -1.0
KIEV pmax pmax
comp=Z,117nm,0.9s,mb5.6
KIS Kishinev 33.57 300κ*i*P P 03 01 02.0 -0.9
KIS *e* 03 02 19.0
KIS pmax pmax
comp=Z,400nm,1.0s,mb6.1
KIS pmax pmax
comp=Z,500nm,1.0s,mb6.2
TIRR Tirgusor 34.01 295⇓*i*P P 03 01 06.8 +0.2
comp=Z,55nm,1.5s,mb5.1
TIRR Tirgusor 34.01 295 P **P 03 01 07.4 +0.7**
CFR Carcaliu 34.14 296 P **P 03 01 08.3 +0.5**
WHN Wuhan 34.42 90 ⇑P **P 03 01 11.0 +0.6**
WHN S **S 03 06 29.6 +2.0**
WHN pmax pmax
comp=Z,94nm,1.3s,mb5.4
WHN LR LR
comp=N,460nm,23.0s
WHN LR LR
comp=E,410nm,22.9s
WHN LR LR
comp=Z,490nm,10.5s
PUL Pulkovo 34.65 323*d*P P 03 01 12.0 0.0
PUL pmax pmax
comp=Z,392nm,1.0s,mb6.0
MICGM Minsk 34.67 313 *e*P **P 03 01 12.0 -0.2**
MNK Minsk 34.70 313 *e*P **P 03 01 12.0 -0.5**
MNK pmax pmax
comp=Z,420nm,1.0s,mb6.0
VRI Vrincioaia 35.07 298 ⇓P **P 03 01 17.0 +1.2**
PLOR Plostina 35.13 298 ⇓P **P 03 01 17.6 +1.3**
NACGM Naroch 35.36 313 *e*P **P 03 01 14.0 -4.1**
JOF Joensuu 35.36 328 *e*P **P 03 01 18.7 +0.6**
JOF pmax pmax
comp=Z,210nm,0.7s,mb5.9
JOF Joensuu 35.36 328 *e*p **P 03 01 18.7 +0.6**
comp=Z,210nm,0.7s,mb5.9
IDID Didziasalis 35.45 314 *e*P **P 03 01 19.0 +0.1**
IDID AMB AMB 03 01 20.2
comp=Z,46nm,1.0s,mb5.0
IIGN Ignalina 35.74 314 *e*P **P 03 01 21.6 +0.2**
IIGN AMB AMB 03 01 23.0
comp=Z,52nm,1.2s,mb5.0
IZAR Zarasai 35.79 315 *e*P **P 03 01 22.1 +0.3**
IZAR AMB AMB 03 01 23.2
comp=Z,71nm,1.2s,mb5.2
ISAL Salakas 35.83 315 *e*P **P 03 01 22.5 +0.3**
ISAL AMB AMB 03 01 23.7
comp=Z,49nm,1.1s,mb5.1
BURAR Bucovina Array 36.00 301 ⇓P **P 03 01 24.1 +0.4**
BUR08 Bucovina Ar. S 36.01 301⇓*i*P P 03 01 23.9 +0.2
VSU Vasula 36.06 319*d*P P 03 01 23.6 -0.5
VSU pmax pmax
comp=Z,216nm,1.0s,mb5.7
BLCB Balcova 36.08 285 P **P 03 01 24.8 +0.3**
ALN Alexandroupoli 36.26 289 P **P 03 01 26.4 +0.4**
KDZ Kurdzhali 36.58 291 P **P 03 01 29.5 +0.8**
LVZ Lovozero 36.58 337*d*P P 03 01 27.9 -0.5
LVZ pmax pmax
comp=Z,315nm,1.0s,mb5.9
LVZ Lovozero 36.58 337 P **P 03 01 28.0 -0.4**
comp=Z,2μm,0.9s,SNR=22
RDO Rodhopi 36.59 290 P **P 03 01 29.1 +0.3**
LVV L'vov 36.71 305 *e*P **P 03 01 29.7 0.0**
LVV *e* 03 02 56.9
SIGR SIGRI 36.78 287 P **P 03 01 30.5 +0.1**
APA Apatity 36.80 336⇑*i*P P 03 01 29.6 -0.6
APA *i* 03 01 56.0
APA *e*SS SS 03 09 34.0 -16
APA pmax pmax
comp=Z,45nm,1.0s,mb5.0
APA MLR MLR
comp=Z,700nm,24.0s
QIZ Qiongzhong 36.95 111 P **P 03 01 32.5 +0.4**
QIZ pP pP 03 02 01.1 -2.8
QIZ S **S 03 07 10.1 +3.7**
QIZ pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
RZN Rozhen 37.09 291 P **P 03 01 33.7 +0.7**
LIA Limnos Island 37.12 288 P **P 03 01 34.6 +1.3**
FINES FINESS Array B 37.15 324 P **P 03 01 33.0 -0.2**
comp=Z,84nm,0.6s,mb5.6,baz=108,slow=8.9,SNR=496
FINES PcP PcP 03 03 50.8 +0.7
comp=Z,14nm,0.7s,baz=123,slow=6.8,SNR=3.0
FINES LR LR 03 17 26.1
comp=Z,332nm,19.4s,baz=124,slow=37
FINES FINESS Array B 37.15 324 P **P 03 01 33.0 -0.2**
FINES PcP PcP 03 03 50.8 +0.7
FINES LR LR 03 17 26.1
FINES FINESS Array B 37.15 324 P **P 03 01 33.1 -0.2**
FINES 03 03 50.8
FINES pmax pmax
comp=Z,84nm,0.6s
FINES pmax pmax
comp=Z,14nm,0.7s
FINES MLR MLR
comp=Z,332nm,19.4s
BMR Baia Mare 37.15 301 P **P 03 01 34.6 +1.1**
KAF Kangasniemi 37.24 325 *e*P **P 03 01 33.7 -0.3**
KAF pmax pmax
comp=Z,58nm,0.8s,mb5.3
KAF Kangasniemi 37.24 325 *e*p **P 03 01 33.7 -0.3**
comp=Z,58nm,0.8s,mb5.3
CRAR CRAIOVA 37.30 296 P **P 03 01 35.8 +1.0**
SUW Suwalki 37.35 312 *e*P **P 03 01 34.5 -0.5**
SUW *e*PP PP 03 03 03.0 -0.1
SUW Suwalki 37.35 312 *e*P **P 03 01 34.5 -0.6**
comp=Z,156nm,1.0s,mb5.6
SUW Suwalki 37.35 312⇓*e*P P 03 01 34.6 -0.5
SUW *e* 03 03 03.0
NJ2 Nanjing 37.37 85 *e*P **P 03 01 38.4 +2.9**
NJ2 pP pP 03 02 09.0 +1.6
NJ2 PP PP 03 03 10.8 +7.1
NJ2 S **S 03 07 14.5 +1.9**
NJ2 pmax pmax
comp=Z,20nm,1.0s,mb4.7
NJ2 LR LR
comp=N,120nm,15.2s
NJ2 LR LR
comp=E,100nm,15.0s
NJ2 LR LR
comp=Z,1μm,16.1s
KAVA Kavala 37.38 290 P **P 03 01 35.8 +0.3**
KWP Kalwaria Pacla 37.57 304 *e*P **P 03 01 37.5 +0.5**
KWP *e*PP PP 03 03 03.3 -2.3
KWP Kalwaria Pacla 37.57 304⇓*i*P P 03 01 37.3 +0.3
comp=Z,105nm,0.9s,mb5.5
KWP Kalwaria Pacla 37.57 304⇓*e*P P 03 01 37.5 +0.5
KWP *e* 03 03 03.3
APE Apeiranthos 37.59 283 ⇓P **P 03 01 37.7 +0.4**
APE Apeiranthos 37.59 283 P **P 03 01 37.7 +0.4**
APE Apeiranthos 37.59 283⇓*i*P P 03 01 37.7 +0.4
DEV Deva 37.73 298 ⇓P **P 03 01 40.0 +1.7**
DRGR 37.76 300 ⇓P **P 03 01 39.8 +1.2**
MMB Musomiste 37.83 291 P **P 03 01 39.8 +0.5**
THR1 Thera Island 37.85 282 P **P 03 01 38.9 -0.6**
GZR Gura Zlata 37.88 297 ⇑P **P 03 01 40.4 +0.8**
KOLS Kolonicke sedl 37.89 303 *e*P **P 03 01 39.9 +0.3**
comp=Z,61nm,1.1s,mb5.1
KOLS *e*PP PP 03 03 09.9 +0.9
KOLS Kolonicke sedl 37.89 303 *e*P **P 03 01 39.9 +0.3**
KOLS pmax pmax
comp=Z,61nm,1.1s,mb5.1
THR3 Thira Island, 37.89 282 P **P 03 01 39.3 -0.5**
UZH Uzhgorod 37.89 303 *i*P **P 03 01 39.5 -0.2**

UZH e 03 03 17.7
THR5 Thira Island, 37.93 283 P **P 03 01 39.7 -0.4**
VTS Vitosha 38.02 293 ⇓P **P 03 01 41.8 +1.0**
SRS Serrai 38.03 290 P **P 03 01 41.4 +0.4**
ATD Arta Tunnel 38.11 234 P **P 03 01 42.3 +0.5**
comp=Z,3.0nm,0.3s,mb4.4,baz=248,slow=21,SNR=11
SNY Shenyang 38.13 68 ⇓P **P 03 01 45.8 +4.0**
SNY S **S 03 07 27.1 +3.3**
SNY pmax pmax
comp=Z,44nm,3.5s
SNY LR LR
comp=N,490nm,7.2s
SNY LR LR
comp=E,320nm,7.8s
SNY LR LR
comp=Z,350nm,7.6s
LAST Lasithi 38.22 281 P **P 03 01 42.7 +0.1**
KKB Krupnik 38.25 292 P **P 03 01 43.1 +0.3**
PLG Polygyros 38.31 289 P **P 03 01 43.9 +0.6**
CRVS Cervenica-Dubn 38.42 303 *e*P **P 03 01 44.1 0.0**
comp=Z,20nm,1.0s,mb4.7
CRVS *e*PP PP 03 03 14.8 -0.1
CRVS Cervenica-Dubn 38.42 303 *e*P **P 03 01 44.1 0.0**
CRVS pmax pmax
comp=Z,20nm,1.0s,mb4.7
CRVS pmax pmax
comp=N,8.0nm,0.9s
WAR Warsaw 38.59 309⇓*e*P **P 03 01 45.6 +0.2**
BZS Buzias 38.66 298 ⇑P **P 03 01 47.0 +0.9**
ATHU Athens Univers 38.67 285 P **P 03 01 48.0 +1.7**
ATAL Atalanti 39.05 287 P **P 03 01 48.9 -0.6**
KECS Kecovo 39.10 303 *e*P **P 03 01 50.5 +0.7**
comp=N,18nm,0.8s,mb4.8
KECS *e*PP PP 03 03 22.4 +0.1
KECS Kecovo 39.10 303 *e*P **P 03 01 50.5 +0.7**
KECS pmax pmax
comp=Z,18nm,0.8s,mb4.8
CN2 Changchun 39.11 65 *e*P **P 03 01 49.4 -0.5**
CN2 *e*sP sP 03 02 32.0 -6.6
CN2 PP PP 03 03 25.4 +3.0
CN2 *e*S **S 03 07 38.4 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,10.0s
CN2 LR LR
comp=E,400nm,10.0s
CN2 LR LR
comp=Z,300nm,11.0s
NIE Niedzica 39.14 304 *e*P **P 03 01 51.3 +1.2**
KARN Karanos 39.35 282 P **P 03 01 52.0 0.0**
OJC Ojcow 39.42 305 *e*P **P 03 01 52.4 0.0**
DSF Desfina 39.50 287 P **P 03 01 52.2 -1.0**
PSZ Piszkesteto 39.55 302⇓*i*P **P 03 01 54.0 +0.5**
comp=Z,101nm,1.4s,mb5.3
PSZ Piszkesteto 39.55 302 ⇓P **P 03 01 54.1 +0.6**
THL Klokotos Trika 39.57 289 P **P 03 01 53.3 -0.5**
GUR Goura 39.77 286 P **P 03 01 54.0 -1.5**
KALE Kalithea 39.80 287 P **P 03 01 54.7 -1.0**
TRIZ Trizonia 39.85 287 P **P 03 01 54.9 -1.2**
KEV Kevo 39.92 337⇓*i*P **P 03 01 55.8 -0.5**
comp=Z,142nm,1.2s,mb5.5
KEV Kevo 39.92 337 *e*P **P 03 01 55.8 -0.5**
KEV pmax pmax
comp=Z,55nm,0.7s,mb5.3
KEV Kevo 39.92 337 *e*p **P 03 01 55.8 -0.5**
comp=Z,55nm,0.7s,mb5.3
LAKA Lakka 39.96 287 P **P 03 01 56.4 -0.6**
LIKS Likavka 39.96 304 *e*P **P 03 01 57.3 +0.4**
comp=Z,23nm,0.7s,mb4.9
LIKS Likavka 39.96 304 *e*P **P 03 01 57.3 +0.4**
LIKS pmax pmax
comp=Z,23nm,0.7s,mb4.9
EFP Efpalio 39.96 287 P **P 03 01 56.4 -0.6**
NEST Nestorio 40.08 290 P **P 03 01 57.5 -0.4**
VYHS Vyhne 40.19 303 *e*P **P 03 01 59.4 +0.6**
comp=Z,50nm,1.3s,mb5.0
VYHS *e*PP PP 03 03 32.7 -1.4
VYHS Vyhne 40.19 303 *e*P **P 03 01 59.4 +0.6**
VYHS pmax pmax
comp=Z,50nm,1.3s,mb5.0
ARCES ARCESS Array B 40.29 336 P **P 03 01 59.1 -0.3**
comp=Z,182nm,0.9s,mb5.7,baz=113,slow=10.0,SNR=644
ARCES LR LR 03 18 44.1
comp=Z,264nm,20.5s,baz=154,slow=36
ARCES ARCESS Array B 40.29 336 P **P 03 01 59.1 -0.2**
ARE0 ARCESS Array S 40.29 336⇓*i*P **P 03 01 59.2 -0.1**
ITM Ithomi 40.31 285 P **P 03 01 58.3 -1.6**
QZH Quanzhou 40.32 96 P **P 03 02 03.8 +3.6**
OKC Ostrava-Krasne 40.51 305⇓*i*P **P 03 02 01.6 +0.2**
OKC *e* 03 03 33.6
OKC Ostrava-Krasne 40.51 305⇓*i*P **P 03 02 01.6 +0.2**
OKC *e*PP PP 03 03 33.6 -3.9
PKSM Moragy 40.62 299 ⇑P **P 03 02 02.7 +0.3**
LKD2 Lefkada island 40.80 288 P **P 03 02 02.9 -1.0**
KTK1 Kautokeino 40.82 335⇓*i*P **P 03 02 03.1 -0.5**
KTK1 AMB AMB 03 02 03.8
comp=Z,287nm,0.9s,mb5.9
GKP Gorka Klasztor 40.88 310⇓*e*P **P 03 02 04.4 +0.1**
KFL Anninata 40.90 287 P **P 03 02 03.2 -1.5**
MORC Moravsky Berou 40.91 305⇓*i*P **P 03 02 04.9 +0.3**
comp=Z,89nm,1.1s,mb5.3
MORC *e*PP PP 03 03 40.3 -1.5
MORC Moravsky Berou 40.91 305⇓*i*P **P 03 02 04.9 +0.3**
MORC *e* 03 03 40.3
MORC pmax pmax
comp=Z,89nm,1.1s,mb5.3
VLS Valsamata 41.02 287 P **P 03 02 04.2 -1.6**
TPTI 41.04 142 P **P 03 02 05.2 -0.9**
comp=Z,10μmcomp=Z,41nm,1.4s,mb4.9
MODS Modra-Piesok 41.24 303 *e*P **P 03 02 08.2 +0.8**
MODS Modra-Piesok 41.24 303 *e*P **P 03 02 08.2 +0.8**
ZST Bratislava 41.38 303 *e*P **P 03 02 09.4 +0.9**
comp=Z,26nm,0.9s,mb4.9
ZST *e*PP PP 03 03 45.9 -1.0
ZST Bratislava 41.38 303 *e*P **P 03 02 09.4 +0.9**
ZST pmax pmax
comp=Z,26nm,0.9s,mb4.9
YAK Yakutsk 41.42 36 *e*P **P 03 02 07.9 -0.8**
comp=Z,36nm,0.6s,mb5.2
YAK *e*pP pP 03 02 41.6 +0.6
YAK Yakutsk 41.42 36*d i*P **P 03 02 08.1 -0.6**
YAK *e**PP pP 03 02 41.9 +0.9
YAK *e* 03 03 44.3
YAK *e* 03 04 02.8
YAK *e*PPP 03 04 21.5
YAK *e*S **S 03 08 10.8 -1.5**
YAK *e**SS sS 03 09 06.1 -2.6
YAK *e* 03 11 52.2
YAK pmax pmax
comp=Z,53nm,0.8s,mb5.2
YAK pmax pmax
comp=E,30nm,1.4s
YAK pmax pmax
comp=N,6.0nm,1.5s
YAK pmax pmax
comp=Z,50nm,1.3s,mb5.0
YAK pmax pmax
comp=E,92nm,2.3s
YAK pmax pmax
comp=N,25nm,2.2s
YAK smax
comp=N,238nm,1.5s
YAK smax
comp=E,155nm,2.2s
VRAC Vranov 41.57 304 P **P 03 02 10.9 +0.9**
comp=E,104nm,1.0s,mb5.4,baz=83,slow=8.6,SNR=98
VRAC LR LR 03 20 31.6
comp=E,158nm,21.2s,baz=94,slow=37
VRAC Vranov 41.57 304 ⇑P **P 03 02 10.8 +0.7**
DPC Dobruska-Polom 41.63 306⇓*i*P **P 03 02 11.4 +0.9**
DPC *e* 03 03 53.7
DPC Dobruska-Polom 41.63 306⇓*i*P **P 03 02 11.4 +0.9**
DPC *e*PP PP 03 03 53.7 +4.1
UPC Upice 41.81 306⇓*i*P **P 03 02 12.7 +0.7**
UPC Upice 41.81 306⇓*i*P **P 03 02 12.7 +0.7**
MDJ Mudanjiang 41.88 63 P **P 03 02 12.8 +0.1**
MDJ pP pP 03 02 39.8 -5.3
MDJ sP sP 03 02 53.8 -7.9
MDJ PP PP 03 03 49.6 -2.8
MDJ PcS PcS 03 08 00.3 +3.1
MDJ S **S 03 08 15.1 -4.4**
MDJ SS SS 03 11 25.6 -5.9
MDJ ScS ScS 03 12 04.4 +4.9
MDJ pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
MDJ LR LR
comp=N,210nm,9.2s
MDJ LR LR
comp=E,170nm,8.3s
MDJ LR LR
comp=Z,260nm,13.3s
BSD Bornholm Skovb 42.19 313⇓*i*P **P 03 02 13.7 -1.3**
BSD pmax pmax
comp=Z,79nm,0.8s,mb5.4
CONA Conrad Observa 42.24 302 *i*P **P 03 02 16.1 +0.6**
comp=Z,185nm,1.3s,mb5.5,SNR=98
TREC Trest 42.29 304⇓*i*P **P 03 02 16.6 +0.7**
TREC Trest 42.29 304⇓*i*P **P 03 02 16.6 +0.7**
TRO Tromso 42.47 335 *e*P **P 03 02 17.0 -0.1**
TRO Tromso 42.47 335 *e*P **P 03 02 17.0 -0.1**
KSRS Korea Array 42.52 74 P **P 03 02 16.8 -1.1**
comp=Z,2.8nm,0.8s,baz=264,slow=7.8,SNR=7.6
KSRS pP pP 03 02 48.0 -2.4
comp=Z,5.2nm,0.9s,baz=279,slow=7.8,SNR=3.7
KSRS PcP PcP 03 04 07.8 0.0
comp=Z,5.8nm,0.8s,baz=281,slow=3.2,SNR=6.5
KSRS LR LR 03 22 11.3
comp=Z,108nm,18.9s,baz=289,slow=39
KSRS Korea Array 42.52 74 P **P 03 02 16.8 -1.1**
KSRS *PP pP 03 02 48.0 -2.4
KSRS 03 04 07.8
KSRS pmax pmax
comp=Z,3.0nm,0.8s
KSRS pmax pmax
comp=Z,5.0nm,0.9s
KSRS pmax pmax
comp=Z,6.0nm,0.8s
KSRS MLR MLR
comp=Z,108nm,19.0s
KLR Kul'dur 42.57 56 *e*P **P 03 02 14.0 -4.1**
KLR *e* pP 03 02 46.2 -4.4
KLR *e*SSS 03 11 39.0
ARSA Arzberg 42.57 301 *e*P **P 03 02 18.5 +0.3**
comp=Z,48nm,0.8s,mb5.2,SNR=30
PVCC Panska Ves 42.73 306⇓*i*P **P 03 02 20.0 +0.6**
PVCC *e* 03 04 09.1
PVCC Panska Ves 42.73 306⇓*i*P **P 03 02 20.0 +0.6**
PVCC *e*PP PP 03 04 09.1 +7.8
SSLB Suanglung 42.76 96 *e*P **P 03 02 21.1 +1.0**
comp=Z,10nm,0.8s,mb4.5
PRU Pruhonice 42.81 306⇓*i*P **P 03 02 21.4 +1.3**
PRU *e* 03 04 03.2
PRU Pruhonice 42.81 306⇓*i*P **P 03 02 21.4 +1.3**
PRU *e*PP PP 03 04 03.2 +1.0
HFS Hagfors 42.91 321 P **P 03 02 20.4 -0.4**
comp=Z,209nm,0.6s,mb5.9,baz=98,slow=11,SNR=634
HFS PP PP 03 04 04.4 +1.3
comp=Z,30nm,0.8s,baz=104,slow=12,SNR=3.6
HFS LR LR 03 22 30.2
comp=Z,178nm,18.2s,baz=82,slow=39
HFS Hagfors 42.91 321 P **P 03 02 20.4 -0.3**
HFS 03 04 04.4
SOKA Soboth 43.01 301⇓*i*P **P 03 02 22.3 +0.6**
comp=Z,110nm,0.9s,mb5.5
RUE Ruedersdorf 43.02 309 *e*P **P 03 02 21.7 0.0**
comp=Z,177nm,1.3s,mb5.5
RUE Ruedersdorf 43.02 309⇓*i*P **P 03 02 21.4 -0.2**
comp=Z,115nm,1.1s,mb5.4
RUE *e*PP PP 03 03 58.9 -5.4
BRG Berggiesshubel 43.08 307 *e*P **P 03 02 22.9 +0.7**
comp=Z,185nm,1.2s,mb5.6
BRG Berggiesshubel 43.08 307⇓*i*P **P 03 02 22.8 +0.6**
comp=Z,189nm,1.2s,mb5.6
BRG *i* sP sP 03 03 12.1 +0.7
comp=Z,25nm,1.2s
BRG *e*PP PP 03 04 03.4 -1.7
comp=Z,30nm,1.1s
BRG *e*SCP ScP 03 07 47.8 +1.0
comp=Z,8.9nm,1.2s
RGN Rugen 43.13 312 *e*P **P 03 02 23.3 +0.7**
comp=Z,585nm,1.1s,mb6.1
MOR8 Moi Rana 43.26 329⇓*i*P **P 03 02 22.6 -0.9**
MOR8 AMb AMB 03 02 24.1
comp=Z,343nm,0.9s,mb6.0
MOR8 Moi Rana 43.26 329⇓*i*P **P 03 02 22.6 -0.9**
comp=Z,343nm,0.9s,mb6.0
STEI Steigen 43.31 332 *e*P **P 03 02 23.7 -0.1**
STEI AMb AMB 03 02 25.8
comp=Z,135nm,2.0s,mb5.2
MOA Molln 43.31 303 *i*P **P 03 02 24.3 +0.1**
comp=Z,65nm,0.9s,mb5.2,SNR=58
OBKA Obir 43.36 301 *i*P **P 03 02 25.2 +0.6**
comp=Z,123nm,1.2s,mb5.4,SNR=34
TIXI Tiksi 43.43 22 *e*P **P 03 02 24.0 -0.8**
comp=Z,71nm,0.7s,mb5.4
TIXI Tiksi 43.43 22*d i*P **P 03 02 24.3 -0.5**
TIXI *e**PP pP 03 02 56.8 -0.6
TIXI *e**SP sP 03 03 12.5 -1.5
TIXI *e*S **S 03 08 40.1 -1.4**
TIXI *e*SS SS 03 11 52.1 -8.7
TIXI pmax pmax
comp=Z,57nm,0.7s,mb5.3
TIXI MLR MLR
comp=Z,263nm,11.0s
GEC2 GERESS Array S 43.52 304 *e*P **P 03 02 26.3 +0.5**
comp=Z,109nm,1.3s,mb5.3
GEC2 GERESS Array S 43.52 304 *e*P **P 03 02 26.3 +0.5**
GEC2 pmax pmax
comp=Z,109nm,1.3s,mb5.3
KHC Kasperske Hory 43.55 304⇓*i*P **P 03 02 26.7 +0.6**
comp=Z,122nm,1.0s,mb5.5
KHC Kasperske Hory 43.55 304⇓*i*P **P 03 02 26.8 +0.7**
KHC *e* 03 04 08.6
KHC Kasperske Hory 43.55 304⇓*i*P **P 03 02 26.8 +0.7**
KHC *e*PP PP 03 04 08.6 -1.5
COP Copenhagen 43.58 314⇓*i*P **P 03 02 26.6 +0.4**
COP pmax pmax
comp=Z,100nm,0.8s,mb5.5
CLL Collm 43.62 308 *e*P **P 03 02 26.6 +0.1**
comp=Z,136nm,1.2s,mb5.5
CLL Collm 43.62 308⇓*i*P **P 03 02 26.6 +0.1**
comp=Z,138nm,1.2s,mb5.5
CLL Collm 43.62 308⇓*i*P **P 03 02 26.6 +0.1**
CLL pmax pmax
comp=Z,138nm,1.2s,mb5.5
FLOS Flostrand 43.72 330 *e*P **P 03 02 26.9 -0.2**
KONS Konsvik 43.84 330 *e*P **P 03 02 28.1 0.0**
MYKA Terra Mystica 43.95 301⇓*i*P **P 03 02 29.5 +0.2**
comp=Z,28nm,0.9s,mb4.9
LOF Lofoten 43.97 332⇓*i*P **P 03 02 28.2 -0.9**
WET Wettzell 44.01 305 *e*P **P 03 02 30.2 +0.5**
comp=Z,88nm,1.2s,mb5.3
WET Wettzell 44.01 305 *e*P **P 03 02 30.2 +0.5**
WET pmax pmax
comp=Z,88nm,1.2s,mb5.3
CUC Castrocucco 44.05 291 *e*P **P 03 02 30.6 +0.4**
comp=Z,65nm,0.8s,mb5.3
NSS Namsos 44.06 327 *e*P **P 03 02 28.1 -1.7**
NSS AMB AMB 03 02 28.6
comp=Z,74nm,1.3s,mb5.2
KBA Koelnbreinsper 44.07 302⇓*i*P **P 03 02 30.6 +0.4**
comp=Z,70nm,1.2s,mb5.2
TANN Tannenbergstha 44.08 306 *e*P **P 03 02 30.8 +0.6**
comp=Z,83nm,1.3s,mb5.2
NKC Novy Kostel 44.11 306⇓*i*P **P 03 02 31.1 +0.6**
NKC Novy Kostel 44.11 306⇓*i*P **P 03 02 31.1 +0.6**
WERN Wernitzgruen 44.15 306 *e*P **P 03 02 31.4 +0.6**
comp=Z,70nm,1.5s,mb5.1
GUNZ Gunzen 44.17 306 *e*P **P 03 02 31.6 +0.7**
comp=Z,72nm,1.0s,mb5.3
NB2 NORSAR Subarra 44.17 322 P **P 03 02 30.0 -0.8**
comp=Z,236nm,0.9s,mb5.8,baz=91,slow=7.9
NOA NORSAR Array B 44.17 322 P **P 03 02 30.1 -0.7**
comp=Z,173nm,0.8s,mb5.7,baz=92,slow=7.7,SNR=525
NOA PP PP 03 04 17.3 +0.9
comp=Z,12nm,0.9s,baz=94,slow=9.7,SNR=3.3
NOA NORSAR Array B 44.17 322 P **P 03 02 30.1 -0.7**
NOA 03 04 17.3
WERD Werda 44.17 307 *e*P **P 03 02 31.4 +0.4**
comp=Z,64nm,0.9s,mb5.2
NAO01 NORSAR Array S 44.33 322⇓*i*P **P 03 02 31.2 -0.8**
comp=Z,196nm,0.9s,mb5.7
ROTZ Rotzenmuhle 44.34 306 *e*P **P 03 02 33.2 +0.9**
comp=Z,110nm,1.2s,mb5.4
MNSI Mandailing Nat 44.35 141 P **P 03 02 32.9 +0.1**
comp=Z,1μmcomp=Z,29nm,0.9s,mb4.9
NEUB Neuenburg 44.40 308 *e*P **P 03 02 32.9 +0.2**
comp=Z,170nm,1.1s,mb5.6
MOX Moxa 44.58 307 *e*P **P 03 02 34.5 +0.3**
comp=Z,127nm,1.3s,mb5.4
MOX Moxa 44.58 307 *e*P **P 03 02 34.7 +0.5**
comp=Z,92nm,1.1s,mb5.3
MOX Moxa 44.58 307 *e*P **P 03 02 34.5 +0.3**
MOX pmax pmax
comp=Z,127nm,1.3s,mb5.4
ABTA Abfaltersbach 44.69 301 *i*P **P 03 02 34.5 -0.6**
comp=Z,69nm,1.4s,mb5.1,SNR=16
KONO Kongsberg 44.97 320⇓*i*P **P 03 02 36.6 -0.5**
comp=Z,139nm,0.8s,mb5.6
KONO Kongsberg 44.97 320⇓*i*P **P 03 02 36.6 -0.5**
KONO pmax pmax
comp=Z,139nm,0.8s,mb5.6
GRA1 Grafenberg Arr 44.98 306 *e*P **P 03 02 38.6 +1.2**
comp=Z,285nm,1.2s,mb5.8
GRF Grafenberg Arr 44.98 306 *e*P **P 03 02 38.6 +1.2**
comp=Z,285nm,1.2s,mb5.8
GRF Grafenberg Arr 44.98 306 *e*P **P 03 02 38.6 +1.2**
GRF pmax pmax
comp=Z,285nm,1.2s,mb5.8
GRF Grafenberg Arr 44.98 306 *e*P **P 03 02 38.6 +1.2**
GRF pmax pmax
comp=Z,285nm,1.2s,mb5.8
GRFO Grafenberg 44.98 306⇓*i*P **P 03 02 38.5 +1.1**
comp=Z,145nm,1.0s,mb5.6
GRFO Grafenberg 44.98 306⇓*i*P **P 03 02 38.5 +1.1**
GRFO pmax pmax
comp=Z,145nm,1.0s,mb5.6
AQU L'Aquila 45.13 295 *e*P **P 03 02 39.2 +0.5**
comp=Z,74nm,1.1s,mb5.2
AQU L'Aquila 45.13 295 ⇓P **P 03 02 39.4 +0.7**
AQU L'Aquila 45.13 295⇓*i*P **P 03 02 39.4 +0.7**
WTTA Wattenberg 45.17 302 *i*P **P 03 02 38.7 -0.2**
comp=Z,112nm,1.2s,mb5.4,SNR=32
CLZ Clausthal 45.17 309 *e*P **P 03 02 39.3 +0.4**
comp=Z,168nm,1.3s,mb5.5
CLZ Clausthal 45.17 309 *e*P **P 03 02 39.3 +0.4**
CLZ pmax pmax
comp=Z,168nm,1.3s,mb5.5
WATA Walderalm 45.20 302⇑*i*P **P 03 02 38.7 -0.4**
comp=Z,36nm,0.9s,mb5.0,SNR=21
FUR Furstenfeldbru 45.23 304 *e*P **P 03 02 40.2 +0.8**
comp=Z,219nm,1.1s,mb5.7
FUR Furstenfeldbru 45.23 304 *e*P **P 03 02 40.2 +0.8**
FUR pmax pmax
comp=Z,219nm,1.1s,mb5.7
NRDL Niedersach Rie 45.24 310 *e*P **P 03 02 40.1 +0.7**
comp=Z,244nm,1.2s,mb5.7
MUD Monsted U'grnd 45.35 315⇓*i*P **P 03 02 40.5 +0.3**
MUD pmax pmax
comp=Z,52nm,1.1s,mb5.1
MOTA Moosalm 45.51 302 *i*P **P 03 02 41.0 -0.5**
comp=Z,76nm,1.0s,mb5.3,SNR=56
UBBA Unterbreizbach 45.56 307 *e*P **P 03 02 42.1 +0.1**
comp=Z,72nm,1.3s,mb5.1
RETA Reutte 45.70 303 *i*P **P 03 02 42.8 -0.3**
comp=Z,64nm,1.5s,mb5.0,SNR=22
FETA Feichten 45.83 302 *i*P **P 03 02 43.7 -0.4**
comp=Z,54nm,1.1s,mb5.1,SNR=22
FUORN Ofenpass-Fuorn 46.23 302⇓*i*P **P 03 02 47.2 0.0**
comp=Z,224nm,1.7s,mb5.5
SPITS Spitsbergen Ar 46.25 346 P **P 03 02 47.0 +0.1**
comp=Z,22nm,0.7s,mb4.9,baz=116,slow=18,SNR=34
SPITS PcP PcP 03 04 20.7 +0.8
comp=Z,26nm,0.8s,baz=178,slow=5.8,SNR=4.7
SPITS Spitsbergen Ar 46.25 346 P **P 03 02 47.0 0.0**
SPITS 03 04 20.7
PDSI Padang 46.26 141 P **P 03 02 46.8 -1.0**
comp=Z,10μmcomp=Z,73nm,0.9s,mb5.3
SNART Snartemo 46.27 318⇓*i*P **P 03 02 47.3 0.0**
SNART AMb AMB 03 02 48.1
comp=Z,90nm,1.4s,mb5.2
JNU Nakatsue 46.32 78⇑*i*P **P 03 02 48.6 +0.5**
comp=Z,12nm,1.1s,mb4.5
DAVA Damuels 46.33 303 *i*P **P 03 02 48.0 0.0**
comp=Z,146nm,0.7s,mb5.8,SNR=89
HLG Helgoland 46.33 312 *e*P **P 03 02 48.7 +0.8**
comp=Z,311nm,1.2s,mb5.8
BERNI Berninapass 46.44 301⇓*i*P **P 03 02 48.7 -0.2**
comp=Z,204nm,0.9s,mb5.7
DAVOX Davos/Dischmat 46.45 302⇓*i*P **P 03 02 48.7 -0.3**
comp=Z,117nm,0.6s,mb5.7
ODD1 Odda 46.46 320⇓*i*P **P 03 02 49.2 +0.4**
TOD Tromm 46.54 306 *e*P **P 03 02 49.9 +0.3**
TOD Tromm 46.54 306 *e*P **P 03 02 49.9 +0.3**
BLS5 Blasjo 46.58 320⇓*i*P **P 03 02 50.1 +0.4**
BLS5 AMB AMB 03 02 50.5
comp=Z,56nm,1.4s,mb5.0
LIENZ Kamor/St.Gall 46.59 303⇓*i*P **P 03 02 50.0 0.0**
comp=Z,358nm,1.8s,mb5.7
HYA Hoyanger 46.61 322⇓*i*P **P 03 02 50.7 +0.7**
TNS Taunus Mts 46.65 307 *e*P **P 03 02 50.8 +0.4**
comp=Z,104nm,1.2s,mb5.3
TNS Taunus Mts 46.65 307 *e*P **P 03 02 50.8 +0.4**
TNS pmax pmax
comp=Z,104nm,1.2s,mb5.3
IBBN Ibbenburen 46.70 310 *e*P **P 03 02 51.1 +0.3**
comp=Z,282nm,1.4s,mb5.7
PLONS Plons/SG 46.72 302⇓*i*P **P 03 02 50.8 -0.3**
comp=Z,393nm,1.7s,mb5.8
SDSI Sungai Dareh 46.76 140 P **P 03 02 50.4 -1.3**
comp=Z,8μmcomp=Z,8.3nm,1.2s,mb4.2
VLC Villacollemand 46.76 298⇓*i*P **P 03 02 51.7 +0.3**
comp=Z,128nm,0.8s,mb5.6
VDL Val di Lei 46.81 302⇓*i*P **P 03 02 51.5 -0.3**
comp=Z,160nm,1.9s,mb5.3
WEIN Weingarten 46.87 303⇓*i*P **P 03 02 51.8 -0.4**
comp=Z,161nm,1.8s,mb5.3
SPAK Spaichingen-Ko 46.87 304 *e*P **P 03 02 52.5 +0.3**
TUE Stuetta 46.88 302⇓*i*P **P 03 02 51.7 -0.6**
comp=Z,22nm,0.8s,mb4.8
STEIN Stein am Rhein 46.91 303⇓*i*P **P 03 02 52.3 -0.3**
comp=Z,223nm,1.6s,mb5.5
WILA Wila 46.95 303⇓*i*P **P 03 02 52.4 -0.4**
comp=Z,264nm,2.0s,mb5.5
LLS Linth-Limmern 47.02 302⇓*i*P **P 03 02 53.1 -0.3**
comp=Z,178nm,1.2s,mb5.6
JOW Kunigami 47.02 87⇑*i*P **P 03 02 53.2 -0.5**
comp=Z,5.7nm,0.4s,mb4.5
RUND Rundenannen 47.05 321⇓*i*P **P 03 02 52.5 -0.9**
KTD Kalmit 47.06 306 *e*P **P 03 02 54.1 +0.4**
KTD Kalmit 47.06 306 *e*P **P 03 02 54.1 +0.4**
BFO Black Forest 47.12 304 *e*P **P 03 02 54.2 +0.1**
comp=Z,75nm,1.2s,mb5.2
BFO Black Forest 47.12 304 *e*P **P 03 02 54.2 +0.1**
BFO pmax pmax
comp=Z,75nm,1.2s,mb5.2
ASK Askoy 47.13 321 *e*P **P 03 02 53.1 -1.0**
EGD Espegrend 47.13 321 *e*P **P 03 02 53.2 -0.9**
FLACH Flaach 47.14 303⇓*i*P **P 03 02 53.7 -0.6**
comp=Z,168nm,1.8s,mb5.4
BUG Bochum--Univer 47.15 309 *e*P **P 03 02 54.7 +0.4**
comp=Z,171nm,1.2s,mb5.5
MUGIO Muggio 47.22 301⇓*i*P **P 03 02 54.9 -0.1**
comp=Z,138nm,1.1s,mb5.5
MUO Muotathal 47.23 302⇓*i*P **P 03 02 53.8 -1.2**
comp=Z,467nm,1.5s,mb5.9
LANF Langenberg 47.31 305 *e*P **P 03 02 56.2 +0.6**
LANF Langenberg 47.31 305 *e*P **P 03 02 56.2 +0.6**
FUSIO Fusio 47.34 302⇓*i*P **P 03 02 55.3 -0.6**
comp=Z,172nm,1.1s,mb5.6
KBS Kingsbay 47.35 347⇓*i*P **P 03 02 55.8 +0.3**
comp=Z,98nm,1.1s,mb5.3
KBS Kingsbay 47.35 347*ce*P **P 03 02 56.7 +1.2**
KBS pmax pmax
comp=Z,82nm,1.2s,mb5.2
BNALP Bannalp 47.40 302⇓*i*P **P 03 02 56.1 -0.2**
comp=Z,201nm,1.1s,mb5.7
FELD Feldberg im Sc 47.44 304 *e*P **P 03 02 56.5 -0.1**
SULZ Cheisacher 47.45 303⇓*i*P **P 03 02 56.1 -0.6**
comp=Z,238nm,1.0s,mb5.8
HASLI Hasliberg/Brie 47.61 302⇓*i*P **P 03 02 57.5 -0.4**
comp=Z,308nm,1.7s,mb5.7
RUP Ruppelstein 47.63 306 *e*P **P 03 02 58.5 +0.4**
RUP Ruppelstein 47.63 306 *e*P **P 03 02 58.5 +0.4**
BALST Balsthal 47.77 303⇓*i*P **P 03 02 58.6 -0.6**
comp=Z,275nm,1.7s,mb5.6
CDF Champ du Feu 47.78 305⇓*i*P **P 03 02 59.2 -0.1**
comp=Z,128nm,1.1s,mb5.2
CDF Champ du Feu 47.78 305⇓*i*P **P 03 02 59.2 -0.1**
comp=Z,64nm,1.1s,mb5.2
CDF Champ du Feu 47.78 305⇓*i*P **P 03 02 59.2 -0.1**
CDF pmax pmax
comp=Z,64nm,1.1s,mb5.2
BBS Basel-Blauen 47.86 303 *e*P **P 03 02 59.4 -0.4**

BBS Basel-Blauen 47.86 303 *eP* **P 03 02 59.4 -0.4**
ECH Echery 47.91 304 *eP* **P 03 03 00.1 -0.1**
ECH Echery 47.91 304⇓*iP* **P 03 02 59.8 -0.4**
comp=Z,52nm,1.4s,mb5.0
ECH *ePP* PP 03 04 51.7 -1.5
ECH Echery 47.91 304⇓*iP* **P 03 02 59.8 -0.4**
ECH *e* 03 04 51.7
ECH pmax pmax
comp=Z,52nm,1.4s,mb5.0
WIMIS Wimmis 47.98 302⇓*iP* **P 03 03 00.4 -0.4**
comp=Z,230nm,1.7s,mb5.5
MOF Molkenrain 48.01 304 *eP* **P 03 03 01.1 +0.1**
MOF Molkenrain 48.01 304 *eP* **P 03 03 01.1 +0.1**
LKBD Leukerbad 48.05 302⇓*iP* **P 03 03 01.0 -0.4**
comp=Z,232nm,1.0s,mb5.8
BOURR Bourrignon 48.06 303⇓*iP* **P 03 03 01.0 -0.4**
comp=Z,146nm,1.1s,mb5.5
PGF Pioggiola 48.19 297⇓*iP* **P 03 03 02.3 -0.2**
comp=Z,161nm,0.9s,mb5.3
PGF Pioggiola 48.19 297⇓*iP* **P 03 03 02.3 -0.2**
comp=Z,81nm,0.9s,mb5.3
PGF Pioggiola 48.19 297⇓*iP* **P 03 03 02.3 -0.2**
PGF pmax pmax
comp=Z,81nm,0.9s,mb5.3
HINF Hinteralfeld 48.20 304⇓*iP* **P 03 03 02.3 -0.2**
comp=Z,172nm,1.0s,mb5.3
HINF Hinteralfeld 48.20 304⇓*iP* **P 03 03 02.3 -0.2**
comp=Z,86nm,1.0s,mb5.3
HINF Hinteralfeld 48.20 304⇓*iP* **P 03 03 02.3 -0.2**
HINF pmax pmax
comp=Z,86nm,1.0s,mb5.3
WLF Walferdange 48.21 307 *eP* **P 03 03 03.4 +0.9**
comp=Z,167nm,1.0s,mb5.6
WLF Walferdange 48.21 307⇓*iP* **P 03 03 03.2 +0.7**
comp=Z,123nm,0.9s,mb5.5
WLF Walferdange 48.21 307⇓*iP* **P 03 03 03.2 +0.7**
WLF pmax pmax
comp=Z,123nm,0.9s,mb5.5
SENIN Lac Senin/Sane 48.28 302⇓*iP* **P 03 03 03.0 -0.1**
comp=Z,228nm,1.5s,mb5.6
DIX Grande Dixence 48.28 302⇓*iP* **P 03 03 03.3 +0.2**
comp=Z,203nm,2.0s,mb5.4
LOMF Lomont 48.34 303 *eP* **P 03 03 03.2 -0.3**
LOMF Lomont 48.34 303 *eP* **P 03 03 03.2 -0.3**
TORNY Torny/Romont 48.40 303⇓*iP* **P 03 03 03.8 -0.2**
comp=Z,169nm,1.1s,mb5.6
GRYON Gryon 48.43 302⇓*iP* **P 03 03 04.1 -0.2**
comp=Z,258nm,1.3s,mb5.7
HAU Haudompre 48.48 304⇓*iP* **P 03 03 04.5 -0.1**
comp=Z,172nm,1.0s,mb5.3
HAU *e*MLR MLR
comp=Z,131nm,18.8s
HAU Haudompre 48.48 304⇓*iP* **P 03 03 04.5 -0.1**
comp=Z,86nm,1.0s,mb5.3
HAU LR LR
comp=Z,130nm,18.8s
HAU Haudompre 48.48 304⇓*iP* **P 03 03 04.5 -0.1**
HAU pmax pmax
comp=Z,86nm,1.0s,mb5.3
HAU MLR MLR
comp=Z,130nm,18.8s
AIGLE Aigle 48.52 302⇓*iP* **P 03 03 04.7 -0.2**
comp=Z,339nm,1.7s,mb5.7
SALAN Lac Salanfe 48.55 302⇓*iP* **P 03 03 05.3 +0.1**
comp=Z,445nm,1.7s,mb5.8
EMV Vieux Emosson 48.63 302⇓*iP* **P 03 03 05.9 +0.1**
comp=Z,117nm,0.9s,mb5.5
THEF They Montfort 48.66 305 *eP* **P 03 03 06.2 +0.2**
THEF They Montfort 48.66 305 *eP* **P 03 03 06.2 +0.2**
OG01 Vacheresse 48.70 302 *eP* **P 03 03 06.4 +0.1**
SAOF Saorge 48.77 299 *eP* **P 03 03 07.5 +0.6**
SAOF Saorge 48.77 299 *eP* **P 03 03 07.5 +0.6**
AUTN L'Aution 48.85 299 *eP* **P 03 03 08.4 +0.9**
AUTN L'Aution 48.85 299 *eP* **P 03 03 08.4 +0.9**
LPG La Plagne 48.88 301⇓*iP* **P 03 03 08.1 +0.4**
comp=Z,248nm,1.0s,mb5.5
LPG La Plagne 48.88 301⇓*iP* **P 03 03 08.1 +0.4**
comp=Z,124nm,1.0s,mb5.5
LPG La Plagne 48.88 301⇓*iP* **P 03 03 08.1 +0.4**
LPG pmax pmax
comp=Z,124nm,1.0s,mb5.5
SBF Sospel 48.89 299⇓*iP* **P 03 03 08.1 +0.3**
comp=Z,679nm,1.2s,mb5.9
SBF Sospel 48.89 299⇓*iP* **P 03 03 08.1 +0.3**
comp=Z,340nm,1.2s,mb5.8
SBF Sospel 48.89 299⇓*iP* **P 03 03 08.1 +0.3**
SBF pmax pmax
comp=Z,340nm,1.2s,mb5.8
LPL La Plagne 48.89 301⇓*iP* **P 03 03 08.2 +0.4**
comp=Z,295nm,1.0s,mb5.6
LPL La Plagne 48.89 301⇓*iP* **P 03 03 08.2 +0.4**
comp=Z,147nm,1.0s,mb5.6
LPL La Plagne 48.89 301⇓*iP* **P 03 03 08.2 +0.4**
LPL pmax pmax
comp=Z,147nm,1.0s,mb5.6
RSL Roselend 48.91 301 *eP* **P 03 03 08.4 +0.4**
RSL Roselend 48.91 301 *eP* **P 03 03 08.4 +0.4**
GIMEL St. Georges / 48.92 302⇓*iP* **P 03 03 08.2 +0.2**
comp=Z,359nm,1.8s,mb5.7
LUCF Luceram 48.94 299 *eP* **P 03 03 08.7 +0.5**
OG22 Abries 48.94 300 *eP* **P 03 03 08.5 +0.3**
GIVF Givet 48.95 307⇓*iP* **P 03 03 08.6 +0.4**
comp=Z,347nm,1.2s,mb5.6
GIVF Givet 48.95 307⇓*iP* **P 03 03 08.6 +0.4**
comp=Z,174nm,1.2s,mb5.6
GIVF Givet 48.95 307⇓*iP* **P 03 03 08.6 +0.4**
GIVF pmax pmax
comp=Z,174nm,1.2s,mb5.6
REVF Revere 48.97 299 *eP* **P 03 03 08.7 +0.3**
REVF Revere 48.97 299 *eP* **P 03 03 08.7 +0.3**
TOUF Mont Tournerai 48.97 299 *eP* **P 03 03 09.2 +0.8**
TOUF Mont Tournerai 48.97 299 *eP* **P 03 03 09.2 +0.8**
CABF La Chapelle 49.02 303⇓*iP* **P 03 03 08.7 0.0**
comp=Z,99nm,0.9s,mb5.2
CABF La Chapelle 49.02 303⇓*iP* **P 03 03 08.7 0.0**
comp=Z,50nm,0.9s,mb5.1
CABF La Chapelle 49.02 303⇓*iP* **P 03 03 08.7 0.0**
CABF pmax pmax
comp=Z,50nm,0.9s,mb5.1
BNI Bardonecchia 49.06 300⇓*iP* **P 03 03 09.0 -0.1**
comp=Z,142nm,1.2s,mb5.5
BNI Bardonecchia 49.06 300⇓*iP* **P 03 03 09.0 -0.1**
BNI pmax pmax
comp=Z,142nm,1.2s,mb5.5
MVIF Mont Vial 49.07 299 *eP* **P 03 03 09.7 +0.5**
MVIF Mont Vial 49.07 299 *eP* **P 03 03 09.7 +0.5**
MBDF Montbardon 49.09 300⇓*iP* **P 03 03 09.0 -0.3**
comp=Z,94nm,0.9s,mb5.1
MBDF Montbardon 49.09 300⇓*iP* **P 03 03 09.0 -0.3**
comp=Z,47nm,0.9s,mb5.1
MBDF Montbardon 49.09 300⇓*iP* **P 03 03 09.0 -0.3**
MBDF pmax pmax
comp=Z,47nm,0.9s,mb5.1
MEZF Maizieres J'vi 49.20 305⇓*iP* **P 03 03 10.4 +0.3**
comp=Z,519nm,1.2s,mb5.7
MEZF Maizieres J'vi 49.20 305⇓*iP* **P 03 03 10.4 +0.3**
comp=Z,519nm,1.2s,mb6.0
SFTF Sexfontaines 49.28 305⇓*iP* **P 03 03 10.7 0.0**
comp=Z,359nm,1.2s,mb5.6
SFTF Sexfontaines 49.28 305⇓*iP* **P 03 03 10.7 0.0**
comp=Z,359nm,1.2s,mb5.9
CALN Calern 49.30 299 *eP* **P 03 03 11.5 +0.6**
CALN Calern 49.30 299 *eP* **P 03 03 11.5 +0.6**
BAIF Baives 49.34 307⇓*iP* **P 03 03 11.7 +0.5**
comp=Z,374nm,1.2s,mb5.6
BAIF Baives 49.34 307⇓*iP* **P 03 03 11.7 +0.5**
comp=Z,187nm,1.2s,mb5.6
BAIF Baives 49.34 307⇓*iP* **P 03 03 11.7 +0.5**
BAIF pmax pmax
comp=Z,187nm,1.2s,mb5.6
FRF La Foret Royal 49.52 299⇓*iP* **P 03 03 12.5 -0.1**
comp=Z,170nm,0.9s,mb5.4
FRF La Foret Royal 49.52 299⇓*iP* **P 03 03 12.5 -0.1**
comp=Z,85nm,0.9s,mb5.4
FRF La Foret Royal 49.52 299⇓*iP* **P 03 03 12.5 -0.1**
FRF pmax pmax
comp=Z,85nm,0.9s,mb5.4
ORIF Oris-en-Rattie 49.64 300⇓*iP* **P 03 03 12.8 -0.7**
comp=Z,66nm,1.0s,mb4.9
ORIF *e*MLR MLR
comp=Z,72nm,18.0s
ORIF Oris-en-Rattie 49.64 300⇓*iP* **P 03 03 12.8 -0.7**
comp=Z,33nm,1.0s,mb4.9
ORIF Oris-en-Rattie 49.64 300⇓*iP* **P 03 03 12.8 -0.7**
ORIF pmax pmax
comp=Z,33nm,1.0s,mb4.9

OG25 Le Caire 49.67 300 *eP* **P 03 03 13.4 -0.3**
KSI Kapahiang 49.68 140 P **P 03 03 10.7 -3.4**
comp=Z,74nm,0.9s,mb5.3
LMR La Mourre 49.69 298⇓*iP* **P 03 03 13.7 -0.2**
comp=Z,81nm,1.0s,mb5.0
LMR La Mourre 49.69 298⇓*iP* **P 03 03 13.7 -0.2**
comp=Z,40nm,1.0s,mb5.0
LMR La Mourre 49.69 298⇓*iP* **P 03 03 13.7 -0.2**
LMR pmax pmax
comp=Z,41nm,1.0s,mb5.0
KSM Kuching 49.82 128 *eP* **P 03 03 16.1 +0.9**
comp=Z,20nm,0.8s,mb4.8
KSM *e*pP pP 03 03 49.5 +0.8
OCF Saint Nazaire 50.13 300 *eP* **P 03 03 17.7 +0.5**
OG26 St.-Nazaire-De 50.13 300 *eP* **P 03 03 17.7 +0.5**
SMRF Simiane la Rot 50.13 299⇓*iP* **P 03 03 17.3 +0.1**
comp=Z,130nm,1.1s,mb5.2
SMRF Simiane la Rot 50.13 299⇓*iP* **P 03 03 17.3 +0.1**
comp=Z,130nm,1.0s,mb5.5
YSS Yuzh-Sakhalins 50.25 56⇑*eP* **P 03 03 18.6 +0.5**
YSS *e* pP 03 03 52.0 +0.5
YSS pmax pmax
comp=Z,30nm,1.0s,mb4.9
KKM Kota Kinabalu 50.28 119 *eP* **P 03 03 19.7 +1.0**
comp=Z,14nm,0.8s,mb4.7
KKM *e*pP pP 03 03 53.0 +0.8
LOR Lormes 50.30 304⇓*iP* **P 03 03 17.8 -0.6**
comp=Z,111nm,0.9s,mb5.2
LOR *e*MLR MLR
comp=Z,85nm,17.5s
LOR Lormes 50.30 304⇓*iP* **P 03 03 17.8 -0.6**
comp=Z,56nm,0.9s,mb5.2
LOR LR LR
comp=Z,80nm,17.5s
LOR Lormes 50.30 304⇓*iP* **P 03 03 17.8 -0.6**
LOR pmax pmax
comp=Z,55nm,0.9s,mb5.2
LOR MLR MLR
comp=Z,80nm,17.5s
KEST Kesra 50.31 288 P **P 03 03 19.4 +0.7**
comp=Z,26nm,0.9s,mb4.8,baz=314,slow=1.0,SNR=68
KEST Kesra 50.31 288⇓*iP* **P 03 03 19.1 +0.4**
LRW Lerwick 50.33 321⇓*eP* **P 03 03 18.1 -0.3**
LRW AMB AMB 03 03 18.8
comp=Z,148nm,0.9s,mb5.6
SSB Saint Sauveur 50.44 301 *eP* **P 03 03 19.7 +0.2**
SSB Saint Sauveur 50.44 301 *eP* **P 03 03 19.7 +0.2**
VIVF Saint-Julien-l 50.48 301⇓*iP* **P 03 03 19.8 0.0**
comp=Z,106nm,0.9s,mb5.2
VIVF Saint-Julien-l 50.48 301⇓*iP* **P 03 03 19.8 0.0**
comp=Z,53nm,0.9s,mb5.2
VIVF Saint-Julien-l 50.48 301⇓*iP* **P 03 03 19.8 0.0**
VIVF pmax pmax
comp=Z,53nm,0.9s,mb5.2
SMF Signal de Mont 50.49 303⇓*iP* **P 03 03 19.6 -0.3**
comp=Z,366nm,1.2s,mb5.6
SMF Signal de Mont 50.49 303⇓*iP* **P 03 03 19.6 -0.3**
comp=Z,183nm,1.2s,mb5.6
SMF Signal de Mont 50.49 303⇓*iP* **P 03 03 19.6 -0.3**
SMF pmax pmax
comp=Z,183nm,1.2s,mb5.6
WAL1 Walls 50.52 321⇓*eP* **P 03 03 19.1 -0.7**
MAJO Matsushiro 50.54 71 *eP* **P 03 03 20.0 -0.4**
comp=Z,8.1nm,1.0s,mb4.3
MAJO Matsushiro 50.54 71 *eP* **P 03 03 20.0 -0.4**
MAJO pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
MJAR Matsushiro Arr 50.54 71 P **P 03 03 20.3 -0.1**
comp=Z,8.3nm,0.9s,mb4.4,baz=286,slow=9.8,SNR=17
MJAR pP pP 03 03 54.1 +0.2
comp=Z,24nm,0.9s,baz=282,slow=10,SNR=4.7
MJAR ScP ScP 03 08 18.4 +0.1
comp=Z,3.4nm,0.9s,baz=279,slow=5.4,SNR=5.8
MJAR Matsushiro Arr 50.54 71 P **P 03 03 20.3 -0.1**
MJAR *PP pP 03 03 54.1 +0.2
SSF Saint Saulge 50.59 304⇓*iP* **P 03 03 20.2 -0.4**
comp=Z,216nm,1.2s,mb5.4
SSF Saint Saulge 50.59 304⇓*iP* **P 03 03 20.2 -0.4**
comp=Z,108nm,1.2s,mb5.4
SSF Saint Saulge 50.59 304⇓*iP* **P 03 03 20.2 -0.4**
SSF pmax pmax
comp=Z,108nm,1.2s,mb5.3
AVF Avril sur Loir 50.77 304⇓*iP* **P 03 03 21.6 -0.4**
comp=Z,430nm,1.0s,mb5.7
AVF Avril sur Loir 50.77 304⇓*iP* **P 03 03 21.6 -0.4**
comp=Z,215nm,1.0s,mb5.7
AVF Avril sur Loir 50.77 304⇓*iP* **P 03 03 21.6 -0.4**
AVF pmax pmax
comp=Z,215nm,1.0s,mb5.7
PLDF La Plantade 50.84 302 *eP* **P 03 03 22.5 0.0**
PLDF La Plantade 50.84 302 *eP* **P 03 03 22.5 0.0**
ELSH Elham, Standar 50.97 309⇓*eP* **P 03 03 23.1 -0.2**
ELSH AMB AMB 03 03 24.5
comp=Z,307nm,1.0s,mb5.9
HYF Humbligny 51.10 304⇓*iP* **P 03 03 24.5 +0.1**
AGO Saint Agoulin 51.14 303 *eP* **P 03 03 25.0 +0.3**
BGF Bois d'Agland 51.17 303⇓*iP* **P 03 03 24.6 -0.4**
comp=Z,123nm,0.9s,mb5.2
BGF Bois d'Agland 51.17 303⇓*iP* **P 03 03 24.6 -0.4**
comp=Z,62nm,0.9s,mb5.2
BGF Bois d'Agland 51.17 303⇓*iP* **P 03 03 24.6 -0.4**
BGF pmax pmax
comp=Z,62nm,0.9s,mb5.2
MDSI Maura Dua 51.20 139 P pP 03 03 56.5 -2.6
LASF Ste Croix 51.28 300⇓*iP* **P 03 03 26.1 +0.3**
comp=Z,300nm,1.1s,mb5.5
PYM Petit Puy Mans 51.32 302 *eP* **P 03 03 26.3 +0.3**
PYM Petit Puy Mans 51.32 302 *eP* **P 03 03 26.3 +0.3**
LBL Lubilhac 51.32 302 *eP* **P 03 03 26.6 +0.5**
LBL Lubilhac 51.32 302 *eP* **P 03 03 26.6 +0.5**
CMAH Djebel Manchou 51.40 290 P **P 03 03 26.0 -0.8**
KMBO Kilima Mbogo 51.43 229 P **P 03 03 26.6 -0.7**
comp=Z,3.7nm,0.8s,baz=0.4,slow=24,SNR=12
KMBO Kilima Mbogo 51.43 229 P **P 03 03 26.6 -0.6**
ABSA Djebel Ababsia 51.49 289 P **P 03 03 27.0 -0.5**
TCF Toulx Ste Croi 51.68 303⇓*iP* **P 03 03 28.8 +0.1**
comp=Z,317nm,1.1s,mb5.6
TCF Toulx Ste Croi 51.68 303⇓*iP* **P 03 03 28.8 +0.1**
comp=Z,159nm,1.1s,mb5.6
TCF Toulx Ste Croi 51.68 303⇓*iP* **P 03 03 28.8 +0.1**
TCF pmax pmax
comp=Z,159nm,1.1s,mb5.6
FRNF Fournols 51.73 302 *eP* **P 03 03 29.7 +0.6**
CAEH 'Ain El Ouahch 51.76 290 P **P 03 03 28.0 -1.5**
JMIC Jan Mayen 51.78 336 LR LR 03 25 00.6
comp=Z,226nm,18.4s,baz=74,slow=35
MME1 Meikle Cairn 51.80 318⇓*iP* **P 03 03 28.9 -0.5**
MCD Coleburn Disti 51.89 318⇓*iP* **P 03 03 29.9 -0.2**
SEY Seymchan 51.89 35⇓*iP* **P 03 03 29.7 -0.3**
ORE Reay 51.93 320⇓*eP* **P 03 03 30.4 0.0**
ESY Stoneypath 51.94 316⇓*iP* **P 03 03 29.6 -0.8**
XAL Allendale 51.98 315⇓*iP* **P 03 03 30.2 -0.5**
CKFL Kef-Lekhel 52.01 290 P **P 03 03 31.0 -0.3**
EBL Broad Law 52.21 316⇓*iP* **P 03 03 31.6 -0.9**
CAF Calviac 52.21 302⇓*iP* **P 03 03 33.0 +0.3**
comp=Z,215nm,1.1s,mb5.4
CAF Calviac 52.21 302⇓*iP* **P 03 03 33.0 +0.3**
comp=Z,107nm,1.1s,mb5.4
CAF Calviac 52.21 302⇓*iP* **P 03 03 33.0 +0.3**
CAF pmax pmax
comp=Z,107nm,1.1s,mb5.4
CASM Ain Smara 52.23 290 P **P 03 03 32.0 -1.0**
EDI Edinburgh 52.25 316⇓*eP* **P 03 03 31.3 -1.5**
EDI AMB AMB 03 03 32.0
comp=Z,126nm,0.9s,mb5.5
MVH1 Achvaich 52.29 319⇓*iP* **P 03 03 32.5 -0.6**
EBH Black Hill 52.34 317⇓*eP* **P 03 03 32.5 -0.9**
WOL Wolverton 52.35 310⇓*eP* **P 03 03 33.3 -0.3**
WOL AMB AMB 03 03 34.0
comp=Z,279nm,1.1s,mb5.8
ECK Cauldkaine Hil 52.40 315⇓*iP* **P 03 03 33.2 -0.7**
EAU Auchinoon 52.41 316⇓*eP* **P 03 03 33.3 -0.6**
ESK Eskdalemuir 52.41 315⇓*eP* **P 03 03 32.5 -1.5**
ESK AMB AMB 03 03 33.1
comp=Z,104nm,1.1s,mb5.4
ESK Eskdalemuir 52.41 315⇓*iP* **P 03 03 33.4 -0.6**
comp=Z,90nm,1.0s,mb5.3
ESK Eskdalemuir 52.41 315⇓*iP* **P 03 03 33.4 -0.6**
ESK pmax pmax
comp=Z,90nm,1.0s,mb5.3
ESK Eskdalemuir 52.41 315 P **P 03 03 33.5 -0.5**
comp=Z,530nm,1.0s,mb6.1,SNR=20
RJF Les Rejaudoux 52.45 302⇓*iP* **P 03 03 34.9 +0.4**
comp=Z,211nm,1.1s,mb5.4
RJF *e*MLR MLR
comp=Z,112nm,17.2s
RJF Les Rejaudoux 52.45 302⇓*iP* **P 03 03 34.9 +0.4**
comp=Z,106nm,1.1s,mb5.4
RJF LR LR
comp=Z,110nm,17.3s
RJF Les Rejaudoux 52.45 302⇓*iP* **P 03 03 34.9 +0.4**
RJF pmax pmax
comp=Z,106nm,1.1s,mb5.4
RJF MLR MLR
comp=Z,110nm,17.3s
LDF La Druitiere 52.47 307⇓*iP* **P 03 03 34.0 -0.5**
comp=Z,161nm,0.9s,mb5.4
LDF La Druitiere 52.47 307⇓*iP* **P 03 03 34.0 -0.5**
comp=Z,81nm,0.9s,mb5.3
LDF La Druitiere 52.47 307⇓*iP* **P 03 03 34.0 -0.5**
LDF pmax pmax
comp=Z,81nm,0.9s,mb5.3
SJAF Saint Jean de 52.49 298 *eP* **P 03 03 34.6 -0.2**
MDO Dochfour 52.50 318⇓*iP* **P 03 03 34.1 -0.5**
KESW Keswick, Cumbr 52.55 315⇓*eP* **P 03 03 34.6 -0.3**
KESW AMB AMB 03 03 35.5
comp=Z,128nm,1.1s,mb5.5
DFRA Djebel Bou Aff 52.57 290 P **P 03 03 35.0 -0.5**
MTLF Montolieu 52.64 300⇓*iP* **P 03 03 36.0 +0.1**
comp=Z,123nm,1.1s,mb5.2
MTLF Montolieu 52.64 300⇓*iP* **P 03 03 36.0 +0.1**
comp=Z,61nm,1.1s,mb5.2
MTLF Montolieu 52.64 300⇓*iP* **P 03 03 36.0 +0.1**
MTLF pmax pmax
comp=Z,61nm,1.1s,mb5.2
FLN La Foliniere 52.65 307⇓*iP* **P 03 03 35.2 -0.6**
comp=Z,234nm,1.0s,mb5.6
FLN *e*MLR MLR
comp=Z,151nm,22.5s
FLN La Foliniere 52.65 307⇓*iP* **P 03 03 35.2 -0.6**
comp=Z,117nm,1.0s,mb5.6
FLN LR LR
comp=Z,150nm,22.5s
FLN La Foliniere 52.65 307⇓*iP* **P 03 03 35.2 -0.6**
FLN pmax pmax
comp=Z,117nm,1.0s,mb5.6
FLN MLR MLR
comp=Z,150nm,22.5s
FILF Fillols 52.68 299 *eP* **P 03 03 36.7 +0.5**
RSC Scourie 52.70 319⇓*eP* **P 03 03 36.0 0.0**
XDE Dent Fell 52.78 314⇓*iP* **P 03 03 36.4 -0.4**
EAB Aberfoyle 52.81 317⇓*eP* **P 03 03 36.2 -0.7**
GCD Castle Douglas 52.94 315⇓*iP* **P 03 03 37.4 -0.5**
CARF Carcanieres 52.94 299 *eP* **P 03 03 38.0 -0.1**
KAC Achnashellach 52.98 318⇓*iP* **P 03 03 37.6 -0.5**
PGBU Glenifferbraes 52.98 316⇓*eP* **P 03 03 37.8 -0.4**
PGBU AMB AMB 03 03 38.6
comp=Z,162nm,0.8s,mb5.8
GRR Gorron 53.00 307⇓*iP* **P 03 03 37.8 -0.6**
comp=Z,399nm,0.9s,mb5.8
GRR Gorron 53.00 307⇓*iP* **P 03 03 37.8 -0.6**
comp=Z,200nm,0.9s,mb5.8
GRR Gorron 53.00 307⇓*iP* **P 03 03 37.8 -0.6**
GRR pmax pmax
comp=Z,200nm,0.9s,mb5.8
SET Setif 53.06 290 P **P 03 03 39.0 -0.1**
LFF La Frestale 53.09 302⇓*iP* **P 03 03 39.4 +0.2**
comp=Z,196nm,0.9s,mb5.6
LFF La Frestale 53.09 302⇓*iP* **P 03 03 39.4 +0.2**
comp=Z,98nm,0.9s,mb5.5
LFF La Frestale 53.09 302⇓*iP* **P 03 03 39.4 +0.2**
LFF pmax pmax
comp=Z,98nm,0.9s,mb5.5
VALF Valcebollere 53.11 299 *eP* **P 03 03 39.8 +0.4**
KSB Sheil Bridge 53.12 318⇓*iP* **P 03 03 38.7 -0.4**
MFF Saint Martin d 53.12 304⇓*iP* **P 03 03 38.7 -0.6**
comp=Z,245nm,1.2s,mb5.5
MFF Saint Martin d 53.12 304⇓*iP* **P 03 03 38.7 -0.6**
comp=Z,123nm,1.2s,mb5.5
MFF Saint Martin d 53.12 304⇓*iP* **P 03 03 38.7 -0.6**
MFF pmax pmax
comp=Z,123nm,1.2s,mb5.5
RRR Rubha Reidh 53.15 319⇓*iP* **P 03 03 39.0 -0.4**
HGH Gray Hill 53.20 311⇓*iP* **P 03 03 39.0 -0.8**
KPL Plockton 53.20 318⇓*eP* **P 03 03 39.3 -0.4**
KPL AMB AMB 03 03 40.4
comp=Z,127nm,1.9s,mb5.3
MCH1 Michaelchurch 53.21 311⇓*eP* **P 03 03 39.9 0.0**
MCH1 AMB AMB 03 03 40.6
comp=Z,216nm,0.9s,mb5.9
YUK Yuzh-Kuril'sk 53.25 59 *eP* **P 03 03 30.8 -10**
YUK S **S 03 11 15.0 +15**
YUK MLR MLR
comp=Z,310nm,18.0s
GAL1 Galloway 53.37 315⇓*eP* **P 03 03 40.6 -0.4**
GAL1 AMB AMB 03 03 41.9
comp=Z,92nm,2.4s,mb5.1
GIM North Isle of 53.39 314⇓*eP* **P 03 03 41.0 -0.2**
KAR1 Arisaig 53.41 318⇓*iP* **P 03 03 41.1 -0.2**
MLS Moulis 53.55 300 *eP* **P 03 03 42.3 -0.2**
SALF Salau 53.55 299 *eP* **P 03 03 41.8 -0.8**
RRH Rhenigidale 53.59 319⇓*eP* **P 03 03 41.7 -0.9**
DAG Danmarks Havn 53.60 343⇓*iP* **P 03 03 42.3 -0.1**
DAG *i* *PP pP 03 04 17.8 +1.5
DAG pmax pmax
comp=Z,56nm,1.1s,mb5.2
DAG Danmarks Havn 53.60 343⇓*iP* **P 03 03 42.3 -0.1**
comp=Z,559nm,1.1s,mb6.2
DAG *i* pP pP 03 04 17.8 +1.5
HEX Exmoor 53.97 310⇓*iP* **P 03 03 44.5 -1.0**
EPF Esparros 54.04 300⇓*iP* **P 03 03 45.1 -1.0**
comp=Z,58nm,1.0s,mb5.0
EPF Esparros 54.04 300⇓*iP* **P 03 03 45.1 -1.0**
comp=Z,29nm,1.0s,mb5.0
EPF Esparros 54.04 300⇓*iP* **P 03 03 45.1 -1.0**
EPF pmax pmax
comp=Z,29nm,1.0s,mb5.0
RESF Ens 54.12 300 *eP* **P 03 03 47.3 +0.6**
LABF Labassere 54.21 300 *eP* **P 03 03 47.2 -0.1**
GMM Mts of Mourne 54.24 315⇓*eP* **P 03 03 46.7 -0.6**
VIEF Viey 54.31 300 *eP* **P 03 03 48.5 +0.5**
HTL Hartland 54.40 311 *eP* **P 03 03 47.9 -0.7**
HTL AMB AMB 03 03 48.7
comp=Z,62nm,0.8s,mb5.4
REYF Montagne du Re 54.52 300 *eP* **P 03 03 49.0 -0.6**
ROSF Rostrenen 54.54 307⇓*iP* **P 03 03 49.2 -0.4**
comp=Z,161nm,0.8s,mb5.5
ROSF Rostrenen 54.54 307⇓*iP* **P 03 03 49.2 -0.4**
comp=Z,80nm,0.8s,mb5.5
ROSF Rostrenen 54.54 307⇓*iP* **P 03 03 49.2 -0.4**
ROSF pmax pmax
comp=Z,81nm,0.8s,mb5.5
ABA Alger-Bouzarea 54.55 292 P **P 03 03 49.7 -0.2**
QUIF Quistinic 54.61 307⇓*iP* **P 03 03 49.7 -0.5**
comp=Z,160nm,0.8s,mb5.5
QUIF Quistinic 54.61 307⇓*iP* **P 03 03 49.7 -0.5**
comp=Z,80nm,0.8s,mb5.5
QUIF Quistinic 54.61 307⇓*iP* **P 03 03 49.7 -0.5**
QUIF pmax pmax
comp=Z,80nm,0.8s,mb5.5
ETSF Etsaut 54.70 300⇓*iP* **P 03 03 51.1 +0.2**
comp=Z,112nm,1.0s,mb5.3
ETSF Etsaut 54.70 300⇓*iP* **P 03 03 51.1 +0.2**
comp=Z,56nm,1.0s,mb5.2
ETSF Etsaut 54.70 300⇓*iP* **P 03 03 51.1 +0.2**
ETSF pmax pmax
comp=Z,56nm,1.0s,mb5.2
DSB Dublin 54.79 314 *eP* **P 03 03 50.8 -0.5**
comp=Z,41nm,1.2s,mb5.0
EMHD Djebel Mahouad 54.87 291 P **P 03 03 52.2 0.0**
LARF Larrau 54.94 300 *eP* **P 03 03 49.7 -2.9**
OSSF Osses 55.04 301 *eP* **P 03 03 52.7 -0.6**
SJPF Ste Jean 55.07 301⇓*iP* **P 03 03 53.1 -0.4**
comp=Z,51nm,1.0s,mb4.9
SJPF Ste Jean 55.07 301⇓*iP* **P 03 03 53.1 -0.4**
comp=Z,26nm,1.0s,mb4.9
SJPF Ste Jean 55.07 301⇓*iP* **P 03 03 53.1 -0.4**
SJPF pmax pmax
comp=Z,26nm,1.0s,mb4.9
EBNR Beni Rached 55.87 292 P **P 03 04 00.0 +0.7**
ECHA Ech Chlef 56.05 292 P **P 03 04 02.5 +1.9**
BILL Bilibino 56.19 27 *eP* **P 03 04 01.5 +0.4**
comp=Z,10nm,0.7s,mb4.8
BILL Bilibino 56.19 27⇑*eP* **P 03 04 01.1 0.0**
BILL *i* *PP pP 03 04 36.9 +1.6
BILL *e*S **S 03 11 39.3 +0.7**
BILL pmax pmax
comp=Z,44nm,1.6s,mb5.0
EANR 'Ain N'Sour 56.33 292 P **P 03 04 03.0 +0.4**
ETRT Tiaret 56.43 291 P **P 03 04 04.5 +1.2**

CART Cartagena 57.15 294⇓*i*P P 03 04 08.2 -0.2
comp=Z,152nm,0.9s,mb5.8
PETK Petropavlovsk- 57.38 45 P **P 03 04 07.6 -2.1**
comp=Z,6.3nm,0.8s,mb4.5,baz=259,slow=2.0,SNR=5.5
PETK PcP PcP 03 04 59.4 -2.5
comp=Z,12nm,1.0s,baz=173,slow=5.8,SNR=5.1
PETK Petropavlovsk- 57.38 45 P **P 03 04 07.6 -2.1**
PETK PcP PcP 03 04 59.4 -2.5
PETK Petropavlovsk- 57.38 45 P **P 03 04 07.6 -2.1**
PETK 03 04 59.4
ALE Alert 57.52 354 P **P 03 04 10.0 -0.3**
comp=Z,263nm,0.8s,mb6.1,SNR=9.5
PET Petropavlovsk 57.94 45 *e*P **P 03 04 12.4 -1.2**
PET *e*S **S 03 11 57.1 -4.9**
PET pmax pmax
comp=Z,25nm,1.7s,mb4.8
PET MLR MLR
comp=Z,100nm,18.0s
MRSI Marisa 58.23 118 P **P 03 04 16.1 -0.1**
comp=Z,33nm,0.9s,mb5.2
ESDC Sonseca Array 58.34 298 P **P 03 04 16.6 -0.1**
comp=Z,32nm,0.8s,mb5.2,baz=58,slow=7.1,SNR=89
ESDC PcP PcP 03 05 04.7 -1.3
comp=Z,3.8nm,0.7s,baz=63,slow=5.6,SNR=5.2
ESDC PP PP 03 06 24.5 -2.6
comp=Z,8.2nm,1.0s,baz=60,slow=9.7,SNR=5.0
ESDC Sonseca Array 58.34 298 P **P 03 04 16.6 -0.1**
ESDC PcP PcP 03 05 04.7 -1.3
ESDC PP PP 03 06 24.5 -2.6
ESLA Sonseca Array 58.34 298⇓*i*P **P 03 04 16.5 -0.2**
comp=Z,14nm,1.0s,mb4.8
PAB San Pablo 58.67 298⇓*i*P **P 03 04 18.8 -0.1**
comp=Z,135nm,1.8s,mb5.5
PAB San Pablo 58.67 298⇓*i*P **P 03 04 18.8 -0.1**
PAB pmax pmax
comp=Z,135nm,1.8s,mb5.5
TAM Tamanrasset 59.27 276⇓*i*P **P 03 04 23.5 +0.1**
comp=Z,90nm,1.8s,mb5.3
TAM Tamanrasset 59.27 276⇓*i*P **P 03 04 23.5 +0.2**
TAM pmax pmax
comp=Z,90nm,1.8s,mb5.3
PBRG Braganca 59.33 301 *e*P **P 03 04 23.4 -0.1**
TTSI Tana Toraja 59.36 123 P **P 03 04 23.7 -0.3**
comp=Z,1µmcomp=Z,17nm,1.1s,mb4.8
MVO Moncorvo 59.81 301 *i*P **P 03 04 26.6 -0.1**
comp=Z,95nm,1.1s,mb5.5
SUMG Summit 60.03 341⇓*i*P **P 03 04 28.7 +0.9**
comp=Z,103nm,1.0s,mb5.6
SUMG Summit 60.03 341⇓*i*P **P 03 04 28.8 +1.0**
comp=Z,61nm,0.9s,mb5.4
PVRL Vila Real 60.22 301 *i*P **P 03 04 29.5 -0.1**
comp=Z,52nm,1.2s,mb5.2
PCAB Cabril 60.24 301 *i*P **P 03 04 29.9 +0.2**
comp=Z,179nm,1.4s,mb5.7
MTE Manteigas 60.50 300 *i*P **P 03 04 31.8 +0.4**
comp=Z,134nm,1.1s,mb5.7
MTE Manteigas 60.50 300⇓*i*P **P 03 04 31.7 +0.2**
comp=Z,83nm,1.0s,mb5.5
PVIS Viseu 60.59 300 *i*P **P 03 04 32.5 +0.4**
comp=Z,122nm,1.3s,mb5.6
PCBR Castelo Branco 60.70 299 *e*P **P 03 04 32.9 +0.1**
comp=Z,45nm,1.4s,mb5.1
PMRV Marv??o 60.83 299 *i*P **P 03 04 33.7 0.0**
comp=Z,95nm,1.3s,mb5.5
PBAR Barrancos 61.16 297 *i*P **P 03 04 36.1 +0.1**
comp=Z,124nm,1.2s,mb5.6
PESTR Estremoz 61.22 298 *i*P **P 03 04 36.2 -0.2**
comp=Z,56nm,1.3s,mb5.2
PESTR *e*S **S 03 12 55.0 +10**
BKSI Bulukumba 61.26 124 P **P 03 04 26.6 -10**
SFS San Fernando 61.37 295⇓*i*P **P 03 04 36.8 -0.6**
comp=Z,109nm,0.9s,mb5.7
SFS San Fernando 61.37 295⇓*i*P **P 03 04 36.8 -0.6**
SFS pmax pmax
comp=Z,109nm,0.9s,mb5.7
PTOM Tomar 61.44 299 *e*P **P 03 04 38.1 +0.3**
comp=Z,176nm,1.1s,mb5.8
EVO Evora 61.67 298⇓*i*P **P 03 04 39.9 +0.5**
comp=Z,108nm,1.4s,mb5.2
EVO *e*MLR MLR
comp=Z,82nm,19.5s
EVO Evora 61.67 298 *i*P **P 03 04 39.3 -0.1**
comp=Z,49nm,1.6s,mb5.1
PBEJ Beja 61.81 298 *e*P **P 03 04 40.4 +0.1**
comp=Z,88nm,1.3s,mb5.4
PVAQ Vaqueiros 61.99 297 *i*P **P 03 04 41.7 +0.1**
comp=Z,132nm,1.1s,mb5.7
PVAQ *e*S **S 03 12 55.3 +1.0**
PCVE Castro Verde 62.11 297 *i*P **P 03 04 42.4 +0.1**
comp=Z,60nm,1.2s,mb5.3
PCVE *e*S **S 03 12 59.1 +3.3**
PBDV Barranco-do-Ve 62.22 297 *i*P **P 03 04 43.6 +0.5**
comp=Z,169nm,1.1s,mb5.8
PMAFR Mafra 62.35 299 *i*P **P 03 04 44.0 +0.1**
comp=Z,140nm,1.2s,mb5.7
PMAFR *e*S **S 03 13 06.8 +8.1**
PTEO Sao Teotonio 62.63 298 *i*P **P 03 04 46.0 +0.2**
comp=Z,93nm,1.3s,mb5.5
MORF Marmelete 62.70 297 *e*P **P 03 04 46.3 +0.1**
comp=Z,45nm,1.4s,mb5.1
PFVI Vila Bisbo 62.90 297 *e*P **P 03 04 47.9 +0.3**
comp=Z,101nm,1.5s,mb5.4
RES Resolute Bay 67.08 357 *e*P **P 03 05 13.0 -1.0**
RES Resolute Bay 67.08 357 *e*P **P 03 05 13.0 -1.0**
TORD Torodi Ar. Bea 67.67 269 P **P 03 05 17.6 -0.9**
comp=Z,33nm,0.5s,mb5.3,baz=48,slow=5.5,SNR=169
COLD Coldfoot 69.76 17⇓*i*P **P 03 05 30.7 0.0**
comp=Z,74nm,0.9s,mb5.4
AMKA Amchitka 69.80 40 *e*P **P 03 05 30.3 -0.9**
comp=Z,46nm,0.6s,mb5.2
TTA Tatalina 71.71 21 *e*P **P 03 05 42.4 -0.1**
TTA Tatalina 71.71 21 *e*P **P 03 05 42.4 -0.1**
INK Inuvik 71.86 10 P **P 03 05 43.6 +0.3**
comp=Z,54nm,0.5s,mb5.5,baz=359,slow=7.4,SNR=209
INK pP pP 03 06 20.1 +1.0
comp=Z,34nm,1.1s,baz=327,slow=7.9,SNR=2.8
INK Inuvik 71.86 10⇓*i*P **P 03 05 43.6 +0.2**
comp=Z,122nm,0.9s,mb5.6
INK *e*pP pP 03 06 20.1 +1.1
INK Inuvik 71.86 10⇓*i*P **P 03 05 43.6 +0.2**
INK *e**PP pP 03 06 20.1 +1.0
INK pmax pmax
comp=Z,122nm,0.9s
BPAW Bear Paw Mtn. 72.13 19⇓*i*P **P 03 05 44.5 -0.6**
comp=Z,38nm,0.9s,mb5.1
COLA College 72.25 17⇓*i*P **P 03 05 45.6 -0.1**
comp=Z,95nm,0.8s,mb5.6
COLA *e*pP pP 03 06 22.0 +0.5
COLA College 72.25 17⇓*i*P **P 03 05 45.7 -0.1**
COLA *e**PP pP 03 06 22.0 +0.5
COLA pmax pmax
comp=Z,95nm,0.8s,mb5.6
ILAR Eielson Array 72.56 17 P **P 03 05 46.8 -0.8**
comp=Z,37nm,0.9s,mb5.1,baz=319,slow=4.7,SNR=315
ILAR pP pP 03 06 23.4 0.0
comp=Z,7.5nm,0.9s,baz=316,slow=5.9,SNR=3.0
ILAR LR LR 03 44 11.3
comp=Z,67nm,19.1s,baz=342,slow=41
ILAR Eielson Array 72.56 17 P **P 03 05 46.8 -0.8**
ILAR *PP pP 03 06 23.4 0.0
PPLA Purkeypile 72.80 20⇓*i*P **P 03 05 48.4 -0.6**
comp=Z,110nm,1.5s,mb5.4
TRF Thorofare Moun 72.85 19 *e*P **P 03 05 48.5 -0.8**
comp=Z,18nm,0.8s,mb4.9
MCK McKinley 72.95 18 *e*P **P 03 05 49.4 -0.5**
comp=Z,23nm,0.9s,mb4.9
MCK McKinley 72.95 18 *e*P **P 03 05 49.4 -0.5**
MCK pmax pmax
comp=Z,23nm,0.9s,mb4.9
EGAK Eagle 73.79 15⇓*i*P **P 03 05 54.3 -0.4**
comp=Z,41nm,1.1s,mb5.1
PSMA Santa Maria 74.00 305 *e*P PcP 03 06 07.7 -3.4
DOT Dot Lake 74.17 16⇓*i*P **P 03 05 56.4 -0.6**
comp=Z,130nm,1.1s,mb5.6
PAX Paxson 74.43 17 *e*P **P 03 05 58.2 -0.3**
comp=Z,21nm,0.5s,mb5.1
PAX Paxson 74.43 17 *e*P **P 03 05 58.2 -0.3**
PAX pmax pmax
comp=Z,21nm,0.5s,mb5.1
FITZ Fitzroy Crossi 74.43 129 P **P 03 05 58.9 -0.2**
comp=Z,3.5nm,0.8s,mb4.1
RSO Redoubt South 74.62 22 *e*P **P 03 06 00.1 +0.4**
comp=Z,67nm,1.0s,mb5.2
PMR Palmer 74.69 20 *e*P **P 03 05 59.2 -0.9**
comp=Z,44nm,0.9s,mb5.1
PMR Palmer 74.69 20 *e*P **P 03 05 59.2 -0.9**
PMR pmax pmax
comp=Z,44nm,0.9s,mb5.1
SML Sawmill 74.72 19⇓*i*P **P 03 05 59.8 -0.4**
comp=Z,32nm,0.8s,mb5.0
SML Sawmill 74.72 19⇓*i*P **P 03 05 59.8 -0.4**
SML pmax pmax
comp=Z,32nm,0.8s,mb5.0
DAWY Dawson 74.77 14⇓*i*P **P 03 06 00.3 -0.2**
MENT Mentasta 74.86 17 *e*P **P 03 06 00.7 -0.3**
PMAN Manadas 74.91 307 *e*P **P 03 06 03.1 +1.3**
comp=Z,193nm,1.2s,mb5.6
PCAN Candelaria 75.26 307 *e*P **P 03 06 05.0 +1.2**
comp=Z,171nm,1.3s,mb5.5
PCED Cedros 75.30 308 *e*P **P 03 06 05.3 +1.3**
comp=Z,106nm,1.1s,mb5.4
SLKM Skilak Lake 75.30 21 *e*P **P 03 06 02.5 -1.0**
SLKM Skilak Lake 75.30 21 *e*P **P 03 06 02.5 -1.1**
HOR Horta 75.31 308 *e*P **P 03 06 05.3 +1.2**
CALA Caldeira 75.32 308 *e*P **P 03 06 06.0 +1.9**
DBIC Dimbokro 76.70 268 P **P 03 06 11.8 -0.4**
comp=Z,21nm,0.8s,mb4.8,baz=31,slow=6.7,SNR=16
DBIC Dimbokro 76.70 268⇓*i*P **P 03 06 11.7 -0.5**
comp=Z,92nm,1.5s,mb5.2
DBIC Dimbokro 76.70 268⇓*i*P **P 03 06 11.7 -0.6**
DBIC pmax pmax
comp=Z,92nm,1.5s
KIC Kosan Boka 76.79 268 *e*P **P 03 06 12.5 -0.3**
comp=Z,72nm,0.8s,mb5.3
TIC Toumodi 76.84 268 *e*P **P 03 06 12.6 -0.5**
comp=Z,71nm,0.9s,mb5.3
TIC Toumodi 76.84 268 *e*P **P 03 06 12.6 -0.5**
TIC pmax pmax
comp=Z,71nm,0.9s,mb5.3
KDAK Kodiak Island 76.85 23 P **P 03 06 12.4 +0.1**
comp=Z,37nm,0.7s,mb5.1,baz=359,slow=4.4,SNR=16
KDAK Kodiak Island 76.85 23 *e*P **P 03 06 12.0 -0.3**
comp=Z,76nm,1.2s,mb5.2
KDAK Kodiak Island 76.85 23 P **P 03 06 12.5 +0.1**
KDAK pmax pmax
comp=Z,37nm,0.7s,mb5.1
KDAK Kodiak Island 76.85 23 P **P 03 06 12.0 -0.4**
comp=Z,344nm,0.9s,mb6.0,SNR=6.3
OHAK Old Harbor 77.08 24 *e*P **P 03 06 13.3 -0.4**
comp=Z,100nm,1.1s,mb5.4
OHAK LR LR
comp=Z,100nm,19.0s
LIC Lamto 77.10 268 *e*P **P 03 06 14.0 -0.5**
comp=Z,90nm,0.8s,mb5.4
LIC Lamto 77.10 268 *e*P **P 03 06 13.7 -0.8**
comp=Z,72nm,0.9s,mb5.0
LIC Lamto 77.10 268 *e*P **P 03 06 13.7 -0.8**
comp=Z,36nm,0.9s,mb5.0
LBTB Lobatse 77.27 224 *e*P **P 03 06 14.0 -1.0**
comp=Z,12nm,0.9s,mb4.5
LBTB Lobatse 77.27 224 *e*P **P 03 06 14.0 -1.1**
LBTB pmax pmax
comp=Z,12nm,0.9s,mb4.5
PNL Peninsula 78.74 16 *e*P **P 03 06 23.4 +0.6**
comp=Z,221nm,1.5s,mb5.6
YKA Yellowknife Ar 79.40 4 P **P 03 06 26.3 0.0**
comp=Z,52nm,0.7s,mb5.2,baz=348,slow=5.5,SNR=64
YKA pP pP 03 07 02.2 -0.4
comp=Z,7.7nm,0.7s,baz=349,slow=5.7,SNR=2.1
YKA LR LR 03 46 40.0
comp=Z,6.6nm,18.2s,baz=135,slow=39
YKA Yellowknife Ar 79.40 4 P **P 03 06 26.3 0.0**
YKA pP pP 03 07 02.2 -0.4
YKA LR LR 03 46 40.0
YKA Yellowknife Ar 79.40 4 P **P 03 06 26.3 0.0**
YKA *PP pP 03 07 02.2 -0.5
SKAG Skagway 79.78 14⇓*i*P **P 03 06 28.8 +0.4**
comp=Z,41nm,1.0s,mb5.0
BOSA Boshof 80.32 222 P **P 03 06 30.6 -1.2**
comp=Z,5.7nm,0.8s,mb4.2,baz=52,slow=6.2,SNR=6.8
BOSA pP pP 03 07 07.5 -0.7
comp=Z,5.5nm,0.8s,baz=38,slow=14,SNR=3.1
BOSA sP sP 03 07 19.6 -4.1
comp=Z,6.3nm,0.8s,baz=112,slow=4.1,SNR=3.1
BOSA Boshof 80.32 222 *e*P **P 03 06 29.7 -2.0**
comp=Z,10nm,1.0s,mb4.4
BOSA Boshof 80.32 222 P **P 03 06 30.6 -1.1**
BOSA *PP pP 03 07 07.5 -0.7
BOSA *SP sP 03 07 19.6 -4.1
BOSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
BOSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
BOSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
SCHQ Schefferville 81.22 338 P **P 03 06 36.0 -0.2**
comp=Z,29nm,0.8s,mb5.0,baz=31,slow=4.9,SNR=18
SCHQ Schefferville 81.22 338 *e*P **P 03 06 35.5 -0.8**
comp=Z,34nm,0.9s,mb5.0
WRA Warramunga Arr 81.32 124 P **P 03 06 36.3 -0.8**
comp=Z,12nm,0.7s,mb4.7,baz=326,slow=5.0,SNR=128
WRA pP pP 03 07 12.2 -1.5
comp=Z,16nm,0.9s,baz=323,slow=5.0,SNR=8.1
WRA sP sP 03 07 24.2 -5.0
comp=Z,11nm,0.8s,baz=327,slow=5.1,SNR=3.9
WRA PKKPbc PKKPbc 03 25 11.6 +1.1
comp=Z,1.9nm,0.7s,baz=133,slow=2.1,SNR=21
WRA Warramunga Arr 81.32 124 P **P 03 06 36.3 -0.9**
WRA *PP pP 03 07 12.3 -1.4
WRA *SP sP 03 07 24.2 -5.0
WB2 Warramunga Arr 81.33 124 *e*P **P 03 06 36.1 -1.1**
WB2 *e*pP pP 03 07 12.7 -1.1
DLBC Dease Lake 81.70 12 P **P 03 06 39.3 +0.6**
comp=Z,27nm,0.8s,mb4.9,baz=338,slow=5.3,SNR=46
DLBC pP pP 03 07 15.3 +0.1
comp=Z,7.1nm,0.9s,baz=18,slow=9.6,SNR=2.1
DLBC Dease Lake 81.70 12⇓*i*P **P 03 06 39.1 +0.5**
FCC Fort Churchill 82.79 353 *e*P **P 03 06 44.1 -0.2**
comp=Z,2.6nm,0.9s
FCC Fort Churchill 82.79 353 *e*P **P 03 06 44.1 -0.2**
FCC pmax pmax
comp=Z,3.0nm,0.9s
WRAK Wrangell Islan 83.19 14 *e*P **P 03 06 47.0 +0.6**
comp=Z,20nm,0.8s,mb4.9
ASAR Alice Springs 83.71 127 P **P 03 06 48.9 -0.6**
comp=Z,4.0nm,0.7s,mb4.2,baz=321,slow=4.7,SNR=41
ASAR pP pP 03 07 24.1 -2.2
comp=Z,7.4nm,0.9s,baz=324,slow=5.5,SNR=7.4
ASAR sP sP 03 07 36.5 -5.2
comp=Z,5.6nm,0.9s,baz=326,slow=5.5,SNR=4.4
ASAR PKKPbc PKKPbc 03 25 06.0 +0.8
comp=Z,1.0nm,0.6s,baz=120,slow=2.6,SNR=9.3
ASAR Alice Springs 83.71 127 P **P 03 06 48.9 -0.6**
ASAR *PP pP 03 07 24.1 -2.1
ASAR *SP sP 03 07 36.5 -5.2
FFC Flin Flon 87.31 357 *e*P **P 03 07 06.6 -0.3**
comp=Z,99nm,1.2s,mb5.5
FFC Flin Flon 87.31 357 *i*P **P 03 07 07.3 +0.4**
FFC Flin Flon 87.31 357 P **P 03 07 07.4 +0.5**
comp=Z,407nm,0.9s,mb6.3,SNR=10
BBB Bella Bella 88.00 13 P **P 03 07 09.4 -0.8**
comp=Z,6.7nm,0.8s,mb4.5,baz=153,slow=10,SNR=3.6
ULM Lac du Bonnet 91.38 353 P **P 03 07 25.9 -0.2**
comp=Z,22nm,0.9s,mb5.2,baz=16,slow=4.0,SNR=13
ULM LR LR 03 49 24.0
comp=Z,58nm,19.5s,baz=339,slow=36
ULM Lac du Bonnet 91.38 353 *e*P **P 03 07 25.1 -0.9**
comp=Z,24nm,0.9s,mb5.2
A05A Maple Falls 92.05 10⇑P **P 03 07 28.6 -0.6**
baz=92
LONY Lake Ozonia 92.60 338 *e*P **P 03 07 31.9 +0.1**
comp=Z,37nm,1.1s,mb5.4
B06A Marblemount 92.60 10⇓P **P 03 07 31.8 +0.1**
baz=92
MDV Middlebury 92.73 337 *e*P **P 03 07 32.6 +0.2**
comp=Z,5µm,0.9s
A12A Yaak River Ran 92.83 6⇑P **P 03 07 33.3 +0.5**
baz=92,SNR=8.6
WALA Waterton Lakes 92.83 5 *e*P **P 03 07 32.6 -0.1**
comp=Z,1.0nm,0.9s
JCW Jim Creek 92.86 10 P **P 03 07 33.1 +0.2**
A13A Flathead Natio 92.92 5⇑P **P 03 07 33.5 +0.3**
baz=92
A14A Double T Ranch 92.95 5⇑P **P 03 07 33.2 -0.1**
baz=92,SNR=22
A15A Johnson Ranch, 92.98 4⇓P **P 03 07 33.5 0.0**
baz=92,SNR=41
B08A Colville Reser 93.03 8⇑P **P 03 07 33.8 0.0**
baz=93,SNR=14
A16A West Butte Ran 93.07 3⇓P **P 03 07 33.7 -0.1**
baz=93
A17A Triple J Farms 93.11 3⇑P **P 03 07 34.1 +0.1**
baz=93,SNR=28
A22A Carney Farms, 93.14 360⇓P **P 03 07 34.8 +0.6**
baz=93
EYMN Ely 93.14 350⇓*i*P **P 03 07 34.0 -0.2**
comp=Z,40nm,1.0s,mb5.5
A21A Bergtoll Ranch 93.14 0⇓P **P 03 07 34.7 +0.5**
baz=93
A23A Redstone 93.16 359⇑P **P 03 07 35.2 +0.9**
baz=93
A18A Metzger Ranch, 93.16 2 P **P 03 07 34.6 +0.3**
baz=93,SNR=40
A24A Westby 93.18 358⇑P **P 03 07 35.7 +1.3**
baz=93
A19A Klindworth Far 93.18 1⇑P **P 03 07 35.0 +0.6**
baz=93,SNR=9.6
A20A Cobblestone Ra 93.24 1⇓P **P 03 07 35.3 +0.7**
baz=93,SNR=13
B12A Libby 93.29 6⇑P **P 03 07 35.4 +0.5**
baz=93,SNR=6.5
AGMN Agassiz Nation 93.31 353⇓*i*P **P 03 07 34.6 -0.4**
comp=Z,31nm,0.8s,mb5.5
NLWA Neilton Lookou 93.35 12⇓*i*P **P 03 07 36.0 +0.8**
comp=Z,32nm,1.5s,mb5.2
NLWA *e*pP pP 03 08 13.2 +0.8
NEW Newport 93.36 7⇓P **P 03 07 35.7 +0.4**
baz=93,SNR=11
NEW Newport 93.36 7 *e*P **P 03 07 34.9 -0.3**
comp=Z,16nm,1.0s,mb5.1
NEW *e*pP pP 03 08 11.6 -0.8
NEW *e*PP PP 03 11 15.8 -4.2
NEW Newport 93.36 7 *e*P **P 03 07 34.9 -0.3**
NEW *e**PP pP 03 08 11.6 -0.8
NEW *e* 03 11 15.8
NEW pmax pmax
comp=Z,16nm,1.0s
B13A Whitefish 93.47 5 P **P 03 07 36.2 +0.5**
baz=93,SNR=12
B14A Marquette Ranc 93.56 4 P **P 03 07 36.2 0.0**
baz=93,SNR=14
DGMT Dagmar 93.64 358⇓P **P 03 07 37.8 +1.3**
baz=93,SNR=9.4
DGMT Dagmar 93.64 358 *e*P **P 03 07 37.2 +0.7**
comp=Z,58nm,1.0s,mb5.7
B19A Brinkman Farms 93.65 2 P **P 03 07 37.0 +0.4**
baz=93,SNR=7.2
B15A Bradely Ranch, 93.65 4 P **P 03 07 36.5 -0.1**
baz=93,SNR=28
B23A Brockton 93.66 359⇓P **P 03 07 37.4 +0.8**
baz=93
B18A Beardsley Farm 93.69 2⇑P **P 03 07 37.3 +0.5**
baz=93,SNR=24
C09A Chrisman Ranch 93.70 8⇓P **P 03 07 37.5 +0.7**
baz=93,SNR=6.8
B21A Ellsworth Farm 93.70 0⇑P **P 03 07 37.8 +1.0**
baz=93,SNR=7.0
B17A L&G Farms, Che 93.76 3 P **P 03 07 37.4 +0.3**
baz=93,SNR=17
B22A Reddig Ranch S 93.83 360 P **P 03 07 38.5 +1.1**
baz=93,SNR=13
D05A Enumclaw 93.83 10⇑P **P 03 07 38.1 +0.7**
baz=93,SNR=6.5
BLMT Blacktail Moun 93.84 5 *e*P **P 03 07 38.1 +0.6**
comp=Z,6.3nm,0.7s,mb4.8
C11A Tepee Creek (N 93.86 7⇑P **P 03 07 38.3 +0.8**
baz=93,SNR=7.1
BSMT Bassoo Peak 93.97 6 *e*P **P 03 07 38.5 +0.5**
comp=Z,28nm,0.8s,mb5.5
BSMT *e*pP pP 03 08 16.4 +1.2
OD2 Odessa Site #2 94.06 8 *e*P **P 03 07 38.5 0.0**
comp=Z,8.9nm,1.0s,mb4.8
C12B Naegeli Ranch, 94.06 6⇓P **P 03 07 39.5 +1.1**
baz=94,SNR=9.1
EGMT Eagleton 94.06 2⇑P **P 03 07 39.3 +0.9**
baz=94,SNR=7.6
EGMT Eagleton 94.06 2 *e*P **P 03 07 38.3 -0.1**
comp=Z,21nm,0.9s,mb5.3
JTMT Jette 94.11 5 *e*P **P 03 07 38.6 0.0**
comp=Z,16nm,1.1s,mb5.0
JTMT *e*pP pP 03 08 15.8 -0.1
JTMT *e*PP PP 03 11 20.6 -5.3
C14A Swan Lake 94.12 5 P **P 03 07 39.0 +0.2**
baz=94,SNR=9.4
C13A Hot Springs 94.16 5⇓P **P 03 07 39.7 +0.8**
baz=94,SNR=26
C15A Salmond Ranch, 94.19 4⇑P **P 03 07 39.5 +0.4**
baz=94,SNR=20
C16A Fuhringer Ranc 94.21 3⇑P **P 03 07 39.1 0.0**
baz=94,SNR=8.4
LON Longmire 94.29 10 *e*P **P 03 07 39.7 +0.2**
comp=Z,8.3nm,0.8s,mb4.9
LON *e*pP pP 03 08 16.3 -0.5
LON Longmire 94.29 10 *e*P **P 03 07 39.7 +0.2**
LON *e**PP pP 03 08 16.3 -0.5
LON pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
STKA Stephens Creek 94.30 128 P **P 03 07 38.5 -1.2**
comp=Z,2.8nm,0.9s,mb4.4,baz=63,slow=22,SNR=4.8
C21A Desert Coulee 94.30 0⇓P **P 03 07 40.2 +0.6**
baz=94,SNR=26
C23A Lambert 94.32 359⇑P **P 03 07 41.0 +1.4**
baz=94
D08A Wollman Farm, 94.36 8⇑P **P 03 07 40.2 +0.3**
baz=94,SNR=7.0
SWMT Swartz Lake 94.37 5 *e*P **P 03 07 40.1 +0.2**
comp=Z,7.3nm,1.0s,mb4.8
C19A Slack Wire Ran 94.37 2⇑P **P 03 07 40.3 +0.4**
baz=94,SNR=12
C22A Vida 94.38 360⇓P **P 03 07 41.1 +1.1**
baz=94
C20A Veseth Ranch, 94.41 1⇓P **P 03 07 40.3 +0.2**
baz=94,SNR=9.2
C17A Wharram Farm, 94.42 3⇓P **P 03 07 40.3 +0.2**
baz=94,SNR=19
C24A Savage 94.58 359⇓P **P 03 07 41.9 +1.1**
baz=94
SLMT Seeley Lake 94.67 5 *e*P **P 03 07 41.3 0.0**
comp=Z,18nm,0.8s,mb5.4
SLMT *e*pP pP 03 08 18.1 -0.4
D12A Red Ives Fores 94.72 6⇓P **P 03 07 41.6 +0.1**
baz=94
D13A Huson 94.75 5⇓P **P 03 07 41.3 -0.3**
baz=94
F03A Seaside 94.82 12⇓P **P 03 07 42.9 +0.9**
baz=94
D14A Greenough 94.83 5⇓P **P 03 07 41.9 -0.1**
baz=94,SNR=13
D18A Linhart Farms, 94.89 2⇑P **P 03 07 42.9 +0.6**
baz=94
D17A Six Diamond Ra 94.90 3⇓P **P 03 07 42.8 +0.5**
baz=94,SNR=21
E08A Dider Farm, El 94.90 9⇓P **P 03 07 42.8 +0.5**
baz=94,SNR=6.5
D19A Cripps Ranch, 94.94 2⇑P **P 03 07 42.9 +0.4**
baz=94,SNR=10
D22A Cohagen 94.98 360⇑P **P 03 07 44.0 +1.3**
baz=94
E09A Wood Farm, Sta 94.98 8⇑P **P 03 07 42.5 -0.2**
baz=94,SNR=12
D16A Dana Ranch, Ca 94.98 3⇑P **P 03 07 42.8 +0.1**
baz=94
F04A Amboy 95.00 11⇑P **P 03 07 43.1 +0.3**
baz=95
CHMT Chamberlain Mo 95.01 5 *e*P **P 03 07 42.5 -0.3**
comp=Z,10nm,0.9s,mb5.1
D20A Manuel Ranch, 95.03 1⇓P **P 03 07 42.8 -0.1**
baz=95,SNR=5.0
MSO Missoula 95.05 5⇓P **P 03 07 42.8 -0.2**
baz=95
MSO Missoula 95.05 5 *e*P **P 03 07 42.7 -0.3**
comp=Z,9.6nm,1.4s,mb4.8
D21A La Casta Ranch 95.07 0 P **P 03 07 43.9 +0.8**
baz=95,SNR=14
HRY Holter Researc 95.29 4 *e*P **P 03 07 44.3 +0.2**
comp=Z,11nm,0.7s,mb5.2
E13A Victor 95.42 5⇓P **P 03 07 44.4 -0.3**
baz=95,SNR=6.0
LAO LASA Array 95.44 360⇑P **P 03 07 45.0 +0.2**
baz=95,SNR=8.7
LAO LASA Array 95.44 360 *e*P **P 03 07 46.0 +1.2**
comp=Z,41nm,1.0s,mb5.6
LAO *e*pP pP 03 08 23.5 +1.5
E16A East Helena 95.47 4⇑P **P 03 07 45.5 +0.5**
baz=95,SNR=13
E14A Clinton 95.49 5⇑P **P 03 07 45.5 +0.5**
baz=95,SNR=9.0
E18A Harlowton 95.51 2⇓P **P 03 07 46.4 +1.2**
baz=95,SNR=10
E15A Deer Lodge 95.53 4⇑P **P 03 07 45.2 0.0**
baz=95,SNR=6.7

E17A	**Martinsdale**	95.58	3	⇑P	P	03 07 45.9 +0.5
	baz=95,SNR=7.7					
F10A	**Beach Ranch, E**	95.61	7	⇑P	P	03 07 45.8 +0.2
	baz=95,SNR=10.0					
E20A	**Meyer Farm, Mu**	95.62	1	⇑P	P	03 07 46.2 +0.6
	baz=95,SNR=8.9					
E19A	**Rath Farm, Rou**	95.65	2	⇓P	P	03 07 46.6 +0.9
	baz=95,SNR=12					
G04A	**Mulino**	95.70	11	⇑P	P	03 07 46.8 +0.8
	baz=95,SNR=5.8					
F12A	**Elk City**	96.01	6	⇑P	P	03 07 45.5 -1.9
	baz=96,SNR=8.6					
F13A	**Darby**	96.05	5	⇓P	P	03 07 47.5 -0.1
	baz=96,SNR=9.7					
F14A	**Wisdom**	96.10	5	⇓P	P	03 07 48.4 +0.6
	baz=96					
F15A	**Butte**	96.12	4	⇓P	P	03 07 48.2 +0.2
	baz=96,SNR=6.9					
LRM	**Limekiln Ridge**	96.14	4	*e*P	P	03 07 48.2 +0.2
	comp=Z,82nm,1.1s,mb6.0					
F17A	**Fitzpatrick Pl**	96.15	3	⇓P	P	03 07 48.7 +0.7
	baz=96,SNR=13					
F18A	**Big Timber**	96.18	2	⇓P	P	03 07 49.0 +0.8
	baz=96,SNR=10					
F16A	**Kennard Place,**	96.22	4	⇓P	P	03 07 48.9 +0.5
	baz=96,SNR=8.4					
F19A	**Roth Farm, Mol**	96.25	2	⇑P	P	03 07 49.0 +0.5
	baz=96,SNR=17					
GCMT	**Greycliff**	96.30	2	*e*P	P	03 07 49.2 +0.5
	comp=Z,7.0nm,1.0s,mb5.0					
BOZ	**Bozeman (W)**	96.36	4	⇑P	P	03 07 49.3 +0.3
	baz=96,SNR=9.1					
BOZ	**Bozeman (W)**	96.36	4	⇓*i*P	P	03 07 49.7 +0.7
	comp=Z,3.3nm,0.8s,mb4.7					
BOZ				*e*pP	pP	03 08 27.4 +1.1
BOZ	**Bozeman (W)**	96.36	4	⇓*i*P	P	03 07 49.7 +0.7
BOZ				*e*PP	pP	03 08 27.4 +1.1
BOZ				pmax	pmax	
	comp=Z,3.0nm,0.8s,mb4.7					
DLMT	**Dillon**	96.59	4	*e*P	P	03 07 50.4 +0.3
	comp=Z,4.0nm,0.9s,mb4.8					
DLMT				*e*pP	pP	03 08 28.5 +1.1
G14A	**Jackson**	96.66	5	⇑P	P	03 07 50.5 +0.1
	baz=96,SNR=6.3					
G13A	**Cobalt**	96.75	5	⇓P	P	03 07 50.9 +0.1
	baz=96,SNR=12					
G16A	**Moss Hill, Enn**	96.77	4	⇑P	P	03 07 51.6 +0.8
	baz=96,SNR=13					
G15A	**Dillon**	96.80	4	⇑P	P	03 07 51.6 +0.7
	baz=96,SNR=7.6					
G20A	**Bridger**	96.90	1	⇑P	P	03 07 52.0 +0.5
	baz=96,SNR=6.1					
RLMT	**Red Lodge**	96.97	2	⇑P	P	03 07 52.9 +1.1
	baz=96,SNR=7.6					
RLMT	**Red Lodge**	96.97	2	*e*P	P	03 07 52.9 +1.1
	comp=Z,24nm,1.4s,mb5.3					
RLMT				*e*pP	pP	03 08 28.6 -0.5
MCMT	**McKenzie Canyo**	97.11	4	*e*P	P	03 07 52.8 +0.4
	comp=Z,1.1nm,0.8s,mb4.2					
I07A	**Izee**	97.22	9	⇑P	P	03 07 53.7 +0.8
	baz=97,SNR=6.7					
H13A	**Challis**	97.28	6	⇑P	P	03 07 53.1 -0.1
	baz=97					
H14A	**Leadore**	97.29	5	⇑P	P	03 07 53.4 +0.2
	baz=97,SNR=5.7					
H18A	**Shoshone NF, C**	97.41	2	⇑P	P	03 07 54.4 +0.7
	baz=97,SNR=5.3					
H19A	**Powell**	97.43	2	⇑P	P	03 07 54.7 +0.8
	baz=97					
H21A	**Big Horn, Sher**	97.50	0	⇑P	P	03 07 55.1 +0.9
	baz=97					
H20A	**Greybull**	97.64	1	P	P	03 07 55.5 +0.8
	baz=97,SNR=5.7					
H17A	**Grant Village**	97.66	3	⇑P	P	03 07 56.7 +1.8
	baz=97,SNR=6.6					
JFWS	**Jewell Farm**	97.86	348	*e*P	P	03 07 55.5 -0.3
	comp=Z,9.6nm,0.7s,mb5.3					
JFWS	**Jewell Farm**	97.86	348	*e*P	P	03 07 55.5 -0.3
JFWS				pmax	pmax	
	comp=Z,10.0nm,0.7s,mb5.3					
ECSD	**EROS Data Cent**	97.90	353	*e*P	P	03 07 55.7 -0.2
	comp=Z,15nm,0.9s,mb5.4					
FLWY	**Flagg Ranch**	97.97	3	*e*P	P	03 07 58.0 +1.8
	comp=Z,4.8nm,0.8s,mb5.0					
I14A	**Mackay**	97.97	5	⇓P	P	03 07 57.2 +1.0
	baz=98,SNR=15					
I12A	**Atlanta**	97.97	6	⇓P	P	03 07 56.9 +0.6
	baz=98,SNR=6.1					
RSSD	**Black Hills**	97.98	358	⇓*i*P	P	03 07 56.8 +0.5
	comp=Z,11nm,0.8s,mb5.3					
RSSD	**Black Hills**	97.98	358	⇓*i*P	P	03 07 56.8 +0.5
RSSD				pmax	pmax	
	comp=Z,11nm,0.8s,mb5.3					
I16A	**Newdale**	98.14	4	⇓P	P	03 07 58.2 +1.2
	baz=98					
IMW	**Indian Meadow**	98.14	3	*e*P	P	03 07 58.5 +1.4
	comp=Z,4.9nm,0.8s,mb5.0					
IMW				*e*pP	pP	03 08 36.6 +2.3
I20A	**Worland**	98.17	1	⇓P	P	03 07 57.3 +0.1
	baz=98					
HLID	**Hailey**	98.26	6	⇓P	P	03 07 57.2 -0.4
	baz=98					
HLID	**Hailey**	98.26	6	*e*P	P	03 07 57.5 -0.1
	comp=Z,0.9nm,0.7s,mb4.3					
MFID	**Camas Ranch**	98.29	7	⇓P	P	03 07 57.9 +0.2
	baz=98					
MOOW	**Moose Ponds**	98.30	3	*e*P	P	03 07 58.5 +0.8
	comp=Z,6.6nm,1.5s,mb4.8					
I21A	**Big Trails, Te**	98.32	1	⇑P	P	03 07 58.2 +0.4
	baz=98,SNR=12					
LOHW	**Long Hollow**	98.44	3	*e*P	P	03 07 58.7 +0.3
	comp=Z,2.4nm,1.0s,mb4.6					
TPAW	**Teton Pass**	98.55	3	*e*P	P	03 07 59.0 +0.1
SNOW	**Snow King Moun**	98.58	3	*e*P	P	03 07 59.5 +0.5
J17A	**Brown Place, J**	98.68	3	⇑P	P	03 08 00.0 +0.5
	baz=98					
J22A	**Midwest**	98.72	360	⇓P	P	03 07 59.8 +0.2
	baz=98,SNR=6.0					
J20A	**Shoshoni**	98.77	1	⇑P	P	03 08 00.7 +0.8
	baz=98					
J21A	**Lysite**	98.78	1	⇓P	P	03 08 01.3 +1.4
	baz=98					
J19A	**Crowheart**	98.84	2	⇓P	P	03 08 01.0 +0.9
	baz=98,SNR=9.9					
J18A	**Kendall Valley**	98.86	3	⇑P	P	03 08 01.5 +1.2
	baz=98					
WVOR	**Wild Horse Val**	98.95	9	*e*P	P	03 08 00.3 -0.4
WVOR	**Wild Horse Val**	98.95	9	*e*P	P	03 08 00.3 -0.4
YBH	**Yreka Blue Hor**	99.05	12	P	P	03 08 01.9 +0.7
	comp=Z,0.5nm,0.3s,mb4.3,baz=357,slow=2.7,SNR=4.0					
YBH	**Yreka Blue Hor**	99.05	12	P	P	03 08 01.9 +0.7
BW06	**Boulder Array**	99.32	2	*e*P	Pdif	03 08 02.4 0.0
PDAR	**Pinedale Array**	99.32	2	P	Pdif	03 08 02.5 0.0
	comp=Z,0.9nm,0.7s,baz=43,slow=3.3,SNR=9.9					
PDAR				PP	PP	03 12 07.7 +1.8
	comp=Z,1.2nm,1.0s,baz=32,slow=8.7,SNR=3.7					
K14A	**Jones Ranch, D**	99.36	5	⇓P	Pdif	03 08 02.9 +0.3
	baz=99					
K18A	**Toltan Ranch,**	99.43	3	⇓P	Pdif	03 08 02.6 -0.4
	baz=99					
K20A	**Yellowstone Ra**	99.46	1	⇑P	Pdif	03 08 02.9 -0.1
	baz=99					
L14A	**Malta**	99.87	5	⇑P	Pdif	03 08 05.9 +1.1
	baz=99					
L19A	**Farson**	99.99	2	⇓P	Pdif	03 08 05.1 -0.3
	baz=100					
L16A	**Fish Haven**	99.99	4	⇑P	Pdif	03 08 06.0 +0.6
	baz=100					
L18A	**Fontenelle, Gr**	100.14	3	⇓P	Pdif	03 08 06.8 +0.8
	baz=100					
HWUT	**Hardware Ranch**	100.39	4	*e*Pdif	Pdif	03 08 08.2 +1.0
	comp=Z,9.9nm,1.2s					
DUG	**Dugway**	101.73	5	⇑P	Pdif	03 08 14.0 +0.9
	baz=101					
DUG	**Dugway**	101.73	5	*e*Pdif	Pdif	03 08 14.2 +1.1
	comp=Z,4.3nm,0.9s					
DUG	**Dugway**	101.73	5	*e*P	Pdif	03 08 14.2 +1.1
DUG				pmax	pmax	
	comp=Z,4.0nm,0.9s					
O19A	**Miners Draw (B**	101.80	2	⇑P	Pdif	03 08 15.2 +1.7
	baz=101					
P14A	**Drum Mountains**	102.31	5	⇓P	Pdif	03 08 16.4 +0.7
	baz=102					
P18A	**Preston Nutter**	102.43	3	⇑P	Pdif	03 08 17.0 +0.7
	baz=102					
NVAR	**Mina Array Bea**	102.94	9	P	Pdif	03 08 19.3 +0.8
	comp=Z,1.2nm,0.7s,baz=357,slow=4.0,SNR=9.6					
NVAR				PKiKP	PKiKP	03 12 39.1 +1.2
	comp=Z,0.8nm,0.8s,baz=316,slow=3.8,SNR=4.4					
R18A	**Canyonlands Na**	103.68	3	⇑P	Pdif	03 08 22.4 +0.6
	baz=103					
PV01	**Paradox Valley**	103.97	2	*e*Pdif	Pdif	03 08 24.3 +1.2
	comp=Z,162nm,0.7s					
S16A	**Weppner Ranch,**	104.26	4	⇓P	Pdif	03 08 24.9 +0.6
	baz=104					
S20A	**Disappointment**	104.28	1	⇓P	Pdif	03 08 26.3 +1.8
	baz=104					
T18A	**Mexican Hat**	104.93	3	⇑P	Pdif	03 08 28.6 +1.3
	baz=104					
T24A	**Torres, Weston**	105.04	359	⇓P	Pdif	03 08 29.6 +1.7
	baz=105					
WMOK	**Wichita Mounta**	107.02	353	*e*PKP	PKiKP	03 12 46.5 +1.0
MNTX	**Cornudas Mount**	110.40	359	*e*PKP	PKiKP	03 12 52.2 +0.3
JCT	**Junction City**	111.34	354	*e*PKP	PKiKP	03 12 54.0 +0.2
JCT	**Junction City**	111.34	354	*e*PKIKP	PKiKP	03 12 54.0 +0.3
TXAR	**Lajitas Array**	112.72	357	Pdiff	Pdif	03 09 03.5 +1.5
	comp=Z,0.5nm,0.9s,baz=1.8,slow=3.9,SNR=4.9					
TXAR				PKiKP	PKiKP	03 12 53.9 -2.5
	comp=Z,0.3nm,0.6s,baz=240,slow=1.8,SNR=3.4					
TXAR				PP	PP	03 13 44.8 +0.3
	comp=Z,2.7nm,1.0s,baz=7.4,slow=3.9,SNR=8.4					
TXAR				PKKP	PKKPbc	03 24 22.6 +38
	comp=Z,0.5nm,0.9s,baz=184,slow=4.8,SNR=4.3					
TXAR	**Lajitas Array**	112.72	357	Pdif	Pdif	03 09 03.5 +1.5
TXAR				PKPdf	PKiKP	03 12 53.9 -2.5
TXAR				PP	PP	03 13 44.8 +0.3
TXAR				PKKP	PKKPbc	03 24 22.6 +38
TXAR	**Lajitas Array**	112.72	357	P	Pdif	03 09 03.5 +1.5
TXAR						03 12 53.9
TXAR						03 13 44.8
TXAR						03 24 22.6
URZ	**Urewera**	121.80	116	PKP	PKPdf	03 13 10.6 -2.8
	comp=Z,4.8nm,0.7s,baz=321,slow=6.5,SNR=4.0					
SDV	**Santo Domingo**	122.36	317	*e*PKPdf	PKPdf	03 13 14.5 -0.7
BDFB	**Brasilia**	124.11	277	PKP	PKPdf	03 13 18.3 -0.2
	comp=Z,1.2nm,0.4s,baz=0.0,slow=3.0,SNR=2.6					
BDFB				PP	PP	03 15 01.3 -3.6
	comp=Z,4.1nm,0.8s,baz=56,slow=4.8,SNR=5.3					
BDFB	**Brasilia**	124.11	277	PKIKP	PKPdf	03 13 18.3 -0.1
BDFB						03 15 01.3
TGUH	**Tegucigalpa,Un**	124.91	337	*e*PKPdf	PKPdf	03 13 20.8 +0.7
BCIP	**Isla Barro Col**	126.63	326	*e*PKPdf	PKPdf	03 13 23.0 -0.5
ROSC	**El Rosal**	127.71	318	PKP	PKPdf	03 13 27.2 +1.7
	comp=Z,22nm,0.9s,baz=122,slow=4.8,SNR=13					
ROSC	**El Rosal**	127.71	318	*e*PKPdf	PKPdf	03 13 26.8 +1.3
CPUP	**Villa Florida**	137.15	271	PKhKP	PKPpre	03 13 33.8
	comp=Z,0.3nm,0.3s,baz=49,slow=4.0,SNR=3.4					
CPUP				PKP	PKPdf	03 13 42.4 -0.4
	comp=Z,6.8nm,0.8s,baz=60,slow=2.8,SNR=17					
CPUP	**Villa Florida**	137.15	271	PKP	PKPpre	03 13 33.8
CPUP				*e*PKPdf	PKPdf	03 13 42.2 -0.7
CPUP	**Villa Florida**	137.15	271	PKHKP	PKPpre	03 13 33.8
CPUP				*e*		03 13 42.2
LPAZ	**La Paz**	139.82	292	PKP	PKPdf	03 13 48.7 +0.7
	comp=Z,4.2nm,0.9s,baz=45,slow=4.0,SNR=15					
LPAZ	**La Paz**	139.82	292	*e*PKPdf	PKPdf	03 13 48.7 +0.7
LPAZ	**La Paz**	139.82	292	*e*PKIKP	PKPdf	03 13 48.7 +0.7
TRQA	**Tornquist**	145.18	256	*e*PKPbc	PKPbc	03 13 57.0 +0.2
TRQA				*ep*PKPdf	pPKPdf	03 14 35.3 -0.6
LCO	**Las Campanas**	148.89	276	*e*PKPdf	PKPdf	03 14 04.5 +1.2
LCO				*e*PKPbc	PKPbc	03 14 08.0 +0.5
PLCA	**Paso Flores**	152.20	253	PKP	PKPdf	03 14 09.2 +1.1
	comp=Z,4.9nm,1.1s,baz=172,slow=7.1,SNR=4.4					
PLCA				PKPbc	PKPbc	03 14 15.7 +0.8
	comp=Z,14nm,0.9s,baz=134,slow=1.8,SNR=14					
PLCA	**Paso Flores**	152.20	253	*e*PKPdf	PKPdf	03 14 08.8 +0.6
PLCA				*e*PKPbc	PKPbc	03 14 15.1 +0.2
PLCA	**Paso Flores**	152.20	253	*e*PKIKP	PKPdf	03 14 08.8 +0.7

MAN 20 02:57:33.7±01.0N×126°.13E, h26km, mb4.5, ML3.3, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	0.14	115	*e*P	Pb	02 57 41.1	+3.0
MATI				*e*S	Sb	02 57 45.6	+4.1
DMPH	**Davao City--Mi**	0.62	277	⇓*i*P	Pb	02 57 45.2	-0.1
DMPH				*i* S	Sb	02 57 57.1	+3.3
BUKP	**Musuan**	1.37	309	*e*P	Pn	02 57 56.6	+0.1
BUKP				*e*S	Sn	02 58 07.2	-6.6

IDC 20 02:59:46.4±3.4, 5°.08S×150°.79E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.4/18, Error ellipse: s-maj=110.3km s-min=47.4km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	21.79	226	P	P	03 04 40.3	+0.2
	0.9nm,0.4s,baz=50,slow=10.0,SNR=15						
ASAR	**Alice Springs**	24.63	220	P	P	03 05 08.6	-0.1
	0.8nm,0.8s,baz=51,slow=8.8,SNR=9.1						
FITZ	**Fitzroy Crossi**	27.78	240	P	P	03 05 37.5	+0.2
	0.9nm,0.3s						
PETK	**Petropavlovsk-**	58.26	5	LR	LR	03 31 11.2	
	comp=Z,42nm,18.8s,baz=154,slow=32						
TORD	**Torodi Ar. Bea**	148.48	287	PKPbc	PKPbc	03 19 35.5	-0.7
	0.3nm,0.5s,baz=50,slow=2.8,SNR=2.4						

*CSEM **20** 03:06:31.5, 37°.00N×4°.28W, h0km, ML0.9, After MDD*
MDD 20 03:06:31.5±0.8, 37°.00N×4°.28W, h0km, mbLg0.9/11, Error ellipse: s-maj=4.8km s-min=4.7km az=77.0, PRXIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELOJ	**Sierra Loja**	0.18	34	Pg	Pg	03 06 34.2	-0.8
	22nm,1.0s,SNR=5.1						
ELOJ				Lg		03 06 37.1	
	87nm,1.1s,SNR=7.9						
ELOJ	**Sierra Loja**	0.18	34	Pg	Pg	03 06 34.2	-0.8
	22nm,1.0s,SNR=5.1						
ELOJ				Lg		03 06 37.1	
	87nm,1.1s,SNR=7.9						
ERON	**Agron**	0.38	87	Pg	Pg	03 06 38.7	-0.1
	5.5nm,0.5s,SNR=7.9						
ERON				Lg		03 06 43.0	
	4.5nm,0.5s,SNR=7.9						
ERON	**Agron**	0.38	87	Pg	Pg	03 06 38.7	-0.1
	5.5nm,0.5s,SNR=7.9						
ERON				Lg		03 06 43.0	
	4.5nm,0.5s,SNR=7.9						
ELUQ	**Luque**	0.56	1	Lg		03 06 50.2	
	161nm,2.4s,SNR=7.9						
ELUQ	**Luque**	0.56	1	Lg		03 06 50.2	
	161nm,2.4s,SNR=7.9						
EMIJ	**Mijas**	0.59	223	Lg		03 06 50.4	
	26nm,3.5s,SNR=7.9						
EMIJ	**Mijas**	0.59	223	Lg		03 06 50.4	
	26nm,3.5s,SNR=7.9						
EGUA	**Guajares**	0.59	106	Lg		03 06 51.3	
	63nm,0.6s,SNR=7.9						
EGUA	**Guajares**	0.59	106	Lg		03 06 51.3	
	63nm,0.6s,SNR=7.9						
EQUE	**Quentar**	0.70	73	Lg		03 06 54.4	
	3.6nm,2.5s,SNR=7.9						
EQUE	**Quentar**	0.70	73	Lg		03 06 54.4	
	3.6nm,2.5s,SNR=7.9						
EBER	**Berja**	1.12	95	Lg		03 07 07.6	
	35nm,3.6s,SNR=7.9						
EBER	**Berja**	1.12	95	Lg		03 07 07.6	
	35nm,3.6s,SNR=7.9						
EADA	**Adamuz**	1.19	349	Lg		03 07 10.0	
	1.4nm,0.5s,SNR=7.9						
EADA	**Adamuz**	1.19	349	Lg		03 07 10.0	
	1.4nm,0.5s,SNR=7.9						
EBAN	**Banos Encina**	1.23	18	Lg		03 07 11.4	
	2.5nm,0.8s,SNR=7.9						
EBAN	**Banos Encina**	1.23	18	Lg		03 07 11.4	
	2.5nm,0.8s,SNR=7.9						
EQES	**Quesada**	1.25	50	Lg		03 07 12.2	
	4.3nm,4.6s,SNR=7.9						
EQES	**Quesada**	1.25	50	Lg		03 07 12.2	
	4.3nm,4.6s,SNR=7.9						
EMIN	**Mina Concepcio**	2.06	293	Lg		03 07 36.8	
	3.4nm,4.2s,SNR=7.9						
EMIN	**Mina Concepcio**	2.06	293	Lg		03 07 36.8	
	3.4nm,4.2s,SNR=7.9						

IDC 20 03:26:23.9±7.5, 31°.93S×179°.81E, h484km±99km, mb2.9/2, mb1 3.2/3, mb1mx3.0/15, mbtmp3.0/3, Error ellipse: s-maj=114.1km s-min=42.0km az=7.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	6.69	199	P	P	03 28 07.2	+0.9
	1.8nm,0.3s,baz=45,slow=1.0,SNR=22						
URZ				S	S	03 29 29.4	-0.8
	4.4nm,0.3s,baz=263,slow=23,SNR=22						
ASAR	**Alice Springs**	41.19	270	P	P	03 33 25.8	+0.3
	0.5nm,0.5s,baz=105,slow=7.3,SNR=8.9						
WRA	**Warramunga Arr**	42.32	275	P	P	03 33 34.1	-0.3
	1.0nm,0.4s,baz=111,slow=8.0,SNR=25						
FINES	**FINESS Array B**	145.89	338	PKPbc	PKPbc	03 45 06.8	-0.9
	1.1nm,0.9s,baz=58,slow=6.1,SNR=5.4						

*ISCJB **20** 03:37:48.4±0.4, 51°.43N±0°.02×16°.11E±0°.02, h0km, Error ellipse: s-maj=3.6km s-min=1.9km az=17.5*
*IPEC **20** 03:37:48.6±0.3, 51°.59N×16°.21E, h0km, ML2.4/3, Error ellipse: s-maj=2.0km s-min=1.5km az=35.0*
*NEIC **20** 03:37:49.2±1.5, 51°.61N×16°.14E, h5km, ML3.0(SZGRF), ML2.7(BRA), Error ellipse: s-maj=22.8km s-min=7.0km az=187.0*
*CSEM **20** 03:37:49.8±0.2, 51°.48N×16°.10E, h2km, ML3.5/11, Error ellipse: s-maj=4.6km s-min=2.2km az=19.0*
*WAR **20** 03:37:50.5, 51°.52N×16°.12E, ML2.8, Mining Induced*
*BGR **20** 03:37:50.6±0.7, 51°.53N×16°.12E, h1km, ML3.0/3, Error ellipse: s-maj=6.7km s-min=5.6km az=3.0*
*PRU **20** 03:37:51.2, 51°.45N×16°.14E, h0km, Felt In Harrachov*
*VIE **20** 03:37:52.6±0.8, 51°.24N×16°.08E, h0km, mb2.6/4, ML3.0/4, Error ellipse: s-maj=5.3km s-min=4.7km az=8.0 66 km WNW of Wroclaw Suspected Mining induced.*
ISC 20 03:37:49.7±0.4, 51°.49N±0°.02×16°.12E±0°.02, h0km, n78, σ0=82/138, 4C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.65	170	*e*Pg	Pg	03 38 03.0	+0.8
KSP				*e*Sg	Sg	03 38 12.1	+1.4
KSP	**Ksiaz**	0.65	170	*i* Pg	Pg	03 38 03.0	+0.8
KSP				e		03 38 10.3	
KSP				*e*Sg	Sg	03 38 12.0	+1.3
KSP				*e*L		03 38 16.9	
KSP	**Ksiaz**	0.65	170	*e*Pg	Pg	03 38 02.9	+0.7
	baz=356						
KSP				*e*Sg	Sg	03 38 12.0	+1.3
UPC	**Upice**	0.98	184	*e*PG	Pg	03 38 09.0	+0.5
UPC	**Upice**	0.98	184	Pg	Pg	03 38 09.0	+0.5
DPC	**Dobruska-Polom**	1.14	173	*e*PG	Pg	03 38 11.8	+0.2
DPC				*e*SG	Sg	03 38 26.5	+0.1
	comp=Z,62nm,0.5s						
DPC	**Dobruska-Polom**	1.14	173	Pg	Pg	03 38 11.8	+0.2
DPC				Sg	Sg	03 38 26.5	+0.1
	comp=Z,62nm,0.5s						
PVCC	**Panska Ves**	1.37	226	*e*PG	Pg	03 38 15.8	-0.2
PVCC				*e*SG	Sg	03 38 34.4	+0.7
	comp=Z,202nm,0.3s						
PVCC	**Panska Ves**	1.37	226	*e*Pn	Pn	03 38 15.7	-0.4
	baz=44						
PVCC				Sg	Sg	03 38 34.4	+0.7
	comp=Z,202nm,0.3s						
BRG	**Berggiesshubel**	1.50	247	*e*Pg	Pg	03 38 18.4	0.0
	SNR=32						
BRG				*e*Sg	Sg	03 38 38.6	+0.7
	SNR=7.8						
BRG	**Berggiesshubel**	1.50	247	PN	Pn	03 38 16.9	-0.9
BRG				PG	Pg	03 38 18.3	-0.2
BRG				SG	Sg	03 38 38.8	+0.9
	comp=Z,139nm,0.4s						
RUE	**Ruedersdorf**	1.76	305	*e*Sg	Sg	03 38 46.3	+0.2
	SNR=5.0						
RUE	**Ruedersdorf**	1.76	305	Sg	Sg	03 38 46.3	+0.2
	SNR=5.0						
PRU	**Pruhonice**	1.80	214	*e*PN	Pn	03 38 22.3	+0.3
PRU				*e*PG	Pg	03 38 23.9	-0.4
PRU				*e*SG	Sg	03 38 48.2	+0.6
	comp=Z,49nm,0.3s						
PRU	**Pruhonice**	1.80	214	Pn	Pn	03 38 22.3	+0.3
PRU	**Pruhonice**	1.80	214	Pg	Pg	03 38 23.9	-0.4
PRU				Sg	Sg	03 38 48.2	+0.6
	comp=Z,49nm,0.3s						
GKP	**Gorka Klasztor**	1.91	21	*e*Pn	Pg	03 38 28.9	+2.5
GKP				*e*Pg	Pg	03 38 31.0	+4.6
GKP				*e*Sn	Sg	03 38 58.5	+7.3
GKP	**Gorka Klasztor**	1.91	21	*e*Pg	Pg	03 38 31.0	+4.6
MORC	**Moravsky Berou**	1.94	152	*e*Pn	Pn	03 38 23.3	-0.5
	baz=336						
MORC				*e*Sg	Sg	03 38 51.4	-0.5
	comp=Z,23nm,0.4s,baz=336						
CLL	**Collm**	1.96	266	*e*Pn	Pn	03 38 23.1	-1.1
	SNR=42						
CLL				*e*Pg	Pg	03 38 26.0	-1.3
CLL				*e*Sg	Sg	03 38 52.1	-0.6
	SNR=3.1						
CLL	**Collm**	1.96	266	*i* Pn	Pn	03 38 23.0	-1.2
CLL				*e*Pg	Pg	03 38 26.0	-1.3
CLL				*e*Sg	Sg	03 38 53.0	+0.4
CLL	**Collm**	1.96	266	*i* Pn	Pn	03 38 23.0	-1.2
	comp=Z,12nm,0.4s						
CLL				*e*Pg	Pg	03 38 26.0	-1.3
CLL				*e*		03 38 29.0	
CLL				*e*Sg	Sg	03 38 53.0	+0.4
	comp=Z,86nm,0.7s						
CLL	**Collm**	1.96	266	Pn	Pn	03 38 23.1	-1.1
	SNR=42						
OKC	**Ostrava-Krasne**	2.10	141	*e*PN	Pn	03 38 25.0	-1.0
OKC				*e*PG	Pg	03 38 29.2	-0.7
OKC				*e*SG	Sg	03 38 55.6

KHC			*e*Pg		**Pg**	**03 38 42.5**	**-2.1**
KHC			*e*Sn		**Sn**	**03 39 11.7**	**0.0**
KHC			*e*Sg		**Sg**	**03 39 22.4**	**+0.7**
KHC	**Kasperske Hory**	**2.87 216**	*e*PN		**Pn**	**03 38 36.4**	**-0.2**
KHC			*e*PG		**Pg**	**03 38 42.7**	**-1.9**
KHC			*e*SG		**Sg**	**03 39 19.7**	**-2.0**
	comp=Z,25nm,0.5s						
KHC	**Kasperske Hory**	**2.87 216**	*e*Pn		**Pn**	**03 38 36.5**	**-0.1**
MOX	**Moxa**	**2.96 255**	*e*PN		**Pn**	**03 38 37.9**	**0.0**
MOX			*e*PG		**Pg**	**03 38 45.7**	**-0.8**
MOX			*i* SG		**Sg**	**03 39 25.8**	**+1.0**
MOX	**Moxa**	**2.96 255**	⇑*e*Pn		**Pn**	**03 38 37.9**	**0.0**
MOX			*e*Pg		**Pg**	**03 38 45.7**	**-0.8**
	SNR=5.5						
MOX			*e*Sg		**Sg**	**03 39 25.8**	**+0.9**
	SNR=11						
MOX	**Moxa**	**2.96 255**	Pn		**Pn**	**03 38 37.9**	**0.0**
GEC2	**GERESS Array S**	**3.07 211**	*e*Pn		**Pn**	**03 38 40.4**	**+1.1**
	SNR=12						
GEC2	**GERESS Array S**	**3.07 211**	*e*Pn		**Pn**	**03 38 40.4**	**+1.0**
GEC2	**GERESS Array S**	**3.07 211**	Pn		**Pn**	**03 38 40.4**	**+1.0**
	SNR=12						
WET	**Wettzell**	**3.13 223**	*e*Pn		**Pn**	**03 38 40.2**	**-0.1**
	SNR=8.0						
WET	**Wettzell**	**3.13 223**	*e*Pn		**Pn**	**03 38 40.2**	**-0.1**
WET	**Wettzell**	**3.13 223**	Pn		**Pn**	**03 38 40.2**	**-0.1**
	SNR=8.0						
ZST	**Bratislava**	**3.35 169**	*e*SG		**Sg**	**03 39 37.1**	**-0.3**
ZST	**Bratislava**	**3.35 169**	*e*Sg		**Sg**	**03 39 37.1**	**-0.3**
NIE	**Niedzica**	**3.39 126**	*e*P		**Pg**	**03 38 53.8**	**-0.8**
NIE			*e*S		**Sg**	**03 39 39.2**	**+0.8**
ASSE	**Asse, Remlinge**	**3.44 283**	*e*Pg		**Pg**	**03 38 54.8**	**-0.8**
	SNR=7.3						
VYHS	**Vyhne**	**3.47 149**	*e*Pn		**Pn**	**03 38 44.6**	**-0.3**
VYHS			*e*			03 38 56.4	
VYHS			*e*Sg		**Sg**	**03 39 42.0**	**+0.9**
VYHS	**Vyhne**	**3.47 149**	*e*PN		**Pn**	**03 38 44.6**	**-0.3**
VYHS			*e*			03 38 56.4	
VYHS	**Vyhne**	**3.47 149**	*e*SG		**Sg**	**03 39 42.0**	**+0.9**
VYHS	**Vyhne**	**3.47 149**	*e*Pn		**Pn**	**03 38 44.6**	**-0.3**
VYHS			*e*Sg		**Sg**	**03 39 42.0**	**+0.9**
CONA	**Conrad Observa**	**3.56 183**	⇓*i*Pn		**Pn**	**03 38 46.8**	**+0.6**
CONA			⇑*i*Sg		**Sg**	**03 39 42.6**	**-1.6**
	comp=Z,21nm,0.4s						
GRFO	**Grafenberg**	**3.60 242**	*e*Pn		**Pn**	**03 38 46.5**	**-0.2**
GRFO			*e*Pg		**Pg**	**03 38 58.9**	**+0.2**
GRFO			*e*Sg		**Sg**	**03 39 46.0**	**+0.6**
GRFO	**Grafenberg**	**3.60 242**	*e*Pn		**Pn**	**03 38 46.5**	**-0.2**
MOA	**Molln**	**3.83 199**	⇑*i*Pn		**Pn**	**03 38 49.9**	**0.0**
MOA			⇑*i*Sg		**Sg**	**03 39 51.7**	**-1.1**
	comp=Z,28nm,0.6s						
MOA	**Molln**	**3.83 199**	Pn		**Pn**	**03 38 49.9**	**0.0**
MOA			Sg		**Sg**	**03 39 51.7**	**-1.1**
	comp=Z,28nm,0.6s						
KECS	**Kecovo**	**4.12 135**	*e*Pn		**Pn**	**03 38 54.4**	**+0.6**
KECS			*e*			03 39 09.4	
KECS			*e*Sg		**Sg**	**03 40 01.4**	**-0.6**
KECS	**Kecovo**	**4.12 135**	*e*PN		**Pn**	**03 38 54.4**	**+0.6**
KECS			*e*			03 39 09.4	
KECS	**Kecovo**	**4.12 135**	*e*SG		**Sg**	**03 40 01.4**	**-0.6**
CRVS	**Cervenica-Dubn**	**4.30 125**	*e*P		**Pg**	**03 39 12.5**	**+0.5**
CRVS			*e*Sg		**Sg**	**03 40 10.0**	**+2.3**
CRVS	**Cervenica-Dubn**	**4.30 125**	*e*SG		**Sg**	**03 40 10.0**	**+2.3**
KWP	**Kalwaria Pacla**	**4.59 111**	*e*Pg		**Pg**	**03 39 14.4**	**-3.3**
KWP	**Kalwaria Pacla**	**4.59 111**	*e*Pg		**Pg**	**03 39 14.4**	**-3.3**
KOLS	**Kolonicke sedl**	**4.71 120**	*e*Pn		**Pn**	**03 39 01.9**	**0.0**
KOLS			*e*			03 39 19.5	
KOLS			*e*Sg		**Sg**	**03 40 21.6**	**+0.8**
KOLS	**Kolonicke sedl**	**4.71 120**	*e*PN		**Pn**	**03 39 01.9**	**0.0**
KOLS			*e*			03 39 19.5	
KOLS	**Kolonicke sedl**	**4.71 120**	*e*SG		**Sg**	**03 40 21.6**	**+0.8**
KOLS	**Kolonicke sedl**	**4.71 120**	*e*Pn		**Pn**	**03 39 01.9**	**0.0**
KOLS			*e*Sg		**Sg**	**03 40 21.6**	**+0.8**
BFO	**Black Forest**	**5.94 241**	*e*Pg		**Pg**	**03 39 45.3**	**+1.8**
	comp=Z,3.0nm,0.6s						
BFO	**Black Forest**	**5.94 241**	*e*Pg		**Pg**	**03 39 45.3**	**+1.8**
	comp=Z,3.0nm,0.6s						

CSEM ***20*** *03:55:41.7±0.3, 50°.44N×18°.86E, h2km, ML2.4/5, Error ellipse: s-maj=6.3km s-min=3.0km az=177.0*
IPEC ***20*** *03:55:42.8±0.2, 50°.36N×18°.93E, h8km±2km, ML1.4/3, Error ellipse: s-maj=2.7km s-min=1.1km az=170.0*
WAR ***20*** *03:55:42.5, 50°.36N×18°.93E*

PRU 20 03:55:42.9, 50°.38N×18°.88E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.61 105**		*e*Pg	Pg	03 55 54.1	-0.5
OJC				*e*Sg	Sg	03 56 01.2	-1.3
OJC	**Ojcow**	**0.61 105**		*e*Pg	Pg	03 55 54.0	-0.6
	baz=284						
OKC	**Ostrava-Krasne**	**0.72 221**		*e*PG	Pg	03 55 56.8	+0.1
OKC				*e*SG	Sg	03 56 06.9	+0.9
	comp=Z,6.6nm,0.4s						
OKC	**Ostrava-Krasne**	**0.72 221**		*e*Pg	Pg	03 55 56.7	0.0
	baz=44						
OKC				Sg	Sg	03 56 06.9	+0.9
	comp=Z,6.6nm,0.4s						
MORC	**Moravsky Berou**	**1.05 235**		*e*Pg	Pg	03 56 02.6	-0.4
	baz=56						
MORC				*e*Sg	Sg	03 56 17.1	+0.4
	comp=Z,6.2nm,0.2s,baz=56						
NIE	**Niedzica**	**1.34 136**		*e*Pg	Pg	03 56 08.0	-0.5
NIE				*e*Sg	Sg	03 56 25.2	-0.6
NIE	**Niedzica**	**1.34 136**		*e*PG	Pg	03 56 07.6	-0.9
DPC	**Dobruska-Polom**	**1.64 270**		*e*PG	Pg	03 56 12.4	-1.9
DPC				*e*SG	Sg	03 56 34.9	-0.6
	comp=Z,3.5nm,0.2s						
DPC	**Dobruska-Polom**	**1.64 270**		Pg	Pg	03 56 12.4	-1.9
DPC				Sg	Sg	03 56 34.9	-0.6
	comp=Z,3.5nm,0.2s						
VRAC	**Vranov**	**1.83 235**		*e*Pn	Pn	03 56 14.9	-0.6
	baz=54						
VRAC				*e*Sg	Sg	03 56 40.5	-1.1
	comp=Z,2.9nm,0.2s,baz=54						
UPC	**Upice**	**1.84 275**		*e*SG	Sg	03 56 41.4	-0.5
UPC	**Upice**	**1.84 275**		Sg	Sg	03 56 41.4	-0.5
KRUC	**Moravsky**	**2.08 232**		*e*Sg	Sg	03 56 47.9	-1.9
	comp=Z,1.9nm,0.2s,baz=51						
PRU	**Pruhonice**	**2.82 264**		*e*SG	Sg	03 57 11.8	-1.5
PRU	**Pruhonice**	**2.82 264**		Sg	Sg	03 57 11.8	-1.5
BRG	**Berggiesshubel**	**3.18 281**		SG	Sg	03 57 25.4	+0.3
	comp=Z,2.2nm,0.8s						
KHC	**Kasperske Hory**	**3.66 252**		*e*SG	Sg	03 57 38.8	-1.5
KHC	**Kasperske Hory**	**3.66 252**		Sg	Sg	03 57 38.8	-1.5

BJI ***20*** *03:59:40.0, 19°.30N×155°.10W, h10km, mB4.9/4, mb4.9/10, Ms4.5/2, Ms7 4.2/4*
IDC ***20*** *03:59:42.0±0.9, 19°.18N×155°.16W, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.1/25, mbtmp4.0/12, MS3.3/2, Ms1 3.3/2, ms1mx2.7/30, Error ellipse: s-maj=31.9km s-min=17.3km az=153.0*
ISCJB ***20*** *03:59:42.8±0.7, 19°.35N±0°.06×155°.16W±0°.05, h14km±3km, mb4.1/15, MS3.6/4, Error ellipse: s-maj=10.8km s-min=8.4km az=175.5*
NEIC ***20*** *03:59:43.0, 19°.33N×155°.11W, h10km, MD4.3(HVO), After HVO.*
NEIC Felt [III] at Captain Cook, Hilo, Honomu, Kamuela, Mountain View, Pahoa, Papa'ikou and Volcano; [II] at Kailua Kona and Kea'au. Also felt at Hakalau, Holualoa, Honaunau, Honoka'a, Kapaau, Kealakekua, Laupahoehoe, Na'alehu, Ninole, Pepeekeo and Waikoloa.

ISC 20 03:59:43.6±0.8, 19°.33N±0°.07×155°.16W±0°.05, h8km±3km, n27, σ0.8 87/28, mb4.1/15, MS3.6/4, 2D, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STCH	**Steam Cracks**	**0.06**	**27**	⇓*i*Pg	**Pg**	**03 59 45.3**	**-0.3**
PUH	**Pauahi**	**0.07**	**308**	⇓*i*Pg	**Pg**	**03 59 45.0**	**-0.6**
PUH				*e*Sg	**Sg**	**03 59 46.9**	**-0.2**
KHU	**Kahuku**	**0.44**	**259**	*e*Pg	**Pg**	**03 59 52.2**	**-0.1**
KHU				*e*Sg	**Sg**	**03 59 59.5**	**+1.4**
POHA	**Pohakuloa**	**0.55**	**320**	*e*Pg	**Pg**	**03 59 53.8**	**-0.6**
POHA				*e*Sg	**Sg**	**04 00 02.2**	**+0.7**
HON	**Honolulu**	**3.32**	**307**	*e*Pn	**Pn**	**04 00 31.3**	**-4.6**
KIP	**Kipapa**	**3.39**	**308**	*e*Pn	**Pn**	**04 00 32.0**	**-4.8**
KIP				*e*Sn	**Sn**	**04 01 13.6**	**-3.7**
YBH	**Yreka Blue Hor**	**35.45**	**44**	P	**P**	**04 06 40.4**	**+0.1**
	1.2nm,0.8s,mb3.9,baz=273,slow=8.7,SNR=4.6						
PPT	**Papeete**	**37.08**	**171**	LR	LR	04 17 29.8	
	comp=Z,109nm,19.8s,MS3.6,baz=59,slow=29						
NVAR	**Mina Array Bea**	**37.14**	**51**	P	**P**	**04 06 55.6**	**+0.7**
	0.6nm,0.8s,mb3.5,baz=238,slow=12,SNR=4.4						
DIB	**Dawson Inlet,**	**38.09**	**22**	T		04 47 07.4	
	SNR=135						
VIB	**Van Inlet**	**38.11**	**22**	T		04 47 07.3	
	SNR=50						
PDAR	**Pinedale Array**	**44.83**	**48**	P	**P**	**04 07 58.4**	**+0.2**
	1.1nm,0.9s,mb3.7,baz=230,slow=3.7,SNR=7.6						
ILAR	**Eielson Array**	**45.75**	**5**	P	**P**	**04 08 05.0**	**-0.2**
	2.2nm,0.9s,mb4.1,baz=197,slow=6.9,SNR=21						
ILAR				PcP	PcP	04 09 42.6	-0.2
	0.3nm,0.6s,baz=199,slow=5.2,SNR=3.4						
TXAR	**Lajitas Array**	**47.64**	**68**	P	**P**	**04 08 21.6**	**+1.1**
	1.9nm,0.8s,mb4.2,baz=256,slow=8.8,SNR=22						
PETK	**Petropavlovsk-**	**49.48**	**324**	P	**P**	**04 08 34.8**	**+0.6**
	3.5nm,0.9s,mb4.4,baz=83,slow=12,SNR=3.1						
PETK				LR	LR	04 25 35.6	
	comp=Z,15nm,20.3s,MS3.0,baz=280,slow=31						
MJAR	**Matsushiro Arr**	**60.22**	**302**	P	**P**	**04 09 52.4**	**0.0**
	2.4nm,0.9s,mb4.2,baz=108,slow=4.3,SNR=4.6						
KSRS	**Korea Array**	**68.33**	**303**	P	**P**	**04 10 47.0**	**+1.4**
	2.5nm,1.1s,mb4.2,baz=70,slow=7.9,SNR=4.0						
CN2	**Changchun**	**69.34**	**310**	*e*P	**P**	**04 10 47.6**	**-4.2**
CN2				*e*S	S	04 19 52.6	-6.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
BJI	**Beijing**	**76.84**	**308**	P	**P**	**04 11 36.3**	**+0.1**
BJI				S	S	04 21 25.0	+0.8
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
BJI				pmax	pmax		
	comp=Z,42nm,3.5s						
BJI				LR	LR		
	comp=N,73nm,26.1s,MS4.2						
BJI				LR	LR		
	comp=E,120nm,24.6s,MS4.2						
BJI				LR	LR		
	comp=Z,35nm,25.6s,MS3.6						
STKA	**Stephens Creek**	**79.12**	**231**	P	**P**	**04 11 47.2**	**-1.7**
	comp=Z,2.4nm,0.8s,mb4.2,baz=45,slow=5.7,SNR=3.5						
STKA	**Stephens Creek**	**79.12**	**231**	P	**P**	**04 11 47.2**	**-1.7**
WRA	**Warramunga Arr**	**79.34**	**244**	P	**P**	**04 11 49.4**	**-1.0**
	comp=Z,0.4nm,0.9s,mb3.3,baz=63,slow=5.2,SNR=2.8						
HHC	**Hu-ho-hao-te**	**80.01**	**310**	*e*P	**P**	**04 11 53.0**	**-0.8**
HHC				pP	pP	04 11 57.8	+1.3
HHC				sP	sP	04 12 00.1	+2.6
HHC				PP	PP	04 14 56.8	+1.5
HHC				S	S	04 21 55.9	-2.3
HHC				sS	sS	04 22 03.8	+1.0
HHC				ScS	ScS	04 22 14.0	-5.1
HHC				SS	SS	04 27 08.1	+0.5
HHC				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
HHC				pmax	pmax		
	comp=Z,75nm,5.2s						
HHC				LR	LR		
	comp=Z,72nm,16.1s,MS4.1						
ASAR	**Alice Springs**	**81.29**	**241**	P	**P**	**04 12 00.8**	**0.0**
	comp=Z,0.6nm,0.8s,mb3.6,baz=79,slow=2.7,SNR=5.2						
SONM	**Songino Array**	**81.39**	**318**	P	**P**	**04 12 01.8**	**+0.8**
	comp=Z,2.0nm,0.9s,mb4.1,baz=60,slow=5.8,SNR=5.4						
GYA	**Guiyang**	**88.55**	**297**	*e*P	**P**	**04 12 35.8**	**-1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA	**Gaotai**	**88.95**	**312**	*e*P	**P**	**04 12 39.9**	**+0.9**
GTA				pP	pP	04 12 43.4	+1.6
GTA				sP	sP	04 12 44.9	+2.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						

ISCJB ***20*** *04:00:22.0±0.2, 29°.41S±0°.02×70°.53W±0°.07, h67km, mb4.4/41, Error ellipse: s-maj=8.5km s-min=2.4km az=176.3*
GUC ***20*** *04:00:22.2±0.9, 29°.38S×70°.83W, h68km±6km, ML4.8*
IDC ***20*** *04:00:23.4±0.5, 29°.36S×70°.80W, h69km±3km, mb4.1/13, mb1 4.2/15, mb1mx4.2/19, mbtmp4.1/15, MS3.6/6, Ms1 3.6/6, ms1mx3.3/24, Error ellipse: s-maj=19.0km s-min=8.5km az=50.0*
BJI ***20*** *04:00:23.3, 29°.40S×70°.60W, h77km, mB4.6/3, Ms5.2/2, Ms7 5.0/2*
NEIC ***20*** *04:00:23.3±0.1, 29°.40S×70°.61W, mb4.6/31, Error ellipse: s-maj=7.2km s-min=3.2km az=85.0*
NEIC Felt [IV] at Alto del Carmen and [III] at Coquimbo, La Serena, Vallenar and Vicuna.

ISC 20 04:00:23.9±0.2, 29°.43S±0°.02×70°.55W±0°.07, h69km, h69km±.3km; pP-P, n384, σ0.65/374, mb4.4/41, 133C-124D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.44**	**342**	⇑*i*Pn	**Pn**	**04 00 35.0**	**-1.2**
LCO				*e*Sn	**Sn**	**04 00 44.0**	**-1.0**
LCO	**Las Campanas**	**0.44**	**342**	⇑*i*P	**Pn**	**04 00 34.6**	**-1.5**
LCO				*i* S	**Sn**	**04 00 44.1**	**-0.9**
LCO				AML	AML	04 00 46.5	
	comp=E,52μm,0.2s						
TLL	**Tololo Astrono**	**0.77**	**197**	*e*P	**Pn**	**04 00 39.1**	**-0.4**
TLL				*e*S	**Sn**	**04 00 51.3**	**+0.2**
TLL	**Tololo Astrono**	**0.77**	**197**	*e*P	**Pn**	**04 00 39.1**	**-0.4**
TLL				*e*S	**Sn**	**04 00 51.3**	**+0.2**
TLL				AML	AML	04 00 54.2	
	comp=N,22μm,0.6s						
OVCH	**Ovalle**	**1.30**	**206**	*e*P	**Pn**	**04 00 44.8**	**-1.4**
OVCH				*i* S	**Sn**	**04 01 00.8**	**-2.2**
OVCH	**Ovalle**	**1.30**	**206**	*e*P	**Pn**	**04 00 44.8**	**-1.4**
OVCH				*i* S	**Sn**	**04 01 00.8**	**-2.2**
OVCH				AML	AML	04 01 06.5	
	comp=N,17μm,0.3s						
CMCH	**Combarbala**	**1.78**	**193**	⇑*i*P	**Pn**	**04 00 51.7**	**-0.8**
CMCH				*i* S	**Sn**	**04 01 13.9**	**-0.4**
CMCH	**Combarbala**	**1.78**	**193**	⇑*i*P	**Pn**	**04 00 51.7**	**-0.8**
CMCH				*i* S	**Sn**	**04 01 13.9**	**-0.4**
CMCH				AML	AML	04 01 19.4	
	comp=N,30μm,0.6s						
CHNG	**Los Chungos**	**2.58**	**198**	⇑*i*P	**Pn**	**04 00 58.1**	**-5.2**
CHNG				*i* S	**Sn**	**04 01 28.6**	**-5.0**
CFAA	**Coronel Fontan**	**2.94**	**138**	P	**Pn**	**04 01 12.2**	**+3.9**
	comp=N,26nm,0.3s,baz=318,slow=12,SNR=1115						
CFAA				S	**Sn**	**04 01 48.4**	**+5.8**
	comp=N,18nm,0.3s,baz=59,slow=23,SNR=8.7						
JACH	**Jahuel**	**3.24**	**181**	P	**Pn**	**04 01 13.4**	**+1.1**
JACH	**Jahuel**	**3.24**	**181**	⇑*i*P	**Pn**	**04 01 13.4**	**+1.1**
ROCH	**El Roble**	**3.55**	**186**	*e*P	**Pn**	**04 01 16.4**	**-0.2**
ROCH	**El Roble**	**3.55**	**186**	*e*P	**Pn**	**04 01 16.4**	**-0.2**
ROCH				*e*P		04 01 16.4	
ROCH				*e*S	**Sn**	**04 01 57.5**	**+0.1**
ROCH				AML	AML	04 02 16.4	
	comp=E,4μm,0.5s						
PEL	**Peldehue**	**3.70**	**182**	⇑*i*P	**Pn**	**04 01 19.3**	**+0.7**
PEL				*i* S	**Sn**	**04 02 02.2**	**+1.2**
IHA	**Instituto Hidr**	**3.70**	**194**	*e*P	**Pn**	**04 01 17.2**	**-1.4**
IHA	**Instituto Hidr**	**3.70**	**194**	*e*P	**Pn**	**04 01 17.2**	**-1.4**
FCH	**Farellones**	**3.89**	**177**	*e*P	**Pn**	**04 01 18.4**	**-2.8**
FCH				*e*S	**Sn**	**04 02 04.4**	**-1.2**
CLCH	**Cerro Calan**	**3.95**	**180**	⇑*i*P	**Pn**	**04 01 23.2**	**+1.2**
CLCH				*i* S	**Sn**	**04 02 08.2**	**+1.0**
LCCH	**Las Cruces**	**4.12**	**192**	*e*P	**Pn**	**04 01 23.6**	**-0.8**
LCCH	**Las Cruces**	**4.12**	**192**	*e*P	**Pn**	**04 01 23.6**	**-0.8**
ANTU	**Antumapu**	**4.12**	**181**	*e*P	**Pn**	**04 01 24.2**	**-0.3**
ANTU				*e*S	**Sn**	**04 02 11.5**	**+0.1**
ANTU	**Antumapu**	**4.12**	**181**	*e*P	**Pn**	**04 01 24.2**	**-0.3**
ANTU				*e*S	**Sn**	**04 02 11.5**	**+0.1**
TACH	**Talagante**	**4.22**	**184**	*e*P	**Pn**	**04 01 25.7**	**0.0**
TACH	**Talagante**	**4.22**	**184**	*e*P	**Pn**	**04 01 25.7**	**0.0**
LMEL	**Las Melosas**	**4.41**	**176**	*e*P	**Pn**	**04 01 29.6**	**+1.2**
LMEL				*i* S	**Sn**	**04 02 20.3**	**+1.9**
LMEL	**Las Melosas**	**4.41**	**176**	*e*P	**Pn**	**04 01 29.6**	**+1.2**
LMEL				*i* S	**Sn**	**04 02 20.3**	**+1.9**
LNV	**Longovilo**	**4.57**	**189**	*e*P	**Pn**	**04 01 29.3**	**-1.2**
LNV	**Longovilo**	**4.57**	**189**	*e*P	**Pn**	**04 01 29.3**	**-1.2**
TRQA	**Tornquist**	**11.17**	**143**	*e*Pn	**Pn**	**04 03 00.6**	**0.0**
PLCA	**Paso Flores**	**11.27**	**180**	P	**Pn**	**04 03 00.9**	**-1.1**
	comp=E,0.3nm,0.3s,baz=2.6,slow=13,SNR=9.2						
PLCA	**Paso Flores**	**11.27**	**180**	*e*Pn	**Pn**	**04 03 04.6**	**+2.5**
CPUP	**Villa Florida**	**12.10**	**78**	P	**Pn**	**04 03 12.9**	**-0.4**
	comp=E,0.9nm,0.3s,baz=234,slow=12,SNR=15						
CPUP				LR	LR	04 08 34.1	
	comp=E,342nm,18.4s,baz=224,slow=40						
CPUP	**Villa Florida**	**12.10**	**78**	*e*Pn	**Pn**	**04 03 12.6**	**-0.7**
	comp=E,15nm,1.2s						
LPAZ	**La Paz**	**13.27**	**10**	P	**Pn**	**04 03 26.1**	**-3.2**
	comp=E,0.4nm,0.3s,baz=178,slow=7.1,SNR=13						
LPAZ	**La Paz**	**13.27**	**10**	*e*Pn	**Pn**	**04 03 29.1**	**-0.2**
ATAH	**Atahualpa**	**23.38**	**340**	LR	LR	04 12 27.3	
	comp=E,105nm,20.9s,baz=96,slow=31						
BDFB	**Brasilia**	**24.87**	**61**	P	**P**	**04 05 40.4**	**+0.2**
	comp=E,5.9nm,0.6s,mb4.2,baz=237,slow=9.4,SNR=16						
BDFB				pP		04 05 57.1	
	comp=E,16nm,1.1s,baz=220,slow=9.9,SNR=6.8						
BDFB				LR	LR	04 15 44.4	
	comp=E,139nm,22.0s,baz=330,slow=37						
USHA	**Ushuaia**	**25.43**	**177**	P	**P**	**04 05 44.9**	**0.0**
	comp=E,9.5nm,0.7s,mb4.3,baz=264,slow=6.0,SNR=5.0						
ROSC	**El Rosal**	**34.28**	**353**	P	**P**	**04 07 03.0**	**-0.6**
	comp=E,2.5nm,0.5s,mb4.3,baz=288,slow=20,SNR=2.2						
ROSC				LR	LR	04 20 55.7	
	comp=E,57nm,18.5s,baz=5.2,slow=36						
CMIG	**Matias Romero**	**51.88**	**330**	P	**P**	**04 09 22.7**	**-2.7**
	comp=E,6.0nm,0.8s,mb4.7,baz=59,slow=5.9,SNR=5.5						
TEIG	**Tepich**	**52.24**	**339**	*e*P	**P**	**04 09 27.1**	**-1.0**
	comp=E,24nm,0.8s,mb5.3						
JCT	**Junction City**	**65.78**	**332**	⇑P	**P**	**04 11 01.3**	**-0.3**
	baz=66,SNR=9.7						
JCT	**Junction City**	**65.78**	**332**	*e*P	**P**	**04 11 01.0**	**-0.6**
	comp=E,13nm,0.6s,mb4.9						
JCT				*e*pP	pP	04 11 19.2	-0.7
JCT				*e*sP	sP	04 11 26.3	-1.3
628A	**Black Gap, Mar**	**66.22**	**329**	⇑P	**P**	**04 11 04.5**	**0.0**
	baz=66,SNR=10						
627A	**Terlingua Ranc**	**66.42**	**329**	⇑P	**P**	**04 11 05.4**	**-0.3**
	baz=67,SNR=6.0						
TXAR	**Lajitas Array**	**66.44**	**329**	P	**P**	**04 11 05.3**	**-0.6**
	comp=E,2.7nm,0.8s,mb4.2,baz=149,slow=8.3,SNR=28						
TXAR				pP	pP	04 11 23.2	-1.0
	comp=E,1.6nm,0.7s,baz=151,slow=9.3,SNR=6.7						
TXAR				sP	sP	04 11 30.7	-1.2
	comp=E,1.5nm,0.8s,baz=139,slow=5.9,SNR=3.9						
TXAR	**Lajitas Array**	**66.44**	**329**	P	**P**	**04 11 05.3**	**-0.6**
TXAR				pP	pP	04 11 23.2	-1.0
TXAR				sP	sP	04 11 30.7	-1.2
528A	**Cox Ranch, San**	**66.76**	**330**	⇑P	**P**	**04 11 07.5**	**-0.4**
	baz=67,SNR=13						
626A	**Big Bend Ranch**	**66.84**	**328**	P	**P**	**04 11 08.5**	**+0.1**
	baz=67,SNR=18						
527A	**Woodward Ranch**	**67.11**	**329**	⇑P	**P**	**04 11 09.9**	**-0.2**
	baz=67,SNR=8.0						
WVT	**Waverly**	**67.21**	**345**	*e*P	**P**	**04 11 08.8**	**-1.8**
	comp=E,8.4nm,0.9s,mb4.6						
MIAR	**Mount Ida**	**67.25**	**340**	*e*P	**P**	**04 11 10.1**	**-0.8**
	comp=E,11nm,1.1s,mb4.6						
526A	**Mary Lane Ranc**	**67.25**	**329**	⇓P	**P**	**04 11 10.9**	**-0.2**
	baz=68,SNR=13						
427A	**Hayter Ranch,**	**67.62**	**330**	⇓P	**P**	**04 11 12.9**	**-0.4**
	baz=68						
426A	**McDonald Obser**	**67.74**	**329**	⇓P	**P**	**04 11 13.7**	**-0.4**
	baz=68,SNR=13						
328A	**Wristen Ranch,**	**67.82**	**330**	⇑P	**P**	**04 11 14.2**	**-0.4**
	baz=68,SNR=6.5						
326A	**Caldwell Ranch**	**68.27**	**329**	⇓P	**P**	**04 11 17.1**	**-0.3**
	baz=68,SNR=5.3						
425A	**Indio Mountain**	**68.27**	**328**	⇓P	**P**	**04 11 16.8**	**-0.7**
	baz=68,SNR=5.4						
227A	**Bennet, Jal**	**68.57**	**330**	⇑P	**P**	**04 11 19.3**	**+0.1**
	baz=69						
325A	**Bean Ranch, Si**	**68.76**	**329**	⇑P	**P**	**04 11 19.8**	**-0.7**
	baz=69,SNR=10						
226A	**Malaga, Loving**	**68.96**	**330**	⇓P	**P**	**04 11 22.1**	**+0.4**
	baz=69,SNR=7.5						
SIUC	**Southern Illin**	**69.05**	**344**	*e*P	**P**	**04 11 20.9**	**-1.2**
	comp=E,50nm,1.4s,mb5.2						
324A	**Moseley Ranch,**	**69.05**	**328**	⇓P	**P**	**04 11 20.8**	**-1.5**
	baz=69,SNR=6.6						
127A	**Arkansas Junct**	**69.17**	**331**	⇑P	**P**	**04 11 22.5**	**-0.5**
	baz=69						
GDL2	**Guadalupe Moun**	**69.19**	**330**	*e*P	**P**	**04 11 23.1**	**-0.1**
GDL2				*e*pP	pP	04 11 41.1	-0.5
MNTX	**Cornudas Mount**	**69.22**	**329**	⇑P	**P**	**04 11 21.8**	**-1.6**
	baz=70,SNR=8.6

117A **Oracle** 72.50 325 ⇑P P 04 11 43.0 -0.2
baz=73
DBIC **Dimbokro** 72.53 72 P P 04 11 44.4 +0.6
comp=E,4.5nm,0.8s,mb4.3,baz=197,slow=9.4,SNR=4.5
DBIC pP pP 04 12 02.7 +0.4
comp=E,3.9nm,0.5s,baz=202,slow=9.6,SNR=2.9
DBIC LR LR 04 40 51.6
comp=E,49nm,20.3s,baz=149,slow=33
DBIC **Dimbokro** 72.53 72 eP P 04 11 43.6 -0.2
comp=E,5.1nm,0.8s,mb4.4
V24A **Rampart Ranch,** 72.59 331 ⇓P P 04 11 43.9 +0.2
baz=73
X21A **Alamocita Cree** 72.62 328 ⇑P P 04 11 44.6 +0.7
baz=73,SNR=6.6
Y19A **Nutrioso** 72.90 327 ⇓P P 04 11 45.5 0.0
baz=73,SNR=7.5
V23A **Ortiz Mt. (NFS** 73.00 330 ⇓P P 04 11 46.5 +0.5
baz=73
X20A **Quemado** 73.03 328 ⇑P P 04 11 46.6 +0.3
baz=73,SNR=5.2
214A **Organ Pipe Nat** 73.06 323 ⇓P P 04 11 46.9 +0.3
baz=73,SNR=8.3
Y18A **Canyon Day Jun** 73.13 326 ⇑P P 04 11 46.6 -0.3
baz=73
CBKS **Cedar Bluff** 73.15 337 eP P 04 11 46.4 -0.5
U24A **Moreno Valley** 73.18 331 ⇓P P 04 11 48.2 +1.1
baz=73
115A **Sonoran Desert** 73.35 324 ⇓P P 04 11 49.3 +1.0
baz=74
T25A **Trinidad** 73.44 332 ⇓P P 04 11 49.2 +0.6
baz=74,SNR=9.0
V22A **San Miguel Ran** 73.45 330 ⇓P P 04 11 49.7 +0.9
baz=74
Y17A **Roosevelt** 73.46 326 ⇑P P 04 11 49.2 +0.4
baz=74,SNR=11
U23A **El Rito** 73.49 331 ⇓P P 04 11 49.7 +0.7
baz=74
W20A **Ramah** 73.51 328 ⇑P P 04 11 49.7 +0.6
baz=74,SNR=13
T24A **Torres, Weston** 73.65 332 ⇓P P 04 11 50.7 +0.8
baz=74,SNR=6.9
114A **Black Gap (USA** 73.73 324 ⇑P P 04 11 50.5 0.0
baz=74,SNR=5.3
U22A **Llaves** 73.82 330 ⇓P P 04 11 51.9 +1.0
baz=74,SNR=6.6
S25A **Robets Cordova** 73.90 333 ⇓P P 04 11 51.7 +0.4
baz=74,SNR=7.4
W19A **Sanders** 73.91 328 ⇓P P 04 11 52.1 +0.6
baz=74
Y16A **Circle Bar Ran** 73.92 325 ⇓P P 04 11 51.9 +0.4
baz=74,SNR=8.4
X17A **Forest Lakes** 73.95 326 ⇑P P 04 11 52.6 +0.9
baz=74,SNR=5.3
T23A **Casias Ranch,** 74.03 331 ⇓P P 04 11 52.5 +0.4
baz=74
V20A **Brimhall** 74.05 329 ⇓P P 04 11 52.5 +0.3
baz=74
S24A **Houchin Ranch,** 74.20 332 ⇓P P 04 11 54.0 +1.0
baz=74,SNR=12
U21A **Nageezi** 74.21 330 ⇓P P 04 11 53.8 +0.6
baz=74,SNR=9.2
X16A **Lo Mia Camp, P** 74.33 326 ⇑P P 04 11 54.5 +0.6
baz=75,SNR=13
T22A **Edith** 74.38 330 ⇑P P 04 11 54.9 +0.7
baz=75,SNR=8.4
Y15A **Casa Rosa Ranc** 74.40 325 ⇑P P 04 11 54.5 +0.2
baz=75,SNR=6.2
SDCO **Great Sand Dun** 74.41 332 ⇑P P 04 11 54.5 +0.2
baz=75,SNR=6.5
SDCO **Great Sand Dun** 74.41 332 eP P 04 11 54.2 0.0
comp=E,1.8nm,0.6s,mb4.0
SDCO epP pP 04 12 12.5 -0.4
Z13A **Yuma Proving G** 74.48 324 P P 04 11 54.9 +0.1
baz=75,SNR=6.8
T21A **Navajo Lake** 74.63 330 ⇑P P 04 11 56.3 +0.7
baz=75
V18A **Ganado** 74.66 328 ⇓P P 04 11 55.9 +0.1
baz=75
R24A **Sanders Place,** 74.66 332 ⇑P P 04 11 56.3 +0.5
baz=75,SNR=6.4
Y14A **Wickenburg** 74.73 324 ⇑P P 04 11 56.1 -0.1
baz=75,SNR=5.4
X15A **Humboldt** 74.78 325 ⇑P P 04 11 57.0 +0.5
baz=75,SNR=11
U19A **Dine' College,** 74.80 328 ⇓P P 04 11 56.5 0.0
baz=75,SNR=6.0
W16A **Flagstaff** 74.92 326 ⇓P P 04 11 58.2 +0.9
baz=75,SNR=8.7
S22A **4UR Ranch, Cre** 74.96 331 ⇓P P 04 11 57.7 +0.2
baz=75
V17A **Tonalea, Kykot** 74.99 327 ⇓P P 04 11 58.2 +0.5
baz=75,SNR=7.7
Y13A **Salome** 75.05 324 ⇑P P 04 11 58.4 +0.3
baz=75
X14A **Yava** 75.09 325 ⇑P P 04 11 58.7 +0.3
baz=75
T19A **Beclabito** 75.16 329 ⇓P P 04 11 58.8 +0.1
baz=75,SNR=11
U18A **Rough Rock, Ch** 75.21 328 ⇓P P 04 11 59.4 +0.5
baz=75,SNR=9.6
Q24A **Divide** 75.31 333 ⇓P P 04 12 00.0 +0.6
baz=76,SNR=11
R22A **Saguache, Gunn** 75.34 331 ⇑P P 04 12 00.2 +0.6
baz=76
P25A **Willow Gulch B** 75.39 334 ⇓P P 04 12 00.5 +0.6
baz=76
U16A **Tuba City** 75.57 327 ⇑P P 04 12 01.3 +0.3
baz=76,SNR=6.8
X13A **Yucca** 75.66 324 ⇑P P 04 12 01.8 +0.2
baz=76,SNR=7.4
S20A **Disappointment** 75.69 330 ⇓P P 04 12 02.6 +0.9
baz=76,SNR=8.2
W14A **Seligman** 75.78 325 ⇓P P 04 12 02.8 +0.6
baz=76
BC3 **Big Chuckawall** 75.78 323 ⇑P P 04 12 02.9 +0.6
baz=76
R21A **Cimarron** 75.79 331 ⇓P P 04 12 02.6 +0.4
baz=76,SNR=8.7
T18A **Mexican Hat** 75.80 329 ⇓P P 04 12 02.4 +0.1
baz=76,SNR=7.7
V15A **Kaibab Nationa** 75.81 326 ⇑P P 04 12 03.2 +0.8
baz=76,SNR=7.7
Q22A **Crested Butte,** 75.94 332 ⇓P P 04 12 03.5 +0.5
baz=76,SNR=6.1
S19A **Harvey Farm, M** 75.97 329 ⇓P P 04 12 03.2 0.0
baz=76,SNR=12
R20A **Redvale** 76.00 330 ⇓P P 04 12 04.4 +0.9
baz=76,SNR=17
PV01 **Paradox Valley** 76.04 330 eP P 04 12 03.7 +0.1
comp=E,766nm,1.1s
PV01 epP pP 04 12 22.4 +0.1
W13A **Hualapai Mount** 76.09 325 ⇑P P 04 12 04.3 +0.3
baz=76
T17A **Navajo Res., N** 76.11 328 ⇑P P 04 12 04.9 +0.8
baz=76,SNR=8.6
V14A **Boquillas Ranc** 76.12 325 ⇓P P 04 12 04.8 +0.6
baz=76,SNR=8.2
ISCO **Idaho Springs** 76.21 333 ⇓P P 04 12 05.0 +0.4
baz=76,SNR=5.5
ISCO **Idaho Springs** 76.21 333 eP P 04 12 04.8 +0.3
comp=E,5.2nm,0.9s,mb4.3
SMCO **Snowmass** 76.23 332 eP P 04 12 05.4 +0.7
comp=E,11nm,0.7s,mb4.7
SMCO epP pP 04 12 23.6 +0.1
S18A **Hurst Farm, Bl** 76.30 329 ⇑P P 04 12 05.9 +0.8
baz=76,SNR=18
U15A **North Rim** 76.36 326 ⇑P P 04 12 06.4 +0.9
baz=77,SNR=8.2
R19A **Curley Farm, L** 76.47 330 ⇓P P 04 12 06.3 +0.2
baz=77,SNR=8.7
P22A **Eagle** 76.50 332 ⇑P P 04 12 06.5 +0.3
baz=77
ECSD **EROS Data Cent** 76.63 341 eP P 04 12 05.9 -0.9
comp=E,14nm,0.8s,mb4.7
ECSD epP pP 04 12 24.4 -1.1
O23A **Lake Granby, G** 76.68 333 ⇑P P 04 12 08.0 +0.8
baz=77,SNR=5.1
P21A **Newcastle** 76.72 332 ⇑P P 04 12 08.4 +0.9
baz=77
V13A **Grand Canyon W** 76.73 325 ⇑P P 04 12 07.7 +0.1
baz=77,SNR=6.6
W12A **Cal Nev Ari** 76.75 324 ⇓P P 04 12 08.1 +0.4
baz=77
GMRC **Granite Mounta** 76.75 323 ⇓P P 04 12 08.0 +0.3
baz=77
U14A **Mt Trumbull** 76.78 326 ⇑P P 04 12 08.7 +0.8
baz=77,SNR=12
R18A **Canyonlands Na** 76.83 329 ⇓P P 04 12 08.1 0.0
baz=77
O22A **Kremmling** 76.89 332 ⇑P P 04 12 08.8 +0.3
baz=77,SNR=7.0
Q19A **Hogan Spring (** 77.02 330 ⇑P P 04 12 09.4 +0.3
baz=77
S16A **Weppner Ranch,** 77.07 328 ⇓P P 04 12 09.4 0.0
baz=77,SNR=5.7
V12A **Nelson** 77.07 324 ⇓P P 04 12 09.6 +0.1
baz=77
P20A **De Beque** 77.10 331 ⇓P P 04 12 10.2 +0.6
baz=77,SNR=9.2
U13A **Pakoon Wash** 77.16 325 ⇑P P 04 12 10.4 +0.4
baz=77,SNR=5.1
R17A **Hanksville Air** 77.22 329 ⇑P P 04 12 10.4 +0.1
baz=78,SNR=9.3
T14A **Hurricane** 77.24 326 ⇓P P 04 12 11.0 +0.5
baz=78,SNR=6.7
N23A **Red Feather La** 77.28 333 ⇓P P 04 12 11.5 +0.9
baz=78
S15A **Panguitch** 77.39 327 ⇓P P 04 12 11.8 +0.5
baz=78
N22A **Wattenberg Ran** 77.40 333 ⇑P P 04 12 12.2 +0.9
baz=78,SNR=5.2
V11A **Goodsprings** 77.45 324 ⇓P P 04 12 11.9 +0.3
baz=78
P19A **Cripple Cowboy** 77.46 331 P P 04 12 12.1 +0.5
baz=78,SNR=15
U12A **Valley of Fire** 77.46 325 ⇑P P 04 12 12.0 +0.3
baz=78
R16A **Teasdale** 77.47 328 ⇓P P 04 12 11.6 -0.1
baz=78,SNR=5.1
Q18A **Rafter H Ranch** 77.53 329 ⇓P P 04 12 12.2 +0.2
baz=78,SNR=6.1
O20A **White River Ci** 77.56 331 ⇓P P 04 12 12.6 +0.4
baz=78,SNR=9.4
T13A **Saint George** 77.61 326 ⇑P P 04 12 12.9 +0.3
baz=78
SRU **San Rafael** 77.70 329 ⇓P P 04 12 13.0 +0.1
baz=78,SNR=9.1
SRU **San Rafael** 77.70 329 eP P 04 12 13.2 +0.2
comp=E,7.5nm,0.7s,mb4.5
SRU epP pP 04 12 31.3 -0.4
CCUT **Cedar City** 77.77 326 eP P 04 12 14.3 +0.9
comp=E,6.1nm,0.9s,mb4.3
CCUT epP pP 04 12 32.9 +0.8
R15A **Junction** 77.78 328 ⇓P P 04 12 13.9 +0.5
baz=78
N21A **Black Mountain** 77.79 332 ⇓P P 04 12 14.2 +0.7
baz=78,SNR=6.8
Q16A **Castle Valley** 77.84 329 ⇑P P 04 12 14.4 +0.7
baz=78
S14A **Cedar City** 77.84 327 ⇑P P 04 12 14.2 +0.4
baz=78
MSU **Marysvale** 77.97 328 eP P 04 12 14.9 +0.4
MSU epP pP 04 12 33.5 +0.3
ARUT **Antelope Range** 77.99 327 eP P 04 12 15.0 +0.4
comp=E,11nm,1.3s,mb4.4
P18A **Preston Nutter** 78.01 330 ⇑P P 04 12 15.3 +0.7
baz=78,SNR=15
S13A **Holt Ranch, En** 78.03 326 ⇑P P 04 12 15.6 +0.8
baz=78,SNR=5.3
O19A **Miners Draw (B** 78.07 331 ⇑P P 04 12 15.0 0.0
baz=78,SNR=10
P17A **Butcher Ranch,** 78.10 329 ⇑P P 04 12 15.2 0.0
baz=78,SNR=6.4
N20A **Spence Gulch,** 78.16 332 ⇓P P 04 12 15.5 0.0
baz=78,SNR=5.1
O18A **Roosevelt** 78.43 330 ⇓P P 04 12 17.5 +0.6
baz=79
M21A **Separation Pea** 78.44 333 ⇓P P 04 12 17.2 +0.2
baz=79
RWWY **Rawlins** 78.45 333 eP P 04 12 17.6 +0.5
comp=E,14nm,0.7s,mb4.8
RWWY epP pP 04 12 35.7 -0.2
N19A **John Jarvie Ra** 78.59 331 ⇓P P 04 12 18.0 +0.2
baz=79,SNR=6.6
M20A **Sweetwater, Wa** 78.68 332 ⇑P P 04 12 18.3 0.0
baz=79
O17A **Robinson Place** 78.69 330 ⇑P P 04 12 18.8 +0.5
baz=79,SNR=13
MPMC **Manual Prospec** 78.69 323 ⇑P P 04 12 18.1 -0.4
baz=79
L21A **Rawlins** 78.75 333 ⇑P P 04 12 18.5 -0.2
baz=79,SNR=12
Q14A **Sevier Lake (B** 78.87 327 ⇑P P 04 12 19.7 +0.3
baz=79,SNR=7.4
N18A **Larsen Ranch,** 78.87 331 ⇑P P 04 12 19.3 -0.1
baz=79
ISA **Isabella** 78.92 322 eP P 04 12 20.2 +0.5
MPU **Maple Canyon** 78.94 329 eP P 04 12 20.3 +0.5
K22A **Casper** 79.00 334 ⇓P P 04 12 20.3 +0.3
baz=79,SNR=5.6
O16A **Springville** 79.03 329 ⇓P P 04 12 20.7 +0.4
baz=79
NLU **North Lily Min** 79.09 329 eP P 04 12 21.4 +0.9
DAU **Daniels Canyon** 79.09 330 eP P 04 12 21.2 +0.6
L20A **Wamsutter** 79.17 332 ⇑P P 04 12 21.2 +0.2
baz=79,SNR=5.7
P14A **Drum Mountains** 79.25 328 ⇓P P 04 12 22.0 +0.5
baz=80,SNR=10
K21A **Alcova** 79.27 333 ⇑P P 04 12 21.7 +0.2
baz=80,SNR=11
JLU **Jordanelle** 79.33 330 eP P 04 12 22.2 +0.3
comp=E,5.6nm,0.7s,mb4.5
JLU epP pP 04 12 40.7 -0.1
N17A **Moffit Pass** 79.34 330 ⇓P P 04 12 22.3 +0.3
baz=80,SNR=7.1
RSSD **Black Hills** 79.35 336 eP P 04 12 22.0 +0.1
R11A **Troy Canyon, C** 79.48 326 ⇓P P 04 12 23.2 +0.4
baz=80,SNR=7.6
SMMC **Simmler** 79.48 321 ⇑P P 04 12 23.4 +0.5
baz=80
DUG **Dugway** 79.62 328 ⇑P P 04 12 23.7 +0.3
baz=80,SNR=7.0
DUG **Dugway** 79.62 328 eP P 04 12 23.8 +0.3
comp=E,5.5nm,0.9s,mb4.4
DUG epP pP 04 12 42.3 0.0
DUG esP sP 04 12 49.3 -0.6
J22A **Midwest** 79.63 334 ⇓P P 04 12 22.6 -0.8
baz=80,SNR=8.2
L19A **Farson** 79.67 332 ⇓P P 04 12 24.1 +0.4
baz=80,SNR=8.6
K20A **Yellowstone Ra** 79.72 333 ⇓P P 04 12 23.4 -0.6
baz=80,SNR=5.0
L18A **Fontenelle, Gr** 79.81 331 ⇓P P 04 12 24.4 0.0
baz=80,SNR=5.0
M16A **Huntsville** 79.99 330 ⇓P P 04 12 25.2 -0.3
baz=80
K19A **Absolon Red Bu** 80.06 332 ⇑P P 04 12 25.5 -0.3
baz=80,SNR=5.9
HWUT **Hardware Ranch** 80.20 330 eP P 04 12 25.8 -0.7
comp=E,7.7nm,0.7s,mb4.6
HWUT epP pP 04 12 44.4 -1.0
J20A **Shoshoni** 80.20 333 ⇓P P 04 12 26.9 +0.4
baz=80
I21A **Big Trails, Te** 80.28 334 ⇑P P 04 12 26.3 -0.6
baz=80,SNR=5.1
PDAR **Pinedale Array** 80.30 332 P P 04 12 26.6 -0.6
comp=E,1.8nm,0.7s,mb4.0,baz=134,slow=4.3,SNR=15
PDAR pP pP 04 12 45.0 -1.0
comp=E,1.3nm,0.6s,baz=129,slow=7.3,SNR=6.3
BW06 **Boulder Array** 80.31 332 ⇓P P 04 12 26.7 -0.4
baz=81
BW06 **Boulder Array** 80.31 332 eP P 04 12 26.7 -0.4
K18A **Toltan Ranch,** 80.40 332 ⇑P P 04 12 28.0 +0.4
baz=81,SNR=12
L16A **Fish Haven** 80.47 330 ⇑P P 04 12 27.9 -0.2
baz=81,SNR=6.8
J19A **Crowheart** 80.51 333 ⇓P P 04 12 28.0 -0.2
baz=81,SNR=8.7
I20A **Worland** 80.72 333 ⇑P P 04 12 29.4 0.0
baz=81,SNR=5.2
K17A **Gardner Place,** 80.86 331 ⇓P P 04 12 30.0 -0.1
baz=81
J18A **Kendall Valley** 80.86 332 ⇓P P 04 12 29.6 -0.5
baz=81,SNR=10.0
L15A **Malad City** 80.88 330 ⇓P P 04 12 29.7 -0.5
baz=81
NVAR **Mina Array Bea** 80.91 324 P P 04 12 29.3 -1.1
comp=E,1.3nm,0.9s,mb3.8,baz=143,slow=7.2,SNR=7.6
NVAR pP pP 04 12 47.9 -1.4
comp=E,0.8nm,0.7s,baz=161,slow=5.7,SNR=4.5
BOSA **Boshof** 81.06 118 P P 04 12 32.2 +0.5
comp=E,2.6nm,0.5s,mb4.3,baz=246,slow=16,SNR=8.6
BOSA pP pP 04 12 50.9 +0.3
comp=E,1.6nm,0.4s,baz=268,slow=19,SNR=2.0
BOSA LR LR 04 42 17.6
comp=E,64nm,20.3s,baz=168,slow=31
BOSA **Boshof** 81.06 118 eP P 04 12 32.1 +0.3
comp=E,3.5nm,0.6s,mb4.4
H20A **Greybull** 81.12 334 ⇑P P 04 12 31.0 -0.5
baz=81,SNR=9.1
I19A **Meeteetse** 81.14 333 ⇓P P 04 12 31.5 0.0
baz=81
I18A **Diamond G Ranc** 81.19 332 ⇑P P 04 12 31.6 -0.2
baz=81,SNR=13
K16A **Soda Springs** 81.21 331 ⇓P P 04 12 32.1 +0.2
baz=82,SNR=6.3
L14A **Malta** 81.28 329 ⇑P P 04 12 32.2 -0.1
baz=82
SNOW **Snow King Moun** 81.37 332 eP P 04 12 32.7 -0.1
LOHW **Long Hollow** 81.43 332 eP P 04 12 33.0 -0.1
G21A **Lodge Grass** 81.45 335 ⇓P P 04 12 33.0 -0.2
baz=82,SNR=5.8
TORD **Torodi Ar. Bea** 81.45 70 P P 04 12 34.3 +0.5
comp=E,2.9nm,0.6s,mb4.3,baz=276,slow=5.5,SNR=5.8
TORD pP pP 04 12 52.9 +0.1
comp=E,5.4nm,0.8s,baz=271,slow=6.1,SNR=4.0
TORD sP sP 04 13 00.8 +0.5
comp=E,4.1nm,0.8s,baz=254,slow=4.4,SNR=2.6
TPAW **Teton Pass** 81.48 332 eP P 04 12 33.4 0.0
RRI2 **Red Ridge** 81.51 331 eP P 04 12 33.6 +0.1
MOOW **Moose Ponds** 81.60 332 eP P 04 12 32.9 -1.1
comp=E,1.1nm,0.8s,mb3.7
H19A **Powell** 81.66 333 ⇑P P 04 12 34.1 -0.1
baz=82
K14A **Jones Ranch, D** 81.67 330 ⇓P P 04 12 33.7 -0.7
baz=82,SNR=5.2
I17A **Pilgrim Ck.** 81.67 332 ⇓P P 04 12 34.9 +0.6
baz=82
IMW **Indian Meadow** 81.81 332 eP P 04 12 35.1 0.0
G20A **Bridger** 81.83 334 ⇓P P 04 12 34.6 -0.5
baz=82,SNR=8.8
H18A **Shoshone NF, C** 81.93 333 ⇓P P 04 12 35.6 -0.1
baz=82,SNR=12
I16A **Newdale** 82.02 331 ⇑P P 04 12 36.4 +0.3
baz=82
J15A **Blackfoot** 82.03 331 ⇓P P 04 12 36.2 -0.1
baz=82
RLMT **Red Lodge** 82.15 333 ⇓P P 04 12 36.8 0.0
baz=82
RLMT **Red Lodge** 82.15 333 eP P 04 12 36.9 +0.1
comp=E,4.0nm,0.6s,mb4.4
RLMT epP pP 04 12 55.1 -0.6
LAO **LASA Array** 82.34 336 eP P 04 12 36.9 -0.9
comp=E,16nm,1.0s,mb4.8
LAO epP pP 04 12 55.7 -1.0
D23A **Lindsay** 82.41 337 ⇑P P 04 12 38.3 +0.2
baz=83
G18A **Lazy EL Ranch,** 82.43 333 ⇓P P 04 12 37.7 -0.6
baz=83
ULM **Lac du Bonnet** 82.45 344 P P 04 12 36.8 -1.5
comp=E,11nm,1.0s,mb4.7,baz=149,slow=7.1,SNR=6.3
ULM pP pP 04 12 56.4 -0.8
comp=E,9.3nm,1.1s,baz=133,slow=6.4,SNR=3.7
ULM **Lac du Bonnet** 82.45 344 eP P 04 12 36.4 -1.8
comp=E,14nm,1.0s,mb4.7
C24A **Savage** 82.45 338 ⇑P P 04 12 38.5 +0.2
baz=83
E21A **Keefer Ranch,** 82.52 336 ⇓P P 04 12 38.6 -0.1
baz=83,SNR=5.8
D22A **Cohagen** 82.72 336 ⇑P P 04 12 39.6 -0.1
baz=83
J13A **Cove Ranch, Pi** 82.79 330 ⇑P P 04 12 40.4 +0.2
baz=83,SNR=5.7
E20A **Meyer Farm, Mu** 82.88 335 P P 04 12 40.3 -0.3
baz=83,SNR=15
I14A **Mackay** 82.89 330 ⇓P P 04 12 41.1 +0.3
baz=83
D21A **La Casta Ranch** 82.94 336 P P 04 12 40.6 -0.3
baz=83,SNR=9.4
C23A **Lambert** 82.95 337 ⇓P P 04 12 40.6 -0.3
baz=83
F18A **Big Timber** 82.97 334 ⇑P P 04 12 40.8 -0.3
baz=83,SNR=6.8
HLID **Hailey** 83.02 330 ⇓P P 04 12 41.6 +0.2
baz=83,SNR=8.5
HLID **Hailey** 83.02 330 eP P 04 12 41.4 0.0
comp=E,4.6nm,0.9s,mb4.3
HLID epP pP 04 13 00.1 -0.3
LBTB **Lobatse** 83.06 115 eP P 04 12 42.3 +0.1
comp=E,8.3nm,0.8s,mb4.6
E19A **Rath Farm, Rou** 83.08 334 ⇓P P 04 12 41.0 -0.6
baz=83,SNR=14
I13A **Wildhorse Cree** 83.17 330 ⇓P P 04 12 42.7 +0.5
baz=83,SNR=9.6
DGMT **Dagmar** 83.20 338 ⇓P P 04 12 42.0 -0.2
baz=84,SNR=5.5
DGMT **Dagmar** 83.20 338 eP P 04 12 42.0 -0.2
D20A **Manuel Ranch,** 83.38 335 ⇑P P 04 12 42.5 -0.6
baz=84,SNR=8.2
H14A **Leadore** 83.41 331 ⇑P P 04 12 43.4 0.0
baz=84
G15A **Dillon** 83.48 332 ⇑P P 04 12 44.0 +0.3
baz=84
BOZ **Bozeman (W)** 83.52 332 eP P 04 12 42.8 -1.1
comp=E,1.2nm,0.8s,mb3.8
I12A **Atlanta** 83.53 329 ⇓P P 04 12 43.9 -0.1
baz=84
C21A **Desert Coulee** 83.62 336 ⇑P P 04 12 43.8 -0.6
baz=84,SNR=13
B22A **Reddig Ranch S** 83.65 337 ⇑P P 04 12 44.4 -0.2
baz=84,SNR=5.6
DLMT **Dillon** 83.69 332 eP P 04 12 44.9 +0.2
H13A **Challis** 83.75 330 ⇑P P 04 12 45.1 0.0
baz=84,SNR=8.3
C20A **Veseth Ranch,** 83.85 336 P P 04 12 44.8 -0.8
baz=84,SNR=5.4
SCHQ **Schefferville** 83.98 2 P P 04 12 43.5 -2.6
comp=E,6.1nm,1.1s,mb4.3,baz=210,slow=16,SNR=3.3
LRM **Limekiln Ridge** 84.00 332 eP P 04 12 45.0 -1.4
B21A **Ellsworth Farm** 84.11 337 ⇓P P 04 12 46.4 -0.5
baz=84
G13A **Cobalt** 84.16 331 ⇑P P 04 12 47.2 +0.1
baz=84,SNR=7.1
A22A **Carney Farms,** 84.22 337 ⇓P P 04 12 47.1 -0.2
baz=84
C19A **Slack Wire Ran** 84.25 335 ⇑P P 04 12 47.3 -0.3
baz=84
D17A **Six Diamond Ra** 84.39 334 ⇑P P 04 12 48.4 +0.1
baz=85,SNR=6.6
MOD **Modoc** 84.52 325 eP P 04 12 48.5 -0.7
comp=E,1.1nm,0.7s,mb3.9
MOD epP pP 04 13 07.1 -1.0
J08A **Circle Bar Ran** 84.73 327 ⇓P P 04 12 50.1 0.0
baz=85,SNR=5.9
F13A **Darby** 84.76 331 ⇓P P 04 12 49.9 -0.3
baz=85,SNR=6.0
C17A **Wharram Farm,** 84.81 334 ⇓P P 04 12 49.8 -0.6
baz=85,SNR=5.0
B18A **Beardsley Farm** 85.07 335 ⇑P P 04 12 51.1 -0.6
baz=85,SNR=7.6
F12A **Elk City** 85.12 330 ⇓P P 04 12 51.4 -0.6
baz=85
E13A **Victor** 85.22 331 ⇓P P 04 12 52.3 -0.2
baz=86,SNR=6.7
C16A **Fuhringer Ranc** 85.33 334 ⇑P P 04 12 52.6 -0.4
baz=86
K05A **Summer Lake** 85.43 325 ⇓P P 04 12 54.0 +0.3
baz=86
YBH **Yreka Blue Hor** 85.62 324 P P 04 12 52.2 -2.5
comp=E,1.0nm,0.5s,mb4.0,baz=72,slow=5.1,SNR=6.4
C15A **Salmond Ranch,** 85.64 333 ⇑P P 04 12 54.5 -0.1
baz=86
I07A **Izee** 85.76 327 ⇓P P 04 12 54.8 -0.5
baz=86
E12A **Beaver Dam Sad** 85.78 331 ⇑P P 04 12 54.5 -0.7
baz=86
B16A **M & M Farms, S** 85.81 334 ⇑P P 04 12 55.0 -0.4
baz=86
D13A **Huson** 85.85 332 ⇑P P 04 12 55.0 -0.6
baz=86
A17A **Triple J Farms** 85.87 335 ⇑P P 04 12 55.1 -0.6
baz=86,SNR=11
B15A **Bradely Ranch,** 86.06 333 ⇑P P 04 12 55.7 -1.0
baz=86,SNR=6.1
F10A **Beach Ranch, E** 86.16 329 ⇑P P 04 12 57.6 +0.4
baz=86
D12A **Red Ives Fores** 86.19 331 ⇓P P 04 12 56.6 -0.6
baz=86
A16A **West Butte Ran** 86.21 334 ⇓P P 04 12 56.8 -0.5
baz=86
C13A **Hot Springs** 86.36 332 ⇓P P 04 12 57.9 -0.2
baz=87
BSMT **Bassoo Peak** 86.58 332 eP P 04 12 58.6 -0.6
A15A **Johnson Ranch,** 86.67 334 ⇓P P 04 12 58.7 -0.9

	baz=87								
B13A	**Whitefish**	86.87	332	⇓P		P	04 12 59.9	-0.6	
	baz=87								
C11A	**Tepee Creek (N**	87.19	331	⇑P		P	04 13 01.1	-1.0	
	baz=87								
WALA	**Waterton Lakes**	87.19	333	*e*P		P	04 13 01.8	-0.3	
A13A	**Flathead Natio**	87.29	333	⇑P		P	04 13 02.5	-0.1	
	baz=88								
KIEV	**Kiev**	118.12	45	*e*PKPdf		PKPdf	04 19 01.8	-0.7	
AKASG	**Malin Array Be**	118.13	45	PKP		PKPdf	04 19 01.3	-1.2	
	comp=E,0.3nm,0.3s,baz=274,slow=2.6,SNR=4.3								
BRTR	**Keskin Array B**	118.43	58	PKP		PKPdf	04 19 03.6	+0.2	
	comp=E,0.8nm,0.8s,baz=95,slow=2.9,SNR=4.4								
ARCES	**ARCESS Array B**	119.34	24	PKP		PKPdf	04 19 02.5	-1.8	
	comp=E,3.0nm,1.1s,baz=211,slow=1.4,SNR=6.1								
MALT	**Malatya**	121.67	61	*e*PKPdf		PKPdf	04 19 10.2	+0.4	
ASAR	**Alice Springs**	122.21	207	PKP		PKPdf	04 19 08.9	-2.4	
	comp=E,0.5nm,0.5s,baz=128,slow=1.7,SNR=6.9								
WRA	**Warramunga Arr**	125.36	209	PKP		PKPdf	04 19 16.1	-1.3	
	comp=E,1.2nm,0.5s,baz=156,slow=1.7,SNR=37								
WRA				pPKP		pPKPdf	04 19 35.5	-1.9	
	comp=E,0.6nm,0.4s,baz=154,slow=1.6,SNR=3.3								
ABKAR	**Akbulak array**	137.77	48	*e*PKPdf		PKPdf	04 19 39.8	-0.1	
BVAR	**Borovoye Array**	143.01	39	PKP		PKPdf	04 19 49.8	+0.5	
	comp=E,0.6nm,0.6s,baz=256,slow=3.0,SNR=3.8								
KURK	**Kurchatov**	148.60	39	*e*PKPdf		PKPdf	04 19 59.0	+0.1	
KURK				*e*PKPbc		PKPbc	04 20 02.6	0.0	
AAK	**Ala-Archa**	149.04	55	*e*PKPbc		PKPbc	04 20 04.9	+0.9	
	comp=E,6.5nm,0.7s,baz=217,slow=5.1,SNR=7.7								
AAK	**Ala-Archa**	149.04	55	*e*PKPdf		PKPdf	04 19 59.8	0.0	
AAK				*e*PKPbc		PKPbc	04 20 04.9	+0.9	
ZAA0	**Zalesovo Array**	149.66	29	*e*PKPdf		PKPdf	04 20 00.2	-0.2	
ZAA0				*e*PKPbc		PKPbc	04 20 05.1	-0.1	
ZALV	**Zalesovo Beam**	149.66	29	PKP		PKPdf	04 20 00.6	+0.1	
	comp=E,20nm,0.6s,baz=288,slow=2.5,SNR=62								
ZALV				PKPbc		PKPbc	04 20 05.2	+0.1	
	comp=E,20nm,0.6s,baz=304,slow=3.5,SNR=67								
ZALV				pPKPbc		pPKPbc	04 20 24.7	-0.3	
	comp=E,7.9nm,0.4s,baz=298,slow=3.2,SNR=9.5								
ZALV	**Zalesovo Beam**	149.66	29	PKP		PKPdf	04 20 00.6	+0.1	
ZALV				PKPbc		PKPbc	04 20 05.2	+0.1	
ZALV				pPKPbc		pPKPbc	04 20 24.7	-0.3	
TKM2	**Tokmak 2**	149.75	54	*e*PKPbc		PKPbc	04 20 06.1	+0.4	
KSH	**Kashi**	150.77	61	*e*PKPbc		PKPbc	04 20 08.8	+0.5	
KSH				*e*PKPab		PKPab	04 20 16.4	+0.8	
KSH				*e*pPKP		pPKPdf	04 20 35.3	+13	
KSH				*e*sPKP			04 20 46.1		
KSH				*e*PKS			04 23 42.4		
KSH				*e*PP		PP	04 23 43.6	-2.5	
KSH				*e*SKS		SKSdf	04 27 05.5	+1.2	
KSH				*e*SKKS		SKKSac	04 30 21.1	-9.3	
KSH				*e*SS		SS	04 42 38.0	-24	
KSH				AMB		AMB			
	comp=Z,300nm,6.4s								
KSH				LR		LR			
	comp=N,1μm,15.9s								
KSH				LR		LR			
	comp=E,900nm,17.0s								
KSH				LR		LR			
	comp=Z,230nm,6.6s								
MK31	**Makanchi Array**	152.69	43	*e*PKPbc		PKPbc	04 20 12.2	-0.2	
MKAR	**Makanchi Array**	152.69	43	PKPbc		PKPbc	04 20 12.4	0.0	
	comp=Z,3.2nm,0.6s,baz=321,slow=2.1,SNR=12								
MKAR				pPKPbc		pPKPbc	04 20 31.6	-0.7	
	comp=Z,1.5nm,0.6s,baz=321,slow=1.7,SNR=2.5								
MJAR	**Matsushiro Arr**	154.92	294	PKPab		PKPab	04 20 32.5	-0.7	
	comp=Z,2.5nm,0.7s,baz=110,slow=1.9,SNR=6.9								
SONM	**Songino Array**	161.47	6	PKPab		PKPab	04 21 01.6	+0.5	
	comp=Z,0.7nm,0.4s,baz=316,slow=3.6,SNR=4.7								
KSRS	**Korea Array**	162.65	302	PKP		PKPdf	04 20 17.6	-0.3	
	comp=Z,0.6nm,0.3s,baz=147,slow=2.5,SNR=4.6								
HHC	**Hu-ho-hao-te**	168.48	352	*e*PKP		PKPdf	04 20 17.8	-4.8	
HHC				pPKP		pPKPdf	04 20 44.8	+2.2	
HHC				sPKP			04 20 54.8		
HHC				PKS			04 23 49.0		
HHC				PP		PP	04 25 18.8	-1.7	
HHC				SKS		SKSdf	04 27 10.4	-10	
HHC				SKKS		SKKSac	04 31 56.6	-5.4	
HHC				SS		SS	04 46 02.3	-3.7	
HHC				AMB		AMB			
	comp=Z,53nm,8.6s								
HHC				LR		LR			
	comp=N,120nm,21.8s								
HHC				LR		LR			
	comp=E,130nm,22.9s								
HHC				LR		LR			
	comp=Z,84nm,20.4s								
LZH	**Lanzhou**	171.86	34	*e*PKP		PKPdf	04 20 25.5	+0.8	
LZH				sPKP			04 20 54.6		
CD2	**Chengdu**	174.85	72	*e*PKP		PKPdf	04 20 24.6	-1.4	
GYA	**Guiyang**	176.15	140	*e*PKP		PKPdf	04 20 25.4	-1.1	
GYA				sPKP			04 20 52.1		
GYA				PKPab		PKPab	04 22 07.8	+1.2	
GYA				PKS			04 23 55.4		
GYA				PP		PP	04 26 01.9	+2.9	
GYA				AMB		AMB			
	comp=Z,80nm,8.0s								

DMN ***20*** *04:11:40.7±3.1, 31°.72N×83°.38E, h33km, Mb5.3/2, Error ellipse: s-maj=73.8km s-min=8.2km az=158.0*
IDC ***20*** *04:11:46.1±0.9, 30°.74N×83°.48E, h0km, mb3.8/12, mb1 4.0/14, mb1mx3.8/28, mbtmp3.9/14, ML3.7/2, MS3.1/2, Ms1 3.1/2, ms1mx2.7/44, Error ellipse: s-maj=36.2km s-min=15.6km az=51.0*
NDI ***20*** *04:11:47.4±2.8, 31°.46N×83°.57E, h10km, ML4.0, mb4.2(NEIC)*
NEIC ***20*** *04:11:49.2±0.3, 30°.99N×83°.52E, h10km, mb4.2/2, Error ellipse: s-maj=11.1km s-min=4.7km az=63.0*
ISCJB ***20*** *04:11:52.7±0.7, 30°.82N±0°.06×83°.48E±0°.05, h63km±10km, mb3.8/13, Error ellipse: s-maj=10.1km s-min=6.1km az=19.8*

ISC 20 04:11:53.7±0.6, 30°.86N±0°.05×83°.53E±0°.04, h55km±9km, n41, σ1°00/43, mb3.8/13, MS3.0/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	2.51	175	*e*P	Pn	04 12 32.8	+0.8
	408nm,0.5s						
GKN	**Gorkha**	3.00	161	*e*P	Pn	04 12 39.6	+0.8
	145nm,0.6s						
KOLN	**Koldanda**	3.08	179	*e*P	Pn	04 12 40.5	+0.7
	266nm,0.6s						
PTH	**Pithoragarh**	3.15	246	*e*PKP	Pn	04 12 39.8	-1.0
PTH				*ex*	x	04 13 28.6	
KKN	**Kakani**	3.42	153	*e*P	Pn	04 12 44.9	+0.4
	121nm,0.5s						
JOSI	**Joshimath**	3.44	266	*e*PKP	Pn	04 12 44.5	-0.2
JOSI				*ex*	x	04 13 10.8	
JOSI				AML	AML	04 13 33.1	
	comp=E,666nm,0.9s						
JOSI				AML	AML	04 13 35.7	
	comp=N,648nm,0.9s						
DMN	**Daman**	3.52	157	*e*P	Pn	04 12 46.6	+0.7
	comp=N,210nm,0.8s						
GUN	**Gumba**	3.58	145	*e*P	Pn	04 12 47.1	+0.4
	comp=N,192nm,0.7s						
PKIN	**Phulchoki**	3.65	153	*e*P	Pn	04 12 48.3	+0.6
	comp=N,145nm,0.7s						
PKI	**Pulchoki**	3.66	153	*e*P	Pn	04 12 48.3	+0.4
	comp=N,110nm,0.6s						
DDI	**Dehra Dun**	4.75	265	*ex*	Pn	04 13 04.0	+1.3
TAPN	**Taplejung**	5.06	133	*e*P	Pn	04 13 06.6	-0.4
	comp=N,25nm,0.3s						
ODAN	**Odare**	5.23	139	*e*P	Pn	04 13 09.0	-0.3
	comp=N,88nm,0.5s						
SONA	**Sohna**	6.19	247	*e*PKP	Pn	04 13 22.7	+0.3
SONA				*e*S	Sn	04 14 33.1	+1.2
LSA	**Lhasa**	6.69	98	*e*Pn	Pn	04 13 29.4	+0.1
	comp=N,21nm,0.6s						
KHET	**Khetri**	7.28	250	*e*PKP	Pn	04 13 36.1	-1.3
KHET				*e*S	Sn	04 14 56.7	-2.1
SHL	**Shillong**	9.06	124	*ex*	Pn	04 13 58.0	-3.8
SHL				*e*S	Sn	04 15 40.0	-2.3
KBL	**Kabul**	12.74	291	*e*Pn	Pn	04 14 49.7	-2.3
	comp=N,8.2nm,0.6s						
AAK	**Ala-Archa**	13.79	331	Pn	Pn	04 15 07.3	+1.0
	comp=N,0.0nm,0.3s,baz=243,slow=4.5,SNR=3.5						
MK31	**Makanchi Array**	15.94	357	*e*P	Pn	04 15 36.0	+1.7
MKAR	**Makanchi Array**	15.94	357	Pn	Pn	04 15 32.4	-1.9
	comp=N,0.3nm,0.3s,baz=185,slow=12,SNR=22						
CMAR	**Chiang Mai Arr**	18.64	128	P	Pn	04 16 06.9	-1.0
	comp=N,0.1nm,0.3s,baz=328,slow=9.6,SNR=4.1						
KURK	**Kurchatov**	20.17	351	*e*P	P	04 16 21.6	-1.8
	comp=N,28nm,1.4s						
ZAA0	**Zalesovo Array**	23.09	2	*e*P	P	04 16 54.4	-0.2
ZALV	**Zalesovo Beam**	23.09	2	P	P	04 16 54.6	+0.1
	comp=N,3.0nm,0.8s,mb3.8,baz=186,slow=9.5,SNR=8.9						
ZALV				LR	LR	04 27 01.8	
	comp=N,37nm,19.3s,MS2.8,baz=81,slow=39						
BVAR	**Borovoye Array**	24.13	340	P	P	04 17 03.8	-0.4
	comp=N,0.6nm,0.5s,mb3.3,baz=126,slow=7.4,SNR=3.8						
SONM	**Songino Array**	24.35	39	P	P	04 17 07.4	+1.1
	comp=N,1.2nm,0.7s,mb3.5,baz=218,slow=12,SNR=4.4						
ABKAR	**Akbulak array**	25.59	323	*e*P	P	04 17 18.2	+0.7
	comp=N,2.7nm,0.8s,mb3.8						
AKTK	**Aktyubinsk**	27.29	323	P	P	04 17 33.5	+0.6
AKTO	**Aktyubinsk**	27.29	323	P	P	04 17 33.5	+0.6
	comp=N,0.5nm,0.3s,mb3.5,baz=80,slow=6.1,SNR=2.3						
KSRS	**Korea Array**	37.05	68	LR	LR	04 35 34.2	
	comp=N,31nm,19.0s,MS3.1,baz=280,slow=38						
AKASG	**Malin Array Be**	44.52	313	P	P	04 20 01.1	+1.3
	comp=N,0.3nm,0.3s,mb3.6,baz=79,slow=7.1,SNR=3.2						
FINES	**FINESS Array B**	47.94	327	P	P	04 20 26.2	-0.1
	comp=N,1.0nm,0.6s,mb4.0,baz=110,slow=6.8,SNR=6.7						
ARCES	**ARCESS Array B**	50.36	337	P	P	04 20 45.0	+0.3
	comp=N,1.4nm,0.8s,mb4.0,baz=84,slow=11,SNR=3.7						
HFS	**Hagfors**	53.83	324	P	P	04 21 09.9	-0.7
	comp=N,1.9nm,0.7s,mb4.2,baz=80,slow=8.1,SNR=5.0						
NB2	**NORSAR Subarra**	55.04	326	P	P	04 21 19.0	-0.4
	comp=Z,0.7nm,0.7s,mb3.8,baz=88,slow=7.4						
NOA	**NORSAR Array B**	55.04	326	P	P	04 21 19.1	-0.3
	comp=Z,0.9nm,0.7s,mb3.9,baz=88,slow=7.1,SNR=4.1						
WRA	**Warramunga Arr**	70.23	129	P	P	04 23 00.8	-0.3
	comp=Z,2.5nm,1.1s,mb4.0,baz=323,slow=6.3,SNR=16						
WRA	**Warramunga Arr**	70.23	129	P	P	04 23 00.8	-0.3
ASAR	**Alice Springs**	72.59	132	P	P	04 23 14.9	-0.4
	comp=Z,0.6nm,0.8s,mb3.6,baz=327,slow=6.6,SNR=5.2						
ILAR	**Eielson Array**	76.92	20	P	P	04 23 40.5	+0.8
	comp=Z,1.3nm,0.9s,mb3.8,baz=299,slow=5.4,SNR=12						

KNET ***20*** *04:15:51.9±0.3, 42°.27N×74°.86E, h20km±5km, ml2.9, Error ellipse: s-maj=2.9km s-min=2.4km az=14.0*
ISCJB ***20*** *04:15:52.5±0.7, 42°.26N±0°.03×74°.83E±0°.04, h7km±6km, Error ellipse: s-maj=6.1km s-min=4.7km az=26.5*
NNC ***20*** *04:15:53.3±1.2, 42°.43N×74°.76E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=20.9km s-min=6.0km az=153.0*

ISC 20 04:15:52.6±0.7, 42°.26N±0°.04×74°.85E±0°.04, h16km±5km, n12, σ0°67/22, 12C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	0.35	122	⇑P	Pg	04 15 59.8	-0.1
	326nm,0.1s,SNR=236						
KZA				⇓S	Sg	04 16 05.3	+0.5
	13μm,0.2s						
KBK	**Karagaybulak**	0.40	11	⇑P	Pg	04 16 00.7	-0.1
	3μm,0.1s,SNR=3031						
KBK				⇓S	Sg	04 16 06.6	+0.3
	5μm,0.1s						
AAK	**Ala-Archa**	0.45	325	⇑P	Pg	04 16 01.8	0.0
	771nm,0.3s,SNR=485						
AAK				⇑S	Sg	04 16 08.0	+0.1
	895nm,0.2s						
CHMS	**Chumysh**	0.74	355	P	Pg	04 16 06.7	-0.4
	152nm,0.2s,SNR=216						
CHMS				⇑S	Sg	04 16 16.6	-0.2
	101nm,0.1s						
TKM2	**Tokmak 2**	0.86	40	⇑P	Pb	04 16 08.7	-0.5
	21nm,0.2s						
TKM2				⇓S	Sb	04 16 19.7	-0.8
	82nm,0.3s						
TKM2	**Tokmak 2**	0.86	40	P	Pb	04 16 08.7	-0.5
	131nm,0.2s,SNR=822						
TKM2				⇓S	Sb	04 16 20.0	-0.5
	386nm,0.1s						
AML	**Almayashu**	0.87	262	⇑P	Pb	04 16 08.9	-0.4
	52nm,0.1s,SNR=62						
AML				⇓S	Sb	04 16 20.1	-0.6
	450nm,0.3s						
EKS2	**Erkin-Say**	0.89	297	⇑P	Pb	04 16 09.5	-0.1
	50nm,0.2s,SNR=293						
EKS2				⇑S	Sb	04 16 22.5	+1.2
	259nm,0.2s						
ULHL	**Ulahol**	1.04	90	P	Pb	04 16 11.4	-0.7
	38nm,0.1s,SNR=271						
USP	**Ospenovka**	1.04	346	P	Pb	04 16 12.0	-0.2
	92nm,0.1s,SNR=47						
USP				⇑S	Sb	04 16 25.7	+0.2
	127nm,0.1s						
KNDC	**Almaty**	1.83	58	⇓Pn	Pn	04 16 25.4	+2.0
	14nm,0.2s						
KNDC				⇑Sn	Sn	04 16 51.2	+5.0
	94nm,0.3s						
KK31	**Karatay Array**	3.31	286	Pg	Pg	04 16 51.9	-4.1
	3.4nm,0.3s,baz=108,slow=15,SNR=40						
KK31				⇑Lg		04 17 35.7	
	31nm,0.5s,baz=108,slow=27,SNR=14						

MAN 20 04:25:09, 18°.22N×119°.64E, h1km, mb4.3, ML3.1, MS2.9, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	1.17	119	*e*P	Pg	04 25 31.8	+0.3
APYP	**Conner**	1.57	103	*e*P	Pn	04 25 38.3	+0.3
APYP				*e*S	Sn	04 25 57.3	-1.7
BOLP	**Bolinao**	1.85	172	*e*P	Pn	04 25 41.6	-0.2
CVP	**Callao Caves**	2.14	104	⇓*i*P	Pn	04 25 47.1	+1.2
CVP				*i* S	Sn	04 26 17.4	+4.3

IDC ***20*** *04:39:22.9±1.9, 1°.53N×126°.09E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=160.6km s-min=24.7km az=65.0*
DJA ***20*** *04:39:32, 1°.02N×125°.46E, h22km, MLv3.8/4*

ISC 20 04:39:31.7±2.8, 0°.98N±0°.06×125°.44E±0°.05, h16km±18km, n9, σ0°81/12, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	0.76	308	P	Pb	04 39 46.2	-0.2
KMSI	**Cibinong**	1.51	255	P	Pn	04 39 57.9	-0.1
KMSI				S	Sn	04 40 17.6	+0.2
TNTI	**Ternate**	1.94	96	P	Pn	04 40 04.4	+0.4
TNTI				S	Sn	04 40 29.0	+1.0
LBMI	**Labuha**	2.62	128	P	Pn	04 40 12.9	-0.3
LBMI				S	Sn	04 40 44.4	-0.3
SGSI	**Sangihe**	2.69	2	S	Sn	04 40 46.4	-0.2
LUWI	**Luwuk**	3.33	233	P	Pn	04 40 24.5	+1.3
WRA	**Warramunga Arr**	22.55	158	P	P	04 44 26.1	-5.0
	0.3nm,0.3s,mb3.2,baz=338,slow=10,SNR=18						
ASAR	**Alice Springs**	25.84	162	P	P	04 45 00.6	-2.0
	0.2nm,0.4s,mb3.0,baz=350,slow=15,SNR=5.3						
MKAR	**Makanchi Array**	59.10	327	P	P	04 49 24.5	-6.7
	0.3nm,0.3s,mb3.8,baz=115,slow=8.6,SNR=2.9						

NAO ***20*** *04:40:38.0±9.2, 78°.86N×1°.27W, h32km±84km*
BER ***20*** *04:40:39.2±5.1, 78°.73N×0°.18E, h10km, MD3.1*
ISCJB ***20*** *04:40:41.8±0.4, 78°.16N±0°.06×1°.2E±0°.3, h10km, mb3.9/16, MS3.3/4, Error ellipse: s-maj=9.4km s-min=7.5km az=31.6*
IDC ***20*** *04:40:42.2±0.7, 78°.28N×1°.55E, h0km, mb3.8/7, mb1 4.0/11, mb1mx3.8/26, mbtmp3.8/11, ML3.4/4, MS3.4/8, Ms1 3.4/8, ms1mx3.0/48, Error ellipse: s-maj=21.8km s-min=15.5km az=30.0*
CSEM ***20*** *04:40:43.2±0.2, 78°.32N×2°.12E, h10km, mb4.0/8, Error ellipse: s-maj=8.3km s-min=5.7km az=16.0*
NEIC ***20*** *04:40:43.9±0.4, 78°.32N×2°.04E, h10km, mb4.0/8, Error ellipse: s-maj=11.3km s-min=7.3km az=208.0*

ISC 20 04:40:43.9±0.4, 78°.16N±0°.06×1°.3E±0°.3, h10km, n67, σ0°98/70, mb3.9/16, MS3.3/4, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	2.26	65	Pn	Pn	04 41 16.3	-4.8
KBS				Sn	Sn	04 41 39.6	-9.4
KBS	**Kingsbay**	2.26	65	*e*P	Pn	04 41 16.2	-4.9
KBS				*e*S	Sn	04 41 39.5	-9.4
KBS	**Kingsbay**	2.26	65	*e*Pn	Pn	04 41 16.1	-5.0
KBS				*e*Pg	Pg	04 41 21.6	-5.5
KBS	**Kingsbay**	2.26	65	Pn	Pn	04 41 16.3	-4.8
KBS	**Kingsbay**	2.26	65	*e*Pg	Pg	04 41 21.6	-5.4
KBS				Sn	Sn	04 41 39.6	-9.4
SPA0	**Spitsbergen Ar**	3.10	82	Pn	Pn	04 41 29.6	-3.1
	baz=274,slow=18						
SPA0	**Spitsbergen Ar**	3.10	82	P	Pn	04 41 29.6	-3.1
	baz=274,slow=16,SNR=50						
SPITS	**Spitsbergen Ar**	3.10	82	Pn	Pn	04 41 29.3	-3.4
	baz=266,slow=12,SNR=397						
SPITS				Sn	Sn	04 42 01.9	-7.7
	baz=262,slow=25,SNR=6.4						
SPITS	**Spitsbergen Ar**	3.10	82	Pn	Pn	04 41 29.3	-3.4
SPITS				Sn	Sn	04 42 01.9	-7.8
DAG	**Danmarks Havn**	4.55	262	*i* P	Pn	04 41 51.0	-1.7
DAG				*i* S	Sn	04 42 41.0	-4.5
JNW	**Jan Mayen West**	7.60	205	*e*Pn	Pn	04 42 34.1	-0.4
JMIC	**Jan Mayen**	7.65	205	Pn	Pn	04 42 33.4	-1.8
JMIC	**Jan Mayen**	7.65	205	*e*Pn	Pn	04 42 33.9	-1.2
JMIC	**Jan Mayen**	7.65	205	Pn	Pn	04 42 33.3	-1.8
	84nm,0.3s,baz=83,slow=3.7,SNR=14						
JMIC				LR	LR	04 44 45.3	
	comp=Z,289nm,20.1s,baz=65,slow=31						
ARA0	**ARCESS Array S**	10.83	130	Pn	Pn	04 43 24.0	+5.4
	baz=327,slow=14						
ARCES	**ARCESS Array B**	10.83	130	Pn	Pn	04 43 24.0	+5.4
	0.1nm,0.3s,baz=343,slow=12,SNR=9.5						
ARCES	**ARCESS Array B**	10.83	130	Pn	Pn	04 43 24.0	+5.4
SUMG	**Summit**	11.24	261	*e*Pn	Pn	04 43 22.0	-2.2
	17nm,0.5s						
SUMG	**Summit**	11.24	261	*i* P	Pn	04 43 22.9	-1.4
SUMG				*i* S	Sn	04 45 24.2	-5.5
NB2	**NORSAR Subarra**	17.49	164	P	Pn	04 44 48.3	+0.9
NB2	**NORSAR Subarra**	17.49	164	P	Pn	04 44 48.3	+0.9
NOA	**NORSAR Array B**	17.49	164	P	Pn	04 44 48.8	+1.4
	0.2nm,0.3s,baz=330,slow=12,SNR=3.2						
NOA				LR	LR	04 50 21.0	
	comp=Z,88nm,18.8s,baz=350,slow=33						
NOA	**NORSAR Array B**	17.49	164	P	Pn	04 44 48.8	+1.4
FIA0	**FINESS Array S**	18.52	141	P	Pn	04 45 00.5	+0.4
	baz=346,slow=12						
FIA0	**FINESS Array S**	18.52	141	P	Pn	04 45 00.4	+0.3
	baz=346,slow=12						
FINES	**FINESS Array B**	18.52	141	P	Pn	04 45 01.3	+1.2
	0.1nm,0.3s,baz=350,slow=10,SNR=4.3						
FINES				LR	LR	04 51 16.9	
	comp=Z,120nm,20.5s,baz=157,slow=34						
FINES	**FINESS Array B**	18.52	141	P	Pn	04 45 01.3	+1.2
HFS	**Hagfors**	18.55	160	P	Pn	04 45 01.5	+1.1
	baz=354,slow=6.5						
HFS	**Hagfors**	18.55	160	P	Pn	04 45 01.1	+0.7
	0.1nm,0.3s,baz=12,slow=7.8,SNR=4.3						
HFS				LR	LR	04 51 22.8	
	comp=Z,123nm,18.8s,baz=328,slow=34						
HFS	**Hagfors**	18.55	160	P	Pn	04 45 01.5	+1.1
	baz=354,slow=6.5,SNR=3.8						
RES	**Resolute Bay**	20.40	311	LR	LR	04 53 21.5	
	comp=Z,68nm,20.8s,MS3.0,baz=25,slow=37						
VRAC	**Vranov**	29.52	160	LR	LR	04 57 43.4	
	comp=Z,65nm,18.8s,MS3.3,baz=58,slow=34						
DAVOX	**Davos/Dischmat**	31.66	169	LR	LR	04 58 36.8	
	comp=Z,102nm,19.3s,MS3.5,baz=170,slow=34						
COLD	**Coldfoot**	33.84	341	*e*P	P	04 47 25.7	+0.1
	2.5nm,0.8s,mb4.2						
COLD	**Coldfoot**	33.84	341	*e*P	P	04 47 25.7	+0.1
	2.5nm,0.8s,mb4.2						
ILAR	**Eielson Array**	36.02	337	P	P	04 47 44.9	+0.4
	2.3nm,0.8s,mb4.1,baz=7.6,slow=7.0,SNR=28						
ILAR				PcP	PcP	04 50 10.0	-0.3
	0.4nm,0.7s,baz=340,slow=4.8,SNR=5.3						
ILAR	**Eielson Array**	36.02	337	P	P	04 47 44.8	+0.3
ILAR	**Eielson Array**	36.02	337	PcP	PcP	04 50 10.0	-0.3
ZALV	**Zalesovo Beam**	36.58	80	P	P	04 47 49.1	-0.2
	0.4nm,0.4s,mb3.6,baz=332,slow=9.1,SNR=3.9						
KURK	**Kurchatov**	38.36	88	*e*P	P	04 48 04.6	+0.2
	1.8nm,0.9s,mb3.8						
KURK	**Kurchatov**	38.36	88	*e*P	P	04 48 04.6	+0.2
	1.8nm,0.9s,mb3.8						
MKAR	**Makanchi Array**	42.85	86	P	P	04 48 41.9	+0.4
	0.5nm,0.5s,mb3.5,baz=354,slow=9.8,SNR=6.4						
PETK	**Petropavlovsk-**	48.20	19	LR	LR	05 10 01.1	
	comp=Z,29nm,18.2s,MS3.3,baz=346,slow=37						
IMW	**Indian Meadow**	51.72	302	*e*P	P	04 49 51.8	+1.2
	4.7nm,1.0s,mb4.4						
IMW	**Indian Meadow**	51.72	302	*e*P	P	04 49 51.8	+1.2
	4.7nm,1.0s,mb4.4						
MOOW	**Moose Ponds**	51.83	301	*e*P	P	04 49 52.0	+0.5
	1.3nm,0.8s,mb3.9						
MOOW	**Moose Ponds**	51.83	301	*e*P	P	04 49 52.0	+0.6
	1.3nm,0.8s,mb3.9						
TPAW	**Teton Pass**	52.12	301	*e*P	P	04 49 54.6	+1.0
	1.3nm,0.7s,mb4.0						
T

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIN	**Lien**	**2.28**	**354**	Pn	**Pn**	**04 45 41.8**	**+0.8**
ILIN	**Lien**	**2.28**	**354**	*e*Pn	**Pn**	**04 45 41.8**	**+0.8**
ILIN				*e*		04 45 47.2	
	comp=Z,1μm,0.1s						
ILIN	**Lien**	**2.28**	**354**	Pn	**Pn**	**04 45 41.8**	**+0.8**
SNGE	**Sanandaj**	**2.44**	**2**	Pn	**Pn**	**04 45 44.0**	**+0.8**
SNGE				Sg	**Sg**	**04 46 19.0**	**-3.7**
SNGE	**Sanandaj**	**2.44**	**2**	Pn	**Pn**	**04 45 44.0**	**+0.8**
SNGE				Sg	**Sg**	**04 46 19.0**	**-3.7**
MIB	**Mutribah**	**2.84**	**179**	*e*P	**Pn**	**04 45 49.4**	**+0.7**
MIB				*e*S	**Sn**	**04 46 22.8**	**+0.4**
MIB				AML	AML	04 46 24.9	
	comp=Z,38nm,0.5s						
MIB	**Mutribah**	**2.84**	**179**	*e*P	**Pn**	**04 45 49.4**	**+0.7**
MIB				*e*S	**Sn**	**04 46 22.8**	**+0.4**
ASAO	**Ashtian**	**2.98**	**50**	*e*Sg	**Sg**	**04 46 33.4**	**-6.7**
IPIR	**Pirpir**	**3.06**	**88**	Pn	**Pn**	**04 45 52.7**	**+1.0**
IPIR	**Pirpir**	**3.06**	**88**	*e*Pn	**Pn**	**04 45 52.7**	**+1.0**
IPIR				*e*		04 46 43.1	
	comp=Z,573nm,0.2s						
IPIR	**Pirpir**	**3.06**	**88**	Pn	**Pn**	**04 45 52.7**	**+1.0**
NAY	**Al-Naaiem**	**3.39**	**180**	*e*P	**Pn**	**04 45 56.5**	**+0.3**
NAY				*e*S	**Sn**	**04 46 36.8**	**+0.7**
NAY				AML	AML	04 46 38.3	
	comp=Z,5.2nm,0.3s						
NAY	**Al-Naaiem**	**3.39**	**180**	*e*P	**Pn**	**04 45 56.5**	**+0.2**
NAY				*e*S	**Sn**	**04 46 36.8**	**+0.7**
IRAZ	**Razeghan**	**3.53**	**38**	Pn	**Pn**	**04 45 59.7**	**+1.5**
IRAZ	**Razeghan**	**3.53**	**38**	*e*Pn	**Pn**	**04 45 59.7**	**+1.5**
IRAZ				*e*		04 46 04.3	
	comp=Z,537nm,0.1s						
IRAZ	**Razeghan**	**3.53**	**38**	Pn	**Pn**	**04 45 59.7**	**+1.5**
IKLH	**Kolahrood**	**3.69**	**78**	Pn	**Pn**	**04 46 00.7**	**+0.3**
IKLH	**Kolahrood**	**3.69**	**78**	*e*Pn	**Pn**	**04 46 00.7**	**+0.3**
IKLH				*e*		04 46 02.2	
	comp=Z,538nm,0.1s						
IKLH	**Kolahrood**	**3.69**	**78**	Pn	**Pn**	**04 46 00.7**	**+0.3**
RDF	**Al-Radifah**	**3.72**	**176**	*e*P	**Pn**	**04 46 01.4**	**+0.6**
RDF				*e*S	**Sn**	**04 46 44.9**	**+0.7**
RDF				AML	AML	04 46 49.4	
	comp=Z,30nm,0.4s						
RDF	**Al-Radifah**	**3.72**	**176**	*e*P	**Pn**	**04 46 01.4**	**+0.6**
RDF				*e*S	**Sn**	**04 46 44.9**	**+0.7**
QRN	**Al-Qurain**	**3.93**	**172**	*e*P	**Pn**	**04 46 04.0**	**+0.3**
IZEF	**Zefreh**	**4.27**	**85**	Pn	**Pn**	**04 46 07.9**	**-0.5**
IZEF	**Zefreh**	**4.27**	**85**	*e*	**Pn**	**04 46 16.6**	**+8.2**
IZEF				*e*Pn	**Pn**	**04 46 07.9**	**-0.5**
	comp=Z,172nm,0.1s						
KFJS		**4.49**	**172**	P	**Pn**	**04 46 10.7**	**-0.6**
KFJS		**4.49**	**172**	P	**Pn**	**04 46 10.7**	**-0.7**
KFJS				S	**Sn**	**04 47 02.3**	**-0.8**
NASN	**Na'in**	**4.67**	**87**	Pn	**Pn**	**04 46 13.0**	**-0.9**
NASN	**Na'in**	**4.67**	**87**	*e*Pn	**Pn**	**04 46 13.5**	**-0.4**
DAMV	**Damavand**	**4.91**	**51**	Pn	**Pn**	**04 46 17.0**	**-0.1**
DAMV	**Damavand**	**4.91**	**51**	Pn	**Pn**	**04 46 17.0**	**-0.1**
IDMV	**Damavand**	**4.92**	**52**	Pn	**Pn**	**04 46 16.9**	**-0.4**
IDMV	**Damavand**	**4.92**	**52**	*e*Pn	**Pn**	**04 46 17.0**	**-0.3**
IDMV				*e*		04 46 21.0	
	comp=Z,132nm,0.1s						
IDMV	**Damavand**	**4.92**	**52**	Pn	**Pn**	**04 46 16.9**	**-0.4**
IFIR	**Firoozkooh**	**5.44**	**55**	Pn	**Pn**	**04 46 23.9**	**-0.6**
IFIR	**Firoozkooh**	**5.44**	**55**	*e*Pn	**Pn**	**04 46 23.9**	**-0.6**
IFIR				*e*		04 46 26.0	
	comp=Z,112nm,0.1s						
IFIR	**Firoozkooh**	**5.44**	**55**	Pn	**Pn**	**04 46 23.9**	**-0.6**
ASYS		**5.72**	**207**	S	**Sn**	**04 47 30.3**	**-3.2**
ASYS		**5.72**	**207**	P	**Pn**	**04 46 26.4**	**-2.0**
GRMI	**Germi**	**6.17**	**5**	P	**Pn**	**04 46 35.0**	**+0.5**
GRMI	**Germi**	**6.17**	**5**	P	**Pn**	**04 46 35.0**	**+0.5**
EIL	**Elat**	**10.96**	**258**	Pn	Px	04 48 16.9	
	comp=Z,0.4nm,0.3s,baz=132,slow=15,SNR=3.5						
EIL	**Elat**	**10.96**	**258**	Pn	Px	04 48 16.9	
EIL	**Elat**	**10.96**	**258**	Pn	Px	04 48 16.9	
BVAR	**Borovoye Array**	**26.29**	**32**	P	**P**	**04 50 36.1**	**-2.5**
	comp=Z,0.5nm,0.4s,mb3.4,baz=216,slow=9.1,SNR=2.3						
BVAR	**Borovoye Array**	**26.29**	**32**	P	**P**	**04 50 36.1**	**-2.5**
BVAR	**Borovoye Array**	**26.29**	**32**	P	**P**	**04 50 36.1**	**-2.5**
MKAR	**Makanchi Array**	**30.14**	**52**	P	**P**	**04 51 11.9**	**-1.1**
	comp=Z,0.5nm,0.3s,mb3.6,baz=245,slow=8.1,SNR=3.6						
MKAR	**Makanchi Array**	**30.14**	**52**	P	**P**	**04 51 11.9**	**-1.1**
MKAR	**Makanchi Array**	**30.14**	**52**	P	**P**	**04 51 11.9**	**-1.1**
FINES	**FINESS Array B**	**31.91**	**341**	P	**P**	**04 51 26.5**	**-2.0**
	comp=Z,0.4nm,0.5s,mb3.5,baz=125,slow=19,SNR=3.9						
FINES	**FINESS Array B**	**31.91**	**341**	P	**P**	**04 51 26.5**	**-2.0**
FINES	**FINESS Array B**	**31.91**	**341**	P	**P**	**04 51 26.5**	**-2.0**
HFS	**Hagfors**	**35.25**	**331**	LR	LR	05 06 03.1	
	comp=Z,79nm,18.7s,baz=133,slow=37						
ARCES	**ARCESS Array B**	**38.91**	**348**	P	**P**	**04 52 25.8**	**-2.6**
	comp=Z,1.3nm,0.8s,mb3.7,baz=153,slow=10,SNR=4.3						
ARCES	**ARCESS Array B**	**38.91**	**348**	P	**P**	**04 52 25.8**	**-2.6**
ARCES	**ARCESS Array B**	**38.91**	**348**	P	**P**	**04 52 25.8**	**-2.6**

CSEM ***20*** *04:50:47.7±0.4, 17°.53N×40°.34E, h2km, mb4.2/5, Error ellipse: s-maj=14.5km s-min=8.5km az=14.0*
ISCJB ***20*** *04:50:47.6±0.5, 17°.66N±0°.05×40°.20E±0°.05, h10km, mb4.2/20, MS3.6/7, Error ellipse: s-maj=7.9km s-min=6.0km az=138.4*
BJI ***20*** *04:50:48.7, 17°.80N×40°.10E, h10km, mB4.9/2, mb4.5/6*
IDC ***20*** *04:50:49.0±0.9, 17°.89N×40°.01E, h0km, mb4.1/10, mb1 4.1/11, mb1mx4.0/25, mbtmp4.1/11, ML4.0/1, MS3.6/12, Ms1 3.6/12, ms1mx3.4/34, Error ellipse: s-maj=25.5km s-min=17.5km az=150.0*
SGS ***20*** *04:50:49.8, 17°.77N×40°.39E, h10km*
NEIC ***20*** *04:50:50.7±0.7, 17°.79N×40°.10E, h10km, mb4.2/6, Error ellipse: s-maj=14.6km s-min=13.2km az=86.0*
ISC 20 04:50:49.2±0.5, 17°.63N±0°.05×40°.23E±0°.05, h10km, n84, σ1§57/83, mb4.2/20, MS3.6/7, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRSS	**Farasan al Kab**	**2.01**	**116**	S	**Sn**	**04 51 44.5**	**-3.8**
FRSS	**Farasan al Kab**	**2.01**	**116**	P	**Pn**	**04 51 20.6**	**-2.5**
FRSS	**Farasan al Kab**	**2.01**	**116**	P	**Pn**	**04 51 20.6**	**-2.5**
FRSS				S	**Sn**	**04 51 44.5**	**-3.8**
NAMS	**An Nimas**	**2.42**	**50**	S	**Sn**	**04 51 50.8**	**-7.8**
NAMS	**An Nimas**	**2.42**	**50**	P	**Pn**	**04 51 24.8**	**-4.0**
NAMS	**An Nimas**	**2.42**	**50**	P	**Pn**	**04 51 24.8**	**-4.0**
NAMS				S	**Sn**	**04 51 50.8**	**-7.7**
WBHS	**Wadi 'Ibn Hash**	**2.57**	**67**	P	**Pn**	**04 51 28.4**	**-2.5**
WBHS	**Wadi 'Ibn Hash**	**2.57**	**67**	P	**Pn**	**04 51 28.4**	**-2.5**
JAZS	**Jizan**	**2.62**	**102**	S	**Sn**	**04 51 58.0**	**-5.6**
JAZS	**Jizan**	**2.62**	**102**	P	**Pn**	**04 51 29.0**	**-2.7**
JAZS	**Jizan**	**2.62**	**102**	P	**Pn**	**04 51 29.0**	**-2.7**
JAZS				S	**Sn**	**04 51 58.0**	**-5.6**
TATS	**Tathlith**	**3.62**	**58**	P	**Pn**	**04 51 42.9**	**-2.4**
TATS	**Tathlith**	**3.62**	**58**	P	**Pn**	**04 51 42.9**	**-2.5**
ATD	**Arta Tunnel**	**6.57**	**157**	Pn	**Pn**	**04 52 32.7**	**+6.8**
	2.8nm,0.3s,baz=97,slow=22,SNR=5.6						
ATD				Sn	**Sb**	**04 54 02.7**	**+0.5**
	0.3nm,0.3s,baz=240,slow=20,SNR=1.6						
ATD				LR	LR	04 54 47.1	
	comp=Z,246nm,21.5s,baz=71,slow=34						
ATD	**Arta Tunnel**	**6.57**	**157**	Pn	**Pn**	**04 52 32.7**	**+6.8**
ATD				Sn	**Sb**	**04 54 02.7**	**+0.5**
ATD				LR	LR	04 54 47.1	
YOBS		**6.84**	**349**	S	**Sn**	**04 53 38.9**	**-8.7**
YOBS		**6.84**	**349**	P	**Pn**	**04 52 26.6**	**-3.0**
YNBS	**Yanbu' al Bahr**	**7.00**	**343**	S	**Sn**	**04 53 43.1**	**-8.3**
YNBS	**Yanbu' al Bahr**	**7.00**	**343**	P	**Pn**	**04 52 28.2**	**-3.6**
UMJS	**Umm Lajj**	**8.04**	**341**	P	**Pn**	**04 52 43.4**	**-2.7**
EIL	**Elat**	**12.92**	**339**	Pn	**Pn**	**04 53 53.1**	**+0.1**
	0.2nm,0.3s,baz=144,slow=19,SNR=2.1						
EIL				LR	LR	04 57 54.1	
	comp=Z,245nm,19.3s,baz=94,slow=34						
EIL	**Elat**	**12.92**	**339**	Pn	**Pn**	**04 53 53.1**	**+0.1**
ASF	**Jabal al Asfar**	**14.79**	**349**	LR	LR	04 59 20.3	
	comp=Z,122nm,20.1s,baz=223,slow=35						
MMAI	**Mount Meron Ar**	**15.93**	**345**	LR	LR	05 00 04.3	
	comp=Z,113nm,18.3s,baz=130,slow=36						
BHD	**Baghdad**	**16.02**	**13**	*ex*	**Pn**	**04 54 34.0**	**-0.6**
BHD				*ex*	x	04 56 44.0	
BHD				*ex*	x	04 59 00.0	
BHD				*ex*	x	04 59 30.0	
ASHO	**Ashiyiah**	**16.34**	**62**	P	**Pn**	**04 54 40.2**	**+1.4**
	SNR=9.9						
ASHO	**Ashiyiah**	**16.34**	**62**	P	**Pn**	**04 54 40.2**	**+1.4**
	SNR=9.9						
HATD	**Hatta, Dubai**	**16.46**	**62**	P	**Pn**	**04 54 42.5**	**+2.2**
	SNR=5.7						
HATD	**Hatta, Dubai**	**16.46**	**62**	P	**Pn**	**04 54 42.5**	**+2.2**
	SNR=5.7						
HOQ	**Hoqain**	**17.05**	**67**	P	**Pn**	**04 54 49.8**	**+2.0**
	SNR=16						
HOQ	**Hoqain**	**17.05**	**67**	P	**Pn**	**04 54 49.8**	**+2.0**
	SNR=16						
JMDO	**Jabal Madar**	**17.44**	**71**	P	**Pn**	**04 54 54.5**	**+1.7**
	SNR=8.3						
JMDO	**Jabal Madar**	**17.44**	**71**	P	**Pn**	**04 54 54.5**	**+1.7**
	SNR=8.3						
SMDO	**Samad**	**17.56**	**69**	P	**Pn**	**04 54 57.8**	**+3.6**
	SNR=5.5						
WBK	**Wadi Bani Khal**	**18.28**	**71**	P	**Pn**	**04 55 05.7**	**+2.6**
	SNR=18						
KMBO	**Kilima Mbogo**	**18.86**	**189**	LR	LR	05 02 19.5	
	comp=Z,262nm,20.7s,baz=90,slow=36						
MALT	**Malatya**	**20.67**	**356**	*e*P	**P**	**04 55 30.8**	**+1.6**
	14nm,1.0s						
MALT	**Malatya**	**20.67**	**356**	*e*P	**P**	**04 55 30.8**	**+1.6**
	14nm,1.0s						
BR131	**Keskin Array S**	**22.75**	**347**	*e*P	**P**	**04 55 52.5**	**+0.9**
	6.6nm,1.0s,mb4.0						
BR131	**Keskin Array S**	**22.75**	**347**	*e*P	**P**	**04 55 52.5**	**+1.0**
	6.6nm,1.0s,mb4.0						
BRTR	**Keskin Array B**	**22.75**	**347**	P	**P**	**04 55 53.1**	**+1.6**
	9.5nm,1.1s,mb4.1,baz=172,slow=9.9,SNR=16						
BRTR	**Keskin Array B**	**22.75**	**347**	P	**P**	**04 55 53.1**	**+1.6**
GNI	**Garni**	**22.78**	**9**	LR	LR	05 05 06.1	
	comp=Z,114nm,19.6s,MS3.3,baz=143,slow=38						
MSKU	**Masuku**	**32.48**	**237**	P	**P**	**04 57 20.2**	**0.0**
	30nm,1.4s,mb4.9,baz=158,slow=19,SNR=4.0						
MSKU				LR	LR	05 10 27.5	
	comp=Z,310nm,19.2s,MS4.0,baz=0.7,slow=36						
MSKU	**Masuku**	**32.48**	**237**	P	**P**	**04 57 20.2**	**0.0**
TAM	**Tamanrasset**	**32.92**	**285**	*e*P	**P**	**04 57 24.7**	**+0.7**
	4.6nm,1.2s,mb4.3						
TAM	**Tamanrasset**	**32.92**	**285**	*e*P	**P**	**04 57 24.7**	**+0.7**
	4.6nm,1.2s,mb4.3						
ABKAR	**Akbulak array**	**35.35**	**22**	*e*P	**P**	**04 57 44.4**	**-0.3**
	1.7nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**35.35**	**22**	*e*P	**P**	**04 57 44.4**	**-0.3**
	1.7nm,0.6s,mb4.2						
AKTK	**Aktyubinsk**	**35.70**	**20**	P	**P**	**04 57 48.4**	**+0.7**
AKTK	**Aktyubinsk**	**35.70**	**20**	P	**P**	**04 57 48.4**	**+0.7**
AKTO	**Aktyubinsk**	**35.70**	**20**	P	**P**	**04 57 48.4**	**+0.7**
	0.7nm,0.4s,mb4.0,baz=234,slow=15,SNR=4.6						
MORC	**Moravsky Berou**	**36.91**	**335**	*e*P	**P**	**04 57 57.7**	**-0.3**
	3.1nm,1.0s,mb4.1						
MORC	**Moravsky Berou**	**36.91**	**335**	*e*P	**P**	**04 57 57.7**	**-0.4**
	3.1nm,1.0s,mb4.1						
TORD	**Torodi Ar. Bea**	**37.38**	**269**	P	**P**	**04 58 02.1**	**-0.4**
	2.0nm,0.9s,mb4.0,baz=74,slow=7.7,SNR=3.3						
TORD	**Torodi Ar. Bea**	**37.38**	**269**	P	**P**	**04 58 02.1**	**-0.4**
BRG	**Berggiesshubel**	**39.23**	**334**	*e*P	**P**	**04 58 21.4**	**+3.7**
	4.3nm,1.0s,mb4.1						
BRG				*e*		05 05 13.4	
	2.5nm,0.8s						
BRG				*e*		05 05 45.0	
	5.7nm,1.3s						
BRG				*e*		05 06 04.5	
	3.8nm,0.9s						
BVAR	**Borovoye Array**	**42.44**	**27**	P	**P**	**04 58 44.1**	**0.0**
	0.4nm,0.4s,mb3.4,baz=208,slow=8.2,SNR=2.6						
BVAR	**Borovoye Array**	**42.44**	**27**	P	**P**	**04 58 44.1**	**0.0**
MDT	**Midelt**	**42.97**	**299**	P	**P**	**04 58 48.8**	**+0.1**
	0.9nm,0.5s,mb3.7,baz=119,slow=4.9,SNR=3.5						
MDT	**Midelt**	**42.97**	**299**	P	**P**	**04 58 48.8**	**+0.1**
FINES	**FINESS Array B**	**44.91**	**350**	P	**P**	**04 59 02.5**	**-1.2**
	2.5nm,0.8s,mb4.1,baz=134,slow=5.5,SNR=5.7						
FINES	**FINESS Array B**	**44.91**	**350**	P	**P**	**04 59 02.5**	**-1.3**
KURK	**Kurchatov**	**44.97**	**34**	*e*P	**P**	**04 59 06.5**	**+2.1**
	5.3nm,1.1s,mb4.3						
KURK	**Kurchatov**	**44.97**	**34**	*e*P	**P**	**04 59 06.5**	**+2.1**
	5.3nm,1.1s,mb4.3						
MK31	**Makanchi Array**	**45.16**	**40**	*e*P	**P**	**04 59 05.2**	**-0.8**
MK31	**Makanchi Array**	**45.16**	**40**	*e*P	**P**	**04 59 05.2**	**-0.8**
MKAR	**Makanchi Array**	**45.16**	**40**	P	**P**	**04 59 07.8**	**+1.7**
	1.0nm,0.8s,mb3.7,baz=227,slow=4.8,SNR=4.9						
MKAR				LR	LR	05 20 22.8	
	comp=Z,135nm,18.9s,MS3.9,baz=69,slow=39						
MKAR	**Makanchi Array**	**45.16**	**40**	P	**P**	**04 59 07.8**	**+1.8**
DBIC	**Dimbokro**	**45.29**	**262**	LR	LR	05 16 21.2	
	comp=Z,118nm,21.7s,MS3.8,baz=45,slow=34						
NOA	**NORSAR Array B**	**48.02**	**341**	P	**P**	**04 59 26.4**	**-1.9**
	1.8nm,0.9s,mb4.1,baz=136,slow=8.0,SNR=4.6						
NOA	**NORSAR Array B**	**48.02**	**341**	P	**P**	**04 59 26.4**	**-1.9**
BOSA	**Boshof**	**48.20**	**198**	LR	LR	05 18 51.4	
	comp=Z,64nm,18.8s,MS3.6,baz=348,slow=35						
ZAA0	**Zalesovo Array**	**49.89**	**33**	*e*P	**P**	**04 59 42.5**	**-0.3**
ZAA0	**Zalesovo Array**	**49.89**	**33**	*e*P	**P**	**04 59 42.5**	**-0.2**
ZALV	**Zalesovo Beam**	**49.89**	**33**	P	**P**	**04 59 42.4**	**-0.3**
	4.6nm,0.8s,mb4.5,baz=241,slow=8.0,SNR=12						
ZALV				LR	LR	05 24 03.5	
	comp=Z,40nm,19.9s,MS3.4,baz=254,slow=40						
ZALV	**Zalesovo Beam**	**49.89**	**33**	P	**P**	**04 59 42.4**	**-0.3**
ZALV				LR	LR	05 24 03.5	
CMAR	**Chiang Mai Arr**	**55.61**	**79**	P	**P**	**05 00 28.4**	**+2.8**
	0.7nm,0.4s,mb4.1,baz=294,slow=6.8,SNR=6.2						
CMAR				LR	LR	05 23 58.3	
	comp=Z,33nm,19.8s,MS3.4,baz=175,slow=36						
GTA	**Gaotai**	**55.64**	**54**	*e*P	**P**	**05 00 29.1**	**+3.6**
GTA				pP	pP	05 00 33.3	+4.6
GTA				sP	sP	05 00 35.3	+5.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
LZH	**Lanzhou**	**58.68**	**58**	*e*P	**P**	**05 00 51.5**	**+4.4**
LZH				pP	pP	05 00 56.5	+6.2
LZH				sP	sP	05 00 59.0	+7.5
LZH				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
SONM	**Songino Array**	**61.18**	**45**	P	**P**	**05 01 04.8**	**+0.8**
	comp=Z,2.5nm,1.0s,mb4.3,baz=258,slow=7.1,SNR=6.8						
SONM	**Songino Array**	**61.18**	**45**	P	**P**	**05 01 04.8**	**+0.7**
SPITS	**Spitsbergen Ar**	**61.68**	**355**	P	**P**	**05 01 10.1**	**+3.1**
	comp=Z,6.2nm,0.7s,mb4.8,baz=191,slow=9.5,SNR=3.1						
SPITS	**Spitsbergen Ar**	**61.68**	**355**	P	**P**	**05 01 10.1**	**+3.1**

MOS ***20*** *04:52:22.0±1.1, 14°.48N×91°.99W, h33km, mb5.2/49, Error ellipse: s-maj=8.2km s-min=4.4km az=102.3*
BJI ***20*** *04:52:24.0, 14°.40N×92°.10W, h48km, mB5.1/11, Ms5.6/18, Ms7 5.4/16*
NEIC ***20*** *04:52:26.0±0.2, 14°.39N×92°.10W, mb5.1/173, MD5.0(MEX), Error ellipse: s-maj=5.0km s-min=3.2km az=32.0*
NEIC Felt at Antigua Guatemala, Coatepeque, Panajachel and Quetzaltenango.
ISCJB ***20*** *04:52:26.2±0.2, 14°.52N±0°.03×92°.23W±0°.02, h58km, mb5.0/192, MS4.7/31, Error ellipse: s-maj=4.2km s-min=1.6km az=31.8*
IDC ***20*** *04:52:26.8±0.5, 14°.64N×91°.87W, h57km±3km, mb4.4/25, mb1 4.6/26, mb1mx4.5/28, mbtmp4.4/26, MS4.3/15, Ms1 4.2/15, ms1mx4.1/36, Error ellipse: s-maj=17.5km s-min=9.5km az=60.0*
GCMT ***20*** *04:52:27.0±0.2, 14°.39N×92°.64W, h47km±1km, MW5.2, Moment Tensor Solution. s70,c112; s65,c114; Moment tensor: Scale 10^16Nm; Mrr=5.33±.16; Mθθ2.27±.13; Mφφ3.05±.15; Mrθ1.54±.12; Mθφ-3.44±.11; Mφr-3.31±.14; Best double couple: M0 6.80000×10^16 NP1:φs127.00000°, δ30.00000°, λ-108.00000°. NP2:φs328.00000°, δ61.00000°, λ-80.00000°. Principal axes: T 7.1200, Plg16.0000°, Azm50.0000°; N -0.6300, Plg9.0000°, Azm143.0000°; P -6.4900, Plg72.0000°, Azm262.0000°; Data Used: II IU IC G CN.*
MEX ***20*** *04:52:27.1±0.5, 14°.28N×92°.62W, h13km±12km, MD5.0*
BGS ***20*** *04:52:29.3±2.3, 16°.54N×93°.87W, h67km, mb4.9*
CASC ***20*** *04:52:29.5±2.0, 14°.29N×92°.26W, h57km±35km, MD4.4, ML4.6, mb5.1(NEIC)*
ISC 20 04:52:28.7±0.2, 14°.57N±0°.03×92°.23W±0°.02, h60km, h60km±.6km: pP-P, n1017, σ1§04/960, mb5.0/192, MS4.7/31, 229C-257D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.34**	**354**	*i* P	**Pn**	**04 52 38.8**	**-0.3**
THIG				*i* S	**Sn**	**04 52 48.0**	**+1.4**
JAT	**Jato**	**0.62**	**113**	⇑*i*P	**Pn**	**04 52 43.4**	**+1.4**
TP2	**Tecpan 2**	**1.19**	**79**	⇑*e*P	**Pn**	**04 52 52.4**	**+3.2**
FG6		**1.30**	**90**	*i* P	**Pn**	**04 52 53.0**	**+2.3**
FUG	**Fuego 3**	**1.35**	**95**	⇑*i*P	**Pn**	**04 52 52.9**	**+1.6**
PCIG		**1.48**	**320**	*e*P	**Pn**	**04 52 50.5**	**-2.6**
PCIG				*i* S	**Sn**	**04 53 08.8**	**-2.7**
PCG	**Pacaya**	**1.58**	**96**	⇑*e*P	**Pn**	**04 52 56.4**	**+2.0**
GCG	**Guatemala City**	**1.64**	**89**	*e*P	**Pn**	**04 52 57.5**	**+2.2**
GCG				*e*S	**Sn**	**04 53 20.9**	**+5.5**
CCIG	**Comitan**	**1.71**	**3**	*e*P	**Pn**	**04 52 58.6**	**+2.4**
CCIG				*i* S	**Sn**	**04 53 21.7**	**+4.8**
CCIG	**Comitan**	**1.71**	**3**	*e*P	**Pn**	**04 52 58.6**	**+2.4**
CCIG				*i* S	**Sn**	**04 53 21.7**	**+4.8**
APG	**El Apazote**	**1.76**	**76**	P	**Pn**	**04 52 59.8**	**+2.9**
	3μm,0.3s,baz=256,slow=6.2,SNR=9089						
APG				S	**Sn**	**04 53 24.9**	**+6.7**
	1μm,0.3s,baz=352,slow=12,SNR=8.2						
NBG	**Las Nubes**	**1.82**	**89**	⇑*e*P	**Pn**	**04 53 01.2**	**+3.5**
SCX	**San Cristobal**	**2.19**	**350**	*e*P	**Pn**	**04 53 06.3**	**+3.6**
SCX				*i* S	**Sn**	**04 53 35.4**	**+6.7**
SCX	**San Cristobal**	**2.19**	**350**	*e*P	**Pn**	**04 53 06.3**	**+3.6**
SCX				*i* S	**Sn**	**04 53 35.4**	**+6.7**
TGIG		**2.36**	**339**	*i* P	**Pn**	**04 53 04.8**	**-0.2**
TGIG				*e*S	**Sn**	**04 53 34.7**	**+1.8**
MRL	**Marmol**	**2.50**	**78**	⇑*i*P	**Pn**	**04 53 10.5**	**+3.5**
RBDL	**Robledal**	**2.50**	**100**	⇑*e*P	**Pn**	**04 53 08.0**	**+1.0**
RTR	**El Retiro**	**2.59**	**105**	*e*P	**Pn**	**04 53 09.2**	**+1.0**
SBLS	**San Blas**	**2.63**	**106**	*e*P	**Pn**	**04 53 09.8**	**+1.1**
SNJE	**San Jose**	**2.64**	**105**	*e*P	**Pn**	**04 53 09.7**	**+0.9**
SNJE				*e*S	**Sn**	**04 53 40.4**	**+0.8**
BOQS	**Boqueron**	**2.98**	**106**	*e*P	**Pn**	**04 53 14.3**	**+0.9**
BOQS				*e*S	**Sn**	**04 53 48.5**	**+0.5**
SNET	**Serv Nac Est T**	**3.04**	**106**	*e*P	**Pn**	**04 53 14.8**	**+0.5**
SNET				*e*S	**Sn**	**04 53 49.1**	**-0.3**
SNET				AML	AML	04 53 56.9	
	comp=Z,6μm,0.3s						
LBRS	**Las Brisas**	**3.20**	**105**	⇑*e*P	**Pn**	**04 53 17.4**	**+0.9**
LFRS	**El Faro**	**3.21**	**107**	*e*P	**Pn**	**04 53 17.1**	**+0.4**
SNVI	**San Vicente**	**3.42**	**106**	*e*P	**Pn**	**04 53 20.4**	**+0.9**
SNVI				*e*S	**Sn**	**04 53 59.2**	**+0.2**
CMIG	**Matias Romero**	**3.58**	**315**	P	**Pn**	**04 53 19.3**	**-2.4**
	comp=Z,47nm,0.3s,baz=156,slow=12,SNR=619						
CMIG				S	**Sn**	**04 53 59.2**	**-3.6**
	comp=Z,501nm,0.3s,baz=118,slow=15,SNR=8.9						
HUIG	**Huatulco**	**3.93**	**288**	*i* P	**Pn**	**04 53 21.0**	**-5.6**
HUIG				*e*S	**Sn**	**04 54 03.1**	**-8.3**
HUIG	**Huatulco**	**3.93**	**288**	*i* P	**Pn**	**04 53 21.0**	**-5.6**
HUIG				*e*S	**Sn**	**04 54 03.1**	**-8.3**
CAHU	**Cacacuatique**	**3.98**	**101**	*e*P	**Pn**	**04 53 27.9**	**+0.8**
VSM	**San Miguel**	**4.00**	**106**	*e*P	**Pn**	**04 53 28.5**	**+1.0**
BLLM	**Bellamira**	**4.03**	**106**	*e*P	**Pn**	**04 53 28.6**	**+0.7**
CNCH	**Conchagua**	**4.46**	**106**	*e*P	**Pn**	**04 53 34.6**	**+0.9**
CNCH				*e*S	**Sn**	**04 54 28.7**	**+4.4**
CNCH				AML	AML	04 54 33.5	
	comp=Z,1μm,1.2s						
SCIG	**Sabancuy**	**4.49**	**13**	*i* P	**Pn**	**04 53 35.5**	**+1.3**
SCIG				*i* S	**Sn**	**04 54 28.2**	**+3.1**
TGUH	**Tegucigalpa,Un**	**4.83**	**95**	*e*Pn	**Pn**	**04 53 39.5**	**+0.7**
TGUH	**Tegucigalpa,Un**	**4.83**	**95**	*e*P	**Pn**	**04 53 39.1**	**+0.3**
OXX	**Oaxaca**	**5.00**	**301**	*i* P	**Pn**	**04 53 44.4**	**+3.3**
OXX	**Oaxaca**	**5.00**	**301**	*i* P	**Pn**	**04 53 44.4**	**+3.3**
VHO	**Vista Hermosa**	**5.00**	**300**	*i* P	**Pn**	**04

JCT eSn Sn 04 59 19.2 -19
JCT Junction City 17.30 338 eP Pn 04 56 26.6 +0.4
JCT pmax pmax
comp=Z,62nm,0.7s
HPIG 17.57 317 eP Pn 04 56 28.3 -1.2
VBMS Vicksburg 17.64 5 eP Pn 04 56 31.7 +1.4
comp=Z,178nm,0.7s
628A Black Gap, Mar 17.82 328 ⇓P Pn 04 56 33.3 +0.8
baz=18,SNR=114
627A Terlingua Ranc 18.05 327 ⇓P Pn 04 56 36.3 +0.9
baz=18,SNR=144
TXAR Lajitas Array 18.10 326 P Pn 04 56 36.8 +0.8
comp=Z,1.0nm,0.3s,baz=146,slow=9.0,SNR=164
TXAR S S 05 00 04.7 +4.6
comp=Z,0.2nm,0.3s,baz=115,slow=37,SNR=2.9
TXAR ScP ScP 05 04 44.5 +6.8
comp=Z,0.1nm,0.3s,baz=160,slow=4.0,SNR=16
TXAR LR LR 05 05 53.1
comp=Z,188nm,18.4s,baz=5.0,slow=44
TXAR Lajitas Array 18.10 326 P Pn 04 56 36.8 +0.8
TXAR S S 05 00 04.7 +4.6
528A Cox Ranch, San 18.32 330 ⇓P Pn 04 56 39.1 +0.5
baz=19,SNR=61
626A Big Bend Ranch 18.53 326 P Pn 04 56 41.5 +0.3
baz=19,SNR=146
527A Woodward Ranch 18.72 328 ⇑P Pn 04 56 44.0 +0.6
baz=19,SNR=142
428A Kincaid Ranch, 18.73 331 P Pn 04 56 44.0 +0.4
baz=19,SNR=52
526A Mary Lane Ranc 18.90 327 P Pn 04 56 45.7 +0.1
baz=19,SNR=94
LRAL Lakeview Retre 18.99 14 eP Pn 04 56 46.3 -0.3
comp=Z,175nm,1.2s
LRAL eSn Sn 05 00 06.5 -12
427A Hayter Ranch, 19.18 330 ⇓P Pn 04 56 48.4 -0.5
baz=20,SNR=48
328A Wristen Ranch, 19.34 332 ⇓P Pn 04 56 50.4 -0.5
baz=20,SNR=117
426A McDonald Obser 19.35 328 ⇓P Pn 04 56 50.3 -0.7
baz=20,SNR=148
LPIG La Paz 19.50 302 iP Pn 04 56 50.7 -2.1
LPIG La Paz 19.50 302 iP Pn 04 56 50.7 -2.1
OTAV Otavalo 19.71 135 eP Pn 04 56 53.2 -2.1
comp=Z,17nm,1.0s
326A Caldwell Ranch 19.85 329 ⇑P Pn 04 56 55.6 -1.2
baz=20,SNR=132
MIAR Mount Ida 19.93 357 eP Pn 04 56 55.6 -2.2
comp=Z,284nm,0.9s
MIAR eS S 05 00 26.6 -10
MIAR Mount Ida 19.93 357 eP Pn 04 56 55.6 -2.1
MIAR eS S 05 00 26.6 -10
MIAR pmax pmax
comp=Z,284nm,0.9s
425A Indio Mountain 19.95 326 P Pn 04 56 56.3 -1.7
baz=20,SNR=87
OXF Oxford 20.02 7 eP P 04 56 57.4 +0.8
comp=Z,420nm,1.2s
OXF eS S 05 00 28.9 -10
OXF Oxford 20.02 7 eP P 04 56 57.4 +0.8
OXF eS S 05 00 28.9 -10
OXF pmax pmax
comp=Z,419nm,1.2s
ROSC El Rosal 20.09 117 P P 04 56 58.4 +0.9
comp=Z,1.9nm,0.3s,baz=88,slow=1.5,SNR=31
ROSC S S 05 00 48.2 +8.0
comp=Z,0.5nm,0.3s,baz=100,slow=19,SNR=2.8
ROSC ScP ScP 05 04 47.6 +5.1
comp=Z,0.1nm,0.3s,baz=209,slow=10.0,SNR=4.1
ROSC El Rosal 20.09 117 eP P 04 56 58.0 +0.5
ROSC eScP S 05 00 58.3 +18
227A Bennet, Jal 20.09 332 ⇓P P 04 56 58.7 +1.3
baz=20,SNR=42
UALR University of 20.12 360 eP P 04 56 57.1 -0.6
comp=Z,426nm,1.1s
UALR eS S 05 00 41.2 +0.7
GOGA Godfrey 20.38 21 eP P 04 56 59.9 -0.6
comp=Z,164nm,0.9s
GOGA Godfrey 20.38 21 eP P 04 56 59.9 -0.6
GOGA pmax pmax
comp=Z,164nm,0.9s
325A Bean Ranch, Si 20.40 327 ⇓P P 04 57 01.5 +0.7
baz=21,SNR=130
226A Malaga, Loving 20.52 330 P P 04 57 02.7 +0.7
baz=21,SNR=75
SDDR Presa de Saban 20.52 75 eP P 04 57 02.6 +0.4
comp=Z,55nm,0.8s
CLNB Carlsbad 20.58 331 eP P 04 57 02.8 +0.2
comp=Z,44nm,1.0s
127A Arkansas Junct 20.68 333 P P 04 57 03.8 0.0
baz=21,SNR=50
324A Moseley Ranch, 20.73 326 ⇑P P 04 57 04.2 -0.1
baz=21,SNR=216
GDL2 Guadalupe Moun 20.76 330 eP P 04 57 05.2 +0.6
MNTX Cornudas Mount 20.87 327 ⇑P P 04 57 06.0 +0.2
baz=21,SNR=157
MNTX Cornudas Mount 20.87 327 ⇓iP P 04 57 05.1 -0.7
comp=Z,65nm,0.9s
225A Deer Hill, Car 20.91 329 ⇓P P 04 57 07.1 +0.8
baz=21,SNR=144
WMOK Wichita Mounta 20.93 345 eP P 04 57 06.1 -0.4
comp=Z,70nm,1.2s
WMOK eS S 05 00 50.2 -6.3
WMOK Wichita Mounta 20.93 345 eP P 04 57 06.1 -0.4
WMOK eS S 05 00 50.2 -6.3
WMOK pmax pmax
comp=Z,70nm,1.2s
HBAR Harrisburg 20.95 4 eP P 04 57 07.6 +1.0
HBAR eS S 05 00 54.4 -2.3
126A Clayton Basin, 20.96 331 ⇑P P 04 57 07.0 +0.2
baz=21,SNR=53
CPRX Cap Rock 21.21 332 eP P 04 57 09.2 -0.2
comp=Z,152nm,0.9s,mb5.3
224A Cornudas Mount 21.24 327 ⇑P P 04 57 10.0 +0.2
baz=22,SNR=169
125A Gardner Draw, 21.27 330 P P 04 57 10.1 0.0
baz=22,SNR=288
SWET Sewanee 21.33 14 eP P 04 57 10.4 -0.2
GNAR Gosnell 21.40 5 eP P 04 57 10.2 -1.2
comp=Z,2μm,1.0s,mb6.3
HALT Halls 21.41 6 eP P 04 57 12.6 +1.0
COW Cow Castle Cre 21.46 27 eP P 04 57 13.2 +1.1
Z26A Caprock 21.46 332 ⇓P P 04 57 12.1 0.0
baz=22,SNR=88
MSTX Muleshoe 21.55 336 ⇑P P 04 57 13.4 +0.4
baz=22,SNR=62
Y27A Causey 21.63 335 ⇑P P 04 57 13.6 -0.3
baz=22,SNR=44
223A Chaparral, Ant 21.67 326 ⇓P P 04 57 13.9 -0.5
baz=22,SNR=7.2
124A Stringfield Ra 21.70 329 ⇓P P 04 57 15.0 +0.3
baz=22,SNR=214
GLAT Glass 21.77 6 eP P 04 57 14.9 -0.5
Z25A Roswell 21.81 331 ⇑P P 04 57 15.7 -0.2
baz=22,SNR=101
WVT Waverly 21.83 10 eP P 04 57 15.5 -0.5
comp=Z,47nm,0.8s,mb5.0
WVT Waverly 21.83 10 eP P 04 57 15.5 -0.6
WVT pmax pmax
comp=Z,47nm,0.8s,mb5.0
SDV Santo Domingo 21.88 103 eP P 04 57 14.0 -2.8
comp=Z,64nm,0.9s,mb5.0
CPCT Cooper Cave 21.92 17 eP P 04 57 17.1 +0.1
Y26A Elida 21.95 333 ⇑P P 04 57 17.7 +0.4
baz=22,SNR=26
AMTX Amarillo 21.95 339 ⇑P P 04 57 17.2 -0.2
baz=22,SNR=34
AMTX Amarillo 21.95 339 eP P 04 57 15.8 -1.5
JSC Jenkinsville 21.99 25 eP P 04 57 16.5 -1.3
JSC Jenkinsville 21.99 25 eP P 04 57 16.5 -1.3
123A Bell Site, Whi 22.07 327 ⇓P P 04 57 18.3 -0.4
baz=22,SNR=18
222A Williams Famil 22.12 325 ⇓P P 04 57 19.5 +0.3
baz=22,SNR=13
Z24A Sheeppen Canyo 22.16 330 ⇑P P 04 57 20.4 +0.8
baz=22,SNR=241
X27A F and S Farms, 22.27 336 ⇑P P 04 57 20.4 -0.4
baz=23,SNR=34
TKL Tuckaleechee C 22.33 18 P P 04 57 21.6 +0.2
comp=Z,22nm,0.7s,mb4.7,baz=188,slow=12,SNR=28
TKL S S 05 01 27.3 +3.8
comp=Z,16nm,0.8s,baz=116,slow=18,SNR=3.0
TKL LR LR 05 07 46.3
comp=Z,1μm,19.5s,MS4.3,baz=204,slow=42
TKL Tuckaleechee C 22.33 18 eP P 04 57 21.3 -0.1
TKL Tuckaleechee C 22.33 18 eP P 04 57 21.3 -0.1
Y25A Mesa, Roswell 22.33 332 P P 04 57 21.4 0.0
baz=23,SNR=183
320A Kipp Ranch, An 22.40 321 ⇓P P 04 57 22.8 +0.6
baz=23
221A Mesquite Ranch 22.43 323 P P 04 57 23.1 +0.6
baz=23,SNR=75
X26A CR and CF Fran 22.48 334 P P 04 57 22.5 -0.4
baz=23,SNR=38
122A Conniff Cattle 22.51 326 ⇓P P 04 57 23.5 +0.2
baz=23,SNR=11
Z23A Rita Site, Whi 22.54 328 ⇑P P 04 57 24.1 +0.5
baz=23,SNR=67
W27A Bowe Ranch, En 22.62 336 ⇓P P 04 57 23.9 -0.5
baz=23,SNR=62
Y24A Capitan 22.68 330 P P 04 57 25.3 +0.2
baz=23,SNR=87
220A Playas Peak, P 22.80 322 P P 04 57 26.6 +0.3
baz=23,SNR=78
121A Cookes Peak, D 22.82 324 P P 04 57 27.1 +0.5
baz=23,SNR=79
X25A Clemmons Ranch 22.82 333 P P 04 57 26.4 -0.3
baz=23,SNR=37
319A Douglas 22.89 320 P P 04 57 27.7 +0.3
baz=23,SNR=72
Z22A Elephant Butte 22.92 327 ⇓P P 04 57 28.2 +0.5
baz=23,SNR=67
Y23A Lovelace Mesa, 22.99 329 ⇑P P 04 57 28.7 +0.4
baz=23,SNR=146
X24A Lazy VL Ranch, 23.21 331 ⇓P P 04 57 30.6 +0.1
baz=24,SNR=9.0
SIUC Southern Illin 23.21 6 eP P 04 57 29.1 -1.4
comp=Z,166nm,0.8s,mb5.5
219A White Tail Can 23.30 321 ⇑P P 04 57 32.2 +0.7
baz=24,SNR=101
120A U Bar Ranch, L 23.32 323 ⇓P P 04 57 32.6 +0.9
baz=24,SNR=84
W25A X Bar L Ranch, 23.32 334 ⇓P P 04 57 31.6 0.0
baz=24,SNR=62
Z21A St. Cloud Mine 23.34 326 P P 04 57 32.1 +0.3
baz=24,SNR=32
FVM French Village 23.38 4 eP P 04 57 30.6 -1.5
comp=Z,37nm,0.9s,mb4.8
FVM French Village 23.38 4 eP P 04 57 30.6 -1.5
FVM pmax pmax
comp=Z,37nm,0.9s,mb4.8
318A Bisbee 23.38 319 ⇑P P 04 57 32.9 +0.7
baz=24,SNR=201
Y22A Socorro 23.45 328 P P 04 57 33.1 +0.3
baz=24,SNR=47
V26A Tequesquite Ra 23.55 336 ⇓P P 04 57 33.5 -0.1
baz=24
X23A Hourglass Bar 23.58 330 ⇓P P 04 57 34.3 +0.4
baz=24,SNR=12
LPM Los Pinos Moun 23.58 329 eP P 04 57 34.3 +0.3
LENM Lemitar 23.63 328 eP P 04 57 35.0 +0.5
comp=Z,162nm,1.6s,mb5.2
USIN University of 23.65 9 eP P 04 57 32.8 -1.8
comp=Z,168nm,0.9s,mb5.5
Z20A Nine Sixteen R 23.71 324 P P 04 57 36.0 +0.8
baz=24,SNR=80
W24A Lazy 6 Ranch, 23.73 332 ⇓P P 04 57 36.1 +0.8
baz=24,SNR=117
218A Dragoon 23.77 320 ⇑P P 04 57 36.2 +0.4
baz=24,SNR=11
119A Ashpeak Ranch, 23.87 322 P P 04 57 37.3 +0.7
baz=24,SNR=38
Y21A Point of Rocks 23.88 327 P P 04 57 37.8 +1.1
baz=24,SNR=54
LAZ Ladron 23.90 328 eP P 04 57 37.5 +0.6
comp=Z,40nm,1.2s,mb4.7
V25A Rancho No Teng 23.92 335 ⇑P P 04 57 37.6 +0.5
baz=24,SNR=79
X22A Bernardo 23.92 329 P P 04 57 38.4 +1.3
baz=24,SNR=27
ANMO Albuquerque 24.01 330 P P 04 57 38.0 +0.2
comp=Z,18nm,0.8s,mb4.5,baz=147,slow=12,SNR=88
ANMO pP 04 57 52.5
comp=Z,12nm,0.7s,baz=145,slow=14,SNR=7.7
ANMO Albuquerque 24.01 330⇓iP P 04 57 37.9 0.0
comp=Z,20nm,0.8s,mb4.6
ANMO Albuquerque 24.01 330⇓iP P 04 57 37.9 0.0
ANMO pmax pmax
comp=Z,20nm,0.8s
W23A Werner Place, 24.03 331 ⇓P P 04 57 39.1 +1.0
baz=24,SNR=40
SLM Saint Louis 24.04 4 eP P 04 57 38.1 0.0
comp=Z,53nm,0.8s,mb5.0
SLM epP 04 57 52.5
SLM Saint Louis 24.04 4 eP P 04 57 38.1 0.0
SLM e*PP 04 57 52.5
SLM pmax pmax
comp=Z,53nm,0.8s,mb5.0
U26A Atchley Ranch, 24.05 337 ⇑P P 04 57 38.6 +0.4
baz=24,SNR=48
V24A Rampart Ranch, 24.10 333 P P 04 57 39.2 +0.5
baz=24,SNR=35
217A Green Valley 24.13 318 ⇓P P 04 57 39.4 +0.3
baz=24,SNR=83
WCI Wyandotte Cave 24.15 11 eP P 04 57 37.0 -2.2
comp=Z,221nm,0.9s,mb5.6
WCI Wyandotte Cave 24.15 11 eP P 04 57 37.0 -2.1
WCI pmax pmax
comp=Z,221nm,0.9s,mb5.6
Y20A Horse Springs, 24.18 326 P P 04 57 40.5 +1.0
baz=24,SNR=55
118A Homack Ranch, 24.18 321 ⇑P P 04 57 39.9 +0.3
baz=24,SNR=37
Z19A T-Link Ranch, 24.22 323 ⇓P P 04 57 42.1 +2.2
baz=24,SNR=6.3
X21A Alamocita Cree 24.27 327 P P 04 57 41.4 +1.1
baz=24,SNR=127
CNNC Cliffs of the 24.29 30 eP P 04 57 37.5 -3.0
comp=Z,82nm,0.9s,mb5.2
W22A Albuquerque 24.30 330 ⇑P P 04 57 41.9 +1.4
baz=25,SNR=29
U25A Circle Dot Ran 24.32 336 ⇑P P 04 57 41.1 +0.4
baz=25,SNR=60
OLIL Olney 24.35 8 eP P 04 57 39.8 -1.2
comp=Z,225nm,1.0s,mb5.5
TUC Tucson 24.46 319⇓iP P 04 57 41.8 -0.3
comp=Z,61nm,1.3s,mb4.9
TUC Tucson 24.46 319⇓iP P 04 57 41.8 -0.3
TUC pmax pmax
comp=Z,61nm,1.3s,mb4.9
V23A Ortiz Mt. (NFS 24.52 332 P P 04 57 43.8 +1.2
baz=25,SNR=70
Z18A Geronimo 24.53 322 P P 04 57 43.4 +0.7
baz=25,SNR=22
117A Oracle 24.61 320 P P 04 57 43.5 +0.1
baz=25,SNR=44
U24A Moreno Valley 24.68 334 P P 04 57 45.4 +1.4
baz=25,SNR=39
216A Three Points, 24.69 318 ⇑P P 04 57 44.2 0.0
baz=25,SNR=16
Y19A Nutrioso 24.70 324 P P 04 57 45.2 +1.0
baz=25,SNR=58
X20A Quemado 24.72 326 P P 04 57 45.6 +1.2
baz=25,SNR=41
W21A San Fidel 24.72 329 P P 04 57 45.3 +0.9
baz=25,SNR=10
KSU1 Kansas State U 24.74 352 eP P 04 57 43.2 -1.3
BLA Blacksburg 24.88 23 eP P 04 57 44.4 -1.5
comp=Z,114nm,0.9s,mb5.4
BLA Blacksburg 24.88 23 eP P 04 57 44.4 -1.4
BLA pmax pmax
comp=Z,114nm,0.9s,mb5.4
Z17A San Carlos Hig 24.94 322 ⇓P P 04 57 47.1 +0.7
baz=25,SNR=11
T25A Trinidad 24.96 336 ⇑P P 04 57 47.4 +0.9
baz=25,SNR=32
V22A San Miguel Ran 25.00 331 ⇑P P 04 57 48.0 +1.1
baz=25
U23A El Rito 25.01 333 ⇑P P 04 57 48.3 +1.3
baz=25,SNR=93
BLO Bloomington 25.02 11 eP P 04 57 45.1 -1.9
comp=Z,98nm,0.8s,mb5.4
BLO Bloomington 25.02 11 eP P 04 57 45.2 -1.8
BLO pmax pmax
comp=Z,98nm,0.8s,mb5.4
Y18A Canyon Day Jun 25.02 323 P P 04 57 47.5 +0.4
baz=25,SNR=46
CBKS Cedar Bluff 25.05 346 P P 04 57 46.9 -0.3
baz=25,SNR=12
CBKS Cedar Bluff 25.05 346 eP P 04 57 46.3 -1.0
comp=Z,112nm,1.1s,mb5.3
CBKS Cedar Bluff 25.05 346 eP P 04 57 46.3 -1.0
CBKS pmax pmax
comp=Z,112nm,1.1s,mb5.3
X19A St. Johns 25.07 325 ⇓P P 04 57 48.3 +0.7
baz=25,SNR=36
VWCC Virginia Weste 25.08 24 eP P 04 57 46.4 -1.2
VWCC epP pP 04 58 02.5 +0.2
T24A Torres, Weston 25.16 335 ⇑P P 04 57 49.8 +1.5
baz=25
W20A Ramah 25.17 327 P P 04 57 49.5 +1.1
baz=25,SNR=38
SJG San Juan 25.26 78 P P 04 57 48.2 -1.3
comp=Z,5.5nm,0.5s,mb4.4,baz=325,slow=16,SNR=3.8
SJG PcP PcP 05 01 19.3 -2.4
comp=Z,12nm,0.7s,baz=164,slow=7.4,SNR=3.5
SJG pPcP 05 01 34.4
comp=Z,22nm,0.8s,baz=356,slow=5.8,SNR=3.8
SJG ScP ScP 05 04 57.6 +1.7
comp=Z,9.4nm,0.8s,baz=227,slow=4.8,SNR=3.3
SJG LR LR 05 07 19.0
comp=Z,939nm,21.4s,MS4.3,baz=258,slow=36
SJG San Juan 25.26 78 eP P 04 57 48.5 -1.0
comp=Z,24nm,0.8s,mb4.8
SJG San Juan 25.26 78 eP P 04 57 48.6 -0.9
SJG pmax pmax
comp=Z,24nm,0.8s
V21A Milan 25.26 330 ⇓P P 04 57 50.2 +0.8
baz=26,SNR=5.8
U22A Llaves 25.35 332 ⇑P P 04 57 51.3 +1.2
baz=26,SNR=92
S25A Robets Cordova 25.43 337 P P 04 57 51.2 +0.4
baz=26,SNR=24
Y17A Roosevelt 25.44 322 ⇑P P 04 57 50.9 -0.1
baz=26,SNR=14
X18A Snowflake 25.51 324 ⇑P P 04 57 52.1 +0.5
baz=26,SNR=33
T23A Casias Ranch, 25.54 334 ⇑P P 04 57 52.5 +0.7
baz=26,SNR=36
Z16A Peralta Trail, 25.55 320 P P 04 57 51.8 -0.2
baz=26,SNR=26
214A Organ Pipe Nat 25.55 316 ⇑P P 04 57 52.0 0.0
baz=26,SNR=32
ATAH Atahualpa 25.56 147 P P 04 57 52.8 +0.6
comp=Z,37nm,0.9s,mb4.9,baz=338,slow=7.2,SNR=15
W19A Sanders 25.63 326 ⇓P P 04 57 53.5 +0.8
baz=26,SNR=14
W19A ⇓PcP PcP 05 01 20.1 -2.1
baz=26
115A Sonoran Desert 25.64 318 ⇑P P 04 57 52.9 +0.1
baz=26
V20A Brimhall 25.67 328 P P 04 57 53.7 +0.7
baz=26,SNR=20
S24A Houchin Ranch, 25.71 336 ⇓P P 04 57 54.4 +1.1
baz=26,SNR=13
U21A Nageezi 25.77 330 ⇓P P 04 57 55.2 +1.3
baz=26,SNR=48
U21A ⇓PcP PcP 05 01 21.9 -0.6
baz=26
R25A Fountain Ranch 25.80 338 ⇓P P 04 57 54.6 +0.5
baz=26,SNR=19
R25A ⇓PcP PcP 05 01 21.3 -1.2
baz=26
W18A Petrified Fore 25.82 326 ⇑P P 04 57 55.4 +1.0
baz=26,SNR=11
X17A Forest Lakes 25.87 323 P P 04 57 55.8 +1.0
baz=26,SNR=12
T22A Edith 25.90 332 ⇑P P 04 57 56.2 +1.1
baz=26,SNR=43
V19A Window Rock 25.91 327 ⇑P P 04 57 55.9 +0.8
baz=26
SDCO Great Sand Dun 25.92 335 P P 04 57 55.9 +0.7
baz=26,SNR=20
SDCO Great Sand Dun 25.92 335⇓iP P 04 57 55.6 +0.4
comp=Z,117nm,0.7s,mb5.5
Y16A Circle Bar Ran 25.95 321 P P 04 57 55.9 +0.3
baz=26,SNR=25
HDIL Hopedale 26.02 5 eP P 04 57 54.0 -2.1
comp=Z,97nm,1.0s,mb5.3
S23A Nye Farm, Mont 26.09 335 ⇑P P 04 57 57.6 +0.8
baz=26,SNR=14
S23A ⇑PcP PcP 05 01 21.7 -1.5
baz=26
114A Black Gap (USA 26.10 317 P P 04 57 56.9 0.0
baz=26,SNR=33
114A ⇓PcP PcP 05 01 21.6 -1.7
baz=26
U20A Newcomb 26.15 329 ⇓P P 04 57 58.9 +1.5
baz=26,SNR=10.0
U20A ⇑PcP PcP 05 01 22.5 -0.8
baz=26
T21A Navajo Lake 26.17 331 ⇑P P 04 57 59.0 +1.5
baz=26,SNR=41
R24A Sanders Place, 26.18 337 ⇓P P 04 57 58.5 +0.9
baz=26,SNR=18
R24A ⇑PcP PcP 05 01 22.6 -0.7
baz=26
X16A Lo Mia Camp, P 26.30 322 P P 04 57 59.2 +0.5
baz=27,SNR=52
W17A Winslow 26.34 324 ⇑P P 04 57 59.7 +0.6
baz=27
V18A Ganado 26.37 326 P P 04 57 59.8 +0.4
baz=27,SNR=10
STVI Saint Thomas 26.41 78 eP P 04 57 59.0 -1.0
comp=Z,52nm,1.1s,mb5.0
U19A Dine' College, 26.43 328 P P 04 58 00.1 +0.2
baz=27,SNR=38
U19A ⇑PcP PcP 05 01 22.4 -1.6
baz=27
Q25A Bedland, Calha 26.47 339 ⇑P P 04 58 00.2 +0.1
baz=27,SNR=8.1
S22A 4UR Ranch, Cre 26.48 333 P P 04 58 01.1 +0.8
baz=27,SNR=60
Y15A Casa Rosa Ranc 26.52 320 ⇑P P 04 58 01.0 +0.3
baz=27,SNR=29
Z14A Wintersburg 26.52 318 ⇓P P 04 58 00.9 +0.1
baz=27,SNR=13
113A Mohawk Valley, 26.69 316 ⇓P P 04 58 02.2 0.0
baz=27
113A ⇓PcP PcP 05 01 22.8 -1.9
baz=27
T19A Beclabito 26.76 329 ⇑P P 04 58 03.1 +0.3
baz=27,SNR=26
T19A ⇓PcP PcP 05 01 23.2 -1.6
baz=27
V17A Tonalea, Kykot 26.78 325 ⇓P P 04 58 03.7 +0.7
baz=27,SNR=30
X15A Humboldt 26.82 321 ⇓P P 04 58 03.9 +0.4
baz=27,SNR=29
X15A ⇑PcP PcP 05 01 23.9 -1.1
baz=27
W16A Flagstaff 26.82 323 ⇑P P 04 58 04.4 +1.0
baz=27,SNR=26
Q24A Divide 26.84 337 ⇓P P 04 58 04.3 +0.8
baz=27
R22A Saguache, Gunn 26.85 334 ⇓P P 04 58 04.7 +1.1
baz=27,SNR=14
U18A Rough Rock, Ch 26.87 327 ⇑P P 04 58 04.4 +0.5
baz=27,SNR=9.2
Z13A Yuma Proving G 26.88 317 ⇑P P 04 58 04.0 0.0
baz=27,SNR=40
Z13A ⇑PcP PcP 05 01 23.1 -2.0
baz=27
Y14A Wickenburg 26.93 319 ⇓P P 04 58 04.6 +0.1
baz=27,SNR=9.9
Y14A ⇓PcP PcP 05 01 23.7 -1.5
baz=27
CBN Corbin 26.97 26 eP P 04 58 04.1 -0.6
comp=Z,29nm,0.7s,mb4.9
CBN epP pP 04 58 19.2 -0.1
Q23A Hartsel 27.05 336 ⇓P P 04 58 05.9 +0.5
baz=27,SNR=14
112A Yuma 27.10 315 ⇓P P 04 58 05.7 -0.3
baz=27
X14A Yava 27.21 320 ⇓P P 04 58 07.1 +0.1
baz=28,SNR=26
X14A ⇓PcP PcP 05 01 25.2 -0.7
baz=28
S20A Disappointment 27.23 331 P P 04 58 08.0 +1.0
baz=28,SNR=19
R21A Cimarron 27.31 333 ⇓P P 04 58 08.3 +0.6
baz=28,SNR=8.2
W15A Williams 27.31 322 ⇑P P 04 58 08.8 +1.0
baz=28,SNR=19
U16A Tuba City 27.35 325 ⇓P P 04 58 08.7 +0.6
baz=28,SNR=8.9
U16A ⇑PcP PcP 05 01 25.6 -0.6
baz=28
Y13A Salome 27.38 318 ⇓P P 04 58 08.8 +0.4
baz=28
T18A Mexican Hat 27.42 328 ⇑P P 04 58 09.7 +1.0
baz=28,SNR=29
T18A ⇑PcP PcP 05 01 25.1 -1.3

baz=28
U17A Shonto 27.43 326 ⇓P P 04 58 09.6 +0.8
baz=28
Q22A Crested Butte, 27.45 335 ⇑P P 04 58 09.5 +0.6
baz=28,SNR=8.3
P23A Jefferson 27.46 337 P P 04 58 10.3 +1.2
baz=28
R20A Redvale 27.53 332 P P 04 58 10.8 +1.0
baz=28,SNR=35
R20A ⇓PcP PcP 05 01 26.2 -0.3
baz=28
S19A Harvey Farm, M 27.53 330 ⇑P P 04 58 10.3 +0.5
baz=28,SNR=62
S19A ⇓PcP PcP 05 01 25.7 -0.9
baz=28
GLA Glamis 27.57 316 ⇓P P 04 58 10.4 +0.2
baz=28,SNR=16
GLA Glamis 27.57 316 eP P 04 58 09.4 -0.8
comp=Z,74nm,1.2s,mb5.2
GLA Glamis 27.57 316 eP P 04 58 09.4 -0.8
GLA pmax pmax
comp=Z,74nm,1.2s,mb5.2
PV01 Paradox Valley 27.58 331 eP P 04 58 10.9 +0.8
comp=Z,7µm,1.4s
V15A Kaibab Nationa 27.70 323 P P 04 58 12.0 +0.7
baz=28,SNR=48
ISCO Idaho Springs 27.74 337 ⇓P P 04 58 12.3 +0.7
baz=28,SNR=8.2
ISCO ⇓PcP PcP 05 01 24.3 -2.8
baz=28
ISCO Idaho Springs 27.74 337 eP P 04 58 11.4 -0.2
comp=Z,12nm,1.0s,mb4.5
ISCO ePcP PcP 05 01 25.9 -1.2
ISCO Idaho Springs 27.74 337 eP P 04 58 11.4 -0.2
ISCO e 05 01 25.9
ISCO pmax pmax
comp=Z,12nm,1.0s,mb4.5
Y12C Blythe 27.79 317 ⇑P P 04 58 12.0 -0.2
baz=28,SNR=12
Y12C ⇑PcP PcP 05 01 24.7 -2.6
baz=28
T17A Navajo Res., N 27.80 327 P P 04 58 12.9 +0.8
baz=28,SNR=30
T17A ⇓PcP PcP 05 01 27.1 -0.1
baz=28
W14A Seligman 27.82 321 P P 04 58 12.8 +0.5
baz=28,SNR=29
W14A ⇑PcP PcP 05 01 26.6 -0.7
baz=28
X13A Yucca 27.88 319 P P 04 58 12.9 0.0
baz=28,SNR=30
PDMCI Parker Dam,Lak 27.89 319 ⇓P P 04 58 13.2 +0.2
baz=28,SNR=21
S18A Hurst Farm, Bl 27.91 329 ⇓P P 04 58 13.8 +0.7
baz=28,SNR=39
PV04 Paradox Valley 27.94 331 ⇓iP P 04 58 14.1 +0.7
P22A Eagle 28.01 336 ⇑P P 04 58 14.3 +0.3
baz=28,SNR=6.4
R19A Curley Farm, L 28.03 331 ⇑P P 04 58 14.6 +0.5
baz=28,SNR=38
Q20A Ridgley Place, 28.12 333 ⇑P P 04 58 15.4 +0.5
baz=28,SNR=6.3
V14A Boquillas Ranc 28.12 322 P P 04 58 15.7 +0.7
baz=28,SNR=67
V14A ⇓PcP PcP 05 01 26.7 -1.4
baz=28
T16A Glen Canyon Da 28.17 326 ⇓P P 04 58 16.3 +0.9
baz=28,SNR=11
SWSC Sam W. Stewart 28.17 315 ⇓P P 04 58 15.3 -0.2
baz=28,SNR=5.5
U15A North Rim 28.20 324 P P 04 58 16.6 +0.8
baz=28,SNR=36
SDMD Soldier's Deli 28.20 26 eP P 04 58 14.2 -1.5
comp=Z,60nm,0.9s,mb5.2
SDMD epP pP 04 58 30.2 -0.2
DVTC Desert V Tower 28.22 314 ⇑P P 04 58 16.0 0.0
baz=28
P21A Newcastle 28.23 335 ⇓P P 04 58 16.8 +0.9
baz=28
W13A Hualapai Mount 28.24 320 ⇑P P 04 58 17.0 +0.9
baz=28
W13A ⇑PcP PcP 05 01 27.3 -1.1
baz=28
S17A Black Ridge (B 28.28 328 P P 04 58 16.9 +0.5
baz=29,SNR=17
JFWS Jewell Farm 28.30 3 eP P 04 58 16.1 -0.4
comp=Z,29nm,0.6s,mb5.1
JFWS Jewell Farm 28.30 3 eP P 04 58 16.1 -0.4
JFWS pmax pmax
comp=Z,29nm,0.6s,mb5.1
BC3 Big Chuckawall 28.35 316 P P 04 58 17.2 +0.1
baz=29,SNR=49
BC3 ⇓PcP PcP 05 01 26.6 -2.1
baz=29
R18A Canyonlands Na 28.41 330 ⇑P P 04 58 17.8 +0.3
baz=29,SNR=28
O22A Kremmling 28.41 337 ⇓P P 04 58 17.5 0.0
baz=29,SNR=9.5
IRM Iron Mountain 28.45 317 P P 04 58 18.1 +0.1
baz=29,SNR=18
IRM ⇓PcP PcP 05 01 27.9 -1.0
baz=29
Q19A Hogan Spring (28.56 331 ⇓P P 04 58 19.4 +0.6
baz=29,SNR=26
MONP Monument Peak 28.57 314 ⇑P P 04 58 19.4 +0.3
baz=29,SNR=5.1
MONP ⇑PcP PcP 05 01 28.1 -1.1
baz=29
P20A De Beque 28.61 333 ⇑P P 04 58 19.8 +0.5
baz=29,SNR=14
T15A Red Dirt Ranch 28.67 325 P P 04 58 20.7 +0.8
baz=29,SNR=47
T15A ⇑PcP PcP 05 01 28.2 -1.2
baz=29
U14A Mt Trumbull 28.70 323 ⇓P P 04 58 21.3 +1.0
baz=29,SNR=44
S16A Weppner Ranch, 28.76 327 ⇓P P 04 58 21.1 +0.4
baz=29,SNR=27
V13A Grand Canyon W 28.80 321 ⇑P P 04 58 21.7 +0.7
baz=29,SNR=57
V13A ⇑PcP PcP 05 01 28.5 -1.2
baz=29
SSPA Standing Stone 28.83 23 eP P 04 58 19.4 -1.8
comp=Z,21nm,0.9s,mb4.9
SSPA epP pP 04 58 35.6 -0.4
R17A Hanksville Air 28.83 329 ⇓P P 04 58 22.0 +0.7
baz=29,SNR=24
BELC Belle Mtn. Jos 28.92 316 P P 04 58 22.3 +0.1
baz=29,SNR=12
BELC ⇑PcP PcP 05 01 28.4 -1.7
baz=29
N22A Wattenberg Ran 28.93 337 ⇓P P 04 58 22.8 +0.7
baz=29
N22A ⇑PcP PcP 05 01 29.8 -0.2
baz=29
P19A Cripple Cowboy 28.98 333 ⇑P P 04 58 23.3 +0.7
baz=29,SNR=6.4
W12A Cal Nev Ari 28.99 319 ⇑P P 04 58 23.2 +0.5
baz=29,SNR=7.4
LDFC Landfair 29.00 319 eP P 04 58 23.8 +1.0
comp=Z,41nm,0.8s,mb5.2
PFO Pinyon Flat Ob 29.00 315 ⇓P P 04 58 22.9 0.0
baz=29
O20A White River Ci 29.07 334 ⇓P P 04 58 24.2 +0.8
baz=29,SNR=11
Q18A Rafter H Ranch 29.08 331 ⇓P P 04 58 24.3 +0.8
baz=29,SNR=42
T14A Hurricane 29.10 324 ⇑P P 04 58 24.7 +1.0
baz=29,SNR=34
R16A Teasdale 29.12 328 ⇓P P 04 58 25.0 +1.1
baz=29,SNR=48
R16A ⇑PcP PcP 05 01 29.7 -0.8
baz=29
S15A Panguitch 29.14 326 ⇑P P 04 58 25.5 +1.5
baz=29,SNR=24
U13A Pakoon Wash 29.16 322 ⇓P P 04 58 25.3 +1.1
baz=29,SNR=54
U13A ⇑PcP PcP 05 01 29.0 -1.7
baz=29
GMRC Granite Mounta 29.17 318 ⇑P P 04 58 24.9 +0.6
baz=29,SNR=19
V12A Nelson 29.25 320 P P 04 58 25.4 +0.4
baz=30,SNR=67
V12A ⇑PcP PcP 05 01 27.6 -3.3
baz=30
SRU San Rafael 29.28 330 ⇑P P 04 58 25.9 +0.6
baz=30,SNR=24
SRU ⇓PcP PcP 05 01 29.5 -1.4
baz=30
SRU San Rafael 29.28 330 eP P 04 58 25.3 0.0
comp=Z,94nm,1.6s,mb5.3
SRU ePcP PcP 05 01 29.1 -1.8
SRU San Rafael 29.28 330 eP P 04 58 25.3 0.0
SRU e 05 01 29.1
SRU pmax pmax
comp=Z,94nm,1.6s,mb5.3
N21A Black Mountain 29.30 336 ⇓P P 04 58 26.3 +0.8
baz=30,SNR=15
ECSD EROS Data Cent 29.31 353 eP P 04 58 24.0 -1.4
comp=Z,26nm,1.0s,mb4.9
ECSD ePcP PcP 05 01 29.4 -1.5
ECSD eScP ScP 05 05 06.6 -1.0
Q16A Castle Valley 29.45 329 P P 04 58 27.6 +0.9
baz=30,SNR=33
R15A Junction 29.48 327 ⇓P P 04 58 28.1 +1.0
baz=30,SNR=6.2
MURC Murrieta 29.51 314 ⇓P P 04 58 27.7 +0.2
baz=30,SNR=5.5
U12A Valley of Fire 29.52 322 ⇑P P 04 58 27.8 +0.4
baz=30,SNR=20
T13A Saint George 29.54 323 ⇓P P 04 58 28.8 +1.2
baz=30,SNR=30
P18A Preston Nutter 29.55 331 ⇓P P 04 58 28.6 +0.9
baz=30,SNR=18
O19A Miners Draw (B 29.59 333 ⇓P P 04 58 28.0 0.0
baz=30,SNR=7.3
CCUT Cedar City 29.60 325 ⇓iP P 04 58 29.2 +1.0
comp=Z,45nm,1.0s,mb5.2
CCUT ePcP PcP 05 01 31.1 -0.6
CCUT eScP ScP 05 05 08.4 -0.3
HEC Hector,Ludlow 29.63 317 P P 04 58 29.3 +0.8
baz=30,SNR=5.8
S14A Cedar City 29.64 325 ⇑P P 04 58 29.9 +1.4
baz=30,SNR=39
MSU Marysvale 29.65 327 eP P 04 58 28.4 -0.2
comp=Z,20nm,1.2s,mb4.7
MSU ePcP PcP 05 01 31.5 -0.3
MSU Marysvale 29.65 327 eP P 04 58 28.4 -0.2
MSU e 05 01 31.5
MSU pmax pmax
comp=Z,20nm,1.2s,mb4.7
P17A Butcher Ranch, 29.67 330 ⇓P P 04 58 29.6 +0.9
baz=30,SNR=43
P17A ⇑PcP PcP 05 01 30.4 -1.4
baz=30
N20A Spence Gulch, 29.67 335 ⇓P P 04 58 29.3 +0.6
baz=30,SNR=24
N20A ⇓PcP PcP 05 01 30.7 -1.1
baz=30
V11A Goodsprings 29.68 320 ⇓P P 04 58 29.4 +0.6
baz=30,SNR=14
V11A ⇓PcP PcP 05 01 29.7 -2.3
baz=30
TUQ Turquoise Moun 29.74 319 ⇓P P 04 58 29.7 +0.3
baz=30,SNR=13
TMUT Trail Mountain 29.76 329 ⇓iP P 04 58 30.1 +0.6
comp=Z,25nm,1.1s,mb4.9
TMUT ePcP PcP 05 01 31.0 -1.1
TMUT e 05 01 48.6
TMUT eScP ScP 05 05 12.5 +3.4
ARUT Antelope Range 29.81 325 eP P 04 58 30.9 +0.9
comp=Z,68nm,0.9s,mb5.4
ARUT Antelope Range 29.81 325 eP P 04 58 30.9 +0.9
ARUT pmax pmax
comp=Z,68nm,0.9s,mb5.4
L23A Garrett 29.82 340 P P 04 58 29.9 -0.1
baz=30,SNR=8.2
L23A ⇑PcP PcP 05 01 30.6 -1.6
baz=30
T12A Moapa 29.82 322 ⇓P P 04 58 30.7 +0.6
baz=30,SNR=7.4
S13A Holt Ranch, En 29.90 324 P P 04 58 32.0 +1.2
baz=30,SNR=74
S13A ⇑PcP PcP 05 01 31.9 -0.6
baz=30
SHPR Sheep Range 29.94 321 eP P 04 58 31.1 -0.1
comp=Z,39nm,1.2s,mb5.0
SHPR ePcP PcP 05 01 31.9 -0.8
SHPR eScP ScP 05 05 11.0 +1.2
O18A Roosevelt 29.95 332 ⇑P P 04 58 32.0 +0.7
baz=30,SNR=22
O18A ⇑PcP PcP 05 01 32.7 +0.2
baz=30
M21A Separation Pea 29.97 337 ⇓P P 04 58 32.6 +1.3
baz=30,SNR=7.5
M21A ⇓PcP PcP 05 01 31.8 -0.8
baz=30
RWWY Rawlins 29.98 337 eP P 04 58 31.8 +0.3
comp=Z,16nm,1.0s,mb4.7
RWWY ePcP PcP 05 01 31.7 -1.0
N19A John Jarvie Ra 30.10 334 P P 04 58 32.5 0.0
baz=30,SNR=11
Q15A Fillmore 30.12 328 P P 04 58 33.5 +0.8
baz=30,SNR=20
Q15A ⇓PcP PcP 05 01 32.0 -1.1
baz=30
BFSC Mount Baldy Ra 30.18 315 ⇓P P 04 58 33.5 +0.2
baz=30,SNR=6.0
M20A Sweetwater, Wa 30.19 336 ⇓P P 04 58 33.7 +0.4
baz=30,SNR=7.9
M20A ⇓PcP PcP 05 01 32.2 -1.0
baz=30
P16A Fountain Green 30.22 329 ⇓P P 04 58 35.1 +1.5
baz=30,SNR=18
P16A ⇑PcP PcP 05 01 32.5 -0.8
baz=30
GSC Goldstone 30.23 317 ⇑P P 04 58 34.2 +0.4
baz=30
GSC ⇓PcP PcP 05 01 32.8 -0.6
baz=30
GSC Goldstone 30.23 317 eP P 04 58 33.8 +0.1
comp=Z,8.8nm,0.9s,mb4.5
GSC ePcP PcP 05 01 32.6 -0.8
GSC e 05 01 48.3
GSC Goldstone 30.23 317 eP P 04 58 33.8 +0.1
GSC e 05 01 32.6
GSC pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
O17A Robinson Place 30.23 331 P P 04 58 34.8 +1.1
baz=30,SNR=42
L21A Rawlins 30.28 337 ⇑P P 04 58 34.3 +0.2
baz=31,SNR=14
L21A ⇑PcP PcP 05 01 32.5 -0.9
baz=31
N18A Larsen Ranch, 30.38 333 ⇑P P 04 58 35.6 +0.6
baz=31
R13A O'Grain Ranch, 30.39 325 P P 04 58 36.6 +1.6
baz=31,SNR=38
R13A ⇑PcP PcP 05 01 32.7 -1.1
baz=31
MWC Mount Wilson 30.45 315 eP P 04 58 34.3 -1.4
comp=Z,56nm,1.5s,mb5.1
MWC Mount Wilson 30.45 315 eP P 04 58 34.3 -1.4
MWC pmax pmax
comp=Z,56nm,1.5s,mb5.1
NNA Nana 30.47 149 LR LR 05 08 56.3
comp=Z,129nm,21.3s,baz=314,slow=33
MPU Maple Canyon 30.52 330 eP P 04 58 36.6 +0.4
comp=Z,74nm,1.4s,mb5.3
K22A Casper 30.58 339 ⇑P P 04 58 36.6 -0.1
baz=31
Q14A Sevier Lake (B 30.59 327 P P 04 58 37.8 +0.9
baz=31,SNR=23
Q14A ⇑PcP PcP 05 01 34.0 -0.3
baz=31
O16A Springville 30.61 330 ⇑P P 04 58 38.0 +1.0
baz=31
U10A Ash Meadows, A 30.61 320 ⇓P P 04 58 37.9 +0.8
baz=31,SNR=11
DAU Daniels Canyon 30.65 331 eP P 04 58 38.2 +0.8
comp=Z,127nm,1.5s,mb5.5
DAU ePcP PcP 05 01 34.0 -0.5
DAU eScP ScP 05 05 17.3 +5.2
DAU Daniels Canyon 30.65 331 eP P 04 58 38.2 +0.8
DAU e 05 01 34.0
DAU e 05 05 17.3
DAU pmax pmax
comp=Z,127nm,1.5s,mb5.5
L20A Wamsutter 30.69 336 P P 04 58 37.6 -0.1
baz=31,SNR=5.7
L20A ⇓PcP PcP 05 01 32.9 -1.5
baz=31
NLU North Lily Min 30.69 329 eP P 04 58 38.0 +0.2
comp=Z,52nm,1.7s,mb5.1
NLU ePcP PcP 05 01 33.6 -0.9
NLU e 05 01 51.1
EDW2 Edwards Air Fo 30.77 316 ⇓P P 04 58 38.4 -0.1
baz=31,SNR=7.2
EDW2 ⇓PcP PcP 05 01 33.6 -1.2
baz=31
K21A Alcova 30.82 338 ⇑P P 04 58 38.9 +0.1
baz=31
K21A ⇑PcP PcP 05 01 34.0 -0.8
baz=31
GLMI Grayling 30.84 11 eP P 04 58 37.4 -1.7
comp=Z,55nm,0.9s,mb5.4
GLMI epP pP 04 58 52.8 -1.0
N17A Moffit Pass 30.87 332 ⇓P P 04 58 40.4 +1.0
baz=31,SNR=19
JLU Jordanelle 30.89 331 eP P 04 58 39.6 +0.1
comp=Z,40nm,1.3s,mb5.1
JLU ePcP PcP 05 01 33.6 -1.4
JLU eScP ScP 05 05 12.8 -0.1
BINY Binghamton 30.90 24 eP P 04 58 37.4 -2.2
comp=Z,76nm,0.9s,mb5.5
BINY epP pP 04 58 53.7 -0.7
P14A Drum Mountains 30.92 328 ⇑P P 04 58 40.9 +1.2
baz=31,SNR=37
FURC Furnace Creek, 30.98 319 ⇑P P 04 58 40.9 +0.5
baz=31,SNR=8.1
FURC ⇑PcP PcP 05 01 34.6 -0.8
baz=31
N16A Rees Ranch, Co 31.11 331 ⇑P P 04 58 42.6 +1.3
baz=31,SNR=16
MPMC Manual Prospec 31.13 318 ⇓P P 04 58 41.8 +0.1
baz=31,SNR=37
MPMC ⇓PcP PcP 05 01 34.9 -0.9
baz=31
RSSD Black Hills 31.13 343 eP P 04 58 41.0 -0.6
comp=Z,3.5nm,0.8s,mb4.2
RSSD ePcP PcP 05 01 34.0 -1.6
RSSD eScP ScP 05 05 14.1 +0.5
RSSD Black Hills 31.13 343 eP P 04 58 41.0 -0.6
RSSD e 05 01 34.0
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
O15A The Old Anders 31.13 329 ⇑P P 04 58 42.9 +1.2
baz=31,SNR=8.5
L19A Farson 31.18 335 ⇑P P 04 58 41.6 -0.4
baz=32
L19A ⇓PcP PcP 05 01 35.1 -0.6
baz=32
M17A Scullys Gap (B 31.22 333 P P 04 58 42.5 +0.1
baz=32,SNR=7.9
J22A Midwest 31.23 340 ⇓PcP PcP 05 01 34.2 -1.7
baz=32
DUG Dugway 31.24 329 ⇓P P 04 58 43.2 +0.6
baz=32,SNR=17
DUG ⇓PcP PcP 05 01 34.8 -1.2
baz=32
DUG Dugway 31.24 329 eP P 04 58 42.8 +0.2
comp=Z,11nm,0.9s,mb4.7
DUG ePcP PcP 05 01 35.3 -0.7
DUG e 05 01 51.9
DUG eScP ScP 05 05 19.3 +5.3
DUG Dugway 31.24 329 eP P 04 58 42.8 +0.2
DUG e 05 01 35.3
DUG pmax pmax
comp=Z,11nm,0.9s,mb4.7
K20A Yellowstone Ra 31.25 337 ⇓PcP PcP 05 01 34.4 -1.5
baz=32
NOQ North Oquirrh 31.25 330 eP P 04 58 43.2 +0.6
comp=Z,34nm,0.8s,mb5.2
L18A Fontenelle, Gr 31.31 334 ⇓P P 04 58 43.3 +0.1
baz=32,SNR=17
R11A Troy Canyon, C 31.42 323 P P 04 58 45.1 +0.9
baz=32,SNR=35
R11A ⇓PcP PcP 05 01 34.0 -2.5
baz=32
ARVC Arvin 31.48 315 ⇓P P 04 58 45.0 +0.2
baz=32,SNR=9.0
J21A Lysite 31.51 339 ⇑P P 04 58 45.4 +0.5
baz=32,SNR=9.2
J21A ⇓PcP PcP 05 01 35.4 -1.3
baz=32
M16A Huntsville 31.53 331 ⇓P P 04 58 45.9 +0.8
baz=32,SNR=20
M16A ⇑PcP PcP 05 01 35.3 -1.4
baz=32
COWI Conover 31.54 4 eP P 04 58 43.2 -2.0
comp=Z,6.1nm,0.6s,mb4.6
COWI epP pP 04 58 59.1 -0.8
ISA Isabella 31.54 316 ⇓P P 04 58 45.7 +0.3
baz=32,SNR=9.1
ISA ⇓PcP PcP 05 01 35.9 -1.0
baz=32
K19A Absolon Red Bu 31.58 336 ⇓P P 04 58 45.1 -0.5
baz=32,SNR=6.6
K19A ⇑PcP PcP 05 01 34.7 -2.1
baz=32
N15A Stansbury Isla 31.62 330 ⇑P P 04 58 46.8 +0.8
baz=32,SNR=7.4
GRAC Grapevine Rang 31.62 320 ⇓P P 04 58 46.9 +0.8
baz=32,SNR=13
HWUT Hardware Ranch 31.73 332 eP P 04 58 46.8 -0.1
comp=Z,36nm,0.9s,mb5.2
HWUT ePcP PcP 05 01 35.8 -1.5
HWUT eScP ScP 05 05 19.0 +3.3
BW06 Boulder Array 31.82 335 ⇑P P 04 58 47.3 -0.3
baz=32,SNR=7.5
BW06 ⇑PcP PcP 05 01 35.7 -1.7
baz=32
BW06 Boulder Array 31.82 335 eP P 04 58 46.6 -1.0
comp=Z,8.6nm,1.1s,mb4.5
PDAR Pinedale Array 31.82 335 P P 04 58 46.5 -1.1
comp=Z,3.1nm,0.7s,mb4.2,baz=131,slow=9.3,SNR=17
PDAR PcP PcP 05 01 35.4 -2.1
comp=Z,3.4nm,0.6s,baz=127,slow=5.4,SNR=9.0
PDAR ScP ScP 05 05 19.6 +3.6
comp=Z,3.0nm,0.9s,baz=137,slow=5.5,SNR=11
PDAR LR LR 05 14 55.6
comp=Z,355nm,20.4s,MS4.0,baz=156,slow=42
L17A Cokeville 31.82 333 ⇓P P 04 58 47.8 +0.1
baz=32,SNR=20
I21A Big Trails, Te 31.86 339 ⇑PcP PcP 05 01 36.1 -1.5
baz=32
BGU Big Grassy Mou 31.90 329 eP P 04 58 48.7 +0.3
comp=Z,28nm,0.9s,mb5.1
BGU ePcP PcP 05 01 36.4 -1.3
BGU e 05 01 53.7
BGU eScP ScP 05 05 20.4 +4.2
K18A Toltan Ranch, 31.90 335 ⇑P P 04 58 49.3 +0.9
baz=32,SNR=21
L16A Fish Haven 32.00 332 ⇑P P 04 58 49.6 +0.4
baz=32,SNR=65
L16A ⇑PcP PcP 05 01 35.8 -2.2
baz=32
M15A Larsen Ranch, 32.03 331 ⇓P P 04 58 50.2 +0.7
baz=32
PKM Peak Mountain 32.03 314 ⇑P P 04 58 49.7 +0.1
baz=32,SNR=7.1
J19A Crowheart 32.03 337 ⇑P P 04 58 49.4 -0.1
baz=32,SNR=6.6
J19A ⇑PcP PcP 05 01 36.8 -1.3
baz=32
VES Vestal, Richgr 32.05 316 ⇑P P 04 58 50.1 +0.3
baz=32,SNR=20
SADO Sadowa 32.09 18 P P 04 58 47.3 -2.7
comp=Z,11nm,0.7s,mb4.8,baz=214,slow=9.2,SNR=12
SADO pP pP 04 59 03.0 -1.8
comp=Z,19nm,0.9s,baz=252,slow=8.9,SNR=5.5
SADO ScP ScP 05 05 17.5 +0.7
comp=Z,9.2nm,0.9s,baz=239,slow=7.4,SNR=3.8
I20A Worland 32.28 338 ⇑P P 04 58 52.1 +0.4
baz=33,SNR=13
I20A ⇓PcP PcP 05 01 37.0 -1.7
baz=33
K17A Gardner Place, 32.37 334 ⇑P P 04 58 52.9 +0.4
baz=33,SNR=27
K17A ⇓PcP PcP 05 01 37.8 -1.1
baz=33
J18A Kendall Valley 32.37 335 ⇑P P 04 58 52.3 -0.2
baz=33,SNR=12
J18A ⇓PcP PcP 05 01 37.7 -1.3
baz=33
SMMC Simmler 32.38 315 ⇑P P 04 58 53.0 +0.3
baz=33,SNR=6.3
SMMC ⇑PcP PcP 05 01 38.6 -0.5
baz=33
RCTC Rector, Farmer 32.42 317 P P 04 58 53.6 +0.5
baz=33,SNR=21
L15A Malad City 32.42 331 P P 04 58 53.2 +0.2

baz=33,SNR=36
L15A ⇓PcP PcP 05 01 37.5 -1.7
baz=33
HVU Hansel Valley 32.43 331 *e*P **P 04 58 53.1 +0.1**
comp=Z,153nm,1.4s,mb5.6
HVU *e*PcP PcP 05 01 37.8 -1.4
HVU Hansel Valley 32.43 331 *e*P **P 04 58 53.2 +0.2**
HVU *e* 05 01 37.8
HVU pmax pmax
comp=Z,153nm,1.4s,mb5.6
AHID Auburn Hatcher 32.46 334 *e*P **P 04 58 53.2 0.0**
comp=Z,18nm,0.8s,mb5.0
H21A Big Horn, Sher 32.50 340 ⇑P **P 04 58 52.9 -0.7**
baz=33,SNR=6.4
H21A ⇓PcP PcP 05 01 37.4 -1.9
baz=33
I19A Meeteetse 32.67 337 ⇓P **P 04 58 55.7 +0.6**
baz=33
I19A ⇑PcP PcP 05 01 38.9 -0.9
baz=33
H20A Greybull 32.70 339 ⇑P **P 04 58 55.5 +0.1**
baz=33,SNR=8.9
H20A ⇑PcP PcP 05 01 38.6 -1.3
baz=33
I18A Diamond G Ranc 32.70 336 ⇑P **P 04 58 55.5 +0.2**
baz=33,SNR=14
I18A ⇓PcP PcP 05 01 38.5 -1.4
baz=33
K16A Soda Springs 32.72 333 ⇑P **P 04 58 56.1 +0.5**
baz=33,SNR=9.9
K16A ⇑PcP PcP 05 01 39.1 -0.9
baz=33
J17A Brown Place, J 32.78 335 ⇑P **P 04 58 56.9 +0.9**
baz=33,SNR=74
ACCN Adirondack Com 32.83 25 *e*P **P 04 58 55.4 -1.1**
comp=Z,83nm,1.2s,mb5.5
REDW Red Top Meadow 32.84 335 ⇓*i*P **P 04 58 56.6 0.0**
comp=Z,66nm,0.9s,mb5.6
REDW *e*PcP PcP 05 01 38.7 -1.6
L14A Malta 32.85 330 ⇓P **P 04 58 57.6 +0.9**
baz=33,SNR=97
L14A ⇑PcP PcP 05 01 39.2 -1.1
baz=33
SNOW Snow King Moun 32.88 335 ⇓*i*P **P 04 58 57.3 +0.4**
comp=Z,78nm,0.8s,mb5.7
MLAC Mammoth Lakes 32.93 319 ⇓P **P 04 58 58.0 +0.5**
baz=33,SNR=5.6
LOHW Long Hollow 32.94 335 ⇓*i*P **P 04 58 57.2 -0.3**
comp=Z,67nm,1.3s,mb5.4
TPAW Teton Pass 32.98 335 ⇓*i*P **P 04 58 58.1 +0.3**
comp=Z,62nm,1.2s,mb5.4
TPAW *e*PcP PcP 05 01 40.0 -0.6
RRI2 Red Ridge 33.02 334 ⇓*i*P **P 04 58 58.2 +0.1**
comp=Z,81nm,1.3s,mb5.5
RRI2 *e*PcP PcP 05 01 39.8 -1.0
RRI2 *e*ScP ScP 05 05 22.6 +2.5
K15A Arbon 33.02 332 P **P 04 58 58.6 +0.4**
baz=33,SNR=40
K15A ⇑PcP PcP 05 01 40.1 -0.8
baz=33
J16A Bone 33.09 334 P **P 04 58 59.1 +0.4**
baz=33,SNR=16
J16A ⇓PcP PcP 05 01 40.1 -0.8
baz=33
NVAR Mina Array Bea 33.09 321 P **P 04 58 59.9 +1.0**
comp=Z,54nm,0.8s,mb5.5,baz=134,slow=8.5,SNR=399
NVAR PcP PcP 05 01 40.8 -0.3
comp=Z,12nm,0.8s,baz=136,slow=4.2,SNR=7.4
NVAR pPcP 05 01 57.6
comp=Z,7.7nm,0.8s,baz=135,slow=3.2,SNR=5.2
NVAR ScP ScP 05 05 26.2 +5.8
comp=Z,2.1nm,0.7s,baz=130,slow=3.8,SNR=8.1
MOOW Moose Ponds 33.11 335 ⇓*i*P **P 04 58 58.8 -0.2**
comp=Z,21nm,1.1s,mb5.0
MOOW *e*PcP PcP 05 01 39.9 -1.1
MOOW *e* 05 01 58.2
MOOW *e*ScP ScP 05 05 24.4 +4.0
DCID1 Drake Creek 33.17 334 *e*P **P 04 58 59.6 +0.2**
comp=Z,60nm,1.2s,mb5.4
I17A Pilgrim Ck. 33.19 335 ⇑P **P 04 59 00.4 +0.8**
baz=34,SNR=15
I17A ⇑PcP PcP 05 01 41.0 -0.2
baz=34
H19A Powell 33.21 338 ⇓P **P 04 59 00.7 +0.9**
baz=34,SNR=7.9
H19A ⇑PcP PcP 05 01 40.3 -0.9
baz=34
K14A Jones Ranch, D 33.21 331 ⇑P **P 04 58 60.0 +0.1**
baz=34,SNR=62
K14A ⇑PcP PcP 05 01 40.8 -0.5
baz=34
IMW Indian Meadow 33.31 335 ⇓*i*P **P 04 59 00.6 -0.1**
comp=Z,15nm,0.8s,mb5.0
IMW *e*PcP PcP 05 01 40.7 -0.9
IMW *e* 05 01 58.2
FLWY Flagg Ranch 33.37 335 *e*P **P 04 59 01.3 +0.1**
comp=Z,19nm,1.0s,mb5.0
FLWY *e*PcP PcP 05 01 41.1 -0.6
G20A Bridger 33.42 339 ⇓P **P 04 59 01.3 -0.2**
baz=34,SNR=7.4
H18A Shoshone NF, C 33.47 337 ⇑P **P 04 59 02.1 0.0**
baz=34,SNR=22
H18A ⇓PcP PcP 05 01 40.3 -1.7
baz=34
LONY Lake Ozonia 33.50 23 *e*P **P 04 59 00.1 -2.2**
comp=Z,25nm,0.9s,mb5.2
LONY *e*pP pP 04 59 14.5 -2.7
I16A Newdale 33.52 334 ⇑P **P 04 59 02.9 +0.4**
baz=34,SNR=15
I16A ⇑PcP PcP 05 01 41.3 -0.9
baz=34
MDV Middlebury 33.54 25 *e*P **P 04 59 00.5 -2.1**
comp=Z,1μm,0.5s
J15A Blackfoot 33.55 333 P **P 04 59 03.1 +0.4**
baz=34,SNR=28
J15A ⇓PcP PcP 05 01 42.1 -0.1
baz=34
RLMT Red Lodge 33.70 338 *e*P **P 04 59 03.5 -0.5**
comp=Z,20nm,1.3s,mb4.9
RLMT *e*PcP PcP 05 01 41.3 -1.4
YFT Old Faithful 33.73 336 *e*P **P 04 59 05.3 +0.9**
comp=Z,23nm,1.0s,mb5.1
YFT *e*PcP PcP 05 01 42.4 -0.3
YFT *e* 05 02 00.4
BMN Battle Mountai 33.76 325 ⇓*i*P **P 04 59 05.0 +0.3**
comp=Z,37nm,0.9s,mb5.3
BMN Battle Mountai 33.76 325 ⇓*i*P **P 04 59 05.0 +0.3**
BMN pmax pmax
comp=Z,37nm,0.9s,mb5.3
WAKR Walker 33.84 320 *e*P **P 04 59 05.8 +0.4**
comp=Z,62nm,1.6s,mb5.3
WAKR *e*PcP PcP 05 01 42.8 -0.4
F20A Billings 33.90 340 ⇓P **P 04 59 06.0 +0.2**
baz=34,SNR=9.3
YMR Madison River 33.96 336 ⇓*i*P **P 04 59 06.9 +0.5**
comp=Z,57nm,1.2s,mb5.4
YMR *e*PcP PcP 05 01 43.0 -0.4
J14A Carey 33.98 332 P **P 04 59 07.0 +0.6**
baz=34,SNR=59
J14A ⇓PcP PcP 05 01 43.6 +0.2
baz=34
G18A Lazy EL Ranch, 33.98 338 ⇑P **P 04 59 06.4 0.0**
baz=34
D24A Glendive 33.98 345 ⇓P **P 04 59 06.7 +0.2**
baz=34
D24A ⇓PcP PcP 05 01 42.1 -1.3
baz=34
I15A Monteview 34.05 333 ⇑P **P 04 59 07.9 +0.8**
baz=34,SNR=6.6
I15A ⇑PcP PcP 05 01 43.2 -0.5
baz=34
FRNY Flat Rock 34.06 24 *e*P **P 04 59 05.1 -2.1**
comp=Z,15nm,0.9s,mb4.9
LAO LASA Array 34.10 343 *e*P **P 04 59 06.1 -1.4**
comp=Z,5.7nm,0.8s,mb4.5
LAO *e*PcP PcP 05 01 42.5 -1.2
H16A Russell Place, 34.10 336 P **P 04 59 08.2 +0.6**
baz=34,SNR=10
CMB Columbia Colle 34.16 318 ⇓*i*P **P 04 59 07.6 -0.6**
comp=Z,20nm,1.0s,mb5.0
CMB *e*PcP PcP 05 01 43.0 -1.2
CMB Columbia Colle 34.16 318 ⇓*i*P **P 04 59 07.6 -0.6**
CMB *e* 05 01 43.0
CMB pmax pmax
comp=Z,20nm,1.0s,mb5.0
F19A Roth Farm, Mol 34.22 339 ⇑P **P 04 59 08.5 -0.1**
baz=34,SNR=7.2

D23A Lindsay 34.26 344 ⇑P **P 04 59 08.9 0.0**
baz=35
D23A ⇓PcP PcP 05 01 43.3 -0.9
baz=35
QLMT Earthquake Lak 34.28 335 *e*P **P 04 59 10.1 +1.0**
comp=Z,1.9nm,0.5s,mb4.3
J13A Cove Ranch, Pi 34.34 331 ⇑P **P 04 59 09.9 +0.3**
baz=35,SNR=22
J13A ⇓PcP PcP 05 01 44.5 0.0
baz=35
C24A Savage 34.40 345 ⇓P **P 04 59 10.9 +0.8**
baz=35
C24A ⇓PcP PcP 05 01 43.8 -0.8
baz=35
I14A Mackay 34.42 332 P **P 04 59 11.2 +0.9**
baz=35,SNR=36
I14A ⇑PcP PcP 05 01 44.7 0.0
baz=35
GCMT Greycliff 34.42 338 *e*P **P 04 59 09.6 -0.7**
comp=Z,12nm,1.1s,mb4.7
D22A Cohagen 34.51 343 ⇓P **P 04 59 11.2 +0.1**
baz=35
E20A Meyer Farm, Mu 34.52 340 ⇓P **P 04 59 10.7 -0.4**
baz=35,SNR=9.1
E20A ⇓PcP PcP 05 01 43.6 -1.3
baz=35
WCN Washoe City 34.52 321 ⇑P **P 04 59 11.3 0.0**
baz=35,SNR=9.0
WCN Washoe City 34.52 321 ⇓*i*P **P 04 59 12.1 +0.8**
comp=Z,26nm,1.2s,mb5.0
WCN *e*PcP PcP 05 01 44.4 -0.7
WCN Washoe City 34.52 321 ⇓*i*P **P 04 59 12.1 +0.8**
WCN *e* 05 01 44.4
WCN pmax pmax
comp=Z,26nm,1.2s,mb5.0
F18A Big Timber 34.53 338 ⇑P **P 04 59 11.6 +0.4**
baz=35,SNR=6.8
F18A ⇑PcP PcP 05 01 43.9 -1.1
baz=35
PAHR Pah Rah Range 34.55 322 ⇓*i*P **P 04 59 11.9 +0.4**
comp=Z,42nm,1.1s,mb5.3
HLID Hailey 34.57 331 ⇑P **P 04 59 12.3 +0.6**
baz=35,SNR=50
HLID ⇑PcP PcP 05 01 43.0 -2.2
baz=35
HLID Hailey 34.57 331 ⇓*i*P **P 04 59 11.7 0.0**
comp=Z,100nm,1.4s,mb5.5
HLID *e*PcP PcP 05 01 43.1 -2.0
HLID *e*ScP ScP 05 05 30.1 +4.6
HLID *e* 05 06 02.5
H15A Lima 34.61 334 P **P 04 59 13.2 +1.3**
baz=35,SNR=33
H15A ⇑PcP PcP 05 01 45.6 +0.4
baz=35
D21A La Casta Ranch 34.67 342 ⇓PcP PcP 05 01 44.5 -0.9
baz=35
E19A Rath Farm, Rou 34.70 340 ⇓P **P 04 59 12.2 -0.4**
baz=35,SNR=7.9
E19A ⇓PcP PcP 05 01 43.6 -1.9
baz=35
I13A Wildhorse Cree 34.71 332 ⇓P **P 04 59 13.5 +0.7**
baz=35,SNR=49
I13A ⇓PcP PcP 05 01 45.7 +0.1
baz=35,SNR=7.3
G16A Moss Hill, Enn 34.76 335 ⇓P **P 04 59 14.1 +0.8**
baz=35,SNR=11
G16A ⇑PcP PcP 05 01 44.7 -1.0
baz=35
C23A Lambert 34.84 345 ⇑P **P 04 59 14.1 +0.2**
baz=35
MCMT McKenzie Canyo 34.87 334 *e*P **P 04 59 15.3 +1.1**
comp=Z,28nm,0.8s,mb5.2
MCMT *e*PcP PcP 05 01 45.8 -0.2
F17A Fitzpatrick Pl 34.88 337 ⇑P **P 04 59 14.8 +0.6**
baz=35,SNR=17
F17A ⇓PcP PcP 05 01 45.3 -0.8
baz=35
H14A Leadore 34.92 333 P **P 04 59 15.5 +0.9**
baz=35,SNR=66
H14A ⇓PcP PcP 05 01 45.5 -0.7
baz=35
C22A Vida 34.97 344 ⇑PcP PcP 05 01 45.0 -1.2
baz=35
G15A Dillon 34.99 335 ⇓P **P 04 59 16.0 +0.8**
baz=35,SNR=36
G15A ⇓PcP PcP 05 01 45.8 -0.5
baz=35
BOZ Bozeman (W) 35.04 336 ⇑P **P 04 59 15.7 +0.1**
baz=35,SNR=12
BOZ Bozeman (W) 35.04 336 *e*P **P 04 59 15.0 -0.6**
comp=Z,5.3nm,0.8s,mb4.5
BOZ *e*PcP PcP 05 01 45.6 -0.9
BOZ Bozeman (W) 35.04 336 *e*P **P 04 59 15.0 -0.6**
BOZ *e* 05 01 45.6
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
D20A Manuel Ranch, 35.04 341 ⇓P **P 04 59 15.4 -0.2**
baz=35,SNR=20
D20A ⇓PcP PcP 05 01 44.5 -1.9
baz=35
I12A Atlanta 35.09 331 ⇑P **P 04 59 16.8 +0.7**
baz=35,SNR=108
MFID Camas Ranch 35.14 330 ⇓P **P 04 59 16.8 +0.2**
baz=35,SNR=37
MFID ⇓PcP PcP 05 01 45.2 -1.6
baz=35
F16A Kennard Place, 35.15 336 ⇓P **P 04 59 17.1 +0.5**
baz=35,SNR=10
F16A ⇓PcP PcP 05 01 46.0 -0.8
baz=35
E18A Harlowton 35.17 339 P **P 04 59 16.7 0.0**
baz=36,SNR=7.8
DLMT Dillon 35.19 335 ⇓*i*P **P 04 59 17.4 +0.4**
comp=Z,66nm,1.3s,mb5.4
DLMT *e*PcP PcP 05 01 46.4 -0.6
DGMT Dagmar 35.22 346 ⇑P **P 04 59 17.3 +0.2**
baz=36,SNR=7.4
DGMT ⇑PcP PcP 05 01 45.9 -1.0
baz=36
DGMT Dagmar 35.22 346 *e*P **P 04 59 16.6 -0.5**
comp=Z,24nm,0.6s,mb5.3
DGMT *e*PcP PcP 05 01 46.0 -1.0
DGMT *e* 05 02 02.1
DGMT *e*ScP ScP 05 05 30.7 +3.0
H13A Challis 35.27 332 ⇓P **P 04 59 18.3 +0.7**
baz=36,SNR=102
D19A Cripps Ranch, 35.34 340 P **P 04 59 17.8 -0.5**
baz=36,SNR=12
C21A Desert Coulee 35.38 343 ⇑P **P 04 59 18.3 -0.3**
baz=36,SNR=9.5
B23A Brockton 35.41 345 ⇑P **P 04 59 19.0 +0.3**
baz=36
G14A Jackson 35.46 334 ⇑P **P 04 59 19.7 +0.4**
baz=36,SNR=29
G14A ⇓PcP PcP 05 01 47.5 -0.2
baz=36,SNR=8.1
LRM Limekiln Ridge 35.51 335 *e*P **P 04 59 19.7 +0.1**
comp=Z,390nm,1.4s,mb6.1
B22A Reddig Ranch S 35.51 344 ⇓P **P 04 59 19.3 -0.3**
baz=36,SNR=5.6
B22A ⇓PcP PcP 05 01 46.5 -1.3
baz=36
H12A Diamond D Ranc 35.53 332 P **P 04 59 20.4 +0.5**
baz=36,SNR=100
F15A Butte 35.54 335 P **P 04 59 20.2 +0.2**
baz=36,SNR=20
F15A ⇓PcP PcP 05 01 47.9 0.0
baz=36,SNR=7.4
C20A Veseth Ranch, 35.55 342 P **P 04 59 19.8 -0.2**
baz=36,SNR=14
A24A Westby 35.60 347 ⇓P **P 04 59 20.6 +0.2**
baz=36
G13A Cobalt 35.68 333 ⇑P **P 04 59 21.5 +0.4**
baz=36,SNR=26
D18A Linhart Farms, 35.68 339 P **P 04 59 21.1 +0.1**
baz=36,SNR=7.8
D18A ⇑PcP PcP 05 01 47.4 -1.0
baz=36
ULM Lac du Bonnet 35.71 356 P **P 04 59 19.0 -2.3**
comp=Z,3.5nm,0.5s,mb4.6,baz=165,slow=11,SNR=6.3
ULM PcP PcP 05 01 46.5 -1.9
comp=Z,16nm,1.0s,baz=262,slow=3.8,SNR=4.2
ULM pPcP 05 02 03.2
comp=Z,22nm,0.8s,baz=180,slow=2.2,SNR=6.7
ULM ScP ScP 05 05 32.1 +2.6
comp=Z,22nm,0.8s,baz=233,slow=1.9,SNR=12
ULM LR LR 05 16 14.5
comp=Z,270nm,21.5s,MS4.0,baz=138,slow=40

ULM Lac du Bonnet 35.71 356 *e*P **P 04 59 19.2 -2.1**
comp=Z,19nm,1.0s,mb5.0
E16A East Helena 35.79 337 P **P 04 59 22.0 -0.1**
baz=36,SNR=12
E16A ⇓PcP PcP 05 01 48.5 -0.2
baz=36
A23A Redstone 35.84 346 ⇓P **P 04 59 22.4 0.0**
baz=36
F14A Wisdom 35.88 335 ⇓P **P 04 59 23.1 +0.3**
baz=36,SNR=9.3
C19A Slack Wire Ran 35.90 341 ⇓P **P 04 59 22.8 -0.2**
baz=36,SNR=13
C19A ⇑PcP PcP 05 01 47.1 -1.8
baz=36
WVOR Wild Horse Val 35.90 326 *e*P **P 04 59 22.9 -0.1**
comp=Z,42nm,1.0s,mb5.3
WVOR Wild Horse Val 35.90 326 *e*P **P 04 59 22.9 -0.2**
WVOR pmax pmax
comp=Z,42nm,1.0s,mb5.3
B21A Ellsworth Farm 35.91 343 ⇓P **P 04 59 22.8 -0.2**
baz=36
B21A ⇑PcP PcP 05 01 47.8 -1.2
baz=36
D17A Six Diamond Ra 35.95 338 ⇓P **P 04 59 23.4 -0.1**
baz=36,SNR=10
D17A ⇓PcP PcP 05 01 48.6 -0.5
baz=36,SNR=6.8
HRY Holter Researc 36.00 337 *e*P **P 04 59 23.6 -0.2**
comp=Z,9.5nm,0.6s,mb4.9
E15A Deer Lodge 36.08 336 ⇓P **P 04 59 24.6 +0.1**
baz=36,SNR=9.6
E15A ⇓PcP PcP 05 01 48.2 -1.3
baz=36
A22A Carney Farms, 36.13 345 ⇑PcP PcP 05 01 47.7 -1.9
baz=36
D16A Dana Ranch, Ca 36.16 337 ⇑PcP PcP 05 01 48.3 -1.5
baz=36
G12A Big Creek, Yel 36.19 332 ⇓P **P 04 59 25.8 +0.3**
baz=36,SNR=37
B20A Solberg Farm, 36.20 342 ⇑P **P 04 59 25.2 -0.3**
baz=36,SNR=12
F13A Darby 36.27 334 ⇑P **P 04 59 26.0 -0.2**
baz=36,SNR=34
EGMT Eagleton 36.38 340 ⇓P **P 04 59 26.9 -0.2**
baz=37,SNR=6.0
EGMT ⇑PcP PcP 05 01 48.4 -2.0
baz=37
EGMT Eagleton 36.38 340 *e*P **P 04 59 26.4 -0.7**
comp=Z,49nm,1.2s,mb5.3
EGMT *e*PcP PcP 05 01 49.4 -1.0
C17A Wharram Farm, 36.39 339 P **P 04 59 27.1 0.0**
baz=37,SNR=12
C17A ⇓PcP PcP 05 01 49.1 -1.4
baz=37
A21A Bergtoll Ranch 36.39 344 ⇓P **P 04 59 27.3 +0.2**
baz=37
E14A Clinton 36.41 335 ⇓P **P 04 59 27.4 0.0**
baz=37,SNR=15
LBCM Butte Creek Ri 36.43 322 P **P 04 59 27.5 -0.1**
J08A Circle Bar Ran 36.45 327 P **P 04 59 28.1 +0.4**
baz=37,SNR=32
J08A ⇓PcP PcP 05 01 50.4 -0.3
baz=37
MOD Modoc 36.48 324 ⇑*i*P **P 04 59 27.5 -0.6**
comp=Z,25nm,1.2s,mb5.0
MOD *e*PcP PcP 05 01 50.0 -0.8
B19A Brinkman Farms 36.50 341 ⇑P **P 04 59 27.8 -0.2**
baz=37,SNR=13
B19A ⇑PcP PcP 05 01 48.6 -2.2
baz=37
D15A Lincoln 36.54 337 ⇑P **P 04 59 28.4 0.0**
baz=37
D15A ⇑PcP PcP 05 01 49.9 -1.0
baz=37
A20A Cobblestone Ra 36.57 343 P **P 04 59 28.6 -0.1**
baz=37,SNR=20
F12A Elk City 36.65 333 P **P 04 59 29.4 0.0**
baz=37,SNR=126
B18A Beardsley Farm 36.71 340 ⇓P **P 04 59 29.8 -0.1**
baz=37
CHMT Chamberlain Mo 36.72 336 *e*P **P 04 59 29.6 -0.3**
comp=Z,4.6nm,0.8s,mb4.4
E13A Victor 36.72 334 P **P 04 59 29.8 -0.2**
baz=37,SNR=37
A19A Klindworth Far 36.86 342 ⇑P **P 04 59 30.9 -0.2**
baz=37
A19A ⇑PcP PcP 05 01 50.9 -1.0
baz=37
C16A Fuhringer Ranc 36.88 338 P **P 04 59 31.2 -0.1**
baz=37,SNR=14
C16A ⇓PcP PcP 05 01 51.1 -0.8
baz=37,SNR=6.2
MSO Missoula 36.93 335 ⇓P **P 04 59 31.8 0.0**
baz=37,SNR=19
MSO Missoula 36.93 335 ⇓*i*P **P 04 59 30.9 -0.8**
comp=Z,27nm,1.3s,mb4.9
MSO *e*PcP PcP 05 01 49.3 -2.8
MSO *e* 05 02 07.6
D14A Greenough 36.96 336 ⇑P **P 04 59 31.4 -0.6**
baz=37,SNR=7.8
D14A ⇑PcP PcP 05 01 50.6 -1.5
baz=37
B17A L&G Farms, Che 36.97 339 ⇑P **P 04 59 32.1 0.0**
baz=37
B17A ⇑PcP PcP 05 01 50.5 -1.6
baz=37
WDC Whiskeytown Da 37.00 320 ⇓*i*P **P 04 59 29.7 -2.8**
comp=Z,13nm,1.2s,mb4.6
WDC *e*PcP PcP 05 01 50.3 -2.1
WDC *e* 05 02 07.4
WDC Whiskeytown Da 37.00 320 ⇓*i*P **P 04 59 29.7 -2.8**
WDC *e* 05 01 50.3
WDC pmax pmax
comp=Z,13nm,1.2s,mb4.6
SLMT Seeley Lake 37.08 336 *e*P **P 04 59 32.2 -0.9**
comp=Z,7.3nm,0.7s,mb4.6
KCPM Cahto Peak 37.15 318 *e*P **P 04 59 34.3 +0.5**
comp=Z,39nm,1.4s,mb5.0
C15A Salmond Ranch, 37.18 337 ⇑P **P 04 59 33.8 -0.1**
baz=38,SNR=6.1
C15A ⇓PcP PcP 05 01 51.5 -1.3
baz=38
A18A Metzger Ranch, 37.19 341 ⇓P **P 04 59 33.6 -0.4**
baz=38,SNR=11
E12A Beaver Dam Sad 37.29 333 P **P 04 59 34.2 -0.7**
baz=38,SNR=43
K05A Summer Lake 37.34 324 ⇓P **P 04 59 35.2 -0.2**
baz=38,SNR=13
K05A ⇓PcP PcP 05 01 53.0 -0.4
baz=38
D13A Huson 37.35 335 ⇑P **P 04 59 35.1 -0.2**
baz=38,SNR=20
I07A Izee 37.49 327 ⇓P **P 04 59 36.2 -0.3**
baz=38,SNR=33
I07A ⇑PcP PcP 05 01 53.0 -0.9
baz=38
A17A Triple J Farms 37.49 340 ⇓P **P 04 59 36.0 -0.5**
baz=38,SNR=13
A17A ⇓PcP PcP 05 01 52.9 -0.9
baz=38,SNR=7.6
SWMT Swartz Lake 37.50 336 *e*P **P 04 59 35.9 -0.7**
comp=Z,7.7nm,0.8s,mb4.5
SWMT *e*PcP PcP 05 01 52.7 -1.1
B15A Bradely Ranch, 37.61 338 ⇓P **P 04 59 36.9 -0.6**
baz=38,SNR=7.1
C14A Swan Lake 37.61 336 ⇓PcP PcP 05 01 52.2 -1.9
baz=38
D12A Red Ives Fores 37.70 334 ⇑P **P 04 59 37.8 -0.5**
baz=38,SNR=46
D12A ⇓PcP PcP 05 01 53.2 -1.3
baz=38
F10A Beach Ranch, E 37.71 331 ⇓P **P 04 59 38.3 -0.1**
baz=38,SNR=114
YBH Yreka Blue Hor 37.78 322 LR LR 05 14 55.1
comp=Z,611nm,21.8s,MS4.4,baz=169,slow=36
YBH Yreka Blue Hor 37.78 322 *e*P **P 04 59 37.0 -2.1**
comp=Z,4.5nm,0.7s,mb4.3
YBH *e*PcP PcP 05 01 52.7 -2.1
YBH *e* 05 02 10.1
YBH Yreka Blue Hor 37.78 322 *e*P **P 04 59 37.0 -2.1**
YBH *e* 05 01 52.7
YBH pmax pmax
comp=Z,4.0nm,0.7s
YBMT Yellow Bay 37.79 336 *e*P **P 04 59 38.7 -0.3**
comp=Z,7.6nm,0.9s,mb4.4
YBMT *e*PcP PcP 05 01 53.5 -1.2
JTMT Jette 37.81 336 *e*P **P 04 59 38.5 -0.6**
comp=Z,24nm,1.2s,mb4.8

JTMT *e*PcP PcP 05 01 53.7 -1.1
JTMT *e* 05 02 10.5
JTMT *e*ScP ScP 05 05 37.2 -0.1
C13A Hot Springs 37.87 335 ⇓P **P 04 59 39.4 -0.3**
baz=38
C13A ⇑PcP PcP 05 01 53.9 -1.1
baz=38
KHMM Horse Mountain 37.91 320 *e*P **P 04 59 39.8 -0.3**
comp=Z,26nm,0.8s,mb5.0
KHMM *e*PcP PcP 05 01 54.4 -0.8
KHMM *e* 05 02 11.7
B14A Marquette Ranc 37.91 337 ⇑PcP PcP 05 01 54.0 -1.0
baz=38
G08A Pilot Rock 38.05 329 ⇑P **P 04 59 40.6 -0.6**
baz=38,SNR=6.2
G08A ⇑PcP PcP 05 01 54.9 -0.7
baz=38
BLMT Blacktail Moun 38.05 336 *e*P **P 04 59 40.3 -0.9**
comp=Z,23nm,1.3s,mb4.7
BLMT *e*PcP PcP 05 01 54.4 -1.1
BSMT Bassoo Peak 38.09 335 *e*P **P 04 59 40.7 -0.9**
comp=Z,16nm,1.4s,mb4.6
BSMT *e*PcP PcP 05 01 54.3 -1.4
LNOR Lincton Mounta 38.13 330 *e*P **P 04 59 40.7 -1.3**
comp=Z,9.3nm,0.7s,mb4.6
LNOR Lincton Mounta 38.13 330 *e*P **P 04 59 40.7 -1.3**
LNOR pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
A15A Johnson Ranch, 38.23 338 ⇓P **P 04 59 42.2 -0.5**
baz=38,SNR=8.5
A15A ⇓PcP PcP 05 01 54.7 -1.3
baz=38
C12B Naegeli Ranch, 38.26 335 ⇑P **P 04 59 42.8 -0.3**
baz=38,SNR=11
C12B ⇑PcP PcP 05 01 54.9 -1.3
baz=38
VIPM Ingram Point 38.36 327 P **P 04 59 43.3 -0.6**
VIPM Ingram Point 38.36 327 P **P 04 59 43.3 -0.6**
B13A Whitefish 38.39 336 ⇓P **P 04 59 44.0 0.0**
baz=39,SNR=13
B13A ⇑PcP PcP 05 01 54.3 -2.2
baz=39
KRMB Red Mountain 38.39 321 *e*P **P 04 59 43.6 -0.6**
comp=Z,39nm,1.3s,mb5.0
KRMB *e*pP pP 04 59 59.6 +0.3
KRMB *e*PcP PcP 05 01 56.0 -0.7
HUMO Hull Mountain 38.46 323 *e*P **P 04 59 42.7 -2.0**
comp=Z,9.5nm,1.2s,mb4.4
HUMO *e*PcP PcP 05 01 55.4 -1.5
A14A Double T Ranch 38.48 337 ⇑P **P 04 59 44.8 0.0**
baz=39,SNR=13
A14A ⇑PcP PcP 05 01 55.4 -1.4
baz=39
E09A Wood Farm, Sta 38.54 331 ⇑P **P 04 59 44.7 -0.6**
baz=39,SNR=18
C11A Tepee Creek (N 38.69 334 P **P 04 59 46.3 -0.4**
baz=39,SNR=52
WALA Waterton Lakes 38.73 337 ⇓*i*P **P 04 59 46.2 -0.7**
comp=Z,0.2nm,0.9s
WALA *e*PcP PcP 05 01 56.4 -1.2
LPAZ La Paz 38.81 141 P **P 04 59 46.6 -1.4**
comp=Z,5.5nm,0.6s,mb4.4,baz=325,slow=6.8,SNR=36
LPAZ PcP PcP 05 01 56.6 -1.7
comp=Z,4.9nm,0.9s,baz=348,slow=6.6,SNR=4.5
LPAZ La Paz 38.81 141 *e*P **P 04 59 46.4 -1.6**
comp=Z,11nm,1.0s,mb4.6
LPAZ *e*PcP PcP 05 01 56.7 -1.7
LPAZ La Paz 38.81 141 *e*P **P 04 59 46.4 -1.6**
LPAZ *e* 05 01 56.7
LPAZ pmax pmax
comp=Z,11nm,1.0s
A13A Flathead Natio 38.82 337 ⇑P **P 04 59 47.7 0.0**
baz=39
G06A Carlson Farm, 38.86 328 ⇑P **P 04 59 47.8 -0.3**
baz=39
B12A Libby 38.91 335 ⇓P **P 04 59 48.8 +0.3**
baz=39,SNR=9.5
B12A ⇑PcP PcP 05 01 56.9 -1.2
baz=39
E08A Dider Farm, El 38.95 330 ⇓PcP PcP 05 01 57.0 -1.4
baz=39
FRIS Frissel Point 38.97 325 P **P 04 59 49.4 +0.3**
KBO Bosley Butte 38.98 321 *e*P **P 04 59 49.1 0.0**
comp=Z,149nm,1.3s,mb5.6
HAWA Hanford 39.11 330 *e*P **P 04 59 49.1 -1.1**
comp=Z,12nm,0.9s,mb4.6
HAWA *e*PcP PcP 05 01 56.8 -2.1
BROR Big Rock Looko 39.20 325 P **P 04 59 50.0 -1.0**
D08A Wollman Farm, 39.30 331 ⇓P **P 04 59 50.8 -0.9**
baz=40,SNR=7.6
A12A Yaak River Ran 39.30 336 ⇑P **P 04 59 52.0 +0.2**
baz=40,SNR=5.2
H04A Detroit Lake 39.32 326 ⇓P **P 04 59 51.8 -0.2**
baz=40,SNR=48
NEW Newport 39.39 334 ⇓P **P 04 59 51.5 -0.9**
baz=40,SNR=15
NEW Newport 39.39 334 ⇓*i*P **P 04 59 51.2 -1.2**
comp=Z,7.6nm,0.7s,mb4.5
NEW *e*PcP PcP 05 01 57.5 -2.2
NEW Newport 39.39 334 ⇓*i*P **P 04 59 51.2 -1.3**
NEW *e* 05 01 57.5
NEW pmax pmax
comp=Z,8.0nm,0.7s
OD2 Odessa Site #2 39.44 332 *e*P **P 04 59 52.2 -0.7**
comp=Z,107nm,1.3s,mb5.4
HOOD Mount Hood Mea 39.45 327 *e*P **P 04 59 53.6 +0.6**
comp=Z,135nm,1.0s,mb5.6
C09A Chrisman Ranch 39.55 332 ⇑P **P 04 59 53.7 -0.1**
baz=40,SNR=26
RNO Roman Nose 39.71 324 P **P 04 59 55.1 -0.1**
G04A Mulino 39.82 326 ⇑P **P 04 59 55.9 -0.1**
baz=40,SNR=13
COR Corvallis 39.88 325 ⇓*i*P **P 04 59 55.7 -0.8**
comp=Z,98nm,1.2s,mb5.4
COR Corvallis 39.88 325 ⇓*i*P **P 04 59 55.7 -0.8**
COR pmax pmax
comp=Z,98nm,1.2s,mb5.4
MPOR Mary's Peak 39.96 325 P **P 04 59 57.2 -0.1**
EBG Ellensburg 39.98 330 P **P 04 59 57.7 +0.3**
WPW White Pass 40.33 329 P **P 05 00 00.3 +0.1**
ETW Entiat 40.36 331 *e*P **P 05 00 00.0 -0.5**
comp=Z,41nm,0.9s,mb5.2
ETW *e*PcP PcP 05 02 01.5 -1.3
B08A Colville Reser 40.44 332 ⇑P **P 05 00 00.6 -0.6**
baz=41,SNR=8.9
LON Longmire 40.49 328 ⇓*i*P **P 05 00 00.8 -0.9**
comp=Z,31nm,0.9s,mb5.0
LON *e*PcP PcP 05 02 01.6 -1.6
LON Longmire 40.49 328 ⇓*i*P **P 05 00 00.8 -0.8**
LON *e* 05 02 01.6
LON pmax pmax
comp=Z,31nm,0.9s,mb5.0
FFC Flin Flon 40.78 351 *e*P **P 05 00 02.5 -1.4**
FFC Flin Flon 40.78 351 *e*P **P 05 00 02.5 -1.4**
F03A Seaside 40.87 326 ⇓P **P 05 00 05.1 +0.4**
baz=41,SNR=9.2
D05A Enumclaw 40.88 329 ⇑P **P 05 00 04.6 -0.2**
baz=41,SNR=15
E03A Lebam 41.26 327 ⇑P **P 05 00 07.9 -0.1**
baz=42,SNR=8.2
RPW Rockport 41.52 331 *e*P **P 05 00 08.8 -1.2**
comp=Z,60nm,1.6s,mb5.0
JCW Jim Creek 41.54 330 P **P 05 00 08.9 -1.3**
B06A Marblemount 41.55 331 ⇑P **P 05 00 09.7 -0.6**
baz=42,SNR=9.6
GNW Green Mountain 41.55 329 ⇓*i*P **P 05 00 08.7 -1.6**
comp=Z,21nm,1.2s,mb4.6
GNW *e*PcP PcP 05 02 05.3 -1.4
GNW *e* 05 02 21.6
HDW Hoodsport 41.73 329 P **P 05 00 10.7 -1.0**
BLN Blyn Mountain 41.92 329 P **P 05 00 12.9 -0.5**
MBW Mount Baker 41.94 331 P **P 05 00 12.4 -1.0**
NLWA Neilton Lookou 41.97 328 ⇓*i*P **P 05 00 13.4 -0.4**
comp=Z,78nm,1.3s,mb5.2
A05A Maple Falls 42.17 331 ⇑P **P 05 00 14.7 -0.7**
baz=42,SNR=17
MCW Mont Constitu 42.31 330 P **P 05 00 15.9 -0.6**
MCW Mount Constitu 42.31 330 P **P 05 00 15.9 -0.6**
SCHQ Schefferville 44.77 21 P **P 05 00 32.7 -3.4**
comp=Z,27nm,1.0s,mb5.0,baz=203,slow=5.2,SNR=11
SCHQ LR LR 05 20 11.8
comp=Z,1μm,21.4s,MS4.8,baz=112,slow=37
SCHQ Schefferville 44.77 21 *e*P **P 05 00 33.1 -3.0**
comp=Z,25nm,0.9s,mb5.0
LCO Las Campanas 48.06 154 *e*P **P 05 01 00.6 -1.7**
comp=Z,29nm,1.1s,mb5.2

YKA Yellowknife Ar 50.42 347 P **P 05 01 18.4 -1.5**
comp=Z,12nm,0.6s,mb5.1,baz=150,slow=7.4,SNR=19
YKA PcP PcP 05 02 35.9 -1.5
comp=Z,6.0nm,0.8s,baz=153,slow=3.4,SNR=5.6
YKA pPcP 05 02 52.4
comp=Z,7.3nm,0.8s,baz=143,slow=4.3,SNR=4.2
YKA ScP ScP 05 06 30.9 +2.5
comp=Z,6.6nm,0.9s,baz=144,slow=4.1,SNR=6.3
YKA Yellowknife Ar 50.42 347 P **P 05 01 18.4 -1.5**
YKA PcP PcP 05 02 35.9 -1.5
YKA pPcP 05 02 52.4
YKA ScP ScP 05 06 30.9 +2.5
YKA Yellowknife Ar 50.42 347 P **P 05 01 18.4 -1.5**
YKA 05 02 35.9
CFAA Coronel Fontan 51.36 154 P **P 05 01 25.2 -2.0**
comp=Z,1.7nm,0.8s,mb4.0,baz=335,slow=6.4,SNR=26
FRB Frobisher Bay 51.81 13 P **P 05 01 27.1 -3.1**
comp=Z,12nm,0.8s,mb4.9,baz=246,slow=17,SNR=4.8
FRB Frobisher Bay 51.81 13 P **P 05 01 27.2 -3.1**
DLBC Dease Lake 52.05 336 *e*P **P 05 01 32.9 +0.8**
DLBC *e*pP pP 05 01 48.2 +0.5
TAOE Nuku Hiva Isla 52.91 247 *e*S **S 05 09 11.0 +6.7**
comp=Z,234nm,27.5s
TAOE *e*LR LR 05 16 29.1
comp=Z,838nm,27.1s,baz=66
CPUP Villa Florida 52.96 140 P **P 05 01 35.6 -3.6**
comp=Z,8.9nm,1.0s,mb4.7,baz=310,slow=7.7,SNR=11
CPUP LR LR 05 22 09.6
comp=Z,248nm,21.7s,MS4.2,baz=322,slow=34
CPUP Villa Florida 52.96 140 ⇓*i*P **P 05 01 35.2 -4.1**
CPUP *e*PcP PcP 05 02 45.9 -1.6
CPUP Villa Florida 52.96 140 ⇓*i*P **P 05 01 35.2 -4.1**
CPUP *e* 05 02 45.9
BDFB Brasilia 53.01 123 P **P 05 01 38.0 -1.9**
comp=Z,27nm,0.9s,mb5.2,baz=289,slow=8.2,SNR=22
BDFB LR LR 05 24 01.3
comp=Z,281nm,19.2s,MS4.3,baz=246,slow=36
BDFB Brasilia 53.01 123 P **P 05 01 38.0 -1.8**
RKT Rikitea 56.15 229 *e*LR LR 05 18 33.0
comp=Z,1μm,26.2s,baz=38
PLCA Paso Flores 58.58 161 P **P 05 02 16.7 -2.5**
comp=Z,9.2nm,0.9s,mb4.8,baz=333,slow=6.7,SNR=15
PLCA LR LR 05 23 09.0
comp=Z,243nm,18.7s,MS4.3,baz=162,slow=32
PLCA Paso Flores 58.58 161 *e*P **P 05 02 16.6 -2.7**
comp=Z,33nm,1.3s,mb5.2
PLCA Paso Flores 58.58 161 *e*P **P 05 02 16.6 -2.6**
PLCA pmax pmax
comp=Z,33nm,1.3s
DAWY Dawson 59.07 338 *e*P **P 05 02 21.1 -1.3**
RCBR Riachuelo 59.41 106 P **P 05 02 20.7 -4.9**
comp=Z,23nm,0.6s,mb5.4,baz=267,slow=5.6,SNR=24
RCBR Riachuelo 59.41 106 ⇑*i*P **P 05 02 24.4 -1.2**
comp=Z,23nm,0.6s,mb5.4
TRQA Tornquist 59.55 153 *e*P **P 05 02 22.9 -3.1**
comp=Z,38nm,1.4s,mb5.2
INK Inuvik 59.83 344 *e*P **P 05 02 26.2 -1.4**
comp=Z,15nm,0.7s,mb5.1
INK Inuvik 59.83 344 *e*P **P 05 02 26.2 -1.4**
INK pmax pmax
comp=Z,15nm,0.7s
EGAK Eagle 60.10 338 *e*P **P 05 02 28.1 -1.4**
comp=Z,30nm,1.1s,mb5.2
EGAK *e*pP pP 05 02 43.3 -2.2
DOT Dot Lake 60.61 336 *e*P **P 05 02 32.3 -0.7**
comp=Z,126nm,1.0s,mb6.0
DOT *e*pP pP 05 02 47.9 -1.1
SEW Seward 61.38 331 ⇓*i*P **P 05 02 36.9 -1.4**
comp=Z,67nm,1.1s,mb5.7
SEW *e*pP pP 05 02 52.4 -1.9
SML Sawmill 61.55 333 *e*P **P 05 02 38.3 -1.0**
comp=Z,22nm,1.4s,mb5.1
SML Sawmill 61.55 333 *e*P **P 05 02 38.3 -1.1**
SML pmax pmax
comp=Z,22nm,1.4s,mb5.1
PMR Palmer 61.81 333 *e*P **P 05 02 39.2 -1.9**
comp=Z,54nm,1.4s,mb5.5
PMR LR LR
comp=Z,800nm,17.0s,MS5.0
PMR Palmer 61.81 333 *e*P **P 05 02 39.2 -1.9**
PMR pmax pmax
comp=Z,54nm,1.4s,mb5.5
PMR MLR MLR
comp=Z,800nm,17.0s,MS5.0
SLKM Skilak Lake 61.89 332 *e*P **P 05 02 40.8 -0.9**
SLKM Skilak Lake 61.89 332 *e*P **P 05 02 40.8 -0.9**
KDAK Kodiak Island 62.12 328 *e*P **P 05 02 42.3 -1.0**
comp=Z,81nm,1.4s,mb5.7
KDAK *e*pP pP 05 02 58.4 -1.0
KDAK Kodiak Island 62.12 328 *e*P **P 05 02 42.3 -1.0**
KDAK *e**PP pP 05 02 58.4 -0.9
KDAK pmax pmax
comp=Z,81nm,1.4s,mb5.7
ILAR Eielson Array 62.23 337 P **P 05 02 42.6 -1.3**
comp=Z,18nm,1.0s,mb5.1,baz=133,slow=4.7,SNR=103
ILAR pP pP 05 02 58.0 -1.9
comp=Z,26nm,0.9s,baz=133,slow=6.0,SNR=15
ILAR Eielson Array 62.23 337 P **P 05 02 42.6 -1.3**
ILAR *PP pP 05 02 58.1 -1.9
OHAK Old Harbor 62.32 327 *e*P **P 05 02 43.6 -1.0**
comp=Z,94nm,1.9s,mb5.6
OHAK LR LR
comp=Z,2μm,17.0s,MS5.4
MCK McKinley 62.59 335 *e*P **P 05 02 45.3 -1.0**
comp=Z,56nm,1.2s,mb5.6
MCK McKinley 62.59 335 *e*P **P 05 02 45.3 -1.0**
MCK pmax pmax
comp=Z,56nm,1.2s,mb5.6
COLA College 62.65 337 *e*P **P 05 02 45.1 -1.6**
comp=Z,23nm,0.8s,mb5.3
COLA *e*pP pP 05 03 00.8 -1.9
COLA College 62.65 337 *e*P **P 05 02 45.1 -1.6**
COLA *e**PP pP 05 03 00.8 -2.0
COLA pmax pmax
comp=Z,23nm,0.8s,mb5.4
TRF Thorofare Moun 63.03 335 *e*P **P 05 02 48.2 -1.0**
comp=Z,94nm,1.0s,mb5.9
TRF *e*pP pP 05 03 04.2 -1.1
RSO Redoubt South 63.05 331 *e*P **P 05 02 48.3 -1.2**
comp=Z,194nm,0.7s,mb6.3
BPAW Bear Paw Mtn. 63.57 335 *e*P **P 05 02 51.1 -1.6**
comp=Z,48nm,0.9s,mb5.5
BPAW *e*pP pP 05 03 07.1 -1.8
PPLA Purkeypile 63.63 334 *e*P **P 05 02 51.6 -1.6**
comp=Z,51nm,1.1s,mb5.5
COLD Coldfoot 64.53 339 *e*P **P 05 02 59.0 0.0**
comp=Z,46nm,1.3s,mb5.3
COLD *e*pP pP 05 03 14.6 -0.6
SVW2 Sparrevohn 64.57 331 *e*P **P 05 02 57.1 -2.3**
comp=Z,20nm,0.6s,mb5.3
SVW2 LR LR
comp=Z,1μm,17.0s,MS5.2
CHGN Chignik 64.82 326 *e*P **P 05 02 59.4 -1.8**
CHGN *e*pP pP 05 03 15.5 -1.8
PPT Papeete 64.95 242 *e*LR LR 05 22 07.9
comp=Z,821nm,27.2s,baz=55
PPT Papeete 64.95 242 LR LR 05 24 09.4
comp=Z,260nm,18.2s,MS4.5,baz=43,slow=29
TTA Tatalina 65.30 333 *e*P **P 05 03 02.1 -1.9**
comp=Z,76nm,1.0s,mb5.7
TTA *e*pP pP 05 03 17.9 -2.4
TTA Tatalina 65.30 333 *e*P **P 05 03 02.1 -2.0**
TTA *e**PP pP 05 03 17.9 -2.3
TTA pmax pmax
comp=Z,76nm,1.0s,mb5.7
SUMG Summit 65.75 15 *e*P **P 05 03 05.5 -1.3**
comp=Z,18nm,1.0s,mb5.0
SUMG Summit 65.75 15 *i*P pP 05 03 27.4 +4.3
comp=Z,13nm,0.8s
TBI Tubuai 67.47 237 *e*LR LR 05 23 31.6
comp=Z,754nm,28.0s,baz=63
UNV Unalaska Valle 69.09 322 *e*P **P 05 03 26.7 -1.6**
comp=Z,127nm,1.2s,mb5.7
UNV *e*pP pP 05 03 43.2 -1.4
RAR Rarotonga 75.22 243 LR LR 05 27 45.8
comp=Z,188nm,21.3s,MS4.4,baz=272,slow=28
PVIS Viseu 76.40 51 *e*P **P 05 04 08.2 -3.7**
comp=Z,17nm,2.0s,mb4.6
EVO Evora 76.61 53 ⇑*i*P **P 05 04 09.8 -3.3**
comp=Z,42nm,1.2s,mb5.0
EVO *e*MLR MLR
comp=Z,195nm,20.2s,MS4.1
MTE Manteigas 76.71 51 *e*P **P 05 04 10.2 -3.5**
comp=Z,10nm,1.2s,mb4.6
GAL1 Galloway 76.81 36 *e*P **P 05 04 10.6 -3.3**
GAL1 AMB AMB 05 04 17.0
comp=Z,50nm,2.0s,mb5.1
PCBR Castelo Branco 76.84 52 *e*P **P 05 04 12.0 -2.4**
PESTR Estremoz 76.89 53 *e*P **P 05 04 11.3 -3.4**
MVO Moncorvo 76.99 51 *e*P **P 05 04 11.7 -3.5**
comp=Z,16nm,1.5s,mb4.7
PVAQ Vaqueiros 77.00 54 *e*P **P 05 04 12.3 -3.1**
comp=Z,20nm,1.2s,mb4.9
EBH Black Hill 77.32 35 *e*P **P 05 04 13.1 -3.7**
EAU Auchinoon 77.41 35 *e*P **P 05 04 13.1 -4.1**
PBAR Barrancos 77.42 54 *e*P **P 05 04 13.8 -3.9**
comp=Z,7.8nm,1.3s,mb4.5
ESK Eskdalemuir 77.61 36 *e*P **P 05 04 13.7 -4.7**
ESK AMB AMB 05 04 16.2
comp=Z,45nm,1.8s,mb5.1
ESK Eskdalemuir 77.61 36 *e*P **P 05 04 14.7 -3.7**
comp=Z,14nm,0.8s,mb5.0
ESK *e*pP pP 05 04 31.0 -4.0
ESK Eskdalemuir 77.61 36 *e*P **P 05 04 14.7 -3.7**
ESK *e**PP pP 05 04 31.0 -4.0
ESK pmax pmax
comp=Z,14nm,0.8s,mb4.9
ESK Eskdalemuir 77.61 36 *i*P **P 05 04 15.7 -2.7**
ESK Eskdalemuir 77.61 36 P **P 05 04 15.1 -3.3**
comp=Z,116nm,0.6s,mb6.0,SNR=8.7
EKA Eskdalemuir Ar 77.64 36 P **P 05 04 15.2 -3.4**
comp=Z,15nm,0.9s,mb4.9,baz=276,slow=5.9,SNR=46
EKA pP pP 05 04 31.1 -4.1
comp=Z,6.9nm,0.7s,baz=276,slow=6.2,SNR=6.6
EKA Eskdalemuir Ar 77.64 36 P **P 05 04 15.2 -3.3**
EKA *PP pP 05 04 31.1 -4.0
ECK Cauldkaine Hil 77.67 36 *e*P **P 05 04 15.2 -3.5**
ESY Stoneypath 77.86 35 *e*P **P 05 04 16.4 -3.4**
MCH1 Michaelchurch 78.20 39 *e*P **P 05 04 18.8 -2.9**
MCH1 AMB AMB 05 04 33.7
comp=Z,48nm,2.1s,mb5.1
XAL Allendale 78.24 36 *e*P **P 05 04 18.5 -3.4**
QUIF Quistinic 78.72 43 *e*P **P 05 04 20.3 -4.4**
QUIF Quistinic 78.72 43 *e*P **P 05 04 20.3 -4.4**
ESDC Sonseca Array 79.54 52 P **P 05 04 26.0 -3.4**
comp=Z,6.1nm,1.0s,mb4.5,baz=288,slow=5.6,SNR=18
ESDC pP pP 05 04 41.5 -4.5
comp=Z,1.8nm,0.7s,baz=295,slow=5.0,SNR=3.6
ESDC Sonseca Array 79.54 52 P **P 05 04 26.0 -3.4**
ESDC pP pP 05 04 41.5 -4.5
GRR Gorron 80.16 43 *e*P **P 05 04 29.0 -3.5**
comp=Z,12nm,0.5s,mb4.8
GRR *e*pP pP 05 04 44.8 -4.4
GRR Gorron 80.16 43 *e*P **P 05 04 29.0 -3.5**
comp=Z,6.1nm,0.5s,mb4.8
GRR *e*pP pP 05 04 44.8 -4.4
GRR Gorron 80.16 43 *e*P **P 05 04 29.0 -3.5**
GRR *e**PP pP 05 04 44.8 -4.4
GRR pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
MDT Midelt 80.28 59 P **P 05 04 30.8 -2.8**
comp=Z,5.5nm,1.1s,mb4.4,baz=288,slow=6.0,SNR=7.6
FLN La Foliniere 80.34 42 *e*P **P 05 04 30.0 -3.5**
FLN *e*MLR MLR
comp=Z,456nm,21.8s,MS4.5
FLN La Foliniere 80.34 42 *e*P **P 05 04 30.0 -3.5**
FLN LR LR
comp=Z,460nm,21.8s,MS4.8
FLN La Foliniere 80.34 42 *e*P **P 05 04 30.0 -3.5**
FLN MLR MLR
comp=Z,460nm,21.8s,MS4.8
LDF La Druitiere 80.60 42 *e*P **P 05 04 31.2 -3.7**
comp=Z,5.4nm,0.6s,mb4.3
LDF La Druitiere 80.60 42 *e*P **P 05 04 31.2 -3.7**
comp=Z,2.7nm,0.6s,mb4.3
LDF La Druitiere 80.60 42 *e*P **P 05 04 31.2 -3.7**
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BILL Bilibino 80.85 338 *e*P **P 05 04 34.6 -1.2**
comp=Z,44nm,1.0s,mb5.3
BILL *e*pP pP 05 04 51.3 -1.2
BILL Bilibino 80.85 338 ⇑*e*P **P 05 04 35.1 -0.7**
BILL *i* *PP pP 05 04 51.3 -1.2
BILL *e* 05 07 37.1
BILL *e*S S 05 14 33.7 -5.6
BILL pmax pmax
comp=Z,64nm,1.1s,mb5.5
SJPF Ste Jean 80.92 48 *e*P **P 05 04 33.5 -3.2**
comp=Z,25nm,1.2s,mb4.7
SJPF *e*pP pP 05 04 49.3 -4.1
SJPF Ste Jean 80.92 48 *e*P **P 05 04 33.5 -3.2**
comp=Z,12nm,1.2s,mb4.7
SJPF *e*pP pP 05 04 49.3 -4.1
SJPF Ste Jean 80.92 48 *e*P **P 05 04 33.5 -3.2**
SJPF *e**PP pP 05 04 49.3 -4.1
SJPF pmax pmax
comp=Z,13nm,1.2s,mb4.7
MFF Saint Martin d 80.98 44 *e*P **P 05 04 34.2 -2.7**
comp=Z,22nm,1.1s,mb4.7
MFF Saint Martin d 80.98 44 *e*P **P 05 04 34.2 -2.7**
comp=Z,11nm,1.1s,mb4.7
MFF Saint Martin d 80.98 44 *e*P **P 05 04 34.2 -2.7**
MFF pmax pmax
comp=Z,11nm,1.1s,mb4.7
ETSF Etsaut 81.44 48 *e*P **P 05 04 36.2 -3.3**
ETSF Etsaut 81.44 48 *e*P **P 05 04 36.2 -3.3**
LFF La Frestale 81.93 46 *e*P **P 05 04 38.5 -3.5**
LFF *e*pP pP 05 04 54.3 -4.4
LFF La Frestale 81.93 46 *e*P **P 05 04 38.5 -3.5**
LFF *e**PP pP 05 04 54.3 -4.4
EPF Esparros 82.06 48 *e*P **P 05 04 39.4 -3.3**
EPF Esparros 82.06 48 *e*P **P 05 04 39.4 -3.3**
RJF Les Rejaudoux 82.39 45 *e*P **P 05 04 40.7 -3.7**
RJF *e*pP pP 05 04 56.5 -4.6
RJF *e*MLR MLR
comp=Z,280nm,21.0s,MS4.3
RJF Les Rejaudoux 82.39 45 *e*P **P 05 04 40.7 -3.7**
RJF *e*pP pP 05 04 56.5 -4.6
RJF LR LR
comp=Z,280nm,21.0s,MS4.6
RJF Les Rejaudoux 82.39 45 *e*P **P 05 04 40.7 -3.7**
RJF *e**PP pP 05 04 56.5 -4.6
RJF MLR MLR
comp=Z,280nm,21.0s,MS4.6
TCF Toulx Ste Croi 82.64 44 *e*P **P 05 04 41.9 -3.8**
comp=Z,11nm,1.0s,mb4.5
TCF Toulx Ste Croi 82.64 44 *e*P **P 05 04 41.9 -3.8**
comp=Z,5.4nm,1.0s,mb4.5
TCF Toulx Ste Croi 82.64 44 *e*P **P 05 04 41.9 -3.8**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
HYF Humbligny 82.70 43 *e*P **P 05 04 42.5 -3.5**
CAF Calviac 82.85 46 *e*P **P 05 04 43.1 -3.7**
comp=Z,16nm,1.2s,mb4.6
CAF *e*pP pP 05 04 58.9 -4.6
CAF Calviac 82.85 46 *e*P **P 05 04 43.1 -3.7**
comp=Z,7.8nm,1.2s,mb4.6
CAF *e*pP pP 05 04 58.9 -4.6
CAF Calviac 82.85 46 *e*P **P 05 04 43.1 -3.7**
CAF *e**PP pP 05 04 58.9 -4.6
CAF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
BGF Bois d'Agland 83.00 44 *e*P **P 05 04 43.8 -3.8**
comp=Z,16nm,0.8s,mb4.8
BGF *e*pP pP 05 04 59.5 -4.8
BGF Bois d'Agland 83.00 44 *e*P **P 05 04 43.8 -3.8**
comp=Z,8.0nm,0.8s,mb4.8
BGF *e*pP pP 05 04 59.5 -4.8
BGF Bois d'Agland 83.00 44 *e*P **P 05 04 43.8 -3.8**
BGF *e**PP pP 05 04 59.5 -4.8
BGF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BAIF Baives 83.04 40 *e*P **P 05 04 44.4 -3.3**
BAIF *e*pP pP 05 05 00.3 -4.1
BAIF Baives 83.04 40 *e*P **P 05 04 44.4 -3.3**
BAIF *e**PP pP 05 05 00.3 -4.1
AVF Avril sur Loir 83.29 44 *e*P **P 05 04 44.9 -4.1**
comp=Z,14nm,1.0s,mb4.7
AVF Avril sur Loir 83.29 44 *e*P **P 05 04 44.9 -4.1**
comp=Z,6.8nm,1.0s,mb4.6
AVF Avril sur Loir 83.29 44 *e*P **P 05 04 44.9 -4.1**
AVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
SSF Saint Saulge 83.32 43 *e*P **P 05 04 45.4 -3.8**
comp=Z,15nm,1.0s,mb4.7
SSF Saint Saulge 83.32 43 *e*P **P 05 04 45.4 -3.8**
comp=Z,7.3nm,1.0s,mb4.7
SSF Saint Saulge 83.32 43 *e*P **P 05 04 45.4 -3.8**
SSF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
MTLF Montolieu 83.33 47 *e*P **P 05 04 45.7 -3.6**

MTLF				*e*pP	pP	05 05 01.6	-4.5
MTLF	**Montolieu**	**83.33**	**47**	*e*P	**P**	**05 04 45.7**	**-3.6**
MTLF				*e**PP	pP	05 05 01.6	-4.5
LOR	**Lormes**	**83.51**	**43**	*e*P	**P**	**05 04 46.5**	**-3.6**
	comp=Z,25nm,1.1s,mb5.0						
LOR				*e*pP	pP	05 05 02.3	-4.6
LOR				*e*MLR	MLR		
	comp=Z,274nm,22.0s,MS4.3						
LOR	**Lormes**	**83.51**	**43**	*e*P	**P**	**05 04 46.5**	**-3.6**
	comp=Z,13nm,1.1s,mb5.0						
LOR				*e*pP	pP	05 05 02.3	-4.6
LOR				LR	LR		
	comp=Z,270nm,22.0s,MS4.6						
LOR	**Lormes**	**83.51**	**43**	*e*P	**P**	**05 04 46.5**	**-3.6**
LOR				*e**PP	pP	05 05 02.3	-4.6
LOR				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
LOR				MLR	MLR		
	comp=Z,270nm,22.0s,MS4.6						
AFI	**Afiamalu**	**83.64**	**254**	LR	LR	05 31 26.8	
	comp=Z,226nm,21.5s,MS4.5,baz=120,slow=28						
SMF	**Signal de Mont**	**83.65**	**44**	*e*P	**P**	**05 04 46.8**	**-4.1**
SMF	**Signal de Mont**	**83.65**	**44**	*e*P	**P**	**05 04 46.8**	**-4.1**
NB2	**NORSAR Subarra**	**83.75**	**28**	P	**P**	**05 04 49.0**	**-2.1**
	comp=Z,3.6nm,1.0s,mb4.5,baz=292,slow=5.1						
NOA	**NORSAR Array B**	**83.75**	**28**	P	**P**	**05 04 49.0**	**-2.1**
	comp=Z,2.3nm,0.9s,mb4.3,baz=290,slow=5.3,SNR=6.1						
NOA				pP	pP	05 05 04.7	-3.2
	comp=Z,2.0nm,0.9s,baz=291,slow=5.0,SNR=4.1						
NOA	**NORSAR Array B**	**83.75**	**28**	P	**P**	**05 04 49.0**	**-2.1**
NOA				*PP	pP	05 05 04.7	-3.2
MEZF	**Maizieres J'vi**	**83.97**	**42**	*e*P	**P**	**05 04 49.2**	**-3.3**
	comp=Z,8.5nm,0.6s,mb4.7						
MEZF	**Maizieres J'vi**	**83.97**	**42**	*e*P	**P**	**05 04 49.2**	**-3.3**
	comp=Z,8.5nm,0.6s,mb5.0						
SFTF	**Sexfontaines**	**84.04**	**42**	*e*P	**P**	**05 04 49.4**	**-3.4**
LASF	**Ste Croix**	**84.30**	**46**	*e*P	**P**	**05 04 50.8**	**-3.5**
VIVF	**Saint-Julien-l**	**84.67**	**45**	*e*P	**P**	**05 04 53.5**	**-2.6**
	comp=Z,26nm,1.1s,mb5.0						
VIVF	**Saint-Julien-l**	**84.67**	**45**	*e*P	**P**	**05 04 53.5**	**-2.6**
	comp=Z,13nm,1.1s,mb5.0						
VIVF	**Saint-Julien-l**	**84.67**	**45**	*e*P	**P**	**05 04 53.5**	**-2.6**
VIVF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
HAU	**Haudompre**	**84.94**	**42**	*e*P	**P**	**05 04 54.0**	**-3.4**
HAU				*e*MLR	MLR		
	comp=Z,230nm,20.2s,MS4.3						
HAU	**Haudompre**	**84.94**	**42**	*e*P	**P**	**05 04 54.0**	**-3.4**
HAU				LR	LR		
	comp=Z,230nm,20.3s,MS4.6						
HAU	**Haudompre**	**84.94**	**42**	*e*P	**P**	**05 04 54.0**	**-3.4**
HAU				MLR	MLR		
	comp=Z,230nm,20.3s,MS4.6						
HFS	**Hagfors**	**85.21**	**29**	P	**P**	**05 04 55.9**	**-2.6**
	comp=Z,2.3nm,0.7s,mb4.4,baz=333,slow=1.7,SNR=5.5						
HFS				pP	pP	05 05 11.5	-3.8
	comp=Z,2.7nm,0.8s,baz=331,slow=1.9,SNR=2.2						
HFS	**Hagfors**	**85.21**	**29**	P	**P**	**05 04 55.9**	**-2.6**
HFS				*PP	pP	05 05 11.5	-3.8
HINF	**Hinteralfeld**	**85.32**	**42**	*e*P	**P**	**05 04 55.8**	**-3.5**
	comp=Z,3.6nm,0.6s,mb4.4						
HINF	**Hinteralfeld**	**85.32**	**42**	*e*P	**P**	**05 04 55.8**	**-3.5**
	comp=Z,1.8nm,0.6s,mb4.4						
HINF	**Hinteralfeld**	**85.32**	**42**	*e*P	**P**	**05 04 55.8**	**-3.5**
HINF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
CDF	**Champ du Feu**	**85.42**	**41**	*e*P	**P**	**05 04 56.6**	**-3.2**
CDF				*e*pP	pP	05 05 12.4	-4.2
CDF	**Champ du Feu**	**85.42**	**41**	*e*P	**P**	**05 04 56.6**	**-3.2**
CDF				*e**PP	pP	05 05 12.4	-4.2
ORIF	**Oris-en-Rattie**	**85.48**	**45**	*e*P	**P**	**05 04 57.4**	**-2.7**
ORIF				*e*MLR	MLR		
	comp=Z,292nm,21.0s,MS4.3						
ORIF	**Oris-en-Rattie**	**85.48**	**45**	*e*P	**P**	**05 04 57.4**	**-2.7**
SMRF	**Simiane la Rot**	**85.52**	**46**	*e*P	**P**	**05 04 58.1**	**-2.3**
	comp=Z,69nm,1.6s,mb5.3						
SMRF	**Simiane la Rot**	**85.52**	**46**	*e*P	**P**	**05 04 58.1**	**-2.3**
	comp=Z,69nm,1.6s,mb5.6						
ARCES	**ARCESS Array B**	**85.67**	**18**	P	**P**	**05 04 58.2**	**-2.4**
	comp=Z,2.6nm,0.7s,mb4.6,baz=287,slow=5.0,SNR=9.4						
ARCES				pP	pP	05 05 14.2	-3.2
	comp=Z,2.2nm,0.6s,baz=267,slow=2.3,SNR=3.1						
ARCES	**ARCESS Array B**	**85.67**	**18**	P	**P**	**05 04 58.2**	**-2.4**
ARCES				pP	pP	05 05 14.2	-3.2
ARCES	**ARCESS Array B**	**85.67**	**18**	P	**P**	**05 04 58.2**	**-2.4**
ARCES				*PP	pP	05 05 14.3	-3.1
DBIC	**Dimbokro**	**85.82**	**84**	P	**P**	**05 04 58.9**	**-3.6**
	comp=Z,9.7nm,1.2s,mb4.9,baz=12,slow=14,SNR=2.4						
DBIC	**Dimbokro**	**85.82**	**84**	P	**P**	**05 04 58.9**	**-3.5**
LPL	**La Plagne**	**85.89**	**44**	*e*P	**P**	**05 04 59.0**	**-3.2**
LPL	**La Plagne**	**85.89**	**44**	*e*P	**P**	**05 04 59.0**	**-3.2**
LPG	**La Plagne**	**85.91**	**44**	*e*P	**P**	**05 04 59.3**	**-3.0**
LPG				*e*pP	pP	05 05 16.0	-3.1
LPG	**La Plagne**	**85.91**	**44**	*e*P	**P**	**05 04 59.3**	**-3.0**
LPG				*e**PP	pP	05 05 16.0	-3.1
BNI	**Bardonecchia**	**85.98**	**45**	*e*P	**P**	**05 05 00.6**	**-2.0**
	comp=Z,18nm,1.2s,mb5.2						
BNI	**Bardonecchia**	**85.98**	**45**	*e*P	**P**	**05 05 00.6**	**-2.1**
BNI				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.2						
LMR	**La Mourre**	**86.35**	**46**	*e*P	**P**	**05 05 01.2**	**-3.3**
	comp=Z,32nm,1.0s,mb5.2						
LMR	**La Mourre**	**86.35**	**46**	*e*P	**P**	**05 05 01.2**	**-3.3**
	comp=Z,16nm,1.0s,mb5.2						
LMR	**La Mourre**	**86.35**	**46**	*e*P	**P**	**05 05 01.2**	**-3.3**
LMR				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.2						
FRF	**La Foret Royal**	**86.39**	**46**	*e*P	**P**	**05 05 01.4**	**-3.3**
	comp=Z,42nm,1.1s,mb5.3						
FRF				*e*pP	pP	05 05 17.3	-4.2
FRF	**La Foret Royal**	**86.39**	**46**	*e*P	**P**	**05 05 01.4**	**-3.3**
	comp=Z,21nm,1.1s,mb5.3						
FRF				*e*pP	pP	05 05 17.3	-4.2
FRF	**La Foret Royal**	**86.39**	**46**	*e*P	**P**	**05 05 01.4**	**-3.3**
FRF				*e**PP	pP	05 05 17.3	-4.2
FRF				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.3						
MOX	**Moxa**	**87.41**	**38**	*e*(P)	**P**	**05 05 17.6**	**+8.1**
MOX	**Moxa**	**87.41**	**38**	P	**P**	**05 05 17.6**	**+8.1**
DAVOX	**Davos/Dischmat**	**87.59**	**42**	P	**P**	**05 05 06.8**	**-3.6**
	comp=Z,2.0nm,0.7s,mb4.5,baz=315,slow=16,SNR=4.1						
DAVOX	**Davos/Dischmat**	**87.59**	**42**	P	**P**	**05 05 06.8**	**-3.7**
CLL	**Collm**	**88.00**	**37**	*e*P	**P**	**05 05 11.0**	**-1.3**
CLL				*e*S	S	05 15 57.0	+5.8
CLL	**Collm**	**88.00**	**37**	*e*P	**P**	**05 05 11.0**	**-1.3**
CLL				*e*S	S	05 15 57.0	+5.8
SEY	**Seymchan**	**88.15**	**336**	‖ *i*P	**P**	**05 05 10.8**	**-1.9**
KHC	**Kasperske Hory**	**89.13**	**39**	*e*P	**P**	**05 05 15.2**	**-2.5**
KHC	**Kasperske Hory**	**89.13**	**39**	*e*P	**P**	**05 05 15.2**	**-2.5**
KHC				*e*x	x	05 05 46.4	
PRU	**Pruhonice**	**89.39**	**38**	*e*P	**P**	**05 05 17.1**	**-1.8**
PRU	**Pruhonice**	**89.39**	**38**	*e*P	**P**	**05 05 17.1**	**-1.8**
TIXI	**Tiksi**	**89.66**	**348**	*e*P	**P**	**05 05 17.6**	**-2.1**
	comp=Z,7.8nm,0.7s,mb5.2						
TIXI				*e*pP	pP	05 05 34.0	-2.6
TIXI	**Tiksi**	**89.66**	**348**	*e*P	**P**	**05 05 17.6**	**-2.1**
TIXI				*e**PP	pP	05 05 34.0	-2.6
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.2						
PETK	**Petropavlovsk-**	**90.06**	**326**	P	**P**	**05 05 21.0**	**-0.9**
	comp=Z,9.0nm,0.9s,mb5.1,baz=81,slow=9.2,SNR=8.2						
PETK				pP	pP	05 05 36.6	-2.2
	comp=Z,14nm,0.9s,baz=90,slow=8.9,SNR=6.9						
PETK	**Petropavlovsk-**	**90.06**	**326**	P	**P**	**05 05 21.0**	**-0.9**
PETK				*PP	pP	05 05 36.6	-2.2
UPC	**Upice**	**90.07**	**37**	*e*P	**P**	**05 05 20.1**	**-1.9**
UPC	**Upice**	**90.07**	**37**	*e*P	**P**	**05 05 20.1**	**-1.9**
FINES	**FINESS Array B**	**90.08**	**25**	P	**P**	**05 05 18.8**	**-3.1**
	comp=Z,2.2nm,0.9s,mb4.5,baz=273,slow=2.1,SNR=6.3						
FINES	**FINESS Array B**	**90.08**	**25**	P	**P**	**05 05 18.8**	**-3.0**
DPC	**Dobruska-Polom**	**90.31**	**37**	*e*P	**P**	**05 05 21.0**	**-2.2**
DPC				*e*	pP	05 05 36.7	-3.4
DPC	**Dobruska-Polom**	**90.31**	**37**	*e*P	**P**	**05 05 21.0**	**-2.2**
DPC				*e*pP	pP	05 05 36.7	-3.4
TORD	**Torodi Ar. Bea**	**90.46**	**76**	P	**P**	**05 05 20.4**	**-4.1**
	comp=Z,0.8nm,0.6s,mb4.2,baz=293,slow=4.8,SNR=3.4						
KEST	**Kesra**	**90.73**	**53**	P	**P**	**05 05 22.6**	**-2.8**
	comp=Z,2.1nm,0.9s,mb4.5,baz=177,slow=2.6,SNR=3.6						
KEST	**Kesra**	**90.73**	**53**	*e*P	**P**	**05 05 24.0**	**-1.5**
TAM	**Tamanrasset**	**91.39**	**66**	*e*P	**P**	**05 05 26.3**	**-2.4**
	comp=Z,1.4nm,1.0s,mb4.2						
TAM	**Tamanrasset**	**91.39**	**66**	*e*P	**P**	**05 05 26.3**	**-2.5**
TAM				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb4.1						
OBN	**Obninsk**	**98.28**	**27**	‖ *e*P	**P**	**05 05 52.7**	**-6.8**
OBN				*e*S	SKSac	05 16 28.6	-3.6
OBN				*e*PS	PS	05 18 56.8	+2.8
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.5						
URZ	**Urewera**	**99.38**	**233**	LR	LR	05 40 13.7	
	comp=Z,155nm,20.6s,MS4.5,baz=203,slow=29						
QSPA	**South Pole Qui**	**104.51**	**180**	Pdiff	Pdif	05 06 32.3	+5.0
	comp=Z,2.8nm,1.1s,baz=154,slow=5.0,SNR=4.5						
DZM	**Mont Dzumac**	**105.65**	**251**	*e*LR	LR	05 41 33.1	
	comp=Z,394nm,25.3s						
ZALV	**Zalesovo Beam**	**111.72**	**2**	PKiKP	PKiKP	05 10 54.7	-1.9
	comp=Z,0.6nm,0.3s,baz=278,slow=2.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**111.72**	**2**	PKIKP	PKiKP	05 10 54.7	-1.9
ABKAR	**Akbulak array**	**111.85**	**19**	*e*PKP	PKiKP	05 10 55.2	-1.8
KURK	**Kurchatov**	**114.51**	**6**	*e*PKP	PKiKP	05 10 59.8	-2.2
KURK	**Kurchatov**	**114.51**	**6**	*e*PKIKP	PKiKP	05 10 59.8	-2.2
SONM	**Songino Array**	**115.69**	**346**	PKP	PKPdf	05 11 02.4	-1.9
	comp=Z,0.5nm,0.3s,baz=253,slow=1.5,SNR=4.0						
SONM				pPKP	pPKPdf	05 11 18.3	-3.6
	comp=Z,0.9nm,0.7s,baz=48,slow=2.4,SNR=2.2						
SONM	**Songino Array**	**115.69**	**346**	PKIKP	PKPdf	05 11 02.4	-2.0
SONM						05 11 18.3	
KSRS	**Korea Array**	**115.95**	**325**	PKP	PKPdf	05 11 03.0	-2.2
	comp=Z,2.0nm,0.6s,baz=15,slow=1.5,SNR=8.0						
KSRS				pPKP	pPKPdf	05 11 19.8	-2.9
	comp=Z,4.5nm,0.9s,baz=20,slow=1.4,SNR=4.5						
SUR	**Sutherland**	**116.99**	**119**	PKP	PKPdf	05 11 07.0	-0.2
	comp=Z,6.1nm,0.9s,baz=117,slow=9.0,SNR=4.3						
SYO	**Syowa Base**	**117.76**	**162**	‖ *e*Pdiff	Pdif	05 07 24.0	-2.2
MKAR	**Makanchi Array**	**118.73**	**4**	PKP	PKPdf	05 11 07.8	-2.4
	comp=Z,1.2nm,0.7s,baz=289,slow=2.5,SNR=6.5						
MKAR				pPKP	pPKPdf	05 11 25.1	-2.6
	comp=Z,0.9nm,0.5s,baz=321,slow=1.6,SNR=3.1						
MKAR				SKP		05 14 43.5	
	comp=Z,0.7nm,0.6s,baz=35,slow=3.5,SNR=5.0						
MKAR	**Makanchi Array**	**118.73**	**4**	PKP	PKPdf	05 11 07.8	-2.4
MKAR				pPKP	pPKPdf	05 11 25.1	-2.6
MKAR				SKP		05 14 43.5	
MKAR	**Makanchi Array**	**118.73**	**4**	PKIKP	PKPdf	05 11 07.8	-2.4
BJI	**Beijing**	**119.58**	**335**	PKP	PKPdf	05 11 11.4	-0.7
BJI				SS	SS	05 28 53.8	+1.3
BJI				LR	LR		
	comp=N,660nm,27.3s,MS5.4						
BJI				LR	LR		
	comp=E,950nm,26.0s,MS5.4						
BJI				LR	LR		
	comp=Z,410nm,25.4s,MS5.0						
HHC	**Hu-ho-hao-te**	**120.61**	**339**	*e*PKP	PKPdf	05 11 11.3	-2.8
HHC				PKS		05 14 51.1	
HHC				SKS	SKSdf	05 18 16.3	-4.9
HHC				AMB	AMB		
	comp=Z,120nm,9.3s						
HHC				LR	LR		
	comp=N,250nm,20.6s,MS5.1						
HHC				LR	LR		
	comp=E,350nm,18.7s,MS5.1						
HHC				LR	LR		
	comp=Z,380nm,19.8s,MS5.0						
BOSA	**Boshof**	**120.79**	**115**	PKP	PKPdf	05 11 12.2	-2.4
	comp=Z,8.0nm,0.7s,baz=34,slow=1.7,SNR=8.5						
BOSA				pPKP	pPKPdf	05 11 28.8	-3.4
	comp=Z,9.2nm,0.9s,baz=288,slow=2.1,SNR=4.8						
BOSA				SKP		05 14 50.0	
	comp=Z,10.0nm,1.1s,baz=336,slow=2.7,SNR=4.7						
BOSA	**Boshof**	**120.79**	**115**	*e*PKPdf	PKPdf	05 11 12.6	-2.1
BOSA	**Boshof**	**120.79**	**115**	*e*PKIKP	PKPdf	05 11 12.6	-2.1
LBTB	**Lobatse**	**121.01**	**111**	*e*PKPdf	PKPdf	05 11 13.8	-1.3
LBTB	**Lobatse**	**121.01**	**111**	*e*PKIKP	PKPdf	05 11 13.8	-1.4
EKS2	**Erkin-Say**	**121.62**	**12**	*e*PKPdf	PKPdf	05 11 15.4	-0.6
TKM2	**Tokmak 2**	**121.71**	**10**	*e*PKPdf	PKPdf	05 11 14.7	-1.5
TKM2	**Tokmak 2**	**121.71**	**10**	*e*PKIKP	PKPdf	05 11 14.7	-1.4
AAK	**Ala-Archa**	**121.79**	**12**	PKP	PKPdf	05 11 15.4	-0.9
	baz=207,slow=2.3						
AAK	**Ala-Archa**	**121.79**	**12**	*e*PKPdf	PKPdf	05 11 15.2	-1.0
AAK				*ep*PKPdf	pPKPdf	05 11 31.9	-1.9
AAK	**Ala-Archa**	**121.79**	**12**	*e*PKIKP	PKPdf	05 11 15.2	-1.1
AAK				*e*		05 11 31.9	
WMQ	**Urumqi**	**121.90**	**0**	PKP	PKPdf	05 11 14.0	-2.4
LSZ	**Lusaka**	**122.58**	**99**	*e*PKPdf	PKPdf	05 11 16.6	-1.8
LSZ	**Lusaka**	**122.58**	**99**	*e*PKIKP	PKPdf	05 11 16.7	-1.7
NJ2	**Nanjing**	**124.90**	**328**	*e*PKP	PKPdf	05 11 23.1	+0.6
KSH	**Kashi**	**125.08**	**11**	*e*PKP	PKPdf	05 11 22.6	-0.1
KSH				*es*PKP		05 11 37.0	
KSH				*e*PKS		05 14 58.0	
KSH				*e*SKS	SKSdf	05 18 29.6	-0.1
KSH				AMB	AMB		
	comp=Z,72nm,3.8s						
KSH				LR	LR		
	comp=N,490nm,11.9s,MS5.7						
KSH				LR	LR		
	comp=E,1μm,15.3s,MS5.7						
KSH				LR	LR		
	comp=Z,750nm,15.6s,MS5.5						
GTA	**Gaotai**	**125.14**	**349**	PKP	PKPdf	05 11 21.5	-1.3
GTA				sPKP		05 11 38.0	
GTA				PP	PP	05 13 15.3	+4.1
GTA				SKS	SKSdf	05 18 28.4	-1.4
GTA				SKKS	SKKSac	05 20 02.8	-2.9
GTA				SS	SS	05 30 05.8	+3.2
GTA				AMB	AMB		
	comp=Z,56nm,5.7s						
GTA				LR	LR		
	comp=N,1μm,16.4s,MS5.7						
GTA				LR	LR		
	comp=E,650nm,16.1s,MS5.7						
GTA				LR	LR		
	comp=Z,490nm,16.6s,MS5.2						
LZH	**Lanzhou**	**127.38**	**344**	*e*PKP	PKPdf	05 11 26.3	-0.9
LZH				sPKP		05 11 43.0	
LZH				LR	LR		
	comp=N,1μm,16.9s,MS5.8						
LZH				LR	LR		
	comp=E,740nm,12.9s,MS5.8						
LZH				LR	LR		
	comp=Z,1μm,20.3s						
XAN	**Xi'an**	**127.64**	**338**	PKP	PKPdf	05 11 26.0	-1.7
XAN				LR	LR		
	comp=N,630nm,23.4s,MS5.3						
XAN				LR	LR		
	comp=E,460nm,22.6s,MS5.3						
XAN				LR	LR		
	comp=Z,440nm,19.3s,MS5.2						
STKA	**Stephens Creek**	**128.14**	**241**	PKP	PKPdf	05 11 26.6	-2.1
	comp=Z,14nm,0.9s,baz=52,slow=2.1,SNR=12						
KMBO	**Kilima Mbogo**	**128.34**	**80**	PKP	PKPdf	05 11 29.4	-0.2
	comp=Z,1.1nm,0.6s,baz=180,slow=24,SNR=4.7						
KMBO				pPKP	pPKPdf	05 11 46.5	-0.6
	comp=Z,0.9nm,0.4s,baz=180,slow=24,SNR=3.3						
KMBO	**Kilima Mbogo**	**128.34**	**80**	PKIKP	PKPdf	05 11 29.4	-0.2
WHN	**Wuhan**	**128.37**	**331**	*e*PKP	PKPdf	05 11 27.5	-1.7
WHN				PP	PP	05 13 35.5	+2.5
ATD	**Arta Tunnel**	**128.48**	**62**	PKP	PKPdf	05 11 29.1	-0.7
	comp=Z,6.7nm,0.7s,baz=129,slow=22,SNR=7.8						
ATD				pPKP	pPKPdf	05 11 46.1	-1.3
	comp=Z,18nm,0.9s,baz=264,slow=23,SNR=5.3						
ENH	**Enshi**	**130.76**	**335**	*e*PKPdf	PKPdf	05 11 32.0	-1.7
ENH				*ep*PKPdf	pPKPdf	05 11 49.2	-2.1
CD2	**Chengdu**	**132.24**	**341**	PKP	PKPdf	05 11 33.3	-3.3
CD2				sPKP		05 11 53.8	
CD2				PP	PP	05 13 58.9	+1.0
CD2				PKS		05 15 08.3	
CD2				SKS	SKSdf	05 18 39.4	-3.8
CD2				SKKS	SKKSac	05 20 45.8	-4.5
CD2				SS	SS	05 31 30.8	+0.1
CD2				AMB	AMB		
	comp=Z,70nm,9.5s						
CD2				LR	LR		
	comp=N,1μm,20.2s,MS5.7						
CD2				LR	LR		
	comp=E,930nm,17.8s,MS5.7						
CD2				LR	LR		
	comp=Z,1μm,16.6s,MS5.7						
GYA	**Guiyang**	**135.27**	**336**	Pdif	Pdif	05 08 42.0	-2.0
GYA				PKP	PKPdf	05 11 40.0	-2.4
GYA				sPKP		05 12 03.3	
GYA				PP	PP	05 14 19.8	+2.5
GYA				PKS		05 15 16.3	
GYA				SKKS	SKKSac	05 21 04.3	-4.6
GYA				SS	SS	05 32 08.0	+0.4
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,180nm,22.9s,MS4.8						
GYA				LR	LR		
	comp=E,120nm,24.0s,MS4.8						
GYA				LR	LR		
	comp=Z,140nm,23.9s,MS4.6						
WRA	**Warramunga Arr**	**135.32**	**256**	PKhKP	PKPpre	05 11 25.0	
	comp=Z,0.3nm,0.7s,baz=92,slow=3.2,SNR=4.9						
WRA				PKP	PKPdf	05 11 40.2	-2.3
	comp=Z,6.2nm,0.8s,baz=76,slow=1.3,SNR=19						
WRA				SKPab		05 15 19.1	
	comp=Z,1.6nm,0.8s,baz=87,slow=2.8,SNR=5.9						
WRA	**Warramunga Arr**	**135.32**	**256**	PKP	PKPpre	05 11 25.0	
WRA				PKP	PKPdf	05 11 40.2	-2.3
WRA				SKPab		05 15 19.1	
WRA	**Warramunga Arr**	**135.32**	**256**	PKHKP	PKPpre	05 11 25.0	
WRA						05 11 40.2	
ASAR	**Alice Springs**	**135.64**	**251**	PKhKP	PKPpre	05 11 23.8	
	comp=Z,0.8nm,0.7s,baz=121,slow=3.5,SNR=4.8						
ASAR				PKP	PKPdf	05 11 40.5	-2.6
	comp=Z,2.3nm,0.8s,baz=84,slow=0.7,SNR=10.0						
ASAR	**Alice Springs**	**135.64**	**251**	PKHKP	PKPpre	05 11 23.8	
ASAR						05 11 40.5	
LSA	**Lhasa**	**135.87**	**356**	*e*PKPdf	PKPdf	05 11 42.4	-1.0
LSA	**Lhasa**	**135.87**	**356**	*e*PKIKP	PKPdf	05 11 42.4	-1.0
GKN	**Gorkha**	**137.57**	**4**	*e*P	PKPdf	05 11 44.3	-2.3
	comp=Z,70nm,1.3s						
PKI	**Pulchoki**	**138.05**	**3**	*e*P	PKPdf	05 11 45.7	-1.8
	comp=Z,44nm,1.1s						
PKI	**Pulchoki**	**138.05**	**3**	*e*PKIKP	PKPdf	05 11 45.7	-1.8
TAPN	**Taplejung**	**138.33**	**0**	*e*P	PKPdf	05 11 38.8	-9.2
	comp=Z,82nm,1.3s						
ODAN	**Odare**	**138.82**	**1**	*e*P	PKPdf	05 11 46.3	-2.6
	comp=Z,35nm,1.2s						
QIZ	**Qiongzhong**	**140.16**	**326**	PKP	PKPdf	05 11 50.3	-1.2
QIZ				PP	PP	05 14 48.4	+0.3
QIZ				SS	SS	05 33 06.8	+0.6
QIZ				LR	LR		
	comp=N,370nm,22.7s,MS5.2						
QIZ				LR	LR		
	comp=E,320nm,22.7s,MS5.2						
QIZ				LR	LR		
	comp=Z,550nm,18.8s,MS5.3						
MRSI	**Marisa**	**143.04**	**291**	P	PKPdf	05 11 49.9	-6.9
	comp=Z,0.1nmcomp=Z,20nm,1.1s						
KDI	**Kendari**	**144.09**	**284**	P	PKPdf	05 11 55.2	-3.5
CHTO	**Chiang Mai**	**145.05**	**341**	*e*PKPbc	PKPbc	05 11 57.3	-2.3
CHTO				*ep*PKPdf	pPKPdf	05 12 13.6	-4.2
CHTO	**Chiang Mai**	**145.05**	**341**	*e*PKIKP	PKPdf	05 11 57.3	-2.9
CHTO				*e*		05 12 13.6	
KKM	**Kota Kinabalu**	**145.14**	**304**	*e*PKPbc	PKPbc	05 11 58.5	-1.6
CMAR	**Chiang Mai Arr**	**145.39**	**341**	PKPbc	PKPbc	05 11 59.0	-1.7
	comp=Z,46nm,0.9s,baz=343,slow=4.2,SNR=150						
CMAR				pPKPbc	pPKPbc	05 12 15.6	-2.5
	comp=Z,47nm,0.9s,baz=343,slow=4.2,SNR=12						
CMAR	**Chiang Mai Arr**	**145.39**	**341**	PKP2	PKPab	05 11 59.0	-1.8
TTSI	**Tana Toraja**	**146.38**	**287**	P	PKPdf	05 12 01.9	-0.7
	comp=Z,26nm,1.0s						
SPSI	**Sidrap Palu**	**146.76**	**285**	P	PKPdf	05 12 03.1	-0.2
	comp=Z,2μmcomp=Z,78nm,1.1s						
BKSI	**Bulukumba**	**146.88**	**283**	P	PKPdf	05 12 02.7	-0.8
BKSI	**Bulukumba**	**146.88**	**283**	P	PKPdf	05 12 02.8	-0.7
	comp=Z,536nmcomp=Z,46nm,1.1s						
HYB	**Hyderabad**	**146.94**	**16**	*i* PKP	PKPdf	05 12 03.0	-0.4
KAPI	**Kappang**	**147.13**	**284**	*e*PKPbc	PKPdf	05 12 03.0	-0.9
KAPI	**Kappang**	**147.13**	**284**	P	PKPdf	05 12 03.2	-0.7
KAPI	**Kappang**	**147.13**	**284**	P	PKPdf	05 12 02.8	-1.1
BMNI	**Bima**	**149.14**	**278**	P	PKPdf	05 12 07.4	+0.3
BMNI	**Bima**	**149.14**	**278**	P	PKPdf	05 12 07.0	-0.1
KBKI	**Kotabaru**	**149.84**	**289**	P	PKPdf	05 12 00.0	-8.3
MTNI	**Mataram**	**151.58**	**279**	P	PKPdf	05 12 13.5	+2.5
MTNI	**Mataram**	**151.58**	**279**	P	PKP

WHY	**Whitehorse**	**4.00 224**	⇓Pn		**Pn**	**05 17 11.0**	**-1.8**
WHY			⇑Pg		**Pg**	**05 17 23.2**	**-5.0**
WHY			⇓Sg		**Sg**	**05 18 11.7**	**-8.2**
DAWY	**Dawson**	**4.53 280**	*e*Pn		**Pn**	**05 17 19.0**	**-1.1**
DAWY			*e*Pg		**Pg**	**05 17 34.4**	**-4.0**
DAWY			*e*Sg		**Sg**	**05 18 38.3**	**+1.4**
DAWY	**Dawson**	**4.53 280**	⇓Pn		**Pn**	**05 17 19.3**	**-0.8**
DAWY			⇓Pg		**Pg**	**05 17 34.0**	**-4.3**
HYT	**Haines Junctio**	**4.80 238**	Pn		**Pn**	**05 17 22.8**	**-1.0**
HYT			Sg		**Sg**	**05 18 38.9**	**-6.5**
HYT	**Haines Junctio**	**4.80 238**	⇓Pn		**Pn**	**05 17 22.8**	**-1.0**
HYT			⇑Sg		**Sg**	**05 18 38.9**	**-6.5**
INK	**Inuvik**	**5.02 341**	Pn		**Pn**	**05 17 25.5**	**-1.2**
	78nm,0.3s,baz=166,slow=10,SNR=306						
INK			Pg		**Pg**	**05 17 42.1**	**-5.4**
	108nm,0.3s,baz=153,slow=16,SNR=22						
INK			Sn		**Sn**	**05 18 18.5**	**-6.1**
	62nm,0.3s,baz=212,slow=22,SNR=4.1						
INK			Lg			05 18 45.7	
	65nm,0.3s,baz=95,slow=21,SNR=7.5						
INK			LR		LR	05 19 44.5	
	comp=Z,6μm,19.0s,baz=157,slow=42						
INK	**Inuvik**	**5.02 341**	*e*Pn		**Pn**	**05 17 25.6**	**-1.1**
	31nm,1.3s						
INK			*e*Pg		**Pg**	**05 17 46.4**	**-1.2**
INK			*e*Sg		**Sg**	**05 18 49.3**	**-3.2**
INK	**Inuvik**	**5.02 341**	P		**Pn**	**05 17 25.5**	**-1.2**
INK						05 18 18.5	
INK			pmax		pmax		
	comp=Z,78nm,0.3s						
INK			pmax		pmax		
	comp=Z,108nm,0.3s						
INK			smax				
	comp=N,62nm,0.3s						
INK			MLR		MLR		
	comp=Z,6μm,19.0s						
INK	**Inuvik**	**5.02 341**	⇑Pn		**Pn**	**05 17 25.9**	**-0.8**
SKAG	**Skagway**	**5.11 218**	*e*Pn		**Pn**	**05 17 26.0**	**-2.0**
	comp=Z,3μm,0.8s						
SKAG			*e*Pg		**Pg**	**05 17 42.2**	**-7.2**
SKAG			*e*Sg		**Sg**	**05 18 48.4**	**-7.1**
DLBC	**Dease Lake**	**5.23 185**	Pn		**Pn**	**05 17 26.9**	**-2.8**
	comp=Z,52nm,0.3s,baz=4.3,slow=13,SNR=570						
DLBC			Pg		**Pg**	**05 17 42.6**	**-9.0**
	comp=Z,91nm,0.3s,baz=33,slow=3.8,SNR=13						
DLBC			Sn		**Sn**	**05 18 26.5**	**-3.4**
	comp=Z,217nm,0.3s,baz=198,slow=22,SNR=7.2						
DLBC			Lg			05 18 48.1	
	comp=Z,157nm,0.3s,baz=241,slow=22,SNR=7.0						
DLBC			LR		LR	05 19 47.3	
	comp=Z,9μm,19.1s,baz=360,slow=42						
DLBC	**Dease Lake**	**5.23 185**	*e*Pn		**Pn**	**05 17 26.8**	**-2.9**
DLBC			*e*Sg		**Sg**	**05 18 53.9**	**-5.4**
DLBC	**Dease Lake**	**5.23 185**	⇓Pn		**Pn**	**05 17 27.2**	**-2.5**
GALN	**Gameti Lake**	**5.28 79**	Pn		**Pn**	**05 17 27.1**	**-3.2**
GALN	**Gameti Lake**	**5.28 79**	⇓Pn		**Pn**	**05 17 27.1**	**-3.2**
EGAK	**Eagle**	**5.35 288**	*e*Pn		**Pn**	**05 17 30.2**	**-1.1**
	comp=Z,80nm,1.1s						
EGAK			*e*Pg		**Pg**	**05 17 48.5**	**-5.5**
EGAK			*e*Sg		**Sg**	**05 19 02.8**	**-0.3**
PLBC	**Pleasant Camp**	**5.41 223**	Pn		**Pn**	**05 17 31.3**	**-0.8**
PLBC			Pg		**Pg**	**05 17 48.1**	**-7.0**
PLBC	**Pleasant Camp**	**5.41 223**	⇓Pn		**Pn**	**05 17 31.4**	**-0.8**
PLBC			⇑Pg		**Pg**	**05 17 48.1**	**-7.0**
FNBB	**Fort Nelson**	**5.62 145**	Pn		**Pn**	**05 17 31.5**	**-3.5**
FNBB	**Fort Nelson**	**5.62 145**	⇑Pn		**Pn**	**05 17 31.5**	**-3.5**
CTLN	**Castor Lake**	**5.85 76**	Pn		**Pn**	**05 17 35.0**	**-3.2**
CTLN	**Castor Lake**	**5.85 76**	⇑Pn		**Pn**	**05 17 35.0**	**-3.2**
PNL	**Peninsula**	**6.27 235**	*e*Pn		**Pn**	**05 17 44.3**	**+0.3**
	comp=Z,1μm,0.9s						
PNL			*e*Sg		**Sg**	**05 19 24.0**	**-8.8**
MENT	**Mentasta**	**6.58 270**	*e*Pn		**Pn**	**05 17 46.9**	**-1.3**
MENT			*e*Sg		**Sg**	**05 19 41.8**	**-1.0**
DOT	**Dot Lake**	**6.62 277**	*e*Pn		**Pn**	**05 17 47.5**	**-1.2**
	comp=Z,39nm,1.2s						
DOT			*e*Pg		**Pg**	**05 18 12.6**	**-5.6**
YKW3	**Yellowknife Ar**	**6.71 93**	Pn		**Pn**	**05 17 46.4**	**-3.6**
YKW3			Sn		**Sn**	**05 18 57.9**	**-8.4**
YKW3	**Yellowknife Ar**	**6.71 93**	⇓Pn		**Pn**	**05 17 46.4**	**-3.6**
YKW3			⇓Sn		**Sn**	**05 18 57.9**	**-8.4**
YKA	**Yellowknife Ar**	**6.73 93**	Pn		**Pn**	**05 17 46.2**	**-4.0**
	comp=Z,24nm,0.3s,baz=282,slow=13,SNR=119						
YKA			Pg		**Pg**	**05 18 09.4**	**-11**
	comp=Z,32nm,0.3s,baz=281,slow=17,SNR=23						
YKA			Sn		**Sn**	**05 18 56.7**	**-10**
	comp=Z,44nm,0.3s,baz=283,slow=23,SNR=7.7						
YKA			Lg			05 19 34.0	
	comp=Z,46nm,0.3s,baz=279,slow=27,SNR=5.9						
YKA	**Yellowknife Ar**	**6.73 93**	Pn		**Pn**	**05 17 46.2**	**-4.0**
YKA			Pg		**Pg**	**05 18 09.4**	**-11**
YKA			Sn		**Sn**	**05 18 56.7**	**-10**
YKA			Lg			05 19 34.0	
YKA	**Yellowknife Ar**	**6.73 93**	P		**Pn**	**05 17 46.2**	**-4.1**
SIT	**Sitka**	**7.26 207**	*e*Pn		**Pn**	**05 17 55.5**	**-2.1**
	comp=Z,484nm,0.8s						
SIT			*e*Sg		**Sg**	**05 20 03.3**	**-1.1**
SIT	**Sitka**	**7.26 207**	*e*P		**Pn**	**05 17 55.5**	**-2.1**
SIT			pmax		pmax		
	comp=Z,484nm,0.8s						
PAX	**Paxson**	**7.36 272**	*e*Pn		**Pn**	**05 17 59.5**	**+0.6**
	comp=Z,272nm,0.8s						
PAX			*e*Sg		**Sg**	**05 20 04.0**	**-3.5**
PAX	**Paxson**	**7.36 272**	*e*P		**Pn**	**05 17 59.5**	**+0.6**
PAX			pmax		pmax		
	comp=Z,272nm,0.8s						
WRAK	**Wrangell Islan**	**7.41 194**	*e*Pn		**Pn**	**05 17 57.1**	**-2.4**
	comp=Z,684nm,0.8s						
WRAK			*e*Sg		**Sg**	**05 20 04.9**	**-4.1**
ILAR	**Eielson Array**	**7.80 286**	Pn		**Pn**	**05 18 03.4**	**-1.5**
	comp=Z,12nm,0.3s,baz=97,slow=10,SNR=395						
ILAR			Lg			05 20 15.8	
	comp=Z,35nm,0.3s,baz=88,slow=25,SNR=6.1						
ILAR	**Eielson Array**	**7.80 286**	P		**Pn**	**05 18 03.4**	**-1.5**
JERN	**Jeri Cho Mine,**	**7.92 65**	⇑Pn		**Pn**	**05 18 02.5**	**-4.2**
JERN			⇑Sn		**Sn**	**05 19 27.2**	**-8.9**
COLA	**College**	**8.21 287**	*e*Pn		**Pn**	**05 18 10.3**	**-0.2**
	comp=Z,126nm,0.7s						
COLA			*e*Sg		Sn	05 20 34.1	+51
COLA	**College**	**8.21 287**	*e*P		**Pn**	**05 18 10.3**	**-0.3**
COLA			pmax		pmax		
	comp=Z,126nm,0.7s						
CRAG	**Craig**	**8.43 195**	*e*Pn		**Pn**	**05 18 11.2**	**-2.3**
	comp=Z,372nm,1.0s						
CRAG			*e*Sg		Sn	05 20 30.5	+42
MCK	**McKinley**	**8.76 280**	*e*Pn		**Pn**	**05 18 17.7**	**-0.4**
	comp=Z,179nm,1.0s						
MCK	**McKinley**	**8.76 280**	*e*P		**Pn**	**05 18 17.7**	**-0.4**
MCK			pmax		pmax		
	comp=Z,179nm,1.0s						
SML	**Sawmill**	**8.97 267**	*e*Pn		**Pn**	**05 18 22.2**	**+1.3**
	comp=Z,2.2nm,0.4s						
SML	**Sawmill**	**8.97 267**	*e*P		**Pn**	**05 18 22.2**	**+1.3**
SML			pmax		pmax		
	comp=Z,2.0nm,0.4s						
PMR	**Palmer**	**9.40 266**	*e*Pn		**Pn**	**05 18 28.3**	**+1.4**
	comp=Z,240nm,1.3s						
PMR	**Palmer**	**9.40 266**	*e*P		**Pn**	**05 18 28.3**	**+1.4**
PMR			pmax		pmax		
	comp=Z,240nm,1.3s						
TRF	**Thorofare Moun**	**9.40 278**	*e*Pn		**Pn**	**05 18 26.8**	**-0.1**
	comp=Z,2.1nm,0.4s						
COLD	**Coldfoot**	**9.44 302**	*e*Pn		**Pn**	**05 18 27.3**	**-0.1**
	comp=Z,198nm,0.6s						
FSB	**Fort Saint Jam**	**9.52 163**	Pn		**Pn**	**05 18 26.1**	**-2.4**
FSB	**Fort Saint Jam**	**9.52 163**	⇑Pn		**Pn**	**05 18 26.1**	**-2.4**
BPAW	**Bear Paw Mtn.**	**9.61 283**	*e*Pn		**Pn**	**05 18 28.6**	**-1.2**
	comp=Z,20nm,0.9s						
RC01	**Rabbit Creek A**	**9.86 264**	*e*Pn		**Pn**	**05 18 35.5**	**+2.3**
	comp=Z,268nm,1.2s						
NDB	**Naden**	**9.90 193**	Pn		**Pn**	**05 18 32.3**	**-1.4**
NDB	**Naden**	**9.90 193**	⇑Pn		**Pn**	**05 18 32.3**	**-1.4**
SEW	**Seward**	**10.18 259**	*e*Pn		**Pn**	**05 18 36.8**	**-0.7**
	comp=Z,102nm,1.3s						
SLKM	**Skilak Lake**	**10.33 262**	*e*Pn		**Pn**	**05 18 40.9**	**+1.3**
SLKM	**Skilak Lake**	**10.33 262**	*e*P		**Pn**	**05 18 40.9**	**+1.3**
PPLA	**Purkeypile**	**10.37 276**	*e*Pn		**Pn**	**05 18 41.2**	**+1.1**
	comp=Z,59nm,1.1s						
RSO	**Redoubt South**	**11.47 265**	*e*Pn		**Pn**	**05 18 56.1**	**+0.9**
	comp=Z,78nm,1.2s						
BBB	**Bella Bella**	**11.49 177**	Pn		**Pn**	**05 18 55.0**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=177,slow=12,SNR=25						
BBB			Lg			05 21 59.2	
	comp=Z,3.2nm,0.3s,baz=142,slow=15,SNR=13						
BBB			LR		LR	05 23 13.7	
	comp=Z,4μm,22.0s,baz=177,slow=37						
BBB	**Bella Bella**	**11.49 177**	Pn		**Pn**	**05 18 55.0**	**-0.5**
BBB			Lg			05 21 59.2	
BBB			LR		LR	05 23 13.7	
TTA	**Tatalina**	**12.05 279**	*e*Pn		**Pn**	**05 19 02.8**	**-0.3**
	comp=Z,135nm,1.1s						
TTA	**Tatalina**	**12.05 279**	*e*P		**Pn**	**05 19 02.8**	**-0.3**
TTA			pmax		pmax		
	comp=Z,135nm,1.1s						
KDAK	**Kodiak Island**	**12.81 254**	Pn		**Pn**	**05 19 13.3**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=65,slow=7.1,SNR=5.6						
KDAK			LR		LR	05 24 07.0	
	comp=Z,3μm,19.0s,baz=23,slow=37						
KDAK	**Kodiak Island**	**12.81 254**	*e*Pn		**Pn**	**05 19 12.7**	**-0.8**
	comp=Z,53nm,1.0s						
KDAK	**Kodiak Island**	**12.81 254**	*e*P		**Pn**	**05 19 12.7**	**-0.8**
KDAK			pmax		pmax		
	comp=Z,53nm,1.0s						
OHAK	**Old Harbor**	**13.45 253**	*e*Pn		**Pn**	**05 19 24.6**	**+2.3**
	comp=Z,90nm,1.0s						
VDB	**Vedder Mountai**	**15.14 162**	P		**Pn**	**05 19 43.6**	**-1.7**
A05A	**Maple Falls**	**15.18 162**	P		**Pn**	**05 19 44.5**	**-1.2**
	baz=15,SNR=15						
PGC	**Sidney**	**15.35 165**	*e*P		**Pn**	**05 19 45.8**	**-2.1**
	comp=Z,8.2nm,1.2s						
B06A	**Marblemount**	**15.73 161**	⇓P		**Pn**	**05 19 52.0**	**-0.9**
	baz=16						
RPW	**Rockport**	**15.79 161**	*e*P		**Pn**	**05 19 51.9**	**-1.8**
	comp=Z,2μm,1.2s						
JCW	**Jim Creek**	**15.98 162**	P		**Pn**	**05 19 54.9**	**-1.3**
RES	**Resolute Bay**	**16.13 33**	Pn		**Pn**	**05 19 52.7**	**-5.3**
	comp=Z,16nm,0.3s,baz=244,slow=14,SNR=23						
RES			Sn		**Sn**	**05 22 41.4**	**-15**
	comp=Z,4.5nm,0.3s,baz=298,slow=13,SNR=5.2						
RES			Lg			05 24 30.8	
	comp=Z,2.1nm,0.3s,baz=173,slow=17,SNR=2.3						
RES			LR		LR	05 27 02.2	
	comp=Z,1μm,20.3s,baz=242,slow=40						
RES	**Resolute Bay**	**16.13 33**	*e*P		**Pn**	**05 19 52.6**	**-5.4**
	comp=Z,227nm,0.7s						
RES	**Resolute Bay**	**16.13 33**	P		**Pn**	**05 19 52.7**	**-5.3**
RES			pmax		pmax		
	comp=Z,16nm,0.3s						
RES			MLR		MLR		
	comp=Z,1μm,20.3s						
CHGN	**Chignik**	**16.24 257**	*e*P		**Pn**	**05 19 57.8**	**-1.6**
B08A	**Colville Reser**	**16.24 156**	⇑P		**Pn**	**05 19 57.2**	**-2.3**
	baz=16,SNR=36						
NLW	**Nelson Butte**	**16.34 158**	P		**Pn**	**05 19 59.4**	**-1.3**
FFC	**Flin Flon**	**16.43 110**	Pn		**Pn**	**05 19 52.6**	**-9.3**
	comp=Z,1μm,1.0s,SNR=19						
A12A	**Yaak River Ran**	**16.48 147**	⇓P		**Pn**	**05 19 58.8**	**-3.8**
	baz=16						
GNW	**Green Mountain**	**16.49 165**	*e*P		**Pn**	**05 20 01.2**	**-1.5**
	comp=Z,141nm,1.2s						
NLWA	**Neilton Lookou**	**16.55 167**	*e*P		**Pn**	**05 20 01.9**	**-1.5**
	comp=Z,114nm,1.1s						
TNA	**Tin City**	**16.55 294**	*e*P		**Pn**	**05 20 05.1**	**+1.8**
	comp=Z,214nm,1.4s						
RMW	**Rattlesnake Mo**	**16.72 162**	P		**Pn**	**05 20 03.5**	**-2.1**
RMW	**Rattlesnake Mo**	**16.72 162**	P		**Pn**	**05 20 03.6**	**-2.0**
WTV	**Waterville**	**16.77 158**	P		**Pn**	**05 20 05.4**	**-0.8**
NEW	**Newport**	**16.77 151**	P		**Pn**	**05 20 02.8**	**-3.5**
	baz=17,SNR=72						
NEW	**Newport**	**16.77 151**	*e*P		**Pn**	**05 20 03.3**	**-3.0**
	comp=Z,2μm,0.9s						
NEW	**Newport**	**16.77 151**	*e*P		**Pn**	**05 20 03.3**	**-3.0**
NEW			pmax		pmax		
	comp=Z,2μm,0.9s						
A13A	**Flathead Natio**	**16.79 144**	⇓P		**Pn**	**05 20 01.5**	**-5.1**
	baz=17						
ETW	**Entiat**	**16.80 159**	P		**Pn**	**05 20 05.7**	**-0.9**
WALA	**Waterton Lakes**	**16.81 143**	*e*P		**Pn**	**05 20 00.6**	**-6.2**
	comp=Z,1.6nm,2.1s						
B12A	**Libby**	**16.93 147**	⇑P		**Pn**	**05 20 05.4**	**-2.8**
	baz=17						
D05A	**Enumclaw**	**16.96 163**	⇑P		**Pn**	**05 20 07.3**	**-1.4**
	baz=17,SNR=38						
C09A	**Chrisman Ranch**	**16.98 154**	⇑P		**Pn**	**05 20 09.8**	**+0.9**
	baz=17,SNR=11						
A14A	**Double T Ranch**	**17.02 142**	P		**Pn**	**05 20 03.6**	**-5.8**
	baz=17,SNR=27						
TBM	**Table Mountain**	**17.18 160**	P		**Pn**	**05 20 09.9**	**-1.5**
A15A	**Johnson Ranch,**	**17.21 141**	P		**Pn**	**05 20 06.5**	**-5.2**
	baz=17,SNR=33						
OD2	**Odessa Site #2**	**17.29 155**	P		**Pn**	**05 20 10.6**	**-2.1**
B13A	**Whitefish**	**17.30 145**	⇑P		**Pn**	**05 20 07.6**	**-5.2**
	baz=17,SNR=46						
C11A	**Tepee Creek (N**	**17.36 150**	⇑P		**Pn**	**05 20 10.6**	**-3.1**
	baz=17,SNR=24						
E03A	**Lebam**	**17.41 167**	⇑P		**Pn**	**05 20 11.8**	**-2.5**
	baz=17,SNR=16						
LON	**Longmire**	**17.42 163**	*e*P		**Pn**	**05 20 12.4**	**-1.9**
	comp=Z,65nm,0.9s						
LON	**Longmire**	**17.42 163**	*e*P		**Pn**	**05 20 12.4**	**-1.9**
LON			pmax		pmax		
	comp=Z,65nm,0.9s						
FCC	**Fort Churchill**	**17.44 90**	*e*P		**Pn**	**05 20 08.8**	**-5.9**
	comp=Z,2.7nm,0.6s						
FCC	**Fort Churchill**	**17.44 90**	*e*P		**Pn**	**05 20 08.8**	**-5.8**
FCC			pmax		pmax		
	comp=Z,3.0nm,0.6s						
A16A	**West Butte Ran**	**17.56 139**	⇑P		**Pn**	**05 20 11.2**	**-4.9**
	baz=17						
D08A	**Wollman Farm,**	**17.57 156**	⇓P		**Pn**	**05 20 14.1**	**-2.1**
	baz=18,SNR=69						
B14A	**Marquette Ranc**	**17.62 143**	⇓P		**Pn**	**05 20 12.5**	**-4.4**
	baz=18,SNR=36						
BLMT	**Blacktail Moun**	**17.66 145**	*e*P		**Pn**	**05 20 14.8**	**-2.6**
	comp=Z,544nm,1.1s						
C12B	**Naegeli Ranch,**	**17.67 148**	⇑P		**Pn**	**05 20 14.2**	**-3.3**
	baz=18,SNR=11						
BSMT	**Bassoo Peak**	**17.70 147**	*e*P		**Pn**	**05 20 13.5**	**-4.4**
	comp=Z,5.5nm,0.4s						
SDPT	**Sand Point**	**17.74 257**	*e*P		**Pn**	**05 20 17.4**	**-0.9**
	comp=Z,235nm,0.9s						
A17A	**Triple J Farms**	**17.84 137**	⇑P		**Pn**	**05 20 15.3**	**-4.2**
	baz=18,SNR=75						
B15A	**Bradely Ranch,**	**17.86 141**	⇑P		**Pn**	**05 20 15.0**	**-4.9**
	baz=18,SNR=22						
GBB	**Gable Butte**	**17.88 158**	P		**Pn**	**05 20 18.4**	**-1.7**
YBMT	**Yellow Bay**	**17.88 145**	*e*P		**Pn**	**05 20 15.2**	**-4.9**
	comp=Z,190nm,1.6s						
E07A	**Sunnyside**	**17.89 159**	⇑P		**Pn**	**05 20 18.7**	**-1.5**
	baz=18,SNR=28						
C13A	**Hot Springs**	**17.91 146**	⇑P		**Pn**	**05 20 16.4**	**-4.1**
	baz=18						
JTMT	**Jette**	**17.92 146**	*e*P		**Pn**	**05 20 16.3**	**-4.3**
	comp=Z,356nm,1.5s						
F03A	**Seaside**	**18.02 167**	⇑P		**Pn**	**05 20 19.6**	**-2.2**
	baz=18,SNR=8.0						
C14A	**Swan Lake**	**18.04 145**	⇑P		**Pn**	**05 20 17.7**	**-4.4**
	baz=18						
E08A	**Dider Farm, El**	**18.09 157**	⇑P		**Pn**	**05 20 21.2**	**-1.5**
	baz=18						
RSW	**Rattlesnake Hi**	**18.09 158**	*e*P		**Pn**	**05 20 21.4**	**-1.4**
	comp=Z,72nm,1.0s						
HAWA	**Hanford**	**18.11 158**	*e*P		**Pn**	**05 20 20.2**	**-2.7**
	comp=Z,2μm,0.9s						
A18A	**Metzger Ranch,**	**18.12 135**	⇓P		**Pn**	**05 20 18.9**	**-4.1**
	baz=18,SNR=29						
F04A	**Amboy**	**18.14 165**	⇑P		**Pn**	**05 20 22.4**	**-0.9**
	baz=18,SNR=53						
SWMT	**Swartz Lake**	**18.21 145**	*e*P		**Pn**	**05 20 19.8**	**-4.4**
	comp=Z,417nm,1.0s						
E09A	**Wood Farm, Sta**	**18.23 155**	⇓P		**Pn**	**05 20 21.6**	**-2.8**
	baz=18,SNR=28						
D12A	**Red Ives Fores**	**18.31 149**	⇓P		**Pn**	**05 20 22.5**	**-2.9**
	baz=18						
C15A	**Salmond Ranch,**	**18.34 142**	⇑P		**Pn**	**05 20 22.6**	**-3.1**
	baz=18,SNR=20						
B17A	**L&G Farms, Che**	**18.39 138**	⇑P		**Pn**	**05 20 23.1**	**-3.2**
	baz=18,SNR=23						
A19A	**Klindworth Far**	**18.47 133**	P		**Pn**	**05 20 21.9**	**-5.3**
	baz=18,SNR=47						
D13A	**Huson**	**18.49 147**	⇓P		**Pn**	**05 20 25.4**	**-2.2**
	baz=18,SNR=38						
F07A	**Phinny Hill Vi**	**18.52 159**	⇓P		**Pn**	**05 20 26.6**	**-1.4**
	baz=18,SNR=9.7						
C16A	**Fuhringer Ranc**	**18.55 141**	⇑P		**Pn**	**05 20 23.4**	**-4.9**
	baz=18,SNR=28						
SLMT	**Seeley Lake**	**18.59 145**	*e*P		**Pn**	**05 20 23.6**	**-5.2**
	comp=Z,78nm,1.4s						
B18A	**Beardsley Farm**	**18.61 136**	⇑P		**Pn**	**05 20 25.9**	**-3.1**
	baz=18,SNR=64						
VLL	**Laurance Lake**	**18.70 163**	P		**Pn**	**05 20 29.8**	**-0.3**
HEBO	**Mount Hebo**	**18.71 168**	*e*P		**Pn**	**05 20 31.5**	**+1.2**
	comp=Z,102nm,1.1s						
D14A	**Greenough**	**18.74 145**	⇓P		**Pn**	**05 20 27.6**	**-3.0**
	baz=19,SNR=41						
A20A	**Cobblestone Ra**	**18.78 132**	⇓P		**Pn**	**05 20 26.3**	**-4.8**
	baz=19,SNR=74						
B19A	**Brinkman Farms**	**18.82 134**	⇑P		**Pn**	**05 20 28.1**	**-3.4**
	baz=19,SNR=8.3						
LNOR	**Lincton Mounta**	**18.83 156**	*e*P		**Pn**	**05 20 30.6**	**-1.1**
	comp=Z,14nm,0.3s						
LNOR	**Lincton Mounta**	**18.83 156**	*e*P		**Pn**	**05 20 30.6**	**-1.1**
LNOR			pmax		pmax		
	comp=Z,14nm,0.3s						
HOOD	**Mount Hood Mea**	**18.84 163**	*e*P		**Pn**	**05 20 31.4**	**-0.4**
	comp=Z,127nm,0.9s						
G04A	**Mulino**	**18.85 165**	P		**Pn**	**05 20 30.7**	**-1.3**
	baz=19,SNR=47						
MSO	**Missoula**	**18.86 146**	⇓P		**Pn**	**05 20 29.3**	**-2.8**
	baz=19,SNR=25						
MSO	**Missoula**	**18.86 146**	*e*P		**Pn**	**05 20 29.2**	**-2.9**
	comp=Z,42nm,0.9s						
E12A	**Beaver Dam Sad**	**18.86 150**	P		**Pn**	**05 20 29.5**	**-2.6**
	baz=19,SNR=34						
F10A	**Beach Ranch, E**	**18.93 154**	⇑P		**Pn**	**05 20 31.4**	**-1.6**
	baz=19,SNR=33						
EGMT	**Eagleton**	**18.94 136**	P		**Pn**	**05 20 28.6**	**-4.4**
	baz=19,SNR=47						
EGMT	**Eagleton**	**18.94 136**	*e*P		**Pn**	**05 20 27.9**	**-5.1**
	comp=Z,2μm,0.9s						
CHMT	**Chamberlain Mo**	**18.96 145**	*e*P		**Pn**	**05 20 28.9**	**-4.3**
	comp=Z,121nm,1.0s						
C17A	**Wharram Farm,**	**18.99 139**	⇑P		**Pn**	**05 20 31.2**	**-2.4**
	baz=19,SNR=33						
D15A	**Lincoln**	**19.03 143**	⇑P		**Pn**	**05 20 32.5**	**-1.6**
	baz=19,SNR=24						
G06A	**Carlson Farm,**	**19.06 161**	P		**Pn**	**05 20 33.4**	**-1.1**
	baz=19,SNR=78						
B20A	**Solberg Farm,**	**19.13 133**	P		**Pn**	**05 20 31.2**	**-4.0**
	baz=19,SNR=32						
E13A	**Victor**	**19.16 147**	P		**Pn**	**05 20 32.8**	**-2.9**
	baz=19,SNR=56						
G08A	**Pilot Rock**	**19.27 158**	⇑P		**Pn**	**05 20 34.6**	**-2.4**
	baz=19,SNR=61						
D16A	**Dana Ranch, Ca**	**19.31 141**	P		**Pn**	**05 20 33.5**	**-4.0**
	baz=19,SNR=26						
E14A	**Clinton**	**19.36 146**	P		**Pn**	**05 20 35.4**	**-2.7**
	baz=19,SNR=29						
COR	**Corvallis**	**19.38 167**	*e*P		**Pn**	**05 20 37.4**	**-0.9**
	comp=Z,122nm,1.1s						
COR	**Corvallis**	**19.38 167**	*e*P		**Pn**	**05 20 37.4**	**-0.9**
COR			pmax		pmax		
	comp=Z,122nm,1.1s						
H04A	**Detroit Lake**	**19.40 165**	⇑P		**Pn**	**05 20 36.4**	**-2.2**
	baz=19,SNR=54						
C19A	**Slack Wire Ran**	**19.42 136**	⇑P		**Pn**	**05 20 36.0**	**-2.8**
	baz=19,SNR=38						
D17A	**Six Diamond Ra**	**19.45 139**	⇓P		**Pn**	**05 20 36.9**	**-2.2**
	baz=19,SNR=22						
B21A	**Ellsworth Farm**	**19.47 131**	⇓P		**Pn**	**05 20 34.8**	**-4.6**
	baz=19,SNR=29						
HRY	**Holter Researc**	**19.52 142**	*e*P		**Pn**	**05 20 36.3**	**-3.8**
	comp=Z,130nm,0.9s						
F12A	**Elk City**	**19.56 150**	P		**Pn**	**05 20 37.4**	**-3.1**
	baz=19,SNR=42						
E15A	**Deer Lodge**	**19.57 144**	⇑P		**Pn**	**05 20 38.3**	**-2.3**
	baz=19,SNR=41						
D18A	**Linhart Farms,**	**19.67 138**	P		**Pn**	**05 20 39.0**	**-2.7**
	baz=20,SNR=78						
E16A	**East Helena**	**19.73 142**	⇑P		**Pn**	**05 20 39.7**	**-2.8**
	baz=20,SNR=17						
F13A	**Darby**	**19.74 148**	⇑P		**Pn**	**05 20 39.5**	**-3.1**
	baz=20,SNR=65						
A23A	**Redstone**	**19.76 127**	⇑P		**Pn**	**05 20 39.8**	**-3.1**
	baz=20						
C20A	**Veseth Ranch,**	**19.77 134**	P		**Pn**	**05 20 39.0**	**-4.0**
	baz=20,SNR=34						
VIPM	**Ingram Point**	**19.78 162**	P		**Pn**	**05 20 40.7**	**-2.4**
VIPM	**Ingram Point**	**19.78 162**	P		**Pn**	**05 20 40.7**	**-2.4**
B22A	**Re

baz=21,SNR=28
LAO LASA Array 21.25 132 eP P 05 20 57.0 -0.5
comp=Z,35nm,0.4s,mb5.0
H15A Lima 21.25 146 P P 05 20 56.3 -1.2
baz=21,SNR=82
QLMT Earthquake Lak 21.37 143 eP P 05 20 57.8 -0.9
comp=Z,51nm,1.5s,mb4.6
UNV Unalaska Valle 21.37 260 eP P 05 20 58.2 -0.5
comp=Z,102nm,1.0s,mb5.1
HUMO Hull Mountain 21.37 167 eP P 05 20 58.3 -0.5
comp=Z,98nm,1.1s,mb5.0
F20A Billings 21.42 137 ⇓P P 05 20 59.9 +0.6
baz=21,SNR=24
G18A Lazy EL Ranch, 21.44 140 ⇓P P 05 20 58.4 -1.2
baz=21,SNR=38
I12A Atlanta 21.45 151 ⇑P P 05 20 58.7 -0.9
baz=21,SNR=185
K05A Summer Lake 21.49 163 P P 05 21 00.4 +0.3
baz=21,SNR=167
D24A Glendive 21.52 128 ⇓P P 05 21 01.0 +0.5
baz=21
H16A Russell Place, 21.53 143 ⇓P P 05 20 59.7 -0.8
baz=21,SNR=38
I13A Wildhorse Cree 21.56 149 P P 05 20 59.2 -1.7
baz=21,SNR=83
YMR Madison River 21.64 143 eP P 05 21 01.4 -0.4
comp=Z,2μm,1.6s,mb6.2
KBO Bosley Butte 21.65 170 eP P 05 21 04.6 +2.8
comp=Z,127nm,1.2s,mb5.2
MFID Camas Ranch 21.67 153 ⇓P P 05 21 01.1 -1.0
baz=22,SNR=25
YNR Norris Junctio 21.68 142 eP P 05 21 02.9 +0.8
comp=Z,76nm,1.1s,mb5.0
I14A Mackay 21.70 148 P P 05 21 01.2 -1.2
baz=22,SNR=64
RLMT Red Lodge 21.70 139 ⇑P P 05 21 02.2 -0.2
baz=22,SNR=63
RLMT Red Lodge 21.70 139 eP P 05 21 02.0 -0.3
comp=Z,87nm,1.3s,mb5.0
HLID Hailey 21.83 150 P P 05 21 02.5 -1.2
baz=22,SNR=99
HLID Hailey 21.83 150 eP P 05 21 02.2 -1.5
comp=Z,86nm,1.9s,mb4.9
I15A Monteview 21.87 146 ⇑P P 05 21 03.8 -0.4
baz=22,SNR=50
YFT Old Faithful 21.88 143 eP P 05 21 07.6 +3.3
comp=Z,77nm,1.2s,mb5.0
LKWY Lake 21.89 142 eP P 05 21 05.6 +1.2
comp=Z,48nm,1.0s,mb4.9
LKWY Lake 21.89 142 eP P 05 21 05.6 +1.2
LKWY pmax pmax
comp=Z,48nm,1.0s,mb4.9
G20A Bridger 21.93 137 P P 05 21 03.5 -1.2
baz=22,SNR=30
H18A Shoshone NF, C 22.00 140 ⇓P P 05 21 04.5 -1.1
baz=22,SNR=50
H17A Grant Village 22.00 142 ⇑P P 05 21 06.0 +0.4
baz=22,SNR=26
J13A Cove Ranch, Pi 22.04 150 ⇓P P 05 21 05.2 -0.8
baz=22,SNR=24
WVOR Wild Horse Val 22.11 159 eP P 05 21 07.6 +0.9
comp=Z,61nm,0.9s,mb5.0
WVOR Wild Horse Val 22.11 159 eP P 05 21 07.6 +0.9
WVOR pmax pmax
comp=Z,61nm,0.9s,mb5.0
H19A Powell 22.20 139 ⇑P P 05 21 07.5 -0.2
baz=22,SNR=64
G21A Lodge Grass 22.23 136 ⇑P P 05 21 08.1 +0.1
baz=22,SNR=13
I16A Newdale 22.24 144 ⇓P P 05 21 07.9 -0.2
baz=22,SNR=71
ULM Lac du Bonnet 22.25 111 P P 05 21 04.5 -3.6
comp=Z,142nm,0.9s,mb5.4,baz=316,slow=10,SNR=77
ULM S S 05 24 56.5 -16
comp=Z,38nm,0.7s,baz=70,slow=19,SNR=3.8
ULM Lg 05 27 29.5
comp=Z,50nm,0.9s,baz=224,slow=18,SNR=2.4
ULM LR LR 05 29 51.1
comp=Z,2μm,18.6s,MS4.6,baz=109,slow=37
ULM Lac du Bonnet 22.25 111 eP P 05 21 05.1 -3.1
comp=Z,9.7nm,0.8s,mb4.3
FLWY Flagg Ranch 22.26 143 eP P 05 21 08.4 +0.1
comp=Z,79nm,0.9s,mb5.2
J14A Carey 22.26 149 P P 05 21 07.4 -0.9
baz=22,SNR=89
YBH Yreka Blue Hor 22.26 167 P P 05 21 07.4 -1.0
comp=Z,13nm,0.9s,mb4.4,baz=111,slow=5.4,SNR=14
YBH LR LR 05 30 36.6
comp=Z,1μm,18.9s,MS4.3,baz=341,slow=39
YBH Yreka Blue Hor 22.26 167 eP P 05 21 07.4 -1.0
comp=Z,50nm,1.1s,mb4.8
YBH Yreka Blue Hor 22.26 167 eP P 05 21 07.4 -1.0
YBH pmax pmax
comp=Z,50nm,1.1s
KRMB Red Mountain 22.36 170 eP P 05 21 09.8 +0.3
comp=Z,37nm,1.1s,mb4.7
IMW Indian Meadow 22.36 143 eP P 05 21 08.8 -0.7
comp=Z,725nm,1.1s,mb6.0
MOD Modoc 22.38 162 eP P 05 21 09.2 -0.5
comp=Z,74nm,1.3s,mb5.0
I17A Pilgrim Ck. 22.44 143 ⇓P P 05 21 10.8 +0.6
baz=22,SNR=35
J15A Blackfoot 22.45 147 ⇓P P 05 21 09.2 -1.1
baz=22,SNR=57
MOOW Moose Ponds 22.55 143 eP P 05 21 10.8 -0.6
comp=Z,286nm,3.3s
DCID1 Drake Creek 22.58 144 eP P 05 21 12.4 +0.7
comp=Z,155nm,0.9s,mb5.4
H20A Greybull 22.66 138 ⇓P P 05 21 11.8 -0.8
baz=22,SNR=32
LOHW Long Hollow 22.72 143 eP P 05 21 13.2 0.0
comp=Z,49nm,0.8s,mb5.0
TPAW Teton Pass 22.74 144 eP P 05 21 13.8 +0.4
comp=Z,737nm,1.1s,mb6.0
J16A Bone 22.77 145 ⇑P P 05 21 13.3 -0.4
baz=23,SNR=98
I19A Meeteetse 22.77 140 ⇑P P 05 21 12.9 -0.9
baz=23,SNR=54
RRI2 Red Ridge 22.78 145 eP P 05 21 14.1 +0.3
comp=Z,792nm,1.1s,mb6.0
SNOW Snow King Moun 22.82 144 eP P 05 21 15.1 +0.8
comp=Z,61nm,1.0s,mb5.0
H21A Big Horn, Sher 22.82 136 ⇓P P 05 21 13.5 -0.8
baz=23,SNR=41
I18A Diamond G Ranc 22.85 142 ⇑P P 05 21 15.8 +1.2
baz=23,SNR=48
REDW Red Top Meadow 22.89 144 eP P 05 21 15.3 +0.3
comp=Z,24nm,0.5s,mb4.9
KHMM Horse Mountain 23.02 169 eP P 05 21 15.7 -0.8
comp=Z,24nm,1.0s,mb4.6
K14A Jones Ranch, D 23.08 149 ⇓P P 05 21 15.8 -1.3
baz=23,SNR=36
K15A Arbon 23.10 147 ⇑P P 05 21 17.0 -0.2
baz=23,SNR=45
I20A Worland 23.11 139 ⇓P P 05 21 17.2 -0.1
baz=23,SNR=32
K16A Soda Springs 23.19 146 ⇓P P 05 21 19.4 +1.2
baz=23,SNR=18
J18A Kendall Valley 23.25 143 ⇑P P 05 21 19.3 +0.5
baz=23,SNR=15
AHID Auburn Hatcher 23.38 145 eP P 05 21 22.3 +2.1
comp=Z,39nm,0.9s,mb4.8
WDC Whiskeytown Da 23.42 167 eP P 05 21 19.8 -0.8
comp=Z,34nm,0.9s,mb4.8
WDC Whiskeytown Da 23.42 167 eP P 05 21 19.8 -0.8
WDC pmax pmax
comp=Z,34nm,0.9s,mb4.8
K17A Gardner Place, 23.44 144 ⇑P P 05 21 21.3 +0.5
baz=23,SNR=7.4
J19A Crowheart 23.47 141 P P 05 21 21.6 +0.5
baz=23,SNR=31
I21A Big Trails, Te 23.48 137 ⇑P P 05 21 20.7 -0.5
baz=23,SNR=32
L14A Malta 23.55 149 ⇑P P 05 21 21.7 -0.3
baz=23,SNR=26
J20A Shoshoni 23.66 139 P P 05 21 23.6 +0.6
baz=24,SNR=64
AGMN Agassiz Nation 23.77 114 eP P 05 21 22.1 -1.8
comp=Z,724nm,1.6s,mb5.9
K18A Toltan Ranch, 23.78 143 ⇓P P 05 21 24.4 +0.4
baz=24,SNR=32
L15A Malad City 23.78 148 P P 05 21 24.8 +0.8
baz=24,SNR=23
BW06 Boulder Array 23.79 142 P P 05 21 25.2 +1.1
baz=24,SNR=38
PDAR Pinedale Array 23.79 142 P P 05 21 22.9 -1.2
comp=Z,9.8nm,0.6s,mb4.4,baz=5.1,slow=6.7,SNR=68
PDAR PcP PcP 05 25 07.0 -0.2
comp=Z,4.2nm,0.7s,baz=50,slow=0.5,SNR=4.8
PDAR Lg 05 28 35.0
comp=Z,2.8nm,1.0s,baz=7.7,slow=28,SNR=2.7
PDAR LR LR 05 31 39.1
comp=Z,3μm,19.7s,MS4.7,baz=174,slow=39
J21A Lysite 23.86 138 ⇓P P 05 21 24.4 -0.3
baz=24,SNR=34
HVU Hansel Valley 23.90 149 eP P 05 21 25.4 +0.2
comp=Z,56nm,1.0s,mb5.0
HVU Hansel Valley 23.90 149 eP P 05 21 25.4 +0.3
HVU pmax pmax
comp=Z,56nm,1.0s,mb5.0
K19A Absolon Red Bu 23.93 141 ⇑P P 05 21 25.4 0.0
baz=24,SNR=15
L16A Fish Haven 24.00 146 P P 05 21 27.2 +1.2
baz=24,SNR=31
L17A Cokeville 24.06 145 ⇓P P 05 21 27.6 +0.9
baz=24,SNR=9.9
J22A Midwest 24.09 136 ⇑P P 05 21 26.9 0.0
baz=24,SNR=28
KIPM Iron Peak 24.10 169 eP P 05 21 29.5 +2.5
comp=Z,43nm,1.1s,mb4.8
KCPM Cahto Peak 24.21 169 eP P 05 21 28.6 +0.6
comp=Z,18nm,1.1s,mb4.4
K20A Yellowstone Ra 24.23 140 ⇑P P 05 21 27.9 -0.2
baz=24,SNR=65
RSSD Black Hills 24.24 132 eP P 05 21 28.3 0.0
comp=Z,65nm,0.8s,mb5.1
RSSD Black Hills 24.24 132 eP P 05 21 28.3 0.0
RSSD pmax pmax
comp=Z,65nm,0.8s,mb5.1
M15A Larsen Ranch, 24.27 148 ⇓P P 05 21 29.9 +1.3
baz=24
BMN Battle Mountai 24.29 157 eP P 05 21 29.8 +1.1
comp=Z,49nm,1.2s,mb4.8
BMN Battle Mountai 24.29 157 eP P 05 21 29.8 +1.1
BMN pmax pmax
comp=Z,49nm,1.2s,mb4.8
HWUT Hardware Ranch 24.35 147 eP P 05 21 29.8 +0.5
comp=Z,2μm,1.1s,mb6.3
SPUT South Promonto 24.42 148 eP P 05 21 31.5 +1.6
comp=Z,69nm,1.3s,mb4.9
L18A Fontenelle, Gr 24.44 144 ⇑P P 05 21 30.6 +0.4
baz=24,SNR=16
L19A Farson 24.46 142 ⇑P P 05 21 30.2 -0.1
baz=24,SNR=13
ALE Alert 24.49 17 P P 05 21 29.9 -0.3
comp=Z,318nm,0.8s,mb5.8,SNR=11
K21A Alcova 24.57 138 ⇓P P 05 21 31.4 +0.2
baz=24,SNR=44
M16A Huntsville 24.61 147 ⇑P P 05 21 32.7 +1.0
baz=24,SNR=22
BGU Big Grassy Mou 24.65 150 eP P 05 21 32.8 +0.7
comp=Z,36nm,1.2s,mb4.8
PAHR Pah Rah Range 24.66 162 eP P 05 21 31.7 -0.4
comp=Z,70nm,1.2s,mb5.1
M17A Scullys Gap (B 24.70 145 ⇓P P 05 21 33.1 +0.7
baz=25,SNR=6.5
K22A Casper 24.77 137 ⇑P P 05 21 32.9 -0.2
baz=25,SNR=28
L20A Wamsutter 24.83 141 ⇓P P 05 21 33.8 +0.1
baz=25,SNR=12
M18A Lyman 24.90 144 ⇓P P 05 21 34.6 +0.3
baz=25,SNR=9.8
HOPS Hopland 24.95 169 eP P 05 21 33.9 -0.8
comp=Z,69nm,1.1s,mb5.1
WCN Washoe City 25.01 162 P P 05 21 36.2 +0.9
baz=25,SNR=25
WCN Washoe City 25.01 162 eP P 05 21 35.9 +0.6
comp=Z,66nm,1.2s,mb5.0
WCN Washoe City 25.01 162 eP P 05 21 35.9 +0.6
WCN pmax pmax
comp=Z,66nm,1.2s,mb5.0
N16A Rees Ranch, Co 25.06 147 ⇓P P 05 21 37.1 +1.4
baz=25,SNR=17
M19A Rock Springs 25.07 143 ⇑P P 05 21 35.6 -0.3
baz=25
L21A Rawlins 25.15 139 P P 05 21 36.0 -0.5
baz=25,SNR=60
N17A Moffit Pass 25.16 146 ⇑P P 05 21 36.5 -0.2
baz=25,SNR=14
CTU Camp Tracy 25.17 148 eP P 05 21 38.0 +1.3
comp=Z,12nm,0.9s,mb4.4
JLU Jordanelle 25.33 147 eP P 05 21 39.6 +1.5
comp=Z,44nm,1.1s,mb4.9
M20A Sweetwater, Wa 25.35 141 ⇑P P 05 21 38.0 -0.4
baz=25,SNR=6.4
DUG Dugway 25.40 150 ⇓P P 05 21 40.0 +1.1
baz=25,SNR=20
DUG Dugway 25.40 150 eP P 05 21 39.5 +0.7
comp=Z,20nm,0.8s,mb4.7
DUG Dugway 25.40 150 eP P 05 21 39.6 +0.8
DUG pmax pmax
comp=Z,20nm,0.8s,mb4.7
N18A Larsen Ranch, 25.43 144 ⇑P P 05 21 38.4 -0.7
baz=25
RWWY Rawlins 25.45 139 eP P 05 21 38.5 -0.7
comp=Z,6.2nm,0.4s,mb4.5
M21A Separation Pea 25.48 140 ⇑P P 05 21 39.5 0.0
baz=25,SNR=28
L23A Garrett 25.51 136 ⇑P P 05 21 39.4 -0.4
baz=25,SNR=25
DAU Daniels Canyon 25.56 147 eP P 05 21 42.6 +2.3
comp=Z,113nm,1.4s,mb5.2
DAU Daniels Canyon 25.56 147 eP P 05 21 42.6 +2.4
DAU pmax pmax
comp=Z,113nm,1.4s,mb5.2
N19A John Jarvie Ra 25.64 143 ⇓P P 05 21 41.1 +0.1
baz=26,SNR=31
BILL Bilibino 25.67 308 eP P 05 21 42.3 +1.2
comp=Z,254nm,1.6s,mb5.5
BILL Bilibino 25.67 308 ⇓eP P 05 21 41.5 +0.4
BILL e 05 22 15.4
BILL i S S 05 26 11.8 +2.8
BILL pmax pmax
comp=Z,155nm,1.5s,mb5.3
BILL MLR MLR
comp=Z,6μm,20.0s,MS5.1
O16A Springville 25.69 148 ⇑P P 05 21 43.5 +2.1
baz=26
NLU North Lily Min 25.80 149 eP P 05 21 43.7 +1.3
comp=Z,17nm,0.9s,mb4.6
L24A Wheatland 25.81 135 P P 05 21 42.8 +0.2
baz=26,SNR=18
WAKR Walker 25.84 162 eP P 05 21 42.5 -0.3
comp=Z,63nm,1.1s,mb5.1
MPU Maple Canyon 25.84 148 eP P 05 21 43.8 +1.0
comp=Z,29nm,1.1s,mb4.7
EYMN Ely 25.86 109 eP P 05 21 41.9 -1.0
comp=Z,141nm,1.0s,mb5.5
O17A Robinson Place 25.89 146 ⇑P P 05 21 45.0 +1.8
baz=26,SNR=14
M22A Cedar Creek Ra 25.89 139 ⇑P P 05 21 43.4 +0.1
baz=26,SNR=46
P14A Drum Mountains 25.92 151 ⇓P P 05 21 43.6 0.0
baz=26,SNR=40
N20A Spence Gulch, 25.94 142 ⇑P P 05 21 44.7 +1.0
baz=26,SNR=34
O18A Roosevelt 26.01 145 ⇑P P 05 21 45.3 +1.0
baz=26,SNR=38
FRB Frobisher Bay 26.01 62 P P 05 21 43.9 -0.2
comp=Z,77nm,0.7s,mb5.4,baz=297,slow=11,SNR=28
FRB Lg 05 29 24.8
comp=Z,162nm,1.0s,baz=32,slow=18,SNR=6.8
FRB LR LR 05 32 09.2
comp=Z,642nm,18.5s,MS4.2,baz=119,slow=37
FRB Frobisher Bay 26.01 62 P P 05 21 43.9 -0.2
NVAR Mina Array Bea 26.07 160 P P 05 21 44.6 -0.3
comp=Z,15nm,0.8s,mb4.6,baz=351,slow=6.8,SNR=54
NVAR PcP PcP 05 25 13.2 +0.9
comp=Z,4.7nm,0.7s,baz=322,slow=2.0,SNR=9.9
P15A Leamington 26.11 149 ⇓P P 05 21 46.4 +1.1
baz=26,SNR=14
CMB Columbia Colle 26.18 164 eP P 05 21 46.4 +0.5
comp=Z,27nm,1.1s,mb4.7
CMB Columbia Colle 26.18 164 eP P 05 21 46.4 +0.5
CMB pmax pmax
comp=Z,27nm,1.1s,mb4.7
O19A Miners Draw (B 26.21 144 ⇓P P 05 21 47.1 +1.0
baz=26,SNR=32
N21A Black Mountain 26.22 141 P P 05 21 46.9 +0.7
baz=26,SNR=32
P16A Fountain Green 26.22 148 ⇓P P 05 21 47.9 +1.7
baz=26,SNR=9.5
PHWY Pilot Hill 26.33 137 eP P 05 21 46.3 -0.9
comp=Z,17nm,0.8s,mb4.6
M24A Cheyenne 26.37 136 P P 05 21 48.4 +0.8
baz=26,SNR=20
Q14A Sevier Lake (B 26.45 151 ⇓P P 05 21 48.0 -0.3
baz=26,SNR=42
N22A Wattenberg Ran 26.48 139 ⇑P P 05 21 49.5 +0.8
baz=26,SNR=29
P18A Preston Nutter 26.55 146 ⇓P P 05 21 50.9 +1.7
baz=26,SNR=38
N23A Red Feather La 26.55 138 ⇑P P 05 21 49.7 +0.5
baz=26,SNR=56
P17A Butcher Ranch, 26.57 147 ⇑P P 05 21 51.2 +1.8
baz=26,SNR=21
O20A White River Ci 26.60 142 P P 05 21 50.8 +1.1
baz=26,SNR=24
R11A Troy Canyon, C 26.61 156 ⇓P P 05 21 50.4 +0.6
baz=26,SNR=14
TMUT Trail Mountain 26.63 148 eP P 05 21 51.0 +1.1
comp=Z,27nm,0.9s,mb4.8
Q15A Fillmore 26.64 150 P P 05 21 50.0 -0.1
baz=26,SNR=32
O21A Pagoda 26.74 141 ⇑P P 05 21 52.1 +1.2
baz=27,SNR=15
P19A Cripple Cowboy 26.87 144 P P 05 21 51.4 -0.7
baz=27,SNR=50
N24A Carr 26.94 136 ⇓P P 05 21 53.4 +0.7
baz=27
SRU San Rafael 26.97 147 P P 05 21 54.9 +1.9
baz=27,SNR=85
SRU San Rafael 26.97 147 eP P 05 21 54.1 +1.1
comp=Z,240nm,1.4s,mb5.5
SRU San Rafael 26.97 147 eP P 05 21 54.1 +1.1
SRU pmax pmax
comp=Z,239nm,1.4s,mb5.5
Q16A Castle Valley 27.00 148 ⇑P P 05 21 54.8 +1.6
baz=27,SNR=24
O22A Kremmling 27.05 140 ⇑P P 05 21 54.3 +0.6
baz=27,SNR=26
Q18A Rafter H Ranch 27.07 146 P P 05 21 55.2 +1.3
baz=27,SNR=50
R13A O'Grain Ranch, 27.09 153 ⇑P P 05 21 55.5 +1.5
baz=27,SNR=25
MSU Marysvale 27.15 150 eP P 05 21 54.9 +0.2
comp=Z,117nm,1.4s,mb5.2
MSU Marysvale 27.15 150 eP P 05 21 54.9 +0.3
MSU pmax pmax
comp=Z,117nm,1.4s,mb5.2
O23A Lake Granby, G 27.19 139 P P 05 21 56.2 +1.2
baz=27,SNR=19
N25A Grover 27.20 135 ⇑P P 05 21 56.0 +1.0
baz=27
ECSD EROS Data Cent 27.24 121 eP P 05 21 54.4 -1.0
comp=Z,1.9nm,0.8s,mb3.7
SAO San Andreas Ge 27.31 166 eP P 05 21 55.8 -0.3
comp=Z,20nm,1.1s,mb4.6
SAO San Andreas Ge 27.31 166 eP P 05 21 55.8 -0.3
SAO pmax pmax
comp=Z,21nm,1.1s,mb4.6
P21A Newcastle 27.39 141 ⇓P P 05 21 57.7 +1.0
baz=27,SNR=20
R15A Junction 27.41 150 ⇓P P 05 21 58.9 +1.8
baz=27,SNR=16
Q19A Hogan Spring (27.43 145 ⇑P P 05 21 57.8 +0.6
baz=27,SNR=20
P22A Eagle 27.51 140 ⇓P P 05 21 58.8 +0.9
baz=27,SNR=20
R16A Teasdale 27.52 149 P P 05 21 59.7 +1.7
baz=27,SNR=53
ARUT Antelope Range 27.57 152 eP P 05 21 58.1 -0.4
comp=Z,34nm,1.0s,mb4.9
ARUT Antelope Range 27.57 152 eP P 05 21 58.1 -0.3
ARUT pmax pmax
comp=Z,33nm,1.0s,mb4.9
R17A Hanksville Air 27.58 147 P P 05 21 59.7 +1.2
baz=28,SNR=50
S14A Cedar City 27.66 152 ⇑P P 05 22 00.1 +0.9
baz=28,SNR=14
ISCO Idaho Springs 27.66 138 ⇓P P 05 22 00.1 +0.9
baz=28,SNR=14
ISCO Idaho Springs 27.66 138 eP P 05 21 59.7 +0.6
comp=Z,92nm,0.8s,mb5.5
ISCO Idaho Springs 27.66 138 eP P 05 21 59.7 +0.5
ISCO pmax pmax
comp=Z,92nm,0.8s,mb5.5
S13A Holt Ranch, En 27.68 153 P P 05 21 59.1 -0.3
baz=28,SNR=37
Q20A Ridgley Place, 27.69 143 ⇓P P 05 21 59.6 +0.1
baz=28,SNR=13
OGNE Ogallala 27.74 132 eP P 05 21 59.8 -0.1
comp=Z,90nm,1.0s,mb5.3
R18A Canyonlands Na 27.81 146 ⇓P P 05 22 01.6 +1.1
baz=28,SNR=47
CCUT Cedar City 27.82 152 eP P 05 22 00.3 -0.3
comp=Z,40nm,1.0s,mb5.0
SMCO Snowmass 27.84 141 eP P 05 22 00.4 -0.4
comp=Z,8μm,1.4s
S15A Panguitch 27.91 151 ⇓P P 05 22 03.3 +1.8
baz=28,SNR=15
P23A Jefferson 27.98 139 ⇑P P 05 22 03.2 +1.1
baz=28
Q21A Lamborn Mesa, 27.99 142 ⇓P P 05 22 03.5 +1.3
baz=28,SNR=21
S16A Weppner Ranch, 28.04 149 ⇓P P 05 22 04.4 +1.8
baz=28,SNR=33
PV04 Paradox Valley 28.05 145 eP P 05 22 03.0 +0.3
R19A Curley Farm, L 28.06 145 P P 05 22 03.8 +1.0
baz=28,SNR=29
Q22A Crested Butte, 28.15 141 ⇓P P 05 22 04.1 +0.4
baz=28,SNR=19
T13A Saint George 28.22 153 ⇑P P 05 22 04.0 -0.2
baz=28,SNR=25
S17A Black Ridge (B 28.30 148 ⇑P P 05 22 05.9 +0.9
baz=28,SNR=25
COWI Conover 28.31 109 eP P 05 22 03.8 -1.1
comp=Z,155nm,2.1s,mb5.3
T14A Hurricane 28.34 152 ⇓P P 05 22 05.1 -0.3
baz=28,SNR=25
U10A Ash Meadows, A 28.36 158 ⇓P P 05 22 05.6 +0.1
baz=28
R20A Redvale 28.38 144 ⇓P P 05 22 06.7 +1.0
baz=28,SNR=19
PV01 Paradox Valley 28.39 144 eP P 05 22 06.2 +0.5
comp=Z,5μm,1.3s
Q23A Hartsel 28.42 139 P P 05 22 07.6 +1.6
baz=28,SNR=7.1
R21A Cimarron 28.44 142 ⇑P P 05 22 06.8 +0.6
baz=28,SNR=20
S18A Hurst Farm, Bl 28.45 147 P P 05 22 06.9 +0.7
baz=28,SNR=17
SHPR Sheep Range 28.48 156 eP P 05 22 05.9 -0.6
comp=Z,14nm,1.0s,mb4.5
MPMC Manual Prospec 28.52 160 P P 05 22 07.2 +0.4
baz=28,SNR=25
T15A Red Dirt Ranch 28.54 151 ⇓P P 05 22 07.4 +0.4
baz=28,SNR=25
Q24A Divide 28.57 138 ⇑P P 05 22 07.4 +0.1
baz=28,SNR=17
S19A Harvey Farm, M 28.61 145 ⇓P P 05 22 08.3 +0.6
baz=28,SNR=26
U12A Valley of Fire 28.66 155 ⇑P P 05 22 08.7 +0.6
baz=29,SNR=31
S20A Disappointment 28.73 144 ⇓P P 05 22 09.0 +0.3
baz=29,SNR=15
T16A Glen Canyon Da 28.76 150 ⇑P P 05 22 10.0 +1.0
baz=29,SNR=9.4
ISA Isabella 28.76 162 ⇑P P 05 22 09.5 +0.5
baz=29,SNR=8.7
ISA Isabella 28.76 162 eP P 05 22 09.0 0.0
comp=Z,22nm,1.3s,mb4.7
ISA Isabella 28.76 162 eP P 05 22 09.0 -0.1
ISA pmax pmax
comp=Z,22nm,1.3s,mb4.7
R22A Saguache, Gunn 28.79 141 P P 05 22 10.7 +1.4
baz=29,SNR=13
U13A Pakoon Wash 28.79 154 ⇓P P 05 22 09.7 +0.3
baz=29,SNR=32
SHOC Shoshone 28.87 158 ⇓P P 05 22 10.7 +0.7
baz=29,SNR=10.0
Q25A Bedland, Calha 28.88 137 ⇓P P 05 22 10.2 0.0
baz=29,SNR=7.9
T17A Navajo Res., N 28.91 148 ⇓P P 05 22 11.0 +0.6
baz=29,SNR=12
U14A Mt Trumbull 28.95 153 P P 05 22 10.9 +0.2
baz=29,SNR=49
T18A Mexican Hat 29.00 147 P P 05 22 11.7 +0.5
baz=29,SNR=14
V11A Goodsprings 29.08 157 ⇓P P 05 22 13.6 +1.7
baz=29,SNR=7.1
U15A North Rim 29.12 151 P P 05 22 12.9 +0.7
baz=29,SNR=17
S22A 4UR Ranch, Cre 29.22 142 ⇓P P 05 22 14.3 +1.2

baz=29,SNR=17
R24A **Sanders Place,** 29.26 139 ⇑P P 05 22 14.0 +0.5
baz=29
V12A **Nelson** 29.29 156 ⇓P P 05 22 13.8 +0.1
baz=29,SNR=23
U17A **Shonto** 29.32 149 ⇑P P 05 22 14.1 +0.1
baz=29
V13A **Grand Canyon W** 29.33 154 ⇓P P 05 22 14.2 +0.1
baz=29,SNR=45
GSC **Goldstone** 29.37 159 ⇓P P 05 22 16.4 +2.0
baz=29
GSC **Goldstone** 29.37 159 *e*P P 05 22 16.3 +1.9
comp=Z,9.5nm,0.9s,mb4.5
GSC **Goldstone** 29.37 159 *e*P P 05 22 16.3 +1.9
GSC pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
TUQ **Turquoise Moun** 29.38 158 ⇓P P 05 22 16.6 +2.1
baz=29,SNR=12
S23A **Nye Farm, Mont** 29.49 141 P P 05 22 17.0 +1.6
baz=29,SNR=6.8
T19A **Beclabito** 29.50 146 ⇑P P 05 22 15.9 +0.3
baz=29
R25A **Fountain Ranch** 29.58 138 ⇑P P 05 22 16.7 +0.4
baz=29,SNR=12
SDCO **Great Sand Dun** 29.59 140 ⇑P P 05 22 17.2 +0.8
baz=30,SNR=9.3
SDCO **Great Sand Dun** 29.59 140 *e*P P 05 22 16.9 +0.4
comp=Z,10nm,1.1s,mb4.5
U16A **Tuba City** 29.65 150 ⇓P P 05 22 17.4 +0.4
baz=30,SNR=13
U18A **Rough Rock, Ch** 29.68 147 ⇑P P 05 22 17.6 +0.4
baz=30,SNR=7.3
V14A **Boquillas Ranc** 29.72 153 ⇑P P 05 22 18.7 +1.2
baz=30,SNR=30
T21A **Navajo Lake** 29.73 143 P P 05 22 19.5 +1.8
baz=30,SNR=5.3
V15A **Kaibab Nationa** 29.73 151 ⇓P P 05 22 17.5 -0.2
baz=30,SNR=16
S24A **Houchin Ranch,** 29.77 139 ⇑P P 05 22 19.1 +1.1
baz=30
LDFC **Landfair** 29.87 156 *e*P P 05 22 20.1 +1.2
comp=Z,36nm,0.9s,mb5.1
T22A **Edith** 29.88 142 ⇑P P 05 22 20.1 +1.1
baz=30,SNR=19
U19A **Dine' College,** 29.97 146 ⇓P P 05 22 20.7 +1.0
baz=30,SNR=11
S25A **Robets Cordova** 29.98 138 ⇑P P 05 22 20.8 +1.0
baz=30,SNR=12
U20A **Newcomb** 30.06 145 ⇑P P 05 22 21.7 +1.1
baz=30
GMRC **Granite Mounta** 30.07 157 ⇑P P 05 22 22.4 +1.8
baz=30,SNR=16
W13A **Hualapai Mount** 30.08 154 ⇓P P 05 22 21.3 +0.5
baz=30
T23A **Casias Ranch,** 30.10 141 ⇓P P 05 22 22.4 +1.5
baz=30,SNR=9.0
W14A **Seligman** 30.13 153 ⇑P P 05 22 22.1 +0.9
baz=30,SNR=25
V17A **Tonalea, Kykot** 30.23 149 ⇓P P 05 22 22.9 +0.8
baz=30,SNR=46
U21A **Nageezi** 30.23 144 ⇑P P 05 22 22.8 +0.7
baz=30,SNR=11
W15A **Williams** 30.33 152 ⇑P P 05 22 23.4 +0.5
baz=30,SNR=40
V18A **Ganado** 30.34 148 ⇑P P 05 22 23.9 +0.8
baz=30,SNR=7.3
T24A **Torres, Weston** 30.35 140 ⇑P P 05 22 24.3 +1.2
baz=30,SNR=8.2
CBKS **Cedar Bluff** 30.43 131 ⇑P P 05 22 23.6 -0.2
baz=30
CBKS **Cedar Bluff** 30.43 131 *e*P P 05 22 23.5 -0.3
comp=Z,22nm,0.9s,mb4.9
CBKS **Cedar Bluff** 30.43 131 *e*P P 05 22 23.5 -0.3
CBKS pmax pmax
comp=Z,22nm,0.9s,mb4.9
JFWS **Jewell Farm** 30.44 114 *e*P P 05 22 23.1 -0.8
comp=Z,21nm,0.7s,mb5.0
JFWS **Jewell Farm** 30.44 114 *e*P P 05 22 23.1 -0.8
JFWS pmax pmax
comp=Z,21nm,0.7s,mb5.0
T25A **Trinidad** 30.47 139 ⇓P P 05 22 23.5 -0.7
baz=30
U22A **Llaves** 30.50 143 ⇓P P 05 22 25.7 +1.3
baz=30,SNR=24
W16A **Flagstaff** 30.57 151 P P 05 22 26.1 +1.0
baz=30,SNR=26
X13A **Yucca** 30.58 155 ⇑P P 05 22 25.4 +0.2
baz=30,SNR=12
V20A **Brimhall** 30.62 146 ⇓P P 05 22 26.8 +1.3
baz=30,SNR=7.8
U23A **El Rito** 30.72 142 P P 05 22 26.4 0.0
baz=31,SNR=62
IRM **Iron Mountain** 30.76 157 ⇑P P 05 22 26.8 +0.1
baz=31,SNR=15
BELC **Belle Mtn. Jos** 30.77 158 ⇑P P 05 22 29.3 +2.5
baz=31
X14A **Yava** 30.89 153 ⇑P P 05 22 28.4 +0.5
baz=31,SNR=19
U24A **Moreno Valley** 30.90 140 ⇓P P 05 22 28.9 +0.9
baz=31,SNR=13
V22A **San Miguel Ran** 30.92 143 ⇑P P 05 22 28.9 +0.8
baz=31
X15A **Humboldt** 31.00 152 ⇑P P 05 22 29.2 +0.3
baz=31,SNR=30
W19A **Sanders** 31.05 147 ⇑P P 05 22 30.8 +1.5
baz=31,SNR=9.3
U25A **Circle Dot Ran** 31.16 139 P P 05 22 31.1 +0.9
baz=31,SNR=9.4
BC3 **Big Chuckawall** 31.20 158 ⇑P P 05 22 31.9 +1.2
baz=31,SNR=9.3
X16A **Lo Mia Camp, P** 31.24 151 ⇑P P 05 22 31.6 +0.6
baz=31,SNR=26
GLMI **Grayling** 31.25 106 *e*P P 05 22 31.2 +0.3
comp=Z,118nm,0.9s,mb5.7
W20A **Ramah** 31.25 146 ⇑P P 05 22 31.7 +0.6
baz=31,SNR=24
KSU1 **Kansas State U** 31.27 126 *e*P P 05 22 30.7 -0.5
comp=Z,62nm,0.9s,mb5.4
V23A **Ortiz Mt. (NFS** 31.27 142 ⇑P P 05 22 32.5 +1.3
baz=31,SNR=14
Y12C **Blythe** 31.27 156 ⇑P P 05 22 32.7 +1.5
baz=31
Y13A **Salome** 31.34 155 ⇓P P 05 22 33.1 +1.2
baz=31
U26A **Atchley Ranch,** 31.36 138 ⇑P P 05 22 33.1 +1.0
baz=31,SNR=19
Y14A **Wickenburg** 31.38 154 ⇑P P 05 22 33.9 +1.7
baz=31,SNR=21
X17A **Forest Lakes** 31.46 150 ⇓P P 05 22 34.2 +1.3
baz=31,SNR=24
X18A **Snowflake** 31.47 149 ⇓P P 05 22 35.0 +1.9
baz=31,SNR=12
Y15A **Casa Rosa Ranc** 31.50 153 P P 05 22 33.6 +0.4
baz=31,SNR=48
V24A **Rampart Ranch,** 31.54 141 ⇑P P 05 22 35.3 +1.6
baz=31,SNR=12
V25A **Rancho No Teng** 31.62 140 ⇓P P 05 22 35.7 +1.3
baz=32,SNR=32
SUMG **Summit** 31.63 35 *e*P P 05 22 33.1 -1.0
comp=Z,40nm,1.0s,mb5.2
SUMG **Summit** 31.63 35 *i*P P 05 22 33.5 -0.6
comp=Z,30nm,1.0s,mb5.1
X19A **St. Johns** 31.72 148 ⇑P P 05 22 37.0 +1.8
baz=32,SNR=14
Y16A **Circle Bar Ran** 31.75 151 ⇓P P 05 22 37.6 +2.1
baz=32,SNR=33
MONP **Monument Peak** 31.79 159 P P 05 22 38.0 +2.1
baz=32,SNR=12
X20A **Quemado** 31.81 146 ⇑P P 05 22 37.3 +1.3
baz=32,SNR=7.0
SCHQ **Schefferville** 31.83 76 P P 05 22 35.3 -0.7
comp=Z,19nm,1.1s,mb4.8,baz=324,slow=10,SNR=4.4
SCHQ Lg 05 32 23.9
comp=Z,68nm,0.9s,baz=190,slow=18,SNR=4.8
SCHQ LR LR 05 35 29.7
comp=Z,2μm,18.3s,MS4.8,baz=317,slow=37
W23A **Werner Place,** 31.83 143 ⇓P P 05 22 38.0 +1.8
baz=32,SNR=5.1
GLA **Glamis** 31.90 157 *e*P P 05 22 38.1 +1.3
comp=Z,35nm,1.4s,mb5.0
GLA **Glamis** 31.90 157 *e*P P 05 22 38.1 +1.3
GLA pmax pmax
comp=Z,35nm,1.4s,mb5.0
V26A **Tequesquite Ra** 31.91 139 ⇑P P 05 22 37.6 +0.8
baz=32
ANMO **Albuquerque** 31.95 143 *e*P P 05 22 37.0 -0.2
comp=Z,1.6nm,0.8s,mb3.9
ANMO **Albuquerque** 31.95 143 *e*P P 05 22 37.0 -0.2
ANMO pmax pmax
comp=Z,2.0nm,0.8s
Z14A **Wintersburg** 31.95 154 ⇑P P 05 22 38.8 +1.6
baz=32
BAR **Barrett** 31.96 160 *e*P P 05 22 38.5 +1.2
comp=Z,17nm,1.0s,mb4.8
Z13A **Yuma Proving G** 31.97 155 ⇓P P 05 22 39.1 +1.7
baz=32,SNR=8.5
W24A **Lazy 6 Ranch,** 31.99 141 ⇓P P 05 22 38.1 +0.5
baz=32,SNR=23
Y17A **Roosevelt** 32.07 150 ⇓P P 05 22 38.5 +0.3
baz=32,SNR=26
X21A **Alamocita Cree** 32.08 145 ⇑P P 05 22 37.8 -0.5
baz=32,SNR=33
Y18A **Canyon Day Jun** 32.17 149 ⇑P P 05 22 40.2 +1.1
baz=32,SNR=26
Z15A **Gila River Ind** 32.18 153 ⇓P P 05 22 40.8 +1.6
baz=32
Y19A **Nutrioso** 32.18 148 ⇓P P 05 22 40.7 +1.4
baz=32,SNR=28
W25A **X Bar L Ranch,** 32.25 140 ⇑P P 05 22 40.9 +1.1
baz=32,SNR=6.5
Z16A **Peralta Trail,** 32.28 151 ⇓P P 05 22 41.0 +0.8
baz=32,SNR=10.0
LAZ **Ladron** 32.28 144 *e*P P 05 22 40.7 +0.6
comp=Z,21nm,1.5s,mb4.8
Y20A **Horse Springs,** 32.44 147 ⇑P P 05 22 42.8 +1.3
baz=32,SNR=25
LPM **Los Pinos Moun** 32.50 144 *e*P P 05 22 43.7 +1.7
comp=Z,17nm,1.3s,mb4.8
Y21A **Point of Rocks** 32.52 145 ⇓P P 05 22 43.3 +1.1
baz=32,SNR=28
Z17A **San Carlos Hig** 32.53 150 ⇓P P 05 22 43.6 +1.2
baz=32,SNR=23
LENM **Lemitar** 32.55 144 *e*P P 05 22 44.2 +1.7
comp=Z,23nm,1.3s,mb4.9
114A **Black Gap (USA** 32.55 154 ⇑P P 05 22 44.4 +1.8
baz=32,SNR=9.1
W26A **Owens Ranch, T** 32.57 139 ⇓P P 05 22 43.3 +0.6
baz=32,SNR=13
BNM **Barren Site** 32.66 144 *e*P P 05 22 44.9 +1.5
115A **Sonoran Desert** 32.73 153 ⇓P P 05 22 45.9 +1.8
baz=33
Y22A **Socorro** 32.77 144 ⇓P P 05 22 45.7 +1.3
baz=33,SNR=30
W27A **Bowe Ranch, En** 32.80 138 ⇓P P 05 22 45.3 +0.6
baz=33,SNR=13
HDIL **Hopedale** 32.81 116 *e*P P 05 22 44.0 -0.7
comp=Z,68nm,1.1s,mb5.5
Y23A **Lovelace Mesa,** 33.02 143 ⇑P P 05 22 47.0 +0.5
baz=33,SNR=29
X26A **CR and CF Fran** 33.06 140 ⇑P P 05 22 47.8 +0.9
baz=33,SNR=6.9
Z20A **Nine Sixteen R** 33.15 147 P P 05 22 49.6 +1.9
baz=33,SNR=18
117A **Oracle** 33.17 151 ⇓P P 05 22 48.4 +0.5
baz=33,SNR=29
X27A **F and S Farms,** 33.18 138 ⇑P P 05 22 48.3 +0.3
baz=33,SNR=9.3
Z21A **St. Cloud Mine** 33.19 146 ⇓P P 05 22 48.8 +0.7
baz=33,SNR=26
Y24A **Capitan** 33.19 142 ⇓P P 05 22 49.3 +1.2
baz=33,SNR=14
SEY **Seymchan** 33.21 305 ⇑*i*P P 05 22 47.9 -0.1
118A **Homack Ranch,** 33.28 150 ⇓P P 05 22 50.6 +1.8
baz=33,SNR=13
119A **Ashpeak Ranch,** 33.31 149 ⇑P P 05 22 51.2 +2.1
baz=33,SNR=15
214A **Organ Pipe Nat** 33.34 154 ⇓P P 05 22 51.6 +2.2
baz=33,SNR=22
AMTX **Amarillo** 33.39 136 ⇑P P 05 22 49.6 -0.2
baz=33,SNR=16
AMTX **Amarillo** 33.39 136 *e*P P 05 22 49.9 +0.1
comp=Z,47nm,0.8s,mb5.5
Y25A **Mesa, Roswell** 33.40 141 ⇑P P 05 22 50.4 +0.5
baz=33,SNR=21
TUC **Tucson** 33.41 151 *e*P P 05 22 50.5 +0.4
comp=Z,37nm,1.1s,mb5.2
TUC **Tucson** 33.41 151 *e*P P 05 22 50.5 +0.4
TUC pmax pmax
comp=Z,37nm,1.1s,mb5.2
Z22A **Elephant Butte** 33.42 145 ⇑P P 05 22 50.8 +0.7
baz=33,SNR=15
DAG **Danmarks Havn** 33.42 23 *i*P P 05 22 48.8 -1.0
DAG pmax pmax
comp=Z,58nm,0.8s,mb5.6
DAG **Danmarks Havn** 33.42 23 *i*P P 05 22 48.8 -1.0
comp=Z,581nm,0.8s,mb6.6
216A **Three Points,** 33.57 152 ⇑P P 05 22 52.5 +1.1
baz=34,SNR=18
Z23A **Rita Site, Whi** 33.60 144 ⇓P P 05 22 53.2 +1.6
baz=34,SNR=8.1
120A **U Bar Ranch, L** 33.68 148 ⇑P P 05 22 54.3 +2.0
baz=34,SNR=10
AAM **Ann Arbor** 33.70 107 *e*P P 05 22 52.9 +0.4
comp=Z,401nm,2.0s,mb6.0
AAM **Ann Arbor** 33.70 107 *e*P P 05 22 52.9 +0.5
AAM pmax pmax
comp=Z,401nm,2.0s,mb6.0
Z24A **Sheeppen Canyo** 33.77 143 ⇓P P 05 22 54.5 +1.4
baz=34,SNR=20
Y27A **Causey** 33.87 139 ⇑P P 05 22 54.5 +0.4
baz=34,SNR=16
121A **Cookes Peak, D** 33.90 146 P P 05 22 55.8 +1.5
baz=34,SNR=10
218A **Dragoon** 33.90 150 ⇓P P 05 22 55.2 +0.9
baz=34,SNR=10
MSTX **Muleshoe** 33.91 138 ⇑P P 05 22 55.0 +0.7
baz=34,SNR=21
217A **Green Valley** 33.92 151 ⇑P P 05 22 56.4 +1.9
baz=34,SNR=17
122A **Conniff Cattle** 33.94 145 ⇑P P 05 22 56.6 +2.0
baz=34
Z25A **Roswell** 33.99 142 ⇓P P 05 22 55.7 +0.6
baz=34,SNR=35
219A **White Tail Can** 34.05 149 ⇓P P 05 22 56.6 +1.0
baz=34,SNR=15
Z26A **Caprock** 34.21 141 ⇓P P 05 22 57.8 +0.9
baz=34,SNR=16
220A **Playas Peak, P** 34.32 148 ⇓P P 05 22 59.2 +1.3
baz=34,SNR=12
124A **Stringfield Ra** 34.34 143 ⇓P P 05 22 59.6 +1.5
baz=34,SNR=15
221A **Mesquite Ranch** 34.40 147 ⇓P P 05 23 00.1 +1.5
baz=34,SNR=9.4
318A **Bisbee** 34.43 150 ⇓P P 05 22 59.9 +1.1
baz=34,SNR=31
WMOK **Wichita Mounta** 34.45 133 *e*P P 05 22 57.3 -1.7
comp=Z,14nm,0.9s,mb4.9
WMOK **Wichita Mounta** 34.45 133 *e*P P 05 22 57.3 -1.7
WMOK pmax pmax
comp=Z,14nm,0.9s,mb4.9
CPRX **Cap Rock** 34.47 141 *e*P P 05 22 59.4 +0.2
comp=Z,38nm,1.1s,mb5.2
FVM **French Village** 34.57 119 *e*P P 05 22 59.1 -0.9
comp=Z,18nm,0.9s,mb5.0
FVM **French Village** 34.57 119 *e*P P 05 22 59.2 -0.8
FVM pmax pmax
comp=Z,18nm,0.9s,mb5.0
125A **Gardner Draw,** 34.59 142 ⇓P P 05 23 00.8 +0.5
baz=34,SNR=12
319A **Douglas** 34.65 149 ⇑P P 05 23 02.8 +2.0
baz=34,SNR=19
126A **Clayton Basin,** 34.78 141 P P 05 23 02.7 +0.8
baz=35,SNR=7.9
OLIL **Olney** 34.84 116 *e*P P 05 23 01.8 -0.6
comp=Z,44nm,0.8s,mb5.4
320A **Kipp Ranch, An** 34.86 148 ⇓P P 05 23 04.6 +2.0
baz=35
224A **Cornudas Mount** 34.91 143 ⇑P P 05 23 04.3 +1.3
baz=35,SNR=18
127A **Arkansas Junct** 34.94 140 ⇓P P 05 23 03.6 +0.3
baz=35,SNR=8.1
TIXI **Tiksi** 34.97 327 *e*P P 05 23 04.2 +1.1
comp=Z,52nm,1.3s,mb5.3
TIXI **Tiksi** 34.97 327 *e*P P 05 23 03.4 +0.2
TIXI *e* 05 24 22.0
TIXI *e*S S 05 28 36.4 +2.1
TIXI pmax pmax
comp=Z,47nm,1.5s,mb5.2
TIXI MLR MLR
comp=Z,654nm,18.0s,MS4.4
225A **Deer Hill, Car** 35.07 142 P P 05 23 04.0 -0.4
baz=35,SNR=45
BLO **Bloomington** 35.11 114 *e*P P 05 23 04.0 -0.7
comp=Z,42nm,1.2s,mb5.2
BLO **Bloomington** 35.11 114 *e*P P 05 23 04.0 -0.7
BLO pmax pmax
comp=Z,42nm,1.2s,mb5.2
GDL2 **Guadalupe Moun** 35.11 142 *e*P P 05 23 05.5 +0.8
comp=Z,32nm,1.4s,mb5.1
CLNB **Carlsbad** 35.18 141 *e*P P 05 23 06.2 +0.8
comp=Z,2.2nm,0.8s,mb4.1
MNTX **Cornudas Mount** 35.31 143 ⇑P P 05 23 06.4 0.0
baz=35,SNR=22
MNTX **Cornudas Mount** 35.31 143 *e*P P 05 23 06.9 +0.4
comp=Z,33nm,1.4s,mb5.1
226A **Malaga, Loving** 35.31 141 ⇓P P 05 23 07.3 +0.8
baz=35,SNR=23
MSNY **Massena** 35.39 95 *e*P P 05 23 06.8 -0.3
comp=Z,299nm,1.0s,mb6.2
ERPA **Erie** 35.42 104 *e*P P 05 23 07.4 +0.1
comp=Z,28nm,0.9s,mb5.2
324A **Moseley Ranch,** 35.52 144 ⇓P P 05 23 08.9 +0.6
baz=35,SNR=12
USIN **University of** 35.68 116 *e*P P 05 23 08.8 -0.8
comp=Z,118nm,1.5s,mb5.6
ACSO **Alum Creek Sta** 35.69 109 *e*P P 05 23 09.8 +0.2
comp=Z,95nm,1.0s,mb5.7
325A **Bean Ranch, Si** 35.73 143 ⇑P P 05 23 10.9 +0.8
baz=36,SNR=8.2
ALLY **Alegheny Colle** 35.74 104 *e*P P 05 23 10.4 +0.3
comp=Z,196nm,1.3s,mb5.9
LONY **Lake Ozonia** 35.81 96 *e*P P 05 23 10.1 -0.6
comp=Z,116nm,1.4s,mb5.6
WCI **Wyandotte Cave** 36.00 114 *e*P P 05 23 11.3 -1.1
comp=Z,18nm,1.1s,mb4.9
WCI **Wyandotte Cave** 36.00 114 *e*P P 05 23 11.3 -1.1
WCI pmax pmax
comp=Z,18nm,1.1s,mb4.9
FRNY **Flat Rock** 36.08 94 *e*P P 05 23 10.9 -2.1
comp=Z,36nm,1.3s,mb5.1
425A **Indio Mountain** 36.28 143 ⇑P P 05 23 15.7 +0.9
baz=36,SNR=15
328A **Wristen Ranch,** 36.32 140 ⇑P P 05 23 14.3 -0.8
baz=36,SNR=15
MIAR **Mount Ida** 36.42 126 *e*P P 05 23 14.7 -1.3
comp=Z,80nm,1.1s,mb5.6
MIAR **Mount Ida** 36.42 126 *e*P P 05 23 14.7 -1.3
MIAR pmax pmax
comp=Z,80nm,1.1s,mb5.6
GNAR **Gosnell** 36.49 120 *e*P P 05 23 16.0 -0.6
comp=Z,248nm,0.5s,mb6.4
426A **McDonald Obser** 36.65 142 ⇑P P 05 23 17.4 -0.5
baz=36,SNR=9.7
MDV **Middlebury** 36.92 95 *e*P P 05 23 19.7 -0.5
comp=Z,8μm,1.0s
428A **Kincaid Ranch,** 36.97 140 ⇑P P 05 23 20.5 -0.2
baz=37,SNR=19
BINY **Binghamton** 37.11 99 *e*P P 05 23 21.5 -0.3
comp=Z,47nm,1.5s,mb5.1
ACCN **Adirondack Com** 37.19 96 *e*P P 05 23 22.1 -0.4
comp=Z,108nm,1.3s,mb5.5
WVT **Waverly** 37.20 118 *e*P P 05 23 21.3 -1.3
comp=Z,19nm,0.8s,mb5.0
WVT **Waverly** 37.20 118 *e*P P 05 23 21.3 -1.3
WVT pmax pmax
comp=Z,19nm,0.8s,mb5.0
526A **Mary Lane Ranc** 37.20 143 P P 05 23 22.8 +0.1
baz=37,SNR=17
527A **Woodward Ranch** 37.26 142 P P 05 23 21.8 -1.3
baz=37,SNR=33
PET **Petropavlovsk** 37.27 288 *e*P P 05 23 28.8 +5.8
PET *e*S S 05 29 13.4 +3.5
PET pmax pmax
comp=Z,34nm,1.3s,mb5.0
PET MLR MLR
comp=Z,900nm,19.0s,MS4.6
LBNH **Lisbon** 37.29 94 *e*P P 05 23 23.5 +0.2
comp=Z,71nm,1.4s,mb5.3
LBNH **Lisbon** 37.29 94 *e*P P 05 23 23.5 +0.2
LBNH pmax pmax
comp=Z,71nm,1.4s,mb5.3
528A **Cox Ranch, San** 37.47 141 ⇓P P 05 23 25.3 +0.3
baz=37,SNR=12
MCWV **Mont Chateau** 37.51 106 *e*P P 05 23 24.5 -0.6
comp=Z,277nm,1.5s,mb5.8
SSPA **Standing Stone** 37.55 103 *e*P P 05 23 24.9 -0.6
comp=Z,105nm,1.5s,mb5.3
HNH **Hanover** 37.55 94 *e*P P 05 23 25.0 -0.5
comp=Z,127nm,1.2s,mb5.5
PETK **Petropavlovsk-** 37.62 289 P P 05 23 26.5 +0.5
comp=Z,19nm,0.9s,mb4.8,baz=78,slow=9.2,SNR=9.8
PETK LR LR 05 39 55.3
comp=Z,872nm,19.7s,MS4.6,baz=266,slow=38
PETK **Petropavlovsk-** 37.62 289 P P 05 23 26.5 +0.5
626A **Big Bend Ranch** 37.67 143 ⇓P P 05 23 26.9 +0.3
baz=38,SNR=22
TRY **Troy** 37.71 97 *e*P P 05 23 27.2 +0.4
comp=Z,139nm,1.4s,mb5.5
627A **Terlingua Ranc** 37.97 142 P P 05 23 28.3 -0.9
baz=38,SNR=31
OXF **Oxford** 38.00 121 *e*P P 05 23 28.9 -0.5
comp=Z,180nm,1.0s,mb5.8
OXF **Oxford** 38.00 121 *e*P P 05 23 28.9 -0.5
OXF pmax pmax
comp=Z,180nm,1.0s,mb5.8
TXAR **Lajitas Array** 38.01 142 P P 05 23 28.2 -1.2
comp=Z,9.2nm,1.0s,mb4.5,baz=349,slow=3.8,SNR=53
TXAR Lg 05 36 18.1
comp=Z,2.4nm,1.1s,baz=26,slow=37,SNR=2.7
TXAR LR LR 05 40 30.3
comp=Z,2μm,20.4s,MS4.8,baz=5.0,slow=39
TXAR **Lajitas Array** 38.01 142 P P 05 23 28.3 -1.2
FFD **Franklin Falls** 38.02 94 *e*P P 05 23 29.9 +0.4
comp=Z,182nm,1.4s,mb5.6
WVL **Waterville** 38.05 91 *e*P P 05 23 28.4 -1.3
comp=Z,388nm,1.8s,mb5.8
JCT **Junction City** 38.05 137 ⇑P P 05 23 28.9 -0.9
baz=38,SNR=16
JCT **Junction City** 38.05 137 *e*P P 05 23 28.9 -1.0
comp=Z,33nm,1.0s,mb5.0
JCT **Junction City** 38.05 137 *e*P P 05 23 28.9 -1.0
JCT pmax pmax
comp=Z,33nm,1.0s,mb5.0
628A **Black Gap, Mar** 38.08 141 ⇓P P 05 23 29.8 -0.3
baz=38,SNR=14
NATX **Nacogdoches** 38.55 129 *e*P P 05 23 34.2 +0.2
comp=Z,35nm,0.9s,mb5.1
QUA2 **Belchertown** 38.65 96 *e*P P 05 23 34.8 0.0
comp=Z,102nm,1.3s,mb5.4
SWET **Sewanee** 38.75 116 *e*P P 05 23 34.2 -1.5
WES **Weston** 39.03 95 *e*P P 05 23 38.0 +0.1
comp=Z,47nm,0.8s,mb5.3
WES **Weston** 39.03 95 *e*P P 05 23 38.0 +0.1
WES pmax pmax
comp=Z,47nm,0.8s,mb5.3
CPCT **Cooper Cave** 39.12 114 *e*P P 05 23 37.4 -1.3
TKL **Tuckaleechee C** 39.24 114 Lg 05 36 22.1
comp=Z,17nm,1.0s,baz=18,slow=14,SNR=3.1
TKL LR LR 05 39 51.5
comp=Z,1μm,19.0s,MS4.7,baz=311,slow=36
TKL **Tuckaleechee C** 39.24 114 *e*P P 05 23 39.1 -0.6
TKL **Tuckaleechee C** 39.24 114 *e*P P 05 23 39.2 -0.6
BLA **Blacksburg** 39.31 109 *e*P P 05 23 39.7 -0.7
comp=Z,85nm,1.1s,mb5.4
BLA **Blacksburg** 39.31 109 *e*P P 05 23 39.7 -0.7
BLA pmax pmax
comp=Z,85nm,1.1s,mb5.4
JMIC **Jan Mayen** 39.59 26 LR LR 05 40 28.6
comp=Z,945nm,19.4s,MS4.6,baz=268,slow=37
VBMS **Vicksburg** 39.63 124 *e*P P 05 23 42.7 -0.3
comp=Z,22nm,0.2s,mb5.5
CBN **Corbin** 39.78 105 *e*P P 05 23 44.0 -0.2
comp=Z,68nm,0.9s,mb5.4
LRAL **Lakeview Retre** 40.24 119 *e*P P 05 23 47.2 -1.0
comp=Z,16nm,1.0s,mb4.7
GOGA **Godfrey** 41.31 115 *e*P P 05 23 55.5 -1.5
comp=Z,47nm,1.0s,mb5.1
GOGA **Godfrey** 41.31 115 *e*P P 05 23 55.5 -1.5
GOGA pmax pmax
comp=Z,47nm,1.0s,mb5.1
BORG **Borgarnes** 41.46 38 LR LR 05 40 08.7
comp=Z,534nm,18.9s,MS4.4,baz=335,slow=35
JSC **Jenkinsville** 41.46 112 *e*P P 05 23 56.4 -1.8
JSC **Jenkinsville** 41.46 112 *e*P P 05 23 56.4 -1.8
YAK **Yakutsk** 41.54 316 *e*P P 05 23 58.7 +0.2
YAK pmax pmax
comp=Z,45nm,1.6s,mb4.8
YAK pmax pmax
comp=E,21nm,1.8s
YAK pmax pmax
comp=N,18nm,1.0s
YAK MLR MLR
comp=Z,1μm,16.0s,MS4.8

YAK MLR MLR
comp=E,863nm,15.0s,MS4.9
YAK MLR MLR
comp=N,503nm,10.0s,MS4.9
COW Cow Castle Cre 42.48 112 *e*P **P** **05 24 06.1 -0.4**
KEV Kevo 45.85 11 *e*P **P** **05 24 32.1 -1.0**
comp=N,34nm,1.0s,mb5.2
KEV Kevo 45.85 11 *e*P **P** **05 24 31.1 -2.0**
KEV pmax pmax
comp=Z,13nm,0.7s,mb5.0
KEV Kevo 45.85 11 *e*p **P** **05 24 31.1 -2.0**
comp=Z,13nm,0.7s,mb5.0
ARCES ARCESS Array B 45.92 12 P **P** **05 24 33.2 -0.5**
comp=Z,18nm,0.9s,mb5.0,baz=348,slow=5.3,SNR=16
ARCES ARCESS Array B 45.92 12 P **P** **05 24 33.2 -0.5**
ARE0 ARCESS Array S 45.93 12 *e*P **P** **05 24 32.7 -0.9**
KIP Kipapa 46.41 218 *e*P **P** **05 24 38.0 0.0**
comp=Z,46nm,0.8s,mb5.5
KIP Kipapa 46.41 218 *e*P **P** **05 24 38.0 0.0**
KIP pmax pmax
comp=Z,46nm,0.8s,mb5.5
CLNS Chul'man 47.14 314 *e*P **P** **05 24 43.7 +0.4**
CLNS pmax pmax
comp=Z,27nm,1.1s,mb5.1
CLNS pmax pmax
comp=N,11nm,1.1s
CLNS pmax pmax
comp=E,21nm,1.4s
LVZ Lovozero 48.25 8⇓*e*P **P** **05 24 50.7 -1.1**
LVZ pmax pmax
comp=Z,82nm,1.5s,mb5.5
APA Apatity 48.49 9⇑*i*P **P** **05 24 53.0 -0.7**
APA *i* S **S** **05 31 56.0 +1.9**
APA pmax pmax
comp=Z,29nm,1.0s,mb5.3
APA MLR MLR
comp=Z,600nm,16.0s,MS4.7
YSS Yuzh-Sakhalins 48.53 294 *e*P **P** **05 24 55.7 +1.5**
comp=Z,109nm,1.0s,mb5.8
YSS Yuzh-Sakhalins 48.53 294*oe*P **P** **05 24 54.1 -0.1**
YSS *e**SP sP 05 24 58.0 -0.7
YSS *e* 05 26 16.0
YSS *e* 05 26 50.0
YSS *e*S **S** **05 31 56.0 +0.9**
YSS pmax pmax
comp=Z,50nm,1.2s,mb5.4
YSS pmax pmax
comp=E,40nm,1.1s
YSS MLR MLR
comp=Z,1μm,15.0s,MS5.0
YSS MLR MLR
comp=N,500nm,16.0s
YUK Yuzh-Kuril'sk 49.59 289⇓*i*P **P** **05 25 01.4 -1.1**
YUK *e*S **S** **05 32 24.4 +14**
YUK smax
comp=N,1μm,3.0s
YUK smax
comp=E,680nm,3.0s
YUK MLR MLR
comp=N,740nm,21.0s,MS4.9
YUK MLR MLR
comp=E,960nm,21.0s,MS4.9
YUK MLR MLR
comp=Z,920nm,21.0s,MS4.8
BOD Bodaibo 49.60 321 *e*P **P** **05 25 00.6 -1.7**
BOD *e* 05 32 09.1
BOD pmax pmax
comp=Z,73nm,1.3s,mb5.5
HABR Khabarovsk 50.35 301 *e*P **P** **05 25 09.9 +1.8**
HABR *e**SP sP 05 25 11.4 -1.2
HABR *e* 05 27 02.0
HABR *e*S **S** **05 32 20.3 -0.3**
HABR *e**SS sS 05 32 25.6 -0.3
HABR *e*SS SS 05 35 54.9 +1.4
HABR pmax pmax
comp=E,51nm,1.6s
HABR pmax pmax
comp=N,40nm,1.6s
HABR pmax pmax
comp=Z,77nm,1.6s,mb5.5
HABR MLR MLR
comp=Z,1μm,19.0s,MS4.9
LRW Lerwick 50.43 31 *e*P **P** **05 25 08.8 +0.2**
LRW AMB AMB 05 25 19.8
comp=Z,66nm,4.0s
KLR Kul'dur 50.98 304 *e*P **P** **05 25 06.6 -6.2**
KLR *e* 05 27 08.0
KLR *e*S **S** **05 32 33.0 +3.7**
KLR *e*SS SS 05 36 05.5 +2.1
KLR pmax pmax
comp=Z,56nm,1.8s,mb5.2
KLR MLR MLR
comp=N,2μm,12.5s,MS5.4
KLR MLR MLR
comp=E,1μm,12.5s,MS5.4
KLR MLR MLR
comp=Z,3μm,12.5s,MS5.5
RRH Rhenigidale 51.05 35 *e*P **P** **05 25 13.7 +0.4**
TEIG Tepich 51.37 128 LR LR 05 52 10.7
comp=Z,610nm,18.4s,MS4.7,baz=293,slow=42
MVH1 Achvaich 51.68 34 *e*P **P** **05 25 18.6 +0.5**
KAC Achnashellach 51.78 35 *e*P **P** **05 25 18.5 -0.2**
NOA NORSAR Array B 52.11 23 P **P** **05 25 20.2 -1.0**
comp=Z,29nm,0.8s,mb5.2,baz=338,slow=7.7,SNR=40
NOA LR LR 05 48 32.8
comp=Z,582nm,19.9s,MS4.6,baz=335,slow=37
NOA NORSAR Array B 52.11 23 P **P** **05 25 20.2 -1.0**
CMIG Matias Romero 52.12 137 LR LR 05 50 37.2
comp=Z,797nm,18.6s,MS4.8,baz=150,slow=40
MCD Coleburn Disti 52.22 33 *e*P **P** **05 25 21.3 -0.7**
NAO01 NORSAR Array S 52.24 23 *e*P **P** **05 25 21.7 -0.4**
comp=Z,28nm,0.9s,mb5.2
ERM Erimo 52.39 290 *e*P **P** **05 25 27.7 +4.2**
comp=Z,30nm,0.8s,mb5.3
ERM Erimo 52.39 290 *e*P **P** **05 25 27.7 +4.2**
ERM pmax pmax
comp=Z,30nm,0.8s,mb5.3
JOF Joensuu 52.92 11 *e*P **P** **05 25 26.0 -1.2**
JOF pmax pmax
comp=Z,27nm,0.7s,mb5.3
JOF Joensuu 52.92 11 *e*p **P** **05 25 26.0 -1.2**
comp=Z,27nm,0.7s,mb5.3
EAB Aberfoyle 53.19 35 *e*P **P** **05 25 28.4 -0.8**
KAF Kangasniemi 53.23 14 *e*P **P** **05 25 28.5 -0.9**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KAF Kangasniemi 53.23 14 *e*p **P** **05 25 28.5 -0.9**
comp=Z,6.2nm,0.7s,mb4.7
EBH Black Hill 53.35 34 *e*P **P** **05 25 29.8 -0.6**
PGBU Glenifferbraes 53.49 35 *e*P **P** **05 25 31.0 -0.4**
PGBU AMB AMB 05 25 37.9
comp=Z,67nm,5.9s
EDI Edinburgh 53.72 34 *e*P **P** **05 25 31.5 -1.6**
EDI AMB AMB 05 25 34.4
comp=Z,26nm,0.9s,mb5.2
EAU Auchinoon 53.72 35 *e*P **P** **05 25 32.7 -0.4**
FINES FINESS Array B 53.86 14 P **P** **05 25 33.0 -1.0**
comp=Z,26nm,0.7s,mb5.2,baz=359,slow=7.9,SNR=34
FINES LR LR 05 48 57.4
comp=Z,657nm,20.0s,MS4.7,baz=322,slow=36
FINES FINESS Array B 53.86 14 P **P** **05 25 33.0 -1.0**
FINES LR LR 05 48 57.4
FINES FINESS Array B 53.86 14 P **P** **05 25 33.0 -1.0**
ESY Stoneypath 53.87 34 *e*P **P** **05 25 32.6 -1.6**
EBL Broad Law 53.89 34 *e*P **P** **05 25 33.0 -1.3**
ESK Eskdalemuir 54.26 35 *e*P **P** **05 25 35.7 -1.4**
ESK AMB AMB 05 25 39.0
comp=Z,36nm,0.9s,mb5.3
ESK Eskdalemuir 54.26 35 *e*P **P** **05 25 36.1 -0.9**
comp=Z,39nm,0.8s,mb5.4
ESK Eskdalemuir 54.26 35 *e*P **P** **05 25 36.1 -0.9**
ESK pmax pmax
comp=Z,39nm,0.8s,mb5.4
ESK Eskdalemuir 54.26 35 P **P** **05 25 36.2 -0.8**
comp=Z,268nm,0.8s,mb6.2,SNR=7.0
GAL1 Galloway 54.27 36 *e*P **P** **05 25 36.4 -0.7**
GAL1 AMB AMB 05 25 40.5
comp=Z,72nm,6.3s
ECK Cauldkaine Hil 54.40 35 *e*P **P** **05 25 37.4 -0.6**
GCD Castle Douglas 54.48 35 *e*P **P** **05 25 38.4 -0.2**
GMM Mts of Mourne 54.50 37 *e*P **P** **05 25 37.7 -1.2**
CIT Chita 54.75 318 *e*P **P** **05 25 41.3 +0.6**
GIM North Isle of 54.85 36 *e*P **P** **05 25 40.7 -0.7**
XDE Dent Fell 54.91 35 *e*P **P** **05 25 40.9 -0.9**
XAL Allendale 54.92 34 *e*P **P** **05 25 41.5 -0.4**

KESW Keswick, Cumbr 54.94 35 *e*P **P** **05 25 42.5 +0.5**
KESW AMB AMB 05 25 49.4
comp=Z,30nm,0.8s,mb5.3
PRGR Permogore 54.99 3⇑*i*P **P** **05 25 42.3 +0.1**
PRGR pmax pmax
comp=Z,100nm,0.9s,mb5.8
HIA Hailar 55.18 312 *e*P **P** **05 25 44.1 +0.3**
comp=Z,28nm,0.9s,mb5.3
HIA Hailar 55.18 312 *e*P **P** **05 25 44.1 +0.3**
HIA pmax pmax
comp=Z,28nm,0.9s
APG El Apazote 55.47 133 LR LR 05 50 37.0
comp=Z,999nm,18.6s,MS4.9,baz=158,slow=37
KLMR Klimovskoe 55.54 7 *e*P **P** **05 25 44.6 -1.6**
KLMR pmax pmax
comp=Z,109nm,1.5s,mb5.7
KLMR MLR MLR
comp=Z,471nm,14.0s,MS4.7
MDJ Mudanjiang 55.65 302 P **P** **05 25 45.9 -1.3**
MDJ pP pP 05 25 49.1 -1.4
MDJ sP sP 05 25 50.4 -1.4
MDJ PP PP 05 27 46.3 -4.7
MDJ S **S** **05 33 31.8 -1.0**
MDJ sS sS 05 33 35.5 -2.7
MDJ SS SS 05 37 14.0 -3.2
MDJ pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
MDJ pmax pmax
comp=Z,84nm,5.0s
MDJ LR LR
comp=N,670nm,22.6s,MS4.9
MDJ LR LR
comp=E,800nm,21.3s,MS4.9
MDJ LR LR
comp=Z,940nm,14.0s
MUD Monsted U'grnd 56.02 26 *i* P **P** **05 25 50.2 +0.5**
MUD pmax pmax
comp=Z,19nm,0.9s,mb5.1
MUD Monsted U'grnd 56.02 26 *i* P **P** **05 25 50.2 +0.5**
comp=Z,19nm,0.9s,mb5.1
VLA Vladivostok 56.03 299⇑*i*P **P** **05 25 50.4 +0.4**
VLA pmax pmax
comp=Z,92nm,1.8s,mb5.5
VSU Vasula 56.85 15*c i*P **P** **05 25 54.8 -0.8**
VSU pmax pmax
comp=Z,75nm,0.7s,mb5.8
SOKR Solikamsk 57.04 356*d i*P **P** **05 25 57.3 +0.4**
SOKR pmax pmax
comp=Z,50nm,1.4s,mb5.3
SOKR MLR MLR
comp=Z,460nm,24.0s,MS4.5
IRK Irkutsk 57.17 324 *e*P **P** **05 25 57.0 -0.9**
IRK pmax pmax
comp=Z,74nm,1.7s,mb5.4
MCH1 Michaelchurch 57.30 36 *e*P **P** **05 25 57.2 -1.7**
MCH1 AMB AMB 05 26 02.0
comp=Z,30nm,1.0s,mb5.3
COP Copenhagen 57.37 25 *i* P **P** **05 26 01.8 +2.5**
COP pmax pmax
comp=Z,21nm,0.9s,mb5.2
COP Copenhagen 57.37 25 *i* P **P** **05 26 01.8 +2.5**
comp=Z,21nm,0.9s,mb5.2
TGUH Tegucigalpa,Un 57.43 130 *e*P **P** **05 26 00.7 +0.5**
comp=Z,21nm,0.9s,mb5.2
HGH Gray Hill 57.68 36 *e*P **P** **05 26 00.3 -1.2**
TLY Talaya 57.84 324 *e*P **P** **05 26 05.0 +2.3**
TLY *e* 05 28 12.0
TLY pmax pmax
comp=Z,42nm,1.1s,mb5.4
TLY MLR MLR
comp=Z,548nm,14.0s,MS4.8
CN2 Changchun 57.89 304 *e*P **P** **05 26 00.5 -2.7**
CN2 *e*pP pP 05 26 05.3 -1.2
CN2 *e*sP sP 05 26 07.5 -0.2
CN2 PcP PcP 05 26 52.6 -2.8
CN2 PP PP 05 28 11.1 +0.1
CN2 *e*S **S** **05 33 56.5 -6.0**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,16.0s,MS5.2
CN2 LR LR
comp=E,1μm,16.0s,MS5.2
CN2 LR LR
comp=Z,700nm,18.0s,MS4.8
BSD Bornholm Skovb 58.37 23 *i* P **P** **05 26 08.4 +2.1**
BSD pmax pmax
comp=Z,22nm,0.8s,mb5.2
BSD Bornholm Skovb 58.37 23 *i* P **P** **05 26 08.4 +2.1**
comp=Z,22nm,0.8s,mb5.2
WOL Wolverton 58.39 36 *e*P **P** **05 26 07.0 +0.5**
WOL AMB AMB 05 26 10.1
comp=Z,66nm,1.1s,mb5.6
MOY Mondy 58.53 326 *e*P **P** **05 26 08.6 +1.1**
MOY pmax pmax
comp=Z,128nm,1.4s,mb5.8
MAJO Matsushiro 59.06 290 *e*P **P** **05 26 14.6 +3.2**
comp=Z,19nm,0.8s,mb5.2
MAJO Matsushiro 59.06 290 *e*P **P** **05 26 14.6 +3.2**
MAJO pmax pmax
comp=Z,19nm,0.8s,mb5.2
MJAR Matsushiro Arr 59.06 290 P **P** **05 26 11.4 0.0**
comp=Z,7.2nm,1.0s,mb4.7,baz=13,slow=5.8,SNR=6.5
MJAR LR LR 05 54 05.0
comp=Z,631nm,18.5s,MS4.8,baz=0.0,slow=38
MJAR Matsushiro Arr 59.06 290 P **P** **05 26 11.4 0.0**
SDDR Presa de Saban 59.09 111 *e*P **P** **05 26 12.3 +0.5**
comp=Z,58nm,1.1s,mb5.5
ZAK Zakamensk 59.12 324 *e*P **P** **05 26 11.1 -0.5**
ZAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
NVS Novosibirsk 59.21 339 *i* P **P** **05 26 09.9 -2.3**
NVS *e* 05 34 10.9
NVS pmax pmax
comp=N,32nm,1.4s
NVS pmax pmax
comp=Z,79nm,1.4s,mb5.5
NVS pmax pmax
comp=E,33nm,1.5s
SVE Sverdlovsk 59.63 354⇑*e*P **P** **05 26 15.5 +0.4**
SVE pmax pmax
comp=Z,56nm,1.1s,mb5.5
WTSB Winterswijk 59.72 30 *e*P **P** **05 26 14.3 -1.5**
ZAA0 Zalesovo Array 59.81 338 *e*P **P** **05 26 15.5 -0.8**
ZALV Zalesovo Beam 59.81 338 P **P** **05 26 15.8 -0.5**
comp=Z,18nm,0.7s,mb5.2,baz=13,slow=7.3,SNR=61
ZALV LR LR 05 53 00.8
comp=Z,272nm,21.4s,MS4.3,baz=12,slow=37
ZALV Zalesovo Beam 59.81 338 P **P** **05 26 15.8 -0.5**
NRDL Niedersach Rie 59.93 27 *e*P **P** **05 26 17.1 -0.1**
comp=Z,11nm,1.1s,mb4.8
NRDL *e*pP pP 05 26 19.9 -0.6
ARU Arti 60.12 355 *e*P **P** **05 26 18.8 +0.3**
comp=Z,68nm,1.0s,mb5.6
ARU Arti 60.12 355*c i*P **P** **05 26 18.7 +0.3**
ARU *e* 05 28 27.3
ARU PPP 05 29 53.5
ARU S **S** **05 34 32.1 +1.1**
ARU SS SS 05 38 25.3 -1.6
ARU pmax pmax
comp=Z,103nm,1.7s,mb5.6
ARU Arti 60.12 355 P **P** **05 26 18.1 -0.3**
comp=Z,254nm,0.6s,mb6.4,SNR=6.0
NACGM Naroch 60.34 16 *e* **P** **05 26 16.0 -4.0**
ULN Ulaanbaatar 60.37 320 *e*P **P** **05 26 21.1 +0.8**
comp=Z,48nm,1.4s,mb5.3
ULN Ulaanbaatar 60.37 320 *e*P **P** **05 26 21.1 +0.9**
ULN pmax pmax
comp=Z,48nm,1.4s,mb5.3
MOS Moscow 60.53 9 *e*P **P** **05 26 20.8 -0.4**
MOS pmax pmax
comp=Z,75nm,0.9s,mb5.8
GKP Gorka Klasztor 60.54 22 *e*P **P** **05 26 21.3 -0.1**
GKP *e*pP pP 05 26 24.0 -0.7
GKP LMZ 05 53 17.3
comp=Z,1μm,19.8s
GKP Gorka Klasztor 60.54 22 *e*P **P** **05 26 21.3 0.0**
GKP *e**PP pP 05 26 24.0 -0.6
GKP MLR MLR
comp=Z,1μm,19.8s,MS5.0
ROSF Rostrenen 60.55 38 *e*P **P** **05 26 21.0 -0.5**
comp=Z,55nm,1.1s,mb5.3
ROSF Rostrenen 60.55 38 *e*P **P** **05 26 21.0 -0.5**
comp=Z,28nm,1.1s,mb5.3
ROSF Rostrenen 60.55 38 *e*P **P** **05 26 21.0 -0.5**
ROSF pmax pmax
comp=Z,28nm,1.1s,mb5.3
BEBN Eben Emael 60.56 31 P **P** **05 26 21.7 +0.1**
comp=Z,7.1nm,1.1s,mb4.7
SONM Songino Array 60.58 320 P **P** **05 26 22.2 +0.5**
comp=Z,18nm,1.1s,mb5.1,baz=13,slow=4.1,SNR=24
SONM LR LR 05 57 17.5
comp=Z,972nm,18.0s,MS5.0,baz=22,slow=41
SONM Songino Array 60.58 320 P **P** **05 26 22.2 +0.5**
CLZ Clausthal 60.60 28 *e*P **P** **05 26 22.1 +0.3**
comp=Z,12nm,0.9s,mb5.0
CLZ Clausthal 60.60 28 *e*P **P** **05 26 22.1 +0.3**
CLZ pmax pmax
comp=Z,12nm,0.9s,mb5.0
HGN Heimansgroeve 60.65 31 *e*P **P** **05 26 21.8 -0.4**
comp=Z,25nm,1.4s,mb5.2
SUW Suwalki 60.74 18 *e*P **P** **05 26 21.9 -0.8**
SUW *e*pP pP 05 26 24.5 -1.5
SUW LMZ 05 51 49.5
comp=Z,700nm,23.5s
SUW Suwalki 60.74 18 *e*P **P** **05 26 22.2 -0.5**
SUW Suwalki 60.74 18 *e*P **P** **05 26 21.9 -0.8**
SUW *e**PP pP 05 26 24.5 -1.5
MEM Membach 60.81 31 P **P** **05 26 23.1 -0.1**
comp=Z,25nm,1.0s,mb5.3
BCLA Clavier 60.82 32 P **P** **05 26 22.8 -0.5**
comp=Z,9.5nm,1.0s,mb4.9
MNK Minsk 60.86 15 *e*P **P** **05 26 22.0 -1.5**
MICGM Minsk 60.87 15 *e*P **P** **05 26 22.0 -1.5**
BAIF Baives 60.90 32 *e*P **P** **05 26 23.5 -0.4**
comp=Z,30nm,1.1s,mb5.0
BAIF Baives 60.90 32 *e*P **P** **05 26 23.5 -0.4**
comp=Z,15nm,1.1s,mb5.0
BAIF Baives 60.90 32 *e*P **P** **05 26 23.5 -0.4**
BAIF pmax pmax
comp=Z,15nm,1.1s,mb5.0
FLN La Foliniere 60.92 36 *e*P **P** **05 26 23.2 -0.8**
comp=Z,71nm,1.0s,mb5.5
FLN *e*MLR MLR
comp=Z,959nm,21.2s,MS4.6
FLN La Foliniere 60.92 36 *e*P **P** **05 26 23.2 -0.8**
comp=Z,36nm,1.0s,mb5.5
FLN LR LR
comp=Z,960nm,21.3s,MS4.9
FLN La Foliniere 60.92 36 *e*P **P** **05 26 23.2 -0.8**
FLN pmax pmax
comp=Z,35nm,1.0s,mb5.4
FLN MLR MLR
comp=Z,960nm,21.3s,MS4.9
DOU Dourbes 60.96 32 P **P** **05 26 25.4 +1.1**
comp=Z,5.0nm,1.0s,mb4.6
QUIF Quistinic 60.97 38 *e*P **P** **05 26 23.6 -0.7**
comp=Z,44nm,1.0s,mb5.3
QUIF Quistinic 60.97 38 *e*P **P** **05 26 23.6 -0.7**
comp=Z,22nm,1.0s,mb5.2
QUIF Quistinic 60.97 38 *e*P **P** **05 26 23.6 -0.7**
QUIF pmax pmax
comp=Z,22nm,1.0s,mb5.2
GIVF Givet 61.01 32 *e*P **P** **05 26 24.2 -0.4**
comp=Z,44nm,1.0s,mb5.2
GIVF Givet 61.01 32 *e*P **P** **05 26 24.2 -0.4**
comp=Z,22nm,1.0s,mb5.2
GIVF Givet 61.01 32 *e*P **P** **05 26 24.2 -0.4**
GIVF pmax pmax
comp=Z,22nm,1.0s,mb5.2
OBN Obninsk 61.08 9 *e*P **P** **05 26 24.6 -0.4**
comp=Z,16nm,0.4s,mb5.5
OBN Obninsk 61.08 9⇓*e*P **P** **05 26 24.8 -0.2**
OBN *i* S **S** **05 34 47.0 +3.7**
OBN pmax pmax
comp=Z,104nm,1.6s,mb5.7
OBN MLR MLR
comp=Z,600nm,19.0s,MS4.8
GRR Gorron 61.16 37 *e*P **P** **05 26 25.1 -0.6**
comp=Z,51nm,0.8s,mb5.4
GRR Gorron 61.16 37 *e*P **P** **05 26 25.1 -0.6**
comp=Z,26nm,0.8s,mb5.4
GRR Gorron 61.16 37 *e*P **P** **05 26 25.1 -0.6**
GRR pmax pmax
comp=Z,26nm,0.8s,mb5.4
LDF La Druitiere 61.17 36 *e*P **P** **05 26 24.6 -1.1**
comp=Z,27nm,0.9s,mb5.1
LDF La Druitiere 61.17 36 *e*P **P** **05 26 24.6 -1.1**
comp=Z,13nm,0.9s,mb5.1
LDF La Druitiere 61.17 36 *e*P **P** **05 26 24.6 -1.1**
LDF pmax pmax
comp=Z,13nm,0.9s,mb5.1
NEUB Neuenburg 61.49 27 *e*P **P** **05 26 27.7 -0.1**
comp=Z,14nm,1.2s,mb5.0
LRS Lares 61.58 107 *e*P **P** **05 26 28.8 0.0**
CLL Collm 61.64 26 *e*P **P** **05 26 28.4 -0.4**
comp=Z,7.0nm,0.9s,mb4.8
CLL Collm 61.64 26⇑*i*P **P** **05 26 28.3 -0.5**
comp=Z,14nm,1.0s,mb5.0
CLL Collm 61.64 26⇑*i*P **P** **05 26 28.3 -0.5**
CLL pmax pmax
comp=Z,14nm,1.0s,mb5.0
CLL Collm 61.64 26⇑*i*P **P** **05 26 28.3 -0.5**
comp=Z,14nm,1.0s,mb5.0
CLL *e*PP PP 05 28 36.0 -7.9
TNS Taunus Mts 61.72 29 *e*P **P** **05 26 29.4 0.0**
comp=Z,18nm,1.4s,mb5.0
TNS Taunus Mts 61.72 29 *e*P **P** **05 26 29.4 0.0**
TNS pmax pmax
comp=Z,18nm,1.4s,mb5.0
WLF Walferdange 61.73 31 P **P** **05 26 29.8 +0.4**
comp=Z,12nm,1.6s,mb4.8
JTS JuntasAbangare 61.73 129 LR LR 05 55 09.6
comp=Z,402nm,18.5s,MS4.6,baz=341,slow=38
CELP Cerrillos 61.88 107 *e*P **P** **05 26 30.8 -0.1**
MOX Moxa 61.99 27 *e*P **P** **05 26 31.4 +0.2**
comp=Z,19nm,1.1s,mb5.1
MOX
comp=Z,300nm,19.0s
MOX Moxa 61.99 27 *e*P **P** **05 26 31.1 -0.1**
comp=Z,11nm,1.1s,mb4.9
MOX Moxa 61.99 27 *e*P **P** **05 26 31.4 +0.2**
MOX pmax pmax
comp=Z,19nm,1.1s,mb5.1
MOX MLR MLR
comp=Z,300nm,19.0s,MS4.5
SJG San Juan 62.03 106 LR LR 05 53 40.7
comp=Z,710nm,19.6s,MS4.8,baz=274,slow=36
SJG San Juan 62.03 106 *e*P **P** **05 26 31.4 -0.5**
comp=Z,26nm,0.8s,mb5.4
SJG San Juan 62.03 106 *e*P **P** **05 26 31.4 -0.5**
SJG pmax pmax
comp=Z,26nm,0.8s
BRG Berggiesshubel 62.23 25 *e*P **P** **05 26 32.5 -0.3**
comp=Z,10.0nm,1.2s,mb4.8
BRG *e*pP pP 05 26 34.9 -1.3
BRG Berggiesshubel 62.23 25 *e*P **P** **05 26 32.4 -0.4**
comp=Z,10nm,1.2s,mb4.8
BRG *e* 05 26 53.2
comp=Z,20nm,1.4s
WERD Werda 62.32 27 *e*P **P** **05 26 33.4 0.0**
comp=Z,9.0nm,1.1s,mb4.8
WERD *e*pP pP 05 26 35.7 -1.0
TANN Tannenbergstha 62.38 27 *e*P **P** **05 26 34.0 +0.2**
comp=Z,6.0nm,1.0s,mb4.7
GUNZ Gunzen 62.40 27 *e*P **P** **05 26 34.0 0.0**
comp=Z,6.0nm,1.1s,mb4.6
GUNZ *e*pP pP 05 26 36.5 -0.8
KSRS Korea Array 62.44 299 P **P** **05 26 34.3 -0.2**
comp=Z,6.5nm,0.9s,mb4.8,baz=27,slow=5.7,SNR=14
KSRS LR LR 05 54 12.2
comp=Z,543nm,18.3s,MS4.8,baz=37,slow=36
KSRS Korea Array 62.44 299 P **P** **05 26 34.3 -0.2**
KSRS pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
KSRS MLR MLR
comp=Z,543nm,18.3s,MS4.8
WERN Wernitzgruen 62.48 27 *e*P **P** **05 26 34.7 +0.2**
comp=Z,6.0nm,0.9s,mb4.7
WERN *e*pP pP 05 26 36.9 -1.0
NKC Novy Kostel 62.55 27 *e*P **P** **05 26 35.1 +0.1**
NKC *e* pP 05 26 37.3 -1.0
NKC MLR MLR
comp=Z,700nm,18.7s,MS4.9
NKC Novy Kostel 62.55 27 *e*P **P** **05 26 35.1 +0.1**
NKC *e*pP pP 05 26 37.3 -1.0
NKC AMS AMS 05 56 10.0
comp=Z,700nm,18.7s
MEZF Maizieres J'vi 62.55 32 *e*P **P** **05 26 34.8 -0.2**
comp=Z,45nm,1.1s,mb5.2

MEZF	**Maizieres J'vi**	62.55	32	*e*P		**P**	**05 26 34.8**	**-0.2**
	comp=Z,45nm,1.1s,mb5.5							
BRVK	**Borovoye**	62.66	347	*e*P		**P**	**05 26 36.1**	**+0.4**
	comp=Z,30nm,0.9s,mb5.4							
BRVK	**Borovoye**	62.66	347	*c i*P		**P**	**05 26 35.7**	**+0.1**
BRVK					pmax	pmax		
	comp=Z,67nm,1.7s,mb5.5							
BRVK	**Borovoye**	62.66	347	P		**P**	**05 26 36.6**	**+1.0**
	comp=Z,185nm,1.0s,mb6.2,SNR=16							
PVCC	**Panska Ves**	62.68	25	*e*P		**P**	**05 26 35.9**	**+0.1**
PVCC					MLR	MLR		
	comp=Z,600nm,20.2s,MS4.8							
PVCC	**Panska Ves**	62.68	25	*e*P		**P**	**05 26 35.9**	**+0.1**
PVCC					AMS	AMS	05 53 20.0	
	comp=Z,600nm,20.2s							
KSP	**Ksiaz**	62.70	24	*e*P		**P**	**05 26 36.4**	**+0.5**
KSP				*e*pP		pP	05 26 38.8	-0.4
KSP					LMZ		05 51 22.7	
	comp=Z,600nm,24.8s							
GRA1	**Grafenberg Arr**	62.81	28	*e*P		**P**	**05 26 37.3**	**+0.6**
	comp=Z,5.0nm,0.9s,mb4.6							
GRA1				*e*pP		pP	05 26 39.6	-0.5
GRF	**Grafenberg Arr**	62.81	28	*e*P		**P**	**05 26 37.3**	**+0.6**
	comp=Z,5.0nm,0.9s,mb4.6							
GRF				*e*pP		pP	05 26 39.6	-0.5
GRF	**Grafenberg Arr**	62.81	28	*e*P		**P**	**05 26 37.3**	**+0.6**
GRF				*e**PP		pP	05 26 39.6	-0.5
GRF					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6							
GRF	**Grafenberg Arr**	62.81	28	*e*P		**P**	**05 26 37.3**	**+0.6**
GRF				*e**PP		pP	05 26 39.6	-0.5
GRF					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6							
GRFO	**Grafenberg**	62.81	28	*e*P		**P**	**05 26 39.1**	**+2.4**
	comp=Z,15nm,0.9s,mb5.1							
GRFO	**Grafenberg**	62.81	28	*e*P		**P**	**05 26 39.1**	**+2.4**
GRFO					pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1							
SFTF	**Sexfontaines**	62.83	33	*e*P		**P**	**05 26 36.5**	**-0.3**
	comp=Z,43nm,1.0s,mb5.2							
SFTF	**Sexfontaines**	62.83	33	*e*P		**P**	**05 26 36.5**	**-0.3**
	comp=Z,43nm,1.0s,mb5.5							
ROTZ	**Rotzenmuhle**	62.95	27	*e*P		**P**	**05 26 37.8**	**+0.2**
	comp=Z,5.0nm,1.0s,mb4.6							
UPC	**Upice**	62.97	24	*e*P		**P**	**05 26 37.6**	**-0.2**
UPC	**Upice**	62.97	24	*e*P		**P**	**05 26 37.6**	**-0.2**
MFF	**Saint Martin d**	62.99	37	*e*P		**P**	**05 26 37.5**	**-0.5**
	comp=Z,18nm,0.8s,mb5.0							
MFF	**Saint Martin d**	62.99	37	*e*P		**P**	**05 26 37.5**	**-0.5**
	comp=Z,8.8nm,0.8s,mb4.9							
MFF	**Saint Martin d**	62.99	37	*e*P		**P**	**05 26 37.5**	**-0.5**
MFF					pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0							
PRA	**Prague**	63.09	25	P		**P**	**05 26 39.0**	**+0.4**
PRA					AMS	AMS	05 53 00.0	
HYF	**Humbligny**	63.11	35	*e*P		**P**	**05 26 38.5**	**-0.2**
CDF	**Champ du Feu**	63.16	31	*e*P		**P**	**05 26 39.0**	**-0.1**
	comp=Z,38nm,1.3s,mb5.1							
CDF	**Champ du Feu**	63.16	31	*e*P		**P**	**05 26 39.0**	**-0.1**
	comp=Z,19nm,1.3s,mb5.1							
CDF	**Champ du Feu**	63.16	31	*e*P		**P**	**05 26 39.0**	**-0.1**
CDF					pmax	pmax		
	comp=Z,19nm,1.3s,mb5.1							
DPC	**Dobruska-Polom**	63.18	24	*e*P		**P**	**05 26 39.4**	**+0.3**
DPC				*e*		pP	05 26 42.0	-0.5
DPC					MLR	MLR		
	comp=Z,400nm,20.1s,MS4.6							
DPC	**Dobruska-Polom**	63.18	24	*e*P		**P**	**05 26 39.4**	**+0.3**
DPC				*e*pP		pP	05 26 42.0	-0.5
DPC					AMS	AMS	05 54 10.0	
	comp=Z,400nm,20.1s							
PRU	**Pruhonice**	63.19	25	*e*P		**P**	**05 26 40.1**	**+0.8**
PRU				*e*		pP	05 26 42.4	-0.2
PRU					MLR	MLR		
	comp=Z,500nm,20.4s,MS4.7							
PRU	**Pruhonice**	63.19	25	*e*P		**P**	**05 26 40.1**	**+0.8**
PRU				*e*pP		pP	05 26 42.4	-0.2
PRU					AMS	AMS	05 53 10.0	
	comp=Z,500nm,20.4s							
ECH	**Echery**	63.32	31	*e*P		**P**	**05 26 40.0**	**-0.1**
ECH	**Echery**	63.32	31	*e*P		**P**	**05 26 39.7**	**-0.4**
	comp=Z,9.7nm,1.0s,mb4.9							
ECH	**Echery**	63.32	31	*e*P		**P**	**05 26 39.7**	**-0.4**
ECH					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9							
HAU	**Haudompre**	63.33	32	*e*P		**P**	**05 26 39.7**	**-0.5**
	comp=Z,19nm,0.9s,mb4.9							
HAU				*e*MLR		MLR		
	comp=Z,1µm,20.2s,MS4.7							
HAU	**Haudompre**	63.33	32	*e*P		**P**	**05 26 39.7**	**-0.5**
	comp=Z,9.4nm,0.9s,mb4.9							
HAU					LR	LR		
	comp=Z,1µm,20.3s,MS5.0							
HAU	**Haudompre**	63.33	32	*e*P		**P**	**05 26 39.7**	**-0.5**
HAU					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9							
HAU					MLR	MLR		
	comp=Z,1µm,20.3s,MS5.0							
LOR	**Lormes**	63.41	34	*e*P		**P**	**05 26 40.4**	**-0.3**
	comp=Z,65nm,0.9s,mb5.5							
LOR				*e*MLR		MLR		
	comp=Z,1µm,23.0s,MS4.8							
LOR	**Lormes**	63.41	34	*e*P		**P**	**05 26 40.4**	**-0.3**
	comp=Z,33nm,0.9s,mb5.5							
LOR					LR	LR		
	comp=Z,1µm,23.0s,MS5.0							
LOR	**Lormes**	63.41	34	*e*P		**P**	**05 26 40.4**	**-0.3**
LOR					pmax	pmax		
	comp=Z,33nm,0.9s,mb5.5							
LOR					MLR	MLR		
	comp=Z,1µm,23.0s,MS5.0							
BFO	**Black Forest**	63.48	30	*e*P		**P**	**05 26 41.0**	**-0.1**
	comp=Z,13nm,1.4s,mb4.9							
BFO	**Black Forest**	63.48	30	*e*P		**P**	**05 26 41.0**	**-0.1**
BFO					pmax	pmax		
	comp=Z,13nm,1.4s,mb4.9							
SSF	**Saint Saulge**	63.52	34	*e*P		**P**	**05 26 41.1**	**-0.3**
	comp=Z,74nm,0.9s,mb5.4							
SSF	**Saint Saulge**	63.52	34	*e*P		**P**	**05 26 41.1**	**-0.3**
	comp=Z,37nm,0.9s,mb5.4							
SSF	**Saint Saulge**	63.52	34	*e*P		**P**	**05 26 41.1**	**-0.3**
SSF					pmax	pmax		
	comp=Z,37nm,0.9s,mb5.4							
HINF	**Hinteralfeld**	63.62	31	*e*P		**P**	**05 26 41.7**	**-0.4**
	comp=Z,16nm,0.9s,mb4.7							
HINF	**Hinteralfeld**	63.62	31	*e*P		**P**	**05 26 41.7**	**-0.4**
	comp=Z,7.8nm,0.9s,mb4.7							
HINF	**Hinteralfeld**	63.62	31	*e*P		**P**	**05 26 41.7**	**-0.4**
HINF					pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8							
MOF	**Molkenrain**	63.65	31	*e*P		**P**	**05 26 42.1**	**-0.2**
MOF	**Molkenrain**	63.65	31	*e*P		**P**	**05 26 42.1**	**-0.2**
WET	**Wettzell**	63.67	27	*e*P		**P**	**05 26 42.7**	**+0.3**
	comp=Z,9.0nm,1.0s,mb4.8							
WET				*e*pP		pP	05 26 45.0	-0.8
WET	**Wettzell**	63.67	27	*e*P		**P**	**05 26 42.7**	**+0.3**
WET				*e**PP		pP	05 26 45.0	-0.8
WET					pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8							
AVF	**Avril sur Loir**	63.73	34	*e*P		**P**	**05 26 42.3**	**-0.6**
	comp=Z,59nm,0.9s,mb5.3							
AVF	**Avril sur Loir**	63.73	34	*e*P		**P**	**05 26 42.3**	**-0.6**
	comp=Z,29nm,0.9s,mb5.3							
AVF	**Avril sur Loir**	63.73	34	*e*P		**P**	**05 26 42.3**	**-0.6**
AVF					pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3							
SPAK	**Spaichingen-Ko**	63.79	30	*e*P		**P**	**05 26 43.0**	**-0.2**
BGF	**Bois d'Agland**	63.82	35	*e*P		**P**	**05 26 42.8**	**-0.6**
	comp=Z,84nm,0.9s,mb5.5							
BGF	**Bois d'Agland**	63.82	35	*e*P		**P**	**05 26 42.8**	**-0.6**
	comp=Z,42nm,0.9s,mb5.5							
BGF	**Bois d'Agland**	63.82	35	*e*P		**P**	**05 26 42.8**	**-0.6**
BGF					pmax	pmax		
	comp=Z,42nm,0.9s,mb5.5							
KHC	**Kasperske Hory**	63.83	26	*e*P		**P**	**05 26 43.8**	**+0.4**
	comp=Z,16nm,0.9s,mb5.0							
KHC	**Kasperske Hory**	63.83	26	*e*P		**P**	**05 26 43.8**	**+0.4**
KHC				*e*		pP	05 26 46.2	-0.6
KHC				*e*			05 35 17.4	
KHC					MLR	MLR		
	comp=Z,600nm,19.2s,MS4.8							
KHC	**Kasperske Hory**	63.83	26	*e*P		**P**	**05 26 43.8**	**+0.4**
KHC				*e*pP		pP	05 26 46.2	-0.6
KHC				*e*S		**S**	**05 35 17.4**	**-0.7**
KHC					AMS	AMS	05 56 50.0	
	comp=Z,600nm,19.2s							
FELD	**Feldberg im Sc**	63.83	31	*e*P		**P**	**05 26 43.2**	**-0.3**
TCF	**Toulx Ste Croi**	63.91	35	*e*P		**P**	**05 26 43.5**	**-0.5**
	comp=Z,92nm,0.9s,mb5.5							
TCF	**Toulx Ste Croi**	63.91	35	*e*P		**P**	**05 26 43.5**	**-0.5**
	comp=Z,46nm,0.9s,mb5.5							
TCF	**Toulx Ste Croi**	63.91	35	*e*P		**P**	**05 26 43.5**	**-0.5**
TCF					pmax	pmax		
	comp=Z,46nm,0.9s,mb5.5							
OJC	**Ojcow**	63.91	22	*e*P		**P**	**05 26 43.4**	**-0.6**
OJC	**Ojcow**	63.91	22	*e*P		**P**	**05 26 43.4**	**-0.6**
KURK	**Kurchatov**	63.92	341	*e*P		**P**	**05 26 43.8**	**-0.3**
	comp=Z,88nm,1.3s,mb5.6							
KURK	**Kurchatov**	63.92	341	*c i*P		**P**	**05 26 43.7**	**-0.3**
KURK					pmax	pmax		
	comp=Z,97nm,1.5s,mb5.6							
KURK	**Kurchatov**	63.92	341	P		**P**	**05 26 43.3**	**-0.7**
	comp=Z,253nm,1.0s,mb6.2,SNR=16							
MORC	**Moravsky Berou**	63.95	23	*e*P		**P**	**05 26 43.6**	**-0.6**
	comp=Z,7.3nm,0.8s,mb4.8							
MORC	**Moravsky Berou**	63.95	23	⇑P		**P**	**05 26 44.2**	**0.0**
MORC	**Moravsky Berou**	63.95	23	⇑*i*P		**P**	**05 26 44.2**	**0.0**
SMF	**Signal de Mont**	63.99	34	*e*P		**P**	**05 26 43.9**	**-0.7**
	comp=Z,56nm,1.0s,mb5.2							
SMF	**Signal de Mont**	63.99	34	*e*P		**P**	**05 26 43.9**	**-0.7**
	comp=Z,28nm,1.0s,mb5.2							
SMF	**Signal de Mont**	63.99	34	*e*P		**P**	**05 26 43.9**	**-0.7**
SMF					pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2							
OKC	**Ostrava-Krasne**	64.00	23	*e*P		**P**	**05 26 44.4**	**-0.2**
OKC					MLR	MLR		
	comp=Z,700nm,18.4s,MS4.9							
OKC	**Ostrava-Krasne**	64.00	23	*e*P		**P**	**05 26 44.4**	**-0.2**
OKC					AMS	AMS	05 55 20.0	
	comp=Z,700nm,18.4s							
TREC	**Trest**	64.04	25	*e*P		**P**	**05 26 44.9**	**+0.1**
TREC				*e*		pP	05 26 47.2	-1.0
TREC					MLR	MLR		
	comp=Z,500nm,23.7s,MS4.6							
TREC	**Trest**	64.04	25	*e*P		**P**	**05 26 44.9**	**+0.1**
TREC				*e*pP		pP	05 26 47.2	-1.0
TREC					AMS	AMS	05 54 10.0	
	comp=Z,500nm,23.7s							
GEC2	**GERESS Array S**	64.12	26	*e*P		**P**	**05 26 45.5**	**+0.1**
	comp=Z,8.0nm,1.0s,mb4.7							
GEC2	**GERESS Array S**	64.12	26	*e*P		**P**	**05 26 45.5**	**+0.1**
GEC2					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7							
VRAC	**Vranov**	64.23	24	⇑P		**P**	**05 26 46.3**	**+0.2**
VRAC	**Vranov**	64.23	24	⇑*i*P		**P**	**05 26 46.3**	**+0.2**
AGO	**Saint Agoulin**	64.36	35	*e*P		**P**	**05 26 47.1**	**+0.1**
BJI	**Beijing**	64.50	309	P		**P**	**05 26 46.4**	**-1.6**
BJI				S		**S**	**05 35 24.3**	**-2.4**
BJI				SS		SS	05 39 35.1	-0.9
BJI					pmax	pmax		
	comp=Z,12nm,1.6s,mb4.7							
BJI					pmax	pmax		
	comp=Z,220nm,3.6s							
BJI					LR	LR		
	comp=N,660nm,23.9s,MS5.0							
BJI					LR	LR		
	comp=E,930nm,24.4s,MS5.0							
BJI					LR	LR		
	comp=Z,400nm,25.0s,MS4.5							
PLDF	**La Plantade**	64.56	35	*e*P		**P**	**05 26 48.5**	**+0.2**
PLDF	**La Plantade**	64.56	35	*e*P		**P**	**05 26 48.5**	**+0.2**
CABF	**La Chapelle**	64.57	32	*e*P		**P**	**05 26 48.3**	**-0.1**
	comp=Z,36nm,0.8s,mb5.2							
CABF	**La Chapelle**	64.57	32	*e*P		**P**	**05 26 48.3**	**-0.1**
	comp=Z,18nm,0.8s,mb5.2							
CABF	**La Chapelle**	64.57	32	*e*P		**P**	**05 26 48.3**	**-0.1**
CABF					pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2							
PYM	**Petit Puy Mans**	64.61	35	*e*P		**P**	**05 26 49.5**	**+0.9**
PYM	**Petit Puy Mans**	64.61	35	*e*P		**P**	**05 26 49.5**	**+0.9**
RJF	**Les Rejaudoux**	64.64	36	*e*P		**P**	**05 26 48.2**	**-0.6**
RJF				*e*MLR		MLR		
	comp=Z,1µm,21.5s,MS4.8							
RJF	**Les Rejaudoux**	64.64	36	*e*P		**P**	**05 26 48.2**	**-0.6**
RJF					LR	LR		
	comp=Z,1µm,21.5s,MS5.1							
RJF	**Les Rejaudoux**	64.64	36	*e*P		**P**	**05 26 48.2**	**-0.6**
RJF					MLR	MLR		
	comp=Z,1µm,21.5s,MS5.1							
AKASG	**Malin Array Be**	64.76	15	P		**P**	**05 26 48.5**	**-1.1**
	comp=Z,32nm,0.8s,mb5.4,baz=350,slow=6.6,SNR=22							
AKASG					LR	LR	05 55 42.1	
	comp=Z,1µm,20.4s,MS5.0,baz=325,slow=37							
AKASG	**Malin Array Be**	64.76	15	P		**P**	**05 26 48.5**	**-1.0**
AKBB	**Malin Array Si**	64.76	15	*e*P		**P**	**05 26 49.0**	**-0.6**
AKBB	**Malin Array Si**	64.76	15	*e*P		**P**	**05 26 49.0**	**-0.5**
KIEV	**Kiev**	64.76	15	*e*P		**P**	**05 26 48.7**	**-0.8**
	comp=Z,41nm,0.9s,mb5.5							
KIEV	**Kiev**	64.76	15	*e*P		**P**	**05 26 48.7**	**-0.8**
KIEV					pmax	pmax		
	comp=Z,41nm,0.9s,mb5.5							
NIE	**Niedzica**	64.77	21	*e*P		**P**	**05 26 50.0**	**+0.4**
NIE	**Niedzica**	64.77	21	*e*P		**P**	**05 26 50.0**	**+0.4**
LFF	**La Frestale**	64.77	37	*e*P		**P**	**05 26 49.5**	**-0.2**
	comp=Z,100nm,1.0s,mb5.5							
LFF	**La Frestale**	64.77	37	*e*P		**P**	**05 26 49.5**	**-0.2**
	comp=Z,50nm,1.0s,mb5.5							
LFF	**La Frestale**	64.77	37	*e*P		**P**	**05 26 49.5**	**-0.2**
LFF					pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5							
RETA	**Reutte**	64.81	29	⇑*i*pP		pP	05 26 49.3	-3.9
	comp=Z,8.5nm,1.0s							
KWP	**Kalwaria Pacla**	64.94	20	*e*P		**P**	**05 26 50.9**	**+0.1**
KWP					LMZ		05 51 51.3	
	comp=Z,700nm,28.5s							
KWP	**Kalwaria Pacla**	64.94	20	⇓P		**P**	**05 26 50.9**	**+0.2**
KWP	**Kalwaria Pacla**	64.94	20	⇓*i*P		**P**	**05 26 50.9**	**+0.2**
LVV	**L'vov**	64.95	19	*e*P		**P**	**05 26 53.5**	**+2.7**
LVV					MLR	MLR		
	comp=Z,400nm,20.0s,MS4.6							
ELOB	**Lobios**	65.01	45	P		**P**	**05 26 51.2**	**-0.1**
	comp=Z,15nm,0.8s,mb5.1							
VSR	**Storozhevoye**	65.13	8	*e*P		**P**	**05 26 50.5**	**-1.4**
VSR					pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9							
VSR					pmax	pmax		
	comp=N,10.0nm,1.3s							
VSR					pmax	pmax		
	comp=E,9.0nm,0.9s							
CAF	**Calviac**	65.13	36	*e*P		**P**	**05 26 51.5**	**-0.6**
	comp=E,36nm,0.9s,mb5.1							
CAF	**Calviac**	65.13	36	*e*P		**P**	**05 26 51.5**	**-0.6**
	comp=E,18nm,0.9s,mb5.1							
CAF	**Calviac**	65.13	36	*e*P		**P**	**05 26 51.5**	**-0.6**
CAF					pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1							
LBL	**Lubilhac**	65.16	35	*e*P		**P**	**05 26 52.6**	**+0.4**
LBL	**Lubilhac**	65.16	35	*e*P		**P**	**05 26 52.6**	**+0.4**
ELAN	**Lanestosa**	65.17	41	P		**P**	**05 26 51.9**	**-0.5**
	comp=Z,16nm,0.7s,mb5.2							
HHC	**Hu-ho-hao-te**	65.32	313	⇑P		**P**	**05 26 52.8**	**-0.5**
HHC				pP		pP	05 26 57.5	+0.8
HHC				sP		sP	05 26 59.8	+1.9
HHC				PcP		PcP	05 27 25.1	-0.4
HHC				PP		PP	05 29 18.3	+1.8
HHC				ScP			05 31 26.4	
HHC				S		S	05 35 34.0	-2.7
HHC				sS		sS	05 35 41.1	-1.1
HHC				ScS		ScS	05 36 42.8	-5.5
HHC				SS		SS	05 39 48.5	-0.2
HHC					pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0							
HHC					pmax	pmax		
	comp=Z,140nm,6.9s							
HHC					LR	LR		
	comp=N,460nm,15.1s,MS5.0							
HHC					LR	LR		
	comp=E,770nm,17.5s,MS5.0							
HHC					LR	LR		
	comp=Z,460nm,17.2s,MS4.7							
VORD	**Divnogorie**	65.39	8	*e*P		**P**	**05 26 52.8**	**-0.8**
VORD					pmax	pmax		
	comp=Z,20nm,1.6s,mb4.9							
VORD					pmax	pmax		
	comp=N,10.0nm,0.9s							
VORD					pmax	pmax		
	comp=E,10.0nm,0.8s							
VYHS	**Vyhne**	65.41	23	*e*P		**P**	**05 26 53.9**	**+0.1**
	comp=E,3.5nm,1.0s,mb4.3							
VYHS	**Vyhne**	65.41	23	*e*P		**P**	**05 26 53.9**	**+0.1**
VYHS					pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4							
VYHS	**Vyhne**	65.41	23	*e*P		**P**	**05 26 53.9**	**+0.1**
CONA	**Conrad Observa**	65.42	25	⇑*i*pP		pP	05 26 54.1	-3.1
	comp=Z,13nm,1.0s							
CRVS	**Cervenica-Dubn**	65.45	21	*e*P		**P**	**05 26 56.5**	**+2.4**
	comp=Z,7.8nm,1.0s,mb4.7							
CRVS	**Cervenica-Dubn**	65.45	21	*e*P		**P**	**05 26 56.5**	**+2.4**
CRVS					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7							
CRVS	**Cervenica-Dubn**	65.45	21	*e*P		**P**	**05 26 56.5**	**+2.4**
TUE	**Stuetta**	65.46	30	*e*P		**P**	**05 26 55.4**	**+1.2**
	comp=Z,15nm,0.8s,mb5.1							
PBRG	**Braganca**	65.48	44	*e*P		**P**	**05 26 55.5**	**+1.1**
KOLS	**Kolonicke sedl**	65.55	20	*e*P		**P**	**05 26 55.1**	**+0.4**
	comp=Z,11nm,1.0s,mb4.8							
KOLS	**Kolonicke sedl**	65.55	20	*e*P		**P**	**05 26 55.1**	**+0.4**
KOLS					pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8							
KOLS	**Kolonicke sedl**	65.55	20	*e*P		**P**	**05 26 55.1**	**+0.4**
PVRL	**Vila Real**	65.66	45	*e*P		**P**	**05 26 55.3**	**-0.2**
	comp=Z,27nm,1.2s,mb5.2							
KECS	**Kecovo**	65.70	22	*e*P		**P**	**05 26 55.8**	**+0.1**
	comp=Z,11nm,0.8s,mb5.0							
KECS	**Kecovo**	65.70	22	*e*P		**P**	**05 26 55.8**	**+0.1**
KECS					pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9							
KECS	**Kecovo**	65.70	22	*e*P		**P**	**05 26 55.8**	**+0.1**
EALK	**Alkurruntz**	65.74	39	P		**P**	**05 26 57.9**	**+1.9**
LPL	**La Plagne**	65.75	32	*e*P		**P**	**05 26 56.5**	**+0.4**
	comp=Z,27nm,0.9s,mb5.0							
LPL	**La Plagne**	65.75	32	*e*P		**P**	**05 26 56.5**	**+0.4**
	comp=Z,14nm,0.9s,mb5.0							
LPL	**La Plagne**	65.75	32	*e*P		**P**	**05 26 56.5**	**+0.4**
LPL					pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0							
LPG	**La Plagne**	65.78	32	*e*P		**P**	**05 26 56.8**	**+0.6**
	comp=Z,34nm,1.0s,mb5.0							
LPG	**La Plagne**	65.78	32	*e*P		**P**	**05 26 56.8**	**+0.6**
	comp=Z,17nm,1.0s,mb5.0							
LPG	**La Plagne**	65.78	32	*e*P		**P**	**05 26 56.8**	**+0.6**
LPG					pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0							
SOP	**Sopron**	65.79	25	⇓*e*P		**P**	**05 26 56.8**	**+0.6**
UZH	**Uzhgorod**	65.85	20	*e*P		**P**	**05 26 53.0**	**-3.6**
UZH				*i*		pP	05 26 56.0	-4.0
UZH				*i*			05 27 23.0	
UZH				*e*			05 29 17.0	
UZH				*e*S		S	05 35 37.0	-5.9
UZH				*e*			05 36 43.0	
VIVF	**Saint-Julien-l**	65.87	34	*e*P		**P**	**05 26 56.3**	**-0.5**
	comp=Z,32nm,1.2s,mb4.9							
VIVF	**Saint-Julien-l**	65.87	34	*e*P		**P**	**05 26 56.3**	**-0.5**
	comp=Z,16nm,1.2s,mb4.9							
VIVF	**Saint-Julien-l**	65.87	34	*e*P		**P**	**05 26 56.3**	**-0.5**
VIVF					pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9							
ABTA	**Abfaltersbach**	65.88	28	⇑*i*pP		pP	05 26 56.3	-3.9
	comp=Z,12nm,0.8s							
SJPF	**Ste Jean**	65.91	39	*e*P		**P**	**05 26 57.2**	**+0.1**
	comp=Z,28nm,1.2s,mb4.9							
SJPF	**Ste Jean**	65.91	39	*e*P		**P**	**05 26 57.2**	**+0.1**
	comp=Z,14nm,1.2s,mb4.9							
SJPF	**Ste Jean**	65.91	39	*e*P		**P**	**05 26 57.2**	**+0.1**
SJPF					pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9							
MVO	**Moncorvo**	65.97	44	*e*P		**P**	**05 26 56.9**	**-0.6**
MVO					A		05 52 11.3	
	comp=Z,612nm,18.9s							
MVO	**Moncorvo**	65.97	44	P		**P**	**05 26 58.0**	**+0.5**
PVIS	**Viseu**	66.11	45	*e*P		**P**	**05 26 58.1**	**-0.3**
ORIF	**Oris-en-Rattie**	66.11	33	*e*P		**P**	**05 26 58.1**	**-0.3**
	comp=Z,26nm,0.9s,mb5.0							
ORIF				*e*MLR		MLR		
	comp=Z,817nm,20.0s,MS4.6							
ORIF	**Oris-en-Rattie**	66.11	33	*e*P		**P**	**05 26 58.1**	**-0.3**
	comp=Z,13nm,0.9s,mb5.0							
ORIF	**Oris-en-Rattie**	66.11	33	*e*P		**P**	**05 26 58.1**	**-0.3**
ORIF					pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0							
PSZ	**Piszkesteto**	66.15	22	*e*P		**P**	**05 26 59.2**	**+0.6**
	comp=Z,15nm,0.8s,mb5.1							
PSZ	**Piszkesteto**	66.15	22	⇓P		**P**	**05 26 58.7**	**+0.1**
PSZ	**Piszkesteto**	66.15	22	⇓*i*P		**P**	**05 26 58.7**	**+0.1**
PSZ	**Piszkesteto**	66.15	22	⇓*e*P		**P**	**05 26 59.0**	**+0.4**
BNI	**Bardonecchia**	66.18	33	*e*P		**P**	**05 26

SAOF	**Saorge**	**67.39**	**32**	*e*P	**P**	**05 27 07.0 +0.4**
SAOF	**Saorge**	**67.39**	**32**	*e*P	**P**	**05 27 07.0 +0.4**
ESAC	**San Caprasio**	**67.41**	**39**	P	**P**	**05 27 06.9 +0.2**
	comp=Z,33nm,1.0s,mb5.3					
LUCF	**Luceram**	**67.43**	**33**	*e*P	**P**	**05 27 08.1 +1.3**
PMRV	**Marv??o**	**67.44**	**45**	*e*P	**P**	**05 27 07.6 +0.7**
PMRV				*e*LR	LR	05 50 37.2
	comp=Z,340nm,19.5s					
SBF	**Sospel**	**67.48**	**33**	*e*P	**P**	**05 27 06.9 -0.2**
	comp=Z,64nm,0.9s,mb5.3					
SBF	**Sospel**	**67.48**	**33**	*e*P	**P**	**05 27 06.9 -0.2**
	comp=Z,32nm,0.9s,mb5.3					
SBF	**Sospel**	**67.48**	**33**	*e*P	**P**	**05 27 06.9 -0.2**
SBF				pmax	pmax	
	comp=Z,32nm,0.9s,mb5.3					
FRF	**La Foret Royal**	**67.57**	**33**	*e*P	**P**	**05 27 07.3 -0.4**
	comp=Z,182nm,1.9s,mb5.5					
FRF	**La Foret Royal**	**67.57**	**33**	*e*P	**P**	**05 27 07.3 -0.4**
	comp=Z,91nm,1.9s,mb5.5					
FRF	**La Foret Royal**	**67.57**	**33**	*e*P	**P**	**05 27 07.3 -0.4**
FRF				pmax	pmax	
	comp=Z,91nm,1.9s,mb5.5					
PKSM	**Moragy**	**67.58**	**24**	⇑*i*P	**P**	**05 27 02.0 -5.7**
BOJS	**Bojanci**	**67.63**	**26**	*i* P	**P**	**05 27 07.8 -0.2**
DRGR		**67.70**	**20**	⇓P	**P**	**05 27 08.4 -0.1**
DRGR		**67.70**	**20**	⇓*i*P	**P**	**05 27 08.4 -0.1**
LMR	**La Mourre**	**67.75**	**33**	*e*P	**P**	**05 27 08.7 -0.1**
	comp=Z,38nm,1.0s,mb5.1					
LMR	**La Mourre**	**67.75**	**33**	*e*P	**P**	**05 27 08.7 -0.1**
	comp=Z,19nm,1.0s,mb5.1					
LMR	**La Mourre**	**67.75**	**33**	*e*P	**P**	**05 27 08.7 -0.1**
LMR				pmax	pmax	
	comp=Z,19nm,1.0s,mb5.1					
EMIR	**Miracle**	**67.79**	**38**	P	**P**	**05 27 10.4 +1.3**
	comp=Z,14nm,0.9s,mb5.0					
PESTR	**Estremoz**	**67.89**	**46**	*e*P	**P**	**05 27 09.7 0.0**
	comp=Z,19nm,1.1s,mb5.0					
PESTR				*e*LQ		05 49 23.9
PESTR				*e*LR	LR	05 50 26.2
	comp=Z,528nm,20.7s					
EVO	**Evora**	**68.05**	**46**	*e*P	**P**	**05 27 09.5 -1.3**
	comp=Z,43nm,0.9s,mb5.2					
EVO				*e*MLR	MLR	
	comp=Z,1μm,19.8s,MS4.8					
EVO	**Evora**	**68.05**	**46**	*e*P	**P**	**05 27 09.9 -0.9**
	comp=Z,23nm,1.2s,mb5.1					
EBAD	**Badajoz**	**68.17**	**45**	P	**P**	**05 27 11.3 -0.3**
	comp=Z,10.0nm,0.9s,mb4.8					
EPOB	**Poblet**	**68.19**	**38**	P	**P**	**05 27 12.6 +0.9**
	comp=Z,19nm,0.9s,mb5.1					
ESDC	**Sonseca Array**	**68.28**	**43**	P	**P**	**05 27 11.2 -1.1**
	comp=Z,16nm,0.8s,mb5.1,baz=333,slow=6.3,SNR=39					
ESDC				LR	LR	05 53 38.4
	comp=Z,343nm,20.9s,MS4.6,baz=295,slow=33					
ESDC	**Sonseca Array**	**68.28**	**43**	P	**P**	**05 27 12.4 +0.2**
ESLA	**Sonseca Array**	**68.28**	**43**	*e*P	**P**	**05 27 12.0 -0.2**
	comp=Z,4.4nm,0.9s,mb4.5					
PAB	**San Pablo**	**68.28**	**43**	*e*P	**P**	**05 27 11.6 -0.6**
	comp=Z,15nm,0.9s,mb5.0					
PAB	**San Pablo**	**68.28**	**43**	*e*P	**P**	**05 27 11.6 -0.6**
PAB				pmax	pmax	
	comp=Z,15nm,0.9s,mb5.0					
ERTA	**Horta de San J**	**68.35**	**39**	P	**P**	**05 27 14.3 +1.7**
	comp=Z,22nm,0.9s,mb5.2					
KIS	**Kishinev**	**68.35**	**16**	*e*P	**P**	**05 27 12.0 -0.6**
KIS				LRM		05 56 40.0
	comp=Z,400nm,25.0s					
KIS	**Kishinev**	**68.35**	**16**	*e*P	**P**	**05 27 12.0 -0.6**
KIS				*e*		05 36 14.0
KIS				MLR	MLR	
	comp=Z,500nm,20.0s,MS4.7					
TESR		**68.55**	**18**	⇓*i*P	**P**	**05 27 13.6 -0.2**
PBEJ	**Beja**	**68.56**	**46**	*e*P	**P**	**05 27 15.2 +1.2**
	comp=Z,18nm,1.0s,mb5.0					
EMOS	**Mosqueruela**	**68.67**	**40**	P	**P**	**05 27 15.8 +1.1**
	comp=Z,25nm,0.9s,mb5.2					
BZS	**Buzias**	**68.67**	**22**	⇓P	**P**	**05 27 14.6 0.0**
BZS	**Buzias**	**68.67**	**22**	⇓*i*P	**P**	**05 27 14.6 0.0**
PBAR	**Barrancos**	**68.69**	**46**	*e*P	**P**	**05 27 16.0 +1.2**
PBAR				*e*LQ		05 49 23.0
PBAR				*e*LR	LR	05 50 44.2
	comp=Z,549nm,22.2s					
MORF	**Marmelete**	**68.96**	**47**	*e*P	**P**	**05 27 16.1 -0.4**
MORF				*e*LQ		05 48 03.9
MORF				A		05 54 34.8
	comp=Z,410nm,20.8s					
WMQ	**Urumqi**	**68.97**	**332**	P	**P**	**05 27 16.0 -0.4**
WMQ				sP	sP	05 27 23.0 +2.0
WMQ				PP	PP	05 29 51.0 +2.9
WMQ				ScP		05 31 42.0
WMQ				S	S	05 36 19.0 -1.6
WMQ				ScS	ScS	05 37 12.0 -4.5
WMQ				pmax	pmax	
	comp=Z,36nm,1.1s,mb5.2					
WMQ				pmax	pmax	
	comp=Z,97nm,6.0s					
WMQ				LR	LR	
	comp=N,570nm,20.0s,MS5.0					
WMQ				LR	LR	
	comp=E,720nm,20.0s,MS5.0					
WMQ				LR	LR	
	comp=Z,580nm,20.0s,MS4.8					
PFVI	**Vila Bisbo**	**69.06**	**48**	*e*P	**P**	**05 27 16.4 -0.7**
PFVI				A		05 54 17.6
	comp=Z,443nm,18.6s					
GZR	**Gura Zlata**	**69.08**	**21**	⇓P	**P**	**05 27 16.8 -0.3**
GZR	**Gura Zlata**	**69.08**	**21**	⇓*i*P	**P**	**05 27 16.8 -0.3**
PGF	**Pioggiola**	**69.09**	**32**	*e*P	**P**	**05 27 16.8 -0.4**
	comp=Z,30nm,0.9s,mb4.9					
PGF	**Pioggiola**	**69.09**	**32**	*e*P	**P**	**05 27 16.8 -0.4**
	comp=Z,15nm,0.9s,mb4.9					
PGF	**Pioggiola**	**69.09**	**32**	*e*P	**P**	**05 27 16.8 -0.4**
PGF				pmax	pmax	
	comp=Z,15nm,0.9s,mb4.9					
EGRO	**El Granado**	**69.13**	**46**	P	**P**	**05 27 17.2 -0.4**
PVAQ	**Vaqueiros**	**69.18**	**47**	*e*P	**P**	**05 27 17.5 -0.3**
	comp=Z,24nm,1.1s,mb5.0					
PVAQ				*e*LQ		05 49 04.0
PVAQ				*e*LR	LR	05 50 46.9
	comp=Z,655nm,22.8s					
EMIN	**Mina Concepcio**	**69.18**	**46**	P	**P**	**05 27 19.6 +1.7**
	comp=Z,5.4nm,0.9s,mb4.5					
VRI	**Vrincioaia**	**69.19**	**18**	⇑P	**P**	**05 27 17.8 0.0**
VRI	**Vrincioaia**	**69.19**	**18**	⇑*i*P	**P**	**05 27 17.8 0.0**
PLOR	**Plostina**	**69.20**	**18**	⇑P	**P**	**05 27 18.0 +0.2**
PLOR	**Plostina**	**69.20**	**18**	⇑*i*P	**P**	**05 27 18.0 +0.2**
PBDV	**Barranco-do-Ve**	**69.25**	**47**	*e*P	**P**	**05 27 19.8 +1.5**
PBDV				*e*LQ		05 49 07.7
PBDV				*e*LR	LR	05 50 50.6
	comp=Z,621nm,20.2s					
EADA	**Adamuz**	**69.47**	**44**	P	**P**	**05 27 19.1 -0.5**
	comp=Z,6.6nm,0.9s,mb4.6					
EVIA	**Vianos**	**69.67**	**42**	P	**P**	**05 27 23.7 +2.8**
	comp=Z,29nm,0.8s,mb5.3					
EVIA	**Vianos**	**69.67**	**42**	P	**P**	**05 27 23.7 +2.8**
EVIA				pmax	pmax	
	comp=Z,29nm,0.8s,mb5.3					
EBAN	**Banos Encina**	**69.72**	**43**	P	**P**	**05 27 23.5 +2.3**
	comp=Z,14nm,0.8s,mb5.0					
EBAN	**Banos Encina**	**69.72**	**43**	P	**P**	**05 27 23.5 +2.3**
EBAN				pmax	pmax	
	comp=Z,14nm,0.8s,mb4.9					
TLCR		**70.14**	**16**	⇓P	**P**	**05 27 23.5 -0.1**
TLCR		**70.14**	**16**	⇓*i*P	**P**	**05 27 23.5 -0.1**
GTA	**Gaotai**	**70.19**	**322**	⇑P	**P**	**05 27 24.3 +0.2**
GTA				pP	pP	05 27 28.8 +1.4
GTA				sP	sP	05 27 31.3 +2.6
GTA				S	S	05 36 35.8 +0.7
GTA				sS	sS	05 36 43.0 +2.4
GTA				pmax	pmax	
	comp=Z,21nm,1.7s,mb4.8					
GTA				pmax	pmax	
	comp=Z,200nm,4.0s					
GTA				LR	LR	
	comp=N,600nm,17.8s,MS5.0					
GTA				LR	LR	
	comp=E,600nm,17.8s,MS5.0					
GTA				LR	LR	
	comp=Z,370nm,18.5s,MS4.7					
ESPR	**Espera**	**70.26**	**45**	P	**P**	**05 27 24.9 +0.4**
	comp=Z,14nm,0.9s,mb4.9					
EQES	**Quesada**	**70.27**	**43**	P	**P**	**05 27 25.5 +0.9**
	comp=Z,7.6nm,1.0s,mb4.6					
ROSC	**El Rosal**	**70.65**	**120**	P	**P**	**05 27 28.8 +1.6**
	comp=Z,14nm,1.0s,mb4.8,baz=105,slow=22,SNR=13					
ROSC				LR	LR	06 00 46.9
	comp=Z,177nm,20.3s,MS4.3,baz=1.2,slow=38					
ROSC	**El Rosal**	**70.65**	**120**	*e*P	**P**	**05 27 27.6 +0.4**
SSE	**Sheshan**	**70.66**	**301**	P	**P**	**05 27 25.0 -2.0**
SSE				S	S	05 36 37.9 -2.9
SSE				sS	sS	05 36 44.1 -2.2
SSE				SS	SS	05 41 08.3 -3.3
SSE				pmax	pmax	
	comp=Z,27nm,0.8s,mb5.2					
SSE				pmax	pmax	
	comp=Z,86nm,5.2s					
SSE				LR	LR	
	comp=N,850nm,22.1s,MS5.2					
SSE				LR	LR	
	comp=E,1μm,22.1s,MS5.2					
SSE				LR	LR	
	comp=Z,650nm,15.8s					
NJ2	**Nanjing**	**70.68**	**303**	*e*P	**P**	**05 27 30.0 +2.8**
NJ2				pP	pP	05 27 35.3 +4.8
NJ2				sP	sP	05 27 37.6 +5.8
NJ2				S	S	05 36 42.5 +1.5
NJ2				sS	sS	05 36 49.0 +2.4
NJ2				pmax	pmax	
	comp=Z,40nm,1.2s,mb5.2					
NJ2				pmax	pmax	
	comp=Z,120nm,5.2s					
NJ2				LR	LR	
	comp=N,290nm,18.4s,MS5.1					
NJ2				LR	LR	
	comp=E,820nm,15.8s,MS5.1					
NJ2				LR	LR	
	comp=Z,290nm,14.9s,MS4.7					
TIRR	**Tirgusor**	**70.80**	**17**	⇓P	**P**	**05 27 27.6 -0.1**
TIRR	**Tirgusor**	**70.80**	**17**	⇓*i*P	**P**	**05 27 27.6 -0.1**
EMIJ	**Mijas**	**70.89**	**45**	P	**P**	**05 27 27.7 -0.6**
SIM	**Simferopol'**	**70.96**	**12**	P	**P**	**05 27 28.5 -0.2**
SIM				S	S	05 36 44.0 +0.1
SIM				pmax	pmax	
	comp=Z,30nm,8.0s					
SIM				MLR	MLR	
	comp=Z,900nm,20.0s,MS5.0					
EBER	**Berja**	**71.16**	**43**	P	**P**	**05 27 29.6 -0.5**
	comp=Z,9.0nm,0.9s,mb4.7					
JOW	**Kunigami**	**71.63**	**293**	*e*P	**P**	**05 27 33.5 +0.5**
	comp=Z,10nm,1.1s,mb4.7					
USP	**Ospenovka**	**71.80**	**342**	P	**P**	**05 27 34.7 +1.0**
	SNR=15					
VTS	**Vitosha**	**71.88**	**21**	⇓P	**P**	**05 27 33.6 -0.6**
VTS	**Vitosha**	**71.88**	**21**	⇓*i*P	**P**	**05 27 33.5 -0.7**
TKM2	**Tokmak 2**	**71.98**	**341**	P	**P**	**05 27 36.0 +1.2**
	SNR=16					
TKM2	**Tokmak 2**	**71.98**	**341**	*e*P	**P**	**05 27 34.7 -0.2**
	comp=Z,67nm,1.3s,mb5.4					
TKM2	**Tokmak 2**	**71.98**	**341**	*e*P	**P**	**05 27 34.7 -0.1**
TKM2				pmax	pmax	
	comp=Z,67nm,1.3s,mb5.4					
CHMS	**Chumysh**	**72.03**	**342**	P	**P**	**05 27 36.1 +1.0**
	SNR=11					
LZH	**Lanzhou**	**72.11**	**317**	*e*P	**P**	**05 27 35.8 +0.1**
LZH				pP	pP	05 27 41.5 +2.4
LZH				sP	sP	05 27 45.0 +4.7
LZH				*e*S	S	05 36 58.0 +0.6
LZH				sS	sS	05 37 03.0 0.0
LZH				SS	SS	05 41 28.3 -5.2
LZH				pmax	pmax	
	comp=Z,63nm,1.0s,mb5.5					
LZH				pmax	pmax	
	comp=Z,380nm,5.2s					
LZH				LR	LR	
	comp=N,530nm,13.7s,MS5.3					
LZH				LR	LR	
	comp=E,1μm,15.8s,MS5.3					
LZH				LR	LR	
	comp=Z,900nm,17.1s,MS5.1					
KBK	**Karagaybulak**	**72.33**	**342**	P	**P**	**05 27 37.6 +0.7**
	SNR=11					
XAN	**Xi'an**	**72.38**	**312**	P	**P**	**05 27 36.3 -1.1**
AAK	**Ala-Archa**	**72.42**	**342**	P	**P**	**05 27 38.6 +1.2**
	SNR=16					
AAK	**Ala-Archa**	**72.42**	**342**	*e*P	**P**	**05 27 38.5 +1.0**
	comp=Z,34nm,0.9s,mb5.3					
AAK	**Ala-Archa**	**72.42**	**342**	*c i*P	**P**	**05 27 37.9 +0.4**
AAK				pmax	pmax	
	comp=Z,36nm,1.6s,mb5.0					
AAK	**Ala-Archa**	**72.42**	**342**	P	**P**	**05 27 38.4 +0.9**
	comp=Z,210nm,0.8s,mb6.1,SNR=12					
KK31	**Karatay Array**	**72.46**	**345**	*i* P	**P**	**05 27 37.6 -0.1**
KK31				pmax	pmax	
	comp=Z,24nm,1.1s,mb5.0					
KKAR	**Karatay Array**	**72.46**	**345**	*e*P	**P**	**05 27 37.9 +0.1**
	comp=Z,16nm,0.9s,mb5.0					
KKAR	**Karatay Array**	**72.46**	**345**	*e*P	**P**	**05 27 37.9 +0.2**
KKAR				pmax	pmax	
	comp=Z,16nm,0.9s,mb5.0					
EKS2	**Erkin-Say**	**72.49**	**342**	P	**P**	**05 27 38.6 +0.7**
	SNR=39					
EKS2	**Erkin-Say**	**72.49**	**342**	*e*P	**P**	**05 27 38.6 +0.7**
	comp=Z,77nm,0.8s,mb5.7					
KIV	**Kislovodsk**	**72.57**	**6**	*e*P	**P**	**05 27 38.9 +0.5**
	comp=Z,36nm,1.1s,mb5.2					
KIV	**Kislovodsk**	**72.57**	**6**	⇑*e*P	**P**	**05 27 38.6 +0.3**
KIV				*e*		05 30 16.0
KIV				*i* S	S	05 37 03.4 +1.0
KIV				pmax	pmax	
	comp=Z,34nm,1.1s,mb5.2					
TAOE	**Nuku Hiva Isla**	**72.76**	**191**	*e*S	S	05 37 04.6 -0.5
	comp=Z,353nm,27.4s					
TAOE				*e*LR	LR	05 50 01.3
	comp=Z,778nm,23.7s,baz=15					
AML	**Almayashu**	**73.02**	**342**	P	**P**	**05 27 42.4 +1.3**
	SNR=19					
AML	**Almayashu**	**73.02**	**342**	*e*P	**P**	**05 27 42.6 +1.5**
	comp=Z,34nm,0.8s,mb5.3					
EANR	**'Ain N'Sour**	**73.22**	**40**	P	**P**	**05 27 45.0 +2.6**
OTAV	**Otavalo**	**73.37**	**126**	*e*P	**P**	**05 27 42.5 -0.9**
	comp=Z,37nm,1.5s,mb5.1					
EMHD	**Djebel Mahouad**	**73.52**	**39**	P	**P**	**05 27 40.5 -3.6**
ZEI	**Tsey**	**73.80**	**5**	*e*P	**P**	**05 27 47.5 +1.8**
ZEI				pmax	pmax	
	comp=Z,18nm,1.1s,mb4.9					
KSH	**Kashi**	**75.26**	**340**	*e*P	**P**	**05 27 57.5 +3.3**
KSH				*e*pP	pP	05 28 00.3 +2.7
KSH				*e*sP	sP	05 28 03.4 +4.6
KSH				pmax	pmax	
	comp=Z,66nm,1.0s,mb5.5					
ENH	**Enshi**	**75.64**	**310**	*e*P	**P**	**05 27 55.8 -0.7**
	comp=Z,32nm,1.1s,mb5.2					
KEST	**Kesra**	**75.65**	**34**	P	**P**	**05 27 56.9 +0.4**
	comp=Z,6.5nm,1.0s,mb4.5,baz=303,slow=6.4,SNR=7.1					
KEST				LR	LR	05 58 47.9
	comp=Z,159nm,19.5s,MS4.3,baz=280,slow=34					
BR131	**Keskin Array S**	**76.08**	**14**	*e*P	**P**	**05 27 59.5 +0.6**
	comp=Z,6.9nm,0.9s,mb4.6					
BRTR	**Keskin Array B**	**76.08**	**14**	P	**P**	**05 27 59.1 +0.3**
	comp=Z,7.9nm,0.9s,mb4.6,baz=348,slow=3.8,SNR=17					
BRTR				LR	LR	06 02 58.7
	comp=Z,334nm,21.9s,MS4.6,baz=336,slow=37					
BRTR	**Keskin Array B**	**76.08**	**14**	P	**P**	**05 27 59.2 +0.3**
GNI	**Garni**	**76.45**	**5**	*c i*P	**P**	**05 28 01.9 +0.9**
GNI				pmax	pmax	
	comp=Z,23nm,1.5s					
CD2	**Chengdu**	**76.93**	**315**	*e*P	**P**	**05 28 03.8 0.0**
CD2				pP	pP	05 28 08.5 +1.3
CD2				sP	sP	05 28 10.9 +2.5
CD2				PP	PP	05 30 58.1 +1.8
CD2				S	S	05 37 49.4 -2.1
CD2				sS	sS	05 37 57.0 -0.1
CD2				SS	SS	05 42 48.3 +1.3
CD2				pmax	pmax	
	comp=Z,20nm,0.9s,mb5.0					
CD2				pmax	pmax	
	comp=Z,140nm,10.8s					
CD2				LR	LR	
	comp=N,1μm,19.2s,MS5.4					
CD2				LR	LR	
	comp=E,900nm,14.2s,MS5.4					
CD2				LR	LR	
	comp=Z,1μm,16.8s,MS5.3					
MALT	**Malatya**	**77.92**	**10**	*e*P	**P**	**05 28 10.8 +1.6**
	comp=Z,8.2nm,0.9s,mb4.7					
MALT	**Malatya**	**77.92**	**10**	⇓P	**P**	**05 28 09.3 +0.1**
MALT	**Malatya**	**77.92**	**10**	⇓*i*P	**P**	**05 28 09.3 +0.1**
GYA	**Guiyang**	**80.10**	**311**	P	**P**	**05 28 21.0 -0.4**
GYA				PP	PP	05 31 23.8 +0.9
GYA				S	S	05 38 21.8 -3.8
GYA				SKS		05 38 33.0
GYA				SS	SS	05 43 34.5 -0.4
GYA				pmax	pmax	
	comp=Z,20nm,1.0s,mb5.0					
GYA				pmax	pmax	
	comp=Z,130nm,5.2s					
GYA				LR	LR	
	comp=N,780nm,19.9s,MS5.1					
GYA				LR	LR	
	comp=E,520nm,20.0s,MS5.1					
GYA				LR	LR	
	comp=Z,640nm,18.9s,MS5.0					
KBL	**Kabul**	**81.09**	**345**	*e*P	**P**	**05 28 26.4 -0.2**
	comp=Z,42nm,1.3s,mb5.2					
KBL	**Kabul**	**81.09**	**345**	*e*P	**P**	**05 28 26.4 -0.2**
KBL				pmax	pmax	
	comp=Z,41nm,1.3s,mb5.2					
LSA	**Lhasa**	**81.67**	**325**	P	**P**	**05 28 24.8 -4.9**
LSA				LR	LR	
	comp=Z,1μm,3.9s					
LSA	**Lhasa**	**81.67**	**325**	*e*P	**P**	**05 28 31.7 +2.0**
	comp=Z,35nm,1.2s,mb5.2					
LSA	**Lhasa**	**81.67**	**325**	*e*P	**P**	**05 28 31.7 +2.0**
LSA				pmax	pmax	
	comp=Z,35nm,1.2s,mb5.2					
PPT	**Papeete**	**82.48**	**200**	*e*LR	LR	05 54 21.9
	comp=Z,445nm,23.8s,baz=9.2					
PPT	**Papeete**	**82.48**	**200**	LR	LR	05 58 49.4
	comp=Z,247nm,19.7s,MS4.6,baz=112,slow=31					
KMI	**Kunming**	**82.63**	**314**	P	**P**	**05 28 35.3 +0.5**
KMI				S	S	05 38 50.3 -1.6
KMI				pmax	pmax	
	comp=Z,12nm,0.5s,mb5.2					
GUN	**Gumba**	**84.65**	**329**	*e*P	**P**	**05 28 44.5 -0.6**
DANN	**Dangsing**	**84.70**	**331**	*e*P	**P**	**05 28 44.7 -0.7**
	comp=Z,319nm,1.5s,mb6.2					
TAPN	**Taplejung**	**84.76**	**328**	*e*P	**P**	**05 28 45.2 -0.5**
	comp=Z,57nm,1.0s,mb5.7					
GKN	**Gorkha**	**84.84**	**330**	*e*P	**P**	**05 28 44.9 -1.2**
KKN	**Kakani**	**84.90**	**330**	*e*P	**P**	**05 28 45.7 -0.7**
	comp=Z,110nm,1.3s,mb5.8					
KKN	**Kakani**	**84.90**	**330**	*e*P	**P**	**05 28 45.7 -0.7**
KKN				pmax	pmax	
	comp=Z,110nm,1.3s,mb5.8					
PKIN	**Phulchoki**	**85.08**	**330**	*e*P	**P**	**05 28 46.8 -0.5**
	comp=Z,20nm,0.7s,mb5.4					
PKI	**Pulchoki**	**85.08**	**330**	*e*P	**P**	**05 28 46.5 -0.8**
	comp=Z,64nm,1.2s,mb5.6					
PKI	**Pulchoki**	**85.08**	**330**	*e*P	**P**	**05 28 46.8 -0.5**
	comp=Z,20nm,0.7s,mb5.4					
PKI	**Pulchoki**	**85.08**	**330**	*e*P	**P**	**05 28 46.8 -0.5**
PKI				pmax	pmax	
	comp=Z,20nm,0.7s,mb5.4					
DMN	**Daman**	**85.12**	**330**	*e*P	**P**	**05 28 47.2 -0.3**
	comp=Z,113nm,1.2s,mb5.9					
KOLN	**Koldanda**	**85.29**	**331**	*e*P	**P**	**05 28 47.7 -0.7**
	comp=Z,22nm,0.7s,mb5.4					
ODAN	**Odare**	**85.31**	**328**	*e*P	**P**	**05 28 47.8 -0.6**
	comp=Z,102nm,1.3s,mb5.8					
RKT	**Rikitea**	**86.58**	**185**	*e*LR	LR	05 56 19.9
	comp=Z,631nm,33.8s					
TAM	**Tamanrasset**	**86.87**	**41**	*e*P	**P**	**05 28 56.4 +0.2**
	comp=Z,6.8nm,1.0s,mb4.8					
TAM	**Tamanrasset**	**86.87**	**41**	*e*P	**P**	**05 28 56.4 +0.2**
TAM				pmax	pmax	
	comp=Z,7.0nm,1.0s,mb4.8					
TBI	**Tubuai**	**88.14**	**199**	*e*LR	LR	05 57 07.9
	comp=Z,518nm,31.5s,baz=9.3					
TBI				*e*LR	LR	05 57 32.6
	comp=Z,577nm,30.8s					
CMAR	**Chiang Mai Arr**	**90.07**	**315**	P	**P**	**05 29 11.2 -0.2**
	comp=Z,5.4nm,0.8s,mb4.9,baz=359,slow=5.4,SNR=21					
CMAR				LR	LR	06 14 20.8
	comp=Z,892nm,18.7s,MS5.2,baz=219,slow=39					
CMAR	**Chiang Mai Arr**	**90.07**	**315**	P	**P**	**05 29 11.2 -0.2**
LPAZ	**La Paz**	**92.40**	**123**	P	**P**	**05 29 20.4 -1.6**
	comp=Z,6.2nm,0.7s,mb5.1,baz=307,slow=3.5,SNR=28					
LPAZ				LR	LR	06 15 13.0
	comp=Z,209nm,18.8s,MS4.6,baz=309,slow=38					
LPAZ	**La Paz**	**92.40**	**123**	*e*P	**P**	**05 29 20.2 -1.9**
	comp=Z,7.4nm,0.8s,mb5.1					
LPAZ	**La Paz**	**92.40**	**123**	*e*P	**P**	**05 29 20.2 -1.9**
LPAZ				pmax	pmax	
	comp=Z,7.0nm,0.8s					
TORD	**Torodi Ar. Bea**	**94.73**	**48**	P	**P**	**05 29 31.6 -1.4**
	comp=Z,1.7nm,0.6s,mb4.6,baz=319,slow=5.3,SNR=3.9					
TORD				LR	LR	06 08 57.7
	comp=Z,483nm,19.2s,MS5.0,baz=345,slow=34					
DBIC	**Dimbokro**	**98.45**	**56**	LR	LR	06 10 17.4
	comp=Z,375nm,20.6s,MS4.9,baz=324,slow=33					
BDFB	**Brasilia**	**100.01**	**105**	LR	LR	06 13 26.4
	comp=Z,425nm,21.8s,MS4.9,baz=358,slow=34					
WRA	**Warramunga Arr**	**110.53**	**267**	PKiKP	PKiKP	05 34 42.0 -1.8
	comp=Z,1.0nm,0.6s,baz=12,slow=2.0,SNR=17					
WRA	**Warramunga Arr**	**110.53**	**267**	PKIKP	PKiKP	05 34 42.0 -1.7
ASAR	**Alice Springs**	**113.97**	**265**	PKP	PKiKP	05 34 48.3 -1.9
	comp=Z,1.5nm,0.7s,baz=16,slow=2.5,SNR=15					
ASAR	**Alice Springs**	**113.97**	**265**	PKIKP	PKiKP	05 34 48.3 -1.9
KMBO	**Kilima Mbogo**	**116.84**	**15**	PKP	PKPdf	05 34 54.5 -1.6
	comp=Z,1.0nm,0.6s,baz=180,slow=24,SNR=3.6					
KMBO	**Kilima Mbogo**	**116.84**	**15**	PKIKP	PKPdf	05 34 54.5 -1.6
STKA	**Stephens Creek**	**117.71**	**254**	PKP	PKPdf	05 34 54.5 -2.7
	comp=Z,5.2nm,0.7s,baz=2.9,slow=5.8,SNR=8.2					
BOSA	**Boshof**	**141.31**	**37**	PKhKP	PKPpre	05 35 36.0
	comp=Z,6.2nm,0.9s,baz=194,slow=3.0,SNR=6.8					
SBA	**Scott Base**	**146.41**	**200**	*e*PKPdf	PKPdf	05 35 50.0 +0.7
QSPA	**South Pole Qui**	**153.47**	**180**	*e*PKPdf	PKPdf	05 35 58.4 -1.9
QSPA				*e*PKPbc	PKPbc	05 36 07.3 -0.7
SYO	**Syowa Base**	**172.97**	**145**	⇑*e*PKPab	PKPab	05 37 45.0 -1.1

ISCJB ***20*** *05:31:04.0±0.5, 63°.41N±0°.03×129°.33W±0°.07, h10km, Error ellipse: s-maj=4.9km s-min=4.2km az=166.6*
IDC ***20*** *05:31:07.9±0.8, 63°.57N×128°.90W, h0km, mb3.8/1, mb1 3.9/5, mb1mx3.5/29, mbtmp3.7/5, ML3.7/4, Error ellipse: s-maj=9.9km s-min=9.1km az=54.0*
PGC ***20*** *05:31:10.5±0.1, 63°.51N×129°.07W, h15km, ML4.0/7, 230km southwest of Norman Wells, Nt Northwest Territories, Canada*
NEIC ***20*** *05:31:10.5, 63°.51N

INK	**Inuvik**	**5.24**	**342**	⇓Pn	**Pn**	**05 32 24.9**	**-1.0**
INK				⇓Pg	**Pg**	**05 32 43.7**	**-4.1**
PLBC	**Pleasant Camp**	**5.24**	**224**	Pn	**Pn**	**05 32 30.3**	**+4.3**
PLBC				Pg	**Pg**	**05 32 47.3**	**-0.7**
PLBC				Sg	**Sg**	**05 33 54.0**	**-1.8**
PLBC	**Pleasant Camp**	**5.24**	**224**	⇓Pn	**Pn**	**05 32 30.3**	**+4.3**
PLBC				⇑Pg	**Pg**	**05 32 47.3**	**-0.7**
PLBC				⇑Sg	**Sg**	**05 33 54.0**	**-1.8**
GALN	**Gameti Lake**	**5.32**	**77**	Pn	**Pn**	**05 32 26.4**	**-0.7**
GALN	**Gameti Lake**	**5.32**	**77**	⇓Pn	**Pn**	**05 32 26.4**	**-0.7**
FNBB	**Fort Nelson**	**5.42**	**144**	Pn	**Pn**	**05 32 30.6**	**+2.1**
FNBB				Sn	**Sn**	**05 33 31.1**	**+0.3**
FNBB	**Fort Nelson**	**5.42**	**144**	⇑Pn	**Pn**	**05 32 30.6**	**+2.1**
FNBB				⇓Sn	**Sn**	**05 33 31.1**	**+0.3**
CTLN	**Castor Lake**	**5.91**	**74**	Pn	**Pn**	**05 32 33.7**	**-1.3**
CTLN				Sn	**Sn**	**05 33 36.8**	**-5.9**
CTLN	**Castor Lake**	**5.91**	**74**	⇓Pn	**Pn**	**05 32 33.7**	**-1.3**
CTLN				⇑Sn	**Sn**	**05 33 36.8**	**-5.9**
DOT	**Dot Lake**	**6.65**	**279**	*e*Pn	**Pn**	**05 32 47.7**	**+2.4**
	46nm,0.7s						
DOT				*e*Pg	**Pg**	**05 33 12.5**	**-2.4**
DOT				*e*Sg	**Sg**	**05 34 39.6**	**-1.4**
YKW3	**Yellowknife Ar**	**6.70**	**91**	Pn	**Pn**	**05 32 45.2**	**-0.7**
YKW3	**Yellowknife Ar**	**6.70**	**91**	⇑Pn	**Pn**	**05 32 45.2**	**-0.7**
YKA	**Yellowknife Ar**	**6.72**	**91**	Pn	**Pn**	**05 32 45.4**	**-0.8**
	0.9nm,0.3s,baz=279,slow=13,SNR=22						
YKA				Sn	**Sn**	**05 33 58.9**	**-3.8**
	1.6nm,0.3s,baz=238,slow=24,SNR=4.3						
YKA				Lg		05 34 33.2	
	1.4nm,0.3s,baz=284,slow=28,SNR=4.8						
YKA	**Yellowknife Ar**	**6.72**	**91**	Pn	**Pn**	**05 32 45.4**	**-0.8**
YKA				Sn	**Sn**	**05 33 58.9**	**-3.8**
YKA				Lg		05 34 33.2	
ILAR	**Eielson Array**	**7.87**	**288**	Pn	**Pn**	**05 33 03.3**	**+1.3**
	0.3nm,0.3s,baz=106,slow=12,SNR=20						
ILAR				Lg		05 35 16.1	
	0.5nm,0.3s,baz=96,slow=28,SNR=8.8						
FINES	**FINESS Array B**	**54.08**	**14**	P	**P**	**05 40 33.5**	**+1.7**
	0.8nm,0.7s,baz=46,slow=5.5,SNR=5.9						

*ISCJB **20** 05:41:00.3±0.9, 7°.0N±0°.1×73°.1W±0°.1, h158km±11km, Error ellipse: s-maj=24.5km s-min=10.7km az=43.1*
*FUNV **20** 05:41:04.5, 7°.18N×73°.05W, h163km, MW3.6*
*IDC **20** 05:41:05.0±5.7, 6°.47N×73°.53W, h193km±33km, mb2.8/1, mb1 3.3/1, mb1mx2.8/21, mbtmp2.8/1, Error ellipse: s-maj=111.2km s-min=31.4km az=70.0*
ISC 20 05:41:01.0±0.8, 6°.9N±0°.1×73°.1W±0°.1, h152km±11km, n13, σ1°.02/20, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.20**	**38**	⇑*i*P	**Pn**	**05 41 29.4**	**+1.6**
CAPV				*e*S	**Sn**	**05 41 49.1**	**+0.9**
ROSC	**El Rosal**	**2.41**	**212**	P	**Pn**	**05 41 41.2**	**+0.1**
	29nm,0.3s,baz=90,slow=20,SNR=92						
ROSC				S	**Sn**	**05 42 09.9**	**-2.1**
	26nm,0.3s,baz=111,slow=16,SNR=18						
VIGV	**El Vigia**	**2.54**	**41**	*e*P	**Pn**	**05 41 43.9**	**+1.1**
VIGV				*e*S	**Sn**	**05 42 12.3**	**-2.7**
SOCV	**Socops**	**2.57**	**58**	*e*P	**Pn**	**05 41 44.0**	**+0.9**
SOCV				*e*S	**Sn**	**05 42 14.8**	**-0.8**
VIRV	**Villa del Rosa**	**3.62**	**10**	*e*P	**Pn**	**05 41 56.0**	**-0.5**
VIRV				*e*S	**Sn**	**05 42 33.5**	**-6.0**
QARV	**Quebrada Arrib**	**4.12**	**37**	*e*P	**Pn**	**05 42 03.3**	**+0.4**
QARV				*e*S	**Sn**	**05 42 45.4**	**-5.7**
SANV	**Sanarito**	**4.33**	**53**	*e*P	**Pn**	**05 42 06.2**	**+0.5**
SANV				*e*S	**Sn**	**05 42 51.5**	**-4.5**
CURV	**Curarigua**	**4.34**	**45**	*e*P	**Pn**	**05 42 05.8**	**-0.1**
CURV				*e*S	**Sn**	**05 42 50.8**	**-5.5**
SIQV	**Siquisique**	**4.91**	**41**	*e*P	**Pn**	**05 42 13.0**	**-0.3**
SIQV				*e*S	**Sn**	**05 43 03.0**	**-6.6**
BAUV	**El Baul**	**5.36**	**68**	*e*P	**Pn**	**05 42 19.4**	**0.0**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**05 47 51.2**	**-0.2**
	0.3nm,0.7s,baz=130,slow=9.6,SNR=3.4						
ASAR	**Alice Springs**	**149.22**	**234**	PKPbc	PKPbc	06 00 29.6	-2.9
	0.6nm,0.6s,baz=110,slow=3.7,SNR=10						
WRA	**Warramunga Arr**	**150.44**	**241**	PKPbc	PKPbc	06 00 32.6	-2.9
	0.5nm,0.4s,baz=108,slow=2.6,SNR=17						

PGC 20 05:42:44.5±0.1, 63°.56N×129°.04W, h5km, ML3.5/7, 15D, 225km southwest of Norman Wells, Nt Northwest Territories, Canada, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHY	**Whitehorse**	**4.00**	**226**	⇑Pn	Pn	05 43 45.5	-0.8
WHY				⇓Pg	Pg	05 43 56.8	-4.3
WHY				⇓Sg	Sg	05 44 46.3	-6.5
DAWY	**Dawson**	**4.62**	**281**	⇓Pn	Pn	05 43 53.4	-1.4
DAWY				⇑Pg	Pg	05 44 07.7	-5.2
DAWY				⇑Sg	Sg	05 45 08.4	-4.2
HYT	**Haines Junctio**	**4.82**	**239**	⇓Pn	Pn	05 43 57.2	-0.4
HYT				⇑Sn	Sn	05 44 49.4	-4.3
HYT				⇓Sg	Sg	05 45 12.3	-6.8
INK	**Inuvik**	**5.11**	**341**	⇓Pn	Pn	05 44 00.7	-0.9
DLBC	**Dease Lake**	**5.16**	**186**	⇓Pn	Pn	05 43 59.7	-2.6
DLBC				⇓Pg	Pg	05 44 16.5	-6.8
DLBC				⇓Sn	Sn	05 44 60.0	-2.2
GALN	**Gameti Lake**	**5.22**	**79**	⇓Pn	Pn	05 44 01.8	-1.4
GALN				⇓Sn	Sn	05 44 59.9	-3.7
PLBC	**Pleasant Camp**	**5.41**	**224**	⇑Pn	Pn	05 44 05.1	-0.5
PLBC				⇓Pg	Pg	05 44 21.9	-6.1
PLBC				⇓Sg	Sg	05 45 28.8	-9.1
FNBB	**Fort Nelson**	**5.51**	**145**	⇑Pn	Pn	05 44 04.8	-2.3
FNBB				⇓Sn	Sn	05 45 06.1	-4.7
FNBB				⇑Sg	Sg	05 45 38.1	-3.4
CTLN	**Castor Lake**	**5.80**	**76**	⇑Pn	Pn	05 44 09.3	-1.7
CTLN				⇓Sn	Sn	05 45 11.4	-6.4
YKW3	**Yellowknife Ar**	**6.63**	**92**	⇓Pn	Pn	05 44 21.0	-1.4
YKW3				⇑Sn	Sn	05 45 32.2	-6.1

*KISR **20** 05:53:00.8±1.1, 32°.56N×47°.81E, h34km±999km, ML3.4*
*CSEM **20** 05:53:01.6±0.4, 32°.42N×47°.30E, h2km, ML3.4, Error ellipse: s-maj=19.2km s-min=7.1km az=107.0*
*ISCJB **20** 05:53:02.3±0.4, 32°.42N±0°.02×47°.44E±0°.06, h10km, Error ellipse: s-maj=6.8km s-min=3.2km az=174.1*
*SGS **20** 05:53:04.2, 32°.33N×47°.33E, h18km*
*TEH **20** 05:53:06.6, 32°.48N×47°.43E, h30km*
ISC 20 05:53:03.5±0.4, 32°.42N±0°.02×47°.42E±0°.05, h10km, n30, σ0°.76/39, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.76**	**3**	*e*Pn	**Pn**	**05 53 34.0**	**0.0**
IKOM				*e*Sg	**Sg**	**05 54 00.6**	**+0.6**
IKOM				*e*		05 54 11.5	
	comp=Z,4μm,0.3s						
IGHG	**Ghaleghazi**	**2.04**	**340**	*e*Pn	**Pn**	**05 53 37.9**	**0.0**
IGHG				*e*Sg	**Sg**	**05 54 09.2**	**+0.2**
IGHG				*e*		05 54 19.4	
	comp=Z,2μm,0.4s						
IVIS	**Veis**	**2.16**	**347**	*e*Pn	**Pn**	**05 53 39.9**	**+0.4**
IVIS				*e*Sg	**Sg**	**05 54 11.8**	**-1.1**
IVIS				*e*		05 54 20.2	
	comp=E,3μm,0.5s						
IDHR	**Dehrash**	**2.44**	**340**	*e*Pn	**Pn**	**05 53 43.6**	**+0.3**
IDHR				*e*		05 54 17.1	
	comp=Z,1μm,0.1s						
ILIN	**Lien**	**2.52**	**352**	*e*Pn	**Pn**	**05 53 44.6**	**0.0**
ILIN				*e*		05 54 41.5	
	comp=Z,882nm,0.4s						
MIB	**Mutribah**	**2.60**	**181**	*e*P	**Pn**	**05 53 45.3**	**-0.3**
MIB				*e*S	**Sn**	**05 54 18.4**	**+1.1**
MIB				AML	AML	05 54 24.2	
	comp=Z,254nm,0.5s						
MIB	**Mutribah**	**2.60**	**181**	*e*P	**Pn**	**05 53 45.3**	**-0.4**
MIB				*e*S	**Sn**	**05 54 18.4**	**+1.0**
SNGE	**Sanandaj**	**2.67**	**359**	*e*Pn	**Pn**	**05 53 47.0**	**+0.4**
IPIR	**Pirpir**	**2.95**	**84**	*e*Pn	**Pn**	**05 53 51.6**	**+1.2**
IPIR				*e*		05 54 52.0	
	comp=Z,2μm,0.3s						
ASAO	**Ashtian**	**3.05**	**45**	*e*Pn	**Pn**	**05 53 52.0**	**+0.3**
NAY	**Al-Naaiem**	**3.16**	**183**	*e*P	**Pn**	**05 53 52.7**	**-0.6**
NAY	**Al-Naaiem**	**3.16**	**183**	*e*P	**Pn**	**05 53 52.7**	**-0.6**
RDF	**Al-Radifah**	**3.48**	**178**	*e*P	**Pn**	**05 53 57.6**	**-0.1**
RDF				*e*S	**Sn**	**05 54 40.3**	**+1.3**
RDF				AML	AML	05 54 41.7	
	comp=Z,40nm,0.3s						
RDF	**Al-Radifah**	**3.48**	**178**	*e*P	**Pn**	**05 53 57.6**	**-1.0**
RDF				*e*S	**Sn**	**05 54 40.3**	**+1.3**
IKLH	**Kolahrood**	**3.62**	**74**	*e*Pn	**Pn**	**05 53 59.9**	**+0.3**
IKLH				*e*		05 54 13.4	
	comp=Z,709nm,0.2s						
IRAZ	**Razeghan**	**3.64**	**34**	*e*Pn	**Pn**	**05 54 00.7**	**+0.8**
IRAZ				*e*		05 54 17.9	
	comp=Z,824nm,0.4s						
QRN	**Al-Qurain**	**3.69**	**173**	*e*P	**Pn**	**05 53 59.9**	**-0.6**
QRN				*e*S	**Sn**	**05 54 43.6**	**-0.4**
QRN				AML	AML	05 54 44.8	
	comp=Z,40nm,0.2s						
IGAR	**Gharneh**	**3.91**	**89**	*e*Pn	**Pn**	**05 54 03.8**	**+0.1**
IGAR				*e*		05 54 52.9	
	comp=Z,510nm,0.1s						
IZEF	**Zefreh**	**4.17**	**82**	*e*	**Pg**	**05 54 21.0**	**-2.5**
	comp=Z,356nm,0.3s						
IZEF				*e*Pn	**Pn**	**05 54 07.3**	**+0.1**
KFJS		**4.24**	**174**	P	**Pn**	**05 54 06.9**	**-1.2**
KFJS		**4.24**	**174**	P	**Pn**	**05 54 06.9**	**-1.3**
NASN	**Na'in**	**4.57**	**84**	*e*Pn	**Pn**	**05 54 12.7**	**+0.1**
DAMV	**Damavand**	**4.96**	**48**	*e*Pn	**Pn**	**05 54 18.2**	**+0.2**
IDMV	**Damavand**	**4.96**	**49**	*e*Pn	**Pn**	**05 54 17.8**	**-0.3**
IDMV				*e*		05 55 48.2	
	comp=Z,238nm,0.4s						
IFIR	**Firoozkooh**	**5.48**	**53**	*e*Pn	**Pn**	**05 54 24.6**	**-0.5**
IFIR				*e*		05 56 22.2	
	comp=E,335nm,0.6s						
ASYS		**5.57**	**209**	P	**Pn**	**05 54 22.9**	**-3.6**
ASYS		**5.57**	**209**	P	**Pn**	**05 54 22.9**	**-3.6**
ISRV	**Sarvestan**	**5.75**	**120**	*e*Pn	**Pn**	**05 54 30.0**	**+1.0**
ISRV				*e*		05 55 45.5	
	comp=Z,283nm,0.2s						
IANJ	**Anjilo**	**6.20**	**59**	*e*Pn	**Pn**	**05 54 34.2**	**-0.9**
IANJ				*e*		05 55 05.6	
	comp=Z,122nm,0.4s						
IMEH	**Mehriz**	**6.21**	**98**	*e*Pn	**Pn**	**05 54 35.2**	**0.0**
IMEH				*e*		05 55 47.0	
	comp=Z,84nm,0.2s						

WEL 20 06:14:44.7±0.3, 37°.91S×177°.84E, h67km±4km, ML3.5/4, Error ellipse: s-maj=2.0km s-min=1.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**0.37**	**116**	PN	Pn	06 14 55.2	-0.9
PUZ				SN	Sn	06 15 03.5	-0.8
MWZ	**Matawai**	**0.49**	**210**	PN	Pn	06 14 56.7	-0.4
MWZ				SN	Sn	06 15 06.3	+0.2
MXZ	**Matakaoa Point**	**0.51**	**47**	PN	Pn	06 14 57.4	+0.1
MXZ				SN	Sn	06 15 06.8	+0.3
WIZ	**White Island**	**0.64**	**307**	PN	Pn	06 14 57.5	-1.1
CNGZ	**Carnagh Statio**	**0.64**	**153**	PN	Pn	06 14 59.0	+0.3
URZ	**Urewera**	**0.67**	**239**	PN	Pn	06 14 58.5	-0.5
URZ				SN	Sn	06 15 09.1	-0.5
EDRZ	**Edgecumbe**	**0.89**	**257**	PN	Pn	06 15 01.3	-0.3
EDRZ				SN	Sn	06 15 14.3	+0.1
PRGZ	**Paritu Road**	**1.01**	**178**	PN	Pn	06 15 03.2	0.0
TARZ	**Mount Tarawera**	**1.10**	**252**	PN	Pn	06 15 04.7	+0.4
KNZ	**Kokohu**	**1.11**	**187**	PN	Pn	06 15 04.0	-0.5
RRRZ	**Republican Roa**	**1.13**	**247**	PN	Pn	06 15 04.7	+0.1
RAHZ	**Arahi**	**1.16**	**210**	PN	Pn	06 15 05.6	+0.5
MHGZ	**Mahia Peninsul**	**1.24**	**177**	PN	Pn	06 15 05.3	-0.8
TGRZ	**Tauranga**	**1.26**	**278**	PN	Pn	06 15 05.8	-0.6
PRRZ	**Plateau Road**	**1.28**	**242**	PN	Pn	06 15 06.6	0.0
ALRZ	**Allen Road**	**1.34**	**241**	PN	Pn	06 15 07.5	0.0
NMHZ	**Naumai**	**1.43**	**214**	PN	Pn	06 15 09.4	+0.7
KAHZ	**Kahuranaki**	**2.02**	**201**	PN	Pn	06 15 16.2	-0.4
KUZ	**Kuaotunu**	**2.05**	**304**	PN	Pn	06 15 16.2	-0.8
PXZ	**Pawanui**	**2.25**	**199**	PN	Pn	06 15 18.2	-1.4
WNVZ	**Wahianoa**	**2.25**	**230**	PN	Pn	06 15 20.3	+0.6
MKAZ	**Moumakai**	**2.27**	**290**	PN	Pn	06 15 19.8	0.0
BFZ	**Birch Farm**	**3.03**	**204**	PN	Pn	06 15 28.4	-1.8

*KISR **20** 06:15:41.5±0.9, 32°.77N×47°.43E, h45km±999km, ML2.7*
*ISCJB **20** 06:15:42.1±0.5, 32°.67N±0°.02×47°.35E±0°.06, h10km, Error ellipse: s-maj=7.6km s-min=3.3km az=172.9*
*TEH **20** 06:15:43.4, 32°.62N×47°.35E, h9km*
ISC 20 06:15:43.5±0.5, 32°.67N±0°.02×47°.34E±0°.06, h10km, n17, σ0°.71/24, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.51**	**5**	*e*Pg	**Pg**	**06 16 10.9**	**-1.6**
IKOM				*e*		06 16 12.9	
	comp=Z,6μm,0.1s						
IKOM				*e*Sg	**Sg**	**06 16 32.0**	**-0.1**
IGHG	**Ghaleghazi**	**1.78**	**339**	*e*Pn	**Pn**	**06 16 15.0**	**+0.7**
IGHG				*e*Sg	**Sg**	**06 16 41.1**	**+0.3**
IGHG				*e*		06 16 47.0	
	comp=Z,4μm,0.3s						
IVIS	**Veis**	**1.90**	**348**	*e*Pn	**Pn**	**06 16 17.6**	**+1.6**
IVIS				*e*		06 16 48.3	
	comp=N,3μm,0.2s						
IDHR	**Dehrash**	**2.18**	**339**	*e*Pn	**Pn**	**06 16 19.8**	**0.0**
IDHR				*e*		06 16 24.5	
	comp=Z,3μm,0.1s						
IDHR				*e*Sg	**Sg**	**06 16 52.6**	**-0.9**
ILIN	**Lien**	**2.27**	**352**	*e*Pn	**Pn**	**06 16 21.4**	**+0.4**
ILIN				*e*		06 16 26.2	
	comp=Z,1μm,0.1s						
MIB	**Mutribah**	**2.85**	**180**	*e*P	**Pn**	**06 16 28.9**	**-0.2**
MIB				*e*S	**Sn**	**06 17 03.4**	**-0.1**
MIB				AML	AML	06 17 08.6	
	comp=Z,11nm,0.3s						
IPIR	**Pirpir**	**2.99**	**89**	*e*Pn	**Pn**	**06 16 31.4**	**+0.4**
IPIR				*e*		06 17 22.6	
	comp=Z,479nm,0.2s						
NAY	**Al-Naaiem**	**3.41**	**182**	*e*P	**Pn**	**06 16 36.1**	**-0.6**
IRAZ	**Razeghan**	**3.47**	**37**	*e*Pn	**Pn**	**06 16 38.5**	**+0.9**
IRAZ				*e*		06 16 49.3	
	comp=Z,441nm,0.2s						
IKLH	**Kolahrood**	**3.62**	**78**	*e*Pn	**Pn**	**06 16 39.9**	**+0.3**
IKLH				*e*		06 16 41.7	
	comp=Z,458nm,0.0s						
RDF	**Al-Radifah**	**3.73**	**177**	*e*P	**Pn**	**06 16 40.9**	**-0.3**
RDF				*e*S	**Sn**	**06 17 25.9**	**+0.7**
RDF				AML	AML	06 17 27.9	
	comp=Z,20nm,0.3s						
QRN	**Al-Qurain**	**3.94**	**173**	*e*P	**Pn**	**06 16 43.5**	**-0.5**
QRN				*e*S	**Sn**	**06 17 30.3**	**0.0**
IGAR	**Gharneh**	**3.98**	**93**	*e*Pn	**Pn**	**06 16 44.0**	**-0.5**
IZEF	**Zefreh**	**4.21**	**86**	*e*Pn	**Pn**	**06 16 47.8**	**+0.2**
IDMV	**Damavand**	**4.85**	**52**	*e*Pn	**Pn**	**06 16 55.9**	**-0.6**
IDMV				*e*		06 17 19.7	
	comp=Z,136nm,0.2s						
IFIR	**Firoozkooh**	**5.38**	**55**	*e*	**Pn**	**06 17 05.5**	**+1.8**
	comp=Z,100nm,0.1s						
IFIR				*e*Pn	**Pn**	**06 17 03.6**	**-0.1**
IANJ	**Anjilo**	**6.13**	**61**	*e*Pn	**Pn**	**06 17 13.2**	**-0.8**
IANJ				*e*		06 17 20.3	
	comp=Z,42nm,0.2s						

*ISCJB **20** 07:02:26.8±0.4, 31°.76N±0°.04×56°.16E±0°.03, h10km, Error ellipse: s-maj=5.6km s-min=3.5km az=163.6*
*THR **20** 07:02:27.7±1.5, 31°.81N×56°.24E, h15km±15km, ML3.5*
*TEH **20** 07:02:27.6, 31°.71N×56°.21E, h6km*
*CSEM **20** 07:02:29.6, 31°.81N×56°.27E, h36km, ML3.2, After THR*
ISC 20 07:02:28.2±0.4, 31°.76N±0°.04×56°.14E±0°.03, h10km, n23, σ0°.89/31, 1C, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBAF	**Bafgh**	**0.52**	**251**	⇑*e*Pg	**Pg**	**07 02 37.3**	**-1.0**
IBAF				*e*Sg	**Sg**	**07 02 44.2**	**-1.0**
IBAF				*e*		07 02 46.2	
	comp=Z,37μm,0.0s						
IMEH	**Mehriz**	**1.36**	**255**	*e*Pg	**Pg**	**07 02 53.2**	**-1.1**
IMEH				*e*Sg	**Sg**	**07 03 11.4**	**-0.5**
IMEH				*e*		07 03 13.8	
	comp=Z,4μm,0.1s						
ICHK	**Chekchek**	**1.55**	**288**	*e*Pg	**Pn**	**07 02 56.4**	**+0.5**
ICHK				*e*		07 03 22.9	
	comp=Z,6μm,0.1s						
KRBR	**Kerman**	**1.85**	**163**	*e*Pg	**Pn**	**07 03 01.4**	**+1.4**
KRBR				*e*Sg	**Sg**	**07 03 27.9**	**+0.2**
KRBR				AML	AML	07 03 30.1	
	comp=N,830nm,0.5s						
KRBR	**Kerman**	**1.85**	**163**	*e*Pn	**Pn**	**07 03 01.5**	**+1.5**
KRBR				*e*Sg	**Sg**	**07 03 28.0**	**+0.2**
TABS	**Tabas**	**2.05**	**23**	*e*Pg	**Pn**	**07 03 03.5**	**+0.8**
TABS				*e*Sg	**Sg**	**07 03 30.4**	**-3.8**
TABS	**Tabas**	**2.05**	**23**	*e*Pn	**Pn**	**07 03 02.4**	**-0.4**
TABS				*e*Sg	**Sg**	**07 03 30.4**	**-3.8**
ISAD	**Sadrabad**	**2.10**	**275**	*e*Sg	**Sg**	**07 03 35.2**	**-0.4**
ISAD				*e*Pn	**Pn**	**07 03 04.8**	**+1.4**
ISAD				*e*		07 03 37.2	
	comp=Z,5μm,0.1s						
IKOO	**Kooshah**	**2.52**	**74**	*e*	**Sg**	**07 03 49.2**	**+0.2**
	comp=Z,3μm,0.1s						
IKOO				*e*Pn	**Pn**	**07 03 07.9**	**-1.2**
NASN	**Na'in**	**3.01**	**291**	*e*Pn	**Pn**	**07 03 18.1**	**+2.2**
NASN				AML	AML	07 04 05.9	
	comp=N,62nm,0.6s						
NASN	**Na'in**	**3.01**	**291**	*e*Pn	**Pn**	**07 03 18.1**	**+2.2**
IPAR	**Pars**	**3.28**	**235**	*e*Pn	**Pn**	**07 03 19.8**	**+0.1**
IPAR				*e*		07 04 26.7	
	comp=Z,1μm,0.5s						
IDAH	**Dahanechah**	**3.30**	**72**	*e*Pn	**Pn**	**07 03 19.7**	**-0.3**
IDAH				*e*		07 04 22.0	
	comp=Z,886nm,0.2s						
IZEF	**Zefreh**	**3.42**	**290**	*e*	**Sg**	**07 04 27.2**	**+9.1**
	comp=N,528nm,0.2s						
SHRT	**Shahrakht**	**3.97**	**61**	*e*Pn	**Pn**	**07 03 28.2**	**-1.0**
SHRT	**Shahrakht**	**3.97**	**61**	*e*Pn	**Pn**	**07 03 28.2**	**-0.9**
IANJ	**Anjilo**	**4.14**	**334**	*e*Pn	**Pn**	**07 03 31.6**	**+0.2**
IANJ				*e*		07 04 49.2	
	comp=Z,280nm,0.2s						
IKLH	**Kolahrood**	**4.16**	**293**	*e*Pn	**Pn**	**07 03 32.6**	**+0.9**
IKLH				*e*		07 04 50.8	
	comp=E,343nm,0.3s						
IFIR	**Firoozkooh**	**4.79**	**325**	*e*Pn	**Pn**	**07 03 40.9**	**+0.5**
IFIR				*e*		07 04 03.3	
	comp=Z,205nm,0.2s						
IMOG	**Moghan**	**5.08**	**31**	*e*Pn	**Pn**	**07 03 44.3**	**-0.1**
IMOG				*e*		07 04 04.5	
	comp=Z,101nm,0.2s						
IDMV	**Damavand**	**5.12**	**319**	*e*Pn	**Pn**	**07 03 45.5**	**+0.6**
IDMV				*e*		07 05 25.8	
	comp=Z,161nm,0.2s						
IAKL	**Akhelmad**	**5.29**	**23**	*e*Pn	**Pn**	**07 03 46.5**	**-0.8**
IAKL				*e*		07 04 19.6	
	comp=Z,125nm,0.2s						
ISFR	**Sfrayin**	**5.50**	**16**	*e*Pn	**Pn**	**07 03 50.0**	**-0.1**
ISFR				*e*		07 05 38.5	
	comp=Z,148nm,0.3s						

*ISCJB **20** 07:05:33.6±0.4, 37°.09N±0°.03×28°.13E±0°.03, h12km±4km, Error ellipse: s-maj=4.5km s-min=3.6km az=173.5*
*ATH **20** 07:05:33.8, 37°.06N×28°.04E, h22km±5km, MD3.0/3*
*DDA **20** 07:05:33.9, 37°.13N×28°.15E, h7km±5km, Md2.8*
*ISK **20** 07:05:33.9, 37°.14N×28°.11E, h11km, MD2.8*
*CSEM **20** 07:05:33.8±0.2, 37°.09N×28°.12E, h12km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.2km az=4.0*
ISC 20 07:05:34.1±0.4, 37°.10N±0°.03×28°.13E±0°.03, h13km±4km, n32, σ0°.92/55, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**73**	PG	**Pg**	**07 05 37.8**	**+0.2**
YER				*e*SG	**Sg**	**07 05 40.4**	**+0.5**
YER	**Yerkesik**	**0.13**	**73**	*i* Pg	**Pg**	**07 05 37.8**	**+0.3**
YER				*e*Sg	**Sg**	**07 05 40.4**	**+0.5**
MLSB	**Milas**	**0.34**	**306**	*e*PG	**Pg**	**07 05 40.3**	**-0.7**
MLSB				*e*SG	**Sg**	**07 05 46.1**	**+0.4**
MLSB	**Milas**	**0.34**	**306**	*e*Pg	**Pg**	**07 05 40.3**	**-0.8**
MLSB				*e*Sg	**Sg**	**07 05 46.1**	**+0.4**
TURN	**Turunc**	**0.44**	**120**	*i* P	**Pg**	**07 05 40.6**	**-2.3**
TURN				*i* S	**Sg**	**07 05 47.4**	**-1.4**
TURN	**Turunc**	**0.44**	**120**	*i* P	**Pg**	**07 05 40.6**	**-2.3**
TURN				*i* S	**Sg**	**07 05 47.4**	**-1.4**
BDRM	**Kayabasi**	**0.55**	**267**	*i* P	**Pg**	**07 05 44.6**	**-0.2**
BDRM				*i* S	**Sg**	**07 05 53.0**	**+0.9**
BDRM	**Kayabasi**	**0.55**	**267**	*i* P	**Pg**	**07 05 44.6**	**-0.2**
BDRM				*i* S	**Sg**	**07 05 53.0**	**+0.9**
DAT	**Datca**	**0.57**	**230**	*e*PG	**Pg**	**07 05 45.2**	**-0.1**
DAT				*e*SG	**Sg**	**07 05 55.5**	**+2.6**
DAT	**Datca**	**0.57**	**230**	*e*Pg	**Pg**	**07 05 45.2**	**-0.1**
AYDN	**Tasoluk**	**0.60**	**341**	*i* P	**Pg**	**07 05 45.6**	**-0.2**
AYDN				*i* S	**Sg**	**07 05 53.6**	**-0.1**
AYDN	**Tasoluk**	**0.60**	**341**	*i* P	**Pg**	**07 05 45.6**	**-0.2**
AYDN				*i* S	**Sg**	**07 05 53.6**	**-0.1**
BODT	**Bodrum**	**0.65**	**267**	*e*PG	**Pg**	**07 05 46.3**	**-0.5**
BODT				*e*SG	**Sg**	**07 05 55.6**	**+0.2**
BODT	**Bodrum**	**0.65**	**267**	*e*Pg	**Pg**

PSET				*e*S		Sg	07 32 22.5	-2.0
PSET				A			07 32 25.9	
	43nm,0.2s							
PSET	**Sete Cidades**	**0.60**	**128**	*e*P		Pg	07 32 15.1	-1.5
PSET				*e*S		Sg	07 32 22.5	-2.0
ADH	**Angra Heroismo**	**0.86**	**303**	*e*P		Pg	07 32 18.9	-2.7
ADH				*e*S		Sg	07 32 28.6	-4.2
ADH				A			07 32 30.5	
	36nm,0.2s							
ADH	**Angra Heroismo**	**0.86**	**303**	*e*P		Pg	07 32 18.9	-2.7
ADH				*e*S		Sg	07 32 28.6	-4.2
BART	**Pico Bartolome**	**0.99**	**114**	*e*S		Sg	07 32 31.6	-5.6
BART	**Pico Bartolome**	**0.99**	**114**	*e*S		Sg	07 32 31.6	-5.6
PMAN	**Manadas**	**1.46**	**288**	*e*P		Pn	07 32 26.8	-4.8
PMAN				*e*S		Sn	07 32 43.2	-7.6
PMAN	**Manadas**	**1.46**	**288**	*e*P		Pn	07 32 26.8	-4.8
PMAN				*e*S		Sn	07 32 43.2	-7.6
PSMA	**Santa Maria**	**1.52**	**142**	*e*S		Sn	07 32 44.8	-7.5
PSMA				A			07 32 47.8	
	32nm,0.2s							
PSMN	**Pico do Norte,**	**1.55**	**140**	*e*S		Sn	07 32 45.4	-7.5
PSMN	**Pico do Norte,**	**1.55**	**140**	*e*S		Sn	07 32 45.4	-7.5
ROSA	**Rosais**	**1.60**	**290**	*e*P		Pn	07 32 28.8	-4.7
ROSA	**Rosais**	**1.60**	**290**	*e*P		Pn	07 32 28.8	-4.7
PICO	**Pico**	**1.69**	**281**	*e*P		Pn	07 32 30.1	-4.6
PICO				*e*S		Sn	07 32 48.8	-7.6
PICO	**Pico**	**1.69**	**281**	*e*P		Pn	07 32 30.1	-4.6
PICO				*e*S		Sn	07 32 48.8	-7.6
PCAN	**Candelaria**	**1.73**	**280**	*e*P		Pn	07 32 30.8	-4.5
PCAN				*e*S		Sn	07 32 49.8	-7.6
PCAN				A			07 32 53.0	
	19nm,0.2s							
PCAN	**Candelaria**	**1.73**	**280**	*e*P		Pn	07 32 30.8	-4.5
PCAN				*e*S		Sn	07 32 49.8	-7.6
CALA	**Caldeira**	**1.92**	**282**	*e*P		Pn	07 32 32.8	-5.0
CALA				*e*S		Sn	07 32 54.6	-7.4
CALA	**Caldeira**	**1.92**	**282**	*e*P		Pn	07 32 32.8	-5.0
CALA				*e*S		Sn	07 32 54.6	-7.4

*ISCJB **20** 07:49:51.0±0.8, 21°.83S±0°.07×68°.29W±0°.08, h117km±9km, mb3.8/7, Error ellipse: s-maj=12.8km s-min=11.8km az=178.4*
*IDC **20** 07:49:51.6±2.4, 21°.72S×68°.20W, h106km±22km, mb3.5/5, mb1 3.6/7, mb1mx3.5/17, mbtmp3.4/7, Error ellipse: s-maj=26.7km s-min=18.2km az=78.0*
*GUC **20** 07:49:53.8±0.7, 21°.85S×68°.54W, h124km±16km, ML4.0*
*NEIC **20** 07:49:53.8, 21°.85S×68°.54W, h124km, mb3.8/4, After GUC.*
ISC 20 07:49:52.0±0.7,**21°.84S**±0°.07×**68°.27W**±0°.07,**h108**km±9km, **n24**,σ0°**93**/28,**mb3.8**/7,**1C-3D**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**		**1.43**	**255**	⇑*i*P		**Pn**	**07 50 18.6**	**+0.8**
MACH					*i* S		**Sn**	**07 50 38.1**	**+0.7**
TOCH	**Tocopilla**		**1.81**	**261**	⇓*i*P		**Pn**	**07 50 22.4**	**-0.1**
TOCH					*i* S		**Sn**	**07 50 44.6**	**-1.2**
TOCH				AML		AML		07 50 51.1	
	comp=E,2μm,0.2s								
MECH	**Mejillones**		**2.38**	**238**	*e*P		**Pn**	**07 50 30.8**	**+1.0**
MECH					*e*S		**Sn**	**07 50 57.7**	**-1.1**
MECH				AML		AML		07 51 17.1	
	comp=N,728nm,0.4s								
ANCH	**Antofagasta**		**2.70**	**227**	⇓*i*P		**Pn**	**07 50 34.9**	**+0.9**
ANCH					*i* S		**Sn**	**07 51 05.7**	**-0.6**
ANCH	**Antofagasta**		**2.70**	**227**	⇓*i*P		**Pn**	**07 50 34.9**	**+0.9**
ANCH					*i* S		**Sn**	**07 51 05.7**	**-0.6**
ANCH				AML		AML		07 51 17.5	
	comp=N,1μm,0.3s								
LPAZ	**La Paz**		**5.52**	**1**	P		**Pn**	**07 51 11.9**	**0.0**
	comp=N,0.4nm,0.3s,baz=192,slow=14,SNR=22								
LPAZ	**La Paz**		**5.52**	**1**	*e*Pn		**Pn**	**07 51 12.7**	**+0.9**
CFAA	**Coronel Fontan**		**9.73**	**180**	P		**Pn**	**07 52 08.5**	**-0.4**
	comp=N,0.0nm,0.3s,baz=0.0,slow=8.1,SNR=6.0								
CFAA					S		**Sn**	**07 53 51.6**	**-4.7**
	comp=N,0.0nm,0.3s,baz=280,slow=18,SNR=3.3								
CFAA	**Coronel Fontan**		**9.73**	**180**	P		**Pn**	**07 52 08.5**	**-0.4**
CFAA					S		**Sn**	**07 53 51.6**	**-4.7**
CPUP	**Villa Florida**		**10.95**	**116**	P		**Pn**	**07 52 25.8**	**+0.4**
	comp=N,0.3nm,0.3s,baz=288,slow=16,SNR=5.1								
CPUP	**Villa Florida**		**10.95**	**116**	*e*Pn		**Pn**	**07 52 26.1**	**+0.7**
BDFB	**Brasilia**		**20.14**	**76**	P		**P**	**07 54 15.4**	**-2.2**
	comp=N,1.3nm,0.4s,baz=250,slow=17,SNR=4.2								
TXAR	**Lajitas Array**		**61.24**	**325**	P		**P**	**07 59 54.8**	**-1.0**
	comp=N,0.2nm,0.5s,mb3.4,baz=146,slow=9.1,SNR=3.4								
ANMO	**Albuquerque**		**67.11**	**327**	*e*P		**P**	**08 00 33.9**	**0.0**
	comp=N,0.9nm,0.8s,mb3.6								
DBIC	**Dimbokro**		**68.26**	**73**	P		**P**	**08 00 41.0**	**-0.7**
	comp=N,7.3nm,0.9s,mb4.5,baz=231,slow=6.5,SNR=4.7								
QSPA	**South Pole Qui**		**68.36**	**180**	P		**P**	**08 00 43.0**	**+1.8**
	comp=N,1.3nm,0.6s,mb4.0,baz=152,slow=19,SNR=15								
QSPA	**South Pole Qui**		**68.36**	**180**	*e*P		**P**	**08 00 42.9**	**+1.7**
	comp=N,1.2nm,0.6s,mb3.9								
SDCO	**Great Sand Dun**		**68.84**	**329**	*e*P		**P**	**08 00 44.9**	**+0.2**
	comp=N,0.9nm,0.6s,mb3.8								
PDAR	**Pinedale Array**		**74.70**	**330**	P		**P**	**08 01 19.4**	**-0.3**
	comp=N,0.2nm,0.5s,mb3.1,baz=118,slow=5.2,SNR=2.4								
PDAR	**Pinedale Array**		**74.70**	**330**	P		**P**	**08 01 19.4**	**-0.3**
HLID	**Hailey**		**77.64**	**328**	*e*P		**P**	**08 01 37.5**	**+1.1**
	comp=N,2.2nm,0.9s,mb3.9								
ASAR	**Alice Springs**		**129.89**	**207**	PKP		PKPdf	08 08 48.8	-0.7
	comp=N,0.3nm,0.7s,baz=116,slow=1.5,SNR=3.4								
WRA	**Warramunga Arr**		**132.97**	**210**	PKP		PKPdf	08 08 54.8	-0.6
	comp=N,0.2nm,0.4s,baz=146,slow=1.6,SNR=6.2								
MKAR	**Makanchi Array**		**145.55**	**37**	PKPbc		PKPbc	08 09 17.0	-0.7
	comp=N,0.2nm,0.3s,baz=304,slow=3.1,SNR=2.8								

*BJI **20** 07:58:09.6, 13°.94N×49°.56E, h10km, mB4.9/14, mb4.8/24, Ms4.7/10, Ms7 4.3/8*
*IDC **20** 07:58:13.4±0.5, 14°.13N×50°.51E, h0km, mb4.4/27, mb1 4.5/28, mb1mx4.4/35, mbtmp4.4/28, ML4.1/1, MS3.6/20, Ms1 3.6/20, ms1mx3.4/37, Error ellipse: s-maj=13.3km s-min=12.9km az=120.0*
*ISCJB **20** 07:58:14.1±0.3, 14°.11N±0°.05×50°.31E±0°.02, h10km, mb4.6/64, MS3.7/28, Error ellipse: s-maj=6.9km s-min=3.1km az=167.7*
*NEIC **20** 07:58:15.5±0.3, 14°.13N×50°.33E, h10km, mb4.8/22, ML4.7(DHMR), Error ellipse: s-maj=8.5km s-min=4.9km az=166.0*
*CSEM **20** 07:58:15.1±0.3, 14°.07N×50°.32E, h2km, mb4.8/27, Error ellipse: s-maj=11.1km s-min=5.7km az=162.0*
*TEH **20** 07:58:17.0, 14°.08N×50°.24E, h10km*
*MOS **20** 07:58:17.3±1.6, 14°.08N×50°.43E, h33km, mb4.9/22, Error ellipse: s-maj=11.6km s-min=5.6km az=105.7*
*DHMR **20** 07:58:17.8±1.6, 13°.86N×49°.99E, h7km±23km, ML4.7*
*OMAN **20** 07:58:26.0±99.0, 14°.67N×50°.73E, h36km±21km, Error ellipse: s-maj=27.6km s-min=8.5km az=19.0*
ISC 20 07:58:16.1±0.3,**14°.12N**±0°.05×**50°.30E**±0°.02,**h10**km, **(h17**km±3.2km**:pP-P)**,**n243**,σ1**42**/256,**mb4.7**/63,**MS3.7**/28, **16C-13D**,**Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**		**1.27**	**286**	*i* P		**Pn**	**07 58 38.2**	**-1.8**
MUKL					*i* S		**Sb**	**07 58 54.5**	**-2.1**
MUKL	**Al Mukalla**		**1.27**	**286**	⇑*i*P		**Pn**	**07 58 38.2**	**-1.8**
MUKL					*i* S		**Sb**	**07 58 54.5**	**-2.1**
MUKL				AML		AML		07 58 55.1	
	comp=N,17μm,0.4s								
ABTO	**Aybut**		**4.32**	**42**	P		**Pn**	**07 59 19.9**	**-2.0**
	SNR=13								
ABTO	**Aybut**		**4.32**	**42**	P		**Pn**	**07 59 19.9**	**-2.0**
	SNR=13								
BDHA	**Al Bayda'**		**4.59**	**269**	*e*P		**Pn**	**07 59 26.4**	**+0.8**
BDHA					*i* S		**Sn**	**08 00 20.2**	**+1.0**
BDHA	**Al Bayda'**		**4.59**	**269**	*e*P		**Pn**	**07 59 26.4**	**+0.8**
BDHA					*i* S		**Sn**	**08 00 20.2**	**+1.0**
BDHA				AML		AML		08 00 21.9	
	comp=N,3μm,0.5s								
BDHA	**Al Bayda'**		**4.59**	**269**	*e*P		**Pn**	**07 59 26.4**	**+0.7**
BDHA					*i* S		**Sn**	**08 00 20.2**	**+1.1**
LBOS			**4.91**	**268**	*i* P		**Pn**	**07 59 30.6**	**+0.6**
LBOS					*i* S		**Sn**	**08 00 27.8**	**+1.0**
LBOS			**4.91**	**268**	⇑*i*P		**Pn**	**07 59 30.6**	**+0.6**
LBOS					*i* S		**Sn**	**08 00 27.8**	**+1.0**
RBK	**Rabkut**		**5.04**	**48**	P		**Pn**	**07 59 27.3**	**-4.5**
	SNR=23								
ADEN	**Aden**		**5.34**	**256**	*i* P		**Pn**	**07 59 34.3**	**-1.7**
ADEN	**Aden**		**5.34**	**256**	⇑*i*P		**Pn**	**07 59 34.3**	**-1.7**
ADEN					*i* S		**Sn**	**08 00 35.3**	**-2.3**
ADEN	**Aden**		**5.34**	**256**	⇑*i*P		**Pn**	**07 59 34.3**	**-1.7**
DHBB	**Dhamar BB**		**5.74**	**275**	*e*P		**Pn**	**07 59 42.5**	**+1.0**
DHBB					*i* S		**Sn**	**08 00 46.9**	**-0.6**
DHBB	**Dhamar BB**		**5.74**	**275**	*e*P		**Pn**	**07 59 42.5**	**+1.0**
DHBB					*i* S		**Sn**	**08 00 47.0**	**-0.5**
DHBB	**Dhamar BB**		**5.74**	**275**	*e*P		**Pn**	**07 59 42.5**	**+1.0**
DHBB					*i* S		**Sn**	**08 00 47.0**	**-0.5**
SANA	**San'a**		**6.03**	**283**	*e*P		**Pn**	**07 59 46.5**	**+1.1**
SANA	**San'a**		**6.03**	**283**	*e*P		**Pn**	**07 59 46.5**	**+1.1**
TRBA	**At Turbah**		**6.08**	**262**	*i* P		**Pn**	**07 59 45.8**	**-0.2**
TRBA	**At Turbah**		**6.08**	**262**	⇓*i*P		**Pn**	**07 59 45.8**	**-0.2**
TRBA					*i* S		**Sn**	**08 00 54.9**	**-0.8**
TRBA	**At Turbah**		**6.08**	**262**	⇓*i*P		**Pn**	**07 59 45.8**	**-0.2**
TRBA					*i* S		**Sn**	**08 00 54.8**	**-0.9**
UDYN	**Al 'Udayn**		**6.15**	**269**	*e*P		**Pn**	**07 59 47.1**	**0.0**
UDYN					*i* S		**Sn**	**08 00 56.6**	**-0.8**
UDYN	**Al 'Udayn**		**6.15**	**269**	⇑*e*P		**Pn**	**07 59 47.1**	**0.0**
UDYN					*i* S		**Sn**	**08 00 55.0**	**-2.4**
ATD	**Arta Tunnel**		**7.71**	**251**	Pn		**Pn**	**08 00 09.6**	**+1.1**
	comp=N,2.4nm,0.3s,baz=71,slow=9.9,SNR=1.9								
ATD	**Arta Tunnel**		**7.71**	**251**	Pn		**Pn**	**08 00 09.6**	**+1.1**
ATD	**Arta Tunnel**		**7.71**	**251**	Pn		**Pn**	**08 00 09.6**	**+1.1**
BSY	**Bisya**		**10.79**	**36**	P		**Pn**	**08 00 48.9**	**-1.8**
	SNR=8.2								
JMDO	**Jabal Madar**		**11.05**	**41**	P		**Pn**	**08 00 53.4**	**-0.9**
	SNR=8.5								
JMDO	**Jabal Madar**		**11.05**	**41**	P		**Pn**	**08 00 53.4**	**-0.9**
	SNR=8.5								
HOQ	**Hoqain**		**11.51**	**34**	P		**Pn**	**08 00 59.0**	**-1.6**
	SNR=12								
HOQ	**Hoqain**		**11.51**	**34**	P		**Pn**	**08 00 59.0**	**-1.6**
	SNR=12								
QRN	**Al-Qurain**		**14.72**	**352**	*e*P		**Pn**	**08 01 38.4**	**-6.0**
NAY	**Al-Naaiem**		**15.32**	**350**	*e*P		**Pn**	**08 01 47.0**	**-5.5**
ISRV	**Sarvestan**		**15.41**	**9**	*e*P		**Pn**	**08 01 49.2**	**-4.4**
MIB	**Mutribah**		**15.84**	**351**	*e*P		**Pn**	**08 01 53.8**	**-5.5**
IPAR	**Pars**		**15.85**	**9**	*e*P		**Pn**	**08 01 54.4**	**-5.0**
IGAR	**Gharneh**		**18.27**	**5**	*e*P		**Pn**	**08 02 25.4**	**-4.4**
IZEF	**Zefreh**		**18.78**	**5**	*e*P		**Pn**	**08 02 32.7**	**-3.3**
IKLH	**Kolahrood**		**19.15**	**3**	*e*P		**Pn**	**08 02 38.7**	**-1.7**
IKLH	**Kolahrood**		**19.15**	**3**	*e*P		**Pn**	**08 02 38.7**	**-1.7**
IDHR	**Dehrash**		**20.79**	**351**	*e*P		**P**	**08 02 55.9**	**-1.6**
IDHR	**Dehrash**		**20.79**	**351**	*e*P		**P**	**08 02 55.9**	**-1.6**
EIL	**Elat**		**20.99**	**320**	P		**P**	**08 03 00.6**	**+0.9**
	comp=N,14nm,0.9s,baz=126,slow=14,SNR=8.8								
EIL					LR		LR	08 10 13.7	
	comp=N,246nm,19.5s,MS3.6,baz=284,slow=34								
EIL	**Elat**		**20.99**	**320**	P		**P**	**08 03 00.6**	**+0.9**
ASF	**Jabal al Asfar**		**21.75**	**328**	P		**P**	**08 03 08.5**	**+0.7**
	comp=N,19nm,0.9s,mb4.5,baz=117,slow=2.3,SNR=22								
ASF					LR		LR	08 11 49.3	
	comp=N,207nm,18.8s,MS3.6,baz=199,slow=37								
ASF	**Jabal al Asfar**		**21.75**	**328**	P		**P**	**08 03 08.5**	**+0.7**
MMAI	**Mount Meron Ar**		**23.19**	**327**	P		**P**	**08 03 23.0**	**-0.1**
	comp=N,2.8nm,0.5s,mb3.9,baz=131,slow=14,SNR=4.8								
MMAI					LR		LR	08 13 19.2	
	comp=N,281nm,21.8s,MS3.7,baz=135,slow=39								
GNI	**Garni**		**26.38**	**350**	P		**P**	**08 03 52.4**	**-0.2**
	comp=N,38nm,0.9s,mb4.9,baz=163,slow=20,SNR=15								
GNI					LR		LR	08 15 13.2	
	comp=N,203nm,18.1s,MS3.7,baz=181,slow=39								
GNI	**Garni**		**26.38**	**350**	*e*P		**P**	**08 03 55.3**	**+2.7**
	comp=N,44nm,0.9s,mb5.0								
GNI	**Garni**		**26.38**	**350**	*i* P		**P**	**08 03 54.8**	**+2.2**
GNI					pmax		pmax		
	comp=Z,41nm,0.8s								
GNI					MLR		MLR		
	comp=Z,341nm,15.0s								
GNI	**Garni**		**26.38**	**350**	*i* P		**P**	**08 03 54.8**	**+2.2**
	comp=Z,341nm,15.0s								
GNI	**Garni**		**26.38**	**350**	P		**P**	**08 03 55.2**	**+2.6**
	SNR=8.1								
GNI					P		pP	08 03 56.4	+0.8
	SNR=6.4								
KBL	**Kabul**		**26.46**	**37**	*e*P		**P**	**08 03 57.2**	**+3.8**
	comp=Z,30nm,1.0s,mb4.8								
KBL	**Kabul**		**26.46**	**37**	*e*P		**P**	**08 03 57.2**	**+3.8**
KBL					pmax		pmax		
	comp=Z,30nm,1.0s,mb4.8								
ZEI	**Tsey**		**29.08**	**350**	*e*P		**P**	**08 04 19.9**	**+3.2**
ZEI					pmax		pmax		
	comp=Z,23nm,1.4s,mb4.7								
ZEI	**Tsey**		**29.08**	**350**	*e*P		**P**	**08 04 19.9**	**+3.2**
	comp=Z,23nm,1.4s,mb4.7								
BR131	**Keskin Array S**		**29.41**	**333**	*e*P		**P**	**08 04 20.8**	**+1.1**
	comp=Z,4.7nm,0.8s,mb4.3								
BR131	**Keskin Array S**		**29.41**	**333**	*e*P		**P**	**08 04 20.8**	**+1.1**
	comp=Z,4.7nm,0.8s,mb4.3								
BRTR	**Keskin Array B**		**29.41**	**333**	P		**P**	**08 04 20.2**	**+0.5**
	comp=Z,2.7nm,0.9s,mb4.0,baz=143,slow=12,SNR=7.9								
BRTR	**Keskin Array B**		**29.41**	**333**	P		**P**	**08 04 20.2**	**+0.5**
BRTR	**Keskin Array B**		**29.41**	**333**	P		**P**	**08 04 20.2**	**+0.5**
KIV	**Kislovodsk**		**30.44**	**349**	⇑*e*P		**P**	**08 04 30.6**	**+1.9**
KIV					*e*			08 05 30.7	
KIV					*e*S		**S**	**08 09 33.4**	**+3.8**
KIV					pmax		pmax		
	comp=Z,15nm,1.4s,mb4.5								
KIV					MLR		MLR		
	comp=Z,300nm,16.0s,MS4.0								
KIV	**Kislovodsk**		**30.44**	**349**	*e*P		**P**	**08 04 30.6**	**+1.9**
	comp=Z,15nm,1.4s,mb4.5								
KOLN	**Koldanda**		**33.81**	**61**	*e*P		**P**	**08 04 59.2**	**+0.6**
	comp=Z,16nm,0.6s,mb5.1								
KOLN	**Koldanda**		**33.81**	**61**	*e*P		**P**	**08 04 59.2**	**+0.6**
	comp=Z,16nm,0.6s,mb5.1								
DANN	**Dangsing**		**34.12**	**60**	*e*P		**P**	**08 05 03.1**	**+1.8**
	comp=Z,41nm,0.8s,mb5.4								
DANN	**Dangsing**		**34.12**	**60**	*e*P		**P**	**08 05 03.1**	**+1.8**
	comp=Z,41nm,0.8s,mb5.4								
GKN	**Gorkha**		**34.76**	**61**	*e*P		**P**	**08 05 07.9**	**+1.1**
	comp=Z,18nm,0.7s,mb5.1								
GKN	**Gorkha**		**34.76**	**61**	*e*P		**P**	**08 05 07.9**	**+1.1**
	comp=Z,18nm,0.7s,mb5.1								
DMN	**Daman**		**35.05**	**62**	*e*P		**P**	**08 05 09.9**	**+0.6**
	comp=Z,24nm,0.8s,mb5.2								
DMN	**Daman**		**35.05**	**62**	*e*P		**P**	**08 05 09.9**	**+0.6**
	comp=Z,24nm,0.8s,mb5.2								
KKN	**Kakani**		**35.25**	**62**	*e*P		**P**	**08 05 11.4**	**+0.4**
	comp=Z,36nm,0.6s,mb5.5								
KKN	**Kakani**		**35.25**	**62**	*e*P		**P**	**08 05 11.4**	**+0.4**
KKN					pmax		pmax		
	comp=Z,36nm,0.6s,mb5.5								
KKN	**Kakani**		**35.25**	**62**	*e*P		**P**	**08 05 11.4**	**+0.4**
	comp=Z,36nm,0.6s,mb5.5								
AAK	**Ala-Archa**		**35.25**	**32**	P		**P**	**08 05 09.3**	**-1.5**
	comp=Z,0.4nm,0.3s,mb3.8,baz=186,slow=10,SNR=1.8								
AAK					LR		LR	08 21 52.9	
	comp=Z,104nm,18.6s,MS3.6,baz=216,slow=40								
AAK	**Ala-Archa**		**35.25**	**32**	P		**P**	**08 05 09.3**	**-1.5**
TIRR	**Tirgusor**		**35.52**	**333**	⇑P		**P**	**08 05 13.8**	**+0.6**
TIRR	**Tirgusor**		**35.52**	**333**	P		**P**	**08 05 13.8**	**+0.6**
GUN	**Gumba**		**35.79**	**62**	*e*P		**P**	**08 05 16.5**	**+0.8**
	comp=Z,24nm,0.6s,mb5.3								
GUN	**Gumba**		**35.79**	**62**	*e*P		**P**	**08 05 16.5**	**+0.8**
	comp=Z,24nm,0.6s,mb5.3								
TLCR			**35.92**	**334**	⇓P		**P**	**08 05 17.5**	**+0.9**
TLCR			**35.92**	**334**	P		**P**	**08 05 17.5**	**+0.9**
LSZ	**Lusaka**		**36.49**	**218**	*e*P		**P**	**08 05 22.8**	**+1.1**
	comp=Z,7.8nm,1.1s,mb4.5								
LSZ	**Lusaka**		**36.49**	**218**	*e*P		**P**	**08 05 22.8**	**+1.1**
LSZ					pmax		pmax		
	comp=Z,8.0nm,1.1s,mb4.6								
LSZ	**Lusaka**		**36.49**	**218**	*e*P		**P**	**08 05 22.8**	**+1.1**
	comp=Z,7.8nm,1.1s,mb4.5								
AKTK	**Aktyubinsk**		**36.76**	**8**	P		**P**	**08 05 21.8**	**-1.8**
AKTK					LR		LR	08 23 02.1	
AKTO	**Aktyubinsk**		**36.76**	**8**	P		**P**	**08 05 21.8**	**-1.8**
	comp=Z,3.1nm,0.8s,mb4.2,baz=197,slow=14,SNR=3.7								
AKTO					LR		LR	08 23 02.1	
	comp=Z,65nm,19.6s,MS3.4,baz=20,slow=40								
ODAN	**Odare**		**36.84**	**64**	*e*P		**P**	**08 05 24.1**	**-0.6**
	comp=Z,9.2nm,0.6s,mb4.8								
ODAN	**Odare**		**36.84**	**64**	*e*P		**P**	**08 05 24.1**	**-0.6**
	comp=Z,9.2nm,0.6s,mb4.8								
TAPN	**Taplejung**		**37.23**	**63**	*e*P		**P**	**08 05 28.1**	**+0.1**
	comp=Z,30nm,0.8s,mb5.2								
TAPN	**Taplejung**		**37.23**	**63**	*e*P		**P**	**08 05 28.1**	**+0.1**
	comp=Z,30nm,0.8s,mb5.2								
VRI	**Vrincioaia**		**37.37**	**333**	⇓P		**P**	**08 05 30.4**	**+1.5**
VRI	**Vrincioaia**		**37.37**	**333**	P		**P**	**08 05 30.4**	**+1.5**
PLOR	**Plostina**		**37.39**	**333**	⇓P		**P**	**08 05 30.7**	**+1.6**
PLOR	**Plostina**		**37.39**	**333**	P		**P**	**08 05 30.7**	**+1.6**
MLR	**Muntele Rosu**		**37.44**	**331**	⇓P		**P**	**08 05 31.5**	**+2.0**
MLR	**Muntele Rosu**		**37.44**	**331**	P		**P**	**08 05 31.5**	**+2.0**
VOIR			**37.82**	**331**	⇑P		**P**	**08 05 34.1**	**+1.4**
VOIR			**37.82**	**331**	P		**P**	**08 05 34.1**	**+1.4**
TESR			**37.90**	**333**	⇑*i*P		**P**	**08 05 34.2**	**+0.8**
VSR	**Storozhevoye**		**38.08**	**349**	*e*P		**P**	**08 05 39.2**	**+4.4**
VSR					pmax		pmax		
	comp=Z,20nm,0.7s,mb5.0								
VSR					pmax		pmax		
	comp=N,30nm,0.8s								
VSR					pmax		pmax		
	comp=E,6.0nm,0.5s								
GZR	**Gura Zlata**		**38.90**	**329**	⇓P		**P**	**08 05 44.8**	**+3.0**
GZR	**Gura Zlata**		**38.90**	**329**	P		**P**	**08 05 44.8**	**+3.0**
BURAR	**Bucovina Array**		**39.37**	**333**	⇑P		**P**	**08 05 47.2**	**+1.4**
BURAR	**Bucovina Array**		**39.37**	**333**	⇑*i*P		**P**	**08 05 47.2**	**+1.4**
BUR08	**Bucovina Ar. S**		**39.40**	**333**	*e*P		**P**	**08 05 46.9**	**+0.9**
BUR08	**Bucovina Ar. S**		**39.40**	**333**	*e*P		**P**	**08 05 46.9**	**+0.9**
MSKU	**Masuku**		**39.58**	**250**	P		**P**	**08 05 48.0**	**+0.1**
	comp=E,6.0nm,0.6s,mb4.5,baz=45,slow=1.4,SNR=8.9								
MSKU	**Masuku**		**39.58**	**250**	P		**P**	**08 05 48.0**	**0.0**
BZS	**Buzias**		**39.64**	**328**	⇓P		**P**	**08 05 50.3**	**+2.3**
BZS	**Buzias**		**39.64**	**328**	P		**P**	**08 05 50.3**	**+2.3**
DRGR			**39.92**	**330**	⇑P		**P**	**08 05 52.2**	**+1.9**
DRGR			**39.92**	**330**	P		**P**	**08 05 52.2**	**+1.9**
AKASG	**Malin Array Be**		**40.29**	**339**	P		**P**	**08 05 52.5**	**-0.8**
	comp=E,4.7nm,0.7s,mb4.3,baz=148,slow=7.3,SNR=13								
AKASG	**Malin Array Be**		**40.29**	**339**	P		**P**	**08 05 52.6**	**-0.7**
AKASG	**Malin Array Be**		**40.29**	**339**	P		**P**	**08 05 52.6**	**-0.7**
AKBB	**Malin Array Si**		**40.29**	**339**	*e*P		**P**	**08 05 52.9**	**-0.4**
AKBB	**Malin Array Si**		**40.29**	**339**	*e*P		**P**	**08 05 52.9**	**-0.4**
AKBB	**Malin Array Si**		**40.29**	**339**	*e*P		**P**	**08 05 52.9**	**-0.4**
KIEV	**Kiev**		**40.29**	**339**	*e*P		**P**	**08 05 52.8**	**-0.6**
	comp=E,12nm,0.8s,mb4.7								
KIEV	**Kiev**		**40.29**	**339**	*e*P		**P**	**08 05 52.8**	**-0.5**
KIEV					pmax		pmax		
	comp=Z,12nm,0.8s,mb4.7								
KIEV	**Kiev**		**40.29**	**339**	*e*P		**P**	**08 05 52.8**	**-0.5**
	comp=Z,12nm,0.8s,mb4.7								
TRPA	**Tarpa**		**40.96**	**332**	⇓*i*P		**P**	**08 06 01.3**	**+2.4**
UZH	**Uzhgorod**		**41.44**	**332**	*e*P		**P**	**08 06 02.3**	**-0.6**
UZH	**Uzhgorod**		**41.44**	**332**	*e*P		**P**	**08 06 02.3**	**-0.6**
LVV	**L'vov**		**41.56**	**334**	*e*P		**P**	**08 05 54.1**	**-10**
PKSM	**Moragy**		**41.59**	**327**	⇓P		**P**	**08 06 07.7**	**+3.6**
BRVK	**Borovoye**		**41.96**	**18**	*de*P		**P**	**

comp=Z,3.5nm,0.7s,mb4.5
NVS Novosibirsk 48.03 25⇑iP P 08 06 54.3 -1.0
NVS pmax pmax
comp=N,22nm,1.2s
NVS pmax pmax
comp=Z,35nm,1.2s,mb5.3
NVS Novosibirsk 48.03 25 iP P 08 06 54.3 -1.0
ZAA0 Zalesovo Array 48.08 27 eP P 08 06 55.0 -0.7
ZALV Zalesovo Beam 48.08 27 P P 08 06 53.2 -2.5
comp=Z,3.7nm,0.6s,mb4.6,baz=236,slow=8.7,SNR=18
ZALV LR LR 08 29 43.5
comp=Z,26nm,20.5s,MS3.2,baz=214,slow=39
ZALV Zalesovo Beam 48.08 27 P P 08 06 53.3 -2.5
LPL La Plagne 48.19 319 eP P 08 06 56.3 -0.4
comp=Z,9.3nm,1.0s,mb4.5
LPL La Plagne 48.19 319 eP P 08 06 56.3 -0.4
comp=Z,4.7nm,1.0s,mb4.5
LPL La Plagne 48.19 319 eP P 08 06 56.3 -0.4
LPL pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
LPL La Plagne 48.19 319 eP P 08 06 56.3 -0.4
comp=Z,9.0nm,1.0s,mb4.8
BOSA Boshof 48.91 210 P P 08 07 02.8 +0.4
comp=Z,7.7nm,0.6s,mb4.9,baz=26,slow=9.5,SNR=20
BOSA LR LR 08 29 15.5
comp=Z,100nm,19.0s,MS3.8,baz=165,slow=38
BOSA Boshof 48.91 210 eP P 08 07 03.0 +0.6
comp=Z,8.7nm,0.7s,mb4.9
BOSA Boshof 48.91 210 eP P 08 07 03.0 +0.6
BOSA pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
CABF La Chapelle 49.08 320 eP P 08 07 02.3 -1.3
comp=Z,22nm,1.1s,mb4.8
CABF La Chapelle 49.08 320 eP P 08 07 02.3 -1.3
comp=Z,11nm,1.1s,mb4.8
CABF La Chapelle 49.08 320 eP P 08 07 02.3 -1.3
CABF pmax pmax
comp=Z,11nm,1.1s,mb4.8
CABF La Chapelle 49.08 320 eP P 08 07 02.3 -1.3
comp=Z,22nm,1.1s,mb5.1
KMI Kunming 50.32 69 P P 08 07 16.1 +2.7
KMI pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
FINES FINESS Array B 50.38 345 P P 08 07 12.0 -1.1
comp=Z,5.2nm,0.8s,mb4.6,baz=140,slow=9.4,SNR=12
FINES LR LR 08 29 42.6
comp=Z,122nm,19.7s,MS3.9,baz=312,slow=38
FINES FINESS Array B 50.38 345 P P 08 07 12.0 -1.2
FINES LR LR 08 29 42.6
FINES FINESS Array B 50.38 345 P P 08 07 12.0 -1.2
LOR Lormes 50.74 320 eP P 08 07 15.5 -0.7
comp=Z,5.5nm,0.6s,mb4.4
LOR Lormes 50.74 320 eP P 08 07 15.5 -0.7
comp=Z,2.8nm,0.6s,mb4.4
LOR Lormes 50.74 320 eP P 08 07 15.5 -0.7
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LOR Lormes 50.74 320 eP P 08 07 15.5 -0.7
comp=Z,5.0nm,0.6s,mb4.6
SSF Saint Saulge 50.87 320 eP P 08 07 15.8 -1.4
comp=Z,5.2nm,0.7s,mb4.2
SSF Saint Saulge 50.87 320 eP P 08 07 15.8 -1.4
comp=Z,2.6nm,0.7s,mb4.3
SSF Saint Saulge 50.87 320 eP P 08 07 15.8 -1.4
SSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SSF Saint Saulge 50.87 320 eP P 08 07 15.8 -1.4
comp=Z,5.0nm,0.7s,mb4.5
CD2 Chengdu 51.66 62 eP P 08 07 25.1 +1.8
CD2 pP pP 08 07 29.6 +3.1
CD2 sP sP 08 07 33.0 +5.2
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CD2 pmax pmax
comp=Z,30nm,5.2s
ETSF Etsaut 52.09 314 eP P 08 07 25.5 -0.9
comp=Z,7.0nm,0.8s,mb4.3
ETSF Etsaut 52.09 314 eP P 08 07 25.5 -0.9
comp=Z,3.5nm,0.8s,mb4.3
ETSF Etsaut 52.09 314 eP P 08 07 25.5 -0.9
ETSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ETSF Etsaut 52.09 314 eP P 08 07 25.5 -0.9
comp=Z,7.0nm,0.8s,mb4.7
LZH Lanzhou 52.48 55 eP P 08 07 29.5 +0.1
LZH pP pP 08 07 37.0 +4.5
LZH sP sP 08 07 38.5 +4.7
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.8
HFS Hagfors 53.15 338 P P 08 07 32.8 -1.1
comp=Z,3.6nm,0.6s,mb4.5,baz=131,slow=8.3,SNR=12
HFS LR LR 08 30 00.2
comp=Z,85nm,18.9s,MS3.8,baz=310,slow=36
HFS Hagfors 53.15 338 P P 08 07 32.8 -1.1
ESDC Sonseca Array 53.74 309 P P 08 07 38.6 0.0
comp=Z,3.8nm,0.7s,mb4.4,baz=93,slow=6.2,SNR=10
ESLA Sonseca Array 53.74 309 eP P 08 07 39.6 +1.0
comp=Z,1.3nm,0.9s,mb3.9
GYA Guiyang 53.90 67 P P 08 07 42.3 +2.3
GYA PP PP 08 09 44.6 +3.3
GYA ScP ScP 08 12 44.3 +0.4
GYA S S 08 15 16.8 +1.2
GYA SS SS 08 18 57.0 +0.1
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=N,580nm,18.4s,MS4.8
GYA LR LR
comp=E,420nm,19.0s,MS4.8
GYA LR LR
comp=Z,540nm,18.9s,MS4.6
DBIC Dimbokro 54.65 268 LR LR 08 33 31.5
comp=Z,28nm,20.0s,MS3.3,baz=68,slow=39
NB2 NORSAR Subarra 54.67 338 P P 08 07 43.4 -1.6
comp=Z,4.7nm,0.9s,mb4.5,baz=132,slow=7.4
NB2 NORSAR Subarra 54.67 338 P P 08 07 43.4 -1.6
comp=Z,4.7nm,0.9s,mb4.5,SNR=0.2
NOA NORSAR Array B 54.67 338 P P 08 07 43.8 -1.2
comp=Z,2.8nm,0.9s,mb4.3,baz=128,slow=7.4,SNR=5.8
NOA LR LR 08 35 13.3
comp=Z,42nm,18.9s,MS3.5,baz=130,slow=41
NOA NORSAR Array B 54.67 338 P P 08 07 43.8 -1.2
SONM Songino Array 57.06 42 P P 08 08 00.2 -2.2
comp=Z,1.5nm,0.7s,mb4.2,baz=249,slow=7.5,SNR=7.0
SONM LR LR 08 34 12.1
comp=Z,52nm,21.6s,MS3.6,baz=256,slow=38
SONM Songino Array 57.06 42 P P 08 08 00.2 -2.2
ARCES ARCESS Array B 57.54 350 LR LR 08 32 30.1
comp=Z,100nm,19.3s,MS3.9,baz=80,slow=36
EKA Eskdalemuir Ar 58.06 327 P P 08 08 07.8 -1.6
comp=Z,1.6nm,0.8s,mb4.1,baz=123,slow=6.1,SNR=4.9
EKA Eskdalemuir Ar 58.06 327 P P 08 08 07.8 -1.5
HHC Hu-ho-hao-te 59.22 51 eP P 08 08 19.6 +1.9
HHC pP pP 08 08 24.4 +3.5
HHC sP sP 08 08 26.8 +4.7
HHC PcP PcP 08 09 06.6 +0.6
HHC PP PP 08 10 33.1 +4.7
HHC ScP ScP 08 13 05.0 -2.0
HHC S S 08 16 26.5 +0.9
HHC sS sS 08 16 34.9 +4.0
HHC ScS ScS 08 18 05.8 -2.3
HHC SS SS 08 20 24.3 +4.3
HHC pmax pmax
comp=Z,24nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,140nm,6.2s
HHC LR LR
comp=N,150nm,16.1s,MS4.3
HHC LR LR
comp=E,94nm,14.5s,MS4.3
HHC LR LR
comp=Z,100nm,15.5s,MS4.0
BJI Beijing 62.63 52 P P 08 08 41.6 +0.7
BJI S S 08 17 10.8 +1.6
BJI pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
BJI pmax pmax
comp=Z,94nm,4.8s
BJI LR LR
comp=N,140nm,12.4s,MS4.4
BJI LR LR
comp=E,96nm,16.1s,MS4.4
SPITS Spitsbergen Ar 66.22 353 P P 08 09 02.8 -0.9
comp=E,3.7nm,0.6s,mb4.6,baz=126,slow=9.9,SNR=4.0
SPITS Spitsbergen Ar 66.22 353 P P 08 09 02.8 -0.9
CN2 Changchun 69.68 48 eP P 08 09 23.3 -2.8
CN2 eS S 08 18 30.8 -4.1
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
KSRS Korea Array 71.80 55 P P 08 09 36.1 -3.1
comp=Z,1.7nm,0.9s,mb4.0,baz=265,slow=6.4,SNR=5.2
FITZ Fitzroy Crossi 80.87 111 P P 08 10 28.4 -2.6
comp=Z,6.4nm,0.9s,mb4.6
WRA Warramunga Arr 89.28 111 P P 08 11 11.3 -1.8
comp=Z,6.6nm,0.6s,mb5.1,baz=301,slow=3.7,SNR=122
WRA Warramunga Arr 89.28 111 P P 08 11 11.3 -1.8
WRA Warramunga Arr 89.28 111 P P 08 11 11.3 -1.8
WB2 Warramunga Arr 89.29 111 eP P 08 11 11.1 -2.1
ASAR Alice Springs 89.87 114 P P 08 11 14.2 -1.6
comp=Z,5.9nm,0.8s,mb5.0,baz=290,slow=4.5,SNR=25
ASAR Alice Springs 89.87 114 P P 08 11 14.2 -1.6
ILAR Eielson Array 100.26 7 PP PP 08 16 07.5 0.0
comp=Z,0.6nm,1.1s,baz=358,slow=9.0,SNR=4.5
NVAR Mina Array Bea 126.65 349 PKP PKPdf 08 17 19.3 -0.9
comp=Z,1.1nm,0.7s,baz=64,slow=2.1,SNR=5.0
TXAR Lajitas Array 130.02 330 PKP PKPdf 08 17 25.4 -1.4
comp=Z,0.3nm,0.8s,baz=32,slow=4.9,SNR=4.4
TXAR Lajitas Array 130.02 330 PKIKP PKPdf 08 17 25.5 -1.4

*CSEM **20** 08:06:11.0, 38.°17N×26.°35W, h0km, ML2.7, After PDA*
PDA 20 08:06:11.0±0.9, 38.°17N×26.°35W, h0km±3km, MD3.7, ML2.7, Error ellipse: s-maj=6.7km s-min=1.3km az=34.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**0.60**	**125**	*e*P	Pg	08 06 22.1	-0.5
PSET				*e*S	Sg	08 06 29.8	-0.6
PSET				A		08 06 31.4	
	101nm,0.3s						
PSET	**Sete Cidades**	**0.60**	**125**	*e*P	Pg	08 06 22.1	-0.5
PSET				*e*S	Sg	08 06 29.8	-0.6
PDA	**Ponta Delgada**	**0.69**	**128**	*e*P	Pg	08 06 23.2	-1.0
PDA				*e*S	Sg	08 06 31.9	-1.2
PDA	**Ponta Delgada**	**0.69**	**128**	*e*P	Pg	08 06 23.2	-1.0
PDA				*e*S	Sg	08 06 31.9	-1.2
GRON	**Grota Negra**	**0.76**	**122**	*e*P	Pg	08 06 25.4	-0.1
GRON				*e*S	Sg	08 06 36.4	+1.0
GRON				A		08 06 42.4	
	37nm,0.2s						
ADH	**Angra Heroismo**	**0.85**	**305**	*e*P	Pg	08 06 24.9	-2.4
ADH				*e*S	Sg	08 06 36.0	-2.2
ADH				A		08 06 37.6	
	240nm,0.2s						
ADH	**Angra Heroismo**	**0.85**	**305**	*e*P	Pg	08 06 24.9	-2.4
ADH				*e*S	Sg	08 06 36.0	-2.2
BART	**Pico Bartolome**	**1.01**	**113**	*e*P	Pg	08 06 27.5	-2.9
BART				*e*S	Sg	08 06 39.8	-3.7
BART				A		08 06 42.9	
	49nm,0.3s						
BART	**Pico Bartolome**	**1.01**	**113**	*e*P	Pg	08 06 27.5	-2.9
BART				*e*S	Sg	08 06 39.8	-3.7
PID	**Ribeirinha**	**1.42**	**281**	*e*P	Pn	08 06 32.9	-5.1
PID				*e*S	Sg	08 06 49.4	-7.2
PID	**Ribeirinha**	**1.42**	**281**	*e*P	Pn	08 06 32.9	-5.1
PID				*e*S	Sg	08 06 49.4	-7.2
PMAN	**Manadas**	**1.44**	**289**	*e*P	Pn	08 06 33.1	-5.3
PMAN				*e*S	Sg	08 06 50.3	-7.1
PMAN				A		08 06 52.8	
	49nm,0.3s						
PMAN	**Manadas**	**1.44**	**289**	*e*P	Pn	08 06 33.1	-5.3
PMAN				*e*S	Sg	08 06 50.3	-7.1
PSMA	**Santa Maria**	**1.52**	**140**	*e*P	Pn	08 06 34.9	-4.5
PSMA				*e*S	Sb	08 06 52.1	-7.8
PSMA				A		08 06 55.0	
	66nm,0.2s						
PAMA	**Santo Amaro**	**1.53**	**290**	*e*P	Pn	08 06 34.9	-4.6
PAMA				*e*S	Sb	08 06 52.1	-7.9
PSMN	**Pico do Norte,**	**1.55**	**139**	*e*P	Pn	08 06 35.1	-4.7
PSMN				*e*S	Sn	08 06 53.0	-7.6
PSMN	**Pico do Norte,**	**1.55**	**139**	*e*P	Pn	08 06 35.1	-4.7
PSMN				*e*S	Sn	08 06 53.0	-7.6
ROSA	**Rosais**	**1.58**	**291**	*e*P	Pn	08 06 35.5	-4.8
ROSA				*e*S	Sn	08 06 54.1	-7.4
ROSA	**Rosais**	**1.58**	**291**	*e*P	Pn	08 06 35.5	-4.8
ROSA				*e*S	Sn	08 06 54.1	-7.4
PICO	**Pico**	**1.67**	**282**	*e*P	Pn	08 06 37.0	-4.4
PICO				*e*S	Sn	08 06 56.2	-7.3
PICO	**Pico**	**1.67**	**282**	*e*P	Pn	08 06 37.0	-4.4
PICO				*e*S	Sn	08 06 56.2	-7.3
PCAN	**Candelaria**	**1.71**	**280**	*e*P	Pn	08 06 37.1	-4.9
PCAN				A		08 06 56.3	
	26nm,0.2s						
PCAN				*e*S	Sn	08 06 56.8	-7.7
PCAN	**Candelaria**	**1.71**	**280**	*e*P	Pn	08 06 37.1	-4.9
PCAN				*e*S	Sn	08 06 56.8	-7.7
CALA	**Caldeira**	**1.90**	**283**	*e*P	Pn	08 06 39.9	-4.7
CALA				*e*S	Sn	08 07 02.1	-7.0
CALA	**Caldeira**	**1.90**	**283**	*e*P	Pn	08 06 39.9	-4.7
CALA				*e*S	Sn	08 07 02.1	-7.0
PCED	**Cedros**	**1.91**	**284**	*e*P	Pn	08 06 39.5	-5.2
PCED				A		08 07 01.6	
	15nm,0.3s						
PCED				*e*S	Sn	08 07 02.0	-7.4
PCED	**Cedros**	**1.91**	**284**	*e*P	Pn	08 06 39.5	-5.2
PCED				*e*S	Sn	08 07 02.0	-7.4

*NEIC **20** 08:42:23.7±3.9, 24.°20N×122.°50E, h10km, MG3.0(JMA), Error ellipse: s-maj=41.7km s-min=11.7km az=74.0*
*ISCJB **20** 08:42:28.8±0.2, 24.°17N±0.°02×122.°21E±0.°02, h39km±13km, Error ellipse: s-maj=3.2km s-min=2.2km az=149.0*
*TAP **20** 08:42:29.0, 24.°21N×122.°15E, h48km, ML3.8, C*
*JMA **20** 08:42:28.9±0.1, 24.°37N×122.°23E, h66km±2km, M3.0*
ISC 20 08:42:29.2±0.4, 24.°18N±0.°02×122.°20E±0.°02, h33km±3km, n65, σ0=83/124, 6C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.49**	**301**	⇓*i*P	**Pb**	**08 42 39.7**	**+0.1**
	baz=307						
ENA				S	**Sb**	**08 42 47.2**	**+0.5**
	baz=307						
TWC	**Suao**	**0.53**	**323**	*i* P	**Pb**	**08 42 39.9**	**-0.5**
	baz=332						
TWC				S	**Sb**	**08 42 47.4**	**-0.6**
	baz=332						
NACB	**Ninganchiao**	**0.55**	**270**	*e*Pg	**Pb**	**08 42 40.1**	**-0.6**
NACB				*e*Sg	**Sb**	**08 42 48.0**	**-0.4**
TWD	**Chiawan**	**0.56**	**260**	P	**Pb**	**08 42 40.1**	**-0.7**
	baz=249						
TWD				S	**Sb**	**08 42 48.5**	**-0.2**
	baz=249						
HWA	**Hwalien**	**0.58**	**250**	P	**Pb**	**08 42 40.6**	**-0.5**
	baz=245						
HWA				*e*S	**Sb**	**08 42 49.5**	**+0.4**
	baz=245						
ILA	**Ilan**	**0.71**	**325**	*e*P	**Pn**	**08 42 43.1**	**+0.1**
	baz=320						
ILA				*e*S	**Sn**	**08 42 53.2**	**+0.4**
	baz=320						
TWE	**Neicheng**	**0.72**	**318**	⇑*i*P	**Pn**	**08 42 43.0**	**-0.1**
	baz=320						
TWE				*i* S	**Sn**	**08 42 53.0**	**0.0**
	baz=320						
ENTT	**Nioudou**	**0.74**	**309**	⇑*i*P	**Pn**	**08 42 43.0**	**-0.3**
	baz=301						
ENTT				S	**Sn**	**08 42 53.0**	**-0.4**
	baz=301						
ESL	**Shilin**	**0.79**	**243**	P	**Pn**	**08 42 43.1**	**-0.9**
	baz=239						
ESL				*e*S	**Sn**	**08 42 54.0**	**-0.7**
	baz=239						
YOJ	**Yonaguni jima**	**0.79**	**69**	P	**Pn**	**08 42 43.9**	**-0.1**
YOJ				S	**Sn**	**08 42 54.9**	**+0.2**
TWB1	**Santiao Chiao**	**0.85**	**347**	*i* P	**Pn**	**08 42 44.1**	**-0.7**
	baz=349						
TWB1				S	**Sn**	**08 42 54.7**	**-1.4**
	baz=349						
WHF	**Hehuan Shan**	**0.85**	**268**	⇑*i*P	**Pn**	**08 42 44.5**	**-0.4**
	baz=256						
WHF				S	**Sn**	**08 42 55.8**	**-0.5**
	baz=256						
YHNB	**Yeheng**	**0.90**	**303**	*e*Pg	**Pn**	**08 42 45.0**	**-0.5**
YHNB				*e*Sg	**Sn**	**08 42 57.0**	**-0.3**
NSK	**Sanguang**	**0.91**	**303**	⇑*i*P	**Pn**	**08 42 45.4**	**-0.3**
	baz=303						
NSK				*i* S	**Sn**	**08 42 56.5**	**-1.2**
	baz=303						
NWF	**Wu-fen Shan**	**0.97**	**337**	*i* P	**Pn**	**08 42 46.2**	**-0.2**
	baz=350						
NWF				S	**Sn**	**08 42 58.5**	**-0.5**
	baz=350						
TWA	**Mucha**	**0.97**	**325**	P	**Pn**	**08 42 46.9**	**+0.3**
	baz=326						
TWA				S	**Sn**	**08 42 59.4**	**+0.2**
	baz=326						
TATO	**Taipei**	**1.02**	**321**	*e*Pg	**Pn**	**08 42 47.0**	**-0.3**
TATO				*e*Sg	**Sn**	**08 42 59.6**	**-0.8**
EHY	**Hungye**	**1.05**	**230**	*e*P	**Pn**	**08 42 46.1**	**-1.4**
	baz=228						
EHY				*e*S	**Sn**	**08 42 59.6**	**-1.3**
	baz=228						
TAP1	**Taipei**	**1.05**	**324**	P	**Pn**	**08 42 47.9**	**+0.2**
	baz=324						
TAP1				*e*S	**Sn**	**08 43 01.5**	**+0.3**
	baz=324						
YULB	**Yu-li**	**1.14**	**227**	*e*Pn	**Pn**	**08 42 48.1**	**-0.7**
YULB				*e*Sn	**Sn**	**08 43 03.6**	**+0.3**
TWS1	**Kuangyinshan**	**1.16**	**322**	⇑*i*P	**Pn**	**08 42 49.3**	**+0.1**
	baz=330						
TWS1				S	**Sn**	**08 43 04.3**	**+0.5**
	baz=330						
TWF1	**Yuli**	**1.17**	**225**	*e*P	**Pn**	**08 42 48.5**	**-0.7**
	baz=234						
TWF1				*e*S	**Sn**	**08 43 02.7**	**-1.3**
	baz=234						
NSTT	**Nanjuang**	**1.18**	**293**	P	**Pn**	**08 42 49.5**	**+0.1**
	baz=292						
NSTT				S	**Sn**	**08 43 04.3**	**0.0**
	baz=292						
SSLB	**Suanglung**	**1.20**	**251**	*e*Pn	**Pn**	**08 42 49.1**	**-0.6**
SSLB				*e*Sn	**Sn**	**08 43 03.3**	**-1.6**
NCU	**National Centr**	**1.21**	**311**	*e*P	**Pn**	**08 42 49.6**	**-0.2**
	baz=311						
NCU				*e*S	**Sn**	**08 43 03.3**	**-1.8**
	baz=311						
TWY	**Chenhua**	**1.22**	**334**	*e*P	**Pn**	**08 42 50.2**	**+0.3**
	baz=345						
TWY				*e*S	**Sn**	**08 43 05.1**	**-0.2**
	baz=345						
SMLT	**Sun Moon Lake**	**1.22**	**256**	⇓*i*P	**Pn**	**08 42 50.3**	**+0.3**
	baz=247						
SMLT				S	**Sn**	**08 43 05.5**	**+0.1**
	baz=247						
TYC	**Yuchr**	**1.26**	**258**	P	**Pn**	**08 42 50.5**	**+0.1**
	baz=249						
TYC				*e*S	**Sn**	**08 43 06.0**	**-0.2**
	baz=249						
TWQ1	**Liyutan**	**1.31**	**278**	*e*P	**Pn**	**08 42 51.9**	**+0.7**
	baz=277						
TWQ1				*e*S	**Sn**	**08 43 08.2**	**+0.6**
	baz=277						
CHKT	**Chengkung**	**1.32**	**216**	*e*P	**Pn**	**08 42 52.1**	**+0.8**
	baz=205						
CHKT				*e*S	**Sn**	**08 43 05.2**	**-2.5**
	baz=205						
NSY	**Sanyi**	**1.33**	**280**	*e*P	**Pn**	**08 42 52.0**	**+0.5**
	baz=280						
NSY				*e*S	**Sn**	**08 43 09.4**	**+1.3**
	baz=280						
YUS	**Yu-Shan**	**1.33**	**239**	⇑*i*P	**Pn**	**08 42 52.1**	**+0.6**
	baz=237						
YUS				S	**Sn**	**08 43 07.9**	**-0.1**
	baz=237						
TCU	**Taichung**	**1.39**	**269**	*e*P	**Pn**	**08 42 53.0**	**+0.8**
	baz=268						
TCU				*e*S	**Sn**	**08 43 10.4**	**+0.8**
	baz=268						
IRIF	**Iriomote-Funau**	**1.41**	**83**	P	**Pn**	**08 42 52.2**	**-0.3**
IRIF				S	**Sn**	**08 43 09.6**	**-0.3**
WNT	**Mingjian**	**1.42**	**258**	*e*P	**Pn**	**08 42 53.6**	**+1.0**
	baz=257						
WNT				*e*S	**Sn**	**08 43 11.2**	**+1.1**
	baz=257						
ALS	**Alishan**	**1.44**	**243**	*e*P	**Pn**	**08 42 53.8**	**+0.9**
	baz=234						
ALS				*e*S	**Sn**	**08 43 11.0**	**+0.3**
	baz=234						
ELDTW	**Lidau**	**1.47**	**228**	P	**Pn**	**08 42 52.9**	**-0.4**
	baz=226						
ELDTW				*e*S	**Sn**	**08 43 09.9**	**-1.4**
	baz=226						
HATJ	**Hateruma jima**	**1.47**	**94**	P	**Pn**	**08 42 53.8**	**+0.4**
HATJ				S	**Sn**	**08 43 12.3**	**+0.8**
WGK	**Gukeng**	**1.58**	**252**	*e*P	**Pn**	**08 42 54.7**	**-0.1**
	baz=240						
WGK				*e*S	**Sn**	**08 43 14.4**	**+0.3**
	baz=240						
JKRS	**Kuro-shima**	**1.65**	**88**	P	**Pn**	**08 42 56.3**	**+0.4**
JKRS				S	**Sn**	**08 43 16.1**	**+0.1**
STYT	**Tauyuan**	**1.67**	**233**	*e*P	**Pn**	**08 42 56.7**	**+0.6**
	baz=224						
STYT				*e*S	**Sn**	**08 43 16.6**	**+0.4**
	baz=224						
TPUB	**Ta-pu**	**1.68**	**239**	*e*Pn	**Pn**	**08 42 57.2**	**+0.9**
TPUB				*e*Sn	**Sn**	**08 43 17.6**	**+0.9**
TWG	**Pinlang**	**1.70**	**218**	*e*Pn	**Pn**	**08 42 56.9**	**+0.3**
TWG	**Pinlang**	**1.70**	**218**	*e*P	**Pn**	**08 42 55.4**	**-1.2**
	baz=216						
TWG				*e*S	**Sn**	**08 43 15.0**	**-2.2**
	baz=216						
TTN	**Taitung**	**1.72**	**214**	*e*P	**Pn**	**08 42 55.6**	**-1.1**
	baz=206						
TTN				*e*S	**Sn**	**08 43 17.5**	**-0.1**
	baz=206						
WTP	**Ta-pu**	**1.73**	**238**	*e*P	**Pn**	**08 42 57.5**	**+0.6**
	baz=236						
WTP				*e*S	**Sn**	**08 43 18.4**	**+0.7**
	baz=236						
CHY	**Chiayi**	**1.76**	**248**	*e*P	**Pn**	**08 42 58.4**	**+1.0**
	baz=247						
CHY				*e*S	**Sn**	**08 43 19.8**	**+1.2**
	baz=247						
WTCT	**Ta-ch'eng**	**1.78**	**260**	*e*P	**Pn**	**08 42 58.5**	**+0.9**
	baz=260						
WTCT				*e*S	**Sn**	**08 43 19.8**	**+0.6**
	baz=260						
JIJ	**Ishigaki jima**	**1.78**	**84**	P	**Pn**	**08 42 57.3**	**-0.4**
JIJ				S	**Sn**	**08 43 18.6**	**-0.6**
CHN1	**Nanshi**	**1.82**	**237**	*e*P	**Pn**	**08 42 59.0**	**+0.8**
	baz=237						
CHN1				*e*S	**Sn**	**08 43 21.0**	**+0.8**
	baz=237						
SGST	**Jiashian**	**1.84**	**234**	*e*P	**Pn**	**08 43 00.1**	**+1.6**
	baz=233						
SGST				*e*S	**Sn**	**08 43 21.9**	**+1.3**
	baz=233						
WSF	**Szhu**	**1.89**	**254**	*e*P	**Pn**	**08 42 59.7**	**+0.6**
	baz=266						
WSF				*e*S	**Sn**	**08 43 22.8**	**+1.0**
	baz=266						
ECL	**Taimali**	**1.95**	**216**	*e*P	**Pn**	**08 42 59.8**	**-0.2**
	baz=215						
ECL				*e*S	**Sn**	**08 43 21.1**	**-2.1**
	baz=215						
TWM1	**Shoushan**	**2.12**	**231**	*e*P	**Pn**	**08 43 04.7**	**+2.4**
	baz=229						
EAST	**Anshuo**	**2.18**	**215**	*e*P	**Pn**	**08 43 04.9**	**+1.8**
	baz=206						
LAY	**Lan-yu**	**2.21**	**196**	*e*P	**Pn**	**08 43 03.6**	**0.0**
	baz=195						
LAY				*e*S	**Sn**	**08 43 27.4**	**-2.4**
	baz=195						
SCZT	**Fangliau**	**2.31**	**219**	*e*P	**Pn**	**08 43 05.9**	**+1.0**
	baz=209						
SCZT				*e*S	**Sn**	**08 43 33.5**	**+1.2**
	baz=209						
JTJ	**Tarama**	**2.33**	**78**	P	**Pn**	**08 43 05.2**	**0.0**
JTJ				S	**Sn**	**08 43 32.2**	**-0.4**
PNG	**Penghu**	**2.50**	**256**	*e*P	**Pn**	**08 43 06.9**	**-0.6**
	baz=256						
PNG				*e*S	**Sn**	**08 43 36.6**	**-0.2**
	baz=256						
HEN	**Hengchun**	**2.55**	**212**	*e*P	**Pn**	**08 43 08.7**	**+0.5**
	baz=211						
HEN				*e*S	**Sn**	**08 43 37.2**	**-0.9**
	baz=211						
TSEB	**Hengchuen, Pin**	**2.56**	**208**	*e*P	**Pn**	**08 43 08.9**	**+0.5**
	baz=208						

TSEB				*e*S		**Sn**	**08 43 38.0**	**-0.5**
	baz=208							
TWK1	**Hengchun**	**2.57**	**210**	*e*P		**Pn**	**08 43 10.0**	**+1.5**
	baz=203							
TWK1				*e*S		**Sn**	**08 43 36.6**	**-2.0**
	baz=203							
JMJ	**Miyako jima 2**	**2.89**	**77**	*e*S		**Sn**	**08 43 47.0**	**+0.5**
JOGS	**Gusukube**	**2.98**	**78**	*e*S		**Sn**	**08 43 49.2**	**+0.5**
KNM	**Kinmen**	**3.44**	**275**	*e*P		**Pn**	**08 43 21.3**	**+0.8**
	baz=264							

NNC 20 09:23:23.0±6.7, 46°.68N×89°.83E, h0km, mb3.1, mpv2.7, 2C-2D, Error ellipse: s-maj=82.4km s-min=47.7km az=29.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**3.23**	**209**	Pn	Pn	09 24 18.0	+3.1
WMQ				Sn	Sn	09 24 55.5	+1.5
WMQ				smax			
	comp=N,37nm,0.6s						
WMQ				smax			
	comp=E,38nm,0.6s						
MK31	**Makanchi Array**	**5.18**	**274**	⇑Pn	Pn	09 24 42.1	+0.4
	comp=E,0.2nm,0.3s,baz=88,slow=15,SNR=5.3						
MK31				⇑Pg	Pg	09 24 56.5	-5.7
	comp=E,0.9nm,0.5s,baz=93,slow=17,SNR=8.3						
MK31				⇓Lg		09 26 07.4	
	comp=E,3.9nm,0.6s,baz=78,slow=35,SNR=4.9						
KURK	**Kurchatov**	**8.44**	**303**	⇓Lg		09 27 52.9	
	comp=E,7.1nm,1.1s						
KURBB	**Kurchatov Arra**	**8.46**	**302**	Lg		09 27 54.4	
	comp=E,1.1nm,0.9s						

KRSC 20 09:23:32.9±1.4, 53°.80N×168°.08E, h5km±5km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.87**	**320**	*e*P	Pn	09 24 06.9	+1.4
BKI				*e*S	Sn	09 24 31.7	+2.3
MKZ	**Mys Kozlova**	**3.81**	**284**	*e*P	Pn	09 24 34.0	+1.9
MKZ				*e*S	Sn	09 25 18.4	+1.2
KBTR	**Krutoberegovo**	**3.87**	**311**	*e*P	Pn	09 24 34.2	+1.2
SPN	**Mys Shipunski**	**4.87**	**265**	*e*S	Sn	09 25 43.6	+0.3
AVH	**Avacha**	**5.60**	**268**	*e*P	Pn	09 24 59.9	+3.2
GNL	**Ganaly**	**6.02**	**273**	*e*P	Pn	09 25 05.7	+3.2

NIED ***20*** *09:30:00, 41°.80N×144°.20E, h14km, Mw3.6 Best double couple: M0:3.26000×10¹⁴ NP1:φs=39.00000°, δ=57.00000°, λ=116.00000°. NP2:φs=177.00000°, δ=41.00000°, λ=56.00000°.*
IDC ***20*** *09:30:20.1±1.4, 41°.60N×144°.41E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/22, mbtmp3.5/6, ML2.9/1, Error ellipse: s-maj=42.4km s-min=25.5km az=60.0*
ISCJB ***20*** *09:30:23.9±2.0, 41°.7N±0°.1×144°.4E±0°.2, h36km±15km, mb3.5/6, Error ellipse: s-maj=24.0km s-min=14.1km az=135.4*
JMA ***20*** *09:30:25.5±0.2, 41°.75N×144°.19E, h26km±3km, M3.5*
ISC 20 09:30:24.6±2.7, 41°.75N±0°.08×144°.3E±0°.2, h24km±17km, n12, σ0°.84/15, mb3.5/6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.90**	**287**	P	**Pb**	**09 30 40.9**	**-0.6**
JCH	**Churui**	**1.11**	**321**	P	**Pn**	**09 30 44.5**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.27**	**295**	P	**Pn**	**09 30 47.5**	**+0.7**
JAK	**Akkeshi**	**1.28**	**13**	P	**Pn**	**09 30 47.4**	**+0.5**
JAK				*e*S	**Sn**	**09 31 03.5**	**+0.3**
JAR	**Ashorobuto**	**1.59**	**346**	P	**Pn**	**09 30 51.1**	**-0.1**
JAR				*e*S	**Sn**	**09 31 09.0**	**-2.0**
ASAJ	**Asahikawa**	**2.68**	**333**	Pn	**Pn**	**09 31 06.7**	**+0.6**
	1.2nm,0.3s,baz=148,slow=14,SNR=8.0						
ASAJ				Sn	**Sn**	**09 31 43.2**	**+5.5**
	4.7nm,0.3s,baz=169,slow=23,SNR=5.6						
SONM	**Songino Array**	**27.38**	**296**	P	**P**	**09 36 09.2**	**+1.5**
	0.6nm,0.6s,mb3.3,baz=81,slow=9.2,SNR=3.9						
ZALV	**Zalesovo Beam**	**40.56**	**308**	P	**P**	**09 38 01.6**	**-0.1**
	0.4nm,0.4s,mb3.4,baz=94,slow=9.1,SNR=3.5						
MKAR	**Makanchi Array**	**43.68**	**299**	P	**P**	**09 38 27.4**	**+0.2**
	0.4nm,0.7s,mb3.2,baz=82,slow=10,SNR=2.7						
WRA	**Warramunga Arr**	**62.07**	**191**	P	**P**	**09 40 41.5**	**-1.6**
	0.2nm,0.9s,mb3.3,baz=9.3,slow=6.7,SNR=2.6						
FINES	**FINESS Array B**	**65.69**	**332**	P	**P**	**09 41 06.7**	**+0.2**
	2.7nm,1.2s,mb4.2,baz=81,slow=8.6,SNR=3.7						
TXAR	**Lajitas Array**	**85.51**	**54**	P	**P**	**09 43 00.6**	**+0.1**
	0.4nm,1.1s,mb3.6,baz=321,slow=3.2,SNR=4.1						

NIED ***20*** *09:33:00, 41°.70N×144°.20E, h14km, Mw3.6 Best double couple: M0:2.49000×10¹⁴ NP1:φs=30.00000°, δ=55.00000°, λ=110.00000°. NP2:φs=178.00000°, δ=40.00000°, λ=65.00000°.*
IDC ***20*** *09:33:17.1±1.3, 41°.60N×144°.24E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.5/23, mbtmp3.5/8, ML3.2/1, Error ellipse: s-maj=31.9km s-min=25.4km az=57.0*
ISCJB ***20*** *09:33:20.1±0.8, 41°.62N±0°.06×144°.3E±0°.1, h33km, mb3.5/7, Error ellipse: s-maj=11.3km s-min=9.0km az=174.0*
JMA ***20*** *09:33:21.2±0.2, 41°.74N×144°.20E, h27km±3km, M3.6*
NEIC ***20*** *09:33:21.3, 41°.74N×144°.20E, h27km, MG3.6(JMA), After JMA.*
ISC 20 09:33:22.4±0.9, 41°.73N±0°.07×144°.2E±0°.1, h35km, n15, σ0°.70/18, mb3.5/7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.84**	**291**	P	**Pn**	**09 33 36.7**	**-1.0**
JCH	**Churui**	**1.09**	**325**	P	**Pn**	**09 33 40.4**	**-0.7**
JCH				*e*S	**Sn**	**09 33 55.4**	**+0.4**
JOB	**Onbets**	**1.21**	**347**	P	**Pn**	**09 33 42.5**	**-0.3**
JNBK	**Urakawa-nobuka**	**1.22**	**297**	P	**Pn**	**09 33 43.3**	**+0.4**
JAK	**Akkeshi**	**1.32**	**16**	P	**Pn**	**09 33 43.2**	**-1.1**
JAK				*e*S	**Sn**	**09 34 01.1**	**+0.4**
JAR	**Ashorobuto**	**1.60**	**348**	P	**Pn**	**09 33 47.0**	**-1.2**
ASAJ	**Asahikawa**	**2.67**	**334**	Pn	**Pn**	**09 34 04.5**	**+1.7**
	2.5nm,0.3s,baz=212,slow=20,SNR=6.6						
ASAJ				Sn	**Sn**	**09 34 38.6**	**+4.7**
	5.6nm,0.3s,baz=234,slow=18,SNR=4.1						
ASAJ	**Asahikawa**	**2.67**	**334**	*e*Pn	**Pn**	**09 34 03.2**	**+0.4**
SONM	**Songino Array**	**27.32**	**296**	P	**P**	**09 39 03.6**	**-0.1**
	0.3nm,0.4s,mb3.2,baz=81,slow=9.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**40.52**	**308**	P	**P**	**09 40 58.4**	**+0.6**
	0.7nm,0.5s,mb3.6,baz=81,slow=8.7,SNR=4.3						
MKAR	**Makanchi Array**	**43.62**	**299**	P	**P**	**09 41 23.8**	**+0.6**
	0.2nm,0.4s,mb3.2,baz=86,slow=10.0,SNR=2.6						
ILAR	**Eielson Array**	**44.39**	**35**	P	**P**	**09 41 29.9**	**+0.8**
	0.3nm,0.6s,mb3.2,baz=278,slow=6.2,SNR=3.7						
WRA	**Warramunga Arr**	**62.03**	**191**	P	**P**	**09 43 38.9**	**-0.2**
	0.3nm,1.0s,mb3.4,baz=10,slow=6.7,SNR=2.6						
FINES	**FINESS Array B**	**65.67**	**332**	P	**P**	**09 44 03.0**	**+0.3**
	0.8nm,0.5s,mb4.0,baz=40,slow=7.4,SNR=6.1						
TXAR	**Lajitas Array**	**85.58**	**54**	P	**P**	**09 45 57.3**	**+0.1**
	0.2nm,0.5s,mb3.6,baz=14,slow=4.1,SNR=2.7						

ISCJB ***20*** *09:47:43.6±1.2, 16°.0N±0°.1×145°.5E±0°.2, h293km±12km, mb3.6/10, Error ellipse: s-maj=34.6km s-min=21.2km az=173.0*
IDC ***20*** *09:47:43.8±1.1, 16°.00N×145°.59E, h280km±12km, mb3.4/10, mb1 3.6/12, mb1mx3.4/24, mbtmp3.5/12, Error ellipse: s-maj=24.8km s-min=16.0km az=77.0*
NEIC ***20*** *09:47:44.7±1.0, 16°.01N×145°.59E, h290km±11km, Error ellipse: s-maj=22.1km s-min=14.8km az=80.0*
ISC 20 09:47:44.2±1.2, 16°.0N±0°.1×145°.6E±0°.2, h284km±13km, n14, σ0°.61/15, mb3.6/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.48**	**196**	P	**Pn**	**09 48 35.2**	**+1.3**
	45nm,0.3s,baz=7.8,slow=2.9,SNR=26						
GUMO				S	**S**	**09 49 12.7**	**-0.8**
	64nm,0.3s,baz=37,slow=23,SNR=11						
JOW	**Kunigami**	**19.36**	**307**	P	**P**	**09 51 48.9**	**-0.5**
	5.0nm,0.3s,baz=125,slow=14,SNR=16						
MJAR	**Matsushiro Arr**	**21.49**	**344**	P	**P**	**09 52 10.1**	**-0.6**
	0.7nm,0.3s,mb3.4,baz=179,slow=4.9,SNR=5.7						
KSRS	**Korea Array**	**26.48**	**327**	P	**P**	**09 52 55.8**	**0.0**
	3.7nm,0.5s,mb4.1,baz=144,slow=9.4,SNR=26						
WRA	**Warramunga Arr**	**37.38**	**198**	P	**P**	**09 54 30.2**	**-0.1**
	0.5nm,1.0s,mb2.9,baz=14,slow=8.8,SNR=3.7						
CMAR	**Chiang Mai Arr**	**44.52**	**280**	P	**P**	**09 55 28.4**	**0.0**
	1.1nm,0.5s,mb3.4,baz=82,slow=7.0,SNR=5.2						
SONM	**Songino Array**	**45.20**	**323**	P	**P**	**09 55 33.9**	**+0.5**
	1.0nm,0.5s,mb3.3,baz=136,slow=5.4,SNR=6.5						
ZALV	**Zalesovo Beam**	**60.10**	**323**	P	**P**	**09 57 21.8**	**0.0**
	1.0nm,0.4s,mb3.7,baz=94,slow=6.3,SNR=7.4						
MK31	**Makanchi Array**	**60.27**	**315**	*e*P	**P**	**09 57 23.6**	**+0.6**
MKAR	**Makanchi Array**	**60.27**	**315**	P	**P**	**09 57 23.8**	**+0.7**
	3.2nm,0.4s,mb4.2,baz=91,slow=8.5,SNR=28						
MKAR	**Makanchi Array**	**60.27**	**315**	P	**P**	**09 57 23.8**	**+0.7**
ILAR	**Eielson Array**	**66.12**	**26**	P	**P**	**09 58 00.8**	**-0.1**
	0.4nm,0.7s,mb3.3,baz=252,slow=6.0,SNR=8.7						
ARCES	**ARCESS Array B**	**85.02**	**342**	P	**P**	**09 59 47.8**	**+0.2**
	2.0nm,0.9s,mb3.9,baz=70,slow=10,SNR=6.4						
FINES	**FINESS Array B**	**89.28**	**335**	P	**P**	**10 00 07.0**	**-1.1**
	0.9nm,0.5s,mb3.8,baz=25,slow=2.9,SNR=6.6						

ISCJB ***20*** *09:51:27.4±0.6, 24°.71N±0°.04×122°.71E±0°.02, h114km±5km, Error ellipse: s-maj=7.0km s-min=3.3km az=172.5*
TAP ***20*** *09:51:28.1, 24°.65N×122°.63E, h118km, ML3.4, C*
JMA ***20*** *09:51:28.6±0.2, 24°.83N×122°.73E, h104km±2km, M1.9*
ISC 20 09:51:28.3±0.6, 24°.70N±0°.04×122°.70E±0°.02, h110km±5km, n39, σ0°.80/62, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**130**	P	**Pn**	**09 51 44.5**	**+0.1**
YOJ				*e*S	**Sn**	**09 51 56.6**	**+0.1**
TWC	**Suao**	**0.78**	**264**	P	**Pn**	**09 51 47.1**	**-0.3**
	baz=265						
TWC				S	**Sn**	**09 52 00.8**	**-0.9**
	baz=265						
NWF	**Wu-fen Shan**	**0.92**	**294**	*e*P	**Pn**	**09 51 49.3**	**+0.7**
	baz=293						
NWF				*e*S	**Sn**	**09 52 04.4**	**+0.4**
	baz=293						
ENA	**Nanau**	**0.92**	**253**	P	**Pn**	**09 51 48.7**	**+0.1**
	baz=251						
ENA				*e*S	**Sn**	**09 52 03.8**	**-0.2**
	baz=251						
TWE	**Neicheng**	**0.94**	**272**	P	**Pn**	**09 51 49.1**	**+0.2**
	baz=277						
TWE				*e*S	**Sn**	**09 52 04.2**	**-0.3**
	baz=277						
IRIF	**Iriomote-Funau**	**1.00**	**111**	P	**Pn**	**09 51 49.8**	**+0.3**
IRIF				*e*S	**Sn**	**09 52 05.5**	**-0.1**
ENTT	**Nioudou**	**1.04**	**267**	P	**Pn**	**09 51 50.4**	**+0.6**
	baz=270						
ENTT				*e*S	**Sn**	**09 52 06.0**	**-0.2**
	baz=270						
TWA	**Mucha**	**1.05**	**286**	*e*S	**Sn**	**09 52 05.8**	**-0.8**
	baz=282						
TWD	**Chiawan**	**1.18**	**239**	P	**Pn**	**09 51 50.7**	**-0.7**
	baz=235						
TWD				S	**Sn**	**09 52 08.0**	**-1.0**
	baz=235						
HATJ	**Hateruma jima**	**1.19**	**122**	P	**Pn**	**09 51 52.2**	**+0.6**
HATJ				*e*S	**Sn**	**09 52 10.0**	**+0.9**
NSK	**Sanguang**	**1.22**	**269**	⇓*i*P	**Pn**	**09 51 52.3**	**+0.4**
	baz=266						
NSK				*i* S	**Sn**	**09 52 09.6**	**-0.2**
	baz=266						
HWA	**Hwalien**	**1.23**	**235**	*e*P	**Pn**	**09 51 51.8**	**-0.2**
	baz=235						
TWS1	**Kuangyinshan**	**1.23**	**289**	*e*P	**Pn**	**09 51 52.4**	**+0.4**
	baz=293						
TWS1				*e*S	**Sn**	**09 52 09.9**	**-0.1**
	baz=293						
JKRS	**Kuro-shima**	**1.28**	**111**	P	**Pn**	**09 51 53.3**	**+0.8**
JKRS				*e*S	**Sn**	**09 52 11.5**	**+0.7**
JIJ	**Ishigaki jima**	**1.35**	**104**	P	**Pn**	**09 51 53.6**	**+0.2**
JIJ				*e*S	**Sn**	**09 52 11.8**	**-0.6**
NCU	**National Centr**	**1.40**	**281**	*e*S	**Sn**	**09 52 14.4**	**+1.0**
	baz=292						
WHF	**Hehuan Shan**	**1.42**	**247**	⇓*i*P	**Pn**	**09 51 54.3**	**+0.1**
	baz=248						
WHF				S	**Sn**	**09 52 13.5**	**-0.4**
	baz=248						
ESL	**Shilin**	**1.46**	**233**	P	**Pn**	**09 51 53.6**	**-0.9**
	baz=229						
NSTT	**Nanjuang**	**1.55**	**268**	*e*S	**Sn**	**09 52 16.2**	**-0.3**
	baz=270						
EHY	**Huoyge**	**1.73**	**227**	*e*P	**Pn**	**09 51 57.0**	**-1.0**
	baz=235						
NSY	**Sanyi**	**1.79**	**261**	*e*S	**Sn**	**09 52 20.8**	**-1.0**
	baz=263						
JTJ	**Tarama**	**1.82**	**91**	P	**Pn**	**09 51 59.6**	**+0.6**
JTJ				*e*S	**Sn**	**09 52 22.6**	**+0.2**
SMLT	**Sun Moon Lake**	**1.83**	**244**	*e*P	**Pn**	**09 51 60.0**	**+0.7**
	baz=241						
SMLT				*e*S	**Sn**	**09 52 24.2**	**+1.5**
	baz=241						
TWF1	**Yuli**	**1.86**	**224**	*e*P	**Pn**	**09 51 58.7**	**-0.8**
	baz=233						
TWF1				*e*S	**Sn**	**09 52 23.3**	**0.0**
	baz=233						
TYC	**Yuchr**	**1.86**	**245**	*e*P	**Pn**	**09 52 00.5**	**+0.9**
	baz=244						
TYC				*e*S	**Sn**	**09 52 24.1**	**+0.8**
	baz=244						
YUS	**Yu-Shan**	**2.00**	**233**	*e*P	**Pn**	**09 52 02.2**	**+0.9**
	baz=230						
YUS				*e*S	**Sn**	**09 52 27.1**	**+0.5**
	baz=230						
CHKT	**Chengkung**	**2.01**	**218**	*e*P	**Pn**	**09 52 00.3**	**-1.1**
	baz=211						
CHKT				*e*S	**Sn**	**09 52 24.2**	**-2.5**
	baz=211						
WNT	**Mingjian**	**2.02**	**246**	*e*P	**Pn**	**09 52 02.3**	**+0.8**
	baz=248						
ALS	**Alishan**	**2.10**	**236**	*e*P	**Pn**	**09 52 03.7**	**+1.2**
	baz=236						
ALS				*e*S	**Sn**	**09 52 29.2**	**+0.4**
	baz=236						
ELDTW	**Lidau**	**2.15**	**226**	*e*P	**Pn**	**09 52 02.8**	**-0.5**
	baz=224						
STYT	**Tauyuan**	**2.35**	**230**	*e*P	**Pn**	**09 52 06.5**	**+0.7**
	baz=230						
TWG	**Pinlang**	**2.39**	**219**	*e*P	**Pn**	**09 52 05.4**	**-1.0**
	baz=218						
TWG				*e*S	**Sn**	**09 52 33.0**	**-2.5**
	baz=218						
WTP	**Ta-pu**	**2.40**	**233**	*e*P	**Pn**	**09 52 06.9**	**+0.5**
	baz=234						
CHN1	**Nanshi**	**2.50**	**233**	*e*P	**Pn**	**09 52 08.7**	**+1.0**
	baz=233						
CHN1				*e*S	**Sn**	**09 52 39.3**	**+1.3**
	baz=233						
JKE	**Kume jima 2**	**4.03**	**65**	P	**Pn**	**09 52 27.8**	**-0.2**
JAGN	**Aguni-jima**	**4.51**	**64**	P	**Pn**	**09 52 34.9**	**+0.4**
JIH	**Iheya**	**5.28**	**63**	P	**Pn**	**09 52 43.9**	**-1.0**
JOW	**Kunigami**	**5.45**	**66**	P	**Pn**	**09 52 46.2**	**-1.0**
JTK	**Tokunoshima**	**6.40**	**60**	P	**Pn**	**09 52 58.2**	**-1.8**

ISCJB ***20*** *10:24:55.9±1.3, 17°.6S±0°.2×178°.4W±0°.1, h532km±20km, mb3.9/9, Error ellipse: s-maj=31.9km s-min=13.3km az=147.7*
IDC ***20*** *10:24:56.7±2.1, 17°.58S×178°.34W, h530km±27km, mb3.3/9, mb1 3.6/10, mb1mx3.4/19, mbtmp3.3/10, Error ellipse: s-maj=27.2km s-min=12.8km az=148.0*
NEIC ***20*** *10:24:56.9±1.0, 17°.57S×178°.36W, h534km±14km, mb4.7/3, Error ellipse: s-maj=23.0km s-min=9.7km az=148.0*
ISC 20 10:24:56.9±1.3, 17°.6S±0°.2×178°.4W±0°.1, h533km±19km, n16, σ0°.78/15, mb3.9/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.32**	**61**	P	**P**	**10 26 47.5**	**0.0**
	2.0nm,0.3s,baz=244,slow=17,SNR=4.9						
URZ	**Urewera**	**20.99**	**190**	P	**P**	**10 29 01.3**	**-1.3**
	2.2nm,0.3s,baz=278,slow=3.2,SNR=7.1						
EIDS	**Eidsvold**	**29.42**	**249**	*e*P	**P**	**10 30 17.5**	**+0.1**
	6.7nm,0.7s,mb4.4						
ARMA	**Armidale**	**30.14**	**239**	*e*P	**P**	**10 30 24.9**	**+1.3**
	12nm,0.7s,mb4.5						
COEN	**Coen**	**37.14**	**270**	*e*P	**P**	**10 31 22.9**	**+0.2**
	45nm,0.6s						
STKA	**Stephens Creek**	**38.82**	**241**	P	**P**	**10 31 37.4**	**+1.2**
	8.7nm,0.5s,mb4.6,baz=93,slow=9.8,SNR=53						
WB2	**Warramunga Arr**	**44.72**	**259**	*e*P	**P**	**10 32 21.8**	**-1.1**
WRA	**Warramunga Arr**	**44.73**	**259**	P	**P**	**10 32 22.6**	**-0.3**
	5.1nm,0.5s,mb4.3,baz=97,slow=6.9,SNR=162						
ASAR	**Alice Springs**	**44.92**	**254**	P	**P**	**10 32 24.4**	**+0.1**
	47nm,0.6s,baz=88,slow=8.2,SNR=1039						
FITZ	**Fitzroy Crossi**	**53.12**	**260**	P	**P**	**10 33 25.1**	**0.0**
	1.8nm,0.3s,mb3.8						
MJAR	**Matsushiro Arr**	**67.66**	**323**	P	**P**	**10 35 00.3**	**-0.6**
	1.7nm,0.8s,mb3.6,baz=166,slow=8.6,SNR=4.6						
NVAR	**Mina Array Bea**	**79.16**	**44**	P	**P**	**10 36 06.8**	**+0.4**
	0.7nm,0.7s,mb3.1,baz=223,slow=11,SNR=6.6						
ILAR	**Eielson Array**	**85.55**	**13**	P	**P**	**10 36 37.5**	**-0.7**
	0.2nm,0.9s,baz=240,slow=6.9,SNR=4.0						
TXAR	**Lajitas Array**	**85.79**	**58**	P	**P**	**10 36 41.5**	**+1.4**
	0.9nm,0.8s,mb3.5,baz=223,slow=5.7,SNR=11						
PDAR	**Pinedale Array**	**87.08**	**43**	P	**P**	**10 36 45.6**	**-0.4**
	0.3nm,0.6s,mb3.1,baz=117,slow=1.0,SNR=3.6						
BRTR	**Keskin Array B**	**144.57**	**315**	PKP	PKPdf	10 43 33.4	+0.4
	1.0nm,0.8s,baz=140,slow=4.7,SNR=5.2						

IDC ***20*** *10:28:33.8±3.4, 4°.92S×101°.74E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/19, mbtmp3.5/5, Error ellipse: s-maj=150.1km s-min=22.2km az=54.0*
ISCJB ***20*** *10:28:40.8±2.3, 4°.7S±0°.2×102°.1E±0°.1, h55km±17km, mb3.6/5, Error ellipse: s-maj=34.3km s-min=11.6km az=41.1*
DJA ***20*** *10:28:44, 4°.46S×102°.26E, h26km, MLv3.6/5*
ISC 20 10:28:41.8±2.6, 4°.6S±0°.2×102°.1E±0°.2, h43km±20km, n13, σ1°.12/14, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.94**	**73**	P	**Pn**	**10 28 57.8**	**-0.7**
KSI	**Kapahiang**	**1.11**	**29**	P	**Pn**	**10 28 59.9**	**-1.1**
LWLI	**Liwa**	**2.03**	**101**	P	**Pn**	**10 29 16.3**	**+2.7**
LWLI				S	**Sn**	**10 29 37.6**	**-0.1**
MDSI	**Maura Dua**	**2.12**	**86**	P	**Pn**	**10 29 15.4**	**+0.6**
KASI	**Kota Agung**	**2.59**	**110**	P	**Pn**	**10 29 22.6**	**+1.4**
KASI				S	**Sn**	**10 29 49.9**	**-1.5**
KLSI		**2.67**	**91**	P	**Pn**	**10 29 20.8**	**-1.5**
KLSI				S	**Sn**	**10 29 55.0**	**+1.6**
WRA	**Warramunga Arr**	**34.92**	**119**	P	**P**	**10 35 28.7**	**-1.0**
	0.3nm,0.6s,mb3.4,baz=308,slow=9.1,SNR=3.3						
ASAR	**Alice Springs**	**36.06**	**125**	P	**P**	**10 35 39.2**	**-0.3**
	0.2nm,0.4s,mb3.4,baz=298,slow=8.0,SNR=4.2						
SONM	**Songino Array**	**52.38**	**4**	P	**P**	**10 37 49.6**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=182,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**54.11**	**343**	P	**P**	**10 38 03.2**	**+0.9**
	0.6nm,0.6s,mb3.7,baz=160,slow=8.0,SNR=5.3						
ZALV	**Zalesovo Beam**	**60.13**	**348**	P	**P**	**10 38 44.8**	**+0.1**
	0.7nm,0.5s,mb4.0,baz=156,slow=4.3,SNR=3.7						
NVAR	**Mina Array Bea**	**130.26**	**42**	PKP	PKPdf	10 47 45.3	-2.5
	0.2nm,0.5s,baz=249,slow=7.6,SNR=2.8						
TXAR	**Lajitas Array**	**145.41**	**42**	PKPbc	PKPbc	10 48 14.3	-1.5
	0.3nm,0.7s,baz=195,slow=1.2,SNR=4.3						

IDC 20 11:01:07.9±0.8, 46°.72N×155°.66E, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.6/24, mbtmp3.5/8, ML3.5/1, Error ellipse: s-maj=29.1km s-min=20.2km az=124.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.53**	**11**	Pn	Pn	11 02 43.3	-1.7
	1.0nm,0.3s,baz=284,slow=15,SNR=22						
SONM	**Songino Array**	**32.99**	**290**	P	P	11 07 45.4	+1.2
	0.4nm,0.6s,baz=53,slow=9.6,SNR=3.0						
ILAR	**Eielson Array**	**35.48**	**38**	P	P	11 08 04.9	-0.7
	0.2nm,0.5s,baz=252,slow=7.7,SNR=7.7						
NVAR	**Mina Array Bea**	**60.89**	**64**	P	P	11 11 23.4	+1.2
	0.5nm,0.7s,baz=285,slow=6.2,SNR=5.0						
FINES	**FINESS Array B**	**64.80**	**336**	P	P	11 11 47.6	-0.2
	1.4nm,0.9s,baz=31,slow=8.8,SNR=3.3						
WRA	**Warramunga Arr**	**69.09**	**201**	P	P	11 12 14.0	-1.5
	0.4nm,0.9s,baz=14,slow=6.2,SNR=2.5						
ASAR	**Alice Springs**	**72.77**	**201**	P	P	11 12 38.9	+1.0
	0.3nm,0.7s,baz=17,slow=6.8,SNR=3.2						
TXAR	**Lajitas Array**	**75.97**	**62**	P	P	11 12 57.4	+0.7
	0.5nm,0.6s,baz=303,slow=4.0,SNR=6.5						

IDC ***20*** *11:05:11.4±3.8, 40°.80N×144°.43E, h0km, mb3.8/4, mb1 3.7/8, mb1mx3.5/26, mbtmp3.7/8, ML3.3/4, Error ellipse: s-maj=71.2km s-min=30.9km az=127.0*
ISCJB ***20*** *11:05:21.4±0.9, 41°.06N±0°.05×143°.36E±0°.09, h49km±10km, mb3.6/4, Error ellipse: s-maj=13.3km s-min=5.2km az=36.9*
JMA ***20*** *11:05:22.0±0.1, 41°.08N×143°.26E, h47km, M3.4*
ISC 20 11:05:22.4±0.9, 41°.07N±0°.05×143°.34E±0°.09, h38km±11km, n20, σ0°.70/28, mb3.6/4, 5C-1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.95**	**352**	P	**Pn**	**11 05 38.9**	**-0.4**
JEM				*e*S	**Sn**	**11 05 51.1**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.28**	**340**	P	**Pn**	**11 05 43.8**	**0.0**
JNBK				*e*S	**Sn**	**11 06 00.8**	**+1.0**
JCH	**Churui**	**1.54**	**1**	P	**Pn**	**11 05 47.3**	**-0.1**
JCH				S	**Sn**	**11 06 06.3**	**+0.2**
JANG	**Nango**	**1.55**	**244**	⇑P	**Pn**	**11 05 47.3**	**-0.2**
JANG				*e*S	**Sn**	**11 06 06.4**	**0.0**
JTM	**Tenmabayashi**	**1.74**	**261**	⇑P	**Pn**	**11 05 50.2**	**0.0**
JTM				*e*

JUA2	**San Juan 2**	**3.78**	**42**	P	Pn	11 11 01.8	+3.2
TERV	**Terraza Guagua**	**3.81**	**42**	⇑P	Pn	11 11 01.9	+2.9
GGP	**Refugio Guagua**	**3.82**	**42**	P	Pn	11 11 01.5	+2.4
ANTI	**Antisana**	**3.94**	**50**	⇓P	Pn	11 11 05.7	+5.0
CAYR	**Refugio Cayamb**	**4.36**	**46**	P	Pn	11 11 11.3	+4.7
COTA	**Cotacachi**	**4.37**	**40**	P	Pn	11 11 10.1	+3.4
CAYA	**Cayambe**	**4.42**	**46**	P	Pn	11 11 12.3	+5.0

IDC 20 11:12:51.5±3.2, 15°.21N×95°.95E, h0km, mb3.6/2, mb1 3.5/3, mb1mx3.2/24, mbtmp3.4/3, ML3.9/1, Error ellipse: s-maj=38.3km s-min=26.3km az=177.0, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**4.32**	**41**	Pn	Pn	11 13 56.5	-1.9
	1.6nm,0.3s,baz=234,slow=15,SNR=29						
CMAR				Pg	Pg	11 14 12.0	-2.2
	0.6nm,0.3s,baz=228,slow=19,SNR=10						
CMAR				Lg		11 15 08.6	
	0.6nm,0.3s,baz=224,slow=32,SNR=4.6						
MKAR	**Makanchi Array**	**33.49**	**343**	P	P	11 19 32.5	0.0
	0.2nm,0.4s,baz=161,slow=9.9,SNR=2.4						
ZALV	**Zalesovo Beam**	**39.63**	**350**	P	P	11 20 24.9	+0.2
	0.6nm,0.5s,baz=151,slow=6.3,SNR=3.5						

*IDC **20** 11:16:24.2±2.0, 23°.52N×90°.98E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/25, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=71.9km s-min=22.1km az=68.0*
*NEIC **20** 11:16:24.5±1.2, 23°.31N×90°.58E, h10km, Error ellipse: s-maj=34.6km s-min=9.9km az=63.0*
NEIC Felt at Dhaka.

ISC 20 11:16:25.5±3.5, 23°.45N±0°.07×90°.8E±0°.2, h9km±18km, n13, σ0°.73/15, mb3.6/4, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.58**	**41**	*e*PKP	**Pg**	11 16 36.0	-0.7
SHL	**Shillong**	**2.31**	**24**	*ex*	**Pn**	11 17 04.0	+0.2
SHL				*ex*	**Sg**	11 17 40.0	+0.1
LSA	**Lhasa**	**6.23**	**3**	*e*Pn	**Pn**	11 17 59.6	+1.9
	17nm,0.6s						
LSA				*e*Sn	**Sn**	11 19 08.5	-0.5
CMAR	**Chiang Mai Arr**	**9.06**	**122**	Pn	**Pn**	11 18 37.4	+0.8
	0.3nm,0.3s,baz=308,slow=13,SNR=8.9						
DDI	**Dehra Dun**	**13.29**	**304**	*ex*	**Sn**	11 21 54.0	-8.4
NDI	**New Delhi**	**13.30**	**296**	*ex*	**Pn**	11 19 28.0	-6.5
NDI				*ex*	x	11 21 45.5	
POO	**Poona**	**16.59**	**256**	*e*PKP	**Sn**	11 23 29.0	+6.0
MK31	**Makanchi Array**	**24.29**	**346**	*e*P	**P**	11 21 42.8	-0.2
MKAR	**Makanchi Array**	**24.29**	**346**	P	**P**	11 21 42.6	-0.4
	2.1nm,0.8s,mb3.6,baz=164,slow=9.5,SNR=11						
SONM	**Songino Array**	**27.32**	**23**	P	**P**	11 22 10.8	+0.3
	0.5nm,0.8s,mb3.1,baz=216,slow=7.1,SNR=3.2						
WRA	**Warramunga Arr**	**60.50**	**132**	P	**P**	11 26 35.6	-0.5
	1.0nm,0.8s,mb3.9,baz=324,slow=6.9,SNR=11						
ASAR	**Alice Springs**	**62.79**	**135**	P	**P**	11 26 50.9	-0.7
	0.3nm,0.6s,mb3.6,baz=316,slow=6.8,SNR=4.2						
ASAR	**Alice Springs**	**62.79**	**135**	P	**P**	11 26 50.9	-0.7

*NEIC **20** 11:28:25.4, 13°.98N×93°.00W, h18km, MD4.2(MEX), After MEX.*

MEX 20 11:28:25.4±1.5, 13°.98N×93°.00W, h18km±48km, MD4.2, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.16**	**37**	*i* P	Pn	11 28 42.4	-4.4
THIG				*i* S	Sb	11 28 56.6	-5.1
PCIG		**1.73**	**353**	*e*P	Pn	11 28 50.7	-3.9
PCIG				*i* S	Sn	11 29 11.1	-5.1
CCIG	**Comitan**	**2.43**	**20**	*e*P	Pn	11 29 03.1	-1.2
CCIG				*i* S	Sn	11 29 31.7	-2.0
CCIG	**Comitan**	**2.43**	**20**	*e*P	Pn	11 29 03.1	-1.2
CCIG				*i* S	Sn	11 29 31.7	-2.0
SCX	**San Cristobal**	**2.76**	**7**	*i* P	Pn	11 29 06.0	-2.8
SCX				*i* S	Sn	11 29 39.8	-1.9
SCX	**San Cristobal**	**2.76**	**7**	*i* P	Pn	11 29 06.0	-2.8
SCX				*i* S	Sn	11 29 39.8	-1.9
TGIG		**2.78**	**358**	*i* P	Pn	11 29 07.3	-1.8
TGIG				*i* S	Sn	11 29 38.5	-3.7
HUIG	**Huatulco**	**3.49**	**301**	*i* P	Pn	11 29 16.5	-2.4
HUIG				*i* S	Sn	11 29 55.8	-4.0
HUIG	**Huatulco**	**3.49**	**301**	*i* P	Pn	11 29 16.5	-2.4
HUIG				*i* S	Sn	11 29 55.8	-4.0
VHO	**Vista Hermosa**	**4.73**	**311**	*i* P	Pn	11 29 35.7	-0.3
VHO				*i* S	Sn	11 30 28.1	-2.3
VHO	**Vista Hermosa**	**4.73**	**311**	*i* P	Pn	11 29 35.7	-0.3
VHO				*i* S	Sn	11 30 28.1	-2.3
UTMO	**Huajuapan**	**6.00**	**310**	*i* P	Pn	11 29 48.0	-5.4

DJA 20 11:42:14, 0°.29N×98°.33E, h19km, MLv3.5/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.35**	**68**	P	Pn	11 42 37.3	-0.5
MNSI				S	Sn	11 42 55.2	0.0
PPI	**Padang Panjang**	**2.20**	**110**	P	Pn	11 42 50.6	+1.1
PDSI	**Padang**	**2.44**	**119**	P	Pn	11 42 52.7	-0.2

*ISCJB **20** 11:42:31.0±2.4, 23°.22N±0°.08×90°.6E±0°.2, h5km±13km, mb3.4/4, Error ellipse: s-maj=27.5km s-min=12.9km az=178.6*
*IDC **20** 11:42:34.0±2.2, 23°.53N×90°.95E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, Error ellipse: s-maj=76.8km s-min=22.6km az=68.0*
*NEIC **20** 11:42:35.2±1.9, 23°.45N×90°.82E, h10km, Error ellipse: s-maj=53.4km s-min=14.3km az=65.0*

ISC 20 11:42:33.8±2.6, 23°.27N±0°.08×90°.5E±0°.2, h10km±14km, n8, σ1°.01/10, mb3.4/4, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.91**	**47**	*e*PKP	**Pg**	11 42 44.0	-7.3
SHL	**Shillong**	**2.60**	**28**	*e*PG	**Pg**	11 43 24.0	+0.3
SHL				*e*SG	**Sn**	11 43 48.0	+0.4
SHL				*e*SN	**Sn**	11 43 48.0	+0.4
LSA	**Lhasa**	**6.43**	**5**	Pn	**Pn**	11 44 08.3	-0.3
CMAR	**Chiang Mai Arr**	**9.21**	**120**	Pn	**Pn**	11 44 46.5	-0.4
	baz=304,slow=13,SNR=4.0						
MKAR	**Makanchi Array**	**24.39**	**346**	P	**P**	11 47 52.8	+0.6
	0.9nm,0.7s,mb3.3,baz=164,slow=9.8,SNR=8.6						
SONM	**Songino Array**	**27.59**	**23**	P	**P**	11 48 19.6	-1.6
	0.2nm,0.4s,mb3.1,baz=198,slow=13,SNR=2.9						
WRA	**Warramunga Arr**	**60.59**	**132**	P	**P**	11 52 47.6	+2.7
	0.3nm,0.9s,mb3.4,baz=326,slow=7.1,SNR=3.8						
ASAR	**Alice Springs**	**62.87**	**135**	P	**P**	11 52 59.6	-0.6
	0.4nm,0.9s,mb3.6,baz=322,slow=5.9,SNR=2.9						

*ISCJB **20** 11:51:37.9±0.9, 23°.42N±0°.04×90°.64E±0°.03, h3km±6km, mb4.0/13, MS3.6/17, Error ellipse: s-maj=6.5km s-min=4.7km az=157.2*
*IDC **20** 11:51:39.6±1.1, 23°.39N×90°.69E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.9/27, mbtmp3.9/10, ML4.5/1, MS3.6/16, Ms1 3.6/16, ms1mx3.4/32, Error ellipse: s-maj=49.0km s-min=15.0km az=62.0*
*BJI **20** 11:51:41.8, 23°.26N×90°.72E, h17km, mB4.4/4, mb4.4/18, Ms4.2/14, Ms7 4.0/12*
*NEIC **20** 11:51:41.3±0.4, 23°.40N×90°.73E, h10km, mb4.5/4, Error ellipse: s-maj=12.5km s-min=5.2km az=51.0*
NEIC Felt at Dhaka.

ISC 20 11:51:39.7±1.1, 23°.46N±0°.04×90°.68E±0°.03, h0km±7km, n57, σ1°.24/54, mb4.1/13, MS3.6/17, 1D, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.68**	**51**	*e*PKP	**Pg**	11 51 52.0	-0.7
AGT				*ex*	x	11 52 56.0	
CAL	**Calcutta**	**2.35**	**248**	*e*PKP	**Pn**	11 52 20.6	+1.1
CAL				*ex*	**Sg**	11 52 56.2	+1.1
SHL	**Shillong**	**2.37**	**27**	⇓*i* P	**Pn**	11 52 20.0	+0.1
SHL				*ex*	x	11 53 08.0	
BOK	**Bokaro**	**4.41**	**275**	*ex*	**Pg**	11 53 04.0	-0.2
BOK				*ex*	x	11 54 14.0	
BWNR	**Bhubaneshwar**	**5.51**	**236**	*ex*	**Pn**	11 52 58.0	-5.0
LSA	**Lhasa**	**6.24**	**4**	Pn	**Pn**	11 53 14.5	+1.5
LSA				Sn	**Sn**	11 54 22.6	-2.4
LSA	**Lhasa**	**6.24**	**4**	*e*Pn	**Pn**	11 53 14.6	+1.6
	26nm,0.5s						
LSA				*e*Sg	**Sg**	11 55 06.3	+6.3
ALBI	**Allahabad**	**8.29**	**285**	*ex*	**Pn**	11 53 38.5	-2.8
VIS	**Vishakhapatnam**	**8.94**	**232**	*i* P	**Pn**	11 53 49.6	-0.5
VIS				*ex*	x	11 55 32.4	
VIS				*ex*	x	11 56 27.4	
	comp=N,110nm,0.6s						
VIS				*ex*	x	11 56 29.6	
	comp=E,139nm,0.8s						
CHTO	**Chiang Mai**	**8.99**	**119**	*e*Pn	**Pn**	11 53 49.7	-1.2
	comp=E,19nm,1.0s						
CM31	**Chiang Mai Arr**	**9.18**	**121**	*e*Pn	**Pn**	11 53 53.1	-0.5
	comp=E,7.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**9.18**	**121**	Pn	**Pn**	11 53 53.0	-0.6
	comp=E,1.4nm,0.3s,baz=305,slow=14,SNR=33						
NGP	**Nagpur**	**11.01**	**260**	*e*PKP	**Pn**	11 54 14.2	-4.3
NGP				*e*S	**Sn**	11 56 09.8	-13
NGP				AML	AML	11 57 39.0	
	comp=N,247nm,0.6s						
NGP				AML	AML	11 57 46.5	
	comp=E,201nm,0.8s						
PTH	**Pithoragarh**	**11.16**	**305**	*ex*	**Pn**	11 54 13.1	-7.5
PTH				*ex*	**Sn**	11 56 25.2	-0.9
BHPL	**Bhopal**	**12.18**	**272**	*e*PKP	**Pn**	11 54 34.1	-0.4
BHPL				*ex*	x	11 56 33.8	
HYB	**Hyderabad**	**12.85**	**244**	*i* P	**Pn**	11 54 44.0	+0.2
HYB				*e*pP		11 54 52.0	
HYB				*e*S	**Sn**	11 57 10.0	+2.4
AKL	**Akola**	**12.96**	**260**	*i* P	**Pn**	11 54 44.5	-0.8
AKL				*i* x	x	11 56 55.1	
NDI	**New Delhi**	**13.17**	**296**	*e*PKP	**Pn**	11 54 45.5	-2.5
NDI				*e*S	**Sn**	11 57 01.0	-14
LATR	**Latur**	**14.11**	**252**	*e*PKP	**Pn**	11 55 00.6	-0.3
LATR				*ex*	x	11 57 23.2	
SMLA	**Simla**	**14.23**	**305**	*i* x	**Pn**	11 54 58.5	-4.1
SMLA				*i* x	x	11 57 26.9	
GYA	**Guiyang**	**14.81**	**75**	P	**Pn**	11 55 13.8	+3.4
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
AJM	**Ajmer**	**14.85**	**285**	*e*PKP	**Pn**	11 55 11.1	+0.1
AJM				*ex*	x	11 57 34.5	
BHK	**Bhakra**	**14.93**	**305**	*ex*	x	11 55 27.0	
POO	**Poona**	**16.46**	**256**	*e*PKP	**Pn**	11 55 30.1	-2.1
KAD	**Karad**	**16.62**	**251**	*ex*	**Pn**	11 55 37.3	+3.0
KAD				*ex*	x	11 58 23.9	
LZH	**Lanzhou**	**16.98**	**39**	*e*P	**Pn**	11 55 42.0	+3.3
LZH				pP	pP	11 55 46.0	+5.3
LZH				sP	sP	11 55 47.5	+6.8
LZH				pmax	pmax		
	comp=Z,15nm,1.5s						
LZH				LR	LR		
	comp=N,320nm,8.7s						
LZH				LR	LR		
	comp=E,400nm,8.6s						
LZH				LR	LR		
	comp=Z,500nm,6.8s						
GTA	**Gaotai**	**17.70**	**24**	*e*P	**Pn**	11 55 56.3	+8.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
ENH	**Enshi**	**18.09**	**64**	*e*P	**Pn**	11 55 52.9	+0.3
	comp=Z,65nm,1.2s						
XAN	**Xi'an**	**19.13**	**52**	P	**Pn**	11 56 03.8	-1.4
XAN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
XAN				LR	LR		
	comp=N,310nm,21.5s						
XAN				LR	LR		
	comp=Z,100nm,23.2s						
KBL	**Kabul**	**21.86**	**305**	*e*P	**P**	11 56 36.1	+2.1
	comp=Z,18nm,0.7s,mb4.6						
KBL				*e*S	**S**	12 00 27.7	-8.9
PSI	**Prapat**	**22.03**	**158**	P	**P**	11 56 37.0	+1.0
	comp=Z,1.4nm,0.3s,mb3.8,baz=13,slow=8.0,SNR=2.8						
PSI	**Prapat**	**22.03**	**158**	P	**P**	11 56 37.0	+1.0
WHN	**Wuhan**	**22.22**	**66**	*e*P	**P**	11 56 38.5	+0.6
WHN				S	**S**	12 00 37.3	-6.3
WHN				LR	LR		
	comp=N,380nm,15.0s						
WHN				LR	LR		
	comp=E,790nm,20.1s						
WHN				LR	LR		
	comp=Z,1μm,15.6s,MS4.4						
TKM2	**Tokmak 2**	**23.09**	**331**	P	**P**	11 56 47.1	+0.1
	comp=Z,13nm,1.1s,mb4.4						
AAK	**Ala-Archa**	**23.37**	**329**	P	**P**	11 56 52.0	+2.0
	comp=Z,0.7nm,0.4s,mb3.5,baz=195,slow=12,SNR=1.8						
AAK				LR	LR	12 07 12.8	
	comp=Z,140nm,21.2s,MS3.4,baz=291,slow=40						
MK31	**Makanchi Array**	**24.25**	**346**	*e*P	**P**	11 56 59.4	+1.2
MKAR	**Makanchi Array**	**24.25**	**346**	P	**P**	11 56 59.6	+1.4
	comp=Z,2.7nm,0.7s,mb3.9,baz=167,slow=9.7,SNR=13						
MKAR				LR	LR	12 07 41.9	
	comp=Z,85nm,19.3s,MS3.2,baz=341,slow=40						
SONM	**Songino Array**	**27.37**	**23**	P	**P**	11 57 27.7	+1.2
	comp=Z,1.2nm,0.9s,mb3.6,baz=206,slow=11,SNR=6.2						
SONM				LR	LR	12 10 18.1	
	comp=Z,72nm,19.1s,MS3.3,baz=196,slow=41						
ZALV	**Zalesovo Beam**	**30.77**	**353**	P	**P**	11 57 57.1	+0.4
	comp=Z,0.3nm,0.4s,mb3.6,baz=164,slow=6.0,SNR=4.8						
ZALV				LR	LR	12 10 55.6	
	comp=Z,84nm,21.3s,MS3.4,baz=216,slow=38						
KSRS	**Korea Array**	**34.77**	**58**	LR	LR	12 12 30.8	
	comp=Z,112nm,22.0s,MS3.6,baz=255,slow=36						
CN2	**Changchun**	**35.00**	**46**	*e*P	**P**	11 58 41.8	+8.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
ABKAR	**Akbulak array**	**35.30**	**325**	*e*P	**P**	11 58 36.6	+0.4
	comp=Z,1.9nm,0.6s,mb4.2						
AKTO	**Aktyubinsk**	**36.99**	**325**	LR	LR	12 16 44.3	
	comp=Z,60nm,20.9s,MS3.4,baz=305,slow=41						
GNI	**Garni**	**41.95**	**305**	LR	LR	12 19 33.1	
	comp=Z,49nm,20.1s,MS3.4,baz=57,slow=40						
MJAR	**Matsushiro Arr**	**42.78**	**61**	LR	LR	12 20 03.5	
	comp=Z,78nm,19.1s,MS3.6,baz=265,slow=40						
GUMO	**Guam**	**52.06**	**91**	LR	LR	12 23 22.0	
	comp=Z,43nm,19.6s,MS3.5,baz=89,slow=36						
FINES	**FINESS Array B**	**57.56**	**329**	P	**P**	12 01 29.9	-1.0
	comp=Z,1.6nm,0.9s,mb4.0,baz=110,slow=8.3,SNR=5.1						
FINES				LR	LR	12 27 51.7	
	comp=Z,113nm,18.6s,MS4.0,baz=309,slow=38						
PETK	**Petropavlovsk-**	**57.87**	**41**	LR	LR	12 30 11.9	
	comp=Z,59nm,18.2s,MS3.7,baz=79,slow=40						
ARCES	**ARCESS Array B**	**59.59**	**338**	LR	LR	12 29 33.7	
	comp=Z,68nm,19.7s,MS3.8,baz=133,slow=38						
WRA	**Warramunga Arr**	**60.60**	**132**	P	**P**	12 01 52.1	-0.5
	comp=Z,3.4nm,0.5s,mb4.7,baz=324,slow=7.0,SNR=55						
WB2	**Warramunga Arr**	**60.61**	**132**	*e*P	**P**	12 01 52.1	-0.5
ASAR	**Alice Springs**	**62.90**	**135**	P	**P**	12 02 07.7	-0.3
	comp=Z,1.3nm,0.5s,mb4.4,baz=313,slow=6.6,SNR=24						
NOA	**NORSAR Array B**	**64.69**	**328**	LR	LR	12 31 49.8	
	comp=Z,76nm,20.7s,MS3.9,baz=70,slow=37						
BOSA	**Boshof**	**81.53**	**234**	LR	LR	12 40 37.4	
	comp=Z,119nm,18.1s,MS4.3,baz=327,slow=36						
ILAR	**Eielson Array**	**81.58**	**21**	P	**P**	12 03 58.5	-0.6
	comp=Z,0.5nm,0.9s,mb3.6,baz=278,slow=4.4,SNR=4.7						
YKA	**Yellowknife Ar**	**92.01**	**11**	LR	LR	12 49 26.8	
	comp=Z,5.7nm,18.3s,MS3.0,baz=280,slow=38						
DBIC	**Dimbokro**	**92.42**	**278**	LR	LR	12 46 55.6	
	comp=Z,46nm,20.4s,MS3.9,baz=52,slow=36						

*IDC **20** 12:00:49.8±1.3, 23°.40N×90°.63E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/26, mbtmp3.8/7, ML4.0/1, Error ellipse: s-maj=59.7km s-min=17.8km az=56.0*
*ISCJB **20** 12:00:50.0±0.7, 23°.44N±0°.05×90°.85E±0°.09, h10km, mb3.7/6, Error ellipse: s-maj=11.8km s-min=7.2km az=178.0*
*NEIC **20** 12:00:51.3±0.7, 23°.39N×90°.69E, h10km, mb4.2/1, Error ellipse: s-maj=17.5km s-min=7.2km az=54.0*
NEIC Felt at Dhaka.
*BJI **20** 12:00:54.8, 23°.84N×90°.94E, h10km, mB4.3/2, mb4.1/7, ML3.8/1, Ms3.7/2, Ms7 3.3/2*

ISC 20 12:00:51.9±0.7, 23°.47N±0°.05×90°.80E±0°.09, h10km, n19, σ0°.66/20, mb3.7/6, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.58**	**45**	*ex*	**Pg**	12 01 02.0	-1.1
AGT				*ex*	x	12 02 07.0	
SHL	**Shillong**	**2.31**	**25**	*e*PN	**Pn**	12 01 30.5	+0.6
SHL				*e*SN	**Sg**	12 02 06.0	0.0
LSA	**Lhasa**	**6.21**	**3**	Pn	**Pn**	12 02 24.8	+1.2
LSA				smax			
	comp=N,60nm,0.8s						
LSA				smax			
	comp=E,100nm,0.8s						
LSA	**Lhasa**	**6.21**	**3**	*e*Pn	**Pn**	12 02 25.9	+2.3
CHTO	**Chiang Mai**	**8.90**	**120**	*e*Pn	**Pn**	12 03 00.5	-0.1
	comp=E,8.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**9.10**	**122**	Pn	**Pn**	12 03 03.6	+0.4
	comp=E,0.4nm,0.3s,baz=305,slow=13,SNR=20						
NDI	**New Delhi**	**13.26**	**296**	*ex*	**Pn**	12 03 55.0	-5.3
NDI				*ex*	x	12 06 11.5	
LZH	**Lanzhou**	**16.90**	**39**	*e*P	**Pn**	12 04 48.0	-0.4
LZH				pP	pP	12 04 53.1	-0.2
LZH				sP	sP	12 04 55.8	+1.2
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
ENH	**Enshi**	**17.98**	**64**	*e*Pn	**Pn**	12 05 02.2	+0.2
	comp=Z,24nm,1.1s						
AAK	**Ala-Archa**	**23.42**	**329**	P	**P**	12 06 00.1	-1.1
	comp=Z,0.9nm,0.5s,mb3.5,baz=207,slow=6.8,SNR=2.6						
MK31	**Makanchi Array**	**24.26**	**346**	*e*P	**P**	12 06 08.7	-0.3
MKAR	**Makanchi Array**	**24.26**	**346**	P	**P**	12 06 09.0	+0.1
	comp=Z,2.1nm,0.8s,mb3.6,baz=166,slow=10,SNR=9.9						
MKAR	**Makanchi Array**	**24.26**	**346**	P	**P**	12 06 09.0	+0.1
SONM	**Songino Array**	**27.31**	**23**	P	**P**	12 06 37.5	+0.9
	comp=Z,0.8nm,0.9s,mb3.2,baz=212,slow=8.1,SNR=4.0						
SONM	**Songino Array**	**27.31**	**23**	P	**P**	12 06 37.5	+0.9
FINES	**FINESS Array B**	**57.61**	**329**	P	**P**	12 10 41.4	-0.3
	comp=Z,0.5nm,0.6s,mb3.7,baz=106,slow=8.0,SNR=2.5						
WRA	**Warramunga Arr**	**60.53**	**132**	P	**P**	12 11 02.6	+0.1
	comp=Z,1.5nm,0.6s,mb4.3,baz=322,slow=7.2,SNR=13						
WB2	**Warramunga Arr**	**60.54**	**132**	*e*P	**P**	12 11 02.4	-0.2
ASAR	**Alice Springs**	**62.83**	**135**	P	**P**	12 11 18.0	0.0
	comp=Z,0.5nm,0.6s,mb3.8,baz=311,slow=6.5,SNR=6.8						

DJA 20 12:20:36, 9°.44S×113°.97E, h22km, MLv3.7/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**0.98**	**11**	P	Pb	12 20 53.4	-0.9
JAGI				S	Sb	12 21 07.7	+0.9
NBBI	**Negara**	**1.24**	**31**	P	Pn	12 20 58.2	+0.1
NBBI				S	Sn	12 21 14.5	+0.4
GMJI	**Gumukmas**	**1.27**	**336**	P	Pn	12 20 58.1	-0.3
IGBI	**Denpasar**	**1.31**	**62**	P	Pn	12 20 58.3	-0.8
SRBI	**Singaraja**	**1.82**	**42**	P	Pn	12 21 06.4	+0.4
KHKI	**Kahang-Kahang**	**1.94**	**57**	P	Pn	12 21 07.5	-0.2
KRKI	**Karangkates**	**1.97**	**310**	P	Pn	12 21 08.7	+0.7
KRKI				S	Sn	12 21 32.5	+0.4
MTNI	**Mataram**	**2.32**	**70**	P	Pn	12 21 13.3	+0.5
KMMI	**Kalianget**	**2.38**	**360**	P	Pn	12 21 15.5	+1.8
PWJI	**Pagerwojo**	**2.56**	**303**	P	Pn	12 21 16.1	-0.1
SJI	**Sawahan**	**2.76**	**308**	P	Pn	12 21 19.4	+0.5
PCJI	**Pacitan**	**3.02**	**294**	P	Pn	12 21 23.6	+1.0
UGM	**Wanagama**	**3.73**	**294**	P	Pn	12 21 33.3	+1.0
BMNI	**Bima**	**4.75**	**80**	P	Pn	12 21 46.4	+0.1

*IDC **20** 12:21:28.9±2.8, 23°.43N×90°.70E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/25, mbtmp3.3/4, Error ellipse: s-maj=83.1km s-min=27.6km az=64.0*
*NEIC **20** 12:21:30.4±1.9, 23°.46N×90°.73E, h10km, Error ellipse: s-maj=48.6km s-min=12.5km az=63.0*
NEIC Felt [III] at Dhaka.

ISC 20 12:21:31.1±4.4, 23°.5N±0°.1×90°.8E±0°.3, h12km±21km, n6, σ0°.64/7, mb3.3/3, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.56**	**46**	*e*PKP	**Pg**	12 21 42.0	0.0
LSA	**Lhasa**	**6.18**	**3**	Pn	**Pn**	12 23 02.2	-0.1
LSA				*e*Sn	**Sn**	12 24 12.7	-0.3
CMAR	**Chiang Mai Arr**	**9.10**	**122**	Pn	**Pn**	12 23 42.2	-0.2
	baz=300,slow=13,SNR=3.1						
MKAR	**Makanchi Array**	**24.23**	**346**	P	**P**	12 26 47.5	-0.2
	0.6nm,0.8s,mb3.1,baz=165,slow=9.8,SNR=5.3						
SONM	**Songino Array**	**27.28**	**23**	P	**P**	12 27 16.4	+1.1
	0.3nm,0.5s,mb3.1,baz=213,slow=8.7,SNR=3.3						
WRA	**Warramunga Arr**	**60.54**	**132**	P	**P**	12 31 41.4	-0.2
	0.9nm,1.2s,mb3.8,baz=325,slow=7.1,SNR=3.4						

*IDC **20** 12:35:11.0±1.2, 33°.37N×46°.12E, h0km, mb3.9/10, mb1 3.9/12, mb1mx3.8/25, mbtmp3.9/12, ML3.9/1, Error ellipse: s-maj=25.1km s-min=20.6km az=32.0*
*THR **20** 12:35:13.1±0.3, 33°.63N×45°.84E, h18km, ML3.8*
*NEIC **20** 12:35:13.0, 33°.48N×45°.86E, h4km, mb4.5/8, ML3.8(THR), MN4.0(TEH), After TEH.*
*TEH **20** 12:35:13.7, 33°.48N×45°.86E, h4km*
*KISR **20** 12:35:14.2±0.7, 33°.32N×46°.29E, h34km±951km, ML3.5*
*CSEM **20** 12:35:14.7±0.1, 33°.58N×45°.94E, h10km, mb4.4/9, Error ellipse: s-maj=3.9km s-min=3.3km az=36.0*
*SGS **20** 12:35:16.6, 33°.59N×46°.06E, h16km*

ISC 20 12:35:15.2±0.9, 33°.58N±0°.03×45°.95E±0°.04, h13km±6km, n164, σ0°.93/181, mb4.1/19, 6D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**0.91**	**34**	Pg	**Pg**	12 35 32.2	-0.6
IGHG				Sg	**Sg**	12 35 44.2	-0.5
IGHG	**Ghaleghazi**	**0.91**	**34**

UMR				eS	Sn	12 37 10.2	+0.2
NAY	**Al-Naaiem**	**4.45**	**165**	eP	Pn	12 36 23.2	+0.8
NAY				eS	Sn	12 37 14.7	+0.6
NAY				AML	AML	12 37 15.1	
comp=Z,29nm,0.3s							
NAY	**Al-Naaiem**	**4.45**	**165**	eP	Pn	12 36 23.2	+0.8
NAY				eS	Sn	12 37 14.7	+0.6
GHVR	**GHOM**	**4.53**	**77**	ePn	Pn	12 36 23.5	0.0
GHVR				AML	AML	12 37 20.1	
comp=N,94nm,1.1s							
GHVR				eSg	Sg	12 37 34.4	-6.2
GHVR				AML	AML	12 37 42.5	
comp=E,79nm,0.7s							
GHVR	**GHOM**	**4.53**	**77**	ePn	Pn	12 36 23.5	+0.1
KBD	**Kabd**	**4.63**	**161**	eP	Pn	12 36 25.2	+0.3
KBD				eS	Sn	12 37 18.4	-0.2
KBD				AML	AML	12 37 20.8	
comp=Z,36nm,0.4s							
KBD	**Kabd**	**4.63**	**161**	eP	Pn	12 36 25.2	+0.3
KBD				eS	Sn	12 37 18.4	-0.2
IKLH	**Kolahrood**	**4.71**	**92**	Pn	Pn	12 36 26.7	+0.7
IKLH	**Kolahrood**	**4.71**	**92**	ePn	Pn	12 36 26.4	+0.4
IKLH				e		12 37 28.4	
comp=Z,875nm,0.2s							
IKLH	**Kolahrood**	**4.71**	**92**	ePn	Pn	12 36 26.4	+0.4
IHRS	**Heris**	**4.81**	**10**	Pn	Pn	12 36 28.4	+1.1
IHRS	**Heris**	**4.81**	**10**	ePn	Pn	12 36 28.2	+0.9
IHRS				e		12 36 50.4	
comp=Z,413nm,0.3s							
RDF	**Al-Radifah**	**4.83**	**163**	eP	Pn	12 36 28.3	+0.7
RDF				eS	Sn	12 37 23.7	+0.2
RDF				AML	AML	12 37 25.6	
comp=Z,111nm,0.4s							
RDF	**Al-Radifah**	**4.83**	**163**	eP	Pn	12 36 28.3	+0.6
RDF				eS	Sn	12 37 23.7	+0.2
CHTH	**Charan**	**4.85**	**60**	ePn	Pn	12 36 28.1	+0.2
CHTH	**Charan**	**4.85**	**60**	ePn	Pn	12 36 28.1	+0.2
IVRN	**Varamin**	**4.99**	**72**	ePn	Pn	12 36 29.8	+0.1
IVRN				ePn	Pn	12 36 30.0	+0.3
IVRN				e		12 36 30.7	
comp=Z,1μm,0.1s							
IVRN	**Varamin**	**4.99**	**72**	ePn	Pn	12 36 30.0	+0.3
QRN	**Al-Qurain**	**5.10**	**160**	eP	Pn	12 36 31.7	+0.3
IMRD	**Marand**	**5.13**	**358**	ePn	Pn	12 36 33.1	+1.4
IMRD				e		12 37 00.0	
comp=Z,601nm,0.2s							
IMRD	**Marand**	**5.13**	**358**	ePn	Pn	12 36 33.1	+1.4
IGAR	**Gharneh**	**5.25**	**101**	ePn	Pn	12 36 33.3	-0.1
IGAR				e		12 37 35.3	
comp=Z,1μm,0.1s							
DAMV	**Damavand**	**5.37**	**66**	ePn	Pn	12 36 35.8	+0.8
DAMV	**Damavand**	**5.37**	**66**	ePn	Pn	12 36 35.8	+0.8
IZEF	**Zefreh**	**5.39**	**95**	Pn	Pn	12 36 35.7	+0.4
IZEF	**Zefreh**	**5.39**	**95**	ePn	Pn	12 36 35.3	0.0
IZEF				e		12 37 02.8	
comp=Z,286nm,0.3s							
IZEF	**Zefreh**	**5.39**	**95**	ePn	Pn	12 36 35.3	0.0
IDMV	**Damavand**	**5.40**	**67**	Pn	Pn	12 36 35.6	+0.2
IDMV	**Damavand**	**5.40**	**67**	ePn	Pn	12 36 35.6	+0.2
IDMV				e		12 37 26.0	
comp=Z,417nm,0.3s							
IDMV	**Damavand**	**5.40**	**67**	ePn	Pn	12 36 35.6	+0.2
KFJS		**5.64**	**162**	P	Pn	12 36 38.3	-0.5
KFJS		**5.64**	**162**	P	Pn	12 36 38.3	-0.4
IFIR	**Firoozkooh**	**5.98**	**68**	ePn	Pn	12 36 43.5	+0.2
IFIR	**Firoozkooh**	**5.98**	**68**	ePn	Pn	12 36 43.5	+0.2
ASYS		**6.21**	**193**	S	Sn	12 37 54.0	-3.5
ASYS		**6.21**	**193**	P	Pn	12 36 46.5	0.0
ASYS		**6.21**	**193**	P	Pn	12 36 46.5	-0.1
ISHM	**Shahmirzad**	**6.44**	**68**	Pn	Pn	12 36 51.1	+1.4
ISHM	**Shahmirzad**	**6.44**	**68**	ePn	Pn	12 36 51.2	+1.4
ISHM	**Shahmirzad**	**6.44**	**68**	ePn	Pn	12 36 51.2	+1.4
ISAD	**Sadrabad**	**6.72**	**102**	ePn	Pn	12 36 53.6	0.0
ISAD	**Sadrabad**	**6.72**	**102**	ePn	Pn	12 36 53.6	0.0
IPAR	**Pars**	**7.10**	**120**	Pn	Pn	12 36 57.8	-1.0
IPAR	**Pars**	**7.10**	**120**	ePn	Pn	12 36 57.9	-0.9
IPAR				e		12 38 22.5	
comp=Z,348nm,0.3s							
IPAR	**Pars**	**7.10**	**120**	ePn	Pn	12 36 57.9	-0.9
ISRV	**Sarvestan**	**7.41**	**122**	Pn	Pn	12 37 02.4	-0.6
ISRV	**Sarvestan**	**7.41**	**122**	e	Pn	12 37 08.9	+5.8
comp=Z,646nm,0.1s							
ISRV				ePn	Pn	12 37 02.5	-0.5
IMEH	**Mehriz**	**7.64**	**104**	Pn	Pn	12 37 05.7	-0.4
IMEH	**Mehriz**	**7.64**	**104**	e	Pn	12 37 06.9	+0.7
comp=Z,148nm,0.1s							
IMEH				ePn	Pn	12 37 05.9	-0.2
BOQSS		**8.24**	**158**	P	Pn	12 37 14.1	-0.3
BRTR	**Keskin Array B**	**11.63**	**305**	Pn	Pn	12 38 00.5	-0.3
baz=302,slow=11,SNR=2.7							
BRTR	**Keskin Array B**	**11.63**	**305**	Pn	Pn	12 38 00.5	-0.4
ABKAR	**Akbulak array**	**18.80**	**29**	eP	Pn	12 39 34.0	-0.8
comp=Z,1.3nm,0.6s							
ABKAR	**Akbulak array**	**18.80**	**29**	eP	Pn	12 39 34.0	-0.8
comp=Z,1.3nm,0.6s							
AKTK	**Aktyubinsk**	**19.04**	**24**	P	Pn	12 39 35.4	-2.2
AKTK	**Aktyubinsk**	**19.04**	**24**	P	Pn	12 39 35.4	-2.2
AKTO	**Aktyubinsk**	**19.04**	**24**	P	Pn	12 39 35.4	-2.2
comp=Z,0.3nm,0.3s,baz=161,slow=8.7,SNR=4.6							
MLR	**Muntele Rosu**	**19.43**	**314**	↓↓P	Px	12 39 54.9	
VOIR		**19.94**	**313**	↓P	Pn	12 39 49.4	+0.9
BURAR	**Bucovina Array**	**20.99**	**318**	↓↓P	P	12 39 59.3	+1.1
BURAR	**Bucovina Array**	**20.99**	**318**	↓↓P	P	12 39 59.3	+1.1
BUR08	**Bucovina Ar. S**	**21.02**	**318**	eP	P	12 39 59.5	+1.1
BUR08	**Bucovina Ar. S**	**21.02**	**318**	eP	P	12 39 59.5	+1.1
AKASG	**Malin Array Be**	**21.05**	**329**	P	P	12 39 58.2	-0.6
comp=Z,1.7nm,0.4s,mb3.7,baz=140,slow=9.8,SNR=11							
AKASG	**Malin Array Be**	**21.05**	**329**	P	P	12 39 58.2	-0.6
AKASG	**Malin Array Be**	**21.05**	**329**	P	P	12 39 58.2	-0.5
BVAR	**Borovoye Array**	**26.13**	**35**	P	P	12 40 47.7	-1.0
comp=Z,0.3nm,0.4s,mb3.1,baz=327,slow=42,SNR=3.5							
BVAR	**Borovoye Array**	**26.13**	**35**	P	P	12 40 47.7	-1.0
PGF	**Pioggiola**	**30.24**	**298**	eP	P	12 41 26.1	+0.5
PGF	**Pioggiola**	**30.24**	**298**	eP	P	12 41 26.1	+0.5
MKAR	**Makanchi Array**	**30.46**	**53**	P	P	12 41 26.5	-0.9
comp=Z,0.4nm,0.3s,mb3.6,baz=231,slow=1.6,SNR=11							
MKAR	**Makanchi Array**	**30.46**	**53**	P	P	12 41 26.5	-0.9
MKAR	**Makanchi Array**	**30.46**	**53**	P	P	12 41 26.5	-0.9
FINES	**FINESS Array B**	**30.68**	**341**	P	P	12 41 28.2	-1.1
comp=Z,0.7nm,0.5s,mb3.7,baz=148,slow=14,SNR=5.8							
FINES	**FINESS Array B**	**30.68**	**341**	P	P	12 41 28.2	-1.1
FINES	**FINESS Array B**	**30.68**	**341**	P	P	12 41 28.2	-1.0
JOF	**Joensuu**	**30.78**	**347**	ep	P	12 41 29.5	-0.6
comp=Z,2.3nm,0.7s,mb4.1							
JOF	**Joensuu**	**30.78**	**347**	eP	P	12 41 29.5	-0.6
comp=Z,2.3nm,0.7s,mb4.1							
KAF	**Kangasniemi**	**31.18**	**342**	ep	P	12 41 31.7	-2.0
KAF	**Kangasniemi**	**31.18**	**342**	eP	P	12 41 31.7	-2.0
SBF	**Sospel**	**31.50**	**300**	eP	P	12 41 37.4	+0.7
SBF	**Sospel**	**31.50**	**300**	eP	P	12 41 37.4	+0.7
FRF	**La Foret Royal**	**32.05**	**300**	eP	P	12 41 41.6	+0.1
comp=Z,6.6nm,0.8s,mb4.2							
FRF	**La Foret Royal**	**32.05**	**300**	eP	P	12 41 41.6	+0.1
comp=Z,3.3nm,0.8s,mb4.2							
FRF	**La Foret Royal**	**32.05**	**300**	eP	P	12 41 41.6	+0.1
comp=Z,3.3nm,0.8s,mb4.2							
MBDF	**Montbardon**	**32.07**	**302**	eP	P	12 41 42.2	+0.5
comp=Z,8.7nm,0.6s,mb4.4							
MBDF	**Montbardon**	**32.07**	**302**	eP	P	12 41 42.2	+0.5
comp=Z,4.3nm,0.6s,mb4.5							
MBDF	**Montbardon**	**32.07**	**302**	eP	P	12 41 42.2	+0.5
comp=Z,4.3nm,0.6s,mb4.4							
LMR	**La Mourre**	**32.13**	**299**	eP	P	12 41 43.0	+0.8
LMR	**La Mourre**	**32.13**	**299**	eP	P	12 41 43.0	+0.8
BNI	**Bardonecchia**	**32.18**	**303**	eP	P	12 41 43.2	+0.6
comp=Z,5.7nm,0.6s,mb4.6							
BNI	**Bardonecchia**	**32.18**	**303**	eP	P	12 41 43.2	+0.6
comp=Z,5.7nm,0.6s,mb4.6							
LPG	**La Plagne**	**32.18**	**303**	eP	P	12 41 43.4	+0.7
comp=Z,5.6nm,0.5s,mb4.3							
LPG	**La Plagne**	**32.18**	**303**	eP	P	12 41 43.4	+0.7
comp=Z,2.8nm,0.5s,mb4.3							
LPG	**La Plagne**	**32.18**	**303**	eP	P	12 41 43.4	+0.7
comp=Z,2.8nm,0.5s,mb4.3							
LPL	**La Plagne**	**32.20**	**303**	eP	P	12 41 43.2	+0.4
comp=Z,4.9nm,0.6s,mb4.2							
LPL	**La Plagne**	**32.20**	**303**	eP	P	12 41 43.2	+0.4
comp=Z,2.5nm,0.6s,mb4.2							
LPL	**La Plagne**	**32.20**	**303**	eP	P	12 41 43.2	+0.4
comp=Z,2.5nm,0.6s,mb4.2							
HINF	**Hinteralfeld**	**32.51**	**308**	eP	P	12 41 45.0	-0.5
HINF	**Hinteralfeld**	**32.51**	**308**	eP	P	12 41 45.0	-0.5
ORIF	**Oris-en-Rattie**	**32.72**	**302**	eP	P	12 41 47.4	0.0
ORIF	**Oris-en-Rattie**	**32.72**	**302**	eP	P	12 41 47.4	0.0
CABF	**La Chapelle**	**32.80**	**305**	eP	P	12 41 48.5	+0.4
comp=Z,12nm,0.6s,mb4.7							
CABF	**La Chapelle**	**32.80**	**305**	eP	P	12 41 48.5	+0.4
comp=Z,5.8nm,0.6s,mb4.7							
CABF	**La Chapelle**	**32.80**	**305**	eP	P	12 41 48.5	+0.4
comp=Z,5.8nm,0.6s,mb4.7							
MEZF	**Maizieres J'vi**	**33.82**	**309**	eP	P	12 41 57.0	0.0
MEZF	**Maizieres J'vi**	**33.82**	**309**	eP	P	12 41 57.0	0.0
ZALV	**Zalesovo Beam**	**34.08**	**41**	P	P	12 41 57.7	-1.4
comp=Z,0.8nm,0.3s,mb4.1,baz=268,slow=12,SNR=4.5							
SMF	**Signal de Mont**	**34.34**	**305**	eP	P	12 42 01.3	-0.2
comp=Z,8.3nm,0.6s,mb4.5							
SMF	**Signal de Mont**	**34.34**	**305**	eP	P	12 42 01.3	-0.2
comp=Z,4.2nm,0.6s,mb4.5							
SMF	**Signal de Mont**	**34.34**	**305**	eP	P	12 42 01.3	-0.2
comp=Z,4.2nm,0.6s,mb4.5							
LOR	**Lormes**	**34.41**	**306**	eP	P	12 42 01.5	-0.6
LOR	**Lormes**	**34.41**	**306**	eP	P	12 42 01.5	-0.6
SSF	**Saint Saulge**	**34.62**	**306**	eP	P	12 42 03.7	-0.2
comp=Z,6.3nm,0.7s,mb4.3							
SSF	**Saint Saulge**	**34.62**	**306**	eP	P	12 42 03.7	-0.2
comp=Z,3.2nm,0.7s,mb4.4							
SSF	**Saint Saulge**	**34.62**	**306**	eP	P	12 42 03.7	-0.2
comp=Z,3.2nm,0.7s,mb4.3							
AVF	**Avril sur Loir**	**34.69**	**305**	eP	P	12 42 04.2	-0.3
AVF	**Avril sur Loir**	**34.69**	**305**	eP	P	12 42 04.2	-0.3
BGF	**Bois d'Agland**	**35.01**	**305**	eP	P	12 42 06.6	-0.7
BGF	**Bois d'Agland**	**35.01**	**305**	eP	P	12 42 06.6	-0.7
TCF	**Toulx Ste Croi**	**35.42**	**304**	eP	P	12 42 10.9	+0.1
TCF	**Toulx Ste Croi**	**35.42**	**304**	eP	P	12 42 10.9	+0.1
NOA	**NORSAR Array B**	**35.43**	**331**	P	P	12 42 12.4	+1.6
comp=Z,0.4nm,0.6s,mb3.5,baz=122,slow=7.5,SNR=3.1							
NOA	**NORSAR Array B**	**35.43**	**331**	P	P	12 42 12.4	+1.7
LDF	**La Druitiere**	**37.23**	**308**	eP	P	12 42 25.9	-0.4
LDF	**La Druitiere**	**37.23**	**308**	eP	P	12 42 25.9	-0.4
ARCES	**ARCESS Array B**	**37.77**	**348**	P	P	12 42 29.9	-0.7
comp=Z,3.7nm,1.0s,mb4.1,baz=162,slow=8.7,SNR=7.6							
ARCES	**ARCESS Array B**	**37.77**	**348**	P	P	12 42 29.9	-0.7
ROSF	**Rostrenen**	**39.30**	**307**	eP	P	12 42 43.1	-0.6
ROSF	**Rostrenen**	**39.30**	**307**	eP	P	12 42 43.1	-0.6
CMAR	**Chiang Mai Arr**	**49.44**	**94**	P	P	12 44 00.3	-4.9
comp=Z,0.7nm,0.7s,mb3.8,baz=306,slow=8.8,SNR=5.0							
KSRS	**Korea Array**	**64.78**	**61**	P	P	12 45 51.0	-2.5
comp=Z,0.9nm,0.4s,mb4.2,baz=280,slow=6.7,SNR=6.6							
BOSA	**Boshof**	**64.89**	**200**	P	P	12 45 51.6	-2.5
comp=Z,3.5nm,0.8s,mb4.4,baz=34,slow=3.6,SNR=3.9							

IDC 20 12:49:52.0±1.1, 5°.47S×153°.84E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.9/17, mbtmp3.9/9, Error ellipse: s-maj=41.7km s-min=20.4km az=100.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.38**	**225**	P	P	12 55 30.7	+0.5
0.8nm,0.5s,baz=57,slow=9.2,SNR=9.7							
STKA	**Stephens Creek**	**28.66**	**202**	P	P	12 55 49.5	-1.1
3.9nm,1.0s,baz=0.0,slow=7.1,SNR=4.6							
PETK	**Petropavlovsk-**	**58.45**	**3**	P	P	12 59 49.6	+0.2
2.1nm,0.8s,baz=177,slow=5.5,SNR=3.3							
CMAR	**Chiang Mai Arr**	**59.09**	**295**	P	P	12 59 54.6	0.0
0.5nm,0.7s,baz=126,slow=5.7,SNR=5.7							
SONM	**Songino Array**	**67.44**	**327**	P	P	13 00 49.0	-0.4
0.3nm,0.6s,baz=144,slow=5.9,SNR=2.9							
MKAR	**Makanchi Array**	**81.50**	**319**	P	P	13 02 11.2	-0.1
0.4nm,0.5s,baz=84,slow=7.9,SNR=5.5							
ZALV	**Zalesovo Beam**	**82.28**	**326**	P	P	13 02 16.8	+1.5
0.6nm,0.5s,baz=105,slow=6.0,SNR=3.6							
ILAR	**Eielson Array**	**82.39**	**22**	P	P	13 02 15.2	-0.3
0.2nm,0.7s,baz=249,slow=4.7,SNR=3.4							
QSPA	**South Pole Qui**	**84.50**	**180**	P	P	13 02 27.3	+1.0
2.4nm,0.8s,baz=194,slow=7.5,SNR=12							

IDC 20 12:51:41.4±2.0, 5°.94S×133°.59E, h0km, mb4.1/4, mb1 4.2/6, mb1mx3.9/15, mbtmp4.1/6, ML3.9/1, Error ellipse: s-maj=164.9km s-min=22.1km az=74.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.94**	**177**	Pn	Pn	12 54 59.9	-0.4
0.3nm,0.3s,baz=356,slow=13,SNR=26							
WRA				Sn	Sn	12 57 27.9	-8.0
0.4nm,0.3s,baz=357,slow=24,SNR=4.2							
ASAR	**Alice Springs**	**17.63**	**179**	P	Pn	12 55 48.1	-0.5
0.4nm,0.3s,baz=2.7,slow=11,SNR=23							
STKA	**Stephens Creek**	**26.87**	**165**	P	P	12 57 24.3	+0.3
0.9nm,0.3s,baz=322,slow=12,SNR=4.1							
MKAR	**Makanchi Array**	**69.35**	**325**	P	P	13 02 51.3	+0.4
1.0nm,0.7s,baz=112,slow=6.6,SNR=7.1							
ZALV	**Zalesovo Beam**	**72.27**	**332**	P	P	13 03 08.1	-0.4
1.9nm,0.7s,baz=113,slow=5.2,SNR=9.5							
BVAR	**Borovoye Array**	**79.11**	**327**	P	P	13 03 48.2	+0.5
1.3nm,0.8s,baz=101,slow=4.6,SNR=5.5							

*IDC **20** 13:13:02.3±9.2, 5°.24S×129°.72E, h194km±98km, mb3.5/5, mb1 3.9/7, mb1mx3.6/16, mbtmp3.7/7, Error ellipse: s-maj=46.4km s-min=22.1km az=50.0*
*ISCJB **20** 13:13:04.1±0.5, 5°.32S±0°.06×129°.83E±0°.09, h235km±6km, mb3.6/5, Error ellipse: s-maj=15.7km s-min=6.5km az=149.7*
*NEIC **20** 13:13:05.2±2.2, 5°.38S×129°.69E, h230km±24km, mb4.2/2, Error ellipse: s-maj=41.0km s-min=14.0km az=68.0*
*DJA **20** 13:13:10, 4°.76S×130°.02E, h193km, MLv3.7/4*
ISC 20 13:13:05.2±0.5, 5°.38S±0°.07×129°.75E±0°.09, h230km±6km, n17, σ1°19/24, mb3.6/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.86**	**10**	P	Pn	13 13 38.3	+1.0
TLE	**Tual**	**2.98**	**95**	P	Pn	13 13 58.8	+2.5
TLE				S	S	13 14 34.0	-2.5
NLAI	**Namlea**	**3.39**	**309**	P	Pn	13 14 03.6	+2.6
NLAI				S	S	13 14 43.8	-1.2
LBMI	**Labuha**	**5.22**	**334**	P	Pn	13 14 22.5	-0.7
LBMI				S	S	13 15 19.3	-5.8
KAKA	**Kakadu**	**7.75**	**160**	ePn	Pn	13 14 55.1	-0.2
80nm,0.5s							
KAKA				eS	S	13 16 17.4	-6.2
WRA	**Warramunga Arr**	**15.15**	**163**	P	Pn	13 16 26.7	-1.3
1.3nm,0.3s,baz=342,slow=11,SNR=56							
WRA				S	S	13 19 10.6	-5.0
1.0nm,0.3s,baz=331,slow=23,SNR=7.4							
WB2	**Warramunga Arr**	**15.15**	**163**	ePn	Pn	13 16 27.9	-0.1
WB2				eS	S	13 19 09.5	-6.2
ASAR	**Alice Springs**	**18.62**	**168**	P	P	13 17 07.8	+2.0
6.6nm,0.3s,baz=350,slow=11,SNR=912							
ASAR				S	S	13 20 25.0	-0.7
0.2nm,0.3s,baz=346,slow=19,SNR=8.6							
STKA	**Stephens Creek**	**28.60**	**159**	P	P	13 18 41.7	+1.4
2.0nm,0.4s,mb4.1,baz=344,slow=9.0,SNR=16							
STKA	**Stephens Creek**	**28.60**	**159**	eP	P	13 18 41.2	+0.9
0.4nm,0.5s,mb3.3							
CMAR	**Chiang Mai Arr**	**38.52**	**309**	P	P	13 20 05.5	-0.3
0.4nm,0.5s,mb3.2,baz=134,slow=6.6,SNR=3.3							
PETK	**Petropavlovsk-**	**62.87**	**19**	P	P	13 23 07.0	+0.3
2.3nm,0.9s,mb3.8,baz=172,slow=4.4,SNR=3.6							
MK31	**Makanchi Array**	**66.74**	**327**	eP	P	13 23 31.6	-0.1
MKAR	**Makanchi Array**	**66.74**	**327**	P	P	13 23 32.0	+0.3
0.6nm,0.4s,mb3.6,baz=131,slow=8.7,SNR=6.7							
ZALV	**Zalesovo Beam**	**70.03**	**334**	P	P	13 23 51.3	-0.7
0.4nm,0.3s,mb3.5,baz=111,slow=7.9,SNR=3.0							
ZALV	**Zalesovo Beam**	**70.03**	**334**	P	P	13 23 51.3	-0.7
QSPA	**South Pole Qui**	**84.59**	**180**	eP	P	13 25 11.7	-0.5

GUC 20 13:31:15.8±1.0, 32°.14S×70°.19W, h3km, MD3.6, ML2.8, 1C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**1.08**	**220**	eP	Pg	13 31 36.3	-0.2
ROCH				i S	Sg	13 31 52.3	+1.7
ROCH				AML	AML	13 31 53.7	
comp=N,719nm,0.5s							
PEL	**Peldehue**	**1.09**	**203**	↑iP	Pg	13 31 36.4	-0.2
PEL				i S	Sg	13 31 52.0	+1.3
PEL				AML	AML	13 31 53.4	
comp=E,755nm,0.7s							
CHNG	**Los Chungos**	**1.14**	**283**	i P	Pg	13 31 32.1	-5.6
CHNG				i S	Sg	13 31 48.1	-4.5
CHNG				AML	AML	13 31 54.0	
comp=E,107nm,0.2s							
CMCH	**Combarbala**	**1.19**	**324**	↓↓iP	Pg	13 31 37.9	-0.6
CMCH				i S	Sg	13 31 55.2	+1.3
CMCH				AML	AML	13 31 55.9	
comp=N,2μm,0.3s							
FCH	**Farellones**	**1.19**	**184**	↓↓iP	Pg	13 31 37.1	-1.5
FCH				i S	Sg	13 31 54.9	+0.9
FCH				AML	AML	13 31 57.6	
comp=E,423nm,0.2s							
CLCH	**Cerro Calan**	**1.29**	**193**	↓↓iP	Pg	13 31 39.1	-1.4
CLCH				i S	Sg	13 31 57.9	+0.7
CLCH				AML	AML	13 32 03.2	
comp=N,210nm,0.4s							
CLCH				AML	AML	13 32 04.0	
comp=E,327nm,0.7s							
ANTU	**Antumapu**	**1.47**	**195**	AML	AML	13 32 01.9	
comp=N,236nm,0.2s							
LMEL	**Las Melosas**	**1.70**	**180**	AML	AML	13 32 12.4	
comp=N,192nm,0.2s							

IDC 20 13:42:47.0±8.6, 14°.42N×145°.20E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/21, mbtmp3.2/3, Error ellipse: s-maj=318.3km s-min=32.1km az=80.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.78**	**198**	P	P	13 49 47.8	-0.3
0.3nm,0.6s,baz=20,slow=9.2,SNR=4.8							
ASAR	**Alice Springs**	**39.43**	**196**	P	P	13 50 19.3	+0.3
0.1nm,0.6s,baz=24,slow=8.8,SNR=4.1							
MKAR	**Makanchi Array**	**61.12**	**316**	P	P	13 53 03.2	+0.1
0.2nm,0.3s,baz=91,slow=8.5,SNR=5.3							

*TRN **20** 13:48:10.8, 15°.97N×62°.01W, h161km, MD3.8, M3.2(FDF)*
*ISCJB **20** 13:48:11.0±0.4, 16°.01N±0°.04×61°.76W±0°.08, h171km±3km, mb3.7/7, Error ellipse: s-maj=13.8km s-min=4.9km az=155.8*
*IDC **20** 13:48:11.8±0.6, 15°.98N×61°.75W, h164km±7km, mb3.5/7, mb1 3.8/8, mb1mx3.4/24, mbtmp3.5/8, Error ellipse: s-maj=23.9km s-min=9.6km az=52.0*
*NEIC **20** 13:48:11.7±0.7, 15°.98N×61°.77W, h164km±6km, Error ellipse: s-maj=18.9km s-min=10.6km az=50.0*
ISC 20 13:48:12.1±0.4, 16°.01N±0°.04×61°.79W±0°.08, h165km±3km, n40, σ0°87/56, mb3.7/7, 12C-3D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMG	**Houelmont**	**0.09**	**105**	↑eP	Pn	13 48 33.9	-0.1
HMG				↑eS	Sn	13 48 49.9	-0.7
SCG	**Saint Claude**	**0.11**	**77**	↑eP	Pn	13 48 34.1	+0.1
SCG				↑eS	Sn	13 48 50.3	-0.4
LZG	**Guadaloupe-1**	**0.14**	**5**	eP	Pn	13 48 33.7	-0.4
PHG	**Guadaloupe-2**	**0.14**	**86**	eP	Pn	13 48 34.1	+0.1
BCG	**Bois Riant Cap**	**0.18**	**64**	eP	Pn	13 48 34.3	+0.2
SFG	**Saint Francois**	**0.62**	**66**	eP	Pn	13 48 35.7	0.0
DWS	**Wesley**	**0.63**	**133**	eP	Pn	13 48 36.8	+1.0
DWS				eS	Sn	13 48 54.3	+0.4
DEG	**La Desirade**	**0.76**	**66**	eP	Pn	13 48 36.4	-0.2
MDN	**Morne-Daniel**	**0.78**	**151**	↑iP	Pn	13 48 37.4	+0.7
DPMT	**Pointe Michel**	**0.84**	**152**	↑iP	Pn	13 48 37.8	+0.7
DBCT	**Belle View Cho**	**0.85**	**150**	↑iP	Pn	13 48 38.2	+1.0
DLPL	**La Plaine**	**0.85**	**142**	↓↓iP	Pn	13 48 37.5	+0.3
DLPL				eS	Sn	13 48 57.0	+0.7
DFBT	**Forest Bistro**	**0.87**	**151**	↑iP	Pn	13 48 37.7	+0.4
DSHT	**Scott's Head**	**0.88**	**153**	↑iP	Pn	13 48 37.9	+0.5
DSTT	**Stowe**	**0.89**	**148**	↑iP	Pn	13 48 38.4	+0.9
DSTT				eS	Sn	13 48 57.4	+0.6
FDF	**Fort de France**	**1.41**	**154**	ePn	Pn	13 48 41.3	-0.6
FDF				eSn	Sn	13 49 09.6	+4.8
FDF	**Fort de France**	**1.41**	**154**	↑iP	Pn	13 48 41.5	-0.5
**

YURE	**YUREGIR**	**0.85**	**188**	*i* P	**Pb**	**14 32 41.3**	**-0.8**	**PTL**	**Penteli**	**1.83**	**103**
YURE				*i* S	**Sb**	**14 32 52.7**	**-0.4**	**PTL**	**Penteli**	**1.83**	**103**
GULE	**Gulek**	**0.89**	**244**	*i* P	**Pb**	**14 32 42.9**	**+0.2**	**PTL**	**Penteli**	**1.83**	**103**
GULE				*i* S	**Sb**	**14 32 55.0**	**+0.8**	**KZN**	**Kozani**	**1.84**	**4**
GULE	**Gulek**	**0.89**	**244**	*i* P	**Pb**	**14 32 42.9**	**+0.2**	**KZN**	**Kozani**	**1.84**	**4**
GULE				*i* S	**Sb**	**14 32 55.0**	**+0.9**	KZN			
SARI	**SarD1z-Kayseri**	**1.24**	**35**	*e*PG	**Pg**	**14 32 49.8**	**-0.2**	**KZN**	**Kozani**	**1.84**	**4**
SARI	**SarD1z-Kayseri**	**1.24**	**35**	*e*Pg	**Pg**	**14 32 49.8**	**-0.1**	KZN			

SKO ***20*** *14:35:27.4, 38°.30N×21°.61E, h0km*
IDC ***20*** *14:35:28.4±1.2, 38°.62N×21°.49E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.5/28, mbtmp3.6/9, ML3.4/2, Error ellipse: s-maj=26.2km s-min=20.4km az=143.0*
ATH ***20*** *14:35:28.8, 38°.50N×21°.61E, h18km±1km, ML3.4*
ISCJB ***20*** *14:35:28.8±0.3, 38°.49N±0°.01×21°.59E±0°.02, h5km±2km, mb3.5/8, Error ellipse: s-maj=2.6km s-min=2.1km az=44.8*
CSEM ***20*** *14:35:29.6±0.1, 38°.46N×21°.60E, h10km, ML3.4, Error ellipse: s-maj=3.2km s-min=2.6km az=45.0*
THE ***20*** *14:35:29.1, 38°.49N×21°.61E, h0km±1km, ML3.3/18, Error ellipse: s-maj=1.0km s-min=0.4km az=201.0*
NEIC ***20*** *14:35:30.8, 38°.46N×21°.69E, h5km, ML3.4(ATH), After ATH.*

ISC 20 14:35:29.6±0.3, 38°.47N±0°.02×21°.60E±0°.02, h5km±2km, n188, σ1°.06/257, mb3.5/8, 6C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.24**	**142**	*e*PB	**Pg**	**14 35 34.6**	**+0.3**
UPR				*e*SB	**Sg**	**14 35 39.5**	**+2.0**
UPR	**University Cam**	**0.24**	**142**	P	**Pg**	**14 35 34.5**	**+0.2**
UPR				S	**Sg**	**14 35 38.1**	**+0.6**
UPR	**University Cam**	**0.24**	**142**	*e*Pb	**Pg**	**14 35 34.6**	**+0.3**
UPR				S	**Sg**	**14 35 38.1**	**+0.6**
UPR				*e*Sb	**Sg**	**14 35 39.5**	**+2.0**
EFP	**Efpalio**	**0.25**	**101**	*e*PB	**Pg**	**14 35 34.2**	**-0.2**
EFP				*e*SB	**Sg**	**14 35 38.2**	**+0.5**
EFP	**Efpalio**	**0.25**	**101**	P	**Pg**	**14 35 34.3**	**-0.1**
EFP				S	**Sg**	**14 35 38.2**	**+0.5**
EFP	**Efpalio**	**0.25**	**101**	*e*Pb	**Pg**	**14 35 34.2**	**-0.2**
EFP				S	**Sg**	**14 35 38.2**	**+0.5**
LAKA	**Lakka**	**0.38**	**128**	P	**Pg**	**14 35 36.6**	**-0.3**
LAKA				S	**Sg**	**14 35 41.8**	**-0.1**
LAKA	**Lakka**	**0.38**	**128**	P	**Pg**	**14 35 36.6**	**-0.3**
LAKA				S	**Sg**	**14 35 41.8**	**-0.1**
TRIZ	**Trizonia**	**0.39**	**106**	P	**Pg**	**14 35 36.5**	**-0.6**
TRIZ				S	**Sg**	**14 35 42.4**	**+0.2**
TRIZ	**Trizonia**	**0.39**	**106**	P	**Pg**	**14 35 36.5**	**-0.6**
TRIZ				S	**Sg**	**14 35 42.4**	**+0.2**
RLS	**Riolos of Patr**	**0.43**	**194**	P	**Pg**	**14 35 37.9**	**+0.1**
RLS	**Riolos of Patr**	**0.43**	**194**	*e*PB	**Pg**	**14 35 38.3**	**+0.5**
RLS	**Riolos of Patr**	**0.43**	**194**	P	**Pg**	**14 35 37.9**	**+0.1**
RLS	**Riolos of Patr**	**0.43**	**194**	*e*Pb	**Pg**	**14 35 38.3**	**+0.5**
KALE	**Kalithea**	**0.43**	**101**	P	**Pg**	**14 35 37.2**	**-0.8**
KALE				S	**Sg**	**14 35 44.3**	**+0.7**
KALE	**Kalithea**	**0.43**	**101**	P	**Pg**	**14 35 37.2**	**-0.8**
KALE				S	**Sg**	**14 35 44.3**	**+0.7**
EVR	**Evrytania**	**0.47**	**21**	*e*PB	**Pg**	**14 35 37.9**	**-0.8**
EVR				*e*SB	**Sg**	**14 35 44.3**	**-0.6**
EVR	**Evrytania**	**0.47**	**21**	*e*Pb	**Pg**	**14 35 37.9**	**-0.8**
EVR				*e*Sb	**Sg**	**14 35 44.3**	**-0.6**
KFL	**Anninata**	**0.73**	**241**	P	**Pg**	**14 35 43.4**	**-0.2**
KFL				S	**Sg**	**14 35 54.1**	**+1.0**
KFL	**Anninata**	**0.73**	**241**	P	**Pg**	**14 35 43.4**	**-0.2**
KFL				S	**Sg**	**14 35 54.1**	**+1.0**
DSF	**Desfina**	**0.73**	**95**	P	**Pg**	**14 35 42.0**	**-1.7**
DSF				S	**Sg**	**14 35 53.9**	**+0.7**
DSF	**Desfina**	**0.73**	**95**	P	**Pg**	**14 35 42.0**	**-1.7**
DSF				S	**Sg**	**14 35 53.9**	**+0.7**
AGG	**Agios Georgios**	**0.79**	**46**	P	**Pg**	**14 35 43.8**	**-1.0**
AGG	**Agios Georgios**	**0.79**	**46**	*e*PN	**Pg**	**14 35 43.8**	**-1.0**
AGG				*e*SN	**Sg**	**14 35 55.0**	**-0.1**
AGG	**Agios Georgios**	**0.79**	**46**	P	**Pg**	**14 35 43.4**	**-1.4**
AGG				S	**Sg**	**14 35 55.7**	**+0.6**
AGG	**Agios Georgios**	**0.79**	**46**	P	**Pg**	**14 35 43.4**	**-1.4**
AGG				S	**Sg**	**14 35 55.7**	**+0.6**
GUR	**Goura**	**0.80**	**132**	*e*PB	**Pg**	**14 35 43.8**	**-1.1**
GUR				*e*SN	**Sg**	**14 35 56.0**	**+0.8**
GUR	**Goura**	**0.80**	**132**	P	**Pg**	**14 35 44.3**	**-0.6**
GUR				S	**Sg**	**14 35 55.8**	**+0.6**
GUR	**Goura**	**0.80**	**132**	*e*Pb	**Pg**	**14 35 43.8**	**-1.1**
GUR	**Goura**	**0.80**	**132**	P	**Pg**	**14 35 44.3**	**-0.6**
GUR				*e*Sn	**Sg**	**14 35 56.0**	**+0.8**
LKD2	**Lefkada island**	**0.80**	**294**	P	**Pg**	**14 35 44.1**	**-0.8**
LKD2				S	**Sg**	**14 35 56.9**	**+1.6**
LKD2	**Lefkada island**	**0.80**	**294**	P	**Pg**	**14 35 44.1**	**-0.8**
LKD2				S	**Sg**	**14 35 56.9**	**+1.6**
VLS	**Valsamata**	**0.84**	**250**	*e*PB	**Pg**	**14 35 44.8**	**-1.0**
VLS				*e*SN	**Sg**	**14 35 58.5**	**+1.7**
VLS	**Valsamata**	**0.84**	**250**	P	**Pg**	**14 35 44.7**	**-1.1**
VLS				S	**Sg**	**14 35 58.5**	**+1.7**
VLS	**Valsamata**	**0.84**	**250**	*e*Pb	**Pg**	**14 35 44.8**	**-1.0**
VLS				S	**Sg**	**14 35 58.5**	**+1.7**
LKR	**Lokris**	**1.11**	**80**	P	**Pg**	**14 35 49.9**	**-1.1**
LKR	**Lokris**	**1.11**	**80**	*e*PN	**Pg**	**14 35 49.6**	**-1.4**
LKR	**Lokris**	**1.11**	**80**	P	**Pg**	**14 35 49.0**	**-2.0**
LKR				S	**Sg**	**14 36 06.6**	**+1.2**
LKR	**Lokris**	**1.11**	**80**	*e*Pn	**Pg**	**14 35 49.6**	**-1.4**
LKR	**Lokris**	**1.11**	**80**	P	**Pg**	**14 35 49.9**	**-1.1**
LKR				S	**Sg**	**14 36 06.6**	**+1.2**
ATAL	**Atalanti**	**1.14**	**78**	P	**Pg**	**14 35 49.8**	**-1.6**
ATAL				S	**Sg**	**14 36 07.1**	**+0.9**
ATAL	**Atalanti**	**1.14**	**78**	P	**Pg**	**14 35 49.8**	**-1.6**
ATAL				S	**Sg**	**14 36 07.1**	**+0.9**
THL	**Klokotos Trika**	**1.14**	**17**	*e*PN	**Pg**	**14 35 50.2**	**-1.2**
THL	**Klokotos Trika**	**1.14**	**17**	P	**Pg**	**14 35 49.6**	**-1.8**
THL				S	**Sg**	**14 36 06.9**	**+0.7**
THL	**Klokotos Trika**	**1.14**	**17**	P	**Pg**	**14 35 49.6**	**-1.8**
THL	**Klokotos Trika**	**1.14**	**17**	*e*Pn	**Pg**	**14 35 50.2**	**-1.2**
THL				S	**Sg**	**14 36 06.9**	**+0.7**
LTK	**Loutraki**	**1.17**	**112**	*e*PN	**Pn**	**14 35 51.3**	**-1.2**
LTK				*e*SN	**Sn**	**14 36 07.6**	**-1.2**
LTK	**Loutraki**	**1.17**	**112**	P	**Pg**	**14 35 51.1**	**-0.9**
LTK				S	**Sg**	**14 36 08.3**	**+1.1**
LTK	**Loutraki**	**1.17**	**112**	*e*Pn	**Pn**	**14 35 51.3**	**-1.2**
LTK				*e*Sn	**Sn**	**14 36 07.6**	**-1.2**
LTK				S	**Sg**	**14 36 08.3**	**+1.1**
VLX	**Vlachokerasia**	**1.26**	**150**	*e*PN	**Pn**	**14 35 52.5**	**-1.3**
VLX				*e*SN	**Sn**	**14 36 11.8**	**+0.7**
VLX	**Vlachokerasia**	**1.26**	**150**	P	**Pg**	**14 35 52.8**	**-1.0**
VLX				S	**Sg**	**14 36 11.2**	**+1.0**
VLX	**Vlachokerasia**	**1.26**	**150**	*e*Pn	**Pn**	**14 35 52.5**	**-1.3**
VLX	**Vlachokerasia**	**1.26**	**150**	P	**Pg**	**14 35 52.8**	**-1.0**
VLX				S	**Sg**	**14 36 11.2**	**+1.0**
VLX				*e*Sn	**Sn**	**14 36 11.8**	**+0.7**
JAN	**Janina**	**1.32**	**334**	P	**Pn**	**14 35 54.3**	**-0.3**
JAN	**Janina**	**1.32**	**334**	P	**Pn**	**14 35 54.3**	**-0.3**
ITM	**Ithomi**	**1.32**	**168**	P	**Pn**	**14 35 54.6**	**0.0**
ITM	**Ithomi**	**1.32**	**168**	*e*PN	**Pn**	**14 35 54.1**	**-0.5**
ITM	**Ithomi**	**1.32**	**168**	P	**Pn**	**14 35 53.4**	**-1.2**
ITM				S	**Sb**	**14 36 12.9**	**+1.0**
ITM	**Ithomi**	**1.32**	**168**	P	**Pn**	**14 35 53.4**	**-1.2**
ITM	**Ithomi**	**1.32**	**168**	*e*Pn	**Pn**	**14 35 54.1**	**-0.5**
ITM				S	**Sb**	**14 36 12.9**	**+1.0**
IGT	**Igoumenitsa**	**1.45**	**317**	P	**Pn**	**14 35 56.4**	**+0.1**
IGT	**Igoumenitsa**	**1.45**	**317**	P	**Pn**	**14 35 55.9**	**-0.4**
IGT				S	**Sb**	**14 36 15.9**	**+0.3**
IGT	**Igoumenitsa**	**1.45**	**317**	P	**Pn**	**14 35 55.9**	**-0.4**
IGT				S	**Sb**	**14 36 15.9**	**+0.3**
NEO	**Neokhori**	**1.52**	**56**	P	**Pn**	**14 35 57.5**	**+0.2**
NEO	**Neokhori**	**1.52**	**56**	*e*PN	**Pn**	**14 35 56.9**	**-0.4**
NEO	**Neokhori**	**1.52**	**56**	*e*Pn	**Pn**	**14 35 56.9**	**-0.4**
NEO	**Neokhori**	**1.52**	**56**	P	**Pn**	**14 35 57.5**	**+0.2**
DID	**Didima**	**1.62**	**126**	P	**Pn**	**14 35 58.6**	**-0.1**
DID				S	**Sn**	**14 36 20.7**	**+0.8**
DID	**Didima**	**1.62**	**126**	P	**Pn**	**14 35 58.6**	**-0.1**
DID				S	**Sn**	**14 36 20.7**	**+0.8**
NAIG	**Nisos Aigina**	**1.66**	**115**	*e*PN	**Pn**	**14 35 59.1**	**-0.1**
NAIG	**Nisos Aigina**	**1.66**	**115**	*e*Pn	**Pn**	**14 35 59.1**	**-0.1**
ATH	**Athens Observa**	**1.74**	**106**	*e*PN	**Pn**	**14 35 59.7**	**-0.7**
ATH	**Athens Observa**	**1.74**	**106**	*e*Pn	**Pn**	**14 35 59.7**	**-0.7**
LIT	**Litokhoron**	**1.77**	**23**	P	**Pn**	**14 36 00.3**	**-0.5**
LIT				S	**Sn**	**14 36 23.8**	**+0.2**
LIT	**Litokhoron**	**1.77**	**23**	P	**Pn**	**14 36 00.3**	**-0.5**
LIT				S	**Sn**	**14 36 23.8**	**+0.2**
ATHU	**Athens Univers**	**1.80**	**106**	P	**Pn**	**14 36 01.0**	**-0.2**
ATHU	**Athens Univers**	**1.80**	**106**	P	**Pn**	**14 36 01.0**	**-0.2**
PTL	**Penteli**	**1.83**	**103**	P	**Pn**	**14 36 02.2**	**+0.5**
PTL	**Penteli**	**1.83**	**103**	*e*PN	**Pn**	**14 36 01.6**	**-0.1**
PTL	**Penteli**	**1.83**	**103**	*e*Pn	**Pn**	**14 36 01.6**	**-0.1**
PTL	**Penteli**	**1.83**	**103**	P	**Pn**	**14 36 02.2**	**+0.5**
KZN	**Kozani**	**1.84**	**4**	P	**Pn**	**14 36 03.1**	**+1.4**
KZN	**Kozani**	**1.84**	**4**	P	**Pn**	**14 36 01.0**	**-0.7**
KZN				S	**Sn**	**14 36 26.4**	**+1.1**
KZN	**Kozani**	**1.84**	**4**	P	**Pn**	**14 36 01.0**	**-0.7**
KZN				S	**Sn**	**14 36 26.4**	**+1.1**
VLY	**Voula,Athens**	**1.84**	**109**	P	**Pn**	**14 36 01.0**	**-0.8**
VLY	**Voula,Athens**	**1.84**	**109**	*e*PB	**Pn**	**14 36 01.1**	**-0.7**
VLY	**Voula,Athens**	**1.84**	**109**	P	**Pn**	**14 36 01.0**	**-0.8**
LSK	**Leskovik**	**1.84**	**336**	*i* PN	**Pn**	**14 36 03.4**	**+1.6**
LSK				*i* SN	**Px**	14 36 09.4	
LSK	**Leskovik**	**1.84**	**336**	*i* Pn	**Pn**	**14 36 03.4**	**+1.6**
AOS	**Alonnisos**	**1.92**	**68**	P	**Pn**	**14 36 02.0**	**-0.8**
AOS				S	**Sn**	**14 36 27.8**	**+0.6**
AOS	**Alonnisos**	**1.92**	**68**	P	**Pn**	**14 36 02.0**	**-0.8**
AOS				S	**Sn**	**14 36 27.8**	**+0.6**
NEST	**Nestorio**	**1.98**	**348**	P	**Pn**	**14 36 03.5**	**-0.3**
NEST				S	**Sn**	**14 36 29.9**	**+0.9**
NEST	**Nestorio**	**1.98**	**348**	P	**Pn**	**14 36 03.5**	**-0.3**
NEST				S	**Sn**	**14 36 29.9**	**+0.9**
VLI	**Veliai**	**2.05**	**148**	P	**Pn**	**14 36 06.7**	**+2.0**
VLI	**Veliai**	**2.05**	**148**	*e*PN	**Pn**	**14 36 06.3**	**+1.6**
VLI	**Veliai**	**2.05**	**148**	*e*Pn	**Pn**	**14 36 06.3**	**+1.6**
VLI	**Veliai**	**2.05**	**148**	P	**Pn**	**14 36 06.7**	**+2.0**
KBN	**Korca**	**2.24**	**344**	*i* PN	**Pg**	**14 36 11.9**	**-0.5**
KBN				*i* SN	**Sg**	**14 36 44.2**	**+2.7**
KBN	**Korca**	**2.24**	**344**	*i* Pn	**Pg**	**14 36 11.9**	**-0.6**
PLG	**Polygyros**	**2.38**	**36**	P	**Pn**	**14 36 08.5**	**-0.7**
PLG	**Polygyros**	**2.38**	**36**	*e*PB	**Pn**	**14 36 08.7**	**-0.5**
PLG	**Polygyros**	**2.38**	**36**	P	**Pn**	**14 36 08.1**	**-1.1**
PLG	**Polygyros**	**2.38**	**36**	P	**Pn**	**14 36 08.5**	**-0.7**
THE	**Thessaloniki**	**2.40**	**26**	P	**Pn**	**14 36 08.7**	**-0.8**
THE	**Thessaloniki**	**2.40**	**26**	P	**Pn**	**14 36 08.7**	**-0.8**
HORT	**Hortiatis**	**2.42**	**28**	P	**Pn**	**14 36 08.8**	**-0.9**
HORT	**Hortiatis**	**2.42**	**28**	P	**Pn**	**14 36 08.8**	**-0.9**
BIA	**Bitola**	**2.55**	**355**	*e*Pn	**Pn**	**14 36 12.7**	**+1.1**
GRG	**Griva**	**2.56**	**14**	P	**Pn**	**14 36 12.6**	**+1.0**
GRG	**Griva**	**2.56**	**14**	P	**Pn**	**14 36 11.4**	**-0.2**
GRG	**Griva**	**2.56**	**14**	P	**Pn**	**14 36 11.4**	**-0.2**
OUR	**Ouranopolis**	**2.62**	**44**	P	**Pn**	**14 36 13.1**	**+0.6**
OUR	**Ouranopolis**	**2.62**	**44**	P	**Pn**	**14 36 11.5**	**-1.0**
OUR				S	**Sn**	**14 36 45.3**	**+0.6**
OUR	**Ouranopolis**	**2.62**	**44**	P	**Pn**	**14 36 13.1**	**+0.6**
OUR				S	**Sn**	**14 36 45.3**	**+0.6**
SOH	**Sokhos**	**2.71**	**30**	P	**Pn**	**14 36 14.4**	**+0.7**
SOH	**Sokhos**	**2.71**	**30**	P	**Pn**	**14 36 13.0**	**-0.7**
SOH				S	**Sn**	**14 36 47.2**	**+0.4**
SOH	**Sokhos**	**2.71**	**30**	P	**Pn**	**14 36 14.4**	**+0.7**
SOH				S	**Sn**	**14 36 47.2**	**+0.4**
KRUS	**Krusevo**	**2.91**	**355**	*e*Pn	**Pn**	**14 36 17.2**	**+0.8**
SRS	**Serrai**	**3.06**	**30**	P	**Pn**	**14 36 18.8**	**+0.3**
SRS	**Serrai**	**3.06**	**30**	P	**Pn**	**14 36 18.2**	**-0.3**
SRS				S	**Sn**	**14 36 56.3**	**+0.9**
SRS	**Serrai**	**3.06**	**30**	P	**Pn**	**14 36 18.2**	**-0.3**
SRS				S	**Sn**	**14 36 56.3**	**+0.9**
LIA	**Limnos Island**	**3.13**	**62**	P	**Pn**	**14 36 19.6**	**+0.1**
LIA	**Limnos Island**	**3.13**	**62**	P	**Pn**	**14 36 19.6**	**+0.1**
NVR	**Nevrokopi**	**3.36**	**31**	P	**Pn**	**14 36 24.9**	**+2.2**
NVR	**Nevrokopi**	**3.36**	**31**	P	**Pn**	**14 36 24.9**	**+2.2**
KAVA	**Kavala**	**3.38**	**41**	P	**Pn**	**14 36 22.5**	**-0.4**
KAVA	**Kavala**	**3.38**	**41**	P	**Pn**	**14 36 22.5**	**-0.4**
APE	**Apeiranthos**	**3.42**	**113**	P	**Pn**	**14 36 25.7**	**+2.2**
APE	**Apeiranthos**	**3.42**	**113**	P	**Pn**	**14 36 23.3**	**-0.2**
APE	**Apeiranthos**	**3.42**	**113**	⇑*i*P	**Pn**	**14 36 24.1**	**+0.6**
APE	**Apeiranthos**	**3.42**	**113**	P	**Pn**	**14 36 23.3**	**-0.2**
CHOS	**Chios island**	**3.50**	**90**	P	**Pn**	**14 36 24.5**	**-0.1**
CHOS	**Chios island**	**3.50**	**90**	P	**Pn**	**14 36 24.5**	**-0.1**
KARN	**Karanos**	**3.58**	**148**	P	**Pn**	**14 36 26.3**	**+0.5**
KARN	**Karanos**	**3.58**	**148**	P	**Pn**	**14 36 26.3**	**+0.5**
PUK	**Puka**	**3.80**	**340**	*i* PN	**Pn**	**14 36 24.7**	**-4.0**
PUK	**Puka**	**3.80**	**340**	*i* Pn	**Pn**	**14 36 24.7**	**-4.0**
TAR1	**Taranto**	**3.92**	**303**	*e*Pn	**Pn**	**14 36 29.8**	**-0.5**
BCI	**Bajram Curri**	**4.06**	**344**	*i* PN	**Pn**	**14 36 36.4**	**+4.2**
BCI	**Bajram Curri**	**4.06**	**344**	*i* Pn	**Pn**	**14 36 36.4**	**+4.1**
VTS	**Vitosha**	**4.29**	**16**	P	**Pn**	**14 36 37.7**	**+2.2**
VTS	**Vitosha**	**4.29**	**16**	P	**Pn**	**14 36 35.7**	**+0.2**
VTS	**Vitosha**	**4.29**	**16**	⇓*i*P	**Pn**	**14 36 37.7**	**+2.2**
VTS	**Vitosha**	**4.29**	**16**	P	**Pn**	**14 36 35.7**	**+0.2**
BARS	**Barje**	**4.34**	**2**	⇑*i*Pn	**Pn**	**14 36 36.8**	**+0.6**
SG1	**Sgolgore (BA)**	**4.47**	**303**	*e*Pn	**Pn**	**14 36 37.7**	**-0.2**
CUC	**Castrocucco**	**4.74**	**290**	P	**Pn**	**14 36 43.5**	**+1.9**
CUC	**Castrocucco**	**4.74**	**290**	P	**Pn**	**14 36 43.5**	**+1.9**
CDT	**Castel del Mon**	**4.86**	**304**	*e*Pn	**Pn**	**14 36 42.7**	**-0.5**
DIVS	**Divibare**	**5.75**	**348**	⇑*i*Pn	**Pn**	**14 36 55.8**	**+0.3**
VAE	**Valguarnera**	**5.76**	**262**	Pn	**Pn**	**14 36 53.1**	**-2.6**
	1.8nm,0.3s,baz=83,slow=16,SNR=2.4						
VAE				Sn	**Sn**	**14 38 01.5**	**-0.6**
	0.7nm,0.3s,baz=104,slow=17,SNR=1.6						
VAE	**Valguarnera**	**5.76**	**262**	Pn	**Pn**	**14 36 53.1**	**-2.6**
VAE				Sn	**Sn**	**14 38 01.5**	**-0.6**
GZR	**Gura Zlata**	**6.97**	**7**	⇓*i*P	**Pn**	**14 37 11.1**	**-1.1**
GZR	**Gura Zlata**	**6.97**	**7**	⇓*i*P	**Pn**	**14 37 11.1**	**-1.1**
VOIR		**7.42**	**19**	⇓*i*P	**Pn**	**14 37 20.1**	**+1.7**
VOIR		**7.42**	**19**	⇓*i*P	**Pn**	**14 37 20.1**	**+1.7**
MLR	**Muntele Rosu**	**7.72**	**23**	⇑*i*P	**Pn**	**14 37 25.2**	**+2.6**
MLR	**Muntele Rosu**	**7.72**	**23**	⇑*i*P	**Pn**	**14 37 25.2**	**+2.6**
NVLJ	**Novalja**	**7.90**	**322**	*i* Pn	**Pn**	**14 37 23.8**	**-1.3**
NVLJ				Sn	**Sn**	**14 38 49.3**	**-5.4**
NVLJ	**Novalja**	**7.90**	**322**	*i* Pn	**Pn**	**14 37 23.7**	**-1.3**
PLOR	**Plostina**	**8.27**	**25**	⇓*i*P	**Pn**	**14 37 33.2**	**+3.1**
VRI	**Vrincioaia**	**8.31**	**26**	⇑*i*P	**Pn**	**14 37 33.8**	**+3.2**
TESR		**8.86**	**23**	⇓*i*P	**Pn**	**14 37 45.0**	**+6.9**
BR131	**Keskin Array S**	**9.45**	**79**	Pn	**Pn**	**14 37 46.2**	**0.0**
BR131	**Keskin Array S**	**9.45**	**79**	Pn	**Pn**	**14 37 46.2**	**0.0**
BRTR	**Keskin Array B**	**9.45**	**79**	Pn	**Pn**	**14 37 46.5**	**+0.3**
	0.2nm,0.3s,baz=258,slow=13,SNR=5.5						
BRTR	**Keskin Array B**	**9.45**	**79**	Pn	**Pn**	**14 37 46.5**	**+0.3**
PSZ	**Piszkesteto**	**9.52**	**353**	*e*Pn	**Pn**	**14 37 46.5**	**-0.7**
PSZ	**Piszkesteto**	**9.52**	**353**	*e*Pn	**Pn**	**14 37 46.5**	**-0.7**
DAVOX	**Davos/Dischmat**	**11.96**	**318**	Pn	**Pn**	**14 38 22.4**	**+1.7**
	0.3nm,0.3s,baz=135,slow=19,SNR=2.6						
DAVOX				Sn	**Sn**	**14 40 24.2**	**-10**
	0.1nm,0.3s,baz=0.0,slow=20,SNR=1.9						
DAVOX	**Davos/Dischmat**	**11.96**	**318**	Pn	**Pn**	**14 38 22.4**	**+1.8**
HFS	**Hagfors**	**22.25**	**350**	P	**P**	**14 40 25.1**	**-1.9**
	1.0nm,0.7s,mb3.4,baz=174,slow=16,SNR=5.2						
HFS	**Hagfors**	**22.25**	**350**	P	**P**	**14 40 25.1**	**-1.9**
FINES	**FINESS Array B**	**23.16**	**5**	P	**P**	**14 40 35.0**	**-1.6**
	0.7nm,0.7s,mb3.2,baz=170,slow=12,SNR=4.5						
FINES	**FINESS Array B**	**23.16**	**5**	P	**P**	**14 40 35.0**	**-1.6**
NB2	**NORSAR Subarra**	**23.51**	**347**	P	**P**	**14 40 36.5**	**-3.7**
	comp=Z,1.5nm,0.9s,mb3.4,baz=158,slow=11						
NOA	**NORSAR Array B**	**23.51**	**347**	P	**P**	**14 40 38.8**	**-1.5**
	comp=Z,0.6nm,0.7s,mb3.2,baz=159,slow=10.0,SNR=4.1						
NOA	**NORSAR Array B**	**23.51**	**347**	P	**P**	**14 40 38.8**	**-1.5**
NOA	**NORSAR Array B**	**23.51**	**347**	P	**P**	**14 40 38.8**	**-1.4**
EKA	**Eskdalemuir Ar**	**23.68**	**323**	P	**P**	**14 40 39.9**	**-2.1**
	comp=Z,2.3nm,0.9s,mb3.6,baz=121,slow=8.0,SNR=4.7						
EKA	**Eskdalemuir Ar**	**23.68**	**323**	P	**P**	**14 40 39.8**	**-2.2**
TORD	**Torodi Ar. Bea**	**30.80**	**220**	P	**P**	**14 41 47.1**	**+0.9**
	comp=Z,0.7nm,0.5s,mb3.7,baz=31,slow=9.5,SNR=3.1						
ARCES	**ARCESS Array B**	**31.19**	**3**	P	**P**	**14 41 47.6**	**-1.6**
	comp=Z,0.8nm,0.8s,mb3.6,baz=174,slow=10.0,SNR=3.3						
ARCES	**ARCESS Array B**	**31.19**	**3**	P	**P**	**14 41 47.7**	**-1.5**
MKAR	**Makanchi Array**	**44.43**	**59**	P	**P**	**14 43 40.0**	**-1.2**
	comp=Z,0.6nm,0.4s,mb3.6,baz=278,slow=7.3,SNR=20						
MKAR	**Makanchi Array**	**44.43**	**59**	P	**P**	**14 43 40.0**	**-1.2**
ZALV	**Zalesovo Beam**	**44.86**	**48**	P	**P**	**14 43 44.4**	**-0.2**
	comp=Z,1.0nm,0.5s,mb3.9,baz=275,slow=8.0,SNR=4.5						
ZALV	**Zalesovo Beam**	**44.86**	**48**	P	**P**	**14 43 44.3**	**-0.2**

ATH ***20*** *14:41:21.8, 38°.00N×21°.26E, h20km±3km, MD2.8/5*
CSEM ***20*** *14:41:21.8±0.2, 38°.01N×21°.25E, h24km±1km, MD2.8*
ISCJB ***20*** *14:41:22.4±0.5, 38°.03N±0°.04×21°.25E±0°.03, h23km±5km, Error ellipse: s-maj=6.4km s-min=3.8km az=4.7*
THE ***20*** *14:41:22.3, 38°.04N×21°.27E, h17km, ML2.0/7, Error ellipse: s-maj=0.9km s-min=0.3km az=189.0*

ISC 20 14:41:22.3±0.5, 38°.03N±0°.04×21°.26E±0°.03, h21km±5km, n32, σ0°.69/61, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**80**	*e*PB	**Pb**	**14 41 26.5**	**-0.7**
RLS				*e*SB	**Sb**	**14 41 29.9**	**-0.6**
RLS	**Riolos of Patr**	**0.17**	**80**	*e*Pb	**Pb**	**14 41 26.5**	**-0.7**
KFL	**Anninata**	**0.38**	**283**	P	**Pb**	**14 41 30.0**	**-0.4**
KFL				S	**Sb**	**14 41 36.3**	**+0.5**
KFL	**Anninata**	**0.38**	**283**	P	**Pb**	**14 41 30.0**	**-0.4**
KFL				S	**Sb**	**14 41 36.3**	**+0.5**
UPR	**University Cam**	**0.49**	**59**	*e*PN	**Pb**	**14 41 32.2**	**-0.1**
UPR	**University Cam**	**0.49**	**59**	P	**Pb**	**14 41 32.0**	**-0.3**
UPR				S	**Sb**	**14 41 38.6**	**-0.4**
UPR	**University Cam**	**0.49**	**59**	*e*Pn	**Pb**	**14 41 32.2**	**-0.1**
UPR				S	**Sb**	**14 41 38.6**	**-0.4**
VLS	**Valsamata**	**0.55**	**286**	*e*PN	**Pb**	**14 41 32.7**	**-0.5**
VLS				*e*SN	**Sb**	**14 41 41.6**	**+1.0**
VLS	**Valsamata**	**0.55**	**286**	P	**Pb**	**14 41 32.7**	**-0.5**
VLS				S	**Sb**	**14 41 41.5**	**+0.9**
VLS	**Valsamata**	**0.55**	**286**	P	**Pb**	**14 41 32.7**	**-0.5**
VLS				S	**Sb**	**14 41 41.5**	**+0.9**
LAKA	**Lakka**	**0.61**	**69**	P	**Pb**	**14 41 33.6**	**-0.7**
LAKA				S	**Sb**	**14 41 42.7**	**+0.3**
LAKA	**Lakka**	**0.61**	**69**	P	**Pb**	**14 41 33.6**	**-0.7**
LAKA				S	**Sb**	**14 41 42.7**	**+0.3**
EFP	**Efpalio**	**0.65**	**52**	*e*PB	**Pb**	**14 41 34.3**	**-0.7**
EFP				*e*SN	**Sb**	**14 41 44.4**	**+0.8**
EFP	**Efpalio**	**0.65**	**52**	P	**Pb**	**14 41 34.2**	**-0.8**
EFP				S	**Sb**	**14 41 44.3**	**+0.7**
EFP	**Efpalio**	**0.65

BDFB Brasilia 24.53 92 P **P** **14 48 22.2 +0.2**
PLCA Paso Flores 24.64 175 P **P** **14 48 22.4 -0.4**
comp=Z,14nm,0.8s,mb4.5,baz=352,slow=10,SNR=5.0
PLCA PcP PcP 14 51 59.4 -0.2
comp=Z,3.5nm,0.8s,baz=225,slow=2.7,SNR=4.2
PLCA Paso Flores 24.64 175 *e*P **P** **14 48 21.6 -1.1**
comp=Z,61nm,0.9s,mb5.1
PLCA LR LR
comp=Z,1μm,22.0s,MS4.4
PLCA Paso Flores 24.64 175 *e*P **P** **14 48 21.6 -1.2**
PLCA pmax pmax
comp=Z,61nm,0.9s
PLCA MLR MLR
comp=Z,1μm,22.0s
SDV Santo Domingo 25.03 7 *e*P **P** **14 48 26.7 +0.1**
comp=Z,64nm,0.8s,mb5.2
SDV *e*pP pP 14 48 38.3 +0.4
SDV LR LR
comp=Z,520nm,22.0s,MS4.0
BCIP Isla Barro Col 25.91 346 *e*P **P** **14 48 34.6 0.0**
comp=Z,280nm,1.4s,mb5.6
BCIP *e* 14 48 40.5
BCIP *e*pP pP 14 48 46.7 +0.8
BCIP LR LR
comp=Z,1μm,20.0s,MS4.4
JTS JuntasAbangare 28.60 336 P **P** **14 48 58.3 -0.4**
comp=Z,3.9nm,0.8s,mb4.2,baz=232,slow=12,SNR=2.5
JTS pP pP 14 49 10.3 +0.3
comp=Z,18nm,0.8s,baz=268,slow=4.6,SNR=9.5
JTS LR LR 15 00 25.2
comp=Z,2μm,20.6s,MS4.6,baz=168,slow=36
JTS JuntasAbangare 28.60 336 P **P** **14 48 58.3 -0.4**
JTS *PP pP 14 49 10.3 +0.3
JTS JuntasAbangare 28.60 336 P pP 14 49 11.1 +1.1
comp=Z,182nm,1.3s,SNR=5.6
GRGR Grenville 30.44 23 PFAKE 14 49 30.0 +15
GRGR LR LR
comp=Z,4μm,19.0s,MS5.0
TGUH Tegucigalpa,Un 32.94 335 *e*P **P** **14 49 36.4 -0.7**
comp=Z,161nm,1.3s,mb5.8
TGUH *e*pP pP 14 49 47.9 -0.5
TGUH LR LR
comp=Z,2μm,21.0s,MS4.7
MTDJ Mount Denham 34.38 353 *e*P **P** **14 49 46.6 -2.8**
comp=Z,324nm,1.0s,mb6.2
MTDJ *e*pP pP 14 50 02.2 +1.3
MTDJ *e*sP sP 14 50 07.2 +1.4
MTDJ LR LR
comp=Z,962nm,21.0s,MS4.5
SJG San Juan 34.80 12 P **P** **14 49 51.8 -1.3**
comp=Z,47nm,0.7s,mb5.5,baz=106,slow=4.6,SNR=12
SJG San Juan 34.80 12 *e*P **P** **14 49 51.5 -1.7**
comp=Z,135nm,1.2s,mb5.8
SJG *e*pP pP 14 50 03.5 -1.0
SJG LR LR
comp=Z,877nm,20.0s,MS4.5
SJG San Juan 34.80 12 *e*P **P** **14 49 51.5 -1.6**
SJG *e*PP pP 14 50 03.5 -1.1
SJG pmax pmax
comp=Z,135nm,1.2s
SJG MLR MLR
comp=Z,877nm,20.0s
RPN Rapa Nui 34.93 246 P **P** **14 49 52.9 -1.4**
comp=Z,167nm,0.9s,mb6.0,baz=78,slow=2.5,SNR=5.9
RPN LR LR 15 00 21.9
comp=Z,3μm,19.8s,MS5.0,baz=42,slow=30
RPN Rapa Nui 34.93 246 P **P** **14 49 52.9 -1.4**
SDDR Presa de Saban 34.97 4 *e*P **P** **14 49 53.2 -1.3**
comp=Z,36nm,1.1s,mb5.2
SDDR pP pP 14 50 05.2 -0.8
SDDR LR LR
comp=Z,1μm,20.0s,MS4.6
ANWB Willy Bob 35.53 19 *e*P **P** **14 49 56.3 -3.1**
comp=Z,135nm,0.6s,mb6.0
ANWB *e*pP pP 14 50 12.5 +1.7
ANWB LR LR
comp=Z,1μm,20.0s,MS4.7
GTBY Guantanamo Bay 35.88 357 P **P** **14 50 01.0 -1.3**
comp=Z,32nm,1.0s,mb5.2
GTBY *e*pP pP 14 50 13.7 -0.2
GTBY LR LR
comp=Z,804nm,19.0s,MS4.5
RCBR Riachuelo 38.25 79 *e*P **P** **14 50 22.9 +0.2**
comp=Z,12nm,0.7s,mb4.7
RCBR *e*pP pP 14 50 38.7 +4.5
RCBR LR LR
comp=Z,5μm,19.0s,MS5.3
USHA Ushuaia 38.81 175 P **P** **14 50 26.6 -0.2**
comp=Z,9.5nm,0.7s,mb4.6,baz=319,slow=0.8,SNR=5.4
TEIG Tepich 38.94 338 P **P** **14 50 28.8 +0.5**
comp=Z,6.6nm,0.8s,mb4.4,baz=151,slow=5.5,SNR=5.3
TEIG Tepich 38.94 338 *e*P **P** **14 50 26.8 -1.5**
comp=Z,217nm,1.2s,mb5.8
TEIG *e*pP pP 14 50 38.7 -1.2
TEIG LR LR
comp=Z,1μm,21.0s,MS4.8
CMIG Matias Romero 39.17 327 P **P** **14 50 33.0 +2.8**
comp=Z,6.4nm,0.7s,mb4.4,baz=139,slow=7.4,SNR=7.3
DWPF Disney 44.65 350 *e*P **P** **14 51 13.5 -1.4**
comp=Z,49nm,1.1s,mb5.2
BRAL Brewton 48.66 344 P **P** **14 51 45.5 -0.7**
comp=Z,62nm,0.7s,mb5.8
BRAL *e*pP pP 14 51 57.6 -0.5
BRAL LR LR
comp=Z,874nm,22.0s,MS4.7
BBSR BB Station 48.97 10 *e*P **P** **14 51 46.8 -1.8**
comp=Z,46nm,0.9s,mb5.5
BBSR *e*pP pP 14 52 04.2 +3.8
BBSR LR LR
comp=Z,625nm,20.0s,MS4.6
KVTX Kingsville 49.45 331 P **P** **14 51 50.7 -1.6**
comp=Z,150nm,0.9s,mb6.0
KVTX *e*pP pP 14 52 04.5 +0.3
KVTX *e*sP sP 14 52 12.0 +3.0
KVTX LR LR
comp=Z,969nm,22.0s,MS4.8
GOGA Godfrey 50.18 349 *e*P **P** **14 51 56.5 -1.3**
comp=Z,99nm,1.0s,mb5.8
GOGA *e*pP pP 14 52 08.1 -1.6
GOGA LR LR
comp=Z,1μm,22.0s,MS4.9
GOGA Godfrey 50.18 349 *e*P **P** **14 51 56.5 -1.3**
GOGA *e*PP pP 14 52 08.1 -1.6
GOGA pmax pmax
comp=Z,99nm,1.0s,mb5.8
GOGA MLR MLR
comp=Z,1μm,22.0s,MS4.9
CNNC Cliffs of the 51.27 355 PFAKE 14 52 20.0 +14
CNNC LR LR
comp=Z,547nm,21.0s,MS4.5
TKL Tuckaleechee C 52.42 349 *e*P **P** **14 52 14.1 -0.4**
TKL *e*pP pP 14 52 24.8 -1.7
TKL Tuckaleechee C 52.42 349 *e*P **P** **14 52 14.1 -0.5**
TKL *e*PP pP 14 52 24.8 -1.7
JCT Junction City 52.81 331 ⇑pP pP 14 52 28.2 -1.3
baz=53
JCT Junction City 52.81 331 *e*P **P** **14 52 14.0 -3.5**
comp=Z,32nm,1.1s,mb5.2
JCT *e*pP pP 14 52 27.9 -1.6
JCT LR LR
comp=Z,349nm,20.0s,MS4.4
JCT Junction City 52.81 331 *e*P **P** **14 52 14.0 -3.5**
JCT *e*PP pP 14 52 27.9 -1.6
JCT pmax pmax
comp=Z,32nm,1.1s,mb5.2
JCT MLR MLR
comp=Z,349nm,20.0s,MS4.4
PTCN Pitcairn Islan 53.38 251 PFAKE 14 52 30.0 +8.0
PTCN LR LR
comp=Z,2μm,20.0s,MS5.2
BLA Blacksburg 53.46 353 P **P** **14 52 21.6 -0.6**
comp=Z,112nm,1.3s,mb5.6
BLA *e*pP pP 14 52 33.3 -0.9
BLA *e*sP sP 14 52 41.6 +2.6
BLA LR LR
comp=Z,861nm,21.0s,MS4.8
BLA Blacksburg 53.46 353 P **P** **14 52 21.6 -0.6**
BLA *e*PP pP 14 52 33.3 -0.8
BLA pmax pmax
comp=Z,112nm,1.3s,mb5.6
BLA MLR MLR
comp=Z,861nm,21.0s,MS4.8
628A Black Gap, Mar 53.49 328 ⇑P **P** **14 52 22.8 +0.2**
baz=54,SNR=12
628A ⇑pP pP 14 52 34.0 -0.5
baz=54

WVT Waverly 53.72 346 *e*P **P** **14 52 21.8 -2.3**
comp=Z,42nm,1.1s,mb5.3
WVT *e*pP pP 14 52 33.2 -2.9
WVT Waverly 53.72 346 *e*P **P** **14 52 21.8 -2.3**
WVT *e*PP pP 14 52 33.2 -2.9
WVT pmax pmax
comp=Z,42nm,1.1s,mb5.3
627A Terlingua Ranc 53.73 327 ⇓P **P** **14 52 23.9 -0.4**
baz=54,SNR=5.5
627A ⇓pP pP 14 52 35.2 -1.0
baz=54
TXAR Lajitas Array 53.77 327 P **P** **14 52 23.9 -0.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=148,slow=8.9,SNR=19
TXAR LR LR 15 14 21.0
comp=Z,735nm,19.7s,MS4.8,baz=310,slow=35
TXAR Lajitas Array 53.77 327 P **P** **14 52 23.9 -0.7**
MIAR Mount Ida 53.90 339 *e*P **P** **14 52 21.9 -3.5**
comp=Z,42nm,0.9s,mb5.4
MIAR *e*pP pP 14 52 34.8 -2.6
MIAR *e*sP sP 14 52 43.6 +1.4
MIAR LR LR
comp=Z,395nm,20.0s,MS4.5
MIAR Mount Ida 53.90 339 *e*P **P** **14 52 21.9 -3.5**
MIAR *e*PP pP 14 52 34.8 -2.6
MIAR pmax pmax
comp=Z,42nm,0.9s,mb5.4
MIAR MLR MLR
comp=Z,395nm,20.0s,MS4.5
528A Cox Ranch, San 53.99 328 ⇓P **P** **14 52 26.0 -0.2**
baz=54,SNR=8.6
528A ⇑pP pP 14 52 37.0 -1.1
baz=54
626A Big Bend Ranch 54.20 327 ⇓P **P** **14 52 27.8 +0.1**
baz=54,SNR=17
626A ⇑pP pP 14 52 38.7 -0.9
baz=54
527A Woodward Ranch 54.40 328 ⇓P **P** **14 52 28.5 -0.6**
baz=54,SNR=13
526A Mary Lane Ranc 54.58 327 ⇓P **P** **14 52 30.2 -0.3**
baz=55,SNR=14
526A ⇓pP pP 14 52 41.5 -0.9
baz=55
427A Hayter Ranch, 54.86 328 ⇑P **P** **14 52 32.2 -0.3**
baz=55
427A ⇑pP pP 14 52 43.3 -1.2
baz=55
328A Wristen Ranch, 54.99 329 ⇑P **P** **14 52 32.9 -0.5**
baz=55,SNR=8.6
328A ⇓pP pP 14 52 44.3 -1.2
baz=55
426A McDonald Obser 55.03 328 ⇑P **P** **14 52 33.5 -0.2**
baz=55,SNR=13
426A ⇑pP pP 14 52 45.2 -0.5
baz=55
WCI Wyandotte Cave 55.40 348 *e*P **P** **14 52 34.0 -2.2**
comp=Z,203nm,1.1s,mb6.1
WCI *e*pP pP 14 52 46.0 -2.2
WCI Wyandotte Cave 55.40 348 *e*P **P** **14 52 34.0 -2.2**
WCI *e*PP pP 14 52 46.1 -2.1
WCI pmax pmax
comp=Z,203nm,1.1s,mb6.1
326A Caldwell Ranch 55.52 328 ⇓P **P** **14 52 36.6 -0.7**
baz=56,SNR=9.9
326A ⇓pP pP 14 52 48.1 -1.2
baz=56
425A Indio Mountain 55.62 327 ⇓P **P** **14 52 37.4 -0.5**
baz=56
425A ⇓pP pP 14 52 48.8 -1.2
baz=56
227A Bennet, Jal 55.74 329 ⇑PP pP 14 52 50.2 -0.7
baz=56
WMOK Wichita Mounta 56.01 335 *e*P **P** **14 52 38.0 -2.7**
comp=Z,26nm,1.1s,mb5.2
WMOK *e*pP pP 14 52 50.7 -2.0
WMOK LR LR
comp=Z,345nm,21.0s,MS4.4
WMOK Wichita Mounta 56.01 335 *e*P **P** **14 52 38.0 -2.7**
WMOK *e*PP pP 14 52 50.7 -2.0
WMOK pmax pmax
comp=Z,26nm,1.1s,mb5.2
WMOK MLR MLR
comp=Z,345nm,21.0s,MS4.4
325A Bean Ranch, Si 56.08 327 P **P** **14 52 40.4 -0.8**
baz=56,SNR=6.7
325A ⇑pP pP 14 52 51.9 -1.3
baz=56
226A Malaga, Loving 56.19 329 ⇓P **P** **14 52 42.2 +0.2**
baz=56,SNR=12
226A ⇓pP pP 14 52 53.4 -0.6
baz=56
127A Arkansas Junct 56.32 330 ⇓pP pP 14 52 54.1 -0.8
baz=56
324A Moseley Ranch, 56.40 327 ⇑P **P** **14 52 42.9 -0.6**
baz=56,SNR=9.4
324A ⇑pP pP 14 52 54.2 -1.4
baz=56
MNTX Cornudas Mount 56.55 327 P **P** **14 52 43.4 -1.2**
baz=57,SNR=10
MNTX pP pP 14 52 54.8 -1.9
baz=57
225A Deer Hill, Car 56.59 328 ⇑P **P** **14 52 44.6 -0.3**
baz=57,SNR=13
225A ⇑pP pP 14 52 56.0 -0.9
baz=57
126A Clayton Basin, 56.62 329 ⇓P **P** **14 52 45.2 +0.1**
baz=57,SNR=9.1
126A ⇓pP pP 14 52 56.1 -1.0
baz=57
SSPA Standing Stone 56.63 356 *e*P **P** **14 52 44.8 -0.2**
comp=Z,68nm,1.3s,mb5.5
SSPA *e*pP pP 14 52 56.3 -0.7
ACSO Alum Creek Sta 56.77 351 *e*P **P** **14 52 44.4 -1.6**
comp=Z,99nm,0.9s,mb5.8
ACSO *e*pP pP 14 52 56.3 -1.7
ACSO LR LR
comp=Z,913nm,22.0s,MS4.8
Z27A Tatum 56.77 330 ⇓P **P** **14 52 45.2 -0.9**
baz=57
Z27A ⇑pP pP 14 52 56.8 -1.4
baz=57
224A Cornudas Mount 56.92 328 ⇑P **P** **14 52 46.3 -1.0**
baz=57,SNR=10
224A ⇑pP pP 14 52 58.0 -1.3
baz=57
125A Gardner Draw, 56.94 329 ⇓P **P** **14 52 46.9 -0.5**
baz=57,SNR=11
125A ⇓pP pP 14 52 58.3 -1.2
baz=57
MSTX Muleshoe 57.10 331 ⇑P **P** **14 52 46.7 -1.8**
baz=57,SNR=10
MSTX ⇓pP pP 14 52 59.2 -1.3
baz=57
Z26A Caprock 57.10 330 ⇓P **P** **14 52 47.6 -1.0**
baz=57,SNR=7.7
Z26A ⇑pP pP 14 52 59.2 -1.3
baz=57
Y27A Causey 57.21 331 ⇑P **P** **14 52 48.6 -0.7**
baz=57,SNR=12
Y27A ⇑pP pP 14 52 60.0 -1.4
baz=57
AMTX Amarillo 57.37 333 PFAKE 14 53 00.0 +10
AMTX LR LR
comp=Z,103nm,20.0s,MS3.9
124A Stringfield Ra 57.38 328 ⇓P **P** **14 52 50.0 -0.5**
baz=58,SNR=11
124A ⇓pP pP 14 53 01.7 -0.8
baz=58
Z25A Roswell 57.47 329 ⇓P **P** **14 52 51.2 +0.1**
baz=58,SNR=9.9
Z25A ⇑pP pP 14 53 01.9 -1.3
baz=58
Y26A Elida 57.56 330 ⇓pP pP 14 53 03.9 +0.1
baz=58
222A Williams Famil 57.77 326 ⇑pP pP 14 53 04.8 -0.6
baz=58
X27A F and S Farms, 57.81 331 ⇑pP pP 14 53 06.4 +0.9
baz=58
Z24A Sheeppen Canyo 57.84 329 ⇓P **P** **14 52 53.1 -0.6**
baz=58,SNR=9.8
Z24A ⇓pP pP 14 53 04.9 -0.9
baz=58
RKT Rikitea 57.95 253 *e*S **S** **15 00 51.7 -0.7**
comp=Z,1μm,30.2s
RKT *e*LR LR 15 09 55.8
comp=Z,3μm,27.8s,baz=96
320A Kipp Ranch, An 57.96 325 ⇓P **P** **14 52 54.8 +0.2**
baz=58,SNR=7.8

320A ⇓pP pP 14 53 06.1 -0.6
baz=58
Y25A Mesa, Roswell 57.98 329 ⇑P **P** **14 52 55.0 +0.3**
baz=58,SNR=8.3
221A Mesquite Ranch 58.06 326 ⇑pP pP 14 53 07.4 +0.1
baz=58
X26A CR and CF Fran 58.07 331 ⇓P **P** **14 52 55.9 +0.6**
baz=58,SNR=7.1
X26A ⇑pP pP 14 53 06.9 -0.4
baz=58
W27A Bowe Ranch, En 58.14 332 ⇑pP pP 14 53 07.5 -0.4
baz=58
122A Conniff Cattle 58.18 327 ⇓pP pP 14 53 08.3 +0.1
baz=58
Z23A Rita Site, Whi 58.22 328 ⇑P **P** **14 52 56.2 -0.2**
baz=58,SNR=8.0
Z23A ⇑pP pP 14 53 07.8 -0.7
baz=58
HDIL Hopedale 58.28 346 *e*P **P** **14 52 54.2 -2.5**
comp=Z,62nm,1.0s,mb5.6
HDIL *e*pP pP 14 53 06.1 -2.7
HDIL LR LR
comp=Z,516nm,20.0s,MS4.6
Y24A Capitan 58.35 329 ⇑pP pP 14 53 08.3 -1.0
baz=58
220A Playas Peak, P 58.39 325 ⇓P **P** **14 52 57.7 +0.1**
baz=58,SNR=7.0
220A ⇑pP pP 14 53 08.9 -0.7
baz=58
319A Douglas 58.41 324 ⇑pP pP 14 53 09.2 -0.6
baz=58
121A Cookes Peak, D 58.47 326 ⇓P **P** **14 52 58.6 +0.5**
baz=59,SNR=9.9
121A ⇑pP pP 14 53 09.7 -0.4
baz=59
Z22A Elephant Butte 58.59 327 ⇓P **P** **14 52 59.1 +0.1**
baz=59,SNR=9.1
Z22A ⇓pP pP 14 53 10.5 -0.6
baz=59
Y23A Lovelace Mesa, 58.66 328 ⇑pP pP 14 53 11.1 -0.4
baz=59
318A Bisbee 58.86 324 ⇑P **P** **14 53 01.0 +0.1**
baz=59,SNR=13
318A ⇑pP pP 14 53 12.3 -0.6
baz=59
219A White Tail Can 58.87 325 ⇑P **P** **14 53 00.8 -0.1**
baz=59,SNR=9.8
219A ⇓pP pP 14 53 12.2 -0.8
baz=59
AAM Ann Arbor 58.90 351 P **P** **14 53 00.5 -0.4**
comp=Z,26nm,0.8s,mb5.3
AAM *e*pP pP 14 53 10.9 -2.1
AAM LR LR
comp=Z,1μm,21.0s,MS5.0
AAM Ann Arbor 58.90 351 P **P** **14 53 00.5 -0.4**
AAM *e*PP pP 14 53 10.9 -2.1
AAM pmax pmax
comp=Z,26nm,0.8s,mb5.3
AAM MLR MLR
comp=Z,1μm,21.0s,MS5.0
W25A X Bar L Ranch, 58.92 331 ⇑P **P** **14 53 01.9 +0.7**
baz=59,SNR=12
120A U Bar Ranch, L 58.94 325 ⇑P **P** **14 53 01.4 0.0**
baz=59,SNR=6.6
120A ⇓pP pP 14 53 13.0 -0.4
baz=59
Z21A St. Cloud Mine 59.01 327 ⇓pP pP 14 53 13.8 -0.2
baz=59,SNR=6.4
KSU1 Kansas State U 59.05 339 P **P** **14 52 58.8 -3.3**
comp=Z,46nm,1.1s,mb5.4
KSU1 *e*pP pP 14 53 12.0 -2.1
KSU1 LR LR
comp=Z,460nm,21.0s,MS4.6
Y22A Socorro 59.13 328 ⇑P **P** **14 53 03.0 +0.4**
baz=59,SNR=6.9
Y22A ⇑pP pP 14 53 14.4 -0.3
baz=59
218A Dragoon 59.29 324 ⇑P **P** **14 53 04.0 +0.1**
baz=59,SNR=8.0
218A ⇑pP pP 14 53 15.3 -0.6
baz=59
Z20A Nine Sixteen R 59.35 326 ⇑P **P** **14 53 04.1 -0.1**
baz=60,SNR=8.0
Z20A ⇑pP pP 14 53 16.4 +0.1
baz=60
119A Ashpeak Ranch, 59.47 325 ⇑pP pP 14 53 16.9 -0.3
baz=60
V25A Rancho No Teng 59.50 331 ⇓P **P** **14 53 06.3 +1.1**
baz=60,SNR=9.2
V25A ⇑pP pP 14 53 17.1 -0.2
baz=60
Y21A Point of Rocks 59.55 327 ⇓P **P** **14 53 05.4 -0.2**
baz=60,SNR=9.6
Y21A ⇓pP pP 14 53 18.0 +0.3
baz=60
U26A Atchley Ranch, 59.55 332 ⇑P **P** **14 53 04.9 -0.7**
baz=60
217A Green Valley 59.58 323 ⇓P **P** **14 53 05.7 -0.1**
baz=60,SNR=6.0
217A ⇓pP pP 14 53 17.1 -0.9
baz=60
X22A Bernardo 59.60 328 ⇑pP pP 14 53 18.6 +0.5
baz=60
ANMO Albuquerque 59.67 329 *e*P **P** **14 53 05.8 -0.7**
comp=Z,31nm,1.1s,mb5.2
ANMO *e*pP pP 14 53 17.5 -1.1
ANMO LR LR
comp=Z,577nm,19.0s,MS4.7
ANMO Albuquerque 59.67 329 *e*P **P** **14 53 05.8 -0.6**
ANMO *e*PP pP 14 53 17.5 -1.0
ANMO pmax pmax
comp=Z,31nm,1.1s
ANMO MLR MLR
comp=Z,577nm,19.0s
W23A Werner Place, 59.69 329 ⇓pP pP 14 53 18.7 0.0
baz=60
118A Homack Ranch, 59.74 325 ⇓P **P** **14 53 06.9 0.0**
baz=60
118A ⇓pP pP 14 53 18.4 -0.7
baz=60
NCB Newcomb 59.82 359 PFAKE 14 53 20.0 +13
NCB LR LR
comp=Z,2μm,22.0s,MS5.3
Y20A Horse Springs, 59.84 327 ⇓P **P** **14 53 08.0 +0.4**
baz=60,SNR=7.4
Y20A ⇓pP pP 14 53 19.2 -0.6
baz=60
Z19A T-Link Ranch, 59.85 326 ⇓pP pP 14 53 19.9 +0.1
baz=60
U25A Circle Dot Ran 59.86 331 ⇓P **P** **14 53 08.8 +1.1**
baz=60,SNR=6.1
U25A ⇓pP pP 14 53 19.1 -0.7
baz=60
CBKS Cedar Bluff 59.93 336 pP pP 14 53 19.7 -0.5
baz=60
X21A Alamocita Cree 59.95 327 ⇓P **P** **14 53 07.9 -0.4**
baz=60,SNR=5.3
X21A ⇓pP pP 14 53 20.4 -0.1
baz=60
TUC Tucson 59.96 324 *e*P **P** **14 53 08.4 0.0**
comp=Z,12nm,0.9s,mb4.9
TUC *e*pP pP 14 53 19.2 -1.3
TUC LR LR
comp=Z,976nm,20.0s,MS4.9
TUC Tucson 59.96 324 *e*P **P** **14 53 08.4 0.0**
TUC *e*PP pP 14 53 19.2 -1.4
TUC pmax pmax
comp=Z,12nm,0.9s,mb4.9
TUC MLR MLR
comp=Z,976nm,20.0s,MS4.9
W22A Albuquerque 59.97 329 ⇑pP pP 14 53 20.9 +0.3
baz=60
216A Three Points, 60.12 323 ⇓P **P** **14 53 09.8 +0.2**
baz=60
216A ⇑pP pP 14 53 20.9 -0.7
baz=60
117A Oracle 60.12 324 ⇓P **P** **14 53 09.0 -0.6**
baz=60,SNR=7.6
117A ⇓pP pP 14 53 20.8 -0.9
baz=60
V23A Ortiz Mt. (NFS 60.17 330 ⇑P **P** **14 53 10.1 +0.3**
baz=60
V23A ⇑pP pP 14 53 21.9 0.0
baz=60
Y19A Nutrioso 60.35 326 ⇓P **P** **14 53 11.8 +0.8**
baz=60,SNR=9.2
Y19A ⇑pP pP 14 53 23.4 +0.2
baz=60

X20A	**Quemado**	**60.39**	**327**	⇑P	**P**	**14 53 12.0 +0.7**
	baz=60,SNR=7.3					
X20A				⇓pP	pP	14 53 23.5 0.0
	baz=60					
W21A	**San Fidel**	**60.40**	**328**	⇑pP	pP	14 53 23.6 +0.1
	baz=61					
T25A	**Trinidad**	**60.47**	**332**	⇑P	**P**	**14 53 12.2 +0.4**
	baz=61,SNR=6.6					
T25A				⇓pP	pP	14 53 23.6 -0.4
	baz=61					
LONY	**Lake Ozonia**	**60.47**	**359**	PFAKE		14 53 20.0 +8.3
LONY				LR	LR	
	comp=Z,718nm,20.0s,MS4.8					
Z17A	**San Carlos Hig**	**60.51**	**325**	⇑pP	pP	14 53 23.6 -0.8
	baz=61					
SCIA	**State Center**	**60.56**	**343**	*e*P	**P**	**14 53 11.8 -0.6**
	comp=Z,42nm,1.1s,mb5.5					
SCIA				*e*pP	pP	14 53 22.1 -2.3
SCIA				LR	LR	
	comp=Z,457nm,21.0s,MS4.6					
Y18A	**Canyon Day Jun**	**60.63**	**325**	⇑P	**P**	**14 53 12.8 -0.3**
	baz=61,SNR=7.2					
Y18A				⇓pP	pP	14 53 24.4 -0.8
	baz=61					
U23A	**El Rito**	**60.64**	**330**	⇓pP	pP	14 53 25.1 -0.1
	baz=61					
V22A	**San Miguel Ran**	**60.66**	**329**	⇑P	**P**	**14 53 13.5 +0.3**
	baz=61					
V22A				⇓pP	pP	14 53 25.5 +0.2
	baz=61					
116A	**Eloy**	**60.67**	**323**	⇑pP	pP	14 53 24.3 -1.1
	baz=61					
T24A	**Torres, Weston**	**60.71**	**331**	⇓pP	pP	14 53 25.4 -0.2
	baz=61					
X19A	**St. Johns**	**60.72**	**326**	⇑P	**P**	**14 53 14.2 +0.6**
	baz=61,SNR=6.1					
X19A				⇑pP	pP	14 53 25.8 0.0
	baz=61					
JFWS	**Jewell Farm**	**60.74**	**346**	*e*P	**P**	**14 53 12.3 -1.2**
	comp=Z,72nm,1.4s,mb5.6					
JFWS				*e*pP	pP	14 53 23.5 -2.2
JFWS				LR	LR	
	comp=Z,491nm,20.0s,MS4.7					
JFWS	**Jewell Farm**	**60.74**	**346**	*e*P	**P**	**14 53 12.3 -1.3**
JFWS				*e**PP	pP	14 53 23.5 -2.2
JFWS				pmax	pmax	
	comp=Z,72nm,1.4s,mb5.6					
JFWS				MLR	MLR	
	comp=Z,491nm,20.0s,MS4.7					
W20A	**Ramah**	**60.84**	**327**	⇓P	**P**	**14 53 15.1 +0.7**
	baz=61,SNR=8.7					
W20A				⇓pP	pP	14 53 26.6 0.0
	baz=61					
S25A	**Robets Cordova**	**60.91**	**332**	⇓P	**P**	**14 53 14.9 +0.1**
	baz=61,SNR=5.5					
S25A				⇑pP	pP	14 53 26.5 -0.5
	baz=61					
U22A	**Llaves**	**61.00**	**330**	⇑P	**P**	**14 53 16.6 +1.1**
	baz=61,SNR=5.9					
Y17A	**Roosevelt**	**61.02**	**325**	⇓pP	pP	14 53 27.5 -0.3
	baz=61					
115A	**Sonoran Desert**	**61.07**	**323**	⇓pP	pP	14 53 27.7 -0.5
	baz=61					
Z16A	**Peralta Trail,**	**61.08**	**324**	⇓pP	pP	14 53 27.7 -0.5
	baz=61					
T23A	**Casias Ranch,**	**61.14**	**331**	⇓P	**P**	**14 53 18.3 +1.9**
	baz=61					
T23A				⇓pP	pP	14 53 28.7 +0.2
	baz=61					
X18A	**Snowflake**	**61.15**	**326**	⇓P	**P**	**14 53 16.8 +0.3**
	baz=61,SNR=7.5					
X18A				⇓pP	pP	14 53 28.6 -0.1
	baz=61					
PKME	**Peaks-Kenny Pk**	**61.23**	**3**	*e*P	**P**	**14 53 16.6 -0.2**
	comp=Z,69nm,1.3s,mb5.6					
PKME				*e*pP	pP	14 53 28.0 -1.0
PKME				*e*sP	sP	14 53 33.5 -0.3
PKME				LR	LR	
	comp=Z,649nm,19.0s,MS4.8					
S24A	**Houchin Ranch,**	**61.24**	**332**	⇑P	**P**	**14 53 17.9 +0.9**
	baz=61,SNR=5.6					
S24A				⇓pP	pP	14 53 29.4 +0.2
	baz=61					
W19A	**Sanders**	**61.30**	**327**	⇑pP	pP	14 53 30.0 +0.4
	baz=61					
V20A	**Brimhall**	**61.35**	**328**	⇑pP	pP	14 53 29.7 -0.3
	baz=62					
U21A	**Nageezi**	**61.44**	**329**	⇓P	**P**	**14 53 19.0 +0.6**
	baz=62,SNR=6.9					
U21A				⇑pP	pP	14 53 30.4 -0.2
	baz=62					
Z15A	**Gila River Ind**	**61.46**	**323**	⇓pP	pP	14 53 30.5 -0.3
	baz=62					
SDCO	**Great Sand Dun**	**61.46**	**331**	PFAKE		14 53 30.0 +11
SDCO				LR	LR	
	comp=Z,250nm,21.0s,MS4.3					
X17A	**Forest Lakes**	**61.47**	**325**	⇑P	**P**	**14 53 19.1 +0.3**
	baz=62,SNR=8.3					
X17A				⇑pP	pP	14 53 30.8 0.0
	baz=62					
114A	**Black Gap (USA**	**61.49**	**323**	⇓P	**P**	**14 53 19.2 +0.3**
	baz=62,SNR=5.7					
114A				⇓pP	pP	14 53 30.2 -0.8
	baz=62					
Y16A	**Circle Bar Ran**	**61.51**	**324**	⇑P	**P**	**14 53 19.1 +0.1**
	baz=62,SNR=6.4					
Y16A				⇓pP	pP	14 53 30.9 -0.2
	baz=62					
T22A	**Edith**	**61.53**	**330**	⇑P	**P**	**14 53 19.7 +0.6**
	baz=62,SNR=5.9					
T22A				⇑pP	pP	14 53 30.7 -0.5
	baz=62					
V19A	**Window Rock**	**61.58**	**327**	⇑pP	pP	14 53 31.3 -0.2
	baz=62					
R24A	**Sanders Place,**	**61.68**	**332**	⇓P	**P**	**14 53 20.5 +0.5**
	baz=62					
R24A				⇑pP	pP	14 53 32.2 +0.1
	baz=62					
U20A	**Newcomb**	**61.83**	**328**	⇑pP	pP	14 53 32.8 -0.4
	baz=62					
Q25A	**Bedland, Calha**	**61.86**	**333**	⇓pP	pP	14 53 33.0 -0.4
	baz=62					
X16A	**Lo Mia Camp, P**	**61.88**	**325**	⇑P	**P**	**14 53 22.2 +0.7**
	baz=62,SNR=8.6					
X16A				⇓pP	pP	14 53 33.2 -0.5
	baz=62					
113A	**Mohawk Valley,**	**62.02**	**322**	⇑pP	pP	14 53 33.7 -0.9
	baz=62					
V18A	**Ganado**	**62.04**	**327**	⇑pP	pP	14 53 34.2 -0.5
	baz=62					
Y15A	**Casa Rosa Ranc**	**62.04**	**324**	⇑P	**P**	**14 53 22.6 +0.1**
	baz=62,SNR=6.0					
Y15A				⇑pP	pP	14 53 34.2 -0.5
	baz=62					
S22A	**4UR Ranch, Cre**	**62.08**	**330**	⇑P	**P**	**14 53 22.8 +0.1**
	baz=62,SNR=8.2					
S22A				⇓pP	pP	14 53 35.6 +0.7
	baz=62					
U19A	**Dine' College,**	**62.11**	**328**	⇓pP	pP	14 53 34.5 -0.7
	baz=62					
Z13A	**Yuma Proving G**	**62.26**	**322**	⇑P	**P**	**14 53 24.4 +0.4**
	baz=62					
Z13A				⇑pP	pP	14 53 35.5 -0.8
	baz=62					
Q24A	**Divide**	**62.30**	**332**	⇑pP	pP	14 53 36.6 +0.2
	baz=62					
P25A	**Willow Gulch B**	**62.32**	**334**	⇓pP	pP	14 53 36.8 +0.3
	baz=62					
X15A	**Humboldt**	**62.38**	**324**	⇑P	**P**	**14 53 25.4 +0.6**
	baz=62,SNR=6.4					
X15A				⇑pP	pP	14 53 36.7 -0.3
	baz=62					
Y14A	**Wickenburg**	**62.41**	**323**	⇑P	**P**	**14 53 25.4 +0.3**
	baz=62					
Y14A				⇓pP	pP	14 53 36.6 -0.7
	baz=62					
V17A	**Tonalea, Kykot**	**62.43**	**326**	⇑P	**P**	**14 53 24.9 -0.2**
	baz=63					
V17A				⇓pP	pP	14 53 37.3 0.0
	baz=63					
R22A	**Saguache, Gunn**	**62.43**	**331**	⇑P	**P**	**14 53 26.6 +1.5**
	baz=63,SNR=6.4					
R22A				⇑pP	pP	14 53 37.4 +0.1
	baz=63					
T19A	**Beclabito**	**62.43**	**328**	⇑P	**P**	**14 53 25.5 +0.3**
	baz=63					
W16A	**Flagstaff**	**62.44**	**325**	⇑P	**P**	**14 53 25.3 +0.1**
	baz=63,SNR=6.2					
W16A				⇓pP	pP	14 53 37.0 -0.4
	baz=63					
U18A	**Rough Rock, Ch**	**62.55**	**327**	⇑P	**P**	**14 53 26.2 +0.3**
	baz=63					
U18A				⇓pP	pP	14 53 37.3 -0.8
	baz=63					
Q23A	**Hartsel**	**62.56**	**332**	⇓P	**P**	**14 53 26.6 +0.8**
	baz=63					
Q23A				⇑pP	pP	14 53 38.5 +0.5
	baz=63					
OGNE	**Ogallala**	**62.66**	**336**	⇑pP	pP	14 53 38.2 -0.5
	baz=63					
OGNE	**Ogallala**	**62.66**	**336**	*e*P	**P**	**14 53 26.8 +0.3**
	comp=Z,60nm,1.2s,mb5.6					
OGNE				*e*pP	pP	14 53 37.3 -1.4
OGNE				LR	LR	
	comp=Z,494nm,21.0s,MS4.7					
X14A	**Yava**	**62.73**	**324**	⇑P	**P**	**14 53 27.9 +0.7**
	baz=63,SNR=6.7					
X14A				⇑pP	pP	14 53 39.0 -0.4
	baz=63					
Y13A	**Salome**	**62.80**	**323**	⇑pP	pP	14 53 39.2 -0.6
	baz=63					
S20A	**Disappointment**	**62.88**	**329**	⇑P	**P**	**14 53 28.5 +0.4**
	baz=63					
S20A				⇓pP	pP	14 53 40.7 +0.4
	baz=63					
W15A	**Williams**	**62.90**	**325**	⇓pP	pP	14 53 40.5 0.0
	baz=63					
R21A	**Cimarron**	**62.92**	**330**	⇑pP	pP	14 53 40.6 +0.1
	baz=63					
P23A	**Jefferson**	**62.94**	**332**	⇓pP	pP	14 53 40.0 -0.6
	baz=63					
U16A	**Tuba City**	**63.00**	**326**	⇑P	**P**	**14 53 29.2 +0.3**
	baz=63,SNR=8.0					
U16A				⇑pP	pP	14 53 41.0 -0.1
	baz=63					
T18A	**Mexican Hat**	**63.10**	**328**	⇑P	**P**	**14 53 29.5 0.0**
	baz=63					
Y12C	**Blythe**	**63.16**	**322**	⇑pP	pP	14 53 41.5 -0.8
	baz=63					
R20A	**Redvale**	**63.17**	**330**	⇑P	**P**	**14 53 30.6 +0.5**
	baz=63,SNR=5.3					
R20A				⇑pP	pP	14 53 42.3 +0.1
	baz=63					
ISCO	**Idaho Springs**	**63.19**	**333**	⇓P	**P**	**14 53 30.7 +0.6**
	baz=63					
ISCO				⇑pP	pP	14 53 42.7 +0.5
	baz=63					
ISCO	**Idaho Springs**	**63.19**	**333**	*e*P	**P**	**14 53 28.7 -1.3**
	comp=Z,92nm,2.0s,mb5.6					
ISCO				*e*pP	pP	14 53 42.6 +0.3
ISCO				LR	LR	
	comp=Z,557nm,22.0s,MS4.7					
ISCO	**Idaho Springs**	**63.19**	**333**	*e*P	**P**	**14 53 28.7 -1.4**
ISCO				*e**PP	pP	14 53 42.6 +0.3
ISCO				pmax	pmax	
	comp=Z,92nm,2.0s,mb5.6					
ISCO				MLR	MLR	
	comp=Z,557nm,22.0s,MS4.7					
ECSD	**EROS Data Cent**	**63.23**	**341**	*e*P	**P**	**14 53 28.7 -1.5**
	comp=Z,77nm,1.3s,mb5.7					
ECSD				*e*pP	pP	14 53 40.3 -2.1
ECSD				LR	LR	
	comp=Z,441nm,19.0s,MS4.7					
V15A	**Kaibab Nationa**	**63.32**	**325**	⇑P	**P**	**14 53 31.7 +0.7**
	baz=64,SNR=6.0					
V15A				⇑pP	pP	14 53 43.0 -0.2
	baz=64					
DVTC	**Desert V Tower**	**63.35**	**320**	⇓P	**P**	**14 53 32.2 +0.9**
	baz=64					
DVTC				⇑pP	pP	14 53 43.3 -0.2
	baz=64					
X13A	**Yucca**	**63.36**	**323**	⇑pP	pP	14 53 42.8 -0.7
	baz=64					
W14A	**Seligman**	**63.38**	**324**	⇑pP	pP	14 53 43.5 -0.2
	baz=64					
T17A	**Navajo Res., N**	**63.48**	**327**	⇓P	**P**	**14 53 32.2 +0.2**
	baz=64					
P22A	**Eagle**	**63.53**	**332**	⇓pP	pP	14 53 44.6 0.0
	baz=64					
COWI	**Conover**	**63.54**	**348**	*e*P	**P**	**14 53 30.6 -1.6**
	comp=Z,30nm,1.2s,mb5.2					
COWI				*e*pP	pP	14 53 42.8 -1.7
COWI				LR	LR	
	comp=Z,708nm,20.0s,MS4.8					
S18A	**Hurst Farm, Bl**	**63.59**	**328**	⇑P	**P**	**14 53 32.6 -0.2**
	baz=64					
S18A				⇑pP	pP	14 53 44.4 -0.6
	baz=64					
BC3	**Big Chuckawall**	**63.65**	**322**	⇓pP	pP	14 53 44.8 -0.7
	baz=64					
O23A	**Lake Granby, G**	**63.66**	**333**	⇑P	**P**	**14 53 33.6 +0.5**
	baz=64					
R19A	**Curley Farm, L**	**63.69**	**329**	⇑pP	pP	14 53 45.8 +0.2
	baz=64					
V14A	**Boquillas Ranc**	**63.70**	**325**	⇓P	**P**	**14 53 33.7 +0.1**
	baz=64,SNR=8.9					
V14A				⇑pP	pP	14 53 45.5 -0.2
	baz=64					
MONP	**Monument Peak**	**63.71**	**320**	⇓P	**P**	**14 53 33.7 +0.1**
	baz=64					
W13A	**Hualapai Mount**	**63.75**	**324**	⇓pP	pP	14 53 45.7 -0.4
	baz=64					
P21A	**Newcastle**	**63.80**	**331**	⇑P	**P**	**14 53 34.2 +0.2**
	baz=64					
P21A				⇓pP	pP	14 53 46.5 +0.3
	baz=64					
IRM	**Iron Mountain**	**63.82**	**322**	⇑P	**P**	**14 53 34.4 0.0**
	baz=64					
IRM				⇓pP	pP	14 53 46.2 -0.4
	baz=64					
T16A	**Glen Canyon Da**	**63.83**	**327**	⇑pP	pP	14 53 46.6 0.0
	baz=64					
U15A	**North Rim**	**63.84**	**326**	⇑P	**P**	**14 53 34.6 +0.2**
	baz=64					
U15A				⇓pP	pP	14 53 46.5 -0.1
	baz=64					
O22A	**Kremmling**	**63.90**	**332**	⇓P	**P**	**14 53 35.0 +0.2**
	baz=64					
R18A	**Canyonlands Na**	**64.07**	**329**	⇑P	**P**	**14 53 35.2 -0.7**
	baz=64					
Q19A	**Hogan Spring (**	**64.20**	**330**	⇑P	**P**	**14 53 37.6 +0.8**
	baz=64					
Q19A				⇑pP	pP	14 53 49.1 +0.1
	baz=64					
BELC	**Belle Mtn. Jos**	**64.21**	**321**	⇑pP	pP	14 53 48.7 -0.4
	baz=64					
M24A	**Cheyenne**	**64.23**	**334**	⇑pP	pP	14 53 50.1 +1.0
	baz=64					
N23A	**Red Feather La**	**64.23**	**333**	⇑pP	pP	14 53 49.4 +0.3
	baz=64					
U14A	**Mt Trumbull**	**64.32**	**325**	⇓P	**P**	**14 53 38.0 +0.5**
	baz=64,SNR=7.6					
U14A				⇑pP	pP	14 53 49.7 -0.1
	baz=64					
T15A	**Red Dirt Ranch**	**64.33**	**326**	⇓P	**P**	**14 53 37.9 +0.3**
	baz=64					
V13A	**Grand Canyon W**	**64.35**	**324**	⇓P	**P**	**14 53 38.3 +0.5**
	baz=64					
V13A				⇑pP	pP	14 53 49.9 -0.2
	baz=64					
N22A	**Wattenberg Ran**	**64.38**	**333**	⇑P	**P**	**14 53 38.6 +0.7**
	baz=65					
S16A	**Weppner Ranch,**	**64.44**	**327**	⇓P	**P**	**14 53 38.5 +0.2**
	baz=65					
S16A				⇑pP	pP	14 53 49.8 -0.8
	baz=65					
R17A	**Hanksville Air**	**64.51**	**328**	⇓pP	pP	14 53 50.7 -0.4
	baz=65					
GMRC	**Granite Mounta**	**64.56**	**322**	⇓pP	pP	14 53 51.0 -0.4
	baz=65					
P19A	**Cripple Cowboy**	**64.60**	**330**	⇑pP	pP	14 53 51.5 -0.1
	baz=65					
M23A	**Laramie**	**64.61**	**334**	⇓P	**P**	**14 53 39.2 -0.1**
	baz=65					
O20A	**White River Ci**	**64.65**	**331**	⇓P	**P**	**14 53 39.8 +0.2**
	baz=65					
O20A				⇑pP	pP	14 53 52.0 +0.1
	baz=65					
MURC	**Murrieta**	**64.67**	**320**	⇓pP	pP	14 53 51.5 -0.6
	baz=65					
T14A	**Hurricane**	**64.73**	**326**	⇓P	**P**	**14 53 41.0 +0.7**
	baz=65,SNR=5.1					
T14A				⇑pP	pP	14 53 52.1 -0.4
	baz=65					
Q18A	**Rafter H Ranch**	**64.75**	**329**	⇑P	**P**	**14 53 40.6 +0.3**
	baz=65					
Q18A				⇑pP	pP	14 53 51.7 -0.8
	baz=65					
U13A	**Pakoon Wash**	**64.75**	**325**	⇓P	**P**	**14 53 40.8 +0.4**
	baz=65,SNR=5.7					
U13A				⇓pP	pP	14 53 52.2 -0.5
	baz=65					
V12A	**Nelson**	**64.75**	**324**	⇓pP	pP	14 53 52.0 -0.7
	baz=65					
R16A	**Teasdale**	**64.80**	**328**	⇑P	**P**	**14 53 41.0 +0.2**
	baz=65					
R16A				⇓pP	pP	14 53 52.4 -0.6
	baz=65					
SRU	**San Rafael**	**64.95**	**329**	⇓P	**P**	**14 53 41.5 -0.2**
	baz=65					
U12A	**Valley of Fire**	**65.08**	**324**	⇑pP	pP	14 53 53.8 -1.0
	baz=65					
Q16A	**Castle Valley**	**65.12**	**328**	⇑pP	pP	14 53 54.4 -0.6
	baz=65					
L23A	**Garrett**	**65.13**	**334**	⇑P	**P**	**14 53 42.7 -0.1**
	baz=65					
L23A				⇑pP	pP	14 53 55.3 +0.3
	baz=65					
T13A	**Saint George**	**65.15**	**325**	⇓pP	pP	14 53 54.7 -0.6
	baz=65					
R15A	**Junction**	**65.16**	**327**	⇑pP	pP	14 53 55.3 +0.1
	baz=65					
V11A	**Goodsprings**	**65.16**	**323**	⇑pP	pP	14 53 54.4 -0.9
	baz=65					
O19A	**Miners Draw (B**	**65.19**	**331**	⇑P	**P**	**14 53 42.9 -0.2**
	baz=65					
O19A				⇑pP	pP	14 53 54.7 -0.7
	baz=65					
N20A	**Spence Gulch,**	**65.22**	**332**	⇓P	**P**	**14 53 43.6 +0.3**
	baz=65					
N20A				⇓pP	pP	14 53 54.9 -0.7
	baz=65					
TAOE	**Nuku Hiva Isla**	**65.23**	**268**	*e*S	S	15 02 23.9 -1.1
	comp=Z,430nm,28.7s					
TAOE				*e*LR	LR	15 13 12.2
	comp=Z,3μm,26.2s,baz=100					
S14A	**Cedar City**	**65.29**	**326**	⇓pP	pP	14 53 56.1 -0.1
	baz=65					
P17A	**Butcher Ranch,**	**65.33**	**329**	⇓P	**P**	**14 53 44.3 +0.2**
	baz=66					
P17A				⇓pP	pP	14 53 55.7 -0.6
	baz=66					
BFSC	**Mount Baldy Ra**	**65.38**	**321**	⇑pP	pP	14 53 56.3 -0.5
	baz=66					
M21A	**Separation Pea**	**65.43**	**333**	⇓pP	pP	14 53 57.4 +0.4
	baz=66					
S13A	**Holt Ranch, En**	**65.54**	**326**	⇑P	**P**	**14 53 45.8 +0.3**
	baz=66					
O18A	**Roosevelt**	**65.59**	**330**	⇑pP	pP	14 53 58.0 0.0
	baz=66					
GSC	**Goldstone**	**65.59**	**322**	⇑P	**P**	**14 53 46.7 +0.7**
	baz=66					
SHOC	**Shoshone**	**65.70**	**323**	⇑pP	pP	14 53 58.8 0.0
	baz=66					
M20A	**Sweetwater, Wa**	**65.70**	**332**	⇓P	**P**	**14 53 46.9 +0.4**
	baz=66					
L21A	**Rawlins**	**65.72**	**333**	⇓P	**P**	**14 53 47.6 +1.0**
	baz=66					
EYMN	**Ely**	**65.79**	**347**	*e*P	**P**	**14 53 45.3 -1.6**
	comp=Z,89nm,1.4s,mb5.6					
EYMN				*e*pP	pP	14 53 56.8 -2.3
EYMN				LR	LR	
	comp=Z,591nm,19.0s,MS4.8					
Q15A	**Fillmore**	**65.80**	**328**	⇓pP	pP	14 53 58.9 -0.5
	baz=66					
O17A	**Robinson Place**	**65.89**	**329**	⇑P	**P**	**14 53 48.0 +0.3**
	baz=66					
O17A				⇓pP	pP	14 53 59.6 -0.4
	baz=66					
K22A	**Casper**	**65.92**	**334**	⇓pP	pP	14 54 00.2 +0.1
	baz=66					
N18A	**Larsen Ranch,**	**65.98**	**331**	⇑P	**P**	**14 53 48.9 +0.6**
	baz=66					
EDW2	**Edwards Air Fo**	**66.02**	**321**	⇑pP	pP	14 53 59.7 -1.1
	baz=66					
R13A	**O'Grain Ranch,**	**66.03**	**326**	⇑P	**P**	**14 53 48.9 +0.3**
	baz=66					
RSSD	**Black Hills**	**66.14**	**336**	*e*P	**P**	**14 53 49.4 +0.2**
	comp=Z,10nm,1.5s,mb4.6					
RSSD				*e*pP	pP	14 54 00.7 -0.8
RSSD	**Black Hills**	**66.14**	**336**	*e*P	**P**	**14 53 49.4 +0.2**
RSSD				*e**PP	pP	14 54 00.7 -0.8
RSSD				pmax	pmax	
	comp=Z,10.0nm,1.5s,mb4.6					
L20A	**Wamsutter**	**66.19**	**332**	⇓P	**P**	**14 53 49.9 +0.3**
	baz=66					
L20A				⇓pP	pP	14 54 02.0 +0.2
	baz=66					
K21A	**Alcova**	**66.21**	**333**	⇑P	**P**	**14 53 49.4 -0.3**
	baz=66					
Q14A	**Sevier Lake (B**	**66.26**	**327**	⇑P	**P**	**14 53 50.3 +0.2**
	baz=66					
Q14A				⇑pP	pP	14 54 02.3 -0.1
	baz=66					
O16A	**Springville**	**66.27**	**329**	⇑P	**P**	**14 53 50.6 +0.5**
	baz=66					
O16A				⇑pP	pP	14 54 02.4 -0.1
	baz=66					
FURC	**Furnace Creek,**	**66.43**	**323**	⇓pP	pP	14 54 02.8 -0.7
	baz=67					
N17A	**Moffit Pass**	**66.51**	**330**	⇑P	**P**	**14 53 52.5 +0.9**
	baz=67					
MPMC	**Manual Prospec**	**66.52**	**322**	⇑P	**P**	**14 53 51.3 -0.5**
	baz=67					
MPMC				⇑pP	pP	14 54 03.0 -1.1
	baz=67					
P14A	**Drum Mountains**	**66.60**	**328**	⇑P	**P**	**14 53 52.9 +0.6**
	baz=67					
P14A				⇑pP	pP	14 54 04.5 0.0
	baz=67					
K20A	**Yellowstone Ra**	**66.71**	**333**	⇓pP	pP	14 54 05.2 0.0
	baz=67					
L19A	**Farson**	**66.72**	**332**	⇓pP	pP	14 54 05.0 -0.3
	baz=67					
N16A	**Rees Ranch, Co**	**66.76**	**330**	⇑pP	pP	14 54 05.6 +0.1
	baz=67					
ISA	**Isabella**	**66.83**	**321**	⇑P	**P**	**14 53 53.9 0.0**
	baz=67					
ISA				⇓pP	pP	14 54 05.0 -1.1
	baz=67					
M17A	**Scullys Gap (B**	**66.84**	**330**	⇓P	**P**	**14 53 53.4 -0.4**
	baz=67					
J21A	**Lysite**	**66.88**	**334**	⇑P	**P**	**14 53 53.9 0.0**
	baz=67					
J21A				⇑pP	pP	14 54 06.4 +0.1
	baz=67					
DUG	**Dugway**	**66.92**	**328**	⇑P	**P**	**14 53 54.9 +0.6**
	baz=67					
DUG				⇑pP	pP	14 54 05.9 -0.6
	baz=67					
DUG	**Dugway**	**66.92**	**328**	*e*P	**P**	**14 53 54.2 0.0**
	comp=Z,35nm,0.9s,mb5.4					
DUG				*e*pP	pP	14 54 05.9 -0.6
DUG				LR	LR	
	comp=Z,637nm,20.0s,MS4.8					
DUG	**Dugway**	**66.92**	**328**	*e*P	**P**	**14 53 54.3 0.0**
DUG				*e**PP	pP	14 54 05.9 -0.7
DUG				pmax	pmax	
	comp=Z,35nm,0.9s,mb5.4					
DUG				MLR	MLR	
	comp=Z,637nm,20.0s,MS4.8					
R11A	**Troy Canyon, C**	**67.03**	**325**	⇑P	**P**	**14 53 55.2 +0.2**
	baz=67					
R11A				⇓pP	pP	14 54 07.3 0.0
	baz=67					
K19A	**Absolon Red Bu**	**67.06**	**332**	⇑pP	pP	14 54 07.9 +0.4
	baz=67					
GRAC	**Grapevine Rang**	**67.09**	**323**	⇑pP	pP	14 54 07.4 -0.4
	baz=67					
CWC	**Cottonwood Cre**	**67.12**	**322**	⇓P	**P**	**14 53 55.4 -0.3**
	baz=67					
CWC				⇑pP	pP	14 54 07.4 -0.6
	baz=67					
AGMN	**Agassiz Nation**	**67.18**	**344**	*e*P	**P**	**14 53 54.5 -1.3**
	comp=Z,37nm,0.9s,mb5.4					
AGMN				*e*pP	pP	14 54 05.8 -2.2
AGMN				LR	LR	
	comp=Z,442nm,19.0s,MS4.7					
M16A	**Huntsville**	**67.18**	**330**	⇓P	**P**	**14 53 56.0 +0.1**
	baz=67					
I21A	**Big Trails, Te**	**67.19**	**334**	⇓P	**P**	**14 53 55.5 -0.4**
	baz=67					
BW06	**Boulder Array**	**67.34**	**332**	PFAKE		14 54 10.0 +13
BW06				LR	LR	

comp=Z,289nm,20.0s,MS4.5
PDAR Pinedale Array 67.34 332 P **P** **14 53 55.4 -1.5**
comp=Z,0.5nm,0.5s,baz=144,slow=6.8,SNR=5.7
PDAR pP pP 14 54 08.4 -0.8
comp=Z,2.1nm,0.8s,baz=143,slow=6.6,SNR=10
PDAR LR LR 15 23 52.0
comp=Z,410nm,21.4s,MS4.6,baz=144,slow=36
HWUT Hardware Ranch 67.37 330 PFAKE 14 54 10.0 +13
HWUT LR LR
comp=Z,292nm,19.0s,MS4.5
K18A Toltan Ranch, 67.45 332 ⇓P **P** **14 53 58.0 +0.4**
baz=68
K18A ⇓pP pP 14 54 09.3 -0.6
baz=68
J19A Crowheart 67.51 333 ⇓P **P** **14 53 58.1 +0.1**
baz=68
J19A ⇑pP pP 14 54 09.3 -1.0
baz=68
SMMC Simmler 67.53 320 ⇓pP pP 14 54 10.4 -0.2
baz=68
L16A Fish Haven 67.62 330 ⇑pP pP 14 54 11.1 +0.1
baz=68
TIN Tinemaha 67.63 323 ⇓pP pP 14 54 11.2 0.0
baz=68
I20A Worland 67.65 334 ⇓P **P** **14 53 58.2 -0.7**
baz=68
J18A Kendall Valley 67.90 332 ⇑P **P** **14 53 59.9 -0.5**
baz=68
AHID Auburn Hatcher 68.04 331 PFAKE 14 54 10.0 +8.7
AHID LR LR
comp=Z,217nm,19.0s,MS4.4
L15A Malad City 68.07 330 ⇑P **P** **14 54 01.3 -0.2**
baz=68
I18A Diamond G Ranc 68.19 332 ⇓P **P** **14 54 02.1 -0.1**
baz=68
K16A Soda Springs 68.32 331 ⇑P **P** **14 54 04.2 +1.1**
baz=68
J17A Brown Place, J 68.33 332 ⇑P **P** **14 54 03.4 +0.3**
baz=68
L14A Malta 68.51 329 ⇑P **P** **14 54 04.2 0.0**
baz=69
NVAR Mina Array Bea 68.61 324 P **P** **14 54 05.2 +0.1**
comp=Z,2.6nm,1.0s,mb4.1,baz=132,slow=6.2,SNR=12
NVAR pP pP 14 54 16.8 -0.5
comp=Z,7.6nm,1.1s,baz=118,slow=4.8,SNR=10
K15A Arbon 68.66 330 ⇑P **P** **14 54 05.7 +0.5**
baz=69
D24A Glendive 68.78 338 ⇓pP pP 14 54 18.2 0.0
baz=69
H18A Shoshone NF, C 68.90 333 ⇑P **P** **14 54 06.3 -0.3**
baz=69
ULM Lac du Bonnet 68.98 345 P **P** **14 54 05.5 -1.5**
comp=Z,7.9nm,0.9s,mb4.6,baz=139,slow=7.0,SNR=5.7
ULM LR LR 15 28 50.8
comp=Z,306nm,19.5s,MS4.5,baz=145,slow=40
ULM Lac du Bonnet 68.98 345 *e*P **P** **14 54 05.2 -1.7**
comp=Z,62nm,1.4s,mb5.3
ULM *e*pP pP 14 54 16.9 -2.4
ULM LR LR
comp=Z,491nm,20.0s,MS4.7
RLMT Red Lodge 69.08 334 P **P** **14 54 07.9 +0.1**
baz=69
RLMT pP pP 14 54 19.9 -0.2
baz=69
RLMT Red Lodge 69.08 334 PFAKE 14 54 20.0 +12
RLMT LR LR
comp=Z,207nm,20.0s,MS4.4
LKWY Lake 69.13 333 PFAKE 14 54 20.0 +12
LKWY LR LR
comp=Z,337nm,19.0s,MS4.6
D23A Lindsay 69.15 337 ⇓P **P** **14 54 08.6 +0.5**
baz=69
D23A ⇑pP pP 14 54 20.6 +0.1
baz=69
J15A Blackfoot 69.16 331 ⇓P **P** **14 54 08.6 +0.4**
baz=69
J15A ⇓pP pP 14 54 20.0 -0.6
baz=69
G18A Lazy EL Ranch, 69.36 334 ⇓P **P** **14 54 09.6 +0.1**
baz=70
D22A Cohagen 69.50 337 ⇑P **P** **14 54 10.8 +0.5**
baz=70
F19A Roth Farm, Mol 69.53 334 ⇓P **P** **14 54 10.4 -0.2**
baz=70
J14A Carey 69.61 330 ⇓P **P** **14 54 11.9 +0.8**
baz=70
C23A Lambert 69.67 338 ⇑P **P** **14 54 11.1 -0.2**
baz=70
E20A Meyer Farm, Mu 69.72 335 ⇑P **P** **14 54 11.8 +0.1**
baz=70
E20A ⇓pP pP 14 54 23.3 -0.7
baz=70
D21A La Casta Ranch 69.74 336 ⇑P **P** **14 54 12.0 +0.3**
baz=70
D21A ⇑pP pP 14 54 23.6 -0.5
baz=70
C22A Vida 69.88 337 ⇑pP pP 14 54 24.4 -0.6
baz=70
DGMT Dagmar 69.89 339 PFAKE 14 54 20.0 +7.3
DGMT LR LR
comp=Z,457nm,19.0s,MS4.7
F18A Big Timber 69.89 334 ⇓P **P** **14 54 12.9 +0.2**
baz=70
E19A Rath Farm, Rou 69.96 335 ⇓P **P** **14 54 13.3 +0.2**
baz=70
E19A ⇑pP pP 14 54 25.0 -0.5
baz=70
I14A Mackay 70.04 330 ⇓P **P** **14 54 13.8 +0.1**
baz=70
WCN Washoe City 70.04 323 ⇑pP pP 14 54 25.5 -0.6
baz=70
A24A Westby 70.21 339 ⇑pP pP 14 54 26.7 -0.3
baz=70
HLID Hailey 70.22 330 ⇓P **P** **14 54 15.2 +0.4**
baz=70
HLID ⇑pP pP 14 54 26.7 -0.5
baz=70
HLID Hailey 70.22 330 *e*P **P** **14 54 14.9 0.0**
comp=Z,15nm,1.2s,mb4.8
HLID *e*pP pP 14 54 26.5 -0.7
HLID LR LR
comp=Z,385nm,20.0s,MS4.7
I13A Wildhorse Cree 70.34 330 ⇑P **P** **14 54 16.4 +0.8**
baz=70
E18A Harlowton 70.51 334 ⇓P **P** **14 54 16.9 +0.4**
baz=71
BOZ Bozeman (W) 70.52 333 PFAKE 14 54 30.0 +13
BOZ LR LR
comp=Z,191nm,22.0s,MS4.3
G15A Dillon 70.53 332 ⇑P **P** **14 54 17.5 +0.8**
baz=71
D19A Cripps Ranch, 70.56 335 ⇓P **P** **14 54 16.7 -0.1**
baz=71
I12A Atlanta 70.75 329 ⇓P **P** **14 54 18.6 +0.6**
baz=71
MFID Camas Ranch 70.81 329 ⇑P **P** **14 54 19.0 +0.6**
baz=71
H13A Challis 70.89 330 ⇑P **P** **14 54 19.3 +0.4**
baz=71
SCHQ Schefferville 70.92 4 P **P** **14 54 17.2 -1.6**
comp=Z,20nm,1.1s,mb5.0,baz=209,slow=16,SNR=2.6
SCHQ pP pP 14 54 30.6 -0.6
comp=Z,25nm,0.9s,baz=167,slow=5.9,SNR=6.3
SCHQ LR LR 15 25 44.7
comp=Z,206nm,21.2s,MS4.4,baz=119,slow=36
TBI Tubuai 71.14 250 *e*S S 15 03 34.0 -1.1
comp=Z,485nm,31.2s
TBI *e*LR LR 15 15 58.8
comp=Z,1μm,29.8s
EOSO Osorio 71.26 52 P **P** **14 54 21.2 -0.3**
comp=Z,163nm,1.8s,mb5.7
LIC Lamto 71.30 78 *e*P **P** **14 54 21.2 -0.9**
comp=Z,302nm,1.3s,mb6.1
LIC Lamto 71.30 78 ⇑*i*P **P** **14 54 21.4 -0.7**
comp=Z,63nm,0.9s,mb5.2
LIC *e*pP pP 14 54 33.6 -0.8
LIC *e*MLR MLR
comp=Z,2μm,19.0s,MS5.1
LIC Lamto 71.30 78 ⇑*i*P **P** **14 54 21.4 -0.7**
comp=Z,32nm,0.9s,mb5.2
LIC *e*pP pP 14 54 33.6 -0.8
LIC LR LR
comp=Z,930nm,19.0s,MS5.1
TIC Toumodi 71.44 77 *e*P **P** **14 54 22.2 -0.7**
comp=Z,318nm,1.3s,mb6.1
TIC Toumodi 71.44 77 *e*P **P** **14 54 22.2 -0.7**
TIC pmax pmax
comp=Z,318nm,1.3s,mb6.1
WVOR Wild Horse Val 71.56 326 *e*P **P** **14 54 25.0 +2.0**
comp=Z,18nm,1.3s,mb4.8
WVOR LR LR
comp=Z,651nm,22.0s,MS4.8
WVOR Wild Horse Val 71.56 326 *e*P **P** **14 54 25.0 +2.0**
WVOR pmax pmax
comp=Z,18nm,1.3s,mb4.8
WVOR MLR MLR
comp=Z,651nm,22.0s,MS4.8
DBIC Dimbokro 71.60 77 P **P** **14 54 23.6 -0.3**
comp=Z,27nm,0.7s,mb5.3,baz=229,slow=6.4,SNR=29
DBIC LR LR 15 24 33.7
comp=Z,1μm,18.3s,MS5.2,baz=226,slow=35
DBIC Dimbokro 71.60 77 *e*P **P** **14 54 23.5 -0.4**
comp=Z,118nm,1.0s,mb5.8
DBIC *e*pP pP 14 54 38.8 +2.5
DBIC LR LR
comp=Z,1μm,19.0s,MS5.2
DBIC Dimbokro 71.60 77 *e*P **P** **14 54 23.5 -0.4**
DBIC *e**PP pP 14 54 38.8 +2.5
DBIC pmax pmax
comp=Z,118nm,1.0s
DBIC MLR MLR
comp=Z,1μm,19.0s
EGMT Eagleton 71.61 335 *e*P **P** **14 54 22.4 -0.7**
comp=Z,24nm,1.5s,mb4.9
EGMT *e*pP pP 14 54 35.1 -0.4
EGMT LR LR
comp=Z,384nm,19.0s,MS4.7
KIC Kosan Boka 71.61 78 *e*P **P** **14 54 23.2 -0.7**
comp=Z,320nm,1.0s,mb6.2
G12A Big Creek, Yel 71.83 330 ⇑P **P** **14 54 24.5 0.0**
baz=72
F13A Darby 71.85 331 ⇓P **P** **14 54 25.1 +0.4**
baz=72
B18A Beardsley Farm 71.91 335 ⇓P **P** **14 54 25.1 +0.1**
baz=72
C16A Fuhringer Ranc 72.25 334 ⇑P **P** **14 54 27.3 +0.3**
baz=72
F12A Elk City 72.26 331 ⇓P **P** **14 54 26.9 -0.2**
baz=72
E13A Victor 72.28 332 ⇓P **P** **14 54 28.0 +0.8**
baz=72
PPT Papeete 72.32 256 *e*S S 15 03 47.6 -1.3
comp=Z,525nm,27.8s
PPT *e*LR LR 15 16 26.4
comp=Z,2μm,24.0s,baz=104
PPT Papeete 72.32 256 LR LR 15 18 24.1
comp=Z,553nm,18.4s,MS4.9,baz=95,slow=29
A18A Metzger Ranch, 72.36 336 ⇓P **P** **14 54 27.4 -0.2**
baz=72
D14A Greenough 72.45 333 ⇑P **P** **14 54 28.6 +0.4**
baz=73
MSO Missoula 72.45 332 PFAKE 14 54 40.0 +12
MSO LR LR
comp=Z,162nm,20.0s,MS4.3
C15A Salmond Ranch, 72.59 334 ⇑P **P** **14 54 29.2 +0.2**
baz=73
B16A M & M Farms, S 72.71 334 ⇓P **P** **14 54 30.3 +0.6**
baz=73
A17A Triple J Farms 72.72 335 ⇑P **P** **14 54 29.8 0.0**
baz=73
E12A Beaver Dam Sad 72.89 331 ⇓P **P** **14 54 30.8 -0.1**
baz=73
A16A West Butte Ran 73.08 335 ⇑P **P** **14 54 32.0 +0.1**
baz=73
I07A Izee 73.16 327 ⇓P **P** **14 54 32.5 -0.1**
baz=73
MAIT Maitri 73.32 160 *e*P **P** **14 54 33.1 +0.1**
MAIT *e* pP 14 54 45.1 -0.4
B14A Marquette Ranc 73.33 334 ⇑P **P** **14 54 33.7 +0.3**
baz=74
YBH Yreka Blue Hor 73.33 324 PFAKE 14 54 40.0 +6.4
YBH LR LR
comp=Z,356nm,20.0s,MS4.7
NVL N'lazarevskaya 73.35 160 *e*P **P** **14 54 34.2 +0.9**
NVL pmax pmax
comp=Z,31nm,1.0s,mb5.2
C13A Hot Springs 73.38 332 ⇑P **P** **14 54 34.1 +0.4**
baz=74
G08A Pilot Rock 73.72 328 ⇑P **P** **14 54 35.7 -0.1**
baz=74
A14A Double T Ranch 73.86 334 ⇑P **P** **14 54 36.5 0.0**
baz=74
QSPA South Pole Qui 74.02 180 P **P** **14 54 37.5 +0.4**
comp=Z,8.3nm,0.7s,mb4.8,baz=150,slow=3.3,SNR=54
QSPA pP pP 14 54 49.0 -0.5
comp=Z,25nm,0.9s,baz=115,slow=4.4,SNR=11
HUMO Hull Mountain 74.04 324 PFAKE 14 54 50.0 +12
HUMO LR LR
comp=Z,280nm,20.0s,MS4.5
C11A Tepee Creek (N 74.26 332 ⇑P **P** **14 54 39.4 +0.6**
baz=74
HAWA Hanford 74.78 329 *e*P **P** **14 54 42.5 +0.6**
comp=Z,21nm,1.1s,mb5.0
HAWA LR LR
comp=Z,786nm,21.0s,MS5.0
NEW Newport 74.97 331 PFAKE 14 54 50.0 +7.1
NEW LR LR
comp=Z,329nm,21.0s,MS4.6
NLWA Neilton Lookou 77.65 328 *e*P **P** **14 54 58.5 +0.3**
comp=Z,15nm,0.9s,mb4.9
NLWA LR LR
comp=Z,739nm,20.0s,MS5.0
FRB Frobisher Bay 79.73 2 LR LR 15 32 59.8
comp=Z,339nm,20.3s,MS4.7,baz=15,slow=38
TORD Torodi Ar. Bea 79.83 73 P **P** **14 55 10.9 0.0**
comp=Z,43nm,0.7s,mb5.5,baz=257,slow=5.1,SNR=99
TORD pP pP 14 55 23.3 -0.2
comp=Z,87nm,1.0s,baz=259,slow=4.8,SNR=11
TORD LR LR 15 30 27.0
comp=Z,940nm,18.2s,MS5.2,baz=245,slow=36
TORD Torodi Ar. Bea 79.83 73 P **P** **14 55 10.9 0.0**
TORD pP pP 14 55 23.3 -0.2
TORD LR LR 15 30 27.0
SBA Scott Base 80.27 191 *e*P **P** **14 55 12.5 +0.3**
comp=Z,29nm,0.9s,mb5.2
SBA *e*pP pP 14 55 24.1 -0.7
SBA Scott Base 80.27 191 *e*P **P** **14 55 12.5 +0.3**
SBA *e**PP pP 14 55 24.1 -0.6
SBA pmax pmax
comp=Z,29nm,0.9s,mb5.2
RTC Rabat Centre 80.64 51 PFAKE 14 55 30.0 +15
RTC LR LR
comp=Z,1μm,21.0s,MS5.2
PFVI Vila Bisbo 80.66 47 *e*LR LR 15 23 18.1
comp=Z,701nm,20.0s
MORF Marmelete 80.86 47 *e*P **P** **14 55 17.6 +1.6**
comp=Z,82nm,1.6s,mb5.4
MORF *i* pP pP 14 55 30.1 +1.6
MORF *e*LR LR 15 25 09.6
comp=Z,917nm,20.0s
MORF Marmelete 80.86 47 *e*P **P** **14 55 13.8 -2.2**
MORF *e* 14 58 21.7
PTEO Sao Teotonio 80.92 47 *e*P **P** **14 55 18.5 +2.2**
PTEO *i* pP pP 14 55 30.0 +1.1
PMAFR Mafra 81.21 45 *e*LQ 15 16 48.9
PMAFR *e*LR LR 15 23 26.4
comp=Z,835nm,18.0s
PBDV Barranco-do-Ve 81.34 47 *e*P **P** **14 55 26.4 +7.9**
PBDV *e*SKS 15 05 21.4
PBDV *e*LR LR 15 23 58.6
comp=Z,610nm,20.0s
MESJ Messejana 81.42 47 *e*P **P** **14 55 16.9 -2.0**
MESJ *e*S S 15 05 27.9 +0.7
MESJ A 15 29 33.5
comp=Z,762nm,21.7s
MESJ Messejana 81.42 47 *e*P **P** **14 55 16.9 -2.0**
MESJ *e*S S 15 05 27.9 +0.7
PCVE Castro Verde 81.44 47 *e*P **P** **14 55 21.0 +1.9**
PCVE *i* pP pP 14 55 33.0 +1.4
PCVE *e*LR LR 15 25 31.6
comp=Z,878nm,20.0s
PVAQ Vaqueiros 81.56 47 *e*P **P** **14 55 21.4 +1.7**
comp=Z,30nm,1.4s,mb5.0
PVAQ *e*LR LR 15 23 29.8
comp=Z,668nm,20.0s
PBEJ Beja 81.75 47 *e*P **P** **14 55 22.4 +1.7**
comp=Z,30nm,1.4s,mb5.0
PBEJ *i* pP pP 14 55 34.5 +1.3
EGRO El Granado 81.79 47 P **P** **14 55 21.9 +1.0**
comp=Z,41nm,1.5s,mb5.1
MDT Midelt 81.82 53 P **P** **14 55 22.6 +1.5**
comp=Z,3.3nm,0.8s,mb4.3,baz=271,slow=5.0,SNR=8.4
MDT pP pP 14 55 34.5 +0.8
comp=Z,4.1nm,1.0s,baz=246,slow=6.1,SNR=5.9
EVO Evora 81.88 46 ⇑*i*P **P** **14 55 22.0 +0.6**
comp=Z,20nm,0.8s,mb4.8
EVO *e*pP pP 14 55 33.7 -0.2
EVO *e*MLR MLR
comp=Z,783nm,20.8s,MS4.8
SFS San Fernando 82.22 49 PFAKE 14 55 30.0 +6.8
SFS LR LR
comp=Z,645nm,22.0s,MS5.0
PESTR Estremoz 82.33 46 *e*SKS S 15 05 35.5 -1.1
PESTR *e*LR LR 15 23 55.6
comp=Z,367nm,22.0s
PBAR Barrancos 82.40 47 *e*P **P** **14 55 25.5 +1.4**
comp=Z,25nm,1.4s,mb5.0
PBAR *i* pP pP 14 55 37.1 +0.4
PBAR *e*LR LR 15 24 36.4
comp=Z,735nm,20.0s
EMIN Mina Concepcio 82.47 47 P **P** **14 55 24.1 -0.4**
comp=Z,36nm,1.3s,mb5.2
ESPR Espera 82.65 48 P **P** **14 55 26.0 +0.6**
comp=Z,69nm,1.7s,mb5.4
EBAD Badajoz 82.68 46 P **P** **14 55 25.9 +0.3**
comp=Z,42nm,1.5s,mb5.2
PMRV Marv??o 82.73 46 *e*LR LR 15 24 17.7
comp=Z,567nm,18.0s
EJIF Jimena Fronter 82.75 49 P **P** **14 55 27.2 +1.3**
comp=Z,21nm,0.8s,mb5.2
EJIF Jimena Fronter 82.75 49 P **P** **14 55 27.2 +1.3**
EJIF pmax pmax
comp=Z,21nm,0.8s,mb5.2
PCBR Castelo Branco 82.86 45 *e*P **P** **14 55 27.6 +1.2**
PCBR *i* pP pP 14 55 40.1 +1.1
PVIS Viseu 82.99 44 *i* pP pP 14 55 39.9 +0.2
SYO Syowa Base 83.00 160 ⇓*e*P **P** **14 55 25.0 -1.7**
SYO Syowa Base 83.00 160 ⇑*e*pP pP 14 55 37.2 -2.1
SYO Syowa Base 83.00 160 ⇓*e*sP sP 14 55 43.6 -0.4
MTE Manteigas 83.08 45 PFAKE 14 55 40.0 +12
MTE LR LR
comp=Z,1μm,20.0s,MS5.2
EMIJ Mijas 83.30 49 P **P** **14 55 28.8 0.0**
comp=Z,34nm,1.3s,mb5.2
ELOB Lobios 83.42 43 P **P** **14 55 29.6 +0.4**
comp=Z,41nm,1.2s,mb5.3
STS Santiago 83.59 42 P **P** **14 55 30.6 +0.4**
comp=Z,43nm,1.1s,mb5.5
STS Santiago 83.59 42 P **P** **14 55 30.6 +0.5**
STS pmax pmax
comp=Z,43nm,1.1s,mb5.5
MVO Moncorvo 83.78 44 *e*P **P** **14 55 32.1 +1.0**
MVO *i* pP pP 14 55 44.6 +0.9
MVO *e*S S 15 05 47.2 -4.0
MVO *e*LQ 15 17 45.3
MVO *e*LR LR 15 24 34.5
comp=Z,803nm,20.0s
MVO Moncorvo 83.78 44 P **P** **14 55 31.1 0.0**
EPLA Plasencia 83.92 45 P **P** **14 55 30.8 -1.1**
comp=Z,73nm,1.3s,mb5.7
EPLA Plasencia 83.92 45 P **P** **14 55 30.8 -1.1**
EPLA pmax pmax
comp=Z,73nm,1.3s,mb5.7
ELOJ Sierra Loja 84.00 49 P **P** **14 55 33.9 +1.6**
comp=Z,83nm,1.0s,mb5.8
ELOJ Sierra Loja 84.00 49 P **P** **14 55 33.9 +1.5**
ELOJ pmax pmax
comp=Z,83nm,1.0s,mb5.8
ELUQ Luque 84.09 48 P **P** **14 55 33.9 +1.1**
comp=Z,183nm,1.6s,mb6.0
ELUQ Luque 84.09 48 P **P** **14 55 33.9 +1.1**
ELUQ pmax pmax
comp=Z,183nm,1.6s,mb6.0
EADA Adamuz 84.13 48 P **P** **14 55 32.6 -0.4**
comp=Z,59nm,1.5s,mb5.5
ERON Agron 84.19 49 P **P** **14 55 34.1 +0.7**
comp=Z,18nm,0.7s,mb5.3
PBRG Braganca 84.27 44 *e*P **P** **14 55 34.6 +1.0**
PBRG *i* pP pP 14 55 45.7 -0.5
PBRG *e*LQ 15 18 34.8
PBRG *e*LR LR 15 24 23.8
ERUA La Rua 84.27 43 P **P** **14 55 33.8 +0.2**
comp=Z,78nm,1.6s,mb5.6
ERUA La Rua 84.27 43 P **P** **14 55 33.8 +0.2**
ERUA pmax pmax
comp=Z,79nm,1.6s,mb5.6
ECAL Calabor 84.33 44 P **P** **14 55 34.3 +0.3**
comp=Z,63nm,1.3s,mb5.6
ECOG Cogollos-Vega 84.48 49 P **P** **14 55 35.2 +0.5**
comp=Z,2.6nm,0.4s,mb4.7
ECOG Cogollos-Vega 84.48 49 P **P** **14 55 35.2 +0.4**
ECOG pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
EBAN Banos Encina 84.69 48 P **P** **14 55 36.5 +0.6**
comp=Z,15nm,0.7s,mb5.2
EBAN Banos Encina 84.69 48 P **P** **14 55 36.5 +0.6**
EBAN pmax pmax
comp=Z,15nm,0.7s,mb5.2
YKA Yellowknife Ar 84.75 342 P **P** **14 55 34.9 -0.6**
comp=Z,12nm,0.7s,mb5.1,baz=136,slow=5.1,SNR=12
YKA LR LR 15 38 09.3
comp=Z,36nm,19.8s,MS3.8,baz=165,slow=39
YKA Yellowknife Ar 84.75 342 P **P** **14 55 34.9 -0.6**
YKA LR LR 15 38 09.3
YKA Yellowknife Ar 84.75 342 P **P** **14 55 34.9 -0.6**
EBER Berja 84.81 49 P **P** **14 55 36.4 -0.1**
comp=Z,112nm,1.5s,mb5.8
PAB San Pablo 84.89 47 *e*P **P** **14 55 37.7 +0.9**
comp=Z,36nm,0.9s,mb5.5
PAB *e*pP pP 14 55 50.0 +0.6
PAB LR LR
comp=Z,534nm,20.0s,MS4.9
PAB San Pablo 84.89 47 *e*P **P** **14 55 37.7 +0.9**
PAB *e**PP pP 14 55 50.0 +0.6
PAB pmax pmax
comp=Z,36nm,0.9s,mb5.5
PAB MLR MLR
comp=Z,534nm,20.0s,MS4.9
EQES Quesada 85.05 49 P **P** **14 55 37.8 +0.1**
comp=Z,90nm,1.7s,mb5.6
ESDC Sonseca Array 85.21 47 P **P** **14 55 39.3 +0.9**
comp=Z,5.6nm,0.7s,mb4.8,baz=252,slow=5.4,SNR=35
ESDC pP pP 14 55 51.7 +0.6
comp=Z,12nm,0.9s,baz=252,slow=4.9,SNR=13
ESDC LR LR 15 31 25.4
comp=Z,384nm,20.8s,MS4.8,baz=255,slow=34
ESDC Sonseca Array 85.21 47 P **P** **14 55 37.9 -0.5**
comp=Z,32nm,1.1s,mb5.4
ESLA Sonseca Array 85.21 47 *e*P **P** **14 55 39.4 +0.9**
comp=Z,8.7nm,1.1s,mb4.8
ESLA *e*pP pP 14 55 51.7 +0.6
ESLA LR LR
comp=Z,3μm,20.0s,MS5.7
ESBB Sonseca Array 85.21 47 P **P** **14 55 38.2 -0.2**
comp=Z,61nm,1.4s,mb5.5
EHUE Huescar 85.40 49 P **P** **14 55 38.2 -1.3**
EHUE Huescar 85.40 49 P **P** **14 55 38.2 -1.2**
GUD Guadarrama 85.50 46 P **P** **14 55 41.0 +1.2**
comp=Z,40nm,1.6s,mb5.3
GUD Guadarrama 85.50 46 P **P** **14 55 41.0 +1.2**
GUD pmax pmax
comp=Z,40nm,1.6s,mb5.3
EVIA Vianos 85.81 48 P **P** **14 55 41.6 +0.2**
comp=Z,24nm,0.8s,mb5.5
EVIA Vianos 85.81 48 P **P** **14 55 41.6 +0.2**
EVIA pmax pmax
comp=Z,24nm,0.8s,mb5.5
TAM Tamanrasset 86.43 65 PFAKE 14 56 00.0 +15
TAM LR LR
comp=Z,1μm,20.0s,MS5.2
ETOB Tobarra 86.49 48 P **P** **14 55 45.4 +0.6**
comp=Z,24nm,0.9s,mb5.4
WRAK Wrangell Islan 87.32 332 PFAKE 14 56 00.0 +12
WRAK LR LR
comp=Z,531nm,20.0s,MS5.0
SJPF Ste Jean 88.51 44 *e*P **P** **14 55 54.9 +0.5**
comp=Z,5.3nm,0.5s,mb4.8
SJPF Ste Jean 88.51 44 *e*P **P** **14 55 54.9 +0.5**
comp=Z,2.7nm,0.5s,mb4.8
SJPF Ste Jean 88.51 44 *e*P **P** **14 55 54.9 +0.5**
SJPF pmax pmax
comp=Z,3.0nm,0.5s,mb4.9
ERTA Horta de San J 88.73 47 P **P** **14 55 55.3 -0.2**
comp=Z,44nm,1.5s,mb5.6
ETSF Etsaut 88.87 45 *e*P **P** **14 55 56.7 +0.6**
ETSF *e*pP pP 14 56 08.3 -0.5
ETSF Etsaut 88.87 45 *e*P **P** **14 55 56.7 +0.6**
ETSF *e**PP pP 14 56 08.3 -0.5
EBIE Bielsa 89.27 45 P **P** **14 55 59.1 +1.2**
comp=Z,41nm,1.6s,mb5.5

ROSF	**Rostrenen**	**89.37**	**39**	*eP*	**P**	**14 55 58.1**	**-0.2**
ROSF	**Rostrenen**	**89.37**	**39**	*eP*	**P**	**14 55 58.1**	**-0.2**
EPF	**Esparros**	**89.53**	**45**	*eP*	**P**	**14 55 59.6**	**+0.4**
	comp=Z,9.0nm,0.9s,mb4.8						
EPF	**Esparros**	**89.53**	**45**	*eP*	**P**	**14 55 59.6**	**+0.4**
	comp=Z,4.5nm,0.9s,mb4.8						
EPF	**Esparros**	**89.53**	**45**	*eP*	**P**	**14 55 59.6**	**+0.4**
EPF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.8						
BOSA	**Boshof**	**89.84**	**120**	P	**P**	**14 56 00.7**	**-0.4**
	comp=Z,3.1nm,0.8s,mb4.7,baz=258,slow=9.6,SNR=4.1						
BOSA				LR	LR	15 32 45.7	
	comp=Z,597nm,19.1s,MS5.0,baz=264,slow=33						
BOSA	**Boshof**	**89.84**	**120**	P	**P**	**14 56 00.7**	**-0.4**
LFF	**La Frestale**	**90.53**	**43**	*eP*	**P**	**14 56 03.6**	**-0.2**
LFF				*ep*P	pP	14 56 15.2	-1.3
LFF	**La Frestale**	**90.53**	**43**	*eP*	**P**	**14 56 03.6**	**-0.2**
LFF				*e*PP*	pP	14 56 15.2	-1.3
MFF	**Saint Martin d**	**90.60**	**41**	*eP*	**P**	**14 56 03.8**	**-0.3**
	comp=Z,12nm,0.8s,mb4.9						
MFF	**Saint Martin d**	**90.60**	**41**	*eP*	**P**	**14 56 03.8**	**-0.3**
	comp=Z,5.8nm,0.8s,mb5.0						
MFF	**Saint Martin d**	**90.60**	**41**	*eP*	**P**	**14 56 03.8**	**-0.3**
MFF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.0						
MAW	**Mawson**	**90.66**	**165**	P	**P**	**14 56 02.9**	**-1.2**
	comp=Z,5.8nm,0.7s,mb5.0						
MAW				LR	LR	15 36 42.0	
	comp=Z,521nm,18.7s,MS5.0,baz=109,slow=36						
MAW	**Mawson**	**90.66**	**165**	P	**P**	**14 56 02.9**	**-1.2**
GRR	**Gorron**	**90.86**	**40**	*eP*	**P**	**14 56 04.6**	**-0.6**
GRR	**Gorron**	**90.86**	**40**	*eP*	**P**	**14 56 04.6**	**-0.6**
MTLF	**Montolieu**	**90.92**	**45**	*eP*	**P**	**14 56 05.5**	**-0.2**
	comp=Z,14nm,1.1s,mb4.9						
MTLF	**Montolieu**	**90.92**	**45**	*eP*	**P**	**14 56 05.5**	**-0.2**
	comp=Z,6.8nm,1.1s,mb4.9						
MTLF	**Montolieu**	**90.92**	**45**	*eP*	**P**	**14 56 05.5**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.9						
RJF	**Les Rejaudoux**	**91.18**	**43**	*eP*	**P**	**14 56 06.4**	**-0.4**
RJF				*e*MLR	MLR		
	comp=Z,712nm,19.8s,MS4.8						
RJF	**Les Rejaudoux**	**91.18**	**43**	*eP*	**P**	**14 56 06.4**	**-0.4**
RJF				LR	LR		
	comp=Z,710nm,19.8s,MS5.1						
RJF	**Les Rejaudoux**	**91.18**	**43**	*eP*	**P**	**14 56 06.4**	**-0.4**
RJF				MLR	MLR		
	comp=Z,710nm,19.8s,MS5.1						
LBTB	**Lobatse**	**91.25**	**116**	PFAKE		14 56 20.0	+12
LBTB				LR	LR		
	comp=Z,535nm,19.0s,MS5.0						
LDF	**La Druitiere**	**91.39**	**40**	*eP*	**P**	**14 56 07.1**	**-0.6**
	comp=Z,6.2nm,0.7s,mb4.7						
LDF				*ep*P	pP	14 56 19.5	-0.9
LDF	**La Druitiere**	**91.39**	**40**	*eP*	**P**	**14 56 07.1**	**-0.6**
	comp=Z,3.1nm,0.7s,mb4.8						
LDF				*ep*P	pP	14 56 19.5	-0.9
LDF	**La Druitiere**	**91.39**	**40**	*eP*	**P**	**14 56 07.1**	**-0.6**
LDF				*e*PP*	pP	14 56 19.5	-0.9
LDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
CAF	**Calviac**	**91.40**	**43**	*eP*	**P**	**14 56 07.6**	**-0.2**
	comp=Z,10.0nm,0.9s,mb4.8						
CAF				*ep*P	pP	14 56 19.2	-1.3
CAF	**Calviac**	**91.40**	**43**	*eP*	**P**	**14 56 07.6**	**-0.2**
	comp=Z,5.0nm,0.9s,mb4.8						
CAF				*ep*P	pP	14 56 19.2	-1.3
CAF	**Calviac**	**91.40**	**43**	*eP*	**P**	**14 56 07.6**	**-0.2**
CAF				*e*PP*	pP	14 56 19.2	-1.3
CAF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.8						
SUMG	**Summit**	**91.52**	**10**	*i* P	**P**	**14 56 08.9**	**+1.1**
	comp=Z,49nm,0.9s,mb5.8						
RES	**Resolute Bay**	**91.64**	**354**	LR	LR	15 42 13.5	
	comp=Z,326nm,18.6s,MS4.8,baz=304,slow=39						
TCF	**Toulx Ste Croi**	**91.99**	**42**	*eP*	**P**	**14 56 10.1**	**-0.4**
	comp=Z,8.2nm,1.0s,mb4.7						
TCF				*ep*P	pP	14 56 21.6	-1.6
TCF	**Toulx Ste Croi**	**91.99**	**42**	*eP*	**P**	**14 56 10.1**	**-0.4**
	comp=Z,4.1nm,1.0s,mb4.7						
TCF				*ep*P	pP	14 56 21.6	-1.6
TCF	**Toulx Ste Croi**	**91.99**	**42**	*eP*	**P**	**14 56 10.1**	**-0.4**
TCF				*e*PP*	pP	14 56 21.6	-1.6
TCF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.7						
LASF	**Ste Croix**	**92.30**	**45**	*eP*	**P**	**14 56 12.3**	**+0.3**
EKA	**Eskdalemuir Ar**	**92.41**	**33**	P	**P**	**14 56 11.7**	**-0.6**
	comp=Z,0.7nm,0.8s,mb4.0,baz=272,slow=5.6,SNR=3.9						
EKA				pP	pP	14 56 24.0	-1.0
	comp=Z,3.2nm,0.9s,baz=236,slow=5.9,SNR=5.5						
EKA	**Eskdalemuir Ar**	**92.41**	**33**	P	**P**	**14 56 11.7**	**-0.6**
EKA				*PP	pP	14 56 24.0	-1.0
BGF	**Bois d'Agland**	**92.50**	**42**	*eP*	**P**	**14 56 12.5**	**-0.4**
BGF				*ep*P	pP	14 56 24.1	-1.5
BGF	**Bois d'Agland**	**92.50**	**42**	*eP*	**P**	**14 56 12.5**	**-0.4**
BGF				*e*PP*	pP	14 56 24.1	-1.5
AVF	**Avril sur Loir**	**92.91**	**42**	*eP*	**P**	**14 56 14.8**	**0.0**
	comp=Z,3.8nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**92.91**	**42**	*eP*	**P**	**14 56 14.8**	**0.0**
	comp=Z,1.9nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**92.91**	**42**	*eP*	**P**	**14 56 14.8**	**0.0**
AVF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.6						
SSF	**Saint Saulge**	**93.10**	**42**	*eP*	**P**	**14 56 14.7**	**-0.9**
SSF	**Saint Saulge**	**93.10**	**42**	*eP*	**P**	**14 56 14.7**	**-0.9**
VIVF	**Saint-Julien-l**	**93.11**	**44**	*eP*	**P**	**14 56 16.2**	**+0.4**
VIVF	**Saint-Julien-l**	**93.11**	**44**	*eP*	**P**	**14 56 16.2**	**+0.4**
SMF	**Signal de Mont**	**93.17**	**42**	*eP*	**P**	**14 56 15.6**	**-0.4**
SMF				*ep*P	pP	14 56 27.1	-1.6
SMF	**Signal de Mont**	**93.17**	**42**	*eP*	**P**	**14 56 15.6**	**-0.4**
SMF				*e*PP*	pP	14 56 27.1	-1.6
LOR	**Lormes**	**93.39**	**42**	*eP*	**P**	**14 56 16.3**	**-0.7**
LOR				*e*MLR	MLR		
	comp=Z,627nm,22.8s,MS4.7						
LOR	**Lormes**	**93.39**	**42**	*eP*	**P**	**14 56 16.3**	**-0.7**
LOR				LR	LR		
	comp=Z,630nm,22.8s,MS5.0						
LOR	**Lormes**	**93.39**	**42**	*eP*	**P**	**14 56 16.3**	**-0.7**
LOR				MLR	MLR		
	comp=Z,630nm,22.8s,MS5.0						
KEST	**Kesra**	**93.64**	**54**	LR	LR	15 41 24.6	
	comp=Z,220nm,18.9s,MS4.6,baz=215,slow=37						
AFI	**Afiamalu**	**93.91**	**254**	P	**P**	**14 56 20.2**	**+0.1**
	comp=Z,25nm,0.8s,mb5.7,baz=108,slow=3.2,SNR=3.6						
AFI	**Afiamalu**	**93.91**	**254**	P	**P**	**14 56 20.2**	**+0.1**
AFI				LR	LR		
	comp=Z,624nm,20.0s,MS5.1						
AFI	**Afiamalu**	**93.91**	**254**	P	**P**	**14 56 20.2**	**0.0**
AFI				MLR	MLR		
	comp=Z,624nm,20.0s,MS5.1						
SFTF	**Sexfontaines**	**94.46**	**41**	*eP*	**P**	**14 56 21.4**	**-0.5**
MBDF	**Montbardon**	**94.48**	**45**	*eP*	**P**	**14 56 22.4**	**+0.3**
MBDF	**Montbardon**	**94.48**	**45**	*eP*	**P**	**14 56 22.4**	**+0.3**
BNI	**Bardonecchia**	**94.52**	**44**	PFAKE		14 56 30.0	+7.8
BNI				LR	LR		
	comp=Z,903nm,20.0s,MS5.2						
BAIF	**Baives**	**94.56**	**39**	*eP*	**P**	**14 56 22.0**	**-0.3**
BAIF	**Baives**	**94.56**	**39**	*eP*	**P**	**14 56 22.0**	**-0.3**
LPL	**La Plagne**	**94.70**	**44**	*eP*	**P**	**14 56 23.8**	**+0.7**
	comp=Z,5.5nm,0.8s,mb4.7						
LPL	**La Plagne**	**94.70**	**44**	*eP*	**P**	**14 56 23.8**	**+0.7**
	comp=Z,2.8nm,0.8s,mb4.7						
LPL	**La Plagne**	**94.70**	**44**	*eP*	**P**	**14 56 23.8**	**+0.7**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
LPG	**La Plagne**	**94.71**	**44**	*eP*	**P**	**14 56 24.0**	**+0.9**
	comp=Z,10nm,0.9s,mb5.0						
LPG				*ep*P	pP	14 56 35.6	-0.2
LPG	**La Plagne**	**94.71**	**44**	*eP*	**P**	**14 56 24.0**	**+0.9**
	comp=Z,5.3nm,0.9s,mb5.0						
LPG				*ep*P	pP	14 56 35.6	-0.2
LPG	**La Plagne**	**94.71**	**44**	*eP*	**P**	**14 56 24.0**	**+0.9**
LPG				*e*PP*	pP	14 56 35.6	-0.2
LPG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
VSL	**Villasalto**	**94.76**	**50**	PFAKE		14 56 30.0	+6.5
VSL				LR	LR		
	comp=Z,355nm,21.0s,MS4.8						
DOU	**Dourbes**	**94.81**	**39**	AP	pP	14 56 38.0	+1.9
GIVF	**Givet**	**94.95**	**39**	*eP*	**P**	**14 56 24.0**	**-0.1**
GIVF				*ep*P	pP	14 56 35.6	-1.2
GIVF	**Givet**	**94.95**	**39**	*eP*	**P**	**14 56 24.0**	**-0.1**
GIVF				*e*PP*	pP	14 56 35.6	-1.2
SNZO	**South Karori**	**94.99**	**225**	PFAKE		14 56 30.0	+5.4
SNZO				LR	LR		
	comp=Z,554nm,21.0s,MS5.0						
EGAK	**Eagle**	**95.34**	**337**	*eP*	**P**	**14 56 23.2**	**-2.3**
	comp=Z,8.0nm,1.1s,mb5.1						
EGAK				LR	LR		
	comp=Z,404nm,21.0s,MS4.9						
HINF	**Hinteralfeld**	**95.49**	**42**	*eP*	**P**	**14 56 26.1**	**-0.5**
HINF	**Hinteralfeld**	**95.49**	**42**	*eP*	**P**	**14 56 26.1**	**-0.5**
WLF	**Walferdange**	**95.62**	**40**	AP	pP	14 56 39.8	-0.1
ECH	**Echery**	**95.81**	**42**	PFAKE		14 56 40.0	+12
ECH				LR	LR		
	comp=Z,360nm,20.0s,MS4.8						
CDF	**Champ du Feu**	**95.94**	**41**	*eP*	**P**	**14 56 28.4**	**-0.2**
CDF	**Champ du Feu**	**95.94**	**41**	*eP*	**P**	**14 56 28.4**	**-0.2**
LSZ	**Lusaka**	**96.65**	**108**	PFAKE		14 56 40.0	+7.3
LSZ				LR	LR		
	comp=Z,1μm,22.0s,MS5.4						
ILAR	**Eielson Array**	**97.57**	**336**	P	**P**	**14 56 34.0**	**-1.7**
	comp=Z,1.0nm,0.8s,mb4.4,baz=126,slow=2.3,SNR=9.2						
ILAR				PP	PP	15 00 33.2	-0.4
	comp=Z,1.3nm,0.9s,baz=107,slow=6.7,SNR=5.6						
ILAR				LR	LR	15 44 25.5	
	comp=Z,348nm,19.8s,MS4.8,baz=348,slow=38						
ILAR	**Eielson Array**	**97.57**	**336**	P	**P**	**14 56 34.0**	**-1.6**
ILAR						15 00 33.3	
CASY	**Casey**	**97.77**	**182**	P	**P**	**14 56 36.0**	**-0.7**
CASY				LR	LR		
	comp=Z,2μm,20.0s,MS5.5						
COLA	**College**	**97.99**	**335**	P	**P**	**14 56 34.5**	**-3.0**
	comp=Z,8.6nm,1.1s,mb5.2						
COLA				LR	LR		
	comp=Z,288nm,19.0s,MS4.8						
COLA	**College**	**97.99**	**335**	P	**P**	**14 56 34.6**	**-2.9**
COLA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.2						
COLA				MLR	MLR		
	comp=Z,288nm,19.0s,MS4.8						
NKC	**Novy Kostel**	**99.69**	**41**	*e*PKP	PKiKP	15 01 03.7	-10
KHC	**Kasperske Hory**	**100.15**	**42**	*e*PKP	PKiKP	15 01 06.8	-8.2
CLL	**Collm**	**100.28**	**40**	*eP*	Pdif	14 57 04.0	+16
CLL				pmax	pmax		
	comp=Z,18nm,1.7s						
CLL	**Collm**	**100.28**	**40**	*es*Pdif		14 57 04.0	
	comp=Z,18nm,1.7s						
CLL				*ep*PP		15 01 08.0	
CLL				*e*SS	SS	15 15 18.0	+1.8
CLL				Lm		15 40 00.0	
	comp=Z,500nm,20.8s						
KONO	**Kongsberg**	**100.34**	**31**	PFAKE		14 57 00.0	+12
KONO				LR	LR		
	comp=Z,537nm,21.0s,MS5.0						
BRG	**Berggiesshubel**	**100.76**	**40**	*eP*	Pdif	14 57 03.2	+13
	comp=Z,8.0nm,1.3s						
BRG							
	comp=N,217nm,16.2s						
BRG							
	comp=E,326nm,17.9s						
BRG							
	comp=Z,387nm,20.8s						
UPC	**Upice**	**101.98**	**41**	*e*PKP	PKiKP	15 01 15.5	-2.7
HFS	**Hagfors**	**102.46**	**31**	PP	PP	15 01 23.4	+13
	comp=Z,2.0nm,0.9s,baz=300,slow=6.7,SNR=3.7						
KBS	**Kingsbay**	**104.85**	**12**	PFAKE		14 57 20.0	+12
KBS				LR	LR		
	comp=Z,291nm,21.0s,MS4.8						
FINES	**FINESS Array B**	**108.62**	**30**	PKKPab	PKKPab	15 12 50.2	-1.4
	comp=Z,1.1nm,0.9s,baz=58,slow=4.7,SNR=3.7						
KEV	**Kevo**	**108.67**	**21**	PFAKE		15 01 40.0	+10
KEV				LR	LR		
	comp=Z,334nm,20.0s,MS4.9						
DZM	**Mont Dzumac**	**110.07**	**239**	*e*LR	LR	15 34 02.3	
	comp=Z,1μm,31.0s						
KIEV	**Kiev**	**110.35**	**41**	PFAKE		15 01 40.0	+6.3
KIEV				LR	LR		
	comp=Z,406nm,20.0s,MS5.0						
AKASG	**Malin Array Be**	**110.36**	**41**	PP	PP	15 02 18.8	+9.5
	comp=Z,0.3nm,0.3s,baz=260,slow=7.8,SNR=14						
BR131	**Keskin Array S**	**113.23**	**53**	PFAKE		15 01 50.0	+10
BR131				LR	LR		
	comp=Z,260nm,19.0s,MS4.8						
BRTR	**Keskin Array B**	**113.23**	**53**	PKiKP	PKiKP	15 01 39.7	+0.2
	comp=Z,0.6nm,0.8s,baz=209,slow=1.5,SNR=3.0						
BRTR				PKKP	PKKPbc	15 12 43.8	+18
	comp=Z,1.3nm,1.0s,baz=52,slow=5.7,SNR=4.2						
BRTR	**Keskin Array B**	**113.23**	**53**	PKIKP	PKiKP	15 01 39.7	+0.2
ASF	**Jabal al Asfar**	**115.51**	**62**	PKP	PKPdf	15 01 44.8	+0.7
	comp=Z,1.1nm,0.4s,baz=180,slow=3.0,SNR=3.0						
ASF	**Jabal al Asfar**	**115.51**	**62**	PKIKP	PKPdf	15 01 44.8	+0.7
BILL	**Bilibino**	**115.97**	**339**	PFAKE		15 01 50.0	+6.1
BILL				LR	LR		
	comp=Z,323nm,22.0s,MS4.9						
PRGR	**Permogore**	**117.79**	**28**	PKIKP	PKPdf	15 01 46.7	-0.9
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZEI	**Tsey**	**120.85**	**50**	*e*PKIKP	pPKPdf	15 02 05.4	-1.8
ZEI				pmax	pmax		
	comp=Z,16nm,1.4s						
STKA	**Stephens Creek**	**121.58**	**215**	PKP	PKPdf	15 01 55.0	-0.9
	comp=Z,1.5nm,0.7s,baz=79,slow=5.2,SNR=4.6						
GNI	**Garni**	**121.75**	**53**	PFAKE		15 02 10.0	+14
GNI				LR	LR		
	comp=Z,178nm,20.0s,MS4.7						
TIXI	**Tiksi**	**122.93**	**352**	PFAKE		15 02 10.0	+13
TIXI				LR	LR		
	comp=Z,305nm,22.0s,MS4.9						
SEY	**Seymchan**	**123.48**	**337**	*i* PKIKP	PKPdf	15 01 58.0	-0.5
PETK	**Petropavlovsk-**	**125.69**	**325**	PKP	PKPdf	15 02 03.1	+0.1
	comp=Z,3.0nm,0.7s,baz=79,slow=2.3,SNR=4.1						
PETK	**Petropavlovsk-**	**125.69**	**325**	PKIKP	PKPdf	15 02 03.2	+0.2
ARU	**Arti**	**125.98**	**31**	*i* PKIKP	PKPdf	15 02 02.7	-0.8
ARU						15 03 57.3	
ARU						15 08 56.9	
ARU				SS	SS	15 20 49.9	-5.6
AKTK	**Aktyubinsk**	**128.31**	**38**	PKP	PKPdf	15 02 08.8	+0.6
AKTO	**Aktyubinsk**	**128.31**	**38**	PKP	PKPdf	15 02 08.8	+0.6
	comp=Z,3.6nm,0.7s,baz=322,slow=2.8,SNR=17						
AKTO	**Aktyubinsk**	**128.31**	**38**	PKIKP	PKPdf	15 02 08.8	+0.7
ABKAR	**Akbulak array**	**129.93**	**38**	*e*PKPdf	PKPdf	15 02 11.4	+0.1
ABKAR				*ep*PKPdf	pPKPdf	15 02 24.1	-0.3
YAK	**Yakutsk**	**131.31**	**346**	*e*PKPdf	PKPdf	15 02 12.3	-1.2
YAK				*ep*PKPdf	pPKPdf	15 02 25.0	-1.5
YAK	**Yakutsk**	**131.31**	**346**	*e*PKIKP	PKPdf	15 02 12.3	-1.2
YAK				*e*		15 02 25.0	
ASAR	**Alice Springs**	**132.22**	**215**	PKP	PKPdf	15 02 15.3	-1.1
	comp=Z,2.2nm,0.9s,baz=127,slow=1.9,SNR=23						
ASAR				PKKP		15 12 10.6	
	comp=Z,0.9nm,1.1s,baz=323,slow=1.4,SNR=6.2						
ASAR	**Alice Springs**	**132.22**	**215**	PKIKP	PKPdf	15 02 15.3	-1.1
BRVK	**Borovoye**	**133.50**	**29**	*ij* PKIKP	PKPdf	15 02 19.2	+1.3
BVAR	**Borovoye Array**	**133.57**	**29**	PKP	PKPdf	15 02 18.6	+0.6
	comp=Z,1.6nm,0.6s,baz=260,slow=2.8,SNR=11						
BVAR				pPKP	pPKPdf	15 02 31.1	0.0
	comp=Z,1.2nm,0.7s,baz=189,slow=2.9,SNR=4.5						
BVAR	**Borovoye Array**	**133.57**	**29**	PKIKP	PKPdf	15 02 18.6	+0.6
BVAR						15 02 31.1	
WB2	**Warramunga Arr**	**134.88**	**218**	*e*PKPdf	PKPdf	15 02 20.1	-1.4
WRA	**Warramunga Arr**	**134.89**	**218**	PKhKP	PKPpre	15 02 05.2	
	comp=Z,0.5nm,1.0s,baz=187,slow=1.7,SNR=3.4						
WRA				PKP	PKPdf	15 02 20.5	-1.0
	comp=Z,4.5nm,0.8s,baz=139,slow=1.8,SNR=40						
WRA	**Warramunga Arr**	**134.89**	**218**	PKP	PKPpre	15 02 05.2	
WRA				PKP	PKPdf	15 02 20.5	-1.0
WRA	**Warramunga Arr**	**134.89**	**218**	PKHKP	PKPpre	15 02 05.2	
WRA						15 02 20.5	
NVS	**Novosibirsk**	**137.41**	**20**	*e*PKIKP	PKPdf	15 02 22.5	-2.6
NVS				pmax	pmax		
	comp=Z,40nm,2.3s						
ZAA0	**Zalesovo Array**	**138.66**	**19**	*e*PKPdf	PKPdf	15 02 26.8	-0.7
ZAA0				*ep*PKPdf	pPKPdf	15 02 38.9	-1.6
ZALV	**Zalesovo Beam**	**138.66**	**19**	PKhKP	PKPpre	15 02 16.0	
	comp=Z,0.3nm,0.4s,baz=309,slow=5.1,SNR=2.2						
ZALV				PKP	PKPdf	15 02 27.3	-0.1
	comp=Z,6.7nm,0.8s,baz=305,slow=1.8,SNR=16						
ZALV				pPKP	pPKPdf	15 02 39.6	-0.9
	comp=Z,23nm,1.0s,baz=302,slow=2.8,SNR=16						
ZALV	**Zalesovo Beam**	**138.66**	**19**	PKHKP	PKPpre	15 02 16.0	
ZALV						15 02 27.3	
ZALV						15 02 39.7	
KURK	**Kurchatov**	**138.89**	**27**	*i* PKIKP	PKPdf	15 02 26.2	-1.8
FITZ	**Fitzroy Crossi**	**141.09**	**210**	PKhKP	PKPpre	15 02 24.6	
KLR	**Kul'dur**	**141.12**	**334**	*e*PKIKP	PKPdf	15 02 28.0	-4.1
EKS2	**Erkin-Say**	**141.54**	**40**	*e*PKPdf	PKPdf	15 02 31.3	-1.8
EKS2				*ep*PKPdf	pPKPdf	15 02 47.4	+1.2
AAK	**Ala-Archa**	**142.00**	**39**	PKhKP	PKPpre	15 02 30.7	
	comp=Z,0.4nm,0.3s,baz=315,slow=4.3,SNR=3.1						
AAK	**Ala-Archa**	**142.00**	**39**	*i* PKIKP	PKPdf	15 02 34.4	+0.5
TKM2	**Tokmak 2**	**142.50**	**38**	*e*PKPdf	PKPdf	15 02 36.6	+1.9
TKM2	**Tokmak 2**	**142.50**	**38**	*e*PKIKP	PKPdf	15 02 36.6	+1.9
GUMO	**Guam**	**142.85**	**271**	PKP	PKPdf	15 02 36.0	-0.2
	comp=Z,139nm,1.2s,baz=352,slow=12,SNR=3.8						
GUMO	**Guam**	**142.85**	**271**	PKIKP	PKPdf	15 02 36.0	-0.2
MK31	**Makanchi Array**	**143.42**	**28**	*e*PKPdf	PKPdf	15 02 32.5	-3.7
MK31				*ep*PKPdf	pPKPdf	15 02 47.1	-2.3
MK31	**Makanchi Array**	**143.42**	**28**	*e*PKIKP	PKPdf	15 02 32.5	-3.7
MK31				*e*		15 02 47.1	
MKAR	**Makanchi Array**	**143.42**	**28**	PKP	PKPdf	15 02 33.1	-3.2
	comp=Z,2.7nm,0.8s,baz=316,slow=3.0,SNR=20						
MKAR	**Makanchi Array**	**143.42**	**28**	PKIKP	PKPdf	15 02 33.1	-3.1
MOY	**Mondy**	**144.29**	**6**	*e*PKIKP	PKPdf	15 02 37.4	-0.2
TLY	**Talaya**	**144.47**	**3**	*e*PKIKP	PKPdf	15 02 35.8	-2.1
TLY				*i*		15 02 48.3	
TLY				pmax	pmax		
	comp=Z,39nm,2.1s						
KSH	**Kashi**	**144.64**	**43**	*e*PKP	PKPdf	15 02 38.8	+0.2
KSH				*es*PKP		15 02 53.3	
KSH				*e*PKS		15 06 13.3	
KSH				*e*SKS	SKSdf	15 09 43.5	-1.3
KSH				AMB	AMB		
	comp=Z,48nm,4.0s						
KSH				LR	LR		
	comp=N,250nm,6.5s						
KSH				LR	LR		
	comp=E,230nm,5.6s						
KSH				LR	LR		
	comp=Z,450nm,14.9s,MS5.4						
MJAR	**Matsushiro Arr**	**145.30**	**312**	PKPbc	PKPbc	15 02 38.6	-1.0
	comp=Z,11nm,0.9s,baz=97,slow=3.2,SNR=22						
MJAR	**Matsushiro Arr**	**145.30**	**312**	PKIKP	PKPdf	15 02 38.6	-1.2
MAJO	**Matsushiro**	**145.30**	**312**	*e*PKPdf	PKPdf	15 02 38.1	-1.7
MAJO				*ep*PKPdf	pPKPdf	15 02 50.1	-2.8
MAJO	**Matsushiro**	**145.30**	**312**	*e*PKIKP	PKPdf	15 02 38.1	-1.8
MAJO				*e*		15 02 50.1	
MAT	**Matsushiro**	**145.30**	**312**	PKP	PKPdf	15 02 38.1	-1.8
VLA	**Vladivostok**	**145.47**	**326***c*	*i* PKIKP	PKPdf	15 02 38.9	-1.0
MDJ	**Mudanjiang**	**145.56**	**330**	PKPbc	PKPbc	15 02 37.9	-2.3
MDJ				pPKP	pPKPdf	15 02 50.6	-2.6
MDJ				sPKP		15 02 55.3	
MDJ				SS	SS	15 24 48.4	-1.1
MDJ				AMB	AMB		
	comp=Z,130nm,11.7s						
MDJ				LR	LR		
	comp=N,140nm,30.5s,MS4.8						
MDJ				LR	LR		
	comp=E,160nm,27.9s,MS4.8						
MDJ				LR	LR		
	comp=Z,150nm,29.2s,MS4.6						
ZAK	**Zakamensk**	**145.75**	**4**	*e*PKP2	PKPab	15 02 40.9	-0.1
ZAK				pmax	pmax		
	comp=Z,26nm,1.2s						
CN2	**Changchun**	**148.07**	**334**	*e*PKPbc	PKPdf	15 02 42.9	-1.4
CN2				*es*PKP		15 02 57.5	
CN2				PP	PP	15 06 19.9	+5.1
CN2				AMB	AMB		
	comp=Z,300nm,7.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s,MS5.1						
CN2				LR	LR		
	comp=E,200nm,17.0s,MS5.1						
CN2				LR	LR		
	comp=Z,300nm,19.0s,MS5.1						
WMQ	**Urumqi**	**148.13**	**26**	PKPbc	PKPbc	15 02 46.0	-1.6
WMQ				PP	PP	15 06 22.0	+6.8
WMQ				SKS	SKSdf	15 09 49.0	-0.5
WMQ				SKKS	SKKSac	15 13 07.0	+3.0
WMQ				SS	SS	15 25 26.0	+7.7
WMQ				AMB	AMB		
	comp=Z,140nm,10.0s						
WMQ				LR	LR		
	comp=N,310nm,26.0s,MS5.1						
WMQ				LR	LR		
	comp=E,280nm,26.0s,MS5.1						
WMQ				LR	LR		
	comp=Z,330nm,26.0s,MS5.0						
ULN

LZH				sPKP		15 03 18.0	
LZH				LR	LR		
	comp=N,310nm,16.2s,MS5.4						
LZH				LR	LR		
	comp=E,430nm,20.6s,MS5.4						
LZH				LR	LR		
	comp=Z,370nm,15.8s,MS5.3						
LSA	**Lhasa**	**160.49**	**44**	PKP	PKPdf	15 03 01.6	-0.4
NJ2	**Nanjing**	**160.58**	**327**	*e*PKP	PKPdf	15 03 01.5	-0.5
WHN	**Wuhan**	**163.96**	**335**	*e*PKP	PKPdf	15 03 05.0	-0.5
PSI	**Prapat**	**164.80**	**150**	PKP	PKPdf	15 03 05.8	-1.0
	comp=Z,2.4nm,0.4s,baz=177,slow=8.8,SNR=3.6						
PSI				PKPab	PKPab	15 04 00.5	-1.9
	comp=Z,2.9nm,0.5s,baz=151,slow=10,SNR=3.1						
PSI	**Prapat**	**164.80**	**150**	PKIKP	PKPdf	15 03 05.8	-0.9
PSI						15 04 00.5	
CD2	**Chengdu**	**165.09**	**9**	*e*PKP	PKPdf	15 03 06.3	-0.2
CD2				pPKP	pPKPdf	15 03 17.3	-2.3
CD2				sPKP		15 03 20.8	
CD2				PKPab	PKPab	15 04 05.1	+1.9
CD2				PP	PP	15 07 52.9	+4.4
CD2				SKS	SKSdf	15 10 05.3	-2.3
CD2				SKKS	SKKSac	15 14 34.8	+0.5
CD2				SS	SS	15 28 21.4	+1.7
CD2				AMB	AMB		
	comp=Z,290nm,8.4s						
CD2				LR	LR		
	comp=N,320nm,20.4s						
CD2				LR	LR		
	comp=E,270nm,18.2s						
CD2				LR	LR		
	comp=Z,470nm,24.0s						
GYA	**Guiyang**	**169.73**	**359**	PKP	PKPdf	15 03 07.0	-2.9
GYA				sPKP		15 03 25.4	
GYA				PKPab	PKPab	15 04 24.3	+0.5
GYA				PKS		15 06 38.6	
GYA				PP	PP	15 08 13.8	+1.6
GYA				SKKS	SKKSac	15 14 55.0	-2.4
GYA				SS	SS	15 29 06.3	0.0
GYA				AMB	AMB		
	comp=Z,140nm,7.9s						
GYA				LR	LR		
	comp=N,180nm,22.9s						
GYA				LR	LR		
	comp=E,120nm,24.0s						
GYA				LR	LR		
	comp=Z,140nm,21.9s						
KMI	**Kunming**	**170.40**	**21**	PKP	PKPdf	15 03 10.3	0.0
CMAR	**Chiang Mai Arr**	**172.43**	**71**	PKP	PKPdf	15 03 10.8	-0.8
	comp=Z,0.4nm,0.4s,baz=271,slow=2.8,SNR=5.1						
CMAR				pPKP	pPKPdf	15 03 23.5	-1.2
	comp=Z,2.6nm,0.9s,baz=292,slow=1.7,SNR=6.6						
CMAR				PKPab	PKPab	15 04 36.5	+0.1
	comp=Z,1.9nm,0.7s,baz=282,slow=6.0,SNR=11						
CMAR				pPKPab	pPKPab	15 04 48.4	-0.7
	comp=Z,4.7nm,1.0s,baz=277,slow=6.0,SNR=7.5						
CMAR				PP	PP	15 08 38.5	+11
	comp=Z,2.6nm,1.1s,baz=274,slow=5.9,SNR=5.4						
CMAR	**Chiang Mai Arr**	**172.43**	**71**	PKIKP	PKPdf	15 03 10.8	-0.7
CMAR						15 03 23.5	
CMAR						15 04 36.5	
QIZ	**Qiongzhong**	**175.70**	**312**	PKP	PKPdf	15 03 09.9	-2.7
QIZ				SS	SS	15 30 02.8	-4.2
QIZ				AMB	AMB		
	comp=Z,120nm,8.3s						
QIZ				LR	LR		
	comp=N,140nm,12.0s						
QIZ				LR	LR		
	comp=Z,280nm,29.0s						

*ISK **20** 14:43:20.0, 38°.56N×36°.46E, h5km, MD3.1*
*CSEM **20** 14:43:21.0±0.3, 38°.56N×36°.45E, h2km, MD3.1, Error ellipse: s-maj=6.7km s-min=6.2km az=24.0*
*ISCJB **20** 14:43:22.0±0.4, 38°.59N±0°.03×36°.50E±0°.04, h10km, Error ellipse: s-maj=4.2km s-min=3.7km az=9.8*
*DDA **20** 14:43:23.5, 38°.58N×36°.63E, h9km±4km, Md3.1*
ISC 20 14:43:21.8±0.8, 38°.62N±0°.03×36°.50E±0°.05, h4km±6km, n34, σ1§11/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARI	**SarD1z-Kayseri**	**0.16**	**69**	PG	**Pg**	**14 43 23.5**	**-1.5**
SARI				*e*SG	**Sg**	**14 43 26.5**	**-0.7**
SARI	**SarD1z-Kayseri**	**0.16**	**69**	*i* Pg	**Pg**	**14 43 23.5**	**-1.5**
SARI				*e*Sg	**Sg**	**14 43 26.5**	**-0.7**
ANDN	**Andirin**	**1.04**	**187**	*i* P	**Pg**	**14 43 44.0**	**+2.1**
ANDN				*i* S	**Sg**	**14 43 57.8**	**+2.5**
ANDN	**Andirin**	**1.04**	**187**	*i* P	**Pg**	**14 43 44.0**	**+2.2**
ANDN				*i* S	**Sg**	**14 43 57.8**	**+2.4**
DARE	**Darende-Malaty**	**1.07**	**72**	*e*PG	**Pg**	**14 43 36.3**	**-6.1**
DARE				*e*SG	**Sg**	**14 43 48.8**	**-7.5**
KMRS	**Kahramanmaras**	**1.16**	**164**	*e*PN	**Pg**	**14 43 42.5**	**-1.5**
KMRS				*e*SN	**Sg**	**14 43 58.2**	**-0.8**
KMRS	**Kahramanmaras**	**1.16**	**164**	*e*Pn	**Pg**	**14 43 42.5**	**-1.4**
KMRS				*e*Sn	**Sg**	**14 43 58.2**	**-0.7**
AKCD	**Akcadag**	**1.16**	**106**	*i* P	**Pg**	**14 43 43.9**	**-0.2**
AKCD				*i* S	**Sg**	**14 44 01.9**	**+2.8**
AKCD	**Akcadag**	**1.16**	**106**	*i* P	**Pg**	**14 43 43.9**	**-0.2**
AKCD				*i* S	**Sg**	**14 44 01.9**	**+2.8**
KOZT	**Kozan**	**1.26**	**205**	*e*PN	**Pn**	**14 43 44.3**	**-1.7**
SCER	**sogukcermik**	**1.33**	**21**	*i* P	**Pg**	**14 43 48.5**	**+1.1**
SCER				*i* S	**Sg**	**14 44 09.6**	**+4.9**
SCER	**sogukcermik**	**1.33**	**21**	*i* P	**Pg**	**14 43 48.5**	**+1.2**
SCER				*i* S	**Sg**	**14 44 09.6**	**+5.0**
YOZ	**Yozgat**	**1.37**	**318**	*e*PN	**Pn**	**14 43 47.6**	**-0.1**
YOZ	**Yozgat**	**1.37**	**318**	*e*Pn	**Pn**	**14 43 47.6**	**0.0**
GZT	**Gaziantep**	**1.52**	**146**	*i* P	**Pn**	**14 43 49.7**	**+0.1**
GZT				*i* S	**Sn**	**14 44 09.9**	**+0.1**
MYA	**Malataya**	**1.54**	**100**	*e*PN	**Pn**	**14 43 50.0**	**0.0**
MYA	**Malataya**	**1.54**	**100**	*e*Pn	**Pn**	**14 43 50.0**	**+0.1**
MALT	**Malatya**	**1.54**	**101**	*e*PN	**Pn**	**14 43 50.1**	**+0.1**
MALT	**Malatya**	**1.54**	**101**	*e*Pn	**Pn**	**14 43 50.1**	**+0.1**
GAZ	**Gaziantep**	**1.55**	**159**	*e*PN	**Pn**	**14 43 49.6**	**-0.5**
GAZ	**Gaziantep**	**1.55**	**159**	*e*Pn	**Pn**	**14 43 49.6**	**-0.5**
KEMA	**Kemaliye**	**1.68**	**67**	*i* P	**Pg**	**14 43 54.5**	**+0.4**
KEMA				*i* S	**Sg**	**14 44 19.5**	**+3.6**
KEMA	**Kemaliye**	**1.68**	**67**	*i* P	**Pg**	**14 43 54.5**	**+0.5**
KEMA				*i* S	**Sg**	**14 44 19.5**	**+3.6**
KARA	**Karaisali**	**1.77**	**221**	*e*PN	**Pn**	**14 43 52.3**	**-0.9**
KARA	**Karaisali**	**1.77**	**221**	*e*Pn	**Pn**	**14 43 52.3**	**-0.9**
CDAG	**Cicekdag**	**1.94**	**302**	*i* P	**Pn**	**14 43 54.5**	**-0.9**
CDAG				*i* S	**Sn**	**14 44 21.5**	**+1.4**
CDAG	**Cicekdag**	**1.94**	**302**	*i* P	**Pn**	**14 43 54.5**	**-0.9**
CDAG				*i* S	**Sn**	**14 44 21.5**	**+1.4**
CORM	**Corum**	**2.13**	**318**	*e*PN	**Pn**	**14 43 58.0**	**-0.1**
CORM	**Corum**	**2.13**	**318**	*e*Pn	**Pn**	**14 43 58.0**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.21**	**95**	*e*PN	**Pn**	**14 43 59.6**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.21**	**95**	*e*Pn	**Pn**	**14 43 59.6**	**+0.4**
PTK	**Pertek**	**2.28**	**82**	*e*PN	**Pn**	**14 44 00.7**	**+0.6**
PTK	**Pertek**	**2.28**	**82**	*e*Pn	**Pn**	**14 44 00.7**	**+0.6**
KELT	**Kelkit**	**2.62**	**54**	*i* P	**Pg**	**14 44 11.3**	**-0.8**
KELT				*i* S	**Sn**	**14 44 24.1**	**-13**

*BJI **20** 14:51:18.5, 43°.76N×85°.28E, h16km, ML3.0/6*
NNC 20 14:51:19.1±4.4, 43°.96N×85°.39E, h0km, mb3.2, mpv2.9, 3C, Error ellipse: s-maj=35.4km s-min=20.6km az=142.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.67**	**94**	Pg	Pg	14 51 50.4	-0.8
WMQ				Sg	Sg	14 52 14.0	+1.1
WMQ				smax			
	comp=N,100nm,0.4s						
WMQ				smax			
	comp=E,160nm,0.4s						
MK31	**Makanchi Array**	**3.58**	**323**	Pn	Pn	14 52 15.7	-0.2
	comp=E,0.5nm,0.2s,baz=144,slow=14,SNR=128						
MK31				Pg	Pg	14 52 25.0	-2.7
	comp=E,2.2nm,0.4s,baz=138,slow=16,SNR=16						
MK31				⇑Lg		14 53 12.6	
	comp=E,14nm,0.5s,baz=142,slow=30,SNR=14						
KURBB	**Kurchatov Arra**	**8.13**	**327**	⇑Lg		14 55 37.5	
	comp=E,1.3nm,0.7s						
KURK	**Kurchatov**	**8.17**	**328**	⇑Lg		14 55 37.5	
	comp=E,8.0nm,0.7s						

*CSEM **20** 15:17:51.4, 36°.97N×4°.31W, h0km, ML1.1, After MDD*
MDD 20 15:17:51.4±0.5, 36°.97N×4°.31W, h0km, mbLg1.1/5, 1D, Error ellipse: s-maj=4.5km s-min=3.4km az=141.0, PRXIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELOJ	**Sierra Loja**	**0.22**	**35**	⇓Pg	Pg	15 17 55.3	-0.2
	2.0nm,0.1s,SNR=18						
ELOJ				Lg		15 17 59.1	
	6.2nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**0.22**	**35**	Pg	Pg	15 17 55.3	-0.2
	2.0nm,0.1s,SNR=18						
ELOJ				Lg		15 17 59.1	
	6.2nm,0.2s,SNR=7.9						
ERON	**Agron**	**0.40**	**83**	Pg	Pg	15 17 58.5	-0.6
	0.4nm,0.2s,SNR=4.0						
ERON				Lg		15 18 03.9	
	3.6nm,0.4s,SNR=7.9						
ERON	**Agron**	**0.40**	**83**	Pg	Pg	15 17 58.5	-0.6
	0.4nm,0.2s,SNR=4.0						
ERON				Lg		15 18 03.9	
	3.6nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**0.55**	**223**	Pg	Pg	15 18 01.8	-0.2
	0.3nm,0.1s,SNR=7.9						
EMIJ				Lg		15 18 09.5	
	0.9nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**0.55**	**223**	Pg	Pg	15 18 01.8	-0.1
	0.3nm,0.1s,SNR=7.9						
EMIJ				Lg		15 18 09.5	
	0.9nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**0.61**	**103**	Pg	Pg	15 18 02.0	-1.1
	1.4nm,0.1s,SNR=4.0						
EGUA				Lg		15 18 10.8	
	5.1nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**0.61**	**103**	Pg	Pg	15 18 02.0	-1.0
	1.4nm,0.1s,SNR=4.0						
EGUA				Lg		15 18 10.8	
	5.1nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**0.67**	**62**	Lg		15 18 13.0	
	2.3nm,0.1s,SNR=4.0						
ECOG	**Cogollos-Vega**	**0.67**	**62**	Lg		15 18 13.0	
	2.3nm,0.1s,SNR=4.0						
EQUE	**Quentar**	**0.73**	**71**	Lg		15 18 15.3	
	0.3nm,0.0s,SNR=7.9						
EQUE	**Quentar**	**0.73**	**71**	Lg		15 18 15.3	
	0.3nm,0.0s,SNR=7.9						
EBER	**Berja**	**1.14**	**93**	Lg		15 18 28.1	
	0.6nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.14**	**93**	Lg		15 18 28.1	
	0.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.22**	**350**	Pg	Pg	15 18 12.6	-2.1
	1.2nm,0.2s,SNR=7.9						
EADA				Lg		15 18 30.4	
	0.7nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.22**	**350**	Pg	Pg	15 18 12.6	-2.1
	1.2nm,0.2s,SNR=7.9						
EADA				Lg		15 18 30.4	
	0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.29**	**49**	Pg	Pg	15 18 15.6	-0.4
	0.2nm,0.1s,SNR=4.0						
EQES				Lg		15 18 34.0	
	1.0nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.29**	**49**	Pg	Pg	15 18 15.6	-0.5
	0.2nm,0.1s,SNR=4.0						
EQES				Lg		15 18 34.0	
	1.0nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**1.42**	**322**	Lg		15 18 36.6	
	0.2nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**1.42**	**322**	Lg		15 18 36.6	
	0.2nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.05**	**294**	Lg		15 18 56.5	
	0.2nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.05**	**294**	Lg		15 18 56.5	
	0.2nm,0.2s,SNR=7.9						

*NEIC **20** 15:18:08.8, 37°.85N×20°.30E, h5km, ML3.2(ATH), After ATH.*
*ATH **20** 15:18:09.2, 38°.09N×20°.43E, h12km±1km, MD3.6/15*
*ISCJB **20** 15:18:10.9±0.8, 38°.10N±0°.03×20°.55E±0°.05, h5km±4km, Error ellipse: s-maj=7.0km s-min=4.6km az=147.9*
*CSEM **20** 15:18:11.9±0.3, 38°.14N×20°.62E, h5km, ML2.8/9, Error ellipse: s-maj=6.6km s-min=4.2km az=46.0*
*THE **20** 15:18:12.8, 38°.17N×20°.69E, h1km±1km, ML2.8/9, Error ellipse: s-maj=1.5km s-min=0.6km az=230.0*
ISC 20 15:18:11.5±0.8, 38°.10N±0°.03×20°.57E±0°.05, h6km±3km, n78, σ0§93/110, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.07**	**11**	*e*PG	**Pg**	**15 18 13.4**	**+0.1**
VLS				*e*SG	**Sg**	**15 18 15.9**	**+1.3**
VLS	**Valsamata**	**0.07**	**11**	P	**Pg**	**15 18 14.4**	**+1.1**
VLS				S	**Sg**	**15 18 15.9**	**+1.3**
VLS	**Valsamata**	**0.07**	**11**	*e*Pg	**Pg**	**15 18 13.4**	**+0.1**
VLS	**Valsamata**	**0.07**	**11**	P	**Pg**	**15 18 14.4**	**+1.1**
VLS				S	**Sg**	**15 18 15.9**	**+1.3**
KFL	**Anninata**	**0.17**	**88**	P	**Pg**	**15 18 15.4**	**+0.4**
KFL	**Anninata**	**0.17**	**88**	P	**Pg**	**15 18 15.4**	**+0.4**
LKD2	**Lefkada island**	**0.69**	**6**	P	**Pg**	**15 18 24.0**	**-0.7**
LKD2				S	**Sg**	**15 18 33.7**	**0.0**
LKD2	**Lefkada island**	**0.69**	**6**	P	**Pg**	**15 18 24.0**	**-0.7**
LKD2				S	**Sg**	**15 18 33.7**	**0.0**
RLS	**Riolos of Patr**	**0.71**	**93**	P	**Pg**	**15 18 25.1**	**0.0**
RLS	**Riolos of Patr**	**0.71**	**93**	*e*PG	**Pg**	**15 18 24.6**	**-0.5**
RLS	**Riolos of Patr**	**0.71**	**93**	*e*Pg	**Pg**	**15 18 24.6**	**-0.5**
RLS	**Riolos of Patr**	**0.71**	**93**	P	**Pg**	**15 18 25.1**	**0.0**
UPR	**University Cam**	**0.97**	**79**	*e*PG	**Pg**	**15 18 29.1**	**-1.1**
UPR				*e*SB	**Sg**	**15 18 45.6**	**+2.8**
UPR	**University Cam**	**0.97**	**79**	P	**Pg**	**15 18 29.9**	**-0.3**
UPR	**University Cam**	**0.97**	**79**	*e*Pg	**Pg**	**15 18 29.1**	**-1.1**
UPR	**University Cam**	**0.97**	**79**	P	**Pg**	**15 18 29.9**	**-0.3**
UPR				*e*Sb	**Sg**	**15 18 45.6**	**+2.8**
EFP	**Efpalio**	**1.10**	**73**	*e*PN	**Pg**	**15 18 31.6**	**-1.0**
EFP				*e*SB	**Sg**	**15 18 48.3**	**+1.4**
EFP	**Efpalio**	**1.10**	**73**	P	**Pg**	**15 18 31.4**	**-1.2**
EFP				S	**Sg**	**15 18 45.0**	**-1.9**
EFP	**Efpalio**	**1.10**	**73**	P	**Pg**	**15 18 31.4**	**-1.2**
EFP				S	**Sg**	**15 18 45.0**	**-1.9**
EFP				*e*Sb	**Sg**	**15 18 48.3**	**+1.4**
LAKA	**Lakka**	**1.12**	**83**	P	**Pg**	**15 18 31.8**	**-1.1**
LAKA				S	**Sg**	**15 18 46.9**	**-0.5**
LAKA	**Lakka**	**1.12**	**83**	P	**Pg**	**15 18 31.8**	**-1.1**
LAKA				S	**Sg**	**15 18 46.9**	**-0.5**
TRIZ	**Trizonia**	**1.21**	**77**	P	**Pg**	**15 18 33.1**	**-1.6**
TRIZ				S	**Sg**	**15 18 50.0**	**-0.4**
TRIZ	**Trizonia**	**1.21**	**77**	P	**Pg**	**15 18 33.1**	**-1.6**
TRIZ				S	**Sg**	**15 18 50.0**	**-0.4**
EVR	**Evrytania**	**1.27**	**50**	P	**Pg**	**15 18 37.9**	**+2.1**
EVR	**Evrytania**	**1.27**	**50**	*e*PB	**Pb**	**15 18 35.1**	**-0.6**
EVR				*e*SB	**Sb**	**15 18 53.7**	**+1.5**
EVR	**Evrytania**	**1.27**	**50**	*e*Pb	**Pb**	**15 18 35.1**	**-0.6**
EVR	**Evrytania**	**1.27**	**50**	P	**Pg**	**15 18 37.9**	**+2.1**
EVR				*e*Sb	**Sb**	**15 18 53.7**	**+1.5**
KALE	**Kalithea**	**1.27**	**76**	P	**Pn**	**15 18 33.9**	**-1.8**
KALE				S	**Sg**	**15 18 52.1**	**-0.2**
KALE	**Kalithea**	**1.27**	**76**	P	**Pn**	**15 18 33.9**	**-1.8**
KALE				S	**Sg**	**15 18 52.1**	**-0.2**
GUR	**Goura**	**1.41**	**96**	P	**Pn**	**15 18 37.0**	**-0.6**
GUR				S	**Sb**	**15 18 56.5**	**+0.1**
GUR	**Goura**	**1.41**	**96**	P	**Pn**	**15 18 37.0**	**-0.6**
GUR				S	**Sb**	**15 18 56.5**	**+0.1**
ITM	**Ithomi**	**1.42**	**130**	*e*PB	**Pb**	**15 18 38.3**	**0.0**
ITM				*e*SB	**Sb**	**15 18 58.2**	**+1.6**
ITM	**Ithomi**	**1.42**	**130**	P	**Pn**	**15 18 38.1**	**+0.3**
ITM				S	**Sb**	**15 18 58.2**	**+1.6**
ITM	**Ithomi**	**1.42**	**130**	P	**Pn**	**15 18 38.1**	**+0.3**
ITM				S	**Sb**	**15 18 58.2**	**+1.6**
IGT	**Igoumenitsa**	**1.44**	**353**	P	**Pn**	**15 18 36.8**	**-1.3**
IGT	**Igoumenitsa**	**1.44**	**353**	P	**Pn**	**15 18 36.8**	**-1.3**
JAN	**Janina**	**1.57**	**8**	P	**Pn**	**15 18 40.8**	**+1.0**
JAN	**Janina**	**1.57**	**8**	*e*PG	**Pn**	**15 18 38.8**	**-1.0**
JAN				*e*SB	**Sb**	**15 19 01.2**	**+0.3**
JAN	**Janina**	**1.57**	**8**	*e*Pg	**Pn**	**15 18 38.8**	**-1.0**
JAN	**Janina**	**1.57**	**8**	P	**Pn**	**15 18 40.8**	**+1.0**
JAN				*e*Sb	**Sb**	**15 19 01.2**	**+0.3**
DSF	**Desfina**	**1.57**	**78**	P	**Pn**	**15 18 38.9**	**-1.0**
DSF				S	**Sn**	**15 18 59.9**	**-0.6**
DSF	**Desfina**	**1.57**	**78**	P	**Pn**	**15 18 38.9**	**-1.0**
DSF				S	**Sn**	**15 18 59.9**	**-0.6**
VLX	**Vlachokerasia**	**1.61**	**117**	P	**Pn**	**15 18 41.2**	**+0.8**
VLX	**Vlachokerasia**	**1.61**	**117**	P	**Pn**	**15 18 41.2**	**+0.8**
AGG	**Agios Georgios**	**1.66**	**56**	P	**Pg**	**15 18 43.6**	**+0.3**
AGG	**Agios Georgios**	**1.66**	**56**	*e*PG	**Pg**	**15 18 42.3**	**-1.0**
AGG	**Agios Georgios**	**1.66**	**56**	P	**Pn**	**15 18 41.2**	**+0.1**
AGG				S	**Sn**	**15 19 02.7**	**+0.1**
AGG	**Agios Georgios**	**1.66**	**56**	P	**Pn**	**15 18 41.2**	**+0.1**
AGG	**Agios Georgios**	**1.66**	**56**	*e*Pg	**Pg**	**15 18 42.3**	**-1.0**
AGG				S	**Sn**	**15 19 02.7**	**+0.1**
THL	**Klokotos Trika**	**1.84**	**37**	*e*PN	**Pn**	**15 18 44.0**	**+0.4**
THL	**Klokotos Trika**	**1.84**	**37**	P	**Pn**	**15 18 43.7**	**+0.1**
THL				S	**Sn**	**15 19 07.2**	**0.0**
THL	**Klokotos Trika**	**1.84**	**37**	P	**Pn**	**15 18 43.7**	**+0.1**
THL	**Klokotos Trika**	**1.84**	**37**	*e*Pn	**Pn**	**15 18 44.0**	**+0.4**
THL				S	**Sn**	**15 19 07.2**	**0.0**
LTK	**Loutraki**	**1.89**	**92**	*e*PN	**Pn**	**15 18 44.4**	**+0.1**
LTK	**Loutraki**	**1.89**	**92**	P	**Pn**	**15 18 44.4**	**+0.1**
LTK	**Loutraki**	**1.89**	**92**	P	**Pn**	**15 18 44.4**	**+0.1**
LKR	**Lokris**	**1.98**	**73**	P	**Pn**	**15 18 46.8**	**+1.2**
LKR	**Lokris**	**1.98**	**73**	*e*PN	**Pn**	**15 18 46.6**	**+1.0**
LKR	**Lokris**	**1.98**	**73**	P	**Pn**	**15 18 45.2**	**-0.4**
LKR	**Lokris**	**1.98**	**73**	P	**Pn**	**15 18 45.2**	**-0.4**
LKR	**Lokris**	**1.98**	**73**	*e*Pn	**Pn**	**15 18 46.6**	**+1.0**
DID	**Didima**	**2.19**	**105**	*e*PN	**Pn**	**15 18 49.1**	**+0.7**
DID	**Didima**	**2.19**	**105**	*e*Pn	**Pn**	**15 18 49.1**	**+0.7**
NAIG	**Nisos Aigina**	**2.33**	**98**	*e*PB	**Pn**	**15 18 50.7**	**+0.3**
NAIG	**Nisos Aigina**	**2.33**	**98**	*e*Pb	**Pn**	**15 18 50.7**	**+0.3**
NEST	**Nestorio**	**2.34**	**9**	P	**Pn**	**15 18 50.3**	**-0.1**
NEST	**Nestorio**	**2.34**	**9**	P	**Pn**	**15 18 50.3**	**-0.1**
KZN	**Kozani**	**2.39**	**23**	P	**Pn**	**15 18 51.1**	**0.0**
KZN	**Kozani**	**2.39**	**23**	P	**Pn**	**15 18 51.1**	**0.0**
LIT	**Litokhoron**	**2.49**	**36**	P	**Pb**	**15 18 56.2**	**-0.4**
LIT	**Litokhoron**	**2.49**	**36**	P	**Pb**	**15 18 56.2**	**-0.4**
VLY	**Voula,Athens**	**2.56**	**95**	P	**Pn**	**15 18 53.1**	**-0.4**
VLY	**Voula,Athens**	**2.56**	**95**	*e*PB	**Pn**	**15 18 53.2**	**-0.3**
VLY	**Voula,Athens**	**2.56**	**95**	P	**Pn**	**15 18 53.1**	**-0.4**
PTL	**Penteli**	**2.60**	**90**	*e*PN	**Pn**	**15 18 54.6**	**+0.6**
PTL	**Penteli**	**2.60**	**90**	*e*Pn	**Pn**	**15 18 54.6**	**+0.6**
PLG	**Polygyros**	**3.18**	**44**	P	**Pn**	**15 19 03.6**	**+1.6**
PLG	**Polygyros**	**3.18**	**44**	P	**Pn**	**15 19 03.6**	**+1.6**

ISC 20 15:26:05.7±1.0, 45°.81N±0°.04×13°.10E±0°.08, h10km, n6, σ0§76/11, 4C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLI	**Talmassons**	**0.11**	**1**	⇓*i*Pg	**Pg**	**15 26 08.2**	**-0.2**
COLI	**Coloredo**	**0.38**	**311**	*e*Pg	**Pg**	**15 26 12.4**	**-0.6**
COLI				*e*Sg	**Sg**	**15 26 18.5**	**+0.4**
VINO	**Villanova**	**0.46**	**16**	*e*Pg	**Pg**	**15 26 13.8**	**-0.8**
VINO				*e*Sg	**Sg**	**15 26 21.1**	**+0.3**
FUSE	**Fusea**	**0.61**	**354**	*e*Pg	**Pg**	**15 26 16.6**	**-0.8**
FUSE				*e*Sg	**Sg**	**15 26 26.1**	**+0.7**
CIMO	**Cimolais**	**0.68**	**318**	*e*Pg	**Pg**	**15 26 18.0**	**-0.8**
CIMO				*e*Sg	**Sg**	**15 26 28.8**	**+1.2**
NVLJ	**Novalja**	**1.77**	**134**	*i* Pn	**Pn**	**15 26 35.8**	**-0.5**
NVLJ				Sn	**Sn**	**15 27 00.0**	**+1.2**

*ISCJB **20** 15:41:15.1±1.0, 19°.0S±0°.1×177°.7W±0°.2, h603km±19km, mb3.5/8, Error ellipse: s-maj=24.0km s-min=13.1km az=26.9*
*IDC **20** 15:41:16.1±1.3, 18°.90S×177°.56W, h607km±21km, mb3.2/7, mb1 3.3/9, mb1mx3.1/19, mbtmp3.2/9, Error ellipse: s-maj=32.5km s-min=13.6km az=134.0*
*NEIC **20** 15:41:16.0±0.9, 18°.91S×177°.58W, h608km±15km, mb3.3/1, Error ellipse: s-maj=27.9km s-min=12.8km az=132.0*
ISC 20 15:41:15.8±1.0, 19°.0S±0°.1×177°.6W±0°.2, h602km±19km, n16, σ0§87/18, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.55**	**49**	P	**P**	**15 43 10.7**	**-0.3**
	3.4nm,0.3s,baz=16,slow=4.2,SNR=11						
AFI				S	**S**	**15 44 44.8**	**-0.5**
	1.0nm,0.3s,baz=165,slow=16,SNR=2.9						
AFI	**Afiamalu**	**7.55**	**49**	P	**P**	**15 43 10.7**	**-0.3**
AFI				S	**S**	**15 44 44.8**	**-0.5**
URZ	**Urewera**	**19.72**	**192**	P	**P**	**15 45 07.7**	**+1.0**
	0.6nm,0.3s,baz=76,slow=23,SNR=6.0						
URZ				S	**S**	**15 48 12.2**	**-1.2**
	0.2nm,0.3s,baz=166,slow=19,SNR=2.8						
STKA	**Stephens Creek**	**38.79**	**243**	P	**P**	**15 47 51.9**	**+1.5**
	1.9nm,0.4s,mb4.0,baz=83,slow=10.0,SNR=13						
STKA	**Stephens Creek**	**38.79**	**243**	*e*P	**P**	**15 47 51.6**	**+1.2**
	0.5nm,0.6s,mb3.2						
WB2	**Warramunga Arr**	**45.19**	**261**	*e*P	**P**	**15 48

0.1nm,0.5s,mb3.2,baz=19,slow=13,SNR=3.7

IDC 20 16:07:22.8±6.6,6.71S×154.13E,h0km,mb3.4/3, mb1 3.5/3,mb1mx3.3/16,mbtmp3.4/3,Error ellipse: s-maj=201.8km s-min=38.1km az=112.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.28**	**234**	P	P	16 12 32.3	-0.1
	0.6nm,0.8s,baz=59,slow=9.7,SNR=4.9						
ASAR	**Alice Springs**	**25.73**	**227**	P	P	16 12 55.0	-0.1
	0.3nm,0.8s,baz=55,slow=8.5,SNR=3.6						
MKAR	**Makanchi Array**	**82.63**	**319**	P	P	16 19 48.3	+0.3
	0.3nm,0.2s,baz=92,slow=4.6,SNR=2.9						

*IDC **20** 16:08:36.8±1.8,25.26N×122.99E,h0km,mb3.5/6, mb1 3.6/6,mb1mx3.5/23,mbtmp3.5/6,Error ellipse: s-maj=168.0km s-min=19.5km az=66.0*
*NEIC **20** 16:08:53.9±2.3,25.19N×122.81E,h149km±18km,Error ellipse: s-maj=49.8km s-min=11.7km az=70.0*
*ISCJB **20** 16:08:54.5±0.3,25.02N±0.03×122.70E±0.02, h159km±3km,mb3.3/6,Error ellipse: s-maj=5.0km s-min=2.7km az=161.2*
*TAP **20** 16:08:55.5,25.05N×122.76E,h151km,ML4.0,C*
*JMA **20** 16:08:57.3±0.4,25.00N×122.74E,h143km,M3.4*

ISC 20 16:08:55.2±0.3,25.03N±0.03×122.70E±0.02,h156km±2km, n75,σ0.97/134,mb3.3/6,2D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.63**	**153**	P	**Pn**	**16 09 18.3**	**+0.3**
YOJ				S	**Sn**	**16 09 35.8**	**+0.4**
TWB1	**Santiao Chiao**	**0.64**	**268**	*i* P	**Pn**	**16 09 18.4**	**+0.4**
	baz=274						
TWB1				S	**Sn**	**16 09 35.3**	**-0.1**
	baz=274						
NWF	**Wu-fen Shan**	**0.83**	**273**	*e*P	**Pn**	**16 09 19.9**	**+0.6**
	baz=276						
NWF				*e*S	**Sn**	**16 09 38.3**	**+0.7**
	baz=276						
TWC	**Suao**	**0.88**	**242**	P	**Pn**	**16 09 19.2**	**-0.4**
	baz=235						
TWC				S	**Sn**	**16 09 37.2**	**-1.0**
	baz=235						
ILA	**Ilan**	**0.90**	**253**	*e*P	**Pn**	**16 09 20.0**	**+0.2**
	baz=244						
ILA				*e*S	**Sn**	**16 09 39.2**	**+0.7**
	baz=244						
TWE	**Neicheng**	**0.99**	**252**	P	**Pn**	**16 09 20.9**	**+0.5**
	baz=252						
TWE				*e*S	**Sn**	**16 09 39.2**	**-0.5**
	baz=252						
TWA	**Mucha**	**1.01**	**267**	*e*P	**Pn**	**16 09 21.0**	**+0.3**
	baz=258						
TWA				*e*S	**Sn**	**16 09 39.8**	**-0.3**
	baz=258						
TWY	**Chenhua**	**1.02**	**284**	*e*P	**Pn**	**16 09 21.1**	**+0.3**
	baz=287						
TWY				*e*S	**Sn**	**16 09 40.2**	**-0.1**
	baz=287						
ENA	**Nanau**	**1.06**	**236**	*e*P	**Pn**	**16 09 21.6**	**+0.5**
	baz=231						
ENA				*e*S	**Sn**	**16 09 40.4**	**-0.4**
	baz=231						
TAP1	**Taipei**	**1.07**	**271**	*e*P	**Pn**	**16 09 22.0**	**+0.9**
	baz=261						
TAP1				*e*S	**Sn**	**16 09 40.5**	**-0.4**
	baz=261						
ENTT	**Nioudou**	**1.10**	**250**	*e*P	**Pn**	**16 09 22.1**	**+0.7**
	baz=245						
ENTT				*e*S	**Sn**	**16 09 42.7**	**+1.2**
	baz=245						
TATO	**Taipei**	**1.10**	**267**	*e*Pn	**Pn**	**16 09 20.1**	**-1.3**
TATO				*e*Sn	**Sn**	**16 09 41.0**	**-0.4**
TWS1	**Kuangyinshan**	**1.16**	**274**	*e*P	**Pn**	**16 09 22.6**	**+0.6**
	baz=266						
TWS1				*e*S	**Sn**	**16 09 42.2**	**-0.2**
	baz=266						
IRIF	**Iriomote-Funau**	**1.17**	**126**	P	**Pn**	**16 09 22.4**	**+0.4**
IRIF				S	**Sn**	**16 09 40.0**	**-2.5**
YHNB	**Yeheng**	**1.25**	**254**	*e*Pn	**Pn**	**16 09 22.9**	**+0.1**
YHNB				*e*Sn	**Sn**	**16 09 41.2**	**-2.7**
NSK	**Sanguang**	**1.27**	**254**	P	**Pn**	**16 09 23.4**	**+0.5**
	baz=254						
NSK				*e*S	**Sn**	**16 09 43.5**	**-0.7**
	baz=254						
NACB	**Ninganchiao**	**1.32**	**230**	*e*Pn	**Pn**	**16 09 23.1**	**-0.4**
NACB				*e*Sn	**Sn**	**16 09 39.1**	**-6.0**
NCU	**National Centr**	**1.37**	**268**	*e*P	**Pn**	**16 09 24.9**	**+0.9**
	baz=267						
NCU				*e*S	**Sn**	**16 09 46.1**	**+0.1**
	baz=267						
TWD	**Chiawan**	**1.38**	**227**	P	**Pn**	**16 09 24.0**	**-0.1**
	baz=225						
TWD				*e*S	**Sn**	**16 09 45.3**	**-0.8**
	baz=225						
HATJ	**Hateruma jima**	**1.40**	**134**	P	**Pn**	**16 09 25.2**	**+0.9**
HATJ				S	**Sn**	**16 09 45.9**	**-0.6**
JKRS	**Kuro-shima**	**1.43**	**123**	P	**Pn**	**16 09 25.5**	**+0.9**
JKRS				S	**Sn**	**16 09 47.0**	**0.0**
HWA	**Hwalien**	**1.45**	**224**	*e*P	**Pn**	**16 09 24.3**	**-0.4**
	baz=219						
HWA				*e*S	**Sn**	**16 09 46.0**	**-1.3**
	baz=219						
JIJ	**Ishigaki jima**	**1.47**	**117**	P	**Pn**	**16 09 25.5**	**+0.5**
JIJ				S	**Sn**	**16 09 46.7**	**-1.0**
WHF	**Hehuan Shan**	**1.57**	**236**	P	**Pn**	**16 09 27.1**	**+1.1**
	baz=232						
WHF				*e*S	**Sn**	**16 09 49.9**	**+0.2**
	baz=232						
HSN	**Hsinchu**	**1.59**	**262**	*e*P	**Pn**	**16 09 26.2**	**0.0**
	baz=255						
HSN				*e*S	**Sn**	**16 09 49.1**	**-0.7**
	baz=255						
NSTT	**Nanjuang**	**1.59**	**256**	P	**Pn**	**16 09 26.4**	**+0.2**
	baz=256						
NSTT				*e*S	**Sn**	**16 09 49.0**	**-1.0**
	baz=256						
ESL	**Shilin**	**1.67**	**224**	*e*P	**Pn**	**16 09 26.4**	**-0.6**
	baz=231						
ESL				*e*S	**Sn**	**16 09 50.0**	**-1.5**
	baz=231						
JTJ	**Tarama**	**1.86**	**102**	P	**Pn**	**16 09 30.0**	**+0.8**
JTJ				S	**Sn**	**16 09 55.0**	**-0.2**
NSY	**Sanyi**	**1.86**	**251**	*e*P	**Pn**	**16 09 30.0**	**+0.8**
	baz=259						
NSY				*e*S	**Sn**	**16 09 55.4**	**+0.2**
	baz=259						
EHY	**Hungye**	**1.97**	**220**	*e*P	**Pn**	**16 09 30.2**	**-0.2**
	baz=218						
EHY				*e*S	**Sn**	**16 09 56.2**	**-1.2**
	baz=218						
SMLT	**Sun Moon Lake**	**2.00**	**235**	⇓P	**Pn**	**16 09 32.0**	**+1.3**
	baz=233						
SMLT				*e*S	**Sn**	**16 09 58.9**	**+1.0**
	baz=233						
SSLB	**Suanglung**	**2.02**	**232**	*e*Pn	**Pn**	**16 09 31.7**	**+0.8**
SSLB				*e*Sn	**Sn**	**16 09 57.6**	**-0.8**
TYC	**Yuchr**	**2.02**	**237**	⇓P	**Pn**	**16 09 31.9**	**+0.9**
	baz=245						
TYC				*e*S	**Sn**	**16 09 59.4**	**+1.0**
	baz=245						
TCU	**Taichung**	**2.04**	**245**	*e*P	**Pn**	**16 09 32.1**	**+0.9**
	baz=252						
TCU				*e*S	**Sn**	**16 09 58.4**	**-0.4**
	baz=252						
TWF1	**Yuli**	**2.10**	**218**	*e*P	**Pn**	**16 09 31.9**	**-0.1**
	baz=225						
TWF1				*e*S	**Sn**	**16 09 58.6**	**-1.6**
	baz=225						
WNT	**Mingjian**	**2.16**	**238**	*e*P	**Pn**	**16 09 33.7**	**+1.0**
	baz=239						
WNT				*e*S	**Sn**	**16 10 01.8**	**+0.3**
	baz=239						
YUS	**Yu-Shan**	**2.21**	**226**	*e*P	**Pn**	**16 09 35.3**	**+2.1**
	baz=221						
YUS				*e*S	**Sn**	**16 10 03.5**	**+1.0**
	baz=221						
CHKT	**Chengkung**	**2.28**	**213**	*e*P	**Pn**	**16 09 33.4**	**-0.6**
	baz=208						
CHKT				*e*S	**Sn**	**16 10 01.9**	**-1.9**
	baz=208						
ALS	**Alishan**	**2.30**	**229**	P	**Pn**	**16 09 36.4**	**+2.2**
	baz=224						
ALS				*e*S	**Sn**	**16 10 06.5**	**+2.2**
	baz=224						
WGK	**Gukeng**	**2.36**	**236**	*e*P	**Pn**	**16 09 35.6**	**+0.6**
	baz=244						
WGK				*e*S	**Sn**	**16 10 06.3**	**+0.6**
	baz=244						
JMJ	**Miyako jima 2**	**2.37**	**95**	P	**Pn**	**16 09 36.6**	**+1.6**
JMJ				S	**Sn**	**16 10 06.0**	**+0.3**
ELDTW	**Lidau**	**2.39**	**220**	*e*P	**Pn**	**16 09 35.7**	**+0.3**
	baz=221						
ELDTW				*e*S	**Sn**	**16 10 05.8**	**-0.5**
	baz=221						
JOGS	**Gusukube**	**2.47**	**96**	P	**Pn**	**16 09 37.9**	**+1.6**
JOGS				S	**Sn**	**16 10 08.3**	**+0.3**
WTCT	**Ta-ch'eng**	**2.49**	**243**	*e*P	**Pn**	**16 09 36.6**	**+0.1**
	baz=243						
WTCT				*e*S	**Sn**	**16 10 07.3**	**-1.1**
	baz=243						
TPUB	**Ta-pu**	**2.56**	**228**	*e*Pn	**Pn**	**16 09 37.7**	**+0.3**
TPUB				*e*Sn	**Sn**	**16 10 08.7**	**-1.1**
STYT	**Tauyuan**	**2.57**	**224**	*e*P	**Pn**	**16 09 38.4**	**+0.9**
	baz=224						
STYT				*e*S	**Sn**	**16 10 11.2**	**+1.1**
	baz=224						
CHY	**Chiayi**	**2.58**	**234**	*e*P	**Pn**	**16 09 37.6**	**0.0**
	baz=234						
CHY				*e*S	**Sn**	**16 10 10.0**	**-0.3**
	baz=234						
WTP	**Ta-pu**	**2.60**	**227**	*e*P	**Pn**	**16 09 38.5**	**+0.5**
	baz=237						
WTP				*e*S	**Sn**	**16 10 11.8**	**+0.9**
	baz=237						
WSF	**Szhu**	**2.65**	**239**	*e*P	**Pn**	**16 09 38.6**	**+0.1**
	baz=239						
WSF				*e*S	**Sn**	**16 10 11.2**	**-0.7**
	baz=239						
TWG	**Pinlang**	**2.66**	**214**	*e*P	**Pn**	**16 09 37.8**	**-0.8**
	baz=219						
TWG				*e*S	**Sn**	**16 10 10.3**	**-1.8**
	baz=219						
TTN	**Taitung**	**2.67**	**212**	*e*P	**Pn**	**16 09 39.5**	**+0.7**
	baz=219						
TTN				*e*S	**Sn**	**16 10 12.7**	**+0.2**
	baz=219						
CHN1	**Nanshi**	**2.70**	**228**	*e*P	**Pn**	**16 09 39.8**	**+0.6**
	baz=228						
CHN1				*e*S	**Sn**	**16 10 13.6**	**+0.5**
	baz=228						
SGST	**Jiashian**	**2.74**	**225**	P	**Pn**	**16 09 40.3**	**+0.7**
	baz=226						
SGST				*e*S	**Sn**	**16 10 14.7**	**+0.9**
	baz=226						
ECL	**Taimali**	**2.90**	**214**	*e*P	**Pn**	**16 09 40.8**	**-0.8**
	baz=210						
ECL				*e*S	**Sn**	**16 10 15.4**	**-2.1**
	baz=210						
TWM1	**Shoushan**	**3.03**	**224**	*e*P	**Pn**	**16 09 45.4**	**+2.2**
	baz=224						
TWM1				*e*S	**Sn**	**16 10 22.3**	**+2.0**
	baz=224						
EAST	**Anshuo**	**3.13**	**213**	*e*P	**Pn**	**16 09 45.1**	**+0.6**
	baz=211						
EAST				*e*S	**Sn**	**16 10 21.3**	**-1.4**
	baz=211						
LAY	**Lan-yu**	**3.16**	**200**	*e*P	**Pn**	**16 09 44.4**	**-0.5**
	baz=196						
LAY				*e*S	**Sn**	**16 10 23.0**	**-0.3**
	baz=196						
PNG	**Penghu**	**3.22**	**244**	*e*P	**Pn**	**16 09 45.0**	**-0.6**
	baz=244						
PNG				*e*S	**Sn**	**16 10 21.9**	**-2.6**
	baz=244						
SCZT	**Fangliau**	**3.26**	**216**	*e*P	**Pn**	**16 09 46.4**	**+0.3**
	baz=225						
JKE	**Kume jima 2**	**3.91**	**70**	P	**Pn**	**16 09 54.6**	**+0.2**
JKE				S	**Sn**	**16 10 41.8**	**+1.3**
JAGN	**Aguni-jima**	**4.38**	**68**	P	**Pn**	**16 10 00.5**	**-0.1**
JJT2	**Tamagusuku 2**	**4.69**	**75**	P	**Pn**	**16 10 04.6**	**-0.1**
JIH	**Iheya**	**5.14**	**66**	P	**Pn**	**16 10 09.7**	**-0.9**
JOW	**Kunigami**	**5.33**	**69**	P	**Pn**	**16 10 11.8**	**-1.3**
JTK	**Tokunoshima**	**6.24**	**63**	P	**Pn**	**16 10 23.3**	**-1.9**
JAM	**Amami Oshima**	**7.03**	**60**	P	**Pn**	**16 10 33.2**	**-2.5**
JMZ	**Minamidaito 2**	**7.75**	**82**	P	**Pn**	**16 10 42.5**	**-2.7**
SONM	**Songino Array**	**26.16**	**335**	P	**P**	**16 14 14.1**	**-0.8**
	0.2nm,0.5s,mb3.0,baz=140,slow=7.0,SNR=2.6						
SONM	**Songino Array**	**26.16**	**335**	P	**P**	**16 14 14.1**	**-0.8**
MKAR	**Makanchi Array**	**38.71**	**315**	P	**P**	**16 16 02.9**	**-1.0**
	0.3nm,0.2s,mb3.5,baz=108,slow=9.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**40.30**	**326**	P	**P**	**16 16 15.2**	**-1.7**
	0.5nm,0.6s,mb3.3,baz=107,slow=9.2,SNR=2.7						
WRA	**Warramunga Arr**	**46.11**	**165**	P	**P**	**16 17 03.4**	**-0.4**
	0.2nm,0.5s,mb3.0,baz=346,slow=8.2,SNR=4.8						
WRA	**Warramunga Arr**	**46.11**	**165**	P	**P**	**16 17 03.4**	**-0.5**
ASAR	**Alice Springs**	**49.61**	**166**	P	**P**	**16 17 32.1**	**+1.4**
	0.7nm,1.2s,mb3.2,baz=340,slow=6.9,SNR=3.1						
FINES	**FINESS Array B**	**71.41**	**330**	P	**P**	**16 19 57.0**	**-1.1**
	0.7nm,0.4s,mb3.7,baz=61,slow=6.5,SNR=13						

*CSEM **20** 16:22:03.5,36.17N×21.87E,h11km,MD3.6,After ATH*

ATH 20 16:22:03.5,36.17N×21.87E,h11km±2km,MD3.6/9, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.95**	**83**	*e*PG	Pg	16 22 21.3	-0.5
KYTH	**Kithira**	**0.95**	**83**	*e*Pg	Pg	16 22 21.3	-0.5
ITM	**Ithomi**	**1.01**	**3**	*e*PB	Pb	16 22 22.7	-0.3
ITM				*e*SB	Sb	16 22 37.2	+0.9
ITM	**Ithomi**	**1.01**	**3**	*e*Pb	Pb	16 22 22.7	-0.3
ITM				*e*Sb	Sb	16 22 37.2	+0.9
VLI	**Veliai**	**1.02**	**57**	*e*PB	Pb	16 22 23.1	-0.1
VLI				*e*SB	Sb	16 22 37.3	+0.7
VLI	**Veliai**	**1.02**	**57**	*e*Pb	Pb	16 22 23.1	-0.1
VLI				*e*Sb	Sb	16 22 37.3	+0.7
VLX	**Vlachokerasia**	**1.27**	**19**	*e*PG	Pg	16 22 27.0	-0.8
VLX				*e*SB	Sb	16 22 44.6	+0.9
VLX	**Vlachokerasia**	**1.27**	**19**	*e*Pg	Pg	16 22 27.0	-0.8
VLX				*e*Sb	Sb	16 22 44.6	+0.9
DID	**Didima**	**1.73**	**39**	*e*PN	Pn	16 22 34.9	+1.5
DID	**Didima**	**1.73**	**39**	*e*Pn	Pn	16 22 34.9	+1.5
GUR	**Goura**	**1.80**	**12**	*e*PG	Pg	16 22 37.0	-1.1
GUR	**Goura**	**1.80**	**12**	*e*Pg	Pg	16 22 37.0	-1.1
VAM	**Vamos**	**2.04**	**111**	*e*PN	Pn	16 22 40.6	+2.8
VAM	**Vamos**	**2.04**	**111**	*e*Pn	Pn	16 22 40.6	+2.8
LTK	**Loutraki**	**2.05**	**25**	*e*PN	Pn	16 22 39.9	+2.0
LTK	**Loutraki**	**2.05**	**25**	*e*Pn	Pn	16 22 39.9	+2.0
EFP	**Efpalio**	**2.25**	**1**	*e*PB	Pb	16 22 42.2	-2.0
EFP	**Efpalio**	**2.25**	**1**	*e*Pb	Pb	16 22 42.2	-2.0
AGG	**Agios Georgios**	**2.87**	**7**	*e*PB	Pb	16 22 51.8	-2.9
AGG	**Agios Georgios**	**2.87**	**7**	*e*Pb	Pb	16 22 51.8	-2.9

*CASC **20** 16:30:09.7±3.1,15.26N×91.63W,h237km±14km,MD3.9, ML4.0,mb4.7(NEIC)*
*ISCJB **20** 16:30:10.8±0.2,15.50N±0.03×91.54W±0.03,h214km, mb4.4/50,Error ellipse: s-maj=5.3km s-min=2.4km az=41.1*
*NEIC **20** 16:30:10.0±0.3,15.35N×91.68W,mb4.7/42,MD4.5(MEX), Error ellipse: s-maj=7.3km s-min=4.8km az=211.0*
*MEX **20** 16:30:11.7±0.9,15.38N×91.86W,h221km±8km,MD4.5*
*IDC **20** 16:30:11.6±0.4,15.44N×91.46W,h216km±3km,mb4.0/18, mb1 4.2/21,mb1mx4.1/27,mbtmp4.1/21,Error ellipse: s-maj=13.6km s-min=6.8km az=57.0*

ISC 20 16:30:12.1±0.2,15.46N±0.03×91.52W±0.03,h215km, h216km±1.7km:pP-P,n289,σ1.15/279,mb4.4/50,94C-78D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TP2	**Tecpan 2**	**0.83**	**144**	⇓*e*P	**Pn**	**16 30 42.8**	**+0.3**
TP2				*e*S	**S**	**16 31 07.9**	**+1.7**
THIG		**0.90**	**233**	*i* P	**Pn**	**16 30 39.6**	**-3.3**
THIG				*e*S	**S**	**16 31 03.0**	**-3.9**
CCIG	**Comitan**	**1.01**	**324**	*i* P	**Pn**	**16 30 42.2**	**-1.3**
CCIG				*e*S	**S**	**16 31 05.2**	**-2.9**
CCIG	**Comitan**	**1.01**	**324**	*i* P	**Pn**	**16 30 42.2**	**-1.3**
CCIG				*e*S	**S**	**16 31 05.2**	**-2.9**
FG6		**1.09**	**145**	⇓*e*P	**Pn**	**16 30 44.9**	**+0.8**
APG	**El Apazote**	**1.12**	**114**	P	**Pn**	**16 30 43.6**	**-0.6**
	144nm,0.3s,baz=306,slow=7.5,SNR=1267						
APG				S	**S**	**16 31 08.8**	**-0.4**
	63nm,0.3s,baz=267,slow=10,SNR=32						
APG	**El Apazote**	**1.12**	**114**	P	**Pn**	**16 30 43.6**	**-0.6**
APG				S	**S**	**16 31 08.8**	**-0.4**
JAT	**Jato**	**1.14**	**186**	⇑*i*P	**Pn**	**16 30 42.9**	**-1.5**
FUG	**Fuego 3**	**1.20**	**147**	*e*P	**Pn**	**16 30 45.0**	**+0.1**
PCG	**Pacaya**	**1.38**	**140**	*e*S	Sx	16 31 23.9	
NBG	**Las Nubes**	**1.43**	**127**	⇓*e*P	**Pn**	**16 30 47.9**	**+1.3**
IXG	**Ixpaco**	**1.64**	**141**	*e*P	**Pn**	**16 30 49.1**	**+0.6**
PCIG		**1.65**	**279**	*i* P	**Pn**	**16 30 44.6**	**-3.9**
PCIG				*e*S	**S**	**16 31 10.2**	**-6.7**
SCX	**San Cristobal**	**1.66**	**320**	*i* P	**Pn**	**16 30 47.6**	**-0.9**
SCX				*e*S	**S**	**16 31 13.1**	**-4.0**
SCX	**San Cristobal**	**1.66**	**320**	*i* P	**Pn**	**16 30 47.6**	**-0.9**
SCX				*e*S	**S**	**16 31 13.1**	**-4.0**
MRL	**Marmol**	**1.81**	**102**	⇓*e*P	**Pn**	**16 30 51.2**	**+1.2**
TGIG		**2.02**	**311**	*i* P	**Pn**	**16 30 49.5**	**-2.5**
TGIG				*e*S	**S**	**16 31 18.2**	**-5.0**
RBDL	**Robledal**	**2.22**	**127**	*e*P	**Pn**	**16 30 54.2**	**+0.1**
RBDL				*e*S	**S**	**16 31 31.0**	**+4.1**
MTO2	**Montecristo 2**	**2.34**	**117**	*e*P	**Pn**	**16 30 54.6**	**-0.6**
MTO2				*e*S	**S**	**16 31 32.1**	**+3.1**
RTR	**El Retiro**	**2.39**	**130**	*e*P	**Pn**	**16 30 55.4**	**-0.5**
SNJE	**San Jose**	**2.44**	**130**	*e*P	**Pn**	**16 30 56.7**	**+0.4**
SBLS	**San Blas**	**2.44**	**131**	*e*P	**Pn**	**16 30 56.8**	**+0.4**
CMIG	**Matias Romero**	**3.61**	**297**	P	**Pn**	**16 31 05.8**	**-4.0**
	250nm,0.3s,baz=102,slow=7.4,SNR=1904						
CMIG				S	**S**	**16 31 46.1**	**-9.1**
	193nm,0.3s,baz=326,slow=20,SNR=23						
TGUH	**Tegucigalpa,Un**	**4.34**	**108**	*e*Pn	**Pn**	**16 31 20.1**	**+1.5**
HUIG	**Huatulco**	**4.43**	**275**	*i* P	**Pn**	**16 31 13.8**	**-6.0**
HUIG				*e*S	**S**	**16 32 02.7**	**-11**
HUIG	**Huatulco**	**4.43**	**275**	*i* P	**Pn**	**16 31 13.8**	**-6.0**
HUIG				*e*S	**S**	**16 32 02.7**	**-11**
CRIN	**San Cristobal**	**5.13**	**122**	*e*P	**Pn**	**16 31 30.1**	**+1.4**
CRIN				*e*S	**S**	**16 32 28.3**	**-0.8**
CRIN				AML	AML	16 32 37.9	
	comp=N,266nm,0.3s						
OXX	**Oaxaca**	**5.25**	**289**	*i* P	**Pn**	**16 31 27.1**	**-2.9**
OXX				*e*S	**S**	**16 32 22.2**	**-10**
OXX	**Oaxaca**	**5.25**	**289**	*i* P	**Pn**	**16 31 27.1**	**-2.9**
OXX				*e*S	**S**	**16 32 22.2**	**-10**
VHO	**Vista Hermosa**	**5.26**	**288**	*i* P	**Pn**	**16 31 27.1**	**-3.1**
VHO				*e*S	**S**	**16 32 22.4**	**-10**
VHO	**Vista Hermosa**	**5.26**	**288**	*i* P	**Pn**	**16 31 27.1**	**-3.1**
VHO				*e*S	**S**	**16 32 22.4**	**-10**
TEIG	**Tepich**	**5.66**	**33**	P	**Pn**	**16 31 35.2**	**0.0**
	comp=N,71nm,0.3s,baz=238,slow=2.8,SNR=391						
TEIG				S	**S**	**16 32 40.9**	**-0.3**
	comp=N,7.2nm,0.3s,baz=30,slow=21,SNR=4.5						
TEIG	**Tepich**	**5.66**	**33**	*e*Pn	**Pn**	**16 31 34.6**	**-0.7**
	comp=N,465nm,0.4s						
TEIG				*e*		16 31 44.0	
TEIG				*e*S	**S**	**16 32 41.1**	**-0.1**
COPN	**Copaltepe**	**5.79**	**124**	*e*P	**Pn**	**16 31 38.0**	**+1.0**
CSAN		**5.93**	**123**	*e*P	**Pn**	**16 31 40.7**	**+2.0**
PNIG	**Pinotepa**	**6.42**	**279**	*i* P	**Pn**	**16 31 40.8**	**-4.2**
PNIG				*e*S	**S**	**16 32 47.3**	**-12**
PNIG	**Pinotepa**	**6.42**	**279**	*i* P	**Pn**	**16 31 40.8**	**-4.2**
PNIG				*e*S	**S**	**16 32 47.3**	**-12**
VCR	**Vista de Mar**	**7.81**	**132**	*e*P	**Pn**	**16 32 03.8**	**+0.7**
ACX	**Acapulco**	**8.13**	**281**	*i* P	**Pn**	**16 32 04.0**	**-3.1**
ACX				*e*S	**S**	**16 33 27.3**	**-12**
ACX	**Acapulco**	**8.13**	**281**	*i* P	**Pn**	**16 32 04.0**	**-3.1**
ACX				*e*S	**S**	**16 33 27.3**	**-12**
JTS	**JuntasAbangare**	**8.21**	**128**	P	**Pn**	**16 32 08.6**	**+0.5**
	comp=N,9.4nm,0.3s,baz=340,slow=15,SNR=22						
JTS				S	Sx	16 33 33.7	
	comp=N,1.5nm,0.3s,baz=292,slow=19,SNR=2.8						
JCR	**Jicaral**	**8.38**	**131**	*e*P	**Pn**	**16 32 10.9**	**+0.6**
CGA2	**Cerro Gallo 2**	**8.75**	**127**	*e*P	**Pn**	**16 32 16.3**	**+1.1**
PRS1	**Puriscal**	**8.89**	**127**	*e*P	**Pn**	**16 32 18.4**	**+1.4**
QCR	**Quepos**	**9.36**	**129**	*e*P	**Pn**	**16 32 23.4**	**+0.5**
URSC	**Urasca**	**9.40**	**126**	*e*P	**Pn**	**16 32 24.9**	**+1.5**
ACR	**Cerro Adams**	**10.60**	**129**	*e*P	**Pn**	**16 32 40.0**	**+1.0**
BCIP	**Isla Barro Col**	**13.01**	**117**	*e*Pn	**Pn**	**16 33 07.4**	**-1.9**
MTDJ	**Mount Denham**	**13.67**	**76**	*e*Pn	**Pn**	**16 33 19.8**	**+2.3**
	comp=N,276nm,0.9s						
DWPF	**Disney**	**15.68**	**35**	*e*P	**Pn**	**16 33 43.5**	**+1.6**
	comp=N,106nm,0.6s						
GTBY	**Guantanamo Bay**	**16.25**	**72**	*e*P	**P**	**16 33 48.1**	**+0.2**
	comp=N,78nm,0.7s						
JCT	**Junction City**	**16.77**	**334**	⇓P	**P**	**16 33 54.7**	**+1.2**
	baz=17,SNR=6.4						
JCT	**Junction City**	**16.77**	**334**	*e*P	**P**	**16 33 54.0**	**+0.6**
	comp=N,11nm,0.6s						
628A	**Black Gap, Mar**	**17.45**	**325**	⇑P	**P**	**16 34 01.6**	**+0.7**
	baz=18,SNR=8.2						
627A	**Terlingua Ranc**	**17.71**	**324**	⇑P	**P**	**16 34 05.4**	**+1.7**
	baz=18,SNR=7.7						
627A				⇓pP		16 34 37.7	
	baz=18						
TXAR	**Lajitas Array**	**17.78**	**323**	P	**P**	**16 34 05.8**	**+1.3**
	comp=N,1.0nm,0.3s,baz=149,slow=10,SNR=49						
TXAR				PcP	PcP	16 38 30.6	-0.7
	comp=N,0.1nm,0.3s,baz=160,slow=3.5,SNR=6.4						
TXAR				ScP	ScP	16 41 46.6	+0.7
	comp=N,0.1nm,0.3s,baz=153,slow=4.5,SNR=14						
528A	**Cox Ranch, San**	**17.92**	**327**	⇑P	**P**	**16 34 07.7**	**+1.7**
	baz=18,SNR=8.8						
LRAL	**Lakeview Retre**	**17.97**	**12**	*e*P	**P**	**16 34 07.0**	**+0.5**
	comp=N,17nm,0.8s						
626A	**Big Bend Ranch**	**18.21**	**323**	⇓P	**P**	**16 34 10.5**	**+1.2**
	baz=18,SNR=9.9						
428A	**Kincaid Ranch,**	**18.32**	**328**	⇑P	**P**	**16 34 11.9**	**+1.6**
	baz=18,SNR=5.5						
527A	**Woodward Ranch**	**18.36**	**325**	⇑P	**P**	**16 34 12.7**	**+1.9**
	baz=

WVT **Waverly** 20.85 8 eP P 16 34 36.3 -1.0
comp=N,57nm,0.5s
125A **Gardner Draw,** 20.87 327 ⇓P P 16 34 37.2 -0.4
baz=21
125A ⇑pP 16 35 13.3
baz=21,SNR=5.1
224A **Cornudas Mount** 20.89 325 ⇓P P 16 34 37.8 0.0
baz=21,SNR=13
Z26A **Caprock** 21.02 330 ⇓P P 16 34 38.6 -0.6
baz=21,SNR=12
MSTX **Muleshoe** 21.04 333 ⇑P P 16 34 38.2 -1.3
baz=21,SNR=8.9
Y27A **Causey** 21.14 332 ⇓P P 16 34 39.8 -0.7
baz=21,SNR=9.2
TKL **Tuckaleechee C** 21.28 18 P P 16 34 42.9 +1.0
comp=N,40nm,0.7s,mb5.0,baz=187,slow=10,SNR=44
TKL **Tuckaleechee C** 21.28 18 eP P 16 34 42.5 +0.7
124A **Stringfield Ra** 21.32 326 ⇑P P 16 34 42.7 +0.3
baz=21,SNR=6.1
AMTX **Amarillo** 21.39 337 ⇓P P 16 34 42.1 -0.9
baz=22,SNR=7.7
AMTX **Amarillo** 21.39 337 eP P 16 34 41.2 -1.8
comp=N,11nm,0.5s,mb4.6
AMTX epP 16 35 17.9
Z25A **Roswell** 21.39 328 ⇓P P 16 34 42.4 -0.7
baz=22
SDV **Santo Domingo** 21.43 105 eP P 16 34 42.5 -1.1
comp=N,18nm,0.6s,mb4.8
Y26A **Elida** 21.48 331 ⇓P P 16 34 43.2 -0.8
baz=22,SNR=6.6
Z24A **Sheeppen Canyo** 21.76 327 ⇑P P 16 34 47.1 +0.3
baz=22,SNR=8.3
Y25A **Mesa, Roswell** 21.89 329 ⇓P P 16 34 48.2 +0.2
baz=22,SNR=8.7
Y25A ⇑pP 16 35 26.7
baz=22,SNR=5.4
X26A **CR and CF Fran** 21.99 332 ⇓P P 16 34 48.2 -0.7
baz=22,SNR=5.7
W27A **Bowe Ranch, En** 22.10 334 ⇑P P 16 34 49.2 -0.7
baz=22,SNR=7.0
W27A ⇑pP 16 35 29.0
baz=22
Z23A **Rita Site, Whi** 22.17 326 ⇑P P 16 34 50.7 +0.2
baz=22,SNR=5.1
Z23A ⇓pP 16 35 30.2
baz=22
Y24A **Capitan** 22.27 328 ⇓P P 16 34 51.7 +0.4
baz=22
121A **Cookes Peak, D** 22.52 322 ⇑P P 16 34 55.1 +1.3
baz=23
220A **Playas Peak, P** 22.54 320 ⇓P P 16 34 54.8 +0.9
baz=23,SNR=5.7
Z22A **Elephant Butte** 22.57 324 ⇓P P 16 34 54.8 +0.6
baz=23
Z22A ⇑pP 16 35 32.7
baz=23,SNR=5.2
Y23A **Lovelace Mesa,** 22.59 327 ⇓P P 16 34 55.1 +0.8
baz=23
319A **Douglas** 22.68 317 ⇑pP pP 16 35 31.8 -1.3
baz=23
W25A **X Bar L Ranch,** 22.84 332 ⇓P P 16 34 56.8 +0.2
baz=23,SNR=8.6
W25A ⇑pP 16 35 36.8
baz=23
120A **U Bar Ranch, L** 23.05 321 ⇑P P 16 34 59.9 +1.4
baz=23
120A ⇓pP 16 35 37.5
baz=23
219A **White Tail Can** 23.07 319 ⇑P P 16 35 00.1 +1.4
baz=23,SNR=7.1
219A ⇑pP 16 35 37.3
baz=23
Y22A **Socorro** 23.08 326 ⇓P P 16 35 00.1 +1.2
baz=23
Y22A ⇑pP 16 35 38.4
baz=23
WCI **Wyandotte Cave** 23.14 11⇑eP P 16 34 59.2 -0.2
comp=N,105nm,0.7s,mb5.5
WCI epP 16 35 38.6
318A **Bisbee** 23.18 317 ⇓P P 16 35 00.6 +0.8
baz=23
318A ⇓pP 16 35 38.7
baz=23
W24A **Lazy 6 Ranch,** 23.28 330 ⇑P P 16 35 01.6 +1.0
baz=23,SNR=7.2
V25A **Rancho No Teng** 23.43 332 ⇑P P 16 35 02.2 +0.2
baz=24
U26A **Atchley Ranch,** 23.53 335 ⇑P P 16 35 02.9 0.0
baz=24,SNR=11
Y21A **Point of Rocks** 23.53 325 ⇑P P 16 35 04.7 +1.8
baz=24
Y21A ⇑pP 16 35 43.0
baz=24
ANMO **Albuquerque** 23.59 328 P P 16 35 03.6 +0.1
comp=N,0.6nm,0.4s,mb3.6,baz=160,slow=15,SNR=3.0
ANMO pP 16 35 44.4
comp=N,4.0nm,0.8s,baz=143,slow=13,SNR=7.4
ANMO ScP ScP 16 41 59.9 -0.1
comp=N,2.6nm,0.9s,baz=140,slow=2.9,SNR=4.9
W23A **Werner Place,** 23.60 329 ⇑pP pP 16 35 45.6 +2.4
baz=24
119A **Ashpeak Ranch,** 23.61 320 ⇓P P 16 35 05.1 +1.5
baz=24,SNR=5.9
V24A **Rampart Ranch,** 23.64 331 ⇑P P 16 35 04.1 +0.3
baz=24
V24A ⇓pP 16 35 46.4
baz=24,SNR=6.5
BLA **Blacksburg** 23.80 22 eP P 16 35 06.0 +0.7
comp=N,27nm,0.8s,mb4.9
BLA pP 16 35 44.9
U25A **Circle Dot Ran** 23.81 334 ⇑P P 16 35 05.7 +0.3
baz=24,SNR=5.8
Y20A **Horse Springs,** 23.85 323 P P 16 35 07.4 +1.5
baz=24,SNR=9.6
Y20A ⇑pP 16 35 46.4
baz=24
X21A **Alamocita Cree** 23.91 325 ⇑P P 16 35 07.3 +0.9
baz=24
X21A ⇑pP 16 35 47.4
baz=24
118A **Homack Ranch,** 23.94 319 ⇓P P 16 35 08.3 +1.7
baz=24
118A ⇑pP 16 35 48.9
baz=24
217A **Green Valley** 23.94 316 ⇑P P 16 35 07.0 +0.3
baz=24
217A ⇓pP 16 35 45.9
baz=24,SNR=6.7
X20A **Quemado** 24.38 324 ⇑P P 16 35 12.4 +1.7
baz=24,SNR=5.8
X20A ⇑pP 16 35 53.1
baz=24
117A **Oracle** 24.39 318 ⇑P P 16 35 11.6 +0.8
baz=24
117A ⇑pP 16 35 50.9
baz=24
Y19A **Nutrioso** 24.40 322 ⇓P P 16 35 12.1 +1.3
baz=24
Y19A ⇓pP 16 35 54.9
baz=24
SJG **San Juan** 24.43 80 P P 16 35 11.3 +0.1
comp=N,23nm,0.7s,mb4.9,baz=306,slow=5.9,SNR=6.2
SJG **San Juan** 24.43 80 eP P 16 35 11.2 -0.1
comp=N,12nm,0.6s,mb4.7
T25A **Trinidad** 24.44 334 ⇓P P 16 35 14.2 +3.1
baz=24
T25A ⇓pP 16 35 54.8
baz=24
U23A **El Rito** 24.56 331 ⇑P P 16 35 12.8 +0.6
baz=25,SNR=6.1
U23A ⇓pP 16 35 57.2
baz=25
V22A **San Miguel Ran** 24.58 329 ⇑P P 16 35 13.6 +1.2
baz=25
V22A ⇑pP 16 35 55.9
baz=25
T24A **Torres, Weston** 24.66 333 ⇑pP pP 16 35 57.5 +3.1
baz=25
Y18A **Canyon Day Jun** 24.74 321 P P 16 35 15.2 +1.3
baz=25,SNR=5.5
Y18A ⇑pP 16 35 58.8
baz=25
X19A **St. Johns** 24.75 323 ⇑P P 16 35 15.4 +1.4
baz=25
W20A **Ramah** 24.81 325 ⇑pP pP 16 35 58.3 +2.3
baz=25
S25A **Robets Cordova** 24.89 335 ⇑pP pP 16 35 59.2 +2.3
baz=25,SNR=6.1

U22A **Llaves** 24.92 330 ⇑P P 16 35 16.2 +0.8
baz=25
U22A ⇑pP 16 35 58.8
baz=25
HDIL **Hopedale** 25.08 4 eP P 16 35 16.5 -0.3
comp=N,62nm,0.8s,mb5.3
R25A **Fountain Ranch** 25.25 336 ⇑pP pP 16 36 02.6 +1.9
baz=25
V20A **Brimhall** 25.29 326 ⇑pP pP 16 36 00.9 -0.3
baz=25
U21A **Nageezi** 25.36 328 ⇓pP pP 16 36 02.9 +1.1
baz=25
214A **Organ Pipe Nat** 25.41 314 ⇓pP pP 16 36 03.6 +1.1
baz=25
SDCO **Great Sand Dun** 25.41 333 ⇑pP pP 16 36 04.2 +1.7
baz=26
T22A **Edith** 25.45 330 ⇑pP pP 16 36 09.3 +6.5
baz=26
115A **Sonoran Desert** 25.45 316 ⇑pP pP 16 36 04.4 +1.4
baz=26
T21A **Navajo Lake** 25.73 329 ⇓pP pP 16 36 08.3 +2.6
baz=26
CBN **Corbin** 25.87 26 eP P 16 35 25.2 +1.2
comp=N,29nm,0.4s,mb5.2
S22A **4UR Ranch, Cre** 26.00 331 ⇑P P 16 35 25.7 +0.5
baz=26
V18A **Ganado** 26.04 324 ⇑P P 16 35 24.7 -0.9
baz=26
X16A **Lo Mia Camp, P** 26.04 320 ⇓P P 16 35 26.5 +1.0
baz=26,SNR=7.7
V17A **Tonalea, Kykot** 26.47 323 ⇓P P 16 35 29.4 0.0
baz=26
Z13A **Yuma Proving G** 26.71 315 ⇓pP pP 16 36 14.9 +0.3
baz=27
Y14A **Wickenburg** 26.72 317 ⇓pP pP 16 36 15.0 +0.3
baz=27
U16A **Tuba City** 27.03 323 pP pP 16 36 20.0 +2.6
baz=27,SNR=6.0
T18A **Mexican Hat** 27.05 326 ⇑pP pP 16 36 19.6 +2.0
baz=27
JFWS **Jewell Farm** 27.38 2 eP P 16 35 38.6 +1.2
comp=N,14nm,0.6s,mb4.8
JFWS epP pP 16 36 19.5 -1.0
V15A **Kaibab Nationa** 27.42 322 ⇓P P 16 35 39.1 +1.3
baz=28,SNR=6.2
V15A ⇑pP pP 16 36 24.7 +3.7
baz=28
T17A **Navajo Res., N** 27.45 325 ⇑pP pP 16 36 23.1 +1.8
baz=28
W14A **Seligman** 27.58 319 ⇓P P 16 35 39.7 +0.4
baz=28
SSPA **Standing Stone** 27.75 23 eP P 16 35 41.1 +0.4
comp=N,8.5nm,0.6s,mb4.5
V14A **Boquillas Ranc** 27.86 320 ⇓P P 16 35 42.8 +1.0
baz=28,SNR=5.7
V14A ⇓pP pP 16 36 28.0 +2.9
baz=28,SNR=5.4
ECSD **EROS Data Cent** 28.51 352 eP P 16 35 44.8 -2.6
comp=N,2.8nm,0.8s,mb3.9
V13A **Grand Canyon W** 28.55 319 ⇓P P 16 35 48.6 +0.7
baz=29
ANWB **Willy Bob** 28.57 81 eP P 16 35 47.1 -1.2
comp=N,38nm,0.5s,mb5.3
U13A **Pakoon Wash** 28.90 320 ⇑P P 16 35 52.4 +1.4
baz=29,SNR=6.8
V12A **Nelson** 29.02 318 ⇓P P 16 35 52.9 +0.8
baz=29
T13A **Saint George** 29.26 321 ⇑P P 16 35 55.5 +1.4
baz=29,SNR=5.6
FDF **Fort de France** 29.32 87 eP P 16 35 53.2 -1.8
S13A **Holt Ranch, En** 29.60 322 ⇑P P 16 35 58.6 +1.4
baz=30,SNR=7.5
BBSR **BB Station** 29.62 51 eP P 16 35 57.6 +0.2
comp=N,36nm,0.9s,mb5.0
COWI **Conover** 30.61 3 eP P 16 36 04.3 -1.6
comp=N,15nm,0.7s,mb4.7
MPMC **Manual Prospec** 30.94 316 ⇓P P 16 36 09.4 +0.4
baz=31
SADO **Sadowa** 31.04 17 P P 16 36 09.3 -0.4
comp=N,22nm,0.6s,mb5.0,baz=224,slow=9.7,SNR=25
SADO **Sadowa** 31.04 17 P P 16 36 09.3 -0.4
R11A **Troy Canyon, C** 31.13 322 ⇑P P 16 36 11.1 +0.5
baz=31,SNR=6.3
HWUT **Hardware Ranch** 31.29 330 eP P 16 36 12.0 +0.1
comp=N,2.3nm,0.9s,mb3.8
PDAR **Pinedale Array** 31.30 334 P P 16 36 11.4 -0.6
comp=N,0.5nm,0.7s,mb3.3,baz=106,slow=9.5,SNR=5.9
PDAR PcP PcP 16 38 59.0 -1.8
comp=N,0.7nm,0.5s,baz=126,slow=6.1,SNR=7.0
PDAR ScP ScP 16 42 23.5 +0.2
comp=N,0.6nm,0.6s,baz=128,slow=5.8,SNR=5.4
PDAR **Pinedale Array** 31.30 334 P P 16 36 11.4 -0.6
PDAR PcP PcP 16 38 59.0 -1.8
PDAR ScP ScP 16 42 23.5 +0.2
I20A **Worland** 31.72 337 ⇑P P 16 36 14.7 -0.9
baz=32
L15A **Malad City** 31.99 330 ⇓P P 16 36 18.0 0.0
baz=32
J17A **Brown Place, J** 32.28 333 ⇑P P 16 36 21.1 +0.5
baz=32
LONY **Lake Ozonia** 32.41 23 eP P 16 36 21.3 -0.4
comp=N,21nm,1.2s,mb4.5
NVAR **Mina Array Bea** 32.85 319 P P 16 36 27.4 +1.7
comp=N,5.9nm,0.6s,mb4.3,baz=135,slow=8.1,SNR=57
NVAR pP pP 16 37 09.6 +0.1
comp=N,2.5nm,0.9s,baz=135,slow=8.5,SNR=3.5
NVAR PcP PcP 16 39 04.6 -0.5
comp=N,0.9nm,0.6s,baz=112,slow=3.9,SNR=5.2
NVAR ScP ScP 16 42 28.8 +0.1
comp=N,2.4nm,0.8s,baz=140,slow=4.4,SNR=14
H18A **Shoshone NF, C** 32.93 336 ⇑P P 16 36 25.7 -0.5
baz=33,SNR=7.6
J14A **Carey** 33.53 330 ⇑P P 16 36 31.1 -0.3
baz=34
I14A **Mackay** 33.96 331 ⇑P P 16 36 36.3 +1.2
baz=34
D21A **La Casta Ranch** 34.04 341 ⇓P P 16 36 36.2 +0.5
baz=34
H15A **Lima** 34.13 333 ⇓P P 16 36 37.2 +0.7
baz=34
I13A **Wildhorse Cree** 34.26 330 ⇓P P 16 36 38.4 +0.8
baz=34
F17A **Fitzpatrick Pl** 34.34 336 ⇑P P 16 36 38.9 +0.7
baz=34
I12A **Atlanta** 34.66 329 ⇑P P 16 36 42.0 +0.9
baz=35
I12A ⇓pP pP 16 37 24.5 -0.8
baz=35
D19A **Cripps Ranch,** 34.75 339 ⇑pP pP 16 37 25.8 -0.2
baz=35
H13A **Challis** 34.82 331 ⇓P P 16 36 42.7 +0.3
baz=35
H13A ⇓pP pP 16 37 25.6 -1.0
baz=35,SNR=6.1
ULM **Lac du Bonnet** 34.88 355 P P 16 36 42.6 -0.2
comp=N,3.4nm,0.5s,mb4.1,baz=173,slow=8.3,SNR=5.6
F15A **Butte** 35.03 334 ⇓P P 16 36 43.4 -0.8
baz=35
F15A ⇑pP pP 16 37 27.2 -1.3
baz=35
H12A **Diamond D Ranc** 35.09 330 ⇓P P 16 36 45.2 +0.5
baz=35
H12A ⇓pP pP 16 37 28.7 -0.3
baz=35,SNR=6.1
G13A **Cobalt** 35.21 332 ⇓P P 16 36 44.8 -0.9
baz=35
G13A ⇓pP pP 16 37 28.6 -1.5
baz=35
E16A **Saint Helena** 35.26 336 ⇑pP pP 16 37 29.6 -0.8
baz=35
WVOR **Wild Horse Val** 35.56 325 eP P 16 36 48.6 -0.2
comp=N,4.6nm,1.0s,mb4.0
WVOR epP pP 16 37 35.0 +1.8
G12A **Big Creek, Yel** 35.74 331 ⇑P P 16 36 50.5 +0.2
baz=36
G12A ⇑pP pP 16 37 34.6 -0.1
baz=36
F12A **Elk City** 36.18 331 ⇑P P 16 36 53.1 -0.9
baz=36,SNR=6.1
F12A ⇑pP pP 16 37 38.1 -0.4
baz=36,SNR=5.4
C16A **Fuhringer Ranc** 36.33 337 ⇑P P 16 36 55.0 -0.2
baz=36
A18A **Metzger Ranch,** 36.59 340 ⇑pP pP 16 37 42.8 +0.8
baz=37
C15A **Salmond Ranch,** 36.64 336 ⇓P P 16 36 58.0 +0.2
baz=37
E12A **Beaver Dam Sad** 36.82 332 ⇓P P 16 36 58.5 -1.0
baz=37
E12A ⇓pP pP 16 37 42.1 -1.9
baz=37
F10A **Beach Ranch, E** 37.27 330 ⇑P P 16 37 02.9 -0.3
baz=37
F10A ⇓pP pP 16 37 46.5 -1.4
baz=37
A14A **Double T Ranch** 37.93 336 ⇑P P 16 37 08.6 -0.1
baz=38
A14A ⇓pP pP 16 37 53.8 +0.4
baz=38
C11A **Tepee Creek (N** 38.21 333 ⇑P P 16 37 10.8 -0.2
baz=38
C11A ⇓pP pP 16 37 54.0 -1.9
baz=38
H04A **Detroit Lake** 38.98 325 ⇓P P 16 37 17.3 -0.2
baz=39,SNR=8.3
LPAZ **La Paz** 39.09 143 P P 16 37 18.9 +0.2
comp=N,20nm,0.7s,mb4.8,baz=330,slow=7.4,SNR=103
LPAZ PcP PcP 16 39 24.3 +0.2
comp=N,0.8nm,0.3s,baz=322,slow=6.0,SNR=3.9
LPAZ ScP ScP 16 42 52.2 +0.3
comp=N,0.8nm,0.4s,baz=333,slow=6.5,SNR=5.1
LPAZ **La Paz** 39.09 143 eP P 16 37 18.6 -0.2
comp=N,19nm,0.6s,mb4.8
LPAZ ePcP PcP 16 39 21.4 -2.7
SCHQ **Schefferville** 43.70 20 P P 16 37 54.8 -0.8
comp=N,6.2nm,0.5s,mb4.2,baz=251,slow=12,SNR=4.5
LCO **Las Campanas** 48.57 155 eP P 16 38 35.4 +1.5
comp=N,9.2nm,0.6s,mb4.3
YKA **Yellowknife Ar** 49.72 346 P P 16 38 41.5 -0.6
comp=N,5.9nm,0.6s,mb4.1,baz=147,slow=7.6,SNR=8.4
YKA pP pP 16 39 28.8 -0.4
comp=N,2.5nm,0.6s,baz=144,slow=7.7,SNR=3.0
YKA **Yellowknife Ar** 49.72 346 P P 16 38 41.5 -0.6
YKA pP pP 16 39 28.8 -0.4
DLBC **Dease Lake** 51.52 335 P P 16 38 56.5 +0.8
comp=N,2.2nm,0.5s,mb3.8,baz=171,slow=4.7,SNR=8.6
DLBC pP pP 16 39 43.0 -0.1
comp=N,4.9nm,1.1s,baz=69,slow=9.5,SNR=3.6
DLBC ScP ScP 16 43 41.9 -0.6
comp=N,1.5nm,0.8s,baz=131,slow=9.3,SNR=3.3
DLBC **Dease Lake** 51.52 335 P P 16 38 56.5 +0.8
DLBC pP pP 16 39 43.0 -0.1
DLBC ScP ScP 16 43 41.9 -0.7
BDFB **Brasilia** 52.93 124 P P 16 39 04.8 -1.8
comp=N,2.2nm,0.3s,mb4.0,baz=291,slow=9.5,SNR=9.5
INK **Inuvik** 59.18 343 P P 16 39 49.1 -0.9
comp=N,6.5nm,0.9s,mb4.3,baz=120,slow=2.4,SNR=6.7
INK pP pP 16 40 37.7 -1.1
comp=N,4.7nm,0.8s,baz=88,slow=1.5,SNR=3.9
INK **Inuvik** 59.18 343 P P 16 39 49.1 -0.9
INK pP pP 16 40 37.7 -1.1
PLCA **Paso Flores** 59.20 162 P P 16 39 50.9 +0.4
comp=N,3.3nm,0.8s,mb4.0,baz=327,slow=7.2,SNR=10
TRQA **Tornquist** 60.02 153 P P 16 39 54.9 -1.3
RC01 **Rabbit Creek A** 61.42 332 eP P 16 40 06.7 +1.4
comp=N,11nm,0.6s,mb4.7
ILAR **Eielson Array** 61.69 336 P P 16 40 06.0 -1.1
comp=N,1.0nm,0.4s,mb3.8,baz=110,slow=5.4,SNR=28
ILAR pP pP 16 40 55.9 -0.4
comp=N,1.8nm,1.0s,baz=116,slow=5.1,SNR=4.3
ILAR ScP ScP 16 44 26.4 -0.9
comp=N,0.5nm,0.7s,baz=166,slow=4.0,SNR=4.9
KDAK **Kodiak Island** 61.73 328 P P 16 40 06.0 -1.4
comp=N,22nm,1.2s,mb4.7,baz=166,slow=4.2,SNR=2.8
BPAW **Bear Paw Mtn.** 63.05 335 eP P 16 40 14.8 -1.3
comp=N,2.2nm,0.7s,mb3.9
MORF **Marmelete** 75.21 55 eP P 16 41 30.2 -1.1
comp=N,22nm,1.5s,mb4.6
PVIS **Viseu** 75.32 51 eP P 16 41 30.4 -1.4
comp=N,27nm,1.6s,mb4.6
EVO **Evora** 75.53 54 eP P 16 41 31.1 -2.0
EVO epP pP 16 42 23.9 -0.4
EVO **Evora** 75.53 54 eP P 16 41 33.8 +0.7
MVO **Moncorvo** 75.90 51 eP P 16 41 34.0 -1.1
PBAR **Barrancos** 76.34 54 eP P 16 41 36.4 -1.3
comp=N,18nm,1.1s,mb4.6
QUIF **Quistinic** 77.61 44 eP P 16 41 43.0 -1.5
ESDC **Sonseca Array** 78.45 52 P P 16 41 47.9 -1.5
comp=N,0.7nm,0.5s,mb3.6,baz=287,slow=5.9,SNR=11
ESDC pP pP 16 42 40.8 -0.1
comp=N,1.0nm,0.7s,baz=287,slow=6.3,SNR=4.0
ESLA **Sonseca Array** 78.45 52 eP P 16 41 47.5 -1.8
comp=N,0.9nm,0.8s,mb3.5
GRR **Gorron** 79.05 43 eP P 16 41 51.0 -1.4
comp=N,22nm,0.7s,mb4.6
GRR **Gorron** 79.05 43 eP P 16 41 51.0 -1.4
comp=N,11nm,0.7s,mb4.6
FLN **La Foliniere** 79.22 42 eP P 16 41 52.0 -1.3
comp=N,9.0nm,0.5s,mb4.4
FLN **La Foliniere** 79.22 42 eP P 16 41 52.0 -1.3
comp=N,4.5nm,0.5s,mb4.3
LDF **La Druitiere** 79.49 42 eP P 16 41 53.3 -1.4
comp=N,3.4nm,0.4s,mb4.0
LDF **La Druitiere** 79.49 42 eP P 16 41 53.3 -1.4
comp=N,1.7nm,0.4s,mb4.0
SJPF **Ste Jean** 79.82 48 eP P 16 41 55.5 -1.2
MFF **Saint Martin d** 79.87 44 eP P 16 41 55.1 -1.7
ETSF **Etsaut** 80.34 48 eP P 16 41 58.4 -1.0
RJF **Les Rejaudoux** 81.28 45 eP P 16 42 02.6 -1.8
TCF **Toulx Ste Croi** 81.53 44 eP P 16 42 03.7 -1.9
comp=N,3.0nm,0.4s,mb4.0
TCF **Toulx Ste Croi** 81.53 44 eP P 16 42 03.7 -1.9
comp=N,1.5nm,0.4s,mb4.0
BGF **Bois d'Agland** 81.89 44 eP P 16 42 05.9 -1.6
AVF **Avril sur Loir** 82.17 44 eP P 16 42 06.5 -2.5
SSF **Saint Saulge** 82.21 43 eP P 16 42 07.3 -1.9
comp=N,3.1nm,0.5s,mb3.9
SSF **Saint Saulge** 82.21 43 eP P 16 42 07.3 -1.9
comp=N,1.5nm,0.4s,mb4.0
LOR **Lormes** 82.39 43 eP P 16 42 08.6 -1.5
SMF **Signal de Mont** 82.53 44 eP P 16 42 08.9 -2.0
NB2 **NORSAR Subarra** 82.65 29 P P 16 42 10.7 -0.4
comp=Z,1.2nm,0.6s,mb3.8,baz=289,slow=5.6
NOA **NORSAR Array B** 82.65 29 P P 16 42 10.9 -0.2
comp=Z,1.4nm,0.7s,mb3.8,baz=290,slow=5.2,SNR=8.1
NOA pP pP 16 43 02.8 -0.4
comp=Z,1.7nm,0.8s,baz=290,slow=5.2,SNR=5.3
MEZF **Maizieres J'vi** 82.85 42 eP P 16 42 11.0 -1.5
comp=Z,7.2nm,0.6s,mb4.3
MEZF **Maizieres J'vi** 82.85 42 eP P 16 42 11.0 -1.5
comp=Z,7.2nm,0.6s,mb4.6
SFTF **Sexfontaines** 82.92 42 eP P 16 42 11.4 -1.4
HAU **Haudompre** 83.82 42 eP P 16 42 15.9 -1.5
CABF **La Chapelle** 84.04 43 eP P 16 42 17.6 -0.9
comp=Z,11nm,1.0s,mb4.3
CABF **La Chapelle** 84.04 43 eP P 16 42 17.6 -0.9
comp=Z,5.7nm,1.0s,mb4.3
HINF **Hinterafeld** 84.20 42 eP P 16 42 17.6 -1.7
CDF **Champ du Feu** 84.30 41 eP P 16 42 18.4 -1.4
ORIF **Oris-en-Rattie** 84.37 45 eP P 16 42 19.5 -0.7
ARCES **ARCESS Array B** 84.61 18 P P 16 42 19.5 -1.4
comp=Z,1.4nm,0.6s,mb3.9,baz=305,slow=2.5,SNR=8.2
ARCES pP pP 16 43 14.0 +0.7
comp=Z,3.1nm,0.7s,baz=296,slow=6.6,SNR=3.7
ARCES **ARCESS Array B** 84.61 18 P P 16 42 19.5 -1.4
ARCES pP pP 16 43 14.0 +0.7
LPG **La Plagne** 84.80 44 eP P 16 42 20.9 -1.4
DBIC **Dimbokro** 85.05 84 eP P 16 42 24.0 -0.3
comp=Z,11nm,1.2s,mb4.5
CLL **Colîm** 86.88 37 eP P 16 42 35.0 +2.6
FINES **FINESS Array B** 88.99 25 P P 16 42 40.5 -1.7
comp=Z,0.7nm,0.6s,mb3.7,baz=338,slow=1.0,SNR=5.2
FINES **FINESS Array B** 88.99 25 P P 16 42 40.5 -1.7
CN2 **Changchun** 112.03 332 ePKP PKiKP 16 48 15.5 -6.4
KSRS **Korea Array** 115.61 326 PKP PKPdf 16 48 27.4 -1.6
comp=Z,0.8nm,0.5s,baz=349,slow=1.5,SNR=6.6
HHC **Hu-ho-hao-te** 120.02 340 ePKP PKPdf 16 48 33.1 -4.2
HHC sPKP 16 49 53.1
HHC PP PP 16 50 03.4 -0.3
HHC PKS 16 52 08.8
HHC SKKS SKKSac 16 56 34.3 -8.4
HHC AMB AMB
comp=Z,63nm,8.0s
HHC LR LR
comp=N,120nm,21.1s
HHC LR LR
comp=E,100nm,20.4s
HHC LR LR
comp=Z,110nm,20.8s
BOSA **Boshof** 120.54 114 PKP PKPdf 16 48 36.8 -1.8
comp=Z,3.0nm,0.7s,baz=178,slow=1.2,SNR=6.9
LBTB **Lobatse** 120.68 110 P PKPdf 16 48 37.1 -1.9
WMQ **Urumqi** 121.01 1 ePKP PKPdf 16 48 36.0 -3.1
GTA **Gaotai** 124.40 349 ePKP PKPdf 16 48 42.1 -3.7

GTA				sPKP		16 50 01.5	
LZH	**Lanzhou**	**126.71**	**344**	*e*PKP	PKPdf	16 48 49.5	-0.8
LZH				sPKP		16 50 07.5	
CD2	**Chengdu**	**131.61**	**342**	*e*PKP	PKPdf	16 48 55.6	-4.2
GYA	**Guiyang**	**134.74**	**337**	*e*Pdif	Pdif	16 46 04.5	-2.5
GYA				PKP	PKPdf	16 49 03.8	-2.0
GYA				sPKP		16 50 17.0	
GYA				PP	PP	16 51 41.3	+0.9
GYA				AMB	AMB		
	comp=Z,90nm,7.8s						
WRA	**Warrumunga Arr**	**136.19**	**257**	PKhKP	PKPpre	16 48 58.4	
	comp=Z,0.2nm,0.3s,baz=92,slow=3.4,SNR=3.0						
WRA				PKP	PKPdf	16 49 08.0	-0.6
	comp=Z,1.5nm,0.6s,baz=81,slow=1.8,SNR=12						
WRA	**Warrumunga Arr**	**136.19**	**257**	PKP	PKPpre	16 48 58.4	
WRA				PKP	PKPdf	16 49 08.0	-0.6
ASAR	**Alice Springs**	**136.57**	**252**	PKhKP	PKPpre	16 49 00.2	
	comp=Z,0.3nm,0.4s,baz=102,slow=3.3,SNR=11						
ASAR				PKP	PKPdf	16 49 09.3	+0.1
	comp=Z,1.0nm,0.6s,baz=116,slow=2.7,SNR=8.6						
CMAR	**Chiang Mai Arr**	**144.76**	**343**	PKP	PKPdf	16 49 21.6	-2.5
	comp=Z,3.6nm,0.7s,baz=336,slow=3.4,SNR=23						

*ISCJB **20** 16:37:07.0±0.5, 37°.18N±0°.03×138°.80E±0°.05, h33km,*
Error ellipse: s-maj=6.1km s-min=4.2km az=178.8
*JMA **20** 16:37:07.5, 37°.17N×138°.81E, h9km±1km, M2.5*

ISC 20 16:37:07.1±0.6, 37°.18N±0°.03×138°.80E±0°.05, h20km±5km, n9, σ0°58/18, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.18**	**68**	P	**Pg**	**16 37 11.4**	**-0.6**
JHK				S	**Sg**	**16 37 14.4**	**-0.9**
JIZZ	**Izumozaki**	**0.36**	**348**	P	**Pg**	**16 37 15.2**	**+0.4**
JIZZ				S	**Sg**	**16 37 21.7**	**+1.7**
JKT	**Katashina**	**0.55**	**139**	P	**Pb**	**16 37 17.8**	**-0.2**
JKT				S	**Sb**	**16 37 25.5**	**+0.1**
JGK	**Kuni**	**0.63**	**192**	P	**Pb**	**16 37 19.5**	**0.0**
JGK				S	**Sb**	**16 37 28.1**	**+0.2**
JFY	**Yanaizu**	**0.75**	**72**	P	**Pb**	**16 37 21.5**	**-0.1**
JFY				S	**Sb**	**16 37 31.7**	**+0.3**
JNS	**Sasagawa**	**0.76**	**33**	P	**Pb**	**16 37 21.4**	**-0.2**
JNS				S	**Sb**	**16 37 31.6**	**+0.1**
MAT	**Matsushiro**	**0.80**	**217**	P	**Pb**	**16 37 21.9**	**-0.4**
MAT				S	**Sb**	**16 37 32.4**	**-0.2**
JAG	**Ashikaga**	**0.92**	**145**	P	**Pb**	**16 37 24.6**	**+0.3**
JAG				*e*S	**Sb**	**16 37 36.8**	**+0.7**
JSD	**Sado**	**0.96**	**333**	P	**Pb**	**16 37 24.2**	**-0.8**
JSD				*e*S	**Sb**	**16 37 36.9**	**-0.4**

MAN 20 16:42:41, 18°.56N×121°.10E, h1km, mb0.0, ML0.0, MS0.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.71**	**169**	*e*P	Pg	16 42 56.2	+1.6
ABRA	**Dolores**	**0.98**	**202**	*e*P	Pg	16 43 00.0	+0.3
CVP	**Callao Caves**	**1.10**	**141**	||/P	Pg	16 43 01.9	-0.2
CVP				/ S	Sg	16 43 22.8	+6.5
PALP	**Palanan**	**1.95**	**139**	*e*P	Pn	16 43 17.5	+2.2
PALP				*e*S	Sn	16 43 39.9	-0.6

NOU 20 17:11:28.5±1.6, 20°.77S×168°.05E, h10km, MD2.6, ML3.7, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**1.76**	**218**	*e*P	Pn	17 11 55.5	-3.5
BAYA				*e*S	Sn	17 12 14.6	-6.8
DZM	**Mont Dzumac**	**1.98**	**229**	*e*P	Pn	17 11 58.5	-3.6
DZM				*e*S	Sn	17 12 22.3	-4.7
DZM				AMP		17 12 25.8	
	comp=Z,1μm,1.6s						
PLUM	**Mont Dore**	**1.99**	**221**	*e*P	Pn	17 11 58.7	-3.6
PLUM				*e*S	Sn	17 12 22.5	-4.8
LASL	**Noumea**	**2.03**	**224**	*e*P	Pn	17 11 59.7	-3.0
LASL				*e*S	Sn	17 12 22.2	-6.0
LASL				AMP		17 12 22.6	
	comp=Z,663nm,4.7s						
NOUC	**Port Laguerre**	**2.10**	**231**	*e*P	Pn	17 12 01.5	-2.2
NOUC				*e*S	Sn	17 12 24.6	-5.4
NOUC				AMP		17 12 33.5	
	comp=Z,134nm,5.9s						
MVNO	**Noumea**	**2.12**	**225**	*e*P	Pn	17 12 01.2	-2.7
MVNO				*e*S	Sn	17 12 25.3	-5.0

*ISCJB **20** 17:20:04.0±3.5, 50°.1N±0°.1×178°.31W±0°.09, h19km±23km,*
mb3.9/23, Error ellipse: s-maj=22.9km s-min=9.3km
az=175.1
*NEIC **20** 17:20:05.5, 50°.07N×178°.40W, h10km, mb4.6/4,*
ML3.6(PMR), ML3.5(AEIC), After AEIC.
*IDC **20** 17:20:06.5±0.8, 49°.99N×178°.40W, h25km±4km, mb3.7/20,*
mb1 4.0/21, mb1mx3.9/29, mbtmp3.8/21, ML3.9/1, Error
ellipse: s-maj=18.9km s-min=12.5km az=171.0

ISC 20 17:20:04.7±5.0, 50°.1N±0°.1×178°.29W±0°.09, h12km±30km, h29km±.3km: pP-P, n36, σ1°.06/36, mb3.9/23, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**2.02**	**312**	*e*P	**Pn**	**17 20 35.6**	**-3.0**
ATKA	**Atka Island**	**3.36**	**49**	P	**Pn**	**17 20 56.5**	**-0.4**
PEA0B	**Petropavlovsk-**	**15.21**	**291**	*e*Pn	**Pn**	**17 23 40.9**	**+1.8**
PETK	**Petropavlovsk-**	**15.21**	**291**	Pn	**Pn**	**17 23 40.8**	**+1.6**
	0.5nm,0.3s,baz=87,slow=20,SNR=21						
KDAK	**Kodiak Island**	**16.92**	**53**	P	**Pn**	**17 23 58.6**	**-2.5**
	0.8nm,0.3s,baz=278,slow=4.9,SNR=9.3						
ILAR	**Eielson Array**	**22.09**	**36**	P	**P**	**17 24 58.8**	**-0.6**
	0.6nm,0.8s,mb3.0,baz=231,slow=9.1,SNR=6.2						
INK	**Inuvik**	**28.37**	**33**	P	**P**	**17 25 58.5**	**+0.2**
	2.4nm,1.0s,mb3.8,baz=261,slow=6.1,SNR=3.7						
INK	**Inuvik**	**28.37**	**33**	*e*P	**P**	**17 25 58.3**	**0.0**
	6.0nm,1.1s,mb4.1						
DLBC	**Dease Lake**	**28.84**	**54**	P	**P**	**17 26 04.8**	**+2.3**
	2.1nm,0.7s,mb4.0,baz=302,slow=9.5,SNR=5.1						
DLBC	**Dease Lake**	**28.84**	**54**	P	**P**	**17 26 04.8**	**+2.3**
YKA	**Yellowknife Ar**	**35.92**	**45**	P	**P**	**17 27 04.8**	**+0.4**
	5.2nm,0.8s,mb4.5,baz=280,slow=7.0,SNR=5.1						
YBH	**Yreka Blue Hor**	**38.77**	**80**	P	**P**	**17 27 30.9**	**+2.2**
	1.1nm,0.8s,mb3.7,baz=318,slow=12,SNR=5.5						
KSRS	**Korea Array**	**40.00**	**273**	P	**P**	**17 27 39.6**	**+0.4**
	1.0nm,0.7s,mb3.6,baz=50,slow=7.9,SNR=7.1						
NVAR	**Mina Array Bea**	**43.41**	**82**	P	**P**	**17 28 07.8**	**+0.8**
	0.1nm,0.4s,mb2.9,baz=295,slow=8.5,SNR=2.9						
NVAR				PcP	PcP	17 29 55.2	-0.1
	0.3nm,0.5s,baz=302,slow=1.7,SNR=3.3						
PDAR	**Pinedale Array**	**46.41**	**71**	P	**P**	**17 28 30.2**	**-0.7**
	1.1nm,0.8s,mb3.9,baz=320,slow=4.4,SNR=9.5						
SONM	**Songino Array**	**47.54**	**298**	P	**P**	**17 28 40.0**	**+0.3**
	0.4nm,0.6s,mb3.6,baz=57,slow=8.5,SNR=5.6						
ZALV	**Zalesovo Beam**	**55.18**	**314**	P	**P**	**17 29 35.8**	**-1.0**
	0.6nm,0.4s,mb4.0,baz=44,slow=8.6,SNR=3.0						
ZALV				PcP	PcP	17 30 36.8	-1.0
	0.4nm,0.4s,baz=7.1,slow=5.8,SNR=2.7						
TXAR	**Lajitas Array**	**58.54**	**81**	P	**P**	**17 30 01.1**	**+0.1**
	0.3nm,0.7s,mb3.4,baz=234,slow=4.0,SNR=4.5						
TXAR				PcP	PcP	17 30 52.0	+0.8
	0.7nm,0.8s,baz=310,slow=3.2,SNR=6.8						
TXAR				pPcP		17 31 00.7	
	0.3nm,0.7s,baz=316,slow=3.5,SNR=3.7						
ARCES	**ARCESS Array B**	**59.45**	**351**	P	**P**	**17 30 06.8**	**+0.1**
	2.4nm,0.6s,mb4.4,baz=39,slow=7.9,SNR=13						
ARCES	**ARCESS Array B**	**59.45**	**351**	P	**P**	**17 30 06.8**	**+0.1**
MK31	**Makanchi Array**	**61.12**	**309**	*e*P	**P**	**17 30 17.5**	**-1.0**
MKAR	**Makanchi Array**	**61.12**	**309**	P	**P**	**17 30 17.9**	**-0.6**
	0.4nm,0.3s,mb4.0,baz=56,slow=7.3,SNR=10						
MKAR				pP	pP	17 30 26.4	+4.1
	0.3nm,0.3s,baz=65,slow=5.8,SNR=1.5						
ARU	**Arti**	**63.90**	**329**	*e*P	**P**	**17 30 36.7**	**-0.1**
	2.8nm,0.8s,mb4.3						
FINES	**FINESS Array B**	**67.15**	**348**	P	**P**	**17 30 57.5**	**-0.3**
	2.7nm,0.8s,mb4.4,baz=35,slow=10,SNR=8.6						
AAK	**Ala-Archa**	**67.97**	**310**	*e*P	**P**	**17 31 03.7**	**+0.5**
	4.2nm,0.7s,mb4.6						
EKS2	**Erkin-Say**	**68.30**	**311**	*e*P	**P**	**17 31 06.0**	**+0.7**
	3.5nm,0.6s,mb4.6						
NB2	**NORSAR Subarra**	**68.99**	**355**	P	**P**	**17 31 10.0**	**+0.6**
	comp=Z,1.5nm,0.7s,mb4.0,baz=8.3,slow=6.9						
NOA	**NORSAR Array B**	**68.99**	**355**	P	**P**	**17 31 09.6**	**+0.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=6.8,slow=6.3,SNR=9.2						
NOA	**NORSAR Array B**	**68.99**	**355**	P	**P**	**17 31 09.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**71.48**	**277**	P	**P**	**17 31 24.4**	**-0.9**
	comp=Z,0.8nm,0.7s,mb3.8,baz=36,slow=6.8,SNR=5.7						
AKASG	**Malin Array Be**	**76.91**	**342**	P	**P**	**17 31 56.2**	**-0.3**
	comp=Z,1.8nm,0.6s,mb4.2,baz=21,slow=5.9,SNR=6.2						
AKASG				pP	pP	17 32 04.8	+4.5
	comp=Z,0.6nm,0.4s,baz=20,slow=5.3,SNR=3.0						
AKASG	**Malin Array Be**	**76.91**	**342**	P	**P**	**17 31 56.2**	**-0.3**
AKASG				pP	pP	17 32 04.8	+4.5
BUR08	**Bucovina Ar. S**	**80.59**	**344**	*e*P	**P**	**17 32 17.6**	**+0.8**
WRA	**Warramunga Arr**	**81.29**	**224**	P	**P**	**17 32 18.9**	**-1.8**
	comp=Z,0.7nm,0.8s,mb3.6,baz=31,slow=5.8,SNR=6.2						
WRA				pP	pP	17 32 27.4	+2.8
	comp=Z,0.5nm,0.5s,baz=32,slow=5.9,SNR=3.6						
ASAR	**Alice Springs**	**84.73**	**223**	P	**P**	**17 32 37.5**	**-0.9**
	comp=Z,0.6nm,0.8s,mb3.8,baz=24,slow=5.7,SNR=9.4						
ASAR				pP	pP	17 32 46.0	+3.6
	comp=Z,0.3nm,0.5s,baz=24,slow=6.1,SNR=2.6						
BRTR	**Keskin Array B**	**86.29**	**336**	P	**P**	**17 32 46.7**	**+0.5**
	comp=Z,0.8nm,0.8s,mb4.0,baz=26,slow=7.0,SNR=3.3						

IDC 20 17:20:19.0±2.9, 0°.11N×21°.45W, h0km, mb3.6/1, mb1 3.7/2, mb1mx3.4/23, mbtmp3.8/2, ML3.5/1, Error ellipse: s-maj=134.3km s-min=42.3km az=131.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**17.79**	**68**	P	Pn	17 24 26.5	-1.7
	0.2nm,0.3s,baz=234,slow=8.7,SNR=2.0						
TORD	**Torodi Ar. Bea**	**26.34**	**60**	P	P	17 25 58.3	+1.3
	2.3nm,0.9s,baz=246,slow=8.9,SNR=5.0						
BRTR	**Keskin Array B**	**63.73**	**45**	P	P	17 30 52.2	-0.5
	0.7nm,0.9s,baz=258,slow=7.2,SNR=2.2						
ASAR	**Alice Springs**	**146.52**	**136**	PKPbc	PKPbc	17 40 01.3	-1.9
	0.4nm,0.7s,baz=213,slow=2.1,SNR=6.8						
WRA	**Warramunga Arr**	**149.16**	**131**	PKPbc	PKPbc	17 40 11.3	+0.8
	0.2nm,0.7s,baz=244,slow=3.0,SNR=4.6						

*ISCJB **20** 17:32:42.9±2.6, 19°.0N±0°.2×145°.3E±0°.2, h232km±30km,*
mb3.3/8, Error ellipse: s-maj=38.6km s-min=28.8km
az=167.9
*IDC **20** 17:32:42.8±2.6, 19°.02N×145°.36E, h218km±29km, mb3.1/8,*
mb1 3.3/9, mb1mx3.1/23, mbtmp3.1/9, Error ellipse:
s-maj=28.2km s-min=21.2km az=80.0
*NEIC **20** 17:32:44.1±2.2, 19°.03N×145°.31E, h231km±25km, Error ellipse:*
s-maj=29.3km s-min=22.9km az=76.0

ISC 20 17:32:43.6±2.5, 19°.0N±0°.2×145°.3E±0°.2, h226km±29km, n10, σ0°92/11, mb3.3/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.37**	**184**	P	**Pn**	**17 34 04.7**	**+1.3**
	2.5nm,0.3s,baz=22,slow=11,SNR=3.2						
GUMO				S	**S**	**17 35 05.7**	**-1.1**
	4.3nm,0.3s,baz=18,slow=20,SNR=3.1						
WRA	**Warramunga Arr**	**40.14**	**196**	P	**P**	**17 39 58.2**	**+0.4**
	0.4nm,0.9s,mb2.9,baz=18,slow=8.7,SNR=7.9						
WRA	**Warramunga Arr**	**40.14**	**196**	P	**P**	**17 39 58.2**	**+0.4**
SONM	**Songino Array**	**42.69**	**321**	P	**P**	**17 40 17.6**	**-0.6**
	0.2nm,0.5s,mb2.8,baz=121,slow=8.1,SNR=2.6						
MKAR	**Makanchi Array**	**57.99**	**314**	P	**P**	**17 42 13.8**	**+1.1**
	0.3nm,0.2s,mb3.5,baz=85,slow=7.7,SNR=2.2						
ILAR	**Eielson Array**	**63.57**	**26**	P	**P**	**17 42 49.2**	**-0.7**
	0.3nm,0.6s,mb3.1,baz=267,slow=4.8,SNR=3.4						
BVAR	**Borovoye Array**	**66.02**	**320**	P	**P**	**17 43 06.3**	**+0.5**
	0.5nm,0.4s,mb3.5,baz=83,slow=6.2,SNR=3.9						
ARCES	**ARCESS Array B**	**82.11**	**342**	P	**P**	**17 44 38.4**	**-0.1**
	1.6nm,0.9s,mb3.6,baz=77,slow=8.4,SNR=2.7						
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**17 44 46.0**	**+0.8**
	0.5nm,0.7s,mb3.4,baz=280,slow=5.4,SNR=5.4						
FINES	**FINESS Array B**	**86.47**	**335**	P	**P**	**17 44 58.9**	**-1.7**
	1.9nm,1.1s,mb3.8,baz=56,slow=3.7,SNR=6.5						

*IDC **20** 17:35:46.2±0.8, 8°.44N×93°.81E, h24km±4km, mb3.7/12,*
mb1 3.8/13, mb1mx3.7/24, mbtmp3.7/13, ML3.8/1, MS3.4/2,
Ms1 3.4/2, ms1mx2.7/27, Error ellipse: s-maj=29.6km
s-min=13.2km az=57.0
*ISCJB **20** 17:35:47.2±1.5, 8°.44N±0°.07×93°.90E±0°.08, h49km±15km,*
mb4.0/18, MS3.5/2, Error ellipse: s-maj=14.4km
s-min=10.5km az=161.0
*NEIC **20** 17:35:49.3±1.0, 8°.44N×93°.89E, h51km±10km, mb4.5/6,*
Error ellipse: s-maj=11.3km s-min=8.1km az=69.0

ISC 20 17:35:49.7±1.1, 8°.44N±0°.06×93°.89E±0°.08, h55km±11km, h25km±2.5km: pP-P, n35, σ1°.01/35, mb4.0/18, MS3.5/2, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.41**	**115**	*e*Pn	**Pn**	**17 37 33.1**	**-2.2**
	6.7nm,0.6s						
KULM				*e*Sn	**Sn**	**17 38 53.2**	**-4.8**
PSI	**Prapat**	**7.52**	**138**	Pn	**Pn**	**17 37 38.0**	**+1.3**
	1.5nm,0.3s,baz=322,slow=17,SNR=3.5						
CMAR	**Chiang Mai Arr**	**11.10**	**26**	Pn	**Pn**	**17 38 27.2**	**+1.4**
	0.9nm,0.3s,baz=213,slow=15,SNR=48						
CHTO	**Chiang Mai**	**11.42**	**25**	*e*Pn	**Pn**	**17 38 30.9**	**+0.7**
	5.1nm,0.6s						
PALK	**Pallekele**	**13.11**	**266**	*e*Pn	**Pn**	**17 38 52.4**	**-1.0**
PALK				*e*Sn	**Sn**	**17 41 06.2**	**-11**
LSA	**Lhasa**	**21.30**	**353**	*e*P	**P**	**17 40 30.8**	**-1.1**
	7.9nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**37.91**	**338**	*e*P	**P**	**17 43 01.9**	**+0.2**
AML	**Almayashu**	**37.99**	**335**	P	**P**	**17 43 03.0**	**+0.7**
	17nm,1.2s,mb4.7						
MK31	**Makanchi Array**	**39.48**	**347**	P	**P**	**17 43 15.5**	**+0.7**
MKAR	**Makanchi Array**	**39.48**	**347**	P	**P**	**17 43 14.5**	**-0.2**
	0.3nm,0.2s,mb3.6,baz=170,slow=7.4,SNR=6.2						
MKAR	**Makanchi Array**	**39.48**	**347**	P	**P**	**17 43 14.5**	**-0.2**
SONM	**Songino Array**	**40.67**	**13**	P	**P**	**17 43 26.7**	**+2.1**
	0.4nm,0.6s,mb3.2,baz=190,slow=7.2,SNR=3.7						
SONM				PcP	PcP	17 45 25.6	+0.2
	0.2nm,0.4s,baz=216,slow=3.2,SNR=2.4						
SONM				pPcP		17 45 34.9	
	0.4nm,0.6s,baz=222,slow=1.9,SNR=3.0						
KSRS	**Korea Array**	**42.20**	**42**	LR	LR	18 01 48.3	
	comp=Z,26nm,19.6s,MS3.1,baz=165,slow=37						
KURK	**Kurchatov**	**44.00**	**346**	P	**P**	**17 43 51.9**	**+0.2**
	2.6nm,1.0s,mb3.9						
ZAA0	**Zalesovo Array**	**45.97**	**353**	*e*P	**P**	**17 44 06.4**	**-0.8**
ZALV	**Zalesovo Beam**	**45.97**	**353**	P	**P**	**17 44 07.0**	**-0.2**
	2.7nm,0.6s,mb4.4,baz=175,slow=8.6,SNR=15						
ZALV				pP	pP	17 44 14.9	-6.7
	7.4nm,0.8s,baz=175,slow=7.8,SNR=13						
BVAR	**Borovoye Array**	**48.38**	**341**	P	**P**	**17 44 24.8**	**-1.1**
	0.4nm,0.4s,mb3.8,baz=121,slow=5.6,SNR=3.2						
WRA	**Warramunga Arr**	**48.79**	**126**	P	**P**	**17 44 29.4**	**-0.3**
	0.5nm,0.6s,mb3.7,baz=304,slow=8.6,SNR=10						
WRA				pP	pP	17 44 37.4	-6.8
	0.9nm,0.5s,baz=304,slow=8.5,SNR=7.2						
WRA				PcP	PcP	17 45 54.6	+0.7
	0.3nm,0.9s,baz=312,slow=3.2,SNR=2.8						
WRA				pPcP		17 46 02.7	
	0.3nm,0.5s,baz=321,slow=2.5,SNR=6.2						
WRA	**Warramunga Arr**	**48.79**	**126**	P	**P**	**17 44 29.4**	**-0.3**
WRA				pP	pP	17 44 37.4	-6.8
WRA				PcP	PcP	17 45 54.6	+0.7
WRA				pPcP		17 46 02.7	
MAJO	**Matsushiro**	**48.97**	**48**	P	**P**	**17 44 29.3**	**-1.5**
ABKAR	**Akbulak array**	**49.62**	**331**	*e*P	**P**	**17 44 35.0**	**-0.5**
	7.0nm,1.2s,mb4.6						
ASAR	**Alice Springs**	**50.47**	**130**	P	**P**	**17 44 41.7**	**-0.7**
	0.5nm,0.7s,mb3.7,baz=305,slow=7.9,SNR=9.7						
ASAR				PcP	PcP	17 46 00.9	+1.0
	0.5nm,0.9s,baz=313,slow=3.7,SNR=3.3						
ASAR				pPcP		17 46 09.0	
	0.6nm,0.6s,baz=314,slow=3.4,SNR=8.0						
BRTR	**Keskin Array B**	**61.87**	**311**	P	**P**	**17 46 02.4**	**-1.2**
	0.8nm,0.7s,mb3.9,baz=146,slow=8.3,SNR=5.4						
AKASG	**Malin Array Be**	**67.56**	**322**	P	**P**	**17 46 39.6**	**-0.7**
	0.2nm,0.4s,mb3.5,baz=110,slow=4.7,SNR=4.1						
FINES	**FINESS Array B**	**72.10**	**332**	P	**P**	**17 47 08.5**	**+0.5**
	0.7nm,0.5s,mb3.8,baz=73,slow=5.4,SNR=6.0						
FINES				LR	LR	18 21 17.0	
	comp=Z,47nm,18.3s,MS3.8,baz=132,slow=38						
FINES	**FINESS Array B**	**72.10**	**332**	P	**P**	**17 47 08.5**	**+0.5**
FINES				LR	LR	18 21 17.0	
LBTB	**Lobatse**	**74.29**	**241**	*e*P	**P**	**17 47 23.0**	**+1.3**
	5.6nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	**74.65**	**340**	P	**P**	**17 47 23.2**	**+0.3**
	2.3nm,1.0s,mb4.1,baz=106,slow=6.7,SNR=5.4						

CASY	**Casey**	**75.52**	**173**	P	**P**	**17 47 28.7**	**+0.9**
	6.7nm,0.9s,mb4.6						
BOSA	**Boshof**	**75.67**	**238**	P	**P**	**17 47 31.1**	**+1.5**
	2.2nm,0.8s,mb4.2,baz=80,slow=4.8,SNR=3.4						
BOSA	**Boshof**	**75.67**	**238**	P	**P**	**17 47 31.1**	**+1.5**
BOSA				*e*P		17 47 31.2	
NB2	**NORSAR Subarra**	**79.12**	**331**	P	**P**	**17 47 47.5**	**-0.7**
	comp=Z,1.9nm,0.7s,mb4.1,baz=96,slow=5.1						
NOA	**NORSAR Array B**	**79.12**	**331**	P	**P**	**17 47 48.0**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=95,slow=5.0,SNR=2.8						
NOA				pP	pP	17 47 55.7	-8.0
	comp=Z,1.4nm,0.7s,baz=95,slow=5.0,SNR=4.7						
NOA	**NORSAR Array B**	**79.12**	**331**	P	**P**	**17 47 48.0**	**-0.1**
NOA				pP	pP	17 47 55.7	-8.0
PLCA	**Paso Flores**	**144.99**	**201**	PKP	PKPdf	17 55 22.4	+1.3
	comp=Z,1.5nm,0.7s,baz=160,slow=3.7,SNR=3.1						

*IDC **20** 17:44:06.3±1.2, 1°.17S×99°.82E, h0km, mb4.1/10,*
mb1 4.1/12, mb1mx3.9/22, mbtmp4.0/12, ML4.0/2, Error
ellipse: s-maj=49.6km s-min=14.6km az=59.0
*DJA **20** 17:44:11, 1°.33S×99°.68E, h39km, MLv4.4/3*
*NEIC **20** 17:44:14.4±1.9, 0°.99S×100°.06E, h60km±13km, mb4.6/11,*
Error ellipse: s-maj=27.2km s-min=8.5km az=52.0
NEIC Felt [II] at Bukittinggi, Padangpanjang and Painan.

ISC 20 17:44:10.2±0.8, 1°.18S±0°.05×99°.79E±0°.04, h24km±5km, n42, σ0°97/47, mb4.4/22, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.72**	**258**	P	**Pb**	**17 44 23.1**	**-0.9**
SISI				S	**Sb**	**17 44 34.4**	**+0.9**
PDSI	**Padang**	**0.72**	**69**	P	**Pb**	**17 44 23.5**	**-0.6**
PDSI				S	**Sb**	**17 44 33.4**	**-0.2**
PPI	**Padang Panjang**	**0.94**	**40**	P	**Pb**	**17 44 26.6**	**-1.2**
PPI				S	**Sb**	**17 44 39.3**	**-0.5**
SDSI	**Sungai Dareh**	**1.66**	**82**	P	**Pn**	**17 44 40.1**	**+2.4**
SDSI				S	**Sn**	**17 45 01.9**	**+3.6**
KRJI	**Kerinci**	**1.90**	**119**	S	**Sn**	**17 45 12.7**	**+8.3**
BKNI	**Bangkinang**	**1.95**	**40**	P	**Pn**	**17 44 45.7**	**+3.9**
BKNI				S	**Sn**	**17 45 11.8**	**+6.3**
MNSI	**Mandailing Nat**	**1.97**	**354**	P	**Pn**	**17 44 44.0**	**+1.9**
RGRI	**Rengat**	**2.67**	**72**	P	**Pn**	**17 45 00.0**	**+8.3**
PSI	**Prapat**	**4.04**	**348**	Pn	**Pn**	**17 45 10.4**	**-0.2**
	6.4nm,0.3s,baz=155,slow=12,SNR=15						
PSI				Pg	**Pn**	**17 45 19.6**	**+9.0**
	4.9nm,0.3s,baz=172,slow=15,SNR=8.1						
PSI				Lg		17 46 18.8	
	4.2nm,0.3s,baz=324,slow=19,SNR=2.7						
TSI	**Tuntungan**	**4.80**	**345**	P	**Pn**	**17 45 24.0**	**+2.9**
MDSI	**Maura Dua**	**5.48**	**127**	P	**Pn**	**17 45 31.2**	**+0.8**
IPM	**Ipoh**	**5.75**	**12**	*e*Pn	**Pn**	**17 45 35.8**	**+1.6**
	24nm,0.6s						
KULM	**Kulim**	**6.48**	**8**	*e*Pn	**Pn**	**17 45 44.5**	**+0.3**
	14nm,0.8s						
CMAR	**Chiang Mai Arr**	**19.53**	**358**	P	**Pn**	**17 48 36.1**	**-1.3**
	0.2nm,0.3s,baz=186,slow=10,SNR=7.3						
ODAN	**Odare**	**30.33**	**338**	*e*P	**P**	**17 50 20.2**	**+0.2**
	10nm,0.7s,mb4.7						
TAPN	**Taplejung**	**30.65**	**339**	*e*P	**P**	**17 50 23.3**	**+0.4**
	18nm,0.9s,mb4.9						
LSA	**Lhasa**	**31.79**	**346**	P	**P**	**17 50 33.8**	**+0.9**
	3.9nm,0.6s,mb4.4						
GUN	**Gumba**	**31.86**	**336**	*e*P	**P**	**17 50 34.1**	**+0.6**
	24nm,0.5s,mb5.3						
KKN	**Kakani**	**32.00**	**335**	*e*P	**P**	**17 50 35.2**	**+0.5**
	7.4nm,0.5s,mb4.8						
GKN	**Gorkha**	**32.46**	**334**	*e*P	**P**	**17 50 38.9**	**+0.1**
	3.4nm,0.3s,mb4.6						
ENH	**Enshi**	**32.61**	**16**	*e*P	**P**	**17 50 36.2**	**-3.9**
KOLN	**Koldanda**	**32.72**	**333**	*e*P	**P**	**17 50

VHO	**Vista Hermosa**	**3.28**	**82**	*i* P	Pn	18 23 42.8	-3.3
VHO				*i* S	Sn	18 24 21.5	-4.1
VHO	**Vista Hermosa**	**3.28**	**82**	*i* P	Pn	18 23 42.8	-3.3
VHO				*i* S	Sn	18 24 21.5	-4.1

*ISCJB **20** 18:24:10.0±0.8, 18°.6S±0°.1×177°.71W±0°.10, h575km±10km, mb4.0/14, Error ellipse: s-maj=21.7km s-min=11.4km az=154.3*
*IDC **20** 18:24:10.1±1.6, 18°.21S×177°.94W, h552km±18km, mb3.4/8, mb1 3.7/9, mb1mx3.4/19, mbtmp3.4/9, Error ellipse: s-maj=66.5km s-min=12.1km az=150.0*
*NEIC **20** 18:24:11.0±0.8, 18°.54S×177°.71W, h574km±9km, mb4.3/7, Error ellipse: s-maj=18.6km s-min=11.5km az=151.0*
ISC 20 18:24:10.7±0.8, 18°.5S±0°.1×177°.68W±0°.10, h567km±10km, n28, σ1°.05/26, mb4.0/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.14**	**280**	*eP*	**P**	**18 25 36.6**	**+1.8**
AFI	**Afiamalu**	**7.29**	**52**	P	**P**	**18 26 00.7**	**-1.5**
	6.3nm,0.3s,baz=172,slow=15,SNR=11						
AFI				S	**S**	**18 27 32.3**	**-1.2**
	1.7nm,0.3s,baz=270,slow=20,SNR=3.3						
AFI	**Afiamalu**	**7.29**	**52**	P	**P**	**18 26 00.7**	**-1.5**
AFI				*eS*	**S**	**18 27 31.9**	**-1.6**
AFI				S	**S**	**18 27 32.3**	**-1.2**
FUNA	**Funafuti**	**10.40**	**343**	P	**P**	**18 26 34.9**	**+1.9**
PMG	**Port Moresby**	**35.25**	**280**	*eP*	**P**	**18 30 19.3**	**+0.6**
	28nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**38.95**	**242**	P	**P**	**18 30 48.8**	**0.0**
	8.3nm,0.7s,mb4.4,baz=96,slow=9.2,SNR=28						
STKA	**Stephens Creek**	**38.95**	**242**	*eP*	**P**	**18 30 48.6**	**-0.1**
	2.6nm,0.9s,mb3.8						
WB2	**Warramunga Arr**	**45.20**	**260**	*eP*	**P**	**18 31 36.8**	**-1.1**
WRA	**Warramunga Arr**	**45.21**	**260**	P	**P**	**18 31 36.8**	**-1.2**
	8.8nm,0.6s,mb4.5,baz=97,slow=7.9,SNR=267						
WRA				PcP	PcP	18 33 05.7	-0.4
	0.8nm,0.5s,baz=95,slow=3.2,SNR=5.1						
WRA	**Warramunga Arr**	**45.21**	**260**	P	**P**	**18 31 36.8**	**-1.2**
WRA				PcP	PcP	18 33 05.7	-0.4
ASAR	**Alice Springs**	**45.30**	**255**	P	**P**	**18 31 38.0**	**-0.6**
	15nm,0.7s,mb4.7,baz=91,slow=7.9,SNR=258						
ASAR				PcP	PcP	18 33 05.7	-0.6
	1.3nm,0.5s,baz=105,slow=4.0,SNR=7.9						
KAKA	**Kakadu**	**48.27**	**269**	*eP*	**P**	**18 32 00.1**	**-1.1**
	29nm,0.6s,mb5.0						
SBA	**Scott Base**	**59.84**	**184**	*eP*	**P**	**18 33 22.3**	**+0.9**
	1.8nm,0.7s,mb3.5						
MAJO	**Matsushiro**	**68.82**	**323**	P	**P**	**18 34 18.0**	**-0.8**
KKM	**Kota Kinabalu**	**69.57**	**284**	*eP*	**P**	**18 34 23.2**	**-0.7**
	9.8nm,0.8s,mb4.4						
QSPA	**South Pole Qui**	**71.53**	**180**	*eP*	**P**	**18 34 34.4**	**+0.2**
	7.2nm,1.2s,mb4.0						
KSM	**Kuching**	**73.46**	**277**	*eP*	**P**	**18 34 46.5**	**0.0**
	12nm,1.0s,mb4.3						
YBH	**Yreka Blue Hor**	**78.57**	**39**	P	**P**	**18 35 14.9**	**+0.9**
	0.7nm,0.6s,mb3.1,baz=153,slow=2.3,SNR=3.8						
NVAR	**Mina Array Bea**	**79.39**	**43**	P	**P**	**18 35 19.8**	**+1.3**
	0.6nm,0.7s,mb3.0,baz=224,slow=8.8,SNR=6.9						
TXAR	**Lajitas Array**	**85.74**	**57**	P	**P**	**18 35 52.2**	**+1.6**
	0.7nm,0.7s,mb3.4,baz=221,slow=6.3,SNR=8.6						
TXAR	**Lajitas Array**	**85.74**	**57**	P	**P**	**18 35 52.2**	**+1.6**
ILAR	**Eielson Array**	**86.34**	**13**	P	**P**	**18 35 52.0**	**-0.5**
	0.3nm,0.4s,mb3.3,baz=215,slow=5.1,SNR=7.4						
CMAR	**Chiang Mai Arr**	**89.75**	**289**	P	**P**	**18 36 09.7**	**+0.1**
	1.5nm,0.9s,mb3.8,baz=133,slow=2.8,SNR=6.9						
MKAR	**Makanchi Array**	**110.07**	**314**	PKiKP	PKiKP	18 41 36.6	-1.5
	0.3nm,0.5s,baz=183,slow=0.7,SNR=7.0						
ARCES	**ARCESS Array B**	**117.05**	**350**	PKP	PKPdf	18 42 09.4	-0.6
	0.9nm,0.5s,baz=9.5,slow=1.5,SNR=9.3						
FINES	**FINESS Array B**	**133.98**	**344**	PKP	PKPdf	18 42 23.0	-0.4
	0.5nm,0.6s,baz=66,slow=4.7,SNR=3.7						
BRTR	**Keskin Array B**	**145.72**	**315**	PKPbc	PKPbc	18 42 45.9	-0.9
	2.6nm,1.0s,baz=20,slow=4.6,SNR=7.9						
CLL	**Collm**	**146.22**	**348**	*i* PKPbc	PKPbc	18 42 48.0	+0.1
	comp=Z,6.0nm,0.9s						

*IDC **20** 18:36:10.4±0.7, 0°.33N×127°.65E, h0km, mb4.1/9, mb1 4.3/11, mb1mx4.1/20, mbtmp4.1/11, ML4.0/1, Error ellipse: s-maj=31.2km s-min=14.1km az=84.0*
*DJA **20** 18:36:13, 0°.37N×127°.81E, h11km, mb4.8/8*
*BJI **20** 18:36:17.9, 0°.30N×127°.70E, h53km, mB4.7/3, mb4.1/6*
*NEIC **20** 18:36:17.3±2.5, 0°.29N×127°.72E, h54km±23km, mb4.3/13, Error ellipse: s-maj=20.1km s-min=7.9km az=63.0*
NEIC Felt [IV] on Halmahera.
ISC 20 18:36:13.6±2.1, 0°.36N±0°.05×127°.85E±0°.08, h21km±14km, n45, σ0°.95/47, mb4.2/20, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.63**	**310**	P	**Pb**	**18 36 25.1**	**-0.9**
MNI	**Manado**	**3.19**	**290**	P	**Pn**	**18 37 03.2**	**+0.6**
NLAI	**Namlea**	**3.66**	**192**	P	**Pn**	**18 37 08.7**	**-0.3**
KMSI	**Cibinong**	**3.87**	**273**	P	**Pn**	**18 37 12.4**	**+0.4**
LUWI	**Luwuk**	**5.26**	**255**	P	**Pn**	**18 37 31.6**	**+0.5**
	2μm109nm,0.9s						
MRSI	**Marisa**	**5.91**	**271**	P	**Pn**	**18 37 40.4**	**+0.4**
	464nm45nm,0.7s						
KDI	**Kendari**	**6.76**	**231**	P	**Pn**	**18 37 51.1**	**-0.6**
	721nm62nm,0.8s						
BBSI	**Bau Bau**	**7.85**	**222**	P	**Pn**	**18 38 08.5**	**+1.9**
	47nm,1.3s						
MSSI	**Masamba**	**8.06**	**249**	P	**Pn**	**18 38 08.5**	**-1.1**
	2μm134nm,0.6s						
TTSI	**Tana Toraja**	**8.71**	**247**	P	**Pn**	**18 38 18.2**	**-0.3**
	866nm70nm,0.7s						
BKSI	**Bulukumba**	**9.56**	**234**	P	**Pn**	**18 38 31.5**	**+1.3**
	16nm,0.6s						
KAPI	**Kappang**	**9.69**	**236**	Pn	**Pn**	**18 38 30.5**	**-1.4**
	1.6nm,0.3s,baz=69,slow=8.5,SNR=12						
KAPI				Sn	**Sn**	**18 40 15.1**	**-5.2**
	0.9nm,0.3s,baz=41,slow=19,SNR=3.5						
KAPI	**Kappang**	**9.69**	**236**	*e*Pn	**Pn**	**18 38 31.9**	**0.0**
	13nm,0.5s						
KAPI				*e*Sn	**Sn**	**18 40 11.8**	**-8.5**
KAPI	**Kappang**	**9.69**	**236**	P	**Pn**	**18 38 32.3**	**+0.4**
KAKA	**Kakadu**	**13.77**	**161**	*e*Pn	**Pn**	**18 39 23.1**	**-4.6**
	21nm,0.7s						
KSM	**Kuching**	**17.57**	**274**	*e*Pn	**Pn**	**18 40 17.2**	**-0.2**
	15nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.48**	**187**	P	**Pn**	**18 40 27.7**	**-0.8**
WRA	**Warramunga Arr**	**21.16**	**163**	P	**P**	**18 40 57.6**	**0.0**
	7.8nm,0.5s,mb4.3,baz=343,slow=11,SNR=122						
WRA				PcP	PcP	18 45 02.5	-0.7
	0.8nm,0.8s,baz=328,slow=2.3,SNR=4.9						
WRA	**Warramunga Arr**	**21.16**	**163**	P	**P**	**18 40 57.6**	**0.0**
WRA				PcP	PcP	18 45 02.5	-0.7
WB2	**Warramunga Arr**	**21.16**	**163**	*eP*	**P**	**18 40 57.3**	**-0.3**
ASAR	**Alice Springs**	**24.60**	**167**	P	**P**	**18 41 33.1**	**+0.7**
	4.7nm,0.4s,mb4.3,baz=344,slow=11,SNR=167						
ASAR				PcP	PcP	18 45 09.8	-0.4
	0.8nm,0.6s,baz=353,slow=2.1,SNR=6.5						
CHTO	**Chiang Mai**	**33.77**	**305**	*eP*	**P**	**18 42 55.8**	**+1.6**
	3.6nm,1.1s,mb4.2						
ENH	**Enshi**	**34.49**	**331**	P	**P**	**18 43 00.6**	**+0.3**
	6.4nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**34.61**	**159**	P	**P**	**18 43 01.6**	**+0.4**
	5.6nm,0.8s,mb4.6,baz=333,slow=8.7,SNR=11						
STKA	**Stephens Creek**	**34.61**	**159**	*eP*	**P**	**18 43 01.5**	**+0.3**
	1.3nm,0.8s,mb3.9						
KSRS	**Korea Array**	**36.91**	**0**	P	**P**	**18 43 22.0**	**+1.1**
	1.9nm,0.7s,mb4.0,baz=176,slow=9.8,SNR=12						
MJAR	**Matsushiro Arr**	**37.26**	**14**	P	**P**	**18 43 23.5**	**-0.4**
	0.8nm,0.5s,mb3.9,baz=194,slow=9.9,SNR=5.4						
MJAR	**Matsushiro Arr**	**37.26**	**14**	P	**P**	**18 43 23.5**	**-0.4**
LSA	**Lhasa**	**45.52**	**313**	*eP*	**P**	**18 44 36.7**	**+4.9**
	3.1nm,0.6s,mb4.4						
ULN	**Ulaanbaatar**	**50.64**	**342**	*eP*	**P**	**18 45 11.8**	**+0.7**
	3.1nm,0.9s,mb4.2						
SONM	**Songino Array**	**50.82**	**341**	P	**P**	**18 45 13.3**	**+0.8**
	0.6nm,0.7s,mb3.6,baz=157,slow=8.1,SNR=2.8						
SONM				PcP	PcP	18 46 28.8	-0.3
	0.5nm,0.8s,baz=132,slow=2.1,SNR=2.8						
PETK	**Petropavlovsk-**	**58.13**	**21**	P	**P**	**18 46 07.8**	**+2.2**
	1.6nm,0.7s,mb4.2,baz=163,slow=5.7,SNR=3.5						
PETK	**Petropavlovsk-**	**58.13**	**21**	P	**P**	**18 46 07.8**	**+2.2**
MK31	**Makanchi Array**	**60.94**	**326**	*eP*	**P**	**18 46 24.6**	**-0.5**
MKAR	**Makanchi Array**	**60.94**	**326**	P	**P**	**18 46 25.0**	**-0.1**
	0.7nm,0.4s,mb4.2,baz=113,slow=8.4,SNR=16						
MKAR	**Makanchi Array**	**60.94**	**326**	P	**P**	**18 46 25.0**	**-0.1**
ZALV	**Zalesovo Beam**	**64.08**	**333**	P	**P**	**18 46 44.5**	**-1.4**
	0.3nm,0.3s,mb3.8,baz=141,slow=7.3,SNR=2.9						

EKS2	**Erkin-Say**	**64.08**	**318**	P	**P**	**18 46 47.0**	**+0.8**
	3.1nm,0.8s,mb4.4						
KBL	**Kabul**	**64.46**	**308**	P	**P**	**18 46 47.9**	**-1.0**
	2.9nm,0.6s,mb4.5						
KURK	**Kurchatov**	**65.16**	**328**	*eP*	**P**	**18 46 52.0**	**-1.0**
	5.5nm,0.8s,mb4.6						
KKAR	**Karatay Array**	**66.45**	**318**	*eP*	**P**	**18 47 00.1**	**-1.4**
	2.1nm,0.8s,mb4.2						
ABKAR	**Akbulak array**	**75.45**	**321**	*eP*	**P**	**18 47 53.6**	**-2.5**
	2.3nm,0.9s,mb4.1						
SBA	**Scott Base**	**80.87**	**172**	P	**P**	**18 48 25.5**	**0.0**
	2.0nm,0.9s,mb4.0						
GNI	**Garni**	**84.49**	**310**	*eP*	**P**	**18 48 51.7**	**+6.6**
	6.6nm,1.1s,mb4.7						
QSPA	**South Pole Qui**	**90.29**	**180**	*eP*	**P**	**18 49 11.5**	**-0.9**

*IDC **20** 18:49:04.8±3.9, 5°.76S×110°.43E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.3/19, mbtmp3.3/3, Error ellipse: s-maj=252.2km s-min=25.8km az=50.0*
*ISCJB **20** 18:49:54.5±0.6, 5°.9S±0°.1×111°.16E±0°.09, h549km±9km, mb2.9/3, Error ellipse: s-maj=20.1km s-min=11.7km az=20.7*
*DJA **20** 18:49:54, 6°.04S×111°.18E, h571km, MLv4.1/11*
ISC 20 18:49:55.6±0.6, 5°.9S±0°.1×111°.15E±0°.08, h541km±9km, n18, σ0°.64/18, mb2.9/3, Java Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGJI	**Ngawi**	**1.45**	**168**	P	**P**	**18 51 03.9**	**+1.6**
SJI	**Sawahan**	**1.89**	**161**	P	**P**	**18 51 04.8**	**+0.8**
UGM	**Wanagama**	**2.06**	**198**	P	**P**	**18 51 04.1**	**-0.6**
PCJI	**Pacitan**	**2.24**	**179**	P	**P**	**18 51 05.6**	**0.0**
KMMI	**Kalianget**	**3.01**	**112**	P	**P**	**18 51 10.5**	**+0.6**
GMJI	**Gumukmas**	**3.25**	**136**	P	**P**	**18 51 10.8**	**-0.7**
CISI	**Cisompet, Garu**	**3.68**	**244**	P	**P**	**18 51 14.0**	**-0.5**
JAGI	**Jajag, Banyuwa**	**3.90**	**130**	P	**P**	**18 51 15.1**	**-1.0**
SRBI	**Singaraja**	**4.56**	**118**	P	**P**	**18 51 21.7**	**+0.5**
KHKI	**Kahang-Kahang**	**5.04**	**119**	P	**P**	**18 51 24.7**	**-0.5**
CGJI	**Cibinong**	**5.47**	**263**	P	**P**	**18 51 28.3**	**-0.7**
KBKI	**Kotabaru**	**5.64**	**63**	P	**P**	**18 51 30.1**	**-0.5**
	839nm102nm,0.9s						
STKI	**Sintang**	**5.97**	**3**	P	**P**	**18 51 33.7**	**+0.1**
	0.1nm37nm,0.9s						
KLSI		**6.51**	**281**	P	**P**	**18 51 39.0**	**+0.4**
	41nm,2.5s						
MNAI	**Manna**	**8.31**	**280**	P	**P**	**18 51 56.7**	**+0.4**
WRA	**Warramunga Arr**	**26.48**	**124**	P	**P**	**18 54 50.5**	**+0.4**
	0.2nm,0.7s,mb2.9,baz=304,slow=9.1,SNR=3.7						
ASAR	**Alice Springs**	**28.10**	**131**	P	**P**	**18 55 04.3**	**+0.1**
	0.2nm,0.6s,mb2.9,baz=305,slow=8.7,SNR=4.7						
MKAR	**Makanchi Array**	**58.41**	**337**	P	**P**	**18 58 59.1**	**-0.2**
	0.4nm,0.5s,mb2.9,baz=150,slow=7.5,SNR=11						

*ISCJB **20** 18:52:09.5±0.4, 14°.15N±0°.08×91°.15W±0°.05, h118km±6km, Error ellipse: s-maj=14.2km s-min=3.4km az=28.5*
*CASC **20** 18:52:09.9±1.9, 14°.19N×91°.13W, h110km±8km, MD3.7, ML3.7*
*MEX **20** 18:52:11.2±0.6, 14°.11N×91°.18W, h130km±11km, MD4.2*
*NEIC **20** 18:52:11.2, 14°.11N×91°.18W, h130km, MD4.2(MEX), After MEX.*
ISC 20 18:52:10.7±0.4, 14°.15N±0°.07×91°.15W±0°.04, h111km±7km, n43, σ0°.85/60, 2C-3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.42**	**45**	*eP*	**Pn**	**18 52 26.3**	**-0.8**
FG6		**0.48**	**32**	*eP*	**Pn**	**18 52 27.0**	**-0.5**
JAT	**Jato**	**0.50**	**290**	*eP*	**Pn**	**18 52 28.1**	**+0.5**
PCG	**Pacaya**	**0.58**	**65**	*eP*	**Pn**	**18 52 27.7**	**-0.5**
PCG				*e*S	**Sn**	**18 52 40.7**	**-0.7**
TP2	**Tecpan 2**	**0.64**	**11**	*eP*	**Pn**	**18 52 28.8**	**+0.1**
TP2				*e*S	**Sn**	**18 52 42.9**	**+0.6**
IXG	**Ixpaco**	**0.68**	**88**	*eP*	**Pn**	**18 52 28.1**	**-0.8**
NBG	**Las Nubes**	**0.89**	**61**	*eP*	**Pn**	**18 52 30.8**	**-0.1**
THIG		**1.32**	**305**	*i* P	**Pn**	**18 52 35.8**	**+0.4**
THIG				*i* S	**Sn**	**18 52 55.2**	**+1.0**
RBDL	**Robledal**	**1.42**	**91**	*eP*	**Pn**	**18 52 35.3**	**-1.3**
RTR	**El Retiro**	**1.48**	**99**	*eP*	**Pn**	**18 52 36.4**	**-0.9**
RTR				*e*S	**Sn**	**18 52 58.7**	**+1.1**
SBLS	**San Blas**	**1.51**	**101**	*eP*	**Pn**	**18 52 36.7**	**-1.0**
SBLS				*e*S	**Sn**	**18 52 59.0**	**+0.7**
MRL	**Marmol**	**1.68**	**57**	*eP*	**Pn**	**18 52 40.0**	**+0.2**
MRL				*e*S	**Sn**	**18 53 01.4**	**-0.5**
MTO2	**Montecristo 2**	**1.75**	**82**	*eP*	**Pn**	**18 52 39.3**	**-1.3**
BOQS	**Boqueron**	**1.86**	**103**	*eP*	**Pn**	**18 52 41.3**	**-0.6**
BOQS				*e*S	**Sn**	**18 53 07.0**	**+1.2**
SNET	**Serv Nac Est T**	**1.92**	**104**	*eP*	**Pn**	**18 52 41.6**	**-1.1**
SNET				*eP*		18 52 41.8	
SNET				AML	AML	18 53 10.7	
	comp=Z,913nm,0.4s						
LBRS	**Las Brisas**	**2.09**	**101**	*eP*	**Pn**	**18 52 44.3**	**-0.5**
LFRS	**El Faro**	**2.10**	**104**	*eP*	**Pn**	**18 52 44.1**	**-0.8**
LFRS				*e*S	**Sn**	**18 53 12.0**	**+0.9**
SNVI	**San Vicente**	**2.31**	**103**	*eP*	**Pn**	**18 52 47.4**	**-0.2**
SNVI				*e*S	**Sn**	**18 53 18.8**	**+2.9**
CCIG	**Comitan**	**2.33**	**336**	*i* P	**Pn**	**18 52 48.8**	**+0.9**
CCIG				*i* S	**Sn**	**18 53 17.3**	**+0.9**
CCIG	**Comitan**	**2.33**	**336**	*i* P	**Pn**	**18 52 48.8**	**+0.9**
CCIG				*i* S	**Sn**	**18 53 17.3**	**+0.9**
PCIG		**2.53**	**308**	*eP*	**Pn**	**18 52 50.9**	**+0.3**
PCIG				*i* S	**Sn**	**18 53 21.2**	**+0.1**
CAHU	**Cacacuatique**	**2.88**	**97**	*eP*	**Pn**	**18 52 54.3**	**-0.8**
CAHU				*eP*		18 52 54.3	
BLLM	**Bellamira**	**2.92**	**104**	*eP*	**Pn**	**18 52 55.0**	**-0.6**
TGIG		**3.23**	**324**	*i* P	**Pn**	**18 52 59.1**	**-0.7**
TGIG				*i* S	**Sn**	**18 53 38.2**	**+0.5**
CNCH	**Conchagua**	**3.34**	**105**	*eP*	**Pn**	**18 53 00.8**	**-0.4**
CRIN	**San Cristobal**	**4.24**	**109**	*eP*	**Pn**	**18 53 14.4**	**+1.1**
CRIN				*e*S	**Sn**	**18 54 10.2**	**+8.2**
CRIN				AML	AML	18 54 27.2	
	comp=E,161nm,0.2s						
TEL3	**Telica 3**	**4.47**	**110**	*eP*	**Pn**	**18 53 16.2**	**-0.2**
CNGN	**Cerro Negro**	**4.63**	**110**	*eP*	**Pn**	**18 53 18.6**	**0.0**
CNGN				*e*S	**Sn**	**18 54 19.2**	**+7.8**
MOMN	**Momotombo**	**4.81**	**111**	*eP*	**Pn**	**18 53 21.9**	**+0.9**
COPN	**Copaltepe**	**4.85**	**113**	*eP*	**Pn**	**18 53 21.6**	**+0.1**
CSAN		**5.00**	**112**	*eP*	**Pn**	**18 53 24.2**	**+0.6**
HUIG	**Huatulco**	**5.05**	**289**	*i* P	**Pn**	**18 53 23.2**	**-1.1**
HUIG	**Huatulco**	**5.05**	**289**	*i* P	**Pn**	**18 53 23.2**	**-1.1**
TICN	**Ticuantepe**	**5.23**	**113**	*eP*	**Pn**	**18 53 27.1**	**+0.4**
VHO	**Vista Hermosa**	**6.11**	**299**	*i* P	**Pn**	**18 53 39.5**	**+0.9**
VHO				*i* S	**Sn**	**18 54 46.0**	**-1.2**
VHO	**Vista Hermosa**	**6.11**	**299**	*i* P	**Pn**	**18 53 39.5**	**+0.9**
VHO				*i* S	**Sn**	**18 54 46.0**	**-1.2**
PNIG	**Pinotepa**	**7.09**	**289**	*eP*	**Pn**	**18 53 52.0**	**+0.1**
PNIG	**Pinotepa**	**7.09**	**289**	*eP*	**Pn**	**18 53 52.0**	**+0.1**
UTMO	**Huajuapan**	**7.37**	**301**	*i* P	**Pn**	**18 53 56.1**	**+0.5**
CGA2	**Cerro Gallo 2**	**7.72**	**121**	*eP*	**Pn**	**18 54 01.5**	**+1.1**
LAJ	**Bijagual**	**8.09**	**121**	*eP*	**Pn**	**18 54 03.3**	**-2.1**
URSC	**Urasca**	**8.39**	**120**	*eP*	**Pn**	**18 54 10.6**	**+1.0**
ACR	**Cerro Adams**	**9.54**	**124**	*eP*	**Pn**	**18 54 26.2**	**+1.1**

*CSEM **20** 18:55:17.9, 64°.50N×17°.78W, h10km, ML3.6, After REY*
REY 20 18:55:17.9, 64°.50N×17°.78W, h10km, ML3.6, ML3.2, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRF	**Grimsfjall**	**0.24**	**113**	P	Pg	18 55 22.7	-0.1
ISKR	**Skrokkalda**	**0.27**	**283**	P	Pg	18 55 23.1	-0.2
ISKR				S	Sg	18 55 27.2	+0.3
IKAL	**Kalfafell**	**0.56**	**176**	P	Pg	18 55 27.9	-0.8
IKAL				S	Sg	18 55 35.7	-0.3
IVAT	**Vatnsfell**	**0.59**	**238**	P	Pg	18 55 28.6	-0.6
IVAT				S	Sg	18 55 37.2	+0.3
IKRE	**Kreppuhraun**	**0.67**	**64**	P	Pg	18 55 29.7	-1.0
IKRE				S	Sg	18 55 39.7	+0.3
IMKO	**Mokollar**	**0.78**	**52**	P	Pg	18 55 31.8	-1.2
IMKO				S	Sg	18 55 43.2	0.0
IFAG	**Fagurholsmyri**	**0.80**	**141**	P	Pg	18 55 31.9	-1.4
IFAG				S	Sg	18 55 43.1	-0.6
IBRU	**Bruarjokull**	**0.80**	**65**	P	Pg	18 55 32.0	-1.3
IBRU				S	Sg	18 55 43.5	-0.2
ISNB	**Snabyli**	**0.85**	**206**	P	Pg	18 55 32.9	-1.4
ISNB				S	Sg	18 55 44.6	-0.8
ISVA	**Svartarkot**	**0.87**	**15**	P	Pg	18 55 33.0	-1.6
ISVA				S	Sg	18 55 44.8	-1.1
IVSH	**V-Sauoahnukur**	**0.94**	**70**	P	Pg	18 55 34.2	-1.7
IVSH				S	Sg	18 55 47.5	-0.5
IHVA	**Hvannstoosfjol**	**0.94**	**60**	P	Pg	18 55 34.3	-1.6
IHVA				S	Sg	18 55 47.1	-1.0
IADA	**Aoalbol**	**1.08**	**60**	P	Pg	18 55 36.5	-2.1
IADA				S	Sg	18 55 51.4	-1.2
IGYG	**Gygjarholskot**	**1.08**	**259**	P	Pg	18 55 36.6	-2.0
IREN	**Reynihlio**	**1.21**	**17**	P	Pn	18 55 38.8	-2.0
IESK	**Eystri-Skogar**	**1.23**	**218**	P	Pn	18 55 39.3	-1.7
IESK				S	Sb	18 55 55.5	-1.4
IGLU	**Glumsstadir**	**1.25**	**66**	P	Pn	18 55 39.2	-2.2
IGLU				S	Sb	18 55 56.6	-1.1
IMID	**Miomork**	**1.25**	**228**	P	Pn	18 55 39.7	-1.7
IMID				S	Sb	18 55 56.6	-1.1
ISAU	**Saurbar**	**1.26**	**247**	P	Pn	18 55 39.2	-2.3
ISAU				S	Sb	18 55 56.5	-1.4
IKVO	**Krokottuvotn**	**1.28**	**17**	P	Pn	18 55 39.7	-2.0
IKVO				S	Sb	18 55 57.0	-1.4
IGRS	**Grimsstaoir**	**1.34**	**31**	P	Pn	18 55 40.9	-1.7
IGRS				S	Sb	18 55 59.0	-1.3
IASM	**Asmuli**	**1.41**	**243**	P	Pn	18 55 41.9	-1.7
IGRA	**Granastaoir**	**1.43**	**3**	P	Pn	18 55 42.1	-1.7
ISOL	**Solvholt**	**1.50**	**249**	P	Pn	18 55 42.9	-1.9
IHEI	**Heioarbar**	**1.53**	**260**	P	Pn	18 55 43.7	-1.6
IASB	**`sbjarnarst**	**1.55**	**281**	P	Pn	18 55 44.1	-1.3
IASB				S	Sn	18 56 04.9	-0.6
IHED	**Heoinshofoi**	**1.60**	**7**	P	Pn	18 55 44.8	-1.4
IHED				S	Sn	18 56 06.5	-0.3
IBJA	**Bjarnastaoir**	**1.64**	**252**	P	Pn	18 55 45.4	-1.3
IFLA	**Flatey**	**1.67**	**359**	P	Pn	18 55 46.2	-0.9
IFLA				S	Sn	18 56 08.8	+0.3
IGIL	**Gilhagi**	**1.69**	**20**	P	Pn	18 55 46.4	-1.1
IGIL				S	Sn	18 56 09.1	0.0
ISIG	**Siglufjorour**	**1.71**	**344**	P	Pn	18 55 46.2	-1.4
ISAN	**Sandskeio**	**1.71**	**257**	P	Pn	18 55 46.3	-1.4
IKUD	**Kuludalsa**	**1.79**	**266**	P	Pn	18 55 47.4	-1.3
IKUD				S	Sn	18 56 11.7	+0.3
IVOS	**Vogsosar**	**1.84**	**251**	P	Pn	18 55 48.7	-0.7
IKAS	**Kald??rsel**	**1.84**	**257**	P	Pn	18 55 48.2	-1.3
IHRN	**Hraun**	**1.89**	**330**	P	Pn	18 55 49.6	-0.6
ILEI	**Leirhofn**	**1.99**	**15**	P	Pn	18 55 50.7	-0.8
IGRI	**Grimsey**	**2.05**	**357**	P	Pn	18 55 51.2	-1.2
IVOG	**Vogar**	**2.08**	**257**	P	Pn	18 55 53.0	+0.2

IDC 20 19:00:26.7±4.8, 6°.94S×127°.53E, h361km±83km, mb3.3/1, mb1 3.3/4, mb1mx2.9/17, mbtmp3.2/4, Error ellipse: s-maj=103.6km s-min=49.1km az=86.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.25**	**189**	P	Pn	19 02 58.6	-0.9
WRA	**Warramunga Arr**	**14.52**	**154**	P	P	19 03 34.6	-1.0
	1.6nm,0.3s,baz=327,slow=12,SNR=53						
WRA				S	S	19 06 11.1	-1.1
	0.1nm,0.3s,baz=332,slow=21,SNR=3.4						
ASAR	**Alice Springs**	**17.72**	**160**	P	P	19 04 10.7	+0.5
	0.9nm,0.3s,baz=344,slow=12,SNR=118						
ASAR				S	S	19 07 16.8	+1.4
	0.1nm,0.3s,baz=341,slow=20,SNR=5.2						
STKA	**Stephens Creek**	**28.07**	**154**	P	P	19 05 46.4	0.0
	1.0nm,0.4s,baz=336,slow=10.0,SNR=6.9						

*DJA **20** 19:02:56, 4°.82N×128°.76E, h114km

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** comp=Z,2.7nm,0.8s,mb4.3,baz=188,slow=6.5,SNR=3.2	**55.71**	**21**	P	**P**	**19 12 50.1**	**+1.8**
MKAR	**Makanchi Array** comp=Z,1.9nm,0.4s,mb4.5,baz=121,slow=8.4,SNR=25	**58.64**	**325**	P	**P**	**19 13 09.9**	**+0.8**
YAK	**Yakutsk** comp=Z,5.7nm,0.6s,mb4.8	**58.86**	**1**	*e*P	**P**	**19 13 10.4**	**+0.1**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.4s,mb3.9,baz=132,slow=8.4,SNR=3.3	**61.61**	**333**	P	**P**	**19 13 28.4**	**-0.9**
KURK	**Kurchatov** comp=Z,5.3nm,0.8s,mb4.5	**62.81**	**327**	P	**P**	**19 13 38.0**	**+0.6**
BVAR	**Borovoye Array** comp=Z,1.5nm,0.7s,mb4.0,baz=132,slow=8.2,SNR=11	**68.39**	**327**	P	**P**	**19 14 13.9**	**+0.6**
AKTK	**Aktyubinsk**	**74.77**	**322**	P	**P**	**19 14 51.8**	**+0.2**
AKTO	**Aktyubinsk** comp=Z,1.2nm,0.7s,mb3.7,baz=131,slow=9.3,SNR=3.0	**74.77**	**322**	P	**P**	**19 14 51.8**	**+0.2**
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,mb3.4,baz=248,slow=5.5,SNR=3.9	**85.31**	**25**	P	**P**	**19 15 48.0**	**-0.1**
ILAR	**Eielson Array**	**85.31**	**25**	P	**P**	**19 15 48.0**	**-0.1**
ARCES	**ARCESS Array B** comp=Z,2.6nm,0.9s,mb4.3,baz=79,slow=8.8,SNR=4.5	**91.40**	**340**	P	**P**	**19 16 16.2**	**-0.8**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.4s,baz=184,slow=1.4,SNR=3.6	**121.27**	**53**	PKP	PKPdf	19 22 06.3	+1.6

ISCJB ***20*** *19:15:12.8±1.3,20.1°S±0.1°×177.7°W±0.1°,h477km±16km, mb3.6/13, Error ellipse: s-maj=23.3km s-min=12.3km az=44.4*
NEIC ***20*** *19:15:13.0±1.4,20.08°S×177.64°W,h467km±17km, mb3.9/5, Error ellipse: s-maj=19.9km s-min=11.7km az=135.0*
IDC ***20*** *19:15:18.9±3.3,20.46°S×177.59°W,h541km±41km, mb3.0/8, mb1 3.3/9, mb1mx3.2/18, mbtmp3.0/9, Error ellipse: s-maj=42.6km s-min=13.9km az=156.0*
ISC 20 19:15:13.4±1.3,20.1°S±0.1°×177.7°W±0.1°,h470km±16km, n20,σ0=95/19,mb3.6/13,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 1.1nm,0.3s,baz=102,slow=18,SNR=2.8	**8.34**	**43**	P	**P**	**19 17 13.3**	**+0.5**
AFI	4.6nm,0.3s,baz=255,slow=19,SNR=6.8			S	**S**	**19 18 50.8**	**0.0**
AFI	**Afiamalu**	**8.34**	**43**	*e*P	**P**	**19 17 12.4**	**-0.4**
AFI				S	**S**	**19 18 50.8**	**0.0**
URZ	**Urewera** 0.6nm,0.3s,baz=331,slow=4.1,SNR=6.2	**18.67**	**193**	P	**P**	**19 18 59.8**	**-1.5**
STKA	**Stephens Creek** 1.7nm,0.8s,mb3.5,baz=90,slow=13,SNR=2.7	**38.25**	**244**	P	**P**	**19 21 52.1**	**0.0**
ASAR	**Alice Springs** 1.5nm,0.5s,mb3.7,baz=93,slow=7.6,SNR=26	**44.91**	**256**	P	**P**	**19 22 46.5**	**+1.3**
ASAR	0.5nm,0.7s,baz=95,slow=14,SNR=6.2			S	**S**	**19 28 44.7**	**-3.6**
WRA	**Warramunga Arr** 1.2nm,0.4s,mb3.7,baz=97,slow=7.9,SNR=48	**44.96**	**262**	P	**P**	**19 22 46.8**	**+1.0**
FITZ	**Fitzroy Crossi** 0.8nm,0.5s,mb3.3	**53.39**	**262**	P	**P**	**19 23 46.7**	**-1.6**
SBA	**Scott Base** 3.6nm,0.9s,mb3.7	**58.30**	**184**	P	**P**	**19 24 22.8**	**+1.2**
QSPA	**South Pole Qui** 2.5nm,0.7s,mb3.9	**69.98**	**180**	*e*P	**P**	**19 25 36.0**	**-0.1**
MAJO	**Matsushiro** 5.3nm,0.9s,mb4.1	**70.06**	**323**	*e*P	**P**	**19 25 35.9**	**-1.3**
KSM	**Kuching** 5.1nm,0.8s,mb4.1	**73.66**	**278**	*e*P	**P**	**19 25 59.8**	**+1.0**
CMB	**Columbia Colle** 1.8nm,0.9s,mb3.6	**78.95**	**43**	*e*P	**P**	**19 26 27.6**	**+0.1**
NVAR	**Mina Array Bea** 0.2nm,0.3s,mb3.1,baz=218,slow=9.5,SNR=4.3	**80.51**	**43**	P	**P**	**19 26 36.5**	**+0.8**
TXAR	**Lajitas Array** 0.3nm,0.6s,mb3.2,baz=194,slow=5.6,SNR=5.6	**86.57**	**57**	P	**P**	**19 27 05.4**	**-0.8**
ILAR	**Eielson Array** 0.4nm,0.5s,mb3.4,baz=220,slow=6.1,SNR=5.2	**87.84**	**13**	P	**P**	**19 27 10.8**	**-0.5**
PDAR	**Pinedale Array** 0.3nm,0.6s,mb3.2,baz=282,slow=0.8,SNR=3.4	**88.45**	**43**	P	**P**	**19 27 15.2**	**+0.5**
AKASG	**Malin Array Be** 1.3nm,0.5s,baz=41,slow=4.5,SNR=7.6	**142.80**	**332**	PKhKP	PKPpre	19 33 48.4	
AKASG	**Malin Array Be**	**142.80**	**332**	PKP	PKPpre	19 33 48.4	
BRTR	**Keskin Array B** 0.5nm,0.6s,baz=102,slow=4.9,SNR=2.9	**146.79**	**313**	PKPbc	PKPbc	19 34 01.9	-0.3
CLL	**Collm** comp=Z,6.0nm,1.1s	**147.73**	**347**	⇓*i*PKPbc	PKPbc	19 34 03.9	-0.4

BJI ***20*** *19:27:20.6,7.38S×126.42E,h454km,mB4.5/24,mb4.6/40*
NEIC ***20*** *19:27:21.8±0.2,7.07S×126.25E,mb4.7/40, Error ellipse: s-maj=7.6km s-min=4.1km az=62.0*
MOS ***20*** *19:27:21.0±0.8,7.04S×126.23E,h429km,mb4.8/22, Error ellipse: s-maj=14.1km s-min=7.4km az=116.6*
ISCJB ***20*** *19:27:23.2±0.3,7.20S±0.03×126.20E±0.03,h460km±3km, mb4.6/86, Error ellipse: s-maj=4.8km s-min=4.2km az=154.4*
TEH ***20*** *19:27:23.0,7.08S×126.26E,h445km*
DJA ***20*** *19:27:23,7.29S×126.19E,h458km,Mw5.3/34*
IDC ***20*** *19:27:24.3±1.1,7.17S×126.22E,h451km±12km, mb4.2/21, mb1 4.3/26, mb1mx4.3/27, mbtmp4.2/26, Error ellipse: s-maj=13.7km s-min=7.1km az=66.0*
ISC 20 19:27:24.1±0.3,7.24S±0.03×126.19E±0.03,h455km±3km, h448km±3.6km:pP-P,n259,σ0=99/253,mb4.6/85,15C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**4.00**	**296**	P	**P**	**19 28 39.6**	**0.0**
NLAI	**Namlea**	**4.07**	**13**	P	**P**	**19 28 40.6**	**+0.3**
MMRI	**Maumere**	**4.16**	**250**	P	**P**	**19 28 40.7**	**-0.2**
BNDI	**Bandanaira**	**4.57**	**54**	P	**P**	**19 28 44.0**	**-0.7**
KDI	**Kendari**	**4.82**	**112**	P	**P**	**19 28 47.7**	**+0.6**
WSI	**Waingapu** 42nm2μm,0.6s	**6.31**	**247**	P	**P**	**19 29 01.4**	**-0.4**
BKSI	**Bulukumba** 0.7nm2μm205nm,1.0s	**6.33**	**287**	P	**P**	**19 29 01.8**	**-0.2**
TLE	**Tual** 24nm4μm,0.8s	**6.70**	**77**	P	**P**	**19 29 04.9**	**-0.9**
KAPI	**Kappang** 11nm,0.3s,baz=131,slow=5.0,SNR=88	**6.77**	**289**	P	**P**	**19 29 07.7**	**+1.1**
KAPI	0.8nm,0.3s,baz=152,slow=18,SNR=4.5			S	**S**	**19 30 31.5**	**+1.0**
KAPI	**Kappang** 297nm,1.0s	**6.77**	**289**	*e*P	**P**	**19 29 07.0**	**+0.4**
KAPI				*e*S	**S**	**19 30 31.7**	**+1.2**
KAPI	**Kappang** 0.5nm1μm126nm,1.0s	**6.77**	**289**	P	**P**	**19 29 07.0**	**+0.4**
LUWI	**Luwuk** 2.3nm7μm728nm,1.0s	**7.04**	**331**	P	**P**	**19 29 10.6**	**+1.2**
SPSI	**Sidrap Palu** 1μm166nm,0.9s	**7.17**	**297**	P	**P**	**19 29 11.8**	**+1.0**
MSSI	**Masamba** 0.9nm4μm136nm,1.0s	**7.47**	**308**	P	**P**	**19 29 15.8**	**+1.8**
BMNI	**Bima** 3.7nm6μm140nm,0.7s	**7.54**	**260**	P	**P**	**19 29 14.2**	**-0.5**
TTSI	**Tana Toraja** 2μm163nm,1.3s	**7.59**	**303**	P	**P**	**19 29 17.1**	**+1.8**
TNTI	**Ternate** 5μm417nm,0.9s	**8.04**	**8**	P	**P**	**19 29 18.6**	**-1.5**
MJSI	**Majene** 5μm657nm,1.0s	**8.06**	**297**	P	**P**	**19 29 22.7**	**+2.4**
KMSI	**Cibinong**	**8.07**	**344**	P	**P**	**19 29 20.9**	**+0.5**
MNI	**Manado** 5μm664nm,0.9s	**8.73**	**351**	P	**P**	**19 29 27.2**	**-0.3**
MRSI	**Marisa**	**8.76**	**331**	P	**P**	**19 29 28.6**	**+0.8**
KNA	**Kununurra** 22nm5μm,0.8s	**8.83**	**164**	P	**P**	**19 29 29.8**	**+1.3**
TOLI	**Toli-Toli** 3μm215nm,0.6s	**9.90**	**327**	P	**P**	**19 29 41.1**	**+0.9**
MTNI	**Mataram** 129nm,0.8s	**10.02**	**261**	P	**P**	**19 29 40.4**	**-1.1**
KHKI	**Kahang-Kahang** 86nm,1.1s	**10.55**	**263**	P	**P**	**19 29 46.9**	**-0.3**
KBKI	**Kotabaru** 1μm154nm,1.1s	**10.72**	**291**	P	**P**	**19 29 51.2**	**+2.1**
FITZ	**Fitzroy Crossi**	**10.81**	**183**	P	**P**	**19 29 51.4**	**+1.4**
FITZ	3.4nm,0.3s,baz=30,slow=20,SNR=7.7			S	**S**	**19 31 48.4**	**-1.9**
SRBI	**Singaraja** 107nm,1.1s	**10.91**	**265**	P	**P**	**19 29 51.7**	**+0.5**
IGBI	**Denpasar** 5μm324nm,0.8s	**11.05**	**261**	P	**P**	**19 29 51.9**	**-0.8**
BAKI	**Biak** 5μm558nm,0.9s	**11.56**	**59**	P	**P**	**19 29 58.9**	**+0.6**
JAGI	**Jajag, Banyuwa** 3μm154nm,0.9s	**11.99**	**263**	P	**P**	**19 30 01.3**	**-1.6**
KMMI	**Kalianget** 5μm211nm,0.9s	**12.13**	**270**	P	**P**	**19 30 07.5**	**+3.1**
GMJI	**Gumukmas** 98nm,1.3s	**12.68**	**264**	P	**P**	**19 30 11.4**	**+1.1**
KRKI	**Karangkates** 226nm,0.8s	**13.65**	**265**	P	**P**	**19 30 21.0**	**+0.2**
TSM	**Tawau**	**14.15**	**324**	P	**P**	**19 30 26.6**	**+0.5**
DAV	**Davao City (W)** 17nm,0.3s,baz=84,slow=7.4,SNR=6.4	**14.22**	**358**	P	**P**	**19 30 26.5**	**-0.4**
DAV	**Davao City (W)**	**14.22**	**358**	*e*P	**P**	**19 30 24.5**	**-2.5**
DAV				*e*S	**S**	**19 32 53.2**	**-4.8**
DAV	**Davao City (W)** 252nm,0.9s	**14.22**	**358**	P	**P**	**19 30 27.2**	**+0.3**
PWJI	**Pagerwojo** 105nm,0.9s	**14.28**	**266**	P	**P**	**19 30 26.8**	**-0.8**
SJI	**Sawahan** 2μm120nm,0.8s	**14.31**	**267**	P	**P**	**19 30 27.3**	**-0.6**
MYLDM	**Lahad Datu**	**14.53**	**328**	P	**P**	**19 30 31.3**	**+1.1**
NGJI	**Ngawi** 56nm,0.8s	**14.61**	**269**	P	**P**	**19 30 30.0**	**-1.1**
WRA	**Warramunga Arr** 30nm,0.3s,baz=328,slow=12,SNR=1494	**14.90**	**149**	P	**P**	**19 30 34.4**	**+0.3**
WRA	6.3nm,0.3s,baz=327,slow=21,SNR=12			S	**S**	**19 33 09.5**	**-1.5**
WRA	**Warramunga Arr**	**14.90**	**149**	P	**P**	**19 30 34.4**	**+0.3**
WRA				S	**S**	**19 33 09.5**	**-1.5**
WB2	**Warramunga Arr**	**14.91**	**149**	*e*P	**P**	**19 30 34.4**	**+0.3**
WB2				*e*S	**S**	**19 33 04.6**	**-6.5**
PCJI	**Pacitan** 111nm,1.0s	**14.91**	**265**	P	**P**	**19 30 31.9**	**-2.4**
JAY	**Jayapura** 6μm69nm,0.8s	**15.20**	**73**	P	**P**	**19 30 37.1**	**-0.2**
SDKM	**Sandakan**	**15.63**	**325**	P	**P**	**19 30 39.9**	**-1.9**
BJII	**Banjamegara** 76nm,1.4s	**16.35**	**269**	P	**P**	**19 30 48.7**	**-0.8**
STKI	**Sintang** 3μm50nm,0.9s	**16.37**	**296**	P	**P**	**19 30 49.6**	**-0.2**
KKM	**Kota Kinabalu**	**16.53**	**323**	P	**P**	**19 30 49.4**	**-2.0**
KKM	**Kota Kinabalu**	**16.53**	**323**	*e*P	**P**	**19 30 50.9**	**-0.4**
BTM	**Bintulu**	**16.69**	**308**	P	**P**	**19 30 52.4**	**-0.8**
KDM	**Kudat**	**16.88**	**326**	P	**P**	**19 30 55.1**	**0.0**
SBUM	**Sibu**	**16.94**	**304**	P	**P**	**19 30 54.8**	**-1.0**
JCJI	**Jatiwangi** 8μm707nm,1.2s	**17.81**	**271**	P	**P**	**19 31 06.1**	**+1.3**
ASAR	**Alice Springs** 24nm,0.3s,baz=340,slow=12,SNR=517	**17.94**	**156**	P	**P**	**19 31 06.7**	**+0.7**
ASAR	1.1nm,0.3s,baz=335,slow=19,SNR=6.5			S	**S**	**19 34 08.3**	**+0.4**
ASAR	**Alice Springs**	**17.94**	**156**	P	**P**	**19 31 06.7**	**+0.7**
ASAR				S	**S**	**19 34 08.3**	**+0.4**
COEN	**Coen** 512nm,0.6s	**17.97**	**113**	⇑*i*P	**P**	**19 31 05.8**	**-0.6**
COEN	**Coen** 303nm,0.8s	**17.97**	**113**	P	**P**	**19 31 05.8**	**-0.6**
KSM	**Kuching**	**18.06**	**298**	P	**P**	**19 31 06.3**	**-1.1**
KSM	**Kuching** 114nm,0.9s	**18.06**	**298**	*e*P	**P**	**19 31 05.8**	**-1.6**
CISI	**Cisompet, Garu** 9μm1μm,1.0s	**18.23**	**268**	P	**P**	**19 31 08.1**	**-1.0**
LEM	**Lembang** 6μm508nm,1.0s	**18.44**	**270**	P	**P**	**19 31 10.2**	**-0.8**
TPI	**Tanjungpandan** 2μm139nm,1.5s	**18.99**	**283**	P	**P**	**19 31 16.8**	**+0.7**
CBJI	**Citeko** 1μm,1.0s	**19.22**	**271**	P	**P**	**19 31 16.3**	**-1.9**
DBJI	**Dramaga** 4μm321nm,1.2s	**19.31**	**271**	P	**P**	**19 31 17.9**	**-1.2**
TNG	**Tangerang** 461nm,0.5s	**19.44**	**272**	P	**P**	**19 31 20.2**	**0.0**
SKJI	**Sukabumi** 5μm555nm,1.0s	**19.49**	**269**	P	**P**	**19 31 18.9**	**-1.7**
SBJI	**Serang** 109nm,1.2s	**19.96**	**272**	P	**P**	**19 31 24.2**	**-0.7**
PPBI	**Pangkal Pinang** 988nm118nm,1.1s	**20.61**	**283**	P	**P**	**19 31 32.2**	**+1.3**
PMG	**Port Moresby** 21nm,0.8s	**20.86**	**97**	*e*P	**P**	**19 31 32.2**	**-0.9**
PMG	**Port Moresby**	**20.86**	**97**	*e*P	**P**	**19 31 32.3**	**-0.8**
PMG	comp=Z,21nm,0.8s			pmax	pmax		
KASI	**Kota Agung** comp=Z,112nm,1.0s,mb5.3	**21.63**	**273**	P	**P**	**19 31 39.6**	**-0.5**
MDSI	**Maura Dua** comp=Z,44nm,1.2s,mb4.9	**22.07**	**276**	P	**P**	**19 31 43.4**	**-0.7**
LWLI	**Liwa** comp=Z,2μmcomp=Z,76nm,1.0s,mb5.2	**22.12**	**274**	P	**P**	**19 31 43.3**	**-1.3**
FORT	**Forrest** comp=Z,54nm,0.7s,mb5.1	**23.49**	**176**	*e*P	**P**	**19 31 57.6**	**+1.0**
KGM	**Kluang**	**24.61**	**291**	P	**P**	**19 32 06.5**	**-0.4**
SDSI	**Sungai Dareh** comp=Z,781nmcomp=Z,63nm,1.3s,mb4.9	**25.47**	**283**	P	**P**	**19 32 14.4**	**-0.2**
KTGM	**Kuala Trenggan**	**26.18**	**298**	P	**P**	**19 32 21.2**	**+0.3**
BKNI	**Bangkinang** comp=Z,58nm,1.3s,mb4.8	**26.19**	**286**	P	**P**	**19 32 20.1**	**-0.8**
PPI	**Padang Panjang** comp=Z,44nm,1.3s,mb4.7	**26.59**	**284**	P	**P**	**19 32 24.6**	**+0.1**
FRIM	**Kepong**	**26.63**	**292**	P	**P**	**19 32 24.9**	**0.0**
NWAO	**Narrogin (SRO)** comp=Z,49nm,1.2s,mb4.8	**26.88**	**197**	*e*P	**P**	**19 32 28.1**	**+1.3**
NWAO	**Narrogin (SRO)**	**26.88**	**197**	*e*P	**P**	**19 32 28.1**	**+1.3**
NWAO	comp=Z,49nm,1.2s			pmax	pmax		
IPM	**Ipoh**	**27.68**	**294**	P	**P**	**19 32 34.1**	**0.0**
IPM	**Ipoh** comp=Z,8.6nm,0.6s,mb4.4	**27.68**	**294**	*e*P	**P**	**19 32 33.6**	**-0.5**
MNSI	**Mandailing Nat** comp=Z,55nm,0.9s,mb5.0	**27.72**	**286**	P	**P**	**19 32 34.2**	**-0.3**
KULM	**Kulim**	**28.36**	**295**	P	**P**	**19 32 40.0**	**-0.1**
KULM	**Kulim** comp=Z,10nm,0.5s,mb4.5	**28.36**	**295**	*e*P	**P**	**19 32 39.2**	**-0.8**
STKA	**Stephens Creek** comp=Z,4.6nm,0.4s,mb4.2,baz=331,slow=9.7,SNR=35	**28.41**	**152**	P	**P**	**19 32 41.9**	**+1.6**
STKA	**Stephens Creek** comp=Z,1.8nm,0.8s,mb3.5	**28.41**	**152**	*e*P	**P**	**19 32 41.6**	**+1.3**
STKA				*e*pP		19 33 56.6	
STKA	**Stephens Creek**	**28.41**	**152**	*e*P	**P**	**19 32 41.6**	**+1.3**
STKA	comp=Z,2.0nm,0.8s			pmax	pmax		
PSI	**Prapat** comp=Z,92nm,0.9s,mb5.2,baz=107,slow=7.3,SNR=71	**28.98**	**289**	P	**P**	**19 32 45.0**	**-0.5**
PSI	**Prapat**	**28.98**	**289**	P	**P**	**19 32 45.0**	**-0.5**
TSI	**Tuntungan** comp=Z,76nm,1.1s,mb5.0	**29.56**	**290**	P	**P**	**19 32 51.0**	**+0.4**
TPUB	**Ta-pu** comp=Z,28nm,0.3s,mb5.2	**30.83**	**350**	*e*P	**P**	**19 32 59.2**	**-2.2**
NACB	**Ninganchiao**	**31.54**	**352**	*e*P	**P**	**19 33 05.2**	**-2.3**
YHNB	**Yeheng** comp=Z,13nm,0.7s,mb4.5	**32.06**	**352**	*e*P	**P**	**19 33 07.5**	**-4.4**
CMAR	**Chiang Mai Arr** comp=Z,9.2nm,0.8s,mb4.3,baz=145,slow=6.7,SNR=52	**37.08**	**314**	P	**P**	**19 33 55.1**	**+0.8**
CMAR	comp=Z,5.3nm,0.8s,baz=162,slow=2.3,SNR=17			PcP	PcP	19 36 04.8	+1.4
CMAR	comp=Z,3.2nm,1.0s,baz=168,slow=3.7,SNR=7.6			ScP	ScP	19 39 07.8	+1.0
CMAR	**Chiang Mai Arr**	**37.08**	**314**	P	**P**	**19 33 55.1**	**+0.8**
CMAR						19 36 04.8	
CMAR						19 39 07.8	
CHG	**Chiang Mai** comp=Z,26nm,1.0s,mb4.6	**37.31**	**314**	⇑P	**P**	**19 33 56.5**	**+0.2**
CHTO	**Chiang Mai** comp=Z,39nm,1.4s,mb4.7	**37.31**	**314**	*e*P	**P**	**19 33 56.6**	**+0.4**
CHTO				*e*PcP	PcP	19 36 04.6	+0.4
CHTO	**Chiang Mai**	**37.31**	**314**	*e*P	**P**	**19 33 56.6**	**+0.3**
CHTO				*e*		19 36 04.6	
CHTO	comp=Z,39nm,1.4s,mb4.6			pmax	pmax		
CHTO	**Chiang Mai** comp=Z,440nmcomp=Z,34nm,1.4s,mb4.6	**37.31**	**314**	P	**P**	**19 33 56.8**	**+0.5**
CHRT	**Chiangrai** comp=Z,197nm,0.6s,mb5.7	**37.43**	**316**	P	**P**	**19 33 57.0**	**-0.3**
GYA	**Guiyang**	**38.48**	**331**	P	**P**	**19 34 05.8**	**0.0**
GYA				pP	pP	19 35 29.0	-0.4
GYA				PcP	PcP	19 36 08.9	+1.2
GYA				ScP	ScP	19 39 12.3	+0.4
GYA				S	**S**	**19 39 29.4**	**+1.7**
GYA				ScS	ScS	19 43 23.3	-0.6
GYA	comp=Z,10.0nm,0.8s,mb4.3			pmax	pmax		
GYA	comp=Z,80nm,4.8s			pmax	pmax		
WHN	**Wuhan**	**39.24**	**344**	*e*P	**P**	**19 34 12.0**	**+0.1**
KMI	**Kunming**	**39.45**	**325**	⇑P	**P**	**19 34 15.1**	**+1.5**
KMI	comp=Z,22nm,1.3s,mb4.4			pmax	pmax		
JNU	**Nakatsue** comp=Z,26nm,1.6s,mb4.4	**40.38**	**6**	*e*P	**P**	**19 34 20.0**	**-1.1**
ENH	**Enshi** comp=Z,6.7nm,0.4s,mb4.4	**40.59**	**338**	*e*P	**P**	**19 34 22.4**	**-0.4**
CD2	**Chengdu**	**43.59**	**332**	*e*P	**P**	**19 34 46.4**	**-0.2**
CD2				pP	pP	19 36 11.9	-0.9
CD2				S	**S**	**19 40 44.0**	**+2.1**
CD2				sS	sS	19 43 16.3	-1.9
CD2				SS	SS	19 44 06.1	-3.6
CD2	comp=Z,30nm,0.6s,mb4.9			pmax	pmax		
CD2	comp=Z,100nm,5.2s			pmax	pmax		
KSRS	**Korea Array** comp=Z,18nm,0.9s,mb4.5,baz=177,slow=9.1,SNR=59	**44.48**	**2**	P	**P**	**19 34 53.7**	**+0.3**
KSRS				PcP	PcP	19 36 28.0	+0.6
MJAR	**Matsushiro Arr** comp=Z,30nm,0.8s,mb4.8,baz=194,slow=9.8,SNR=98	**44.98**	**14**	P	**P**	**19 34 56.2**	**-1.2**
MJAR	**Matsushiro Arr**	**44.98**	**14**	P	**P**	**19 34 56.2**	**-1.1**
MAJO	**Matsushiro** comp=Z,39nm,0.8s,mb4.9	**44.98**	**14**	*e*P	**P**	**19 34 56.0**	**-1.3**
MAJO	**Matsushiro**	**44.98**	**14**	*e*P	**P**	**19 34 56.0**	**-1.3**
MAJO	comp=Z,39nm,0.8s,mb4.9			pmax	pmax		
MAT	**Matsushiro**	**44.98**	**14**	P	**P**	**19 34 56.1**	**-1.2**
MAT				S	**S**	**19 40 56.0**	**-5.5**
PALK	**Pallekele** comp=Z,51nm,1.1s,mb4.8	**47.60**	**287**	*e*P	**P**	**19 35 18.1**	**+0.3**
PALK	**Pallekele**	**47.60**	**287**	*i*P	**P**	**19 35 18.7**	**+0.9**
PALK	**Pallekele** comp=Z,22nm,1.6s,mb4.2	**47.60**	**287**	P	**P**	**19 35 19.0**	**+1.2**
LZH	**Lanzhou**	**47.94**	**335**	*e*P	**P**	**19 35 20.8**	**+0.9**
LZH				pP	pP	19 36 52.0	+3.8
LZH				S	**S**	**19 41 39.3**	**-3.6**
LZH				sS	sS	19 44 19.3	-2.9
LZH				*e*SS	SS	19 45 18.0	-1.2
LZH	comp=Z,34nm,1.0s,mb4.6			pmax	pmax		
LZH	comp=Z,140nm,5.4s			pmax	pmax		
BJI	**Beijing**	**47.94**	**350**	P	**P**	**19 35 20.5**	**+0.7**
BJI				S	**S**	**19 41 40.4**	**-2.4**
BJI	comp=Z,9.0nm,0.5s,mb4.4			pmax	pmax		
BJI	comp=Z,88nm,4.0s			pmax	pmax		
VIS	**Vishakhapatnam**	**49.06**	**301**	*e*PKP	**P**	**19 35 27.3**	**-1.3**
HHC	**Hu-ho-hao-te**	**49.70**	**345**	*e*P	**P**	**19 35 35.3**	**+2.3**
HHC				PcP	PcP	19 36 48.8	+2.7
HHC				pP	pP	19 37 04.3	+2.2
HHC				PP	PP	19 37 36.8	+3.4
HHC				sP	sP	19 37 51.8	-0.8
HHC				ScP	ScP	19 40 00.8	+3.1
HHC				S	**S**	**19 42 09.4**	**+2.4**
HHC				ScS	ScS	19 44 37.0	+1.8
HHC				sS	sS	19 44 46.8	-0.8
HHC				SS	SS	19 45 49.8	+2.9
HHC	comp=Z,14nm,1.0s,mb4.2			pmax	pmax		
HHC	comp=Z,85nm,7.4s			pmax	pmax		
LSA	**Lhasa** comp=Z,44nm,0.8s,mb4.8	**49.83**	**319**	*e*P	**P**	**19 35 35.2**	**+1.1**
LSA	**Lhasa**	**49.83**	**319**	*e*P	**P**	**19 35 35.3**	**+1.2**
LSA	comp=Z,44nm,0.8s,mb4.8			pmax	pmax		
MDRS	**Chennai**	**49.90**	**294**	*e*PKP	**P**	**19 35 33.8**	**-1.1**
MDRS				AMb	AMB	19 35 54.5	
VLA	**Vladivostok**	**50.38**	**5**	*i*P	**P**	**19 35 37.9**	**0.0**
VLA	comp=Z,46nm,1.3s,mb4.7			pmax	pmax		
CN2	**Changchun**	**50.80**	**359**	*e*P	**P**	**19 35 40.3**	**-0.7**
CN2				*e*S	**S**	**19 42 22.8**	**+1.0**
CN2	comp=Z,10.0nm,1.0s,mb4.1			pmax	pmax		
CN2	comp=Z,200nm,4.0s			pmax	pmax		
TRD	**Trivandrum**	**51.51**	**287**	*e*PKP	**P**	**19 35 46.0**	**-0.7**
TRD				AMb	AMB	19 35 53.9	
MDJ	**Mudanjiang** comp=Z,79nm,1.1s,mb4.9	**51.70**	**3**	P	**P**	**19 35 48.3**	**+0.8**
MDJ	comp=Z,29nm,1.1s,mb4.5			pmax	pmax		
MDJ	**Mudanjiang** comp=Z,32nm,1.1s,mb4.6	**51.70**	**3**	*e*P	**P**	**19 35 47.3**	**-0.2**
GUN	**Gumba** comp=Z,136nm,0.7s,mb5.4	**52.32**	**314**	*e*P	**P**	**19 35 53.0**	**+0.6**
GTA	**Gaotai**	**52.45**	**334**	⇑*i*P	**P**	**19 35 53.8**	**+0.7**
GTA				pP	pP	19 37 23.1	-0.4
GTA				sP	sP	19 38 10.9	-2.6
GTA				S	**S**	**19 42 46.8**	**+2.6**
GTA				sS	sS	19 45 25.4	-1.2
GTA				SS	SS	19 46 34.0	+3.7
GTA	comp=Z,30nm,0.9s,mb4.6			pmax	pmax		
GTA	comp=Z,68nm,5.2s			pmax	pmax		
PKI	**Pulchoki** comp=Z,46nm,0.6s,mb5.0	**52.46**	**313**	*e*P	**P**	**19 35 53.5**	**+0.1**
PKI	**Pulchoki**	**52.46**	**313**	*e*P	**P**	**19 35 53.5**	**+0.1**
PKI	comp=Z,47nm,0.6s,mb5.0			pmax	pmax		
PKIN	**Phulchoki** comp=Z,42nm,0.7s,mb4.9	**52.48**	**313**	*e*P	**P**	**19 35 53.1**	**-0.4**
KKN	**Kakani** comp=Z,72nm,0.9s,mb5.0	**52.68**	**313**	*e*P	**P**	**19 35 55.2**	**+0.2**
KKN	**Kakani**	**52.68**	**313**	*e*P	**P**	**19 35 55.2**	**+0.2**
KKN	comp=Z,72nm,0.9s,mb5.0			pmax	pmax		
DMN	**Daman** comp=Z,108nm,1.0s,mb5.1	**52.70**	**313**	*e*P	**P**	**19 35 55.5**	**+0.4**
HYB	**Hyderabad**	**53.06**	**298**	*i*P	**P**	**19 35 57.0**	**-0.8**
ASAJ	**Asahikawa** comp=Z,16nm,0.8s,mb4.4,baz=225,slow=9.3	**53.22**	**15**	P	**P**	**19 35 59.0**	**+0.5**
GKN	**Gorkha** comp=Z,88nm,0.6s,mb5.2	**53.27**	**313**	*e*P	**P**	**19 35 59.5**	**+0.3**
RPZ	**Rata Peaks** comp=Z,13nm,0.4s,mb4.6,baz=233,slow=5.1,SNR=3.2	**53.41**	**140**	P	**P**	**19 36 01.2**	**+1.3**
DANN	**Dangsing** comp=Z,116nm,0.9s,mb5.2	**54.10**	**313**	*e*P	**P**	**19 36 05.3**	**+0.2**
URZ	**Urewera** comp=Z,4.9nm,0.8s,mb3.9,baz=270,slow=4.0,SNR=3.4	**55.28**	**132**	P	**P**	**19 36 13.7**	**+0.4**
HABR	**Khabarovsk**	**56.02**	**7**	*c*e*P	**P**	**19 36 17.2**	**-0.9**
HABR				*e*		19 37 08.6	
HABR						19 38 27.1	
HABR				*e**SP	sP	19 38 36.1	-3.6
HABR				*e*S	**S**

comp=Z,4.0nm,0.8s,mb4.1
KSH Kashi 65.68 319 *e*P **P** **19 37 23.3 +0.9**
KSH *e*PcP PcP 19 37 52.9 +3.4
KSH *e*pP pP 19 38 57.8 -0.4
KSH *e*sP sP 19 39 44.3 -2.4
KSH *e*PP PP 19 39 53.5 -0.9
KSH *e*ScP 19 41 12.0
KSH *e*PcS 19 41 56.1
KSH *e*S S 19 45 25.6 -6.2
KSH *e*ScS ScS 19 46 30.4 -2.8
KSH pmax pmax
comp=Z,34nm,0.7s,mb5.1
PETK Petropavlovsk- 65.79 20 P **P** **19 37 23.6 +0.9**
comp=Z,17nm,0.9s,mb4.7,baz=190,slow=5.1,SNR=11
PETK Petropavlovsk- 65.79 20 P **P** **19 37 23.6 +0.9**
MK31 Makanchi Array 66.41 329⇑ *i*P **P** **19 37 26.9 +0.1**
MK31 Makanchi Array 66.41 329⇑ *i*P **P** **19 37 26.9 +0.2**
MKAR Makanchi Array 66.41 329 P **P** **19 37 27.1 +0.4**
comp=Z,14nm,0.6s,mb4.8,baz=126,slow=7.6,SNR=134
MKAR Makanchi Array 66.41 329 P **P** **19 37 27.1 +0.4**
TKM2 Tokmak 2 67.81 322 *e*P **P** **19 37 35.6 +0.1**
comp=Z,10.0nm,0.8s,mb4.5
TKM2 Tokmak 2 67.81 322 *e*P **P** **19 37 35.7 +0.2**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
KBL Kabul 68.06 312 *e*P **P** **19 37 37.1 -0.1**
comp=Z,19nm,0.8s,mb4.8
KBL Kabul 68.06 312 *e*P **P** **19 37 37.1 -0.1**
KBL pmax pmax
comp=Z,19nm,0.8s,mb4.8
AAK Ala-Archa 68.32 321 P **P** **19 37 39.8 +1.2**
comp=Z,8.3nm,0.5s,mb4.6,baz=120,slow=5.4,SNR=26
AAK Ala-Archa 68.32 321 *e*P **P** **19 37 39.5 +0.8**
comp=Z,16nm,1.0s,mb4.6
AAK Ala-Archa 68.32 321 *c i*P **P** **19 37 39.6 +0.9**
AAK pmax pmax
comp=Z,11nm,1.1s,mb4.4
AAK Ala-Archa 68.32 321 P **P** **19 37 39.7 +1.0**
comp=Z,5.3nm,0.9s,mb4.2
AML Almayashu 68.55 321 *e*P **P** **19 37 41.2 +1.1**
comp=Z,7.6nm,0.6s,mb4.4
AML Almayashu 68.55 321 *e*P **P** **19 37 41.2 +1.1**
AML pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
EKS2 Erkin-Say 68.78 321 *e*P **P** **19 37 42.1 +0.6**
comp=Z,8.3nm,0.6s,mb4.4
EKS2 Erkin-Say 68.78 321 *e*P **P** **19 37 42.1 +0.6**
EKS2 pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
YAK Yakutsk 69.11 2 *e*P **P** **19 37 42.5 -0.5**
comp=Z,24nm,0.8s,mb4.8
YAK Yakutsk 69.11 2 *e*P **P** **19 37 42.3 -0.7**
YAK pmax pmax
comp=Z,13nm,0.8s,mb4.5
ZAA0 Zalesovo Array 70.17 335 *e*P **P** **19 37 48.9 -0.7**
ZALV Zalesovo Beam 70.17 335 P **P** **19 37 49.0 -0.5**
comp=Z,26nm,0.4s,mb5.1,baz=136,slow=5.1,SNR=164
ZALV Zalesovo Beam 70.17 335 P **P** **19 37 49.1 -0.5**
KURK Kurchatov 70.80 330 *e*P **P** **19 37 53.3 0.0**
comp=Z,55nm,0.8s,mb5.1
KURK Kurchatov 70.80 330 *c i*P **P** **19 37 53.5 +0.1**
KURK pmax pmax
comp=Z,59nm,1.0s,mb5.1
KKAR Karatay Array 71.06 320 *e*P **P** **19 37 55.4 +0.3**
comp=Z,6.3nm,0.9s,mb4.2
KKAR Karatay Array 71.06 320 *e*P **P** **19 37 55.4 +0.3**
KKAR pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
NVS Novosibirsk 71.46 335⇑ *i*P **P** **19 37 55.5 -1.7**
NVS *e*S S 19 46 33.0 -5.3
NVS pmax pmax
comp=N,17nm,1.2s
NVS pmax pmax
comp=Z,40nm,1.2s,mb4.8
NVS pmax pmax
comp=E,19nm,1.1s
NVS smax
comp=N,20nm,2.0s
NVS smax
comp=E,40nm,2.0s
SEY Seymchan 72.78 12 *d i*P **P** **19 38 05.2 +0.5**
MAW Mawson 73.36 201 P **P** **19 38 09.8 +1.7**
comp=E,3.2nm,0.4s,mb4.2,baz=74,slow=6.9,SNR=6.3
MAW Mawson 73.36 201 P **P** **19 38 09.8 +1.7**
SBA Scott Base 73.62 172 *e*P **P** **19 38 11.2 +1.7**
comp=E,4.9nm,0.8s,mb4.1
SBA Scott Base 73.62 172 *e*P **P** **19 38 11.2 +1.8**
SBA pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
IMYA Miami 75.47 310 *e*P **P** **19 38 21.4 +0.8**
IMOG Moghan 75.97 310 *e*P **P** **19 38 24.2 +0.8**
BVAR Borovoye Array 76.28 329 P **P** **19 38 24.9 +0.2**
comp=Z,13nm,0.6s,mb4.6,baz=124,slow=8.7,SNR=130
BVAR Borovoye Array 76.28 329 P **P** **19 38 24.9 +0.1**
IPAY Payeh 76.35 310 *e*P **P** **19 38 26.6 +1.1**
BRVK Borovoye 76.36 329 *e*P **P** **19 38 25.0 -0.2**
comp=Z,29nm,0.9s,mb4.8
BRVK Borovoye 76.36 329 *c i*P **P** **19 38 25.2 0.0**
BRVK pmax pmax
comp=Z,30nm,1.2s,mb4.7
IAKL Akhelmad 76.58 310 *e*P **P** **19 38 26.3 -0.5**
IKRD Kardeh 76.82 310 *e*P **P** **19 38 24.8 -3.3**
IEMG Emamgholi 76.93 311 *e*P **P** **19 38 29.7 +1.0**
ISFR Sfrayin 77.30 310 *e*P **P** **19 38 31.7 +0.9**
IMEH Mehriz 78.27 304 *e*P **P** **19 38 35.2 -0.9**
TIXI Tiksi 78.74 1 *e*P **P** **19 38 36.9 -0.9**
comp=Z,4.4nm,0.6s,mb4.2
TIXI Tiksi 78.74 1 *e*P **P** **19 38 36.5 -1.3**
TIXI pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
ABKAR Akbulak array 80.37 323⇑ *i*P **P** **19 38 46.4 -0.5**
comp=Z,6.2nm,0.5s,mb4.4
IKLH Kolahrood 81.26 305 *e*P **P** **19 38 52.7 +0.8**
IPIR Pirpir 81.66 304 *e*P **P** **19 38 55.1 +1.1**
AKTK Aktyubinsk 81.97 323 P **P** **19 38 55.2 +0.1**
AKTO Aktyubinsk 81.97 323 P **P** **19 38 55.2 +0.1**
comp=Z,12nm,0.6s,mb4.6,baz=106,slow=7.7,SNR=51
SYO Syowa Base 82.07 201⇓ *e*P **P** **19 38 55.0 -0.3**
QSPA South Pole Qui 82.74 180 *e*P **P** **19 38 59.6 +1.0**
comp=Z,33nm,1.2s,mb4.7
QSPA *e*pP pP 19 40 36.5 -3.3
RDF Al-Radifah 83.62 300 *e*P **P** **19 39 04.1 +0.1**
RDF AMb AMB 19 39 05.2
comp=Z,52nm,1.4s,mb4.8
ARU Arti 83.93 329 *e*P **P** **19 39 04.0 -0.8**
comp=Z,35nm,1.2s,mb4.8
ARU Arti 83.93 329 *c i*P **P** **19 39 04.6 -0.3**
ARU 19 42 23.0
ARU S S 19 48 42.7 -7.2
ARU SS SS 19 54 26.4 -4.4
ARU pmax pmax
comp=Z,34nm,1.7s,mb4.6
NAY Al-Naaiem 83.95 300 *e*P **P** **19 39 05.2 -0.4**
NAY AMb AMB 19 39 06.2
comp=Z,29nm,0.7s,mb4.9
MIB Mutribah 83.98 301 *e*P **P** **19 39 05.4 -0.4**
MIB AMb AMB 19 39 07.5
comp=Z,50nm,1.2s,mb4.9
IKOM Komasi 84.75 305 *e*P **P** **19 39 08.8 -0.7**
ILIN Lien 85.35 306 *e*P **P** **19 39 11.6 -0.8**
KMBO Kilima Mbogo 88.81 269 P **P** **19 39 30.5 +1.3**
comp=Z,2.8nm,0.8s,mb4.1,baz=180,slow=20,SNR=7.7
KMBO Kilima Mbogo 88.81 269 P **P** **19 39 30.5 +1.3**
ZEI Tsey 89.24 313 *e*P **P** **19 39 32.2 +1.6**
ZEI pmax pmax
comp=Z,12nm,1.4s,mb4.5
MALT Malatya 92.68 308 P **P** **19 39 48.0 +1.4**
ILAR Eielson Array 95.18 25 P **P** **19 39 56.1 -1.3**
comp=Z,0.3nm,0.6s,mb3.5,baz=257,slow=4.8,SNR=3.2
ILAR PP PP 19 43 56.0 +1.4
comp=Z,1.7nm,0.9s,baz=262,slow=5.6,SNR=8.6
ILAR Eielson Array 95.18 25 P **P** **19 39 56.1 -1.2**
ILAR 19 43 56.0
OBN Obninsk 95.66 325⇑ *e*P **P** **19 39 58.5 -1.2**
OBN *e*PS PS 19 52 46.9 -12
LSZ Lusaka 95.77 254 *e*P **P** **19 40 01.0 -0.2**
comp=Z,1.4nm,0.7s,mb4.2
LSZ Lusaka 95.77 254 *e*P **P** **19 40 01.0 -0.2**
LSZ pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
BOSA Boshof 96.08 240 P **P** **19 40 03.1 +0.8**
comp=Z,2.6nm,0.5s,mb4.6,baz=61,slow=5.0,SNR=9.5
BOSA Boshof 96.08 240 *e*P **P** **19 40 02.7 +0.4**
comp=Z,15nm,1.2s,mb5.0
BOSA Boshof 96.08 240 *e*P **P** **19 40 02.7 +0.4**
BOSA pmax pmax
comp=Z,15nm,1.2s,mb5.0
BRTR Keskin Array B 96.53 309 P **P** **19 40 03.2 -0.8**
comp=Z,2.0nm,0.8s,mb4.4,baz=142,slow=5.2,SNR=9.7
BRTR Keskin Array B 96.53 309 *c e*P **P** **19 40 03.2 -0.8**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 99.97 320 P Pdif 19 40 17.7 -1.4
comp=Z,0.4nm,0.3s,baz=72,slow=4.7,SNR=5.3
AKASG Malin Array Be 99.97 320 P Pdif 19 40 17.7 -1.5
AKASG Malin Array Be 99.97 320 P Pdif 19 40 17.7 -1.4
ARCES ARCESS Array B 100.48 339 P Pdif 19 40 19.8 -1.6
comp=Z,2.8nm,0.9s,baz=100,slow=3.8,SNR=3.8
ARCES PKiKP PKiKP 19 44 44.7 0.0
comp=Z,2.2nm,0.9s,baz=124,slow=0.4,SNR=6.5
ARCES PKKPbc PKKPbc 19 56 34.6 -3.0
comp=Z,0.6nm,0.4s,baz=247,slow=2.5,SNR=8.9
ARCES ARCESS Array B 100.48 339 P Pdif 19 40 19.8 -1.6
FINES FINESS Array B 101.16 331 PKiKP PKiKP 19 44 46.8 +0.7
comp=Z,0.5nm,0.4s,baz=118,slow=3.8,SNR=7.1
HFS Hagfors 107.36 331 Pdiff Pdif 19 40 50.0 -2.0
comp=Z,3.0nm,1.0s,baz=116,slow=3.4,SNR=4.0
HFS Hagfors 107.36 331 P Pdif 19 40 50.0 -2.0
NVAR Mina Array Bea 114.39 51 PKP PKiKP 19 45 12.2 +0.6
comp=Z,0.2nm,0.3s,baz=209,slow=1.7,SNR=3.7
NVAR PKKPbc PKKPbc 19 56 01.3 +7.9
comp=Z,0.6nm,0.9s,baz=132,slow=4.3,SNR=4.1
EKA Eskdalemuir Ar 117.53 330 PKP PKPdf 19 45 17.1 0.0
comp=Z,0.5nm,0.4s,baz=32,slow=2.8,SNR=5.3
EKA Eskdalemuir Ar 117.53 330 PKP PKPdf 19 45 17.1 0.0
PDAR Pinedale Array 119.72 45 PKP PKPdf 19 45 22.1 +0.4
comp=Z,0.4nm,0.5s,baz=102,slow=0.9,SNR=5.6
PDAR PKKPbc PKKPbc 19 55 37.0 +2.1
comp=Z,1.3nm,0.6s,baz=104,slow=6.7,SNR=3.6
ESDC Sonseca Array 124.98 314 PKP PKPdf 19 45 32.8 +0.8
comp=Z,0.1nm,0.5s,baz=349,slow=3.0,SNR=5.5
TORD Torodi Ar. Bea 125.15 281 PKP PKPdf 19 45 33.4 +0.4
comp=Z,3.3nm,0.4s,baz=70,slow=1.4,SNR=11
MDT Midelt 127.84 306 PKP PKPdf 19 45 38.4 +0.8
comp=Z,0.9nm,0.5s,baz=159,slow=1.8,SNR=4.7
TXAR Lajitas Array 128.28 58 PKP PKPdf 19 45 38.8 +0.2
comp=Z,0.5nm,0.6s,baz=211,slow=3.0,SNR=6.7
TXAR SKPbc 19 48 16.4
comp=Z,3.5nm,1.0s,baz=270,slow=3.8,SNR=16
PLCA Paso Flores 129.84 163 PKP PKPdf 19 45 42.0 +0.7
comp=Z,1.0nm,0.4s,baz=225,slow=7.1,SNR=4.7
JCT Junction City 131.16 56 *e*PKPdf PKPdf 19 45 44.5 +0.6
SCHQ Schefferville 131.40 10 SKPbc SKPbc 19 48 25.4 -0.5
comp=Z,5.4nm,0.6s,baz=324,slow=14,SNR=3.0
DBIC Dimbokro 131.42 273 PKP PKPdf 19 45 46.5 +1.6
comp=Z,1.1nm,0.3s,baz=92,slow=1.0,SNR=7.0
CPUP Villa Florida 146.46 174 PKPbc PKPbc 19 46 15.1 +1.0
comp=Z,20nm,0.8s,baz=157,slow=1.8,SNR=28
JTS JuntasAbangare 149.08 82 *e*PKPbc PKPbc 19 46 21.8 +0.7
LPAZ La Paz 152.66 149 PKPbc PKPbc 19 46 31.2 +1.9
comp=Z,1.6nm,0.4s,baz=234,slow=4.9,SNR=8.0
LPAZ PKPab PKPab 19 46 44.0 +2.1
comp=Z,3.7nm,0.6s,baz=200,slow=4.4,SNR=10
LPAZ La Paz 152.66 149 *e*PKPbc PKPbc 19 46 30.4 +1.2
LPAZ *e*PKPab PKPab 19 46 44.4 +2.5

ISCJB ***20*** *19:29:28.0±0.5, 38°.93N±0°.02×21°.97E±0°.04, h15km±9km, Error ellipse: s-maj=5.8km s-min=4.0km az=8.9*
CSEM ***20*** *19:29:27.5±0.2, 38°.93N×22°.00E, h25km±1km, MD3.0, Error ellipse: s-maj=5.9km s-min=4.2km az=89.0*
ATH ***20*** *19:29:27.3, 38°.93N×21°.96E, h19km±2km, MD3.0/6*
THE ***20*** *19:29:28.1, 38°.92N×22°.00E, h18km±1km, ML1.9/4, Error ellipse: s-maj=1.2km s-min=0.5km az=86.0*
ISC 20 19:29:27.7±0.5, 38°.93N±0°.02×21°.97E±0°.04, h17km±4km, n32, σ0°61/56, Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.13**	**263**	*e*PB		**Pg**	**19 29 31.3**	**-0.1**
EVR				*e*SB		**Sg**	**19 29 33.9**	**0.0**
EVR	**Evrytania**	**0.13**	**263**	*e*Pb		**Pg**	**19 29 31.3**	**-0.1**
AGG	**Agios Georgios**	**0.30**	**72**	*e*PB		**Pg**	**19 29 34.1**	**+0.1**
AGG				*e*SB		**Sg**	**19 29 38.4**	**+0.1**
AGG	**Agios Georgios**	**0.30**	**72**	P		**Pg**	**19 29 34.1**	**+0.1**
AGG				S		**Sg**	**19 29 39.2**	**+0.9**
AGG	**Agios Georgios**	**0.30**	**72**	P		**Pg**	**19 29 34.1**	**+0.1**
AGG				*e*Sb		**Sg**	**19 29 38.4**	**+0.1**
AGG				S		**Sg**	**19 29 39.2**	**+0.9**
EFP	**Efpalio**	**0.51**	**186**	*e*PN		**Pg**	**19 29 37.8**	**0.0**
EFP				*e*SN		**Sg**	**19 29 45.4**	**+0.8**
EFP	**Efpalio**	**0.51**	**186**	P		**Pg**	**19 29 37.6**	**-0.2**
EFP				S		**Sg**	**19 29 45.6**	**+1.0**
EFP	**Efpalio**	**0.51**	**186**	P		**Pg**	**19 29 37.6**	**-0.2**
EFP				S		**Sg**	**19 29 45.6**	**+1.0**
KALE	**Kalithea**	**0.56**	**166**	P		**Pg**	**19 29 38.5**	**-0.2**
KALE				S		**Sg**	**19 29 47.1**	**+0.9**
KALE	**Kalithea**	**0.56**	**166**	P		**Pg**	**19 29 38.5**	**-0.2**
KALE				S		**Sg**	**19 29 47.1**	**+0.9**
TRIZ	**Trizonia**	**0.57**	**172**	P		**Pg**	**19 29 38.7**	**-0.3**
TRIZ				S		**Sg**	**19 29 47.7**	**+1.0**
TRIZ	**Trizonia**	**0.57**	**172**	P		**Pg**	**19 29 38.7**	**-0.3**
TRIZ				S		**Sg**	**19 29 47.7**	**+1.0**
THL	**Klokotos Trika**	**0.63**	**3**	*e*PN		**Pg**	**19 29 39.8**	**-0.3**
THL				*e*SN		**Sg**	**19 29 49.1**	**+0.5**
THL	**Klokotos Trika**	**0.63**	**3**	P		**Pg**	**19 29 39.9**	**-0.2**
THL				S		**Sg**	**19 29 50.1**	**+1.5**
THL	**Klokotos Trika**	**0.63**	**3**	*e*Pn		**Pg**	**19 29 39.8**	**-0.3**
THL				*e*Sn		**Sg**	**19 29 49.1**	**+0.5**
THL				S		**Sg**	**19 29 50.1**	**+1.5**
DSF	**Desfina**	**0.68**	**140**	P		**Pg**	**19 29 40.1**	**-0.9**
DSF				S		**Sg**	**19 29 50.1**	**0.0**
DSF	**Desfina**	**0.68**	**140**	P		**Pg**	**19 29 40.1**	**-0.9**
DSF				S		**Sg**	**19 29 50.1**	**0.0**
LAKA	**Lakka**	**0.69**	**179**	P		**Pg**	**19 29 41.1**	**-0.1**
LAKA				S		**Sg**	**19 29 50.8**	**+0.4**
LAKA	**Lakka**	**0.69**	**179**	P		**Pg**	**19 29 41.1**	**-0.1**
LAKA				S		**Sg**	**19 29 50.8**	**+0.4**
ATAL	**Atalanti**	**0.86**	**106**	P		**Pg**	**19 29 44.0**	**-0.4**
ATAL				S		**Sg**	**19 29 54.8**	**-0.8**
ATAL	**Atalanti**	**0.86**	**106**	P		**Pg**	**19 29 44.0**	**-0.4**
ATAL				S		**Sg**	**19 29 54.8**	**-0.8**
RLS	**Riolos of Patr**	**0.96**	**204**	*e*PN		**Pg**	**19 29 46.0**	**-0.3**
RLS	**Riolos of Patr**	**0.96**	**204**	*e*Pn		**Pg**	**19 29 46.0**	**-0.3**
LKD2	**Lefkada island**	**1.03**	**262**	P		**Pg**	**19 29 46.9**	**-0.8**
LKD2	**Lefkada island**	**1.03**	**262**	P		**Pg**	**19 29 46.9**	**-0.8**
GUR	**Goura**	**1.04**	**163**	*e*PN		**Pg**	**19 29 46.7**	**-1.1**
GUR	**Goura**	**1.04**	**163**	*e*Pn		**Pg**	**19 29 46.7**	**-1.1**
LIT	**Litokhoron**	**1.23**	**19**	P		**Pn**	**19 29 49.7**	**-0.5**
LIT				S		**Sb**	**19 30 06.9**	**+0.7**
LIT	**Litokhoron**	**1.23**	**19**	P		**Pn**	**19 29 49.7**	**-0.5**
LIT				S		**Sb**	**19 30 06.9**	**+0.7**
VLS	**Valsamata**	**1.32**	**236**	*e*PN		**Pn**	**19 29 51.5**	**+0.2**
VLS	**Valsamata**	**1.32**	**236**	*e*Pn		**Pn**	**19 29 51.5**	**+0.2**
DID	**Didima**	**1.74**	**145**	*e*PB		**Pn**	**19 29 57.7**	**+0.6**

IDC 20 19:29:57.3±9.3, 12°.88S×128°.70E, h0km, mb4.4/1, mb1 4.7/3, mb1mx3.9/15, mbtmp4.5/3, ML4.2/1, Error ellipse: s-maj=118.7km s-min=96.9km az=36.0, South of Timor

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**8.87**	**143**	Pn		Pn	19 32 04.7	-2.0
	baz=330,slow=13,SNR=3.0							
WRA				Sn		Sn	19 33 49.4	+2.0
	baz=321,slow=24,SNR=2.7							
ASAR	**Alice Springs**	**11.81**	**156**	Pn		Pn	19 32 48.7	+1.6
	1.3nm,0.3s,baz=327,slow=10,SNR=2.7							
STKA	**Stephens Creek**	**22.32**	**150**	P		P	19 34 56.9	+0.4
	11nm,0.6s,baz=314,slow=11,SNR=3.0							

MAN 20 19:30:00, 5°.99N×125°.85E, h149km, mb5.1, ML4.1, MS4.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.04**	**23**	*e*P		Pn	19 30 25.4	+0.4
MATI				*e*S		Sn	19 30 44.7	+0.6
DMPH	**Davao City--Mi**	**1.14**	**343**	*e*P		Pn	19 30 26.7	+0.8
BUKP	**Musuan**	**2.03**	**338**	*e*P		Pn	19 30 35.6	+0.1
BUKP				*e*S		Sn	19 31 12.7	+10
BUTP	**Butuan**	**2.97**	**356**	*e*P		Pn	19 30 48.1	+1.1

ISCJB ***20*** *19:41:38.3±0.9, 5°.5N±0°.1×126°.1E±0°.2, h142km±15km, mb3.3/4, Error ellipse: s-maj=31.6km s-min=19.0km az=145.1*
IDC ***20*** *19:41:39.1±2.2, 5°.62N×126°.46E, h140km±18km, mb3.1/4, mb1 3.3/4, mb1mx3.0/21, mbtmp3.1/4, Error ellipse: s-maj=107.8km s-min=20.4km az=68.0*
MAN ***20*** *19:41:44, 5°.70N×125°.77E, h52km, mb4.4, ML3.3, MS3.1*
ISC 20 19:41:39.2±1.0, 5°.4N±0°.1×126°.1E±0°.2, h129km±17km, n12, σ0°76/17, mb3.3/4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.54**	**8**	*e*P		**Pn**	**19 42 06.3**	**-1.4**
MATI				*e*S		**Sn**	**19 42 24.1**	**-5.5**
DAV	**Davao City (W)**	**1.72**	**344**	P		**Pn**	**19 42 09.4**	**-0.4**
	61nm,0.3s,baz=110,slow=10.0,SNR=4.0							
DAV				S		**Sn**	**19 42 33.9**	**+0.7**
	53nm,0.3s,baz=308,slow=23,SNR=9.3							
DMPH	**Davao City--Mi**	**1.75**	**342**	*e*P		**Pn**	**19 42 09.4**	**-0.7**
DMPH				*i* S		**Sn**	**19 42 34.4**	**+0.6**
KCP	**Kidapawan**	**1.85**	**329**⇑	*e*P		**Pn**	**19 42 16.5**	**+5.1**
KCP				*i* S		**Sn**	**19 42 44.3**	**+8.3**
BUKP	**Musuan**	**2.65**	**338**	*e*P		**Pn**	**19 42 21.5**	**+0.3**
BUKP				*e*S		**Sn**	**19 42 47.1**	**-6.5**
BUTP	**Butuan**	**3.57**	**353**	*e*P		**Pn**	**19 42 34.5**	**+1.3**
PAGZ	**Pagadian**	**3.59**	**313**	*e*P		**Pn**	**19 42 33.2**	**-0.3**
IPIL	**Ipil**	**4.18**	**305**	*e*P		**Pn**	**19 42 41.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**23.36**	**181**	P		**P**	**19 46 37.4**	**+1.2**
	2.2nm,0.4s,mb4.0,baz=4.5,slow=10.0,SNR=24							
WRA	**Warramunga Arr**	**26.48**	**162**	P		**P**	**19 47 04.4**	**0.0**
	0.2nm,0.3s,mb3.2,baz=342,slow=9.7,SNR=8.5							
ASAR	**Alice Springs**	**29.89**	**165**	P		**P**	**19 47 34.5**	**-0.2**
	0.2nm,0.6s,mb3.1,baz=344,slow=6.4,SNR=4.3							
MKAR	**Makanchi Array**	**55.80**	**325**	P		**P**	**19 51 02.1**	**-0.7**
	0.1nm,0.4s,mb3.0,baz=116,slow=8.2,SNR=4.0							

IDC ***20*** *19:50:02.6±8.2, 12°.14S×167°.56E, h280km±78km, mb3.8/11, mb1 4.1/11, mb1mx3.8/18, mbtmp3.8/11, Error ellipse: s-maj=37.1km s-min=25.1km az=137.0*
NEIC ***20*** *19:50:03.4±3.9, 12°.19S×167°.64E, h292km±37km, mb4.6/12, Error ellipse: s-maj=19.7km s-min=14.8km az=121.0*
ISC 20 19:50:03.6±5.6, 12°.2S±0°.1×167°.6E±0°.2, h291km±55km, n49, σ0°83/26, mb4.3/20, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**20.26**	**276**	*e*P		**P**	**19 54 18.0**	**+0.1**
	39nm,0.9s							
EIDS	**Eidsvold**	**20.40**	**228**	*e*P		**P**	**19 54 19.8**	**+0.5**
	8.2nm,0.4s							
EIDS				*e*			19 54 33.6	
STKA	**Stephens Creek**	**30.94**	**226**	P		**P**	**19 55 55.1**	**+1.0**
	8.1nm,0.4s,mb4.6,baz=46,slow=8.3,SNR=25							
STKA	**Stephens Creek**	**30.94**	**226**	*e*P		**P**	**19 55 54.7**	**+0.6**
	2.0nm,0.5s,mb3.9							
WRA	**Warramunga Arr**	**32.84**	**252**	P		**P**	**19 56 09.4**	**-1.3**
	1.7nm,0.5s,mb3.9,baz=83,slow=8.8,SNR=38							
ASAR	**Alice Springs**	**33.95**	**246**	P		**P**	**19 56 19.2**	**-1.1**
	2.3nm,0.6s,mb3.9,baz=71,slow=9.3,SNR=56							
FITZ	**Fitzroy Crossi**	**40.87**	**256**	P		**P**	**19 57 17.7**	**-0.3**
	3.4nm,0.4s,mb4.0,baz=66,slow=7.1,SNR=44							
KKM	**Kota Kinabalu**	**54.19**	**287**	*e*P		**P**	**19 58 59.9**	**-0.2**
	31nm,1.2s,mb4.5							
YSS	**Yuzh-Sakhalins**	**62.90**	**341**	*e*P		**P**	**20 00 00.3**	**+1.2**
	30nm,1.1s,mb4.8							
PETK	**Petropavlovsk-**	**65.55**	**353**	P		**P**	**20 00 16.5**	**+0.4**
	1.6nm,0.6s,mb3.9,baz=148,slow=8.5,SNR=3.4							
CMAR	**Chiang Mai Arr**	**74.21**	**293**	P		**P**	**20 01 10.6**	**+1.3**
	1.0nm,0.8s,mb3.5,baz=129,slow=2.8,SNR=5.1							
QSPA	**South Pole Qui**	**77.86**	**180**	*e*P		**P**	**20 01 29.3**	**+0.5**
	9.1nm,1.1s,mb4.4							
TRF	**Thorofare Moun**	**82.00**	**18**	*e*P		**P**	**20 01 50.4**	**-0.5**
	10nm,0.8s,mb4.6							
MCK	**McKinley**	**82.62**	**18**	*e*P		**P**	**20 01 53.5**	**-0.6**
	18nm,1.1s,mb4.8							
COLA	**College**	**83.78**	**18**	*e*P		**P**	**20 01 59.5**	**-0.5**
	20nm,0.9s,mb5.0							
ILAR	**Eielson Array**	**83.99**	**18**	P		**P**	**20 02 00.7**	**-0.4**
	14nm,0.7s,mb4.9,baz=247,slow=5.2,SNR=121							
COLD	**Coldfoot**	**84.87**	**15**	*e*P		**P**	**20 02 06.6**	**+1.2**
	6.7nm,0.8s,mb4.5							
NVAR	**Mina Array Bea**	**85.36**	**49**	P		**P**	**20 02 09.3**	**+0.8**
	1.2nm,0.7s,mb3.8,baz=232,slow=8.4,SNR=7.4							
NVAR	**Mina Array Bea**	**85.36**	**49**	P		**P**	**20 02 09.3**	**+0.8**
EGAK	**Eagle**	**85.80**	**20**	*e*P		**P**	**20 02 09.6**	**-0.4**
	8.0nm,0.8s,mb4.6							
MSU	**Marysvale**	**89.97**	**51**	P		**P**	**20 02 27.4**	**-2.9**
	5.7nm,0.8s,mb4.5							
TXAR	**Lajitas Array**	**94.77**	**61**	P		**P**	**20 02 53.4**	**+0.7**
	0.4nm,0.7s,mb3.6,baz=232,slow=4.1,SNR=3.5							
TXAR	**Lajitas Array**	**94.77**	**61**	P		**P**	**20 02 53.4**	**+0.7**
YKA	**Yellowknife Ar**	**95.12**	**27**	P		**P**	**20 02 52.7**	**-0.8**
	0.7nm,0.4s,mb4.1,baz=259,slow=5.1,SNR=3.3							
MK31	**Makanchi Array**	**95.56**	**317**	*e*P		**P**	**20 02 55.9**	**0.0**
MKAR	**Makanchi Array**	**95.56**	**317**	P		**P**	**20 02 56.1**	**+0.2**
	0.7nm,0.4s,mb4.1,baz=90,slow=6.5,SNR=9.3							
KEV	**Kevo**	**117.33**	**346**	*e*pkp		PKPdf	20 08 11.8	-2.1
ARCES	**ARCESS Array B**	**117.85**	**346**	PKP		PKPdf	20 08 14.4	-0.5
	1.7nm,0.8s,baz=49,slow=1.9,SNR=12							
JOF	**Joensuu**	**120.63**	**338**	*e*pkp		PKPdf	20 08 19.2	-1.2
KAF	**Kangasniemi**	**122.91**	**339**	*e*pkp		PKPdf	20 08 23.0	-1.9
FINES	**FINESS Array B**	**123.45**	**339**	PKP		PKPdf	20 08 25.6	-0.4
	0.7nm,0.6s,baz=28,slow=1.0,SNR=8.4							
LPG	**La Plagne**	**142.97**	**337**	*e*PKP1		PKPdf	20 09 03.2	+0.3
MBDF	**Montbardon**	**143.62**	**337**	*e*PKP1		PKPdf	20 09 04.4	+0.4
TCF	**Toulx Ste Croi**	**143.79**	**343**	*e*PKP1		PKPdf	20 09 02.8	-1.5
	4.3nm,0.7s							
ORIF	**Oris-en-Rattie**	**143.79**	**338**	*e*PKP1		PKPdf	20 09 03.2	-1.1
	8.5nm,0.6s							
SBF	**Sospel**	**144.07**	**335**	*e*PKP1		PKPdf	20 09 03.4	-1.4
	21nm,0.8s							
MFF	**Saint Martin d**	**144.13**	**346**	*e*PKP1		PKPdf	20 09 03.8	-1.1
	12nm,0.5s							
VIVF	**Saint-Julien-l**	**144.28**	**339**	*e*PKP1		PKPdf	20 09 04.0	-1.2
	4.7nm,0.8s							
PGF	**Pioggiola**

KNZ	Kokohu	1.43	161	PN	Pn	20 01 54.9	-0.1
NMHZ	Naumai	1.44	188	PN	Pn	20 01 55.6	+0.5
BKZ	Black Stump Fm	1.56	197	PN	Pn	20 01 55.8	-0.6
MHGZ	Mahia Peninsul	1.62	156	PN	Pn	20 01 56.9	-0.1
MCHZ	McNeill Hill	1.80	189	PN	Pn	20 01 58.8	0.0
BHHZ	Black Hill Sta	1.98	203	PN	Pn	20 02 00.1	-0.8
CKHZ	Cape Kidnapper	1.99	180	PN	Pn	20 02 00.6	-0.4
WNVZ	Wahianoa	2.02	214	PN	Pn	20 02 00.9	-0.5
MOVZ	Moawhango	2.02	210	PN	Pn	20 02 00.4	-1.0
KAHZ	Kahuranaki	2.13	184	PN	Pn	20 02 02.2	-0.4
PNHZ	Pukenui	2.34	197	PN	Pn	20 02 03.9	-1.2
PXZ	Pawanui	2.37	184	PN	Pn	20 02 04.2	-1.2
WPHZ	Waipukurau	2.44	191	PN	Pn	20 02 05.2	-1.2
TSZ	Takapari Road	2.54	200	PN	Pn	20 02 06.1	-1.5
PRHZ	Porangahau	2.62	187	PN	Pn	20 02 07.2	-1.3
MRZ	Mangatainoka R	3.21	201	PN	Pn	20 02 13.7	-2.1
HOWZ	Holdsworth Sta	3.44	200	PN	Pn	20 02 16.4	-2.4
OGWZ	Otaki Gorge	3.47	205	PN	Pn	20 02 16.7	-2.5
MTW	Mount Morrison	3.69	199	PN	Pn	20 02 18.9	-3.1
CAW	Cannon Point	3.77	204	PN	Pn	20 02 19.9	-3.1

CASC 20 20:55:02.5±1.4, 11°.61N×88°.46W, h35km±22km, MD3.7, ML3.4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.75	52	eP	Pn	20 55 30.1	-0.2
CRIN				eS	Sn	20 55 53.7	+2.3
CRIN				AML	AML	20 56 02.8	
	comp=E,393nm,0.2s						
CNCH	Conchagua	1.76	20	eP	Pn	20 55 30.4	-0.2
VSM	San Miguel	1.81	6	eP	Pn	20 55 31.7	+0.5
BLLM	Bellamira	1.83	7	eP	Pn	20 55 31.4	-0.1
BLLM				eS	Sn	20 55 54.2	+0.8
COPN	Copaltepe	1.91	73	eP	Pn	20 55 32.5	-0.1
SNVI	San Vicente	2.02	349	eP	Pn	20 55 34.5	+0.4
SNVI				eS	Sn	20 55 58.8	+0.6
MOMN	Momotombo	2.04	67	eP	Pn	20 55 34.0	-0.3
LFRS	El Faro	2.08	344	eP	Pn	20 55 35.2	+0.3
CAHU	Cacacuatique	2.16	6	eP	Pn	20 55 36.6	+0.6
CAHU				eS	Sn	20 56 03.2	+1.7
TICN	Ticuantepe	2.22	79	eP	Pn	20 55 37.5	+0.7
BOQS	Boqueron	2.26	339	eP	Pn	20 55 38.2	+0.8
BOQS				eS	Sn	20 56 05.5	+1.6
SBLS	San Blas	2.49	333	eP	Pn	20 55 41.6	+1.0
SBLS				eS	Sn	20 56 10.7	+1.0
SNJE	San Jose	2.50	334	eP	Pn	20 55 42.0	+1.2
TGUH	Tegucigalpa,Un	2.69	25	eP	Pn	20 55 44.2	+0.9
TGUH				eS	Sn	20 56 16.0	+1.4
RBDL	Robledal	2.76	334	eP	Pn	20 55 45.5	+1.3

IDC 20 20:56:40.5±8.2, 18°.65S×179°.53W, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.6/16, mbtmp3.5/3, Error ellipse: s-maj=362.7km s-min=38.3km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.46	260	P	P	21 04 46.2	+0.5
	0.3nm,0.7s,baz=95,slow=7.5,SNR=5.6						
ASAR	Alice Springs	43.57	255	P	P	21 04 46.0	-0.6
	0.2nm,0.4s,baz=89,slow=8.4,SNR=7.7						
ILAR	Eielson Array	86.85	13	P	P	21 09 26.5	+0.1
	0.3nm,0.6s,baz=218,slow=6.6,SNR=5.5						

MAN 20 20:57:00, 7°.75N×124°.05E, h93km, mb4.2, ML3.0, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	Pagadian	0.67	278	eP	Pn	20 57 18.5	+2.0
PAGZ				eS	Sn	20 57 29.9	+1.1
BUKP	Musuan	1.01	83	eP	Pn	20 57 21.2	+1.2
BUKP				eS	Sn	20 57 35.8	+0.8
IPIL	Ipil	1.47	272	eP	Pn	20 57 26.6	+1.0
IPIL				eS	Sn	20 57 37.2	-7.6

*MOS **20** 21:06:42.4±1.6, 51°.60N×104°.15E, h10km, mb4.3/1, Error ellipse: s-maj=17.2km s-min=11.4km az=66.1*

BYKL 20 21:06:43.1, 51°.60N×104°.03E, h16km, 1C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLY	Talaya	0.25	290	ePG	Pg	21 06 48.5	-0.2
TLY				e		21 06 52.4	
TLY				pmax	pmax		
	comp=Z,576nm,0.1s						
TLY				smax			
	comp=N,5μm,0.2s						
TLY	Talaya	0.25	290	⇓iPg	Pg	21 06 48.4	-0.2
TLY				eSg	Sg	21 06 52.2	-0.2
TLY				Pmax			
	comp=N,180nm,0.1s						
TLY				Smax			
	comp=N,4μm,0.2s						
LSTR	Listvyanka	0.57	61	⇓iPG	Pg	21 06 53.7	-0.7
LSTR				e		21 07 01.3	
LSTR				pmax	pmax		
	comp=Z,203nm,0.2s						
LSTR				smax			
	comp=N,375nm,0.1s						
LSTR	Listvyanka	0.57	61	⇓iPg	Pg	21 06 53.7	-0.6
LSTR				eSg	Sg	21 07 01.3	-0.7
LSTR				Pmax			
	comp=N,195nm,0.2s						
LSTR				Smax			
	comp=N,355nm,0.1s						
IRK	Irkutsk	0.67	13	ePG	Pg	21 06 55.6	-0.6
IRK				e		21 07 04.3	
IRK				pmax	pmax		
	comp=Z,555nm,0.2s						
IRK				smax			
	comp=E,3μm,0.5s						
IRK	Irkutsk	0.67	13	ePg	Pg	21 06 55.6	-0.5
IRK				eSg	Sg	21 07 04.3	-0.7
IRK				Pmax			
	comp=E,520nm,0.2s						
IRK				Smax			
	comp=E,3μm,0.3s						
ARS	Arshan	1.05	289	ePG	Pg	21 07 02.5	-0.9
ARS				e		21 07 16.3	
ARS				pmax	pmax		
	comp=Z,90nm,0.1s						
ARS				smax			
	comp=E,1μm,0.4s						
ARS	Arshan	1.05	289	ePg	Pg	21 07 02.6	-0.8
ARS				eSg	Sg	21 07 16.2	-0.9
ARS				Pmax			
	comp=E,91nm,0.2s						
ARS				Smax			
	comp=E,795nm,0.2s						
ZAK	Zakamensk	1.30	202	ePG	Pg	21 07 06.7	-1.5
ZAK				e		21 07 24.1	
ZAK				pmax	pmax		
	comp=Z,64nm,0.1s						
ZAK				smax			
	comp=E,596nm,0.2s						
ZAK	Zakamensk	1.30	202	⇑iPg	Pg	21 07 07.1	-1.1
ZAK				eSg	Sg	21 07 24.4	-0.7
ZAK				Pmax			
	comp=E,62nm,0.1s						
ZAK				Smax			
	comp=E,717nm,0.3s						
TRG	Tyrgan	1.84	50	ePN	Pn	21 07 14.9	+0.8
TRG				e		21 07 16.0	
TRG				e		21 07 39.8	
TRG				pmax	pmax		
	comp=Z,79nm,0.2s						
TRG				smax			
	comp=E,652nm,0.2s						
TRG	Tyrgan	1.84	50	ePg	Pg	21 07 16.0	-2.6
TRG				eSg	Sg	21 07 39.8	-2.6
TRG				Pmax			
	comp=E,61nm,0.2s						
TRG				Smax			
	comp=E,595nm,0.2s						
MOY	Mondy	1.89	273	ePN	Pn	21 07 17.9	+3.2
MOY				e		21 07 42.5	
MOY				pmax	pmax		
	comp=Z,106nm,0.2s						
MOY				smax			
	comp=E,416nm,0.4s						
ORL	Orlik	2.77	292	ePN	Pn	21 07 32.3	+5.5
ORL				e		21 08 07.8	
ORL				pmax	pmax		
	comp=Z,41nm,0.5s						
ORL				smax			
	comp=N,299nm,0.7s						
OGRR	Ongureny	2.99	45	ePN	Pn	21 07 30.9	+1.1
OGRR				e		21 07 36.4	
OGRR				e		21 08 13.7	
OGRR				pmax	pmax		
	comp=Z,17nm,0.2s						
OGRR				smax			
	comp=E,345nm,0.6s						
NIZ	Nizh Angarsk	5.32	36	ePN	Pn	21 08 01.4	-0.3
NIZ				e		21 08 17.0	
NIZ				eS	Sn	21 09 01.7	-0.9
NIZ				e		21 09 25.0	
NIZ				pmax	pmax		
	comp=Z,16nm,0.9s						
NIZ				smax			
	comp=N,74nm,0.9s						

IDC 20 21:10:46.4±5.0, 16°.79S×175°.87E, h0km, mb4.1/3, mb1 4.4/3, mb1mx3.8/17, mbtmp4.1/3, Error ellipse: s-maj=330.6km s-min=49.8km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.47	259	P	P	21 18 17.9	-0.9
	0.9nm,0.5s,baz=90,slow=6.6,SNR=17						
ASAR	Alice Springs	39.86	253	P	P	21 18 22.8	+0.8
	2.9nm,0.5s,baz=86,slow=8.2,SNR=77						
FITZ	Fitzroy Crossi	47.82	261	P	P	21 19 26.0	-0.1
	4.3nm,0.7s,baz=92,slow=7.3,SNR=16						
FINES	FINESS Array B	130.51	341	PKP	PKPdf	21 29 58.5	-0.2
	0.7nm,0.4s,baz=54,slow=2.4,SNR=11						

*IDC **20** 21:12:06.2±1.0, 7°.62N×82°.17W, h0km, mb4.3/8, mb1 4.6/11, mb1mx4.3/22, mbtmp4.3/11, ML4.1/3, MS3.6/18, Ms1 3.6/18, ms1mx3.5/30, Error ellipse: s-maj=43.4km s-min=18.5km az=44.0*

*CASC **20** 21:12:10.4±2.0, 7°.64N×82°.58W, h14km, MD4.1, mb4.5(NEIC)*

NEIC 20 21:12:11.2±0.4, 7°.56N×82°.12W, h35km, mb4.5/44, 98C-88D, Error ellipse: s-maj=13.5km s-min=7.0km az=223.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	1.35	335	eP	Pn	21 12 31.3	-2.3
ACR	Cerro Adams	1.50	317	⇑eP	Pn	21 12 31.3	-4.4
ACR				eS	Sn	21 12 47.1	-7.0
QCR	Quepos	2.74	313	eP	Pn	21 12 48.3	-4.5
BCIP	Isla Barro Col	2.77	55	ePn	Pn	21 12 54.4	+1.2
URSC	Urasca	2.79	324	iP	Pn	21 12 51.7	-1.8
URSC				eS	Sn	21 13 21.7	-4.3
LAJ	Bijagual	3.02	319	eP	Pn	21 12 55.1	-1.6
SJS	Escuela Geolog	3.04	321	eP	Pn	21 12 54.5	-2.4
PRS1	Puriscal	3.24	318	eP	Pn	21 12 56.0	-3.6
CGA2	Cerro Gallo 2	3.37	317	eP	Pn	21 12 57.8	-3.6
CGA2				eS	Sn	21 13 34.1	-6.0
JCR	Jicaral	3.73	308	eP	Pn	21 13 01.6	-4.8
JCR				eS	Sn	21 13 41.3	-7.8
JTS	JuntasAbangare	3.90	314	Pn	Pn	21 13 04.7	-3.9
	62nm,0.3s,baz=144,slow=7.2,SNR=98						
JTS				Sn	Sn	21 13 50.5	-2.8
	baz=90,slow=20,SNR=2.6						
JTS				LR	LR	21 14 51.5	
	comp=Z,2μm,18.7s,baz=146,slow=43						
JTS	JuntasAbangare	3.90	314	ePn	Pn	21 13 04.7	-4.0
JTS				eS	Sn	21 13 45.1	-8.2
VCR	Vista de Mar	4.30	307	eP	Pn	21 13 09.9	-4.3
OTAV	Otavalo	8.14	153	ePn	Pn	21 14 06.4	-0.6
	4.4nm,0.8s						
ROSC	El Rosal	8.20	109	LR	LR	21 16 56.1	
	comp=Z,404nm,20.2s,baz=203,slow=35						
TGUH	Tegucigalpa,Un	8.20	322	ePn	Pn	21 14 06.8	-1.0
APG	El Apazote	11.03	313	Pn	Pn	21 14 43.5	-3.1
	0.7nm,0.3s,baz=122,slow=13,SNR=7.8						
APG				LR	LR	21 19 33.2	
	comp=Z,384nm,18.8s,baz=141,slow=41						
SDV	Santo Domingo	11.45	83	Pn	Pn	21 14 59.2	+6.9
	14nm,0.9s						
PAYG	Puerto Ayora	11.54	225	ePn	Pn	21 15 08.2	+15
TEIG	Tepich	13.93	335	LR	LR	21 20 55.7	
	comp=Z,435nm,19.5s,baz=145,slow=38						
ATAH	Atahualpa	15.06	166	LR	LR	21 20 43.1	
	comp=Z,273nm,18.6s,baz=178,slow=34						
CMIG	Matias Romero	15.65	308	Pn	Pn	21 15 47.6	-1.6
	0.3nm,0.3s,baz=90,slow=11,SNR=3.1						
CMIG				LR	LR	21 22 35.2	
	comp=Z,261nm,19.2s,baz=340,slow=40						
SJG	San Juan	18.76	54	LR	LR	21 22 43.7	
	comp=Z,114nm,21.5s,baz=95,slow=34						
LPAZ	La Paz	27.44	150	P	P	21 17 53.6	-0.4
	1.2nm,0.7s,baz=320,slow=9.5,SNR=4.5						
LPAZ				LR	LR	21 30 06.1	
	comp=Z,182nm,18.4s,baz=236,slow=39						
TKL	Tuckaleechee C	28.01	357	LR	LR	21 29 41.1	
	comp=Z,100nm,20.5s,baz=354,slow=38						
JCT	Junction City	28.19	326	⇑P	P	21 18 00.1	-0.5
	baz=28						
JCT	Junction City	28.19	326	eP	P	21 17 59.4	-1.2
	13nm,1.0s						
UALR	University of	28.67	342	eP	P	21 18 04.0	-0.9
	8.9nm,0.8s						
628A	Black Gap, Mar	29.28	321	⇓P	P	21 18 10.4	+0.1
	baz=29,SNR=7.2						
627A	Terlingua Ranc	29.57	320	⇑P	P	21 18 13.4	+0.5
	baz=30,SNR=10						
TXAR	Lajitas Array	29.67	320	P	P	21 18 13.7	-0.1
	1.6nm,0.7s,baz=133,slow=8.1,SNR=17						
TXAR				PcP	PcP	21 21 20.3	+2.5
	0.3nm,0.8s,baz=119,slow=1.1,SNR=2.8						
TXAR				LR	LR	21 33 02.6	
	comp=Z,72nm,18.6s,baz=180,slow=42						
528A	Cox Ranch, San	29.69	322	⇓P	P	21 18 13.8	-0.2
	baz=30,SNR=9.2						
428A	Kincaid Ranch,	30.03	323	⇓P	P	21 18 17.1	+0.1
	baz=30,SNR=14						
626A	Big Bend Ranch	30.12	319	⇑P	P	21 18 17.7	-0.1
	baz=30						
527A	Woodward Ranch	30.19	321	⇓P	P	21 18 18.4	0.0
	baz=30,SNR=5.9						
427A	Hayter Ranch,	30.55	322	⇓P	P	21 18 21.9	+0.4
	baz=31						
328A	Wristen Ranch,	30.57	324	⇓P	P	21 18 21.0	-0.8
	baz=31,SNR=6.2						
426A	McDonald Obser	30.81	321	⇓P	P	21 18 24.1	+0.3
	baz=31						
WMOK	Wichita Mounta	31.09	333	eP	P	21 18 24.4	-1.9
	3.0nm,1.0s						
326A	Caldwell Ranch	31.23	322	⇓P	P	21 18 27.1	-0.5
	baz=31						
425A	Indio Mountain	31.49	320	⇓P	P	21 18 30.1	+0.2
	baz=32						
226A	Malaga, Loving	31.83	323	⇑P	P	21 18 32.6	-0.2
	baz=32						
127A	Arkansas Junct	31.83	325	⇓P	P	21 18 32.3	-0.6
	baz=32						
325A	Bean Ranch, Si	31.88	321	⇑P	P	21 18 33.3	0.0
	baz=32						
Z27A	Tatum	32.22	326	⇑P	P	21 18 35.7	-0.6
	baz=32						
324A	Moseley Ranch,	32.25	321	P	P	21 18 35.9	-0.6
	baz=32,SNR=8.4						
225A	Deer Hill, Car	32.30	322	⇓P	P	21 18 36.8	-0.1
	baz=32,SNR=5.5						
MNTX	Cornudas Mount	32.36	321	⇓P	P	21 18 36.9	-0.6
	baz=32,SNR=14						
MNTX	Cornudas Mount	32.36	321	eP	P	21 18 36.6	-0.8
	6.2nm,0.9s						
MSTX	Muleshoe	32.47	327	⇑P	P	21 18 37.3	-1.2
	baz=33,SNR=7.0						
125A	Gardner Draw,	32.58	323	P	P	21 18 39.0	-0.4
	baz=33,SNR=12						
Y27A	Causey	32.62	326	P	P	21 18 38.3	-1.4
	baz=33,SNR=5.5						
224A	Cornudas Mount	32.70	321	⇑P	P	21 18 40.4	-0.1
	baz=33						
Z25A	Roswell	33.06	324	⇓P	P	21 18 43.5	0.0
	baz=33						
124A	Stringfield Ra	33.09	322	⇓P	P	21 18 44.4	+0.5
	baz=33,SNR=10						
Z24A	Sheeppen Canyo	33.47	323	⇑P	P	21 18 47.3	+0.1
	baz=34,SNR=8.2						
Y25A	Mesa, Roswell	33.51	325	⇑P	P	21 18 47.2	-0.3
	baz=34,SNR=7.5						
Y24A	Capitan	33.94	324	⇑P	P	21 18 51.0	-0.3
	baz=34,SNR=11						
Z23A	Rita Site, Whi	33.95	322	⇑P	P	21 18 51.7	+0.4
	baz=34						
320A	Kipp Ranch, An	34.16	317	⇑P	P	21 18 54.9	+1.7
	baz=34,SNR=16						
Y23A	Lovelace Mesa,	34.31	323	⇑P	P	21 18 55.2	+0.8
	baz=34,SNR=8.3						
W25A	X Bar L Ranch,	34.32	327	⇓P	P	21 18 54.0	-0.6
	baz=34						
121A	Cookes Peak, D	34.43	320	⇓P	P	21 18 57.3	+1.8
	baz=34,SNR=5.6						
220A	Playas Peak, P	34.51	318	⇑P	P	21 18 57.7	+1.4
	baz=35,SNR=21						
319A	Douglas	34.70	317	P	P	21 18 59.8	+1.9
	baz=35,SNR=16						
U26A	Atchley Ranch,	34.83	329	⇑P	P	21 18 58.5	-0.4
	baz=35						
W24A	Lazy 6 Ranch,	34.84	325	⇓P	P	21 18 59.3	+0.2
	baz=35						
Y22A	Socorro	34.85	322	P	P	21 19 00.2	+1.1
	baz=35,SNR=8.3						
V25A	Rancho No Teng	34.87	327	⇑P	P	21 18 59.3	0.0
	baz=35,SNR=6.6						
120A	U Bar Ranch, L	34.99	319	⇓P	P	21 19 01.8	+1.4
	baz=35,SNR=13						
219A	White Tail Can	35.06	318	⇓P	P	21 19 02.3	+1.4
	baz=35,SNR=19						
V24A	Rampart Ranch,	35.14	326	⇑P	P	21 19 01.9	+0.2
	baz=35						
318A	Bisbee	35.22	316	⇓P	P	21 19 03.9	+1.5
	baz=35,SNR=9.0						
ANMO	Albuquerque	35.26	324	eP	P	21 19 03.1	+0.4
	9.7nm,0.9s						
LAZ	Ladron	35.28	323	eP	P	21 19 03.0	+0.2
	3.1nm,0.9s						
Z20A	Nine Sixteen R	35.32	320	⇑P	P	21 19 05.0	+1.7
	baz=35,SNR=10						
Y21A	Point of Rocks	35.34	322	⇑P	P	21 19 05.0	+1.6
	baz=35,SNR=6.0						
119A	Ashpeak Ranch,	35.56	319	⇓P	P	21 19 06.6	+1.3
	baz=36,SNR=9.4						
X21A	Alamocita Cree	35.70	322	P	P	21 19 07.6	+1.1
	baz=36,SNR=12						
Y20A	Horse Springs,	35.70	321	⇑P	P	21 19 08.1	+1.5
	baz=36,SNR=6.8						
T25A	Trinidad	35.74	329	⇑P	P	21 19 07.1	+0.3
	baz=36,SNR=5.2						
118A	Homack Ranch,	35.93	318	⇑P	P	21 19 10.0	+1.6
	baz=36						
217A	Green Valley	35.98	316	⇓P	P	21 19 10.4	+1.5
	baz=36,SNR=6.1						
T24A	Torres, Weston	36.03	328	⇓P	P	21 19 09.9	+0.7
	baz=36,SNR=5.6						
W21A	San Fidel	36.07	323	⇑P	P	21 19 11.1	+1.5
	baz=36						
U23A	El Rito	36.09	326	P	P	21 19 10.6	+0.8
	baz=36,SNR=17						
X20A	Quemado	36.20	322	⇓P	P	21 19 12.1	+1.4
	baz=36,SNR=5.2						
TUC	Tucson	36.28	317	eP	P	21 19 11.8	+0.4
	10nm,1.1s						
Y19A	Nutrioso	36.29	320	⇓P	P	21 19 13.3	+1.8
	baz=36						
117A	Oracle	36.40	317	P	P	21 19 14.0	+1.5
	baz=36,SNR=14						
U22A	Llaves	36.50	325	⇓P	P	21 19 14.1	+0.8
	baz=37,SNR=5.6						
S24A	Houchin Ranch,	36.54	328	⇓P	P	21 19 14.4	+0.8
	baz=37						
V21A	Milan	36.54	324	⇑P	P	21 19 14.5	+0.8
	baz=37						
W20A	Ramah	36.59	322	⇓P	P	21 19 15.2	+1.1
	baz=37,SNR=8.5						
X19A	St. Johns	36.62	321	⇑P	P	21 19 15.9	+1.6
	baz=37,SNR=9.0						
Z17A	San Carlos Hig	36.66	318	P	P	21 19 16.4	+1.7
	baz=37,SNR=5.7						
Y18A	Canyon Day Jun	36.67	319	⇓P	P	21 19 16.0	+1.1
	baz=37,SNR=9.4						
SDCO	Great Sand Dun	36.77	328	P	P	21 19 15.9	+0.4
	baz=37,SNR=12						
SDCO	Great Sand Dun	36.77	328	eP	P	21 19 15.8	+0.2
	11nm,1.2s						
R24A	Sanders Place,	36.94	329	⇓P	P	21 19 17.4	+0.4
	baz=37						
T22A	Edith	36.98	326	⇑P	P	21 19 18.0	+0.6
	baz=37						
U21A	Nageezi	36.99	325	⇑P	P	21 19 18.5	+1.1
	baz=37						
116A	Eloy	37.05	316	⇑P	P	21 19 19.5	+1.5
	baz=37						
X18A	Snowflake	37.10	320	⇓P	P	21 19 19.7	+1.3
	baz=37						
W19A	Sanders	37.12	322	⇓P	P	21 19 20.0	+1.4
	baz=37						
Y17A	Roosevelt	37.15	318	⇑P	P	21 19 20.2	+1.4
	baz=37						
T21A	Navajo Lake	37.32	325	⇑P	P	21 19 20.9	+0.6
	baz=37,SNR=5.2						
Z16A	Peralta Trail,	37.33	317	⇓P	P	21 19 21.3	+1.0
	baz=37						
U20A	Newcomb	37.45	324	P	P	21 19 22.2	+0.8
	baz=38,SNR=5.5						
P25A	Willow Gulch B	37.47	331	P	P	21 19 21.8	+0.4
	baz=38,SNR=7.2						
S22A	4UR Ranch, Cre	37.47	327	⇑P	P	21 19 21.5	0.0
	baz=38,SNR=6.2						
214A	Organ Pipe Nat	37.48	315	⇑P	P	21 19 22.6	+0.9
	baz=38,SNR=8.2						
115A	Sonoran Desert	37.49	316	⇑P	P	21 19 23.1	+1.3
	baz=38,SNR=5.7						
Q24A	Divide	37.52	330	⇓P	P	21 19 22.1	+0.2
	baz=38						
X17A	Forest Lakes	37.52	319	⇓P	P	21 19 23.6	+1.6
	baz=38,SNR=7.1						
OGNE	Ogallala	37.68	335	eP	P	21 19 23.2	0.0
	24nm,0.9s						
Y16A	Circle Bar Ran	37.68	318	P	P	21 19 24.9	+1.6
	baz=38,SNR=22						
R22A	Saguache, Gunn	37.79	328	⇓P	P	21 19 24.5	+0.3
	baz=38,SNR=5.3						
U19A	Dine' College,	37.80	323	⇑P	P	21 19 24.6	+0.3
	baz=38						
X16A	Lo Mia Camp, P	37.99	319	⇓P	P	21 19 27.2	+1.3
	baz=38,SNR=13						
T19A	Beclabito	38.06	324	P	P	21 19 26.8	+0.3
	baz=38,SNR=13						
ECSD	EROS Data Cent	38.20	343	eP	P	21 19 26.1	-1.5
	10nm,1.1s						
U18A	Rough Rock, Ch	38.28	323	⇑P	P	21 19 28.2	-0.2
	baz=38						
Y15A	Casa Rosa Ranc	38.30	318	⇑P	P	21 19 30.3	+1.8
	baz=38,SNR=5.8						
R21A	Cimarron	38.32	327	⇑P	P	21 19 28.9	+0.3
	baz=38						
V17A	Tonalea, Kykot	38.33	321	P	P	21 19 29.6	+0.9
	baz=38,SNR=20						
ISCO	Idaho Springs	38.39	330	⇑P	P	21 19 29.4	+0.2
	baz=38						
ISCO	Idaho Springs	38.39	330	eP	P	21 19 29.2	0.0
	3.0nm,0.8s						
X15A	Humboldt	38.55	318	P	P	21 19 32.0	+1.3
	baz=39,SNR=20						
SMCO	Snowmass	38.61	328	eP	P	21 19 31.9	+0.8
	3.4nm,0.8s						
R20A	Redvale	38.64	326	P	P	21 19 31.9	+0.6
	baz=39,SNR=5.9						
Y14A	Wickenburg	38.74	317	P	P	21 19 33.9	+1.6
	baz=39,SNR=11						
S19A	Harvey Farm, M	38.76	325	⇑P	P	21 19 32.6	+0.3
	baz=39						
T18A	Mexican Hat	38.77	324

baz=39
R19A Curley Farm, L 39.20 325 ⇓P P 21 19 36.2 +0.1
baz=39,SNR=5.3
V15A Kaibab Nationa 39.32 320 P P 21 19 39.0 +1.9
baz=39,SNR=26
W14A Seligman 39.54 319 ⇓P P 21 19 40.8 +1.8
baz=40,SNR=10
Q19A Hogan Spring (39.67 326 ⇑P P 21 19 40.0 0.0
baz=40
X13A Yucca 39.67 317 P P 21 19 41.5 +1.4
baz=40,SNR=8.7
U15A North Rim 39.78 321 ⇓P P 21 19 42.1 +1.2
baz=40,SNR=6.3
V14A Boquillas Ranc 39.81 319 P P 21 19 43.4 +2.2
baz=40,SNR=21
W13A Hualapai Mount 40.01 318 ⇑P P 21 19 44.7 +1.9
baz=40
R17A Hanksville Air 40.12 324 ⇑P P 21 19 43.9 +0.2
baz=40,SNR=7.2
S16A Weppner Ranch, 40.18 323 ⇓P P 21 19 45.0 +0.8
baz=40,SNR=6.9
T15A Red Dirt Ranch 40.20 321 ⇑P P 21 19 45.7 +1.3
baz=40,SNR=5.1
L23A Garrett 40.24 333 ⇑P P 21 19 44.5 -0.1
baz=40,SNR=6.2
U14A Mt Trumbull 40.33 320 ⇑P P 21 19 47.1 +1.5
baz=40,SNR=6.9
R16A Teasdale 40.48 324 ⇑P P 21 19 47.5 +0.8
baz=41,SNR=6.6
SRU San Rafael 40.48 325 ⇓P P 21 19 47.1 +0.4
baz=41,SNR=6.7
SRU San Rafael 40.48 325 *eP* P 21 19 47.1 +0.4
14nm,0.8s
N20A Spence Gulch, 40.50 329 ⇑P P 21 19 47.1 +0.3
baz=41
O19A Miners Draw (B 40.55 328 ⇑P P 21 19 47.4 +0.1
baz=41
M21A Separation Pea 40.63 331 ⇓P P 21 19 48.1 +0.2
baz=41
P18A Preston Nutter 40.69 326 ⇑P P 21 19 48.4 +0.1
baz=41
U13A Pakoon Wash 40.84 319 ⇑P P 21 19 51.5 +1.8
baz=41,SNR=7.3
BELC Belle Mtn. Jos 40.84 315 ⇑P P 21 19 50.6 +0.8
baz=41,SNR=5.7
BDFB Brasilia 40.90 124 LR LR 21 36 14.7
comp=Z,164nm,18.8s,baz=253,slow=35
PFO Pinyon Flat Ob 40.95 314 ⇓P P 21 19 52.1 +1.4
baz=41,SNR=5.4
PFO Pinyon Flat Ob 40.95 314 *eP* P 21 19 51.8 +1.1
9.3nm,1.0s
V12A Nelson 41.01 318 P P 21 19 52.9 +1.7
baz=41,SNR=7.4
K22A Casper 41.03 332 ⇓P P 21 19 51.1 0.0
baz=41
MSU Marysvale 41.04 323 *eP* P 21 19 52.5 +1.2
RSSD Black Hills 41.14 336 *eP* P 21 19 52.4 +0.3
5.6nm,0.9s
CCUT Cedar City 41.15 321 *eP* P 21 19 54.6 +2.4
8.6nm,1.3s
T13A Saint George 41.16 320 ⇑P P 21 19 54.1 +1.7
baz=41,SNR=8.4
O17A Robinson Place 41.35 326 ⇓P P 21 19 54.6 +0.7
baz=41,SNR=9.7
K21A Alcova 41.36 332 ⇓P P 21 19 53.8 -0.1
baz=42
CPUP Villa Florida 41.40 145 LR LR 21 39 49.5
comp=Z,110nm,19.6s,baz=358,slow=40
S13A Holt Ranch, En 41.48 321 ⇑P P 21 19 56.7 +1.8
baz=42,SNR=13
T12A Moapa 41.50 319 ⇓P P 21 19 56.7 +1.5
baz=42
HEC Hector,Ludlow 41.51 316 ⇓P P 21 19 56.8 +1.5
baz=42,SNR=10
J22A Midwest 41.61 333 ⇑P P 21 19 55.7 -0.2
baz=42,SNR=6.5
SHPR Sheep Range 41.66 319 *eP* P 21 19 57.6 +1.1
O16A Springville 41.78 326 ⇑P P 21 19 58.0 +0.6
baz=42
DAU Daniels Canyon 41.79 326 *eP* P 21 19 58.7 +1.3
K20A Yellowstone Ra 41.90 331 ⇓P P 21 19 57.8 -0.4
baz=42
R13A O'Grain Ranch, 41.91 322 ⇑P P 21 19 59.3 +0.8
baz=42,SNR=6.7
J21A Lysite 42.00 332 ⇓P P 21 19 59.1 0.0
baz=42
Q14A Sevier Lake (B 42.00 323 ⇓P P 21 20 00.2 +1.0
baz=42,SNR=10
GSC Goldstone 42.10 316 *eP* P 21 20 01.5 +1.5
104nm,2.5s
L18A Fontenelle, Gr 42.20 329 ⇑P P 21 20 00.9 +0.1
baz=42,SNR=5.4
M17A Scullys Gap (B 42.21 328 P P 21 20 00.6 -0.2
baz=42,SNR=11
K19A Absolon Red Bu 42.27 331 ⇓P P 21 20 00.7 -0.6
baz=42,SNR=9.1
BW06 Boulder Array 42.58 330 *eP* P 21 20 03.0 -0.8
11nm,1.4s
PDAR Pinedale Array 42.58 330 P P 21 20 03.1 -0.7
1.4nm,0.6s,baz=141,slow=9.6,SNR=15
PDAR PcP PcP 21 21 55.5 -0.3
0.5nm,0.8s,baz=89,slow=4.7,SNR=3.8
PDAR LR LR 21 42 20.0
comp=Z,59nm,19.2s,baz=323,slow=43
EDW2 Edwards Air Fo 42.70 315 ⇑P P 21 20 05.6 +0.6
baz=43
J19A Crowheart 42.70 331 ⇓P P 21 20 04.5 -0.3
baz=43
K18A Toltan Ranch, 42.72 329 ⇓P P 21 20 05.1 +0.1
baz=43,SNR=5.9
FURC Furnace Creek, 42.77 317 ⇓P P 21 20 06.9 +1.4
baz=43,SNR=6.1
I20A Worland 42.78 332 ⇓P P 21 20 05.3 -0.1
baz=43,SNR=5.8
HWUT Hardware Ranch 42.78 327 *eP* P 21 20 05.2 -0.3
7.8nm,0.8s
MPMC Manual Prospec 42.97 317 ⇓P P 21 20 07.6 +0.5
baz=43,SNR=6.3
R11A Troy Canyon, C 43.02 321 ⇑P P 21 20 08.8 +1.3
baz=43,SNR=10
J18A Kendall Valley 43.13 330 ⇓P P 21 20 08.2 -0.1
baz=43,SNR=10.0
M15A Larsen Ranch, 43.17 326 ⇓P P 21 20 08.3 -0.3
baz=43
I19A Meeteetse 43.25 332 ⇑P P 21 20 09.2 -0.1
baz=43
I18A Diamond G Ranc 43.40 331 ⇑P P 21 20 10.2 -0.2
baz=44,SNR=5.1
L15A Malad City 43.50 327 ⇑P P 21 20 10.9 -0.4
baz=44,SNR=5.9
HVU Hansel Valley 43.56 326 *eP* P 21 20 12.6 +0.8
5.2nm,0.8s
J17A Brown Place, J 43.59 330 ⇓P P 21 20 11.9 -0.1
baz=44,SNR=6.5
REDW Red Top Meadow 43.66 329 *eP* P 21 20 12.3 -0.3
9.8nm,0.9s
SNOW Snow King Moun 43.68 330 *eP* P 21 20 13.0 +0.2
6.1nm,0.8s
LOHW Long Hollow 43.72 330 *eP* P 21 20 12.6 -0.4
2.9nm,0.6s
TPAW Teton Pass 43.80 330 *eP* P 21 20 13.6 -0.1
4.9nm,0.8s
G20A Bridger 43.80 333 ⇑P P 21 20 13.1 -0.6
baz=44
RRI2 Red Ridge 43.88 329 *eP* P 21 20 14.5 +0.2
5.5nm,0.8s
MOOW Moose Ponds 43.89 330 *eP* P 21 20 14.2 -0.2
3.2nm,0.7s
VES Vestal, Richgr 43.96 315 ⇑P P 21 20 15.9 +0.8
baz=44
J16A Bone 43.98 329 ⇑P P 21 20 15.1 0.0
baz=44
L14A Malta 43.99 326 ⇓P P 21 20 15.2 0.0
baz=44,SNR=10
ULM Lac du Bonnet 44.08 347 P P 21 20 13.7 -2.1
13nm,0.8s,baz=160,slow=7.7,SNR=14
IMW Indian Meadow 44.09 330 *eP* P 21 20 16.0 0.0
5.5nm,0.6s
RLMT Red Lodge 44.20 332 ⇑P P 21 20 16.6 -0.3
baz=44,SNR=8.0
RLMT Red Lodge 44.20 332 *eP* P 21 20 16.3 -0.6
7.3nm,0.7s
K14A Jones Ranch, D 44.30 327 P P 21 20 17.5 -0.2
baz=44,SNR=16
SMMC Simmler 44.34 314 ⇓P P 21 20 19.0 +0.8
baz=44
MTUM Tungsten Hills 44.40 317 *eP* P 21 20 20.1 +1.5
D22A Cohagen 44.49 337 ⇓P P 21 20 18.5 -0.6
baz=45
G18A Lazy EL Ranch, 44.49 332 ⇑P P 21 20 18.6 -0.6
baz=45
J15A Blackfoot 44.49 328 ⇑P P 21 20 19.4 +0.1
baz=45,SNR=5.7
F19A Roth Farm, Mol 44.62 333 ⇓P P 21 20 19.8 -0.3
baz=45
C23A Lambert 44.65 338 ⇑P P 21 20 20.5 +0.2
baz=45
D21A La Casta Ranch 44.74 336 ⇑P P 21 20 20.8 -0.4
baz=45
E20A Meyer Farm, Mu 44.77 335 ⇑P P 21 20 21.4 0.0
baz=45,SNR=8.0
NVAR Mina Array Bea 44.81 319 P P 21 20 23.1 +1.2
14nm,0.7s,baz=128,slow=7.1,SNR=112
NVAR PcP PcP 21 22 04.4 +1.0
0.4nm,0.7s,baz=129,slow=3.7,SNR=3.0
GCMT Greycliff 44.89 333 *eP* P 21 20 22.3 -0.1
4.6nm,1.0s
F18A Big Timber 45.00 333 ⇑P P 21 20 23.1 -0.2
baz=45,SNR=7.6
J14A Carey 45.01 327 ⇑P P 21 20 23.8 +0.4
baz=45
E19A Rath Farm, Rou 45.02 334 ⇑P P 21 20 23.0 -0.3
baz=45
B23A Brockton 45.13 339 ⇑P P 21 20 24.3 +0.1
baz=45
A24A Westby 45.17 340 ⇑P P 21 20 24.5 0.0
baz=45
BMN Battle Mountai 45.28 322 *eP* P 21 20 26.3 +0.7
34nm,0.9s
I14A Mackay 45.39 328 ⇑P P 21 20 27.0 +0.6
baz=46,SNR=6.4
C21A Desert Coulee 45.40 336 ⇑P P 21 20 26.3 -0.1
baz=46
J13A Cove Ranch, Pi 45.42 327 ⇓P P 21 20 26.7 +0.1
baz=46,SNR=7.6
F17A Fitzpatrick Pl 45.44 332 ⇓P P 21 20 27.1 +0.4
baz=46
H15A Lima 45.46 329 ⇓P P 21 20 28.1 +1.2
baz=46,SNR=16
G16A Moss Hill, Enn 45.48 331 P P 21 20 27.4 +0.3
baz=46,SNR=6.3
E18A Harlowton 45.60 333 ⇓P P 21 20 27.9 0.0
baz=46
WAKR Walker 45.60 318 *eP* P 21 20 29.4 +1.3
D19A Cripps Ranch, 45.61 335 ⇑P P 21 20 27.8 -0.2
baz=46
HLID Hailey 45.66 327 P P 21 20 28.5 0.0
baz=46,SNR=20
HLID Hailey 45.66 327 *eP* P 21 20 28.5 0.0
7.1nm,0.7s
C20A Veseth Ranch, 45.67 336 ⇓P P 21 20 28.2 -0.3
baz=46
BOZ Bozeman (W) 45.70 331 P P 21 20 28.5 -0.3
baz=46,SNR=8.3
BOZ Bozeman (W) 45.70 331 *eP* P 21 20 28.4 -0.4
1.2nm,0.5s
MCMT McKenzie Canyo 45.71 329 *eP* P 21 20 29.0 +0.1
2.3nm,0.8s
I13A Wildhorse Cree 45.73 328 ⇓P P 21 20 29.6 +0.5
baz=46,SNR=16
G15A Dillon 45.77 330 ⇓P P 21 20 30.0 +0.6
baz=46,SNR=5.7
H14A Leadore 45.83 329 ⇓P P 21 20 30.4 +0.6
baz=46,SNR=10
CMB Columbia Colle 45.98 317 *eP* P 21 20 32.5 +1.3
15nm,1.8s
C19A Slack Wire Ran 46.12 335 ⇓P P 21 20 32.0 -0.1
baz=46
I12A Atlanta 46.20 327 ⇓P P 21 20 32.8 +0.1
baz=46
PAHR Pah Rah Range 46.22 320 *eP* P 21 20 33.8 +0.8
26nm,1.2s
LRM Limekiln Ridge 46.23 331 *eP* P 21 20 33.2 +0.2
H13A Challis 46.25 328 ⇑P P 21 20 33.1 0.0
baz=46
F15A Butte 46.26 331 P P 21 20 33.4 +0.2
baz=46,SNR=6.7
A21A Bergtoll Ranch 46.28 338 ⇓P P 21 20 33.5 +0.1
baz=46
MFID Camas Ranch 46.33 326 ⇓P P 21 20 34.1 +0.3
baz=46
D17A Six Diamond Ra 46.39 333 ⇑P P 21 20 34.2 0.0
baz=46
H12A Diamond D Ranc 46.55 328 ⇑P P 21 20 35.6 0.0
baz=47,SNR=8.9
A20A Cobblestone Ra 46.58 337 ⇑P P 21 20 35.7 +0.1
baz=47
G13A Cobalt 46.60 329 P P 21 20 35.6 -0.3
baz=47,SNR=5.7
D16A Dana Ranch, Ca 46.69 332 ⇑P P 21 20 36.5 0.0
baz=47,SNR=5.1
E15A Deer Lodge 46.75 331 ⇑P P 21 20 36.7 -0.3
baz=47,SNR=6.1
B18A Beardsley Farm 46.95 335 ⇑P P 21 20 38.4 -0.2
baz=47
F13A Darby 47.13 329 ⇑P P 21 20 39.7 -0.3
baz=47,SNR=7.8
D15A Lincoln 47.14 332 ⇓P P 21 20 39.8 -0.3
baz=47
WVOR Wild Horse Val 47.33 323 *eP* P 21 20 42.0 +0.3
28nm,1.0s
OHCM Honcut 47.39 318 *eP* P 21 20 43.6 +1.4
E13A Victor 47.52 330 ⇓P P 21 20 42.7 -0.3
baz=48
F12A Elk City 47.58 329 ⇓P P 21 20 43.2 -0.3
baz=48,SNR=10
C15A Salmond Ranch, 47.72 332 ⇑P P 21 20 44.5 -0.1
baz=48
J08A Circle Bar Ran 47.79 324 ⇓P P 21 20 46.0 +0.7
baz=48
E12A Beaver Dam Sad 48.19 329 ⇑P P 21 20 47.5 -0.7
baz=48
B14A Marquette Ranc 48.45 333 ⇑P P 21 20 50.1 -0.2
baz=48
D12A Red Ives Fores 48.52 330 ⇓P P 21 20 50.2 -0.5
baz=49
LASM Arnica Sink 48.66 321 P P 21 20 52.4 +0.5
F10A Beach Ranch, E 48.75 328 ⇓P P 21 20 52.2 -0.4
baz=49
I07A Izee 48.83 324 P P 21 20 52.9 -0.3
baz=49,SNR=7.7
K05A Summer Lake 48.86 322 ⇑P P 21 20 53.8 +0.3
baz=49
KIPM Iron Peak 48.96 318 *eP* P 21 20 56.0 +1.6
22nm,0.9s
C12B Naegeli Ranch, 49.03 331 P P 21 20 54.8 +0.1
baz=49,SNR=5.4
G08A Pilot Rock 49.26 326 P P 21 20 56.6 +0.2
baz=49,SNR=7.5
A13A Flathead Natio 49.39 332 ⇓P P 21 20 57.3 -0.1
baz=50
YBH Yreka Blue Hor 49.44 320 *eP* P 21 20 56.6 -1.4
5.7nm,0.8s
C11A Tepee Creek (N 49.50 330 ⇑P P 21 20 58.0 -0.3
baz=50
E09A Wood Farm, Sta 49.59 328 ⇓P P 21 20 58.5 -0.4
baz=50
KHMM Horse Mountain 49.66 319 *eP* P 21 21 00.7 +1.1
14nm,0.8s
VIPM Ingram Point 49.72 324 P P 21 20 00.8 +0.8
G06A Carlson Farm, 50.16 325 ⇓P P 21 21 04.4 +1.0
baz=50
FRIS Frissel Point 50.42 323 P P 21 21 06.0 +0.6
E07A Sunnyside 50.53 327 ⇑P P 21 21 06.1 0.0
baz=51
KBO Bosley Butte 50.66 320 *eP* P 21 21 07.8 +0.6
83nm,1.2s
VFP Flag Point 50.69 325 P P 21 21 08.5 +1.2
H04A Detroit Lake 50.74 324 ⇑P P 21 21 08.1 +0.3
baz=51,SNR=10
HOOD Mount Hood Mea 50.80 325 *eP* P 21 21 10.0 +1.9
18nm,0.8s
KEBM Edson Butte 51.07 321 *eP* P 21 21 10.8 +0.6
58nm,1.3s
ETW Entiat 51.44 328 *eP* P 21 21 13.2 +0.3
LON Longmire 51.72 326 *eP* P 21 21 15.7 +0.6
3.7nm,0.8s
NLWA Neilton Lookou 53.24 326 *eP* P 21 21 27.0 +0.7
14nm,1.5s
YKA Yellowknife Ar 59.73 343 P P 21 22 11.3 -0.9
1.8nm,0.6s,baz=142,slow=6.0,SNR=3.6
YKA LR LR 21 50 08.4
comp=Z,7.0nm,19.5s,baz=285,slow=38
YKA Yellowknife Ar 59.73 343 P P 21 22 11.3 -0.9
YKA LR LR 21 50 08.3
DOT Dot Lake 71.03 335 *eP* P 21 23 25.1 -0.2
18nm,0.8s
ILAR Eielson Array 72.59 336 P P 21 23 34.2 -0.4
2.2nm,0.7s,baz=109,slow=4.2,SNR=21
ILAR LR LR 22 01 00.7
comp=Z,36nm,21.0s,baz=19,slow=40
ESDC Sonseca Array 76.11 51 P P 21 23 57.0 +1.3
1.1nm,0.7s,baz=278,slow=5.1,SNR=7.4
TORD Torodi Ar. Bea 82.33 78 P P 21 24 31.7 +1.6
0.9nm,0.7s,baz=289,slow=7.0,SNR=2.7
TORD LR LR 21 57 37.3
comp=Z,55nm,18.3s,baz=185,slow=33
NOA NORSAR Array B 85.06 29 LR LR 21 59 46.6
comp=Z,25nm,18.6s,baz=300,slow=34
FINES FINESS Array B 91.96 27 LR LR 22 03 24.9
comp=Z,48nm,18.6s,baz=131,slow=34
CN2 Changchun 123.11 336 *e*PKP PKPdf 21 31 03.8 -0.6
CN2 PP PP 21 32 43.8 +0.6
WMQ Urumqi 128.04 9 *e*PKP PKPdf 21 31 17.0 +3.1
BJI Beijing 129.71 342 PKP PKPdf 21 31 20.1 +2.9
BJI LR LR
comp=Z,190nm,27.1s
HHC Hu-ho-hao-te 130.21 346 *e*PKP PKPdf 21 31 21.8 +3.7
HHC sPKP 21 31 36.1
HHC PP PP 21 33 35.5 +5.5
HHC PKS 21 34 56.9
HHC SKS SKSdf 21 38 28.3 +1.1
HHC SKKS SKKSac 21 40 22.8 -2.7
HHC SS SS 21 50 52.8 -0.3
HHC AMB AMB
comp=Z,120nm,9.0s
HHC LR LR
comp=N,99nm,19.6s
HHC LR LR
comp=E,140nm,19.3s
HHC LR LR
comp=Z,120nm,19.8s
LZH Lanzhou 136.23 353 *e*PKP PKPdf 21 31 31.5 +1.9
LZH sPKP 21 31 45.0
ASAR Alice Springs 141.93 241 PKhKP PKPpre 21 31 37.7
comp=Z,0.5nm,0.6s,baz=123,slow=2.7,SNR=6.8
WRA Warramunga Arr 142.60 247 PKhKP PKPpre 21 31 36.1
comp=Z,0.4nm,0.8s,baz=95,slow=1.9,SNR=3.8
WRA PKP PKPdf 21 31 43.1 +1.5
comp=Z,0.8nm,0.7s,baz=102,slow=3.0,SNR=9.3
CMAR Chiang Mai Arr 154.13 358 PKPbc PKPbc 21 32 07.5 -0.9
comp=Z,0.5nm,0.6s,baz=339,slow=4.0,SNR=3.9

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*IDC **20** 21:13:57.8±1.2, 7.31S×156.02E, h27km±5km, mb4.1/11, mb1 4.2/12, mb1mx4.1/18, mbtmp4.1/12, ML4.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.2/20, Error ellipse: s-maj=28.6km s-min=17.8km az=107.0*

*NEIC **20** 21:13:58.4±0.5, 7.36S×156.10E, h35km, mb4.2/1, Error ellipse: s-maj=12.4km s-min=11.5km az=100.0*

ISC 20 21:13:58.8±0.6, **7.33S**±0.09×**156.0E**±0.1, **h35**km, **(h27**km±1.9km**:pP-P), n17**, σ0.83/19, **mb4.1**/12,

Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.41**	**119**	Pn	**Pn**	**21 15 04.5**	**+1.3**
	13nm,0.3s,baz=216,slow=3.3,SNR=4.0						
HNR				Sn	**Sn**	**21 16 03.1**	**+10**
	13nm,0.3s,baz=315,slow=20,SNR=2.8						
HNR				LR	LR	21 16 43.0	
	comp=Z,283nm,20.0s,baz=216,slow=37						
HNR	**Honiara**	**4.41**	**119**	*e*Pn	**Pn**	**21 15 01.6**	**-1.6**
HNR				*e*S	**Sn**	**21 16 09.2**	**+16**
HNR				LR	LR	21 16 43.0	
WB2	**Warramunga Arr**	**24.47**	**237**	*eP*	**P**	**21 19 14.5**	**-0.2**
WRA	**Warramunga Arr**	**24.48**	**237**	P	**P**	**21 19 14.7**	**-0.1**
	8.9nm,0.8s,mb4.3,baz=62,slow=10.0,SNR=24						
WRA				PcP	PcP	21 22 52.9	-0.2
	0.4nm,0.8s,baz=69,slow=2.6,SNR=5.0						
ASAR	**Alice Springs**	**26.73**	**230**	P	**P**	**21 19 34.0**	**-1.1**
	1.4nm,0.6s,mb3.6,baz=62,slow=9.3,SNR=12						
STKA	**Stephens Creek**	**27.88**	**207**	P	**P**	**21 19 46.9**	**+1.5**
	1.2nm,0.5s,mb3.8,baz=36,slow=15,SNR=6.0						
FITZ	**Fitzroy Crossi**	**31.46**	**247**	P	**P**	**21 20 16.7**	**-0.6**
	1.9nm,0.4s,mb4.3,baz=94,slow=6.9,SNR=12						
MJAR	**Matsushiro Arr**	**46.73**	**340**	P	**P**	**21 22 24.4**	**-0.2**
	1.6nm,0.6s,mb4.1,baz=171,slow=8.2,SNR=5.8						
KSRS	**Korea Array**	**51.72**	**331**	P	**P**	**21 23 02.8**	**+0.1**
	1.3nm,0.7s,mb4.0,baz=138,slow=7.2,SNR=6.6						
CMAR	**Chiang Mai Arr**	**61.85**	**295**	P	**P**	**21 24 15.8**	**+0.8**
	0.8nm,0.5s,mb4.1,baz=128,slow=5.4,SNR=11						
CMAR				pP	pP	21 24 24.9	-0.8
	1.9nm,0.7s,baz=121,slow=5.1,SNR=9.5						
ULN	**Ulaanbaatar**	**69.83**	**327**	*eP*	**P**	**21 25 06.8**	**+1.0**
	1.7nm,0.7s,mb4.1						
SONM	**Songino Array**	**70.17**	**327**	P	**P**	**21 25 08.6**	**+0.8**
	2.4nm,0.5s,mb4.4,baz=144,slow=6.6,SNR=7.3						
ILAR	**Eielson Array**	**83.31**	**21**	P	**P**	**21 26 20.8**	**-0.9**
	0.2nm,0.7s,mb3.3,baz=231,slow=6.7,SNR=3.1						
MK31	**Makanchi Array**	**84.33**	**318**	*eP*	**P**	**21 26 27.6**	**+0.4**
MKAR	**Makanchi Array**	**84.33**	**318**	P	**P**	**21 26 27.7**	**+0.4**
	6.9nm,0.6s,mb5.0,baz=101,slow=6.3,SNR=54						
MKAR				pP	pP	21 26 35.5	-2.8
	3.1nm,0.6s,baz=96,slow=7.0,SNR=4.7						
ZAA0	**Zalesovo Array**	**85.03**	**326**	*eP*	**P**	**21 26 29.7**	**-0.9**
ZALV	**Zalesovo Beam**	**85.03**	**326**	P	**P**	**21 26 29.6**	**-1.0**
	4.5nm,0.4s,mb4.9,baz=115,slow=5.7,SNR=26						
ZALV				pP	pP	21 26 38.4	-3.3
	1.8nm,0.5s,baz=113,slow=6.7,SNR=5.5						

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*ISCJB **20** 21:18:00.9±1.0, 16.4N±0.2×145.7E±0.2, h523km±10km, mb3.2/7, Error ellipse: s-maj=34.5km s-min=22.3km az=16.9*

*IDC **20** 21:18:00.9±1.0, 16.37N×145.79E, h511km±11km, mb2.7/7, mb1 3.0/8, mb1mx2.8/24, mbtmp2.7/8, Error ellipse: s-maj=28.8km s-min=17.2km az=115.0*

*NEIC **20** 21:18:02.4±1.0, 16.33N×145.74E, h530km±12km, Error ellipse: s-maj=26.0km s-min=16.6km az=108.0*

ISC 20 21:18:01.6±1.0, **16.3N**±0.2×**145.7E**±0.2, **h518**km±10km, **n10**, σ0.71/12, **mb3.2**/7, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.85**	**197**	P	**P**	**21 19 13.4**	**+0.3**
	13nm,0.3s,baz=162,slow=18,SNR=16						
GUMO				S	**S**	**21 20 10.0**	**-1.1**
	7.1nm,0.3s,baz=139,slow=23,SNR=6.0						
GUMO	**Guam**	**2.85**	**197**	*e*Pn	**P**	**21 19 15.0**	**+1.8**
GUMO				*e*S	**S**	**21 20 11.0**	**-0.2**
WRA	**Warramunga Arr**	**37.74**	**198**	P	**P**	**21 24 33.0**	**-0.1**
	0.2nm,0.5s,mb2.9,baz=20,slow=8.4,SNR=5.1						
FITZ	**Fitzroy Crossi**	**39.52**	**211**	P	**P**	**21 24 47.6**	**-0.1**
	0.4nm,0.4s,mb3.3,baz=21,slow=8.6,SNR=4.8						
ASAR	**Alice Springs**	**41.40**	**197**	P	**P**	**21 25 02.5**	**-0.1**
	0.2nm,0.8s,mb2.7,baz=21,slow=8.0,SNR=2.8						
ASAR	**Alice Springs**	**41.40**	**197**	P	**P**	**21 25 02.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**44.61**	**280**	P	**P**	**21 25 27.9**	**+0.1**
	0.5nm,0.4s,mb3.4,baz=75,slow=6.2,SNR=4.9						
MKAR	**Makanchi Array**	**60.13**	**315**	P	**P**	**21 27 18.9**	**+0.1**
	0.4nm,0.3s,mb3.3,baz=91,slow=8.4,SNR=1.8						
ILAR	**Eielson Array**	**65.75**	**26**	P	**P**	**21 27 53.4**	**-1.2**
	0.7nm,0.5s,mb3.5,baz=250,slow=5.8,SNR=11						
NVAR	**Mina Array Bea**	**84.57**	**52**	P	**P**	**21 29 41.3**	**+0.9**
	0.3nm,0.5s,mb3.1,baz=274,slow=5.1,SNR=3.3						

FUNV 20 21:25:45.3, 6.79N×73.16W, h170km, **MW3.5,7C,**

Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.36**	**38**	⇑*iP*	Pn	21 26 14.6	-0.4
CAPV				*e*S	Sn	21 26 36.2	-1.7
VIGV	**El Vigia**	**2.70**	**41**	⇑*iP*	Pn	21 26 28.9	-1.0
VIGV				*e*S	Sn	21 27 00.9	-3.5
SOCV	**Socops**	**2.72**	**57**	⇑*iP*	Pn	21 26 29.1	-0.9
SOCV				*e*S	Sn	21 27 01.5	-3.3
ELOV	**Elorza**	**3.66**	**87**	*eP*	Pn	21 26 40.6	-1.1
VIRV	**Villa del Rosa**	**3.76**	**11**	*eP*	Pn	21 26 41.3	-1.8
VIRV				*e*S	Sn	21 27 23.5	-4.7
QARV	**Quebrada Arrib**	**4.28**	**37**	⇑*eP*	Pn	21 26 48.9	-0.8
SANV	**Sanarito**	**4.48**	**53**	*eP*	Pn	21 26 50.7	-1.7
CURV	**Curarigua**	**4.50**	**44**	⇑*eP*	Pn	21 26 51.0	-1.5
TEPV	**Terepaima**	**5.03**	**51**	*eP*	Pn	21 26 58.1	-1.4
SIQV	**Siquisique**	**5.07**	**41**	*eP*	Pn	21 26 58.3	-1.6
BAUV	**El Baul**	**5.50**	**67**	⇑*eP*	Pn	21 27 03.1	-2.5
MAPV	**Macapo**	**5.55**	**57**	⇑*eP*	Pn	21 27 04.4	-1.9
MONV	**Montecano**	**6.02**	**31**	*eP*	Pn	21 27 10.9	-1.5

TURV	Turiamo	6.39	55	eP	Pn	21 27 16.2	-1.2
CAOV	Caicara del Or	6.81	85	eP	Pn	21 27 20.5	-2.3

IDC 20 21:36:08.5±4.0, 2°80S×139°73E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.6/15, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=132.6km s-min=28.6km az=91.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.83**	**197**	P	Pn	21 40 17.8	-0.4
	0.8nm,0.3s,baz=20,slow=13,SNR=13						
WRA				S	Sn	21 43 21.4	-16
	0.1nm,0.3s,baz=6.1,slow=23,SNR=5.8						
FITZ	**Fitzroy Crossi**	**20.55**	**221**	P	P	21 40 48.7	0.0
	1.4nm,0.6s,baz=43,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**21.50**	**195**	P	P	21 40 59.4	+0.4
	0.9nm,0.3s,baz=16,slow=11,SNR=39						
MKAR	**Makanchi Array**	**70.48**	**322**	P	P	21 47 25.1	+0.1
	0.4nm,0.4s,baz=107,slow=7.8,SNR=5.6						

*IDC **20** 21:48:25.6±1.1, 8°83S×123°43E, h0km, mb4.0/4, mb1 4.3/7, mb1mx4.0/18, mbtmp4.1/7, ML4.3/3, Error ellipse: s-maj=119.5km s-min=18.5km az=63.0*
*NEIC **20** 21:48:30.5±0.8, 8°83S×123°65E, h35km, mb4.1/1, Error ellipse: s-maj=45.4km s-min=10.6km az=62.0*
*DJA **20** 21:48:33, 9°45S×121°04E, h35km, MLv3.5/4*
*ISCJB **20** 21:48:34.0±0.6, 9°52S±0°09×123°1E±0°2, h111km±10km, mb3.8/4, Error ellipse: s-maj=29.7km s-min=7.4km az=154.7*

ISC 20 21:48:35.4±0.6, 9°50S±0°09×123°1E±0°2, h102km±10km, n14, σ1°910/18, mb3.8/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.22**	**315**	P	Pn	21 48 57.9	-0.5
MMRI				S	Sn	21 49 14.9	-0.8
BBSI	**Bau Bau**	**4.02**	**352**	P	Pn	21 49 35.8	+0.9
BKSI	**Bulukumba**	**5.10**	**324**	P	Pn	21 49 50.2	+0.7
KDI	**Kendari**	**5.53**	**355**	P	Pn	21 49 55.6	+0.3
FITZ	**Fitzroy Crossi**	**8.90**	**164**	Pn	Pn	21 50 43.5	+2.3
	2.7nm,0.3s,baz=7.2,slow=9.3,SNR=63						
FITZ				Sn	Sn	21 52 19.6	0.0
	10.0nm,0.3s,baz=120,slow=12,SNR=23						
WRA	**Warramunga Arr**	**15.02**	**135**	Pn	Pn	21 52 00.9	-1.3
	1.1nm,0.3s,baz=312,slow=15,SNR=47						
WRA				Sn	S	21 54 39.8	-19
	3.0nm,0.3s,baz=309,slow=24,SNR=13						
WB2	**Warramunga Arr**	**15.02**	**135**	ePn	Pn	21 52 01.5	-0.8
WB2				eS	S	21 54 38.1	-21
ASAR	**Alice Springs**	**17.46**	**145**	P	Pn	21 52 35.2	+2.7
	1.4nm,0.3s,baz=323,slow=13,SNR=59						
ASAR				S	S	21 55 39.3	-8.2
	1.3nm,0.3s,baz=323,slow=23,SNR=17						
STKA	**Stephens Creek**	**28.10**	**145**	P	P	21 54 22.8	+5.2
	3.0nm,0.6s,mb4.0,baz=328,slow=8.0,SNR=14						
STKA	**Stephens Creek**	**28.10**	**145**	eP	P	21 54 22.7	+5.1
	8.6nm,1.8s,mb4.0						
SONM	**Songino Array**	**58.97**	**347**	P	P	21 58 23.9	-0.2
	0.6nm,0.6s,mb3.8,baz=139,slow=7.7,SNR=2.4						
MKAR	**Makanchi Array**	**66.81**	**331**	P	P	21 59 16.8	+0.8
	0.7nm,0.6s,mb3.7,baz=126,slow=6.2,SNR=5.5						
MKAR	**Makanchi Array**	**66.81**	**331**	P	P	21 59 16.8	+0.8
ZALV	**Zalesovo Beam**	**71.01**	**337**	P	P	21 59 40.8	-1.1
	1.0nm,0.6s,mb3.9,baz=131,slow=6.5,SNR=5.7						

*ISCJB **20** 21:53:57.9±1.5, 17°4S±0°4×178°9W±0°3, h532km±24km, mb3.7/8, Error ellipse: s-maj=67.8km s-min=15.6km az=149.6*
*IDC **20** 21:53:59.0±2.1, 17°46S×178°88W, h535km±28km, mb3.2/7, mb1 3.5/8, mb1mx3.3/18, mbtmp3.3/8, Error ellipse: s-maj=58.5km s-min=14.4km az=150.0*
*NEIC **20** 21:53:58.9±1.0, 17°50S×178°86W, h535km±14km, mb4.1/1, Error ellipse: s-maj=44.8km s-min=10.7km az=150.0*

ISC 20 21:53:58.9±1.4, 17°5S±0°4×178°9W±0°2, h534km±22km, n33, σ0°44/11, mb3.7/8, 10C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.71**	**63**	P	P	21 55 53.4	0.0
	3.7nm,0.3s,baz=216,slow=19,SNR=6.3						
AFI	**Afiamalu**	**7.71**	**63**	P	P	21 55 53.4	0.0
EIDS	**Eidsvold**	**28.99**	**249**	P	P	21 59 15.7	0.0
	4.3nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**38.44**	**241**	P	P	22 00 35.3	+0.3
	1.3nm,0.4s,mb3.8,baz=84,slow=8.3,SNR=6.4						
WRA	**Warramunga Arr**	**44.27**	**259**	P	P	22 01 21.0	-0.4
	0.9nm,0.5s,mb3.5,baz=95,slow=7.0,SNR=14						
ASAR	**Alice Springs**	**44.47**	**254**	P	P	22 01 22.9	0.0
	9.9nm,0.6s,mb4.5,baz=89,slow=8.2,SNR=145						
PETK	**Petropavlovsk-**	**73.17**	**346**	P	P	22 04 35.8	+0.7
	1.5nm,0.6s,mb3.6,baz=125,slow=9.0,SNR=2.8						
NVAR	**Mina Array Bea**	**79.44**	**44**	P	P	22 05 10.0	+0.1
	1.0nm,0.7s,mb3.3,baz=223,slow=8.9,SNR=6.1						
NVAR	**Mina Array Bea**	**79.44**	**44**	P	P	22 05 10.0	+0.1
ILAR	**Eielson Array**	**85.59**	**13**	P	P	22 05 39.4	-1.0
	0.6nm,0.5s,mb3.5,baz=234,slow=4.7,SNR=7.7						
TXAR	**Lajitas Array**	**86.16**	**58**	P	P	22 05 44.1	+0.2
	0.9nm,0.8s,mb3.5,baz=218,slow=6.0,SNR=11						
KWP	**Kalwaria Pacla**	**143.51**	**336**	⇑iP	PKPdf	22 12 31.5	-1.2
BUR08	**Bucovina Ar. S**	**144.03**	**332**	ePKPdf	PKPdf	22 12 33.8	+0.1
BURAR	**Bucovina Array**	**144.04**	**332**	⇑iP	PKPdf	22 12 33.9	+0.2
BRTR	**Keskin Array B**	**144.18**	**315**	PKP	PKPdf	22 12 33.8	-0.5
	0.8nm,0.5s,baz=108,slow=1.1,SNR=6.5						
CLL	**Collm**	**144.96**	**347**	i PKPbc	PKPdf	22 12 35.5	+0.3
	comp=Z,4.0nm,0.7s						
BRG	**Berggiesshubel**	**145.16**	**346**	eP	PKPdf	22 12 36.0	+0.5
	comp=Z,2.8nm,0.8s						
DRGR		**145.77**	**333**	⇓iP	PKPdf	22 12 38.3	+1.6
BZS	**Buzias**	**147.16**	**333**	⇓iP	PKPbc	22 12 41.6	-0.6
GIVF	**Givet**	**147.34**	**356**	ePKP1	PKPbc	22 12 42.0	-0.5
BAIF	**Baives**	**147.42**	**356**	ePKP1	PKPbc	22 12 42.4	-0.3
	comp=Z,4.6nm,0.7s						
CDF	**Champ du Feu**	**148.76**	**352**	ePKP1	PKPbc	22 12 45.6	-0.5
	comp=Z,3.0nm,0.6s						
FLN	**La Foliniere**	**148.79**	**2**	⇑iPKP1	PKPbc	22 12 45.2	-1.0
LDF	**La Druitiere**	**148.97**	**2**	⇑iPKP1	PKPbc	22 12 45.4	-1.2
	comp=Z,3.0nm,0.4s						
GRR	**Gorron**	**149.15**	**3**	⇑iPKP1	PKPbc	22 12 46.2	-0.9
	comp=Z,2.4nm,0.4s						
SFTF	**Sexfontaines**	**149.21**	**355**	⇑iPKP1	PKPbc	22 12 46.8	-0.4
	comp=Z,5.5nm,0.5s						
HAU	**Haudompre**	**149.27**	**353**	ePKP1	PKPbc	22 12 46.7	-0.7
HINF	**Hinteralfeld**	**149.40**	**352**	⇑iPKP1	PKPbc	22 12 47.4	-0.3
	comp=Z,2.7nm,0.6s						
LOR	**Lormes**	**150.22**	**356**	⇑iPKP1	PKPbc	22 12 49.0	-0.7
	comp=Z,5.6nm,0.6s						
SSF	**Saint Saulge**	**150.45**	**357**	⇑iPKP1	PKPbc	22 12 49.6	-0.6
	comp=Z,3.8nm,0.5s						
AVF	**Avril sur Loir**	**150.73**	**357**	ePKP1	PKPbc	22 12 49.8	-1.0
MFF	**Saint Martin d**	**150.96**	**2**	⇑iPKP1	PKPbc	22 12 50.3	-1.1
	comp=Z,5.7nm,0.7s						
BGF	**Bois d'Agland**	**150.99**	**358**	ePKP1	PKPbc	22 12 50.7	-0.7
	comp=Z,7.7nm,0.7s						

*ATH **20** 21:54:38.0, 36°34N×21°37E, h26km±3km, MD3.9/15*
*ISCJB **20** 21:54:39.1±1.4, 36°31N±0°05×21°38E±0°06, h19km±10km, Error ellipse: s-maj=10.0km s-min=6.2km az=142.1*
*THE **20** 21:54:40.5, 36°38N×21°50E, h10km±2km, ML3.0/2, Error ellipse: s-maj=2.8km s-min=1.6km az=48.0*
*CSEM **20** 21:54:40.2±0.4, 36°40N×21°54E, h10km, ML3.0/2, Error ellipse: s-maj=9.1km s-min=4.4km az=49.0*

ISC 20 21:54:39.1±1.3, 36°34N±0°04×21°42E±0°06, h9km±7km, n70, σ0°77/88, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.93**	**26**	ePN	Pg	21 54 56.6	-0.4
ITM				eSN	Sg	21 55 09.7	+0.6
ITM	**Ithomi**	**0.93**	**26**	P	Pg	21 54 56.6	-0.4
ITM				S	Sg	21 55 09.6	+0.5
ITM	**Ithomi**	**0.93**	**26**	P	Pg	21 54 56.6	-0.4
ITM				eSn	Sg	21 55 09.7	+0.6
VLI	**Veliai**	**1.28**	**72**	ePN	Pn	21 55 03.1	0.0
VLI				eSN	Sn	21 55 20.8	+0.5
VLI	**Veliai**	**1.28**	**72**	P	Pn	21 55 03.0	-0.1
VLI				S	Sb	21 55 20.1	+0.3
VLI	**Veliai**	**1.28**	**72**	ePn	Pn	21 55 03.1	0.0
VLI				S	Sb	21 55 20.1	+0.3
VLI				eSn	Sn	21 55 20.8	+0.5
VLX	**Vlachokerasia**	**1.28**	**36**	ePN	Pn	21 55 02.5	-0.7
VLX				eSN	Sn	21 55 21.1	+0.6
VLX	**Vlachokerasia**	**1.28**	**36**	P	Pn	21 55 02.5	-0.7
VLX				S	Sb	21 55 20.8	+0.8
VLX	**Vlachokerasia**	**1.28**	**36**	P	Pn	21 55 02.5	-0.7
VLX				eSn	Sn	21 55 21.1	+0.6
KYTH	**Kithira**	**1.30**	**92**	ePN	Pn	21 55 04.1	+0.6
KYTH	**Kithira**	**1.30**	**92**	P	Pn	21 55 04.0	+0.5
KYTH	**Kithira**	**1.30**	**92**	P	Pn	21 55 04.0	+0.5
RLS	**Riolos of Patr**	**1.72**	**1**	ePN	Pn	21 55 09.0	-0.2
RLS				eSN	Sn	21 55 30.4	-0.8
RLS	**Riolos of Patr**	**1.72**	**1**	P	Pn	21 55 09.2	0.0
RLS				S	Sn	21 55 32.0	+0.8
RLS	**Riolos of Patr**	**1.72**	**1**	P	Pn	21 55 09.2	0.0
RLS				eSn	Sn	21 55 30.4	-0.8
RLS				S	Sn	21 55 32.0	+0.8
GUR	**Goura**	**1.76**	**24**	ePN	Pn	21 55 09.8	+0.1
GUR	**Goura**	**1.76**	**24**	P	Pn	21 55 09.6	-0.1
GUR	**Goura**	**1.76**	**24**	ePn	Pn	21 55 09.8	+0.1
KFL	**Anninata**	**1.84**	**344**	P	Pn	21 55 12.1	+1.3
KFL	**Anninata**	**1.84**	**344**	P	Pn	21 55 12.1	+1.3
DID	**Didima**	**1.86**	**51**	ePB	Pn	21 55 09.8	-1.4
DID	**Didima**	**1.86**	**51**	P	Pn	21 55 09.8	-1.4
DID	**Didima**	**1.86**	**51**	ePb	Pn	21 55 09.8	-1.4
LAKA	**Lakka**	**1.95**	**13**	P	Pn	21 55 12.7	+0.4
LAKA				S	Sn	21 55 36.5	-0.4
LAKA	**Lakka**	**1.95**	**13**	P	Pn	21 55 12.7	+0.4
LAKA				S	Sn	21 55 36.5	-0.4
VLS	**Valsamata**	**1.95**	**340**	ePB	Pn	21 55 11.1	-1.3
VLS	**Valsamata**	**1.95**	**340**	P	Pn	21 55 13.3	+0.9
VLS				S	Sn	21 55 36.6	-0.4
VLS	**Valsamata**	**1.95**	**340**	ePb	Pn	21 55 11.1	-1.3
VLS	**Valsamata**	**1.95**	**340**	P	Pn	21 55 13.3	+0.9
VLS				S	Sn	21 55 36.6	-0.4
LTK	**Loutraki**	**2.08**	**36**	ePN	Pn	21 55 13.1	-1.1
LTK	**Loutraki**	**2.08**	**36**	P	Pn	21 55 13.4	-0.8
LTK	**Loutraki**	**2.08**	**36**	ePn	Pn	21 55 13.1	-1.1
LTK	**Loutraki**	**2.08**	**36**	P	Pn	21 55 13.4	-0.8
EFP	**Efpalio**	**2.12**	**10**	P	Pn	21 55 15.3	+0.6
EFP	**Efpalio**	**2.12**	**10**	P	Pn	21 55 15.3	+0.6
EFP	**Efpalio**	**2.12**	**10**	ePb	Pn	21 55 15.6	+0.9
KALE	**Kalithea**	**2.13**	**15**	P	Pn	21 55 15.5	+0.7
KALE	**Kalithea**	**2.13**	**15**	P	Pn	21 55 15.5	+0.7
KARN	**Karanos**	**2.23**	**114**	P	Pn	21 55 16.6	+0.4
KARN	**Karanos**	**2.23**	**114**	P	Pn	21 55 16.6	+0.4
DSF	**Desfina**	**2.25**	**23**	P	Pn	21 55 16.1	-0.4
DSF	**Desfina**	**2.25**	**23**	P	Pn	21 55 16.1	-0.4
VLY	**Voula,Athens**	**2.42**	**51**	ePN	Pn	21 55 17.4	-1.5
VLY	**Voula,Athens**	**2.42**	**51**	P	Pn	21 55 17.4	-1.5
VLY	**Voula,Athens**	**2.42**	**51**	P	Pn	21 55 17.4	-1.5
VAM	**Vamos**	**2.44**	**112**	ePN	Pn	21 55 18.8	-0.3
VAM	**Vamos**	**2.44**	**112**	P	Pn	21 55 19.0	-0.1
VAM	**Vamos**	**2.44**	**112**	P	Pn	21 55 19.0	-0.1
LKD2	**Lefkada island**	**2.52**	**346**	P	Pn	21 55 21.2	+1.0
LKD2	**Lefkada island**	**2.52**	**346**	P	Pn	21 55 21.2	+1.0
PTL	**Penteli**	**2.59**	**48**	P	Pn	21 55 19.5	-1.7
PTL	**Penteli**	**2.59**	**48**	ePn	Pn	21 55 19.0	-2.2
PTL	**Penteli**	**2.59**	**48**	P	Pn	21 55 19.5	-1.7
EVR	**Evrytania**	**2.59**	**7**	ePB	Pn	21 55 21.9	+0.7
EVR	**Evrytania**	**2.59**	**7**	P	Pn	21 55 21.9	+0.7
EVR	**Evrytania**	**2.59**	**7**	P	Pn	21 55 21.9	+0.7
LKR	**Lokris**	**2.63**	**28**	ePN	Pn	21 55 20.4	-1.3
LKR	**Lokris**	**2.63**	**28**	P	Pn	21 55 20.3	-1.4
LKR	**Lokris**	**2.63**	**28**	ePn	Pn	21 55 20.4	-1.3
AGG	**Agios Georgios**	**2.77**	**15**	ePN	Pn	21 55 23.7	0.0
AGG	**Agios Georgios**	**2.77**	**15**	P	Pn	21 55 23.4	-0.3
AGG	**Agios Georgios**	**2.77**	**15**	P	Pn	21 55 23.4	-0.3
AGG	**Agios Georgios**	**2.77**	**15**	ePn	Pn	21 55 23.7	0.0
SIVA	**Sivas**	**3.06**	**115**	P	Pn	21 55 28.4	+0.9
SIVA	**Sivas**	**3.06**	**115**	P	Pn	21 55 28.4	+0.9
THL	**Klokotos Trika**	**3.25**	**8**	ePN	Pn	21 55 30.1	-0.2
THL	**Klokotos Trika**	**3.25**	**8**	P	Pn	21 55 30.1	-0.2
THL	**Klokotos Trika**	**3.25**	**8**	P	Pn	21 55 30.1	-0.2
LIT	**Litokhoron**	**3.85**	**12**	P	Pn	21 55 38.7	+0.2
LIT	**Litokhoron**	**3.85**	**12**	P	Pn	21 55 38.7	+0.2

*NIED **20** 22:17:00.35°60N×140°20E, h83km, Mw4.8 Best double couple: M0=1.64000×10^16 NP1:φs=121.00000°, δ83.00000°, λ-83.00000°. NP2:φs=256.00000°, δ10.00000°, λ-135.00000°.*
*BJI **20** 22:17:07.2, 35°48N×140°56E, h70km, mB4.8/26, mb4.8/55, Ms4.2/35, Ms7 3.6/27*
*MOS **20** 22:17:09.4±0.8, 35°92N×139°95E, h42km, mb5.2/82, Error ellipse: s-maj=7.5km s-min=4.5km az=100.0*
*JMA **20** 22:17:11.3±0.2, 35°62N×140°06E, h71km±2km, M4.8 Broadband fault plane solution: P waves. NP1: φs188.00000°, δ11.00000°, λ175.00000°. NP2: φs284.00000°, δ89.00000°, λ79.00000°. Principal axes: T Plg45.0000°, Azm183.0000°; N Plg11.0000°, Azm284.0000°; P Plg43.0000°, Azm24.0000°;*
JMA Felt III J1.
*NEIC **20** 22:17:11.3, 35°62N×140°06E, h71km, mb5.0/151, MW4.7(NIED), After JMA.*
NEIC Felt [III] at Yokosuka. Also felt at Ayase, Hayama, Tokyo, Yokohama and Zushi. Recorded [3 JMA] in Chiba, Kanagawa, Saitama, Tokyo and Yamanashi; [2 JMA] in Gumma, Ibaraki, Shizuoka and Tochigi; [1 JMA] in Fukushima, Miyagi, Nagano and Niigata. Also recorded [2 JMA] on O-shima and [1 JMA] on Nii-jima and To-shima.
*IDC **20** 22:17:11.8±1.0, 35°51N×140°05E, h66km±8km, mb4.4/25, mb1 4.7/27, mb1mx4.6/29, mbtmp4.5/27, MS3.6/11, Ms1 3.6/11, ms1mx3.3/27, Error ellipse: s-maj=12.3km s-min=5.6km az=66.0*
*SZGRF **20** 22:17:11.3, 35°86N×141°02E, h51km, mb4.9, Near east coast of eastern Honshu, Japan*
*ISCJB **20** 22:17:11.9±0.2, 35°53N±0°02×139°90E±0°02, h75km±2km, mb4.8/208, Error ellipse: s-maj=3.8km s-min=2.8km az=176.7*
*DJA **20** 22:17:38, 35°08N×138°99E, h273km, mb4.7/13*

ISC 20 22:17:12.9±0.2, 35°53N±0°02×139°91E±0°02, h70km±2km, h62km±2.3km: pP-P, n839, σ0°74/862, mb4.8/208, 143C-159D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.20**	**323**	⇓P	Pn	22 17 23.1	-0.4
TOK				S	Sn	22 17 31.5	+0.3
JCN	**Nagara**	**0.27**	**115**	⇓P	Pn	22 17 22.8	-1.0
JCN				S	Sn	22 17 31.5	-0.3
JOD2	**Odawara 2**	**0.72**	**249**	⇓P	Pn	22 17 28.2	+0.2
JOD2				S	Sn	22 17 40.0	+0.9
BSO3	**Boso 3**	**0.88**	**146**	⇓P	Pn	22 17 28.0	-1.9
JIM2	**Oshima 3**	**0.90**	**206**	⇓P	Pn	22 17 29.5	-0.6
JIM2				S	Sn	22 17 43.8	+0.9
JRY	**Ryogami san**	**0.95**	**301**	⇑P	Pn	22 17 31.1	+0.4
JRY				S	Sn	22 17 46.2	+2.2
JAG	**Ashikaga**	**0.97**	**338**	⇑P	Pn	22 17 29.5	-1.4
JAG				S	Sn	22 17 42.9	-1.5
JYN	**Shimob**	**1.11**	**269**	⇓P	Pn	22 17 33.3	+0.6
JYN				S	Sn	22 17 49.7	+2.1
JIZS	**Izushimoda**	**1.17**	**226**	⇓P	Pn	22 17 33.8	+0.3
JIZS				S	Sn	22 17 50.2	+1.3
BSO1	**Boso 1**	**1.24**	**135**	⇓P	Pn	22 17 31.7	-2.7
JKT	**Katashina**	**1.34**	**337**	⇑P	Pn	22 17 34.3	-1.5
JKT				S	Sn	22 17 52.0	-1.0
MJAR	**Matsushiro Arr**	**1.71**	**307**	P	Pn	22 17 38.3	-2.2
	270nm,0.3s,baz=297,slow=5.5,SNR=2042						
MJAR				S	Sn	22 18 02.9	+1.4
	692nm,0.3s,baz=145,slow=18,SNR=14						
MJAR	**Matsushiro Arr**	**1.71**	**307**	P	Pn	22 17 38.3	-2.2
MJAR				S	Sn	22 18 02.9	+1.4
MAJO	**Matsushiro**	**1.71**	**307**	ePn	Pn	22 17 41.0	+0.5
MAJO				eS	Sn	22 18 05.8	+4.2
MAJO	**Matsushiro**	**1.71**	**307**	eP	Pn	22 17 41.0	+0.4
MAT	**Matsushiro**	**1.71**	**307**	P	Pn	22 17 40.7	+0.1
MAT				S	Sn	22 18 03.7	+2.1
JHJ	**Hachijo jima 2**	**2.41**	**182**	P	Pn	22 17 49.6	-0.4
	692nm,0.3s,baz=162,slow=0.3,SNR=120						
JHJ				S	Sn	22 18 17.8	-0.6
	2μm,0.3s,baz=104,slow=23,SNR=11						
ERM	**Erimo**	**6.96**	**20**	ePn	Pn	22 18 47.0	-5.1
ERM				eS	Sn	22 20 00.8	-8.8
ERM	**Erimo**	**6.96**	**20**	eP	Pn	22 18 47.0	-5.0
ERM				eS	Sn	22 20 00.8	-8.8
ERM	**Erimo**	**6.96**	**20**	Pn	Pn	22 18 47.0	-5.0
	978nm,0.6s,SNR=57						
JNU	**Nakatsue**	**7.84**	**255**	ePn	Pn	22 19 06.7	+2.4
CBIJ	**Chichi jima**	**8.63**	**166**	P	Pn	22 19 11.3	-3.7
	196nm,0.3s,baz=21,slow=5.6,SNR=127						
CBIJ				S	Sn	22 20 42.3	-8.5
	63nm,0.3s,baz=278,slow=23,SNR=4.6						
ASAJ	**Asahikawa**	**8.82**	**13**	P	Pn	22 19 11.8	-5.7
	11nm,0.3s,baz=211,slow=12,SNR=77						
ASAJ				S	Sn	22 20 48.8	-6.5
	6.6nm,0.3s,baz=360,slow=29,SNR=6.2						
ASAJ				LR	LR	22 23 32.2	
	comp=Z,64nm,18.5s,baz=194,slow=43						
ASAJ	**Asahikawa**	**8.82**	**13**	ePn	Pn	22 19 11.6	-5.9
ASAJ				eS	Sn	22 20 48.1	-7.2
ASAJ	**Asahikawa**	**8.82**	**13**	P	Pn	22 19 11.9	-5.6
ASAJ				S	Sn	22 20 48.8	-6.5
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				smax			
	comp=N,7.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,64nm,18.5s						
YUK	**Yuzh-Kuril'sk**	**9.65**	**27**	⇑iP	Pn	22 19 22.9	-5.9
YUK				i S	Sn	22 21 03.0	-12
YUK				pmax	pmax		
	comp=Z,474nm,1.8s						
YUK				pmax	pmax		
	comp=Z,95nm,0.2s						
YUK				pmax	pmax		
	comp=N,368nm,1.3s						
YUK				pmax	pmax		
	comp=E,326nm,1.3s						
YUK				smax			
	comp=N,612nm,0.7s						
YUK				smax			
	comp=E,1μm,0.7s						
YUK				MLR	MLR		
	comp=N,202nm,10.4s						
YUK				MLR	MLR		
	comp=Z,151nm,10.4s						
YUK				MLR	MLR		
	comp=E,47nm,2.8s						
KSRS	**Korea Array**	**9.84**	**285**	P	Pn	22 19 35.6	+4.2
	comp=E,2.2nm,0.3s,baz=99,slow=14,SNR=79						
KSRS				LR	LR	22 23 22.0	
	comp=E,332nm,19.2s,baz=307,slow=37						
KSRS	**Korea Array**	**9.84**	**285**	P	Pn	22 19 35.6	+4.2
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,332nm,19.2s						
KUR	**Kuril'sk**	**11.43**	**30**	eP	Pn	22 19 47.0	-6.1
KUR				eS	Sn	22 21 46.0	-13
KUR				pmax	pmax		
	comp=Z,230nm,1.0s						
KUR				smax			
	comp=N,230nm,0.6s						
KUR				smax			
	comp=E,230nm,0.6s						
YSS	**Yuzh-Sakhalins**	**11.61**	**10**	ePn	Pn	22 19 50.3	-5.2
YSS	**Yuzh-Sakhalins**	**11.61**	**10**	eP	Pn	22 19 50.3	-5.3
MDJ	**Mudanjiang**	**12.02**	**322**	P	Pn	22 20 02.4	+1.2
MDJ				S	Sn	22 22 15.5	+2.1
MDJ				PcP	PcP	22 25 40.4	-0.8
MDJ				pmax	pmax		
	comp=Z,66nm,1.2s						
MDJ				LR	LR		
	comp=N,160nm,12.7s						
MDJ				LR	LR		
	comp=E,77nm,7.7s						
MDJ				LR	LR		
	comp=Z,180nm,11.8s						
MDJ	**Mudanjiang**	**12.02**	**322**	ePn	Pn	22 20 03.3	+2.1
	comp=Z,60nm,1.0s						
JOW	**Kunigami**	**13.19**	**232**	ePn	Pn	22 20 19.7	+2.5
HABR	**Khabarovsk**	**13.42**	**346**	P	Pn	22 20 14.5	-5.6
HABR				eS	Sn	22 22 39.0	-8.4
HABR				pmax	pmax		
	comp=Z,30nm,1.4s						
HABR				MLR	MLR		
	comp=Z,257nm,22.0s						
CN2	**Changchun**	**13.85**	**311**	eP	Pn	22 20 28.0	+2.2
CN2				epP		22 20 37.9	
CN2				eS	Sn	22 23 02.0	+4.1
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=N,200nm,10.0s						
CN2				LR	LR		
	comp=E,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
SNY	**Shenyang**	**14.21**	**301**	⇑P	Pn	22 20 34.0	+3.5
SNY				pmax	pmax		
	comp=Z,32nm,1.3s						
SNY				LR	LR		
	comp=N,86nm,6.0s						
SNY				LR	LR		
	comp=E,210nm,12.3s						
SNY				LR	LR		
	comp=Z,110nm,12.0s						
KLR	**Kul'dur**	**14.94**	**339**	eP	Pn	22 20 31.8	-8.2
DL2	**Dalian**	**14.95**	**288**	P	Pn	22 20 43.6	+3.5
DL2				S	Sn	22 23 32.3	+7.7
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
DL2				LR	LR		
	comp=N,280nm,12.9s						
DL2				LR	LR		
	comp=Z,260nm,23.2s						
SSE	**Sheshan**	**16.26**	**260**	P	Pn	22 20 57.3	+0.5
SSE				S	S	22 23 59.8	-5.5
SSE				pmax	pmax		
	comp=Z,51nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,7.7s						
SSE				LR	LR		
	comp=N,200nm,31.4s						
SSE				LR	LR		
	comp=E,140nm,31.4s						
SSE				LR	LR		
	comp=Z,180nm,31.4s						
NJ2	**Nanjing**	**17.84**	**265**	eP	Pn	22 21 19.1	+2.9
NJ2				pP	pP	22 21 33.1	+2.7
NJ2				PP		22

PEA0B	**Petropavlovsk-**	**21.60**	**30**	*e*P	**P**	**22 21 55.0**	**-1.7**
PETK	**Petropavlovsk-**	**21.60**	**30**	P	**P**	**22 21 55.0**	**-1.7**
	comp=Z,66nm,1.0s,mb4.9,baz=212,slow=9.5,SNR=46						
PETK				LR	LR	22 29 43.3	
	comp=Z,102nm,20.5s,baz=212,slow=35						
PETK	**Petropavlovsk-**	**21.60**	**30**	P	**P**	**22 21 55.0**	**-1.7**
PETK				LR	LR	22 29 43.3	
PETK	**Petropavlovsk-**	**21.60**	**30**	P	**P**	**22 21 55.0**	**-1.7**
PET	**Petropavlovsk**	**21.93**	**31**	*e*P	**P**	**22 21 58.2**	**-2.1**
	comp=Z,97nm,0.9s,mb5.1						
PET	**Petropavlovsk**	**21.93**	**31**	*e*P	**P**	**22 21 57.9**	**-2.4**
PET				*e*S	**S**	**22 25 51.4**	**-6.9**
PET				pmax	pmax		
	comp=Z,135nm,1.0s,mb5.2						
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
WHN	**Wuhan**	**21.97**	**264**	P	**P**	**22 22 04.4**	**+3.5**
WHN				pmax	pmax		
	comp=Z,40nm,0.9s,mb4.8						
WHN				LR	LR		
	comp=N,580nm,23.3s						
WHN				LR	LR		
	comp=E,570nm,32.0s						
WHN				LR	LR		
	comp=Z,380nm,23.0s						
GUMO	**Guam**	**22.30**	**167**	P	**P**	**22 22 03.0**	**-1.4**
	comp=Z,78nm,0.7s,mb5.2,baz=249,slow=16,SNR=6.2						
GUMO	**Guam**	**22.30**	**167**	P	**P**	**22 22 03.0**	**-1.5**
GUMO				pmax	pmax		
	comp=Z,78nm,0.7s,mb5.2						
GUMO	**Guam**	**22.30**	**167**	P	**P**	**22 22 11.6**	**+7.1**
	comp=Z,251nm,1.2s,mb5.4						
HHC	**Hu-ho-hao-te**	**22.85**	**292**	*e*P	**P**	**22 22 09.3**	**-0.8**
HHC				pP		22 22 23.5	
HHC				sP	sP	22 22 30.9	-2.8
HHC				PP		22 22 41.3	
HHC				PcP	PcP	22 25 58.8	+0.1
HHC				S	**S**	**22 26 13.0**	**-1.2**
HHC				ScP	ScP	22 29 30.5	+0.2
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.2						
HHC				pmax	pmax		
	comp=Z,110nm,5.8s						
HHC				LR	LR		
	comp=N,210nm,6.9s						
HHC				LR	LR		
	comp=E,130nm,7.6s						
HHC				LR	LR		
	comp=Z,130nm,8.9s						
CLNS	**Chul'man**	**23.61**	**339**	*e*P	**P**	**22 22 16.8**	**-0.3**
CLNS				*e**PP		22 22 25.4	
CLNS				*e*PPP		22 22 48.5	
CLNS				pmax	pmax		
	comp=Z,85nm,1.3s,mb4.9						
CLNS				pmax	pmax		
	comp=N,55nm,1.2s						
CLNS				pmax	pmax		
	comp=E,16nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
CLNS				pmax	pmax		
	comp=N,13nm,0.7s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.7s						
XAN	**Xi'an**	**25.44**	**276**	P	**P**	**22 22 33.8**	**-0.3**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
XAN				LR	LR		
	comp=N,150nm,27.2s						
ENH	**Enshi**	**26.01**	**267**	*e*P	**P**	**22 22 39.3**	**0.0**
	comp=N,30nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**27.24**	**307**	*e*P	**P**	**22 22 51.2**	**+1.1**
	comp=N,5.5nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**27.24**	**307**	*e*P	**P**	**22 22 51.2**	**+1.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.2						
ULN	**Ulaanbaatar**	**27.24**	**307**	P	**P**	**22 22 54.4**	**+4.3**
	comp=Z,12nm,1.3s,mb4.3						
YAK	**Yakutsk**	**27.30**	**349**	*e*P	**P**	**22 22 49.0**	**-1.5**
	comp=Z,117nm,1.1s,mb5.3						
YAK	**Yakutsk**	**27.30**	**349**	*e*P	**P**	**22 22 48.7**	**-1.8**
YAK				*e*		22 23 34.9	
YAK				*e*		22 26 05.5	
YAK				*e*S	**S**	**22 27 22.8**	**-1.8**
YAK				*e*SS		22 28 47.8	
YAK				*e*		22 33 29.7	
YAK				pmax	pmax		
	comp=Z,86nm,1.3s,mb5.1						
YAK				pmax	pmax		
	comp=N,75nm,1.4s						
YAK				pmax	pmax		
	comp=E,20nm,1.2s						
YAK				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.7						
YAK				smax			
	comp=E,50nm,2.4s						
YAK				smax			
	comp=N,85nm,2.8s						
SONM	**Songino Array**	**27.66**	**307**	P	**P**	**22 22 53.2**	**-0.7**
	comp=N,3.9nm,0.8s,mb4.0,baz=110,slow=10,SNR=7.3						
SONM				LR	LR	22 33 38.1	
	comp=N,123nm,21.7s,baz=60,slow=36						
SONM	**Songino Array**	**27.66**	**307**	P	**P**	**22 22 53.2**	**-0.7**
BOD	**Bodaibo**	**28.19**	**330**	*e*P	**P**	**22 22 57.3**	**-1.2**
SEY	**Seymchan**	**28.50**	**12**	*de*P	**P**	**22 23 00.5**	**-0.7**
LZH	**Lanzhou**	**29.15**	**282**	*e*P	**P**	**22 23 09.8**	**+2.5**
LZH				pP	pP	22 23 22.0	-2.0
LZH				sP	sP	22 23 32.0	-0.2
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
GYA	**Guiyang**	**29.78**	**262⇑**	*i*P	**P**	**22 23 14.0**	**+1.0**
GYA				pP	pP	22 23 28.0	-1.7
GYA				sP	sP	22 23 35.4	-2.5
GYA				PP	PP	22 24 13.3	-7.9
GYA				PcP	PcP	22 26 15.3	+0.2
GYA				S	**S**	**22 28 06.4**	**+1.9**
GYA				ScP	ScP	22 29 51.4	+0.5
GYA				ScS	ScS	22 33 44.8	-1.4
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,580nm,15.9s						
GYA				LR	LR		
	comp=E,420nm,16.0s						
GYA				LR	LR		
	comp=Z,540nm,14.9s						
ZAK	**Zakamensk**	**30.29**	**311**	*e*P	**P**	**22 23 17.4**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CD2	**Chengdu**	**30.48**	**272**	*e*P	**P**	**22 23 19.5**	**+0.4**
CD2				pP	pP	22 23 34.3	-1.5
CD2				sP	sP	22 23 41.6	-2.4
CD2				PP	PP	22 24 20.8	-8.1
CD2				S	**S**	**22 28 16.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
CD2				pmax	pmax		
	comp=Z,30nm,5.6s						
CD2				LR	LR		
	comp=N,440nm,15.6s						
CD2				LR	LR		
	comp=E,480nm,19.2s						
CD2				LR	LR		
	comp=Z,290nm,14.4s						
GTA	**Gaotai**	**31.87**	**289**	*e*P	**P**	**22 23 32.3**	**+1.0**
GTA				pP	pP	22 23 47.3	-0.7
GTA				sP	sP	22 23 54.4	-1.9
GTA				S	**S**	**22 28 39.6**	**+2.7**
GTA				sS	sS	22 29 05.4	-0.3
GTA				SS	SS	22 30 36.4	-19
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
GTA				pmax	pmax		
	comp=Z,69nm,4.5s						
KMI	**Kunming**	**33.54**	**262**	⇑P	**P**	**22 23 45.9**	**-0.1**
KMI				pP	pP	22 24 00.9	-1.9
KMI				S	**S**	**22 29 01.1**	**-2.0**
KMI				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.7						
KMI				LR	LR		
	comp=N,130nm,9.6s						
KMI				LR	LR		
	comp=E,150nm,7.7s						
KMI				LR	LR		
	comp=Z,160nm,8.1s						
BILL	**Bilibino**	**35.81**	**17**	*e*P	**P**	**22 24 03.8**	**-1.3**
	comp=Z,28nm,0.8s,mb5.2						
BILL	**Bilibino**	**35.81**	**17⇑**	*e*P	**P**	**22 24 03.6**	**-1.4**
BILL				*e*		22 25 22.1	
BILL				*e*S	**S**	**22 29 27.6**	**-10**
BILL				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
BILL				MLR	MLR		
	comp=Z,200nm,20.0s						
TIXI	**Tiksi**	**36.65**	**354**	*e*P	**P**	**22 24 10.6**	**-1.6**
	comp=Z,15nm,0.6s,mb5.1						
TIXI	**Tiksi**	**36.65**	**354**	*e*P	**P**	**22 24 10.6**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
MRSI	**Marisa**	**38.68**	**210**	P	**P**	**22 24 29.8**	**-0.1**
	comp=Z,20nm,1.1s,mb4.9						
CHTO	**Chiang Mai**	**39.74**	**256**	*e*P	**P**	**22 24 37.9**	**-0.8**
	comp=Z,6.7nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**39.74**	**256**	*e*P	**P**	**22 24 37.9**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**39.74**	**256**	P	**P**	**22 24 39.7**	**+0.9**
	comp=Z,9.6nm,1.5s,mb4.4						
CMAR	**Chiang Mai Arr**	**39.94**	**256**	P	**P**	**22 24 39.7**	**-0.7**
	comp=Z,1.7nm,0.6s,mb4.0,baz=49,slow=7.7,SNR=8.1						
CMAR				LR	LR	22 42 50.7	
	comp=Z,83nm,19.0s,baz=262,slow=38						
CMAR	**Chiang Mai Arr**	**39.94**	**256**	P	**P**	**22 24 39.7**	**-0.7**
WMQ	**Urumqi**	**40.45**	**298**	P	**P**	**22 24 45.0**	**+0.6**
WMQ				pP	pP	22 24 57.0	-4.6
WMQ				PP	PP	22 26 23.0	+4.5
WMQ				S	**S**	**22 30 51.0**	**+3.2**
WMQ				SS	SS	22 33 47.0	-2.2
WMQ				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,67nm,4.0s						
WMQ				LR	LR		
	comp=N,150nm,14.0s						
WMQ				LR	LR		
	comp=E,77nm,14.0s						
WMQ				LR	LR		
	comp=Z,66nm,14.0s						
LSA	**Lhasa**	**41.14**	**276**	*e*P	**P**	**22 24 51.6**	**+1.4**
	comp=Z,6.7nm,0.8s,mb4.5						
LSA	**Lhasa**	**41.14**	**276**	*e*P	**P**	**22 24 51.6**	**+1.4**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
ZALV	**Zalesovo Beam**	**42.05**	**314**	P	**P**	**22 24 56.9**	**-0.4**
	comp=Z,10nm,0.4s,mb4.9,baz=99,slow=8.3,SNR=63						
ZALV				PcP	PcP	22 26 50.3	-0.6
	comp=Z,2.8nm,0.6s,baz=96,slow=3.6,SNR=4.3						
ZALV				ScP	ScP	22 30 34.6	-0.6
	comp=Z,1.2nm,0.7s,baz=82,slow=4.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**42.05**	**314**	P	**P**	**22 24 56.9**	**-0.4**
ZALV				PcP	PcP	22 26 50.3	-0.6
ZALV				ScP	ScP	22 30 34.6	-0.6
ZALV	**Zalesovo Beam**	**42.05**	**314**	P	**P**	**22 24 56.9**	**-0.4**
ZALV						22 26 50.3	
NVS	**Novosibirsk**	**43.02**	**315⇑**	*i*P	**P**	**22 25 04.0**	**-1.1**
NVS				pmax	pmax		
	comp=E,24nm,1.4s						
NVS				pmax	pmax		
	comp=Z,37nm,1.4s,mb4.9						
KSM	**Kuching**	**43.63**	**226**	*e*P	**P**	**22 25 09.8**	**-0.7**
	comp=Z,10nm,0.5s,mb4.8						
MK31	**Makanchi Array**	**43.90**	**303**	*e*P	**P**	**22 25 12.7**	**+0.3**
MK31	**Makanchi Array**	**43.90**	**303**	*e*P	**P**	**22 25 12.7**	**+0.3**
MKAR	**Makanchi Array**	**43.90**	**303**	P	**P**	**22 25 12.7**	**+0.3**
	comp=Z,8.2nm,0.6s,mb4.6,baz=87,slow=10,SNR=36						
MKAR				ScP	ScP	22 30 42.7	-0.1
	comp=Z,1.9nm,0.6s,baz=78,slow=5.8,SNR=6.1						
MKAR				LR	LR	22 43 42.4	
	comp=Z,60nm,21.5s,baz=258,slow=36						
MKAR	**Makanchi Array**	**43.90**	**303**	P	**P**	**22 25 12.7**	**+0.3**
TAPN	**Taplejung**	**44.84**	**275**	*e*P	**P**	**22 25 20.5**	**+0.4**
	comp=Z,17nm,0.5s,mb5.0						
ODAN	**Odare**	**45.30**	**274**	*e*P	**P**	**22 25 23.9**	**+0.1**
	comp=Z,21nm,0.7s,mb5.0						
KURK	**Kurchatov**	**45.92**	**309**	*e*P	**P**	**22 25 28.1**	**-0.2**
	comp=Z,54nm,1.0s,mb5.2						
KURK	**Kurchatov**	**45.92**	**309**	*e*P	**P**	**22 25 28.1**	**-0.2**
KURK				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.2						
GUN	**Gumba**	**46.10**	**276**	*e*P	**P**	**22 25 30.3**	**+0.2**
	comp=Z,59nm,0.8s,mb5.4						
PKI	**Pulchoki**	**46.62**	**276**	*e*P	**P**	**22 25 34.0**	**-0.1**
	comp=Z,31nm,0.8s,mb5.1						
PKI	**Pulchoki**	**46.62**	**276**	*e*P	**P**	**22 25 34.2**	**+0.1**
	comp=Z,18nm,0.5s,mb5.0						
PKI	**Pulchoki**	**46.62**	**276**	*e*P	**P**	**22 25 34.2**	**+0.1**
PKI				pmax	pmax		
	comp=Z,18nm,0.5s,mb5.1						
PKIN	**Phulchoki**	**46.62**	**276**	*e*P	**P**	**22 25 34.2**	**0.0**
	comp=Z,18nm,0.5s,mb5.0						
KKN	**Kakani**	**46.63**	**276**	*e*P	**P**	**22 25 33.9**	**-0.4**
	comp=Z,40nm,0.9s,mb5.2						
KKN	**Kakani**	**46.63**	**276**	*e*P	**P**	**22 25 33.9**	**-0.4**
KKN				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.2						
DMN	**Daman**	**46.85**	**276**	*e*P	**P**	**22 25 35.6**	**-0.3**
	comp=Z,24nm,0.9s,mb4.9						
GKN	**Gorkha**	**47.07**	**277**	*e*P	**P**	**22 25 37.5**	**-0.2**
	comp=Z,73nm,0.9s,mb5.4						
DANN	**Dangsing**	**47.64**	**278**	*e*P	**P**	**22 25 42.1**	**0.0**
	comp=Z,156nm,0.7s,mb6.0						
KOLN	**Koldanda**	**48.00**	**277**	*e*P	**P**	**22 25 43.9**	**-1.0**
	comp=Z,22nm,0.5s,mb5.2						
RSO	**Redoubt South**	**48.84**	**37**	*e*P	**P**	**22 25 50.5**	**-0.4**
	comp=Z,175nm,1.0s,mb5.9						
KDAK	**Kodiak Island**	**49.03**	**41**	*ce*P	**P**	**22 25 50.7**	**-1.6**
KDAK	**Kodiak Island**	**49.03**	**41**	P	**P**	**22 25 51.0**	**-1.3**
	comp=Z,587nm,0.6s,SNR=21						
PPLA	**Purkeypile**	**49.10**	**34**	*e*P	**P**	**22 25 52.7**	**-0.1**
	comp=Z,17nm,1.0s,mb4.9						
TKM2	**Tokmak 2**	**49.28**	**299**	P	**P**	**22 25 56.0**	**+1.5**
	SNR=13						
TKM2	**Tokmak 2**	**49.28**	**299**	*e*P	**P**	**22 25 56.0**	**+1.5**
	comp=Z,25nm,0.8s,mb5.2						
TKM2	**Tokmak 2**	**49.28**	**299**	*e*P	**P**	**22 25 56.0**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
COEN	**Coen**	**49.31**	**176**	*e*P	**P**	**22 25 54.7**	**-0.2**
	comp=Z,158nm,0.9s,mb5.9						
BPAW	**Bear Paw Mtn.**	**49.65**	**33**	*e*P	**P**	**22 25 56.4**	**-0.5**
	comp=Z,18nm,1.3s,mb4.8						
KBK	**Karagaybulak**	**49.81**	**299**	P	**P**	**22 26 00.4**	**+1.9**
	SNR=19						
CHMS	**Chumysh**	**49.87**	**299**	P	**P**	**22 26 00.4**	**+1.4**
	SNR=8.6						
KSH	**Kashi**	**49.92**	**295**	*e*P	**P**	**22 26 04.3**	**+4.9**
KSH				*ep*P	pP	22 26 19.9	+2.8
KSH				*es*P	sP	22 26 27.0	+1.9
KSH				*e*PcP	PcP	22 27 22.3	+3.5
KSH				*e*PP	PP	22 28 01.5	+6.9
KSH				*e*PcS	PcS	22 31 18.0	+2.3
KSH				*e*S	**S**	**22 33 11.5**	**+7.1**
KSH				*e*ScS	ScS	22 35 46.5	+2.4
KSH				*e*SS	SS	22 36 43.1	+5.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
KSH				LR	LR		
	comp=N,200nm,7.6s						
KSH				LR	LR		
	comp=E,210nm,5.4s						
TRF	**Thorofare Moun**	**49.96**	**33**	*e*P	**P**	**22 25 58.9**	**-0.4**
	comp=E,7.4nm,0.7s,mb4.7						
USP	**Ospenovka**	**49.98**	**300**	P	**P**	**22 26 01.2**	**+1.4**
	SNR=8.8						
COLD	**Coldfoot**	**50.05**	**28**	*e*P	**P**	**22 25 59.1**	**-0.9**
	comp=E,2.9nm,0.6s,mb4.4						
AAK	**Ala-Archa**	**50.14**	**299**	P	**P**	**22 26 03.0**	**+1.9**
	SNR=6.9						
AAK	**Ala-Archa**	**50.14**	**299**	P	**P**	**22 26 02.0**	**+1.0**
	comp=E,4.3nm,0.6s,mb4.6,baz=97,slow=6.9,SNR=11						
AAK				LR	LR	22 47 50.0	
	comp=E,74nm,19.6s,baz=60,slow=37						
AAK	**Ala-Archa**	**50.14**	**299**	*e*P	**P**	**22 26 01.4**	**+0.3**
	comp=E,19nm,1.2s,mb4.9						
AAK	**Ala-Archa**	**50.14**	**299**	*de*P	**P**	**22 26 02.4**	**+1.4**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
AAK	**Ala-Archa**	**50.14**	**299**	P	**P**	**22 26 01.3**	**+0.3**
	comp=Z,59nm,1.3s,mb5.4,SNR=5.5						
AAK	**Ala-Archa**	**50.14**	**299**	P	**P**	**22 26 02.7**	**+1.7**
	comp=Z,2.6nm,1.1s,mb4.1						
SEW	**Seward**	**50.50**	**38**	*e*P	**P**	**22 26 01.8**	**-1.6**
	comp=Z,32nm,0.8s,mb5.3						
MCK	**McKinley**	**50.56**	**33**	*e*P	**P**	**22 26 02.9**	**-0.9**
	comp=Z,18nm,0.9s,mb5.1						
MCK	**McKinley**	**50.56**	**33**	*e*P	**P**	**22 26 02.9**	**-0.9**
MCK				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
EKS2	**Erkin-Say**	**50.65**	**299**	*e*P	**P**	**22 26 06.2**	**+1.3**
	comp=Z,11nm,1.1s,mb4.8						
BVAR	**Borovoye Array**	**50.69**	**313**	P	**P**	**22 26 05.1**	**+0.1**
	comp=Z,2.9nm,0.4s,mb4.7,baz=74,slow=8.1,SNR=18						
BVAR	**Borovoye Array**	**50.69**	**313**	P	**P**	**22 26 05.1**	**+0.1**
BRVK	**Borovoye**	**50.75**	**313**	*e*P	**P**	**22 26 05.7**	**+0.2**
	comp=Z,4.9nm,0.4s,mb4.9						
BRVK	**Borovoye**	**50.75**	**313**	*d i*P	**P**	**22 26 06.5**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
AML	**Almayashu**	**50.85**	**299**	P	**P**	**22 26 09.0**	**+2.7**
	SNR=21						
AML	**Almayashu**	**50.85**	**299**	*e*P	**P**	**22 26 07.9**	**+1.5**
	comp=Z,28nm,0.6s,mb5.5						
SML	**Sawmill**	**50.92**	**36**	*e*P	**P**	**22 26 05.8**	**-0.8**
	comp=Z,6.1nm,0.8s,mb4.7						
SML	**Sawmill**	**50.92**	**36**	*e*P	**P**	**22 26 05.8**	**-0.8**
SML				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
MNSI	**Mandailing Nat**	**50.97**	**236**	P	**P**	**22 26 06.2**	**-1.4**
	comp=Z,20nm,0.6s,mb5.3						
COLA	**College**	**51.00**	**32**	*e*P	**P**	**22 26 06.8**	**-0.4**
	comp=Z,11nm,0.6s,mb5.0						
COLA	**College**	**51.00**	**32**	*e*P	**P**	**22 26 06.8**	**-0.3**
COLA				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1						
ILAR	**Eielson Array**	**51.41**	**32**	P	**P**	**22 26 08.8**	**-1.4**
	comp=Z,13nm,0.8s,mb5.0,baz=270,slow=6.3,SNR=150						
ILAR	**Eielson Array**	**51.41**	**32**	P	**P**	**22 26 08.9**	**-1.3**
MDSI	**Maura Dua**	**52.03**	**228**	P	**P**	**22 26 14.0**	**-1.5**
	comp=Z,44nm,0.9s,mb5.5						
PAX	**Paxson**	**52.16**	**34**	*e*P	**P**	**22 26 15.6**	**-0.2**
	comp=Z,10nm,1.0s,mb4.8						
PAX	**Paxson**	**52.16**	**34**	*e*P	**P**	**22 26 15.6**	**-0.2**
PAX				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
DOT	**Dot Lake**	**52.73**	**33**	*e*P	**P**	**22 26 18.9**	**-1.2**
	comp=Z,28nm,0.8s,mb5.3						
KKAR	**Karatay Array**	**52.83**	**301**	*e*P	**P**	**22 26 21.4**	**+0.3**
	comp=Z,16nm,0.9s,mb5.1						
KKAR	**Karatay Array**	**52.83**	**301**	*e*P	**P**	**22 26 21.4**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
EGAK	**Eagle**	**53.86**	**31**	*e*P	**P**	**22 26 27.1**	**-1.2**
	comp=Z,17nm,1.2s,mb5.0						
WB2	**Warramunga Arr**	**55.42**	**186**	*e*P	**P**	**22 26 38.9**	**-1.1**
WRA	**Warramunga Arr**	**55.42**	**186**	P	**P**	**22 26 38.9**	**-1.2**
	comp=Z,16nm,0.4s,mb5.4,baz=0.9,slow=7.7,SNR=444						
WRA				PcP	PcP	22 27 39.7	+0.1
	comp=Z,1.9nm,0.5s,baz=0.4,slow=4.6,SNR=2.8						
WRA				ScP	ScP	22 31 32.9	+0.8
	comp=Z,2.1nm,0.9s,baz=6.1,slow=4.8,SNR=6.0						
WRA	**Warramunga Arr**	**55.42**	**186**	P	**P**	**22 26 38.9**	**-1.2**
WRA				PcP	PcP	22 27 39.7	+0.1
WRA				ScP	ScP	22 31 32.9	+0.8
WRA	**Warramunga Arr**	**55.42**	**186**	P	**P**	**22 26 38.9**	**-1.1**
WRA						22 27 39.7	
INK	**Inuvik**	**56.28**	**27**	*e*P	**P**	**22 26 44.3**	**-1.4**
	comp=Z,9.6nm,0.7s,mb4.9						
INK	**Inuvik**	**56.28**	**27**	*e*P	**P**	**22 26 44.3**	**-1.4**
INK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARU	**Arti**	**56.68**	**319**	*e*P	**P**	**22 26 48.3**	**-0.4**
	comp=Z,11nm,0.5s,mb5.1						
ARU	**Arti**	**56.68**	**319**	*d i*P	**P**	**22 26 48.3**	**-0.4**
ARU				*e**PP	pP	22 27 04.4	-2.4
ARU				*e*		22 28 49.0	
ARU				S	**S**	**22 34 35.1**	**-0.5**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
ARU	**Arti**	**56.68**	**319**	P	**P**	**22 26 48.3**	**-0.4**
	comp=Z,116nm,0.5s,SNR=11						
KBL	**Kabul**	**56.82**	**291**	*e*P	**P**	**22 26 50.6**	**+0.6**
	comp=Z,6.6nm,0.8s,mb4.7						
KBL	**Kabul**	**56.82**	**291**	*e*P	**P**	**22 26 50.6**	**+0.5**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
HYB	**Hyderabad**	**56.94**	**268**	*i* P	**P**	**22 26 50.0**	**-1.1**
SKAG	**Skagway**	**57.63**	**37**	*e*P	**P**	**22 26 55.8**	**+0.5**
	comp=Z,34nm,1.1s,mb5.3						
ABKAR	**Akbulak array**	**57.98**	**310**	*e*P	**P**	**22 26 57.9**	**-0.1**
	comp=Z,5.9nm,0.4s,mb5.0						
AKTK	**Aktyubinsk**	**58.78**	**312**	P	**P**	**22 27 03.2**	**-0.3**
AKTK				LR	LR	22 51 38.6	
AKTO	**Aktyubinsk**	**58.78**	**312**	P	**P**	**22 27 03.2**	**-0.3**
	comp=Z,2.4nm,0.6s,mb4.4,baz=81,slow=14,SNR=10						
AKTO				LR	LR	22 51 38.6	
	comp=Z,32nm,19.0s,baz=70,slow=35						
AKTO	**Aktyubinsk**	**58.78**	**312**	P	**P**	**22 27 03.2**	**-0.3**
ASAR	**Alice Springs**	**59.15**	**186**	P	**P**	**22 27 05.3**	**-0.9**
	comp=Z,5.5nm,0.5s,mb4.9,baz=18,slow=10,SNR=105						
ASAR	**Alice Springs**	**59.15**	**186**	P	**P**	**22 27 05.3**	**-0.9**
MBWA	**Marble Bar**	**59.53**	**202**	*e*P	**P**	**22 27 08.3**	**-0.7**
	comp=Z,36nm,0.6s,mb5.6						
DLBC	**Dease Lake**	**60.56**	**37**	*e*P	**P**	**22 27 15.9**	**+0.3**
PRGR	**Permogore**	**61.36**	**327⇓**	*i*P	**P**	**22 27 19.2**	**-1.8**
PRGR				*e**PP	pP	22 27 35.3	-4.0
PRGR				*e*		22 28 00.5	
PRGR				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
EIDS	**Eidsvold**	**61.48**	**168**	*e*P	**P**	**22 27 21.7**	**-0.5**
	comp=Z,3.9nm,0.5s,mb4.7						
ALE	**Alert**	**61.68**	**3**	P	**P**	**22 27 22.0**	**-0.9**
	comp=Z,88nm,0.9s,mb5.8,SNR=5.5						
KBS	**Kingsbay**	**61.93**	**350**	*ce*P	**P**	**22 27 23.0**	**-1.6**
KBS				pmax	pmax		
	comp=Z,39nm,2.5s,mb5.0						
APA	**Apatity**	**63.56**	**336⇓**	*i*P	**P**	**22 27 34.7**	**-0.8**
APA				*i*	pP	22 27

comp=Z,36nm,0.9s,mb5.2
A05A Maple Falls 68.87 44 ⇊P P 22 28 09.4 -0.4
baz=68
HDW Hoodsport 68.98 46 P P 22 28 11.1 +0.5
KAF Kangasniemi 69.08 333 *e*P P 22 28 08.7 -2.2
KAF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
KAF Kangasniemi 69.08 333 *e*p P 22 28 08.7 -2.2
comp=Z,6.9nm,0.5s,mb4.7
MBW Mount Baker 69.08 44 P P 22 28 11.0 -0.2
CMW Cultus Mountai 69.14 45 P P 22 28 11.8 +0.2
GNW Green Mountain 69.16 46 *e*P P 22 28 11.6 -0.1
comp=Z,14nm,1.2s,mb4.7
E03A Lebam 69.23 47 ⇑P P 22 28 11.9 -0.2
baz=69
VSR Storozhevoye 69.26 319 *e*P P 22 28 10.3 -1.9
VSR *e**PP pP 22 28 28.0 -2.8
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.2s
VORD Divnogorie 69.32 318 *e*P P 22 28 10.7 -1.9
VORD *e**PP pP 22 28 28.4 -2.8
VORD pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.7s
JCW Jim Creek 69.36 45 P P 22 28 12.8 -0.1
FINES FINESS Array B 69.57 332 P P 22 28 13.2 -0.8
comp=E,13nm,0.8s,mb4.8,baz=53,slow=6.0,SNR=65
FINES FINESS Array B 69.57 332 P P 22 28 13.2 -0.7
D05A Enumclaw 69.84 46 ⇑P P 22 28 16.4 +0.6
baz=70
LON Longmire 70.17 46 *e*P P 22 28 17.2 -0.7
comp=E,8.8nm,1.0s,mb4.5
LON Longmire 70.17 46 *e*P P 22 28 17.2 -0.7
LON pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
F04A Amboy 70.23 47 ⇑P P 22 28 18.5 +0.3
baz=70
COR Corvallis 70.38 49 *e*P P 22 28 20.1 +0.9
comp=Z,30nm,1.1s,mb5.0
COR Corvallis 70.38 49 *e*P P 22 28 20.1 +0.9
COR pmax pmax
comp=Z,30nm,1.1s,mb5.0
G04A Mulino 70.56 48 ⇑P P 22 28 20.7 +0.4
baz=70
ETW Entiat 70.59 45 *e*P P 22 28 20.2 -0.2
comp=Z,31nm,0.8s,mb5.2
KEBM Edson Butte 70.61 51 *e*P P 22 28 21.1 +0.5
comp=Z,52nm,1.0s,mb5.3
B08A Colville Reser 70.76 44 P P 22 28 21.1 -0.3
baz=70,SNR=15
ZEI Tsey 70.82 309 *e*P P 22 28 17.8 -4.1
ZEI pmax pmax
comp=Z,12nm,1.4s,mb4.5
KIV Kislovodsk 70.97 311 *e*P P 22 28 23.7 +0.9
comp=Z,31nm,1.0s,mb5.1
KIV Kislovodsk 70.97 311⇊*e*P P 22 28 24.0 +1.2
KIV *e*S S 22 37 42.9 +10
KIV pmax pmax
comp=Z,22nm,1.2s,mb4.9
HOOD Mount Hood Mea 71.00 48 *e*P P 22 28 22.8 -0.2
comp=Z,31nm,1.0s,mb5.1
H04A Detroit Lake 71.01 48 ⇊P P 22 28 23.2 +0.1
baz=71,SNR=14
E07A Sunnyside 71.42 46 ⇑P P 22 28 25.6 +0.1
baz=71
GBB Gable Butte 71.53 46 P P 22 28 26.0 -0.1
HUMO Hull Mountain 71.62 51 *e*P P 22 28 26.9 +0.1
comp=Z,4.2nm,1.0s,mb4.2
GNI Garni 71.62 306 *e*P P 22 28 27.5 +0.7
GNI pmax pmax
comp=Z,5.0nm,1.2s
G06A Carlson Farm, 71.66 47 ⇊P P 22 28 26.9 0.0
baz=71,SNR=11
RSW Rattlesnake Hi 71.66 46 *e*P P 22 28 27.2 +0.3
comp=Z,41nm,1.1s,mb5.2
C09A Chrisman Ranch 71.66 44 P P 22 28 26.7 -0.2
baz=71,SNR=13
D08A Wollman Farm, 71.69 45 P P 22 28 26.9 -0.2
baz=71,SNR=14
HAWA Hanford 71.69 46 *e*P P 22 28 26.6 -0.6
comp=Z,26nm,1.1s,mb5.0
F07A Phinny Hill Vi 71.73 46 ⇑P P 22 28 27.9 +0.5
baz=71
H2OWA Water 71.76 46 P P 22 28 27.6 +0.1
E08A Dider Farm, El 71.92 46 ⇊P P 22 28 28.5 +0.1
baz=72
VIPM Ingram Point 72.06 48 P P 22 28 29.4 +0.1
VIPM Ingram Point 72.06 48 P P 22 28 29.4 +0.1
NEW Newport 72.06 43 P P 22 28 29.0 -0.2
baz=72,SNR=19
NEW Newport 72.06 43 *e*P P 22 28 28.8 -0.4
comp=Z,30nm,1.1s,mb5.0
NEW *e* 22 28 53.9
NEW Newport 72.06 43 *e*P P 22 28 28.8 -0.5
NEW *e* 22 28 53.9
NEW pmax pmax
comp=Z,31nm,1.1s
SUMG Summit 72.18 359 *e*P P 22 28 30.0 +0.4
comp=Z,35nm,0.8s,mb5.2
SUMG Summit 72.18 359⇊*i*P P 22 28 30.2 +0.6
comp=Z,32nm,0.8s,mb5.2
YBH Yreka Blue Hor 72.23 51 *e*P P 22 28 30.9 +0.4
comp=Z,16nm,1.0s,mb4.8
YBH Yreka Blue Hor 72.23 51 *e*P P 22 28 30.9 +0.5
YBH pmax pmax
comp=Z,16nm,1.0s
E09A Wood Farm, Sta 72.44 45 ⇑P P 22 28 31.5 -0.1
baz=72,SNR=12
G08A Pilot Rock 72.63 47 P P 22 28 32.7 0.0
baz=72,SNR=12
LNOR Lincton Mounta 72.71 46 *e*P P 22 28 32.2 -0.9
comp=Z,14nm,0.9s,mb4.8
LNOR Lincton Mounta 72.71 46 *e*P P 22 28 32.2 -1.0
LNOR pmax pmax
comp=Z,14nm,0.9s,mb4.8
KCPM Cahto Peak 72.75 53 *e*P P 22 28 33.6 0.0
comp=Z,13nm,1.1s,mb4.7
KIPM Iron Peak 72.75 53 *e*P P 22 28 33.8 +0.3
comp=Z,20nm,1.0s,mb4.9
C11A Tepee Creek (N 72.78 43 ⇊P P 22 28 33.7 +0.1
baz=72
K05A Summer Lake 72.84 50 ⇊P P 22 28 34.8 +0.8
baz=72,SNR=36
WDC Whiskeytown Da 72.95 52 *e*P P 22 28 34.5 -0.2
comp=Z,16nm,1.0s,mb4.8
WDC Whiskeytown Da 72.95 52 *e*P P 22 28 34.5 -0.2
WDC pmax pmax
comp=Z,16nm,1.0s,mb4.8
I07A Izee 72.96 48 P P 22 28 34.8 +0.1
baz=73,SNR=13
IDID Didziasalis 73.07 327 *e*P P 22 28 35.0 -0.1
IDID AMB AMB 22 28 36.0
comp=Z,5.5nm,0.8s,mb4.5
A13A Flathead Natio 73.17 42 ⇑P P 22 28 35.8 0.0
baz=73
ISAL Salakas 73.18 327 *e*P P 22 28 35.6 -0.1
ISAL AMB AMB 22 28 36.8
comp=Z,13nm,1.2s,mb4.6
F10A Beach Ranch, E 73.27 45 ⇑P P 22 28 36.5 0.0
baz=73
IIGN Ignalina 73.28 327 *e*P P 22 28 36.2 -0.2
IIGN AMB AMB 22 28 37.2
comp=Z,7.0nm,1.3s,mb4.3
WALA Waterton Lakes 73.37 41 *e*P P 22 28 37.1 +0.1
comp=Z,0.5nm,1.0s
B13A Whitefish 73.46 42 ⇊P P 22 28 38.1 +0.5
baz=73,SNR=20
BSMT Bassoo Peak 73.59 43 *e*P P 22 28 37.4 -1.0
comp=Z,4.4nm,0.6s,mb4.4
MOD Modoc 73.66 50 *e*P P 22 28 39.0 +0.1
comp=Z,9.7nm,1.1s,mb4.5
A14A Double T Ranch 73.68 41 P P 22 28 39.0 +0.1
baz=73,SNR=6.5
ANN Anapa 73.69 314 *e*P P 22 28 34.1 -4.9
ANN *e**PP pP 22 28 51.2 -6.6
ANN *e*S S 22 37 57.1 -7.0
ANN *e*SS SS 22 42 52.1 +4.2
ANN pmax pmax
comp=Z,37nm,1.1s,mb5.0
D12A Red Ives Fores 73.73 44 ⇊P P 22 28 38.6 -0.6
baz=73
BLMT Blacktail Moun 73.73 42 *e*P P 22 28 39.5 +0.3
comp=Z,24nm,1.0s,mb4.9
C13A Hot Springs 73.80 43 ⇊P P 22 28 39.9 +0.3
baz=73,SNR=21
JTMT Jette 73.92 43 *e*P P 22 28 40.5 +0.2
comp=Z,47nm,1.1s,mb5.1
E12A Beaver Dam Sad 73.97 44 ⇊P P 22 28 40.9 +0.4
baz=74
J08A Circle Bar Ran 73.98 48 ⇊P P 22 28 41.2 +0.5
baz=74
YBMT Yellow Bay 74.01 42 *e*P P 22 28 40.8 0.0
comp=Z,20nm,1.0s,mb4.8
A15A Johnson Ranch, 74.05 41 ⇑P P 22 28 40.2 -0.8
baz=74,SNR=5.8
B14A Marquette Ranc 74.12 42 ⇊P P 22 28 41.5 +0.1
baz=74,SNR=8.0
D13A Huson 74.20 43 ⇊P P 22 28 41.4 -0.6
baz=74,SNR=14
C14A Swan Lake 74.21 42 ⇊P P 22 28 41.7 -0.3
baz=74
SWMT Swartz Lake 74.22 43 *e*P P 22 28 41.7 -0.3
comp=Z,28nm,1.1s,mb4.9
WVOR Wild Horse Val 74.40 49 *e*P P 22 28 43.2 0.0
comp=Z,20nm,1.1s,mb4.8
WVOR Wild Horse Val 74.40 49 *e*P P 22 28 43.2 0.0
WVOR pmax pmax
comp=Z,20nm,1.1s,mb4.8
F12A Elk City 74.53 45 ⇊P P 22 28 44.0 +0.2
baz=74,SNR=34
B15A Bradely Ranch, 74.53 41 ⇊P P 22 28 44.0 +0.1
baz=74,SNR=24
MSO Missoula 74.65 43 ⇊P P 22 28 43.9 -0.6
baz=74,SNR=6.6
MSO Missoula 74.65 43 *e*P P 22 28 43.7 -0.8
comp=Z,12nm,1.0s,mb4.6
SLMT Seely Lake 74.65 43 *e*P P 22 28 44.2 -0.3
comp=Z,50nm,0.6s,mb5.4
A16A West Butte Ran 74.67 40 ⇊P P 22 28 43.7 -0.9
baz=74,SNR=6.3
E13A Victor 74.73 44 ⇑P P 22 28 44.4 -0.6
baz=74,SNR=5.7
AKASG Malin Array Be 74.73 322 P P 22 28 44.3 -0.6
comp=Z,3.1nm,0.4s,mb4.4,baz=47,slow=6.0,SNR=24
AKASG Malin Array Be 74.73 322*ce*P P 22 28 44.2 -0.7
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKBB Malin Array Si 74.73 322 *e*P P 22 28 44.5 -0.5
AKBB Malin Array Si 74.73 322 *e*P P 22 28 44.5 -0.4
D14A Greenough 74.74 43 P P 22 28 44.5 -0.5
baz=74,SNR=17
KIEV Kiev 74.75 322 *e*P P 22 28 43.5 -1.5
comp=Z,8.2nm,0.8s,mb4.5
KIEV Kiev 74.75 322 *e*P P 22 28 43.5 -1.5
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
C15A Salmond Ranch, 74.83 42 P P 22 28 45.9 +0.3
baz=74,SNR=21
G12A Big Creek, Yel 74.85 45 ⇊P P 22 28 45.0 -0.7
baz=74
B16A M & M Farms, S 74.93 41 ⇑P P 22 28 45.8 -0.4
baz=74
CHMT Chamberlain Mo 74.98 43 *e*P P 22 28 45.5 -0.9
comp=Z,3.8nm,0.5s,mb4.4
F13A Darby 75.03 44 P P 22 28 45.8 -1.0
baz=75,SNR=9.4
NB2 NORSAR Subarra 75.09 337 P P 22 28 45.8 -1.0
comp=Z,6.6nm,0.7s,mb4.5,baz=41,slow=6.2
NOA NORSAR Array B 75.09 337 P P 22 28 46.1 -0.7
comp=Z,6.7nm,0.7s,mb4.5,baz=40,slow=5.8,SNR=28
NOA NORSAR Array B 75.09 337 P P 22 28 46.1 -0.7
A17A Triple J Farms 75.14 40 ⇑P P 22 28 47.1 -0.3
baz=75,SNR=12
MIB Mutribah 75.27 296 *e*P P 22 28 47.6 -0.8
MIB AMb AMB 22 28 58.8
comp=Z,14nm,0.6s,mb4.9
C16A Fuhringer Ranc 75.28 41 ⇊P P 22 28 47.8 -0.3
baz=75,SNR=13
D15A Lincoln 75.31 42 ⇑P P 22 28 48.1 -0.2
baz=75
PAHR Pah Rah Range 75.45 52 *e*P P 22 28 49.1 -0.2
comp=Z,30nm,1.3s,mb4.9
H12A Diamond D Ranc 75.45 45 ⇊P P 22 28 49.2 0.0
baz=75,SNR=19
B17A L&G Farms, Che 75.49 41 ⇊P P 22 28 49.4 +0.1
baz=75,SNR=16
G13A Cobalt 75.50 45 ⇊P P 22 28 48.7 -0.8
baz=75,SNR=8.7
MFID Camas Ranch 75.54 47 ⇑P P 22 28 49.8 +0.1
baz=75,SNR=17
RDF Al-Radifah 75.58 295 *e*P P 22 28 50.2 -0.1
RDF AMb AMB 22 28 59.5
comp=Z,20nm,0.8s,mb4.9
A18A Metzger Ranch, 75.61 40 ⇊P P 22 28 49.5 -0.5
baz=75,SNR=14
E15A Deer Lodge 75.61 43 P P 22 28 49.9 -0.2
baz=75,SNR=15
FFC Flin Flon 75.63 32 *e*P P 22 28 48.5 -1.4
comp=Z,33nm,1.1s,mb5.0
FFC Flin Flon 75.63 32*ce*P P 22 28 49.6 -0.4
NAY Al-Naaiem 75.64 296 *e*P P 22 28 49.7 -0.8
NAY AMb AMB 22 28 54.7
comp=Z,8.0nm,0.6s,mb4.6
I12A Atlanta 75.73 46 ⇊P P 22 28 50.7 -0.1
baz=75,SNR=20
CMB Columbia Colle 75.74 53 *e*P P 22 28 50.7 -0.3
comp=Z,22nm,1.0s,mb4.8
CMB Columbia Colle 75.74 53 *e*P P 22 28 50.7 -0.3
CMB pmax pmax
comp=Z,22nm,1.0s,mb4.8
H13A Challis 75.79 45 P P 22 28 51.1 -0.1
baz=75,SNR=15
D16A Dana Ranch, Ca 75.85 42 ⇊P P 22 28 51.5 +0.1
baz=75,SNR=15
HRY Holter Researc 75.89 42 *e*P P 22 28 51.5 -0.1
comp=Z,36nm,0.8s,mb5.2
C17A Wharram Farm, 75.91 41 ⇊P P 22 28 51.1 -0.7
baz=76,SNR=7.5
B18A Beardsley Farm 75.96 40 ⇑P P 22 28 52.1 +0.1
baz=76,SNR=19
F15A Butte 76.04 43 ⇑P P 22 28 52.7 +0.2
baz=76,SNR=47
LRM Limekiln Ridge 76.07 43 *e*P P 22 28 52.8 +0.1
comp=Z,368nm,0.8s
E16A East Helena 76.08 42 ⇊P P 22 28 52.7 0.0
baz=76,SNR=9.5
WAKR Walker 76.09 53 *e*P P 22 28 53.4 +0.4
comp=Z,13nm,0.9s,mb4.7
A19A Klindworth Far 76.17 39 ⇊P P 22 28 52.9 -0.3
baz=76,SNR=7.0
EGMT Eagleton 76.20 40 P P 22 28 53.2 -0.2
baz=76,SNR=11
EGMT Eagleton 76.20 40 *e*P P 22 28 53.2 -0.3
comp=Z,53nm,1.0s,mb5.2
D17A Six Diamond Ra 76.24 42 P P 22 28 53.4 -0.3
baz=76,SNR=11
I13A Wildhorse Cree 76.26 46 P P 22 28 54.3 +0.5
baz=76,SNR=21
DLMT Dillon 76.27 44 *e*P P 22 28 53.8 0.0
comp=Z,45nm,1.0s,mb5.2
H14A Leadore 76.27 45 ⇑P P 22 28 53.6 -0.3
baz=76,SNR=9.0
HLID Hailey 76.29 46 P P 22 28 54.3 +0.3
baz=76,SNR=22
HLID Hailey 76.29 46 *e*P P 22 28 54.1 +0.2
comp=Z,12nm,1.0s,mb4.6
HLID *e*PP PP 22 31 38.2 -7.4
B19A Brinkman Farms 76.36 40 ⇊P P 22 28 54.1 -0.2
baz=76,SNR=10
BMN Battle Mountai 76.41 50 *e*P P 22 28 54.6 -0.1
comp=Z,39nm,1.1s,mb5.0
BMN Battle Mountai 76.41 50 *e*P P 22 28 54.6 -0.1
BMN pmax pmax
comp=Z,39nm,1.1s,mb5.0
MCMT McKenzie Canyo 76.44 44 *e*P P 22 28 53.7 -1.2
comp=Z,2.1nm,0.7s,mb4.0
G15A Dillon 76.45 44 ⇊P P 22 28 54.9 +0.1
baz=76,SNR=22
J13A Cove Ranch, Pi 76.53 46 P P 22 28 55.9 +0.5
baz=76,SNR=21
F16A Kennard Place, 76.56 43 ⇑P P 22 28 55.4 0.0
baz=76,SNR=18
E17A Martinsdale 76.57 42 ⇊P P 22 28 55.8 +0.2
baz=76,SNR=13
I14A Mackay 76.64 45 ⇑P P 22 28 56.9 +0.9
baz=76,SNR=48
BOZ Bozeman (W) 76.64 43 P P 22 28 56.2 +0.2
baz=76,SNR=19
BOZ Bozeman (W) 76.64 43 *e*P P 22 28 56.1 +0.1
comp=Z,26nm,1.1s,mb4.9
BOZ Bozeman (W) 76.64 43 *e*P P 22 28 56.1 +0.2
BOZ pmax pmax
comp=Z,26nm,1.1s,mb4.9
H15A Lima 76.69 44 ⇊P P 22 28 56.0 -0.2
baz=76,SNR=5.4
D18A Linhart Farms, 76.69 41 ⇊P P 22 28 56.3 +0.1
baz=76,SNR=6.9
MALT Malatya 76.73 308 *e*P P 22 28 57.9 +1.3
comp=Z,6.6nm,1.0s,mb4.3
MALT Malatya 76.73 308 ⇊P P 22 28 58.5 +1.9
MALT Malatya 76.73 308⇊*i*P P 22 28 58.5 +1.9
C19A Slack Wire Ran 76.76 40 P P 22 28 56.7 +0.1
baz=76,SNR=10
G16A Moss Hill, Enn 76.80 44 ⇊P P 22 28 56.6 -0.2
baz=76,SNR=7.8
NVAR Mina Array Bea 76.87 52 P P 22 28 57.7 +0.3
comp=Z,12nm,0.7s,mb4.8,baz=300,slow=5.6,SNR=64
NVAR Mina Array Bea 76.87 52 P P 22 28 57.7 +0.3
J14A Carey 76.96 46 ⇑P P 22 28 58.7 +1.0
baz=77
E18A Harlowton 77.02 42 ⇊P P 22 28 58.6 +0.5
baz=77,SNR=13
F17A Fitzpatrick Pl 77.02 43 ⇑P P 22 28 57.8 -0.2
baz=77,SNR=7.4
A21A Bergtoll Ranch 77.06 38 ⇊P P 22 28 58.0 -0.3
baz=77
I15A Monteview 77.15 45 ⇑P P 22 28 59.4 +0.6
baz=77
D19A Cripps Ranch, 77.20 41 P P 22 28 59.0 0.0
baz=77,SNR=22
QLMT Earthquake Lak 77.25 44 *e*P P 22 28 59.7 +0.4
comp=Z,1.0nm,0.4s,mb3.9
C20A Veseth Ranch, 77.32 40 ⇑P P 22 28 59.6 -0.1
baz=77
G17A Pierce Place, 77.33 43 ⇊P P 22 29 00.5 +0.7
baz=77,SNR=7.3
H16A Russell Place, 77.43 44 ⇊P P 22 29 00.6 +0.2
baz=77,SNR=6.5
F18A Big Timber 77.54 42 ⇑P P 22 29 01.3 +0.4
baz=77,SNR=17
J15A Blackfoot 77.54 45 P P 22 29 01.9 +0.9
baz=77,SNR=17
K14A Jones Ranch, D 77.62 46 ⇊P P 22 29 02.1 +0.6
baz=77,SNR=15
D20A Manuel Ranch, 77.64 40 ⇑P P 22 29 01.4 -0.1
baz=77,SNR=14
E19A Rath Farm, Rou 77.69 41 ⇑P P 22 29 01.8 0.0
baz=77,SNR=27
C21A Desert Coulee 77.72 39 ⇑P P 22 29 01.7 -0.2
baz=77,SNR=6.3
I16A Newdale 77.80 45 ⇑P P 22 29 03.6 +1.1
baz=77,SNR=32
LVV L'vov 77.87 323 *e*P P 22 29 02.7 0.0
PKM Peak Mountain 77.89 56 ⇊P P 22 29 03.6 +0.5
baz=78,SNR=7.1
L14A Malta 77.89 47 ⇑P P 22 29 03.8 +0.8
baz=78,SNR=12
K15A Arbon 77.92 46 ⇑P P 22 29 03.9 +0.7
baz=78,SNR=6.6
F19A Roth Farm, Mol 77.99 42 P P 22 29 03.1 -0.4
baz=78,SNR=12
H17A Grant Village 78.00 44 ⇑P P 22 29 05.5 +2.0
baz=78,SNR=8.0
E20A Meyer Farm, Mu 78.02 41 ⇑P P 22 29 03.7 +0.1
baz=78,SNR=17
J16A Bone 78.09 45 P P 22 29 04.9 +0.8
baz=78,SNR=6.2
FLWY Flagg Ranch 78.12 44 *e*P P 22 29 05.1 +0.8
comp=Z,8.9nm,0.7s,mb4.6
RRI2 Red Ridge 78.22 45 *e*P P 22 29 05.3 +0.5
comp=Z,12nm,0.9s,mb4.6
D21A La Casta Ranch 78.26 40 ⇑P P 22 29 04.9 -0.1
baz=78,SNR=6.1
RLMT Red Lodge 78.27 43 P P 22 29 05.4 +0.4
baz=78,SNR=9.5
RLMT Red Lodge 78.27 43 *e*P P 22 29 05.2 +0.1
I17A Pilgrim Ck. 78.29 44 ⇑P P 22 29 06.4 +1.2
baz=78,SNR=5.9
GRAC Grapevine Rang 78.30 53 ⇑P P 22 29 05.8 +0.5
baz=78
MOOW Moose Ponds 78.30 44 *e*P P 22 29 05.1 -0.1
comp=Z,3.8nm,0.6s,mb4.3
HVU Hansel Valley 78.32 47 *e*P P 22 29 04.5 -0.9
comp=Z,22nm,0.8s,mb4.9
HVU Hansel Valley 78.32 47 *e*P P 22 29 04.5 -0.9
HVU pmax pmax
comp=Z,22nm,0.8s,mb4.9
H18A Shoshone NF, C 78.33 43 ⇑P P 22 29 05.7 +0.3
baz=78,SNR=7.2
TPAW Teton Pass 78.34 45 *e*P P 22 29 06.2 +0.7
comp=Z,11nm,0.6s,mb4.8
B23A Brockton 78.38 38 ⇊P P 22 29 05.1 -0.5
baz=78
K16A Soda Springs 78.38 45 ⇑P P 22 29 06.8 +1.1
baz=78,SNR=11
C22A Vida 78.40 39 ⇊P P 22 29 05.0 -0.6
baz=78
L15A Malad City 78.42 46 ⇑P P 22 29 06.3 +0.4
baz=78,SNR=12
F20A Billings 78.45 41 ⇑P P 22 29 05.6 -0.5
baz=78
LOHW Long Hollow 78.47 44 *e*P P 22 29 06.0 -0.2
SNOW Snow King Moun 78.47 45 *e*P P 22 29 06.8 +0.6
comp=Z,11nm,0.9s,mb4.6
E21A Keefer Ranch, 78.56 40 ⇊P P 22 29 06.7 +0.1
baz=78
D22A Cohagen 78.63 40 ⇊P P 22 29 07.0 0.0
baz=78
KWP Kalwaria Pacla 78.63 324 *e*P P 22 29 07.1 +0.2
KWP Kalwaria Pacla 78.63 324 *e*P P 22 29 07.3 +0.3
comp=Z,38nm,1.0s,mb5.2
KWP Kalwaria Pacla 78.63 324 ⇑P P 22 29 07.6 +0.7
KWP Kalwaria Pacla 78.63 324⇑*i*P P 22 29 07.6 +0.7
R11A Troy Canyon, C 78.65 51 P P 22 29 07.5 +0.3
baz=78,SNR=29
BGU Big Grassy Mou 78.69 48 *e*P P 22 29 07.7 +0.3
comp=Z,8.4nm,0.9s,mb4.6
TESR 78.70 320⇊*i*P P 22 29 07.3 -0.1
M15A Larsen Ranch, 78.71 47 ⇊P P 22 29 08.1 +0.5
baz=78,SNR=14
H19A Powell 78.71 43 ⇑P P 22 29 08.0 +0.5
baz=78,SNR=5.5
BUR08 Bucovina Ar. S 78.72 321 *e*P P 22 29 07.7 +0.3
C23A Lambert 78.72 39 ⇊P P 22 29 07.2 -0.2
baz=78
BURAR Bucovina Array 78.73 321 ⇑P P 22 29 07.9 +0.4
BURAR Bucovina Array 78.73 321⇑*i*P P 22 29 07.9 +0.4
MPMC Manual Prospec 78.77 54 ⇊P P 22 29 08.1 +0.2
baz=78,SNR=16
G20A Bridger 78.79 42 P P 22 29 07.3 -0.6
baz=78,SNR=5.7
I18A Diamond G Ranc 78.86 44 ⇊P P 22 29 08.9 +0.6
baz=78
LAO LASA Array 78.91 40 ⇑P P 22 29 09.1 +0.5
baz=78
BR131 Keskin Array S 78.93 311 *e*P P 22 29 09.6 +0.8
comp=Z,3.1nm,0.7s,mb4.2
BRTR Keskin Array B 78.93 311 P P 22 29 09.8 +1.0
comp=Z,2.7nm,0.9s,mb4.1,baz=56,slow=6.7,SNR=8.5
BRTR Keskin Array B 78.93 311*ce*P P 22 29 12.0 +3.2
BRTR pmax pmax
comp=Z,3.0nm,0.9s
FURC Furnace Creek, 78.94 53 ⇑P P 22 29 08.8 -0.1
baz=79
F21A Absaloka Mine, 78.99 41 ⇑P P 22 29 08.8 -0.1
baz=79
J18A Kendall Valley 79.05 44 ⇊P P 22 29 09.9 +0.6
baz=79,SNR=14
I19A Meeteetse 79.11 43 ⇑P P 22 29 09.9 +0.2
baz=79
D23A Lindsay 79.12 39 ⇊P P 22 29 09.8 +0.1
baz=79
EDW2 Edwards Air Fo 79.12 55 ⇊P P 22 29 09.2 -0.8
baz=79,SNR=9.6
L17A Cokeville 79.25 46 ⇑P P 22 29 10.8 +0.3
baz=79
DUG Dugway 79.26 48 ⇑P P 22 29 10.8 +0.2
baz=79,SNR=19
DUG Dugway 79.26 48 *e*P P 22 29 10.3 -0.3
comp=Z,21nm,0.9s,mb5.0
DUG Dugway 79.26 48 *e*P P 22 29 10.3 -0.3
DUG pmax pmax
comp=Z,21nm,0.9s,mb5.0
M16A Huntsville 79.29 47 ⇊P P 22 29 10.8 +0.1
baz=79,SNR=7.8

KOLS Kolonicke sedl 79.31 324 eP P 22 29 11.0 +0.3
comp=Z,6.2nm,1.1s,mb4.3
KOLS Kolonicke sedl 79.31 324 eP P 22 29 11.0 +0.3
KOLS comp=Z,6.0nm,1.1s,mb4.3 pmax pmax
KOLS Kolonicke sedl 79.31 324 eP P 22 29 11.0 +0.3
G21A Lodge Grass 79.33 41 ⇓P P 22 29 10.1 -0.8
baz=79,SNR=6.2
H20A Greybull 79.37 42 ⇓P P 22 29 10.8 -0.3
baz=79
K18A Toltan Ranch, 79.39 45 ⇓P P 22 29 11.6 +0.4
baz=79,SNR=10.0
NOQ North Oquirrh 79.40 47 eP P 22 29 11.5 +0.2
comp=Z,59nm,1.2s,mb5.3
O15A The Old Anders 79.42 48 ⇓P P 22 29 12.0 +0.6
baz=79
P14A Drum Mountains 79.47 49 P P 22 29 12.1 +0.4
baz=79,SNR=6.0
UZH Uzhgorod 79.51 323 eP P 22 29 12.5 +0.8
PGOR Pogoanele 79.55 318 ⇑iP P 22 29 25.3 +13
J19A Crowheart 79.56 44 ⇓P P 22 29 12.7 +0.6
baz=79
BW06 Boulder Array 79.59 45 ⇓P P 22 29 12.1 -0.3
baz=79,SNR=11
PDAR Pinedale Array 79.59 45 P P 22 29 11.8 -0.5
comp=Z,8.4nm,0.5s,mb4.8,baz=267,slow=1.6,SNR=31
PDAR LR LR 22 58 38.2
comp=Z,42nm,21.4s,baz=266,slow=31
OJC Ojcow 79.60 326 eP P 22 29 12.2 0.0
OJC Ojcow 79.60 326 eP P 22 29 12.2 0.0
D24A Glendive 79.61 39 ⇑P P 22 29 12.4 0.0
baz=79
I20A Worland 79.65 43 P P 22 29 12.9 +0.3
baz=79,SNR=5.3
GSC Goldstone 79.66 54 ⇓P P 22 29 12.8 0.0
baz=79,SNR=9.1
GSC Goldstone 79.66 54 eP P 22 29 12.5 -0.4
comp=Z,21nm,1.3s,mb4.8
GSC Goldstone 79.66 54 eP P 22 29 12.5 -0.3
GSC comp=Z,21nm,1.3s,mb4.8 pmax pmax
N16A Rees Ranch, Co 79.67 47 ⇑P P 22 29 13.3 +0.5
baz=79
Q14A Sevier Lake (B 79.71 49 ⇑P P 22 29 13.5 +0.5
baz=79,SNR=28
BFSC Mount Baldy Ra 79.72 55 ⇓P P 22 29 13.0 -0.2
baz=79,SNR=6.8
CRVS Cervenica-Dubn 79.73 324 eP P 22 29 13.4 +0.5
comp=Z,4.6nm,1.2s,mb4.2
CRVS Cervenica-Dubn 79.73 324 eP P 22 29 13.4 +0.5
CRVS comp=Z,5.0nm,1.2s,mb4.2 pmax pmax
CRVS Cervenica-Dubn 79.73 324 eP P 22 29 13.4 +0.5
TRPA Tarpa 79.73 323 ⇑iP P 22 29 13.8 +0.9
M17A Scullys Gap (B 79.76 46 P P 22 29 13.5 +0.3
baz=79,SNR=5.9
R13A O'Grain Ranch, 79.77 50 ⇓P P 22 29 14.1 +0.7
baz=79
H21A Big Horn, Sher 79.81 42 P P 22 29 13.4 0.0
baz=79,SNR=11
L18A Fontenelle, Gr 79.84 45 ⇓P P 22 29 14.2 +0.5
baz=79,SNR=8.7
NLU North Lily Min 79.86 48 eP P 22 29 14.2 +0.4
comp=Z,17nm,1.0s,mb4.8
NIE Niedzica 79.92 325 eP P 22 29 14.7 +0.8
NIE Niedzica 79.92 325 eP P 22 29 14.7 +0.8
K19A Absolon Red Bu 79.96 44 ⇓P P 22 29 13.7 -0.6
baz=80
P15A Leamington 79.97 48 ⇓P P 22 29 14.7 +0.3
baz=80,SNR=6.6
N17A Moffit Pass 79.99 47 ⇑P P 22 29 14.9 +0.4
baz=80,SNR=6.7
SHPR Sheep Range 80.02 52 eP P 22 29 15.0 +0.2
comp=Z,35nm,1.5s,mb5.0
O16A Springville 80.05 47 ⇓P P 22 29 15.4 +0.6
baz=80
J20A Shoshoni 80.05 43 P P 22 29 14.8 0.0
baz=80,SNR=14
DAU Daniels Canyon 80.07 47 eP P 22 29 15.4 +0.4
comp=Z,15nm,0.7s,mb4.9
DAU Daniels Canyon 80.07 47 eP P 22 29 15.4 +0.5
DAU comp=Z,15nm,0.7s,mb4.9 pmax pmax
MPU Maple Canyon 80.09 48 eP P 22 29 14.7 -0.3
comp=Z,33nm,1.0s,mb5.1
L19A Farson 80.12 45 ⇓P P 22 29 15.2 0.0
baz=80,SNR=9.4
M18A Lyman 80.14 46 ⇓P P 22 29 15.3 0.0
baz=80
TUQ Turquoise Moun 80.16 53 ⇑P P 22 29 15.6 0.0
baz=80,SNR=12
I21A Big Trails, Te 80.20 43 ⇓P P 22 29 15.4 -0.1
baz=80,SNR=8.0
S13A Holt Ranch, En 80.20 51 ⇓P P 22 29 16.3 +0.6
baz=80,SNR=9.8
V11A Goodsprings 80.24 53 P P 22 29 16.2 +0.2
baz=80,SNR=10
HEC Hector,Ludlow 80.25 54 ⇓P P 22 29 15.9 -0.1
baz=80,SNR=14
Q15A Fillmore 80.26 49 ⇓P P 22 29 16.4 +0.4
baz=80,SNR=5.8
ARUT Antelope Range 80.34 50 eP P 22 29 17.0 +0.6
comp=Z,16nm,1.2s,mb4.7
ARUT Antelope Range 80.34 50 eP P 22 29 17.0 +0.5
ARUT comp=Z,16nm,1.2s,mb4.7 pmax pmax
K20A Yellowstone Ra 80.35 44 ⇑P P 22 29 15.9 -0.5
baz=80
MURC Murrieta 80.40 56 ⇓P P 22 29 16.4 -0.5
baz=80
J21A Lysite 80.41 43 ⇑P P 22 29 16.7 0.0
baz=80
KECS Kecovo 80.48 324 eP P 22 29 17.5 +0.5
comp=Z,4.3nm,1.7s,mb4.0
KECS Kecovo 80.48 324 eP P 22 29 17.5 +0.5
KECS comp=Z,4.0nm,1.7s,mb4.0 pmax pmax
KECS Kecovo 80.48 324 eP P 22 29 17.5 +0.5
T13A Saint George 80.51 51 P P 22 29 18.1 +0.7
baz=80,SNR=13
O17A Robinson Place 80.51 47 ⇓P P 22 29 18.1 +0.8
baz=80,SNR=13
CCUT Cedar City 80.53 51 eP P 22 29 17.4 -0.1
comp=Z,20nm,1.3s,mb4.8
DRGR 80.55 322 ⇓P P 22 29 17.7 +0.3
DRGR 80.55 322 ⇓iP P 22 29 17.7 +0.3
OKC Ostrava-Krasne 80.62 326 eP P 22 29 17.6 -0.1
OKC Ostrava-Krasne 80.62 326 eP P 22 29 17.6 -0.1
N18A Larsen Ranch, 80.65 46 ⇓P P 22 29 17.9 -0.2
baz=80,SNR=9.4
MSU Marysvale 80.68 49 eP P 22 29 19.1 +0.8
comp=Z,14nm,1.1s,mb4.7
MSU Marysvale 80.68 49 eP P 22 29 19.1 +0.8
MSU comp=Z,14nm,1.1s,mb4.7 pmax pmax
V12A Nelson 80.69 53 ⇓P P 22 29 18.8 +0.4
baz=80,SNR=6.6
GMRC Granite Mounta 80.73 54 P P 22 29 18.6 0.0
baz=80,SNR=25
L20A Wamsutter 80.77 45 ⇓P P 22 29 18.7 +0.1
baz=80
R15A Junction 80.81 49 ⇓P P 22 29 19.7 +0.8
baz=80,SNR=5.9
U13A Pakoon Wash 80.84 52 ⇑P P 22 29 19.5 +0.3
baz=80,SNR=17
109C Camp Elliot, M 80.89 56 ⇑P P 22 29 19.3 -0.2
baz=80
PFO Pinyon Flat Ob 80.90 55 ⇑P P 22 29 19.1 -0.4
baz=80,SNR=10
PFO Pinyon Flat Ob 80.90 55 eP P 22 29 19.1 -0.4
comp=Z,32nm,1.1s,mb5.1
PFO Pinyon Flat Ob 80.90 55 eP P 22 29 19.1 -0.4
PFO comp=Z,32nm,1.1s,mb5.1 pmax pmax
PFO Pinyon Flat Ob 80.90 55 P P 22 29 19.2 -0.3
comp=Z,148nm,0.8s,mb5.9,SNR=6.3
O18A Roosevelt 80.90 47 ⇑P P 22 29 20.1 +0.6
baz=80,SNR=9.7
J22A Midwest 80.91 43 P P 22 29 19.0 -0.4
baz=80,SNR=19
W12A Cal Nev Ari 80.93 53 ⇓P P 22 29 19.9 +0.3
baz=81
MORC Moravsky Berou 80.94 326 ⇑P P 22 29 19.8 +0.4
MORC Moravsky Berou 80.94 326 ⇑iP P 22 29 19.8 +0.4
P17A Butcher Ranch, 80.96 48 ⇑P P 22 29 20.2 +0.4
baz=81,SNR=14
BELC Belle Mtn. Jos 80.97 55 ⇓P P 22 29 19.6 -0.3
baz=81,SNR=10
K21A Alcova 80.98 44 P P 22 29 19.6 -0.1
baz=81,SNR=15
N19A John Jarvie Ra 81.00 46 P P 22 29 19.7 -0.2
baz=81,SNR=7.6
T14A Hurricane 81.01 51 P P 22 29 20.6 +0.6
baz=81,SNR=9.4
Q16A Castle Valley 81.05 48 ⇑P P 22 29 20.7 +0.5
baz=81,SNR=8.3
DPC Dobruska-Polom 81.07 327 eP P 22 29 20.3 +0.2
DPC Dobruska-Polom 81.07 327 eP P 22 29 20.3 +0.2
UPC Upice 81.09 328 eP P 22 29 18.1 -2.1
UPC Upice 81.09 328 eP P 22 29 18.1 -2.1
PSZ Piszkesteto 81.16 324 ⇑P P 22 29 21.0 +0.4
PSZ Piszkesteto 81.16 324 ⇑iP P 22 29 21.0 +0.4
P18A Preston Nutter 81.16 47 ⇓P P 22 29 21.6 +0.8
baz=81
V13A Grand Canyon W 81.17 52 P P 22 29 21.1 +0.2
baz=81,SNR=11
M20A Sweetwater, Wa 81.19 45 ⇓P P 22 29 21.2 +0.3
baz=81,SNR=8.2
R16A Teasdale 81.25 49 ⇓P P 22 29 22.7 +1.4
baz=81,SNR=17
BAR Barrett 81.30 56 eP P 22 29 21.2 -0.5
comp=Z,18nm,0.8s,mb5.0
SRU San Rafael 81.32 48 ⇑P P 22 29 22.0 +0.4
baz=81,SNR=10
SRU San Rafael 81.32 48 eP P 22 29 21.9 +0.2
comp=Z,13nm,0.5s,mb5.0
SRU San Rafael 81.32 48 eP P 22 29 21.9 +0.2
SRU comp=Z,13nm,0.5s,mb5.0 pmax pmax
U14A Mt Trumbull 81.34 51 ⇑P P 22 29 22.4 +0.6
baz=81,SNR=15
MONP Monument Peak 81.35 56 P P 22 29 21.8 -0.1
baz=81,SNR=10
L21A Rawlins 81.35 44 P P 22 29 21.6 -0.2
baz=81,SNR=12
K22A Casper 81.38 43 ⇓P P 22 29 21.6 -0.3
baz=81
O19A Miners Draw (B 81.41 46 ⇑P P 22 29 21.9 -0.2
baz=81,SNR=6.5
ULM Lac du Bonnet 81.43 32 P P 22 29 20.9 -1.0
comp=Z,11nm,0.8s,mb4.7,baz=249,slow=3.4,SNR=11
IRM Iron Mountain 81.44 54 ⇓P P 22 29 22.6 +0.3
baz=81
GZR Gura Zlata 81.46 321 ⇑P P 22 29 21.6 -0.7
GZR Gura Zlata 81.46 321 ⇑iP P 22 29 21.6 -0.7
T15A Red Dirt Ranch 81.48 50 ⇑P P 22 29 23.2 +0.7
baz=81,SNR=17
S16A Weppner Ranch, 81.53 49 ⇑P P 22 29 23.5 +0.7
baz=81,SNR=11
BC3 Big Chuckawall 81.54 55 P P 22 29 22.9 0.0
baz=81,SNR=8.4
N20A Spence Gulch, 81.57 45 ⇑P P 22 29 23.6 +0.7
baz=81,SNR=20
M21A Separation Pea 81.58 44 ⇓P P 22 29 22.8 -0.2
baz=81,SNR=9.5
R17A Hanksville Air 81.64 48 P P 22 29 23.6 +0.2
baz=81,SNR=6.9
W13A Hualapai Mount 81.69 53 ⇓P P 22 29 23.7 0.0
baz=81
PVCC Panska Ves 81.70 328 eP P 22 29 19.2 -4.3
PVCC Panska Ves 81.70 328 eP P 22 29 19.2 -4.3
VRAC Vranov 81.71 326 ⇑P P 22 29 23.9 +0.4
VRAC Vranov 81.71 326 ⇑iP P 22 29 23.9 +0.4
BRG Berggiesshubel 81.72 329 eP P 22 29 23.2 -0.3
comp=Z,8.0nm,1.0s,mb4.5
BRG Berggiesshubel 81.72 329 eP P 22 29 23.2 -0.3
comp=Z,7.8nm,1.0s,mb4.5
CLL Collm 81.78 330 eP P 22 29 23.3 -0.5
comp=Z,11nm,1.0s,mb4.6
CLL Collm 81.78 330 ⇓iP P 22 29 23.1 -0.7
comp=Z,14nm,1.0s,mb4.8
CLL Collm 81.78 330 ⇓iP P 22 29 23.1 -0.7
CLL comp=Z,14nm,1.0s,mb4.8 pmax pmax
CLL Collm 81.78 330 ⇓iP P 22 29 23.1 -0.7
CLL comp=Z,14nm,1.0s,mb4.8 epP pP 22 29 40.0 -2.9
V14A Boquillas Ranc 81.87 52 ⇓P P 22 29 25.4 +0.7
baz=82,SNR=29
U15A North Rim 81.90 51 ⇓P P 22 29 25.4 +0.7
baz=82,SNR=13
BZS Buzias 81.91 321 ⇑P P 22 29 24.3 -0.3
BZS Buzias 81.91 321 ⇑iP P 22 29 24.3 -0.3
P19A Cripple Cowboy 81.92 47 ⇑P P 22 29 25.0 +0.2
baz=82,SNR=15
O20A White River Ci 82.03 46 ⇑P P 22 29 25.4 +0.1
baz=82,SNR=8.8
NRDL Niedersach Rie 82.03 332 eP P 22 29 24.6 -0.5
comp=Z,4.0nm,0.8s,mb4.3
X13A Yucca 82.04 53 ⇓P P 22 29 25.7 +0.2
baz=82,SNR=19
N21A Black Mountain 82.05 45 ⇓P P 22 29 25.6 +0.1
baz=82,SNR=9.4
S17A Black Ridge (B 82.08 49 ⇓P P 22 29 25.8 +0.1
baz=82,SNR=10
Y12C Blythe 82.10 54 ⇓P P 22 29 25.9 +0.1
baz=82,SNR=7.2
PRU Pruhonice 82.12 328 eP P 22 29 25.2 -0.4
PRU Pruhonice 82.12 328 eP P 22 29 25.2 -0.4
W14A Seligman 82.14 52 P P 22 29 26.5 +0.4
baz=82,SNR=22
R18A Canyonlands Na 82.16 48 ⇓P P 22 29 26.1 0.0
baz=82
Q19A Hogan Spring (82.18 47 ⇑P P 22 29 25.9 -0.3
baz=82,SNR=8.0
L23A Garrett 82.19 43 ⇓P P 22 29 25.4 -0.7
baz=82,SNR=8.1
TREC Trest 82.21 327 eP P 22 29 26.3 +0.2
TREC Trest 82.21 327 eP P 22 29 26.3 +0.2
GLA Glamis 82.32 55 ⇑P P 22 29 27.3 +0.3
baz=82,SNR=12
GLA Glamis 82.32 55 eP P 22 29 27.1 +0.1
comp=Z,23nm,0.7s,mb5.1
GLA Glamis 82.32 55 eP P 22 29 27.1 +0.1
GLA comp=Z,23nm,0.7s,mb5.1 pmax pmax
V15A Kaibab Nationa 82.35 51 ⇓P P 22 29 28.0 +0.9
baz=82,SNR=20
NEUB Neuenburg 82.36 330 eP P 22 29 26.6 -0.3
comp=Z,9.0nm,0.9s,mb4.6
CLZ Clausthal 82.44 331 eP P 22 29 27.2 -0.1
comp=Z,8.0nm,0.9s,mb4.5
CLZ Clausthal 82.44 331 eP P 22 29 27.2 -0.1
CLZ comp=Z,8.0nm,0.9s,mb4.5 pmax pmax
T17A Navajo Res., N 82.48 50 ⇓P P 22 29 27.4 -0.4
baz=82
Y13A Salome 82.52 54 ⇑P P 22 29 28.4 +0.4
baz=82
S18A Hurst Farm, Bl 82.54 49 ⇑P P 22 29 28.2 +0.2
baz=82,SNR=11
R19A Curley Farm, L 82.60 48 ⇓P P 22 29 28.8 +0.4
baz=82,SNR=12
N22A Wattenberg Ran 82.63 45 ⇑P P 22 29 29.1 +0.6
baz=82
W15A Williams 82.69 52 ⇑P P 22 29 29.8 +0.9
baz=82,SNR=7.3
WERD Werda 82.72 329 eP P 22 29 28.6 -0.2
comp=Z,2.0nm,0.9s,mb4.0
X14A Yava 82.73 53 P P 22 29 29.6 +0.5
baz=82,SNR=20
PV04 Paradox Valley 82.75 48 eP P 22 29 29.4 +0.2
Q20A Ridgley Place, 82.76 47 ⇓P P 22 29 28.9 -0.3
baz=82,SNR=9.9
U16A Tuba City 82.81 50 P P 22 29 30.2 +0.7
baz=82,SNR=28
WERN Wernitzgruen 82.81 329 eP P 22 29 29.1 -0.2
comp=Z,3.0nm,0.9s,mb4.1
U17A Shonto 82.82 50 P P 22 29 30.2 +0.6
baz=82
NKC Novy Kostel 82.83 329 eP P 22 29 28.8 -0.5
NKC e pP 22 29 49.1 +0.7
NKC Novy Kostel 82.83 329 eP P 22 29 28.8 -0.5
NKC epP pP 22 29 49.1 +0.7
MOX Moxa 82.86 330 e(P) P 22 29 28.9 -0.6
MOX Moxa 82.86 330 P P 22 29 28.9 -0.6
N23A Red Feather La 82.86 44 ⇑P P 22 29 30.4 +0.7
baz=82,SNR=8.5
PHWY Pilot Hill 82.87 44 eP P 22 29 29.7 0.0
P21A Newcastle 82.89 46 ⇑P P 22 29 30.4 +0.6
baz=82,SNR=6.5
T18A Mexican Hat 82.97 49 ⇓P P 22 29 30.1 -0.2
baz=83,SNR=20
PKSM Moragy 82.97 323 ⇑P P 22 29 29.7 -0.5
PKSM Moragy 82.97 323 ⇑iP P 22 29 29.7 -0.5
Y14A Wickenburg 82.98 53 P P 22 29 30.3 -0.1
baz=83,SNR=14
O22A Kremmling 83.00 45 ⇑P P 22 29 30.2 -0.2
baz=83,SNR=13
Z13A Yuma Proving G 83.01 54 ⇑P P 22 29 30.8 +0.2
baz=83,SNR=18
S19A Harvey Farm, M 83.03 48 ⇓P P 22 29 30.5 -0.1
baz=83,SNR=13
IBBN Ibbenburen 83.08 333 eP P 22 29 30.1 -0.5
comp=Z,11nm,0.6s,mb4.9
M24A Cheyenne 83.11 43 ⇑P P 22 29 31.7 +0.7
baz=83
PV01 Paradox Valley 83.12 48 eP P 22 29 31.4 +0.3
comp=Z,2µm,1.1s
VTS Vitosha 83.14 318 ⇓P P 22 29 31.5 +0.4
VTS Vitosha 83.14 318 ⇓iP P 22 29 31.5 +0.4
X15A Humboldt 83.14 52 ⇑P P 22 29 31.8 +0.5
baz=83,SNR=31
KHC Kasperske Hory 83.17 328 eP P 22 29 31.2 +0.1
comp=Z,13nm,1.3s,mb4.6
KHC Kasperske Hory 83.17 328 eP P 22 29 30.7 -0.4
KHC e pP 22 29 46.2 -4.1
KHC Kasperske Hory 83.17 328 eP P 22 29 30.7 -0.4
KHC epP pP 22 29 46.2 -4.1
113A Mohawk Valley, 83.20 55 ⇓P P 22 29 31.4 -0.1
baz=83,SNR=7.0
R20A Redvale 83.20 47 P P 22 29 31.9 +0.4
baz=83,SNR=23
W16A Flagstaff 83.21 52 ⇓P P 22 29 32.4 +0.8
baz=83,SNR=6.9
P22A Eagle 83.25 46 ⇓P P 22 29 32.2 +0.5
baz=83,SNR=8.7
Q21A Lamborn Mesa, 83.26 47 ⇓P P 22 29 32.5 +0.7
baz=83
ROTZ Rotzenmuhle 83.28 329 eP P 22 29 31.8 +0.1
O23A Lake Granby, G 83.33 45 ⇑P P 22 29 33.0 +0.9
baz=83
V17A Tonalea, Kykot 83.35 51 ⇓P P 22 29 32.9 +0.6
baz=83,SNR=64
SMCO Snowmass 83.39 46 eP P 22 29 32.1 -0.4
comp=Z,9.8nm,0.9s,mb4.6
Y15A Casa Rosa Ranc 83.41 53 ⇑P P 22 29 33.1 +0.4
baz=83,SNR=16
U18A Rough Rock, Ch 83.42 50 ⇓P P 22 29 33.4 +0.7
baz=83,SNR=30
S20A Disappointment 83.44 48 P P 22 29 33.0 +0.2
baz=83,SNR=9.5
R21A Cimarron 83.58 47 P P 22 29 34.2 +0.8
baz=83,SNR=12
Q22A Crested Butte, 83.64 46 P P 22 29 34.5 +0.8
baz=83,SNR=12
GRA3 Grafenberg Arr 83.66 329 eP P 22 29 33.7 +0.1
T19A Beclabito 83.68 49 P P 22 29 34.3 +0.3
baz=83,SNR=25
X16A Lo Mia Camp, P 83.69 52 P P 22 29 34.6 +0.5
baz=83,SNR=26
GRA1 Grafenberg Arr 83.75 329 eP P 22 29 34.2 +0.1
comp=Z,14nm,0.9s,mb4.8
GRF Grafenberg Arr 83.75 329 eP P 22 29 34.2 +0.1
comp=Z,14nm,0.9s,mb4.8
GRF Grafenberg Arr 83.75 329 eP P 22 29 34.2 +0.1
GRF comp=Z,14nm,0.9s,mb4.8 pmax pmax
GRF Grafenberg Arr 83.75 329 eP P 22 29 34.2 +0.1
GRF comp=Z,14nm,0.9s,mb4.8 pmax pmax
GRFO Grafenberg 83.75 329 eP P 22 29 34.4 +0.3
comp=Z,8.9nm,1.1s,mb4.5
GRFO Grafenberg 83.75 329 eP P 22 29 34.4 +0.3
GRFO comp=Z,9.0nm,1.1s,mb4.5 pmax pmax
ISCO Idaho Springs 83.78 45 ⇓P P 22 29 34.8 +0.4
baz=83,SNR=6.3
ISCO Idaho Springs 83.78 45 eP P 22 29 34.3 -0.1
comp=Z,5.7nm,1.1s,mb4.3
ISCO Idaho Springs 83.78 45 eP P 22 29 34.3 -0.1
ISCO comp=Z,6.0nm,1.1s,mb4.3 pmax pmax
114A Black Gap (USA 83.79 54 ⇓P P 22 29 35.0 +0.4
baz=83,SNR=14
V18A Ganado 83.83 50 ⇑P P 22 29 35.2 +0.4
baz=83,SNR=19
U19A Dine' College, 83.92 49 P P 22 29 35.5 +0.3
baz=84,SNR=24
P23A Jefferson 83.93 45 ⇑P P 22 29 35.9 +0.8
baz=84
Z15A Gila River Ind 83.94 53 ⇑P P 22 29 35.5 +0.1
baz=84
Y16A Circle Bar Ran 84.01 52 ⇓P P 22 29 36.0 +0.2
baz=84,SNR=16
R22A Saguache, Gunn 84.14 47 ⇑P P 22 29 37.7 +1.4
baz=84,SNR=15
X17A Forest Lakes 84.15 52 P P 22 29 37.3 +0.8
baz=84,SNR=9.4
115A Sonoran Desert 84.26 54 ⇓P P 22 29 37.4 +0.4
baz=84,SNR=8.5
U20A Newcomb 84.29 49 ⇑P P 22 29 37.4 +0.4
baz=84,SNR=12
214A Organ Pipe Nat 84.33 55 ⇓P P 22 29 37.5 +0.1
baz=84,SNR=15
PERS Pernice 84.34 325 iP P 22 29 37.0 -0.2
Z16A Peralta Trail, 84.38 53 ⇑P P 22 29 37.9 +0.3
baz=84,SNR=8.0
S22A 4UR Ranch, Cre 84.42 47 P P 22 29 38.5 +0.8
baz=84,SNR=18
T21A Navajo Lake 84.49 48 ⇑P P 22 29 38.7 +0.7
baz=84,SNR=12
Y17A Roosevelt 84.53 52 ⇑P P 22 29 38.7 +0.3
baz=84,SNR=19
X18A Snowflake 84.58 51 P P 22 29 38.8 +0.2
baz=84,SNR=8.3
Q24A Divide 84.60 45 ⇑P P 22 29 38.9 +0.3
baz=84,SNR=7.3
116A Eloy 84.69 54 ⇑P P 22 29 39.4 +0.2
baz=84,SNR=9.3
V20A Brimhall 84.69 49 ⇓P P 22 29 39.3 +0.1
baz=84,SNR=20
PMOR Pomariorio Ree 84.71 112 eT 00 02 34.3
comp=Z,8.7nm,0.2s
U21A Nageezi 84.78 48 P P 22 29 39.8 +0.3
baz=84,SNR=17
P25A Willow Gulch B 84.80 44 ⇓P P 22 29 39.3 -0.3
baz=84
T22A Edith 84.86 48 ⇓P P 22 29 40.6 +0.6
baz=84,SNR=18
FUR Furstenfeldbru 84.90 328 eP P 22 29 39.8 -0.1
comp=Z,9.0nm,0.7s,mb4.8
FUR Furstenfeldbru 84.90 328 eP P 22 29 39.8 -0.1
FUR comp=Z,9.0nm,0.7s,mb4.8 pmax pmax
Y18A Canyon Day Jun 85.00 52 ⇑P P 22 29 41.2 +0.5
baz=85,SNR=21
Z17A San Carlos Hig 85.03 52 ⇓P P 22 29 41.5 +0.7
baz=85,SNR=8.8
EYMN Ely 85.06 32 eP P 22 29 39.7 -1.0
comp=Z,26nm,1.1s,mb5.1
X19A St. Johns 85.06 51 ⇑P P 22 29 41.6 +0.6
baz=85,SNR=8.1
PPT Papeete 85.07 115 eLR LR 22 56 24.0
comp=Z,184nm,32.0s
PPT Papeete 85.07 115 LR LR 23 01 59.9
comp=Z,106nm,18.5s,baz=0.8,slow=32
W20A Ramah 85.11 50 ⇓P P 22 29 41.5 +0.2
baz=85,SNR=12
R24A Sanders Place, 85.11 46 ⇑P P 22 29 41.6 +0.4
baz=85,SNR=13
Q25A Bedland, Calha 85.15 45 P P 22 29 41.3 -0.1
baz=85,SNR=6.2
V21A Milan 85.20 49 ⇑P P 22 29 42.1 +0.4
baz=85
216A Three Points, 85.20 54 P P 22 29 42.1 +0.4
baz=85,SNR=5.8
SDCO Great Sand Dun 85.21 46 ⇓P P 22 29 42.1 +0.5
baz=85,SNR=14
SDCO Great Sand Dun 85.21 46 eP P 22 29 41.9 +0.2
comp=Z,16nm,1.3s,mb4.8
U22A Llaves 85.30 48 ⇑P P 22 29 42.7 +0.5
baz=85,SNR=12
117A Oracle 85.31 53 P P 22 29 42.5 +0.2
baz=85,SNR=15
JAVS Javornik 85.38 325 iP P 22 29 41.4 -1.0
Y19A Nutrioso 85.39 51 ⇑P P 22 29 43.5 +0.9
baz=85,SNR=6.7
S24A Houchin Ranch, 85.45 46 P P 22 29 43.5 +0.6
baz=85,SNR=10
TUC Tucson 85.45 53 eP P 22 29 42.2 -0.8
comp=Z,14nm,1.1s,mb4.8

TUC	**Tucson**	85.45	53	*e*P	P	22 29 42.2	-0.8
TUC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
X20A	**Quemado**	85.49	50	P	P	22 29 43.8	+0.7
	baz=85,SNR=22						
V22A	**San Miguel Ran**	85.58	48	P	P	22 29 43.8	+0.3
	baz=85,SNR=8.2						
R25A	**Fountain Ranch**	85.65	45	⇑P	P	22 29 43.8	-0.1
	baz=85,SNR=8.0						
U23A	**El Rito**	85.74	48	P	P	22 29 45.1	+0.7
	baz=85,SNR=29						
217A	**Green Valley**	85.77	54	⇓P	P	22 29 44.7	+0.1
	baz=85,SNR=18						
118A	**Homack Ranch,**	85.77	53	⇓P	P	22 29 44.7	+0.1
	baz=85,SNR=13						
S25A	**Robets Cordova**	85.89	46	⇑P	P	22 29 44.7	-0.4
	baz=86						
T24A	**Torres, Weston**	85.92	47	⇑P	P	22 29 45.9	+0.7
	baz=86,SNR=9.6						
Y20A	**Horse Springs,**	85.97	51	⇓P	P	22 29 46.4	+0.9
	baz=86,SNR=18						
X21A	**Alamocita Cree**	86.00	50	⇑P	P	22 29 46.3	+0.7
	baz=86,SNR=17						
BFO	**Black Forest**	86.01	330	*e*P	P	22 29 44.8	-0.6
	comp=Z,13nm,1.3s,mb4.7						
BFO	**Black Forest**	86.01	330	*e*P	P	22 29 44.8	-0.6
BFO				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
119A	**Ashpeak Ranch,**	86.12	52	⇓P	P	22 29 47.0	+0.7
	baz=86,SNR=5.9						
V23A	**Ortiz Mt. (NFS**	86.13	48	⇑P	P	22 29 47.2	+0.9
	baz=86						
218A	**Dragoon**	86.15	53	P	P	22 29 47.1	+0.7
	baz=86,SNR=8.5						
BAIF	**Baives**	86.21	333	*e*P	P	22 29 45.3	-1.1
BAIF	**Baives**	86.21	333	*e*P	P	22 29 45.3	-1.1
U24A	**Moreno Valley**	86.23	47	⇓P	P	22 29 48.0	+1.2
	baz=86,SNR=6.5						
T25A	**Trinidad**	86.26	46	⇓P	P	22 29 47.2	+0.3
	baz=86,SNR=5.9						
Y21A	**Point of Rocks**	86.35	50	⇓P	P	22 29 48.1	+0.7
	baz=86,SNR=7.9						
Z20A	**Nine Sixteen R**	86.35	51	P	P	22 29 48.1	+0.6
	baz=86,SNR=22						
CDF	**Champ du Feu**	86.37	331	*e*P	P	22 29 46.4	-0.8
	comp=Z,19nm,1.1s,mb4.7						
CDF	**Champ du Feu**	86.37	331	*e*P	P	22 29 46.4	-0.8
	comp=Z,9.4nm,1.1s,mb4.6						
CDF	**Champ du Feu**	86.37	331	*e*P	P	22 29 46.4	-0.8
CDF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
LAZ	**Ladron**	86.43	50	*e*P	P	22 29 48.0	+0.3
	comp=Z,4.7nm,1.3s,mb4.3						
ANMO	**Albuquerque**	86.49	49	*e*P	P	22 29 48.0	0.0
	comp=Z,10nm,1.1s,mb4.7						
ANMO	**Albuquerque**	86.49	49	*e*P	P	22 29 48.0	-0.1
ANMO				pmax	pmax		
	comp=Z,11nm,1.1s						
318A	**Bisbee**	86.52	54	⇑P	P	22 29 48.5	+0.2
	baz=86,SNR=15						
219A	**White Tail Can**	86.64	53	⇑P	P	22 29 49.6	+0.7
	baz=86,SNR=11						
120A	**U Bar Ranch, L**	86.69	52	⇑P	P	22 29 50.0	+0.9
	baz=86,SNR=5.1						
V24A	**Rampart Ranch,**	86.69	48	⇓P	P	22 29 50.1	+1.1
	baz=86,SNR=12						
U25A	**Circle Dot Ran**	86.76	47	⇓P	P	22 29 49.2	-0.2
	baz=86,SNR=5.1						
Z21A	**St. Cloud Mine**	86.81	51	P	P	22 29 50.2	+0.6
	baz=86,SNR=16						
Y22A	**Socorro**	86.84	50	⇑P	P	22 29 50.6	+0.8
	baz=86,SNR=6.3						
BNM	**Barren Site**	86.91	50	*e*P	P	22 29 50.4	+0.2
	comp=Z,4.5nm,0.7s,mb4.5						
W24A	**Lazy 6 Ranch,**	86.96	48	⇓P	P	22 29 51.1	+0.8
	baz=87,SNR=7.2						
V25A	**Rancho No Teng**	87.01	47	⇑P	P	22 29 51.2	+0.6
	baz=87,SNR=7.9						
HINF	**Hinteralfeld**	87.01	330	*e*P	P	22 29 49.0	-1.4
HINF	**Hinteralfeld**	87.01	330	*e*P	P	22 29 49.0	-1.4
HAU	**Haudompre**	87.06	331	*e*P	P	22 29 49.3	-1.3
	comp=Z,6.4nm,0.7s,mb4.3						
HAU	**Haudompre**	87.06	331	*e*P	P	22 29 49.3	-1.3
	comp=Z,3.2nm,0.7s,mb4.4						
HAU	**Haudompre**	87.06	331	*e*P	P	22 29 49.3	-1.3
HAU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
SCHQ	**Schefferville**	87.11	15	P	P	22 29 50.4	-0.3
	comp=Z,15nm,0.8s,mb5.0,baz=4.6,slow=6.2,SNR=7.9						
MEZF	**Maizieres J'vi**	87.17	332	*e*P	P	22 29 50.3	-0.8
Z22A	**Elephant Butte**	87.29	50	⇑P	P	22 29 52.0	0.0
	baz=87,SNR=7.1						
SFTF	**Sexfontaines**	87.42	332	*e*P	P	22 29 51.4	-0.9
	comp=Z,16nm,0.9s,mb4.6						
SFTF	**Sexfontaines**	87.42	332	*e*P	P	22 29 51.4	-0.9
	comp=Z,16nm,0.9s,mb4.9						
Z23A	**Rita Site, Whi**	87.75	50	⇓P	P	22 29 54.1	-0.1
	baz=87						
W27A	**Bowe Ranch, En**	88.47	47	⇓P	P	22 29 57.5	0.0
	baz=88						
LOR	**Lormes**	88.64	332	*e*P	P	22 29 58.2	+0.1
LOR	**Lormes**	88.64	332	*e*P	P	22 29 58.2	+0.1
Z25A	**Roswell**	88.67	49	⇑P	P	22 29 58.4	-0.1
	baz=88,SNR=5.3						
TBI	**Tubuai**	88.82	120	*e*T		00 07 42.1	
	comp=Z,2.1nm,0.2s						
LPL	**La Plagne**	88.91	329	*e*P	P	22 29 58.7	-0.7
	comp=Z,17nm,1.3s,mb4.6						
LPL	**La Plagne**	88.91	329	*e*P	P	22 29 58.7	-0.7
	comp=Z,8.6nm,1.3s,mb4.6						
LPL	**La Plagne**	88.91	329	*e*P	P	22 29 58.7	-0.7
LPL				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
LPG	**La Plagne**	88.92	329	*e*P	P	22 29 58.8	-0.7
	comp=Z,10nm,1.0s,mb4.5						
LPG	**La Plagne**	88.92	329	*e*P	P	22 29 58.8	-0.7
	comp=Z,5.2nm,1.0s,mb4.5						
LPG	**La Plagne**	88.92	329	*e*P	P	22 29 58.8	-0.7
LPG				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
SSF	**Saint Saulge**	88.95	332	*e*P	P	22 29 58.6	-1.0
SSF	**Saint Saulge**	88.95	332	*e*P	P	22 29 58.6	-1.0
FLN	**La Foliniere**	88.97	335	*e*P	P	22 29 58.9	-0.7
FLN	**La Foliniere**	88.97	335	*e*P	P	22 29 58.9	-0.7
224A	**Cornudas Mount**	88.98	51	⇓P	P	22 29 59.3	-0.7
	baz=89,SNR=6.2						
LDF	**La Druitiere**	88.99	335	*e*P	P	22 29 59.0	-0.7
	comp=Z,4.4nm,0.5s,mb4.4						
LDF	**La Druitiere**	88.99	335	*e*P	P	22 29 59.0	-0.7
	comp=Z,2.2nm,0.5s,mb4.4						
LDF	**La Druitiere**	88.99	335	*e*P	P	22 29 59.0	-0.7
LDF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
Z26A	**Caprock**	89.14	49	⇑P	P	22 30 00.2	-0.6
	baz=89						
Y27A	**Causey**	89.22	48	⇓P	P	22 30 00.5	-0.6
	baz=89						
AVF	**Avril sur Loir**	89.23	332	*e*P	P	22 29 59.9	-1.0
	comp=Z,12nm,0.9s,mb4.6						
AVF	**Avril sur Loir**	89.23	332	*e*P	P	22 29 59.9	-1.0
	comp=Z,6.0nm,0.9s,mb4.6						
AVF	**Avril sur Loir**	89.23	332	*e*P	P	22 29 59.9	-1.0
AVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
KSU1	**Kansas State U**	89.24	40	*e*P	P	22 30 00.2	-0.9
	comp=Z,10nm,0.6s,mb5.0						
GRR	**Gorron**	89.42	335	*e*P	P	22 30 00.9	-0.9
	comp=Z,14nm,0.9s,mb4.7						
GRR	**Gorron**	89.42	335	*e*P	P	22 30 00.9	-0.9
	comp=Z,6.9nm,0.9s,mb4.7						
GRR	**Gorron**	89.42	335	*e*P	P	22 30 00.9	-0.9
GRR				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
BGF	**Bois d'Agland**	89.62	332	*e*P	P	22 30 01.6	-1.1
BGF	**Bois d'Agland**	89.62	332	*e*P	P	22 30 01.6	-1.1
ORIF	**Oris-en-Rattie**	89.75	329	*e*P	P	22 30 02.4	-1.0
	comp=Z,5.6nm,0.9s,mb4.4						
ORIF	**Oris-en-Rattie**	89.75	329	*e*P	P	22 30 02.4	-1.0
	comp=Z,2.8nm,0.9s,mb4.4						
ORIF	**Oris-en-Rattie**	89.75	329	*e*P	P	22 30 02.4	-1.0
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
SBF	**Sospel**	89.94	328	*e*P	P	22 30 03.7	-0.6
	comp=Z,23nm,1.0s,mb5.0						
SBF	**Sospel**	89.94	328	*e*P	P	22 30 03.7	-0.6
	comp=Z,12nm,1.0s,mb5.0						
SBF	**Sospel**	89.94	328	*e*P	P	22 30 03.7	-0.6
SBF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
TCF	**Toulx Ste Croi**	90.09	332	*e*P	P	22 30 04.4	-0.5
TCF	**Toulx Ste Croi**	90.09	332	*e*P	P	22 30 04.4	-0.5
MFF	**Saint Martin d**	90.69	334	*e*P	P	22 30 07.2	-0.5
	comp=Z,34nm,1.2s,mb5.1						
MFF	**Saint Martin d**	90.69	334	*e*P	P	22 30 07.2	-0.5
	comp=Z,17nm,1.2s,mb5.1						
MFF	**Saint Martin d**	90.69	334	*e*P	P	22 30 07.2	-0.5
MFF				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
LMR	**La Mourre**	90.76	328	*e*P	P	22 30 06.9	-1.2
	comp=Z,30nm,1.2s,mb5.0						
LMR	**La Mourre**	90.76	328	*e*P	P	22 30 06.9	-1.2
	comp=Z,15nm,1.2s,mb5.0						
LMR	**La Mourre**	90.76	328	*e*P	P	22 30 06.9	-1.2
LMR				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.0						
RJF	**Les Rejaudoux**	91.17	332	*e*P	P	22 30 09.6	-0.4
	comp=Z,22nm,1.1s,mb4.9						
RJF	**Les Rejaudoux**	91.17	332	*e*P	P	22 30 09.6	-0.4
	comp=Z,11nm,1.1s,mb4.9						
RJF	**Les Rejaudoux**	91.17	332	*e*P	P	22 30 09.6	-0.4
RJF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
LASF	**Ste Croix**	91.27	330	*e*P	P	22 30 09.7	-0.8
CAF	**Calviac**	91.28	332	*e*P	P	22 30 10.3	-0.2
CAF	**Calviac**	91.28	332	*e*P	P	22 30 10.3	-0.2
LFF	**La Frestale**	91.78	332	*e*P	P	22 30 12.5	-0.3
LFF	**La Frestale**	91.78	332	*e*P	P	22 30 12.5	-0.3
TXAR	**Lajitas Array**	92.01	51	P	P	22 30 13.8	-0.4
	comp=Z,2.4nm,0.6s,mb4.6,baz=300,slow=3.4,SNR=36						
TXAR	**Lajitas Array**	92.01	51	P	P	22 30 13.8	-0.4
MTLF	**Montolieu**	92.55	331	*e*P	P	22 30 15.9	-0.5
	comp=Z,28nm,1.4s,mb5.1						
MTLF	**Montolieu**	92.55	331	*e*P	P	22 30 15.9	-0.5
	comp=Z,14nm,1.4s,mb5.1						
MTLF	**Montolieu**	92.55	331	*e*P	P	22 30 15.9	-0.5
MTLF				pmax	pmax		
	comp=Z,14nm,1.4s,mb5.1						
EPF	**Esparros**	93.55	332	*e*P	P	22 30 20.9	-0.1
	comp=Z,26nm,1.4s,mb5.1						
EPF	**Esparros**	93.55	332	*e*P	P	22 30 20.9	-0.1
	comp=Z,13nm,1.4s,mb5.1						
EPF	**Esparros**	93.55	332	*e*P	P	22 30 20.9	-0.1
EPF				pmax	pmax		
	comp=Z,13nm,1.4s,mb5.1						
ETSF	**Etsaut**	94.01	332	*e*P	P	22 30 23.6	+0.5
ETSF	**Etsaut**	94.01	332	*e*P	P	22 30 23.6	+0.5
ESDC	**Sonseca Array**	98.08	333	P	P	22 30 42.7	+1.0
	comp=Z,0.1nm,0.5s,baz=93,slow=4.9,SNR=4.0						
TORD	**Torodi Ar. Bea**	117.50	313	PKP	PKPdf	22 35 51.2	0.0
	comp=Z,1.0nm,0.5s,baz=21,slow=1.2,SNR=6.0						
TORD	**Torodi Ar. Bea**	117.50	313	PKP	PKPdf	22 35 51.2	0.0
DBIC	**Dimbokro**	126.51	315	PKP	PKPdf	22 36 08.0	-0.5
	comp=Z,2.9nm,0.8s,baz=304,slow=3.6,SNR=3.6						
DBIC	**Dimbokro**	126.51	315	PKIKP	PKPdf	22 36 08.0	-0.5
SDV	**Santo Domingo**	127.26	39	*e*PKPdf	PKPdf	22 36 09.2	-0.7
LPAZ	**La Paz**	148.50	60	PKPbc	PKPbc	22 36 52.5	+0.4
	comp=Z,6.8nm,0.7s,baz=325,slow=2.8,SNR=31						
LPAZ	**La Paz**	148.50	60	*e*PKPdf	PKPdf	22 36 48.7	+0.3
LPAZ				*e*PKPbc	PKPbc	22 36 52.5	+0.4
LPAZ	**La Paz**	148.50	60	*e*PKIKP	PKPdf	22 36 48.7	+0.3
LPAZ				*e*		22 36 52.5	
PLCA	**Paso Flores**	155.56	111	PKPab	PKPab	22 37 24.2	-0.3
	comp=Z,1.9nm,0.9s,baz=236,slow=2.5,SNR=4.1						
PLCA	**Paso Flores**	155.56	111	PKP2	PKPab	22 37 24.2	-0.3
BDFB	**Brasilia**	158.96	22	PKPab	PKPab	22 37 38.3	-1.3
	comp=Z,2.9nm,0.8s,baz=336,slow=2.6,SNR=3.9						
BDFB	**Brasilia**	158.96	22	PKP2	PKPab	22 37 38.3	-1.3
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.8s						

DDA ***20*** *22:17:08.2, 38°.51N×44°.72E, h7km±2km, Md3.6*
ISK ***20*** *22:17:11.5, 38°.52N×44°.42E, h5km, MD3.7*
ISCJB ***20*** *22:17:12.2±0.3, 38°.48N±0°.03×44°.50E±0°.02, h10km, Error ellipse: s-maj=3.6km s-min=2.4km az=175.8*
CSEM ***20*** *22:17:12.3±0.2, 38°.47N×44°.47E, h2km, MD3.7, Error ellipse: s-maj=4.5km s-min=3.1km az=3.0*
TEH ***20*** *22:17:14.4, 38°.43N×44°.53E, h3km*
ISC 20 22:17:13.2±0.3, 38°.49N±0°.02×44°.50E±0°.02, h10km, n61, σ1§35/82, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	0.80	325	*e*PG	Pg	22 17 26.0	-2.5
CLDR				*e*SG	Sg	22 17 37.0	-1.9
CLDR	**Caldiran**	0.80	325	*e*Pg	Pg	22 17 26.0	-2.5
CLDR				*e*Sg	Sg	22 17 37.0	-1.9
TVAN	**Van**	0.86	273	*i* P	Pg	22 17 27.5	-2.3
TVAN				*i* S	Sg	22 17 42.9	+1.9
TVAN	**Van**	0.86	273	*i* P	Pg	22 17 27.5	-2.3
TVAN				*i* S	Sg	22 17 42.9	+1.9
VANB	**Van**	0.88	277	*e*PG	Pg	22 17 28.2	-1.9
VANB				*e*SG	Sg	22 17 40.3	-1.3
VANB	**Van**	0.88	277	*e*Pg	Pg	22 17 28.2	-1.9
VANB				*e*Sg	Sg	22 17 40.3	-1.3
ISHB	**Shabestar**	0.90	103	*e*Pg	Pg	22 17 30.2	-0.3
ISHB				*e*Sg	Sg	22 17 42.0	-0.2
ISHB				*e*		22 17 46.9	
	comp=Z,16μm,0.2s						
IMRD	**Marand**	0.97	76	*e*Pg	Pg	22 17 31.1	-0.7
IMRD				*e*		22 17 50.4	
	comp=Z,37μm,0.2s						
IMRD	**Marand**	0.97	76	*e*Pg	Pg	22 17 31.1	-0.7
VANT	**Van**	0.97	266	*e*PG	Pg	22 17 30.3	-1.6
VANT				*e*SG	Sg	22 17 43.8	-0.8
VANT	**Van**	0.97	266	*e*Pg	Pg	22 17 30.3	-1.6
VANT				*e*Sg	Sg	22 17 43.8	-0.8
NAX	**Nakhchivan**	1.03	48	P	Pg	22 17 32.6	-0.4
	SNR=23						
NAX				S	Sg	22 17 47.7	+1.3
HKR	**Hakkari**	1.09	214	*e*PG	Pg	22 17 32.6	-1.6
HKR	**Hakkari**	1.09	214	*e*Pg	Pg	22 17 32.6	-1.6
HAKT	**HAKKARI**	1.12	214	*i* P	Pg	22 17 32.2	-2.6
HAKT				*i* S	Sg	22 17 49.5	+0.1
HAKT	**HAKKARI**	1.12	214	*i* P	Pg	22 17 32.2	-2.6
HAKT				*i* S	Sg	22 17 49.5	+0.1
DYDN	**Diyadin**	1.23	329	*i* P	Pn	22 17 36.0	-0.4
DYDN				*i* S	Sb	22 17 51.6	-0.7
DYDN	**Diyadin**	1.23	329	*i* P	Pn	22 17 36.0	-0.4
DYDN				*i* S	Sb	22 17 51.7	-0.6
ITBZ	**Tabriz**	1.32	101	*e*Pg	Pg	22 17 37.1	-1.4
ITBZ				*e*Sg	Sg	22 17 54.2	-1.4
ITBZ				*e*		22 18 06.5	
	comp=Z,3μm,0.3s						
IAZR	**Azarshahr**	1.42	124	*e*Pn	Pn	22 17 39.4	+0.4
IAZR				*e*		22 17 42.6	
	comp=Z,17μm,0.2s						
IAZR	**Azarshahr**	1.42	124	*e*Pn	Pn	22 17 39.4	+0.4
CUKT	**Cukurca**	1.43	210	*e*PN	Pn	22 17 38.7	-0.5
CUKT	**Cukurca**	1.43	210	*e*Pn	Pn	22 17 38.7	-0.5
IFTB	**Fath-abad**	1.56	107	*e*Pn	Pn	22 17 43.0	+2.0
IFTB				*e*		22 18 17.6	
	comp=Z,73μm,0.3s						
AGRB	**Hanur-Agry**	1.60	313	*e*PN	Pn	22 17 41.3	-0.2
AGRB	**Hanur-Agry**	1.60	313	*e*Pn	Pn	22 17 41.3	-0.2
GNI	**Garni**	1.67	6	*e*PN	Pn	22 17 43.3	+0.9
GNI	**Garni**	1.67	6	*e*Pn	Pn	22 17 43.3	+0.9
TATV	**Tatvan**	1.75	271	*i* P	Pn	22 17 43.7	+0.1
TATV				*i* S	Sg	22 18 10.8	+1.2
TATV	**Tatvan**	1.75	271	*i* P	Pn	22 17 43.7	+0.1
TATV				*i* S	Sg	22 18 10.8	+1.2
IHRS	**Heris**	2.00	94	*e*Pn	Pn	22 17 49.4	+2.4
IHRS				*e*		22 17 52.0	
	comp=Z,3μm,0.1s						
IHRS				*e*Sg	Sg	22 18 16.0	-1.5
KARS	**Kars**	2.40	333	*e*PN	Pn	22 17 52.6	+0.1
KARS	**Kars**	2.40	333	*e*Pn	Pn	22 17 52.6	+0.1
GANJ	**Ganja**	2.57	33	P	Pn	22 17 57.0	+2.2
	SNR=3.9						
ISRB	**Sarab**	2.58	104	*e*Pn	Pn	22 17 57.0	+2.0
ISRB				*e*		22 18 48.3	
	comp=Z,1μm,0.3s						
ISRB	**Sarab**	2.58	104	*e*Pn	Pn	22 17 57.0	+2.0
ERZM	**Erzurum**	2.82	301	*i* P	Pg	22 18 03.2	-4.0
ERZM	**Erzurum**	2.82	301	*i* P	Pg	22 18 03.2	-3.9
EZM	**Erzurum**	2.82	301	*e*PN	Pn	22 17 58.7	+0.4
DGRG	**David-gareji**	3.03	12	P	Pg	22 18 08.7	-2.5
DGRG				S	Sg	22 18 52.5	+2.1
BINT	**Bingol**	3.17	278	*e*PN	Pn	22 18 03.4	+0.3
BINT	**Bingol**	3.17	278	*e*Pn	Pn	22 18 03.4	+0.4
MARD	**Mardin**	3.17	249	*i* P	Pn	22 18 04.2	+1.0
MARD				*i* S	Sg	22 18 57.9	+2.9
MTA	**Mtatsminda**	3.21	4	P	Pg	22 18 10.2	-4.4
MTA				S	Sg	22 18 55.0	-1.2
TBLG	**Delisi**	3.24	3	P	Pg	22 18 09.9	-5.3
GOR	**Gori**	3.50	355	P	Pg	22 18 15.3	-5.0
BCA	**Borcka**	3.69	324	*e*PN	Pn	22 18 11.2	+1.0
BCA	**Borcka**	3.69	324	*e*Pn	Pn	22 18 11.2	+1.0
BAYT	**Ayd¨–ntepe-Bay**	3.87	301	*e*PN	Pn	22 18 13.6	+0.9
BAYT	**Ayd¨–ntepe-Bay**	3.87	301	*e*Pn	Pn	22 18 13.6	+0.8
PQL	**Pirkuli**	3.90	53	P	Pn	22 18 17.1	+4.0
PTK	**Pertek**	4.02	277	*e*PN	Pn	22 18 15.4	+0.7
PTK	**Pertek**	4.02	277	*e*Pn	Pn	22 18 15.4	+0.6
SVRC	**Sivrice-ELAZID**	4.08	270	*e*PN	Pn	22 18 16.4	+0.8
SVRC	**Sivrice-ELAZID**	4.08	270	*e*Pn	Pn	22 18 16.4	+0.8
EZC	**Erzincan**	4.20	289	*e*PN	Pn	22 18 18.1	+0.9
EZC	**Erzincan**	4.20	289	*e*Pn	Pn	22 18 18.1	+0.9
GUMT	**Gumushane**	4.36	298	*e*PN	Pn	22 18 20.5	+1.1
GUMT	**Gumushane**	4.36	298	*e*Pn	Pn	22 18 20.5	+1.1
MALT	**Malatya**	4.78	270	*e*PN	Pn	22 18 26.5	+1.3
MALT	**Malatya**	4.78	270	*e*Pn	Pn	22 18 26.5	+1.3

ISCJB ***20*** *22:18:00.5±0.9, 49°.92N±0°.05×88°.25E±0°.09, h10km, Error ellipse: s-maj=8.8km s-min=6.8km az=26.7*
IDC ***20*** *22:18:00.7±2.2, 49°.97N×88°.18E, h0km, mb1 3.0/3, mb1mx2.9/27, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=25.4km s-min=14.8km az=112.0*
NNC ***20*** *22:18:01.0±1.7, 49°.91N×88°.16E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=12.7km s-min=7.9km az=88.0*
NEIC ***20*** *22:18:02.5±0.9, 50°.00N×88°.19E, h10km, Error ellipse: s-maj=15.1km s-min=11.3km az=167.0*
ISC 20 22:18:02.5±0.9, 49°.93N±0°.05×88°.28E±0°.09, h10km, n8, σ0§93/17, 7C-2D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	4.55	333	Pn	Pn	22 19 10.6	-0.8
	0.3nm,0.3s,baz=156,slow=14,SNR=5.0						
ZALV				Pg	Pb	22 19 21.8	-0.6
	0.4nm,0.3s,baz=157,slow=16,SNR=5.4						
ZALV				Sn	Sn	22 20 06.0	+1.6
	0.5nm,0.3s,baz=160,slow=17,SNR=3.6						
ZALV				Lg		22 20 22.9	
	1.0nm,0.3s,baz=149,slow=30,SNR=7.9						
MK31	**Makanchi Array**	5.08	234	⇑Pn	Pn	22 19 17.5	-1.1
	2.2nm,0.7s,baz=68,slow=11,SNR=4.7						
MK31				⇓Sn	Sn	22 20 16.8	-0.4
	0.4nm,0.3s,baz=61,slow=25,SNR=3.6						
MK31				⇑Lg		22 20 40.1	
	1.5nm,0.4s,baz=47,slow=32,SNR=3.6						
MK31	**Makanchi Array**	5.08	234	*e*Pn	Pn	22 19 19.2	+0.6
MK31				*e*S	Sb	22 20 38.4	+6.0
MKAR	**Makanchi Array**	5.08	234	Pn	Pn	22 19 18.3	-0.3
	0.5nm,0.3s,baz=57,slow=14,SNR=6.9						
MKAR				Pg	Pb	22 19 31.7	+0.4
	0.6nm,0.3s,baz=53,slow=17,SNR=5.4						
MKAR				Sn	Sn	22 20 18.5	+1.3
	0.8nm,0.3s,baz=60,slow=24,SNR=5.4						
MKAR				Lg		22 20 40.0	
	1.4nm,0.3s,baz=45,slow=25,SNR=6.9						
KURK	**Kurchatov**	6.23	281	⇓Pn	Pn	22 19 33.2	-1.2
	1.5nm,0.8s						
KURK				⇑Sn	Sn	22 20 45.7	0.0
	2.4nm,0.8s						
KURK				⇑Lg		22 21 14.8	
	6.5nm,0.9s						
KURK	**Kurchatov**	6.23	281	*e*Pn	Pn	22 19 33.0	-1.4
KURK				*e*S	Sb	22 21 14.1	+8.5
KURBB	**Kurchatov Arra**	6.29	280	⇑Pn	Pn	22 19 33.8	-1.4
	0.1nm,0.3s,baz=94,slow=14						
KURBB				⇑Sn	Sn	22 20 47.9	+0.9
	0.5nm,0.7s,baz=91,slow=23						
KURBB				⇑Lg		22 21 16.6	
	1.2nm,0.8s,baz=93,slow=33						
SONM	**Songino Array**	12.11	93	Pn	Pn	22 20 55.8	+0.8
	0.2nm,0.3s,baz=294,slow=12,SNR=2.8						

ISCJB ***20*** *22:21:33.7±

2.2nm,0.8s,mb4.1,baz=315,slow=7.1,SNR=3.1
MKAR Makanchi Array 50.94 344 P **P** **22 42 53.5 +0.1**
0.3nm,0.3s,mb3.9,baz=152,slow=7.9,SNR=2.4
ZALV Zalesovo Beam 57.01 349 P **P** **22 43 37.0 -0.4**
0.4nm,0.2s,mb4.0,baz=212,slow=5.1,SNR=3.2
BVAR Borovoye Array 60.16 339 P **P** **22 43 59.4 +0.1**
1.3nm,0.4s,mb4.3,baz=132,slow=8.0,SNR=8.0
ARCES ARCESS Array B 86.44 340 P **P** **22 46 34.3 +0.9**
3.0nm,0.9s,mb4.2,baz=90,slow=6.3,SNR=3.9

IDC 20 22:39:48.4±1.9, 20°.67N×93°.28E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/24, mbtmp3.7/6, ML3.3/1, Error ellipse: s-maj=78.2km s-min=20.7km az=47.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**5.77**	**111**	Pn	Pn	22 41 16.2	+0.8
	0.2nm,0.3s,baz=301,slow=14,SNR=9.2						
CMAR				Sn	Sn	22 42 25.6	+3.3
	0.1nm,0.3s,baz=304,slow=26,SNR=3.1						
MKAR	**Makanchi Array**	**27.56**	**344**	P	P	22 45 38.0	+1.0
	0.3nm,0.2s,baz=155,slow=7.3,SNR=3.3						
ZALV	**Zalesovo Beam**	**33.85**	**351**	P	P	22 46 31.1	-1.3
	1.2nm,0.3s,baz=170,slow=7.5,SNR=8.3						
WRA	**Warramunga Arr**	**56.95**	**133**	P	P	22 49 35.2	-0.6
	0.3nm,0.9s,baz=321,slow=7.6,SNR=4.6						
FINES	**FINESS Array B**	**61.18**	**330**	P	P	22 50 05.6	+0.9
	1.1nm,0.8s,baz=64,slow=4.4,SNR=6.4						
ARCES	**ARCESS Array B**	**63.06**	**339**	P	P	22 50 17.0	-0.2
	1.7nm,1.0s,baz=82,slow=9.2,SNR=3.0						

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*DDA **20** 22:41:05.3, 41°.04N×38°.91E, h5km±7km, Md3.1*
*ISCJB **20** 22:41:06.9±0.8, 41°.05N±0°.05×39°.06E±0°.03, h9km±4km, Error ellipse: s-maj=8.5km s-min=3.9km az=173.7*
*ISK **20** 22:41:06.1, 41°.07N×39°.07E, h11km, MD3.0*
*CSEM **20** 22:41:07.2±0.3, 41°.03N×39°.05E, h10km, MD3.0, Error ellipse: s-maj=6.8km s-min=3.3km az=176.0*
ISC 20 22:41:07.2±0.9, 41°.06N±0°.06×39°.05E±0°.03, h8km±5km, n27, σ0s79/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPY	**Espiye-Giresun**	**0.28**	**240**	*e*PG	**Pg**	**22 41 12.8**	**+0.1**
ESPY				*e*SG	**Sg**	**22 41 16.7**	**+0.2**
ESPY	**Espiye-Giresun**	**0.28**	**240**	*e*Pg	**Pg**	**22 41 12.8**	**+0.1**
ESPY				*e*Sg	**Sg**	**22 41 16.7**	**+0.2**
KTUT	**Trabzon**	**0.55**	**97**	*e*PG	**Pg**	**22 41 16.9**	**-1.0**
KTUT				*e*SG	**Sg**	**22 41 24.8**	**-0.2**
KTUT	**Trabzon**	**0.55**	**97**	*e*Pg	**Pg**	**22 41 16.9**	**-0.9**
KTUT				*e*Sg	**Sg**	**22 41 24.8**	**-0.2**
MACK	**Trabzon**	**0.56**	**101**	*i* P	**Pg**	**22 41 19.1**	**+1.1**
MACK				*i* S	**Sg**	**22 41 26.8**	**+1.5**
MACK	**Trabzon**	**0.56**	**101**	*i* P	**Pg**	**22 41 19.1**	**+1.1**
MACK				*i* S	**Sg**	**22 41 26.8**	**+1.5**
GRSN	**GIRESUNGRSN**	**0.60**	**258**	*i* P	**Pg**	**22 41 03.7**	**-15**
GRSN				*i* S	**Sg**	**22 41 21.4**	**-5.3**
GUMT	**Gumushane**	**0.68**	**151**	*e*PG	**Pg**	**22 41 20.5**	**+0.1**
GUMT				*e*SG	**Sg**	**22 41 29.6**	**+0.4**
GUMT	**Gumushane**	**0.68**	**151**	*e*Pg	**Pg**	**22 41 20.5**	**+0.2**
GUMT				*e*Sg	**Sg**	**22 41 29.6**	**+0.4**
KELT	**Kelkit**	**0.92**	**170**	*i* P	**Pg**	**22 41 23.9**	**-1.0**
KELT				*i* S	**Sg**	**22 41 36.4**	**-0.5**
KELT	**Kelkit**	**0.92**	**170**	*i* P	**Pg**	**22 41 23.9**	**-1.0**
KELT				*i* S	**Sg**	**22 41 36.4**	**-0.4**
BAYT	**Ayd¨–ntepe-Bay**	**1.06**	**128**	*e*PG	**Pg**	**22 41 27.1**	**-0.5**
BAYT				*e*SG	**Sg**	**22 41 41.3**	**-0.1**
BAYT	**Ayd¨–ntepe-Bay**	**1.06**	**128**	*e*Pg	**Pg**	**22 41 27.1**	**-0.5**
BAYT				*e*Sg	**Sg**	**22 41 41.3**	**-0.1**
EZC	**Erzincan**	**1.32**	**170**	*e*PN	**Pn**	**22 41 30.4**	**-1.5**
EZC	**Erzincan**	**1.32**	**170**	*e*Pn	**Pn**	**22 41 30.4**	**-1.5**
RSDY	**Resadiye-TOKAT**	**1.46**	**244**	*e*PN	**Pn**	**22 41 33.7**	**-0.1**
RSDY	**Resadiye-TOKAT**	**1.46**	**244**	*e*Pn	**Pn**	**22 41 33.7**	**-0.1**
ERBA	**Erbaa**	**1.78**	**259**	*i* P	**Pn**	**22 41 38.0**	**-0.2**
ERBA				*i* S	**Sn**	**22 42 00.3**	**-0.6**
ERBA	**Erbaa**	**1.78**	**259**	*i* P	**Pn**	**22 41 38.0**	**-0.2**
ERBA				*i* S	**Sn**	**22 42 00.3**	**-0.6**
SCER	**sogukcermik**	**1.89**	**231**	*i* P	**Pn**	**22 41 40.2**	**+0.5**
SCER				*i* S	**Sn**	**22 42 05.4**	**+1.7**
SCER	**sogukcermik**	**1.89**	**231**	*i* P	**Pn**	**22 41 40.2**	**+0.5**
DBAD	**Bademkaya**	**2.00**	**90**	*i* P	**Pn**	**22 41 40.5**	**-0.8**
DBAD				*i* S	**Sn**	**22 42 05.5**	**-1.0**
DBAD	**Bademkaya**	**2.00**	**90**	*i* P	**Pn**	**22 41 40.5**	**-0.8**
DBAD				*i* S	**Sn**	**22 42 05.6**	**-0.9**
DDEM	**Demirkent**	**2.05**	**94**	*i* P	**Pn**	**22 41 42.5**	**+0.5**
DDEM				*i* S	**Sn**	**22 42 08.7**	**+0.9**
DDEM	**Demirkent**	**2.05**	**94**	*i* P	**Pn**	**22 41 42.5**	**+0.5**
DDEM				*i* S	**Sn**	**22 42 08.7**	**+1.0**
PTK	**Pertek**	**2.18**	**173**	*e*PN	**Pn**	**22 41 44.0**	**+0.4**
PTK	**Pertek**	**2.18**	**173**	*e*Pn	**Pn**	**22 41 44.1**	**+0.4**

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*IDC **20** 22:54:44.7±8.5, 17°.88S×167°.63E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.7/15, mbtmp3.6/3, MS3.5/1, Ms1 3.5/1, ms1mx2.8/21, Error ellipse: s-maj=400.0km s-min=35.1km az=147.0*
*NOU **20** 22:54:50.9±0.8, 17°.09S×167°.08E, h30km, MD3.0, ML4.0*
*ISCJB **20** 22:54:53.5±2.2, 17°.5S±0°.1×167°.1E±0°.2, h63km±25km, mb3.6/3, Error ellipse: s-maj=38.5km s-min=16.4km az=8.5*
ISC 20 22:54:54.6±2.1, 17°.4S±0°.1×167°.2E±0°.2, h58km±26km, n11, σ0s49/14, mb3.6/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.68**	**189**	*e*P	**Pn**	**22 56 02.6**	**-0.1**
DZM				*e*S	**Sn**	**22 56 56.0**	**+0.3**
DZM				AMP		22 56 59.8	
	comp=Z,1μm,0.0s						
BAYA	**Yate Dam**	**4.72**	**183**	*e*P	**Pn**	**22 56 03.3**	**0.0**
BAYA				*e*S	**Sn**	**22 56 57.3**	**+0.6**
NOUC	**Port Laguerre**	**4.73**	**190**	*e*P	**Pn**	**22 56 03.3**	**-0.1**
NOUC				*e*S	**Sn**	**22 56 56.8**	**-0.2**
NOUC				AMP		22 57 01.0	
	comp=Z,61nm,6.8s						
NORM	**Noumea**	**4.83**	**188**	*e*P	**Pn**	**22 56 04.8**	**+0.1**
PLUM	**Mont Dore**	**4.86**	**186**	*e*P	**Pn**	**22 56 05.1**	**0.0**
PLUM				*e*S	**Sn**	**22 57 00.5**	**+0.4**
PLUM				AMP		22 57 01.1	
	comp=Z,161nm,0.3s						
MVNO	**Noumea**	**4.88**	**188**	*e*P	**Pn**	**22 56 05.6**	**+0.1**
MVNO				*e*S	**Sn**	**22 56 59.5**	**-1.0**
URZ	**Urewera**	**22.51**	**159**	LR	LR	23 06 05.3	
	comp=Z,118nm,19.6s,baz=308,slow=31						
WRA	**Warramunga Arr**	**31.20**	**260**	P	**P**	**23 01 09.4**	**+1.0**
	comp=Z,0.2nm,0.3s,mb3.4,baz=84,slow=8.6,SNR=9.9						
ASAR	**Alice Springs**	**31.73**	**253**	P	**P**	**23 01 12.4**	**-0.8**
	comp=Z,0.5nm,0.7s,mb3.4,baz=78,slow=8.7,SNR=5.7						
ILAR	**Eielson Array**	**89.09**	**18**	P	**P**	**23 07 42.9**	**-0.1**
	comp=Z,0.8nm,0.8s,mb4.1,baz=237,slow=5.1,SNR=8.9						
FINES	**FINESS Array B**	**128.17**	**337**	PKhKP	PKPpre	23 13 44.9	
	comp=Z,1.4nm,0.9s,baz=46,slow=4.0,SNR=3.5						

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*ISCJB **20** 23:19:25.6±0.6, 55°.71S±0°.10×26°.9W±0°.2, h10km, mb4.3/12, MS3.6/3, Error ellipse: s-maj=15.4km s-min=11.7km az=43.8*
*IDC **20** 23:19:25.8±0.6, 55°.75S×27°.03W, h0km, mb4.3/9, mb1 4.3/10, mb1mx4.2/17, mbtmp4.2/10, ML3.6/1, MS3.6/3, Ms1 3.7/3, ms1mx3.3/14, Error ellipse: s-maj=20.8km s-min=16.5km az=48.0*
*NEIC **20** 23:19:30.1±5.4, 55°.79S×27°.08W, h29km±38km, mb4.6/4, Error ellipse: s-maj=14.7km s-min=8.7km az=219.0*
ISC 20 23:19:27.4±0.6, 55°.78S±0°.10×27°.0W±0°.2, h10km, n26, σ0s72/18, mb4.3/12, MS3.6/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**18.95**	**156**	P	**Pn**	**23 23 49.1**	**+0.3**
	0.2nm,0.3s,baz=311,slow=11,SNR=15						
PMSA	**Palmer Station**	**20.14**	**229**	P	**P**	**23 24 06.0**	**+4.7**
	18nm,0.6s,baz=84,slow=9.2,SNR=5.2						
USHA	**Ushuaia**	**23.34**	**255**	P	**P**	**23 24 34.9**	**-0.6**
	7.2nm,0.9s,mb4.1,baz=61,slow=10,SNR=5.5						
TRQA	**Tornquist**	**29.30**	**292**	*e*P	**P**	**23 25 30.3**	**+0.6**
	4.8nm,0.6s,mb4.4						
PLCA	**Paso Flores**	**32.05**	**279**	P	**P**	**23 25 52.9**	**-1.0**
	0.6nm,0.6s,mb3.6,baz=199,slow=4.2,SNR=3.0						
PLCA	**Paso Flores**	**32.05**	**279**	P	**P**	**23 25 52.9**	**-1.0**
QSPA	**South Pole Qui**	**34.47**	**180**	P	**P**	**23 26 15.3**	**+0.7**
	4.7nm,0.6s,mb4.6,baz=230,slow=3.7,SNR=27						
QSPA				PcP	PcP	23 28 50.9	+1.5
	1.0nm,0.7s,baz=133,slow=4.0,SNR=3.5						
CPUP	**Villa Florida**	**36.70**	**311**	P	**P**	**23 26 34.2**	**-0.1**
	4.4nm,0.6s,mb4.5,baz=135,slow=7.3,SNR=15						
CPUP				LR	LR	23 39 30.3	
	comp=Z,78nm,18.3s,MS3.5,baz=199,slow=33						
CPUP	**Villa Florida**	**36.70**	**311**	*e*P	**P**	**23 26 34.1**	**-0.3**
	19nm,0.5s,mb5.2						
CPUP				LR	LR	23 39 30.2	
MAW	**Mawson**	**40.31**	**144**	P	**P**	**23 27 04.8**	**+0.6**
	2.5nm,0.7s,mb4.1,baz=229,slow=9.3,SNR=3.6						
BOSA	**Boshof**	**45.82**	**76**	P	**P**	**23 27 48.6**	**-0.6**
	2.0nm,0.8s,mb4.1,baz=228,slow=12,SNR=3.2						
BOSA				LR	LR	23 43 48.6	
	comp=Z,104nm,18.1s,MS3.8,baz=167,slow=32						
BOSA	**Boshof**	**45.82**	**76**	*e*P	**P**	**23 27 48.8**	**-0.5**
BOSA				LR	LR	23 43 48.6	
LPAZ	**La Paz**	**50.30**	**305**	P	**P**	**23 28 25.3**	**+1.3**
	7.2nm,0.7s,mb4.8,baz=160,slow=6.2,SNR=40						
LPAZ				LR	LR	23 49 56.3	
	comp=Z,54nm,20.0s,MS3.6,baz=167,slow=36						
LPAZ	**La Paz**	**50.30**	**305**	*e*P	**P**	**23 28 25.1**	**+1.2**
	7.0nm,0.7s,mb4.8						
LPAZ				LR	LR	23 49 56.3	
DBIC	**Dimbokro**	**64.89**	**24**	P	**P**	**23 30 06.9**	**+0.3**
	2.6nm,0.9s,mb4.3,baz=191,slow=5.0,SNR=2.5						
TORD	**Torodi Ar. Bea**	**72.78**	**29**	P	**P**	**23 30 55.5**	**-0.2**
	1.1nm,0.5s,mb4.0,baz=201,slow=6.1,SNR=5.1						
SDV	**Santo Domingo**	**73.88**	**315**	*e*P	**P**	**23 31 02.7**	**+0.4**
	3.1nm,0.6s,mb4.4						
ASAR	**Alice Springs**	**99.22**	**162**	P	**P**	**23 33 07.7**	**-1.5**
	0.7nm,0.8s,mb4.3,baz=185,slow=3.3,SNR=7.5						
WRA	**Warramunga Arr**	**102.93**	**162**	P	Pdif	23 33 24.8	-1.0
	0.3nm,0.7s,baz=191,slow=4.2,SNR=2.8						
FINES	**FINESS Array B**	**124.10**	**28**	PKP	PKPdf	23 38 24.0	-0.5
	1.6nm,0.7s,baz=248,slow=3.5,SNR=7.5						
CMAR	**Chiang Mai Arr**	**125.07**	**110**	PKP	PKPdf	23 38 27.4	-0.3
	0.8nm,0.8s,baz=233,slow=3.5,SNR=4.5						
ARCES	**ARCESS Array B**	**130.66**	**22**	PKP	PKPdf	23 38 36.2	-0.5
	2.3nm,0.8s,baz=249,slow=2.3,SNR=5.3						
MKAR	**Makanchi Array**	**136.72**	**71**	PKP	PKPdf	23 38 49.6	+0.8
	0.3nm,0.2s,baz=199,slow=0.8,SNR=2.8						
ZALV	**Zalesovo Beam**	**142.17**	**63**	PKhKP	PKPpre	23 38 52.4	
	0.2nm,0.3s,baz=259,slow=5.9,SNR=2.6						
INK	**Inuvik**	**145.65**	**321**	*e*PKPdf	PKPdf	23 39 04.1	-0.1
ILAR	**Eielson Array**	**150.00**	**312**	PKPbc	PKPbc	23 39 15.7	-0.8
	4.1nm,0.8s,baz=130,slow=1.6,SNR=37						
ILAR				PKPab	PKPab	23 39 22.4	0.0
	3.6nm,0.8s,baz=121,slow=2.1,SNR=7.7						

MEX 21 00:07:46.4±1.2, 14°.22N×92°.67W, h17km±112km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.79**	**30**	*i* P	Pb	00 07 58.1	-3.7
THIG				*i* S	Sb	00 08 08.5	-3.7
PCIG		**1.57**	**340**	*e*P	Pn	00 08 10.3	-3.3
PCIG				*i* S	Sn	00 08 28.6	-4.9
CCIG	**Comitan**	**2.12**	**14**	*i* P	Pn	00 08 19.1	-2.0
CCIG				*i* S	Sn	00 08 43.9	-3.2
TGIG		**2.58**	**350**	*i* P	Pn	00 08 24.4	-3.1
TGIG				*i* S	Sn	00 08 54.0	-4.5

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*IDC **21** 00:13:57.4±7.2, 35°.97N×77°.25E, h0km, mb3.6/1, mb1 3.6/5, mb1mx3.3/27, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=105.5km s-min=54.8km az=146.0*
*NEIC **21** 00:14:04.0±9.4, 35°.94N×77°.43E, h60km±38km, Error ellipse: s-maj=103.1km s-min=20.1km az=169.0*
*BJI **21** 00:14:04.0, 35°.99N×77°.37E, h45km, ML3.4/3*
*NNC **21** 00:14:20.6±3.9, 37°.22N×75°.86E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=75.0km s-min=27.8km az=46.0*
ISC 21 00:14:07.3±1.7, 36°.47N±0°.03×77°.33E±0°.09, h21km±15km, n22, σ1s44/29, 2C-3D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.22**	**341**	P	**Pn**	**00 14 56.9**	**+0.3**
KSH				S	**Sn**	**00 15 28.9**	**-5.5**
KSH				smax			
	comp=N,130nm,0.2s						
KSH				smax			
	comp=E,210nm,0.2s						
CHCP	**Chirah Chowk**	**4.36**	**231**	P	**Pb**	**00 15 19.3**	**-3.8**
KLP	**Kalpa**	**4.99**	**171**	*e*PKP	**Pb**	**00 15 33.4**	**-0.4**
KLP				*e*S	**Sn**	**00 16 18.4**	**+0.5**
KLP				AML	AML	00 16 27.3	
	comp=N,20nm,0.2s						
KLP				AML	AML	00 16 27.6	
	comp=E,34nm,0.2s						
CEP	**Cherat**	**5.16**	**241**	P	**Pn**	**00 15 27.9**	**+4.6**
CEP				S	**Sn**	**00 16 23.0**	**+0.7**
SMLA	**Simla**	**5.33**	**181**	*i* P	**Pb**	**00 15 36.1**	**-3.7**
SMLA				*i* x	**Sn**	**00 16 30.1**	**+3.7**
SMLA				⇓		00 16 36.9	
	comp=N,3μm,0.2s						
SMLA				⇓		00 16 37.4	
	comp=E,2μm,0.3s						
THW	**Thamme Wali**	**5.88**	**233**	P	**Pn**	**00 15 37.8**	**+4.6**
JOSI	**Joshimath**	**6.19**	**162**	*e*S	**Sn**	**00 16 47.5**	**0.0**
JOSI				AML	AML	00 17 02.5	
	comp=E,79nm,0.4s						
JOSI				AML	AML	00 17 03.9	
	comp=N,79nm,0.4s						
AAK	**Ala-Archa**	**6.53**	**341**	Pn	**Pn**	**00 15 45.3**	**+3.2**
	comp=N,0.0nm,0.3s,baz=150,slow=10.0,SNR=12						
AAK	**Ala-Archa**	**6.53**	**341**	*e*Pn	**Pn**	**00 15 45.2**	**+3.1**
AAK				*e*S	**Sn**	**00 16 52.2**	**-3.6**
TKM2	**Tokmak 2**	**6.58**	**349**	⇑Pn	**Pn**	**00 15 46.9**	**+4.2**
	comp=N,1.7nm,0.4s						
TKM2	**Tokmak 2**	**6.58**	**349**	*e*Pn	**Pn**	**00 15 45.7**	**+3.0**
	comp=N,3.1nm,0.4s						
NDI	**New Delhi**	**7.77**	**181**	*e*PKP	**Sn**	**00 17 30.0**	**+3.6**
SONA	**Sohna**	**8.20**	**181**	*e*S	**Sn**	**00 17 32.9**	**-4.2**
SONA				AML	AML	00 17 43.8	
	comp=N,20nm,0.4s						
SONA				AML	AML	00 17 44.2	
	comp=E,42nm,0.5s						
KK31	**Karatay Array**	**8.45**	**324**	⇑Pn	**Pn**	**00 16 09.3**	**+1.0**
	comp=E,0.9nm,0.3s,baz=130,slow=12,SNR=22						
KK31				⇓Sn	**Sn**	**00 17 35.2**	**-7.8**
	comp=E,1.3nm,0.3s,baz=138,slow=20,SNR=8.3						
KKAR	**Karatay Array**	**8.45**	**324**	*e*Pn	**Pn**	**00 16 09.6**	**+1.2**
	comp=E,2.1nm,0.3s						
KKAR				*e*S	**Sn**	**00 17 36.1**	**-6.9**
KHET	**Khetri**	**8.47**	**189**	*e*S	**Sn**	**00 17 41.8**	**-1.9**
KHET				AML	AML	00 17 48.8	
	comp=N,14nm,0.2s						
KHET				AML	AML	00 17 49.1	
	comp=E,20nm,0.2s						
MKAR	**Makanchi Array**	**10.96**	**18**	Pn	**Pn**	**00 16 44.5**	**+1.8**
	comp=E,0.4nm,0.3s,baz=197,slow=13,SNR=5.3						
BVAR	**Borovoye Array**	**17.25**	**346**	P	**Pn**	**00 18 07.0**	**+0.2**
	comp=E,0.1nm,0.3s,baz=143,slow=12,SNR=3.2						
AB31	**Akbulak array**	**17.99**	**321**	Pn	**Pn**	**00 18 14.5**	**-1.4**
	comp=E,1.2nm,0.9s,baz=130,slow=13,SNR=7.6						
ABKAR	**Akbulak array**	**17.99**	**321**	*e*P	**Pn**	**00 18 15.0**	**-0.8**
	comp=E,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**18.24**	**14**	P	**Pn**	**00 18 17.3**	**-1.5**
	comp=E,0.2nm,0.3s,baz=202,slow=11,SNR=3.8						
FINES	**FINESS Array B**	**40.41**	**325**	P	**P**	**00 21 39.9**	**-3.6**
	comp=E,0.4nm,0.3s,baz=115,slow=10,SNR=7.1						

FUNV 21 00:30:39.8, 6°.77N×73°.15W, h160km, MW3.5, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.36**	**37**	⇓*i* P	Pn	00 31 08.5	-0.3
CAPV				*e*S	Sn	00 31 29.2	-1.9
VIGV	**El Vigia**	**2.71**	**41**	⇓*e*P	Pn	00 31 23.2	-0.8
VIGV				*e*S	Sn	00 31 55.4	-2.8
SOCV	**Socops**	**2.72**	**56**	*e*P	Pn	00 31 23.4	-0.7
SOCV				*e*S	Sn	00 31 55.2	-3.3
ELOV	**Elorza**	**3.64**	**86**	*e*P	Pn	00 31 34.8	-1.0
VIRV	**Villa del Rosa**	**3.78**	**11**	*e*P	Pn	00 31 35.8	-1.8
VIRV				*e*S	Sn	00 32 17.3	-5.2
QARV	**Quebrada Arrib**	**4.29**	**37**	*e*P	Pn	00 31 43.2	-0.9
SANV	**Sanarito**	**4.49**	**53**	*e*P	Pn	00 31 45.2	-1.4
CURV	**Curarigua**	**4.51**	**44**	*e*P	Pn	00 31 45.3	-1.6
TEPV	**Terepaima**	**5.04**	**51**	*e*P	Pn	00 31 52.6	-1.3
SIQV	**Siquisique**	**5.07**	**40**	*e*P	Pn	00 31 52.7	-1.7
BAUV	**El Baul**	**5.50**	**67**	*e*P	Pn	00 31 57.2	-2.8
MAPV	**Macapo**	**5.55**	**56**	*e*P	Pn	00 31 59.0	-1.6
IMOV	**Isla Los Monje**	**5.98**	**22**	*e*P	Pn	00 32 04.8	-1.5
MONV	**Montecano**	**6.03**	**31**	*e*P	Pn	00 32 05.0	-2.0
TURV	**Turiamo**	**6.39**	**55**	*e*P	Pn	00 32 10.0	-1.9
CAOV	**Caicara del Or**	**6.80**	**85**	*e*P	Pn	00 32 14.2	-3.0
CUPV	**Cœpira**	**7.98**	**65**	*e*P	Pn	00 32 30.3	-2.6

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*ISCJB **21** 01:09:32.2±0.7, 24°.13N±0°.02×119°.58E±0°.04, h13km±7km, Error ellipse: s-maj=5.7km s-min=3.5km az=6.5*
*TAP **21** 01:09:32.4, 24°.09N×119°.67E, h7km, ML3.7, D*
ISC 21 01:09:32.7±0.5, 24°.11N±0°.02×119°.62E±0°.02, h12km±3km, n43, σ0s66/80, 3C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNG	**Penghu**	**0.54**	**186**	⇓*i* P	**Pg**	**01 09 43.9**	**+0.6**
	baz=191						
PNG				S	**Sg**	**01 09 51.4**	**+0.9**
	baz=191						
WTCT	**Ta-ch'eng**	**0.66**	**112**	*i* P	**Pg**	**01 09 45.2**	**-0.2**
	baz=111						
WTCT				S	**Sg**	**01 09 54.5**	**+0.4**
	baz=111						
WSF	**Szhu**	**0.73**	**130**	P	**Pg**	**01 09 46.6**	**-0.2**
	baz=131						
WSF				*i* S	**Sg**	**01 09 56.9**	**+0.6**
	baz=131						
CHY	**Chiayi**	**0.96**	**129**	P	**Pg**	**01 09 50.7**	**-0.4**
	baz=130						
CHY				S	**Sg**	**01 10 03.8**	**+0.1**
	baz=130						
WGK	**Gukeng**	**0.96**	**116**	P	**Pg**	**01 09 50.8**	**-0.5**
	baz=115						
WGK				S	**Sg**	**01 10 04.2**	**+0.3**
	baz=115						
TCU	**Taichung**	**0.97**	**88**	*i* P	**Pg**	**01 09 51.2**	**-0.1**
	baz=86						
TCU				S	**Sg**	**01 10 04.3**	**+0.3**
	baz=86						
WNT	**Mingjian**	**1.00**	**103**	P	**Pg**	**01 09 51.4**	**-0.6**
	baz=102						
WNT				S	**Sg**	**01 10 04.9**	**-0.2**
	baz=102						
SCLT	**Jiali**	**1.07**	**150**	P	**Pb**	**01 09 52.8**	**-0.3**
	baz=151						
SCLT				S	**Sb**	**01 10 08.0**	**+0.8**
	baz=151						
TWQ1	**Liyutan**	**1.08**	**77**	*e*S	**Sb**	**01 10 08.1**	**+0.6**
	baz=75						
NSY	**Sanyi**	**1.09**	**74**	*e*P	**Pb**	**01 09 53.2**	**-0.3**
	baz=71						
NSY				*e*S	**Sb**	**01 10 08.5**	**+0.9**
	baz=71						
KNM	**Kinmen**	**1.12**	**286**	P	**Pb**	**01 09 57.3**	**+3.3**
	baz=284						
KNM				*e*S	**Sb**	**01 10 14.8**	**+6.2**
	baz=284						
TYC	**Yuchr**	**1.16**	**100**	P	**Pb**	**01 09 53.6**	**-1.0**
	baz=99						
TYC				*e*S	**Sb**	**01 10 09.2**	**-0.3**
	baz=99						
SMLT	**Sun Moon Lake**	**1.20**	**101**	*i* P	**Pn**	**01 09 54.3**	**-1.0**
	baz=100						
SMLT				S	**Sb**	**01 10 09.9**	**-0.8**
	baz=100						
TAI1	**Yung-k'ang**	**1.21**	**152**	P	**Pn**	**01 09 55.3**	**-0.1**
	baz=153						
TAI1				S	**Sb**	**01 10 11.8**	**+0.8**
	baz=153						
CHN3	**Shinhua**	**1.24**	**146**	*e*P	**Pn**	**01 09 55.6**	**-0.3**
	baz=147						
CHN3				*e*S	**Sb**	**01 10 13.5**	**+1.6**
	baz=147						
ALS	**Alishan**	**1.24**	**118**	⇑*i* P	**Pn**	**01 09 55.1**	**-0.8**
	baz=118						
ALS				*e*S	**Sb**	**01 10 11.8**	**-0.3**
	baz=118						
CHN1	**Nanshi**	**1.25**	**138**	P	**Pn**	**01 09 54.9**	**-1.0**
	baz=138						
CHN1				*e*S	**Sb**	**01 10 11.9**	**-0.2**
	baz=138						
QZH	**Quanzhou**	**1.25**	**312**	⇓*i* Pn	**Pn**	**01 09 55.9**	**-0.1**
QZH				Pg	**Pg**	**01 09 56.3**	**-0.3**
QZH				Sg	**Sg**	**01 10 13.3**	**+0.4**
QZH				smax			
	comp=N,1μm,0.2s						
QZH				smax			
	comp=E,2μm,0.2s						
WTP	**Ta-pu**	**1.26**	**133**	⇑*i* P	**Pn**	**01 09 55.1**	**-1.0**
	baz=133						
WTP				*e*S	**Sb**	**01 10 11.6**	**-0.9**
	baz=133						
SGST	**Jiashian**	**1.35**	**139**	*e*P	**Pn**	**01 09 56.8**	**-0.6**
	baz=139						
SGST				*e*S	**Sb**	**01 10 15.4**	**+0.1**
	baz=139						
NSTT	**Nanjuang**	**1.37**	**67**	*e*P	**Pn**	**01 09 54.6**	**-2.9**
	baz=65				

baz=71
EAST Anshuo 2.06 146 *e*P Pn 01 10 06.3 -0.9
baz=147
TWC Suao 2.10 76 *e*P Pn 01 10 08.2 +0.6
baz=75
TWC *e*S Sn 01 10 34.6 +0.9
baz=75
TWY Chenhua 2.15 57 *e*P Pn 01 10 08.4 0.0
baz=56
TWY *e*S Sn 01 10 34.9 0.0
baz=56
TWB1 Santiao Chiao 2.34 67 *e*P Pn 01 10 11.1 +0.1
baz=66

ISCJB ***21*** *01:32:54.7±2.1, 12°.06S±0°.09×166°.6E±0°.1, h126km±17km, mb4.2/9, Error ellipse: s-maj=24.1km s-min=10.2km az=148.2*
IDC ***21*** *01:32:58.7±6.5, 11°.89S×166°.43E, h146km±50km, mb3.8/8, mb1 3.9/9, mb1mx3.7/21, mbtmp3.9/9, Error ellipse: s-maj=49.9km s-min=21.6km az=115.0*
NEIC ***21*** *01:32:59.6±3.9, 11°.89S×166°.41E, h152km±27km, mb4.4/3, Error ellipse: s-maj=40.8km s-min=14.6km az=111.0*
ISC 21 01:32:55.1±1.9, 12°.03S±0°.09×166°.6E±0°.1, h117km±14km, n16, σ1°10/18, mb4.2/9, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.04**	**291**	P		**Pn**		**01 34 37.1**	**+1.5**
	11nm,0.3s,baz=214,slow=2.4,SNR=3.8								
HNR				S		**Sn**		**01 35 52.9**	**-1.3**
	34nm,0.3s,baz=189,slow=19,SNR=4.3								
DZM	**Mont Dzumac**	**9.99**	**181**	*e*P		**Pn**		**01 35 15.5**	**-0.1**
DZM				*e*S		**Sn**		**01 37 03.5**	**-2.2**
NOUC	**Port Laguerre**	**10.02**	**182**	*e*P		**Pn**		**01 35 16.9**	**+0.9**
EIDS	**Eidsvold**	**19.78**	**226**	*e*P		**P**		**01 37 18.4**	**+2.1**
	16nm,0.7s								
CTA	**Charters Tower**	**21.12**	**245**	P		**P**		**01 37 31.3**	**+0.5**
	7.3nm,0.7s,mb4.2,baz=69,slow=12,SNR=8.6								
CTA	**Charters Tower**	**21.12**	**245**	P		**P**		**01 37 31.3**	**+0.5**
CTAO	**Charters Tower**	**21.12**	**245**	*e*P		**P**		**01 37 31.1**	**+0.4**
	11nm,0.8s,mb4.2								
STKA	**Stephens Creek**	**30.34**	**225**	P		**P**		**01 38 57.2**	**+1.4**
	2.2nm,0.8s,mb3.9,baz=66,slow=9.6,SNR=3.2								
STKA	**Stephens Creek**	**30.34**	**225**	P		**P**		**01 38 57.2**	**+1.4**
WRA	**Warramunga Arr**	**31.96**	**252**	P		**P**		**01 39 08.7**	**-1.5**
	1.4nm,0.8s,mb3.7,baz=79,slow=9.2,SNR=8.4								
ASAR	**Alice Springs**	**33.13**	**245**	P		**P**		**01 39 19.7**	**-0.7**
	3.3nm,0.7s,mb4.3,baz=70,slow=9.6,SNR=46								
FITZ	**Fitzroy Crossi**	**39.96**	**256**	P		**P**		**01 40 18.6**	**+0.1**
	5.6nm,0.8s,mb4.4,baz=105,slow=8.0,SNR=11								
MBWA	**Marble Bar**	**45.69**	**252**	*e*P		**P**		**01 41 04.8**	**+0.1**
	7.1nm,0.7s,mb4.5								
JOW	**Kunigami**	**53.65**	**317**	P		**P**		**01 42 04.5**	**-0.3**
	6.9nm,0.7s,mb4.8,baz=66,slow=7.2,SNR=4.0								
ILAR	**Eielson Array**	**84.17**	**18**	P		**P**		**01 45 12.1**	**-0.8**
	0.4nm,0.6s,mb3.4,baz=232,slow=5.3,SNR=8.3								
MKAR	**Makanchi Array**	**94.81**	**317**	P		**P**		**01 46 03.8**	**0.0**
	0.6nm,0.7s,mb4.2,baz=95,slow=4.5,SNR=4.3								

CSEM ***21*** *01:58:47.1, 38°.79N×27°.86E, h10km, MD2.6, After DDA*
DDA 21 01:58:47.1, 38°.79N×27°.86E, h10km±1km, Md2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.10**	**339**	*i*P			Pg	01 58 49.7	0.0
AKHS				*i*S			Sg	01 58 51.6	+0.1
AKHS	**Akhisar**	**0.10**	**339**	*i*P			Pg	01 58 49.7	0.0
AKHS				*i*S			Sg	01 58 51.6	+0.1
DEMI	**Demirci**	**0.71**	**69**	*i*P			Pg	01 59 00.6	-0.3
DEMI				*i*S			Sg	01 59 09.9	-0.4
DEMI	**Demirci**	**0.71**	**69**	*i*P			Pg	01 59 00.6	-0.3
DEMI				*i*S			Sg	01 59 09.9	-0.4
DURS	**Dursunbey**	**0.94**	**30**	*i*P			Pg	01 59 06.0	+0.8
DURS				*i*S			Sg	01 59 19.1	+1.6
DURS	**Dursunbey**	**0.94**	**30**	*i*P			Pg	01 59 06.0	+0.7
DURS				*i*S			Sg	01 59 19.1	+1.6
BALY	**Balya**	**0.97**	**349**	*i*P			Pg	01 59 06.0	+0.2
BALY				*i*S			Sg	01 59 19.0	+0.6
BALY	**Balya**	**0.97**	**349**	*i*P			Pg	01 59 06.0	+0.2
BALY				*i*S			Sg	01 59 19.0	+0.6
AYDN	**Tasoluk**	**1.12**	**179**	*i*P			Pb	01 59 09.1	+0.4
AYDN				*i*S			Sb	01 59 24.3	+1.0
AYDN	**Tasoluk**	**1.12**	**179**	*i*P			Pb	01 59 09.1	+0.5
AYDN				*i*S			Sb	01 59 24.3	+1.0

NEIC ***21*** *02:47:46.4, 19°.65N×65°.99W, h117km, MD3.6(RSPR), After RSPR.*
RSPR 21 02:47:46.4, 19°.65N×65°.99W, h117km±29km, MD3.6/4, 6C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**1.48**	**209**	↑*e*P			Pn	02 48 12.5	-0.9
AOPR	**Arecibo Observ**	**1.48**	**209**	↑*e*P			Pn	02 48 12.5	-0.9
HUMP	**Col San Antoni**	**1.51**	**175**	↓*e*P			Pn	02 48 13.3	-0.5
HUMP				*e*S			Sn	02 48 34.1	-0.4
HUMP	**Col San Antoni**	**1.51**	**175**	↓*e*P			Pn	02 48 13.3	-0.5
HUMP				*e*S			Sn	02 48 34.7	+0.2
STVI	**Saint Thomas**	**1.62**	**143**	↑*e*P			Pn	02 48 14.3	-0.8
STVI				*e*S			Sn	02 48 37.5	+0.6
STVI	**Saint Thomas**	**1.62**	**143**	↑*e*P			Pn	02 48 14.3	-0.8
STVI				*e*S			Sn	02 48 37.5	+0.6
CRPR	**Cabo Rojo, PR**	**1.95**	**213**	↑*e*P			Pn	02 48 19.7	+0.6
CRPR	**Cabo Rojo, PR**	**1.95**	**213**	↑*e*P			Pn	02 48 19.7	+0.6

IDC ***21*** *03:11:10.9±3.5, 23°.78S×179°.95W, h415km±42km, mb3.7/3, mb1 3.8/5, mb1mx3.3/18, mbtmp3.7/5, Error ellipse: s-maj=32.0km s-min=26.1km az=123.0*
NEIC 21 03:11:13.0±1.4, 23°.84S×179°.68W, h467km±25km, mb3.9/1, Error ellipse: s-maj=26.7km s-min=14.5km az=116.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.38**	**39**	P			P	03 13 56.1	+0.1
	2.5nm,0.3s,baz=41,slow=19,SNR=3.1								
AFI	**Afiamalu**	**12.38**	**39**	P			P	03 13 56.1	+0.1
URZ	**Urewera**	**14.64**	**190**	P			P	03 14 19.5	-0.2
	1.4nm,0.3s,baz=316,slow=6.4,SNR=5.2								
RPZ	**Rata Peaks**	**21.24**	**199**	P			P	03 15 25.0	+0.5
	22nm,1.0s,baz=38,slow=8.4,SNR=4.0								
CTAO	**Charters Tower**	**31.77**	**270**	*e*P			P	03 16 58.4	+0.6
	2.1nm,0.5s								
ASAR	**Alice Springs**	**42.33**	**260**	P			P	03 18 24.9	0.0
	2.7nm,0.7s,baz=95,slow=7.8,SNR=48								
WRA	**Warramunga Arr**	**42.70**	**266**	P			P	03 18 27.3	-0.5
	4.4nm,0.3s,baz=96,slow=8.5,SNR=166								
BRTR	**Keskin Array B**	**147.77**	**307**	PKP			PKPdf	03 30 01.2	+0.2
	0.4nm,0.6s,baz=77,slow=3.2,SNR=3.6								
BRTR				PKPbc			PKPbc	03 30 08.6	+4.0
	0.5nm,0.6s,baz=84,slow=2.7,SNR=4.0								

IDC ***21*** *03:15:35.3±4.6, 40°.71S×90°.27W, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.8/17, mbtmp3.5/6, ML3.4/1, MS4.1/11, Ms1 4.1/11, ms1mx4.0/13, Error ellipse: s-maj=126.2km s-min=33.7km az=9.0*
GCMT ***21*** *03:15:36.4±0.2, 41°.27S×90°.38W, h15km±1km, MW5.1, Moment Tensor Solution. s34,c42; s79,c112; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.47±.14; $M_{\theta\theta}$=0.55±.15; $M_{\phi\phi}$=-0.08±.12; M_{rt}=-2.87±.54; $M_{\theta\phi}$=-3.76±.10; $M_{\phi r}$=-1.44±.37; Best double couple: M_0=4.90000×10^{16} NP1:ϕ_s=352.00000°, δ54.00000°, λ=-12.00000°. NP2:ϕ_s=89.00000°, δ80.00000°, λ=-144.00000°. Principal axes: T 4.3600, Plg17.0000°, Azm216.0000°; N 1.0600, Plg53.0000°, Azm102.0000°; P -5.4100, Plg32.0000°, Azm317.0000°; Data Used: II IU IC G CN.*
NEIC 21 03:15:36.7±2.4, 40°.76S×90°.27W, h10km, mb3.9/2 Error ellipse: s-maj=66.6km s-min=17.8km az=201.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**14.95**	**96**	Pn			Pn	03 19 07.2	-0.8
	0.0nm,0.3s,baz=278,slow=14,SNR=2.7								
PLCA				LR			LR	03 23 28.1	
	comp=Z,844nm,18.2s,baz=84,slow=32								
CFAA	**Coronel Fontan**	**19.95**	**70**	P			Pn	03 20 08.4	-2.1
	0.1nm,0.3s,baz=227,slow=12,SNR=4.5								
CFAA				LR			LR	03 26 13.2	
	comp=Z,125nm,20.4s,baz=233,slow=32								
USHA	**Ushuaia**	**20.21**	**141**	LR			LR	03 26 25.2	
	comp=Z,1μm,18.8s,baz=269,slow=32								
RPN	**Rapa Nui**	**20.80**	**305**	LR			LR	03 25 45.1	
	comp=Z,558nm,19.0s,baz=117,slow=29								
TRQA	**Tornquist**	**21.99**	**92**	*e*P			P	03 20 32.1	+1.3
	4.6nm,1.0s								
CPUP	**Villa Florida**	**30.79**	**72**	LR			LR	03 32 58.1	
	comp=Z,524nm,19.3s,baz=226,slow=34								
NNA	**Nana**	**31.00**	**26**	LR			LR	03 31 08.7	
	comp=Z,371nm,20.1s,baz=192,slow=30								
LPAZ	**La Paz**	**31.02**	**45**	P			P	03 21 55.9	+1.4
	0.9nm,0.7s,baz=229,slow=13,SNR=3.6								
LPAZ				LR			LR	03 31 50.2	
	comp=Z,534nm,18.5s,baz=224,slow=32								
LPAZ	**La Paz**	**31.02**	**45**	*e*P			P	03 21 56.3	+1.7
	2.7nm,1.4s								
LPAZ				LR			LR	03 31 50.2	
RKT	**Rikitea**	**41.33**	**281**	*e*LR			LR	03 34 28.9	
	394nm,28.8s								
ROSC	**El Rosal**	**47.69**	**22**	LR			LR	03 41 46.1	
	comp=Z,188nm,21.0s,baz=197,slow=33								
VNA3	**Neumayer Olymp**	**49.04**	**155**	*e*			P	03 24 32.1	+8.8
VNA1	**Neumayer--Stat**	**49.58**	**154**	*e*			P	03 24 26.4	-1.0
VNA2	**Neumayer--Watz**	**49.82**	**155**	*e*			P	03 24 38.2	+9.0
	baz=280,slow=6.8								
TBI	**Tubuai**	**52.13**	**270**	*e*LR			LR	03 39 25.8	
	307nm,26.8s								
TAOE	**Nuku Hiva Isla**	**54.32**	**292**	*e*LR			LR	03 40 39.9	
	414nm,25.7s								
PPT	**Papeete**	**55.60**	**276**	*e*LR			LR	03 41 01.7	
	141nm,24.2s								
TXAR	**Lajitas Array**	**70.84**	**348**	P			P	03 26 51.8	-1.6
	0.3nm,0.7s,baz=174,slow=9.1,SNR=3.9								
TXAR				LR			LR	03 51 55.0	
	comp=Z,85nm,22.0s,baz=170,slow=31								
NVAR	**Mina Array Bea**	**82.88**	**338**	P			P	03 28 02.6	+1.6
	0.4nm,0.6s,baz=170,slow=5.9,SNR=4.3								
PDAR	**Pinedale Array**	**84.95**	**346**	P			P	03 28 11.9	+0.3
	0.3nm,0.8s,baz=145,slow=5.1,SNR=2.5								
PDAR				LR			LR	03 59 57.9	
	comp=Z,34nm,20.9s,baz=105,slow=31								
TORD	**Torodi Ar. Bea**	**99.92**	**81**	LR			LR	04 14 09.2	
	comp=Z,81nm,19.6s,baz=140,slow=35								

WEL 21 03:49:48.6±0.4, 38°.01S×176°.12E, h164km±3km, ML3.5/8, Error ellipse: s-maj=3.5km s-min=2.9km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.82**	**108**	PN			Pn	03 50 13.4	0.0
URZ				SN			Sn	03 50 32.2	0.0
MWZ	**Matawai**	**1.15**	**107**	PN			Pn	03 50 16.1	+0.2
MWZ				SN			Sn	03 50 37.3	+0.4
RAHZ	**Arahi**	**1.18**	**140**	PN			Pn	03 50 16.9	+0.7
RAHZ				SN			Sn	03 50 36.6	-0.8
WTVZ	**West Tongariro**	**1.18**	**201**	PN			Pn	03 50 16.6	+0.4
TWVZ	**Taurewa**	**1.19**	**207**	PN			Pn	03 50 16.7	+0.4
BKZ	**Black Stump Fm**	**1.19**	**166**	PN			Pn	03 50 16.3	0.0
BKZ				SN			Sn	03 50 37.0	-0.6
NMHZ	**Naumai**	**1.21**	**154**	PN			Pn	03 50 17.6	+1.1
NMHZ				SN			Sn	03 50 38.0	+0.1
TUVZ	**Tukino**	**1.31**	**196**	PN			Pn	03 50 17.8	+0.4
WNVZ	**Wahianoa**	**1.38**	**197**	PN			Pn	03 50 18.3	+0.3
MOVZ	**Moawhango**	**1.43**	**192**	PN			Pn	03 50 18.3	-0.2
BHHZ	**Black Hill Sta**	**1.48**	**182**	PN			Pn	03 50 18.6	-0.3
MCHZ	**McNeill Hill**	**1.50**	**163**	PN			Pn	03 50 19.8	+0.6
KNZ	**Kokohu**	**1.58**	**130**	PN			Pn	03 50 20.1	+0.1
PRGZ	**Paritu Road**	**1.66**	**124**	PN			Pn	03 50 21.3	+0.5
PUZ	**Puketiti**	**1.69**	**93**	PN			Pn	03 50 20.6	-0.5
MXZ	**Matakaoa Point**	**1.79**	**76**	PN			Pn	03 50 22.0	-0.2
MHGZ	**Mahia Peninsul**	**1.81**	**130**	PN			Pn	03 50 22.6	+0.2
CKHZ	**Cape Kidnapper**	**1.81**	**156**	PN			Pn	03 50 22.5	+0.1
KAHZ	**Kahuranaki**	**1.88**	**162**	PN			Pn	03 50 23.2	0.0
PNHZ	**Pukenui**	**1.90**	**178**	PN			Pn	03 50 22.7	-0.7
WAZ	**Wanganui**	**1.96**	**207**	PN			Pn	03 50 23.6	-0.4
TSZ	**Takapari Road**	**2.05**	**183**	PN			Pn	03 50 24.1	-1.0
WPHZ	**Waipukurau**	**2.07**	**173**	PN			Pn	03 50 24.5	-0.8
PXZ	**Pawanui**	**2.10**	**164**	PN			Pn	03 50 25.0	-0.6
DVHZ	**Dannevirke**	**2.29**	**179**	PN			Pn	03 50 26.4	-1.4
PRHZ	**Porangahau**	**2.29**	**170**	PN			Pn	03 50 26.9	-0.9
MRZ	**Mangatainoka R**	**2.68**	**189**	PN			Pn	03 50 30.5	-2.0
OGWZ	**Otaki Gorge**	**2.90**	**194**	PN			Pn	03 50 33.0	-2.3
KIW	**Kapiti Island**	**3.00**	**198**	PN			Pn	03 50 33.7	-2.7
MTW	**Mount Morrison**	**3.18**	**188**	PN			Pn	03 50 35.7	-3.0
CAW	**Cannon Point**	**3.20**	**194**	PN			Pn	03 50 36.2	-2.8
DUWZ	**D'Urville Isla**	**3.27**	**211**	PN			Pn	03 50 36.2	-3.7
MSWZ	**Moikau Station**	**3.47**	**191**	PN			Pn	03 50 39.1	-3.2
SNZO	**South Karori**	**3.47**	**198**	PN			Pn	03 50 39.0	-3.4
TCW	**Tory Channel**	**3.50**	**203**	PN			Pn	03 50 39.6	-3.1
PLWZ	**Palliser**	**3.62**	**190**	PN			Pn	03 50 40.6	-3.7
TUWZ	**Tuamarina**	**3.81**	**206**	PN			Pn	03 50 43.1	-3.5
NNZ	**Nelson**	**3.84**	**213**	PN			Pn	03 50 43.4	-3.7
QRZ	**Quartz Range**	**3.96**	**224**	PN			Pn	03 50 44.7	-3.9
BSWZ	**Blackbirch Sta**	**4.08**	**204**	PN			Pn	03 50 46.8	-3.5
THZ	**Tophouse**	**4.49**	**212**	PN			Pn	03 50 51.7	-3.8
KHZ	**Kahutara**	**4.83**	**203**	PN			Pn	03 50 55.8	-4.1

WEL 21 04:10:55.8±0.6, 36°.91S×177°.11E, h174km±5km, ML3.8/12, Error ellipse: s-maj=6.3km s-min=5.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.16**	**125**	PN			Pn	04 11 24.1	0.0
URZ	**Urewera**	**1.35**	**180**	PN			Pn	04 11 26.4	+0.6
URZ				SN			Sn	04 11 49.3	+0.2
MWZ	**Matawai**	**1.47**	**167**	PN			Pn	04 11 27.4	+0.5
MWZ				SN			Sn	04 11 51.4	+0.4
PUZ	**Puketiti**	**1.48**	**142**	PN			Pn	04 11 27.2	+0.2
PUZ				SN			Sn	04 11 50.5	-0.7
CNGZ	**Carnagh Statio**	**1.80**	**151**	PN			Pn	04 11 30.7	+0.5
RAHZ	**Arahi**	**2.01**	**181**	PN			Pn	04 11 33.1	+0.6
RAHZ				SN			Sn	04 12 00.8	-0.2
PRGZ	**Paritu Road**	**2.10**	**163**	PN			Pn	04 11 33.3	-0.3
KNZ	**Kokohu**	**2.16**	**168**	PN			Pn	04 11 33.9	-0.3
NMHZ	**Naumai**	**2.20**	**186**	PN			Pn	04 11 35.4	+0.8
NMHZ				SN			Sn	04 12 05.4	+0.5
BKZ	**Black Stump Fm**	**2.31**	**192**	PN			Pn	04 11 35.7	-0.2
MHGZ	**Mahia Peninsul**	**2.33**	**165**	PN			Pn	04 11 35.8	-0.3
MCHZ	**McNeill Hill**	**2.56**	**187**	PN			Pn	04 11 38.8	+0.1
BHHZ	**Black Hill Sta**	**2.71**	**197**	PN			Pn	04 11 40.0	-0.5
BHHZ				SN			Sn	04 12 13.5	-1.9
MOVZ	**Moawhango**	**2.72**	**203**	PN			Pn	04 11 40.3	-0.3
CKHZ	**Cape Kidnapper**	**2.75**	**181**	PN			Pn	04 11 40.6	-0.5
KAHZ	**Kahuranaki**	**2.89**	**184**	PN			Pn	04 11 42.3	-0.5
PNHZ	**Pukenui**	**3.09**	**193**	PN			Pn	04 11 44.1	-1.1
PXZ	**Pawanui**	**3.13**	**184**	PN			Pn	04 11 44.4	-1.3
WPHZ	**Waipukurau**	**3.20**	**189**	PN			Pn	04 11 45.3	-1.3
TSZ	**Takapari Road**	**3.28**	**196**	PN			Pn	04 11 46.2	-1.3
PRHZ	**Porangahau**	**3.38**	**186**	PN			Pn	04 11 47.5	-1.3
DVHZ	**Dannevirke**	**3.47**	**192**	PN			Pn	04 11 48.1	-1.8
MRZ	**Mangatainoka R**	**3.94**	**197**	PN			Pn	04 11 53.5	-2.3
HOWZ	**Holdsworth Sta**	**4.18**	**197**	PN			Pn	04 11 56.2	-2.7
OGWZ	**Otaki Gorge**	**4.19**	**201**	PN			Pn	04 11 56.7	-2.4
KIW	**Kapiti Island**	**4.31**	**203**	PN			Pn	04 11 57.9	-2.6
MTW	**Mount Morrison**	**4.43**	**196**	PN			Pn	04 11 58.5	-3.6
CAW	**Cannon Point**	**4.49**	**200**	PN			Pn	04 11 60.0	-2.9
TCW	**Tory Channel**	**4.83**	**206**	PN			Pn	04 12 04.2	-3.2
THZ	**Tophouse**	**5.84**	**213**	PN			Pn	04 12 18.2	-2.4
KHZ	**Kahutara**	**6.16**	**205**	PN			Pn	04 12 20.6	-4.1

CSEM ***21*** *04:29:22.0, 36°.35N×21°.66E, h38km, MD3.6, After ATH*
ATH 21 04:29:22.4, 36°.36N×21°.70E, h37km±5km, MD3.6/10, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.84**	**12**	*e*PN			Pn	04 29 38.7	+1.0
ITM				*e*SN			Sn	04 29 50.5	+1.7
ITM	**Ithomi**	**0.84**	**12**	*e*PN			Pn	04 29 38.7	+1.0
ITM				*e*SN			Sn	04 29 50.5	+1.7
VLI	**Veliai**	**1.06**	**70**	*e*PN			Pn	04 29 43.3	+2.6
VLI				*e*SN			Sn	04 29 56.9	+2.7
VLI	**Veliai**	**1.06**	**70**	*e*PN			Pn	04 29 43.3	+2.6
VLI				*e*SN			Sn	04 29 56.9	+2.7
KYTH	**Kithira**	**1.08**	**94**	*e*PN			Pn	04 29 43.6	+2.6
KYTH	**Kithira**	**1.08**	**94**	*e*Pn			Pn	04 29 43.6	+2.6
VLX	**Vlachokerasia**	**1.15**	**28**	*e*PN			Pn	04 29 44.0	+2.1
VLX				*e*SN			Sn	04 30 00.0	+3.6
VLX	**Vlachokerasia**	**1.15**	**28**	*e*Pn			Pn	04 29 44.0	+2.1
VLX				*e*Sn			Sn	04 30 00.0	+3.6
GUR	**Goura**	**1.66**	**18**	*e*PB			Pn	04 29 51.4	+2.5
GUR				*e*SN			Sn	04 30 11.0	+2.1
GUR	**Goura**	**1.66**	**18**	*e*Pb			Pn	04 29 51.4	+2.5
GUR				*e*Sn			Sn	04 30 11.0	+2.1
DID	**Didima**	**1.68**	**47**	*e*PN			Pn	04 29 51.1	+1.8
DID	**Didima**	**1.68**	**47**	*e*Pn			Pn	04 29 51.1	+1.8
RLS	**Riolos of Patr**	**1.71**	**354**	*e*PN			Pn	04 29 50.6	+1.0
RLS	**Riolos of Patr**	**1.71**	**354**	*e*Pn			Pn	04 29 50.6	+1.0
LTK	**Loutraki**	**1.94**	**31**	*e*PN			Pn	04 29 54.6	+1.7
LTK	**Loutraki**	**1.94**	**31**	*e*Pn			Pn	04 29 54.6	+1.7
VLS	**Valsamata**	**2.02**	**334**	*e*Pn			Pn	04 29 53.8	-0.1
EFP	**Efpalio**	**2.07**	**4**	*e*PB			Pn	04 29 57.5	+2.9
EFP	**Efpalio**	**2.07**	**4**	*e*Pb			Pn	04 29 57.5	+2.9
VAM	**Vamos**	**2.24**	**114**	*e*PN			Pn	04 29 57.9	+0.9
VAM	**Vamos**	**2.24**	**114**	*e*Pn			Pn	04 29 57.9	+0.9
AGG	**Agios Georgios**	**2.70**	**10**	*e*PN			Pn	04 30 05.5	+2.2
AGG	**Agios Georgios**	**2.70**	**10**	*e*Pn			Pn	04 30 05.5	+2.2

ISCJB ***21*** *05:01:08.1±1.5, 42°.36N±0°.10×79°.8E±0°.2, h10km, Error ellipse: s-maj=22.5km s-min=6.2km az=36.3*
BJI ***21*** *05:01:08.1, 42°.17N×79°.99E, h24km, ML3.0/7*
NNC ***21*** *05:01:10.1±2.7, 42°.68N×79°.85E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=29.6km s-min=8.1km az=151.0*
ISC 21 05:01:11.8±1.3, 42°.51N±0°.08×79°.6E±0°.1, h10km, n6, σ1°07/7, 7C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**2.05**	**291**	↑Pg			**Pg**	**05 01 51.6**	**+0.6**
	7.9nm,0.2s								
KNDC				↑Lg				05 02 18.9	
	102nm,0.6s								
TKM2	**Tokmak 2**	**2.96**	**279**	↓Pn			**Pn**	**05 02 00.1**	**+1.2**
	6.7nm,0.7s								
TKM2				↑Lg				05 02 45.0	
	36nm,0.6s								
KSH	**Kashi**	**4.04**	**224**	Pn			**Pg**	**05 02 28.9**	**-0.4**
KSH				Sn			**Sg**	**05 03 22.1**	**+0.5**
KSH				smax					
	comp=N,11nm,0.5s								
KSH				smax					
	comp=E,24nm,1.3s								
MK31	**Makanchi Array**	**4.70**	**23**	↑Pn			**Pn**	**05 02 21.8**	**-0.9**
	comp=E,1.0nm,0.2s,baz=202,slow=13,SNR=19								
MK31				↓Sn			**Sn**	**05 03 18.0**	**+0.7**
	comp=E,2.7nm,0.3s								
MK31				↑Lg				05 03 32.3	
	comp=E,2.0nm,0.3s,baz=204,slow=28,SNR=9.8								
KK31	**Karatay Array**	**6.70**	**278**	↑Pg			**Pg**	**05 03 17.5**	**-2.5**
	comp=E,0.4nm,0.4s,baz=95,slow=15,SNR=4.5								
KK31				↑Lg				05 04 43.8	
	comp=E,2.1nm,0.5s,baz=101,slow=26,SNR=8.6								
KURK	**Kurchatov**	**8.24**	**356**	↓Lg				05 05 31.6	
	comp=E,6.2nm,0.7s								

NIED ***21*** *05:15:00, 37°.10N×141°.60E, h32km, Mw3.8 Best double couple: M_0=5.65000×10^{14} NP1:ϕ_s=92.00000°, δ69.00000°, λ-148.00000°. NP2:ϕ_s=349.00000°, δ60.00000°, λ-24.00000°.*
IDC ***21*** *05:15:24.9±1.4, 37°.08N×141°.75E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/23, mbtmp3.7/7, ML3.1/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/34, Error ellipse: s-maj=29.8km s-min=25.5km az=153.0*
ISCJB ***21*** *05:15:27.4±1.1, 37°.17N±0°.04×141°.77E±0°.06, h28km±6km, mb3.8/7, MS3.3/2, Error ellipse: s-maj=8.9km s-min=6.1km az=40.6*
JMA ***21*** *05:15:29.4±0.2, 37°.14N×141°.63E, h43km±2km, M4.0*
JMA Felt II J1.
NEIC ***21*** *05:15:29.4, 37°.14N×141

DGRG				S		**Sb**	**05 51 55.9**	**+1.0**
ARTV	**Artvin**	**1.42**	**271**	*i* P		**Pn**	**05 51 41.3**	**-0.9**
DDEM	**Demirkent**	**1.58**	**261**	*i* P		**Pn**	**05 51 44.9**	**+0.6**
DBAD	**Bademkaya**	**1.61**	**265**	*i* P		**Pn**	**05 51 45.8**	**+1.1**

*NEIC **21** 06:15:00.2,22°.10S×68°.62W,h108km,MG3.9(GUC), After GUC.*

GUC 21 06:15:00.2±0.5,22°.10S×68°.62W,h108km±5km,ML3.9, 3C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**0.89**	**154**	*e*P	Pn	06 15 21.4	+1.3
SPCH				*i* S	Sn	06 15 36.9	+1.7
SPCH	**San Pedro de A**	**0.89**	**154**	*e*P	Pn	06 15 21.4	+1.3
SPCH				*i* S	Sn	06 15 36.9	+1.7
SPCH				AML	AML	06 15 37.4	
	comp=E,3μm,0.3s						
TOCH	**Tocopilla**	**1.47**	**270**	⇑*i* P	Pn	06 15 27.0	+0.5
TOCH				*i* S	Sn	06 15 47.3	+0.9
TOCH				AML	AML	06 15 49.4	
	comp=E,2μm,0.1s						
ANCH	**Antofagasta**	**2.28**	**226**	⇓*i* P	Pn	06 15 37.4	+0.8
ANCH				S	Sn	06 16 04.0	-0.7
ANCH	**Antofagasta**	**2.28**	**226**	⇓*i* P	Pn	06 15 37.4	+0.8
ANCH				*i* S	Sn	06 16 04.0	-0.7
PSGC	**Pisagua**	**2.86**	**330**	⇑*i* P	Pn	06 15 44.4	+0.1
PSGC				*i* S	Sn	06 16 19.1	+0.7
PSGC				AML	AML	06 16 29.5	
	comp=N,286nm,0.1s						
MNMC	**Miæe Miæ**	**3.10**	**343**	⇑*i* P	Pn	06 15 49.1	+1.7
MNMC				AML	AML	06 16 39.2	
	comp=E,543nm,0.6s						
LPAZ	**La Paz**	**5.80**	**5**	*e*Pn	Pn	06 16 28.6	+4.6
	comp=E,3.7nm,0.7s						
LCO	**Las Campanas**	**7.13**	**195**	Pn	Pn	06 16 38.1	-3.8
LCO				*e*Sn	Sn	06 17 55.9	-5.4

*TAP **21** 06:31:28.8,24°.61N×122°.63E,h106km,ML3.1,C*
*ISCJB **21** 06:31:29.1±0.8,24°.57N±0°.05×122°.67E±0°.03, h100km±7km, Error ellipse: s-maj=9.0km s-min=3.7km az=174.0*
*JMA **21** 06:31:29.9±0.3,24°.79N×122°.83E,h101km,M1.9*

ISC 21 06:31:29.6±0.8,24°.57N±0°.06×122°.67E±0°.03,h99km±7km, n24,σ0°.71/43,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.33**	**110**	P	**Pn**	**06 31 45.1**	**+0.9**
YOJ				*e*S	**Sn**	**06 31 56.1**	**+1.0**
TWC	**Suao**	**0.75**	**273**	P	**Pn**	**06 31 46.5**	**-0.8**
	baz=270						
TWC				*i* S	**Sn**	**06 31 59.5**	**-1.1**
	baz=270						
TWB1	**Santiao Chiao**	**0.76**	**305**	*i* P	**Pn**	**06 31 47.1**	**-0.3**
	baz=303						
ENA	**Nanau**	**0.86**	**261**	P	**Pn**	**06 31 48.2**	**-0.2**
	baz=252						
ENA				*e*S	**Sn**	**06 32 03.0**	**+0.4**
	baz=252						
NWF	**Wu-fen Shan**	**0.95**	**302**	P	**Pn**	**06 31 49.2**	**-0.2**
	baz=301						
NWF				S	**Sn**	**06 32 04.2**	**0.0**
	baz=301						
IRIF	**Iriomote-Funau**	**0.99**	**104**	P	**Pn**	**06 31 49.5**	**-0.3**
IRIF				*e*S	**Sn**	**06 32 05.2**	**+0.1**
ENTT	**Nioudou**	**1.01**	**274**	P	**Pn**	**06 31 50.2**	**+0.2**
	baz=270						
ENTT				*e*S	**Sn**	**06 32 05.8**	**+0.4**
	baz=270						
TWD	**Chiawan**	**1.10**	**244**	P	**Pn**	**06 31 50.2**	**-0.7**
	baz=236						
TWD				S	**Sn**	**06 32 06.7**	**-0.4**
	baz=236						
HATJ	**Hateruma jima**	**1.16**	**116**	*e*S	**Sn**	**06 32 10.1**	**+1.8**
NSK	**Sanguang**	**1.20**	**275**	*i* P	**Pn**	**06 31 52.0**	**-0.1**
	baz=266						
NSK				S	**Sn**	**06 32 09.6**	**+0.4**
	baz=266						
JKRS	**Kuro-shima**	**1.26**	**105**	P	**Pn**	**06 31 53.1**	**+0.2**
JKRS				*e*S	**Sn**	**06 32 10.7**	**+0.1**
WHF	**Hehuan Shan**	**1.35**	**252**	*i* P	**Pn**	**06 31 54.0**	**0.0**
	baz=249						
WHF				S	**Sn**	**06 32 12.4**	**0.0**
	baz=249						
JIJ	**Ishigaki jima**	**1.36**	**99**	P	**Pn**	**06 31 53.5**	**-0.5**
JIJ				*e*S	**Sn**	**06 32 11.4**	**-1.1**
EHY	**Hungye**	**1.63**	**230**	*e*P	**Pn**	**06 31 56.9**	**-0.5**
	baz=226						
EHY				*e*S	**Sn**	**06 32 17.0**	**-1.4**
	baz=226						
TWF1	**Yuli**	**1.75**	**226**	*e*P	**Pn**	**06 31 58.3**	**-0.6**
	baz=231						
TWF1				*e*S	**Sn**	**06 32 20.6**	**-0.6**
	baz=231						
SMLT	**Sun Moon Lake**	**1.76**	**247**	*e*P	**Pn**	**06 31 59.8**	**+0.8**
	baz=240						
TYC	**Yuchr**	**1.79**	**248**	P	**Pn**	**06 32 00.1**	**+0.8**
	baz=243						
TYC				*e*S	**Sn**	**06 32 22.7**	**+0.7**
	baz=243						
JTJ	**Tarama**	**1.85**	**87**	P	**Pn**	**06 31 59.8**	**-0.4**
JTJ				*e*S	**Sn**	**06 32 22.5**	**-1.0**
YUS	**Yu-Shan**	**1.91**	**236**	*e*P	**Pn**	**06 32 00.9**	**0.0**
	baz=229						
YUS				*e*S	**Sn**	**06 32 25.1**	**+0.3**
	baz=229						
ALS	**Alishan**	**2.01**	**239**	*e*P	**Pn**	**06 32 03.5**	**+1.3**
	baz=237						
ALS				*e*S	**Sn**	**06 32 27.6**	**+0.5**
	baz=237						
ELDTW	**Lidau**	**2.05**	**228**	*e*P	**Pn**	**06 32 02.5**	**-0.2**
	baz=225						
ELDTW				*e*S	**Sn**	**06 32 26.9**	**-1.1**
	baz=225						
STYT	**Tauyuan**	**2.25**	**232**	*e*P	**Pn**	**06 32 05.9**	**+0.6**
	baz=224						
WTP	**Ta-pu**	**2.30**	**235**	*e*P	**Pn**	**06 32 07.1**	**+1.1**
	baz=234						
CHN1	**Nanshi**	**2.40**	**235**	*e*P	**Pn**	**06 32 08.3**	**+1.0**
	baz=233						
CHN1				*e*S	**Sn**	**06 32 35.7**	**-0.6**
	baz=233						

*ISCJB **21** 06:35:06.6±1.9,29°.88N±0°.07×90°.6E±0°.1,h13km±13km, mb3.9/6,Error ellipse: s-maj=21.4km s-min=7.5km az=152.1*
*IDC **21** 06:35:07.0±1.0,30°.02N×90°.60E,h0km,mb3.9/6, mb1 4.0/8,mb1mx3.8/26,mbtmp3.9/8,ML3.1/2,MS3.1/2, Ms1 3.2/2,ms1mx2.5/36,Error ellipse: s-maj=30.8km s-min=21.6km az=55.0*
*NEIC **21** 06:35:07.7±0.7,29°.87N×90°.61E,h10km,mb3.6/1,Error ellipse: s-maj=20.0km s-min=8.6km az=225.0*
*BJI **21** 06:35:12.2,30°.19N×90°.81E,h6km,mb4.2/7,ML4.1/2*

ISC 21 06:35:07.2±2.3,29°.88N±0°.07×90°.6E±0°.1,h5km±16km,n17, σ1°.08/18,mb3.9/6,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**0.55**	**109**	Pg	**Pg**	**06 35 16.6**	**-1.2**
LSA				Sg	**Sg**	**06 35 26.0**	**+1.0**
LSA				smax			
	comp=N,12μm,0.5s						
LSA				smax			
	comp=E,6μm,0.4s						
LSA	**Lhasa**	**0.55**	**109**	*e*Pg	**Pg**	**06 35 17.3**	**-0.6**
LSA				*e*Sg	**Sg**	**06 35 25.9**	**+0.9**
SHL	**Shillong**	**4.46**	**164**	*e*PN	**Pn**	**06 36 16.0**	**+0.5**
SHL				*e*SN	**Sn**	**06 37 08.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**13.70**	**144**	Pn	**Pn**	**06 38 20.2**	**-2.1**
	baz=314,slow=12,SNR=11						
MK31	**Makanchi Array**	**18.07**	**341**	*e*Pn	**Pn**	**06 39 19.1**	**+0.1**
MKAR	**Makanchi Array**	**18.07**	**341**	P	**Pn**	**06 39 17.7**	**-1.2**
	comp=E,0.1nm,0.3s,baz=150,slow=12,SNR=10						
AAK	**Ala-Archa**	**18.11**	**319**	P	**Pn**	**06 39 21.2**	**+1.6**
	comp=E,0.0nm,0.3s,baz=132,slow=14,SNR=2.5						
AAK				LR	LR	06 47 38.8	
	comp=E,64nm,19.9s,baz=314,slow=42						
EKS2	**Erkin-Say**	**18.55**	**318**	*e*P	**Pn**	**06 39 25.0**	**+0.2**
	comp=E,7.3nm,1.6s						
SONM	**Songino Array**	**21.69**	**30**	P	**P**	**06 40 00.0**	**+1.2**
	comp=E,8.7nm,0.8s,mb4.2,baz=215,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**24.41**	**352**	P	**P**	**06 40 26.1**	**-0.3**
	comp=E,0.8nm,0.5s,mb3.4,baz=165,slow=12,SNR=5.1						
BRTR	**Keskin Array B**	**47.06**	**298**	P	**P**	**06 43 40.9**	**+1.0**
	comp=E,0.7nm,0.8s,mb3.7,baz=74,slow=6.8,SNR=2.8						
BRTR	**Keskin Array B**	**47.06**	**298**	P	**P**	**06 43 40.9**	**+1.0**
NOA	**NORSAR Array B**	**59.25**	**326**	P	**P**	**06 45 07.7**	**-1.7**
	comp=E,1.0nm,0.9s,mb3.8,baz=83,slow=7.1,SNR=2.5						
NOA				LR	LR	07 14 14.6	
	comp=E,15nm,18.2s,baz=90,slow=40						
WRA	**Warramunga Arr**	**65.06**	**134**	P	**P**	**06 45 49.9**	**+1.1**
	comp=E,2.9nm,0.6s,mb4.5,baz=326,slow=6.6,SNR=15						
ILAR	**Eielson Array**	**75.67**	**22**	P	**P**	**06 46 52.2**	**-1.0**
	comp=E,1.5nm,0.9s,mb3.9,baz=293,slow=5.2,SNR=16						
CPUP	**Villa Florida**	**151.50**	**269**	PKPbc	PKPbc	06 55 03.1	+0.4
	comp=E,1.0nm,0.6s,baz=63,slow=4.5,SNR=3.8						
CPUP				PKPab	PKPab	06 55 12.8	+1.6
	comp=E,0.2nm,0.4s,baz=73,slow=1.7,SNR=3.0						
CPUP	**Villa Florida**	**151.50**	**269**	PKPbc	PKPbc	06 55 03.1	+0.4
CPUP				PKPab	PKPab	06 55 12.8	+1.6

*SZGRF **21** 06:36:20.8,15°.96S×174°.00W,h33km,Tonga Islands*
*BJI **21** 06:36:23.9,16°.10S×173°.80W,h75km,mB5.1/17, mb4.9/25,Ms5.2/15,Ms7 4.8/14*
*ISCJB **21** 06:36:28.2±0.2,16°.14S±0°.06×173°.97W±0°.04,h120km, mb4.9/133,Error ellipse: s-maj=9.0km s-min=4.4km az=149.0*
*MOS **21** 06:36:29.9±1.2,15°.59S×173°.73W,h112km,mb5.2/33, MS4.3/4,Error ellipse: s-maj=16.1km s-min=7.4km az=59.5*
*NEIC **21** 06:36:29.9±0.2,16°.09S×173°.84W,mb5.0/105,Error ellipse: s-maj=9.8km s-min=5.7km az=143.0*
*IDC **21** 06:36:29.5±0.5,16°.13S×173°.90W,h121km±3km,mb4.5/23, mb1 4.6/23,mb1mx4.6/25,mbtmp4.5/23,MS3.9/11, Ms1 3.9/11,ms1mx3.6/32,Error ellipse: s-maj=15.3km s-min=9.0km az=127.0*
*GCMT **21** 06:36:30.8±0.2,16°.20S×173°.41W,h124km±1km,MW5.2, Moment Tensor Solution. s64,c86; s92,c140; Moment tensor: Scale 10^{16}Nm; M_{rr}-4.98±.16; $M_{\theta\theta}$-1.87±.20; $M_{\phi\phi}$6.85±.19; $M_{r\theta}$-2.46±.14; $M_{\theta\phi}$-0.72±.22; $M_{\phi r}$3.61±.15; Best double couple: $M_0$7.50000×10^{16} NP1:ϕ_s20.00000°, δ33.00000°,λ-51.00000°. NP2:ϕ_s155.00000°,δ65.00000°, λ-113.00000°. Principal axes: T 8.0600, Plg17.0000°, Azm262.0000°; N -1.1100, Plg21.0000°, Azm165.0000°; P -6.9500, Plg63.0000°, Azm28.0000°; Data Used: II IU IC G CN.*

ISC 21 06:36:29.9±0.2,16°.14S±0°.06×173°.96W±0°.04,h121km, h121km±2.3km:pP-P,n862,σ0°.54/636,mb4.9/133, 145C-158D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.06**	**44**	P	**Pn**	**06 37 10.0**	**-7.1**
	326nm,0.3s,baz=227,slow=23,SNR=326						
AFI				S	**Sn**	**06 37 41.0**	**-13**
	2μm,0.3s,baz=43,slow=22,SNR=11						
AFI	**Afiamalu**	**3.06**	**44**	*e*Pn	**Pn**	**06 37 10.5**	**-6.7**
AFI				*e*Sn	**Sn**	**06 37 41.1**	**-12**
AFI	**Afiamalu**	**3.06**	**44**	*e*P	**Pn**	**06 37 10.5**	**-6.7**
AFI				*e*		06 37 41.1	
MSVF	**Nonsavu**	**7.81**	**257**	*e*Pn	**Pn**	**06 38 27.1**	**+6.2**
	516nm,1.4s						
MSVF	**Nonsavu**	**7.81**	**257**	Pn	**Pn**	**06 38 27.9**	**+7.0**
	1μm,1.0s,SNR=13						
FUNA	**Funafuti**	**10.09**	**318**	*e*Pn	**Pn**	**06 38 46.0**	**-5.8**
RAR	**Rarotonga**	**14.36**	**113**	P	**Pn**	**06 39 42.7**	**-4.9**
	4.0nm,0.3s,baz=271,slow=8.7,SNR=17						
RAR				S	**Sn**	**06 42 10.2**	**-16**
	1.7nm,0.3s,baz=6.1,slow=22,SNR=1.6						
RAR				LR	LR	06 43 08.2	
	comp=Z,400nm,21.9s,baz=282,slow=28						
RAR	**Rarotonga**	**14.36**	**113**	*e*Pn	**Pn**	**06 39 42.1**	**-5.6**
	156nm,1.0s						
RAR				*e*Sn	**Sn**	**06 42 10.3**	**-16**
RAR	**Rarotonga**	**14.36**	**113**	*e*P	**Pn**	**06 39 42.1**	**-5.5**
RAR				pmax	pmax		
	comp=Z,156nm,1.0s						
DZM	**Mont Dzumac**	**19.42**	**249**	*e*Pn	**Pn**	**06 40 49.1**	**-0.2**
	comp=Z,5.4nm,0.3s						
DZM				*e*LR	LR	06 45 44.9	
	comp=Z,1μm,35.6s						
DZM	**Mont Dzumac**	**19.42**	**249**	*e*P	**P**	**06 40 47.1**	**+0.2**
NOUC	**Port Laguerre**	**19.56**	**249**	*e*P	**P**	**06 40 49.5**	**+1.2**
PPT	**Papeete**	**23.38**	**97**	*e*LR	LR	06 46 44.4	
	comp=Z,1μm,30.5s						
URZ	**Urewera**	**23.39**	**198**	P	**P**	**06 41 27.2**	**-0.6**
	comp=Z,13nm,0.4s,mb4.6,baz=357,slow=3.4,SNR=18						
URZ				S	**S**	**06 45 31.8**	**+0.1**
	comp=Z,3.0nm,0.4s,baz=102,slow=21,SNR=1.6						
URZ	**Urewera**	**23.39**	**198**	*e*P	**P**	**06 41 27.5**	**-0.3**
	comp=Z,17nm,0.5s,mb4.6						
URZ				*e*S	**S**	**06 45 26.2**	**-5.5**
TBI	**Tubuai**	**24.13**	**111**	*e*LR	LR	06 47 08.6	
	comp=Z,773nm,36.0s						
SNZO	**South Karori**	**26.93**	**199**	*e*P	**P**	**06 41 56.4**	**-3.3**
	comp=Z,26nm,0.7s,mb4.9						
RPZ	**Rata Peaks**	**30.30**	**202**	P	**P**	**06 42 30.7**	**+1.1**
	comp=Z,9.0nm,0.5s,mb4.6,baz=37,slow=5.1,SNR=5.2						
RPZ				LR	LR	06 53 10.3	
	comp=Z,204nm,18.5s,baz=84,slow=33						
EIDS	**Eidsvold**	**33.87**	**248**	*e*P	**P**	**06 43 00.3**	**-0.8**
ARMA	**Armidale**	**34.50**	**240**	*e*P	**P**	**06 43 06.3**	**-0.2**
ARMA	**Armidale**	**34.50**	**240**	*e*P	**P**	**06 43 05.9**	**-0.6**
	comp=Z,5.0nm,0.5s,mb4.6						
RKT	**Rikitea**	**37.29**	**107**	*e*LR	LR	06 52 58.1	
	comp=Z,348nm,31.2s						
PMG	**Port Moresby**	**38.45**	**275**	⇑*e*P	**P**	**06 43 39.2**	**-1.1**
PMG				pmax	pmax		
	comp=Z,23nm,1.2s						
CMSA	**Cobar Meteorol**	**39.71**	**240**	*e*P	**P**	**06 43 49.9**	**-0.7**
STKA	**Stephens Creek**	**43.20**	**240**	P	**P**	**06 44 18.6**	**-0.4**
	comp=Z,12nm,0.9s,mb4.6,baz=83,slow=11,SNR=8.4						
STKA				pP	pP	06 44 45.6	-1.0
	comp=Z,17nm,1.1s,baz=112,slow=7.9,SNR=4.1						
STKA	**Stephens Creek**	**43.20**	**240**	*e*P	**P**	**06 44 18.6**	**-0.4**
	comp=Z,8.0nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**43.20**	**240**	*e*P	**P**	**06 44 18.5**	**-0.5**
	comp=Z,3.1nm,1.0s,mb4.0						
STKA				*e*pP	pP	06 44 39.4	-7.3
STKA				*e*sP	sP	06 44 48.7	-12
BBOO	**Buckleboo**	**47.97**	**240**	*e*P	**P**	**06 44 55.6**	**-1.0**
	comp=Z,12nm,1.2s,mb4.6						
WRA	**Warramunga Arr**	**49.15**	**257**	P	**P**	**06 45 05.0**	**-0.8**
	comp=Z,2.1nm,0.5s,mb4.3,baz=95,slow=6.7,SNR=65						
WRA				pP	pP	06 45 34.9	+0.8
	comp=Z,7.8nm,1.2s,baz=94,slow=7.8,SNR=2.8						
WRA	**Warramunga Arr**	**49.15**	**257**	P	**P**	**06 45 05.0**	**-0.8**
WRA				*PP	pP	06 45 34.9	+0.8
ASAR	**Alice Springs**	**49.37**	**253**	P	**P**	**06 45 06.4**	**-1.0**
	comp=Z,7.5nm,0.4s,mb5.0,baz=90,slow=7.5,SNR=107						
ASAR				pP	pP	06 45 36.0	+0.2
	comp=Z,9.2nm,0.7s,baz=86,slow=8.6,SNR=3.7						
ASAR	**Alice Springs**	**49.37**	**253**	P	**P**	**06 45 06.4**	**-1.0**
ASAR				*PP	pP	06 45 36.0	+0.3
KAKA	**Kakadu**	**51.91**	**266**	*e*P	**P**	**06 45 27.0**	**+0.4**
	comp=Z,20nm,0.7s,mb5.3						
FITZ	**Fitzroy Crossi**	**57.53**	**259**	P	**P**	**06 46 07.0**	**-0.1**
	comp=Z,2.3nm,0.6s,mb4.4,baz=150,slow=4.0,SNR=11						
SBA	**Scott Base**	**62.47**	**185**	*e*P	**P**	**06 46 41.5**	**+1.7**
	comp=Z,3.8nm,0.7s,mb4.5						
SBA	**Scott Base**	**62.47**	**185**	*e*P	**P**	**06 46 41.5**	**+1.6**
SBA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MBWA	**Marble Bar**	**62.64**	**254**	*e*P	**P**	**06 46 41.5**	**-0.4**
MBWA	**Marble Bar**	**62.64**	**254**	*e*P	**P**	**06 46 41.6**	**-0.4**
	comp=Z,7.9nm,0.7s,mb4.8						
NWAO	**Narrogin (SRO)**	**63.79**	**241**	LR	LR	07 14 06.7	
	comp=Z,168nm,18.6s,baz=188,slow=35						
ATKA	**Atka Island**	**68.05**	**360**	*e*P	**P**	**06 47 15.5**	**-0.6**
	comp=Z,107nm,1.3s,mb5.5						
MJAR	**Matsushiro Arr**	**69.16**	**320**	P	**P**	**06 47 22.3**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=142,slow=6.3,SNR=3.5						
MJAR	**Matsushiro Arr**	**69.16**	**320**	P	**P**	**06 47 22.3**	**-1.0**
SAO	**San Andreas Ge**	**72.24**	**42**	*e*P	**P**	**06 47 40.8**	**-1.2**
	comp=Z,30nm,1.3s,mb5.0						
SAO	**San Andreas Ge**	**72.24**	**42**	*e*P	**P**	**06 47 40.8**	**-1.2**
SAO				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
SMMC	**Simmler**	**72.33**	**44**	⇑P	**P**	**06 47 42.5**	**-0.1**
	baz=72						
HOPS	**Hopland**	**72.58**	**39**	*e*P	**P**	**06 47 44.1**	**+0.2**
	comp=Z,63nm,1.2s,mb5.3						
KCPM	**Cahto Peak**	**72.71**	**39**	*e*P	**P**	**06 47 45.2**	**+0.5**
	comp=Z,26nm,1.2s,mb4.9						
KIPM	**Iron Peak**	**72.85**	**38**	*e*P	**P**	**06 47 45.1**	**-0.4**
	comp=Z,23nm,1.2s,mb4.9						
PASC	**Pasadena Art C**	**72.92**	**46**	*e*P	**P**	**06 47 44.8**	**-1.3**
	comp=Z,90nm,1.1s,mb5.5						
ARVC	**Arvin**	**73.02**	**45**	⇑P	**P**	**06 47 46.5**	**-0.1**
	baz=73						
MWC	**Mount Wilson**	**73.04**	**46**	*e*P	**P**	**06 47 45.6**	**-1.2**
	comp=Z,171nm,2.3s,mb5.5						
MWC	**Mount Wilson**	**73.04**	**46**	*e*P	**P**	**06 47 45.6**	**-1.2**
MWC				pmax	pmax		
	comp=Z,171nm,2.3s,mb5.5						
PETK	**Petropavlovsk-**	**73.17**	**343**	P	**P**	**06 47 47.5**	**+0.4**
	comp=Z,17nm,0.7s,mb5.0,baz=141,slow=8.3,SNR=21						
PETK	**Petropavlovsk-**	**73.17**	**343**	P	**P**	**06 47 47.5**	**+0.4**
VES	**Vestal, Richgr**	**73.25**	**44**	⇑P	**P**	**06 47 47.4**	**-0.6**
	baz=73,SNR=10						
MURC	**Murrieta**	**73.29**	**47**	⇑P	**P**	**06 47 48.0**	**-0.3**
	baz=73,SNR=6.0						
BFSC	**Mount Baldy Ra**	**73.32**	**46**	⇓P	**P**	**06 47 47.9**	**-0.5**
	baz=73,SNR=5.2						
CHGN	**Chignik**	**73.34**	**9**	*e*P	**P**	**06 47 47.2**	**-0.8**
KHMM	**Horse Mountain**	**73.38**	**37**	*e*P	**P**	**06 47 48.1**	**-0.5**
	comp=Z,19nm,1.1s,mb4.8						
EDW2	**Edwards Air Fo**	**73.45**	**45**	P	**P**	**06 47 49.2**	**0.0**
	baz=74,SNR=13						
MONP	**Monument Peak**	**73.46**	**48**	⇑P	**P**	**06 47 49.4**	**+0.1**
	baz=74,SNR=14						
ISA	**Isabella**	**73.56**	**44**	⇑P	**P**	**06 47 50.0**	**+0.2**
	baz=74,SNR=10						
ISA	**Isabella**	**73.56**	**44**	*e*P	**P**	**06 47 49.5**	**-0.3**
	comp=Z,114nm,2.1s,mb5.2						
ISA	**Isabella**	**73.56**	**44**	*e*P	**P**	**06 47 49.5**	**-0.3**
ISA				pmax	pmax		
	comp=Z,114nm,2.1s,mb5.2						
CMB	**Columbia Colle**	**73.67**	**41**	*e*P	**P**	**06 47 49.6**	**-0.8**
	comp=Z,24nm,1.1s,mb4.8						
CMB	**Columbia Colle**	**73.67**	**41**	*e*P	**P**	**06 47 49.6**	**-0.8**
CMB				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.8						
OHCM	**Honcut**	**73.77**	**40**	*e*P	**P**	**06 47 50.4**	**-0.5**
PFO	**Pinyon Flat Ob**	**73.82**	**47**	P	**P**	**06 47 51.3**	**-0.1**
	baz=74,SNR=7.0						
PFO	**Pinyon Flat Ob**	**73.82**	**47**	*e*P	**P**	**06 47 51.0**	**-0.4**
	comp=Z,30nm,1.3s,mb4.9						
PFO	**Pinyon Flat Ob**	**73.82**	**47**	*e*P	**P**	**06 47 51.0**	**-0.4**
PFO				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.9						
YSS	**Yuzh-Sakhalins**	**73.86**	**331**	⇑*e*P	**P**	**06 47 51.9**	**+0.6**
WDC	**Whiskeytown Da**	**73.89**	**38**	*e*P	**P**	**06 47 51.4**	**-0.3**
	comp=Z,26nm,1.1s,mb4.9						
WDC	**Whiskeytown Da**	**73.89**	**38**	*e*P	**P**	**06 47 51.4**	**-0.2**
WDC				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.9						
QSPA	**South Pole Qui**	**73.91**	**180**	P	**P**	**06 47 51.4**	**+0.2**
	comp=Z,11nm,1.1s,mb4.5,baz=58,slow=1.9,SNR=17						
QSPA				pP	pP	06 48 21.0	-0.5
	comp=Z,4.2nm,0.9s,baz=86,slow=4.6,SNR=3.2						
SWSC	**Sam W. Stewart**	**73.93**	**48**	⇑P	**P**	**06 47 52.0**	**-0.1**
	baz=74						
RRX	**Edison Barstow**	**74.13**	**46**	⇑P	**P**	**06 47 53.3**	**+0.1**
	baz=74						
CWC	**Cottonwood Cre**	**74.26**	**44**	⇓P	**P**	**06 47 54.0**	**+0.1**
	baz=74						
KEBM	**Edson Butte**	**74.31**	**36**	*e*P	**P**	**06 47 54.4**	**+0.4**
	comp=Z,54nm,1.2s,mb5.2						
BELC	**Belle Mtn. Jos**	**74.35**	**47**	⇓P	**P**	**06 47 54.6**	**+0.1**
	baz=74,SNR=14						
MLAC	**Mammoth Lakes**	**74.44**	**43**	⇑P	**P**	**06 47 55.1**	**+0.2**
	baz=74,SNR=5.1						
MPMC	**Manual Prospec**	**74.44**	**45**	⇑P	**P**	**06 47 55.1**	**+0.1**
	baz=74,SNR=18						
MTUM	**Tungsten Hills**	**74.46**	**43**	*e*P	**P**	**06 47 54.8**	**-0.2**
GSC	**Goldstone**	**74.49**	**45**	P	**P**	**06 47 55.2**	**0.0**
	baz=74,SNR=12						
GSC	**Goldstone**	**74.49**	**45**	*e*P	**P**	**06 47 54.6**	**-0.6**
	comp=Z,32nm,1.3s,mb4.9						
GSC	**Goldstone**	**74.49**	**45**	*e*P	**P**	**06 47 54.6**	**-0.6**
GSC				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.9						
YBH	**Yreka Blue Hor**	**74.51**	**37**	P	**P**	**06 47 55.1**	**-0.1**
	comp=Z,33nm,0.8s,mb5.1,baz=156,slow=1.4,SNR=22						
YBH	**Yreka Blue Hor**	**74.51**	**37**	*e*P	**P**	**06 47 55.5**	**+0.3**
	comp=Z,34nm,0.9s,mb5.1						
YBH	**Yreka Blue Hor**	**74.51**	**37**	*e*P	**P**	**06 47 55.5**	**+0.3**
YBH				pmax	pmax		
	comp=Z,34nm,0.9s						
BC3	**Big Chuckawall**	**74.55**	**48**	P	**P**	**06 47 55.9**	**+0.2**
	baz=75,SNR=13						
WAKR	**Walker**	**74.56**	**42**	*e*P	**P**	**06 47 55.3**	**-0.2**
HEC	**Hector,Ludlow**	**74.56**	**46**	⇓P	**P**	**06 47 55.8**	**+0.1**
	baz=75						
112A	**Yuma**	**74.60**	**49**	⇑P	**P**	**06 47 56.2**	**+0.2**
	baz=75,SNR=8.3						
GLA	**Glamis**	**74.69**	**48**	⇓P	**P**	**06 47 56.6**	**+0.2**
	baz=75,SNR=7.0						
GLA	**

Y14A	Wickenburg	76.45	48	⇑P	P	06 48 06.2	-0.2
	baz=76,SNR=24						
216A	Three Points,	76.63	51	P	P	06 48 07.3	-0.2
	baz=77,SNR=16						
U12A	Valley of Fire	76.65	46	⇑P	P	06 48 07.8	+0.3
	baz=77,SNR=23						
H04A	Detroit Lake	76.67	35	P	P	06 48 07.2	-0.2
	baz=77,SNR=14						
T12A	Moapa	76.68	45	⇓P	P	06 48 08.0	+0.2
	baz=77						
V13A	Grand Canyon W	76.73	46	⇑P	P	06 48 08.1	+0.1
	baz=77,SNR=15						
Z15A	Gila River Ind	76.74	49	⇓P	P	06 48 08.2	+0.1
	baz=77,SNR=7.2						
X14A	Yava	76.80	48	⇑P	P	06 48 08.5	+0.1
	baz=77,SNR=19						
Y15A	Casa Rosa Ranc	76.94	49	⇑P	P	06 48 09.5	+0.3
	baz=77,SNR=49						
R11A	Troy Canyon, C	76.97	43	⇑P	P	06 48 09.1	-0.2
	baz=77,SNR=16						
217A	Green Valley	77.00	51	⇓P	P	06 48 09.4	-0.1
	baz=77,SNR=23						
W14A	Seligman	77.03	47	P	P	06 48 09.9	+0.2
	baz=77,SNR=25						
U13A	Pakoon Wash	77.03	46	⇑P	P	06 48 09.8	+0.2
	baz=77,SNR=54						
BMN	Battle Mountai	77.06	41	eP	P	06 48 09.3	-0.4
	comp=Z,30nm,1.2s,mb4.9						
BMN	Battle Mountai	77.06	41	eP	P	06 48 09.3	-0.5
BMN				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.9						
E03A	Lebam	77.12	33	P	P	06 48 10.2	+0.3
	baz=77,SNR=6.9						
V14A	Boquillas Ranc	77.23	47	P	P	06 48 10.9	+0.1
	baz=77,SNR=27						
X15A	Humboldt	77.27	48	⇓P	P	06 48 11.1	0.0
	baz=77,SNR=30						
TUC	Tucson	77.28	51	eP	P	06 48 10.7	-0.5
	comp=Z,67nm,1.5s,mb5.2						
TUC	Tucson	77.28	51	eP	P	06 48 10.7	-0.4
TUC				pmax	pmax		
	comp=Z,67nm,1.5s,mb5.2						
Z16A	Peralta Trail,	77.30	50	⇓P	P	06 48 11.0	-0.2
	baz=77,SNR=20						
F04A	Amboy	77.33	34	⇓P	P	06 48 11.0	-0.2
	baz=77,SNR=7.7						
WVOR	Wild Horse Val	77.35	39	eP	P	06 48 10.6	-0.7
	comp=Z,28nm,1.0s,mb5.0						
WVOR	Wild Horse Val	77.35	39	eP	P	06 48 10.6	-0.7
WVOR				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
T13A	Saint George	77.39	45	⇑P	P	06 48 11.9	+0.3
	baz=77,SNR=32						
117A	Oracle	77.43	51	⇑P	P	06 48 12.2	+0.2
	baz=78,SNR=25						
VIPM	Ingram Point	77.44	36	P	P	06 48 11.7	0.0
VIPM	Ingram Point	77.44	36	P	P	06 48 11.7	0.0
318A	Bisbee	77.46	52	P	P	06 48 11.9	-0.2
	baz=78,SNR=24						
NLWA	Neilton Lookou	77.51	32	eP	P	06 48 12.3	+0.2
	comp=Z,24nm,1.2s,mb4.8						
Y16A	Circle Bar Ran	77.52	49	P	P	06 48 12.4	-0.1
	baz=78,SNR=24						
U14A	Mt Trumbull	77.58	46	⇑P	P	06 48 13.1	+0.4
	baz=78,SNR=42						
W15A	Williams	77.59	48	⇑P	P	06 48 13.6	+0.8
	baz=78						
218A	Dragoon	77.67	51	P	P	06 48 13.2	-0.1
	baz=78,SNR=27						
S13A	Holt Ranch, En	77.71	45	⇓P	P	06 48 13.4	0.0
	baz=78,SNR=28						
X16A	Lo Mia Camp, P	77.81	49	P	P	06 48 14.2	+0.2
	baz=78,SNR=29						
I07A	Izee	77.81	37	⇓P	P	06 48 13.8	-0.1
	baz=78,SNR=24						
G06A	Carlson Farm,	77.87	35	P	P	06 48 13.9	-0.2
	baz=78,SNR=8.4						
OSD	Olympics--Snow	77.88	32	P	P	06 48 14.7	+0.6
Y17A	Roosevelt	77.89	50	⇓P	P	06 48 14.6	0.0
	baz=78,SNR=16						
R13A	O'Grain Ranch,	77.95	44	⇑P	P	06 48 15.0	+0.3
	baz=78,SNR=14						
319A	Douglas	77.97	52	⇓P	P	06 48 15.0	0.0
	baz=78,SNR=25						
T14A	Hurricane	77.97	46	⇑P	P	06 48 15.1	+0.2
	baz=78,SNR=9.6						
Z17A	San Carlos Hig	77.98	50	⇑P	P	06 48 15.9	+0.9
	baz=78						
V15A	Kaibab Nationa	77.98	47	P	P	06 48 15.2	+0.3
	baz=78,SNR=31						
J08A	Circle Bar Ran	77.99	38	P	P	06 48 15.0	+0.2
	baz=78,SNR=17						
CCUT	Cedar City	78.03	45	eP	P	06 48 15.3	+0.1
	comp=Z,24nm,1.1s,mb4.8						
118A	Homack Ranch,	78.04	51	P	P	06 48 15.4	+0.1
	baz=78,SNR=24						
W16A	Flagstaff	78.08	48	⇓P	P	06 48 15.8	+0.3
	baz=78						
HDW	Hoodsport	78.10	32	P	P	06 48 15.7	+0.4
ARUT	Antelope Range	78.11	45	eP	P	06 48 15.5	-0.1
	comp=Z,21nm,1.1s,mb4.8						
ARUT				ePcP	PcP	06 48 25.3	+0.5
ARUT				ePP	PP	06 51 08.9	-5.1
ARUT	Antelope Range	78.11	45	eP	P	06 48 15.5	-0.1
ARUT				e		06 48 25.3	
ARUT				e		06 51 08.9	
ARUT				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.8						
GNW	Green Mountain	78.16	33	eP	P	06 48 15.6	-0.1
	comp=Z,9.6nm,1.2s,mb4.4						
LON	Longmire	78.18	34	eP	P	06 48 15.4	-0.4
	comp=Z,41nm,2.0s,mb4.8						
LON	Longmire	78.18	34	eP	P	06 48 15.4	-0.4
LON				pmax	pmax		
	comp=Z,41nm,2.0s,mb4.8						
U15A	North Rim	78.20	46	P	P	06 48 16.5	+0.4
	baz=78,SNR=44						
RSO	Redoubt South	78.23	11	eP	P	06 48 15.6	-0.1
X17A	Forest Lakes	78.23	49	P	P	06 48 16.7	+0.3
	baz=78,SNR=28						
219A	White Tail Can	78.27	52	⇓P	P	06 48 16.7	0.0
	baz=78,SNR=21						
S14A	Cedar City	78.28	45	⇑P	P	06 48 16.9	+0.4
	baz=78,SNR=12						
WPW	White Pass	78.29	34	P	P	06 48 16.2	-0.2
D05A	Emmclaw	78.36	33	⇓P	P	06 48 17.6	+0.8
	baz=78,SNR=11						
SVW2	Sparrevohn	78.37	9	eP	P	06 48 15.8	-0.7
	comp=Z,35nm,1.7s,mb4.8						
T15A	Red Dirt Ranch	78.44	46	⇓P	P	06 48 17.7	+0.3
	baz=78,SNR=54						
SEW	Seward	78.53	12	eP	P	06 48 17.0	-0.3
	comp=Z,24nm,1.0s,mb5.0						
Y18A	Canyon Day Jun	78.53	50	⇓P	P	06 48 18.4	+0.4
	baz=79,SNR=21						
320A	Kipp Ranch, An	78.53	53	⇑P	P	06 48 18.6	+0.5
	baz=78,SNR=17						
119A	Ashpeak Ranch,	78.59	51	⇓P	P	06 48 19.1	+0.7
	baz=79						
RMW	Rattlesnake Mo	78.63	33	P	P	06 48 18.2	0.0
RMW	Rattlesnake Mo	78.63	33	P	P	06 48 18.2	0.0
W17A	Winslow	78.66	48	⇓P	P	06 48 19.4	+0.8
	baz=79						
SLKM	Skilak Lake	78.74	12	eP	P	06 48 18.2	-0.4
SLKM	Skilak Lake	78.74	12	eP	P	06 48 18.2	-0.4
S15A	Panguitch	78.78	45	⇓P	P	06 48 20.8	+1.4
	baz=79,SNR=20						
220A	Playas Peak, P	78.78	52	⇑P	P	06 48 20.3	+0.8
	baz=79,SNR=36						
BBB	Bella Bella	78.79	27	P	P	06 48 18.0	-1.0
	comp=Z,11nm,1.0s,mb4.7,baz=30,slow=12,SNR=3.2						
Q14A	Sevier Lake (B	78.84	44	⇑P	P	06 48 19.6	0.0
	baz=79,SNR=30						
G08A	Pilot Rock	78.85	36	⇓P	P	06 48 19.4	-0.1
	baz=79,SNR=28						
V17A	Tonalea, Kykot	78.86	48	⇑P	P	06 48 20.0	+0.2
	baz=79,SNR=30						
U16A	Tuba City	78.88	47	P	P	06 48 20.1	+0.2
	baz=79,SNR=30						
X18A	Snowflake	78.94	49	⇑P	P	06 48 20.3	+0.1
	baz=79,SNR=12						
120A	U Bar Ranch, L	79.00	51	⇓P	P	06 48 21.3	+0.7
	baz=79,SNR=15						
T16A	Glen Canyon Da	79.03	46	⇑P	P	06 48 21.4	+0.7
	baz=79,SNR=20						
JCW	Jim Creek	79.03	33	eP	P	06 48 20.4	0.0
R15A	Junction	79.11	45	P	P	06 48 22.1	+1.0
	baz=79,SNR=5.1						
E07A	Sunnyside	79.11	35	P	P	06 48 21.1	+0.2
	baz=79,SNR=6.7						
RSW	Rattlesnake Hi	79.16	35	eP	P	06 48 21.4	+0.2
Y19A	Nutrioso	79.18	50	⇑P	P	06 48 22.3	+0.6
	baz=79,SNR=32						
HAWA	Hanford	79.19	35	eP	P	06 48 20.6	-0.7
	comp=Z,19nm,0.9s,mb4.9						
CRAG	Craig	79.23	22	eP	P	06 48 21.1	-0.2
	comp=Z,68nm,1.3s,mb5.3						
MDJ	Mudanjiang	79.28	323	P	P	06 48 24.8	+2.9
MDJ				pP	pP	06 48 43.4	-9.2
MDJ				sP	sP	06 48 51.8	-14
MDJ				PP	PP	06 51 28.3	+4.8
MDJ				S	S	06 58 17.1	+4.9
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,65nm,5.5s						
Z20A	Nine Sixteen R	79.28	51	⇑P	P	06 48 22.7	+0.5
	baz=79,SNR=28						
P14A	Drum Mountains	79.29	43	⇑P	P	06 48 22.0	0.0
	baz=79,SNR=22						
S16A	Weppner Ranch,	79.33	46	P	P	06 48 22.2	-0.1
	baz=79,SNR=24						
MSU	Marysvale	79.33	45	eP	P	06 48 21.6	-0.7
MSU	Marysvale	79.33	45	eP	P	06 48 21.6	-0.7
X19A	St. Johns	79.38	49	⇓P	P	06 48 23.1	+0.5
	baz=79,SNR=24						
W18A	Petrified Fore	79.38	49	⇓P	P	06 48 23.1	+0.5
	baz=79,SNR=5.1						
221A	Mesquite Ranch	79.40	52	⇑P	P	06 48 23.5	+0.6
	baz=79,SNR=9.4						
U17A	Shonto	79.43	47	⇑P	P	06 48 23.8	+0.9
	baz=80						
ETW	Entiat	79.50	34	P	P	06 48 22.7	-0.3
V18A	Ganado	79.52	48	⇑P	P	06 48 24.2	+0.8
	baz=80,SNR=15						
T17A	Navajo Res., N	79.52	47	⇓P	P	06 48 24.0	+0.6
	baz=80,SNR=30						
LNOR	Lincton Mounta	79.58	36	eP	P	06 48 22.7	-0.7
LNOR	Lincton Mounta	79.58	36	eP	P	06 48 22.7	-0.7
MFID	Camas Ranch	79.60	39	P	P	06 48 23.5	-0.1
	baz=80,SNR=16						
W19A	Sanders	79.62	49	⇓P	P	06 48 24.3	+0.3
	baz=80,SNR=6.9						
121A	Cookes Peak, D	79.63	52	P	P	06 48 24.3	+0.2
	baz=80,SNR=18						
R16A	Teasdale	79.69	45	P	P	06 48 24.8	+0.5
	baz=80,SNR=16						
DUG	Dugway	79.77	43	P	P	06 48 24.6	0.0
	baz=80,SNR=13						
DUG	Dugway	79.77	43	eP	P	06 48 24.0	-0.6
	comp=Z,28nm,1.4s,mb4.9						
DUG	Dugway	79.77	43	eP	P	06 48 24.0	-0.6
DUG				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.9						
P15A	Leamington	79.80	44	⇑P	P	06 48 25.0	+0.2
	baz=80,SNR=6.8						
Y20A	Horse Springs,	79.81	50	P	P	06 48 25.4	+0.4
	baz=80,SNR=44						
S17A	Black Ridge (B	79.83	46	⇓P	P	06 48 25.1	0.0
	baz=80,SNR=13						
U18A	Rough Rock, Ch	79.90	47	⇓P	P	06 48 25.9	+0.5
	baz=80,SNR=19						
D08A	Wollman Farm,	79.93	35	⇑P	P	06 48 25.5	+0.2
	baz=80,SNR=17						
PMR	Palmer	79.95	12	eP	P	06 48 24.5	-0.6
	comp=Z,1μm,1.2s						
PMR	Palmer	79.95	12	eP	P	06 48 24.5	-0.6
X20A	Quemado	80.01	50	⇓P	P	06 48 26.6	+0.6
	baz=80,SNR=36						
E09A	Wood Farm, Sta	80.03	35	⇓P	P	06 48 25.4	-0.5
	baz=80,SNR=6.6						
TTA	Tatalina	80.06	8	eP	P	06 48 25.9	+0.2
TTA	Tatalina	80.06	8	eP	P	06 48 25.9	+0.3
Z21A	St. Cloud Mine	80.06	51	P	P	06 48 27.0	+0.6
	baz=80,SNR=52						
V19A	Window Rock	80.15	48	⇑P	P	06 48 27.2	+0.4
	baz=80,SNR=13						
NJ2	Nanjing	80.18	307	eP	P	06 48 27.8	+0.8
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
I12A	Atlanta	80.23	39	⇑P	P	06 48 27.0	0.0
	baz=80,SNR=36						
F10A	Beach Ranch, E	80.23	36	P	P	06 48 26.4	-0.6
	baz=80,SNR=16						
T18A	Mexican Hat	80.24	47	⇑P	P	06 48 27.5	+0.2
	baz=80,SNR=81						
OD2	Odessa Site #2	80.24	35	P	P	06 48 26.7	-0.3
W20A	Ramah	80.28	49	P	P	06 48 27.9	+0.4
	baz=80,SNR=60						
R17A	Hanksville Air	80.28	45	⇑P	P	06 48 27.3	-0.1
	baz=80,SNR=24						
122A	Conniff Cattle	80.30	52	⇑P	P	06 48 28.5	+0.9
	baz=80,SNR=15						
SML	Sawmill	80.31	12	eP	P	06 48 26.7	-0.3
	comp=Z,8.8nm,1.4s,mb4.4						
SML	Sawmill	80.31	12	eP	P	06 48 26.7	-0.3
SML				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.4						
U19A	Dine' College,	80.31	48	P	P	06 48 27.7	+0.1
	baz=80,SNR=28						
Y21A	Point of Rocks	80.37	50	⇓P	P	06 48 29.0	+1.0
	baz=80,SNR=31						
TMUT	Trail Mountain	80.38	44	eP	P	06 48 28.8	+0.9
	comp=Z,35nm,1.0s,mb5.2						
S18A	Hurst Farm, Bl	80.42	46	⇑P	P	06 48 28.4	+0.2
	baz=80,SNR=8.8						
L14A	Malta	80.45	41	P	P	06 48 28.3	0.0
	baz=80,SNR=9.6						
MPU	Maple Canyon	80.45	44	eP	P	06 48 28.6	+0.2
	comp=Z,12nm,1.0s,mb4.7						
X21A	Alamocita Cree	80.49	50	P	P	06 48 29.4	+0.8
	baz=80,SNR=18						
B08A	Colville Reser	80.49	33	⇓P	P	06 48 27.1	-1.2
	baz=81,SNR=14						
HLID	Hailey	80.54	39	⇑P	P	06 48 28.6	-0.1
	baz=81,SNR=38						
HLID	Hailey	80.54	39	eP	P	06 48 28.5	-0.2
	comp=Z,25nm,1.0s,mb5.0						
Z22A	Elephant Butte	80.57	51	P	P	06 48 29.1	+0.1
	baz=81,SNR=30						
J13A	Cove Ranch, Pi	80.60	40	⇓P	P	06 48 29.1	+0.1
	baz=81,SNR=32						
V20A	Brimhall	80.61	49	⇑P	P	06 48 29.2	-0.1
	baz=81,SNR=5.9						
HVU	Hansel Valley	80.62	42	eP	P	06 48 28.9	-0.2
	comp=Z,18nm,1.0s,mb4.9						
HVU	Hansel Valley	80.62	42	eP	P	06 48 28.9	-0.2
HVU				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.9						
M15A	Larsen Ranch,	80.66	42	⇓P	P	06 48 29.6	+0.2
	baz=81						
T19A	Beclabito	80.69	47	⇓P	P	06 48 30.1	+0.4
	baz=81,SNR=28						
CTU	Camp Tracy	80.72	43	eP	P	06 48 29.6	-0.1
	comp=Z,15nm,1.0s,mb4.8						
C09A	Chrisman Ranch	80.72	34	⇑P	P	06 48 29.5	0.0
	baz=81,SNR=6.1						
SRU	San Rafael	80.75	45	P	P	06 48 30.1	+0.2
	baz=81,SNR=13						
SRU	San Rafael	80.75	45	eP	P	06 48 29.7	-0.2
	comp=Z,19nm,1.0s,mb4.9						
SRU	San Rafael	80.75	45	eP	P	06 48 29.7	-0.2
SRU				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
K14A	Jones Ranch, D	80.76	41	⇓P	P	06 48 30.1	+0.2
	baz=81,SNR=25						
H12A	Diamond D Ranc	80.81	38	P	P	06 48 29.9	-0.2
	baz=81,SNR=12						
R18A	Canyonlands Na	80.83	46	⇓P	P	06 48 30.2	-0.2
	baz=81,SNR=17						
U20A	Newcomb	80.84	48	P	P	06 48 31.1	+0.6
	baz=81,SNR=7.0						
G12A	Big Creek, Yel	80.85	38	⇑P	P	06 48 30.4	+0.1
	baz=81,SNR=33						
Y22A	Socorro	80.87	51	⇓P	P	06 48 30.6	-0.1
	baz=81,SNR=24						
JLU	Jordanelle	80.87	43	eP	P	06 48 30.0	-0.5
	comp=Z,18nm,1.1s,mb4.8						
W21A	San Fidel	80.89	49	P	P	06 48 31.6	+0.9
	baz=81,SNR=7.7						
DAU	Daniels Canyon	80.91	43	eP	P	06 48 30.9	+0.2
DAU	Daniels Canyon	80.91	43	eP	P	06 48 30.9	+0.2
I13A	Wildhorse Cree	80.91	39	P	P	06 48 30.9	+0.2
	baz=81,SNR=11						
324A	Moseley Ranch,	80.91	54	⇑P	P	06 48 30.8	-0.2
	baz=81,SNR=33						
LAZ	Ladron	80.95	50	eP	P	06 48 31.1	0.0
	comp=Z,38nm,1.8s,mb4.9						
LAZ				ePP	PP	06 51 36.0	-1.6
J14A	Carey	80.96	40	⇑P	P	06 48 31.4	+0.4
	baz=81,SNR=28						
LENM	Lemitar	80.96	51	eP	P	06 48 31.6	+0.5
L15A	Malad City	80.98	42	⇓P	P	06 48 30.6	-0.4
	baz=81,SNR=13						
Q18A	Rafter H Ranch	81.01	45	P	P	06 48 31.3	0.0
	baz=81,SNR=19						
N16A	Rees Ranch, Co	81.02	43	⇓P	P	06 48 31.1	-0.2
	baz=81,SNR=6.0						
425A	Indio Mountain	81.03	54	P	P	06 48 31.4	-0.2
	baz=81,SNR=50						
S19A	Harvey Farm, M	81.05	47	⇓P	P	06 48 31.6	+0.1
	baz=81,SNR=18						
MNTX	Cornudas Mount	81.10	53	⇑P	P	06 48 31.8	-0.2
	baz=81,SNR=44						
MNTX	Cornudas Mount	81.10	53	eP	P	06 48 31.3	-0.6
	comp=Z,52nm,1.4s,mb5.2						
M16A	Huntsville	81.11	42	⇑P	P	06 48 31.4	-0.4
	baz=81,SNR=11						
Z23A	Rita Site, Whi	81.12	52	⇑P	P	06 48 32.5	+0.4
	baz=81,SNR=5.0						
O17A	Robinson Place	81.14	44	⇓P	P	06 48 32.2	+0.3
	baz=81,SNR=26						
224A	Cornudas Mount	81.15	53	⇓P	P	06 48 32.3	0.0
	baz=81,SNR=35						
H13A	Challis	81.18	39	⇑P	P	06 48 32.1	0.0
	baz=81,SNR=15						
626A	Big Bend Ranch	81.19	56	⇑P	P	06 48 32.5	0.0
	baz=81,SNR=23						
P18A	Preston Nutter	81.19	44	⇓P	P	06 48 32.4	+0.2
	baz=81,SNR=6.8						
V21A	Milan	81.21	49	⇓P	P	06 48 32.8	+0.4
	baz=81						
BNM	Barren Site	81.21	51	eP	P	06 48 32.1	-0.4
	comp=Z,26nm,1.2s,mb4.9						
R19A	Curley Farm, L	81.22	46	⇑P	P	06 48 32.3	-0.1
	baz=81,SNR=23						
K15A	Arbon	81.24	41	⇓P	P	06 48 32.1	-0.3
	baz=81,SNR=11						
F12A	Elk City	81.25	37	⇓P	P	06 48 31.7	-0.7
	baz=81,SNR=33						
325A	Bean Ranch, Si	81.28	54	⇓P	P	06 48 32.7	-0.2
	baz=81,SNR=41						
LPM	Los Pinos Moun	81.28	51	eP	P	06 48 33.3	+0.4
CN2	Changchun	81.31	320	eP	P	06 48 35.0	+2.3
CN2				epP	pP	06 48 55.3	-8.3
CN2				eS	S	06 58 39.5	+6.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
HWUT	Hardware Ranch	81.31	42	eP	P	06 48 32.5	-0.3
	comp=Z,50nm,1.8s,mb5.0						
I14A	Mackay	81.33	40	⇑P	P	06 48 32.9	0.0
	baz=81,SNR=12						
PV10	Paradox Valley	81.41	46	eP	P	06 48 32.8	-0.6
	comp=Z,412nm,0.9s						
526A	Mary Lane Ranc	81.43	55	⇓P	P	06 48 33.7	0.0
	baz=81,SNR=38						
W22A	Albuquerque	81.44	50	⇓P	P	06 48 34.4	+0.7
	baz=82,SNR=8.3						
TRF	Thorofare Moun	81.45	11	eP	P	06 48 32.6	-0.5
	comp=Z,262nm,2.4s,mb5.6						
N17A	Moffit Pass	81.45	43	P	P	06 48 33.7	+0.1
	baz=82,SNR=7.2						
124A	Stringfield Ra	81.47	52	P	P	06 48 33.9	0.0
	baz=82,SNR=18						
TXAR	Lajitas Array	81.47	56	P	P	06 48 33.5	-0.5
	comp=Z,18nm,1.1s,mb4.8,baz=220,slow=5.7,SNR=71						
TXAR				pP	pP	06 49 03.4	-1.5
	comp=Z,5.3nm,1.0s,baz=223,slow=5.1,SNR=4.5						
TXAR				LR	LR	07 15 33.7	
	comp=Z,77nm,21.2s,baz=185,slow=29						
TXAR	Lajitas Array	81.47	56	P	P	06 48 33.5	-0.5
TXAR				pP	pP	06 49 03.4	-1.5
TXAR				LR	LR	07 15 33.7	
TXAR	Lajitas Array	81.47	56	P	P	06 48 33.5	-0.5
TXAR				*PP	pP	06 49 03.4	-1.5
U21A	Nageezi	81.48	48	⇑P	P	06 48 34.3	+0.4
	baz=82,SNR=55						
G13A	Cobalt	81.48	38	⇑P	P	06 48 33.6	0.0
	baz=82,SNR=17						
PV04	Paradox Valley	81.51	46	eP	P	06 48 34.1	+0.2
Q19A	Hogan Spring (	81.53	45	⇓P	P	06 48 33.9	-0.1
	baz=82,SNR=22						
Y23A	Lovelace Mesa,	81.55	51	⇑P	P	06 48 34.1	-0.1
	baz=82,SNR=11						
L16A	Fish Haven	81.60	42	P	P	06 48 34.2	-0.2
	baz=82,SNR=7.8						
SKAG	Skagway	81.61	19	eP	P	06 48 34.7	+0.7
	comp=Z,56nm,1.6s,mb5.2						
NEW	Newport	81.62	34	eP	P	06 48 33.5	-0.8
	comp=Z,7.8nm,1.1s,mb4.5						
NEW	Newport	81.62	34	eP	P	06 48 33.5	-0.8
NEW				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PV01	Paradox Valley	81.62	46	eP	P	06 48 34.5	-0.1
	comp=Z,3μm,1.2s						
PV01				ePP	PP	06 51 40.6	-2.4
S20A	Disappointment	81.63	47	⇓P	P	06 48 35.0	+0.4
	baz=82,SNR=25						
O18A	Roosevelt	81.66	44	⇓P	P	06 48 34.6	-0.1
	baz=82,SNR=5.2						
J15A	Blackfoot	81.67	40	⇑P	P	06 48 35.1	+0.4
	baz=82,SNR=48						
ANMO	Albuquerque	81.69	50	P	P	06 48 34.7	-0.3
	comp=Z,6.1nm,0.5s,mb4.7,baz=244,slow=5.8,SNR=38						
ANMO	Albuquerque	81.69	50	eP	P	06 48 34.8	-0.2
	comp=Z,110nm,1.8s,mb5.4						
ANMO	Albuquerque	81.69	50	eP	P	06 48 34.8	-0.2
ANMO				pmax	pmax		
	comp=Z,110nm,1.8s						
225A	Deer Hill, Car	81.70	53	⇑P	P	06 48 35.1	0.0
	baz=82,SNR=30						
426A	McDonald Obser	81.73	55	P	P	06 48 35.1	-0.2
	baz=82,SNR=43						
627A	Terlingua Ranc	81.74	56	⇑P	P	06 48 35.4	+0.1
	baz=82,SNR=36						
H14A	Leadore	81.74	39	⇑P	P	06 48 35.4

GDL2	Guadalupe Moun	82.10	53	eP	P	06 48 37.1	0.0
J16A	Bone	82.12	41	⇑P	P	06 48 37.5	+0.5
	baz=82,SNR=21						
628A	Black Gap, Mar	82.16	56	⇑P	P	06 48 37.6	0.0
	baz=82,SNR=22						
MCMT	McKenzie Canyo	82.17	39	eP	P	06 48 37.2	0.0
	comp=Z,13nm,1.1s,mb4.7						
MCMT				ePcP	PcP	06 48 43.2	+0.9
H15A	Lima	82.18	39	⇑P	P	06 48 37.4	+0.1
	baz=82,SNR=22						
M18A	Lyman	82.19	43	⇓P	P	06 48 37.7	+0.2
	baz=82,SNR=16						
Q20A	Ridgley Place,	82.20	46	P	P	06 48 37.8	+0.2
	baz=82,SNR=27						
C12B	Naegeli Ranch,	82.21	36	⇓P	P	06 48 37.4	0.0
	baz=82,SNR=8.6						
N18A	Larsen Ranch,	82.23	44	P	P	06 48 37.4	-0.3
	baz=82,SNR=8.5						
226A	Malaga, Loving	82.24	54	⇑P	P	06 48 37.8	-0.1
	baz=82,SNR=26						
E13A	Victor	82.24	37	⇓P	P	06 48 37.1	-0.5
	baz=82,SNR=28						
V23A	Ortiz Mt. (NFS	82.24	49	P	P	06 48 38.4	+0.5
	baz=82,SNR=42						
O19A	Miners Draw (B	82.27	44	P	P	06 48 37.7	-0.2
	baz=82,SNR=9.2						
Z25A	Roswell	82.28	52	⇑P	P	06 48 38.1	0.0
	baz=82,SNR=23						
X24A	Lazy VL Ranch,	82.28	51	⇓P	P	06 48 38.0	-0.1
	baz=82,SNR=13						
T22A	Edith	82.29	48	⇓P	P	06 48 38.1	+0.1
	baz=82,SNR=21						
427A	Hayter Ranch,	82.29	55	⇓P	P	06 48 38.3	+0.1
	baz=82,SNR=32						
MENT	Mentasta	82.30	13	eP	P	06 48 36.9	-0.6
K17A	Gardner Place,	82.30	41	P	P	06 48 38.0	+0.1
	baz=82,SNR=12						
F14A	Wisdom	82.38	38	P	P	06 48 38.2	-0.1
	baz=82,SNR=12						
P20A	De Beque	82.39	45	P	P	06 48 38.2	-0.3
	baz=82,SNR=38						
R21A	Cimarron	82.44	47	P	P	06 48 39.0	+0.2
	baz=82,SNR=43						
D13A	Huson	82.44	36	P	P	06 48 37.7	-0.9
	baz=82,SNR=20						
U23A	El Rito	82.49	49	P	P	06 48 39.3	+0.1
	baz=82,SNR=53						
528A	Cox Ranch, San	82.50	56	P	P	06 48 39.1	-0.2
	baz=82,SNR=22						
I16A	Newdale	82.51	40	P	P	06 48 39.3	+0.3
	baz=83,SNR=26						
N19A	John Jarvie Ra	82.52	44	P	P	06 48 38.7	-0.4
	baz=83,SNR=11						
126A	Clayton Basin,	82.55	53	P	P	06 48 39.0	-0.6
	baz=83,SNR=14						
DCID1	Drake Creek	82.56	41	eP	P	06 48 39.7	+0.4
	comp=Z,42nm,1.1s,mb5.2						
G15A	Dillon	82.56	39	P	P	06 48 39.0	-0.3
	baz=83,SNR=31						
Y25A	Mesa, Roswell	82.56	52	P	P	06 48 39.0	-0.5
	baz=83,SNR=33						
W24A	Lazy 6 Ranch,	82.58	50	P	P	06 48 39.1	-0.5
	baz=83,SNR=38						
DLBC	Dease Lake	82.58	22	P	P	06 48 38.4	-0.7
	comp=Z,7.9nm,1.0s,mb4.5,baz=216,slow=6.7,SNR=11						
DLBC	Dease Lake	82.58	22	eP	P	06 48 39.3	+0.2
MSO	Missoula	82.60	37	P	P	06 48 38.7	-0.7
	baz=83,SNR=9.7						
MSO	Missoula	82.60	37	eP	P	06 48 38.5	-0.9
	comp=Z,36nm,1.6s,mb5.0						
DLMT	Dillon	82.60	39	eP	P	06 48 39.4	0.0
	comp=Z,24nm,1.0s,mb5.0						
E14A	Clinton	82.63	37	⇓P	P	06 48 39.1	-0.5
	baz=83,SNR=23						
Q21A	Lamborn Mesa,	82.64	46	P	P	06 48 40.4	+0.5
	baz=83,SNR=30						
REDW	Red Top Meadow	82.65	41	eP	P	06 48 39.2	-0.5
	comp=Z,53nm,1.3s,mb5.2						
TPAW	Teton Pass	82.65	41	eP	P	06 48 39.5	-0.3
	comp=Z,50nm,1.2s,mb5.2						
S22A	4UR Ranch, Cre	82.67	47	P	P	06 48 40.3	+0.3
	baz=83,SNR=51						
BSMT	Bassoo Peak	82.68	36	eP	P	06 48 39.1	-0.7
QIZ	Qiongzhong	82.68	292	P	P	06 48 40.6	+0.1
QIZ				sP	sP	06 49 08.8	-16
QIZ				S	S	06 58 50.1	+1.6
QIZ				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.1						
QIZ				LR	LR		
	comp=N,99nm,6.3s						
QIZ				LR	LR		
	comp=Z,150nm,7.4s						
C13A	Hot Springs	82.70	36	⇓P	P	06 48 39.2	-0.7
	baz=83,SNR=7.1						
J17A	Brown Place, J	82.73	41	⇓P	P	06 48 40.6	+0.4
	baz=83,SNR=18						
SNOW	Snow King Mour	82.76	41	eP	P	06 48 40.2	-0.1
	comp=Z,47nm,1.0s,mb5.3						
O20A	White River Ci	82.79	45	⇓P	P	06 48 40.7	+0.1
	baz=83,SNR=14						
K18A	Toltan Ranch,	82.80	42	⇓P	P	06 48 41.0	+0.4
	baz=83,SNR=27						
428A	Kincaid Ranch,	82.81	55	⇑P	P	06 48 41.0	+0.1
	baz=83,SNR=15						
CPRX	Cap Rock	82.82	53	eP	P	06 48 40.5	-0.4
	comp=Z,23nm,0.9s,mb5.0						
M19A	Rock Springs	82.83	43	⇑P	P	06 48 40.6	-0.1
	baz=83,SNR=23						
Z26A	Caprock	82.83	53	⇑P	P	06 48 41.1	+0.1
	baz=83,SNR=36						
DOT	Dot Lake	82.84	13	eP	P	06 48 40.3	0.0
	comp=Z,101nm,1.2s,mb5.5						
IMW	Indian Meadow	82.86	40	eP	P	06 48 41.3	+0.4
	comp=Z,43nm,1.1s,mb5.2						
V24A	Rampart Ranch,	82.90	50	⇑P	P	06 48 41.3	0.0
	baz=83,SNR=12						
MOOW	Moose Ponds	82.91	41	eP	P	06 48 40.9	-0.2
	comp=Z,21nm,1.2s,mb4.8						
F15A	Butte	82.92	38	P	P	06 48 41.1	0.0
	baz=83,SNR=16						
T23A	Casias Ranch,	82.92	48	⇑P	P	06 48 41.9	+0.6
	baz=83,SNR=26						
LOHW	Long Hollow	82.93	41	eP	P	06 48 40.5	-0.7
LRM	Limekiln Ridge	82.93	38	eP	P	06 48 40.5	-0.7
SWMT	Swartz Lake	82.93	36	eP	P	06 48 37.9	-3.3
	comp=Z,3.2nm,0.8s,mb4.2						
R22A	Saguache, Gunn	82.94	47	⇑P	P	06 48 42.0	+0.6
	baz=83,SNR=40						
328A	Wristen Ranch,	82.97	55	⇓P	P	06 48 41.6	-0.2
	baz=83,SNR=13						
L19A	Farson	82.98	43	⇑P	P	06 48 41.4	-0.1
	baz=83,SNR=44						
D14A	Greenough	82.98	37	⇓P	P	06 48 40.8	-0.6
	baz=83,SNR=13						
G16A	Moss Hill, Enn	83.01	39	P	P	06 48 41.8	+0.2
	baz=83,SNR=14						
QLMT	Earthquake Lak	83.03	39	eP	P	06 48 42.6	+0.9
CHMT	Chamberlain Mo	83.04	37	eP	P	06 48 41.2	-0.5
P21A	Newcastle	83.04	46	P	P	06 48 42.2	+0.3
	baz=83,SNR=16						
127A	Arkansas Junct	83.07	53	⇑P	P	06 48 42.0	-0.2
	baz=83,SNR=5.2						
SLMT	Seeley Lake	83.08	37	eP	P	06 48 40.8	-1.1
H16A	Russell Place,	83.08	40	P	P	06 48 42.4	+0.5
	baz=83,SNR=42						
SEY	Seymchan	83.09	345	deP	P	06 48 40.8	-0.8
J18A	Kendall Valley	83.10	41	⇓P	P	06 48 42.4	+0.3
	baz=83,SNR=36						
I17A	Pilgrim Ck.	83.10	41	⇑P	P	06 48 42.9	+0.8
	baz=83,SNR=11						
N20A	Spence Gulch,	83.10	44	⇑P	P	06 48 42.4	+0.3
	baz=83,SNR=30						
Q22A	Crested Butte,	83.11	46	⇓P	P	06 48 42.4	+0.1
	baz=83,SNR=54						
E15A	Deer Lodge	83.14	38	P	P	06 48 41.9	-0.4
	baz=83,SNR=10						
B13A	Whitefish	83.14	35	P	P	06 48 41.4	-0.8
	baz=83,SNR=6.6						
BW06	Boulder Array	83.17	42	⇓P	P	06 48 42.4	-0.1
	baz=83,SNR=35						
BW06	Boulder Array	83.17	42	eP	P	06 48 41.5	-1.0
	comp=Z,34nm,1.0s,mb5.1						
PDAR	Pinedale Array	83.18	42	P	P	06 48 41.5	-1.1
	comp=Z,18nm,0.8s,mb5.0,baz=210,slow=3.2,SNR=142						
PDAR				LR	LR	07 23 47.2	
	comp=Z,56nm,18.2s,baz=268,slow=34						
COLA	College	83.19	11	eP	P	06 48 41.1	-0.9
	comp=Z,60nm,1.0s,mb5.4						
COLA	College	83.19	11	eP	P	06 48 41.1	-0.9
COLA				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.4						
U24A	Moreno Valley	83.19	49	⇓P	P	06 48 43.8	+1.0
	baz=83,SNR=14						
YFT	Old Faithful	83.20	40	eP	P	06 48 44.3	+1.7
	comp=Z,20nm,0.9s,mb4.9						
SMCO	Snowmass	83.21	46	eP	P	06 48 42.7	-0.1
	comp=Z,44nm,1.1s,mb5.2						
Y26A	Elida	83.22	52	P	P	06 48 42.8	-0.1
	baz=83,SNR=7.1						
YMR	Madison River	83.23	40	eP	P	06 48 43.0	+0.2
	comp=Z,127nm,1.6s,mb5.5						
S23A	Nye Farm, Mont	83.24	48	P	P	06 48 43.5	+0.5
	baz=83,SNR=9.8						
ILAR	Eielson Array	83.27	11	P	P	06 48 41.4	-1.1
	comp=Z,42nm,1.3s,mb5.1,baz=215,slow=5.6,SNR=49						
ILAR				pP	pP	06 49 12.6	-0.9
	comp=Z,4.3nm,1.1s,baz=219,slow=6.8,SNR=2.7						
ILAR				LR	LR	07 20 09.2	
	comp=Z,40nm,20.1s,baz=214,slow=32						
ILAR	Eielson Array	83.27	11	P	P	06 48 41.4	-1.1
ILAR				*PP	pP	06 49 12.6	-0.9
W25A	X Bar L Ranch,	83.28	51	⇑P	P	06 48 43.0	-0.2
	baz=83,SNR=29						
BOZ	Bozeman (W)	83.33	39	P	P	06 48 43.3	0.0
	baz=83,SNR=25						
BOZ	Bozeman (W)	83.33	39	eP	P	06 48 42.6	-0.6
	comp=Z,27nm,1.2s,mb5.0						
BOZ	Bozeman (W)	83.33	39	eP	P	06 48 42.6	-0.6
BOZ				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
H17A	Grant Village	83.34	40	⇓P	P	06 48 44.3	+1.0
	baz=83,SNR=16						
O21A	Pagoda	83.35	45	P	P	06 48 43.2	-0.3
	baz=83,SNR=6.8						
F16A	Kennard Place,	83.40	39	P	P	06 48 43.9	+0.2
	baz=84,SNR=15						
V25A	Rancho No Teng	83.43	50	⇓P	P	06 48 43.9	-0.1
	baz=84,SNR=34						
YNR	Norris Junctio	83.44	40	eP	P	06 48 45.0	+1.2
	comp=Z,21nm,1.1s,mb4.9						
Z27A	Tatum	83.44	53	⇓P	P	06 48 43.4	-0.7
	baz=84						
M20A	Sweetwater, Wa	83.46	44	⇓P	P	06 48 44.4	+0.4
	baz=84,SNR=21						
I18A	Diamond G Ranc	83.47	41	P	P	06 48 44.1	+0.1
	baz=84,SNR=16						
A13A	Flathead Natio	83.48	35	⇓P	P	06 48 43.9	0.0
	baz=84						
X26A	CR and CF Fran	83.49	51	P	P	06 48 44.0	-0.4
	baz=84,SNR=6.1						
D15A	Lincoln	83.53	37	⇓P	P	06 48 44.2	-0.1
	baz=84,SNR=17						
LKWY	Lake	83.53	40	eP	P	06 48 46.1	+1.8
	comp=Z,46nm,1.0s,mb5.3						
LKWY	Lake	83.53	40	eP	P	06 48 46.1	+1.8
LKWY				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.3						
P22A	Eagle	83.55	46	⇓P	P	06 48 44.5	0.0
	baz=84,SNR=17						
N21A	Black Mountain	83.56	44	P	P	06 48 44.9	+0.3
	baz=84,SNR=40						
L20A	Wamsutter	83.60	43	⇑P	P	06 48 45.0	+0.3
	baz=84,SNR=62						
SDCO	Great Sand Dun	83.61	48	⇓P	P	06 48 44.9	0.0
	baz=84,SNR=30						
SDCO	Great Sand Dun	83.61	48	eP	P	06 48 44.3	-0.6
	comp=Z,31nm,1.3s,mb5.0						
T24A	Torres, Weston	83.64	49	⇑P	P	06 48 45.5	+0.4
	baz=84,SNR=16						
K19A	Absolon Red Bu	83.66	42	⇓P	P	06 48 44.4	-0.6
	baz=84,SNR=29						
G17A	Pierce Place,	83.70	39	⇑P	P	06 48 46.2	+1.0
	baz=84,SNR=13						
Y27A	Causey	83.71	52	⇓P	P	06 48 45.4	0.0
	baz=84,SNR=22						
J19A	Crowheart	83.74	42	⇑P	P	06 48 45.4	0.0
	baz=84,SNR=25						
E16A	East Helena	83.76	38	P	P	06 48 45.4	0.0
	baz=84,SNR=6.6						
HRY	Holter Researc	83.76	38	eP	P	06 48 44.8	-0.7
S24A	Houchin Ranch,	83.77	48	⇓P	P	06 48 46.1	+0.4
	baz=84,SNR=18						
U25A	Circle Dot Ran	83.82	49	P	P	06 48 45.8	-0.2
	baz=84,SNR=8.3						
WALA	Waterton Lakes	83.83	35	eP	P	06 48 45.0	-0.7
	comp=Z,2.8nm,2.0s,mb3.8						
C15A	Salmond Ranch,	83.87	37	⇑P	P	06 48 45.5	-0.5
	baz=84,SNR=17						
Q23A	Hartsel	83.88	47	⇓P	P	06 48 46.3	0.0
	baz=84,SNR=20						
K20A	Yellowstone Ra	83.91	43	⇑P	P	06 48 45.9	-0.4
	baz=84,SNR=17						
O22A	Kremmling	83.95	45	⇑P	P	06 48 46.8	+0.3
	baz=84,SNR=26						
V26A	Tequesquite Ra	84.03	50	⇑P	P	06 48 46.6	-0.5
	baz=84,SNR=18						
MSTX	Muleshoe	84.04	52	⇓P	P	06 48 47.3	+0.1
	baz=84,SNR=27						
H18A	Shoshone NF, C	84.04	40	⇓P	P	06 48 47.3	+0.4
	baz=84,SNR=9.2						
F17A	Fitzpatrick Pl	84.05	39	⇓P	P	06 48 47.3	+0.4
	baz=84,SNR=16						
A14A	Double T Ranch	84.05	35	⇓P	P	06 48 46.5	-0.3
	baz=84,SNR=14						
M21A	Separation Pea	84.06	44	⇑P	P	06 48 47.1	+0.1
	baz=84,SNR=20						
X27A	F and S Farms,	84.07	52	⇑P	P	06 48 47.3	0.0
	baz=84,SNR=14						
D16A	Dana Ranch, Ca	84.09	38	P	P	06 48 47.1	0.0
	baz=84,SNR=12						
R24A	Sanders Place,	84.10	48	⇑P	P	06 48 47.8	+0.4
	baz=84,SNR=10						
I19A	Meeteetse	84.15	41	⇓P	P	06 48 47.8	+0.3
	baz=84,SNR=20						
B15A	Bradely Ranch,	84.18	36	⇑P	P	06 48 46.4	-1.1
	baz=84,SNR=12						
RWWY	Rawlins	84.20	44	eP	P	06 48 46.7	-1.1
	comp=Z,56nm,1.1s,mb5.3						
E17A	Martinsdale	84.21	38	⇑P	P	06 48 47.6	-0.1
	baz=84						
L21A	Rawlins	84.22	43	⇓P	P	06 48 47.1	-0.7
	baz=84,SNR=14						
W27A	Bowe Ranch, En	84.26	51	⇓P	P	06 48 48.0	-0.2
	baz=84,SNR=20						
DAWY	Dawson	84.27	15	eP	P	06 48 47.3	-0.3
N22A	Wattenberg Ran	84.30	45	⇓P	P	06 48 48.5	+0.2
	baz=84,SNR=26						
U26A	Atchley Ranch,	84.31	50	P	P	06 48 48.0	-0.4
	baz=84,SNR=15						
S25A	Robets Cordova	84.34	48	P	P	06 48 48.4	-0.2
	baz=84,SNR=15						
C16A	Fuhringer Ranc	84.38	37	⇑P	P	06 48 48.3	-0.2
	baz=84,SNR=19						
Q24A	Divide	84.39	47	⇓P	P	06 48 48.8	0.0
	baz=84,SNR=13						
J20A	Shoshoni	84.40	42	⇓P	P	06 48 48.9	+0.2
	baz=84,SNR=23						
O23A	Lake Granby, G	84.41	46	⇓P	P	06 48 49.1	+0.3
	baz=84,SNR=12						
G18A	Lazy EL Ranch,	84.42	40	⇓P	P	06 48 49.1	+0.3
	baz=84,SNR=12						
ISCO	Idaho Springs	84.43	46	⇓P	P	06 48 49.1	+0.1
	baz=84,SNR=8.0						
ISCO	Idaho Springs	84.43	46	eP	P	06 48 49.1	+0.1
	comp=Z,26nm,1.5s,mb4.8						
ISCO	Idaho Springs	84.43	46	eP	P	06 48 49.1	+0.1
ISCO				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.8						
A15A	Johnson Ranch,	84.44	35	P	P	06 48 48.1	-0.7
	baz=84,SNR=20						
EGAK	Eagle	84.46	13	eP	P	06 48 48.7	+0.2
	comp=Z,42nm,1.3s,mb5.1						
H19A	Powell	84.46	41	P	P	06 48 49.4	+0.3
	baz=84,SNR=17						
M22A	Cedar Creek Ra	84.48	44	⇑P	P	06 48 49.3	+0.1
	baz=84,SNR=7.3						
RLMT	Red Lodge	84.51	40	P	P	06 48 49.7	+0.5
	baz=85,SNR=12						
RLMT	Red Lodge	84.51	40	eP	P	06 48 49.5	+0.3
	comp=Z,31nm,1.1s,mb5.2						
K21A	Alcova	84.61	43	⇓P	P	06 48 49.7	-0.1
	baz=85,SNR=20						
F18A	Big Timber	84.62	39	⇓P	P	06 48 50.1	+0.4
	baz=85,SNR=12						
CMIG	Matias Romero	84.64	71	LR	LR	07 20 04.9	
	comp=Z,49nm,20.4s,baz=182,slow=31						
I20A	Worland	84.66	41	⇑P	P	06 48 50.0	0.0
	baz=85,SNR=23						
D17A	Six Diamond Ra	84.66	38	⇓P	P	06 48 50.2	+0.2
	baz=85,SNR=22						
N23A	Red Feather La	84.69	45	⇑P	P	06 48 50.3	+0.1
	baz=85,SNR=14						
B16A	M & M Farms, S	84.72	36	⇑P	P	06 48 49.6	-0.6
	baz=85,SNR=22						
J21A	Lysite	84.81	42	⇑P	P	06 48 51.1	+0.3
	baz=85,SNR=42						
E18A	Harlowton	84.83	39	⇓P	P	06 48 51.2	+0.4
	baz=85,SNR=14						
C17A	Wharram Farm,	84.86	37	⇓P	P	06 48 51.1	+0.1
	baz=85,SNR=38						
L22A	Ellis Ranch, M	84.87	44	P	P	06 48 51.7	+0.6
	baz=85						
COLD	Coldfoot	84.95	9	eP	P	06 48 51.6	+0.7
	comp=Z,49nm,1.3s,mb5.3						
H20A	Greybull	84.99	41	⇓P	P	06 48 51.3	-0.4
	baz=85,SNR=12						
JCT	Junction City	85.01	56	⇓P	P	06 48 51.4	-0.7
	baz=85,SNR=7.9						
JCT	Junction City	85.01	56	eP	P	06 48 51.1	-1.0
	comp=Z,138nm,2.7s,mb5.4						
JCT	Junction City	85.01	56	eP	P	06 48 51.1	-1.0
JCT				pmax	pmax		
	comp=Z,138nm,2.7s,mb5.4						
A16A	West Butte Ran	85.06	36	⇓P	P	06 48 51.7	-0.2
	baz=85,SNR=49						
F19A	Roth Farm, Mol	85.06	39	⇓P	P	06 48 52.2	+0.3
	baz=85,SNR=19						
K22A	Casper	85.09	43	⇓P	P	06 48 52.1	-0.1
	baz=85,SNR=6.4						
M23A	Laramie	85.10	44	P	P	06 48 52.0	-0.2
	baz=85,SNR=7.5						
I21A	Big Trails, Te	85.13	42	⇓P	P	06 48 52.2	-0.2
	baz=85,SNR=26						
BILL	Bilibino	85.17	353	eP	P	06 48 52.3	+0.3
	comp=Z,5.7nm,0.4s,mb4.8						
BILL	Bilibino	85.17	353	diP	P	06 48 51.5	-0.5
BILL				eS	S	06 59 08.5	-2.9
BILL				eSS	SS	07 04 46.7	-1.8
BILL				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.1						
B17A	L&G Farms, Che	85.17	37	⇑P	P	06 48 52.0	-0.5
	baz=85,SNR=13						
PHWY	Pilot Hill	85.20	45	eP	P	06 48 52.3	-0.5
	comp=Z,21nm,1.5s,mb4.8						
D18A	Linhart Farms,	85.20	38	⇓P	P	06 48 53.4	+0.7
	baz=85,SNR=5.0						
G20A	Bridger	85.21	40	⇑P	P	06 48 52.3	-0.4
	baz=85						
AMTX	Amarillo	85.23	52	⇓P	P	06 48 52.5	-0.6
	baz=85,SNR=11						
AMTX	Amarillo	85.23	52	eP	P	06 48 52.5	-0.7
	comp=Z,32nm,0.9s,mb5.3						
P25A	Willow Gulch B	85.31	47	P	P	06 48 53.2	-0.2
	baz=85,SNR=7.1						
L23A	Garrett	85.40	44	⇑P	P	06 48 53.2	-0.6
	baz=85,SNR=17						
E19A	Rath Farm, Rou	85.45	39	⇑P	P	06 48 54.2	+0.2
	baz=86,SNR=14						
J22A	Midwest	85.47	42	P	P	06 48 53.5	-0.6
	baz=86,SNR=15						
A17A	Triple J Farms	85.56	36	⇑P	P	06 48 54.6	+0.2
	baz=86,SNR=26						
BJI	Beijing	85.58	314	P	P	06 48 55.8	+1.1
BJI				S	S	06 59 22.1	+5.5
BJI				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
BJI				pmax	pmax		
	comp=Z,110nm,5.7s						
BJI				LR	LR		
	comp=N,130nm,16.9s						
BJI				LR	LR		
	comp=E,100nm,18.0s						
BJI				LR	LR		
	comp=Z,58nm,20.0s						
EGMT	Eagleton	85.64	37	⇓P	P	06 48 54.9	0.0
	baz=86						
EGMT	Eagleton	85.64	37	eP	P	06 48 54.5	-0.4
	comp=Z,28nm,1.1s,mb5.1						
D19A	Cripps Ranch,	85.74	38	⇑P	P	06 48 55.6	+0.3
	baz=86,SNR=13						
B18A	Beardsley Farm	85.82	37	P	P	06 48 55.4	-0.2
	baz=86,SNR=6.9						
E20A	Meyer Farm, Mu	85.87	39	⇑P	P	06 48 56.1	+0.1
	baz=86,SNR=5.7						
C19A	Slack Wire Ran	85.92	38	⇑P	P	06 48 56.6	+0.5
	baz=86,SNR=19						
A18A	Metzger Ranch,	86.04	37	⇑P	P	06 48 56.3	-0.4
	baz=86,SNR=9.8						
D20A	Manuel Ranch,	86.15	39	P	P	06 48 57.5	+0.1
	baz=86,SNR=9.8						
C20A	Veseth Ranch,	86.52	38	⇓P	P	06 48 59.3	+0.1
	baz=87						
E21A	Keefer Ranch,	86.53	39	⇑P	P	06 48 59.4	+0.2
	baz=87,SNR=7.2						
A19A	Klindworth Far	86.68	37	⇓P	P	06 48 59.6	-0.2
	baz=87,SNR=7.1						
D21A	La Casta Ranch	86.83	39	P	P	06 49 00.8	+0.1
	baz=87,SNR=7.5						
MAW	Mawson	86.92	199	P	P	06 49 01.4	+0.6
	comp=Z,2.5nm,0.6s,mb4.3,baz=127,slow=4.5,SNR=3.9						
MAW	Mawson	86.92	199	P	P	06 49 01.4	+0.5
C21A	Desert Coulee	87.12	38	⇑P	P	06 49 02.2	+0.2
	baz=87						
LAO	LASA Array	87.12	40	⇑P	P	06 49 02.3	+0.2
	baz=87						
LAO	LASA Array	87.12	40	eP	P	06 49 02.0	-0.1
	comp=Z,12nm,0.7s,mb4.9						
A20A	Cobblestone Ra	87.12	37	P	P	06 49 01.9	-0.1
	baz=87,SNR=11						
D22A	Cohagen	87.36	39	⇓P	P	06 49 03.4	+0.2
	baz=87						
RSSD	Black Hills	87.37	43	eP	P	06 49 02.4	-1.0
	comp=Z,11nm,1.1s,mb4.7						
RSSD	Black Hills	87.37	43	eP	P	06 49 02.4	-0.9
RSSD				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
WMOK	Wichita Mounta	87.38	53	eP	P	06 49 02.4	-1.3
	comp=Z,19nm,2.0s,mb4.7						
WMOK	Wichita Mounta	87.38	53	eP	P	06 49 02.4	-1.2
WMOK				pmax	pmax		
	comp=Z,19nm,2.0s,mb4.7						
A

B23A Brockton 88.66 38 ⇑P **P 06 49 09.6 +0.3**
baz=89
INK Inuvik 89.11 14 P **P 06 49 10.0 -1.0**
comp=Z,9.2nm,1.2s,mb4.7,baz=207,slow=11,SNR=5.5
INK Inuvik 89.11 14 *eP* **P 06 49 10.7 -0.3**
comp=Z,8.7nm,2.1s,mb4.4
INK Inuvik 89.11 14 *eP* **P 06 49 10.7 -0.3**
INK pmax pmax
comp=Z,9.0nm,2.1s
HHC Hu-ho-hao-te 89.13 313 *eP* **P 06 49 13.3 +1.5**
HHC pP pP 06 49 34.0 -9.1
HHC sP sP 06 49 42.3 -14
HHC PP PP 06 52 48.0 +4.1
HHC SKS 06 59 34.4
HHC S S 06 59 54.5 +4.0
HHC sS sS 07 00 32.1 -13
HHC SS SS 07 05 56.8 +9.3
HHC pmax pmax
comp=Z,15nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,78nm,7.0s
HHC LR LR
comp=N,170nm,16.1s
HHC LR LR
comp=E,140nm,16.1s
HHC LR LR
comp=Z,120nm,14.4s
DGMT Dagmar 89.14 39 ⇓P **P 06 49 11.9 +0.3**
baz=89,SNR=5.8
DGMT Dagmar 89.14 39 *eP* **P 06 49 11.7 +0.1**
comp=Z,64nm,1.1s,mb5.6
PLCA Paso Flores 89.42 132 P **P 06 49 14.2 +1.0**
comp=Z,4.2nm,1.1s,mb4.4,baz=152,slow=1.7,SNR=4.6
PLCA pP pP 06 49 44.9 +0.3
comp=Z,2.0nm,0.9s,baz=83,slow=22,SNR=2.8
PLCA LR LR 07 21 00.3
comp=Z,146nm,18.9s,baz=155,slow=30
PLCA Paso Flores 89.42 132 P **P 06 49 14.3 +1.1**
PLCA *PP pP 06 49 44.9 +0.3
YAK Yakutsk 89.58 337⇑*eP* **P 06 49 13.4 +0.1**
NATX Nacogdoches 89.58 57 *eP* **P 06 49 14.3 +0.2**
comp=Z,21nm,0.3s,mb5.8
KMI Kunming 90.86 296 P **P 06 49 21.3 +1.1**
KMI pmax pmax
comp=Z,15nm,0.7s,mb5.2
YKA Yellowknife Ar 90.99 24 P **P 06 49 19.0 -0.9**
comp=Z,2.6nm,0.9s,mb4.3,baz=235,slow=4.3,SNR=6.9
YKA LR LR 07 20 23.9
comp=Z,5.4nm,21.0s,baz=190,slow=29
YKA Yellowknife Ar 90.99 24 P **P 06 49 19.0 -0.9**
CD2 Chengdu 91.73 302 *eP* **P 06 49 24.3 +0.2**
CD2 pP pP 06 49 45.0 -11
CD2 sP sP 06 49 53.3 -15
CD2 PP PP 06 53 06.9 +2.2
CD2 SKS 06 59 48.6
CD2 S S 07 00 17.0 +2.2
CD2 sS sS 07 00 52.8 -16
CD2 SS SS 07 06 30.6 +5.1
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
CD2 pmax pmax
comp=Z,20nm,4.2s
ECSD EROS Data Cent 92.16 45 *eP* **P 06 49 24.7 -1.1**
comp=Z,15nm,1.3s,mb5.0
VNA3 Neumayer Olymp 92.17 175 *eP* **P 06 49 22.8 -2.6**
VNA3 *e* 06 49 27.3
VNA3 *e* 06 49 53.8 -3.0
CMAR Chiang Mai Arr 92.33 288 P **P 06 49 28.9 +1.8**
comp=Z,0.8nm,0.3s,mb4.4,baz=74,slow=3.0,SNR=6.8
CMAR pP pP 06 49 59.3 +0.8
comp=Z,1.5nm,0.5s,baz=67,slow=1.6,SNR=2.5
CMAR Chiang Mai Arr 92.33 288 P **P 06 49 28.9 +1.8**
CMAR *PP pP 06 49 59.3 +0.8
UALR University of 92.38 55 *eP* **P 06 49 27.4 +0.4**
comp=Z,12nm,0.8s,mb5.2
VNA1 Neumayer--Stat 92.86 175 *eP* **P 06 49 25.9 -2.7**
FFC Flin Flon 93.02 34*ceP* **P 06 49 29.5 +0.1**
LZH Lanzhou 93.23 307 *eP* **P 06 49 32.5 +1.6**
LZH pP pP 06 49 53.0 -9.3
LZH sP sP 06 50 01.0 -14
LZH pmax pmax
comp=Z,19nm,1.3s,mb5.3
LZH LR LR
comp=N,590nm,18.4s
LZH LR LR
comp=E,380nm,16.5s
LZH LR LR
comp=Z,100nm,18.8s
ATAH Atahualpa 93.35 98 LR LR 07 19 37.0
comp=Z,39nm,20.2s,baz=43,slow=28
AGMN Agassiz Nation 94.21 41 *eP* **P 06 49 33.3 -1.7**
comp=Z,14nm,1.1s,mb5.2
FVM French Village 94.81 52 *eP* **P 06 49 36.9 -1.2**
comp=Z,22nm,1.3s,mb5.4
FVM French Village 94.81 52 *eP* **P 06 49 36.9 -1.2**
FVM pmax pmax
comp=Z,22nm,1.3s,mb5.4
ULM Lac du Bonnet 94.85 39 P **P 06 49 35.6 -2.3**
comp=Z,9.7nm,1.0s,mb5.2,baz=264,slow=4.7,SNR=4.8
ULM PP PP 06 53 24.1 -4.4
comp=Z,5.7nm,1.1s,baz=287,slow=5.2,SNR=3.3
ULM LR LR 07 24 58.1
comp=Z,88nm,18.7s,baz=345,slow=31
ULM Lac du Bonnet 94.85 39 P **P 06 49 35.6 -2.3**
ULM PP PP 06 53 24.1 -4.4
ULM LR LR 07 24 58.1
JFWS Jewell Farm 96.32 47 *eP* **P 06 49 44.1 -0.8**
comp=Z,14nm,0.8s,mb5.5
JFWS Jewell Farm 96.32 47 *eP* **P 06 49 44.1 -0.8**
JFWS pmax pmax
comp=Z,14nm,0.8s,mb5.4
WMQ Urumqi 106.95 312 *eP* Pdif 06 50 30.0 -2.1
MKAR Makanchi Array 110.96 314 PKiKP PKiKP 06 54 47.9 -1.0
comp=Z,0.4nm,0.4s,baz=52,slow=2.0,SNR=4.0
MKAR Makanchi Array 110.96 314 PKIKP PKiKP 06 54 47.9 -0.9
BVAR Borovoye Array 118.13 322 PKP PKPdf 06 55 02.0 -0.4
comp=Z,0.7nm,0.5s,baz=188,slow=7.2,SNR=4.1
ARU Arti 123.68 328 *i* PKIKP PKPdf 06 55 12.7 -0.3
ARU 07 02 07.0
ARU SS SS 07 13 30.7 -4.4
KEV Kevo 124.85 351 *e*PKIKP PKPdf 06 55 13.3 -1.5
KEV Kevo 124.85 351 *ep* PKPdf 06 55 13.3 -1.5
ARCES ARCESS Array B 125.26 352 PKP PKPdf 06 55 14.6 -1.1
comp=Z,6.4nm,0.8s,baz=49,slow=1.0,SNR=18
ARCES ARCESS Array B 125.26 352 PKIKP PKPdf 06 55 14.6 -1.0
KLMR Klimovskoe 129.30 340 *e*PKIKP PKPdf 06 55 21.9 -1.7
KLMR pmax pmax
comp=Z,19nm,1.6s
JOF Joensuu 130.05 345 *e*PKIKP PKPdf 06 55 23.0 -1.9
JOF pmax pmax
comp=Z,4.0nm,0.5s
JOF Joensuu 130.05 345 *ep* PKPdf 06 55 23.0 -1.9
comp=Z,3.5nm,0.5s
KAF Kangasniemi 131.89 347 *e*PKIKP PKPdf 06 55 27.5 -1.0
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 131.89 347 *ep* PKPdf 06 55 27.5 -1.0
comp=Z,2.3nm,0.5s
FINES FINESS Array B 132.54 347 PKP PKPdf 06 55 29.3 -0.4
comp=Z,1.5nm,0.5s,baz=38,slow=3.0,SNR=17
FINES FINESS Array B 132.54 347 PKIKP PKPdf 06 55 29.3 -0.4
AKASG Malin Array Be 140.81 337 PKP PKPdf 06 55 45.0 -0.3
comp=Z,0.2nm,0.3s,baz=112,slow=1.0,SNR=5.7
AKASG Malin Array Be 140.81 337 PKIKP PKPdf 06 55 45.0 -0.3
MALT Malatya 144.00 314 *e*PKPdf PKPdf 06 55 51.1 -0.3
MALT Malatya 144.00 314 ⇓PKIKP PKPdf 06 55 50.8 -0.6
MALT Malatya 144.00 314⇓*i*P PKPdf 06 55 50.8 -0.6
OJC Ojcow 144.23 345 *e*PKP PKPdf 06 55 49.9 -1.5
OJC Ojcow 144.23 345 *e*PKIKP PKPdf 06 55 49.9 -1.5
WTSB Winterswijk 144.25 359 *e*PKP PKPdf 06 55 48.6 -2.8
comp=Z,30nm,2.1s
KSP Ksiaz 144.41 349 *e*PKP PKPdf 06 55 50.6 -1.1
CLL Collm 144.48 352 *i* PKP PKPdf 06 55 50.2 -1.6
CLL Collm 144.48 352 *i* PKIKP PKPdf 06 55 50.2 -1.6
CLL pmax pmax
comp=Z,17nm,1.5s
CLL Collm 144.48 352 *i* PKPdf PKPdf 06 55 50.2 -1.6
CLL ⇓*i*PKiKP PKiKP 06 55 55.8 +0.3
comp=Z,17nm,1.4s
KOLS Kolonicke sedl 144.71 341 *e*PKP PKPdf 06 55 52.0 -0.3
KOLS Kolonicke sedl 144.71 341 *e*PKIKP PKPdf 06 55 52.0 -0.3
KOLS Kolonicke sedl 144.71 341 *e*PKP PKPdf 06 55 52.0 -0.3
KMBO Kilima Mbogo 144.72 244 PKP PKPdf 06 55 53.5 +0.1
comp=Z,2.7nm,0.6s,baz=180,slow=24,SNR=11
KMBO pPKP pPKPdf 06 56 25.0 -1.2
comp=Z,1.0nm,0.3s,baz=180,slow=24,SNR=2.9
KMBO Kilima Mbogo 144.72 244 PKP PKPdf 06 55 53.5 +0.1
KMBO pPKP pPKPdf 06 56 25.0 -1.2
KMBO Kilima Mbogo 144.72 244 PKP2 PKPdf 06 55 53.6 +0.2
BUG Bochum--Univer 144.77 359 *e*PKPbc PKPdf 06 55 51.6 -0.7
BRG Berggiesshubel 144.78 351 *e*PKPbc PKPdf 06 55 51.7 -0.6
BRG Berggiesshubel 144.78 351 *e*PKP PKPdf 06 55 51.4 -0.9
comp=Z,9.0nm,1.3s
UPC Upice 144.79 349 *e*PKIKP PKPdf 06 55 52.0 -0.4
UPC *e* 06 56 23.4
UPC Upice 144.79 349 *e*PKP PKPdf 06 55 52.0 -0.4
UPC *ep*PKP pPKPdf 06 56 23.4 -1.8
BUR08 Bucovina Ar. S 144.83 337 *e*PKPdf PKPdf 06 55 52.8 +0.3
NIE Niedzica 144.83 344 *e*PKP PKPdf 06 55 52.1 -0.4
NIE Niedzica 144.83 344 *e*PKIKP PKPdf 06 55 52.1 -0.4
BURAR Bucovina Array 144.85 337 ⇓PKIKP PKPdf 06 55 52.2 -0.4
BURAR Bucovina Array 144.85 337⇓*i*P PKPdf 06 55 52.2 -0.4
DPC Dobruska-Polom 144.88 349 *e*PKIKP PKPdf 06 55 52.1 -0.4
DPC *e* 06 56 23.4
DPC Dobruska-Polom 144.88 349 *e*PKP PKPdf 06 55 52.1 -0.4
DPC *ep*PKP pPKPdf 06 56 23.4 -2.0
UZH Uzhgorod 144.97 341*c i* PKIKP PKPdf 06 55 51.9 -0.8
UZH *i* 06 56 23.7
CRVS Cervenica-Dubn 144.98 342 *e*PKP PKPdf 06 55 52.8 +0.1
CRVS Cervenica-Dubn 144.98 342 *e*PKIKP PKPdf 06 55 52.8 +0.1
CRVS Cervenica-Dubn 144.98 342 *e*PKP PKPdf 06 55 52.8 +0.1
OKC Ostrava-Krasne 144.98 346 *e*PKIKP PKPdf 06 55 52.8 +0.1
OKC *e* 06 56 23.9
OKC Ostrava-Krasne 144.98 346 *e*PKP PKPdf 06 55 52.8 +0.1
OKC *ep*PKP pPKPdf 06 56 23.9 -1.7
PVCC Panska Ves 145.02 350 *e*PKIKP PKPdf 06 55 52.8 0.0
PVCC Panska Ves 145.02 350 *e*PKP PKPdf 06 55 52.8 0.0
MORC Moravsky Berou 145.18 347 *e*PKPbc PKPbc 06 55 53.3 +0.4
MORC Moravsky Berou 145.18 347 ⇑PKIKP PKPdf 06 55 51.4 -1.7
MORC Moravsky Berou 145.18 347⇑*i*P PKPbc 06 55 51.3 -1.6
MOX Moxa 145.29 354 *e*PKP PKPdf 06 55 53.2 0.0
comp=Z,58nm,1.6s
MOX Moxa 145.29 354 *e*PKPbc PKPbc 06 55 53.5 +0.3
MOX Moxa 145.29 354 *e*PKIKP PKPdf 06 55 53.2 0.0
TRPA Tarpa 145.33 340⇑*i*P PKPdf 06 55 54.0 +0.6
WERD Werda 145.41 353 *e*PKPbc PKPbc 06 55 54.0 +0.4
TANN Tannenbergstha 145.42 353 *e*PKPbc PKPbc 06 55 54.2 +0.6
BEBN Eben Emael 145.43 0 PKP PKPdf 06 55 54.1 +0.7
HGN Heimansgroeve 145.46 0⇓*e*PKP PKPdf 06 55 53.1 -0.4
comp=Z,66nm,1.9s
GUNZ Gunzen 145.49 353 *e*PKPbc PKPbc 06 55 54.5 +0.7
PRU Pruhonice 145.54 350 *e*PKIKP PKPdf 06 55 54.8 +1.1
PRU *e* 06 56 25.7
PRU Pruhonice 145.54 350 *e*PKP PKPdf 06 55 54.8 +1.1
PRU *ep*PKP pPKPdf 06 56 25.7 -0.8
WERN Wernitzgruen 145.56 353 *e*PKPbc PKPbc 06 55 54.8 +0.7
NKC Novy Kostel 145.60 353 *ep*PKP pPKPdf 06 56 25.6 -1.0
MEM Membach 145.62 0 PKP PKPdf 06 55 54.4 +0.6
KECS Kecovo 145.64 343 *e*PKP PKPdf 06 55 55.0 +1.1
KECS Kecovo 145.64 343 *e*PKIKP PKPdf 06 55 55.0 +1.1
KECS Kecovo 145.64 343 *e*PKP PKPdf 06 55 55.0 +1.1
VRI Vrincioaia 145.68 334 ⇓PKIKP PKPdf 06 55 55.6 +1.6
VRI Vrincioaia 145.68 334⇓*i*P PKPdf 06 55 55.6 +1.6
SNF Seneffe 145.69 2 PKP PKPdf 06 55 54.5 +0.6
BCLA Clavier 145.80 1 PKP PKPdf 06 55 54.8 +0.7
VRAC Vranov 145.82 348 ⇑PKIKP PKPdf 06 55 54.4 +0.2
VRAC Vranov 145.82 348⇑*i*P PKPdf 06 55 54.4 +0.2
TNS Taunus Mts 145.95 357 *e*PKPbc PKPbc 06 55 55.8 +0.5
TNS Taunus Mts 145.95 357 *e*PKP2 PKPbc 06 55 55.8 +0.5
VYHS Vyhne 146.07 345 *e*PKP PKPdf 06 55 55.3 +0.7
VYHS Vyhne 146.07 345 *e*PKIKP PKPdf 06 55 55.3 +0.7
VYHS Vyhne 146.07 345 *e*PKP PKPdf 06 55 55.3 +0.7
GIVF Givet 146.11 1 *e*PKP1 PKPdf 06 55 55.2 +0.6
GIVF Givet 146.11 1 *e*PKP2 PKPdf 06 55 55.2 +0.6
DOU Dourbes 146.11 2 PKP PKPdf 06 55 55.8 +1.2
BAIF Baives 146.14 2 *e*PKP1 PKPbc 06 55 55.5 -0.3
comp=Z,28nm,0.6s
BAIF Baives 146.14 2 *e*PKP2 PKPbc 06 55 55.5 -0.3
GRFO Grafenberg 146.27 354 *e*PKPbc PKPbc 06 55 57.1 +0.8
GRFO Grafenberg 146.27 354 *e*PKP2 PKPbc 06 55 57.1 +0.9
MLR Muntele Rosu 146.31 334 ⇓PKP2 PKPbc 06 55 57.3 +0.8
MLR Muntele Rosu 146.31 334⇓*i*P PKPbc 06 55 57.3 +0.8
PSZ Piszkesteto 146.32 343 *e*PKPbc PKPbc 06 55 56.6 +0.1
PSZ Piszkesteto 146.32 343 *e*PKP2 PKPbc 06 55 56.6 +0.2
PSZ Piszkesteto 146.32 343⇓*i*P PKPbc 06 55 56.1 -0.3
BR131 Keskin Array S 146.38 320 *e*PKPbc PKPbc 06 55 57.7 +0.8
BRTR Keskin Array B 146.38 320 PKPbc PKPbc 06 55 57.5 +0.7
comp=Z,11nm,0.8s,baz=99,slow=2.1,SNR=37
BRTR pPKPbc pPKPbc 06 56 28.6 -0.7
comp=Z,5.2nm,0.8s,baz=75,slow=2.7,SNR=3.5
DRGR 146.44 339 ⇑PKP2 PKPbc 06 55 56.7 -0.1
DRGR 146.44 339⇑*i*P PKPbc 06 55 56.7 -0.1
RUP Ruppelstein 146.52 359 PKP PKPbc 06 55 57.5 +0.6
RUP Ruppelstein 146.52 359 PKP2 PKPbc 06 55 57.5 +0.6
KHC Kasperske Hory 146.53 351 *e*PKPbc PKPbc 06 55 57.7 +0.7
KHC Kasperske Hory 146.53 351 *e*PKP2 PKPbc 06 55 57.7 +0.7
KHC Kasperske Hory 146.53 351 *e*PKP PKPbc 06 55 57.5 +0.5
KHC *ep*PKP pPKPdf 06 56 27.1 -1.1
TOD Tromm 146.55 357 PKP PKPbc 06 55 57.5 +0.5
TOD Tromm 146.55 357 PKP2 PKPbc 06 55 57.5 +0.5
WLF Walferdange 146.56 360 PKP PKPbc 06 55 58.0 +0.9
WLF Walferdange 146.56 360 *e*PKPbc PKPbc 06 55 58.2 +1.1
WLF Walferdange 146.56 360 *e*PKPbc PKPbc 06 55 57.7 +0.6
WLF Walferdange 146.56 360 *e*PKP2 PKPbc 06 55 57.7 +0.6
VOIR 146.72 335 ⇑PKP2 PKPab 06 55 58.9 -0.1
VOIR 146.72 335⇑*i*P PKPab 06 55 58.9 -0.1
GERES GERESS Array B 146.79 351 PKPbc PKPbc 06 55 57.4 -0.3
comp=Z,3.9nm,0.7s,baz=33,slow=2.9,SNR=33
GERES pPKPbc pPKPbc 06 56 29.4 -0.8
comp=Z,1.0nm,0.7s,baz=354,slow=1.3,SNR=2.4
ROSF Rostrenen 147.00 11 *e*PKP1 PKPdf 06 55 57.4 +1.2
ROSF Rostrenen 147.00 11 *e*PKIKP PKPdf 06 55 57.4 +1.2
FLN La Foliniere 147.03 8 *e*PKP1 PKPbc 06 55 57.6 -0.8
comp=Z,61nm,0.9s
FLN *e*MLR MLR
comp=Z,52nm,18.2s
FLN La Foliniere 147.03 8 *e*PKP PKPdf 06 55 57.6 +1.4
FLN LR LR
comp=Z,50nm,18.3s
FLN La Foliniere 147.03 8 *e*PKP2 PKPdf 06 55 57.6 +1.4
FLN MLR MLR
comp=Z,50nm,18.3s
LANF Langenberg 147.22 358 PKP PKPbc 06 55 59.6 +0.7
LANF Langenberg 147.22 358 PKP2 PKPbc 06 55 59.6 +0.7
LDF La Druitiere 147.25 8 *e*PKP1 PKPdf 06 55 58.1 +1.5
comp=Z,21nm,0.7s
LDF La Druitiere 147.25 8 *e*PKIKP PKPdf 06 55 58.1 +1.5
CONA Conrad Observa 147.28 348⇑*i*PKPab PKPbc 06 55 59.5 +0.3
comp=Z,13nm,0.7s,SNR=12
GRR Gorron 147.35 9 *e*PKP1 PKPbc 06 55 58.7 -0.6
comp=Z,30nm,0.6s
GRR Gorron 147.35 9 *e*PKP2 PKPbc 06 55 58.7 -0.6
QUIF Quistinic 147.42 12 *e*PKP1 PKPdf 06 55 58.5 +1.6
QUIF Quistinic 147.42 12 *e*PKIKP PKPdf 06 55 58.5 +1.6
MOA Molln 147.66 350⇓*i*PKPbc PKPbc 06 56 00.1 -0.1
comp=Z,11nm,1.1s,SNR=5.1
MEZF Maizieres J'vi 147.72 1 *e*PKP1 PKPbc 06 56 00.0 -0.3
comp=Z,51nm,1.1s
CDF Champ du Feu 147.80 358 *e*PKP1 PKPbc 06 56 00.3 -0.3
comp=Z,60nm,1.1s
CDF Champ du Feu 147.80 358 *e*PKP2 PKPbc 06 56 00.3 -0.3
BZS Buzias 147.84 339 ⇓PKP2 PKPbc 06 56 00.5 -0.2
BZS Buzias 147.84 339⇓*i*P PKPbc 06 56 00.5 -0.2
BFO Black Forest 147.84 357 *e*PKPbc PKPbc 06 56 01.3 +0.6
BFO Black Forest 147.84 357 *e*PKP2 PKPbc 06 56 01.3 +0.6
ECH Echery 148.00 359 PKP PKPbc 06 56 01.4 +0.3
ECH Echery 148.00 359 *e*PKPbc PKPbc 06 56 01.1 0.0
ECH *e*PKPab PKPab 06 56 04.0 0.0
ECH Echery 148.00 359 *e*PKP2 PKPbc 06 56 01.1 0.0
THEF They Montfort 148.00 0 PKP PKPbc 06 56 01.6 +0.5
THEF They Montfort 148.00 0 PKP2 PKPbc 06 56 01.6 +0.5
SFTF Sexfontaines 148.01 1 *e*PKP1 PKPbc 06 56 00.9 -0.2
comp=Z,102nm,1.1s
SPAK Spaichingen-Ko 148.05 357 PKP PKPbc 06 56 01.6 +0.4
HAU Haudompre 148.22 360 *e*PKP1 PKPbc 06 56 01.4 -0.3
comp=Z,52nm,0.9s
HAU *e*MLR MLR
comp=Z,59nm,20.2s
HAU Haudompre 148.22 360 *e*PKP PKPbc 06 56 01.4 -0.3
HAU LR LR
comp=Z,60nm,20.3s
HAU Haudompre 148.22 360 *e*PKP2 PKPbc 06 56 01.4 -0.3
HAU MLR MLR
comp=Z,60nm,20.3s
PKSM Moragy 148.22 343 ⇑PKIKP PKPbc 06 56 01.0 -0.7
PKSM Moragy 148.22 343⇑*i*P PKPbc 06 56 01.0 -0.7
MOF Molkenrain 148.37 359 PKP PKPbc 06 56 02.7 +0.6
MOF Molkenrain 148.37 359 PKP2 PKPbc 06 56 02.7 +0.6
HINF Hinteralfeld 148.41 359 *e*PKP1 PKPbc 06 56 01.6 -0.6
comp=Z,12nm,0.8s
HINF Hinteralfeld 148.41 359 *e*PKP2 PKPbc 06 56 01.6 -0.6
WTTA Wattenberg 148.62 353⇑*i*PKPbc PKPbc 06 56 02.3 -0.4
comp=Z,15nm,0.5s,SNR=6.7
PERS Pernice 148.67 348 *i* PKPbc PKPbc 06 56 02.1 -0.8
PERS *e* 06 56 47.1
BBS Basel-Blauen 148.74 358 PKP PKPbc 06 56 03.5 +0.5
BBS Basel-Blauen 148.74 358 PKP2 PKPbc 06 56 03.5 +0.5
DAVA Damuels 148.78 355⇓*i*PKPbc PKPbc 06 56 03.0 -0.1
comp=Z,30nm,1.3s
HYF Humbligny 148.84 4 *e*PKP1 PKPbc 06 56 03.2 -0.1
LOMF Lomont 148.87 359 PKP PKPbc 06 56 04.2 +0.8
LOMF Lomont 148.87 359 PKP2 PKPbc 06 56 04.2 +0.8
LOR Lormes 148.91 3 *e*PKP1 PKPbc 06 56 03.2 -0.3
comp=Z,39nm,0.8s
LOR *e*MLR MLR
comp=Z,55nm,22.2s
LOR Lormes 148.91 3 *e*PKP PKPbc 06 56 03.2 -0.3
LOR LR LR
comp=Z,60nm,22.3s
LOR Lormes 148.91 3 *e*PKP2 PKPbc 06 56 03.2 -0.3
LOR MLR MLR
comp=Z,60nm,22.3s
FETA Feichten 148.97 354⇓*i*PKiKP PKPbc 06 56 03.7 +0.1
comp=Z,21nm,1.3s,SNR=6.7
ABTA Abfaltersbach 149.01 351⇓*i*PKPbc PKPbc 06 56 02.9 -0.8
comp=Z,14nm,0.8s,SNR=9.9
SSF Saint Saulge 149.10 3 *e*PKP1 PKPbc 06 56 03.8 -0.1
comp=Z,183nm,1.5s
SSF Saint Saulge 149.10 3 *e*PKP2 PKPbc 06 56 03.8 -0.1
MFF Saint Martin d 149.19 8 *e*PKP1 PKPbc 06 56 03.5 -0.7
comp=Z,37nm,1.0s
MFF Saint Martin d 149.19 8 *e*PKIKP PKPbc 06 56 03.5 -0.7
LJU Ljubljana 149.35 348 *i* PKPbc PKPbc 06 56 04.0 -0.6
AVF Avril sur Loir 149.36 4 *e*PKP1 PKPbc 06 56 04.0 -0.6
comp=Z,29nm,0.9s
AVF Avril sur Loir 149.36 4 *e*PKP2 PKPbc 06 56 04.0 -0.6
SMF Signal de Mont 149.53 3 *e*PKP1 PKPbc 06 56 04.4 -0.6
SMF Signal de Mont 149.53 3 *e*PKIKP PKPbc 06 56 04.4 -0.6
BGF Bois d'Agland 149.56 4 *e*PKP1 PKPbc 06 56 04.7 -0.4
comp=Z,76nm,1.1s
BGF Bois d'Agland 149.56 4 *e*PKP2 PKPbc 06 56 04.7 -0.4
JAVS Javornik 149.59 349 *i* PKPbc PKPbc 06 56 04.2 -1.0
CABF La Chapelle 149.62 360 *e*PKP1 PKPbc 06 56 05.6 +0.4
comp=Z,124nm,1.2s
CABF La Chapelle 149.62 360 *e*PKP2 PKPbc 06 56 05.6 +0.4
TUE Stuetta 149.63 355 *e*PKPbc PKPbc 06 56 06.0 +0.7
BOJS Bojanci 149.72 347 *i* PKPbc PKPbc 06 56 05.3 -0.2
BOJS *e* 06 56 18.2
TCF Toulx Ste Croi 149.77 5 *e*PKP1 PKPbc 06 56 05.0 -0.6
comp=Z,79nm,1.3s
TCF Toulx Ste Croi 149.77 5 *e*PKHKP PKPbc 06 56 05.0 -0.6
AGO Saint Agoulin 150.08 4 PKP PKPbc 06 56 07.9 +1.5
PLDF La Plantade 150.19 3 PKP PKPbc 06 56 08.4 +1.7
PYM Petit Puy Mans 150.37 4 PKP PKPbc 06 56 08.8 +1.7
RJF Les Rejaudoux 150.68 7 *e*PKP1 PKPbc 06 56 07.2 -0.6
RJF *e*MLR MLR
comp=Z,68nm,20.5s
RJF Les Rejaudoux 150.68 7 *e*PKP PKPbc 06 56 07.2 -0.6
RJF LR LR
comp=Z,70nm,20.5s
RJF Les Rejaudoux 150.68 7 *e*PKIKP PKPbc 06 56 07.2 -0.6
RJF MLR MLR
comp=Z,70nm,20.5s
FRNF Fournols 150.70 5 PKP PKPbc 06 56 08.9 +1.0
LPL La Plagne 150.71 359 *e*PKP1 PKPbc 06 56 08.6 +0.7
comp=Z,32nm,1.0s
LPG La Plagne 150.73 359 *e*PKP1 PKPbc 06 56 08.8 +0.9
comp=Z,31nm,0.8s
LBL Lubilhac 150.91 4 PKP PKPbc 06 56 09.8 +1.4
SSB Saint Sauveur 150.93 2 PKP PKPbc 06 56 09.3 +0.9
LFF La Frestale 150.95 8 *e*PKP1 PKPbc 06 56 07.9 -0.6
comp=Z,57nm,1.1s
LFF La Frestale 150.95 8 *e*PKIKP PKPbc 06 56 07.9 -0.6
CAF Calviac 151.11 6 *e*PKP1 PKPbc 06 56 08.5 -0.3
comp=Z,28nm,1.0s
BNI Bardonecchia 151.18 359 *e*PKPbc PKPbc 06 56 10.3 +1.3
BNI *e*PKPab PKPab 06 56 18.7 +1.6
BNI Bardonecchia 151.18 359 *e*PKIKP PKPbc 06 56 10.3 +1.3
ORIF Oris-en-Rattie 151.31 0 *e*PKP1 PKPbc 06 56 09.4 +0.1
comp=Z,19nm,1.0s
ORIF *e*MLR MLR
comp=Z,84nm,18.8s
VIVF Saint-Julien-l 151.35 2 *e*PKP1 PKPbc 06 56 09.4 0.0
comp=Z,43nm,1.0s
MBDF Montbardon 151.50 359 *e*PKP1 PKPbc 06 56 09.9 +0.2
comp=Z,12nm,0.7s
PCAB Cabril 151.78 23 *e*PKPdf PKPbc 06 56 11.1 +0.6
LASF Ste Croix 152.09 3 *e*PKP1 PKPbc 06 56 11.2 +0.1
comp=Z,38nm,1.0s
SMRF Simiane la Rot 152.25 1 *e*PKP1 PKPbc 06 56 11.8 +0.3
comp=Z,27nm,0.8s
PVRL Vila Real 152.28 23 *e*PKPab PKPab 06 56 22.1 +0.3
MVO Moncorvo 152.62 22 *e*PKPdf PKPbc 06 56 12.8 +0.4
PVIS Viseu 152.69 24 *e*PKPab PKPab 06 56 23.8 +0.2
MTLF Montolieu 152.69 6 *e*PKP1 PKPbc 06 56 12.1 -0.4
ETSF Etsaut 152.74 11 *e*PKP1 PKPbc 06 56 12.6 0.0
EPF Esparros 152.76 9 *e*PKP1 PKPbc 06 56 11.9 -0.7
LMR La Mourre 152.90 359 *e*PKP1 PKPbc 06 56 12.4 -0.5
MTE Manteigas 153.10 23 *e*PKPdf PKPbc 06 56 13.3 -0.2
PTOM Tomar 153.43 26 *e*PKPdf PKPbc 06 56 14.3 +0.1
PTOM Tomar 153.43 26 *e*PKPab PKPab 06 56 26.6 -0.1
PCBR Castelo Branco 153.61 24 *e*PKPdf PKPbc 06 56 14.7 +0.1
PMRV Marv??o 154.00 24 *e*PKPdf PKPbc 06 56 15.5 0.0
PMRV Marv??o 154.00 24 *e*PKPab PKPab 06 56 28.9 -0.3
PESTR Estremoz 154.40 25 *e*PKPab PKPab 06 56 30.8 -0.1
ESDC Sonseca Array 154.98 18 PKPbc PKPbc 06 56 16.9 -0.6
comp=Z,0.3nm,0.5s,baz=326,slow=2.7,SNR=5.0
ESDC PKPab PKPab 06 56 32.4 -1.0
comp=Z,2.7nm,1.0s,baz=321,slow=3.9,SNR=11
PBAR Barrancos 155.21 25 *e*PKPdf PKPdf 06 56 19.5 +10
PCVE Castro Verde 155.24 27 *e*PKPab PKPab 06 56 34.3 -0.3
PFVI Vila Bisbo 155.29 29 *e*PKPab PKPab 06 56 32.5 -2.3
PVAQ Vaqueiros 155.58 27 *e*PKPab PKPab 06 56 36.3 +0.3

BJI ***21*** *07:05:43.1, 4.22S×141.90E, h109km, mB5.0/27, mb5.0/44*
ISCJB ***21*** *07:05:45.5±0.2, 3.96S±0.03×141.53E±0.04, h104km, mb5.0/77, Error ellipse: s-maj=5.9km s-min=4.0km az=170.8*
MOS ***21*** *07:05:46.0±1.0, 3.96S×141.51E, h111km, mb5.0/14, Error ellipse: s-maj=12.2km s-min=7.0km az=107.1*
NEIC ***21*** *07:05:47.0±0.2, 3.98S×141.46E, mb4.8/30, Error ellipse: s-maj=7.2km s-min=4.6km az=73.0*
IDC ***21*** *07:05:47.2±0.5, 4.06S×141.38E, h105km±3km, mb4.6/16, mb1 4.7/20, mb1mx4.7/21, mbtmp4.7/20, MS3.5/7, Ms1 3.5/7, ms1mx3.2/26, Error ellipse: s-maj=12.2km s-min=7.9km az=95.0*
DJA ***21*** *07:05:49, 3.99S×141.52E, h110km, mb5.1/24*
GCMT ***21*** *07:05:49.5±0.4, 4.00S×141.54E, h120km±4km, MW4.9, Moment Tensor Solution. s18,c23; s63,c76; Moment tensor: Scale 10^16Nm; Mrr=0.32±.19; Mθθ=0.78±.18; Mφφ=1.10±.19; Mrθ=1.99±.10; Mrφ=1.37±.16; Mθφ=1.75±.12; Best double couple: M0=3.00000×10^16 NP1:φs=202.00000°, δ=28.00000°, λ=-11.00000°. NP2:φs=302.00000°, δ=85.00000°, λ=-118.00000°. Principal axes: T 3.5000, Plg34.0000°, Azm55.0000°; N -0.9400, Plg28.0000°, Azm304.0000°; P -2.5600, Plg44.0000°, Azm185.0000°; Data Used: IU IC II G CN.*

ISC 21 07:05:47.4±0.2, 3.99S±0.03×141.51E±0.04, h106km, h106km±1.3km: pP-P, n183, σ1.05/179, mb5.0/77, 3C-7D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
MMPI	**Merauke**	**4.59**	**194**	P	**Pn**	**07 06 56.5**		**+1.8**
BAKI	**Biak**	**6.07**	**297**	P	Px	07 07 34.4		
PMG	**Port Moresby**	**7.77**	**134**	*e*Pn	**Pn**	**07 07 38.4**		**+0.5**
PMG	**Port Moresby**	**7.77**	**134**	*d i*P	**Pn**	**07 07 38.1**		**+0.2**
PMG	**Port Moresby** 0.6nm180nm,0.7s	**7.77**	**134**	P	**Pn**	**07 07 38.4**		**+0.5**
TLE	**Tual** 2.5nm7μm844nm,1.0s	**8.90**	**259**	P	**Pn**	**07 07 52.5**		**-0.7**
COEN	**Coen**	**10.04**	**171**	*e*Pn	**Pn**	**07 08 09.1**		**+0.3**
COEN	**Coen** 274nm,1.2s	**10.04**	**171**	P	**Pn**	**07 08 09.4**		**+0.6**
KAKA	**Kakadu** 219nm,0.4s	**12.47**	**225

KAKA	**Kakadu**	**12.47**	225	*e*Pn	**Pn**	**07 08 39.4**	**-1.9**
	113nm,0.4s						
KAKA				*e*Sn	**Sn**	**07 10 47.4**	**-11**
CTA	**Charters Tower**	**16.66**	164	P	**Pn**	**07 09 35.2**	**+0.6**
	1.3nm,0.3s,baz=335,slow=10,SNR=17						
CTA				pP	pP	07 09 55.4	+0.7
	0.4nm,0.3s,baz=321,slow=12,SNR=4.2						
CTA				LR	LR	07 16 33.3	
	comp=Z,89nm,19.9s,baz=9.8,slow=39						
CTA	**Charters Tower**	**16.66**	164	*e*P	**Pn**	**07 09 35.3**	**+0.7**
	14nm,0.7s						
CTA	**Charters Tower**	**16.66**	164	P	**Pn**	**07 09 35.2**	**+0.6**
CTAO	**Charters Tower**	**16.66**	164	*e*P	**Pn**	**07 09 35.8**	**+1.2**
	30nm,1.1s						
CTAO	**Charters Tower**	**16.66**	164	*e*P	**Pn**	**07 09 35.8**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,30nm,1.1s						
CTAO	**Charters Tower**	**16.66**	164	P	**Pn**	**07 09 38.7**	**+4.1**
	comp=Z,29nm,1.1s						
KNA	**Kununurra**	**17.14**	226	P	**Pn**	**07 09 39.6**	**-0.9**
	comp=Z,2µm,0.8s						
WB2	**Warramunga Arr**	**17.33**	203	*e*P	**Pn**	**07 09 41.1**	**-1.7**
WRA	**Warramunga Arr**	**17.33**	203	P	**Pn**	**07 09 41.2**	**-1.7**
	comp=Z,18nm,0.3s,baz=22,slow=12,SNR=247						
WRA				pP	pP	07 10 02.4	+0.2
	comp=Z,5.1nm,0.3s,baz=23,slow=12,SNR=5.7						
WRA				S	**S**	**07 12 44.0**	**-12**
	comp=Z,0.8nm,0.3s,baz=156,slow=16,SNR=3.4						
WRA	**Warramunga Arr**	**17.33**	203	P	**Pn**	**07 09 41.2**	**-1.7**
WRA				pP	pP	07 10 02.4	+0.2
WRA				S	**S**	**07 12 44.0**	**-12**
WRA	**Warramunga Arr**	**17.33**	203	P	**Pn**	**07 09 41.2**	**-1.7**
WRA				S	**S**	**07 12 44.0**	**-12**
GUMO	**Guam**	**17.77**	11	P	**Pn**	**07 09 48.1**	**-0.1**
	comp=Z,4.0nm,0.3s,baz=159,slow=11,SNR=3.6						
GUMO				LR	LR	07 16 13.0	
	comp=Z,84nm,18.4s,baz=181,slow=35						
GUMO	**Guam**	**17.77**	11	P	**Pn**	**07 09 48.1**	**-0.1**
KMSI	**Cibinong**	**18.10**	284	P	**P**	**07 09 51.8**	**+0.7**
	comp=Z,575nm,1.1s						
KDI	**Kendari**	**18.85**	269	P	**P**	**07 10 01.9**	**+2.5**
	comp=Z,1µmcomp=Z,37nm,1.1s						
LUWI	**Luwuk**	**18.95**	278	P	**P**	**07 10 06.7**	**+6.2**
	comp=Z,2µmcomp=Z,216nm,1.0s						
HNR	**Honiara**	**19.08**	107	P	**P**	**07 10 02.0**	**+0.1**
	comp=Z,19nm,0.3s,baz=250,slow=10,SNR=4.2						
HNR	**Honiara**	**19.08**	107	P	**P**	**07 10 02.0**	**+0.1**
MMRI	**Maumere**	**19.70**	256	P	**P**	**07 10 11.1**	**+2.4**
	comp=Z,2µmcomp=Z,157nm,0.8s						
MRSI	**Marisa**	**20.06**	282	P	**P**	**07 10 12.2**	**-0.3**
	comp=Z,1µmcomp=Z,189nm,0.6s						
ASAR	**Alice Springs**	**20.90**	200	P	**P**	**07 10 20.7**	**-0.7**
	comp=Z,32nm,0.7s,baz=29,slow=11,SNR=345						
ASAR				pP		07 10 41.9	
	comp=Z,40nm,0.9s,baz=31,slow=9.2,SNR=6.2						
ASAR				S	**S**	**07 14 05.6**	**-3.0**
	comp=Z,7.2nm,0.9s,baz=18,slow=27,SNR=4.4						
ASAR	**Alice Springs**	**20.90**	200	P	**P**	**07 10 20.7**	**-0.7**
ASAR				S	**S**	**07 14 05.6**	**-3.0**
FITZ	**Fitzroy Crossi**	**20.93**	227	P	**P**	**07 10 20.9**	**-1.0**
	comp=Z,48nm,0.6s,baz=48,slow=10,SNR=41						
FITZ				S	**S**	**07 14 05.3**	**-4.1**
	comp=Z,95nm,0.8s,baz=102,slow=13,SNR=8.1						
FITZ				LR	LR	07 18 51.4	
	comp=Z,247nm,19.8s,baz=36,slow=38						
FITZ	**Fitzroy Crossi**	**20.93**	227	*e*P	**P**	**07 10 20.2**	**-1.7**
	comp=Z,79nm,0.5s						
FITZ				*e*S	**S**	**07 14 06.2**	**-3.2**
FITZ	**Fitzroy Crossi**	**20.93**	227	*e*P	**P**	**07 10 20.2**	**-1.6**
	comp=Z,52nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.93**	227	P	**P**	**07 10 22.4**	**+0.5**
	comp=Z,203nm,1.1s						
BKSI	**Bulukumba**	**21.36**	266	P	**P**	**07 10 28.3**	**+1.8**
	comp=Z,71nm,0.6s,mb5.2						
TTSI	**Tana Toraja**	**21.67**	272	P	**P**	**07 10 32.4**	**+2.6**
	comp=Z,1µmcomp=Z,73nm,1.0s,mb5.0						
SPSI	**Sidrap Palu**	**21.69**	269	P	**P**	**07 10 33.5**	**+3.5**
	comp=Z,2µmcomp=Z,57nm,1.0s,mb4.8						
KAPI	**Kappang**	**21.72**	266	P	**P**	**07 10 29.2**	**-1.1**
	comp=Z,13nm,0.5s,mb4.5,baz=133,slow=5.3,SNR=7.6						
KAPI	**Kappang**	**21.72**	266	*e*P	**P**	**07 10 28.9**	**-1.4**
	comp=Z,43nm,1.1s,mb4.7						
KAPI	**Kappang**	**21.72**	266	P	**P**	**07 10 34.3**	**+4.0**
	comp=Z,16nm,0.9s,mb4.3						
WSI	**Waingapu**	**21.80**	254	P	**P**	**07 10 36.6**	**+5.4**
BMNI	**Bima**	**23.13**	258	P	**P**	**07 10 45.6**	**+1.0**
	comp=Z,49nm,0.7s,mb5.0						
EIDS	**Eidsvold**	**23.16**	158	*e*P	**P**	**07 10 45.9**	**+1.2**
	comp=Z,202nm,0.8s,mb5.5						
MBWA	**Marble Bar**	**27.20**	229	*e*P	**P**	**07 11 21.8**	**+0.4**
	comp=Z,68nm,0.8s,mb5.2						
MBWA	**Marble Bar**	**27.20**	229	P	**P**	**07 11 21.9**	**+0.5**
	comp=Z,96nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**27.75**	180	P	**P**	**07 11 25.3**	**-0.8**
	comp=Z,12nm,0.8s,mb4.5,baz=340,slow=9.6,SNR=19						
STKA	**Stephens Creek**	**27.75**	180	*e*P	**P**	**07 11 24.4**	**-1.7**
	comp=Z,9.2nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**27.75**	180	*e*P	**P**	**07 11 24.8**	**-1.3**
	comp=Z,2.8nm,0.8s						
STKA	**Stephens Creek**	**27.75**	180	*e*P	**P**	**07 11 24.8**	**-1.3**
STKA				pmax	pmax		
	comp=Z,30nm,0.8s						
ARMA	**Armidale**	**27.97**	161	*e*P	**P**	**07 11 29.2**	**+1.0**
ARMA	**Armidale**	**27.97**	161	*e*P	**P**	**07 11 29.4**	**+1.3**
	comp=Z,88nm,1.4s,mb5.1						
BBOO	**Buckleboo**	**29.13**	189	*e*P	**P**	**07 11 38.6**	**+0.2**
	comp=Z,964nm,2.6s,mb6.0						
FORT	**Forrest**	**29.52**	204	*e*P	**P**	**07 11 41.3**	**-0.6**
	comp=Z,162nm,0.6s,mb5.8						
FORT	**Forrest**	**29.52**	204	*e*P	**P**	**07 11 41.9**	**0.0**
	comp=Z,171nm,0.6s,mb5.9						
KSM	**Kuching**	**31.65**	279	*e*P	**P**	**07 12 00.7**	**-0.3**
	comp=Z,20nm,1.0s,mb4.8						
CAN	**Canberra**	**31.94**	168	*e*P	**P**	**07 12 04.3**	**+1.1**
	comp=Z,106nm,0.9s,mb5.6						
CAN	**Canberra**	**31.94**	168	*e*P	**P**	**07 12 04.3**	**+1.1**
CAN				pmax	pmax		
	comp=Z,107nm,0.9s,mb5.6						
CNB	**Canberra Magne**	**32.01**	168	*e*P	**P**	**07 12 05.0**	**+1.2**
TOO	**Toolangi**	**33.62**	174	*e*P	**P**	**07 12 19.4**	**+1.6**
NACB	**Ninganchiao**	**34.05**	326	*e*P	**P**	**07 12 21.4**	**-0.3**
	comp=Z,21nm,0.8s,mb5.0						
YHNB	**Yeheng**	**34.57**	326	*e*P	**P**	**07 12 26.3**	**+0.2**
	comp=Z,23nm,0.8s,mb5.1						
KLBR	**Kellerberrin**	**35.40**	216	*e*P	**P**	**07 12 32.4**	**-0.8**
	comp=Z,76nm,0.7s,mb5.6						
NWAO	**Narrogin (SRO)**	**36.66**	215	P	**P**	**07 12 44.2**	**+0.2**
	comp=Z,58nm,0.8s,mb5.5,baz=51,slow=6.6,SNR=21						
NWAO	**Narrogin (SRO)**	**36.66**	215	P	**P**	**07 12 44.2**	**+0.2**
NWAO	**Narrogin (SRO)**	**36.66**	215	P	**P**	**07 12 44.2**	**+0.2**
MDSI	**Maura Dua**	**37.23**	268	P	**P**	**07 12 48.8**	**-0.3**
	comp=Z,28nm,1.5s,mb5.0						
SDSI	**Sungai Dareh**	**40.16**	273	P	**P**	**07 13 12.4**	**-1.2**
	comp=Z,618nmcomp=Z,26nm,1.2s,mb4.9						
MJAR	**Matsushiro Arr**	**40.43**	356	P	**P**	**07 13 13.9**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=162,slow=7.5,SNR=3.7						
MJAR				pP	pP	07 13 39.5	-0.2
	comp=Z,1.7nm,0.8s,baz=161,slow=8.4,SNR=2.9						
MJAR	**Matsushiro Arr**	**40.43**	356	P	**P**	**07 13 13.9**	**-1.5**
MJAR				*PP	pP	07 13 39.6	-0.2
PPI	**Padang Panjang**	**41.23**	274	P	**P**	**07 13 21.2**	**-1.2**
	comp=Z,64nm,0.8s,mb5.5						
NJ2	**Nanjing**	**41.82**	331	*e*P	**P**	**07 13 27.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.1						
KULM	**Kulim**	**41.84**	282	*e*P	**P**	**07 13 25.8**	**-1.6**
	comp=Z,5.5nm,0.7s,mb4.4						
PSI	**Prapat**	**43.09**	278	P	**P**	**07 13 36.3**	**-1.2**
	comp=Z,51nm,0.8s,mb5.3,baz=94,slow=5.7,SNR=44						
PSI				pP	pP	07 14 00.9	-1.2
	comp=Z,37nm,0.9s,baz=115,slow=2.9,SNR=5.4						
PSI	**Prapat**	**43.09**	278	P	**P**	**07 13 36.3**	**-1.2**
PSI				*PP	pP	07 14 00.9	-1.2
KSRS	**Korea Array**	**43.12**	344	P	**P**	**07 13 37.9**	**+0.5**
	comp=Z,1.7nm,0.5s,mb4.0,baz=160,slow=8.2,SNR=9.5						
KSRS				sP	sP	07 14 14.9	+1.0
	comp=Z,2.7nm,0.7s,baz=157,slow=8.9,SNR=3.6						
KSRS				PcP	PcP	07 15 26.5	+1.2
	comp=Z,1.1nm,0.8s,baz=152,slow=6.0,SNR=3.2						
KSRS				pPcP		07 15 54.8	
	comp=Z,1.0nm,0.6s,baz=177,slow=4.4,SNR=4.6						
KSRS				LR	LR	07 28 51.3	
	comp=Z,34nm,19.2s,baz=165,slow=32						
TPTI		**44.88**	279	P	**P**	**07 13 51.6**	**-0.2**
	comp=Z,14nm,1.2s,mb4.6						
GYA	**Guiyang**	**45.31**	314	⇓*i*P	**P**	**07 13 55.4**	**+0.5**
GYA				pP	pP	07 14 20.8	+1.1
GYA				sP	sP	07 14 37.9	+6.2
GYA				PcP	PcP	07 15 33.5	+0.5
GYA				PP	PP	07 15 44.0	+1.0
GYA				ScP	ScP	07 19 16.0	-0.2
GYA				S	**S**	**07 20 27.3**	**-0.5**
GYA				sS	sS	07 21 11.3	+0.9
GYA				ScS	ScS	07 23 39.0	-2.3
GYA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
ENH	**Enshi**	**45.81**	320	*e*P	**P**	**07 13 58.8**	**0.0**
	comp=Z,6.0nm,0.4s,mb4.7						
URZ	**Urewera**	**47.06**	141	P	**P**	**07 14 08.8**	**+0.2**
	comp=Z,6.2nm,0.4s,mb4.7,baz=244,slow=6.1,SNR=14						
URZ	**Urewera**	**47.06**	141	*e*P	**P**	**07 14 08.8**	**+0.2**
	comp=Z,63nm,0.8s,mb5.4						
RPZ	**Rata Peaks**	**47.40**	151	P	**P**	**07 14 11.7**	**+0.6**
	comp=Z,20nm,0.9s,mb4.9,baz=330,slow=14,SNR=6.5						
CMAR	**Chiang Mai Arr**	**47.50**	299	P	**P**	**07 14 12.0**	**-0.2**
	comp=Z,3.5nm,0.5s,mb4.3,baz=123,slow=5.7,SNR=12						
CMAR				pP	pP	07 14 36.3	-0.8
	comp=Z,1.1nm,0.4s,baz=112,slow=6.3,SNR=1.6						
CMAR				sP	sP	07 14 46.3	-2.7
	comp=Z,4.2nm,0.8s,baz=121,slow=6.5,SNR=3.1						
CMAR	**Chiang Mai Arr**	**47.50**	299	P	**P**	**07 14 12.0**	**-0.2**
CMAR				*PP	pP	07 14 36.3	-0.9
CMAR				*SP	sP	07 14 46.3	-2.8
CHTO	**Chiang Mai**	**47.64**	300	P	**P**	**07 14 14.5**	**+1.2**
	comp=Z,6.1nm,1.6s,mb4.2						
KHZ	**Kahutara**	**47.72**	148	*e*P	**P**	**07 14 13.7**	**+0.1**
XAN	**Xi'an**	**48.74**	323	P	**P**	**07 14 21.3**	**-0.2**
XAN				pP	pP	07 14 44.9	-1.7
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
XAN				pmax	pmax		
	comp=Z,21nm,6.1s						
BJI	**Beijing**	**49.61**	334	P	**P**	**07 14 27.8**	**-0.2**
BJI				pP	pP	07 14 53.0	-0.2
BJI				sP	sP	07 15 04.5	-0.6
BJI				PcP	PcP	07 15 48.5	+0.4
BJI				PP	PP	07 16 24.3	+0.8
BJI				ScP	ScP	07 19 34.6	+0.6
BJI				S	**S**	**07 21 26.6**	**-1.8**
BJI				sS	sS	07 22 12.3	+0.7
BJI				ScS	ScS	07 24 10.4	+1.1
BJI				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
BJI				pmax	pmax		
	comp=Z,78nm,4.1s						
CN2	**Changchun**	**49.72**	345	*e*P	**P**	**07 14 29.3**	**+0.5**
CN2				*e*pP	pP	07 14 55.3	+1.4
CN2				*e*sP	sP	07 15 08.0	+2.2
CN2				*e*S	**S**	**07 21 30.0**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CD2	**Chengdu**	**50.01**	317	⇑*i*P	**P**	**07 14 32.0**	**+0.7**
CD2				pP	pP	07 14 58.1	+1.7
CD2				sP	sP	07 15 10.8	+2.5
CD2				PP	PP	07 16 29.8	+2.5
CD2				S	**S**	**07 21 32.8**	**-1.5**
CD2				sS	sS	07 22 18.5	+0.9
CD2				SS	SS	07 25 03.9	-4.9
CD2				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.7						
CD2				pmax	pmax		
	comp=Z,130nm,5.8s						
HHC	**Hu-ho-hao-te**	**52.36**	331	*e*P	**P**	**07 14 50.9**	**+2.3**
HHC				pP	pP	07 15 17.4	+3.4
HHC				sP	sP	07 15 30.0	+4.2
HHC				PcP	PcP	07 15 59.8	+1.5
HHC				PP	PP	07 16 53.9	+5.5
HHC				ScP	ScP	07 19 45.3	-0.6
HHC				S	**S**	**07 22 07.9**	**+1.7**
HHC				sS	sS	07 22 53.3	+3.5
HHC				ScS	ScS	07 24 26.1	-2.1
HHC				SS	SS	07 25 46.6	+1.0
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,64nm,5.7s						
HHC				LR	LR		
	comp=N,140nm,16.1s						
HHC				LR	LR		
	comp=E,140nm,15.9s						
HHC				LR	LR		
	comp=Z,100nm,14.3s						
LZH	**Lanzhou**	**53.19**	322	*e*P	**P**	**07 14 56.3**	**+1.5**
LZH				pP	pP	07 15 18.3	-2.0
LZH				sP	sP	07 15 35.0	+2.9
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
LZH				pmax	pmax		
	comp=Z,120nm,4.0s						
LZH				LR	LR		
	comp=N,270nm,14.8s						
LZH				LR	LR		
	comp=E,410nm,17.8s						
LZH				LR	LR		
	comp=Z,120nm,12.6s						
KLR	**Kul'dur**	**53.67**	352	*e*P	**P**	**07 14 53.5**	**-4.6**
SHL	**Shillong**	**56.36**	304	*e*PKP	**P**	**07 15 18.0**	**+0.1**
GTA	**Gaotai**	**57.77**	322	⇓P	**P**	**07 15 28.3**	**+0.8**
GTA				pP	pP	07 15 55.0	+1.7
GTA				sP	sP	07 16 07.4	+2.4
GTA				S	**S**	**07 23 18.5**	**0.0**
GTA				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.2						
GTA				pmax	pmax		
	comp=Z,120nm,5.9s						
GTA				LR	LR		
	comp=N,78nm,21.3s						
GTA				LR	LR		
	comp=E,100nm,19.9s						
GTA				LR	LR		
	comp=Z,72nm,19.4s						
PETK	**Petropavlovsk-**	**58.50**	11	P	**P**	**07 15 32.0**	**-0.3**
	comp=Z,13nm,0.8s,mb5.0,baz=172,slow=7.4,SNR=29						
PETK				pP	pP	07 15 58.0	-0.2
	comp=Z,4.1nm,0.7s,baz=165,slow=5.8,SNR=2.9						
PETK				LR	LR	07 35 38.3	
	comp=Z,31nm,21.2s,baz=54,slow=31						
PETK	**Petropavlovsk-**	**58.50**	11	P	**P**	**07 15 32.0**	**-0.4**
PETK				*PP	pP	07 15 58.0	-0.2
LSA	**Lhasa**	**58.69**	308	*e*P	**P**	**07 15 35.9**	**+1.7**
	comp=Z,11nm,0.7s,mb5.0						
LSA	**Lhasa**	**58.69**	308	*e*P	**P**	**07 15 35.9**	**+1.7**
LSA				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
ULN	**Ulaanbaatar**	**59.81**	334	*e*P	**P**	**07 15 42.5**	**+0.9**
	comp=Z,6.2nm,0.5s,mb4.9						
ULN	**Ulaanbaatar**	**59.81**	334	*e*P	**P**	**07 15 42.5**	**+1.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
ULN	**Ulaanbaatar**	**59.81**	334	P	**P**	**07 15 42.3**	**+0.8**
SONM	**Songino Array**	**60.08**	333	P	**P**	**07 15 44.0**	**+0.6**
	comp=Z,3.9nm,0.6s,mb4.6,baz=149,slow=7.1,SNR=6.7						
SONM	**Songino Array**	**60.08**	333	P	**P**	**07 15 44.0**	**+0.6**
PALK	**Pallekele**	**61.71**	280	*i* P	**P**	**07 15 56.2**	**+1.1**
GUN	**Gumba**	**62.21**	304	*e*P	**P**	**07 15 59.0**	**+0.8**
	comp=Z,73nm,0.7s,mb5.8						
PKI	**Pulchoki**	**62.48**	304	*e*P	**P**	**07 16 00.2**	**+0.2**
	comp=Z,20nm,0.6s,mb5.3						
PKI	**Pulchoki**	**62.48**	304	*e*P	**P**	**07 16 00.2**	**+0.2**
PKI				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
PKIN	**Phulchoki**	**62.49**	304	*e*P	**P**	**07 16 00.1**	**0.0**
	comp=Z,19nm,0.5s,mb5.4						
KKN	**Kakani**	**62.66**	304	*e*P	**P**	**07 16 01.6**	**+0.4**
	comp=Z,62nm,0.7s,mb5.6						
KKN	**Kakani**	**62.66**	304	*e*P	**P**	**07 16 01.6**	**+0.4**
DMN	**Daman**	**62.74**	304	*e*P	**P**	**07 16 02.4**	**+0.7**
	comp=Z,66nm,0.6s,mb5.7						
GKN	**Gorkha**	**63.27**	304	*e*P	**P**	**07 16 05.6**	**+0.4**
	comp=Z,117nm,0.5s,mb6.1						
ZAK	**Zakamensk**	**63.34**	334	*e*P	**P**	**07 16 05.3**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
KOLN	**Koldanda**	**64.05**	303	*e*P	**P**	**07 16 10.8**	**+0.4**
	comp=Z,64nm,0.8s,mb5.5						
DANN	**Dangsing**	**64.12**	304	*e*P	**P**	**07 16 11.2**	**+0.4**
	comp=Z,88nm,0.6s,mb5.8						
TLY	**Talaya**	**64.13**	335	*e*P	**P**	**07 16 10.4**	**0.0**
TLY				*e*		07 16 52.1	
TLY				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
BOD	**Bodaibo**	**65.47**	344	*e*P	**P**	**07 16 18.4**	**-0.5**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
YAK	**Yakutsk**	**66.46**	354	⇑*i*P	**P**	**07 16 25.0**	**-0.2**
SEY	**Seymchan**	**67.25**	5*d*	*i*P	**P**	**07 16 30.3**	**+0.2**
WMQ	**Urumqi**	**67.75**	321	P	**P**	**07 16 34.0**	**+0.3**
WMQ				pP	pP	07 17 02.0	+1.8
WMQ				sP	sP	07 17 14.0	+2.2
WMQ				PP	PP	07 19 07.0	+2.4
WMQ				S	S	07 25 21.0	-2.2
WMQ				ScS	ScS	07 26 19.0	-3.6
WMQ				SS	SS	07 29 46.0	-0.7
WMQ				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.2						
WMQ				pmax	pmax		
	comp=Z,110nm,6.0s						
WMQ				LR	LR		
	comp=N,36nm,18.0s						
WMQ				LR	LR		
	comp=E,53nm,18.0s						
WMQ				LR	LR		
	comp=Z,44nm,18.0s						
POO	**Poona**	**70.25**	291	*e*PKP	**P**	**07 16 47.0**	**-2.7**
MIR	**Mirnyy**	**70.86**	198	⇓*i*P	**P**	**07 16 53.2**	**+0.7**
MIR				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.3						
MK31	**Makanchi Array**	**72.51**	322	*e*P	**P**	**07 17 02.9**	**+0.1**
MK31	**Makanchi Array**	**72.51**	322	*e*P	**P**	**07 17 02.9**	**+0.2**
MKAR	**Makanchi Array**	**72.51**	322	P	**P**	**07 17 03.0**	**+0.3**
	comp=Z,17nm,0.7s,mb5.0,baz=108,slow=7.8,SNR=101						
MKAR				pP	pP	07 17 29.5	-0.1
	comp=Z,4.4nm,0.7s,baz=111,slow=6.9,SNR=2.7						
MKAR				sP	sP	07 17 40.6	-0.4
	comp=Z,4.8nm,0.7s,baz=108,slow=7.3,SNR=3.2						
MKAR	**Makanchi Array**	**72.51**	322	P	**P**	**07 17 03.0**	**+0.3**
MKAR				*PP	pP	07 17 29.5	0.0
MKAR				*SP	sP	07 17 40.6	-0.4
BILL	**Bilibino**	**73.93**	9	*e*P	**P**	**07 17 10.1**	**-0.6**
BILL				*e**PP	pP	07 17 36.9	-0.7
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
KSH	**Kashi**	**73.99**	313	*e*P	**P**	**07 17 13.3**	**+1.7**
KSH				*e*PcP	PcP	07 17 29.3	+2.9
KSH				*e*pP	pP	07 17 38.3	-0.2
KSH				*e*sP	sP	07 17 49.1	-0.9
KSH				*e*PP	PP	07 20 00.3	+2.1
KSH				*e*S	S	07 26 32.9	-2.8
KSH				*e*SKS		07 27 05.8	
KSH				*e*ScS	ScS	07 27 09.6	-2.7
KSH				*e*SS	SS	07 31 28.8	+6.2
KSH				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.1						
KSH				LR	LR		
	comp=N,140nm,8.2s						
KSH				LR	LR		
	comp=E,200nm,4.3s						
KSH				LR	LR		
	comp=Z,240nm,6.7s						
ZAA0	**Zalesovo Array**	**74.45**	329	*e*P	**P**	**07 17 12.7**	**-1.2**
ZALV	**Zalesovo Beam**	**74.45**	329	P	**P**	**07 17 13.0**	**-1.0**
	comp=Z,9.5nm,0.7s,mb4.7,baz=111,slow=5.5,SNR=46						
ZALV				pP	pP	07 17 40.5	-0.4
	comp=Z,2.2nm,0.7s,baz=95,slow=4.8,SNR=2.7						
ZALV	**Zalesovo Beam**	**74.45**	329	P	**P**	**07 17 13.0**	**-0.9**
ZALV				*PP	pP	07 17 40.5	-0.4
TKM2	**Tokmak 2**	**75.39**	316	*e*P	**P**	**07 17 20.0**	**+0.3**
	comp=Z,6.9nm,0.7s,mb4.5						
TKM2	**Tokmak 2**	**75.39**	316	*e*P	**P**	**07 17 20.0**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
NVS	**Novosibirsk**	**75.69**	329	*e*P	**P**	**07 17 18.7**	**-2.4**
NVS				*e*	pP	07 17 46.5	-1.6
NVS				pmax	pmax		
	comp=N,8.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.9						
NVS				pmax	pmax		
	comp=E,14nm,1.3s						
TIXI	**Tiksi**	**75.95**	356	*e*P	**P**	**07 17 22.3**	**+0.1**
AAK	**Ala-Archa**	**76.06**	316	*e*P	**P**	**07 17 24.2**	**+0.8**
	comp=E,8.6nm,1.1s,mb4.4						
AAK	**Ala-Archa**	**76.06**	316	*e*P	**P**	**07 17 24.2**	**+0.7**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
KURK	**Kurchatov**	**76.37**	324	*e*P	**P**	**07 17 24.8**	**-0.2**
	comp=Z,21nm,1.0s,mb4.8						
KURK	**Kurchatov**	**76.37**	324*d*	*i*P	**P**	**07 17 24.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.8						
EKS2	**Erkin-Say**	**76.58**	315	*e*P	**P**	**07 17 27.0**	**+0.6**
	comp=Z,16nm,1.2s,mb4.6						
EKS2				*e*pP	pP	07 17 53.4	0.0
EKS2	**Erkin-Say**	**76.58**

PLCA pPKP pPKPdf 07 25 08.0 +0.2
PLCA Paso Flores 126.70 150 PKIKP PKPdf 07 24 39.8 +0.9
PLCA 07 25 08.0
ROSC El Rosal 144.25 87 PKP PKPdf 07 25 11.0 -1.2
comp=Z,4.1nm,0.7s,baz=258,slow=23,SNR=9.2
ROSC pPKP pPKPdf 07 25 39.5 -1.7
comp=Z,11nm,0.7s,baz=225,slow=2.9,SNR=9.4
LPAZ La Paz 144.43 125 PKP PKPdf 07 25 12.8 +0.4
comp=Z,13nm,0.8s,baz=265,slow=2.1,SNR=67
LPAZ pPKP pPKPdf 07 25 40.5 -0.8
comp=Z,7.7nm,0.7s,baz=185,slow=3.4,SNR=4.1
LPAZ La Paz 144.43 125 *e*PKPdf PKPdf 07 25 12.7 +0.4
LPAZ *ep*PKPdf pPKPdf 07 25 40.3 -1.0
LPAZ La Paz 144.43 125 *e*PKIKP PKPdf 07 25 12.7 +0.4
LPAZ *e* 07 25 40.3
CPUP Villa Florida 144.77 150 PKP PKPdf 07 25 11.8 -0.9
comp=Z,3.8nm,0.8s,baz=215,slow=2.1,SNR=8.7
CPUP Villa Florida 144.77 150 PKP PKPdf 07 25 11.8 -0.9
CPUP Villa Florida 144.77 150 PKIKP PKPdf 07 25 11.8 -0.9
KIC Kosan Boka 146.31 275 *e*PKP2 PKPab 07 25 17.2 -0.8
comp=Z,62nm,1.0s
DBIC Dimbokro 146.41 276 PKPbc PKPbc 07 25 16.5 -0.8
comp=Z,2.5nm,0.5s,baz=4.6,slow=9.0,SNR=11
DBIC pPKPbc pPKPbc 07 25 44.9 -1.0
comp=Z,7.9nm,0.7s,baz=76,slow=3.3,SNR=4.3
TIC Toumodi 146.58 276 *e*PKP2 PKPbc 07 25 15.8 -2.0
comp=Z,23nm,0.7s
TIC Toumodi 146.58 276 *e*PKP2 PKPbc 07 25 15.8 -2.0
LIC Lamto 146.60 275 *e*PKP2 PKPbc 07 25 16.5 -1.4
comp=Z,81nm,1.2s
SDV Santo Domingo 147.70 80 *e*PKPbc PKPbc 07 25 20.4 -0.5
BDFB Brasilia 158.34 154 PKPab PKPab 07 26 07.8 0.0
comp=Z,2.5nm,0.7s,baz=112,slow=3.0,SNR=6.4

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*ISCJB **21** 07:11:05.3±1.0, 22°.13S±0°.09×179°.62W±0°.09,*
h563km±14km, mb4.3/36, Error ellipse: s-maj=17.2km
s-min=8.1km az=141.2
*IDC **21** 07:11:05.9±1.7, 22°.26S×179°.48W, h569km±18km,*
mb3.7/15, mb1 3.9/17, mb1mx3.9/22, mbtmp3.8/17, Error
ellipse: s-maj=24.8km s-min=12.5km az=150.0
*NEIC **21** 07:11:06.9±0.8, 22°.26S×179°.47W, h581km±9km, mb4.5/18,*
Error ellipse: s-maj=14.7km s-min=9.1km az=135.0
*SZGRF **21** 07:11:06.6, 21°.94S×177°.87W, h33km, Fiji Islands region*
ISC 21 07:11:05.5±0.9, 22°.08S±0°.10×179°.57W±0°.09,
h551km±12km, h594km±5.1km; pP-P, n132, σ0°.76/49,
mb4.3/36, 10C-8D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.87**	**332**	*e*P	**P**	**07 12 40.6**	**+6.2**
	98nm,0.8s						
AFI	**Afiamalu**	**11.00**	**44**	P	**P**	**07 13 33.7**	**-0.1**
	7.5nm,0.3s,baz=41,slow=6.4,SNR=13						
AFI	**Afiamalu**	**11.00**	**44**	*e*P	**P**	**07 13 33.9**	**+0.1**
AFI				*e*S	**S**	**07 15 35.5**	**-0.2**
OUZ	**Omahuta**	**14.40**	**203**	*e*P	**P**	**07 14 08.8**	**+0.3**
	39nm,1.0s						
URZ	**Urewera**	**16.38**	**189**	P	**P**	**07 14 24.9**	**-3.4**
	4.4nm,0.3s,baz=3.6,slow=4.6,SNR=20						
SNZO	**South Karori**	**19.77**	**193**	*e*P	**P**	**07 14 58.4**	**-0.9**
ARMA	**Armidale**	**27.07**	**246**	*e*P	**P**	**07 16 05.3**	**+0.8**
	4.8nm,0.9s,mb4.1						
CAN	**Canberra**	**30.42**	**237**	*e*P	**P**	**07 16 34.4**	**+0.9**
	7.9nm,0.8s,mb4.3						
CTA	**Charters Tower**	**31.91**	**267**	P	**P**	**07 16 47.0**	**+0.6**
	24nm,0.7s,mb4.9,baz=57,slow=11,SNR=8.4						
CTA	**Charters Tower**	**31.91**	**267**	P	**P**	**07 16 47.0**	**+0.6**
CTAO	**Charters Tower**	**31.91**	**267**	*e*P	**P**	**07 16 47.3**	**+0.9**
	20nm,0.6s,mb4.8						
PMG	**Port Moresby**	**34.32**	**286**	*e*P	**P**	**07 17 07.6**	**+0.9**
	44nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**35.80**	**246**	P	**P**	**07 17 19.1**	**+0.3**
	8.7nm,0.9s,mb4.3,baz=96,slow=14,SNR=6.8						
ASAR	**Alice Springs**	**42.75**	**259**	P	**P**	**07 18 14.5**	**-0.4**
	12nm,0.8s,mb4.5,baz=95,slow=10.0,SNR=5.1						
WRA	**Warramunga Arr**	**42.95**	**264**	P	**P**	**07 18 15.6**	**-1.0**
	11nm,0.8s,mb4.5,baz=96,slow=7.0,SNR=15						
WRA	**Warramunga Arr**	**42.95**	**264**	P	**P**	**07 18 15.6**	**-1.0**
FITZ	**Fitzroy Crossi**	**51.38**	**264**	P	**P**	**07 19 19.5**	**-0.5**
	6.0nm,0.5s,mb4.2,baz=156,slow=12,SNR=17						
KAPI	**Kappang**	**60.99**	**277**	P	**P**	**07 20 25.1**	**-1.1**
	4.6nm,0.6s,mb4.0,baz=131,slow=9.3,SNR=3.6						
KAPI	**Kappang**	**60.99**	**277**	*e*P	**P**	**07 20 26.1**	**-0.1**
	7.7nm,1.0s,mb4.0						
JOW	**Kunigami**	**70.08**	**311**	P	**P**	**07 21 23.2**	**+0.5**
	16nm,0.7s,mb4.6,baz=149,slow=6.9,SNR=6.7						
MJAR	**Matsushiro Arr**	**70.63**	**325**	P	**P**	**07 21 25.3**	**-0.5**
	6.0nm,0.8s,mb4.2,baz=165,slow=6.0,SNR=20						
MAJO	**Matsushiro**	**70.63**	**325**	*e*P	**P**	**07 21 25.7**	**0.0**
	9.8nm,0.8s,mb4.4						
MAT	**Matsushiro**	**70.63**	**325**	P	**P**	**07 21 25.5**	**-0.3**
TPUB	**Ta-pu**	**73.62**	**304**	*e*P	**P**	**07 21 42.1**	**-1.2**
	34nm,0.8s,mb4.8						
KSRS	**Korea Array**	**77.11**	**320**	P	**P**	**07 22 03.1**	**+0.6**
	3.1nm,0.9s,mb3.7,baz=143,slow=5.2,SNR=10						
PETK	**Petropavlovsk-**	**77.43**	**346**	P	**P**	**07 22 03.6**	**-0.1**
	15nm,0.8s,mb4.5,baz=140,slow=8.1,SNR=19						
NJ2	**Nanjing**	**79.77**	**311**	*e*P	**P**	**07 22 17.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
CMB	**Columbia Colle**	**81.61**	**43**	*e*P	**P**	**07 22 26.8**	**+0.6**
	comp=Z,4.0nm,0.9s,mb3.9						
WAKR	**Walker**	**82.49**	**43**	*e*P	**P**	**07 22 31.5**	**+0.8**
CN2	**Changchun**	**82.66**	**323**	*e*P	**P**	**07 22 31.4**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.7						
WCN	**Washoe City**	**82.75**	**43**	*e*P	**P**	**07 22 33.2**	**+1.2**
	comp=Z,3.5nm,1.0s,mb3.8						
NVAR	**Mina Array Bea**	**83.17**	**44**	P	**P**	**07 22 34.3**	**+0.3**
	comp=Z,1.8nm,0.9s,mb3.6,baz=228,slow=8.0,SNR=12						
GYA	**Guiyang**	**86.16**	**300**	*e*P	**P**	**07 22 48.9**	**0.0**
GYA				pP	pP	07 24 55.0	+6.4
GYA				sP	sP	07 25 52.0	+7.8
GYA				PP	PP	07 26 22.8	+2.7
GYA				SKS		07 32 18.9	
GYA				S	S	07 32 35.6	-2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
PMR	**Palmer**	**86.89**	**14**	*e*P	**P**	**07 22 50.8**	**-0.7**
	comp=Z,9.3nm,1.0s,mb4.4						
XAN	**Xi'an**	**87.93**	**308**	P	**P**	**07 22 57.3**	**+0.3**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
XAN				pmax	pmax		
	comp=Z,22nm,6.4s						
TRF	**Thorofare Moun**	**88.30**	**13**	*e*P	**P**	**07 22 57.0**	**-1.0**
	comp=Z,10nm,0.7s,mb4.7						
HLID	**Hailey**	**88.47**	**41**	*e*P	**P**	**07 23 00.3**	**+0.9**
	comp=Z,3.3nm,1.1s,mb4.0						
SRU	**San Rafael**	**88.67**	**47**	*e*P	**P**	**07 23 01.1**	**+0.7**
	comp=Z,4.7nm,1.1s,mb4.2						
MCK	**McKinley**	**88.83**	**13**	*e*P	**P**	**07 22 59.9**	**-0.6**
	comp=Z,7.5nm,0.9s,mb4.5						
TXAR	**Lajitas Array**	**89.14**	**58**	P	**P**	**07 23 03.3**	**+0.6**
	comp=Z,1.0nm,0.9s,mb3.6,baz=207,slow=5.3,SNR=7.7						
CMAR	**Chiang Mai Arr**	**89.27**	**290**	P	**P**	**07 23 04.3**	**+0.7**
	comp=Z,8.0nm,0.9s,mb4.6,baz=128,slow=3.5,SNR=32						
CHTO	**Chiang Mai**	**89.41**	**290**	*e*P	**P**	**07 23 05.0**	**+0.8**
	comp=Z,11nm,0.8s,mb4.7						
HHC	**Hu-ho-hao-te**	**89.41**	**315**	*e*P	**P**	**07 23 03.0**	**-0.8**
HHC				pP	pP	07 25 13.6	+9.1
HHC				sP	sP	07 26 12.5	+13
HHC				PP	PP	07 26 48.3	+2.9
HHC				SKS		07 32 36.6	
HHC				S	S	07 33 02.0	-5.5
HHC				sS	sS	07 36 53.1	+10
HHC				SS	SS	07 39 21.5	+1.3
HHC				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
HHC				pmax	pmax		
	comp=Z,55nm,5.7s						
COLA	**College**	**90.06**	**13**	*e*P	**P**	**07 23 05.0**	**-1.1**
	comp=Z,2.6nm,0.9s,mb4.1						
ILAR	**Eielson Array**	**90.17**	**13**	P	**P**	**07 23 05.5**	**-1.2**
	comp=Z,1.3nm,0.9s,mb3.8,baz=218,slow=6.1,SNR=7.8						
CD2	**Chengdu**	**90.41**	**303**	*e*P	**P**	**07 23 07.3**	**-1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,30nm,5.8s						
PDAR	**Pinedale Array**	**91.11**	**44**	P	**P**	**07 23 11.3**	**-0.2**
	comp=Z,0.8nm,0.9s,mb3.7,baz=216,slow=1.3,SNR=5.9						
LZH	**Lanzhou**	**92.57**	**308**	*e*P	**P**	**07 23 19.0**	**+0.5**
LZH				pP	pP	07 25 28.0	+8.5
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
MKAR	**Makanchi Array**	**111.20**	**313**	PKiKP	PKiKP	07 28 34.2	-2.5
	comp=Z,0.5nm,0.5s,baz=260,slow=0.7,SNR=3.8						
BVAR	**Borovoye Array**	**119.33**	**319**	PKP	PKPdf	07 28 50.0	-2.1
	comp=Z,1.5nm,0.3s,baz=118,slow=2.7,SNR=15						
AKTO	**Aktyubinsk**	**127.24**	**317**	PKP	PKPdf	07 29 06.2	-1.2
	comp=Z,0.6nm,0.3s,baz=93,slow=3.4,SNR=4.4						
ARCES	**ARCESS Array B**	**130.19**	**349**	PKP	PKPdf	07 29 10.0	-2.4
	comp=Z,1.9nm,0.7s,baz=64,slow=2.8,SNR=5.8						
FINES	**FINESS Array B**	**136.84**	**342**	PKhKP	PKPpre	07 29 12.6	
	comp=Z,0.8nm,0.7s,baz=62,slow=3.3,SNR=3.1						
FINES				PKP	PKPdf	07 29 23.3	-1.8
	comp=Z,2.6nm,0.8s,baz=83,slow=2.1,SNR=6.1						
KMBO	**Kilima Mbogo**	**137.31**	**242**	PKP	PKPdf	07 29 26.7	-0.8
	comp=Z,1.3nm,1.0s,baz=0.3,slow=24,SNR=5.2						
AKASG	**Malin Array Be**	**143.64**	**329**	PKP	PKPdf	07 29 34.4	-3.3
	comp=Z,3.0nm,0.3s,baz=40,slow=4.3,SNR=36						
AKASG				SKPbc	SKPbc	07 32 21.1	-3.4
	comp=Z,0.5nm,0.5s,baz=142,slow=0.7,SNR=5.0						
AKBB	**Malin Array Si**	**143.64**	**329**	*e*PKPdf	PKPdf	07 29 34.5	-3.1
KIEV	**Kiev**	**143.65**	**329**	*e*PKPdf	PKPdf	07 29 34.5	-3.1
MALT	**Malatya**	**143.68**	**305**	*e*PKPdf	PKPdf	07 29 36.7	-1.5
MALT	**Malatya**	**143.68**	**305**	⇓*i*P	PKPdf	07 29 36.8	-1.3
SUW	**Suwalki**	**143.75**	**337**	*e*PKP	PKPdf	07 29 35.5	-2.2
BR131	**Keskin Array S**	**146.76**	**310**	*e*PKPbc	PKPbc	07 29 44.9	-1.2
BR131				*e*PKPab	PKPab	07 29 48.1	-0.9
BRTR	**Keskin Array B**	**146.76**	**310**	PKPbc	PKPbc	07 29 44.5	-1.7
	comp=Z,4.3nm,0.7s,baz=141,slow=4.1,SNR=20						
KWP	**Kalwaria Pacla**	**147.35**	**333**	*e*PKP	PKPbc	07 29 46.4	-0.9
BUR08	**Bucovina Ar. S**	**147.65**	**328**	*e*PKPbc	PKPbc	07 29 48.2	+0.1
BUR08				*e*PKPab	PKPab	07 29 52.7	+0.3
BURAR	**Bucovina Array**	**147.66**	**328**	⇓*i*P	PKPbc	07 29 47.8	-0.4
VRI	**Vrincioaia**	**148.03**	**324**	⇑*i*P	PKPbc	07 29 48.0	-1.2
OJC	**Ojcow**	**148.05**	**336**	*e*PKP	PKPbc	07 29 48.0	-1.1
KOLS	**Kolonicke sedl**	**148.07**	**332**	*e*PKP	PKPbc	07 29 48.7	-0.5
CRVS	**Cervenica-Dubn**	**148.44**	**333**	*e*PKP	PKPdf	07 29 45.1	-0.7
CRVS				*e*		07 29 49.4	
NIE	**Niedzica**	**148.50**	**335**	*e*PKP	PKPbc	07 29 49.8	-0.4
MLR	**Muntele Rosu**	**148.70**	**324**	⇓*i*P	PKPbc	07 29 49.3	-1.6
KSP	**Ksiaz**	**148.72**	**340**	*e*PKP	PKPbc	07 29 50.1	-0.6
OKC	**Ostrava-Krasne**	**148.97**	**338**	⇑*e*PKP	PKPbc	07 29 50.4	-1.0
UPC	**Upice**	**149.10**	**340**	⇑*e*PKP	PKPbc	07 29 50.8	-0.9
DPC	**Dobruska-Polom**	**149.14**	**340**	⇑*e*PKP	PKPbc	07 29 51.2	-0.6
KECS	**Kecovo**	**149.17**	**334**	*e*PKP	PKPbc	07 29 51.4	-0.5
KECS				*e*		07 29 58.5	
VOIR		**149.21**	**325**	⇓*i*P	PKPbc	07 29 51.5	-0.6
CLL	**Collm**	**149.22**	**345**	*e*PKPdf	PKPdf	07 29 46.0	-1.0
	comp=Z,2.0nm,0.7s						
CLL				⇓*i*PKPbc	PKPbc	07 29 50.9	-1.0
	comp=Z,26nm,0.9s						
CLL				*i* PKPab	PKPab	07 29 58.1	-0.6
	comp=Z,14nm,1.0s						
MORC	**Moravsky Berou**	**149.23**	**338**	*e*PKPbc	PKPbc	07 29 51.3	-0.7
MORC	**Moravsky Berou**	**149.23**	**338**	⇑*i*P	PKPbc	07 29 50.8	-1.2
IBBN	**Ibbenburen**	**149.30**	**351**	*e*PKPbc	PKPbc	07 29 51.1	-1.0
IBBN				*e*PKPab	PKPab	07 29 58.7	-0.3
CLZ	**Clausthal**	**149.30**	**348**	*e*PKPbc	PKPbc	07 29 51.4	-0.7
BRG	**Berggiesshubel**	**149.38**	**343**	*e*PKPbc	PKPbc	07 29 51.4	-0.9
BRG	**Berggiesshubel**	**149.38**	**343**	*i* PKP	PKPbc	07 29 51.4	-0.9
	comp=Z,18nm,0.8s						
BRG				*e*		07 29 58.1	
	comp=Z,7.8nm,0.9s						
DRGR		**149.46**	**329**	⇓*i*P	PKPbc	07 29 51.7	-0.9
PVCC	**Panska Ves**	**149.51**	**342**	⇑*e*PKP	PKPbc	07 29 51.9	-0.8
NEUB	**Neuenburg**	**149.61**	**346**	*e*PKPbc	PKPbc	07 29 51.9	-0.9
NEUB				*e*PKPab	PKPab	07 29 59.5	-0.8
VYHS	**Vyhne**	**149.82**	**335**	*e*PKP	PKPbc	07 29 52.4	-1.0
VYHS				*e*		07 30 01.0	
PRU	**Pruhonice**	**150.00**	**342**	⇑*e*PKP	PKPbc	07 29 53.5	-0.3
PRU				*e*PKPAB	PKPab	07 30 02.6	+0.6
MOX	**Moxa**	**150.17**	**346**	*e*PKPbc	PKPbc	07 29 53.1	-1.1
MOX				*e*PKPab	PKPab	07 30 02.1	-0.6
TANN	**Tannenbergstha**	**150.18**	**344**	*e*PKPbc	PKPbc	07 29 53.3	-0.9
TANN				*e*PKPab	PKPab	07 30 02.2	-0.5
WERD	**Werda**	**150.19**	**345**	*e*PKPbc	PKPbc	07 29 53.3	-0.9
WERD				*e*PKPab	PKPab	07 30 02.2	-0.5
BUG	**Bochum--Univer**	**150.21**	**351**	*e*PKPbc	PKPbc	07 29 53.0	-1.3
GUNZ	**Gunzen**	**150.26**	**345**	*e*PKPbc	PKPbc	07 29 53.6	-0.8
GUNZ				*e*PKPab	PKPab	07 30 02.7	-0.3
WERN	**Wernitzgruen**	**150.32**	**344**	*e*PKPbc	PKPbc	07 29 53.7	-0.8
WERN				*e*PKPab	PKPab	07 30 03.1	-0.2
NKC	**Novy Kostel**	**150.35**	**344**	⇑*e*PKP	PKPbc	07 29 53.7	-0.9
GZR	**Gura Zlata**	**150.42**	**327**	⇓*i*P	PKPbc	07 29 53.5	-1.4
BZS	**Buzias**	**150.83**	**329**	⇑*i*P	PKPbc	07 29 54.3	-1.6
ROTZ	**Rotzenmuhle**	**150.84**	**344**	*e*PKPbc	PKPbc	07 29 54.8	-1.0
ROTZ				*e*PKPab	PKPab	07 30 05.4	-0.1
KHC	**Kasperske Hory**	**151.05**	**342**	*e*PKPdf	PKPdf	07 29 48.3	-1.5
KHC				*e*PKPbc	PKPbc	07 29 55.2	-1.1
KHC				*e*PKPab	PKPab	07 30 06.5	+0.1
KHC	**Kasperske Hory**	**151.05**	**342**	⇑*e*PKP	PKPbc	07 29 55.1	-1.2
KHC				*e*PKPAB	PKPab	07 30 06.3	-0.1
GRF	**Grafenberg Arr**	**151.15**	**345**	*e*PKPab	PKPab	07 30 06.6	-0.2
WET	**Wettzell**	**151.24**	**343**	*e*PKPab	PKPab	07 30 07.0	-0.2
GERES	**GERESS Array B**	**151.27**	**342**	PKPbc	PKPbc	07 29 55.5	-1.3
	comp=Z,0.9nm,0.4s,baz=48,slow=2.0,SNR=14						
GERES				PKPab	PKPab	07 30 06.9	-0.4
	comp=Z,0.9nm,0.5s,baz=20,slow=4.3,SNR=6.8						
PKSM	**Moragy**	**151.73**	**333**	⇓*i*P	PKPbc	07 29 56.4	-1.5
GIVF	**Givet**	**151.82**	**354**	*e*PKP2	PKPab	07 30 08.6	-1.0
BAIF	**Baives**	**151.91**	**355**	*e*PKP2	PKPab	07 30 08.9	-1.1
PERS	**Pernice**	**152.76**	**338**	*i* PKPdf	PKPbc	07 30 02.4	+2.2
CDF	**Champ du Feu**	**153.16**	**350**	*e*PKP2	PKPab	07 30 14.4	-1.0
	comp=Z,15nm,1.2s						
FLN	**La Foliniere**	**153.36**	**1**	*e*PKP2	PKPab	07 30 14.4	-1.8
	comp=Z,24nm,1.1s						
MEZF	**Maizieres J'vi**	**153.38**	**353**	*e*PKP2	PKPab	07 30 15.5	-0.8
SFTF	**Sexfontaines**	**153.67**	**353**	*e*PKP2	PKPab	07 30 16.6	-0.9
BOJS	**Bojanci**	**153.67**	**336**	*i* PKPdf	PKPbc	07 29 59.7	-2.4
HAU	**Haudompre**	**153.70**	**351**	*e*PKP2	PKPab	07 30 16.6	-1.1
	comp=Z,14nm,1.2s						
GRR	**Gorron**	**153.73**	**2**	*e*PKP2	PKPab	07 30 16.4	-1.4
JAVS	**Javornik**	**153.77**	**338**	*i* PKPdf	PKPbc	07 30 00.7	-1.6
HINF	**Hinteralfeld**	**153.80**	**350**	*e*PKP2	PKPab	07 30 16.8	-1.3
	comp=Z,7.3nm,1.1s						
LOR	**Lormes**	**154.72**	**355**	*e*PKP2	PKPab	07 30 21.1	-0.9
SSF	**Saint Saulge**	**154.95**	**355**	*e*PKP2	PKPab	07 30 22.1	-1.0
	comp=Z,14nm,0.9s						
CABF	**La Chapelle**	**155.10**	**351**	*e*PKP2	PKPab	07 30 22.1	-1.6
	comp=Z,11nm,1.0s						
AVF	**Avril sur Loir**	**155.23**	**355**	*e*PKP2	PKPab	07 30 23.1	-1.2
SMF	**Signal de Mont**	**155.33**	**354**	*e*PKP2	PKPab	07 30 23.6	-1.1
	comp=Z,18nm,1.0s						
LPL	**La Plagne**	**156.06**	**349**	*e*PKP2	PKPab	07 30 27.8	-0.1
	comp=Z,12nm,1.1s						
LPG	**La Plagne**	**156.07**	**349**	*e*PKP2	PKPab	07 30 28.1	+0.1
	comp=Z,5.5nm,0.8s						
ORIF	**Oris-en-Rattie**	**156.78**	**350**	*e*PKP2	PKPab	07 30 30.6	-0.4
	comp=Z,11nm,1.0s						
MBDF	**Montbardon**	**156.81**	**348**	*e*PKP2	PKPab	07 30 30.4	-0.8
VIVF	**Saint-Julien-l**	**157.01**	**352**	*e*PKP2	PKPab	07 30 30.6	-1.4
	comp=Z,11nm,1.1s						
LFF	**La Frestale**	**157.19**	**359**	*e*PKP2	PKPab	07 30 31.7	-1.1
	comp=Z,20nm,1.0s						
SBF	**Sospel**	**157.51**	**347**	*e*PKP2	PKPab	07 30 33.6	-0.6
	comp=Z,28nm,0.8s						
PGF	**Pioggiola**	**158.36**	**343**	*e*PKP2	PKPab	07 30 37.1	-0.9
MTLF	**Montolieu**	**158.74**	**356**	*e*PKP2	PKPab	07 30 38.6	-1.0
ESDC	**Sonseca Array**	**162.06**	**11**	PKPab	PKPab	07 30 53.6	-0.7
	comp=Z,0.3nm,0.5s,baz=323,slow=3.2,SNR=9.1						

IDC 21 07:17:38.5±0.9, 27°.60N×141°.71E, h0km, mb3.9/6,
mb1 3.9/7, mb1mx3.7/25, mbtmp3.8/7, ML3.5/1, Error
ellipse: s-maj=44.3km s-min=12.1km az=54.0, Bonin
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.66**	**140**	Pn	Pg	07 17 55.2	+4.1
	26nm,0.3s,baz=342,slow=9.8,SNR=17						
CBIJ				Sn	Sg	07 18 06.8	+7.1
	62nm,0.3s,baz=272,slow=23,SNR=7.3						
MJAR	**Matsushiro Arr**	**9.39**	**342**	Pn	Pn	07 19 54.3	-0.8
	0.5nm,0.3s,baz=159,slow=11,SNR=8.6						
WRA	**Warramunga Arr**	**47.80**	**189**	P	P	07 26 17.0	-0.8
	1.7nm,0.4s,baz=12,slow=8.5,SNR=20						
ZALV	**Zalesovo Beam**	**48.83**	**319**	P	P	07 26 24.5	-0.9
	0.7nm,0.4s,baz=89,slow=7.6,SNR=3.9						
MKAR	**Makanchi Array**	**49.83**	**309**	P	P	07 26 33.6	+0.5
	0.6nm,0.8s,baz=96,slow=12,SNR=3.4						
ASAR	**Alice Springs**	**51.52**	**189**	P	P	07 26 46.6	+0.5
	0.2nm,0.4s,baz=15,slow=9.5,SNR=5.0						
BVAR	**Borovoye Array**	**57.39**	**317**	P	P	07 27 28.5	0.0
	1.7nm,0.6s,baz=88,slow=8.2,SNR=8.7						
AKTO	**Aktyubinsk**	**65.38**	**316**	P	P	07 28 23.2	+0.6
	0.9nm,0.5s,baz=72,slow=14,SNR=5.7						

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*SKO **21** 07:18:28.3, 41°.88N×23°.22E, h24km, M1.8, ML2.2*
*SOF **21** 07:18:28.1, 41°.90N×23°.21E, h16km, MD2.6*
*CSEM **21** 07:18:29.1±0.1, 41°.88N×23°.21E, h5km, MD2.6, Error*
ellipse: s-maj=2.5km s-min=2.1km az=101.0
*BEO **21** 07:18:29.2±2.4, 41°.86N×23°.21E, h2km±2km, ML2.2/2*
*THE **21** 07:18:29.3, 41°.87N×23°.22E, h2km±1km, ML2.4/7, Error*
ellipse: s-maj=1.8km s-min=0.8km az=287.0
*ATH **21** 07:18:33.7, 41°.66N×23°.45E, h5km±4km, MD3.3/6*
ISC 21 07:18:29.4±0.4, 41°.89N±0°.02×23°.22E±0°.03, h4km±4km,
n63, σ0°.67/106, 1C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.10**	**260**	*i* Pg	**Pg**	**07 18 31.6**	**+0.2**
KKB	**Krupnik**	**0.10**	**260**	*i* Pg	**Pg**	**07 18 31.6**	**+0.2**
MMB	**Musomiste**	**0.48**	**128**	*i* Pg	**Pg**	**07 18 39.1**	**+0.5**
MMB	**Musomiste**	**0.48**	**128**	*i* Pg	**Pg**	**07 18 39.1**	**+0.5**
VTS	**Vitosha**	**0.71**	**359**	⇑*i*Pg	**Pg**	**07 18 42.6**	**-0.3**
VTS				*e*Sg	**Sg**	**07 18 52.1**	**0.0**
VTS	**Vitosha**	**0.71**	**359**	P	**Pg**	**07 18 42.6**	**-0.3**
VTS				S	**Sg**	**07 18 52.5**	**+0.4**
VTS	**Vitosha**	**0.71**	**359**	*i* Pg	**Pg**	**07 18 42.6**	**-0.3**
VTS	**Vitosha**	**0.71**	**359**	P	**Pg**	**07 18 42.6**	**-0.3**
VTS				*e*Sg	**Sg**	**07 18 52.1**	**0.0**
VTS				S	**Sg**	**07 18 52.5**	**+0.4**
NVR	**Nevrokopi**	**0.72**	**138**	*e*PB	**Pg**	**07 18 42.9**	**-0.3**
NVR				*e*SB	**Sg**	**07 18 48.6**	**-3.9**
NVR	**Nevrokopi**	**0.72**	**138**	P	**Pg**	**07 18 42.7**	**-0.5**
NVR				S	**Sg**	**07 18 52.4**	**-0.1**
NVR	**Nevrokopi**	**0.72**	**138**	*e*Pb	**Pg**	**07 18 42.9**	**-0.3**
NVR				S	**Sg**	**07 18 52.4**	**-0.1**
VAY	**Valandovo**	**0.74**	**221**	P	**Pg**	**07 18 43.5**	**-0.1**
VAY				S	**Sg**	**07 18 53.4**	**+0.2**
VAY	**Valandovo**	**0.74**	**221**	*e*Pg	**Pg**	**07 18 43.4**	**-0.2**
VAY				*e*Sg	**Sg**	**07 18 53.8**	**+0.5**
VAY				*e*Lg		07 18 53.9	
	comp=N,88nm,0.5s						
VAY				*e*Lg		07 18 54.1	
	comp=E,81nm,0.6s						
VAY	**Valandovo**	**0.74**	**221**	P	**Pg**	**07 18 43.5**	**-0.1**
VAY				S	**Sg**	**07 18 53.4**	**+0.2**
SRS	**Serrai**	**0.82**	**160**	P	**Pg**	**07 18 44.7**	**-0.3**
SRS				S	**Sg**	**07 18 55.9**	**+0.3**
SRS	**Serrai**	**0.82**	**160**	P	**Pg**	**07 18 44.7**	**-0.3**
SRS				S	**

*THE **21** 07:41:07.5, 38.'07N×23.'24E, h26km±3km, ML2.2/2, Error ellipse: s-maj=4.1km s-min=1.0km az=222.0*

ISC 21 07:41:07.1±0.5, 38.'06N±0.'03×23.'23E±0.'04, h29km±4km, n31, σ0.963/49, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.21**	**259**	*e*PB	**Pb**	**07 41 12.4**	**-0.9**
LTK				*e*SB	**Sb**	**07 41 16.4**	**-1.2**
LTK	**Loutraki**	**0.21**	**259**	P	**Pb**	**07 41 12.3**	**-1.0**
LTK				S	**Sb**	**07 41 18.1**	**+0.5**
LTK	**Loutraki**	**0.21**	**259**	*e*Pb	**Pb**	**07 41 12.4**	**-0.9**
LTK				*e*Sb	**Sb**	**07 41 16.4**	**-1.2**
LTK				S	**Sb**	**07 41 18.1**	**+0.5**
ATH	**Athens Observa**	**0.40**	**103**	*e*PB	**Pb**	**07 41 15.9**	**0.0**
ATH				*e*SB	**Sb**	**07 41 22.0**	**+0.1**
ATH	**Athens Observa**	**0.40**	**103**	P	**Pb**	**07 41 15.5**	**-0.4**
ATH	**Athens Observa**	**0.40**	**103**	P	**Pb**	**07 41 15.5**	**-0.4**
ATH	**Athens Observa**	**0.40**	**103**	*e*Pb	**Pb**	**07 41 15.9**	**0.0**
ATH				*e*Sb	**Sb**	**07 41 22.0**	**+0.1**
ATHU	**Athens Univers**	**0.45**	**102**	P	**Pb**	**07 41 17.3**	**+0.6**
ATHU	**Athens Univers**	**0.45**	**102**	P	**Pb**	**07 41 17.3**	**+0.6**
VLY	**Voula,Athens**	**0.49**	**115**	*e*PN	**Pn**	**07 41 17.4**	**-0.8**
VLY				*e*SN	**Sb**	**07 41 24.9**	**+0.4**
VLY	**Voula,Athens**	**0.49**	**115**	P	**Pb**	**07 41 17.0**	**-0.4**
VLY	**Voula,Athens**	**0.49**	**115**	P	**Pb**	**07 41 17.0**	**-0.4**
VLY	**Voula,Athens**	**0.49**	**115**	*e*Pn	**Pn**	**07 41 17.4**	**-0.8**
VLY				*e*Sn	**Sb**	**07 41 24.9**	**+0.4**
PTL	**Penteli**	**0.50**	**91**	*e*PN	**Pn**	**07 41 17.5**	**-0.8**
PTL				*e*SN	**Sb**	**07 41 24.9**	**+0.2**
PTL	**Penteli**	**0.50**	**91**	P	**Pb**	**07 41 17.1**	**-0.5**
PTL				S	**Sb**	**07 41 25.2**	**+0.5**
PTL	**Penteli**	**0.50**	**91**	P	**Pb**	**07 41 17.1**	**-0.5**
PTL	**Penteli**	**0.50**	**91**	*e*Pn	**Pn**	**07 41 17.5**	**-0.8**
PTL				*e*Sn	**Sb**	**07 41 24.9**	**+0.2**
PTL				S	**Sb**	**07 41 25.2**	**+0.5**
DID	**Didima**	**0.56**	**179**	*e*PN	**Pn**	**07 41 19.0**	**0.0**
DID				*e*SN	**Sn**	**07 41 27.3**	**+0.1**
DID	**Didima**	**0.56**	**179**	P	**Pb**	**07 41 18.9**	**+0.5**
DID	**Didima**	**0.56**	**179**	*e*Pn	**Pn**	**07 41 19.0**	**0.0**
DID				*e*Sn	**Sn**	**07 41 27.3**	**+0.1**
LKR	**Lokris**	**0.61**	**343**	*e*PN	**Pb**	**07 41 18.9**	**-0.5**
LKR				*e*SN	**Sn**	**07 41 28.4**	**-0.4**
LKR	**Lokris**	**0.61**	**343**	P	**Pb**	**07 41 18.9**	**-0.5**
LKR				S	**Sb**	**07 41 29.0**	**+1.3**
LKR	**Lokris**	**0.61**	**343**	P	**Pb**	**07 41 18.9**	**-0.5**
LKR				*e*Sn	**Sn**	**07 41 28.4**	**-0.4**
LKR				S	**Sb**	**07 41 29.0**	**+1.3**
ATAL	**Atalanti**	**0.65**	**346**	P	**Pb**	**07 41 19.6**	**-0.4**
ATAL	**Atalanti**	**0.65**	**346**	P	**Pb**	**07 41 19.6**	**-0.4**
DSF	**Desfina**	**0.65**	**303**	P	**Pb**	**07 41 20.3**	**+0.3**
DSF	**Desfina**	**0.65**	**303**	P	**Pb**	**07 41 20.3**	**+0.3**
NEO	**Neokhori**	**1.24**	**360**	*e*PN	**Pn**	**07 41 29.1**	**+0.6**
NEO	**Neokhori**	**1.24**	**360**	*e*Pn	**Pn**	**07 41 29.1**	**+0.6**
VLI	**Veliai**	**1.36**	**190**	*e*PN	**Pn**	**07 41 31.3**	**+1.2**
VLI	**Veliai**	**1.36**	**190**	*e*Pn	**Pn**	**07 41 31.3**	**+1.2**

*NIED **21** 07:44:00, 32.'30N×132.'20E, h20km, Mw3.7 Best double couple: M0=4.45000×10^14 NP1:φs=17.00000°, δ79.00000°, λ87.00000°. NP2:φs=211.00000°, δ11.00000°, λ104.00000°.*

JMA 21 07:44:27.0±0.1, 32.'27N×132.'16E, h17km±2km, M3.9, 2C-5D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.56**	**268**	⇓P	Pg	07 44 37.6	-0.4
JTSN				S	Sg	07 44 45.6	+0.1
JKIT	**Kitakata**	**0.69**	**301**	⇓P	Pg	07 44 40.3	-0.3
JKIT				S	Sg	07 44 50.2	+0.3
JTO	**Tosashimizu**	**0.80**	**43**	⇓P	Pb	07 44 41.6	-0.9
JTO				*e*S	Sb	07 44 53.1	+0.1
JUS	**Usuki**	**0.86**	**337**	⇓P	Pb	07 44 43.4	-0.2
JUS				S	Sb	07 44 55.6	+0.7
JTZ	**Takazaki**	**0.98**	**248**	P	Pb	07 44 45.2	-0.3
JTZ				S	Sb	07 44 59.7	+1.5
UWA2	**Uwa jima 2**	**1.02**	**22**	⇑P	Pb	07 44 45.3	-0.9
UWA2				*e*S	Sb	07 44 59.6	+0.3
JNAR	**Kushima--Naru**	**1.06**	**226**	⇑P	Pb	07 44 46.8	0.0
JNAR				*e*S	Sb	07 45 01.6	+1.2
JIU2	**Izumi 2**	**1.17**	**284**	⇓P	Pn	07 44 48.3	-0.3

*ISCJB **21** 07:45:21.5±0.7, 20.'69S±0.'07×178.'39W±0.'06, h556km±8km, mb4.3/61, Error ellipse: s-maj=12.0km s-min=7.1km az=146.0*

*NEIC **21** 07:45:21.7±0.7, 20.'58S×178.'31W, h546km±8km, mb4.4/42, Error ellipse: s-maj=12.1km s-min=6.2km az=143.0*

*SZGRF **21** 07:45:21.3, 20.'61S×177.'10W, h33km, Fiji Islands region*

*IDC **21** 07:45:24.1±2.5, 20.'46S×178.'37W, h570km±28km, mb3.7/12, mb1 3.9/12, mb1mx3.8/17, mbtmp3.7/12, Error ellipse: s-maj=19.9km s-min=10.6km az=152.0*

ISC 21 07:45:22.5±0.8, 20.'58S±0.'09×178.'39W±0.'06, h553km±8km, n360, σ0.55/282, mb4.3/61, 119C-86D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.40**	**309**	*e*Pn	**P**	**07 46 47.1**	**-0.6**
MSVF				*e*Sn	**S**	**07 47 57.1**	**+0.1**
AFI	**Afiamalu**	**9.15**	**45**	P	**P**	**07 47 24.8**	**-7.2**
AFI	1.6nm,0.3s,baz=60,slow=8.6,SNR=5.7			S	**S**	**07 49 05.7**	**-13**
AFI	**Afiamalu**	**9.15**	**45**	*e*P	**P**	**07 47 24.8**	**-7.2**
AFI	3.5nm,0.3s,baz=89,slow=9.4,SNR=6.5			*e*S	**S**	**07 49 03.9**	**-14**
URZ	**Urewera**	**18.05**	**192**	P	**P**	**07 48 57.4**	**-3.1**
URZ	1.3nm,0.3s,baz=357,slow=8.4,SNR=9.5			S	**S**	**07 51 51.9**	**-6.1**
ARMA	**Armidale**	**28.71**	**244**	*e*P	**P**	**07 50 37.6**	**+2.0**
CTAO	0.1nm,0.3s,baz=315,slow=19,SNR=2.6 **Charters Tower**	**33.12**	**265**	*e*P	**P**	**07 51 14.0**	**+0.4**
STKA	4.5nm,0.9s,mb4.1 **Stephens Creek**	**37.43**	**244**	P	**P**	**07 51 50.1**	**+0.9**
ASAR	7.8nm,0.6s,mb4.4 **Alice Springs**	**44.15**	**257**	P	**P**	**07 52 43.4**	**+0.6**
ASAR	2.8nm,0.7s,mb3.9,baz=50,slow=6.4,SNR=6.2 17nm,0.8s,mb4.6,baz=98,slow=7.8,SNR=187			PcP	PcP	07 54 16.1	+0.5
ASAR	4.0nm,0.8s,baz=103,slow=4.1,SNR=13			S	**S**	**07 58 36.6**	**+0.7**
WB2	1.6nm,0.8s,baz=92,slow=15,SNR=11 **Warramunga Arr**	**44.22**	**262**	*e*P	**P**	**07 52 42.9**	**-0.4**
WRA	**Warramunga Arr**	**44.23**	**262**	P	**P**	**07 52 43.2**	**-0.2**
WRA	7.1nm,0.6s,mb4.4,baz=97,slow=8.6,SNR=124 2.0nm,0.8s,baz=94,slow=3.7,SNR=6.8			PcP	PcP	07 54 16.0	+0.1
WRA	1.2nm,1.0s,baz=96,slow=14,SNR=5.0			S	**S**	**07 58 35.5**	**-1.7**
POHA	**Pohakuloa**	**45.91**	**31**	*e*P	**P**	**07 52 56.4**	**+0.3**
QSPA	43nm,0.5s,mb5.2 **South Pole Qui**	**69.49**	**180**	P	**P**	**07 55 36.6**	**+1.3**
MJAR	3.5nm,0.8s,mb3.9,baz=18,slow=2.0,SNR=10 **Matsushiro Arr**	**70.05**	**324**	P	**P**	**07 55 38.7**	**-0.6**
PETK	0.6nm,0.4s,mb3.5,baz=168,slow=6.0,SNR=5.8 **Petropavlovsk-**	**76.25**	**345**	P	**P**	**07 56 13.5**	**-0.7**
KSRS	5.8nm,0.7s,mb4.1,baz=146,slow=8.4,SNR=10 **Korea Array**	**76.70**	**319**	P	**P**	**07 56 17.9**	**+0.8**
SAO	1.9nm,0.9s,mb3.5,baz=147,slow=5.7,SNR=6.7 **San Andreas Ge**	**78.33**	**43**	*e*P	**P**	**07 56 25.5**	**-0.5**
ARVC	12nm,0.9s,mb4.2 **Arvin**	**79.11**	**46**	⇓P	**P**	**07 56 30.0**	**-0.2**
MWC	baz=79 **Mount Wilson**	**79.12**	**47**	*e*P	**P**	**07 56 30.1**	**-0.2**
MURC	9.9nm,1.0s,mb4.1 **Murrieta**	**79.37**	**48**	⇑P	**P**	**07 56 31.2**	**-0.3**
KHMM	baz=80 **Horse Mountain**	**79.44**	**39**	*e*P	**P**	**07 56 31.9**	**+0.1**
MONP	12nm,1.1s,mb4.2 **Monument Peak**	**79.53**	**49**	⇑P	**P**	**07 56 32.5**	**0.0**
EDW2	baz=80 **Edwards Air Fo**	**79.53**	**47**	⇓P	**P**	**07 56 32.6**	**+0.2**
NJ2	baz=80 **Nanjing**	**79.65**	**310**	*e*P	**P**	**07 56 32.9**	**-0.2**
NJ2	comp=Z,20nm,1.0s,mb4.4			pmax	pmax		
ISA	**Isabella**	**79.65**	**46**	⇑P	**P**	**07 56 33.1**	**+0.1**
ISA	baz=80 **Isabella**	**79.65**	**46**	*e*P	**P**	**07 56 33.2**	**+0.2**
CMB	comp=Z,19nm,1.6s,mb4.2 **Columbia Colle**	**79.76**	**43**	*e*P	**P**	**07 56 33.4**	**-0.2**
OHCM	comp=Z,8.0nm,1.0s,mb4.0 **Honcut**	**79.85**	**41**	*e*P	**P**	**07 56 33.2**	**-0.8**
WDC	**Whiskeytown Da**	**79.96**	**40**	*e*P	**P**	**07 56 34.8**	**+0.2**
SWSC	comp=Z,7.9nm,0.9s,mb4.0 **Sam W. Stewart**	**80.00**	**49**	⇓P	**P**	**07 56 35.3**	**+0.3**
LRMC	baz=80 **Laurel Mountai**	**80.07**	**46**	⇓P	**P**	**07 56 35.3**	**+0.1**
CWC	baz=80 **Cottonwood Cre**	**80.35**	**45**	⇑P	**P**	**07 56 36.9**	**+0.3**
MDJ	baz=80 **Mudanjiang**	**80.37**	**325**	P	**P**	**07 56 36.8**	**+0.3**
MDJ				pmax	pmax		
MDJ	comp=Z,7.0nm,0.8s,mb4.0			pmax	pmax		
BELC	comp=Z,51nm,5.0s **Belle Mtn. Jos**	**80.43**	**48**	⇑P	**P**	**07 56 37.0**	**-0.1**
MLAC	baz=81 **Mammoth Lakes**	**80.53**	**44**	⇑P	**P**	**07 56 38.0**	**+0.5**
MPMC	baz=81 **Manual Prospec**	**80.53**	**46**	⇓P	**P**	**07 56 37.7**	**+0.1**
MTUM	baz=81 **Tungsten Hills**	**80.55**	**44**	*e*P	**P**	**07 56 37.0**	**-0.6**
GSC	**Goldstone**	**80.58**	**47**	*e*P	**P**	**07 56 37.2**	**-0.6**
BC3	comp=Z,8.9nm,1.3s,mb4.0 **Big Chuckawall**	**80.63**	**49**	⇓P	**P**	**07 56 38.3**	**+0.2**
WAKR	baz=81 **Walker**	**80.64**	**43**	*e*P	**P**	**07 56 38.2**	**0.0**
HEC	**Hector,Ludlow**	**80.65**	**47**	⇑P	**P**	**07 56 37.7**	**-0.5**
WCN	baz=81 **Washoe City**	**80.91**	**42**	⇓P	**P**	**07 56 39.7**	**+0.2**
WCN	baz=81,SNR=12 **Washoe City**	**80.91**	**42**	*e*P	**P**	**07 56 39.5**	**+0.1**
HUMO	comp=Z,10nm,1.0s,mb4.2 **Hull Mountain**	**80.98**	**38**	*e*P	**P**	**07 56 39.6**	**-0.2**
GMRC	comp=Z,15nm,1.1s,mb4.3 **Granite Mounta**	**81.08**	**48**	⇑P	**P**	**07 56 40.5**	**0.0**
IRM	baz=81 **Iron Mountain**	**81.11**	**49**	⇑P	**P**	**07 56 40.8**	**+0.2**
FURC	baz=81 **Furnace Creek,**	**81.18**	**46**	⇑P	**P**	**07 56 40.6**	**-0.4**
TUQ	baz=81 **Turquoise Moun**	**81.25**	**47**	⇑P	**P**	**07 56 41.3**	**-0.1**
NVAR	baz=81 **Mina Array Bea**	**81.33**	**44**	P	**P**	**07 56 41.3**	**-0.4**
Y12C	comp=Z,5.9nm,0.9s,mb4.0,baz=225,slow=9.5,SNR=41 **Blythe**	**81.33**	**49**	⇑P	**P**	**07 56 41.8**	**+0.1**
113A	baz=82 **Mohawk Valley,**	**81.36**	**50**	⇓P	**P**	**07 56 41.8**	**-0.1**
PAHR	baz=82 **Pah Rah Range**	**81.38**	**42**	*e*P	**P**	**07 56 41.8**	**-0.1**
LDFC	comp=Z,13nm,1.1s,mb4.3 **Landfair**	**81.62**	**48**	*e*P	**P**	**07 56 43.3**	**0.0**
214A	comp=Z,24nm,1.1s,mb4.5 **Organ Pipe Nat**	**81.64**	**51**	⇑P	**P**	**07 56 43.3**	**-0.1**
Z13A	baz=82 **Yuma Proving G**	**81.67**	**50**	P	**P**	**07 56 43.5**	**0.0**
V11A	baz=82,SNR=9.0 **Goodsprings**	**81.81**	**47**	⇑P	**P**	**07 56 43.9**	**-0.2**
Y13A	baz=82 **Salome**	**81.86**	**49**	⇑P	**P**	**07 56 44.5**	**0.0**
PDMCI	baz=82 **Parker Dam,Lak**	**81.89**	**49**	⇑P	**P**	**07 56 44.8**	**+0.2**
114A	baz=82 **Black Gap (USA**	**82.00**	**51**	⇓P	**P**	**07 56 45.2**	**0.0**
MOD	baz=82 **Modoc**	**82.11**	**40**	*e*P	**P**	**07 56 45.4**	**-0.1**
CN2	comp=Z,7.0nm,0.9s,mb4.1 **Changchun**	**82.14**	**323**	*e*P	**P**	**07 56 42.0**	**-3.6**
CN2				pmax	pmax		
K05A	comp=Z,10.0nm,0.6s,mb4.4 **Summer Lake**	**82.25**	**39**	⇑P	**P**	**07 56 46.7**	**+0.4**
X13A	baz=82 **Yucca**	**82.26**	**49**	⇑P	**P**	**07 56 46.3**	**-0.2**
SHPR	baz=82,SNR=6.7 **Sheep Range**	**82.35**	**47**	*e*P	**P**	**07 56 46.0**	**-0.9**
115A	**Sonoran Desert**	**82.45**	**51**	⇑P	**P**	**07 56 47.4**	**-0.1**
W13A	baz=83 **Hualapai Mount**	**82.49**	**48**	⇓P	**P**	**07 56 48.0**	**+0.3**
Y14A	baz=83 **Wickenburg**	**82.51**	**50**	⇑P	**P**	**07 56 47.8**	**0.0**
H04A	baz=83,SNR=6.6 **Detroit Lake**	**82.70**	**37**	⇑P	**P**	**07 56 47.8**	**-0.6**
U12A	baz=83,SNR=7.6 **Valley of Fire**	**82.73**	**47**	⇑P	**P**	**07 56 49.0**	**+0.1**
116A	baz=83,SNR=6.0 **Eloy**	**82.76**	**51**	⇓P	**P**	**07 56 49.1**	**+0.1**
V13A	baz=83 **Grand Canyon W**	**82.81**	**48**	⇑P	**P**	**07 56 49.3**	**+0.1**
X14A	baz=83,SNR=5.9 **Yava**	**82.86**	**49**	⇑P	**P**	**07 56 50.0**	**+0.5**
Y15A	baz=83,SNR=9.6 **Casa Rosa Ranc**	**83.00**	**50**	P	**P**	**07 56 50.6**	**+0.3**
217A	baz=83,SNR=9.9 **Green Valley**	**83.03**	**52**	⇑P	**P**	**07 56 51.1**	**+0.7**
R11A	baz=83,SNR=11 **Troy Canyon, C**	**83.06**	**45**	⇑P	**P**	**07 56 50.1**	**-0.3**
W14A	baz=83,SNR=5.8 **Seligman**	**83.11**	**49**	⇑P	**P**	**07 56 51.1**	**+0.4**
U13A	baz=83,SNR=7.0 **Pakoon Wash**	**83.12**	**47**	⇓P	**P**	**07 56 51.1**	**+0.4**
BMN	baz=83,SNR=14 **Battle Mountai**	**83.15**	**42**	*e*P	**P**	**07 56 50.6**	**-0.3**
V14A	comp=Z,12nm,1.0s,mb4.4 **Boquillas Ranc**	**83.31**	**48**	⇑P	**P**	**07 56 52.2**	**+0.5**
TUC	baz=83,SNR=7.2 **Tucson**	**83.31**	**52**	*e*P	**P**	**07 56 52.2**	**+0.4**
X15A	comp=Z,11nm,1.1s,mb4.3 **Humboldt**	**83.34**	**50**	⇓P	**P**	**07 56 52.5**	**+0.6**
F04A	baz=84,SNR=6.5 **Amboy**	**83.35**	**36**	⇓P	**P**	**07 56 51.5**	**-0.2**
HOOD	baz=84 **Mount Hood Mea**	**83.40**	**36**	*e*P	**P**	**07 56 51.8**	**-0.2**
WVOR	comp=Z,16nm,1.2s,mb4.4 **Wild Horse Val**	**83.42**	**40**	*e*P	**P**	**07 56 51.4**	**-0.7**
117A	comp=Z,11nm,1.1s,mb4.3 **Oracle**	**83.47**	**52**	⇑P	**P**	**07 56 53.2**	**+0.5**
T13A	baz=84,SNR=6.6 **Saint George**	**83.48**	**47**	⇑P	**P**	**07 56 52.4**	**-0.1**
318A	baz=84,SNR=9.3 **Bisbee**	**83.48**	**53**	⇓P	**P**	**07 56 52.6**	**-0.1**
NLWA	baz=84,SNR=11 **Neilton Lookou**	**83.50**	**34**	*e*P	**P**	**07 56 52.2**	**-0.2**
Y16A	comp=Z,11nm,1.0s,mb4.3 **Circle Bar Ran**	**83.58**	**50**	⇓P	**P**	**07 56 53.6**	**+0.5**
U14A	baz=84,SNR=11 **Mt Trumbull**	**83.66**	**47**	⇓P	**P**	**07 56 53.9**	**+0.5**
218A	baz=84,SNR=16 **Dragoon**	**83.70**	**53**	P	**P**	**07 56 54.4**	**+0.6**
S13A	baz=84,SNR=13 **Holt Ranch, En**	**83.80**	**46**	P	**P**	**07 56 54.2**	**+0.1**
I07A	baz=84,SNR=9.1 **Izee**	**83.87**	**38**	⇑P	**P**	**07 56 54.6**	**+0.3**
X16A	baz=84,SNR=16 **Lo Mia Camp, P**	**83.87**	**50**	⇓P	**P**	**07 56 54.8**	**+0.2**
G06A	baz=84,SNR=8.3 **Carlson Farm,**	**83.91**	**37**	⇑P	**P**	**07 56 54.4**	**-0.1**
319A	baz=84,SNR=5.4 **Douglas**	**83.98**	**53**	⇑P	**P**	**07 56 55.9**	**+0.7**
J08A	baz=84,SNR=7.0 **Circle Bar Ran**	**84.05**	**39**	⇑P	**P**	**07 56 55.3**	**0.0**
V15A	baz=84 **Kaibab Nationa**	**84.06**	**48**	⇑P	**P**	**07 56 56.0**	**+0.6**
T14A	baz=84,SNR=5.6 **Hurricane**	**84.06**	**47**	⇓P	**P**	**07 56 55.6**	**+0.2**
118A	baz=84 **Homack Ranch,**	**84.07**	**52**	⇑P	**P**	**07 56 55.9**	**+0.3**
CCUT	baz=84 **Cedar City**	**84.12**	**46**	*e*P	**P**	**07 56 55.9**	**+0.2**
U15A	comp=Z,9.0nm,1.3s,mb4.1 **North Rim**	**84.28**	**48**	⇓P	**P**	**07 56 56.9**	**+0.4**
X17A	baz=84,SNR=12 **Forest Lakes**	**84.29**	**50**	⇑P	**P**	**07 56 57.1**	**+0.5**
219A	baz=84 **White Tail Can**	**84.30**	**53**	⇓P	**P**	**07 56 56.8**	**+0.1**
T15A	baz=84,SNR=6.9 **Red Dirt Ranch**	**84.52**	**47**	P	**P**	**07 56 58.1**	**+0.4**
320A	baz=85,SNR=5.5 **Kipp Ranch, An**	**84.53**	**54**	⇑P	**P**	**07 56 58.7**	**+0.8**
Y18A	baz=85,SNR=7.9 **Canyon Day Jun**	**84.58**	**51**	P	**P**	**07 56 58.6**	**+0.6**
220A	baz=85,SNR=9.2 **Playas Peak, P**	**84.80**	**53**	P	**P**	**07 57 00.1**	**+1.0**
S15A	baz=85,SNR=6.1 **Panguitch**	**84.87**	**47**	⇓P	**P**	**07 57 00.4**	**+1.0**
G08A	baz=85 **Pilot Rock**	**84.90**	**38**	⇓P	**P**	**07 56 59.5**	**+0.2**
Q14A	baz=85,SNR=12 **Sevier Lake (B**	**84.93**	**45**	⇓P	**P**	**07 56 59.7**	**+0.1**
V17A	baz=85,SNR=6.2 **Tonalea, Kykot**	**84.93**	**49**	⇓P	**P**	**07 56 59.9**	**+0.2**
U16A	baz=85 **Tuba City**	**84.95**	**49**	⇑P	**P**	**07 57 00.1**	**+0.4**
120A	baz=85,SNR=6.7 **U Bar Ranch, L**	**85.02**	**53**	⇑P	**P**	**07 57 01.0**	**+0.7**
T16A	baz=85 **Glen Canyon Da**	**85.11**	**48**	⇑P	**P**	**07 57 00.5**	**0.0**
E07A	baz=85,SNR=5.2 **Sunnyside**	**85.14**	**36**	⇓P	**P**	**07 57 01.1**	**+0.6**
PMR	baz=85 **Palmer**	**85.18**	**14**	*e*P	**P**	**07 56 59.5**	**-0.7**
RSW	comp=Z,38nm,1.5s,mb4.7 **Rattlesnake Hi**	**85.19**	**36**	*e*P	**P**	**07 57 00.7**	**0.0**
HAWA	**Hanford**	**85.22**	**36**	*e*P	**P**	**07 57 00.3**	**-0.6**
Y19A	comp=Z,12nm,1.1s,mb4.4 **Nutrioso**	**85.23**	**51**	⇓P	**P**	**07 57 02.0**	**+0.8**
Z20A	baz=85,SNR=8.4 **Nine Sixteen R**	**85.32**	**52**	⇓P	**P**	**07 57 02.3**	**+0.6**
221A	baz=85 **Mesquite Ranch**	**85.41**	**54**	⇑P	**P**	**07 57 02.5**	**+0.4**
ETW	baz=86 **Entiat**	**85.51**	**35**	*e*P	**P**	**07 57 01.8**	**-0.5**
T17A	**Navajo Res., N**	**85.60**	**48**	⇓P	**P**	**07 57 03.2**	**+0.3**
121A	baz=86 **Cookes Peak, D**	**85.65**	**53**	⇑P	**P**	**07 57 03.9**	**+0.6**
MFID	baz=86 **Camas Ranch**	**85.68**	**40**	⇓P	**P**	**07 57 03.1**	**0.0**
W19A	baz=86,SNR=5.4 **Sanders**	**85.69**	**50**	⇑P	**P**	**07 57 03.2**	**-0.2**
Y20A	baz=86 **Horse Springs,**	**85.85**	**52**	⇓P	**P**	**07 57 04.5**	**+0.3**
S17A	baz=86,SNR=6.2 **Black Ridge (B**	**85.92**	**47**	⇓P	**P**	**07 57 03.9**	**-0.5**
D08A	baz=86 **Wollman Farm,**	**85.96**	**36**	⇓P	**P**	**07 57 04.1**	**-0.2**
U18A	baz=86 **Rough Rock, Ch**	**85.97**	**49**	⇓P	**P**	**07 57 04.7**	**0.0**
X20A	baz=86 **Quemado**	**86.06**	**51**	⇓P	**P**	**07 57 05.8**	**+0.6**
E09A	baz=86 **Wood Farm, Sta**	**86.07**	**37**	⇓P	**P**	**07 57 04.6**	**-0.3**
Z21A	baz=86 **St. Cloud Mine**	**86.09**	**52**	⇓P	**P**	**07 57 06.1**	**+0.7**
OD2	baz=86 **Odessa Site #2**	**86.27**	**36**	*e*P	**P**	**07 57 04.3**	**-1.5**
F10A	**Beach Ranch, E**	**86.28**	**38**	⇓P	**P**	**07 57 05.6**	**-0.3**
I12A	baz=86,SNR=8.5 **Atlanta**	**86.31**	**40**	⇑P	**P**	**07 57 06.4**	**+0.3**
T18A	baz=86,SNR=10 **Mexican Hat**	**86.32**	**48**	⇓P	**P**	**07 57 06.5**	**+0.2**
W20A	baz=86 **Ramah**	**86.33**	**50**	⇓P	**P**	**07 57 06.9**	**+0.4**
R17A	baz=86,SNR=5.6 **Hanksville Air**	**86.37**	**47**	⇓P	**P**	**07 57 06.2**	**-0.3**
GYA	baz=86 **Guiyang**	**86.37**	**300**	*e*P	**P**	**07 57 05.9**	**-0.9**
GYA				pP	pP	07 59 06.4	-0.5
GYA				sP	sP	08 00 01.3	-1.4
GYA				PP	PP	08 00 41.3	+2.7
GYA				SKS		08 06 38.4	
GYA				S	S	08 06 55.8	-1.1
GYA				pmax	pmax		
U19A	comp=Z,10.0nm,1.0s,mb4.4 **Dine' College,**	**86.38**	**49**	⇑P	**P**	**07 57 06.6**	**0.0**
Y21A	baz=86 **Point of Rocks**	**86.41**	**52**	⇑P	**P**	**07 57 07.3**	**+0.5**
B08A	baz=86 **Colville Reser**	**86.50**	**35**	⇓P	**P**	**07 57 06.3**	**-0.6**
Z22A	baz=87 **Elephant Butte**	**86.59**	**53**	⇓P	**P**	**07 57 07.8**	**+0.1**
TRF	baz=87 **Thorofare Moun**	**86.60**	**12**	*e*P	**P**	**07 57 05.5**	**-1.5**
HLID	comp=Z,13nm,0.8s,mb4.6 **Hailey**	**86.62**	**41**	⇓P	**P**	**07 57 07.9**	**+0.3**
HLID	baz=87,SNR=9.2 **Hailey**	**86.62**	**41**	*e*P	**P**	**07 57 07.4**	**-0.2**
J13A	comp=Z,5.0nm,0.9s,mb4.1 **Cove Ranch, Pi**	**86.68**	**41**	P	**P**	**07 57 08.1**	**+0.2**
C09A	baz=87,SNR=8.2 **Chrisman Ranch**	**86.75**	**36**	⇑P	**P**	**07 57 07.8**	**-0.2**
SRU	baz=87 **San Rafael**	**86.84**	**46**	⇑P	**P**	**07 57 08.5**	**-0.2**
SRU	baz=87 **San Rafael**	**86.84**	**46**	*e*P	**P**	**07 57 08.4**	**-0.3**
P17A	comp=Z,7.1nm,1.1s,mb4.2 **Butcher Ranch,**	**86.87**	**46**	⇓P	**P**	**07 57 09.0**	**+0.1**
H12A	baz=87 **Diamond D Ranc**	**86.89**	**40**	⇑P	**P**	**07 57 08.8**	**0.0**
324A	baz=87,SNR=14 **Moseley Ranch,**	**86.90**	**55**	⇑P	**P**	**07 57 09.3**	**+0.1**
Y22A	baz=87,SNR=11 **Socorro**	**86.90**	**52**	⇓P	**P**	**07 57 09.3**	**+0.1**
R18A	baz=87 **Canyonlands Na**	**86.91**	**47**	⇑P	**P**	**07 57 08.9**	**-0.1**
G12A	baz=87 **Big Creek, Yel**	**86.92**	**39**	⇑P	**P**	**07 57 09.0**	**0.0**
I13A	baz=87,SNR=11 **Wildhorse Cree**	**86.99**	**41**	⇓P	**P**	**07 57 09.6**	**+0.2**
425A	baz=87,SNR=5.9 **Indio Mountain**	**87.00**	**56**	⇑P	**P**	**07 57 10.1**	**+0.4**
J14A	baz=87,SNR=10 **Carey**	**87.05**	**41**	P	**P**	**07 57 10.1**	**+0.5**
MNTX	baz=87,SNR=6.4 **Cornudas Mount**	**87.09**	**55**	⇑P	**P**	**07 57 10.2**	**+0.1**
Q18A	baz=87,SNR=10 **Rafter H Ranch**	**87.10**	**46**	⇑P	**P**	**07 57 09.4**	**-0.5**
MCK	baz=87 **McKinley**	**87.12**	**13**	*e*P	**P**	**07 57 08.2**	**-1.2**
S19A	comp=Z,11nm,0.8s,mb4.5 **Harvey Farm, M**	**87.12**	**48**	⇓P	**P**	**07 57 10.0**	**-0.1**
626A	baz=87 **Big Bend Ranch**	**87.13**	**57**	⇑P	**P**	**07 57 10.3**	**-0.1**
224A	baz=87,SNR=6.6 **Cornudas Mount**	**87.15**	**54**	P	**P**	**07 57 10.6**	**+0.2**
O17A	baz=87,SNR=8.4 **Robinson Place**	**87.23**	**45**	⇑P	**P**	**07 57 10.9**	**+0.3**
H13A	baz=87 **Challis**	**87.25**	**40**	⇑P	**P**	**07 57 10.7**	**+0.2**
325A	baz=87 **Bean Ranch, Si**	**87.26**	**55**	⇑P	**P**	**07 57 10.8**	**-0.1**
R19A	baz=87,SNR=11 **Curley Farm, L**	**87.30**	**47**	⇑P	**P**	**07 57 10.6**	**-0.3**
F12A	baz=87 **Elk City**	**87.31**	**39**	⇑P	**P**	**07 57 10.6**	**-0.1**
526A	baz=88,SNR=23 **Mary Lane Ranc**	**87.38**	**57**	⇑P	**P**	**07 57 11.1**	**-0.4**
TXAR	baz=88,SNR=7.1

GDL2	Guadalupe Moun	88.09	55	eP	P	07 57 14.7	-0.1
VNA3	Neumayer Olymp	88.09	176	eP	P	07 57 10.7	-3.4
G14A	Jackson	88.09	40	⇑P	P	07 57 14.7	+0.3
	baz=88,SNR=7.1						
J16A	Bone	88.21	42	⇓P	P	07 57 15.4	+0.4
	baz=88,SNR=7.7						
226A	Malaga, Loving	88.23	55	⇑P	P	07 57 15.3	-0.1
	baz=88						
MCMT	McKenzie Canyo	88.25	40	eP	P	07 57 15.1	-0.1
	comp=Z,5.2nm,1.1s,mb4.2						
C12B	Naegeli Ranch,	88.25	37	⇓P	P	07 57 15.0	-0.1
	baz=88						
427A	Hayter Ranch,	88.25	56	⇑P	P	07 57 15.5	0.0
	baz=88,SNR=12						
H15A	Lima	88.26	41	⇑P	P	07 57 15.5	+0.2
	baz=88,SNR=10.0						
M18A	Lyman	88.28	44	⇑P	P	07 57 15.5	+0.1
	baz=88						
N18A	Larsen Ranch,	88.32	45	⇑P	P	07 57 15.8	+0.2
	baz=88						
COLA	College	88.36	13	eP	P	07 57 13.4	-1.8
	comp=Z,12nm,0.9s,mb4.6						
O19A	Miners Draw (B	88.36	46	⇓P	P	07 57 15.4	-0.4
	baz=88						
K17A	Gardner Place,	88.39	43	⇓P	P	07 57 16.0	+0.1
	baz=88,SNR=5.1						
ILAR	Eielson Array	88.47	13	P	P	07 57 13.9	-1.8
	comp=Z,4.4nm,0.9s,mb4.2,baz=222,slow=5.0,SNR=41						
R21A	Cimarron	88.52	48	⇓P	P	07 57 16.8	+0.1
	baz=89						
VNA2	Neumayer--Watz	88.53	177	eP	P	07 57 13.1	-3.0
U23A	El Rito	88.55	50	⇑P	P	07 57 17.4	+0.6
	baz=89,SNR=5.4						
Y25A	Mesa, Roswell	88.59	53	⇑P	P	07 57 16.7	-0.4
	baz=89						
I16A	Newdale	88.59	42	P	P	07 57 17.4	+0.5
	baz=89,SNR=11						
W24A	Lazy 6 Ranch,	88.62	52	⇑P	P	07 57 17.1	-0.1
	baz=89						
G15A	Dillon	88.64	40	⇑P	P	07 57 17.1	+0.1
	baz=89,SNR=9.1						
DLMT	Dillon	88.68	40	eP	P	07 57 17.4	+0.3
	comp=Z,18nm,1.4s,mb4.7						
REDW	Red Top Meadow	88.73	42	eP	P	07 57 17.4	-0.1
	comp=Z,16nm,1.3s,mb4.7						
TPAW	Teton Pass	88.74	42	eP	P	07 57 17.8	+0.4
	comp=Z,6.7nm,1.1s,mb4.4						
S22A	4UR Ranch, Cre	88.74	49	⇓P	P	07 57 17.9	+0.2
	baz=89						
VNA1	Neumayer--Stat	88.76	177	eP	P	07 57 14.8	-2.4
J17A	Brown Place, J	88.82	42	⇑P	P	07 57 18.2	+0.3
	baz=89,SNR=8.2						
A12A	Yaak River Ran	88.83	36	⇑P	P	07 57 17.8	0.0
	baz=89						
Z26A	Caprock	88.84	54	P	P	07 57 17.7	-0.5
	baz=89,SNR=5.1						
SNOW	Snow King Moun	88.85	42	eP	P	07 57 18.1	+0.1
	comp=Z,11nm,1.1s,mb4.6						
O20A	White River Ci	88.87	46	⇑P	P	07 57 18.3	+0.1
	baz=89						
K18A	Toltan Ranch,	88.89	43	⇓P	P	07 57 18.5	+0.3
	baz=89,SNR=5.2						
IMW	Indian Meadow	88.95	42	eP	P	07 57 18.2	-0.2
	comp=Z,9.2nm,1.0s,mb4.6						
F15A	Butte	88.99	40	⇑P	P	07 57 18.5	-0.1
	baz=89,SNR=5.4						
MOOW	Moose Ponds	89.00	42	eP	P	07 57 18.8	+0.2
	comp=Z,3.3nm,1.0s,mb4.1						
LOHW	Long Hollow	89.02	42	eP	P	07 57 18.9	+0.1
	comp=Z,3.2nm,0.8s,mb4.2						
L19A	Farson	89.07	44	⇑P	P	07 57 19.1	0.0
	baz=89,SNR=5.6						
G16A	Moss Hill, Enn	89.09	40	⇓P	P	07 57 19.2	+0.1
	baz=89						
HHC	Hu-ho-hao-te	89.14	315	eP	P	07 57 21.1	+1.7
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
H16A	Russell Place,	89.16	41	⇑P	P	07 57 20.3	+0.9
	baz=89,SNR=7.7						
J18A	Kendall Valley	89.19	43	⇓P	P	07 57 19.4	-0.2
	baz=89,SNR=20						
N20A	Spence Gulch,	89.19	46	⇓P	P	07 57 19.6	0.0
	baz=89						
BW06	Boulder Array	89.27	43	⇑P	P	07 57 19.6	-0.4
	baz=89,SNR=5.7						
BW06	Boulder Array	89.27	43	eP	P	07 57 19.6	-0.4
	comp=Z,3.4nm,0.8s,mb4.2						
PDAR	Pinedale Array	89.27	43	P	P	07 57 19.0	-0.9
	comp=Z,3.5nm,0.8s,mb4.2,baz=216,slow=3.2,SNR=29						
SMCO	Snowmass	89.30	47	eP	P	07 57 17.6	-2.6
	comp=Z,7.4nm,1.0s,mb4.5						
W25A	X Bar L Ranch,	89.32	52	⇓P	P	07 57 19.7	-0.7
	baz=89,SNR=6.5						
BOZ	Bozeman (W)	89.41	40	⇑P	P	07 57 20.5	0.0
	baz=90,SNR=7.5						
BOZ	Bozeman (W)	89.41	40	eP	P	07 57 20.6	+0.1
	comp=Z,5.2nm,1.0s,mb4.3						
V25A	Rancho No Teng	89.48	51	⇓P	P	07 57 20.7	-0.4
	baz=90						
I18A	Diamond G Ranc	89.56	42	⇑P	P	07 57 21.2	0.0
	baz=90						
DAWY	Dawson	89.63	16	eP	P	07 57 20.6	-0.6
N21A	Black Mountain	89.65	46	⇑P	P	07 57 21.9	+0.1
	baz=90,SNR=6.7						
SDCO	Great Sand Dun	89.68	49	eP	P	07 57 21.7	-0.3
	comp=Z,3.5nm,1.3s,mb4.0						
L20A	Wamsutter	89.69	44	⇑P	P	07 57 22.2	+0.2
	baz=90,SNR=6.1						
K19A	Absolon Red Bu	89.75	44	⇓P	P	07 57 21.5	-0.7
	baz=90						
CMAR	Chiang Mai Arr	89.80	290	P	P	07 57 24.7	+1.8
	comp=Z,3.3nm,0.6s,mb4.3,baz=126,slow=3.6,SNR=17						
J19A	Crowheart	89.83	43	⇓P	P	07 57 22.3	-0.2
	baz=90,SNR=5.6						
B14A	Marquette Ranc	89.85	37	⇑P	P	07 57 21.9	-0.6
	baz=90						
U25A	Circle Dot Ran	89.87	51	⇓P	P	07 57 22.6	-0.3
	baz=90						
K20A	Yellowstone Ra	90.00	44	⇓P	P	07 57 22.6	-0.7
	baz=90						
COLD	Coldfoot	90.02	11	eP	P	07 57 22.4	-0.4
	comp=Z,6.2nm,0.9s,mb4.4						
O22A	Kremmling	90.04	47	⇑P	P	07 57 23.8	+0.2
	baz=90						
A14A	Double T Ranch	90.09	37	⇑P	P	07 57 23.3	-0.3
	baz=90						
I19A	Meeteetse	90.24	42	⇑P	P	07 57 24.6	+0.1
	baz=90						
N22A	Wattenberg Ran	90.39	46	⇓P	P	07 57 25.3	+0.1
	baz=90						
S25A	Robets Cordova	90.40	50	⇑P	P	07 57 25.3	0.0
	baz=90						
J20A	Shoshoni	90.50	43	⇑P	P	07 57 25.6	0.0
	baz=91,SNR=5.3						
CD2	Chengdu	90.52	303	eP	P	07 57 26.8	+0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,30nm,6.2s						
K21A	Alcova	90.70	44	⇑P	P	07 57 26.3	-0.3
	baz=91						
D17A	Six Diamond Ra	90.73	39	⇑P	P	07 57 26.7	+0.1
	baz=91						
N23A	Red Feather La	90.78	46	⇓P	P	07 57 27.4	+0.4
	baz=91						
J21A	Lysite	90.90	44	P	P	07 57 27.4	-0.1
	baz=91,SNR=6.5						
C17A	Wharram Farm,	90.92	39	⇓P	P	07 57 27.3	-0.2
	baz=91						
L22A	Ellis Ranch, M	90.96	45	P	P	07 57 27.5	-0.3
	baz=91						
A16A	West Butte Ran	91.11	37	⇓P	P	07 57 28.0	-0.3
	baz=91						
I21A	Big Trails, Te	91.22	43	⇓P	P	07 57 28.4	-0.5
	baz=91						
L23A	Garrett	91.49	45	⇑P	P	07 57 30.0	-0.3
	baz=92						
A17A	Triple J Farms	91.61	38	⇓P	P	07 57 30.3	-0.3
	baz=92						
C19A	Slack Wire Ran	91.98	39	⇑P	P	07 57 32.5	+0.2
	baz=92						
A18A	Metzger Ranch,	92.09	38	⇓P	P	07 57 32.7	-0.1
	baz=92						
LZH	Lanzhou	92.53	308	eP	P	07 57 39.0	+3.8
LZH				pP	pP	07 59 35.0	-1.6
LZH				sP	sP	08 00 30.0	-1.9
LZH				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						

ZALV	Zalesovo Beam	110.32	321	PKiKP	PKiKP	08 02 50.5	-1.2
	comp=Z,1.1nm,0.6s,baz=241,slow=1.6,SNR=6.2						
MKAR	Makanchi Array	110.98	313	PKiKP	PKiKP	08 02 52.2	-1.0
	comp=Z,0.4nm,0.3s,baz=52,slow=2.0,SNR=8.2						
ARCES	ARCESS Array B	128.93	349	PKP	PKPdf	08 03 26.4	-0.5
	comp=Z,1.2nm,0.5s,baz=344,slow=4.0,SNR=4.8						
FINES	FINESS Array B	135.74	343	PKP	PKPdf	08 03 39.1	-0.8
	comp=Z,1.9nm,0.8s,baz=358,slow=11,SNR=4.3						
NOA	NORSAR Array B	139.01	353	PKhKP	PKPpre	08 03 39.0	
	comp=Z,0.7nm,0.6s,baz=16,slow=2.4,SNR=4.0						
AKASG	Malin Array Be	142.90	331	PKhKP	PKPpre	08 03 49.4	
	comp=Z,14nm,0.6s,baz=43,slow=4.3,SNR=21						
MALT	Malatya	143.69	307	ePKPbc	PKPdf	08 03 54.8	-0.3
MALT	Malatya	143.69	307	⇓iP	PKPdf	08 03 54.8	-0.3
KWP	Kalwaria Pacla	146.50	335	⇑iP	PKPbc	08 04 02.1	+0.1
BR131	Keskin Array S	146.62	312	ePKPbc	PKPbc	08 04 02.2	-0.4
BRTR	Keskin Array B	146.62	312	PKPbc	PKPbc	08 04 01.8	-0.8
	comp=Z,4.9nm,0.8s,baz=128,slow=4.7,SNR=23						
BUR08	Bucovina Ar. S	146.93	330	ePKPbc	PKPbc	08 04 03.9	+0.6
BURAR	Bucovina Array	146.95	330	⇑iP	PKPbc	08 04 03.7	+0.5
OJC	Ojcow	147.10	338	ePKPdf	PKPdf	08 04 00.2	-0.3
OJC				ePKPab	PKPab	08 04 03.2	-3.7
KOLS	Kolonicke sedl	147.22	335	ePKP	PKPbc	08 04 04.4	+0.5
VRI	Vrincioaia	147.43	327	⇓iP	PKPbc	08 04 04.8	+0.2
NRDL	Niedersach Rie	147.47	350	ePKPbc	PKPbc	08 04 04.1	-0.3
	comp=Z,17nm,1.2s						
CRVS	Cervenica-Dubn	147.57	335	ePKP	PKPbc	08 04 05.1	+0.3
NIE	Niedzica	147.58	337	ePKPab	PKPbc	08 04 05.4	+0.6
TRPA	Tarpa	147.75	333	⇑iP	PKPbc	08 04 05.0	-0.3
IBBN	Ibbenburen	147.97	353	ePKPab	PKPab	08 04 09.7	-0.7
OKC	Ostrava-Krasne	147.98	340	⇑ePKP	PKPbc	08 04 06.0	+0.2
UPC	Upice	148.03	343	⇑ePKP	PKPbc	08 04 05.9	0.0
UPC				ePKPAB	PKPab	08 04 11.5	+0.8
CLL	Collm	148.05	346	ePKPbc	PKPbc	08 04 05.8	-0.2
	comp=Z,26nm,0.9s						
CLL	Collm	148.05	346	ePKPdf	PKPdf	08 04 02.0	0.0
CLL				⇓iPKPbc	PKPbc	08 04 05.7	-0.3
	comp=Z,26nm,0.9s						
CLL				iPKPab	PKPab	08 04 10.3	-0.5
	comp=Z,11nm,0.8s						
CLL				ePKPbc	pPKPbc	08 06 12.0	-1.7
CLZ	Clausthal	148.05	350	ePKPbc	PKPbc	08 04 06.0	+0.1
	comp=Z,19nm,1.2s						
DPC	Dobruska-Polom	148.09	342	⇑ePKP	PKPbc	08 04 06.3	+0.2
DPC				ePKPAB	PKPab	08 04 11.4	+0.4
MLR	Muntele Rosu	148.09	327	⇓iP	PKPbc	08 04 06.2	-0.1
MORC	Moravsky Berou	148.22	340	⇑iP	PKPbc	08 04 06.7	+0.3
BRG	Berggiesshubel	148.24	345	ePKPbc	PKPbc	08 04 06.4	0.0
	comp=Z,16nm,1.1s						
BRG				ePKPab	PKPab	08 04 11.3	-0.3
BRG	Berggiesshubel	148.24	345	ePKP	PKPdf	08 04 02.5	+0.2
	comp=Z,3.3nm,0.8s						
BRG	Berggiesshubel	148.24	345	iPKP	PKPbc	08 04 06.3	-0.1
	comp=Z,16nm,1.1s						
BRG	Berggiesshubel	148.24	345	ePKP	PKPab	08 04 11.2	-0.4
	comp=Z,11nm,0.9s						
BRG							
	comp=N,190nm,15.4s						
BRG							
	comp=E,155nm,17.6s						
BRG							
	comp=Z,207nm,18.1s						
KECS	Kecovo	148.29	336	ePKP	PKPbc	08 04 06.7	+0.1
KECS				e		08 04 12.2	
PVCC	Panska Ves	148.40	344	⇑ePKP	PKPbc	08 04 07.2	+0.3
DRGR		148.70	332	⇑iP	PKPbc	08 04 07.3	-0.4
VYHS	Vyhne	148.89	338	ePKP	PKPbc	08 04 08.5	+0.4
VYHS				e		08 04 14.9	
PRU	Pruhonice	148.91	344	⇑ePKP	PKPbc	08 04 08.5	+0.4
PRU				ePKPAB	PKPab	08 04 15.1	+0.8
VRAC	Vranov	148.93	341	⇓iP	PKPbc	08 04 08.4	+0.2
MOX	Moxa	148.97	348	ePKP	PKPbc	08 04 08.2	0.0
	comp=Z,15nm,1.2s						
MOX	Moxa	148.97	348	ePKPbc	PKPbc	08 04 08.0	-0.2
	comp=Z,13nm,1.2s						
TANN	Tannenbergstha	149.01	346	ePKPbc	PKPbc	08 04 08.4	+0.1
	comp=Z,10.0nm,1.0s						
WERD	Werda	149.01	347	ePKPbc	PKPbc	08 04 08.3	-0.1
	comp=Z,11nm,0.8s						
GUNZ	Gunzen	149.09	347	ePKPbc	PKPbc	08 04 08.6	+0.1
	comp=Z,28nm,1.5s						
GUNZ				ePKPab	PKPab	08 04 15.0	-0.1
WERN	Wernitzgruen	149.15	346	ePKPbc	PKPbc	08 04 08.6	-0.1
	comp=Z,34nm,1.6s						
WERN				ePKPab	PKPab	08 04 15.5	+0.2
NKC	Novy Kostel	149.18	346	⇑ePKP	PKPbc	08 04 09.0	+0.2
TREC	Trest	149.27	342	⇑ePKP	PKPbc	08 04 08.6	-0.4
ROTZ	Rotzenmuhle	149.68	346	ePKPbc	PKPbc	08 04 10.0	0.0
	comp=Z,14nm,1.3s						
GZR	Gura Zlata	149.72	330	⇓iP	PKPbc	08 04 09.7	-0.5
MEM	Membach	149.83	354	PKPbc	PKPbc	08 04 09.9	-0.4
TNS	Taunus Mts	149.92	351	ePKPbc	PKPbc	08 04 10.2	-0.3
	comp=Z,18nm,0.8s						
KHC	Kasperske Hory	149.94	344	ePKPdf	PKPdf	08 04 05.1	+0.1
KHC				ePKPbc	PKPbc	08 04 10.5	-0.1
KHC				ePKPab	PKPab	08 04 18.9	+0.2
KHC	Kasperske Hory	149.94	344	⇑ePKP	PKPbc	08 04 10.5	-0.1
KHC				ePKPAB	PKPab	08 04 18.8	+0.1
SNF	Seneffe	150.06	357	PKPbc	PKPbc	08 04 10.8	0.0
BZS	Buzias	150.09	331	⇓iP	PKPbc	08 04 10.4	-0.7
WET	Wettzell	150.10	345	ePKPab	PKPab	08 04 19.6	+0.3
GEC2	GERESS Array S	150.17	344	ePKPbc	PKPbc	08 04 11.0	-0.2
	comp=Z,10.0nm,1.1s						
GERES	GERESS Array B	150.17	344	PKP	PKPdf	08 04 05.3	-0.1
	comp=Z,0.4nm,0.6s,baz=230,slow=1.0,SNR=3.8						
GERES				PKPbc	PKPbc	08 04 10.4	-0.7
	comp=Z,3.1nm,0.6s,baz=11,slow=2.7,SNR=19						
GIVF	Givet	150.43	356	ePKP1	PKPbc	08 04 11.4	-0.3
	comp=Z,40nm,1.0s						
DOU	Dourbes	150.45	356	PKPbc	PKPbc	08 04 11.7	-0.1
BAIF	Baives	150.51	357	ePKP1	PKPbc	08 04 11.6	-0.3
	comp=Z,20nm,1.0s						
WLF	Walferdange	150.75	354	PKPbc	PKPbc	08 04 12.5	0.0
PKSM	Moragy	150.87	335	⇓iP	PKPbc	08 04 12.1	-0.8
FUR	Furstenfeldbru	151.39	346	ePKPab	PKPab	08 04 24.9	+0.1
VTS	Vitosha	151.51	325	⇓iP	PKPbc	08 04 14.1	-0.3
PERS	Pernice	151.76	340	iPKPdf	PKPbc	08 04 14.2	-0.6
FLN	La Foliniere	151.83	3	ePKP1	PKPbc	08 04 13.2	-1.7
CDF	Champ du Feu	151.86	352	ePKP1	PKPbc	08 04 14.4	-0.6
MEZF	Maizieres J'vi	152.00	355	ePKP1	PKPbc	08 04 15.1	-0.2
	comp=Z,5.8nm,0.4s						
LDF	La Druitiere	152.01	2	ePKP1	PKPbc	08 04 13.4	-1.9
GRR	Gorron	152.18	4	ePKP1	PKPbc	08 04 14.1	-1.6
SFTF	Sexfontaines	152.30	355	ePKP1	PKPbc	08 04 15.6	-0.4
	comp=Z,19nm,0.9s						
HAU	Haudompre	152.37	353	ePKP1	PKPbc	08 04 15.4	-0.7
	comp=Z,7.9nm,0.8s						
HINF	Hinteralfeld	152.50	352	ePKP1	PKPbc	08 04 15.5	-0.9
VISS	Visnje	152.59	340	iPKPdf	PKPbc	08 04 16.4	-0.3
BOJS	Bojanci	152.72	339	iPKPdf	PKPbc	08 04 16.9	-0.1
JAVS	Javornik	152.75	341	iPKPdf	PKPbc	08 04 21.2	+4.1
LOR	Lormes	153.31	357	ePKP1	PKPbc	08 04 17.5	-0.7
SSF	Saint Saulge	153.53	357	ePKP2	PKPab	08 04 33.2	-0.7
SSF	Saint Saulge	153.53	357	ePKP1	PKPbc	08 04 18.1	-0.6
MFF	Saint Martin d	154.00	3	ePKP1	PKPbc	08 04 19.6	-0.1
ESDC	Sonseca Array	160.37	13	PKPab	PKPab	08 05 03.3	-0.5
	comp=Z,1.1nm,0.8s,baz=338,slow=4.6,SNR=8.6						
MDT	Midelt	166.60	23	PKP	PKPdf	08 04 25.9	+0.7
	comp=Z,0.9nm,0.9s,baz=36,slow=2.4,SNR=4.1						
TORD	Torodi Ar. Bea	172.61	181	PKP	PKPdf	08 04 27.9	-1.3
	comp=Z,0.9nm,0.6s,baz=249,slow=1.3,SNR=4.0						

KRSC 21 07:52:46.4±0.1, 54°.98N×164°.73E, h43km±33km, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	0.75	72	eP	Pn	07 52 59.5	-1.0
BKI				eS	Sn	07 53 09.2	-1.5
KBTR	Krutoberegovo	1.64	319	eP	Pn	07 53 11.5	-1.2
KBTR				eS	Sn	07 53 29.6	-3.0
MKZ	Mys Kozlova	1.79	257	eP	Pn	07 53 15.5	+0.8
MKZ				eS	Sn	07 53 35.9	-0.3
KRSR	Krestovskiy	2.67	299	eP	Pn	07 53 28.8	+2.0
KRSR				eS	Sn	07 53 59.5	+1.7
KLY	Klyuchi	2.67	302	eS	Sn	07 53 58.3	+0.4
KMNR	Kamenistaya	2.68	289	eP	Pn	07 53 29.6	+2.7
KMNR				eS	Sn	07 54 01.2	+3.1
KPT	Kopyto	2.75	293	eP	Pn	07 53 30.6	+2.7
KPT				eS	Sn	07 54 03.7	+3.9
KOZ	Kozyrevsk	2.96	293	eP	Pn	07 53 32.9	+2.0
KOZ				eS	Sn	07 54 08.2	+3.1
SRDR	Sredinnyy	3.14	297	eP	Pn	07 53 35.9	+2.6
SRDR				eS	Sn	07 54 11.8	+2.3
SPN	Mys Shipunski	3.35	238	eP	Pn	07 53 37.5	+1.3
SPN				eS	Sn	07 54 13.5	-1.3
NLC	Nalytchevo	3.65	242	eP	Pn	07 53 41.8	+1.5
NLC				eS	Sn	07 54 21.7	-0.4
AVH	Avacha	3.92	246	eP	Pn	07 53 46.5	+2.5
AVH				eS	Sn	07 54 30.2	+1.5
PET	Petropavlovsk	4.09	244	eP	Pn	07 53 48.8	+2.5
PET				eS	Sn	07 54 33.2	+0.5
GNL	Ganaly	4.18	255	eP	Pn	07 53 50.5	+3.0

IDC 21 08:00:21.6±0.8, 13°.49N×44°.90W, h0km, mb3.9/8, mb1 4.2/8, mb1mx3.9/23, mbtmp3.9/8, MS3.5/10, Ms1 3.5/10, ms1mx3.3/27, Error ellipse: s-maj=24.5km s-min=19.8km az=131.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	Riachuelo	21.16	154	LR	LR	08 11 20.2	
	comp=Z,52nm,20.2s,baz=140,slow=31						
BBTS	Babate	27.53	84	LR	LR	08 14 04.4	
	comp=Z,95nm,19.6s,baz=263,slow=30						
BDFB	Brasilia	29.10	186	P	P	08 06 24.9	+0.7
	3.2nm,0.8s,baz=319,slow=11,SNR=5.3						
BDFB				LR	LR	08 18 27.4	
	comp=Z,64nm,19.1s,baz=123,slow=37						
LPAZ	La Paz	37.45	219	P	P	08 07 38.0	+1.1
	1.9nm,0.8s,baz=19,slow=11,SNR=9.1						
LPAZ				LR	LR	08 22 52.5	
	comp=Z,118nm,18.5s,baz=53,slow=36						
DBIC	Dimbokro	39.96	96	LR	LR	08 20 30.6	
	comp=Z,60nm,19.2s,baz=254,slow=30						
ESDC	Sonseca Array	44.39	46	P	P	08 08 34.0	0.0
	0.5nm,0.8s,baz=251,slow=8.1,SNR=4.0						
ESDC				LR	LR	08 21 54.5	
	comp=Z,50nm,19.2s,baz=230,slow=29						
TORD	Torodi Ar. Bea	45.28	85	P	P	08 08 40.5	-1.0
	1.4nm,0.8s,baz=285,slow=7.3,SNR=2.9						
TORD				LR	LR	08 25 23.1	
	comp=Z,90nm,20.5s,baz=255,slow=33						
TXAR	Lajitas Array	56.40	296	P	P	08 10 04.7	-0.5
	1.1nm,0.9s,baz=122,slow=8.3,SNR=13						
TXAR				PcP	PcP	08 11 02.9	+0.6
	0.6nm,0.9s,baz=101,slow=5.3,SNR=3.8						
TXAR				LR	LR	08 31 58.0	
	comp=Z,45nm,21.0s,baz=180,slow=34						
PLCA	Paso Flores	58.95	203	P	P	08 10 21.9	-0.8
	4.2nm,1.1s,baz=39,slow=7.1,SNR=3.2						
NOA	NORSAR Array B	62.20	27	LR	LR	08 31 51.4	
	comp=Z,24nm,20.8s,baz=295,slow=30						
PDAR	Pinedale Array	62.40	311	LR	LR	08 35 28.2	
	comp=Z,41nm,18.2s,baz=340,slow=34						
NVAR	Mina Array Bea	68.80	306	P	P	08 11 28.3	+0.5
	0.3nm,0.7s,baz=90,slow=4.5,SNR=3.3						
AKASG	Malin Array Be	69.63	41	P	P	08 11 33.8	+1.1
	0.8nm,0.6s,baz=270,slow=5.2,SNR=5.6						
ILAR	Eielson Array	82.95	335	P	P	08 12 48.0	-0.2
	1.3nm,0.8s,baz=75,slow=4.5,SNR=16						

ISCJB 21 08:27:51.9±4.4, 2°.5N±0°.2×95°.9E±0°.3, h45km±32km, mb3.9/10, Error ellipse: s-maj=48.1km s-min=16.9km az=148.8

NEIC 21 08:27:52.5±0.6, 2°.51N×95°.88E, h35km, mb4.1/1, Error ellipse: s-maj=12.8km s-min=7.9km az=211.0

IDC 21 08:27:54.2±5.8, 2°.57N×95°.97E, h49km±48km, mb3.5/7, mb1 3.7/9, mb1mx3.5/24, mbtmp3.6/9, ML4.0/2, Error ellipse: s-maj=63.2km s-min=19.7km az=59.0

ISC 21 08:27:53.7±4.3, 2°.5N±0°.2×95°.9E±0°.3, h44km±32km, n15, σ0°36/15, mb3.9/10, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.99	85	P	Pn	08 28 38.5	0.0
	3.3nm,0.3s,baz=289,slow=6.0,SNR=10						
IPM	Ipoh	5.43	69	ePn	Pn	08 29 12.2	+0.1
	23nm,0.4s						
KULM	Kulim	5.43	60	ePn	Pn	08 29 12.0	-0.1
	37nm,0.8s						
CMAR	Chiang Mai Arr	16.09	10	P	Pn	08 31 36.9	0.0
	0.6nm,0.3s,baz=194,slow=11,SNR=3.4						
GTA	Gaotai	36.87	5	eP	P	08 34 57.8	-0.1
GTA				pP	pP	08 35 02.1	-7.7
GTA				sP	sP	08 35 04.8	-10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.2						
BJI	Beijing	41.59	24	P	P	08 35 38.3	+1.0
BJI				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.8						
WRA

COEN			eSn	Sn	08 38 02.6	-1.5
CTAO	Charters Tower	14.59 184	eP	Pn	08 37 28.9	+3.3
KAKA	Kakadu	16.34 243	eP	Pn	08 37 47.1	+0.2
WB2	Warramunga Arr	19.13 220	eP	P	08 38 17.0	+0.2
WRA	Warramunga Arr	19.14 220	P	P	08 38 17.2	+0.3
	6.1nm,0.4s,baz=48,slow=12,SNR=106					
WRA	Warramunga Arr	19.14 220	P	P	08 38 17.2	+0.3
ASAR	Alice Springs	22.24 214	P	P	08 38 48.8	-0.4
	5.3nm,0.8s,mb4.0,baz=48,slow=9.2,SNR=70					
FITZ	Fitzroy Crossi	24.61 237	P	P	08 39 11.6	+0.7
	4.6nm,0.5s,mb4.3,baz=50,slow=11,SNR=21					
MKAR	Makanchi Array	77.26 320	P	P	08 45 41.2	+0.1
	0.5nm,0.3s,mb3.7,baz=100,slow=9.0,SNR=6.9					
MKAR	Makanchi Array	77.26 320	P	P	08 45 41.2	0.0
ZALV	Zalesovo Beam	78.70 328	P	P	08 45 47.8	-1.1
	1.4nm,0.4s,mb3.9,baz=113,slow=5.9,SNR=6.2					
QSPA	South Pole Qui	84.52 180	eP	P	08 46 18.6	-0.4
	25nm,2.1s,mb4.6					
TORD	Torodi Ar. Bea	145.23 285	PKPbc	PKPbc	08 53 22.2	-1.7
	1.5nm,0.7s,baz=77,slow=3.4,SNR=3.2					

*DDA **21** 08:35:35.7,37.°38N×26.°63E,h7km±4km,Md2.6*
*CSEM **21** 08:35:36.4±0.2,37.°39N×26.°62E,h20km,MD2.6,Error ellipse: s-maj=4.8km s-min=3.8km az=177.0*
*ISCJB **21** 08:35:37.2±0.7,37.°40N±0.°05×26.°66E±0.°05,h29km±7km, Error ellipse: s-maj=8.0km s-min=6.5km az=169.4*
*ISK **21** 08:35:37.5,37.°24N×26.°62E,h5km,ML2.3*
ISC 21 08:35:37.2±0.7,37.°40N±0.°05×26.°66E±0.°05,h28km±11km, n11,σ0.°50/20,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.55	56	iP	Pb	08 35 47.9	-0.4
GCAM				iS	Sb	08 35 55.5	-0.3
GCAM	G?zelcaml?	0.55	56	iP	Pb	08 35 47.9	-0.4
GCAM				iS	Sb	08 35 55.5	-0.3
BODT	Bodrum	0.62	122	ePG	Pb	08 35 49.5	0.0
BODT				eSG	Sb	08 35 57.7	0.0
BODT	Bodrum	0.62	122	ePg	Pb	08 35 49.5	+0.1
BODT				eSg	Sb	08 35 57.7	-0.1
APE	Apeiranthos	0.96	250	ePG	Pb	08 35 54.6	-0.5
APE				eSG	Sb	08 36 07.7	+0.2
APE	Apeiranthos	0.96	250	ePg	Pb	08 35 54.6	-0.6
URLA	Izmir	0.96	357	iP	Pn	08 35 53.9	-1.0
URLA				iS	Sb	08 36 08.5	+0.9
URLA	Izmir	0.96	357	iP	Pn	08 35 53.9	-1.0
URLA				iS	Sb	08 36 08.5	+0.9
DAT	Datca	0.99	132	ePG	Pn	08 35 55.9	+0.6
AYDN	Tasoluk	1.00	74	iP	Pn	08 35 55.7	+0.3
AYDN				iS	Sb	08 36 08.8	0.0
AYDN	Tasoluk	1.00	74	iP	Pn	08 35 55.7	+0.3
AYDN				iS	Sb	08 36 08.8	0.0

NEIC 21 08:45:34.1,61.°58N×149.°97W,h35km,ML3.6(PMR), ML3.2(AEIC),After AEIC.,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUA	Susitna One	0.39	253	P	Pn	08 45 43.0	-0.2
SUA				S	Sn	08 45 50.7	+1.4
PMR	Palmer	0.40	88	eP	Pn	08 45 42.3	-1.0
FIB	Fire Island	0.43	193	P	Pn	08 45 44.0	+0.3
RC01	Rabbit Creek A	0.50	167	P	Pn	08 45 43.6	-1.1
RC01				S	Sn	08 45 52.9	+0.8
GHO	Glory Hole Cre	0.54	68	P	Pn	08 45 44.9	-0.3
KNK	Knik Glacier	0.75	102	P	Pn	08 45 47.8	-0.3
SML	Sawmill	0.81	73	P	Pn	08 45 48.1	-0.9
SML				S	Sn	08 45 59.7	-0.1
SKT	Skwentna	0.84	299	P	Pn	08 45 48.1	-1.3
SKT				S	Sn	08 46 00.0	-0.5
SPU	Mount Spurr	1.08	249	ePn	Pn	08 45 52.1	-0.5
SPU				eSn	Sn	08 46 06.3	0.0
SLKM	Skilak Lake	1.08	187	P	Pn	08 45 52.0	-0.7
SCM	Sheep Creek Mo	1.28	77	P	Pn	08 45 55.2	-0.2
SEW	Seward	1.50	170	P	Pn	08 45 57.1	-1.3
SEW				S	Sn	08 46 17.4	+0.6
PPLA	Purkeypile	1.68	323	P	Pn	08 46 00.3	-0.6
PPLA				S	Sn	08 46 21.2	+0.1
RSO	Redoubt South	1.76	232	ePn	Pn	08 46 02.1	+0.2
BRLK	Bradley Lake	1.89	194	P	Pn	08 46 02.7	-0.9
TRF	Thorofare Moun	1.89	356	P	Pn	08 46 03.5	-0.2
RND	Reindeer	1.91	15	P	Pn	08 46 03.8	-0.2
DHY	Denali Highway	1.93	38	P	Pn	08 46 04.2	-0.1
CNPM	China Poot	2.15	197	P	Pn	08 46 06.4	-1.0
MCK	McKinley	2.21	12	P	Pn	08 46 08.7	+0.5
PAX	Paxson	2.53	54	P	Pn	08 46 12.6	+0.1
CHUM	Lake Minchumin	2.55	336	P	Pn	08 46 12.3	-0.5
BPAW	Bear Paw Mtn.	2.57	350	P	Pn	08 46 12.4	-0.8
SVW2	Sparrevohn	2.75	262	eP	Pn	08 46 14.2	-1.3
MID	Middleton Isla	2.81	139	eP	Pn	08 46 16.9	+0.5
TT01	Tatalina	3.13	298	P	Pn	08 46 19.7	-1.1
TTA	Tatalina	3.13	298	eP	Pn	08 46 19.6	-1.2
HDA	Harding Lake	3.15	25	P	Pn	08 46 21.8	+0.6
MENT	Mentasta	3.23	62	eP	Pn	08 46 21.7	-0.4
DOT	Dot Lake	3.43	50	ePn	Pn	08 46 25.6	+0.7
COLA	College	3.44	15	P	Pn	08 46 25.4	+0.3
MDM	Murphy Dome	3.48	12	P	Pn	08 46 25.7	+0.1
IL1	Eielson Array	3.50	22	P	Pn	08 46 26.1	+0.3
KDAK	Kodiak Island	4.03	200	P	Pn	08 46 31.4	-1.8
BCA3	Beaver Creek A	4.10	65	P	Pn	08 46 34.2	+0.1
GCSA	Galena City Sc	4.46	318	P	Pn	08 46 38.6	-0.5
OHAK	Old Harbor	4.69	203	eP	Pn	08 46 40.7	-1.5
IM3	Indian Mountai	4.73	341	P	Pn	08 46 42.1	-0.6
EGAK	Eagle	5.12	47	ePn	Pn	08 46 47.6	-0.5
DAWY	Dawson	5.45	58	ePn	Pn	08 46 52.2	-0.5
COLD	Coldfoot	5.67	359	P	Pn	08 46 55.6	-0.1
BM3	Burnt Mountain	6.30	19	P	Pn	08 47 04.1	-0.2

IDC 21 08:48:24.6±2.0,7.°86N×126.°74E,h0km,mb3.6/5, mb1 3.7/5,mb1mx3.5/22,mbtmp3.6/5,Error ellipse: s-maj=148.4km s-min=20.2km az=71.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	25.82	182	P	P	08 53 57.8	+0.2
	0.9nm,0.5s,baz=352,slow=7.1,SNR=4.4						
WRA	Warramunga Arr	28.62	165	P	P	08 54 22.8	-0.1
	0.1nm,0.6s,baz=345,slow=8.9,SNR=4.3						
ASAR	Alice Springs	32.10	168	P	P	08 54 53.5	-0.1
	0.2nm,0.7s,baz=343,slow=6.9,SNR=4.1						
MKAR	Makanchi Array	54.23	324	P	P	08 57 52.4	+0.2
	0.9nm,0.4s,baz=123,slow=8.2,SNR=12						
ZALV	Zalesovo Beam	56.96	332	P	P	08 58 11.4	-0.3
	0.5nm,0.3s,baz=115,slow=7.8,SNR=2.6						

*CSEM **21** 08:55:38.6±0.2,36.°99N×26.°14E,h15km,MD3.2,Error ellipse: s-maj=5.8km s-min=4.1km az=146.0*
*ATH **21** 08:55:39.2,37.°04N×26.°09E,h31km±1km,MD3.2/5*
*ISCJB **21** 08:55:40.4±0.8,37.°02N±0.°04×26.°09E±0.°05,h31km±8km, Error ellipse: s-maj=8.0km s-min=5.5km az=144.2*
ISC 21 08:55:39.9±1.2,37.°02N±0.°04×26.°12E±0.°05,h20km±7km, n20,σ0.°83/32,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APE	Apeiranthos	0.48	276	ePB	Pb	08 55 49.2	-0.4
APE				eSB	Sb	08 55 56.6	+0.4
APE	Apeiranthos	0.48	276	ePb	Pb	08 55 49.2	-0.4
APE				eSb	Sb	08 55 56.6	+0.4
SMG	Samos	0.89	39	ePN	Pn	08 55 56.6	-0.7
SMG				eSN	Sn	08 56 09.3	-0.4
SMG	Samos	0.89	39	ePn	Pn	08 55 56.6	-0.7
SMG				eSn	Sn	08 56 09.3	-0.4
GCAM	G?zelcaml?	1.12	52	iP	Pn	08 55 59.0	-1.3
GCAM	G?zelcaml?	1.12	52	iP	Pn	08 55 59.0	-1.4
GCAM				iS	Sb	08 56 17.3	+2.7
CHOS	Chios island	1.37	358	ePN	Pn	08 56 04.0	+0.2
CHOS				eSN	Sn	08 56 21.2	-0.2
CHOS	Chios island	1.37	358	ePn	Pn	08 56 04.0	+0.2
CHOS				eSn	Sn	08 56 21.2	-0.2
URLA	Izmir	1.39	15	iS	Sg	08 56 25.9	+0.9
AYDN	Tasoluk	1.54	65	iP	Pn	08 56 06.7	+0.5
AYDN	Tasoluk	1.54	65	iP	Pn	08 56 06.7	+0.5
AYDN				iS	Sn	08 56 26.1	+0.5
NPS	Neapolis	1.80	193	ePB	Pn	08 56 10.2	+0.5
NPS				eSN	Sn	08 56 32.0	0.0
NPS	Neapolis	1.80	193	ePb	Pn	08 56 10.2	+0.5
NPS				eSn	Sn	08 56 32.0	0.0
VLY	Voula,Athens	2.03	295	ePN	Pn	08 56 12.9	-0.1
VLY				eSN	Sn	08 56 37.7	0.0
VLY	Voula,Athens	2.03	295	ePn	Pn	08 56 12.9	-0.1
VLY				eSn	Sn	08 56 37.7	0.0
PRK	Paraskevi	2.23	3	ePB	Pn	08 56 16.4	+0.8
AKHS	Akhisar	2.29	35	iP	Pg	08 56 22.4	-1.4
AKHS	Akhisar	2.29	35	iS	Sn	08 56 43.1	-1.0
GOLH	Golhisar	2.76	84	iP	Pn	08 56 17.6	-5.3
GOLH	Golhisar	2.76	84	iP	Pn	08 56 17.6	-5.3

*IDC **21** 09:11:30.5±3.9,38.°68N×141.°10E,h0km,mb3.4/2, mb1 3.5/4,mb1mx3.4/25,mbtmp3.3/4,ML3.0/2,Error ellipse: s-maj=75.7km s-min=36.3km az=174.0*
*ISCJB **21** 09:11:31.7±0.7,38.°79N±0.°04×140.°81E±0.°04,h14km±7km, mb3.5/2,Error ellipse: s-maj=6.7km s-min=5.2km az=149.5*
*JMA **21** 09:11:32.0,38.°80N×140.°78E,h3km±1km,M3.1*
JMA Felt II J1.
ISC 21 09:11:31.9±0.5,38.°79N±0.°03×140.°79E±0.°04,h6km±7km, n13,σ0.°89/22,mb3.5/2,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	Kaneyama	0.36	291	P	Pg	09 11 39.1	+0.1
JMK	Ichinoseki	0.37	64	P	Pg	09 11 39.1	0.0
JMK				eS	Sg	09 11 44.6	+0.6
JOU	Okura	0.43	194	P	Pg	09 11 40.6	+0.3
JOU				S	Sg	09 11 46.9	+0.9
JIO	Ouri	0.55	127	P	Pg	09 11 42.5	0.0
JIO				S	Sg	09 11 50.2	+0.6
JOM	Ohasama	0.79	29	P	Pg	09 11 46.5	-0.6
JOM				eS	Sg	09 11 57.2	-0.1
JYS	Shiratake	0.80	226	P	Pg	09 11 47.4	0.0
JYS				S	Sg	09 11 58.3	+0.5
JYA	Atsumi	0.87	257	P	Pg	09 11 48.3	-0.3
JYA				S	Sg	09 11 59.8	0.0
JMM	Marumori	0.92	180	P	Pg	09 11 48.7	-0.9
JMM				S	Sg	09 12 00.9	-0.6
MAT	Matsushiro	3.04	223	P	Pn	09 12 21.5	+0.9
MAT				eS	Sn	09 13 02.2	+5.0
MJAR	Matsushiro Arr	3.04	223	Pn	Pn	09 12 20.9	+0.4
	1.0nm,0.3s,baz=24,slow=15,SNR=12						
MJAR				Pg	Pg	09 12 27.8	-2.4
	1.6nm,0.3s,baz=24,slow=16,SNR=48						
KSRS	Korea Array	10.23	267	Pn	Pn	09 14 02.1	+2.8
	0.2nm,0.3s,baz=83,slow=14,SNR=5.9						
WRA	Warramunga Arr	58.73	187	P	P	09 21 28.7	-1.8
	0.3nm,0.6s,mb3.5,baz=3.8,slow=7.3,SNR=10						
ASAR	Alice Springs	62.46	187	P	P	09 21 55.6	-0.3
	0.3nm,0.8s,mb3.5,baz=14,slow=4.8,SNR=3.6						

*ISCJB **21** 09:13:53.5±0.8,14.°0S±0.°2×14.°0W±0.°2,h10km,mb4.2/19, MS3.9/19,Error ellipse: s-maj=35.3km s-min=11.4km az=40.9*
*IDC **21** 09:13:54.9±1.1,13.°56S×14.°43W,h0km,mb4.1/11, mb1 4.2/11,mb1mx4.1/20,mbtmp4.1/11,MS3.9/19, Ms1 3.9/19,ms1mx3.9/25,Error ellipse: s-maj=44.9km s-min=19.1km az=139.0*
*NEIC **21** 09:13:55.0±0.7,14.°08S×13.°94W,h10km,mb4.8/7,Error ellipse: s-maj=33.8km s-min=11.3km az=130.0*
ISC 21 09:13:55.4±0.8,14.°0S±0.°2×14.°0W±0.°2,h10km,n37, σ0.°99/26,mb4.2/19,MS3.9/19,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	Lamto	22.01	24	eP	P	09 18 52.0	+2.0
	78nm,1.3s,mb5.0						
KIC	Kosan Boka	22.25	25	eP	P	09 18 52.2	-0.4
	37nm,1.1s,mb4.7						
TIC	Toumodi	22.39	24	eP	P	09 18 55.6	+1.4
	62nm,0.9s,mb5.0						
DBIC	Dimbokro	22.48	24	P	P	09 18 54.4	-0.7
	15nm,1.0s,mb4.4,baz=175,slow=12,SNR=8.5						
DBIC				LR	LR	09 25 32.3	
	comp=Z,296nm,20.0s,MS3.7,baz=184,slow=31						
RCBR	Riachuelo	23.03	289	LR	LR	09 25 24.8	
	comp=Z,147nm,20.7s,MS3.4,baz=99,slow=31						
BBTS	Babate	28.61	355	LR	LR	09 29 00.0	
	comp=Z,180nm,18.1s,MS3.7,baz=330,slow=32						
TORD	Torodi Ar. Bea	31.16	31	P	P	09 20 14.1	-0.7
	3.4nm,0.8s,mb4.2,baz=214,slow=9.0,SNR=5.7						
TORD				LR	LR	09 30 34.7	
	comp=Z,404nm,19.8s,MS4.1,baz=205,slow=32						
BDFB	Brasilia	32.89	263	LR	LR	09 31 15.3	
	comp=Z,351nm,20.8s,MS4.0,baz=226,slow=32						
BOSA	Boshof	39.16	118	LR	LR	09 34 19.0	
	comp=Z,112nm,21.7s,MS3.7,baz=109,slow=31						
CPUP	Villa Florida	42.27	246	P	P	09 21 48.8	-0.6
	1.3nm,0.6s,mb3.7,baz=84,slow=6.0,SNR=4.6						
CPUP				LR	LR	09 37 23.9	
	comp=Z,283nm,18.2s,MS4.2,baz=95,slow=34						
CPUP	Villa Florida	42.27	246	P	P	09 21 50.8	+1.4
	2.5nm,0.7s,mb4.0						
CPUP				LR	LR	09 37 23.9	
LPAZ	La Paz	52.16	260	LR	LR	09 43 29.4	
	comp=Z,122nm,21.3s,MS3.9,baz=255,slow=34						
KMBO	Kilima Mbogo	52.27	80	P	P	09 23 12.7	+5.2
	2.0nm,0.8s,mb4.1,baz=0.5,slow=24,SNR=6.3						
KMBO				LR	LR	09 42 34.2	
	comp=Z,185nm,18.1s,MS4.2,baz=79,slow=33						
CFAA	Coronel Fontan	52.43	241	P	P	09 23 08.8	+0.3
	0.7nm,1.2s,mb3.5,baz=71,slow=6.7,SNR=4.0						
CFAA	Coronel Fontan	52.43	241	P	P	09 23 08.8	+0.3
KEST	Kesra	54.20	23	P	P	09 23 22.3	+1.0
	3.9nm,1.0s,mb4.3,baz=285,slow=4.8,SNR=5.6						
KEST				LR	LR	09 45 34.1	
	comp=Z,76nm,19.3s,MS3.8,baz=271,slow=35						
ESDC	Sonseca Array	54.24	10	P	P	09 23 19.3	-2.1
	0.4nm,0.6s,mb3.6,baz=194,slow=7.2,SNR=4.3						
ESDC				LR	LR	09 45 12.4	
	comp=Z,105nm,19.1s,MS3.9,baz=195,slow=35						
PLCA	Paso Flores	55.72	230	LR	LR	09 42 36.4	
	comp=Z,202nm,19.6s,MS4.2,baz=296,slow=31						
ROSC	El Rosal	62.70	283	LR	LR	09 49 21.9	
	comp=Z,138nm,20.2s,MS4.1,baz=25,slow=34						
OTAV	Otavalo	65.31	277	eP	P	09 24 38.1	-0.1
	8.4nm,1.4s,mb4.6						
GERES	GERESS Array B	67.25	19	P	P	09 24 49.0	-0.9
	0.6nm,0.8s,mb3.7,baz=231,slow=4.5,SNR=3.5						
VYHS	Vyhne	68.74	23	eP	P	09 25 00.1	+0.8
KECS	Kecovo	69.37	24	eP	P	09 25 04.1	+0.9
BRTR	Keskin Array B	69.46	37	P	P	09 25 04.0	0.0
	1.8nm,1.0s,mb4.0,baz=248,slow=2.3,SNR=6.4						
BRTR				LR	LR	09 53 09.7	
	comp=Z,43nm,20.2s,MS3.7,baz=275,slow=34						
CRVS	Cervenica-Dubn	70.09	24	eP	P	09 25 08.7	+1.1
KIEV	Kiev	74.69	27	eP	P	09 25 34.0	-1.1
	4.2nm,0.9s,mb4.4						
AKASG	Malin Array Be	74.71	27	P	P	09 25 34.1	-1.1
	3.8nm,0.8s,mb4.4,baz=223,slow=6.1,SNR=13						
QSPA	South Pole Qui	76.13	180	eP	P	09 25 43.1	+0.1
	20nm,1.6s,mb4.8						
NB2	NORSAR Subarra	77.47	12	P	P	09 25 51.6	+0.9
	comp=Z,1.0nm,0.7s,mb3.9,baz=208,slow=5.9						
NOA	NORSAR Array B	77.47	12	P	P	09 25 50.8	0.0
	comp=Z,1.9nm,0.8s,mb4.1,baz=192,slow=8.3,SNR=4.7						
NOA				LR	LR	09 58 51.4	
	comp=Z,48nm,18.1s,MS3.9,baz=205,slow=35						
FINES	FINESS Array B	81.63	18	P	P	09 26 12.1	-1.3
	comp=Z,1.7nm,0.5s,mb4.2,baz=183,slow=3.8,SNR=8.3						
FINES				LR	LR	10 03 28.7	
	comp=Z,93nm,18.1s,MS4.2,baz=102,slow=37						
ARCES	ARCESS Array B	87.83	13	LR	LR	10 03 07.9	
	comp=Z,82nm,18.5s,MS4.2,baz=254,slow=34						
RPN	Rapa Nui	88.34	243	LR	LR	09 58 26.8	
	comp=Z,122nm,21.5s,MS4.3,baz=150,slow=30						
AKTO	Aktyubinsk	89.64	37	LR	LR	10 10 58.0	
	comp=Z,34nm,18.5s,MS3.8,baz=46,slow=38						
TXAR	Lajitas Array	96.45	299	P	P	09 27 25.3	-0.1
	comp=Z,0.2nm,0.7s,mb3.6,baz=96,slow=8.4,SNR=3.4						
TXAR	Lajitas Array	96.45	299	P	P	09 27 25.2	-0.1
MJAR	Matsushiro Arr	146.55	43	PKPbc	PKPbc	09 33 35.8	-1.7
	comp=Z,3.7nm,1.1s,baz=286,slow=5.6,SNR=6.7						

*ISCJB **21** 09:27:22.9±0.5,37.°43N±0.°02×26.°60E±0.°03,h3km±6km, Error ellipse: s-maj=4.2km s-min=3.6km az=158.3*
*ISK **21** 09:27:22.8,37.°40N×26.°63E,h15km,MD3.0*
*DDA **21** 09:27:23.1,37.°43N×26.°64E,h7km±6km,Md2.8*
*CSEM **21** 09:27:23.9±0.2,37.°40N×26.°65E,h19km,MD3.1,Error ellipse: s-maj=5.2km s-min=4.3km az=12.0*
*ATH **21** 09:27:24.2,37.°51N×26.°52E,h15km,MD3.1/6*
ISC 21 09:27:23.7±0.5,37.°43N±0.°02×26.°60E±0.°03,h5km±5km, n35,σ1.°01/63,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.33	34	ePB	Pg	09 27 30.9	+0.8
SMG				eSB	Sg	09 27 35.7	+1.2
SMG	Samos	0.33	34	ePb	Pg	09 27 30.9	+0.8
SMG				eSb	Sg	09 27 35.7	+1.2
GCAM	G?zelcaml?	0.57	62	iP	Pg	09 27 34.7	0.0
GCAM				iS	Sg	09 27 42.7	+0.7
GCAM	G?zelcaml?	0.57	62	iP	Pg	09 27 34.7	+0.1
GCAM				iS	Sg	09 27 42.7	+0.7
BODT	Bodrum	0.68	123	ePG	Pg	09 27 35.5	-1.2
BODT				eSG	Sg	09 27 44.2	-1.2
BODT	Bodrum	0.68	123	ePg	Pg	09 27 35.5	-1.2
BODT				eSg	Sg	09 27 44.2	-1.2
URLA	Izmir	0.93	360	iP	Pg	09 27 40.5	-1.0
URLA				iS	Sg	09 27 53.3	-0.2
URLA	Izmir	0.93	360	iP	Pg	09 27 40.5	-1.0
URLA				iS	Sg	09 27 53.3	-0.2
APE	Apeiranthos	0.93	247	ePG	Pg	09 27 41.5	0.0
APE				eSG	Sg	09 27 54.0	+0.4
APE	Apeiranthos	0.93	247	ePN	Pg	09 27 41.4	-0.2
APE				eSN	Sg	09 27 54.5	+0.9
APE	Apeiranthos	0.93	247	ePg	Pg	09 27 41.5	-0.1
APE				eSg	Sg	09 27 54.0	+0.4
APE				eSn	Sg	09 27 54.5	+0.9
MLSB	Milas	0.94	98	ePG	Pg	09 27 40.5	-1.3
MLSB				eSG	Sg	09 27 54.3	+0.2
MLSB	Milas	0.94	98	ePg	Pg	09 27 40.5	-1.3
MLSB				eSg	Sg	09 27 54.3	+0.2
BLCB	Balcova	1.01	20	ePG	Pg	09 27 43.4	+0.3
BLCB				eSG	Sg	09 27 58.0	+1.7
BLCB	Balcova	1.01	20	ePg	Pg	09 27 43.4	+0.3
BLCB				eSg	Sg	09 27 58.0	+1.8
AYDN	Tasoluk	1.04	77	iP	Pg	09 27 42.7	-1.0
AYDN				iS	Sg	09 27 56.0	-1.1
AYDN	Tasoluk	1.04	77	iP	Pg	09 27 42.7	-0.9
AYDN				iS	Sg	09 27 56.0	-1.1
CHOS	Chios island	1.04	336	ePN	Pg	09 27 42.6	-1.2
CHOS				eSN	Sg	09 27 54.8	-2.5
CHOS	Chios island	1.04	336	ePn	Pg	09 27 42.6	-1.2
DAT	Datca	1.05	132	ePG	Pg	09 27 43.4	-0.4
DAT				eSG	Sg	09 27 58.0	+0.5
DAT	Datca	1.05	132	ePg	Pg	09 27 43.4	-0.4
DAT				eSg	Sg	09 27 58.0	+0.5
IZM	Izmir	1.09	28	ePN	Pg	09 27 44.5	-0.2
IZM				eSN	Sg	09 28 00.3	+1.3
YER	Yerkesik	1.37	102	ePN	Pn	09 27 48.5	-1.0
YER	Yerkesik	1.37	102	ePn	Pn	09 27 48.5	-1.0
TURN	Turunc	1.69	109	iP	Pn	09 27 47.2	-6.7
TURN				iS	Sn	09 28 06.7	-9.3
ARG	Arkhangelos	1.72	134	ePN	Pg	09 27 57.3	+0.6
ARG				eSN	Sg	09 28 21.5	+2.4
PRK	Paraskevi	1.83	352	ePN	Pn	09 27 55.8	0.0
PRK				eSN	Sn	09 28 19.4	+0.1
PRK	Paraskevi	1.83	352	ePn	Pn	09 27 55.8	0.0
PRK				eSn	Sn	09 28 19.4	+0.1
KULA	Kula-Manisa	1.95	56	ePN	Pn	09 27 56.8	-0.7
KULA	Kula-Manisa	1.95	56	ePn	Pn	09 27 56.8	-0.7
VLY	Voula,Athens	2.27	281	ePN	Pn	09 28 02.7	+0.9
VLY				eSN	Sn	09 28 29.5	-0.7
VLY	Voula,Athens	2.27	281	ePn	Pn	09 28 02.7	+0.9
VLY				eSn	Sn	09 28 29.5	-0.7
NPS	Neapolis	2.31	201	ePN	Pn	09 28 04.0	+1.6
DID	Didima	2.68	273	ePN	Pn	09 28 08.1	+0.6
DID	Didima	2.68	273	ePn	Pn	09 28 08.1	+0.6

*TRN **21** 09:34:05.0,11.°53N×60.°06W,h32km,MD3.2*
*FUNV **21** 09:34:12.0,11.°24N×60.°43W,h36km,MW3.0*
ISC 21 09:34:05.0±1.2,11.°51N±0.°04×60.°07W±0.°10,h51km±15km, n20,σ0.°67/31,1D,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSP	Speyside	0.51	246	eP	Pn	09 34 15.7	-0.7
TOSP				eS	Sn	09 34 24.1	-0.4
TPR	Prospect	0.77	245	eS	Sn	09 34 30.8	+0.4
TRN	Trinidad (W)	1.57	237	⇓iP	Pn	09 34 31.9	+1.5
TRN				eS	Sn	09 34 49.9	+0.2
GRW	Mount Saint Ca	1.69	293	eP	Pn	09 34 32.9	+0.8
GRW				eS	Sn	09 34 53.4	+0.8
SVB	Belmont	2.10	327	eP	Pn	09 34 37.7	-0.1
SVB				eS	Sn	09 35 02.0	-0.7
SSV	Crater Summit	2.12	329	eP	Pn	09 34 38.7	+0.8
SSV				eS	Sn	09 35 03.0	0.0
GUIV	Guiria	2.29	248	eP	Pn	09 34 40.1	-0.2
GUIV				eS	Sn	09 35 01.6	-5.7
MCLT	Moule a Chique	2.35	339	eP	Pn	09 34 41.6	+0.4
MCLT				eS	Sn	09 35 08.4	-0.4
ITEV	Isla Los Testi	3.01	267	eP	Pn	09 34 50.6	+0.4
ITEV				eS	Sn	09 35

MORF	**Marmelete**	**0.83**	**60**	*e*P	**Pg**	**10 12 54.0**	**+2.6**
MORF				*e*S	**Sg**	**10 13 07.4**	**+5.2**
MORF				A		10 13 09.1	
27nm,0.1s							
MORF	**Marmelete**	**0.83**	**60**	⇑P	**Pg**	**10 12 54.0**	**+2.6**
MORF				S	**Sg**	**10 13 07.4**	**+5.2**
27nm,0.1s							
PTEO	**Sao Teotonio**	**0.92**	**45**	*i* P	**Pg**	**10 12 55.5**	**+2.2**
PTEO				*e*S	**Sg**	**10 13 10.3**	**+5.0**
PTEO				A		10 13 13.2	
17nm,0.4s							
PTEO	**Sao Teotonio**	**0.92**	**45**	⇑P	**Pg**	**10 12 55.5**	**+2.2**
PTEO				S	**Sg**	**10 13 10.3**	**+5.0**
8.4nm,0.4s							
PTEO	**Sao Teotonio**	**0.92**	**45**	*e*S	**Sg**	**10 13 10.3**	**+5.0**
17nm,0.4s							
PBDV	**Barranco-do-Ve**	**1.34**	**74**	*i* P	**Pn**	**10 13 00.6**	**+0.4**
PBDV				*e*S	**Sb**	**10 13 18.8**	**+1.0**
PBDV				A		10 13 25.6	
9.8nm,0.2s							
PBDV	**Barranco-do-Ve**	**1.34**	**74**	⇑P	**Pn**	**10 13 00.6**	**+0.4**
PBDV				S	**Sb**	**10 13 18.8**	**+1.0**
9.8nm,0.2s							
PCVE	**Castro Verde**	**1.41**	**58**	*e*P	**Pn**	**10 13 02.2**	**+1.0**
PCVE				*e*S	**Sn**	**10 13 21.6**	**+1.8**
PCVE				A		10 13 23.6	
11nm,0.3s							
PCVE	**Castro Verde**	**1.41**	**58**	P	**Pn**	**10 13 02.2**	**+1.0**
PCVE				S	**Sn**	**10 13 21.6**	**+1.8**
11nm,0.3s							
PCVE	**Castro Verde**	**1.41**	**58**	*e*P	**Pn**	**10 13 02.2**	**+1.0**
PCVE				*e*S	**Sn**	**10 13 21.6**	**+1.8**
11nm,0.3s							
MESJ	**Messejana**	**1.42**	**48**	*e*P	**Pn**	**10 13 02.3**	**+1.0**
MESJ				*e*S	**Sn**	**10 13 21.6**	**+1.6**
MESJ				*e*S	**Sn**	**10 13 21.6**	**+1.6**
MESJ	**Messejana**	**1.42**	**48**	P	**Pn**	**10 13 02.3**	**+1.0**
MESJ				S	**Sn**	**10 13 21.6**	**+1.6**
MESJ	**Messejana**	**1.42**	**48**	*e*P	**Pn**	**10 13 02.3**	**+1.0**
MESJ				*e*S	**Sn**	**10 13 21.6**	**+1.6**
PVAQ	**Vaqueiros**	**1.55**	**70**	*i* Pn	**Pn**	**10 13 03.5**	**+0.4**
PVAQ				*e*Sn	**Sn**	**10 13 23.7**	**+0.5**
PVAQ				A		10 13 33.0	
7.4nm,0.1s							
PVAQ	**Vaqueiros**	**1.55**	**70**	⇑Pn	**Pn**	**10 13 03.5**	**+0.4**
PVAQ				Sn	**Sn**	**10 13 23.7**	**+0.5**
7.4nm,0.1s							
PBEJ	**Beja**	**1.75**	**49**	*e*Pn	**Pn**	**10 13 06.4**	**+0.5**
PBEJ				*e*Sn	**Sn**	**10 13 29.4**	**+1.2**
PBEJ				A		10 13 32.0	
7.0nm,0.2s							
PBEJ	**Beja**	**1.75**	**49**	Pn	**Pn**	**10 13 06.4**	**+0.5**
PBEJ				Sn	**Sn**	**10 13 29.4**	**+1.2**
3.5nm,0.2s							
PBEJ	**Beja**	**1.75**	**49**	*e*Pn	**Pn**	**10 13 06.4**	**+0.5**
PBEJ				*e*Sn	**Sn**	**10 13 29.4**	**+1.2**
7.0nm,0.2s							
EGRO	**El Granado**	**1.77**	**68**	P	**Pn**	**10 13 06.6**	**+0.5**
EGRO				S	**Sn**	**10 13 29.2**	**+0.5**
EGRO	**El Granado**	**1.77**	**68**	P	**Pn**	**10 13 06.6**	**+0.5**
1.0nm,0.1s,SNR=24							
EGRO				S	**Sn**	**10 13 29.3**	**+0.6**
19nm,0.2s,SNR=5.9							
EGRO	**El Granado**	**1.77**	**68**	P	**Pn**	**10 13 06.6**	**+0.5**
1.0nm,0.1s,SNR=24							
EGRO				S	**Sn**	**10 13 29.2**	**+0.6**
MOE	**Montemor**	**1.88**	**30**	*e*Sn	**Sn**	**10 13 33.2**	**+1.7**
MOE	**Montemor**	**1.88**	**30**	Sn	**Sn**	**10 13 33.2**	**+1.7**
MOE	**Montemor**	**1.88**	**30**	*e*Sn	**Sn**	**10 13 33.2**	**+1.7**
EVO	**Evora**	**2.04**	**36**	*e*Pn	**Pn**	**10 13 10.6**	**+0.8**
EVO				*e*Sn	**Sn**	**10 13 36.6**	**+1.3**
EVO				A		10 13 38.6	
15nm,0.1s							
EVO	**Evora**	**2.04**	**36**	Pn	**Pn**	**10 13 10.6**	**+0.8**
EVO				Sn	**Sn**	**10 13 36.6**	**+1.3**
15nm,0.1s							
EVO	**Evora**	**2.04**	**36**	*e*Pn	**Pn**	**10 13 10.6**	**+0.8**
EVO				*e*Sn	**Sn**	**10 13 36.6**	**+1.3**
15nm,0.1s							
PMAFR	**Mafra**	**2.07**	**6**	*e*Pn	**Pn**	**10 13 10.5**	**+0.2**
PMAFR				*e*Sn	**Sn**	**10 13 36.8**	**+0.7**
PMAFR				A		10 13 39.4	
39nm,0.1s							
PMAFR	**Mafra**	**2.07**	**6**	P	**Pn**	**10 13 09.6**	**-0.7**
3.6nm,0.2s,SNR=5.6							
PMAFR				S	**Sn**	**10 13 35.3**	**-0.8**
53nm,0.2s,SNR=20							
PMAFR	**Mafra**	**2.07**	**6**	P	**Pn**	**10 13 09.6**	**-0.7**
3.6nm,0.2s,SNR=5.6							
PMAFR	**Mafra**	**2.07**	**6**	*e*Pn	**Pn**	**10 13 10.5**	**+0.2**
PMAFR				S	**Sn**	**10 13 35.3**	**-0.8**
53nm,0.2s,SNR=20							
PMAFR				*e*Sn	**Sn**	**10 13 36.8**	**+0.7**
PBAR	**Barrancos**	**2.37**	**57**	*e*Pn	**Pn**	**10 13 15.1**	**+0.7**
PBAR				*e*Sn	**Sn**	**10 13 44.3**	**+0.8**
PBAR	**Barrancos**	**2.37**	**57**	Pn	**Pn**	**10 13 15.1**	**+0.7**
PBAR				Sn	**Sn**	**10 13 44.3**	**+0.8**
PBAR	**Barrancos**	**2.37**	**57**	*e*Pn	**Pn**	**10 13 15.1**	**+0.7**
PBAR				*e*Sn	**Sn**	**10 13 44.3**	**+0.8**
EMIN	**Mina Concepcio**	**2.45**	**68**	P	**Pn**	**10 13 15.5**	**0.0**
EMIN				S	**Sn**	**10 13 45.3**	**-0.2**
EMIN	**Mina Concepcio**	**2.45**	**68**	P	**Pn**	**10 13 15.5**	**0.0**
0.9nm,0.1s,SNR=19							
EMIN				S	**Sn**	**10 13 45.3**	**-0.2**
3.6nm,0.2s							
EMIN	**Mina Concepcio**	**2.45**	**68**	P	**Pn**	**10 13 15.5**	**0.0**
0.9nm,0.1s,SNR=19							
EMIN				S	**Sn**	**10 13 45.3**	**-0.2**
3.6nm,0.2s							
PESTR	**Estremoz**	**2.50**	**38**	*e*Pn	**Pn**	**10 13 16.6**	**+0.3**
PESTR				*e*Sn	**Sn**	**10 13 47.6**	**+0.7**
PESTR				A		10 13 49.6	
2.5nm,0.2s							
PESTR	**Estremoz**	**2.50**	**38**	Pn	**Pn**	**10 13 16.6**	**+0.3**
PESTR				Sn	**Sn**	**10 13 47.6**	**+0.7**
2.5nm,0.2s							
PESTR	**Estremoz**	**2.50**	**38**	*e*Pn	**Pn**	**10 13 16.6**	**+0.3**
PESTR				*e*Sn	**Sn**	**10 13 47.6**	**+0.7**
2.5nm,0.2s							
EBAD	**Badajoz**	**2.73**	**46**	P	**Pn**	**10 13 19.7**	**+0.3**
EBAD				S	**Sn**	**10 13 52.7**	**+0.2**
EBAD	**Badajoz**	**2.73**	**46**	⇑P	**Pn**	**10 13 19.7**	**+0.3**
1.1nm,0.1s,SNR=18							
EBAD				S	**Sn**	**10 13 52.7**	**+0.2**
7.0nm,0.2s							
EBAD	**Badajoz**	**2.73**	**46**	P	**Pn**	**10 13 19.7**	**+0.3**
1.1nm,0.1s,SNR=18							
EBAD				S	**Sn**	**10 13 52.7**	**+0.2**
7.0nm,0.2s							
PTOM	**Tomar**	**2.86**	**18**	*e*Sn	**Sn**	**10 13 55.9**	**+0.2**
PTOM				A		10 13 58.3	
9.3nm,0.1s							
PTOM	**Tomar**	**2.86**	**18**	Sn	**Sn**	**10 13 55.9**	**+0.2**
4.7nm,0.1s							
PTOM	**Tomar**	**2.86**	**18**	*e*Sn	**Sn**	**10 13 55.9**	**+0.2**
9.3nm,0.1s							
ESPR	**Espera**	**2.96**	**89**	P	**Pn**	**10 13 21.5**	**-1.0**
ESPR				S	**Sn**	**10 13 56.1**	**-2.0**
ESPR	**Espera**	**2.96**	**89**	P	**Pn**	**10 13 22.0**	**-0.5**
2.6nm,0.1s,SNR=7.9							
ESPR				S	**Sn**	**10 13 56.1**	**-2.0**
50nm,0.2s,SNR=11							
ESPR	**Espera**	**2.96**	**89**	P	**Pn**	**10 13 22.0**	**-0.5**
2.6nm,0.1s,SNR=7.9							
ESPR				S	**Sn**	**10 13 56.1**	**-2.0**
50nm,0.2s,SNR=11							
PMRV	**Marv??o**	**3.05**	**33**	*e*Pn	**Pn**	**10 13 24.5**	**+0.8**
PMRV				*e*Sn	**Sn**	**10 14 00.4**	**+0.2**
PMRV				A		10 14 03.1	
6.7nm,0.3s							
PMRV	**Marv??o**	**3.05**	**33**	⇓Pn	**Pn**	**10 13 24.5**	**+0.8**
PMRV				Sn	**Sn**	**10 14 00.4**	**+0.2**
6.7nm,0.3s							
PCBR	**Castelo Branco**	**3.36**	**28**	*e*Pn	**Pn**	**10 13 29.1**	**+1.1**
PCBR				*e*Sn	**Sn**	**10 14 08.1**	**+0.1**
PCBR				A		10 14 11.7	
2.5nm,0.8s							
PCBR	**Castelo Branco**	**3.36**	**28**	Pn	**Pn**	**10 13 29.1**	**+1.1**
PCBR				Sn	**Sn**	**10 14 08.1**	**+0.1**
1.2nm,0.8s							
PCBR	**Castelo Branco**	**3.36**	**28**	*e*Pn	**Pn**	**10 13 29.1**	**+1.1**
PCBR				*e*Sn	**Sn**	**10 14 08.1**	**+0.1**
2.5nm,0.8s							
ECAB	**El Cabril**	**3.49**	**69**	P	**Pn**	**10 13 29.4**	**-0.4**
ECAB				S	**Sn**	**10 14 10.5**	**-0.6**
0.2nm,0.0s,SNR=7.9							
ECAB				S	**Sn**	**10 14 10.5**	**-0.6**
6.0nm,0.4s,SNR=7.9							
ECAB	**El Cabril**	**3.49**	**69**	P	**Pn**	**10 13 29.8**	**0.0**
0.2nm,0.0s,SNR=7.9							
ECAB				S	**Sn**	**10 14 10.5**	**-0.6**
6.0nm,0.4s,SNR=7.9							
MTE	**Manteigas**	**3.83**	**24**	*e*Sn	**Sn**	**10 14 18.9**	**-0.8**
MTE				A		10 14 23.6	
2.5nm,0.3s							
MTE	**Manteigas**	**3.83**	**24**	Sn	**Sn**	**10 14 18.9**	**-0.8**
1.2nm,0.3s							
MTE	**Manteigas**	**3.83**	**24**	*e*Sn	**Sn**	**10 14 18.9**	**-0.8**
2.5nm,0.3s							
EMIJ	**Mijas**	**3.85**	**93**	S	**Sn**	**10 14 18.3**	**-1.8**
2.6nm,0.3s,SNR=7.9							
EMIJ	**Mijas**	**3.85**	**93**	S	**Sn**	**10 14 18.3**	**-1.7**
2.6nm,0.3s,SNR=7.9							
PVIS	**Viseu**	**4.03**	**18**	*e*Sn	**Sn**	**10 14 24.5**	**+0.1**
PVIS				A		10 14 28.3	
4.7nm,0.3s							
PVIS	**Viseu**	**4.03**	**18**	Sn	**Sn**	**10 14 24.5**	**+0.1**
2.3nm,0.3s							
PVIS	**Viseu**	**4.03**	**18**	*e*Sn	**Sn**	**10 14 24.5**	**+0.1**
4.7nm,0.3s							
EADA	**Adamuz**	**4.15**	**71**	P	**Pn**	**10 13 38.7**	**-0.1**
EADA				S	**Sn**	**10 14 25.9**	**-1.5**
EADA	**Adamuz**	**4.15**	**71**	P	**Pn**	**10 13 39.2**	**+0.3**
0.3nm,0.1s,SNR=7.9							
EADA				S	**Sn**	**10 14 25.9**	**-1.5**
2.3nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**4.15**	**71**	P	**Pn**	**10 13 38.7**	**-0.2**
EADA				S	**Sn**	**10 14 25.9**	**-1.5**
2.3nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**4.17**	**40**	P	**Pn**	**10 13 39.0**	**-0.2**
EPLA				S	**Sn**	**10 14 28.0**	**0.0**
EPLA	**Plasencia**	**4.17**	**40**	P	**Pn**	**10 13 39.0**	**-0.2**
0.7nm,0.1s,SNR=6.0							
EPLA				S	**Sn**	**10 14 27.1**	**-0.9**
5.7nm,0.2s,SNR=8.9							
EPLA	**Plasencia**	**4.17**	**40**	P	**Pn**	**10 13 39.0**	**-0.2**
0.7nm,0.1s,SNR=6.0							
EPLA				S	**Sn**	**10 14 28.0**	**0.0**
PVRL	**Vila Real**	**4.60**	**17**	*e*Sn	**Sn**	**10 14 37.3**	**-1.2**
PVRL				A		10 14 40.8	
8.9nm,0.3s							
PVRL	**Vila Real**	**4.60**	**17**	Sn	**Sn**	**10 14 37.3**	**-1.2**
4.4nm,0.3s							
PVRL	**Vila Real**	**4.60**	**17**	*e*Sn	**Sn**	**10 14 37.3**	**-1.2**
8.9nm,0.3s							
MVO	**Moncorvo**	**4.69**	**24**	*e*Pn	**Pn**	**10 13 46.6**	**+0.3**
MVO				*e*Sn	**Sn**	**10 14 39.6**	**-1.2**
MVO				A		10 14 42.6	
4.9nm,0.5s							
MVO	**Moncorvo**	**4.69**	**24**	P	**Pn**	**10 13 46.1**	**-0.3**
MVO				S	**Sn**	**10 14 40.5**	**-0.3**
MVO	**Moncorvo**	**4.69**	**24**	P	**Pn**	**10 13 46.5**	**+0.2**
0.1nm,0.1s							
MVO				S	**Sn**	**10 14 39.7**	**-1.1**
3.0nm,0.1s,SNR=6.3							
MVO	**Moncorvo**	**4.69**	**24**	P	**Pn**	**10 13 46.5**	**+0.2**
0.1nm,0.1s							
MVO				*e*Sn	**Sn**	**10 14 39.6**	**-1.2**
4.9nm,0.5s							
MVO				S	**Sn**	**10 14 40.5**	**-0.3**
EQUE	**Quentar**	**4.89**	**85**	S	**Sn**	**10 14 44.6**	**-1.2**
1.0nm,0.4s,SNR=7.9							
EQUE	**Quentar**	**4.89**	**85**	S	**Sn**	**10 14 44.6**	**-1.2**
1.0nm,0.4s,SNR=7.9							
PCAB	**Cabril**	**4.95**	**13**	*e*Sn	**Sn**	**10 14 44.1**	**-3.1**
PCAB				A		10 14 49.7	
2.7nm,0.3s							
PCAB	**Cabril**	**4.95**	**13**	Sn	**Sn**	**10 14 44.1**	**-3.1**
1.4nm,0.3s							
PCAB	**Cabril**	**4.95**	**13**	*e*Sn	**Sn**	**10 14 44.1**	**-3.1**
2.7nm,0.3s							
ELOB	**Lobios**	**5.10**	**13**	P	**Pn**	**10 13 51.1**	**-0.8**
ELOB				S	**Sn**	**10 14 49.1**	**-1.7**
ELOB	**Lobios**	**5.10**	**13**	P	**Pn**	**10 13 51.1**	**-0.8**
0.3nm,0.1s							
ELOB				S	**Sn**	**10 14 47.7**	**-3.1**
4.5nm,0.2s,SNR=8.3							
ELOB	**Lobios**	**5.10**	**13**	P	**Pn**	**10 13 51.1**	**-0.8**
0.3nm,0.1s							
ELOB				S	**Sn**	**10 14 49.1**	**-1.7**
ESDC	**Sonseca Array**	**5.20**	**56**	P	**Pn**	**10 13 53.7**	**+0.5**
ESDC				S	**Sn**	**10 14 53.3**	**+0.1**
ESDC	**Sonseca Array**	**5.20**	**56**	P	**Pn**	**10 13 53.7**	**+0.5**
0.9nm,0.2s,baz=240,slow=13,SNR=18							
ESDC				S	**Sn**	**10 14 53.3**	**+0.1**
2.9nm,0.2s,baz=240,slow=24,SNR=14							
ESDC	**Sonseca Array**	**5.20**	**56**	P	**Pn**	**10 13 53.7**	**+0.5**
0.9nm,0.2s,baz=240,slow=13,SNR=18							
ESDC				S	**Sn**	**10 14 53.3**	**+0.1**
2.9nm,0.2s,baz=240,slow=24,SNR=14							
EQES	**Quesada**	**5.24**	**78**	P	**Pn**	**10 13 52.6**	**-1.2**
EQES				S	**Sn**	**10 14 52.5**	**-1.7**
EQES	**Quesada**	**5.24**	**78**	P	**Pn**	**10 13 53.7**	**-0.1**
0.4nm,0.2s,SNR=8.3							
EQES				S	**Sn**	**10 14 52.5**	**-1.7**
1.5nm,0.1s,SNR=5.0							
EQES	**Quesada**	**5.24**	**78**	P	**Pn**	**10 13 53.7**	**-0.1**
0.4nm,0.2s,SNR=8.3							
EQES				S	**Sn**	**10 14 52.5**	**-1.8**
1.5nm,0.1s,SNR=5.0							
PBRG	**Braganca**	**5.36**	**23**	*e*Sn	**Sn**	**10 14 55.8**	**-1.5**
PBRG	**Braganca**	**5.36**	**23**	Sn	**Sn**	**10 14 55.8**	**-1.5**
PBRG	**Braganca**	**5.36**	**23**	*e*Sn	**Sn**	**10 14 55.8**	**-1.5**
ECAL	**Calabor**	**5.49**	**22**	S	**Sn**	**10 14 58.7**	**-1.7**
2.9nm,0.2s,SNR=5.8							
ECAL	**Calabor**	**5.49**	**22**	S	**Sn**	**10 14 58.7**	**-1.7**
2.9nm,0.2s,SNR=5.8							
EHUE	**Huescar**	**5.62**	**78**	S	**Sn**	**10 15 01.2**	**-2.4**
1.1nm,0.2s,SNR=7.9							
EHUE	**Huescar**	**5.62**	**78**	S	**Sn**	**10 15 01.2**	**-2.4**
1.1nm,0.2s,SNR=7.9							
GUD	**Guadarrama**	**5.63**	**47**	P	**Pn**	**10 13 59.7**	**+0.4**
GUD				S	**Sn**	**10 15 03.4**	**-0.6**
GUD	**Guadarrama**	**5.63**	**47**	P	**Pn**	**10 13 59.7**	**+0.4**
1.1nm,0.2s,SNR=7.9							
GUD				S	**Sn**	**10 15 03.4**	**-0.6**
1.7nm,0.3s,SNR=7.9							
GUD	**Guadarrama**	**5.63**	**47**	P	**Pn**	**10 13 59.7**	**+0.4**
1.1nm,0.2s,SNR=7.9							
GUD				S	**Sn**	**10 15 03.4**	**-0.6**
1.7nm,0.3s,SNR=7.9							
EMAZ	**Mazaricos**	**6.06**	**4**	P	**Pn**	**10 14 03.7**	**-1.5**
EMAZ				S	**Sn**	**10 15 11.1**	**-3.5**
EMAZ	**Mazaricos**	**6.06**	**4**	P	**Pn**	**10 14 03.7**	**-1.5**
0.3nm,0.1s,SNR=7.9							
EMAZ				S	**Sn**	**10 15 09.1**	**-5.4**
2.0nm,0.1s,SNR=7.9							
EMAZ	**Mazaricos**	**6.06**	**4**	P	**Pn**	**10 14 03.7**	**-1.4**
0.3nm,0.1s,SNR=7.9							
EMAZ				S	**Sn**	**10 15 11.1**	**-3.5**
ETOB	**Tobarra**	**6.57**	**72**	S	**Sn**	**10 15 24.0**	**-3.2**
1.2nm,0.4s,SNR=7.9							
ETOB	**Tobarra**	**6.57**	**72**	S	**Sn**	**10 15 24.0**	**-3.1**
1.2nm,0.4s,SNR=7.9							

*IDC **21** 10:17:10.5±4.5, 33°.03S×179°.73E, h209km±36km, mb3.9/4, mb1 4.0/6, mb1mx3.6/19, mbtmp3.9/6, Error ellipse: s-maj=40.1km s-min=16.9km az=48.0*

ISC 21 10:17:19.5±1.6, 33°.8S±0°.1×179°.5E±0°.2, h295km±11km, n63, σ1°.13/58, mb3.9/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.91**	**194**	PN	**Pn**	**10 18 23.3**	**-1.1**
MXZ				SN	**S**	**10 19 17.0**	**+0.7**
KUZ	**Kuaotunu**	**4.29**	**225**	PN	**Pn**	**10 18 30.7**	**+2.1**
PUZ	**Puketiti**	**4.42**	**193**	PN	**Pn**	**10 18 29.1**	**-0.9**
PUZ				SN	**S**	**10 19 26.3**	**-0.2**
OPRZ	**Ohinepanea**	**4.72**	**209**	PN	**Pn**	**10 18 34.1**	**+0.6**
CNGZ	**Carnagh Statio**	**4.82**	**192**	PN	**Pn**	**10 18 34.5**	**-0.2**
MWZ	**Matawai**	**4.83**	**199**	PN	**Pn**	**10 18 34.2**	**-0.5**
MWZ				SN	**S**	**10 19 36.0**	**+0.8**
URZ	**Urewera**	**4.88**	**203**	P	**Pn**	**10 18 33.9**	**-1.4**
11nm,0.3s,baz=288,slow=3.2,SNR=171							
URZ				S	**S**	**10 19 38.2**	**+1.9**
35nm,0.3s,baz=79,slow=22,SNR=19							
URZ	**Urewera**	**4.88**	**203**	*e*PN	**Pn**	**10 18 34.3**	**-1.1**
URZ				SN	**S**	**10 19 37.8**	**+1.6**
RRRZ	**Republican Roa**	**5.16**	**207**	PN	**Pn**	**10 18 41.5**	**+2.9**
PRGZ	**Paritu Road**	**5.31**	**194**	PN	**Pn**	**10 18 39.2**	**-1.2**
PRRZ	**Plateau Road**	**5.35**	**207**	PN	**Pn**	**10 18 42.2**	**+1.4**
ALRZ	**Allen Road**	**5.42**	**207**	PN	**Pn**	**10 18 43.0**	**+1.3**
KNZ	**Kokohu**	**5.45**	**195**	PN	**Pn**	**10 18 40.5**	**-1.5**
MHGZ	**Mahia Peninsul**	**5.53**	**193**	PN	**Pn**	**10 18 43.3**	**+0.4**
NMHZ	**Naumai**	**5.75**	**201**	PN	**Pn**	**10 18 46.1**	**+0.6**
BKZ	**Black Stump Fm**	**5.91**	**203**	PN	**Pn**	**10 18 46.6**	**-0.9**
HIZ	**Hauiti**	**6.04**	**217**	PN	**Pn**	**10 18 52.5**	**+3.4**
MCHZ	**McNeill Hill**	**6.10**	**201**	PN	**Pn**	**10 18 50.5**	**+0.8**
CKHZ	**Cape Kidnapper**	**6.19**	**198**	PN	**Pn**	**10 18 50.1**	**-0.8**
WTVZ	**West Tongariro**	**6.20**	**209**	PN	**Pn**	**10 18 53.4**	**+2.4**
FWVZ	**Far West T-bar**	**6.33**	**209**	PN	**Pn**	**10 18 54.0**	**+1.5**
BHHZ	**Black Hill Sta**	**6.34**	**205**	PN	**Pn**	**10 18 53.9**	**+1.2**
KAHZ	**Kahuranaki**	**6.37**	**198**	PN	**Pn**	**10 18 53.6**	**+0.6**
VRZ	**Vera Road**	**6.57**	**214**	PN	**Pn**	**10 18 57.9**	**+2.4**
PXZ	**Pawanui**	**6.60**	**198**	PN	**Pn**	**10 18 53.6**	**-2.2**
PRHZ	**Porangahau**	**6.88**	**199**	PN	**Pn**	**10 18 59.4**	**+0.2**
TSZ	**Takapari Road**	**6.89**	**203**	PN	**Pn**	**10 18 58.5**	**-0.9**
ANWZ	**Angora Road**	**7.10**	**199**	PN	**Pn**	**10 19 02.6**	**+0.7**
BFZ	**Birch Farm**	**7.37**	**200**	PN	**Pn**	**10 19 05.1**	**-0.1**
MRZ	**Mangatainoka R**	**7.56**	**203**	PN	**Pn**	**10 19 07.0**	**-0.5**
MRZ				SN	**S**	**10 20 31.2**	**-3.7**
HOWZ	**Holdsworth Sta**	**7.79**	**203**	PN	**Pn**	**10 19 09.7**	**-0.6**
OGWZ	**Otaki Gorge**	**7.84**	**205**	PN	**Pn**	**10 19 10.5**	**-0.4**
TMWZ	**Te Maipa**	**7.87**	**200**	PN	**Pn**	**10 19 11.2**	**-0.1**
TRWZ	**Traveller**	**8.20**	**200**	PN	**Pn**	**10 19 15.0**	**-0.3**
MSWZ	**Moikau Station**	**8.35**	**203**	PN	**Pn**	**10 19 16.4**	**-0.8**
SNZO	**South Karori**	**8.44**	**205**	PN	**Pn**	**10 19 16.9**	**-1.4**
TCW	**Tory Channel**	**8.51**	**208**	PN	**Pn**	**10 19 18.2**	**-1.0**
NNZ	**Nelson**	**8.88**	**211**	PN	**Pn**	**10 19 22.1**	**-1.7**
QRZ	**Quartz Range**	**8.97**	**216**	PN	**Pn**	**10 19 23.9**	**-0.9**
THZ	**Tophouse**	**9.53**	**211**	PN	**Pn**	**10 19 30.8**	**-1.0**
KHZ	**Kahutara**	**9.83**	**207**	PN	**Pn**	**10 19 34.1**	**-1.3**
LTZ	**Lake Taylor**	**10.64**	**210**	PN	**Pn**	**10 19 44.3**	**-1.0**
MQZ	**McQueen's Vall**	**11.27**	**206**	PN	**Pn**	**10 19 52.0**	**-1.1**
RPZ	**Rata Peaks**	**11.91**	**211**	P	**Pn**	**10 20 01.2**	**+0.3**
1.4nm,0.3s,baz=169,slow=14,SNR=11							
ODZ	**Otahua Downs**	**13.17**	**209**	PN	**Pn**	**10 20 17.0**	**+0.9**
CTA	**Charters Tower**	**32.46**	**286**	P	**P**	**10 23 22.6**	**-0.4**
2.9nm,0.7s,mb3.9,baz=110,slow=11,SNR=3.9							
ASAR	**Alice Springs**	**40.94**	**272**	P	**P**	**10 24 33.9**	**-0.1**
5.3nm,1.1s,mb3.7,baz=109,slow=7.6,SNR=19							
WRA	**Warramunga Arr**	**42.24**	**277**	P	**P**	**10 24 44.1**	**-0.4**
1.6nm,0.4s,mb3.6,baz=114,slow=7.9,SNR=70							
QSPA	**South Pole Qui**	**56.35**	**180**	P	**P**	**10 26 35.8**	**+6.1**
9.3nm,0.6s,mb4.4,baz=14,slow=1.0,SNR=97							
VNA3	**Neumayer Olymp**	**75.09**	**177**	*e*	**P**	**10 28 29.8**	**+1.0**
VNA2	**Neumayer--Watz**	**75.49**	**178**	*e*	**P**	**10 28 32.4**	**+1.3**
baz=192,slow=6.3							
VNA1	**Neumayer--Stat**	**75.73**	**177**	*e*	**P**	**10 28 34.1**	**+1.6**
KEV	**Kevo**	**140.87**	**345**	*e*pkp	PKPdf	10 36 19.9	+6.6
ARCES	**ARCESS Array B**	**141.37**	**346**	PKP	PKPdf	10 36 13.6	-0.6
2.9nm,0.9s,baz=108,slow=2.0,SNR=3.7							
JOF	**Joensuu**	**144.67**	**335**	*e*pkp	PKPdf	10 36 17.4	-2.8
1.7nm,0.4s							
KAF	**Kangasniemi**	**146.91**	**337**	*e*pkp	PKPdf	10 36 23.8	-0.2
3.5nm,0.4s							
FINES	**FINESS Array B**	**147.47**	**336**	PKPbc	PKPbc	10 36 26.6	-1.4
4.8nm,0.5s,baz=36,slow=4.3,SNR=54							
NOA	**NORSAR Array B**	**151.67**	**348**	PKPbc	PKPbc	10 36 37.2	-1.0
2.6nm,0.4s,baz=14,slow=4.1,SNR=14							
LIC	**Lamto**	**152.28**	**170**	*e*PKP1	PKPbc	10 36 42.7	+1.6
28nm,0.6s							
KIC	**Kosan Boka**	**152.45**	**171**	*e*PKP1	PKPbc	10 36 42.9	+1.4
4.6nm,0.2s							
TIC	**Toumodi**	**152.69**	**170**	*e*PKP1	PKPbc	10 36 43.5	+1.5
8.0nm,0.3s							
DBIC	**Dimbokro**	**152.74**	**171**

1.9nm,0.4s,mb4.2,baz=4.9,slow=5.6,SNR=10
STKA Stephens Creek 29.98 172 *eP* **P 11 21 33.0 +0.2**
6.2nm,1.9s,mb4.0
KSRS Korea Array 40.22 349 LR LR 11 37 08.8
comp=Z,43nm,18.1s,MS3.3,baz=179,slow=33
CMAR Chiang Mai Arr 42.79 300 P **P 11 23 23.4 +1.2**
2.0nm,1.0s,mb3.8,baz=119,slow=7.0,SNR=7.2
SONM Songino Array 56.47 336 LR LR 11 48 14.6
comp=Z,66nm,21.5s,MS3.7,baz=234,slow=35
MKAR Makanchi Array 68.33 323 P **P 11 26 25.2 -0.1**
0.3nm,0.2s,mb3.9,baz=100,slow=9.6,SNR=4.0
ZALV Zalesovo Beam 70.59 330 P **P 11 26 37.8 -1.2**
0.5nm,0.5s,mb3.7,baz=120,slow=5.7,SNR=3.4
CPUP Villa Florida 148.50 154 PKPbc PKPbc 11 35 09.4 -1.9
6.0nm,0.9s,baz=212,slow=7.5,SNR=7.2
LPAZ La Paz 149.06 127 PKPbc PKPbc 11 35 10.6 -2.4
1.4nm,0.8s,baz=209,slow=6.1,SNR=4.8

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*CSEM **21** 12:05:49.3, 37°.50N×25°.12W, h2km, ML2.2, After PDA*
PDA 21 12:05:49.3±0.4, 37°.50N×25°.12W, h2km±3km, MD3.5, ML2.2, Error ellipse: s-maj=2.8km s-min=2.1km az=75.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	**0.28**	**352**	*i* P	Pg	12 05 54.4	-0.3
BART				*e*S	Sg	12 05 58.6	+0.2
BART				A		12 05 59.6	
	581nm,0.2s						
PSMN	**Pico do Norte,**	**0.50**	**175**	*e*P	Pg	12 05 58.3	-0.5
PSMN				*e*S	Sg	12 06 04.8	-0.4
PSMN	**Pico do Norte,**	**0.50**	**175**	*e*P	Pg	12 05 58.3	-0.5
PSMN				*e*S	Sg	12 06 04.8	-0.4
PDA	**Ponta Delgada**	**0.50**	**300**	*e*P	Pg	12 05 58.1	-0.8
PDA	**Ponta Delgada**	**0.50**	**300**	*e*P	Pg	12 05 58.1	-0.8
PSMA	**Santa Maria**	**0.50**	**181**	*e*P	Pg	12 05 58.2	-0.7
PSMA				*e*S	Sg	12 06 04.9	-0.5
PSMA				A		12 06 05.5	
	22nm,0.2s						
PSET	**Sete Cidades**	**0.58**	**304**	*e*S	Sg	12 06 07.1	-0.8
PSET				A		12 06 08.8	
	15nm,0.2s						
PSET	**Sete Cidades**	**0.58**	**304**	*e*S	Sg	12 06 07.1	-0.8

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*NEIC **21** 12:06:53.2, 34°.80N×33°.92E, h23km, ML3.0(NIC), After NIC.*
*NIC **21** 12:06:53.2±0.1, 34°.80N×33°.92E, h23km, ML3.0, MW3.1*
*CSEM **21** 12:06:56.3±0.3, 34°.79N×33°.54E, h30km, Mw3.1, Error ellipse: s-maj=7.6km s-min=5.7km az=14.0*
*ISCJB **21** 12:06:56.5±0.7, 34°.91N±0°.05×33°.66E±0°.05, h42km±12km, Error ellipse: s-maj=9.1km s-min=6.6km az=7.8*
*DDA **21** 12:06:59.2, 35°.43N×33°.93E, h7km±3km, Md3.0*
*ISK **21** 12:06:59.1, 34°.71N×33°.96E, h32km, ML2.7*
ISC 21 12:06:54.6±0.6, 34°.91N±0°.04×33°.87E±0°.04, h31km±5km, n33, σ1°.21/44, 2C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.17**	**54**	P	**Pb**	**12 06 59.2**	**-1.4**
	24nm,0.2s						
CSS	**Prodhromos**	**0.45**	**277**	⇑P	**Pb**	**12 07 03.5**	**-0.7**
	16nm,0.2s						
CSS				S	**Sb**	**12 07 11.4**	**+0.6**
CSS	**Prodhromos**	**0.45**	**277**	PG	**Sb**	**12 07 11.4**	**+0.6**
CSS				*e*SG	Sx	12 07 19.4	
CSS	**Prodhromos**	**0.45**	**277**	⇑P	**Pb**	**12 07 03.5**	**-0.7**
	16nm,0.2s						
CSS				S	**Sb**	**12 07 11.4**	**+0.6**
LFK	**Lefkose**	**0.46**	**324**	PG	**Sb**	**12 07 12.6**	**+1.3**
LFK				*e*SG	Sx	12 07 22.3	
MAMC	**Mammari**	**0.59**	**297**	P	**Pb**	**12 07 06.0**	**-0.7**
MAMC	**Mammari**	**0.59**	**297**	P	**Pb**	**12 07 06.0**	**-0.7**
EREN	**Erenkoy**	**0.67**	**22**	PG	**Sb**	**12 07 14.9**	**-1.9**
EREN				*e*SG	Sx	12 07 26.6	
EREN	**Erenkoy**	**0.67**	**22**	*i* Pg	**Sb**	**12 07 15.0**	**-1.9**
EREN				eSg	Sx	12 07 26.6	
LEF	**Lefka**	**0.83**	**285**	*e*PG	**Sn**	**12 07 17.3**	**-4.1**
LEF				*e*SG	Sx	12 07 30.1	
ALFC	**Alevga**	**1.07**	**284**	P	**Pn**	**12 07 12.2**	**-1.3**
	5.8nm,0.3s						
ALFC				S	**Sn**	**12 07 27.2**	**-0.1**
ALFC	**Alevga**	**1.07**	**284**	P	**Pn**	**12 07 12.2**	**-1.3**
	5.8nm,0.3s						
PPCY	**Paphos**	**1.25**	**269**	P	**Pn**	**12 07 14.5**	**-1.5**
PPCY	**Paphos**	**1.25**	**269**	P	**Pn**	**12 07 14.5**	**-1.5**
BHL	**Bhannes**	**1.78**	**124**	*e*P	**Pb**	**12 07 27.0**	**+0.3**
BHL	**Bhannes**	**1.78**	**124**	*e*P	**Pb**	**12 07 27.0**	**+0.4**
HWQ	**Hawqa**	**1.82**	**109**	*e*P	**Pb**	**12 07 29.0**	**+1.7**
HWQ	**Hawqa**	**1.82**	**109**	*e*P	**Pb**	**12 07 29.0**	**+1.6**
ERMK	**Ermenek**	**1.90**	**336**	*i* P	**Pn**	**12 07 26.4**	**+1.5**
ERMK				*i* S	**Sn**	**12 07 48.2**	**+0.4**
ERMK	**Ermenek**	**1.90**	**336**	*i* P	**Pn**	**12 07 26.4**	**+1.5**
ERMK				*i* S	**Sn**	**12 07 48.2**	**+0.4**
YAYL	**Yayladag**	**2.15**	**58**	*i* P	**Pb**	**12 07 34.1**	**+1.3**
YAYL				*i* S	**Sb**	**12 07 57.9**	**-1.1**
YAYL	**Yayladag**	**2.15**	**58**	*i* P	**Pb**	**12 07 34.1**	**+1.3**
YAYL				*i* S	**Sb**	**12 07 57.9**	**-1.1**
RCY	**Rachaya**	**2.15**	**131**	*e*P	**Pb**	**12 07 33.2**	**+0.3**
RCY	**Rachaya**	**2.15**	**131**	*e*P	**Pb**	**12 07 33.2**	**+0.3**
HTY	**Hatay**	**2.21**	**56**	*e*PN	**Pb**	**12 07 35.0**	**+1.1**
HTY	**Hatay**	**2.21**	**56**	*e*Pn	**Pb**	**12 07 35.0**	**+1.0**
HDMB	**Hadim**	**2.34**	**332**	*e*PN	**Pb**	**12 07 40.0**	**+3.9**
GULE	**Gulek**	**2.48**	**17**	*i* P	**Pb**	**12 07 38.9**	**+0.3**
GULE				*i* S	**Sb**	**12 08 09.8**	**+1.0**
GULE	**Gulek**	**2.48**	**17**	*i* P	**Pb**	**12 07 38.9**	**+0.3**
GULE				*i* S	**Sb**	**12 08 09.8**	**+1.1**
COBT	**Iskenderun**	**2.52**	**50**	*i* P	**Pb**	**12 07 38.0**	**-1.3**
COBT				*i* S	**Sb**	**12 08 07.1**	**-2.7**
COBT	**Iskenderun**	**2.52**	**50**	*i* P	**Pb**	**12 07 38.0**	**-1.2**
COBT				*i* S	**Sb**	**12 08 07.1**	**-2.7**
KARA	**Karaisali**	**2.54**	**22**	*e*PN	**Pb**	**12 07 40.8**	**+1.3**
KARA	**Karaisali**	**2.54**	**22**	*e*Pn	**Pb**	**12 07 40.8**	**+1.3**

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*NNC **21** 12:10:59.6±2.1, 38°.01N×70°.69E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=24.5km s-min=15.5km az=97.0*
ISC 21 12:10:48.1±3.1, 37°.1N±0°.2×71°.9E±0°.1, h35km, n4, σ1°.02/7, 2C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.03**	**52**	Pn	**Pn**	**12 11 52.0**	**+4.7**
KSH				Sn	**Sn**	**12 12 33.1**	**-0.1**
KSH				smax			
	comp=N,61nm,0.9s						
KSH				smax			
	comp=E,68nm,0.8s						
KK31	**Karatay Array**	**6.06**	**351**	Pn	**Pn**	**12 12 19.8**	**+4.7**
	comp=E,2.6nm,0.3s,baz=176,slow=12,SNR=74						
KK31				Sn	**Sn**	**12 13 23.3**	**+0.1**
	comp=E,2.3nm,0.3s,baz=178,slow=22,SNR=8.0						
AB31	**Akbulak array**	**14.89**	**328**	Pn	**Pn**	**12 14 14.3**	**-1.5**
	comp=E,0.6nm,0.5s,baz=151,slow=14,SNR=14						
AB31				⇑Sn	**Sn**	**12 16 46.8**	**-13**
	comp=E,0.7nm,0.6s,baz=155,slow=22,SNR=7.2						
AKTO	**Aktyubinsk**	**16.60**	**328**	⇑Pn	**Pn**	**12 14 39.2**	**+1.3**
	comp=E,0.7nm,0.6s						

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*IDC **21** 12:38:51.3±1.6, 22°.86S×179°.28E, h528km±17km, mb3.5/19, mb1 3.7/20, mb1mx3.7/24, mbtmp3.5/20, Error ellipse: s-maj=14.7km s-min=11.0km az=143.0*
*ISCJB **21** 12:38:52.8±0.8, 23°.08S±0°.05×179°.19E±0°.06, h543km±11km, mb4.2/45, Error ellipse: s-maj=9.4km s-min=6.4km az=31.1*
*NEIC **21** 12:38:52.1±0.9, 23°.02S×179°.27E, h526km±11km, mb4.5/24, Error ellipse: s-maj=14.6km s-min=9.3km az=134.0*
ISC 21 12:38:53.2±0.8, 23°.15S±0°.05×179°.28E±0°.06, h537km±10km, h522km±6.0km: pP-P, n212, σ0°.80/170, mb4.2/45, 52C-51D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.51**	**348**	*e*Pn	**P**	**12 40 26.9**	**0.0**
AFI	**Afiamalu**	**12.50**	**44**	P	**P**	**12 41 31.3**	**-5.8**
	3.4nm,0.3s,baz=61,slow=8.6,SNR=13						
AFI				S	**S**	**12 43 43.3**	**-8.7**
	0.5nm,0.3s,baz=37,slow=20,SNR=3.1						
AFI	**Afiamalu**	**12.50**	**44**	*e*Pn	**P**	**12 41 32.7**	**-4.4**
OUZ	**Omahuta**	**13.01**	**201**	*e*Pn	**P**	**12 41 46.5**	**+4.4**
KUZ	**Kuaotunu**	**13.89**	**192**	*e*PN	**P**	**12 41 52.0**	**+0.8**
MXZ	**Matakaoa Point**	**14.39**	**183**	PN	**P**	**12 41 56.4**	**0.0**
URZ	**Urewera**	**15.18**	**187**	P	**P**	**12 42 03.1**	**-1.4**
	4.1nm,0.3s,baz=0.3,slow=6.4,SNR=27						
URZ				S	**S**	**12 44 39.7**	**-2.3**
	1.7nm,0.3s,baz=173,slow=19,SNR=8.0						
URZ	**Urewera**	**15.18**	**187**	*e*P	**P**	**12 42 03.8**	**-0.6**
	60nm,0.8s						
URZ	**Urewera**	**15.18**	**187**	PN	**P**	**12 42 02.9**	**-1.6**
MWZ	**Matawai**	**15.21**	**185**	PN	**P**	**12 42 03.8**	**-1.0**
SNZO	**South Karori**	**18.51**	**191**	*e*P	**P**	**12 42 36.5**	**+0.3**
	115nm,1.1s						
QRZ	**Quartz Range**	**18.52**	**196**	PN	**P**	**12 42 38.6**	**+2.3**
NNZ	**Nelson**	**18.69**	**194**	PN	**P**	**12 42 38.1**	**+0.3**
NNZ				*e*SN	**S**	**12 45 39.8**	**-0.6**
THZ	**Tophouse**	**19.31**	**195**	*e*PN	**P**	**12 42 44.3**	**+0.9**
KHZ	**Kahutara**	**19.80**	**193**	*e*P	**P**	**12 42 47.6**	**-0.3**
	17nm,0.3s						
LTZ	**Lake Taylor**	**20.43**	**195**	PN	**P**	**12 42 52.9**	**-0.7**
RPZ	**Rata Peaks**	**21.61**	**196**	P	**P**	**12 43 04.6**	**+0.4**
	12nm,0.7s,mb4.6,baz=24,slow=3.1,SNR=5.1						
ARMA	**Armidale**	**25.68**	**248**	*e*P	**P**	**12 43 42.2**	**+1.5**
ARMA	**Armidale**	**25.68**	**248**	*e*P	**P**	**12 43 42.1**	**+1.4**
	10nm,0.8s,mb4.5						
RMQ	**Roma**	**27.87**	**257**	*e*P	**P**	**12 44 01.0**	**+1.1**
	20nm,0.9s,mb4.7						
CNB	**Canberra Magne**	**28.67**	**238**	*e*P	**P**	**12 44 08.4**	**+1.6**
CTA	**Charters Tower**	**30.82**	**269**	P	**P**	**12 44 24.7**	**-0.8**
	9.5nm,0.3s,mb4.7,baz=97,slow=11,SNR=22						
CTA	**Charters Tower**	**30.82**	**269**	*e*P	**P**	**12 44 25.5**	**-0.1**
	8.6nm,0.3s,mb4.8						
CTAO	**Charters Tower**	**30.82**	**269**	*e*P	**P**	**12 44 25.4**	**-0.2**
	12nm,0.6s,mb4.6						
CMSA	**Cobar Meteorol**	**30.89**	**247**	*e*P	**P**	**12 44 26.4**	**+0.4**
TOO	**Toolangi**	**32.31**	**236**	*e*P	**P**	**12 44 38.8**	**+0.7**
STKA	**Stephens Creek**	**34.40**	**247**	P	**P**	**12 44 56.0**	**+0.3**
	3.3nm,0.4s,mb4.2,baz=174,slow=17,SNR=13						
STKA	**Stephens Creek**	**34.40**	**247**	*e*P	**P**	**12 44 56.1**	**+0.3**
	4.8nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**34.40**	**247**	*e*P	**P**	**12 44 56.1**	**+0.4**
	0.7nm,0.4s,mb3.5						
COEN	**Coen**	**35.34**	**279**	*e*P	**P**	**12 45 04.3**	**+0.4**
	65nm,1.0s,mb5.1						
ASAR	**Alice Springs**	**41.51**	**260**	P	**P**	**12 45 52.8**	**-1.1**
	1.7nm,0.4s,mb4.0,baz=88,slow=8.8,SNR=51						
ASAR				PcP	PcP	12 47 37.7	-1.0
	2.4nm,0.8s,baz=93,slow=4.7,SNR=11						
ASAR				ScP	ScP	12 50 37.0	-0.8
	1.8nm,1.0s,baz=110,slow=3.4,SNR=7.6						
ASAR				S	**S**	**12 51 26.9**	**-3.9**
	1.2nm,0.9s,baz=101,slow=14,SNR=6.5						
WRA	**Warramunga Arr**	**41.80**	**266**	P	**P**	**12 45 54.6**	**-1.6**
	1.9nm,0.3s,mb4.2,baz=96,slow=8.2,SNR=208						
WRA				PcP	PcP	12 47 38.4	-1.3
	0.2nm,0.5s,baz=98,slow=3.4,SNR=4.7						
WRA				ScP	ScP	12 50 37.8	-1.3
	2.1nm,1.0s,baz=103,slow=4.2,SNR=6.7						
WRA				S	**S**	**12 51 28.5**	**-6.6**
	0.8nm,0.9s,baz=100,slow=13,SNR=5.7						
WRA	**Warramunga Arr**	**41.80**	**266**	P	**P**	**12 45 54.6**	**-1.6**
WRA				PcP	PcP	12 47 38.4	-1.3
WRA				ScP	ScP	12 50 37.8	-1.3
WRA				S	**S**	**12 51 28.5**	**-6.6**
FORT	**Forrest**	**45.96**	**249**	*e*P	**P**	**12 46 27.2**	**-1.0**
	22nm,0.8s,mb4.7						
FORT	**Forrest**	**45.96**	**249**	*e*P	**P**	**12 46 27.3**	**-0.9**
	22nm,0.6s,mb4.9						
KNA	**Kununurra**	**48.01**	**269**	*e*P	**P**	**12 46 42.5**	**-1.3**
	3.4nm,0.2s,mb4.5						
FITZ	**Fitzroy Crossi**	**50.23**	**265**	P	**P**	**12 46 59.0**	**-1.2**
	2.0nm,0.5s,mb3.8,baz=107,slow=6.2						
SBA	**Scott Base**	**55.08**	**183**	*e*P	**P**	**12 47 36.8**	**+2.8**
	4.3nm,0.9s,mb3.7						
QSPA	**South Pole Qui**	**66.93**	**180**	P	**P**	**12 48 53.2**	**+1.5**
	12nm,1.0s,mb4.4,baz=20,slow=2.7,SNR=13						
MJAR	**Matsushiro Arr**	**70.91**	**326**	P	**P**	**12 49 12.8**	**-3.4**
	1.8nm,0.8s,mb3.7,baz=172,slow=5.7,SNR=8.1						
MJAR	**Matsushiro Arr**	**70.91**	**326**	P	**P**	**12 49 12.8**	**-3.4**
KSRS	**Korea Array**	**77.25**	**320**	P	**P**	**12 49 51.0**	**-1.1**
	1.7nm,0.8s,mb3.5,baz=134,slow=5.7,SNR=8.9						
PETK	**Petropavlovsk-**	**78.22**	**347**	P	**P**	**12 49 54.1**	**-2.9**
	4.5nm,0.8s,mb3.9,baz=165,slow=6.0,SNR=2.7						
NJ2	**Nanjing**	**79.67**	**311**	*e*P	**P**	**12 50 05.6**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.6						
VES	**Vestal, Richgr**	**82.68**	**46**	⇓P	**P**	**12 50 20.1**	**-0.5**
	baz=83						
MONP	**Monument Peak**	**82.84**	**50**	⇓P	**P**	**12 50 21.6**	**+0.1**
	baz=83						
CN2	**Changchun**	**82.89**	**324**	*e*P	**P**	**12 50 25.3**	**+3.8**
DVTC	**Desert V Tower**	**82.94**	**50**	⇓P	**P**	**12 50 21.4**	**-0.6**
	baz=83						
ISA	**Isabella**	**82.98**	**47**	⇑P	**P**	**12 50 22.1**	**0.0**
	baz=83						
ISA	**Isabella**	**82.98**	**47**	*e*P	**P**	**12 50 22.2**	**+0.1**
	comp=Z,4.4nm,0.9s,mb4.0						
CMB	**Columbia Colle**	**83.11**	**44**	*e*P	**P**	**12 50 22.4**	**-0.3**
	comp=Z,4.8nm,0.9s,mb4.0						
SYO	**Syowa Base**	**83.58**	**194**	⇑*e*X		12 50 22.0	
BELC	**Belle Mtn. Jos**	**83.75**	**49**	⇓P	**P**	**12 50 26.0**	**0.0**
	baz=84						
YBH	**Yreka Blue Hor**	**83.93**	**40**	P	**P**	**12 50 26.6**	**-0.1**
	comp=Z,2.4nm,0.8s,mb3.8,baz=75,slow=1.2,SNR=6.5						
HEC	**Hector,Ludlow**	**83.97**	**48**	⇑P	**P**	**12 50 26.7**	**-0.3**
	baz=84						
WAKR	**Walker**	**84.00**	**44**	*e*P	**P**	**12 50 27.5**	**+0.4**
GLA	**Glamis**	**84.06**	**50**	*e*P	**P**	**12 50 27.3**	**-0.2**
	comp=Z,7.3nm,1.0s,mb4.2						
WCN	**Washoe City**	**84.26**	**43**	⇑P	**P**	**12 50 28.5**	**+0.2**
	baz=84						
HUMO	**Hull Mountain**	**84.33**	**39**	*e*P	**P**	**12 50 28.4**	**-0.3**
	comp=Z,5.7nm,1.2s,mb4.0						
IRM	**Iron Mountain**	**84.42**	**49**	⇓P	**P**	**12 50 29.3**	**0.0**
	baz=84						
SHOC	**Shoshone**	**84.59**	**47**	⇑P	**P**	**12 50 30.3**	**+0.2**
	baz=85						
Y12C	**Blythe**	**84.64**	**50**	⇓P	**P**	**12 50 30.9**	**+0.5**
	baz=85						
NVAR	**Mina Array Bea**	**84.68**	**44**	P	**P**	**12 50 29.1**	**-1.4**
	comp=Z,1.3nm,0.8s,mb3.5,baz=226,slow=8.3,SNR=9.1						
Z13A	**Yuma Proving G**	**84.97**	**51**	⇓P	**P**	**12 50 32.1**	**+0.1**
	baz=85						
V11A	**Goodsprings**	**85.14**	**48**	⇑P	**P**	**12 50 33.1**	**+0.3**
	baz=85						
Y13A	**Salome**	**85.17**	**50**	⇑P	**P**	**12 50 32.9**	**0.0**
	baz=85						
W12A	**Cal Nev Ari**	**85.23**	**49**	⇑P	**P**	**12 50 33.5**	**+0.2**
	baz=85						
114A	**Black Gap (USA**	**85.29**	**52**	⇓P	**P**	**12 50 33.8**	**+0.3**
	baz=85						
SNAA	**Sanae**	**85.42**	**179**	P	**P**	**12 50 32.1**	**-1.5**
	comp=Z,0.3nm,0.4s,mb3.1,baz=218,slow=9.1,SNR=5.8						
X13A	**Yucca**	**85.58**	**50**	⇓P	**P**	**12 50 35.0**	**+0.1**
	baz=86						
K05A	**Summer Lake**	**85.61**	**40**	⇑P	**P**	**12 50 35.1**	**+0.2**
	baz=86						
VNA3	**Neumayer Olymp**	**85.66**	**177**	*e*P	**P**	**12 50 30.9**	**-3.8**
GYA	**Guiyang**	**85.80**	**301**	*e*P	**P**	**12 50 37.8**	**+1.7**
GYA				pP	pP	12 52 33.4	+0.2
GYA				sP	sP	12 53 25.0	-2.6
GYA				PP	PP	12 54 08.6	+2.8
GYA				SKS		13 00 11.8	
GYA				S	S	13 00 26.3	+1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
U12A	**Valley of Fire**	**86.06**	**48**	⇓P	**P**	**12 50 37.2**	**0.0**
	baz=86						
VNA2	**Neumayer--Watz**	**86.07**	**178**	*e*P	**P**	**12 50 33.4**	**-3.2**
	baz=194,slow=4.2						
F03A	**Seaside**	**86.08**	**36**	⇓P	**P**	**12 50 37.1**	**+0.1**
	baz=86						
V13A	**Grand Canyon W**	**86.14**	**48**	⇓P	**P**	**12 50 36.8**	**-0.8**
	baz=86						
217A	**Green Valley**	**86.30**	**53**	P	**P**	**12 50 39.0**	**+0.6**
	baz=86,SNR=5.9						
Y15A	**Casa Rosa Ranc**	**86.30**	**51**	⇑P	**P**	**12 50 38.6**	**+0.3**
	baz=86						
U13A	**Pakoon Wash**	**86.45**	**48**	⇑P	**P**	**12 50 38.8**	**-0.2**
	baz=87						
V14A	**Boquillas Ranc**	**86.63**	**49**	⇓P	**P**	**12 50 40.2**	**+0.3**
	baz=87						
F04A	**Amboy**	**86.70**	**36**	⇓P	**P**	**12 50 39.7**	**-0.2**
	baz=87						
318A	**Bisbee**	**86.75**	**54**	⇑P	**P**	**12 50 41.3**	**+0.7**
	baz=87,SNR=6.0						
117A	**Oracle**	**86.75**	**53**	⇓P	**P**	**12 50 40.9**	**+0.4**
	baz=87						
WVOR	**Wild Horse Val**	**86.78**	**41**	*e*P	**P**	**12 50 40.0**	**-0.4**
	comp=Z,33nm,2.1s,mb4.6						
Y16A	**Circle Bar Ran**	**86.88**	**51**	⇓P	**P**	**12 50 41.1**	**+0.1**
	baz=87						
U14A	**Mt Trumbull**	**86.99**	**48**	⇓P	**P**	**12 50 41.8**	**+0.3**
	baz=87						
X16A	**Lo Mia Camp, P**	**87.18**	**51**	⇓P	**P**	**12 50 42.7**	**+0.2**
	baz=87						
I07A	**Izee**	**87.23**	**39**	⇓P	**P**	**12 50 42.5**	**+0.1**
	baz=87,SNR=7.0						
319A	**Douglas**	**87.25**	**54**	⇑P	**P**	**12 50 43.8**	**+0.9**
	baz=87,SNR=5.0						
G06A	**Carlson Farm,**	**87.27**	**38**	⇑P	**P**	**12 50 42.2**	**-0.4**
	baz=87						
118A	**Homack Ranch,**	**87.35**	**53**	⇑P	**P**	**12 50 43.5**	**+0.1**
	baz=87						
V15A	**Kaibab Nationa**	**87.37**	**49**	⇑P	**P**	**12 50 43.6**	**+0.2**
	baz=88						
J08A	**Circle Bar Ran**	**87.41**	**40**	⇓P	**P**	**12 50 43.1**	**-0.2**
	baz=88						
CCUT	**Cedar City**	**87.46**	**47**	*e*P	**P**	**12 50 43.8**	**+0.1**
	comp=Z,13nm,2.0s,mb4.2						
U15A	**North Rim**	**87.60**	**49**	⇓P	**P**	**12 50 45.0**	**+0.6**
	baz=88						
D05A	**Enumclaw**	**87.71**	**36**	⇑P	**P**	**12 50 44.9**	**+0.2**
	baz=88						
320A	**Kipp Ranch, An**	**87.79**	**55**	⇓P	**P**	**12 50 46.4**	**+0.9**
	baz=88						
Y18A	**Canyon Day Jun**	**87.87**	**52**	⇓P	**P**	**12 50 46.4**	**+0.7**
	baz=88						
220A	**Playas Peak, P**	**88.06**	**54**	⇑P	**P**	**12 50 47.8**	**+1.1**
	baz=88						
V17A	**Tonalea, Kykot**	**88.24**	**50**	⇑P	**P**	**12 50 47.3**	**-0.1**
	baz=88						
U16A	**Tuba City**	**88.27**	**49**	⇓P	**P**	**12 50 48.3**	**+0.7**
	baz=88						
Q14A	**Sevier Lake (B**	**88.27**	**46**	⇓P	**P**	**12 50 47.1**	**-0.3**
	baz=88						
T16A	**Glen Canyon Da**	**88.43**	**48**	⇓P	**P**	**12 50 48.5**	**+0.3**
	baz=88						
E07A	**Sunnyside**	**88.49**	**37**	⇑P	**P**	**12 50 48.2**	**-0.1**
	baz=89						
Y19A	**Nutrioso**	**88.52**	**52**	⇑P	**P**	**12 50 48.8**	**0.0**
	baz=89						
CMAR	**Chiang Mai Arr**	**88.64**	**291**	P	**P**	**12 50 48.7**	**-1.0**
	comp=Z,1.0nm,0.7s,mb3.8,baz=131,slow=2.3,SNR=8.0						
MSU	**Marysvale**	**88.75**	**47**	*e*P	**P**	**12 50 50.9**	**+1.1**
	comp=Z,3.6nm,1.5s,mb4.0						
T17A	**Navajo Res., N**	**88.92**	**49**	⇓P	**P**	**12 50 50.8**	**+0.3**
	baz=89						
MFID	**Camas Ranch**	**89.03**	**41**	⇓P	**P**	**12 50 50.7**	**-0.3**
	baz=89,SNR=5.0						
R16A	**Teasdale**	**89.11**	**47**	⇑P	**P**	**12 50 51.9**	**+0.5**
	baz=89						
Y20A	**Horse Springs,**	**89.14**	**52**	⇓P	**P**	**12 50 52.1**	**+0.4**
	baz=89						
P15A	**Leamington**	**89.23**	**46**	⇑P	**P**	**12 50 52.4**	**+0.5**
	baz=89						
S17A	**Black Ridge (B**	**89.24**	**48**	⇓P	**P**	**12 50 51.5**	**-0.5**
	baz=89						
PLCA	**Paso Flores**	**89.26**	**134**	P	**P**	**12 50 53.3**	**+1.1**
	comp=Z,2.5nm,1.0s,mb4.0,baz=169,slow=1.7,SNR=3.1						
D08A	**Wollman Farm,**	**89.31**	**37**	⇓P	**P**	**12 50 52.0**	**-0.1**
	baz=89						
X20A	**Quemado**	**89.35**	**52**	⇑P	**P**	**12 50 53.0**	**+0.4**
	baz=89						
Z21A	**St. Cloud Mine**	**89.37**	**53**	⇑P	**P**	**12 50 52.8**	**+0.1**
	baz=90						
HHC	**Hu-ho-hao-te**	**89.42**	**315**	*e*P	**P**	**12 50 55.4**	**+2.6**
HHC				pP	pP	12 52 48.8	-2.2
HHC				sP	sP	12 53 39.9	-5.2
HHC				PP	PP	12 54 39.3	+5.2
HHC				SKS		13 00 36.6	
HHC				S	S	13 01 02.1	+4.5
HHC				sS	sS	13 04 22.8	-5.7
HHC				SS	SS	13 07 16.4	+6.6
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,90nm,5.5s						
122A	**Conniff Cattle**	**89.58**	**54**	⇓P	**P**	**12 50 54.5**	**+0.8**
	baz=90						
W20A	**Ramah**	**89.63**	**51**	⇓P	**P**	**12 50 54.1**	**+0.2**
	baz=90						
T18A	**Mexican Hat**	**89.64**	**49**	⇑P	**P**	**12 50 54.0**	**+0.1**
	baz=90,SNR=7.3						
Q16A	**Castle Valley**	**89.64**	**47**	⇑P	**P**	**12 50 54.6**	**+0.7**
	baz=90,SNR=6.0						
U19A	**Dine' College,**	**89.69**	**50**	⇑P	**P**	**12 50 54.3**	**+0.1**

427A	Hayter Ranch,	91.47	57	⇓P	P	12 51 02.4	-0.1
	baz=92						
LZH	Lanzhou	92.39	308	eP	P	12 51 12.0	+5.4
LZH				pP	pP	12 53 10.0	+4.9
LZH				sP	sP	12 53 51.5	-7.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
PDAR	Pinedale Array	92.61	44	P	P	12 51 05.8	-1.7
	comp=Z,0.8nm,0.8s,mb3.8,baz=210,slow=3.2,SNR=6.8						
SDCO	Great Sand Dun	92.99	50	eP	P	12 51 08.6	-0.7
	comp=Z,1.0nm,0.7s,mb4.0						
MKAR	Makanchi Array	111.16	313	PKiKP	PKiKP	12 56 22.8	-2.9
	comp=Z,0.3nm,0.6s,baz=119,slow=1.8,SNR=3.5						
FINES	FINESS Array B	137.53	341	PKP	PKPdf	12 57 13.8	-1.7
	comp=Z,2.2nm,0.8s,baz=106,slow=4.2,SNR=4.7						
NOA	NORSAR Array B	141.24	351	PKhKP	PKPpre	12 57 14.8	
	comp=Z,0.9nm,0.6s,baz=15,slow=4.7,SNR=5.9						
MALT	Malatya	143.40	304	⇑P	PKPdf	12 57 24.5	-2.3
AKASG	Malin Array Be	143.99	327	PKP	PKPdf	12 57 24.0	-3.3
	comp=Z,6.4nm,0.6s,baz=44,slow=4.1,SNR=31						
SUW	Suwalki	144.31	336	ePKP	PKPdf	12 57 26.0	-1.8
BR131	Keskin Array S	146.60	308	ePKPdf	PKPdf	12 57 33.9	+1.7
BRTR	Keskin Array B	146.60	308	PKPbc	PKPbc	12 57 33.0	-1.7
	comp=Z,2.7nm,0.7s,baz=114,slow=3.9,SNR=11						
KWP	Kalwaria Pacla	147.79	331	ePKPdf	PKPbc	12 57 36.2	-1.4
KWP	Kalwaria Pacla	147.79	331	⇓iP	PKPbc	12 57 36.3	-1.2
BUR08	Bucovina Ar. S	147.97	326	ePKPdf	PKPbc	12 57 37.5	-0.5
BURAR	Bucovina Array	147.98	326	⇑iP	PKPbc	12 57 37.6	-0.5
CSS	Prodhromos	148.14	299	ePKPdf	PKPbc	12 57 37.1	-1.8
KOLS	Kolonicke sedl	148.50	330	ePKP	PKPbc	12 57 38.7	-0.6
OJC	Ojcow	148.58	334	ePKP	PKPbc	12 57 37.6	-1.9
CRVS	Cervenica-Dubn	148.88	331	ePKP	PKPbc	12 57 39.3	-1.0
NIE	Niedzica	148.99	333	ePKP	PKPbc	12 57 39.4	-1.1
KSP	Ksiaz	149.35	339	ePKP	PKPbc	12 57 40.0	-1.3
OKC	Ostrava-Krasne	149.52	336	⇑ePKP	PKPbc	12 57 40.5	-1.3
KECS	Kecovo	149.63	332	ePKP	PKPbc	12 57 40.6	-1.5
UPC	Upice	149.73	339	⇑ePKP	PKPbc	12 57 40.9	-1.3
UPC				ePKPAB	PKPab	12 57 47.9	-2.0
DPC	Dobruska-Polom	149.76	338	⇑ePKP	PKPbc	12 57 41.2	-1.1
DPC				ePKPAB	PKPab	12 57 49.0	-1.0
MORC	Moravsky Berou	149.80	336	⇑iP	PKPbc	12 57 40.9	-1.5
DRGR		149.80	327	⇓iP	PKPbc	12 57 40.9	-1.6
BRG	Berggiesshubel	150.07	341	i PKP	PKPbc	12 57 41.5	-1.5
	comp=Z,15nm,0.8s						
BRG				e		12 57 48.4	
	comp=Z,5.2nm,0.9s						
BRG				e		13 00 05.5	
	comp=Z,9.0nm,1.3s						
PVCC	Panska Ves	150.18	340	⇑ePKP	PKPbc	12 57 41.9	-1.4
VYHS	Vyhne	150.32	333	ePKP	PKPbc	12 57 42.3	-1.4
PRU	Pruhonice	150.66	340	⇑ePKP	PKPbc	12 57 43.3	-1.1
GZR	Gura Zlata	150.71	325	⇑iP	PKPbc	12 57 42.9	-1.8
MOX	Moxa	150.92	344	ePKP	PKPbc	12 57 43.4	-1.6
	comp=Z,11nm,1.1s						
TREC	Trest	150.94	338	⇑ePKP	PKPbc	12 57 43.8	-1.3
NKC	Novy Kostel	151.07	342	⇑ePKP	PKPbc	12 57 44.0	-1.4
BZS	Buzias	151.16	326	⇓iP	PKPbc	12 57 43.7	-2.0
KHC	Kasperske Hory	151.72	340	ePKPbc	PKPbc	12 57 45.2	-1.6
KHC	Kasperske Hory	151.72	340	⇑ePKP	PKPbc	12 57 45.1	-1.7
KHC				ePKPAB	PKPab	12 57 55.5	-2.7
GERES	GERESS Array B	151.93	340	PKPbc	PKPbc	12 57 45.2	-2.1
	comp=Z,2.3nm,0.8s,baz=48,slow=2.0,SNR=18						
PKSM	Moragy	152.16	330	⇑iP	PKPbc	12 57 46.2	-1.7
BAIF	Baives	152.87	353	ePKP2	PKPab	12 58 00.7	-2.4
MEZF	Maizieres J'vi	154.29	351	ePKP2	PKPab	12 58 06.9	-2.3
HAU	Haudompre	154.56	349	ePKP2	PKPab	12 58 07.9	-2.5
SFTF	Sexfontaines	154.58	351	ePKP2	PKPab	12 58 08.2	-2.2
SSF	Saint Saulge	155.90	353	ePKP2	PKPab	12 58 13.8	-2.4
	comp=Z,6.8nm,0.8s						
CABF	La Chapelle	155.96	348	ePKP2	PKPab	12 58 14.1	-2.3
	comp=Z,10.0nm,0.9s						
AVF	Avril sur Loir	156.19	353	ePKP2	PKPab	12 58 14.9	-2.5
	comp=Z,5.3nm,0.9s						
SMF	Signal de Mont	156.27	352	ePKP2	PKPab	12 58 15.3	-2.5
	comp=Z,13nm,1.0s						
ESDC	Sonseca Array	163.30	9	PKPab	PKPab	12 58 44.8	-3.8
	comp=Z,0.8nm,0.7s,baz=348,slow=4.7,SNR=5.2						
TORD	Torodi Ar. Bea	169.79	193	PKPab	PKPab	12 59 17.3	-0.6
	comp=Z,2.7nm,0.9s,baz=132,slow=2.2,SNR=4.2						

IDC 21 12:39:36.8±0.8, 45°72S×72°50W, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.1/18, mbtmp4.1/9, ML3.3/1, MS3.7/4, Ms1 3.7/4, ms1mx3.1/19, Error ellipse: s-maj=36.6km s-min=17.8km az=92.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	5.19	17	Pn	Pn	12 40 59.9	+4.4
	3.6nm,0.3s,baz=196,slow=13,SNR=41						
PLCA				Pg	Pg	12 41 13.8	-2.3
	4.0nm,0.3s,baz=194,slow=17,SNR=16						
PLCA				Lg		12 42 27.6	
	7.7nm,0.3s,baz=289,slow=20,SNR=4.6						
USHA	Ushuaia	9.48	166	LR	LR	12 46 30.5	
	comp=Z,370nm,18.0s,baz=354,slow=44						
CFAA	Coronel Fontan	14.48	15	Pn	Pn	12 43 02.9	0.0
	0.1nm,0.3s,baz=196,slow=11,SNR=14						
CFAA				LR	LR	12 49 33.5	
	comp=Z,13nm,21.7s,baz=128,slow=41						
CPUP	Villa Florida	22.84	37	P	P	12 44 41.2	-0.2
	2.1nm,0.5s,baz=200,slow=8.7,SNR=8.5						
CPUP				LR	LR	12 54 38.2	
	comp=Z,77nm,21.6s,baz=192,slow=40						
LPAZ	La Paz	29.57	9	P	P	12 45 44.9	+1.6
	4.1nm,0.8s,baz=176,slow=6.2,SNR=18						
BDFB	Brasilia	36.35	42	P	P	12 46 41.9	-0.5
	4.4nm,0.7s,baz=209,slow=7.4,SNR=5.3						
BDFB				LR	LR	13 02 49.7	
	comp=Z,130nm,20.8s,baz=198,slow=38						
SNAA	Sanae	41.06	153	P	P	12 47 21.8	+0.3
	1.6nm,0.9s,baz=258,slow=8.5,SNR=11						
QSPA	South Pole Qui	44.53	180	P	P	12 47 49.4	0.0
	4.4nm,0.9s,baz=131,slow=2.1,SNR=14						
RPZ	Rata Peaks	74.62	222	LR	LR	13 15 08.2	
	comp=Z,125nm,20.0s,baz=96,slow=29						
TXAR	Lajitas Array	79.89	333	P	P	12 51 47.6	+0.6
	0.7nm,0.7s,baz=164,slow=8.3,SNR=6.5						
ANMO	Albuquerque	85.96	333	P	P	12 52 19.1	+0.6
	1.7nm,0.8s,baz=150,slow=8.7,SNR=5.5						
PDAR	Pinedale Array	94.08	334	P	P	12 52 55.9	-0.5
	0.3nm,0.7s,baz=142,slow=3.4,SNR=3.1						
ILAR	Eielson Array	124.33	330	PKP	PKPdf	12 58 34.6	-1.6
	0.5nm,0.8s,baz=194,slow=2.4,SNR=6.3						
CMAR	Chiang Mai Arr	151.90	163	PKPbc	PKPbc	12 59 34.5	+0.7
	2.0nm,0.9s,baz=221,slow=3.6,SNR=8.8						

*IDC **21** 12:47:55.8±0.7, 3°.09S×139°.03E, h0km, mb4.4/12, mb1 4.6/14, mb1mx4.6/15, mbtmp4.5/14, ML4.8/2, MS4.0/14, Ms1 4.0/14, ms1mx3.8/22, Error ellipse: s-maj=26.5km s-min=14.2km az=91.0*

*BJI **21** 12:47:58.8, 3°.40S×139°.29E, h46km, mB4.9/17, mb4.7/28, Ms4.6/14, Ms7 4.4/13*

*ISCJB **21** 12:47:59.9±0.3, 3°.14S±0°.03×139°.02E±0°.05, h36km, mb4.5/43, MS4.0/15, Error ellipse: s-maj=7.2km s-min=4.8km az=170.8*

*MOS **21** 12:47:59.7±1.1, 3°.04S×138°.82E, h33km, mb5.0/12, Error ellipse: s-maj=15.9km s-min=8.0km az=105.8*

*TEH **21** 12:48:02.0, 3°.06S×138°.84E, h40km*

*NEIC **21** 12:48:02.3±1.7, 3°.07S×138°.85E, h41km±17km, mb4.7/18, Error ellipse: s-maj=11.8km s-min=8.8km az=98.0*

*DJA **21** 12:48:03, 3°.24S×138°.77E, h13km, mb4.9/11*

ISC 21 12:48:02.0±0.3, 3°.13S±0°.03×139°.01E±0°.05, h39km, h39km±1.4km: pP-P, n122, σ1§13/119, mb4.5/44, MS4.0/15, 3C-2D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	Biak	3.48	303	P	Pn	12 48 53.7	0.0
MMPI	Merauke	5.48	166	P	Pn	12 49 26.0	+4.8
	12nm1μm,0.6s						
TLE	Tual	6.74	248	P	Pn	12 49 40.0	+1.5
	0.7nm94nm,1.5s						
PMG	Port Moresby	10.22	128	ePn	Pn	12 50 30.6	+4.4
PMG	Port Moresby	10.22	128	c iP	Pn	12 50 31.7	+5.5
PMG	Port Moresby	10.22	128	P	Pn	12 50 32.5	+6.3
	46nm,1.1s						
COEN	Coen	11.52	159	eP	Pn	12 50 43.4	-0.7
COEN				eS	Sn	12 52 52.6	+1.1
COEN	Coen	11.52	159	ePn	Pn	12 50 44.0	0.0
COEN	Coen	11.52	159	P	Pn	12 50 46.3	+2.2
	122nm,1.1s						
KAKA	Kakadu	11.53	214	eP	Pn	12 50 41.8	-2.4
	96nm,0.4s						
LBMI	Labuha	11.77	282	P	Pn	12 50 45.9	-1.6
	47nm,1.1s						
NLAI	Namlea	11.90	269	P	Pn	12 50 49.0	-0.2
	34nm,1.1s						
KNA	Kununurra	16.10	218	P	Pn	12 51 44.8	-0.8
	3μm315nm,0.9s						
LUWI	Luwuk	16.36	277	P	Pn	12 51 51.2	+2.2
	68nm,0.9s						
WRA	Warramunga Arr	17.33	195	P	Pn	12 51 59.8	-1.2
	3.5nm,0.3s,baz=14,slow=12,SNR=47						
WRA				S	S	12 55 04.6	-16
	1.3nm,0.3s,baz=9.6,slow=22,SNR=5.1						
WRA				LR	LR	12 59 25.6	
	comp=Z,692nm,19.5s,baz=25,slow=40						
WRA	Warramunga Arr	17.33	195	P	Pn	12 51 59.8	-1.2
WRA				S	S	12 55 04.6	-16
MRSI	Marisa	17.44	282	P	Pn	12 52 04.6	+2.1
	22nm,1.1s						
GUMO	Guam	17.59	19	LR	LR	12 57 37.5	
	comp=Z,328nm,21.6s,baz=166,slow=33						
CTA	Charters Tower	18.28	158	P	Pn	12 52 14.8	+2.1
	0.5nm,0.3s,baz=325,slow=12,SNR=7.8						
CTA				LR	LR	12 59 47.2	
	comp=Z,595nm,18.4s,baz=344,slow=39						
CTA	Charters Tower	18.28	158	eP	Pn	12 52 15.6	+2.8
	8.1nm,0.8s						
CTA				eS	S	12 55 57.1	+17
CTA	Charters Tower	18.28	158	P	Pn	12 52 14.9	+2.1
CTAO	Charters Tower	18.28	158	eP	Pn	12 52 15.7	+2.9
	10nm,0.7s						
CTAO	Charters Tower	18.28	158	eP	Pn	12 52 15.7	+2.9
CTAO				pmax	pmax		
	comp=Z,11nm,0.7s						
TTSI	Tana Toraja	19.17	270	P	Pn	12 52 24.9	+1.3
	comp=Z,669nmcomp=Z,21nm,1.3s						
FITZ	Fitzroy Crossi	19.83	220	P	Pn	12 52 28.7	-2.8
	comp=Z,2.6nm,0.3s,baz=39,slow=11,SNR=97						
FITZ				S	S	12 56 02.4	-8.6
	comp=Z,1.7nm,0.3s,baz=191,slow=15,SNR=4.0						
FITZ				LR	LR	13 00 47.1	
	comp=Z,758nm,18.1s,baz=30,slow=39						
FITZ	Fitzroy Crossi	19.83	220	eP	Pn	12 52 28.9	-2.5
	comp=Z,44nm,0.9s						
FITZ				eS	S	12 56 01.8	-9.3
FITZ	Fitzroy Crossi	19.83	220	eP	Pn	12 52 29.0	-2.5
	comp=Z,37nm,1.0s						
FITZ	Fitzroy Crossi	19.83	220	P	Pn	12 52 28.9	-2.5
ASAR	Alice Springs	21.01	193	P	P	12 52 42.0	-0.3
	comp=Z,25nm,0.8s,mb4.6,baz=10,slow=12,SNR=133						
ASAR				S	S	12 56 33.6	-0.7
	comp=Z,4.2nm,0.9s,baz=7.7,slow=29,SNR=5.4						
ASAR	Alice Springs	21.01	193	P	P	12 52 42.1	-0.3
ASAR				S	S	12 56 33.6	-0.7
KBKI	Kotabaru	22.81	269	P	P	12 53 02.3	+0.5
QLP	Quilpie	23.85	168	eP	P	12 53 11.5	-0.4
EIDS	Eidsvold	24.98	153	eP	P	12 53 23.6	+1.5
	comp=Z,24nm,1.4s,mb4.5						
MBWA	Marble Bar	25.95	225	eP	P	12 53 30.2	-0.8
MBWA	Marble Bar	25.95	225	eP	P	12 53 31.0	0.0
	comp=Z,37nm,0.9s,mb4.9						
STKA	Stephens Creek	28.70	175	P	P	12 53 55.2	-0.3
	comp=Z,4.6nm,0.8s,mb4.2,baz=1.8,slow=6.8,SNR=8.6						
STKA				LR	LR	13 06 30.7	
	comp=Z,535nm,20.2s,MS4.1,baz=263,slow=39						
STKA	Stephens Creek	28.70	175	eP	P	12 53 56.8	+1.2
	comp=Z,3.9nm,0.9s,mb4.1						
STKA	Stephens Creek	28.70	175	eP	P	12 53 55.3	-0.3
	comp=Z,1.5nm,1.0s,mb3.7						
STKA	Stephens Creek	28.70	175	eP	P	12 53 55.3	-0.3
STKA				pmax	pmax		
	comp=Z,20nm,1.0s						
CBIJ	Chichi jima	30.20	6	LR	LR	13 05 24.4	
	comp=Z,124nm,20.3s,MS3.5,baz=312,slow=35						
DZM	Mont Dzumac	32.61	128	eLR	LR	13 04 23.4	
	comp=Z,244nm,26.9s						
NWAO	Narrogin (SRO)	35.99	212	LR	LR	13 10 39.3	
	comp=Z,599nm,19.1s,MS4.4,baz=328,slow=38						
JNU	Nakatsue	36.86	349	eP	P	12 55 06.6	-0.1
	comp=Z,13nm,1.2s,mb4.6						
MJAR	Matsushiro Arr	39.47	359	P	P	12 55 25.8	-2.8
	comp=Z,2.3nm,0.6s,mb4.1,baz=178,slow=9.0,SNR=17						
MJAR				LR	LR	13 09 46.0	
	comp=Z,62nm,18.8s,MS3.5,baz=100,slow=33						
MJAR	Matsushiro Arr	39.47	359	P	P	12 55 25.8	-2.9
MAJO	Matsushiro	39.47	359	eP	P	12 55 27.4	-1.3
	comp=Z,4.6nm,0.4s,mb4.6						
MAJO	Matsushiro	39.47	359	eP	P	12 55 27.4	-1.3
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.6						
MAT	Matsushiro	39.47	359	P	P	12 55 27.7	-1.0
NJ2	Nanjing	39.88	333	eP	P	12 55 31.4	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
PSI	Prapat	40.50	278	P	P	12 55 37.1	-0.6
	comp=Z,15nm,0.9s,mb4.6,baz=74,slow=3.2,SNR=7.6						
PSI	Prapat	40.50	278	P	P	12 55 37.1	-0.6
KSRS	Korea Array	41.67	347	P	P	12 55 47.5	+0.6
	comp=Z,1.9nm,0.7s,mb3.8,baz=153,slow=8.4,SNR=12						
KSRS				LR	LR	13 10 11.0	
	comp=Z,71nm,21.6s,MS3.5,baz=171,slow=32						
GYA	Guiyang	42.93	315	P	P	12 55 57.8	+0.5
GYA				pP	pP	12 56 08.4	+0.1
GYA				PP	PP	12 57 40.0	+2.5
GYA				PcP	PcP	12 57 46.9	-0.7
GYA				ScP	ScP	13 01 34.5	-1.4
GYA				S	S	13 02 18.8	-1.0
GYA				ScS	ScS	13 05 52.0	-3.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
GYA				pmax	pmax		
	comp=Z,90nm,5.3s						
GYA				LR	LR		
	comp=N,460nm,17.8s,MS4.5						
GYA				LR	LR		
	comp=E,380nm,18.0s,MS4.5						
GYA				LR	LR		
	comp=Z,440nm,17.8s,MS4.4						
CMAR	Chiang Mai Arr	44.91	300	P	P	12 56 12.9	-0.4
	comp=Z,1.4nm,0.8s,mb3.9,baz=118,slow=6.5,SNR=8.3						
CMAR	Chiang Mai Arr	44.91	300	P	P	12 56 12.9	-0.4
XAN	Xi'an	46.59	325	P	P	12 56 27.9	+1.6
XAN				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
XAN				pmax	pmax		
	comp=Z,24nm,5.7s						
ASAJ	Asahikawa	47.14	4	eP	P	12 56 30.4	-0.1
	comp=Z,3.3nm,0.7s,mb4.4						
ASAJ				e	pP	12 56 41.5	-0.1
CD2	Chengdu	47.69	318	eP	P	12 56 35.6	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
MDJ	Mudanjiang	48.27	351	P	P	12 56 38.9	-0.3
MDJ				pP	pP	12 56 50.6	+0.2
MDJ				PcP	PcP	12 58 05.0	-0.8
MDJ				PP	PP	12 58 31.4	-0.6
MDJ				ScP	ScP	13 01 56.6	-0.9
MDJ				PcS	PcS	13 02 01.3	-0.2
MDJ				S	S	13 03 34.6	-1.7
MDJ				ScS	ScS	13 06 28.3	-0.7
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,59nm,3.9s						
MDJ				LR	LR		
	comp=N,31nm,25.4s						
MDJ				LR	LR		
	comp=E,58nm,32.6s						
MDJ				LR	LR		
	comp=Z,73nm,24.2s,MS3.6						
CN2	Changchun	48.28	347	eP	P	12 56 41.6	+2.3
CN2				epP	pP	12 56 54.0	+3.5
CN2				eS	S	13 03 37.8	+1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
YSS	Yuzh-Sakhalins	49.98	3	eP	P	12 56 51.9	-0.3
	comp=Z,22nm,0.8s,mb5.2						
YSS	Yuzh-Sakhalins	49.98	3	eP	P	12 56 51.9	-0.3
YSS				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
HHC	Hu-ho-hao-te	50.44	333	eP	P	12 56 57.3	+1.5
HHC				pP	pP	12 57 09.8	+2.7
HHC				sP	sP	12 57 15.3	+3.7
HHC				PcP	PcP	12 58 14.8	+1.1
HHC				PP	PP	12 58 55.3	+3.5
HHC				ScP	ScP	13 02 05.8	-1.1
HHC				S	S	13 04 06.4	-0.4
HHC				sS	sS	13 04 28.5	+3.1
HHC				ScS	ScS	13 06 40.9	-3.0
HHC				SS	SS	13 07 38.6	-2.6
HHC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
HHC				pmax	pmax		
	comp=Z,92nm,5.0s						
HHC				LR	LR		
	comp=N,120nm,13.3s,MS4.2						
HHC				LR	LR		
	comp=E,120nm,12.9s,MS4.2						
HHC				LR	LR		
	comp=Z,230nm,12.7s,MS4.4						
LZH	Lanzhou	50.99	323	eP	P	12 57 02.0	+1.9
LZH				pP	pP	12 57 12.5	+1.1
LZH				sP	sP	12 57 20.5	+4.6
LZH				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
KLR	Kul'dur	52.52	354	eP	P	12 57 07.7	-3.6
GTA	Gaotai	55.58	324	eP	P	12 57 35.3	+1.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
PETK	Petropavlovsk-	58.19	13	P	P	12 57 52.7	+0.7
	comp=Z,3.1nm,0.6s,mb4.5,baz=178,slow=6.4,SNR=13						
PETK				LR	LR	13 19 13.0	
	comp=Z,63nm,19.8s,MS3.7,baz=198,slow=32						
PETK	Petropavlovsk-	58.19	13	P	P	12 57 52.7	+0.7
SONM	Songino Array	58.22	335	P	P	12 57 52.8	+0.4
	comp=Z,0.8nm,0.5s,mb4.0,baz=145,slow=5.3,SNR=2.9						
SONM				LR	LR	13 25 03.6	
	comp=Z,111nm,18.3s,MS4.0,baz=69,slow=38						
SONM	Songino Array	58.22	335	P	P	12 57 52.8	+0.5
ZAK	Zakamensk	61.49	335	eP	P	12 58 14.7	0.0
ZAK				e	pP	12 58 27.3	+1.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2						
TLY	Talaya	62.32	336	eP	P	12 58 19.2	-1.1
WMQ	Urumqi	65.52	322	P	P	12 58 42.0	+0.5
WMQ				sP	sP	12 59 00.0	+2.4
WMQ				PP	PP	13 01 08.0	+1.9
WMQ				S	S	13 07 22.0	-1.9
WMQ				ScS	ScS	13 08 30.0	-4.2
WMQ				SS	SS	13 11 37.0	-1.3
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,59nm,6.0s						
WMQ				LR	LR		
	comp=N,36nm,18.0s,MS3.8						
WMQ				LR	LR		
	comp=E,40nm,18.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,39nm,18.0s,MS3.6						
MK31	Makanchi Array	70.30	322	eP	P	12 59 11.6	+0.1
MK31	Makanchi Array	70.30	322	eP	P	12 59 11.6	+0.1
MKAR	Makanchi Array	70.30	322	P	P	12 59 11.7	+0.1
	comp=Z,3.9nm,0.6s,mb4.5,baz=112,slow=8.1,SNR=48						
MKAR	Makanchi Array	70.30	322	i P	P	12 59 11.6	+0.1
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PPT	Papeete	71.34	107	eLR	LR	13 22 17.9	
	comp=Z,112nm,26.0s						
PPT	Papeete	71.34	107	LR	LR	13 23 57.6	
	comp=Z,111nm,19.3s,MS4.1,baz=295,slow=30						
KSH	Kashi	71.59	313	eP	P	12 59 21.8	+2.3
KSH				epP	pP	12 59 34.8	+3.6
KSH				esP	sP	12 59 40.1	+4.4
KSH				ePcP	PcP	12 59 41.4	+2.7
KSH				ePP	PP	13 02 02.5	+3.7
KSH				eS	S	13 08 35.3	-0.9
KSH				eSKS		13 09 16.6	
KSH				eScS	ScS	13 09 19.1	-2.8
KSH				eSS	SS	13 13 12.3	+0.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
KSH				LR	LR		
	comp=N,260nm,6.5s						
KSH				LR	LR		
	comp=E,190nm,5.1s						
KSH				LR	LR		
	comp=Z,150nm,7.8s						
ZAA0	Zalesovo Array	72.44	330	eP	P	12 59 22.8	-1.5
ZAA0				e	pP	12 59 32.9	-3.1
ZALV	Zalesovo Beam	72.44	330	P	P	12 59 22.3	-2.0
	comp=Z,1.9nm,0.6s,mb4.2,baz=114,slow=6.7,SNR=10						
ZALV	Zalesovo Beam	72.44	330	P	P	12 59 22.3	-2.0
ZALV	Zalesovo Beam	72.44	330	P	P	12 59 22.3	-2.0
TKM2	Tokmak 2	73.05	317	eP	P	12 59 28.9	+0.7
	comp=Z,57nm,2.6s,mb5.0						
TKM2	Tokmak 2	73.05	317	eP	P	12 59 28.9	+0.7
TKM2				pmax	pmax		
	comp=Z,57nm,2.6s,mb5.0						
BILL	Bilibino	73.52	10	⇓eP	P	12 59 30.1	-0.3
BILL				e*PP	pP	12 59 41.1	-1.0
BILL				eS	S	13 08 54.6	-2.5
BILL				eSS	SS	13 13 37.0	-3.5
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,22.0s,MS4.1						
NVS	Novosibirsk	73.70	330	eP	P	12 59 22.8	-8.9
AAK	Ala-Archa	73.71	316	⇓eP	P	12 59 31.2	-0.9
AAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.8						
KURK	Kurchatov	74.23	325	eP	P	12 59 34.1	-0.8
	comp=Z,3.4nm,0.9s,mb4.

ILAR Eielson Array 86.08 24 P P 13 00 36.8 -1.7
comp=Z,5.5nm,0.7s,mb4.9,baz=263,slow=4.4,SNR=90
ILAR LR LR 13 40 00.5
comp=Z,40nm,18.2s,MS3.9,baz=269,slow=36
ILAR Eielson Array 86.08 24 P P 13 00 36.8 -1.7
ARU Arti 87.31 327 *c i*P **P 13 00 44.0 -0.6**
ARU *e* 13 04 04.8
ARU S SKSac 13 11 08.2 -0.9
ARU SS SS 13 17 00.3 -6.6
ARU pmax pmax
comp=Z,8.0nm,1.7s,mb4.7
EGAK Eagle 88.47 25 *e*P **P 13 00 50.5 +0.4**
comp=Z,10nm,1.0s,mb5.0
EGAK *e* pP 13 00 59.9 -2.1
DAWY Dawson 89.11 26 *e*P **P 13 00 53.7 +0.7**
DAWY *e* pP 13 01 04.0 -1.0
OBN Obninsk 99.67 325 *e*P Pdif 13 01 42.8 +1.2
OBN *e**PP pP 13 01 53.5 -0.1
OBN *e**SP sP 13 01 58.1 +0.1
OBN pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
ARCES ARCESS Array B 101.00 341 P Pdif 13 01 45.0 -2.4
comp=Z,2.5nm,0.8s,baz=70,slow=8.0,SNR=3.8
ARCES ARCESS Array B 101.00 341 P Pdif 13 01 45.1 -2.4
TORD Torodi Ar. Bea 136.66 286 PKP PKPdf 13 07 19.1 -2.1
comp=Z,2.3nm,0.8s,baz=103,slow=2.0,SNR=4.4
DBIC Dimbokro 143.84 277 PKP PKPdf 13 07 31.7 -2.6
comp=Z,5.4nm,0.9s,baz=91,slow=9.4,SNR=5.6
CPUP Villa Florida 146.72 153 PKPbc PKPbc 13 07 40.6 0.0
comp=Z,3.0nm,0.6s,baz=205,slow=4.3,SNR=9.7
LPAZ La Paz 146.96 127 PKPbc PKPbc 13 07 42.4 +0.9
comp=Z,3.3nm,0.9s,baz=288,slow=2.4,SNR=9.6
LPAZ La Paz 146.96 127 *e*PKPbc PKPbc 13 07 43.3 +1.8

BJI ***21*** *13:40:46.3, 40°.25N×77°.55E, h12km, ML3.2/7*
ISCJB ***21*** *13:40:49.7±2.0, 40°.3N±0°.1×77°.8E±0°.2, h10km, Error ellipse: s-maj=21.8km s-min=7.9km az=40.1*
NNC ***21*** *13:40:49.1±3.5, 40°.27N×77°.54E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=35.9km s-min=24.0km az=164.0*
ISC 21 13:40:52.3±1.9, 40°.3N±0°.1×77°.5E±0°.2, h10km, n15, σ1º30/15, 7C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.41**	**238**	Pg	**Pg**	**13 41 19.4**	**0.0**
KSH				Sg	**Sg**	**13 41 44.0**	**+6.3**
KSH				smax			
	comp=N,290nm,0.4s						
KSH				smax			
	comp=E,160nm,0.3s						
ULHL	**Ulahol**	**2.20**	**334**	P	**Pn**	**13 41 28.0**	**-0.9**
	SNR=11						
KZA	**Kyzart**	**2.49**	**317**	P	**Pn**	**13 41 31.6**	**-1.3**
	SNR=25						
KNDC	**Almaty**	**2.97**	**352**	⇑Pn	**Pn**	**13 41 41.8**	**+2.2**
	comp=E,47nm,0.7s						
KNDC				⇑Lg		13 42 22.4	
	comp=E,171nm,0.6s						
TKM2	**Tokmak 2**	**3.02**	**332**	⇑Pn	**Pn**	**13 41 38.9**	**-1.3**
	comp=E,23nm,0.7s						
TKM2				⇓Lg		13 42 23.4	
	comp=E,43nm,0.7s						
TKM2	**Tokmak 2**	**3.02**	**332**	P	**Pn**	**13 41 42.6**	**+2.4**
	SNR=30						
KBK	**Karagaybulak**	**3.07**	**322**	P	**Pn**	**13 41 42.6**	**+1.7**
	SNR=36						
AAK	**Ala-Archa**	**3.28**	**317**	P	**Pn**	**13 41 43.1**	**-0.6**
	SNR=19						
CHMS	**Chumysh**	**3.43**	**324**	P	**Pn**	**13 41 47.5**	**+1.8**
	SNR=12						
EKS2	**Erkin-Say**	**3.69**	**312**	P	**Pn**	**13 41 49.3**	**-0.1**
	SNR=5.6						
USP	**Ospenovka**	**3.75**	**324**	P	**Pb**	**13 41 55.4**	**-3.2**
	SNR=15						
KK31	**Karatay Array**	**5.96**	**301**	⇑Pn	**Pn**	**13 42 21.2**	**+0.5**
	comp=E,0.2nm,0.3s,baz=114,slow=13,SNR=5.7						
KK31				⇓Pg	**Pb**	**13 42 35.8**	**-0.5**
	comp=E,3.9nm,0.9s,baz=125,slow=15,SNR=8.7						
KK31				⇑Lg		13 43 52.6	
	comp=E,13nm,0.9s,baz=114,slow=29,SNR=7.0						
MK31	**Makanchi Array**	**7.38**	**26**	⇑Pn	**Pn**	**13 42 39.1**	**-1.0**
	comp=E,0.8nm,0.6s,baz=204,slow=31,SNR=8.7						
MK31				⇑Lg		13 44 45.4	
	comp=E,1.4nm,0.6s						
KURBB	**Kurchatov Arra**	**10.38**	**4**	⇓Lg		13 46 19.8	
	comp=E,1.8nm,0.8s						
KURK	**Kurchatov**	**10.47**	**4**	⇓Lg		13 46 19.7	
	comp=E,13nm,1.1s						

NEIC ***21*** *13:41:44.9, 16°.75N×99°.26W, h14km, MD3.7(MEX), After MEX.*
MEX 21 13:41:44.9±0.9, 16°.75N×99°.26W, h14km±9km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.59**	**282**	*i* P	Pg	13 41 55.7	-0.7
ACX				*i* S	Sg	13 42 03.5	-0.7
ACX	**Acapulco**	**0.59**	**282**	*i* P	Pg	13 41 55.7	-0.7
ACX				*i* S	Sg	13 42 03.5	-0.7
CAIG	**El Cayaco**	**1.01**	**287**	*e*P	Pb	13 42 01.3	-2.9
CAIG				*i* S	Sb	13 42 13.9	-3.5
CAIG	**El Cayaco**	**1.01**	**287**	*e*P	Pb	13 42 01.3	-2.9
CAIG				*i* S	Sb	13 42 13.9	-3.5
PNIG	**Pinotepa**	**1.14**	**108**	*e*P	Pb	13 42 02.7	-3.7
PNIG				*i* S	Sb	13 42 17.2	-3.9
PNIG	**Pinotepa**	**1.14**	**108**	*e*P	Pb	13 42 02.7	-3.7
PNIG				*i* S	Sb	13 42 17.2	-3.9
MEIG	**Mezcala**	**1.22**	**344**	*i* P	Pn	13 42 03.5	-4.1
MEIG				*i* S	Sb	13 42 18.6	-4.7
PLIG	**Platanillo**	**1.65**	**352**	*e*P	Pn	13 42 10.0	-3.5
PLIG				*i* S	Sn	13 42 29.9	-4.6
PLIG	**Platanillo**	**1.65**	**352**	*e*P	Pn	13 42 10.0	-3.5
PLIG				*i* S	Sn	13 42 29.9	-4.6
UTMO	**Huajuapan**	**1.75**	**52**	*e*P	Pn	13 42 10.8	-4.2
UTMO				*i* S	Sn	13 42 33.1	-4.1
YAIG	**Yautepec**	**2.11**	**5**	*i* P	Pn	13 42 17.4	-2.4
YAIG				*i* S	Sn	13 42 41.3	-4.5
YAIG	**Yautepec**	**2.11**	**5**	*i* P	Pn	13 42 17.4	-2.4
YAIG				*i* S	Sn	13 42 41.3	-4.5
ZIIG	**Zihuatanejo**	**2.27**	**292**	*e*P	Pn	13 42 21.9	-0.3
ZIIG				*i* S	Sn	13 42 48.0	-2.0
ZIIG	**Zihuatanejo**	**2.27**	**292**	*e*P	Pn	13 42 21.9	-0.3
ZIIG				*i* S	Sn	13 42 48.0	-2.0
VHO	**Vista Hermosa**	**2.44**	**82**	*i* P	Pn	13 42 21.7	-2.7
VHO				*i* S	Sn	13 42 50.2	-3.7
VHO	**Vista Hermosa**	**2.44**	**82**	*i* P	Pn	13 42 21.7	-2.7
VHO				*i* S	Sn	13 42 50.2	-3.7

DJA 21 14:03:49, 9°.42S×120°.50E, h9km, MLv3.7/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.89**	**66**	P	Pn	14 04 22.5	+1.1
MMRI				S	Sn	14 04 45.7	+0.4
BMNI	**Bima**	**1.99**	**296**	P	Pn	14 04 22.1	-0.7
BMNI				S	Sn	14 04 49.5	+1.6
BKSI	**Bulukumba**	**4.09**	**355**	P	Pn	14 04 52.5	+0.8
KAPI	**Kappang**	**4.44**	**350**	P	Pn	14 04 56.3	-0.3

ISCJB ***21*** *14:33:10.3±1.5, 12°.71N±0°.09×144°.9E±0°.2, h55km±13km, mb3.8/9, MS3.4/6, Error ellipse: s-maj=29.0km s-min=15.2km az=5.4*
IDC ***21*** *14:33:10.7±1.8, 12°.79N×144°.88E, h41km±15km, mb3.5/8, mb1 3.7/8, mb1mx3.6/22, mbtmp3.5/8, MS3.4/6, Ms1 3.4/6, ms1mx3.1/24, Error ellipse: s-maj=31.5km s-min=16.4km az=101.0*
NEIC ***21*** *14:33:11.3±1.5, 12°.73N×144°.90E, h50km±13km, Error ellipse: s-maj=21.3km s-min=11.3km az=97.0*
ISC 21 14:33:11.2±1.7, 12°.73N±0°.09×144°.9E±0°.2, h47km±15km, n19, σ0º80/16, mb3.8/9, MS3.4/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.86**	**359**	P	**Pn**	**14 33 27.2**	**+0.3**
	154nm,0.3s,baz=170,slow=10,SNR=176						
GUMO				S	**Sn**	**14 33 36.8**	**-1.6**
	309nm,0.3s,baz=179,slow=21,SNR=27						
GUMO	**Guam**	**0.86**	**359**	*e*Pn	**Pn**	**14 33 26.9**	**0.0**
GUMO				Sn	**Sn**	**14 33 39.5**	**+1.1**
MJAR	**Matsushiro Arr**	**24.46**	**347**	P	**P**	**14 38 25.6**	**-0.2**
	2.5nm,0.9s,mb3.6,baz=168,slow=10,SNR=7.8						
YULB	**Yu-li**	**24.77**	**299**	*e*P	**P**	**14 38 29.0**	**+0.3**
HNR	**Honiara**	**26.62**	**145**	LR	LR	14 48 29.3	
	comp=Z,92nm,20.6s,MS3.3,baz=167,slow=34						
WB2	**Warramunga Arr**	**34.08**	**198**	*e*P	**P**	**14 39 51.4**	**0.0**
WRA	**Warramunga Arr**	**34.08**	**198**	P	**P**	**14 39 51.2**	**-0.2**
	0.7nm,0.7s,mb3.7,baz=21,slow=9.6,SNR=9.1						
WRA	**Warramunga Arr**	**34.08**	**198**	P	**P**	**14 39 51.2**	**-0.3**
ASAR	**Alice Springs**	**37.73**	**197**	P	**P**	**14 40 22.5**	**-0.1**
	0.2nm,0.5s,mb3.1,baz=85,slow=8.6,SNR=8.2						
CMAR	**Chiang Mai Arr**	**44.52**	**283**	P	**P**	**14 41 19.4**	**+0.7**
	0.8nm,0.5s,mb3.8,baz=82,slow=6.6,SNR=7.5						
CMAR				LR	LR	15 00 28.1	
	comp=Z,132nm,18.2s,MS3.9,baz=179,slow=37						
SONM	**Songino Array**	**47.44**	**325**	LR	LR	15 01 54.7	
	comp=Z,71nm,19.8s,MS3.6,baz=63,slow=36						
YAK	**Yakutsk**	**50.43**	**351**	*e*P	**P**	**14 42 04.6**	**+0.7**
	5.4nm,0.5s,mb4.8						
MKAR	**Makanchi Array**	**62.12**	**316**	P	**P**	**14 43 27.3**	**-0.1**
	0.3nm,0.6s,mb3.6,baz=97,slow=8.8,SNR=3.3						
MKAR				LR	LR	15 11 33.1	
	comp=Z,37nm,18.9s,MS3.6,baz=349,slow=37						
ZALV	**Zalesovo Beam**	**62.33**	**325**	LR	LR	15 09 23.3	
	comp=Z,29nm,21.3s,MS3.4,baz=80,slow=35						
ILAR	**Eielson Array**	**69.34**	**25**	P	**P**	**14 44 13.3**	**-0.3**
	0.5nm,0.6s,mb3.7,baz=251,slow=5.9,SNR=16						
YKA	**Yellowknife Ar**	**83.61**	**27**	LR	LR	15 22 43.5	
	comp=Z,3.0nm,19.6s,MS2.7,baz=120,slow=36						
NVAR	**Mina Array Bea**	**87.44**	**51**	P	**P**	**14 45 55.2**	**+1.1**
	0.8nm,0.8s,mb4.0,baz=226,slow=3.6,SNR=2.9						
FINES	**FINESS Array B**	**91.95**	**335**	P	**P**	**14 46 12.4**	**-2.2**
	0.7nm,0.8s,mb4.1,baz=12,slow=9.9,SNR=4.8						
DBIC	**Dimbokro**	**144.28**	**301**	PKP	PKPdf	14 52 42.3	-0.9
	2.0nm,0.6s,baz=34,slow=2.2,SNR=3.8						

IDC ***21*** *15:37:08.1±1.9, 6°.52S×129°.89E, h0km, mb3.8/2, mb1 3.9/5, mb1mx3.6/17, mbtmp3.7/5, ML3.5/3, MS4.1/1, Ms1 4.1/1, ms1mx2.9/23, Error ellipse: s-maj=87.6km s-min=25.7km az=78.0*
NEIC ***21*** *15:37:12.7±0.8, 6°.53S×129°.08E, h10km, Error ellipse: s-maj=37.2km s-min=13.1km az=75.0*
ISC 21 15:37:14.7±1.0, 6°.7S±0°.1×129°.4E±0°.3, h35km, n10, σ1º35/9, mb3.8/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.72**	**154**	*e*P	**Pn**	**15 38 54.6**	**+3.8**
FITZ	**Fitzroy Crossi**	**11.96**	**198**	Pn	**Pn**	**15 40 02.9**	**+0.1**
	0.2nm,0.3s,baz=133,slow=9.7,SNR=18						
FITZ				Sn	Sx	15 42 02.1	
	0.5nm,0.3s,baz=77,slow=16,SNR=4.8						
FITZ	**Fitzroy Crossi**	**11.96**	**198**	*e*P	**Pn**	**15 40 03.5**	**+0.8**
FITZ				*e*S	Sx	15 42 00.1	
WRA	**Warramunga Arr**	**14.05**	**161**	Pn	**Pn**	**15 40 29.1**	**-2.2**
	0.2nm,0.3s,baz=346,slow=13,SNR=22						
WRA				Sn	Sx	15 42 51.2	
	0.8nm,0.3s,baz=333,slow=22,SNR=7.7						
ASAR	**Alice Springs**	**17.46**	**166**	P	**Pn**	**15 41 13.7**	**-1.8**
	0.2nm,0.3s,baz=340,slow=9.4,SNR=32						
ASAR				S	Sx	15 44 15.2	
	0.3nm,0.3s,baz=358,slow=26,SNR=6.5						
RPZ	**Rata Peaks**	**51.86**	**142**	LR	LR	16 08 15.3	
	comp=Z,192nm,18.8s,baz=349,slow=36						
MK31	**Makanchi Array**	**67.62**	**327**	*e*P	**P**	**15 48 08.7**	**+0.8**
MKAR	**Makanchi Array**	**67.62**	**327**	P	**P**	**15 48 08.3**	**+0.4**
	0.4nm,0.4s,mb3.8,baz=119,slow=8.2,SNR=6.9						
MKAR	**Makanchi Array**	**67.62**	**327**	P	**P**	**15 48 08.3**	**+0.4**
ZALV	**Zalesovo Beam**	**71.02**	**334**	P	**P**	**15 48 27.6**	**-1.2**
	0.6nm,0.5s,mb3.8,baz=120,slow=5.8,SNR=3.6						

ATH ***21*** *15:51:48.3, 37°.34N×20°.28E, h12km±3km, MD3.7/26, ML4.0*
ISCJB ***21*** *15:51:49.8±0.5, 37°.41N±0°.02×20°.39E±0°.02, h9km±2km, mb4.2/19, Error ellipse: s-maj=3.1km s-min=2.2km az=29.5*
IDC ***21*** *15:51:49.3±0.8, 37°.54N×20°.73E, h0km, mb3.8/11, mb1 3.7/16, mb1mx3.7/32, mbtmp3.7/16, ML3.8/4, MS3.0/3, Ms1 3.1/3, ms1mx2.5/46, Error ellipse: s-maj=18.6km s-min=14.3km az=153.0*
CSEM ***21*** *15:51:50.9±0.1, 37°.40N×20°.49E, h2km, mb4.2/4, Error ellipse: s-maj=3.5km s-min=2.2km az=41.0*
HLW ***21*** *15:51:51.1, 37°.68N×20°.84E, h50km±28km, Ml4.1*
NEIC ***21*** *15:51:51.2±0.5, 37°.29N×20°.61E, h10km, ML4.1(ATH), ML3.9(PDG), Error ellipse: s-maj=7.2km s-min=6.1km az=203.0*
THE ***21*** *15:51:52.1, 37°.45N×20°.53E, h2km±1km, ML3.9/10, Error ellipse: s-maj=1.7km s-min=0.8km az=242.0*
PDG ***21*** *15:51:52.7±0.5, 37°.49N×20°.58E, h11km±1km, ML3.9/10, Error ellipse: s-maj=1.6km s-min=1.8km az=0.0*
BEO ***21*** *15:51:58.5±1.0, 37°.92N×20°.49E, h0km, ML3.8/7*
TIR ***21*** *15:52:04.1, 38°.76N×18°.38E, h19km, ML3.7*
ISC 21 15:51:51.0±0.5, 37°.39N±0°.02×20°.46E±0°.02, h5km±2km, n303, σ1º17/418, mb4.2/19, 20C-14D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.77**	**20**	P	**Pg**	**15 52 05.3**	**-0.4**
KFL				S	**Sg**	**15 52 15.1**	**-0.5**
KFL	**Anninata**	**0.77**	**20**	P	**Pg**	**15 52 05.3**	**-0.4**
KFL				S	**Sg**	**15 52 15.1**	**-0.5**
VLS	**Valsamata**	**0.79**	**7**	P	**Pg**	**15 52 05.1**	**-1.1**
VLS	**Valsamata**	**0.79**	**7**	*e*PB	**Pg**	**15 52 05.7**	**-0.5**
VLS				*e*SB	**Sg**	**15 52 16.9**	**+0.3**
VLS	**Valsamata**	**0.79**	**7**	P	**Pg**	**15 52 05.4**	**-0.8**
VLS				S	**Sg**	**15 52 16.3**	**-0.3**
VLS	**Valsamata**	**0.79**	**7**	P	**Pg**	**15 52 05.4**	**-0.8**
VLS	**Valsamata**	**0.79**	**7**	*e*Pb	**Pg**	**15 52 05.7**	**-0.5**
VLS				S	**Sg**	**15 52 16.3**	**-0.3**
VLS				*e*Sb	**Sg**	**15 52 16.9**	**+0.3**
RLS	**Riolos of Patr**	**1.04**	**50**	P	**Pg**	**15 52 09.5**	**-1.5**
RLS	**Riolos of Patr**	**1.04**	**50**	*e*PB	**Pg**	**15 52 09.6**	**-1.4**
RLS	**Riolos of Patr**	**1.04**	**50**	P	**Pg**	**15 52 09.6**	**-1.4**
RLS				S	**Sg**	**15 52 23.8**	**-0.7**
RLS	**Riolos of Patr**	**1.04**	**50**	P	**Pg**	**15 52 09.6**	**-1.4**
RLS				S	**Sg**	**15 52 23.8**	**-0.7**
ITM	**Ithomi**	**1.19**	**100**	P	**Pg**	**15 52 13.4**	**-0.4**
ITM	**Ithomi**	**1.19**	**100**	*e*PB	**Pb**	**15 52 14.1**	**+0.1**
ITM	**Ithomi**	**1.19**	**100**	P	**Pg**	**15 52 13.6**	**-0.2**
ITM				S	**Sg**	**15 52 30.8**	**+1.6**
ITM	**Ithomi**	**1.19**	**100**	P	**Pg**	**15 52 13.6**	**-0.2**
ITM	**Ithomi**	**1.19**	**100**	*e*Pb	**Pb**	**15 52 14.1**	**+0.1**
ITM				S	**Sg**	**15 52 30.8**	**+1.6**
UPR	**University Cam**	**1.38**	**49**	*e*PB	**Pb**	**15 52 18.0**	**+0.8**
UPR	**University Cam**	**1.38**	**49**	P	**Pn**	**15 52 16.6**	**-0.2**
UPR				S	**Sb**	**15 52 35.6**	**+0.5**
UPR	**University Cam**	**1.38**	**49**	P	**Pn**	**15 52 16.6**	**-0.2**
UPR	**University Cam**	**1.38**	**49**	*e*Pb	**Pb**	**15 52 18.0**	**+0.8**
UPR				S	**Sb**	**15 52 35.6**	**+0.5**
LKD2	**Lefkada island**	**1.41**	**6**	P	**Pn**	**15 52 16.4**	**-0.8**
LKD2				S	**Sb**	**15 52 36.5**	**+0.6**
LKD2	**Lefkada island**	**1.41**	**6**	P	**Pn**	**15 52 16.4**	**-0.8**
LKD2				S	**Sb**	**15 52 36.5**	**+0.6**
LAKA	**Lakka**	**1.47**	**54**	P	**Pn**	**15 52 17.4**	**-0.7**
LAKA				S	**Sn**	**15 52 37.2**	**-0.5**
LAKA	**Lakka**	**1.47**	**54**	P	**Pn**	**15 52 17.4**	**-0.7**
LAKA				S	**Sn**	**15 52 37.2**	**-0.5**
VLX	**Vlachokerasia**	**1.53**	**90**	*e*PB	**Pb**	**15 52 19.5**	**-0.3**
VLX	**Vlachokerasia**	**1.53**	**90**	P	**Pn**	**15 52 18.9**	**0.0**
VLX				S	**Sn**	**15 52 40.0**	**+0.9**
VLX	**Vlachokerasia**	**1.53**	**90**	P	**Pn**	**15 52 18.9**	**0.0**
VLX	**Vlachokerasia**	**1.53**	**90**	*e*Pb	**Pb**	**15 52 19.5**	**-0.3**
VLX				S	**Sn**	**15 52 40.0**	**+0.9**
EFP	**Efpalio**	**1.54**	**47**	*e*PB	**Pb**	**15 52 19.4**	**-0.6**
EFP	**Efpalio**	**1.54**	**47**	P	**Pn**	**15 52 18.9**	**-0.2**
EFP				S	**Sn**	**15 52 40.1**	**+0.6**
EFP	**Efpalio**	**1.54**	**47**	P	**Pn**	**15 52 18.9**	**-0.2**
EFP	**Efpalio**	**1.54**	**47**	*e*Pb	**Pb**	**15 52 19.4**	**-0.6**
EFP				S	**Sn**	**15 52 40.1**	**+0.6**
GUR	**Goura**	**1.59**	**69**	*e*PN	**Pn**	**15 52 20.2**	**+0.5**
GUR				*e*SN	**Sg**	**15 52 44.1**	**+2.0**
GUR	**Goura**	**1.59**	**69**	P	**Pn**	**15 52 19.8**	**+0.1**
GUR				S	**Sn**	**15 52 40.8**	**+0.2**
GUR	**Goura**	**1.59**	**69**	P	**Pn**	**15 52 19.8**	**+0.1**
GUR	**Goura**	**1.59**	**69**	*e*Pn	**Pn**	**15 52 20.2**	**+0.5**
GUR				S	**Sn**	**15 52 40.8**	**+0.2**
GUR				*e*Sn	**Sg**	**15 52 44.1**	**+2.0**
KALE	**Kalithea**	**1.66**	**53**	P	**Pn**	**15 52 20.5**	**-0.2**
KALE				S	**Sn**	**15 52 42.4**	**0.0**
KALE	**Kalithea**	**1.66**	**53**	P	**Pn**	**15 52 20.5**	**-0.2**
KALE				S	**Sn**	**15 52 42.4**	**0.0**
EVR	**Evrytania**	**1.86**	**34**	P	**Pg**	**15 52 25.8**	**-0.8**
EVR	**Evrytania**	**1.86**	**34**	*e*PG	**Pg**	**15 52 26.0**	**-0.6**
EVR				*e*SN	**Sg**	**15 52 50.2**	**-0.6**
EVR	**Evrytania**	**1.86**	**34**	P	**Pn**	**15 52 23.5**	**+0.1**
EVR				S	**Sn**	**15 52 47.0**	**-0.3**
EVR	**Evrytania**	**1.86**	**34**	P	**Pn**	**15 52 23.5**	**+0.1**
EVR	**Evrytania**	**1.86**	**34**	*e*Pg	**Pg**	**15 52 26.0**	**-0.6**
EVR				S	**Sn**	**15 52 47.0**	**-0.3**
EVR				*e*Sn	**Sg**	**15 52 50.2**	**-0.6**
DSF	**Desfina**	**1.93**	**57**	P	**Pn**	**15 52 24.9**	**+0.5**
DSF				S	**Sn**	**15 52 49.3**	**+0.3**
DSF	**Desfina**	**1.93**	**57**	P	**Pn**	**15 52 24.9**	**+0.5**
DSF				S	**Sn**	**15 52 49.3**	**+0.3**
LTK	**Loutraki**	**2.09**	**72**	*e*PB	**Pn**	**15 52 26.5**	**-0.1**
LTK				*e*SN	**Sg**	**15 52 56.6**	**-1.5**
LTK	**Loutraki**	**2.09**	**72**	P	**Pn**	**15 52 26.4**	**-0.2**
LTK				S	**Sn**	**15 52 53.2**	**+0.3**
LTK	**Loutraki**	**2.09**	**72**	P	**Pn**	**15 52 26.4**	**-0.2**
LTK				S	**Sn**	**15 52 53.2**	**+0.3**
LTK				*e*Sn	**Sg**	**15 52 56.6**	**-1.5**
VLI	**Veliai**	**2.09**	**108**	P	**Pg**	**15 52 28.8**	**-2.3**
VLI	**Veliai**	**2.09**	**108**	*e*PG	**Pg**	**15 52 29.5**	**-1.6**
VLI				*e*SN	**Sn**	**15 52 54.8**	**+1.8**
VLI	**Veliai**	**2.09**	**108**	P	**Pn**	**15 52 27.8**	**+1.2**
VLI				S	**Sn**	**15 52 55.1**	**+2.1**
VLI	**Veliai**	**2.09**	**108**	P	**Pn**	**15 52 27.8**	**+1.2**
VLI	**Veliai**	**2.09**	**108**	*e*Pg	**Pg**	**15 52 29.5**	**-1.6**
VLI				*e*Sn	**Sn**	**15 52 54.8**	**+1.8**
VLI				S	**Sn**	**15 52 55.1**	**+2.1**
IGT	**Igoumenitsa**	**2.14**	**357**	P	**Pn**	**15 52 29.3**	**+2.0**
IGT	**Igoumenitsa**	**2.14**	**357**	P	**Pn**	**15 52 26.2**	**-1.1**
IGT	**Igoumenitsa**	**2.14**	**357**	P	**Pn**	**15 52 26.2**	**-1.1**
AGG	**Agios Georgios**	**2.20**	**42**	P	**Pn**	**15 52 28.7**	**+0.6**
AGG	**Agios Georgios**	**2.20**	**42**	*e*PN	**Pn**	**15 52 29.0**	**+0.9**
AGG	**Agios Georgios**	**2.20**	**42**	P	**Pn**	**15 52 28.7**	**+0.6**
AGG				S	**Sn**	**15 52 54.5**	**-1.1**
AGG	**Agios Georgios**	**2.20**	**42**	P	**Pn**	**15 52 28.7**	**+0.6**
AGG	**Agios Georgios**	**2.20**	**42**	*e*Pn	**Pn**	**15 52 29.0**	**+0.9**
AGG				S	**Sn**	**15 52 54.5**	**-1.1**
DID	**Didima**	**2.21**	**86**	*e*PB	**Pn**	**15 52 27.8**	**-0.5**
DID	**Didima**	**2.21**	**86**	P	**Pn**	**15 52 27.4**	**-0.9**
DID				S	**Sn**	**15 52 56.7**	**+0.7**
DID	**Didima**	**2.21**	**86**	P	**Pn**	**15 52 27.4**	**-0.9**
DID	**Didima**	**2.21**	**86**	*e*Pb	**Pn**	**15 52 27.8**	**-0.5**
DID				S	**Sn**	**15 52 56.7**	**+0.7**
JAN	**Janina**	**2.29**	**8**	P	**Pn**	**15 52 30.2**	**+0.9**
JAN				S	**Sn**	**15 52 58.5**	**+0.7**
JAN	**Janina**	**2.29**	**8**	P	**Pn**	**15 52 30.2**	**+0.9**
JAN				S	**Sn**	**15 52 58.5**	**+0.7**
KYTH	**Kithira**	**2.34**	**117**	*e*PN	**Pn**	**15 52 31.9**	**+1.8**
KYTH	**Kithira**	**2.34**	**117**	P	**Pn**	**15 52 31.1**	**+1.0**
KYTH	**Kithira**	**2.34**	**117**	P	**Pn**	**15 52 31.1**	**+1.0**
KYTH	**Kithira**	**2.34**	**117**	*e*Pn	**Pn**	**15 52 31.9**	**+1.8**
LKR	**Lokris**	**2.37**	**57**	P	**Pn**	**15 52 30.1**	**-0.3**
LKR	**Lokris**	**2.37**	**57**	*e*PB	**Pn**	**15 52 30.4**	**0.0**
LKR				*e*SN	**Sg**	**15 53 03.5**	**-3.6**
LKR	**Lokris**	**2.37**	**57**	P	**Pn**	**15 52 30.4**	**0.0**
LKR				S	**Sn**	**15 52 59.1**	**-0.7**
LKR	**Lokris**	**2.37**	**57**	*e*Pb	**Pn**	**15 52 30.4**	**0.0**
LKR				S	**Sn**	**15 52 59.1**	**-0.7**
LKR				*e*Sn	**Sg**	**15 53 03.5**	**-3.6**
KEK	**Kerkira**	**2.38**	**348**	P	**Pn**	**15 52 30.9**	**+0.4**
KEK				S	**Sn**	**15 53 02.0**	**+2.0**
KEK	**Kerkira**	**2.38**	**348**	P	**Pn**	**15 52 30.9**	**+0.4**
KEK				S	**Sn**	**15 53 02.0**	**+2.0**
ATAL	**Atalanti**	**2.41**	**56**	P	**Pn**	**15 52 31.2**	**+0.3**
ATAL				S	**Sn**	**15 52 59.8**	**-0.9**
ATAL	**Atalanti**	**2.41**	**56**	P	**Pn**	**15 52 31.2**	**+0.3**
ATAL				S	**Sn**	**15 52 59.8**	**-0.9**
THL	**Klokotos Trika**	**2.49**	**29**	*e*PN	**Pn**	**15 52 32.9**	**+0.8**
THL	**Klokotos Trika**	**2.49**	**29**	P	**Pn**	**15 52 32.7**	**+0.6**
THL				S	**Sn**	**15 53 02.8**	**-0.1**
THL	**Klokotos Trika**	**2.49**	**29**	P	**Pn**	**15 52 32.7**	**+0.6**
THL				S	**Sn**	**15 53 02.8**	**-0.1**
SRN	**Sarande**	**2.51**	**352**	*e*PN	**Pn**	**15 52 34.4**	**+1.9**
SRN				*i* SN	**Sn**	**15 53 00.5**	**-2.9**
SRN	**Sarande**	**2.51**	**352**	*e*Pn	**Pn**	**15 52 34.3**	**+1.9**
SRN				*i* Sn	**Sn**	**15 53 00.5**	**-2.

HORT Hortiatis 3.81 32 P Pn 15 52 49.8 -0.4
GRG Griva 3.87 22 P Pn 15 52 51.0 -0.1
GRG Griva 3.87 22 P Pn 15 52 50.8 -0.2
GRG Griva 3.87 22 P Pn 15 52 51.0 -0.1
TIR Tirane 3.98 354 *e*Pn **Pn 15 52 54.0 +1.4**
TIR Tirane 3.98 354 Pn **Pn 15 52 54.1 +1.5**
TIR Tirane 3.98 354 *e*Pn **Pn 15 52 54.0 +1.4**
TAR1 Taranto 3.99 323 *e*Pn **Pn 15 52 52.1 -0.6**
TAR1 *e*Sn **Sn 15 53 36.7 -3.1**
KRUS Krusevo 4.02 9 *i* Pn **Pn 15 52 52.4 -0.7**
OUR Ouranopolis 4.03 42 P **Pn 15 52 54.8 +1.6**
OUR Ouranopolis 4.03 42 P **Pn 15 52 52.1 -1.1**
OUR Ouranopolis 4.03 42 P **Pn 15 52 52.1 -1.1**
APE Apeiranthos 4.06 93 P **Pn 15 52 52.5 -1.2**
APE Apeiranthos 4.06 93 ⇑*i*P **Pb 15 53 03.2 +0.3**
APE Apeiranthos 4.06 93 P **Pn 15 52 52.5 -1.2**
SOH Sokhos 4.10 32 P **Pn 15 52 54.7 +0.5**
SOH Sokhos 4.10 32 *e*PN **Pn 15 52 54.8 +0.6**
SOH Sokhos 4.10 32 P **Pn 15 52 54.6 +0.4**
SOH S **Sn 15 53 40.9 -1.7**
SOH Sokhos 4.10 32 P **Pn 15 52 54.6 +0.4**
SOH S **Sn 15 53 40.9 -1.7**
VAY Valandovo 4.25 22 *i* Pn **Pn 15 52 55.5 -0.9**
SRS Serrai 4.45 32 P **Pn 15 52 59.5 +0.5**
SRS Serrai 4.45 32 P **Pn 15 52 58.4 -0.6**
SRS Serrai 4.45 32 P **Pn 15 52 59.5 +0.5**
CUC Castrocucco 4.47 307 *e*Pn **Pn 15 53 01.2 +1.9**
CUC Castrocucco 4.47 307 *e*Pn **Pn 15 53 01.2 +1.9**
LIA Limnos Island 4.47 54 P **Pn 15 52 59.0 -0.3**
LIA Limnos Island 4.47 54 P **Pn 15 52 59.0 -0.3**
SG1 Sgolgore (BA) 4.53 321 *e*Pn **Pn 15 53 01.0 +0.9**
SG1 *e*Sn **Sn 15 53 50.4 -2.7**
CHOS Chios island 4.54 76 P **Pn 15 52 59.5 -0.7**
CHOS Chios island 4.54 76 P **Pn 15 52 59.5 -0.7**
LAST Lasithi 4.62 117 P **Pn 15 53 02.1 +0.7**
LAST Lasithi 4.62 117 P **Pn 15 53 02.1 +0.7**
BAI Bari 4.64 324 *e*Pn **Pn 15 53 01.6 0.0**
BAI *e*Sn **Sn 15 53 51.7 -4.1**
ULC Ulcinj 4.66 349 ⇓*i*Pn **Pn 15 53 03.2 +1.2**
ULC *e*Sn **Sn 15 53 57.0 +0.6**
ULC Ulcinj 4.66 349 ⇓*i*Pn **Pn 15 53 03.2 +1.2**
ULC *e*Sn **Sn 15 53 57.0 +0.6**
PUK Puka 4.67 355 *e*PN **Pn 15 53 02.7 +0.7**
PUK *i* SN **Sn 15 53 45.2 -11**
PUK Puka 4.67 355 *e*Pn **Pn 15 53 02.7 +0.7**
NPS Neapolis 4.67 115 P **Pn 15 53 03.1 +1.0**
NPS Neapolis 4.67 115 P **Pn 15 53 03.1 +1.0**
NVR Nevrokopi 4.75 33 P **Pn 15 53 03.0 -0.2**
NVR Nevrokopi 4.75 33 P **Pn 15 53 03.0 -0.2**
KAVA Kavala 4.79 40 P **Pn 15 53 02.6 -1.0**
KAVA Kavala 4.79 40 P **Pn 15 53 02.6 -1.0**
VAE Valguarnera 4.81 273 Pn **Pn 15 53 07.7 +3.7**
1.2nm,0.3s,baz=247,slow=15,SNR=2.3
VAE Sn **Sn 15 53 59.0 -1.1**
8.1nm,0.3s,baz=116,slow=5.2,SNR=3.2
VAE Valguarnera 4.81 273 Pn **Pn 15 53 07.8 +3.8**
VAE Sn **Sn 15 53 59.0 -1.1**
CDT Castel del Mon 4.91 320 *e*Pn **Pn 15 53 01.0 -4.4**
BCI Bajram Curri 4.98 357 *e*PN **Pn 15 53 08.9 +2.6**
BCI Bajram Curri 4.98 357 *e*Pn **Pn 15 53 08.9 +2.6**
BUM Brajici-Budva 5.05 347 ⇑*i*Pn **Pn 15 53 08.9 +1.6**
BUM *e*Sn **Sn 15 54 06.3 +0.4**
BUM Brajici-Budva 5.05 347 ⇑*i*Pn **Pn 15 53 08.9 +1.6**
BUM *e*Sn **Sn 15 54 06.3 +0.4**
SMG Samos 5.08 84 *e*PN **Pn 15 53 06.1 -1.6**
SMG Samos 5.08 84 *e*Pn **Pn 15 53 06.1 -1.6**
PDG Podgorica 5.12 350 ⇓*i*Pn **Pn 15 53 09.4 +1.2**
PDG *e*Sn **Sn 15 54 07.7 +0.1**
TTG Podgorica 5.12 350 ⇓*i*Pn **Pn 15 53 09.4 +1.2**
TTG *e*Sn **Sn 15 54 07.7 +0.1**
TTG Podgorica 5.12 350 ⇓*i*Pn **Pn 15 53 09.4 +1.2**
TTG *e*Sn **Sn 15 54 07.7 +0.1**
PVY Plav 5.21 356 ⇑*i*Pn **Pn 15 53 10.8 +1.3**
PVY *e*Sn **Sn 15 54 09.8 -0.1**
PVY Plav 5.21 356 ⇑*i*Pn **Pn 15 53 10.8 +1.3**
PVY *e*Sn **Sn 15 54 09.8 -0.1**
HCY Herceg Novi 5.27 344 ⇑*i*Pn **Pn 15 53 12.1 +1.8**
HCY *e*Sn **Sn 15 54 11.6 +0.2**
HCY Herceg Novi 5.27 344 ⇑*i*Pn **Pn 15 53 12.1 +1.8**
HCY *e*Sn **Sn 15 54 11.6 +0.2**
RDO Rodhopi 5.44 45 P **Pn 15 53 11.8 -0.8**
RDO Rodhopi 5.44 45 P **Pn 15 53 11.8 -0.8**
BEY Berane 5.49 356 ⇓*i*Pn **Pn 15 53 14.9 +1.5**
BEY *e*Sn **Sn 15 54 16.6 -0.2**
IVA Berane 5.49 356 ⇓*i*Pn **Pn 15 53 14.9 +1.5**
IVA *e*Sn **Sn 15 54 16.6 -0.2**
IVA Berane 5.49 356 ⇓*i*Pn **Pn 15 53 14.9 +1.5**
IVA *e*Sn **Sn 15 54 16.6 -0.2**
BARS Barje 5.52 10 *e*Pn **Pn 15 53 12.9 -0.8**
BARS *e*Sn **Sn 15 54 11.8 -5.7**
BARS Barje 5.52 10 *e*Pn **Pn 15 53 12.9 -0.8**
NKY Niksic 5.53 349 ⇑*i*Pn **Pn 15 53 15.5 +1.6**
NKY *e*Sn **Sn 15 54 17.7 -0.1**
NKY Niksic 5.53 349 ⇑*i*Pn **Pn 15 53 15.5 +1.6**
NKY *e*Sn **Sn 15 54 17.7 -0.1**
ALN Alexandroupoli 5.58 49 P **Pn 15 53 13.9 -0.6**
ALN Alexandroupoli 5.58 49 P **Pn 15 53 13.9 -0.6**
VTS Vitosha 5.61 21 *e*Pn **Pn 15 53 15.2 +0.3**
VTS *e*Sn **Sn 15 54 14.0 -5.7**
VTS Vitosha 5.61 21 P **Pn 15 53 15.5 +0.6**
VTS Vitosha 5.61 21 ⇑*i*P **Pn 15 53 15.5 +0.6**
VTS Vitosha 5.61 21 *e*Pn **Pn 15 53 15.2 +0.3**
VTS Vitosha 5.61 21 P **Pn 15 53 15.5 +0.6**
BRY Bratogost 5.70 346 ⇑*i*Pn **Pn 15 53 17.8 +1.6**
BRY *e*Sn **Sn 15 54 21.7 -0.2**
BRY Bratogost 5.70 346 ⇑*i*Pn **Pn 15 53 17.8 +1.6**
BRY *e*Sn **Sn 15 54 21.7 -0.2**
KARP Karpathos 5.71 107 P **Pn 15 53 16.2 -0.1**
KARP Karpathos 5.71 107 P **Pn 15 53 16.2 -0.1**
STON Ston 5.87 340 *e*Pn **Pn 15 53 16.5 -2.0**
STON Sn **Sn 15 54 19.4 -6.7**
STON Ston 5.87 340 *e*Pn **Pn 15 53 16.5 -2.0**
SJES Sjenica 5.88 357 *e*Pn **Pn 15 53 18.7 +0.1**
SJES *e*Sn **Sn 15 54 19.1 -7.2**
SJES Sjenica 5.88 357 *e*Pn **Pn 15 53 18.7 +0.1**
UPM Unac-Piva 5.93 349 ⇑*i*Pn **Pn 15 53 21.1 +1.8**
UPM *e*Sn **Sn 15 54 27.3 -0.2**
UPM Unac-Piva 5.93 349 ⇑*i*Pn **Pn 15 53 21.1 +1.8**
UPM *e*Sn **Sn 15 54 27.3 -0.2**
PLE Pljevlja 5.99 353 ⇑*i*Pn **Pn 15 53 21.0 +0.8**
PLE *e*Sn **Sn 15 54 28.8 -0.3**
PLE Pljevlja 5.99 353 ⇑*i*Pn **Pn 15 53 21.0 +0.8**
PLE *e*Sn **Sn 15 54 28.8 -0.3**
ZAPS Zavoj 6.11 15 ⇓*i*Pn **Pn 15 53 22.1 +0.3**
BBLS Lazići 6.52 353 *e*Pn **Pn 15 53 28.5 +1.1**
BBLS Lazići 6.52 353 *e*Pn **Pn 15 53 28.5 +1.1**
DIVS Divibare 6.71 357 *e*Pn **Pn 15 53 30.1 0.0**
DIVS *e*Sn **Sn 15 54 38.6 -8.3**
DIVS Divibare 6.71 357 *e*Pn **Pn 15 53 30.1 0.0**
SLUM 7.07 145 S **Sn 15 54 47.3 -8.5**
baz=148
SLUM AMP 15 54 00.0
comp=E,60μm,0.5s,logA/T=5.1,baz=148
FRGS Fruska Gora 7.78 357 *e*Pn **Pn 15 53 44.4 -0.3**
GZR Gura Zlata 8.18 12 ⇓*i*P **Pn 15 53 51.2 +0.9**
GZR Gura Zlata 8.18 12 ⇓*i*P **Pn 15 53 51.2 +0.9**
BZS Buzias 8.27 6 *e*Pn **Pn 15 53 51.9 +0.5**
BZS Buzias 8.27 6 ⇓*i*P **Pn 15 53 52.1 +0.7**
BZS Buzias 8.27 6 *e*Pn **Pn 15 53 51.9 +0.5**
NVLJ Novalja 8.32 331 *e*Pn **Pn 15 53 52.2 +0.1**
NVLJ Sn **Sn 15 55 20.8 -5.5**
NVLJ Novalja 8.32 331 *e*Pn **Pn 15 53 52.1 0.0**
HMAT Matruh 8.34 137 S **Sn 15 55 16.6 -10**
baz=140
VOIR 8.75 22 ⇑*i*P **Pn 15 53 58.5 +0.5**
VOIR 8.75 22 ⇑*i*P **Pn 15 53 58.5 +0.5**
PKSM Moragy 8.92 352 *e*Pn **Pn 15 54 00.4 0.0**
PKSM Moragy 8.92 352 *e*Pn **Pn 15 54 00.4 0.0**
BOJS Bojanci 9.00 336 *i* Pn **Pn 15 54 00.4 -1.1**
BOJS *i* Sn **Sn 15 55 35.8 -7.3**
BOJS Bojanci 9.00 336 Pn **Pn 15 54 00.4 -1.0**
MLR Muntele Rosu 9.08 25 ⇑*i*P **Pn 15 54 03.4 +0.8**
MLR Muntele Rosu 9.08 25 ⇑*i*P **Pn 15 54 03.4 +0.8**
KEST Kesra 9.09 263 Pn **Sn 15 54 05.9 +3.1**
comp=E,0.0nm,0.3s,baz=65,slow=19,SNR=3.7
KEST Sn **Sn 15 55 43.9 -1.6**
comp=E,0.1nm,0.3s,baz=68,slow=18,SNR=2.8
SWA2 9.13 151 P **Pn 15 54 03.8 +0.5**
baz=154
SWA2 AMP 15 55 00.0
comp=N,100μm,1.1s,logA/T=5.0,baz=154
SWA2 S **Sn 15 55 37.1 -9.5**
baz=154
SWA2 9.13 151 P **Pn 15 54 03.8 +0.4**
PLOR Plostina 9.64 27 ⇓*i*P **Pn 15 54 11.5 +1.3**
PLOR Plostina 9.64 27 ⇓*i*P **Pn 15 54 11.5 +1.3**
VOY Vojsko 9.93 332 *e*Pn **Pn 15 54 15.9 +1.7**
VOY *e* 15 54 28.8
VOY *e*Sn **Sn 15 56 02.8 -3.1**
VOY Vojsko 9.93 332 *e*Pn **Pn 15 54 15.9 +1.7**
PERS Pernice 10.05 338 *i* Pn **Pn 15 54 14.0 -1.9**
BRTR Keskin Array B 10.58 73 Pn **Pn 15 54 21.5 -1.7**
comp=N,0.1nm,0.3s,baz=235,slow=14,SNR=2.7
BRTR Sn **Sn 15 56 09.4 -13**
comp=N,0.1nm,0.3s,baz=281,slow=24,SNR=3.3
BRTR Keskin Array B 10.58 73 Pn **Pn 15 54 21.5 -1.7**
DAVOX Davos/Dischmat 12.23 323 LR LR 15 59 45.8
comp=N,32nm,19.1s,baz=54,slow=39
GERES GERESS Array B 12.46 339 Pn **Pn 15 54 48.0 -0.8**
comp=N,0.1nm,0.3s,baz=159,slow=14,SNR=5.9
GERES GERESS Array B 12.46 339 Pn **Pn 15 54 48.0 -0.8**
KHC Kasperske Hory 12.76 339 *e*P **Pn 15 54 53.8 +1.0**
KHC AMS AMS 16 00 40.0
comp=N,300nm,13.2s
KHC Kasperske Hory 12.76 339 P **Pn 15 54 53.8 +1.0**
SUZ 12.76 123 P **Pn 15 54 51.4 -1.7**
baz=124
SUZ 12.76 123 P **Pn 15 54 51.4 -1.6**
DPC Dobruska-Polom 13.29 348 AMS AMS 16 01 10.0
comp=N,300nm,16.3s
PRU Pruhonice 13.30 343 AMS AMS 16 01 10.0
comp=N,200nm,16.9s
NKC Novy Kostel 14.07 338 AMS AMS 16 01 20.0
comp=N,300nm,11.8s
EIL Elat 14.32 118 Pn **Pn 15 55 11.8 -2.5**
comp=N,0.3nm,0.3s,baz=358,slow=19,SNR=6.2
EIL Sn **Sn 15 57 36.2 -17**
comp=N,0.3nm,0.3s,baz=72,slow=19,SNR=4.2
GNI Garni 19.12 74 LR LR 16 03 50.1
comp=N,35nm,18.4s,baz=87,slow=38
ESDC Sonseca Array 19.23 284 P **Pn 15 56 17.3 +0.5**
comp=N,0.2nm,0.3s,baz=77,slow=9.9,SNR=2.9
ESDC Sonseca Array 19.23 284 P **Pn 15 56 17.3 +0.5**
MDT Midelt 20.99 265 P **P 15 56 36.3 +1.2**
comp=N,1.9nm,0.9s,baz=75,slow=10.0,SNR=3.8
MDT Midelt 20.99 265 P **P 15 56 36.3 +1.2**
HFS Hagfors 23.17 351 P **P 15 56 54.7 -3.4**
comp=N,2.6nm,1.0s,mb3.6,baz=219,slow=8.9,SNR=7.5
EKA Eskdalemuir Ar 24.05 326 P **P 15 57 05.8 -0.9**
comp=N,1.4nm,0.9s,mb3.4,baz=131,slow=10,SNR=4.6
EKA Eskdalemuir Ar 24.05 326 P **P 15 57 05.8 -0.9**
FINES FINESS Array B 24.34 7 P **P 15 57 06.7 -2.5**
comp=N,1.9nm,0.8s,mb3.6,baz=187,slow=8.4,SNR=5.7
FINES FINESS Array B 24.34 7 P **P 15 57 06.7 -2.5**
NB2 NORSAR Subarra 24.38 349 P **P 15 57 10.7 +1.0**
comp=Z,2.8nm,1.0s,mb3.6,baz=162,slow=9.3
NB2 NORSAR Subarra 24.38 349 P **P 15 57 10.7 +1.0**
comp=Z,2.8nm,1.0s,mb3.6,baz=162,slow=9.1,SNR=6.2
NOA NORSAR Array B 24.38 349 P **P 15 57 08.7 -1.0**
comp=Z,1.5nm,0.9s,mb3.4,baz=168,slow=11,SNR=3.3
NOA NORSAR Array B 24.38 349 P **P 15 57 08.7 -1.0**
KAF Kangasniemi 25.02 7 *e*P **P 15 57 13.7 -1.7**
comp=Z,2.3nm,0.6s,mb3.9
JOF Joensuu 26.41 11 *e*P **P 15 57 29.4 +1.3**
comp=Z,2.0nm,0.7s,mb3.8
TORD Torodi Ar. Bea 29.39 220 P **P 15 57 56.6 +1.4**
comp=Z,2.8nm,1.1s,mb3.9,baz=37,slow=7.7,SNR=2.9
ARCES ARCESS Array B 32.32 3 LR LR 16 12 58.1
comp=Z,88nm,19.1s,baz=259,slow=40
DBIC Dimbokro 38.28 223 P **P 15 59 12.9 +0.5**
comp=Z,1.6nm,0.5s,mb4.0,baz=18,slow=13,SNR=2.9
DBIC Dimbokro 38.28 223 P **P 15 59 12.9 +0.5**
MK31 Makanchi Array 45.76 58 *e*P **P 16 00 09.9 -3.3**
MKAR Makanchi Array 45.76 58 P **P 16 00 09.8 -3.3**
comp=Z,1.0nm,0.6s,mb4.0,baz=271,slow=6.9,SNR=12
ZALV Zalesovo Beam 46.26 48 P **P 16 00 13.9 -3.0**
comp=Z,1.6nm,0.5s,mb4.2,baz=280,slow=8.5,SNR=7.7
DANN Dangsing 53.06 80 *e*P **P 16 01 07.3 -1.8**
comp=Z,23nm,0.7s,mb5.2
DANN Dangsing 53.06 80 *e*P **P 16 01 07.3 -1.8**
comp=Z,23nm,0.7s,mb5.2
KOLN Koldanda 53.20 81 *e*P **P 16 01 07.5 -2.7**
comp=Z,15nm,0.9s,mb4.9
GKN Gorkha 53.90 80 *e*P **P 16 01 12.6 -2.8**
comp=Z,13nm,0.7s,mb5.0
DMN Daman 54.45 80 *e*P **P 16 01 16.5 -2.9**
comp=Z,15nm,0.6s,mb5.1
KKN Kakani 54.51 80 *e*P **P 16 01 17.0 -2.8**
comp=Z,7.9nm,0.6s,mb4.9
GUN Gumba 54.92 80 *e*P **P 16 01 19.6 -3.2**
comp=Z,6.7nm,0.4s,mb5.0
SONM Songino Array 61.00 50 P **P 16 02 02.9 -2.2**
comp=Z,0.8nm,0.8s,mb3.9,baz=282,slow=8.5,SNR=3.5
CMAR Chiang Mai Arr 70.05 82 P **P 16 03 02.0 -2.1**
comp=Z,0.7nm,0.8s,mb3.7,baz=306,slow=7.5,SNR=6.2
CMAR Chiang Mai Arr 70.05 82 P **P 16 03 02.0 -2.1**
KSRS Korea Array 79.87 50 P **P 16 03 59.0 -1.6**
comp=Z,1.6nm,0.7s,mb4.0,baz=308,slow=5.6,SNR=7.2

IDC 21 15:56:52.6±2.1, 7°.10S×130°.77E, h0km, mb3.9/1, mb1 3.7/4, mb1mx3.5/16, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=81.9km s-min=27.4km az=79.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.02**	**204**	Pn	Pn	Pn	15 59 46.4	+1.0
baz=0.0,slow=0.0								
FITZ				Sn	Sn	Sn	16 01 50.6	-10
0.5nm,0.3s,baz=256,slow=19,SNR=4.9								
WRA	**Warramunga Arr**	**13.23**	**165**	Pn	Pn	Pn	16 00 00.9	-0.9
0.2nm,0.3s,baz=346,slow=14,SNR=14								
WRA				Sn	Sn	Sn	16 02 21.1	-8.6
0.7nm,0.3s,baz=334,slow=23,SNR=8.0								
ASAR	**Alice Springs**	**16.74**	**170**	Pn	Pn	Pn	16 00 48.7	0.0
0.2nm,0.3s,baz=1.8,slow=9.4,SNR=24								
ASAR				Sn	Sn	Sn	16 03 47.1	-8.3
0.2nm,0.3s,baz=355,slow=28,SNR=5.8								
MKAR	**Makanchi Array**	**68.73**	**326**	P	P	P	16 07 58.3	+0.1
0.6nm,0.5s,baz=117,slow=8.1,SNR=17								

IDC 21 16:03:57.7±1.8, 23°.00S×176°.16W, h0km, mb3.9/5, mb1 4.2/6, mb1mx3.9/18, mbtmp3.9/6, ML2.3/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/35, Error ellipse: s-maj=70.1km s-min=21.5km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.95**	**25**	Pn	Pn	Pn	16 06 21.1	-1.0
1.6nm,0.3s,baz=155,slow=22,SNR=4.2								
AFI				Sn	Sn	Sn	16 08 14.6	0.0
1.3nm,0.3s,baz=189,slow=19,SNR=2.9								
CTA	**Charters Tower**	**35.02**	**267**	P	P	P	16 10 54.0	+1.8
3.2nm,0.3s,baz=97,slow=11,SNR=15								
CTA				LR	LR	LR	16 23 50.5	
comp=Z,117nm,18.5s,baz=142,slow=34								
ASAR	**Alice Springs**	**45.66**	**259**	P	P	P	16 12 18.6	-1.8
1.4nm,1.1s,baz=94,slow=7.3,SNR=9.0								
WRA	**Warramunga Arr**	**45.99**	**264**	P	P	P	16 12 22.6	-0.4
0.9nm,0.4s,baz=102,slow=8.2,SNR=34								
TGY	**Tagaytay City**	**71.75**	**295**	LR	LR	LR	16 40 49.0	
comp=Z,34nm,21.5s,baz=228,slow=31								
TXAR	**Lajitas Array**	**86.98**	**57**	P	P	P	16 16 45.3	+0.2
0.2nm,0.7s,baz=269,slow=6.3,SNR=2.7								
ILAR	**Eielson Array**	**90.38**	**12**	P	P	P	16 17 01.0	+0.7
0.5nm,1.0s,baz=223,slow=6.1,SNR=3.5								
CMAR	**Chiang Mai Arr**	**92.55**	**289**	P	P	P	16 17 14.2	+2.8
0.9nm,0.7s,baz=129,slow=2.6,SNR=6.4								

*IDC **21** 16:17:59.2±2.2, 17°.21S×179°.00W, h518km±32km, mb3.2/6, mb1 3.5/7, mb1mx3.2/19, mbtmp3.2/7, Error ellipse: s-maj=92.4km s-min=15.5km az=154.0*
*ISCJB **21** 16:18:03.1±1.4, 17°.05±0°.5×179°.3W±0°.3, h577km±14km, mb3.7/7, Error ellipse: s-maj=87.5km s-min=21.1km az=153.3*
*NEIC **21** 16:18:03.6±1.1, 17°.06S×179°.22W, h571km±10km, mb4.3/1, Error ellipse: s-maj=63.0km s-min=15.1km az=153.0*
ISC 21 16:18:03.8±1.5, 17°.1S±0°.5×179°.2W±0°.3, h571km±13km, n13, σ0°46/13, mb3.7/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.68**	**256**	*e*P	**P**	**P**	**16 19 18.8**	**0.0**
AFI	**Afiamalu**	**7.84**	**67**	P	**P**	**P**	**16 19 53.2**	**-7.5**
2.1nm,0.3s,baz=111,slow=13,SNR=6.5								
ARMA	**Armidale**	**29.69**	**238**	*e*P	**P**	**P**	**16 23 24.2**	**-0.3**
STKA	**Stephens Creek**	**38.35**	**240**	P	**P**	**P**	**16 24 36.7**	**-0.1**
2.2nm,0.5s,mb4.0,baz=72,slow=7.7,SNR=17								
STKA	**Stephens Creek**	**38.35**	**240**	P	**P**	**P**	**16 24 36.7**	**-0.2**
WRA	**Warramunga Arr**	**44.02**	**259**	P	**P**	**P**	**16 25 21.7**	**-0.1**
1.3nm,0.6s,mb3.7,baz=96,slow=7.2,SNR=42								
ASAR	**Alice Springs**	**44.27**	**253**	P	**P**	**P**	**16 25 24.1**	**+0.5**
12nm,0.6s,mb4.6,baz=89,slow=7.9,SNR=485								
KAKA	**Kakadu**	**46.83**	**268**	P	**P**	**P**	**16 25 42.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**52.40**	**260**	P	**P**	**P**	**16 26 25.2**	**+1.1**
1.0nm,0.4s,mb3.5,baz=93,slow=6.7,SNR=6.5								
FITZ	**Fitzroy Crossi**	**52.40**	**260**	*e*P	**P**	**P**	**16 26 25.1**	**+1.0**
MBWA	**Marble Bar**	**57.52**	**256**	*e*P	**P**	**P**	**16 26 59.4**	**-0.4**
19nm,1.2s,mb4.2								
NVAR	**Mina Array Bea**	**79.38**	**44**	P	**P**	**P**	**16 29 10.9**	**-0.2**
0.5nm,0.7s,mb3.0,baz=221,slow=12,SNR=4.4								
TXAR	**Lajitas Array**	**86.22**	**58**	P	**P**	**P**	**16 29 45.9**	**+0.2**
0.5nm,0.8s,mb3.2,baz=232,slow=6.2,SNR=6.2								

*IDC **21** 16:21:59.1±1.6, 1°.75N×127°.93E, h0km, mb3.9/4, mb1 4.1/6, mb1mx3.7/20, mbtmp4.0/6, ML3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx2.4/31, Error ellipse: s-maj=51.3km s-min=23.2km az=68.0*
*NEIC **21** 16:22:04.0±1.1, 1°.76N×128°.02E, h35km, Error ellipse: s-maj=22.4km s-min=13.1km az=222.0*
*ISCJB **21** 16:22:16.3±1.3, 1°.4N±0°.1×127°.36E±0°.10, h164km±9km, mb3.8/4, Error ellipse: s-maj=21.6km s-min=12.6km az=31.7*
*DJA **21** 16:22:19, 1°.34N×127°.26E, h128km, MLv4.8/7*
ISC 21 16:22:17.4±1.3, 1°.3N±0°.1×127°.36E±0°.10, h158km±9km, n21, σ0°75/21, mb3.8/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.55**	**179**	P	**Pn**	**Pn**	**16 22 40.3**	**+0.5**
MNI	**Manado**	**2.52**	**273**	P	**Pn**	**Pn**	**16 22 58.5**	**-0.6**
KMSI	**Cibinong**	**3.46**	**258**	P	**Pn**	**Pn**	**16 23 10.9**	**0.0**
NLAI	**Namlea**	**4.54**	**183**	P	**Pn**	**Pn**	**16 23 25.3**	**+0.4**
LUWI	**Luwuk**	**5.16**	**243**	P	**Pn**	**Pn**	**16 23 31.8**	**-1.2**
1.1nm3μm55nm,1.1s								
MRSI	**Marisa**	**5.48**	**261**	P	**Pn**	**Pn**	**16 23 36.7**	**-0.6**
0.2nm36nm,0.5s								
MSSI	**Masamba**	**8.02**	**241**	P	**Pn**	**Pn**	**16 24 10.8**	**-0.2**
0.6nm6μm79nm,0.7s								
TTSI	**Tana Toraja**	**8.70**	**240**	P	**Pn**	**Pn**	**16 24 19.7**	**-0.4**
31nm,0.9s								
SPSI	**Sidrap Palu**	**9.23**	**235**	P	**Pn**	**Pn**	**16 24 28.5**	**+1.4**
635nm17nm,0.5s								
BKSI	**Bulukumba**	**9.79**	**228**	P	**Pn**	**Pn**	**16 24 35.9**	**+1.4**
KAPI	**Kappang**	**9.87**	**230**	Pn	**Pn**	**Pn**	**16 24 34.2**	**-1.3**
2.2nm,0.3s,baz=62,slow=2.3,SNR=15								
KAPI	**Kappang**	**9.87**	**230**	*e*Pn	**Pn**	**Pn**	**16 24 35.1**	**-0.4**
KSM	**Kuching**	**17.05**	**271**	*e*P	**Pn**	**Pn**	**16 26 07.8**	**+1.2**
FITZ	**Fitzroy Crossi**	**19.38**	**185**	P	**P**	**P**	**16 26 30.8**	**-0.4**
0.2nm,0.3s,baz=35,slow=7.5,SNR=5.1								
FITZ	**Fitzroy Crossi**	**19.38**	**185**	P	**P**	**P**	**16 26 30.8**	**-0.4**
WRA	**Warramunga Arr**	**22.21**	**162**	P	**P**	**P**	**16 27 00.7**	**-0.6**
2.8nm,0.4s,mb4.1,baz=340,slow=11,SNR=42								
WB2	**Warramunga Arr**	**22.22**	**162**	*e*P	**P**	**P**	**16 27 00.6**	**-0.7**
ASAR	**Alice Springs**	**25.64**	**166**	P	**P**	**P**	**16 27 32.6**	**+0.2**
0.9nm,0.4s,mb3.7,baz=346,slow=7.8,SNR=22								
STKA	**Stephens Creek**	**35.67**	**159**	P	**P**	**P**	**16 29 00.9**	**+0.4**
1.9nm,0.8s,mb3.8,baz=330,slow=11,SNR=7.7								
MKAR	**Makanchi Array**	**59.88**	**326**	P	**P**	**P**	**16 32 06.6**	**+0.1**
0.5nm,0.4s,mb3.7,baz=118,slow=8.2,SNR=6.1								
MKAR				LR	LR	LR	16 56 12.7	
comp=Z,32nm,21.9s,baz=168,slow=34								
MKAR	**Makanchi Array**	**59.88**	**326**	P	**P**	**P**	**16 32 06.6**	**+0.1**
MKAR				LR	LR	LR	16 56 12.7	

*ISCJB **21** 16:23:18.5±0.8, 17°.89S±0°.09×178°.63W±0°.08, h548km±11km, mb4.2/30, Error ellipse: s-maj=15.1km s-min=8.5km az=144.6*
*IDC **21** 16:23:19.5±1.2, 17°.65S×178°.76W, h543km±14km, mb3.7/13, mb1 3.9/14, mb1mx3.7/21, mbtmp3.7/14, Error ellipse: s-maj=21.4km s-min=9.6km az=148.0*
*NEIC **21** 16:23:20.2±0.4, 17°.70S×178°.67W, mb4.5/11, Error ellipse: s-maj=17.7km s-min=8.6km az=148.0*
ISC 21 16:23:19.1±0.8, 17°.86S±0°.09×178°.60W±0°.08, h542km±10km, h553km±2.7km: pP-P, n69, σ1°17/56, mb4.2/30, 5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.20**	**272**	*e*P	**P**	**P**	**16 24 39.5**	**+4.7**
AFI	**Afiamalu**	**7.65**	**60**	P	**P**	**P**	**16 25 13.4**	**+0.2**
9.1nm,0.3s,baz=45,slow=4.8,SNR=27								
AFI				S	**S**	**S**	**16 26 45.5**	**-1.1**
1.6nm,0.3s,baz=28,slow=21,SNR=2.1								
AFI	**Afiamalu**	**7.65**	**60**	*e*P	**P**	**P**	**16 25 13.2**	**0.0**
70nm,0.8s								
OUZ	**Omahuta**	**18.63**	**200**	*e*P	**P**	**P**	**16 27 06.5**	**+3.5**
URZ	**Urewera**	**20.67**	**190**	P	**P**	**P**	**16 27 23.3**	**+1.8**
5.6nm,0.6s,baz=136,slow=21,SNR=11								
URZ	**Urewera**	**20.67**	**190**	*e*P	**P**	**P**	**16 27 22.4**	**+0.9**
ARMA	**Armidale**	**29.81**	**240**	⇓*i*P	**P**	**P**	**16 28 43.6**	**+1.2**
ARMA	**Armidale**	**29.81**	**240**	*e*P	**P**	**P**	**16 28 43.7**	**+1.3**
21nm,0.7s,mb4.8								
CTA	**Charters Tower**	**33.28**	**260**	P	**P**	**P**	**16 29 11.8**	**-0.3**
20nm,0.7s,mb4.7,baz=96,slow=10.0,SNR=22								
CTA	**Charters Tower**	**33.28**	**260**	*e*P	**P**	**P**	**16 29 11.7**	**-0.4**
16nm,0.8s,mb4.6								
CTA	**Charters Tower**	**33.28**	**260**	P	**P**	**P**	**16 29 11.8**	**-0.3**
CTAO	**Charters Tower**	**33.28**	**260**

comp=Z,18nm,1.6s,mb4.2
NVAR Mina Array Bea 79.51 44 P P 16 34 30.5 +0.8
comp=Z,2.2nm,0.8s,mb3.6,baz=223,slow=9.3,SNR=20
NVAR pP pP 16 36 29.8 +4.3
comp=Z,0.5nm,0.6s,baz=235,slow=8.0,SNR=4.2
CN2 Changchun 79.88 322 *e*P **P 16 34 29.8 -1.7**
WVOR Wild Horse Val 81.49 40 *e*P **P 16 34 40.5 +0.6**
comp=Z,4.0nm,0.9s,mb3.9
BJI Beijing 83.63 315 P P 16 34 50.6 -0.1
BJI pP pP 16 36 51.5 +3.5
BJI sP sP 16 37 47.4 +4.3
BJI pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
PSI Prapat 83.70 275 P P 16 34 50.8 -1.0
comp=Z,9.3nm,0.8s,mb4.4,baz=204,slow=1.0,SNR=7.5
MAW Mawson 83.84 200 P P 16 34 52.1 +0.7
comp=Z,5.4nm,0.7s,mb4.2,baz=152,slow=5.5,SNR=11
ENH Enshi 84.10 304 *e*P **P 16 34 53.4 +0.1**
comp=Z,4.5nm,0.8s,mb4.0
HLID Hailey 84.71 41 *e*P **P 16 34 55.9 -0.1**
comp=Z,0.9nm,0.9s,mb3.3
GYA Guiyang 84.86 300 *e*P **P 16 34 58.0 +0.9**
GYA pP pP 16 36 59.0 +4.2
GYA sP sP 16 37 55.9 +6.1
GYA PP PP 16 38 25.0 +1.1
GYA SKS 16 44 25.8
GYA S S 16 44 38.6 -2.2
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
ILAR Eielson Array 85.88 13 P P 16 34 59.5 -1.6
comp=Z,1.3nm,0.8s,mb3.6,baz=228,slow=5.7,SNR=10
TXAR Lajitas Array 86.12 58 P P 16 35 04.6 +1.5
comp=Z,1.0nm,0.7s,mb3.5,baz=219,slow=5.3,SNR=12
TXAR pP pP 16 37 04.9 +3.6
comp=Z,0.2nm,0.6s,baz=69,slow=18,SNR=2.0
HHC Hu-ho-hao-te 87.11 315 *e*P **P 16 35 09.6 +2.1**
HHC pP pP 16 37 07.8 +1.8
HHC sP sP 16 38 02.1 +1.3
HHC PP PP 16 38 45.1 +3.6
HHC SKS 16 44 44.4
HHC S S 16 45 01.1 -0.4
HHC sS sS 16 48 32.3 -0.5
HHC SS SS 16 51 04.3 +2.4
HHC pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
HHC pmax pmax
comp=Z,100nm,5.5s
PDAR Pinedale Array 87.44 44 P P 16 35 08.9 0.0
comp=Z,0.9nm,0.8s,mb3.5,baz=226,slow=2.9,SNR=7.0
CMAR Chiang Mai Arr 88.70 290 P P 16 35 16.1 +0.7
comp=Z,2.7nm,0.9s,mb4.1,baz=100,slow=2.8,SNR=17
CD2 Chengdu 88.89 303 *e*P **P 16 35 17.5 +1.4**
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CD2 pmax pmax
comp=Z,30nm,7.2s
SYO Syowa Base 89.16 193 ⇓*e*P **P 16 35 15.0 -1.6**
SYO Syowa Base 89.16 193 ⇓*e*pP pP 16 37 19.7 +4.0
LZH Lanzhou 90.72 308 *e*P **P 16 35 22.5 -1.9**
LZH pP pP 16 37 25.0 +1.2
LZH sP sP 16 38 16.3 -2.0
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.8
VNA3 Neumayer Olymp 90.80 176 *e*P **P 16 35 21.9 -2.3**
VNA2 Neumayer--Watz 91.23 177 *e*P **P 16 35 24.0 -2.2**
baz=168,slow=3.3
VNA1 Neumayer--Stat 91.46 177 *e*P **P 16 35 26.0 -1.2**
MK31 Makanchi Array 108.97 314 *e*PKiKP PKiKP 16 40 45.4 -1.7
MKAR Makanchi Array 108.97 314 PKiKP PKiKP 16 40 45.4 -1.7
comp=Z,0.4nm,0.5s,baz=139,slow=0.8,SNR=5.4
ABKAR Akbulak array 123.78 318 *e*PKPdf PKPdf 16 41 14.4 -0.9
FINES FINESS Array B 133.09 344 PKP PKPdf 16 41 31.8 -0.9
comp=Z,1.7nm,0.9s,baz=216,slow=9.4,SNR=3.6
FINES SKPbc SKPbc 16 44 08.5 -1.5
comp=Z,3.9nm,0.9s,baz=9.2,slow=10,SNR=4.9
FINES FINESS Array B 133.09 344 PKP PKPdf 16 41 31.8 -0.9
FINES SKPbc SKPbc 16 44 08.5 -1.6
AKASG Malin Array Be 140.44 332 SKPbc SKPbc 16 44 30.5 -1.5
comp=Z,0.3nm,0.4s,baz=324,slow=7.3,SNR=4.1
BR131 Keskin Array S 144.62 315 *e*PKP PKPdf 16 41 53.6 -0.7
BRTR Keskin Array B 144.62 315 PKP PKPdf 16 41 54.0 -0.3
comp=Z,3.5nm,0.8s,baz=116,slow=2.9,SNR=19
GERES GERESS Array B 147.52 345 PKPbc PKPbc 16 42 02.0 -0.3
comp=Z,1.9nm,0.6s,baz=26,slow=3.2,SNR=15
GIVF Givet 147.72 356 *e*PKP1 PKPbc 16 42 02.3 -0.5
BAIF Baives 147.80 357 *e*PKP1 PKPbc 16 42 02.6 -0.4
comp=Z,4.0nm,0.6s
FLN La Foliniere 149.14 2 *e*PKP1 PKPbc 16 42 05.5 -0.9
CDF Champ du Feu 149.16 352 *e*PKP1 PKPbc 16 42 05.9 -0.5
comp=Z,2.7nm,0.5s
SFTF Sexfontaines 149.59 355 *e*PKP1 PKPbc 16 42 07.1 -0.4

IDC 21 16:40:34.2±3.7, 5°.16N×94°.56E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.4/23, mbtmp3.4/5, Error ellipse: s-maj=148.2km s-min=23.4km az=62.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**42.81**	**348**	P	P	16 48 33.1	-0.6
	0.2nm,0.5s,baz=176,slow=8.2,SNR=2.8						
SONM	**Songino Array**	**43.71**	**12**	P	P	16 48 41.2	+0.2
	0.2nm,0.4s,baz=200,slow=3.8,SNR=3.9						
WRA	**Warramunga Arr**	**46.39**	**124**	P	P	16 49 02.5	-0.2
	0.3nm,0.7s,baz=302,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	**47.89**	**128**	P	P	16 49 14.5	+0.1
	0.1nm,0.4s,baz=303,slow=7.5,SNR=9.0						
ZALV	**Zalesovo Beam**	**49.28**	**352**	P	P	16 49 24.9	+0.3
	0.4nm,0.3s,baz=164,slow=7.5,SNR=4.2						

*IDC **21** 16:44:04.9±1.6, 34°.84N×137°.61E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/26, mbtmp3.4/3, ML3.7/1, Error ellipse: s-maj=53.8km s-min=24.5km az=98.0*
*ISCJB **21** 16:44:06.8±0.6, 35°.55N±0°.04×140°.07E±0°.06, h80km±5km, mb3.4/2, Error ellipse: s-maj=8.5km s-min=5.1km az=145.1*
*JMA **21** 16:44:07.8±0.2, 35°.62N×140°.05E, h69km±2km, M3.2*
JMA Felt I J1.
ISC 21 16:44:07.7±0.6, 35°.55N±0°.04×140°.07E±0°.06, h74km±5km, n17, σ0°.66/29, mb3.4/2, 2C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.17**	**141**	⇓P	**Pn**	**16 44 19.1**	**+0.5**
JCN				S	**Sn**	**16 44 26.7**	**+0.1**
TOK	**Tokyo**	**0.29**	**298**	P	**Pn**	**16 44 19.3**	**+0.1**
TOK				S	**Sn**	**16 44 27.9**	**+0.2**
BSO3	**Boso 3**	**0.83**	**154**	⇓P	**Pn**	**16 44 24.4**	**0.0**
BSO3				S	**Sn**	**16 44 37.4**	**+0.7**
JOD2	**Odawara 2**	**0.85**	**250**	⇓P	**Pn**	**16 44 24.5**	**-0.1**
JOD2				S	**Sn**	**16 44 36.2**	**-1.0**
JIM2	**Oshima 3**	**0.98**	**212**	P	**Pn**	**16 44 25.8**	**-0.4**
JIM2				S	**Sn**	**16 44 39.8**	**-0.2**
JAG	**Ashikaga**	**1.00**	**330**	⇑P	**Pn**	**16 44 25.8**	**-0.6**
JRY	**Ryogami san**	**1.06**	**296**	⇑P	**Pn**	**16 44 27.3**	**+0.2**
JRY				S	**Sn**	**16 44 42.2**	**+0.7**
BSO1	**Boso 1**	**1.17**	**140**	P	**Pn**	**16 44 28.1**	**-0.4**
BSO1				S	**Sn**	**16 44 44.3**	**+0.3**
JYN	**Shimob**	**1.25**	**268**	⇓P	**Pn**	**16 44 29.6**	**+0.1**
JYN				S	**Sn**	**16 44 46.1**	**+0.3**
JIZS	**Izushimoda**	**1.28**	**230**	P	**Pn**	**16 44 30.1**	**+0.1**
JIZS				S	**Sn**	**16 44 46.3**	**-0.4**
JKT	**Katashina**	**1.38**	**331**	P	**Pn**	**16 44 30.6**	**-0.6**
JKT				S	**Sn**	**16 44 47.9**	**-1.0**
MJAR	**Matsushiro Arr**	**1.80**	**304**	Pn	**Pn**	**16 44 36.7**	**-0.1**
	7.5nm,0.3s,baz=146,slow=14,SNR=73						
MAT	**Matsushiro**	**1.80**	**304**	P	**Pn**	**16 44 37.2**	**+0.4**
MAT				S	**Sn**	**16 44 59.9**	**+1.0**
JHJ	**Hachijo jima 2**	**2.44**	**186**	Pn	**Pn**	**16 44 46.8**	**+1.4**
	36nm,0.3s,baz=358,slow=17,SNR=11						
JHJ				Sn	**Sn**	**16 45 13.9**	**-0.3**
	54nm,0.3s,baz=235,slow=23,SNR=7.8						
CBIJ	**Chichi jima**	**8.62**	**167**	Pn	**Pn**	**16 46 07.3**	**-2.4**
	9.3nm,0.3s,baz=314,slow=18,SNR=11						
WRA	**Warramunga Arr**	**55.46**	**187**	P	**P**	**16 53 34.9**	**+0.2**
	0.2nm,0.3s,mb3.6,baz=0.8,slow=7.6,SNR=16						
ASAR	**Alice Springs**	**59.19**	**187**	P	**P**	**16 54 01.6**	**+0.6**
	0.2nm,0.7s,mb3.3,baz=1.0,slow=5.8,SNR=5.8						

IDC 21 16:46:52.2±1.9, 4°.01N×124°.92E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, Error ellipse: s-maj=124.6km s-min=24.2km az=68.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.98**	**178**	P	P	16 51 48.0	+0.1
	1.3nm,0.8s,baz=14,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**25.53**	**159**	P	P	16 52 23.2	+0.4
	0.1nm,0.3s,baz=338,slow=9.9,SNR=6.7						
ASAR	**Alice Springs**	**28.86**	**163**	P	P	16 52 52.3	-0.4
	0.4nm,0.9s,baz=347,slow=7.6,SNR=3.9						
MKAR	**Makanchi Array**	**56.31**	**326**	P	P	16 56 34.9	0.0
	0.3nm,0.3s,baz=128,slow=7.3,SNR=6.8						

*IDC **21** 16:50:49.8±0.8, 8°.50N×103°.66W, h0km, mb3.9/9, mb1 4.3/9, mb1mx4.1/20, mbtmp3.9/9, MS4.0/18, Ms1 4.0/18, ms1mx3.9/27, Error ellipse: s-maj=52.1km s-min=15.3km az=63.0*
*ISCJB **21** 16:50:52.5±0.6, 8°.62N±0°.07×103°.07W±0°.08, h10km, mb4.5/52, MS4.1/19, Error ellipse: s-maj=13.1km s-min=7.4km az=137.1*
*NEIC **21** 16:50:53.2±0.7, 8°.56N×103°.17W, h10km, mb4.6/46, Error ellipse: s-maj=17.7km s-min=10.4km az=53.0*
*GCMT **21** 16:50:55.4±0.3, 8°.46N×103°.67W, h20km±1km, MW4.9, Moment Tensor Solution. s33,c36; s64,c83; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.76±.15; $M_{\theta\theta}$1.37±.13; $M_{\phi\phi}$-0.62±.15; $M_{r\theta}$-1.27±.25; $M_{\theta\phi}$-2.78±.11; $M_{\phi r}$0.28±.25; Best double couple: $M_0$3.20000×10^{16} NP1:ϕ_s351.00000°, δ67.00000°, λ-1.00000°. NP2:ϕ_s81.00000°, δ89.00000°, λ-157.00000°. Principal axes: T 3.6600, Plg15.0000°, Azm214.0000°; N -0.9400, Plg67.0000°, Azm83.0000°; P -2.7200, Plg16.0000°, Azm308.000°; Data Used: II IU IC G CN.*
*BJI **21** 16:50:55.1, 8°.60N×103°.20W, h10km, mB5.0/2, Ms4.9/2, Ms7 4.4/3*
ISC 21 16:50:54.4±0.6, 8°.62N±0°.07×103°.10W±0°.07, h10km, n206, σ0°.95/178, mb4.5/52, MS4.1/19, 48C-61D, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**11.61**	**43**	Pn	**Pn**	**16 53 39.6**	**-0.7**
	0.3nm,0.3s,baz=215,slow=13,SNR=3.9						
CMIG				LR	LR	16 57 17.9	
	comp=Z,2μm,21.1s,baz=216,slow=32						
CMIG	**Matias Romero**	**11.61**	**43**	Pn	**Pn**	**16 53 39.6**	**-0.7**
CMIG				LR	LR	16 57 17.9	
APG	**El Apazote**	**13.89**	**62**	Pn	**Pn**	**16 54 13.2**	**+1.7**
	2.3nm,0.3s,baz=272,slow=23,SNR=24						
TEIG	**Tepich**	**18.39**	**50**	LR	LR	17 01 51.0	
	comp=Z,688nm,18.2s,baz=121,slow=35						
TEIG	**Tepich**	**18.39**	**50**	P	**Pn**	**16 55 06.9**	**-2.9**
TXAR	**Lajitas Array**	**20.61**	**359**	P	**P**	**16 55 33.8**	**-0.1**
	3.3nm,1.0s,baz=183,slow=11,SNR=21						
TXAR				LR	LR	17 03 05.1	
	comp=Z,1μm,18.5s,MS4.3,baz=150,slow=36						
627A	**Terlingua Ranc**	**20.72**	**359**	⇑P	**P**	**16 55 35.8**	**+0.7**
	baz=21,SNR=8.2						
628A	**Black Gap, Mar**	**20.76**	**1**	⇓P	**P**	**16 55 36.6**	**+1.2**
	baz=21						
626A	**Big Bend Ranch**	**20.84**	**357**	⇑P	**P**	**16 55 37.2**	**+0.8**
	baz=21						
526A	**Mary Lane Ranc**	**21.35**	**358**	P	**P**	**16 55 42.5**	**+0.6**
	baz=22,SNR=9.5						
527A	**Woodward Ranch**	**21.42**	**359**	P	**P**	**16 55 43.4**	**+0.8**
	baz=22,SNR=15						
528A	**Cox Ranch, San**	**21.43**	**1**	⇓P	**P**	**16 55 43.5**	**+0.8**
	baz=22						
426A	**McDonald Obser**	**21.95**	**358**	⇓P	**P**	**16 55 49.9**	**+1.6**
	baz=22						
JCT	**Junction City**	**21.96**	**8**	⇑P	**P**	**16 55 49.3**	**+0.8**
	baz=22,SNR=5.4						
JCT	**Junction City**	**21.96**	**8**	*e*P	**P**	**16 55 49.3**	**+0.8**
	34nm,1.4s,mb4.6						
427A	**Hayter Ranch,**	**22.12**	**359**	⇑P	**P**	**16 55 50.8**	**+0.8**
	baz=22						
425A	**Indio Mountain**	**22.12**	**356**	⇓P	**P**	**16 55 50.5**	**+0.3**
	baz=22,SNR=17						
325A	**Bean Ranch, Si**	**22.70**	**356**	P	**P**	**16 55 56.9**	**+0.5**
	baz=23,SNR=8.3						
324A	**Moseley Ranch,**	**22.81**	**355**	⇓P	**P**	**16 55 57.7**	**+0.2**
	baz=23,SNR=7.4						
MNTX	**Cornudas Mount**	**23.06**	**355**	⇓P	**P**	**16 55 59.8**	**-0.3**
	baz=23,SNR=22						
MNTX	**Cornudas Mount**	**23.06**	**355**	*e*P	**P**	**16 55 58.8**	**-1.3**
	13nm,1.0s,mb4.3						
319A	**Douglas**	**23.36**	**347**	⇓P	**P**	**16 56 03.3**	**+0.1**
	baz=24						
224A	**Cornudas Mount**	**23.45**	**355**	⇑P	**P**	**16 56 04.4**	**+0.2**
	baz=24						
GDL2	**Guadalupe Moun**	**23.49**	**357**	*e*P	**P**	**16 56 03.5**	**-1.1**
	9.4nm,1.2s,mb4.1						
220A	**Playas Peak, P**	**23.71**	**348**	⇓P	**P**	**16 56 06.4**	**-0.3**
	baz=24,SNR=9.3						
219A	**White Tail Can**	**23.95**	**347**	⇑P	**P**	**16 56 09.9**	**+1.0**
	baz=24,SNR=8.0						
124A	**Stringfield Ra**	**24.06**	**355**	⇓P	**P**	**16 56 10.0**	**+0.1**
	baz=24						
218A	**Dragoon**	**24.12**	**345**	⇓P	**P**	**16 56 12.4**	**+2.0**
	baz=24,SNR=6.1						
217A	**Green Valley**	**24.13**	**344**	⇑P	**P**	**16 56 14.3**	**+3.7**
	baz=24,SNR=7.5						
121A	**Cookes Peak, D**	**24.18**	**350**	⇑P	**P**	**16 56 11.1**	**+0.1**
	baz=24						
120A	**U Bar Ranch, L**	**24.35**	**349**	⇓P	**P**	**16 56 12.5**	**-0.1**
	baz=24,SNR=7.4						
Z26A	**Caprock**	**24.54**	**358**	⇓P	**P**	**16 56 13.8**	**-0.5**
	baz=25,SNR=6.2						
Z27A	**Tatum**	**24.57**	**360**	⇓P	**P**	**16 56 14.5**	**-0.1**
	baz=25						
Z25A	**Roswell**	**24.58**	**357**	⇓P	**P**	**16 56 14.4**	**-0.3**
	baz=25,SNR=5.4						
TUC	**Tucson**	**24.63**	**344**	*e*P	**P**	**16 56 14.5**	**-0.5**
	17nm,1.1s,mb4.5						
Z23A	**Rita Site, Whi**	**24.69**	**354**	⇓P	**P**	**16 56 15.6**	**0.0**
	baz=25,SNR=7.7						
119A	**Ashpeak Ranch,**	**24.70**	**347**	⇑P	**P**	**16 56 15.5**	**-0.3**
	baz=25						
118A	**Homack Ranch,**	**24.73**	**346**	⇑P	**P**	**16 56 16.0**	**0.0**
	baz=25,SNR=13						
Z22A	**Elephant Butte**	**24.77**	**352**	P	**P**	**16 56 16.0**	**-0.4**
	baz=25,SNR=6.9						
Z20A	**Nine Sixteen R**	**24.89**	**349**	⇓P	**P**	**16 56 17.8**	**+0.3**
	baz=25,SNR=28						
Z21A	**St. Cloud Mine**	**24.93**	**351**	⇓P	**P**	**16 56 17.9**	**+0.1**
	baz=25,SNR=7.9						
Y27A	**Causey**	**25.14**	**360**	⇓P	**P**	**16 56 20.0**	**+0.2**
	baz=25						
Y25A	**Mesa, Roswell**	**25.22**	**357**	⇑P	**P**	**16 56 20.2**	**-0.3**
	baz=25						
Y23A	**Lovelace Mesa,**	**25.33**	**354**	⇓P	**P**	**16 56 21.7**	**+0.2**
	baz=26						
Y22A	**Socorro**	**25.44**	**352**	⇓P	**P**	**16 56 22.3**	**-0.2**
	baz=26						
BNM	**Barren Site**	**25.61**	**353**	*e*P	**P**	**16 56 23.2**	**-0.8**
	10nm,1.2s,mb4.2						
Y21A	**Point of Rocks**	**25.61**	**351**	⇓P	**P**	**16 56 24.0**	**0.0**
	baz=26						
Y20A	**Horse Springs,**	**25.63**	**350**	⇓P	**P**	**16 56 24.7**	**+0.5**
	baz=26						
Y18A	**Canyon Day Jun**	**25.84**	**347**	⇑P	**P**	**16 56 26.3**	**+0.2**
	baz=26,SNR=7.1						
LAZ	**Ladron**	**25.92**	**352**	*e*P	**P**	**16 56 26.4**	**-0.4**
	6.1nm,1.0s,mb4.1						
OTAV	**Otavalo**	**25.93**	**107**	*e*P	**P**	**16 56 27.4**	**+0.3**
	19nm,1.4s,mb4.4						
Y17A	**Roosevelt**	**25.95**	**345**	⇑P	**P**	**16 56 27.4**	**+0.3**
	baz=26						
113A	**Mohawk Valley,**	**25.98**	**339**	⇑P	**P**	**16 56 27.0**	**-0.4**
	baz=26						
X23A	**Hourglass Bar**	**25.99**	**354**	⇓P	**P**	**16 56 27.7**	**+0.2**
	baz=26,SNR=6.2						
X21A	**Alamocita Cree**	**26.06**	**351**	⇓P	**P**	**16 56 28.0**	**0.0**
	baz=26,SNR=6.4						
X20A	**Quemado**	**26.27**	**350**	⇓P	**P**	**16 56 30.1**	**+0.1**
	baz=26,SNR=7.3						
Z13A	**Yuma Proving G**	**26.33**	**340**	⇓P	**P**	**16 56 30.6**	**0.0**
	baz=26						
ANMO	**Albuquerque**	**26.38**	**354**	P	**P**	**16 56 32.7**	**+1.7**
	1.5nm,0.8s,mb3.6,baz=178,slow=9.6,SNR=4.7						
ANMO	**Albuquerque**	**26.38**	**354**	P	**P**	**16 56 32.7**	**+1.7**
	5.3nm,1.2s,mb4.0						
W24A	**Lazy 6 Ranch,**	**26.55**	**356**	⇑P	**P**	**16 56 32.8**	**+0.3**
	baz=27						
GLA	**Glamis**	**26.62**	**338**	*e*P	**P**	**16 56 35.0**	**+1.8**
	13nm,1.1s,mb4.4						
V24A	**Rampart Ranch,**	**27.05**	**356**	⇑P	**P**	**16 56 36.3**	**-0.7**
	baz=27						
MONP	**Monument Peak**	**27.11**	**335**	⇑P	**P**	**16 56 38.7**	**+1.1**
	baz=27,SNR=5.4						
V25A	**Rancho No Teng**	**27.12**	**357**	⇓P	**P**	**16 56 37.6**	**-0.1**
	baz=27						
W16A	**Flagstaff**	**27.46**	**345**	⇓P	**P**	**16 56 41.2**	**+0.5**
	baz=28						
U23A	**El Rito**	**27.72**	**355**	⇑P	**P**	**16 56 42.6**	**-0.4**
	baz=28						
IRM	**Iron Mountain**	**27.73**	**338**	⇑P	**P**	**16 56 43.1**	**0.0**
	baz=28						
V17A	**Tonalea, Kykot**	**27.78**	**346**	⇓P	**P**	**16 56 43.6**	**0.0**
	baz=28						
BELC	**Belle Mtn. Jos**	**27.91**	**337**	⇓P	**P**	**16 56 44.1**	**-0.6**
	baz=28						
U21A	**Nageezi**	**27.99**	**352**	⇑P	**P**	**16 56 45.2**	**-0.2**
	baz=28,SNR=5.7						
T25A	**Trinidad**	**28.41**	**358**	⇑P	**P**	**16 56 49.3**	**+0.2**
	baz=29						
T22A	**Edith**	**28.47**	**354**	⇑P	**P**	**16 56 49.9**	**+0.2**
	baz=29,SNR=6.7						
BFSC	**Mount Baldy Ra**	**28.80**	**334**	⇓P	**P**	**16 56 52.4**	**-0.3**
	baz=29						
ROSC	**El Rosal**	**28.81**	**96**	LR	LR	17 05 50.3	
	comp=Z,268nm,20.6s,MS3.8,baz=25,slow=31						
T18A	**Mexican Hat**	**29.04**	**349**	⇑P	**P**	**16 56 54.5**	**-0.3**
	baz=29,SNR=5.7						
ATAH	**Atahualpa**	**29.18**	**122**	LR	LR	17 06 21.6	
	comp=Z,651nm,20.6s,MS4.2,baz=321,slow=32						
S22A	**4UR Ranch, Cre**	**29.19**	**354**	⇑P	**P**	**16 56 56.4**	**+0.3**
	baz=29,SNR=6.4						
GSC	**Goldstone**	**29.37**	**337**	*e*P	**P**	**16 56 59.0**	**+1.3**
	16nm,1.5s,mb4.5						
EDW2	**Edwards Air Fo**	**29.49**	**335**	⇑P	**P**	**16 57 01.0**	**+2.3**
	baz=30						
R24A	**Sanders Place,**	**29.53**	**357**	⇑P	**P**	**16 56 59.7**	**+0.6**
	baz=30						
S18A	**Hurst Farm, Bl**	**29.60**	**349**	⇑P	**P**	**16 56 59.6**	**-0.2**
	baz=30,SNR=7.0						
R22A	**Saguache, Gunn**	**29.66**	**354**	⇓P	**P**	**16 57 01.0**	**+0.8**
	baz=30						
R20A	**Redvale**	**29.82**	**352**	⇑P	**P**	**16 57 01.5**	**-0.2**
	baz=30						
R19A	**Curley Farm, L**	**30.06**	**350**	⇑P	**P**	**16 57 03.4**	**-0.4**
	baz=30,SNR=6.7						
R18A	**Canyonlands Na**	**30.26**	**349**	P	**P**	**16 57 05.0**	**-0.6**
	baz=30,SNR=7.4						
MPMC	**Manual Prospec**	**30.30**	**336**	⇓P	**P**	**16 57 05.3**	**-0.7**
	baz=30,SNR=7.6						
Q22A	**Crested Butte,**	**30.30**	**354**	⇓P	**P**	**16 57 05.9**	**-0.1**
	baz=30,SNR=14						
ISA	**Isabella**	**30.36**	**335**	*e*P	**P**	**16 57 07.7**	**+1.2**
	8.0nm,1.1s,mb4.4						
R17A	**Hanksville Air**	**30.45**	**348**	⇓P	**P**	**16 57 07.2**	**0.0**
	baz=31,SNR=6.2						
SMCO	**Snowmass**	**30.62**	**354**	*e*P	**P**	**16 57 11.7**	**+3.0**
	16nm,1.3s,mb4.7						
Q19A	**Hogan Spring (**	**30.70**	**351**	⇓P	**P**	**16 57 09.4**	**-0.1**
	baz=31,SNR=5.9						
P23A	**Jefferson**	**30.72**	**356**	P	**P**	**16 57 10.0**	**+0.4**
	baz=31						
P22A	**Eagle**	**31.01**	**355**	⇓P	**P**	**16 57 12.7**	**+0.5**
	baz=31,SNR=5.9						
P21A	**Newcastle**	**31.02**	**353**	⇑P	**P**	**16 57 13.3**	**+1.1**
	baz=31,SNR=6.4						
O22A	**Kremmling**	**31.56**	**355**	⇓P	**P**	**16 57 16.9**	**-0.1**
	baz=32,SNR=7.1						
Q14A	**Sevier Lake (B**	**31.59**	**345**	⇓P	**P**	**16 57 17.3**	**0.0**
	baz=32,SNR=6.0						
O20A	**White River Ci**	**31.71**	**352**	⇓P	**P**	**16 57 18.2**	**-0.1**
	baz=32,SNR=5.2						
O19A	**Miners Draw (B**	**32.00**	**351**	⇑P	**P**	**16 57 20.4**	**-0.5**
	baz=32						
SDV	**Santo Domingo**	**32.08**	**87**	*e*P	**P**	**16 57 23.2**	**+1.3**
	14nm,0.9s,mb4.8						
P14A	**Drum Mountains**	**32.10**	**345**	⇓P	**P**	**16 57 21.8**	**0.0**
	baz=32						
O17A	**Robinson Place**	**32.17**	**349**	⇑P	**P**	**16 57 22.3**	**-0.1**
	baz=32						
MPU	**Maple Canyon**	**32.18**	**348**	*e*P	**P**	**16 57 22.1**	**-0.3**
	21nm,1.1s,mb4.9						
DAU	**Daniels Canyon**	**32.48**	**348**	*e*P	**P**	**16 57 24.0**	**-1.1**
	11nm,1.0s,mb4.6						
DUG	**Dugway**	**32.61**	**346**	⇑P	**P**	**16 57 26.5**	**+0.2**
	baz=33,SNR=5.8						
DUG	**Dugway**	**32.61**	**346**	*e*P	**P**	**16 57 26.9**	**+0.7**
	20nm,1.5s,mb4.8						
NVAR	**Mina Array Bea**	**32.69**	**338**	P	**P**	**16 57 25.2**	**-1.7**
	0.1nm,0.3s,baz=302,slow=21,SNR=3.8						
N18A	**Larsen Ranch,**	**32.74**	**351**	⇓P	**P**	**16 57 27.3**	**-0.1**
	baz=33,SNR=5.6						
NNA	**Nana**	**33.17**	**128**	LR	LR	17 07 56.9	
	comp=Z,181nm,18.2s,MS3.8,baz=314,slow=31						
WAKR	**Walker**	**33.19**	**336**	P	**P**	**16 57 33.5**	**+2.1**
	5.9nm,1.2s,mb4.4						
BGU	**Big Grassy Mou**	**33.36**	**346**	P	**P**	**16 57 32.2**	**-0.6**
	17nm,1.4s,mb4.8						
M17A	**Scullys Gap (B**	**33.40**	**350**	⇑P	**P**	**16 57 32.9**	**-0.2**
	baz=34,SNR=5.9						
L21A	**Rawlins**	**33.42**	**354**	⇑P	**P**	**16 57 33.1**	**-0.2**
	baz=34						
HWUT	**Hardware Ranch**	**33.69**	**349**	*e*P	**P**	**16 57 34.0**	**-1.7**
	10nm,1.1s,mb4.7						
BW06	**Boulder Array**	**34.48**	**352**	⇓P	**P**	**16 57 41.6**	**-0.9**
	baz=35,SNR=6.8						
PDAR	**Pinedale Array**	**34.48**	**352**	P	**P**	**16 57 40.9**	**-1.6**
	3.0nm,0.9s,mb4.2,baz=166,slow=7.8,SNR=21						
J18A	**Kendall Valley**	**34.98**	**351**	⇓P	**P**	**16 57 46.6**	**-0.2**
	baz=35						
J17A	**Brown Place, J**	**35.24**	**350**	⇓P	**P**	**16 57 48.7**	**-0.3**
	baz=35,SNR=6.2						
REDW	**Red Top Meadow**	**35.26**	**350**	*e*P	**P**	**16 57 46.7**	**-2.6**
	12nm,1.3s,mb4.7

E19A	Rath Farm, Rou	38.02	354	⇑P	P	16 58 11.4	-1.2
	baz=38,SNR=5.7						
F13A	Darby	38.27	347	⇓P	P	16 58 14.5	-0.3
	baz=38						
E17A	Martinsdale	38.29	351	⇑P	P	16 58 14.1	-0.9
	baz=38						
F12A	Elk City	38.45	346	⇓P	P	16 58 16.5	+0.2
	baz=39,SNR=5.2						
D19A	Cripps Ranch,	38.72	354	⇑P	P	16 58 17.8	-0.8
	baz=39,SNR=5.3						
E13A	Victor	38.87	348	⇓P	P	16 58 19.4	-0.4
	baz=39,SNR=6.0						
D17A	Six Diamond Ra	38.94	352	⇓P	P	16 58 18.8	-1.6
	baz=39						
D16A	Dana Ranch, Ca	38.95	351	⇑P	P	16 58 20.1	-0.4
	baz=39						
G08A	Pilot Rock	39.02	342	⇑P	P	16 58 21.3	+0.2
	baz=39,SNR=6.4						
C22A	Vida	39.06	357	⇓P	P	16 58 20.7	-0.7
	baz=39						
D14A	Greenough	39.34	349	⇓P	P	16 58 24.8	+1.0
	baz=40						
SLMT	Seeley Lake	39.49	349	*e*P	P	16 58 26.2	+1.2
	12nm,1.4s,mb4.4						
H04A	Detroit Lake	39.56	339	⇓P	P	16 58 25.4	-0.2
	baz=40,SNR=6.0						
EGMT	Eagleton	39.67	353	*e*P	P	16 58 23.7	-2.8
	13nm,1.1s,mb4.6						
DGMT	Dagmar	39.72	359	P	P	16 58 25.6	-1.4
	16nm,1.0s,mb4.7						
SWMT	Swartz Lake	39.85	348	*e*P	P	16 58 30.0	+2.0
	3.8nm,1.0s,mb4.1						
AGMN	Agassiz Nation	40.01	8	*e*P	P	16 58 27.4	-2.0
	24nm,1.3s,mb4.8						
RSW	Rattlesnake Hi	40.20	342	*e*P	P	16 58 33.6	+2.6
	9.5nm,0.7s,mb4.6						
TAOE	Nuku Hiva Isla	40.79	246	*e*LR	LR	17 08 56.7	
	347nm,27.6s						
TAOE				*e*T		17 40 52.6	
	38nm,0.2s						
OD2	Odessa Site #2	40.85	344	*e*P	P	16 58 38.1	+1.8
	11nm,1.2s,mb4.4						
NEW	Newport	41.25	346	⇓P	P	16 58 40.3	+0.7
	baz=41,SNR=6.1						
NEW	Newport	41.25	346	*e*P	P	16 58 37.0	-2.7
	12nm,1.0s,mb4.5						
ETW	Entiat	41.51	342	P	P	16 58 44.3	+2.5
	15nm,1.1s,mb4.5						
ULM	Lac du Bonnet	41.93	7	LR	LR	17 16 10.3	
	comp=Z,283nm,19.3s,MS4.2,baz=240,slow=36						
NLWA	Neilton Lookou	42.48	339	*e*P	P	16 58 51.1	+1.4
	26nm,1.3s,mb4.7						
JCW	Jim Creek	42.53	341	*e*P	P	16 58 51.4	+1.3
	19nm,1.0s,mb4.8						
LPAZ	La Paz	42.55	126	P	P	16 58 50.7	+0.1
	2.1nm,0.8s,mb3.9,baz=313,slow=7.0,SNR=11						
LPAZ	La Paz	42.55	126	*e*P	P	16 58 50.5	-0.2
	4.9nm,0.9s,mb4.2						
RKT	Rikitea	44.36	224	*e*LR	LR	17 11 05.4	
	627nm,28.2s,baz=44						
RKT				*e*T		17 45 30.1	
	6.6nm,0.3s						
CFAA	Coronel Fontan	52.07	142	P	P	17 00 05.0	+0.3
	0.5nm,0.9s,mb3.4,baz=274,slow=7.3,SNR=5.3						
PPT	Papeete	52.78	240	*e*LR	LR	17 14 47.6	
	389nm,25.2s,baz=62						
PPT	Papeete	52.78	240	LR	LR	17 16 25.9	
	comp=Z,207nm,19.1s,MS4.2,baz=107,slow=29						
SCHQ	Schefferville	54.35	25	LR	LR	17 25 07.2	
	comp=Z,188nm,18.9s,MS4.2,baz=320,slow=38						
YKA	Yellowknife Ar	54.42	353	LR	LR	17 24 09.8	
	comp=Z,18nm,20.5s,MS3.1,baz=295,slow=37						
TBI	Tubuai	55.36	234	*e*LR	LR	17 15 58.5	
	405nm,28.0s,baz=59						
TBI				*e*T		17 59 09.5	
	2.5nm,0.2s						
CPUP	Villa Florida	56.40	129	P	P	17 00 36.9	+0.5
	5.2nm,1.0s,mb4.5,baz=242,slow=6.8,SNR=3.9						
CPUP	Villa Florida	56.40	129	P	P	17 00 36.9	+0.5
PLCA	Paso Flores	57.55	151	P	P	17 00 41.1	-3.1
	1.8nm,1.0s,mb4.0,baz=267,slow=3.9,SNR=3.0						
PLCA				LR	LR	17 19 20.4	
	comp=Z,180nm,19.5s,MS4.2,baz=318,slow=30						
BDFB	Brasilia	59.64	114	LR	LR	17 26 01.0	
	comp=Z,193nm,18.4s,MS4.3,baz=314,slow=35						
DAWY	Dawson	61.04	343	*e*P	P	17 01 09.4	+1.3
SML	Sawmill	62.50	338	*e*P	P	17 01 14.0	-3.9
	5.3nm,1.0s,mb4.6						
INK	Inuvik	62.92	348	P	P	17 01 16.1	-4.4
	3.4nm,1.0s,mb4.4,baz=145,slow=7.8,SNR=3.1						
INK	Inuvik	62.92	348	*e*P	P	17 01 21.6	+1.0
ILAR	Eielson Array	63.86	341	P	P	17 01 21.9	-5.0
	3.5nm,1.0s,mb4.3,baz=150,slow=4.5,SNR=20						
ILAR				LR	LR	17 30 41.6	
	comp=Z,78nm,18.1s,MS3.9,baz=145,slow=38						
PPLA	Purkeypile	64.59	337	P	P	17 01 32.3	+0.5
	33nm,1.3s,mb5.2						
TTA	Tatalina	66.09	336	*e*P	P	17 01 40.0	-1.4
	24nm,1.5s,mb5.0						
COLD	Coldfoot	66.47	342	*e*P	P	17 01 44.7	+0.9
	14nm,1.4s,mb4.8						
PETK	Petropavlovsk-	88.66	323	LR	LR	17 35 04.1	
	comp=Z,29nm,21.5s,MS3.7,baz=302,slow=30						
ESDC	Sonseca Array	91.52	50	LR	LR	17 37 27.8	
	comp=Z,71nm,20.9s,MS4.1,baz=40,slow=30						
NOA	NORSAR Array B	93.90	26	LR	LR	17 44 56.7	
	comp=Z,74nm,18.9s,MS4.2,baz=285,slow=34						
ARCES	ARCESS Array B	94.45	16	LR	LR	17 47 38.6	
	comp=Z,44nm,19.3s,MS3.9,baz=257,slow=36						
DBIC	Dimbokro	97.10	82	LR	LR	17 48 48.2	
	comp=Z,54nm,18.1s,MS4.1,baz=270,slow=36						
CN2	Changchun	111.79	324	*e*PKP	PKiKP	17 09 31.3	+1.4
BJI	Beijing	119.49	326	PKP	PKPdf	17 09 43.6	-1.2
BJI				LR	LR		
	comp=Z,59nm,19.9s,MS4.2						
HHC	Hu-ho-hao-te	121.33	330	*e*PKP	PKPdf	17 09 50.0	+1.7
HHC				PP	PP	17 11 23.5	+5.3
HHC				PKS		17 13 25.8	
HHC				SKS	SKSdf	17 17 00.8	+0.2
HHC				SKKS	SKKSac	17 18 15.5	-3.5
HHC				SS	SS	17 27 54.3	+2.4
HHC				AMB	AMB		
	comp=Z,67nm,8.6s						
HHC				LR	LR		
	comp=N,98nm,21.5s,MS4.6						
HHC				LR	LR		
	comp=E,120nm,20.7s,MS4.6						
HHC				LR	LR		
	comp=Z,150nm,19.4s,MS4.7						
WRA	Warramunga Arr	123.45	252	PKP	PKPdf	17 09 50.7	-2.2
	comp=Z,0.5nm,0.7s,baz=88,slow=2.4,SNR=5.9						
ASAR	Alice Springs	123.59	247	PKP	PKPdf	17 09 49.2	-3.9
	comp=Z,0.3nm,0.7s,baz=108,slow=1.4,SNR=4.2						
MKAR	Makanchi Array	124.62	356	PKP	PKPdf	17 09 50.8	-3.6
	comp=Z,0.7nm,0.8s,baz=29,slow=2.8,SNR=3.9						
WMQ	Urumqi	126.89	350	*e*PKP	PKPdf	17 10 00.0	+1.1
WMQ				PP	PP	17 12 00.0	+5.0
WMQ				SKS	SKSdf	17 17 11.0	+0.1
WMQ				SKKS	SKKSac	17 18 53.0	-1.4
WMQ				SS	SS	17 29 05.0	+3.8
WMQ				AMB	AMB		
	comp=Z,24nm,10.0s						
WMQ				LR	LR		
	comp=N,83nm,25.0s,MS4.6						
WMQ				LR	LR		
	comp=E,140nm,25.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,110nm,25.0s,MS4.4						
LZH	Lanzhou	128.81	332	*e*PKP	PKPdf	17 10 03.5	+0.7
LZH				sPKP		17 10 10.3	
CD2	Chengdu	133.01	328	*e*PKP	PKPdf	17 10 10.3	-0.6
CMAR	Chiang Mai Arr	145.40	321	PKPbc	PKPbc	17 10 28.8	-4.7
	comp=Z,0.2nm,0.3s,baz=24,slow=2.5,SNR=3.7						

NEIC ***21*** *17:34:57.0, 18.°20N×68.°08W, h108km, MD3.4(RSPR), After RSPR.*

RSPR 21 17:34:57.0, 18.°20N×68.°08W, h108km±1km, MD3.4/7, 3C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	0.94	101⇓	*e*P	Pn	17 35 16.3	-1.1
CRPR				*e*S	Sn	17 35 32.6	-0.2
LSP	Las Mesas	0.94	91⇑	*e*P	Pn	17 35 17.0	-0.4
AGPR	Aguadilla, PR	0.95	73⇓	*e*P	Pn	17 35 17.0	-0.5
AGPR				*e*S	Sn	17 35 33.0	0.0
AOPR	Arecibo Observ	1.26	83⇓	*e*P	Pn	17 35 20.6	-0.4
AOPR				*e*S	Sn	17 35 38.8	-0.2
OBIP	Obispado Ponce	1.41	96	*e*Pn	Pn	17 35 22.1	-0.5
CELP	Cerrillos	1.43	95⇓	*e*P	Pn	17 35 22.5	-0.4
SJG	San Juan	1.83	92⇑	*e*P	Pn	17 35 27.8	0.0
SJG	San Juan	1.83	92⇓	*e*P	Pn	17 35 27.6	-0.2
SJG	San Juan	1.83	92	*e*S	Sn	17 35 51.5	+0.2
SJG	San Juan	1.83	92⇓	*e*P	Pn	17 35 27.6	-0.2
SJG				*e*S	Sn	17 35 51.5	+0.2
HUMP	Col San Antoni	2.12	91⇑	*e*P	Pn	17 35 30.9	-0.5
HUMP				*e*S	Sn	17 35 57.4	-0.3
SDDR	Presa de Saban	3.15	285	*e*Pn	Pn	17 35 44.4	-0.5

ISCJB ***21*** *17:35:24.0±0.6, 26.°63S±0.°05×63.°4W±0.°1, h576km±10km, mb4.1/9, Error ellipse: s-maj=14.3km s-min=8.2km az=176.4*

IDC ***21*** *17:35:24.2±0.9, 26.°55S×63.°38W, h557km±11km, mb3.7/4, mb1 3.5/10, mb1mx3.3/21, mbtmp3.5/10, Error ellipse: s-maj=16.7km s-min=12.5km az=102.0*

NEIC ***21*** *17:35:24.5±0.6, 26.°58S×63.°39W, h564km±8km, mb4.4/5, Error ellipse: s-maj=13.0km s-min=9.1km az=89.0*

ISC 21 17:35:24.3±0.6, 26.°59S±0.°05×63.°4W±0.°1, h565km±9km, n32, σ1°10/27, mb4.1/9, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	Villa Florida	5.45	89	P	P	17 36 59.9	+1.0
	1.8nm,0.3s,baz=246,slow=11,SNR=15						
CPUP	Villa Florida	5.45	89	*e*P	P	17 37 00.2	+1.4
CFAA	Coronel Fontan	6.55	219	P	P	17 37 09.7	+1.2
	1.9nm,0.3s,baz=32,slow=11,SNR=285						
CFAA				S	S	17 38 33.3	-0.6
	0.5nm,0.3s,baz=240,slow=20,SNR=36						
LCO	Las Campanas	6.90	248	*e*P	P	17 37 12.8	+1.0
	16nm,0.3s						
LPAZ	La Paz	11.15	336	P	P	17 37 55.0	+0.6
	10nm,0.3s,baz=158,slow=7.9,SNR=272						
LPAZ				S	S	17 39 55.6	-1.9
	0.7nm,0.3s,baz=61,slow=19,SNR=5.1						
LPAZ	La Paz	11.15	336	*e*P	P	17 37 55.0	+0.6
LPAZ				S	S	17 39 55.6	-1.9
TRQA	Tornquist	11.50	174	*e*P	P	17 37 56.3	-1.2
	8.8nm,0.5s						
PLCA	Paso Flores	15.30	201	P	P	17 38 34.9	-1.6
	0.3nm,0.3s,baz=30,slow=11,SNR=5.9						
SAML	Samuel	17.54	1	*e*P	P	17 38 57.2	-0.3
BDFB	Brasilia	18.00	56	P	P	17 39 00.9	-0.8
	0.6nm,0.3s,baz=236,slow=15,SNR=3.8						
NNA	Nana	19.25	316	P	P	17 39 13.6	+0.5
	0.7nm,0.3s,baz=150,slow=8.0,SNR=5.4						
USHA	Ushuaia	28.46	186	P	P	17 40 34.2	0.0
	7.6nm,1.0s,mb4.3,baz=4.9,slow=11,SNR=6.2						
OTAV	Otavalo	30.35	329	*e*P	P	17 40 53.5	+2.3
	4.9nm,0.8s,mb4.1						
SDV	Santo Domingo	35.95	348	*e*P	P	17 41 37.0	-1.3
	6.3nm,0.5s,mb4.4						
VNA3	Neumayer Olymp	53.66	161	*e*	P	17 43 51.9	-1.2
VNA1	Neumayer--Stat	53.82	160	*e*	P	17 43 53.3	-1.0
VNA2	Neumayer--Watz	54.20	160	*e*	P	17 43 55.7	-1.2
	baz=295,slow=7.8						
SNAA	Sanae	55.84	161	P	P	17 44 09.1	+0.8
	0.8nm,0.5s,mb3.2,baz=306,slow=11,SNR=14						
QSPA	South Pole Qui	63.63	180	*e*P	P	17 45 01.8	+1.9
	12nm,1.2s,mb4.2						
DBIC	Dimbokro	65.62	68	P	P	17 45 13.6	+0.1
	2.9nm,0.3s,mb4.3,baz=215,slow=5.9,SNR=19						
TORD	Torodi Ar. Bea	74.54	66	P	P	17 46 06.6	+0.3
	5.5nm,0.4s,mb4.3,baz=254,slow=5.5,SNR=22						
BOSA	Boshof	76.68	115	P	P	17 46 18.4	+0.4
	4.9nm,0.5s,mb4.2,baz=248,slow=4.2,SNR=19						
BOSA	Boshof	76.68	115	*e*P	P	17 46 18.5	+0.4
MAW	Mawson	77.99	162	P	P	17 46 25.5	+1.1
	3.1nm,0.6s,mb3.8,baz=228,slow=7.5,SNR=7.0						
ASAR	Alice Springs	127.31	200	PKP	PKPdf	17 53 26.4	+0.6
	1.9nm,0.6s,baz=148,slow=1.8,SNR=38						
WRA	Warramunga Arr	130.65	202	PKP	PKPdf	17 53 32.7	+0.5
	1.1nm,0.4s,baz=159,slow=1.7,SNR=60						
WRA	Warramunga Arr	130.65	202	PKP	PKPdf	17 53 32.7	+0.4
BVAR	Borovoye Array	136.81	40	PKP	PKPdf	17 53 44.1	+1.5
	0.6nm,0.5s,baz=298,slow=3.1,SNR=3.1						
ZALV	Zalesovo Beam	144.00	32	PKP	PKPdf	17 53 56.3	+0.8
	5.9nm,0.4s,baz=314,slow=3.8,SNR=29						
ZALV				SKPbc	SKPbc	17 56 42.7	+1.3
	1.5nm,0.6s,baz=301,slow=3.7,SNR=6.0						
ZALV	Zalesovo Beam	144.00	32	PKP	PKPdf	17 53 56.3	+0.8
ZALV				SKPbc	SKPbc	17 56 42.7	+1.3
MK31	Makanchi Array	146.27	44	*e*PKPbc	PKPbc	17 54 01.3	-0.6
MKAR	Makanchi Array	146.27	44	PKPbc	PKPbc	17 54 01.4	-0.6
	3.3nm,0.4s,baz=291,slow=3.8,SNR=19						

IDC 21 18:06:38.3±2.3, 6.°61S×129.°64E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.3/16, mbtmp3.3/3, ML3.3/2, Error ellipse: s-maj=141.7km s-min=32.0km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.02	161	Pn	Pn	18 09 58.4	0.0
	0.2nm,0.3s,baz=344,slow=13,SNR=16						
WRA				Sn	Sn	18 12 22.6	-12
	0.3nm,0.3s,baz=335,slow=22,SNR=6.6						
ASAR	Alice Springs	17.45	167	P	Pn	18 10 43.3	0.0
	0.1nm,0.3s,baz=340,slow=11,SNR=9.8						
ASAR				S	Sn	18 13 45.9	-12
	0.1nm,0.3s,baz=341,slow=24,SNR=4.6						
MKAR	Makanchi Array	67.70	327	P	P	18 17 37.6	+0.2
	0.2nm,0.5s,baz=116,slow=6.9,SNR=4.9						

CASC 21 18:32:30.9±2.4, 12.°77N×88.°45W, h24km±14km, MD3.6, ML3.1, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.67	15	*e*P	Pb	18 32 44.3	+0.3
BLLM	Bellamira	0.70	17	*e*P	Pb	18 32 44.3	-0.1
CNCH	Conchagua	0.78	50	*e*P	Pb	18 32 45.1	-0.8
CNCH				*e*S	Sb	18 32 57.1	+1.0
CAHU	Cacacuatique	1.02	13	*e*P	Pn	18 32 48.4	-1.3
LFRS	El Faro	1.03	325	*e*P	Pn	18 32 49.2	-0.7
LFRS				*e*S	Sb	18 33 02.9	-0.4
BOQS	Boqueron	1.25	320	*e*P	Pn	18 32 53.1	+0.2
CRIN	San Cristobal	1.37	93	*i* P	Pn	18 32 54.0	-0.6
CRIN				*e*S	Sn	18 33 12.2	+0.3
CRIN				AML	AML	18 33 13.2	
	comp=N,334nm,0.2s						
SBLS	San Blas	1.56	313	*i* P	Pn	18 32 59.0	+1.9
SBLS				*e*S	Sn	18 33 18.1	+1.5
TEL3	Telica 3	1.58	97	*e*P	Pn	18 32 56.4	-1.0
COPN	Copaltepe	1.91	108	*i* P	Pn	18 33 03.8	+1.9
CSAN		2.07	106	*e*P	Pn	18 33 04.5	+0.4

NEIC ***21*** *18:41:27.4±2.2, 5.°51S×148.°39E, h158km±26km, Error ellipse: s-maj=53.5km s-min=17.5km az=125.0*

IDC ***21*** *18:41:31.7±3.3, 5.°65S×148.°36E, h200km±29km, mb3.6/5, mb1 3.8/6, mb1mx3.5/16, mbtmp3.5/6, Error ellipse: s-maj=49.5km s-min=11.9km az=118.0*

ISC 21 18:41:29.3±1.7, 5.°7S±0.°2×148.°4E±0.°4, h176km±20km, n8, σ0°80/10, mb3.8/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.92	198	*e*P	Pn	18 42 28.7	-0.6
WB2	Warramunga Arr	19.69	223	*e*P	P	18 45 45.4	+0.3
WRA	Warramunga Arr	19.70	223	P	P	18 45 45.7	+0.5
	1.1nm,0.3s,baz=51,slow=10,SNR=33						
WRA				S	S	18 49 16.4	-1.4
	0.1nm,0.3s,baz=48,slow=19,SNR=3.9						
ASAR	Alice Springs	22.69	216	P	P	18 46 17.5	+1.5
	3.3nm,0.7s,mb3.9,baz=49,slow=8.6,SNR=53						
ASAR				S	S	18 50 11.5	+0.5
	0.6nm,1.0s,baz=30,slow=23,SNR=3.7						
FITZ	Fitzroy Crossi	25.41	239	P	P	18 46 41.1	+0.4
	9.9nm,0.7s,mb4.5,baz=59,slow=9.1,SNR=35						
MKAR	Makanchi Array	78.09	320	P	P	18 53 08.9	+0.3
	1.0nm,1.0s,mb3.4,baz=98,slow=6.4,SNR=3.4						
ZALV	Zalesovo Beam	79.44	327	P	P	18 53 15.4	-0.5
	0.4nm,0.3s,mb3.5,baz=102,slow=6.2,SNR=3.5						
ILAR	Eielson Array	84.63	23	P	P	18 53 41.9	-0.7
	0.8nm,0.9s,mb3.5,baz=236,slow=6.4,SNR=6.3						

NOU ***21*** *18:49:22.9±0.5, 39.°03S×175.°55E, h30km*

ISCJB ***21*** *18:50:16.8±0.4, 31.°56S±0.°03×179.°88E±0.°03, h344km±4km, mb5.1/139, Error ellipse: s-maj=5.2km s-min=3.6km az=142.1*

MOS ***21*** *18:50:16.4±0.9, 31.°26S×179.°98W, h334km, mb5.4/28, Error ellipse: s-maj=11.4km s-min=8.8km az=74.1*

BJI ***21*** *18:50:17.3, 31.°40S×180.°00E, h348km, mB4.9/27, mb5.0/41*

IDC ***21*** *18:50:18.9±1.1, 31.°24S×179.°91W, h350km±10km, mb4.7/23, mb1 4.8/24, mb1mx4.8/25, mbtmp4.7/24, Error ellipse: s-maj=9.3km s-min=7.9km az=162.0*

GCMT ***21*** *18:50:20.4±0.3, 31.°35S×179.°92W, h351km±1km, MW5.3, Moment Tensor Solution. s71,c114; Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.20000×10^17 NP1:φs174.00000°, δ27.00000°, λ-152.00000°. NP2: φs59.00000°, δ78.00000°, λ-66.00000°. Principal axes: T 1.1400, Plg29.0000°, Azm130.0000°; N 0.0500, Plg23.0000°, Azm234.0000°; P -1.1900, Plg51.0000°, Azm356.0000°; Data Used: II IU IC G CN.*

NEIC ***21*** *18:50:21.4±0.8, 31.°38S×179.°97E, h378km±7km, mb5.2/94 Error ellipse: s-maj=6.3km s-min=4.7km az=145.0*

DJA ***21*** *18:50:36, 31.°73S×178.°97E, h516km, mb5.0/29*

ISC 21 18:50:18.1±0.4, 31.°70S±0.°03×179.°92E±0.°03, h347km±4km, h351km±3.0km; pP-P, n926, σ1°02/520, mb5.1/136, 117C-105D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.00	192	PN	Pn	18 51 48.7	0.0
MXZ				SN	S	18 53 03.2	+1.0
KUZ	Kuaotunu	6.12	213	PN	Pn	18 51 56.2	+6.1
WIZ	White Island	6.24	200	PN	Pn	18 51 55.1	+3.7
WIZ				SN	S	18 53 12.8	+5.7
WCZ	Waipu Caves	6.28	226	PN	Pn	18 51 59.2	+7.3
WCZ				SN	S	18 53 23.4	+15
MYRZ	Mayor Island	6.35	208	PN	Pn	18 51 57.5	+4.9
OUZ	Omahuta	6.35	235	*e*P	Pn	18 51 59.4	+6.7
	264nm,0.8s						
PUZ	Puketiti	6.51	192	PN	Pn	18 51 55.1	+0.6
PUZ				SN	S	18 53 14.2	+1.4
OTAZ	Otara	6.67	217	*e*PN	Pn	18 52 04.1	+7.7
MKAZ	Moumakai	6.68	215	PN	Pn	18 52 03.2	+6.7
OPRZ	Ohinepanea	6.73	203	PN	Pn	18 51 59.7	+2.6
MWZ	Matawai	6.91	196	PN	Pn	18 51 59.8	+0.6
MWZ				SN	S	18 53 22.5	+1.2
URZ	Urewera	6.94	199	P	Pn	18 52 01.2	+1.6
	91nm,0.3s,baz=304,slow=8.7,SNR=147						
URZ				S	S	18 53 25.0	+2.9
	177nm,0.3s,baz=100,slow=23,SNR=14						
URZ	Urewera	6.94	199	*e*P	Pn	18 51 59.7	+0.1
	473nm,0.4s						
URZ	Urewera	6.94	199	PN	Pn	18 51 59.5	0.0
URZ				SN	S	18 53 25.0	+2.9
RRRZ	Republican Roa	7.19	202	PN	Pn	18 52 06.4	+3.9
RRRZ				SN	S	18 53 31.4	+3.9
KNZ	Kokohu	7.54	193	PN	Pn	18 52 06.0	-0.5
KNZ				SN	S	18 53 34.8	-0.1
NMHZ	Naumai	7.81	198	PN	Pn	18 52 10.1	+0.3
NMHZ				SN	S	18 53 43.4	+2.6
RATZ	Rangitukua	7.92	204	PN	Pn	18 52 12.8	+1.7
RATZ				*e*SN	S	18 53 49.2	+6.0
BKZ	Black Stump Fm	7.96	200	PN	Pn	18 52 11.1	-0.5
BKZ				SN	S	18 53 45.0	+0.8
HIZ	Hauiti	7.97	210	PN	Pn	18 52 15.8	+4.2
HIZ				SN	S	18 53 55.3	+11
TWVZ	Taurewa	8.22	205	PN	Pn	18 52 15.7	+1.1
TWVZ				SN	S	18 53 54.9	+5.2
TUVZ	Tukino	8.32	204	PN	Pn	18 52 16.1	+0.3
TUVZ				SN	S	18 53 53.1	+1.2
FWVZ	Far West T-bar	8.34	204	PN	Pn	18 52 16.6	+0.5
BHHZ	Black Hill Sta	8.39	201	PN	Pn	18 52 16.0	-0.6
BHHZ				SN	S	18 53 54.1	+0.7
KAHZ	Kahuranaki	8.45	196	PN	Pn	18 52 16.9	-0.5
MTVZ	Mangateitei	8.49	204	PN	Pn	18 52 20.2	+2.4
MTVZ				SN	S	18 53 59.7	+4.2
VRZ	Vera Road	8.53	208	PN	Pn	18 52 20.5	+2.2
VRZ				SN	S	18 54 05.6	+9.1
PXZ	Pawanui	8.68	196	PN	Pn	18 52 19.0	-1.1
PKE	Pukeiti	8.91	211	PN	Pn	18 52 26.7	+3.8
PKE				SN	S	18 54 15.1	+10
TSZ	Takapari Road	8.94	200	PN	Pn	18 52 21.7	-1.5
PRHZ	Porangahau	8.96	196	PN	Pn	18 52 22.6	-0.8
PRHZ				SN	S	18 54 07.1	+1.2
WAZ	Wanganui	8.99	205	PN	Pn	18 52 23.4	-0.3
WAZ				SN	S	18 54 08.8	+2.3
DVHZ	Dannevirke	9.11	198	PN	Pn	18 52 23.4	-1.8
POWZ	Post Office Ro	9.31	200	SN	S	18 54 11.2	-2.4
BFZ	Birch Farm	9.45	197	PN	Pn	18 52 27.5	-1.7
MRZ	Mangatainoka R	9.61	200	PN	Pn	18 52 29.0	-2.2
OGWZ	Otaki Gorge	9.88	201	PN	Pn	18 52 32.6	-1.7
OGWZ				SN	S	18 54 25.0	-1.1
KIW	Kapiti Island	10.00	202	PN	Pn	18 52 34.1	-1.7
KIW				SN	S	18 54 26.8	-2.1
MSWZ	Moikau Station	10.40	200	PN	Pn	18 52 38.4	-2.3
MSWZ				SN	S	18 54 35.9	-1.8
SNZO	South Karori	10.47	202	*e*P	Pn	18 52 39.3	-2.1
	86nm,0.4s						
SNZO	South Karori	10.47	202	PN	Pn	18 52 39.4	-2.0
SNZO				SN	S	18 54 37.2	-2.1

comp=Z,399nm,0.8s
RAR Rarotonga 20.93 65 P **P 18 54 31.3 -3.5**
comp=Z,34nm,0.9s,baz=190,slow=4.0,SNR=5.7
RAR Rarotonga 20.93 65 P **P 18 54 31.4 -3.4**
FUNA Funafuti 23.06 358 *eP* **P 18 54 50.0 -4.3**
comp=Z,274nm,0.9s,mb5.5
ARMA Armidale 24.25 266 *eP* **P 18 55 10.0 +5.2**
ARMA *e*SCP ScP 19 01 40.5 +1.2
ARMA Armidale 24.25 266 *eP* **P 18 55 10.0 +5.1**
comp=Z,9.9nm,0.4s,mb4.4
CNB Canberra Magne 25.68 254 *eP* **P 18 55 22.6 +5.0**
CNB *e*PCP PcP 18 58 38.8 +1.3
CNB *e*SCP ScP 19 01 43.9 +0.5
EIDS Eidsvold 26.06 277 *eP* **P 18 55 23.4 +2.3**
comp=Z,75nm,0.9s,mb4.9
TOO Toolangi 28.82 249 *eP* **P 18 55 50.0 +4.6**
TOO *e*PCP PcP 18 58 45.9 +0.8
TOO *e*SCP ScP 19 01 52.9 0.0
HNR Honiara 28.89 316 P **P 18 55 45.5 -0.7**
comp=Z,147nm,1.0s,mb5.2,baz=168,slow=8.8,SNR=4.9
HNR Honiara 28.89 316 P **P 18 55 45.5 -0.7**
PPT Papeete 30.96 70 *eP* **P 18 56 03.5 -0.8**
comp=Z,63nm,1.3s,mb4.7
PPT Papeete 30.96 70 *eP* **P 18 56 03.5 -0.8**
PPT pmax pmax
comp=Z,63nm,1.3s
CTA Charters Tower 32.29 283 P **P 18 56 18.2 +2.4**
comp=Z,155nm,0.7s,mb5.4,baz=110,slow=11,SNR=62
CTA PcP PcP 18 58 55.5 +0.9
comp=Z,30nm,0.7s,baz=131,slow=4.2,SNR=5.5
CTA S **S 19 01 06.1 +2.6**
comp=Z,1.7nm,0.4s,baz=282,slow=20,SNR=3.5
CTA ScP ScP 19 02 05.4 +0.7
comp=Z,80nm,0.9s,baz=123,slow=3.7,SNR=34
CTA Charters Tower 32.29 283⇓*iP* **P 18 56 18.3 +2.5**
comp=Z,107nm,0.6s,mb5.2
CTA *e*PCP PcP 18 58 54.9 +0.3
CTA *e*SCP ScP 19 02 05.5 +0.8
CTA Charters Tower 32.29 283 P **P 18 56 18.2 +2.4**
CTA 18 58 55.5
CTA S **S 19 01 06.1 +2.6**
CTAO Charters Tower 32.29 283 *eP* **P 18 56 18.1 +2.2**
comp=Z,136nm,0.7s,mb5.3
CTAO Charters Tower 32.29 283 *eP* **P 18 56 18.1 +2.3**
CTAO pmax pmax
comp=Z,136nm,0.7s,mb5.3
STKA Stephens Creek 32.47 259 P **P 18 56 21.2 +4.0**
comp=Z,30nm,0.6s,mb4.7,baz=101,slow=12,SNR=104
STKA PcP PcP 18 58 55.4 +0.5
comp=Z,15nm,0.7s,baz=59,slow=5.9,SNR=4.1
STKA ScP ScP 19 02 04.8 -0.3
comp=Z,24nm,0.9s,baz=79,slow=5.0,SNR=12
STKA Stephens Creek 32.47 259⇓*iP* **P 18 56 21.1 +3.9**
comp=Z,25nm,0.6s,mb4.6
STKA *e*PCP PcP 18 58 54.6 -0.4
STKA *e*SCP ScP 19 02 04.9 -0.2
STKA Stephens Creek 32.47 259 *eP* **P 18 56 21.1 +3.9**
comp=Z,6.5nm,0.7s,mb4.0
STKA *e*PcP PcP 18 58 54.7 -0.2
BBOO Buckleboo 36.91 256 *eP* **P 18 56 57.2 +2.3**
comp=Z,67nm,0.8s,mb4.9
COEN Coen 37.96 289 *eP* **P 18 57 05.0 +1.3**
comp=Z,158nm,0.9s,mb5.2
COEN Coen 37.96 289 P **P 18 57 05.4 +1.6**
comp=Z,105nm,0.9s,mb5.1
ASAR Alice Springs 41.28 269 P **P 18 57 32.0 +1.2**
comp=Z,16nm,0.6s,mb4.5,baz=107,slow=7.2,SNR=189
ASAR PcP PcP 18 59 22.6 +0.5
comp=Z,8.1nm,0.8s,baz=112,slow=4.4,SNR=4.7
ASAR ScP ScP 19 02 38.5 +0.2
comp=Z,26nm,0.8s,baz=116,slow=4.1,SNR=32
ASAR S **S 19 03 20.7 +2.2**
comp=Z,3.5nm,0.8s,baz=113,slow=14,SNR=5.3
ASAR PKiKP PKiKP 19 06 27.5 -1.2
comp=Z,0.3nm,0.5s,baz=81,slow=1.3,SNR=5.2
ASAR Alice Springs 41.28 269 P **P 18 57 32.0 +1.2**
ASAR PcP PcP 18 59 22.6 +0.5
ASAR ScP ScP 19 02 38.5 +0.2
ASAR S **S 19 03 20.7 +2.2**
ASAR Alice Springs 41.28 269 P **P 18 57 32.1 +1.2**
ASAR 18 59 22.6
ASAR S **S 19 03 20.7 +2.1**
WB2 Warramunga Arr 42.38 275 *eP* **P 18 57 40.8 +1.0**
WB2 *e*ScP ScP 19 02 42.9 +0.2
WRA Warramunga Arr 42.39 275 P **P 18 57 40.7 +0.9**
comp=Z,43nm,0.7s,mb4.7,baz=112,slow=7.8,SNR=408
WRA PcP PcP 18 59 25.9 +0.1
comp=Z,24nm,0.9s,baz=112,slow=3.3,SNR=10.0
WRA ScP ScP 19 02 43.5 +0.8
comp=Z,16nm,0.8s,baz=106,slow=3.8,SNR=24
WRA S **S 19 03 34.5 -0.3**
comp=Z,6.2nm,1.0s,baz=112,slow=14,SNR=4.5
WRA PKiKP PKiKP 19 06 28.1 -1.7
comp=Z,1.0nm,0.7s,baz=117,slow=0.4,SNR=7.0
WRA Warramunga Arr 42.39 275 P **P 18 57 40.7 +0.9**
WRA PcP PcP 18 59 25.9 +0.1
WRA ScP ScP 19 02 43.5 +0.8
WRA S **S 19 03 34.5 -0.3**
WRA Warramunga Arr 42.39 275 P **P 18 57 40.7 +0.9**
WRA 18 59 25.9
WRA S **S 19 03 34.5 -0.3**
FORT Forrest 44.00 257 *eP* **P 18 57 54.2 +1.8**
comp=Z,94nm,0.6s,mb5.1
FORT Forrest 44.00 257 *eP* **P 18 57 54.2 +1.7**
comp=Z,79nm,0.6s,mb5.0
SBA Scott Base 46.62 184 *eP* **P 18 58 16.4 +4.3**
comp=Z,68nm,1.3s,mb4.7
SBA Scott Base 46.62 184 *eP* **P 18 58 16.4 +4.3**
SBA pmax pmax
comp=Z,68nm,1.3s,mb4.7
KNA Kununurra 49.01 277 P **P 18 58 32.4 +1.3**
comp=Z,2μmcomp=Z,122nm,0.9s,mb5.1
FITZ Fitzroy Crossi 50.60 272 P **P 18 58 44.2 +1.3**
comp=Z,24nm,0.7s,mb4.6,baz=134,slow=5.0,SNR=111
FITZ PcP PcP 18 59 55.9 +0.9
comp=Z,5.4nm,0.7s,baz=117,slow=6.1,SNR=4.0
FITZ ScP ScP 19 03 17.9 +0.8
comp=Z,27nm,0.8s,baz=133,slow=3.3,SNR=15
FITZ S **S 19 05 32.5 +2.1**
comp=Z,1.9nm,0.9s,baz=277,slow=19,SNR=4.2
FITZ Fitzroy Crossi 50.60 272⇓*iP* **P 18 58 43.8 +0.9**
comp=Z,50nm,0.6s,mb4.9
FITZ *e*SCP ScP 19 03 18.1 +0.9
FITZ Fitzroy Crossi 50.60 272 *eP* **P 18 58 44.0 +1.1**
comp=Z,17nm,0.6s,mb4.5
FITZ *e*PcP PcP 18 59 55.4 +0.4
FITZ *e*ScP ScP 19 03 17.6 +0.5
FITZ Fitzroy Crossi 50.60 272 P **P 18 58 43.8 +0.9**
comp=Z,87nm,0.8s,mb5.0
BAKI Biak 51.26 297 P **P 18 58 48.0 +0.1**
comp=Z,58nm,1.0s,mb4.8
WAKE Wake Island 52.26 344 *eP* **P 18 58 52.6 -2.4**
comp=Z,430nm,1.4s,mb5.6
CASY Casey 53.16 208 *eP* **P 18 59 02.6 +1.7**
comp=Z,26nm,1.0s,mb4.5
SWI Sorong 55.19 294 P **P 18 59 15.5 -0.7**
comp=Z,52nm,0.9s,mb4.8
STCH Steam Cracks 56.15 29 *eP* **P 18 59 20.8 -1.9**
POHA Pohakuloa 56.31 28 *eP* **P 18 59 22.4 -1.5**
comp=Z,90nm,0.8s,mb5.2
KIP Kipapa 56.89 25 *eP* **P 18 59 25.9 -2.0**
comp=Z,111nm,1.1s,mb5.1
KIP Kipapa 56.89 25 *eP* **P 18 59 25.9 -2.0**
KIP pmax pmax
comp=Z,111nm,1.1s,mb5.1
NLAI Namlea 57.07 289 P **P 18 59 28.8 -0.6**
comp=Z,44nm,1.2s,mb4.7
MMRI Maumere 58.09 280 P **P 18 59 37.3 +0.9**
comp=Z,111nm,1.1s,mb5.1
QSPA South Pole Qui 58.42 180 P **P 18 59 42.1 +4.4**
comp=Z,334nm,0.7s,mb5.8,baz=30,slow=4.2,SNR=1314
QSPA S **S 19 07 21.8 +9.5**
comp=Z,8.7nm,1.0s,baz=194,slow=19,SNR=18
QSPA South Pole Qui 58.42 180 *eP* **P 18 59 42.2 +4.5**
comp=Z,314nm,0.7s,mb5.8
BBSI Bau Bau 59.50 283 P **P 18 59 47.0 +0.9**
comp=Z,36nm,1.1s,mb4.7
MIR Mirnyy 60.16 207⇓*iP* **P 18 59 52.4 +2.7**
MIR pmax pmax
comp=Z,41nm,1.0s,mb4.8
KDI Kendari 60.31 285 P **P 18 59 51.1 -0.5**
comp=Z,501nmcomp=Z,35nm,1.0s,mb4.7
BMNI Bima 61.12 278 P **P 18 59 54.3 -2.7**
comp=Z,78nm,1.0s,mb5.1
BKSI Bulukumba 61.63 282 P **P 18 59 59.7 -0.6**
comp=Z,34nm,1.1s,mb4.8
MNI Manado 61.66 291 P **P 18 59 59.9 -0.6**
comp=Z,51nm,0.9s,mb5.1
LUWI Luwuk 61.85 288 P **P 19 00 01.5 -0.3**
comp=Z,950nmcomp=Z,105nm,1.1s,mb5.3
KAPI Kappang 62.11 282 P **P 19 00 03.5 0.0**
comp=Z,19nm,0.7s,mb4.8,baz=122,slow=4.2,SNR=8.3
KAPI Kappang 62.11 282 *eP* **P 19 00 03.0 -0.5**
comp=Z,20nm,0.9s,mb4.7
SPSI Sidrap Palu 62.67 283 P **P 19 00 06.1 -1.1**
comp=Z,32nm,1.1s,mb4.8
TTSI Tana Toraja 63.13 284 P **P 19 00 09.4 -0.8**
comp=Z,24nm,0.9s,mb4.7
MTNI Mataram 63.20 277 P **P 19 00 10.0 -0.7**
comp=Z,104nm,0.9s,mb5.4
MRSI Marisa 63.41 289 P **P 19 00 09.6 -2.4**
comp=Z,16nm,1.3s,mb4.4
SRBI Singaraja 64.30 277 P **P 19 00 16.3 -1.5**
comp=Z,89nm,1.2s,mb5.3
GMJI Gumkmas 65.70 275 P **P 19 00 25.0 -1.7**
comp=Z,90nm,0.9s,mb5.5
KBKI Kotabaru 66.03 281 P **P 19 00 27.8 -1.0**
comp=Z,52nm,1.0s,mb5.2
PWJI Pagerwojo 67.22 275 P **P 19 00 36.6 +0.3**
comp=Z,80nm,1.4s,mb5.3
TSM Tawau 68.93 289 P **P 19 00 48.5 +1.7**
SDKM Sandakan 70.26 290 P **P 19 00 56.5 +1.7**
MAW Mawson 70.47 201 P **P 19 00 57.4 +2.2**
comp=Z,1.7nm,0.5s,mb4.0,baz=130,slow=7.0,SNR=8.5
MAW Mawson 70.47 201 P **P 19 00 57.4 +2.2**
KKM Kota Kinabalu 71.28 290 P **P 19 01 02.7 +1.7**
LEM Lembang 71.39 273 P **P 19 01 02.8 +1.2**
comp=Z,77nm,1.2s,mb5.3
STKI Sintang 71.78 282 P **P 19 01 05.0 +1.1**
comp=Z,55nm,0.7s,mb5.4
PMSA Palmer Station 71.82 156 *eP* **P 19 01 05.8 +2.5**
comp=Z,97nm,1.0s,mb5.5
SBUM Sibu 72.48 284 P **P 19 01 09.3 +1.3**
TGY Tagaytay City 72.57 299 P **P 19 01 09.3 +0.9**
comp=Z,354nm,1.0s,mb6.0,baz=148,slow=9.5,SNR=7.3
TGY Tagaytay City 72.57 299 P **P 19 01 09.3 +0.9**
KSM Kuching 73.53 282 P **P 19 01 15.0 +0.9**
KSM Kuching 73.53 282 *eP* **P 19 01 13.7 -0.4**
comp=Z,17nm,0.6s,mb5.0
KLSI 74.95 274 P **P 19 01 20.3 -2.0**
comp=Z,68nm,0.9s,mb5.4
SYO Syowa Base 75.45 194⇓*eP* **P 19 01 24.0 -0.1**
SYO Syowa Base 75.45 194⇓*iP*cP PcP 19 01 35.6 +0.2
MDSI Maura Dua 75.53 274 P **P 19 01 24.6 -0.9**
comp=Z,48nm,0.8s,mb5.3
VNA3 Neumayer Olymp 77.13 177 *eP* **P 19 01 33.0 -0.4**
VNA3 *e* pP 19 02 54.5 +2.3
MAIT Maitri 77.47 184⇑*iP* **P 19 01 37.8 +2.5**
NVL N'lazarevskaya 77.47 184 *eP* **P 19 01 36.4 +1.0**
NVL pmax pmax
comp=Z,79nm,1.2s,mb5.3
VNA2 Neumayer--Watz 77.54 178 *eP* **P 19 01 35.6 -0.1**
baz=174,slow=4.0
VNA2 *e* pP 19 02 56.5 +2.0
VNA1 Neumayer--Stat 77.78 177 *eP* **P 19 01 37.1 +0.1**
MJAR Matsushiro Arr 78.31 327 P **P 19 01 38.4 -1.9**
comp=Z,18nm,1.0s,mb4.7,baz=147,slow=4.1,SNR=61
MJAR Matsushiro Arr 78.31 327 P **P 19 01 38.4 -1.9**
MAJO Matsushiro 78.32 327 *eP* **P 19 01 38.4 -2.0**
comp=Z,58nm,1.1s,mb5.2
MAJO Matsushiro 78.32 327 *eP* **P 19 01 38.4 -2.0**
MAJO pmax pmax
comp=Z,58nm,1.1s,mb5.2
MAT Matsushiro 78.32 327 P **P 19 01 38.7 -1.7**
YULB Yu-li 78.38 307 *eP* **P 19 01 39.5 -1.5**
comp=Z,14nm,0.8s,mb4.7
TPUB Ta-pu 78.78 306 *eP* **P 19 01 41.0 -2.2**
comp=Z,43nm,0.7s,mb5.3
SSLB Suanglung 78.88 307 *eP* **P 19 01 41.7 -2.0**
comp=Z,52nm,0.8s,mb5.3
MYKOM Kota Tinggi 79.11 279 P **P 19 01 46.7 +1.5**
JNU Nakatsue 79.36 320 *eP* **P 19 01 45.3 -0.8**
comp=Z,29nm,0.9s,mb5.0
KGM Kluang 79.68 279 P **P 19 01 50.0 +1.7**
ERM Erimo 80.78 333 *eP* **P 19 01 53.5 +0.2**
comp=Z,87nm,0.9s,mb5.5
ERM Erimo 80.78 333 *eP* **P 19 01 53.5 +0.1**
ERM pmax pmax
comp=Z,87nm,0.9s,mb5.5
ERM Erimo 80.78 333 P **P 19 01 53.8 +0.4**
comp=Z,570nm,0.9s,mb6.3,SNR=17
KTGM Kuala Trenggan 81.62 282 P **P 19 01 59.0 +0.5**
MNSI Mandailing Nat 82.19 276 P **P 19 02 00.3 -1.2**
comp=Z,20nm,0.8s,mb5.0
ASAJ Asahikawa 82.79 334 P **P 19 02 03.8 +0.1**
comp=Z,60nm,0.8s,mb5.5,baz=169,slow=5.2,SNR=29
ASAJ Asahikawa 82.79 334 *eP* **P 19 02 04.2 +0.5**
comp=Z,21nm,0.8s,mb5.0
PLCA Paso Flores 82.92 134 P **P 19 02 06.9 +2.2**
comp=Z,32nm,0.9s,mb5.2,baz=238,slow=6.0,SNR=51
PLCA Paso Flores 82.92 134 P **P 19 02 06.9 +2.2**
IPM Ipoh 82.93 280 P **P 19 02 06.5 +1.3**
KULM Kulim 83.68 280 P **P 19 02 09.7 +0.7**
QIZ Qiongzhong 83.95 297 P **P 19 02 10.9 +0.7**
QIZ sP sP 19 04 05.1 -1.6
QIZ S S 19 12 05.6 +1.2
QIZ pmax pmax
comp=Z,17nm,0.9s,mb4.9
QIZ pmax pmax
comp=Z,51nm,4.3s
KSRS Korea Array 84.20 321 P **P 19 02 10.8 -0.1**
comp=Z,30nm,0.8s,mb5.2,baz=139,slow=5.9,SNR=110
SMY Shemya 84.22 356 *eP* **P 19 02 09.2 -1.5**
comp=Z,308nm,0.9s,mb6.1
SMY Shemya 84.22 356 *eP* **P 19 02 09.2 -1.5**
SMY pmax pmax
comp=Z,308nm,0.9s,mb6.1
NIKO Nikolski 84.88 7 *eP* **P 19 02 12.1 -1.9**
comp=Z,227nm,1.1s,mb5.9
INCN Inchon 84.92 320 *eP* **P 19 02 14.7 +0.1**
comp=Z,76nm,1.4s,mb5.3
YSS Yuzh-Sakhalins 85.16 335 *eP* **P 19 02 15.9 +0.4**
comp=Z,285nm,0.8s,mb6.2
YSS Yuzh-Sakhalins 85.16 335⇓*iP* **P 19 02 15.8 +0.3**
YSS pmax pmax
comp=Z,250nm,0.8s,mb6.1
NJ2 Nanjing 85.75 312 *eP* **P 19 02 18.6 -0.2**
NJ2 pmax pmax
comp=Z,20nm,0.9s,mb5.0
UNV Unalaska Valle 86.00 8 *eP* **P 19 02 17.6 -1.8**
comp=Z,52nm,0.9s,mb5.4
PET Petropavlovsk 86.38 347 *eP* **P 19 02 20.2 -1.1**
PET pmax pmax
comp=Z,70nm,0.7s,mb5.6
VLA Vladivostok 86.48 327⇓*iP* **P 19 02 21.8 -0.2**
VLA pmax pmax
comp=Z,83nm,1.2s,mb5.4
PEA0B Petropavlovsk- 86.64 347 *eP* **P 19 02 21.1 -1.4**
PETK Petropavlovsk- 86.64 347 P **P 19 02 21.6 -0.9**
comp=Z,126nm,0.9s,mb5.7,baz=125,slow=7.2,SNR=65
PETK Petropavlovsk- 86.64 347 P **P 19 02 21.6 -0.9**
CIS Catalina Islan 87.03 48 ⇑P **P 19 02 24.7 -0.2**
baz=87
BLG Laguna Peak 87.08 47 ⇓P **P 19 02 25.5 +0.3**
baz=87
PKM Peak Mountain 87.14 46 ⇓P **P 19 02 26.0 +0.6**
baz=87,SNR=6.2
SMMC Simmler 87.31 45 ⇑P **P 19 02 26.7 +0.5**
baz=87
109C Camp Elliot, M 87.52 49 ⇑P **P 19 02 27.3 +0.1**
baz=88
OSI Osito Adit 87.63 46 ⇑P **P 19 02 28.5 +0.8**
baz=88,SNR=5.6
OSI Osito Adit 87.63 46 *eP* **P 19 02 27.7 0.0**
comp=Z,37nm,1.1s,mb5.1
BAR Barrett 87.66 49 P **P 19 02 27.9 0.0**
comp=Z,57nm,1.5s,mb5.2
PASC Pasadena Art C 87.67 47 *eP* **P 19 02 27.4 -0.5**
comp=Z,34nm,1.1s,mb5.1
WHN Wuhan 87.72 308 P **P 19 02 27.8 -0.4**
MWC Mount Wilson 87.78 47 *eP* **P 19 02 28.2 -0.2**
comp=Z,32nm,1.0s,mb5.1
MWC Mount Wilson 87.78 47 *eP* **P 19 02 28.2 -0.2**
MWC pmax pmax
comp=Z,32nm,1.0s,mb5.1
ARVC Arvin 87.90 46 P **P 19 02 28.8 -0.1**
baz=88,SNR=12
MURC Murrieta 87.92 48 ⇑P **P 19 02 29.4 +0.3**
baz=88,SNR=11
MONP Monument Peak 87.96 49 ⇑P **P 19 02 29.8 +0.5**
baz=88
DVTC Desert V Tower 88.01 49 ⇑P **P 19 02 30.0 +0.5**
baz=88
BFSC Mount Baldy Ra 88.04 47 ⇑P **P 19 02 29.7 0.0**
baz=88,SNR=24
VES Vestal, Richgr 88.22 45 ⇓P **P 19 02 30.2 -0.2**
baz=88
EDW2 Edwards Air Fo 88.26 47 P **P 19 02 30.6 0.0**
baz=88,SNR=37
SDPT Sand Point 88.31 11 *eP* **P 19 02 28.9 -1.4**
comp=Z,423nm,1.6s,mb6.0
SWSC Sam W. Stewart 88.39 49 ⇓P **P 19 02 31.5 +0.2**
baz=88,SNR=15
KIPM Iron Peak 88.39 40 *eP* **P 19 02 30.9 -0.3**
comp=Z,49nm,1.3s,mb5.2
PFO Pinyon Flat Ob 88.40 48 ⇑P **P 19 02 31.9 +0.6**
baz=88,SNR=8.8
PFO Pinyon Flat Ob 88.40 48 *eP* **P 19 02 31.5 +0.2**
comp=Z,56nm,1.4s,mb5.2
PFO Pinyon Flat Ob 88.40 48 *eP* **P 19 02 31.5 +0.2**
PFO pmax pmax
comp=Z,56nm,1.4s,mb5.2
PFO Pinyon Flat Ob 88.40 48 P **P 19 02 31.0 -0.3**
comp=Z,167nm,0.8s,mb5.9,SNR=8.4
ISA Isabella 88.47 46 ⇓P **P 19 02 31.6 -0.1**
baz=88,SNR=40
ISA Isabella 88.47 46 *eP* **P 19 02 31.1 -0.5**
comp=Z,43nm,0.9s,mb5.3
ISA Isabella 88.47 46 *eP* **P 19 02 31.1 -0.5**
ISA pmax pmax
comp=Z,43nm,0.9s,mb5.3
MDJ Mudanjiang 88.70 327 P **P 19 02 32.6 +0.2**
MDJ pP pP 19 03 51.5 -2.2
MDJ sP sP 19 04 27.8 -1.9
MDJ PP PP 19 06 04.1 -3.3
MDJ S S 19 12 49.8 +1.0
MDJ sS sS 19 15 10.3 -2.5
MDJ SS SS 19 18 46.5 -4.0
MDJ pmax pmax
comp=Z,50nm,1.1s,mb5.3
MDJ pmax pmax
comp=Z,140nm,5.1s
MDJ Mudanjiang 88.70 327 *eP* **P 19 02 32.4 0.0**
comp=Z,88nm,1.4s,mb5.4
LRMC Laurel Mountai 88.83 46 ⇓P **P 19 02 33.7 +0.4**
baz=89,SNR=16
CMB Columbia Colle 88.92 43 *eP* **P 19 02 32.7 -1.0**
comp=Z,54nm,1.3s,mb5.2
CMB Columbia Colle 88.92 43 *eP* **P 19 02 32.7 -0.9**
CMB pmax pmax
comp=Z,54nm,1.3s,mb5.2
112A Yuma 88.92 50 ⇑P **P 19 02 34.1 +0.2**
baz=89
BELC Belle Mtn. Jos 88.94 48 P **P 19 02 34.4 +0.6**
baz=89,SNR=36
KHMM Horse Mountain 89.00 39 *eP* **P 19 02 34.0 +0.1**
comp=Z,19nm,1.1s,mb4.8
BC3 Big Chuckawall 89.07 49 ⇑P **P 19 02 35.1 +0.7**
baz=89,SNR=22
GLA Glamis 89.09 50 P **P 19 02 35.6 +1.0**
baz=89,SNR=20
GLA Glamis 89.09 50 *eP* **P 19 02 35.3 +0.7**
comp=Z,74nm,0.8s,mb5.6
GLA Glamis 89.09 50 *eP* **P 19 02 35.3 +0.7**
GLA pmax pmax
comp=Z,74nm,0.8s,mb5.6
HEC Hector,Ludlow 89.26 48 ⇑P **P 19 02 35.7 +0.3**
baz=89,SNR=6.9
GSC Goldstone 89.27 47 P **P 19 02 35.4 +0.1**
baz=89,SNR=20
GSC Goldstone 89.27 47 *eP* **P 19 02 35.4 0.0**
comp=Z,30nm,1.0s,mb5.1
GSC Goldstone 89.27 47 *eP* **P 19 02 35.4 +0.1**
GSC pmax pmax
comp=Z,30nm,1.0s,mb5.1
MPMC Manual Prospec 89.34 46 P **P 19 02 35.6 0.0**
baz=89,SNR=16
KRMB Red Mountain 89.37 39 *eP* **P 19 02 35.6 0.0**
comp=Z,47nm,1.2s,mb5.2
WDC Whiskeytown Da 89.44 40 *eP* **P 19 02 35.4 -0.6**
comp=Z,47nm,1.2s,mb5.2
WDC Whiskeytown Da 89.44 40 *eP* **P 19 02 35.4 -0.6**
WDC pmax pmax
comp=Z,47nm,1.2s,mb5.2
TIN Tinemaha 89.54 45 ⇓P **P 19 02 36.7 +0.1**
baz=90,SNR=5.5
CHGN Chignik 89.57 12 *eP* **P 19 02 35.2 -1.0**
IRM Iron Mountain 89.58 49 ⇓P **P 19 02 37.5 +0.6**
baz=90,SNR=47
113A Mohawk Valley, 89.61 50 ⇑P **P 19 02 37.2 +0.2**
baz=90,SNR=15
GMRC Granite Mounta 89.65 48 P **P 19 02 37.4 +0.3**
baz=90,SNR=14
KBO Bosley Butte 89.69 38 *eP* **P 19 02 37.5 +0.4**
comp=Z,57nm,1.1s,mb5.4
Y12C Blythe 89.73 49 ⇓P **P 19 02 38.2 +0.7**
baz=90,SNR=14
214A Organ Pipe Nat 89.73 52 ⇓P **P 19 02 38.2 +0.6**
baz=90,SNR=17
LCO Las Campanas 89.74 124 *eP* **P 19 02 39.2 +1.3**
comp=Z,64nm,1.3s,mb5.4
TRQA Tornquist 89.77 136 *eP* **P 19 02 38.9 +1.0**
comp=Z,31nm,1.4s,mb5.0
WAKR Walker 89.79 43 *eP* **P 19 02 37.0 -0.7**
comp=Z,45nm,1.2s,mb5.3
TUQ Turquoise Moun 89.90 47 ⇓P **P 19 02 38.4 +0.1**
baz=90,SNR=6.4
Z13A Yuma Proving G 89.94 50 ⇓P **P 19 02 39.4 +0.8**
baz=90,SNR=46
SHOC Shoshone 89.98 47 ⇑P **P 19 02 38.5 -0.1**
baz=90,SNR=5.6
FURC Furnace Creek, 89.99 46 ⇓P **P 19 02 38.4 -0.2**
baz=90,SNR=7.0
GRAC Grapevine Rang 90.02 45 P **P 19 02 39.0 +0.1**
baz=90,SNR=13
CN2 Changchun 90.11 324 ⇓P **P 19 02 38.8 -0.2**
CN2 *e*S S 19 12 59.8 -2.0
CN2 pmax pmax
comp=Z,90nm,0.9s,mb5.7
CN2 pmax pmax
comp=Z,200nm,3.0s
WCN Washoe City 90.14 42 ⇑P **P 19 02 39.3 0.0**
baz=90
WCN Washoe City 90.14 42 *eP* **P 19 02 38.9 -0.4**
comp=Z,16nm,1.2s,mb4.8
WCN Washoe City 90.14 42 *eP* **P 19 02 38.9 -0.4**
WCN pmax pmax
comp=Z,16nm,1.2s,mb4.8
YBH Yreka Blue Hor 90.15 39 *eP* **P 19 02 38.9 -0.3**
comp=Z,21nm,1.0s,mb5.0
YBH Yreka Blue Hor 90.15 39 *eP* **P 19 02 38.9 -0.4**
YBH pmax pmax
comp=Z,21nm,1.0s
114A Black Gap (USA 90.18 51 ⇑P **P 19 02 40.4 +0.7**
baz=90,SNR=9.4
Y13A Salome 90.22 50 P **P 19 02 40.7 +0.9**
baz=90,SNR=16
U10A Ash Meadows, A 90.28 46 ⇑P **P 19 02 40.3 +0.3**
baz=90
PDMCI Parker Dam,Lak 90.32 49 ⇑P **P 19 02 40.9 +0.7**
baz=90,SNR=5.2
NVAR Mina Array Bea 90.40 44 P **P 19 02 39.7 -0.8**
comp=Z,14nm,0.8s,mb4.9,baz=219,slow=7.8,SNR=101
NVAR PKKPbc PKKPbc 19 20 08.8 +1.0
comp=Z,0.6nm,0.6s,baz=73,slow=1.2,SNR=3.9
V11A Goodsprings 90.47 47 ⇓P **P 19 02 41.3 +0.4**
baz=90,SNR=11
W12A Cal Nev Ari 90.48 48 ⇓P **P 19 02 41.4 +0.4**
baz=90
Z14A Wintersburg 90.51 50 P **P 19 02 42.0 +0.8**
baz=90,SNR=14
115A Sonoran Desert 90.58 51 P **P 19 02 42.3 +0.8**
baz=91,SNR=11
PAHR Pah Rah Range 90.62 42 *eP* **P 19 02 40.3 -1.2**
comp=Z,24nm,1.2s,mb5.0
HUMO Hull Mountain 90.63 38 *eP* **P 19 02 41.6 +0.1**
comp=Z,77nm,1.4s,mb5.4
GYA Guiyang 90.66 301 P **P 19 02 43.0 +1.0**
GYA pP pP 19 04 05.3 +1.9
GYA sP sP 19 04 38.9 -0.5
GYA PP PP 19 06 25.4 +2.2
GYA SKS 19 12 42.3
GYA S S 19 13 07.8 +0.2
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,130nm,6.0s
216A Three Points, 90.67 52 ⇓P **P 19 02 42.8 +0.9**
baz=91,SNR=6.0

X13A	Yucca	90.70	49	⇑P		P	19 02 42.2	+0.2
	baz=91,SNR=15							
V12A	Nelson	90.76	48	⇑P		P	19 02 42.6	+0.4
	baz=91							
Y14A	Wickenburg	90.83	50	⇓P		P	19 02 42.7	+0.1
	baz=91,SNR=14							
116A	Eloy	90.85	52	P		P	19 02 43.6	+0.9
	baz=91,SNR=11							
ENH	Enshi	90.87	305	eP		P	19 02 43.0	+0.1
	comp=Z,104nm,1.2s,mb5.6							
217A	Green Valley	90.97	53	P		P	19 02 44.2	+0.9
	baz=91,SNR=36							
W13A	Hualapai Mount	90.98	49	⇑P		P	19 02 44.0	+0.6
	baz=91							
Z15A	Gila River Ind	90.99	51	⇑P		P	19 02 44.1	+0.7
	baz=91							
SHPR	Sheep Range	91.06	47	eP		P	19 02 43.8	+0.1
	comp=Z,23nm,1.5s,mb4.9							
X14A	Yava	91.23	50	⇑P		P	19 02 45.3	+0.8
	baz=91,SNR=12							
KLR	Kul'dur	91.27	331	eP		P	19 02 39.3	-5.0
KLR				pmax	pmax			
	comp=Z,50nm,1.2s,mb5.3							
Y15A	Casa Rosa Ranc	91.28	50	⇓P		P	19 02 45.0	+0.3
	baz=91,SNR=8.3							
TUC	Tucson	91.31	52	eP		P	19 02 45.5	+0.6
	comp=Z,20nm,0.8s,mb5.1							
TUC	Tucson	91.31	52	eP		P	19 02 45.5	+0.6
TUC				pmax	pmax			
	comp=Z,19nm,0.8s,mb5.1							
318A	Bisbee	91.33	54	⇑P		P	19 02 45.7	+0.7
	baz=91,SNR=24							
V13A	Grand Canyon W	91.39	48	⇓P		P	19 02 45.3	+0.1
	baz=91,SNR=7.2							
U12A	Valley of Fire	91.40	47	P		P	19 02 45.6	+0.4
	baz=91,SNR=13							
OHAK	Old Harbor	91.42	14	eP		P	19 02 43.6	-1.2
	comp=Z,47nm,0.7s,mb5.5							
117A	Oracle	91.50	52	⇑P		P	19 02 46.8	+1.0
	baz=92,SNR=13							
Z16A	Peralta Trail,	91.50	51	⇓P		P	19 02 46.4	+0.6
	baz=92,SNR=8.9							
W14A	Seligman	91.57	49	P		P	19 02 46.8	+0.8
	baz=92,SNR=9.6							
MOD	Modoc	91.58	40	eP		P	19 02 45.1	-0.8
	comp=Z,31nm,1.2s,mb5.1							
218A	Dragoon	91.61	53	⇑P		P	19 02 47.1	+0.8
	baz=92,SNR=33							
MPOR	Mary's Peak	91.65	37	P		P	19 02 46.5	+0.3
X15A	Humboldt	91.67	50	⇓P		P	19 02 47.0	+0.5
	baz=92,SNR=14							
U13A	Pakoon Wash	91.75	48	⇑P		P	19 02 47.3	+0.4
	baz=92,SNR=17							
319A	Douglas	91.78	54	⇑P		P	19 02 48.0	+0.9
	baz=92,SNR=6.7							
Y16A	Circle Bar Ran	91.80	51	⇑P		P	19 02 47.9	+0.8
	baz=92,SNR=23							
V14A	Boquillas Ranc	91.81	49	P		P	19 02 47.8	+0.7
	baz=92,SNR=21							
K05A	Summer Lake	91.81	39	⇑P		P	19 02 47.1	+0.2
	baz=92							
IRO	Indian Ridge	91.97	38	P		P	19 02 47.1	-0.6
R11A	Troy Canyon, C	91.97	45	P		P	19 02 47.4	-0.4
	baz=92,SNR=6.4							
118A	Homack Ranch,	92.06	53	P		P	19 02 49.2	+0.9
	baz=92,SNR=27							
KDAK	Kodiak Island	92.09	14	P		P	19 02 46.5	-1.3
	comp=Z,11nm,0.6s,mb5.0,baz=210,slow=7.0,SNR=16							
KDAK	Kodiak Island	92.09	14	iP		P	19 02 46.7	-1.1
KDAK	Kodiak Island	92.09	14	P		P	19 02 47.0	-0.8
	comp=Z,115nm,0.6s,mb6.0,SNR=6.2							
Y17A	Roosevelt	92.11	51	P		P	19 02 49.1	+0.6
	baz=92,SNR=8.7							
Z17A	San Carlos Hig	92.11	52	P		P	19 02 49.5	+1.0
	baz=92,SNR=5.2							
CMAR	Chiang Mai Arr	92.16	290	P		P	19 02 49.9	+0.7
	comp=Z,4.1nm,0.8s,mb4.4,baz=120,slow=4.0,SNR=24							
CMAR				PKiKP	PKiKP		19 07 36.5	-0.4
	comp=Z,1.8nm,0.8s,baz=194,slow=1.6,SNR=7.9							
CMAR				PKKP	PKKPbc		19 20 04.8	+2.4
	comp=Z,1.3nm,0.7s,baz=288,slow=3.8,SNR=6.8							
CMAR	Chiang Mai Arr	92.16	290	P		P	19 02 49.9	+0.8
219A	White Tail Can	92.16	53	⇓P		P	19 02 49.4	+0.5
	baz=92,SNR=7.7							
T13A	Saint George	92.17	47	P		P	19 02 48.9	+0.2
	baz=92,SNR=5.6							
U14A	Mt Trumbull	92.25	48	P		P	19 02 49.7	+0.6
	baz=92,SNR=16							
320A	Kipp Ranch, An	92.28	54	⇑P		P	19 02 49.8	+0.4
	baz=92,SNR=5.1							
BMN	Battle Mountai	92.34	43	eP		P	19 02 48.5	-1.0
	comp=Z,34nm,1.3s,mb5.1							
BMN	Battle Mountai	92.34	43	eP		P	19 02 48.5	-1.0
BMN				pmax	pmax			
	comp=Z,34nm,1.3s,mb5.1							
CHTO	Chiang Mai	92.35	291	eP		P	19 02 50.3	+0.3
	comp=Z,4.5nm,0.8s,mb4.5							
CHTO				ePKiKP	PKiKP		19 07 37.3	+0.1
CHTO	Chiang Mai	92.35	291	eP		P	19 02 50.3	+0.3
CHTO				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4							
CHTO	Chiang Mai	92.35	291	P		P	19 02 51.4	+1.4
W16A	Flagstaff	92.50	50	⇑P		P	19 02 51.2	+0.8
	baz=92,SNR=6.4							
V15A	Kaibab Nationa	92.52	49	P		P	19 02 51.1	+0.7
	baz=92,SNR=9.4							
S13A	Holt Ranch, En	92.55	47	P		P	19 02 50.8	+0.4
	baz=92,SNR=8.3							
119A	Ashpeak Ranch,	92.59	53	⇑P		P	19 02 51.4	+0.7
	baz=93							
BJT	Baijiatuau	92.60	316	eP		P	19 02 50.7	+0.1
	comp=Z,40nm,0.8s,mb5.5							
BJT	Baijiatuau	92.60	316	eP		P	19 02 50.7	+0.1
BJT				pmax	pmax			
	comp=Z,40nm,0.8s							
BJI	Beijing	92.61	316	P		P	19 02 50.8	+0.1
BJI				pP	pP		19 04 11.6	-0.6
BJI				sP	sP		19 04 47.3	-0.8
BJI				PP	PP		19 06 38.6	+0.4
BJI				S	S		19 13 25.4	+1.2
BJI				pmax	pmax			
	comp=Z,57nm,0.8s,mb5.7							
BJI				pmax	pmax			
	comp=Z,100nm,6.1s							
220A	Playas Peak, P	92.61	54	⇓P		P	19 02 51.6	+0.7
	baz=93,SNR=6.8							
Y18A	Canyon Day Jun	92.69	52	P		P	19 02 52.0	+0.8
	baz=93,SNR=14							
T14A	Hurricane	92.71	47	⇓P		P	19 02 51.6	+0.4
	baz=93							
U15A	North Rim	92.82	48	⇓P		P	19 02 52.3	+0.5
	baz=93,SNR=22							
KMI	Kunming	92.83	298	P		P	19 02 53.9	+1.8
KMI				pmax	pmax			
	comp=Z,17nm,1.2s,mb5.0							
CCUT	Cedar City	92.84	47	eP		P	19 02 52.0	+0.2
	comp=Z,9.7nm,1.2s,mb4.7							
R13A	O'Grain Ranch,	92.85	46	⇓P		P	19 02 52.2	+0.3
	baz=93,SNR=6.9							
WVOR	Wild Horse Val	92.85	41	eP		P	19 02 50.9	-0.8
	comp=Z,22nm,1.3s,mb5.0							
WVOR	Wild Horse Val	92.85	41	eP		P	19 02 50.9	-0.9
WVOR				pmax	pmax			
	comp=Z,22nm,1.3s,mb5.0							
120A	U Bar Ranch, L	92.91	53	⇓P		P	19 02 53.2	+0.9
	baz=93,SNR=10.0							
T15A	Red Dirt Ranch	93.12	48	⇑P		P	19 02 53.5	+0.4
	baz=93,SNR=5.5							
VIPM	Ingram Point	93.17	38	P		P	19 02 52.8	-0.4
VIPM	Ingram Point	93.17	38	P		P	19 02 52.8	-0.4
F04A	Amboy	93.22	36	⇑P		P	19 02 52.8	-0.6
	baz=93,SNR=6.6							
Z20A	Nine Sixteen R	93.27	53	⇑P		P	19 02 54.2	+0.3
	baz=93,SNR=7.7							
V17A	Tonalea, Kykot	93.30	50	⇓P		P	19 02 54.4	+0.4
	baz=93,SNR=12							
Y19A	Nutrioso	93.32	52	⇑P		P	19 02 54.8	+0.7
	baz=93,SNR=5.2							
U16A	Tuba City	93.39	49	P		P	19 02 54.8	+0.4
	baz=93,SNR=8.5							
I07A	Izee	93.48	39	⇑P		P	19 02 54.4	-0.2
	baz=94,SNR=31							
XAN	Xi'an	93.49	308	P		P	19 02 55.4	+0.5
XAN				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.4							
XAN				pmax	pmax			
	comp=Z,33nm,6.2s							
S15A	Panguitch	93.54	47	⇑P		P	19 02 55.8	+0.8
	baz=94							
J08A	Circle Bar Ran	93.55	40	⇑P		P	19 02 54.7	-0.2
	baz=94							
G06A	Carlson Farm,	93.66	38	⇓P		P	19 02 54.7	-0.6
	baz=94,SNR=7.8							
222A	Williams Famil	93.71	54	⇑P		P	19 02 56.3	+0.3
	baz=94							
Q14A	Sevier Lake (B	93.78	46	⇑P		P	19 02 56.4	+0.3
	baz=94,SNR=18							
Y20A	Horse Springs,	93.88	52	⇓P		P	19 02 57.7	+1.0
	baz=94,SNR=7.8							
V18A	Ganado	93.91	50	⇑P		P	19 02 57.1	+0.4
	baz=94							
U17A	Shonto	93.97	49	⇓P		P	19 02 57.1	+0.1
	baz=94							
Z21A	St. Cloud Mine	94.02	53	⇑P		P	19 02 58.2	+0.9
	baz=94							
LON	Longmire	94.09	36	eP		P	19 02 56.1	-1.2
	comp=Z,3.0nm,0.8s,mb4.4							
LON	Longmire	94.09	36	eP		P	19 02 56.1	-1.2
LON				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.4							
MSU	Marysvale	94.17	47	eP		P	19 02 57.4	-0.5
	comp=Z,7.6nm,1.2s,mb4.6							
MSU	Marysvale	94.17	47	eP		P	19 02 57.4	-0.5
MSU				pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.6							
X20A	Quemado	94.17	52	⇑P		P	19 02 58.5	+0.5
	baz=94,SNR=6.3							
P14A	Drum Mountains	94.28	46	⇑P		P	19 02 58.5	+0.1
	baz=94							
D05A	Enumclaw	94.30	35	⇓P		P	19 02 58.7	+0.4
	baz=94							
Q15A	Fillmore	94.34	46	⇑P		P	19 02 59.0	+0.4
	baz=94							
626A	Big Bend Ranch	94.37	58	⇓P		P	19 02 59.0	0.0
	baz=94,SNR=6.0							
U18A	Rough Rock, Ch	94.37	50	⇑P		P	19 02 59.0	+0.1
	baz=94							
Y21A	Point of Rocks	94.42	53	P		P	19 02 59.8	+0.7
	baz=94,SNR=8.1							
425A	Indio Mountain	94.45	57	⇑P		P	19 02 59.3	-0.1
	baz=94							
R16A	Teasdale	94.46	47	⇑P		P	19 02 59.6	+0.4
	baz=94							
W20A	Ramah	94.51	51	⇑P		P	19 03 00.3	+0.7
	baz=94,SNR=7.8							
G08A	Pilot Rock	94.57	38	⇑P		P	19 02 59.3	-0.3
	baz=95,SNR=17							
TXAR	Lajitas Array	94.59	58	P		P	19 02 59.1	-0.9
	comp=Z,3.3nm,1.1s,mb4.3,baz=212,slow=6.4,SNR=15							
TXAR				PKKP	PKKPbc		19 19 56.4	-0.1
	comp=Z,0.4nm,0.6s,baz=93,slow=4.0,SNR=5.9							
TXAR	Lajitas Array	94.59	58	P		P	19 02 59.1	-0.9
X21A	Alamocita Cree	94.59	52	⇓P		P	19 03 00.3	+0.4
	baz=95,SNR=7.7							
MNTX	Cornudas Mount	94.68	56	⇑P		P	19 03 00.1	-0.3
	baz=95							
526A	Mary Lane Ranc	94.68	58	P		P	19 03 00.2	-0.2
	baz=95,SNR=6.5							
P15A	Leamington	94.75	46	⇑P		P	19 03 00.5	0.0
	baz=95,SNR=5.3							
224A	Cornudas Mount	94.80	55	⇑P		P	19 03 00.9	0.0
	baz=95							
T18A	Mexican Hat	94.80	49	P		P	19 03 00.8	0.0
	baz=95,SNR=9.6							
DUG	Dugway	94.81	45	⇑P		P	19 03 00.4	-0.4
	baz=95							
627A	Terlingua Ranc	94.85	58	⇑P		P	19 03 01.2	0.0
	baz=95,SNR=5.5							
V20A	Brimhall	94.93	51	⇑P		P	19 03 01.5	+0.1
	baz=95							
HAWA	Hanford	95.00	37	eP		P	19 03 00.9	-0.6
	comp=Z,7.3nm,0.8s,mb4.8							
JCW	Jim Creek	95.02	35	eP		P	19 03 00.6	-1.0
	comp=Z,6.0nm,0.7s,mb4.7							
Q16A	Castle Valley	95.04	47	⇑P		P	19 03 02.1	+0.2
	baz=95							
MFID	Camas Ranch	95.06	41	⇓P		P	19 03 01.2	-0.6
	baz=95,SNR=16							
426A	McDonald Obser	95.06	57	⇑P		P	19 03 01.7	-0.5
	baz=95,SNR=5.1							
SLKM	Skilak Lake	95.08	14	eP		P	19 02 60.0	-1.5
SLKM	Skilak Lake	95.08	14	eP		P	19 03 00.0	-1.5
628A	Black Gap, Mar	95.24	59	⇑P		P	19 03 02.8	-0.2
	baz=95							
TMUT	Trail Mountain	95.24	47	eP		P	19 03 02.5	-0.2
	comp=Z,4.4nm,0.6s,mb4.7							
CD2	Chengdu	95.28	303	eP		P	19 03 03.5	+0.4
CD2				pP	pP		19 04 26.3	+1.5
CD2				sP	sP		19 05 00.9	+0.2
CD2				PP	PP		19 06 55.6	-3.4
CD2				SKS			19 13 02.5	
CD2				S	S		19 13 37.5	-10
CD2				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb5.0							
CD2				pmax	pmax			
	comp=Z,20nm,4.2s							
225A	Deer Hill, Car	95.31	56	⇓P		P	19 03 03.2	-0.1
	baz=95							
ETW	Entiat	95.41	36	eP		P	19 03 02.4	-0.9
	comp=Z,12nm,0.9s,mb4.9							
SRU	San Rafael	95.56	47	⇑P		P	19 03 04.0	-0.2
	baz=96							
SRU	San Rafael	95.56	47	eP		P	19 03 03.6	-0.6
	comp=Z,5.4nm,0.8s,mb4.7							
SRU	San Rafael	95.56	47	eP		P	19 03 03.6	-0.6
SRU				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.7							
427A	Hayter Ranch,	95.61	57	⇓P		P	19 03 04.6	-0.1
	baz=96,SNR=6.1							
CRAG	Craig	95.65	25	eP		P	19 03 04.0	-0.1
528A	Cox Ranch, San	95.68	58	⇓P		P	19 03 04.7	-0.2
	baz=96							
L14A	Malta	95.68	43	⇑P		P	19 03 04.5	-0.2
	baz=96,SNR=9.5							
I12A	Atlanta	95.69	41	⇓P		P	19 03 04.6	0.0
	baz=96,SNR=11							
D08A	Wollman Farm,	95.76	37	⇓P		P	19 03 04.3	-0.6
	baz=96,SNR=11							
ANMO	Albuquerque	95.78	52	eP		P	19 03 04.7	-0.6
	comp=Z,3.7nm,1.1s,mb4.4							
ANMO	Albuquerque	95.78	52	eP		P	19 03 04.7	-0.6
ANMO				pmax	pmax			
	comp=Z,4.0nm,1.1s							
HVU	Hansel Valley	95.80	44	eP		P	19 03 04.3	-0.9
	comp=Z,23nm,1.2s,mb5.2							
HVU	Hansel Valley	95.80	44	eP		P	19 03 04.3	-0.9
HVU				pmax	pmax			
	comp=Z,23nm,1.2s,mb5.2							
M15A	Larsen Ranch,	95.80	44	⇓P		P	19 03 04.9	-0.3
	baz=96,SNR=7.2							
E09A	Wood Farm, Sta	95.81	38	⇓P		P	19 03 04.2	-0.9
	baz=96,SNR=5.1							
U21A	Nageezi	95.82	51	⇑P		P	19 03 05.4	0.0
	baz=96,SNR=7.1							
HHC	Hu-ho-hao-te	95.86	315	eP		P	19 03 06.3	+0.8
HHC				PP	PP		19 07 04.5	+1.2
HHC				SKS			19 13 10.1	
HHC				S	S		19 13 52.8	+0.4
HHC				SS	SS		19 20 34.9	+2.2
HHC				pmax	pmax			
	comp=Z,16nm,1.1s,mb5.1							
HHC				pmax	pmax			
	comp=Z,100nm,6.3s							
HHC				LR	LR			
	comp=N,170nm,17.8s							
HHC				LR	LR			
	comp=E,300nm,17.1s							
HHC				LR	LR			
	comp=Z,140nm,17.3s							
Y24A	Capitan	95.90	54	⇓P		P	19 03 05.8	-0.1
	baz=96,SNR=5.8							
F10A	Beach Ranch, E	95.94	39	⇓P		P	19 03 04.7	-1.1
	baz=96,SNR=6.4							
HLID	Hailey	95.95	42	P		P	19 03 05.5	-0.3
	baz=96,SNR=11							
HLID	Hailey	95.95	42	eP		P	19 03 05.3	-0.6
	comp=Z,5.2nm,1.0s,mb4.6							
J13A	Cove Ranch, Pi	95.98	42	P		P	19 03 05.9	-0.1
	baz=96,SNR=13							
K14A	Jones Ranch, D	96.03	43	⇓P		P	19 03 06.1	-0.2
	baz=96,SNR=8.5							
P18A	Preston Nutter	96.04	47	⇓P		P	19 03 06.4	+0.1
	baz=96							
O17A	Robinson Place	96.07	46	⇑P		P	19 03 06.6	+0.1
	baz=96,SNR=7.6							
OD2	Odessa Site #2	96.09	37	eP		P	19 03 05.5	-0.9
	comp=Z,19nm,1.2s,mb5.1							
L15A	Malad City	96.17	44	⇓P		P	19 03 06.3	-0.6
	baz=96,SNR=8.9							
S20A	Disappointment	96.18	49	⇓P		P	19 03 06.8	-0.3
	baz=96							
TTA	Tatalina	96.25	11	eP		P	19 03 05.7	-1.0
TTA	Tatalina	96.25	11	eP		P	19 03 05.7	-1.0
PMR	Palmer	96.29	14	eP		P	19 03 05.3	-1.6
	comp=Z,9.5nm,0.6s,mb5.1							
PMR	Palmer	96.29	14	eP		P	19 03 05.3	-1.6
PMR				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb5.1							
J14A	Carey	96.31	42	⇑P		P	19 03 08.0	+0.5
	baz=96,SNR=9.8							
H12A	Diamond D Ranc	96.32	41	P		P	19 03 06.8	-0.8
	baz=96,SNR=12							
I13A	Wildhorse Cree	96.34	42	⇓P		P	19 03 07.8	+0.2
	baz=96							
Y25A	Mesa, Roswell	96.41	54	⇑P		P	19 03 07.5	-0.7
	baz=96							
K15A	Arbon	96.50	43	⇑P		P	19 03 08.1	-0.2
	baz=96							
Z26A	Caprock	96.54	55	⇓P		P	19 03 08.0	-0.8
	baz=96							
SML	Sawmill	96.65	15	eP		P	19 03 07.5	-1.1
	comp=Z,3.4nm,1.1s,mb4.4							
SML	Sawmill	96.65	15	eP		P	19 03 07.5	-1.1
SML				pmax	pmax			
	comp=Z,3.0nm,1.1s,mb4.3							
H13A	Challis	96.67	41	⇓P		P	19 03 09.3	+0.3
	baz=97,SNR=5.3							
I14A	Mackay	96.72	42	P		P	19 03 09.6	+0.2
	baz=97,SNR=6.8							
SEY	Seymchan	96.84	348	ceP		P	19 03 08.2	-1.2
J15A	Blackfoot	96.99	43	⇑P		P	19 03 10.7	+0.2
	baz=97,SNR=7.2							
G13A	Cobalt	97.01	41	⇓P		P	19 03 10.5	-0.1
	baz=97							
H14A	Leadore	97.20	41	⇑P		P	19 03 11.9	+0.4
	baz=97							
J16A	Bone	97.39	43	⇓P		P	19 03 12.7	+0.4
	baz=97							
NEW	Newport	97.47	37	⇑P		P	19 03 12.7	+0.1
	baz=98							
K17A	Gardner Place,	97.48	44	⇓P		P	19 03 12.5	-0.3
	baz=98,SNR=6.5							
MCMT	McKenzie Canyo	97.62	41	eP		P	19 03 12.9	-0.4
	comp=Z,1.4nm,0.8s,mb4.2							
D12A	Red Ives Fores	97.62	39	⇓P		P	19 03 12.3	-1.0
	baz=98							
C11A	Tepee Creek (N	97.64	38	⇓P		P	19 03 12.7	-0.6
	baz=98							
TRF	Thorofare Moun	97.74	13	eP		P	19 03 11.4	-1.9
	comp=Z,19nm,0.6s,mb5.5							
I16A	Newdale	97.82	43	⇓P		P	19 03 14.9	+0.6
	baz=98							
K18A	Toltan Ranch,	97.94	44	⇑P		P	19 03 14.5	-0.3
	baz=98,SNR=6.7							
N20A	Spence Gulch,	97.97	47	⇑P		P	19 03 14.7	-0.3
	baz=98							
G15A	Dillon	98.03	41	⇑P		P	19 03 15.1	-0.1
	baz=98,SNR=9.2							
L19A	Farson	98.03	45	⇓P		P	19 03 14.9	-0.4
	baz=98							
LZH	Lanzhou	98.07	307	eP		P	19 03 16.5	+0.9
LZH				pP	pP		19 04 40.4	+3.0
LZH				sP	sP		19 05 10.4	-2.8
LZH				pmax	pmax			
	comp=Z,28nm,1.5s,mb5.3							
LZH				pmax	pmax			
	comp=Z,110nm,4.8s							
BPAW	Bear Paw Mtn.	98.20	12	eP		P	19 03 13.7	-1.7
	comp=Z,3.9nm,0.9s,mb4.6							
MCK	McKinley	98.25	13	eP		P	19 03 14.3	-1.4
	comp=Z,12nm,0.9s,mb5.1							
MCK	McKinley	98.25	13	eP		P	19 03 14.3	-1.4
MCK				pmax	pmax			
	comp=Z,12nm,0.9s,mb5.1							
J18A	Kendall Valley	98.29	44	⇓P		P	19 03 16.1	-0.2
	baz=98,SNR=11							
BW06	Boulder Array	98.30	45	⇓P		P	19 03 15.6	-0.8
	baz=98							
PDAR	Pinedale Array	98.30	45	P		P	19 03 15.2	-1.2
	comp=Z,1.6nm,0.7s,mb4.4,baz=243,slow=4.0,SNR=8.2							
PDAR				PKKPbc	PKKPbc		19 19 47.7	+0.6
	comp=Z,1.4nm,0.5s,baz=96,slow=4.3,SNR=7.7							
MENT	Mentasta	98.68	16	eP	Pdif		19 03 16.5	-1.9
DOT	Dot Lake	99.22	15	ePdif	Pdif		19 03 18.6	-2.2
	comp=Z,22nm,0.7s							
LPAZ	La Paz	99.22	116	P	Pdif		19 03 22.2	+1.5
	comp=Z,1.6nm,0.9s,baz=218,slow=7.3,SNR=6.4							
LPAZ				PKKPbc	PKKPbc		19 19 42.9	-0.3
	comp=Z,0.8nm,0.5s,baz=57,slow=5.4,SNR=5.6							
LPAZ	La Paz	99.22	116	P	Pdif		19 03 22.2	+1.5
I19A	Meeteetse	99.37	44	⇑P	Pdif		19 03 21.0	-0.4
	baz=99							
COLA	College	99.49	13	ePdif	Pdif		19 03 19.1	-2.8
	comp=Z,5.3nm,0.6s							
COLA	College	99.49	13	eP	Pdif		19 03 19.1	-2.8
COLA				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb5.0							
ILAR	Eielson Array	99.59	14	P	Pdif		19 03 19.2	-3.1
	comp=Z,2.5nm,0.6s,baz=218,slow=5.6,SNR=57							
ILAR				PKiKP	PKiKP		19 07 47.0	-1.4
	comp=Z,1.3nm,0.7s,baz=292,slow=2.4,SNR=7.5							
ILAR				PKKPbc	PKKPbc		19 19 43.1	-1.3
	comp=Z,0.3nm,0.7s,baz=26,slow=2.4,SNR=4.1							
ILAR	Eielson Array	99.59	14	P	Pdif		19 03 19.3	-3.1
J21A	Lysite	99.90	45	⇑P	Pdif		19 03 23.3	-0.4
	baz=100							
BILL	Bilibino	99.95	355	ePdif	Pdif		19 03 23.2	-0.8
	comp=Z,5.8nm,0.4s							
BILL	Bilibino	99.95	355	ceP	Pdif		19 03 23.1	-0.9
BILL				e*PP	pP		19 04 37.7	-7.4
BILL				e			19

comp=Z,19nm,0.6s
TKL Tuckaleechee C 112.31 61 PKiKP PKiKP 19 08 12.4 -0.5
TKL Tuckaleechee C 112.31 61 PKiKP PKiKP 19 08 12.5 -0.5
WMQ Urumqi 112.62 308 *e*PKP PKiKP 19 08 11.0 -2.3
WMQ PP PP 19 09 07.0 +0.2
WMQ SKS SKSdf 19 14 48.0 -3.5
WMQ SKKS SKKSac 19 15 24.0 -7.6
WMQ SS SS 19 24 19.0 -1.9
WMQ AMB AMB
comp=Z,31nm,9.0s
BDFB Brasilia 114.21 128 PKKPbc PKKPbc 19 18 58.2 +0.8
comp=Z,8.3nm,0.7s,baz=90,slow=5.1,SNR=11
BOSA Boshof 115.36 205 PKP PKPdf 19 08 20.4 +1.2
comp=Z,1.8nm,0.6s,baz=143,slow=2.1,SNR=11
BOSA PKKPbc PKKPbc 19 18 51.3 -2.7
comp=Z,2.2nm,0.8s,baz=324,slow=8.1,SNR=4.5
BOSA PKKPab PKKPab 19 18 58.8 -4.8
comp=Z,6.1nm,0.7s,baz=350,slow=4.1,SNR=13
BOSA Boshof 115.36 205 PKP PKPdf 19 08 20.4 +1.2
BOSA PKKPbc PKKPbc 19 18 51.3 -2.7
BOSA PKKPab PKKPab 19 18 58.8 -4.8
BOSA Boshof 115.36 205 PKiKP PKPdf 19 08 20.4 +1.2
MK31 Makanchi Array 117.23 310 *e*PKPdf PKPdf 19 08 21.2 -0.9
MK31 Makanchi Array 117.23 310 *e*PKiKP PKPdf 19 08 21.2 -0.8
MKAR Makanchi Array 117.23 310 PKP PKPdf 19 08 20.9 -1.1
comp=Z,14nm,0.8s,baz=97,slow=2.6,SNR=46
MKAR Makanchi Array 117.23 310 PKiKP PKPdf 19 08 20.9 -1.1
ZAA0 Zalesovo Array 117.81 318 *e*PKPdf PKPdf 19 08 21.4 -1.4
ZALV Zalesovo Beam 117.81 318 PKP PKPdf 19 08 21.2 -1.7
comp=Z,5.6nm,0.7s,baz=114,slow=4.1,SNR=32
ZALV Zalesovo Beam 117.81 318 PKiKP PKPdf 19 08 21.2 -1.7
NVS Novosibirsk 118.94 319 *i* PKiKP PKPdf 19 08 22.5 -2.5
NVS pmax pmax
comp=Z,28nm,1.2s
NVS pmax pmax
comp=N,6.0nm,1.0s
NVS pmax pmax
comp=E,12nm,1.3s
KSH Kashi 119.36 301 *e*PKP PKPdf 19 08 27.3 +0.9
KSH *es*PKP 19 10 30.1
KSH PKS 19 12 02.8
KSH SKS SKSdf 19 15 04.6 0.0
KSH AMB AMB
comp=Z,190nm,3.4s
KSH LR LR
comp=N,260nm,5.2s
KSH LR LR
comp=E,250nm,5.1s
KSH LR LR
comp=Z,380nm,5.7s
ULHL Ulahol 119.99 304 P PKPdf 19 08 28.0 +0.5
SNR=5.5
TKM2 Tokmak 2 120.64 304 P PKPdf 19 08 28.5 -0.2
SNR=24
TKM2 Tokmak 2 120.64 304 *e*PKPdf PKPdf 19 08 28.3 -0.4
TKM2 Tokmak 2 120.64 304 *e*PKiKP PKPdf 19 08 28.3 -0.4
KURK Kurchatov 120.65 314 *e*PKPdf PKPdf 19 08 27.6 -0.9
KURK *es*SKPdf SKPdf 19 11 30.0 -0.2
KURK Kurchatov 120.65 314 *e*PKiKP PKPdf 19 08 27.6 -0.9
KURK Kurchatov 120.65 314 PKPdf PKPdf 19 08 28.0 -0.4
SNR=14
KBK Karagaybulak 121.03 304 P PKPdf 19 08 29.6 +0.2
SNR=20
CHMS Chumysh 121.26 304 P PKPdf 19 08 29.6 -0.3
SNR=36
AAK Ala-Archa 121.34 304 P PKPdf 19 08 30.0 -0.1
SNR=17
AAK Ala-Archa 121.34 304 PKP PKPdf 19 08 30.2 +0.1
comp=Z,19nm,0.7s,baz=144,slow=5.0,SNR=54
AAK Ala-Archa 121.34 304 *e*PKPdf PKPdf 19 08 30.1 0.0
AAK Ala-Archa 121.34 304 *d* /PKIKP PKPdf 19 08 28.7 -1.4
USP Ospenovka 121.51 304 P PKPdf 19 08 30.1 -0.3
SNR=21
AML Almayashu 121.78 303 P PKPdf 19 08 32.0 +1.1
SNR=12
AML Almayashu 121.78 303 *e*PKPdf PKPdf 19 08 31.8 +0.8
EKS2 Erkin-Say 121.86 303 P PKPdf 19 08 31.7 +0.6
SNR=18
EKS2 Erkin-Say 121.86 303 *e*PKPdf PKPdf 19 08 31.5 +0.4
KKAR Karatay Array 124.29 303 *e*PKPdf PKPdf 19 08 35.5 -0.2
KKAR Karatay Array 124.29 303 *e*PKiKP PKPdf 19 08 35.5 -0.2
PKME Peaks-Kenny Pk 125.72 54 *e*PKPdf PKPdf 19 08 37.7 -0.7
LSZ Lusaka 125.99 214 *e*PKPdf PKPdf 19 08 41.3 +1.5
LSZ Lusaka 125.99 214 *e*PKiKP PKPdf 19 08 41.3 +1.4
BVAR Borovoye Array 126.07 315 PKP PKPdf 19 08 38.4 -0.4
comp=Z,31nm,0.7s,baz=105,slow=2.2,SNR=5.0
BVAR Borovoye Array 126.07 315 PKiKP PKPdf 19 08 38.4 -0.4
BRVK Borovoye 126.14 315 *e*PKPdf PKPdf 19 08 37.4 -1.5
BRVK Borovoye 126.14 315 *d* /PKiKP PKPdf 19 08 38.2 -0.7
BRVK Borovoye 126.14 315 PKPdf PKPdf 19 08 38.7 -0.2
SNR=18
EMMW East Machias 126.89 55 *e*PKPdf PKPdf 19 08 38.9 -1.7
SMDO Samad 128.18 276 PKPdf PKPdf 19 08 44.0 +0.2
SNR=8.2
BSY Bisya 128.78 275 PKPdf PKPdf 19 08 44.9 0.0
SNR=9.1
HOQ Hoqain 129.01 276 PKPdf PKPdf 19 08 45.9 +0.6
SNR=5.9
HATD Hatta, Dubai 130.47 277 PKPdf PKPdf 19 08 48.3 +0.2
SNR=7.8
ASHO Ashiyiah 130.48 277 PKPdf PKPdf 19 08 48.0 -0.1
SNR=7.0
KMBO Kilima Mbogo 131.87 235 SKPbc SKPbc 19 11 45.2 +1.3
comp=Z,53nm,0.9s,baz=0.0,slow=24,SNR=71
ABKAR Akbulak array 132.38 310 *e*PKPpre PKPpre 19 08 29.9
ABKAR *e*PKPdf PKPdf 19 08 50.5 -0.4
ARU Arti 132.93 320 *e*PKPdf PKPdf 19 08 51.8 +0.1
ARU *es*SKPbc SKPbc 19 11 46.4 +0.3
ARU Arti 132.93 320 *i* PKiKP PKPdf 19 08 52.0 +0.3
ARU 19 11 18.3
SOKR Solikamsk 133.41 324 *e*PKHKP PKPpre 19 08 43.7
SOKR pmax pmax
comp=Z,10.0nm,0.9s
AKTO Aktyubinsk 133.63 311 SKPbc SKPbc 19 11 48.3 -0.3
comp=Z,18nm,1.1s,baz=318,slow=1.5,SNR=12
ATD Arta Tunnel 135.69 253 SKPbc SKPbc 19 11 58.2 +1.9
comp=Z,38nm,0.8s,baz=283,slow=1.5,SNR=15
KEV Kevo 138.97 346 *e*PKHKP PKPpre 19 08 50.8
KEV pmax pmax
comp=Z,7.0nm,0.5s
KEV Kevo 138.97 346 *e*p PKPpre 19 08 50.8
comp=Z,6.7nm,0.5s
KBD Kabd 138.99 279 *e*P PKPpre 19 08 55.7
RDF Al-Radifah 139.04 279 *e*P PKPpre 19 08 55.8
RDF AMb AMB 19 09 07.5
comp=Z,204nm,0.6s
APA Apatity 139.08 341 ||*i* /PKiKP PKPpre 19 08 57.2
APA pmax pmax
comp=Z,23nm,1.0s
APA MLR MLR
comp=Z,600nm,25.0s
NAY Al-Naaiem 139.39 279 *e*P PKPpre 19 08 56.1
NAY AMb AMB 19 09 08.1
comp=Z,40nm,1.3s
ARCES ARCESS Array B 139.45 346 PKhKP PKPpre 19 08 55.8
comp=Z,5.3nm,0.5s,baz=56,slow=2.3,SNR=29
ARCES SKPbc SKPbc 19 12 04.6 -0.8
comp=Z,9.4nm,0.8s,baz=20,slow=2.9,SNR=7.2
ARCES ARCESS Array B 139.45 346 PKHKP PKPpre 19 08 55.8
ARCES 19 12 04.6
ARE0 ARCESS Array S 139.45 346 *e*PKPpre PKPpre 19 08 56.2
MIB Mutribah 139.45 280 *e*P PKPpre 19 08 55.8
MIB AMb AMB 19 09 08.5
comp=Z,105nm,0.8s
KLMR Klimovskoe 141.03 330 *e*PKHKP PKPpre 19 09 00.2
KLMR *e* 19 12 06.5
KLMR pmax pmax
comp=Z,63nm,1.6s
DGRG David-gareji 142.59 298 P PKPdf 19 09 06.6 -3.4
JOF Joensuu 142.93 337 *e*PKHKP PKPpre 19 09 05.2
JOF pmax pmax
comp=Z,23nm,0.7s
JOF Joensuu 142.93 337 *e*p PKPdf 19 09 05.2 -4.6
comp=Z,23nm,0.7s
MTA Mtatsminda 143.02 299 P PKPdf 19 09 08.3 -2.4
GNI Garni 143.06 296 PKP PKPdf 19 09 09.3 -1.5
comp=Z,23nm,0.6s,baz=243,slow=2.3,SNR=6.0
GNI Garni 143.06 296 *e*PKPpre PKPdf 19 09 08.6 -2.2
GNI Garni 143.06 296 *d* /PKiKP PKPdf 19 09 08.6 -2.2
GNI pmax pmax
comp=Z,103nm,1.2s
GNI Garni 143.06 296 PKPdf PKPdf 19 09 09.4 -1.4
SNR=16
TBLG Delisi 143.06 299 *e*PKiKP PKPdf 19 09 08.6 -2.2
TBLG Delisi 143.06 299 P PKPdf 19 09 08.6 -2.2

ZEI Tsey 143.65 300 *i* PKiKP PKPdf 19 09 09.8 -2.0
ZEI pmax pmax
comp=Z,56nm,0.5s
VRHR Novokhopersk 143.81 315 *e*PKiKP PKPdf 19 09 09.1 -2.7
VRHR pmax pmax
comp=Z,120nm,0.7s
VRHR pmax pmax
comp=N,30nm,1.2s
VRHR pmax pmax
comp=E,20nm,1.1s
ONI Oni 143.99 300 P PKPdf 19 09 11.8 -0.6
GOF Gofitskoye 144.08 304 ||*i* PKiKP PKPdf 19 09 21.7 +9.3
GOF pmax pmax
comp=Z,403nm,0.9s
MOS Moscow 144.35 324 *d* /PKiKP PKPdf 19 09 11.9 -0.6
MOS *e* 19 12 37.3
MOS pmax pmax
comp=Z,500nm,0.9s
MOS pmax pmax
comp=Z,336nm,0.7s
MSKU Masuku 144.38 204 PKP PKPdf 19 09 14.6 +0.6
comp=Z,18nm,0.4s,baz=148,slow=4.8,SNR=35
MSKU SKPbc SKPbc 19 12 20.2 +0.7
comp=Z,27nm,0.9s,baz=216,slow=1.4,SNR=8.6
MOR8 Moi Rana 144.39 350 ||*i* PKPdf 19 09 09.5 -2.8
MOR8 AMB AMB 19 09 11.2
comp=Z,120nm,1.4s
BORG Borgarnes 144.40 15 PKP PKPdf 19 09 09.6 -2.7
comp=Z,29nm,0.7s,baz=293,slow=0.9,SNR=4.2
BORG Borgarnes 144.40 15 PKiKP PKPdf 19 09 09.6 -2.8
STOK Stokkvaagen 144.44 351 ||*i* PKPdf 19 09 10.6 -1.7
STOK AMb AMB 19 09 12.2
comp=Z,353nm,0.9s
KIV Kislovodsk 144.45 302 *e*PKP PKPdf 19 09 12.5 -0.6
KIV Kislovodsk 144.45 302 *e*PKiKP PKPdf 19 09 12.5 -0.6
KIV pmax pmax
comp=Z,171nm,1.1s
KIV Kislovodsk 144.45 302 PKPbc PKPdf 19 09 13.1 0.0
SNR=9.3
VOR Voronezh 145.06 317 *e*PKiKP PKPdf 19 09 13.0 -0.9
VOR pmax pmax
comp=Z,1μm,1.0s
KAF Kangasniemi 145.13 339 *e*PKHKP PKPpre 19 09 10.4
KAF pmax pmax
comp=Z,84nm,0.7s
KAF Kangasniemi 145.13 339 *e*p PKPpre 19 09 10.4
comp=Z,84nm,0.7s
OBN Obninsk 145.17 323 *e*PKP PKPdf 19 09 13.7 -0.3
OBN Obninsk 145.17 323 *d* /PKiKP PKPdf 19 09 13.7 -0.3
OBN *e* 19 12 31.5
OBN pmax pmax
comp=Z,2μm,1.7s
VSR Storozhevoye 145.25 316 *e*PKP2 PKPab 19 09 14.6 -0.8
VSR pmax pmax
comp=Z,780nm,0.6s
VSR pmax pmax
comp=N,140nm,0.8s
VSR pmax pmax
comp=E,380nm,0.8s
VORD Divnogorie 145.26 315 *e*PKP2 PKPab 19 09 14.6 -0.9
VORD pmax pmax
comp=Z,640nm,0.7s
VORD pmax pmax
comp=N,60nm,0.5s
VORD pmax pmax
comp=E,290nm,1.1s
PUL Pulkovo 145.39 333 *d* /PKP2 PKPab 19 09 14.1 -1.6
PUL pmax pmax
comp=Z,863nm,0.7s
FINES FINESS Array B 145.71 338 PKPbc PKPbc 19 09 14.6 -1.2
comp=Z,140nm,0.5s,baz=46,slow=3.9,SNR=668
FINES FINESS Array B 145.71 338 PKiKP PKPdf 19 09 14.6 -0.1
NSS Namsos 146.29 351 ||*i* PKPdf 19 09 15.0 -0.6
NSS AMb AMB 19 09 17.8
comp=Z,190nm,1.0s
SOC Sochi 146.63 302 *d* /PKP2 PKPdf 19 09 18.6 +1.8
SOC pmax pmax
comp=Z,196nm,0.8s
MALT Malatya 147.94 293 *e*PKPdf PKPdf 19 09 19.4 +0.2
MALT *e*PKPbc PKPbc 19 09 23.3 +0.6
MALT Malatya 147.94 293 *e*PKiKP PKPdf 19 09 19.4 +0.2
MALT *e* 19 09 23.3
MALT Malatya 147.94 293 ||*i* PKPdf 19 09 20.0 +0.8
ANN Anapa 148.05 305 *d* /PKP2 PKPbc 19 09 22.6 -0.2
ANN pmax pmax
comp=Z,362nm,1.0s
ASF Jabal al Asfar 148.71 281 PKPbc PKPbc 19 09 26.1 +1.2
comp=Z,90nm,0.7s,baz=13,slow=1.8,SNR=140
ASF Jabal al Asfar 148.71 281 PKP2 PKPbc 19 09 26.1 +1.2
IZAR Zarasai 149.68 330 *e*P PKPbc 19 09 26.3 -0.1
IZAR AMB AMB 19 09 27.6
comp=Z,71nm,1.2s
NB2 NORSAR Subarra 149.72 349 PKP PKPbc 19 09 25.3 -1.1
baz=14,slow=2.5
NOA NORSAR Array B 149.72 349 PKPbc PKPbc 19 09 25.7 -0.7
comp=Z,28nm,0.6s,baz=16,slow=4.1,SNR=149
NOA NORSAR Array B 149.72 349 PKHKP PKPbc 19 09 25.7 -0.7
MICGM Minsk 149.75 327 ||*e*P PKPbc 19 09 25.0 -1.7
IDID Didziasalis 149.75 329 *e*P PKPbc 19 09 26.5 -0.1
IDID AMB AMB 19 09 27.7
comp=Z,62nm,1.2s
MNK Minsk 149.77 327 ⇑*e*PKHKP PKPbc 19 09 25.0 -1.7
MNK *e* 19 09 32.0
RCY Rachaya 149.79 283 *e*P PKPbc 19 09 28.5 +1.0
ISAL Salakas 149.85 330 *e*P PKPbc 19 09 26.8 -0.1
ISAL AMB AMB 19 09 28.0
comp=Z,48nm,1.1s
EIL Elat 149.88 275 PKPbc PKPbc 19 09 28.5 +0.7
comp=Z,186nm,0.8s,baz=108,slow=0.8,SNR=166
EIL Elat 149.88 275 PKPbc PKPbc 19 09 28.5 +0.7
FOO Floro 149.90 355 ||*i* PKPbc 19 09 25.1 -1.7
IIGN Ignalina 149.95 330 *e*P PKPbc 19 09 27.1 0.0
IIGN AMB AMB 19 09 28.3
comp=Z,75nm,1.2s
NAO01 NORSAR Array S 149.96 349 *e*PKPbc PKPbc 19 09 26.2 -0.8
NAO01 *e*PKPab PKPab 19 09 32.6 -1.5
BHL Bhannes 149.97 284 *e*P PKPbc 19 09 28.9 +1.0
NACGM Naroch 150.00 329 *e*P PKPab 19 09 48.0 +14
MMAI Mount Meron Ar 150.08 282 PKPbc PKPbc 19 09 29.4 +1.3
comp=Z,239nm,0.5s,baz=73,slow=4.8,SNR=474
SIM Simferopol' 150.32 306 ||*i* PKiKP PKPbc 19 09 29.0 +0.7
SIM pmax pmax
comp=Z,120nm,0.8s
SUE Sulen 150.46 355 *e*P PKPbc 19 09 27.5 -0.6
ASK Askoy 150.99 355 *e*P PKPbc 19 09 27.9 -1.5
RUND Rundenannen 151.05 354 *e*P PKPbc 19 09 28.3 -1.2
AKASG Malin Array Be 151.19 320 PKPbc PKPbc 19 09 29.7 -0.4
comp=Z,135nm,0.9s,baz=59,slow=2.3,SNR=153
AKASG Malin Array Be 151.19 320 PKiKP PKPbc 19 09 29.7 -0.5
KIEV Kiev 151.20 320 *e*PKPbc PKPbc 19 09 29.0 -1.2
KIEV *e*PKPab PKPab 19 09 38.6 -1.0
KIEV Kiev 151.20 320 *e*PKiKP PKPbc 19 09 29.0 -1.2
KIEV *e* 19 09 38.6
KONO Kongsberg 151.30 350 *e*PKPbc PKPbc 19 09 29.4 -0.7
KONO *e*PKPab PKPab 19 09 38.2 -1.4
KONO Kongsberg 151.30 350 *e*PKiKP PKPbc 19 09 29.5 -0.6
KONO *e* 19 09 38.2
PHNC Paralimni 151.40 286 *e*P PKPdf 19 09 22.0 -2.7
comp=Z,3.0nm,0.5s
ODD1 Odda 151.42 353 ||*i* PKPbc 19 09 30.0 -0.4
ODD1 AMb AMB 19 09 31.8
comp=Z,94nm,0.9s
BR131 Keskin Array S 151.60 296 *e*PKPdf PKPdf 19 09 25.2 +0.3
BR131 *e*PKPbc PKPbc 19 09 31.4 0.0
BRTR Keskin Array B 151.60 296 PKPbc PKPbc 19 09 31.4 -0.1
comp=Z,85nm,0.6s,baz=128,slow=3.5,SNR=368
BRTR Keskin Array B 151.60 296 PKiKP PKPbc 19 09 31.4 -0.1
BLS5 Blasjo 151.92 353 ||*i* PKPbc 19 09 31.2 -0.3
CSS Prodhromos 151.97 286 P PKPdf 19 09 22.8 -2.8
comp=Z,1.2nm,0.6s
CSS Prodhromos 151.97 286 P PKPdf 19 09 22.8 -2.8
CSS *e*PKPbc PKPbc 19 09 32.6 +0.2
MAMC Mammari 152.07 286 P PKPdf 19 09 23.5 -2.2
SUW Suwalki 152.16 330 *e*PKP PKPbc 19 09 31.8 -0.4
SUW *e* 19 09 42.0
SUW Suwalki 152.16 330 *e*PKPdf PKPdf 19 09 25.7 +0.5
SUW *e*PKPbc PKPbc 19 09 31.6 -0.6
SUW *e*PKPab PKPab 19 09 42.2 -1.3
SUW Suwalki 152.16 330 *e*PKiKP PKPdf 19 09 25.7 +0.5
SUW *e* 19 09 42.2
SZAC Souni-Zanaja 152.32 285 P PKPdf 19 09 23.6 -2.5
ALFC Alevga 152.58 286 P PKPdf 19 09 23.6 -2.9
comp=Z,1.8nm,0.5s
TLCR 153.82 309 ⇑*i* PKPbc 19 09 36.4 +0.3

LIC Lamto 154.24 169 *e*P PKPdf 19 09 29.2 -0.3
comp=Z,90nm,1.2s
CFR Carcaliu 154.27 310 ⇑*i* PKPbc 19 09 37.6 +0.5
BSD Bornholm Skovb 154.29 340 *e*PKP2 PKPab 19 09 51.1 -1.4
BSD pmax pmax
comp=Z,55nm,0.9s
BSD Bornholm Skovb 154.29 340 *i* P PKPab 19 09 51.1 -1.4
comp=Z,55nm,0.9s
TIRR Tirgusor 154.35 308 ⇑*i* PKPbc 19 09 37.5 +0.2
MUD Monsted U'grnd 154.42 348 *i* PKP2 PKPab 19 09 51.7 -1.2
MUD pmax pmax
comp=Z,22nm,0.8s
MUD Monsted U'grnd 154.42 348 *i* P PKPab 19 09 51.7 -1.2
comp=Z,22nm,0.8s
KIC Kosan Boka 154.42 169 *e*P PKPdf 19 09 30.4 +0.6
comp=Z,60nm,0.9s
LVV L'vov 154.46 322 *e*PKIKP PKPbc 19 09 45.3 +8.0
TIC Toumodi 154.65 168 *e*P PKPdf 19 09 30.9 +0.8
comp=Z,77nm,1.2s
TIC Toumodi 154.65 168 *e*PKIKP PKPdf 19 09 30.9 +0.8
TESR 154.68 313 ||*i* PKPbc 19 09 38.3 +0.4
DBIC Dimbokro 154.71 169 PKP PKPdf 19 09 31.0 +0.9
comp=Z,4.6nm,0.8s,baz=184,slow=2.5,SNR=6.1
DBIC PKPab PKPab 19 09 56.8 +1.6
comp=Z,14nm,0.7s,baz=170,slow=4.5,SNR=12
DBIC Dimbokro 154.71 169 PKP PKPdf 19 09 31.0 +0.9
DBIC PKPab PKPab 19 09 56.8 +1.6
DBIC Dimbokro 154.71 169 PKiKP PKPdf 19 09 31.0 +0.8
DBIC 19 09 56.8
VRI Vrincioaia 154.91 312 PKP2 PKPab 19 09 56.6 +1.1
VRI Vrincioaia 154.91 312 ||*i* PKPbc 19 09 38.7 +0.3
PLOR Plostina 154.97 312 ⇑*i* PKPbc 19 09 40.7 +2.2
BUR08 Bucovina Ar. S 155.01 317 *e*PKPbc PKPdf 19 09 39.2 +10
BUR08 *e*PKPab PKPab 19 09 56.0 +0.2
GKP Gorka Klasztor 155.07 335 *e*PKP PKPdf 19 09 38.8 +9.5
GKP *e* 19 09 54.9
GKP Gorka Klasztor 155.07 335 *e*PKIKP PKPdf 19 09 38.8 +9.4
GKP *e* 19 09 54.9
KWP Kalwaria Pacla 155.26 323 *e*PKP PKPdf 19 09 39.4 +10
KWP *e* 19 09 56.5
KWP Kalwaria Pacla 155.26 323 *e*PKPdif PKPdf 19 09 38.7 +9.0
KWP *e*PKPab PKPab 19 09 56.6 -0.2
KWP Kalwaria Pacla 155.26 323 ||*e*PKIKP PKPdf 19 09 38.7 +8.9
KWP *e* 19 09 56.6
MLR Muntele Rosu 155.57 312 ⇑*i* PKPdf 19 09 40.3 +10
KOLS Kolonicke sedl 155.91 322 *e*PKP PKPdf 19 09 30.7 +0.1
KOLS *e* 19 09 41.3
KOLS *e* 19 09 59.2
KOLS Kolonicke sedl 155.91 322 *e*PKIKP PKPdf 19 09 30.7 +0.1
KOLS *e* 19 09 59.2
KOLS Kolonicke sedl 155.91 322 *e*PKP PKPdf 19 09 30.7 +0.1
KOLS *e* 19 09 41.3
KOLS *e* 19 09 59.2
BMR Baia Mare 155.98 318 PKP2 PKPab 19 10 00.7 +0.7
UZH Uzhgorod 156.09 321 *d* /PKIKP PKPdf 19 09 41.0 +10
UZH *i* 19 10 00.0
VOIR 156.16 312 ⇑*i* PKPdf 19 09 42.3 +11
EKA Eskdalemuir Ar 156.27 4 PKPab PKPab 19 09 58.5 -2.4
comp=Z,12nm,0.7s,baz=340,slow=2.6,SNR=22
EKA PP PP 19 13 33.3 -6.4
comp=Z,2.2nm,0.9s,baz=335,slow=3.1,SNR=3.8
EKA Eskdalemuir Ar 156.27 4 PKP2 PKPab 19 09 58.5 -2.4
ESK Eskdalemuir 156.28 4 *e*PKPab PKPab 19 09 58.9 -2.1
ESK Eskdalemuir 156.28 4 *e*PKP2 PKPab 19 09 58.9 -2.1
OJC Ojcow 156.30 327 *e*PKP PKPdf 19 09 30.6 -0.5
OJC *e*PKPab PKPab 19 10 00.2 -1.1
OJC Ojcow 156.30 327 *e*PKIKP PKPdf 19 09 30.6 -0.5
CRVS Cervenica-Dubn 156.35 323 *e*PKP PKPdf 19 09 30.7 -0.5
CRVS *e* 19 09 42.2
CRVS *e* 19 10 01.5
CRVS Cervenica-Dubn 156.35 323 *e*PKIKP PKPdf 19 09 30.7 -0.5
CRVS *e* 19 10 01.5
CRVS Cervenica-Dubn 156.35 323 *e*PKP PKPdf 19 09 30.7 -0.5
CRVS *e* 19 09 42.2
CRVS *e* 19 10 01.5
NIE Niedzica 156.60 325 *e*PKPab PKPab 19 10 02.5 -0.1
NIE Niedzica 156.60 325 *e*PKP2 PKPab 19 10 02.5 -0.1
RUE Ruedersdorf 156.90 338 *e*PKPab PKPab 19 10 03.2 -0.6
DRGR 156.90 317 PKP2 PKPab 19 10 04.5 +0.5
KECS Kecovo 157.12 323 *e* PKPdf 19 09 48.2 +16
KECS Kecovo 157.12 323 *e*PKP PKPab 19 10 04.8 -0.1
OKC Ostrava-Krasne 157.32 328 *e*PKiKP PKPdf 19 09 30.7 -1.7
OKC Ostrava-Krasne 157.32 328 *e*PKPDF PKPdf 19 09 30.7 -1.7
OKC *e*PKPAB PKPab 19 10 05.0 -0.7
KSP Ksiaz 157.35 332 *e*PKP PKPab 19 10 05.0 -0.8
GZR Gura Zlata 157.59 314 PKP2 PKPab 19 10 07.5 +0.4
GZR Gura Zlata 157.59 314 ||*i* PKPdf 19 09 44.3 +11
MORC Moravsky Berou 157.63 329 *e*PKPdf PKPdf 19 09 32.3 -0.5
MORC *e*PKPab PKPab 19 10 06.2 -0.9
MORC Moravsky Berou 157.63 329 *e*PKIKP PKPdf 19 09 32.3 -0.5
MORC Moravsky Berou 157.63 329 ||*i* PKPdf 19 09 33.2 +0.4
DPC Dobruska-Polom 157.72 332 *e*PKIKP PKPdf 19 09 33.6 +0.7
DPC *e* 19 13 48.2
DPC Dobruska-Polom 157.72 332 *e*PKPDF PKPdf 19 09 33.6 +0.7
DPC *e*PKPAB PKPab 19 10 07.0 -0.4
DPC *e*PP PP 19 13 48.2 +0.2
UPC Upice 157.72 332 *e*PKP2 PKPab 19 10 06.8 -0.6
UPC Upice 157.72 332 *e*PKPAB PKPab 19 10 06.8 -0.6
PSZ Piszkesteto 157.79 323 *e*PKPab PKPab 19 10 07.3 -0.5
PSZ Piszkesteto 157.79 323 *e*PKP2 PKPab 19 10 07.3 -0.5
PSZ Piszkesteto 157.79 323 ⇑*e*PKP PKPab 19 10 07.5 -0.3
MPEP Malo Peshtene 157.89 308 P PKPdf 19 09 45.4 +12
NRDL Niedersach Rie 157.93 343 *e*PKPab PKPab 19 10 07.0 -1.2
VYHS Vyhne 157.94 325 *e*PKP PKPdf 19 09 32.4 -0.8
VYHS *e* 19 09 44.9
VYHS *e* 19 10 08.3
VYHS Vyhne 157.94 325 *e*PKIKP PKPdf 19 09 32.4 -0.8
VYHS Vyhne 157.94 325 *e*PKP PKPdf 19 09 32.4 -0.8
VYHS *e* 19 09 44.9
VYHS *e* 19 10 08.3
BZS Buzias 158.18 316 ||*i* PKPdf 19 09 33.7 +0.1
BRG Berggiesshubel 158.20 336 *e*PKPab PKPab 19 10 09.0 -0.5
BRG Berggiesshubel 158.20 336 *e*PKP PKPdf 19 09 33.0 -0.5
comp=Z,27nm,1.8s
BRG *e* 19 09 45.2
comp=Z,7.8nm,1.1s
BRG *i* 19 10 08.6
comp=Z,70nm,1.0s
BRG *e*PP PP 19 13 47.0 -3.5
comp=Z,7.0nm,1.2s
BRG *e* 19 17 39.4
comp=Z,15nm,1.6s
PVCC Panska Ves 158.26 334 *e*PKP2 PKPab 19 10 09.2 -0.5
PVCC Panska Ves 158.26 334 *e*PKPAB PKPab 19 10 09.2 -0.5
VRAC Vranov 158.40 329 PKPab PKPab 19 10 09.9 -0.5
comp=Z,30nm,0.7s,baz=34,slow=5.1,SNR=36
VRAC Vranov 158.40 329 PKP2 PKPab 19 10 10.4 0.0
CLZ Clausthal 158.46 342 *e*PKPab PKPab 19 10 10.0 -0.5
CLZ Clausthal 158.46 342 *e*PKP2 PKPab 19 10 10.0 -0.5
BUD Budapest 158.52 323 ⇑*e*PKP PKPab 19 10 10.6 -0.4
VTS Vitosha 158.55 307 P PKPdf 19 09 46.5 +12
IBBN Ibbenburen 158.62 347 *e*PKPab PKPab 19 10 10.3 -0.9
NEUB Neuenburg 158.63 339 *e*PKPab PKPab 19 10 10.7 -0.6
PRU Pruhonice 158.71 333 *e*PKIKP PKPdf 19 09 27.6 -6.5
PRU *e* 19 10 11.5
PRU Pruhonice 158.71 333 *ex* x 19 09 27.6
PRU *e*PKPAB PKPab 19 10 11.5 -0.2
MODS Modra-Piesok 158.77 327 *e*PKP2 PKPab 19 10 12.0 -0.1
MODS Modra-Piesok 158.77 327 *e*PKP PKPab 19 10 12.0 -0.1
TREC Trest 158.88 331 *e*PKP2 PKPab 19 10 11.5 -1.0
TREC Trest 158.88 331 *e*PKPAB PKPab 19 10 11.5 -1.0
ZST Bratislava 158.98 327 *e*PKP2 PKPab 19 10 13.1 +0.1
ZST Bratislava 158.98 327 *e*PKP PKPab 19 10 13.1 +0.1
TANN Tannenbergstha 159.10 337 *e*PKPab PKPab 19 10 13.0 -0.4
WERD Werda 159.12 337 *e*PKPab PKPab 19 10 13.3 -0.2
MOX Moxa 159.17 339 *e*PKP PKPab 19 10 12.6 -1.1
comp=Z,80nm,1.5s
MOX Moxa 159.17 339 *e*PKPab PKPab 19 10 13.1 -0.6
GUNZ Gunzen 159.18 337 *e*PKPab PKPab 19 10 13.6 -0.1
WERN Wernitzgruen 159.23 337 *e*PKPab PKPab 19 10 13.7 -0.3
NKC Novy Kostel 159.26 337 *e*PKP2 PKPab 19 10 13.4 -0.7
NKC Novy Kostel 159.26 337 *e*PKPAB PKPab 19 10 13.4 -0.7
VAY Valandovo 159.47 304 *i* PKP PKPab 19 10 14.4 -0.9
UBBA Unterbreizbach 159.48 342 *e*PKPab PKPab 19 10 13.9 -1.1
PKSM Moragy 159.53 320 ||*i* PKPdf 19 09 34.8 -0.4
BUG Bochum--Univer 159.54 347 *e*PKPdf PKPdf 19 09 35.2 +0.2
BUG *e*PKPab PKPab 19 10 13.8 -1.4
SOP Sopron 159.60 326 ⇑*e*PKP PKPab 19 10 15.4 -0.3
ROTZ Rotzenmuhle 159.74 337 *e*PKPab PKPab 19 10 16.3 +0.1
CONA Conrad Observa 159.75 328 ||*i* PKPab PKPab 19 10 16.0 -0.4
comp=Z,54nm,1.0s

KHC **Kasperske Hory** 159.77 333 *e*PKPab PKPab 19 10 15.8 -0.6
KHC **Kasperske Hory** 159.77 333 *e*PKIKP PKPdf 19 09 34.8 -0.5
KHC *e* 19 10 15.7
KHC *e* 19 13 56.3
KHC **Kasperske Hory** 159.77 333 *e*PKPDF PKPdf 19 09 34.8 -0.5
KHC *ex* x 19 09 57.4
KHC *e*PKPAB PKPab 19 10 15.7 -0.7
KHC *e*PP PP 19 13 56.3 -2.7
GEC2 **GERESS Array S** 159.96 333 *e*PKPdf PKPdf 19 09 35.1 -0.5
GEC2 *e*PKPab PKPab 19 10 16.6 -0.6
GEC2 **GERESS Array S** 159.96 333 *e*PKIKP PKPdf 19 09 35.1 -0.5
GERES **GERESS Array B** 159.96 333 PKP PKPdf 19 09 34.9 -0.7
comp=Z,2.1nm,1.1s,baz=80,slow=1.2,SNR=14
GERES PKPab PKPab 19 10 16.0 -1.1
comp=Z,21nm,0.8s,baz=38,slow=5.0,SNR=44
GERES **GERESS Array B** 159.96 333 PKP PKPdf 19 09 34.9 -0.7
GERES PKPab PKPab 19 10 16.0 -1.1
GERES **GERESS Array B** 159.96 333 PKIKP PKPdf 19 09 34.9 -0.7
GERES 19 10 16.0
SKO **Skopje** 160.00 307 *e*PKP PKPab 19 10 18.1 +0.4
WET **Wettzell** 160.02 334 *e*PKPdf PKPdf 19 09 35.3 -0.3
WET *e*PKPab PKPab 19 10 17.3 -0.1
WET **Wettzell** 160.02 334 *e*PKIKP PKPdf 19 09 35.3 -0.3
GRF **Grafenberg Arr** 160.12 338 *e*PKPab PKPab 19 10 17.6 -0.3
GRF *e*PP PP 19 13 57.5 -3.3
GRF **Grafenberg Arr** 160.12 338 *e*PKP2 PKPab 19 10 17.6 -0.3
GRF *e* 19 13 57.5
KRUS **Krusevo** 160.37 305 *e*PKP PKPab 19 10 17.5 -1.8
ARSA **Arzberg** 160.40 327 ⇓*i*PKPab PKPab 19 10 18.3 -0.9
comp=Z,18nm,0.7s,SNR=8.2
TNS **Taunus Mts** 160.43 343 *e*PKPab PKPab 19 10 18.3 -0.9
TNS **Taunus Mts** 160.43 343 *e*PKP2 PKPab 19 10 18.3 -0.9
BEBN **Eben Emael** 160.44 349 PKPab PKPab 19 10 17.7 -1.5
BIA **Bitola** 160.45 304 *e*PKP PKPab 19 10 18.2 -1.4
MOA **Molln** 160.51 330 ⇑*i*PKPab PKPab 19 10 18.8 -0.8
comp=Z,24nm,0.8s
MEM **Membach** 160.57 348 PKPab PKPab 19 10 18.4 -1.4
IVA **Berane** 160.63 311 ⇑*i*P PKPab 19 10 20.9 +0.5
IVA **Berane** 160.63 311 ⇑*i*P PKPab 19 10 20.9 +0.5
PVY **Plav** 160.71 310 ⇑*i*P PKPab 19 10 21.0 +0.2
PVY **Plav** 160.71 310 ⇑*i*P PKPab 19 10 21.1 +0.3
PLE **Pljevlja** 160.72 313 ⇑*i*P PKPab 19 10 21.2 +0.4
PLE **Pljevlja** 160.72 313 ⇑*i*P PKPab 19 10 21.3 +0.5
PLE **Pljevlja** 160.72 313 ⇑*i*PKP2 PKPab 19 10 21.3 +0.5
BCLA **Clavier** 160.87 349 PKPab PKPab 19 10 19.5 -1.5
SNF **Seneffe** 160.93 351 PKPab PKPab 19 10 20.0 -1.3
SOKA **Soboth** 161.05 326 ⇑*i*PKPab PKPab 19 10 20.9 -1.2
comp=Z,29nm,1.2s
UPM **Unac-Piva** 161.09 313 ⇑*i*P PKPab 19 10 22.5 +0.1
UPM **Unac-Piva** 161.09 313 ⇑*i*P PKPab 19 10 22.5 +0.1
NKY **Niksic** 161.24 312 ⇑*i*P PKPab 19 10 20.7 -2.3
NKY **Niksic** 161.24 312 ⇑*i*P PKPab 19 10 20.7 -2.3
NKY **Niksic** 161.24 312 ⇑*i*PKP2 PKPab 19 10 20.7 -2.3
GIVF **Givet** 161.25 350 *e*PKIKP PKPdf 19 09 36.3 -0.6
GIVF **Givet** 161.25 350 *e*PKIKP PKPdf 19 09 36.3 -0.6
TTG **Podgorica** 161.25 310 ⇑*i*P PKPab 19 10 20.7 -2.4
TTG **Podgorica** 161.25 310 ⇑*i*P PKPab 19 10 20.8 -2.4
TTG **Podgorica** 161.25 310 ⇑*i*PKP2 PKPab 19 10 20.8 -2.3
DOU **Dourbes** 161.29 351 PKPab PKPab 19 10 21.1 -1.8
BAIF **Baives** 161.38 351 *e*PKIKP PKPdf 19 09 36.2 -0.8
BAIF **Baives** 161.38 351 *e*PKIKP PKPdf 19 09 36.2 -0.8
FUR **Furstenfeldbru** 161.42 336 *e*PKPab PKPab 19 10 23.5 -0.1
FUR **Furstenfeldbru** 161.42 336 *e*PKP2 PKPab 19 10 23.5 -0.1
WLF **Walferdange** 161.45 347 PKPab PKPab 19 10 22.7 -0.9
WLF **Walferdange** 161.45 347 *e*PKPab PKPab 19 10 22.9 -0.7
TORD **Torodi Ar. Bea** 161.47 185 PKP PKPdf 19 09 38.4 +0.2
comp=Z,2.6nm,0.8s,baz=207,slow=0.7,SNR=4.8
TORD PKPab PKPab 19 10 25.3 +0.8
comp=Z,7.6nm,0.8s,baz=177,slow=3.6,SNR=9.5
BRY **Bratogost** 161.48 312 ⇑*i*P PKPab 19 10 24.0 -0.1
BRY **Bratogost** 161.48 312 ⇑*i*P PKPab 19 10 24.0 -0.1
BRY **Bratogost** 161.48 312 ⇑*i*PKP2 PKPab 19 10 24.0 -0.1
ULC **Ulcinj** 161.48 309 ⇑*i*P PKPab 19 10 23.7 -0.5
ULC **Ulcinj** 161.48 309 ⇑*i*P PKPab 19 10 23.7 -0.5
ULC **Ulcinj** 161.48 309 ⇑*i*PKP2 PKPab 19 10 23.7 -0.5
BUM **Brajici-Budva** 161.55 310 ⇑*i*P PKPab 19 10 23.3 -1.2
BUM **Brajici-Budva** 161.55 310 ⇑*i*P PKPab 19 10 23.3 -1.1
MYKA **Terra Mystica** 161.72 329 ⇓*i*PKPab PKPab 19 10 23.0 -1.9
comp=Z,26nm,0.8s
LANF **Langenberg** 161.74 343 PKP PKPab 19 10 23.7 -1.2
HCY **Herceg Novi** 161.74 311 ⇑*i*P PKPab 19 10 24.5 -0.8
HCY **Herceg Novi** 161.74 311 ⇑*i*P PKPab 19 10 24.5 -0.8
HCY **Herceg Novi** 161.74 311 ⇑*i*PKP2 PKPab 19 10 24.5 -0.8
WATA **Walderalm** 162.01 334 ⇓*i*PKPab PKPab 19 10 25.3 -0.9
comp=Z,28nm,1.1s
STON **Ston** 162.02 313 P PKPab 19 10 24.9 -1.6
WTTA **Wattenberg** 162.05 333 ⇓*i*PKPab PKPab 19 10 25.5 -0.9
comp=Z,44nm,1.3s
MOTA **Moosalm** 162.18 334 ⇓*i*PKPab PKPab 19 10 26.1 -0.9
comp=Z,47nm,0.8s,SNR=21
RETA **Reutte** 162.18 335 *i* PKPab PKPab 19 10 26.4 -0.5
comp=Z,66nm,1.0s,SNR=18
BFO **Black Forest** 162.20 341 *e*PKPab PKPab 19 10 26.1 -0.9
BFO **Black Forest** 162.20 341 *e*PKP2 PKPab 19 10 26.1 -0.9
FETA **Feichten** 162.59 335 ⇓*i*PKPab PKPab 19 10 27.9 -0.9
comp=Z,53nm,1.0s,SNR=29
ECH **Echery** 162.61 344 PKP PKPab 19 10 27.3 -1.5
DAVA **Damuels** 162.66 337 ⇓*i*PKPab PKPab 19 10 28.2 -0.8
comp=Z,72nm,0.9s,SNR=19
MEZF **Maizieres J'vi** 162.77 348 *e*PKIKP PKPdf 19 09 38.0 -0.5
comp=Z,50nm,1.4s
THEF **They Montfort** 162.86 346 PKP PKPab 19 10 28.4 -1.4
FLN **La Foliniere** 162.95 1 *e*PKIKP PKPdf 19 09 38.0 -0.7
comp=Z,56nm,1.1s
FLN **La Foliniere** 162.95 1 *e*PKIKP PKPdf 19 09 38.0 -0.7
MOF **Molkenrain** 162.95 343 PKP PKPab 19 10 29.1 -1.2
HAU **Haudompre** 162.99 345 *e*PKIKP PKPdf 19 09 37.7 -1.0
HAU **Haudompre** 162.99 345 *e*PKIKP PKPdf 19 09 37.7 -1.0
HINF **Hinteralfeld** 163.05 344 *e*PKIKP PKPdf 19 09 37.5 -1.3
HINF **Hinteralfeld** 163.05 344 *e*PKIKP PKPdf 19 09 37.5 -1.3
SFTF **Sexfontaines** 163.06 348 *e*PKIKP PKPdf 19 09 38.2 -0.6
comp=Z,87nm,1.5s
DAVOX **Davos/Dischmat** 163.10 336 PKP PKPdf 19 09 39.8 +0.9
comp=Z,1.8nm,0.7s,baz=53,slow=4.2,SNR=3.1
DAVOX PKPab PKPab 19 10 30.5 -0.5
comp=Z,30nm,0.8s,baz=22,slow=5.4,SNR=27
DAVOX **Davos/Dischmat** 163.10 336 PKP PKPdf 19 09 39.8 +0.9
DAVOX PKPab PKPab 19 10 30.5 -0.5
DAVOX **Davos/Dischmat** 163.10 336 PKIKP PKPdf 19 09 39.8 +0.9
DAVOX 19 10 30.5
LOMF **Lomont** 163.49 343 PKP PKPab 19 10 31.7 -1.0
QUIF **Quistinic** 163.63 7 *e*PKIKP PKPdf 19 09 38.7 -0.6
comp=Z,60nm,1.3s
QUIF **Quistinic** 163.63 7 *e*PKIKP PKPdf 19 09 38.7 -0.6
LOR **Lormes** 164.16 350 *e*PKIKP PKPdf 19 09 39.2 -0.6
LOR **Lormes** 164.16 350 *e*PKIKP PKPdf 19 09 39.2 -0.6
CABF **La Chapelle** 164.36 344 *e*PKIKP PKPdf 19 09 38.2 -1.8
comp=Z,32nm,1.2s
CABF **La Chapelle** 164.36 344 *e*PKIKP PKPdf 19 09 38.2 -1.8
SSF **Saint Saulge** 164.41 351 *e*PKIKP PKPdf 19 09 39.3 -0.8
comp=Z,42nm,1.5s
SSF **Saint Saulge** 164.41 351 *e*PKIKP PKPdf 19 09 39.3 -0.8
AVF **Avril sur Loir** 164.69 351 *e*PKIKP PKPdf 19 09 39.4 -0.9
comp=Z,18nm,1.4s
AVF **Avril sur Loir** 164.69 351 *e*PKIKP PKPdf 19 09 39.4 -0.9
SMF **Signal de Mont** 164.77 350 *e*PKIKP PKPdf 19 09 39.8 -0.6
SMF **Signal de Mont** 164.77 350 *e*PKIKP PKPdf 19 09 39.8 -0.6
BGF **Bois d'Agland** 164.99 352 *e*PKIKP PKPdf 19 09 40.2 -0.4
BGF **Bois d'Agland** 164.99 352 *e*PKIKP PKPdf 19 09 40.2 -0.4
RSL **Roselend** 165.09 341 PKP PKPab 19 10 39.1 -0.7
MFF **Saint Martin d** 165.11 0 *e*PKIKP PKPdf 19 09 40.2 -0.5
MFF **Saint Martin d** 165.11 0 *e*PKIKP PKPdf 19 09 40.2 -0.5
AGO **Saint Agoulin** 165.45 351 PKP PKPab 19 10 40.9 -0.4
PLDF **La Plantade** 165.46 350 PKP PKPab 19 10 41.3 -0.1
PYM **Petit Puy Mans** 165.76 351 PKP PKPab 19 10 42.1 -0.6
OG22 **Abries** 165.79 339 PKP PKPab 19 10 42.1 -0.8
MBDF **Montbardon** 165.93 340 *e*PKIKP PKPdf 19 09 41.1 -0.3
MBDF **Montbardon** 165.93 340 *e*PKIKP PKPdf 19 09 41.1 -0.3
SSB **Saint Sauveur** 165.97 346 PKP PKPab 19 10 42.6 -1.0
ORIF **Oris-en-Rattie** 166.00 342 *e*PKIKP PKPdf 19 09 41.0 -0.5
ORIF **Oris-en-Rattie** 166.00 342 *e*PKIKP PKPdf 19 09 41.0 -0.5
FRNF **Fournols** 166.18 352 PKP PKPab 19 10 43.5 -1.0
LBL **Lubilhac** 166.24 350 PKP PKPab 19 10 44.8 0.0
SAOF **Saorge** 166.34 336 PKP PKPab 19 10 43.9 -1.4
VIVF **Saint-Julien-l** 166.34 346 *e*PKIKP PKPdf 19 09 41.3 -0.4
VIVF **Saint-Julien-l** 166.34 346 *e*PKIKP PKPdf 19 09 41.3 -0.4
RJF **Les Rejaudoux** 166.35 355 *e*PKIKP PKPdf 19 09 40.0 -1.7
RJF **Les Rejaudoux** 166.35 355 *e*PKIKP PKPdf 19 09 40.0 -1.7
TOUF **Mont Tournerai** 166.42 337 PKP PKPab 19 10 44.8 -0.9
OG25 **Le Caire** 166.46 341 PKP PKPab 19 10 45.2 -0.6
OG26 **St.-Nazaire-De** 166.46 343 PKP PKPab 19 10 45.5 -0.4
LUCF **Luceram** 166.49 336 PKP PKPab 19 10 44.9 -1.1
MVIF **Mont Vial** 166.55 337 PKP PKPab 19 10 45.3 -1.0
CAF **Calviac** 166.68 353 *e*PKIKP PKPdf 19 09 40.4 -1.6
comp=Z,18nm,1.2s
CAF **Calviac** 166.68 353 *e*PKIKP PKPdf 19 09 40.4 -1.6
LFF **La Frestale** 166.76 357 *e*PKIKP PKPdf 19 09 41.6 -0.4
LFF **La Frestale** 166.76 357 *e*PKIKP PKPdf 19 09 41.6 -0.4
CALN **Calern** 166.77 337 PKP PKPab 19 10 46.2 -1.0
FRF **La Foret Royal** 167.02 338 *e*PKIKP PKPdf 19 09 41.3 -1.0
comp=Z,16nm,1.2s
FRF **La Foret Royal** 167.02 338 *e*PKIKP PKPdf 19 09 41.3 -1.0
LASF **Ste Croix** 167.26 347 *e*PKIKP PKPdf 19 09 42.2 -0.2
LMR **La Mourre** 167.26 338 *e*PKIKP PKPdf 19 09 42.2 -0.3
LMR **La Mourre** 167.26 338 *e*PKIKP PKPdf 19 09 42.2 -0.3
SJPF **Ste Jean** 168.57 4 *e*PKIKP PKPdf 19 09 41.6 -1.8
comp=Z,66nm,1.5s
SJPF **Ste Jean** 168.57 4 *e*PKIKP PKPdf 19 09 41.6 -1.8
PBRG **Braganca** 168.59 26 *e*PKPab PKPab 19 10 54.0 -1.4
PVRL **Vila Real** 168.64 31 *e*PKPdf PKPdf 19 09 44.6 +1.1
PVRL **Vila Real** 168.64 31 *e*PKPab PKPab 19 10 54.1 -1.5
EPF **Esparros** 168.68 358 *e*PKIKP PKPdf 19 09 42.0 -1.4
comp=Z,17nm,1.0s
EPF **Esparros** 168.68 358 *e*PKIKP PKPdf 19 09 42.0 -1.4
ETSF **Etsaut** 168.81 2 *e*PKIKP PKPdf 19 09 42.7 -0.8
comp=Z,24nm,1.4s
ETSF **Etsaut** 168.81 2 *e*PKIKP PKPdf 19 09 42.7 -0.8
PVIS **Viseu** 169.01 33 *e*PKPdf PKPdf 19 09 43.8 +0.1
PVIS **Viseu** 169.01 33 *e*PKPab PKPab 19 10 55.5 -1.8
MVO **Moncorvo** 169.02 29 *e*PKPdf PKPdf 19 09 44.7 +1.0
MVO **Moncorvo** 169.02 29 *e*PKPab PKPab 19 10 55.9 -1.4
MTE **Manteigas** 169.42 33 *e*PKPab PKPab 19 10 57.3 -1.9
PTOM **Tomar** 169.59 38 *e*PKPab PKPab 19 10 58.5 -1.5
TAM **Tamanrasset** 169.83 211 *e*PKPdf PKPdf 19 09 45.6 +0.8
TAM **Tamanrasset** 169.83 211 *e*PKIKP PKPdf 19 09 45.6 +0.8
PCBR **Castelo Branco** 169.90 34 *e*PKPdf PKPdf 19 09 45.1 +0.8
PCBR **Castelo Branco** 169.90 34 *e*PKPab PKPab 19 10 59.4 -1.9
PMRV **Marv??o** 170.26 36 *e*PKPab PKPab 19 11 00.9 -2.0
PESTR **Estremoz** 170.57 39 *e*PKPab PKPab 19 11 02.3 -2.0
EVO **Evora** 170.58 41 *e*PKIKP PKPdf 19 09 45.2 +0.5
comp=Z,10nm,0.9s
EVO **Evora** 170.58 41 *e*PKPdf PKPdf 19 09 45.8 +1.1
EVO **Evora** 170.58 41 *e*PKPab PKPab 19 11 02.4 -2.0
MORF **Marmelete** 170.98 49 *e*PKPdf PKPdf 19 09 46.3 +1.3
PBEJ **Beja** 171.01 43 *e*PKPdf PKPdf 19 09 46.1 +1.1
PCVE **Castro Verde** 171.17 46 *e*PKPdf PKPdf 19 09 46.5 +1.5
PCVE **Castro Verde** 171.17 46 *e*PKPab PKPab 19 11 05.5 -1.5
KEST **Kesra** 171.18 300 PKP PKPdf 19 09 45.9 +0.8
comp=Z,1.5nm,0.9s,baz=190,slow=8.4,SNR=3.6
PBAR **Barrancos** 171.38 40 *e*PKPdf PKPdf 19 09 46.3 +1.2
PBAR **Barrancos** 171.38 40 *e*PKPab PKPab 19 11 05.9 -2.0
PAB **San Pablo** 171.43 23 *e*PKPdf PKPdf 19 09 45.5 +0.3
PAB **San Pablo** 171.43 23 *e*PKIKP PKPdf 19 09 45.5 +0.4
ESDC **Sonseca Array** 171.44 21 PKP PKPdf 19 09 45.1 0.0
comp=Z,1.5nm,0.8s,baz=349,slow=2.1,SNR=14
ESDC PKPab PKPab 19 11 06.1 -2.0
comp=Z,4.0nm,0.8s,baz=330,slow=3.7,SNR=20
ESDC PP PP 19 14 56.0 -2.9
comp=Z,1.0nm,0.9s,baz=333,slow=4.9,SNR=4.3
PBDV **Barranco-do-Ve** 171.48 47 *e*PKPdf PKPdf 19 09 46.7 +1.5
MDT **Midelt** 176.00 73 PKP PKPdf 19 09 48.6 +1.6
comp=Z,3.8nm,0.9s,baz=231,slow=0.7,SNR=7.0

*MDD **21** 19:11:29.7±2.1,37.°11N×13.°08W,h0km,mb4.0/2,Error ellipse: s-maj=22.4km s-min=17.9km az=178.0,PRXIMO*
*ISCJB **21** 19:11:30.8±0.9,37.°33N±0.°06×12.°87W±0.°06,h10km,Error ellipse: s-maj=9.3km s-min=6.1km az=149.1*
*INMG **21** 19:11:30.9±1.2,36.°97N×13.°49W,h4km±145km,ML2.1, Error ellipse: s-maj=120.0km s-min=9.8km az=73.0*
*NEIC **21** 19:11:30.3,37.°11N×13.°02W,h0km,MG3.8(MDD),After MDD.*
*CSEM **21** 19:11:32.6±0.3,37.°26N×12.°86W,h10km,ML3.2/8,Error ellipse: s-maj=8.8km s-min=5.0km az=145.0*
ISC 21 19:11:32.2±0.9,37.°25N±0.°06×12.°88W±0.°06,h10km,n63, σ0**9**1/112**,2C,Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.24**	**91**	*e*Pn	**Pn**	**19 12 22.6**	**-0.5**
PFVI				*e*Sn	**Sn**	**19 13 01.8**	**+0.1**
PFVI				A		19 13 03.6	
2.7nm,0.2s							
PFVI	**Vila Bisbo**	**3.24**	**91**	⇑P	**Pn**	**19 12 22.6**	**-0.6**
PFVI				S	**Sn**	**19 13 01.3**	**-0.5**
PFVI	**Vila Bisbo**	**3.24**	**91**	⇑Pn	**Pn**	**19 12 22.6**	**-0.6**
1.8nm,0.1s,SNR=18							
PFVI				Sn	**Sn**	**19 13 01.3**	**-0.5**
5.2nm,0.2s,SNR=7.9							
PFVI	**Vila Bisbo**	**3.24**	**91**	*e*Pn	**Pn**	**19 12 22.6**	**-0.5**
PFVI				S	**Sn**	**19 13 01.3**	**-0.4**
5.2nm,0.2s,SNR=7.9							
PFVI				*e*Sn	**Sn**	**19 13 01.8**	**+0.1**
2.7nm,0.2s							
PMAFR	**Mafra**	**3.31**	**58**	*e*Pn	**Pn**	**19 12 24.7**	**+0.6**
PMAFR				*e*Sn	**Sn**	**19 13 05.5**	**+2.1**
PMAFR				A		19 13 07.9	
6.6nm,0.2s							
PMAFR	**Mafra**	**3.31**	**58**	Pn	**Pn**	**19 12 24.6**	**+0.6**
2.1nm,0.1s,SNR=7.9							
PMAFR				Sn	**Sn**	**19 13 04.9**	**+1.5**
7.9nm,0.2s,SNR=7.9							
PMAFR	**Mafra**	**3.31**	**58**	P	**Pn**	**19 12 24.6**	**+0.5**
2.1nm,0.1s,SNR=7.9							
PMAFR				S	**Sn**	**19 13 04.9**	**+1.5**
7.9nm,0.2s,SNR=7.9							
PMAFR				*e*Sn	**Sn**	**19 13 05.5**	**+2.1**
6.6nm,0.2s							
PTEO	**Sao Teotonio**	**3.32**	**84**	*e*Sn	**Sn**	**19 13 04.4**	**+0.6**
PTEO				A		19 13 05.0	
2.3nm,0.1s							
PTEO	**Sao Teotonio**	**3.32**	**84**	Sn	**Sn**	**19 13 04.4**	**+0.6**
1.2nm,0.1s							
PTEO	**Sao Teotonio**	**3.32**	**84**	*e*Sn	**Sn**	**19 13 04.4**	**+0.6**
2.3nm,0.1s							
MORF	**Marmelete**	**3.38**	**88**	*e*Pn	**Pn**	**19 12 24.7**	**-0.3**
MORF				*e*Sn	**Sn**	**19 13 05.3**	**+0.2**
MORF				A		19 13 12.8	
4.6nm,0.1s							
MORF	**Marmelete**	**3.38**	**88**	Pn	**Pn**	**19 12 24.7**	**-0.3**
MORF				Sn	**Sn**	**19 13 05.3**	**+0.2**
4.6nm,0.1s							
MORF	**Marmelete**	**3.38**	**88**	*e*Pn	**Pn**	**19 12 24.7**	**-0.3**
MORF				*e*Sn	**Sn**	**19 13 05.3**	**+0.2**
4.6nm,0.1s							
PCVE	**Castro Verde**	**3.87**	**83**	*e*Pn	**Pn**	**19 12 31.9**	**+0.1**
PCVE				*e*Sn	**Sn**	**19 13 18.1**	**+0.8**
PCVE				A		19 13 21.2	
1.1nm,0.2s							
PCVE	**Castro Verde**	**3.87**	**83**	Pn	**Pn**	**19 12 31.9**	**+0.1**
PCVE				Sn	**Sn**	**19 13 18.1**	**+0.8**
1.1nm,0.2s							
PCVE	**Castro Verde**	**3.87**	**83**	*e*Pn	**Pn**	**19 12 31.9**	**+0.1**
PCVE				*e*Sn	**Sn**	**19 13 18.1**	**+0.8**
1.1nm,0.2s							
PBDV	**Barranco-do-Ve**	**3.95**	**89**	*e*Sn	**Sn**	**19 13 20.3**	**+1.0**
PBDV	**Barranco-do-Ve**	**3.95**	**89**	Sn	**Sn**	**19 13 20.3**	**+1.0**
PBDV	**Barranco-do-Ve**	**3.95**	**89**	*e*Sn	**Sn**	**19 13 20.3**	**+1.0**
EVO	**Evora**	**4.06**	**70**	*e*Pn	**Pn**	**19 12 34.5**	**+0.1**
EVO				*e*Sn	**Sn**	**19 13 23.1**	**+1.2**
EVO				A		19 13 27.1	
3.3nm,0.1s							
EVO	**Evora**	**4.06**	**70**	Pn	**Pn**	**19 12 34.5**	**+0.1**
EVO				Sn	**Sn**	**19 13 23.1**	**+1.2**
3.3nm,0.1s							
EVO	**Evora**	**4.06**	**70**	*e*Pn	**Pn**	**19 12 34.5**	**+0.1**
EVO				*e*Sn	**Sn**	**19 13 23.1**	**+1.2**
3.3nm,0.1s							
PVAQ	**Vaqueiros**	**4.12**	**86**	*e*Pn	**Pn**	**19 12 35.6**	**+0.4**
PVAQ				*e*Sn	**Sn**	**19 13 23.7**	**+0.3**
PVAQ				A		19 13 28.5	
3.4nm,0.1s							
PVAQ	**Vaqueiros**	**4.12**	**86**	Pn	**Pn**	**19 12 35.6**	**+0.4**
PVAQ				Sn	**Sn**	**19 13 23.7**	**+0.3**
3.4nm,0.1s							
PVAQ	**Vaqueiros**	**4.12**	**86**	*e*Pn	**Pn**	**19 12 35.6**	**+0.4**
PVAQ				*e*Sn	**Sn**	**19 13 23.7**	**+0.3**
3.4nm,0.1s							
EGRO	**El Granado**	**4.31**	**85**	P	**Pn**	**19 12 37.3**	**-0.5**
EGRO				S	**Sn**	**19 13 26.9**	**-1.2**
EGRO	**El Granado**	**4.31**	**85**	Pn	**Pn**	**19 12 37.3**	**-0.5**
0.6nm,0.1s,SNR=7.9							
EGRO				Sn	**Sn**	**19 13 26.9**	**-1.2**
2.7nm,0.1s,SNR=7.9							
EGRO	**El Granado**	**4.31**	**85**	P	**Pn**	**19 12 37.3**	**-0.5**
0.6nm,0.1s,SNR=7.9							
EGRO				S	**Sn**	**19 13 26.9**	**-1.2**
2.7nm,0.1s,SNR=7.9							
PESTR	**Estremoz**	**4.48**	**67**	*e*Pn	**Pn**	**19 12 41.0**	**+0.9**
PESTR				*e*Sn	**Sn**	**19 13 33.8**	**+1.6**
PESTR	**Estremoz**	**4.48**	**67**	Pn	**Pn**	**19 12 41.0**	**+0.9**
PESTR				Sn	**Sn**	**19 13 33.8**	**+1.6**
PESTR	**Estremoz**	**4.48**	**67**	*e*Pn	**Pn**	**19 12 41.0**	**+0.9**
PESTR				*e*Sn	**Sn**	**19 13 33.8**	**+1.6**
PBAR	**Barrancos**	**4.72**	**77**	*e*Sn	**Sn**	**19 13 37.5**	**-0.8**
PBAR	**Barrancos**	**4.72**	**77**	Sn	**Sn**	**19 13 37.5**	**-0.8**
PBAR	**Barrancos**	**4.72**	**77**	*e*Sn	**Sn**	**19 13 37.5**	**-0.8**
PMRV	**Marv??o**	**4.83**	**62**	*e*Pn	**Pn**	**19 12 45.2**	**+0.2**
PMRV				*e*Sn	**Sn**	**19 13 41.8**	**+0.8**
PMRV				A		19 13 44.9	
1.0nm,0.1s							
PMRV	**Marv??o**	**4.83**	**62**	Pn	**Pn**	**19 12 45.2**	**+0.2**
PMRV				Sn	**Sn**	**19 13 41.8**	**+0.8**
1.0nm,0.1s							
PMRV	**Marv??o**	**4.83**	**62**	*e*Pn	**Pn**	**19 12 45.2**	**+0.2**
PMRV				*e*Sn	**Sn**	**19 13 41.8**	**+0.8**
1.0nm,0.1s							
EBAD	**Badajoz**	**4.87**	**70**	P	**Pn**	**19 12 46.2**	**+0.7**
EBAD				S	**Sn**	**19 13 41.0**	**-0.9**
EBAD	**Badajoz**	**4.87**	**70**	Pn	**Pn**	**19 12 46.2**	**+0.7**
0.5nm,0.1s,SNR=7.9							
EBAD				Sn	**Sn**	**19 13 41.0**	**-0.9**
0.8nm,0.1s,SNR=7.9							
EBAD	**Badajoz**	**4.87**	**70**	P	**Pn**	**19 12 46.2**	**+0.7**
0.5nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**19 13 41.0**	**-1.0**
0.8nm,0.1s,SNR=7.9							
PCBR	**Castelo Branco**	**4.96**	**57**	*e*P	**Pn**	**19 12 47.2**	**+0.4**
PCBR	**Castelo Branco**	**4.96**	**57**	Pn	**Pn**	**19 12 47.2**	**+0.4**
PCBR	**Castelo Branco**	**4.96**	**57**	*e*P	**Pn**	**19 12 47.2**	**+0.4**
EMIN	**Mina Concepcio**	**4.96**	**82**	P	**Pn**	**19 12 46.9**	**+0.1**
EMIN				S	**Sn**	**19 13 42.7**	**-1.5**
EMIN	**Mina Concepcio**	**4.96**	**82**	Pn	**Pn**	**19 12 46.9**	**+0.1**
0.1nm,0.1s,SNR=7.9							
EMIN				Sn	**Sn**	**19 13 42.7**	**-1.5**
0.7nm,0.1s,SNR=6.9							
EMIN	**Mina Concepcio**	**4.96**	**82**	P	**Pn**	**19 12 46.9**	**+0.1**
0.1nm,0.1s,SNR=7.9							
EMIN				S	**Sn**	**19 13 42.7**	**-1.6**
0.7nm,0.1s,SNR=6.9							
PMAR	**Madeira**	**5.60**	**217**	*e*P	**Sn**	**19 13 55.6**	**-4.4**
PMAR				*e*S	**Sn**	**19 14 02.7**	**+2.7**
PMAR				A		19 14 04.4	
92nm,0.1s							
FUL	**Funchal**	**5.67**	**217**	*e*P	**Sn**	**19 13 54.5**	**-7.1**
FUL				*e*S	**Sn**	**19 14 00.8**	**-0.8**
FUL				A		19 14 01.2	
53nm,0.2s							
ECAB	**El Cabril**	**5.98**	**80**	P	**Pn**	**19 13 01.2**	**+0.5**
ECAB				S	**Sn**	**19 14 06.9**	**-2.3**
ECAB	**El Cabril**	**5.98**	**80**	Pn	**Pn**	**19 13 01.2**	**+0.5**
0.8nm,0.1s,SNR=7.9							
ECAB				Sn	**Sn**	**19 14 06.9**	**-2.3**
0.2nm,0.1s,SNR=7.9							
ECAB	**El Cabril**	**5.98**	**80**	P	**Pn**	**19 13 01.2**	**+0.5**
0.8nm,0.1s,SNR=7.9							
ECAB				S	**Sn**	**19 14 06.9**	**-2.3**
0.2nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.99**	**48**	P	**Pn**	**19 13 00.5**	**-0.5**
MVO				S	**Sn**	**19 14 08.3**	**-1.2**
MVO	**Moncorvo**	**5.99**	**48**	Pn	**Pn**	**19 13 00.5**	**-0.5**
0.7nm,0.1s,SNR=7.9							
MVO				Sn	**Sn**	**19 14 08.3**	**-1.2**
0.4nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.99**	**48**	P	**Pn**	**19 13 00.4**	**-0.5**
0.7nm,0.1s,SNR=7.9							
MVO				S	**Sn**	**19 14 08.3**	**-1.3**
0.4nm,0.1s,SNR=7.9							
EPLA	**Plasencia**	**6.02**	**60**	P	**Pn**	**19 13 00.9**	**-0.4**
EPLA				S	**Sn**	**19 14 09.2**	**-1.0**
EPLA	**Plasencia**	**6.02**	**60**	Pn	**Pn**	**19 13 00.9**	**-0.4**
0.3nm,0.0s,SNR=7.9							
EPLA				Sn	**Sn**	**19 14 09.2**	**-1.0**
1.1nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**6.02**	**60**	P	**Pn**	**19 13 00.9**	**-0.4**
0.3nm,0.0s,SNR=7.9							
EPLA				S	**Sn**	**19 14 09.2**	**-1.0**
1.1nm,0.2s,SNR=7.9							
EMAZ	**Mazaricos**	**6.43**	**27**	Sn	**Sn**	**19 14 14.4**	**-5.9**
2.7nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**6.65**	**80**	P	**Pn**	**19 13 10.2**	**+0.3**
EADA				S	**Sn**	**19 14 20.9**	**-4.8**
EADA	**Adamuz**	**6.65**	**80**	Pn	**Pn**	**19 13 10.2**	**+0.3**
0.2nm,0.1s,SNR=4.0	

KNA Kununurra 54.05 262 P P 19 28 18.2 -0.2
43nm,0.9s,mb5.0
NLAI Namlea 58.31 276 P P 19 28 49.0 +0.5
878nm45nm,1.4s,mb4.9
TNTI Ternate 59.25 280 P P 19 28 55.3 +0.3
73nm,1.2s,mb5.2
KDI Kendari 62.42 274 P P 19 29 16.6 +0.4
39nm,1.1s,mb5.0
LUWI Luwuk 63.08 277 P P 19 29 21.4 +0.8
74nm,1.3s,mb5.2
MRSI Marisa 64.32 278 P P 19 29 28.2 -0.5
24nm,1.1s,mb4.7
KAPI Kappang 64.90 272 P P 19 29 31.8 -0.6
13nm,0.8s,mb4.6,baz=146,slow=7.3,SNR=8.1
BMNI Bima 65.07 268 P P 19 29 33.2 -0.3
62nm,1.2s,mb5.1
MJAR Matsushiro Arr 68.17 321 P P 19 29 51.0 -1.5
6.5nm,0.9s,mb4.2,baz=165,slow=7.2,SNR=14
MJAR Matsushiro Arr 68.17 321 P P 19 29 51.0 -1.5
MAJO Matsushiro 68.17 321 eP P 19 29 51.3 -1.3
8.7nm,1.0s,mb4.3
MAT Matsushiro 68.17 321 P P 19 29 51.2 -1.4
KBKI Kotabaru 68.80 273 P P 19 29 58.0 +1.0
47nm,1.1s,mb5.0
JNU Nakatsue 70.89 314 eP P 19 30 08.3 -0.9
9.8nm,0.9s,mb4.4
SJI Sawahan 71.93 267 P P 19 30 16.3 +0.4
59nm,1.1s,mb5.1
PCJI Pacitan 72.38 266 P P 19 30 18.9 +0.3
201nm,1.0s,mb5.7
PETK Petropavlovsk- 72.41 343 P P 19 30 16.8 -1.0
20nm,0.7s,mb4.8,baz=131,slow=8.8,SNR=20
EDW2 Edwards Air Fo 73.77 46 ⇑P P 19 30 26.3 +0.1
baz=74
MONP Monument Peak 73.82 48 ⇓P P 19 30 26.8 +0.2
baz=74
ISA Isabella 73.86 45 ⇓P P 19 30 26.7 +0.1
baz=74
CMB Columbia Colle 73.92 42 eP P 19 30 26.1 -0.9
9.0nm,1.2s,mb4.3
STKI Sintang 74.22 275 P P 19 30 30.4 +1.1
2µm27nm,1.2s,mb4.8
LRMC Laurel Mountai 74.30 45 ⇑P P 19 30 29.4 +0.2
baz=74
YBH Yreka Blue Hor 74.69 38 eP P 19 30 31.3 0.0
15nm,1.3s,mb4.5
BELC Belle Mtn. Jos 74.70 48 ⇑P P 19 30 31.8 +0.2
baz=75
MPMC Manual Prospec 74.75 45 ⇑P P 19 30 32.1 +0.3
baz=75
WAKR Walker 74.81 42 eP P 19 30 32.0 0.0
21nm,1.4s,mb4.6
GSC Goldstone 74.81 46 ⇓P P 19 30 32.2 0.0
baz=75
GSC Goldstone 74.81 46 eP P 19 30 31.5 -0.6
3.8nm,0.9s,mb4.0
HEC Hector,Ludlow 74.89 47 ⇓P P 19 30 32.7 +0.1
baz=75
BC3 Big Chuckawall 74.91 48 ⇓P P 19 30 33.1 +0.3
baz=75
WCN Washoe City 75.06 41 ⇑P P 19 30 33.8 +0.4
baz=75
KSRS Korea Array 75.30 316 P P 19 30 35.0 +0.1
6.7nm,0.9s,mb4.2,baz=130,slow=6.5,SNR=20
GRAC Grapevine Rang 75.33 44 ⇓P P 19 30 35.5 +0.4
baz=76
GMRC Granite Mounta 75.34 47 ⇑P P 19 30 34.8 -0.4
baz=76
IRM Iron Mountain 75.38 48 ⇑P P 19 30 35.6 +0.2
baz=76
FURC Furnace Creek, 75.39 45 ⇑P P 19 30 35.3 -0.1
baz=76
SHOC Shoshone 75.49 46 ⇓P P 19 30 36.3 +0.3
baz=76
NVAR Mina Array Bea 75.50 43 P P 19 30 35.7 -0.3
5.2nm,0.9s,mb4.2,baz=228,slow=9.4,SNR=28
NVAR Mina Array Bea 75.50 43 P P 19 30 35.7 -0.3
Y12C Blythe 75.63 48 ⇑P P 19 30 36.7 -0.1
baz=76
113A Mohawk Valley, 75.69 50 ⇑P P 19 30 37.3 +0.1
baz=76
U10A Ash Meadows, A 75.73 45 ⇓P P 19 30 37.7 +0.3
baz=76
Z13A Yuma Proving G 75.98 49 ⇓P P 19 30 39.0 +0.2
baz=76,SNR=6.3
214A Organ Pipe Nat 76.00 51 ⇓P P 19 30 38.8 -0.2
baz=76
V11A Goodsprings 76.05 46 ⇓P P 19 30 39.4 +0.3
baz=76
LEM Lembang 76.14 267 P P 19 30 40.9 +0.7
75nm,0.9s,mb5.3
Y13A Salome 76.16 49 ⇓P P 19 30 40.3 +0.5
baz=76
PDMCI Parker Dam,Lak 76.18 48 ⇑P P 19 30 39.8 -0.1
baz=76
MOD Modoc 76.23 39 eP P 19 30 39.5 -0.5
7.5nm,1.3s,mb4.2
K05A Summer Lake 76.36 38 P P 19 30 41.1 +0.3
baz=76,SNR=6.3
V12A Nelson 76.39 47 ⇑P P 19 30 41.6 +0.5
baz=76
X13A Yucca 76.55 48 ⇓P P 19 30 42.2 +0.2
baz=77
W13A Hualapai Mount 76.76 47 ⇓P P 19 30 43.2 0.0
baz=77
Y14A Wickenburg 76.82 49 ⇑P P 19 30 43.4 -0.1
baz=77
216A Three Points, 77.04 51 ⇑P P 19 30 45.0 +0.2
baz=77
V13A Grand Canyon W 77.06 47 ⇓P P 19 30 44.9 +0.1
baz=77
Z15A Gila River Ind 77.12 50 ⇓P P 19 30 46.0 +0.7
baz=77
X14A Yava 77.16 48 ⇑P P 19 30 46.0 +0.6
baz=77,SNR=7.9
R11A Troy Canyon, C 77.25 44 ⇑P P 19 30 45.7 -0.2
baz=77,SNR=7.8
Y15A Casa Rosa Ranc 77.31 49 ⇑P P 19 30 46.3 0.0
baz=77,SNR=7.6
U13A Pakoon Wash 77.36 46 ⇓P P 19 30 46.7 +0.2
baz=78,SNR=12
W14A Seligman 77.38 48 ⇑P P 19 30 47.1 +0.4
baz=78,SNR=12
217A Green Valley 77.42 52 ⇓P P 19 30 47.3 +0.4
baz=78,SNR=6.3
WVOR Wild Horse Val 77.54 39 eP P 19 30 46.6 -0.7
13nm,1.4s,mb4.4
V14A Boquillas Ranc 77.58 47 P P 19 30 48.2 +0.5
baz=78,SNR=13
X15A Humboldt 77.64 49 ⇑P P 19 30 48.4 +0.3
baz=78,SNR=13
Z16A Peralta Trail, 77.69 50 ⇓P P 19 30 48.9 +0.5
baz=78
TUC Tucson 77.69 51 eP P 19 30 46.5 -1.9
19nm,1.4s,mb4.5
T13A Saint George 77.71 46 ⇑P P 19 30 48.9 +0.5
baz=78
117A Oracle 77.84 51 ⇓P P 19 30 49.9 +0.6
baz=78,SNR=8.0
318A Bisbee 77.89 52 ⇑P P 19 30 49.3 -0.2
baz=78,SNR=6.6
Y16A Circle Bar Ran 77.90 50 ⇓P P 19 30 49.3 -0.2
baz=78,SNR=6.6
U14A Mt Trumbull 77.91 47 ⇓P P 19 30 50.0 +0.5
baz=78,SNR=10
I07A Izee 77.98 37 ⇓P P 19 30 49.8 +0.1
baz=78
S13A Holt Ranch, En 78.02 45 ⇓P P 19 30 49.9 -0.2
baz=78
218A Dragoon 78.09 52 ⇑P P 19 30 50.8 +0.2
baz=78,SNR=5.6
X16A Lo Mia Camp, P 78.19 49 ⇑P P 19 30 51.1 +0.1
baz=78,SNR=7.7
R13A O'Grain Ranch, 78.25 45 ⇑P P 19 30 51.5 +0.2
baz=78
Y17A Roosevelt 78.28 50 ⇑P P 19 30 51.8 +0.1
baz=78,SNR=5.2
MDJ Mudanjiang 78.31 323 P P 19 30 51.6 +0.1
MDJ pmax pmax
comp=Z,9.0nm,1.6s,mb4.2
MDJ pmax pmax
comp=Z,69nm,6.1s
V15A Kaibab Nationa 78.33 48 ⇑P P 19 30 52.6 +0.8
baz=78,SNR=8.3
319A Douglas 78.41 53 ⇓P P 19 30 52.8 +0.4
baz=78,SNR=5.2
W16A Flagstaff 78.44 48 ⇓P P 19 30 52.9 +0.4
baz=79

118A Homack Ranch, 78.45 51 ⇑P P 19 30 52.4 -0.1
baz=79,SNR=6.9
U15A North Rim 78.54 47 ⇑P P 19 30 53.4 +0.5
baz=79,SNR=5.5
Z18A Geronimo 78.60 51 ⇑P P 19 30 54.2 +0.8
baz=79
X17A Forest Lakes 78.61 49 ⇑P P 19 30 53.9 +0.5
baz=79
219A White Tail Can 78.70 52 ⇓P P 19 30 54.3 +0.4
baz=79
T15A Red Dirt Ranch 78.76 46 ⇓P P 19 30 54.1 -0.1
baz=79,SNR=7.4
Y18A Canyon Day Jun 78.92 50 ⇑P P 19 30 55.9 +0.8
baz=79,SNR=6.7
G08A Pilot Rock 79.00 37 ⇓P P 19 30 54.9 -0.4
baz=79,SNR=6.6
119A Ashpeak Ranch, 79.01 51 ⇑P P 19 30 55.6 0.0
baz=79
Q14A Sevier Lake (B 79.13 44 P P 19 30 56.2 +0.1
baz=79,SNR=7.1
NJ2 Nanjing 79.13 308 eP P 19 30 59.1 +2.8
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb4.9
220A Playas Peak, P 79.22 53 ⇓P P 19 30 57.6 +0.8
baz=79,SNR=9.1
V17A Tonalea, Kykot 79.22 48 ⇓P P 19 30 57.3 +0.6
baz=79,SNR=8.4
U16A Tuba City 79.22 48 ⇓P P 19 30 57.1 +0.4
baz=79
X18A Snowflake 79.33 50 ⇓P P 19 30 57.4 +0.1
baz=80
120A U Bar Ranch, L 79.42 52 ⇑P P 19 30 57.5 -0.3
baz=80
P14A Drum Mountains 79.57 44 ⇓P P 19 30 58.4 0.0
baz=80,SNR=7.0
Y19A Nutrioso 79.58 50 ⇓P P 19 30 59.8 +1.1
baz=80,SNR=7.5
ETW Entiat 79.61 34 eP P 19 30 58.0 -0.5
S16A Weppner Ranch, 79.65 46 ⇓P P 19 30 59.0 +0.1
baz=80
Z20A Nine Sixteen R 79.70 51 ⇓P P 19 30 59.9 +0.6
baz=80,SNR=8.1
X19A St. Johns 79.77 50 ⇓P P 19 31 00.2 +0.5
baz=80,SNR=8.7
MFID Camas Ranch 79.80 39 P P 19 30 59.1 -0.5
baz=80,SNR=5.2
221A Mesquite Ranch 79.84 53 ⇓P P 19 31 01.0 +1.0
baz=80
T17A Navajo Res., N 79.86 47 ⇓P P 19 31 00.7 +0.6
baz=80
V18A Ganado 79.88 49 ⇓P P 19 31 01.0 +0.8
baz=80
DUG Dugway 80.05 43 ⇑P P 19 31 00.6 -0.4
baz=80
DUG Dugway 80.05 43 eP P 19 31 00.1 -0.9
comp=Z,3.4nm,1.2s,mb3.9
DUG ePcP PcP 19 31 08.0 +0.5
D08A Wollman Farm, 80.05 35 ⇓P P 19 31 00.4 -0.4
baz=80
121A Cookes Peak, D 80.06 52 ⇑P P 19 31 01.3 +0.1
baz=80
Y20A Horse Springs, 80.21 51 ⇑P P 19 31 02.7 +0.6
baz=80,SNR=11
CN2 Changchun 80.32 321 eP P 19 31 02.3 -0.1
CN2 eS S 19 40 43.8 -2.8
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
F10A Beach Ranch, E 80.39 37 ⇑P P 19 31 01.9 -0.7
baz=80
X20A Quemado 80.40 50 ⇑P P 19 31 03.6 +0.6
baz=80,SNR=5.6
I12A Atlanta 80.43 39 ⇑P P 19 31 03.1 +0.2
baz=81,SNR=7.5
Z21A St. Cloud Mine 80.48 52 ⇑P P 19 31 04.2 +0.7
baz=81,SNR=14
T18A Mexican Hat 80.58 47 ⇑P P 19 31 04.6 +0.7
baz=81,SNR=13
W20A Ramah 80.66 50 ⇑P P 19 31 05.3 +1.0
baz=81,SNR=12
TMUT Trail Mountain 80.68 45 eP P 19 31 05.2 +0.8
comp=Z,5.1nm,0.8s,mb4.2
HLID Hailey 80.75 40 ⇓P P 19 31 04.5 -0.1
baz=81,SNR=8.4
HLID Hailey 80.75 40 eP P 19 31 04.2 -0.5
comp=Z,11nm,1.3s,mb4.3
Y21A Point of Rocks 80.78 51 ⇓P P 19 31 04.8 -0.3
baz=81,SNR=5.8
J13A Cove Ranch, Pi 80.81 40 P P 19 31 05.1 +0.1
baz=81,SNR=8.9
X21A Alamocita Cree 80.89 50 ⇑P P 19 31 06.4 +0.8
baz=81,SNR=6.2
K14A Jones Ranch, D 81.00 41 ⇑P P 19 31 05.6 -0.4
baz=81
H12A Diamond D Ranc 81.01 39 ⇑P P 19 31 05.5 -0.4
baz=81
G12A Big Creek, Yel 81.03 38 P P 19 31 05.8 -0.3
baz=81,SNR=12
T19A Beclabito 81.05 48 ⇓P P 19 31 06.6 +0.2
baz=81
SRU San Rafael 81.06 45 ⇓P P 19 31 06.3 -0.1
baz=81
P17A Butcher Ranch, 81.08 45 ⇓P P 19 31 06.3 -0.2
baz=81
J14A Carey 81.18 40 ⇓P P 19 31 06.9 0.0
baz=81,SNR=5.2
L15A Malad City 81.23 42 ⇑P P 19 31 06.8 -0.4
baz=81,SNR=5.2
Y22A Socorro 81.28 51 ⇑P P 19 31 08.3 +0.6
baz=81
Q18A Rafter H Ranch 81.32 45 ⇓P P 19 31 07.6 -0.1
baz=82
324A Moseley Ranch, 81.37 54 ⇓P P 19 31 07.9 -0.4
baz=82,SNR=7.8
H13A Challis 81.38 39 ⇑P P 19 31 07.8 -0.1
baz=82
F12A Elk City 81.42 38 ⇑P P 19 31 07.6 -0.4
baz=82,SNR=11
O17A Robinson Place 81.43 44 ⇑P P 19 31 08.3 0.0
baz=82
425A Indio Mountain 81.50 55 ⇓P P 19 31 09.3 +0.4
baz=82
I14A Mackay 81.54 40 P P 19 31 08.8 +0.1
baz=82,SNR=6.6
Z23A Rita Site, Whi 81.55 52 ⇑P P 19 31 08.5 -0.6
baz=82
MNTX Cornudas Mount 81.56 54 ⇑P P 19 31 08.5 -0.6
baz=82,SNR=7.0
224A Cornudas Mount 81.60 53 ⇑P P 19 31 09.6 +0.2
baz=82,SNR=10
BNM Barren Site 81.62 51 eP P 19 31 08.7 -0.8
comp=Z,20nm,1.7s,mb4.5
G13A Cobalt 81.67 39 ⇑P P 19 31 08.8 -0.6
baz=82
626A Big Bend Ranch 81.69 56 ⇓P P 19 31 10.3 +0.4
baz=82,SNR=8.1
325A Bean Ranch, Si 81.75 54 ⇓P P 19 31 10.2 0.0
baz=82,SNR=6.2
U21A Nageezi 81.85 49 P P 19 31 10.9 +0.4
baz=82,SNR=15
Q19A Hogan Spring (81.85 46 ⇑P P 19 31 10.1 -0.5
baz=82
L16A Fish Haven 81.85 42 ⇓P P 19 31 10.1 -0.3
baz=82
J15A Blackfoot 81.90 41 ⇑P P 19 31 10.6 -0.1
baz=82,SNR=5.5
124A Stringfield Ra 81.91 53 ⇑P P 19 31 10.9 -0.1
baz=82
526A Mary Lane Ranc 81.92 56 P P 19 31 11.3 +0.2
baz=82,SNR=7.0
H14A Leadore 81.94 39 ⇓P P 19 31 10.8 0.0
baz=82
Y23A Lovelace Mesa, 81.96 52 ⇑P P 19 31 11.5 +0.2
baz=82
S20A Disappointment 81.97 47 ⇓P P 19 31 11.2 0.0
baz=82,SNR=5.6
TXAR Lajitas Array 81.97 57 P P 19 31 11.3 -0.1
comp=Z,4.1nm,1.0s,mb4.0,baz=228,slow=4.9,SNR=24
TXAR PP PP 19 34 27.4 +4.3
comp=Z,0.2nm,0.8s,baz=270,slow=7.5,SNR=4.6
TXAR Lajitas Array 81.97 57 P P 19 31 11.3 -0.1
TXAR PP PP 19 34 27.4 +4.3
F13A Darby 81.98 38 ⇑P P 19 31 10.3 -0.7
baz=82
WHN Wuhan 82.00 305 P P 19 31 10.3 -1.2
ANMO Albuquerque 82.09 50 eP P 19 31 11.7 -0.2
comp=Z,18nm,1.4s,mb4.5

225A Deer Hill, Car 82.16 54 ⇓P P 19 31 12.3 0.0
baz=82,SNR=6.8
V22A San Miguel Ran 82.17 49 ⇑P P 19 31 12.1 -0.2
baz=82
T21A Navajo Lake 82.19 48 ⇑P P 19 31 12.7 +0.4
baz=82
426A McDonald Obser 82.21 55 P P 19 31 13.2 +0.6
baz=82,SNR=11
627A Terlingua Ranc 82.25 57 ⇓P P 19 31 13.3 +0.5
baz=82,SNR=9.5
527A Woodward Ranch 82.33 56 ⇑P P 19 31 12.7 -0.5
baz=82,SNR=8.3
J16A Bone 82.36 41 ⇓P P 19 31 12.9 -0.2
baz=82,SNR=5.7
MCMT McKenzie Canyo 82.37 39 eP P 19 31 12.8 -0.2
comp=Z,4.9nm,1.2s,mb4.0
W23A Werner Place, 82.41 50 ⇑P P 19 31 13.3 -0.2
baz=82
Y24A Capitan 82.43 52 ⇑P P 19 31 14.0 +0.4
baz=82,SNR=12
M18A Lyman 82.46 43 ⇑P P 19 31 13.8 +0.2
baz=83
125A Gardner Draw, 82.51 53 ⇑P P 19 31 14.0 -0.1
baz=83,SNR=6.5
Q20A Ridgley Place, 82.52 46 ⇓P P 19 31 13.2 -0.8
baz=83,SNR=7.3
GDL2 Guadalupe Moun 82.55 54 eP P 19 31 14.2 -0.1
comp=Z,18nm,1.3s,mb4.7
O19A Miners Draw (B 82.57 45 ⇓P P 19 31 13.9 -0.3
baz=83
RRI2 Red Ridge 82.58 41 eP P 19 31 13.9 -0.3
comp=Z,26nm,1.4s,mb4.8
D13A Huson 82.60 37 ⇑P P 19 31 13.5 -0.7
baz=83
628A Black Gap, Mar 82.66 57 ⇓P P 19 31 14.8 -0.2
baz=83
226A Malaga, Loving 82.70 54 ⇑P P 19 31 14.9 -0.2
baz=83,SNR=7.4
P20A De Beque 82.70 46 ⇓P P 19 31 15.0 +0.1
baz=83,SNR=5.5
Z25A Roswell 82.71 53 ⇓P P 19 31 15.6 +0.5
baz=83,SNR=5.2
I16A Newdale 82.74 41 ⇓P P 19 31 15.3 +0.3
baz=83
G15A Dillon 82.76 39 ⇑P P 19 31 15.1 0.0
baz=83,SNR=8.0
427A Hayter Ranch, 82.77 55 ⇑P P 19 31 16.0 +0.5
baz=83,SNR=6.9
R21A Cimarron 82.78 47 ⇓P P 19 31 15.6 +0.2
baz=83,SNR=10
U23A El Rito 82.87 49 ⇓P P 19 31 15.6 -0.3
baz=83,SNR=6.8
COLA College 82.88 11 eP P 19 31 13.8 -1.4
comp=Z,9.1nm,0.9s,mb4.5
TPAW Teton Pass 82.89 41 eP P 19 31 15.4 -0.4
comp=Z,11nm,1.0s,mb4.5
RGRI Rengat 82.90 272 P P 19 31 18.0 +1.4
comp=Z,48nm,0.7s,mb5.4
ILAR Eielson Array 82.97 12 P P 19 31 13.8 -1.8
comp=Z,2.7nm,0.5s,mb4.2,baz=222,slow=5.3,SNR=71
ILAR pP pP 19 32 16.4 +0.7
comp=Z,1.1nm,1.1s,baz=223,slow=7.0,SNR=4.1
Q21A Lamborn Mesa, 82.97 47 ⇓P P 19 31 16.0 -0.3
baz=83
W24A Lazy 6 Ranch, 82.98 51 P P 19 31 16.2 -0.3
baz=83,SNR=6.3
Y25A Mesa, Roswell 82.99 52 P P 19 31 16.6 0.0
baz=83,SNR=7.4
126A Clayton Basin, 83.00 53 ⇑P P 19 31 16.2 -0.4
baz=83
528A Cox Ranch, San 83.00 56 ⇓P P 19 31 16.1 -0.5
baz=83,SNR=7.7
S22A 4UR Ranch, Cre 83.02 48 ⇓P P 19 31 17.1 +0.5
baz=83,SNR=9.9
K18A Toltan Ranch, 83.06 42 P P 19 31 16.6 0.0
baz=83,SNR=11
O20A White River Ci 83.09 45 ⇑P P 19 31 16.6 -0.3
baz=83
M19A Rock Springs 83.11 44 ⇑P P 19 31 16.7 -0.3
baz=83
LRM Limekiln Ridge 83.12 39 eP P 19 31 15.5 -1.4
comp=Z,46nm,1.4s,mb5.0
G16A Moss Hill, Enn 83.21 39 ⇓P P 19 31 17.4 0.0
baz=83
L19A Farson 83.25 43 ⇑P P 19 31 17.4 -0.3
baz=83,SNR=7.6
CPRX Cap Rock 83.27 53 eP P 19 31 17.9 -0.1
comp=Z,4.5nm,0.3s,mb4.7
Z26A Caprock 83.28 53 ⇓P P 19 31 18.0 0.0
baz=83,SNR=13
R22A Saguache, Gunn 83.28 47 ⇓P P 19 31 17.9 0.0
baz=83
H16A Russell Place, 83.30 40 ⇑P P 19 31 17.9 +0.1
baz=83,SNR=8.2
V24A Rampart Ranch, 83.30 50 ⇓P P 19 31 18.4 +0.4
baz=83
E15A Deer Lodge 83.31 38 ⇑P P 19 31 17.9 0.0
baz=84
J18A Kendall Valley 83.34 42 ⇑P P 19 31 18.1 0.0
baz=84,SNR=18
BW06 Boulder Array 83.43 42 P P 19 31 18.2 -0.4
baz=84,SNR=9.0
PDAR Pinedale Array 83.43 42 P P 19 31 17.6 -1.0
comp=Z,3.4nm,0.6s,mb4.2,baz=228,slow=3.8,SNR=21
328A Wristen Ranch, 83.45 55 ⇑P P 19 31 18.6 -0.3
baz=84
Q22A Crested Butte, 83.45 47 ⇑P P 19 31 19.2 +0.4
baz=84,SNR=6.8
BOZ Bozeman (W) 83.53 39 ⇓P P 19 31 19.0 0.0
baz=84
BOZ Bozeman (W) 83.53 39 eP P 19 31 18.4 -0.6
comp=Z,5.6nm,1.2s,mb4.2
SDSI Sungai Dareh 83.62 271 P P 19 31 19.7 -0.5
comp=Z,12nm,1.0s,mb4.6
W25A X Bar L Ranch, 83.69 51 ⇓P P 19 31 20.1 0.0
baz=84
M20A Sweetwater, Wa 83.75 44 ⇑P P 19 31 20.1 -0.1
baz=84
V25A Rancho No Teng 83.83 50 ⇑P P 19 31 20.8 +0.1
baz=84
N21A Black Mountain 83.87 45 ⇓P P 19 31 21.1 +0.2
baz=84,SNR=5.9
L20A Wamsutter 83.88 43 P P 19 31 21.2 +0.3
baz=84,SNR=6.3
Z27A Tatum 83.88 53 ⇑P P 19 31 20.5 -0.6
baz=84
HRY Holter Researc 83.94 38 eP P 19 31 20.9 -0.1
comp=Z,5.3nm,0.8s,mb4.3
B14A Marquette Ranc 83.95 36 ⇑P P 19 31 21.2 +0.2
baz=84
SDCO Great Sand Dun 83.97 48 ⇓P P 19 31 21.1 -0.3
baz=84
SDCO Great Sand Dun 83.97 48 P P 19 31 20.6 -0.8
comp=Z,4.9nm,1.2s,mb4.1
J19A Crowheart 83.99 42 ⇓P P 19 31 21.3 -0.1
baz=84
C15A Salmond Ranch, 84.03 37 ⇓P P 19 31 21.2 -0.2
baz=84
Y27A Causey 84.14 53 ⇑P P 19 31 22.3 -0.1
baz=84
O22A Kremmling 84.27 46 ⇑P P 19 31 22.6 -0.2
baz=84,SNR=5.6
MSTX Muleshoe 84.47 53 ⇓P P 19 31 23.5 -0.5
baz=85
BJI Beijing 84.56 314 P P 19 31 24.4 +0.1
BJI pP pP 19 32 29.8 +5.3
BJI sP sP 19 32 57.9 +7.0
BJI PP PP 19 34 46.3 +2.3
BJI S S 19 41 29.8 +0.1
BJI sS sS 19 43 24.4 +8.9
BJI SS SS 19 47 09.6 +2.2
BJI pmax pmax
comp=Z,27nm,1.3s,mb4.8
BJI pmax pmax
comp=Z,100nm,4.2s
G18A Lazy EL Ranch, 84.64 40 ⇑P P 19 31 24.5 -0.1
baz=85
J20A Shoshoni 84.66 42 ⇑P P 19 31 24.1 -0.7
baz=85
K21A Alcova 84.88 43 ⇑P P 19 31 25.7 -0.1
baz=85
I20A Worland 84.91 42 ⇓P P 19 31 25.6 -0.3
baz=85
E18A Harlowton 85.02 39 ⇑P P 19 31 26.5 0.0
baz=85
A16A West Butte Ran 85.20 36 ⇑P P 19 31 27.2 0.0
baz=85
ENH Enshi 85.80 303 eP P 19 31 30.8 +0.1

comp=Z,61nm,1.4s,mb5.1
GYA Guiyang 86.85 298 *e*P **P** **19 31 37.3 +1.4**
GYA pP pP 19 32 42.5 +6.1
GYA sP sP 19 33 09.8 +7.1
GYA PP PP 19 35 06.3 +3.6
GYA SKS 19 41 34.0
GYA S S 19 41 50.4 -2.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
MAW Mawson 87.09 199 P **P** **19 31 35.8 -0.5**
comp=Z,3.8nm,0.8s,mb4.2,baz=123,slow=7.9,SNR=6.1
XAN Xi'an 87.57 306 P **P** **19 31 39.6 +0.5**
XAN pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
XAN pmax pmax
comp=Z,11nm,3.5s
HHC Hu-ho-hao-te 88.11 313 *e*P **P** **19 31 40.3 -1.2**
HHC PP PP 19 35 12.0 -0.4
HHC SKS 19 41 42.3
HHC S S 19 41 57.5 -6.3
HHC SS SS 19 47 53.5 -5.6
HHC pmax pmax
comp=Z,19nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,94nm,6.7s
HHC LR LR
comp=N,160nm,17.8s
HHC LR LR
comp=E,170nm,17.5s
HHC LR LR
comp=Z,160nm,17.5s
KMI Kunming 89.80 296 P **P** **19 31 51.3 +1.5**
KMI pmax pmax
comp=Z,20nm,1.3s,mb4.8
CD2 Chengdu 90.67 302 *e*P **P** **19 31 53.9 +0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CD2 pmax pmax
comp=Z,30nm,5.8s
YKA Yellowknife Ar 90.91 24 P **P** **19 31 52.7 -1.3**
comp=Z,0.4nm,0.4s,mb3.7,baz=234,slow=4.6,SNR=4.4
YKA Yellowknife Ar 90.91 24 P **P** **19 31 52.7 -1.3**
CMAR Chiang Mai Arr 91.28 289 P **P** **19 31 57.4 +0.6**
comp=Z,7.5nm,0.9s,mb4.6,baz=92,slow=2.8,SNR=40
CHTO Chiang Mai 91.38 289 *e*P **P** **19 31 58.0 +0.8**
comp=Z,14nm,1.2s,mb4.8
LZH Lanzhou 92.17 307 *e*P **P** **19 32 01.3 +0.8**
LZH pP pP 19 33 10.0 +8.5
LZH pmax pmax
comp=Z,20nm,1.1s,mb5.0
LZH pmax pmax
comp=Z,100nm,7.2s
ULN Ulaanbaatar 93.63 319 *e*P **P** **19 32 06.3 -0.7**
comp=Z,2.8nm,0.9s,mb4.3
ULN Ulaanbaatar 93.63 319 P **P** **19 32 06.6 -0.3**
SONM Songino Array 94.04 319 P **P** **19 32 08.0 -0.7**
comp=Z,0.7nm,0.7s,mb3.8,baz=127,slow=3.9,SNR=5.0
SONM PP PP 19 35 56.7 -2.2
comp=Z,0.9nm,1.0s,baz=122,slow=7.7,SNR=4.9
MKAR Makanchi Array 109.94 315 PKiKP PKiKP 19 37 19.1 -1.5
comp=Z,0.6nm,0.7s,baz=158,slow=1.0,SNR=4.2
ABKAR Akbulak array 124.44 319 *e*PKPdf PKPdf 19 37 47.5 -0.8
ARCES ARCESS Array B 124.63 351 PKP PKPdf 19 37 47.1 -1.0
comp=Z,3.3nm,0.6s,baz=34,slow=1.0,SNR=16
JOF Joensuu 129.32 345 *e*p PKPdf 19 37 54.0 -3.2
comp=Z,1.9nm,0.5s
KAF Kangasniemi 131.20 347 *e*p PKPdf 19 37 58.3 -2.5
comp=Z,1.5nm,0.5s
FINES FINESS Array B 131.84 347 PKP PKPdf 19 38 01.1 -0.9
comp=Z,1.1nm,0.5s,baz=21,slow=3.4,SNR=15
AKASG Malin Array Be 139.97 336 PKP PKPdf 19 38 16.9 -0.6
comp=Z,0.4nm,0.4s,baz=40,slow=2.7,SNR=3.7
KWP Kalwaria Pacla 143.18 341 ⇑*i*P PKPdf 19 38 19.9 -3.3
KOLS Kolonicke sedl 143.93 341 *e*PKP PKPdf 19 38 23.1 -1.4
KOLS Kolonicke sedl 143.93 341 *e*PKP PKPdf 19 38 23.1 -1.4
BUR08 Bucovina Ar. S 144.00 337 *e*PKPdf PKPdf 19 38 22.4 -2.3
BURAR Bucovina Array 144.02 337 ⇓*i*P PKPdf 19 38 21.5 -3.3
NIE Niedzica 144.09 343 *e*PKP PKPdf 19 38 23.1 -1.7
KMBO Kilima Mbogo 144.09 245 PKP PKPdf 19 38 25.9 0.0
comp=Z,8.8nm,0.9s,baz=180,slow=24,SNR=16
KMBO Kilima Mbogo 144.09 245 PKP PKPdf 19 38 25.9 0.0
UPC Upice 144.11 348 *e*PKP PKPdf 19 38 22.9 -1.9
DPC Dobruska-Polom 144.20 348 *e*PKP PKPdf 19 38 23.2 -1.8
DPC *ep*PKP pPKPdf 19 39 40.5 +11
CRVS Cervenica-Dubn 144.21 341 *e*PKP PKPdf 19 38 23.1 -1.9
CRVS Cervenica-Dubn 144.21 341 *e*PKP PKPdf 19 38 23.1 -1.9
BUG Bochum--Univer 144.24 358 *e*PKPbc PKPdf 19 38 23.2 -1.8
OKC Ostrava-Krasne 144.27 345 *e*PKP PKPdf 19 38 23.4 -1.7
OKC *ep*PKP pPKPdf 19 39 36.9 +7.7
PVCC Panska Ves 144.36 350 *e*PKP PKPdf 19 38 23.6 -1.6
MORC Moravsky Berou 144.47 346 *e*PKP PKPdf 19 38 23.6 -1.9
MORC Moravsky Berou 144.47 346 ⇑*i*P PKPdf 19 38 21.5 -4.0
TRPA Tarpa 144.54 340 ⇓*i*P PKPdf 19 38 24.1 -1.5
BMR Baia Mare 144.60 338 ⇑*i*P PKPdf 19 38 24.3 -1.5
MOX Moxa 144.68 353 *e*PKP PKPdf 19 38 24.5 -1.3
comp=Z,17nm,1.3s
MOX Moxa 144.68 353 *e*PKPbc PKPdf 19 38 24.6 -1.2
WERD Werda 144.79 352 *e*PKPbc PKPdf 19 38 24.9 -1.1
TANN Tannenbergstha 144.80 352 *e*PKPbc PKPdf 19 38 24.8 -1.2
VRI Vrincioaia 144.81 333 ⇓*i*P PKPdf 19 38 25.2 -1.0
PLOR Plostina 144.86 333 ⇑*i*P PKPdf 19 38 25.4 -0.9
GUNZ Gunzen 144.87 352 *e*PKPbc PKPdf 19 38 25.2 -0.9
KECS Kecovo 144.88 342 *e*PKP PKPdf 19 38 25.6 -0.6
KECS Kecovo 144.88 342 *e*PKP PKPdf 19 38 25.6 -0.6
PRU Pruhonice 144.88 349 *e*PKP PKPdf 19 38 25.8 -0.4
PRU *ep*PKP pPKPdf 19 39 37.2 +6.9
BEBN Eben Emael 144.93 359 PKP PKPdf 19 38 24.6 -1.6
WERN Wernitzgruen 144.94 352 *e*PKPbc PKPdf 19 38 25.3 -1.0
NKC Novy Kostel 144.98 352 *e*PKP PKPdf 19 38 25.5 -0.8
MEM Membach 145.11 359 PKP PKPdf 19 38 25.9 -0.6
VRAC Vranov 145.12 347 ⇑*i*P PKPdf 19 38 26.3 -0.3
TIRR Tirgusor 145.13 330 ⇓*i*P PKPdf 19 38 26.6 -0.2
SNF Seneffe 145.21 1 PKP PKPdf 19 38 26.2 -0.5
DOPR Dopca 145.30 335 ⇓*i*P PKPdf 19 38 27.4 +0.4
BCLA Clavier 145.31 360 PKP PKPdf 19 38 26.6 -0.3
VYHS Vyhne 145.33 344 *e*PKP PKPdf 19 38 26.7 -0.3
VYHS Vyhne 145.33 344 *e*PKP PKPdf 19 38 26.7 -0.3
TREC Trest 145.37 348 *e*PKP PKPdf 19 38 26.4 -0.6
BRTR Keskin Array B 145.39 319 PKPbc PKPbc 19 38 27.4 -0.5
comp=Z,8.4nm,0.6s,baz=91,slow=3.1,SNR=22
BRTR pPKPbc 19 39 35.9
comp=Z,3.0nm,1.0s,baz=48,slow=1.8,SNR=3.9
MLR Muntele Rosu 145.45 334 ⇓*i*P PKPdf 19 38 28.0 +0.7
ROTZ Rotzenmuhle 145.47 352 *e*PKPbc PKPbc 19 38 27.3 -0.4
GIVF Givet 145.62 0 *e*PKP1 PKPbc 19 38 27.4 -0.8
DOU Dourbes 145.63 1 PKP PKPdf 19 38 27.4 -0.1
DRGR 145.63 338 ⇑*i*P PKPdf 19 38 27.4 -0.2
BAIF Baives 145.66 1 *e*PKP1 PKPbc 19 38 27.6 -0.7
comp=Z,18nm,0.8s
GRFO Grafenberg 145.67 353 *e*PKPbc PKPbc 19 38 28.2 -0.2
VOIR 145.87 335 ⇑*i*P PKPdf 19 38 29.1 +1.1
KHC Kasperske Hory 145.88 350 *e*PKP PKPdf 19 38 27.6 -0.3
KHC Kasperske Hory 145.88 350 *e*PKP PKPdf 19 38 28.4 +0.5
KHC *ep*PKP pPKPdf 19 39 43.0 +11
WLF Walferdange 146.05 359 PKP PKPdf 19 38 28.9 +0.7
WLF Walferdange 146.05 359 *e*PKPbc PKPbc 19 38 29.4 -0.1
WLF Walferdange 146.05 359 *e*PKPbc PKPbc 19 38 28.9 -0.6
GEC2 GERESS Array S 146.13 350 *e*PKPbc PKPbc 19 38 29.0 -0.7
GERES GERESS Array B 146.13 350 PKPbc PKPbc 19 38 28.9 -0.9
comp=Z,3.5nm,0.6s,baz=23,slow=3.5,SNR=43
CONA Conrad Observa 146.59 347 *i* PKPab PKPab 19 38 30.9 -1.8
comp=Z,9.7nm,0.8s,SNR=11
FLN La Foliniere 146.65 7 *e*PKP1 PKPbc 19 38 29.9 -1.3
comp=Z,20nm,0.5s
GZR Gura Zlata 146.80 337 ⇓*i*P PKPbc 19 38 31.5 -0.3
LDF La Druitiere 146.86 6 *e*PKP1 PKPbc 19 38 30.4 -1.4
comp=Z,13nm,0.5s
GRR Gorron 146.98 7 *e*PKP1 PKPbc 19 38 31.2 -1.0
comp=Z,9.5nm,0.5s
BZS Buzias 147.03 338 ⇓*i*P PKPbc 19 38 31.8 -0.6
MEZF Maizieres J'vi 147.23 0 *e*PKP1 PKPbc 19 38 32.1 -0.7
comp=Z,6.9nm,0.6s
CDF Champ du Feu 147.27 357 *e*PKP1 PKPbc 19 38 32.3 -0.6
comp=Z,15nm,0.8s
BFO Black Forest 147.29 356 *e*PKPbc PKPbc 19 38 32.4 -0.6
BFO Black Forest 147.29 356 *e*PKPbc PKPbc 19 38 31.9 -1.1
PKSM Moragy 147.47 342 ⇓*i*P PKPbc 19 38 32.7 -0.9
SFTF Sexfontaines 147.52 0 *e*PKP1 PKPbc 19 38 33.0 -0.6
comp=Z,9.1nm,0.6s
HAU Haudompre 147.71 358 *e*PKP1 PKPbc 19 38 33.4 -0.7
comp=Z,14nm,0.8s
HINF Hinteralfeld 147.88 358 *e*PKP1 PKPbc 19 38 33.5 -1.1
comp=Z,3.1nm,0.6s
MOTA Moosalm 147.99 352 ⇓*i*PKiKP PKPbc 19 38 34.1 -0.8
comp=Z,10nm,1.1s
WTTA Wattenberg 148.00 352 ⇓*i*PKPbc PKPbc 19 38 34.0 -1.0
comp=Z,9.4nm,0.6s
ABTA Abfaltersbach 148.37 350 *i* PKPbc PKPbc 19 38 34.8 -1.0
comp=Z,10.0nm,0.8s,SNR=7.8
LOR Lormes 148.44 2 *e*PKP1 PKPbc 19 38 35.4 -0.7
comp=Z,9.2nm,0.7s
SSF Saint Saulge 148.64 2 *e*PKP1 PKPbc 19 38 36.0 -0.6
comp=Z,10nm,0.8s
MFF Saint Martin d 148.82 7 *e*PKP1 PKPbc 19 38 36.0 -1.0
AVF Avril sur Loir 148.91 2 *e*PKP1 PKPbc 19 38 36.2 -1.0
comp=Z,12nm,1.0s
VTS Vitosha 148.95 334 ⇑*i*P PKPbc 19 38 35.7 -1.8
CABF La Chapelle 149.11 359 *e*PKP1 PKPbc 19 38 37.8 0.0
comp=Z,25nm,0.8s
LPL La Plagne 150.18 358 *e*PKP1 PKPbc 19 38 40.7 +0.3
comp=Z,5.1nm,0.5s
LPG La Plagne 150.20 358 *e*PKP1 PKPbc 19 38 40.9 +0.5
comp=Z,12nm,0.8s
RJF Les Rejaudoux 150.28 5 *e*PKP1 PKPbc 19 38 39.6 -1.0
CAF Calviac 150.69 4 *e*PKP1 PKPbc 19 38 41.0 -0.6
comp=Z,4.2nm,0.8s
ORIF Oris-en-Rattie 150.80 359 *e*PKP1 PKPbc 19 38 41.5 -0.4
VIVF Saint-Julien-l 150.87 1 *e*PKP1 PKPbc 19 38 41.7 -0.3
comp=Z,7.8nm,0.9s
MBDF Montbardon 150.97 357 *e*PKP1 PKPbc 19 38 41.9 -0.4
comp=Z,7.4nm,0.8s
LASF Ste Croix 151.63 2 *e*PKP1 PKPbc 19 38 43.5 -0.3
comp=Z,4.6nm,0.8s
SMRF Simiane la Rot 151.75 359 *e*PKP1 PKPbc 19 38 44.1 0.0
comp=Z,11nm,1.0s
FRF La Foret Royal 152.14 358 *e*PKP1 PKPbc 19 38 44.8 -0.2
MTLF Montolieu 152.28 4 *e*PKP1 PKPbc 19 38 44.7 -0.6
comp=Z,5.4nm,1.1s
EPF Esparros 152.40 7 *e*PKP1 PKPbc 19 38 44.3 -1.3
ETSF Etsaut 152.41 9 *e*PKP1 PKPbc 19 38 45.2 -0.4
ESDC Sonseca Array 154.78 17 PKPab PKPab 19 39 06.3 -0.6
comp=Z,0.2nm,0.4s,baz=324,slow=2.6,SNR=4.4
DBIC Dimbokro 166.81 131 PKPab PKPab 19 40 00.3 +0.2
comp=Z,4.4nm,1.0s,baz=307,slow=5.1,SNR=3.0

TAP 21 19:23:46.8, 21°.67N×122°.58E, h28km±1km, ML3.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**1.03**	**291**	*i* P	Pn	19 24 05.1	-0.3
	baz=291						
LAY				*e*S	Sn	19 24 18.6	-0.3
	baz=291						
TSEB	**Hengchuen, Pin**	**1.58**	**279**	*e*P	Pn	19 24 14.6	+1.6
	baz=278						
TSEB				*e*S	Sn	19 24 36.1	+3.6
	baz=278						
TWK1	**Hengchun**	**1.68**	**280**	P	Pn	19 24 15.3	+1.0
	baz=279						
TWK1				*e*S	Sn	19 24 38.5	+3.7
	baz=279						
HEN	**Hengchun**	**1.75**	**282**	P	Pn	19 24 17.3	+2.1
	baz=281						
HEN				*e*S	Sn	19 24 39.9	+3.3
	baz=281						
EAST	**Anshuo**	**1.76**	**294**	P	Pn	19 24 16.0	+0.6
	baz=294						
EAST				*e*S	Sn	19 24 37.6	+0.6
	baz=294						
ECL	**Taimali**	**1.77**	**302**	P	Pn	19 24 15.9	+0.3
	baz=287						
ECL				*e*S	Sn	19 24 37.6	+0.4
	baz=287						
TWG	**Pinlang**	**1.81**	**310**	P	Pn	19 24 16.8	+0.7
	baz=320						
TWG				*e*S	Sn	19 24 38.8	+0.6
	baz=320						
CHKT	**Chengkung**	**1.82**	**322**	*e*P	Pn	19 24 15.4	-0.8
	baz=322						
CHKT				*e*S	Sn	19 24 37.1	-1.2
	baz=322						
SCZT	**Fangliau**	**1.95**	**291**	*e*P	Pn	19 24 19.4	+1.3
	baz=291						
SCZT				*e*S	Sn	19 24 44.0	+2.3
	baz=291						
TWF1	**Yuli**	**2.06**	**325**	P	Pn	19 24 19.3	-0.2
	baz=325						
TWF1				S	Sn	19 24 44.4	+0.1
	baz=325						
ELDTW	**Lidau**	**2.10**	**317**	*e*P	Pn	19 24 20.1	0.0
	baz=317						
ELDTW				*e*S	Sn	19 24 44.9	-0.4
	baz=317						
TWP	**Hsiaoliuchiu**	**2.17**	**289**	*e*P	Pn	19 24 24.7	+3.7
	baz=289						
EHY	**Hungye**	**2.17**	**328**	*e*P	Pn	19 24 21.3	+0.2
	baz=328						
EHY				*e*S	Sn	19 24 47.7	+0.6
	baz=328						
STYT	**Tauyuan**	**2.25**	**312**	*e*P	Pn	19 24 24.6	+2.4
	baz=324						
STYT				*e*S	Sn	19 24 49.6	+0.5
	baz=324						
TWM1	**Shoushan**	**2.31**	**300**	*e*P	Pn	19 24 26.7	+3.7
	baz=300						
TWM1				*e*S	Sn	19 24 57.9	+7.4
	baz=300						
SGST	**Jiashian**	**2.33**	**308**	*e*P	Pn	19 24 26.1	+2.9
	baz=308						
SGST				*e*S	Sn	19 24 56.6	+5.7
	baz=308						
YUS	**Yu-Shan**	**2.36**	**321**	P	Pn	19 24 25.2	+1.5
	baz=332						
YUS				*e*S	Sn	19 24 50.3	-1.4
	baz=332						
ESL	**Shilin**	**2.39**	**334**	P	Pn	19 24 24.0	-0.1
	baz=334						
ESL				*e*S	Sn	19 24 51.3	-1.1
	baz=334						
WTP	**Ta-pu**	**2.41**	**311**	P	Pn	19 24 26.8	+2.5
	baz=321						
WTP				S	Sn	19 24 56.6	+3.7
	baz=321						
CHN1	**Nanshi**	**2.43**	**309**	*e*P	Pn	19 24 27.8	+3.2
	baz=309						
CHN1				*e*S	Sn	19 24 58.4	+5.0
	baz=309						
ALS	**Alishan**	**2.46**	**319**	P	Pn	19 24 27.4	+2.2
	baz=319						
ALS				*e*S	Sn	19 24 57.2	+2.9
	baz=319						
CHN3	**Shinhua**	**2.49**	**305**	*e*P	Pn	19 24 29.7	+4.2
	baz=305						
CHN3				*e*S	Sn	19 25 01.7	+6.8
	baz=305						
TWD	**Chiawan**	**2.57**	**339**	*e*P	Pn	19 24 26.2	-0.3
	baz=340						
TWD				*e*S	Sn	19 24 55.8	-1.1
	baz=340						
SMLT	**Sun Moon Lake**	**2.70**	**325**	P	Pn	19 24 29.9	+1.5
	baz=334						
SMLT				*e*S	Sn	19 25 03.1	+3.0
	baz=334						
TYC	**Yuchr**	**2.74**	**325**	P	Pn	19 24 30.6	+1.7
	baz=333						
WGK	**Gukeng**	**2.75**	**318**	*e*P	Pn	19 24 32.8	+3.8
	baz=304						
WGK				*e*S	Sn	19 25 05.3	+4.1
	baz=304						
WHF	**Hehuan Shan**	**2.75**	**334**	*e*P	Pn	19 24 30.5	+1.5
	baz=335						
WHF				*e*S	Sn	19 25 02.2	+0.8
	baz=335						
WNT	**Mingjian**	**2.81**	**322**	*e*P	Pn	19 24 32.7	+2.8
	baz=335						
ENA	**Nanau**	**2.86**	**344**	P	Pn	19 24 31.1	+0.5
	baz=345						
ENA				*e*S	Sn	19 25 04.1	+0.1
	baz=345						
TWT	**Tachien**	**2.88**	**334**	*e*P	Pn	19 24 33.3	+2.4
	baz=343						
WSF	**Szhu**	**2.94**	**312**	*e*P	Pn	19 24 31.2	-0.4
	baz=313						
TWC	**Suao**	**3.01**	**347**	P	Pn	19 24 34.0	+1.4
	baz=348						
TWC				*e*S	Sn	19 25 08.0	+0.3
	baz=348						
TCU	**Taichung**	**3.03**	**325**	*e*P	Pn	19 24 36.9	+4.0
	baz=313						
ENTT	**Nioudou**	**3.11**	**343**	P	Pn	19 24 35.0	+1.0
	baz=343						
ENTT				S	Sn	19 25 10.9	+0.8
	baz=343						
TWE	**Neicheng**	**3.16**	**345**	P	Pn	19 24 36.1	+1.5
	baz=346						
NSK	**Sanguang**	**3.20**	**340**	P	Pn	19 24 36.7	+1.5
	baz=351						
NSY	**Sanyi**	**3.21**	**329**	*e*P	Pn	19 24 38.6	+3.3
	baz=314						
NSTT	**Nanjuang**	**3.29**	**334**	P	Pn	19 24 39.6	+3.1
	baz=347						
NSTT				*e*S	Sn	19 25 18.5	+3.8
	baz=347						
TWA	**Mucha**	**3.43**	**345**	P	Pn	19 24 40.6	+2.2
	baz=345						
TWA				S	Sn	19 25 20.0	+2.0
	baz=345						
NWF	**Wu-fen Shan**	**3.47**	**348**	*e*P	Pn	19 24 41.1	+2.2
	baz=349						
TWS1	**Kuangyinshan**	**3.58**	**343**	*e*P	Pn	19 24 41.5	+1.0
	baz=344						

MEX 21 19:35:30.6±0.5, 14°.03N×92°.70W, h55km±17km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.96**	**26**	*i* P	Pn	19 35 46.9	-1.1
THIG				*i* S	Sn	19 35 58.9	-2.0
PCIG		**1.74**	**343**	*e*P	Pn	19 35 56.9	-1.5
PCIG				*i* S	Sn	19 36 17.7	-1.7
CCIG	**Comitan**	**2.30**	**14**	*e*P	Pn	19 36 04.7	-1.4
CCIG				*i* S	Sn	19 36 32.3	-1.0
TGIG		**2.76**	**352**	*i* P	Pn	19 36 11.8	-0.6
TGIG				*i* S	Sn	19 36 43.5	-1.1

IDC 21 19:42:55.9±5.9, 10°.45S×161°.59E, h69km±43km, mb3.3/6, mb1 3.5/6, mb1mx3.4/18, mbtmp3.3/6, Error ellipse: s-maj=45.5km s-min=24.6km az=117.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.90**	**302**	P	Pn	19 43 25.8	-0.4
	342nm,0.3s,baz=152,slow=7.2,SNR=80						
HNR				S	Sn	19 43 49.7	+0.5
	424nm,0.3s,baz=176,slow=20,SNR=11						
WRA	**Warramunga Arr**	**27.90**	**247**	P	P	19 48 40.0	+0.4
	0.2nm,0.4s,baz=75,slow=9.0,SNR=8.9						
ASAR	**Alice Springs**	**29.48**	**240**	P	P	19 48 53.6	+0.1
	0.1nm,0.3s,baz=64,slow=10,SNR=4.4						
FITZ	**Fitzroy Crossi**	**35.61**	**254**	P	P	19 49 46.6	-0.5
	2.1nm,0.9s,baz=34,slow=7.2,SNR=7.8						
SONM	**Songino Array**	**75.80**	**325**	P	P	19 54 35.2	+0.8
	0.6nm,0.5s,baz=140,slow=6.4,SNR=4.3						
ILAR	**Eielson Array**	**84.29**	**20**	P	P	19 55 19.8	+0.1
	0.2nm,0.7s,baz=263,slow=7.2,SNR=3.5						
MKAR	**Makanchi Array**	**90.31**	**318**	P	P	19 55 48.9	-0.4
	0.2nm,0.5s,baz=89,slow=4.6,SNR=4.8						

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*IDC **21** 19:48:37.9±1.6, 2°.93N×127°.11E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/20, mbtmp3.8/5, Error ellipse: s-maj=94.1km s-min=22.3km az=68.0*
*DJA **21** 19:48:42, 3°.78N×126°.39E, h87km, MLv4.4/6*
*ISCJB **21** 19:48:43.4±2.4, 3°.6N±0°.2×126°.3E±0°.1, h141km±14km, mb3.7/5, Error ellipse: s-maj=31.0km s-min=14.2km az=28.8*

ISC 21 19:48:44.1±2.5, 3°.6N±0°.2×126°.3E±0°.1, h132km±15km, n11, σ0°.97/14, mb3.7/5, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**2.56**	**214**	P	**Pn**	**19 49 24.2**	**-1.0**
MNI				S	**Sn**	**19 49 59.5**	**+2.6**
TNTI	**Ternate**	**2.99**	**159**	P	**Pn**	**19 49 30.7**	**+0.1**
TNTI				S	**Sn**	**19 50 07.4**	**+0.8**
KMSI	**Cibinong**	**3.77**	**218**	P	**Pn**	**19 49 40.9**	**0.0**
MRSI	**Marisa**	**5.32**	**235**	P	**Pn**	**19 50 00.3**	**-1.3**
	0.3nm889nm76nm,0.6s						
LUWI	**Luwuk**	**5.78**	**218**	P	**Pn**	**19 50 08.9**	**+1.2**
	0.2nm796nm42nm,0.8s						
NLAI	**Namlea**	**6.82**	**173**	P	**Pn**	**19 50 21.2**	**-0.5**
NLAI				S	**Sn**	**19 51 36.5**	**-1.5**
FITZ	**Fitzroy Crossi**	**21.55**	**182**	P	**P**	**19 53 23.1**	**+0.1**
	2.6nm,1.0s,mb3.6,baz=359,slow=14,SNR=4.7						
WRA	**Warramunga Arr**	**24.67**	**162**	P	**P**	**19 53 53.0**	**+0.2**
	1.8nm,0.5s,mb3.9,baz=343,slow=10,SNR=25						
ASAR	**Alice Springs**	**28.08**	**165**	P	**P**	**19 54 23.6**	**+0.3**
	0.4nm,0.4s,mb3.5,baz=340,slow=7.2,SNR=15						
STKA	**Stephens Creek**	**38.15**	**159**	P	**P**	**19 55 51.0**	**+0.4**
	1.8nm,0.4s,mb4.1,baz=338,slow=8.5,SNR=6.2						
MKAR	**Makanchi Array**	**57.43**	**326**	P	**P**	**19 58 35.7**	**+17**
	0.3nm,0.6s,mb3.3,baz=106,slow=8.6,SNR=3.0						

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*IDC **21** 20:13:50.9±5.5, 4°.92S×101°.46E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.8/3, Error ellipse: s-maj=197.4km s-min=80.3km az=54.0*
*ISCJB **21** 20:13:56.7±1.6, 4°.9S±0°.1×101°.83E±0°.09, h64km±14km, mb3.9/3, Error ellipse: s-maj=24.7km s-min=10.4km az=27.7*
*DJA **21** 20:13:58, 4°.81S×101°.95E, h82km, MLv3.7/4*

ISC 21 20:13:58.2±1.5, 4°.9S±0°.1×101°.86E±0°.08, h55km±14km, n13, σ0°.48/14, mb3.9/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.21**	**65**	P	**Pn**	**20 14 19.6**	**+0.7**
MNAI				S	**Sn**	**20 14 34.0**	**-0.3**
KSI	**Kapahiang**	**1.43**	**31**	P	**Pn**	**20 14 26.6**	**+4.8**
LWLI	**Liwa**	**2.19**	**94**	P	**Pn**	**20 14 32.5**	**+0.2**
MDSI	**Maura Dua**	**2.34**	**80**	P	**Pn**	**20 14 34.3**	**0.0**
MDSI				S	**Sn**	**20 15 01.5**	**-0.5**
KLSI		**2.87**	**86**	P	**Pn**	**20 14 42.0**	**+0.5**
SDSI	**Sungai Dareh**	**3.95**	**354**	P	**Pn**	**20 14 57.0**	**+0.6**
CGJI	**Cibinong**	**4.18**	**114**	P	**Pn**	**20 14 59.2**	**-0.4**
PDSI	**Padang**	**4.18**	**340**	P	**Pn**	**20 14 59.0**	**-0.6**
SISI	**Saibi**	**4.49**	**322**	P	**Pn**	**20 15 03.5**	**-0.2**
SONM	**Songino Array**	**52.65**	**4**	P	**P**	**20 23 07.5**	**+0.7**
	0.9nm,0.6s,mb3.9,baz=186,slow=11,SNR=6.0						
MKAR	**Makanchi Array**	**54.29**	**344**	P	**P**	**20 23 18.4**	**-0.4**
	0.3nm,0.3s,mb3.7,baz=160,slow=7.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**60.34**	**348**	P	**P**	**20 24 01.0**	**-0.3**
	0.6nm,0.3s,mb4.0,baz=147,slow=5.6,SNR=3.9						
TXAR	**Lajitas Array**	**145.72**	**42**	PKPbc	PKPbc	20 33 32.7	+0.9
	0.1nm,0.4s,baz=306,slow=3.0,SNR=3.4						

MAN 21 20:38:07, 6°.97N×125°.61E, h20km, mb3.9, ML2.6, MS2.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.15**	**316**	*e*P	Pb	20 38 13.7	+2.2
DMPH				*e*S	Sb	20 38 19.8	+5.2
MATI	**Mati**	**0.64**	**92**	*e*P	Pb	20 38 20.5	+1.0
MATI				*e*S	Sb	20 38 25.6	-2.4
BUKP	**Musuan**	**1.05**	**329**	*e*P	Pb	20 38 27.2	+0.6
BUKP				*e*S	Sb	20 38 38.8	-1.1

IDC 21 20:38:52.1±4.8, 25°.16N×109°.41W, h0km, mb3.3/1, mb1 3.7/5, mb1mx3.5/24, mbtmp3.3/5, ML3.2/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/18, Error ellipse: s-maj=69.6km s-min=23.5km az=164.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.59**	**50**	Pn	Pn	20 40 30.4	+0.3
	0.2nm,0.3s,baz=231,slow=14,SNR=8.5						
TXAR				Sn	Sn	20 41 46.2	+0.2
	0.8nm,0.3s,baz=226,slow=24,SNR=9.4						
TXAR				Lg		20 42 19.0	
	0.4nm,0.3s,baz=231,slow=17,SNR=2.9						
ANMO	**Albuquerque**	**10.09**	**14**	Pn	Pn	20 41 20.1	+1.9
	0.1nm,0.3s,baz=217,slow=16,SNR=4.3						
ANMO				LR	LR

PDAR Pinedale Array 17.56 360 P Pn 20 42 59.2 +1.0
baz=158,slow=9.6,SNR=5.0
TKL Tuckaleechee C 24.39 59 LR LR 20 54 42.6
comp=Z,61nm,18.1s,baz=110,slow=39
ILAR Eielson Array 46.35 339 P P 20 47 19.8 +0.2
0.5nm,1.0s,baz=178,slow=4.4,SNR=3.4

*IDC **21** 20:51:49.5±8.3, 17°.27S×178°.47W, h576km±81km, mb3.3/7, mb1 3.5/7, mb1mx3.2/18, mbtmp3.3/7, Error ellipse: s-maj=67.7km s-min=29.6km az=115.0*
*ISCJB **21** 20:51:52.7±2.8, 17°.2S±0°.5×178°.8W±0°.5, h620km±15km, mb3.6/7, Error ellipse: s-maj=100.8km s-min=29.1km az=42.6*
*NEIC **21** 20:51:52.6±1.9, 17°.32S×178°.57W, h611km±11km, mb3.4/1, Error ellipse: s-maj=66.8km s-min=22.0km az=137.0*
ISC 21 20:51:53.0±2.8, 17°.2S±0°.5×178°.6W±0°.5, h612km±14km, n16, σ0°83/12, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.20**	**261**	*eP*	**P**	**20 53 14.4**	**+0.2**
STKA	**Stephens Creek**	**38.76**	**240**	P	**P**	**20 58 26.4**	**-0.5**
6.2nm,0.8s,mb4.2,baz=16,slow=6.6,SNR=13							
STKA	**Stephens Creek**	**38.76**	**240**	*eP*	**P**	**20 58 26.1**	**-0.8**
0.9nm,0.7s,mb3.4							
WRA	**Warramunga Arr**	**44.54**	**259**	P	**P**	**20 59 12.3**	**-0.1**
1.8nm,0.5s,mb3.9,baz=94,slow=7.4,SNR=88							
WRA				PcP	PcP	21 00 41.2	-0.7
0.3nm,0.4s,baz=88,slow=3.9,SNR=5.0							
WRA	**Warramunga Arr**	**44.54**	**259**	P	**P**	**20 59 12.3**	**-0.1**
WRA				PcP	PcP	21 00 41.2	-0.7
ASAR	**Alice Springs**	**44.76**	**254**	P	**P**	**20 59 13.8**	**-0.2**
10.0nm,0.6s,mb4.5,baz=86,slow=8.6,SNR=168							
ASAR				PcP	PcP	21 00 41.9	-0.7
1.0nm,0.6s,baz=103,slow=3.5,SNR=6.4							
FITZ	**Fitzroy Crossi**	**52.92**	**260**	P	**P**	**21 00 14.5**	**+0.3**
0.9nm,0.7s,mb3.2,baz=67,slow=7.6,SNR=3.9							
FITZ	**Fitzroy Crossi**	**52.92**	**260**	*eP*	**P**	**21 00 14.1**	**-0.1**
MJAR	**Matsushiro Arr**	**67.24**	**323**	P	**P**	**21 01 47.2**	**-0.9**
0.8nm,0.6s,mb3.4,baz=151,slow=5.3,SNR=3.3							
MJAR	**Matsushiro Arr**	**67.24**	**323**	P	**P**	**21 01 47.2**	**-0.9**
ILAR	**Eielson Array**	**85.29**	**13**	P	**P**	**21 03 25.8**	**-0.2**
0.2nm,0.5s,mb3.0,baz=220,slow=5.0,SNR=7.9							
CMAR	**Chiang Mai Arr**	**88.45**	**290**	P	**P**	**21 03 44.2**	**+2.2**
0.5nm,0.6s,mb3.4,baz=117,slow=2.8,SNR=5.0							
BVAR	**Borovoye Array**	**116.19**	**321**	PKP	PKPdf	21 09 26.7	-1.0
0.4nm,0.5s,baz=82,slow=2.0,SNR=3.2							
BR131	**Keskin Array S**	**144.16**	**315**	*e*PKP	PKPdf	21 10 21.0	+0.5
BRTR	**Keskin Array B**	**144.16**	**315**	PKP	PKPdf	21 10 20.8	+0.2
1.6nm,0.8s,baz=97,slow=2.8,SNR=6.6							
GERES	**GERESS Array B**	**146.92**	**345**	PKPbc	PKPbc	21 10 28.2	+0.3
1.1nm,0.6s,baz=25,slow=3.2,SNR=12							

*CASC **21** 21:45:54.4±3.8, 6°.85N×78°.96W, h36km±999km, MD4.6, mb4.6(NEIC)*
*IDC **21** 21:45:58.8±0.6, 7°.01N×79°.99W, h0km, mb4.1/15, mb1 4.3/16, mb1mx4.2/24, mbtmp4.1/16, ML3.2/1, MS3.7/17, Ms1 3.7/17, ms1mx3.6/34, Error ellipse: s-maj=27.4km s-min=12.5km az=58.0*
*ISCJB **21** 21:46:00.6±1.6, 7°.18N±0°.04×79°.53W±0°.04, h9km±10km, mb4.3/44, MS3.8/14, Error ellipse: s-maj=6.8km s-min=5.1km az=40.7*
*NEIC **21** 21:46:06.8±0.7, 7°.28N×79°.50W, h36km±6km, mb4.4/28, Error ellipse: s-maj=8.1km s-min=5.4km az=222.0*
ISC 21 21:46:01.9±1.9, 7°.22N±0°.04×79°.53W±0°.03, h2km±12km, n88, σ1°18/85, mb4.3/44, MS3.8/14, 2C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCIP	**Isla Barro Col**	**1.96**	**351**	⇓*i*Pn	**Pn**	**21 46 34.8**	**-1.3**
BCIP				*e*Sn	**Sn**	**21 47 00.2**	**-1.1**
PINA	**Piqa, Costa Ab**	**2.09**	**346**	⇑*e*P	**Pn**	**21 46 37.0**	**-0.9**
PINA				*e*S	**Sn**	**21 47 05.1**	**+0.6**
BRU2	**Volcan**	**3.50**	**297**	*e*P	**Pn**	**21 46 55.6**	**-1.7**
CNI	**Changuinola**	**3.67**	**307**	*e*P	**Pn**	**21 46 58.4**	**-1.3**
ACR	**Cerro Adams**	**3.87**	**292**	⇑*e*P	**Pn**	**21 46 59.8**	**-2.7**
URSC	**Urasca**	**4.94**	**302**	*e*P	**Pn**	**21 47 17.5**	**+0.4**
QCR	**Quepos**	**5.08**	**296**	*e*P	**Pn**	**21 47 18.4**	**-0.7**
SJS	**Escuela Geolog**	**5.22**	**302**	*e*P	**Pn**	**21 47 20.6**	**-0.4**
LAJ	**Bijagual**	**5.25**	**300**	*e*P	**Pn**	**21 47 25.4**	**+4.1**
PRS1	**Puriscal**	**5.47**	**301**	*e*P	**Pn**	**21 47 23.5**	**-0.9**
CGA2	**Cerro Gallo 2**	**5.61**	**300**	*e*P	**Pn**	**21 47 26.2**	**-0.1**
ROSC	**El Rosal**	**5.68**	**114**	Pn	**Pn**	**21 47 30.2**	**+2.9**
14nm,0.3s,baz=323,slow=4.1,SNR=40							
ROSC				LR	LR	21 49 51.8	
comp=Z,600nm,21.6s,baz=356,slow=39							
JCR	**Jicaral**	**6.11**	**296**	*e*P	**Pn**	**21 47 33.6**	**+0.5**
JTS	**JuntasAbangare**	**6.17**	**300**	Pn	**Pn**	**21 47 32.8**	**-1.1**
4.2nm,0.3s,baz=75,slow=12,SNR=17							
JTS				Sn	**Sn**	**21 48 55.9**	**+11**
baz=143,slow=20,SNR=2.1							
JTS	**JuntasAbangare**	**6.17**	**300**	*e*Pn	**Pn**	**21 47 35.0**	**+1.0**
JTS				*e*Sn	**Sn**	**21 48 46.6**	**+1.5**
OTAV	**Otavalo**	**7.02**	**171**	*e*Pn	**Pn**	**21 47 48.6**	**+2.9**
OTAV				S	**Sn**	**21 49 05.1**	**-1.0**
SDV	**Santo Domingo**	**8.97**	**79**	*e*Pn	**Pn**	**21 48 13.5**	**+1.0**
59nm,0.6s							
SDV				*e*Sn	**Sn**	**21 49 53.6**	**-0.6**
TGUH	**Tegucigalpa,Un**	**10.20**	**312**	*e*Pn	**Pn**	**21 48 32.0**	**+2.6**
TGUH				*e*Sn	**Sn**	**21 50 26.7**	**+2.4**
MTDJ	**Mount Denham**	**11.12**	**10**	*e*Pn	**Pn**	**21 48 41.6**	**-0.3**
MTDJ				*e*Sn	**Sn**	**21 50 45.2**	**-1.6**
SDDR	**Presa de Saban**	**14.18**	**34**	*e*Pn	**Pn**	**21 49 24.1**	**+0.3**
SDDR				*e*Sn	**Sn**	**21 52 01.3**	**-0.6**
ATAH	**Atahualpa**	**14.30**	**175**	LR	LR	21 54 31.7	
comp=Z,190nm,21.4s,baz=154,slow=36							
LSP	**Las Mesas**	**16.30**	**47**	*e*Pn	**Pn**	**21 49 52.3**	**+0.3**
LRS	**Lares**	**16.55**	**47**	*e*Pn	**Pn**	**21 49 55.7**	**+0.5**
AOPR	**Arecibo Observ**	**16.65**	**47**	*e*Pn	**Pn**	**21 50 02.7**	**+6.2**
27nm,0.8s							
SJG	**San Juan**	**16.95**	**49**	LR	LR	21 56 04.3	
comp=Z,197nm,21.9s,baz=122,slow=35							
LPAZ	**La Paz**	**25.94**	**154**	P	**P**	**21 51 34.8**	**-0.9**
2.1nm,0.8s,mb3.7,baz=331,slow=8.2,SNR=5.6							
LPAZ				LR	LR	22 03 05.1	
comp=Z,168nm,19.9s,MS3.6,baz=226,slow=40							
LPAZ	**La Paz**	**25.94**	**154**	*e*P	**P**	**21 51 35.4**	**-0.4**
12nm,1.3s,mb4.3							
LRAL	**Lakeview Retre**	**26.61**	**346**	*e*P	**P**	**21 51 41.9**	**+0.2**
8.3nm,0.9s,mb4.3							
CPCT	**Cooper Cave**	**28.47**	**351**	*e*P	**P**	**21 51 58.3**	**-0.1**
TKL	**Tuckaleechee C**	**28.57**	**353**	P	**P**	**21 52 02.1**	**+2.8**
2.7nm,0.8s,mb4.0,baz=184,slow=14,SNR=4.8							
TKL				LR	LR	22 03 13.6	
comp=Z,131nm,20.9s,MS3.5,baz=117,slow=36							
UALR	**University of**	**29.86**	**338**	*e*P	**P**	**21 52 13.0**	**+2.3**
15nm,0.9s,mb4.7							
WCI	**Wyandotte Cave**	**31.48**	**350**	*e*P	**P**	**21 52 26.6**	**+1.7**
9.7nm,0.9s,mb4.6							
USIN	**University of**	**31.49**	**348**	*e*P	**P**	**21 52 24.8**	**-0.2**
29nm,0.8s,mb5.2							
TXAR	**Lajitas Array**	**31.63**	**317**	P	**P**	**21 52 24.1**	**-2.3**
0.7nm,0.8s,mb3.6,baz=90,slow=11,SNR=3.1							
TXAR				LR	LR	22 05 03.1	
comp=Z,62nm,21.2s,MS3.3,baz=180,slow=36							
OLIL	**Olney**	**32.32**	**347**	*e*P	**P**	**21 52 34.6**	**+2.3**
MNTX	**Cornudas Mount**	**34.27**	**319**	*e*P	**P**	**21 52 48.5**	**-1.0**
4.0nm,1.1s,mb4.3							
KSU1	**Kansas State U**	**35.28**	**337**	*e*P	**P**	**21 52 58.0**	**-0.1**
23nm,0.8s,mb5.2							
ANMO	**Albuquerque**	**37.08**	**322**	P	**P**	**21 53 10.1**	**-3.5**
5.6nm,0.8s,mb4.4,baz=137,slow=10,SNR=14							
ANMO				LR	LR	22 10 23.3	
comp=Z,56nm,21.2s,MS3.3,baz=309,slow=40							
ANMO	**Albuquerque**	**37.08**	**322**	*e*P	**P**	**21 53 13.5**	**-0.1**
ANMO				LR	LR	22 10 23.3	
LAZ	**Ladron**	**37.14**	**321**	*e*P	**P**	**21 53 14.9**	**+0.8**
1.9nm,0.9s,mb3.9							
SADO	**Sadowa**	**37.41**	**0**	P	**P**	**21 53 16.2**	**0.0**
3.6nm,0.6s,mb4.3,baz=188,slow=6.6,SNR=5.0							
SADO				LR	LR	22 09 26.6	
comp=Z,110nm,18.0s,MS3.7,baz=234,slow=37							
SDCO	**Great Sand Dun**	**38.45**	**326**	*e*P	**P**	**21 53 25.7**	**+0.6**
4.0nm,0.9s,mb4.2							
BDFB	**Brasilia**	**38.61**	**126**	P	**P**	**21 53 26.4**	**-0.3**
1.5nm,0.5s,mb4.0,baz=256,slow=18,SNR=2.7							
BDFB				LR	LR	22 09 56.4	
comp=Z,252nm,19.9s,MS4.0,baz=260,slow=37							
CPUP	**Villa Florida**	**39.70**	**148**	LR	LR	22 10 46.2	
comp=Z,110nm,20.1s,MS3.7,baz=312,slow=37							

CFAA	**Coronel Fontan**	**40.08**	**165**	P	**P**	**21 53 35.7**	**-3.1**
0.1nm,0.4s,baz=27,slow=5.7,SNR=1.7							
CFAA	**Coronel Fontan**	**40.08**	**165**	P	**P**	**21 53 35.7**	**-3.1**
SMCO	**Snowmass**	**40.28**	**326**	*e*P	**P**	**21 53 40.8**	**+0.5**
4.4nm,1.0s,mb4.1							
SRU	**San Rafael**	**42.26**	**323**	*e*P	**P**	**21 54 00.8**	**+4.1**
6.2nm,1.1s,mb4.2							
RSSD	**Black Hills**	**42.54**	**334**	*e*P	**P**	**21 53 59.3**	**+0.4**
6.5nm,0.9s,mb4.4							
GSC	**Goldstone**	**44.14**	**315**	*e*P	**P**	**21 54 13.2**	**+1.2**
4.8nm,0.9s,mb4.2							
BW06	**Boulder Array**	**44.19**	**328**	*e*P	**P**	**21 54 12.4**	**+0.2**
9.4nm,1.4s,mb4.3							
PDAR	**Pinedale Array**	**44.19**	**328**	P	**P**	**21 54 10.5**	**-1.8**
1.7nm,0.7s,mb3.9,baz=123,slow=11,SNR=11							
HWUT	**Hardware Ranch**	**44.49**	**325**	*e*P	**P**	**21 54 14.2**	**-0.5**
5.0nm,1.0s,mb4.2							
RPN	**Rapa Nui**	**44.70**	**219**	LR	LR	22 07 50.4	
comp=Z,198nm,21.2s,MS4.0,baz=204,slow=30							
ULM	**Lac du Bonnet**	**45.02**	**345**	P	**P**	**21 54 16.9**	**-1.9**
9.9nm,1.0s,mb4.6,baz=161,slow=10,SNR=5.2							
REDW	**Red Top Meadow**	**45.29**	**328**	*e*P	**P**	**21 54 21.5**	**+0.5**
9.8nm,1.2s,mb4.5							
LOHW	**Long Hollow**	**45.33**	**328**	*e*P	**P**	**21 54 21.9**	**+0.5**
8.5nm,1.3s,mb4.4							
TPAW	**Teton Pass**	**45.43**	**328**	*e*P	**P**	**21 54 22.7**	**+0.6**
71nm,2.8s,mb5.0							
MOOW	**Moose Ponds**	**45.50**	**328**	*e*P	**P**	**21 54 25.0**	**+2.3**
3.0nm,0.9s,mb4.1							
RRI2	**Red Ridge**	**45.52**	**327**	*e*P	**P**	**21 54 23.2**	**+0.4**
6.3nm,1.0s,mb4.5							
IMW	**Indian Meadow**	**45.70**	**328**	*e*P	**P**	**21 54 23.1**	**-1.2**
4.2nm,0.7s,mb4.5							
DGMT	**Dagmar**	**46.12**	**337**	*e*P	**P**	**21 54 26.9**	**-0.6**
9.9nm,0.8s,mb4.8							
NVAR	**Mina Array Bea**	**46.78**	**318**	P	**P**	**21 54 28.1**	**-4.8**
1.7nm,0.9s,mb4.0,baz=133,slow=9.1,SNR=3.7							
MCMT	**McKenzie Canyo**	**47.34**	**328**	*e*P	**P**	**21 54 37.7**	**+0.6**
2.3nm,1.0s,mb4.1							
HLID	**Hailey**	**47.36**	**326**	*e*P	**P**	**21 54 37.2**	**-0.2**
2.2nm,0.8s,mb4.1							
LRM	**Limekiln Ridge**	**47.81**	**329**	*e*P	**P**	**21 54 41.3**	**+0.6**
PLCA	**Paso Flores**	**48.42**	**171**	P	**P**	**21 54 41.1**	**-4.4**
0.8nm,0.6s,mb3.9,baz=2.2,slow=14,SNR=2.4							
SCHQ	**Schefferville**	**48.56**	**10**	P	**P**	**21 54 46.5**	**+0.1**
3.9nm,0.7s,mb4.5,baz=236,slow=18,SNR=2.9							
SCHQ	**Schefferville**	**48.56**	**10**	P	**P**	**21 54 46.5**	**0.0**
WVOR	**Wild Horse Val**	**49.16**	**322**	*e*P	**P**	**21 54 51.4**	**+0.1**
3.1nm,0.6s,mb4.5							
YBH	**Yreka Blue Hor**	**51.37**	**319**	P	**P**	**21 55 02.6**	**-5.4**
1.2nm,0.8s,mb3.9,baz=124,slow=3.6,SNR=3.9							
YBH				LR	LR	22 17 55.1	
comp=Z,90nm,20.2s,MS3.8,baz=56,slow=37							
BBB	**Bella Bella**	**59.84**	**328**	LR	LR	22 24 08.0	
comp=Z,45nm,18.5s,MS3.6,baz=328,slow=38							
YKA	**Yellowknife Ar**	**60.82**	**342**	P	**P**	**21 56 11.1**	**-4.1**
2.2nm,0.8s,mb4.4,baz=136,slow=6.5,SNR=6.9							
DLBC	**Dease Lake**	**64.02**	**333**	LR	LR	22 26 23.2	
comp=Z,76nm,20.6s,MS3.9,baz=99,slow=38							
SUMG	**Summit**	**69.86**	**12**	*i* P	**P**	**21 57 14.6**	**+0.9**
4.3nm,0.8s,mb4.4							
PPT	**Papeete**	**73.40**	**249**	LR	LR	22 21 05.6	
comp=Z,140nm,18.3s,MS4.3,baz=33,slow=29							
ILAR	**Eielson Array**	**73.95**	**336**	P	**P**	**21 57 36.1**	**-2.3**
0.5nm,0.9s,mb3.5,baz=132,slow=5.4,SNR=5.0							
DBIC	**Dimbokro**	**74.05**	**85**	P	**P**	**21 57 39.0**	**-1.0**
3.3nm,0.8s,mb4.3,baz=304,slow=1.3,SNR=4.1							
ESDC	**Sonseca Array**	**74.33**	**51**	P	**P**	**21 57 41.0**	**-0.1**
1.9nm,0.9s,mb4.0,baz=268,slow=6.4,SNR=9.9							
BPAW	**Bear Paw Mtn.**	**75.48**	**335**	*e*P	**P**	**21 57 47.2**	**-0.1**
5.0nm,1.0s,mb4.4							
PPLA	**Purkeypile**	**75.73**	**333**	*e*P	**P**	**21 57 48.7**	**0.0**
TAM	**Tamanrasset**	**82.71**	**68**	*e*P	**P**	**21 58 27.4**	**-0.4**
5.2nm,1.2s,mb4.4							
NOA	**NORSAR Array B**	**84.11**	**29**	LR	LR	22 31 57.1	
comp=Z,52nm,18.9s,MS3.9,baz=280,slow=33							
GERES	**GERESS Array B**	**86.75**	**41**	P	**P**	**21 58 50.4**	**+2.8**
0.4nm,0.8s,mb3.7,baz=261,slow=5.3,SNR=4.7							
FINES	**FINESS Array B**	**91.08**	**28**	LR	LR	22 38 36.8	
comp=Z,65nm,18.7s,MS4.1,baz=130,slow=34							
ASAR	**Alice Springs**	**143.99**	**239**	PKP	PKPdf	22 05 34.5	-5.4
1.4nm,0.5s,baz=116,slow=4.0,SNR=7.7							
WRA	**Warramunga Arr**	**144.82**	**246**	PKP	PKPdf	22 05 37.4	-4.0
4.3nm,0.9s,baz=102,slow=3.3,SNR=21							
CMAR	**Chiang Mai Arr**	**154.45**	**3**	PKP	PKPdf	22 05 56.1	-0.6
0.2nm,0.3s,baz=5.7,slow=2.7,SNR=2.7							
CMAR				PKPbc	PKPbc	22 06 03.2	-1.8
0.6nm,0.5s,baz=335,slow=3.7,SNR=6.4							

*ISCJB **21** 21:48:15.0±0.4, 15°.97N±0°.05×94°.26W±0°.03, h69km±11km, Error ellipse: s-maj=9.0km s-min=3.7km az=15.8*
*CASC **21** 21:48:15.9±1.2, 16°.22N×94°.17W, h35km±999km, MD4.1, mb3.8(NEIC)*
*MEX **21** 21:48:16.9±0.6, 15°.94N×94°.25W, h69km±13km, MD4.2*
*NEIC **21** 21:48:17.3, 15°.92N×94°.25W, h63km, mb3.8/1, MD4.2(MEX), After MEX.*
ISC 21 21:48:16.2±0.4, 15°.96N±0°.05×94°.25W±0°.03, h57km±15km, n24, σ0°94/40, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.03**	**104**	*e*P	**Pn**	**21 48 34.4**	**-0.2**
PCIG				*i* S	**Sn**	**21 48 48.3**	**+0.2**
TGIG		**1.35**	**53**	*i* P	**Pn**	**21 48 39.2**	**+0.3**
TGIG				*i* S	**Sn**	**21 48 55.8**	**-0.1**
SCX	**San Cristobal**	**1.73**	**63**	*i* P	**Pn**	**21 48 44.0**	**-0.1**
SCX				*i* S	**Sn**	**21 49 04.6**	**-0.5**
SCX	**San Cristobal**	**1.73**	**63**	*i* P	**Pn**	**21 48 44.0**	**-0.1**
SCX				*i* S	**Sn**	**21 49 04.6**	**-0.5**
HUIG	**Huatulco**	**1.80**	**264**	*e*P	**Pn**	**21 48 44.5**	**-0.4**
HUIG				*i* S	**Sn**	**21 49 05.2**	**-1.4**
HUIG	**Huatulco**	**1.80**	**264**	*e*P	**Pn**	**21 48 44.5**	**-0.4**
HUIG				*i* S	**Sn**	**21 49 05.2**	**-1.4**
CCIG	**Comitan**	**2.06**	**81**	*i* P	**Pn**	**21 48 48.1**	**-0.4**
CCIG				*i* S	**Sn**	**21 49 12.0**	**-1.0**
CCIG	**Comitan**	**2.06**	**81**	*i* P	**Pn**	**21 48 48.1**	**-0.4**
CCIG				*i* S	**Sn**	**21 49 12.0**	**-1.0**
THIG		**2.19**	**118**	*i* P	**Pn**	**21 48 49.4**	**-0.8**
THIG				*i* S	**Sn**	**21 49 15.0**	**-1.1**
VHO	**Vista Hermosa**	**2.62**	**295**	*i* P	**Pn**	**21 48 58.4**	**+2.3**
VHO				*i* S	**Sn**	**21 49 25.2**	**-1.6**
VHO	**Vista Hermosa**	**2.62**	**295**	*i* P	**Pn**	**21 48 56.0**	**-0.1**
VHO				*e*S	**Sn**	**21 49 26.9**	**+0.1**
JAT	**Jato**	**3.01**	**123**	*e*P	**Pn**	**21 49 01.9**	**+0.4**
TP2	**Tecpan 2**	**3.33**	**110**	*e*P	**Pn**	**21 49 06.7**	**+0.9**
FUG	**Fuego 3**	**3.62**	**114**	*e*P	**Pn**	**21 49 11.2**	**+1.4**
PNIG	**Pinotepa**	**3.75**	**277**	*e*P	**Pn**	**21 49 11.2**	**-0.4**
PNIG				*i* S	**Sn**	**21 49 54.5**	**0.0**
PNIG	**Pinotepa**	**3.75**	**277**	*e*P	**Pn**	**21 49 11.2**	**-0.4**
PNIG				*i* S	**Sn**	**21 49 54.5**	**0.0**
TPIG	**Tehuac#an**	**3.85**	**310**	*i* P	**Pn**	**21 49 13.5**	**+0.6**
TPIG				*i* S	**Sn**	**21 49 56.7**	**-0.2**
UTMO	**Huajuapan**	**3.87**	**299**	*i* P	**Pn**	**21 49 14.9**	**+1.6**
UTMO				*i* S	**Sn**	**21 49 57.8**	**+0.2**
IXG	**Ixpaco**	**4.08**	**115**	*e*P	**Pn**	**21 49 17.5**	**+1.4**
IXG				*e*S	**Sn**	**21 50 05.5**	**+2.9**
MRL	**Marmol**	**4.49**	**101**	*e*P	**Pn**	**21 49 21.5**	**-0.2**
TEIG	**Tepich**	**7.09**	**52**	*e*Pn	**Pn**	**21 49 56.1**	**-1.3**
31nm,0.4s							
JTS	**JuntasAbangare**	**10.67**	**121**	*e*Pn	**Pn**	**21 50 46.4**	**0.0**
JCT	**Junction City**	**15.32**	**342**	Pn	**Pn**	**21 51 49.9**	**+1.0**
OTAV	**Otavalo**	**22.07**	**134**	*e*P	**P**	**21 53 04.9**	**-1.7**
3.8nm,1.0s							

*IDC **21** 21:55:22.7±1.6, 30°.91S×177°.44W, h0km, mb4.1/4, mb1 4.3/6, mb1mx4.0/19, mbtmp4.2/6, ML4.2/2, Error ellipse: s-maj=49.2km s-min=28.6km az=139.0*
*NEIC **21** 21:55:24.1±1.4, 31°.02S×176°.54W, h54km±13km, mb4.2/2, Error ellipse: s-maj=17.9km s-min=11.4km az=112.0*
ISC 21 21:55:25.3±4.2, 30°.9S±0°.1×177°.1W±0°.7, h35km, n18, σ0°78/10, mb4.1/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.75**	**212**	Pn	**Pn**	**21 57 28.5**	**-0.8**
1.2nm,0.3s,baz=342,slow=6.4,SNR=4.7							
URZ				Sn	Sx	21 59 01.4	
1.8nm,0.3s,baz=234,slow=18,SNR=7.0							
URZ	**Urewera**	**8.75**	**212**	*e*Pn	**Pn**	**21 57 30.3**	**+1.0**
URZ				*e*Sn	Sx	21 59 03.0	
OUZ	**Omahuta**	**8.93**	**239**	*e*Pn	Px	21 57 35.2	
11nm,0.7s							

RPZ	**Rata Peaks**	**15.87**	**213**	Pn	**Pn**	**21 59 06.2**	**+0.4**
2.7nm,0.3s,baz=150,slow=7.2,SNR=12							
RPZ	**Rata Peaks**	**15.87**	**213**	*e*Pn	**Pn**	**21 59 06.0**	**+0.1**
17nm,0.8s							
AFI	**Afiamalu**	**17.62**	**17**	*e*Pn	Px	21 59 25.2	
CTA	**Charters Tower**	**34.68**	**279**	P	**P**	**22 02 12.9**	**+1.2**
1.6nm,0.3s,mb4.4,baz=118,slow=11,SNR=3.7							
CTAO	**Charters Tower**	**34.68**	**279**	P	**P**	**22 02 13.5**	**+1.7**
STKA	**Stephens Creek**	**35.15**	**257**	P	**P**	**22 02 14.9**	**-0.8**
3.0nm,0.7s,mb4.3,baz=100,slow=10,SNR=4.6							
ASAR	**Alice Springs**	**43.89**	**267**	P	**P**	**22 03 28.4**	**-0.2**
0.8nm,0.5s,mb3.7,baz=102,slow=7.6,SNR=14							
WRA	**Warramunga Arr**	**44.92**	**272**	P	**P**	**22 03 36.1**	**-0.8**
0.8nm,0.3s,mb4.0,baz=111,slow=8.1,SNR=30							
CASY	**Casey**	**55.06**	**208**	*e*P	Px	22 04 51.1	
1.2nm,0.5s							
PMSA	**Palmer Station**	**71.46**	**155**	P	Px	22 06 36.6	
TPUB	**Ta-pu**	**80.44**	**304**	*e*P	**P**	**22 07 33.6**	**0.0**
FINES	**FINESS Array B**	**145.91**	**340**	PKPbc	PKPbc	22 15 02.4	+2.1
2.0nm,0.3s,baz=53,slow=4.5,SNR=53							
NOA	**NORSAR Array B**	**149.38**	**352**	PKPbc	PKPbc	22 15 12.7	+3.0
1.4nm,1.0s,baz=16,slow=4.2,SNR=3.4							
AKASG	**Malin Array Be**	**152.20**	**323**	PKPbc	PKPbc	22 15 19.6	+2.8
0.5nm,0.4s,baz=50,slow=5.1,SNR=4.2							
AKASG				PKPab	PKPab	22 15 27.8	+1.2
0.6nm,0.4s,baz=54,slow=5.0,SNR=5.2							
BRTR	**Keskin Array B**	**153.56**	**298**	PKPbc	PKPbc	22 15 22.3	+2.2
0.6nm,0.6s,baz=148,slow=4.5,SNR=6.1							

IDC 21 22:23:34.2±7.4, 30°.45S×178°.65W, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.5/15, mbtmp3.3/2, Error ellipse: s-maj=309.0km s-min=57.5km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.54**	**267**	P	P	22 31 31.6	-0.2
0.2nm,0.8s,baz=116,slow=7.5,SNR=3.2							
WRA	**Warramunga Arr**	**43.54**	**273**	P	P	22 31 39.8	0.0
0.5nm,0.7s,baz=111,slow=7.9,SNR=7.2							
FINES	**FINESS Array B**	**145.00**	**339**	PKPbc	PKPdf	22 43 11.2	-1.4
1.2nm,0.8s,baz=48,slow=2.1,SNR=6.7							

*ISCJB **21** 22:25:54.3±0.3, 43°.18N±0°.02×10°.72E±0°.03, h26km±5km, Error ellipse: s-maj=4.2km s-min=3.7km az=38.1*
*CSEM **21** 22:25:54.3±0.1, 43°.21N×10°.83E, h20km, ML2.8/14, Error ellipse: s-maj=2.5km s-min=1.8km az=11.0*
*ROM **21** 22:25:54.9±0.1, 43°.20N×10°.83E, h12km±1km, Md2.9/21, Ml2.4/21, Error ellipse: s-maj=1.7km s-min=1.2km az=2.0*
*NEIC **21** 22:25:54.9, 43°.20N×10°.80E, h8km, ML2.6(LDG), ML2.4(ROM), After ROM.*
*LDG **21** 22:25:55.7±0.1, 43°.18N×10°.78E, h10km, Ml2.6/14, Error ellipse: s-maj=3.0km s-min=1.8km az=12.0*
ISC 21 22:25:54.3±0.3, 43°.20N±0°.02×10.79E±0°.03, h19km±3km, n82, σ0°99/124, 2C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASP	**Castiglione de**	**0.41**	**173**	Pg	**Pg**	**22 26 02.7**	**-0.2**
CASP				Sg	**

PIEI	**Pieia**	**1.31**	**75**	Pg		**Pn**	**22 26 19.0**	**+1.4**
	48nm,0.8s							
PGF	**Pioggiola**	**1.47**	**244**	*e*Pn		**Pn**	**22 26 20.7**	**+1.0**
PGF				*e*Sn		**Sn**	**22 26 39.2**	**+0.8**
	62nm,0.6s							
PGF	**Pioggiola**	**1.47**	**244**	*e*Pn		**Pn**	**22 26 20.7**	**+1.0**
PGF				*e*Sn		**Sn**	**22 26 39.2**	**+0.8**
	31nm,0.6s							
AQU	**L'Aquila**	**2.10**	**113**	*e*Pn		**Pb**	**22 26 31.8**	**+0.1**
AQU				*e*Sn		**Sb**	**22 26 57.5**	**+0.2**
AQU	**L'Aquila**	**2.10**	**113**	*e*Pn		**Pb**	**22 26 31.8**	**+0.1**
AQU				*e*Sn		**Sb**	**22 26 57.5**	**+0.2**
SBF	**Sospel**	**2.53**	**286**	*e*Pn		**Pn**	**22 26 34.7**	**+0.4**
SBF				*e*Sn		**Sn**	**22 27 04.4**	**-0.2**
	28nm,0.8s							
SBF	**Sospel**	**2.53**	**286**	*e*Pn		**Pn**	**22 26 34.7**	**+0.4**
SBF				*e*Sn		**Sn**	**22 27 04.4**	**-0.2**
	14nm,0.8s							
FRF	**La Foret Royal**	**3.04**	**278**	*e*Pn		**Pn**	**22 26 41.9**	**+0.5**
FRF				*e*Sn		**Sn**	**22 27 16.0**	**-1.2**
	4.5nm,0.3s							
FRF	**La Foret Royal**	**3.04**	**278**	*e*Pn		**Pn**	**22 26 41.9**	**+0.5**
FRF				*e*Sn		**Sn**	**22 27 16.0**	**-1.2**
	2.2nm,0.3s							
LMR	**La Mourre**	**3.13**	**274**	*e*Pn		**Pn**	**22 26 42.7**	**+0.1**
LMR				*e*Sn		**Sn**	**22 27 18.1**	**-1.3**
	9.9nm,0.5s							
LMR	**La Mourre**	**3.13**	**274**	*e*Pn		**Pn**	**22 26 42.7**	**+0.1**
LMR				*e*Sn		**Sn**	**22 27 18.1**	**-1.3**
	4.9nm,0.5s							
MBDF	**Montbardon**	**3.28**	**299**	*e*Pn		**Pn**	**22 26 46.3**	**+1.7**
MBDF				*e*Sn		**Sn**	**22 27 22.0**	**-1.1**
	7.2nm,0.6s							
MBDF	**Montbardon**	**3.28**	**299**	*e*Pn		**Pn**	**22 26 46.3**	**+1.7**
MBDF				*e*Sn		**Sn**	**22 27 22.0**	**-1.1**
	3.6nm,0.6s							
TUE	**Stuetta**	**3.43**	**343**	*e*Pn		**Pn**	**22 26 49.5**	**+2.8**
TUE				*e*Sn		**Sn**	**22 27 30.4**	**+3.7**
TUE	**Stuetta**	**3.43**	**343**	*e*Pn		**Pn**	**22 26 49.5**	**+2.8**
TUE				*e*Sn		**Sn**	**22 27 30.4**	**+3.7**
LPG	**La Plagne**	**3.70**	**310**	*e*Pn		**Pn**	**22 26 51.1**	**+0.7**
LPG				*e*Sn		**Sn**	**22 27 32.6**	**-0.8**
	2.8nm,0.5s							
LPG	**La Plagne**	**3.70**	**310**	*e*Pn		**Pn**	**22 26 51.1**	**+0.7**
LPG				*e*Sn		**Sn**	**22 27 32.6**	**-0.8**
	1.4nm,0.5s							
LPL	**La Plagne**	**3.72**	**310**	*e*Pn		**Pn**	**22 26 51.2**	**+0.5**
LPL				*e*Sn		**Sn**	**22 27 33.1**	**-0.8**
	4.3nm,0.6s							
LPL	**La Plagne**	**3.72**	**310**	*e*Pn		**Pn**	**22 26 51.2**	**+0.5**
LPL				*e*Sn		**Sn**	**22 27 33.1**	**-0.8**
	2.2nm,0.6s							
SMRF	**Simiane la Rot**	**3.87**	**283**	*e*Pn		**Pn**	**22 26 53.3**	**+0.6**
SMRF				*e*Sn		**Sn**	**22 27 36.4**	**-1.2**
	8.2nm,0.9s							
SMRF	**Simiane la Rot**	**3.87**	**283**	*e*Pn		**Pn**	**22 26 53.3**	**+0.6**
SMRF				*e*Sn		**Sn**	**22 27 36.4**	**-1.2**
	4.1nm,0.9s							
ORIF	**Oris-en-Rattie**	**3.94**	**298**	*e*Pn		**Pn**	**22 26 54.1**	**+0.5**
ORIF				*e*Sn		**Sn**	**22 27 38.0**	**-1.2**
	4.2nm,0.5s							
ORIF	**Oris-en-Rattie**	**3.94**	**298**	*e*Pn		**Pn**	**22 26 54.1**	**+0.5**
ORIF				*e*Sn		**Sn**	**22 27 38.0**	**-1.2**
	2.1nm,0.5s							
MOTA	**Moosalm**	**4.15**	**3⇑**	*i*Pn		**Pn**	**22 26 59.8**	**+3.2**
	4.5nm,0.6s							
MOTA	**Moosalm**	**4.15**	**3**	Pn		**Pn**	**22 26 59.8**	**+3.2**
	4.5nm,0.6s							
WATA	**Walderalm**	**4.17**	**7⇑**	*i*Pn		**Pn**	**22 27 00.8**	**+3.9**
	3.8nm,0.5s							
WATA	**Walderalm**	**4.17**	**7**	Pn		**Pn**	**22 27 00.8**	**+3.9**
	3.8nm,0.5s							
VIVF	**Saint-Julien-l**	**4.71**	**293**	*e*Pn		**Pn**	**22 27 04.7**	**+0.4**
VIVF				*e*Sn		**Sn**	**22 27 56.4**	**-2.0**
	0.9nm,0.4s							
VIVF	**Saint-Julien-l**	**4.71**	**293**	*e*Pn		**Pn**	**22 27 04.7**	**+0.4**
VIVF				*e*Sn		**Sn**	**22 27 56.4**	**-2.0**
	0.4nm,0.4s							
LASF	**Ste Croix**	**5.11**	**282**	*e*Pn		**Pn**	**22 27 09.8**	**+0.1**
LASF				*e*Sn		**Sn**	**22 28 06.0**	**-2.1**
	1.4nm,0.5s							
LASF	**Ste Croix**	**5.11**	**282**	*e*Pn		**Pn**	**22 27 09.8**	**+0.1**
LASF				*e*Sn		**Sn**	**22 28 06.0**	**-2.1**
	0.7nm,0.5s							
MTLF	**Montolieu**	**6.26**	**274**	*e*Pn		**Pn**	**22 27 25.6**	**0.0**
MTLF				*e*Sn		**Sn**	**22 28 33.3**	**-3.2**
	0.3nm,0.3s							
MTLF	**Montolieu**	**6.26**	**274**	*e*Pn		**Pn**	**22 27 25.6**	**0.0**
EPF	**Esparros**	**7.65**	**272**	*e*Pn		**Pn**	**22 27 44.5**	**-0.1**
EPF				*e*Sn		**Sn**	**22 29 06.8**	**-3.9**
	0.6nm,0.3s							
EPF	**Esparros**	**7.65**	**272**	*e*Pn		**Pn**	**22 27 44.5**	**-0.1**

IDC 21 22:26:59.8±1.1, 22°.00N×143°.15E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/23, mbtmp4.0/5, Error ellipse: s-maj=75.5km s-min=22.3km az=96.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.56**	**192**	P	P	22 34 57.6	+0.1
	2.1nm,0.5s,baz=17,slow=9.2,SNR=38						
ASAR	**Alice Springs**	**46.27**	**192**	P	P	22 35 26.9	-0.2
	0.6nm,0.6s,baz=12,slow=9.4,SNR=7.0						
YKA	**Yellowknife Ar**	**76.20**	**28**	P	P	22 38 50.0	+0.4
	0.5nm,0.6s,baz=292,slow=6.2,SNR=3.5						
ARCES	**ARCESS Array B**	**78.63**	**341**	P	P	22 39 03.6	+0.5
	2.7nm,0.7s,baz=74,slow=9.5,SNR=2.9						
FINES	**FINESS Array B**	**82.90**	**334**	P	P	22 39 25.2	-0.9
	0.6nm,0.4s,baz=62,slow=4.9,SNR=8.0						

*ISK **21** 22:38:57.4, 37°.06N×28°.20E, h31km, MD2.5*
*ISCJB **21** 22:39:00.6±0.7, 37°.04N±0°.05×28°.07E±0°.04, h10km, Error ellipse: s-maj=6.9km s-min=3.8km az=161.9*
*DDA **21** 22:39:00.1, 37°.03N×28°.08E, h7km, 3km, Md2.6*
*CSEM **21** 22:39:00.1±0.4, 37°.03N×28°.08E, h8km, MD2.5, Error ellipse: s-maj=9.0km s-min=5.1km az=163.0*

ISC 21 22:39:00.1±0.9, 36°.99N±0°.05×28°.10E±0°.03, h10km±48km, n16, σ1°.22/32, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**44**	*e*PG	**Pg**	**22 39 03.6**	**-0.8**
YER				*e*SG	**Sg**	**22 39 07.2**	**-0.1**
YER	**Yerkesik**	**0.20**	**44**	*e*Pg	**Pg**	**22 39 03.6**	**-0.8**
YER				*e*Sg	**Sg**	**22 39 07.2**	**-0.1**
MLSB	**Milas**	**0.40**	**320**	*e*PG	**Pg**	**22 39 07.4**	**-0.6**
MLSB				*e*SG	**Sg**	**22 39 15.0**	**+1.6**
MLSB	**Milas**	**0.40**	**320**	*e*Pg	**Pg**	**22 39 07.4**	**-0.6**
MLSB				*e*Sg	**Sg**	**22 39 15.0**	**+1.6**
TURN	**Turunc**	**0.42**	**106**	*i* P	**Pg**	**22 39 04.6**	**-3.7**
TURN				*i* S	**Sg**	**22 39 10.1**	**-3.7**
TURN	**Turunc**	**0.42**	**106**	*i* P	**Pg**	**22 39 04.6**	**-3.6**
TURN				*i* S	**Sg**	**22 39 10.1**	**-3.7**
DAT	**Datca**	**0.49**	**239**	*e*PG	**Pg**	**22 39 10.0**	**+0.3**
DAT				*e*SG	**Sg**	**22 39 19.2**	**+3.0**
DAT	**Datca**	**0.49**	**239**	*e*Pg	**Pg**	**22 39 10.0**	**+0.3**
DAT				*e*Sg	**Sg**	**22 39 19.3**	**+3.1**
BODT	**Bodrum**	**0.64**	**277**	*e*PG	**Pg**	**22 39 10.7**	**-1.8**
BODT				*e*SG	**Sg**	**22 39 20.9**	**+0.1**
BODT	**Bodrum**	**0.64**	**277**	*e*Pg	**Pg**	**22 39 10.7**	**-1.8**
BODT				*e*Sg	**Sg**	**22 39 20.9**	**+0.1**
AYDN	**Tasoluk**	**0.69**	**345**	*i* P	**Pg**	**22 39 12.8**	**-0.8**
AYDN				*i* S	**Sg**	**22 39 21.9**	**-0.7**
AYDN	**Tasoluk**	**0.69**	**345**	*i* P	**Pg**	**22 39 12.8**	**-0.7**
AYDN				*i* S	**Sg**	**22 39 21.9**	**-0.7**
DNZL	**Cakiroluk**	**1.03**	**47**	*i* P	**Pg**	**22 39 19.1**	**-0.7**
DNZL				*i* S	**Sg**	**22 39 33.7**	**+0.5**
DNZL	**Cakiroluk**	**1.03**	**47**	*i* P	**Pg**	**22 39 19.1**	**-0.7**
DNZL				*i* S	**Sg**	**22 39 33.7**	**+0.5**
GOLH	**Golhisar**	**1.19**	**78**	*i* P	**Pg**	**22 39 23.8**	**+0.8**
GOLH				*i* S	**Sg**	**22 39 40.8**	**+2.4**
GOLH	**Golhisar**	**1.19**	**78**	*i* P	**Pg**	**22 39 23.8**	**+0.8**
GOLH				*i* S	**Sg**	**22 39 40.8**	**+2.4**

*IDC **21** 22:47:18.1±1.5, 33°.27S×68°.78W, h0km, mb3.1/1, mb1 3.7/2, mb1mx3.5/14, mbtmp3.3/2, ML3.6/1, Error ellipse: s-maj=68.0km s-min=17.0km az=107.0*
*ISCJB **21** 22:47:21.9±0.7, 33°.15S±0°.05×68°.39W±0°.05, h40km±11km, Error ellipse: s-maj=7.5km s-min=6.4km az=177.2*
*GUC **21** 22:47:22.3±0.6, 33°.15S×68°.68W, h0km±40km, ML3.1*
*NEIC **21** 22:47:23.6±0.7, 33°.14S×68°.46W, h36km±8km, mb3.2/1, ML3.1(GUC), Error ellipse: s-maj=9.8km s-min=7.5km az=127.0*
NEIC Felt [III] at Mendoza.

ISC 21 22:47:23.7±0.7, 33°.15S±0°.05×68°.45W±0°.05, h37km±11km, n34, σ0°.98/43, 1C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**1.55**	**7**	Pn	**Pn**	**22 47 48.7**	**-0.1**
	3.3nm,0.3s,baz=191,slow=13,SNR=270						
CFAA				Lg		22 48 13.2	
	9.4nm,0.3s,baz=232,slow=6.1,SNR=19						
FCH	**Farellones**	**1.55**	**263⇓**	*i*P	**Pn**	**22 47 46.4**	**-2.4**
FCH				*i* S	**Sn**	**22 48 05.8**	**-1.9**
SJCH	**San Jose de Ma**	**1.67**	**252**	*e*P	**Pn**	**22 47 49.1**	**-1.2**
SJCH				*e*S	**Sn**	**22 48 10.2**	**-0.3**
SJCH	**San Jose de Ma**	**1.67**	**252**	*e*P	**Pn**	**22 47 49.1**	**-1.2**
SJCH				*e*S	**Sn**	**22 48 10.2**	**-0.3**
SJCH				AML	AML	22 48 15.3	
	comp=E,450nm,0.2s						
CLCH	**Cerro Calan**	**1.77**	**261**	*e*P	**Pn**	**22 47 50.7**	**-1.0**
CLCH				*i* S	**Sn**	**22 48 12.6**	**-0.4**
CLCH				AML	AML	22 48 26.7	
	comp=E,434nm,0.5s						
PCH	**Pirque**	**1.79**	**254**	*e*P	**Pn**	**22 47 51.4**	**-0.7**
PCH	**Pirque**	**1.79**	**254**	*e*P	**Pn**	**22 47 51.4**	**-0.7**
JACH	**Jahuel**	**1.86**	**284⇓**	*i*P	**Pn**	**22 47 52.8**	**-0.2**
JACH	**Jahuel**	**1.86**	**284⇓**	*i*P	**Pn**	**22 47 52.8**	**-0.2**
ANTU	**Antumapu**	**1.88**	**256**	*e*P	**Pn**	**22 47 52.5**	**-0.7**
ANTU				*i* S	**Sn**	**22 48 15.8**	**+0.1**
ANTU	**Antumapu**	**1.88**	**256**	*e*P	**Pn**	**22 47 52.5**	**-0.7**
ANTU				*i* S	**Sn**	**22 48 15.8**	**+0.1**
ANTU				AML	AML	22 48 20.8	
	comp=E,450nm,0.4s						
PEL	**Peldehue**	**1.88**	**270⇑**	*i*P	**Pn**	**22 47 52.4**	**-0.8**
PEL				*i* S	**Sn**	**22 48 16.0**	**+0.3**
PEL				AML	AML	22 48 29.1	
	comp=E,552nm,0.5s						
SAN	**Santiago**	**1.88**	**260**	*e*P	**Pn**	**22 47 52.6**	**-0.7**
SAN	**Santiago**	**1.88**	**260**	*e*P	**Pn**	**22 47 52.6**	**-0.7**
SAN				AML	AML	22 48 27.8	
	comp=N,247nm,0.4s						
CACH	**El Canelo**	**2.04**	**241**	*e*P	**Pn**	**22 47 56.1**	**+0.7**
CACH				*e*S	**Sn**	**22 48 21.5**	**+1.8**
CACH	**El Canelo**	**2.04**	**241**	*e*P	**Pn**	**22 47 56.1**	**+0.7**
CACH				*e*S	**Sn**	**22 48 21.5**	**+1.8**
TACH	**Talagante**	**2.14**	**256**	*e*P	**Pn**	**22 47 56.9**	**0.0**
TACH	**Talagante**	**2.14**	**256**	*e*P	**Pn**	**22 47 56.9**	**0.0**
ROCH	**El Roble**	**2.16**	**274⇓**	*i*P	**Pn**	**22 47 57.9**	**+0.7**
ROCH				*e*S	**Sn**	**22 48 24.3**	**+1.7**
LNV	**Longovilo**	**2.60**	**251**	*e*P	**Pn**	**22 48 04.7**	**+1.5**
LNV				*e*S	**Sn**	**22 48 36.5**	**+2.9**
LNV	**Longovilo**	**2.60**	**251**	*e*P	**Pn**	**22 48 04.7**	**+1.5**
LNV				*e*S	**Sn**	**22 48 36.5**	**+2.9**
LCO	**Las Campanas**	**4.55**	**334**	*e*Pn	**Pn**	**22 48 31.1**	**+1.0**
LCO				*e*Sn	**Sn**	**22 49 22.6**	**+0.8**
TRQA	**Tornquist**	**7.19**	**135**	*e*Pn	**Pn**	**22 49 06.3**	**0.0**
	comp=N,6.5nm,0.6s						
TRQA				*e*Sn	**Sn**	**22 50 27.4**	**+0.6**
PLCA	**Paso Flores**	**7.75**	**192**	Lg		22 51 28.5	
	comp=N,0.5nm,0.3s,baz=303,slow=19,SNR=3.7						
CPUP	**Villa Florida**	**11.81**	**58**	Lg		22 53 42.1	
	comp=N,0.9nm,0.3s,baz=136,slow=8.3,SNR=4.1						
LPAZ	**La Paz**	**16.79**	**1**	Pn	**Pn**	**22 51 16.0**	**0.0**
	comp=N,0.1nm,0.3s,baz=183,slow=1.9,SNR=3.1						
LPAZ	**La Paz**	**16.79**	**1**	*e*Pn	**Pn**	**22 51 15.4**	**-0.6**
	comp=N,1.5nm,0.7s						
RPN	**Rapa Nui**	**35.70**	**269**	P	**P**	**22 54 18.6**	**-0.1**
	comp=N,78nm,0.7s						
SDV	**Santo Domingo**	**41.85**	**357**	P	**P**	**22 55 10.3**	**+0.1**
JTS	**JuntasAbangare**	**45.97**	**337**	P	**P**	**22 55 42.9**	**-0.4**
TXAR	**Lajitas Array**	**70.53**	**328**	P	**P**	**22 58 34.9**	**+0.1**
	comp=N,0.1nm,0.4s,baz=172,slow=7.3,SNR=2.9						
WRA	**Warramunga Arr**	**122.90**	**206**	PKP	PKPdf	23 06 15.8	-0.7
	comp=N,0.3nm,0.8s,baz=158,slow=1.7,SNR=6.5						
WRA	**Warramunga Arr**	**122.90**	**206**	PKP	PKPdf	23 06 15.8	-0.7
ZALV	**Zalesovo Beam**	**151.87**	**34**	PKPbc	PKPbc	23 07 15.3	+1.3
	comp=N,1.5nm,0.5s,baz=307,slow=3.5,SNR=7.6						

*NEIC **21** 22:58:45.7, 16°.21N×98°.33W, h5km, MD3.5(MEX), After MEX.*

MEX 21 22:58:45.7±0.5, 16°.21N×98°.33W, h5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.27**	**47**	*e*P	Pg	22 58 50.2	-0.6
PNIG				*i* S	Sg	22 58 54.3	-0.1
PNIG	**Pinotepa**	**0.27**	**47**	*e*P	Pg	22 58 50.2	-0.6
PNIG				*i* S	Sg	22 58 54.3	-0.1
UTMO	**Huajuapan**	**1.69**	**17**	*i* P	Pn	22 59 12.5	-3.4
UTMO				*i* S	Sn	22 59 34.0	-3.9
VHO	**Vista Hermosa**	**1.75**	**61**	*e*P	Pn	22 59 13.2	-3.6
VHO				*i* S	Sn	22 59 35.5	-4.0
VHO	**Vista Hermosa**	**1.75**	**61**	*e*P	Pn	22 59 13.2	-3.6
VHO				*i* S	Sn	22 59 35.5	-4.0
CAIG	**El Cayaco**	**2.04**	**294**	*i* P	Pn	22 59 17.1	-3.6
CAIG				*i* S	Sn	22 59 41.8	-4.7
CAIG	**El Cayaco**	**2.04**	**294**	*i* P	Pn	22 59 17.1	-3.6
CAIG				*i* S	Sn	22 59 41.8	-4.7
HUIG	**Huatulco**	**2.18**	**101**	*i* P	Pn	22 59 19.9	-2.8
HUIG				*i* S	Sn	22 59 46.4	-3.7
HUIG	**Huatulco**	**2.18**	**101**	*i* P	Pn	22 59 19.9	-2.8
HUIG				*i* S	Sn	22 59 46.4	-3.7

IDC 21 23:02:14.3±2.8, 30°.76S×177°.90W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.8/17, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=67.3km s-min=35.5km az=113.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.54**	**207**	Pn	Pn	23 04 19.6	+0.4
	1.0nm,0.3s,baz=18,slow=9.6,SNR=4.7						
URZ				Sn	Sn	23 05 55.7	-0.6
	1.7nm,0.3s,baz=336,slow=19,SNR=4.4						
ASAR	**Alice Springs**	**43.18**	**267**	P	P	23 10 17.7	+0.7
	0.8nm,0.7s,baz=104,slow=7.6,SNR=8.0						
WRA	**Warramunga Arr**	**44.20**	**272**	P	P	23 10 24.6	-0.7
	0.8nm,0.6s,baz=111,slow=8.1,SNR=13						
FINES	**FINESS Array B**	**145.51**	**340**	PKPbc	PKPbc	23 21 52.8	-0.9
	1.2nm,0.5s,baz=22,slow=1.5,SNR=15						

MEX 21 23:15:28.0±0.7, 15°.57N×93°.33W, h90km±7km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.17**	**40**	*e*P	Pn	23 15 39.2	-1.7
PCIG				*i* S	Sn	23 15 49.0	-1.4
TGIG		**1.21**	**10**	*i* P	Pn	23 15 49.3	-0.9
TGIG				*i* S	Sn	23 16 04.9	-2.1
CCIG	**Comitan**	**1.35**	**58**	*e*P	Pn	23 15 51.2	-0.7
CCIG				*i* S	Sn	23 16 08.3	-1.6
HUIG	**Huatulco**	**2.68**	**275**	*i* P	Pn	23 16 07.7	-1.6
HUIG				*i* S	Sn	23 16 38.9	-2.1

*ISK **21** 23:25:14.4, 40°.97N×43°.52E, h2km, ML2.2*
*CSEM **21** 23:25:14.9±0.1, 40°.98N×43°.50E, h2km, ML2.2, Error ellipse: s-maj=4.5km s-min=2.7km az=162.0*
*TIF **21** 23:25:14.1, 41°.35N×44°.18E, h10km*
*ISCJB **21** 23:25:16.0±0.8, 40°.98N±0°.03×43°.50E±0°.03, h8km±6km, Error ellipse: s-maj=5.6km s-min=3.7km az=152.6*
*DDA **21** 23:25:16.6, 41°.07N×43°.37E, h7km, 2km, Md2.8*

ISC 21 23:25:15.3±0.6, 40°.99N±0°.04×43°.50E±0°.03, h1km±7km, n25, σ0°.85/43, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARS	**Kars**	**0.48**	**221**	*e*PG	**Pg**	**23 25 24.7**	**+0.2**
KARS				*e*SG	**Sg**	**23 25 32.1**	**+1.4**
KARS	**Kars**	**0.48**	**221**	*e*Pg	**Pg**	**23 25 24.7**	**+0.2**
KARS				*e*Sg	**Sg**	**23 25 32.1**	**+1.4**
TBLG	**Delisi**	**1.19**	**51**	P	**Pg**	**23 25 37.8**	**-0.4**
TBLG				S	**Sg**	**23 25 54.5**	**+0.8**
TBLG	**Delisi**	**1.19**	**51**	P	**Pg**	**23 25 37.8**	**-0.4**
TBLG				S	**Sg**	**23 25 54.5**	**+0.8**
ARTV	**Artvin**	**1.20**	**280**	*i* P	**Pg**	**23 25 37.2**	**-1.1**
ARTV				*i* S	**Sg**	**23 25 53.6**	**-0.3**
ARTV	**Artvin**	**1.20**	**280**	*i* P	**Pg**	**23 25 37.2**	**-1.1**
ARTV				*i* S	**Sg**	**23 25 53.6**	**-0.3**
MTA	**Mtatsminda**	**1.21**	**54**	P	**Pg**	**23 25 37.6**	**-0.8**
MTA				S	**Sg**	**23 25 54.1**	**0.0**
MTA	**Mtatsminda**	**1.21**	**54**	P	**Pg**	**23 25 37.6**	**-0.8**
MTA				S	**Sg**	**23 25 54.1**	**+0.1**
GNI	**Garni**	**1.27**	**131**	*e*PN	**Pn**	**23 25 38.9**	**-1.2**
GNI				*e*SN	**Sn**	**23 25 57.0**	**-0.7**
GNI	**Garni**	**1.27**	**131**	*e*Pn	**Pn**	**23 25 38.9**	**-1.2**
GNI				*e*Sn	**Sn**	**23 25 57.0**	**-0.7**
DDEM	**Demirkent**	**1.32**	**266**	*i* P	**Pg**	**23 25 40.3**	**-0.4**
DDEM				*i* S	**Sg**	**23 25 57.4**	**-0.5**
DDEM	**Demirkent**	**1.32**	**266**	*i* P	**Pg**	**23 25 40.3**	**-0.4**
DDEM				*i* S	**Sg**	**23 25 57.4**	**-0.5**
DBOC	**Borcka**	**1.43**	**285**	*i* P	**Pn**	**23 25 41.9**	**-0.4**
DBOC				*i* S	**Sg**	**23 26 00.4**	**-0.8**
DBOC	**Borcka**	**1.43**	**285**	*i* P	**Pn**	**23 25 41.9**	**-0.4**
DBOC				*i* S	**Sg**	**23 26 00.4**	**-0.7**
AGRB	**Hanur-Agry**	**1.46**	**195**	*e*PN	**Pn**	**23 25 42.7**	**-0.1**
AGRB	**Hanur-Agry**	**1.46**	**195**	*e*Pn	**Pn**	**23 25 42.7**	**-0.1**
BCA	**Borcka**	**1.48**	**289**	*e*PN	**Pn**	**23 25 43.3**	**+0.2**
BCA	**Borcka**	**1.48**	**289**	*e*Pn	**Pn**	**23 25 43.3**	**+0.2**
DGRG	**David-gareji**	**1.49**	**71**	P	**Pn**	**23 25 42.5**	**-0.7**
DGRG				S	**Sg**	**23 26 04.0**	**+0.8**
DGRG	**David-gareji**	**1.49**	**71**	P	**Pn**	**23 25 42.5**	**-0.7**
DGRG				S	**Sg**	**23 26 04.0**	**+0.8**
HOMI	**Horasan**	**1.54**	**233**	*i* P	**Pn**	**23 25 45.2**	**+1.5**
HOMI				*i* S	**Sn**	**23 26 05.3**	**+1.0**
ONI	**Oni**	**1.60**	**359**	P	**Pg**	**23 25 50.0**	**+4.0**
ONI				S	**Sg**	**23 26 10.0**	**+3.2**
CLDR	**Caldiran**	**1.87**	**170**	*e*PN	**Pn**	**23 25 48.2**	**-0.2**
CLDR	**Caldiran**	**1.87**	**170**	*e*Pn	**Pn**	**23 25 48.2**	**-0.2**
EZM	**Erzurum**	**1.95**	**237**	*e*PN	**Pn**	**23 25 50.0**	**+0.5**

MAN 21 23:26:58, 9°.78N×122°.63E, h40km, mb4.2, ML3.0, MS2.8, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.84**	**357**	*e*P	Pn	23 27 15.1	+1.7
GUIM				*e*S	Sn	23 27 22.9	-1.7
TBP	**Tagbilaran**	**1.22**	**94**	*e*P	Pn	23 27 21.0	+2.5
TBP				*e*S	Sn	23 27 35.1	+1.3
CUYO	**Cuyo Island**	**1.91**	**304**	*e*P	Pn	23 27 29.1	+1.1
PAGZ	**Pagadian**	**2.06**	**159**	*e*P	Pn	23 27 31.7	+1.6

*IGQ **21** 23:34:48.0, 2°.17S×77°.75W, h174km±3km, Mb4.4, Ms4.2, Error ellipse: s-maj=5.2km s-min=2.5km az=16.0*
*IDC **21** 23:34:49.4±1.8, 1°.91S×77°.47W, h132km±17km, mb3.6/10, mb1 3.8/14, mb1mx3.6/26, mbtmp3.6/14, Error ellipse: s-maj=26.6km s-min=12.0km az=80.0*
*ISCJB **21** 23:34:50.3±0.4, 2°.05S±0°.03×77°.63W±0°.06, h157km±3km, mb4.0/13, Error ellipse: s-maj=10.2km s-min=5.6km az=3.6*
*NEIC **21** 23:34:50.4±0.7, 1°.95S×77°.48W, h144km±7km, mb4.5/4, MD4.6(IGQ), Error ellipse: s-maj=10.1km s-min=7.2km az=62.0*

ISC 21 23:34:51.2±0.4, 2°.05S±0°.03×77°.62W±0°.07, h150km±3km, n81, σ0°.88/83, mb4.0/13, 14C-21D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.62**	**251**	⇑S	**Sn**	**23 35 29.5**	**-0.5**
MACE	**Macas**	**0.62**	**251**	⇑P	**Pn**	**23 35 12.5**	**-0.7**
PAT1	**Patacocha**	**0.98**	**303**	S	**Sn**	**23 35 34.3**	**-0.5**
PAT1	**Patacocha**	**0.98**	**303**	P	**Pn**	**23 35 15.3**	**-0.6**
ULBA	**Ulba**	**0.99**	**307**	⇑P	**Pn**	**23 35 15.5**	**-0.5**
ARRY	**Arrayan**	**1.00**	**303**	⇑P	**Pn**	**23 35 15.1**	**-0.9**
ARRY	**Arrayan**	**1.00**	**303**	⇑S	**Sn**	**23 35 33.6**	**-1.3**
BULB	**Ulba Tungurahu**	**1.00**	**308**	⇓P	**Pn**	**23 35 15.6**	**-0.4**
BULB	**Ulba Tungurahu**	**1.00**	**308**	⇓S	**Sn**	**23 35 34.5**	**-0.4**
BRUN	**Tungurahua Vol**	**1.01**	**308**	⇓S	**Sn**	**23 35 34.7**	**-0.4**
BRUN	**Tungurahua Vol**	**1.01**	**308**	⇓P	**Pn**	**23 35 15.9**	**-0.3**
BMAS	**Trigal station**	**1.02**	**302**	⇑S	**Sn**	**23 35 34.9**	**-0.4**
BMAS	**Trigal station

LIC	**Lamto**	**72.93**	**83**	*e*P	**P**		**23 46 04.0**	**-0.8**
	49nm,1.2s,mb5.1							
TIC	**Toumodi**	**72.97**	**82**	*e*P	**P**		**23 46 03.7**	**-1.3**
	76nm,1.7s,mb5.2							
KIC	**Kosan Boka**	**73.23**	**83**	*e*P	**P**		**23 46 05.7**	**-0.8**
	28nm,1.3s,mb4.8							
ESDC	**Sonseca Array**	**78.79**	**49**	P	**P**		**23 46 37.0**	**-0.4**
	0.5nm,0.8s,mb3.2,baz=261,slow=6.4,SNR=5.4							
ILAR	**Eielson Array**	**83.14**	**336**	P	**P**		**23 46 59.2**	**-0.7**
	0.9nm,0.7s,mb3.6,baz=134,slow=4.2,SNR=9.4							
QSPA	**South Pole Qui**	**88.02**	**180**	P	**P**		**23 47 25.5**	**+1.8**
	6.4nm,0.9s,mb4.4,baz=174,slow=1.4,SNR=19							
QSPA	**South Pole Qui**	**88.02**	**180**	*e*P	**P**		**23 47 25.1**	**+1.3**
	9.0nm,1.1s,mb4.5							
ZALV	**Zalesovo Beam**	**126.29**	**13**	PKP	PKPdf		23 53 35.7	-0.2
	1.0nm,0.7s,baz=315,slow=0.6,SNR=4.9							
MKAR	**Makanchi Array**	**132.12**	**19**	PKP	PKPdf		23 53 47.2	0.0
	0.3nm,0.2s,baz=327,slow=0.6,SNR=2.0							

DJA 21 23:48:03,0°.52S×122°.90E,h96km,MLv4.0/8,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.53**	**194**	P	Pn	23 48 17.6	-1.1
LUWI				S	Sn	23 48 32.5	+2.2
MRSI	**Marisa**	**1.38**	**316**	P	Pn	23 48 21.1	-6.5
KMSI	**Cibinong**	**1.53**	**45**	P	Pn	23 48 38.7	+9.2
KDI	**Kendari**	**3.43**	**185**	P	Pn	23 48 55.3	+0.9
TTSI	**Tana Toraja**	**3.97**	**231**	P	Pn	23 49 03.9	+2.1
LBMI	**Labuha**	**4.60**	**91**	P	Pn	23 49 07.3	-3.0
SPSI	**Sidrap Palu**	**4.64**	**222**	P	Pn	23 49 12.8	+2.0
NLAI	**Namlea**	**4.99**	**123**	P	Pn	23 49 11.0	-4.6

*IDC **21** 23:48:24.7±1.8,8°.87S×128°.18E,h0km,mb3.6/1, mb1 3.8/4,mb1mx3.5/17,mbtmp3.6/4,ML3.7/3,MS2.8/1, Ms1 2.8/1,ms1mx2.0/21,Error ellipse: s-maj=63.2km s-min=23.4km az=75.0*

*ISCJB **21** 23:48:28.6±0.8,9°.19S±0°.06×127°.83E±0°.07,h33km, mb3.7/4,Error ellipse: s-maj=10.0km s-min=8.2km az=137.3*

*NEIC **21** 23:48:31.4±0.7,9°.26S×127°.96E,h35km,mb3.8/3,Error ellipse: s-maj=13.6km s-min=9.7km az=50.0*

ISC 21 23:48:30.8±0.8,9°.15S±0°.06×127°.84E±0°.07,h35km,n12, σ1°.54/17,mb3.7/4,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.74**	**128**	*e*Pn	**Pn**	**23 49 52.1**	**-1.6**
	46nm,0.7s						
KAKA				*e*Sn	**Sn**	**23 51 00.0**	**+1.7**
KAPI	**Kappang**	**9.01**	**297**	LR	LR	23 54 34.6	
	comp=Z,65nm,20.5s,baz=92,slow=40						
FITZ	**Fitzroy Crossi**	**9.15**	**193**	Pn	**Pn**	**23 50 44.2**	**+3.8**
	0.5nm,0.3s,baz=25,slow=12,SNR=19						
FITZ				Sn	**Sn**	**23 52 33.3**	**+11**
	2.8nm,0.3s,baz=300,slow=23,SNR=14						
FITZ	**Fitzroy Crossi**	**9.15**	**193**	*e*Pn	**Pn**	**23 50 39.7**	**-0.7**
FITZ				*e*Sn	**Sn**	**23 52 24.0**	**+1.7**
WRA	**Warramunga Arr**	**12.44**	**150**	Pn	**Pn**	**23 51 23.4**	**-2.0**
	0.5nm,0.3s,baz=327,slow=14,SNR=29						
WRA				Sn	**Sn**	**23 53 45.7**	**+2.9**
	1.4nm,0.3s,baz=326,slow=23,SNR=10.0						
MBWA	**Marble Bar**	**14.27**	**212**	*e*Pn	**Pn**	**23 51 51.0**	**+0.6**
MBWA				*e*Sn	**Sn**	**23 54 26.3**	**-1.3**
ASAR	**Alice Springs**	**15.56**	**159**	Pn	**Pn**	**23 52 06.3**	**-1.3**
	0.2nm,0.3s,baz=336,slow=11,SNR=7.7						
ASAR				Sn	**Sn**	**23 55 08.2**	**+9.2**
	0.5nm,0.3s,baz=316,slow=20,SNR=5.8						
CTAO	**Charters Tower**	**20.85**	**123**	P	**P**	**23 53 07.8**	**-2.0**
ARMA	**Armidale**	**30.68**	**137**	*e*P	**P**	**23 54 42.4**	**+0.1**
	0.7nm,0.4s,mb3.8						
CHTO	**Chiang Mai**	**39.80**	**314**	*e*P	**P**	**23 56 02.8**	**+2.0**
	1.0nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	**68.88**	**328**	P	**P**	**23 59 30.9**	**-1.0**
	0.2nm,0.3s,mb3.5,baz=126,slow=8.6,SNR=2.6						
KURK	**Kurchatov**	**73.25**	**330**	*e*P	**P**	**23 59 59.8**	**+1.4**
	0.4nm,0.4s,mb3.7						

*NIED **21** 23:49:00,37°.70N×141°.80E,h59km,Mw3.5 Best double couple: Mo1.87000×1014 NP1:φs216.00000°,δ88.00000°, λ68.00000°. NP2:φs120.00000°,δ22.00000°,λ174.00000°.*

*JMA **21** 23:49:11.2±0.1,37°.74N×141°.82E,h38km±2km,M3.6*

ISC 21 23:49:10.0±1.4,37°.75N±0°.04×141°.83E±0°.08,h13km±5km, n12,σ0°.60/22,5C-4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.80**	**332**	⇑P	**Pg**	**23 49 26.0**	**+0.5**
JIO				S	**Sg**	**23 49 36.0**	**0.0**
JMM	**Marumori**	**0.83**	**278**	⇓P	**Pg**	**23 49 26.5**	**+0.4**
JMM				S	**Sg**	**23 49 37.1**	**+0.1**
JFK	**Kawauchi**	**0.85**	**244**	⇓P	**Pg**	**23 49 26.5**	**0.0**
JFK				S	**Sg**	**23 49 37.3**	**-0.3**
ONAJ	**Iwakimizuishiy**	**1.05**	**232**	⇓P	**Pb**	**23 49 29.3**	**-0.6**
ONAJ				S	**Sb**	**23 49 42.1**	**-1.4**
JOU	**Okura**	**1.11**	**304**	⇑P	**Pb**	**23 49 31.0**	**0.0**
JOU				*e*S	**Sb**	**23 49 45.1**	**-0.2**
JFT	**Otama**	**1.21**	**259**	⇓P	**Pn**	**23 49 32.7**	**+0.1**
JFT				S	**Sb**	**23 49 47.8**	**-0.4**
JMK	**Ichinoseki**	**1.29**	**338**	⇑P	**Pn**	**23 49 33.2**	**-0.5**
JYS	**Shiratake**	**1.47**	**289**	P	**Pn**	**23 49 36.2**	**0.0**
JYS				S	**Sn**	**23 49 55.4**	**+0.1**
JYK	**Kaneyama**	**1.64**	**316**	⇑P	**Pn**	**23 49 38.3**	**-0.2**
JFY	**Yanaizu**	**1.73**	**259**	P	**Pn**	**23 49 39.9**	**+0.3**
JFY				*e*S	**Sn**	**23 50 01.6**	**+0.1**
JOM	**Ohasama**	**1.77**	**346**	⇑P	**Pn**	**23 49 40.3**	**0.0**
JOM				S	**Sn**	**23 50 02.1**	**-0.6**
MAT	**Matsushiro**	**3.14**	**249**	P	**Pn**	**23 50 00.4**	**+1.3**
MAT				*e*S	**Sn**	**23 50 37.9**	**+1.6**

*BJI **22** 00:11:21.3,36°.11N×73°.56E,h54km,mB4.7/4,mb4.7/8, ML4.2/4*

*LDG **22** 00:11:22.7±0.1,36°.06N×73°.88E,h80km,Mb4.6/30,Error ellipse: s-maj=5.6km s-min=4.0km az=29.0*

*NEIC **22** 00:11:23.7±0.7,36°.09N±0°.70E,h57km±6km,mb4.7/52, Error ellipse: s-maj=7.5km s-min=4.8km az=224.0*

*ISCJB **22** 00:11:25.0±0.1,36°.25N±0°.02×73°.79E±0°.03,h83km, mb4.6/102,Error ellipse: s-maj=3.5km s-min=2.5km az=162.6*

*MOS **22** 00:11:25.8±0.9,36°.31N×73°.72E,h82km,mb4.7/46,Error ellipse: s-maj=6.9km s-min=3.9km az=122.5*

*IDC **22** 00:11:27.6±0.5,36°.32N×73°.74E,h86km±4km,mb4.1/20, mb1 4.3/25,mb1mx4.2/30,mbtmp4.1/25,MS3.2/6, Ms1 3.3/6,ms1mx2.9/38,Error ellipse: s-maj=11.3km s-min=9.6km az=14.0*

*NNC **22** 00:11:34.3±0.6,37°.62N×74°.27E,h0km,mb4.6,mpv4.5, Error ellipse: s-maj=5.5km s-min=3.6km az=28.0*

ISC 22 00:11:27.0±0.1,36°.23N±0°.02×73°.80E±0°.03,h85km, h85km±2.9km;pP-P,n421,σ0°.93/454,mb4.6/102,40C-18D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**2.61**	**190**	⇑P	**Pn**	**00 12 09.3**	**+2.2**
CEP	**Cherat**	**2.86**	**213**	⇑P	**Pn**	**00 12 11.8**	**+1.3**
CEP				S	**Sn**	**00 12 37.0**	**-7.0**
JMU	**Jammu**	**3.63**	**165**	*e*PKP	**Pn**	**00 12 21.0**	**+0.1**
JMU				*e*S	**Sn**	**00 13 01.0**	**-1.5**
KSH	**Kashi**	**3.70**	**27**	P	**Pn**	**00 12 18.4**	**-3.4**
KSH				S	**Sn**	**00 12 52.1**	**-12**
KSH				smax			
	comp=N,1μm,0.3s						
KSH				smax			
	comp=E,760nm,0.5s						
THW	**Thamme Wali**	**3.83**	**207**	⇓P	**Pn**	**00 12 24.2**	**+0.6**
BHK	**Bhakra**	**5.28**	**155**	*e*PKP	**Pn**	**00 12 44.0**	**+0.7**
BHK				*ex*	**Sn**	**00 13 43.2**	**+0.4**
SDNR	**Sundarnagar**	**5.41**	**150**	*e*PKP	**Pn**	**00 12 45.5**	**+0.4**
SDNR				*e*S	**Sn**	**00 13 40.5**	**-5.5**
SMLA	**Simla**	**5.82**	**150**	*i* P	**Pn**	**00 12 49.9**	**-0.8**
SMLA				*i* S	**Sn**	**00 13 51.6**	**-4.4**
SMLA				⇓		00 13 55.7	
	comp=E,35μm,0.3s						
SMLA				⇓		00 13 56.1	
	comp=N,15μm,0.2s						
AML	**Almayashu**	**5.89**	**359**	P	**Pn**	**00 12 52.0**	**+0.5**
	SNR=23						
AML	**Almayashu**	**5.89**	**359**	*e*Pn	**Pn**	**00 12 51.7**	**+0.2**
	comp=N,129nm,0.8s						
AML				*e*Sn	**Sn**	**00 13 53.7**	**-3.9**
KZA	**Kyzart**	**5.94**	**11**	P	**Pn**	**00 12 53.5**	**+1.2**
	SNR=8.8						
KZA	**Kyzart**	**5.94**	**11**	*e*Pn	**Pn**	**00 12 52.8**	**+0.4**
	comp=N,45nm,1.0s						
KZA				*e*Sn	**Sn**	**00 13 54.9**	**-4.1**
UCH	**Uchtor**	**6.01**	**5**	Pn	**Pn**	**00 12 53.9**	**+0.6**
ULHL	**Ulahol**	**6.30**	**17**	P	**Pn**	**00 12 58.8**	**+1.6**
	SNR=26						
AAK	**Ala-Archa**	**6.41**	**5**	P	**Pn**	**00 12 59.4**	**+0.7**
	SNR=24						
AAK	**Ala-Archa**	**6.41**	**5**	P	**Pn**	**00 12 59.8**	**+1.0**
	comp=N,0.1nm,0.3s,baz=165,slow=7.6,SNR=33						
AAK				S	**Sn**	**00 14 07.5**	**-2.9**
	comp=N,0.1nm,0.3s,baz=172,slow=18,SNR=3.3						
AAK	**Ala-Archa**	**6.41**	**5**	*e*Pn	**Pn**	**00 12 59.3**	**+0.6**
AAK				*e*Sn	**Sn**	**00 14 07.0**	**-3.4**
AAK	**Ala-Archa**	**6.41**	**5**	*i*PN	**Pn**	**00 12 59.4**	**+0.7**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
EKS2	**Erkin-Say**	**6.42**	**360**	P	**Pn**	**00 12 59.3**	**+0.5**
	SNR=155						
EKS2	**Erkin-Say**	**6.42**	**360**	*e*Pn	**Pn**	**00 12 59.4**	**+0.6**
EKS2				*e*Sn	**Sn**	**00 14 06.3**	**-4.2**
KBK	**Karagaybulak**	**6.47**	**8**	P	**Pn**	**00 13 00.8**	**+1.2**
	SNR=27						
KBK	**Karagaybulak**	**6.47**	**8**	*e*Pn	**Pn**	**00 13 00.6**	**+1.0**
KBK				*e*Sn	**Sn**	**00 14 09.1**	**-2.8**
CHMS	**Chumysh**	**6.80**	**6**	P	**Pn**	**00 13 04.7**	**+0.7**
	SNR=16						
TKM2	**Tokmak 2**	**6.82**	**11**	⇑Pn	**Pn**	**00 12 56.4**	**-7.8**
	comp=Z,12nm,0.4s						
TKM2				⇑Sn	**Sn**	**00 14 00.4**	**-20**
	comp=Z,33nm,0.6s						
TKM2	**Tokmak 2**	**6.82**	**11**	P	**Pn**	**00 13 05.4**	**+1.1**
	SNR=63						
TKM2	**Tokmak 2**	**6.82**	**11**	*e*Pn	**Pn**	**00 13 05.2**	**+0.9**
TKM2				*e*Sn	**Sn**	**00 14 14.2**	**-6.2**
TKM2	**Tokmak 2**	**6.82**	**11**	*e*PN	**Pn**	**00 13 05.2**	**+0.9**
CHM	**Chimkent**	**6.89**	**333**	*e*Pn	**Pn**	**00 13 04.5**	**-0.7**
CHM	**Chimkent**	**6.89**	**333**	*e*PN	**Pn**	**00 13 04.5**	**-0.7**
DDI	**Dehra Dun**	**6.89**	**148**	*e*PKP	**Pn**	**00 13 04.8**	**-0.5**
DDI				*ex*	**Sn**	**00 14 24.0**	**+1.8**
USP	**Ospenovka**	**7.04**	**4**	P	**Pn**	**00 13 09.0**	**+1.6**
	SNR=17						
KK31	**Karatay Array**	**7.31**	**341**	⇑Pn	**Pn**	**00 13 09.6**	**-1.4**
	comp=Z,13nm,0.3s,baz=152,slow=11,SNR=1293						
KK31				Pg	**Pn**	**00 13 26.6**	**+16**
	comp=Z,30nm,0.4s,baz=153,slow=12,SNR=8.2						
KK31				⇑Sn	**Sn**	**00 14 24.8**	**-7.6**
	comp=Z,68nm,0.4s,baz=149,slow=24,SNR=15						
KK31	**Karatay Array**	**7.31**	**341**	PN	**Pn**	**00 13 09.6**	**-1.4**
KK31				pmax	pmax		
	comp=Z,35nm,0.2s						
KKAR	**Karatay Array**	**7.31**	**341**	*e*Pn	**Pn**	**00 13 09.6**	**-1.4**
KKAR				*e*Sn	**Sn**	**00 14 24.6**	**-7.8**
KKAR	**Karatay Array**	**7.31**	**341**	*e*PN	**Pn**	**00 13 09.6**	**-1.4**
JOSI	**Joshimath**	**7.43**	**138**	*e*PKP	**Pn**	**00 13 12.0**	**-0.7**
JOSI				*e*S	**Sn**	**00 14 29.2**	**-6.3**
JOSI				AML	AML	00 14 34.4	
	comp=E,614nm,0.5s						
AYAN	**Aya Nagar**	**8.23**	**159**	*e*PKP	**Pn**	**00 13 22.8**	**-0.7**
AYAN				*e*S	**Sn**	**00 14 47.6**	**-7.3**
KHET	**Khetri**	**8.31**	**168**	*e*PKP	**Pn**	**00 13 22.4**	**-2.3**
KHET				*e*S	**Sn**	**00 14 49.0**	**-7.9**
SONA	**Sohna**	**8.43**	**160**	*e*PKP	**Pn**	**00 13 25.3**	**-1.0**
SONA				*e*S	**Sn**	**00 14 52.9**	**-7.0**
PTH	**Pithoragarh**	**8.58**	**139**	*e*PKP	**Pn**	**00 13 29.2**	**+0.9**
PTH				*e*S	**Sn**	**00 14 56.7**	**-6.7**
AJM	**Ajmer**	**9.75**	**176**	*e*PKP	**Pn**	**00 13 42.0**	**-2.3**
AJM				*e*S	**Sn**	**00 15 23.0**	**-9.1**
DANN	**Dangsing**	**11.52**	**130**	*e*P	**Pn**	**00 14 04.0**	**-4.4**
	comp=E,99nm,0.4s						
KOLN	**Koldanda**	**11.85**	**133**	*e*P	**Pn**	**00 14 08.6**	**-4.2**
	comp=E,42nm,0.3s						
MK31	**Makanchi Array**	**12.31**	**28**	⇓P	**Pn**	**00 14 11.5**	**-7.5**
	comp=E,1.6nm,0.4s,baz=187,slow=12,SNR=12						
MK31	**Makanchi Array**	**12.31**	**28**	*e*Pn	**Pn**	**00 14 19.2**	**+0.2**
MK31				Sn	**Sn**	**00 16 27.6**	**-6.5**
MK31	**Makanchi Array**	**12.31**	**28**	*e*P	**Pn**	**00 14 19.2**	**+0.2**
MK31						00 16 27.6	
MKAR	**Makanchi Array**	**12.31**	**28**	P	**Pn**	**00 14 18.6**	**-0.4**
	comp=E,0.6nm,0.3s,baz=205,slow=14,SNR=12						
MKAR	**Makanchi Array**	**12.31**	**28**	P	**Pn**	**00 14 18.6**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GKN	**Gorkha**	**12.31**	**129**	*e*P	**Pn**	**00 14 14.3**	**-4.9**
	comp=Z,123nm,0.4s						
KKN	**Kakani**	**12.87**	**128**	*e*P	**Pn**	**00 14 21.1**	**-5.5**
	comp=Z,94nm,0.5s						
KKN	**Kakani**	**12.87**	**128**	*e*P	**Pn**	**00 14 21.1**	**-5.5**
KKN				pmax	pmax		
	comp=Z,94nm,0.5s						
DMN	**Daman**	**12.88**	**129**	*e*P	**Pn**	**00 14 21.9**	**-4.9**
	comp=Z,85nm,0.4s						
PKIN	**Phulchoki**	**13.09**	**128**	*e*P	**Pn**	**00 14 24.7**	**-4.8**
	comp=Z,71nm,0.5s						
PKI	**Pulchoki**	**13.10**	**128**	*e*P	**Pn**	**00 14 24.5**	**-5.2**
	comp=Z,98nm,0.6s						
PKI	**Pulchoki**	**13.10**	**128**	*e*P	**Pn**	**00 14 24.7**	**-5.0**
	comp=Z,71nm,0.5s						
PKI	**Pulchoki**	**13.10**	**128**	*e*P	**Pn**	**00 14 24.7**	**-5.0**
PKI				pmax	pmax		
	comp=Z,71nm,0.5s						
GUN	**Gumba**	**13.18**	**126**	*e*P	**Pn**	**00 14 25.4**	**-5.2**
	comp=Z,78nm,0.4s						
BHPL	**Bhopal**	**13.32**	**165**	*e*PKP	**Pn**	**00 14 30.1**	**-2.6**
BHPL				*ex*	x	00 16 49.0	
BHPL				AML	AML	00 16 52.8	
	comp=E,65nm,0.5s						
BHPL				AML	AML	00 16 53.3	
	comp=N,33nm,0.4s						
TAPN	**Taplejung**	**14.77**	**123**	*e*P	**Pn**	**00 14 45.3**	**-6.1**
	comp=N,63nm,0.5s						
KURBB	**Kurchatov Arra**	**14.78**	**12**	⇓P	**Pn**	**00 14 45.2**	**-6.2**
	comp=N,3.8nm,0.7s						
ODAN	**Odare**	**14.88**	**125**	*e*P	**Pn**	**00 14 47.0**	**-5.7**
	comp=N,73nm,0.7s						
KURK	**Kurchatov**	**14.89**	**12**	⇑P	**Pn**	**00 14 46.1**	**-6.6**
	comp=N,32nm,1.0s						
KURK	**Kurchatov**	**14.89**	**12**	*e*Pn	**Pn**	**00 14 49.4**	**-3.3**
KURK				S	**Sn**	**00 17 37.3**	**+0.8**
KURK	**Kurchatov**	**14.89**	**12**	P	**Pn**	**00 14 51.3**	**-1.4**
KURK				pmax	pmax		
	comp=Z,32nm,1.0s						
NGP	**Nagpur**	**15.72**	**162**	*ex*	**Pn**	**00 14 56.1**	**-7.3**
AKL	**Akola**	**15.73**	**169**	*ex*	**Pn**	**00 15 00.4**	**-3.2**
LSA	**Lhasa**	**15.95**	**109**	P	**Pn**	**00 14 55.8**	**-10**
AB31	**Akbulak array**	**16.48**	**326**	⇑P	**Pn**	**00 15 14.2**	**+1.4**
	comp=Z,3.2nm,0.3s,baz=135,slow=14,SNR=164						
AB31				S	**S**	**00 18 08.8**	**-13**
	comp=Z,12nm,0.7s,baz=158,slow=23,SNR=14						
AB31	**Akbulak array**	**16.48**	**326**	P	**Pn**	**00 15 08.6**	**-4.2**
AB31				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ABKAR	**Akbulak array**	**16.48**	**326**	*e*Pn	**Pn**	**00 15 08.7**	**-4.1**
ABKAR				*e*Sn	**Sn**	**00 17 55.9**	**-19**
VOSK	**Vostochnaya**	**16.61**	**354**	⇓P	**Pn**	**00 15 10.3**	**-4.0**
	comp=Z,10nm,1.2s						
BVA0	**Borovoye Array**	**16.96**	**353**	⇑P	**Pn**	**00 15 16.2**	**-2.4**
	comp=Z,1.7nm,0.6s						
BVA0	**Borovoye Array**	**16.96**	**353**	P	**Pn**	**00 15 16.1**	**-2.5**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	**Borovoye Array**	**16.96**	**353**	P	**Pn**	**00 15 19.6**	**+0.9**
	comp=Z,4.4nm,0.3s,baz=165,slow=10,SNR=66						
BVAR	**Borovoye Array**	**16.96**	**353**	P	**Pn**	**00 15 19.6**	**+1.0**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BRVK	**Borovoye**	**17.00**	**353**	⇑P	**Pn**	**00 15 16.2**	**-3.0**
	comp=Z,39nm,0.9s						
BRVK	**Borovoye**	**17.00**	**353**	*e*Pn	**Pn**	**00 15 16.3**	**-2.9**
	comp=Z,21nm,0.8s						
BRVK				Sn	**Sn**	**00 18 19.6**	**-8.1**
BRVK	**Borovoye**	**17.00**	**353**	*i,e*P	**Pn**	**00 15 20.3**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,21nm,0.7s						
POO	**Poona**	**17.64**	**180**	*e*PKP	**Pn**	**00 15 26.0**	**-1.2**
POO				*e*PKP		00 15 27.9	
POO				*e*S	**S**	**00 18 43.0**	**-1.2**
LATR	**Latur**	**17.92**	**171**	*e*PKP	**Pn**	**00 15 29.6**	**-1.0**
LATR				*e*PKP		00 15 29.6	
AKTK	**Aktyubinsk**	**18.20**	**326**	P	**Pn**	**00 15 31.6**	**-2.1**
AKTK				S	**S**	**00 18 42.7**	**-14**
AKTK				LR	LR	00 23 18.8	
AKTO	**Aktyubinsk**	**18.20**	**326**	⇑P	**Pn**	**00 15 37.8**	**+4.1**
	comp=Z,3.7nm,0.5s						
AKTO				⇑S	**S**	**00 18 51.4**	**-5.2**
	comp=Z,2.7nm,0.9s						
AKTO	**Aktyubinsk**	**18.20**	**326**	P	**Pn**	**00 15 31.6**	**-2.1**
	comp=Z,5.6nm,0.3s,baz=126,slow=8.3,SNR=114						
AKTO				S	**S**	**00 18 42.7**	**-14**
	comp=Z,0.5nm,0.3s,baz=135,slow=20,SNR=5.3						
AKTO				LR	LR	00 23 18.8	
	comp=Z,59nm,18.6s,baz=192,slow=39						
AKTO	**Aktyubinsk**	**18.20**	**326**	P	**Pn**	**00 15 31.6**	**-2.1**
AKTO				S	**S**	**00 18 42.7**	**-14**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,59nm,18.6s						
SHL	**Shillong**	**18.78**	**119**	*e*PKP	**Pn**	**00 15 39.5**	**-1.4**
SHL				*ex*	x	00 18 56.0	
HYB	**Hyderabad**	**19.21**	**166**	*i* P	**Pn**	**00 15 47.0**	**+1.0**
ZAA0	**Zalesovo Array**	**19.30**	**20**	*e*P	**Pn**	**00 15 43.9**	**-2.9**
ZAA0				*e*S	**S**	**00 19 12.7**	**-6.1**
ZALV	**Zalesovo Beam**	**19.30**	**20**	P	**Pn**	**00 15 44.4**	**-2.5**
	comp=Z,8.7nm,0.3s,baz=217,slow=13,SNR=99						
ZALV				S	**S**	**00 19 12.9**	**-5.8**
	comp=Z,0.3nm,0.3s,baz=214,slow=21,SNR=4.6						
ZALV	**Zalesovo Beam**	**19.30**	**20**	P	**Pn**	**00 15 44.4**	**-2.4**
ZALV				S	**S**	**00 19 13.0**	**-5.8**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.3s						
NVS	**Novosibirsk**	**19.71**	**16**	⇑*i*P	**Pn**	**00 15 47.2**	**-4.4**
NVS				*e*S	**S**	**00 19 19.9**	**-7.0**
NVS				pmax	pmax		
	comp=N,10.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,19nm,0.5s						
NVS				smax			
	comp=N,19nm,1.4s						
NVS				smax			
	comp=E,9.0nm,1.4s						
GTA	**Gaotai**	**20.77**	**73**	*e*P	**P**	**00 16 02.9**	**+1.9**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU	**Arti**	**22.68**	**338**	*e*P	**P**	**00 16 20.3**	**-0.7**
	comp=Z,25nm,0.7s,mb4.7						
ARU	**Arti**	**22.68**	**338**	*c i*P	**P**	**00 16 20.3**	**-0.7**
ARU				*e*		00 16 47.5	
ARU				S	**S**	**00 20 26.0**	**+3.3**
ARU				SS		00 21 00.3	
ARU				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.7						
DGRG	**David-gareji**	**22.69**	**292**	P	**P**	**00 16 21.1**	**-0.2**
UMR	**Umm Al-Rimmam**	**22.85**	**261**	*e*P	**P**	**00 16 22.0**	**-1.2**
UMR				AMb	AMB	00 16 25.4	
	comp=Z,42nm,0.9s,mb4.8						
MIB	**Mutribah**	**23.05**	**261**	*e*P	**P**	**00 16 24.2**	**-0.9**
MIB				AMb	AMB	00 16 27.1	
	comp=Z,49nm,1.2s,mb4.7						
GNI	**Garni**	**23.12**	**289**	P	**P**	**00 16 26.8**	**+1.2**
	comp=Z,7.0nm,0.5s,mb4.2,baz=356,slow=2.1,SNR=12						
GNI	**Garni**	**23.12**	**289**	*e*P	**P**	**00 16 26.1**	**+0.5**
	comp=Z,32nm,1.3s,mb4.5						
GNI	**Garni**	**23.12**	**289**	*e*P	**P**	**00 16 26.1**	**+0.5**
GNI				pmax	pmax		
	comp=Z,32nm,1.3s						
MTA	**Mtatsminda**	**23.14**	**292**	P	**P**	**00 16 26.2**	**+0.4**
TBLG	**Delisi**	**23.18**	**293**	*e*P	**P**	**00 16 26.7**	**+0.5**
TBLG	**Delisi**	**23.18**	**293**	P	**P**	**00 16 26.7**	**+0.5**
RDF	**Al-Radifah**	**23.24**	**259**	*e*P	**P**	**00 16 26.1**	**-0.7**
RDF				AMb	AMB	00 16 28.4	
	comp=Z,29nm,0.7s,mb4.7						
NAY	**Al-Naaiem**	**23.35**	**260**	*e*P	**P**	**00 16 27.1**	**-0.8**
NAY				AMb	AMB	00 16 31.0	
	comp=Z,15nm,0.6s,mb4.5						
ZEI	**Tsey**	**23.89**	**295**	*e*P	**P**	**00 16 33.6**	**+0.9**
ZEI				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.3						
ONI	**Oni**	**24.20**	**295**	P	**P**	**00 16 38.9**	**+3.4**
KIV	**Kislovodsk**	**24.91**	**298**	*e*P	**P**	**00 16 41.7**	**-0.2**
KIV	**Kislovodsk**	**24.91**	**298**	*e*P	**P**	**00 16 42.0**	**+0.1**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.2						
ZAK	**Zakamensk**	**25.49**	**47**	*e*P	**P**	**00 16 48.2**	**+1.1**
ZAK				*e*	pP	00 17 05.3	-1.0
ZAK				pmax

PLOR Plostina 36.37 300 ⇑P **P 00 18 24.1 +1.3**
PLOR Plostina 36.37 300 ⇑*i*P **P 00 18 24.1 +1.3**
MLR Muntele Rosu 36.88 300 ⇑P **P 00 18 28.9 +1.8**
MLR Muntele Rosu 36.88 300 ⇑*i*P **P 00 18 28.9 +1.8**
JOF Joensuu 37.24 329 *eP* **P 00 18 30.6 +0.7**
JOF pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
JOF Joensuu 37.24 329 *ep* **P 00 18 30.6 +0.7**
comp=Z,7.6nm,0.5s,mb4.9
NJ2 Nanjing 37.27 83 *eP* **P 00 18 32.8 +2.2**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
BURAR Bucovina Array 37.32 303 ⇓P **P 00 18 30.1 -0.7**
BURAR Bucovina Array 37.32 303 ⇓*i*P **P 00 18 30.1 -0.7**
BUR08 Bucovina Ar. S 37.33 303 *eP* **P 00 18 31.2 +0.3**
VOIR 37.51 300 ⇑P **P 00 18 33.2 +0.8**
VOIR 37.51 300 ⇑*i*P **P 00 18 33.2 +0.8**
FINES FINESS Array B 38.97 326 P **P 00 18 44.3 -0.2**
comp=Z,4.0nm,0.4s,mb4.7,baz=117,slow=9.4,SNR=79
FINES FINESS Array B 38.97 326 P **P 00 18 44.3 -0.2**
FINES pmax pmax
comp=Z,4.0nm,0.4s
KWP Kalwaria Pacla 38.98 306 *eP* **P 00 18 45.1 +0.4**
comp=Z,5.7nm,0.6s,mb4.6
KWP *eP*cP PcP 00 20 53.1 -0.4
KWP Kalwaria Pacla 38.98 306 ⇓P **P 00 18 45.5 +0.7**
KWP Kalwaria Pacla 38.98 306 ⇓*i*P **P 00 18 45.5 +0.7**
DRGR 39.05 302 ⇑P **P 00 18 46.4 +1.0**
DRGR 39.05 302 ⇑*i*P **P 00 18 46.4 +1.0**
KAF Kangasniemi 39.08 327 *eP* **P 00 18 44.3 -1.1**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
KAF Kangasniemi 39.08 327 *ep* **P 00 18 44.3 -1.1**
comp=Z,2.3nm,0.6s,mb4.2
GZR Gura Zlata 39.11 300 ⇑*i*P **P 00 18 46.3 +0.5**
VTS Vitosha 39.11 295 ⇑P **P 00 18 46.9 +1.0**
VTS Vitosha 39.11 295 ⇑*i*P **P 00 18 46.9 +1.0**
KOLS Kolonicke sedl 39.27 305 *eP* **P 00 18 47.5 +0.3**
KOLS Kolonicke sedl 39.27 305 *eP* **P 00 18 47.5 +0.3**
KOLS Kolonicke sedl 39.27 305 *eP* **P 00 18 47.5 +0.3**
CN2 Changchun 39.73 63 *eP* **P 00 18 52.8 +1.8**
CRVS Cervenica-Dubn 39.81 305 *eP* **P 00 18 52.2 +0.6**
CRVS Cervenica-Dubn 39.81 305 *eP* **P 00 18 52.2 +0.6**
CRVS Cervenica-Dubn 39.81 305 *eP* **P 00 18 52.2 +0.6**
BZS Buzias 39.90 300 ⇓P **P 00 18 53.4 +1.0**
BZS Buzias 39.90 300 ⇓*i*P **P 00 18 53.4 +1.0**
KECS Kecovo 40.47 305 *eP* **P 00 19 00.7 +3.6**
KECS Kecovo 40.47 305 *eP* **P 00 19 00.7 +3.6**
KECS Kecovo 40.47 305 *eP* **P 00 19 00.7 +3.6**
NIE Niedzica 40.55 306 *eP* **P 00 18 58.9 +1.2**
NIE Niedzica 40.55 306 *eP* **P 00 18 58.9 +1.2**
OJC Ojcow 40.86 307 *eP* **P 00 19 00.3 0.0**
OJC Ojcow 40.86 307 *eP* **P 00 19 00.3 0.0**
PSZ Piszkesteto 40.90 304 *eP* **P 00 19 00.2 -0.4**
PSZ Piszkesteto 40.90 304 *eP* **P 00 19 00.2 -0.4**
VYHS Vyhne 41.56 305 *eP* **P 00 19 13.2 +7.1**
VYHS Vyhne 41.56 305 *eP* **P 00 19 13.2 +7.1**
KEV Kevo 41.89 338 *eP* **P 00 19 08.7 +0.3**
comp=Z,5.5nm,0.4s,mb4.6
KEV Kevo 41.89 338 *eP* **P 00 19 08.7 +0.2**
KEV pmax pmax
comp=Z,6.0nm,0.4s,mb4.7
KEV Kevo 41.89 338 *ep* **P 00 19 07.6 -0.9**
comp=Z,6.8nm,0.6s,mb4.5
PKSM Moragy 41.91 301 ⇓P **P 00 19 09.6 +0.7**
PKSM Moragy 41.91 301 ⇓*i*P **P 00 19 09.6 +0.7**
YHNB Yeheng 42.23 92 P **P 00 19 15.5 +3.7**
ARCES ARCESS Array B 42.26 337 P **P 00 19 11.8 +0.4**
comp=Z,11nm,0.4s,mb4.9,baz=112,slow=8.5,SNR=92
ARCES LR LR 00 37 12.8
comp=Z,55nm,18.5s,baz=235,slow=37
ARCES ARCESS Array B 42.26 337 P **P 00 19 11.9 +0.5**
ARCES pmax pmax
comp=Z,11nm,0.4s
ARCES MLR MLR
comp=Z,55nm,18.5s
ARE0 ARCESS Array S 42.26 337 *eP* **P 00 19 11.7 +0.2**
MORC Moravsky Berou 42.33 307 *eP* **P 00 19 12.2 -0.1**
comp=Z,3.2nm,0.7s,mb4.2
MORC Moravsky Berou 42.33 307 ⇑P **P 00 19 13.0 +0.7**
MORC Moravsky Berou 42.33 307 ⇑*i*P **P 00 19 13.0 +0.7**
NACB Ninganchiao 42.64 93 *eP* **P 00 19 19.0 +3.9**
KTK1 Kautokeino 42.77 336 *eP* **P 00 19 15.6 -0.1**
KSRS Korea Array 42.83 72 P **P 00 19 17.5 +1.0**
comp=Z,1.5nm,0.5s,mb4.0,baz=277,slow=7.2,SNR=7.1
KSRS pP pP 00 19 36.8 0.0
comp=Z,1.5nm,0.8s,baz=278,slow=6.5,SNR=3.2
KSRS LR LR 00 38 55.9
comp=Z,19nm,19.0s,baz=230,slow=38
KSRS Korea Array 42.83 72 P **P 00 19 17.5 +1.0**
KSRS *PP pP 00 19 36.8 0.0
KSRS pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KSRS MLR MLR
comp=Z,19nm,19.0s
YAK Yakutsk 42.88 35 *eP* **P 00 19 17.0 +0.4**
YAK Yakutsk 42.88 35 *eP* **P 00 19 17.0 +0.4**
VRAC Vranov 42.98 306 ⇑P **P 00 19 18.7 +1.1**
VRAC Vranov 42.98 306 ⇑*i*P **P 00 19 18.7 +1.1**
DPC Dobruska-Polom 43.08 308 *eP* **P 00 19 19.1 +0.7**
DPC Dobruska-Polom 43.08 308 *eP* **P 00 19 19.1 +0.7**
UPC Upice 43.27 308 *eP* **P 00 19 20.4 +0.5**
UPC Upice 43.27 308 *eP* **P 00 19 20.4 +0.5**
CONA Conrad Observa 43.60 304 ⇑*i*P **P 00 19 23.1 +0.6**
comp=Z,4.2nm,0.7s,mb4.3
TREC Trest 43.70 306 *eP* **P 00 19 24.2 +0.8**
TREC Trest 43.70 306 *eP* **P 00 19 24.2 +0.8**
PVCC Panska Ves 44.19 308 *eP* **P 00 19 26.9 -0.3**
PVCC Panska Ves 44.19 308 *eP* **P 00 19 26.9 -0.3**
PRU Pruhonice 44.25 307 *eP* **P 00 19 29.1 +1.4**
PRU Pruhonice 44.25 307 *eP* **P 00 19 29.1 +1.4**
SOKA Soboth 44.32 303 ⇑*i*P **P 00 19 28.9 +0.6**
comp=Z,4.3nm,0.7s,mb4.3
TRO Tromso 44.43 336 *eP* **P 00 19 29.1 +0.2**
TRO Tromso 44.43 336 *eP* **P 00 19 29.1 +0.2**
BRG Berggiesshubel 44.55 309 *eP* **P 00 19 30.6 +0.4**
comp=Z,8.9nm,0.6s,mb4.6
MOA Molln 44.67 304 ⇑*i*P **P 00 19 31.3 +0.2**
comp=Z,3.1nm,0.7s,mb4.2
GERES GERESS Array B 44.92 306 P **P 00 19 33.4 +0.4**
comp=Z,0.5nm,0.5s,mb3.5,baz=80,slow=7.2,SNR=8.6
GERES GERESS Array B 44.92 306 P **P 00 19 33.4 +0.3**
GERES GERESS Array B 44.92 306 P **P 00 19 33.4 +0.3**
GERES pmax pmax
comp=Z,1.0nm,0.5s
KHC Kasperske Hory 44.97 306 *eP* **P 00 19 34.1 +0.7**
KHC Kasperske Hory 44.97 306 *eP* **P 00 19 34.1 +0.7**
MOR8 Moi Rana 45.16 330 *eP* **P 00 19 34.1 -0.6**
TIXI Tiksi 45.19 21 *eP* **P 00 19 34.4 -0.5**
comp=Z,8.1nm,0.6s,mb4.6
TIXI Tiksi 45.19 21 *eP* **P 00 19 35.1 +0.2**
TIXI pmax pmax
comp=Z,11nm,0.6s,mb4.8
NB2 NORSAR Subarra 45.95 323 P **P 00 19 40.0 -1.0**
comp=Z,5.0nm,0.5s,mb4.5,baz=94,slow=7.9
NOA NORSAR Array B 45.95 323 P **P 00 19 40.5 -0.5**
comp=Z,7.1nm,0.8s,mb4.5,baz=94,slow=7.6,SNR=23
NOA pP pP 00 20 02.4 +0.9
comp=Z,1.0nm,0.6s,baz=92,slow=8.0,SNR=2.2
NOA LR LR 00 41 19.0
comp=Z,16nm,18.2s,baz=100,slow=39
NOA NORSAR Array B 45.95 323 P **P 00 19 40.5 -0.5**
NOA pP pP 00 20 02.4 +0.9
NOA LR LR 00 41 19.0
NOA NORSAR Array B 45.95 323 P **P 00 19 40.5 -0.5**
NOA *PP pP 00 20 02.4 +0.9
NOA pmax pmax
comp=Z,7.0nm,0.8s
NOA MLR MLR
comp=Z,17nm,18.2s
ABTA Abfaltersbach 46.02 303 ⇑*i*P **P 00 19 41.3 -0.5**
comp=Z,3.9nm,0.6s,mb4.3
NAO01 NORSAR Array S 46.10 323 *eP* **P 00 19 41.3 -0.9**
AQU L'Aquila 46.28 297 P **P 00 19 44.2 +0.2**
AQU L'Aquila 46.28 297 P **P 00 19 44.2 +0.3**
WTTA Wattenberg 46.52 304 ⇑*i*P **P 00 19 45.4 -0.4**
comp=Z,1.5nm,0.3s,mb4.1
MOTA Moosalm 46.87 304 ⇓*i*P **P 00 19 47.7 -0.7**
comp=Z,1.4nm,0.4s,mb4.1
FETA Feichten 47.17 304 ⇑*i*P **P 00 19 50.3 -0.5**
comp=Z,3.4nm,0.5s,mb4.3
DAVA Damuels 47.70 304 ⇑*i*P **P 00 19 54.7 -0.1**
comp=Z,16nm,0.5s,mb5.1
SPITS Spitsbergen Ar 48.27 347 LR LR 00 45 52.9
comp=Z,54nm,19.8s,baz=100,slow=43
CDF Champ du Feu 49.20 306 *eP* **P 00 20 06.3 0.0**
comp=Z,3.3nm,0.6s,mb4.2
CDF Champ du Feu 49.20 306 *eP* **P 00 20 06.3 0.0**
comp=Z,1.6nm,0.6s,mb4.1
CDF Champ du Feu 49.20 306 *eP* **P 00 20 06.3 0.0**
CDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
PGF Pioggiola 49.39 298 *eP* **P 00 20 07.3 -0.6**
comp=Z,11nm,0.6s,mb4.7
PGF Pioggiola 49.39 298 *eP* **P 00 20 07.3 -0.6**
comp=Z,5.4nm,0.6s,mb4.7
PGF Pioggiola 49.39 298 *eP* **P 00 20 07.3 -0.6**
PGF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
HINF Hinteralfeld 49.60 305 *eP* **P 00 20 08.9 -0.5**
comp=Z,6.3nm,0.5s,mb4.5
HINF Hinteralfeld 49.60 305 *eP* **P 00 20 08.9 -0.5**
comp=Z,3.2nm,0.5s,mb4.5
HINF Hinteralfeld 49.60 305 *eP* **P 00 20 08.9 -0.5**
HINF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
WLF Walferdange 49.67 308 *eP* **P 00 20 09.5 -0.5**
WLF Walferdange 49.67 308 *eP* **P 00 20 09.5 -0.4**
HAU Haudompre 49.89 306 *eP* **P 00 20 11.3 -0.3**
comp=Z,5.4nm,0.5s,mb4.4
HAU Haudompre 49.89 306 *eP* **P 00 20 11.3 -0.3**
comp=Z,2.7nm,0.5s,mb4.4
HAU Haudompre 49.89 306 *eP* **P 00 20 11.3 -0.3**
HAU pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
VSL Villasalto 49.99 294 *eP* **P 00 20 11.5 -1.0**
SBF Sospel 50.14 300 *eP* **P 00 20 13.7 +0.1**
comp=Z,40nm,0.8s,mb5.1
SBF Sospel 50.14 300 *eP* **P 00 20 13.7 +0.1**
comp=Z,20nm,0.8s,mb5.1
SBF Sospel 50.14 300 *eP* **P 00 20 13.7 +0.1**
SBF pmax pmax
comp=Z,20nm,0.8s,mb5.1
LPG La Plagne 50.20 303 *eP* **P 00 20 14.4 +0.4**
comp=Z,4.9nm,0.4s,mb4.5
LPG La Plagne 50.20 303 *eP* **P 00 20 14.4 +0.4**
comp=Z,2.5nm,0.4s,mb4.5
LPG La Plagne 50.20 303 *eP* **P 00 20 14.4 +0.4**
LPG pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
LPL La Plagne 50.21 303 *eP* **P 00 20 14.5 +0.4**
comp=Z,5.2nm,0.4s,mb4.5
LPL La Plagne 50.21 303 *eP* **P 00 20 14.5 +0.4**
comp=Z,2.6nm,0.4s,mb4.5
LPL La Plagne 50.21 303 *eP* **P 00 20 14.5 +0.4**
LPL pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
KMBO Kilima Mbogo 50.36 231 P **P 00 20 17.9 +2.3**
comp=Z,3.3nm,0.7s,mb4.4,baz=0.0,slow=20,SNR=14
KMBO pP pP 00 20 37.6 +1.2
comp=Z,1.9nm,0.7s,baz=0.3,slow=24,SNR=4.6
KMBO Kilima Mbogo 50.36 231 P **P 00 20 17.9 +2.3**
KMBO *PP pP 00 20 37.6 +1.3
KMBO pmax pmax
comp=Z,3.0nm,0.7s
CABF La Chapelle 50.38 304 *eP* **P 00 20 15.1 -0.2**
comp=Z,11nm,0.5s,mb4.7
CABF La Chapelle 50.38 304 *eP* **P 00 20 15.1 -0.2**
comp=Z,5.3nm,0.5s,mb4.7
CABF La Chapelle 50.38 304 *eP* **P 00 20 15.1 -0.2**
CABF pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
MBDF Montbardon 50.38 302 *eP* **P 00 20 14.9 -0.5**
MBDF Montbardon 50.38 302 *eP* **P 00 20 14.9 -0.5**
MEZF Maizieres J'vi 50.62 307 *eP* **P 00 20 16.8 -0.3**
SFTF Sexfontaines 50.70 306 *eP* **P 00 20 17.4 -0.3**
FRF La Foret Royal 50.78 300 *eP* **P 00 20 18.0 -0.4**
comp=Z,16nm,0.6s,mb4.9
FRF La Foret Royal 50.78 300 *eP* **P 00 20 18.0 -0.4**
comp=Z,7.8nm,0.6s,mb4.9
FRF La Foret Royal 50.78 300 *eP* **P 00 20 18.0 -0.4**
FRF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
BAIF Baives 50.82 309 *eP* **P 00 20 18.6 0.0**
comp=Z,8.9nm,0.7s,mb4.6
BAIF Baives 50.82 309 *eP* **P 00 20 18.6 0.0**
comp=Z,4.4nm,0.7s,mb4.6
BAIF Baives 50.82 309 *eP* **P 00 20 18.6 0.0**
BAIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
LMR La Mourre 50.94 300 *eP* **P 00 20 19.0 -0.6**
LMR La Mourre 50.94 300 *eP* **P 00 20 19.0 -0.6**
ORIF Oris-en-Rattie 50.94 302 *eP* **P 00 20 19.5 -0.1**
ORIF Oris-en-Rattie 50.94 302 *eP* **P 00 20 19.5 -0.1**
MJAR Matsushiro Arr 50.95 69 P **P 00 20 20.1 +0.4**
comp=Z,2.4nm,0.4s,mb4.6,baz=312,slow=13,SNR=4.9
MJAR pP pP 00 20 40.6 0.0
comp=Z,1.7nm,0.5s,baz=283,slow=9.6,SNR=3.8
MJAR Matsushiro Arr 50.95 69 P **P 00 20 20.1 +0.3**
MJAR *PP pP 00 20 40.6 +0.1
MJAR pmax pmax
comp=Z,2.0nm,0.4s
MJAR pmax pmax
comp=Z,2.0nm,0.5s
SMRF Simiane la Rot 51.41 301 *eP* **P 00 20 23.3 +0.2**
LOR Lormes 51.70 305 *eP* **P 00 20 24.4 -0.8**
comp=Z,1.8nm,0.4s,mb4.2
LOR Lormes 51.70 305 *eP* **P 00 20 24.4 -0.8**
comp=Z,0.9nm,0.4s,mb4.2
LOR Lormes 51.70 305 *eP* **P 00 20 24.4 -0.8**
LOR pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
VIVF Saint-Julien-l 51.78 302 *eP* **P 00 20 25.9 0.0**
comp=Z,7.7nm,0.5s,mb4.7
VIVF Saint-Julien-l 51.78 302 *eP* **P 00 20 25.9 0.0**
comp=Z,3.8nm,0.5s,mb4.7
VIVF Saint-Julien-l 51.78 302 *eP* **P 00 20 25.9 0.0**
VIVF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
SMF Signal de Mont 51.87 305 *eP* **P 00 20 26.0 -0.5**
comp=Z,15nm,0.7s,mb4.8
SMF Signal de Mont 51.87 305 *eP* **P 00 20 26.0 -0.5**
comp=Z,7.6nm,0.7s,mb4.8
SMF Signal de Mont 51.87 305 *eP* **P 00 20 26.0 -0.5**
SMF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
SSF Saint Saulge 51.98 305 *eP* **P 00 20 26.8 -0.5**
SSF Saint Saulge 51.98 305 *eP* **P 00 20 26.8 -0.5**
AVF Avril sur Loir 52.15 305 *eP* **P 00 20 28.1 -0.5**
comp=Z,11nm,0.5s,mb4.8
AVF Avril sur Loir 52.15 305 *eP* **P 00 20 28.1 -0.5**
comp=Z,5.4nm,0.5s,mb4.8
AVF Avril sur Loir 52.15 305 *eP* **P 00 20 28.1 -0.5**
AVF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
HYF Humbligny 52.50 306 *eP* **P 00 20 30.8 -0.3**
BGF Bois d'Agland 52.55 305 *eP* **P 00 20 31.3 -0.3**
comp=Z,5.4nm,0.6s,mb4.5
BGF Bois d'Agland 52.55 305 *eP* **P 00 20 31.3 -0.3**
comp=Z,2.7nm,0.6s,mb4.5
BGF Bois d'Agland 52.55 305 *eP* **P 00 20 31.3 -0.3**
BGF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
LASF Ste Croix 52.57 302 *eP* **P 00 20 32.0 +0.3**
TCF Toulx Ste Croi 53.05 305 *eP* **P 00 20 35.2 0.0**
comp=Z,15nm,0.8s,mb4.8
TCF Toulx Ste Croi 53.05 305 *eP* **P 00 20 35.2 0.0**
comp=Z,7.3nm,0.8s,mb4.8
TCF Toulx Ste Croi 53.05 305 *eP* **P 00 20 35.2 0.0**
TCF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
CAF Calviac 53.54 303 *eP* **P 00 20 39.0 +0.2**
comp=Z,11nm,0.7s,mb4.7
CAF Calviac 53.54 303 *eP* **P 00 20 39.0 +0.2**
comp=Z,5.6nm,0.7s,mb4.7
CAF Calviac 53.54 303 *eP* **P 00 20 39.0 +0.2**
CAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
RJF Les Rejaudoux 53.80 304 *eP* **P 00 20 40.2 -0.5**
comp=Z,7.6nm,0.7s,mb4.5
RJF Les Rejaudoux 53.80 304 *eP* **P 00 20 40.2 -0.5**
comp=Z,3.8nm,0.7s,mb4.5
RJF Les Rejaudoux 53.80 304 *eP* **P 00 20 40.2 -0.5**
RJF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MTLF Montolieu 53.92 301 *eP* **P 00 20 41.5 -0.2**
comp=Z,9.2nm,0.7s,mb4.6
MTLF Montolieu 53.92 301 *eP* **P 00 20 41.5 -0.2**
comp=Z,4.6nm,0.7s,mb4.6
MTLF Montolieu 53.92 301 *eP* **P 00 20 41.5 -0.2**
MTLF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
LDF La Druitiere 53.93 308 *eP* **P 00 20 40.8 -0.8**
comp=Z,4.3nm,0.4s,mb4.5
LDF La Druitiere 53.93 308 *eP* **P 00 20 40.8 -0.8**
comp=Z,2.2nm,0.4s,mb4.5
LDF La Druitiere 53.93 308 *eP* **P 00 20 40.8 -0.8**
LDF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
FLN La Foliniere 54.11 308 *eP* **P 00 20 42.2 -0.7**
comp=Z,30nm,0.9s,mb5.0
FLN La Foliniere 54.11 308 *eP* **P 00 20 42.2 -0.7**
comp=Z,15nm,0.9s,mb5.0
FLN La Foliniere 54.11 308 *eP* **P 00 20 42.2 -0.7**
FLN pmax pmax
comp=Z,15nm,0.9s,mb5.0
MBAR Mbarara 54.23 237 ⇓*eP* **P 00 20 44.4 +0.2**
CLLI Llivia 54.37 300 P **P 00 20 45.2 +0.3**
LFF La Frestale 54.43 303 *eP* **P 00 20 45.3 0.0**
comp=Z,17nm,0.5s,mb5.0
LFF La Frestale 54.43 303 *eP* **P 00 20 45.3 0.0**
comp=Z,8.6nm,0.5s,mb5.0
LFF La Frestale 54.43 303 *eP* **P 00 20 45.3 0.0**
LFF pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
GRR Gorron 54.46 308 *eP* **P 00 20 44.7 -0.7**
comp=Z,19nm,0.8s,mb4.9
GRR Gorron 54.46 308 *eP* **P 00 20 44.7 -0.7**
comp=Z,9.4nm,0.8s,mb4.9
GRR Gorron 54.46 308 *eP* **P 00 20 44.7 -0.7**
GRR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MFF Saint Martin d 54.52 306 *eP* **P 00 20 45.1 -0.8**
MFF Saint Martin d 54.52 306 *eP* **P 00 20 45.1 -0.8**
EMIR Miracle 54.87 300 P **P 00 20 48.6 0.0**
comp=Z,35nm,1.4s,mb5.2
CSOR Sort 54.99 300 P **P 00 20 49.6 +0.2**
comp=Z,291nm,4.8s
EPF Esparros 55.32 301 *eP* **P 00 20 50.9 -0.9**
comp=Z,4.4nm,0.5s,mb4.5
EPF Esparros 55.32 301 *eP* **P 00 20 50.9 -0.9**
comp=Z,2.2nm,0.5s,mb4.4
EPF Esparros 55.32 301 *eP* **P 00 20 50.9 -0.9**
EPF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
EBIE Bielsa 55.58 301 P **P 00 20 53.8 +0.2**
comp=Z,103nm,2.9s,mb5.3
ETSF Etsaut 55.99 301 *eP* **P 00 20 56.6 +0.1**
comp=Z,14nm,0.6s,mb4.9
ETSF Etsaut 55.99 301 *eP* **P 00 20 56.6 +0.1**
comp=Z,6.9nm,0.6s,mb4.9
ETSF Etsaut 55.99 301 *eP* **P 00 20 56.6 +0.1**
ETSF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
ROSF Rostrenen 56.01 308 *eP* **P 00 20 56.2 -0.4**
ROSF Rostrenen 56.01 308 *eP* **P 00 20 56.2 -0.4**
QUIF Quistinic 56.07 308 *eP* **P 00 20 56.3 -0.8**
comp=Z,13nm,0.7s,mb4.8
QUIF Quistinic 56.07 308 *eP* **P 00 20 56.3 -0.8**
comp=Z,6.7nm,0.7s,mb4.8
QUIF Quistinic 56.07 308 *eP* **P 00 20 56.3 -0.8**
QUIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
ESAC San Caprasio 56.34 300 P **P 00 20 58.9 -0.2**
comp=Z,225nm,1.9s
SJPF Ste Jean 56.37 302 *eP* **P 00 20 59.0 -0.3**
SJPF Ste Jean 56.37 302 *eP* **P 00 20 59.0 -0.3**
ECHE Chera 57.47 298 P **P 00 21 07.8 +0.7**
ECHE Chera 57.47 298 P **P 00 21 07.8 +0.7**
ETOB Tobarra 58.25 297 P **P 00 21 13.0 +0.5**
comp=Z,139nm,3.3s
GUD Guadarrama 59.32 300 P **P 00 21 20.2 +0.2**
comp=Z,12nm,1.7s,mb4.6
GUD Guadarrama 59.32 300 P **P 00 21 20.2 +0.3**
GUD pmax pmax
comp=Z,12nm,1.7s,mb4.7
EHUE Huescar 59.34 297 P **P 00 21 20.0 -0.1**
EHUE Huescar 59.34 297 P **P 00 21 20.0 -0.1**
ESDC Sonseca Array 59.57 299 P **P 00 21 21.6 -0.1**
comp=Z,8.6nm,0.6s,mb5.0,baz=56,slow=7.1,SNR=133
ESDC Sonseca Array 59.57 299 P **P 00 21 21.6 -0.1**
comp=Z,6.5nm,0.5s,mb4.9
ESLA Sonseca Array 59.57 299 *eP* **P 00 21 21.3 -0.3**
comp=Z,1.7nm,0.7s,mb4.2
EQES Quesada 59.69 297 P **P 00 21 22.7 +0.2**
comp=Z,60nm,1.8s,mb5.3
EBAN Banos Encina 60.05 297 P **P 00 21 25.2 +0.2**
comp=Z,11nm,0.6s,mb5.0
EBAN Banos Encina 60.05 297 P **P 00 21 25.2 +0.2**
EBAN pmax pmax
comp=Z,11nm,0.6s,mb5.1
ERON Agron 60.55 296 P **P 00 21 27.2 -1.1**
EADA Adamuz 60.62 298 P **P 00 21 28.0 -0.9**
ELUQ Luque 60.65 297 P **P 00 21 28.4 -0.7**
ELUQ Luque 60.65 297 P **P 00 21 28.4 -0.7**
EPLA Plasencia 60.90 300 P **P 00 21 30.4 -0.3**
comp=Z,15nm,0.9s,mb5.0
EPLA Plasencia 60.90 300 P **P 00 21 30.5 -0.2**
EPLA pmax pmax
comp=Z,15nm,0.9s,mb5.0
MTE Manteigas 61.78 301 *eP* **P 00 21 37.0 +0.3**
comp=Z,23nm,2.0s,mb4.9
PVIS Viseu 61.89 301 *eP* **P 00 21 37.9 +0.5**
comp=Z,16nm,1.4s,mb4.9
PCBR Castelo Branco 61.97 300 *eP* **P 00 21 38.6 +0.6**
comp=Z,10nm,1.6s,mb4.6
SUMG Summit 62.03 342 *eP* **P 00 21 38.3 +0.4**
comp=Z,19nm,1.1s,mb5.0
SUMG Summit 62.03 342 *i* P **P 00 21 37.9 0.0**
comp=Z,8.6nm,0.9s,mb4.8
EBAD Badajoz 62.10 299 P **P 00 21 39.2 +0.3**
comp=Z,19nm,0.6s,mb5.3
EMIN Mina Concepcio 62.29 298 P **P 00 21 39.3 -0.9**
PBAR Barrancos 62.37 299 *eP* **P 00 21 41.0 +0.3**
comp=Z,16nm,1.3s,mb4.9
PESTR Estremoz 62.46 299 *eP* **P 00 21 41.5 +0.2**
comp=Z,16nm,1.5s,mb4.8
PTOM Tomar 62.71 301 *eP* **P 00 21 43.4 +0.5**
comp=Z,35nm,1.5s,mb5.1
EVO Evora 62.91 299 *eP* **P 00 21 44.4 +0.2**
EGRO El Granado 62.97 298 P **P 00 21 44.3 -0.3**
PBEJ Beja 63.02 299 *eP* **P 00 21 45.4 +0.4**
comp=Z,13nm,0.6s,mb5.0
PVAQ Vaqueiros 63.19 298 *eP* **P 00 21 46.3 +0.1**
comp=Z,15nm,1.9s,mb4.6
PCVE Castro Verde 63.32 298 *eP* **P 00 21 48.4 +1.4**
comp=Z,29nm,2.1s,mb4.8
PBDV Barranco-do-Ve 63.42 298 *eP* **P 00 21 48.3 +0.7**
comp=Z,40nm,1.6s,mb5.1
PTEO Sao Teotonio 63.85 299 *eP* **P 00 21 51.0 +0.5**
PFVI Vila Bisbo 64.11 298 *eP* **P 00 21 52.6 +0.4**
comp=Z,52nm,1.6s,mb5.1
TORD Torodi Ar. Bea 67.97 270 P **P 00 22 15.5 -1.8**
comp=Z,4.4nm,0.5s,mb4.5,baz=47,slow=6.0,SNR=16
COLD Coldfoot 71.60 17 *eP* **P 00 22 38.5 -0.2**
comp=Z,12nm,1.0s,mb4.7
FITZ Fitzroy Crossi 72.94 129 P **P 00 22 53.1 +5.8**
BPAW Bear Paw Mtn. 73.94 19 *eP* **P 00 22 53.2 +0.7**
comp=Z,6.0nm,0.9s,mb4.3
ILAR Eielson Array 74.40 17 P **P 00 22 54.9 -0.3**
comp=Z,3.7nm,0.7s,mb4.2,baz=319,slow=4.8,SNR=55
ILAR Eielson Array 74.40 17 P **P 00 22 54.9 -0.3**
ILAR pmax pmax
comp=Z,4.0nm,0.7s
PPLA Purkeypile 74.58 20 *eP* **P 00 22 56.7 +0.4**
comp=Z,7.7nm,0.5s,mb4.7
MCK McKinley 74.77 18 *eP* **P 00 22 57.2 -0.2**
comp=Z,3.8nm,0.6s,mb4.3
MCK McKinley 74.77 18 *eP* **P 00 22 57.2 -0.1**
MCK pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
EGAK Eagle 75.65 15 *eP* **P 00 23 02.8 +0.4**
LBTB Lobatse 76.03 224 *eP* **P 00 23 05.6 +0.5**
LBTB Lobatse 76.03 224 *eP* **P 00 23 05.6 +0.6**
SML Sawmill 76.52 19 *eP* **P 00 23 07.0 -0.4**
comp=Z,4.0nm,0.8s,mb4.2
SML Sawmill 76.52 19 *eP* **P 00 23 07.0 -0.4**
SML pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
DBIC Dimbokro 76.94 269 P **P 00 23 10.2 -0.4**
comp=Z,1.9nm,0.5s,mb4.0,baz=64,slow=5.4,SNR=5.4
DBIC Dimbokro 76.94 269 P **P 00 23 10.2 -0.4**
DBIC pmax pmax
comp=Z,2.0nm,0.5s
SLKM Skilak Lake 77.07 21 *eP* **P 00 23 10.5 -0.1**
SLKM Skilak Lake 77.07 21 *eP* **P 00 23 10.5 0.0**

KDAK	Kodiak Island	78.57	23	*c*eP	P	00 23 19.5	+0.6
BOSA	Boshof	79.03	222	*e*P	P	00 23 22.0	+0.3
BOSA	Boshof	79.03	222	*e*P	P	00 23 22.0	+0.3
WRA	Warramunga Arr	79.95	124	P	P	00 23 28.0	+1.1
	comp=Z,1.4nm,0.6s,mb4.0,baz=325,slow=5.2,SNR=19						
WRA				pP	pP	00 23 49.3	+0.1
	comp=Z,1.2nm,0.8s,baz=322,slow=5.3,SNR=4.3						
WRA	Warramunga Arr	79.95	124	P	P	00 23 28.0	+1.1
WRA				*PP	pP	00 23 49.3	+0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WB2	Warramunga Arr	79.96	124	*e*P	P	00 23 28.4	+1.5
YKA	Yellowknife Ar	81.38	4	P	P	00 23 34.3	+0.4
	comp=Z,6.2nm,0.6s,mb4.6,baz=347,slow=5.3,SNR=47						
YKA				pP	pP	00 23 58.2	+1.9
	comp=Z,1.8nm,0.8s,baz=348,slow=5.3,SNR=2.9						
YKA	Yellowknife Ar	81.38	4	P	P	00 23 34.3	+0.4
YKA				pP	pP	00 23 58.2	+1.9
YKA	Yellowknife Ar	81.38	4	P	P	00 23 34.3	+0.4
YKA				*PP	pP	00 23 58.2	+1.9
YKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ASAR	Alice Springs	82.27	127	P	P	00 23 40.0	+0.9
	comp=Z,0.8nm,0.6s,mb3.7,baz=310,slow=5.0,SNR=11						
ASAR	Alice Springs	82.27	127	P	P	00 23 40.1	+1.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SCHQ	Schefferville	83.20	338	P	P	00 23 43.8	+0.2
	comp=Z,2.7nm,0.4s,mb4.4,baz=32,slow=8.2,SNR=10						
CPUP	Villa Florida	137.46	269	PKP	PKPdf	00 30 40.8	-0.2
	comp=Z,0.5nm,0.5s,baz=124,slow=3.6,SNR=3.3						
CPUP	Villa Florida	137.46	269	PKIKP	PKPdf	00 30 40.8	-0.2
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LPAZ	La Paz	140.83	290	PKP	PKPdf	00 30 49.0	+1.6
	comp=Z,0.7nm,0.6s,baz=58,slow=4.1,SNR=3.6						
LPAZ	La Paz	140.83	290	PKIKP	PKPdf	00 30 49.0	+1.6
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PLCA	Paso Flores	151.85	250	PKPbc	PKPbc	00 31 11.3	-0.4
	comp=Z,2.0nm,0.8s,baz=63,slow=2.3,SNR=3.3						
PLCA				pPKPbc	pPKPbc	00 31 35.5	+0.2
	comp=Z,0.9nm,0.7s,baz=113,slow=6.2,SNR=1.6						

*ISK **22** 00:16:05.9, 36.°99N×29.°29E, h23km, ML1.7*
*ISCJB **22** 00:16:07.9±0.6, 36.°94N±0.°03×29.°33E±0.°05, h10km, Error ellipse: s-maj=6.2km s-min=4.0km az=11.1*
*CSEM **22** 00:16:07.8±0.2, 36.°95N×29.°31E, h2km, ML1.7, Error ellipse: s-maj=6.0km s-min=3.6km az=95.0*
*DDA **22** 00:16:07.8, 36.°97N×29.°33E, h7km±3km, Md2.7*
ISC 22 00:16:08.2±0.6, 36.°96N±0.°03×29.°31E±0.°06, h3km±11km, n16, σ0.°70/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.25	37	*e*PG	Pg	00 16 12.3	-0.7
GLHS				*e*SG	Sg	00 16 16.7	+0.4
GLHS	Glhisar (BURDU	0.25	37	*e*Pg	Pg	00 16 12.3	-0.7
GLHS				*e*Sg	Sg	00 16 16.7	+0.4
GOLH	Golhisar	0.34	35	*i* P	Pg	00 16 13.6	-1.2
GOLH				*i* S	Sg	00 16 19.8	+0.5
GOLH	Golhisar	0.34	35	*i* P	Pg	00 16 13.6	-1.2
GOLH				*i* S	Sg	00 16 19.8	+0.5
FETY	Fethiye	0.37	210	*e*PG	Pg	00 16 14.2	-1.1
FETY				*e*SG	Sg	00 16 21.2	+1.1
FETY	Fethiye	0.37	210	*e*Pg	Pg	00 16 14.2	-1.1
FETY				*e*Sg	Sg	00 16 21.2	+1.1
ELL	Elmali	0.52	113	*e*PG	Pg	00 16 17.8	-0.5
ELL				*e*SG	Sg	00 16 25.8	+0.8
ELL	Elmali	0.52	113	*e*Pg	Pg	00 16 17.8	-0.4
ELL				*e*Sg	Sg	00 16 25.8	+0.8
TURN	Turunc	0.57	262	*i* P	Pg	00 16 24.9	+5.7
TURN				*i* S	Sg	00 16 37.7	+11
TURN	Turunc	0.57	262	*i* P	Pg	00 16 24.9	+5.7
TURN				*i* S	Sg	00 16 37.7	+11
AKAS	Kas	0.76	162	*i* P	Pg	00 16 22.6	-0.1
AKAS				*i* S	Sg	00 16 39.0	+6.5
AKAS	Kas	0.76	162	*i* P	Pg	00 16 22.6	-0.1
AKAS				*i* S	Sg	00 16 39.0	+6.4
DNZL	Cakiroluk	0.76	344	*i* P	Pg	00 16 23.2	+0.4
DNZL				*i* S	Sg	00 16 33.0	+0.3
DNZL	Cakiroluk	0.76	344	*i* P	Pg	00 16 23.2	+0.4
DNZL				*i* S	Sg	00 16 33.0	+0.2
KHAL	Karahalli	1.42	6	*i* P	Pn	00 16 34.5	-0.4
KHAL				*i* S	Sb	00 16 54.4	+0.5
KHAL	Karahalli	1.42	6	*i* P	Pn	00 16 34.5	-0.4
KHAL				*i* S	Sb	00 16 54.3	+0.5

*TIR **22** 00:24:31.1±1.1, 41.°82N×19.°23E, h4km±8km, ML2.5*
*ISCJB **22** 00:24:32.2±0.6, 41.°80N±0.°03×19.°32E±0.°03, h7km±3km, Error ellipse: s-maj=5.2km s-min=3.2km az=39.3*
*CSEM **22** 00:24:32.4±0.3, 41.°80N×19.°35E, h10km, ML2.3/10, Error ellipse: s-maj=6.0km s-min=4.4km az=35.0*
*PDG **22** 00:24:33.6±0.1, 41.°86N×19.°38E, h5km±1km, MD2.3/1, ML2.3/10, Error ellipse: s-maj=0.3km s-min=0.3km az=90.0*
*SKO **22** 00:24:34.0, 41.°72N×19.°34E, h16km*
*BEO **22** 00:24:36.2±0.4, 41.°78N×19.°97E, h24km±4km, ML1.9/5*
ISC 22 00:24:32.7±0.6, 41.°78N±0.°03×19.°31E±0.°03, h6km±4km, n41, σ1.°03/78, 14C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	Ulcinj	0.19	347	⇑*i*Pg	Pg	00 24 36.3	-0.3
ULC				*e*Sg	Sg	00 24 39.0	-0.1
ULC	Ulcinj	0.19	347	⇑*i*Pg	Pg	00 24 36.3	-0.3
ULC				*e*Sg	Sg	00 24 39.0	-0.1
PUK	Puka	0.51	59	*e*PG	Pg	00 24 41.0	-1.6
PUK				*i* SG	Sg	00 24 49.0	-0.3
PUK	Puka	0.51	59	*e*Pg	Pg	00 24 41.0	-1.6
	SNR=92						
PUK				*i* Sg	Sg	00 24 49.0	-0.3
	SNR=92						
TIR	Tirane	0.60	136	*e*Pg	Pg	00 24 44.9	+0.6
TIR				*e*Sg	Sg	00 24 54.2	+2.1
TIR	Tirane	0.60	136	*e*Pg	Pg	00 24 44.9	+0.6
TIR				*e*Sg	Sg	00 24 54.2	+2.1
BUM	Brajici-Budva	0.60	330	⇑*i*Pg	Pg	00 24 44.1	-0.3
BUM				*e*Sg	Sg	00 24 53.2	+0.9
BUM	Brajici-Budva	0.60	330	⇑*i*Pg	Pg	00 24 44.1	-0.3
BUM				*e*Sg	Sg	00 24 53.2	+0.9
PDG	Podgorica	0.65	357	⇓*i*Pg	Pg	00 24 43.7	-1.6
PDG				*e*Sg	Sg	00 24 53.6	-0.2
TTG	Podgorica	0.65	357	⇓*i*Pg	Pg	00 24 43.7	-1.6
TTG				*e*Sg	Sg	00 24 53.6	-0.2
BCI	Bajram Curri	0.82	44	*e*PG	Pg	00 24 46.3	-2.1
BCI				*i* SG	Sg	00 24 59.3	+0.3
BCI	Bajram Curri	0.82	44	*e*Pg	Pg	00 24 46.3	-2.1
	SNR=90						
BCI				*i* Sg	Sg	00 24 59.3	+0.3
	SNR=90						
HCY	Herceg Novi	0.90	318	⇑*i*Pg	Pg	00 24 49.9	-0.1
HCY				*e*Sg	Sg	00 25 03.9	+2.2
HCY	Herceg Novi	0.90	318	⇑*i*Pg	Pg	00 24 49.9	-0.1
HCY				*e*Sg	Sg	00 25 03.9	+2.2
PVY	Plav	0.95	31	⇑*i*Pg	Pg	00 24 49.6	-1.5
PVY				*e*Sg	Sg	00 25 03.0	-0.5
PVY	Plav	0.95	31	⇑*i*Pg	Pg	00 24 49.6	-1.5
PVY				*e*Sg	Sg	00 25 03.0	-0.5
NKY	Niksic	1.06	348	⇓*i*Pg	Pg	00 24 52.1	-1.0
NKY				*e*Sg	Sg	00 25 07.9	+1.1
NKY	Niksic	1.06	348	⇓*i*Pg	Pg	00 24 52.1	-1.0
NKY				*e*Sg	Sg	00 25 07.9	+1.1
BEY	Berane	1.18	22	⇓*i*Pg	Pg	00 24 53.5	-1.8
BEY				*e*Sg	Sg	00 25 10.7	+0.1
IVA	Berane	1.18	22	⇓*i*Pg	Pg	00 24 53.5	-1.8
IVA				*e*Sg	Sg	00 25 10.7	+0.1
BRY	Bratogost	1.26	334	⇑*i*Pg	Pg	00 24 56.2	-0.6
BRY				*e*Sg	Sg	00 25 15.1	+2.0
BRY	Bratogost	1.26	334	⇑*i*Pg	Pg	00 24 56.2	-0.6
BRY				*e*Sg	Sg	00 25 15.1	+2.0
UPM	Unac-Piva	1.45	348	⇑*i*Pg	Pn	00 24 59.3	-0.2
UPM				*e*Sg	Sg	00 25 21.0	+1.5
UPM	Unac-Piva	1.45	348	⇑*i*Pg	Pn	00 24 59.3	-0.2
UPM				*e*Sg	Sg	00 25 21.0	+1.5
KRUS	Krusevo	1.51	105	*e*Pn	Pn	00 25 00.5	+0.2
KRUS				*e*Sg	Sg	00 25 20.9	-0.4
PLE	Pljevlja	1.55	2	⇑*i*Pg	Pn	00 25 00.8	0.0
PLE				*e*Sg	Sg	00 25 23.8	+1.2
PLE	Pljevlja	1.55	2	⇑*i*Pg	Pn	00 25 00.8	0.0
PLE				*e*Sg	Sg	00 25 23.8	+1.2
SJES	Sjenica	1.56	18	*e*Pg	Pg	00 25 02.3	-0.4
SJES				*e*Sg	Sg	00 25 23.9	+0.9
SJES	Sjenica	1.56	18	*e*Pg	Pg	00 25 02.3	-0.4
SJES				*e*Sg	Sg	00 25 23.9	+0.9
SKO	Skopje	1.60	82	*e*Pn	Pn	00 25 02.7	+1.1
STON	Ston	1.62	313	*e*Pn	Pn	00 25 01.4	-0.4
STON				Sn	Sn	00 25 21.8	-1.0
STON	Ston	1.62	313	*e*Pn	Pn	00 25 01.3	-0.4
STON				Sn	Sn	00 25 21.8	-1.1
BIA	Bitola	1.70	116	*e*Pn	Pn	00 25 03.6	+0.8
BARS	Barje	2.13	60	*e*Sg	Sn	00 25 29.9	-5.6
DIVS	Divibare	2.37	12	*e*Pn	Pn	00 25 12.7	+0.6
DIVS				*e*Sn	Sn	00 25 41.7	+0.2
DIVS	Divibare	2.37	12	*e*Pn	Pn	00 25 12.7	+0.6
DIVS				*e*Sn	Sn	00 25 41.7	+0.2
ZAPS	Zavoj	2.88	58	*e*Pn	Pn	00 25 14.8	-4.3
ZAPS				*e*Sg	Sn	00 25 54.9	+1.0
VTS	Vitosha	3.01	73	*e*Pn	Pn	00 25 16.6	-4.3
VTS				*e*Sg	Sn	00 25 57.8	+0.6
VTS	Vitosha	3.01	73	*e*Pn	Pn	00 25 16.6	-4.3
NVLJ	Novalja	4.28	312	*e*Pn	Pn	00 25 37.2	-1.0
NVLJ				Sn	Sn	00 26 27.3	-1.1
NVLJ	Novalja	4.28	312	*e*Pn	Pn	00 25 37.2	-1.1
NVLJ				Sn	Sn	00 26 27.2	-1.2

*ISCJB **22** 00:43:35.6±0.4, 40.°60N±0.°02×21.°46E±0.°03, h5km±4km, Error ellipse: s-maj=4.1km s-min=3.4km az=174.9*
*ATH **22** 00:43:35.4, 40.°59N×21.°45E, h21km±1km, MD3.4/9*
*CSEM **22** 00:43:36.1±0.2, 40.°60N×21.°38E, h19km, ML2.2/7, Error ellipse: s-maj=5.3km s-min=5.0km az=58.0*
*THE **22** 00:43:36.0, 40.°61N×21.°44E, h7km±1km, ML2.2/7, Error ellipse: s-maj=1.2km s-min=0.7km az=271.0*
*SKO **22** 00:43:44.4, 40.°65N×21.°24E, h24km, M1.8, ML2.1*
ISC 22 00:43:36.1±0.4, 40.°61N±0.°02×21.°45E±0.°03, h9km±4km, n49, σ0.°92/87, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	Nestorio	0.36	238	P	Pg	00 43 42.7	-0.4
NEST				S	Sg	00 43 48.8	+0.9
NEST	Nestorio	0.36	238	P	Pg	00 43 42.7	-0.4
NEST				S	Sg	00 43 48.8	+0.9
KZN	Kozani	0.39	141	*e*PB	Pg	00 43 43.3	-0.4
KZN				*e*SB	Sg	00 43 49.8	+1.0
KZN	Kozani	0.39	141	P	Pg	00 43 43.4	-0.3
KZN				S	Sg	00 43 49.3	+0.5
KZN	Kozani	0.39	141	P	Pg	00 43 43.4	-0.3
KZN				S	Sg	00 43 49.3	+0.5
KZN				*e*Sb	Sg	00 43 49.8	+1.0
BIA	Bitola	0.42	347	P	Pg	00 43 43.3	-1.0
BIA				S	Sg	00 43 50.3	+0.4
BIA	Bitola	0.42	347	*e*Pg	Pg	00 43 53.3	+9.0
BIA				*i* Sg	Sg	00 44 02.8	+13
BIA				*e*Lg		00 44 02.9	
BIA				*e*Lg		00 44 02.9	
BIA	Bitola	0.42	347	P	Pg	00 43 43.3	-1.0
BIA				S	Sg	00 43 50.3	+0.4
KBN	Korca	0.50	272	*e*PN	Pg	00 43 45.2	-0.6
KBN				*i* SN	Sg	00 43 53.0	+0.6
KBN	Korca	0.50	272	*e*Pn	Pg	00 43 45.2	-0.6
KRUS	Krusevo	0.78	349	*i* Pg	Pg	00 43 58.7	+7.7
GRG	Griva	0.80	64	P	Pg	00 43 51.4	-0.2
GRG				S	Sg	00 44 03.5	+1.5
GRG	Griva	0.80	64	P	Pg	00 43 51.4	-0.2
GRG				S	Sg	00 44 03.5	+1.5
LIT	Litokhoron	0.94	122	*e*PN	Pg	00 43 53.3	-0.9
LIT				*e*SN	Sg	00 44 06.4	-0.1
LIT	Litokhoron	0.94	122	P	Pg	00 43 53.5	-0.7
LIT				S	Sg	00 44 07.6	+1.1
LIT	Litokhoron	0.94	122	P	Pg	00 43 53.5	-0.7
LIT				*e*Sn	Sg	00 44 06.4	-0.1
LIT				S	Sg	00 44 07.6	+1.1
JAN	Janina	1.05	206	*e*PN	Pg	00 43 55.1	-1.2
JAN				*e*SN	Sg	00 44 09.7	-0.3
JAN	Janina	1.05	206	*e*Pn	Pg	00 43 55.1	-1.2
JAN				*e*Sn	Sg	00 44 09.7	-0.3
VAY	Valandovo	1.11	50	P	Pg	00 43 56.7	-0.7
VAY	Valandovo	1.11	50	*e*Pg	Pg	00 44 07.3	+10
VAY				*e*Sg	Sg	00 44 24.3	+12
VAY				*e*Lg		00 44 25.5	
	comp=N,46nm,0.8s						
VAY				*e*Lg		00 44 25.8	
	comp=E,28nm,0.5s						
VAY	Valandovo	1.11	50	P	Pg	00 43 56.7	-0.7
THL	Klokotos Trika	1.13	157	*e*PB	Pg	00 43 55.9	-1.9
THL				*e*SN	Sg	00 44 12.0	-0.4
THL	Klokotos Trika	1.13	157	P	Pg	00 43 56.0	-1.8
THL				S	Sg	00 44 13.9	+1.5
THL	Klokotos Trika	1.13	157	P	Pg	00 43 56.0	-1.8
THL				*e*Sn	Sg	00 44 12.0	-0.4
THL				S	Sg	00 44 13.9	+1.5
HORT	Hortiatis	1.26	90	P	Pn	00 43 59.4	-0.5
HORT				S	Sg	00 44 17.1	+0.5
HORT	Hortiatis	1.26	90	P	Pn	00 43 59.4	-0.5
HORT				S	Sg	00 44 17.1	+0.5
SRN	Sarande	1.32	237	*e*PN	Pg	00 44 03.2	+1.7
SRN				*i* SN	Sg	00 44 22.0	+3.3
SRN	Sarande	1.32	237	*e*Pn	Pg	00 44 03.2	+1.7
SRN				*i* Sn	Sg	00 44 22.0	+3.3
SOH	Sokhos	1.47	81	*e*PN	Pn	00 44 02.1	-0.6
SOH				*e*SN	Sn	00 44 22.8	+0.8
SOH	Sokhos	1.47	81	P	Pn	00 44 02.2	-0.5
SOH				S	Sn	00 44 22.0	0.0
SOH	Sokhos	1.47	81	P	Pn	00 44 02.2	-0.5
SOH				S	Sn	00 44 22.0	0.0
SOH				*e*Sn	Sn	00 44 22.8	+0.8
PLG	Polygyros	1.54	98	*e*PN	Pn	00 44 03.6	-0.2
PLG				*e*SN	Sn	00 44 23.4	-0.5
PLG	Polygyros	1.54	98	P	Pn	00 44 03.5	-0.3
PLG				S	Sn	00 44 24.6	+0.7
PLG	Polygyros	1.54	98	P	Pn	00 44 03.5	-0.3
PLG				*e*Sn	Sn	00 44 23.4	-0.5
PLG				S	Sn	00 44 24.6	+0.7
EVR	Evrytania	1.71	171	*e*PN	Pn	00 44 06.0	-0.1
EVR	Evrytania	1.71	171	*e*Pn	Pn	00 44 06.0	-0.1
AGG	Agios Georgios	1.72	156	*e*PN	Pn	00 44 06.0	-0.3
AGG				*e*SN	Sn	00 44 28.6	+0.2
AGG	Agios Georgios	1.72	156	P	Pn	00 44 06.1	-0.2
AGG				S	Sn	00 44 28.7	+0.3
AGG	Agios Georgios	1.72	156	*e*Pn	Pn	00 44 06.0	-0.3
AGG				*e*Sn	Sn	00 44 28.6	+0.2
PUK	Puka	1.85	321	*e*PN	Pg	00 44 10.1	-1.5
PUK	Puka	1.85	321	*e*Pn	Pg	00 44 10.1	-1.5
NEO	Neokhori	1.89	133	*e*PB	Pn	00 44 08.0	-0.5
NEO	Neokhori	1.89	133	*e*Pb	Pn	00 44 08.0	-0.5
NVR	Nevrokopi	1.97	67	*e*PN	Pn	00 44 10.2	+0.5
NVR	Nevrokopi	1.97	67	*e*Pn	Pn	00 44 10.2	+0.5
BCI	Bajram Curri	2.04	330	*e*PN	Pn	00 44 12.8	+2.2
BCI	Bajram Curri	2.04	330	*e*Pn	Pn	00 44 12.8	+2.2
BARS	Barje	2.22	7	*e*Pn	Pn	00 44 12.7	-0.4
DIVS	Divibare	3.65	343	*e*Pn	Pn	00 44 28.1	-4.7

*ISCJB **22** 00:44:53.6±0.6, 38.°46N±0.°03×21.°61E±0.°04, h24km±7km, Error ellipse: s-maj=6.1km s-min=5.1km az=43.4*
*ATH **22** 00:44:53.4, 38.°46N×21.°64E, h24km±3km, MD2.9/4*
*CSEM **22** 00:44:53.2±0.2, 38.°46N×21.°59E, h20km, MD2.9, Error ellipse: s-maj=4.8km s-min=3.9km az=141.0*
*THE **22** 00:44:53.2, 38.°45N×21.°60E, h22km±1km, ML2.1/6, Error ellipse: s-maj=2.0km s-min=0.5km az=142.0*
ISC 22 00:44:53.6±0.6, 38.°46N±0.°03×21.°60E±0.°04, h23km±7km, n25, σ0.°75/47, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.23	141	*e*PB	Pb	00 44 59.2	-0.1
UPR	University Cam	0.23	141	P	Pb	00 44 59.2	-0.1
UPR				S	Sb	00 45 03.2	0.0
UPR	University Cam	0.23	141	P	Pb	00 44 59.2	-0.1
UPR				S	Sb	00 45 03.2	0.0
EFP	Efpalio	0.24	98	*e*PB	Pb	00 44 58.9	-0.6
EFP				*e*SB	Sb	00 45 03.8	+0.3
EFP	Efpalio	0.24	98	P	Pb	00 44 59.0	-0.5
EFP				S	Sb	00 45 03.5	0.0
EFP	Efpalio	0.24	98	*e*Pb	Pb	00 44 58.9	-0.6
EFP				S	Sb	00 45 03.5	0.0
EFP				*e*Sb	Sb	00 45 03.8	+0.3
LAKA	Lakka	0.37	127	P	Pb	00 45 00.9	-0.6
LAKA				S	Sb	00 45 06.6	-0.2
LAKA	Lakka	0.37	127	P	Pb	00 45 00.9	-0.6
LAKA				S	Sb	00 45 06.6	-0.2
TRIZ	Trizonia	0.38	104	P	Pb	00 45 01.3	-0.4
TRIZ				S	Sb	00 45 07.7	+0.5
TRIZ	Trizonia	0.38	104	P	Pb	00 45 01.3	-0.4
TRIZ				S	Sb	00 45 07.7	+0.5
RLS	Riolos of Patr	0.42	195	*e*PB	Pb	00 45 01.8	-0.5
RLS				*e*SB	Sb	00 45 09.4	+1.2
RLS	Riolos of Patr	0.42	195	*e*Pb	Pb	00 45 01.8	-0.5
RLS				*e*Sb	Sb	00 45 09.4	+1.2
KALE	Kalithea	0.43	99	P	Pb	00 45 02.2	-0.3
KALE				S	Sb	00 45 08.7	+0.2
KALE	Kalithea	0.43	99	P	Pb	00 45 02.2	-0.3
KALE				S	Sb	00 45 08.7	+0.2
EVR	Evrytania	0.48	19	*e*PB	Pb	00 45 04.0	+0.6
EVR				*e*SB	Sb	00 45 10.3	+0.2
EVR	Evrytania	0.48	19	*e*Pb	Pb	00 45 04.0	+0.6
EVR				*e*Sb	Sb	00 45 10.3	+0.2
GUR	Goura	0.78	132	*e*PN	Pn	00 45 07.8	-1.4
GUR	Goura	0.78	132	P	Pb	00 45 08.0	-0.5
GUR				S	Sb	00 45 19.1	+0.5
GUR	Goura	0.78	132	P	Pb	00 45 08.0	-0.5
GUR				S	Sb	00 45 19.1	+0.5
AGG	Agios Georgios	0.80	45	P	Pb	00 45 08.1	-0.7
AGG				S	Sb	00 45 20.1	+0.9
AGG	Agios Georgios	0.80	45	P	Pb	00 45 08.1	-0.7
AGG				S	Sb	00 45 20.1	+0.9
VLS	Valsamata	0.85	251	P	Pb	00 45 08.2	-1.4
VLS				S	Sb	00 45 21.2	+0.7
VLS	Valsamata	0.85	251	P	Pb	00 45 08.2	-1.4
VLS				S	Sb	00 45 21.2	+0.7
VLX	Vlachokerasia	1.25	150	*e*PN	Pn	00 45 17.4	+1.8
VLX	Vlachokerasia	1.25	150	*e*Pn	Pn	00 45 17.4	+1.8

*ISCJB **22** 00:53:30.0±0.7, 39.°96N±0.°04×39.°92E±0.°04, h10km, Error ellipse: s-maj=5.6km s-min=4.9km az=177.5*
*CSEM **22** 00:53:29.8±0.3, 39.°94N×39.°95E, h8km, MD2.6, Error ellipse: s-maj=5.6km s-min=4.8km az=134.0*
*ISK **22** 00:53:29.3, 39.°98N×39.°97E, h6km, MD2.6*
*DDA **22** 00:53:30.6, 39.°97N×39.°91E, h7km±5km, Md2.7*
ISC 22 00:53:30.3±1.9, 39.°96N±0.°04×39.°92E±0.°05, h16km±34km, n13, σ0.°78/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.45	83	*i* P	Pg	00 53 38.8	-0.5
KOPT				*i* S	Sg	00 53 46.9	+1.5
KOPT	Kop Dagi	0.45	83	*i* P	Pg	00 53 38.8	-0.5
KOPT				*i* S	Sg	00 53 46.9	+1.5
BAYT	Ayd¨–ntepe-Bay	0.46	21	*e*PG	Pg	00 53 38.5	-1.1
BAYT				*e*SG	Sg	00 53 44.5	-1.4
BAYT	Ayd¨–ntepe-Bay	0.46	21	*e*Pg	Pg	00 53 38.5	-1.1
BAYT				*e*Sg	Sg	00 53 44.6	-1.3
EZC	Erzincan	0.48	245	*e*PG	Pg	00 53 40.1	+0.1
EZC	Erzincan	0.48	245	*e*Pg	Pg	00 53 40.1	+0.1
KELT	Kelkit	0.54	290	*i* P	Pg	00 53 40.6	-0.4
KELT				*i* S	Sg	00 53 48.8	+0.4
KELT	Kelkit	0.54	290	*i* P	Pg	00 53 40.7	-0.4
KELT				*i* S	Sg	00 53 48.8	+0.4
GUMT	Gumushane	0.60	326	*e*PG	Pg	00 53 42.0	-0.1
GUMT				*e*SG	Sg	00 53 50.5	+0.3
MACK	Trabzon	0.99	353	*i* P	Pg	00 53 50.4	+1.0
MACK				*i* S	Sg	00 54 03.0	+0.6
MACK	Trabzon	0.99	353	*i* P	Pg	00 53 50.4	+1.0
MACK				*i* S	Sg	00 54 03.0	+0.6
PTK	Pertek	1.14	201	*e*PN	Pg	00 53 52.0	-0.4
PTK	Pertek	1.14	201	*e*Pn	Pg	00 53 52.0	-0.4

*NEIC **22** 01:02:58.4, 17.°02N×95.°33W, h116km, MD4.0(MEX), After MEX.*
MEX 22 01:02:58.4±0.8, 17.°02N×95.°33W, h116km±10km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.43	81	*i* P	Pn	01 03 14.5	-0.9
CMIG				*i* S	Sn	01 03 25.8	-2.4
CMIG	Matias Romero	0.43	81	*i* P	Pn	01 03 14.5	-0.9
CMIG				*i* S	Sn	01 03 25.8	-2.4
VHO	Vista Hermosa	1.34	272	*i* P	Pn	01 03 22.8	-0.9
VHO				*i* S	Sn	01 03 42.2	-0.8
VHO	Vista Hermosa	1.34	272	*i* P	Pn	01 03 22.8	-0.9
VHO				*i* S	Sn	01 03 42.2	-0.8
HUIG	Huatulco	1.45	211	*e*P	Pn	01 03 24.1	-0.9
HUIG				*i* S	Sn	01 03 44.5	-0.6
HUIG	Huatulco	1.45	211	*e*P	Pn	01 03 24.1	-0.9
HUIG				*i* S	Sn	01 03 44.5	-0.6
TGIG		2.13	96	*i* P	Pn	01 03 30.8	-2.4
TGIG				*i* S	Sn	01 03 59.0	-1.0
PCIG		2.41	123	*i

σ0°71/16, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.88**	**4**	*e*Pn	**Pn**	**01 34 33.5**	**-0.6**
IGHG	**Ghaleghazi**	**2.13**	**342**	*e*Pn	**Pn**	**01 34 36.8**	**-0.8**
IGHG	comp=Z,2μm,0.2s			*e*		01 35 14.5	
IVIS	**Veis**	**2.27**	**349**	*e*Pn	**Pn**	**01 34 39.7**	**+0.3**
IVIS				*e*Sn	**Sn**	**01 35 08.8**	**+1.4**
IVIS	comp=Z,855nm,0.1s			*e*		01 35 13.9	
MIB	**Mutribah**	**2.48**	**180**	*e*P	**Pn**	**01 34 41.7**	**-0.7**
MIB				*e*S	**Sn**	**01 35 13.1**	**+0.3**
MIB	comp=Z,38nm,0.5s			AML	AML	01 35 20.8	
IDHR	**Dehrash**	**2.53**	**341**	*e*Pn	**Pn**	**01 34 42.3**	**-0.8**
ILIN	**Lien**	**2.64**	**353**	*e*Pn	**Pn**	**01 34 45.0**	**+0.5**
ILIN	comp=Z,525nm,0.3s			*e*		01 35 29.2	
IPIR	**Pirpir**	**3.01**	**82**	*e*Pn	**Pn**	**01 34 50.1**	**+0.5**
IPIR	comp=Z,317nm,0.3s			*e*		01 35 49.3	
NAY	**Al-Naaiem**	**3.04**	**182**	*e*P	**Pn**	**01 34 49.0**	**-1.1**
NAY				*e*S	**Sn**	**01 35 26.9**	**+0.4**
NAY	comp=Z,10nm,0.7s			AML	AML	01 35 36.1	
RDF	**Al-Radifah**	**3.36**	**177**	*e*P	**Pn**	**01 34 54.4**	**-0.2**
RDF				*e*S	**Sn**	**01 35 35.7**	**+1.2**
RDF	comp=Z,22nm,0.7s			AML	AML	01 35 37.8	
IKLH	**Kolahrood**	**3.69**	**73**	*e*Pn	**Pn**	**01 34 58.9**	**-0.2**
IKLH	comp=Z,153nm,0.4s			*e*		01 36 01.6	
IRAZ	**Razeghan**	**3.77**	**34**	*e*Pn	**Pn**	**01 35 00.5**	**+0.5**
IRAZ	comp=Z,302nm,0.3s			*e*		01 36 10.4	
IZEF	**Zefreh**	**4.23**	**81**	*e*Pn	**Pn**	**01 35 05.9**	**-0.6**

TIR ***22*** *01:36:51.1, 40°.66N×21°.39E, h2km, ML2.9*
SKO ***22*** *01:36:54.1, 40°.63N×21°.43E, h20km, M2.1, ML2.5*
ATH ***22*** *01:36:55.4, 40°.63N×21°.58E, h21km±1km, MD3.4/10*
ISCJB ***22*** *01:36:55.0±0.3, 40°.66N±0°.02×21°.45E±0°.02, h12km±3km, Error ellipse: s-maj=2.9km s-min=2.7km az=3.0*
CSEM ***22*** *01:36:55.4±0.1, 40°.61N×21°.47E, h10km, MD3.4, Error ellipse: s-maj=3.3km s-min=2.8km az=43.0*
THE ***22*** *01:36:55.4, 40°.61N×21°.46E, h4km±1km, ML2.7/10, Error ellipse: s-maj=1.2km s-min=0.7km az=290.0*
ISC 22 01:36:55.7±0.3, 40°.64N±0°.02×21°.47E±0°.02, h12km±3km, n71, σ1°06/123, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	**Bitola**	**0.39**	**344**	P	**Pg**	**01 37 02.9**	**-0.6**
BIA				S	**Sg**	**01 37 09.8**	**+1.0**
BIA	**Bitola**	**0.39**	**344**	*i* Pg	**Pg**	**01 37 02.8**	**-0.7**
BIA				*i* Sg	**Sg**	**01 37 09.8**	**+1.0**
BIA	comp=E,1μm,0.5s			*e*Lg		01 37 09.9	
BIA	comp=N,544nm,0.3s			*e*Lg		01 37 09.9	
BIA	**Bitola**	**0.39**	**344**	P	**Pg**	**01 37 02.9**	**-0.6**
BIA				S	**Sg**	**01 37 09.8**	**+1.0**
NEST	**Nestorio**	**0.39**	**235**	P	**Pg**	**01 37 02.4**	**-1.1**
NEST				S	**Sg**	**01 37 08.3**	**-0.5**
NEST	**Nestorio**	**0.39**	**235**	P	**Pg**	**01 37 02.4**	**-1.1**
NEST				S	**Sg**	**01 37 08.3**	**-0.5**
KZN	**Kozani**	**0.41**	**145**	*e*PB	**Pg**	**01 37 02.7**	**-1.0**
KZN				*e*SB	**Sg**	**01 37 09.2**	**0.0**
KZN	**Kozani**	**0.41**	**145**	P	**Pg**	**01 37 03.1**	**-0.6**
KZN				S	**Sg**	**01 37 08.9**	**-0.3**
KZN	**Kozani**	**0.41**	**145**	S	**Sg**	**01 37 08.9**	**-0.3**
KZN	**Kozani**	**0.41**	**145**	*e*Pb	**Pg**	**01 37 02.7**	**-1.0**
KZN	**Kozani**	**0.41**	**145**	P	**Pg**	**01 37 03.1**	**-0.6**
KZN				*e*Sb	**Sg**	**01 37 09.2**	**0.0**
KBN	**Korca**	**0.52**	**268**	*e*PN	**Pg**	**01 37 05.0**	**-0.9**
KBN				*i* SN	**Sg**	**01 37 13.2**	**+0.4**
KBN	**Korca**	**0.52**	**268**	*i* Sn	**Sg**	**01 37 13.2**	**+0.4**
KBN	**Korca**	**0.52**	**268**	*e*Pn	**Pg**	**01 37 05.0**	**-0.9**
KRUS	**Krusevo**	**0.74**	**347**	*i* Pg	**Pg**	**01 37 08.9**	**-1.3**
GRG	**Griva**	**0.77**	**66**	P	**Pg**	**01 37 10.8**	**+0.1**
GRG				S	**Sg**	**01 37 22.4**	**+1.6**
GRG	**Griva**	**0.77**	**66**	P	**Pg**	**01 37 10.8**	**+0.1**
GRG				S	**Sg**	**01 37 22.4**	**+1.6**
LSK	**Leskovik**	**0.83**	**234**	*e*PN	**Pg**	**01 37 10.0**	**-1.7**
LSK				*i* SN	**Sg**	**01 37 23.1**	**+0.6**
LSK	**Leskovik**	**0.83**	**234**	*e*Pn	**Pg**	**01 37 10.0**	**-1.7**
LSK				*i* Sn	**Sg**	**01 37 23.1**	**+0.6**
LIT	**Litokhoron**	**0.95**	**124**	*e*PN	**Pg**	**01 37 12.6**	**-1.4**
LIT				*e*SN	**Sg**	**01 37 24.2**	**-2.1**
LIT	**Litokhoron**	**0.95**	**124**	P	**Pg**	**01 37 13.1**	**-0.9**
LIT				S	**Sg**	**01 37 26.8**	**+0.5**
LIT	**Litokhoron**	**0.95**	**124**	*e*Pn	**Pg**	**01 37 12.6**	**-1.4**
LIT	**Litokhoron**	**0.95**	**124**	P	**Pg**	**01 37 13.1**	**-0.9**
LIT				S	**Sg**	**01 37 26.8**	**+0.5**
VAY	**Valandovo**	**1.07**	**50**	P	**Pb**	**01 37 15.2**	**-1.0**
VAY				S	**Sg**	**01 37 31.3**	**+0.9**
VAY	**Valandovo**	**1.07**	**50**	*e*Pg	**Pg**	**01 37 15.6**	**-0.8**
VAY				*e*Sg	**Sg**	**01 37 31.4**	**+1.0**
VAY	comp=N,125nm,0.8s			*e*Lg		01 37 33.0	
VAY	comp=E,59nm,0.5s			*e*Lg		01 37 33.3	
VAY	**Valandovo**	**1.07**	**50**	P	**Pb**	**01 37 15.2**	**-1.0**
VAY				S	**Sg**	**01 37 31.3**	**+0.9**
JAN	**Janina**	**1.09**	**206**	*e*PN	**Pg**	**01 37 17.4**	**+0.7**
JAN				*e*SN	**Sg**	**01 37 32.0**	**+1.1**
JAN	**Janina**	**1.09**	**206**	*e*Pn	**Pg**	**01 37 17.4**	**+0.7**
JAN				*e*Sn	**Sg**	**01 37 32.0**	**+1.1**
THE	**Thessaloniki**	**1.14**	**90**	P	**Pb**	**01 37 16.7**	**-0.6**
THE				S	**Sb**	**01 37 33.3**	**+1.3**
THE	**Thessaloniki**	**1.14**	**90**	P	**Pb**	**01 37 16.7**	**-0.6**
THE				S	**Sb**	**01 37 33.3**	**+1.3**
THL	**Klokotos Trika**	**1.15**	**159**	*e*PB	**Pb**	**01 37 15.7**	**-1.9**
THL				*e*SN	**Sn**	**01 37 32.3**	**-1.1**
THL	**Klokotos Trika**	**1.15**	**159**	P	**Pb**	**01 37 15.7**	**-1.9**
THL				S	**Sb**	**01 37 32.7**	**+0.2**
THL	**Klokotos Trika**	**1.15**	**159**	P	**Pb**	**01 37 15.7**	**-1.9**
THL				*e*Sn	**Sn**	**01 37 32.3**	**-1.1**
THL				S	**Sb**	**01 37 32.7**	**+0.2**
HORT	**Hortiatis**	**1.24**	**92**	P	**Pn**	**01 37 18.8**	**-0.1**
HORT				S	**Sb**	**01 37 37.1**	**+2.1**
HORT	**Hortiatis**	**1.24**	**92**	P	**Pn**	**01 37 18.8**	**-0.1**
HORT				S	**Sb**	**01 37 37.1**	**+2.1**
SKO	**Skopje**	**1.33**	**359**	*e*Pg	**Pg**	**01 37 19.5**	**-1.7**
SKO				*e*Sg	**Sg**	**01 37 38.2**	**-0.4**
SKO	comp=N,82nm,0.6s			*e*Lg		01 37 40.3	
SKO	comp=E,109nm,0.9s			*e*Lg		01 37 40.4	
SRN	**Sarande**	**1.36**	**236**	*e*PN	**Pg**	**01 37 24.0**	**+2.2**
SRN				*i* SN	**Sg**	**01 37 41.8**	**+2.4**
SRN	**Sarande**	**1.36**	**236**	*e*Pn	**Pg**	**01 37 24.0**	**+2.2**
SRN				*i* Sn	**Sg**	**01 37 41.8**	**+2.4**
SOH	**Sokhos**	**1.44**	**82**	*e*PN	**Pn**	**01 37 21.6**	**-0.1**
SOH				*e*SN	**Sn**	**01 37 40.3**	**-0.2**
SOH	**Sokhos**	**1.44**	**82**	P	**Pn**	**01 37 21.6**	**-0.1**
SOH				S	**Sn**	**01 37 41.4**	**+0.9**
SOH	**Sokhos**	**1.44**	**82**	P	**Pn**	**01 37 21.6**	**-0.1**
SOH				*e*Sn	**Sn**	**01 37 40.3**	**-0.2**
SOH				S	**Sn**	**01 37 41.4**	**+0.9**
PLG	**Polygyros**	**1.53**	**99**	*e*PN	**Pn**	**01 37 22.8**	**0.0**
PLG				*e*SN	**Sn**	**01 37 41.6**	**-1.1**
PLG	**Polygyros**	**1.53**	**99**	P	**Pn**	**01 37 23.3**	**+0.5**
PLG				S	**Sn**	**01 37 44.1**	**+1.4**
PLG	**Polygyros**	**1.53**	**99**	*e*Pn	**Pn**	**01 37 22.8**	**0.0**
PLG	**Polygyros**	**1.53**	**99**	P	**Pn**	**01 37 23.3**	**+0.5**
PLG				*e*Sn	**Sn**	**01 37 41.6**	**-1.1**
PLG				S	**Sn**	**01 37 44.1**	**+1.4**
EVR	**Evrytania**	**1.74**	**171**	*e*PN	**Pn**	**01 37 26.0**	**+0.2**
EVR				*e*SN	**Sn**	**01 37 48.9**	**+1.0**
EVR	**Evrytania**	**1.74**	**171**	*e*Pn	**Pn**	**01 37 26.0**	**+0.2**
EVR				*e*Sn	**Sn**	**01 37 48.9**	**+1.0**
AGG	**Agios Georgios**	**1.75**	**157**	*e*PN	**Pn**	**01 37 25.6**	**-0.2**
AGG				*e*SN	**Sn**	**01 37 49.0**	**+1.0**
AGG	**Agios Georgios**	**1.75**	**157**	P	**Pn**	**01 37 25.6**	**-0.2**
AGG				S	**Sn**	**01 37 48.2**	**+0.2**
AGG	**Agios Georgios**	**1.75**	**157**	P	**Pn**	**01 37 25.6**	**-0.2**
AGG				S	**Sn**	**01 37 48.2**	**+0.2**
AGG				*e*Sn	**Sn**	**01 37 49.0**	**+1.0**
PUK	**Puka**	**1.84**	**320**	*e*PN	**Pg**	**01 37 31.3**	**+0.4**
PUK				*i* SN	**Sg**	**01 37 56.3**	**+1.6**
PUK	**Puka**	**1.84**	**320**	*i* Sn	**Sg**	**01 37 56.3**	**+1.6**
PUK	**Puka**	**1.84**	**320**	*e*Pn	**Pg**	**01 37 31.3**	**+0.4**
NEO	**Neokhori**	**1.90**	**134**	*e*PN	**Pn**	**01 37 27.4**	**-0.5**
NEO				*e*SN	**Sn**	**01 37 51.1**	**-0.6**
NEO	**Neokhori**	**1.90**	**134**	*e*Pn	**Pn**	**01 37 27.4**	**-0.5**
NEO				*e*Sn	**Sn**	**01 37 51.1**	**-0.6**
NVR	**Nevrokopi**	**1.94**	**68**	*e*PN	**Pn**	**01 37 28.1**	**-0.4**
NVR	**Nevrokopi**	**1.94**	**68**	*e*Pn	**Pn**	**01 37 28.1**	**-0.4**
BCI	**Bajram Curri**	**2.02**	**329**	*i* SN	**Pg**	**01 37 32.0**	**-2.4**
BCI				*i* SN	**Sg**	**01 38 02.0**	**+1.4**
BCI	**Bajram Curri**	**2.02**	**329**	*i* Sn	**Sg**	**01 38 02.0**	**+1.4**
BARS	**Barje**	**2.19**	**7**	∥*i*Pn	**Pn**	**01 37 32.3**	**+0.4**
AOS	**Alonnisos**	**2.37**	**128**	P	**Pn**	**01 37 34.6**	**+0.3**
AOS	**Alonnisos**	**2.37**	**128**	P	**Pn**	**01 37 34.6**	**+0.3**
ALN	**Alexandroupoli**	**3.48**	**84**	*e*PN	**Pn**	**01 37 49.5**	**-0.2**
ALN	**Alexandroupoli**	**3.48**	**84**	*e*Pn	**Pn**	**01 37 49.5**	**-0.2**
STON	**Ston**	**3.59**	**310**	*e*Pn	**Pn**	**01 37 52.6**	**+1.3**
STON				Sn	**Sn**	**01 38 32.5**	**-1.1**
STON	**Ston**	**3.59**	**310**	Sn	**Sn**	**01 38 32.5**	**-1.1**
STON	**Ston**	**3.59**	**310**	*e*Pn	**Pn**	**01 37 52.5**	**+1.3**
DIVS	**Divibare**	**3.62**	**343**	*e*Pn	**Pn**	**01 37 53.5**	**+1.9**
TRUS	**Trudelj**	**3.67**	**348**	*e*Pn	**Pn**	**01 37 52.0**	**-0.2**
NVLJ	**Novalja**	**6.25**	**311**	*e*Pn	**Pn**	**01 38 27.3**	**-0.4**
NVLJ				Sn	**Sn**	**01 39 37.8**	**-1.2**
NVLJ	**Novalja**	**6.25**	**311**	Sn	**Sn**	**01 39 37.7**	**-1.3**
NVLJ	**Novalja**	**6.25**	**311**	*e*Pn	**Pn**	**01 38 27.2**	**-0.5**

ISCJB ***22*** *01:48:23.1±0.7, 12°.83N±0°.09×48°.05E±0°.05, h10km, mb3.7/11, MS3.1/2, Error ellipse: s-maj=13.5km s-min=6.5km az=1.4*
CSEM ***22*** *01:48:23.7±0.3, 12°.80N×48°.00E, h2km, ML3.7, Error ellipse: s-maj=13.3km s-min=6.8km az=170.0*
IDC ***22*** *01:48:23.1±1.1, 12°.63N×48°.14E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/25, mbtmp3.8/12, ML3.8/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/37, Error ellipse: s-maj=27.9km s-min=19.7km az=13.0*
DHMR ***22*** *01:48:23.7±1.7, 13°.15N×47°.92E, h10km, ML3.7*
NEIC ***22*** *01:48:24.4±0.6, 12°.60N×48°.12E, h10km, Error ellipse: s-maj=14.9km s-min=10.5km az=177.0*
ISC 22 01:48:24.7±0.7, 12°.8N±0°.1×48°.00E±0°.05, h10km, n33, σ0°95/37, mb3.7/11, MS3.1/2, 3C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.98**	**30**	⇑*i*P	**Pn**	**01 48 55.0**	**-3.3**
MUKL				*i* S	**Sn**	**01 49 17.1**	**-6.1**
MUKL				AML	AML	01 49 31.2	
MUKL	comp=N,703nm,0.5s						
BDHA	**Al Bayda'**	**2.66**	**297**	*i* P	**Pn**	**01 49 06.2**	**-1.3**
BDHA				*i* S	**Sn**	**01 49 39.2**	**-0.7**
BDHA				AML	AML	01 49 41.7	
BDHA	comp=N,2μm,0.5s						
BDHA	**Al Bayda'**	**2.66**	**297**	*i* P	**Pn**	**01 49 06.2**	**-1.4**
BDHA				*i* S	**Sn**	**01 49 39.2**	**-0.7**
BDHA	comp=N,819nm,0.5s						
LBOS		**2.90**	**293**	⇑*i*P	**Pn**	**01 49 10.5**	**-0.4**
LBOS				*i* S	**Sn**	**01 49 45.7**	**-0.1**
LBOS		**2.90**	**293**	⇑*i*P	**Pn**	**01 49 10.5**	**-0.4**
LBOS				*i* S	**Sn**	**01 49 45.7**	**-0.1**
TRBA	**At Turbah**	**3.82**	**277**	*i* P	**Pn**	**01 49 22.8**	**-0.8**
TRBA				AML	AML	01 50 20.2	
TRBA	comp=E,134nm,0.6s						
ATD	**Arta Tunnel**	**5.19**	**257**	Pn	**Pn**	**01 49 42.9**	**+0.5**
ATD	comp=E,2.9nm,0.3s,baz=78,slow=14,SNR=17 **Arta Tunnel**	**5.19**	**257**	Pn	**Pn**	**01 49 42.9**	**+0.5**
EIL	**Elat**	**20.73**	**326**	P	**P**	**01 53 12.2**	**+6.7**
EIL	comp=E,3.0nm,0.6s,baz=113,slow=7.4,SNR=4.8						
ASF	**Jabal al Asfar**	**21.84**	**334**	P	**P**	**01 53 21.2**	**+3.8**
ASF	comp=E,0.7nm,0.3s,mb3.5,baz=63,slow=4.5,SNR=3.6						
GNI	**Garni**	**27.43**	**355**	LR	LR	02 06 38.3	
GNI	comp=E,61nm,19.6s,MS3.2,baz=352,slow=40						
BRTR	**Keskin Array B**	**29.70**	**337**	P	**P**	**01 54 32.0**	**+1.1**
BRTR	comp=E,0.4nm,0.8s,mb3.2,baz=167,slow=7.0,SNR=2.6 **Keskin Array B**	**29.70**	**337**	P	**P**	**01 54 32.0**	**+1.1**
AKASG	**Malin Array Be**	**40.82**	**342**	P	**P**	**01 56 07.2**	**+0.9**
AKASG	comp=E,0.3nm,0.4s,mb3.3,baz=146,slow=6.7,SNR=3.0 **Malin Array Be**	**40.82**	**342**	P	**P**	**01 56 07.2**	**+0.9**
MKAR	**Makanchi Array**	**44.50**	**34**	P	**P**	**01 56 36.1**	**-0.1**
MKAR	comp=E,0.8nm,0.8s,mb3.5,baz=205,slow=5.4,SNR=4.7 **Makanchi Array**	**44.50**	**34**	P	**P**	**01 56 36.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**45.08**	**276**	P	**P**	**01 56 42.4**	**+1.0**
TORD	comp=E,310nm,0.3s,baz=88,slow=6.8,SNR=2.0 **Torodi Ar. Bea**	**45.08**	**276**	P	**P**	**01 56 42.3**	**+1.0**
GERES	**GERESS Array B**	**45.80**	**329**	P	**P**	**01 56 47.9**	**+1.3**
GERES	comp=E,0.5nm,0.5s,mb3.7,baz=135,slow=8.4,SNR=6.5 **GERESS Array B**	**45.80**	**329**	P	**P**	**01 56 47.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**49.27**	**77**	P	**P**	**01 57 12.9**	**-1.1**
CMAR	comp=E,0.8nm,0.3s,mb4.2,baz=274,slow=9.1,SNR=5.8 **Chiang Mai Arr**	**49.27**	**77**	P	**P**	**01 57 12.9**	**-1.1**
ZALV	**Zalesovo Beam**	**50.31**	**27**	P	**P**	**01 57 21.0**	**-0.3**
ZALV	comp=E,0.3nm,0.4s,mb3.7,baz=225,slow=5.9,SNR=3.3			LR	LR	02 22 41.2	
ZALV	comp=E,21nm,21.2s,MS3.1,baz=349,slow=41						
FINES	**FINESS Array B**	**51.14**	**347**	P	**P**	**01 57 28.7**	**+1.2**
FINES	comp=E,1.5nm,0.7s,mb4.0,baz=134,slow=8.1,SNR=3.5 **FINESS Array B**	**51.14**	**347**	P	**P**	**01 57 28.7**	**+1.2**
FINES	**FINESS Array B**	**51.14**	**347**	P	**P**	**01 57 28.7**	**+1.2**
SONM	**Songino Array**	**59.56**	**42**	P	**P**	**01 58 29.1**	**+0.7**
SONM	comp=E,0.7nm,0.8s,mb3.7,baz=266,slow=7.5,SNR=3.6 **Songino Array**	**59.56**	**42**	P	**P**	**01 58 29.1**	**+0.7**
WRA	**Warramunga Arr**	**90.91**	**110**	P	**P**	**02 01 28.6**	**-0.7**
WRA	comp=E,1.9nm,0.9s,mb4.4,baz=298,slow=3.7,SNR=8.8 **Warramunga Arr**	**90.91**	**110**	P	**P**	**02 01 28.6**	**-0.7**
ASAR	**Alice Springs**	**91.36**	**114**	P	**P**	**02 01 31.1**	**-0.2**
ASAR	comp=E,0.5nm,0.9s,mb3.8,baz=289,slow=5.8,SNR=4.6 **Alice Springs**	**91.36**	**114**	P	**P**	**02 01 31.1**	**-0.2**

CSEM ***22*** *01:55:14.6, 43°.05N×1°.91W, h0km, ML0.5, After MDD*
MDD 22 01:55:14.6±0.7, 43°.05N×1°.91W, h0km, mbLg1.1/1, Error ellipse: s-maj=5.9km s-min=4.4km az=11.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELIZ	**Elizondo**	**0.30**	**67**	Pg	Pg	01 55 20.4	0.0
ELIZ	2.0nm,0.1s,SNR=7.9			Lg		01 55 24.2	
ELIZ	**Elizondo**	**0.30**	**67**	Pg	Pg	01 55 20.4	0.0
ELIZ	2.0nm,0.1s,SNR=7.9			Lg		01 55 24.2	
EALK	**Alkurruntz**	**0.34**	**60**	Pg	Pg	01 55 21.1	0.0
EALK	0.3nm,0.2s,SNR=7.9			Lg		01 55 25.1	
EALK	**Alkurruntz**	**0.34**	**60**	Pg	Pg	01 55 21.1	-0.1
EALK	0.3nm,0.2s,SNR=7.9			Lg		01 55 25.1	
IZUN	**Zunzarren**	**0.38**	**119**	Pg	Pg	01 55 21.1	-0.8
IZUN	0.3nm,0.1s,SNR=7.9			Lg		01 55 27.0	
IZUN	**Zunzarren**	**0.38**	**119**	Pg	Pg	01 55 21.1	-0.8
IZUN	0.3nm,0.1s,SNR=7.9			Lg		01 55 27.0	
EORO	**Oroz-Betelu**	**0.47**	**109**	Pg	Pg	01 55 23.5	-0.1
EORO	0.2nm,0.2s,SNR=7.9			Lg		01 55 30.0	
EORO	**Oroz-Betelu**	**0.47**	**109**	Pg	Pg	01 55 23.5	-0.1
EORO	0.2nm,0.2s,SNR=7.9			Lg		01 55 30.0	
IELO	**Elcoad**	**0.54**	**112**	Pg	Pg	01 55 24.7	-0.1
IELO	0.4nm,0.1s,SNR=7.9			Lg		01 55 31.4	
IELO	**Elcoad**	**0.54**	**112**	Pg	Pg	01 55 24.7	-0.2
IELO	0.4nm,0.1s,SNR=7.9			Lg		01 55 31.4	
ELAN	**Lanestosa**	**1.13**	**280**	Pg	Pg	01 55 34.6	-1.6
ELAN	0.0nm,0.1s,SNR=7.9			Lg		01 55 51.8	
ELAN	**Lanestosa**	**1.13**	**280**	Pg	Pg	01 55 34.6	-1.6
ELAN	SNR=7.9			Lg		01 55 51.8	
EBIE	**Bielsa**	**1.55**	**103**	Pg	Pg	01 55 42.6	-1.8
EBIE	0.1nm,0.1s,SNR=7.9			Lg		01 56 04.8	
EBIE	**Bielsa**	**1.55**	**103**	Pg	Pg	01 55 42.6	-1.7
EBIE	0.1nm,0.1s,SNR=7.9			Lg		01 56 04.8	
	0.1nm,0.2s,SNR=7.9						

IDC ***22*** *01:57:28.0±1.7, 2°.06N×127°.66E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.8/19, mbtmp4.0/5, Error ellipse: s-maj=90.8km s-min=22.8km az=68.0*
ISCJB ***22*** *01:57:41.2±0.9, 1°.84N±0°.07×127°.08E±0°.09, h133km±7km, mb3.9/4, Error ellipse: s-maj=16.4km s-min=8.8km az=146.2*
DJA ***22*** *01:57:53, 0°.94N×128°.10E, h30km, MLv3.9/3*
ISC 22 01:57:42.2±0.9, 1°.85N±0°.07×127°.10E±0°.09, h127km±7km, n11, σ0°96/13, mb4.0/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.10**	**166**	P	**Pn**	**01 58 05.8**	**0.0**
TNTI				S	**Sn**	**01 58 24.0**	**+0.2**
MNI	**Manado**	**2.29**	**260**	P	**Pn**	**01 58 21.4**	**+1.8**
SGSI	**Sangihe**	**2.40**	**319**	P	**Sn**	**01 58 49.8**	**-1.1**
LBMI	**Labuha**	**2.50**	**171**	P	**Pn**	**01 58 21.5**	**-0.8**
LBMI				S	**Sn**	**01 58 53.9**	**+0.7**
KMSI	**Cibinong**	**3.36**	**248**	P	**Sn**	**01 58 57.5**	**-16**
LUWI	**Luwuk**	**5.19**	**236**	P	**Sn**	**01 59 56.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.88**	**184**	P	**P**	**02 02 03.5**	**-0.1**
WRA	1.9nm,0.5s,baz=12,slow=11,SNR=4.7 **Warramunga Arr**	**22.79**	**162**	P	**P**	**02 02 33.4**	**-0.8**
ASAR	8.0nm,0.5s,mb4.3,baz=344,slow=11,SNR=56 **Alice Springs**	**26.21**	**166**	P	**P**	**02 03 04.8**	**-0.4**
STKA	1.0nm,0.6s,mb3.4,baz=345,slow=7.0,SNR=8.9 **Stephens Creek**	**36.25**	**159**	P	**P**	**02 04 33.0**	**-0.3**
MKAR	2.3nm,0.8s,mb4.2,baz=353,slow=7.2,SNR=4.7 **Makanchi Array**	**59.30**	**326**	P	**P**	**02 07 32.9**	**+2.3**
	0.9nm,0.6s,mb4.0,baz=111,slow=7.9,SNR=7.3						

IDC 22 02:11:37.0±1.9, 2°.13N×127°.91E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.7/4, Error ellipse: s-maj=109.1km s-min=23.3km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.23**	**186**	P	P	02 16 13.3	-0.6
WRA	0.6nm,0.4s,baz=12,slow=12,SNR=4.1 **Warramunga Arr**	**22.82**	**164**	P	P	02 16 42.5	+0.7
ASAR	1.5nm,0.4s,baz=345,slow=11,SNR=42 **Alice Springs**	**26.30**	**168**	P	P	02 17 14.2	-0.3
MKAR	0.8nm,0.4s,baz=347,slow=7.3,SNR=14 **Makanchi Array**	**59.53**	**325**	P	P	02 21 42.4	+0.2
	0.3nm,0.4s,baz=119,slow=7.7,SNR=2.7						

CSEM ***22*** *02:12:58.7±0.2, 38°.32N×21°.59E, h20km, MD3.2, Error ellipse: s-maj=5.2km s-min=4.0km az=153.0*
THE ***22*** *02:12:59.4, 38°.26N×21°.62E, h10km±1km, ML2.4/11, Error ellipse: s-maj=1.1km s-min=0.6km az=356.0*
ATH 22 02:12:58.5, 38°.27N×21°.63E, h22km±1km, MD3.2/13, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.12**	**84**	*e*PB	Pb	02 13 02.9	0.0
UPR				*e*SB	Sb	02 13 06.4	+0.5
UPR	**University Cam**	**0.12**	**84**	P	Pb	02 13 03.2	+0.3
UPR				S	Sb	02 13 05.8	-0.1
UPR	**University Cam**	**0.12**	**84**	*e*Pb	Pb	02 13 02.9	0.0
UPR	**University Cam**	**0.12**	**84**	P	Pb	02 13 03.2	+0.3
UPR				S	Sb	02 13 05.8	-0.1
UPR				*e*Sb	Sb	02 13 06.4	+0.5
RLS	**Riolos of Patr**	**0.25**	**211**	P	Pb	02 13 04.3	-0.2
RLS	**Riolos of Patr**	**0.25**	**211**	*e*PB	Pb	02 13 04.8	+0.3
RLS				*e*SB	Sb	02 13 09.6	+1.1
RLS	**Riolos of Patr**	**0.25**	**211**	P	Pb	02 13 04.3	-0.2
RLS	**Riolos of Patr**	**0.25**	**211**	*e*Pb	Pb	02 13 04.8	+0.3
RLS				*e*Sb	Sb	02 13 09.6	+1.1
EFP	**Efpalio**	**0.27**	**54**	*e*PB	Pb	02 13 05.0	+0.2
EFP				*e*SB	Sb	02 13 09.1	0.0
EFP	**Efpalio**	**0.27**	**54**	P	Pb	02 13 04.9	+0.1
EFP				S	Sb	02 13 09.5	+0.4
EFP	**Efpalio**	**0.27**	**54**	P	Pb	02 13 04.9	+0.1
EFP				*e*Sb	Sb	02 13 09.1	0.0
EFP				S	Sb	02 13 09.5	+0.4
LAKA	**Lakka**	**0.28**	**96**	P	Pb	02 13 05.3	+0.4
LAKA				S	Sb	02 13 09.5	+0.2
LAKA	**Lakka**	**0.28**	**96**	P	Pb	02 13 05.3	+0.4
LAKA				S	Sb	02 13 09.5	+0.2
TRIZ	**Trizonia**	**0.36**	**75**	P	Pb	02 13 06.5	+0.2
TRIZ				S	Sb	02 13 11.8	+0.2
TRIZ	**Trizonia**	**0.36**	**75**	P	Pb	02 13 06.5	+0.2
TRIZ				S	Sb	02 13 11.8	+0.2
KALE	**Kalithea**	**0.42**	**73**	P	Pb

THL	Klokotos Trika	1.33	13	*e*Pn	Pn	02 13 23.8	+2.1
THL				S	Sn	02 13 42.4	+3.7
DID	Didima	1.48	120	*e*PN	Pn	02 13 25.9	+2.1
DID	Didima	1.48	120	P	Pn	02 13 25.5	+1.7
DID				S	Sn	02 13 46.4	+3.9
DID	Didima	1.48	120	P	Pn	02 13 25.5	+1.7
DID	Didima	1.48	120	*e*Pn	Pn	02 13 25.9	+2.1
DID				S	Sn	02 13 46.4	+3.9
NEO	Neokhori	1.62	50	P	Pn	02 13 29.6	+3.9
NEO	Neokhori	1.62	50	P	Pn	02 13 29.6	+3.9
PTL	Penteli	1.77	96	*e*PN	Pn	02 13 29.9	+2.1
PTL	Penteli	1.77	96	*e*Pn	Pn	02 13 29.9	+2.1
VLI	Veliai	1.87	146	*e*PN	Pn	02 13 32.0	+2.9
VLI	Veliai	1.87	146	*e*Pn	Pn	02 13 32.0	+2.9

*IDC **22** 02:24:11.6±0.9, 9°.24S×158°.88E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.8/16, mbtmp3.8/6, Error ellipse: s-maj=28.7km s-min=16.6km az=177.0*
*ISCJB **22** 02:24:15.3±4.3, 9°.3S±0°.2×158°.8E±0°.2, h33km±46km, mb3.7/6, Error ellipse: s-maj=46.8km s-min=18.0km az=146.4*
*NEIC **22** 02:24:16.6±0.6, 9°.32S×158°.94E, h35km, Error ellipse: s-maj=18.7km s-min=11.0km az=162.0*

ISC 22 02:24:14.3±6.3, 9°.2S±0°.2×158°.84E±0°.05, h16km±39km, n9, σ0°64/11, mb3.7/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.11	100	Pn	Pn	02 24 34.3	-0.9
	324nm,0.3s,baz=230,slow=7.9,SNR=19						
HNR				Sn	Sn	02 24 49.9	-0.2
	881nm,0.3s,baz=307,slow=20,SNR=16						
HNR	Honiara	1.11	100	*e*Pn	Pn	02 24 34.2	-1.0
HNR				*e*S	Sb	02 24 50.1	+0.8
WB2	Warramunga Arr	25.94	243	P	P	02 29 46.6	+0.4
WRA	Warramunga Arr	25.95	243	P	P	02 29 46.6	+0.3
	1.0nm,0.8s,mb3.4,baz=70,slow=9.4,SNR=9.4						
STKA	Stephens Creek	27.63	213	P	P	02 30 01.1	-0.1
	7.7nm,1.2s,mb4.2,baz=45,slow=6.8,SNR=4.3						
ASAR	Alice Springs	27.82	236	P	P	02 30 02.6	-0.4
	0.5nm,0.7s,mb3.2,baz=64,slow=8.4,SNR=3.8						
SONM	Songino Array	73.29	326	P	P	02 35 46.1	+1.1
	0.7nm,0.7s,mb3.7,baz=145,slow=5.4,SNR=4.2						
ILAR	Eielson Array	84.09	20	P	P	02 36 43.2	-0.9
	0.2nm,0.5s,mb3.5,baz=246,slow=4.7,SNR=5.9						
MKAR	Makanchi Array	87.60	318	P	P	02 37 01.7	-0.1
	0.4nm,0.5s,mb3.9,baz=94,slow=5.8,SNR=3.4						

*IDC **22** 02:41:53.0±1.8, 2°.80S×129°.82E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.6/19, mbtmp3.7/4, ML3.4/2, Error ellipse: s-maj=104.9km s-min=26.5km az=73.0*
*DJA **22** 02:41:56, 2°.60S×129°.69E, h7km, MLv3.6/5*
*ISCJB **22** 02:41:57.5±0.9, 2°.78S±0°.07×129°.71E±0°.09, h60km±16km, mb3.7/2, Error ellipse: s-maj=15.7km s-min=10.3km az=31.4*

ISC 22 02:41:58.5±0.8, 2°.78S±0°.07×129°.71E±0°.09, h51km±19km, n8, σ1°32/11, mb3.7/2, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.74	174	P	Pn	02 42 28.6	+2.2
BNDI				S	Sn	02 42 55.8	+8.3
SWI	Sorong	2.45	39	P	Pn	02 42 35.8	-0.3
SWI				S	Sn	02 43 04.9	0.0
NLAI	Namlea	2.65	260	P	Pn	02 42 39.1	+0.3
LBMI	Labuha	3.07	314	P	Pn	02 42 43.8	-0.8
FITZ	Fitzroy Crossi	15.74	194	Pn	Pn	02 45 35.6	-1.4
	0.1nm,0.3s,baz=18,slow=15,SNR=2.2						
WRA	Warramunga Arr	17.65	166	P	Pn	02 45 58.5	-2.3
	0.3nm,0.3s,baz=350,slow=12,SNR=9.6						
WRA				S	S	02 49 06.4	-15
	0.1nm,0.3s,baz=343,slow=22,SNR=4.2						
ASAR	Alice Springs	21.16	169	P	P	02 46 40.4	+0.9
	1.8nm,0.5s,mb3.7,baz=347,slow=11,SNR=15						
ASAR				PcP	PcP	02 50 46.4	+2.4
	0.4nm,0.6s,baz=356,slow=1.3,SNR=4.5						
MKAR	Makanchi Array	64.58	326	P	P	02 52 32.5	+2.0
	0.6nm,0.7s,mb3.8,baz=126,slow=6.9,SNR=5.3						

*NEIC **22** 02:46:19.0, 17°.77N×68°.91W, h89km, MD3.5(RSPR), After RSPR.*

RSPR 22 02:46:19.0, 17°.77N×68°.91W, h89km±24km, 1C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	1.73	82	⇓*i*P	Pn	02 46 47.0	-0.6
LSP	Las Mesas	1.78	77	*e*Pn	Pn	02 46 47.6	-0.7
LSP				*e*S	Sn	02 47 13.8	+3.1
AGPR	Aguadilla, PR	1.84	68	⇑*i*P	Pn	02 46 49.0	-0.1
AGPR				*e*S	Sn	02 47 11.1	-0.9
LRS	Lares	2.03	75	⇑*i*P	Pn	02 46 50.8	-0.8
LRS	Lares	2.03	75	*e*Pn	Pn	02 46 51.0	-0.6
LRS				*e*S	Sn	02 47 19.6	+3.1
AOPR	Arecibo Observ	2.13	74	⇓*e*P	Pn	02 46 52.0	-0.8
AOPR				*e*S	Sn	02 47 19.2	+0.5
CELP	Cerrillos	2.24	82	⇓*e*P	Pn	02 46 54.7	+0.4
CELP	Cerrillos	2.24	82	*e*Pn	Pn	02 46 53.7	-0.6
CELP				*e*S	Sn	02 47 24.0	+2.6
SDDR	Presa de Saban	2.56	298	*e*Pn	Pn	02 46 49.6	-9.0
SDDR				*e*S	Sn	02 47 18.3	-11
SJG	San Juan	2.65	82	*e*Pn	Pn	02 46 58.7	-1.1
SJG				*e*S	Sn	02 47 30.3	-0.8

IDC 22 03:08:30.2±1.5, 3°.22S×136°.22E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.6/15, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=63.4km s-min=25.9km az=97.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.73	186	Pn	Pn	03 12 25.6	-0.4
	0.1nm,0.3s,baz=2.9,slow=13,SNR=5.8						
WRA				Sn	Sn	03 15 26.3	-6.2
	0.2nm,0.3s,baz=0.5,slow=23,SNR=5.4						
FITZ	Fitzroy Crossi	18.06	214	P	Pn	03 12 41.7	-1.0
	baz=40,slow=13						
FITZ				S	Sn	03 15 51.4	-14
	0.1nm,0.3s,baz=96,slow=10,SNR=3.7						
ASAR	Alice Springs	20.45	186	P	P	03 13 10.2	+0.8
	1.0nm,0.5s,baz=11,slow=10,SNR=16						
MKAR	Makanchi Array	68.69	323	P	P	03 19 36.5	+0.9
	0.2nm,0.2s,baz=126,slow=7.3,SNR=4.6						
ILAR	Eielson Array	87.33	25	P	P	03 21 17.9	-0.8
	0.3nm,0.7s,baz=262,slow=4.2,SNR=6.1						

*IDC **22** 03:11:53.4±1.1, 5°.70S×146°.39E, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.1/16, mbtmp4.0/9, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/19, Error ellipse: s-maj=40.7km s-min=19.2km az=103.0*
*ISCJB **22** 03:11:58.9±3.0, 5°.7S±0°.1×146°.2E±0°.2, h50km±32km, mb4.0/8, Error ellipse: s-maj=32.1km s-min=21.0km az=22.4*
*NEIC **22** 03:12:00.9±2.3, 5°.75S×146°.22E, h54km±23km, mb3.8/1, Error ellipse: s-maj=23.8km s-min=18.1km az=115.0*

ISC 22 03:12:00.8±2.6, 5°.7S±0°.1×146°.2E±0°.2, h51km±29km, n16, σ0°70/14, mb4.0/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.76	165	*e*Pn	Pn	03 12 56.9	+0.6
COEN	Coen	8.68	200	*e*Pn	Pn	03 14 02.8	-1.1
COEN				*e*S	Sn	03 15 28.4	-12
CTA	Charters Tower	14.26	180	Pn	Pn	03 15 20.5	+0.6
	0.4nm,0.3s,baz=9.5,slow=12,SNR=2.3						
WRA	Warramunga Arr	18.22	218	P	Pn	03 16 10.3	+0.2
	0.2nm,0.3s,baz=42,slow=12,SNR=6.5						
WRA				PcP	PcP	03 20 42.1	+1.2
	0.1nm,0.3s,baz=25,slow=2.0,SNR=10						
GUMO	Guam	19.25	356	LR	LR	03 22 44.5	
	comp=Z,35nm,18.8s,baz=79,slow=34						
ASAR	Alice Springs	21.39	212	P	P	03 16 43.3	-0.9
	5.2nm,0.4s,mb4.2,baz=52,slow=8.3,SNR=3.6						
FITZ	Fitzroy Crossi	23.52	237	P	P	03 17 06.5	0.0
	3.3nm,0.6s,mb4.0,baz=73,slow=8.0,SNR=9.0						
FITZ	Fitzroy Crossi	23.52	237	*e*P	P	03 17 06.9	+0.3
	1.8nm,0.5s,mb3.8						
STKA	Stephens Creek	26.35	189	P	P	03 17 32.5	+0.4
	1.9nm,0.5s,mb3.9,baz=360,slow=9.3,SNR=4.9						
KSRS	Korea Array	46.23	340	P	P	03 20 20.7	-0.2
	0.6nm,0.4s,mb3.9,baz=156,slow=8.8,SNR=5.0						
CMAR	Chiang Mai Arr	52.42	298	P	P	03 21 09.1	+0.6
	1.4nm,0.4s,mb4.3,baz=90,slow=2.9,SNR=4.3						
SONM	Songino Array	63.79	331	P	P	03 22 28.3	+0.7
	0.3nm,0.6s,mb3.5,baz=156,slow=5.9,SNR=2.7						
MKAR	Makanchi Array	76.79	321	P	P	03 23 47.3	+0.3
	0.4nm,0.2s,mb3.9,baz=97,slow=7.3,SNR=2.4						
ILAR	Eielson Array	85.56	23	P	P	03 24 31.8	-1.4
	1.0nm,0.7s,mb4.2,baz=253,slow=4.9,SNR=20						
TORD	Torodi Ar. Bea	144.25	284	PKP	PKPdf	03 31 30.9	-1.2
	1.2nm,0.6s,baz=64,slow=3.8,SNR=4.4						
DBIC	Dimbokro	151.20	273	PKPbc	PKPbc	03 31 50.5	+0.9
	1.6nm,0.5s,baz=111,slow=1.4,SNR=7.9						

IDC 22 03:15:10.3±2.1, 0°.13N×98°.14E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, ML2.3/1, Error ellipse: s-maj=78.5km s-min=22.7km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.77	16	Pn	Pn	03 15 54.9	-1.1
	0.5nm,0.3s,baz=144,slow=19,SNR=2.0						
WRA	Warramunga Arr	40.68	122	P	P	03 22 52.7	-0.1
	0.7nm,0.6s,baz=301,slow=9.0,SNR=6.3						
ASAR	Alice Springs	42.01	127	P	P	03 23 03.9	+0.2
	0.4nm,0.6s,baz=294,slow=7.0,SNR=4.5						
MKAR	Makanchi Array	48.50	345	P	P	03 23 55.2	+0.3
	0.9nm,0.5s,baz=157,slow=8.2,SNR=8.7						
ZALV	Zalesovo Beam	54.76	350	P	P	03 24 41.5	-0.1
	0.9nm,0.4s,baz=176,slow=4.2,SNR=5.2						
TXAR	Lajitas Array	144.06	34	PKP	PKPdf	03 34 46.8	-2.0
	0.1nm,0.4s,baz=222,slow=1.2,SNR=4.3						

KRSC 22 03:32:28.0±1.2, 52°.81N×157°.71E, h232km±42km, ML4.2, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PET	Petropavlovsk	0.61	69	*e*P	Pn	03 33 00.7	+1.6
AVH	Avacha	0.77	53	*e*P	Pn	03 33 01.8	+2.0
GNL	Ganaly	0.90	9	*e*P	Pn	03 33 01.1	+0.7
SPN	Mys Shipunski	1.43	77	P	Pn	03 33 05.4	+1.5
SPN				*i*S	S	03 33 32.4	+0.3
TUMR	Tumrok	2.86	29	*e*P	Pn	03 33 20.4	+2.7
MKZ	Mys Kozlova	2.96	52	*e*P	Pn	03 33 20.4	+1.6
MKZ				*i*S	S	03 33 58.0	-1.0
KBTR	Krutoberegovo	4.52	39	*e*P	Pn	03 33 39.3	+2.1
KBTR				*i*S	S	03 34 32.5	+0.4

*CSEM **22** 03:33:50.5, 42°.78N×1°.32W, h0km, ML1.1, After MDD*

MDD 22 03:33:50.6±0.3, 42°.79N×1°.34W, h0km, mbLg1.0/6, 2D, Error ellipse: s-maj=3.5km s-min=1.3km az=177.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPRE	Itoiz	0.02	317	⇓Pg	Pg	03 33 50.7	-0.2
	5.6nm,0.1s,SNR=18						
IPRE				Lg		03 33 51.2	
	28nm,0.1s,SNR=7.9						
IPRE	Itoiz	0.02	317	Pg	Pg	03 33 50.5	-0.4
	5.6nm,0.1s,SNR=7.9						
IPRE				Lg		03 33 51.4	
	46nm,0.2s,SNR=7.9						
IELO	Elcoad	0.09	58	⇓Pg	Pg	03 33 52.3	-0.1
	3.1nm,0.2s,SNR=18						
IELO				Lg		03 33 54.0	
	9.5nm,0.2s,SNR=7.9						
IELO	Elcoad	0.09	58	Pg	Pg	03 33 52.3	0.0
	3.1nm,0.2s,SNR=7.9						
IELO				Lg		03 33 54.0	
	6.2nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	0.10	14	Pg	Pg	03 33 52.7	+0.1
	1.1nm,0.1s,SNR=7.9						
EORO				Lg		03 33 54.8	
	14nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	0.10	14	Pg	Pg	03 33 52.7	+0.2
	1.1nm,0.1s,SNR=7.9						
EORO				Lg		03 33 54.8	
	4.7nm,0.1s,SNR=7.9						
IZUN	Zunzarren	0.11	308	Pg	Pg	03 33 52.5	-0.1
	1.8nm,0.2s,SNR=7.9						
IZUN				Lg		03 33 54.6	
	5.7nm,0.2s,SNR=7.9						
IZUN	Zunzarren	0.11	308	Pg	Pg	03 33 52.1	-0.5
	1.8nm,0.2s,SNR=7.9						
IZUN				Lg		03 33 55.1	
	3.0nm,0.1s,SNR=7.9						
IUNC	Unciti	0.12	252	Pg	Pg	03 33 52.8	-0.1
	4.5nm,0.1s,SNR=7.9						
IUNC				Lg		03 33 55.3	
	11nm,0.1s,SNR=7.9						
IUNC	Unciti	0.12	252	Pg	Pg	03 33 52.7	-0.2
	4.5nm,0.1s,SNR=7.9						
IUNC				Lg		03 33 55.6	
	9.9nm,0.1s,SNR=7.9						
EARA	Aranguren	0.18	263	Pg	Pg	03 33 53.8	-0.2
	2.7nm,0.2s,SNR=7.9						
EARA				Lg		03 33 58.0	
	8.9nm,0.3s,SNR=7.9						
EARA	Aranguren	0.18	263	Pg	Pg	03 33 53.6	-0.4
	2.7nm,0.2s,SNR=7.9						
EARA				Lg		03 33 58.6	
	2.7nm,0.1s,SNR=7.9						

*CSEM **22** 03:34:29.4, 42°.75N×1°.29W, h0km, ML0.5, After MDD*

MDD 22 03:34:30.1±0.6, 42°.79N×1°.32W, h0km, mbLg1.0/4, Error ellipse: s-maj=5.0km s-min=2.3km az=153.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPRE	Itoiz	0.03	308	Pg	Pg	03 34 30.2	-0.5
	4.3nm,0.3s,SNR=7.9						
IPRE				Lg		03 34 30.7	
	8.4nm,0.0s,SNR=7.9						
IPRE	Itoiz	0.03	308	Pg	Pg	03 34 29.8	-0.9
	4.3nm,0.3s,SNR=7.9						
IELO	Elcoad	0.09	46	Pg	Pg	03 34 31.6	-0.1
	0.2nm,0.3s,SNR=7.9						
IELO				Lg		03 34 33.5	
	2.9nm,0.1s,SNR=7.9						
IELO	Elcoad	0.09	46	Pg	Pg	03 34 31.6	-0.1
	0.2nm,0.3s,SNR=7.9						
IELO				Lg		03 34 33.5	
	2.1nm,0.1s,SNR=7.9						
EORO	Oroz-Betelu	0.11	4	Pg	Pg	03 34 31.4	-0.7
	0.5nm,0.1s,SNR=7.9						
EORO				Lg		03 34 34.2	
	6.2nm,0.1s,SNR=7.9						
EORO	Oroz-Betelu	0.11	4	Pg	Pg	03 34 31.5	-0.6
	0.5nm,0.1s,SNR=7.9						
EORO				Lg		03 34 34.3	
	2.1nm,0.2s,SNR=7.9						
IZUN	Zunzarren	0.13	307	Pg	Pg	03 34 32.4	-0.1
	0.3nm,0.1s,SNR=7.9						
IZUN				Lg		03 34 34.4	
	3.8nm,0.1s,SNR=7.9						
IZUN	Zunzarren	0.13	307	Pg	Pg	03 34 32.4	-0.1
	0.3nm,0.1s,SNR=7.9						
IZUN				Lg		03 34 34.4	
	1.9nm,0.1s,SNR=7.9						
IUNC	Unciti	0.14	258	Pg	Pg	03 34 32.2	-0.4
	1.4nm,0.2s,SNR=7.9						
IUNC				Lg		03 34 35.1	
	9.6nm,0.1s,SNR=7.9						
IUNC	Unciti	0.14	258	Pg	Pg	03 34 32.2	-0.4
	1.4nm,0.2s,SNR=7.9						
IUNC				Lg		03 34 35.1	
	5.5nm,0.2s,SNR=7.9						
EARA	Aranguren	0.19	266	Pg	Pg	03 34 33.3	-0.4
	0.3nm,0.3s,SNR=7.9						
EARA				Lg		03 34 37.3	
	2.7nm,0.1s,SNR=7.9						
EARA	Aranguren	0.19	266	Pg	Pg	03 34 33.3	-0.4
	0.3nm,0.3s,SNR=7.9						
EARA				Lg		03 34 37.3	
	1.9nm,0.1s,SNR=7.9						

MAN 22 03:45:26, 7°.26N×124°.45E, h13km, mb4.3, ML3.1, MS2.9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.21	261	⇑*i*P	Pg	03 45 32.2	+1.6
CTBH				*i*S	Sg	03 45 36.3	+2.5
BUKP	Musuan	0.86	44	*e*P	Pg	03 45 42.5	-0.3
BUKP				*e*S	Sg	03 45 53.1	-1.0
DMPH	Davao City--Mi	1.06	99	⇑*e*P	Pb	03 45 45.8	-0.4
DMPH				*i*S	Sb	03 46 01.8	+1.8
PAGZ	Pagadian	1.22	299	*e*P	Pn	03 45 47.9	-0.8
PAGZ				*e*S	Sb	03 45 59.2	-5.3

*ISCJB **22** 03:47:32.7±1.2, 14°.9S±0°.2×175°.7W±0°.2, h306km±14km, mb4.0/10, Error ellipse: s-maj=44.4km s-min=16.0km az=150.5*
*IDC **22** 03:47:33.0±1.6, 14°.71S×175°.73W, h293km±23km, mb3.7/7, mb1 4.0/8, mb1mx3.7/18, mbtmp3.7/8, Error ellipse: s-maj=70.3km s-min=12.2km az=150.0*
*NEIC **22** 03:47:34.1±1.0, 14°.98S×175°.43W, h310km±11km, mb4.0/2, Error ellipse: s-maj=38.8km s-min=12.1km az=153.0*

ISC 22 03:47:34.6±0.9, 14°.9S±0°.2×175°.5W±0°.1, h311km±11km, n15, σ1°01/15, mb4.0/10, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.77	75	P	Pn	03 48 36.5	-2.5
	88nm,0.3s,baz=279,slow=13,SNR=134						
AFI				S	S	03 49 31.2	+0.6
	6.6nm,0.3s,baz=75,slow=19,SNR=2.8						
AFI	Afiamalu	3.77	75	P	Pn	03 48 36.5	-2.5
AFI				S	S	03 49 31.2	+0.6
MSVF	Nonsavu	6.76	245	*e*Pn	Pn	03 49 15.8	+2.5
	85nm,1.0s						
STKA	Stephens Creek	42.50	239	P	P	03 54 59.8	-0.4
	3.3nm,0.5s,mb3.8,baz=73,slow=9.0,SNR=8.9						
WRA	Warramunga Arr	47.95	257	P	P	03 55 42.3	-0.7
	1.9nm,0.5s,mb3.6,baz=92,slow=6.9,SNR=24						
ASAR	Alice Springs	48.31	252	P	P	03 55 44.5	-1.1
	18nm,0.6s,mb4.6,baz=89,slow=7.0,SNR=79						
KAKA	Kakadu	50.49	266	*e*P	P	03 56 02.2	+0.1
	26nm,0.6s,mb4.7						
QSPA	South Pole Qui	75.09	180	*e*P	P	03 58 42.5	+0.2
	3.8nm,0.8s,mb4.1						
NVAR	Mina Array Bea	75.38	43	P	P	03 58 45.1	+0.6
	1.5nm,0.6s,mb3.8,baz=224,slow=9.6,SNR=9.7						
TXAR	Lajitas Array	82.07	57	P	P	03 59 21.6	+0.7
	1.0nm,0.8s,mb3.6,baz=216,slow=9.0,SNR=12						
ILAR	Eielson Array	82.41	12	P	P	03 59 21.4	-0.5
	0.9nm,0.5s,mb3.8,baz=221,slow=5.6,SNR=23						
TPAW	Teton Pass	82.74	41	*e*P	P	03 59 24.9	+0.8
	1.3nm,0.7s,mb3.9						
PDAR	Pinedale Array	83.31	43	P	P	03 59 26.9	0.0
	1.6nm,0.8s,mb3.9,baz=208,slow=3.0,SNR=13						
BRTR	Keskin Array B	144.50	320	PKP	PKPdf	04 06 35.1	+0.8
	0.5nm,0.5s,baz=80,slow=1.6,SNR=4.1						
TORD	Torodi Ar. Bea	176.76	123	PKPab	PKPab	04 08 51.8	-1.4
	1.0nm,0.7s,baz=251,slow=4.6,SNR=2.0						

MEX 22 03:52:10.0±1.1, 18°.89N×104°.57W, h17km±9km, MD3.7, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R15V		0.62	63	*i*P	Pg	03 52 20.1	-2.1
R15V				*i*S	Sg	03 52 27.9	-2.7
EZ5V		1.08	57	*i*P	Pb	03 52 26.9	-3.4
EZ5V				*i*S	Sb	03 52 40.2	-4.0
SFJM	Santa Fe	2.14	42	*i*P	Pn	03 52 44.2	-0.8
SFJM				*i*S	Sn	03 53 08.5	-2.6
ANIG	Ahuacatlan	2.15	1	*i*P	Pn	03 52 42.3	-2.8
ANIG				*i*S	Sn	03 53 07.0	-4.4

*ISCJB **22** 04:34:26.5±0.3, 42°.68N±0°.02×46°.41E±0°.02, h10km, Error ellipse: s-maj=3.5km s-min=2.6km az=175.2*
*MOS **22** 04:34:26.0±1.2, 42°.73N×46°.47E, h14km, mb4.3/1, Error ellipse: s-maj=11.0km s-min=7.5km az=24.8*
*CSEM **22** 04:34:26.0, 42°.73N×46°.47E, h14km, mb4.3, After OBN*

ISC 22 04:34:26.9±0.3, 42°.68N±0°.03×46°.38E±0°.03, h10km, n40, σ1°14/70, 5C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRNR	Karanay	0.41	69	⇑*i*PG	Pg	04 34 33.5	-1.5
KRNR				*i*S	Sg	04 34 40.8	+0.3
KRNR				pmax	pmax		
	comp=Z,86nm,0.2s						
KRNR	Karanay	0.41	69	*i*Pg	Pg	04 34 33.5	-1.5
	comp=Z,86nm,0.2s						
KRNR				*i*Sg	Sg	04 34 40.8	+0.3
DLMR	Dylym	0.43	25	*e*PG	Pg	04 34 33.4	-1.9
DLMR				*e*S	Sg	04 34 41.8	+0.8
DLMR				pmax	pmax		
	comp=Z,393nm,0.3s						
DLMR	Dylym	0.43	25	*e*Pg	Pg	04 34 33.4	-1.9
	comp=Z,393nm,0.3s						
DLMR				*e*Sg	Sg	04 34 41.8	+0.8
DBC	Dubki	0.47	44	*e*PG	Pg	04 34 34.8	-1.3
DBC				*i*S	Sg	04 34 42.8	+0.5
DBC	Dubki	0.47	44	*e*Pg	Pg	04 34 34.8	-1.3
DBC				*i*Sg	Sg	04 34 42.8	+0.5
BUJR	Buynaksk	0.55	75	PG	Pg	04 34 38.0	+0.3
BUJR				*e*S	Sg	04 34 47.5	+2.6
BUJR				pmax	pmax		
	comp=Z,67nm,0.2s						
BUJR	Buynaksk	0.55	75	Pg	Pg	04 34 38.0	+0.3
	comp=Z,67nm,0.2s						
BUJR				*e*Sg	Sg	04 34 47.5	+2.6
KMKR	Kumukh	0.77	136	*e*PG	Pg	04 34 40.0	-1.7
KMKR				*e*S	Sg	04 34 53.0	+1.3
KMKR				pmax	pmax		
	comp=Z,70nm,0.2s						
KMKR	Kumukh	0.77	136	*e*Pg	Pg	04 34 40.0	-1.7
	comp=Z,70nm,0.2s						
KMKR				*e*Sg	Sg	04 34 53.0	+1.3
SNJR	Sundja	1.22	289	*e*PG	Pn	04 34 49.3	-0.7
SNJR				*e*S	Sb	04 35 05.7	-0.1
SNJR	Sundja	1.22	289	*e*Pg	Pn	04 34 49.3	-0.7
SNJR				*e*Sg	Sb	04 35 05.7	-0.1
VLKR	Vladikavkaz	1.31	287	*e*PG	Pn	04 34 51.0	-0.2
VLKR				*i*S	Sn	04 35 08.4	-0.3
VLKR	Vladikavkaz	1.31	287	*e*Pg	Pn	04 34 51.0	-0.2
VLKR				*i*Sg	Sn	04 35 08.4	-0.3
DGRG	David-gareji	1.44	212	P	Pn	04 34 50.7	-2.4
DGRG				S	Sn	04 35 13.7	+1.6
BTKR	Batakoyurt	1

PRTR	**Priterechnaya**	**1.87 305**	*i* Pn	**Pn**	**04 34 59.4**	**+0.4**
LSNR	**Lesken**	**1.98 288** ⇑	*i*PN	**Pn**	**04 35 01.0**	**+0.6**
LSNR	**Lesken**	**1.98 288**	*i* Pn	**Pn**	**04 35 01.0**	**+0.6**
DIGR	**Digorskoe uzhe**	**2.08 277** ⇓	*i*PN	**Pn**	**04 35 01.9**	**+0.1**
DIGR	**Digorskoe uzhe**	**2.08 277**	*i* Pn	**Pn**	**04 35 01.9**	**+0.1**
ONI	**Oni**	**2.17 269**	P	**Pn**	**04 35 03.8**	**+0.7**
ONI			S	**Sn**	**04 35 33.2**	**+3.4**

THR ***22*** *04:39:40.9±0.3, 26°.98N×55°.93E, h10km±5km, ML3.5*
CSEM ***22*** *04:39:40.7±0.5, 26°.94N×55°.85E, h2km, ML3.5, Error ellipse: s-maj=17.3km s-min=10.1km az=101.0*
ISCJB ***22*** *04:39:41.5±0.9, 27°.02N±0°.03×55°.81E±0°.08, h24km±11km, Error ellipse: s-maj=11.6km s-min=5.6km az=0.3*
OMAN ***22*** *04:39:42.3±99.0, 26°.87N×56°.17E, h4km, Error ellipse: s-maj=64.5km s-min=15.8km az=43.0*
SGS ***22*** *04:39:43.2, 27°.19N×55°.79E, h20km*
TEH ***22*** *04:39:45.2, 27°.17N×56°.16E, h10km*
ISC 22 04:39:42.8±1.0, 27°.01N±0°.04×55°.89E±0°.08, h17km±9km, n31, σ1°67/41, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.46**	**33**	*e*Pg	**Pg**	**04 39 50.5**	**-1.6**
BNDS				*e*Sg	**Sg**	**04 39 57.4**	**-0.9**
BNDS				AML	AML	04 39 59.3	
	comp=N,3μm,0.2s						
BNDS				AML	AML	04 40 02.7	
	comp=E,4μm,0.3s						
BNDS	**Bandar-Abbas**	**0.46**	**33**	*e*Pg	**Pg**	**04 39 50.5**	**-1.6**
BNDS				*e*Sg	**Sg**	**04 39 57.4**	**-0.9**
IBND	**Bandar-abas**	**0.72**	**53**	*e*Pg	**Pg**	**04 39 53.1**	**-3.8**
IBND				*e*Sg	**Sg**	**04 39 59.0**	**-7.6**
IBND				*e*		04 40 15.7	
	comp=Z,62μm,0.2s						
BANOM	**Banah**	**1.14 161**		P	**Pn**	**04 40 00.6**	**-3.3**
	SNR=555						
BANOM	**Banah**	**1.14 161**		P	**Pn**	**04 40 00.6**	**-3.3**
	SNR=555						
ASHO	**Ashiyiah**	**2.32 176**		P	**Pn**	**04 40 19.4**	**-0.8**
	SNR=27						
ASHO	**Ashiyiah**	**2.32 176**		P	**Pn**	**04 40 19.4**	**-0.7**
	SNR=20						
ASUD	**Al Ashush, Dub**	**2.43 192**		P	**Pn**	**04 40 21.9**	**+0.3**
	SNR=20						
ASUD	**Al Ashush, Dub**	**2.43 192**		P	**Pn**	**04 40 21.9**	**+0.3**
	SNR=20						
KRBR	**Kerman**	**3.06**	**14**	*e*Pn	**Pn**	**04 40 31.9**	**+1.6**
KRBR				AML	AML	04 41 23.4	
	comp=N,104nm,0.7s						
KRBR				AML	AML	04 41 30.9	
	comp=E,115nm,0.5s						
KRBR	**Kerman**	**3.06**	**14**	*e*Pn	**Pn**	**04 40 31.9**	**+1.6**
ISRV	**Sarvestan**	**3.40**	**315**	*e*Pn	**Pn**	**04 40 37.5**	**+2.5**
ISRV				*e*		04 41 57.4	
	comp=Z,853nm,0.5s						
IPAR	**Pars**	**3.77**	**319**	*e*Pn	**Pn**	**04 40 43.1**	**+3.0**
IPAR				*e*		04 41 30.1	
	comp=Z,860nm,0.4s						
IMEH	**Mehriz**	**4.50**	**346**	*e*Pn	**Pn**	**04 40 52.6**	**+2.4**
IMEH				*e*Sn	**Sn**	**04 41 41.4**	**-0.7**
IMEH				*e*		04 41 55.7	
	comp=Z,256nm,0.4s						
IBAF	**Bafgh**	**4.57**	**357**	*e*	**Pb**	**04 41 01.6**	**-0.9**
	comp=Z,180nm,0.2s						
ISAD	**Sadrabad**	**5.25**	**339**	*e*Pn	**Pn**	**04 41 03.8**	**+3.4**
ISAD				*e*Sn	**Sn**	**04 41 59.4**	**-1.1**
ISAD				*e*		04 42 06.9	
	comp=Z,250nm,0.3s						
ICHK	**Chekchek**	**5.37**	**346**	*e*Pn	**Pn**	**04 41 04.3**	**+2.2**
ICHK				*e*Sn	**Sn**	**04 42 01.9**	**-1.6**
ICHK				*e*		04 42 13.1	
	comp=Z,163nm,0.3s						
BTHS		**5.43**	**238**	S	**Sn**	**04 42 01.4**	**-3.6**
BTHS		**5.43**	**238**	S	**Sn**	**04 42 01.4**	**-3.6**
IKOO	**Kooshah**	**6.04**	**26**	*e*Pn	**Pn**	**04 41 11.3**	**+0.1**
IKOO				*e*		04 41 38.4	
	comp=Z,125nm,0.2s						
IGAR	**Gharneh**	**6.33**	**329**	*e*Pn	**Pn**	**04 41 17.7**	**+2.4**
IGAR				*e*		04 41 23.6	
	comp=Z,204nm,0.2s						
NASN	**Na'in**	**6.36**	**336**	*e*Pn	**Pn**	**04 41 17.8**	**+2.2**
NASN	**Na'in**	**6.36**	**336**	*e*Pn	**Pn**	**04 41 17.8**	**+2.2**
IZEF	**Zefreh**	**6.63**	**333**	*e*Pn	**Pn**	**04 41 20.9**	**+1.6**
IZEF				*e*		04 41 21.6	
	comp=Z,72nm,0.2s						
IZEF				*e*Sn	**Sn**	**04 42 33.1**	**-1.4**
HRDDS		**7.11**	**237**	P	**Pn**	**04 41 25.2**	**-0.8**
IPIR	**Pirpir**	**7.13**	**324**	*e*Pn	**Pn**	**04 41 29.0**	**+2.8**
IPIR				*e*		04 41 29.4	
	comp=Z,257nm,0.2s						
IPIR				*e*Sn	**Sn**	**04 42 46.6**	**-0.2**
IKLH	**Kolahrood**	**7.31**	**330**	*e*Pn	**Pn**	**04 41 31.1**	**+2.4**
IKLH				*e*		04 42 10.6	
	comp=Z,70nm,0.2s						
IKLH				*e*Sn	**Sn**	**04 42 49.6**	**-1.7**
MIB	**Mutribah**	**8.03**	**292**	*e*P	**Pn**	**04 41 39.7**	**+1.1**
MIB				*e*S	**Sn**	**04 43 07.3**	**-1.7**
MIB				AML	AML	04 43 08.4	
	comp=Z,8.1nm,0.8s						
ASYS		**10.29**	**275**	S	**Sn**	**04 43 56.9**	**-7.7**
ASYS		**10.29**	**275**	P	**Pn**	**04 42 08.0**	**-1.6**
ASYS		**10.29**	**275**	P	**Pn**	**04 42 08.0**	**-1.6**

ISCJB ***22*** *04:44:34.5±1.0, 32°.16N±0°.04×105°.35E±0°.05, h1km±7km, mb3.7/5, Error ellipse: s-maj=8.5km s-min=5.3km az=31.5*
IDC ***22*** *04:44:35.6±1.2, 32°.13N×105°.24E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/25, mbtmp3.6/6, Error ellipse: s-maj=74.8km s-min=21.1km az=60.0*
BJI ***22*** *04:44:37.7, 32°.27N×104°.96E, h12km, ML3.7/12*
ISC 22 04:44:36.3±0.9, 32°.21N±0°.04×105°.28E±0°.05, h3km±7km, n11, σ0°95/19, mb3.6/5, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.83**	**226**	⇓*i*Pn	**Pn**	**04 45 08.9**	**+0.3**
CD2				Pg	**Pg**	**04 45 10.6**	**-0.8**
CD2				Sn	**Sn**	**04 45 32.6**	**+0.3**
CD2				Sg	**Sg**	**04 45 35.3**	**+0.1**
CD2				smax			
	comp=N,4μm,0.6s						
CD2				smax			
	comp=E,2μm,0.8s						
XAN	**Xi'an**	**3.56**	**58**	Pn	**Pb**	**04 45 38.9**	**-0.9**
XAN				Pg	**Pg**	**04 45 46.8**	**+2.3**
XAN				Sg	**Sg**	**04 46 29.9**	**-0.7**
XAN				smax			
	comp=N,160nm,0.7s						
XAN				smax			
	comp=E,67nm,0.9s						
LZH	**Lanzhou**	**4.05**	**343**	Pg	**Pb**	**04 45 48.9**	**+0.7**
LZH				Sn	**Sn**	**04 46 23.8**	**-3.2**
LZH				Sg	**Sb**	**04 46 38.1**	**+0.6**
LZH				smax			
	comp=N,150nm,1.0s						
LZH				smax			
	comp=E,550nm,1.0s						
GYA	**Guiyang**	**5.85**	**168**	Pn	**Pn**	**04 46 09.4**	**+5.5**
GYA				Sn	**Sn**	**04 47 12.6**	**+1.1**
GYA				smax			
	comp=N,70nm,0.9s						
GYA				smax			
	comp=E,120nm,0.8s						
GTA	**Gaotai**	**8.45**	**330**	*e*P	**Pb**	**04 47 10.1**	**+7.0**
GTA				pP		04 47 14.4	
GTA				sP		04 47 17.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**14.84**	**204**	Pn	**Pn**	**04 48 06.1**	**-0.9**
	baz=15,slow=13,SNR=4.5						
MKAR	**Makanchi Array**	**22.84**	**316**	P	**P**	**04 49 39.9**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.1,baz=126,slow=7.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**26.19**	**332**	P	**P**	**04 50 12.3**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.5,baz=141,slow=9.3,SNR=3.2						
WRA	**Warramunga Arr**	**58.85**	**148**	P	**P**	**04 54 36.1**	**-0.2**
	comp=Z,0.5nm,0.5s,mb3.8,baz=340,slow=7.7,SNR=7.2						
ASAR	**Alice Springs**	**61.93**	**150**	P	**P**	**04 54 56.2**	**-1.1**
	comp=Z,0.2nm,0.3s,mb3.7,baz=330,slow=7.6,SNR=3.5						
NOA	**NORSAR Array B**	**64.27**	**327**	P	**P**	**04 55 13.2**	**+0.8**
	comp=Z,1.2nm,0.8s,mb4.0,baz=71,slow=6.8,SNR=3.7						

IDC ***22*** *04:51:40.0±1.0, 30°.02S×71°.64W, h40km±7km, mb3.9/3, mb1 3.9/6, mb1mx3.6/17, mbtmp3.8/6, ML4.0/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/23, Error ellipse: s-maj=21.0km s-min=15.7km az=46.0*
NEIC ***22*** *04:51:39.9, 30°.17S×71°.59W, h22km, ML4.5(GUC), After GUC.*
NEIC Felt [II] at Coquimbo, Illapel, La Serena and Ovalle.
GUC ***22*** *04:51:39.9±1.0, 30°.17S×71°.59W, h22km±8km, ML4.5*
ISCJB ***22*** *04:51:40.6±0.8, 30°.13S±0°.04×71°.50W±0°.09, h56km±6km, mb3.8/4, Error ellipse: s-maj=13.0km s-min=5.5km az=11.2*
ISC 22 04:51:41.8±0.8, 30°.12S±0°.04×71°.48W±0°.09, h48km±7km, n42, σ1°01/55, mb3.8/4, 12C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.55**	**154**	⇓*i*P	**Pn**	**04 51 52.0**	**-1.4**
OVCH				*i* S	**Sn**	**04 52 00.2**	**-1.6**
OVCH	**Ovalle**	**0.55**	**154**	⇓*i*P	**Pn**	**04 51 52.0**	**-1.4**
OVCH				*i* S	**Sn**	**04 52 00.2**	**-1.6**
OVCH				AML	AML	04 52 01.7	
	comp=N,15μm,0.3s						
TLL	**Tololo Astrono**	**0.59**	**95**	⇑*i*P	**Pn**	**04 51 53.5**	**-0.5**
TLL				*i* S	**Sn**	**04 52 02.6**	**-0.1**
TLL	**Tololo Astrono**	**0.59**	**95**	⇑*i*P	**Pn**	**04 51 53.5**	**-0.5**
TLL				*i* S	**Sn**	**04 52 02.6**	**-0.1**
TLL				AML	AML	04 52 04.0	
	comp=E,17μm,0.4s						
CMCH	**Combarbala**	**1.13**	**159**	⇑*i*P	**Pn**	**04 52 00.0**	**-1.2**
CMCH				*i* S	**Sn**	**04 52 14.4**	**-1.2**
CMCH	**Combarbala**	**1.13**	**159**	⇑*i*P	**Pn**	**04 52 00.0**	**-1.2**
CMCH				*i* S	**Sn**	**04 52 14.4**	**-1.2**
CMCH				AML	AML	04 52 17.2	
	comp=N,35μm,0.7s						
LCO	**Las Campanas**	**1.29**	**32**	*e*Pn	**Pn**	**04 52 03.2**	**-0.2**
LCO				*e*S	**Sn**	**04 52 20.4**	**+0.9**
JACH	**Jahuel**	**2.67**	**164**	*e*P	**Pn**	**04 52 23.1**	**+0.9**
JACH				S	**Sn**	**04 52 56.1**	**+2.8**
JACH	**Jahuel**	**2.67**	**164**	*e*P	**Pn**	**04 52 23.1**	**+0.9**
JACH				*i* S	**Sn**	**04 52 56.1**	**+2.8**
PEL	**Peldehue**	**3.09**	**168**	⇓*i*P	**Pn**	**04 52 28.0**	**-0.1**
PEL				AML	AML	04 53 17.6	
	comp=N,2μm,0.3s						
CFAA	**Coronel Fontan**	**3.16**	**119**	P	**Pn**	**04 52 30.6**	**+1.6**
	comp=N,7.5nm,0.3s,baz=306,slow=12,SNR=681						
CFAA				S	**Sn**	**04 53 08.7**	**+3.3**
	comp=N,4.4nm,0.3s,baz=185,slow=16,SNR=4.4						
FCH	**Farellones**	**3.36**	**163**	⇑*i*P	**Pn**	**04 52 36.3**	**+4.6**
FCH				*i* S	**Sn**	**04 53 17.0**	**+6.7**
FCH				AML	AML	04 53 27.2	
	comp=E,1μm,0.3s						
CLCH	**Cerro Calan**	**3.37**	**166**	⇑*i*P	**Pn**	**04 52 32.0**	**+0.2**
CLCH				*i* S	**Sn**	**04 53 12.0**	**+1.5**
CLCH				AML	AML	04 53 24.2	
	comp=E,2μm,0.5s						
CLCH				AML	AML	04 53 25.3	
	comp=E,2μm,0.5s						
LACH	**Col Las Americ**	**3.42**	**167**	⇓*i*P	**Pn**	**04 52 33.0**	**+0.4**
LACH				*i* S	**Sn**	**04 53 12.7**	**+0.8**
LACH				AML	AML	04 53 30.9	
	comp=N,629nm,0.2s						
FSR	**Penalolen**	**3.45**	**167**	*e*P	**Pn**	**04 52 33.3**	**+0.3**
FSR	**Penalolen**	**3.45**	**167**	*e*P	**Pn**	**04 52 33.3**	**+0.3**
FSR				AML	AML	04 53 24.6	
	comp=N,324nm,0.5s						
ANTU	**Antumapu**	**3.52**	**168**	⇑*i*P	**Pn**	**04 52 34.3**	**+0.4**
ANTU	**Antumapu**	**3.52**	**168**	⇑*i*P	**Pn**	**04 52 34.3**	**+0.4**
ANTU				AML	AML	04 53 26.1	
	comp=N,1μm,0.3s						
TACH	**Talagante**	**3.56**	**173**	⇑*i*P	**Pn**	**04 52 34.0**	**-0.4**
TACH	**Talagante**	**3.56**	**173**	⇑*i*P	**Pn**	**04 52 34.0**	**-0.4**
PCH	**Pirque**	**3.59**	**167**	⇓*i*P	**Pn**	**04 52 35.2**	**+0.3**
PCH	**Pirque**	**3.59**	**167**	⇓*i*P	**Pn**	**04 52 35.2**	**+0.3**
SJCH	**San Jose de Ma**	**3.64**	**165**	*e*P	**Pn**	**04 52 36.4**	**+0.8**
SJCH	**San Jose de Ma**	**3.64**	**165**	*e*P	**Pn**	**04 52 36.4**	**+0.8**
CHCH	**Chadas Angostu**	**3.87**	**170**	⇑*i*P	**Pn**	**04 52 38.8**	**+0.1**
CHCH	**Chadas Angostu**	**3.87**	**170**	⇑*i*P	**Pn**	**04 52 38.8**	**+0.1**
CACH	**El Canelo**	**4.06**	**170**	*e*P	**Pn**	**04 52 41.8**	**+0.4**
CACH	**El Canelo**	**4.06**	**170**	*e*P	**Pn**	**04 52 41.8**	**+0.4**
PLCA	**Paso Flores**	**10.62**	**176**	P	**Pn**	**04 54 09.5**	**-1.7**
	comp=N,0.1nm,0.3s,baz=331,slow=11,SNR=3.8						
PLCA				LR	LR	04 58 47.8	
	comp=N,72nm,18.9s,baz=44,slow=40						
PLCA	**Paso Flores**	**10.62**	**176**	P	**Pn**	**04 54 09.5**	**-1.7**
PLCA				LR	LR	04 58 47.8	
TRQA	**Tornquist**	**11.16**	**138**	*e*Pn	**Pn**	**04 54 17.8**	**-0.8**
	comp=N,11nm,0.8s						
TRQA				*e*S	**Sn**	**04 56 21.4**	**-0.5**
CPUP	**Villa Florida**	**13.03**	**77**	P	**Pn**	**04 54 43.3**	**-1.0**
	comp=N,0.7nm,0.3s,baz=247,slow=13,SNR=7.9						
CPUP	**Villa Florida**	**13.03**	**77**	*e*Pn	**Pn**	**04 54 44.2**	**-0.1**
LPAZ	**La Paz**	**14.10**	**13**	P	**Pn**	**04 55 00.5**	**+1.6**
	comp=N,0.2nm,0.3s,baz=196,slow=6.9,SNR=11						
LPAZ	**La Paz**	**14.10**	**13**	*e*Pn	**Pn**	**04 55 01.6**	**+2.7**
USHA	**Ushuaia**	**24.80**	**176**	P	**P**	**04 56 59.2**	**+0.1**
	comp=N,3.1nm,0.9s,mb3.8,baz=337,slow=7.7,SNR=2.7						
USHA				pP		04 57 09.1	
	comp=N,4.1nm,0.7s,baz=337,slow=4.8,SNR=3.1						
BDFB	**Brasilia**	**25.91**	**61**	P	**P**	**04 57 08.1**	**-1.4**
	comp=N,3.3nm,0.7s,mb4.0,baz=236,slow=9.5,SNR=9.5						
SNAA	**Sanae**	**55.01**	**159**	P	**P**	**05 01 07.5**	**-0.4**
	comp=N,0.3nm,0.8s,mb3.4,baz=278,slow=7.1,SNR=5.0						
DBIC	**Dimbokro**	**73.51**	**72**	P	**P**	**05 03 09.8**	**-0.1**
	comp=N,1.1nm,0.7s,mb3.9,baz=228,slow=9.2,SNR=2.8						
DBIC				pP	pP	05 03 21.1	-2.6
	comp=N,1.6nm,0.5s,baz=228,slow=7.5,SNR=3.0						
DBIC	**Dimbokro**	**73.51**	**72**	P	**P**	**05 03 09.8**	**-0.1**
DBIC				pP	pP	05 03 21.1	-2.6
TORD	**Torodi Ar. Bea**	**82.44**	**70**	P	**P**	**05 03 58.7**	**-0.7**
	comp=N,178nm,0.4s,baz=276,slow=5.8,SNR=2.4						
TORD				pP	pP	05 04 10.9	-2.5
	comp=N,1.5nm,0.8s,baz=266,slow=5.0,SNR=1.7						
ZALV	**Zalesovo Beam**	**150.65**	**29**	PKP	PKPdf	05 11 20.9	-1.6
	comp=N,0.7nm,0.3s,baz=311,slow=4.8,SNR=2.7						
ZALV				PKPbc	PKPbc	05 11 28.1	0.0
	comp=N,1.3nm,0.7s,baz=242,slow=3.1,SNR=3.7						
ZALV				pPKPbc	pPKPbc	05 11 40.8	-1.7
	comp=N,1.2nm,0.6s,baz=286,slow=2.5,SNR=2.2						

NEIC ***22*** *04:56:51.3, 31°.33S×71°.91W, h30km, ML3.0(GUC), After GUC.*
GUC 22 04:56:51.3±1.0, 31°.33S×71°.91W, h30km±17km, MD3.8, ML3.0, 2C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.65**	**148**	*i* P	Pb	04 56 58.9	-5.3
CHNG				*i* S	Sb	04 57 07.4	-5.6
CHNG				AML	AML	04 57 09.5	
	comp=E,465nm,0.3s						
OVCH	**Ovalle**	**0.94**	**40**	⇓*i*P	Pn	04 57 08.3	-0.1
OVCH				*i* S	Sn	04 57 20.9	0.0
OVCH	**Ovalle**	**0.94**	**40**	⇓*i*P	Pn	04 57 08.3	-0.1
OVCH				*i* S	Sn	04 57 20.9	0.0
OVCH				AML	AML	04 57 23.8	
	comp=N,913nm,0.4s						
TLL	**Tololo Astrono**	**1.50**	**40**	⇓*i*P	Pn	04 57 17.7	+1.6
TLL				*i* S	Sn	04 57 37.5	+2.9
TLL	**Tololo Astrono**	**1.50**	**40**	⇓*i*P	Pn	04 57 17.7	+1.6
TLL				*i* S	Sn	04 57 37.5	+2.9
TLL				AML	AML	04 57 38.9	
	comp=N,428nm,0.5s						
JACH	**Jahuel**	**1.75**	**141**	⇑*i*P	Pn	04 57 21.7	+2.1
JACH				*i* S	Sn	04 57 44.2	+3.3
JACH	**Jahuel**	**1.75**	**141**	⇑*i*P	Pn	04 57 21.7	+2.1
JACH				*i* S	Sn	04 57 44.2	+3.3
ROCH	**El Roble**	**1.81**	**155**	*i* P	Pn	04 57 21.9	+1.6
ROCH				*i* S	Sn	04 57 47.2	+4.9
ROCH				AML	AML	04 57 53.5	
	comp=N,271nm,0.4s						
PEL	**Peldehue**	**2.08**	**151**	⇓*i*P	Pn	04 57 25.8	+1.6
PEL				*i* S	Sn	04 57 51.8	+2.7
PEL				AML	AML	04 57 57.4	
	comp=E,347nm,0.2s						
FCH	**Farellones**	**2.42**	**146**	AML	AML	04 58 12.3	
	comp=E,126nm,0.2s						
TACH	**Talagante**	**2.46**	**161**	*e*P	Pn	04 57 30.5	+1.2
TACH	**Talagante**	**2.46**	**161**	*e*P	Pn	04 57 30.5	+1.2
LCO	**Las Campanas**	**2.54**	**25**	*e*Pn	Pn	04 57 30.6	+0.2

NEIC ***22*** *05:05:25.9, 19°.15N×66°.78W, h25km, MD3.1(RSPR), After RSPR.*
RSPR 22 05:05:25.9, 19°.15N×66°.78W, h25km±18km, MD3.1/13, 7C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.75**	**205**	⇓*e*P	Pb	05 05 38.1	-2.1
AGPR				*e*S	Sb	05 05 48.2	-1.9
AOPR	**Arecibo Observ**	**0.80**	**178**	⇓*e*P	Pb	05 05 39.2	-2.0
AOPR				*e*S	Sb	05 05 49.1	-2.4
LRS	**Lares**	**0.86**	**184**	⇓*e*P	Pb	05 05 39.9	-2.2
LSP	**Las Mesas**	**1.01**	**197**	⇑*e*P	Pn	05 05 42.3	-2.2
CELP	**Cerrillos**	**1.09**	**170**	⇓*e*P	Pn	05 05 43.5	-2.0
OBIP	**Obispado Ponce**	**1.11**	**172**	⇑*e*P	Pn	05 05 44.0	-1.9
OBIP				*e*S	Sn	05 05 57.2	-3.2
GBPR	**Guanica, Bosqu**	**1.17**	**185**	⇑*e*P	Pn	05 05 45.0	-1.7
CRPR	**Cabo Rojo, PR**	**1.18**	**196**	⇓*e*P	Pn	05 05 44.6	-2.2
CRPR				*e*S	Sn	05 05 58.9	-3.2
SJG	**San Juan**	**1.19**	**150**	⇑*e*P	Pn	05 05 44.4	-2.5
SJG	**San Juan**	**1.19**	**150**	⇑*i*P	Pn	05 05 44.7	-2.3
ICM	**Isla Caja Muer**	**1.27**	**169**	⇑*e*P	Pn	05 05 46.7	-1.4
ICM				*e*S	Sn	05 06 01.9	-2.5
HUMP	**Col San Antoni**	**1.33**	**139**	⇑*e*P	Pn	05 05 46.8	-2.1
HUMP				*e*S	Sn	05 06 03.2	-2.6
STVI	**Saint Thomas**	**1.90**	**114**	⇑*e*P	Pn	05 05 54.8	-1.9
STVI				*e*S	Sn	05 06 16.8	-3.1
SDDR	**Presa de Saban**	**4.27**	**268**	*e*Pn	Pn	05 06 30.4	+1.1

IDC ***22*** *05:10:18.1±1.9, 1°.14N×127°.04E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.6/19, mbtmp3.8/4, Error ellipse: s-maj=118.2km s-min=24.3km az=69.0*
ISCJB ***22*** *05:10:26.2±0.7, 1°.10N±0°.06×126°.86E±0°.07, h86km±7km, mb3.9/3, Error ellipse: s-maj=13.1km s-min=7.3km az=138.3*
DJA ***22*** *05:10:27, 1°.12N×126°.81E, h44km, MLv4.1/4*
ISC 22 05:10:27.2±0.7, 1°.09N±0°.06×126°.86E±0°.07, h79km±8km, n9, σ0°92/13, mb3.9/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.59**	**122**	P	**Pn**	**05 10 41.1**	**-0.6**
TNTI				S	**Sn**	**05 10 52.2**	**-0.3**
LBMI	**Labuha**	**1.83**	**160**	P	**Pn**	**05 10 57.4**	**+0.6**
LBMI				S	**Sn**	**05 11 20.9**	**+1.6**
MNI	**Manado**	**2.05**	**280**	P	**Pn**	**05 10 59.4**	**-0.4**
SGSI	**Sangihe**	**2.90**	**333**	P	**Pn**	**05 11 11.8**	**+0.5**
SGSI				S	**Sn**	**05 11 44.9**	**-0.3**
KMSI	**Cibinong**	**2.93**	**260**	P	**Pn**	**05 11 11.0**	**-0.6**
KMSI				S	**Sn**	**05 11 46.2**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.11**	**184**	P	**Pn**	**05 14 43.1**	**-2.4**
	0.2nm,0.3s,baz=6.3,slow=9.2,SNR=3.3						
WRA	**Warramunga Arr**	**22.15**	**161**	P	**P**	**05 15 16.0**	**-0.6**
	1.9nm,0.5s,mb3.7,baz=341,slow=10,SNR=55						
ASAR	**Alice Springs**	**25.54**	**165**	P	**P**	**05 15 48.7**	**0.0**
	1.9nm,0.4s,mb3.9,baz=345,slow=8.8,SNR=20						
MKAR	**Makanchi Array**	**59.80**	**326**	P	**P**	**05 20 25.6**	**+1.5**
	0.7nm,0.4s,mb4.1,baz=114,slow=8.0,SNR=5.9						

CSEM ***22*** *05:24:30.9±0.6, 34°.70N×24°.98E, h10km, ML3.5/1, Error ellipse: s-maj=13.2km s-min=4.1km az=1.0*
ATH ***22*** *05:24:30.5, 34°.73N×24°.97E, h22km±1km, MD3.7/14*
THE ***22*** *05:24:31.2, 34°.73N×24°.97E, h1km±1km, ML3.5/1, Error ellipse: s-maj=3.5km s-min=1.0km az=186.0*
ISC 22 05:24:30.3±1.3, 34°.67N±0°.07×24°.97E±0°.03, h5km±5km, n58, σ0°64/79, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.37**	**339**	*e*PB	**Pg**	**05 24 37.6**	**+0.1**
SIVA				*e*SB	**Sg**	**05 24 42.3**	**0.0**
SIVA	**Sivas**	**0.37**	**339**	P	**Pg**	**05 24 37.7**	**+0.2**
SIVA				S	**Sg**	**05 24 42.2**	**-0.1**
SIVA	**Sivas**	**0.37**	**339**	*e*Pb	**Pg**	**05 24 37.6**	**+0.1**
SIVA				*e*Sb	**Sg**	**05 24 42.3**	**0.0**
LAST	**Lasithi**	**0.64**	**41**	*e*PB	**Pg**	**05 24 42.2**	**-0.5**
LAST				*e*SN	**Sg**	**05 24 51.2**	**+0.2**
LAST	**Lasithi**	**0.64**	**41**	P	**Pg**	**05 24 42.5**	**-0.2**
LAST				S	**Sg**	**05 24 52.2**	**+1.2**
LAST	**Lasithi**	**0.64**	**41**	*e*Pb	**Pg**	**05 24 42.2**	**-0.5**
LAST	**Lasithi**	**0.64**	**41**	P	**Pg**	**05 24 42.5**	**-0.2**
LAST				S	**Sg**	**05 24 52.2**	**+1.2**
NPS	**Neapolis**	**0.79**	**42**	*e*PN	**Pg**	**05 24 44.8**	**-0.7**
NPS				*e*SN	**Sg**	**05 24 55.3**	**-0.5**
NPS	**Neapolis**	**0.79**	**42**	*e*Pn	**Pg**	**05 24 44.8**	**-0.7**
NPS				*e*Sn	**Sg**	**05 24 55.3**	**-0.5**
VAM	**Vamos**	**0.97**	**319**	*e*PN	**Pg**	**05 24 47.8**	**-1.1**
VAM				*e*SN	**Sg**	**05 25 02.2**	**+0.7**
VAM	**Vamos**	**0.97**	**319**	*e*Pn	**Pg**	**05 24 47.8**	**-1.1**
VAM				*e*Sn	**Sg**

*ISCJB **22** 05:31:26.3±0.9, 9°.66N±0°.08×79°.18W±0°.05, h40km±13km, mb3.9/10, MS3.6/5, Error ellipse: s-maj=13.8km s-min=8.0km az=17.0*
*NEIC **22** 05:31:28.5±0.9, 9°.63N×79°.21W, h46km±12km, mb4.3/4, Error ellipse: s-maj=13.3km s-min=11.0km az=193.0*
NEIC Felt at Panama.

ISC 22 05:31:27.8±0.7, 9°.51N±0°.09×79°.16W±0°.05, h44km±11km, n42, σ1§00/36, mb3.9/10, MS3.6/5, 1C-2D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPIG		**0.63**	**216**	⇓*iP*	**Pn**	**05 31 39.6**	**-0.8**
UPIG				*eS*	**Sn**	**05 31 49.1**	**-0.4**
BCIP	**Isla Barro Col**	**0.75**	**243**	*e*Pg	**Pn**	**05 31 40.6**	**-1.4**
BCIP	**Isla Barro Col**	**0.75**	**243**	⇓*e*P	**Pn**	**05 31 40.5**	**-1.5**
PINA	**Piqa, Costa Ab**	**0.93**	**254**	⇑*e*P	**Pn**	**05 31 43.7**	**-0.7**
BRU2	**Volcan**	**3.56**	**259**	*e*P	**Pn**	**05 32 23.6**	**+3.0**
ACR	**Cerro Adams**	**4.05**	**258**	*e*P	**Pn**	**05 32 27.9**	**+0.6**
URSC	**Urasca**	**4.57**	**274**	*e*P	**Pn**	**05 32 34.6**	**+0.2**
PRS1	**Puriscal**	**5.10**	**276**	*e*P	**Pn**	**05 32 43.4**	**+1.7**
CGA2	**Cerro Gallo 2**	**5.26**	**276**	*e*P	**Pn**	**05 32 43.8**	**0.0**
JTS	**JuntasAbangare**	**5.76**	**278**	Pn	**Pn**	**05 32 51.3**	**+0.5**
	1.8nm,0.3s,baz=51,slow=14,SNR=12						
JTS				Sn	**Sn**	**05 33 54.2**	**-1.5**
	1.9nm,0.3s,baz=311,slow=19,SNR=2.4						
JTS				LR	LR	05 35 31.4	
	comp=Z,349nm,18.4s,baz=6.5,slow=42						
JTS	**JuntasAbangare**	**5.76**	**278**	Pn	**Pn**	**05 32 51.3**	**+0.5**
JTS				Sn	**Sn**	**05 33 54.2**	**-1.5**
JTS				LR	LR	05 35 31.4	
JCR	**Jicaral**	**5.88**	**274**	*e*P	**Pn**	**05 32 53.4**	**+1.0**
ROSC	**El Rosal**	**6.65**	**134**	Pn	**Pn**	**05 33 07.8**	**+4.7**
	3.7nm,0.3s,baz=314,slow=1.1,SNR=17						
ROSC				Sn	**Sn**	**05 34 27.8**	**+10**
	baz=99,slow=19,SNR=2.2						
ROSC				LR	LR	05 35 03.6	
	comp=Z,93nm,18.7s,baz=1.1,slow=33						
SDV	**Santo Domingo**	**8.44**	**94**	*e*Pn	**Pn**	**05 33 28.0**	**+0.5**
	15nm,0.6s						
SDV				*e*Sn	**Sn**	**05 34 57.5**	**-4.0**
SDV	**Santo Domingo**	**8.44**	**94**	*e*S	**Sn**	**05 34 57.9**	**-3.6**
OTAV	**Otavalo**	**9.23**	**176**	*e*Pn	**Pn**	**05 33 43.0**	**+4.5**
	13nm,0.7s						
SDDR	**Presa de Saban**	**12.12**	**38**	*e*Pn	**Pn**	**05 34 16.9**	**-1.0**
	71nm,0.9s						
APG	**El Apazote**	**12.32**	**297**	LR	LR	05 39 57.9	
	comp=Z,170nm,19.1s,baz=318,slow=41						
TEIG	**Tepich**	**13.82**	**321**	LR	LR	05 40 46.1	
	comp=Z,148nm,18.1s,baz=57,slow=40						
ATAH	**Atahualpa**	**16.55**	**177**	LR	LR	05 42 25.0	
	comp=Z,69nm,18.3s,baz=12,slow=40						
CMIG	**Matias Romero**	**17.05**	**298**	LR	LR	05 43 07.7	
	comp=Z,59nm,21.0s,baz=229,slow=41						
SWET	**Sewanee**	**26.33**	**347**	*e*P	**P**	**05 37 00.9**	**+1.4**
TKL	**Tuckaleechee C**	**26.37**	**352**	LR	LR	05 48 28.2	
	comp=Z,91nm,18.2s,MS3.4,baz=262,slow=39						
LPAZ	**La Paz**	**27.86**	**157**	LR	LR	05 49 06.8	
	comp=Z,160nm,20.2s,MS3.6,baz=242,slow=38						
TXAR	**Lajitas Array**	**30.27**	**314**	P	**P**	**05 37 35.3**	**+0.6**
	0.2nm,0.4s,mb3.2,baz=134,slow=9.0,SNR=7.0						
WMOK	**Wichita Mounta**	**30.88**	**327**	*e*P	**P**	**05 37 39.3**	**-0.8**
	1.2nm,0.5s,mb4.0						
KSU1	**Kansas State U**	**33.35**	**335**	*e*P	**P**	**05 38 01.5**	**-0.3**
	6.6nm,0.5s,mb4.8						
SDCO	**Great Sand Dun**	**36.79**	**324**	*e*P	**P**	**05 38 32.7**	**+1.2**
	0.8nm,0.5s,mb3.8						
BDFB	**Brasilia**	**39.70**	**129**	LR	LR	05 56 17.6	
	comp=Z,243nm,18.3s,MS4.1,baz=330,slow=38						
CPUP	**Villa Florida**	**41.46**	**150**	LR	LR	05 59 06.2	
	comp=Z,73nm,19.0s,MS3.6,baz=67,slow=40						
PDAR	**Pinedale Array**	**42.48**	**327**	P	**P**	**05 39 19.4**	**+0.8**
	1.1nm,0.6s,mb3.7,baz=127,slow=11,SNR=12						
PDAR				sP	sP	05 39 31.7	-4.1
	0.8nm,0.6s,baz=122,slow=11,SNR=4.8						
ULM	**Lac du Bonnet**	**42.92**	**344**	P	**P**	**05 39 20.3**	**-1.8**
	0.7nm,0.3s,mb3.8,baz=140,slow=5.5,SNR=5.8						
ULM				LR	LR	05 57 26.2	
	comp=Z,60nm,19.1s,MS3.5,baz=298,slow=36						
ULM	**Lac du Bonnet**	**42.92**	**344**	P	**P**	**05 39 20.3**	**-1.8**
ULM				LR	LR	05 57 26.2	
NVAR	**Mina Array Bea**	**45.38**	**316**	P	**P**	**05 39 41.3**	**-0.8**
	0.5nm,0.7s,mb3.5,baz=113,slow=6.9,SNR=3.6						
WVOR	**Wild Horse Val**	**47.62**	**320**	*e*P	**P**	**05 39 59.7**	**+0.2**
	13nm,1.6s,mb4.7						
YKA	**Yellowknife Ar**	**58.77**	**342**	P	**P**	**05 41 20.3**	**-0.8**
	1.7nm,0.9s,mb4.1,baz=135,slow=7.5,SNR=13						
YKA				pP	pP	05 41 29.2	-4.5
	1.3nm,0.7s,baz=137,slow=7.4,SNR=6.2						
YKA	**Yellowknife Ar**	**58.77**	**342**	P	**P**	**05 41 20.3**	**-0.8**
YKA				pP	pP	05 41 29.2	-4.5
ILAR	**Eielson Array**	**72.03**	**335**	P	**P**	**05 42 46.4**	**-0.5**
	0.4nm,0.9s,mb3.4,baz=108,slow=5.6,SNR=4.4						
ILAR				pP	pP	05 42 55.1	-4.6
	0.5nm,0.9s,baz=108,slow=4.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**79.06**	**78**	P	**P**	**05 43 28.2**	**+0.1**
	156nm,0.3s,baz=288,slow=6.8,SNR=2.5						
ASAR	**Alice Springs**	**145.44**	**242**	PKPbc	PKPbc	05 51 01.1	-0.8
	1.0nm,0.7s,baz=83,slow=3.0,SNR=7.3						
ASAR				pPKPbc	pPKPbc	05 51 09.8	-5.6
	1.3nm,0.7s,baz=113,slow=3.5,SNR=8.2						
WRA	**Warramunga Arr**	**146.05**	**248**	PKPbc	PKPbc	05 51 03.2	-0.6
	0.8nm,0.7s,baz=102,slow=3.2,SNR=7.2						
WRA				pPKPbc	pPKPbc	05 51 12.0	-5.4
	0.8nm,0.7s,baz=103,slow=3.5,SNR=4.7						
WRA	**Warramunga Arr**	**146.05**	**248**	PKPbc	PKPbc	05 51 03.2	-0.6
WRA				pPKPbc	pPKPbc	05 51 12.0	-5.4

JMA 22 05:36:28.2±0.1, 42°.34N×139°.19E, h23km±1km, M3.5, 2C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**0.33**	**140**	⇑P	Pb	05 36 35.4	-0.2
JOSM				*e*S	Sb	05 36 39.8	-0.8
JSH	**Shimam**	**0.70**	**64**	⇑P	Pb	05 36 41.3	-0.4
JSH				*e*S	Sb	05 36 50.1	-0.9
JYM2	**Yakumo 2**	**0.90**	**104**	P	Pb	05 36 45.2	0.0
JYM2				*e*S	Sb	05 36 57.2	+0.4
JSR	**Shiriuchi**	**1.22**	**131**	P	Pn	05 36 49.7	-0.1
JSR				*e*S	Sn	05 37 05.6	0.0
JNB	**Noboribetsu**	**1.38**	**84**	P	Pn	05 36 51.0	-0.9
JSK	**Shakotan**	**1.39**	**43**	P	Pn	05 36 51.5	-0.6
JSK				*e*S	Sn	05 37 07.5	-2.2
JKB	**Kayabe**	**1.44**	**108**	P	Pn	05 36 53.6	+0.7

IDC 22 05:40:59.7±2.1, 7°.19S×155°.19E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.8/16, mbtmp3.7/6, Error ellipse: s-maj=68.9km s-min=28.0km az=121.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.86**	**236**	P	P	05 46 14.7	-0.4
	1.5nm,0.7s,baz=58,slow=9.8,SNR=8.8						
ASAR	**Alice Springs**	**26.19**	**229**	P	P	05 46 36.1	-0.1
	0.3nm,0.6s,baz=62,slow=8.7,SNR=4.9						
CMAR	**Chiang Mai Arr**	**61.04**	**296**	P	P	05 51 17.3	+1.6
	0.7nm,0.6s,baz=134,slow=5.1,SNR=4.2						
SONM	**Songino Array**	**69.61**	**327**	P	P	05 52 09.6	-1.1
	0.3nm,0.6s,baz=132,slow=6.4,SNR=2.8						
ILAR	**Eielson Array**	**83.49**	**21**	P	P	05 53 29.6	+0.6
	0.2nm,0.8s,baz=245,slow=3.9,SNR=3.7						
MKAR	**Makanchi Array**	**83.68**	**319**	P	P	05 53 30.7	+0.3
	0.5nm,0.7s,baz=90,slow=6.1,SNR=4.3						
TORD	**Torodi Ar. Bea**	**153.26**	**285**	PKPbc	PKPbc	06 01 00.9	+0.1
	1.2nm,0.8s,baz=104,slow=2.3,SNR=2.2						

IGQ 22 05:42:41.2, 2°.89S×78°.07W, h27km±3km, Mb4.2, Ms4.0, 12C-10D, Error ellipse: s-maj=8.6km s-min=6.6km az=161.5, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.65**	**348**	⇓S	Sb	05 43 03.9	+1.2
MACE	**Macas**	**0.65**	**348**	⇓P	Pb	05 42 54.2	+0.3
RIOE	**Riobamba**	**1.26**	**334**	⇓P	Pn	05 43 05.2	+2.0
PAT1	**Patacocha**	**1.43**	**345**	⇓P	Pn	05 43 07.1	+1.7
ARRY	**Arrayan**	**1.43**	**344**	⇑P	Pn	05 43 06.8	+1.4
BMAS	**Trigal station**	**1.44**	**343**	⇑S	Sn	05 43 27.7	+4.0
BMAS	**Trigal station**	**1.44**	**343**	⇑P	Pn	05 43 07.6	+2.0
ULBA	**Ulba**	**1.47**	**347**	⇑S	Sn	05 43 28.5	+4.0
ULBA	**Ulba**	**1.47**	**347**	⇑P	Pn	05 43 08.1	+2.0
RETU	**Refugio**	**1.48**	**345**	P	Pn	05 43 08.2	+2.1
BULB	**Ulba Tungurahu**	**1.48**	**347**	S	Sn	05 43 28.8	+4.0
BULB	**Ulba Tungurahu**	**1.48**	**347**	P	Pn	05 43 08.2	+2.0
BIL2	**Estacion Bilba**	**1.49**	**343**	P	Pn	05 43 10.5	+4.1
BBIL	**Ulba Tungurahu**	**1.49**	**344**	⇑P	Pn	05 43 09.3	+3.0
BRUN	**Tungurahua Vol**	**1.50**	**347**	⇑P	Pn	05 43 08.6	+2.2
BRUN	**Tungurahua Vol**	**1.50**	**347**	⇑S	Sn	05 43 31.1	+5.9
IGUA	**Igualata**	**1.50**	**338**	⇓S	Sn	05 43 31.7	+6.4
IGUA	**Igualata**	**1.50**	**338**	⇓P	Pn	05 43 09.9	+3.4
RUN5	**Runtun**	**1.51**	**346**	S	Sn	05 43 30.6	+5.3
RUN5	**Runtun**	**1.51**	**346**	P	Pn	05 43 08.4	+1.8
JUI6	**Juive**	**1.51**	**345**	S	Sn	05 43 30.4	+5.0
JUI6	**Juive**	**1.51**	**345**	P	Pn	05 43 08.4	+1.8
PISA	**Pisayambo**	**1.85**	**350**	S	Sn	05 43 40.5	+6.8
PISA	**Pisayambo**	**1.85**	**350**	P	Pn	05 43 14.2	+3.0
BMOR	**Cotopaxi Volca**	**2.18**	**350**	S	Sn	05 43 50.2	+8.2
BMOR	**Cotopaxi Volca**	**2.18**	**350**	P	Pn	05 43 20.3	+4.5
MOV1	**Cotopaxi Vol s**	**2.20**	**350**	S	Sn	05 43 50.1	+7.8
MOV1	**Cotopaxi Vol s**	**2.20**	**350**	P	Pn	05 43 19.9	+3.8
TAMB	**Tambo**	**2.20**	**352**	P	Pn	05 43 20.0	+3.8
BTAM	**Cotopaxi Volca**	**2.23**	**351**	P	Pn	05 43 21.6	+5.2
COV1	**Cotopaxi Volc**	**2.23**	**353**	P	Pn	05 43 21.5	+5.0
BREF	**Cotopaxi Volca**	**2.24**	**350**	P	Pn	05 43 22.3	+5.7
VC1	**Cotopaxi 1**	**2.26**	**351**	⇑S	Sn	05 43 52.5	+8.6
VC1	**Cotopaxi 1**	**2.26**	**351**	⇑P	Pn	05 43 20.4	+3.5
NAS2	**Nasa**	**2.27**	**350**	⇓S	Sn	05 43 53.9	+10
NAS2	**Nasa**	**2.27**	**350**	⇓P	Pn	05 43 21.8	+4.8
PITA	**Cotopaxi Volc**	**2.35**	**351**	S	Sn	05 43 55.3	+9.2
PITA	**Cotopaxi Volc**	**2.35**	**351**	P	Pn	05 43 23.3	+5.2
ANTI	**Antisana**	**2.43**	**358**	⇑S	Sn	05 43 54.2	+6.1
ANTI	**Antisana**	**2.43**	**358**	⇑P	Pn	05 43 22.5	+3.2
JUA2	**San Juan 2**	**2.71**	**349**	P	Pn	05 43 30.6	+7.5
GGP	**Refugio Guagua**	**2.75**	**349**	P	Pn	05 43 29.7	+6.0
TERV	**Terraza Guagua**	**2.75**	**349**	P	Pn	05 43 31.6	+7.9
YANA	**Yana**	**2.80**	**350**	S	Sn	05 44 09.2	+12
YANA	**Yana**	**2.80**	**350**	P	Pn	05 43 31.5	+7.2
CHAR	**Charly**	**2.81**	**8**	S	Sn	05 44 07.5	+10
CHAR	**Charly**	**2.81**	**8**	P	Pn	05 43 29.4	+4.9
LAV4	**Lava4-Reventad**	**2.81**	**9**	⇓P	Pn	05 43 28.9	+4.3
LAV4	**Lava4-Reventad**	**2.81**	**9**	⇓S	Sn	05 44 06.9	+9.2
CONE	**Cono NE Rev Vo**	**2.83**	**9**	P	Pn	05 43 30.0	+5.2
CAYR	**Refugio Cayamb**	**2.89**	**1**	P	Pn	05 43 29.6	+4.1
CAYA	**Cayambe**	**2.94**	**1**	P	Pn	05 43 29.9	+3.5
COTA	**Cotacachi**	**3.22**	**355**	P	Pn	05 43 40.9	+11

*ISCJB **22** 05:47:23.4±0.4, 45°.20N±0°.04×37°.71E±0°.03, h10km, mb3.7/2, Error ellipse: s-maj=5.8km s-min=3.2km az=14.0*
*MOS **22** 05:47:25.4±1.2, 45°.29N×37°.66E, h22km, mb4.0/1, Error ellipse: s-maj=10.7km s-min=7.6km az=6.4*
*CSEM **22** 05:47:28.0±0.2, 45°.14N×37°.72E, h60km, mb4.0, Error ellipse: s-maj=6.4km s-min=3.6km az=23.0*

ISC 22 05:47:25.6±0.3, 45°.15N±0°.03×37°.69E±0°.03, h10km, n96, σ1§12/120, mb3.7/2, 7C-10D, Ukraine - Moldova - Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANN	**Anapa**	**0.39**	**208**	*i*P	**Pg**	**05 47 37.5**	**+4.3**
ANN				*i*		05 47 45.2	
ANN	**Anapa**	**0.39**	**208**	*i*P	**Pg**	**05 47 37.5**	**+4.3**
ANN				*i*S	**Sg**	**05 47 45.2**	**+6.8**
KERU	**Kerch**	**0.89**	**281**	*i*P	**Pg**	**05 47 48.0**	**+5.4**
KERU				*e*		05 48 03.3	
FEO	**Feodosiya**	**1.64**	**266**	*e*P	**Pn**	**05 47 56.7**	**+2.3**
FEO				*e*		05 48 18.3	
FEO	**Feodosiya**	**1.64**	**266**	*e*P	**Pn**	**05 47 56.7**	**+2.3**
SUDU	**Sudak**	**1.93**	**263**	⇓*i*P	**Pn**	**05 47 59.3**	**+0.9**
SUDU				*e*		05 48 22.9	
SUDU	**Sudak**	**1.93**	**263**	*i*P	**Pn**	**05 47 59.3**	**+0.9**
SUDU				*e*S	**Sn**	**05 48 22.9**	**+0.3**
SOC	**Sochi**	**2.13**	**136**	*e*P	**Pn**	**05 48 02.1**	**+0.9**
SOC				*e*		05 48 26.6	
SOC				pmax	pmax		
	comp=Z,36nm,0.8s						
SOC				smax			
	comp=N,7.0nm,0.3s						
SOC				smax			
	comp=E,81nm,0.4s						
SOC	**Sochi**	**2.13**	**136**	*e*P	**Pn**	**05 48 02.1**	**+0.9**
	comp=E,7.0nm,0.3s						
SOC				*e*S	**Sn**	**05 48 26.6**	**-1.1**
ALU	**Alushta**	**2.38**	**260**	*e*P	**Pn**	**05 48 05.8**	**+1.2**
ALU	**Alushta**	**2.38**	**260**	*e*P	**Pn**	**05 48 05.8**	**+1.2**
SIM	**Simferopol'**	**2.54**	**267**	P	**Pn**	**05 48 08.7**	**+1.9**
SIM				S	**Sn**	**05 48 37.6**	**-0.2**
SIM				pmax	pmax		
	comp=Z,115nm,0.3s						
SIM	**Simferopol'**	**2.54**	**267**	P	**Pn**	**05 48 08.7**	**+1.9**
	comp=Z,115nm,0.3s						
SIM				S	**Sn**	**05 48 37.6**	**-0.2**
YAL	**Yalta**	**2.60**	**257**	⇓*i*P	**Pn**	**05 48 08.4**	**+0.7**
YAL				*e*		05 48 37.9	
YAL	**Yalta**	**2.60**	**257**	*i*P	**Pn**	**05 48 08.4**	**+0.7**
YAL				*e*S	**Sn**	**05 48 37.9**	**-1.4**
SEV	**Sevastopol'**	**2.93**	**260**	*e*P	**Pn**	**05 48 12.8**	**+0.7**
SEV				*e*		05 48 46.4	
SEV	**Sevastopol'**	**2.93**	**260**	*e*P	**Pn**	**05 48 12.8**	**+0.7**
SEV				*e*S	**Sn**	**05 48 46.4**	**-0.9**
DOMR	**Dombai**	**3.38**	**122**	*i*P	**Pn**	**05 48 19.6**	**+1.3**
DOMR	**Dombai**	**3.38**	**122**	*i*P	**Pn**	**05 48 19.6**	**+1.3**
KIV	**Kislovodsk**	**3.76**	**107**	*e*P	**Pn**	**05 48 23.6**	**0.0**
KIV				*e*S	**Sn**	**05 49 06.8**	**-1.1**
KIV				pmax	pmax		
	comp=Z,13nm,0.9s						
KIV	**Kislovodsk**	**3.76**	**107**	*e*P	**Pn**	**05 48 23.6**	**0.0**
	comp=Z,13nm,0.9s						
KIV				*e*S	**Sn**	**05 49 06.8**	**-1.1**
BEYR	**Belyy Ugol+**	**3.83**	**105**	*e*P	**Pn**	**05 48 24.9**	**+0.4**
BEYR	**Belyy Ugol+**	**3.83**	**105**	*e*P	**Pn**	**05 48 24.9**	**+0.4**
BZK	**Bozkurt**	**4.16**	**221**	*e*PN	**Pn**	**05 48 30.5**	**+1.4**
BZK	**Bozkurt**	**4.16**	**221**	*e*Pn	**Pn**	**05 48 30.5**	**+1.4**
KVT	**Kavak**	**4.24**	**197**	*e*PN	**Pn**	**05 48 30.9**	**+0.8**
KVT	**Kavak**	**4.24**	**197**	*e*Pn	**Pn**	**05 48 30.9**	**+0.8**
ESPY	**Espiye-Giresun**	**4.29**	**169**	*e*PN	**Pn**	**05 48 30.3**	**-0.6**
ESPY	**Espiye-Giresun**	**4.29**	**169**	*e*Pn	**Pn**	**05 48 30.3**	**-0.6**
MACK	**Trabzon**	**4.47**	**159**	*i*P	**Pn**	**05 48 32.6**	**-0.6**
MACK	**Trabzon**	**4.47**	**159**	*i*P	**Pn**	**05 48 32.7**	**-0.6**
MACK				*i*S	**Sn**	**05 49 19.7**	**-5.6**
ERBA	**Erbaa**	**4.51**	**189**	*i*P	**Pn**	**05 48 33.9**	**-0.1**
ERBA	**Erbaa**	**4.51**	**189**	*i*P	**Pn**	**05 48 33.9**	**0.0**
BCA	**Borcka**	**4.68**	**141**	*e*PN	**Pn**	**05 48 35.3**	**-0.9**
BCA	**Borcka**	**4.68**	**141**	*e*Pn	**Pn**	**05 48 35.3**	**-0.9**
DBOC	**Borcka**	**4.78**	**141**	*i*P	**Pn**	**05 48 36.7**	**-0.9**
DBOC	**Borcka**	**4.78**	**141**	*i*P	**Pn**	**05 48 36.7**	**-0.9**
BALT	**Daday**	**4.79**	**223**	*i*P	**Pn**	**05 48 37.6**	**-0.1**
BALT	**Daday**	**4.79**	**223**	*i*P	**Pn**	**05 48 37.6**	**0.0**
GUMT	**Gumushane**	**4.86**	**164**	*e*PN	**Pn**	**05 48 38.6**	**-0.1**
GUMT	**Gumushane**	**4.86**	**164**	*e*Pn	**Pn**	**05 48 38.6**	**-0.1**
TOS	**Tosya**	**4.91**	**214**	*e*PN	**Pn**	**05 48 40.2**	**+0.8**
TOS	**Tosya**	**4.91**	**214**	*e*Pn	**Pn**	**05 48 40.2**	**+0.9**
CTKT	**Corum**	**5.00**	**206**	*i*P	**Pn**	**05 48 40.3**	**-0.3**
CTKT	**Corum**	**5.00**	**206**	*i*P	**Pn**	**05 48 40.3**	**-0.3**
ARTV	**Artvin**	**5.03**	**140**	*i*P	**Pn**	**05 48 39.5**	**-1.5**
ARTV	**Artvin**	**5.03**	**140**	*i*P	**Pn**	**05 48 39.5**	**-1.4**
DBAD	**Bademkaya**	**5.06**	**143**	*i*P	**Pn**	**05 48 41.4**	**0.0**
DBAD	**Bademkaya**	**5.06**	**143**	*i*P	**Pn**	**05 48 41.4**	**0.0**
BAYT	**Ayd¨–ntepe-Bay**	**5.08**	**158**	*e*PN	**Pn**	**05 48 41.7**	**0.0**
BAYT	**Ayd¨–ntepe-Bay**	**5.08**	**158**	*e*Pn	**Pn**	**05 48 41.7**	**0.0**
KELT	**Kelkit**	**5.12**	**166**	*i*P	**Pn**	**05 48 41.6**	**-0.7**
KELT	**Kelkit**	**5.12**	**166**	*i*P	**Pn**	**05 48 41.6**	**-0.7**
KELT				*i*S	**Sn**	**05 49 38.3**	**-3.2**
DDEM	**Demirkent**	**5.19**	**144**	*i*P	**Pn**	**05 48 43.5**	**+0.3**
DDEM	**Demirkent**	**5.19**	**144**	*i*P	**Pn**	**05 48 43.5**	**+0.3**
DDEM				*i*S	**Sn**	**05 49 39.2**	**-3.8**
SAFT	**Safranbolu**	**5.35**	**225**	*e*PN	**Pn**	**05 48 47.0**	**+1.6**
SAFT	**Safranbolu**	**5.35**	**225**	*e*Pn	**Pn**	**05 48 47.0**	**+1.6**
CORM	**Corum**	**5.45**	**206**	*e*PN	**Pn**	**05 48 47.3**	**+0.5**
CORM	**Corum**	**5.45**	**206**	*e*Pn	**Pn**	**05 48 47.3**	**+0.5**
YOZ	**Yozgat**	**5.78**	**199**	*e*PN	**Pn**	**05 48 52.1**	**+0.9**
YOZ	**Yozgat**	**5.78**	**199**	*e*Pn	**Pn**	**05 48 52.1**	**+0.9**
KEMA	**Kemaliye**	**5.90**	**174**	*i*P	**Pn**	**05 48 53.8**	**+0.8**
BRTR	**Keskin Array B**	**6.19**	**210**	*i*P	**Pn**	**05 48 57.5**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRTR	**Keskin Array B**	**6.19**	**210**	*i*P	**Pn**	**05 48 57.5**	**+0.5**
	comp=Z,2.0nm,0.3s						
TLCR		**6.28**	**274**	⇓P	**Pn**	**05 48 58.4**	**+0.3**
TLCR				S	**Sn**	**05 50 06.8**	**-3.1**
TLCR		**6.28**	**274**	⇓*i*P	**Pn**	**05 48 58.4**	**+0.3**
TLCR		**6.28**	**274**	S	**Sn**	**05 50 06.8**	**-3.1**
TLCR		**6.28**	**274**	P	**Pn**	**05 48 58.4**	**+0.3**
TLCR				S	**Sn**	**05 50 06.8**	**-3.1**
TIRR	**Tirgusor**	**6.64**	**267**	⇓P	**Pn**	**05 49 02.5**	**-0.6**
TIRR				S	**Sn**	**05 50 12.9**	**-5.9**
TIRR	**Tirgusor**	**6.64**	**267**	⇓*i*P	**Pn**	**05 49 02.5**	**-0.6**
TIRR	**Tirgusor**	**6.64**	**267**	S	**Sn**	**05 50 12.9**	**-5.9**
TIRR	**Tirgusor**	**6.64**	**267**	P	**Pn**	**05 49 02.5**	**-0.6**
CFR	**Carcaliu**	**6.76**	**274**	⇑P	**Pn**	**05 49 04.1**	**-0.6**
CFR				S	**Sn**	**05 50 18.1**	**-3.6**
CFR	**Carcaliu**	**6.76**	**274**	⇑*i*P	**Pn**	**05 49 04.1**	**-0.6**
CFR	**Carcaliu**	**6.76**	**274**	S	**Sn**	**05 50 18.0**	**-3.7**
CFR	**Carcaliu**	**6.76**	**274**	P	**Pn**	**05 49 04.1**	**-0.6**
CFR				S	**Sn**	**05 50 18.1**	**-3.6**
MLR	**Muntele Rosu**	**8.29**	**277**	⇓P	**Pn**	**05 49 25.4**	**-0.3**
MLR				S	**Sn**	**05 50 56.4**	**-3.0**
MLR	**Muntele Rosu**	**8.29**	**277**	P	**Pn**	**05 49 25.4**	**-0.3**
MLR				S	**Sn**	**05 50 56.4**	**-3.0**
VOIR		**8.92**	**276**	⇑P	**Pn**	**05 49 34.4**	**0.0**
VOIR		**8.92**	**276**	P	**Pn**	**05 49 34.4**	**0.0**
BURAR	**Bucovina Array**	**8.97**	**290**	⇓P	**Pn**	**05 49 34.8**	**-0.3**
BURAR	**Bucovina Array**	**8.97**	**290**	⇓*i*P	**Pn**	**05 49 34.8**	**-0.3**
NIE	**Niedzica**	**12.55**	**296**	*e*P	**Pn**	**05 50 23.6**	**-0.4**
NIE	**Niedzica**	**12.55**	**296**	*e*P	**Pn**	**05 50 23.6**	**-0.4**
OJC	**Ojcow**	**13.07**	**299**	*e*P	**Pn**	**05 50 29.2**	**-2.0**
OJC	**Ojcow**	**13.07**	**299**	*e*P	**Pn**	**05 50 29.2**	**-2.0**
AKTO	**Aktyubinsk**	**14.63**	**62**	⇑P	**Pn**	**05 50 50.0**	**-2.4**
	comp=Z,0.4nm,0.7s						
AKTO				⇑S	**Sn**	**05 53 19.0**	**-16**
	comp=Z,0.3nm,0.6s						
AKTO	**Aktyubinsk**	**14.63**	**62**	P	**Pn**	**05 50 50.0**	**-2.4**
	comp=Z,0.4nm,0.7s						
AKTO				S	**Sn**	**05 53 19.0**	**-16**
	comp=Z,0.3nm,0.6s						
AB31	**Akbulak array**	**15.66**	**67**	⇑P	**Pn**	**05 51 05.7**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=258,slow=12,SNR=4.9						
AB31				⇑S	**Sn**	**05 53 47.6**	**-12**
	comp=Z,0.9nm,0.6s,baz=264,slow=22,SNR=4.9						
AB31	**Akbulak array**	**15.66**	**67**	P	**Pn**	**05 51 05.7**	**-0.3**
	comp=Z,1.5nm,0.8s,SNR=4.9						
AB31				S	**Sn**	**05 53 47.6**	**-12**
	comp=Z,0.9nm,0.6s,SNR=4.9						
KHC	**Kasperske Hory**	**16.86**	**292**	*i*P	**Pn**	**05 51 25.7**	**+4.2**
ARU	**Arti**	**17.29**	**42**	*d*P	**Pn**	**05 51 28.2**	**+1.4**
ARU				S	**Sn**	**05 54 40.7**	**+1.8**
ARU				pm

CMIG	Matias Romero	4.83	83	eP	Pn	05 57 04.8 +0.3
CMIG				i S	Sn	05 58 02.2 +1.2
SFJM	Santa Fe	4.90	323	i P	Pn	05 57 02.8 -2.5
SFJM	Santa Fe	4.90	323	i P	Pn	05 57 02.8 -2.5
ANIG	Ahuacatlan	6.24	316	i P	Pn	05 57 17.2 -6.6
ANIG				i S	Sn	05 58 26.5 -9.3
PCIG		6.48	97	i P	Pn	05 57 28.1 +0.9
PCIG				i S	Sn	05 58 44.4 +2.7
TGIG		6.50	87	eP	Pn	05 57 28.6 +1.2
TGIG				i S	Sn	05 58 44.2 +2.0
SCX	San Cristobal	6.97	88	i P	Pn	05 57 33.7 -0.2
SCX	San Cristobal	6.97	88	i P	Pn	05 57 33.7 -0.2
CCIG	Comitan	7.46	91	i P	Pn	05 57 41.9 +1.3
CCIG				i S	Sn	05 59 07.2 +1.5
CCIG	Comitan	7.46	91	i P	Pn	05 57 41.9 +1.3
CCIG				i S	Sn	05 59 07.2 +1.5
LNIG	Linares	8.29	3	i S	Sn	05 59 25.9 -0.3
APG	El Apazote	9.22	98	Pn	Pn	05 58 05.1 +0.3
	0.5nm,0.3s,baz=321,slow=17,SNR=13					
APG				Lg		06 00 55.6
	1.0nm,0.3s,baz=204,slow=14,SNR=5.7					
APG				LR	LR	06 02 01.2
	comp=Z,532nm,18.4s,baz=283,slow=40					
HPIG		11.61	334	eP	Pn	05 58 35.2 -2.3
HPIG				i S	Sn	06 00 43.7 -4.2
TEIG	Tepich	11.62	70	Pn	Pn	05 58 37.2 -0.4
	1.6nm,0.3s,baz=25,slow=19,SNR=10					
TEIG				Sn	Sn	06 00 56.6 +8.7
	1.5nm,0.3s,baz=80,slow=19,SNR=3.6					
TEIG				LR	LR	06 03 21.9
	comp=Z,303nm,20.0s,baz=247,slow=39					
628A	Black Gap, Mar	13.14	348	⇑P	Pn	05 58 59.7 +1.3
	baz=13,SNR=11					
TXAR	Lajitas Array	13.16	345	Pn	Pn	05 58 59.8 +1.1
	0.1nm,0.3s,baz=165,slow=15,SNR=21					
TXAR				Lg		06 02 40.5
	0.0nm,0.3s,baz=143,slow=26,SNR=3.6					
627A	Terlingua Ranc	13.21	347	⇓P	Pn	05 59 00.7 +1.3
	baz=13					
626A	Big Bend Ranch	13.49	344	⇑P	Pn	05 59 04.3 +1.1
	baz=13					
528A	Cox Ranch, San	13.78	349	⇑P	Pn	05 59 08.1 +1.0
	baz=14,SNR=12					
JCT	Junction City	13.84	0	ePn	Pn	05 59 07.2 -0.7
526A	Mary Lane Ranc	13.96	345	⇑P	Pn	05 59 11.1 +1.5
	baz=14,SNR=9.7					
428A	Kincaid Ranch,	14.31	350	⇓P	Pn	05 59 16.0 +1.6
	baz=14,SNR=27					
426A	McDonald Obser	14.53	346	⇓P	Pn	05 59 19.0 +1.6
	baz=14,SNR=8.8					
427A	Hayter Ranch,	14.56	348	⇓P	Pn	05 59 18.6 +0.8
	baz=14,SNR=13					
425A	Indio Mountain	14.89	343	⇑P	Pn	05 59 22.7 +0.5
	baz=15,SNR=13					
328A	Wristen Ranch,	14.97	350	⇑P	Pn	05 59 23.7 +0.2
	baz=15,SNR=11					
325A	Bean Ranch, Si	15.43	343	⇑P	Pn	05 59 29.8 +0.2
	baz=15,SNR=11					
324A	Moseley Ranch,	15.65	342	⇓P	Pn	05 59 33.5 +1.1
	baz=15,SNR=37					
JTS	JuntasAbangare	15.82	111	Pn	Pn	05 59 38.0 +3.3
	1.2nm,0.3s,baz=294,slow=8.5,SNR=8.6					
JTS	JuntasAbangare	15.82	111	eP	Pn	05 59 39.8 +5.1
	39nm,1.0s					
NATX	Nacogdoches	15.85	17	eP	Pn	05 59 38.3 +3.3
	62nm,0.9s					
MNTX	Cornudas Mount	15.86	343	⇓P	Pn	05 59 35.7 +0.7
	baz=16,SNR=22					
MNTX	Cornudas Mount	15.86	343	eP	Pn	05 59 35.5 +0.5
	12nm,1.0s					
226A	Malaga, Loving	15.88	347	⇓P	Pn	05 59 35.9 +0.5
	baz=16,SNR=12					
GDL2	Guadalupe Moun	16.07	346	eP	Pn	05 59 37.8 -0.1
225A	Deer Hill, Car	16.10	345	P	Pn	05 59 38.1 0.0
	baz=16,SNR=12					
224A	Cornudas Mount	16.25	343	⇑P	Pn	05 59 40.3 +0.1
	baz=16,SNR=17					
127A	Arkansas Junct	16.33	350	⇓P	Pn	05 59 40.8 -0.4
	baz=16,SNR=7.5					
125A	Gardner Draw,	16.58	346	⇑P	Pn	05 59 44.7 +0.3
	baz=16,SNR=12					
320A	Kipp Ranch, An	16.66	333	⇓P	Pn	05 59 46.5 +1.1
	baz=16,SNR=15					
CPRX	Cap Rock	16.77	348	eP	Pn	05 59 47.4 +0.6
	5.8nm,0.2s					
222A	Williams Famil	16.78	338	⇑P	Pn	05 59 47.1 +0.2
	baz=17					
124A	Stringfield Ra	16.82	344	⇓P	Pn	05 59 47.6 +0.2
	baz=17,SNR=16					
221A	Mesquite Ranch	16.95	336	⇑P	Pn	05 59 49.9 +0.9
	baz=17,SNR=9.6					
123A	Bell Site, Whi	16.99	341	⇑P	Pn	05 59 50.0 +0.4
	baz=17,SNR=9.6					
Z26A	Caprock	17.02	348	⇓P	Pn	05 59 50.3 +0.3
	baz=17,SNR=13					
319A	Douglas	17.03	332	⇓P	Pn	05 59 50.9 +0.8
	baz=17,SNR=13					
220A	Playas Peak, P	17.15	334	⇓P	Pn	05 59 51.8 +0.2
	baz=17,SNR=14					
122A	Conniff Cattle	17.29	339	⇓P	Pn	05 59 54.4 +1.1
	baz=17,SNR=7.3					
Z24A	Sheeppen Canyo	17.39	345	⇓P	Pn	05 59 55.3 +0.7
	baz=17,SNR=12					
318A	Bisbee	17.41	330	⇑P	Pn	05 59 55.3 +0.5
	baz=17,SNR=12					
121A	Cookes Peak, D	17.42	337	⇑P	Pn	05 59 56.0 +1.1
	baz=17,SNR=9.8					
Y27A	Causey	17.48	351	⇓P	Pn	05 59 54.1 -1.6
	baz=17,SNR=12					
MSTX	Muleshoe	17.51	352	⇓P	Pn	05 59 54.3 -1.7
	baz=17,SNR=18					
219A	White Tail Can	17.55	333	⇓P	Pn	05 59 57.0 +0.5
	baz=17,SNR=14					
Z23A	Rita Site, Whi	17.57	342	⇑P	Pn	05 59 57.1 +0.3
	baz=17,SNR=11					
120A	U Bar Ranch, L	17.76	335	⇓P	Pn	05 59 59.9 +0.8
	baz=18,SNR=12					
Z22A	Elephant Butte	17.79	340	⇓P	Pn	05 59 59.9 +0.4
	baz=18,SNR=25					
Y25A	Mesa, Roswell	17.80	347	⇑P	Pn	05 59 60.0 +0.3
	baz=18,SNR=9.5					
218A	Dragoon	17.88	331	⇑P	Pn	06 00 00.8 +0.1
	baz=18,SNR=7.2					
Y24A	Capitan	17.98	345	⇑P	Pn	06 00 02.1 +0.3
	baz=18,SNR=9.8					
Z21A	St. Cloud Mine	18.07	339	⇑P	Pn	06 00 04.4 +1.4
	baz=18,SNR=20					
217A	Green Valley	18.09	329	⇑P	Pn	06 00 03.5 +0.2
	baz=18,SNR=14					
WMOK	Wichita Mounta	18.11	3	eP	Pn	06 00 00.4 -3.1
	8.4nm,0.9s					
Y23A	Lovelace Mesa,	18.15	343	⇑P	Pn	06 00 04.4 +0.5
	baz=18,SNR=29					
119A	Ashpeak Ranch,	18.23	334	⇓P	Pn	06 00 05.6 +0.8
	baz=18,SNR=6.1					
Z20A	Nine Sixteen R	18.24	336	⇓P	Pn	06 00 05.9 +0.8
	baz=18,SNR=11					
AMTX	Amarillo	18.30	355	⇓P	Pn	06 00 03.9 -1.9
	baz=18,SNR=6.9					
AMTX	Amarillo	18.30	355	eP	Pn	06 00 03.0 -2.8
	22nm,0.8s					
118A	Homack Ranch,	18.41	332	⇓P	Pn	06 00 07.3 +0.1
	baz=18,SNR=27					
Y22A	Socorro	18.42	341	⇑P	Pn	06 00 07.5 +0.3
	baz=18,SNR=11					
BNM	Barren Site	18.51	342	eP	Pn	06 00 10.1 +1.7
	22nm,1.0s					
216A	Three Points,	18.60	328	⇑P	Pn	06 00 09.7 +0.2
	baz=18,SNR=12					
W27A	Bowe Ranch, En	18.63	352	⇑P	Pn	06 00 07.7 -2.0
	baz=18,SNR=8.6					
LENM	Lemitar	18.63	341	eP	Pn	06 00 10.2 +0.3
LPM	Los Pinos Moun	18.66	342	eP	Pn	06 00 10.5 +0.2
117A	Oracle	18.70	330	⇑P	Pn	06 00 11.1 +0.4
	baz=18,SNR=19					
Y21A	Point of Rocks	18.71	340	⇓P	Pn	06 00 11.4 +0.6
	baz=18,SNR=19					
MIAR	Mount Ida	18.77	16	eP	Pn	06 00 09.3 -2.3
	12nm,0.8s					
Y20A	Horse Springs,	18.87	338	⇑P	Pn	06 00 13.0 +0.3
	baz=19,SNR=21					
LAZ	Ladron	18.90	341	eP	Pn	06 00 13.0 -0.1
	33nm,1.6s					
W25A	X Bar L Ranch,	19.01	348	P	Pn	06 00 13.9 -0.4
	baz=19,SNR=13					
X21A	Alamocita Cree	19.15	340	⇑P	Pn	06 00 16.0 -0.1
	baz=19,SNR=24					
116A	Eloy	19.17	328	P	Pn	06 00 15.8 -0.6
	baz=19,SNR=22					
Z17A	San Carlos Hig	19.19	332	⇑P	Pn	06 00 16.1 -0.5
	baz=19,SNR=11					
W24A	Lazy 6 Ranch,	19.20	346	⇑P	Pn	06 00 15.4 -1.3
	baz=19,SNR=13					
ANMO	Albuquerque	19.21	343	P	Pn	06 00 15.8 -1.1
	0.3nm,0.3s,baz=155,slow=12,SNR=38					
ANMO				LR	LR	06 07 33.0
	comp=Z,316nm,20.4s,baz=24,slow=37					
ANMO	Albuquerque	19.21	343	eP	Pn	06 00 15.6 -1.3
	11nm,1.0s					
Y19A	Nutrioso	19.24	336	⇓P	Pn	06 00 17.5 +0.3
	baz=19,SNR=19					
214A	Organ Pipe Nat	19.28	325	⇓P	Pn	06 00 17.3 -0.4
	baz=19,SNR=11					
W23A	Werner Place,	19.33	344	P	Pn	06 00 17.1 -1.2
	baz=19,SNR=7.5					
UALR	University of	19.34	19	eP	Pn	06 00 15.8 -2.6
	39nm,1.3s					
Y18A	Canyon Day Jun	19.41	334	⇑P	Pn	06 00 18.7 -0.5
	baz=19,SNR=16					
V26A	Tequesquite Ra	19.45	350	⇑P	Pn	06 00 17.9 -1.9
	baz=19,SNR=32					
X20A	Quemado	19.48	338	⇓P	Pn	06 00 19.9 -0.2
	baz=19,SNR=12					
115A	Sonoran Desert	19.55	327	⇓P	Pn	06 00 20.4 -0.5
	baz=19					
V25A	Rancho No Teng	19.64	349	⇑P	Pn	06 00 20.0 -1.9
	baz=19,SNR=6.7					
Y17A	Roosevelt	19.69	332	⇑P	Pn	06 00 22.0 -0.6
	baz=20,SNR=14					
V23A	Ortiz Mt. (NFS	19.89	345	⇑P	Pn	06 00 23.6 -1.5
	baz=20					
114A	Black Gap (USA	19.93	326	⇑P	Pn	06 00 24.4 -1.1
	baz=20,SNR=11					
W20A	Ramah	20.01	339	P	P	06 00 25.8 +1.0
	baz=20,SNR=36					
X18A	Snowflake	20.02	335	⇓P	P	06 00 27.3 +2.5
	baz=20,SNR=9.1					
U26A	Atchley Ranch,	20.03	351	⇑P	P	06 00 24.3 -0.6
	baz=20,SNR=29					
LRAL	Lakeview Retre	20.11	33	eP	P	06 00 24.9 -0.9
	15nm,1.1s					
Y16A	Circle Bar Ran	20.13	331	⇑P	P	06 00 26.5 +0.4
	baz=20,SNR=19					
U25A	Circle Dot Ran	20.14	349	⇓P	P	06 00 25.8 -0.4
	baz=20,SNR=7.6					
X17A	Forest Lakes	20.21	333	⇑P	P	06 00 28.1 +1.2
	baz=20,SNR=22					
V22A	San Miguel Ran	20.24	343	⇓P	P	06 00 27.0 -0.2
	baz=20,SNR=13					
W19A	Sanders	20.31	337	⇓P	P	06 00 28.8 +0.7
	baz=20,SNR=16					
113A	Mohawk Valley,	20.42	325	⇓P	P	06 00 30.0 +0.8
	baz=20,SNR=11					
Z14A	Wintersburg	20.44	327	⇑P	P	06 00 30.0 +0.6
	baz=20,SNR=7.2					
U23A	El Rito	20.45	345	⇓P	P	06 00 29.4 -0.1
	baz=20,SNR=36					
W18A	Petrified Fore	20.45	336	⇑P	P	06 00 31.8 +2.3
	baz=20,SNR=12					
X16A	Lo Mia Camp, P	20.56	332	⇑P	P	06 00 31.6 +0.9
	baz=20,SNR=38					
Y15A	Casa Rosa Ranc	20.60	329	⇓P	P	06 00 31.5 +0.3
	baz=20,SNR=47					
V20A	Brimhall	20.61	340	⇓P	P	06 00 31.7 +0.5
	baz=20,SNR=8.2					
U22A	Llaves	20.66	344	⇓P	P	06 00 31.9 +0.1
	baz=20					
Z13A	Yuma Proving G	20.69	326	⇑P	P	06 00 32.6 +0.5
	baz=20,SNR=13					
V19A	Window Rock	20.73	339	P	P	06 00 33.0 +0.5
	baz=21,SNR=24					
T25A	Trinidad	20.87	350	⇓P	P	06 00 34.3 +0.3
	baz=21,SNR=12					
T24A	Torres, Weston	20.92	348	⇑P	P	06 00 34.8 +0.2
	baz=21,SNR=9.9					
Y14A	Wickenburg	20.92	328	P	P	06 00 35.0 +0.4
	baz=21,SNR=25					
U21A	Nageezi	20.94	342	⇓P	P	06 00 35.3 +0.5
	baz=21,SNR=24					
X15A	Humboldt	20.99	330	⇓P	P	06 00 35.8 +0.5
	baz=21,SNR=34					
V18A	Ganado	21.05	337	P	P	06 00 36.6 +0.6
	baz=21,SNR=29					
T23A	Casias Ranch,	21.09	346	P	P	06 00 36.0 -0.4
	baz=21,SNR=8.1					
U20A	Newcomb	21.15	340	⇓P	P	06 00 37.5 +0.3
	baz=21					
W16A	Flagstaff	21.17	333	⇓P	P	06 00 38.4 +1.0
	baz=21,SNR=14					
GLA	Glamis	21.23	323	eP	P	06 00 38.7 +0.7
	163nm,1.7s,mb5.1					
Y13A	Salome	21.25	326	⇑P	P	06 00 39.0 +0.7
	baz=21,SNR=42					
T22A	Edith	21.28	344	⇑P	P	06 00 38.7 +0.2
	baz=21,SNR=9.5					
X14A	Yava	21.29	329	P	P	06 00 39.1 +0.5
	baz=21,SNR=24					
U19A	Dine' College,	21.31	339	⇑P	P	06 00 39.1 +0.3
	baz=21,SNR=37					
V17A	Tonalea, Kykot	21.31	335	⇑P	P	06 00 39.4 +0.5
	baz=21					
S25A	Robets Cordova	21.38	350	⇑P	P	06 00 39.1 -0.5
	baz=21					
T21A	Navajo Lake	21.43	343	P	P	06 00 40.1 0.0
	baz=21,SNR=7.6					
S24A	Houchin Ranch,	21.50	348	P	P	06 00 40.5 -0.3
	baz=21,SNR=14					
W15A	Williams	21.57	332	P	P	06 00 42.9 +1.2
	baz=21,SNR=11					
Y12C	Blythe	21.58	325	⇓P	P	06 00 42.3 +0.6
	baz=21,SNR=22					
U18A	Rough Rock, Ch	21.66	338	⇓P	P	06 00 42.7 +0.2
	baz=22,SNR=7.8					
SDCO	Great Sand Dun	21.66	348	P	P	06 00 42.0 -0.6
	baz=22,SNR=39					
SDCO	Great Sand Dun	21.66	348	eP	P	06 00 41.7 -0.9
	21nm,1.0s,mb4.5					
S23A	Nye Farm, Mont	21.72	347	⇑P	P	06 00 43.6 +0.4
	baz=22,SNR=17					
T19A	Beclabito	21.73	340	⇑P	P	06 00 43.4 +0.1
	baz=22,SNR=6.9					
PDMCI	Parker Dam,Lak	21.79	327	⇑P	P	06 00 44.4 +0.4
	baz=22,SNR=11					
R25A	Fountain Ranch	21.83	351	⇑P	P	06 00 43.8 -0.6
	baz=22,SNR=11					
X13A	Yucca	21.86	328	⇑P	P	06 00 45.1 +0.4
	baz=22,SNR=30					
S22A	4UR Ranch, Cre	21.95	345	⇓P	P	06 00 45.7 0.0
	baz=22,SNR=18					
W14A	Seligman	21.98	330	⇓P	P	06 00 46.7 +0.7
	baz=22,SNR=46					
BC3	Big Chuckawall	22.03	323	⇓P	P	06 00 47.1 +0.5
	baz=22,SNR=11					
R24A	Sanders Place,	22.05	349	⇓P	P	06 00 46.1 -0.6
	baz=22,SNR=14					
V15A	Kaibab Nationa	22.06	333	⇑P	P	06 00 47.7 +0.8
	baz=22,SNR=11					
BAR	Barrett	22.07	320	eP	P	06 00 47.2 +0.2
	25nm,1.1s,mb4.5					
S21A	Coal Bank Pass	22.13	343	⇑P	P	06 00 47.6 0.0
	baz=22					
CBKS	Cedar Bluff	22.15	0	eP	P	06 00 46.7 -1.1
	29nm,0.9s,mb4.7					
IRM	Iron Mountain	22.23	325	⇑P	P	06 00 49.2 +0.5
	baz=22,SNR=15					
WVT	Waverly	22.24	27	eP	P	06 00 46.5 -2.3
	11nm,0.8s,mb4.3					
W13A	Hualapai Mount	22.28	328	⇓P	P	06 00 49.9 +0.7
	baz=22					
T18A	Mexican Hat	22.30	339	⇓P	P	06 00 49.6 +0.2
	baz=22,SNR=43					
V14A	Boquillas Ranc	22.33	331	⇑P	P	06 00 50.4 +0.7
	baz=22,SNR=23					
SWET	Sewanee	22.37	31	eP	P	06 00 48.5 -1.7
GOGA	Godfrey	22.37	38	eP	P	06 00 49.1 -1.1
	42nm,0.9s,mb4.9					
S20A	Disappointment	22.45	342	⇑P	P	06 00 51.0 0.0
	baz=22,SNR=16					
T17A	Navajo Res., N	22.51	337	⇓P	P	06 00 53.5 +1.8
	baz=22,SNR=22					
Q25A	Bedland, Calha	22.58	351	⇓P	P	06 00 51.4 -1.0
	baz=22					
PFO	Pinyon Flat Ob	22.58	322	eP	P	06 00 51.9 -0.6
	35nm,1.3s,mb4.6					
BELC	Belle Mtn. Jos	22.59	323	⇓P	P	06 00 53.2 +0.7
	baz=22,SNR=30					
S19A	Harvey Farm, M	22.60	341	P	P	06 00 52.2 -0.5
	baz=22,SNR=22					
KSU1	Kansas State U	22.62	7	eP	P	06 00 54.1 +1.3
	14nm,0.8s,mb4.4					
U15A	North Rim	22.63	333	⇑P	P	06 00 53.7 +0.8
	baz=22,SNR=13					
R21A	Cimarron	22.73	344	⇑P	P	06 00 53.9 0.0
	baz=22,SNR=7.2					
T16A	Glen Canyon Da	22.77	335	⇓P	P	06 00 55.1 +0.6
	baz=23,SNR=5.0					
R20A	Redvale	22.78	343	P	P	06 00 54.2 -0.3
	baz=23,SNR=24					
PV01	Paradox Valley	22.79	342	eP	P	06 00 54.3 -0.3
	771nm,1.0s					
S18A	Hurst Farm, Bl	22.84	339	⇑P	P	06 00 55.1 0.0
	baz=23,SNR=15					
Q23A	Hartsel	22.84	348	P	P	06 00 54.3 -0.8
	baz=23,SNR=14					
FVM	French Village	22.90	20	eP	P	06 00 53.8 -2.0
	13nm,0.9s,mb4.4					
LDFC	Landfair	22.90	326	eP	P	06 00 57.1 +1.3
	68nm,1.2s,mb5.0					
V13A	Grand Canyon W	22.93	330	⇓P	P	06 00 56.8 +0.7
	baz=23,SNR=8.6					
GMRC	Granite Mounta	22.97	325	⇓P	P	06 00 56.7 +0.2
	baz=23,SNR=13					
U14A	Mt Trumbull	23.01	332	⇑P	P	06 00 57.5 +0.5
	baz=23,SNR=9.5					
MURC	Murrieta	23.02	321	⇑P	P	06 00 57.1 0.0
	baz=23					
Q22A	Crested Butte,	23.04	346	⇓P	P	06 00 57.4 +0.2
	baz=23,SNR=7.7					
SIUC	Southern Illin	23.07	22	eP	P	06 00 56.3 -1.2
	21nm,0.8s,mb4.6					
PV04	Paradox Valley	23.13	342	eP	P	06 00 58.0 -0.2
R19A	Curley Farm, L	23.14	341	⇓P	P	06 00 57.3 -1.0
	baz=23,SNR=19					
PV10	Paradox Valley	23.15	341	eP	P	06 00 56.9 -1.5
	197nm,0.8s,mb5.6					
T15A	Red Dirt Ranch	23.16	334	P	P	06 00 58.6 +0.1
	baz=23,SNR=22					
V12A	Nelson	23.26	328	⇑P	P	06 01 00.0 +0.4
	baz=23,SNR=19					
CPCT	Cooper Cave	23.27	33	eP	P	06 00 58.6 -1.1
U13A	Pakoon Wash	23.37	330	⇓P	P	06 01 01.1 +0.3
	baz=23,SNR=22					
HEC	Hector,Ludlow	23.38	324	⇑P	P	06 01 01.2 +0.3
	baz=23,SNR=14					
R18A	Canyonlands Na	23.43	340	⇑P	P	06 01 00.9 -0.5
	baz=23,SNR=24					
S16A	Weppner Ranch,	23.45	336	⇓P	P	06 01 01.0 -0.6
	baz=23,SNR=17					
Q20A	Ridgley Place,	23.47	343	P	P	06 01 01.1 -0.7
	baz=23,SNR=11					
T14A	Hurricane	23.50	333	⇑P	P	06 01 02.1 -0.1
	baz=23,SNR=5.5					
V11A	Goodsprings	23.65	327	⇑P	P	06 01 03.5 -0.1
	baz=24,SNR=9.9					
U12A	Valley of Fire	23.66	329	⇑P	P	06 01 04.0 +0.3
	baz=24,SNR=12					
ISCO	Idaho Springs	23.67	349	P	P	06 01 03.0 -0.8
	baz=24,SNR=18					
ISCO	Idaho Springs	23.67	349	eP	P	06 01 02.9 -0.8
	14nm,0.9s,mb4.4					
P22A	Eagle	23.70	347	⇓P	P	06 01 03.2 -0.8
	baz=24,SNR=14					
S15A	Panguitch	23.72	335	P	P	06 01 05.4 +1.2
	baz=24,SNR=7.7					
R17A	Hanksville Air	23.74	339	P	P	06 01 04.1 -0.3
	baz=24,SNR=8.6					
Q19A	Hogan Spring (	23.75	342	⇓P	P	06 01 03.8 -0.8
	baz=24,SNR=16					
P21A	Newcastle	23.79	345	P	P	06 01 04.3 -0.5
	baz=24,SNR=12					
TKL	Tuckaleechee C	23.83	34	P	P	06 01 03.5 -1.8
	15nm,0.9s,mb4.4,baz=201,slow=9.9,SNR=13					
TKL	Tuckaleechee C	23.83	34	eP	P	06 01 04.1 -1.1
T13A	Saint George	23.84	331	⇑P	P	06 01 05.8 +0.5
	baz=24,SNR=30					
USIN	University of	23.87	24	eP	P	06 01 04.4 -1.2
	36nm,1.1s,mb4.7					
O24A	Longmont	23.89	350	⇓P	P	06 01 06.0 +0.2
	baz=24,SNR=7.9					
R16A	Teasdale	23.90	337	⇑P	P	06 01 06.3 +0.4
	baz=24,SNR=7.7					
T12A	Moapa	23.98	330	⇓P	P	06 01 06.8 +0.2
	baz=24,SNR=8.0					
GSC	Goldstone	23.99	324	⇓P	P	06 01 06.9 +0.1
	baz=24,SNR=9.7					
P20A	De Beque	24.01	344	⇓P	P	06 01 06.3 -0.5
	baz=24,SNR=8.0					
SHPR	Sheep Range	24.03	329	eP	P	06 01 07.0 -0.1
CCUT	Cedar City	24.03	333	eP	P	06 01 07.5 +0.4
	27nm,1.6s,mb4.4					
U11A	Corn Creek	24.07	328	⇓P	P	06 01 08.0 +0.5
	baz=24,SNR=7.7					
O23A	Lake Granby, G	24.12	349	⇑P	P	06 01 07.7 -0.2
	baz=24,SNR=16					
S14A	Cedar City	24.12	334	⇑P	P	06 01 08.8 +0.9
	baz=24,SNR=8.6					
R15A	Junction	24.14	336	⇓P	P	06 01 08.6 +0.6
	baz=24,SNR=10					
Q18A	Rafter H Ranch	24.16	340	⇓P	P	06 01 07.9 -0.4
	baz=24,SNR=8.3					
O22A	Kremmling	24.20	348	P	P	06 01 08.0 -0.6
	baz=24,SNR=29					
NHSC	New Hope	24.24	44	eP	P	06 01 09.8 +0.7
	145nm,1.2s,mb5.3					
ARUT	Antelope Range	24.26	333	eP	P	06 01 09.6 +0.4
	21nm,0.8s,mb4.6					
S13A	Holt Ranch, En	24.28	332	P	P	06 01 09.8 +0.5
	baz=24,SNR=11					
SRU	San Rafael	24.30	340	P	P	06 01 09.1 -0.3
	baz=24,SNR=21					
SRU	San Rafael	24.30	340	eP	P	06 01 09.2 -0.3
	17nm,0.8s,mb4.5					
P19A	Cripple Cowboy	24.30	343	P	P	06 01 09.5 0.0
	baz=24,SNR=17					
JSC	Jenkinsville	24.30	40	eP	P	06 01 09.1 -0.5
Q16A	Castle Valley	24.35	338	P	P	06 01 10.2 +0.2
	baz=24,SNR=21					
OGNE	Ogallala	24.35	356	eP	P	06 01 10.4 +0.5
	265nm,2.4s,mb5.2					
MSU	Marysvale	24.36	336	eP	P	06 01 10.8 +0.7
EDW2	Edwards Air Fo	24.38	322	P	P	06 01 10.3 +0.1
	baz=24,SNR=5.9					
U10A	Ash Meadows, A	24.56	327	⇓P	P	06 01 12.7 +0.7
	baz=24					

baz=25,SNR=33
BLO Bloomington 25.37 25 eP P 06 01 18.1 -1.1
16nm,1.0s,mb4.5
M22A Cedar Creek Ra 25.40 348 ⇓P P 06 01 20.3 +0.7
baz=25,SNR=7.1
MPU Maple Canyon 25.49 339 eP P 06 01 20.7 +0.4
20nm,1.1s,mb4.6
N19A John Jarvie Ra 25.52 344 P P 06 01 20.6 -0.1
baz=25,SNR=14
GRAC Grapevine Rang 25.55 326 P P 06 01 21.5 +0.6
baz=25,SNR=12
NLU North Lily Min 25.59 338 eP P 06 01 21.9 +0.6
12nm,0.9s,mb4.4
HDIL Hopedale 25.60 19 eP P 06 01 20.1 -1.3
22nm,0.7s,mb4.8
O16A Springville 25.61 339 ⇓P P 06 01 21.6 +0.2
baz=25
P14A Drum Mountains 25.64 336 ⇑P P 06 01 22.6 +0.9
baz=26,SNR=32
VES Vestal, Richgr 25.68 322 ⇓P P 06 01 22.7 +0.5
baz=26,SNR=9.9
R11A Troy Canyon, C 25.69 331 P P 06 01 22.6 +0.4
baz=26,SNR=31
DAU Daniels Canyon 25.71 340 eP P 06 01 23.0 +0.6
N18A Larsen Ranch, 25.74 343 ⇓P P 06 01 22.6 0.0
baz=26
M21A Separation Pea 25.76 347 ⇓P P 06 01 24.1 +1.4
baz=26,SNR=7.0
RWWY Rawlins 25.80 347 eP P 06 01 24.1 +1.0
18nm,0.8s,mb4.7
M20A Sweetwater, Wa 25.83 346 ⇓P P 06 01 23.8 +0.3
baz=26
SCIA State Center 25.89 11 eP P 06 01 24.4 +0.5
27nm,1.1s,mb4.7
L23A Garrett 25.93 350 P P 06 01 25.1 +0.7
baz=26,SNR=6.9
JLU Jordanelle 25.95 340 eP P 06 01 24.4 -0.1
11nm,1.3s,mb4.2
L22A Ellis Ranch, M 25.98 349 ⇑P P 06 01 25.9 +1.2
baz=26
N17A Moffit Pass 26.05 341 ⇑P P 06 01 26.0 +0.5
baz=26,SNR=13
DUG Dugway 26.07 337 ⇓P P 06 01 26.3 +0.7
baz=26,SNR=20
M19A Rock Springs 26.09 344 ⇑P P 06 01 25.7 0.0
baz=26
CTU Camp Tracy 26.13 339 eP P 06 01 26.8 +0.7
13nm,0.9s,mb4.5
L20A Wamsutter 26.36 346 ⇑P P 06 01 28.4 +0.2
baz=26,SNR=9.8
MTUM Tungsten Hills 26.45 325 eP P 06 01 30.0 +0.9
M17A Scullys Gap (B 26.49 342 ⇑P P 06 01 29.6 +0.3
baz=26,SNR=16
K22A Casper 26.60 349 ⇓P P 06 01 30.5 +0.2
baz=26
ELN Prospectdale 26.63 36 eP P 06 01 30.5 -0.3
M16A Huntsville 26.65 340 ⇓P P 06 01 31.0 +0.2
baz=26,SNR=9.0
L19A Farson 26.70 344 ⇓P P 06 01 31.7 +0.4
baz=26,SNR=9.1
K21A Alcova 26.72 348 ⇑P P 06 01 31.7 +0.2
baz=26,SNR=12
BGU Big Grassy Mou 26.79 338 eP P 06 01 32.0 -0.1
11nm,0.9s,mb4.4
BLA Blacksburg 26.81 36 eP P 06 01 32.0 -0.3
56nm,0.8s,mb5.2
HWUT Hardware Ranch 26.89 340 eP P 06 01 32.8 -0.2
22nm,0.9s,mb4.7
K20A Yellowstone Ra 26.98 346 ⇑P P 06 01 33.1 -0.7
baz=27,SNR=6.5
VWCC Virginia Weste 27.09 37 eP P 06 01 34.6 -0.2
NVAR Mina Array Bea 27.11 327 P P 06 01 34.3 -0.7
9.9nm,0.8s,mb4.4,baz=154,slow=9.2,SNR=30
ECSD EROS Data Cent 27.21 5 eP P 06 01 34.6 -1.2
18nm,1.1s,mb4.5
J22A Midwest 27.33 350 ⇓P P 06 01 36.8 -0.1
baz=27
BW06 Boulder Array 27.38 344 ⇑P P 06 01 37.2 -0.2
baz=27,SNR=21
BW06 Boulder Array 27.38 344 eP P 06 01 36.6 -0.7
11nm,0.9s,mb4.4
PDAR Pinedale Array 27.38 344 P P 06 01 36.8 -0.6
11nm,0.9s,mb4.4,baz=146,slow=9.3,SNR=79
PDAR LR LR 06 13 34.5
comp=Z,276nm,20.4s,MS3.8,baz=356,slow=39
K18A Toltan Ranch, 27.38 344 ⇓P P 06 01 37.6 +0.2
baz=27,SNR=7.9
J21A Lysite 27.44 348 ⇓P P 06 01 38.0 0.0
baz=27,SNR=6.3
HVU Hansel Valley 27.45 339 eP P 06 01 38.3 +0.3
12nm,0.9s,mb4.4
JFWS Jewell Farm 27.51 15 eP P 06 01 36.8 -1.8
8.3nm,0.8s,mb4.4
L15A Malad City 27.52 340 ⇑P P 06 01 38.6 0.0
baz=27,SNR=28
J20A Shoshoni 27.58 347 P P 06 01 39.2 0.0
baz=27,SNR=17
J19A Crowheart 27.72 346 ⇑P P 06 01 39.9 -0.5
baz=28,SNR=6.8
K17A Gardner Place, 27.73 342 P P 06 01 40.5 -0.1
baz=28,SNR=10
WAKR Walker 27.76 326 eP P 06 01 41.6 +0.7
ACSO Alum Creek Sta 27.77 29 eP P 06 01 40.3 -0.7
54nm,1.9s,mb4.9
AHID Auburn Hatcher 27.80 342 eP P 06 01 41.0 -0.1
9.1nm,1.0s,mb4.4
L14A Malta 27.84 338 ⇓P P 06 01 41.9 +0.4
baz=28,SNR=35
I21A Big Trails, Te 27.86 349 ⇑P P 06 01 41.5 -0.2
baz=28,SNR=13
J18A Kendall Valley 27.91 344 ⇓P P 06 01 42.0 -0.2
baz=28,SNR=21
CMB Columbia Colle 27.95 324 eP P 06 01 41.8 -0.8
12nm,1.3s,mb4.4
K16A Soda Springs 28.01 341 P P 06 01 43.3 +0.3
baz=28,SNR=6.3
I20A Worland 28.16 347 ⇓P P 06 01 44.7 +0.3
baz=28,SNR=11
K15A Arbon 28.17 340 P P 06 01 44.7 +0.2
baz=28,SNR=32
J17A Brown Place, J 28.24 343 ⇓P P 06 01 45.2 +0.2
baz=28,SNR=8.4
K14A Jones Ranch, D 28.27 339 ⇑P P 06 01 45.5 +0.2
baz=28,SNR=26
REDW Red Top Meadow 28.28 343 eP P 06 01 45.2 -0.2
7.9nm,0.9s,mb4.3
SNOW Snow King Moun 28.34 343 eP P 06 01 46.3 +0.3
103nm,2.3s,mb5.0
RRI2 Red Ridge 28.40 342 eP P 06 01 46.4 -0.1
11nm,1.1s,mb4.4
J16A Bone 28.42 342 P P 06 01 46.6 0.0
baz=28,SNR=24
TPAW Teton Pass 28.42 343 eP P 06 01 46.9 +0.2
21nm,1.4s,mb4.6
I19A Meeteetse 28.43 346 ⇑P P 06 01 47.1 +0.3
baz=28,SNR=8.1
LOHW Long Hollow 28.44 344 eP P 06 01 46.7 -0.2
7.8nm,0.8s,mb4.4
WCN Washoe City 28.51 326 eP P 06 01 47.8 +0.3
6.9nm,0.9s,mb4.4
H21A Big Horn, Sher 28.60 349 ⇓P P 06 01 48.0 -0.3
baz=28,SNR=8.8
MOOW Moose Ponds 28.61 343 eP P 06 01 47.6 -0.7
7.3nm,0.9s,mb4.4
H20A Greybull 28.65 348 ⇓P P 06 01 48.6 -0.1
baz=28,SNR=7.7
I17A Pilgrim Ck. 28.72 344 ⇑P P 06 01 49.7 +0.4
baz=28
J15A Blackfoot 28.78 341 P P 06 01 49.9 0.0
baz=29,SNR=26
IMW Indian Meadow 28.80 343 eP P 06 01 50.1 +0.1
8.6nm,0.9s,mb4.5
H19A Powell 29.04 347 P P 06 01 52.5 +0.3
baz=29,SNR=6.5
J14A Carey 29.07 339 ⇓P P 06 01 52.5 +0.1
baz=29,SNR=14
H18A Shoshone NF, C 29.20 346 P P 06 01 53.4 -0.2
baz=29,SNR=7.7
G21A Lodge Grass 29.21 349 P P 06 01 53.4 -0.3
baz=29,SNR=5.7
J13A Cove Ranch, Pi 29.36 338 ⇓P P 06 01 55.0 0.0
baz=29,SNR=13
SDV Santo Domingo 29.52 101 eP P 06 01 58.6 +1.8
RLMT Red Lodge 29.53 346 eP P 06 01 53.1 -3.4
29nm,1.7s,mb4.7
I14A Mackay 29.59 340 P P 06 01 57.5 +0.4
baz=29,SNR=14
HLID Hailey 29.59 338 P P 06 01 57.3 +0.2
baz=29,SNR=11
HLID Hailey 29.59 338 eP P 06 01 57.1 0.0
8.6nm,1.0s,mb4.4
F21A Absaloka Mine, 29.78 350 ⇑P P 06 01 57.8 -0.9
baz=30,SNR=9.3
I13A Wildhorse Cree 29.80 339 ⇓P P 06 01 59.5 +0.6
baz=30,SNR=7.4
F20A Billings 29.94 348 ⇑P P 06 01 59.8 -0.4
baz=30,SNR=13
MFID Camas Ranch 29.98 336 ⇑P P 06 02 00.5 -0.1
baz=30,SNR=9.9
I12A Atlanta 30.05 338 ⇓P P 06 02 01.6 +0.5
baz=30,SNR=7.4
G17A Pierce Place, 30.07 345 ⇓P P 06 02 02.5 +1.2
baz=30,SNR=9.3
F19A Roth Farm, Mol 30.15 347 ⇓P P 06 02 01.5 -0.6
baz=30
H14A Leadore 30.17 341 ⇑P P 06 02 03.2 +1.0
baz=30,SNR=25
MCMT McKenzie Canyo 30.20 342 eP P 06 02 03.6 +1.2
3.6nm,0.8s,mb4.2
G16A Moss Hill, Enn 30.26 343 ⇑P P 06 02 03.9 +0.9
baz=30,SNR=7.6
WVOR Wild Horse Val 30.35 332 eP P 06 02 03.4 -0.5
14nm,1.3s,mb4.5
SDMD Soldier's Deli 30.36 37 eP P 06 02 02.5 -1.4
9.4nm,0.8s,mb4.6
F18A Big Timber 30.37 346 ⇑P P 06 02 03.6 -0.3
baz=30,SNR=9.7
G15A Dillon 30.40 342 ⇑P P 06 02 04.6 +0.3
baz=30,SNR=9.2
H13A Challis 30.41 340 ⇓P P 06 02 04.9 +0.5
baz=30,SNR=16
E21A Keefer Ranch, 30.47 350 ⇓P P 06 02 04.3 -0.5
baz=30,SNR=21
LAO LASA Array 30.48 351 ⇑P P 06 02 04.6 -0.3
baz=30,SNR=6.1
LAO LASA Array 30.48 351 eP P 06 02 04.1 -0.8
13nm,0.8s,mb4.7
F17A Fitzpatrick Pl 30.59 345 ⇑P P 06 02 06.5 +0.6
baz=30,SNR=8.8
BOZ Bozeman (W) 30.60 344 ⇑P P 06 02 06.0 0.0
baz=30,SNR=9.7
BOZ Bozeman (W) 30.60 344 eP P 06 02 05.7 -0.3
28nm,1.8s,mb4.8
H12A Diamond D Ranc 30.61 339 ⇑P P 06 02 06.6 +0.6
baz=30,SNR=19
DLMT Dillon 30.61 342 eP P 06 02 06.5 +0.4
20nm,0.9s,mb4.9
E20A Meyer Farm, Mu 30.61 349 ⇓P P 06 02 05.8 -0.3
baz=30,SNR=18
SSPA Standing Stone 30.62 34 eP P 06 02 06.0 -0.3
14nm,1.0s,mb4.8
D24A Glendive 30.67 354 ⇑P P 06 02 06.5 0.0
baz=30
E19A Rath Farm, Rou 30.70 348 P P 06 02 06.8 -0.1
baz=30,SNR=20
MOD Modoc 30.72 329 eP P 06 02 07.5 +0.4
8.8nm,0.9s,mb4.6
F16A Kennard Place, 30.73 344 ⇓P P 06 02 07.4 +0.3
baz=30,SNR=12
G14A Jackson 30.76 341 P P 06 02 07.7 +0.3
baz=31,SNR=33
G13A Cobalt 30.88 340 ⇑P P 06 02 08.9 +0.4
baz=31,SNR=19
D22A Cohagen 30.93 352 ⇓P P 06 02 08.6 -0.3
baz=31
D21A La Casta Ranch 30.96 351 ⇓P P 06 02 09.1 -0.1
baz=31,SNR=15
LRM Limekiln Ridge 30.99 343 eP P 06 02 09.5 +0.1
F15A Butte 31.02 343 ⇑P P 06 02 10.1 +0.5
baz=31,SNR=16
J08A Circle Bar Ran 31.02 333 ⇑P P 06 02 10.1 +0.4
baz=31,SNR=7.2
MVL Millersville 31.04 37 eP P 06 02 09.7 -0.2
19nm,1.3s,mb4.8
E18A Harlowton 31.04 347 ⇓P P 06 02 09.7 -0.2
baz=31,SNR=9.1
C24A Savage 31.09 354 ⇓P P 06 02 10.2 -0.1
baz=31
E17A Martinsdale 31.16 345 ⇑P P 06 02 11.1 +0.2
baz=31,SNR=15
D20A Manuel Ranch, 31.18 349 ⇑P P 06 02 10.8 -0.3
baz=31,SNR=10
F14A Wisdom 31.25 342 ⇓P P 06 02 11.8 +0.1
baz=31,SNR=6.7
G12A Big Creek, Yel 31.28 339 ⇑P P 06 02 12.3 +0.4
baz=31,SNR=20
D19A Cripps Ranch, 31.39 348 ⇓P P 06 02 12.9 -0.1
baz=31,SNR=26
E16A East Helena 31.43 344 ⇑P P 06 02 13.5 +0.1
baz=31,SNR=8.0
C23A Lambert 31.44 353 ⇑P P 06 02 13.6 +0.2
baz=31
C22A Vida 31.47 352 ⇑P P 06 02 13.5 -0.1
baz=31
F13A Darby 31.53 341 ⇓P P 06 02 14.3 +0.2
baz=31,SNR=19
E15A Deer Lodge 31.59 343 P P 06 02 14.8 0.0
baz=31,SNR=14
D18A Linhart Farms, 31.61 347 ⇓P P 06 02 15.0 +0.1
baz=31,SNR=39
K05A Summer Lake 31.63 330 ⇑P P 06 02 15.6 +0.5
baz=32
HRY Holter Researc 31.64 344 eP P 06 02 14.9 -0.2
ATAH Atahualpa 31.75 136 LR LR 06 11 20.8
comp=Z,55nm,18.2s,MS3.3,baz=347,slow=29
C20A Veseth Ranch, 31.76 350 P P 06 02 16.1 -0.1
baz=32,SNR=9.3
D17A Six Diamond Ra 31.77 346 ⇓P P 06 02 16.3 +0.1
baz=32,SNR=11
F12A Elk City 31.80 339 ⇓P P 06 02 16.9 +0.3
baz=32,SNR=32
AGMN Agassiz Nation 31.81 5 eP P 06 02 15.5 -1.1
10nm,0.8s,mb4.7
E14A Clinton 31.83 342 ⇓P P 06 02 17.1 +0.2
baz=32,SNR=8.2
C19A Slack Wire Ran 31.97 348 ⇑P P 06 02 18.0 0.0
baz=32,SNR=22
DGMT Dagmar 32.00 355 ⇓P P 06 02 18.0 -0.3
baz=32,SNR=9.0
DGMT Dagmar 32.00 355 eP P 06 02 17.8 -0.5
32nm,0.9s,mb5.2
I07A Izee 32.05 333 ⇓P P 06 02 18.3 -0.5
baz=32,SNR=7.6
E13A Victor 32.06 341 ⇓P P 06 02 18.9 0.0
baz=32,SNR=23
B23A Brockton 32.07 354 ⇑P P 06 02 18.9 0.0
baz=32
D15A Lincoln 32.13 344 ⇓P P 06 02 19.5 +0.1
baz=32,SNR=6.7
CHMT Chamberlain Mo 32.21 343 eP P 06 02 20.1 -0.1
C17A Wharram Farm, 32.24 346 ⇑P P 06 02 20.5 +0.1
baz=32,SNR=34
MSO Missoula 32.34 342 ⇓P P 06 02 21.1 -0.1
baz=32,SNR=7.0
MSO Missoula 32.34 342 eP P 06 02 21.2 -0.1
6.4nm,0.9s,mb4.5
EGMT Eagleton 32.39 348 ⇑P P 06 02 21.6 -0.1
baz=32
EGMT Eagleton 32.39 348 eP P 06 02 21.6 -0.1
24nm,1.3s,mb4.9
D14A Greenough 32.44 343 ⇓P P 06 02 21.8 -0.3
baz=32,SNR=11
B20A Solberg Farm, 32.47 350 ⇑P P 06 02 22.4 0.0
baz=32
SLMT Seeley Lake 32.58 343 eP P 06 02 23.0 -0.4
C16A Fuhringer Ranc 32.63 345 ⇑P P 06 02 23.7 -0.1
baz=32,SNR=7.3
B19A Brinkman Farms 32.64 349 ⇓P P 06 02 23.9 0.0
baz=32,SNR=29
F10A Beach Ranch, E 32.69 337 P P 06 02 24.2 -0.2
baz=32,SNR=35
D13A Huson 32.73 341 ⇓P P 06 02 24.4 -0.3
baz=32,SNR=32
BINY Binghamton 32.74 34 eP P 06 02 22.8 -2.1
14nm,1.0s,mb4.8
G08A Pilot Rock 32.79 335 ⇑P P 06 02 24.8 -0.4
baz=33,SNR=16
C15A Salmond Ranch, 32.83 344 ⇓P P 06 02 25.3 -0.3
baz=33
A21A Bergtoll Ranch 32.83 351 ⇓P P 06 02 25.3 -0.2
baz=33
B17A L&G Farms, Che 32.87 347 ⇓P P 06 02 25.6 -0.3
baz=33,SNR=15
A20A Cobblestone Ra 32.88 350 ⇑P P 06 02 25.8 -0.1
baz=33,SNR=12
SWMT Swartz Lake 32.97 342 eP P 06 02 26.1 -0.6
A19A Klindworth Far 33.06 349 ⇑P P 06 02 27.7 +0.1
baz=33,SNR=26
A18A Metzger Ranch, 33.26 348 P P 06 02 28.9 -0.5
baz=33,SNR=9.4
B15A Bradely Ranch, 33.31 345 ⇑P P 06 02 29.2 -0.6
baz=33,SNR=6.3
A17A Triple J Farms 33.46 347 ⇓P P 06 02 30.8 -0.3
baz=33,SNR=32
KEBM Edson Butte 33.48 327 eP P 06 02 32.9 +1.5
50nm,1.1s,mb5.3
A16A West Butte Ran 33.67 346 ⇓P P 06 02 32.6 -0.3
baz=34
H04A Detroit Lake 33.73 331 ⇓P P 06 02 33.1 -0.4
baz=34,SNR=13
ULM Lac du Bonnet 33.74 5 P P 06 02 30.8 -2.7
17nm,0.9s,mb5.0,baz=188,slow=9.4,SNR=14
ULM LR LR 06 20 02.6
comp=Z,8.9nm,19.2s,baz=336,slow=43
ULM Lac du Bonnet 33.74 5 P P 06 02 30.8 -2.7
ULM LR LR 06 20 02.6
B13A Whitefish 33.88 342 ⇓P P 06 02 34.8 +0.1
baz=34,SNR=9.9
A15A Johnson Ranch, 33.97 345 ⇑P P 06 02 35.4 -0.1
baz=34,SNR=6.3
HOOD Mount Hood Mea 33.97 332 eP P 06 02 35.5 -0.1
19nm,0.8s,mb5.1
A14A Double T Ranch 34.14 344 ⇓P P 06 02 36.9 -0.1
baz=34,SNR=8.0
B12A Libby 34.30 341 ⇑P P 06 02 38.8 +0.4
baz=34,SNR=5.6
WALA Waterton Lakes 34.35 344 eP P 06 02 38.4 -0.4
0.4nm,0.9s
NEW Newport 34.61 340 eP P 06 02 40.8 -0.3
6.6nm,1.0s,mb4.5
C09A Chrisman Ranch 34.62 338 ⇑P P 06 02 40.9 -0.2
baz=34
A12A Yaak River Ran 34.73 342 ⇓P P 06 02 42.4 +0.2
baz=34,SNR=10
NCB Newcomb 34.90 33 eP P 06 02 39.5 -4.1
68nm,0.8s,mb5.6
LON Longmire 35.15 334 eP P 06 02 45.8 +0.1
8.5nm,0.8s,mb4.7
ETW Entiat 35.23 336 eP P 06 02 46.5 +0.1
B08A Colville Reser 35.47 338 P P 06 02 48.2 -0.3
baz=35,SNR=7.0
GNW Green Mountain 36.22 333 eP P 06 02 54.2 -0.7
5.3nm,0.8s,mb4.5
JCW Jim Creek 36.34 335 eP P 06 02 53.8 -2.1
RPW Rockport 36.38 336 eP P 06 03 01.6 +5.4
FFC Flin Flon 38.10 358 eP P 06 03 09.2 -1.6
25nm,0.8s,mb5.0
LPAZ La Paz 45.26 135 P P 06 04 10.3 +0.4
2.2nm,1.2s,mb3.9,baz=318,slow=10.0,SNR=3.8
LPAZ LR LR 06 21 25.2
comp=Z,71nm,18.7s,MS3.6,baz=77,slow=34
LPAZ La Paz 45.26 135 eP P 06 04 11.9 +2.0
26nm,2.4s,mb4.6
SCHQ Schefferville 45.87 26 P P 06 04 12.6 -1.8
16nm,0.9s,mb5.0,baz=234,slow=5.7,SNR=9.2
SCHQ LR LR 06 27 09.7
comp=Z,87nm,18.8s,MS3.7,baz=110,slow=41
SCHQ Schefferville 45.87 26 eP P 06 04 13.7 -0.6
279nm,2.5s,mb5.8
YKA Yellowknife Ar 47.02 351 P P 06 04 21.4 -1.8
4.5nm,0.7s,mb4.5,baz=158,slow=7.2,SNR=20
YKA LR LR 06 24 42.5
comp=Z,12nm,21.0s,baz=105,slow=37
YKA Yellowknife Ar 47.02 351 P P 06 04 21.4 -1.8
YKA LR LR 06 24 42.5
RKT Rikitea 52.28 222 eT 07 01 21.5
8.8nm,0.3s
DAWY Dawson 54.54 340 eP P 06 05 19.4 -0.5
MENT Mentasta 55.34 337 eP P 06 05 25.6 -0.1
EGAK Eagle 55.59 340 eP P 06 05 26.4 -1.1
7.3nm,1.0s,mb4.7
DOT Dot Lake 55.89 338 eP P 06 05 30.3 +0.6
100nm,1.6s,mb5.6
INK Inuvik 55.94 346 eP P 06 05 28.6 -1.3
9.0nm,1.0s,mb4.8
PAX Paxson 56.02 337 eP P 06 05 30.4 -0.2
33nm,1.8s,mb5.1
SML Sawmill 56.52 335 eP P 06 05 34.3 +0.1
7.0nm,1.5s,mb4.5
CFAA Coronel Fontan 56.73 148 P P 06 05 36.3 +0.2
0.6nm,1.1s,mb3.5,baz=331,slow=7.0,SNR=6.7
PMR Palmer 56.74 334 eP P 06 05 34.9 -0.8
9.1nm,1.0s,mb4.8
PMOR Pomariorio Ree 56.82 239 eT 07 07 00.5
6.6nm,0.2s
ILAR Eielson Array 57.55 338 P P 06 05 40.2 -1.2
3.6nm,0.9s,mb4.4,baz=150,slow=4.9,SNR=33
ILAR LR LR 06 31 54.1
comp=Z,100nm,18.7s,MS4.0,baz=71,slow=38
MCK McKinley 57.74 337 eP P 06 05 42.3 -0.5
6.8nm,0.9s,mb4.7
RSO Redoubt South 57.78 332 eP P 06 05 42.7 -0.4
TRF Thorofare Moun 58.12 336 eP P 06 05 45.2 -0.3
21nm,0.9s,mb5.2
PPT Papeete 59.54 238 eLR LR 06 23 18.7
110nm,25.0s
PPT Papeete 59.54 238 LR LR 06 27 33.1
comp=Z,82nm,18.1s,MS3.9,baz=117,slow=32
TTA Tatalina 60.21 334 eP P 06 05 58.1 -1.9
BDFB Brasilia 60.38 119 P P 06 06 00.8 -1.0
5.2nm,1.0s,mb4.5,baz=248,slow=9.9,SNR=4.3
TBI Tubuai 62.62 232 eLR LR 06 24 41.6
123nm,27.0s
TBI eT 07 14 17.4
4.5nm,0.3s
PLCA Paso Flores 63.20 155 LR LR 06 26 05.0
comp=Z,75nm,18.5s,MS3.9,baz=253,slow=29
SUMG Summit 65.89 17 eP P 06 06 37.7 +0.2
269nm,3.0s
SUMG Summit 65.89 17 iP P 06 06 37.3 -0.3
7.8nm,0.9s,mb4.7
MTE Manteigas 81.20 51 eP P 06 08 08.0 -0.3
27nm,1.6s,mb4.9
EVO Evora 81.31 52 eP P 06 08 07.1 -1.8
12nm,0.8s,mb4.6
EVO Evora 81.31 52 eP P 06 08 08.8 -0.1
15nm,2.0s,mb4.6
PMRV Marv??o 81.56 51 eP P 06 08 10.1 -0.1
19nm,1.9s,mb4.7
GRR Gorron 83.63 41 eP P 06 08 20.6 -0.2
17nm,0.7s,mb5.0
GRR Gorron 83.63 41 eP P 06 08 20.6 -0.2
8.6nm,0.7s,mb5.0
FLN La Foliniere 83.76 41 eP P 06 08 21.0 -0.5
45nm,1.1s,mb5.2
FLN La Foliniere 83.76 41 eP P 06 08 21.0 -0.5
23nm,1.1s,mb5.2
ESDC Sonseca Array 84.05 51 P P 06 08 22.8 -0.3
1.5nm,0.7s,mb4.2,baz=299,slow=4.9,SNR=9.1
PETK Petropavlovsk- 84.14 324 LR LR 06 47 15.0
comp=Z,42nm,18.4s,MS3.9,baz=165,slow=37
NOA NORSAR Array B 85.44 27 LR LR 06 45 03.8
comp=Z,54nm,18.6s,MS4.0,baz=295,slow=35
ETSF Etsaut 85.53 47 eP P 06 08 29.8 -0.8
16nm,0.9s,mb5.0
ETSF Etsaut 85.53 47 eP P 06 08 29.8 -0.8
7.8nm,0.9s,mb4.9
LFF La Frestale 85.77 44 eP P 06 08 31.3 -0.4
23nm,0.7s,mb5.2
LFF La Frestale 85.77 44 eP P 06 08 31.3 -0.4
11nm,0.7s,mb5.2
ARCES ARCESS Array B 85.98 17 LR LR 06 49 12.0
comp=Z,74nm,21.8s,MS4.0,baz=263,slow=37
EPF Esparros 86.11 46 eP P 06 08 32.2 -1.2
RJF Les Rejaudoux 86.16 44 eP P 06 08 33.0 -0.6
BAIF Baives 86.21 39 eP P 06 08 33.7 -0.1
TCF Toulx Ste Croi 86.29 43 eP P 06 08 33.5 -0.7
6.4nm,0.7s,mb4.6
TCF Toulx Ste Croi 86.29 43 eP P 06 08 33.5 -0.7
3.2nm,0.7s,mb4.7
AVF Avril sur Loir 86.85 42 eP P 06 08 36.0 -1.0
7.7nm,0.8s,mb4.7
AVF Avril sur Loir 86.85 42 eP P 06 08 36.0 -1.0
3.8nm,0.8s,mb4.7
SSF Saint Saulge 86.85 42 eP P 06 08 35.6 -1.4
12nm,0.9s,mb4.8
SSF Saint Saulge 86.85 42 eP P 06 08 35.6 -1.4
5.8nm,0.9s,mb4.8
LOR Lormes 87.00 41 eP P 06 08 36.7 -1.0
14nm,0.8s,mb5.0
LOR Lormes 87.00 41 eP P 06 08 36.7 -1.0
7.2nm,0.8s,mb5.0
SMF Signal de Mont 87.22 42 eP P 06 08 37.1 -1.7
MTLF Montolieu 87.30 46 eP P 06 08 39.0 -0.3

3.9nm,0.5s,mb4.6
MTLF Montolieu 87.30 46 *e*P **P 06 08 39.0 -0.3**
2.0nm,0.5s,mb4.6
SFTF Sexfontaines 87.40 40 *e*P **P 06 08 38.3 -1.3**
LASF Ste Croix 88.16 44 *e*P **P 06 08 42.8 -0.5**
7.3nm,0.8s,mb4.7
LMR La Mourre 90.22 44 *e*P **P 06 08 52.1 -0.9**
FINES FINESS Array B 91.26 23 LR LR 06 49 10.2
comp=Z,86nm,18.8s,MS4.2,baz=133,slow=35
GERES GERESS Array B 92.34 37 P **P 06 09 01.4 -1.3**
0.4nm,0.5s,mb4.0,baz=331,slow=4.9,SNR=3.7
GERES GERESS Array B 92.34 37 P **P 06 09 01.4 -1.3**
KEST Kesra 95.30 50 P **P 06 09 15.4 -1.2**
1.3nm,0.8s,mb4.4,baz=140,slow=8.3,SNR=3.9
AKASG Malin Array Be 99.55 30 LR LR 06 55 19.2
comp=Z,51nm,18.1s,MS4.1,baz=300,slow=36
HHC Hu-ho-hao-te 115.83 334 *e*PKP PKPdf 06 14 36.5 +1.2
HHC PP PP 06 15 43.3 +5.8
HHC PKS 06 18 12.3
HHC SKS SKSdf 06 21 43.8 -4.8
HHC SKKS SKKSac 06 22 31.5 -10
HHC SS SS 06 31 36.8 -1.9
HHC LR LR
comp=N,180nm,18.1s,MS4.8
HHC LR LR
comp=E,140nm,22.0s,MS4.8
HHC LR LR
comp=Z,130nm,19.5s,MS4.5
NJ2 Nanjing 119.03 323 *e*PKP PKPdf 06 14 43.1 +1.4
WMQ Urumqi 119.50 354 *e*PKP PKPdf 06 14 44.0 +1.8
LZH Lanzhou 123.01 337 *e*PKP PKPdf 06 14 48.5 -0.7
LZH LR LR
comp=N,130nm,18.2s
LZH LR LR
comp=Z,160nm,20.1s,MS4.7
CD2 Chengdu 127.59 334 *e*PKP PKPdf 06 14 56.6 -1.6
WRA Warramunga Arr 128.56 258 PKP PKPdf 06 14 58.5 -1.7
comp=Z,0.4nm,0.8s,baz=88,slow=2.4,SNR=4.3
GYA Guiyang 130.03 328 *e*Pdif Pdif 06 11 50.0 -0.9
GYA PKP PKPdf 06 15 01.3 -1.6
GYA sPKP 06 15 18.5
GYA PP PP 06 17 16.6 +2.8
GYA AMB AMB
comp=Z,80nm,7.8s
KMI Kunming 133.04 331 PKP PKPdf 06 15 07.9 -0.8
CMAR Chiang Mai Arr 140.55 331 PKP PKPdf 06 15 21.4 -1.3
comp=Z,1.0nm,0.5s,baz=343,slow=2.1,SNR=4.4

*DJA **22** 06:32:23.8°±09.0s×119°±44.2e, h28km±8km, MLv3.8/5*
*ISCJB **22** 06:32:25.2±0.8, 7°±83.5S±0°±05.0×119°±1.1E±0°±1.1, h39km±16km, mb3.9/9, Error ellipse: s-maj=17.5km s-min=7.2km az=16.0*
*IDC **22** 06:32:27.2±6.0, 7°±71.5S×119°±18.1E, h39km±56km, mb3.6/2, mb1 3.8/5, mb1mx3.5/21, mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=80.4km s-min=19.6km az=68.0*
ISC 22 06:32:25.5±1.8, 7°.86S±0°.04×119°.15E±0°.10, h28km±18km, n13, σ1.47/16, mb3.9/2, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.81**	**214**	P	**Pn**	**06 32 39.9**	**-1.2**
BMNI				S	**Sb**	**06 32 50.8**	**-0.8**
WSI	**Waingapu**	**2.12**	**148**	P	**Pn**	**06 32 52.5**	**-6.7**
BKSI	**Bulukumba**	**2.70**	**21**	P	**Pn**	**06 33 06.8**	**-0.3**
KAPI	**Kappang**	**2.89**	**12**	Pn	**Pn**	**06 33 08.6**	**-1.2**
2.5nm,0.3s,baz=185,slow=11,SNR=15							
KAPI				Sn	**Sn**	**06 33 41.4**	**-2.2**
10nm,0.3s,baz=189,slow=19,SNR=4.7							
KAPI	**Kappang**	**2.89**	**12**	P	**Pn**	**06 33 08.4**	**-1.4**
MTNI	**Mataram**	**3.05**	**255**	P	**Pn**	**06 33 06.9**	**-5.0**
KHKI	**Kahang-Kahang**	**3.54**	**262**	P	**Pn**	**06 33 20.8**	**+2.1**
SPSI	**Sidrap Palu**	**3.92**	**9**	P	**Pn**	**06 33 26.1**	**+2.2**
TTSI	**Tana Toraja**	**4.83**	**8**	P	**Pn**	**06 33 37.5**	**+1.1**
FITZ	**Fitzroy Crossi**	**11.98**	**149**	Pn	**Pn**	**06 35 17.5**	**+3.0**
0.1nm,0.3s,baz=319,slow=11,SNR=2.6							
FITZ				Sn	**Sn**	**06 37 25.7**	**-1.5**
0.3nm,0.3s,baz=169,slow=13,SNR=6.3							
WRA	**Warramunga Arr**	**18.99**	**131**	P	**Pn**	**06 36 46.3**	**+0.4**
0.2nm,0.3s,baz=304,slow=13,SNR=19							
ASAR	**Alice Springs**	**21.14**	**140**	P	**P**	**06 37 10.1**	**+1.6**
4.7nm,0.7s,mb4.0,baz=316,slow=8.7,SNR=37							
MKAR	**Makanchi Array**	**63.52**	**333**	P	**P**	**06 42 52.8**	**-0.5**
0.6nm,0.7s,mb3.8,baz=141,slow=7.1,SNR=5.1							

*IDC **22** 06:39:04.3±1.0, 5°.54S×146°.35E, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.9/17, mbtmp4.0/6, ML3.8/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/25, Error ellipse: s-maj=52.2km s-min=23.2km az=119.0*
*ISCJB **22** 06:39:08.0±1.2, 5°.6S±0°.1×146°.3E±0°.1, h33km, mb3.9/5, Error ellipse: s-maj=20.1km s-min=17.6km az=16.4*
*NEIC **22** 06:39:10.3±2.4, 5°.52S×146°.23E, h42km±19km, mb4.7/1, Error ellipse: s-maj=21.7km s-min=16.0km az=179.0*
ISC 22 06:39:09.5±1.2, 5°.5S±0°.1×146°.3E±0°.1, h35km, n15, σ0.63/11, mb3.9/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.99**	**167**	*e*Pn	**Pn**	**06 40 08.1**	**-0.1**
COEN	**Coen**	**8.94**	**200**	*e*Pn	**Pn**	**06 41 16.5**	**+0.3**
49nm,0.4s							
CTA	**Charters Tower**	**14.51**	**180**	Pn	**Pn**	**06 42 33.6**	**+1.3**
1.0nm,0.3s,baz=6.1,slow=14,SNR=8.4							
CTA				LR	LR	06 46 52.7	
comp=Z,69nm,20.4s,baz=226,slow=32							
CTAO	**Charters Tower**	**14.51**	**180**	*e*P	**Pn**	**06 42 36.7**	**+4.4**
5.1nm,0.5s							
KAKA	**Kakadu**	**15.40**	**241**	*e*P	**Pn**	**06 42 45.0**	**+0.6**
30nm,0.6s							
WRA	**Warramunga Arr**	**18.46**	**218**	P	**Pn**	**06 43 21.3**	**-1.3**
0.3nm,0.3s,baz=41,slow=12,SNR=14							
WRA				PcP	PcP	06 47 53.5	+1.5
0.1nm,0.3s,baz=26,slow=1.8,SNR=9.5							
ASAR	**Alice Springs**	**21.63**	**212**	P	**P**	**06 43 57.4**	**+0.5**
1.1nm,0.5s,mb3.5,baz=52,slow=8.4,SNR=17							
FITZ	**Fitzroy Crossi**	**23.72**	**236**	P	**P**	**06 44 18.3**	**-0.2**
3.0nm,0.5s,mb4.0,baz=64,slow=8.2,SNR=13							
FITZ				LR	LR	06 53 49.2	
comp=Z,126nm,21.2s,baz=264,slow=37							
STKA	**Stephens Creek**	**26.61**	**189**	P	**P**	**06 44 44.3**	**-0.3**
1.5nm,0.4s,mb3.9,baz=22,slow=11,SNR=8.8							
QSPA	**South Pole Qui**	**84.47**	**180**	P	**P**	**06 51 37.7**	**-0.4**
0.8nm,0.5s,mb4.1,baz=232,slow=1.3,SNR=7.6							
ILAR	**Eielson Array**	**85.31**	**23**	P	**P**	**06 51 42.8**	**+0.2**
1.1nm,0.7s,mb4.1,baz=254,slow=5.0,SNR=23							
PLCA	**Paso Flores**	**122.95**	**147**	PKP	PKPdf	06 58 03.5	+1.0
0.6nm,0.6s,baz=267,slow=3.7,SNR=3.6							
PLCA	**Paso Flores**	**122.95**	**147**	PKP	PKPdf	06 58 03.5	+1.0
TORD	**Torodi Ar. Bea**	**144.25**	**285**	PKP	PKPdf	06 58 41.9	-0.9
1.0nm,0.4s,baz=62,slow=4.3,SNR=5.6							
DBIC	**Dimbokro**	**151.25**	**274**	PKPbc	PKPbc	06 59 01.1	+0.7
2.0nm,0.5s,baz=31,slow=2.0,SNR=8.4							

DJA 22 06:40:22.2°±1.41S×122°.72E, h60km, MLv3.8/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.36**	**2**	P	Pn	06 40 45.5	+0.7
LUWI				S	Sn	06 41 06.6	+4.7
KDI	**Kendari**	**1.54**	**184**	P	Pn	06 40 48.9	+1.6
KDI				S	Sn	06 41 06.5	+0.2
MSSI	**Masamba**	**2.40**	**267**	P	Pn	06 40 59.7	+0.8
MSSI				S	Sn	06 41 30.4	+3.2
TTSI	**Tana Toraja**	**2.97**	**258**	P	Pn	06 41 07.6	+0.9
TTSI				S	Sn	06 41 40.4	-0.7
MRSI	**Marisa**	**2.97**	**345**	P	Pn	06 41 06.1	-0.7
SPSI	**Sidrap Palu**	**3.33**	**242**	P	Pn	06 41 12.7	+1.1
BKSI	**Bulukumba**	**3.88**	**222**	P	Pn	06 41 20.0	+0.8

*IDC **22** 06:45:16.7±1.0, 31°.25N×104°.09E, h0km, mb3.9/7, mb1 4.1/9, mb1mx3.9/25, mbtmp3.9/9, ML3.5/2, Error ellipse: s-maj=33.2km s-min=18.3km az=69.0*
*BJI **22** 06:45:17.6, 31°.30N×103°.74E, h12km, mb4.4/4, ML4.1/18, Ms4.1/8, Ms7 4.0/5*
*NEIC **22** 06:45:18.5±0.5, 31°.17N×103°.98E, h10km, mb3.8/2, Error ellipse: s-maj=14.0km s-min=9.4km az=61.0*
ISC 22 06:45:18.4±0.9, 31°.27N±0°.03×103°.96E±0°.05, h4km±6km, n20, σ1.31/29, mb3.8/8, 1C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.39**	**205**	⇑*i*Pg	**Pg**	**06 45 25.9**	**-0.1**
CD2				Sg	**Sg**	**06 45 32.0**	**+0.9**
CD2				smax			
comp=N,17μm,1.0s							
CD2				smax			
comp=E,18μm,1.1s							
LZH	**Lanzhou**	**4.81**	**359**	Pn	**Pn**	**06 46 34.0**	**+2.4**
LZH				Sn	**Sn**	**06 47 31.5**	**+3.8**
LZH				Sg	**Sg**	**06 47 52.1**	**-0.8**
LZH				smax			
comp=N,160nm,1.0s							
LZH				smax			
comp=E,180nm,1.0s							
LZH				LR	LR		
comp=N,1μm,5.3s							
LZH				LR	LR		
comp=E,920nm,5.6s							
LZH				LR	LR		
comp=Z,920nm,5.7s							
ENH	**Enshi**	**4.86**	**100**	*e*Pn	**Pn**	**06 46 32.5**	**+0.2**
ENH				*e*Sn	**Sn**	**06 47 29.9**	**+0.8**
XAN	**Xi'an**	**5.02**	**55**	Pn	**Pn**	**06 46 39.1**	**+4.6**
XAN				Pg	**Pg**	**06 46 51.9**	**-2.7**
XAN				Sn	**Sb**	**06 47 43.5**	**-4.0**
XAN				Sg	**Sg**	**06 48 01.1**	**+1.5**
XAN				smax			
comp=N,320nm,1.0s							
XAN				smax			
comp=E,190nm,1.0s							
XAN				LR	LR		
comp=N,430nm,10.9s							
XAN				LR	LR		
comp=E,69nm,5.9s							
GYA	**Guiyang**	**5.35**	**153**	Pn	**Pn**	**06 46 40.0**	**+1.0**
GYA				Sn	**Sn**	**06 47 41.9**	**+0.9**
GYA				Sg	**Sg**	**06 48 04.6**	**-5.6**
GYA				smax			
comp=N,250nm,1.1s							
GYA				smax			
comp=E,270nm,1.0s							
WHN	**Wuhan**	**8.96**	**92**	*e*P	Px	06 47 46.3	
WHN				S	**Sn**	**06 49 10.1**	**+0.1**
WHN				LR	LR		
comp=N,1μm,6.2s							
WHN				LR	LR		
comp=E,680nm,8.2s							
CMAR	**Chiang Mai Arr**	**13.54**	**201**	Pn	**Pn**	**06 48 28.9**	**-2.3**
comp=E,0.2nm,0.3s,baz=12,slow=12,SNR=4.2							
SONM	**Songino Array**	**16.65**	**6**	Pn	**Pn**	**06 49 12.9**	**+0.3**
comp=E,0.1nm,0.3s,baz=188,slow=11,SNR=11							
KSRS	**Korea Array**	**20.70**	**66**	P	**P**	**06 49 57.3**	**-2.3**
comp=E,10.0nm,0.7s,baz=260,slow=10,SNR=8.3							
CN2	**Changchun**	**21.07**	**48**	⇓P	**P**	**06 50 05.1**	**+1.6**
MK31	**Makanchi Array**	**22.77**	**319**	*e*P	**P**	**06 50 22.9**	**+1.2**
MKAR	**Makanchi Array**	**22.77**	**319**	P	**P**	**06 50 21.5**	**-0.2**
comp=E,2.1nm,0.8s,mb3.6,baz=128,slow=11,SNR=12							
MKAR	**Makanchi Array**	**22.77**	**319**	P	**P**	**06 50 21.5**	**-0.2**
ZALV	**Zalesovo Beam**	**26.52**	**334**	P	**P**	**06 50 57.0**	**+0.2**
comp=E,2.2nm,0.7s,mb3.8,baz=128,slow=9.6,SNR=8.9							
KURK	**Kurchatov**	**27.04**	**323**	*e*P	**P**	**06 51 02.5**	**+0.9**
comp=E,4.5nm,1.0s,mb4.0							
ABKAR	**Akbulak array**	**37.47**	**312**	*e*P	**P**	**06 52 33.5**	**+0.7**
comp=E,0.4nm,0.4s,mb3.6							
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**06 55 15.7**	**-1.5**
comp=E,2.7nm,0.6s,mb4.5,baz=339,slow=8.0,SNR=38							
ASAR	**Alice Springs**	**61.70**	**149**	P	**P**	**06 55 36.6**	**-1.1**
comp=E,0.4nm,0.5s,mb3.9,baz=340,slow=6.6,SNR=8.7							
ILAR	**Eielson Array**	**69.75**	**26**	P	**P**	**06 56 27.2**	**-2.0**
comp=E,0.6nm,0.8s,mb3.5,baz=295,slow=3.6,SNR=6.2							
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**06 57 35.6**	**-1.5**
comp=E,0.3nm,0.6s,mb3.4,baz=322,slow=4.4,SNR=3.9							

*ISCJB **22** 06:47:53.0±1.1, 29°.18N±0°.05×53°.16E±0°.06, h20km±8km, Error ellipse: s-maj=9.8km s-min=8.5km az=137.2*
*TEH **22** 06:47:54.6, 29°.22N×53°.21E, h10km*
*KISR **22** 06:47:59.7±0.3, 29°.05N×52°.11E, h34km, ML2.9*
ISC 22 06:47:54.0±1.2, 29°.21N±0°.05×53°.21E±0°.06, h12km±6km, n17, σ1.11/23, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRV	**Sarvestan**	**0.19**	**335**	*e*Pg	**Pg**	**06 47 57.4**	**-0.9**
ISRV				*e*		06 48 14.5	
comp=Z,33μm,0.2s							
IPAR	**Pars**	**0.65**	**348**	*e*Sg	**Sg**	**06 48 15.1**	**-0.1**
IPAR				*e*Pg	**Pg**	**06 48 05.7**	**-1.0**
IPAR				*e*		06 48 25.1	
comp=Z,6μm,0.4s							
SHI	**Shiraz**	**0.74**	**306**	*e*Pg	**Pg**	**06 48 10.8**	**+2.3**
IMEH	**Mehriz**	**2.49**	**29**	*e*Pn	**Pn**	**06 48 33.8**	**-0.6**
IMEH				*e*		06 49 33.0	
comp=Z,1μm,0.3s							
ISAD	**Sadrabad**	**2.73**	**9**	*e*Pn	**Pn**	**06 48 38.9**	**+1.3**
ISAD				*e*Sn	**Sn**	**06 49 10.8**	**+0.3**
ISAD				*e*		06 49 31.7	
comp=Z,2μm,0.4s							
IBAF	**Bafgh**	**3.13**	**40**	*e*Pn	**Pn**	**06 48 40.9**	**-2.2**
IBAF				*e*		06 48 43.8	
comp=Z,606nm,0.1s							
IBAF				*e*Sn	**Sn**	**06 49 20.2**	**-0.2**
ICHK	**Chekchek**	**3.20**	**19**	*e*Pn	**Pn**	**06 48 43.9**	**-0.2**
ICHK				*e*Sn	**Sn**	**06 49 21.7**	**-0.4**
ICHK				*e*		06 49 49.9	
comp=Z,696nm,0.3s							
IGAR	**Gharneh**	**3.34**	**343**	*e*Pn	**Pn**	**06 48 47.4**	**+1.4**
IGAR				*e*		06 49 56.8	
comp=Z,373nm,0.3s							
IBND	**Bandar-abas**	**3.42**	**120**	*e*Pn	**Pn**	**06 48 47.6**	**+0.5**
IBND				*e*		06 50 15.9	
comp=Z,2μm,0.2s							
IZEF	**Zefreh**	**3.75**	**349**	*e*Pn	**Pn**	**06 48 52.7**	**+1.0**
IZEF				*e*		06 50 26.3	
comp=N,210nm,0.3s							
IPIR	**Pirpir**	**4.00**	**331**	*e*Pn	**Pn**	**06 48 55.9**	**+0.9**
IPIR				*e*Sn	**Sn**	**06 49 40.4**	**-1.4**
IPIR				*e*		06 49 53.4	
comp=Z,242nm,0.3s							
IKLH	**Kolahrood**	**4.33**	**342**	*e*Pn	**Pn**	**06 49 02.1**	**+2.5**
IKLH				*e*		06 50 39.1	
comp=E,272nm,0.3s							
MIB	**Mutribah**	**5.15**	**278**	*e*P	**Pn**	**06 49 09.9**	**-1.0**
MIB				*e*S	**Sn**	**06 50 02.5**	**-7.7**
MIB				AML	AML	06 50 08.4	
comp=Z,15nm,0.7s							
NAY	**Al-Naaiem**	**5.21**	**272**	*e*P	**Pn**	**06 49 10.4**	**-1.4**
IANJ	**Anjilo**	**6.27**	**5**	*e*Pn	**Pn**	**06 49 26.2**	**-0.1**
IANJ				*e*		06 49 27.4	
comp=Z,111nm,0.2s							
ISHM	**Shahmirzad**	**6.58**	**1**	*e*Pn	**Pn**	**06 49 31.6**	**+1.0**
IGHG	**Ghaleghazi**	**7.62**	**314**	*e*Pn	**Pn**	**06 49 44.3**	**-0.5**

IDC 22 07:17:43.1±1.7, 5°.87S×147°.00E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.6/16, mbtmp3.4/4, Error ellipse: s-maj=106.9km s-min=27.8km az=126.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.64**	**220**	P	Pn	07 22 02.5	-0.3
0.1nm,0.3s,baz=49,slow=12,SNR=7.2							
WRA				PcP	PcP	07 26 32.1	+0.4
0.1nm,0.3s,baz=26,slow=1.9,SNR=7.5							
ASAR	**Alice Springs**	**21.73**	**214**	P	P	07 22 36.5	+0.4
0.4nm,0.5s,baz=50,slow=8.8,SNR=7.2							
FITZ	**Fitzroy Crossi**	**24.14**	**238**	P	P	07 23 00.1	-0.9
2.0nm,0.6s,baz=87,slow=6.8,SNR=7.6							
ILAR	**Eielson Array**	**85.36**	**23**	P	P	07 30 21.2	-0.6
0.4nm,0.7s,baz=248,slow=5.8,SNR=5.1							
TORD	**Torodi Ar. Bea**	**145.06**	**285**	PKPbc	PKPbc	07 37 22.8	-0.1
0.9nm,0.8s,baz=63,slow=3.7,SNR=1.5							

*NIED **22** 07:31:00, 41°.50N×140°.60E, h150km, Mw5.6 Best double couple: M0 3.10000×10^17 NP1:φ=206.00000°, δ61.00000°, λ-132.00000°. NP2:φ=88.00000°, δ49.00000°, λ-40.00000°.*
*SZGRF **22** 07:31:46.4, 41°.62N×141°.73E, h33km, mb5.3, MS4.8, Hokkaido, Japan, region*
*BJI **22** 07:31:54.2, 41°.60N×140°.77E, h139km, mB5.3/39, mb5.2/58*
*MOS **22** 07:31:57.6±1.0, 41°.58N×140°.50E, h147km, mb5.2/124, MS4.9/24, Error ellipse: s-maj=5.7km s-min=3.8km az=98.6*
*ISCJB **22** 07:31:58.1±0.1, 41°.56N±0°.01×140°.50E±0°.02, h150km±1km, mb5.2/343, Error ellipse: s-maj=2.5km s-min=1.8km az=146.2*
*IDC **22** 07:31:59.0±0.8, 41°.54N×140°.51E, h150km±6km, mb4.8/40, mb1 4.8/45, mb1mx4.8/46, mbtmp4.7/45, MS4.5/13, Ms1 4.5/13, ms1mx4.1/38, Error ellipse: s-maj=7.9km s-min=5.7km az=109.0*
*JMA **22** 07:31:58.5±0.1, 41°.54N×140°.57E, h152km±1km, M5.6*
JMA Felt III J1.
*NEIC **22** 07:31:59.2±0.4, 41°.58N×140°.45E, h149km±3km, mb5.3/239, MW5.6, MW5.6(NIED), Error ellipse: s-maj=3.6km s-min=2.4km az=157.0, Moment Tensor Solution. s82 Moment tensor: Scale 10^17Nm; Mrr-2.63; Mθθ2.48; Mφφ0.14; Mrθ-0.62; Mφθ1.98; Mφr1.42; Best double couple: M0 3.60000×10^17 NP1:φ=88.00000°, δ51.00000°, λ-49.00000°. NP2:φ=213.00000°, δ54.00000°, λ-129.00000°. Principal axes: T 3.6200, Plg1.0000°, Azm329.0000°; N -0.0700, Plg30.0000°, Azm238.0000°; P -3.5600, Plg59.0000°, Azm62.0000°;*
NEIC Felt at Furano. Felt [III] at Misawa, Honshu. Also felt at Kuroishi. Recorded [2 JMA] in southeastern Hokkaido and [1 JMA] on Okushiri-to. Recorded [3 JMA] in Aomori; [2 JMA] in Akita, Iwate, Miyagi, Tochigi and Yamagata; [1 JMA] in Fukushima, Ibaraki and Saitama, Honshu.
*BGS **22** 07:31:59.2±1.9, 41°.68N×141°.01E, h137km, mb4.8*
*GCMT **22** 07:32:01.8±0.1, 41°.46N×140°.50E, h152km, MW5.6, Moment Tensor Solution. s95,c168; s31,c34; Moment tensor: Scale 10^17Nm; Mrr-2.26±.04; Mθθ2.17±.05; Mφφ0.09±.05; Mrθ-0.55±.04; Mθφ2.34±.04; Mφr1.74±.04; Best double couple: M0 3.70000×10^17 NP1:φ=89.00000°, δ52.00000°, λ-39.00000°. NP2:φ=205.00000°, δ61.00000°, λ-135.00000°. Principal axes: T 3.7300, Plg5.0000°, Azm325.0000°; N -0.0600, Plg38.0000°, Azm231.0000°; P -3.6700, Plg52.0000°, Azm62.0000°; Data Used: II IU CN IC G. Surface waves: sta=112, comp=237, per= 50.*
ISC 22 07:31:59.1±0.1, 41°.56N±0°.01×140°.48E±0°.02, h146km±1km, h152km±2.2km; pP-P, n1445, σ0.81/1463, mb5.2/342, 286C-235D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSR	**Shiriuchi**	**0.06**	**236**	⇓P	**Pn**	**07 32 18.8**	**+0.1**
JSR				*e*S	**Sn**	**07 32 34.2**	**+0.7**
JOT	**Ohata**	**0.51**	**113**	⇓P	**Pn**	**07 32 19.6**	**-0.2**
JOT				*e*S	**Sn**	**07 32 36.2**	**+0.8**
JSI2	**Shiura 2**	**0.51**	**186**	⇓P	**Pn**	**07 32 20.2**	**+0.2**
JSI2				*e*S	**Sn**	**07 32 36.5**	**+0.6**
JKB	**Kayabe**	**0.53**	**52**	⇓P	**Pn**	**07 32 20.2**	**+0.1**
JKB				*e*S	**Sn**	**07 32 36.7**	**+0.6**
JYM2	**Yakumo 2**	**0.56**	**351**	⇓P	**Pn**	**07 32 20.6**	**+0.3**
JYM2				*e*S	**Sn**	**07 32 38.0**	**+1.5**
JTM	**Tenmabayashi**	**0.89**	**150**	⇓P	**Pn**	**07 32 22.3**	**-0.3**
JTM				*e*S	**Sn**	**07 32 39.8**	**-0.6**
JOSM	**Okushiri--Mats**	**0.92**	**305**	⇓P	**Pn**	**07 32 23.2**	**+0.5**
JOSM				*e*S	**Sn**	**07 32 41.7**	**+1.0**
JNB	**Noboribetsu**	**1.00**	**24**	*e*S	**Sn**	**07 32 42.5**	**+0.5**
JIW	**Iwasaki**	**1.03**	**200**	⇓P	**Pn**	**07 32 24.0**	**+0.2**
JIW				*e*S	**Sn**	**07 32 43.1**	**+0.6**
JSH	**Shimam**	**1.13**	**343**	⇓P	**Pn**	**07 32 25.2**	**+0.6**
JSH				*e*S	**Sn**	**07 32 45.1**	**+1.0**
JAH	**Hinai**	**1.38**	**175**	⇓P	**Pn**	**07 32 27.1**	**0.0**
JAH				S	**Sn**	**07 32 48.8**	**+0.4**
JANG	**Nango**	**1.42**	**146**	⇑P	**Pn**	**07 32 26.4**	**-1.1**
JANG				S	**Sn**	**07 32 47.2**	**-2.0**
JEW	**Eniwo**	**1.47**	**29**	⇓P	**Pn**	**07 32 28.2**	**+0.3**
JEW				*e*S	**Sn**	**07 32 50.6**	**+0.5**
JKZ	**Kuzumaki**	**1.70**	**157**	⇑P	**Pn**	**07 32 30.0**	**-0.5**
JKZ				S	**Sn**	**07 32 53.4**	**-1.2**
JOG2	**Oga 2**	**1.73**	**198**	⇓P	**Pn**	**07 32 31.1**	**+0.3**
JOG2				S	**Sn**	**07 32 55.4**	**+0.3**
JSK	**Shakotan**	**1.79**	**360**	⇑P	**Pn**	**07 32 32.0**	**+0.5**
JNBK	**Urakawa-nobuka**	**1.84**	**66**	⇑P	**Pn**	**07 32 31.2**	**-0.8**
JNBK				*e*S	**Sn**	**07 32 56.8**	**-0.6**
JBT2	**Biratori 2**	**1.85**	**48**	⇑P	**Pn**	**07 32 32.0**	**-0.2**
JTH	**Tanohata**	**1.93**	**147**	⇑P	**Pn**	**07 32 31.7**	**-1.5**
JYW	**Yuwa**	**2.03**	**186**	⇓P	**Pn**	**07 32 34.9**	**+0.6**
ERM	**Erimo**	**2.05**	**76**	*e*Pn	**Pn**	**07 32 33.9**	**-0.6**
ERM				*e*Sn	**Sn**	**07 32 59.5**	**-2.3**
ERM	**Erimo**	**2.05**	**76**	*d*iP	**Pn**	**07 32 33.8**	**-0.7**
JRG	**Rokugo**	**2.17**	**177**	⇑P	**Pn**	**07 32 36.0**	**+0.1**
JOM	**Ohasama**	**2.18**	**163**	⇑P	**Pn**	**07 32 35.1**	**-1.0**
JOM				S	**Sn**	**07 33 02.7**	**-1.7**
MIYJ	**Miyakonagasawa**	**2.23**	**152**	⇑P	**Pn**	**07 32 35.3**	**-1.4**
JFR	**Furan**	**2.24**	**44**	P	**Pn**	**07 32 35.8**	**-0.9**
JFR				*e*S	**Sn**	**07 33 05.4**	**-0.3**
JHR	**Hokuryu**	**2.37**	**22**	P	**Pn**	**07 32 39.4**	**+1.1**
JHR				*e*S	**Sn**	**07 33 11.2**	**+2.7**
JCH	**Churui**	**2.39**	**63**	⇑P	**Pn**	**07 32 37.9**	**-0.7**
JCH				*e*S	**Sn**	**07 33 06.9**	**-2.1**
JTB	**Tobi-shima**	**2.47**	**197**	⇓P	**Pn**	**07 32 39.9**	**+0.3**
JTB				S	**Sn**	**07 33 10.7**	**-0.1**
OFUJ	**Ofunato**	**2.64**	**160**	⇑P	**Pn**	**07 32 40.2**	**-1.5**
JYK	**Kaneyama**	**2.64**	**182**	⇑P	**Pn**	**07 32 41.3**	**-0.5**
JMK	**Ichinoseki**	**2.67**	**168**	⇑P	**Pn**	**07 32 40.7**	**-1.4**
JAR	**Ashorobuto**	**2.99**	**53**	⇑P	**Pn**	**07 32 44.7**	**-1.4**
ASAJ	**Asahikawa**	**2.99**	**31**	P	**Pn**	**07 32 46.0**	**-0.1**
194nm,0.3s,baz=232,slow=11,SNR=175							
ASAJ				S	**Sn**	**07 33 22.4**	**0.0**
266nm,0.3s,baz=308,slow=30,SNR=14							
ASAJ	**Asahikawa**	**2.99**	**31**	*e*Pn	**Pn**	**07 32 45.9**	**-0.2**
ASAJ				*e*Sn	**Sn**	**07 33 22.5**	**0.0**
ASAJ	**Asahikawa**	**2.99**	**31**	P	**Pn**	**07 32 46.0**	**-0.1**
ASAJ				S	**Sn**	**07 33 22.5**	**+0.1**
ASAJ				pmax	pmax		
comp=Z,195nm,0.3s							
ASAJ				smax			
comp=N,266nm,0.3s							
JIO	**Ouri**	**3.17**	**168**	⇑P	**Pn**	**07 32 46.5**	**-2.0**
JOU	**Okura**	**3.20**	**177**	⇑P	**Pn**	**07 32 48.1**	**-0.7**
JAW	**Awa shima**

MJAR	**Matsushiro Arr**	**5.32 200**	P	**Pn**	**07 33 15.9**	**-0.7**
MJAR			S	**Sn**	**07 34 18.7**	**+1.6**
MJAR			pmax	pmax		
	comp=Z,30nm,0.3s					
MJAR			smax			
	comp=N,41nm,0.3s					
JJH	**Hakui**	**5.45 213**	P	**Pn**	**07 33 20.5**	**+2.1**
JNG	**Nsakai**	**5.47 201**	P	**Pn**	**07 33 18.7**	**0.0**
YSS	**Yuzh-Sakhalins**	**5.63 16**	*e*Pn	**Pn**	**07 33 20.7**	**0.0**
YSS	**Yuzh-Sakhalins**	**5.63 16**	⇓*i*P	**Pn**	**07 33 20.3**	**-0.4**
YSS			*i* S	**Sn**	**07 34 22.0**	**-2.5**
YSS			pmax	pmax		
	comp=Z,530nm,0.7s					
YSS			pmax	pmax		
	comp=N,380nm,0.4s					
YSS			pmax	pmax		
	comp=N,1μm,4.0s					
YSS			pmax	pmax		
	comp=Z,1μm,4.0s					
YSS			smax			
	comp=E,7μm,9.0s					
YSS			smax			
	comp=N,640nm,0.7s					
YSS			smax			
	comp=E,370nm,0.8s					
YSS			MLR	MLR		
	comp=Z,5μm,15.0s					
YSS			MLR	MLR		
	comp=N,6μm,13.0s					
JRY	**Ryogami san**	**5.67 193**	⇑P	**Pn**	**07 33 20.3**	**-1.1**
JGN	**Niukaw**	**5.88 206**	⇑P	**Pn**	**07 33 25.0**	**+0.9**
JNT	**Takato**	**5.97 199**	P	**Pn**	**07 33 25.9**	**+0.6**
JGF	**Kuroka**	**6.43 203**	P	**Pn**	**07 33 32.0**	**+0.5**
KUR	**Kuril'sk**	**6.51 53**	*e*P	**Pn**	**07 33 31.0**	**-1.4**
KUR			*e*S	**Sn**	**07 34 40.0**	**-5.5**
KUR			pmax	pmax		
	comp=N,170nm,0.5s					
KUR			pmax	pmax		
	comp=E,190nm,0.5s					
KUR			pmax	pmax		
	comp=Z,870nm,0.5s					
KUR			pmax	pmax		
	comp=Z,8μm,6.0s					
KUR			smax			
	comp=N,470nm,0.5s					
KUR			smax			
	comp=E,780nm,0.5s					
KUR			smax			
	comp=N,10μm,3.0s					
KUR			smax			
	comp=E,5μm,3.0s					
JNY	**Yasuok**	**6.53 199**	⇑P	**Pn**	**07 33 32.3**	**-0.5**
VLA	**Vladivostok**	**6.55 287**	*c i*P	**Pn**	**07 33 33.9**	**+0.9**
JAO	**Obara**	**6.78 203**	⇑P	**Pn**	**07 33 35.8**	**-0.3**
JIZS	**Izushimoda**	**6.95 191**	P	**Pn**	**07 33 35.1**	**-3.3**
JFM	**Mihama**	**6.98 212**	P	**Pn**	**07 33 40.4**	**+1.6**
JAA	**Atsumi**	**7.40 202**	P	**Pn**	**07 33 43.6**	**-0.9**
UGL	**Uglegorsk**	**7.60 8**	P	**Pn**	**07 33 50.5**	**+3.5**
UGL			S	**Sn**	**07 35 07.6**	**-4.0**
UGL			pmax	pmax		
	comp=Z,110nm,0.5s					
UGL			smax			
	comp=N,5μm,12.0s					
UGL			smax			
	comp=E,4μm,12.0s					
UGL			smax			
	comp=N,90nm,0.5s					
UGL			smax			
	comp=E,190nm,0.5s					
UGL			MLR	MLR		
	comp=N,2μm,14.0s					
UGL			MLR	MLR		
	comp=E,5μm,14.0s					
JIE	**Ise**	**7.75 204**	P	**Pn**	**07 33 48.1**	**-1.1**
JHJ	**Hachijo jima 2**	**8.45 184**	P	**Pn**	**07 33 53.6**	**-4.8**
	comp=E,140nm,0.3s,baz=11,slow=4.5,SNR=42					
JHJ			S	**Sn**	**07 35 21.7**	**-11**
	comp=E,752nm,0.3s,baz=67,slow=21,SNR=15					
JHJ			LR	LR	07 36 57.0	
	comp=E,3μm,19.8s,baz=315,slow=35					
MDJ	**Mudanjiang**	**8.53 295**	P	**Pn**	**07 34 00.3**	**+0.8**
MDJ			sP		07 34 37.9	
MDJ			S	**Sn**	**07 35 36.1**	**+1.9**
MDJ			ScP	ScP	07 43 33.8	+1.2
MDJ			PcS	PcS	07 43 48.1	+0.7
MDJ			pmax	pmax		
	comp=Z,57nm,1.1s					
MDJ			pmax	pmax		
	comp=Z,3μm,6.0s					
MDJ			LR	LR		
	comp=N,18μm,16.4s					
MDJ			LR	LR		
	comp=E,8μm,17.0s					
MDJ			LR	LR		
	comp=Z,5μm,17.5s					
MDJ	**Mudanjiang**	**8.53 295**	*e*Pn	**Pn**	**07 34 00.5**	**+1.0**
	comp=Z,237nm,0.8s					
JHS	**Saijyo**	**8.74 224**	P	**Pn**	**07 34 04.3**	**+1.9**
KLR	**Kul'dur**	**9.82 324**	*e*P	**Pn**	**07 34 11.7**	**-4.8**
KLR			*e*		07 36 04.5	
KLR			pmax	pmax		
	comp=N,100nm,2.2s					
KLR			pmax	pmax		
	comp=E,170nm,2.2s					
KLR			pmax	pmax		
	comp=Z,350nm,2.2s					
KLR			pmax	pmax		
	comp=N,2μm,8.0s					
KLR			pmax	pmax		
	comp=E,2μm,8.0s					
KLR			pmax	pmax		
	comp=Z,4μm,8.0s					
KLR			MLR	MLR		
	comp=N,4μm,13.0s					
KLR			MLR	MLR		
	comp=E,3μm,13.0s					
KLR			MLR	MLR		
	comp=E,4μm,12.0s					
KLR			MLR	MLR		
	comp=Z,5μm,12.0s					
KSRS	**Korea Array**	**10.53 251**	P	**Pn**	**07 34 27.2**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=68,slow=12,SNR=38					
KSRS			LR	LR	07 38 22.5	
	comp=Z,1μm,18.2s,baz=62,slow=36					
KSRS			PcP	PcP	07 40 15.8	-0.6
	comp=Z,0.1nm,0.3s,baz=111,slow=0.5,SNR=5.0					
KSRS			ScP	ScP	07 43 34.6	-0.4
	comp=Z,0.3nm,0.3s,baz=39,slow=0.2,SNR=18					
KSRS	**Korea Array**	**10.53 251**	P	**Pn**	**07 34 27.2**	**+1.1**
KSRS			pmax	pmax		
	comp=Z,1.0nm,0.3s					
KSRS			MLR	MLR		
	comp=Z,1μm,18.2s					
CN2	**Changchun**	**11.29 286**	*e*P	**Pn**	**07 34 35.9**	**-0.2**
CN2			*e*S	**Sn**	**07 36 38.9**	**-1.8**
CN2			PcP	PcP	07 40 20.4	+3.3
CN2			pmax	pmax		
	comp=Z,50nm,0.8s					
CN2			pmax	pmax		
	comp=Z,200nm,6.0s					
CN2			LR	LR		
	comp=N,12μm,12.0s					
CN2			LR	LR		
	comp=E,5μm,12.0s					
CN2			LR	LR		
	comp=Z,2μm,14.0s					
JNU	**Nakatsue**	**11.37 225**	*e*Pn	**Pn**	**07 34 38.6**	**+1.4**
SNY	**Shenyang**	**12.64 277**	⇑P	**Pn**	**07 34 54.1**	**+0.4**
SNY			S	**Sn**	**07 37 18.6**	**+5.3**
SNY			pmax	pmax		
	comp=Z,36nm,1.5s					
SNY			pmax	pmax		
	comp=Z,1μm,12.0s					
SNY			LR	LR		
	comp=N,1μm,15.0s					
SNY			LR	LR		
	comp=E,1μm,10.2s					
SNY			LR	LR		
	comp=Z,1μm,9.6s					
SKR	**Severo-Kuril's**	**14.14 45**	*e*P	**Pn**	**07 35 11.6**	**-1.1**
SKR			S	**Sn**	**07 37 34.5**	**-15**
SKR			pmax	pmax		
	comp=N,80nm,0.5s					
SKR			pmax	pmax		
	comp=E,80nm,0.5s					
SKR			pmax	pmax		
	comp=Z,220nm,0.5s					
SKR			pmax	pmax		
	comp=Z,1μm,4.0s					
SKR			smax			
	comp=N,140nm,0.5s					
SKR			smax			
	comp=E,90nm,0.5s					
SKR			MLR	MLR		
	comp=Z,2μm,16.0s					
CBIJ	**Chichi jima**	**14.50 174**	P	**Pn**	**07 35 12.8**	**-4.6**
	comp=Z,146nm,0.3s,baz=327,slow=8.5,SNR=59					
CBIJ			S	**Sn**	**07 37 44.3**	**-14**
	comp=Z,154nm,0.3s,baz=294,slow=23,SNR=9.1					
CBIJ	**Chichi jima**	**14.50 174**	P	**Pn**	**07 35 12.7**	**-4.7**
DL2	**Dalian**	**14.64 266**	⇑*i*P	**Pn**	**07 35 19.6**	**+0.5**
DL2			sP		07 35 56.3	
DL2			S	**Sn**	**07 38 00.3**	**-1.2**
DL2			pmax	pmax		
	comp=Z,70nm,0.9s					
DL2			pmax	pmax		
	comp=Z,490nm,5.4s					
PEA0B	**Petropavlovsk-**	**16.37 39**	*e*P	**Pn**	**07 35 40.3**	**+0.1**
PETK	**Petropavlovsk-**	**16.37 39**	P	**Pn**	**07 35 38.2**	**-2.0**
	comp=Z,1.4nm,0.3s,baz=216,slow=12,SNR=23					
PETK	**Petropavlovsk-**	**16.37 39**	P	**Pn**	**07 35 38.2**	**-2.0**
PETK			pmax	pmax		
	comp=Z,1.0nm,0.3s					
HIA	**Hailar**	**16.44 305**	*e*P	**Pn**	**07 35 40.5**	**-0.6**
	comp=Z,74nm,0.6s					
HIA	**Hailar**	**16.44 305**	*e*P	**Pn**	**07 35 40.5**	**-0.6**
HIA			pmax	pmax		
	comp=Z,74nm,0.6s					
PET	**Petropavlovsk**	**16.78 41**	*e*P	**Pn**	**07 35 45.7**	**+0.5**
	comp=Z,25nm,0.5s					
PET	**Petropavlovsk**	**16.78 41**	*d i*P	**Pn**	**07 35 40.0**	**-5.2**
PET			*i* S	**S**	**07 38 43.1**	**-8.6**
PET			pmax	pmax		
	comp=Z,900nm,12.8s					
PET			pmax	pmax		
	comp=Z,1μm,11.8s					
PET			MLR	MLR		
	comp=Z,2μm,17.0s					
PET			MLR	MLR		
	comp=Z,1μm,19.0s					
JOW	**Kunigami**	**17.80 218**	P	**Pn**	**07 35 56.0**	**-1.7**
	baz=17,slow=6.6					
JOW	**Kunigami**	**17.80 218**	*e*P	**Pn**	**07 35 56.5**	**-1.1**
	comp=Z,38nm,1.1s					
CLNS	**Chul'man**	**18.30 332**	*e*P	**P**	**07 36 01.9**	**+0.4**
CLNS			*e*S	**S**	**07 39 20.8**	**-2.1**
CLNS			pmax	pmax		
	comp=Z,392nm,0.8s					
CLNS			pmax	pmax		
	comp=N,203nm,0.8s					
CLNS			pmax	pmax		
	comp=E,123nm,0.8s					
CLNS			smax			
	comp=E,922nm,11.4s					
CLNS			smax			
	comp=N,2μm,13.1s					
BJI	**Beijing**	**18.45 273**	P	**P**	**07 36 01.9**	**-1.5**
BJI			S	**S**	**07 39 20.3**	**-6.1**
BJI			pmax	pmax		
	comp=Z,52nm,0.9s					
BJI			pmax	pmax		
	comp=Z,480nm,3.4s					
BJI			LR	LR		
	comp=N,12μm,17.5s					
BJI			LR	LR		
	comp=E,2μm,19.2s					
BJI			LR	LR		
	comp=Z,3μm,22.6s					
BJT	**Baijiatuau**	**18.46 273**	*e*P	**P**	**07 36 02.2**	**-1.4**
	comp=Z,84nm,0.6s					
BJT	**Baijiatuau**	**18.46 273**	*e*P	**P**	**07 36 02.2**	**-1.3**
BJT			pmax	pmax		
	comp=Z,84nm,0.6s					
SSE	**Sheshan**	**18.69 242**	P	**P**	**07 36 10.0**	**+3.9**
SSE			S	**S**	**07 39 35.3**	**+4.1**
SSE			pmax	pmax		
	comp=Z,83nm,0.7s					
SSE			pmax	pmax		
	comp=Z,1μm,5.4s					
SSE			LR	LR		
	comp=N,1μm,12.9s					
SSE			LR	LR		
	comp=E,1μm,12.9s					
SSE			LR	LR		
	comp=Z,2μm,10.7s					
TIA	**Tai'an**	**18.93 261**	P	**P**	**07 36 07.0**	**-1.6**
TIA			S	**S**	**07 39 30.9**	**-5.0**
TIA			pmax	pmax		
	comp=Z,90nm,0.6s					
TIA			pmax	pmax		
	comp=Z,370nm,6.8s					
TIA			LR	LR		
	comp=N,8μm,17.2s					
TIA			LR	LR		
	comp=E,3μm,11.3s					
TIA			LR	LR		
	comp=Z,4μm,16.2s					
NJ2	**Nanjing**	**19.70 248**	*e*P	**P**	**07 36 16.4**	**-0.6**
NJ2			pP		07 36 40.1	
NJ2			sP	sP	07 36 59.4	-1.6
NJ2			S	**S**	**07 39 48.0**	**-3.3**
NJ2			pmax	pmax		
	comp=Z,20nm,0.6s					
NJ2			pmax	pmax		
	comp=Z,1μm,6.8s					
NJ2			LR	LR		
	comp=N,5μm,18.7s					
NJ2			LR	LR		
	comp=E,4μm,17.9s					
NJ2			LR	LR		
	comp=Z,2μm,19.1s					
CIT	**Chita**	**21.08 309**	*e*P	**P**	**07 36 28.5**	**-3.0**
CIT			*e*		07 37 04.6	
CIT			*e*		07 37 18.7	
CIT			*e*S	**S**	**07 40 09.1**	**-8.6**
CIT			pmax	pmax		
	comp=Z,244nm,3.0s					
YAK	**Yakutsk**	**21.50 346**	*e*P	**P**	**07 36 34.9**	**-1.1**
	comp=Z,369nm,0.8s,mb5.9					
YAK	**Yakutsk**	**21.50 346**	*d i*P	**P**	**07 36 34.9**	**-1.0**
YAK			*e*S	**S**	**07 40 17.9**	**-7.5**
YAK			pmax	pmax		
	comp=N,89nm,0.9s					
YAK			pmax	pmax		
	comp=Z,309nm,0.9s,mb5.7					
YAK			pmax	pmax		
	comp=E,16nm,0.8s					
YAK			smax			
	comp=E,656nm,2.8s					
YAK			smax			
	comp=N,484nm,2.0s					
HHC	**Hu-ho-hao-te**	**21.73 278**	*e*P	**P**	**07 36 38.6**	**0.0**
HHC			pP		07 37 06.3	
HHC			PP		07 37 10.8	
HHC			sP	sP	07 37 23.4	+0.3
HHC			S	**S**	**07 40 23.6**	**-5.9**
HHC			PcP	PcP	07 40 36.5	+3.3
HHC			SS		07 41 13.3	
HHC			pmax	pmax		
	comp=Z,26nm,1.2s,mb4.5					
HHC			pmax	pmax		
	comp=Z,230nm,5.4s					
HHC			LR	LR		
	comp=N,7μm,11.7s					
HHC			LR	LR		
	comp=E,2μm,10.4s					
HHC			LR	LR		
	comp=Z,2μm,11.8s					
TIY	**Taiyuan**	**21.90 269**	*e*P	**P**	**07 36 40.0**	**-0.4**
TIY			pP		07 37 08.3	
TIY			S	**S**	**07 40 31.4**	**-0.9**
TIY			pmax	pmax		
	comp=Z,650nm,3.7s					
TIY			LR	LR		
	comp=N,2μm,12.4s					
TIY			LR	LR		
	comp=E,500nm,5.3s					
TIY			LR	LR		
	comp=Z,980nm,15.1s					
SEY	**Seymchan**	**22.54 14**	*ce*P	**P**	**07 36 46.5**	**0.0**
TATO	**Taipei**	**22.85 230**	*e*P	**P**	**07 36 49.3**	**-0.4**
	comp=Z,455nm,1.6s,mb5.7					
BTO	**Baotou**	**22.93 278**	*e*P	**P**	**07 36 47.3**	**-3.0**
YHNB	**Yeheng**	**23.15 229**	*e*P	**P**	**07 36 53.6**	**+1.1**
	comp=Z,90nm,1.0s,mb5.2					
BOD	**Bodaibo**	**23.39 323**	⇓*i*P	**P**	**07 36 54.3**	**-0.1**
BOD			pmax	pmax		
	comp=Z,217nm,0.8s,mb5.6					
WHN	**Wuhan**	**23.73 251**	P	**P**	**07 36 57.0**	**-0.7**
WHN			S	**S**	**07 40 56.5**	**-5.6**
WHN			LR	LR		
	comp=N,3μm,9.0s					
WHN			LR	LR		
	comp=E,2μm,10.4s					
WHN			LR	LR		
	comp=Z,3μm,10.1s					
SSLB	**Suanglung**	**24.08 229**	*e*P	**P**	**07 37 01.2**	**+0.2**
	comp=Z,15nm,0.6s,mb4.7					
ULN	**Ulaanbaatar**	**24.45 296**	*e*P	**P**	**07 37 03.4**	**-0.7**
	comp=Z,74nm,0.7s,mb5.3					
ULN	**Ulaanbaatar**	**24.45 296**	*e*P	**P**	**07 37 03.4**	**-0.7**
ULN			pmax	pmax		
	comp=Z,74nm,0.7s,mb5.3					
ULN	**Ulaanbaatar**	**24.45 296**	P	**P**	**07 37 05.8**	**+1.7**
	SNR=18					
QZH	**Quanzhou**	**24.59 234**	*e*P	**P**	**07 37 07.8**	**+2.2**
QZH			S	**S**	**07 41 22.0**	**+6.1**
QZH			pmax	pmax		
	comp=Z,120nm,0.8s,mb5.5					
QZH			LR	LR		
	comp=Z,2μm,14.4s					
TPUB	**Ta-pu**	**24.64 228**	*e*P	**P**	**07 37 06.7**	**+0.6**
	comp=Z,219nm,1.7s,mb5.4					
SONM	**Songino Array**	**24.89 296**	P	**P**	**07 37 06.7**	**-1.4**
	comp=Z,61nm,0.6s,mb5.3,baz=98,slow=8.6,SNR=136					
SONM			PcP	PcP	07 40 39.2	-0.5
	comp=Z,4.6nm,0.6s,baz=103,slow=1.9,SNR=3.7					
SONM			ScP	ScP	07 44 04.5	-0.5
	comp=Z,2.0nm,0.5s,baz=103,slow=3.2,SNR=8.3					
SONM			LR	LR	07 46 36.3	
	comp=Z,1μm,21.6s,baz=94,slow=35					
SONM	**Songino Array**	**24.89 296**	P	**P**	**07 37 06.7**	**-1.4**
SONM					07 40 39.2	
SONM			pmax	pmax		
	comp=Z,61nm,0.6s					
SONM			MLR	MLR		
	comp=Z,1μm,21.7s					
XAN	**Xi'an**	**25.94 264**	P	**P**	**07 37 17.6**	**-0.1**
XAN			pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.2					
IRK	**Irkutsk**	**26.68 306**	*e*P	**P**	**07 37 25.1**	**+0.9**
IRK			*e*S	**S**	**07 41 51.4**	**+3.0**
IRK			*e*		07 42 43.7	
IRK			pmax	pmax		
	comp=Z,144nm,2.6s,mb5.1					
TLY	**Talaya**	**26.98 305**	*e*P	**P**	**07 37 24.0**	**-2.9**
	comp=Z,31nm,0.7s,mb5.0					
TLY	**Talaya**	**26.98 305**	*c i*P	**P**	**07 37 26.1**	**-0.8**
TLY			*e*S	**S**	**07 41 53.8**	**+0.6**
TLY			*e*SSS		07 43 13.1	
TLY			pmax	pmax		
	comp=Z,34nm,0.8s,mb5.0					
TLY			MLR	MLR		
	comp=Z,1μm,17.0s					
TLY	**Talaya**	**26.98 305**	P	**P**	**07 37 29.7**	**+2.8**
	SNR=6.0					
ZAK	**Zakamensk**	**27.07 302**	*e*P	**P**	**07 37 27.6**	**-0.1**
ZAK			pmax	pmax		
	comp=Z,15nm,1.3s,mb4.5					
ENH	**Enshi**	**27.37 256**	*e*P	**P**	**07 37 28.9**	**-1.7**
	comp=Z,41nm,0.6s,mb5.2					
MOY	**Mondy**	**28.62 304**	*e*P	**P**	**07 37 44.0**	**+2.6**
LZH	**Lanzhou**	**28.91 271**	⇓P	**P**	**07 37 46.1**	**+1.9**
LZH			pP	pP	07 38 16.3	+1.2
LZH			sP	sP	07 38 33.1	+1.1
LZH			PP	PP	07 38 45.8	-6.4
LZH			S	**S**	**07 42 24.0**	**+0.1**
LZH			sS	sS	07 43 17.5	-0.8
LZH			ScP	ScP	07 44 18.8	+1.6
LZH			pmax	pmax		
	comp=Z,150nm,1.3s,mb5.6					
LZH			pmax	pmax		
	comp=Z,430nm,4.0s					
LZH			LR	LR		
	comp=N,2μm,12.2s					
LZH			LR	LR		
	comp=E,960nm,10.0s					
LZH			LR	LR		
	comp=Z,1μm,10.5s					
GZH	**Guangzhou**	**29.23 239**	P	**P**	**07 37 41.4**	**-5.7**
GZH			S	**S**	**07 42 20.8**	**-8.2**
GZH			LR	LR		
	comp=N,2μm,16.6s					
GZH			LR	LR		
	comp=E,3μm,15.6s					
GZH			LR	LR		
	comp=Z,2μm,12.5s					
BILL	**Bilibino**	**29.94 19**	*e*P	**P**	**07 37 52.9**	**0.0**
	comp=Z,40nm,0.6s,mb5.3					
BILL	**Bilibino**	**29.94 19**	*de*P	**P**	**07 37 52.8**	**-0.1**
BILL			*i*		07 38 54.9	
BILL			*i*		07 40 53.8	
BILL			*i* S	**S**	**07 42 36.2**	**-3.1**
BILL			pmax	pmax		
	comp=Z,38nm,0.7s,mb5.2					
BILL			MLR	MLR		
	comp=Z,700nm,18.0s					
TIXI	**Tiksi**	**30.71 353**	*e*P	**P**	**07 37 59.1**	**-0.6**
	comp=Z,14nm,0.5s,mb5.0					
TIXI	**Tiksi**	**30.71 353**	*e*P	**P**	**07 37 58.6**	**-1.1**
TIXI			*e**PP	pP	07 38 28.5	-2.2
TIXI			*e**SP	sP	07 38 44.7	-2.9
TIXI			*e*		07 39 01.0	
TIXI			*e*S	**S**	**07 42 47.8**	**-3.5**
TIXI			*e**SS	sS	07 43 41.7	-4.1
TIXI			*e*SS	SS	07 44 38.5	-30
TIXI			pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7					
GTA	**Gaotai**	**30.81 280**	⇑P	**P**	**07 37 59.5**	**-1.4**
GTA			pP	pP	07 38 30.3	-1.6
GTA			sP	sP	07 38 45.6	-3.1
GTA			PcP	PcP	07 40 53.9	-0.5
GTA			S	**S**	**07 42 50.6**	**-2.9**
GTA			ScP	ScP	07 44 23.0	-0.3
GTA			ScS	ScS	07 48 20.6	+0.4
GTA			pmax	pmax		
	comp=Z,17nm,1.3s,mb4.6					
GTA			pmax	pmax		
	comp=Z,190nm,4.5s					
GTA			LR	LR		
	comp=N,6μm,19.9s					
GTA			LR	LR		
	comp=E,2μm,19.7s					
GTA			LR	LR		
	comp=Z,1μm,19.4s					
CD2	**Chengdu**	**31.26 262**	P	**P**	**07 38 04.4**	**-0.5**
CD2			pP	pP	07 38 36.4	+0.4
CD2			sP	sP	07 38 50.8	-2.0
CD2			PP	PP	07 39 12.9	-5.4
CD2			S	**S**	**07 42 58.9**	**-1.8**
CD2			sS	sS	07 43 51.9	-3.3
CD2			SS	SS	07 44 55.8	-25
CD2			pmax	pmax		
	comp=Z,30nm,0.6s,mb5.2					
CD2			pmax	pmax		
	comp=Z,430nm,8.3s					
GYA	**Guiyang**	**31.59 252**	P	**P**	**07 38 07.1**	**-0.8**
GYA			pP	pP	07 38 37.1	-1.9
GYA			sP	sP	07 38 53.8	-1.9
GYA			PP	PP	07 39 15.6	-6.5
GYA			PcP	PcP	07 40 58.5	+1.8
GYA			S	**S**	**07 43 02.3**	**-3.6**
GYA			ScP	ScP	07 44 27.0	+0.9
GYA			PcS	PcS	07 44 39.8	-1.7
GYA			pmax	pmax		
	comp=Z,40nm,0.6s,mb5.3					
GYA			pmax	pmax		
	comp=Z,150nm,4.3s					
GYA			LR	LR		
	comp=N,1μm,17.4s					
GYA			LR	LR		
	comp=E,1μm,15.8s					
GYA			LR	LR		
	comp=Z,2μm,18.0s					
QIZ	**Qiongzhong**	**34.41 239**	P	**P**	**07 38 33.1**	**+0.7**
QIZ			pP	pP	07 39 02.8	-1.0
QIZ			S	**S**	**07 43 50.4**	**+0.8**

QIZ pmax pmax
comp=Z,6.0nm,1.3s,mb4.2
QIZ pmax pmax
comp=Z,160nm,9.4s
QIZ LR LR
comp=N,1µm,17.1s
QIZ LR LR
comp=E,750nm,15.9s
QIZ LR LR
comp=Z,810nm,15.1s
KMI Kunming 35.21 254 P P 07 38 38.6 -0.7
KMI pP pP 07 39 09.6 -1.2
KMI sP sP 07 39 27.5 +0.1
KMI PP PP 07 40 01.6 -0.5
KMI S **S 07 43 56.9 -5.0**
KMI ScP ScP 07 44 36.3 -2.6
KMI PcS PcS 07 44 52.8 -1.4
KMI sS sS 07 44 55.8 -1.2
KMI SS SS 07 46 26.8 -11
KMI pmax pmax
comp=Z,23nm,0.8s,mb4.9
KMI pmax pmax
comp=Z,220nm,3.7s
KMI LR LR
comp=N,1µm,15.5s
KMI LR LR
comp=E,1µm,17.8s
KMI LR LR
comp=Z,800nm,10.8s
DAV Davao City (W) 36.81 205⇑ *eP* **P 07 38 53.0 0.0**
AKUT Akutan 37.30 52 *eP* **P 07 38 56.2 -0.4**
comp=Z,112nm,1.5s,mb5.3
AKUT *e*PcP PcP 07 41 12.3 -0.4
TNA Tin City 37.35 33 *eP* **P 07 38 56.5 -0.4**
comp=Z,107nm,0.8s,mb5.5
ZAA0 Zalesovo Array 38.44 308 *eP* **P 07 39 05.7 -0.5**
ZALV Zalesovo Beam 38.44 308 P **P 07 39 05.9 -0.3**
comp=Z,120nm,0.8s,mb5.6,baz=90,slow=8.2,SNR=105
ZALV PcP PcP 07 41 16.1 -0.1
comp=Z,37nm,0.6s,baz=96,slow=3.1,SNR=9.2
ZALV ScP ScP 07 44 48.5 -1.9
comp=Z,13nm,0.7s,baz=71,slow=4.3,SNR=9.1
ZALV Zalesovo Beam 38.44 308 P **P 07 39 05.9 -0.3**
ZALV 07 41 16.1
ZALV 07 44 48.5
ZALV pmax pmax
comp=Z,120nm,0.8s,mb5.6
FALS False Pass 38.63 50 *eP* **P 07 39 06.8 -0.9**
comp=Z,80nm,1.4s,mb5.2
FALS *e*PcP PcP 07 41 15.7 -1.1
SDPT Sand Point 40.27 49 *eP* **P 07 39 19.9 -1.5**
comp=Z,66nm,0.6s,mb5.4
MK31 Makanchi Array 41.24 298 *eP* **P 07 39 29.1 -0.2**
MK31 Makanchi Array 41.24 298 *ceP* **P 07 39 28.9 -0.5**
MK31 pmax pmax
comp=Z,105nm,0.6s,mb5.6
MKAR Makanchi Array 41.24 298 P **P 07 39 29.0 -0.4**
comp=Z,76nm,0.6s,mb5.5,baz=84,slow=9.2,SNR=192
MKAR S **S 07 45 32.3 +0.3**
comp=Z,8.4nm,1.0s,baz=89,slow=15,SNR=4.5
MKAR Makanchi Array 41.24 298 P **P 07 39 29.0 -0.4**
MKAR S **S 07 45 32.3 +0.3**
MKAR Makanchi Array 41.24 298 *i* P **P 07 39 29.0 -0.4**
MKAR pmax pmax
comp=Z,76nm,0.6s
LSA Lhasa 41.30 270 P **P 07 39 31.0 +0.9**
LSA Lhasa 41.30 270 *eP* **P 07 39 31.9 +1.8**
comp=Z,54nm,1.2s,mb5.0
LSA Lhasa 41.30 270 *eP* **P 07 39 31.9 +1.8**
LSA pmax pmax
comp=Z,54nm,1.2s,mb5.0
CHTO Chiang Mai 41.93 250 *eP* **P 07 39 36.0 +0.6**
comp=Z,22nm,0.6s,mb5.0
CHTO Chiang Mai 41.93 250 *eP* **P 07 39 36.0 +0.6**
CHTO pmax pmax
comp=Z,22nm,0.6s,mb5.0
CHTO Chiang Mai 41.93 250 P **P 07 39 37.3 +1.9**
SNR=9.0
CMAR Chiang Mai Arr 42.17 250 P **P 07 39 38.0 +0.8**
comp=Z,5.6nm,0.6s,mb4.4,baz=42,slow=6.7,SNR=29
CMAR PcP PcP 07 41 28.8 -0.1
comp=Z,4.5nm,0.6s,baz=30,slow=1.9,SNR=6.0
CMAR ScP ScP 07 45 04.3 -1.2
comp=Z,2.9nm,0.7s,baz=30,slow=2.4,SNR=8.4
CMAR LR LR 07 58 21.7
comp=Z,451nm,18.5s,baz=221,slow=38
CMAR Chiang Mai Arr 42.17 250 P **P 07 39 38.1 +0.8**
CMAR 07 41 28.8
CMAR pmax pmax
comp=Z,6.0nm,0.6s
CMAR MLR MLR
comp=Z,451nm,18.5s
TTA Tatalina 42.20 38 *eP* **P 07 39 36.9 -0.1**
TTA Tatalina 42.20 38 *eP* **P 07 39 36.9 -0.1**
KURK Kurchatov 42.68 304 *eP* **P 07 39 40.5 -0.5**
comp=Z,202nm,0.7s,mb5.9
KURK Kurchatov 42.68 304 *ceP* **P 07 39 40.2 -0.8**
KURK pmax pmax
comp=Z,166nm,0.6s,mb5.8
KURK Kurchatov 42.68 304 P **P 07 39 40.6 -0.4**
SNR=55
SHL Shillong 42.95 264 *e*PKP **P 07 39 42.0 -1.6**
SHL *i* x x 07 45 52.0
RSO Redoubt South 43.88 41 *eP* **P 07 39 51.1 +0.6**
PPLA Purkeypile 43.95 38 *eP* **P 07 39 51.9 +0.9**
comp=Z,543nm,1.8s,mb5.9
OHAK Old Harbor 44.02 46 *eP* **P 07 39 51.1 -0.6**
comp=Z,105nm,0.8s,mb5.5
OHAK *e*PcP PcP 07 41 33.8 -0.7
KDAK Kodiak Island 44.31 45 P **P 07 39 53.1 -0.9**
comp=Z,142nm,0.8s,mb5.7,baz=284,slow=4.9,SNR=68
KDAK PcP PcP 07 41 35.9 +0.4
comp=Z,29nm,0.7s,baz=234,slow=3.6,SNR=5.4
KDAK Kodiak Island 44.31 45 *eP* **P 07 39 51.6 -2.4**
comp=Z,127nm,0.7s,mb5.7
KDAK *e*PcP PcP 07 41 36.4 +1.0
KDAK Kodiak Island 44.31 45 *ceP* **P 07 39 52.9 -1.1**
BPAW Bear Paw Mtn. 44.41 36 *eP* **P 07 39 54.9 +0.2**
comp=Z,63nm,0.7s,mb5.3
BPAW *e*PcP PcP 07 41 33.1 -2.6
COLD Coldfoot 44.60 31 *eP* **P 07 39 56.1 -0.1**
comp=Z,48nm,1.0s,mb5.1
TRF Thorofare Moun 44.76 37 *eP* **P 07 39 57.5 0.0**
comp=Z,61nm,0.8s,mb5.3
TAPN Taplejung 45.10 269 *eP* **P 07 40 01.1 +0.4**
comp=Z,234nm,1.2s,mb5.7
SLKM Skilak Lake 45.12 41 *eP* **P 07 39 59.5 -0.8**
SLKM Skilak Lake 45.12 41 *eP* **P 07 39 59.5 -0.9**
RC01 Rabbit Creek A 45.28 40 *eP* **P 07 40 01.0 -0.6**
comp=Z,99nm,0.8s,mb5.5
MCK McKinley 45.34 36 *eP* **P 07 40 01.9 -0.1**
comp=Z,70nm,0.8s,mb5.3
MCK McKinley 45.34 36 *eP* **P 07 40 01.9 -0.1**
MCK pmax pmax
comp=Z,70nm,0.8s,mb5.3
PMR Palmer 45.50 39 *eP* **P 07 40 02.7 -0.6**
comp=Z,76nm,0.5s,mb5.6
PMR Palmer 45.50 39 *eP* **P 07 40 02.7 -0.6**
PMR pmax pmax
comp=Z,77nm,0.5s,mb5.6
SEW Seward 45.56 41 *eP* **P 07 40 03.2 -0.6**
comp=Z,77nm,0.8s,mb5.4
ODAN Odare 45.60 269 *eP* **P 07 40 04.6 0.0**
comp=Z,121nm,0.9s,mb5.5
COLA College 45.70 34 *eP* **P 07 40 05.0 +0.1**
comp=Z,189nm,0.7s,mb5.8
COLA College 45.70 34 *eP* **P 07 40 05.0 +0.2**
COLA pmax pmax
comp=Z,189nm,0.7s,mb5.8
SML Sawmill 45.85 39 *eP* **P 07 40 06.2 +0.1**
comp=Z,36nm,0.6s,mb5.2
SML Sawmill 45.85 39 *eP* **P 07 40 06.2 +0.2**
SML pmax pmax
comp=Z,36nm,0.6s,mb5.2
ILAR Eielson Array 46.12 35 P **P 07 40 07.3 -0.8**
comp=Z,83nm,0.8s,mb5.4,baz=276,slow=4.1,SNR=226
ILAR LR LR 07 58 26.1
comp=Z,362nm,21.8s,baz=279,slow=34
ILAR Eielson Array 46.12 35 P **P 07 40 07.4 -0.7**
ILAR pmax pmax
comp=Z,83nm,0.8s
GUN Gumba 46.18 271 *eP* **P 07 40 09.5 +0.4**
comp=Z,322nm,0.7s,mb6.0
KKN Kakani 46.69 271 *eP* **P 07 40 13.4 +0.3**
comp=Z,174nm,0.8s,mb5.7
KKN Kakani 46.69 271 *eP* **P 07 40 13.4 +0.3**
KKN pmax pmax
comp=Z,174nm,0.8s,mb5.7
PKI Pulchoki 46.71 271 *eP* **P 07 40 13.5 +0.2**
comp=Z,115nm,0.7s,mb5.6
PKI Pulchoki 46.71 271 *eP* **P 07 40 13.5 +0.2**
PKI pmax pmax
comp=Z,106nm,0.6s,mb5.7
PKIN Phulchoki 46.72 271 *eP* **P 07 40 13.5 +0.2**
comp=Z,106nm,0.6s,mb5.6
VOSK Vostochnaya 46.81 309 P **P 07 40 13.7 0.0**
VOSK pmax pmax
comp=Z,75nm,1.0s,mb5.3
DMN Daman 46.92 271 *eP* **P 07 40 15.2 +0.3**
comp=Z,93nm,0.7s,mb5.5
TKM2 Tokmak 2 46.97 295 P **P 07 40 18.3 +3.2**
SNR=6.8
TKM2 Tokmak 2 46.97 295 *eP* **P 07 40 15.4 +0.4**
comp=Z,348nm,0.7s,mb6.1
TKM2 Tokmak 2 46.97 295 *eP* **P 07 40 15.5 +0.4**
TKM2 pmax pmax
comp=Z,348nm,0.7s,mb6.1
TKM2 Tokmak 2 46.97 295 ⇓Pn **P 07 40 19.0 +3.9**
comp=Z,200nm,0.7s,mb5.9
PAX Paxson 46.99 37 *eP* **P 07 40 15.4 +0.5**
comp=Z,24nm,0.6s,mb5.0
PAX Paxson 46.99 37 *eP* **P 07 40 15.4 +0.5**
PAX pmax pmax
comp=Z,24nm,0.6s,mb5.0
GKN Gorkha 47.06 272 *eP* **P 07 40 16.0 0.0**
comp=Z,124nm,0.6s,mb5.7
BVAR Borovoye Array 47.07 309 P **P 07 40 15.5 -0.2**
comp=Z,24nm,0.5s,mb5.1,baz=78,slow=7.9,SNR=76
BVAR PcP PcP 07 41 44.1 -1.1
comp=Z,17nm,0.6s,baz=85,slow=3.1,SNR=5.8
BVAR ScP ScP 07 45 24.2 -1.0
comp=Z,1.6nm,0.5s,baz=98,slow=5.0,SNR=4.7
BVAR Borovoye Array 47.07 309 P **P 07 40 15.5 -0.2**
BVAR 07 41 44.1
BVAR pmax pmax
comp=Z,24nm,0.5s
BRVK Borovoye 47.12 309 *eP* **P 07 40 15.8 -0.3**
comp=Z,37nm,0.6s,mb5.2
BRVK Borovoye 47.12 309 *deP* **P 07 40 16.0 -0.1**
BRVK pmax pmax
comp=Z,35nm,0.6s,mb5.2
BRVK Borovoye 47.12 309 P **P 07 40 17.5 +1.3**
SNR=13
DOT Dot Lake 47.50 36 *eP* **P 07 40 18.4 -0.5**
comp=Z,64nm,0.6s,mb5.8
KBK Karagaybulak 47.51 294 P **P 07 40 21.1 +1.8**
SNR=38
KBK Karagaybulak 47.51 294 *eP* **P 07 40 19.6 +0.4**
comp=Z,542nm,0.6s
DANN Dangsing 47.53 273 *eP* **P 07 40 20.1 +0.4**
comp=Z,597nm,0.6s
MENT Mentasta 47.78 37 *eP* **P 07 40 21.8 +0.8**
AAK Ala-Archa 47.83 295 LR LR 07 59 32.5
comp=Z,1µm,18.5s,baz=300,slow=35
ZRNK Zerenda 47.90 309 *i* P **P 07 40 22.0 -0.1**
ZRNK pmax pmax
comp=Z,73nm,0.6s,mb5.5
KOLN Koldanda 47.96 272 *eP* **P 07 40 23.0 +0.1**
comp=Z,164nm,0.9s,mb5.7
KSH Kashi 48.03 290 *eP* **P 07 40 26.3 +3.0**
KSH *ep*P pP 07 40 58.3 +1.9
KSH *es*P sP 07 41 14.3 +1.6
KSH *e*PcP PcP 07 41 52.5 +3.6
KSH *e*PP PP 07 42 19.6 +3.0
KSH *e*ScP ScP 07 45 32.3 +2.7
KSH *e*PcS PcS 07 45 47.0 +2.2
KSH *e*S **S 07 47 11.8 +1.5**
KSH *es*S sS 07 48 08.5 +0.9
KSH *e*ScS ScS 07 50 01.9 +0.7
KSH LR LR
comp=N,8µm,19.5s
KSH LR LR
comp=E,7µm,17.5s
KSH LR LR
comp=Z,3µm,15.9s
KSM Kuching 48.28 222 *eP* **P 07 40 26.2 +0.7**
comp=Z,19nm,0.6s,mb4.9
EKS2 Erkin-Say 48.30 295 P **P 07 40 20.9 -4.5**
SNR=106
EKS2 Erkin-Say 48.30 295 *eP* **P 07 40 20.8 -4.5**
comp=Z,472nm,0.7s,mb6.2
EGAK Eagle 48.54 34 *eP* **P 07 40 26.3 -0.6**
comp=Z,78nm,0.7s,mb5.5
DAWY Dawson 49.45 35 *eP* **P 07 40 33.7 0.0**
JOSI Joshimath 49.54 278 *e*PKP **P 07 40 35.3 +0.3**
JOSI AMb AMB 07 40 43.1
comp=Z,902nm,0.9s
KAPI Kappang 50.07 207 P **P 07 40 38.0 -1.1**
comp=Z,12nm,0.7s,mb4.7,baz=13,slow=8.3,SNR=6.1
KAPI Kappang 50.07 207 *eP* **P 07 40 38.4 -0.6**
comp=Z,92nm,1.3s,mb5.2
PNL Peninsula 50.59 40 *eP* **P 07 40 44.1 +1.7**
comp=Z,54nm,0.8s,mb5.2
KULM Kulim 50.62 236 *eP* **P 07 40 45.0 +1.7**
comp=Z,15nm,0.7s,mb4.7
INK Inuvik 50.73 29 P **P 07 40 43.2 -0.2**
comp=Z,100nm,0.6s,mb5.7,baz=308,slow=6.4,SNR=133
INK Inuvik 50.73 29 *eP* **P 07 40 43.1 -0.2**
comp=Z,100nm,0.6s,mb5.6
INK Inuvik 50.73 29 *eP* **P 07 40 43.1 -0.2**
INK pmax pmax
comp=Z,100nm,0.6s
DDI Dehra Dun 50.77 278 *ex* **P 07 40 47.0 +2.7**
DDI *ex* x 07 44 13.0
SDNR Sundarnagar 50.98 280 *e*PKP **P 07 40 45.5 -0.3**
SDNR *ex* x 07 43 03.5
SMLA Simla 51.02 280 *i* P **P 07 40 44.1 -2.0**
SMLA *i* x x 07 43 13.0
SVE Sverdlovsk 51.33 316⇑ *eP* **P 07 40 49.5 +1.5**
SVE *e* 07 42 47.3
SVE *eS* **S 07 47 54.8 -0.8**
SVE *e*SS SS 07 51 37.1 +4.6
SVE pmax pmax
comp=Z,21nm,0.8s,mb4.8
SVE MLR MLR
comp=Z,2µm,16.0s
NDI New Delhi 52.25 277 *e*PKP **P 07 40 54.5 -0.7**
NDI *ex* x 07 44 07.5
SOKR Solikamsk 52.35 320 *eP* **P 07 40 54.8 -0.7**
SOKR S **S 07 48 08.7 -0.7**
SOKR pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
SOKR MLR MLR
comp=Z,610nm,15.0s
AYAN Aya Nagar 52.42 277 *e*PKP **P 07 40 54.9 -1.6**
AGRA Agra 52.48 275 *e*PKP **P 07 40 56.8 -0.2**
AGRA AMb AMB 07 40 58.6
comp=Z,47nm,0.3s,mb5.6
ARU Arti 52.54 316 *eP* **P 07 40 57.9 +1.0**
comp=Z,47nm,0.9s,mb5.2
ARU Arti 52.54 316 *c i*P **P 07 40 57.5 +0.5**
ARU *PP pP 07 41 29.3 -1.3
ARU *e*SP sP 07 41 45.1 -1.7
ARU 07 42 05.1
ARU *e* 07 42 56.9
ARU *e*PPP 07 44 08.7
ARU S **S 07 48 14.2 +2.0**
ARU 07 50 27.7
ARU SS SS 07 51 53.6 +2.0
ARU SSS 07 53 42.4
ARU pmax pmax
comp=Z,34nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,2µm,16.0s
SONA Sohna 52.58 277 *e*PKP **P 07 40 57.6 -0.1**
SONA AMb AMB 07 41 01.5
comp=Z,42nm,1.1s,mb5.1
SKAG Skagway 52.62 40 *eP* **P 07 40 57.9 +0.4**
comp=Z,54nm,1.0s,mb5.2
SIT Sitka 53.48 43 *eP* **P 07 41 05.0 +1.1**
comp=Z,52nm,0.8s,mb5.3
SIT Sitka 53.48 43 *eP* **P 07 41 05.0 +1.1**
SIT pmax pmax
comp=Z,52nm,0.8s,mb5.3
KHET Khetri 53.62 277 *e*PKP **P 07 41 04.5 -0.8**
PSI Prapat 53.63 235 P **P 07 41 04.9 -0.6**
comp=Z,4.0nm,0.5s,mb4.4,baz=176,slow=18,SNR=4.2
PSI Prapat 53.63 235 P **P 07 41 04.9 -0.6**
PSI pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
KAKA Kakadu 54.51 190 *eP* **P 07 41 08.9 -2.8**
comp=Z,21nm,0.7s,mb5.0
KAKA Kakadu 54.51 190 *eP* **P 07 41 11.0 -0.7**
comp=Z,66nm,0.7s,mb5.5
ABKAR Akbulak array 54.54 307 *eP* **P 07 41 11.3 -0.3**
comp=Z,31nm,0.6s,mb5.2
KIP Kipapa 55.00 91 *eP* **P 07 41 16.8 +1.5**
comp=Z,89nm,0.7s,mb5.6
KIP Kipapa 55.00 91 *eP* **P 07 41 16.8 +1.5**
KIP pmax pmax
comp=Z,89nm,0.7s,mb5.6
BHPL Bhopal 55.10 271 *e*PKP **P 07 41 15.8 -0.3**
BHPL AMb AMB 07 41 24.2
comp=Z,26nm,0.9s,mb5.0
AKTK Aktyubinsk 55.18 309 P **P 07 41 16.9 +0.7**
AKTK PcP PcP 07 42 14.8 -0.6
AKTO Aktyubinsk 55.18 309 P **P 07 41 16.9 +0.7**
comp=Z,20nm,0.6s,mb5.0,baz=67,slow=12,SNR=18
AKTO PcP PcP 07 42 14.8 -0.6
comp=Z,17nm,0.7s,baz=57,slow=2.8,SNR=4.9
AKTO Aktyubinsk 55.18 309 P **P 07 41 16.9 +0.7**
AKTO 07 42 14.8
AKTO pmax pmax
comp=Z,20nm,0.6s,mb5.0
CRAG Craig 55.24 44 *eP* **P 07 41 17.9 +1.4**
comp=Z,34nm,0.7s,mb5.2
WRAK Wrangell Islan 55.25 42 *eP* **P 07 41 17.7 +1.2**
comp=Z,44nm,1.1s,mb5.1
COEN Coen 55.29 177 *eP* **P 07 41 17.0 -0.3**
comp=Z,87nm,0.8s,mb5.5
AJM Ajmer 55.36 276 *e*PKP **P 07 41 18.5 +0.6**
DLBC Dease Lake 55.55 40 *eP* **P 07 41 19.9 +1.2**
ALE Alert 55.64 4 P **P 07 41 18.9 -0.2**
comp=Z,300nm,0.8s,mb6.2,SNR=8.2
SPITS Spitsbergen Ar 55.95 348 P **P 07 41 20.3 -1.0**
comp=Z,4.7nm,0.5s,mb4.6,baz=293,slow=5.9,SNR=12
SPITS Spitsbergen Ar 55.95 348 P **P 07 41 20.3 -1.0**
SPITS pmax pmax
comp=Z,5.0nm,0.5s
LVZ Lovozero 57.70 334 *eP* **P 07 41 34.6 +0.8**
comp=Z,23nm,0.6s,mb5.2
LVZ Lovozero 57.70 334 *eP* **P 07 41 34.6 +0.8**
LVZ pmax pmax
comp=Z,23nm,0.6s,mb5.2
POHA Pohakuloa 57.85 91 *eP* **P 07 41 36.0 +0.5**
comp=Z,137nm,0.8s,mb5.8
APA Apatity 58.28 334⇑ *i*P **P 07 41 40.0 +2.2**
APA *i* *PP pP 07 42 15.0 +2.9
APA *i* 07 43 52.0
APA *i* S **S 07 49 34.0 +6.0**
APA *i* SS SS 07 53 20.0 -1.4
APA pmax pmax
comp=Z,20nm,1.0s,mb4.9
APA MLR MLR
comp=Z,900nm,15.0s
RES Resolute Bay 58.41 15 P **P 07 41 37.8 -0.9**
comp=Z,51nm,0.8s,mb5.4,baz=311,slow=6.5,SNR=12
RES Resolute Bay 58.41 15 *eP* **P 07 41 38.7 +0.1**
comp=Z,56nm,0.8s,mb5.5
RES Resolute Bay 58.41 15 *eP* **P 07 41 38.7 +0.1**
RES pmax pmax
comp=Z,57nm,0.8s,mb5.5
KEV Kevo 58.97 338 *eP* **P 07 41 42.7 +0.2**
KEV pmax pmax
comp=Z,16nm,0.6s,mb5.0
KEV Kevo 58.97 338 *ep* **P 07 41 42.7 +0.2**
comp=Z,16nm,0.6s,mb5.0
ARCES ARCESS Array B 59.52 338 P **P 07 41 46.3 0.0**
comp=Z,5.5nm,0.7s,mb4.5,baz=70,slow=8.0,SNR=20
ARCES PcP PcP 07 42 32.2 0.0
comp=Z,7.9nm,0.8s,baz=347,slow=5.0,SNR=4.3
ARCES ARCESS Array B 59.52 338 P **P 07 41 46.3 0.0**
ARCES PcP PcP 07 42 32.2 0.0
ARCES ARCESS Array B 59.52 338 P **P 07 41 46.3 0.0**
ARCES 07 42 32.2
ARCES pmax pmax
comp=Z,6.0nm,0.7s
KLMR Klimovskoe 59.57 326 *eP* **P 07 41 46.5 -0.3**
KLMR *e* 07 43 59.1
KLMR S **S 07 49 38.9 -6.0**
KLMR SS SS 07 53 40.5 -1.4
KLMR pmax pmax
comp=Z,26nm,0.6s,mb5.2
YKA Yellowknife Ar 60.28 31 P **P 07 41 50.7 -0.9**
comp=Z,26nm,0.6s,mb5.3,baz=297,slow=7.0,SNR=136
YKA PcP PcP 07 42 35.9 +0.6
comp=Z,12nm,0.6s,baz=304,slow=3.7,SNR=11
YKA Yellowknife Ar 60.28 31 P **P 07 41 50.7 -0.9**
YKA PcP PcP 07 42 35.9 +0.6
YKA Yellowknife Ar 60.28 31 P **P 07 41 50.7 -0.9**
YKA 07 42 35.9
YKA pmax pmax
comp=Z,26nm,0.6s
FITZ Fitzroy Crossi 60.93 196 P **P 07 41 55.5 -1.0**
comp=Z,15nm,0.9s,mb4.8,baz=23,slow=7.4,SNR=25
FITZ Fitzroy Crossi 60.93 196 *eP* **P 07 41 55.6 -0.9**
comp=Z,25nm,1.0s,mb5.0
FITZ Fitzroy Crossi 60.93 196 *eP* **P 07 41 55.6 -0.9**
comp=Z,24nm,1.1s,mb4.9
KAD Karad 61.08 268 *e*PKP **P 07 41 57.4 -0.3**
KAD AMb AMB 07 42 09.6
comp=Z,27nm,0.9s,mb5.1
DAG Danmarks Havn 61.21 355 *i* P **P 07 41 56.2 -1.5**
DAG pmax pmax
comp=Z,21nm,0.8s,mb5.0
DAG Danmarks Havn 61.21 355 *i* P **P 07 41 56.2 -1.5**
comp=Z,211nm,0.8s,mb6.0
WRA Warramunga Arr 61.45 187 P **P 07 41 58.3 -1.7**
comp=Z,28nm,0.8s,mb5.1,baz=4.3,slow=7.0,SNR=160
WRA S **S 07 50 05.0 -4.6**
comp=Z,8.8nm,1.2s,baz=3.1,slow=12,SNR=17
WRA PKPPKP 08 11 12.3
comp=Z,1.3nm,0.8s,baz=179,slow=1.9,SNR=46
WRA Warramunga Arr 61.45 187 P **P 07 41 58.3 -1.7**
WRA S **S 07 50 05.0 -4.6**
WRA P'P' 08 11 12.3
WRA Warramunga Arr 61.45 187 P **P 07 41 58.3 -1.7**
WRA S **S 07 50 05.0 -4.6**
WRA pmax pmax
comp=Z,28nm,0.8s
WRA smax
comp=N,9.0nm,1.2s
CTA Charters Tower 61.57 174 P **P 07 42 00.0 -0.7**
comp=N,4.8nm,0.6s,mb4.5,baz=9.0,slow=4.4,SNR=7.4
CTA Charters Tower 61.57 174 P **P 07 42 00.0 -0.7**
CTA pmax pmax
comp=Z,5.0nm,0.6s
JOF Joensuu 61.65 331 *eP* **P 07 41 59.9 -0.9**
JOF pmax pmax
comp=Z,49nm,0.5s,mb5.6
JOF Joensuu 61.65 331 *ep* **P 07 41 59.9 -0.9**
comp=Z,49nm,0.5s,mb5.6
MOS Moscow 63.22 322 *eP* **P 07 42 11.2 -0.2**
MOS *e* pP 07 42 47.4 +1.3
MOS *e* 07 44 29.4
MOS *i* S **S 07 50 30.1 -0.9**
MOS MLR MLR
comp=Z,1µm,17.0s
PGC Sidney 63.76 47 *eP* **P 07 42 16.0 +0.9**
comp=Z,4.5nm,0.6s,mb4.5
VRHR Novokhopersk 63.89 316 *eP* **P 07 42 13.8 -2.1**
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.1
VRHR pmax pmax
comp=N,20nm,0.7s
KAF Kangasniemi 63.97 331 *eP* **P 07 42 14.3 -1.9**
KAF pmax pmax
comp=Z,55nm,0.5s,mb5.6
KAF Kangasniemi 63.97 331 *ep* **P 07 42 14.3 -1.9**
comp=Z,55nm,0.5s,mb5.6
OBN Obninsk 64.07 322 *eP* **P 07 42 17.1 +0.1**
comp=Z,37nm,0.7s,mb5.3
OBN Obninsk 64.07 322⇑ *eP* **P 07 42 16.4 -0.6**
OBN *i* pP 07 42 51.5 -0.3
OBN *e* 07 44 38.9
OBN *i* S **S 07 50 41.3 -0.3**
OBN *i* PPS 07 51 47.6
OBN *i* SS SS 07 54 47.7 -4.6
OBN pmax pmax
comp=Z,41nm,1.3s,mb5.1
OBN MLR MLR
comp=Z,800nm,19.0s
NLWA Neilton Lookou 64.23 49 *eP* **P 07 42 18.8 +0.6**
comp=Z,102nm,1.0s,mb5.6
A05A Maple Falls 64.32 46 ⇑P **P 07 42 19.0 +0.3**

baz=64,SNR=18
FINES FINESS Array B 64.49 331 P P 07 42 18.8 -0.8
comp=Z,39nm,0.7s,mb5.3,baz=46,slow=8.2,SNR=44
FINES LR LR 08 12 34.2
comp=Z,703nm,18.2s,baz=78,slow=38
FINES FINESS Array B 64.49 331 P P 07 42 18.8 -0.8
FINES pmax pmax
comp=Z,39nm,0.7s
FINES MLR MLR
comp=Z,703nm,18.2s
GNW Green Mountain 64.72 48 *e*P **P 07 42 23.2 +1.9**
comp=Z,92nm,2.0s,mb5.3
JCW Jim Creek 64.86 47 P **P 07 42 22.1 -0.1**
E03A Lebam 64.88 49 ⇓P **P 07 42 22.8 +0.4**
baz=65,SNR=25
B06A Marblemount 64.92 47 ⇓P **P 07 42 22.7 +0.1**
baz=65,SNR=21
RPW Rockport 64.94 47 *e*P **P 07 42 22.9 +0.2**
VSR Storozhevoye 65.09 317 *e*P **P 07 42 24.7 +1.1**
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.2
VSR pmax pmax
comp=N,10.0nm,1.0s
VORD Divnogorie 65.17 317 *e*P **P 07 42 25.0 +0.8**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,40nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
ASAR Alice Springs 65.18 187 P **P 07 42 23.6 -0.9**
comp=Z,8.9nm,0.7s,mb4.7,baz=2.6,slow=5.1,SNR=50
ASAR S S 07 50 53.2 -2.5
comp=Z,3.5nm,1.2s,baz=9.5,slow=12,SNR=5.7
ASAR PKPPKP 08 11 00.5
comp=Z,0.6nm,0.7s,baz=178,slow=2.8,SNR=5.3
ASAR Alice Springs 65.18 187 P **P 07 42 23.6 -0.8**
ASAR S S 07 50 53.3 -2.4
ASAR pmax pmax
comp=Z,9.0nm,0.7s
ASAR smax
comp=N,4.0nm,1.3s
F03A Seaside 65.23 50 ⇓P **P 07 42 24.1 -0.5**
baz=65,SNR=8.6
MBWA Marble Bar 65.30 201 *e*P **P 07 42 24.3 -1.0**
comp=N,11nm,0.6s,mb4.9
D05A Enumclaw 65.40 48 ⇑P **P 07 42 26.2 +0.5**
baz=65,SNR=25
HEBO Mount Hebo 65.53 51 *e*P **P 07 42 28.4 +1.8**
comp=N,88nm,0.8s,mb5.6
LON Longmire 65.75 48 *e*P **P 07 42 28.0 0.0**
comp=N,29nm,0.7s,mb5.2
LON Longmire 65.75 48 *e*P **P 07 42 28.0 0.0**
LON pmax pmax
comp=Z,29nm,0.7s,mb5.2
TDL Tradedollar La 65.76 49 P **P 07 42 28.6 +0.6**
F04A Amboy 65.88 49 ⇓P **P 07 42 29.0 +0.2**
baz=66,SNR=64
MTMW Mount Mitchell 65.95 49 P **P 07 42 29.8 +0.6**
ETW Entiat 66.08 47 *e*P **P 07 42 29.8 -0.3**
COR Corvallis 66.15 51 *e*P **P 07 42 31.3 +0.7**
comp=Z,107nm,0.7s,mb5.8
COR Corvallis 66.15 51 *e*P **P 07 42 31.3 +0.7**
COR pmax pmax
comp=Z,107nm,0.7s,mb5.8
SUMG Summit 66.16 360 *e*P **P 07 42 30.4 +0.2**
comp=Z,66nm,1.2s,mb5.3
SUMG Summit 66.16 360 *i* P **P 07 42 30.4 +0.2**
comp=Z,24nm,0.7s,mb5.1
B08A Colville Reser 66.18 46 ⇓P **P 07 42 30.5 -0.2**
baz=66,SNR=34
G04A Mulino 66.27 50 ⇑P **P 07 42 31.4 +0.1**
baz=66,SNR=26
KEBM Edson Butte 66.53 53 *e*P **P 07 42 34.0 +1.0**
comp=Z,93nm,0.9s,mb5.6
VLL Laurance Lake 66.58 49 P **P 07 42 33.9 +0.6**
HOOD Mount Hood Mea 66.68 50 *e*P **P 07 42 34.2 +0.3**
comp=Z,139nm,0.8s,mb5.8
H04A Detroit Lake 66.74 50 ⇑P **P 07 42 34.0 -0.3**
baz=66,SNR=83
VFP Flag Point 66.78 49 P **P 07 42 34.8 +0.2**
E07A Sunnyside 66.96 48 ⇑P **P 07 42 35.9 +0.2**
baz=67,SNR=24
KBO Bosley Butte 66.98 53 *e*P **P 07 42 37.4 +1.4**
comp=Z,77nm,1.1s,mb5.4
C09A Chrisman Ranch 67.08 46 ⇑P **P 07 42 35.9 -0.5**
baz=67
OD2 Odessa Site #2 67.09 46 *e*P **P 07 42 36.8 +0.3**
D08A Wollman Farm, 67.17 47 ⇑P **P 07 42 36.5 -0.5**
baz=67,SNR=43
RSW Rattlesnake Hi 67.20 48 *e*P **P 07 42 37.7 +0.5**
WRD Warden 67.20 47 P **P 07 42 36.0 -1.3**
HAWA Hanford 67.23 48 *e*P **P 07 42 37.4 0.0**
comp=Z,68nm,0.7s,mb5.6
G06A Carlson Farm, 67.31 49 ⇓P **P 07 42 37.9 0.0**
baz=67,SNR=49
EIDS Eidsvold 67.31 170 *e*P **P 07 42 38.2 +0.2**
comp=Z,8.3nm,0.8s,mb4.6
F07A Phinny Hill Vi 67.31 48 ⇑P **P 07 42 38.2 +0.3**
baz=67,SNR=24
NEW Newport 67.41 45 ⇓P **P 07 42 37.9 -0.6**
baz=67,SNR=39
NEW Newport 67.41 45 *e*P **P 07 42 38.0 -0.5**
comp=Z,36nm,0.8s,mb5.2
NEW Newport 67.41 45 *e*P **P 07 42 38.0 -0.5**
NEW pmax pmax
comp=Z,36nm,0.8s
ZEI Tsey 67.43 308 *e*P **P 07 42 35.7 -3.0**
ZEI *e*S S 07 51 19.5 -3.2
ZEI *e**SS sS 07 52 17.6 -5.9
ZEI pmax pmax
comp=Z,11nm,0.7s,mb4.8
KIV Kislovodsk 67.44 309 *e*P **P 07 42 40.2 +1.5**
comp=Z,59nm,0.7s,mb5.5
KIV Kislovodsk 67.44 309 *e*P **P 07 42 38.5 -0.3**
KIV *e**PP pP 07 43 13.4 -0.5
KIV *e**SP sP 07 43 27.2 -2.5
KIV *e*S S 07 51 23.8 +1.0
KIV pmax pmax
comp=Z,53nm,1.1s,mb5.3
HUMO Hull Mountain 67.51 53 *e*P **P 07 42 39.1 -0.1**
comp=Z,14nm,0.6s,mb4.9
KRMB Red Mountain 67.58 54 *e*P **P 07 42 41.2 +1.6**
comp=Z,72nm,1.3s,mb5.2
DZM Mont Dzumac 67.73 154 *e*S S 07 51 28.2 +1.7
comp=Z,556nm,26.1s
DZM *e*LR LR 08 03 24.3
comp=Z,496nm,28.5s
A12A Yaak River Ran 67.77 44 ⇓P **P 07 42 40.2 -0.5**
baz=68,SNR=18
E09A Wood Farm, Sta 67.93 47 P **P 07 42 41.6 -0.2**
baz=68,SNR=57
KHMM Horse Mountain 68.07 54 *e*P **P 07 42 43.6 +0.8**
comp=Z,21nm,0.7s,mb5.0
B12A Libby 68.09 44 ⇓P **P 07 42 44.1 +1.3**
baz=68,SNR=6.7
C11A Tepee Creek (N 68.13 45 ⇓P **P 07 42 43.1 +0.1**
baz=68
YBH Yreka Blue Hor 68.18 53 P **P 07 42 43.3 -0.1**
comp=Z,24nm,0.7s,mb5.0,baz=15,slow=5.1,SNR=68
YBH Yreka Blue Hor 68.18 53 P **P 07 42 43.3 -0.1**
YBH pmax pmax
comp=Z,24nm,0.7s
G08A Pilot Rock 68.22 48 ⇓P **P 07 42 43.8 +0.2**
baz=68,SNR=39
IZAR Zarasai 68.22 326 *e*P **P 07 42 43.6 +0.2**
LNOR Lincton Mounta 68.24 48 *e*P **P 07 42 44.2 +0.4**
LNOR Lincton Mounta 68.24 48 *e*P **P 07 42 44.2 +0.5**
MICGM Minsk 68.37 325 *e*P **P 07 42 43.0 -1.4**
MNK Minsk 68.39 325 *e*P **P 07 42 43.0 -1.5**
ISAL Salakas 68.40 326 *e*P **P 07 42 44.7 +0.2**
A13A Flathead Natio 68.42 43 ⇑P **P 07 42 44.5 -0.2**
baz=68,SNR=46
GNI Garni 68.47 305 P **P 07 42 45.8 +0.6**
comp=Z,3.4nm,0.4s,mb4.4,baz=332,slow=12,SNR=4.6
GNI Garni 68.47 305 *i* P **P 07 42 46.1 +0.8**
GNI pmax pmax
comp=Z,13nm,1.2s
IIGN Ignalina 68.51 326 *e*P **P 07 42 45.4 +0.2**
WALA Waterton Lakes 68.59 43 *e*P **P 07 42 45.4 -0.5**
comp=Z,1.6nm,0.7s
C12B Naegeli Ranch, 68.63 45 ⇓P **P 07 42 46.2 +0.1**
baz=68,SNR=44
I07A Izee 68.64 50 ⇓P **P 07 42 46.3 +0.1**
baz=68,SNR=58

K05A Summer Lake 68.66 51 ⇓P **P 07 42 46.9 +0.5**
baz=68,SNR=103
B13A Whitefish 68.74 44 ⇑P **P 07 42 46.8 +0.1**
baz=68,SNR=40
F10A Beach Ranch, E 68.76 47 ⇑P **P 07 42 46.6 -0.3**
baz=68,SNR=34
KCPM Cahto Peak 68.87 55 *e*P **P 07 42 49.3 +1.6**
comp=Z,21nm,0.8s,mb4.9
A14A Double T Ranch 68.90 43 ⇓P **P 07 42 47.6 -0.2**
baz=69,SNR=41
BSMT Bassoo Peak 68.90 44 *e*P **P 07 42 47.9 +0.2**
WDC Whiskeytown Da 68.97 54 *e*P **P 07 42 48.6 +0.3**
comp=Z,30nm,0.9s,mb5.0
WDC Whiskeytown Da 68.97 54 *e*P **P 07 42 48.6 +0.3**
WDC pmax pmax
comp=Z,30nm,0.9s,mb5.0
BLMT Blacktail Moun 69.02 44 *e*P **P 07 42 49.2 +0.7**
D12A Red Ives Fores 69.10 45 ⇓P **P 07 42 48.7 -0.3**
baz=69
C13A Hot Springs 69.12 44 ⇑P **P 07 42 49.2 +0.1**
baz=69,SNR=62
JTMT Jette 69.23 44 *e*P **P 07 42 50.2 +0.4**
A15A Johnson Ranch, 69.24 42 ⇓P **P 07 42 49.1 -0.8**
baz=69,SNR=67
YBMT Yellow Bay 69.30 44 *e*P **P 07 42 51.2 +1.0**
B14A Marquette Ranc 69.36 43 ⇓P **P 07 42 50.7 +0.1**
baz=69,SNR=65
SOC Sochi 69.38 310 *e*P **P 07 42 41.5 -9.3**
SOC *e* 07 45 35.8
SOC *e*S S 07 51 38.2 -7.6
SOC *e* 07 52 36.0
SOC *e*SS SS 07 56 10.7 -4.2
SOC *e*SSS 07 59 28.1
SOC MLR MLR
comp=Z,883nm,16.0s
E12A Beaver Dam Sad 69.39 46 ⇑P **P 07 42 50.9 +0.1**
baz=69
C14A Swan Lake 69.50 44 ⇓P **P 07 42 51.6 +0.2**
baz=69
MOD Modoc 69.51 52 *e*P **P 07 42 51.6 0.0**
SWMT Swartz Lake 69.53 44 *e*P **P 07 42 51.5 -0.2**
D13A Huson 69.55 45 ⇑P **P 07 42 51.1 -0.7**
baz=69,SNR=94
HOPS Hopland 69.60 56 *e*P **P 07 42 53.4 +1.1**
comp=Z,6.4nm,0.7s,mb4.5
J08A Circle Bar Ran 69.68 50 ⇑P **P 07 42 52.9 +0.3**
baz=69,SNR=37
NB2 NORSAR Subarra 69.75 336 P **P 07 42 51.9 -0.8**
comp=Z,33nm,0.7s,mb5.2,baz=39,slow=6.5
NOA NORSAR Array B 69.75 336 P **P 07 42 51.6 -1.2**
comp=Z,29nm,0.7s,mb5.1,baz=38,slow=6.1,SNR=82
NOA NORSAR Array B 69.75 336 P **P 07 42 51.6 -1.1**
NOA pmax pmax
comp=Z,29nm,0.7s
B15A Bradely Ranch, 69.76 43 ⇑P **P 07 42 52.7 -0.3**
baz=70,SNR=111
A16A West Butte Ran 69.83 42 ⇓P **P 07 42 52.7 -0.8**
baz=70
ANN Anapa 69.91 312 *e*P **P 07 42 52.6 -1.4**
ANN *e**PP pP 07 43 28.9 -0.5
ANN *e*S S 07 51 51.1 -0.8
ANN pmax pmax
comp=Z,97nm,1.8s,mb5.2
ANN MLR MLR
comp=N,532nm,17.0s
ANN MLR MLR
comp=E,310nm,17.0s
ANN MLR MLR
comp=Z,576nm,17.0s
SLMT Seeley Lake 69.97 44 *e*P **P 07 42 53.9 -0.4**
F12A Elk City 69.97 46 ⇑P **P 07 42 54.1 -0.3**
baz=70,SNR=129
MSO Missoula 69.99 45 ⇑P **P 07 42 54.4 -0.2**
baz=70,SNR=34
MSO Missoula 69.99 45 *e*P **P 07 42 54.3 -0.2**
comp=Z,27nm,0.8s,mb5.0
NAO01 NORSAR Array S 70.00 336 *e*P **P 07 42 53.2 -1.0**
comp=Z,20nm,0.8s,mb4.9
D14A Greenough 70.06 44 ⇑P **P 07 42 54.5 -0.4**
baz=70,SNR=98
C15A Salmond Ranch, 70.08 43 ⇓P **P 07 42 55.3 +0.3**
baz=70,SNR=99
E13A Victor 70.11 45 ⇓P **P 07 42 54.6 -0.6**
baz=70,SNR=40
B16A M & M Farms, S 70.13 42 ⇑P **P 07 42 54.8 -0.5**
baz=70
WVOR Wild Horse Val 70.16 51 *e*P **P 07 42 55.5 -0.1**
comp=Z,44nm,0.9s,mb5.2
WVOR Wild Horse Val 70.16 51 *e*P **P 07 42 55.5 -0.1**
WVOR pmax pmax
comp=Z,44nm,0.9s,mb5.2
FCC Fort Churchill 70.28 27 *e*P **P 07 42 55.3 -0.7**
comp=Z,2.9nm,1.0s
FCC Fort Churchill 70.28 27 *e*P **P 07 42 55.3 -0.8**
A17A Triple J Farms 70.29 42 ⇑P **P 07 42 55.3 -0.9**
baz=70,SNR=98
CHMT Chamberlain Mo 70.30 44 *e*P **P 07 42 55.7 -0.7**
FFC Flin Flon 70.30 33 *e*P **P 07 42 55.5 -0.8**
comp=Z,92nm,0.8s,mb5.6
FFC Flin Flon 70.30 33 *ce*P **P 07 42 56.2 0.0**
AKASG Malin Array Be 70.30 321 P **P 07 42 55.2 -1.1**
comp=Z,28nm,0.7s,mb5.1,baz=44,slow=5.9,SNR=49
AKASG Malin Array Be 70.30 321 *ce*P **P 07 42 55.2 -1.1**
AKASG pmax pmax
comp=Z,28nm,0.7s
KIEV Kiev 70.31 321 *e*P **P 07 42 55.1 -1.3**
comp=Z,48nm,0.7s,mb5.3
KIEV Kiev 70.31 321 *e*P **P 07 42 55.1 -1.3**
KIEV pmax pmax
comp=Z,48nm,0.7s,mb5.3
G12A Big Creek, Yel 70.33 47 ⇓P **P 07 42 56.0 -0.6**
baz=70,SNR=44
OHCM Honcut 70.37 55 *e*P **P 07 42 56.3 -0.7**
F13A Darby 70.45 46 ⇑P **P 07 42 56.2 -1.1**
baz=70,SNR=38
E14A Clinton 70.50 45 ⇓P **P 07 42 57.1 -0.5**
baz=70,SNR=52
C16A Fuhringer Ranc 70.51 43 ⇑P **P 07 42 57.4 -0.2**
baz=70,SNR=17
AFI Afiamalu 70.60 130 P **P 07 42 59.6 +1.1**
comp=Z,20nm,0.7s,mb4.9,baz=220,slow=3.3,SNR=4.3
AFI Afiamalu 70.60 130 P **P 07 42 59.6 +1.1**
AFI Afiamalu 70.60 130 P **P 07 42 59.6 +1.1**
AFI pmax pmax
comp=Z,20nm,0.7s,mb5.0
D15A Lincoln 70.60 44 ⇑P **P 07 42 58.3 +0.1**
baz=70
B17A L&G Farms, Che 70.67 42 ⇓P **P 07 42 58.4 -0.2**
baz=70
SUW Suwalki 70.71 326 *e*P **P 07 42 59.5 +0.8**
SUW *e*pP pP 07 43 38.2 +4.0
SUW *e*S S 07 52 00.8 -0.1
SUW LMZ 08 19 16.1
comp=Z,800nm,18.8s
SUW Suwalki 70.71 326 *e*P **P 07 42 59.5 +0.8**
SUW *e**PP pP 07 43 38.2 +4.0
SUW *e*S S 07 52 00.8 -0.1
SUW MLR MLR
comp=Z,800nm,18.8s
A18A Metzger Ranch, 70.72 41 ⇑P **P 07 42 58.3 -0.6**
baz=70,SNR=41
E15A Deer Lodge 70.94 44 ⇑P **P 07 42 59.9 -0.3**
baz=71,SNR=101
G13A Cobalt 70.95 46 ⇓P **P 07 42 59.5 -0.8**
baz=71,SNR=54
F14A Wisdom 70.95 45 ⇑P **P 07 43 00.1 -0.2**
baz=71,SNR=24
H12A Diamond D Ranc 70.96 47 ⇓P **P 07 42 60.0 -0.4**
baz=71,SNR=122
B18A Beardsley Farm 71.11 42 P **P 07 43 01.0 -0.2**
baz=71,SNR=76
D16A Dana Ranch, Ca 71.11 43 ⇑P **P 07 43 01.3 0.0**
baz=71,SNR=11
C17A Wharram Farm, 71.12 43 ⇑P **P 07 43 00.5 -0.8**
baz=71,SNR=53
MFID Camas Ranch 71.14 48 ⇑P **P 07 43 01.5 -0.1**
baz=71,SNR=58
HRY Holter Researc 71.18 44 *e*P **P 07 43 01.6 -0.1**
A19A Klindworth Far 71.26 41 ⇑P **P 07 43 01.9 -0.2**
baz=71,SNR=110
G14A Jackson 71.27 46 ⇓P **P 07 43 02.7 +0.5**
baz=71,SNR=6.5
H13A Challis 71.28 47 ⇑P **P 07 43 02.2 -0.1**
baz=71,SNR=67
I12A Atlanta 71.29 48 ⇑P **P 07 43 02.6 +0.2**
baz=71,SNR=158

KONO Kongsberg 71.34 336 *e*P **P 07 43 03.1 +0.7**
comp=Z,28nm,0.8s,mb5.0
KONO Kongsberg 71.34 336 *e*P **P 07 43 03.1 +0.7**
KONO pmax pmax
comp=Z,28nm,0.8s,mb5.0
EGMT Eagleton 71.37 42 ⇓P **P 07 43 02.6 -0.2**
baz=71,SNR=94
EGMT Eagleton 71.37 42 *e*P **P 07 43 02.4 -0.4**
comp=Z,177nm,0.6s,mb6.0
E16A East Helena 71.37 44 ⇓P **P 07 43 03.0 +0.1**
baz=71,SNR=29
F15A Butte 71.40 45 ⇑P **P 07 43 03.2 +0.2**
baz=71,SNR=142
PAHR Pah Rah Range 71.42 53 *e*P **P 07 43 03.5 +0.3**
comp=Z,50nm,0.8s,mb5.3
LRM Limekiln Ridge 71.43 45 *e*P **P 07 43 03.1 -0.1**
WCN Washoe City 71.44 54 ⇓P **P 07 43 04.3 +0.9**
baz=71,SNR=25
WCN Washoe City 71.44 54 *e*P **P 07 43 03.9 +0.4**
comp=Z,298nm,2.3s,mb5.6
WCN Washoe City 71.44 54 *e*P **P 07 43 03.9 +0.5**
WCN pmax pmax
comp=Z,298nm,2.3s,mb5.6
D17A Six Diamond Ra 71.47 43 ⇓P **P 07 43 03.1 -0.3**
baz=71,SNR=27
B19A Brinkman Farms 71.48 41 ⇓P **P 07 43 03.1 -0.3**
baz=71,SNR=27
SIM Simferopol' 71.63 314 *de*P **P 07 43 06.9 +2.5**
SIM *e*S S 07 52 14.3 +2.5
SIM pmax pmax
comp=Z,25nm,0.7s,mb5.0
DLMT Dillon 71.66 45 *e*P **P 07 43 04.4 -0.1**
comp=Z,154nm,0.7s,mb5.8
A20A Cobblestone Ra 71.69 40 ⇓P **P 07 43 04.6 -0.2**
baz=71,SNR=42
H14A Leadore 71.73 46 ⇑P **P 07 43 04.6 -0.4**
baz=72,SNR=32
I13A Wildhorse Cree 71.77 47 ⇑P **P 07 43 05.5 +0.2**
baz=72,SNR=102
HLID Hailey 71.84 48 ⇑P **P 07 43 05.7 0.0**
baz=72,SNR=86
HLID Hailey 71.84 48 *e*P **P 07 43 05.7 0.0**
comp=Z,38nm,0.8s,mb5.2
G15A Dillon 71.84 45 ⇓P **P 07 43 05.4 -0.3**
baz=72,SNR=314
E17A Martinsdale 71.84 44 ⇓P **P 07 43 05.9 +0.2**
baz=72,SNR=86
CMB Columbia Colle 71.85 55 *e*P **P 07 43 05.1 -0.8**
comp=Z,34nm,0.7s,mb5.2
CMB Columbia Colle 71.85 55 *e*P **P 07 43 05.1 -0.8**
CMB pmax pmax
comp=Z,34nm,0.7s,mb5.2
MCMT McKenzie Canyo 71.87 46 *e*P **P 07 43 05.6 -0.3**
comp=Z,7.7nm,0.6s,mb4.6
F16A Kennard Place, 71.89 44 ⇑P **P 07 43 05.8 -0.2**
baz=72,SNR=117
D18A Linhart Farms, 71.90 42 ⇑P **P 07 43 05.8 -0.2**
baz=72,SNR=68
C19A Slack Wire Ran 71.91 42 ⇑P **P 07 43 05.9 -0.1**
baz=72,SNR=96
B20A Solberg Farm, 71.94 41 ⇑P **P 07 43 05.7 -0.5**
baz=72,SNR=21
BOZ Bozeman (W) 71.98 45 ⇓P **P 07 43 06.6 +0.1**
baz=72,SNR=205
BOZ Bozeman (W) 71.98 45 *e*P **P 07 43 06.5 0.0**
comp=Z,78nm,0.7s,mb5.5
BOZ Bozeman (W) 71.98 45 *e*P **P 07 43 06.5 0.0**
BOZ pmax pmax
comp=Z,78nm,0.7s,mb5.5
SAO San Andreas Ge 71.99 57 *e*P **P 07 43 07.6 +0.9**
comp=Z,12nm,0.7s,mb4.7
SAO San Andreas Ge 71.99 57 *e*P **P 07 43 07.6 +0.9**
SAO pmax pmax
comp=Z,12nm,0.7s,mb4.7
J13A Cove Ranch, Pi 72.08 48 ⇑P **P 07 43 07.4 +0.3**
baz=72,SNR=127
A21A Bergtoll Ranch 72.10 40 ⇑P **P 07 43 06.9 -0.3**
baz=72
H15A Lima 72.12 46 ⇓P **P 07 43 07.0 -0.3**
baz=72
I14A Mackay 72.13 47 ⇓P **P 07 43 07.6 +0.1**
baz=72,SNR=51
WAKR Walker 72.14 54 *e*P **P 07 43 07.8 +0.3**
G16A Moss Hill, Enn 72.17 45 ⇓P **P 07 43 07.5 -0.1**
baz=72,SNR=117
BMN Battle Mountai 72.24 52 *e*P **P 07 43 08.7 +0.6**
comp=Z,50nm,0.9s,mb5.2
BMN Battle Mountai 72.24 52 *e*P **P 07 43 08.7 +0.5**
BMN pmax pmax
comp=Z,50nm,0.9s,mb5.2
E18A Harlowton 72.26 43 ⇓P **P 07 43 08.3 +0.1**
baz=72,SNR=14
F17A Fitzpatrick Pl 72.32 44 ⇓P **P 07 43 08.5 0.0**
baz=72,SNR=53
ARMA Armidale 72.36 170 *e*P **P 07 43 08.7 0.0**
ARMA Armidale 72.36 170 *e*P **P 07 43 08.6 -0.1**
comp=Z,22nm,1.1s,mb4.8
D19A Cripps Ranch, 72.38 42 ⇓P **P 07 43 08.5 -0.4**
baz=72,SNR=83
B21A Ellsworth Farm 72.44 40 ⇓P **P 07 43 08.7 -0.4**
baz=72,SNR=83
C20A Veseth Ranch, 72.45 41 ⇓P **P 07 43 08.5 -0.7**
baz=72,SNR=64
J14A Carey 72.49 47 ⇑P **P 07 43 09.9 +0.4**
baz=72,SNR=82
A22A Carney Farms, 72.58 39 ⇑P **P 07 43 09.6 -0.4**
baz=72
I15A Monteview 72.61 46 ⇑P **P 07 43 10.5 +0.2**
baz=72,SNR=9.3
QLMT Earthquake Lak 72.63 45 *e*P **P 07 43 11.3 +1.0**
G17A Pierce Place, 72.67 44 ⇓P **P 07 43 10.7 +0.1**
baz=72,SNR=74
D20A Manuel Ranch, 72.81 42 ⇑P **P 07 43 10.9 -0.4**
baz=72,SNR=71
F18A Big Timber 72.81 43 ⇑P **P 07 43 11.3 -0.1**
baz=72,SNR=159
H16A Russell Place, 72.81 45 ⇑P **P 07 43 11.6 +0.2**
baz=72,SNR=79
C21A Desert Coulee 72.82 41 ⇓P **P 07 43 11.1 -0.4**
baz=72,SNR=38
NVAR Mina Array Bea 72.88 54 P **P 07 43 12.1 +0.2**
comp=Z,36nm,0.7s,mb5.2,baz=295,slow=5.4,SNR=91
FORT Forrest 72.89 191 *e*P **P 07 43 11.3 -0.5**
comp=Z,30nm,0.5s,mb5.3
FORT Forrest 72.89 191 *e*P **P 07 43 11.7 -0.1**
comp=Z,37nm,0.6s,mb5.3
E19A Rath Farm, Rou 72.91 43 ⇓P **P 07 43 12.0 0.0**
baz=73,SNR=120
GCMT Greycliff 72.91 44 *e*P **P 07 43 12.3 +0.3**
comp=Z,59nm,0.7s,mb5.4
YMR Madison River 72.98 45 *e*P **P 07 43 12.7 +0.3**
comp=Z,73nm,0.6s,mb5.6
KIS Kishinev 73.01 318 *e*P **P 07 43 07.0 -5.6**
KIS Kishinev 73.01 318 *e*PcP PcP 07 43 25.0 -3.7
KIS Kishinev 73.01 318 *e*PP PP 07 46 00.0 +3.6
KIS Kishinev 73.01 318 *e*PPP 07 47 40.0
KIS *e*S S 07 52 18.0 -9.4
KIS Kishinev 73.01 318 *e*P **P 07 43 07.0 -5.6**
KIS *e* 07 43 25.0
KIS *e* 07 46 00.0
KIS *e*PPP 07 47 40.0
KIS *e*S S 07 52 18.0 -9.4
KIS *e*PS 07 53 05.0
KIS MLR MLR
comp=Z,400nm,18.0s
KIS MLR MLR
comp=Z,500nm,18.0s
B22A Reddig Ranch S 73.02 40 ⇓P **P 07 43 11.8 -0.8**
baz=73,SNR=21
J15A Blackfoot 73.03 47 ⇓P **P 07 43 12.3 -0.5**
baz=73,SNR=63
MLAC Mammoth Lakes 73.06 55 ⇓P **P 07 43 14.0 +1.0**
baz=73,SNR=5.3
MIB Mutribah 73.08 295 *e*P **P 07 43 11.8 -1.5**
MIB AMb AMB 07 43 21.8
comp=Z,58nm,0.7s,mb5.4
STKA Stephens Creek 73.08 179 P **P 07 43 13.0 +0.1**
comp=Z,13nm,0.7s,mb4.8,baz=332,slow=7.9,SNR=26
STKA Stephens Creek 73.08 179 *e*P **P 07 43 11.7 -1.3**
comp=Z,11nm,0.6s,mb4.8
STKA Stephens Creek 73.08 179 *e*P **P 07 43 12.8 -0.1**
comp=Z,2.5nm,0.7s
YNR Norris Junctio 73.10 45 *e*P **P 07 43 15.8 +2.6**
comp=Z,32nm,0.9s,mb5.0
BSD Bornholm Skovb 73.13 331 *i* P **P 07 43 12.5 -0.6**
BSD pmax pmax
comp=Z,52nm,0.8s,mb5.3

BSD Bornholm Skovb 73.13 331 *i* P **P 07 43 12.5 -0.6**
comp=Z,52nm,0.8s,mb5.3
K14A Jones Ranch, D 73.19 48 ⇑P **P 07 43 14.0 +0.3**
baz=73,SNR=146
YFT Old Faithful 73.20 45 *e*P **P 07 43 15.6 +1.8**
comp=Z,84nm,0.8s,mb5.5
E20A Meyer Farm, Mu 73.21 42 ⇑P **P 07 43 13.4 -0.3**
baz=73,SNR=56
I16A Newdale 73.23 46 ⇑P **P 07 43 14.1 +0.2**
baz=73,SNR=210
F19A Roth Farm, Mol 73.24 43 ⇓P **P 07 43 13.8 -0.1**
baz=73,SNR=102
G18A Lazy EL Ranch, 73.28 44 ⇓P **P 07 43 14.6 +0.4**
baz=73,SNR=12
LVV L'vov 73.32 323 *e*P **P 07 43 14.2 -0.1**
LVV *e*S S 07 52 25.8 -5.1
LKWY Lake 73.35 45 *e*P **P 07 43 18.7 +4.1**
comp=Z,40nm,0.8s,mb5.2
LKWY Lake 73.35 45 *e*P **P 07 43 18.7 +4.1**
LKWY pmax pmax
comp=Z,40nm,0.8s,mb5.2
H17A Grant Village 73.37 45 ⇑P **P 07 43 15.8 +1.1**
baz=73,SNR=70
B23A Brockton 73.39 39 ⇑P **P 07 43 14.5 -0.3**
baz=73
D21A La Casta Ranch 73.39 41 ⇓P **P 07 43 14.3 -0.5**
baz=73,SNR=43
MTUM Tungsten Hills 73.40 55 *e*P **P 07 43 16.1 +1.1**
K15A Arbon 73.45 47 ⇓P **P 07 43 15.4 +0.1**
baz=73,SNR=59
MALT Malatya 73.46 307 *e*P **P 07 43 16.1 +0.7**
comp=Z,16nm,0.8s,mb4.8
MALT Malatya 73.46 307 ⇑P **P 07 43 16.9 +1.6**
MALT Malatya 73.46 307 ⇑*i*P **P 07 43 16.9 +1.6**
C22A Vida 73.46 40 ⇑P **P 07 43 14.5 -0.7**
baz=73
RDF Al-Radifah 73.48 294 *e*P **P 07 43 14.2 -1.5**
RDF AMb AMB 07 43 17.2
comp=Z,51nm,0.8s,mb5.3
NAY Al-Naaiem 73.49 294 *e*P **P 07 43 13.8 -1.9**
NAY AMb AMB 07 43 26.1
comp=Z,24nm,0.7s,mb5.0
L14A Malta 73.49 48 ⇓P **P 07 43 15.9 +0.4**
baz=73,SNR=101
IMW Indian Meadow 73.51 46 *e*P **P 07 43 16.4 +0.9**
comp=Z,96nm,0.8s,mb5.6
A24A Westby 73.53 38 ⇑P **P 07 43 15.1 -0.4**
baz=73
J16A Bone 73.57 46 ⇓P **P 07 43 16.5 +0.6**
baz=73,SNR=68
RLMT Red Lodge 73.57 44 ⇑P **P 07 43 15.8 0.0**
baz=73,SNR=69
RLMT Red Lodge 73.57 44 *e*P **P 07 43 16.0 +0.1**
comp=Z,46nm,0.7s,mb5.3
COP Copenhagen 73.57 332 *i* P **P 07 43 17.0 +1.3**
COP pmax pmax
comp=Z,40nm,0.7s,mb5.3
COP Copenhagen 73.57 332 *i* P **P 07 43 17.0 +1.3**
comp=Z,40nm,0.7s,mb5.2
DCID1 Drake Creek 73.58 46 *e*P **P 07 43 16.8 +0.8**
comp=Z,86nm,0.8s,mb5.5
RCTC Rector, Farmer 73.65 56 ⇓P **P 07 43 17.4 +0.9**
baz=73,SNR=5.3
GKP Gorka Klasztor 73.66 328 *e*P **P 07 43 15.0 -1.3**
GKP *e*S S 07 52 35.6 +1.1
GKP LMZ 08 21 40.3
comp=Z,800nm,18.8s
GKP Gorka Klasztor 73.66 328 *e*P **P 07 43 15.0 -1.3**
GKP *e*S S 07 52 35.6 +1.0
H18A Shoshone NF, C 73.66 44 ⇓P **P 07 43 16.3 -0.1**
baz=73,SNR=54
RRI2 Red Ridge 73.68 46 *e*P **P 07 43 17.1 +0.6**
comp=Z,89nm,0.8s,mb5.5
F20A Billings 73.68 43 ⇑P **P 07 43 15.9 -0.7**
baz=73
I17A Pilgrim Ck. 73.69 45 ⇓P **P 07 43 17.2 +0.5**
baz=73,SNR=116
E21A Keefer Ranch, 73.71 42 ⇓P **P 07 43 16.8 +0.1**
baz=73,SNR=18
MOOW Moose Ponds 73.72 46 *e*P **P 07 43 17.3 +0.5**
comp=Z,53nm,0.9s,mb5.3
D22A Cohagen 73.73 41 ⇓P **P 07 43 16.4 -0.4**
baz=74
DGMT Dagmar 73.76 39 ⇓P **P 07 43 16.2 -0.7**
baz=74,SNR=32
DGMT Dagmar 73.76 39 *e*P **P 07 43 16.6 -0.4**
comp=Z,122nm,0.6s,mb5.8
C23A Lambert 73.76 40 ⇑P **P 07 43 16.2 -0.7**
baz=74
TPAW Teton Pass 73.78 46 *e*P **P 07 43 17.8 +0.7**
comp=Z,224nm,1.8s,mb5.6
TIN Tinemaha 73.80 55 ⇑P **P 07 43 18.5 +1.1**
baz=74,SNR=6.0
K16A Soda Springs 73.87 47 ⇓P **P 07 43 18.8 +1.1**
baz=74,SNR=54
LOHW Long Hollow 73.88 46 *e*P **P 07 43 18.1 +0.4**
comp=Z,41nm,1.0s,mb5.1
SNOW Snow King Moun 73.90 46 *e*P **P 07 43 18.3 +0.4**
comp=Z,46nm,0.8s,mb5.3
HVU Hansel Valley 73.92 48 *e*P **P 07 43 18.6 +0.6**
comp=Z,66nm,0.7s,mb5.5
HVU Hansel Valley 73.92 48 *e*P **P 07 43 18.6 +0.6**
HVU pmax pmax
comp=Z,66nm,0.7s,mb5.5
REDW Red Top Meadow 73.92 46 *e*P **P 07 43 18.4 +0.4**
comp=Z,50nm,0.8s,mb5.3
L15A Malad City 73.99 48 ⇑P **P 07 43 18.4 0.0**
baz=74,SNR=50
J17A Brown Place, J 73.99 46 ⇓P **P 07 43 19.1 +0.8**
baz=74,SNR=40
H19A Powell 74.02 44 ⇓P **P 07 43 19.2 +0.7**
baz=74,SNR=23
LAO LASA Array 74.03 41 ⇑P **P 07 43 18.6 0.0**
baz=74,SNR=41
LAO LASA Array 74.03 41 *e*P **P 07 43 18.2 -0.4**
comp=Z,69nm,0.8s,mb5.4
G20A Bridger 74.05 43 ⇑P **P 07 43 17.8 -0.8**
baz=74,SNR=48
VES Vestal, Richgr 74.05 56 ⇑P **P 07 43 18.0 -0.8**
baz=74,SNR=14
KWP Kalwaria Pacla 74.05 323 *e*P **P 07 43 20.0 +1.4**
KWP *e*PcP PcP 07 43 32.2 -0.9
KWP LMZ 08 18 56.7
comp=Z,1μm,16.8s
KWP Kalwaria Pacla 74.05 323 *e*P **P 07 43 19.8 +1.2**
comp=Z,41nm,0.6s,mb5.3
KWP Kalwaria Pacla 74.05 323 *e*P **P 07 43 19.8 +1.2**
KWP pmax pmax
comp=Z,41nm,0.6s,mb5.3
KWP Kalwaria Pacla 74.05 323 ⇑*i*P **P 07 43 19.0 +0.4**
MUD Monsted U'grnd 74.06 334 *i* P **P 07 43 19.0 +0.5**
MUD pmax pmax
comp=Z,22nm,0.8s,mb4.9
MUD Monsted U'grnd 74.06 334 *i* P **P 07 43 19.0 +0.5**
comp=Z,22nm,0.8s,mb4.9
AHID Auburn Hatcher 74.19 47 *e*P **P 07 43 19.8 +0.2**
comp=Z,40nm,0.8s,mb5.2
F21A Absaloka Mine, 74.19 42 ⇓P **P 07 43 19.7 +0.3**
baz=74,SNR=15
D23A Lindsay 74.19 40 ⇑P **P 07 43 19.5 +0.1**
baz=74
I18A Diamond G Ranc 74.25 45 ⇑P **P 07 43 20.7 +0.9**
baz=74,SNR=24
CWC Cottonwood Cre 74.28 55 ⇑P **P 07 43 20.5 +0.3**
baz=74,SNR=17
K17A Gardner Place, 74.29 46 ⇑P **P 07 43 20.5 +0.4**
baz=74,SNR=20
M15A Larsen Ranch, 74.31 48 ⇑P **P 07 43 20.6 +0.3**
baz=74,SNR=30
C24A Savage 74.32 40 ⇑P **P 07 43 19.9 -0.3**
baz=74
BUR08 Bucovina Ar. S 74.33 321 *e*P **P 07 43 20.2 -0.1**
BURAR Bucovina Array 74.34 321 ⇓P **P 07 43 20.6 +0.3**
BURAR Bucovina Array 74.34 321 ⇓*i*P **P 07 43 20.6 +0.3**
BGU Big Grassy Mou 74.34 49 *e*P **P 07 43 21.8 +1.3**
comp=Z,32nm,0.8s,mb5.1
GRAC Grapevine Rang 74.36 54 ⇑P **P 07 43 21.0 +0.4**
baz=74,SNR=63
SPUT South Promonto 74.42 48 *e*P **P 07 43 22.1 +1.2**
comp=Z,47nm,0.9s,mb5.2
TESR 74.42 319 ⇑*i*P **P 07 43 21.2 +0.4**
I19A Meeteetse 74.45 45 ⇓P **P 07 43 21.3 +0.3**
baz=74,SNR=33
J18A Kendall Valley 74.47 46 ⇑P **P 07 43 21.7 +0.5**
baz=74,SNR=57
L16A Fish Haven 74.51 47 ⇓P **P 07 43 22.5 +1.2**
baz=74,SNR=24

ISA Isabella 74.54 56 ⇑P **P 07 43 20.8 -0.9**
baz=74,SNR=12
ISA Isabella 74.54 56 *e*P **P 07 43 20.8 -0.9**
comp=Z,12nm,0.8s,mb4.6
ISA Isabella 74.54 56 *e*P **P 07 43 20.8 -0.9**
ISA pmax pmax
comp=Z,12nm,0.8s,mb4.6
R11A Troy Canyon, C 74.56 52 ⇓P **P 07 43 21.6 -0.2**
baz=74,SNR=67
G21A Lodge Grass 74.56 43 ⇑P **P 07 43 21.2 -0.4**
baz=74,SNR=42
CFR Carcaliu 74.61 317 ⇓P **P 07 43 22.4 +0.5**
CFR Carcaliu 74.61 317 ⇓*i*P **P 07 43 22.4 +0.5**
N15A Stansbury Isla 74.65 49 ⇓P **P 07 43 22.9 +0.6**
baz=74,SNR=12
H20A Greybull 74.66 44 ⇑P **P 07 43 21.8 -0.5**
baz=74,SNR=33
ARVC Arvin 74.66 57 ⇓P **P 07 43 21.9 -0.5**
baz=74,SNR=6.2
HWUT Hardware Ranch 74.71 48 *e*P **P 07 43 22.6 +0.1**
KOLS Kolonicke sedl 74.76 323 *e*P **P 07 43 24.5 +1.8**
comp=Z,13nm,1.1s,mb4.5
KOLS Kolonicke sedl 74.76 323 *e*P **P 07 43 24.5 +1.8**
KOLS pmax pmax
comp=Z,13nm,1.1s,mb4.5
KOLS Kolonicke sedl 74.76 323 *e*P **P 07 43 24.5 +1.8**
KOLS Kolonicke sedl 74.76 323 *e*P **P 07 43 24.5 +1.8**
comp=Z,13nm,1.1s,mb4.5
L17A Cokeville 74.76 47 ⇓P **P 07 43 23.2 +0.3**
baz=74,SNR=23
K18A Toltan Ranch, 74.85 46 ⇑P **P 07 43 23.6 +0.3**
baz=75,SNR=64
M16A Huntsville 74.87 48 ⇓P **P 07 43 23.6 +0.1**
baz=75
PLOR Plostina 74.89 319 ⇓P **P 07 43 23.7 +0.2**
PLOR Plostina 74.89 319 ⇓*i*P **P 07 43 23.7 +0.2**
MPMC Manual Prospec 74.89 55 ⇓P **P 07 43 23.8 0.0**
baz=75,SNR=51
OJC Ojcow 74.90 325 *e*P **P 07 43 24.1 +0.6**
OJC *e*sP sP 07 44 12.8 -2.2
OJC *e*S S 07 52 49.1 +0.6
OJC L 08 18 00.3
comp=Z,0.4nm,18.9s
OJC Ojcow 74.90 325 *e*P **P 07 43 23.5 0.0**
comp=Z,57nm,0.8s,mb5.3
OJC Ojcow 74.90 325 *e*P **P 07 43 24.1 +0.6**
OJC *e**SP sP 07 44 12.8 -2.2
OJC *e*S S 07 52 49.1 +0.6
OJC MLR MLR
comp=Z,400nm,18.9s
J19A Crowheart 74.95 45 ⇑P **P 07 43 24.0 0.0**
baz=75,SNR=124
DUG Dugway 74.95 49 ⇑P **P 07 43 24.1 +0.1**
baz=75,SNR=85
DUG Dugway 74.95 49 *e*P **P 07 43 24.2 +0.2**
comp=Z,64nm,0.8s,mb5.3
DUG Dugway 74.95 49 *e*P **P 07 43 24.2 +0.2**
DUG pmax pmax
comp=Z,64nm,0.8s,mb5.3
I20A Worland 74.97 44 ⇓P **P 07 43 24.0 +0.1**
baz=75,SNR=117
UZH Uzhgorod 74.97 323 *e*P **P 07 43 22.8 -1.1**
UZH *i* S S 07 52 45.0 -4.3
UZH *e* 07 53 44.0
UZH MLR MLR
comp=N,600nm,15.0s
UZH MLR MLR
comp=E,750nm,15.0s
UZH MLR MLR
comp=Z,400nm,15.0s
FURC Furnace Creek, 75.01 55 ⇑P **P 07 43 24.4 0.0**
baz=75,SNR=63
BW06 Boulder Array 75.02 46 ⇓P **P 07 43 24.0 -0.3**
baz=75,SNR=140
BW06 Boulder Array 75.02 46 *e*P **P 07 43 24.0 -0.3**
PDAR Pinedale Array 75.02 46 P **P 07 43 23.9 -0.4**
comp=Z,71nm,0.6s,mb5.5,baz=283,slow=0.9,SNR=227
PDAR LR LR 08 17 09.9
comp=Z,155nm,21.2s,baz=76,slow=36
NOQ North Oquirrh 75.04 49 *e*P **P 07 43 25.1 +0.6**
comp=Z,130nm,0.8s,mb5.6
H21A Big Horn, Sher 75.06 43 ⇓P **P 07 43 24.2 -0.3**
baz=75,SNR=45
CRVS Cervenica-Dubn 75.14 323 *e*P **P 07 43 25.2 +0.3**
comp=Z,11nm,0.9s,mb4.5
CRVS Cervenica-Dubn 75.14 323 *e*P **P 07 43 25.2 +0.3**
CRVS pmax pmax
comp=Z,11nm,0.9s,mb4.5
CRVS Cervenica-Dubn 75.14 323 *e*P **P 07 43 25.2 +0.3**
BLG Laguna Peak 75.17 58 ⇓P **P 07 43 25.7 +0.3**
baz=75,SNR=6.1
P14A Drum Mountains 75.21 50 ⇓P **P 07 43 25.6 +0.2**
baz=75,SNR=60
CTU Camp Tracy 75.22 48 *e*P **P 07 43 25.5 0.0**
comp=Z,42nm,0.8s,mb5.1
TRPA Tarpa 75.22 322 ⇑*i*P **P 07 43 25.8 +0.4**
N16A Rees Ranch, Co 75.26 48 ⇓P **P 07 43 26.0 +0.2**
baz=75,SNR=44
NIE Niedzica 75.27 324 *e*P **P 07 43 26.0 +0.4**
NIE Niedzica 75.27 324 *e*P **P 07 43 26.0 +0.4**
NIE *i* 07 43 42.0
M17A Scullys Gap (B 75.30 47 ⇑P **P 07 43 26.5 +0.6**
baz=75,SNR=21
L18A Fontenelle, Gr 75.33 47 ⇓P **P 07 43 26.4 +0.3**
baz=75,SNR=73
BR131 Keskin Array S 75.34 310 *e*P **P 07 43 25.9 -0.3**
comp=Z,10nm,0.7s,mb4.6
BRTR Keskin Array B 75.34 310 P **P 07 43 26.4 +0.2**
comp=Z,10nm,0.7s,mb4.6,baz=81,slow=3.7,SNR=35
BRTR LR LR 08 22 49.5
comp=Z,286nm,19.0s,baz=191,slow=40
BRTR Keskin Array B 75.34 310 P **P 07 43 26.4 +0.2**
BRTR LR LR 08 22 49.5
BRTR Keskin Array B 75.34 310 *ce*P **P 07 43 26.3 +0.1**
BRTR pmax pmax
comp=Z,11nm,0.7s
EDW2 Edwards Air Fo 75.35 56 ⇑P **P 07 43 26.3 -0.1**
baz=75,SNR=23
K19A Absolon Red Bu 75.36 45 ⇓P **P 07 43 25.7 -0.6**
baz=75,SNR=48
U10A Ash Meadows, A 75.37 54 ⇑P **P 07 43 26.2 -0.2**
baz=75
J20A Shoshoni 75.40 45 ⇓P **P 07 43 26.2 -0.3**
baz=75,SNR=90
JLU Jordanelle 75.45 48 *e*P **P 07 43 26.9 +0.1**
comp=Z,23nm,0.6s,mb5.0
MLR Muntele Rosu 75.49 319 ⇑P **P 07 43 27.5 +0.5**
MLR Muntele Rosu 75.49 319 ⇑*i*P **P 07 43 27.5 +0.5**
Q14A Sevier Lake (B 75.49 51 ⇓P **P 07 43 26.8 -0.3**
baz=75,SNR=65
I21A Big Trails, Te 75.50 44 ⇓P **P 07 43 26.6 -0.4**
baz=75,SNR=140
NLU North Lily Min 75.53 49 *e*P **P 07 43 27.8 +0.5**
comp=Z,56nm,0.8s,mb5.2
DECC Green Verdugo 75.54 57 ⇑P **P 07 43 27.1 -0.4**
baz=75,SNR=9.7
N17A Moffit Pass 75.56 48 ⇓P **P 07 43 27.5 +0.1**
baz=75,SNR=112
L19A Farson 75.58 46 ⇓P **P 07 43 27.0 -0.5**
baz=75,SNR=70
R13A O'Grain Ranch, 75.62 52 ⇓P **P 07 43 28.2 +0.4**
baz=75,SNR=25
M18A Lyman 75.66 47 ⇑P **P 07 43 28.1 +0.1**
baz=75,SNR=37
P15A Leamington 75.67 50 ⇓P **P 07 43 28.0 -0.1**
baz=75,SNR=32
DAU Daniels Canyon 75.69 48 *e*P **P 07 43 28.5 +0.3**
DAU Daniels Canyon 75.69 48 *e*P **P 07 43 28.5 +0.3**
PASC Pasadena Art C 75.69 57 *e*P **P 07 43 28.8 +0.5**
comp=Z,136nm,1.9s,mb5.2
O16A Springville 75.69 49 ⇑P **P 07 43 28.3 +0.2**
baz=75
MWC Mount Wilson 75.73 57 *e*P **P 07 43 28.4 -0.1**
comp=Z,47nm,1.1s,mb5.0
MWC Mount Wilson 75.73 57 *e*P **P 07 43 28.4 -0.1**
MWC pmax pmax
comp=Z,47nm,1.1s,mb5.0
J21A Lysite 75.74 44 ⇑P **P 07 43 28.0 -0.4**
baz=76,SNR=79
SHOC Shoshone 75.74 55 ⇓P **P 07 43 28.6 0.0**
baz=76,SNR=9.2
MPU Maple Canyon 75.74 49 *e*P **P 07 43 29.0 +0.5**
comp=Z,107nm,0.7s,mb5.6
K20A Yellowstone Ra 75.75 45 ⇑P **P 07 43 27.7 -0.7**
baz=76,SNR=32
KLBR Kellerberrin 75.75 200 *e*P **P 07 43 27.9 -0.5**
comp=Z,18nm,0.8s,mb4.7

GSC Goldstone 75.81 55 ⇓P **P 07 43 28.4 -0.6**
baz=76,SNR=25
GSC Goldstone 75.81 55 *e*P **P 07 43 28.6 -0.4**
comp=Z,30nm,0.8s,mb5.0
GSC Goldstone 75.81 55 *e*P **P 07 43 28.6 -0.4**
GSC pmax pmax
comp=Z,30nm,0.8s,mb5.0
KECS Kecovo 75.89 324 *e*P **P 07 43 30.5 +1.3**
comp=Z,4.7nm,0.9s,mb4.1
KECS Kecovo 75.89 324 *e*P **P 07 43 30.5 +1.3**
KECS Kecovo 75.89 324 *e*P **P 07 43 30.5 +1.3**
OKC Ostrava-Krasne 75.89 326 *e*P **P 07 43 30.1 +1.0**
OKC *e*S S 07 52 56.6 -2.8
OKC MLR MLR
comp=Z,500nm,17.7s
OKC Ostrava-Krasne 75.89 326 *e*P **P 07 43 30.1 +1.0**
OKC *e*S S 07 52 56.6 -2.8
OKC AMS AMS 08 19 30.0
comp=Z,500nm,17.7s
KSP Ksiaz 75.89 327 *e*P **P 07 43 29.2 0.0**
KSP *e*S S 07 52 58.3 -1.0
KSP LMZ 08 23 01.0
comp=Z,900nm,18.1s
U11A Corn Creek 75.94 54 ⇑P **P 07 43 29.6 -0.1**
baz=76,SNR=21
VOIR 75.97 319 ⇑P **P 07 43 30.1 +0.4**
VOIR 75.97 319 ⇑*i*P **P 07 43 30.0 +0.3**
BFSC Mount Baldy Ra 75.97 57 ⇑P **P 07 43 30.3 +0.4**
baz=76,SNR=23
Q15A Fillmore 76.00 50 ⇓P **P 07 43 30.4 +0.4**
baz=76,SNR=43
P16A Fountain Green 76.00 49 ⇓P **P 07 43 30.3 +0.3**
baz=76
SHPR Sheep Range 76.02 54 *e*P **P 07 43 30.3 +0.2**
S13A Holt Ranch, En 76.09 52 ⇑P **P 07 43 30.6 +0.1**
baz=76,SNR=62
M19A Rock Springs 76.10 47 ⇓P **P 07 43 30.4 -0.1**
baz=76,SNR=15
DRGR 76.12 321 ⇑P **P 07 43 30.8 +0.3**
DRGR 76.12 321 ⇑*i*P **P 07 43 30.8 +0.3**
ULM Lac du Bonnet 76.12 33 P **P 07 43 29.4 -1.1**
comp=Z,48nm,0.7s,mb5.2,baz=310,slow=6.7,SNR=43
O17A Robinson Place 76.12 48 ⇓P **P 07 43 31.1 +0.5**
baz=76,SNR=43
T12A Moapa 76.15 53 ⇑P **P 07 43 31.2 +0.3**
baz=76,SNR=18
N18A Larsen Ranch, 76.18 47 ⇑P **P 07 43 30.9 0.0**
baz=76
MORC Moravsky Berou 76.19 326 *e*P **P 07 43 31.1 +0.2**
comp=Z,22nm,0.8s,mb4.8
MORC Moravsky Berou 76.19 326 *e*P **P 07 43 31.1 +0.2**
MORC pmax pmax
comp=Z,22nm,0.8s,mb4.8
MORC Moravsky Berou 76.19 326 ⇓*i*P **P 07 43 30.4 -0.5**
ARUT Antelope Range 76.20 52 *e*P **P 07 43 31.2 +0.1**
comp=Z,18nm,0.7s,mb4.8
ARUT Antelope Range 76.20 52 *e*P **P 07 43 31.2 +0.1**
ARUT pmax pmax
comp=Z,18nm,0.7s,mb4.8
L20A Wamsutter 76.20 46 ⇓P **P 07 43 31.0 -0.1**
baz=76,SNR=36
J22A Midwest 76.20 44 ⇑P **P 07 43 30.8 -0.2**
baz=76,SNR=177
DPC Dobruska-Polom 76.26 327 *e*P **P 07 43 31.2 0.0**
DPC *e* pP 07 44 09.3 +2.1
DPC *e*S S 07 53 03.1 -0.3
DPC MLR MLR
comp=Z,600nm,15.5s
DPC Dobruska-Polom 76.26 327 *e*P **P 07 43 31.2 0.0**
DPC *e*pP pP 07 44 09.3 +2.1
DPC *e*sP sP 07 44 29.0 +6.2
DPC *e*S S 07 53 03.1 -0.3
DPC AMS AMS 08 20 30.0
comp=Z,600nm,15.5s
TUQ Turquoise Moun 76.27 55 ⇑P **P 07 43 32.8 +1.3**
baz=76,SNR=7.3
UPC Upice 76.27 327 *e*P **P 07 43 31.3 +0.1**
UPC Upice 76.27 327 *e*P **P 07 43 31.3 +0.1**
UPC *e*sP sP 07 44 29.9 +7.1
V11A Goodsprings 76.30 54 ⇑P **P 07 43 31.6 -0.1**
baz=76,SNR=45
K21A Alcova 76.34 45 ⇓P **P 07 43 31.8 0.0**
baz=76,SNR=153
PRD Provadia 76.37 316 *i* P **P 07 43 43.3 +11**
PRD Provadia 76.37 316 *i* P **P 07 43 43.3 +11**
S14A Cedar City 76.37 51 ⇓P **P 07 43 32.4 +0.3**
baz=76,SNR=20
CCUT Cedar City 76.40 52 *e*P **P 07 43 32.2 -0.1**
comp=Z,26nm,0.8s,mb4.9
HEC Hector,Ludlow 76.41 55 ⇑P **P 07 43 32.7 +0.3**
baz=76,SNR=26
BBRC Big Bear Solar 76.42 56 ⇓P **P 07 43 32.8 +0.4**
baz=76,SNR=9.3
T13A Saint George 76.43 52 ⇑P **P 07 43 32.8 +0.4**
baz=76,SNR=74
MSU Marysvale 76.45 50 *e*P **P 07 43 33.1 +0.6**
comp=Z,26nm,0.8s,mb4.9
MSU Marysvale 76.45 50 *e*P **P 07 43 33.1 +0.6**
MSU pmax pmax
comp=Z,26nm,0.8s,mb4.9
U12A Valley of Fire 76.45 53 ⇑P **P 07 43 33.0 +0.5**
baz=76,SNR=36
TMUT Trail Mountain 76.47 49 *e*P **P 07 43 33.1 +0.5**
comp=Z,32nm,0.9s,mb5.0
O18A Roosevelt 76.48 48 ⇓P **P 07 43 33.1 +0.5**
baz=76,SNR=78
N19A John Jarvie Ra 76.51 47 ⇓P **P 07 43 32.5 -0.3**
baz=76,SNR=43
MVH1 Achvaich 76.57 342 P **P 07 43 33.1 +0.3**
MVH1 Achvaich 76.57 342 *e*P **P 07 43 33.1 +0.3**
PSZ Piszkesteto 76.58 323 *e*P **P 07 43 34.4 +1.3**
comp=Z,27nm,0.9s,mb4.9
PSZ Piszkesteto 76.58 323 ⇓P **P 07 43 34.6 +1.6**
PSZ Piszkesteto 76.58 323 ⇓*i*P **P 07 43 34.6 +1.6**
PSZ Piszkesteto 76.58 323 ⇓*e*P **P 07 43 33.3 +0.3**
R15A Junction 76.59 51 ⇑P **P 07 43 34.2 +0.8**
baz=76,SNR=26
VYHS Vyhne 76.61 324 *e*P **P 07 43 33.9 +0.7**
comp=Z,55nm,2.4s,mb4.8
VYHS Vyhne 76.61 324 *e*P **P 07 43 33.9 +0.7**
VYHS pmax pmax
comp=Z,55nm,2.4s,mb4.8
VYHS Vyhne 76.61 324 *e*P **P 07 43 33.9 +0.7**
P17A Butcher Ranch, 76.62 49 ⇑P **P 07 43 33.6 +0.1**
baz=76,SNR=54
M20A Sweetwater, Wa 76.64 46 ⇓P **P 07 43 33.9 +0.4**
baz=76,SNR=38
MURC Murrieta 76.68 57 ⇑P **P 07 43 34.1 +0.2**
baz=76,SNR=10.0
K22A Casper 76.71 44 ⇑P **P 07 43 33.1 -0.8**
baz=76,SNR=47
V12A Nelson 76.73 54 ⇓P **P 07 43 34.1 -0.1**
baz=76,SNR=44
L21A Rawlins 76.75 45 ⇑P **P 07 43 33.8 -0.3**
baz=76,SNR=49
Q16A Castle Valley 76.75 50 ⇓P **P 07 43 34.5 +0.3**
baz=76,SNR=33
P18A Preston Nutter 76.79 48 ⇑P **P 07 43 35.5 +1.1**
baz=76,SNR=36
U13A Pakoon Wash 76.80 53 ⇓P **P 07 43 35.2 +0.7**
baz=77,SNR=134
BRG Berggiesshubel 76.81 328 *e*P **P 07 43 36.0 +1.7**
comp=Z,18nm,0.8s,mb4.8
BRG Berggiesshubel 76.81 328 *e*P **P 07 43 34.7 +0.4**
comp=Z,18nm,0.8s,mb4.7
BRG sP sP 07 44 29.0 +3.1
BRG PP PP 07 46 18.0 -10
BRG S S 07 53 11.0 +1.7
BRG SS SS 07 58 09.0 +1.7
BRG
comp=N,601nm,15.7s
BRG
comp=E,392nm,19.9s
BRG
comp=Z,686nm,13.4s
MME1 Meikle Cairn 76.82 341 P **P 07 43 33.2 -1.0**
MME1 Meikle Cairn 76.82 341 *e*P **P 07 43 33.2 -1.0**
PVCC Panska Ves 76.83 328 *e*P **P 07 43 34.4 0.0**
PVCC *e*S S 07 53 09.8 +0.2
PVCC MLR MLR
comp=Z,700nm,11.8s
PVCC Panska Ves 76.83 328 *e*P **P 07 43 34.4 0.0**
PVCC *e*S S 07 53 09.8 +0.2
PVCC AMS AMS 08 20 30.0
comp=Z,700nm,11.8s
GMRC Granite Mounta 76.86 55 ⇓P **P 07 43 34.6 -0.3**

baz=77,SNR=39
T14A Hurricane 76.89 52 ⇑P P 07 43 35.6 +0.6
baz=77,SNR=20
S15A Panguitch 76.90 51 ⇓P P 07 43 35.9 +0.8
baz=77,SNR=25
RSSD Black Hills 76.94 42 eP P 07 43 34.5 -0.7
RSSD Black Hills 76.94 42 eP P 07 43 34.5 -0.7
NRDL Niedersach Rie 76.95 331 eP P 07 43 36.7 +1.6
comp=Z,19nm,0.8s,mb4.8
O19A Miners Draw (B 76.95 47 ⇑P P 07 43 34.9 -0.5
baz=77,SNR=37
SRU San Rafael 76.98 49 ⇓P P 07 43 35.5 -0.1
baz=77,SNR=81
SRU San Rafael 76.98 49 eP P 07 43 35.4 -0.1
comp=Z,69nm,0.8s,mb5.3
SRU San Rafael 76.98 49 eP P 07 43 35.4 -0.1
SRU pmax pmax
comp=Z,69nm,0.8s,mb5.3
W12A Cal Nev Ari 77.00 54 ⇑P P 07 43 36.5 +0.8
baz=77,SNR=12
M21A Separation Pea 77.00 45 ⇑P P 07 43 35.2 -0.3
baz=77,SNR=34
LDFC Landfair 77.00 55 eP P 07 43 35.8 +0.1
comp=Z,94nm,0.8s,mb5.5
R16A Teasdale 77.00 50 ⇑P P 07 43 36.4 +0.7
baz=77,SNR=50
RWWY Rawlins 77.02 45 eP P 07 43 35.6 -0.1
comp=Z,107nm,0.8s,mb5.5
MDO Dochfour 77.05 341 P P 07 43 35.8 +0.3
MDO Dochfour 77.05 341 eP P 07 43 35.8 +0.3
N20A Spence Gulch, 77.05 47 ⇑P P 07 43 36.1 +0.2
baz=77,SNR=123
SZH Strazhica 77.08 317 i P P 07 43 37.5 +1.5
GZR Gura Zlata 77.11 320 ⇓P P 07 43 36.0 -0.1
GZR Gura Zlata 77.11 320 ⇓i P P 07 43 36.0 -0.1
PFO Pinyon Flat Ob 77.14 56 ⇓P P 07 43 37.4 +0.9
baz=77,SNR=20
PFO Pinyon Flat Ob 77.14 56 eP P 07 43 37.0 +0.5
comp=Z,34nm,1.0s,mb4.9
PFO Pinyon Flat Ob 77.14 56 eP P 07 43 37.0 +0.5
PFO pmax pmax
comp=Z,34nm,1.0s,mb4.9
RRH Rhenigidale 77.15 343 P P 07 43 35.4 -0.7
RRH Rhenigidale 77.15 343 eP P 07 43 35.4 -0.7
NWAO Narrogin (SRO) 77.15 200 P P 07 43 35.6 -0.7
comp=Z,20nm,0.7s,mb4.9,baz=42,slow=6.2,SNR=11
NWAO Narrogin (SRO) 77.15 200 eP P 07 43 35.8 -0.4
comp=Z,177nm,2.0s,mb5.3
NWAO Narrogin (SRO) 77.15 200 eP P 07 43 35.8 -0.5
NWAO pmax pmax
comp=Z,177nm,2.0s
BELC Belle Mtn. Jos 77.17 56 ⇑P P 07 43 36.2 -0.4
baz=77,SNR=24
V13A Grand Canyon W 77.17 53 ⇑P P 07 43 36.9 +0.3
baz=77,SNR=19
L22A Ellis Ranch, M 77.19 45 ⇑P P 07 43 36.9 +0.2
baz=77
Q18A Rafter H Ranch 77.21 49 ⇑P P 07 43 37.4 +0.6
baz=77,SNR=29
KAC Achnashellach 77.21 342 P P 07 43 36.5 +0.1
KAC Achnashellach 77.21 342 eP P 07 43 36.5 +0.1
PRA Prague 77.24 328 P P 07 43 38.0 +1.3
PRA S S 07 53 14.0 -0.1
PRA AMS AMS 08 21 00.0
PRU Pruhonice 77.26 328 eP P 07 43 38.0 +1.1
PRU eS S 07 53 14.3 0.0
PRU MLR MLR
comp=Z,400nm,13.1s
PRU Pruhonice 77.26 328 eP P 07 43 38.0 +1.1
PRU eS S 07 53 14.3 0.0
PRU AMS AMS 08 20 30.0
comp=Z,400nm,13.1s
U14A Mt Trumbull 77.27 53 ⇓P P 07 43 37.8 +0.6
baz=77,SNR=24
S16A Weppner Ranch, 77.32 51 ⇓P P 07 43 37.9 +0.4
baz=77,SNR=87
T15A Red Dirt Ranch 77.34 52 ⇓P P 07 43 37.7 +0.2
baz=77,SNR=63
R17A Hanksville Air 77.35 50 ⇓P P 07 43 37.3 -0.2
baz=77,SNR=58
NEUB Neuenburg 77.38 330 eP P 07 43 39.2 +1.7
comp=Z,50nm,0.9s,mb5.1
TREC Trest 77.42 327 AMS AMS 08 20 10.0
comp=Z,400nm,15.5s
PVL Pavlikeni 77.42 317 i P P 07 43 39.7 +1.8
KPL Plockton 77.44 342 P P 07 43 37.3 -0.4
KPL AMB AMB 07 43 41.1
comp=Z,92nm,5.0s
KPL Plockton 77.44 342 eP P 07 43 37.3 -0.4
KPL AMB AMB 07 43 41.1
comp=Z,92nm,5.0s
P19A Cripple Cowboy 77.49 48 ⇓P P 07 43 38.3 -0.1
baz=77,SNR=74
BZS Buzias 77.50 321 ⇓P P 07 43 38.4 +0.2
BZS Buzias 77.50 321 ⇓i P P 07 43 38.4 +0.2
N21A Black Mountain 77.51 46 ⇑P P 07 43 38.5 +0.1
baz=77,SNR=79
L23A Garrett 77.52 44 ⇓P P 07 43 37.6 -0.9
baz=77,SNR=45
O20A White River Ci 77.55 47 ⇓P P 07 43 38.3 -0.4
baz=77,SNR=33
M22A Cedar Creek Ra 77.55 45 ⇑P P 07 43 38.7 +0.1
baz=77,SNR=32
IRM Iron Mountain 77.59 55 ⇑P P 07 43 39.0 0.0
baz=77,SNR=26
BAR Barrett 77.62 57 eP P 07 43 39.7 +0.5
comp=Z,26nm,0.8s,mb4.9
AGMN Agassiz Nation 77.63 35 eP P 07 43 37.6 -1.4
comp=Z,56nm,0.7s,mb5.3
MONP Monument Peak 77.64 57 ⇑P P 07 43 39.9 +0.6
baz=77,SNR=14
W13A Hualapai Mount 77.73 54 ⇓P P 07 43 40.0 +0.3
baz=78
BC3 Big Chuckawall 77.73 56 ⇑P P 07 43 39.7 -0.1
baz=78,SNR=24
WERD Werda 77.78 329 eP P 07 43 41.6 +1.9
comp=Z,11nm,0.9s,mb4.5
U15A North Rim 77.79 52 ⇑P P 07 43 40.8 +0.8
baz=78,SNR=115
Q19A Hogan Spring (77.80 48 ⇓P P 07 43 39.7 -0.4
baz=78,SNR=46
S17A Black Ridge (B 77.84 50 ⇓P P 07 43 40.1 -0.2
baz=78,SNR=72
R18A Canyonlands Na 77.84 49 ⇑P P 07 43 39.8 -0.4
baz=78,SNR=28
V14A Boquillas Ranc 77.84 53 ⇓P P 07 43 41.1 +0.7
baz=78,SNR=66
KAR1 Arisaig 77.86 342 P P 07 43 39.2 -0.8
KAR1 Arisaig 77.86 342 eP P 07 43 39.2 -0.8
T16A Glen Canyon Da 77.87 51 ⇑P P 07 43 41.4 +0.9
baz=78,SNR=10
WERN Wernitzgruen 77.88 329 eP P 07 43 42.3 +2.0
comp=Z,22nm,1.0s,mb4.7
MOX Moxa 77.89 330 eP P 07 43 40.5 +0.2
comp=Z,26nm,1.3s,mb4.7
MOX eS S 07 53 20.0 -1.0
MOX
comp=Z,400nm,19.0s
MOX Moxa 77.89 330 eP P 07 43 42.1 +1.8
comp=Z,19nm,1.1s,mb4.6
MOX Moxa 77.89 330 eP P 07 43 40.5 +0.2
MOX eS S 07 53 20.0 -1.0
MOX pmax pmax
comp=Z,26nm,1.3s,mb4.7
MOX MLR MLR
comp=Z,400nm,19.0s
NKC Novy Kostel 77.90 329 eP P 07 43 42.0 +1.6
NKC eS S 07 53 19.7 -1.4
NKC MLR MLR
comp=Z,600nm,11.7s
NKC Novy Kostel 77.90 329 eP P 07 43 42.0 +1.6
NKC eS S 07 53 19.7 -1.4
NKC AMS AMS 08 22 30.0
comp=Z,600nm,11.7s
P20A De Beque 77.91 48 ⇑P P 07 43 40.3 -0.3
baz=78,SNR=23
O21A Pagoda 77.92 47 ⇓P P 07 43 41.5 +0.8
baz=78,SNR=8.4
IBBN Ibbenburen 77.93 333 eP P 07 43 42.1 +1.6
comp=Z,41nm,0.9s,mb5.1
M23A Laramie 77.97 45 ⇓P P 07 43 40.7 -0.2
baz=78,SNR=53
ESY Stoneypath 77.97 340 P P 07 43 41.1 +0.4
ESY Stoneypath 77.97 340⇑eP P 07 43 41.1 +0.4
L24A Wheatland 77.97 44 ⇑P P 07 43 41.9 +0.9
baz=78,SNR=11
DVTC Desert V Tower 77.99 57 ⇑P P 07 43 41.4 +0.1
baz=78,SNR=8.5
SWSC Sam W. Stewart 78.00 57 ⇑P P 07 43 41.5 +0.3
baz=78,SNR=8.4
N22A Wattenberg Ran 78.05 46 ⇓P P 07 43 41.7 +0.3
baz=78,SNR=37
X13A Yucca 78.11 54 ⇓P P 07 43 41.8 0.0
baz=78,SNR=96
PDMCI Parker Dam,Lak 78.11 55 ⇓P P 07 43 41.8 -0.1
baz=78,SNR=31
W14A Seligman 78.14 53 ⇑P P 07 43 42.4 +0.4
baz=78,SNR=64
EAB Aberfoyle 78.17 341 P P 07 43 42.3 +0.6
EAB Aberfoyle 78.17 341⇑eP P 07 43 42.3 +0.6
EBL Broad Law 78.21 340 P P 07 43 42.2 +0.2
EBL Broad Law 78.21 340 eP P 07 43 42.2 +0.2
PHWY Pilot Hill 78.23 45 eP P 07 43 42.0 -0.4
Y12C Blythe 78.25 55 ⇓P P 07 43 42.6 0.0
baz=78,SNR=14
N23A Red Feather La 78.26 45 ⇑P P 07 43 42.8 +0.2
baz=78,SNR=34
S18A Hurst Farm, Bl 78.26 50 ⇓P P 07 43 42.7 0.0
baz=78,SNR=100
R19A Curley Farm, L 78.27 49 ⇓P P 07 43 42.5 -0.1
baz=78,SNR=50
T17A Navajo Res., N 78.27 51 ⇑P P 07 43 42.3 -0.4
baz=78,SNR=18
V15A Kaibab Nationa 78.27 52 ⇓P P 07 43 42.9 +0.2
baz=78,SNR=54
CONA Connrad Observa 78.32 326⇑i P P 07 43 43.4 +0.6
comp=Z,19nm,0.7s,mb4.8,SNR=12
KHC Kasperske Hory 78.33 328 eP P 07 43 42.6 -0.1
comp=Z,27nm,0.6s,mb5.0
KHC Kasperske Hory 78.33 328 eP P 07 43 42.4 -0.4
KHC e 07 44 37.7
KHC eS S 07 53 24.2 -1.6
KHC MLR MLR
comp=Z,600nm,13.7s
KHC Kasperske Hory 78.33 328 eP P 07 43 42.4 -0.4
KHC eSP sP 07 44 37.7 +3.3
KHC eS S 07 53 24.2 -1.6
KHC AMS AMS 08 21 50.0
comp=Z,600nm,13.7s
PV10 Paradox Valley 78.33 49 eP P 07 43 43.3 +0.3
comp=Z,2μm,0.8s
Q20A Ridgley Place, 78.35 48 ⇑P P 07 43 42.6 -0.5
baz=78,SNR=35
UBBA Unterbreizbach 78.35 330 eP P 07 43 44.2 +1.3
comp=Z,12nm,0.8s,mb4.6
PV04 Paradox Valley 78.39 49 eP P 07 43 43.9 +0.5
P21A Newcastle 78.41 47 ⇓P P 07 43 43.6 +0.2
baz=78,SNR=33
M24A Cheyenne 78.44 44 ⇓P P 07 43 43.9 +0.3
baz=78,SNR=39
O22A Kremmling 78.46 46 ⇑P P 07 43 43.5 -0.1
baz=78,SNR=82
PGB Panagyurishte 78.49 317 i P P 07 43 45.7 +1.9
PGB Panagyurishte 78.49 317 i P P 07 43 45.7 +1.9
GEC2 GERESS Array S 78.50 327 eP P 07 43 45.4 +1.7
comp=Z,10.0nm,0.7s,mb4.5
GEC2 GERESS Array S 78.50 327 eP P 07 43 45.4 +1.7
GEC2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
GERES GERESS Array B 78.50 327 P P 07 43 43.3 -0.4
comp=Z,6.1nm,0.5s,mb4.5,baz=38,slow=5.4,SNR=39
GERES GERESS Array B 78.50 327 P P 07 43 43.3 -0.4
GERES pmax pmax
comp=Z,6.0nm,0.5s
GLA Glamis 78.53 56 ⇑P P 07 43 44.2 +0.1
baz=78,SNR=7.9
GLA Glamis 78.53 56 eP P 07 43 44.4 +0.2
comp=Z,40nm,0.8s,mb5.1
GLA Glamis 78.53 56 eP P 07 43 44.4 +0.2
GLA pmax pmax
comp=Z,40nm,0.8s,mb5.1
PGBU Glenifferbraes 78.54 341 P P 07 43 44.4 +0.6
PGBU AMB AMB 07 43 46.2
comp=Z,82nm,2.3s,mb5.0
PGBU Glenifferbraes 78.54 341 eP P 07 43 44.4 +0.6
PGBU AMB AMB 07 43 46.2
comp=Z,82nm,2.3s,mb5.0
WTSB Winterswijk 78.55 333⇑i P P 07 43 45.2 +1.3
comp=Z,39nm,0.7s,mb5.2
WET Wettzell 78.59 328 eP P 07 43 46.4 +2.2
comp=Z,15nm,1.0s,mb4.6
WET Wettzell 78.59 328 eP P 07 43 46.4 +2.2
WET pmax pmax
comp=Z,15nm,1.0s,mb4.6
Y13A Salome 78.63 55 ⇑P P 07 43 45.8 +1.1
baz=78,SNR=25
W15A Williams 78.65 53 ⇑P P 07 43 45.7 +0.9
baz=78,SNR=9.9
ESK Eskdalemuir 78.66 340 P P 07 43 44.2 -0.3
ESK AMB AMB 07 43 48.1
comp=Z,51nm,5.2s
ESK Eskdalemuir 78.66 340 eP P 07 43 44.2 -0.3
ESK AMB AMB 07 43 48.1
comp=Z,51nm,5.2s
ESK Eskdalemuir 78.66 340 i P P 07 43 46.8 +2.3
U16A Tuba City 78.67 52 ⇑P P 07 43 45.5 +0.6
baz=78,SNR=118
S19A Harvey Farm, M 78.72 49 ⇑P P 07 43 45.0 -0.1
baz=78,SNR=62
T18A Mexican Hat 78.72 50 ⇓P P 07 43 44.5 -0.6
baz=78,SNR=106
CSS Prodhromos 78.74 307 eP P 07 43 45.6 +0.3
P22A Eagle 78.74 47 ⇓P P 07 43 45.3 +0.1
baz=78,SNR=131
O23A Lake Granby, G 78.76 46 ⇓P P 07 43 45.8 +0.5
baz=78,SNR=72
X14A Yava 78.76 54 ⇑P P 07 43 45.8 +0.4
baz=78,SNR=65
ECK Cauldkaine Hil 78.76 340 P P 07 43 44.4 -0.7
ECK Cauldkaine Hil 78.76 340 eP P 07 43 44.4 -0.7
PV01 Paradox Valley 78.77 49 eP P 07 43 45.6 +0.2
comp=Z,2μm,0.8s
MMAI Mount Meron Ar 78.79 304 P P 07 43 44.8 -0.9
comp=Z,13nm,0.6s,mb4.7,baz=59,slow=5.0,SNR=14
RDO Rodhopi 78.80 316 P P 07 43 46.2 +0.7
GRF Grafenberg Arr 78.81 329 eL 08 22 45.9
comp=Z,463nm,20.2s
XAL Allendale 78.81 339 P P 07 43 45.6 +0.3
XAL Allendale 78.81 339 eP P 07 43 45.6 +0.3
GRFO Grafenberg 78.81 329 eP P 07 43 46.0 +0.7
GRFO Grafenberg 78.81 329 eP P 07 43 46.1 +0.7
Q21A Lamborn Mesa, 78.83 48 ⇓P P 07 43 47.2 +1.5
baz=79,SNR=15
R20A Redvale 78.83 49 ⇓P P 07 43 45.8 0.0
baz=79,SNR=49
TOO Toolangi 78.89 176 eP P 07 43 45.3 -0.4
VTS Vitosha 78.95 318 ⇑P P 07 43 46.3 0.0
VTS Vitosha 78.95 318 P P 07 43 46.7 +0.4
VTS Vitosha 78.95 318⇑i P P 07 43 46.3 0.0
VTS Vitosha 78.95 318 i P P 07 43 46.4 +0.1
Y14A Wickenburg 79.05 54 ⇑P P 07 43 46.6 -0.4
baz=79,SNR=40
S20A Disappointment 79.10 49 ⇑P P 07 43 47.1 -0.1
baz=79,SNR=20
X15A Humboldt 79.14 53 ⇑P P 07 43 48.0 +0.5
baz=79,SNR=90
W16A Flagstaff 79.15 53 ⇓P P 07 43 48.1 +0.6
baz=79,SNR=21
Z13A Yuma Proving G 79.15 55 ⇓P P 07 43 47.5 0.0
baz=79,SNR=63
R21A Cimarron 79.17 48 ⇓P P 07 43 48.0 +0.4
baz=79,SNR=56
Q22A Crested Butte, 79.18 47 ⇓P P 07 43 48.0 +0.4
baz=79,SNR=71
U18A Rough Rock, Ch 79.21 51 ⇓P P 07 43 48.7 +0.9
baz=79,SNR=22
ISCO Idaho Springs 79.22 46 ⇑P P 07 43 48.0 +0.2
baz=79,SNR=54
ISCO Idaho Springs 79.22 46 eP P 07 43 48.0 +0.2
comp=Z,34nm,0.8s,mb5.0
ISCO Idaho Springs 79.22 46 eP P 07 43 48.0 +0.2
ISCO pmax pmax
comp=Z,34nm,0.8s,mb5.0
V17A Tonalea, Kykot 79.22 52 ⇑P P 07 43 48.5 +0.5
baz=79,SNR=136
GCD Castle Douglas 79.26 340 P P 07 43 47.9 +0.1
GCD Castle Douglas 79.26 340 eP P 07 43 47.9 +0.1
O24A Longmont 79.28 45 ⇑P P 07 43 48.5 +0.3
baz=79,SNR=36
KESW Keswick, Cumbr 79.28 339 P P 07 43 48.0 +0.2
KESW AMB AMB 07 43 48.8
comp=Z,80nm,2.0s,mb5.0
KESW Keswick, Cumbr 79.28 339 eP P 07 43 48.0 +0.2
KESW AMB AMB 07 43 48.8
comp=Z,80nm,2.0s,mb5.0
113A Mohawk Valley, 79.38 56 ⇓P P 07 43 49.3 +0.5
baz=79,SNR=12
TNS Taunus Mts 79.41 331 eP P 07 43 50.4 +1.7
comp=Z,36nm,1.0s,mb5.0
TNS Taunus Mts 79.41 331 eP P 07 43 50.4 +1.7
TNS pmax pmax
comp=Z,36nm,1.0s,mb5.0
T19A Beclabito 79.42 50 ⇑P P 07 43 49.3 +0.3
baz=79,SNR=46
Y15A Casa Rosa Ranc 79.45 54 ⇓P P 07 43 49.3 +0.1
baz=79,SNR=63
GAL1 Galloway 79.45 340 P P 07 43 47.8 -1.0
GAL1 AMB AMB 07 43 53.8
comp=Z,91nm,4.1s
GAL1 Galloway 79.45 340⇑eP P 07 43 47.8 -1.0
GAL1 AMB AMB 07 43 53.8
comp=Z,91nm,4.1s
XDE Dent Fell 79.46 340 P P 07 43 48.8 -0.1
XDE Dent Fell 79.46 340 eP P 07 43 48.8 -0.1
Z14A Wintersburg 79.48 55 ⇑P P 07 43 50.2 +0.8
baz=79,SNR=11
S21A Coal Bank Pass 79.53 49 ⇓P P 07 43 50.1 +0.5
baz=79
KKB Krupnik 79.54 318 i P P 07 43 51.3 +1.8
PERS Pernice 79.65 325 i P P 07 43 49.5 -0.5
SOKA Soboth 79.65 325⇑i P P 07 43 50.0 0.0
comp=Z,45nm,1.2s,mb5.0
X16A Lo Mia Camp, P 79.67 53 ⇑P P 07 43 51.0 +0.6
baz=79,SNR=78
V18A Ganado 79.67 51 ⇑P P 07 43 50.8 +0.5
baz=79,SNR=94
U19A Dine' College, 79.69 50 ⇑P P 07 43 50.8 +0.3
baz=79,SNR=50
R22A Saguache, Gunn 79.71 48 ⇑P P 07 43 51.3 +0.8
baz=80
EYMN Ely 79.72 33 eP P 07 43 49.3 -1.1
comp=Z,82nm,0.8s,mb5.4
Q23A Hartsel 79.74 47 ⇑P P 07 43 50.8 +0.2
baz=80,SNR=55
O25A Wiggins 79.79 45 ⇑P P 07 43 50.8 0.0
baz=80,SNR=28
TOD Tromm 79.79 330 eP P 07 43 51.0 +0.3
TOD Tromm 79.79 330 eP P 07 43 51.0 +0.3
P24A Kohler Place, 79.80 46 ⇓P P 07 43 51.2 +0.2
baz=80,SNR=44
HGN Heimansgroeve 79.85 333⇑i P P 07 43 52.2 +1.2
comp=Z,28nm,0.8s,mb5.0
BEBN Eben Emael 79.91 333 P P 07 43 51.4 0.0
comp=Z,12nm,0.9s,mb4.5
114A Black Gap (USA 79.93 55 ⇑P P 07 43 52.2 +0.4
baz=80,SNR=21
MEM Membach 79.96 333 P P 07 43 52.8 +1.2
comp=Z,20nm,1.1s,mb4.7
Z15A Gila River Ind 80.01 54 ⇑P P 07 43 52.4 +0.1
baz=80,SNR=11
S22A 4UR Ranch, Cre 80.01 48 ⇑P P 07 43 52.6 +0.4
baz=80,SNR=39
FUR Furstenfeldbru 80.02 328 eP P 07 43 54.1 +2.1
comp=Z,54nm,0.7s,mb5.3
FUR Furstenfeldbru 80.02 328 eP P 07 43 54.1 +2.1
FUR pmax pmax
comp=Z,54nm,0.7s,mb5.3
Y16A Circle Bar Ran 80.02 53 ⇑P P 07 43 52.3 +0.1
baz=80,SNR=39
U20A Newcomb 80.02 50 ⇑P P 07 43 53.3 +1.1
baz=80,SNR=8.0
KBA Koelnbreinsper 80.05 326⇑i P P 07 43 52.4 +0.3
comp=Z,32nm,0.8s,mb5.0,SNR=8.4
Q24A Divide 80.07 46 ⇑P P 07 43 52.5 +0.1
baz=80,SNR=35
X17A Forest Lakes 80.10 53 ⇑P P 07 43 53.5 +0.8
baz=80,SNR=31
T21A Navajo Lake 80.15 49 ⇑P P 07 43 53.3 +0.4
baz=80,SNR=22
V19A Window Rock 80.18 51 ⇓P P 07 43 53.9 +0.8
baz=80,SNR=10
P25A Willow Gulch B 80.20 45 ⇓P P 07 43 53.1 0.0
baz=80,SNR=18
VAY Valandovo 80.20 318 eP P 07 43 52.7 -0.4
OGNE Ogallala 80.27 43 ⇓P P 07 43 53.3 -0.2
baz=80,SNR=14
OGNE Ogallala 80.27 43 eP P 07 43 53.3 -0.1
comp=Z,111nm,0.6s,mb5.7
MYKA Terra Mystica 80.28 326⇑i P P 07 43 52.7 -0.7
comp=Z,28nm,0.8s,mb5.0
GMM Mts of Mourne 80.33 341 P P 07 43 52.6 -0.8
GMM Mts of Mourne 80.33 341⇑eP P 07 43 52.6 -0.8
RUP Ruppelstein 80.34 331 eP P 07 43 53.6 -0.1
RUP Ruppelstein 80.34 331 eP P 07 43 53.6 -0.1
BCLA Clavier 80.36 333 P P 07 43 53.7 0.0
comp=Z,12nm,1.0s,mb4.5
115A Sonoran Desert 80.37 55 ⇑P P 07 43 54.4 +0.2
baz=80
W19A Sanders 80.41 51 ⇑P P 07 43 54.7 +0.4
baz=80,SNR=20
Z16A Peralta Trail, 80.42 54 ⇓P P 07 43 55.2 +0.8
baz=80,SNR=15
VISS Visnje 80.42 325 i P P 07 43 53.9 -0.2
PLG Polygyros 80.45 316 P P 07 43 53.9 -0.6
V20A Brimhall 80.46 50 ⇓P P 07 43 54.7 +0.1
baz=80,SNR=25
BOJS Bojanci 80.48 324 i P P 07 43 54.1 -0.4
U21A Nageezi 80.48 49 ⇓P P 07 43 54.8 +0.1
baz=80,SNR=40
X18A Snowflake 80.48 52 ⇑P P 07 43 55.2 +0.5
baz=80,SNR=26
T22A Edith 80.49 49 ⇑P P 07 43 55.0 +0.3
baz=80,SNR=74
S23A Nye Farm, Mont 80.50 48 ⇑P P 07 43 55.6 +0.9
baz=80,SNR=14
CHOS Chios island 80.51 313 P P 07 43 54.7 -0.1
214A Organ Pipe Nat 80.52 56 ⇓P P 07 43 54.6 -0.3
baz=80,SNR=12
Y17A Roosevelt 80.53 53 ⇑P P 07 43 54.8 -0.1
baz=80,SNR=39
WATA Walderalm 80.56 328⇓i P P 07 43 55.7 +0.8
comp=Z,18nm,0.5s,mb4.9
Q25A Bedland, Calha 80.59 46 ⇓P P 07 43 54.6 -0.6
baz=80,SNR=52
WTTA Wattenberg 80.60 327⇓i P P 07 43 54.9 -0.2
comp=Z,35nm,0.9s,mb5.0,SNR=10
R24A Sanders Place, 80.62 47 P P 07 43 55.2 -0.1
baz=80,SNR=85
VOY Vojsko 80.65 325 eP P 07 43 54.7 -0.7
VOY e 07 43 55.7
VOY e 07 44 00.1
ABTA Abfaltersbach 80.66 327⇑i P P 07 43 56.1 +0.7
comp=Z,16nm,1.2s,mb4.5
JAVS Javornik 80.69 325 i P P 07 43 54.2 -1.4
MOTA Moosalm 80.75 328 i P P 07 43 55.9 0.0
comp=Z,39nm,0.9s,mb5.0,SNR=15
SDCO Great Sand Dun 80.75 47 ⇑P P 07 43 56.0 -0.1
baz=80,SNR=75
SDCO Great Sand Dun 80.75 47 eP P 07 43 56.0 -0.1
comp=Z,30nm,0.9s,mb4.9
RETA Reutte 80.77 328⇑i P P 07 43 56.0 0.0
comp=Z,47nm,0.8s,mb5.2,SNR=18
116A Eloy 80.78 55 ⇓P P 07 43 56.5 +0.1
baz=81,SNR=27
GIVF Givet 80.79 333 eP P 07 43 54.5 -1.6
GIVF Givet 80.79 333 eP P 07 43 54.5 -1.6
ECSD EROS Data Cent 80.81 38 eP P 07 43 54.9 -1.4
comp=Z,90nm,0.8s,mb5.5
KRUS Krusevo 80.83 318 eP P 07 43 55.7 -0.8
DOU Dourbes 80.88 333 P P 07 43 57.5 +1.0
W20A Ramah 80.91 51 ⇑P P 07 43 56.8 -0.2
baz=81,SNR=24
V21A Milan 80.93 50 ⇑P P 07 43 57.4 +0.3
baz=81,SNR=15
X19A St. Johns 80.94 52 ⇓P P 07 43 57.5 +0.3
baz=81,SNR=92
Y18A Canyon Day Jun 80.95 53 ⇑P P 07 43 57.5 +0.3
baz=81,SNR=44
T23A Casias Ranch, 80.96 48 ⇑P P 07 43 57.5 +0.3
baz=81,SNR=53
U22A Llaves 80.97 49 ⇓P P 07 43 57.8 +0.5
baz=81,SNR=23
S24A Houchin Ranch, 80.98 47 ⇓P P 07 43 57.6 +0.3
baz=81,SNR=21
BFO Black Forest 81.02 330 eP P 07 43 58.9 +1.6
comp=Z,43nm,1.1s,mb5.0
BFO Black Forest 81.02 330 eP P 07 43 58.9 +1.6
BFO pmax pmax
comp=Z,43nm,1.1s,mb5.0

Z17A San Carlos Hig 81.02 53 ⇑P P 07 43 57.7 +0.1
baz=81,SNR=17
SPAK Spaichingen-Ko 81.03 330 *e*P **P 07 43 57.5 +0.1**
BAIF Baives 81.04 333 *e*P **P 07 43 55.9 -1.5**
comp=Z,24nm,0.8s,mb4.6
BAIF Baives 81.04 333 *e*P **P 07 43 55.9 -1.5**
comp=Z,12nm,0.8s,mb4.6
BAIF Baives 81.04 333 *e*P **P 07 43 55.9 -1.5**
BAIF pmax pmax
comp=Z,12nm,0.8s,mb4.6
R25A Fountain Ranch 81.12 46 ⇑P P 07 43 57.4 -0.7
baz=81,SNR=58
LIT Litokhoron 81.15 317 P **P 07 43 58.4 +0.3**
LIT Litokhoron 81.15 317 P **P 07 43 58.4 +0.3**
FETA Feichten 81.16 328⇑/P **P 07 43 58.1 0.0**
comp=Z,20nm,0.7s,mb4.9,SNR=17
SCHQ Schefferville 81.18 16 P **P 07 43 56.9 -1.2**
comp=Z,23nm,0.7s,mb4.9,baz=352,slow=4.8,SNR=19
SCHQ LR LR 08 25 19.8
comp=Z,191nm,19.2s,baz=17,slow=39
V22A San Miguel Ran 81.27 49 ⇓P P 07 43 59.1 +0.2
baz=81,SNR=47
DAVA Damuels 81.28 328⇑/P **P 07 43 58.6 -0.1**
comp=Z,46nm,0.8s,mb5.2,SNR=14
Y19A Nutrioso 81.29 52 ⇑P P 07 43 59.4 +0.4
baz=81,SNR=22
216A Three Points, 81.32 55 ⇓P P 07 43 59.4 +0.2
baz=81,SNR=17
X20A Quemado 81.33 51 ⇓P P 07 43 59.8 +0.6
baz=81,SNR=47
DLF Lyons Farm 81.33 341 *e*P **P 07 43 59.4 +0.6**
EIL Elat 81.34 302 P **P 07 43 59.5 +0.1**
comp=Z,8.4nm,0.7s,mb4.5,baz=359,slow=4.0,SNR=7.0
EIL Elat 81.34 302 P **P 07 43 59.5 +0.1**
CDF Champ du Feu 81.34 331 *e*P **P 07 43 57.8 -1.2**
comp=Z,55nm,1.0s,mb4.8
CDF Champ du Feu 81.34 331 *e*P **P 07 43 57.8 -1.2**
comp=Z,28nm,1.0s,mb4.8
CDF Champ du Feu 81.34 331 *e*P **P 07 43 57.8 -1.2**
CDF pmax pmax
comp=Z,28nm,1.0s,mb4.8
117A Oracle 81.37 54 ⇑P P 07 43 58.6 -0.8
baz=81,SNR=19
U23A El Rito 81.38 49 ⇓P P 07 43 59.8 +0.4
baz=81,SNR=166
S25A Robets Cordova 81.39 47 ⇑P P 07 43 58.9 -0.6
baz=81,SNR=40
T24A Torres, Weston 81.48 47 ⇑P P 07 43 59.0 -1.0
baz=81,SNR=38
FELD Feldberg im Sc 81.52 330 *e*P **P 07 44 00.9 +1.0**
TUC Tucson 81.52 54 *e*P **P 07 43 60.0 -0.3**
TUC Tucson 81.52 54 *e*P **P 07 44 00.0 -0.2**
ECH Echery 81.55 331 *e*P **P 07 44 00.2 +0.1**
ECH Echery 81.55 331 *e*P **P 07 44 00.2 +0.1**
MCH1 Michaelchurch 81.57 338 P **P 07 44 00.0 -0.1**
MCH1 AMB AMB 07 44 08.4
comp=Z,44nm,3.1s
MCH1 Michaelchurch 81.57 338 *e*P **P 07 44 00.0 -0.1**
MCH1 AMB AMB 07 44 08.4
comp=Z,44nm,3.1s
NEST Nestorio 81.65 318 P **P 07 44 00.9 +0.1**
FUORN Ofenpass-Fuorn 81.67 328 *e*P **P 07 44 00.8 +0.1**
APE Apeiranthos 81.75 313 P **P 07 43 58.8 -2.6**
T25A Trinidad 81.79 47 ⇑P P 07 44 01.1 -0.5
baz=82,SNR=63
V23A Ortiz Mt. (NFS 81.80 49 ⇓P P 07 44 01.1 -0.5
baz=82,SNR=71
X21A Alamocita Cree 81.81 51 ⇑P P 07 44 02.3 +0.6
baz=82,SNR=59
U24A Moreno Valley 81.83 48 ⇓P P 07 44 02.7 +0.9
baz=82,SNR=15
HGH Gray Hill 81.84 338 P **P 07 44 00.7 -0.9**
HGH Gray Hill 81.84 338⇑*e*P **P 07 44 00.7 -0.9**
Y20A Horse Springs, 81.84 52 ⇓P P 07 44 02.6 +0.7
baz=82,SNR=72
MOF Molkenrain 81.86 330 *e*P **P 07 44 02.5 +0.8**
MOF Molkenrain 81.86 330 *e*P **P 07 44 02.5 +0.8**
217A Green Valley 81.87 55 ⇓P P 07 44 02.1 0.0
baz=82,SNR=42
W22A Albuquerque 81.89 50 ⇓P P 07 44 02.9 +0.7
baz=82,SNR=6.1
ATAL Atalanti 81.91 315 P **P 07 44 00.4 -1.8**
THEF They Montfort 81.97 331 *e*P **P 07 44 02.3 0.0**
THEF They Montfort 81.97 331 *e*P **P 07 44 02.3 0.0**
HINF Hinteralfeld 82.00 330 *e*P **P 07 44 00.8 -1.6**
HINF Hinteralfeld 82.00 330 *e*P **P 07 44 00.8 -1.6**
HAU Haudompre 82.02 331 *e*P **P 07 44 01.0 -1.6**
comp=Z,30nm,0.8s,mb4.7
HAU *e*MLR MLR
comp=Z,443nm,17.5s
HAU Haudompre 82.02 331 *e*P **P 07 44 01.0 -1.6**
comp=Z,15nm,0.8s,mb4.7
HAU LR LR
comp=Z,440nm,17.5s
HAU Haudompre 82.02 331 *e*P **P 07 44 01.0 -1.6**
HAU pmax pmax
comp=Z,15nm,0.8s,mb4.7
HAU MLR MLR
comp=Z,440nm,17.5s
BBS Basel-Blauen 82.04 330 *e*P **P 07 44 02.2 -0.5**
BBS Basel-Blauen 82.04 330 *e*P **P 07 44 02.2 -0.5**
MEZF Maizieres J'vi 82.07 332 *e*P **P 07 44 01.6 -1.2**
119A Ashpeak Ranch, 82.10 53 ⇑P P 07 44 03.3 0.0
baz=82,SNR=9.7
TUE Stuetta 82.16 328 *e*P **P 07 44 03.1 -0.2**
Y21A Point of Rocks 82.18 51 ⇓P P 07 44 04.3 +0.6
baz=82,SNR=29
218A Dragoon 82.20 54 ⇓P P 07 44 04.1 +0.3
baz=82,SNR=30
ANMO Albuquerque 82.22 50 *e*P **P 07 44 04.0 +0.2**
comp=Z,23nm,0.8s,mb4.9
ANMO Albuquerque 82.22 50 *e*P **P 07 44 04.0 +0.2**
ANMO pmax pmax
comp=Z,23nm,0.8s
LAZ Ladron 82.22 51 *e*P **P 07 44 04.3 +0.4**
comp=Z,10nm,0.9s,mb4.5
X22A Bernardo 82.22 50 ⇓P P 07 44 04.5 +0.6
baz=82,SNR=12
W23A Werner Place, 82.24 49 ⇑P P 07 44 04.4 +0.5
baz=82,SNR=41
Z20A Nine Sixteen R 82.28 52 ⇑P P 07 44 04.6 +0.4
baz=82,SNR=52
THR3 Thira Island, 82.30 312 P **P 07 44 02.9 -1.4**
U25A Circle Dot Ran 82.33 47 ⇑P P 07 44 04.1 -0.3
baz=82,SNR=42
SFTF Sexfontaines 82.33 332 *e*P **P 07 44 02.8 -1.4**
V24A Rampart Ranch, 82.33 48 ⇑P P 07 44 05.1 +0.7
baz=82,SNR=68
THR6 Thira Island, 82.34 312 P **P 07 44 02.4 -2.1**
DSF Desfina 82.38 316 P **P 07 44 02.6 -2.0**
LOMF Lomont 82.39 330 *e*P **P 07 44 06.0 +1.5**
LOMF Lomont 82.39 330 *e*P **P 07 44 06.0 +1.5**
LENM Lemitar 82.48 51 *e*P **P 07 44 06.6 +1.4**
LPM Los Pinos Moun 82.57 50 *e*P **P 07 44 06.8 +1.1**
Y22D IRIS PASSCAL I 82.58 51 ⇑P P 07 44 06.4 +0.7
baz=82,SNR=5.6
KALE Kalithea 82.60 316 P **P 07 44 06.0 +0.2**
318A Bisbee 82.61 54 ⇑P P 07 44 05.9 -0.1
baz=82,SNR=40
V25A Rancho No Teng 82.62 48 P **P 07 44 06.1 +0.2**
baz=82,SNR=46
W24A Lazy 6 Ranch, 82.63 49 ⇓P P 07 44 06.6 +0.6
baz=82,SNR=62
Y22A Socorro 82.65 51 ⇑P P 07 44 06.3 +0.2
baz=82,SNR=40
120A U Bar Ranch, L 82.65 53 ⇑P P 07 44 06.4 +0.3
baz=82
TRIZ Trizonia 82.66 316 P **P 07 44 03.3 -2.8**
219A White Tail Can 82.66 53 ⇑P P 07 44 06.3 +0.1
baz=82,SNR=27
Z21A St. Cloud Mine 82.68 52 ⇓P P 07 44 06.9 +0.6
baz=82,SNR=38
BNM Barren Site 82.69 50 *e*P **P 07 44 06.5 +0.2**
comp=Z,23nm,0.6s,mb5.1
U26A Atchley Ranch, 82.69 47 ⇑P P 07 44 06.5 +0.2
baz=82,SNR=9.9
EFP Efpalio 82.70 316 P **P 07 44 05.5 -0.8**
ZKR Zakros 82.78 311 P **P 07 44 06.9 +0.1**
LAKA Lakka 82.80 316 P **P 07 44 06.3 -0.5**
KEK Kerkira 82.81 318 P **P 07 44 06.5 -0.3**
GUR Goura 82.83 315 P **P 07 44 06.3 -0.7**
CBKS Cedar Bluff 83.03 43 ⇓P P 07 44 07.1 -0.8
baz=83,SNR=8.0
CBKS Cedar Bluff 83.03 43 *e*P **P 07 44 07.4 -0.6**
CBKS Cedar Bluff 83.03 43 *e*P **P 07 44 07.4 -0.6**
SENIN Lac Senin/Sane 83.04 329 *e*P **P 07 44 07.8 -0.1**

LKD2 Lefkada island 83.07 317 P **P 07 44 06.8 -1.4**
X24A Lazy VL Ranch, 83.08 49 ⇑P P 07 44 08.8 +0.5
baz=83,SNR=60
319A Douglas 83.09 54 ⇑P P 07 44 08.9 +0.5
baz=83,SNR=24
V26A Tequesquite Ra 83.11 48 ⇓P P 07 44 08.0 -0.4
baz=83,SNR=34
Z22A Elephant Butte 83.14 51 ⇓P P 07 44 08.7 0.0
baz=83,SNR=45
W25A X Bar L Ranch, 83.16 48 ⇑P P 07 44 09.0 +0.3
baz=83,SNR=39
LAST Lasithi 83.17 312 P **P 07 44 09.2 +0.5**
121A Cookes Peak, D 83.17 52 ⇓P P 07 44 09.4 +0.6
baz=83,SNR=34
220A Playas Peak, P 83.17 53 ⇑P P 07 44 09.0 +0.2
baz=83,SNR=17
Y23A Lovelace Mesa, 83.18 50 ⇑P P 07 44 09.3 +0.5
baz=83,SNR=78
VLX Vlachokerasia 83.23 315 P **P 07 44 07.5 -1.6**
CABF La Chapelle 83.29 330 *e*P **P 07 44 07.9 -1.3**
comp=Z,18nm,0.8s,mb4.5
CABF La Chapelle 83.29 330 *e*P **P 07 44 07.9 -1.3**
comp=Z,8.9nm,0.8s,mb4.5
CABF La Chapelle 83.29 330 *e*P **P 07 44 07.9 -1.3**
CABF pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
122A Conniff Cattle 83.51 52 ⇓P P 07 44 11.6 +1.1
baz=83,SNR=15
KFL Anninata 83.52 316 P **P 07 44 10.2 -0.3**
KFL Anninata 83.52 316 P **P 07 44 10.2 -0.3**
Y24A Capitan 83.54 50 ⇓P P 07 44 10.7 0.0
baz=83,SNR=32
LOR Lormes 83.54 332 *e*P **P 07 44 09.0 -1.4**
comp=Z,74nm,0.8s,mb5.2
LOR *e*pP pP 07 44 48.3 +1.3
LOR *e*MLR MLR
comp=Z,380nm,21.8s
LOR Lormes 83.54 332 *e*P **P 07 44 09.0 -1.4**
comp=Z,37nm,0.8s,mb5.2
LOR *e*pP pP 07 44 48.3 +1.3
LOR LR LR
comp=Z,380nm,21.8s
LOR Lormes 83.54 332 *e*P **P 07 44 09.0 -1.4**
LOR *e**PP pP 07 44 48.3 +1.3
LOR pmax pmax
comp=Z,37nm,0.8s,mb5.2
LOR MLR MLR
comp=Z,380nm,21.8s
X25A Clemmons Ranch 83.54 49 ⇑P P 07 44 11.1 +0.4
baz=83,SNR=15
Z23A Rita Site, Whi 83.56 51 P **P 07 44 10.9 +0.1**
baz=83,SNR=21
VLS Valsamata 83.57 317 P **P 07 44 09.9 -0.8**
VLS Valsamata 83.57 317 P **P 07 44 09.9 -0.8**
320A Kipp Ranch, An 83.57 54 ⇓P P 07 44 11.6 +0.7
baz=83,SNR=15
ITM Ithomi 83.62 315 P **P 07 44 09.8 -1.2**
SIVA Sivas 83.64 312 P **P 07 44 10.9 -0.3**
FLN La Foliniere 83.69 335 *e*P **P 07 44 09.5 -1.7**
comp=Z,64nm,1.0s,mb5.0
FLN *e*MLR MLR
comp=Z,476nm,22.5s
FLN La Foliniere 83.69 335 *e*P **P 07 44 09.5 -1.7**
comp=Z,32nm,1.0s,mb5.0
FLN LR LR
comp=Z,480nm,22.5s
FLN La Foliniere 83.69 335 *e*P **P 07 44 09.5 -1.7**
FLN pmax pmax
comp=Z,32nm,1.0s,mb5.0
FLN MLR MLR
comp=Z,480nm,22.5s
LDF La Druitiere 83.73 335 *e*P **P 07 44 09.4 -2.0**
comp=Z,17nm,0.5s,mb4.7
LDF La Druitiere 83.73 335 *e*P **P 07 44 09.4 -2.0**
comp=Z,8.5nm,0.5s,mb4.7
LDF La Druitiere 83.73 335 *e*P **P 07 44 09.4 -2.0**
LDF pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
AQU L'Aquila 83.79 323 *e*P **P 07 44 13.0 +1.2**
comp=Z,128nm,1.7s,mb5.4
AQU L'Aquila 83.79 323 *e*P **P 07 44 13.0 +1.2**
AQU pmax pmax
comp=Z,128nm,1.7s,mb5.4
SCIA State Center 83.79 37 *e*P **P 07 44 11.3 -0.5**
comp=Z,213nm,1.1s,mb5.8
SSF Saint Saulge 83.84 332 *e*P **P 07 44 10.6 -1.4**
comp=Z,37nm,0.7s,mb4.9
SSF Saint Saulge 83.84 332 *e*P **P 07 44 10.6 -1.4**
comp=Z,19nm,0.7s,mb4.9
SSF Saint Saulge 83.84 332 *e*P **P 07 44 10.6 -1.4**
SSF pmax pmax
comp=Z,19nm,0.7s,mb4.9
KARN Karanos 83.86 313 P **P 07 44 11.7 -0.6**
RSL Roselend 83.86 329 *e*P **P 07 44 11.6 -0.5**
RSL Roselend 83.86 329 *e*P **P 07 44 11.6 -0.5**
222A Williams Famil 83.88 52 ⇑P P 07 44 12.6 +0.2
baz=84,SNR=17
Y25A Mesa, Roswell 83.97 49 P **P 07 44 12.6 -0.2**
baz=84,SNR=43
HYF Humbligny 83.97 333 *e*P **P 07 44 11.6 -1.0**
LPL La Plagne 83.97 329 *e*P **P 07 44 11.9 -0.7**
comp=Z,75nm,0.7s,mb5.2
LPL La Plagne 83.97 329 *e*P **P 07 44 11.9 -0.7**
comp=Z,38nm,0.7s,mb5.2
LPL La Plagne 83.97 329 *e*P **P 07 44 11.9 -0.7**
LPL pmax pmax
comp=Z,38nm,0.7s,mb5.2
LPG La Plagne 83.97 329 *e*P **P 07 44 12.1 -0.6**
comp=Z,83nm,0.5s,mb5.4
LPG La Plagne 83.97 329 *e*P **P 07 44 12.1 -0.6**
comp=Z,42nm,0.5s,mb5.4
LPG La Plagne 83.97 329 *e*P **P 07 44 12.1 -0.6**
LPG pmax pmax
comp=Z,42nm,0.5s,mb5.4
123A Bell Site, Whi 83.99 51 ⇑P P 07 44 13.4 +0.4
baz=84,SNR=8.8
X26A CR and CF Fran 84.01 48 P **P 07 44 13.4 +0.3**
baz=84,SNR=34
Z24A Sheeppen Canyo 84.01 50 ⇑P P 07 44 13.4 +0.3
baz=84,SNR=11
W27A Bowe Ranch, En 84.05 48 P **P 07 44 13.5 +0.2**
baz=84,SNR=26
SMF Signal de Mont 84.08 332 *e*P **P 07 44 11.9 -1.3**
comp=Z,66nm,0.9s,mb5.1
SMF *e*pP pP 07 44 51.2 +1.4
SMF Signal de Mont 84.08 332 *e*P **P 07 44 11.9 -1.3**
comp=Z,33nm,0.9s,mb5.1
SMF *e*pP pP 07 44 51.2 +1.4
SMF Signal de Mont 84.08 332 *e*P **P 07 44 11.9 -1.3**
SMF *e**PP pP 07 44 51.2 +1.4
SMF pmax pmax
comp=Z,33nm,0.9s,mb5.1
AVF Avril sur Loir 84.13 332 *e*P **P 07 44 12.2 -1.2**
comp=Z,103nm,0.8s,mb5.3
AVF Avril sur Loir 84.13 332 *e*P **P 07 44 12.2 -1.2**
comp=Z,51nm,0.8s,mb5.3
AVF Avril sur Loir 84.13 332 *e*P **P 07 44 12.2 -1.2**
AVF pmax pmax
comp=Z,51nm,0.8s,mb5.3
GRR Gorron 84.14 335 *e*P **P 07 44 12.1 -1.4**
comp=Z,33nm,0.6s,mb4.9
GRR *e*pP pP 07 44 51.4 +1.3
GRR Gorron 84.14 335 *e*P **P 07 44 12.1 -1.4**
comp=Z,17nm,0.6s,mb4.9
GRR *e*pP pP 07 44 51.4 +1.3
GRR Gorron 84.14 335 *e*P **P 07 44 12.1 -1.4**
GRR *e**PP pP 07 44 51.4 +1.3
GRR pmax pmax
comp=Z,17nm,0.6s,mb5.0
JFWS Jewell Farm 84.29 35 *e*P **P 07 44 12.9 -1.4**
JFWS Jewell Farm 84.29 35 *e*P **P 07 44 12.9 -1.4**
X27A F and S Farms, 84.33 48 P **P 07 44 15.1 +0.4**
baz=84,SNR=23
BNI Bardonecchia 84.38 329 *e*P **P 07 44 14.7 0.0**
BNI Bardonecchia 84.38 329 *e*P **P 07 44 14.7 0.0**
KSU1 Kansas State U 84.38 41 *e*P **P 07 44 13.4 -1.5**
comp=Z,126nm,0.6s,mb5.8
124A Stringfield Ra 84.41 51 P **P 07 44 15.1 0.0**
baz=84,SNR=42
Z25A Roswell 84.42 50 ⇓P P 07 44 15.4 +0.3
baz=84,SNR=67
Y26A Elida 84.46 49 P **P 07 44 15.5 +0.1**
baz=84,SNR=26
OG22 Abries 84.47 329 *e*P **P 07 44 16.4 +1.2**
BGF Bois d'Agland 84.51 332 *e*P **P 07 44 14.2 -1.1**
comp=Z,30nm,0.8s,mb4.8

BGF Bois d'Agland 84.51 332 *e*P **P 07 44 14.2 -1.1**
comp=Z,15nm,0.8s,mb4.8
BGF Bois d'Agland 84.51 332 *e*P **P 07 44 14.2 -1.1**
BGF pmax pmax
comp=Z,15nm,0.8s,mb4.8
MBDF Montbardon 84.61 329 *e*P **P 07 44 14.3 -1.6**
comp=Z,58nm,0.7s,mb5.2
MBDF Montbardon 84.61 329 *e*P **P 07 44 14.3 -1.6**
comp=Z,29nm,0.7s,mb5.1
MBDF Montbardon 84.61 329 *e*P **P 07 44 14.3 -1.6**
MBDF pmax pmax
comp=Z,29nm,0.7s,mb5.1
PLDF La Plantade 84.74 331 *e*P **P 07 44 17.7 +1.2**
PLDF La Plantade 84.74 331 *e*P **P 07 44 17.7 +1.2**
ORIF Oris-en-Rattie 84.80 329 *e*P **P 07 44 15.8 -1.0**
comp=Z,84nm,0.7s,mb5.3
ORIF *e*MLR MLR
comp=Z,398nm,20.5s
ORIF Oris-en-Rattie 84.80 329 *e*P **P 07 44 15.8 -1.0**
comp=Z,42nm,0.7s,mb5.3
ORIF Oris-en-Rattie 84.80 329 *e*P **P 07 44 15.8 -1.0**
ORIF pmax pmax
comp=Z,42nm,0.7s,mb5.3
224A Cornudas Mount 84.83 51 ⇑P P 07 44 17.2 0.0
baz=85,SNR=47
AGO Saint Agoulin 84.84 332 *e*P **P 07 44 18.5 +1.5**
Z26A Caprock 84.85 49 ⇑P P 07 44 17.3 0.0
baz=85,SNR=95
Y27A Causey 84.86 48 ⇑P P 07 44 16.9 -0.4
baz=85,SNR=27
125A Gardner Draw, 84.91 50 ⇑P P 07 44 18.5 +0.9
baz=85,SNR=34
SAOF Saorge 84.92 328 *e*P **P 07 44 18.1 +0.6**
SAOF Saorge 84.92 328 *e*P **P 07 44 18.1 +0.6**
ROSF Rostrenen 84.93 337 *e*P **P 07 44 16.5 -0.9**
comp=Z,73nm,0.9s,mb5.1
ROSF Rostrenen 84.93 337 *e*P **P 07 44 16.5 -0.9**
comp=Z,36nm,0.9s,mb5.1
ROSF Rostrenen 84.93 337 *e*P **P 07 44 16.5 -0.9**
ROSF pmax pmax
comp=Z,36nm,0.9s,mb5.1
AMTX Amarillo 84.94 47 ⇓P P 07 44 17.6 -0.2
baz=85,SNR=22
AMTX Amarillo 84.94 47 *e*P **P 07 44 17.3 -0.5**
comp=Z,46nm,0.6s,mb5.4
TCF Toulx Ste Croi 84.96 332 *e*P **P 07 44 16.7 -0.9**
comp=Z,36nm,0.7s,mb4.9
TCF Toulx Ste Croi 84.96 332 *e*P **P 07 44 16.7 -0.9**
comp=Z,18nm,0.7s,mb4.9
TCF Toulx Ste Croi 84.96 332 *e*P **P 07 44 16.7 -0.9**
TCF pmax pmax
comp=Z,18nm,0.7s,mb4.9
GLMI Grayling 84.99 30 *e*P **P 07 44 17.2 -0.6**
comp=Z,254nm,0.7s,mb6.1
SSB Saint Sauveur 84.99 330 *e*P **P 07 44 17.9 +0.1**
SSB Saint Sauveur 84.99 330 *e*P **P 07 44 17.9 +0.1**
MSTX Muleshoe 85.02 48 ⇓P P 07 44 17.7 -0.4
baz=85,SNR=18
TOUF Mont Tournerai 85.02 328 *e*P **P 07 44 18.1 +0.1**
TOUF Mont Tournerai 85.02 328 *e*P **P 07 44 18.1 +0.1**
SBF Sospel 85.08 328 *e*P **P 07 44 16.3 -1.9**
comp=Z,76nm,0.8s,mb5.2
SBF Sospel 85.08 328 *e*P **P 07 44 16.3 -1.9**
comp=Z,38nm,0.8s,mb5.2
SBF Sospel 85.08 328 *e*P **P 07 44 16.3 -1.9**
SBF pmax pmax
comp=Z,38nm,0.8s,mb5.2
LUCF Luceram 85.09 328 *e*P **P 07 44 19.1 +0.8**
CPRX Cap Rock 85.09 49 *e*P **P 07 44 18.9 +0.4**
comp=Z,49nm,0.8s,mb5.3
PYM Petit Puy Mans 85.15 332 *e*P **P 07 44 20.1 +1.6**
PYM Petit Puy Mans 85.15 332 *e*P **P 07 44 20.1 +1.6**
MNTX Cornudas Mount 85.18 51 ⇓P P 07 44 18.8 -0.2
baz=85,SNR=23
MNTX Cornudas Mount 85.18 51 *e*P **P 07 44 18.7 -0.2**
comp=Z,19nm,1.1s,mb4.7
OG25 Le Caire 85.18 329 *e*P **P 07 44 18.1 -0.7**
225A Deer Hill, Car 85.21 51 ⇑P P 07 44 20.0 +0.8
baz=85,SNR=12
Z27A Tatum 85.25 49 ⇓P P 07 44 19.2 -0.1
baz=85
QUIF Quistinic 85.27 336 *e*P **P 07 44 17.9 -1.2**
comp=Z,54nm,0.8s,mb5.0
QUIF Quistinic 85.27 336 *e*P **P 07 44 17.9 -1.2**
comp=Z,27nm,0.8s,mb5.0
QUIF Quistinic 85.27 336 *e*P **P 07 44 17.9 -1.2**
QUIF pmax pmax
comp=Z,27nm,0.8s,mb5.0
126A Clayton Basin, 85.28 50 ⇓P P 07 44 19.1 -0.4
baz=85,SNR=14
OCF Saint Nazaire 85.30 330 *e*P **P 07 44 19.7 +0.4**
OG26 St.-Nazaire-De 85.30 330 *e*P **P 07 44 19.7 +0.4**
VIVF Saint-Julien-l 85.30 330 *e*P **P 07 44 18.2 -1.1**
comp=Z,78nm,0.8s,mb5.2
VIVF *e*pP pP 07 44 57.7 +1.7
VIVF Saint-Julien-l 85.30 330 *e*P **P 07 44 18.2 -1.1**
comp=Z,39nm,0.8s,mb5.2
VIVF *e*pP pP 07 44 57.7 +1.7
VIVF Saint-Julien-l 85.30 330 *e*P **P 07 44 18.2 -1.1**
VIVF *e**PP pP 07 44 57.7 +1.7
VIVF pmax pmax
comp=Z,39nm,0.8s,mb5.2
324A Moseley Ranch, 85.31 52 P **P 07 44 19.4 -0.2**
baz=85,SNR=14
GDL2 Guadalupe Moun 85.41 50 *e*P **P 07 44 19.9 -0.2**
MFF Saint Martin d 85.49 334 *e*P **P 07 44 19.4 -0.8**
comp=Z,105nm,0.9s,mb5.3
MFF Saint Martin d 85.49 334 *e*P **P 07 44 19.4 -0.8**
comp=Z,52nm,0.9s,mb5.3
MFF Saint Martin d 85.49 334 *e*P **P 07 44 19.4 -0.8**
MFF pmax pmax
comp=Z,52nm,0.9s,mb5.3
LBL Lubilhac 85.51 331 *e*P **P 07 44 21.7 +1.4**
LBL Lubilhac 85.51 331 *e*P **P 07 44 21.7 +1.4**
PGF Pioggiola 85.53 326 *e*P **P 07 44 18.7 -1.8**
comp=Z,20nm,0.8s,mb4.6
PGF Pioggiola 85.53 326 *e*P **P 07 44 18.7 -1.8**
comp=Z,10nm,0.8s,mb4.6
PGF Pioggiola 85.53 326 *e*P **P 07 44 18.7 -1.8**
PGF pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
FRNF Fournols 85.62 332 *e*P **P 07 44 21.7 +0.8**
127A Arkansas Junct 85.64 49 ⇑P P 07 44 20.9 -0.3
baz=85,SNR=10
FRF La Foret Royal 85.64 328 *e*P **P 07 44 19.0 -2.0**
comp=Z,17nm,0.6s,mb4.7
FRF La Foret Royal 85.64 328 *e*P **P 07 44 19.0 -2.0**
comp=Z,8.4nm,0.6s,mb4.7
FRF La Foret Royal 85.64 328 *e*P **P 07 44 19.0 -2.0**
FRF pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
325A Bean Ranch, Si 85.66 51 ⇑P P 07 44 21.5 +0.1
baz=85,SNR=22
226A Malaga, Loving 85.66 50 ⇑P P 07 44 21.2 -0.1
baz=85,SNR=23
SMRF Simiane la Rot 85.71 329 *e*P **P 07 44 20.3 -1.1**
comp=Z,18nm,0.8s,mb4.5
SMRF Simiane la Rot 85.71 329 *e*P **P 07 44 20.3 -1.1**
comp=Z,18nm,0.8s,mb4.9
LMR La Mourre 85.89 328 *e*P **P 07 44 20.5 -1.8**
comp=Z,44nm,0.9s,mb4.9
LMR La Mourre 85.89 328 *e*P **P 07 44 20.5 -1.8**
comp=Z,22nm,0.9s,mb4.9
LMR La Mourre 85.89 328 *e*P **P 07 44 20.5 -1.8**
LMR pmax pmax
comp=Z,22nm,0.9s,mb4.9
RJF Les Rejaudoux 86.06 332 *e*P **P 07 44 22.2 -0.9**
comp=Z,58nm,0.8s,mb5.1
RJF *e*pP pP 07 45 01.7 +1.9
RJF *e*MLR MLR
comp=Z,369nm,21.0s
RJF Les Rejaudoux 86.06 332 *e*P **P 07 44 22.2 -0.9**
comp=Z,29nm,0.8s,mb5.1
RJF *e*pP pP 07 45 01.7 +1.9
RJF LR LR
comp=Z,370nm,21.0s
RJF Les Rejaudoux 86.06 332 *e*P **P 07 44 22.2 -0.9**
RJF *e**PP pP 07 45 01.7 +1.9
RJF pmax pmax
comp=Z,29nm,0.8s,mb5.1
RJF MLR MLR
comp=Z,370nm,21.0s
425A Indio Mountain 86.08 52 ⇑P P 07 44 23.3 -0.1
baz=86,SNR=23
227A Bennet, Jal 86.16 50 ⇓P P 07 44 23.8 0.0
baz=86,SNR=11

URZ Urewera 86.18 152 P P 07 44 22.9 -0.6
comp=Z,15nm,0.7s,mb4.8,baz=290,slow=2.9,SNR=12
CAF Calviac 86.19 332 *e*P P 07 44 23.3 -0.4
comp=Z,105nm,0.8s,mb5.3
CAF *e*pP pP 07 45 02.8 +2.3
CAF Calviac 86.19 332 *e*P P 07 44 23.3 -0.4
comp=Z,52nm,0.8s,mb5.3
CAF *e*pP pP 07 45 02.8 +2.3
CAF Calviac 86.19 332 *e*P P 07 44 23.3 -0.4
CAF *e**PP pP 07 45 02.8 +2.3
CAF pmax pmax
comp=Z,53nm,0.8s,mb5.3
LASF Ste Croix 86.27 330 *e*P P 07 44 23.3 -0.8
comp=Z,35nm,1.0s,mb4.7
326A Caldwell Ranch 86.28 51 ⇑P P 07 44 24.8 +0.3
baz=86,SNR=25
WMOK Wichita Mounta 86.62 45 *e*P P 07 44 25.2 -0.8
comp=Z,27nm,0.8s,mb5.1
WMOK Wichita Mounta 86.62 45 *e*P P 07 44 25.2 -0.8
WMOK pmax pmax
comp=Z,27nm,0.8s,mb5.1
HDIL Hopedale 86.63 36 *e*P P 07 44 25.1 -0.9
comp=Z,71nm,0.8s,mb5.5
LFF La Frestale 86.64 333 *e*P P 07 44 25.4 -0.5
comp=Z,99nm,0.8s,mb5.4
LFF *e*pP pP 07 45 04.9 +2.2
LFF La Frestale 86.64 333 *e*P P 07 44 25.4 -0.5
comp=Z,49nm,0.8s,mb5.4
LFF *e*pP pP 07 45 04.9 +2.2
LFF La Frestale 86.64 333 *e*P P 07 44 25.4 -0.5
LFF *e**PP pP 07 45 04.9 +2.2
LFF pmax pmax
comp=Z,49nm,0.8s,mb5.4
426A McDonald Obser 86.72 51 ⇓P P 07 44 26.1 -0.5
baz=86,SNR=20
328A Wristen Ranch, 86.91 50 ⇑P P 07 44 27.8 +0.4
baz=87,SNR=24
427A Hayter Ranch, 86.95 51 ⇑P P 07 44 27.8 +0.1
baz=87,SNR=20
526A Mary Lane Ranc 87.13 52 ⇓P P 07 44 28.8 +0.2
baz=87,SNR=26
PPT Papeete 87.29 116 *e*S S 07 54 56.9 -0.3
comp=Z,570nm,31.0s
PPT *e*LQ 08 07 44.9
comp=Z,2μm,36.2s
PPT *e*LR LR 08 12 18.3
comp=Z,666nm,22.2s,baz=307
PPT Papeete 87.29 116 LR LR 08 17 14.4
comp=Z,398nm,20.4s,baz=311,slow=31
527A Woodward Ranch 87.35 51 ⇑P P 07 44 29.7 +0.1
baz=87,SNR=17
428A Kincaid Ranch, 87.46 50 ⇑P P 07 44 30.3 +0.1
baz=87,SNR=57
626A Big Bend Ranch 87.48 52 ⇓P P 07 44 30.2 0.0
baz=87,SNR=20
MTLF Montolieu 87.51 331 *e*P P 07 44 29.4 -0.7
comp=Z,13nm,0.8s,mb4.5
MTLF Montolieu 87.51 331 *e*P P 07 44 29.4 -0.7
comp=Z,6.6nm,0.8s,mb4.5
MTLF Montolieu 87.51 331 *e*P P 07 44 29.4 -0.7
MTLF pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
SLM Saint Louis 87.77 37 *e*P P 07 44 30.7 -0.8
SLM Saint Louis 87.77 37 *e*P P 07 44 30.7 -0.8
528A Cox Ranch, San 87.82 51 ⇑P P 07 44 31.8 0.0
baz=88,SNR=28
TXAR Lajitas Array 87.91 52 P P 07 44 31.7 -0.6
comp=Z,13nm,0.6s,mb4.9,baz=285,slow=3.1,SNR=60
TXAR PKKPbc PKKPbc 08 02 17.2 +1.5
comp=Z,0.6nm,0.6s,baz=157,slow=5.5,SNR=9.4
TXAR Lajitas Array 87.91 52 P P 07 44 31.7 -0.6
TXAR pmax pmax
comp=Z,13nm,0.6s
TAOE Nuku Hiva Isla 87.95 104 *e*LR LR 08 12 51.4
comp=Z,470nm,22.2s
627A Terlingua Ranc 87.99 52 P P 07 44 32.0 -0.7
baz=88,SNR=18
ATD Arta Tunnel 88.08 284 P P 07 44 33.6 +0.4
comp=Z,10nm,0.7s,mb4.8,baz=273,slow=23,SNR=7.9
ATD LR LR 08 24 13.0
comp=Z,271nm,21.6s,baz=215,slow=36
MSNY Massena 88.20 24 *e*P P 07 44 32.6 -0.7
comp=Z,211nm,0.7s,mb6.1
FVM French Village 88.22 38 *e*P P 07 44 32.7 -0.9
comp=Z,44nm,0.8s,mb5.3
FVM French Village 88.22 38 *e*P P 07 44 32.7 -0.9
FVM pmax pmax
comp=Z,44nm,0.8s,mb5.3
MLS Moulis 88.25 331 *e*P P 07 44 34.1 +0.5
628A Black Gap, Mar 88.26 51 ⇓P P 07 44 33.3 -0.7
baz=88,SNR=6.8
EPF Esparros 88.45 332 *e*P P 07 44 33.2 -1.4
comp=Z,12nm,0.8s,mb4.5
EPF Esparros 88.45 332 *e*P P 07 44 33.2 -1.4
comp=Z,5.8nm,0.8s,mb4.5
EPF Esparros 88.45 332 *e*P P 07 44 33.2 -1.4
EPF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
PQI Presque Isle 88.56 19 *e*P P 07 44 34.0 -1.0
comp=Z,56nm,0.8s,mb5.5
LONY Lake Ozonia 88.63 24 *e*P P 07 44 35.4 0.0
comp=Z,6.8nm,0.7s,mb4.7
OLIL Olney 88.65 36 *e*P P 07 44 35.2 -0.4
FRNY Flat Rock 88.73 23 *e*P P 07 44 35.4 -0.5
ETSF Etsaut 88.89 332 *e*P P 07 44 36.8 +0.2
comp=Z,39nm,0.7s,mb5.2
ETSF Etsaut 88.89 332 *e*P P 07 44 36.8 +0.2
comp=Z,20nm,0.7s,mb5.2
ETSF Etsaut 88.89 332 *e*P P 07 44 36.8 +0.2
ETSF pmax pmax
comp=Z,20nm,0.7s,mb5.2
SJPF Ste Jean 88.92 333 *e*P P 07 44 36.4 -0.4
comp=Z,18nm,0.8s,mb4.8
SJPF Ste Jean 88.92 333 *e*P P 07 44 36.4 -0.4
comp=Z,8.8nm,0.8s,mb4.7
SJPF Ste Jean 88.92 333 *e*P P 07 44 36.4 -0.4
SJPF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BLO Bloomington 88.97 35 *e*P P 07 44 36.0 -1.1
BLO Bloomington 88.97 35 *e*P P 07 44 36.0 -1.1
SIUC Southern Illin 88.99 37 *e*P P 07 44 36.8 -0.4
ERPA Erie 89.03 29 *e*P P 07 44 36.6 -0.7
comp=Z,83nm,0.8s,mb5.7
JCT Junction City 89.29 49 P P 07 44 38.2 -0.6
baz=89,SNR=17
JCT Junction City 89.29 49 *e*P P 07 44 37.8 -1.0
comp=Z,46nm,0.8s,mb5.5
JCT Junction City 89.29 49 *e*P P 07 44 37.8 -1.0
JCT pmax pmax
comp=Z,46nm,0.8s,mb5.5
NCB Newcomb 89.32 24 *e*P P 07 44 38.0 -0.7
ALLY Alegheny Colle 89.39 29 *e*P P 07 44 38.9 -0.1
comp=Z,232nm,0.9s,mb6.1
MIAR Mount Ida 89.46 42 *e*P P 07 44 39.1 -0.4
MIAR Mount Ida 89.46 42 *e*P P 07 44 39.1 -0.4
ACSO Alum Creek Sta 89.53 32 *e*P P 07 44 39.3 -0.4
PKME Peaks-Kenny Pk 89.55 21 *e*P P 07 44 40.2 +0.5
comp=Z,24nm,0.7s,mb5.2
MDV Middlebury 89.61 24 *e*P P 07 44 38.8 -1.2
LBNH Lisbon 89.76 23 *e*P P 07 44 41.1 +0.4
comp=Z,17nm,0.8s,mb5.0
LBNH Lisbon 89.76 23 *e*P P 07 44 41.1 +0.4
LBNH pmax pmax
comp=Z,17nm,0.8s,mb5.0
WCI Wyandotte Cave 89.86 35 *e*P P 07 44 40.5 -0.7
comp=Z,49nm,0.6s,mb5.6
WCI Wyandotte Cave 89.86 35 *e*P P 07 44 40.6 -0.7
WCI pmax pmax
comp=Z,49nm,0.6s,mb5.6
UALR University of 89.89 41 *e*P P 07 44 41.6 +0.2
ACCN Adirondack Com 90.03 24 *e*P P 07 44 42.0 +0.1
HBAR Harrisburg 90.08 39 *e*P P 07 44 42.2 -0.2
WVL Waterville 90.10 21 *e*P P 07 44 41.2 -1.1
comp=Z,21nm,0.7s,mb5.2
HNH Hanover 90.15 23 *e*P P 07 44 42.1 -0.4
comp=Z,21nm,0.8s,mb5.1
BINY Binghamton 90.35 26 *e*P P 07 44 42.4 -1.1
comp=Z,37nm,0.7s,mb5.4
FFD Franklin Falls 90.55 23 *e*P P 07 44 44.9 +0.6
comp=Z,37nm,0.6s,mb5.6
WVT Waverly 90.92 37 *e*P P 07 44 45.6 -0.7
comp=Z,16nm,0.9s,mb5.0
WVT Waverly 90.92 37 *e*P P 07 44 45.6 -0.7
WVT pmax pmax
comp=Z,16nm,0.9s,mb5.0
KEST Kesra 91.00 322 P P 07 44 45.1 -1.5
comp=Z,2.9nm,0.7s,mb4.4,baz=239,slow=2.1,SNR=10
KEST Kesra 91.00 322 *e*P P 07 44 44.7 -1.9
SSPA Standing Stone 91.09 28 *e*P P 07 44 46.4 -0.5
comp=Z,48nm,0.9s,mb5.5
NATX Nacogdoches 91.10 44 *e*P P 07 44 49.5 +2.3
comp=Z,18nm,0.6s,mb5.3
MCWV Mont Chateau 91.23 30 *e*P P 07 44 48.2 +0.6
comp=Z,37nm,1.0s,mb5.4
TBI Tubuai 91.44 120 *e*S S 07 55 36.0 +0.4
comp=Z,362nm,32.2s
TBI *e*LQ 08 09 41.4
comp=Z,537nm,35.0s
TBI *e*LR LR 08 13 33.7
comp=Z,345nm,39.2s,baz=311
OXF Oxford 91.52 39 *e*P P 07 44 48.1 -0.9
comp=Z,40nm,0.8s,mb5.5
OXF Oxford 91.52 39 *e*P P 07 44 48.1 -0.9
OXF pmax pmax
comp=Z,40nm,0.8s,mb5.5
WES Weston 91.64 23 *e*P P 07 44 49.1 -0.3
comp=Z,41nm,0.8s,mb5.5
WES Weston 91.64 23 *e*P P 07 44 49.1 -0.4
WES pmax pmax
comp=Z,41nm,0.8s,mb5.5
PBRG Braganca 91.88 336 *e*P P 07 44 50.1 -0.5
comp=Z,18nm,0.9s,mb5.1
PAL Palisades 92.10 25 *e*P P 07 44 50.4 -1.2
comp=Z,21nm,0.8s,mb5.2
PAL Palisades 92.10 25 *e*P P 07 44 50.4 -1.2
PAL pmax pmax
comp=Z,21nm,0.8s,mb5.2
SWET Sewanee 92.53 36 *e*P P 07 44 52.6 -1.1
MVO Moncorvo 92.55 336 *e*P P 07 44 54.0 +0.3
comp=Z,32nm,1.0s,mb5.4
PVRL Vila Real 92.66 337 *e*P P 07 44 55.2 +1.0
VBMS Vicksburg 92.85 41 *e*P P 07 44 56.1 +0.9
comp=Z,26nm,0.7s,mb5.5
ESDC Sonseca Array 92.92 333 P P 07 44 54.5 -0.9
comp=Z,8.4nm,0.7s,mb5.0,baz=18,slow=3.5,SNR=24
ESDC LR LR 08 32 05.1
comp=Z,224nm,18.4s,baz=350,slow=39
ESDC Sonseca Array 92.92 333 P P 07 44 54.5 -0.9
ESDC LR LR 08 32 05.1
CPCT Cooper Cave 92.96 35 *e*P P 07 44 55.2 -0.5
ELN Prospectdale 93.00 32 *e*P P 07 44 54.6 -1.2
TKL Tuckaleechee C 93.10 35 *e*P P 07 44 56.0 -0.3
TKL Tuckaleechee C 93.10 35 *e*P P 07 44 56.0 -0.3
BLA Blacksburg 93.14 32 *e*P P 07 44 56.2 -0.3
comp=Z,23nm,0.8s,mb5.3
BLA Blacksburg 93.14 32 *e*P P 07 44 56.2 -0.3
BLA pmax pmax
comp=Z,23nm,0.8s,mb5.4
PVIS Viseu 93.23 336 *e*P P 07 44 58.4 +1.6
MTE Manteigas 93.41 336 *e*P P 07 44 58.1 +0.4
comp=Z,16nm,1.2s,mb5.0
MTE A 07 45 12.1
comp=Z,25nm,1.8s
CBN Corbin 93.43 29 *e*P P 07 44 57.1 -0.7
comp=Z,23nm,0.6s,mb5.5
LRAL Lakeview Retre 93.87 38 *e*P P 07 44 58.7 -1.2
comp=Z,9.8nm,0.8s,mb5.0
PMRV Marv??o 94.25 336 *e*P P 07 45 02.0 +0.5
comp=Z,17nm,1.3s,mb5.0
GOGA Godfrey 95.15 36 *e*P P 07 45 05.0 -0.8
comp=Z,11nm,0.8s,mb5.1
GOGA Godfrey 95.15 36 *e*P P 07 45 05.0 -0.7
GOGA pmax pmax
comp=Z,11nm,0.8s,mb5.1
PBAR Barrancos 95.29 335 *e*P P 07 45 05.4 -0.9
comp=Z,19nm,1.9s,mb5.0
PBEJ Beja 95.69 335 *e*P P 07 45 09.3 +1.2
comp=Z,21nm,2.1s,mb5.1
MDT Midelt 99.31 331 P Pdif 07 45 23.3 -1.2
comp=Z,2.0nm,0.7s,baz=2.3,slow=3.5,SNR=4.5
MDT PKiKP PKiKP 07 49 54.8 +1.3
comp=Z,2.5nm,0.9s,baz=332,slow=4.2,SNR=3.8
KMBO Kilima Mbogo 100.64 278 P Pdif 07 45 30.6 +0.3
comp=Z,1.9nm,0.7s,baz=180,slow=24,SNR=5.7
KMBO Kilima Mbogo 100.64 278 P Pdif 07 45 30.6 +0.2
KMBO pmax pmax
comp=Z,2.0nm,0.7s
RKT Rikitea 101.09 111 *e*Sdif Sdif 07 56 53.7 -4.8
comp=Z,413nm,35.5s
RKT *e*LR LR 08 18 53.4
comp=Z,514nm,27.5s
TORD Torodi Ar. Bea 113.61 316 PKiKP PKiKP 07 50 18.1 -2.3
comp=Z,25nm,1.1s,baz=14,slow=2.1,SNR=4.5
TORD PKKPbc PKKPbc 08 01 02.5 0.0
comp=Z,2.1nm,0.7s,baz=215,slow=2.6,SNR=13
MSKU Masuku 117.97 295 PKP PKPdf 07 50 27.6 -1.2
comp=Z,3.8nm,0.3s,baz=172,slow=22,SNR=3.7
SDV Santo Domingo 122.24 37 *e*PKPdf PKPdf 07 50 35.9 -1.1
DBIC Dimbokro 122.47 318 PKP PKPdf 07 50 36.0 -1.5
comp=Z,11nm,0.7s,baz=7.0,slow=2.6,SNR=22
DBIC Dimbokro 122.47 318 PKIKP PKPdf 07 50 36.0 -1.5
DBIC pmax pmax
comp=Z,11nm,0.7s
TIC Toumodi 122.58 318 *e*PKP1 PKPdf 07 50 36.6 -1.1
comp=Z,19nm,0.6s
TIC Toumodi 122.58 318 *e*PKIKP PKPdf 07 50 36.6 -1.1
KIC Kosan Boka 122.68 318 *e*PKP1 PKPdf 07 50 36.6 -1.3
comp=Z,32nm,0.6s
LIC Lamto 122.94 318 *e*PKP1 PKPdf 07 50 37.3 -1.1
comp=Z,36nm,0.7s
LIC Lamto 122.94 318 *e*PKIKP PKPdf 07 50 37.0 -1.4
comp=Z,22nm,0.7s
MAW Mawson 123.28 207 PKP PKPdf 07 50 37.1 -0.2
comp=Z,14nm,0.7s,baz=78,slow=3.3,SNR=27
MAW PKKPbc PKKPbc 08 00 28.4 -0.2
comp=Z,4.4nm,0.6s,baz=243,slow=5.2,SNR=11
MAW Mawson 123.28 207 *e*PKPdf PKPdf 07 50 36.4 -0.8
MAW PKP PKPdf 07 50 37.1 -0.2
MAW PKKPbc PKKPbc 08 00 28.4 -0.2
MAW Mawson 123.28 207 PKIKP PKPdf 07 50 37.1 -0.2
MAW pmax pmax
comp=Z,14nm,0.7s
ROSC El Rosal 123.94 43 PKP PKPdf 07 50 40.3 0.0
comp=Z,3.3nm,0.6s,baz=90,slow=20,SNR=4.9
ROSC PKKPbc PKKPbc 08 00 26.3 +1.2
comp=Z,1.7nm,0.6s,baz=91,slow=17,SNR=4.1
LBTB Lobatse 124.36 266 *e*PKPdf PKPdf 07 50 39.8 -0.9
LBTB Lobatse 124.36 266 *e*PKIKP PKPdf 07 50 39.8 -0.9
BOSA Boshof 126.59 262 PKP PKPdf 07 50 44.6 -0.3
comp=Z,4.5nm,0.8s,baz=67,slow=5.5,SNR=5.6
BOSA Boshof 126.59 262 PKP PKPdf 07 50 44.6 -0.3
BOSA *e*PKPdf PKPdf 07 50 45.3 +0.5
BOSA Boshof 126.59 262 PKIKP PKPdf 07 50 44.6 -0.2
BOSA pmax pmax
comp=Z,5.0nm,0.9s
QSPA South Pole Qui 131.30 180 PKP PKPdf 07 50 52.6 +0.3
comp=Z,7.8nm,0.6s,baz=306,slow=1.4,SNR=28
QSPA PP PP 07 53 11.5 -1.4
comp=Z,2.3nm,0.9s,baz=12,slow=3.1,SNR=9.6
QSPA South Pole Qui 131.30 180 PKP PKPdf 07 50 52.6 +0.3
QSPA PP PP 07 53 11.5 -1.4
SUR Sutherland 131.80 260 PKP PKPdf 07 50 55.9 +1.3
comp=Z,6.8nm,0.9s,baz=148,slow=9.7,SNR=5.7
NNA Nana 136.08 59 *e*PKPdf PKPdf 07 51 03.0 -0.2
NVL N'lazarevskaya 141.16 204 *e*PKIKP PKPdf 07 51 07.6 -3.2
NVL pmax pmax
comp=Z,8.0nm,0.6s
MAIT Maitri 141.19 204 *e*P PKPdf 07 51 03.2 -7.6
RCBR Riachuelo 144.27 354 PKP PKPdf 07 51 15.1 -3.0
comp=Z,30nm,0.9s,baz=348,slow=3.6,SNR=11
LPAZ La Paz 144.78 53 PKP PKPdf 07 51 17.6 -1.2
comp=Z,10nm,0.6s,baz=288,slow=2.6,SNR=56
LPAZ PKKPbc 07 58 57.7
comp=Z,0.9nm,0.9s,baz=27,slow=2.3,SNR=3.6
LPAZ La Paz 144.78 53 PKIKP PKPdf 07 51 17.6 -1.2
LPAZ pmax pmax
comp=Z,10.0nm,0.6s
SNAA Sanae 144.82 199 PKP PKPdf 07 51 15.4 -1.8
comp=Z,26nm,0.6s,baz=177,slow=2.8,SNR=668
SNAA Sanae 144.82 199 PKIKP PKPdf 07 51 15.4 -1.8
SNAA pmax pmax
comp=Z,26nm,0.6s
VNA2 Neumayer--Watz 146.42 198 *e*PKPdf PKPdf 07 51 17.8 -2.2
VNA2 *e* 07 54 43.1
VNA3 Neumayer Olymp 146.72 197 *e*PKPdf PKPdf 07 51 19.0 -1.4
VNA3 *e* 07 52 24.0
VNA3 *e* 07 54 44.1
VNA1 Neumayer--Stat 146.82 198 *e*PKPdf PKPdf 07 51 20.0 -0.6
VNA1 *e* 07 51 23.1
LCO Las Campanas 151.79 74 *e*PKPdf PKPdf 07 51 30.9 +1.0
LCO *e*PKPbc PKPbc 07 51 36.2 -0.2
BDFB Brasilia 153.15 18 PKP PKPdf 07 51 32.5 +0.2
comp=Z,3.4nm,0.7s,baz=169,slow=4.3,SNR=5.5
BDFB PKPbc PKPbc 07 51 39.8 +0.1
comp=Z,14nm,0.7s,baz=231,slow=3.8,SNR=19
BDFB PKPab PKPab 07 51 52.4 +0.6
comp=Z,27nm,0.8s,baz=247,slow=2.8,SNR=13
BDFB Brasilia 153.15 18 PKIKP PKPdf 07 51 32.5 +0.3
BDFB pmax pmax
comp=Z,3.0nm,0.7s
CFAA Coronel Fontan 154.99 76 PKP PKPdf 07 51 34.1 -0.2
comp=Z,0.3nm,0.7s,baz=270,slow=2.0,SNR=2.9
CFAA PKPbc PKPbc 07 51 42.3 -1.0
comp=Z,0.6nm,0.5s,baz=0.2,slow=2.1,SNR=13
CFAA PKPab PKPab 07 51 59.5 +0.1
comp=Z,2.0nm,0.7s,baz=280,slow=3.4,SNR=10
PLCA Paso Flores 156.68 98 PKP PKPdf 07 51 37.5 +1.2
comp=Z,1.3nm,0.7s,baz=230,slow=5.3,SNR=5.6
PLCA PKPab PKPab 07 52 06.5 0.0
comp=Z,17nm,0.8s,baz=279,slow=4.8,SNR=21
PLCA Paso Flores 156.68 98 PKP PKPdf 07 51 37.5 +1.2
PLCA PKPab PKPab 07 52 06.5 0.0
PLCA Paso Flores 156.68 98 PKIKP PKPdf 07 51 37.5 +1.2
PLCA pmax pmax
comp=Z,1.0nm,0.7s
CPUP Villa Florida 158.87 50 PKP PKPdf 07 51 40.6 +1.1
comp=Z,1.6nm,0.7s,baz=143,slow=3.1,SNR=4.4
CPUP PKPab PKPab 07 52 14.8 -1.4
comp=Z,2.6nm,0.5s,baz=291,slow=3.7,SNR=9.6
CPUP Villa Florida 158.87 50 PKP PKPdf 07 51 40.6 +1.1
CPUP PKPab PKPab 07 52 14.8 -1.4
CPUP Villa Florida 158.87 50 PKIKP PKPdf 07 51 40.6 +1.1
CPUP 07 52 14.8
CPUP pmax pmax
comp=Z,2.0nm,0.7s
TRQA Tornquist 162.40 86 *e*PKPab PKPab 07 52 31.4 -0.1

ISCJB ***22*** *07:39:25.8±0.4, 39°.32N±0°.03×74°.41E±0°.05, h10km, mb4.3/17, Error ellipse: s-maj=5.6km s-min=4.3km az=7.0*
IDC ***22*** *07:39:27.0±0.6, 39°.61N×74°.53E, h0km, mb4.4/16, mb1 4.5/19, mb1mx4.3/31, mbtmp4.4/19, ML3.9/3, MS3.5/2, Ms1 3.5/2, ms1mx2.7/33, Error ellipse: s-maj=16.2km s-min=10.8km az=74.0*
BJI ***22*** *07:39:29.9, 39°.74N×74°.39E, h35km, mB4.5/1, mb4.0/2, ML4.2/3, Ms4.3/1, Ms7 4.1/1*
MOS ***22*** *07:39:30.4±1.2, 39°.59N×74°.39E, h33km, mb4.7/12, Error ellipse: s-maj=19.4km s-min=9.3km az=103.3*
NEIC ***22*** *07:39:32.4±0.5, 39°.58N×74°.44E, h35km, mb4.4/1, Error ellipse: s-maj=10.1km s-min=8.3km az=60.0*
NNC ***22*** *07:39:33.1±0.8, 40°.25N×74°.53E, h0km, mb5.0, mpv4.7, Error ellipse: s-maj=7.1km s-min=3.2km az=170.0*
ISC 22 07:39:27.3±0.4**, 39°.34N**±0°.03×**74°.43E**±0°.06**, h10**km**, n73, σ1**s**39**/79**, mb4.3**/17**, 3C-6D, Southern Xinjiang**

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

KSH Kashi 1.21 81 P Pn 07 39 47.9 -2.4
KSH S Sb 07 40 02.3 -3.6
KSH smax
comp=N,5μm,0.9s
KSH smax
comp=E,4μm,0.8s
KZA Kyzart 2.81 13 P Pn 07 40 13.8 +1.5
SNR=53
KZA Kyzart 2.81 13 *e*Pn Pn 07 40 13.1 +0.9
KZA *e*Sn Sn 07 40 47.1 +1.0
AML Almayashu 2.85 349 P Pn 07 40 13.2 +0.4
SNR=348
AML Almayashu 2.85 349 *e*Pn Pn 07 40 13.2 +0.4
AML *e*Sn Sn 07 40 48.9 +1.8
UCH Uchtor 2.89 1 P Pn 07 40 14.2 +0.8
SNR=388
UCH Uchtor 2.89 1 *e*Pn Pn 07 40 14.0 +0.7
UCH *e*Sn Sn 07 40 49.2 +1.1
ULHL Ulahol 3.21 25 P Pn 07 40 17.2 -0.7
SNR=6.6
AAK Ala-Archa 3.29 1 P Pn 07 40 20.1 +1.2
SNR=286
AAK Ala-Archa 3.29 1 Pn Pn 07 40 20.0 +1.1
comp=E,0.8nm,0.3s,baz=168,slow=7.8,SNR=219
AAK Sn Sn 07 40 59.5 +1.4
comp=E,1.6nm,0.3s,baz=90,slow=20,SNR=9.0
AAK Lg 07 41 02.4
comp=E,1.6nm,0.3s,baz=98,slow=15,SNR=8.8
AAK LR LR 07 41 35.9
comp=E,686nm,19.0s,baz=187,slow=43
AAK Ala-Archa 3.29 1 Pn Pn 07 40 20.0 +1.1
AAK Sn Sn 07 40 59.5 +1.4
AAK Lg 07 41 02.4
AAK LR LR 07 41 35.9
AAK Ala-Archa 3.29 1 *e*Pn Pn 07 40 20.0 +1.1
AAK *e*Sn Sn 07 40 56.1 -2.1
AAK Ala-Archa 3.29 1 *de*P Pn 07 40 20.1 +1.2
AAK pmax pmax
comp=Z,240nm,0.8s
AAK Ala-Archa 3.29 1 *de*PN Pn 07 40 20.1 +1.2
AAK pmax pmax
comp=Z,240nm,0.8s
AAK Ala-Archa 3.29 1 P Pn 07 40 19.6 +0.7
comp=Z,3μm,0.8s
AAK Ala-Archa 3.29 1 P Pn 07 40 20.2 +1.3
SNR=122
FRU Bishkek 3.50 2 *e*PN Pn 07 40 21.0 -0.7
FRU *i* S Sn 07 41 03.0 -0.1
FRU pmax pmax
comp=Z,500nm,1.8s
FRU smax
comp=N,1μm,2.0s
CHMS Chumysh 3.67 4 P Pn 07 40 25.1 +1.1
SNR=23
TKM2 Tokmak 2 3.69 13 ⇑Pg Pn 07 40 24.4 0.0
comp=N,197nm,0.6s
TKM2 ⇓Lg 07 41 02.2
comp=N,892nm,0.9s
USP Ospenovka 3.93 1 P Pb 07 40 34.8 -1.9
SNR=6.8
KNDC Almaty 4.32 25 ⇑Pg Pn 07 40 36.7 +3.6
comp=N,472nm,0.7s
KNDC ⇓Lg 07 41 23.6
comp=N,1μm,0.8s
AAA Alma-Ata 4.36 25 *i* PN Pb 07 40 42.1 -2.0
AAA *i* S Sb 07 41 35.5 -1.2
AAA pmax pmax
comp=Z,579nm,0.3s
AAA smax
comp=N,1μm,0.4s
KK31 Karatay Array 4.78 323 ⇓Pn Pn 07 40 40.5 +1.1
comp=N,26nm,0.5s,baz=130,slow=12,SNR=292
KK31 ⇓Sn Sn 07 41 33.5 -1.4
comp=N,44nm,0.5s,baz=208,slow=36,SNR=4.4
KK31 ⇑Lg 07 41 42.8
comp=N,111nm,0.5s,baz=132,slow=28,SNR=3.2
KKAR Karatay Array 4.78 323 *e*Pn Pn 07 40 39.4 -0.1
KKAR Karatay Array 4.78 323 *e*PN Pn 07 40 39.4 0.0
CHCP Chirah Chowk 5.75 190 P Pb 07 41 05.8 -1.8
CEP Cherat 5.87 201 P Pb 07 41 06.4 -3.3
THW Thamme Wali 6.88 199 P Pb 07 41 20.5 -6.5
MKAR Makanchi Array 9.41 35 Lg 07 44 13.4
comp=N,0.9nm,0.3s,baz=223,slow=27,SNR=5.7
MKAR LR LR 07 45 18.5
comp=N,292nm,18.2s,baz=343,slow=38
BVAR Borovoye Array 13.97 350 Lg 07 46 35.8
comp=N,0.2nm,0.3s,baz=164,slow=33,SNR=4.5
AKTK Aktyubinsk 16.04 319 Pn Pn 07 43 11.4 -1.4
AKTO Aktyubinsk 16.04 319 Pn Pn 07 43 11.4 -1.4
comp=N,0.8nm,0.3s,baz=118,slow=14,SNR=3.6
AKTO Aktyubinsk 16.04 319 P Pn 07 43 11.4 -1.4
AKTO pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 16.23 22 Pn Pn 07 43 13.2 -2.1
comp=Z,0.4nm,0.3s,baz=206,slow=12,SNR=4.1
ZALV Zalesovo Beam 16.23 22 P Pn 07 43 13.2 -2.1
GTA Gaotai 19.61 82 *e*P Pn 07 43 58.5 +1.4
GTA pP pP 07 44 03.4 +4.8
GTA pmax pmax
comp=Z,6.0nm,1.2s
ZAK Zakamensk 23.09 52 *e*P P 07 44 40.0 +6.9
SONM Songino Array 24.52 59 P P 07 44 47.9 +1.2
comp=Z,1.3nm,0.7s,mb3.6,baz=261,slow=12,SNR=3.6
SONM Songino Array 24.52 59 P P 07 44 47.9 +1.1
BR131 Keskin Array S 31.27 284 *e*P P 07 45 49.5 +2.3
comp=Z,4.7nm,0.7s,mb4.4
BRTR Keskin Array B 31.27 284 P P 07 45 49.5 +2.2
comp=Z,5.1nm,0.7s,mb4.5,baz=90,slow=7.8,SNR=7.9
BRTR Keskin Array B 31.27 284 P P 07 45 49.5 +2.2

BRTR pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 33.42 305 P P 07 46 05.6 -0.3
comp=Z,1.3nm,0.4s,mb4.3,baz=80,slow=8.1,SNR=3.2
AKASG Malin Array Be 33.42 305 P **P 07 46 05.6 -0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 36.75 323 P P 07 46 34.1 -0.4
comp=Z,5.8nm,0.5s,mb4.6,baz=112,slow=9.6,SNR=6.3
FINES FINESS Array B 36.75 323 P **P 07 46 34.1 -0.4**
FINES pmax pmax
comp=Z,6.0nm,0.5s
ARCES ARCESS Array B 39.63 335 P P 07 46 58.0 -0.7
comp=Z,4.1nm,0.6s,mb4.4,baz=98,slow=7.3,SNR=11
ARCES ARCESS Array B 39.63 335 P **P 07 46 58.0 -0.7**
ARCES pmax pmax
comp=Z,4.0nm,0.6s
PSI Prapat 42.65 142 P P 07 47 28.9 +4.8
comp=Z,1.3nm,0.3s,mb4.2,baz=59,slow=12,SNR=4.1
PSI Prapat 42.65 142 P **P 07 47 29.0 +4.9**
PSI pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
GERES GERESS Array B 43.58 303 P P 07 47 33.0 +1.7
comp=Z,3.2nm,0.5s,mb4.3,baz=65,slow=8.4,SNR=12
GERES GERESS Array B 43.58 303 P **P 07 47 33.0 +1.7**
GERES pmax pmax
comp=Z,3.0nm,0.5s
NB2 NORSAR Subarra 43.81 321 P P 07 47 32.4 -0.6
comp=Z,7.1nm,0.7s,mb4.5,baz=90,slow=8.6
NOA NORSAR Array B 43.81 321 P P 07 47 32.8 -0.3
comp=Z,5.6nm,0.6s,mb4.5,baz=91,slow=8.0,SNR=18
NOA NORSAR Array B 43.81 321 P **P 07 47 32.8 -0.2**
NOA pmax pmax
comp=Z,6.0nm,0.6s
ESDC Sonseca Array 58.54 298 P P 07 49 24.6 +0.6
comp=Z,1.5nm,0.4s,mb4.3,baz=54,slow=7.2,SNR=7.7
TORD Torodi Ar. Bea 68.48 270 P P 07 50 31.1 +1.2
comp=Z,5.0nm,0.6s,mb4.8,baz=52,slow=5.6,SNR=7.2
INK Inuvik 70.65 11 P P 07 50 41.4 -1.2
comp=Z,2.5nm,0.6s,mb4.3,baz=53,slow=3.9,SNR=4.3
INK Inuvik 70.65 11 P **P 07 50 41.4 -1.1**
INK pmax pmax
comp=Z,3.0nm,0.6s
ILAR Eielson Array 71.29 17 P P 07 50 44.9 -1.6
comp=Z,0.8nm,0.7s,mb3.8,baz=329,slow=5.1,SNR=8.9
ILAR Eielson Array 71.29 17 P **P 07 50 44.9 -1.6**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
FITZ Fitzroy Crossi 74.50 130 P P 07 51 07.9 +1.8
comp=Z,2.9nm,0.9s,mb4.2,baz=114,slow=2.2,SNR=3.5
KDAK Kodiak Island 75.53 24 P P 07 51 09.8 -1.8
comp=Z,3.6nm,0.6s,mb4.5,baz=11,slow=5.2,SNR=3.5
KDAK Kodiak Island 75.53 24 P **P 07 51 09.8 -1.8**
KDAK Kodiak Island 75.53 24 P **P 07 51 09.8 -1.8**
KDAK pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
YKA Yellowknife Ar 78.26 4 P P 07 51 25.9 -1.0
comp=Z,1.2nm,0.3s,mb4.2,baz=347,slow=5.8,SNR=28
YKA Yellowknife Ar 78.26 4 P **P 07 51 25.9 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.4s
WRA Warramunga Arr 81.27 125 P P 07 51 46.5 +2.7
comp=Z,4.3nm,0.6s,mb4.5,baz=321,slow=4.4,SNR=51
WRA Warramunga Arr 81.27 125 P **P 07 51 46.5 +2.7**
WRA pmax pmax
comp=Z,4.0nm,0.6s
ASAR Alice Springs 83.73 127 P P 07 51 58.7 +2.2
comp=Z,2.7nm,0.6s,mb4.5,baz=318,slow=5.0,SNR=29
ASAR Alice Springs 83.73 127 P **P 07 51 58.7 +2.2**
ASAR pmax pmax
comp=Z,3.0nm,0.6s
CFAA Coronel Fontan 148.80 273 PKPbc PKPbc 07 59 16.4 +1.4
comp=Z,0.2nm,0.8s,baz=101,slow=5.2,SNR=4.0
CFAA Coronel Fontan 148.80 273 PKPbc PKPbc 07 59 16.4 +1.4

IDC 22 07:47:34.7±15.0, 0°26S×124°71E, h266km±63km, mb3.5/3, mb1 3.5/4, mb1mx3.1/20, mbtmp3.3/4, Error ellipse: s-maj=172.2km s-min=89.7km az=153.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**17.75**	**177**	P	P	07 51 22.6	-1.1
	0.2nm,0.3s,baz=16,slow=11,SNR=5.9						
WRA	**Warramunga Arr**	**21.71**	**155**	P	P	07 52 04.3	-0.5
	2.5nm,0.4s,baz=338,slow=9.4,SNR=45						
ASAR	**Alice Springs**	**24.92**	**160**	P	P	07 52 34.0	+0.1
	1.3nm,0.4s,baz=339,slow=8.5,SNR=20						
ASAR				ScP	ScP	07 59 14.8	-0.8
	0.4nm,0.5s,baz=351,slow=1.9,SNR=7.6						
STKA	**Stephens Creek**	**35.27**	**155**	P	P	07 54 06.3	+1.7
	1.2nm,0.5s,baz=320,slow=10,SNR=4.2						

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*BJI **22** 08:17:15.8, 6°50S×151°82E, h35km, mB5.2/33, mb5.0/44, Ms5.0/30, Ms7 4.6/31*
*IDC **22** 08:17:17.5±0.5, 6°02S×150°99E, h0km, mb4.8/18, mb1 5.0/20, mb1mx5.0/21, mbtmp4.8/20, ML4.4/2, MS4.2/17, Ms1 4.2/17, ms1mx4.2/24, Error ellipse: s-maj=18.9km s-min=10.1km az=120.0*
*ISCJB **22** 08:17:17.0±1.3, 6°00S±0°04×151°02E±0°04, h3km±8km, mb5.1/108, MS4.4/26, Error ellipse: s-maj=7.4km s-min=4.9km az=44.8*
*MOS **22** 08:17:22.9±1.2, 5°87S×150°77E, h33km, mb5.2/23, Error ellipse: s-maj=11.7km s-min=7.4km az=84.9*
*NEIC **22** 08:17:22.8±1.7, 5°99S×150°96E, h30km±12km, mb5.1/66, Error ellipse: s-maj=5.8km s-min=5.2km az=134.0*
*DJA **22** 08:17:24, 6°30S×151°35E, h63km, mb5.6/14*
*GCMT **22** 08:17:24.3±0.3, 6°33S×151°16E, h20km±1km, MW5.0, Moment Tensor Solution. s26,c30; s75,c109; Moment tensor: Scale 10^{16}Nm; M_{rr}1.77±.22; $M_{\theta\theta}$2.85±.14; $M_{\phi\phi}$-4.62±.17; $M_{r\theta}$1.32±.31; $M_{\theta\phi}$1.42±.13; $M_{\phi r}$0.25±.26; Best double couple: $M_0$4.40000×10^{16} NP1:ϕ_s129.00000°, δ68.00000°, λ24.00000°. NP2:ϕ_s30.00000°, δ68.00000°, λ156.00000°. Principal axes: T 3.9400, Plg32.0000°, Azm350.0000°; N 0.9400, Plg58.0000°, Azm170.0000°; P -4.8800, Plg0.0000°, Azm80.0000°; Data Used: IU II IC G CN.*
ISC 22 08:17:23.9±0.9, 6°09S±0°04×151°04E±0°04, h41km±8km, h36km±1.3km; pP-P, n376, σ19 12/221, mb5.1/108, MS4.4/26, 11C-7D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.06**	**229**	*e*Pn	**Pn**	08 18 37.7	+0.4
PMG				*e*Sn	**Sn**	08 19 37.4	+2.8
PMG	**Port Moresby**	**5.06**	**229**	*de*P	**Pn**	08 18 37.7	+0.3
PMG				pmax	pmax		
	comp=Z,523nm,0.6s						
PMG	**Port Moresby**	**5.06**	**229**	P	**Pn**	08 18 38.0	+0.6
HNR	**Honiara**	**9.43**	**111**	Pn	**Pn**	08 19 35.7	-1.5
	comp=Z,24nm,0.3s,baz=153,slow=3.3,SNR=5.5						
HNR				LR	LR	08 22 26.3	
	comp=Z,923nm,19.4s,baz=102,slow=32						
HNR	**Honiara**	**9.43**	**111**	*e*Pn	**Pn**	08 19 37.4	+0.1
HNR	**Honiara**	**9.43**	**111**	*e*P	**Pn**	08 19 37.4	+0.1
COEN	**Coen**	**11.00**	**224**	*e*Pn	**Pn**	08 19 58.3	-0.5
COEN	**Coen**	**11.00**	**224**	P	**Pn**	08 19 59.0	+0.2
	comp=Z,147nm,1.3s						
CTA	**Charters Tower**	**14.67**	**198**	Pn	**Pn**	08 20 49.0	+0.2
	comp=Z,0.3nm,0.3s,baz=14,slow=15,SNR=3.9						
CTA				LR	LR	08 26 00.4	
	comp=Z,1μm,19.4s,baz=19,slow=36						
CTA	**Charters Tower**	**14.67**	**198**	P	**Pn**	08 20 49.0	+0.2
CTAO	**Charters Tower**	**14.67**	**198**	*e*Pn	**Pn**	08 20 49.7	+0.9
CTAO	**Charters Tower**	**14.67**	**198**	*e*P	**Pn**	08 20 49.7	+0.9
CTAO	**Charters Tower**	**14.67**	**198**	P	**Pn**	08 20 50.8	+2.0
TLE	**Tual**	**18.21**	**270**	P	sP	08 22 00.4	+11
EIDS	**Eidsvold**	**19.17**	**180**	*e*P	**Pn**	08 21 45.0	-0.2
	comp=Z,43nm,1.0s						
KAKA	**Kakadu**	**19.48**	**249**	*e*P	**Pn**	08 21 47.4	-1.7
	comp=Z,130nm,0.6s						
KAKA	**Kakadu**	**19.48**	**249**	*e*P	**Pn**	08 21 47.8	-1.3
	comp=Z,313nm,0.6s						
KAKA				*e*S	**S**	08 25 24.4	-1.4
KAKA	**Kakadu**	**19.48**	**249**	P	**Pn**	08 21 48.0	-1.1
GUMO	**Guam**	**20.49**	**343**	P	**P**	08 21 60.0	+1.5
	comp=Z,203nm,0.9s,baz=174,slow=6.3,SNR=6.8						
GUMO				LR	LR	08 28 21.2	
	comp=Z,751nm,18.3s,MS4.1,baz=178,slow=32						
GUMO	**Guam**	**20.49**	**343**	*e*P	**P**	08 21 59.9	+1.4
	comp=Z,885nm,1.4s						
GUMO	**Guam**	**20.49**	**343**	*e*P	**P**	08 21 59.9	+1.4
GUMO				pmax	pmax		
	comp=Z,885nm,1.4s						
GUMO	**Guam**	**20.49**	**343**	P	**P**	08 22 00.5	+2.0
	comp=Z,503nm,1.3s						
WB2	**Warramunga Arr**	**21.27**	**228**	*e*P	**P**	08 22 06.6	-0.3
WRA	**Warramunga Arr**	**21.28**	**228**	P	**P**	08 22 06.0	-1.1
	comp=Z,113nm,1.0s,mb5.2,baz=54,slow=11,SNR=332						
WRA				S	**S**	08 26 02.2	+0.8
	comp=Z,16nm,1.1s,baz=54,slow=19,SNR=7.0						
WRA				ScP	ScP	08 29 47.1	+2.4
	comp=Z,3.8nm,0.8s,baz=54,slow=2.8,SNR=7.6						
WRA				LR	LR	08 31 14.7	
	comp=Z,939nm,18.3s,MS4.2,baz=45,slow=39						
WRA	**Warramunga Arr**	**21.28**	**228**	P	**P**	08 22 06.0	-1.1
WRA				S	**S**	08 26 02.2	+0.8
WRA				ScP	ScP	08 29 47.1	+2.4
WRA				LR	LR	08 31 14.7	
WRA	**Warramunga Arr**	**21.28**	**228**	P	**P**	08 22 06.0	-1.1
WRA				S	**S**	08 26 02.2	+0.8
	comp=Z,938nm,19.0s,MS4.4,baz=15,slow=37						
STKA	**Stephens Creek**	**27.13**	**198**	*e*P	**P**	08 23 01.8	-1.4
	comp=Z,57nm,1.0s,mb5.0						
STKA	**Stephens Creek**	**27.13**	**198**	*e*P	**P**	08 23 04.0	+0.8
	comp=Z,16nm,1.0s,mb4.5						
FITZ	**Fitzroy Crossi**	**27.51**	**242**	P	**P**	08 23 06.7	-0.1
	comp=Z,19nm,0.5s,mb5.0,baz=72,slow=6.9,SNR=61						
FITZ				LR	LR	08 35 09.0	
	comp=Z,438nm,20.6s,MS4.0,baz=65,slow=39						
FITZ	**Fitzroy Crossi**	**27.51**	**242**	*e*P	**P**	08 23 06.4	-0.4
	comp=Z,91nm,0.9s,mb5.4						
FITZ	**Fitzroy Crossi**	**27.51**	**242**	P	**P**	08 23 06.7	-0.1
	comp=Z,136nm,1.1s,mb5.5						
MMRI	**Maumere**	**28.67**	**263**	P	pP	08 23 27.3	-1.2
BKSI	**Bulukumba**	**30.77**	**270**	P	pP	08 23 47.8	+0.7
KAPI	**Kappang**	**31.16**	**270**	*e*P	**P**	08 23 39.1	-0.1
	comp=Z,38nm,1.1s,mb5.1						
FORT	**Forrest**	**32.69**	**218**	*e*P	**P**	08 23 51.7	-0.8
	comp=Z,55nm,0.9s,mb5.5						
FORT	**Forrest**	**32.69**	**218**	*e*P	**P**	08 23 52.3	-0.2
	comp=Z,66nm,0.9s,mb5.6						
FORT				*e*	pP	08 24 04.7	+0.9
MBWA	**Marble Bar**	**33.81**	**241**	*e*P	**P**	08 24 02.8	+0.4
	comp=Z,14nm,0.7s,mb5.0						
KHKI	**Kahang-Kahang**	**35.22**	**264**	P	**P**	08 24 14.8	+0.2
	comp=Z,99nm,1.0s,mb5.7						
OUZ	**Omahuta**	**35.66**	**147**	*e*P	**P**	08 24 21.4	+3.2
	comp=Z,33nm,1.1s,mb5.2						
OUZ				*e*pP	pP	08 24 31.2	+1.6
JAGI	**Jajag, Banyuwa**	**36.66**	**264**	P	**P**	08 24 28.2	+1.2
	comp=Z,134nm,1.0s,mb5.7						
PWJI	**Pagerwojo**	**38.98**	**265**	P	**P**	08 24 46.9	+0.3
	comp=Z,103nm,0.8s,mb5.6						
SJI	**Sawahan**	**39.01**	**265**	P	**P**	08 24 48.4	+1.5
	comp=Z,66nm,1.2s,mb5.2						
JOW	**Kunigami**	**39.47**	**327**	*e*P	**P**	08 24 51.5	+1.0
	comp=Z,25nm,1.0s,mb4.9						
PCJI	**Pacitan**	**39.60**	**265**	P	**P**	08 24 56.3	+4.5
KLBR	**Kellerberrin**	**40.15**	**227**	*e*P	**P**	08 24 54.0	-2.1
	comp=Z,37nm,1.0s,mb5.1						
BJII	**Banjamegara**	**41.06**	**266**	P	**P**	08 25 08.0	+4.1
NACB	**Ninganchiao**	**41.58**	**317**	*e*P	**P**	08 25 08.5	+0.5
	comp=Z,110nm,1.2s,mb5.4						
YHNB	**Yeheng**	**42.06**	**318**	*e*P	**P**	08 25 12.8	+0.9
	comp=Z,86nm,0.9s,mb5.4						
CISI	**Cisompet, Garu**	**42.93**	**265**	P	**P**	08 25 19.4	+0.2
	comp=Z,345nm,0.9s,mb6.1						
LEM	**Lembang**	**43.14**	**267**	P	**P**	08 25 21.8	+0.9
	comp=Z,152nm,0.9s,mb5.7						
JNU	**Nakatsue**	**43.44**	**335**	*e*P	**P**	08 25 23.2	+0.2
	comp=Z,16nm,0.8s,mb4.8						
CBJI	**Citeko**	**43.92**	**267**	P	pP	08 25 38.9	+0.1
MJAR	**Matsushiro Arr**	**44.08**	**345**	P	**P**	08 25 25.3	-2.8
	comp=Z,1.7nm,1.0s,baz=168,slow=8.9,SNR=3.6						
MJAR				ScP	ScP	08 31 05.3	+3.8
	comp=Z,4.1nm,1.1s,baz=184,slow=5.9,SNR=4.7						
MJAR				LR	LR	08 42 46.4	
	comp=Z,186nm,19.0s,MS4.0,baz=160,slow=35						
MJAR	**Matsushiro Arr**	**44.08**	**345**	P	**P**	08 25 25.3	-2.7
MAT	**Matsushiro**	**44.08**	**345**	P	**P**	08 25 22.9	-5.1
QZH	**Quanzhou**	**44.14**	**316**	P	**P**	08 25 28.4	-0.3
MDSI	**Maura Dua**	**46.68**	**270**	P	**P**	08 25 48.4	-0.7
	comp=Z,42nm,1.0s,mb5.3						
QIZ	**Qiongzhong**	**47.65**	**303**	P	**P**	08 25 57.4	+0.9
QIZ				pP	pP	08 26 06.1	-2.1
QIZ				S	**S**	08 32 51.3	+1.7
QIZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
QIZ				pmax	pmax		
	comp=Z,100nm,7.5s						
QIZ				LR	LR		
	comp=N,370nm,19.4s,MS4.4						
QIZ				LR	LR		
	comp=E,96nm,18.7s,MS4.4						
QIZ				LR	LR		
	comp=Z,260nm,31.5s						
KSRS	**Korea Array**	**48.39**	**335**	P	**P**	08 26 01.5	-0.5
	comp=Z,2.6nm,0.7s,mb4.4,baz=151,slow=7.9,SNR=12						
KSRS				PcP	PcP	08 27 29.0	+1.1
	comp=Z,2.5nm,0.7s,baz=177,slow=3.4,SNR=5.7						
KSRS				LR	LR	08 44 52.8	
	comp=Z,192nm,20.3s,MS4.1,baz=148,slow=34						
NJ2	**Nanjing**	**48.78**	**323**	*e*P	**P**	08 26 06.3	+1.3
NJ2				pP	pP	08 26 16.3	-0.4
NJ2				sP	sP	08 26 20.1	-1.5
NJ2				S	**S**	08 33 10.5	+5.3
NJ2				SS	SS	08 36 42.0	+5.6
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
NJ2				pmax	pmax		
	comp=Z,230nm,5.3s						
NJ2				LR	LR		
	comp=N,410nm,20.2s,MS4.5						
NJ2				LR	LR		
	comp=E,270nm,24.1s,MS4.5						
NJ2				LR	LR		
	comp=Z,500nm,20.3s,MS4.5						
SDSI	**Sungai Dareh**	**49.76**	**274**	P	**P**	08 26 12.5	-0.4
	comp=Z,1μmcomp=Z,18nm,0.8s,mb5.1						
ASAJ	**Asahikawa**	**50.55**	**352**	*e*P	**P**	08 26 17.7	-0.6
	comp=Z,6.2nm,0.9s,mb4.5						
WHN	**Wuhan**	**50.61**	**318**	P	**P**	08 26 21.0	+2.1
PPI	**Padang Panjang**	**50.84**	**274**	P	**P**	08 26 20.8	-0.3
	comp=Z,7μmcomp=Z,43nm,1.1s,mb5.3						
KULM	**Kulim**	**51.56**	**282**	*e*P	**P**	08 26 25.6	-0.8
	comp=Z,8.1nm,0.8s,mb4.7						
MNSI	**Mandailing Nat**	**51.83**	**276**	P	**P**	08 26 28.1	-0.3
YSS	**Yuzh-Sakhalins**	**53.32**	**353**	*e*P	**P**	08 26 37.7	-1.1
GYA	**Guiyang**	**53.81**	**309**	P	**P**	08 26 44.9	+2.1
GYA				pP	pP	08 26 55.3	+0.6
GYA				PP	PP	08 28 46.8	+2.5
GYA				ScP	ScP	08 31 44.3	+1.1
GYA				S	**S**	08 34 15.0	+0.1
GYA				sS	sS	08 34 32.9	-1.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GYA				pmax	pmax		
	comp=Z,140nm,5.4s						
GYA				LR	LR		
	comp=N,890nm,17.4s,MS5.0						
GYA				LR	LR		
	comp=E,750nm,18.8s,MS5.0						
GYA				LR	LR		
	comp=Z,950nm,17.0s,MS4.9						
MDJ	**Mudanjiang**	**54.04**	**341**	P	**P**	08 26 44.1	0.0
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
CN2	**Changchun**	**54.78**	**337**	*e*P	**P**	08 26 46.8	-2.7
CN2				LR	LR		
	comp=N,600nm,18.0s,MS4.8						
CN2				LR	LR		
	comp=E,500nm,18.0s,MS4.8						
CN2				LR	LR		
	comp=Z,400nm,17.0s,MS4.6						
BJI	**Beijing**	**56.02**	**328**	P	**P**	08 27 00.6	+2.0
BJI				S	**S**	08 34 47.3	+3.1
BJI				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
BJI				pmax	pmax		
	comp=Z,170nm,4.7s						
BJI				LR	LR		
	comp=N,250nm,20.0s,MS4.3						
BJI				LR	LR		
	comp=E,150nm,21.6s,MS4.3						
BJI				LR	LR		
	comp=Z,200nm,21.9s,MS4.2						
KMI	**Kunming**	**56.28**	**306**	P	**P**	08 27 03.8	+3.1
KMI				pP	pP	08 27 13.8	+1.2
KMI				sP	sP	08 27 17.8	+0.4
KMI				PcP	PcP	08 28 00.8	+2.9
KMI				PP	PP	08 29 09.8	+3.3
KMI				S	**S**	08 34 48.1	0.0
KMI				sS	sS	08 35 06.6	-1.3
KMI				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2						
KMI				pmax	pmax		
	comp=Z,130nm,4.2s						
KMI				LR	LR		
	comp=N,320nm,13.7s,MS4.6						
KMI				LR	LR		
	comp=E,280nm,17.5s,MS4.6						
KMI				LR	LR		
	comp=Z,200nm,21.3s,MS4.2						
XAN	**Xi'an**	**56.37**	**318**	P	**P**	08 27 05.1	+3.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
CMAR	**Chiang Mai Arr**	**56.86**	**297**	P	**P**	08 27 04.3	-0.6
	comp=Z,1.6nm,0.4s,mb4.4,baz=109,slow=5.1,SNR=7.9						
CMAR				LR	LR	08 51 11.4	
	comp=Z,214nm,18.6s,MS4.3,baz=288,slow=36						
CMAR	**Chiang Mai Arr**	**56.86**	**297**	P	**P**	08 27 04.4	-0.5
KLR	**Kul'dur**	**57.61**	**345**	*e*P	**P**	08 27 02.0	-7.6
CD2	**Chengdu**	**58.27**	**312**	*e*P	**P**	08 27 16.3	+1.7
CD2				pP	pP	08 27 26.3	-0.3
CD2				sP	sP	08 27 30.8	-0.6
CD2				PP	PP	08 29 26.8	+2.7
CD2				S	**S**	08 35 13.8	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
CD2				pmax	pmax		
	comp=Z,20nm,5.2s						
CD2				LR	LR		
	comp=N,400nm,19.0s						
CD2				LR	LR		
	comp=E,470nm,13.2s						
CD2				LR	LR		
	comp=Z,470nm,14.6s,MS4.7						
PPT	**Papeete**	**59.02**	**107**	*e*LR	LR	08 44 24.1	
	comp=Z,154nm,24.5s						
PPT	**Papeete**	**59.02**	**107**	LR	LR	08 47 46.0	
	comp=Z,176nm,19.7s,MS4.2,baz=282,slow=31						
HHC	**Hu-ho-hao-te**	**59.10**	**326**	*e*P	**P**	08 27 22.5	+2.3
HHC				pP	pP	08 27 32.5	+0.3
HHC				sP	sP	08 27 36.6	-0.4
HHC				PcP	PcP	08 28 11.4	+2.8
HHC				PP	PP	08 29 34.6	+3.4
HHC				ScP	ScP	08 32 07.8	+1.7
HHC				S	**S**	08 35 26.5	+2.1
HHC				sS	sS	08 35 42.3	-2.1
HHC				ScS	ScS	08 37 06.4	-0.6
HHC				SS	SS	08 39 21.3	+2.0
HHC				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
HHC				pmax	pmax		
	comp=Z,170nm,6.3s						
HHC				LR	LR		
	comp=N,270nm,14.3s,MS4.9						
HHC				LR	LR		
	comp=E,580nm,14.9s,MS4.9						
HHC				LR	LR		
	comp=Z,280nm,16.2s,MS4.5						
PETK	**Petropavlovsk-**	**59.24**	**5**	P	**P**	08 27 19.6	-1.4
	comp=Z,6.1nm,0.5s,mb4.9,baz=161,slow=7.4,SNR=7.9						
PETK				LR	LR	08 49 26.5	
	comp=Z,156nm,19.6s,MS4.1,baz=14,slow=33						
PETK	**Petropavlovsk-**	**59.24**	**5**	P	**P**	08 27 19.6	-1.3
TBI	**Tubuai**	**59.64**	**113**	*e*S	**S**	08 35 28.4	-3.8
	comp=Z,152nm,31.8s						
TBI				*e*LQ		08 42 31.1	
	comp=Z,594nm,33.8s						
TBI				*e*LR	LR	08 44 52.4	
	comp=Z,182nm,37.0s						
LZH	**Lanzhou**	**60.95**	**317**	⇑P	**P**	08 27 33.8	+0.8
LZH				pP	pP	08 27 43.9	-1.2
LZH				sP	sP	08 27 47.8	-2.1
LZH				PP	PP	08 29 50.3	+2.5
LZH				S	**S**	08 35 49.0	+0.5
LZH				pmax	pmax		
	comp=Z,71nm,1.4s,mb5.6						
LZH				pmax	pmax		
	comp=Z,220nm,7.0s						
LZH				LR	LR		
	comp=N,500nm,16.5s,MS4.9						
LZH				LR	LR		
	comp=E,490nm,17.2s,MS4.9						
LZH				LR	LR		
	comp=Z,750nm,18.0s,MS4.9						
GTA	**Gaotai**	**65.43**	**318**	⇑P	**P**	08 28 03.3	+0.7
GTA				pP	pP	08 28 13.5	-1.3
GTA				sP	sP	08 28 17.4	-2.1
GTA				S	**S**	08 36 45.0	+0.7
GTA				sS	sS	08 37 01.3	-3.2
GTA				SS	SS	08 41 00.5	+2.0
GTA				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
GTA				pmax	pmax		
	comp=Z,140nm,5.4s						
GTA				LR	LR		
	comp=N,160nm,15.9s,MS4.5						
GTA				LR	LR		
	comp=E,140nm,14.7s,MS4.5						
GTA				LR	LR		
	comp=Z,240nm,16.6s,MS4.5						
SHL	**Shillong**	**65.47**	**302**	*e*PKP	**P**	08 28 02.0	-1.2
CASY	**Casey**	**66.28**	**197**	*e*P	**P**	08 28 07.5	-0.1
CASY	**Casey**	**66.28**	**197**	*e*P	**P**	08 28 07.2	-0.5
	comp=Z,27nm,1.0s,mb5.2						
SONM	**Songino Array**	**66.50**	**329**	P	**P**	08 28 09.8	+0.5
	comp=Z,5.0nm,1.0s,mb4.5,baz=145,slow=5.4,SNR=22						
SONM	**Songino Array**	**66.50**	**329**	P	**P**	08 28 09.8	+0.5
LSA	**Lhasa**	**67.54**	**305**	P	**P**	08 28 16.3	0.0
LSA	**Lhasa**	**67.54**	**305**	*e*P	**P**	08 28 16.1	-0.2
	comp=Z,8.3nm,0.6s,mb4.9						
LSA	**Lhasa**	**67.54**	**305**	*e*P	**P**	08 28 16.1	-0.2
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
SEY	**Seymchan**	**68.83**	**1**	*de*P	**P**	08 28 24.6	+0.9
TAPN	**Taplejung**	**69.58**	**302**	*e*P	**P**	08 28 29.0	-0.1
	comp=Z,21nm,1.0s,mb5.0						
ZAK	**Zakamensk**	**69.70**	**330**	*e*P	**P**	08 28 29.3	0.0
ZAK				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.6						
ODAN	**Odare**	**69.70**	**301**	*e*P	**P**	08 28 29.2	-0.7
	comp=Z,27nm,0.7s,mb5.3						
YAK	**Yakutsk**	**69.90**	**349**	*e*P	**P**	08 28 29.7	-0.6
BOD	**Bodaibo**	**70.38**	**340**	*e*P	**P**	08 28 31.3	-2.1
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
GUN	**Gumba**	**71.30**	**302**	*e*P	**P**	08 28 39.3	-0.3
	comp=Z,24nm,0.7s,mb5.2						
PALK	**Pallekele**	**71.42**	**280**	*e*P	**P**	08 28 40.1	-0.5
	comp=Z,8.5nm,0.6s,mb4.8						
PALK	**Pallekele**	**71.42**

KKN pmax pmax
comp=Z,12nm,0.6s,mb5.0
DMN Daman 71.86 302 *eP* **P 08 28 41.8 -1.2**
comp=Z,37nm,1.0s,mb5.3
MIR Mirnyy 72.10 201 *eP* **P 08 28 44.0 +0.3**
MIR pmax pmax
comp=Z,90nm,1.0s,mb5.7
GKN Gorkha 72.38 302 *eP* **P 08 28 44.6 -1.5**
comp=Z,45nm,1.1s,mb5.3
KOLN Koldanda 73.19 301 *eP* **P 08 28 49.2 -1.7**
comp=Z,21nm,0.7s,mb5.2
DANN Dangsing 73.22 302 *eP* **P 08 28 50.1 -1.0**
comp=Z,17nm,0.7s,mb5.1
BILL Biiibino 74.74 6⇓ *eP* **P 08 28 59.6 +0.5**
BILL pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
WMQ Urumqi 75.51 318 P **P 08 29 03.0 -1.1**
WMQ sP sP 08 29 17.0 -4.1
WMQ PP PP 08 31 54.0 +0.2
WMQ S S 08 38 39.0 -2.7
WMQ ScS ScS 08 39 11.0 -3.4
WMQ pmax pmax
comp=Z,15nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,45nm,7.0s
WMQ LR LR
comp=N,120nm,18.0s,MS4.5
WMQ LR LR
comp=E,210nm,18.0s,MS4.5
WMQ LR LR
comp=Z,89nm,18.0s,MS4.1
OHAK Old Harbor 77.49 27 *eP* **P 08 29 14.7 -0.3**
comp=Z,41nm,1.2s,mb5.2
KDAK Kodiak Island 78.11 27 *eP* **P 08 29 19.5 +1.1**
comp=Z,207nm,2.2s,mb5.7
KDAK Kodiak Island 78.11 27 *ceP* **P 08 29 20.6 +2.2**
TIXI Tiksi 78.95 353 *eP* **P 08 29 23.6 +0.8**
TIXI pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
RSO Redoubt South 79.48 25 *eP* **P 08 29 24.6 -1.3**
TTA Tatalina 79.61 22 *eP* **P 08 29 26.2 -0.3**
TTA Tatalina 79.61 22 *eP* **P 08 29 26.3 -0.2**
MK31 Makanchi Array 80.15 319 *eP* **P 08 29 29.9 0.0**
MK31 Makanchi Array 80.15 319 *ceP* **P 08 29 29.6 -0.2**
MKAR Makanchi Array 80.15 319 P **P 08 29 29.5 -0.3**
comp=Z,5.7nm,0.8s,mb4.6,baz=114,slow=5.8,SNR=30
MKAR PP PP 08 32 30.6 -2.1
comp=Z,2.3nm,0.9s,baz=107,slow=8.1,SNR=5.1
MKAR LR LR 09 05 33.8
comp=Z,128nm,18.2s,MS4.3,baz=354,slow=36
MKAR Makanchi Array 80.15 319 P **P 08 29 29.5 -0.3**
MKAR PP PP 08 32 30.6 -2.1
MKAR LR LR 09 05 33.8
MKAR Makanchi Array 80.15 319 *i* P **P 08 29 29.5 -0.3**
MKAR pmax pmax
comp=Z,6.0nm,0.8s
SLKM Skilak Lake 80.58 25 *eP* **P 08 29 31.5 -0.3**
SLKM Skilak Lake 80.58 25 *eP* **P 08 29 31.5 -0.3**
SEW Seward 80.70 26 *eP* **P 08 29 32.2 -0.3**
comp=Z,30nm,0.8s,mb5.3
PPLA Purkeypile 81.03 23 *eP* **P 08 29 34.1 0.0**
comp=Z,14nm,1.2s,mb4.8
RC01 Rabbit Creek A 81.08 25 *eP* **P 08 29 33.6 -0.8**
comp=Z,23nm,0.9s,mb5.1
ZALV Zalesovo Beam 81.26 327 P **P 08 29 34.4 -1.2**
comp=Z,2.6nm,0.5s,mb4.4,baz=106,slow=5.3,SNR=8.9
ZALV LR LR 09 06 03.6
comp=Z,88nm,19.1s,MS4.1,baz=139,slow=36
ZALV Zalesovo Beam 81.26 327 P **P 08 29 34.4 -1.2**
PMR Palmer 81.58 25 *eP* **P 08 29 36.0 -1.1**
comp=Z,16nm,0.9s,mb5.0
PMR Palmer 81.58 25 *eP* **P 08 29 36.0 -1.1**
PMR pmax pmax
comp=Z,16nm,0.9s,mb5.0
SML Sawmill 82.02 25 *eP* **P 08 29 38.2 -1.2**
comp=Z,11nm,0.8s,mb4.8
SML Sawmill 82.02 25 *eP* **P 08 29 38.2 -1.2**
SML pmax pmax
comp=Z,11nm,0.8s,mb4.8
TRF Thorofare Moun 82.06 23 *eP* **P 08 29 38.4 -1.2**
comp=Z,17nm,1.0s,mb4.9
BPAW Bear Paw Mtn. 82.13 22 *eP* **P 08 29 38.5 -1.4**
comp=Z,9.3nm,0.8s,mb4.8
KSH Kashi 82.45 311 *eP* **P 08 29 43.9 +1.7**
KSH *ep*P pP 08 29 54.3 -0.4
KSH *es*P sP 08 29 58.3 -1.1
KSH *e*PP PP 08 32 53.8 +2.0
KSH *e*S S 08 39 54.5 -1.3
KSH *e*SKS 08 39 57.3
KSH pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KSH LR LR
comp=N,400nm,6.5s
KSH LR LR
comp=E,240nm,4.6s
KSH LR LR
comp=Z,280nm,4.9s
MCK McKinley 82.72 23 *eP* **P 08 29 41.5 -1.6**
comp=Z,55nm,0.9s,mb5.6
MCK McKinley 82.72 23 *eP* **P 08 29 41.5 -1.5**
MCK pmax pmax
comp=Z,55nm,0.9s,mb5.6
TKM2 Tokmak 2 83.57 314 *eP* **P 08 29 47.6 -0.3**
comp=Z,6.8nm,0.8s,mb4.8
TKM2 Tokmak 2 83.57 314 *eP* **P 08 29 47.6 -0.3**
TKM2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
COLA College 83.69 22 *eP* **P 08 29 45.7 -2.3**
comp=Z,27nm,0.8s,mb5.4
COLA College 83.69 22 *eP* **P 08 29 45.7 -2.3**
COLA pmax pmax
comp=Z,27nm,0.8s,mb5.4
KURK Kurchatov 83.71 322 *eP* **P 08 29 47.2 -1.2**
comp=Z,18nm,1.0s,mb5.2
KURK Kurchatov 83.71 322 *eP* **P 08 29 47.3 -1.1**
KURK pmax pmax
comp=Z,19nm,1.0s,mb5.2
KURK Kurchatov 83.71 322 P **P 08 29 47.5 -0.9**
comp=Z,99nm,0.9s,mb5.9,SNR=8.0
MAW Mawson 83.71 203 P **P 08 29 48.6 +0.4**
comp=Z,7.9nm,1.0s,mb4.8,baz=80,slow=5.0,SNR=4.5
MAW LR LR 09 04 18.8
comp=Z,470nm,19.3s,MS4.9,baz=61,slow=34
MAW Mawson 83.71 203 *eP* **P 08 29 48.8 +0.6**
comp=Z,4.1nm,0.6s,mb4.7
MAW Mawson 83.71 203 *eP* **P 08 29 52.2 +4.1**
comp=Z,3.5nm,1.1s,mb4.4
MAW LR LR 09 04 18.8
MAW Mawson 83.71 203 *eP* **P 08 29 52.3 +4.1**
MAW pmax pmax
comp=Z,4.0nm,1.1s
PAX Paxson 83.74 24 *eP* **P 08 29 48.2 -0.1**
comp=Z,10nm,1.1s,mb4.9
PAX Paxson 83.74 24 *eP* **P 08 29 48.3 0.0**
PAX pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
QSPA South Pole Qui 83.88 180 *eP* **P 08 29 49.2 +0.4**
comp=Z,19nm,0.8s,mb5.3
ILAR Eielson Array 84.01 22 P **P 08 29 47.5 -2.1**
comp=Z,18nm,0.9s,mb5.2,baz=252,slow=4.2,SNR=109
ILAR LR LR 09 06 28.0
comp=Z,246nm,19.2s,MS4.6,baz=139,slow=35
ILAR Eielson Array 84.01 22 P **P 08 29 47.6 -2.0**
COLD Coldfoot 84.05 20 *eP* **P 08 29 50.1 +0.3**
comp=Z,31nm,1.4s,mb5.2
UCH Uchtor 84.17 313 *eP* **P 08 29 52.0 +1.0**
comp=Z,4.3nm,0.7s,mb4.7
AAK Ala-Archa 84.28 314 P **P 08 29 50.9 -0.6**
comp=Z,4.7nm,0.7s,mb4.7,baz=142,slow=8.3,SNR=14
AAK Ala-Archa 84.28 314 *eP* **P 08 29 51.5 0.0**
comp=Z,6.2nm,0.7s,mb4.8
AAK Ala-Archa 84.28 314 *eP* **P 08 29 51.7 +0.1**
AAK pmax pmax
comp=Z,9.0nm,1.7s,mb4.6
AAK Ala-Archa 84.28 314 P **P 08 29 51.6 0.0**
comp=Z,50nm,0.7s,mb5.8,SNR=5.3
MENT Mentasta 84.45 25 *eP* **P 08 29 51.5 -0.4**
DOT Dot Lake 84.61 24 *eP* **P 08 29 51.9 -0.8**
comp=Z,82nm,0.8s,mb5.9
AML Almayashu 84.75 313 *eP* **P 08 29 55.1 +1.3**
comp=Z,17nm,1.0s,mb5.1
EKS2 Erkin-Say 84.81 314 *eP* **P 08 29 54.6 +0.4**
comp=Z,12nm,0.9s,mb5.0
PNL Peninsula 85.10 29 *eP* **P 08 29 56.2 +1.0**
comp=Z,34nm,1.0s,mb5.4
EGAK Eagle 86.23 23 *eP* **P 08 30 00.7 -0.1**
comp=Z,29nm,1.0s,mb5.5
DAWY Dawson 86.68 24 *eP* **P 08 30 03.2 +0.3**
SKAG Skagway 86.99 29 *eP* **P 08 30 05.9 +1.3**
comp=Z,28nm,1.0s,mb5.5
KK31 Karatay Array 87.25 314 *ceP* **P 08 30 05.5 -0.7**
KK31 pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
KKAR Karatay Array 87.25 314 *eP* **P 08 30 05.7 -0.5**
comp=Z,8.9nm,0.8s,mb5.0
KKAR Karatay Array 87.25 314 *eP* **P 08 30 05.7 -0.5**
KKAR pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
WRAK Wrangell Islan 87.69 33 *eP* **P 08 30 08.7 +0.7**
comp=Z,63nm,1.4s,mb5.7
BVAR Borovoye Array 89.22 323 P **P 08 30 13.1 -2.3**
comp=Z,2.8nm,0.7s,mb4.7,baz=100,slow=6.2,SNR=9.7
BVAR Borovoye Array 89.22 323 P **P 08 30 13.1 -2.3**
DLBC Dease Lake 89.38 31 *eP* **P 08 30 16.9 +0.9**
INK Inuvik 90.28 21 *eP* **P 08 30 20.1 +0.1**
comp=Z,20nm,1.3s,mb5.3
INK Inuvik 90.28 21 *eP* **P 08 30 20.1 +0.1**
INK pmax pmax
comp=Z,20nm,1.3s
HUMO Hull Mountain 91.14 47 *eP* **P 08 30 25.7 +1.1**
comp=Z,6.0nm,0.7s,mb5.0
YBH Yreka Blue Hor 91.22 48 *eP* **P 08 30 26.0 +1.0**
comp=Z,12nm,1.2s,mb5.1
YBH Yreka Blue Hor 91.22 48 *eP* **P 08 30 26.0 +1.1**
YBH pmax pmax
comp=Z,12nm,1.2s
SYO Syowa Base 91.87 200⇓ *eP* **P 08 30 30.4 +2.9**
SYO Syowa Base 91.87 200⇑ *epP* pP 08 30 39.5 -0.6
MOD Modoc 93.02 48 *eP* **P 08 30 33.9 +0.6**
comp=Z,5.8nm,1.0s,mb5.0
WCN Washoe City 93.20 51 *eP* **P 08 30 36.2 +2.1**
comp=Z,5.3nm,0.9s,mb5.0
WCN Washoe City 93.20 51 *eP* **P 08 30 36.3 +2.1**
WCN pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
PAHR Pah Rah Range 93.52 51 *eP* **P 08 30 36.4 +0.8**
comp=Z,9.5nm,1.2s,mb5.1
PAHR *ep*P pP 08 30 48.5 +0.2
HAWA Hanford 93.97 44 *eP* **P 08 30 38.8 +1.3**
comp=Z,19nm,1.5s,mb5.3
MWC Mount Wilson 94.13 56 *eP* **P 08 30 40.0 +1.4**
comp=Z,11nm,1.0s,mb5.2
MWC Mount Wilson 94.13 56 *eP* **P 08 30 40.0 +1.4**
MWC pmax pmax
comp=Z,11nm,1.0s,mb5.2
NVAR Mina Array Bea 94.25 52 P **P 08 30 40.3 +1.3**
comp=Z,2.7nm,0.7s,mb4.8,baz=255,slow=6.2,SNR=17
NVAR PP PP 08 34 26.5 +0.1
comp=Z,0.2nm,0.4s,baz=256,slow=7.3,SNR=2.7
NVAR Mina Array Bea 94.25 52 P **P 08 30 40.3 +1.3**
NVAR PP PP 08 34 26.5 +0.1
WVOR Wild Horse Val 94.30 48 *eP* **P 08 30 39.3 +0.1**
comp=Z,4.2nm,1.0s,mb4.8
WVOR Wild Horse Val 94.30 48 *eP* **P 08 30 39.3 +0.1**
WVOR pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
OD2 Odessa Site #2 94.60 43 *eP* **P 08 30 40.3 -0.1**
ABKAR Akbulak array 95.29 319 *eP* **P 08 30 41.4 -2.1**
comp=Z,1.8nm,0.6s,mb4.7
NEW Newport 95.72 42 *eP* **P 08 30 46.1 +0.6**
comp=Z,47nm,2.4s,mb5.5
NEW Newport 95.72 42 *eP* **P 08 30 46.1 +0.6**
NEW pmax pmax
comp=Z,47nm,2.4s
AKTK Aktyubinsk 96.58 320 P **P 08 30 47.5 -1.8**
AKTK LR LR 09 14 23.4
AKTO Aktyubinsk 96.58 320 P **P 08 30 47.5 -1.8**
comp=Z,1.1nm,0.5s,mb4.6,baz=219,slow=1.3,SNR=4.2
AKTO LR LR 09 14 23.4
comp=Z,181nm,18.5s,MS4.6,baz=94,slow=36
AKTO Aktyubinsk 96.58 320 P **P 08 30 47.5 -1.9**
SHPR Sheep Range 96.63 54 *eP* **P 08 30 51.5 +1.6**
comp=Z,5.7nm,1.3s,mb4.8
YKA Yellowknife Ar 97.38 28 P **P 08 30 52.7 0.0**
comp=Z,4.8nm,0.7s,mb5.0,baz=270,slow=4.7,SNR=27
YKA LR LR 09 09 20.7
comp=Z,20nm,19.2s,MS3.6,baz=270,slow=32
YKA Yellowknife Ar 97.38 28 P **P 08 30 52.7 0.0**
YKA LR LR 09 09 20.7
YKA Yellowknife Ar 97.38 28 P **P 08 30 52.7 0.0**
HLID Hailey 97.45 47 *eP* **P 08 30 55.0 +1.6**
comp=Z,2.5nm,1.0s,mb4.6
PDAR Pinedale Array 101.01 48 P Pdif 08 31 09.3 +0.2
comp=Z,0.7nm,0.6s,baz=231,slow=1.1,SNR=8.8
PDAR PP PP 08 35 16.8 -1.3
comp=Z,1.1nm,1.1s,baz=289,slow=4.5,SNR=5.6
VNA3 Neumayer Olymp 101.77 186 *e*Pdiff Pdif 08 31 13.0 +0.5
TXAR Lajitas Array 106.28 61 PKiKP PKiKP 08 35 44.7 +0.1
comp=Z,0.4nm,0.9s,baz=18,slow=3.1,SNR=3.9
TXAR PP PP 08 36 01.9 +4.0
comp=Z,0.7nm,0.9s,baz=284,slow=5.0,SNR=6.3
TXAR Lajitas Array 106.28 61 PKPdf PKiKP 08 35 44.7 +0.1
TXAR PP PP 08 36 01.9 +4.0
ARCES ARCESS Array B 107.58 343 PKiKP PKiKP 08 35 46.3 +0.4
comp=Z,2.6nm,0.8s,baz=60,slow=2.2,SNR=7.4
OBN Obninsk 108.84 326 *eP* Pdif 08 31 41.8 -2.2
OBN pmax pmax
comp=Z,4.0nm,0.9s
ANN Anapa 110.95 316 *i* PKIKP PKiKP 08 35 40.7 -12
ANN pmax pmax
comp=Z,178nm,6.6s
FINES FINESS Array B 111.49 335 PKiKP PKiKP 08 35 53.3 -0.1
comp=Z,3.2nm,0.8s,baz=114,slow=4.6,SNR=6.5
FINES FINESS Array B 111.49 335 PKIKP PKiKP 08 35 53.3 -0.1
AKASG Malin Array Be 114.50 324 PKP PKiKP 08 35 59.2 -0.3
comp=Z,1.5nm,0.5s,baz=50,slow=3.4,SNR=7.0
AKASG Malin Array Be 114.50 324 PKP PKiKP 08 35 59.2 -0.3
AKASG Malin Array Be 114.50 324 PKIKP PKiKP 08 35 59.2 -0.3
BRTR Keskin Array B 114.84 311 PKP PKiKP 08 36 01.4 +0.9
comp=Z,0.9nm,0.7s,baz=36,slow=4.6,SNR=3.9
BRTR Keskin Array B 114.84 311 PKIKP PKiKP 08 36 01.5 +1.0
NB2 NORSAR Subarra 117.51 339 PKPdf PKPdf 08 36 04.4 -0.6
comp=Z,4.7nm,0.8s,baz=45,slow=1.9
NB2 NORSAR Subarra 117.51 339 PKPdf PKPdf 08 36 04.4 -0.6
baz=45,slow=1.9
NOA NORSAR Array B 117.51 339 PKP PKPdf 08 36 04.8 -0.2
comp=Z,3.8nm,0.8s,baz=47,slow=1.8,SNR=14
NOA NORSAR Array B 117.51 339 PKIKP PKPdf 08 36 04.8 -0.2
KOLS Kolonicke sedl 119.33 324 *e*PKP PKPdf 08 36 10.2 +1.3
KOLS Kolonicke sedl 119.33 324 *e*PKIKP PKPdf 08 36 10.2 +1.3
KOLS Kolonicke sedl 119.33 324 *e*PKP PKPdf 08 36 10.2 +1.3
LSZ Lusaka 119.54 249 *e*PKPdf PKPdf 08 36 10.6 +0.4
LSZ Lusaka 119.54 249 *e*PKIKP PKPdf 08 36 10.6 +0.4
PLCA Paso Flores 119.78 144 PKP PKPdf 08 36 09.8 -0.2
comp=Z,0.9nm,0.7s,baz=259,slow=2.9,SNR=2.9
PLCA Paso Flores 119.78 144 PKP PKPdf 08 36 09.8 -0.2
PLCA Paso Flores 119.78 144 PKIKP PKPdf 08 36 09.8 -0.2
CRVS Cervenica-Dubn 119.82 324 *e*PKP PKPdf 08 36 10.8 +1.0
CRVS Cervenica-Dubn 119.82 324 *e*PKIKP PKPdf 08 36 10.8 +1.0
CRVS Cervenica-Dubn 119.82 324 *e*PKP PKPdf 08 36 10.8 +1.0
KECS Kecovo 120.59 324 *e*PKP PKPdf 08 36 12.8 +1.5
KECS Kecovo 120.59 324 *e*PKIKP PKPdf 08 36 12.8 +1.5
KECS Kecovo 120.59 324 *e*PKP PKPdf 08 36 12.8 +1.5
PSZ Piszkesteto 121.21 324⇓ *e*P PKPdf 08 36 13.5 +1.0
OKC Ostrava-Krasne 121.24 326 *e*PKIKP PKPdf 08 36 12.9 +0.4
OKC Ostrava-Krasne 121.24 326 *e*PKPdf PKPdf 08 36 12.9 +0.4
VYHS Vyhne 121.54 325 *e*PKP PKPdf 08 36 13.6 +0.5
VYHS Vyhne 121.54 325 *e*PKIKP PKPdf 08 36 13.6 +0.5
VYHS Vyhne 121.54 325 *e*PKP PKPdf 08 36 13.6 +0.5
UPC Upice 122.03 328 *e*PKIKP PKPdf 08 36 14.8 +0.8
UPC Upice 122.03 328 *e*PKPdf PKPdf 08 36 14.8 +0.8
PVCC Panska Ves 122.77 328 *e*PKIKP PKPdf 08 36 16.0 +0.6
PVCC Panska Ves 122.77 328 *e*PKPdf PKPdf 08 36 16.0 +0.6
BRG Berggiesshubel 122.89 329 *e*PKP PKPdf 08 36 16.0 +0.4
comp=Z,13nm,0.9s
PRU Pruhonice 123.10 328 *e*PKIKP PKPdf 08 36 17.2 +1.1
PRU Pruhonice 123.10 328 *e*PKPdf PKPdf 08 36 17.2 +1.1
CLL Collm 123.11 330 *i* PKP PKPdf 08 36 16.4 +0.4
CLL *ep*PKP pPKPdf 08 36 30.0 +0.9
CLL Collm 123.11 330 *i* PKIKP PKPdf 08 36 16.4 +0.4
CLL *e* 08 36 30.0
CLL pmax pmax
comp=Z,13nm,0.9s
CONA Conrad Observa 123.53 325⇓ *i* PKiKP PKiKP 08 36 17.1 -0.1
comp=Z,6.2nm,1.0s
NKC Novy Kostel 124.04 329 *e*PKIKP PKPdf 08 36 18.3 +0.4
NKC Novy Kostel 124.04 329 *e*PKPdf PKPdf 08 36 18.3 +0.4
KHC Kasperske Hory 124.11 328 *e*PKPdf PKPdf 08 36 18.2 +0.2
KHC Kasperske Hory 124.11 328 *e*PKIKP PKPdf 08 36 18.2 +0.2
KHC Kasperske Hory 124.11 328 *e*PKPdf PKPdf 08 36 18.3 +0.3
MOX Moxa 124.21 330 *e*PKP PKPdf 08 36 18.7 +0.5
comp=Z,14nm,1.4s
MOX Moxa 124.21 330 *e*PKIKP PKPdf 08 36 18.7 +0.5
GERES GERESS Array B 124.21 327 PKP PKPdf 08 36 18.6 +0.4
comp=Z,5.6nm,0.7s,baz=70,slow=1.6,SNR=39
GERES GERESS Array B 124.21 327 PKIKP PKPdf 08 36 18.6 +0.4
SOKA Soboth 124.68 324⇑ *i* PKiKP PKiKP 08 36 19.0 -0.5
comp=Z,9.4nm,1.0s
ABTA Abfaltersbach 126.08 326⇓ *i* PKPdf PKPdf 08 36 20.9 -1.0
comp=Z,17nm,1.0s
WTTA Wattenberg 126.26 327⇑ *i* PKiKP PKiKP 08 36 22.4 -0.3
comp=Z,21nm,0.8s
MOTA Moosalm 126.50 327⇓ *i* PKiKP PKiKP 08 36 22.8 -0.3
comp=Z,12nm,0.7s
FETA Feichten 126.90 327⇑ *i* PKiKP PKiKP 08 36 23.7 -0.3
comp=Z,18nm,0.9s
MEM Membach 126.91 333 PKP PKPdf 08 36 24.4 +1.1
DAVA Damuels 127.20 328⇑ *i* PKiKP PKiKP 08 36 24.2 -0.3
comp=Z,12nm,0.8s
BCLA Clavier 127.36 333 PKP PKPdf 08 36 25.3 +1.1
WLF Walferdange 127.50 332 PKP PKPdf 08 36 25.6 +1.1
SNF Seneffe 127.75 334 PKP PKPdf 08 36 25.9 +0.9
GIVF Givet 127.80 333 *e*PKP1 PKPdf 08 36 25.7 +0.6
comp=Z,49nm,1.0s
GIVF Givet 127.80 333 *e*PKIKP PKPdf 08 36 25.7 +0.6
CDF Champ du Feu 127.81 330 *e*PKP1 PKPdf 08 36 25.1 0.0
comp=Z,10nm,0.8s
CDF Champ du Feu 127.81 330 *e*PKIKP PKPdf 08 36 25.1 0.0
DOU Dourbes 127.91 333 PKP PKPdf 08 36 26.6 +1.3
TUE Stuetta 127.99 327 *e*PKPdf PKPdf 08 36 26.3 +0.7
ECH Echery 128.00 330 *e*PKPdf PKPdf 08 36 25.6 +0.1
ECH Echery 128.00 330 *e*PKIKP PKPdf 08 36 25.6 +0.1
BAIF Baives 128.11 333 *e*PKP1 PKPdf 08 36 26.2 +0.5
comp=Z,11nm,0.7s
BAIF Baives 128.11 333 *e*PKIKP PKPdf 08 36 26.2 +0.5
HINF Hinteralfeld 128.42 330 *e*PKP1 PKPdf 08 36 26.4 +0.1
comp=Z,24nm,0.9s
HINF Hinteralfeld 128.42 330 *e*PKIKP PKPdf 08 36 26.4 +0.1
HAU Haudompre 128.54 330 *e*PKP1 PKPdf 08 36 26.7 +0.2
comp=Z,19nm,0.6s
HAU Haudompre 128.54 330 *e*PKIKP PKPdf 08 36 26.7 +0.2
CABF La Chapelle 129.61 329 *e*PKP1 PKPdf 08 36 29.6 +1.0
comp=Z,67nm,1.2s
CABF La Chapelle 129.61 329 *e*PKIKP PKPdf 08 36 29.6 +1.0
LPL La Plagne 130.00 328 *e*PKP1 PKPdf 08 36 30.3 +0.9
comp=Z,8.5nm,0.7s
LPL La Plagne 130.00 328 *e*PKIKP PKPdf 08 36 30.3 +0.9
LPG La Plagne 130.00 328 *e*PKP1 PKPdf 08 36 30.4 +1.0
comp=Z,19nm,0.9s
LPG La Plagne 130.00 328 *e*PKIKP PKPdf 08 36 30.4 +1.0
LOR Lormes 130.27 331 *e*PKP1 PKPdf 08 36 30.5 +0.6
LOR Lormes 130.27 331 *e*PKIKP PKPdf 08 36 30.5 +0.6
BNI Bardonecchia 130.33 327 *e*PKPdf PKPdf 08 36 30.7 +0.7
BNI Bardonecchia 130.33 327 *e*PKIKP PKPdf 08 36 30.7 +0.6
MBDF Montbardon 130.49 327 *e*PKP1 PKPdf 08 36 31.2 +0.8
comp=Z,9.8nm,0.8s
MBDF Montbardon 130.49 327 *e*PKIKP PKPdf 08 36 31.2 +0.8
PGF Pioggiola 130.57 323 *e*PKP1 PKPdf 08 36 31.2 +0.6
comp=Z,12nm,0.7s
PGF Pioggiola 130.57 323 *e*PKIKP PKPdf 08 36 31.2 +0.6
SSF Saint Saulge 130.58 331 *e*PKP1 PKPdf 08 36 31.2 +0.7
comp=Z,30nm,0.9s
SSF Saint Saulge 130.58 331 *e*PKIKP PKPdf 08 36 31.2 +0.7
SBF Sospel 130.68 326 *e*PKP1 PKPdf 08 36 31.1 +0.4
comp=Z,92nm,1.2s
SBF Sospel 130.68 326 *e*PKIKP PKPdf 08 36 31.1 +0.4
SMF Signal de Mont 130.72 331 *e*PKP1 PKPdf 08 36 31.4 +0.7
SMF Signal de Mont 130.72 331 *e*PKIKP PKPdf 08 36 31.4 +0.7
AVF Avril sur Loir 130.85 331 *e*PKP1 PKPdf 08 36 31.3 +0.3
AVF Avril sur Loir 130.85 331 *e*PKIKP PKPdf 08 36 31.3 +0.3
ORIF Oris-en-Rattie 130.85 328 *e*PKP1 PKPdf 08 36 31.6 +0.6
comp=Z,14nm,0.8s
ORIF Oris-en-Rattie 130.85 328 *e*PKIKP PKPdf 08 36 31.6 +0.6
FLN La Foliniere 131.10 335 *e*PKP1 PKPdf 08 36 32.0 +0.6
comp=Z,61nm,1.1s
FLN La Foliniere 131.10 335 *e*PKIKP PKPdf 08 36 32.0 +0.6
BGF Bois d'Agland 131.26 331 *e*PKP1 PKPdf 08 36 32.6 +0.8
comp=Z,37nm,1.0s
BGF Bois d'Agland 131.26 331 *e*PKIKP PKPdf 08 36 32.6 +0.8
FRF La Foret Royal 131.31 326 *e*PKP1 PKPdf 08 36 32.4 +0.4
comp=Z,41nm,1.1s
FRF La Foret Royal 131.31 326 *e*PKIKP PKPdf 08 36 32.4 +0.4
VIVF Saint-Julien-l 131.53 328 *e*PKP1 PKPdf 08 36 33.0 +0.7
comp=Z,31nm,1.1s
VIVF Saint-Julien-l 131.53 328 *e*PKIKP PKPdf 08 36 33.0 +0.7
LMR La Mourre 131.53 326 *e*PKP1 PKPdf 08 36 32.9 +0.5
comp=Z,41nm,1.2s
LMR La Mourre 131.53 326 *e*PKIKP PKPdf 08 36 32.9 +0.5
SMRF Simiane la Rot 131.63 327 *e*PKP1 PKPdf 08 36 33.6 +1.0
comp=Z,24nm,0.9s
TCF Toulx Ste Croi 131.76 331 *e*PKP1 PKPdf 08 36 33.6 +0.9
comp=Z,36nm,0.9s
TCF Toulx Ste Croi 131.76 331 *e*PKIKP PKPdf 08 36 33.6 +0.9
LASF Ste Croix 132.49 328 *e*PKP1 PKPdf 08 36 35.2 +1.0
comp=Z,36nm,1.2s
ROSF Rostrenen 132.57 337 *e*PKP1 PKPdf 08 36 34.6 +0.4
comp=Z,16nm,0.8s
ROSF Rostrenen 132.57 337 *e*PKIKP PKPdf 08 36 34.6 +0.4
MFF Saint Martin d 132.62 333 *e*PKP1 PKPdf 08 36 35.1 +0.8
comp=Z,15nm,0.8s
MFF Saint Martin d 132.62 333 *e*PKIKP PKPdf 08 36 35.1 +0.8
RJF Les Rejaudoux 132.81 331 *e*PKP1 PKPdf 08 36 35.3 +0.6
RJF Les Rejaudoux 132.81 331 *e*PKIKP PKPdf 08 36 35.3 +0.6
QUIF Quistinic 132.87 336 *e*PKP1 PKPdf 08 36 35.3 +0.5
comp=Z,41nm,1.1s
QUIF Quistinic 132.87 336 *e*PKIKP PKPdf 08 36 35.3 +0.5
MTLF Montolieu 133.85 328 *e*PKP1 PKPdf 08 36 37.7 +0.9
comp=Z,16nm,1.0s
MTLF Montolieu 133.85 328 *e*PKIKP PKPdf 08 36 37.7 +0.9
KEST Kesra 134.12 315 PKP PKPdf 08 36 38.2 +0.7
comp=Z,2.1nm,0.9s,baz=287,slow=6.4,SNR=6.0
KEST SKPbc SKPbc 08 40 05.0 +1.2
comp=Z,1.1nm,0.9s,baz=190,slow=6.1,SNR=3.5
LPAZ La Paz 135.32 120 PKhKP PKPpre 08 36 33.8
comp=Z,0.7nm,0.7s,baz=229,slow=8.2,SNR=4.6
LPAZ PKP PKPdf 08 36 42.1 +1.9
comp=Z,1.4nm,0.8s,baz=188,slow=5.5,SNR=5.5
LPAZ La Paz 135.32 120 *e*PKPpre PKPpre 08 36 33.3
LPAZ *e*PKPdf PKPdf 08 36 41.8 +1.5
LPAZ La Paz 135.32 120 *e*PKHKP PKPpre 08 36 33.3
LPAZ *e* 08 36 41.8
ETSF Etsaut 135.59 330 *e*PKP1 PKPdf 08 36 41.1 +1.1
comp=Z,26nm,1.1s
ETSF Etsaut 135.59 330 *e*PKIKP PKPdf 08 36 41.1 +1.1
CPUP Villa Florida 137.62 141 PKP PKPdf 08 36 46.0 +1.7
comp=Z,1.3nm,0.7s,baz=355,slow=2.1,SNR=3.4
CPUP Villa Florida 137.62 141 PKP PKPdf 08 36 46.0 +1.6
CPUP Villa Florida 137.62 141 PKIKP PKPdf 08 36 46.0 +1.7
ESDC Sonseca Array 139.70 330 PKP PKPdf 08 36 49.2 +1.5
comp=Z,0.2nm,0.3s,baz=359,slow=1.3,SNR=7.0
ESDC Sonseca Array 139.70 330 PKP PKPdf 08 36 49.2 +1.5
MVO Moncorvo 139.96 334 *e*PKPdf PKPdf 08 36 49.9 +1.8
PVRL Vila Real 140.16 335 *e*PKPdf PKPdf 08 36 49.4 +0.9
PVIS Viseu 140.70 334 *e*PKPdf PKPdf 08 36 52.5 +3.0
MTE Manteigas 140.81 334 *e*PKPdf PKPdf 08 36 50.9 +1.2
PCBR Castelo Branco 141.24 333 *e*PKPdf PKPdf 08 36 51.9 +1.4
PMRV Marv??o 141.53 333 *e*PKPdf PKPdf 08 36 51.8 +0.8
PESTR Estremoz 142.08 332 *e*PKPdf PKPdf 08 36 51.4 -0.6
PBAR Barrancos 142.37 331 *e*PKPdf PKPdf 08 36 53.7 +1.1
EVO Evora 142.54 333 *e*PKIKP PKPdf 08 36 52.8 -0.1
comp=Z,9.2nm,0.8s
EVO Evora 142.54 333 *e*PKPdf PKPdf 08 36 50.0 -2.9
PBEJ Beja 142.88 332 *e*PKPdf PKPdf 08 36 54.8 +1.3
PCVE Castro Verde 143.28 332 *e*PKPdf PKPdf 08 36 56.0 +1.8
PTEO Sao Teotonio 143.67 332 *e*PKPdf PKPdf 08 36 56.4 +1.5
MORF Marmelete 143.83 332 *e*PKPdf PKPdf 08 36 55.8 +0.6
TORD Torodi Ar. Bea 149.00 285 PKPbc PKPbc 08 37 07.9 -0.7
comp=Z,23nm,0.7s,baz=44,slow=2.8,SNR=28
BDFB Brasilia 151.32 139 PKPbc PKPbc 08 37 13.4 -0.7
comp=Z,9.9nm,0.7s,baz=183,slow=0.9,SNR=12
BDFB Brasilia 151.32 139 PKIKP PKPbc 08 37 13.4 -0.7
KIC Kosan Boka 155.92 272 *eP* PKPdf 08 37 24.7 +10
comp=Z,33nm,0.8s
DBIC Dimbokro 156.04 273 PKP PKPdf 08 37 15.1 +0.1
comp=Z,2.2nm,0.8s,baz=319,slow=4.8,SNR=3.1
DBIC PKPab PKPab 08 37 42.7 +0.3
comp=Z,8.8nm,0.7s,baz=73,slow=4.3,SNR=7.9
DBIC Dimbokro 156.04 273 PKP PKPdf 08 37 15.1 +0.1
DBIC PKPab PKPab 08 37 42.7 +0.3
DBIC Dimbokro 156.04 273 PKIKP PKPdf 08 37 15.1 +0.2
DBIC 08 37 42.7
TIC Toumodi 156.20 273 *eP* PKPdf 08 37 25.8 +11
comp=Z,28nm,0.9s
LIC Lamto 156.21 272 *eP* PKPdf 08 37 26.4 +11
comp=Z,164nm,1.7s

*NEIC **22** 08:31:17.9, 16.°07N×97.°56W, h16km, MD3.9(MEX), After MEX.*

MEX 22 08:31:17.9±1.4, 16.°07N×97.°56W, h16km±15km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.64**	**301**	*eP*	Pg	08 31 27.8	-2.7
PNIG				*i* S	Sg	08 31 36.1	-2.8
PNIG	**Pinotepa**	**0.64**	**301**	*eP*	Pg	08 31 27.8	-2.7
PNIG				*i* S	Sg	08 31 36.1	-2.8
VHO	**Vista Hermosa**	**1.27**	**38**	*i* P	Pn	08 31 37.0	-4.0
VHO				*i* S	Sb	08 31 52.2	-5.4
VHO	**Vista Hermosa**	**1.27**	**38**	*i* P	Pn	08 31 37.0	-4.0
VHO				*i* S	Sb	08 31 52.2	-5.4
OXX	**Oaxaca**	**1.29**	**38**	*i* P	Pn	08 31 38.5	-2.7
OXX				*i* S	Sb	08 31 52.5	-5.5
OXX	**Oaxaca**	**1.29**	**38**	*i* P	Pn	08 31 38.5	-2.7
OXX				*i* S	Sb	08 31 52.5	-5.5
HUIG	**Huatulco**	**1.42**	**102**	*eP*	Pn	08 31 40.4	-2.7
HUIG				*i* S	Sn	08 31 56.0	-5.4
HUIG	**Huatulco**	**1.42**	**102**	*eP*	Pn	08 31 40.4	-2.7
HUIG				*i* S	Sn	08 31 56.0	-5.4
UTMO	**Huajuapan**	**1.77**	**352**	*i* P	Pn	08 31 45.7	-2.2
UTMO				*i* S	Sn	08 32 06.6	-3.4
CMIG	**Matias Romero**	**2.76**	**68**	*i* P	Pn	08 31 58.2	-3.2
CMIG				*i* S	Sn	08 32 30.1	-4.3
CMIG	**Matias Romero**	**2.76**	**68**	*i* P	Pn	08 31 58.2	-3.2
CMIG				*i* S	Sn	08 32 30.1	-4.3

*ISCJB **22** 08:46:42.5±0.9, 12.°94N±0.°05×143.°53E±0.°10, h145km±9km, mb4.1/23, Error ellipse: s-maj=16.2km s-min=8.2km az=165.6*
*IDC **22** 08:46:43.7±0.6, 12.°94N×143.°55E, h143km±5km, mb3.8/16, mb1 4.0/17, mb1mx3.9/27, mbtmp3.8/17, MS2.9/1, Ms1 2.9/1, ms1mx2.2/36, Error ellipse: s-maj=10.3km s-min=8.9km az=109.0*
*NEIC **22** 08:46:44.0±0.9, 12.°96N×143.°56E, h146km±8km, mb4.4/10, Error ellipse: s-maj=11.4km s-min=6.7km az=79.0*

ISC 22 08:46:44.0±0.8, 12.°96N±0.°05×143.°58E±0.°10, h146km±9km, h142km±5.1km; pP-P, n41, σ0.°94/40, mb4.1/23, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.40**	**63**	P	**Pn**	**08 47 12.6**	**+0.4**
	673nm,0.3s,baz=192,slow=7.2,SNR=511						
GUMO				S	**Sn**	**08 47 33.6**	**-0.2**
	1μm,0.3s,baz=339,slow=23,SNR=14						
GUMO				LR	LR	08 47 52.0	
	comp=Z,881nm,18.9s,baz=23,slow=48						
GUMO	**Guam**	**1.40**	**63**	*e*Pn	**Pn**	**08 47 12.6**	**+0.4**
GUMO				*e*Sn	**Sn**	**08 47 32.6**	**-1.2**
GUMO				LR	LR	08 47 52.0	
CBIJ	**Chichi jima**	**14.12**	**355**	P	**Pn**	**08 50 00.9**	**+3.3**
	9.8nm,0.3s,baz=353,slow=22,SNR=5.6						
JOW	**Kunigami**	**19.91**	**316**	P	**P**	**08 51 05.5**	**+1.2**
	4.3nm,0.3s,baz=132,slow=14,SNR=8.1						
JOW	**Kunigami**	**19.91**	**316**	*eP*	**P**	**08 51 05.5**	**+1.2**
	5.2nm,0.4s						
JNU	**Nakatsue**	**23.18**	**332**	*eP*	**P**	**08 51 38.0**	**+0.2**
	4.7nm,0.9s,mb3.9						
MJAR	**Matsushiro Arr**	**23.97**	**349**	P	**P**	**08 51 43.6**	**-1.3**
	3.0nm,0.7s,mb4.0,baz=177,slow=9.2,SNR=9.7						
MJAR				pP		08 52 15.5	
	4.0nm,0.8s,baz=177,slow=10,SNR=2.9						
MAJO	**Matsushiro**	**23.97**	**349**	*eP*	**P**	**08 51 43.3**	**-1.6**
	8.9nm,0.8s,mb4.3						
MAT	**Matsushiro**	**23.97**	**349**	P	**P**	**08 51 43.2**	**-1.7**
SSLB	**Suanglung**	**23.98**	**300**	*eP*	**P**	**08 51 45.2**	**0.0**
	27nm,0.7s,mb4.9						
COEN	**Coen**	**26.75**	**181**	*eP*	**P**	**08 52 09.9**	**-0.2**
	63nm,0.9s,mb5.2						
KSRS	**Korea Array**	**28.12**	**333**	P	**P**	**08 52 21.5**	**-0.7**
	1.8nm,0.6s,mb4.0,baz=148,slow=8.5,SNR=7.8						
KSRS				LR	LR	09 02 08.3	
	comp=Z,25nm,20.6s,baz=160,slow=33						
CTA	**Charters Tower**	**32.95**	**175**	P	**P**	**08 53 05.5**	**+0.7**
	6.6nm,0.8s,mb4.4,baz=321,slow=11,SNR=6.1						
CTAO	**Charters Tower**	**32.95**	**175**	*eP*	**P**	**08 53 05.4**	**+0.6**
	4.7nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**33.94**	**196**	P	**P**	**08 53 13.1**	**-0.3**
	3.9nm,0.7s,mb4.3,baz=16,slow=9.5,SNR=73						
WRA				S	**S**	**08 58 26.0**	**-1.5**
	0.5nm,0.9s,baz=21,slow=14,SNR=3.5						
WRA				ScP	ScP	08 59 18.4	-1.5
	1.0nm,0.8s,baz=13,slow=3.5,SNR=7.6						
WRA	**Warramunga Arr**	**33.94**	**196**	P	**P**	**08 53 13.1**	**-0.3**
WRA				S	**S**	**08 58 26.1**	**-1.5**
WRA				ScP	ScP	08 59 18.4	-1.6
FITZ	**Fitzroy Crossi**	**35.58**	**210**	P	**P**	**08 53 27.3**	**-0.3**
	4.4nm,0.6s,mb4.3,baz=25,slow=8.9,SNR=15						
ASAR	**Alice Springs**	**37.61**	**195**	P	**P**	**08 53 44.6**	**-0.1**
	2.7nm,0.7s,mb4.0,baz=20,slow=12,SNR=44						
ASAR				S	**S**	**08 59 22.8**	**-0.8**
	1.4nm,1.0s,baz=14,slow=19,SNR=5.5						
ASAR				ScP	ScP	08 59 33.0	-0.3
	0.5nm,1.0s,baz=12,slow=6.6,SNR=4.7						
EIDS	**Eidsvold**	**38.79**	**169**	*eP*	**P**	**08 53 54.4**	**-0.2**
	4.2nm,0.8s,mb4.1						
NOUC	**Port Laguerre**	**41.36**	**147**	*eP*	**P**	**08 54 16.3**	**+0.4**
DZM	**Mont Dzumac**	**41.41**	**147**	*eP*	**P**	**08 54 17.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**43.23**	**283**	P	**P**	**08 54 31.8**	**+0.6**
	1.4nm,0.5s,mb3.8,baz=89,slow=6.2,SNR=9.6						
CMAR				pP	pP	08 55 01.9	-1.7
	3.0nm,0.9s,baz=87,slow=6.2,SNR=4.3						
ARMA	**Armidale**	**43.82**	**170**	*eP*	**P**	**08 54 36.0**	**+0.5**
	8.0nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**44.62**	**182**	P	**P**	**08 54 41.3**	**-0.6**
	3.3nm,0.6s,mb4.1,baz=341,slow=12,SNR=10						
STKA	**Stephens Creek**	**44.62**	**182**	*eP*	**P**	**08 54 41.1**	**-0.8**
	1.7nm,1.0s,mb3.6						
PSI	**Prapat**	**45.29**	**261**	P	**P**	**08 54 47.3**	**-0.3**
	3.1nm,0.4s,mb4.3,baz=46,slow=4.0,SNR=6.6						
SONM	**Songino Array**	**46.53**	**326**	P	**P**	**08 54 57.1**	**+0.3**
	1.3nm,0.6s,mb3.8,baz=143,slow=7.7,SNR=8.6						
SONM				pP	pP	08 55 28.2	-1.4
	0.5nm,0.5s,baz=150,slow=7.0,SNR=2.0						
SONM				ScP	ScP	09 00 07.9	-0.8
	0.6nm,0.7s,baz=147,slow=3.4,SNR=3.4						
MKAR	**Makanchi Array**	**61.07**	**316**	P	**P**	**08 56 43.0**	**+0.5**
	0.5nm,0.2s,mb3.9,baz=87,slow=7.3,SNR=4.0						
MKAR				pP	pP	08 57 13.9	-3.1
	0.5nm,0.2s,baz=89,slow=9.1,SNR=1.4						
MKAR	**Makanchi Array**	**61.07**	**316**	P	**P**	**08 56 43.0**	**+0.5**
MKAR				pP	pP	08 57 13.9	-3.1
KURK	**Kurchatov**	**64.26**	**320**	*eP*	**P**	**08 57 05.1**	**+1.6**
	5.8nm,0.9s,mb4.4						
ILAR	**Eielson Array**	**69.67**	**25**	P	**P**	**08 57 35.8**	**-1.7**
	0.8nm,0.6s,mb3.6,baz=255,slow=5.7,SNR=13						
ILAR				pP	pP	08 58 12.2	-0.6
	0.6nm,0.8s,baz=260,slow=5.2,SNR=2.2						
YKA	**Yellowknife Ar**	**83.99**	**27**	P	**P**	**08 58 58.3**	**+0.6**
	0.2nm,0.3s,mb3.4,baz=286,slow=5.2,SNR=8.4						
YBH	**Yreka Blue Hor**	**84.23**	**49**	P	**P**	**08 59 01.1**	**+1.7**
	0.6nm,0.4s,mb3.7,baz=341,slow=3.2,SNR=5.5						
YBH				pP	pP	08 59 38.9	+3.0
	0.8nm,0.7s,baz=236,slow=2.7,SNR=1.9						
ARCES	**ARCESS Array B**	**87.29**	**342**	P	**P**	**08 59 13.5**	**-0.4**
	3.5nm,0.8s,mb4.2,baz=84,slow=8.3,SNR=3.4						
NVAR	**Mina Array Bea**	**88.29**	**51**	P	**P**	**08 59 19.9**	**+0.6**
	1.2nm,0.7s,mb3.8,baz=273,slow=5.8,SNR=7.9						
DBIC	**Dimbokro**	**143.07**	**300**	PKP	PKPdf	09 06 01.3	-0.4
	1.3nm,0.6s,baz=231,slow=4.4,SNR=3.3						
DBIC	**Dimbokro**	**143.07**	**300**	PKP	PKPdf	09 06 01.3	-0.4
LCO	**Las Campanas**	**144.40**	**122**	*e*PKPdf	PKPdf	09 06 03.7	+0.2
LPAZ	**La Paz**	**149.16**	**100**	PKP	PKPdf	09 06 13.2	+1.4
	3.7nm,0.7s,baz=217,slow=5.1,SNR=4.9						
LPAZ				PKPbc	PKPbc	09 06 17.7	+1.5
	3.3nm,0.6s,baz=246,slow=2.9,SNR=4.9						
LPAZ	**La Paz**	**149.16**	**100**	*e*PKPdf	PKPdf	09 06 13.4	+1.6
LPAZ				*e*PKPbc	PKPbc	09 06 17.6	+1.5
CPUP	**Villa Florida**	**156.29**	**127**	PKPab	PKPab	09 06 52.0	+1.2
	1.6nm,0.6s,baz=308,slow=2.8,SNR=4.2						

*IDC **22** 09:07:34.4±5.1, 36.°19N×71.°05E, h95km±44km, mb3.7/7, mb1 3.8/11, mb1mx3.5/28, mbtmp3.7/11, MS2.5/1, Ms1 2.5/1, ms1mx2.2/37, Error ellipse: s-maj=33.9km s-min=19.9km az=31.0*
*ISCJB **22** 09:07:35.9±0.9, 36.°33N±0.°04×71.°06E±0.°08, h118km±10km, mb3.8/7, Error ellipse: s-maj=12.1km s-min=4.2km az=156.2*
*NEIC **22** 09:07:36.0±1.1, 36.°24N×70.°95E, h106km±11km, mb4.7/9, Error ellipse: s-maj=13.9km s-min=4.6km az=58.0*
*NNC **22** 09:07:43.6±1.8, 37.°36N×70.°70E, h0km, mb4.2, mpv4.5, Error ellipse: s-maj=14.6km s-min=13.5km az=72.0*

ISC 22 09:07:36.7±0.8, 36.°29N±0.°04×71.°05E±0.°09, h111km±9km, n56, σ1.°19/73, mb3.8/7, 6C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.05**	**49**	P	**Pn**	**09 08 48.6**	**-1.6**
KSH				S	**Sn**	**09 09 39.0**	**-8.4**
KSH				smax			
	comp=N,300nm,0.5s						
KSH				smax			
	comp=E,260nm,0.5s						
AML	**Almayashu**	**6.18**	**19**	P	**Pn**	**09 09 06.3**	**+0.8**
	SNR=21						
AML	**Almayashu**	**6.18**	**19**	*e*Pn	**Pn**	**09 09 05.8**	**+0.3**
AML				*e*Sn	**Sn**	**09 10 12.3**	**-2.3**
UCH	**Uchtor**	**6.51**	**23**	P	**Pn**	**09 09 10.6**	**+0.8**
	SNR=22						
KZA	**Kyzart**	**6.63**	**28**	*e*Pn	**Pn**	**09 09 13.0**	**+1.5**
	comp=E,140nm,0.6s						
EKS2	**Erkin-Say**	**6.70**	**18**	P	**Pn**	**09 09 13.2**	**+0.7**
	SNR=10.0						
EKS2	**Erkin-Say**	**6.70**	**18**	*e*Pn	**Pn**	**09 09 13.0**	**+0.6**
	comp=E,9.7nm,0.3s						
EKS2				*e*Sn	**Sn**	**09 10 24.6**	**-2.7**
KK31	**Karatay Array**	**6.81**	**357**	Pn	**Pn**	**09 09 12.9**	**-1.1**
	comp=E,30nm,0.3s,baz=179,slow=12,SNR=472						
KK31				⇑Sn	**Sn**	**09 10 23.0**	**-7.0**
	comp=E,9.8nm,0.4s						
KKAR	**Karatay Array**	**6.81**	**357**	*e*Pn	**Pn**	**09 09 13.8**	**-0.2**
	comp=E,78nm,0.4s						
KKAR				*e*Sn	**Sn**	**09 10 27.9**	**-2.1**
SDNR	**Sundarnagar**	**6.86**	**132**	*e*PKP	**Pn**	**09 09 17.5**	**+2.7**
SDNR				*e*S	**Sn**	**09 10 29.5**	**-1.9**
AAK	**Ala-Archa**	**6.87**	**22**	P	**Pn**	**09 09 15.5**	**+0.8**
	SNR=26						
AAK	**Ala-Archa**	**6.87**	**22**	P	**Pn**	**09 09 15.7**	**+0.9**
	comp=E,0.2nm,0.3s,baz=169,slow=4.5,SNR=42						
AAK				S	**Sn**	**09 10 30.0**	**-1.4**
	comp=E,0.1nm,0.3s,baz=319,slow=22,SNR=9.4						
AAK	**Ala-Archa**	**6.87**	**22**	P	**Pn**	**09 09 15.7**	**+0.9**
AAK				S	**Sn**	**09 10 29.9**	**-1.4**
KBK	**Karagaybulak**	**7.03**	**24**	P	**Pn**	**09 09 19.0**	**+2.0**
	SNR=12						
ULHL	**Ulahol**	**7.18**	**33**	P	**Pn**	**09 09 19.9**	**+0.9**
	SNR=5.6						
SMLA	**Simla**	**7.25**	**134**	*i* P	**Pn**	**09 09 21.0**	**+1.0**
SMLA				*i* S	**Sn**	**09 10 39.9**	**-0.8**
SMLA				⇓		09 10 43.9	
	comp=N,1μm,0.3s						
SMLA				⇓		09 10 45.3	
	comp=E,1μm,0.3s						
CHMS	**Chumysh**	**7.28**	**22**	P	**Pn**	**09 09 21.9**	**+1.5**
	SNR=12						
USP	**Ospenovka**	**7.45**	**20**	P	**Pn**	**09 09 22.5**	**-0.2**
	SNR=20						
TKM2	**Tokmak 2**	**7.49**	**27**	⇑Pn	**Pn**	**09 09 22.6**	**-0.6**
	comp=E,12nm,0.6s						
TKM2				⇓Sn	**Sn**	**09 10 41.9**	**-4.6**
	comp=E,19nm,1.3s						
TKM2	**Tokmak 2**	**7.49**	**27**	P	**Pn**	**09 09 27.5**	**+4.3**
	SNR=15						
TKM2	**Tokmak 2**	**7.49**	**27**	*e*Pn	**Pn**	**09 09 23.8**	**+0.6**
	comp=E,16nm,0.6s						
TKM2				*e*Sn	**Sn**	**09 10 45.6**	**-0.9**
JOSI	**Joshimath**	**9.13**	**126**	*e*PKP	**Pn**	**09 09 47.8**	**+2.3**
JOSI				AMb	AMB	09 09 50.8	
	comp=Z,81nm,0.8s						
JOSI				*e*S	**Sn**	**09 11 22.6**	**-3.7**
KHET	**Khetri**	**9.13**	**152**	*e*PKP	**Pn**	**09 09 43.3**	**-2.3**
KHET				AMb	AMB	09 09 47.3	
	comp=Z,21nm,0.4s						
KHET				*e*S	**Sn**	**09 11 19.4**	**-7.1**
SONA	**Sohna**	**9.51**	**146**	*e*PKP	**Pn**	**09 09 50.4**	**-0.3**
SONA				AMb	AMB	09 09 53.0	
	comp=Z,8.2nm,0.2s						
SONA				*e*S	**Sn**	**09 11 30.5**	**-5.1**
DANN	**Dangsing**	**13.34**	**123**	*e*P	**Pn**	**09 10 41.9**	**+0.2**
	comp=Z,22nm,0.5s						
MK31	**Makanchi Array**	**13.44**	**35**	*e*Pn	**Pn**	**09 10 45.5**	**+2.7**
MKAR	**Makanchi Array**	**13.44**	**35**	P	**Pn**	**09 10 41.9**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=220,slow=13,SNR=8.1						
KOLN	**Koldanda**	**13.61**	**125**	*e*P	**Pn**	**09 10 45.7**	**+0.5**
	comp=Z,13nm,0.5s						
GKN	**Gorkha**	**14.16**	**122**	*e*P	**Pn**	**09 10 52.1**	**-0.2**
	comp=Z,43nm,0.6s						
DMN	**Daman**	**14.73**	**122**	*e*P	**Pn**	**09 11 00.0**	**+0.4**
	comp=Z,31nm,0.9s						
KKN	**Kakani**	**14.74**	**121**	*e*P	**Pn**	**09 10 59.5**	**-0.1**
	comp=Z,25nm,0.5s						
GUN	**Gumba**	**15.08**	**119**	*e*P	**Pn**	**09 11 03.7**	**-0.3**
	comp=Z,14nm,0.4s						
AB31	**Akbulak array**	**15.28**	**331**	⇓P	**Pn**	**09 11 05.6**	**-0.7**
	comp=Z,2.2nm,0.4s,baz=166,slow=13,SNR=67						
AB31				⇓S	**S**	**09 13 45.8**	**-18**
	comp=Z,3.0nm,0.7s,baz=160,slow=22,SNR=6.8						
ABKAR	**Akbulak array**	**15.28**	**331**	*e*Pn	**Pn**	**09 11 05.5**	**-0.7**
	comp=Z,4.1nm,0.4s						
KURBB	**Kurchatov Arra**	**15.30**	**18**	⇑P	**Pn**	**09 11 08.9**	**+2.4**
	comp=Z,0.6nm,0.6s						
KURK	**Kurchatov**	**15.41**	**18**	⇑P	**Pn**	**09 11 09.3**	**+1.4**
	comp=Z,4.9nm,1.2s						
KURK	**Kurchatov**	**15.41**	**18**	*e*Pn	**Pn**	**09 11 08.0**	**0.0**
VOSK	**Vostochnaya**	**16.43**	**360**	⇑P	**Pn**	**09 11 22.1**	**+1.7**
	comp=Z,3.5nm,0.8s						
TAPN	**Taplejung**	**16.72**	**118**	*e*P	**Pn**	**09 11 24.4**	**+0.1**
	comp=Z,33nm,0.5s						
ZRNK	**Zerenda**	**16.72**	**356**	⇓P	**Pn**	**09 11 25.2**	**+1.2**
	comp=Z,1.6nm,0.6s						
BVAR	**Borovoye Array**	**16.73**	**359**	P	**Pn**	**09 11 23.7**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=168,slow=11,SNR=12						
BRVK	**Borovoye**	**16.77**	**358**	*e*Pn	**Pn**	**09 11 24.4**	**-0.3**
	comp=Z,2.4nm,0.6s						
AKTK	**Aktyubinsk**	**16.98**	**330**	P	**Pn**	**09 11 26.9**	**-0.3**
AKTK				S	**S**	**09 14 28.5**	**-8.0**
AKTO	**Aktyubinsk**	**16.98**	**330**	⇑P	**Pn**	**09 11 29.0**	**+1.7**
	comp=Z,1.8nm,0.8s						
AKTO				⇓S	**S**	**09 14 26.4**	**-10**
	comp=Z,0.9nm,0.7s						
AKTO	**Aktyubinsk**	**16.98**	**330**	P	**Pn**	**09 11 26.9**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=130,slow=13,SNR=15						
AKTO				S	**S**	**09 14 28.5**	**-7.9**
	comp=Z,0.2nm,0.3s,baz=246,slow=20,SNR=2.7						
ZAA0	**Zalesovo Array**	**20.09**	**24**	*e*P	**P**	**09 12 01.7**	**+0.5**
ZALV	**Zalesovo Beam**	**20.09**	**24**	P	**P**	**09 12 01.3**	**+0.1**
	comp=Z,8.5nm,0.6s,baz=225,slow=11,SNR=32						
FINES	**FINESS Array B**	**37.67**	**326**	P	**P**	**09 14 40.6**	**-0.3**
	comp=Z,0.9nm,0.3s,mb4.0,baz=130,slow=7.7,SNR=3.9						
ARCES	**ARCESS Array B**	**41.35**	**338**	P	**P**	**09 15 11.9**	**+0.7**
	comp=Z,3.5nm,0.8s,mb4.3,baz=106,slow=8.9,SNR=9.1						
NB2	**NORSAR Subarra**	**44.57**	**323**	P	**P**	**09 15 37.1**	**-0.1**
	comp=Z,2.4nm,0.5s,mb4.2,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.57**	**323**	P	**P**	**09 15 37.4**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.2,baz=96,slow=7.8,SNR=14						
TGY	**Tagaytay City**	**49.63**	**103**	LR	LR	09 38 17.9	
	comp=Z,4.7nm,18.8s,baz=250,slow=37						
TORD	**Torodi Ar. Bea**	**65.75**	**269**	P	**P**	**09 18 08.5**	**-1.6**
	comp=Z,1.0nm,0.5s,mb3.9,baz=48,slow=5.6,SNR=5.5						
YKA	**Yellowknife Ar**	**81.45**	**3**	P	**P**	**09 19 40.8**	**-0.2**
	comp=Z,0.5nm,0.7s,mb3.5,baz=351,slow=5.6,SNR=5.4						
WRA	**Warramunga Arr**	**81.85**	**122**	P	**P**	**09 19 43.1**	**-0.7**
	comp=Z,0.5nm,0.7s,mb3.4,baz=325,slow=5.1,SNR=8.5						
ASAR	**Alice Springs**	**84.11**	**125**	P	**P**	**09 19 54.6**	**-0.7**
	comp=Z,0.4nm,0.6s,mb3.5,baz=313,slow=4.7,SNR=8.4						

*IDC **22** 09:19:47.0±1.4, 55.°68N×115.°15E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/26, mbtmp3.5/4, Error ellipse: s-maj=47.1km s-min=22.8km az=134.0*
*MOS **22** 09:19:47.6±1.4, 56.°03N×114.°26E, h14km, mb4.4/3, Error ellipse: s-maj=17.1km s-min=11.8km az=58.5*
*BYKL **22** 09:19:47.9±0.3, 56.°10N×114.°02E*

ISC 22 09:19:46.0±0.3, 55.°99N±0.°03×114.°11E±0.°03, h10km, n48, σ1.°56/83, mb3.5/4, 8C-12D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOA	**Uoyan**	**1.35**	**277**	⇓*i*PG	**Pg**	**09 20 11.1**	**-0.7**
YOA				*i*		09 20 29.1	
YOA				pmax	pmax		
	comp=Z,600nm,0.3s						
YOA				smax			
	comp=E,10μm,0.7s						
YOA	**Uoyan**	**1.35**	**277**	⇑*i*Pg	**Pg**	**09 20 11.3**	**-0.5**
YOA				Pmax		09 20 15.9	
	comp=E,504nm,0.4s						
YOA				*i* Sg	**Sg**	**09 20 29.4**	**+0.1**
YOA				*e*Sb	**Sb**	**09 20 31.4**	**+2.9**
YOA				max		09 20 32.6	
	comp=E,8μm,0.5s						
KMO	**Kumora**	**1.64**	**268**	*e*PN	**Pn**	**09 20 16.2**	**+1.4**
KMO				*e*		09 20 35.3	
KMO				pmax	pmax		
	comp=Z,161nm,0.3s						
KMO				smax			
	comp=N,2μm,1.0s						
KMO	**Kumora**	**1.64**	**268**	⇑*i*Pg	**Pg**	**09 20 16.3**	**-1.1**
KMO				⇓*i*		09 20 22.5	
KMO				max		09 20 22.7	
	comp=N,546nm,0.4s						
KMO				*i* Sg	**Sg**	**09 20 37.3**	**-1.4**
KMO				Smax		09 20 40.3	
	comp=N,2μm,1.0s						
BOD	**Bodaibo**	**1.84**	**358**	*e*PN	**Pn**	**09 20 17.4**	**-0.1**
BOD				*e*		09 20 40.7	
BOD				pmax	pmax		
	comp=Z,384nm,0.6s						
BOD				smax			
	comp=E,3μm,0.6s						
BOD	**Bodaibo**	**1.84**	**358**	⇑*i*Pg	**Pg**	**09 20 17.9**	**-3.3**
BOD				Pmax		09 20 18.9	
	comp=E,435nm,1.0s						
BOD				*i* Sg	**Sg**	**09 20 41.2**	**-3.8**
BOD				Smax		09 20 42.2	
	comp=E,3μm,0.7s						
YLYR	**Ulyunkhan**	**2.02**	**238**	*e*PN	**Pn**	**09 20 24.1**	**+4.1**
YLYR				*e*		09 20 51.7	
YLYR				pmax	pmax		
	comp=Z,154nm,0.6s						
YLYR				smax			
	comp=E,804nm,0.2s						
YLYR	**Ulyunkhan**	**2.02**	**238**	⇑*i*Pn	**Pn**	**09 20 22.2**	**+2.2**
	comp=E,18nm,0.6s						
YLYR				⇑*i*Pn	**Pn**	**09 20 22.2**	**+2.2**
	comp=E,25nm,0.6s						
YLYR				⇓*i*Pn	**Pn**	**09 20 22.2**	**+2.2**
	comp=E,31nm,0.6s						
YLYR				*e*Pg	**Pg**	**09 20 24.0**	**-0.6**
YLYR				*e*		09 20 27.2	
YLYR				max		09 20 30.5	
	comp=E,113nm,0.5s						
YLYR				*i* Sg	**Sg**	**09 20 52.0**	**+1.2**
YLYR				Smax		09 20 54.1	
	comp=E,811nm,0.5s						
CRS	**Chara**	**2.48**	**67**	*e*PN	**Pn**	**09 20 32.5**	**+6.1**
CRS				*e*		09 21 05.3	
CRS				pmax	pmax		
	comp=Z,323nm,0.6s						
CRS				smax			
	comp=E,682nm,0.7s						
CRS	**Chara**	**2.48**	**67**	⇓*i*Pn	**Pn**	**09 20 28.1**	**+1.7**
CRS				⇓*i*Pg	**Pg**	**09 20 32.6**	**-0.9**
CRS				*e*PgPg		09 20 37.5	
CRS				max		09 20 38.2	
	comp=E,323nm,0.8s						
CRS				*i* Sg	**Sg**	**09 21 05.4**	**-0.3**
CRS				Smax		09 21 07.9	
	comp=E,683nm,0.7s						
NIZ	**Nizh Angarsk**	**2.58**	**267**	*e*PN	**Pn**	**09 20 29.9**	**+2.1**
NIZ				*e*		09 20 33.1	
NIZ				*e*S	**Sn**	**09 21 00.3**	**+1.1**
NIZ				pmax	pmax		
	comp=Z,72nm,0.6s						
NIZ				smax			
	comp=N,467nm,0.3s						
NIZ	**Nizh Angarsk**	**2.58**	**267**	*e*Pn	**Pn**	**09 20 29.0**	**+1.2**
NIZ				⇓*i*		09 20 31.1	
NIZ				⇓*i*Pg	**Pg**	**09 20 33.1**	**-2.4**
NIZ				Pmax		09 20 36.0	
	comp=N,70nm,0.9s						
NIZ				*i* Sg	**Sg**	**09 21 06.9**	**-2.0**
NIZ				Smax		09 21 11.0	
	comp=N,451nm,0.7s						
SYVR	**Suvo**	**3.33**	**227**	*e*PN	**Pn**	**09 20 40.0**	**+1.9**
SYVR				*e*		09 20 49.4	
SYVR				*e*		09 21 32.0	
SYVR				pmax	pmax		
	comp=Z,49nm,0.9s						
SYVR				smax			
	comp=E,227nm,0.8s						
SYVR	**Suvo**	**3.33**	**227**	⇓*i*Pn	**Pn**	**09 20 40.0**	**+1.9**
SYVR				*e*		09 20 45.5	
SYVR				*e*Pg	**Pg**	**09 20 47.6**	**-2.2**
SYVR				Pmax		09 20 57.5	
	comp=E,49nm,0.9s						
SYVR				*e*		09 21 15.5	
SYVR				*e*Sg	**Sg**	**09 21 32.2**	**-0.8**
SYVR				Smax		09 21 40.6	
	comp=

UUDB				Smax		09 22 47.7	
	comp=Z,2µm,0.0s						
KAB	Kabansk	5.91	231	eSg	Sg	09 22 51.1	-4.3
KAB				Smax		09 23 38.4	
	comp=Z,471nm,0.8s						
CLNS	Chul'man	6.05	77	e	Pb	09 21 32.9	+1.6
CLNS				e		09 21 49.3	
CLNS				e		09 22 15.3	
CLNS				e		09 22 45.5	
CLNS				eSg	Sg	09 22 54.5	-5.4
TNDR	Tynda	6.08	94	e	Sb	09 22 38.6	-6.0
TNDR				eSg	Sg	09 22 59.3	-1.6
HRMR	Khuramsha	6.09	227	ePn	Pn	09 21 16.5	+0.6
HRMR				Pg	Pg	09 21 37.0	-5.4
HRMR				Pmax		09 21 50.1	
	comp=Z,23nm,0.6s						
HRMR				e		09 22 05.8	
HRMR				eSg	Sg	09 22 58.4	-2.8
HRMR				e		09 23 06.9	
HRMR				max		09 23 07.6	
	comp=Z,307nm,0.8s						
KPC	Khapcheranga	6.38	190	ePN	Pg	09 21 42.9	-5.2
KPC				e		09 23 08.8	
KPC				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KPC				smax			
	comp=N,141nm,0.8s						
KPC	Khapcheranga	6.38	190	ePn	Pn	09 21 21.0	+1.0
KPC				e		09 21 30.0	
KPC				ePg	Pg	09 21 43.4	-4.7
KPC				e		09 21 53.4	
KPC				max		09 21 54.3	
	comp=N,10.0nm,0.3s						
KPC				eSn	Sn	09 22 34.6	+1.8
KPC				e		09 22 52.4	
KPC				eSg	Sg	09 23 08.9	-1.8
KPC				Smax		09 23 17.5	
	comp=N,141nm,0.9s						
LSTR	Listvyanka	6.86	237	e	Sn	09 22 52.3	+7.8
LSTR				eSg	Sg	09 23 21.1	-4.8
LSTR				Smax		09 23 26.1	
	comp=N,136nm,1.8s						
TLY	Talaya	7.55	239	e	Pg	09 22 16.8	+6.5
TLY				eSg	Sg	09 23 41.2	-6.7
TLY				Smax		09 23 57.1	
	comp=N,64nm,1.5s						
ZAK	Zakamensk	8.59	234	ePG	Px	09 22 27.5	
ZAK				e		09 24 20.1	
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAK				smax			
	comp=N,22nm,1.0s						
ZAK	Zakamensk	8.59	234	Pg	Px	09 22 21.5	
ZAK				Pmax		09 22 24.7	
	comp=N,2.0nm,0.1s						
ZAK				e		09 22 52.8	
ZAK				eSg	Sx	09 24 13.3	
ZAK				Smax		09 24 36.4	
	comp=N,139nm,0.9s						
MOY	Mondy	8.88	246	ePG	Pn	09 22 28.9	+35
MOY				eS	Sn	09 23 34.2	0.0
MOY	Mondy	8.88	246	ePn	Pn	09 21 56.6	+2.4
MOY				e		09 22 10.7	
MOY				ePg	Pn	09 22 27.7	+33
MOY				Pmax		09 22 30.6	
	comp=N,6.0nm,0.7s						
MOY				e		09 22 40.0	
MOY				e		09 23 45.0	
MOY				eSg	Sn	09 24 23.6	+49
MOY				Smax		09 24 27.2	
	comp=N,101nm,1.6s						
ORL	Orlik	9.05	254	ePn	Pn	09 22 00.8	+4.2
ORL				e		09 22 02.2	
ORL				e		09 22 23.8	
ORL				max		09 22 24.7	
	comp=N,5.0nm,0.9s						
ORL				ePg	Pn	09 22 29.9	+33
ORL				e		09 23 45.1	
ORL				eSg	Sn	09 24 27.6	+49
ORL				Smax		09 24 33.9	
	comp=N,68nm,1.4s						
ULN	Ulaanbaatar	9.22	211	e	Px	09 23 27.1	
ULN				e		09 23 58.3	
ULN				eSg	Sx	09 24 37.5	
SONM	Songino Array	9.45	213	Pn	Pn	09 22 07.6	+5.6
	baz=25,slow=11,SNR=3.4						
SONM				Lg		09 24 46.3	
	comp=N,1.8nm,0.3s,baz=31,slow=29,SNR=16						
SONM	Songino Array	9.45	213	P	Pn	09 22 07.6	+5.6
SEY	Seymchan	20.39	54	eP	P	09 24 19.3	-3.2
MKAR	Makanchi Array	21.71	258	P	P	09 24 45.1	+8.2
	comp=N,1.4nm,0.5s,mb3.6,baz=40,slow=7.5,SNR=4.9						
MKAR	Makanchi Array	21.71	258	eP	P	09 24 45.7	+8.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	28.64	259	eP	P	09 25 51.9	+9.5
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
AAK				MLR	MLR		
	comp=Z,30nm,17.0s						
ILAR	Eielson Array	44.79	37	P	P	09 28 00.8	+1.5
	comp=Z,0.7nm,1.0s,mb3.5,baz=304,slow=10,SNR=8.0						
ILAR	Eielson Array	44.79	37	P	P	09 28 00.8	+1.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKASG	Malin Array Be	47.92	301	i P	P	09 28 32.5	+8.5
WRA	Warramunga Arr	77.55	161	P	P	09 31 41.8	+0.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=347,slow=5.5,SNR=4.6						
WRA	Warramunga Arr	77.55	161	P	P	09 31 41.8	+0.1

*IDC **22** 09:28:47.2±0.8, 24°.01S×175°.88W, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.2/19, mbtmp4.2/10, MS3.7/5, Ms1 3.7/5, ms1mx3.3/30, Error ellipse: s-maj=33.4km s-min=22.1km az=153.0*

*ISCJB **22** 09:28:50.4±0.6, 24°.2S±0°.1×175°.9W±0°.1, h33km, mb4.2/10, MS3.7/4, Error ellipse: s-maj=19.2km s-min=16.7km az=176.9*

*NEIC **22** 09:28:58.8±3.5, 23°.10S×175°.09W, h162km±42km, mb4.8/1, Error ellipse: s-maj=46.7km s-min=14.3km az=188.0*

ISC 22 09:28:52.1±0.6**, 24°.3S**±0°.1**×175°.8W**±0°.1**, h35**km**, (h42**km±1.0km**:pP-P), n29,** σ**0s.96**/20**, mb4.2**/10**, MS3.7**/4**, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.66	318	ePn	Pn	09 30 57.6	+2.6
	26nm,0.8s						
AFI	Afiamalu	10.99	21	Pn	Pn	09 31 14.7	-12
	2.4nm,0.3s,baz=299,slow=21,SNR=5.3						
AFI				Sn	Sn	09 33 09.3	-19
	3.2nm,0.3s,baz=62,slow=22,SNR=5.4						
RAR	Rarotonga	15.12	82	Pn	Pn	09 32 13.5	-10
	3.7nm,0.3s,baz=257,slow=9.5,SNR=16						
RAR				LR	LR	09 37 05.9	
	comp=Z,217nm,19.9s,baz=24,slow=33						
DZM	Mont Dzumac	16.45	274	eLR	LR	09 36 18.3	
	218nm,23.4s						
TBI	Tubuai	24.13	93	eLR	LR	09 39 46.2	
	190nm,29.2s						
PPT	Papeete	25.38	80	eLR	LR	09 40 14.4	
	199nm,29.0s						
PPT	Papeete	25.38	80	LR	LR	09 42 19.7	
	comp=Z,130nm,19.0s,MS3.5,baz=236,slow=32						
HNR	Honiara	27.41	298	LR	LR	09 43 40.4	
	comp=Z,80nm,21.5s,MS3.3,baz=231,slow=33						
CTA	Charters Tower	35.29	269	P	P	09 35 44.2	+0.3
	4.9nm,0.4s,mb4.8,baz=91,slow=9.0,SNR=12						
CTA	Charters Tower	35.29	269	P	P	09 35 44.2	+0.3
CTAO	Charters Tower	35.29	269	eP	P	09 35 43.5	-0.4
ASAR	Alice Springs	45.73	260	P	P	09 37 10.4	+0.2
	2.0nm,0.9s,mb4.1,baz=94,slow=8.6,SNR=14						
WRA	Warramunga Arr	46.18	265	P	P	09 37 12.7	-1.1
	3.4nm,0.7s,mb4.4,baz=101,slow=8.2,SNR=20						
KAKA	Kakadu	50.14	274	P	P	09 37 42.7	-1.8
FITZ	Fitzroy Crossi	54.60	264	P	P	09 38 18.3	+0.8
	1.6nm,0.6s,mb4.2,baz=68,slow=9.3,SNR=3.8						
MAW	Mawson	78.71	200	P	P	09 40 51.5	+1.1
	1.0nm,0.4s,mb4.1,baz=100,slow=6.1,SNR=3.5						
PETK	Petropavlovsk-	80.42	344	P	P	09 40 59.1	-0.6
	4.0nm,0.7s,mb4.5,baz=142,slow=7.2,SNR=3.0						
NVAR	Mina Array Bea	82.42	42	P	P	09 41 10.8	+0.1
	0.6nm,0.8s,mb3.5,baz=228,slow=8.0,SNR=2.4						
VNA3	Neumayer Olymp	84.25	176	e	P	09 41 19.1	-0.6
VNA3				e	pP	09 41 30.7	-0.1
VNA2	Neumayer--Watz	84.72	176	e	P	09 41 22.0	-0.1
	baz=189,slow=3.3						
VNA2				e	pP	09 41 34.5	+1.4
VNA1	Neumayer--Stat	84.93	176	e	P	09 41 23.4	+0.2
VNA1				e	pP	09 41 35.9	+1.7
TXAR	Lajitas Array	87.42	56	P	P	09 41 36.5	+0.4
	0.4nm,0.9s,mb3.6,baz=225,slow=8.3,SNR=3.0						
PDAR	Pinedale Array	90.35	42	LR	LR	10 18 58.7	
	comp=Z,42nm,19.1s,MS3.9,baz=259,slow=33						
ILAR	Eielson Array	91.55	12	P	P	09 41 53.7	-0.9
	0.2nm,0.9s,mb3.4,baz=211,slow=5.7,SNR=4.1						
CMAR	Chiang Mai Arr	93.25	289	P	P	09 42 04.7	+1.2
	4.6nm,0.6s,mb5.1,baz=138,slow=3.9,SNR=5.0						
ATAH	Atahualpa	93.82	100	LR	LR	10 13 24.0	
	comp=Z,62nm,19.9s,MS4.1,baz=203,slow=28						
AKASG	Malin Array Be	147.27	330	PKPbc	PKPbc	09 48 30.6	-0.9
	0.8nm,0.4s,baz=42,slow=3.8,SNR=6.7						
BRTR	Keskin Array B	150.81	309	PKPbc	PKPbc	09 48 40.6	-0.3
	1.2nm,0.9s,baz=130,slow=3.7,SNR=4.8						
TORD	Torodi Ar. Bea	168.69	168	PKPab	PKPab	09 50 08.6	+2.6
	0.6nm,0.9s,baz=208,slow=2.5,SNR=3.4						

*ISCJB **22** 09:40:15.2±0.4, 38°.48N±0°.02×21°.58E±0°.02, h6km±7km, Error ellipse: s-maj=3.9km s-min=3.2km az=8.0*

*ATH **22** 09:40:15.1, 38°.47N×21°.55E, h5km±3km, MD3.3/12*

*CSEM **22** 09:40:15.3±0.2, 38°.47N×21°.58E, h15km, ML2.4/6, Error ellipse: s-maj=3.4km s-min=2.7km az=3.0*

*THE **22** 09:40:15.7, 38°.48N×21°.59E, h2km±2km, ML2.4/6, Error ellipse: s-maj=2.4km s-min=0.6km az=318.0*

ISC 22 09:40:15.6±0.4**, 38°.46N**±0°.02×**21°.59E**±0°.03**, h14**km±6km**, n43,** σ**0s.85**/75**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.24	138	ePG	Pg	09 40 20.8	0.0
UPR				eSG	Sg	09 40 25.5	+1.1
UPR	University Cam	0.24	138	P	Pg	09 40 21.0	+0.2
UPR				S	Sg	09 40 25.0	+0.6
UPR	University Cam	0.24	138	ePg	Pg	09 40 20.8	0.0
UPR				S	Sg	09 40 25.0	+0.6
UPR				eSg	Sg	09 40 25.5	+1.1
EFP	Efpalio	0.25	98	ePG	Pg	09 40 21.1	0.0
EFP				eSG	Sg	09 40 26.3	+1.5
EFP	Efpalio	0.25	98	P	Pg	09 40 21.3	+0.2
EFP				S	Sg	09 40 24.1	-0.7
EFP	Efpalio	0.25	98	ePg	Pg	09 40 21.1	0.0
EFP				S	Sg	09 40 24.1	-0.7
EFP				eSg	Sg	09 40 26.3	+1.5
LAKA	Lakka	0.38	126	P	Pg	09 40 23.1	-0.2
LAKA				S	Sg	09 40 28.9	+0.4
LAKA	Lakka	0.38	126	P	Pg	09 40 23.1	-0.2
LAKA				S	Sg	09 40 28.9	+0.4
TRIZ	Trizonia	0.40	104	P	Pg	09 40 23.4	-0.2
TRIZ				S	Sg	09 40 29.2	+0.3
TRIZ	Trizonia	0.40	104	P	Pg	09 40 23.4	-0.2
TRIZ				S	Sg	09 40 29.2	+0.3
RLS	Riolos of Patr	0.41	193	ePB	Pg	09 40 24.0	0.0
RLS	Riolos of Patr	0.41	193	ePb	Pg	09 40 24.0	0.0
KALE	Kalithea	0.44	99	P	Pg	09 40 24.1	-0.3
KALE				S	Sg	09 40 30.7	+0.3
KALE	Kalithea	0.44	99	P	Pg	09 40 24.1	-0.3
KALE				S	Sg	09 40 30.7	+0.3
EVR	Evrytania	0.49	21	ePB	Pg	09 40 25.1	-0.2
EVR				eSB	Sg	09 40 32.6	+0.8
EVR	Evrytania	0.49	21	ePb	Pg	09 40 25.1	-0.2
EVR				eSb	Sg	09 40 32.6	+0.8
KFL	Anninata	0.72	241	P	Pg	09 40 29.6	-0.1
KFL				S	Sg	09 40 40.4	+1.3
KFL	Anninata	0.72	241	P	Pg	09 40 29.6	-0.1
KFL				S	Sg	09 40 40.4	+1.3
DSF	Desfina	0.74	94	P	Pg	09 40 28.8	-1.3
DSF				S	Sg	09 40 39.8	0.0
DSF	Desfina	0.74	94	P	Pg	09 40 28.8	-1.3
DSF				S	Sg	09 40 39.8	0.0
GUR	Goura	0.80	131	ePB	Pg	09 40 30.1	-1.0
GUR				eSB	Sg	09 40 42.2	+0.7
GUR	Goura	0.80	131	ePb	Pg	09 40 30.1	-1.0
GUR				eSb	Sg	09 40 42.2	+0.7
LKD2	Lefkada island	0.80	294	P	Pg	09 40 30.4	-0.7
LKD2				S	Sg	09 40 43.0	+1.4
LKD2	Lefkada island	0.80	294	P	Pg	09 40 30.4	-0.7
LKD2				S	Sg	09 40 43.0	+1.4
AGG	Agios Georgios	0.81	46	ePG	Pg	09 40 30.5	-0.8
AGG				eSB	Sg	09 40 42.6	+0.7
AGG	Agios Georgios	0.81	46	P	Pg	09 40 30.6	-0.7
AGG	Agios Georgios	0.81	46	P	Pg	09 40 30.6	-0.7
AGG				eSb	Sg	09 40 42.6	+0.7
VLS	Valsamata	0.83	250	ePG	Pg	09 40 30.2	-1.6
VLS				eSB	Sg	09 40 43.3	+0.6
VLS	Valsamata	0.83	250	ePg	Pg	09 40 30.2	-1.6
VLS				eSb	Sg	09 40 43.3	+0.6
THL	Klokotos Trika	1.15	17	ePN	Pg	09 40 36.8	-1.0
THL				eSB	Sg	09 40 52.8	0.0
THL	Klokotos Trika	1.15	17	ePn	Pg	09 40 36.8	-1.0
THL				eSb	Sg	09 40 52.8	0.0
LTK	Loutraki	1.17	112	ePB	Pb	09 40 38.4	+0.7
LTK				eSB	Sb	09 40 54.3	+1.6
LTK	Loutraki	1.17	112	ePb	Pb	09 40 38.4	+0.7
LTK				eSb	Sb	09 40 54.3	+1.6
VLX	Vlachokerasia	1.26	150	ePG	Pg	09 40 39.2	-0.7
VLX	Vlachokerasia	1.26	150	ePg	Pg	09 40 39.2	-0.7
ITM	Ithomi	1.31	168	ePB	Pb	09 40 40.4	+0.4
ITM	Ithomi	1.31	168	ePb	Pb	09 40 40.4	+0.4
LIT	Litokhoron	1.78	23	ePN	Pg	09 40 49.8	0.0
LIT	Litokhoron	1.78	23	ePn	Pg	09 40 49.8	0.0
VLI	Veliai	2.05	148	ePN	Pg	09 40 53.4	-1.5
VLI	Veliai	2.05	148	ePn	Pg	09 40 53.4	-1.5
KYTH	Kithira	2.47	152	ePN	Pg	09 40 59.8	-3.1
KYTH	Kithira	2.47	152	ePn	Pg	09 40 59.8	-3.1

*ISCJB **22** 09:48:23.5±0.7, 40°.65N±0°.05×29°.40E±0°.05, h15km±8km, Error ellipse: s-maj=9.8km s-min=5.6km az=152.3*

*ISK **22** 09:48:23.4, 40°.65N×29°.39E, h10km, ML2.2*

*DDA **22** 09:48:23.6, 40°.69N×29°.39E, h5km±3km, Md2.7*

*CSEM **22** 09:48:23.6±0.2, 40°.67N×29°.38E, h12km, ML2.2, Error ellipse: s-maj=4.7km s-min=3.1km az=166.0*

ISC 22 09:48:23.8±0.8**, 40°.67N**±0°.05×**29°.39E**±0°.05**, h14**km±9km**, n18,** σ**0s.53**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRT	Hereke	0.27	54	ePG	Pg	09 48 29.4	0.0
HRT				eSG	Sg	09 48 33.8	+0.6
HRT	Hereke	0.27	54	ePg	Pg	09 48 29.4	0.0
HRT				eSg	Sg	09 48 33.8	+0.6
GEMT	Gemlik	0.28	213	ePG	Pg	09 48 29.2	-0.4
GEMT				eSG	Sg	09 48 33.7	+0.2
GEMT	Gemlik	0.28	213	ePg	Pg	09 48 29.2	-0.4
GEMT				eSg	Sg	09 48 33.7	+0.3
BUY	Buyukada	0.28	313	i P	Pg	09 48 30.0	+0.4
BUY	Buyukada	0.28	313	i P	Pg	09 48 30.0	+0.4
ADVT	Abdulvahap	0.35	131	ePG	Pg	09 48 30.8	-0.1
ADVT	Abdulvahap	0.35	131	ePg	Pg	09 48 30.8	-0.2
ARMT	Armutlu	0.41	256	ePG	Pg	09 48 31.9	-0.2
ARMT				eSG	Sg	09 48 38.2	+0.6
ARMT	Armutlu	0.41	256	ePg	Pg	09 48 31.9	-0.1
ARMT				eSg	Sg	09 48 38.2	+0.6
MDNY	Mudanya-Bursa	0.48	232	ePG	Pg	09 48 33.0	-0.3
MDNY	Mudanya-Bursa	0.48	232	ePg	Pg	09 48 33.0	-0.4
ELBA	Catalca	0.87	304	i P	Pg	09 48 39.4	-1.2
ELBA	Catalca	0.87	304	i P	Pg	09 48 39.4	-1.3
GULT	Gulveren	0.89	105	ePG	Pg	09 48 40.8	-0.3
GULT	Gulveren	0.89	105	ePg	Pg	09 48 40.8	-0.2
GONE	Gonen-Balikesi	1.44	245	ePN	Pn	09 48 50.2	+0.7
GONE	Gonen-Balikesi	1.44	245	ePn	Pn	09 48 50.2	+0.7

*NIED **22** 10:13:00, 46°.90N×154°.20E, h17km, Mw4.1 Best double couple: $M_0$1.36000×10^15 NP1:ϕ_s218.00000°, δ55.00000°, λ126.00000°. NP2:ϕ_s346.00000°, δ49.00000°, λ49.00000°.*

*ISCJB **22** 10:13:01.5±1.0, 47°.20N±0°.08×153°.8E±0°.1, h45km±8km, mb4.0/21, MS3.5/2, Error ellipse: s-maj=17.3km s-min=6.2km az=138.7*

*BJI **22** 10:13:02.6, 47°.20N×153°.80E, h40km, mB4.4/5, mb4.4/5*

*MOS **22** 10:13:02.2±1.1, 47°.22N×153°.76E, h51km, mb4.4/12, Error ellipse: s-maj=13.1km s-min=8.2km az=63.2*

*IDC **22** 10:13:03.9±3.0, 47°.19N×153°.78E, h51km±27km, mb3.6/14, mb1 3.8/17, mb1mx3.8/28, mbtmp3.7/17, ML3.4/3, MS3.1/3, Ms1 3.1/3, ms1mx2.8/26, Error ellipse: s-maj=25.5km s-min=14.8km az=144.0*

*NEIC **22** 10:13:04.6±1.1, 47°.17N×153°.84E, h60km±10km, mb4.2/4, Error ellipse: s-maj=17.1km s-min=8.0km az=141.0*

ISC 22 10:13:04.0±0.8**, 47°.19N**±0°.08×**153°.8E**±0°.1**, h52**km±7km**, n63,** σ**1s.01**/69**, mb4.0**/21**, MS3.5**/2**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.81	23	ePN	Pn	10 14 01.2	+1.1
SKR				eS	Sn	10 14 40.5	-3.1
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR				pmax	pmax		
	comp=Z,80nm,0.4s						
SKR				smax			
	comp=N,330nm,0.9s						
SKR				smax			
	comp=E,200nm,0.9s						
YUK	Yuzh-Kuril'sk	6.41	243	i PN	Pn	10 14 35.5	-0.3
YUK				i S	Sn	10 15 48.3	+0.7
YUK				pmax	pmax		
	comp=Z,158nm,1.1s						
YUK				pmax	pmax		
	comp=N,77nm,0.6s						
YUK				pmax	pmax		
	comp=E,81nm,0.6s						
YUK				pmax	pmax		
	comp=Z,460nm,1.1s						
YUK				smax			
	comp=N,650nm,1.3s						
YUK				smax			
	comp=E,410nm,1.3s						
YUK				smax			
	comp=N,167nm,1.0s						
YUK				smax			
	comp=E,244nm,1.0s						
PETK	Petropavlovsk-	6.43	21	P	Pn	10 14 35.6	-0.4
	comp=E,0.9nm,0.3s,baz=180,slow=12,SNR=14						
PETK				S	Sn	10 15 56.2	+8.3
	baz=114,slow=44,SNR=2.0						
PETK				LR	LR	10 17 16.7	
	comp=E,124nm,18.1s,baz=210,slow=39						
PETK	Petropavlovsk-	6.43	21	PN	Pn	10 14 35.6	-0.4
PETK				S	Sn	10 15 56.2	+8.3
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PET	Petropavlovsk	6.62	26	ePN	Pn	10 14 38.3	-0.2
PET				pmax	pmax		
	comp=Z,44nm,1.1s						
YSS	Yuzh-Sakhalins	7.56	272	ePn	Pn	10 14 53.2	+1.7
	comp=Z,30nm,0.6s						
YSS	Yuzh-Sakhalins	7.56	272	ePN	Pn	10 14 52.8	+1.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAJ	Asahikawa	8.44	253	P	Pn	10 15 03.3	-0.3
	comp=Z,0.4nm,0.3s,baz=84,slow=15,SNR=3.7						
ASAJ				LR	LR	10 18 07.8	
	comp=Z,125nm,18.2s,baz=0.9,slow=36						
ASAJ	Asahikawa	8.44	253	ePn	Pn	10 15 05.4	+1.8
	comp=Z,14nm,0.7s						
ASAJ	Asahikawa	8.44	253	PN	Pn	10 15 03.3	-0.3
ERM	Erimo	9.20	240	ePn	Pn	10 15 14.4	+0.5
	comp=Z,21nm,0.6s						
ERM				eSn	Sn	10 16 53.4	-2.5
ERM	Erimo	9.20	240	ePN	Pn	10 15 14.6	+0.7
MAJO	Matsushiro	15.73	233	ePn	Pn	10 16 42.9	+0.8
	comp=Z,9.4nm,0.6s						
MAJO	Matsushiro	15.73	233	eP	Pn	10 16 42.9	+0.8
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MJAR	Matsushiro Arr	15.73	233	P	Pn	10 16 39.8	-2.3
	comp=Z,0.2nm,0.3s,baz=26,slow=12,SNR=4.6						
MJAR	Matsushiro Arr	15.73	233	P	Pn	10 16 39.8	-2.3
KSRS	Korea Array	21.39	252	P	P	10 17 47.4	+0.2
	comp=Z,2.1nm,0.6s,mb3.6,baz=59,slow=9.6,SNR=6.9						
KSRS	Korea Array	21.39	252	eP	P	10 17 49.7	+2.5
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
SONM	Songino Array	31.65	289	P	P	10 19 21.6	-0.4
	comp=Z,0.2nm,0.5s,mb3.2,baz=46,slow=8.3,SNR=2.3						
SONM	Songino Array	31.65	289	P	P	10 19 21.6	-0.4
SML	Sawmill	35.32	44	eP	P	10 19 53.2	-0.5
SML	Sawmill	35.32	44	eP	P	10 19 53.2	-0.5
COLA	College	35.49	39	eP	P	10 19 55.7	+0.5
	comp=Z,4.8nm,1.0s,mb4.4						
COLA	College	35.49	39	eP	P	10 19 55.7	+0.5
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
ILAR	Eielson Array	35.90	39	P	P	10 19 59.0	+0.3
	comp=Z,2.8nm,1.2s,mb4.1,baz=260,slow=7.7,SNR=12						
ILAR	Eielson Array	35.90	39	P	P	10 19 59.1	+0.4
ILAR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZALV	Zalesovo Beam	42.75	306	P	P	10 20 57.4	+1.6
	comp=Z,0.5nm,0.5s,mb3.5,baz=108,slow=4.7,SNR=3.2						
ZALV				LR	LR	10 39 46.9	
	comp=Z,31nm,21.2s,MS3.2,baz=238,slow=38						
ZALV	Zalesovo Beam	42.75	306	P	P	10 20 57.4	+1.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,31nm,21.2s,MS3.2						
WMQ	Urumqi	45.22	291	P	P	10 21 15.5	-0.3
MKAR	Makanchi Array	47.17	297	P	P	10 21 30.4	-0.6
	comp=Z,0.3nm,0.2s,mb3.8,baz=64,slow=6.6,SNR=3.1						
MKAR	Makanchi Array	47.17	297	P	P	10 21 30.4	-0.7
KURK	Kurchatov	47.52	304	eP	P	10 21 31.7	-2.1
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
YKA	Yellowknife Ar	50.28	37	P	P	10 21 55.5	+0.8
	comp=Z,1.4nm,0.7s,mb4.1,baz=298,slow=7.3,SNR=3.6						
YKA	Yellowknife Ar	50.28	37	P	P	10 21 55.5	+0.8
YKA	Yellowknife Ar	50.28	37	P	P	10 21 55.5	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	Borovoye	50.99	309	eP	P	10 22 00.4	+0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CMAR	Chiang Mai Arr	52.94	257	P	P	10 22 15.2	+0.1
	comp=Z,0.7nm,0.3s,mb4.1,baz=38,slow=7.2,SNR=7.4						
CMAR	Chiang Mai Arr	52.94	257	P	P	10 22 15.2	+0.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARU	Arti	55.02	318d	i P	P	10 22 30.4	+0.6
ARU						10 24 31.9	
ARU				S	S	10 30 09.3	+1.5
ARU				SS	SS	10 33 45.2	-6.1
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
PDAR	Pinedale Array	64.10	54	P	P	10 23 33.2	+0.7
	comp=Z,0.1nm,0.4s,mb3.2,baz=291,slow=5.7,SNR=2.1						
NB2	NORSAR Subarra	67.97	341	P	P	10 23 56.4	-0.6
	comp=Z,1.3nm,0.7s,mb4.1,baz=28,slow=6.5						
NOA	NORSAR Array B	67.97	341	P	P	10 23 56.8	-0.2
	comp=Z,3.6nm,0.9s,mb4.4,baz=27,slow=6.3,SNR=6.0						
NOA	NORSAR Array B	67.97	341	P	P	10 23 56.8	-0.2
NOA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HFS	Hagfors	68.21	340	P	P	10 23 57.9	-0.7
	comp=Z,2.6nm,0.5s,mb4.5,baz=74,slow=6.3,SNR=8.7						
HFS	Hagfors	68.21	340	P	P	10 23 57.9	-0.7
HFS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KIV	Kislovodsk	70.84	315	eP	P	10 24 09.4	-5.6
KIV				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
KIV				MLR	MLR		
	comp=Z,51nm,18.0s,MS3.8						
AKASG	Malin Array Be	71.45	326	P	P	10 24 16.6	-2.0
	comp=Z,0.6nm,0.4s,mb3.9,baz=31,slow=6.9,SNR=4.1						
AKASG	Malin Array Be	71.45	326	eP	P	10 24 17.3	-1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	72.78	199	P	P	10 24 26.5	-0.2
	comp=Z,1.0nm,0.8s,mb3.8,baz=9.5,slow=5.7,SNR=8.7						
ASAR	Alice Springs	72.78	199	P	P	10 24 26.5	-0.2
ASAR	Alice Springs	72.78	199	eP	P	10 24 27.5	+0.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DPC	Dobruska-Polom	76.15	334	eP	P	10 24 45.9	-0.2
DPC				e	pP	10 24 58.4	-2.4

DPC	**Dobruska-Polom**	**76.15 334**	*e*P	**P**	**10 24 45.9**	**-0.2**
DPC			*e*PCP	PcP	10 24 58.4	+0.3
CLL	**Collm**	**76.27 336**	*i* P	**P**	**10 24 45.7**	**-1.1**
	comp=Z,6.0nm,0.9s,mb4.5					
CLL			*e*	pP	10 24 58.0	-3.4
CLL	**Collm**	**76.27 336**	*i* P	**P**	**10 24 45.7**	**-1.1**
CLL			*e*	pP	10 24 58.0	-3.4
CLL			pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5					
TXAR	**Lajitas Array**	**76.86 61**	P	**P**	**10 24 50.4**	**-0.1**
	comp=Z,0.2nm,0.6s,mb3.2,baz=324,slow=6.2,SNR=3.5					
TXAR	**Lajitas Array**	**76.86 61**	P	**P**	**10 24 50.4**	**-0.1**
MALT	**Malatya**	**77.21 313**	*e*P	**P**	**10 24 52.2**	**-0.1**
	comp=Z,1.4nm,0.6s,mb4.1					
MALT	**Malatya**	**77.21 313**	*e*P	**P**	**10 24 52.2**	**-0.1**
MALT			pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9					
KHC	**Kasperske Hory**	**78.05 335**	*e*P	**P**	**10 24 57.6**	**+0.8**
KHC	**Kasperske Hory**	**78.05 335**	*e*P	**P**	**10 24 57.6**	**+0.8**
BRTR	**Keskin Array B**	**78.40 317**	P	**P**	**10 24 59.8**	**+0.8**
	comp=Z,2.1nm,0.9s,mb4.0,baz=35,slow=4.5,SNR=6.6					
BRTR	**Keskin Array B**	**78.40 317**	*e*P	**P**	**10 24 59.7**	**+0.8**
BRTR			pmax	pmax		
	comp=Z,2.0nm,0.9s					

WEL 22 10:38:26.7±0.3, 38°.26S×176°.15E, h153km±3km, ML3.6/8, Error ellipse: s-maj=1.8km s-min=1.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.52**	**38**	PN	Pn	10 38 48.2	-0.2
OPRZ				SN	Sn	10 39 05.8	+0.9
URZ	**Urewera**	**0.76**	**91**	PN	Pn	10 38 49.5	-0.3
URZ				SN	Sn	10 39 06.4	-1.0
KRVZ	**Karewarewa**	**0.93**	**205**	PN	Pn	10 38 51.1	+0.1
BKZ	**Black Stump Fm**	**0.95**	**164**	PN	Pn	10 38 51.2	0.0
BKZ				SN	Sn	10 39 08.9	-1.2
TWVZ	**Taurewa**	**0.98**	**214**	PN	Pn	10 38 51.6	+0.1
NMHZ	**Naumai**	**0.99**	**149**	PN	Pn	10 38 52.6	+1.1
NMHZ				SN	Sn	10 39 11.7	+1.1
RAHZ	**Arahi**	**0.99**	**132**	PN	Pn	10 38 52.2	+0.6
NGZ	**Ngauruhoe**	**1.01**	**205**	PN	Pn	10 38 51.4	-0.3
HIZ	**Hauiti**	**1.05**	**255**	PN	Pn	10 38 52.1	+0.1
WPVZ	**Whakapapa**	**1.06**	**206**	PN	Pn	10 38 52.3	+0.2
TUVZ	**Tukino**	**1.08**	**201**	PN	Pn	10 38 52.6	+0.3
MWZ	**Matawai**	**1.09**	**95**	PN	Pn	10 38 52.5	+0.1
MWZ				SN	Sn	10 39 11.0	-1.0
FWVZ	**Far West T-bar**	**1.10**	**205**	PN	Pn	10 38 52.5	0.0
WNVZ	**Wahianoa**	**1.15**	**202**	PN	Pn	10 38 53.1	+0.1
MOVZ	**Moawhango**	**1.19**	**195**	PN	Pn	10 38 52.9	-0.4
PKVZ	**Pokaka**	**1.21**	**211**	PN	Pn	10 38 53.4	-0.1
BHHZ	**Black Hill Sta**	**1.23**	**183**	PN	Pn	10 38 53.5	-0.2
MTVZ	**Mangateitei**	**1.25**	**205**	PN	Pn	10 38 53.9	+0.1
MCHZ	**McNeill Hill**	**1.26**	**160**	PN	Pn	10 38 54.7	+0.7
MCHZ				SN	Sn	10 39 15.5	+0.5
MKAZ	**Moumakai**	**1.38**	**326**	PN	Pn	10 38 55.4	+0.2
VRZ	**Vera Road**	**1.39**	**231**	PN	Pn	10 38 55.4	+0.2
KNZ	**Kokohu**	**1.42**	**123**	PN	Pn	10 38 55.6	+0.1
KNZ				SN	Sn	10 39 16.7	-1.0
KUZ	**Kuaotunu**	**1.54**	**347**	PN	Pn	10 38 56.8	-0.1
CKHZ	**Cape Kidnapper**	**1.58**	**153**	PN	Pn	10 38 57.5	+0.3
CNGZ	**Carnagh Statio**	**1.64**	**99**	PN	Pn	10 38 58.5	+0.6
KAHZ	**Kahuranaki**	**1.64**	**160**	PN	Pn	10 38 58.0	+0.2
MHGZ	**Mahia Peninsul**	**1.64**	**124**	PN	Pn	10 38 58.1	+0.2
PNHZ	**Pukenui**	**1.66**	**179**	PN	Pn	10 38 57.4	-0.6
PUZ	**Puketiti**	**1.67**	**84**	PN	Pn	10 38 57.9	-0.4
PUZ				SN	Sn	10 39 20.8	-1.6
RAEZ	**Rainy Point**	**1.71**	**233**	PN	Pn	10 38 59.3	+0.6
WAZ	**Wanganui**	**1.75**	**211**	PN	Pn	10 38 58.6	-0.4
TSZ	**Takapari Road**	**1.81**	**185**	PN	Pn	10 38 58.9	-0.7
WPHZ	**Waipukurau**	**1.82**	**173**	PN	Pn	10 38 59.3	-0.5
MXZ	**Matakaoa Point**	**1.84**	**69**	PN	Pn	10 39 00.1	0.0
PXZ	**Pawanui**	**1.86**	**163**	PN	Pn	10 38 59.9	-0.4
NEZ	**North Egmont**	**1.90**	**237**	PN	Pn	10 39 01.3	+0.7
DFE	**Dawson Falls**	**1.92**	**236**	PN	Pn	10 39 01.6	+0.6
DVHZ	**Dannevirke**	**2.04**	**180**	PN	Pn	10 39 01.2	-1.1
PRHZ	**Porangahau**	**2.04**	**169**	PN	Pn	10 39 01.8	-0.6
BFZ	**Birch Farm**	**2.42**	**178**	PN	Pn	10 39 05.4	-1.5
MRZ	**Mangatainoka R**	**2.44**	**190**	PN	Pn	10 39 05.4	-1.7
OGWZ	**Otaki Gorge**	**2.67**	**196**	PN	Pn	10 39 08.0	-1.9
HOWZ	**Holdsworth Sta**	**2.68**	**190**	PN	Pn	10 39 07.9	-2.2
KIW	**Kapiti Island**	**2.77**	**200**	PN	Pn	10 39 09.0	-2.2
TMWZ	**Te Maipa**	**2.85**	**184**	PN	Pn	10 39 10.0	-2.2
MTW	**Mount Morrison**	**2.94**	**190**	PN	Pn	10 39 10.7	-2.6
CAW	**Cannon Point**	**2.97**	**196**	PN	Pn	10 39 11.2	-2.4
DUWZ	**D'Urville Isla**	**3.07**	**213**	PN	Pn	10 39 12.6	-2.3
TRWZ	**Traveller**	**3.16**	**186**	PN	Pn	10 39 13.5	-2.5
WEL	**Wellington**	**3.21**	**199**	PN	Pn	10 39 14.2	-2.5
MSWZ	**Moikau Station**	**3.23**	**192**	PN	Pn	10 39 14.1	-2.8
SNZO	**South Karori**	**3.25**	**200**	PN	Pn	10 39 14.3	-2.9
TCW	**Tory Channel**	**3.29**	**205**	PN	Pn	10 39 14.8	-2.9
PLWZ	**Palliser**	**3.38**	**191**	PN	Pn	10 39 15.9	-3.0
NNZ	**Nelson**	**3.65**	**215**	PN	Pn	10 39 19.4	-2.9
QRZ	**Quartz Range**	**3.79**	**226**	PN	Pn	10 39 20.6	-3.6
BSWZ	**Blackbirch Sta**	**3.87**	**206**	PN	Pn	10 39 22.2	-3.0
THZ	**Tophouse**	**4.30**	**214**	PN	Pn	10 39 27.1	-3.7
KHZ	**Kahutara**	**4.61**	**205**	PN	Pn	10 39 31.2	-3.6
MQZ	**McQueen's Vall**	**6.05**	**205**	PN	Pn	10 39 48.5	-5.5
ODZ	**Otahua Downs**	**7.93**	**210**	PN	Pn	10 40 14.0	-5.0

TRN 22 10:38:54.3, 16°.60N×60°.63W, h27km, MD3.6, M3.2(FDF), 4C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEG	**La Desirade**	**0.50**	**235**	⇑*i*P	Pb	10 39 06.3	+1.7
MGG	**Marie-Galante**	**0.94**	**224**	⇑*i*P	Pn	10 39 13.1	+1.3
BCG	**Bois Riant Cap**	**1.08**	**242**	*e*P	Pn	10 39 15.4	+1.7
SCG	**Saint Claude**	**1.16**	**241**	*e*P	Pn	10 39 16.7	+2.0
SCG				*e*S	Sn	10 39 36.6	+6.9
LZG	**Guadaloupe-1**	**1.19**	**248**	⇑*i*P	Pn	10 39 16.9	+1.7
HMG	**Houelmont**	**1.20**	**239**	*e*P	Pn	10 39 17.5	+2.2
DWS	**Wesley**	**1.22**	**213**	*e*P	Pn	10 39 17.7	+2.1
DWS				*e*S	Sn	10 39 34.5	+3.3
TBG	**Guadaloupe-3**	**1.23**	**233**	*e*P	Pn	10 39 17.8	+2.1
BPA	**Boggy Peak**	**1.25**	**291**	*e*P	Pn	10 39 17.2	+1.1
BPA				*e*S	Sn	10 39 35.0	+2.9
DLPL	**La Plaine**	**1.39**	**205**	*e*P	Pn	10 39 19.4	+1.3
DLPL				*e*S	Sn	10 39 38.0	+2.4
MDN	**Morne-Daniel**	**1.47**	**210**	*e*P	Pn	10 39 20.1	+1.1
MDN				*e*S	Sn	10 39 39.5	+2.1
DSTT	**Stowe**	**1.49**	**206**	⇑*i*P	Pn	10 39 20.1	+0.7
DSTT				*e*S	Sn	10 39 40.5	+2.5
DFBT	**Forest Bistro**	**1.52**	**207**	*e*P	Pn	10 39 20.5	+0.8
FDF	**Fort de France**	**1.92**	**195**	*e*P	Pn	10 39 26.7	+1.3
FDF				*e*S	Sn	10 39 51.4	+2.8
MVM	**Montagne Vaucl**	**2.05**	**187**	*e*P	Pn	10 39 29.9	+2.9
BIM	**Bigot**	**2.11**	**192**	*e*P	Pn	10 39 30.3	+2.3
SKI	**Saint Kitts**	**2.14**	**290**	*e*P	Pn	10 39 30.1	+1.8
SKI				*e*S	Sn	10 39 56.0	+1.9
SLW	**Petit Monier**	**2.58**	**187**	*e*P	Pn	10 39 36.5	+2.1
SLB	**Belfond**	**2.79**	**188**	*e*S	Sn	10 40 11.9	+2.0
MCLT	**Moule a Chique**	**2.89**	**186**	*e*P	Pn	10 39 41.2	+2.6
MCLT				*e*S	Sn	10 40 13.7	+1.2
SVB	**Belmont**	**3.36**	**190**	*e*P	Pn	10 39 47.4	+2.3
SVB				*e*S	Sn	10 40 25.9	+1.7

NIED ***22*** *10:42:00, 43°.90N×147°.60E, h65km, Mw4.4 Best double couple: M₀5.14000×10¹⁵ NP1:φ232.00000°, δ77.00000°, λ99.00000°. NP2:φ15.00000°, δ16.00000°, λ54.00000°.*
MOS ***22*** *10:42:40.7±1.0, 44°.19N×147°.53E, h59km, mb4.8/42, Error ellipse: s-maj=9.8km s-min=5.8km az=99.8*
BJI ***22*** *10:42:42.5, 44°.02N×147°.74E, h84km, mB4.8/8, mb4.7/17, Ms4.5/3, Ms7 4.0/4*
SKHL ***22*** *10:42:43.6±0.8, 44°.20N×147°.70E, h70km±5km, mb5.0/4*
JMA ***22*** *10:42:43.1±0.2, 43°.92N×147°.63E, h26km, M4.8*
ISCJB ***22*** *10:42:43.9±0.4, 44°.26N±0°.03×147°.45E±0°.03, h80km±3km, mb4.4/84, Error ellipse: s-maj=5.5km s-min=3.5km az=155.4*
IDC ***22*** *10:42:43.9±0.5, 44°.18N×147°.50E, h69km±4km, mb3.9/20, mb1 4.1/24, mb1mx4.1/31, mbtmp3.9/24, MS3.5/11, Ms1 3.5/11, ms1mx3.2/37, Error ellipse: s-maj=14.3km s-min=8.4km az=165.0*
NEIC ***22*** *10:42:45.3±0.7, 44°.21N×147°.47E, h86km±6km, mb4.6/45, Error ellipse: s-maj=8.9km s-min=5.4km az=154.0*

ISC 22 10:42:45.4±0.4, 44°.25N±0°.03×147°.42E±0°.03, h79km±3km, h69km±3.0km: pP-P, n384, σ0.90/397, mb4.4/84, 85C-63D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.04**	**18**	⇑*i*PN	**Pn**	**10 43 02.5**	**-2.2**
KUR				*e*S	**Sn**	**10 43 17.0**	**-2.2**
KUR				pmax	pmax		
	comp=Z,6μm,1.0s						
KUR				pmax	pmax		
	comp=N,1μm,1.0s						
KUR				pmax	pmax		
	comp=E,2μm,1.0s						
KUR				pmax	pmax		
	comp=Z,5μm,1.0s						
KUR				smax			
	comp=N,30μm,3.0s						
KUR				smax			
	comp=E,23nm,3.0s						
KUR	**Kuril'sk**	**1.04**	**18**	⇑*i*P	**Pn**	**10 43 02.5**	**-2.2**
KUR				AMB	AMB	10 43 03.5	
	comp=E,750nm,0.9s						
KUR				AMB	AMB	10 43 03.5	
	comp=E,1μm,0.9s						
KUR				AMB	AMB	10 43 03.5	
	comp=E,3μm,0.9s						
KUR				AMB	AMB	10 43 03.5	
	comp=E,5μm,1.0s						
KUR				*e*S	**Sn**	**10 43 17.0**	**-2.2**
KUR				A		10 43 18.0	
	comp=E,29μm,1.2s						
KUR				A		10 43 18.0	
	comp=E,22μm,1.2s						
YUK	**Yuzh-Kuril'sk**	**1.14**	**260**	⇑*i*P	**Pn**	**10 43 05.2**	**-0.8**
YUK				AMB	AMB	10 43 06.4	
	comp=E,3μm,0.4s						
YUK				*i* S	**Sn**	**10 43 20.9**	**-0.5**
YUK				A		10 43 25.0	
	comp=E,12μm,0.4s						
YUK				A		10 43 25.0	
	comp=E,27μm,0.5s						
YUK				A		10 43 40.9	
	comp=E,5μm,1.0s						
YUK				A		10 43 40.9	
	comp=E,15μm,1.0s						
NEM2	**Nemuro 2**	**1.50**	**234**	P	**Pn**	**10 43 08.6**	**-2.0**
NEM2				*e*S	**Sn**	**10 43 27.7**	**-1.9**
JRA	**Rausu**	**1.68**	**260**	P	**Pn**	**10 43 13.6**	**+0.7**
JRA				*e*S	**Sn**	**10 43 35.8**	**+2.0**
JNK	**Nakash**	**2.06**	**252**	P	**Pn**	**10 43 18.0**	**+0.1**
JNK				*e*S	**Sn**	**10 43 43.4**	**+0.6**
JAK	**Akkeshi**	**2.34**	**239**	P	**Pn**	**10 43 20.6**	**-1.1**
JAK				*e*S	**Sn**	**10 43 48.5**	**-1.0**
JTKR	**Abashiri--Toko**	**2.54**	**265**	P	**Pn**	**10 43 25.4**	**+1.0**
JAR	**Ashorobuto**	**2.81**	**251**	P	**Pn**	**10 43 28.9**	**+0.9**
JAR				*e*S	**Sn**	**10 44 02.2**	**+1.4**
JOB	**Onbets**	**2.93**	**244**	P	**Pn**	**10 43 29.8**	**+0.1**
JOB				*e*S	**Sn**	**10 44 03.7**	**-0.1**
JMP	**Maruseppu**	**2.93**	**267**	P	**Pn**	**10 43 31.0**	**+1.3**
JCH	**Churui**	**3.37**	**242**	P	**Pn**	**10 43 35.0**	**-0.7**
JCH				*e*S	**Sn**	**10 44 13.2**	**-1.4**
JKK2	**Kamakawa 2**	**3.38**	**265**	P	**Pn**	**10 43 37.8**	**+2.0**
ASAJ	**Asahikawa**	**3.47**	**269**	P	**Pn**	**10 43 37.8**	**+0.8**
	comp=E,3.5nm,0.3s,baz=84,slow=16,SNR=16						
ASAJ				S	**Sn**	**10 44 16.6**	**-0.2**
	comp=E,7.5nm,0.3s,baz=95,slow=22,SNR=4.2						
ASAJ	**Asahikawa**	**3.47**	**269**	*e*Pn	**Pn**	**10 43 39.2**	**+2.3**
ASAJ	**Asahikawa**	**3.47**	**269**	PN	**Pn**	**10 43 37.8**	**+0.8**
ASAJ				S	**Sn**	**10 44 16.7**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,8.0nm,0.3s						
JSE	**Soyaes**	**3.52**	**283**	P	**Pn**	**10 43 39.4**	**+1.7**
JFR	**Furan**	**3.66**	**254**	P	**Pn**	**10 43 41.5**	**+1.9**
ERM	**Erimo**	**3.83**	**236**	*e*Pn	**Pn**	**10 43 42.8**	**+0.9**
ERM				*e*Sn	**Sn**	**10 44 26.9**	**+1.1**
ERM	**Erimo**	**3.83**	**236**	*c i*PN	**Pn**	**10 43 42.7**	**+0.8**
ERM	**Erimo**	**3.83**	**236**	*e*P	**Pn**	**10 43 42.7**	**+0.8**
JNBK	**Urakawa-nobuka**	**3.93**	**242**	P	**Pn**	**10 43 42.5**	**-0.8**
JWK2	**Keihoku**	**4.07**	**287**	P	**Pn**	**10 43 48.6**	**+3.5**
YSS	**Yuzh-Sakhalins**	**4.24**	**311**	*e*Pn	**Pn**	**10 43 49.3**	**+1.8**
YSS				*e*Sn	**Sn**	**10 44 37.5**	**+1.8**
YSS	**Yuzh-Sakhalins**	**4.24**	**311**	⇓*e*PN	**Pn**	**10 43 49.0**	**+1.5**
YSS				*e*S	**Sn**	**10 44 36.3**	**+0.5**
YSS				pmax	pmax		
	comp=N,50nm,0.7s						
YSS				pmax	pmax		
	comp=E,40nm,0.7s						
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				smax			
	comp=N,180nm,0.6s						
YSS				smax			
	comp=E,270nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.24**	**311**	⇓*e*P	**Pn**	**10 43 49.0**	**+1.5**
YSS				AMB	AMB	10 43 50.5	
	comp=E,50nm,0.7s						
YSS				AMB	AMB	10 43 50.5	
	comp=E,50nm,0.7s						
YSS				AMB	AMB	10 43 50.5	
	comp=E,40nm,0.7s						
YSS				*e*S	**Sn**	**10 44 36.3**	**+0.5**
YSS				A		10 44 41.0	
	comp=E,270nm,0.7s						
YSS				A		10 44 41.0	
	comp=E,180nm,0.6s						
UGL	**Uglegorsk**	**6.07**	**325**	*e*rx	rx	10 44 37.0	
UGL				*e*S	**Sn**	**10 45 24.5**	**+4.1**
UGL				A		10 45 28.5	
	comp=E,180nm,0.7s						
UGL				A		10 45 28.5	
	comp=E,110nm,0.5s						
TYV	**Tymovskoe**	**7.36**	**336**	*e*P	**Pn**	**10 44 31.0**	**+1.1**
TYV				AMB	AMB	10 44 36.0	
	comp=E,22nm,1.0s						
TYV				AMB	AMB	10 44 36.0	
	comp=E,22nm,0.8s						
TYV				*e*S	**Sn**	**10 45 53.0**	**+1.2**
TYV				A		10 45 53.0	
	comp=E,22nm,0.8s						
TYV				A		10 45 53.0	
	comp=E,33nm,0.8s						
MAJO	**Matsushiro**	**10.41**	**225**	*e*Pn	**Pn**	**10 45 09.8**	**-1.9**
MAJO	**Matsushiro**	**10.41**	**225**	*e*PN	**Pn**	**10 45 09.8**	**-1.9**
MJAR	**Matsushiro Arr**	**10.41**	**225**	P	**Pn**	**10 45 09.4**	**-2.3**
	comp=E,0.4nm,0.3s,baz=26,slow=13,SNR=8.5						
MJAR	**Matsushiro Arr**	**10.41**	**225**	PN	**Pn**	**10 45 09.4**	**-2.3**
PEA0B	**Petropavlovsk-**	**11.16**	**34**	*e*Pn	**Pn**	**10 45 20.9**	**-0.9**
PETK	**Petropavlovsk-**	**11.16**	**34**	P	**Pn**	**10 45 20.2**	**-1.6**
	comp=E,1.2nm,0.3s,baz=196,slow=10,SNR=12						
PETK				LR	LR	10 49 51.2	
	comp=E,38nm,18.7s,baz=224,slow=38						
PETK	**Petropavlovsk-**	**11.16**	**34**	PN	**Pn**	**10 45 20.2**	**-1.6**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLR	**Kul'dur**	**11.84**	**300**	*e*PN	**Pn**	**10 45 31.7**	**+0.7**
KSRS	**Korea Array**	**16.22**	**252**	P	**Pn**	**10 46 27.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=60,slow=12,SNR=7.6						
KSRS				LR	LR	10 52 11.2	
	comp=Z,56nm,21.2s,baz=70,slow=35						
KSRS	**Korea Array**	**16.22**	**252**	P	**Pn**	**10 46 27.6**	**-0.7**
ZEA	**Zeya**	**16.23**	**313**	*e*P	**Pn**	**10 46 27.2**	**-1.1**
SEY	**Seymchan**	**18.94**	**7**	*e*P	**Pn**	**10 46 58.3**	**-2.9**
YAK	**Yakutsk**	**20.62**	**336**	*e*P	**P**	**10 47 17.6**	**-0.4**
	comp=Z,53nm,1.2s						
YAK	**Yakutsk**	**20.62**	**336**	*e*P	**P**	**10 47 21.2**	**+3.3**
YAK				pmax	pmax		
	comp=Z,23nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
BJI	**Beijing**	**23.46**	**271**	P	**P**	**10 47 47.1**	**-0.6**
BJI				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.5						
BJT	**Baijiatuau**	**23.48**	**271**	*e*P	**P**	**10 47 47.6**	**-0.2**
	comp=Z,16nm,0.8s,mb4.4						
BJT	**Baijiatuau**	**23.48**	**271**	*e*P	**P**	**10 47 47.6**	**-0.2**
BJT				pmax	pmax		
	comp=Z,16nm,0.8s						
BOD	**Bodaibo**	**24.71**	**315**	*e*P	**P**	**10 47 56.8**	**-2.0**
NJ2	**Nanjing**	**25.41**	**251**	*e*P	**P**	**10 48 04.3**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
BILL	**Bilibino**	**25.83**	**16**	*e*P	**P**	**10 48 06.4**	**-2.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.7						
SONM	**Songino Array**	**28.46**	**292**	P	**P**	**10 48 32.5**	**-0.2**
	comp=Z,1.6nm,0.6s,mb3.7,baz=88,slow=8.4,SNR=9.0						
SONM				pP	pP	10 48 50.0	-0.9
	comp=Z,1.1nm,0.8s,baz=62,slow=8.4,SNR=4.0						
SONM				LR	LR	11 00 49.2	
	comp=Z,143nm,19.1s,baz=121,slow=38						
SONM	**Songino Array**	**28.46**	**292**	P	**P**	**10 48 32.5**	**-0.1**
SONM				*PP	pP	10 48 50.0	-0.9
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,143nm,19.1s						
GUMO	**Guam**	**30.63**	**185**	LR	LR	10 59 00.1	
	comp=Z,42nm,20.8s,baz=94,slow=32						
LZH	**Lanzhou**	**33.95**	**271**	⇑P	**P**	**10 49 22.5**	**+1.5**
LZH				pP	pP	10 49 44.5	+5.0
LZH				sP	sP	10 49 56.8	+8.2
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.8						
GTA	**Gaotai**	**35.40**	**279**	*e*P	**P**	**10 49 35.0**	**+1.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.2						
TTA	**Tatalina**	**36.92**	**39**	*e*P	**P**	**10 49 45.9**	**-0.3**
TTA				*e*pP	pP	10 50 03.6	-1.2
TTA	**Tatalina**	**36.92**	**39**	*e*P	**P**	**10 49 45.9**	**-0.3**
TTA				*e*PP	pP	10 50 03.6	-1.2
RSO	**Redoubt South**	**38.47**	**44**	*e*P	**P**	**10 49 58.5**	**-0.7**
PPLA	**Purkeypile**	**38.67**	**40**	*e*P	**P**	**10 50 01.6**	**+0.7**
KDAK	**Kodiak Island**	**38.77**	**48**	P	**P**	**10 50 00.4**	**-1.3**
	comp=Z,6.0nm,0.7s,mb4.5,baz=272,slow=2.6,SNR=5.0						
KDAK	**Kodiak Island**	**38.77**	**48**	*i* P	**P**	**10 50 01.1**	**-0.7**
COLD	**Coldfoot**	**39.63**	**33**	*e*P	**P**	**10 50 08.7**	**-0.1**
SML	**Sawmill**	**40.52**	**41**	*e*P	**P**	**10 50 15.8**	**-0.4**
	comp=Z,3.4nm,1.0s,mb4.1						
SML	**Sawmill**	**40.52**	**41**	*e*P	**P**	**10 50 15.8**	**-0.4**
SML				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
ZALV	**Zalesovo Beam**	**40.85**	**307**	P	**P**	**10 50 20.4**	**+1.3**
	comp=Z,0.5nm,0.3s,mb3.8,baz=64,slow=6.6,SNR=2.6						
ZALV				pP	pP	10 50 34.9	-3.1
	comp=Z,0.6nm,0.4s,baz=151,slow=13,SNR=2.0						
ZALV				PcP	PcP	10 52 19.0	+0.7
	comp=Z,1.0nm,0.5s,baz=34,slow=3.7,SNR=4.4						
ZALV				LR	LR	11 08 25.3	
	comp=Z,42nm,19.2s,baz=249,slow=38						
ZALV	**Zalesovo Beam**	**40.85**	**307**	P	**P**	**10 50 20.4**	**+1.3**
ZALV				*PP	pP	10 50 34.9	-3.1
ZALV						10 52 19.0	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
ZALV				MLR	MLR		
	comp=Z,42nm,19.2s						
ILAR	**Eielson Array**	**40.97**	**37**	P	**P**	**10 50 19.1**	**-0.8**
	comp=Z,1.2nm,0.5s,mb4.0,baz=273,slow=8.6,SNR=28						
ILAR				pP	pP	10 50 36.1	-2.7
	comp=Z,1.3nm,0.8s,baz=259,slow=7.6,SNR=4.6						
ILAR	**Eielson Array**	**40.97**	**37**	P	**P**	**10 50 19.2**	**-0.7**
ILAR				*PP	pP	10 50 36.1	-2.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MENT	**Mentasta**	**42.53**	**39**	*e*P	**P**	**10 50 32.8**	**+0.1**
EGAK	**Eagle**	**43.42**	**36**	*e*P	**P**	**10 50 38.7**	**-1.1**
MK31	**Makanchi Array**	**44.52**	**297**	*e*P	**P**	**10 50 49.1**	**+0.3**
MK31	**Makanchi Array**	**44.52**	**297**	*e*P	**P**	**10 50 49.1**	**+0.2**
MKAR	**Makanchi Array**	**44.52**	**297**	P	**P**	**10 50 49.2**	**+0.3**
	comp=Z,2.5nm,0.8s,mb4.0,baz=76,slow=7.8,SNR=13						
MKAR				LR	LR	11 10 57.5	
	comp=Z,86nm,18.9s,baz=353,slow=38						
MKAR	**Makanchi Array**	**44.52**	**297**	P	**P**	**10 50 49.2**	**+0.3**
MKAR				LR	LR	11 10 57.5	
MKAR	**Makanchi Array**	**44.52**	**297**	*i* P	**P**	**10 50 49.2**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	**Kurchatov**	**45.41**	**304**	*e*P	**P**	**10 50 56.5**	**+0.7**
	comp=Z,11nm,1.5s,mb4.4						
KURK	**Kurchatov**	**45.41**	**304**	*e*P	**P**	**10 50 56.0**	**+0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
INK	**Inuvik**	**45.88**	**31**	P	**P**	**10 50 58.9**	**-0.4**
	comp=Z,6.4nm,1.0s,mb4.3,baz=283,slow=8.9,SNR=18						
INK	**Inuvik**	**45.88**	**31**	P	**P**	**10 50 58.9**	**-0.4**
INK	**Inuvik**	**45.88**	**31**	P	**P**	**10 50 58.9**	**-0.4**
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**47.85**	**253**	P	**P**	**10 51

comp=Z,39nm,2.6s,mb4.8
D13A Huson 64.00 49 ⇓P P 10 53 10.4 +0.2
baz=60
B15A Bradely Ranch, 64.26 47 ⇓P P 10 53 11.8 -0.2
baz=61
F12A Elk City 64.39 50 ⇓P P 10 53 13.0 +0.2
baz=61
MSO Missoula 64.45 49 ⇑P P 10 53 13.3 +0.2
baz=61
MSO Missoula 64.45 49 eP P 10 53 13.3 +0.2
comp=Z,36nm,2.6s,mb4.7
FINES FINESS Array B 64.52 333 P P 10 53 12.3 -1.0
comp=Z,4.1nm,0.5s,mb4.5,baz=43,slow=8.6,SNR=11
FINES LR LR 11 27 28.6
comp=Z,54nm,18.6s,baz=326,slow=42
FINES FINESS Array B 64.52 333 P P 10 53 12.4 -1.0
FINES pmax pmax
comp=Z,4.0nm,0.5s
D14A Greenough 64.52 48 ⇓P P 10 53 13.6 -0.1
baz=61
E14A Clinton 64.94 49 ⇑P P 10 53 16.6 +0.2
baz=61
WRA Warramunga Arr 64.99 194 P P 10 53 14.7 -2.2
comp=Z,7.0nm,1.0s,mb4.4,baz=13,slow=6.8,SNR=20
WRA Warramunga Arr 64.99 194 P P 10 53 14.7 -2.1
WRA pmax pmax
comp=Z,7.0nm,1.0s
C16A Fuhringer Ranc 65.01 47 ⇑P P 10 53 16.6 -0.2
baz=61,SNR=5.6
OBN Obninsk 65.03 324 eP P 10 53 17.1 +0.3
OBN pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
B17A L&G Farms, Che 65.19 46 ⇑P P 10 53 18.1 +0.2
baz=62
A18A Metzger Ranch, 65.29 45 ⇑P P 10 53 18.3 -0.2
baz=62
G13A Cobalt 65.36 50 ⇓P P 10 53 18.8 -0.3
baz=62
E15A Deer Lodge 65.40 49 ⇑P P 10 53 19.4 +0.1
baz=62
C17A Wharram Farm, 65.63 47 ⇑P P 10 53 20.8 0.0
baz=62
B18A Beardsley Farm 65.66 46 ⇑P P 10 53 20.7 -0.3
baz=62
I12A Atlanta 65.67 52 ⇑P P 10 53 21.4 +0.3
baz=62,SNR=5.1
H13A Challis 65.68 51 ⇓P P 10 53 21.2 +0.1
baz=62,SNR=6.1
F15A Butte 65.85 49 ⇑P P 10 53 22.9 +0.7
baz=62
LRM Limekiln Ridge 65.88 49 eP P 10 53 22.0 -0.4
B19A Brinkman Farms 66.04 45 ⇓P P 10 53 23.6 +0.1
baz=62
I13A Wildhorse Cree 66.16 51 ⇑P P 10 53 25.1 +0.8
baz=62
HLID Hailey 66.22 52 ⇓P P 10 53 24.3 -0.3
baz=62
G15A Dillon 66.28 50 ⇑P P 10 53 24.7 -0.2
baz=63
BOZ Bozeman (W) 66.44 49 ⇑P P 10 53 26.6 +0.6
baz=63,SNR=6.4
BOZ Bozeman (W) 66.44 49 eP P 10 53 26.6 +0.6
comp=Z,2.9nm,0.8s,mb4.2
BOZ Bozeman (W) 66.44 49 eP P 10 53 26.6 +0.6
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
C19A Slack Wire Ran 66.45 46 ⇑P P 10 53 26.5 +0.4
baz=63
J13A Cove Ranch, Pi 66.46 52 ⇑P P 10 53 26.7 +0.6
baz=63
I14A Mackay 66.53 51 P P 10 53 27.4 +0.8
baz=63,SNR=6.1
G16A Moss Hill, Enn 66.61 49 ⇑P P 10 53 27.4 +0.3
baz=63
A21A Bergtoll Ranch 66.71 44 ⇓P P 10 53 27.8 +0.1
baz=63
F17A Fitzpatrick Pl 66.79 48 ⇓P P 10 53 28.8 +0.5
baz=63
J14A Carey 66.88 52 ⇓P P 10 53 29.6 +0.8
baz=63,SNR=5.0
C20A Veseth Ranch, 67.00 45 ⇑P P 10 53 30.2 +0.7
baz=63
NVAR Mina Array Bea 67.15 58 P P 10 53 31.1 +0.4
comp=Z,2.9nm,0.7s,mb4.2,baz=298,slow=7.1,SNR=22
NVAR pP pP 10 53 47.9 -3.2
comp=Z,1.5nm,0.6s,baz=292,slow=6.8,SNR=5.6
F18A Big Timber 67.30 48 ⇑P P 10 53 32.1 +0.7
baz=64
D20A Manuel Ranch, 67.34 46 ⇓P P 10 53 32.2 +0.5
baz=64,SNR=5.3
F19A Roth Farm, Mol 67.74 47 ⇑P P 10 53 34.7 +0.5
baz=64
IMW Indian Meadow 67.94 50 eP P 10 53 36.0 +0.4
comp=Z,4.9nm,1.1s,mb4.2
J16A Bone 67.97 51 ⇓P P 10 53 36.9 +1.2
baz=64
B23A Brockton 68.02 43 ⇓P P 10 53 36.0 0.0
baz=64
RRI2 Red Ridge 68.09 50 eP P 10 53 36.7 +0.2
comp=Z,5.7nm,0.9s,mb4.4
MOOW Moose Ponds 68.14 50 eP P 10 53 37.4 +0.6
comp=Z,46nm,3.0s
TPAW Teton Pass 68.20 50 eP P 10 53 37.4 +0.2
comp=Z,4.8nm,0.9s,mb4.3
REDW Red Top Meadow 68.34 50 eP P 10 53 39.1 +1.1
comp=Z,24nm,2.1s,mb4.7
ASAR Alice Springs 68.71 193 P P 10 53 40.5 +0.1
comp=Z,2.0nm,0.7s,mb4.0,baz=11,slow=5.6,SNR=32
ASAR Alice Springs 68.71 193 P P 10 53 40.5 +0.1
ASAR pmax pmax
comp=Z,2.0nm,0.7s
R11A Troy Canyon, C 68.85 57 ⇓P P 10 53 41.2 -0.1
baz=65
MPMC Manual Prospec 69.16 60 ⇓P P 10 53 43.4 +0.1
baz=66
NB2 NORSAR Subarra 69.21 339 P P 10 53 41.8 -1.3
comp=Z,2.4nm,0.6s,mb4.2,baz=31,slow=6.5
NOA NORSAR Array B 69.21 339 P P 10 53 42.5 -0.6
comp=Z,1.9nm,0.5s,mb4.2,baz=31,slow=6.3,SNR=9.6
NOA LR LR 11 26 33.8
comp=Z,51nm,18.5s,baz=40,slow=38
NOA NORSAR Array B 69.21 339 P P 10 53 42.5 -0.6
NOA pmax pmax
comp=Z,2.0nm,0.5s
NOA MLR MLR
comp=Z,51nm,18.5s
M16A Huntsville 69.24 52 ⇑P P 10 53 43.7 +0.1
baz=66
D24A Glendive 69.26 44 ⇑P P 10 53 43.9 +0.2
baz=66
K18A Toltan Ranch, 69.26 50 ⇑P P 10 53 44.2 +0.4
baz=66
FURC Furnace Creek, 69.28 59 ⇑P P 10 53 44.3 +0.2
baz=66,SNR=6.6
LRMC Laurel Mountai 69.41 60 ⇑P P 10 53 44.4 -0.4
baz=66
BW06 Boulder Array 69.44 50 ⇑P P 10 53 45.1 +0.2
baz=66
BW06 Boulder Array 69.44 50 eP P 10 53 45.1 +0.2
comp=Z,4.4nm,1.3s,mb4.1
PDAR Pinedale Array 69.44 50 P P 10 53 44.9 0.0
comp=Z,1.4nm,0.7s,mb3.9,baz=277,slow=1.3,SNR=16
PDAR pP pP 10 54 03.2 -2.1
comp=Z,1.4nm,0.7s,baz=274,slow=1.9,SNR=7.0
P14A Drum Mountains 69.54 54 ⇓P P 10 53 45.9 +0.3
baz=66
H21A Big Horn, Sher 69.56 47 ⇑P P 10 53 45.4 -0.1
baz=66
KIV Kislovodsk 69.57 312 eP P 10 53 47.6 +1.9
KIV pmax pmax
comp=Z,21nm,0.8s,mb5.0
KIV MLR MLR
comp=Z,51nm,18.0s
EDW2 Edwards Air Fo 69.60 61 ⇑P P 10 53 46.1 +0.1
baz=66
M17A Scullys Gap (B 69.68 52 ⇓P P 10 53 46.5 +0.1
baz=66
ZEI Tsey 69.71 310 eP P 10 53 45.6 -0.9
ZEI pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
Q14A Sevier Lake (B 69.81 55 ⇑P P 10 53 47.0 -0.2
baz=66
J20A Shoshoni 69.86 49 ⇓P P 10 53 47.4 0.0
baz=66
N17A Moffit Pass 69.94 52 ⇑P P 10 53 48.0 +0.1
baz=66
I21A Big Trails, Te 69.97 48 ⇑P P 10 53 48.4 +0.3
baz=66

P15A Leamington 70.01 54 ⇓P P 10 53 48.8 +0.3
baz=66
BBRC Big Bear Solar 70.67 61 ⇓P P 10 53 52.5 -0.1
baz=67
HEC Hector,Ludlow 70.67 60 ⇓P P 10 53 52.4 -0.2
baz=67
K21A Alcova 70.79 49 ⇑P P 10 53 53.0 -0.2
baz=67
U13A Pakoon Wash 71.09 57 ⇑P P 10 53 55.5 +0.5
baz=67,SNR=7.0
GMRC Granite Mounta 71.12 60 ⇓P P 10 53 55.4 +0.1
baz=68
AKASG Malin Array Be 71.29 324 P P 10 53 55.7 -0.3
comp=Z,3.0nm,0.6s,mb4.3,baz=40,slow=6.1,SNR=13
AKASG Malin Array Be 71.29 324 P P 10 53 55.7 -0.4
AKASG Malin Array Be 71.29 324 P P 10 53 55.7 -0.3
AKASG pmax pmax
comp=Z,3.0nm,0.6s
SRU San Rafael 71.33 53 ⇑P P 10 53 56.4 -0.1
baz=68,SNR=5.9
SRU San Rafael 71.33 53 eP P 10 53 56.8 +0.3
comp=Z,5.8nm,1.0s,mb4.4
SRU epP pP 10 54 14.6 -2.4
SRU San Rafael 71.33 53 eP P 10 53 56.8 +0.3
SRU e*PP pP 10 54 14.6 -2.4
SRU pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
V13A Grand Canyon W 71.45 58 ⇑P P 10 53 57.4 +0.2
baz=68
N20A Spence Gulch, 71.46 51 ⇑P P 10 53 56.7 -0.5
baz=68
S16A Weppner Ranch, 71.64 55 ⇓P P 10 53 59.1 +0.7
baz=68
L22A Ellis Ranch, M 71.65 49 ⇑P P 10 53 58.6 +0.3
baz=68
R17A Hanksville Air 71.69 54 ⇑P P 10 53 58.7 0.0
baz=68
IRM Iron Mountain 71.85 60 ⇑P P 10 53 59.7 0.0
baz=68
N21A Black Mountain 71.92 50 ⇓P P 10 54 00.4 +0.4
baz=68,SNR=5.7
U15A North Rim 72.09 57 ⇑P P 10 54 01.7 +0.6
baz=68
V14A Boquillas Ranc 72.13 58 ⇑P P 10 54 01.8 +0.5
baz=68,SNR=5.6
Q19A Hogan Spring (72.17 53 ⇓P P 10 54 01.3 -0.2
baz=68
X13A Yucca 72.38 59 ⇑P P 10 54 02.9 +0.1
baz=69
PDMCI Parker Dam,Lak 72.38 59 ⇑P P 10 54 02.7 -0.2
baz=69
V15A Kaibab Nationa 72.57 57 ⇑P P 10 54 04.0 +0.1
baz=69
S18A Hurst Farm, Bl 72.60 54 ⇓P P 10 54 04.2 +0.1
baz=69
U16A Tuba City 72.97 56 ⇓P P 10 54 06.4 0.0
baz=69,SNR=5.8
S19A Harvey Farm, M 73.06 54 ⇓P P 10 54 06.8 0.0
baz=69
P22A Eagle 73.14 51 ⇑P P 10 54 07.8 +0.5
baz=69
O23A Lake Granby, G 73.18 50 ⇑P P 10 54 08.3 +0.8
baz=70
X15A Humboldt 73.42 58 P P 10 54 09.6 +0.6
baz=70,SNR=5.6
V17A Tonalea, Kykot 73.53 56 ⇓P P 10 54 10.5 +0.9
baz=70,SNR=6.3
R21A Cimarron 73.54 52 ⇓P P 10 54 10.3 +0.7
baz=70
Q22A Crested Butte, 73.56 52 ⇓P P 10 54 10.0 +0.3
baz=70
ISCO Idaho Springs 73.64 50 ⇓P P 10 54 10.2 +0.1
baz=70
Y15A Casa Rosa Ranc 73.72 58 ⇑P P 10 54 11.1 +0.3
baz=70
X16A Lo Mia Camp, P 73.95 58 ⇓P P 10 54 12.9 +0.8
baz=70,SNR=5.9
V18A Ganado 73.98 56 ⇓P P 10 54 12.6 +0.4
baz=70
W19A Sanders 74.71 56 ⇓P P 10 54 17.3 +0.8
baz=71
X19A St. Johns 75.24 56 ⇓P P 10 54 20.5 +0.9
baz=72
Y18A Canyon Day Jun 75.24 57 ⇓P P 10 54 20.3 +0.7
baz=72
BUR08 Bucovina Ar. S 75.33 324 eP P 10 54 20.3 +0.5
BURAR Bucovina Array 75.35 324 ⇑P P 10 54 20.5 +0.6
OJC Ojcow 75.46 328 eP P 10 54 21.0 +0.5
KOLS Kolonicke sedl 75.53 326 eP P 10 54 21.5 +0.6
comp=Z,4.2nm,0.9s,mb4.2
KOLS Kolonicke sedl 75.53 326 eP P 10 54 21.5 +0.6
KOLS pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
X20A Quemado 75.64 56 ⇓P P 10 54 22.3 +0.5
baz=72
U23A El Rito 75.74 53 ⇑P P 10 54 23.2 +0.8
baz=72,SNR=5.9
MALT Malatya 75.80 310 eP P 10 54 23.8 +1.1
comp=Z,4.2nm,0.8s,mb4.2
MALT Malatya 75.80 310 ⇑P P 10 54 24.5 +1.8
CRVS Cervenica-Dubn 75.87 327 eP P 10 54 21.1 -1.8
comp=Z,15nm,2.0s,mb4.4
CRVS Cervenica-Dubn 75.87 327 eP P 10 54 21.1 -1.8
CRVS pmax pmax
comp=Z,15nm,2.0s,mb4.4
STKA Stephens Creek 75.95 185 LR LR 11 23 47.1
comp=Z,106nm,20.5s,baz=18,slow=32
118A Homack Ranch, 76.06 58 ⇑P P 10 54 24.8 +0.5
baz=72
X21A Alamocita Cree 76.12 55 ⇑P P 10 54 25.7 +1.1
baz=72
V23A Ortiz Mt. (NFS 76.15 53 ⇓P P 10 54 25.7 +1.0
baz=72
TIRR Tirgusor 76.36 320 ⇓P P 10 54 26.0 +0.2
MIB Mutribah 76.43 298 eP P 10 54 26.3 -0.1
MIB AMb AMB 10 54 27.6
comp=Z,22nm,0.9s,mb4.9
ANMO Albuquerque 76.55 54 eP P 10 54 26.8 -0.3
ANMO Albuquerque 76.55 54 eP P 10 54 26.8 -0.2
KECS Kecovo 76.60 327 eP P 10 54 27.5 +0.5
comp=Z,2.2nm,0.9s,mb3.9
KECS Kecovo 76.60 327 eP P 10 54 27.5 +0.5
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
DPC Dobruska-Polom 76.63 330 eP P 10 54 27.8 +0.6
comp=Z,21nm,1.3s,mb4.7
DPC Dobruska-Polom 76.63 330 eP P 10 54 27.8 +0.7
DPC pmax pmax
comp=Z,21nm,1.3s,mb4.7
MORC Moravsky Berou 76.66 329 ⇑P P 10 54 27.9 +0.6
MLR Muntele Rosu 76.68 322 ⇑P P 10 54 28.0 +0.4
QRN Al-Qurain 76.79 297 eP P 10 54 28.4 -0.1
QRN AMb AMB 10 54 29.4
comp=Z,42nm,0.9s,mb5.2
NAY Al-Naaiem 76.87 298 eP P 10 54 28.6 -0.3
NAY AMb AMB 10 54 30.6
comp=Z,12nm,1.6s,mb4.3
RDF Al-Radifah 76.90 298 eP P 10 54 29.0 -0.1
RDF AMb AMB 10 54 30.6
comp=Z,41nm,1.3s,mb5.0
120A U Bar Ranch, L 76.94 57 ⇑P P 10 54 29.5 +0.3
baz=73
219A White Tail Can 76.94 58 ⇓P P 10 54 29.6 +0.3
baz=73
CLL Collm 76.96 333 i P P 10 54 28.5 -0.5
comp=Z,16nm,0.7s,mb4.9
CLL Collm 76.96 333 i P P 10 54 28.5 -0.5
CLL pmax pmax
comp=Z,16nm,0.7s,mb4.9
W24A Lazy 6 Ranch, 76.98 53 ⇓P P 10 54 30.3 +0.9
baz=73
V25A Rancho No Teng 76.99 52 ⇓P P 10 54 30.1 +0.7
baz=73
Z21A St. Cloud Mine 76.99 56 ⇓P P 10 54 30.6 +1.1
baz=73
DRGR 77.05 325 ⇓P P 10 54 30.5 +0.9
VOIR 77.12 322 ⇑P P 10 54 31.1 +1.1
VYHS Vyhne 77.23 328 eP P 10 54 31.4 +0.8
comp=Z,4.8nm,1.2s,mb4.1
VYHS Vyhne 77.23 328 eP P 10 54 31.4 +0.8
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
BRTR Keskin Array B 77.34 314 P P 10 54 31.9 +0.6
comp=Z,2.7nm,0.7s,mb4.1,baz=86,slow=3.5,SNR=15
BRTR Keskin Array B 77.34 314 P P 10 54 31.9 +0.6
BRTR pmax pmax
comp=Z,3.0nm,0.7s

319A Douglas 77.36 59 P P 10 54 32.2 +0.6
baz=74,SNR=5.1
VRAC Vranov 77.39 330 ⇑P P 10 54 32.4 +0.9
Z22A Elephant Butte 77.45 56 ⇑P P 10 54 32.5 +0.5
baz=74
121A Cookes Peak, D 77.46 57 ⇓P P 10 54 33.0 +0.8
baz=74
Y23A Lovelace Mesa, 77.51 55 ⇓P P 10 54 32.7 +0.3
baz=74
W25A X Bar L Ranch, 77.52 53 ⇑P P 10 54 32.9 +0.5
baz=74
Y24A Capitan 77.87 54 ⇓P P 10 54 34.8 +0.4
baz=74
GZR Gura Zlata 78.14 324 ⇑P P 10 54 35.5 -0.2
KHC Kasperske Hory 78.62 331 eP P 10 54 37.7 -0.5
comp=Z,9.9nm,0.7s,mb4.8
KHC Kasperske Hory 78.62 331 eP P 10 54 37.7 -0.5
KHC pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CONA Conrad Observa 78.81 329 ⇑iP P 10 54 39.7 +0.3
comp=Z,8.2nm,0.8s,mb4.6
GERES GERESS Array B 78.82 331 P P 10 54 39.4 0.0
comp=Z,2.8nm,0.7s,mb4.2,baz=39,slow=5.2,SNR=18
GERES GERESS Array B 78.82 331 P P 10 54 39.4 +0.1
GERES pmax pmax
comp=Z,3.0nm,0.7s
Z26A Caprock 79.19 54 ⇓P P 10 54 41.8 +0.2
baz=76
Y27A Causey 79.22 53 ⇑P P 10 54 41.8 -0.1
baz=76
125A Gardner Draw, 79.23 55 ⇑P P 10 54 42.3 +0.4
baz=76
MNTX Cornudas Mount 79.49 56 ⇓P P 10 54 43.3 0.0
baz=76
225A Deer Hill, Car 79.53 55 ⇑P P 10 54 44.0 +0.4
baz=76
Z27A Tatum 79.60 53 ⇑P P 10 54 44.0 +0.1
baz=76
226A Malaga, Loving 79.99 55 ⇑P P 10 54 46.2 +0.2
baz=76
SOKA Soboth 80.17 329 ⇑iP P 10 54 47.4 +0.6
comp=Z,10.0nm,1.0s,mb4.6
VTS Vitosha 80.18 322 ⇓P P 10 54 47.7 +0.8
425A Indio Mountain 80.38 56 ⇓P P 10 54 48.5 +0.3
baz=77
KBA Koelnbreinsper 80.45 330 ⇑iP P 10 54 49.1 +0.9
comp=Z,8.3nm,0.7s,mb4.7
326A Caldwell Ranch 80.60 55 ⇑P P 10 54 49.3 0.0
baz=77
WTTA Wattenberg 80.89 331 ⇓iP P 10 54 51.2 +0.6
comp=Z,8.5nm,0.5s,mb4.8
MOTA Moosalm 81.00 332 ⇓iP P 10 54 51.4 +0.2
comp=Z,8.0nm,0.8s,mb4.6
426A McDonald Obser 81.03 56 ⇓P P 10 54 51.6 -0.1
baz=77
328A Wristen Ranch, 81.24 55 ⇑P P 10 54 52.8 +0.1
baz=78
427A Hayter Ranch, 81.27 55 ⇓P P 10 54 53.1 +0.2
baz=78
CDF Champ du Feu 81.32 334 eP P 10 54 51.0 -1.8
CDF Champ du Feu 81.32 334 eP P 10 54 51.0 -1.8
FETA Feichten 81.41 332 ⇑iP P 10 54 53.7 +0.4
comp=Z,9.5nm,1.3s,mb4.5
526A Mary Lane Ranc 81.44 56 ⇑P P 10 54 54.1 +0.3
baz=78
DAVA Damuels 81.47 332 ⇑iP P 10 54 53.2 -0.4
comp=Z,4.8nm,0.7s,mb4.5
527A Woodward Ranch 81.66 56 ⇑P P 10 54 55.0 0.0
baz=78
626A Big Bend Ranch 81.78 57 ⇓P P 10 54 55.9 +0.3
baz=78
428A Kincaid Ranch, 81.79 55 ⇓P P 10 54 56.1 +0.5
baz=78
FUORN Ofenpass-Fuorn 81.92 332 eP P 10 54 56.6 +0.6
comp=Z,10nm,1.1s,mb4.6
HAU Haudompre 81.96 335 eP P 10 54 54.2 -2.0
HAU Haudompre 81.96 335 eP P 10 54 54.2 -2.0
HINF Hinteralfeld 81.97 334 eP P 10 54 54.0 -2.3
HINF Hinteralfeld 81.97 334 eP P 10 54 54.0 -2.3
528A Cox Ranch, San 82.14 55 ⇑P P 10 54 57.9 +0.4
baz=78
SFTF Sexfontaines 82.18 336 eP P 10 54 55.4 -1.9
TXAR Lajitas Array 82.22 56 P P 10 54 57.9 0.0
comp=Z,3.7nm,0.7s,mb4.3,baz=300,slow=4.0,SNR=55
TXAR pP pP 10 55 17.5 -1.4
comp=Z,2.7nm,0.6s,baz=292,slow=2.8,SNR=9.5
TXAR Lajitas Array 82.22 56 P P 10 54 57.9 0.0
TXAR pP pP 10 55 17.5 -1.4
TXAR Lajitas Array 82.22 56 P P 10 54 57.9 0.0
TXAR *PP pP 10 55 17.5 -1.4
TXAR pmax pmax
comp=Z,4.0nm,0.7s
627A Terlingua Ranc 82.30 56 ⇓P P 10 54 58.5 +0.2
baz=79
628A Black Gap, Mar 82.57 56 ⇑P P 10 54 59.6 -0.1
baz=79
FLN La Foliniere 83.19 339 eP P 10 55 00.7 -1.9
comp=Z,9.6nm,0.5s,mb4.6
FLN La Foliniere 83.19 339 eP P 10 55 00.7 -1.9
comp=Z,4.8nm,0.5s,mb4.6
FLN La Foliniere 83.19 339 eP P 10 55 00.7 -1.9
FLN pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
LDF La Druitiere 83.26 339 eP P 10 55 00.8 -2.1
comp=Z,7.1nm,0.6s,mb4.4
LDF La Druitiere 83.26 339 eP P 10 55 00.8 -2.1
comp=Z,3.5nm,0.6s,mb4.4
LDF La Druitiere 83.26 339 eP P 10 55 00.8 -2.1
LDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
CABF La Chapelle 83.29 334 eP P 10 55 01.3 -1.8
CABF La Chapelle 83.29 334 eP P 10 55 01.3 -1.8
LOR Lormes 83.37 336 eP P 10 55 01.5 -2.0
comp=Z,4.9nm,0.6s,mb4.2
LOR Lormes 83.37 336 eP P 10 55 01.5 -2.0
comp=Z,2.5nm,0.6s,mb4.2
LOR Lormes 83.37 336 eP P 10 55 01.5 -2.0
LOR pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
GRR Gorron 83.63 339 eP P 10 55 03.1 -1.8
comp=Z,18nm,0.6s,mb4.8
GRR Gorron 83.63 339 eP P 10 55 03.1 -1.8
comp=Z,9.1nm,0.6s,mb4.8
GRR Gorron 83.63 339 eP P 10 55 03.1 -1.8
GRR pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
SSF Saint Saulge 83.66 336 eP P 10 55 04.0 -1.0
comp=Z,13nm,0.8s,mb4.5
SSF Saint Saulge 83.66 336 eP P 10 55 04.0 -1.0
comp=Z,6.7nm,0.8s,mb4.5
SSF Saint Saulge 83.66 336 eP P 10 55 04.0 -1.0
SSF pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
SMF Signal de Mont 83.94 336 eP P 10 55 04.6 -1.9
comp=Z,26nm,0.9s,mb4.8
SMF Signal de Mont 83.94 336 eP P 10 55 04.6 -1.9
comp=Z,13nm,0.9s,mb4.8
SMF Signal de Mont 83.94 336 eP P 10 55 04.6 -1.9
SMF pmax pmax
comp=Z,13nm,0.9s,mb4.8
AVF Avril sur Loir 83.95 336 eP P 10 55 04.8 -1.7
comp=Z,10nm,0.7s,mb4.5
AVF Avril sur Loir 83.95 336 eP P 10 55 04.8 -1.7
comp=Z,5.2nm,0.7s,mb4.5
AVF Avril sur Loir 83.95 336 eP P 10 55 04.8 -1.7
AVF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPL La Plagne 84.06 333 eP P 10 55 05.9 -1.2
comp=Z,12nm,0.8s,mb4.5
LPL La Plagne 84.06 333 eP P 10 55 05.9 -1.2
comp=Z,5.8nm,0.8s,mb4.5
LPL La Plagne 84.06 333 eP P 10 55 05.9 -1.2
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
LPG La Plagne 84.07 333 eP P 10 55 06.1 -1.0
comp=Z,16nm,0.8s,mb4.6
LPG La Plagne 84.07 333 eP P 10 55 06.1 -1.0
comp=Z,8.1nm,0.8s,mb4.6
LPG La Plagne 84.07 333 eP P 10 55 06.1 -1.0
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
SGMF Saint Gilles 84.18 340 eP P 10 55 06.3 -1.3
SGMF Saint Gilles 84.18 340 eP P 10 55 06.3 -1.3
ROSF Rostrenen 84.27 341 eP P 10 55 06.7 -1.4
comp=Z,25nm,0.8s,mb4.8
ROSF Rostrenen 84.27 341 eP P 10 55 06.7 -1.4
comp=Z,13nm,0.8s,mb4.8

ROSF	Rostrenen	84.27	341	eP	P	10 55 06.7	-1.4
ROSF				pmax	pmax		
comp=Z,13nm,0.8s,mb4.8							
TCF	Toulx Ste Croi	84.74	337	eP	P	10 55 09.0	-1.5
comp=Z,8.0nm,0.9s,mb4.3							
TCF	Toulx Ste Croi	84.74	337	eP	P	10 55 09.0	-1.5
comp=Z,4.0nm,0.9s,mb4.3							
TCF	Toulx Ste Croi	84.74	337	eP	P	10 55 09.0	-1.5
TCF				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.3							
MBDF	Montbardon	84.75	333	eP	P	10 55 09.3	-1.3
comp=Z,6.0nm,0.6s,mb4.4							
MBDF	Montbardon	84.75	333	eP	P	10 55 09.3	-1.3
comp=Z,3.0nm,0.6s,mb4.4							
MBDF	Montbardon	84.75	333	eP	P	10 55 09.3	-1.3
MBDF				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.4							
ORIF	Oris-en-Rattie	84.86	334	eP	P	10 55 09.9	-1.3
comp=Z,13nm,0.7s,mb4.7							
ORIF	Oris-en-Rattie	84.86	334	eP	P	10 55 09.9	-1.3
comp=Z,6.3nm,0.7s,mb4.7							
ORIF	Oris-en-Rattie	84.86	334	eP	P	10 55 09.9	-1.3
ORIF				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.6							
MFF	Saint Martin d	85.10	338	eP	P	10 55 11.1	-1.2
comp=Z,18nm,0.9s,mb4.7							
MFF	Saint Martin d	85.10	338	eP	P	10 55 11.1	-1.2
comp=Z,9.1nm,0.9s,mb4.7							
MFF	Saint Martin d	85.10	338	eP	P	10 55 11.1	-1.2
MFF				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.7							
SBF	Sospel	85.29	332	eP	P	10 55 12.1	-1.2
SBF	Sospel	85.29	332	eP	P	10 55 12.1	-1.2
VIVF	Saint-Julien-l	85.30	334	eP	P	10 55 12.0	-1.3
VIVF	Saint-Julien-l	85.30	334	eP	P	10 55 12.0	-1.3
SMRF	Simiane la Rot	85.80	333	eP	P	10 55 14.7	-1.2
comp=Z,7.2nm,0.7s,mb4.4							
SMRF	Simiane la Rot	85.80	333	eP	P	10 55 14.7	-1.2
comp=Z,7.2nm,0.7s,mb4.7							
FRF	La Foret Royal	85.83	333	eP	P	10 55 13.9	-2.1
FRF	La Foret Royal	85.83	333	eP	P	10 55 13.9	-2.1
RJF	Les Rejaudoux	85.83	337	eP	P	10 55 14.6	-1.4
RJF	Les Rejaudoux	85.83	337	eP	P	10 55 14.6	-1.4
PGF	Pioggiola	85.91	331	eP	P	10 55 14.4	-2.0
PGF	Pioggiola	85.91	331	eP	P	10 55 14.4	-2.0
CAF	Calviac	86.02	336	eP	P	10 55 16.1	-0.8
comp=Z,16nm,0.8s,mb4.7							
CAF	Calviac	86.02	336	eP	P	10 55 16.1	-0.8
comp=Z,7.9nm,0.8s,mb4.7							
CAF	Calviac	86.02	336	eP	P	10 55 16.1	-0.8
CAF				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.7							
LMR	La Mourre	86.07	333	eP	P	10 55 15.3	-1.9
LMR	La Mourre	86.07	333	eP	P	10 55 15.3	-1.9
LASF	Ste Croix	86.25	335	eP	P	10 55 17.1	-1.0
comp=Z,9.9nm,0.8s,mb4.5							
LFF	La Frestale	86.39	337	eP	P	10 55 17.8	-0.9
comp=Z,14nm,0.6s,mb4.8							
LFF	La Frestale	86.39	337	eP	P	10 55 17.8	-0.9
comp=Z,6.9nm,0.6s,mb4.8							
LFF	La Frestale	86.39	337	eP	P	10 55 17.8	-0.9
LFF				pmax	pmax		
comp=Z,7.0nm,0.6s,mb4.8							
URZ	Urewera	86.41	157	LR	LR	11 28 25.2	
comp=Z,84nm,18.9s,baz=238,slow=32							
EPF	Esparros	88.25	336	eP	P	10 55 27.1	-0.6
EPF	Esparros	88.25	336	eP	P	10 55 27.1	-0.6
ETSF	Etsaut	88.63	337	eP	P	10 55 28.2	-1.3
comp=Z,9.2nm,0.8s,mb4.5							
ETSF	Etsaut	88.63	337	eP	P	10 55 28.2	-1.3
comp=Z,4.6nm,0.8s,mb4.6							
ETSF	Etsaut	88.63	337	eP	P	10 55 28.2	-1.3
ETSF				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.6							
BDFB	Brasilia	148.62	29	PKPbc	PKPbc	11 02 24.3	+0.8
comp=Z,1.9nm,0.4s,baz=178,slow=24,SNR=3.8							
BDFB				pPKPbc	pPKPbc	11 02 43.2	-2.3
comp=Z,4.1nm,0.8s,baz=122,slow=25,SNR=2.5							
PLCA	Paso Flores	151.95	96	PKPbc	PKPbc	11 02 30.3	-0.5
comp=Z,1.4nm,0.8s,baz=219,slow=11,SNR=3.4							
PLCA				pPKPbc	pPKPbc	11 02 49.9	-3.0
comp=Z,1.8nm,0.7s,baz=9.6,slow=22,SNR=3.0							

IDC 22 11:19:56.7±8.0, 12°.02S×167°.76E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/17, mbtmp3.8/4, Error ellipse: s-maj=218.7km s-min=50.9km az=122.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.03	252	P	P	11 26 33.5	-0.5
0.2nm,0.5s,baz=85,slow=9.5,SNR=5.5							
ASAR	Alice Springs	34.15	245	P	P	11 26 44.2	+0.5
0.7nm,0.7s,baz=70,slow=9.2,SNR=9.5							
CMAR	Chiang Mai Arr	74.31	293	P	P	11 31 36.9	+0.4
0.4nm,0.6s,baz=126,slow=5.7,SNR=3.7							
MKAR	Makanchi Array	95.58	317	P	P	11 33 23.4	-0.5
0.3nm,0.2s,baz=90,slow=6.1,SNR=4.0							

IDC 22 11:34:05.5±3.0, 29°.64N×51°.24E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.7/26, mbtmp4.1/4, Error ellipse: s-maj=66.5km s-min=31.8km az=144.0
SGS 22 11:34:08.5, 29°.87N×51°.48E, h18km
KISR 22 11:34:09.8±1.1, 29°.70N×51°.08E, h34km±102km, ML3.3
TEH 22 11:34:09.2, 29°.69N×51°.30E, h5km
CSEM 22 11:34:10.1±0.2, 29°.70N×51°.34E, h20km, ML3.3, Error ellipse: s-maj=6.3km s-min=4.0km az=152.0

ISC 22 11:34:08.0±1.1, 29°.66N±0°.04×51°.32E±0°.04, h4km±8km, n38, σ1§09/51, mb4.1/4, 2C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPAR	Pars	1.52	83	ePg	Pg	11 34 36.0	-1.1
IPAR				eSg	Sg	11 34 57.1	+0.3
IPAR				e		11 35 00.8	
comp=Z,4μm,0.3s							
ISRV	Sarvestan	1.59	100	ePg	Pg	11 34 38.1	-0.4
ISRV				e		11 35 06.6	
comp=Z,6μm,0.2s							
IGAR	Gharneh	2.81	13	ePn	Pn	11 34 54.4	+0.8
IGAR				e		11 35 02.3	
comp=Z,1μm,0.1s							
ISAD	Sadrabad	3.04	42	ePn	Pn	11 34 58.2	+1.4
ISAD				e		11 35 48.1	
comp=Z,2μm,0.3s							
IPIR	Pirpir	3.04	353	ePn	Pn	11 34 57.8	+1.0
IPIR				eSn	Sn	11 35 32.8	-0.8
IPIR				e		11 35 53.9	
comp=N,1μm,0.3s							
QRN	Al-Qurain	3.11	254	eP	Pn	11 34 59.1	+1.4
QRN				eS	Sn	11 35 35.5	+0.1
QRN				AML	AML	11 35 37.3	
comp=Z,199nm,0.3s							
UMR	Umm Al-Rimmam	3.14	269	eP	Pn	11 34 59.2	+1.0
UMR	Umm Al-Rimmam	3.14	269	eP	Pn	11 34 59.2	+1.0
KBD	Kabd	3.20	262	eP	Pn	11 35 00.1	+1.1
KBD				eS	Sn	11 35 38.0	+0.4
KBD				AML	AML	11 35 38.9	
comp=Z,44nm,0.4s							
KBD	Kabd	3.20	262	eP	Pn	11 35 00.1	+1.1
KBD				eS	Sn	11 35 38.0	+0.5
comp=Z,44nm,0.4s							
KFJS		3.30	244	P	Pn	11 35 00.7	+0.2
KFJS		3.30	244	P	Pn	11 35 00.7	+0.3
IMEH	Mehriz	3.33	58	ePn	Pn	11 35 01.9	+1.1
IMEH				e		11 35 10.5	
comp=Z,776nm,0.3s							
IZEF	Zefreh	3.34	15	ePn	Pn	11 35 01.1	+0.1
IZEF				e		11 35 15.6	
comp=Z,530nm,0.1s							
RDF	Al-Radifah	3.37	258	eP	Pn	11 35 02.4	+1.0
RDF				eS	Sn	11 35 41.2	-0.6
RDF				AML	AML	11 35 43.2	
comp=Z,48nm,0.3s							
RDF	Al-Radifah	3.37	258	eP	Pn	11 35 02.4	+1.0
RDF				eS	Sn	11 35 41.2	-0.6
NASN	Na'in	3.38	22	ePn	Pn	11 35 01.8	+0.3
MIB	Mutribah	3.46	273	eP	Pn	11 35 02.8	+0.1
MIB				eS	Sn	11 35 43.4	-0.7
MIB				AML	AML	11 35 48.4	
comp=Z,47nm,0.5s							
MIB	Mutribah	3.46	273	eP	Pn	11 35 02.8	+0.1
MIB				eS	Sn	11 35 43.4	-0.7
NAY	Al-Naaiem	3.58	264	eP	Pn	11 35 05.0	+0.7
NAY				eS	Sn	11 35 46.8	-0.1
NAY				AML	AML	11 35 49.9	
comp=Z,39nm,0.4s							
NAY	Al-Naaiem	3.58	264	eP	Pn	11 35 05.0	+0.8
NAY				eS	Sn	11 35 46.8	-0.1
IKLH	Kolahrood	3.66	3	ePn	Pn	11 35 05.7	+0.4
ICHK	Chekchek	3.70	45	e	Sn	11 35 52.0	+2.0
comp=Z,583nm,0.2s							
ICHK				ePn	Pn	11 35 06.4	+0.5
IBAF	Bafgh	4.14	61	e	Pg	11 35 25.2	-2.1
comp=Z,399nm,0.3s							
BOQSS		4.15	205	P	Pn	11 35 13.3	+1.2
KRBR	Kerman	4.74	85	ePn	Pn	11 35 20.7	+0.5
ASAO	Ashtian	5.00	348	ePn	Pn	11 35 23.2	-0.5
BTHS		5.61	184	P	Pn	11 35 32.5	+0.4
BTHS		5.61	184	P	Pn	11 35 32.5	+0.4
BTHS				S	Sn	11 36 35.6	-1.4
TABS	Tabas	6.35	50	ePn	Pn	11 35 42.8	+0.5
SNGE	Sanandaj	6.37	329	ePn	Pn	11 35 41.4	-1.3
MLR	Muntele Rosu	25.43	315	⇑iP	P	11 39 28.3	-8.3
VOIR		25.95	315	⇑iP	P	11 39 31.5	-10
ZALV	Zalesovo Beam	34.30	35	P	P	11 40 53.4	-1.8
comp=Z,1.0nm,0.3s,mb4.2,baz=253,slow=7.6,SNR=5.7							
HFS	Hagfors	39.53	331	P	P	11 41 36.8	-2.8
comp=Z,0.8nm,0.3s,mb4.0,baz=141,slow=9.4,SNR=9.2							
ARCES	ARCESS Array B	42.57	347	P	P	11 42 03.9	-0.7
comp=Z,4.1nm,1.0s,mb4.1,baz=146,slow=6.6,SNR=2.9							
EKA	Eskdalemuir Ar	46.13	320	P	P	11 42 30.6	-2.6
comp=Z,0.8nm,0.3s,mb4.1,baz=101,slow=8.2,SNR=6.0							
TORD	Torodi Ar. Bea	48.66	261	P	P	11 42 51.1	-2.4
comp=Z,173nm,0.4s,baz=54,slow=8.4,SNR=3.5							

IDC 22 11:50:02.2±8.8, 11°.69S×165°.66E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.6/3, Error ellipse: s-maj=264.6km s-min=53.5km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.19	251	P	P	11 56 23.7	+0.4
0.4nm,0.7s,baz=84,slow=9.4,SNR=6.0							
ASAR	Alice Springs	32.43	244	P	P	11 56 34.1	-0.1
0.3nm,0.6s,baz=68,slow=9.8,SNR=7.5							
MKAR	Makanchi Array	93.94	317	P	P	12 03 21.8	-0.1
0.8nm,0.6s,baz=86,slow=6.2,SNR=6.6							

BUC 22 11:55:15.8±2.9, 45°.50N×21°.23E, h7km±8km, MD2.8/2, Error ellipse: s-maj=20.3km s-min=12.4km az=71.0
ISCJB 22 11:55:16.4±0.5, 45°.31N±0°.02×21°.69E±0°.04, h10km, Error ellipse: s-maj=4.1km s-min=3.2km az=39.0
BEO 22 11:55:16.9±0.4, 45°.33N×21°.75E, h0km, ML1.9/6
CSEM 22 11:55:16.2±0.2, 45°.32N×21°.72E, h2km, ML1.9, Error ellipse: s-maj=5.3km s-min=3.5km az=99.0

ISC 22 11:55:17.0±0.5, 45°.32N±0°.02×21°.72E±0°.04, h10km, n30, σ1§10/48, 10C-3D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZS	Buzias	0.30	348	⇑iPg	Pg	11 55 21.7	-1.4
BZS				eSg	Sg	11 55 26.2	-1.0
BZS	Buzias	0.30	348	⇓iP	Pg	11 55 21.8	-1.3
BZS				i S	Sg	11 55 26.6	-0.6
BZS	Buzias	0.30	348	⇓iP	Pg	11 55 21.8	-1.3
BZS				S	Sg	11 55 26.6	-0.6
BZS	Buzias	0.30	348	⇓iP	Pg	11 55 21.8	-1.3
BZS				eSg	Sg	11 55 26.2	-1.0
BZS				S	Sg	11 55 26.6	-0.6
GZR	Gura Zlata	0.76	84	⇑iP	Sg	11 55 37.3	-4.1
GZR	Gura Zlata	0.76	84	⇑iP	Sg	11 55 37.3	-4.1
GZR	Gura Zlata	0.76	84	⇑iP	Pg	11 55 30.0	-1.6
GZR				S	Pb	11 55 32.5	+0.3
DJES	Djerdap	0.87	138	ePg	Pg	11 55 33.1	-0.7
DJES				eSg	Sg	11 55 44.2	-0.9
SVIS	Svilajnac	1.11	199	ePg	Pg	11 55 37.1	-1.2
SVIS				eSg	Sg	11 55 53.2	+0.4
FRGS	Fruska Gora	1.35	264	eSg	Sg	11 56 01.4	+0.9
FRGS	Fruska Gora	1.35	264	eSg	Sg	11 56 01.4	+0.9
TRUS	Trudelj	1.44	221	ePg	Pb	11 55 43.1	-0.7
TRUS				eSg	Sg	11 56 02.8	-0.4
TRUS	Trudelj	1.44	221	ePg	Pb	11 55 43.1	-0.7
TRUS				eSg	Sg	11 56 02.8	-0.4
BOLS	Boljevac	1.50	173	eSg	Sg	11 56 03.1	-2.2
BOLS	Boljevac	1.50	173	eSg	Sg	11 56 03.1	-2.2
DRGR		1.63	25	⇑iP	Pn	11 55 46.3	+0.6
DRGR				i S	Sn	11 56 07.9	+1.2
DRGR		1.63	25	⇑iP	Pn	11 55 46.3	+0.6
DRGR		1.63	25	S	Sn	11 56 07.9	+1.2
DRGR		1.63	25	⇑iP	Pn	11 55 46.3	+0.6
DRGR				S	Sn	11 56 07.9	+1.2
DIVS	Divibare	1.73	226	ePg	Pb	11 55 48.9	+0.1
DIVS				eSg	Sg	11 56 12.0	-0.6
DIVS	Divibare	1.73	226	ePg	Pb	11 55 48.9	+0.1
DIVS				eSg	Sg	11 56 12.0	-0.6
ZAPS	Zavoj	2.15	162	ePn	Pn	11 55 54.8	+1.9
ZAPS				eSn	Sn	11 56 21.5	+1.9
VOIR		2.36	86	⇑iP	Pb	11 55 59.9	+0.4
VOIR				i S	Sg	11 56 32.5	-0.2
VOIR		2.36	86	⇑iP	Pb	11 55 59.9	+0.4
VOIR		2.36	86	S	Sg	11 56 32.5	-0.2
VOIR		2.36	86	⇑iP	Pb	11 55 59.9	+0.4
BARS	Barje	2.50	178	ePn	Pn	11 55 58.4	+0.7
BARS				eSn	Sn	11 56 30.7	+2.4
BARS	Barje	2.50	178	ePn	Pn	11 55 58.4	+0.7
BARS				eSn	Sn	11 56 30.7	+2.4
MLR	Muntele Rosu	2.99	85	i S	Sb	11 56 47.2	+0.4
MLR	Muntele Rosu	2.99	85	S	Sb	11 56 47.2	+0.4

NEIC 22 12:04:33.0, 14°.36N×92°.81W, h27km, MD4.0(MEX), After MEX.

MEX 22 12:04:33.0±0.6, 14°.36N×92°.81W, h27km±10km, MD4.0, 2C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.76	44	i P	Pb	12 04 45.2	-2.4
THIG				i S	Sb	12 04 54.6	-2.9
PCIG		1.39	344	i P	Pn	12 04 54.0	-2.6
PCIG				i S	Sn	12 05 11.1	-3.0
CCIG	Comitan	2.02	19	eP	Pn	12 05 03.2	-2.0
CCIG				i S	Sn	12 05 27.4	-2.2
CCIG	Comitan	2.02	19	eP	Pn	12 05 03.2	-2.0
CCIG				i S	Sn	12 05 27.4	-2.2
TGIG		2.42	353	i P	Pn	12 05 09.4	-1.4
TGIG				i S	Sn	12 05 36.0	-3.5
CMIG	Matias Romero	3.37	324	i P	Pn	12 05 22.6	-1.2
CMIG				i S	Sn	12 06 00.3	-2.6
CMIG	Matias Romero	3.37	324	i P	Pn	12 05 22.6	-1.2
CMIG				i S	Sn	12 06 00.3	-2.6
HUIG	Huatulco	3.48	294	eP	Pn	12 05 23.6	-1.7
HUIG				i S	Sn	12 06 03.3	-2.4
HUIG	Huatulco	3.48	294	eP	Pn	12 05 23.6	-1.7
HUIG				i S	Sn	12 06 03.3	-2.4
VHO	Vista Hermosa	4.64	306	i P	Pn	12 05 40.4	-0.9
VHO	Vista Hermosa	4.64	306	i P	Pn	12 05 40.4	-0.9
PNIG	Pinotepa	5.51	292	⇑iP	Pn	12 05 53.1	-0.2
PNIG	Pinotepa	5.51	292	⇑iP	Pn	12 05 53.1	-0.2
UTMO	Huajuapan	5.91	306	i P	Pn	12 05 59.5	+0.7

NEIC 22 12:07:08.7, 16°.12N×97°.27W, h29km, MD3.5(MEX), After MEX.

MEX 22 12:07:08.7±0.4, 16°.12N×97°.27W, h29km±19km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.87	288	i P	Pn	12 07 22.5	-2.4
PNIG				i S	Sb	12 07 33.3	-3.2
PNIG	Pinotepa	0.87	288	i P	Pn	12 07 22.5	-2.4
PNIG				i S	Sb	12 07 33.3	-3.2
VHO	Vista Hermosa	1.07	28	i P	Pn	12 07 25.1	-2.7
VHO				i S	Sn	12 07 38.9	-2.9
VHO	Vista Hermosa	1.07	28	i P	Pn	12 07 25.1	-2.7
VHO				i S	Sn	12 07 38.9	-2.9
HUIG	Huatulco	1.17	107	i P	Pn	12 07 27.0	-2.1
HUIG				i S	Sn	12 07 40.8	-3.3
HUIG	Huatulco	1.17	107	i P	Pn	12 07 27.0	-2.1
HUIG				i S	Sn	12 07 40.8	-3.3
CMIG	Matias Romero	2.48	67	i P	Pn	12 07 44.4	-2.7
CMIG				i S	Sn	12 08 14.2	-2.2
CMIG	Matias Romero	2.48	67	i P	Pn	12 07 44.4	-2.7
CMIG				i S	Sn	12 08 14.2	-2.2

IDC 22 12:20:46.8±2.1, 5°.99S×151°.15E, h0km, mb4.0/6, mb1 4.3/6, mb1mx3.9/16, mbtmp4.0/6, Error ellipse: s-maj=86.4km s-min=24.2km az=123.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	19.63	249	eP	Pn	12 25 19.0	+0.6
6.3nm,0.6s							
WRA	Warramunga Arr	21.43	228	P	P	12 25 36.7	0.0
11nm,1.0s,baz=54,slow=11,SNR=53							
ASAR	Alice Springs	24.18	222	P	P	12 26 05.0	0.0
11nm,0.7s,baz=56,slow=9.3,SNR=149							
FITZ	Fitzroy Crossi	27.66	242	P	P	12 26 36.6	+0.1
2.1nm,0.8s,baz=70,slow=8.5,SNR=6.6							
FITZ	Fitzroy Crossi	27.66	242	eP	P	12 26 36.6	0.0
9.9nm,1.4s							
MKAR	Makanchi Array	80.14	319	P	P	12 32 58.8	0.0
0.3nm,0.7s,baz=102,slow=6.1,SNR=2.5							
ZALV	Zalesovo Beam	81.23	327	P	P	12 33 04.6	+0.1
0.3nm,0.3s,baz=108,slow=4.7,SNR=2.5							
ILAR	Eielson Array	83.87	22	P	P	12 33 18.1	0.0
0.6nm,0.6s,baz=243,slow=5.5,SNR=6.7							
TORD	Torodi Ar. Bea	149.08	286	PKPbc	PKPbc	12 40 37.8	-0.3
5.1nm,0.9s,baz=74,slow=2.9,SNR=1.5							

CSEM 22 12:26:50.7±0.2, 38°.07N×21°.93E, h20km, ML1.5/6, Error ellipse: s-maj=5.1km s-min=4.5km az=63.0
ISCJB 22 12:26:51.0±0.7, 38°.04N±0°.03×21°.94E±0°.04, h13km±4km, Error ellipse: s-maj=6.5km s-min=4.8km az=43.2
THE 22 12:26:51.5, 38°.05N×21°.97E, h12km±4km, ML1.5/6, Error ellipse: s-maj=4.1km s-min=0.8km az=22.0
ATH 22 12:26:51.0, 38°.06N×21°.95E, h20km±3km, MD2.9/6

ISC 22 12:26:51.2±0.7, 38°.05N±0°.04×21°.95E±0°.04, h18km±7km, n22, σ0§49/38, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	Lakka	0.19	6	P	Pg	12 26 55.6	-0.4
LAKA				S	Sg	12 26 58.7	-0.5
LAKA	Lakka	0.19	6	P	Pg	12 26 55.6	-0.4
LAKA				S	Sg	12 26 58.7	-0.5
GUR	Goura	0.33	110	ePB	Pg	12 26 58.0	-0.2
GUR				eSB	Sg	12 27 03.5	+0.6
GUR	Goura	0.33	110	P	Pg	12 26 58.0	-0.2
GUR				S	Sg	12 27 02.7	-0.2
GUR	Goura	0.33	110	P	Pg	12 26 58.0	-0.2
GUR				S	Sg	12 27 02.7	-0.2
GUR				eSb	Sg	12 27 03.5	+0.6
TRIZ	Trizonia	0.33	17	P	Pg	12 26 58.0	-0.2
TRIZ				S	Sg	12 27 03.5	+0.5
TRIZ	Trizonia	0.33	17	P	Pg	12 26 58.0	-0.2
TRIZ				S	Sg	12 27 03.5	+0.5
KALE	Kalithea	0.37	23	P	Pg	12 26 58.8	-0.1
KALE				S	Sg	12 27 05.1	+0.9
KALE	Kalithea	0.37	23	P	Pg	12 26 58.8	-0.1
KALE				S	Sg	12 27 05.1	+0.9
EFP	Efpalio	0.38	355	ePB	Pg	12 26 58.9	-0.2
EFP				eSB	Sg	12 27 04.4	0.0
EFP	Efpalio	0.38	355	P	Pg	12 26 59.1	0.0
EFP				S	Sg	12 27 04.1	-0.3
EFP	Efpalio	0.38	355	ePb	Pg	12 26 58.9	-0.2
EFP				S	Sg	12 27 04.1	-0.3
RLS	Riolos of Patr	0.38	271	ePB	Pg	12 26 58.7	-0.4
RLS				eSB	Sg	12 27 05.1	+0.7
RLS	Riolos of Patr	0.38	271	ePb	Pg	12 26 58.7	-0.4
DSF	Desfina	0.58	51	P	Pg	12 27 02.4	-0.3
DSF				S	Sg	12 27 10.3	-0.2
DSF	Desfina	0.58	51	P	Pg	12 27 02.4	-0.3
DSF				S	Sg	12 27 10.3	-0.2
LTK	Loutraki	0.80	92	ePB	Pb	12 27 06.2	-0.4
LTK	Loutraki	0.80	92	ePb	Pb	12 27 06.2	-0.4
ITM	Ithomi	0.87	181	ePN	Pn	12 27 08.1	-0.4
ITM	Ithomi	0.87	181	ePn	Pn	12 27 08.1	-0.4
DID	Didima	1.15	118	ePN	Pn	12 27 13.5	+1.1
DID	Didima	1.15	118	ePn	Pn	12 27 13.5	+1.1

IDC 22 13:10:40.0±0.8, 24°.12S×175°.82W, h0km, mb4.2/11, mb1 4.5/11, mb1mx4.4/18, mbtmp4.2/11, MS4.0/6, Ms1 4.0/6, ms1mx3.6/31, Error ellipse: s-maj=41.5km s-min=18.7km az=152.0
ISCJB 22 13:10:43.0±0.3, 24°.73S±0°.05×175°.67W±0°.09, h33km, mb4.6/36, MS4.3/7, Error ellipse: s-maj=12.2km s-min=6.1km az=26.5
NEIC 22 13:10:45.5±0.4, 24°.22S×175°.88W, h35km, mb4.7/15, Error ellipse: s-maj=14.9km s-min=8.9km az=151.0

ISC 22 13:10:44.9±0.3, 24°.68S±0°.05×175°.66W±0°.08, h35km, (h35km±1.0km: pP-P), n84, σ1§11/65, mb4.6/36, MS4.3/7, 1C, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	9.06	318	P	Pn	13 12 45.9	-7.4
138nm,1.1s							
AFI	Afiamalu	11.32	20	Pn	Pn	13 13 11.2	-13
9.2nm,0.3s,baz=107,slow=3.6,SNR=9.6							
AFI				Sn	Sx	13 15 03.6	
2.8nm,0.3s,baz=229,slow=20,SNR=2.5							
AFI	Afiamalu	11.32	20	eP	Pn	13 13 11.7	-13
110nm,1.0s							
MXZ	Matakaoa Point	13.84	200	ePN	Pn	13 13 59.0	+0.5
MXZ				SN	Px	13 15 15.4	
OUZ	Omahuta	14.03	219	P	Pn	13 14 03.5	+2.4
PUZ	Puketiti	14.32	200	PN	Pn	13 14 04.3	-0.8
CNGZ	Carnagh Statio	14.72	199	ePN	Pn	13 14 09.6	-0.9
MWZ	Matawai	14.79	201	ePN	Pn	13 14 09.2	-2.3
MWZ				SN	Px	13 15 32.8	
URZ	Urewera	14.87	203	Pn	Pn	13 14 09.1	-3.4
11nm,0.3s,baz=355,slow=2.6,SNR=102							
URZ				Sn	Sn

STKA	**Stephens Creek**	**38.13 249**	P	**P**	**13 18 01.8 +1.0**
	2.2nm,0.9s,mb3.9,baz=42,slow=4.5,SNR=3.7				
STKA			LR	LR	13 32 57.5
	comp=Z,390nm,19.6s,MS4.2,baz=29,slow=35				
PMG	**Port Moresby**	**38.50 287**	*e*P	**P**	**13 18 00.7 -3.3**
	31nm,0.9s,mb5.0				
ASAR	**Alice Springs**	**45.81 260**	P	**P**	**13 19 02.4 -1.2**
	0.7nm,0.8s,mb3.6,baz=101,slow=8.2,SNR=4.5				
WRA	**Warramunga Arr**	**46.30 265**	P	**P**	**13 19 05.7 -1.8**
	3.0nm,0.7s,mb4.3,baz=98,slow=8.2,SNR=5.5				
KAKA	**Kakadu**	**50.32 274**	P	**P**	**13 19 36.4 -2.1**
SBA	**Scott Base**	**53.88 185**	*e*P	**P**	**13 20 07.4 +3.2**
FITZ	**Fitzroy Crossi**	**54.71 265**	P	**P**	**13 20 11.5 +0.4**
	5.0nm,1.0s,mb4.5,baz=102,slow=8.0,SNR=5.5				
FITZ	**Fitzroy Crossi**	**54.71 265**	*e*P	**P**	**13 20 11.9 +0.9**
	8.1nm,1.0s,mb4.7				
MAW	**Mawson**	**78.37 199**	P	**P**	**13 22 45.1 +3.7**
	1.8nm,0.9s,mb4.0,baz=92,slow=4.8,SNR=4.0				
YSS	**Yuzh-Sakhalins**	**80.58 333**	*e*P	**P**	**13 22 53.5 0.0**
	14nm,0.9s,mb4.9				
KSRS	**Korea Array**	**81.43 318**	P	**P**	**13 22 58.2 -0.1**
	1.8nm,1.0s,mb4.0,baz=143,slow=6.4,SNR=6.3				
WAKR	**Walker**	**81.99 41**	*e*P	**P**	**13 23 01.0 -0.2**
	7.4nm,1.1s,mb4.5				
WCN	**Washoe City**	**82.31 40**	P	**P**	**13 23 02.7 -0.2**
	5.5nm,1.2s,mb4.4				
NVAR	**Mina Array Bea**	**82.62 42**	P	**P**	**13 23 04.2 -0.4**
	3.2nm,0.8s,mb4.4,baz=222,slow=7.4,SNR=18				
SYO	**Syowa Base**	**83.13 192⇑**	*e*P	**P**	**13 23 08.6 +1.8**
SHPR	**Sheep Range**	**83.40 45**	*e*P	**P**	**13 23 07.3 -1.2**
	6.1nm,1.3s,mb4.5				
MOD	**Modoc**	**83.70 38**	P	**P**	**13 23 09.6 -0.4**
	1.7nm,0.8s,mb4.2				
VNA3	**Neumayer Olymp**	**83.84 175**	*e*P	**P**	**13 23 11.0 +0.6**
VNA3			*e*	pP	13 23 20.6 -0.8
NJ2	**Nanjing**	**84.19 309**	*e*P	**P**	**13 23 13.3 +0.6**
NJ2			pmax	pmax	
	comp=Z,10.0nm,0.8s,mb5.0				
WVOR	**Wild Horse Val**	**84.98 39**	*e*P	**P**	**13 23 16.4 -0.1**
	comp=Z,4.5nm,1.0s,mb4.5				
MDJ	**Mudanjiang**	**85.16 324**	P	**P**	**13 23 17.4 +0.1**
MDJ			pmax	pmax	
	comp=Z,11nm,1.5s,mb4.8				
MDJ			pmax	pmax	
	comp=Z,29nm,3.1s				
MSU	**Marysvale**	**86.49 45**	*e*P	**P**	**13 23 25.1 +1.0**
	comp=Z,4.4nm,1.2s,mb4.6				
CN2	**Changchun**	**86.91 322**	*e*P	**P**	**13 23 26.8 +0.8**
CN2			*e*pP	pP	13 23 37.3 +0.2
CN2			*e*S	S	13 33 59.6 -2.1
CN2			pmax	pmax	
	comp=Z,10.0nm,1.2s,mb4.9				
CN2			LR	LR	
	comp=Z,3μm,14.0s				
TXAR	**Lajitas Array**	**87.53 56**	P	**P**	**13 23 29.4 +0.1**
	comp=Z,1.0nm,0.9s,mb4.0,baz=226,slow=9.9,SNR=7.3				
TXAR	**Lajitas Array**	**87.53 56**	P	**P**	**13 23 29.4 +0.1**
TMUT	**Trail Mountain**	**87.56 44**	*e*P	**P**	**13 23 30.4 +1.1**
	comp=Z,5.7nm,0.8s,mb4.8				
LAZ	**Ladron**	**87.60 50**	*e*P	**P**	**13 23 30.1 +0.6**
	comp=Z,2.7nm,1.2s,mb4.3				
HLID	**Hailey**	**88.11 40**	*e*P	**P**	**13 23 30.6 -1.1**
ANMO	**Albuquerque**	**88.36 50**	*e*P	**P**	**13 23 33.6 +0.4**
	comp=Z,2.6nm,1.0s,mb4.4				
ENH	**Enshi**	**90.15 303**	*e*P	**P**	**13 23 42.5 +0.8**
	comp=Z,38nm,1.3s,mb5.6				
BJI	**Beijing**	**90.36 315**	P	**P**	**13 23 43.0 +0.6**
BJI			S	S	13 34 32.6 -1.9
BJI			pmax	pmax	
	comp=Z,9.0nm,0.5s,mb5.4				
BJI			LR	LR	
	comp=N,350nm,14.4s,MS5.1				
BJI			LR	LR	
	comp=E,340nm,14.7s,MS5.1				
BJI			LR	LR	
	comp=Z,180nm,26.6s				
PDAR	**Pinedale Array**	**90.55 42**	P	**P**	**13 23 42.2 -1.0**
	comp=Z,0.9nm,0.9s,mb4.1,baz=214,slow=3.1,SNR=6.2				
GYA	**Guiyang**	**90.57 299**	*e*P	**P**	**13 23 44.0 +0.3**
GYA			pP	pP	13 23 54.3 -0.6
GYA			PP	PP	13 27 20.0 +0.7
GYA			SKS		13 34 08.4
GYA			S	S	13 34 32.1 -4.9
GYA			pmax	pmax	
	comp=Z,10.0nm,1.0s,mb5.1				
GYA			pmax	pmax	
	comp=Z,90nm,5.6s				
MENT	**Mentasta**	**90.92 14**	*e*P	**P**	**13 23 43.7 -0.8**
BOZ	**Bozeman (W)**	**90.94 39**	*e*P	**P**	**13 23 44.4 -0.6**
	comp=Z,4.5nm,1.3s,mb4.6				
ILAR	**Eielson Array**	**91.91 12**	P	**P**	**13 23 46.8 -2.2**
	comp=Z,1.3nm,1.1s,mb4.2,baz=212,slow=5.0,SNR=6.5				
XAN	**Xi'an**	**92.36 306**	P	**P**	**13 23 52.8 +0.9**
XAN			pP	pP	13 24 04.3 +1.3
XAN			pmax	pmax	
	comp=Z,2.0nm,1.0s,mb4.4				
KMI	**Kunming**	**93.14 296**	P	**P**	**13 23 58.5 +2.8**
KMI			pmax	pmax	
	comp=Z,8.0nm,1.3s,mb5.0				
CMAR	**Chiang Mai Arr**	**93.52 289**	P	**P**	**13 23 59.0 +1.5**
	comp=Z,4.1nm,1.0s,mb4.8,baz=126,slow=3.4,SNR=21				
CHTO	**Chiang Mai**	**93.67 289**	P	**P**	**13 23 59.2 +0.9**
	comp=Z,7.7nm,1.0s,mb5.1				
HHC	**Hu-ho-hao-te**	**93.79 313**	*e*P	**P**	**13 23 58.5 +0.2**
HHC			pP	pP	13 24 09.5 0.0
HHC			sP	sP	13 24 13.3 -0.1
HHC			PP	PP	13 27 45.6 +1.2
HHC			SKS		13 34 28.6
HHC			S	S	13 35 02.3 -3.0
HHC			sS	sS	13 35 20.3 -3.5
HHC			SS	SS	13 41 23.8 -1.3
HHC			pmax	pmax	
	comp=Z,30nm,1.0s,mb5.7				
HHC			pmax	pmax	
	comp=Z,160nm,5.4s				
HHC			LR	LR	
	comp=N,300nm,19.1s,MS4.9				
HHC			LR	LR	
	comp=E,230nm,17.7s,MS4.9				
HHC			LR	LR	
	comp=Z,300nm,17.8s,MS4.8				
CD2	**Chengdu**	**94.83 302**	*e*P	**P**	**13 24 03.3 0.0**
CD2			pP	pP	13 24 13.1 -1.4
CD2			sP	sP	13 24 18.3 -0.2
CD2			pmax	pmax	
	comp=Z,10.0nm,0.6s,mb5.4				
CD2			pmax	pmax	
	comp=Z,20nm,5.8s				
LZH	**Lanzhou**	**97.00 306**	*e*P	**P**	**13 24 12.5 -0.6**
LZH			pP	pP	13 24 23.3 -0.9
LZH			sP	sP	13 24 27.0 -1.2
LZH			*e*PP	PP	13 28 09.6 +0.2
LZH			pmax	pmax	
	comp=Z,16nm,1.2s,mb5.3				
LZH			pmax	pmax	
	comp=Z,47nm,9.3s				
LZH			LR	LR	
	comp=E,200nm,17.8s				
LZH			LR	LR	
	comp=Z,300nm,19.5s,MS4.8				
AKASG	**Malin Array Be**	**147.70 330**	PKPbc	PKPbc	13 30 22.2 -3.3
	comp=Z,0.6nm,0.4s,baz=34,slow=3.4,SNR=9.7				
MALT	**Malatya**	**148.11 303**	*e*PKPbc	PKPbc	13 30 28.2 +1.1
EKA	**Eskdalemuir Ar**	**148.88 8**	PKPbc	PKPbc	13 30 27.8 -0.7
	comp=Z,2.6nm,0.9s,baz=348,slow=3.1,SNR=4.3				
BR131	**Keskin Array S**	**151.18 308**	*e*PKPbc	PKPbc	13 30 34.3 -0.3
BRTR	**Keskin Array B**	**151.18 308**	PKPbc	PKPbc	13 30 34.4 -0.2
	comp=Z,1.8nm,0.8s,baz=80,slow=1.6,SNR=8.3				
MMAI	**Mount Meron Ar**	**151.63 294**	PKPbc	PKPbc	13 30 35.5 -0.3
	comp=Z,0.8nm,0.3s,baz=151,slow=3.3,SNR=5.0				
KOLS	**Kolonicke sedl**	**151.99 334**	*e*PKP	PKPbc	13 30 36.7 +0.6
KOLS			*e*		13 30 51.2
KOLS	**Kolonicke sedl**	**151.99 334**	*e*PKP	PKPbc	13 30 36.7 +0.6
KOLS			*e*		13 30 51.2
CRVS	**Cervenica-Dubn**	**152.33 335**	*e*PKP	PKPbc	13 30 35.1 -1.8
CRVS	**Cervenica-Dubn**	**152.33 335**	*e*PKP	PKPbc	13 30 35.0 -1.9
EIL	**Elat**	**152.36 287**	PKPbc	PKPbc	13 30 37.5 -0.1
	comp=Z,1.9nm,0.5s,baz=36,slow=5.0,SNR=3.7				
EIL	**Elat**	**152.36 287**	PKPbc	PKPbc	13 30 37.5 -0.1
CLL	**Collm**	**152.59 348**	*e*PKPbc	PKPbc	13 30 37.0 -0.4
	comp=Z,8.0nm,1.3s				
CLL			*e*PKPab	PKPab	13 30 47.0 -0.9
	comp=Z,8.0nm,1.0s				
VYHS	**Vyhne**	**153.62 338**	*e*PKP	PKPbc	13 30 37.4 -2.4
VYHS			*e*		13 30 51.3
VYHS	**Vyhne**	**153.62 338**	*e*PKP	PKPbc	13 30 37.3 -2.5
VYHS			*e*		13 30 51.3

NEIC ***22*** *13:11:48.5, 16°.22N×94°.59W, h82km, MD4.2(MEX), After MEX.*

MEX 22 13:11:48.5±1.5, 16°.22N×94°.59W, h82km±19km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.91**	**342**	*i* P	Pn	13 12 05.4	-1.2
CMIG				*i* S	Sn	13 12 18.7	-1.5
CMIG	**Matias Romero**	**0.91**	**342**	*i* P	Pn	13 12 05.4	-1.2
CMIG				*i* S	Sn	13 12 18.7	-1.5
PCIG		**1.41**	**111**	*e*P	Pn	13 12 11.9	-0.9
PCIG				*i* S	Sn	13 12 30.4	-0.7
TGIG		**1.51**	**68**	*e*P	Pn	13 12 12.5	-1.5
TGIG				*i* S	Sn	13 12 31.1	-2.2
HUIG	**Huatulco**	**1.53**	**253**	*e*P	Pn	13 12 12.1	-2.1
HUIG				*i* S	Sn	13 12 31.7	-2.0
HUIG	**Huatulco**	**1.53**	**253**	*e*P	Pn	13 12 12.1	-2.1
HUIG				*i* S	Sn	13 12 31.7	-2.0
SCX	**San Cristobal**	**1.94**	**74**	*i* P	Pn	13 12 19.6	-0.1
SCX				*i* S	Sn	13 12 39.8	-3.6
SCX	**San Cristobal**	**1.94**	**74**	*i* P	Pn	13 12 19.6	-0.1
SCX				*i* S	Sn	13 12 39.8	-3.6
VHO	**Vista Hermosa**	**2.22**	**293**	*e*P	Pn	13 12 23.8	+0.3
VHO				*i* S	Sn	13 12 50.0	-0.1
VHO	**Vista Hermosa**	**2.22**	**293**	*e*P	Pn	13 12 23.8	+0.3
VHO				*i* S	Sn	13 12 50.0	-0.1
CCIG	**Comitan**	**2.36**	**88**	*i* P	Pn	13 12 23.8	-1.4
CCIG				*i* S	Sn	13 12 51.8	-1.5
CCIG	**Comitan**	**2.36**	**88**	*i* P	Pn	13 12 23.8	-1.4
CCIG				*i* S	Sn	13 12 51.8	-1.5
THIG		**2.59**	**120**	*i* P	Pn	13 12 27.7	-0.6
THIG				*i* S	Sn	13 12 58.5	-0.5
PNIG	**Pinotepa**	**3.40**	**273**	*e*P	Pn	13 12 37.6	-1.7
PNIG				*i* S	Sn	13 13 16.3	-2.3
PNIG	**Pinotepa**	**3.40**	**273**	*e*P	Pn	13 12 37.6	-1.7
PNIG				*i* S	Sn	13 13 16.3	-2.3
TPIG	**Tehuac#an**	**3.44**	**310**	*i* P	Pn	13 12 39.6	-0.2
TPIG				*i* S	Sn	13 13 18.6	-0.8
UTMO	**Huajuapan**	**3.47**	**298**	*i* P	Pn	13 12 40.9	+0.7
UTMO				*i* S	Sn	13 13 17.9	-2.3
SCIG	**Sabancuy**	**4.24**	**49**	*i* P	Pn	13 12 49.3	-1.4

SZGRF ***22*** *13:30:31.3, 14°.78N×95°.99E, h33km, mb5.5, MS4.9, Andaman Islands, India, region*

IDC ***22*** *13:30:36.9±3.1, 15°.54N×96°.10E, h26km±20km, mb4.9/31, mb1 4.9/33, mb1mx4.9/34, mbtmp4.9/33, ML5.6/1, MS4.6/30, Ms1 4.7/30, ms1mx4.5/41, Error ellipse: s-maj=12.2km s-min=8.7km az=60.0*

BJI ***22*** *13:30:36.8, 15°.46N×96°.14E, h50km, mB5.4/42, mb5.3/73, Ms5.5/74, Ms7 5.3/66*

MOS ***22*** *13:30:36.6±0.8, 15°.64N×96°.10E, h33km, mb5.6/124, MS4.9/38, Error ellipse: s-maj=6.8km s-min=3.5km az=120.1*

DJA ***22*** *13:30:36, 15°.79N×96°.15E, h9km, mb5.1/29*

GCMT ***22*** *13:30:37.5±0.2, 15°.46N×96°.15E, h12km, MW5.2, Moment Tensor Solution. s49,c75; s90,c173; Moment tensor: Scale 10^16Nm; Mrr-5.84±.16; Mθθ4.90±.14; Mφφ0.94±.16; Mrθ2.74±.41; Mθφ6.15±.12; Mφr0.60±.42; Best double couple: M0 8.20000×10^16 NP1:φs.33.00000°, δ39.00000°, λ-121.00000°. NP2:φs.251.00000°, δ57.00000°, λ-67.00000°. Principal axes: T 9.8000, Plg9.0000°, Azm325.0000°; N -3.1400, Plg19.0000°, Azm58.0000°; P -6.6600, Plg68.0000°, Azm210.0000°; Data Used: II G IU CN IC.*

ISCJB ***22*** *13:30:37.2±0.1, 15°.63N±0°.02×96°.08E±0°.02, h37km, mb5.3/278, MS4.9/77 Error ellipse: s-maj=3.1km s-min=2.5km az=41.1*

NEIC ***22*** *13:30:38.2±0.1, 15°.58N×96°.08E, h35km, mb5.4/145, MS4.9/13, Error ellipse: s-maj=3.8km s-min=2.8km az=217.0*

NEIC Felt in tall buildings at Bangkok, Thailand.

TEH ***22*** *13:30:38.0, 15°.57N×96°.08E, h29km*

ISC 22 13:30:39.2±0.1, 15°.65N±0°.02×96°.09E±0°.02, h39km, h39km±2.2km: pP-P, n749, σ0992/749, mb5.3/278, MS4.9/77, 25C-58D, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**3.90**	**44**	Pn	**Pn**	**13 31 35.6**	**-1.0**
	103nm,0.3s,baz=234,slow=15,SNR=2047						
CMAR				Pg	**Pn**	**13 31 52.5**	**+16**
	46nm,0.3s,baz=228,slow=19,SNR=28						
CMAR				Sn	**Sn**	**13 32 26.6**	**+5.3**
	20nm,0.3s,baz=228,slow=31,SNR=5.5						
CMAR				Lg		13 32 42.5	
	27nm,0.3s,baz=228,slow=20,SNR=4.9						
CMAR				LR	LR	13 33 14.8	
	comp=Z,7μm,19.2s,baz=184,slow=40						
CMAR	**Chiang Mai Arr**	**3.90**	**44**	P	**Pn**	**13 31 35.6**	**-1.0**
CMAR						13 32 26.6	
CMAR				pmax	pmax		
	comp=Z,103nm,0.3s						
CMAR				smax			
	comp=N,20nm,0.3s						
CHTO	**Chiang Mai**	**4.16**	**40**	*e*P	**Pn**	**13 31 39.0**	**-1.2**
CHTO	**Chiang Mai**	**4.16**	**40**	*e*P	**Pn**	**13 31 39.0**	**-1.2**
CHTO	**Chiang Mai**	**4.16**	**40**	P	**Pn**	**13 31 38.5**	**-1.7**
CHTO	**Chiang Mai**	**4.16**	**40**	Pn	**Pn**	**13 31 39.3**	**-0.9**
	SNR=139						
AGT	**Agartala**	**9.37**	**332**	*ex*	**Pn**	**13 32 44.0**	**-7.7**
AGT				*ex*	x	13 34 14.0	
CAL	**Calcutta**	**10.04**	**314**	*i* P	**Pn**	**13 33 08.3**	**+7.5**
CAL				*e*S	**Sn**	**13 34 47.8**	**-4.4**
SHL	**Shillong**	**10.62**	**339**	⇓*i*x	**Pn**	**13 33 04.0**	**-4.9**
SHL				*i* S	**Sn**	**13 35 00.0**	**-6.5**
BWNR	**Bhubaneshwar**	**10.82**	**297**	*e*PKP	**Pn**	**13 33 03.0**	**-8.6**
BWNR				*e*S	**Sn**	**13 34 53.0**	**-18**
KULM	**Kulim**	**11.23**	**156**	P	**Pn**	**13 33 20.6**	**+3.4**
KULM	**Kulim**	**11.23**	**156**	*e*P	**Pn**	**13 33 13.3**	**-3.9**
	comp=N,38nm,1.1s						
KMI	**Kunming**	**11.30**	**32**	P	**Pn**	**13 33 21.4**	**+3.3**
KMI				PP		13 33 30.8	
KMI				sP		13 33 34.3	
KMI				S	**Sn**	**13 35 27.9**	**+4.8**
KMI				SS		13 35 42.4	
KMI				pmax	pmax		
	comp=Z,68nm,1.5s						
KMI				LR	LR		
	comp=N,14μm,8.6s						
KMI				LR	LR		
	comp=E,12μm,11.0s						
IPM	**Ipoh**	**12.11**	**156**	P	**Pn**	**13 33 32.8**	**+3.4**
IPM	**Ipoh**	**12.11**	**156**	*e*P	**Pn**	**13 33 25.9**	**-3.4**
	comp=E,31nm,1.0s						
TSI	**Tuntungan**	**12.32**	**168**	P	**Pn**	**13 33 31.1**	**-1.0**
	comp=E,4μmcomp=E,231nm,1.5s						
TPTI		**12.36**	**175**	P	**Pn**	**13 33 34.8**	**+2.1**
	comp=E,2μmcomp=E,32nm,2.2s						
VIS	**Vishakhapatnam**	**12.40**	**281**	*e*PKP	**Pn**	**13 33 31.1**	**-2.1**
VIS				*e*S	**Sn**	**13 35 38.2**	**-12**
PSI	**Prapat**	**13.07**	**167**	Pn	**Pn**	**13 33 41.0**	**-1.4**
	comp=E,0.2nm,0.3s,baz=348,slow=16,SNR=16						
PSI				Lg		13 37 31.4	
	comp=E,0.5nm,0.3s,baz=350,slow=18,SNR=6.6						
PSI				LR	LR	13 39 43.8	
	comp=E,5μm,18.0s,baz=333,slow=42						
PSI	**Prapat**	**13.07**	**167**	P	**Pn**	**13 33 41.0**	**-1.4**
PSI				MLR	MLR		
	comp=Z,5μm,18.0s						
QIZ	**Qiongzhong**	**13.55**	**74**	P	**Pn**	**13 33 45.3**	**-3.7**
QIZ				S	**Sn**	**13 36 18.4**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,21nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,400nm,7.9s						
QIZ				LR	LR		
	comp=N,13μm,15.1s						
QIZ				LR	LR		
	comp=Z,9μm,11.3s						
QIZ	**Qiongzhong**	**13.55**	**74**	*e*P	**Pn**	**13 33 47.1**	**-1.9**
	comp=Z,36nm,1.0s						
ODAN	**Odare**	**13.78**	**325**	*e*P	**Pn**	**13 33 48.7**	**-3.4**
	comp=Z,94nm,0.5s						
TAPN	**Taplejung**	**14.01**	**328**	*e*P	**Pn**	**13 33 51.9**	**-3.2**
	comp=Z,101nm,0.6s						
GYA	**Guiyang**	**14.59**	**41**	⇓*i*P	**Pn**	**13 34 04.6**	**+1.6**
GYA				pP	pP	13 34 12.1	-6.4
GYA				PP		13 34 16.8	
GYA				S	**Sn**	**13 36 48.9**	**+5.5**
GYA				sS		13 37 00.0	
GYA				SS		13 37 05.5	
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
GYA				pmax	pmax		
	comp=Z,350nm,5.9s						
GYA				LR	LR		
	comp=N,7μm,11.2s						
GYA				LR	LR		
	comp=E,4μm,7.8s						
GYA				LR	LR		
	comp=Z,9μm,9.0s						
LSA	**Lhasa**	**14.70**	**343**	P	**Pn**	**13 33 59.0**	**-5.6**
LSA				S	**Sn**	**13 36 43.3**	**-3.0**
LSA				LR	LR		
	comp=N,2μm,19.2s						
LSA				LR	LR		
	comp=E,5μm,16.1s						
LSA				LR	LR		
	comp=Z,4μm,16.6s						
LSA	**Lhasa**	**14.70**	**343**	*e*P	**Pn**	**13 34 00.6**	**-4.0**
	comp=Z,52nm,0.7s						
LSA	**Lhasa**	**14.70**	**343**	*e*P	**Pn**	**13 34 00.6**	**-4.0**
LSA				pmax	pmax		
	comp=Z,52nm,0.7s						
MNSI	**Mandailing Nat**	**15.16**	**167**	P	**Pn**	**13 34 09.9**	**-0.7**
	comp=Z,2μmcomp=Z,94nm,1.3s						
KGM	**Kluang**	**15.31**	**152**	P	**Pn**	**13 34 14.6**	**+2.0**
GUN	**Gumba**	**15.44**	**324**	*e*P	**Pn**	**13 34 11.9**	**-2.3**
	comp=Z,308nm,1.0s						
PKI	**Pulchoki**	**15.46**	**322**	*e*P	**Pn**	**13 34 12.1**	**-2.4**
	comp=Z,348nm,1.0s						
PKI	**Pulchoki**	**15.46**	**322**	*e*P	**Pn**	**13 34 12.2**	**-2.3**
	comp=Z,323nm,1.0s						
PKI	**Pulchoki**	**15.46**	**322**	*e*P	**Pn**	**13 34 12.2**	**-2.3**
PKI				pmax	pmax		
	comp=Z,323nm,1.0s						
PKIN	**Phulchoki**	**15.47**	**322**	*e*P	**Pn**	**13 34 12.2**	**-2.4**
	comp=Z,323nm,1.0s						
MDRS	**Chennai**	**15.56**	**263⇑**	*ex*	x	13 34 28.2	
MDRS				*ex*	x	13 37 54.2	
MDRS				*ex*	x	13 39 37.2	
DMN	**Daman**	**15.67**	**321**	*e*P	**Pn**	**13 34 14.8**	**-2.4**
	comp=Z,368nm,0.8s						
KKN	**Kakani**	**15.70**	**322**	*e*P	**Pn**	**13 34 15.3**	**-2.3**
	comp=Z,68nm,0.6s						
KKN	**Kakani**	**15.70**	**322**	*e*P	**Pn**	**13 34 15.3**	**-2.3**
KKN				pmax	pmax		
	comp=Z,68nm,0.6s						
MYKOM	**Kota Tinggi**	**15.75**	**150**	P	**Pn**	**13 34 19.8**	**+1.4**
BKNI	**Bangkinang**	**15.99**	**162**	P	**Pn**	**13 34 20.1**	**-1.3**
	comp=Z,2μmcomp=Z,144nm,1.7s						
GKN	**Gorkha**	**16.24**	**321**	*e*P	**Pn**	**13 34 22.3**	**-2.2**
	comp=Z,218nm,0.7s						
KOLN	**Koldanda**	**16.72**	**318**	*e*P	**Pn**	**13 34 29.6**	**-1.0**
	comp=Z,269nm,0.8s						
CD2	**Chengdu**	**16.73**	**23**	*e*P	**Pn**	**13 34 30.6**	**-0.1**
CD2				pP	pP	13 34 38.4	-3.9
CD2				sP	sP	13 34 43.0	-4.2
CD2				PP		13 34 45.3	
CD2				S	**S**	**13 37 37.0**	**-8.3**
CD2				sS	sS	13 37 49.5	-11
CD2				SS		13 37 58.3	
CD2				pmax	pmax		
	comp=Z,190nm,1.2s						
CD2				pmax	pmax		
	comp=Z,2μm,5.5s						
CD2				LR	LR		
	comp=N,12μm,10.8s						
CD2				LR	LR		
	comp=E,9μm,9.5s						
CD2				LR	LR		
	comp=Z,10μm,9.5s						
HYB	**Hyderabad**	**16.91**	**278**	*i* P	**Pn**	**13 34 34.0**	**+1.0**
HYB				*e*S	**S**	**13 37 50.0**	**+0.9**
JBP	**Jabalpur**	**16.93**	**299**	*ex*	**Pn**	**13 34 35.9**	**+2.7**
JBP				*ex*	**S**	**13 37 32.9**	**-16**
PDSI	**Padang**	**17.01**	**165**	P	**Pn**	**13 34 33.9**	**-0.4**
	comp=Z,69nm,1.1s						
DANN	**Dangsing**	**17.02**	**320**	*e*P	**Pn**	**13 34 32.9**	**-1.5**
	comp=Z,261nm,1.0s						
SISI	**Saibi**	**17.13**	**170**	P	sP	13 34 46.0	-5.7
PALK	**Pallekele**	**17.22**	**243**	*e*P	**Pn**	**13 34 37.2**	**+0.4**
	comp=Z,199nm,1.4s						
PALK	**Pallekele**	**17.22**	**243**	*i* P	**Pn**	**13 34 39.2**	**+2.3**
PALK	**Pallekele**	**17.22**	**243**	Pn	**Pn**	**13 34 38.4**	**+1.5**
	comp=Z,441nm,1.4s,SNR=8.3						
PALK	**Pallekele**	**17.22**	**243**	P	**Pn**	**13 34 36.3**	**-0.6**
	comp=Z,852nmcomp=Z,50nm,1.4s						
PALK	**Pallekele**	**17.22**	**243**	Pn	**Pn**	**13 34 39.1**	**+2.2**
	SNR=7.1						
SDSI	**Sungai Dareh**	**17.30**	**162**	P	**Pn**	**13 34 42.3**	**+4.4**
GZH	**Guangzhou**	**17.87**	**63**	P	**Pn**	**13 34 51.1**	**+6.2**
GZH				S	**S**	**13 38 22.8**	**+14**
GZH				LR	LR		
	comp=N,7μm,11.2s						
GZH				LR	LR		
	comp=E,5μm,10.5s						
GZH				LR	LR		
	comp=Z,7μm,11.0s						
AKL	**Akola**	**18.80**	**288**	*i* P	**Pn**	**13 34 55.9**	**-0.4**
AKL				*i* x	x	13 38 43.8	
LATR	**Latur**	**18.88**	**281**	*e*PKP	**Pn**	**13 34 56.0**	**-1.2**
LATR				*ex*	x	13 38 30.7	
ENH	**Enshi**	**19.05**	**38**	*e*P	**Pn**	**13 34 58.2**	**-0.9**
	comp=Z,152nm,1.3s						
BHPL	**Bhopal**	**19.14**	**296**	*e*PKP	**Pn**	**13 34 59.8**	**-0.6**
BHPL				*e*S	**S**	**13 38 34.7**	**+0.4**
KSM	**Kuching**	**19.88**	**134**	P	**Pn**	**13 35 07.4**	**-1.8**
KSM	**Kuching**	**19.88**	**134**	*e*P	**Pn**	**13 35 07.4**	**-1.7**
	comp=Z,70nm,1.4s						
TRD	**Trivandrum**	**20.00**	**251**	*e*PKP	**Pn**	**13 35 08.3**	**-2.3**
KSI	**Kapahiang**	**20.23**	**161**	P	**P**	**13 35 14.7**	**+3.6**
	comp=Z,65nm,1.4s						
PPBI	**Pangkal Pinang**	**20.30**	**150**	P	**P**	**13 35 11.9**	**+0.1**
	comp=Z,1μmcomp=Z,83nm,1.6s						
SBUM	**Sibu**	**20.61**	**128**	P	**P**	**13 35 14.8**	**-0.4**
KAD	**Karad**	**21.07**	**278**	*e*PKP	**P**	**13 35 19.9**	**-0.4**
KAD				*e*S	**S**	**13 39 13.9**	**+1.0**
POO	**Poona**	**21.45**	**281**	*e*PKP	**P**	**13 35 23.7**	**-0.6**
POO				AMb	AMB	13 35 29.7	
	comp=Z,163nm,1.0s,mb5.3						
POO				*e*S	**

KLSI		**21.95**	**156**	P	**P**	**13 35 28.8 -0.8**
	comp=Z,106nm,1.4s,mb5.1					
DDI	**Dehra Dun**	**22.07**	**315**	*e*PKP	**P**	**13 35 29.0 -1.8**
DDI				*e*S	**S**	**13 39 31.5 -0.5**
WHN	**Wuhan**	**22.35**	**45**	⇑P	**P**	**13 35 30.4 -3.4**
WHN				LR	LR	
	comp=N,14μm,7.2s					
WHN				LR	LR	
	comp=E,14μm,9.8s					
WHN				LR	LR	
	comp=Z,24μm,9.4s					
KASI	**Kota Agung**	**22.62**	**158**	P	**P**	**13 35 39.6 +2.8**
	comp=Z,76nm,1.0s,mb5.1					
AJM	**Ajmer**	**22.70**	**302**	*e*PKP	**P**	**13 35 37.9 +0.4**
AJM				AMb	AMB	13 35 41.1
	comp=Z,200nm,1.3s,mb5.4					
QZH	**Quanzhou**	**23.01**	**63**	⇓*i*P	**P**	**13 35 39.3 -1.6**
QZH				LR	LR	
	comp=N,12μm,16.1s,MS5.5					
QZH				LR	LR	
	comp=E,6μm,11.9s,MS5.5					
QZH				LR	LR	
	comp=Z,7μm,11.2s,MS5.3					
SMLA	**Simla**	**23.16**	**315**	*i* P	**P**	**13 35 42.1 -0.3**
SMLA				*i* S	**S**	**13 39 52.2 +1.1**
SDNR	**Sundarnagar**	**23.52**	**315**	*e*PKP	**P**	**13 35 45.5 -0.4**
SDNR				*ex*	x	13 40 24.5
SBJI	**Serang**	**23.81**	**155**	P	**P**	**13 35 50.3 +1.6**
	comp=Z,4μmcomp=Z,153nm,0.5s,mb5.7					
BHK	**Bhakra**	**23.85**	**315**	*e*PKP	**P**	**13 35 49.4 +0.5**
GTA	**Gaotai**	**23.89**	**7**	⇓P	**P**	**13 35 50.1 +0.9**
GTA				pP		13 35 59.6
GTA				sP	sP	13 36 03.6 -1.0
GTA				S	**S**	**13 40 06.8 +3.9**
GTA				sS	sS	13 40 21.4 +0.8
GTA				pmax	pmax	
	comp=Z,120nm,1.6s,mb5.1					
GTA				pmax	pmax	
	comp=Z,1μm,5.9s					
GTA				LR	LR	
	comp=N,4μm,14.5s,MS5.2					
GTA				LR	LR	
	comp=E,5μm,12.6s,MS5.2					
GTA				LR	LR	
	comp=Z,5μm,13.3s,MS5.1					
HMDM	**Hanimaadhoo**	**24.12**	**251**	P	**P**	**13 35 52.3 +0.7**
	comp=Z,169nm,2.3s,mb5.1					
TSM	**Tawau**	**24.21**	**116**	P	**P**	**13 35 51.5 -0.8**
TPUB	**Ta-pu**	**24.33**	**68**	*e*P	**P**	**13 35 54.6 +1.2**
	comp=Z,226nm,1.1s,mb5.5					
MYLDM	**Lahad Datu**	**24.34**	**113**	P	**P**	**13 35 53.1 -0.5**
DBJI	**Dramaga**	**24.46**	**154**	P	**P**	**13 35 56.0 +1.4**
	comp=Z,84nm,1.7s,mb4.9					
SSLB	**Suanglung**	**24.74**	**67**	*e*P	**P**	**13 35 58.5 +1.4**
	comp=Z,229nm,1.1s,mb5.6					
YULB	**Yu-li**	**24.95**	**68**	*e*P	**P**	**13 36 00.5 +1.4**
	comp=Z,113nm,1.1s,mb5.3					
PLKI	**Palangkaraya**	**25.05**	**134**	P	**P**	**13 36 00.0 0.0**
	comp=Z,170nm,1.1s,mb5.5					
LEM	**Lembang**	**25.08**	**152**	P	**P**	**13 36 01.9 +1.6**
	comp=Z,3μmcomp=Z,97nm,1.0s,mb5.3					
NJ2	**Nanjing**	**26.37**	**48**	*e*P	**P**	**13 36 12.8 +1.0**
NJ2				pP	pP	13 36 22.1 -0.4
NJ2				sP	sP	13 36 26.1 -1.1
NJ2				PP		13 36 56.1
NJ2				S	**S**	**13 40 43.5 +1.0**
NJ2				sS	sS	13 40 57.0 -3.4
NJ2				SS		13 41 51.0
NJ2				pmax	pmax	
	comp=Z,180nm,1.0s,mb5.6					
NJ2				pmax	pmax	
	comp=Z,420nm,5.8s					
NJ2				LR	LR	
	comp=N,7μm,22.5s,MS5.2					
NJ2				LR	LR	
	comp=E,6μm,23.1s,MS5.2					
NJ2				LR	LR	
	comp=Z,8μm,24.1s,MS5.2					
BJII	**Banjamegara**	**26.52**	**148**	P	**P**	**13 36 14.9 +1.6**
	comp=Z,71nm,1.9s,mb4.9					
BBKI	**Banjar Baru**	**26.55**	**134**	P	**P**	**13 36 13.8 +0.2**
	comp=Z,3μmcomp=Z,115nm,1.1s,mb5.3					
CHCP	**Chirah Chowk**	**27.32**	**315**	P	**P**	**13 36 20.0 -0.3**
KBKI	**Kotabaru**	**27.37**	**132**	P	**P**	**13 36 21.2 +0.2**
	comp=Z,2μmcomp=Z,30nm,1.1s,mb4.7					
UGM	**Wanagama**	**27.43**	**148**	P	**P**	**13 36 23.9 +2.4**
	comp=Z,171nm,1.9s,mb5.2					
NGJI	**Ngawi**	**27.47**	**145**	P	**P**	**13 36 23.6 +1.7**
	comp=Z,56nm,1.5s,mb4.9					
SSE	**Sheshan**	**27.60**	**52**	P	**P**	**13 36 19.3 -3.6**
SSE				S	**S**	**13 41 00.3 -1.7**
SSE				sS	sS	13 41 15.8 -4.1
SSE				pmax	pmax	
	comp=Z,32nm,0.8s,mb5.0					
SSE				pmax	pmax	
	comp=Z,350nm,5.5s					
SSE				LR	LR	
	comp=N,2μm,14.7s,MS5.2					
SSE				LR	LR	
	comp=E,5μm,14.6s,MS5.2					
SSE				LR	LR	
	comp=E,6μm,11.1s,MS5.4					
XMIS	**Christmas Isla**	**27.64**	**159**	P	**P**	**13 36 25.3 +2.0**
	comp=Z,555nm,1.0s,mb6.2					
BTO	**Baotou**	**27.66**	**23**	*e*P	**P**	**13 36 22.8 -0.5**
COCO	**West Island**	**27.67**	**178**	P	**P**	**13 36 25.9 +2.3**
	comp=Z,127nm,1.8s,mb5.2					
TIA	**Tai'an**	**27.76**	**39**	P	**P**	**13 36 23.9 -0.4**
TIA				pmax	pmax	
	comp=Z,70nm,1.0s,mb5.2					
TIA				LR	LR	
	comp=N,3μm,10.8s,MS5.3					
TIA				LR	LR	
	comp=E,3μm,13.2s,MS5.3					
TIA				LR	LR	
	comp=Z,6μm,12.8s,MS5.4					
SJI	**Sawahan**	**27.95**	**145**	P	**P**	**13 36 27.2 +1.1**
CEP	**Cherat**	**28.34**	**314**	P	**P**	**13 36 29.6 +0.1**
HHC	**Hu-ho-hao-te**	**28.48**	**25**	⇓P	**P**	**13 36 31.3 +0.7**
HHC				pP	pP	13 36 40.8 -0.6
HHC				sP	sP	13 36 44.8 -1.2
HHC				PP	PP	13 37 23.8 -12
HHC				PcP	PcP	13 39 42.1 +0.2
HHC				S	**S**	**13 41 16.3 +0.8**
HHC				sS	sS	13 41 32.0 -1.4
HHC				SS	SS	13 42 42.9 -34
HHC				ScP	ScP	13 43 20.0 -0.2
HHC				pmax	pmax	
	comp=Z,45nm,1.2s,mb5.0					
HHC				pmax	pmax	
	comp=Z,250nm,6.1s					
HHC				LR	LR	
	comp=N,4μm,11.2s,MS5.3					
HHC				LR	LR	
	comp=E,3μm,14.1s,MS5.3					
HHC				LR	LR	
	comp=Z,4μm,12.1s,MS5.3					
WMQ	**Urumqi**	**28.97**	**347**	P	**P**	**13 36 36.0 +1.0**
WMQ				pP	pP	13 36 46.0 +0.2
WMQ				sP	sP	13 36 50.0 -0.4
WMQ				PP	PP	13 37 31.0 -10
WMQ				S	**S**	**13 41 24.0 +0.7**
WMQ				sS	sS	13 41 40.0 -1.2
WMQ				SS	SS	13 42 54.0 -33
WMQ				pmax	pmax	
	comp=Z,78nm,0.7s,mb5.5					
WMQ				pmax	pmax	
	comp=Z,140nm,3.0s					
WMQ				LR	LR	
	comp=N,2μm,11.0s,MS5.1					
WMQ				LR	LR	
	comp=E,2μm,12.0s,MS5.1					
WMQ				LR	LR	
	comp=Z,2μm,10.0s,MS4.9					
KSH	**Kashi**	**29.58**	**327**	*e*P	**P**	**13 36 40.3 -0.1**
KSH				*ep*P	pP	13 36 49.8 -1.4
KSH				*es*P	sP	13 36 53.8 -2.1
KSH				*e*PP	PP	13 37 33.6 -14
KSH				*e*S	**S**	**13 41 26.5 -6.5**
KSH				pmax	pmax	
	comp=Z,73nm,1.0s,mb5.4					
KSH				LR	LR	
	comp=N,3μm,10.8s,MS5.4					
KSH				LR	LR	
	comp=E,4μm,12.3s,MS5.4					
KSH				LR	LR	
	comp=Z,5μm,12.8s,MS5.3					
BJI	**Beijing**	**29.95**	**32**	P	**P**	**13 36 44.4 +0.7**
BJI				pP	pP	13 36 53.4 -1.1
BJI				sP	sP	13 36 57.3 -1.9
BJI				PP	PP	13 37 45.3 -6.5
BJI				S	**S**	**13 41 46.1 +7.3**
BJI				sS	sS	13 41 56.8 +0.1
BJI				pmax	pmax	
	comp=Z,26nm,1.0s,mb4.9					
BJI				pmax	pmax	
	comp=Z,290nm,6.8s					
BJI				LR	LR	
	comp=N,3μm,16.6s,MS5.2					
BJI				LR	LR	
	comp=E,5μm,17.9s,MS5.2					
DAV	**Davao City (W)**	**30.11**	**103**	LR	LR	13 47 49.7
	comp=E,1μm,21.6s,MS4.5,baz=89,slow=34					
KBL	**Kabul**	**30.73**	**313**	*e*P	**P**	**13 36 50.9 +0.3**
	comp=E,37nm,1.3s,mb5.1					
KBL	**Kabul**	**30.73**	**313**	*e*P	**P**	**13 36 50.9 +0.2**
KBL				pmax	pmax	
	comp=Z,37nm,1.3s,mb5.0					
KAPI	**Kappang**	**31.15**	**129**	P	**P**	**13 36 52.9 -1.7**
	comp=Z,18nm,1.0s,mb4.9					
KZA	**Kyzart**	**31.87**	**330**	P	**P**	**13 37 02.5 +2.0**
	SNR=10					
KZA	**Kyzart**	**31.87**	**330**	*e*P	**P**	**13 37 01.3 +0.7**
	comp=Z,114nm,1.3s,mb5.5					
JOW	**Kunigami**	**31.90**	**64**	P	**P**	**13 37 00.8 -0.4**
	comp=Z,36nm,0.9s,mb5.2,baz=117,slow=16,SNR=5.0					
DL2	**Dalian**	**32.23**	**39**	P	**P**	**13 37 05.0 +1.2**
DL2				S	**S**	**13 42 19.3 +4.9**
DL2				pmax	pmax	
	comp=Z,80nm,0.9s,mb5.5					
DL2				pmax	pmax	
	comp=Z,200nm,4.9s					
DL2				LR	LR	
	comp=N,1μm,12.6s,MS4.9					
DL2				LR	LR	
	comp=E,1μm,16.0s,MS4.9					
DL2				LR	LR	
	comp=Z,2μm,14.2s,MS5.0					
UCH	**Uchtor**	**32.34**	**329**	P	**P**	**13 37 05.8 +1.1**
	SNR=18					
UCH	**Uchtor**	**32.34**	**329**	*e*P	**P**	**13 37 05.8 +1.1**
	comp=Z,15nm,0.9s,mb4.8					
TKM2	**Tokmak 2**	**32.35**	**331**	P	**P**	**13 37 06.2 +1.4**
	SNR=35					
TKM2	**Tokmak 2**	**32.35**	**331**	*e*P	**P**	**13 37 06.1 +1.3**
	comp=Z,119nm,1.4s,mb5.5					
TKM2	**Tokmak 2**	**32.35**	**331**	*e*P	**P**	**13 37 06.1 +1.3**
TKM2				pmax	pmax	
	comp=Z,119nm,1.4s,mb5.5					
KBK	**Karagaybulak**	**32.45**	**330**	P	**P**	**13 37 07.8 +2.1**
	SNR=47					
AAK	**Ala-Archa**	**32.65**	**330**	P	**P**	**13 37 09.2 +1.7**
	SNR=66					
AAK	**Ala-Archa**	**32.65**	**330**	P	**P**	**13 37 08.9 +1.4**
	comp=Z,39nm,0.9s,mb5.3,baz=140,slow=9.1,SNR=108					
AAK				LR	LR	13 53 36.7
	comp=Z,1μm,19.6s,MS4.7,baz=140,slow=42					
AAK	**Ala-Archa**	**32.65**	**330**	*e*P	**P**	**13 37 09.0 +1.5**
	comp=Z,91nm,1.0s,mb5.7					
AAK	**Ala-Archa**	**32.65**	**330**	*de*P	**P**	**13 37 09.1 +1.6**
AAK				pmax	pmax	
	comp=Z,76nm,1.2s,mb5.5					
AAK	**Ala-Archa**	**32.65**	**330**	P	**P**	**13 37 09.6 +2.1**
	comp=Z,494nm,1.0s,mb6.4,SNR=43					
AAK	**Ala-Archa**	**32.65**	**330**	P	**P**	**13 37 09.5 +2.1**
	SNR=44					
AML	**Almayashu**	**32.68**	**328**	P	**P**	**13 37 09.9 +2.2**
	SNR=12					
AML	**Almayashu**	**32.68**	**328**	*e*P	**P**	**13 37 09.3 +1.6**
	comp=Z,102nm,1.3s,mb5.6					
FRU	**Bishkek**	**32.74**	**330**	⇓*i*P	**P**	**13 37 09.0 +0.7**
FRU				*e*		13 42 30.0
FRU				*e*		13 44 52.0
CHMS	**Chumysh**	**32.81**	**330**	P	**P**	**13 37 09.9 +1.1**
	SNR=31					
EKS2	**Erkin-Say**	**33.02**	**329**	P	**P**	**13 37 12.3 +1.6**
	SNR=41					
EKS2	**Erkin-Say**	**33.02**	**329**	*e*P	**P**	**13 37 12.2 +1.5**
	comp=Z,42nm,0.8s,mb5.4					
EKS2				*e*PcP	PcP	13 39 54.7 +0.9
MK31	**Makanchi Array**	**33.11**	**343**	*ce*P	**P**	**13 37 11.6 +0.2**
MK31				pmax	pmax	
	comp=Z,100nm,0.9s,mb5.8					
MKAR	**Makanchi Array**	**33.11**	**343**	P	**P**	**13 37 12.1 +0.7**
	comp=Z,44nm,0.8s,mb5.4,baz=151,slow=9.7,SNR=253					
MKAR				PcP	PcP	13 39 53.9 -0.2
	comp=Z,6.6nm,0.8s,baz=124,slow=2.8,SNR=5.9					
MKAR				LR	LR	13 54 42.0
	comp=Z,1μm,20.2s,MS4.5,baz=158,slow=44					
MKAR	**Makanchi Array**	**33.11**	**343**	*ce*P	**P**	**13 37 12.3 +0.9**
MKAR				pmax	pmax	
	comp=Z,44nm,0.8s					
USP	**Ospenovka**	**33.13**	**331**	P	**P**	**13 37 12.8 +1.1**
	SNR=26					
SONM	**Songino Array**	**33.20**	**13**	P	**P**	**13 37 12.9 +0.7**
	comp=Z,15nm,1.1s,mb4.8,baz=199,slow=10,SNR=55					
SONM				PcP	PcP	13 39 54.4 +0.2
	comp=Z,3.3nm,0.8s,baz=196,slow=4.2,SNR=4.4					
SONM	**Songino Array**	**33.20**	**13**	P	**P**	**13 37 12.9 +0.7**
SONM						13 39 54.4
SONM				pmax	pmax	
	comp=Z,15nm,1.1s					
ULN	**Ulaanbaatar**	**33.38**	**13**	*e*P	**P**	**13 37 14.5 +0.8**
	comp=Z,84nm,1.7s,mb5.4					
ULN	**Ulaanbaatar**	**33.38**	**13**	*e*P	**P**	**13 37 14.5 +0.8**
ULN				pmax	pmax	
	comp=Z,84nm,1.7s,mb5.4					
ULN	**Ulaanbaatar**	**33.38**	**13**	P	**P**	**13 37 14.8 +1.1**
	SNR=19					
KK31	**Karatay Array**	**35.02**	**327**	*ce*P	**P**	**13 37 28.0 0.0**
KK31				pmax	pmax	
	comp=Z,16nm,0.7s,mb5.1					
KKAR	**Karatay Array**	**35.02**	**327**	*e*P	**P**	**13 37 28.4 +0.3**
	comp=Z,31nm,1.0s,mb5.2					
KKAR	**Karatay Array**	**35.02**	**327**	*e*P	**P**	**13 37 28.4 +0.4**
KKAR				pmax	pmax	
	comp=Z,31nm,1.0s,mb5.2					
ZAK	**Zakamensk**	**35.13**	**8**	⇓*i*P	**P**	**13 37 29.9 +1.1**
ZAK				*e*		13 40 00.2
ZAK				pmax	pmax	
	comp=Z,12nm,1.2s,mb4.7					
SNY	**Shenyang**	**35.23**	**37**	⇑P	**P**	**13 37 29.9 +0.1**
SNY				S	**S**	**13 42 52.5 -8.3**
SNY				pmax	pmax	
	comp=Z,36nm,1.6s,mb5.0					
SNY				pmax	pmax	
	comp=Z,240nm,4.2s					
SNY				LR	LR	
	comp=N,3μm,14.4s,MS5.3					
SNY				LR	LR	
	comp=E,2μm,13.8s,MS5.3					
SNY				LR	LR	
	comp=Z,3μm,14.7s,MS5.1					
KSRS	**Korea Array**	**35.54**	**46**	P	**P**	**13 37 31.6 -1.0**
	comp=Z,17nm,0.9s,mb5.0,baz=242,slow=9.0,SNR=53					
KSRS				PcP	PcP	13 40 00.5 -0.7
	comp=Z,1.1nm,0.6s,baz=234,slow=3.3,SNR=4.5					
KSRS	**Korea Array**	**35.54**	**46**	P	**P**	**13 37 31.6 -1.0**
KSRS						13 40 00.5
KSRS				pmax	pmax	
	comp=Z,17nm,0.9s,mb5.0					
JNU	**Nakatsue**	**35.93**	**55**	*e*P	**P**	**13 37 36.5 +0.6**
	comp=Z,27nm,1.1s,mb5.1					
MOY	**Mondy**	**36.14**	**5**	*e*P	**P**	**13 37 38.5 +1.0**
MOY				pmax	pmax	
	comp=Z,68nm,2.3s,mb5.2					
TLY	**Talaya**	**36.45**	**8**	*d*P	**P**	**13 37 41.6 +1.5**
TLY				*e*S	**S**	**13 43 27.5 +8.3**
TLY				pmax	pmax	
	comp=Z,60nm,2.0s,mb5.2					
TLY				MLR	MLR	
	comp=Z,1μm,15.0s,MS4.9					
SMDO	**Samad**	**36.56**	**288**	P	**P**	**13 37 42.6 +1.1**
	SNR=7.4					
IRK	**Irkutsk**	**37.08**	**8**	*e*P	**P**	**13 37 47.0 +1.5**
IRK				*e*		13 38 05.1
IRK				pmax	pmax	
	comp=Z,59nm,2.6s,mb5.0					
BSY	**Bisya**	**37.32**	**287**	P	**P**	**13 37 48.5 +0.5**
	SNR=9.3					
CN2	**Changchun**	**37.54**	**36**	⇓P	**P**	**13 37 50.0 +0.4**
CN2				*ep*P	pP	13 37 59.8 -0.7
CN2				*es*P	sP	13 38 03.6 -1.6
CN2				*e*S	**S**	**13 43 37.3 +1.2**
CN2				pmax	pmax	
	comp=Z,60nm,1.2s,mb5.2					
CN2				LR	LR	
	comp=N,3μm,11.0s,MS5.4					
CN2				LR	LR	
	comp=E,2μm,11.0s,MS5.4					
CN2				LR	LR	
	comp=Z,3μm,14.0s,MS5.2					
KURK	**Kurchatov**	**37.71**	**342**	*e*P	**P**	**13 37 51.3 +0.5**
	comp=Z,119nm,0.8s,mb5.7					
KURK				LR	LR	
	comp=Z,2μm,19.0s,MS4.9					
KURK	**Kurchatov**	**37.71**	**342**	*i* P	**P**	**13 37 51.1 +0.2**
KURK				pmax	pmax	
	comp=Z,135nm,0.9s,mb5.7					
KURK	**Kurchatov**	**37.71**	**342**	P	**P**	**13 37 51.8 +0.9**
	comp=Z,964nm,0.8s,mb6.6,SNR=40					
KURK	**Kurchatov**	**37.71**	**342**	P	**P**	**13 37 51.7 +0.9**
	SNR=57					
HIA	**Hailar**	**38.68**	**25**	*e*P	**P**	**13 37 59.6 +0.5**
	comp=Z,118nm,1.3s,mb5.5					
HIA	**Hailar**	**38.68**	**25**	*e*P	**P**	**13 37 59.6 +0.5**
HIA				pmax	pmax	
	comp=Z,118nm,1.3s					
IAKL	**Akhelmad**	**39.14**	**309**	*e*P	**P**	**13 38 03.4 +0.2**
ZAA0	**Zalesovo Array**	**39.22**	**349**	*e*P	**P**	**13 38 04.2 +0.7**
ZALV	**Zalesovo Beam**	**39.22**	**349**	P	**P**	**13 38 04.2 +0.6**
	comp=Z,112nm,0.9s,mb5.6,baz=170,slow=8.8,SNR=421					
ZALV				PcP	PcP	13 40 10.7 -1.4
	comp=Z,8.2nm,0.9s,baz=196,slow=3.2,SNR=4.1					
ZALV				ScP	ScP	13 43 58.3 +0.6
	comp=Z,1.3nm,0.8s,baz=197,slow=4.5,SNR=4.5					
ZALV				LR	LR	13 56 08.1
	comp=Z,471nm,21.2s,MS4.3,baz=165,slow=39					
ZALV	**Zalesovo Beam**	**39.22**	**349**	P	**P**	**13 38 04.2 +0.7**
ZALV						13 40 10.7
ZALV						13 43 58.3
ZALV				pmax	pmax	
	comp=Z,112nm,0.9s,mb5.6					
ZALV				MLR	MLR	
	comp=Z,471nm,21.3s,MS4.3					
IKRD	**Kardeh**	**39.39**	**310**	*e*P	**P**	**13 37 59.8 -5.4**
IEMG	**Emamgholi**	**39.53**	**310**	*e*P	**P**	**13 38 07.6 +1.2**
ABKT	**Ailbek**	**40.12**	**311**	P	**P**	**13 38 12.6 +1.3**
	comp=Z,738nm,0.9s,mb6.4,SNR=32					
VAN	**Vannovskaya**	**40.14**	**311**	*de*P	**P**	**13 38 12.4 +1.0**
NVS	**Novosibirsk**	**40.36**	**349**	⇓*i*P	**P**	**13 38 12.8 -0.2**
NVS				pmax	pmax	
	comp=N,70nm,1.2s					
NVS				pmax	pmax	
	comp=E,39nm,1.2s					
NVS				pmax	pmax	
	comp=Z,109nm,1.2s,mb5.5					
MDJ	**Mudanjiang**	**40.41**	**37**	P	**P**	**13 38 13.6 0.0**
MDJ				pP	pP	13 38 22.6 -2.0
MDJ				sP	sP	13 38 26.4 -2.8
MDJ				ScP	ScP	13 44 02.9 +0.4
MDJ				PcS	PcS	13 44 06.3 -0.2
MDJ				S	**S**	**13 44 21.0 +1.7**
MDJ				pmax	pmax	
	comp=Z,13nm,1.2s,mb4.5					
MDJ				pmax	pmax	
	comp=Z,200nm,5.6s					
MDJ				LR	LR	
	comp=N,720nm,9.6s					
MDJ				LR	LR	
	comp=E,2μm,18.3s					
MDJ				LR	LR	
	comp=Z,2μm,20.4s,MS5.0					
MDJ	**Mudanjiang**	**40.41**	**37**	P	**P**	**13 38 13.8 +0.2**
	comp=Z,13nm,0.8s,mb4.7					
VLA	**Vladivostok**	**41.00**	**41**	⇑*e*P	**P**	**13 38 16.7 -1.8**
VLA				S	**S**	**13 44 26.6 -1.5**
VLA				pmax	pmax	
	comp=Z,172nm,1.6s,mb5.4					
VLA				MLR	MLR	
	comp=E,8μm,11.0s					
ICHK	**Chekchek**	**41.23**	**301**	*e*P	**P**	**13 38 20.6 +0.1**
VOSK	**Vostochnaya**	**41.98**	**337**	P	**P**	**13 38 25.5 -0.8**
VOSK				pmax	pmax	
	comp=Z,95nm,0.7s,mb5.5					
BVA0	**Borovoye Array**	**42.44**	**337**	P	**P**	**13 38 29.0 -1.0**
BVAR	**Borovoye Array**	**42.44**	**337**	P	**P**	**13 38 29.9 -0.2**
	comp=Z,12nm,0.7s,mb4.7,baz=138,slow=9.3,SNR=69					
BVAR				PcP	PcP	13 40 22.4 -0.1
	comp=Z,12nm,0.9s,baz=149,slow=3.7,SNR=8.9					
BVAR	**Borovoye Array**	**42.44**	**337**	P	**P**	**13 38 29.9 -0.1**
BVAR						13 40 22.4
BVAR				pmax	pmax	
	comp=Z,12nm,0.7s					
IANJ	**Anjilo**	**42.47**	**306**	*e*P	**P**	**13 38 31.3 +0.7**
BRVK	**Borovoye**	**42.50**	**337**	*e*P	**P**	**13 38 30.2 -0.3**
	comp=Z,51nm,1.0s,mb5.2					
BRVK				LR	LR	
	comp=Z,2μm,20.0s,MS4.9					
BRVK	**Borovoye**	**42.50**	**337**	*i* P	**P**	**13 38 29.9 -0.7**
BRVK				pmax	pmax	
	comp=Z,52nm,0.8s,mb5.3					
BRVK				MLR	MLR	
	comp=Z,2μm,24.0s,MS4.9					
BRVK	**Borovoye**	**42.50**	**337**	P	**P**	**13 38 30.4 -0.2**
	comp=Z,218nm,0.7s,mb6.0,SNR=19					
BRVK	**Borovoye**	**42.50**	**337**	P	**P**	**13 38 31.1 +0.5**
	SNR=16					
MAJO	**Matsushiro**	**42.74**	**53**	*e*P	**P**	**13 38 32.2 -0.6**
	comp=Z,31nm,0.8s,mb5.1					
MAJO	**Matsushiro**	**42.74**	**53**	*e*P	**P**	**13 38 32.2 -0.6**
MAJO				pmax	pmax	
	comp=Z,31nm,0.8s,mb5.1					
MAT	**Matsushiro**	**42.74**	**53**	P	**P**	**13 38 32.1 -0.7**
MAT				S	**S**	**13 45 00.0 +6.0**
MJAR	**Matsushiro Arr**	**42.74**	**53**	P	**P**	**13 38 33.1 +0.4**
	comp=Z,18nm,0.8s,mb4.8,baz=263,slow=11,SNR=41					
MJAR				PcP	PcP	13 40 23.5 -0.4
	comp=Z,8.8nm,0.9s,baz=238,slow=6.2,SNR=11					
MJAR				LR	LR	13 58 07.4
	comp=Z,926nm,18.2s,MS4.7,baz=215,slow=38					
MJAR	**Matsushiro Arr**	**42.74**	**53**	P	**P**	**13 38 33.1 +0.4**
MJAR				PcP	PcP	13 40 23.5 -0.4
MJAR				LR	LR	13 58 07.4
MJAR	**Matsushiro Arr**	**42.74**	**53**	P	**P**	**13 38 33.1 +0.3**
MJAR						13 40 23.5
MJAR				pmax	pmax	
	comp=Z,18nm,0.8s					
MJAR				MLR	MLR	
	comp=Z,926nm,18.2s					
IGLO	**Ghaloghah**	**42.84**	**307**	*e*P	**P**	**13 38 35.4 +1.8**
IKIA	**Kiasar**	**42.86**	**307**	*e*P	**P**	**13 38 35.1 +1.3**
JHJ	**Hachijo jima 2**	**43.08**	**58**	LR	LR	13 59 56.4
	comp=Z,660nm,18.3s,MS4.6,baz=136,slow=41					
IGAR	**Gharneh**	**43.22**	**301**	*e*P	**P**	**13 38 37.6 +0.9**
IFIR	**Firoozkooh**	**43.43**	**306**	*e*P	**P**	**13 38 40.1 +1.8**
IDMV	**Damavand**	**43.98**	**305**	*e*P	**P**	**13 38 43.7 +0.9**
BOD	**Bodaibo**	**44.19**	**14**	⇓*i*P	**P**	**13 38 44.0 -0.1**
BOD				pmax	pmax	
	comp=Z,25nm,1.3s,mb4.8					
KLR	**Kul'dur**	**44.31**	**33**	*e*P	**P**	**13 38 39.7 -5.5**
KLR				*e*		13 48 38.0
KLR				MLR	MLR	
	comp=N,3μm,14.0s,MS5.4					
KLR				MLR	MLR	
	comp=E,2μm,14.0s,MS5.4					
KLR				MLR	MLR	
	comp=Z,4μm,11.0s,MS5.5					
FITZ	**Fitzroy Crossi**	**44.41**	**138**	P	**P**	**13 38 44.8 -1.6**
	comp=Z,2.2nm,0.8s,baz=304,slow=11,SNR=3.8					
FITZ				PcP	PcP	13 40 28.2 -1.5
	comp=Z,4.3nm,0.8s,baz=306,slow=3.3,SNR=5.6					
FITZ				LR	LR	13 59 57.3
	comp=Z,1μm,19.1s,baz=310,slow=40					
AB31	**Akbulak array**	**44.58**	**327**	*ce*P	**P**	**13 38 47.6 +0.2**
AB31				pmax	pmax	
	comp=Z,25nm,

AKTO LR LR 14 02 21.5
comp=Z,769nm,20.9s,MS4.6,baz=133,slow=41
AKTO Aktyubinsk 46.28 327 *i* P **P 13 39 00.8 0.0**
AKTO pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KBD Kabd 46.42 295 *e*P **P 13 39 01.7 -0.5**
KBD AMb AMB 13 39 02.5
comp=Z,68nm,0.8s,mb5.6
UMR Umm Al-Rimmam 46.44 296 *e*P **P 13 39 01.6 -0.8**
UMR AMb AMB 13 39 02.5
comp=Z,67nm,0.9s,mb5.6
RDF Al-Radifah 46.52 295 *e*P **P 13 39 02.3 -0.7**
RDF AMb AMB 13 39 03.6
comp=Z,179nm,1.1s,mb5.9
CLNS Chul'man 46.53 21 *e*P **P 13 39 02.6 -0.1**
CLNS *e**PP pP 13 39 09.7 -4.1
CLNS *e* 13 40 34.5
CLNS *e* 13 40 52.3
CLNS *e*PPP 13 41 36.2
CLNS *e*S **S 13 45 51.8 +3.4**
CLNS *e*SS SS 13 48 46.6 -28
CLNS pmax pmax
comp=Z,66nm,1.0s,mb5.5
CLNS pmax pmax
comp=E,41nm,1.1s
CLNS pmax pmax
comp=N,43nm,1.1s
CLNS pmax pmax
comp=E,11nm,1.1s
CLNS pmax pmax
comp=Z,13nm,1.1s,mb4.8
CLNS pmax pmax
comp=N,5.0nm,1.1s
CLNS smax
comp=N,133nm,12.3s
CLNS smax
comp=E,358nm,17.3s
CLNS MLR MLR
comp=Z,1μm,14.0s,MS4.9
CLNS MLR MLR
comp=E,1μm,13.0s,MS5.1
CLNS MLR MLR
comp=N,617nm,12.0s,MS5.1
MIB Mutribah 46.79 296 *e*P **P 13 39 04.6 -0.6**
MIB AMb AMB 13 39 05.5
comp=Z,116nm,0.8s,mb5.9
NAY Al-Naaiem 46.82 296 *e*P **P 13 39 04.6 -0.8**
NAY AMb AMB 13 39 05.9
comp=Z,104nm,0.9s,mb5.8
GUMO Guam 47.16 86 LR LR 13 56 30.0
comp=Z,492nm,19.8s,MS4.5,baz=90,slow=33
ERM Erimo 48.10 47 *i* P **P 13 39 15.3 +0.1**
ERM pmax pmax
comp=Z,11nm,1.0s,mb4.8
ASAJ Asahikawa 48.43 44 P **P 13 39 18.4 +0.7**
comp=Z,27nm,1.1s,mb5.2,baz=258,slow=8.1,SNR=6.5
ASAJ LR LR 14 01 05.5
comp=Z,1μm,18.8s,MS5.0,baz=204,slow=38
ASAJ Asahikawa 48.43 44 P **P 13 39 18.4 +0.8**
ASAJ pmax pmax
comp=Z,27nm,1.1s
ASAJ MLR MLR
comp=Z,1μm,18.8s
SVE Sverdlovsk 49.05 335⇑*e*P **P 13 39 23.0 +0.8**
SVE *e* 13 41 17.0
SVE *e*S **S 13 46 29.0 +4.9**
SVE pmax pmax
comp=Z,157nm,1.3s,mb5.9
SVE MLR MLR
comp=Z,2μm,20.0s,MS5.1
YSS Yuzh-Sakhalins 49.59 41 *e*P **P 13 39 26.9 +0.4**
comp=Z,38nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 49.59 41⇓*e*P **P 13 39 27.0 +0.5**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.3
YSS MLR MLR
comp=Z,1μm,17.0s,MS5.0
ARU Arti 49.66 334 *e*P **P 13 39 26.8 0.0**
comp=Z,69nm,1.1s,mb5.6
ARU Arti 49.66 334*d i*P **P 13 39 26.9 +0.1**
ARU *e* 13 40 47.2
ARU *e* 13 41 22.7
ARU *e*PPP 13 42 18.6
ARU S **S 13 46 34.7 +2.1**
ARU pmax pmax
comp=Z,109nm,1.7s,mb5.6
ARU Arti 49.66 334 P **P 13 39 26.1 -0.7**
comp=Z,290nm,1.3s,mb6.2,SNR=14
DGRG David-gareji 50.56 311 P **P 13 39 34.6 +0.7**
YUK Yuzh-Kuril'sk 50.62 45 *i* P **P 13 39 30.6 -3.7**
YUK *i* 13 41 30.9
YUK *i* SS SS 13 50 20.9 0.0
YUK pmax pmax
comp=N,221nm,1.0s
YUK pmax pmax
comp=E,183nm,1.0s
YUK pmax pmax
comp=Z,395nm,1.0s,mb6.3
YUK pmax pmax
comp=Z,640nm,1.0s,mb6.5
YUK MLR MLR
comp=Z,2μm,19.0s,MS5.1
YUK MLR MLR
comp=N,530nm,19.0s,MS5.1
YUK MLR MLR
comp=E,2μm,19.0s,MS5.1
GNI Garni 50.70 309 P **P 13 39 36.5 +1.5**
comp=E,54nm,0.7s,mb5.6,baz=138,slow=4.8,SNR=15
GNI Garni 50.70 309 *e*P **P 13 39 36.5 +1.5**
comp=E,128nm,1.0s,mb5.8
GNI Garni 50.70 309*de*P **P 13 39 36.4 +1.4**
GNI pmax pmax
comp=Z,177nm,1.2s
GNI Garni 50.70 309 P **P 13 39 36.9 +1.9**
SNR=17
MTA Mtatsminda 51.04 311 P **P 13 39 38.4 +0.8**
TBLG Delisi 51.09 311 *e*P **P 13 39 38.8 +0.9**
TBLG Delisi 51.09 311 P **P 13 39 38.9 +0.9**
GOR Gori 51.61 311 P **P 13 39 43.7 +1.9**
WRA Warramunga Arr 51.62 132 P **P 13 39 40.6 -1.6**
comp=Z,26nm,0.9s,mb5.2,baz=317,slow=7.8,SNR=145
WRA PcP PcP 13 40 54.6 -1.0
comp=Z,5.3nm,0.9s,baz=320,slow=3.6,SNR=7.8
WRA LR LR 14 03 16.8
comp=Z,967nm,21.0s,MS4.8,baz=305,slow=38
WRA Warramunga Arr 51.62 132 P **P 13 39 40.6 -1.5**
WRA 13 40 54.6
WRA pmax pmax
comp=Z,26nm,0.9s
WRA MLR MLR
comp=Z,967nm,21.0s
WB2 Warramunga Arr 51.63 132 *e*P **P 13 39 40.8 -1.4**
ATD Arta Tunnel 51.81 272 LR LR 14 02 39.7
comp=Z,366nm,18.6s,MS4.4,baz=343,slow=37
ZEI Tsey 51.96 312 *e*P **P 13 39 44.8 +0.4**
ZEI pmax pmax
comp=Z,136nm,1.3s,mb5.7
YAK Yakutsk 52.06 19 *e*P **P 13 39 44.0 -0.8**
comp=Z,14nm,0.6s,mb5.1
YAK LR LR
comp=Z,778nm,20.0s,MS4.7
YAK Yakutsk 52.06 19*d i*P **P 13 39 44.0 -0.8**
YAK pmax pmax
comp=Z,28nm,0.9s,mb5.2
YAK pmax pmax
comp=N,15nm,1.4s
YAK pmax pmax
comp=E,17nm,1.3s
YAK MLR MLR
comp=Z,981nm,17.0s,MS4.9
YAK MLR MLR
comp=E,930nm,16.0s,MS5.0
YAK MLR MLR
comp=N,750nm,18.0s,MS5.0
ONI Oni 52.23 312 P **P 13 39 47.6 +1.2**
NWAO Narrogin (SRO) 52.36 157 P **P 13 39 46.0 -1.4**
comp=N,25nm,0.9s,mb5.2,baz=326,slow=7.4,SNR=6.7
NWAO LR LR 14 03 52.8
comp=N,1μm,18.1s,MS4.9,baz=324,slow=38
NWAO Narrogin (SRO) 52.36 157 P **P 13 39 46.0 -1.4**
NWAO LR LR 14 03 52.8
NWAO Narrogin (SRO) 52.36 157 P **P 13 39 46.0 -1.4**
NWAO pmax pmax
comp=Z,25nm,0.9s
NWAO MLR MLR
comp=Z,1μm,18.1s

SOKR Solikamsk 52.39 336*d i*P **P 13 39 47.0 -0.3**
SOKR S **S 13 47 05.9 -4.4**
SOKR pmax pmax
comp=Z,100nm,0.9s,mb5.8
SOKR MLR MLR
comp=Z,980nm,15.0s,MS5.0
KIV Kislovodsk 53.12 314 *e*P **P 13 39 53.6 +0.7**
comp=Z,287nm,1.0s,mb6.2
KIV Kislovodsk 53.12 314*d i*P **P 13 39 53.8 +0.8**
KIV *e* 13 41 52.9
KIV *e*S **S 13 47 23.4 +2.7**
KIV pmax pmax
comp=Z,231nm,0.9s,mb6.1
KIV pmax pmax
comp=Z,39nm,2.3s,mb4.9
KIV Kislovodsk 53.12 314 P **P 13 39 54.7 +1.8**
comp=Z,1μm,1.0s,SNR=20
KIV Kislovodsk 53.12 314 P **P 13 39 54.3 +1.3**
SNR=20
ASAR Alice Springs 53.78 136 P **P 13 39 56.9 -1.2**
comp=Z,6.5nm,0.7s,mb4.7,baz=315,slow=6.9,SNR=83
ASAR PcP PcP 13 41 02.4 -1.3
comp=Z,3.4nm,0.8s,baz=320,slow=5.9,SNR=6.9
ASAR Alice Springs 53.78 136 P **P 13 39 56.9 -1.2**
ASAR 13 41 02.4
ASAR pmax pmax
comp=Z,7.0nm,0.7s
MALT Malatya 55.19 306 *e*P **P 13 40 08.7 +0.5**
comp=Z,66nm,1.3s,mb5.5
MALT Malatya 55.19 306 *e*P **P 13 40 08.7 +0.5**
MALT pmax pmax
comp=Z,66nm,1.3s,mb5.5
VRHR Novokhopersk 55.87 322 *e*P **P 13 40 11.8 -1.0**
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.5
VRHR pmax pmax
comp=N,110nm,1.7s
VRHR pmax pmax
comp=E,150nm,1.7s
PMG Port Moresby 56.37 113*ce*P **P 13 40 17.1 +0.1**
PMG pmax pmax
comp=Z,48nm,1.7s
ANN Anapa 56.97 314 *e*P **P 13 40 13.5 -7.3**
ANN pmax pmax
comp=Z,93nm,1.4s,mb5.6
VORD Divnogorie 57.23 321 *e*P **P 13 40 22.2 -0.3**
VORD pmax pmax
comp=Z,50nm,1.5s,mb5.3
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=E,40nm,0.6s
VSR Storozhevoye 57.38 321 *e*P **P 13 40 22.9 -0.6**
VSR pmax pmax
comp=Z,50nm,1.6s,mb5.3
VSR pmax pmax
comp=N,20nm,1.4s
VSR pmax pmax
comp=E,50nm,1.2s
CSS Prodhromos 59.00 302 P **P 13 40 34.4 -0.8**
comp=E,25nm,0.9s,mb5.2
BR131 Keskin Array S 59.05 307 *e*P **P 13 40 35.0 -0.4**
comp=E,22nm,1.0s,mb5.1
BRTR Keskin Array B 59.05 307 P **P 13 40 34.9 -0.6**
comp=E,22nm,1.0s,mb5.1,baz=116,slow=6.6,SNR=65
BRTR LR LR 14 12 42.5
comp=E,333nm,18.1s,MS4.5,baz=100,slow=43
BRTR Keskin Array B 59.05 307*ce*P **P 13 40 34.9 -0.6**
BRTR pmax pmax
comp=Z,22nm,1.0s
TIXI Tiksi 59.28 12 *e*P **P 13 40 35.6 -0.9**
comp=Z,126nm,1.1s,mb5.9
TIXI Tiksi 59.28 12 *e*P **P 13 40 35.4 -1.1**
TIXI *e*S **S 13 48 46.1 +4.4**
TIXI pmax pmax
comp=N,29nm,1.1s
TIXI pmax pmax
comp=E,16nm,1.1s
TIXI pmax pmax
comp=Z,133nm,1.2s,mb5.8
TIXI pmax pmax
comp=Z,42nm,5.1s
TIXI MLR MLR
comp=Z,1μm,15.0s,MS5.1
SIM Simferopol' 59.32 313 P **P 13 40 38.0 +0.8**
SIM S **S 13 48 49.3 +6.2**
SIM pmax pmax
comp=Z,22nm,1.1s,mb5.1
MOS Moscow 59.60 326 *e*P **P 13 40 37.2 -1.7**
MOS *e*S **S 13 48 46.3 +0.1**
MOS pmax pmax
comp=Z,163nm,1.5s,mb5.8
OBN Obninsk 59.99 325 *e*P **P 13 40 40.3 -1.3**
comp=Z,153nm,1.3s,mb5.9
OBN Obninsk 59.99 325⇓*i*P **P 13 40 41.5 -0.1**
OBN *i* 13 41 25.1
OBN *e* 13 42 53.7
OBN pmax pmax
comp=Z,127nm,1.4s,mb5.8
OBN MLR MLR
comp=Z,1μm,24.0s,MS4.9
OBN Obninsk 59.99 325 P **P 13 40 41.0 -0.6**
comp=Z,343nm,0.8s,mb6.4,SNR=5.1
KLMR Klimovskoe 60.42 332*d i*P **P 13 40 44.6 +0.1**
KLMR pmax pmax
comp=Z,107nm,5.2s
KMBO Kilima Mbogo 60.45 260 P **P 13 40 44.7 -0.8**
comp=Z,1.3nm,0.7s,baz=180,slow=20,SNR=4.5
KMBO LR LR 14 04 02.1
comp=Z,424nm,20.1s,MS4.6,baz=270,slow=33
KMBO Kilima Mbogo 60.45 260 P **P 13 40 44.7 -0.8**
PETK Petropavlovsk- 60.65 37 P **P 13 40 45.8 -0.4**
comp=Z,11nm,0.8s,mb5.0,baz=224,slow=4.7,SNR=7.0
PETK LR LR 14 10 06.4
comp=Z,932nm,18.3s,MS5.0,baz=67,slow=39
PETK Petropavlovsk- 60.65 37 P **P 13 40 45.8 -0.4**
PETK pmax pmax
comp=Z,11nm,0.9s,mb5.0
PETK MLR MLR
comp=Z,932nm,18.3s,MS5.0
CTA Charters Tower 60.76 124 P **P 13 40 46.2 -1.1**
comp=Z,4.0nm,0.6s,mb4.7,baz=320,slow=9.9,SNR=3.6
CTA Charters Tower 60.76 124 P **P 13 40 46.3 -1.1**
CTA pmax pmax
comp=Z,4.0nm,0.6s
SEY Seymchan 61.12 26*ce*P **P 13 40 48.6 -0.6**
PET Petropavlovsk 61.20 38 *e*P **P 13 40 50.3 +0.4**
PET *e*S **S 13 49 02.7 -4.1**
PET pmax pmax
comp=Z,51nm,0.9s,mb5.7
PET pmax pmax
comp=Z,200nm,16.0s
PET MLR MLR
comp=Z,1μm,16.0s,MS5.1
PET MLR MLR
comp=Z,1μm,18.0s
KIS Kishinev 63.24 315 *e*P **P 13 41 02.5 -1.2**
KIS *e*S **S 13 49 32.0 -0.8**
KIS *e*LQ 14 02 08.0
KIS *e*LR LR 14 07 40.0
comp=Z,600nm,20.0s
KIS Kishinev 63.24 315 *e*P **P 13 41 02.5 -1.2**
KIS *e* pP 13 41 13.0 -2.3
KIS *e*S **S 13 49 32.0 -0.8**
KIS MLR MLR
comp=N,400nm,20.0s
KIS MLR MLR
comp=Z,600nm,20.0s,MS4.8
KIS MLR MLR
comp=Z,600nm,20.0s
TIRR Tirgusor 63.31 312 *e*P **P 13 41 03.9 -0.3**
comp=Z,13nm,1.1s,mb5.0
TIRR Tirgusor 63.31 312 *e*P **P 13 41 03.9 -0.3**
TIRR pmax pmax
comp=Z,13nm,1.1s,mb5.0
TIRR Tirgusor 63.31 312⇓*i*P **P 13 41 03.7 -0.5**
AKASG Malin Array Be 63.41 319 P **P 13 41 03.8 -1.0**
comp=Z,8.6nm,0.8s,mb4.9,baz=85,slow=6.4,SNR=34
AKASG LR LR 14 15 31.8
comp=Z,658nm,20.4s,MS4.8,baz=90,slow=42
AKASG Malin Array Be 63.41 319*ce*P **P 13 41 03.9 -0.9**
AKASG pmax pmax
comp=Z,9.0nm,0.8s
KIEV Kiev 63.42 319 *e*P **P 13 41 03.8 -1.1**
comp=Z,31nm,1.3s,mb5.3
KIEV Kiev 63.42 319 *e*P **P 13 41 03.8 -1.0**

KIEV pmax pmax
comp=Z,31nm,1.3s,mb5.3
STKA Stephens Creek 64.31 138 P **P 13 41 10.1 -0.8**
comp=Z,26nm,0.8s,mb5.3,baz=323,slow=7.5,SNR=30
STKA LR LR 14 12 09.5
comp=Z,1μm,19.9s,MS5.2,baz=276,slow=39
STKA Stephens Creek 64.31 138 *e*P **P 13 41 10.2 -0.7**
comp=Z,22nm,0.8s,mb5.2
STKA Stephens Creek 64.31 138 *e*P **P 13 41 09.9 -0.9**
comp=Z,12nm,1.3s,mb4.8
VRI Vrincioaia 64.59 314 P **P 13 41 13.5 +0.9**
VRI Vrincioaia 64.59 314⇑*i*P **P 13 41 13.0 +0.4**
PLOR Plostina 64.65 314 P **P 13 41 14.0 +1.0**
PLOR Plostina 64.65 314⇑*i*P **P 13 41 13.6 +0.6**
TESR 64.69 314⇓*i*P **P 13 41 13.1 -0.2**
JOF Joensuu 64.77 333 *e*P **P 13 41 12.9 -0.6**
JOF pmax pmax
comp=Z,25nm,0.8s,mb5.3
JOF Joensuu 64.77 333 *ep* **P 13 41 12.9 -0.6**
comp=Z,25nm,0.8s,mb5.3
LVZ Lovozero 65.01 338 *e*P **P 13 41 15.2 +0.3**
LVZ pmax pmax
comp=Z,74nm,2.5s,mb5.3
MLR Muntele Rosu 65.12 313⇑P **P 13 41 16.5 +0.4**
MLR Muntele Rosu 65.12 313⇑*i*P **P 13 41 16.5 +0.4**
APA Apatity 65.34 338⇓*i*P **P 13 41 18.4 +1.3**
APA *e* 13 43 50.0
APA *i* PS 13 50 00.0
APA pmax pmax
comp=Z,82nm,1.2s,mb5.6
APA MLR MLR
comp=Z,1μm,14.0s,MS5.2
BURAR Bucovina Array 65.73 315⇓P **P 13 41 20.3 +0.3**
BURAR Bucovina Array 65.73 315⇓*i*P **P 13 41 20.3 +0.3**
BUR08 Bucovina Ar. S 65.75 316 *e*P **P 13 41 20.4 +0.4**
LVV L'vov 66.64 318⇓*i*P **P 13 41 25.3 -0.5**
LVV *e* 13 41 54.3
FINES FINESS Array B 66.84 331 P **P 13 41 26.6 -0.2**
comp=Z,27nm,0.8s,mb5.3,baz=100,slow=7.6,SNR=38
FINES LR LR 14 14 31.9
comp=Z,944nm,19.6s,MS5.0,baz=108,slow=39
FINES FINESS Array B 66.84 331 P **P 13 41 26.6 -0.2**
FINES pmax pmax
comp=Z,27nm,0.8s
FINES MLR MLR
comp=Z,944nm,19.6s
KAF Kangasniemi 66.85 331 *e*P **P 13 41 25.9 -1.0**
KAF pmax pmax
comp=Z,15nm,0.9s,mb5.0
KAF Kangasniemi 66.85 331 *ep* **P 13 41 25.9 -1.0**
comp=Z,15nm,0.9s,mb5.0
VTS Vitosha 67.04 310⇓P **P 13 41 27.9 -0.5**
VTS Vitosha 67.04 310⇓*i*P **P 13 41 27.9 -0.5**
DRGR 67.41 315 P **P 13 41 31.6 +0.9**
DRGR 67.41 315⇓*i*P **P 13 41 31.1 +0.4**
SUW Suwalki 67.45 322 *e*P **P 13 41 30.9 +0.1**
SUW LMZ 14 12 38.0
comp=Z,500nm,28.2s
SUW Suwalki 67.45 322 *e*P **P 13 41 30.9 +0.1**
SUW MLR MLR
comp=Z,500nm,28.2s,MS4.6
KWP Kalwaria Pacla 67.49 318 *e*P **P 13 41 31.3 +0.1**
KWP LMZ 14 17 43.1
comp=Z,700nm,19.8s
KWP Kalwaria Pacla 67.49 318 *e*P **P 13 41 31.2 +0.1**
comp=Z,64nm,1.1s,mb5.6
KWP Kalwaria Pacla 67.49 318 *e*P **P 13 41 31.3 +0.1**
KWP Kalwaria Pacla 67.49 318⇓*i*P **P 13 41 30.7 -0.5**
VAY Valandovo 67.53 309 *e*P **P 13 41 29.9 -1.7**
TRPA Tarpa 67.56 316⇓*i*P **P 13 41 31.8 +0.2**
UZH Uzhgorod 67.73 316*c i*P **P 13 41 32.0 -0.7**
UZH *i* 13 41 48.8
UZH *e*S S 13 50 27.0 -0.7
UZH *e*PS 13 51 08.0
UZH *e* 13 51 21.0
UZH *e*SSS 13 57 48.0
KOLS Kolonicke sedl 67.75 317 *e*P **P 13 41 33.4 +0.5**
comp=Z,9.0nm,1.1s,mb4.7
KOLS Kolonicke sedl 67.75 317 *e*P **P 13 41 33.4 +0.5**
KOLS pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
KOLS Kolonicke sedl 67.75 317 *e*P **P 13 41 33.4 +0.5**
BZS Buzias 68.16 313⇑P **P 13 41 36.0 +0.5**
BZS Buzias 68.16 313⇑*i*P **P 13 41 36.0 +0.5**
BILL Bilibino 68.21 22 *e*P **P 13 41 34.5 -0.8**
comp=Z,57nm,1.3s,mb5.4
BILL Bilibino 68.21 22⇓*i*P **P 13 41 34.4 -0.9**
BILL pmax pmax
comp=Z,46nm,1.0s,mb5.5
BILL MLR MLR
comp=Z,1μm,20.0s,MS5.0
KEV Kevo 68.22 340 *e*P **P 13 41 34.4 -1.0**
KEV pmax pmax
comp=Z,14nm,0.8s,mb5.0
KEV Kevo 68.22 340 *ep* **P 13 41 34.4 -1.0**
comp=Z,14nm,0.8s,mb5.0
CRVS Cervenica-Dubn 68.29 317 *e*P **P 13 41 37.0 +0.8**
comp=Z,118nm,1.7s,mb5.6
CRVS Cervenica-Dubn 68.29 317 *e*P **P 13 41 37.0 +0.8**
CRVS pmax pmax
comp=Z,118nm,1.7s,mb5.6
CRVS Cervenica-Dubn 68.29 317 *e*P **P 13 41 37.0 +0.8**
KRUS Krusevo 68.53 309 *e*P **P 13 41 35.7 -2.1**
ARCES ARCESS Array B 68.68 339 P **P 13 41 38.6 +0.4**
comp=Z,12nm,0.7s,mb4.9,baz=94,slow=7.7,SNR=29
ARCES LR LR 14 15 48.0
comp=Z,576nm,19.9s,MS4.8,baz=96,slow=39
ARCES ARCESS Array B 68.68 339 P **P 13 41 38.7 +0.4**
ARCES pmax pmax
comp=Z,12nm,0.7s
ARCES MLR MLR
comp=Z,576nm,19.9s
KECS Kecovo 68.93 316 *e*P **P 13 41 38.7 -1.5**
comp=Z,10nm,1.3s,mb4.6
KECS *e* 13 41 53.8
KECS Kecovo 68.93 316 *e*P **P 13 41 38.7 -1.5**
KECS *e* 13 41 53.8
KECS pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
KECS Kecovo 68.93 316 *e*P **P 13 41 38.7 -1.5**
KECS *ep*P pP 13 41 53.8 +1.9
NIE Niedzica 69.05 317 *e*P **P 13 41 42.1 +1.2**
NIE Niedzica 69.05 317 *e*P **P 13 41 42.1 +1.2**
PSZ Piszkesteto 69.33 316 *e*P **P 13 41 43.0 +0.3**
comp=Z,58nm,1.5s,mb5.3
PSZ Piszkesteto 69.33 316 *e*P **P 13 41 43.0 +0.3**
PSZ pmax pmax
comp=Z,58nm,1.5s,mb5.3
PSZ Piszkesteto 69.33 316⇓*i*P **P 13 41 42.5 -0.2**
PSZ Piszkesteto 69.33 316⇓*e*P **P 13 41 42.7 0.0**
OJC Ojcow 69.38 318 *e*P **P 13 41 42.8 -0.2**
OJC *ep*P pP 13 41 46.4 -8.3
OJC Ojcow 69.38 318 *e*P **P 13 41 42.8 -0.2**
BUD Budapest 69.93 315 *e*P **P 13 41 45.2 -1.2**
VYHS Vyhne 70.03 316 *e*P **P 13 41 47.3 +0.3**
comp=Z,15nm,1.6s,mb4.7
VYHS *e* pP 13 42 00.1 +1.4
VYHS Vyhne 70.03 316 *e*P **P 13 41 47.3 +0.3**
VYHS *e* pP 13 42 00.1 +1.4
VYHS pmax pmax
comp=Z,15nm,1.6s,mb4.7
VYHS Vyhne 70.03 316 *e*P **P 13 41 47.3 +0.3**
VYHS *ep*P pP 13 42 00.0 +1.3
PKSM Moragy 70.23 314⇓P **P 13 41 48.2 -0.1**
PKSM Moragy 70.23 314⇓*i*P **P 13 41 48.2 -0.1**
ARMA Armidale 70.38 131 *e*P **P 13 41 50.5 +1.1**
TOO Toolangi 70.40 140 *e*P **P 13 41 50.1 +0.7**
OKC Ostrava-Krasne 70.45 318 *e*P **P 13 41 50.3 +0.7**
OKC *e* pP 13 42 02.5 +1.2
OKC MLR MLR
comp=Z,300nm,16.1s,MS4.6
OKC Ostrava-Krasne 70.45 318 *e*P **P 13 41 50.3 +0.7**
OKC *ep*P pP 13 42 02.5 +1.2
OKC AMS AMS 14 16 40.0
comp=Z,300nm,16.1s
MORC Moravsky Berou 70.85 318 *e*P **P 13 41 51.2 -0.7**
comp=Z,76nm,1.6s,mb5.4
MORC Moravsky Berou 70.85 318⇑P **P 13 41 52.1 +0.1**
MORC Moravsky Berou 70.85 318⇑*i*P **P 13 41 52.1 +0.1**
ZST Bratislava 71.19 316 *e*P **P 13 41 54.9 +0.8**
comp=Z,24nm,1.8s,mb4.8
ZST Bratislava 71.19 316 *e*P **P 13 41 54.9 +0.8**
ZST pmax pmax
comp=Z,24nm,1.8s,mb4.8

ZST Bratislava 71.19 316 *eP* **P 13 41 54.9 +0.8**
VRAC Vranov 71.48 317 P **P 13 41 57.0 +1.2**
CNB Canberra Magne 71.53 136 *eP* **P 13 41 56.1 -0.1**
SOP Sopron 71.59 316⇓ *eP* **P 13 41 56.5 0.0**
KSP Ksiaz 71.61 319 *eP* **P 13 41 57.0 +0.5**
KSP LMZ 14 19 36.9
comp=Z,1µm,19.8s
DPC Dobruska-Polom 71.61 318 *eP* **P 13 41 57.4 +0.8**
DPC *e* 13 42 12.1
DPC MLR MLR
comp=Z,700nm,15.1s,MS5.0
DPC Dobruska-Polom 71.61 318 *eP* **P 13 41 57.4 +0.8**
DPC *es*P sP 13 42 12.1 -0.7
DPC AMS AMS 14 19 10.0
comp=Z,700nm,15.1s
UPC Upice 71.80 319 *eP* **P 13 41 58.1 +0.4**
UPC Upice 71.80 319 *eP* **P 13 41 58.1 +0.4**
CONA Conrad Observa 72.04 316⇓ *iP* **P 13 41 59.3 +0.1**
comp=Z,32nm,1.4s,mb5.1
CSNA Conrad Observa 72.04 316⇓ *iP* **P 13 41 59.3 +0.1**
comp=Z,32nm,1.4s,mb5.1
TREC Trest 72.20 317 *eP* **P 13 42 00.8 +0.6**
TREC Trest 72.20 317 *eP* **P 13 42 00.8 +0.6**
ARSA Arzberg 72.31 315⇓ *iP* **P 13 42 01.0 +0.1**
comp=Z,24nm,1.4s,mb4.9
BOJS Bojanci 72.64 313 *i* P **P 13 42 03.0 +0.2**
BOJS *i* 13 43 05.4
PERS Pernice 72.64 315 *i* P **P 13 42 03.0 +0.2**
PERS *i* 13 43 05.3
SOKA Soboth 72.69 315⇓ *iP* **P 13 42 03.5 +0.3**
comp=Z,34nm,1.6s,mb5.0
PVCC Panska Ves 72.72 319 *eP* **P 13 42 03.9 +0.7**
PVCC MLR MLR
comp=Z,700nm,15.6s,MS5.0
PVCC Panska Ves 72.72 319 *eP* **P 13 42 03.9 +0.7**
PVCC AMS AMS 14 20 00.0
comp=Z,700nm,15.6s
CUC Castrocucco 72.75 308 *eP* **P 13 42 02.9 -0.7**
comp=Z,14nm,1.1s,mb4.8
PRU Pruhonice 72.77 318 *eP* **P 13 42 04.6 +1.1**
PRU *e* pP 13 42 17.9 +2.6
PRU *e* 13 51 31.6
PRU MLR MLR
comp=Z,600nm,15.7s,MS5.0
PRU Pruhonice 72.77 318 *eP* **P 13 42 04.6 +1.1**
PRU *es*P sP 13 42 17.9 -1.8
PRU *eS* S 13 51 31.6 +5.1
PRU AMS AMS 14 20 00.0
comp=Z,600nm,15.7s
VISS Visnje 72.90 314 *i* P **P 13 42 04.5 +0.1**
VISS *i* 13 43 01.1
OBKA Obir 73.04 314⇓ *iP* **P 13 42 05.3 +0.1**
comp=Z,36nm,1.3s,mb5.1
BRG Berggiesshubel 73.09 319 *eP* **P 13 42 05.9 +0.5**
comp=Z,58nm,1.3s,mb5.3
BRG Berggiesshubel 73.09 319 *eP* **P 13 42 06.0 +0.5**
comp=Z,58nm,1.3s,mb5.3
MOA Molln 73.12 316⇓ *iP* **P 13 42 05.4 -0.2**
comp=Z,26nm,1.2s,mb5.0,SNR=8.0
GEC2 GERESS Array S 73.41 317 *eP* **P 13 42 07.7 +0.4**
comp=Z,51nm,1.4s,mb5.3
GEC2 GERESS Array S 73.41 317 *eP* **P 13 42 07.7 +0.4**
GEC2 pmax pmax
comp=Z,51nm,1.4s,mb5.3
GERES GERESS Array B 73.41 317 P **P 13 42 07.5 +0.1**
comp=Z,12nm,0.9s,mb4.8,baz=72,slow=6.4,SNR=38
GERES GERESS Array B 73.41 317 P **P 13 42 07.5 +0.2**
GERES pmax pmax
comp=Z,12nm,0.9s
JAVS Javornik 73.43 314 *i* P **P 13 42 06.5 -1.0**
JAVS *i* 13 43 04.1
KHC Kasperske Hory 73.47 317 *eP* **P 13 42 07.9 +0.2**
comp=Z,28nm,1.4s,mb5.0
KHC Kasperske Hory 73.47 317 *eP* **P 13 42 08.0 +0.4**
KHC *e* pP 13 42 21.0 +1.6
KHC *e* 13 52 15.1
KHC MLR MLR
comp=Z,600nm,22.8s,MS4.8
KHC Kasperske Hory 73.47 317 *eP* **P 13 42 08.0 +0.4**
KHC *ep*P pP 13 42 21.0 +1.6
KHC *eS*CS ScS 13 52 15.1 +1.5
KHC AMS AMS 14 18 30.0
comp=Z,600nm,22.8s
VOY Vojsko 73.53 314 *eP* **P 13 42 07.9 -0.2**
VOY *e* pP 13 42 20.6 +0.7
MYKA Terra Mystica 73.65 315⇓ *iP* **P 13 42 08.7 -0.1**
comp=Z,9.6nm,1.1s,mb4.7
CLL Collm 73.65 320 *eP* **P 13 42 08.8 +0.1**
comp=Z,65nm,1.6s,mb5.3
CLL Collm 73.65 320⇓ *iP* **P 13 42 08.4 -0.3**
comp=Z,65nm,1.6s,mb5.3
CLL *ep*P pP 13 42 18.0 -2.5
CLL *eS* S 13 51 24.0 -12
CLL LR LR
comp=Z,600nm,19.4s,MS4.9
CLL Collm 73.65 320⇓ *iP* **P 13 42 08.4 -0.3**
CLL *e**PP pP 13 42 18.0 -2.5
CLL *e* 13 42 43.0
CLL *e*PP PP 13 45 12.0 +19
CLL *e*PPP 13 46 46.0
CLL *e*PPPP 13 47 39.0
CLL *eS* S 13 51 31.0 -5.4
CLL *eS*S SS 13 56 42.0 +22
CLL *e*SSS 13 59 44.0
CLL LmV 14 22 00.0
comp=Z,600nm,19.4s
LSZ Lusaka 73.77 249 *eP* **P 13 42 09.2 -0.8**
comp=Z,72nm,1.4s,mb5.4
LSZ Lusaka 73.77 249 *eP* **P 13 42 09.2 -0.7**
LSZ pmax pmax
comp=Z,72nm,1.4s,mb5.4
LSZ Lusaka 73.77 249 P **P 13 42 10.0 +0.1**
SNR=10
KBA Koelnbreinsper 73.81 315⇓ *iP* **P 13 42 09.3 -0.5**
comp=Z,26nm,1.5s,mb4.9,SNR=5.8
WET Wettzell 73.92 317 *eP* **P 13 42 10.7 +0.4**
comp=Z,47nm,1.4s,mb5.2
WET Wettzell 73.92 317 *eP* **P 13 42 10.7 +0.4**
WET pmax pmax
comp=Z,47nm,1.4s,mb5.2
NB2 NORSAR Subarra 73.97 330 P **P 13 42 09.6 -0.8**
comp=Z,40nm,1.0s,mb5.3,baz=86,slow=6.2
NOA NORSAR Array B 73.97 330 P **P 13 42 09.8 -0.5**
comp=Z,19nm,0.9s,mb5.0,baz=87,slow=5.8,SNR=44
NOA LR LR 14 19 25.6
comp=Z,647nm,18.0s,MS5.0,baz=90,slow=40
NOA NORSAR Array B 73.97 330 P **P 13 42 09.9 -0.5**
NOA pmax pmax
comp=Z,19nm,0.9s
NOA MLR MLR
comp=Z,647nm,18.0s
TANN Tannenbergstha 74.07 319 *eP* **P 13 42 11.5 +0.3**
comp=Z,53nm,1.5s,mb5.2
NKC Novy Kostel 74.10 318 *eP* **P 13 42 11.8 +0.5**
NKC *e* pP 13 42 22.7 -0.4
NKC MLR MLR
comp=Z,800nm,15.8s,MS5.1
NKC Novy Kostel 74.10 318 *eP* **P 13 42 11.8 +0.5**
NKC *ep*P pP 13 42 22.7 -0.4
NKC AMS AMS 14 20 50.0
comp=Z,800nm,15.8s
WERN Wernitzgruen 74.14 318 *eP* **P 13 42 12.0 +0.4**
comp=Z,38nm,1.4s,mb5.1
GUNZ Gunzen 74.16 319 *eP* **P 13 42 12.2 +0.5**
comp=Z,61nm,1.4s,mb5.3
WERD Werda 74.17 319 *eP* **P 13 42 12.1 +0.4**
comp=Z,40nm,1.3s,mb5.2
ROTZ Rotzenmuhle 74.30 318 *eP* **P 13 42 13.4 +0.9**
comp=Z,84nm,1.4s,mb5.5
ABTA Abfaltersbach 74.41 315⇓ *iP* **P 13 42 12.2 -1.0**
comp=Z,17nm,1.3s,mb4.8
NEUB Neuenburg 74.43 319 *eP* **P 13 42 13.6 +0.4**
comp=Z,66nm,1.3s,mb5.4
MOX Moxa 74.59 319 *eP* **P 13 42 14.7 +0.5**
comp=Z,45nm,1.5s,mb5.2
MOX
comp=Z,500nm,19.0s
MOX Moxa 74.59 319 *eP* **P 13 42 14.7 +0.5**
MOX pmax pmax
comp=Z,45nm,1.5s,mb5.2
MOX MLR MLR
comp=Z,500nm,19.0s,MS4.8
GRB3 Grafenberg Arr 74.60 318 *eP* **P 13 42 15.1 +0.8**
KONO Kongsberg 74.88 328 *eP* **P 13 42 15.4 -0.2**
comp=Z,67nm,1.4s,mb5.4
KONO Kongsberg 74.88 328 *eP* **P 13 42 15.4 -0.3**
KONO pmax pmax
comp=Z,67nm,1.4s,mb5.4
GRA1 Grafenberg Arr 74.94 318 *eP* **P 13 42 17.0 +0.8**
comp=Z,115nm,1.4s,mb5.6
GRA1 LR LR
comp=Z,600nm,20.2s,MS4.9
GRF Grafenberg Arr 74.94 318 *eP* **P 13 42 17.0 +0.8**
comp=Z,115nm,1.4s,mb5.6
GRF *e*L 14 21 47.5
comp=Z,594nm,20.2s
GRF Grafenberg Arr 74.94 318 *eP* **P 13 42 17.0 +0.8**
GRF pmax pmax
comp=Z,115nm,1.4s,mb5.6
GRF Grafenberg Arr 74.94 318 *eP* **P 13 42 17.0 +0.8**
GRF pmax pmax
comp=Z,115nm,1.4s,mb5.6
GRF MLR MLR
comp=Z,600nm,20.2s,MS4.9
GRFO Grafenberg 74.94 318 *eP* **P 13 42 16.7 +0.5**
comp=Z,88nm,1.6s,mb5.4
GRFO Grafenberg 74.94 318 *eP* **P 13 42 16.7 +0.5**
GRFO pmax pmax
comp=Z,88nm,1.6s,mb5.4
WTTA Wattenberg 74.95 315⇓ *iP* **P 13 42 15.7 -0.6**
comp=Z,37nm,1.2s,mb5.2,SNR=9.1
WATA Walderalm 74.98 315⇓ *iP* **P 13 42 15.5 -1.0**
comp=Z,8.9nm,0.7s,mb4.8
CLZ Clausthal 75.23 320 *eP* **P 13 42 18.5 +0.6**
comp=Z,72nm,1.3s,mb5.4
CLZ Clausthal 75.23 320 *eP* **P 13 42 18.5 +0.6**
CLZ pmax pmax
comp=Z,72nm,1.3s,mb5.4
MOTA Moosalm 75.30 316⇓ *iP* **P 13 42 17.5 -0.8**
comp=Z,13nm,0.8s,mb5.0,SNR=7.4
NRDL Niedersach Rie 75.32 321 *eP* **P 13 42 19.1 +0.7**
comp=Z,97nm,1.4s,mb5.5
MUD Monsted U'grnd 75.42 325 *iP* **P 13 42 17.5 -1.4**
MUD pmax pmax
comp=Z,26nm,1.0s,mb5.1
MUD MLR MLR
comp=Z,750nm,17.0s,MS5.1
MUD Monsted U'grnd 75.42 325 *iP* **P 13 42 17.5 -1.4**
comp=Z,26nm,1.0s,mb5.1
MUD
comp=Z,740nm,17.0s
RETA Reutte 75.51 316⇓ *iP* **P 13 42 19.1 -0.5**
comp=Z,38nm,1.2s,mb5.2,SNR=9.6
UBBA Unterbreizbach 75.59 319 *eP* **P 13 42 20.1 +0.2**
comp=Z,51nm,1.6s,mb5.2
FETA Feichten 75.59 315⇓ *iP* **P 13 42 19.7 -0.3**
comp=Z,26nm,1.2s,mb5.0,SNR=8.5
DAVA Damuels 76.13 316⇓ *iP* **P 13 42 22.8 -0.3**
comp=Z,39nm,1.4s,mb5.2
TOD Tromm 76.51 318 *eP* **P 13 42 25.1 -0.1**
TOD Tromm 76.51 318 *eP* **P 13 42 25.1 -0.1**
TUE Stuetta 76.61 315 *eP* **P 13 42 25.4 -0.5**
comp=Z,50nm,1.4s,mb5.2
TNS Taunus Mts 76.65 319 *eP* **P 13 42 26.5 +0.5**
comp=Z,64nm,1.2s,mb5.4
TNS Taunus Mts 76.65 319 *eP* **P 13 42 26.5 +0.5**
TNS pmax pmax
comp=Z,64nm,1.2s,mb5.4
IBBN Ibbenburen 76.77 321 *eP* **P 13 42 27.3 +0.7**
comp=Z,126nm,1.5s,mb5.6
BFO Black Forest 77.01 317 *eP* **P 13 42 27.8 -0.3**
comp=Z,42nm,1.6s,mb5.1
BFO Black Forest 77.01 317 *eP* **P 13 42 27.8 -0.3**
BFO pmax pmax
comp=Z,42nm,1.6s,mb5.1
BUG Bochum-Univer 77.20 320 *eP* **P 13 42 29.7 +0.6**
comp=Z,67nm,1.2s,mb5.5
LANF Langenberg 77.25 318 *eP* **P 13 42 29.7 +0.3**
LANF Langenberg 77.25 318 *eP* **P 13 42 29.7 +0.3**
FELD Feldberg im Sc 77.30 316 *eP* **P 13 42 29.5 -0.2**
PGF Pioggiola 77.48 311 *eP* **P 13 42 30.4 -0.4**
comp=Z,54nm,1.2s,mb5.1
PGF Pioggiola 77.48 311 *eP* **P 13 42 30.4 -0.4**
comp=Z,27nm,1.2s,mb5.0
PGF Pioggiola 77.48 311 *eP* **P 13 42 30.4 -0.4**
PGF pmax pmax
comp=Z,27nm,1.2s,mb5.0
RUP Ruppelstein 77.62 318 *eP* **P 13 42 31.5 +0.1**
RUP Ruppelstein 77.62 318 *eP* **P 13 42 31.5 +0.1**
CDF Champ du Feu 77.69 317 *eP* **P 13 42 31.3 -0.6**
comp=Z,58nm,1.2s,mb5.1
CDF Champ du Feu 77.69 317 *eP* **P 13 42 31.3 -0.6**
comp=Z,29nm,1.2s,mb5.1
CDF Champ du Feu 77.69 317 *eP* **P 13 42 31.3 -0.6**
CDF pmax pmax
comp=Z,29nm,1.2s,mb5.1
VSL Villasalto 77.73 308 *eP* **P 13 42 31.6 -0.7**
comp=Z,26nm,0.9s,mb5.2
ECH Echery 77.80 317 *eP* **P 13 42 33.3 +0.8**
ECH Echery 77.80 317 *eP* **P 13 42 33.3 +0.8**
MOF Molkenrain 77.88 316 *eP* **P 13 42 32.6 -0.3**
MOF Molkenrain 77.88 316 *eP* **P 13 42 32.6 -0.3**
HINF Hinteralfeld 78.07 316 *eP* **P 13 42 33.3 -0.7**
comp=Z,85nm,1.5s,mb5.1
HINF Hinteralfeld 78.07 316 *eP* **P 13 42 33.3 -0.7**
comp=Z,42nm,1.5s,mb5.2
HINF Hinteralfeld 78.07 316 *eP* **P 13 42 33.3 -0.7**
HINF pmax pmax
comp=Z,43nm,1.5s,mb5.2
MEM Membach 78.13 319 P **P 13 42 34.7 +0.4**
comp=Z,16nm,1.8s,mb4.6
LOMF Lomont 78.17 316 *eP* **P 13 42 34.2 -0.4**
LOMF Lomont 78.17 316 *eP* **P 13 42 34.2 -0.4**
WLF Walferdange 78.20 318 P **P 13 42 35.4 +0.7**
comp=Z,44nm,1.6s,mb5.1
WLF Walferdange 78.20 318 *eP* **P 13 42 35.6 +0.9**
comp=Z,77nm,1.3s,mb5.5
WLF Walferdange 78.20 318 *eP* **P 13 42 35.0 +0.3**
comp=Z,108nm,1.5s,mb5.6
WLF Walferdange 78.20 318 *eP* **P 13 42 35.0 +0.3**
WLF pmax pmax
comp=Z,108nm,1.5s,mb5.6
BEBN Eben Emael 78.30 320 P **P 13 42 35.9 +0.7**
HAU Haudompre 78.37 317 *eP* **P 13 42 35.0 -0.7**
comp=Z,128nm,1.3s,mb5.4
HAU *e*MLR MLR
comp=Z,745nm,19.5s,MS4.7
HAU Haudompre 78.37 317 *eP* **P 13 42 35.0 -0.7**
comp=Z,64nm,1.3s,mb5.4
HAU LR LR
comp=Z,740nm,19.5s,MS5.0
HAU Haudompre 78.37 317 *eP* **P 13 42 35.0 -0.7**
HAU pmax pmax
comp=Z,64nm,1.3s,mb5.4
HAU MLR MLR
comp=Z,740nm,19.5s,MS5.0
SBF Sospel 78.38 312 *eP* **P 13 42 35.2 -0.6**
comp=Z,166nm,1.3s,mb5.5
SBF Sospel 78.38 312 *eP* **P 13 42 35.2 -0.6**
comp=Z,83nm,1.3s,mb5.5
SBF Sospel 78.38 312 *eP* **P 13 42 35.2 -0.6**
SBF pmax pmax
comp=Z,83nm,1.3s,mb5.5
KEST Kesra 78.44 304 P **P 13 42 36.3 0.0**
comp=Z,13nm,1.0s,mb4.8,baz=134,slow=6.2,SNR=25
KEST LR LR 14 26 10.1
comp=Z,78nm,18.3s,MS4.1,baz=12,slow=42
DZM Mont Dzumac 78.44 117 *eP* **P 13 42 37.8 +1.3**
comp=Z,32nm,1.1s,mb5.2
DZM *eS* S 13 52 31.4 +1.3
comp=Z,162nm,25.4s
DZM *e*LR LR 14 06 57.3
comp=Z,411nm,22.4s
LPG La Plagne 78.56 314 *eP* **P 13 42 36.7 0.0**
comp=Z,44nm,0.9s,mb5.1
LPG La Plagne 78.56 314 *eP* **P 13 42 36.7 0.0**
comp=Z,22nm,0.9s,mb5.1
LPG La Plagne 78.56 314 *eP* **P 13 42 36.7 0.0**
LPG pmax pmax
comp=Z,22nm,0.9s,mb5.1
LPL La Plagne 78.57 314 *eP* **P 13 42 36.7 -0.1**
comp=Z,88nm,1.2s,mb5.3
LPL La Plagne 78.57 314 *eP* **P 13 42 36.7 -0.1**
comp=Z,44nm,1.2s,mb5.3
LPL La Plagne 78.57 314 *eP* **P 13 42 36.7 -0.1**
LPL pmax pmax
comp=Z,44nm,1.2s,mb5.3
THEF They Montfort 78.57 317 *eP* **P 13 42 36.5 -0.3**
THEF They Montfort 78.57 317 *eP* **P 13 42 36.5 -0.3**
BCLA Clavier 78.61 319 P **P 13 42 37.1 +0.2**
comp=Z,15nm,1.6s,mb4.7
MBDF Montbardon 78.69 313 *eP* **P 13 42 36.2 -1.3**
comp=Z,40nm,1.2s,mb4.9
MBDF Montbardon 78.69 313 *eP* **P 13 42 36.2 -1.3**
comp=Z,20nm,1.2s,mb4.9
MBDF Montbardon 78.69 313 *eP* **P 13 42 36.2 -1.3**
MBDF pmax pmax
comp=Z,20nm,1.2s,mb4.9
BNI Bardonecchia 78.69 314 *eP* **P 13 42 36.5 -1.0**
comp=Z,16nm,1.1s,mb4.9
BNI Bardonecchia 78.69 314 *eP* **P 13 42 36.5 -1.0**
BNI pmax pmax
comp=Z,16nm,1.1s,mb4.9
CABF La Chapelle 78.81 315 *eP* **P 13 42 37.9 -0.2**
comp=Z,87nm,1.4s,mb5.2
CABF La Chapelle 78.81 315 *eP* **P 13 42 37.9 -0.2**
comp=Z,44nm,1.4s,mb5.2
CABF La Chapelle 78.81 315 *eP* **P 13 42 37.9 -0.2**
CABF pmax pmax
comp=Z,44nm,1.4s,mb5.2
GIVF Givet 78.97 319 *eP* **P 13 42 38.7 -0.2**
comp=Z,152nm,1.6s,mb5.4
GIVF Givet 78.97 319 *eP* **P 13 42 38.7 -0.2**
comp=Z,76nm,1.5s,mb5.4
GIVF Givet 78.97 319 *eP* **P 13 42 38.7 -0.2**
GIVF pmax pmax
comp=Z,76nm,1.5s,mb5.4
FRF La Foret Royal 79.00 312 *eP* **P 13 42 38.8 -0.4**
comp=Z,92nm,0.9s,mb5.4
FRF La Foret Royal 79.00 312 *eP* **P 13 42 38.8 -0.4**
comp=Z,46nm,0.9s,mb5.4
FRF La Foret Royal 79.00 312 *eP* **P 13 42 38.8 -0.4**
FRF pmax pmax
comp=Z,46nm,0.9s,mb5.4
DOU Dourbes 79.11 319 P **P 13 42 39.6 -0.1**
comp=Z,15nm,1.5s,mb4.7
MEZF Maizieres J'vi 79.13 317 *eP* **P 13 42 39.6 -0.2**
LMR La Mourre 79.14 312 *eP* **P 13 42 39.6 -0.4**
comp=Z,225nm,1.5s,mb5.6
LMR La Mourre 79.14 312 *eP* **P 13 42 39.6 -0.4**
comp=Z,113nm,1.5s,mb5.6
LMR La Mourre 79.14 312 *eP* **P 13 42 39.6 -0.4**
LMR pmax pmax
comp=Z,113nm,1.5s,mb5.6
SFTF Sexfontaines 79.20 317 *eP* **P 13 42 39.6 -0.6**
comp=Z,99nm,1.2s,mb5.3
SFTF Sexfontaines 79.20 317 *eP* **P 13 42 39.6 -0.6**
comp=Z,99nm,1.2s,mb5.6
SNF Seneffe 79.23 319 P **P 13 42 40.3 0.0**
comp=Z,20nm,1.5s,mb4.8
ORIF Oris-en-Rattie 79.27 314 *eP* **P 13 42 39.9 -0.8**
ORIF *e*MLR MLR
comp=Z,624nm,22.5s,MS4.6
ORIF Oris-en-Rattie 79.27 314 *eP* **P 13 42 39.9 -0.8**
BAIF Baives 79.36 319 *eP* **P 13 42 41.0 -0.1**
comp=Z,104nm,1.3s,mb5.3
BAIF Baives 79.36 319 *eP* **P 13 42 41.0 -0.1**
comp=Z,52nm,1.3s,mb5.3
BAIF Baives 79.36 319 *eP* **P 13 42 41.0 -0.1**
BAIF pmax pmax
comp=Z,52nm,1.3s,mb5.3
SMRF Simiane la Rot 79.67 313 *eP* **P 13 42 42.9 0.0**
comp=Z,61nm,1.2s,mb5.1
SMRF Simiane la Rot 79.67 313 *eP* **P 13 42 42.9 0.0**
comp=Z,61nm,1.2s,mb5.4
LBTB Lobatse 79.68 240 *eP* **P 13 42 42.8 -0.4**
comp=Z,40nm,1.1s,mb5.3
LBTB LR LR
comp=Z,596nm,19.0s,MS5.0
LBTB Lobatse 79.68 240 *eP* **P 13 42 42.8 -0.4**
LBTB pmax pmax
comp=Z,40nm,1.1s,mb5.3
LBTB MLR MLR
comp=Z,596nm,19.0s,MS5.0
CMAH Djebel Manchou 79.79 305 P **P 13 42 43.8 +0.1**
VIVF Saint-Julien-l 80.13 314 *eP* **P 13 42 44.7 -0.6**
comp=Z,115nm,1.6s,mb5.3
VIVF Saint-Julien-l 80.13 314 *eP* **P 13 42 44.7 -0.6**
comp=Z,58nm,1.6s,mb5.3
VIVF Saint-Julien-l 80.13 314 *eP* **P 13 42 44.7 -0.6**
VIVF pmax pmax
comp=Z,57nm,1.6s,mb5.2
LOR Lormes 80.17 316 *eP* **P 13 42 44.8 -0.7**
comp=Z,147nm,1.5s,mb5.4
LOR *e*MLR MLR
comp=Z,443nm,19.8s,MS4.5
LOR Lormes 80.17 316 *eP* **P 13 42 44.8 -0.7**
comp=Z,73nm,1.5s,mb5.4
LOR LR LR
comp=Z,440nm,19.8s,MS4.8
LOR Lormes 80.17 316 *eP* **P 13 42 44.8 -0.7**
LOR pmax pmax
comp=Z,73nm,1.5s,mb5.4
LOR MLR MLR
comp=Z,440nm,19.8s,MS4.8
CAEH 'Ain El Ouahch 80.21 305 P **P 13 42 45.7 -0.2**
SMF Signal de Mont 80.31 316 *eP* **P 13 42 45.7 -0.6**
comp=Z,73nm,1.1s,mb5.2
SMF Signal de Mont 80.31 316 *eP* **P 13 42 45.7 -0.6**
comp=Z,36nm,1.1s,mb5.2
SMF Signal de Mont 80.31 316 *eP* **P 13 42 45.7 -0.6**
SMF pmax pmax
comp=Z,37nm,1.1s,mb5.2
DAG Danmarks Havn 80.33 348 *iP* **P 13 42 43.9 -1.9**
DAG pmax pmax
comp=Z,18nm,0.9s,mb5.0
DAG Danmarks Havn 80.33 348 *iP* **P 13 42 43.9 -1.9**
comp=Z,176nm,0.9s,mb6.0
SSF Saint Saulge 80.45 316 *eP* **P 13 42 46.5 -0.5**
comp=Z,51nm,1.1s,mb5.1
SSF Saint Saulge 80.45 316 *eP* **P 13 42 46.5 -0.5**
comp=Z,26nm,1.1s,mb5.1
SSF Saint Saulge 80.45 316 *eP* **P 13 42 46.5 -0.5**
SSF pmax pmax
comp=Z,26nm,1.1s,mb5.1
CASM Ain Smara 80.60 305 P **P 13 42 48.3 +0.2**
PLDF La Plantade 80.61 315 *eP* **P 13 42 48.0 +0.1**
PLDF La Plantade 80.61 315 *eP* **P 13 42 48.0 +0.1**
AVF Avril sur Loir 80.61 316 *eP* **P 13 42 47.2 -0.7**
comp=Z,51nm,1.1s,mb5.1
AVF Avril sur Loir 80.61 316 *eP* **P 13 42 47.2 -0.7**
comp=Z,26nm,1.1s,mb5.1
AVF Avril sur Loir 80.61 316 *eP* **P 13 42 47.2 -0.7**
AVF pmax pmax
comp=Z,26nm,1.1s,mb5.1
NIKO Nikolski 80.67 38 *eP* **P 13 42 45.4 -2.7**
comp=Z,56nm,1.3s,mb5.3
LASF Ste Croix 80.86 313 *eP* **P 13 42 49.1 -0.2**
comp=Z,168nm,1.5s,mb5.5
AGO Saint Agoulin 80.92 315 *eP* **P 13 42 49.4 -0.2**
HYF Humbligny 80.98 317 *eP* **P 13 42 49.9 +0.1**
BGF Bois d'Agland 81.00 316 *eP* **P 13 42 49.5 -0.5**
comp=Z,126nm,1.6s,mb5.3
BGF Bois d'Agland 81.00 316 *eP* **P 13 42 49.5 -0.5**
comp=Z,63nm,1.6s,mb5.3
BGF Bois d'Agland 81.00 316 *eP* **P 13 42 49.5 -0.5**
BGF pmax pmax
comp=Z,63nm,1.6s,mb5.3
DFRA Djebel Bou Aff 81.02 305 P **P 13 42 51.0 +0.7**
LBL Lubilhac 81.03 314 *eP* **P 13 42 50.8 +0.7**
LBL Lubilhac 81.03 314 *eP* **P 13 42 50.8 +0.7**
PYM Petit Puy Mans 81.08 315 *eP* **P 13 42 50.5 +0.1**
PYM Petit Puy Mans 81.08 315 *eP* **P 13 42 50.5 +0.1**
BOSA Boshof 81.35 237 P **P 13 42 51.5 -0.6**
comp=Z,28nm,1.0s,mb5.1,baz=77,slow=5.3,SNR=17
BOSA LR LR 14 15 19.4
comp=Z,320nm,19.2s,MS4.7,baz=257,slow=33
BOSA Boshof 81.35 237 P **P 13 42 51.5 -0.6**
BOSA LR LR 14 15 19.4
BOSA Boshof 81.35 237 P **P 13 42 51.5 -0.6**
BOSA pmax pmax
comp=Z,28nm,1.0s,mb5.2
ALE Alert 81.48 357 P **P 13 42 51.5 -0.4**
comp=Z,164nm,1.1s,mb5.9,SNR=6.4
TCF Toulx Ste Croi 81.49 316 *eP* **P 13 42 52.4 -0.2**
comp=Z,125nm,1.3s,mb5.4
TCF Toulx Ste Croi 81.49 316 *eP* **P 13 42 52.4 -0.2**
comp=Z,62nm,1.3s,mb5.4
TCF Toulx Ste Croi 81.49 316 *eP* **P 13 42 52.4 -0.2**
TCF pmax pmax
comp=Z,63nm,1.3s,mb5.4

CAF Calviac 81.92 314 *eP* **P 13 42 54.7 -0.1**
comp=Z,64nm,1.3s,mb5.1
CAF Calviac 81.92 314 *eP* **P 13 42 54.7 -0.1**
comp=Z,32nm,1.3s,mb5.1
CAF Calviac 81.92 314 *eP* **P 13 42 54.7 -0.1**
CAF pmax pmax
comp=Z,32nm,1.3s,mb5.1
MIR Mirnyy 81.99 181 ⇑ *iP* **P 13 42 53.8 -0.8**
MIR pmax pmax
comp=Z,48nm,1.4s,mb5.2
MTLF Montolieu 82.19 313 *eP* **P 13 42 55.9 -0.4**
comp=Z,77nm,1.3s,mb5.2
MTLF Montolieu 82.19 313 *eP* **P 13 42 55.9 -0.4**
comp=Z,39nm,1.3s,mb5.2
MTLF Montolieu 82.19 313 *eP* **P 13 42 55.9 -0.4**
MTLF pmax pmax
comp=Z,39nm,1.3s,mb5.2
RJF Les Rejaudoux 82.20 315 *eP* **P 13 42 56.4 +0.1**
comp=Z,145nm,1.4s,mb5.4
RJF *e*MLR MLR
comp=Z,357nm,19.5s,MS4.4
RJF Les Rejaudoux 82.20 315 *eP* **P 13 42 56.4 +0.1**
comp=Z,72nm,1.4s,mb5.4
RJF LR LR
comp=Z,360nm,19.5s,MS4.7
RJF Les Rejaudoux 82.20 315 *eP* **P 13 42 56.4 +0.1**
RJF pmax pmax
comp=Z,73nm,1.4s,mb5.4
RJF MLR MLR
comp=Z,360nm,19.5s,MS4.7
CASY Casey 82.40 174 *eP* **P 13 42 55.6 -1.1**
comp=Z,15nm,1.2s,mb4.8
CFON Fontmartina 82.42 311 P **P 13 42 57.3 -0.3**
comp=Z,73nm,1.5s,mb5.4
LDF La Druitiere 82.46 318 *eP* **P 13 42 57.0 -0.6**
LDF La Druitiere 82.46 318 *eP* **P 13 42 57.0 -0.6**
ESK Eskdalemuir 82.47 325 *eP* **P 13 42 57.2 -0.3**
comp=Z,29nm,1.0s,mb5.2
ESK Eskdalemuir 82.47 325 *iP* **P 13 42 58.6 +1.1**
CLLI Llivia 82.58 312 P **P 13 42 58.5 +0.2**
FLN La Foliniere 82.64 318 *eP* **P 13 42 58.0 -0.6**
comp=Z,60nm,1.1s,mb5.2
FLN *e*MLR MLR
comp=Z,492nm,21.2s,MS4.5
FLN La Foliniere 82.64 318 *eP* **P 13 42 58.0 -0.6**
comp=Z,30nm,1.1s,mb5.2
FLN LR LR
comp=Z,490nm,21.3s,MS4.8
FLN La Foliniere 82.64 318 *eP* **P 13 42 58.0 -0.6**
FLN pmax pmax
comp=Z,30nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,490nm,21.3s,MS4.8
LFF La Frestale 82.82 315 *eP* **P 13 42 59.6 0.0**
comp=Z,87nm,1.3s,mb5.3
LFF La Frestale 82.82 315 *eP* **P 13 42 59.6 0.0**
comp=Z,44nm,1.3s,mb5.3
LFF La Frestale 82.82 315 *eP* **P 13 42 59.6 0.0**
LFF pmax pmax
comp=Z,43nm,1.3s,mb5.3
GRR Gorron 82.98 318 *eP* **P 13 42 59.9 -0.4**
comp=Z,187nm,1.7s,mb5.5
GRR Gorron 82.98 318 *eP* **P 13 42 59.9 -0.4**
comp=Z,93nm,1.7s,mb5.5
GRR Gorron 82.98 318 *eP* **P 13 42 59.9 -0.4**
GRR pmax pmax
comp=Z,93nm,1.7s,mb5.5
MFF Saint Martin d 82.99 316 *eP* **P 13 42 59.9 -0.5**
comp=Z,112nm,1.3s,mb5.5
MFF Saint Martin d 82.99 316 *eP* **P 13 42 59.9 -0.5**
comp=Z,56nm,1.3s,mb5.4
MFF Saint Martin d 82.99 316 *eP* **P 13 42 59.9 -0.5**
MFF pmax pmax
comp=Z,56nm,1.3s,mb5.4
EMIR Miracle 83.04 311 P **P 13 43 00.7 -0.1**
comp=Z,136nm,1.4s,mb5.8
CSOR Sort 83.20 312 P **P 13 43 01.4 -0.2**
comp=Z,95nm,1.5s,mb5.6
EMHD Djebel Mahouad 83.40 306 P **P 13 43 04.0 +1.3**
EPOB Poblet 83.51 311 P **P 13 43 01.8 -1.4**
comp=Z,64nm,1.2s,mb5.6
EPF Esparros 83.60 313 *eP* **P 13 43 04.0 +0.4**
comp=Z,25nm,1.2s,mb4.9
EPF Esparros 83.60 313 *eP* **P 13 43 04.0 +0.4**
comp=Z,12nm,1.2s,mb4.9
EPF Esparros 83.60 313 *eP* **P 13 43 04.0 +0.4**
EPF pmax pmax
comp=Z,12nm,1.2s,mb4.9
EBIE Bielsa 83.83 312 P **P 13 43 04.1 -0.7**
comp=Z,27nm,1.2s,mb5.2
TTA Tatalina 84.09 26 *eP* **P 13 43 05.6 -0.1**
TTA Tatalina 84.09 26 *eP* **P 13 43 05.6 -0.1**
SGMF Saint Gilles 84.11 318 *eP* **P 13 43 05.8 -0.3**
comp=Z,116nm,1.5s,mb5.5
SGMF Saint Gilles 84.11 318 *eP* **P 13 43 05.8 -0.3**
comp=Z,58nm,1.5s,mb5.5
SGMF Saint Gilles 84.11 318 *eP* **P 13 43 05.8 -0.3**
SGMF pmax pmax
comp=Z,58nm,1.5s,mb5.5
ETSF Etsaut 84.27 313 *eP* **P 13 43 07.0 -0.1**
comp=Z,48nm,1.2s,mb5.2
ETSF Etsaut 84.27 313 *eP* **P 13 43 07.0 -0.1**
comp=Z,24nm,1.2s,mb5.2
ETSF Etsaut 84.27 313 *eP* **P 13 43 07.0 -0.1**
ETSF pmax pmax
comp=Z,24nm,1.2s,mb5.2
COLD Coldfoot 84.48 21 *eP* **P 13 43 07.8 +0.2**
comp=Z,64nm,1.9s,mb5.4
ROSF Rostrenen 84.54 319 *eP* **P 13 43 08.1 -0.2**
comp=Z,65nm,1.1s,mb5.3
ROSF Rostrenen 84.54 319 *eP* **P 13 43 08.1 -0.2**
comp=Z,32nm,1.1s,mb5.4
ROSF Rostrenen 84.54 319 *eP* **P 13 43 08.1 -0.2**
ROSF pmax pmax
comp=Z,32nm,1.1s,mb5.4
TAM Tamanrasset 84.58 292 *eP* **P 13 43 09.4 +0.4**
comp=Z,37nm,1.4s,mb5.3
TAM Tamanrasset 84.58 292 *eP* **P 13 43 09.5 +0.5**
TAM pmax pmax
comp=Z,37nm,1.4s,mb5.3
QUIF Quistinic 84.60 318 *eP* **P 13 43 08.0 -0.6**
comp=Z,58nm,1.3s,mb5.3
QUIF Quistinic 84.60 318 *eP* **P 13 43 08.0 -0.6**
comp=Z,29nm,1.3s,mb5.2
QUIF Quistinic 84.60 318 *eP* **P 13 43 08.0 -0.6**
QUIF pmax pmax
comp=Z,29nm,1.3s,mb5.2
SJPF Ste Jean 84.68 313 *eP* **P 13 43 09.2 +0.1**
comp=Z,130nm,1.4s,mb5.6
SJPF Ste Jean 84.68 313 *eP* **P 13 43 09.2 +0.1**
comp=Z,65nm,1.4s,mb5.6
SJPF Ste Jean 84.68 313 *eP* **P 13 43 09.2 +0.1**
SJPF pmax pmax
comp=Z,65nm,1.4s,mb5.6
EANR 'Ain N'Sour 84.91 306 P **P 13 43 11.0 +0.5**
SVW2 Sparrevohn 85.00 28 *eP* **P 13 43 10.4 +0.1**
comp=Z,51nm,2.0s,mb5.3
CHGN Chignik 85.46 33 *eP* **P 13 43 11.1 -1.7**
ECHE Chera 85.49 310 P **P 13 43 13.9 +0.6**
comp=Z,20nm,0.9s,mb5.2
ECHE Chera 85.49 310 P **P 13 43 13.9 +0.7**
ECHE pmax pmax
comp=Z,20nm,0.9s,mb5.2
BPAW Bear Paw Mtn. 85.64 24 *eP* **P 13 43 12.9 -0.6**
comp=Z,106nm,1.5s,mb5.8
PPLA Purkeypile 85.70 25 *eP* **P 13 43 14.2 +0.4**
comp=Z,50nm,1.6s,mb5.5
ETOB Tobarra 86.19 309 P **P 13 43 16.8 0.0**
comp=Z,35nm,1.2s,mb5.5
TRF Thorofare Moun 86.22 24 *eP* **P 13 43 16.0 -0.3**
comp=Z,57nm,1.7s,mb5.5
COLA College 86.46 23 P **P 13 43 17.2 -0.3**
comp=Z,15nm,1.0s,mb5.2
COLA College 86.46 23 P **P 13 43 17.2 -0.3**
COLA pmax pmax
comp=Z,15nm,1.0s,mb5.2
MAW Mawson 86.49 192 P **P 13 43 17.0 -0.4**
comp=Z,17nm,1.1s,mb5.2,baz=23,slow=9.5,SNR=16
MAW Mawson 86.49 192 P **P 13 43 17.0 -0.4**
MAW pmax pmax
comp=Z,17nm,1.1s
MCK McKinley 86.61 24 *eP* **P 13 43 18.4 +0.1**
comp=Z,66nm,1.1s,mb5.8
MCK McKinley 86.61 24 *eP* **P 13 43 18.4 +0.1**
MCK pmax pmax
comp=Z,66nm,1.1s,mb5.8
ILAR Eielson Array 86.87 22 P **P 13 43 18.1 -1.4**
comp=Z,11nm,0.8s,mb5.2,baz=299,slow=4.4,SNR=124
ILAR PP PP 13 46 39.5 -2.5
comp=Z,1.1nm,1.0s,baz=282,slow=5.8,SNR=4.2
ILAR PKKP PKKPbc 14 01 10.1 -5.0
comp=Z,0.5nm,1.0s,baz=194,slow=1.9,SNR=19
ILAR LR LR 14 26 51.6
comp=Z,690nm,20.4s,MS5.0,baz=133,slow=39
ILAR Eielson Array 86.87 22 P **P 13 43 18.2 -1.3**
ILAR 13 46 39.6
ILAR pmax pmax
comp=Z,11nm,0.8s
ILAR pmax pmax
comp=Z,1.0nm,1.0s
EVIA Vianos 86.91 309 P **P 13 43 20.7 +0.4**
comp=Z,32nm,1.1s,mb5.5
EVIA Vianos 86.91 309 P **P 13 43 20.7 +0.4**
EVIA pmax pmax
comp=Z,32nm,1.1s,mb5.5
SUMG Summit 87.02 348 *eP* **P 13 43 20.3 +0.2**
comp=Z,40nm,1.3s,mb5.5
SUMG Summit 87.02 348 *iP* **P 13 43 18.1 -2.0**
comp=Z,13nm,0.8s,mb5.2
EHUE Huescar 87.22 308 P **P 13 43 21.4 -0.4**
comp=Z,53nm,1.3s,mb5.6
EHUE Huescar 87.22 308 P **P 13 43 21.4 -0.4**
EHUE pmax pmax
comp=Z,53nm,1.3s,mb5.6
GUD Guadarrama 87.50 311 P **P 13 43 23.2 +0.1**
comp=Z,46nm,1.1s,mb5.6
GUD Guadarrama 87.50 311 P **P 13 43 23.2 +0.1**
GUD pmax pmax
comp=Z,46nm,1.1s,mb5.6
RC01 Rabbit Creek A 87.56 26 *eP* **P 13 43 22.4 -0.5**
comp=Z,16nm,0.9s,mb5.2
PMR Palmer 87.57 26 *eP* **P 13 43 22.2 -0.7**
comp=Z,85nm,1.7s,mb5.7
PMR Palmer 87.57 26 *eP* **P 13 43 22.3 -0.7**
PMR pmax pmax
comp=Z,85nm,1.7s,mb5.7
EQES Quesada 87.59 308 P **P 13 43 23.2 -0.4**
comp=Z,55nm,2.4s,mb5.4
ESDC Sonseca Array 87.67 310 P **P 13 43 23.6 -0.3**
comp=Z,6.4nm,0.8s,mb4.9,baz=56,slow=4.5,SNR=16
ESDC LR LR 14 25 38.4
comp=Z,189nm,21.1s,MS4.5,baz=25,slow=38
ESDC Sonseca Array 87.67 310 P **P 13 43 23.3 -0.6**
comp=Z,13nm,0.9s,mb5.2
OHAK Old Harbor 87.69 31 *eP* **P 13 43 23.2 -0.4**
comp=Z,8.8nm,0.6s,mb5.2
KDAK Kodiak Island 87.78 30 *ceP* **P 13 43 23.8 -0.3**
SML Sawmill 87.80 25 *eP* **P 13 43 24.2 +0.2**
comp=Z,14nm,1.0s,mb5.2
SML Sawmill 87.80 25 *eP* **P 13 43 24.2 +0.1**
SML pmax pmax
comp=Z,14nm,1.0s,mb5.2
PAB San Pablo 87.99 310 *eP* **P 13 43 25.4 0.0**
comp=Z,30nm,1.6s,mb5.3
PAB San Pablo 87.99 310 *eP* **P 13 43 25.5 0.0**
PAB pmax pmax
comp=Z,30nm,1.6s,mb5.3
EBAN Banos Encina 88.01 309 P **P 13 43 25.5 -0.1**
comp=Z,13nm,0.9s,mb5.2
EBAN Banos Encina 88.01 309 P **P 13 43 25.5 -0.1**
EBAN pmax pmax
comp=Z,13nm,0.9s,mb5.2
PAX Paxson 88.35 24 *eP* **P 13 43 26.9 +0.3**
comp=Z,8.9nm,0.9s,mb5.0
PAX Paxson 88.35 24 *eP* **P 13 43 26.9 +0.3**
PAX pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
EADA Adamuz 88.60 309 P **P 13 43 28.2 -0.2**
comp=Z,53nm,1.4s,mb5.7
EGAK Eagle 88.92 21 P **P 13 43 27.6 -1.6**
comp=Z,48nm,2.0s,mb5.5
PBRG Braganca 88.97 313 *eP* **P 13 43 30.8 +0.8**
MENT Mentasta 89.04 23 *eP* **P 13 43 30.6 +0.7**
INK Inuvik 89.04 16 *eP* **P 13 43 29.4 -0.3**
comp=Z,40nm,1.4s,mb5.5
INK Inuvik 89.04 16 *eP* **P 13 43 29.5 -0.3**
INK pmax pmax
comp=Z,40nm,1.4s
EPLA Plasencia 89.08 311 P **P 13 43 30.0 -0.7**
comp=Z,79nm,1.6s,mb5.8
EPLA Plasencia 89.08 311 P **P 13 43 30.0 -0.6**
EPLA pmax pmax
comp=Z,79nm,1.6s,mb5.8
ECAB El Cabril 89.26 309 P **P 13 43 31.2 -0.3**
comp=Z,60nm,1.4s,mb5.7
MVO Moncorvo 89.39 313 *eP* **P 13 43 32.8 +0.8**
comp=Z,49nm,1.5s,mb5.6
MVO *e*SKS 13 54 30.8
MVO Moncorvo 89.39 313 P **P 13 43 31.8 -0.2**
EJIF Jimena Fronter 89.83 308 P **P 13 43 33.9 -0.3**
comp=Z,73nm,1.2s,mb5.9
EJIF Jimena Fronter 89.83 308 P **P 13 43 33.9 -0.3**
EJIF pmax pmax
comp=Z,73nm,1.2s,mb5.9
PCAB Cabril 89.90 313 *eP* **P 13 43 35.5 +1.1**
comp=Z,58nm,1.4s,mb5.7
DAWY Dawson 89.96 21 *eP* **P 13 43 34.4 +0.2**
MTE Manteigas 90.02 312 *eP* **P 13 43 36.3 +1.3**
comp=Z,73nm,1.3s,mb5.8
MTE *e*SKS 13 54 25.6
PVIS Viseu 90.16 312 *eP* **P 13 43 36.7 +1.1**
comp=Z,41nm,1.6s,mb5.5
PCBR Castelo Branco 90.17 312 *eP* **P 13 43 36.2 +0.5**
comp=Z,71nm,1.5s,mb5.8
EBAD Badajoz 90.21 310 P **P 13 43 35.3 -0.6**
comp=Z,60nm,1.4s,mb5.7
PMRV Marv??o 90.25 311 *eP* **P 13 43 36.3 +0.2**
comp=Z,39nm,1.2s,mb5.6
PMRV *e*SKS 13 54 20.0
EMIN Mina Concepcio 90.30 309 P **P 13 43 35.5 -0.9**
comp=Z,29nm,1.1s,mb5.5
PBAR Barrancos 90.43 310 *eP* **P 13 43 37.6 +0.7**
comp=Z,87nm,1.5s,mb5.9
PESTR Estremoz 90.59 311 *eP* **P 13 43 38.1 +0.4**
comp=Z,24nm,1.6s,mb5.3
PESTR *e*SKS 13 54 21.9
TORD Torodi Ar. Bea 90.65 284 P **P 13 43 37.8 -0.6**
comp=Z,6.7nm,1.1s,mb4.9,baz=68,slow=4.6,SNR=7.2
TORD PP PP 13 47 09.2 -4.7
comp=Z,4.8nm,1.0s,baz=63,slow=4.3,SNR=4.5
TORD LR LR 14 27 25.7
comp=Z,394nm,20.9s,MS4.8,baz=65,slow=38
PTOM Tomar 90.92 312 *eP* **P 13 43 40.4 +1.2**
comp=Z,86nm,1.6s,mb5.8
EGRO El Granado 90.98 309 P **P 13 43 39.3 -0.2**
comp=Z,68nm,1.3s,mb5.8
EVO Evora 91.02 310 *eP* **P 13 43 39.9 +0.2**
comp=Z,56nm,1.2s,mb5.5
EVO *e*MLR MLR
comp=Z,294nm,20.2s,MS4.4
EVO Evora 91.02 310 *eP* **P 13 43 40.4 +0.7**
comp=Z,39nm,1.7s,mb5.5
PBEJ Beja 91.09 310 *eP* **P 13 43 40.8 +0.8**
comp=Z,50nm,1.3s,mb5.7
PVAQ Vaqueiros 91.20 309 *eP* **P 13 43 40.9 +0.3**
comp=Z,77nm,1.4s,mb5.8
PVAQ *e*SKS 13 54 26.2
PCVE Castro Verde 91.36 310 *eP* **P 13 43 41.6 +0.3**
comp=Z,50nm,1.5s,mb5.6
PCVE *e*SKS 13 54 19.8
PBDV Barranco-do-Ve 91.42 309 *eP* **P 13 43 41.7 +0.1**
comp=Z,84nm,1.7s,mb5.8
PBDV *e*SKS 13 54 25.5
PTEO Sao Teotonio 91.90 310 *eP* **P 13 43 44.5 +0.7**
comp=Z,66nm,1.7s,mb5.7
SYO Syowa Base 93.35 198‖ *eP* **P 13 43 47.8 -1.8**
SYO Syowa Base 93.35 198‖ *e*PcP PcP 13 43 50.6 +0.5
YKA Yellowknife Ar 98.47 14 P **P 13 44 12.7 -0.5**
comp=Z,1.7nm,0.9s,mb4.6,baz=328,slow=8.4,SNR=3.6
YKA LR LR 14 35 19.4
comp=Z,35nm,20.0s,MS3.9,baz=190,slow=39
YKA Yellowknife Ar 98.47 14 P **P 13 44 12.7 -0.5**
YKA pmax pmax
comp=Z,2.0nm,0.9s
DBIC Dimbokro 98.67 279 LR LR 14 32 02.8
comp=Z,200nm,21.7s,MS4.6,baz=39,slow=37
REDW Red Top Meadow 116.29 22 *e*PKPdf PKPdf 13 49 19.1 +0.3
PDAR Pinedale Array 117.27 21 PKP PKPdf 13 49 19.9 -0.7
comp=Z,1.6nm,0.7s,baz=210,slow=0.7,SNR=14
NVAR Mina Array Bea 117.29 30 PKP PKPdf 13 49 21.1 +0.3
comp=Z,1.3nm,0.7s,baz=336,slow=2.0,SNR=9.4
NVAR PKKPbc PKKPbc 13 59 44.6 -0.8
comp=Z,0.3nm,0.7s,baz=146,slow=6.6,SNR=3.5
PPT Papeete 117.33 102 *e*LR LR 14 25 05.1
comp=Z,149nm,20.8s
TBI Tubuai 118.17 108 *e*LR LR 14 25 28.5
comp=Z,258nm,23.5s
ECSD EROS Data Cent 119.77 11 *e*PKPdf PKPdf 13 49 25.0 -0.4
MSU Marysvale 119.96 25 *e*PKPdf PKPdf 13 49 27.3 +1.3
MSU Marysvale 119.96 25 *e*PKIKP PKPdf 13 49 27.3 +1.4
SDCO Great Sand Dun 123.14 20 *e*PKPdf PKPdf 13 49 32.1 0.0
ACSO Alum Creek Sta 124.40 359 *e*PKPdf PKPdf 13 49 33.9 -0.6
ANMO Albuquerque 125.31 23 *e*PKPdf PKPdf 13 49 37.1 +0.8
ANMO Albuquerque 125.31 23 *e*PKIKP PKPdf 13 49 37.1 +0.8
LAZ Ladron 125.54 24 *e*PKPdf PKPdf 13 49 37.2 +0.4
WVT Waverly 128.37 4 *e*PKPdf PKPdf 13 49 41.4 -0.7
WVT Waverly 128.37 4 *e*PKIKP PKPdf 13 49 41.4 -0.7
GDL2 Guadalupe Moun 128.54 22 *e*PKPdf PKPdf 13 49 42.5 0.0
MIAR Mount Ida 129.24 10 *e*PKPdf PKPdf 13 49 43.2 -0.6
MIAR Mount Ida 129.24 10 *e*PKIKP PKPdf 13 49 43.2 -0.6
TXAR Lajitas Array 131.38 23 PKP PKPdf 13 49 48.4 +0.4
comp=Z,1.1nm,0.6s,baz=264,slow=0.9,SNR=14
TXAR PP PP 13 51 59.0 -6.3
comp=Z,1.5nm,1.0s,baz=356,slow=5.4,SNR=5.6
TXAR Lajitas Array 131.38 23 PKIKP PKPdf 13 49 48.4 +0.4
JCT Junction City 131.65 18 *e*PKPdf PKPdf 13 49 48.5 0.0
JCT Junction City 131.65 18 *e*PKIKP PKPdf 13 49 48.5 0.0
SDDR Presa de Saban 143.41 340 *e*PKPpre PKPpre 13 50 07.3
BDFB Brasilia 145.46 265 PKPbc PKPbc 13 50 13.8 -0.3
comp=Z,90nm,0.9s,baz=109,slow=3.7,SNR=64
BDFB Brasilia 145.46 265 PKIKP PKPdf 13 50 13.8 -0.2
BDFB pmax pmax
comp=Z,90nm,0.9s
MTDJ Mount Denham 145.76 349 *e*PKPdf PKPdf 13 50 14.9 +0.4
TGUH Tegucigalpa,Un 150.30 7 *e*PKPbc PKPbc 13 50 27.9 +0.7
TRQA Tornquist 150.47 217 *e*PKPbc PKPbc 13 50 26.3 -0.6
SDV Santo Domingo 152.30 331 *e*PKPdf PKPdf 13 50 24.8 -0.4
SDV *e*PKPbc PKPbc 13 50 31.5 -0.4
PLCA Paso Flores 152.44 202 PKP PKPdf 13 50 24.4 -0.2
comp=Z,3.6nm,1.0s,baz=313,slow=6.8,SNR=4.0
PLCA PKPbc PKPbc 13 50 31.2 -0.3
comp=Z,19nm,1.1s,baz=154,slow=4.2,SNR=19
PLCA PKPab PKPab 13 50 40.7 -0.9
comp=Z,6.3nm,0.9s,baz=108,slow=3.6,SNR=5.9
PLCA Paso Flores 152.44 202 PKPdf PKPdf 13 50 24.5 0.0
PLCA *e*PKPbc PKPbc 13 50 31.3 -0.1
PLCA LR LR
comp=Z,335nm,20.0s,MS5.2
PLCA Paso Flores 152.44 202 PKIKP PKPdf 13 50 24.4 -0.1
PLCA 13 50 31.2
PLCA 13 50 40.7
PLCA pmax pmax
comp=Z,4.0nm,1.0s
PLCA pmax pmax
comp=Z,6.0nm,0.9s
CPUP Villa Florida 153.06 242 PKP PKPdf 13 50 25.1 -0.7
comp=Z,3.7nm,1.0s,baz=30,slow=4.2,SNR=4.2
CPUP PKPbc PKPbc 13 50 31.9 -1.3
comp=Z,12nm,0.8s,baz=88,slow=3.1,SNR=21
CPUP PKPab PKPab 13 50 43.5 -1.3
comp=Z,5.1nm,0.7s,baz=64,slow=4.9,SNR=6.5
CPUP Villa Florida 153.06 242 PKIKP PKPdf 13 50 25.2 -0.7
CPUP 13 50 31.9
CPUP 13 50 43.5
CPUP pmax pmax
comp=Z,4.0nm,1.0s
CPUP pmax pmax
comp=Z,5.0nm,0.7s
ROSC El Rosal 157.53 334 PKP PKPdf 13 50 33.4 +1.1
comp=Z,12nm,0.5s,baz=98,slow=20,SNR=12
ROSC PKPab PKPab 13 51 04.3 +0.3
comp=Z,13nm,0.3s,baz=112,slow=12,SNR=8.4
LPAZ La Paz 164.81 265 PKP PKPdf 13 50 40.1 +0.2
comp=Z,7.1nm,1.2s,baz=90,slow=1.0,SNR=14
LPAZ PKPab PKPab 13 51 34.9 -1.1
comp=Z,7.0nm,1.1s,baz=115,slow=2.7,SNR=9.4
LPAZ La Paz 164.81 265 *e*PKPdf PKPdf 13 50 40.1 +0.2
LPAZ LR LR
comp=Z,312nm,21.0s
LPAZ La Paz 164.81 265 PKIKP PKPdf 13 50 40.1 +0.2
LPAZ 13 51 34.9
LPAZ pmax pmax
comp=Z,7.0nm,1.2s
LPAZ pmax pmax
comp=Z,7.0nm,1.1s

ISCJB ***22*** *13:38:19.3±0.8, 13°.88N±0°.07×145°.2E±0°.1, h101km±6km, mb4.0/17, Error ellipse: s-maj=20.5km s-min=12.1km az=7.0*
IDC ***22*** *13:38:19.2±0.8, 13°.93N×145°.30E, h86km±6km, mb3.7/15, mb1 3.9/15, mb1mx3.8/25, mbtmp3.7/15, MS4.0/1, Ms1 4.0/1, ms1mx3.2/25, Error ellipse: s-maj=23.1km s-min=12.4km az=97.0*
NEIC ***22*** *13:38:20.2±0.9, 13°.90N×145°.21E, h97km±8km, mb4.6/2, Error ellipse: s-maj=16.8km s-min=9.5km az=99.0*
ISC 22 13:38:20.2±0.8, 13°.89N±0°.07×145°.2E±0°.1, h94km±7km, n34, σ0°79/30, mb4.0/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**		**0.47 230**	P	**Pn**	**13 38 35.1**	**0.0**
1μm,0.3s,baz=99,slow=1.9,SNR=954							
GUMO				S	**Sn**	**13 38 46.6**	**+0.3**
1μm,0.3s,baz=197,slow=19,SNR=62							
GUMO	**Guam**		**0.47 230**	*e*P	**Pn**	**13 38 34.9**	**-0.3**
GUMO				*e*S	**Sn**	**13 38 45.8**	**-0.4**
JNU	**Nakatsue**		**23.18 328**	*e*P	**P**	**13 43 19.7**	**+1.0**
MJAR	**Matsushiro Arr**		**23.42 346**	P	**P**	**13 43 20.3**	**-0.5**
1.2nm,0.4s,mb3.5,baz=123,slow=13,SNR=5.2							
KSRS	**Korea Array**		**28.08 330**	P	**P**	**13 44 04.2**	**+1.3**
0.6nm,0.4s,mb3.5,baz=149,slow=8.8,SNR=5.1							
CTA	**Charters Tower**		**33.78 178**	LR	LR	13 56 53.6	
comp=Z,225nm,20.1s,baz=201,slow=33							
WB2	**Warramunga Arr**		**35.28 198**	*e*P	**P**	**13 45 07.0**	**+0.9**
WRA	**Warramunga Arr**		**35.29 198**	P	**P**	**13 45 06.0**	**-0.2**
0.6nm,0.6s,mb3.6,baz=22,slow=11,SNR=18							
WRA				PcP	PcP	13 47 35.9	+1.0
0.7nm,0.6s,baz=12,slow=3.3,SNR=10							
WRA	**Warramunga Arr**		**35.29 198**	P	**P**	**13 45 06.0**	**-0.2**
WRA				PcP	PcP	13 47 35.9	+1.0
FITZ	**Fitzroy Crossi**		**37.20 212**	P	**P**	**13 45 22.8**	**+0.3**
1.8nm,0.6s,mb4.2,baz=36,slow=11,SNR=15							
ASAR	**Alice Springs**		**38.94 197**	P	**P**	**13 45 37.2**	**+0.2**
0.5nm,0.7s,mb3.5,baz=19,slow=7.1,SNR=9.7							
ASAR				PcP	PcP	13 47 46.2	+0.2
0.8nm,1.0s,baz=28,slow=3.6,SNR=4.7							
STKA	**Stephens Creek**		**45.64 184**	P	**P**	**13 46 30.9**	**-0.4**
6.9nm,1.1s,mb4.3,baz=15,slow=10,SNR=4.2							
SONM	**Songino Array**		**46.69 325**	P	**P**	**13 46 39.8**	**+0.4**
0.3nm,0.4s,mb3.4,baz=120,slow=5.7,SNR=2.5							
MK31	**Makanchi Array**		**61.52 316**	*e*P	**P**	**13 48 27.8**	**+0.6**
MKAR	**Makanchi Array**		**61.52 316**	P	**P**	**13 48 27.2**	**-0.1**
1.0nm,0.4s,mb4.2,baz=90,slow=9.1,SNR=21							
KDAK	**Kodiak Island**		**63.63 32**	P	**P**	**13 48 41.0**	**-0.1**
3.0nm,0.4s,mb4.5,baz=297,slow=4.5,SNR=9.7							
HYB	**Hyderabad**		**64.03 283**	*i*P	**P**	**13 48 43.0**	**-1.4**
PPLA	**Purkeypile**		**65.36 27**	*e*P	**P**	**13 48 52.2**	**0.0**
COLD	**Coldfoot**		**67.53 22**	*e*P	**P**	**13 49 06.7**	**+0.7**
ILAR	**Eielson Array**		**68.14 25**	P	**P**	**13 49 08.2**	**-1.7**
1.1nm,0.4s,mb4.0,baz=250,slow=6.1,SNR=32							
BVAR	**Borovoye Array**		**69.91 322**	P	**P**	**13 49 20.8**	**-0.3**
0.8nm,0.4s,mb4.0,baz=103,slow=8.4,SNR=8.4							
EGAK	**Eagle**		**70.55 26**	*e*P	**P**	**13 49 24.6**	**-0.1**
YKA	**Yellowknife Ar**		**82.43 27**	P	**P**	**13 50 31.0**	**-0.8**
0.8nm,0.6s,mb3.8,baz=286,slow=5.0,SNR=3.1							
BSMT	**Bassoo Peak**		**86.39 42**	*e*P	**P**	**13 50 53.1**	**+1.0**
24nm,1.4s,mb4.9							
NVAR	**Mina Array Bea**		**86.45 51**	P	**P**	**13 50 53.5**	**+0.8**
0.6nm,0.5s,mb3.8,baz=269,slow=5.3,SNR=4.5							
NVAR	**Mina Array Bea**		**86.45 51**	P	**P**	**13 50 53.5**	**+0.8**
HLID	**Hailey**		**87.88 46**	*e*P	**P**	**13 51 00.1**	**+0.7**
2.5nm,1.1s,mb4.2							
FINES	**FINESS Array B**		**91.04 335**	P	**P**	**13 51 11.8**	**-2.0**
2.3nm,0.9s,mb4.3,baz=42,slow=6.4,SNR=3.5							
PDAR	**Pinedale Array**		**91.50 45**	P	**P**	**13 51 15.9**	**-0.4**
0.3nm,0.5s,mb3.8,baz=241,slow=3.7,SNR=2.2							
KIC	**Kosan Boka**		**144.04 302**	*e*PKIKP	PKPdf	13 57 44.0	-1.9
19nm,1.2s							
TIC	**Toumodi**		**144.11 303**	*e*PKIKP	PKPdf	13 57 43.6	-2.4
25nm,1.2s							
LIC	**Lamto**		**144.36 302**	*e*PKIKP	PKPdf	13 57 44.4	-2.0
39nm,1.7s							
LPAZ	**La Paz**		**147.71 99**	PKPbc	PKPbc	13 57 56.0	+1.1
1.7nm,0.6s,baz=354,slow=1.2,SNR=7.6							
LPAZ	**La Paz**		**147.71 99**	*e*PKPbc	PKPbc	13 57 56.5	+1.6

FUNV 22 13:59:53.3, 12°30N×68°64W, h3km, MW2.9, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACV	**Jacura**	**1.22 189**		*eP*	Pg	14 00 15.9	-0.8
JACV				*eS*	Sg	14 00 33.0	+0.5
MONV	**Montecano**	**1.35 255**		*eP*	Pn	14 00 17.2	-1.8
MONV				*eS*	Sg	14 00 36.5	-0.1
TURV	**Turiamo**	**2.00 157**		*eP*	Pn	14 00 27.1	-0.8
TURV				*eS*	Sn	14 00 52.3	-1.2
SIQV	**Siquisique**	**2.00 215**		*eP*	Pn	14 00 27.6	-0.4
SIQV				*eS*	Sn	14 00 52.7	-0.8
IMOV	**Isla Los Monje**	**2.21 272**		*eP*	Pn	14 00 30.8	-0.1
CURV	**Curarigua**	**2.62 210**		*eP*	Pn	14 00 36.4	-0.1
CURV				*eS*	Sn	14 01 07.1	-1.7
SANV	**Sanarito**	**2.92 198**		*eP*	Pn	14 00 39.1	-1.5
BIRV	**Birongo**	**2.95 128**		*eP*	Pn	14 00 40.0	-1.0
BIRV				*eS*	Sn	14 01 14.4	-2.5
BAUV	**El Baul**	**3.39 170**		*eP*	Pn	14 00 46.4	-0.7
CUPV	**Cœpira**	**3.58 128**		*eP*	Pn	14 00 49.0	-0.6

MAN 22 14:12:37, 7°14N×126°17E, h32km, mb4.4, ML3.3, MS3.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.21 155**		*eP*	Pb	14 12 45.2	+1.6
MATI				*eS*	Sb	14 12 51.3	+3.2
DMPH	**Davao City--Mi**	**0.66 265**		*eP*	Pn	14 12 50.9	+0.9
DMPH				*i S*	Sb	14 13 00.9	+2.0
BUKP	**Musuan**	**1.32 304**		*eP*	Pn	14 13 00.6	+1.4
BUKP				*eS*	Sn	14 13 15.7	0.0

IDC 22 14:21:52.6±2.1, 5°47S×150°60E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.7/16, mbtmp3.7/5, MS3.4/1, Ms1 3.4/1, ms1mx2.5/26, Error ellipse: s-maj=71.9km s-min=24.4km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.13 196**		LR	LR	14 30 25.1	
	comp=Z,124nm,18.2s,baz=232,slow=34						
WRA	**Warramunga Arr**	**21.38 226**		P	P	14 26 42.6	+0.7
	1.5nm,0.4s,baz=50,slow=11,SNR=25						
ASAR	**Alice Springs**	**24.21 220**		P	P	14 27 11.3	+0.3
	0.4nm,0.4s,baz=54,slow=9.5,SNR=23						
FITZ	**Fitzroy Crossi**	**27.42 241**		P	P	14 27 39.5	-0.8
	1.1nm,0.6s,baz=74,slow=21,SNR=7.9						
SONM	**Songino Array**	**65.74 329**		P	P	14 32 40.4	+1.2
	0.3nm,0.3s,baz=131,slow=5.3,SNR=3.1						
ILAR	**Eielson Array**	**83.60 22**		P	P	14 34 21.2	-1.3
	0.2nm,0.6s,baz=243,slow=5.7,SNR=3.1						

IDC 22 14:28:31.0±31.0, 16°82S×174°86W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/18, mbtmp4.1/4, Error ellipse: s-maj=605.4km s-min=155.7km az=85.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.12 241**		P	P	14 36 25.6	+0.4
	1.9nm,0.4s,baz=83,slow=8.1,SNR=5.5						
WRA	**Warramunga Arr**	**48.16 258**		P	P	14 37 12.6	-0.8
	0.5nm,0.5s,baz=96,slow=7.0,SNR=17						
ASAR	**Alice Springs**	**48.34 253**		P	P	14 37 14.6	-0.1
	5.5nm,0.6s,baz=89,slow=7.8,SNR=122						
FITZ	**Fitzroy Crossi**	**56.55 259**		P	P	14 38 16.3	+0.5
	1.1nm,0.8s,baz=86,slow=13,SNR=3.7						

IDC 22 14:36:56.6±16.0, 6°00S×129°93E, h93km±168km, mb3.1/1, mb1 3.2/4, mb1mx3.1/17, mbtmp3.1/4, ML3.5/3, Error ellipse: s-maj=126.3km s-min=59.9km az=44.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.74 199**		P	Pn	14 39 55.2	+1.0
	0.3nm,0.3s,baz=13,slow=7.5,SNR=18						
FITZ				S	Sn	14 42 08.7	-5.7
	0.4nm,0.3s,baz=210,slow=9.8,SNR=8.5						
WRA	**Warramunga Arr**	**14.51 163**		P	Pn	14 40 16.2	-1.2
	0.2nm,0.3s,baz=344,slow=13,SNR=12						
WRA				S	Sn	14 42 44.5	-13
	0.6nm,0.3s,baz=337,slow=23,SNR=6.1						
ASAR	**Alice Springs**	**17.98 168**		P	Pn	14 40 59.9	-0.6
	0.1nm,0.3s,baz=349,slow=11,SNR=9.4						
ASAR				S	S	14 44 10.4	-11
	0.1nm,0.3s,baz=332,slow=14,SNR=5.7						
MKAR	**Makanchi Array**	**67.35 327**		P	P	14 47 41.8	+0.1
	0.3nm,0.8s,baz=114,slow=7.9,SNR=5.0						

*NEIC **22** 14:52:23.1, 33°97S×70°41W, h96km, MD3.4(GUC), After GUC.*

GUC 22 14:52:23.1±0.8, 33°97S×70°41W, h96km±3km, MD3.4, ML3.7, 13C-16D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCH	**Chadas Angostu**	**0.20 279**		⇓*iP*	Pn	14 52 37.1	+0.3
CHCH	**Chadas Angostu**	**0.20 279**		⇓*iP*	Pn	14 52 37.1	+0.3
LMEL	**Las Melosas**	**0.21 56**		⇓*iP*	Pn	14 52 37.0	+0.2
LMEL				*i S*	Sn	14 52 47.9	+0.8
LMEL	**Las Melosas**	**0.21 56**		⇓*iP*	Pn	14 52 37.0	+0.2
LMEL				*i S*	Sn	14 52 47.9	+0.8
LMEL				AML	AML	14 52 49.6	
	comp=E,2μm,0.3s						
CACH	**El Canelo**	**0.22 226**		⇑*iP*	Pn	14 52 37.6	+0.7
CACH				*i S*	Sn	14 52 48.7	+1.6
CACH	**El Canelo**	**0.22 226**		⇑*iP*	Pn	14 52 37.6	+0.7
CACH				*i S*	Sn	14 52 48.7	+1.6
SJCH	**San Jose de Ma**	**0.33 9**		*eP*	Pn	14 52 37.9	+0.5
SJCH				*i S*	Sn	14 52 49.1	+1.1
SJCH	**San Jose de Ma**	**0.33 9**		*eP*	Pn	14 52 37.9	+0.5
SJCH				*i S*	Sn	14 52 49.1	+1.1
SJCH				AML	AML	14 52 49.6	
	comp=E,3μm,0.3s						
PCH	**Pirque**	**0.35 346**		⇓*iP*	Pn	14 52 38.0	+0.4
PCH				*i S*	Sn	14 52 48.8	+0.6
PCH	**Pirque**	**0.35 346**		⇓*iP*	Pn	14 52 38.0	+0.4
PCH				*i S*	Sn	14 52 48.8	+0.6
ANTU	**Antumapu**	**0.44 335**		⇑*iP*	Pn	14 52 38.3	+0.2
ANTU				*i S*	Sn	14 52 49.7	+0.6
ANTU	**Antumapu**	**0.44 335**		⇑*iP*	Pn	14 52 38.3	+0.2
ANTU				*i S*	Sn	14 52 49.7	+0.6
ANTU				AML	AML	14 52 50.7	
	comp=E,4μm,0.5s						
FSR	**Penalolen**	**0.49 349**		⇓*iP*	Pn	14 52 38.9	+0.4
FSR				*i S*	Sn	14 52 50.5	+0.7
FSR	**Penalolen**	**0.49 349**		⇓*iP*	Pn	14 52 38.9	+0.4
FSR				*i S*	Sn	14 52 50.5	+0.7
FSR				AML	AML	14 52 51.3	
	comp=N,985nm,0.3s						
TACH	**Talagante**	**0.54 305**		⇓*iP*	Pn	14 52 39.1	+0.4
TACH				*i S*	Sn	14 52 51.2	+0.8
TACH	**Talagante**	**0.54 305**		⇓*iP*	Pn	14 52 39.1	+0.4
TACH				*i S*	Sn	14 52 51.2	+0.8
SAN	**Santiago**	**0.55 338**		⇑*iP*	Pn	14 52 39.1	+0.2
SAN				*i S*	Sn	14 52 51.0	+0.4
SAN	**Santiago**	**0.55 338**		⇑*iP*	Pn	14 52 39.1	+0.2
SAN				*i S*	Sn	14 52 51.0	+0.4
CLCH	**Cerro Calan**	**0.58 350**		⇑*iP*	Pn	14 52 39.5	+0.4
CLCH				*i S*	Sn	14 52 52.1	+1.1
CLCH				AML	AML	14 52 52.6	
	comp=E,4μm,0.3s						
CLCH				AML	AML	14 52 53.2	
	comp=E,5μm,0.4s						
FCH	**Farellones**	**0.65 9**		⇑*iP*	Pn	14 52 36.2	-3.4
FCH				*i S*	Sn	14 52 49.7	-2.3
FCH				AML	AML	14 52 50.4	
	comp=N,4μm,0.4s						
LNV	**Longovilo**	**0.83 270**		⇑*iP*	Pn	14 52 41.5	+0.1
LNV	**Longovilo**	**0.83 270**		⇑*iP*	Pn	14 52 41.5	+0.1
PEL	**Peldehue**	**0.85 344**		⇓*iP*	Pn	14 52 42.0	+0.3
PEL				*i S*	Sn	14 52 56.7	+1.2
PEL				AML	AML	14 52 58.6	
	comp=E,2μm,0.3s						
LCCH	**Las Cruces**	**1.08 297**		⇓*iP*	Pn	14 52 44.2	+0.1
LCCH				*i S*	Sn	14 53 00.3	+0.3
LCCH	**Las Cruces**	**1.08 297**		⇓*iP*	Pn	14 52 44.2	+0.1
LCCH				*i S*	Sn	14 53 00.3	+0.3
ROCH	**El Roble**	**1.11 333**		*eP*	Pn	14 52 44.7	+0.3
ROCH				*i S*	Sn	14 53 01.4	+0.9
ROCH	**El Roble**	**1.11 333**		*eP*	Pn	14 52 44.7	+0.3
ROCH				⇑*iP*		14 52 44.8	
ROCH				*i S*	Sn	14 53 01.4	+0.9
ROCH				*i S*	Sn	14 53 01.9	+1.4
ROCH				AML	AML	14 53 05.0	
	comp=N,2μm,0.2s						
JACH	**Jahuel**	**1.29 353**		⇑*iP*	Pn	14 52 47.5	+0.9
JACH				*i S*	Sn	14 53 05.3	+1.0
JACH	**Jahuel**	**1.29 353**		⇑*iP*	Pn	14 52 47.5	+0.9
JACH				*i S*	Sn	14 53 05.3	+1.0
IHA	**Instituto Hidr**	**1.39 312**		⇓*iP*	Pn	14 52 48.4	+0.6
IHA	**Instituto Hidr**	**1.39 312**		⇓*iP*	Pn	14 52 48.4	+0.6
CMCH	**Combarbala**	**2.83 350**		P	Pn	14 53 06.4	-0.1
CMCH				S	Sn	14 53 39.0	-0.8
CMCH	**Combarbala**	**2.83 350**		*eP*	Pn	14 53 06.4	-0.1
CMCH				*i S*	Sn	14 53 39.0	-0.8
CMCH				AML	AML	14 53 52.3	
	comp=E,1μm,0.5s						
TLL	**Tololo Astrono**	**3.80 355**		P	Pn	14 53 19.5	0.0
TLL	**Tololo Astrono**	**3.80 355**		⇓*iP*	Pn	14 53 19.5	0.0

*ISCJB **22** 14:55:56.2±1.5, 6°09S±0°09×128°2E±0°2, h340km±18km, mb3.6/5, Error ellipse: s-maj=31.5km s-min=10.3km az=161.5*

*NEIC **22** 14:55:58.5±2.1, 6°12S×128°21E, h349km±29km, mb4.0/1, Error ellipse: s-maj=27.0km s-min=16.1km az=99.0*

*IDC **22** 14:56:01.4±3.4, 6°20S×128°31E, h388km±40km, mb3.2/4, mb1 3.3/7, mb1mx3.2/17, mbtmp3.2/7, Error ellipse: s-maj=52.5km s-min=11.3km az=75.0*

ISC 22 14:55:59.2±1.5, 6°14S±0°06×128°4E±0°2, h363km±18km, n13, σ0s57/18, mb3.6/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.67 149**		*eP*	**Pn**	**14 57 49.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**12.19 192**		P	**P**	**14 58 41.7**	**-0.8**
	0.4nm,0.3s,baz=59,slow=12,SNR=23						
FITZ				S	**S**	**15 00 58.3**	**+0.8**
	0.3nm,0.3s,baz=97,slow=22,SNR=1.7						
FITZ	**Fitzroy Crossi**	**12.19 192**		*eP*	**P**	**14 58 41.9**	**-0.5**
FITZ				S	**S**	**15 00 58.3**	**+0.8**
WRA	**Warramunga Arr**	**14.90 158**		P	**P**	**14 59 13.1**	**+0.9**
	2.8nm,0.3s,baz=340,slow=11,SNR=214						
WRA				S	**S**	**15 01 51.5**	**-0.7**
	0.8nm,0.3s,baz=339,slow=22,SNR=7.7						
WRA	**Warramunga Arr**	**14.90 158**		P	**P**	**14 59 13.1**	**+0.9**
WRA				S	**S**	**15 01 51.5**	**-0.6**
MBWA	**Marble Bar**	**17.12 208**		*eP*	**P**	**14 59 35.6**	**-0.6**
ASAR	**Alice Springs**	**18.22 164**		P	**P**	**14 59 48.7**	**+0.7**
	0.6nm,0.3s,baz=341,slow=11,SNR=79						
ASAR				S	**S**	**15 02 57.2**	**-0.2**
	0.2nm,0.3s,baz=343,slow=21,SNR=9.0						
KSRS	**Korea Array**	**43.37 359**		P	**P**	**15 03 27.4**	**+0.2**
	1.1nm,0.4s,mb3.3,baz=180,slow=8.9,SNR=8.3						
SONM	**Songino Array**	**57.13 343**		P	**P**	**15 05 09.9**	**+0.8**
	0.8nm,0.7s,mb3.2,baz=157,slow=6.5,SNR=4.9						
MK31	**Makanchi Array**	**66.63 327**		*eP*	**P**	**15 06 11.7**	**0.0**
MKAR	**Makanchi Array**	**66.63 327**		P	**P**	**15 06 11.7**	**-0.1**
	0.9nm,0.5s,mb3.8,baz=115,slow=8.7,SNR=20						
ZALV	**Zalesovo Beam**	**70.10 334**		P	**P**	**15 06 32.2**	**-0.7**
	0.7nm,0.5s,mb3.6,baz=104,slow=4.9,SNR=3.9						
KURK	**Kurchatov**	**70.95 329**		*eP*	**P**	**15 06 37.9**	**-0.1**
	1.2nm,0.4s,mb4.0						

IDC 22 15:04:46.2±13.0, 6°43S×130°03E, h106km±149km, mb3.4/1, mb1 3.1/4, mb1mx3.0/17, mbtmp2.9/4, ML3.2/3, Error ellipse: s-maj=85.0km s-min=60.3km az=25.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.36 200**		P	Pn	15 07 40.6	+2.0
	0.1nm,0.3s,baz=38,slow=11,SNR=7.6						
FITZ				S	Sn	15 09 51.4	-3.3
	0.7nm,0.3s,baz=70,slow=12,SNR=12						
WRA	**Warramunga Arr**	**14.06 163**		P	Pn	15 07 59.5	-1.3
	0.1nm,0.3s,baz=347,slow=13,SNR=6.5						
WRA				S	Sn	15 10 26.1	-10
	0.2nm,0.3s,baz=350,slow=18,SNR=2.1						
ASAR	**Alice Springs**	**17.53 168**		P	Pn	15 08 44.7	+0.7
	0.1nm,0.3s,baz=351,slow=11,SNR=6.6						
MKAR	**Makanchi Array**	**67.77 327**		P	P	15 15 32.4	-0.1
	0.3nm,0.3s,baz=121,slow=7.3,SNR=4.2						

IDC 22 15:12:07.8±3.2, 4°78S×152°81E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/17, mbtmp3.6/4, Error ellipse: s-maj=82.7km s-min=37.1km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.46 228**		P	P	15 17 19.5	+0.2
	0.8nm,0.5s,baz=53,slow=9.9,SNR=14						
ASAR	**Alice Springs**	**26.17 222**		P	P	15 17 44.4	+0.3
	0.3nm,0.6s,baz=53,slow=9.4,SNR=6.6						
FITZ	**Fitzroy Crossi**	**29.68 241**		P	P	15 18 15.0	-0.6
	0.6nm,0.3s,baz=63,slow=7.6,SNR=8.7						
CMAR	**Chiang Mai Arr**	**57.88 295**		P	P	15 22 02.3	+0.3
	0.3nm,0.5s,baz=114,slow=6.3,SNR=5.3						
TORD	**Torodi Ar. Bea**	**150.31 288**		PKPbc	PKPbc	15 32 01.7	-0.5
	0.9nm,0.7s,baz=61,slow=2.7,SNR=2.1						

IDC 22 15:39:41.7±31.0, 7°03S×128°85E, h116km±168km, mb3.9/1, mb1 3.7/4, mb1mx3.3/17, mbtmp3.6/4, ML3.8/3, Error ellipse: s-maj=299.9km s-min=106.3km az=3.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.44 196**		P	Pn	15 42 22.0	+0.3
	0.8nm,0.3s,baz=32,slow=9.6,SNR=25						
FITZ				S	Sn	15 44 18.7	-9.0
	0.5nm,0.3s,baz=52,slow=17,SNR=2.4						
WRA	**Warramunga Arr**	**13.90 158**		P	Pn	15 42 52.3	-1.5
	0.3nm,0.3s,baz=328,slow=13,SNR=20						
WRA				S	Sn	15 45 15.9	-11
	1.5nm,0.3s,baz=331,slow=21,SNR=13						
ASAR	**Alice Springs**	**17.24 164**		P	Pn	15 43 36.7	+1.3
	0.5nm,0.3s,baz=341,slow=10,SNR=66						
ASAR				S	S	15 46 38.3	-9.4
	0.3nm,0.3s,baz=234,slow=17,SNR=9.7						
STKA	**Stephens Creek**	**27.43 156**		P	P	15 45 16.5	-0.2
	2.7nm,0.7s,baz=320,slow=10,SNR=5.3						

*ISCJB **22** 15:42:37.7±0.9, 18°4S±0°1×177°7W±0°1, h613km±12km, mb3.6/7, Error ellipse: s-maj=25.7km s-min=14.6km az=141.2*

*IDC **22** 15:42:39.0±2.8, 18°49S×177°84W, h604km±36km, mb3.2/7, mb1 3.4/7, mb1mx3.1/19, mbtmp3.2/7, Error ellipse: s-maj=30.5km s-min=16.8km az=141.0*

*NEIC **22** 15:42:39.6±1.2, 18°44S×177°83W, h613km±11km, mb3.4/1, Error ellipse: s-maj=24.2km s-min=15.5km az=95.0*

ISC 22 15:42:38.3±0.9, 18°4S±0°1×177°7W±0°1, h604km±12km, n15, σ1s06/12, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.13 279**		*eP*	**P**	**15 44 06.2**	**+1.3**
AFI	**Afiamalu**	**7.20 53**		S	**S**	**15 46 00.7**	**-1.3**
	0.7nm,0.3s,baz=55,slow=23,SNR=2.2						
URZ	**Urewera**	**20.31 192**		P	**P**	**15 46 33.3**	**-1.1**
	2.5nm,0.5s,baz=324,slow=8.7,SNR=4.6						
URZ	**Urewera**	**20.31 192**		*eP*	**P**	**15 46 33.7**	**-0.7**
WRA	**Warramunga Arr**	**45.24 260**		P	**P**	**15 50 02.8**	**-0.7**
	1.7nm,0.4s,mb3.9,baz=98,slow=7.0,SNR=16						
WRA				PcP	PcP	15 51 31.0	+0.7
	0.2nm,0.3s,baz=93,slow=3.6,SNR=4.1						
ASAR	**Alice Springs**	**45.34 255**		P	**P**	**15 50 03.8**	**-0.4**
	2.0nm,0.4s,mb4.0,baz=92,slow=7.7,SNR=27						
ASAR				PcP	PcP	15 51 31.2	+0.6
	0.4nm,0.5s,baz=105,slow=4.0,SNR=6.2						
ASAR				S	**S**	**15 55 59.8**	**-2.5**
	1.3nm,0.9s,baz=92,slow=16,SNR=7.4						
FITZ	**Fitzroy Crossi**	**53.65 261**		P	**P**	**15 51 04.9**	**-0.1**
	2.9nm,1.1s,mb3.5,baz=85,slow=5.4,SNR=6.1						
MJAR	**Matsushiro Arr**	**68.72 323**		P	**P**	**15 52 42.9**	**0.0**
	0.9nm,0.8s,mb3.2,baz=156,slow=5.6,SNR=4.4						
QSPA	**South Pole Qui**	**71.66 180**		*eP*	**P**	**15 53 01.6**	**+2.0**
	0.8nm,0.6s,mb3.4						
PETK	**Petropavlovsk-**	**74.33 345**		P	**P**	**15 53 15.8**	**+0.8**
	1.2nm,0.5s,mb3.7,baz=113,slow=7.7,SNR=6.1						
ILAR	**Eielson Array**	**86.20 13**		P	**P**	**15 54 16.8**	**+0.5**
	0.4nm,0.4s,mb3.4,baz=221,slow=4.5,SNR=8.7						
ARCES	**ARCESS Array B**	**126.92 350**		PKP	PKPdf	16 00 33.7	-0.1
	3.3nm,0.9s,baz=13,slow=6.6,SNR=3.6						
BRTR	**Keskin Array B**	**145.63 315**		PKPbc	PKPbc	16 01 11.2	+0.6
	0.4nm,0.5s,baz=127,slow=3.8,SNR=3.1						
CLL	**Collm**	**146.09 348**		*e*PKPbc	PKPbc	16 01 13.0	+1.4
	comp=Z,3.0nm,0.6s						
GERES	**GERESS Array B**	**148.26 346**		PKPbc	PKPbc	16 01 18.6	+1.3
	comp=Z,0.3nm,0.5s,baz=35,slow=5.4,SNR=4.2						

*IDC **22** 15:44:08.2±0.9, 8°23N×103°95W, h0km, mb4.0/8, mb1 4.4/8, mb1mx4.2/20, mbtmp4.0/8, MS4.0/19, Ms1 4.0/19, ms1mx3.9/24, Error ellipse: s-maj=51.9km s-min=16.5km az=62.0*

*BJI **22** 15:44:10.4, 8°30N×103°60W, h20km, mB5.2/3, Ms5.0/3, Ms7 4.5/3*

*NEIC **22** 15:44:10.5±0.6, 8°31N×103°62W, h10km, mb4.5/24, Error ellipse: s-maj=17.3km s-min=8.9km az=54.0*

*ISCJB **22** 15:44:13.3±0.5, 8°40N±0°06×103°47W±0°08, h33km, mb4.3/31, MS4.1/18, Error ellipse: s-maj=11.9km s-min=7.8km az=151.8*

*GCMT **22** 15:44:14.4±0.4, 8°45N×103°62W, h13km±2km, MW4.9, Moment Tensor Solution. s19,c20; s57,c84; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.28±.11; $M_{\theta\theta}$0.93±.11; $M_{\phi\phi}$-0.65±.11; $M_{r\theta}$-1.07±.34; $M_{\theta\phi}$-1.96±.11; $M_{\phi r}$0.53±.26; Best double couple: $M_0$2.40000×10^{16} NP1:ϕ_s352.00000°, δ70.00000°, λ11.00000°. NP2:ϕ_s258.00000°, δ80.00000°, λ160.00000°. Principal axes: T 2.7200, Plg22.0000°, Azm213.0000°; N -0.7300, Plg67.0000°, Azm51.0000°; P -1.9900, Plg6.0000°, Azm306.0000°; Data Used: IU II IC G CN.*

ISC 22 15:44:13.4±6.9, 8°4N±0°1×103°6W±0°2, h22km±45km, n122, σ0s86/95, mb4.3/31, MS4.1/18, 24C-26D, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**12.12 43**		Pn	**Pn**	**15 46 59.7**	**-5.1**
	0.4nm,0.3s,baz=195,slow=17,SNR=4.2						
CMIG				LR	LR	15 50 38.1	
	comp=Z,2μm,20.9s,baz=206,slow=31						
CMIG	**Matias Romero**	**12.12 43**		Pn	**Pn**	**15 46 59.7**	**-5.1**
CMIG				LR	LR	15 50 38.1	
APG	**El Apazote**	**14.42 62**		Pn	**Pn**	**15 47 33.8**	**-2.5**
	2.0nm,0.3s,baz=236,slow=7.0,SNR=31						
APG				LR	LR	15 51 58.4	
	comp=Z,1μm,21.6s,baz=143,slow=32						
JTS	**JuntasAbangare**	**18.46 83**		LR	LR	15 53 47.4	
	comp=Z,133nm,22.0s,baz=174,slow=31						
TEIG	**Tepich**	**18.91 50**		LR	LR	15 55 11.3	
	comp=Z,559nm,18.0s,baz=226,slow=34						
TXAR	**Lajitas Array**	**20.87 360**		P	**P**	**15 48 53.5**	**-0.6**
	2.7nm,0.9s,baz=182,slow=14,SNR=17						
TXAR				LR	LR	15 56 24.8	
	comp=Z,961nm,18.3s,MS4.2,baz=135,slow=35						
627A	**Terlingua Ranc**	**20.99 0**		P	**P**	**15 48 55.9**	**+0.5**
	baz=21,SNR=9.7						
628A	**Black Gap, Mar**	**21.03 2**		⇓P	**P**	**15 48 55.9**	**+0.1**
	baz=21						
626A	**Big Bend Ranch**	**21.10 359**		⇑P	**P**	**15 48 57.1**	**+0.6**
	baz=21						
526A	**Mary Lane Ranc**	**21.60 359**		⇓P	**P**	**15 49 02.4**	**+0.5**
	baz=22						
527A	**Woodward Ranch**	**21.68 360**		⇑P	**P**	**15 49 03.5**	**+0.8**
	baz=22,SNR=12						
528A	**Cox Ranch, San**	**21.71 2**		⇓P	**P**	**15 49 03.1**	**+0.1**
	baz=22						
426A	**McDonald Obser**	**22.21 359**		⇓P	**P**	**15 49 08.6**	**+0.3**
	baz=22						
428A	**Kincaid Ranch,**	**22.27 2**		⇑P	**P**	**15 49 09.3**	**+0.2**
	baz=22						
JCT	**Junction City**	**22.29 9**		*eP*	**P**	**15 49 08.0**	**-1.2**
	19nm,1.2s,mb4.4						
425A	**Indio Mountain**	**22.36 357**		P	**P**	**15 49 10.0**	**0.0**
	baz=22,SNR=14						
427A	**Hayter Ranch,**	**22.38 0**		⇓P	**P**	**15 49 11.2**	**+1.0**
	baz=22,SNR=13						
325A	**Bean Ranch, Si**	**22.94 357**		⇑P	**P**	**15 49 16.4**	**+0.3**
	baz=23						
324A	**Moseley Ranch,**	**23.04 356**		⇑P	**P**	**15 49 17.4**	**+0.2**
	baz=23						
319A	**Douglas**	**23.52 348**		⇓P	**P**	**15 49 21.2**	**-0.9**
	baz=24						
225A	**Deer Hill, Car**	**23.67 357**		⇓P	**P**	**15 49 22.6**	**-0.9**
	baz=24						
224A	**Cornudas Mount**	**23.68 356**		⇓P	**P**	**15 49 22.9**	**-0.7**
	baz=24						
220A	**Playas Peak, P**	**23.89 350**		⇑P	**P**	**15 49 25.3**	**-0.2**
	baz=24						
219A	**White Tail Can**	**24.12 348**		⇓P	**P**	**15 49 26.8**	**-0.8**
	baz=24						
217A	**Green Valley**	**24.26 345**		⇑P	**P**	**15 49 28.8**	**-0.2**
	baz=24						
124A	**Stringfield Ra**	**24.29 356**		⇓P	**P**	**15 49 30.5**	**+1.3**
	baz=24						
120A	**U Bar Ranch, L**	**24.53 350**		⇓P	**P**	**15 49 32.8**	**+1.4**
	baz=25						
TUC	**Tucson**	**24.77 345**		*eP*	**P**	**15 49 31.4**	**-2.1**
	14nm,1.1s,mb4.4						
Z26A	**Caprock**	**24.80 359**		⇑P	**P**	**15 49 33.5**	**-0.3**
	baz=25						
Z25A	**Roswell**	**24.83 358**		⇓P	**P**	**15 49 34.2**	**+0.2**
	baz=25						
Z27A	**Tatum**	**24.84 1**		⇑P	**P**	**15 49 34.1**	**-0.1**
	baz=25,SNR=20						
119A	**Ashpeak Ranch,**	**24.87 348**		⇑P	**P**	**15 49 34.2**	**-0.3**
	baz=25						
118A	**Homack Ranch,

	baz=30					
S18A	Hurst Farm, Bl	29.78 350	⇑P		P	15 50 19.0 +0.5
	baz=30					
T14A	Hurricane	29.86 345	⇑P		P	15 50 19.6 +0.4
	baz=30					
MPMC	Manual Prospec	30.37 337	⇓P		P	15 50 23.4 -0.3
	baz=30					
ISA	Isabella	30.41 336	P		P	15 50 23.2 -0.9
	6.1nm,1.2s,mb4.2					
Q19A	Hogan Spring (	30.90 351	⇓P		P	15 50 29.2 +0.9
	baz=31					
MPU	Maple Canyon	32.34 348	*e*P		P	15 50 40.7 -0.4
	13nm,1.1s,mb4.7					
SDV	Santo Domingo	32.55 87	*e*P		P	15 50 43.6 +0.3
	9.1nm,1.0s,mb4.7					
NVAR	Mina Array Bea	32.76 338	P		P	15 50 44.0 -0.7
	0.9nm,0.9s,mb3.7,baz=176,slow=7.5,SNR=5.0					
PHWY	Pilot Hill	32.86 357	*e*P		P	15 50 45.1 -0.5
	7.8nm,1.1s,mb4.5					
WAKR	Walker	33.26 337	*e*P		P	15 50 48.8 -0.2
	6.5nm,1.1s,mb4.5					
PDAR	Pinedale Array	34.68 352	P		P	15 51 00.3 -1.1
	8.6nm,1.1s,mb4.6,baz=165,slow=7.5,SNR=15					
REDW	Red Top Meadow	35.45 351	P		P	15 51 09.2 +1.2
	5.0nm,1.0s,mb4.4					
RRI2	Red Ridge	35.52 350	*e*P		P	15 51 07.5 -1.1
	3.8nm,0.9s,mb4.3					
LOHW	Long Hollow	35.66 351	*e*P		P	15 51 09.3 -0.5
	9.9nm,1.2s,mb4.6					
HLID	Hailey	36.34 347	*e*P		P	15 51 15.0 -0.6
	4.0nm,1.0s,mb4.3					
H15A	Lima	36.98 349	⇓P		P	15 51 23.0 +1.9
	baz=37					
H14A	Leadore	37.12 348	⇑P		P	15 51 22.9 +0.7
	baz=37					
MCMT	McKenzie Canyo	37.22 349	*e*P		P	15 51 23.2 +0.1
	1.8nm,1.1s,mb3.8					
H13A	Challis	37.25 347	⇑P		P	15 51 24.8 +1.4
	baz=37					
YBH	Yreka Blue Hor	37.31 336	P		P	15 51 21.7 -2.3
	1.6nm,0.8s,mb3.9,baz=148,slow=15,SNR=2.5					
K05A	Summer Lake	37.48 339	⇓P		P	15 51 25.5 +0.2
	baz=38					
DLMT	Dillon	37.69 350	*e*P		P	15 51 28.4 +1.3
	11nm,1.2s,mb4.5					
G13A	Cobalt	37.75 348	⇑P		P	15 51 27.7 0.0
	baz=38,SNR=15					
LRM	Limekiln Ridge	38.11 350	*e*P		P	15 51 31.7 +1.1
	66nm,1.0s,mb5.3					
E20A	Meyer Farm, Mu	38.22 355	⇓P		P	15 51 30.6 -1.0
	baz=38					
E19A	Rath Farm, Rou	38.23 354	⇑P		P	15 51 31.1 -0.6
	baz=38					
DGMT	Dagmar	39.98 359	P		P	15 51 45.2 -1.1
	18nm,1.1s,mb4.7					
AGMN	Agassiz Nation	40.34 8	*e*P		P	15 51 47.5 -1.8
	22nm,1.0s,mb4.8					
ETW	Entiat	41.63 343	*e*P		P	15 52 01.1 +1.2
	14nm,1.1s,mb4.5					
ULM	Lac du Bonnet	42.25 7	LR		LR	16 09 30.5
	comp=Z,203nm,21.4s,MS4.0,baz=302,slow=36					
JCW	Jim Creek	42.64 342	P		P	15 52 09.3 +1.1
	28nm,1.3s,mb4.8					
LPAZ	La Paz	42.76 125	P		P	15 52 09.7 +0.1
	3.6nm,0.9s,mb4.1,baz=321,slow=8.0,SNR=13					
LPAZ	La Paz	42.76 125	*e*P		P	15 52 09.7 +0.1
	10nm,1.2s,mb4.4					
RKT	Rikitea	43.85 224	*e*LR		LR	16 04 24.4
	453nm,27.0s,baz=51					
RKT			*e*T			16 38 44.6
	14nm,0.3s					
PMOR	Pomariorio Ree	49.70 242	*e*T			16 46 20.8
	2.2nm,0.2s					
CFAA	Coronel Fontan	52.15 141	P		P	15 53 23.0 +0.7
	0.1nm,0.3s,mb3.2,baz=311,slow=9.3,SNR=2.9					
PPT	Papeete	52.25 240	*e*S		S	16 00 47.9 +0.4
	40nm,25.2s					
PPT			*e*LR		LR	16 08 05.9
	326nm,25.0s,baz=63					
PPT	Papeete	52.25 240	LR		LR	16 08 34.5
	comp=Z,186nm,21.1s,MS4.1,baz=312,slow=28					
YKA	Yellowknife Ar	54.64 354	LR		LR	16 17 39.1
	comp=Z,16nm,18.7s,MS3.1,baz=120,slow=37					
SCHQ	Schefferville	54.79 25	LR		LR	16 18 27.5
	comp=Z,169nm,19.9s,MS4.1,baz=277,slow=37					
TBI	Tubuai	54.83 234	*e*S		S	16 01 22.0 -0.4
	66nm,29.0s					
TBI			*e*LR		LR	16 09 30.7
	288nm,26.5s,baz=51					
TBI			*e*T			16 52 31.9
	4.6nm,0.3s					
CPUP	Villa Florida	56.59 129	P		P	15 53 54.3 -0.4
	5.9nm,1.0s,mb4.6,baz=341,slow=7.8,SNR=4.1					
PLCA	Paso Flores	57.53 151	LR		LR	16 12 28.4
	comp=Z,140nm,20.6s,MS4.0,baz=171,slow=30					
BDFB	Brasilia	59.95 113	LR		LR	16 18 19.2
	comp=Z,137nm,20.9s,MS4.1,baz=34,slow=34					
MENT	Mentasta	61.69 340	*e*P		P	15 54 29.2 -0.3
SML	Sawmill	62.58 338	*e*P		P	15 54 33.2 -2.3
	3.6nm,1.1s,mb4.4					
ILAR	Eielson Array	63.97 341	P		P	15 54 41.8 -2.9
	3.7nm,1.0s,mb4.4,baz=153,slow=4.9,SNR=16					
ILAR	Eielson Array	63.97 341	P		P	15 54 41.8 -2.9
AFI	Afiamalu	71.21 252	LR		LR	16 19 00.9
	comp=Z,110nm,18.8s,MS4.1,baz=111,slow=30					
PETK	Petropavlovsk-	88.60 323	LR		LR	16 26 48.5
	comp=Z,62nm,21.0s,MS4.0,baz=303,slow=29					
ESDC	Sonseca Array	92.03 50	LR		LR	16 32 04.6
	comp=Z,64nm,19.5s,MS4.1,baz=75,slow=31					
NOA	NORSAR Array B	94.34 26	LR		LR	16 38 28.3
	comp=Z,79nm,20.1s,MS4.2,baz=320,slow=34					
ARCES	ARCESS Array B	94.83 16	LR		LR	16 39 10.4
	comp=Z,72nm,20.9s,MS4.1,baz=292,slow=35					
DBIC	Dimbokro	97.59 82	LR		LR	16 35 03.5
	comp=Z,48nm,18.8s,MS4.0,baz=252,slow=31					
HHC	Hu-ho-hao-te	121.33 329	*e*PKP		PKPdf	16 03 03.0 -2.2
HHC			PKS			16 06 38.6
HHC			SKS		SKSdf	16 10 14.0 -2.2
HHC			SKKS		SKKSac	16 11 23.4 -11
HHC			AMB		AMB	
	comp=Z,80nm,8.1s					
HHC			LR		LR	
	comp=N,150nm,20.4s,MS4.7					
HHC			LR		LR	
	comp=E,100nm,20.8s,MS4.7					
HHC			LR		LR	
	comp=Z,120nm,20.2s,MS4.5					
WRA	Warramunga Arr	122.94 252	PKP		PKPdf	16 03 05.8 -3.0
	comp=Z,0.3nm,0.8s,baz=104,slow=0.3,SNR=3.7					
ASAR	Alice Springs	123.07 247	PKP		PKPdf	16 03 06.5 -2.5
	comp=Z,0.6nm,1.1s,baz=102,slow=0.9,SNR=3.0					
MKAR	Makanchi Array	124.85 355	PKP		PKPdf	16 03 11.6 -0.2
	comp=Z,0.6nm,0.7s,baz=41,slow=5.0,SNR=4.5					
WMQ	Urumqi	127.08 350	*e*PKP		PKPdf	16 03 16.0 -0.2
WMQ			PP		PP	16 05 18.0 +4.7
WMQ			SKS		SKSdf	16 10 27.0 +0.2
WMQ			SKKS		SKKSac	16 12 10.0 -1.2
WMQ			SS		SS	16 22 24.0 +4.6
WMQ			AMB		AMB	
	comp=Z,29nm,10.0s					
WMQ			LR		LR	
	comp=N,110nm,25.0s,MS4.7					
WMQ			LR		LR	
	comp=E,180nm,25.0s,MS4.7					
WMQ			LR		LR	
	comp=Z,94nm,25.0s,MS4.4					
LZH	Lanzhou	128.83 331	*e*PKP		PKPdf	16 03 18.0 -1.7
LZH			sPKP			16 03 22.6
LZH			LR		LR	
	comp=E,130nm,18.0s					
LZH			LR		LR	
	comp=Z,170nm,20.3s,MS4.7					
CD2	Chengdu	132.99 327	*e*PKP		PKPdf	16 03 26.3 -1.5
KMI	Kunming	138.01 323	PKP		PKPdf	16 03 35.8 -1.5
CMAR	Chiang Mai Arr	145.32 320	PKPbc		PKPbc	16 03 47.7 -2.5
	comp=Z,0.5nm,0.8s,baz=19,slow=3.3,SNR=4.4					

DDA ***22*** *15:45:26.0,37°.52N×35°.07E, h7km±2km, Md2.6*
ISK ***22*** *15:45:25.1,37°.54N×35°.07E, h5km, ML2.4*
ISCJB ***22*** *15:45:26.2±0.6,37°.56N±0°.03×35°.07E±0°.05, h10km, Error ellipse: s-maj=6.5km s-min=4.4km az=22.5*
CSEM ***22*** *15:45:26.2±0.2,37°.56N×35°.05E, h2km, ML2.4, Error ellipse: s-maj=6.4km s-min=4.8km az=114.0*
ISC 22 15:45:26.2±0.7,37°.58N±0°.03×35°.02E±0°.06, h0km±13km, n20,σ0°66/28, Turkey

IDC 22 15:56:56.3±36.0,7°.47N×103°.10W, h0km, mb3.3/3, mb1 3.8/3, mb1mx3.6/18, mbtmp3.4/3, MS3.1/5, Ms1 3.1/5, ms1mx3.0/15, Error ellipse: s-maj=1202.0km s-min=111.9km az=112.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	12.48	39	LR	LR	16 02 49.8	
	comp=Z,32nm,21.2s,baz=210,slow=28						
TEIG	Tepich	19.16	47	LR	LR	16 07 47.6	
	comp=Z,97nm,19.9s,baz=175,slow=34						
TXAR	Lajitas Array	21.75	359	P	P	16 01 49.6	0.0
	0.3nm,0.8s,baz=175,slow=12,SNR=3.5						
TXAR				LR	LR	16 10 42.6	
	comp=Z,71nm,18.4s,baz=0.0,slow=38						
PDAR	Pinedale Array	35.61	352	P	P	16 03 56.2	+0.5
	0.7nm,0.8s,baz=161,slow=5.7,SNR=4.1						
YKA	Yellowknife Ar	55.56	354	LR	LR	16 30 34.3	
	comp=Z,4.9nm,18.5s,baz=205,slow=36						
PLCA	Paso Flores	56.55	151	LR	LR	16 25 18.0	
	comp=Z,86nm,18.3s,baz=283,slow=30						
ILAR	Eielson Array	64.94	341	P	P	16 07 37.5	-0.1
	0.4nm,0.7s,baz=154,slow=5.9,SNR=6.3						

IDC 22 16:08:10.3±2.2,5°.43S×131°.18E, h0km, mb4.2/1, mb1 3.6/4, mb1mx3.4/16, mbtmp3.5/4, ML3.0/3, Error ellipse: s-maj=98.8km s-min=27.3km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.71	203	Pn	Pn	16 11 24.4	-1.7
	0.1nm,0.3s,baz=30,slow=7.5,SNR=14						
WRA	Warramunga Arr	14.75	168	Pn	Pn	16 11 40.4	0.0
	0.0nm,0.3s,baz=352,slow=12,SNR=5.3						
WRA				Sn	Sn	16 14 27.2	+2.6
	0.1nm,0.3s,baz=349,slow=25,SNR=3.4						
ASAR	Alice Springs	18.32	172	P	Pn	16 12 26.6	+0.5
	0.1nm,0.3s,baz=349,slow=11,SNR=11						
ZALV	Zalesovo Beam	70.71	333	P	P	16 19 28.2	+0.1
	1.1nm,0.5s,baz=132,slow=5.4,SNR=4.7						

IDC ***22*** *16:08:47.0±0.6,20°.58N×146°.30E, h0km, mb4.2/17, mb1 4.4/19, mb1mx4.3/27, mbtmp4.2/19, ML3.8/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/28, Error ellipse: s-maj=21.3km s-min=13.2km az=91.0*
ISCJB ***22*** *16:08:50.7±1.8,20°.61N±0°.06×146°.2E±0°.1, h40km±16km, mb4.2/23, Error ellipse: s-maj=18.9km s-min=10.1km az=176.0*
NEIC ***22*** *16:08:52.8±1.6,20°.62N×146°.22E, h42km±15km, mb4.7/4, Error ellipse: s-maj=13.6km s-min=8.2km az=86.0*
ISC 22 16:08:53.4±1.5,20°.61N±0°.06×146°.2E±0°.1, h47km±14km, n37,σ0°91/35, mb4.2/23, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	7.09	190	Pn	Pn	16 10 35.2	+0.6
	6.5nm,0.3s,baz=20,slow=21,SNR=2.1						
GUMO				LR	LR	16 12 36.3	
	comp=Z,51nm,19.0s,baz=52,slow=32						
GUMO	Guam	7.09	190	P	Pn	16 10 34.9	+0.3
GUMO				LR	LR	16 12 36.3	
	comp=Z,51nm,19.0s,baz=100,slow=20,SNR=1.9						
CBIJ	Chichi jima	7.42	331	Pn	Pn	16 10 38.9	-0.3
	5.5nm,0.3s,baz=100,slow=20,SNR=1.9						
CBIJ				Sn	Sn	16 11 56.9	-5.2
	9.7nm,0.3s,baz=271,slow=21,SNR=1.6						
MJAR	Matsushiro Arr	17.34	338	Pn	Pn	16 12 51.3	-0.7
	0.3nm,0.3s,baz=26,slow=20,SNR=2.9						
JNU	Nakatsue	18.46	316	P	Pn	16 13 04.3	-1.4
KSRS	Korea Array	23.10	321	P	P	16 13 56.7	+1.5
	2.6nm,0.6s,mb3.8,baz=148,slow=8.6,SNR=16						
ASAJ	Asahikawa	23.63	354	P	P	16 14 02.0	+1.8
	9.7nm,1.1s,mb4.2,baz=243,slow=14,SNR=3.4						
PETK	Petropavlovsk-	33.64	13	P	P	16 15 30.3	+1.0
	2.6nm,0.9s,mb4.2,baz=188,slow=9.0,SNR=3.4						
WRA	Warramunga Arr	41.93	197	P	P	16 16 39.7	0.0
	3.4nm,0.6s,mb4.2,baz=17,slow=9.0,SNR=79						
SONM	Songino Array	41.97	320	P	P	16 16 40.6	+0.9
	0.6nm,0.4s,mb3.5,baz=132,slow=6.2,SNR=6.3						
FITZ	Fitzroy Crossi	43.42	209	P	P	16 16 52.7	+0.9
	1.4nm,0.3s,mb4.2,baz=51,slow=10.0,SNR=23						
ASAR	Alice Springs	45.60	196	P	P	16 17 08.4	-0.6
	0.9nm,0.5s,mb3.9,baz=15,slow=6.6,SNR=29						
ASAR				PcP	PcP	16 18 47.5	+0.6
	0.4nm,0.6s,baz=23,slow=3.5,SNR=3.1						
STKA	Stephens Creek	52.37	185	P	P	16 17 59.9	-0.8
	4.2nm,1.0s,mb4.3,baz=346,slow=12,SNR=3.0						
STKA	Stephens Creek	52.37	185	P	P	16 17 59.9	-0.8
ZALV	Zalesovo Beam	56.80	322	P	P	16 18 32.8	+0.1
	1.9nm,0.6s,mb4.3,baz=104,slow=7.4,SNR=8.9						
MK31	Makanchi Array	57.49	313	P	P	16 18 37.4	-0.3
MKAR	Makanchi Array	57.49	313	P	P	16 18 38.2	+0.5
	0.9nm,0.6s,mb4.0,baz=86,slow=8.7,SNR=8.4						
BPAW	Bear Paw Mtn.	59.85	27	*e*P	P	16 18 54.4	+0.6
	7.6nm,0.8s,mb4.8						
TRF	Thorofare Moun	59.99	28	*e*P	P	16 18 54.7	-0.1
	6.6nm,0.8s,mb4.7						
KURK	Kurchatov	60.17	317	*e*P	P	16 18 56.8	+0.5
ILAR	Eielson Array	61.74	27	P	P	16 19 05.6	-1.0
	3.3nm,0.7s,mb4.6,baz=260,slow=5.6,SNR=38						
ILAR	Eielson Array	61.74	27	P	P	16 19 05.6	-1.0
EGAK	Eagle	64.17	27	*e*P	P	16 19 22.4	-0.4
ABKAR	Akbulak array	72.27	317	*e*P	P	16 20 14.0	+0.2
	1.2nm,0.6s,mb4.0						
YKA	Yellowknife Ar	76.10	28	P	P	16 20 35.8	-0.1
	1.2nm,0.5s,mb4.1,baz=288,slow=6.0,SNR=3.2						
LON	Longmire	76.61	45	*e*P	P	16 20 36.1	-3.0
	7.9nm,1.0s,mb4.6						
KEV	Kevo	80.27	342	*e*p	P	16 20 57.8	-1.0
ARCES	ARCESS Array B	80.83	342	P	P	16 21 02.4	+0.6
	2.8nm,0.7s,mb4.3,baz=50,slow=8.3,SNR=6.5						
NVAR	Mina Array Bea	81.61	52	P	P	16 21 07.5	+0.9
	4.1nm,0.7s,mb4.5,baz=265,slow=5.8,SNR=29						
JOF	Joensuu	82.49	335	*e*p	P	16 21 10.0	-0.7
	3.2nm,0.7s,mb4.4						
KAF	Kangasniemi	84.87	336	*e*p	P	16 21 20.0	-2.9
	3.0nm,0.6s,mb4.6						
FINES	FINESS Array B	85.35	335	P	P	16 21 24.9	-0.4
	4.2nm,0.6s,mb4.8,baz=71,slow=4.8,SNR=27						
PDAR	Pinedale Array	86.17	46	P	P	16 21 29.8	0.0
	0.8nm,0.6s,mb4.1,baz=84,slow=0.6,SNR=7.1						
TXAR	Lajitas Array	96.39	56	P	P	16 22 18.4	+0.6
	0.2nm,0.7s,mb3.7,baz=307,slow=3.3,SNR=2.4						
LPAZ	La Paz	147.20	88	PKPbc	PKPbc	16 28 34.5	+2.2
	5.9nm,0.8s,baz=351,slow=2.5,SNR=21						
LPAZ	La Paz	147.20	88	*e*PKPbc	PKPbc	16 28 34.4	+2.1
CPUP	Villa Florida	157.71	109	PKPab	PKPab	16 29 17.7	-0.1
	0.3nm,0.3s,baz=90,slow=3.0,SNR=3.3						

IDC 22 16:51:09.2±7.2,7°.92S×128°.87E, h179km±78km, mb3.3/1, mb1 3.2/4, mb1mx3.0/17, mbtmp3.0/4, Error ellipse: s-maj=59.4km s-min=35.0km az=49.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.60	197	P	Pn	16 53 37.0	+0.5
	0.1nm,0.3s,baz=50,slow=6.6,SNR=6.5						
FITZ				S	Sn	16 55 32.4	-2.1
	0.2nm,0.3s,baz=302,slow=18,SNR=2.4						
WRA	Warramunga Arr	13.08	157	P	Pn	16 54 08.8	+0.4
	0.4nm,0.3s,baz=342,slow=13,SNR=14						
WRA				S	Sn	16 56 29.7	-4.1
	0.5nm,0.3s,baz=333,slow=22,SNR=8.9						
ASAR	Alice Springs	16.39	163	P	Pn	16 54 50.8	+1.6
	0.1nm,0.3s,baz=340,slow=9.7,SNR=24						
ASAR				S	S	16 57 52.6	+1.6
	0.1nm,0.3s,baz=320,slow=16,SNR=5.2						
MKAR	Makanchi Array	68.38	328	P	P	17 01 51.3	0.0
	0.4nm,0.4s,baz=116,slow=8.0,SNR=12						

IDC 22 17:05:43.1±2.3,0°.98S×128°.06E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.1/18, mbtmp3.1/3, ML3.3/1, Error ellipse: s-maj=175.3km s-min=27.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.83	162	P	Pn	17 10 15.5	-1.5
	0.1nm,0.3s,baz=341,slow=11,SNR=3.7						
ASAR	Alice Springs	23.26	166	P	P	17 10 52.5	+0.1
	0.2nm,0.5s,baz=345,slow=12,SNR=8.9						
MKAR	Makanchi Array	62.16	326	P	P	17 16 06.2	0.0
	0.2nm,0.5s,baz=120,slow=7.7,SNR=4.3						

WEL 22 17:09:45.6±0.2,38°.02S×176°.53E, h135km±1km, ML3.5/15, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.17	5	PN	Pn	17 10 04.1	+0.1
OPRZ				SN	Sn	17 10 18.4	+0.5
RRRZ	Republican Roa	0.32	183	PN	Pn	17 10 04.7	+0.3
RRRZ				SN	Sn	17 10 18.6	-0.1
URZ	Urewera	0.51	118	PN	Pn	17 10 05.1	-0.3
URZ				SN	Sn	17 10 20.3	0.0
MWZ	Matawai	0.84	112	PN	Pn	17 10 07.7	+0.1
MWZ				SN	Sn	17 10 24.8	+0.4
RAHZ	Arahi	0.99	154	PN	Pn	17 10 09.6	+0.6
RAHZ				SN	Sn	17 10 26.6	-0.1
NMHZ	Naumai	1.10	169	PN	Pn	17 10 10.7	+0.8
BKZ	Black Stump Fm	1.15	182	PN	Pn	17 10 10.2	-0.2
BKZ				SN	Sn	17 10 28.9	-0.4
KNZ	Kokohu	1.34	139	PN	Pn	17 10 12.3	-0.1
KNZ				SN	Sn	17 10 31.9	-0.9
PUZ	Puketiti	1.36	93	PN	Pn	17 10 12.2	-0.4
PUZ				SN	Sn	17 10 32.2	-0.9
NGZ	Ngauruhoe	1.37	212	PN	Pn	17 10 13.1	+0.5
PRGZ	Paritu Road	1.39	131	PN	Pn	17 10 12.9	0.0
CNGZ	Carnagh Statio	1.40	110	PN	Pn	17 10 13.4	+0.5
HIZ	Hauiti	1.41	249	PN	Pn	17 10 13.4	+0.3
WPVZ	Whakapapa	1.41	213	PN	Pn	17 10 13.5	+0.3
MKAZ	Moumakai	1.42	309	PN	Pn	17 10 13.3	+0.2
TUVZ	Tukino	1.42	209	PN	Pn	17 10 13.4	+0.1
KUZ	Kuaotunu	1.43	333	PN	Pn	17 10 12.9	-0.4
MCHZ	McNeill Hill	1.43	175	PN	Pn	17 10 13.6	+0.4
MXZ	Matakaoa Point	1.48	73	PN	Pn	17 10 13.8	0.0
BHHZ	Black Hill Sta	1.51	194	PN	Pn	17 10 13.8	-0.4
MOVZ	Moawhango	1.51	204	PN	Pn	17 10 13.7	-0.5
MHGZ	Mahia Peninsul	1.56	137	PN	Pn	17 10 14.9	+0.2
PKVZ	Pokaka	1.57	216	PN	Pn	17 10 14.8	-0.1
CKHZ	Cape Kidnapper	1.69	166	PN	Pn	17 10 16.2	0.0
VRZ	Vera Road	1.78	231	PN	Pn	17 10 17.3	+0.1
KAHZ	Kahuranaki	1.79	172	PN	Pn	17 10 17.3	-0.1
PNHZ	Pukenui	1.91	188	PN	Pn	17 10 17.7	-1.1
PXZ	Pawanui	2.02	173	PN	Pn	17 10 19.4	-0.8
WPHZ	Waipukurau	2.04	182	PN	Pn	17 10 19.3	-1.0
TSZ	Takapari Road	2.08	192	PN	Pn	17 10 19.6	-1.3
WAZ	Wanganui	2.11	214	PN	Pn	17 10 20.7	-0.5
DVHZ	Dannevirke	2.29	187	PN	Pn	17 10 21.7	-1.7
POWZ	Post Office Ro	2.44	194	PN	Pn	17 10 23.6	-1.6
BFZ	Birch Farm	2.67	185	PN	Pn	17 10 26.2	-1.9
HOWZ	Holdsworth Sta	2.98	195	PN	Pn	17 10 29.5	-2.6
OGWZ	Otaki Gorge	2.99	200	PN	Pn	17 10 29.7	-2.5
KIW	Kapiti Island	3.10	203	PN	Pn	17 10 30.8	-2.9
TMWZ	Te Maipa	3.12	189	PN	Pn	17 10 31.5	-2.5
MTW	Mount Morrison	3.23	194	PN	Pn	17 10 32.3	-3.1
CAW	Cannon Point	3.29	200	PN	Pn	17 10 33.0	-3.1
SNZO	South Karori	3.58	203	PN	Pn	17 10 36.3	-3.6
TCW	Tory Channel	3.63	208	PN	Pn	17 10 37.0	-3.6
PLWZ	Palliser	3.68	195	PN	Pn	17 10 37.6	-3.6
NNZ	Nelson	4.02	216	PN	Pn	17 10 42.1	-3.6
QRZ	Quartz Range	4.18	227	PN	Pn	17 10 44.1	-3.7

ISK ***22*** *17:14:58.1,37°.68N×36°.17E, h4km, ML2.5*
DDA ***22*** *17:14:58.8,37°.54N×36°.22E, h7km±6km, Md2.8*
CSEM ***22*** *17:14:59.7±0.2,37°.54N×36°.19E, h16km±2km, MD2.8, Error ellipse: s-maj=6.5km s-min=4.6km az=166.0*
ISCJB ***22*** *17:15:00.1±0.4,37°.53N±0°.04×36°.19E±0°.04, h24km±5km, Error ellipse: s-maj=6.4km s-min=4.8km az=162.6*
ISC 22 17:15:00.1±0.5,37°.52N±0°.04×36°.19E±0°.04, h20km±3km, n28,σ0°88/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	Andirin	0.14	65	*i* P	Pg	17 15 04.9	+0.6
ANDN				*i* S	Sg	17 15 08.1	+0.8
ANDN	Andirin	0.14	65	*i* P	Pg	17 15 04.9	+0.6
ANDN				*i* S	Sg	17 15 08.1	+0.9
KOZT	Kozan	0.29	262	*e*Pg	Pg	17 15 05.3	-1.3
KOZT				*e*Sg	Sg	17 15 10.7	-0.4
KMRS	Kahramanmaras	0.56	92	*e*PG	Pg	17 15 10.4	-1.0
KMRS				*e*SG	Sg	17 15 19.3	+0.2
KMRS	Kahramanmaras	0.56	92	*e*Pg	Pg	17 15 10.4	-1.0
KMRS				*e*Sg	Sg	17 15 19.3	+0.3
CEYT	Ceyhan	0.62	215	*e*PG	Pg	17 15 13.2	+0.8
CEYT	Ceyhan	0.62	215	*e*Pg	Pg	17 15 13.2	+0.8
GAZ	Gaziantep	0.89	113	*e*PG	Pg	17 15 17.3	-0.1
GAZ	Gaziantep	0.89	113	*e*Pg	Pg	17 15 17.3	-0.1
KARA	Karaisali	0.94	254	*e*PG	Pg	17 15 17.3	-1.1
KARA	Karaisali	0.94	254	*e*Pg	Pg	17 15 17.3	-1.1
COBT	Iskenderun	1.00	177	*i* P	Pb	17 15 18.4	-0.4
COBT				*i* S	Sb	17 15 32.0	+0.4
COBT	Iskenderun	1.00	177	*i* P	Pb	17 15 18.4	-0.4
COBT				*i* S	Sb	17 15 32.0	+0.5
GZT	Gaziantep	1.11	98	*i* P	Pn	17 15 19.9	-0.6
GULE	Gulek	1.15	258	*i* S	Sb	17 15 36.5	+0.8
GULE	Gulek	1.15	258	*i* S	Sb	17 15 36.5	+0.7
PINB	Pinarbasi	1.16	8	*i* P	Pn	17 15 20.8	-0.5
PINB	

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.81**	**305**	*eP*		**P**		**17 40 16.0**	**+0.8**
AFI	**Afiamalu**	**8.75**	**42**	P		**P**		**17 40 50.7**	**-1.8**
	18nm,0.3s,baz=16,slow=3.4,SNR=30								
AFI				S		**S**		**17 42 28.4**	**-6.7**
	22nm,0.3s,baz=8.2,slow=22,SNR=8.9								
OUZ	**Omahuta**	**16.48**	**206**	*eP*		**P**		**17 42 14.4**	**+2.8**
	17nm,0.8s								
URZ	**Urewera**	**18.20**	**193**	P		**P**		**17 42 27.7**	**+0.2**
	7.2nm,0.3s,baz=344,slow=3.4,SNR=36								
URZ				S		**S**		**17 45 23.8**	**-2.8**
	1.0nm,0.3s,baz=73,slow=20,SNR=6.4								
URZ	**Urewera**	**18.20**	**193**	*eP*		**P**		**17 42 27.5**	**0.0**
URZ				S		**S**		**17 45 23.8**	**-2.8**
ARMA	**Armidale**	**29.22**	**244**	*eP*		**P**		**17 44 07.3**	**+1.6**
CTA	**Charters Tower**	**33.67**	**264**	P		**P**		**17 44 43.9**	**0.0**
	24nm,0.6s,mb4.9,baz=98,slow=10,SNR=45								
CTA	**Charters Tower**	**33.67**	**264**	*eP*		**P**		**17 44 43.9**	**0.0**
	18nm,0.6s,mb4.8								
CTA	**Charters Tower**	**33.67**	**264**	P		**P**		**17 44 43.9**	**0.0**
CTAO	**Charters Tower**	**33.67**	**264**	*eP*		**P**		**17 44 43.7**	**-0.2**
STKA	**Stephens Creek**	**37.94**	**244**	P		**P**		**17 45 20.1**	**+1.0**
	2.7nm,0.5s,mb4.0,baz=12,slow=24,SNR=11								
STKA	**Stephens Creek**	**37.94**	**244**	*eP*		**P**		**17 45 20.2**	**+1.1**
STKA	**Stephens Creek**	**37.94**	**244**	*eP*		**P**		**17 45 19.9**	**+0.8**
ASAR	**Alice Springs**	**44.69**	**257**	P		**P**		**17 46 12.8**	**+0.1**
	18nm,0.7s,mb4.7,baz=89,slow=8.3,SNR=424								
ASAR				PcP		PcP		17 47 44.0	+0.4
	1.3nm,0.5s,baz=104,slow=4.0,SNR=5.2								
ASAR				S		**S**		**17 52 05.5**	**-4.6**
	1.1nm,0.9s,baz=92,slow=16,SNR=6.1								
WB2	**Warramunga Arr**	**44.77**	**262**	*eP*		**P**		**17 46 12.0**	**-1.3**
WRA	**Warramunga Arr**	**44.78**	**262**	P		**P**		**17 46 12.6**	**-0.8**
	13nm,0.5s,mb4.7,baz=97,slow=8.4,SNR=76								
WRA				S		**S**		**17 52 12.2**	**+0.8**
	1.0nm,1.0s,baz=96,slow=14,SNR=4.1								
WRA	**Warramunga Arr**	**44.78**	**262**	P		**P**		**17 46 12.6**	**-0.8**
WRA				S		**S**		**17 52 12.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**53.21**	**262**	*eP*		**P**		**17 47 15.2**	**-0.6**
	9.9nm,0.6s,mb4.3								
MBWA	**Marble Bar**	**58.03**	**257**	*eP*		**P**		**17 47 48.1**	**-1.0**
KLBR	**Kellerberrin**	**58.21**	**245**	*eP*		**P**		**17 47 50.5**	**+0.2**
	7.2nm,0.6s,mb4.1								
MJAR	**Matsushiro Arr**	**70.35**	**324**	P		**P**		**17 49 05.2**	**-1.8**
	3.9nm,0.5s,mb4.2,baz=158,slow=6.4,SNR=17								
MAT	**Matsushiro**	**70.35**	**324**	P		**P**		**17 49 05.7**	**-1.3**
ASAJ	**Asahikawa**	**73.85**	**331**	P		**P**		**17 49 27.8**	**+0.7**
	8.9nm,0.7s,mb4.3,baz=162,slow=2.6,SNR=6.6								
PETK	**Petropavlovsk-**	**76.35**	**345**	P		**P**		**17 49 40.0**	**-0.8**
	4.6nm,0.8s,mb4.0,baz=131,slow=8.1,SNR=6.0								
KSRS	**Korea Array**	**77.04**	**318**	P		**P**		**17 49 45.0**	**0.0**
	1.8nm,0.6s,mb3.6,baz=128,slow=6.2,SNR=11								
YBH	**Yreka Blue Hor**	**80.20**	**39**	P		**P**		**17 50 03.9**	**+2.1**
	3.8nm,0.7s,mb3.8,baz=204,slow=0.9,SNR=9.4								
NVAR	**Mina Array Bea**	**80.92**	**43**	P		**P**		**17 50 07.7**	**+2.1**
	1.7nm,0.8s,mb3.5,baz=226,slow=9.5,SNR=10								
ENH	**Enshi**	**86.21**	**304**	*eP*		**P**		**17 50 32.5**	**+0.4**
	5.8nm,0.7s,mb4.3								
TXAR	**Lajitas Array**	**86.92**	**57**	P		**P**		**17 50 38.1**	**+2.7**
	0.5nm,0.6s,mb3.3,baz=226,slow=7.0,SNR=7.5								
VNA3	**Neumayer Olymp**	**88.09**	**176**	*e*		**P**		**17 50 39.4**	**-0.8**
ILAR	**Eielson Array**	**88.31**	**13**	P		**P**		**17 50 40.4**	**-0.6**
	0.2nm,0.5s,mb3.1,baz=211,slow=3.7,SNR=4.0								
VNA2	**Neumayer--Watz**	**88.54**	**177**	*e*		**P**		**17 50 41.7**	**-0.5**
	baz=204,slow=4.1								
CMAR	**Chiang Mai Arr**	**90.30**	**290**	P		**P**		**17 50 52.5**	**+1.2**
	4.7nm,0.8s,mb4.3,baz=120,slow=2.7,SNR=28								
ZALV	**Zalesovo Beam**	**110.64**	**321**	PKiKP		PKiKP		17 56 17.9	-0.6
	0.5nm,0.5s,baz=118,slow=2.9,SNR=3.6								
MKAR	**Makanchi Array**	**111.36**	**313**	PKiKP		PKiKP		17 56 18.9	-1.3
	0.6nm,0.6s,baz=93,slow=1.3,SNR=7.2								
KURK	**Kurchatov**	**114.15**	**317**	*e*PKiKP		PKiKP		17 56 24.6	-0.7
BVAR	**Borovoye Array**	**119.23**	**320**	PKP		PKPdf		17 56 34.3	-0.7
	1.8nm,0.5s,baz=317,slow=0.8,SNR=11								
AKTK	**Aktyubinsk**	**127.22**	**318**	PKP		PKPdf		17 56 50.9	+0.5
AKTO	**Aktyubinsk**	**127.22**	**318**	PKP		PKPdf		17 56 50.9	+0.5
	1.3nm,0.8s,baz=106,slow=9.5,SNR=4.3								
ARCES	**ARCESS Array B**	**128.99**	**350**	PKP		PKPdf		17 56 53.2	0.0
	9.3nm,1.1s,baz=19,slow=4.1,SNR=6.3								
NOA	**NORSAR Array B**	**139.04**	**353**	PKhKP		PKPpre		17 57 07.1	
	0.6nm,0.8s,baz=352,slow=3.7,SNR=3.4								
AKASG	**Malin Array Be**	**143.13**	**331**	PKP		PKPdf		17 57 16.9	-3.0
	4.5nm,0.6s,baz=42,slow=4.2,SNR=22								
MALT	**Malatya**	**144.10**	**308**	*e*PKPdf		PKPdf		17 57 21.9	-0.1
MALT	**Malatya**	**144.10**	**308**	||*i*P		PKPdf		17 57 22.2	+0.2
BRTR	**Keskin Array B**	**147.00**	**312**	PKPbc		PKPbc		17 57 29.6	-0.3
	2.1nm,0.5s,baz=138,slow=5.1,SNR=13								
BUR08	**Bucovina Ar. S**	**147.17**	**331**	*e*PKPbc		PKPbc		17 57 30.6	+0.6
BURAR	**Bucovina Array**	**147.18**	**331**	||*i*P		PKPbc		17 57 30.9	+0.9
KOLS	**Kolonicke sedl**	**147.42**	**335**	*e*P		PKPbc		17 57 31.3	+0.7
KOLS	**Kolonicke sedl**	**147.42**	**335**	*e*PKP		PKPbc		17 57 31.2	+0.6
PLOR	**Plostina**	**147.75**	**327**	||*i*P		PKPdf		17 57 28.5	+0.6
CRVS	**Cervenica-Dubn**	**147.76**	**336**	*e*P		PKPbc		17 57 32.8	+1.3
CRVS	**Cervenica-Dubn**	**147.76**	**336**	*e*PKP		PKPbc		17 57 32.8	+1.3
CLL	**Collm**	**148.14**	**347**	||*i*PKPbc		PKPbc		17 57 32.6	+0.2
	comp=Z,8.0nm,0.8s								
BRG	**Berggiesshubel**	**148.34**	**346**	*e*P		PKPbc		17 57 33.4	+0.5
	comp=Z,4.5nm,0.7s								
MLR	**Muntele Rosu**	**148.35**	**327**	||*i*P		PKPbc		17 57 33.2	+0.1
KECS	**Kecovo**	**148.48**	**336**	*e*P		PKPbc		17 57 33.7	+0.4
KECS	**Kecovo**	**148.48**	**336**	*e*PKP		PKPbc		17 57 33.7	+0.4
VYHS	**Vyhne**	**149.06**	**338**	*e*P		PKPbc		17 57 35.3	+0.6
VYHS	**Vyhne**	**149.06**	**338**	*e*PKP		PKPbc		17 57 35.3	+0.6
GERES	**GERESS Array B**	**150.29**	**345**	PKPbc		PKPbc		17 57 37.8	+0.2
	comp=Z,1.5nm,0.8s,baz=16,slow=1.9,SNR=13								
BZS	**Buzias**	**150.32**	**332**	||*i*P		PKPbc		17 57 37.5	-0.3

BJI ***22*** *17:53:25.0, 9°.97S×160°.74E, h35km, mB5.1/25, mb4.8/32, Ms5.0/22, Ms7 4.7/22*
IDC ***22*** *17:53:26.5±3.3, 9°.88S×160°.37E, h19km±19km, mb4.5/19, mb1 4.7/20, mb1mx4.6/22, mbtmp4.5/20, ML4.5/1, MS3.8/13, Ms1 3.8/13, ms1mx3.6/28, Error ellipse: s-maj=21.5km s-min=13.3km az=106.0*
ISCJB ***22*** *17:53:27.0±1.2, 9°.82S±0°.05×160°.24E±0°.05, h29km±7km, mb4.7/51, MS4.1/20, Error ellipse: s-maj=9.3km s-min=7.5km az=160.4*
NEIC ***22*** *17:53:28.2±1.4, 9°.79S×160°.27E, h30km±9km, mb4.9/25, Error ellipse: s-maj=11.8km s-min=5.7km az=118.0*
ISC 22 17:53:28.3±1.2, 9°.82S±0°.05×160°.28E±0°.05, h27km±8km, h35km±.8km: pP-P, n150, σ0s74/142, mb4.7/51, MS4.1/20, 32C-31D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.51**	**319**		Pg	**Pb**		**17 53 38.0**	**-0.6**
	1μm,0.3s,baz=149,slow=5.9,SNR=1028								
HNR					Lg			17 53 47.4	
	6μm,0.3s,baz=340,slow=22,SNR=82								
HNR	**Honiara**	**0.51**	**319**	*eP*		**Pb**		**17 53 38.0**	**-0.7**
DZM	**Mont Dzumac**	**13.54**	**155**	*e*LR		LR		17 59 43.2	
	610nm,25.6s								
CTA	**Charters Tower**	**16.96**	**231**	Pn		**Pn**		**17 57 24.4**	**+0.7**
	1.2nm,0.3s,baz=50,slow=12,SNR=27								
CTA				LR		LR		18 03 05.2	
	comp=Z,326nm,19.0s,baz=50,slow=34								
CTA	**Charters Tower**	**16.96**	**231**	*eP*		**Pn**		**17 57 25.5**	**+1.8**
	25nm,0.8s								
CTA	**Charters Tower**	**16.96**	**231**	Pn		**Pn**		**17 57 24.4**	**+0.7**
CTA				LR		LR		18 03 05.2	
CTAO	**Charters Tower**	**16.96**	**231**	*eP*		**Pn**		**17 57 24.3**	**+0.6**
	35nm,0.8s								
EIDS	**Eidsvold**	**17.77**	**208**	*eP*		**Pn**		**17 57 35.2**	**+1.5**
	36nm,1.3s								
ARMA	**Armidale**	**22.03**	**200**	*eP*		**P**		**17 58 20.4**	**-0.3**
ARMA	**Armidale**	**22.03**	**200**	*eP*		**P**		**17 58 20.3**	**-0.5**
	20nm,1.0s,mb4.5								
WRA	**Warramunga Arr**	**26.98**	**245**	P		**P**		**17 59 07.5**	**-0.5**
	21nm,1.0s,mb4.6,baz=70,slow=9.1,SNR=25								
WRA					PcP	PcP		18 02 29.0	-0.5
	1.9nm,0.7s,baz=64,slow=2.3,SNR=4.7								
AFI	**Afiamalu**	**27.63**	**101**	LR		LR		18 07 37.1	
	comp=Z,214nm,18.7s,MS3.8,baz=286,slow=31								
GUMO	**Guam**	**27.84**	**326**	LR		LR		18 09 05.4	
	comp=Z,206nm,18.4s,MS3.8,baz=149,slow=34								
STKA	**Stephens Creek**	**27.96**	**216**	P		**P**		**17 59 15.8**	**-0.9**
	9.7nm,0.9s,mb4.5,baz=40,slow=14,SNR=12								
STKA				LR		LR		18 09 35.2	
	comp=Z,215nm,21.4s,MS3.7,baz=24,slow=35								
STKA	**Stephens Creek**	**27.96**	**216**	*eP*		**P**		**17 59 15.8**	**-0.8**
	6.2nm,0.6s,mb4.4								
STKA	**Stephens Creek**	**27.96**	**216**	*eP*		**P**		**17 59 14.7**	**-1.9**
	9.2nm,1.5s,mb4.2								
ASAR	**Alice Springs**	**28.70**	**238**	P		**P**		**17 59 21.8**	**-1.5**
	1.9nm,0.6s,mb4.0,baz=61,slow=10,SNR=41								
ASAR					PcP	PcP		18 02 32.3	-1.3
	1.5nm,0.9s,baz=64,slow=2.9,SNR=4.4								
FITZ	**Fitzroy Crossi**	**34.56**	**252**	*eP*		**P**		**18 00 14.1**	**-0.9**
	20nm,0.6s,mb5.2								
FITZ	**Fitzroy Crossi**	**34.56**	**252**	*eP*		**P**		**18 00 14.1**	**-0.9**
	10nm,0.7s,mb4.9								
MBWA	**Marble Bar**	**40.56**	**249**	*eP*		**P**		**18 01 04.6**	**-1.1**
NWAO	**Narrogin (SRO)**	**45.78**	**233**	LR		LR		18 19 36.0	
	comp=Z,272nm,18.3s,MS4.2,baz=276,slow=34								
PPT	**Papeete**	**49.20**	**105**	*e*LR		LR		18 16 28.5	
	122nm,23.0s								
PPT	**Papeete**	**49.20**	**105**	LR		LR		18 18 55.4	
	comp=Z,119nm,21.5s,MS3.9,baz=328,slow=31								
TBI	**Tubuai**	**49.77**	**112**	*e*LQ				18 14 33.0	
	360nm,29.2s								
TBI					*e*LR	LR		18 16 45.1	
	112nm,29.5s								
MJAR	**Matsushiro Arr**	**50.57**	**337**	P		**P**		**18 02 23.3**	**-1.3**
	5.1nm,0.9s,mb4.4,baz=173,slow=9.0,SNR=9.5								
MAJO	**Matsushiro**	**50.57**	**337**	*eP*		**P**		**18 02 23.5**	**-1.2**
	4.7nm,0.7s,mb4.5								
MAT	**Matsushiro**	**50.57**	**337**	P		**P**		**18 02 23.6**	**-1.0**
KSRS	**Korea Array**	**55.95**	**329**	P		**P**		**18 03 04.4**	**+0.2**
	5.2nm,1.0s,mb4.5,baz=144,slow=6.9,SNR=13								
KSRS					LR	LR		18 26 55.4	
	comp=Z,84nm,18.6s,MS3.9,baz=338,slow=36								
ASAJ	**Asahikawa**	**56.03**	**345**	P		**P**		**18 03 05.2**	**+0.6**
	6.3nm,0.5s,mb4.9,baz=154,slow=14,SNR=9.0								
QIZ	**Qiongzhong**	**57.39**	**300**	P		**P**		**18 03 14.5**	**-0.3**
QIZ				pP		pP		18 03 23.9	+0.8
QIZ				S		**S**		**18 11 09.4**	**-0.9**
QIZ				pmax		pmax			
	comp=Z,9.0nm,1.2s,mb4.7								
QIZ				pmax		pmax			
	comp=Z,150nm,11.0s								
QIZ				LR		LR			
	comp=N,340nm,5.8s								
QIZ				LR		LR			
	comp=E,150nm,7.8s								
QIZ				LR		LR			
	comp=Z,440nm,13.3s,MS4.7								
NJ2	**Nanjing**	**57.45**	**318**	*eP*		**P**		**18 03 16.5**	**+1.5**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.6s,mb5.0								
MDJ	**Mudanjiang**	**60.88**	**335**	P		**P**		**18 03 39.1**	**+0.7**
MDJ				pP		pP		18 03 48.4	+1.6
MDJ				sP		sP		18 03 52.3	+2.3
MDJ				ScP		ScP		18 08 21.1	-0.6
MDJ				PcS		PcS		18 08 24.9	+0.5
MDJ				S		**S**		**18 11 55.8**	**+1.3**
MDJ				sS		sS		18 12 11.8	+3.4
MDJ				ScS		ScS		18 13 27.8	+0.1
MDJ				pmax		pmax			
	comp=Z,11nm,1.2s,mb4.9								
MDJ				pmax		pmax			
	comp=Z,86nm,4.5s								
MDJ				LR		LR			
	comp=N,58nm,23.9s,MS3.8								
MDJ				LR		LR			
	comp=E,58nm,20.8s,MS3.8								
MDJ				LR		LR			
	comp=Z,62nm,23.1s,MS3.7								
CN2	**Changchun**	**62.04**	**332**	*eP*		**P**		**18 03 46.4**	**+0.1**
CN2				*e*pP		pP		18 03 56.6	+1.9
CN2				*e*S		**S**		**18 12 08.1**	**-1.2**
CN2				pmax		pmax			
	comp=Z,20nm,1.0s,mb5.2								
CN2				LR		LR			
	comp=N,200nm,12.0s,MS4.8								
CN2				LR		LR			
	comp=E,300nm,12.0s,MS4.8								
CN2				LR		LR			
	comp=Z,200nm,13.0s,MS4.5								
PETK	**Petropavlovsk-**	**62.71**	**358**	P		**P**		**18 03 49.9**	**-0.7**
	comp=Z,1.8nm,0.5s,mb4.4,baz=177,slow=8.4,SNR=10								
PETK				LR		LR		18 28 00.8	
	comp=Z,41nm,19.0s,MS3.6,baz=349,slow=33								
GYA	**Guiyang**	**63.32**	**306**	P		**P**		**18 03 55.8**	**+0.6**
GYA				pP		pP		18 04 07.3	+3.6
GYA				sP		sP		18 04 12.8	+5.9
GYA				PP		PP		18 06 18.0	+3.2
GYA				ScP		ScP		18 08 31.4	-1.6
GYA				S		**S**		**18 12 24.6**	**-1.5**
GYA				sS		sS		18 12 41.0	+1.0
GYA				SS		SS		18 16 31.3	-2.0
GYA				pmax		pmax			
	comp=Z,20nm,1.0s,mb5.2								
GYA				pmax		pmax			
	comp=Z,130nm,5.3s								
GYA				LR		LR			
	comp=N,590nm,18.4s,MS4.9								
GYA				LR		LR			
	comp=E,450nm,19.8s,MS4.9								
GYA				LR		LR			
	comp=Z,550nm,18.0s,MS4.8								
BJI	**Beijing**	**64.23**	**324**	P		**P**		**18 04 01.8**	**+0.9**
BJI				pmax		pmax			
	comp=Z,6.0nm,0.9s,mb4.6								
BJI				pmax		pmax			
	comp=Z,280nm,3.7s								
BJI				LR		LR			
	comp=N,290nm,24.7s,MS4.5								
BJI				LR		LR			
	comp=E,290nm,24.9s,MS4.5								
BJI				LR		LR			
	comp=Z,64nm,22.4s,MS3.8								
KMI	**Kunming**	**65.93**	**303**	P		**P**		**18 04 13.9**	**+1.6**
KMI				pP		pP		18 04 24.3	+3.6
KMI				sP		sP		18 04 28.5	+4.6
KMI				PP		PP		18 06 41.1	+3.4
KMI				S		S		18 12 56.3	-2.0
KMI				sS		sS		18 13 14.1	+1.9
KMI				SKS				18 14 02.8	
KMI				SS		SS		18 17 14.0	+0.1
KMI				pmax		pmax			
	comp=Z,3.0nm,1.2s,mb4.2								
KMI				pmax		pmax			
	comp=Z,70nm,3.1s								
KMI				LR		LR			
	comp=N,390nm,8.9s								
KMI				LR		LR			
	comp=E,500nm,12.1s								
KMI				LR		LR			
	comp=Z,310nm,8.9s								
CMAR	**Chiang Mai Arr**	**66.71**	**295**	P		**P**		**18 04 17.9**	**+0.5**
	comp=Z,4.1nm,0.9s,mb4.4,baz=122,slow=5.1,SNR=23								
CHTO	**Chiang Mai**	**66.83**	**295**	*eP*		**P**		**18 04 17.9**	**-0.3**
	comp=Z,5.7nm,1.3s,mb4.4								
HHC	**Hu-ho-hao-te**	**67.49**	**322**	*eP*		**P**		**18 04 24.4**	**+2.5**
HHC				pP		pP		18 04 34.8	+4.4
HHC				sP		sP		18 04 38.8	+5.2
HHC				PcP		PcP		18 04 51.5	+2.4
HHC				PP		PP		18 06 55.9	+4.9
HHC				ScP				18 08 50.8	
HHC				S		S		18 13 18.0	+1.4
HHC				sS		sS		18 13 35.3	+4.7
HHC				ScS		ScS		18 14 16.5	-1.9
HHC				SS		SS		18 17 39.8	+2.2
HHC				pmax		pmax			
	comp=Z,15nm,1.1s,mb4.9								
HHC				pmax		pmax			
	comp=Z,240nm,5.3s								
HHC				LR		LR			
	comp=N,210nm,16.7s,MS4.6								
HHC				LR		LR			
	comp=E,220nm,15.5s,MS4.6								
HHC				LR		LR			
	comp=Z,180nm,16.0s,MS4.4								
CD2	**Chengdu**	**67.63**	**309**	*eP*		**P**		**18 04 24.8**	**+1.8**
CD2				pP		pP		18 04 35.3	+3.8
CD2				sP		sP		18 04 39.4	+4.7
CD2				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.9								
CD2				pmax		pmax			
	comp=Z,20nm,4.8s								
LZH	**Lanzhou**	**70.00**	**314**	*eP*		**P**		**18 04 40.5**	**+2.8**
LZH				pP		pP		18 04 50.8	+4.6
LZH				sP		sP		18 04 54.9	+5.5
LZH				pmax		pmax			
	comp=Z,23nm,1.3s,mb5.0								
LZH				pmax		pmax			
	comp=Z,72nm,7.6s								
LZH				LR		LR			
	comp=N,410nm,17.5s								
LZH				LR		LR			
	comp=Z,500nm,19.0s,MS4.8								
ULN	**Ulaanbaatar**	**74.22**	**326**	*eP*		**P**		**18 05 03.2**	**+0.5**
	comp=Z,6.9nm,1.0s,mb4.5								
GTA	**Gaotai**	**74.38**	**316**	*eP*		**P**		**18 05 04.9**	**+1.1**
GTA				pP		pP		18 05 14.3	+1.9
GTA				sP		sP		18 05 18.9	+3.3
GTA				S		S		18 14 36.6	-0.2
GTA				pmax		pmax			
	comp=Z,4.0nm,1.2s,mb4.2								
GTA				pmax		pmax			
	comp=Z,99nm,5.7s								
GTA				LR		LR			
	comp=N,110nm,13.8s,MS4.6								
GTA				LR		LR			
	comp=E,170nm,14.2s,MS4.6								
GTA				LR		LR			
	comp=Z,89nm,13.0s,MS4.2								
SONM	**Songino Array**	**74.56**	**326**	P		**P**		**18 05 05.1**	**+0.4**
	comp=Z,3.7nm,0.6s,mb4.5,baz=138,slow=5.5,SNR=39								
SONM				LR		LR		18 35 28.3	
	comp=Z,80nm,19.1s,MS4.0,baz=13,slow=34								
YAK	**Yakutsk**	**75.49**	**346**	*eP*		**P**		**18 05 09.0**	**-0.7**
	comp=Z,30nm,0.8s,mb5.3								
BILL	**Biiibino**	**77.78**	**2**	*eP*		**P**		**18 05 21.8**	**-0.7**
	comp=Z,9.5nm,0.9s,mb4.7								
TTA	**Tatalina**	**79.90**	**19**	*eP*		**P**		**18 05 34.0**	**-0.2**
	comp=Z,9.0nm,1.1s,mb4.6								
QSPA	**South Pole Qui**	**80.18**	**180**	P		**P**		**18 05 35.3**	**-0.3**
	comp=Z,14nm,0.8s,mb5.0,baz=12,slow=1.6,SNR=49								
QSPA	**South Pole Qui**	**80.18**	**180**	*eP*		**P**		**18 05 35.1**	**-0.6**
	comp=Z,27nm,1.2s,mb5.1								
TRF	**Thorofare Moun**	**82.14**	**20**	*eP*		**P**		**18 05 44.4**	**-1.8**
	comp=Z,3.6nm,0.8s,mb4.3								
MCK	**McKinley**	**82.79**	**20**	*eP*		**P**		**18 05 48.5**	**-1.0**
	comp=Z,24nm,1.0s,mb5.2								
MAW	**Mawson**	**83.81**	**202**	P		**P**		**18 05 55.9**	**+0.9**
	comp=Z,4.4nm,0.7s,mb4.7,baz=96,slow=7.9,SNR=13								
COLA	**College**	**83.88**	**20**	*eP*		**P**		**18 05 53.4**	**-1.7**
	comp=Z,7.2nm,0.8s,mb4.8								
ILAR	**Eielson Array**	**84.14**	**20**	P		**P**		**18 05 54.8**	**-1.7**
	comp=Z,2.7nm,0.7s,mb4.5,baz=260,slow=4.7,SNR=21								
ILAR				LR		LR		18 42 13.7	
	comp=Z,42nm,18.1s,MS3.9,baz=254,slow=35								
WMQ	**Urumqi**	**84.46**	**316**	*eP*		**P**		**18 05 59.0**	**+0.4**
WMQ				sP		sP		18 06 14.0	+3.6
WMQ				PP		PP		18 09 16.0	+1.8
WMQ				S		S		18 16 21.0	-2.4
WMQ				SS		SS		18 21 55.0	+0.5
WMQ				pmax		pmax			
	comp=Z,16nm,1.0s,mb5.1								
WMQ				pmax		pmax			
	comp=Z,42nm,7.0s								
WMQ				LR		LR			
	comp=N,62nm,20.0s,MS4.1								
WMQ				LR		LR			
	comp=E,54nm,20.0s,MS4.1								
WMQ				LR		LR			
	comp=Z,46nm,20.0s,MS3.9								
EGAK	**Eagle**	**86.14**	**21**	*eP*		**P**		**18 06 06.8**	**+0.3**
	comp=Z,12nm,1.0s,mb5.1								
DAWY	**Dawson**	**86.42**	**23**	*eP*		**P**		**18 06 08.4**	**+0.5**
YBH	**Yreka Blue Hor**	**86.93**	**47**	P		**P**		**18 06 10.6**	**-0.4**
	comp=Z,8.8nm,0.9s,mb5.0,baz=197,slow=1.0,SNR=17								
YBH	**Yreka Blue Hor**	**86.93**	**47**	*eP*		**P**		**18 06 10.7**	**-0.3**
	comp=Z,12nm,1.0s,mb5.1								
HUMO	**Hull Mountain**	**87.00**	**46**	*eP*		**P**		**18 06 11.4**	**+0.1**
	comp=Z,11nm,1.0s,mb5.0								
K05A	**Summer Lake**	**88.50**	**46**	⇑P		**P**		**18 06 18.3**	**-0.2**
	baz=89								
WAKR	**Walker**	**88.54**	**51**	*eP*		**P**		**18 06 18.6**	**-0.1**
	comp=Z,4.8nm,1.1s,mb4.7								
ISA	**Isabella**	**88.63**	**54**	⇓P		**P**		**18 06 18.8**	**-0.4**
	baz=89								
EDW2	**Edwards Air Fo**	**88.84**	**54**	⇑P		**P**		**18 06 20.3**	**0.0**
	baz=89								
MKAR	**Makanchi Array**	**88.98**	**318**	P		**P**		**18 06

J13A	Cove Ranch, Pi	93.45	47	⇑P		P	18 06 42.1	+0.6
	baz=94,SNR=6.7							
I13A	Wildhorse Cree	93.58	46	⇓P		P	18 06 42.6	+0.6
	baz=94,SNR=13							
H13A	Challis	93.60	46	P		P	18 06 42.4	+0.3
	baz=94,SNR=20							
P14A	Drum Mountains	93.61	51	⇓P		P	18 06 42.8	+0.5
	baz=94							
G13A	Cobalt	93.70	45	⇓P		P	18 06 42.6	0.0
	baz=94,SNR=12							
F13A	Darby	93.76	44	P		P	18 06 42.5	-0.3
	baz=94,SNR=12							
L14A	Malta	93.89	48	⇑P		P	18 06 44.3	+0.7
	baz=94,SNR=6.0							
I14A	Mackay	94.06	46	⇑P		P	18 06 45.0	+0.7
	baz=94,SNR=9.9							
H14A	Leadore	94.23	46	⇓P		P	18 06 45.3	+0.3
	baz=94,SNR=11							
K15A	Arbon	94.52	48	⇑P		P	18 06 47.7	+1.3
	baz=95							
MCMT	McKenzie Canyo	94.63	45	eP		P	18 06 47.2	+0.4
	comp=Z,0.8nm,0.9s,mb4.2							
H15A	Lima	94.74	46	⇓P		P	18 06 48.0	+0.6
	baz=95							
G15A	Dillon	94.93	45	⇑P		P	18 06 48.3	+0.1
	baz=95							
K16A	Soda Springs	95.22	48	⇑P		P	18 06 50.6	+1.0
	baz=95							
C15A	Salmond Ranch,	95.25	43	⇑P		P	18 06 48.8	-0.8
	baz=95							
G16A	Moss Hill, Enn	95.42	45	⇑P		P	18 06 50.5	+0.1
	baz=96							
F17A	Fitzpatrick Pl	96.31	45	⇓P		P	18 06 55.1	+0.6
	baz=96							
YKA	Yellowknife Ar	96.38	28	P		P	18 06 53.2	-1.2
	comp=Z,3.9nm,0.8s,mb4.9,baz=256,slow=4.3,SNR=8.5							
YKA				LR		LR	18 52 52.3	
	comp=Z,4.1nm,18.4s,baz=205,slow=37							
YKA	Yellowknife Ar	96.38	28	P		P	18 06 53.2	-1.2
YKA				LR		LR	18 52 52.3	
D17A	Six Diamond Ra	96.45	43	⇑P		P	18 06 54.2	-0.9
	baz=96							
C17A	Wharram Farm,	96.47	43	⇑P		P	18 06 54.8	-0.3
	baz=96							
B17A	L&G Farms, Che	96.53	42	⇓P		P	18 06 55.0	-0.4
	baz=97							
I18A	Diamond G Ranc	96.62	47	⇑P		P	18 06 56.4	+0.4
	baz=97							
A17A	Triple J Farms	96.67	42	⇓P		P	18 06 55.6	-0.5
	baz=97							
BW06	Boulder Array	96.70	48	⇓P		P	18 06 55.7	-0.6
	baz=97							
PDAR	Pinedale Array	96.70	48	P		P	18 06 56.5	+0.2
	comp=Z,2.9nm,0.9s,mb4.7,baz=266,slow=3.3,SNR=19							
E18A	Harlowton	96.91	44	⇓P		P	18 06 57.0	-0.2
	baz=97							
F18A	Big Timber	96.97	45	⇑P		P	18 06 57.7	+0.2
	baz=97							
EGMT	Eagleton	97.19	43	⇓P		P	18 06 58.0	-0.4
	baz=97							
C19A	Slack Wire Ran	97.63	43	⇑P		P	18 06 59.7	-0.7
	baz=98							
E19A	Rath Farm, Rou	97.67	44	⇓P		P	18 07 00.2	-0.4
	baz=98							
SNAA	Sanae	97.92	185	P		P	18 06 59.7	-1.6
	comp=Z,0.3nm,0.7s,mb3.9,baz=166,slow=5.9,SNR=6.4							
G20A	Bridger	97.94	46	⇓P		P	18 07 01.6	-0.2
	baz=98							
E20A	Meyer Farm, Mu	98.12	44	⇑P		P	18 07 03.0	+0.3
	baz=98							
LAO	LASA Array	99.45	44	eP		P	18 07 08.4	-0.2
	comp=Z,12nm,1.3s,mb5.3							
TXAR	Lajitas Array	99.98	62	LR		LR	18 46 13.0	
	comp=Z,59nm,18.1s,MS4.1,baz=185,slow=32							
BOSA	Boshof	122.16	227	PKP		PKPdf	18 12 20.3	-1.0
	comp=Z,3.7nm,1.1s,baz=3.9,slow=5.5,SNR=4.0							
TORD	Torodi Ar. Bea	158.76	281	PKPab		PKPab	18 13 58.6	-1.7
	comp=Z,10nm,1.0s,baz=115,slow=3.2,SNR=7.0							
TORD	Torodi Ar. Bea	158.76	281	PKPab		PKPab	18 13 58.6	-1.7

*ISCJB **22** 18:02:48.0±0.7, 52.°66S±0.°10×18.°7E±0.°2, h2km, mb4.1/9, MS3.6/8, Error ellipse: s-maj=20.1km s-min=13.9km az=168.6*
*IDC **22** 18:02:48.3±0.7, 52.°63S×18.°86E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.0/18, mbtmp4.1/9, MS3.7/8, Ms1 3.7/8, ms1mx3.5/22, Error ellipse: s-maj=27.3km s-min=18.4km az=66.0*
*NEIC **22** 18:02:49.5±0.5, 52.°59S×18.°86E, h10km, mb3.6/1, Error ellipse: s-maj=16.6km s-min=12.3km az=65.0*
ISC 22 18:02:49.9±0.7, 52.°69S±0.°10×18.°8E±0.°2, h10km, n24, σ0°99/15, mb4.1/9, MS3.6/8, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	Maitri	18.43	187	eP	Pn	18 07 05.1	+0.1
SUR	Sutherland	20.35	5	LR	LR	18 13 59.2	
	comp=Z,185nm,19.1s,MS3.5,baz=244,slow=33						
SNAA	Sanae	21.30	199	P	P	18 07 37.1	+0.9
	4.0nm,0.9s,mb3.8,baz=32,slow=9.2,SNR=17						
SNAA				LR	LR	18 13 28.2	
	comp=Z,82nm,21.7s,MS3.1,baz=195,slow=30						
VNA2	Neumayer--Watz	21.73	203	ePdiff	P	18 07 38.1	-2.8
	baz=37,slow=5.5						
VNA2				e		18 07 40.8	
VNA3	Neumayer Olymp	22.50	204	ePdiff	P	18 07 47.4	-1.6
BOSA	Boshof	24.53	14	LR	LR	18 15 47.0	
	comp=Z,282nm,18.6s,MS3.8,baz=164,slow=32						
MAW	Mawson	25.80	142	P	P	18 08 21.3	+0.6
	4.2nm,0.8s,mb4.0,baz=287,slow=11,SNR=7.6						
MAW	Mawson	25.80	142	eP	P	18 08 20.8	+0.2
	1.4nm,0.9s,mb3.5						
LBTB	Lobatse	28.12	13	LR	LR	18 17 43.8	
	comp=Z,278nm,19.1s,MS3.9,baz=137,slow=32						
QSPA	South Pole Qui	37.54	180	P	P	18 10 04.4	+1.0
	11nm,0.9s,mb4.6,baz=242,slow=4.4,SNR=25						
QSPA				PcP	PcP	18 12 20.2	-0.9
	1.9nm,1.0s,baz=243,slow=5.0,SNR=3.4						
PLCA	Paso Flores	58.59	243	P	P	18 12 47.3	+0.8
	1.5nm,1.0s,mb4.0,baz=146,slow=11,SNR=3.3						
CPUP	Villa Florida	61.23	264	P	P	18 13 04.9	0.0
	0.3nm,0.3s,mb3.9,baz=140,slow=7.9,SNR=3.1						
CPUP				LR	LR	18 33 37.9	
	comp=Z,69nm,19.1s,MS3.8,baz=303,slow=30						
DBIC	Dimbokro	62.45	333	P	P	18 13 13.4	+0.3
	4.4nm,0.8s,mb4.6,baz=159,slow=6.3,SNR=4.7						
DBIC				LR	LR	18 34 02.0	
	comp=Z,43nm,19.1s,MS3.6,baz=111,slow=30						
BDFB	Brasilia	63.65	279	LR	LR	18 35 15.3	
	comp=Z,33nm,20.4s,MS3.5,baz=156,slow=31						
TORD	Torodi Ar. Bea	67.20	342	P	P	18 13 42.8	-1.2
	182nm,0.3s,baz=185,slow=6.0,SNR=2.9						
TORD	Torodi Ar. Bea	67.20	342	P	P	18 13 42.8	-1.2
LPAZ	La Paz	75.36	262	P	P	18 14 34.7	+1.2
	1.5nm,0.9s,mb3.9,baz=104,slow=4.9,SNR=4.8						
LPAZ				LR	LR	18 42 33.6	
	comp=Z,44nm,18.3s,MS3.8,baz=309,slow=32						
ASAR	Alice Springs	85.44	124	P	P	18 15 27.4	-0.2
	0.9nm,0.8s,mb4.0,baz=204,slow=4.6,SNR=10						
WRA	Warramunga Arr	88.75	122	P	P	18 15 43.6	-0.2
	0.9nm,1.0s,mb4.1,baz=214,slow=4.3,SNR=3.3						
SONM	Songino Array	124.70	55	PKP	PKPdf	18 21 49.0	+0.4
	0.6nm,0.9s,baz=270,slow=3.0,SNR=4.4						
PDAR	Pinedale Array	144.56	275	PKP	PKPdf	18 22 24.0	-1.7
	2.5nm,0.8s,baz=123,slow=5.1,SNR=20						
LAO	LASA Array	144.66	283	ePKPdf	PKPdf	18 22 25.2	-0.5
NVAR	Mina Array Bea	147.26	262	PKPbc	PKPbc	18 22 33.5	+0.7
	1.6nm,0.7s,baz=133,slow=4.3,SNR=14						
ILAR	Eielson Array	165.83	334	PKPab	PKPab	18 23 54.5	+1.4
	1.2nm,0.8s,baz=23,slow=3.8,SNR=10						

*ISCJB **22** 18:13:01.8±3.4, 15.°8N±0.°1×96.°0E±0.°2, h2km±20km, mb3.8/5, MS3.8/3, Error ellipse: s-maj=27.2km s-min=16.7km az=154.1*
*IDC **22** 18:13:02.0±1.4, 15.°41N×95.°93E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.5/26, mbtmp3.8/5, ML4.0/1, MS3.7/4, Ms1 3.7/4, ms1mx3.0/29, Error ellipse: s-maj=24.4km s-min=21.7km az=56.0*
*NEIC **22** 18:13:08.0±1.0, 15.°68N×96.°18E, h35km, mb4.0/1, Error ellipse: s-maj=17.8km s-min=15.8km az=192.0*
ISC 22 18:13:04.1±3.9, 15.°7N±0.°1×96.°0E±0.°2, h8km±22km, n13, σ0°77/11, mb3.8/5, MS3.8/3, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	3.92	45	Pn	Pn	18 14 05.0	+0.4
	2.5nm,0.3s,baz=233,slow=15,SNR=51						
CMAR				Pg	Pg	18 14 19.6	+0.4
	3.7nm,0.3s,baz=228,slow=20,SNR=29						
CMAR				Lg		18 15 16.6	
	4.7nm,0.3s,baz=209,slow=32,SNR=5.1						
CHTO	Chiang Mai	4.17	42	eP	Pn	18 14 07.4	-0.7
SHL	Shillong	10.56	339	ePKP	Pn	18 15 34.0	-1.8
SHL				eS	Sn	18 17 34.0	-0.3
PSI	Prapat	13.13	167	LR	LR	18 22 27.0	
	comp=Z,156nm,18.3s,baz=254,slow=44						
MKAR	Makanchi Array	33.05	343	P	P	18 19 41.0	+0.9
	1.1nm,0.7s,mb3.9,baz=154,slow=9.5,SNR=9.6						
KSRS	Korea Array	35.56	46	LR	LR	18 35 27.1	
	comp=Z,49nm,18.7s,MS3.3,baz=245,slow=38						
KURK	Kurchatov	37.65	342	eP	P	18 20 19.9	+0.4
	1.8nm,0.8s,mb3.9						
ZALV	Zalesovo Beam	39.17	350	P	P	18 20 33.1	+0.8
	2.1nm,0.7s,mb4.0,baz=176,slow=8.9,SNR=13						
MJAR	Matsushiro Arr	42.77	53	LR	LR	18 40 44.7	
	comp=Z,89nm,18.1s,MS3.7,baz=190,slow=39						
AKTK	Aktyubinsk	46.21	327	P	P	18 21 29.8	+0.3
AKTO	Aktyubinsk	46.21	327	P	P	18 21 29.8	+0.3
	0.3nm,0.3s,mb3.6,baz=132,slow=8.6,SNR=3.9						
WRA	Warramunga Arr	51.70	132	P	P	18 22 11.1	-0.9
	0.3nm,0.3s,mb3.7,baz=326,slow=5.5,SNR=3.3						
BOSA	Boshof	81.32	237	LR	LR	18 58 48.0	
	comp=Z,112nm,18.9s,MS4.2,baz=344,slow=34						

*CSEM **22** 18:24:58.8±0.4, 37.°68N×36.°07E, h8km, MD2.8, Error ellipse: s-maj=12.3km s-min=5.7km az=160.0*
*DDA **22** 18:24:58.8, 37.°51N×36.°17E, h7km±6km, Md2.8*
*ISK **22** 18:24:58.0, 37.°65N×36.°16E, h2km, ML2.3*
*ISCJB **22** 18:24:59.9±0.6, 37.°56N±0.°06×36.°14E±0.°04, h17km±6km, Error ellipse: s-maj=10.9km s-min=4.7km az=161.1*
ISC 22 18:24:59.9±0.6, 37.°55N±0.°06×36.°14E±0.°04, h17km±4km, n24, σ0°95/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	Andirin	0.17	81	iP	Pg	18 25 04.9	+0.6
ANDN				iS	Sg	18 25 07.9	+0.6
ANDN	Andirin	0.17	81	iP	Pg	18 25 04.9	+0.6
ANDN				iS	Sg	18 25 07.9	+0.6
KOZT	Kozan	0.26	254	PG	Pg	18 25 05.1	-0.5
KOZT				eSG	Sg	18 25 10.4	+0.9
KMRS	Kahramanmaras	0.61	94	ePG	Pg	18 25 10.1	-1.8
KMRS				eSG	Sg	18 25 19.7	-0.4
KMRS	Kahramanmaras	0.61	94	ePg	Pg	18 25 10.1	-1.9
KMRS				eSg	Sg	18 25 19.7	-0.4
CEYT	Ceyhan	0.62	210	ePG	Pg	18 25 13.1	+0.9
CEYT	Ceyhan	0.62	210	ePg	Pg	18 25 13.1	+0.9
KARA	Karaisali	0.91	252	ePG	Pg	18 25 16.9	-0.6
KARA	Karaisali	0.91	252	ePg	Pg	18 25 16.9	-0.7
GAZ	Gaziantep	0.94	114	ePG	Pg	18 25 17.8	-0.4
GAZ	Gaziantep	0.94	114	ePg	Pg	18 25 17.8	-0.3
GULE	Gulek	1.11	256	iP	Pn	18 25 19.0	-1.7
GULE	Gulek	1.11	256	iP	Pn	18 25 19.0	-1.7
GZT	Gaziantep	1.15	99	iP	Pn	18 25 20.1	-1.1
GZT				iS	Sb	18 25 32.2	-3.9
SARI	SarD1z-Kayseri	1.21	21	ePG	Pn	18 25 14.3	-7.7
SARI	SarD1z-Kayseri	1.21	21	ePg	Pn	18 25 14.3	-7.7
YAYL	Yayladag	1.52	181	iP	Pn	18 25 27.0	+0.8
YAYL				iS	Sn	18 25 46.1	+0.6
YAYL	Yayladag	1.52	181	iP	Pn	18 25 27.0	+0.8
YAYL				iS	Sn	18 25 46.1	+0.6
AKCD	Akcadag	1.60	62	iP	Pn	18 25 27.8	+0.5
AKCD				iS	Sn	18 25 49.1	+1.5
AKCD	Akcadag	1.60	62	iP	Pn	18 25 27.8	+0.5
AKCD				iS	Sn	18 25 49.1	+1.6
MALT	Malatya	1.96	67	ePN	Pn	18 25 32.9	+0.5
MALT	Malatya	1.96	67	ePn	Pn	18 25 32.9	+0.5
MYA	Malataya	1.97	66	ePN	Pn	18 25 32.3	-0.1
MYA	Malataya	1.97	66	ePn	Pn	18 25 32.3	-0.2

*ISCJB **22** 18:49:57.5±0.4, 32.°65N±0.°03×105.°67E±0.°04, h10km, mb3.7/7, Error ellipse: s-maj=5.6km s-min=4.5km az=26.5*
*IDC **22** 18:49:58.1±0.9, 32.°62N×105.°48E, h0km, mb3.7/7, mb1 3.7/10, mb1mx3.6/27, mbtmp3.5/10, ML3.4/2, Error ellipse: s-maj=36.5km s-min=16.9km az=56.0*
*BJI **22** 18:49:59.1, 32.°65N×105.°55E, h14km, mB4.5/3, mb4.2/3, ML3.8/14, Ms3.7/3, Ms7 3.4/2*
*NEIC **22** 18:49:59.5±0.5, 32.°68N×105.°50E, h10km, Error ellipse: s-maj=15.8km s-min=8.2km az=64.0*
ISC 22 18:49:59.6±0.4, 32.°66N±0.°03×105.°66E±0.°04, h10km, n19, σ1°27/31, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.38	223	Pn	Pn	18 50 39.8	+1.1
CD2				Pg	Pg	18 50 44.5	-0.7
CD2				Sn	Sn	18 51 09.8	+1.9
CD2				Sg	Sg	18 51 14.3	-1.8
CD2				smax			
	comp=N,1μm,0.6s						
CD2				smax			
	comp=E,1μm,0.6s						
XAN	Xi'an	3.06	62	Pn	Pn	18 50 51.0	+2.9
XAN				Pg	Pg	18 50 57.5	-0.8
XAN				Sn	Sn	18 51 29.8	+5.1
XAN				Sg	Sg	18 51 37.5	-0.5
XAN				smax			
	comp=N,330nm,0.7s						
XAN				smax			
	comp=E,170nm,0.9s						
LZH	Lanzhou	3.73	337	Pn	Pn	18 50 59.0	+1.7
LZH				Pg	Pg	18 51 07.8	-3.4
LZH				Sn	Sn	18 51 42.0	+0.7
LZH				Sg	Sg	18 51 53.3	-6.2
LZH				smax			
	comp=N,330nm,1.0s						
LZH				smax			
	comp=E,380nm,1.0s						
LZH				LR	LR		
	comp=N,670nm,5.0s						
LZH				LR	LR		
	comp=E,760nm,4.6s						
LZH				LR	LR		
	comp=Z,720nm,6.7s						
ENH	Enshi	4.05	125	ePn	Pn	18 51 04.1	+2.4
ENH				ePg	Pg	18 51 15.0	-2.2
GYA	Guiyang	6.24	172	Pn	Pn	18 51 33.3	+1.5
GYA				Sn	Sn	18 52 43.3	+0.1
GYA				smax			
	comp=N,60nm,0.8s						
GYA				smax			
	comp=E,40nm,0.8s						
WHN	Wuhan	7.71	104	Pg	Pb	18 52 12.0	-1.4
GTA	Gaotai	8.23	327	eP	Pn	18 52 00.4	+1.3
GTA				pP		18 52 03.8	
GTA				sP		18 52 06.4	
GTA				S	Sn	18 53 40.1	+8.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,82nm,4.0s						
GTA				LR	LR		
	comp=N,180nm,8.5s						
GTA				LR	LR		
	comp=E,130nm,10.9s						
GTA				LR	LR		
	comp=Z,130nm,10.2s						
SONM	Songino Array	15.17	2	Pn	Pn	18 53 32.3	-1.5
	baz=162,slow=42,SNR=2.2						
SONM				Lg		18 58 08.6	
	comp=Z,0.1nm,0.3s,baz=176,slow=25,SNR=3.4						
CMAR	Chiang Mai Arr	15.38	205	Pn	Pn	18 53 35.7	-1.0
	comp=Z,0.1nm,0.3s,baz=15,slow=12,SNR=5.2						
KSRS	Korea Array	18.83	69	P	Pn	18 54 21.4	+1.3
	comp=Z,0.1nm,0.3s,baz=255,slow=11,SNR=3.3						
MKAR	Makanchi Array	22.74	315	P	P	18 55 01.3	-0.4
	comp=Z,0.5nm,0.6s,mb3.1,baz=115,slow=14,SNR=4.6						
ZALV	Zalesovo Beam	25.95	331	P	P	18 55 32.0	+0.1
	comp=Z,0.3nm,0.5s,mb3.1,baz=165,slow=6.0,SNR=2.2						
KURK	Kurchatov	26.84	320	P	P	18 55 38.8	-1.4
FINES	FINESS Array B	57.02	326	P	P	18 59 44.9	-0.4
	comp=Z,1.2nm,0.5s,mb4.2,baz=96,slow=8.5,SNR=12						
AKASG	Malin Array Be	57.29	313	P	P	18 59 46.6	-0.8
	comp=Z,1.0nm,0.6s,mb4.1,baz=70,slow=6.5,SNR=3.8						
WRA	Warramunga Arr	59.06	148	P	P	19 00 00.2	+0.1
	comp=Z,0.8nm,0.5s,mb4.0,baz=342,slow=7.3,SNR=4.6						
WRA	Warramunga Arr	59.06	148	P	P	19 00 00.2	+0.1
ASAR	Alice Springs	62.16	151	P	P	19 00 21.5	+0.4
	comp=Z,0.6nm,0.6s,mb3.9,baz=332,slow=6.6,SNR=23						
NOA	NORSAR Array B	64.06	327	P	P	19 00 32.9	-0.5
	comp=Z,0.2nm,0.4s,mb3.5,baz=71,slow=5.2,SNR=3.0						

IDC 22 18:50:57.5±3.3, 32.°69S×178.°57W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/16, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=75.4km s-min=37.8km az=113.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.58	211	Pn	Pn	18 52 35.3	-0.2
	0.5nm,0.3s,baz=127,slow=23,SNR=2.9						
URZ				Sn	Sn	18 53 51.4	+0.2
	2.5nm,0.3s,baz=125,slow=20,SNR=10						
ASAR	Alice Springs	42.56	270	P	P	18 58 55.5	+0.4
	0.4nm,0.6s,baz=103,slow=7.9,SNR=12						
WRA	Warramunga Arr	43.75	275	P	P	18 59 04.5	-0.4
	0.4nm,0.3s,baz=115,slow=7.8,SNR=3.0						
FINES	FINESS Array B	147.10	338	PKPbc	PKPbc	19 10 40.7	-0.9
	1.4nm,0.9s,baz=72,slow=4.5,SNR=3.8						

*ISCJB **22** 19:06:04.9±0.5, 38.°05N±0.°02×21.°94E±0.°03, h10km, Error ellipse: s-maj=3.7km s-min=3.3km az=40.2*
*ATH **22** 19:06:04.9, 38.°05N×21.°94E, h5km±3km, MD3.1/9*
*CSEM **22** 19:06:04.6±0.1, 38.°03N×21.°94E, h5km, ML1.4/5, Error ellipse: s-maj=2.7km s-min=2.2km az=41.0*
*THE **22** 19:06:05.6, 38.°07N×21.°99E, h10km±1km, ML1.4/5, Error ellipse: s-maj=1.7km s-min=0.5km az=41.0*
ISC 22 19:06:05.3±0.5, 38.°05N±0.°03×21.°95E±0.°03, h8km±8km, n29, σ0°55/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	Lakka	0.19	7	P	Pg	19 06 09.1	-0.2
LAKA				S	Sg	19 06 12.0	+0.1
LAKA	Lakka	0.19	7	P	Pg	19 06 09.1	-0.2
LAKA				S	Sg	19 06 12.0	+0.1
TRIZ	Trizonia	0.33	17	P	Pg	19 06 11.5	-0.3
TRIZ				S	Sg	19 06 16.3	+0.1
TRIZ	Trizonia	0.33	17	P	Pg	19 06 11.5	-0.3
TRIZ				S	Sg	19 06 16.3	+0.1
GUR	Goura	0.33	110	ePG	Pg	19 06 11.4	-0.4
GUR				eSB	Sg	19 06 16.4	+0.2
GUR	Goura	0.33	110	P	Pg	19 06 11.5	-0.3
GUR				S	Sg	19 06 16.7	+0.5
GUR	Goura	0.33	110	P	Pg	19 06 11.5	-0.3
GUR				eSb	Sg	19 06 16.4	+0.2
GUR				S	Sg	19 06 16.7	+0.5
KALE	Kalithea	0.37	24	P	Pg	19 06 12.2	-0.4
KALE				S	Sg	19 06 18.2	+0.7
KALE	Kalithea	0.37	24	P	Pg	19 06 12.2	-0.4
KALE				S	Sg	19 06 18.2	+0.7
EFP	Efpalio	0.38	355	ePB	Pg	19 06 12.5	-0.2
EFP				eSB	Sg	19 06 18.0	+0.3
EFP	Efpalio	0.38	355	P	Pg	19 06 12.5	-0.2
EFP				S	Sg	19 06 18.6	+0.9
EFP	Efpalio	0.38	355	P	Pg	19 06 12.5	-0.2
EFP				eSb	Sg	19 06 18.0	+0.3
EFP				S	Sg	19 06 18.6	+0.9
RLS	Riolos of Patr	0.38	271	ePG	Pg	19 06 12.1	-0.7
RLS				eSB	Sg	19 06 18.0	+0.2
RLS	Riolos of Patr	0.38	271	ePg	Pg	19 06 12.1	-0.7
RLS				eSb	Sg	19 06 18.0	+0.2
DSF	Desfina	0.58	52	P	Pg	19 06 15.9	-0.6
DSF				S	Sg	19 06 23.6	-0.5
DSF	Desfina	0.58	52	P	Pg	19 06 15.9	-0.6
DSF				S	Sg	19 06 23.6	-0.5
VLX	Vlachokerasia	0.76	153	ePB	Pg	19 06 19.8	-0.2
VLX				eSB	Sg	19 06 31.0	+1.1
VLX	Vlachokerasia	0.76	153	ePb	Pg	19 06 19.8	-0.2
VLX				eSb	Sg	19 06 31.0	+1.1
LTK	Loutraki	0.80	92	ePB	Pg	19 06 20.5	-0.3
LTK	Loutraki	0.80	92	ePb	Pg	19 06 20.5	-0.3
LKR	Lokris	1.02	54	ePN	Pg	19 06 25.3	+0.4
LKR	Lokris	1.02	54	ePn	Pg	19 06 25.3	+0.4
VLS	Valsamata	1.08	277	ePG	Pg	19 06 24.9	-1.2
VLS				eSB	Sg	19 06 41.0	+0.9
VLS	Valsamata	1.08	277	ePg	Pg	19 06 24.9	-1.2
VLS				eSb	Sg	19 06 41.0	+0.9
DID	Didima	1.16	118	ePB	Pb	19 06 27.2	-0.3
DID				eSB	Sb	19 06 42.7	0.0
DID	Didima	1.16	118	P	Pb	19 06 27.0	-0.5
DID				S	Sb	19 06 43.1	+0.4
DID	Didima	1.16	118	ePb	Pb	19 06 27.2	-0.3
DID				eSb	Sb	19 06 42.7	0.0
DID				S	Sb	19 06 43.1	+0.4
THL	Klokotos Trika	1.51	2	ePB	Pb	19 06 34.2	+0.6
THL	Klokotos Trika	1.51	2	ePb	Pb	19 06 34.2	+0.6

*DDA **22** 19:11:38.5, 37.°56N×36.°20E, h7km±6km, Md2.9*
*ISK **22** 19:11:38.3, 37.°59N×36.°18E, h3km, ML2.1*
*ISCJB **22** 19:11:39.4±0.6, 37.°60N±0.°04×36.°18E±0.°04, h6km±6km, Error ellipse: s-maj=6.9km s-min=5.1km az=141.8*
*CSEM **22** 19:11:39.0±0.4, 37.°63N×36.°08E, h8km, MD2.9, Error ellipse: s-maj=12.2km s-min=7.9km az=153.0*
ISC 22 19:11:40.0±0.6, 37.°59N±0.°04×36.°16E±0.°04, h11km±4km, n22, σ1°04/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	Andirin	0.15	94	iP	Pg	19 11 44.8	+1.4
ANDN				iS	Sg	19 11 47.9	+2.2
ANDN	Andirin	0.15	94	iP	Pg	19 11 44.8	+1.5
ANDN				iS	Sg	19 11 47.9	+2.2
KOZT	Kozan	0.29	248	ePG	Pg	19 11 45.1	-0.7
KOZT				eSG	Sg	19 11 50.0	+0.4
KMRS	Kahramanmaras	0.59	98	ePG	Pg	19 11 50.0	-1.5
KMRS				eSG	Sg	19 11 58.9	-0.4
KMRS	Kahramanmaras	0

KRSC 22 19:24:39.7±0.8, 55°.70N×162°.14E, h24km±24km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.64**	**37**	*eP*	Pb	19 24 52.8	+0.7
KBTR				*eS*	Sb	19 25 02.9	+2.3
ZLN	**Zelenaya**	**0.82**	**293**	*eP*	Pb	19 24 56.2	+1.0
ZLN				*eS*	Sb	19 25 07.8	+2.0
BZGR	**Bezymyannyi-Gr**	**0.85**	**287**	*eP*	Pb	19 24 56.3	+0.6
BZGR				*eS*	Sb	19 25 08.3	+1.6
BZMR	**Bezymyannaya**	**0.96**	**285**	*eP*	Pb	19 24 57.4	-0.2
BZMR				*eS*	Sb	19 25 10.2	+0.3
SMKR	**Semkarok**	**0.96**	**337**	*eP*	Pb	19 24 57.6	0.0
SMKR				*eS*	Sb	19 25 11.2	+1.3
BZWR	**Bezymyannyi-We**	**0.96**	**287**	*eP*	Pn	19 24 58.2	+0.5
BZWR				*eS*	Sb	19 25 11.4	+1.4
BDR	**Baidarnaya**	**1.01**	**329**	*eP*	Pn	19 24 58.5	+0.1
BDR				*eS*	Sb	19 25 12.2	+0.8
KRSR	**Krestovskiy**	**1.03**	**301**	*eP*	Pn	19 24 58.3	-0.2
KRSR				*eS*	Sb	19 25 11.9	+0.1
KLY	**Klyuchi**	**1.04**	**307**	*eP*	Pn	19 24 57.2	-1.5
KLY				*eS*	Sb	19 25 10.4	-1.7
KIRR	**Kirishev**	**1.05**	**285**	*eP*	Pn	19 24 59.6	+0.8
KIRR				*eS*	Sb	19 25 13.4	+1.1
KMNR	**Kamenistaya**	**1.08**	**274**	*eP*	Pn	19 25 00.2	+1.0
KMNR				*eS*	Sb	19 25 15.5	+2.2
SRKR	**Sorokina**	**1.10**	**331**	*eP*	Pn	19 24 59.7	+0.1
SRKR				*eS*	Sb	19 25 14.7	+0.8
KPT	**Kopyto**	**1.11**	**285**	*eP*	Pn	19 25 00.4	+0.7
KPT				*eS*	Sb	19 25 15.2	+0.9
MKZ	**Mys Kozlova**	**1.17**	**192**	*eP*	Pn	19 25 00.8	+0.3
MKZ				*eS*	Sn	19 25 16.6	+0.9
TUMR	**Tumrok**	**1.21**	**251**	*eP*	Pn	19 25 02.2	+1.2
TUMR				*eS*	Sn	19 25 18.9	+2.3
KOZ	**Kozyrevsk**	**1.33**	**287**	*eP*	Pn	19 25 04.0	+1.3
KOZ				*eS*	Sn	19 25 22.3	+2.8
SRDR	**Sredinnyy**	**1.50**	**295**	*eP*	Pn	19 25 06.0	+1.0
SRDR				*eS*	Sn	19 25 24.9	+1.2
BKI	**Bering**	**2.24**	**101**	*eS*	Sn	19 25 42.7	+0.7
SPN	**Mys Shipunski**	**2.89**	**206**	*eP*	Pn	19 25 25.0	+0.9
SPN				*eS*	Sn	19 25 57.8	-0.2
NLC	**Nalytchevo**	**3.01**	**214**	*eP*	Pn	19 25 27.0	+1.1
NLC				*eS*	Sn	19 26 01.9	+0.8
AVH	**Avacha**	**3.15**	**221**	*eP*	Pn	19 25 29.8	+2.2
AVH				*eS*	Sn	19 26 06.9	+2.5
GNL	**Ganaly**	**3.16**	**232**	*eP*	Pn	19 25 29.6	+1.8
GNL				*eS*	Sn	19 26 05.7	+1.0
PET	**Petropavlovsk**	**3.37**	**219**	*eP*	Pn	19 25 32.0	+1.3
PET				*eS*	Sn	19 26 11.0	+1.1

*IDC **22** 19:25:26.8±0.5, 23°.93S×175°.78W, h0km, mb4.4/18, mb1 4.6/19, mb1mx4.5/23, mbtmp4.4/19, ML4.5/1, MS4.0/14, Ms1 3.9/14, ms1mx3.8/25, Error ellipse: s-maj=20.6km s-min=16.3km az=126.0*

*NEIC **22** 19:25:29.7±5.0, 23°.97S×175°.77W, h19km±30km, mb4.9/8, Error ellipse: s-maj=12.0km s-min=9.8km az=108.0*

*ISCJB **22** 19:25:30.2±0.3, 23°.99S±0°.07×175°.86W±0°.08, h33km, mb4.6/29, MS4.0/12, Error ellipse: s-maj=11.4km s-min=9.5km az=141.3*

ISC 22 19:25:32.1±0.4, 24°.01S±0°.07×175°.80W±0°.08, h35km, n76, σ1§09/48, mb4.6/29, MS4.0/12, 1D, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.49**	**316**	*eP*	**Pn**	**19 27 32.1**	**-0.5**
	48nm,0.8s						
AFI	**Afiamalu**	**10.74**	**21**	Pn	**Pn**	**19 27 53.8**	**-10**
	7.0nm,0.3s,baz=124,slow=3.2,SNR=5.9						
AFI				Sn	**Sn**	**19 29 48.0**	**-15**
	3.7nm,0.3s,baz=356,slow=16,SNR=3.2						
AFI	**Afiamalu**	**10.74**	**21**	Pn	**Pn**	**19 27 53.8**	**-10**
AFI				Sn	**Sn**	**19 29 48.0**	**-15**
RAR	**Rarotonga**	**15.06**	**82**	Pn	**Pn**	**19 28 52.1**	**-10**
	9.4nm,0.3s,baz=248,slow=8.1,SNR=26						
RAR				Sn	Sn	19 31 22.7	-25
	1.8nm,0.3s,baz=172,slow=23,SNR=5.4						
RAR				LR	LR	19 33 09.0	
	comp=Z,330nm,19.5s,baz=314,slow=31						
URZ	**Urewera**	**15.44**	**201**	Pn	**Pn**	**19 29 07.7**	**+0.6**
	1.7nm,0.3s,baz=335,slow=6.0,SNR=7.1						
URZ				Sn	**Sn**	**19 31 51.2**	**-5.8**
	0.7nm,0.3s,baz=170,slow=17,SNR=3.9						
URZ				LR	LR	19 33 45.2	
	comp=Z,253nm,20.5s,baz=23,slow=32						
DZM	**Mont Dzumac**	**16.46**	**273**	*eLR*	LR	19 32 58.5	
	558nm,23.1s						
TBI	**Tubuai**	**24.12**	**94**	*eLR*	LR	19 36 41.2	
	436nm,22.2s,baz=260						
PPT	**Papeete**	**25.32**	**80**	*eLR*	LR	19 37 13.9	
	478nm,21.8s,baz=248						
PPT	**Papeete**	**25.32**	**80**	LR	LR	19 39 07.6	
	comp=Z,475nm,18.1s,MS4.0,baz=209,slow=32						
HNR	**Honiara**	**27.31**	**298**	LR	LR	19 40 21.1	
	comp=Z,211nm,19.1s,MS3.7,baz=268,slow=33						
CTA	**Charters Tower**	**35.32**	**269**	*eP*	**P**	**19 32 24.1**	**0.0**
	7.9nm,0.3s,mb5.1						
CTAO	**Charters Tower**	**35.32**	**269**	*eP*	**P**	**19 32 23.5**	**-0.6**
	21nm,0.8s,mb5.1						
TAOE	**Nuku Hiva Isla**	**37.23**	**72**	*eLR*	LR	19 42 40.6	
	281nm,22.5s						
MTSU	**Mount Surprise**	**37.58**	**271**	*eP*	**P**	**19 32 43.0**	**-0.4**
	27nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**38.25**	**248**	P	**P**	**19 32 49.2**	**+0.2**
	1.5nm,0.5s,mb4.0,baz=130,slow=9.9,SNR=8.9						
STKA				LR	LR	19 47 48.1	
	comp=Z,459nm,18.7s,MS4.3,baz=292,slow=35						
STKA	**Stephens Creek**	**38.25**	**248**	*eP*	**P**	**19 32 49.0**	**0.0**
	7.4nm,1.4s,mb4.2						
STKA	**Stephens Creek**	**38.25**	**248**	P	**P**	**19 32 49.2**	**+0.2**
STKA				LR	LR	19 47 48.1	
ASAR	**Alice Springs**	**45.80**	**260**	P	**P**	**19 33 49.8**	**-0.9**
	11nm,1.0s,mb4.8,baz=92,slow=7.3,SNR=42						
ASAR				PcP	PcP	19 35 27.9	0.0
	2.0nm,1.0s,baz=101,slow=4.8,SNR=2.9						
WB2	**Warramunga Arr**	**46.22**	**265**	*eP*	**P**	**19 33 52.2**	**-1.8**
WRA	**Warramunga Arr**	**46.23**	**265**	P	**P**	**19 33 53.1**	**-1.0**
	9.8nm,0.7s,mb4.8,baz=100,slow=8.2,SNR=43						
WRA				PcP	PcP	19 35 29.6	+0.2
	1.7nm,0.8s,baz=105,slow=3.6,SNR=3.5						
WRA	**Warramunga Arr**	**46.23**	**265**	P	**P**	**19 33 53.1**	**-1.0**
WRA				PcP	PcP	19 35 29.6	+0.2
KNA	**Kununurra**	**52.50**	**268**	*eP*	**P**	**19 34 41.0**	**-1.0**
	9.5nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**54.65**	**264**	LR	LR	19 58 18.6	
	comp=Z,308nm,18.8s,MS4.4,baz=147,slow=36						
FITZ	**Fitzroy Crossi**	**54.65**	**264**	*eP*	**P**	**19 34 57.6**	**-0.2**
	14nm,0.9s,mb5.0						
CASY	**Casey**	**61.70**	**206**	*eP*	**P**	**19 35 47.3**	**+1.0**
CASY	**Casey**	**61.70**	**206**	*eP*	**P**	**19 35 46.2**	**-0.1**
	15nm,0.9s,mb5.1						
KAPI	**Kappang**	**64.66**	**276**	LR	LR	20 01 46.6	
	comp=Z,124nm,18.6s,MS4.1,baz=19,slow=34						
QSPA	**South Pole Qui**	**66.07**	**180**	P	**P**	**19 36 16.8**	**+1.9**
	2.8nm,0.8s,mb4.3,baz=68,slow=3.4,SNR=8.3						
QSPA	**South Pole Qui**	**66.07**	**180**	*eP*	**P**	**19 36 16.4**	**+1.5**
	6.2nm,1.2s,mb4.5						
MJAR	**Matsushiro Arr**	**74.23**	**323**	P	**P**	**19 37 04.7**	**-0.7**
	2.0nm,0.7s,mb4.2,baz=162,slow=6.6,SNR=7.3						
MAW	**Mawson**	**78.96**	**199**	P	**P**	**19 37 33.2**	**+1.5**
	4.2nm,0.7s,mb4.5,baz=132,slow=6.0,SNR=10						
MAW				LR	LR	20 09 45.1	
	comp=Z,146nm,20.8s,MS4.3,baz=317,slow=34						
MAW	**Mawson**	**78.96**	**199**	*eP*	**P**	**19 37 33.4**	**+1.7**
	4.4nm,0.9s,mb4.4						
PETK	**Petropavlovsk-**	**80.18**	**344**	P	**P**	**19 37 39.0**	**+0.6**
	11nm,0.8s,mb4.8,baz=134,slow=8.6,SNR=7.3						
ISA	**Isabella**	**80.38**	**44**	*eP*	**P**	**19 37 39.0**	**-0.9**
	8.2nm,1.1s,mb4.6						
KSRS	**Korea Array**	**80.85**	**318**	P	**P**	**19 37 43.4**	**+1.0**
	1.2nm,0.6s,mb4.0,baz=132,slow=6.4,SNR=5.9						
KSRS				LR	LR	20 09 45.8	
	comp=Z,76nm,19.4s,MS4.1,baz=358,slow=33						
WAKR	**Walker**	**81.57**	**41**	*eP*	**P**	**19 37 45.6**	**-0.6**
	3.8nm,1.1s,mb4.2						
YBH	**Yreka Blue Hor**	**81.80**	**37**	P	**P**	**19 37 47.7**	**+0.5**
	0.4nm,0.3s,mb3.8,baz=345,slow=8.4,SNR=3.8						
NVAR	**Mina Array Bea**	**82.21**	**42**	P	**P**	**19 37 49.6**	**+0.1**
	2.0nm,0.8s,mb4.1,baz=225,slow=8.9,SNR=12						
SNAA	**Sanae**	**84.45**	**178**	P	**P**	**19 38 01.1**	**+0.4**
	0.9nm,0.9s,mb3.9,baz=181,slow=2.4,SNR=12						
VNA3	**Neumayer Olymp**	**84.51**	**176**	*e*	**P**	**19 37 58.3**	**-2.6**
VNA2	**Neumayer--Watz**	**84.97**	**176**	*e*	**P**	**19 38 01.0**	**-2.3**
	baz=202,slow=4.4						
PLCA	**Paso Flores**	**85.40**	**133**	P	**P**	**19 38 04.9**	**-1.1**
	2.2nm,0.9s,mb4.3,baz=270,slow=5.1,SNR=3.4						
PLCA				LR	LR	20 09 50.1	
	comp=Z,91nm,19.1s,MS4.2,baz=287,slow=31						
MSU	**Marysvale**	**86.11**	**45**	*eP*	**P**	**19 38 09.9**	**+0.6**
MNTX	**Cornudas Mount**	**87.15**	**54**	*eP*	**P**	**19 38 14.1**	**-0.5**
	6.1nm,1.1s,mb4.7						
TXAR	**Lajitas Array**	**87.26**	**56**	P	**P**	**19 38 15.3**	**+0.1**
	0.4nm,0.6s,mb3.8,baz=207,slow=9.8,SNR=3.8						
ANMO	**Albuquerque**	**88.04**	**50**	P	**P**	**19 38 18.5**	**-0.3**
	0.5nm,0.3s,mb4.2,baz=162,slow=3.7,SNR=3.8						
ENH	**Enshi**	**89.68**	**303**	*eP*	**P**	**19 38 28.1**	**+1.4**
	30nm,1.2s,mb5.5						
PDAR	**Pinedale Array**	**90.14**	**42**	P	**P**	**19 38 28.5**	**0.0**
	0.6nm,0.8s,mb4.0,baz=180,slow=3.0,SNR=3.9						
PDAR				LR	LR	20 13 45.5	
	comp=Z,59nm,18.7s,MS4.0,baz=143,slow=32						
DLBC	**Dease Lake**	**90.50**	**22**	P	**P**	**19 38 30.4**	**+0.6**
	2.1nm,0.9s,mb4.5,baz=248,slow=11,SNR=2.4						
ILAR	**Eielson Array**	**91.29**	**12**	P	**P**	**19 38 32.3**	**-1.0**
	1.2nm,0.8s,mb4.2,baz=219,slow=5.8,SNR=8.2						
KMI	**Kunming**	**92.74**	**296**	P	**P**	**19 38 43.3**	**+2.3**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
CMAR	**Chiang Mai Arr**	**93.19**	**289**	P	**P**	**19 38 45.4**	**+2.2**
	comp=Z,10nm,0.9s,mb5.3,baz=137,slow=3.1,SNR=40						
CHTO	**Chiang Mai**	**93.33**	**289**	*eP*	**P**	**19 38 45.6**	**+1.8**
	comp=Z,14nm,0.9s,mb5.4						
LPAZ	**La Paz**	**98.84**	**112**	LR	LR	20 16 55.1	
	comp=Z,60nm,18.1s,MS4.1,baz=110,slow=31						
YKA	**Yellowknife Ar**	**98.85**	**24**	LR	LR	20 17 47.7	
	comp=Z,7.1nm,18.5s,MS3.2,baz=210,slow=32						
SONM	**Songino Array**	**99.72**	**318**	LR	LR	20 19 19.8	
	comp=Z,55nm,20.1s,MS4.1,baz=246,slow=32						
FINES	**FINESS Array B**	**139.70**	**344**	PKP	PKPdf	19 44 55.7	+0.1
	comp=Z,1.0nm,0.6s,baz=95,slow=6.1,SNR=4.2						
NOA	**NORSAR Array B**	**142.68**	**354**	PKP	PKPdf	19 44 59.8	-1.2
	comp=Z,0.5nm,0.9s,baz=5.6,slow=3.7,SNR=2.8						
NACGM	**Naroch**	**144.89**	**337**	*e*	PKPdf	19 45 04.0	-1.0
SUW	**Suwalki**	**146.83**	**339**	*e*PKPbc	PKPbc	19 45 10.9	+0.7
AKASG	**Malin Array Be**	**147.06**	**330**	PKPbc	PKPbc	19 45 10.2	-0.8
	comp=Z,2.1nm,0.4s,baz=38,slow=3.7,SNR=14						
KIEV	**Kiev**	**147.07**	**330**	*e*PKPbc	PKPbc	19 45 09.9	-1.0
MALT	**Malatya**	**147.63**	**304**	*e*PKPbc	PKPbc	19 45 13.9	+1.0
BR131	**Keskin Array S**	**150.67**	**309**	*e*PKPbc	PKPbc	19 45 20.6	+0.1
BRTR	**Keskin Array B**	**150.67**	**309**	PKPbc	PKPbc	19 45 20.8	+0.3
	comp=Z,1.7nm,0.9s,baz=162,slow=4.8,SNR=8.3						
KOLS	**Kolonicke sedl**	**151.34**	**335**	*e*P	PKPbc	19 45 23.1	+1.3
KOLS				*e*		19 45 29.7	
KOLS	**Kolonicke sedl**	**151.34**	**335**	*e*PKP	PKPbc	19 45 23.1	+1.3
KOLS				*e*		19 45 29.7	
CRVS	**Cervenica-Dubn**	**151.68**	**336**	*e*P	PKPbc	19 45 22.8	+0.2
CRVS				*e*		19 45 32.4	
CRVS	**Cervenica-Dubn**	**151.68**	**336**	*e*PKP	PKPbc	19 45 22.8	+0.2
CRVS				*e*		19 45 32.4	
CLL	**Collm**	**151.92**	**348**	*i* PKPbc	PKPbc	19 45 22.4	-0.6
	comp=Z,5.0nm,0.8s						
CLL				*i* PKPab	PKPab	19 45 30.3	-1.9
	comp=Z,5.0nm,1.0s						
CLL				*i* pPKPab	pPKPab	19 45 36.3	-7.2
CLL				*i*		19 45 39.7	
KECS	**Kecovo**	**152.39**	**336**	*e*PKP	PKPab	19 45 35.2	+0.9
VYHS	**Vyhne**	**152.96**	**338**	*e*P	PKPbc	19 45 29.0	+3.5
VYHS				*e*		19 45 37.2	
VYHS				*e*		19 45 50.2	
VYHS	**Vyhne**	**152.96**	**338**	*e*PKP	PKPbc	19 45 29.0	+3.5
VYHS				*e*		19 45 37.2	
VYHS				*e*		19 45 50.2	
GERES	**GERESS Array B**	**154.11**	**346**	PKPbc	PKPbc	19 45 29.8	+1.9
	comp=Z,0.2nm,0.3s,baz=28,slow=4.4,SNR=3.4						
CONA	**Conrad Observa**	**154.40**	**342**	||*i*PKPab	PKPab	19 45 42.8	0.0
	comp=Z,5.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**168.94**	**167**	PKPab	PKPab	19 46 47.6	+0.7
	comp=Z,0.5nm,0.6s,baz=183,slow=3.4,SNR=2.0						

IDC 22 19:55:26.2±7.7, 9°.24S×127°.07E, h78km±86km, mb3.5/2, mb1 3.9/5, mb1mx3.5/17, mbtmp3.7/5, ML4.1/3, Error ellipse: s-maj=56.5km s-min=44.2km az=33.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.92**	**189**	P	Pn	19 57 32.6	+0.2
	2.3nm,0.3s,baz=356,slow=5.5,SNR=46						
FITZ				S	Sn	19 59 13.3	+2.0
	2.3nm,0.3s,baz=95,slow=23,SNR=14						
WRA	**Warramunga Arr**	**12.76**	**147**	P	Pn	19 58 23.9	-0.7
	1.3nm,0.3s,baz=316,slow=14,SNR=14						
WRA				S	Sn	20 00 43.3	-1.5
	1.4nm,0.3s,baz=322,slow=22,SNR=10						
ASAR	**Alice Springs**	**15.77**	**156**	P	Pn	19 59 05.2	+1.5
	0.5nm,0.3s,baz=324,slow=11,SNR=26						
ASAR				S	S	20 01 57.2	-11
	0.4nm,0.3s,baz=314,slow=19,SNR=9.0						
MKAR	**Makanchi Array**	**68.55**	**329**	P	P	20 06 20.6	+0.1
	0.3nm,0.4s,baz=120,slow=7.2,SNR=13						
ZALV	**Zalesovo Beam**	**72.34**	**335**	P	P	20 06 43.3	-0.1
	0.6nm,0.4s,baz=126,slow=5.6,SNR=4.6						

CASC 22 20:10:09.1±1.5, 8°.46N×82°.94W, h4km, MD3.6, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.30**	**311**	||*eP*	Pg	20 10 15.2	+0.3
ACR				*eS*	Sg	20 10 20.9	+2.1
BRU2	**Volcan**	**0.41**	**36**	*eP*	Pg	20 10 18.6	+1.5
URSC	**Urasca**	**1.60**	**329**	*eP*	Pn	20 10 37.8	-0.4
URSC				*eS*	Sn	20 11 00.8	+1.5
LAJ	**Bijagual**	**1.82**	**320**	*eP*	Pn	20 10 44.1	+2.9
PRS1	**Puriscal**	**2.03**	**318**	*eP*	Pn	20 10 43.9	-0.3
PRS1				*eS*	Sn	20 11 09.4	-0.6
CGA2	**Cerro Gallo 2**	**2.16**	**316**	*eP*	Pn	20 10 47.2	+1.3
CGA2				*eS*	Sn	20 11 14.2	+1.0

*SZGRF **22** 20:20:53.9, 23°.73S×178°.72W, h33km, South of Fiji Islands*

*BJI **22** 20:20:59.4, 23°.20S×179°.49W, h545km, mB5.0/22, mb4.8/41*

*ISCJB **22** 20:21:00.5±0.8, 23°.50S±0°.04×179°.99W±0°.07, h554km±9km, mb5.0/87, Error ellipse: s-maj=9.3km s-min=5.5km az=172.6*

*NEIC **22** 20:21:00.3±0.2, 23°.43S×179°.74W, mb5.3/23, Error ellipse: s-maj=8.8km s-min=7.4km az=106.0*

*DJA **22** 20:21:00, 23°.56S×179°.44W, h580km, mb5.1/51*

*IDC **22** 20:21:01.6±0.6, 23°.41S×179°.91W, h551km±6km, mb4.2/18, mb1 4.3/18, mb1mx4.3/21, mbtmp4.2/18, Error ellipse: s-maj=10.9km s-min=8.9km az=155.0*

*GCMT **22** 20:21:03.2±0.6, 23°.41S×179°.93W, h546km±4km, MW5.2, Moment Tensor Solution. s45,c50; Moment tensor: Scale 10^{16}Nm; M_{rr}-5.30±.36; $M_{\theta\theta}$3.29±.65; $M_{\phi\phi}$2.01±.66; $M_{r\theta}$4.53±.70; $M_{\theta\phi}$-2.09±.51; $M_{\phi r}$-1.03±.74; Best double couple: $M_0$6.90000×10^{16} NP1:ϕ_s137.00000°, δ26.00000°, λ-67.00000°. NP2:ϕ_s292.00000°, δ66.00000°, λ-101.00000°. Principal axes: T 6.4600, Plg21.0000°, Azm30.0000°; N 0.7900, Plg10.0000°, Azm296.0000°; P -7.2500, Plg67.0000°, Azm182.0000°; Data Used: II IU G CN IC.*

*BGS **22** 20:21:03.2±3.8, 23°.43S×179°.43W, h545km, mb5.3(NEIC)*

*MOS **22** 20:21:06.0±1.2, 23°.27S×179°.44E, h563km, mb5.1/6, Error ellipse: s-maj=17.7km s-min=11.9km az=41.2*

ISC 22 20:21:00.4±0.7, 23°.64S±0°.04×179°.87W±0°.07, h546km±8km, h548km±2.3km; pP-P, n435, σ1§03/171, mb5.0/87, 40C-44D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.19**	**341**	*eP*	**P**	**20 22 40.3**	**-0.4**
	162nm,0.6s						
MSVF	**Nonsavu**	**6.19**	**341**	P	**P**	**20 22 40.0**	**-0.6**
	2μm,0.6s,SNR=19						
AFI	**Afiamalu**	**12.34**	**40**	P	**P**	**20 23 36.9**	**-5.7**
	16nm,0.3s,baz=225,slow=1.4,SNR=28						
AFI				S	**S**	**20 25 43.6**	**-12**
	2.9nm,0.3s,baz=217,slow=20,SNR=3.5						
AFI	**Afiamalu**	**12.34**	**40**	*eP*	**P**	**20 23 36.6**	**-6.0**
	322nm,0.8s						
OUZ	**Omahuta**	**12.87**	**205**	*eP*	**P**	**20 23 51.6**	**+3.9**
	134nm,0.9s						
OUZ	**Omahuta**	**12.87**	**205**	PN	**P**	**20 23 51.7**	**+4.0**
MXZ	**Matakaoa Point**	**13.97**	**186**	PN	**P**	**20 23 58.4**	**-0.7**
MXZ				SN	**S**	**20 26 25.4**	**-0.9**
MKAZ	**Moumakai**	**14.09**	**197**	PN	**P**	**20 24 03.2**	**+2.8**
PUZ	**Puketiti**	**14.48**	**186**	PN	**P**	**20 24 03.6**	**-0.7**
PUZ				SN	**S**	**20 26 34.7**	**-1.2**
URZ	**Urewera**	**14.80**	**189**	P	**P**	**20 24 05.9**	**-1.8**
	11nm,0.3s,baz=12,slow=1.8,SNR=46						
URZ				S	**S**	**20 26 40.8**	**-1.1**
	3.8nm,0.3s,baz=70,slow=22,SNR=10						
URZ	**Urewera**	**14.80**	**189**	*eP*	**P**	**20 24 06.2**	**-1.5**
	200nm,0.6s						
URZ	**Urewera**	**14.80**	**189**	PN	**P**	**20 24 06.7**	**-1.0**
URZ				SN	**S**	**20 26 41.5**	**-0.4**
MWZ	**Matawai**	**14.82**	**188**	PN	**P**	**20 24 08.2**	**+0.3**
MWZ				SN	**S**	**20 26 42.9**	**+0.7**
KNZ	**Kokohu**	**15.48**	**187**	SN	**S**	**20 26 54.2**	**-0.1**
MOVZ	**Moawhango**	**16.16**	**192**	SN	**S**	**20 27 05.1**	**-0.4**
ANWZ	**Angora Road**	**17.06**	**190**	PN	**P**	**20 24 31.1**	**+1.5**
SNZO	**South Karori**	**18.20**	**193**	*eP*	**P**	**20 24 40.0**	**0.0**
	178nm,0.8s						
KHZ	**Kahutara**	**19.52**	**195**	*eP*	**P**	**20 24 53.1**	**+1.1**
	110nm,0.6s						
RPZ	**Rata Peaks**	**21.38**	**198**	P	**P**	**20 25 11.2**	**+2.3**
	208nm,0.6s,mb6.0,baz=344,slow=1.6,SNR=43						
RPZ	**Rata Peaks**	**21.38**	**198**	*eP*	**P**	**20 25 10.9**	**+2.0**
	186nm,0.6s,mb5.9						
HNR	**Honiara**	**23.91**	**303**	P	**P**	**20 25 30.8**	**-1.0**
	87nm,0.8s,mb5.5,baz=174,slow=1.3,SNR=4.9						
HNR	**Honiara**	**23.91**	**303**	P	**P**	**20 25 30.8**	**-1.1**
ARMA	**Armidale**	**26.23**	**249**	||*iP*	**P**	**20 25 55.2**	**+3.0**
ARMA	**Armidale**	**26.23**	**249**	*eP*	**P**	**20 25 55.2**	**+3.0**
	16nm,0.8s,mb4.7						
EIDS	**Eidsvold**	**26.47**	**260**	*eP*	**P**	**20 25 55.9**	**+1.6**
	32nm,0.9s,mb5.0						
CTA	**Charters Tower**	**31.59**	**270**	P	**P**	**20 26 40.6**	**+1.7**
	163nm,0.6s,mb5.8,baz=96,slow=11,SNR=205						
CTA				S	**S**	**20 31 11.3**	**+1.6**
	9.2nm,1.0s,baz=7.1,slow=16,SNR=4.2						
CTA	**Charters Tower**	**31.59**	**270**	||*iP*	**P**	**20 26 40.6**	**+1.7**
	95nm,0.4s,mb5.7						
CTA	**Charters Tower**	**31.59**	**270**	P	**P**	**20 26 40.6**	**+1.7**
CTA				S	**S**	**20 31 11.3**	**+1.6**
CTA	**Charters Tower**	**31.59**	**270**	P	**P**	**20 26 40.6**	**+1.7**
CTA				S	**S**	**20 31 11.3**	**+1.7**
CTAO	**Charters Tower**	**31.59**	**270**	*eP*	**P**	**20 26 40.5**	**+1.6**
	134nm,0.6s,mb5.7						
CTAO	**Charters Tower**	**31.59**	**270**	*eP*	**P**	**20 26 40.5**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,134nm,0.6s,mb5.7						
CTAO	**Charters Tower**	**31.59**	**270**	P	**P**	**20 26 40.0**	**+1.1**
	comp=Z,2μmcomp=Z,223nm,0.9s,mb5.7						
PMG	**Port Moresby**	**34.52**	**289**	*eP*	**P**	**20 27 04.1**	**+0.4**
	comp=Z,160nm,0.8s,mb5.6						
PMG	**Port Moresby**	**34.52**	**289**	*deP*	**P**	**20 27 04.2**	**+0.5**
PMG				pmax	pmax		
	comp=Z,186nm,0.9s						
PMG	**Port Moresby**	**34.52**	**289**	P	**P**	**20 27 03.8**	**+0.1**
	comp=Z,2μmcomp=Z,216nm,0.9s,mb5.7						
STKA	**Stephens Creek**	**34.93**	**248**	P	**P**	**20 27 09.1**	**+2.2**
	comp=Z,18nm,0.6s,mb4.8,baz=93,slow=10,SNR=72						
STKA				PcP	PcP	20 29 25.2	+1.3
	comp=Z,6.6nm,0.8s,baz=64,slow=8.1,SNR=2.9						
STKA				S	**S**	**20 32 01.6**	**+1.7**
	comp=Z,3.3nm,0.8s,baz=100,slow=19,SNR=2.8						
STKA	**Stephens Creek**	**34.93**	**248**	*eP*	**P**	**20 27 08.8**	**+1.9**
	comp=Z,14nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**34.93**	**248**	*eP*	**P**	**20 27 08.9**	**+2.0**
	comp=Z,3.5nm,0.8s,mb3.9						
COEN	**Coen**	**36.19**	**279**	*eP*	**P**	**20 27 18.7**	**+1.2**
	comp=Z,220nm,1.0s,mb5.6						
COEN	**Coen**	**36.19**	**279**	P

comp=Z,103nm,1.1s,mb5.2
GMJI Gumukmas 65.40 272 P **P 20 30 49.4 -0.4**
comp=Z,53nm,0.9s,mb5.0
QSPA South Pole Qui 66.45 180 P **P 20 30 58.1 +2.9**
comp=Z,22nm,0.8s,mb4.7,baz=22,slow=1.3,SNR=94
QSPA South Pole Qui 66.45 180 *e*P **P 20 30 58.1 +2.9**
comp=Z,42nm,1.1s,mb4.9
PWJI Pagerwojo 67.00 271 P **P 20 30 58.9 -0.9**
comp=Z,60nm,0.9s,mb5.1
SJI Sawahan 67.14 271 P **P 20 31 01.0 +0.4**
comp=Z,62nm,0.8s,mb5.2
PCJI Pacitan 67.51 271 P **P 20 31 03.5 +0.6**
comp=Z,273nm,1.0s,mb5.7
UGM Wanagama 68.22 271 P **P 20 31 07.0 -0.2**
comp=Z,157nm,2.3s,mb5.1
YOGI Yogyakarta 68.46 271 P **P 20 31 08.1 -0.6**
comp=Z,379nm,1.4s,mb5.7
SMRI Semarang 68.62 272 P **P 20 31 09.3 -0.3**
comp=Z,84nm,1.3s,mb5.1
BJII Banjamegara 69.18 271 P **P 20 31 12.6 -0.4**
comp=Z,33nm,1.6s,mb4.6
STKI Sintang 70.53 279 P **P 20 31 20.5 -0.5**
comp=Z,82nm,0.7s,mb5.4
CISI Cisompet, Garu 70.83 270 P **P 20 31 21.0 -1.8**
comp=Z,62nm,1.7s,mb4.9
JOW Kunigami 70.90 312 *e*P **P 20 31 23.1 +0.3**
comp=Z,70nm,1.5s,mb5.0
LEM Lembang 71.29 271 P **P 20 31 26.4 +0.9**
comp=Z,122nm,1.0s,mb5.4
MJAR Matsushiro Arr 71.75 325 P **P 20 31 27.0 -0.6**
comp=Z,9.2nm,0.8s,mb4.3,baz=155,slow=6.0,SNR=33
MJAR Matsushiro Arr 71.75 325 P **P 20 31 27.0 -0.6**
MAJO Matsushiro 71.75 325 *e*P **P 20 31 27.0 -0.6**
comp=Z,14nm,0.9s,mb4.4
MAJO Matsushiro 71.75 325 *e*P **P 20 31 27.0 -0.6**
MAJO pmax pmax
comp=Z,14nm,0.9s,mb4.4
MAT Matsushiro 71.75 325 P **P 20 31 26.8 -0.8**
MAT *e*S S 20 40 03.0 -1.3
KSM Kuching 72.18 280 *e*P **P 20 31 30.6 -0.1**
comp=Z,65nm,1.1s,mb5.0
DBJI Dramaga 72.19 271 P **P 20 31 30.5 -0.3**
comp=Z,81nm,1.1s,mb5.1
TNG Tangerang 72.43 271 P **P 20 31 28.9 -3.3**
comp=Z,873nm,0.4s
CGJI Cibinong 73.14 270 P **P 20 31 34.7 -1.5**
comp=Z,68nm,0.9s,mb5.1
ERM Erimo 73.73 332 *e*P **P 20 31 40.2 +1.3**
PPBI Pangkal Pinang 74.48 274 P **P 20 31 43.8 0.0**
comp=Z,26nm,1.2s,mb4.5
KLSI 74.77 272 P **P 20 31 43.9 -1.5**
comp=Z,38nm,2.4s,mb4.4
MDSI Maura Dua 75.35 271 P **P 20 31 47.6 -1.1**
comp=Z,30nm,1.0s,mb4.7
QZH Quanzhou 76.73 305⇑ *i*P **P 20 31 55.6 -0.4**
QZH pmax pmax
comp=Z,160nm,1.0s,mb5.4
KSI Kapahiang 77.13 272 P **P 20 31 58.0 -0.5**
comp=Z,95nm,0.9s,mb5.2
MAW Mawson 78.04 200 P **P 20 32 04.3 +2.0**
comp=Z,10nm,0.7s,mb4.3,baz=126,slow=6.5,SNR=20
MAW Mawson 78.04 200⇓ *i*P **P 20 32 04.3 +1.9**
comp=Z,16nm,1.4s,mb4.2
MAW Mawson 78.04 200 *e*P **P 20 32 04.0 +1.6**
comp=Z,9.3nm,1.4s,mb3.9
MAW Mawson 78.04 200 *e*P **P 20 32 04.0 +1.6**
KSRS Korea Array 78.12 320 P **P 20 32 03.9 +0.7**
comp=Z,7.6nm,0.8s,mb4.1,baz=136,slow=5.5,SNR=25
PETK Petropavlovsk- 78.87 346 P **P 20 32 06.3 -0.5**
comp=Z,13nm,0.8s,mb4.3,baz=130,slow=7.4,SNR=10.0
PETK Petropavlovsk- 78.87 346 P **P 20 32 06.4 -0.4**
SDSI Sungai Dareh 79.28 274 P **P 20 32 08.8 -1.2**
comp=Z,2μmcomp=Z,18nm,0.8s,mb4.5
PPI Padang Panjang 80.41 274 P **P 20 32 15.0 -0.9**
comp=Z,12nm,1.2s,mb4.1
NJ2 Nanjing 80.58 311 *e*P **P 20 32 17.3 +1.0**
NJ2 pmax pmax
comp=Z,60nm,1.0s,mb5.0
SISI Saibi 81.26 272 P **P 20 32 19.2 -1.1**
IPM Ipoh 81.84 278 *e*P **P 20 32 23.6 +0.3**
comp=Z,54nm,1.2s,mb4.9
MDJ Mudanjiang 82.11 326 P **P 20 32 24.5 +0.6**
MDJ pP pP 20 34 20.8 -0.4
MDJ sP sP 20 35 16.1 -0.6
MDJ PP PP 20 35 42.9 +0.5
MDJ S S 20 41 56.3 +2.7
MDJ sS sS 20 45 24.1 +1.4
MDJ pmax pmax
comp=Z,23nm,1.0s,mb4.6
MDJ pmax pmax
comp=Z,54nm,3.0s
WHN Wuhan 82.93 308 P **P 20 32 29.0 +0.6**
SYO Syowa Base 83.30 193⇑ *i*P **P 20 32 28.8 -0.8**
CN2 Changchun 83.75 324 *e*P **P 20 32 32.4 +0.3**
CN2 *e*S S 20 42 16.3 +6.5
CN2 pmax pmax
comp=Z,30nm,1.1s,mb4.7
KDAK Kodiak Island 84.26 14 *i*P **P 20 32 35.0 +0.7**
KLR Kul'dur 84.36 330 *e*P **P 20 32 31.0 -4.0**
NVAR Mina Array Bea 84.48 44 P **P 20 32 36.6 +0.8**
comp=Z,1.1nm,0.6s,baz=223,slow=7.5,SNR=8.7
NVAR pP pP 20 34 35.2 +1.2
comp=Z,0.5nm,0.7s,baz=214,slow=9.3,SNR=3.0
NVAR Mina Array Bea 84.48 44 P **P 20 32 36.6 +0.8**
NVAR pP pP 20 34 35.2 +1.2
VNA3 Neumayer Olymp 85.13 177 *e*P **P 20 32 36.4 -2.1**
VNA3 *e* pP 20 34 37.5 +0.7
MAIT Maitri 85.49 184 *e*P **P 20 32 40.8 +0.5**
VNA2 Neumayer--Watz 85.55 178 *e*P **P 20 32 38.6 -2.0**
baz=194,slow=3.9
VNA2 *e* pP 20 34 39.5 +0.5
VNA1 Neumayer--Stat 85.79 177 *e*P **P 20 32 39.7 -2.0**
VNA1 *e* pP 20 34 41.2 +1.0
ENH Enshi 86.39 305 *e*P **P 20 32 45.9 +0.7**
comp=Z,32nm,0.9s,mb5.0
GYA Guiyang 86.72 301 P **P 20 32 46.6 -0.3**
GYA pP pP 20 34 45.8 0.0
GYA sP sP 20 35 39.6 -1.3
GYA PP PP 20 36 21.3 +1.7
GYA SKS 20 42 21.9
GYA S S 20 42 39.0 0.0
GYA sS sS 20 46 09.6 -1.4
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,140nm,6.2s
BJI Beijing 86.92 316 P **P 20 32 47.9 +0.4**
BJI pmax pmax
comp=Z,18nm,0.8s,mb4.8
PLCA Paso Flores 88.36 134 P **P 20 32 55.2 +0.8**
comp=Z,3.0nm,1.1s,mb3.9,baz=245,slow=6.7,SNR=3.7
PLCA Paso Flores 88.36 134 P **P 20 32 55.2 +0.8**
XAN Xi'an 88.67 308 P **P 20 32 56.8 +1.0**
XAN pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
SEY Seymchan 89.04 348 *ce*P **P 20 32 55.7 -1.1**
KMI Kunming 89.25 298 P **P 20 32 59.9 +1.2**
KMI pP pP 20 35 00.8 +2.4
KMI sP sP 20 35 53.9 +0.6
KMI PP PP 20 36 43.3 +3.7
KMI S S 20 43 02.8 +0.4
KMI SS SS 20 49 18.4 +4.5
KMI pmax pmax
comp=Z,19nm,1.2s,mb4.8
KMI pmax pmax
comp=Z,150nm,6.2s
CMAR Chiang Mai Arr 89.55 290 P **P 20 33 02.0 +1.8**
comp=Z,17nm,0.9s,mb4.9,baz=137,slow=3.2,SNR=94
CMAR PP PP 20 36 40.7 -1.3
comp=Z,2.8nm,1.1s,baz=138,slow=5.6,SNR=4.4
CMAR Chiang Mai Arr 89.55 290 P **P 20 33 02.1 +1.9**
CMAR 20 36 40.7
CHTO Chiang Mai 89.69 291 *e*P **P 20 33 02.3 +1.4**
comp=Z,30nm,0.9s,mb5.1
CHTO Chiang Mai 89.69 291 *e*P **P 20 33 02.3 +1.4**
CHTO pmax pmax
comp=Z,30nm,0.9s,mb5.1
TXAR Lajitas Array 90.19 58 P **P 20 33 04.4 +1.4**
comp=Z,1.2nm,0.6s,mb3.9,baz=224,slow=6.6,SNR=14
TXAR pP pP 20 35 04.1 +1.2
comp=Z,3.7nm,1.0s,baz=219,slow=9.7,SNR=3.1
TXAR Lajitas Array 90.19 58 P **P 20 33 04.4 +1.4**
TXAR *PP pP 20 35 04.1 +1.2
HHC Hu-ho-hao-te 90.31 315 *e*P **P 20 33 04.0 +0.7**
HHC pP pP 20 35 03.9 +0.7
HHC sP sP 20 35 56.5 -1.5
HHC PP PP 20 36 51.1 +3.4
HHC SKS 20 42 43.9
HHC S S 20 43 11.5 +0.2
HHC sS sS 20 46 44.1 -1.5
HHC SS SS 20 49 33.6 +5.0
HHC pmax pmax
comp=Z,22nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,98nm,5.3s
CD2 Chengdu 91.03 303⇓ *i*P **P 20 33 08.4 +1.5**
CD2 pP pP 20 35 08.3 +1.5
CD2 sP sP 20 36 01.3 -0.3
CD2 PP PP 20 36 57.8 +4.3
CD2 SKS 20 42 48.5
CD2 S S 20 43 18.8 +0.6
CD2 sS sS 20 46 51.1 -1.8
CD2 SS SS 20 49 43.8 +4.5
CD2 pmax pmax
comp=Z,30nm,1.2s,mb5.1
CD2 pmax pmax
comp=Z,100nm,6.2s
BILL Bilibino 91.97 355⇑ *e*P **P 20 33 10.0 -0.3**
BILL pmax pmax
comp=Z,22nm,1.6s,mb4.9
PDAR Pinedale Array 92.42 44 P **P 20 33 12.5 -0.5**
comp=Z,1.0nm,0.6s,mb4.0,baz=190,slow=1.6,SNR=7.2
PDAR pP pP 20 35 14.7 +1.6
comp=Z,1.3nm,1.0s,baz=232,slow=7.2,SNR=4.0
PDAR PP PP 20 37 00.3 -3.7
comp=Z,0.4nm,0.7s,baz=242,slow=8.2,SNR=4.3
LZH Lanzhou 93.31 308⇓ P **P 20 33 18.3 +1.1**
LZH pP pP 20 35 18.5 +1.2
LZH sP sP 20 36 11.6 -0.4
LZH SKS 20 43 00.0
LZH pmax pmax
comp=Z,45nm,1.2s,mb5.4
LZH pmax pmax
comp=Z,200nm,8.5s
SONM Songino Array 96.98 319 P **P 20 33 33.0 -0.5**
comp=Z,0.8nm,0.7s,mb4.1,baz=122,slow=5.4,SNR=7.4
SONM PP PP 20 37 33.9 -4.8
comp=Z,2.2nm,1.2s,baz=126,slow=7.3,SNR=4.6
SONM Songino Array 96.98 319 P **P 20 33 33.0 -0.5**
SONM 20 37 33.9
GTA Gaotai 97.62 310 *e*P **P 20 33 37.5 +1.0**
GTA pP pP 20 35 37.6 +0.5
GTA sP sP 20 36 30.8 -0.9
GTA pmax pmax
comp=Z,4.0nm,1.4s,mb4.6
ZALV Zalesovo Beam 111.82 321 PKiKP PKiKP 20 38 31.7 -1.3
comp=Z,0.9nm,0.4s,baz=93,slow=2.4,SNR=6.5
ZALV Zalesovo Beam 111.82 321 PKPdif PKiKP 20 38 31.7 -1.4
MKAR Makanchi Array 112.06 313 Pdiff Pdif 20 34 41.7 +1.0
comp=Z,0.3nm,0.5s,baz=87,slow=5.6,SNR=5.1
MKAR PKiKP PKiKP 20 38 32.6 -1.1
comp=Z,2.2nm,0.7s,baz=88,slow=1.1,SNR=18
MKAR PP PP 20 39 31.8 +3.1
comp=Z,1.3nm,0.9s,baz=124,slow=6.0,SNR=4.5
MKAR Makanchi Array 112.06 313 Pdif Pdif 20 34 41.7 +1.0
MKAR PKPdif PKiKP 20 38 32.6 -1.1
MKAR PP PP 20 39 31.8 +3.1
MKAR Makanchi Array 112.06 313 P Pdif 20 34 41.7 +1.0
MKAR 20 38 32.6
MKAR 20 39 31.8
KURK Kurchatov 115.09 317 *e*PKPdf PKPdf 20 38 37.8 -1.6
KURK Kurchatov 115.09 317 *e*PKIKP PKPdf 20 38 37.8 -1.6
KSH Kashi 115.22 304 *e*PKP PKPdf 20 38 40.4 +0.4
KSH *es*PKP 20 41 39.0
KSH *e*PKS 20 42 15.9
KSH *e*SKS SKSdf 20 45 01.8 +1.3
KSH AMB AMB
comp=Z,120nm,6.2s
TKM2 Tokmak 2 116.08 308 *e*PKPdf PKPdf 20 38 41.0 -0.6
TKM2 Tokmak 2 116.08 308 *e*PKIKP PKPdf 20 38 41.0 -0.6
KKAR Karatay Array 119.80 307 *e*PKPdf PKPdf 20 38 47.9 -0.8
KKAR Karatay Array 119.80 307 *e*PKIKP PKPdf 20 38 47.9 -0.8
BRVK Borovoye 120.38 319 *e*PKPdf PKPdf 20 38 48.9 -0.6
BRVK Borovoye 120.38 319 *i*PKIKP PKPdf 20 38 48.9 -0.6
BRVK pmax pmax
comp=Z,5.0nm,0.8s
BOSA Boshof 122.69 206 PKP PKPdf 20 38 55.5 +0.6
comp=Z,4.5nm,0.9s,baz=147,slow=3.0,SNR=5.8
BOSA Boshof 122.69 206 PKIKP PKPdf 20 38 55.5 +0.6
SVE Sverdlovsk 125.54 324 *e*PKIKP PKPdf 20 38 58.8 -0.5
SVE pmax pmax
comp=Z,14nm,1.1s
ARU Arti 126.74 324 *e*PKPdf PKPdf 20 39 01.0 -0.6
ARU Arti 126.74 324 *i*PKIKP PKPdf 20 39 01.1 -0.5
ARU 20 41 04.2
ARU 20 45 14.4
ARCES ARCESS Array B 131.65 348 PKhKP PKPpre 20 38 59.5
comp=Z,12nm,1.2s,baz=1.9,slow=3.6,SNR=4.5
ARCES PKP PKPdf 20 39 09.8 -0.8
comp=Z,3.7nm,0.6s,baz=87,slow=1.1,SNR=25
ARCES ARCESS Array B 131.65 348 PKP PKPdf 20 39 09.8 -0.8
ARCES ARCESS Array B 131.65 348 PKIKP PKPdf 20 39 09.8 -0.8
JOF Joensuu 135.53 340 *e*PKHKP PKPpre 20 39 08.0
JOF Joensuu 135.53 340 *e*pkp PKPpre 20 39 08.0
KMBO Kilima Mbogo 136.33 241 PKP PKPdf 20 39 23.4 +2.3
comp=Z,3.7nm,1.0s,baz=0.4,slow=24,SNR=5.8
KMBO Kilima Mbogo 136.33 241 PKIKP PKPdf 20 39 23.4 +2.4
KAF Kangasniemi 137.63 342 *e*PKHKP PKPpre 20 39 09.2
KAF Kangasniemi 137.63 342 *e*pkp PKPpre 20 39 09.2
FINES FINESS Array B 138.23 342 PKhKP PKPpre 20 39 11.4
comp=Z,1.5nm,0.7s,baz=355,slow=4.0,SNR=8.2
FINES PKP PKPdf 20 39 23.3 +0.3
comp=Z,2.4nm,0.5s,baz=74,slow=1.6,SNR=12
FINES SKPbc SKPbc 20 42 04.7 -1.5
comp=Z,2.7nm,0.8s,baz=81,slow=6.0,SNR=4.7
FINES FINESS Array B 138.23 342 PKP PKPdf 20 39 23.3 +0.3
FINES SKPbc SKPbc 20 42 04.7 -1.5
FINES FINESS Array B 138.23 342 PKIKP PKPdf 20 39 23.3 +0.3
OBN Obninsk 138.61 329 *i*PKIKP PKPdf 20 39 24.5 +0.6
OBN pmax pmax
comp=Z,9.0nm,1.0s
ZEI Tsey 139.24 309 *e*PKIKP PKPdf 20 39 26.2 +0.8
ZEI pmax pmax
comp=Z,9.0nm,1.1s
NOA NORSAR Array B 141.84 351 PKhKP PKPpre 20 39 24.6
comp=Z,5.6nm,0.8s,baz=16,slow=4.6,SNR=19
NOA SKPbc SKPbc 20 42 15.3 -0.3
comp=Z,1.4nm,0.8s,baz=14,slow=4.2,SNR=3.7
NOA NORSAR Array B 141.84 351 PKHKP PKPpre 20 39 24.6
ANN Anapa 143.06 314⇑ *i*PKHKP PKPpre 20 39 29.0
ANN pmax pmax
comp=Z,82nm,0.9s
KELT Kelkit 143.26 306 *i*P PKPdf 20 39 29.7 -3.1
KONO Kongsberg 143.40 352 *e*PKPdf PKPdf 20 39 29.6 -2.8
KONO Kongsberg 143.40 352 *e*PKHKP PKPdf 20 39 29.6 -2.7
LRW Lerwick 143.51 1 *e*P PKPdf 20 39 29.4 -3.1
ELZG Elazig 143.85 303 *i*P PKPdf 20 39 33.8 0.0
SUSE Susehri 144.02 306 *i*P PKPdf 20 39 31.6 -2.5
KEMA Kemaliye 144.05 305 *i*P PKPdf 20 39 32.6 -1.6
MALT Malatya 144.32 303 *e*PKPdf PKPdf 20 39 34.9 +0.3
MALT Malatya 144.32 303 *e*PKHKP PKPdf 20 39 34.9 +0.3
MALT Malatya 144.32 303⇑ *i*P PKPdf 20 39 35.3 +0.7
AKCD Akcadag 144.71 303 *i*P PKPdf 20 39 36.2 +0.9
AKASG Malin Array Be 144.81 328 PKP PKPdf 20 39 34.5 -0.6
comp=Z,17nm,0.5s,baz=42,slow=2.8,SNR=78
AKASG pPKP pPKPdf 20 41 43.9 +0.8
comp=Z,3.8nm,0.7s,baz=42,slow=3.5,SNR=4.5
AKASG Malin Array Be 144.81 328 PKP PKPdf 20 39 34.5 -0.6
AKASG pPKP pPKPdf 20 41 43.9 +0.8
AKASG Malin Array Be 144.81 328 PKHKP PKPdf 20 39 34.5 -0.6
KIEV Kiev 144.82 328 *e*PKPdf PKPdf 20 39 34.0 -1.1
KIEV Kiev 144.82 328 *e*PKHKP PKPdf 20 39 34.0 -1.1
ERBA Erbaa 144.95 308 *i*P PKPdf 20 39 33.0 -2.6
SUW Suwalki 145.07 336 *e*PKP PKPdf 20 39 35.6 +0.2
SUW *e* 20 39 36.9
SUW Suwalki 145.07 336 *e*PKPdf PKPdf 20 39 35.1 -0.3
SUW Suwalki 145.07 336 *e*PKHKP PKPdf 20 39 35.1 -0.3
SIM Simferopol' 145.15 316 *de*PKIKP PKPab 20 39 37.9 0.0
SIM pmax pmax
comp=Z,45nm,0.7s
GZT Gaziantep 145.20 302 *i*P PKPdf 20 39 35.9 -0.3
KAC Achnashellach 145.94 5⇓ *e*P PKPdf 20 39 37.8 +1.1
MCD Coleburn Disti 146.00 3⇓ *e*P PKPdf 20 39 37.3 +0.5
KPL Plockton 146.07 6 *e*P PKPdf 20 39 37.0 0.0
MDO Dochfour 146.07 4⇓ *e*P PKPdf 20 39 37.9 +0.9
ANDN Andirin 146.09 303 *i*P PKPdf 20 39 38.6 +0.9
MME1 Meikle Cairn 146.28 3 *e*P PKPdf 20 39 38.0 +0.7
CTKT Corum 146.38 309 *i*P PKPdf 20 39 38.9 +0.8
COBT Iskenderun 146.40 301 *i*P PKPbc 20 39 40.3 -0.3
KAR1 Arisaig 146.47 6 *e*P PKPdf 20 39 39.2 +1.6
YAYL Yayladag 146.62 300 *i*P PKPbc 20 39 40.7 -0.5
AVNT Avonos 146.91 305 *i*P PKPdf 20 39 37.4 -1.6
HWQ Hawqa 147.07 297 *e*P PKPbc 20 39 42.7 +0.3
KIS Kishinev 147.28 323 *e*UNK PKPdf 20 39 40.0 +0.7
KIS Kishinev 147.28 323 *e*PKHKP PKPdf 20 39 40.0 +0.7
KIS *e* 20 39 47.0
EBH Black Hill 147.31 4⇓ *e*P PKPbc 20 39 41.5 -0.8
EAB Aberfoyle 147.32 5 *e*P PKPbc 20 39 41.5 -0.9
BHL Bhannes 147.37 296 *e*P PKPbc 20 39 43.8 +0.5
GULE Gulek 147.38 303 *i*P PKPdf 20 39 39.8 0.0
ELDT Eldivan 147.40 309 *i*P PKPbc 20 39 42.5 -0.7
BR131 Keskin Array S 147.51 308 *e*PKPbc PKPbc 20 39 43.1 -0.4
BRTR Keskin Array B 147.51 308 PKP PKPdf 20 39 39.2 -0.8
comp=Z,6.2nm,0.7s,baz=60,slow=3.5,SNR=9.4
BRTR PKPbc PKPbc 20 39 43.2 -0.2
comp=Z,6.4nm,0.7s,baz=98,slow=3.1,SNR=24
BRTR PKPab PKPab 20 39 47.5 0.0
comp=Z,13nm,0.8s,baz=89,slow=3.9,SNR=25
BRTR pPKPbc pPKPbc 20 41 49.7 +0.1
comp=Z,0.6nm,0.7s,baz=82,slow=3.4,SNR=2.2
BRTR Keskin Array B 147.51 308 PKHKP PKPdf 20 39 39.2 -0.8
BRTR 20 39 43.2
BRTR 20 39 47.5
BRTR 20 41 49.7
EDI Edinburgh 147.66 3 *e*P PKPdf 20 39 41.2 +1.6
PGBU Glenifferbraes 147.68 5 *e*P PKPbc 20 39 42.3 -1.1
ESY Stoneypath 147.69 3⇓ *e*P PKPbc 20 39 42.2 -1.1
GKP Gorka Klasztor 147.69 341 *e*PKP PKPbc 20 39 43.2 -0.2
GKP Gorka Klasztor 147.69 341 *e*PKIKP PKPbc 20 39 43.2 -0.3
EAU Auchinoon 147.72 4⇓ *e*P PKPbc 20 39 42.6 -0.8
EBL Broad Law 147.81 3⇓ *e*P PKPbc 20 39 42.7 -1.0
LVV L'vov 147.87 330 *e*PKIKP PKPbc 20 39 42.9 -1.1
LVV *e* 20 41 55.1
LEOM Leova 147.90 322 PKIKP PKPbc 20 39 44.3 +0.1
LEOM Leova 147.90 322⇑ *i*P PKPbc 20 39 44.0 -0.2
ESK Eskdalemuir 148.26 4 *e*P PKPdf 20 39 42.7 +2.0
TLCR 148.30 320⇑ PKIKP PKPbc 20 39 45.4 +0.1
TLCR 148.30 320⇑ *i*P PKPbc 20 39 45.4 +0.1
SGKT Sivrigoynuk 148.34 310 *i*P PKPbc 20 39 43.8 -1.7
ECK Cauldkaine Hil 148.40 4 *e*P PKPbc 20 39 44.1 -1.0
KWP Kalwaria Pacla 148.59 331 *e*PKP PKPbc 20 39 45.9 +0.1
KWP *e* 20 39 51.6
KWP Kalwaria Pacla 148.59 331 *e*PKPbc PKPbc 20 39 45.5 -0.3
KWP Kalwaria Pacla 148.59 331 *e*PKHKP PKPbc 20 39 45.9 +0.1
KWP *e* 20 39 51.6
KWP Kalwaria Pacla 148.59 331⇓ *i*P PKPbc 20 39 45.9 +0.1
GAL1 Galloway 148.60 5 *e*P PKPbc 20 39 44.8 -0.9
CFR Carcaliu 148.71 320⇑ PKHKP PKPbc 20 39 46.3 0.0
CFR Carcaliu 148.71 320⇑ *i*P PKPbc 20 39 46.3 0.0
XAL Allendale 148.76 3⇓ *e*P PKPbc 20 39 45.3 -0.8
TESR 148.77 324⇑ *i*P PKPbc 20 39 45.9 -0.5
BUR08 Bucovina Ar. S 148.81 326 *e*PKPbc PKPbc 20 39 46.8 +0.4
BURAR Bucovina Array 148.82 326⇓ PKHKP PKPbc 20 39 47.3 +0.9
BURAR Bucovina Array 148.82 326⇓ *i*P PKPbc 20 39 47.3 +0.9
TIRR Tirgusor 148.94 319⇓ PKHKP PKPbc 20 39 46.4 -0.4
TIRR Tirgusor 148.94 319⇓ *i*P PKPbc 20 39 46.3 -0.5
KDHN Kadinhani 149.03 306 *i*P PKPbc 20 39 46.4 -0.8
XDE Dent Fell 149.05 4 *e*P PKPdf 20 39 44.2 +2.2
CSS Prodhromos 149.06 299 *e*PKPbc PKPbc 20 39 46.9 -0.5
VRI Vrincioaia 149.11 322⇑ PKHKP PKPbc 20 39 47.3 +0.1
VRI Vrincioaia 149.11 322⇑ *i*P PKPbc 20 39 47.3 +0.1
PLOR Plostina 149.17 322⇑ PKHKP PKPbc 20 39 47.1 -0.2
PLOR Plostina 149.17 322⇑ *i*P PKPbc 20 39 47.1 -0.2
GIM North Isle of 149.19 5⇓ *e*P PKPbc 20 39 46.2 -0.9
KOLS Kolonicke sedl 149.30 331 *e*PKHKP PKPbc 20 39 48.2 +0.6
KOLS Kolonicke sedl 149.30 331 *e*PKP PKPbc 20 39 48.2 +0.6
KOLS *e* 20 41 59.3
OJC Ojcow 149.35 335 *e*PKP PKPbc 20 39 47.5 -0.1
OJC Ojcow 149.35 335 *e*PKHKP PKPbc 20 39 47.5 -0.1
RUE Ruedersdorf 149.37 344 *e*PKPbc PKPbc 20 39 47.6 0.0
PSN Preselentsi 149.49 318 P PKPbc 20 39 48.1 -0.1
UZH Uzhgorod 149.51 330 *d i*PKHKP PKPbc 20 39 48.0 -0.1
UZH *i* 20 39 56.0
GAZI Gazipasa 149.56 302 *i*P PKPbc 20 39 46.2 -2.4
ESKT Eskisehir 149.60 309 *i*P PKPdf 20 39 45.5 +2.2
BMR Baia Mare 149.63 328 PKHKP PKPbc 20 39 48.5 +0.1
CRVS Cervenica-Dubn 149.68 332 *e*PKHKP PKPbc 20 39 48.7 +0.2
CRVS Cervenica-Dubn 149.68 332 *e*PKP PKPbc 20 39 48.7 +0.2
CRVS *e* 20 41 59.9
TRPA Tarpa 149.76 330⇑ *i*P PKPbc 20 39 48.2 -0.5
NIE Niedzica 149.77 333 *e*PKP PKPbc 20 39 49.3 +0.6
NIE *e* 20 42 01.2
NIE Niedzica 149.77 333 *e*PKHKP PKPbc 20 39 49.3 +0.6
MLR Muntele Rosu 149.78 323⇓ PKHKP PKPbc 20 39 48.8 0.0
MLR Muntele Rosu 149.78 323⇓ *i*P PKPbc 20 39 48.8 0.0
DOPR Dopca 149.79 324⇑ *i*P PKPbc 20 39 49.5 +0.7
KSP Ksiaz 150.08 339 *e*PKP PKPbc 20 39 49.6 +0.2
KSP *e* 20 39 57.7
NRDL Niedersach Rie 150.19 348 *e*PKPbc PKPbc 20 39 49.3 -0.3
PRD Provadia 150.23 318 P PKPbc 20 39 50.2 +0.2
OKC Ostrava-Krasne 150.28 336 *i*PKHKP PKPbc 20 39 49.7 -0.2
OKC *e* 20 39 57.3
OKC Ostrava-Krasne 150.28 336⇑ *i*PKP PKPbc 20 39 49.7 -0.2
OKC *e*PKPAB PKPab 20 39 57.3 -1.2
OKC *e*pPKP pPKPdf 20 42 01.4 +9.1
VOIR 150.31 323⇑ PKHKP PKPbc 20 39 49.8 -0.3
VOIR 150.31 323⇑ *i*P PKPbc 20 39 49.8 -0.3
KECS Kecovo 150.42 332 *e*PKHKP PKPbc 20 39 50.7 +0.5
KECS *e* 20 39 59.2
KECS Kecovo 150.42 332 *e*PKP PKPbc 20 39 50.7 +0.5
KECS *e* 20 39 59.2
KECS *e* 20 42 02.9
UPC Upice 150.46 339 *i*PKHKP PKPbc 20 39 50.4 +0.2
UPC *e* 20 39 59.9
UPC Upice 150.46 339⇑ *i*PKP PKPbc 20 39 50.4 +0.2
UPC *e*PKPAB PKPab 20 39 59.9 +0.6
UPC *e*pPKP pPKPdf 20 42 02.1 +10
DPC Dobruska-Polom 150.50 339 *i*PKHKP PKPbc 20 39 50.7 +0.4
DPC *e* 20 39 58.5
DPC Dobruska-Polom 150.50 339⇑ *i*PKP PKPbc 20 39 50.7 +0.4
DPC *e*PKPAB PKPab 20 39 58.5 -0.9
DPC *e*pPKP pPKPdf 20 42 02.2 +10
MORC Moravsky Berou 150.56 337 *e*PKPbc PKPbc 20 39 50.4 0.0
MORC Moravsky Berou 150.56 337⇓ PKHKP PKPbc 20 39 50.5 0.0
MORC Moravsky Berou 150.56 337⇓ *i*P PKPbc 20 39 50.5 0.0
DRGR 150.63 327 PKHKP PKPbc 20 39 50.8 0.0
DRGR 150.63 327⇓ *i*P PKPbc 20 39 50.5 -0.3
CLL Collm 150.64 343⇓ *e*PKIKP PKPdf 20 39 44.0 -0.5
CLL *i* 20 39 50.4
CLL *i* 20 39 59.4
CLL pmax pmax
comp=Z,54nm,1.1s
CLL pmax pmax
comp=Z,21nm,1.1s
CLL Collm 150.64 343 *e*PKPdf PKPdf 20 39 44.0 -0.5
CLL ⇓ *i*PKPbc PKPbc 20 39 50.4 -0.2
comp=Z,54nm,1.1s
CLL ⇑ *i*PKPab PKPab 20 39 59.4 -0.6
comp=Z,21nm,1.1s
CLL *e*pPKPbc pPKPbc 20 41 58.0 +0.4
CLL *i*pPKPab pPKPab 20 42 01.5 -0.5
BRG Berggiesshubel 150.77 342 *e*PKPbc PKPbc 20 39 51.0 +0.1
BRG Berggiesshubel 150.77 342 *e*PKP PKPbc 20 39 50.9 0.0
comp=Z,29nm,0.7s
BRG *e*pPKP pPKPdf 20 42 02.5 +9.4
comp=Z,23nm,1.3s
KORT Korkueli 150.85 304 *i*P PKPbc 20 39 50.6 -1.0
PVCC Panska Ves 150.90 341 *i*PKIKP PKPbc 20 39 51.4 +0.2
PVCC *e* 20 42 02.9
PVCC Panska Ves 150.90 341⇑ *i*PKP PKPbc 20 39 51.4 +0.2
PVCC *e*pPKP pPKPdf 20 42 02.9 +10
KHAL Karahalli 151.01 307 *i*P PKPbc 20 39 50.3 -1.6
NEUB Neuenburg 151.04 345 *e*PKPab PKPab 20 40 01.2 -0.4
SZH Strazhica 151.09 319 P PKPbc 20 39 51.3 -0.6
VYHS Vyhne 151.10 334 *e*PKIKP PKPbc 20 39 51.5 -0.3
VYHS *e* 20 40 02.1
VYHS *e* 20 42 00.7
VYHS Vyhne 151.10 334 *e*PKP PKPbc 20 39 51.5 -0.3
VYHS *e* 20 40 02.1
VYHS *e* 20 42 00.7
PSZ Piszkesteto 151.11 332 *e*PKPbc PKPbc 20 39 51.3 -0.5
PSZ Piszkesteto 151.11 332 *i*PKIKP PKPbc 20 39 51.6 -0.2
PSZ Piszkesteto 151.11 332⇓ *i*P PKPbc 20 39 51.6 -0.2
PSZ Piszkesteto 151.11 332⇓ *e*PKP PKPbc 20 39 51.6 -0.2
PSZ *e*PKP PKPab 20 40 02.5 +0.4
PSZ *e*pPKP/A pPKPbc 20 41 59.7 +0.9
JMB Yambol 151.13 317 P PKPbc 20 39 52.1 +0.1
KOLL Kolacno 151.21 334 *e*PKIKP PKPbc 20 39 52.2 +0.2

KOLL	Kolacno	151.21	334	*e*PKP	PKPbc	20 39 52.2	+0.2
DURS	Dursunbey	151.25	310	*i* P	PKPbc	20 39 50.3	-2.1
VRAC	Vranov	151.29	337	⇑PKIKP	PKPbc	20 39 51.7	-0.5
VRAC	Vranov	151.29	337	⇑*i*P	PKPbc	20 39 51.7	-0.5
DEMI	Demirci	151.31	309	*i* P	PKPbc	20 39 52.0	-0.6
GOLH	Golhisar	151.36	305	*i* P	PKPbc	20 39 50.3	-2.5
PRU	Pruhonice	151.38	340	*i* PKIKP	PKPbc	20 39 52.8	+0.5
PRU				*e*		20 40 03.1	
PRU				*e*		20 42 04.8	
PRU	Pruhonice	151.38	340	⇑*i*PKP	PKPbc	20 39 52.8	+0.5
PRU				*e*PKPAB	PKPab	20 40 03.1	0.0
PRU				*e*pPKP	pPKPab	20 42 04.8	-0.3
PVL	Pavlikeni	151.48	319	P	PKPbc	20 39 53.0	+0.2
GZR	Gura Zlata	151.55	325	⇑PKIKP	PKPdf	20 39 46.2	+0.1
GZR	Gura Zlata	151.55	325	⇑*i*P	PKPdf	20 39 46.2	+0.1
MCH1	Michaelchurch	151.58	4	*e*P	PKPbc	20 39 51.8	-0.9
DNZL	Cakiroluk	151.59	306	*i* P	PKPbc	20 39 51.4	-1.9
TANN	Tannenbergstha	151.59	343	*e*PKPbc	PKPbc	20 39 52.7	-0.1
MOX	Moxa	151.60	345	*e*PKP	PKPbc	20 39 52.5	-0.3
	comp=Z,18nm,1.4s						
MOX				*e*		20 40 02.6	
MOX	Moxa	151.60	345	*e*PKPbc	PKPbc	20 39 52.6	-0.2
MOX				*e*PKPab	PKPab	20 40 03.5	-0.5
WERD	Werda	151.60	344	*e*PKPbc	PKPbc	20 39 52.8	0.0
WERD				*e*PKPab	PKPab	20 40 03.7	-0.3
GUNZ	Gunzen	151.67	343	*e*PKPbc	PKPbc	20 39 53.1	+0.1
GUNZ				*e*PKPab	PKPab	20 40 04.3	0.0
TREC	Trest	151.68	339	*i* PKIKP	PKPbc	20 39 52.7	-0.3
TREC				*e*		20 40 04.9	
TREC				*e*		20 42 04.8	
TREC	Trest	151.68	339	⇑*i*PKP	PKPbc	20 39 52.7	-0.3
TREC				*e*PKPAB	PKPab	20 40 04.9	+0.5
TREC				*e*pPKP	pPKPab	20 42 04.8	-1.5
WERN	Wernitzgruen	151.73	343	*e*PKPbc	PKPbc	20 39 53.4	+0.3
WERN				*e*PKPab	PKPab	20 40 04.7	+0.1
NKC	Novy Kostel	151.76	343	*i* PKIKP	PKPbc	20 39 52.7	-0.5
NKC				*e*		20 40 03.5	
NKC				*e*		20 42 05.3	
NKC	Novy Kostel	151.76	343	⇑*i*PKP	PKPbc	20 39 52.7	-0.5
NKC				*e*PKPAB	PKPab	20 40 03.5	-1.2
NKC				*e*pPKP	pPKPab	20 42 05.3	-1.3
BALY	Balya	151.78	311	*i* P	PKPbc	20 39 52.2	-1.4
MODS	Modra-Piesok	151.81	335	*e*PKIKP	PKPbc	20 39 53.8	+0.4
MODS				*e*		20 40 06.0	
MODS				*e*		20 42 05.4	
MODS	Modra-Piesok	151.81	335	*e*PKP	PKPbc	20 39 53.8	+0.4
MODS				*e*		20 40 06.0	
MODS				*e*		20 42 05.4	
BUD	Budapest	151.82	332	⇓*e*PKP	PKPbc	20 39 53.0	-0.4
HGH	Gray Hill	151.95	4	*e*P	PKPbc	20 39 52.1	-1.4
BZS	Buzias	152.00	327	⇓PKIKP	PKPdf	20 39 45.8	-1.0
BZS	Buzias	152.00	327	⇓*i*P	PKPdf	20 39 45.8	-1.0
ZST	Bratislava	152.03	335	*e*PKIKP	PKPbc	20 39 53.8	0.0
ZST				*e*		20 40 06.7	
ZST	Bratislava	152.03	335	*e*PKP	PKPbc	20 39 53.8	0.0
ZST				*e*		20 40 06.7	
ROTZ	Rotzenmuhle	152.25	343	*e*PKPab	PKPab	20 40 07.0	+0.2
KDZ	Kurdzhali	152.30	316	P	PKPbc	20 39 53.9	-0.8
KHC	Kasperske Hory	152.43	341	*e*PKPdf	PKPdf	20 39 47.0	-0.3
KHC	Kasperske Hory	152.43	341	*e*PKIKP	PKPdf	20 39 46.9	-0.4
KHC				*i*		20 39 54.4	
KHC				*e*		20 40 07.6	
KHC	Kasperske Hory	152.43	341	*e*PKIKP	PKPdf	20 39 47.0	-0.3
KHC	Kasperske Hory	152.43	341	*e*PKPDF	PKPdf	20 39 46.9	-0.4
KHC				⇑*i*PKP	PKPbc	20 39 54.4	-0.3
KHC				*e*PKPAB	PKPab	20 40 07.6	0.0
KHC				*e*pPKP	pPKPab	20 42 06.3	-3.1
PGB	Panagyurishte	152.56	319	P	PKPbc	20 39 54.3	-0.9
GRF	Grafenberg Arr	152.57	344	*e*PKPab	PKPab	20 40 08.4	+0.2
GRFO	Grafenberg	152.58	344	PKPbc	PKPbc	20 39 55.0	0.0
GRFO	Grafenberg	152.58	344	PKIKP	PKPbc	20 39 55.0	0.0
WET	Wettzell	152.63	342	*e*PKPab	PKPab	20 40 08.4	0.0
GEC2	GERESS Array S	152.65	340	*e*PKPbc	PKPbc	20 39 54.9	-0.3
GEC2	GERESS Array S	152.65	340	*e*PKIKP	PKPbc	20 39 54.9	-0.3
GERES	GERESS Array B	152.65	340	PKP	PKPdf	20 39 47.5	-0.1
	comp=Z,0.8nm,0.9s,baz=354,slow=1.3,SNR=5.9						
GERES				PKPbc	PKPbc	20 39 54.8	-0.4
	comp=Z,1.5nm,0.5s,baz=22,slow=1.8,SNR=22						
GERES				PKPab	PKPab	20 40 07.7	-0.9
	comp=Z,1.0nm,0.6s,baz=33,slow=4.9,SNR=6.2						
GERES				pPKPbc	pPKPbc	20 42 03.0	+0.6
	comp=Z,1.1nm,0.8s,baz=45,slow=2.5,SNR=4.7						
GERES	GERESS Array B	152.65	340	PKP	PKPdf	20 39 47.5	-0.1
GERES				PKPbc	PKPbc	20 39 54.8	-0.4
GERES				PKPab	PKPab	20 40 07.7	-0.9
GERES				pPKPbc	pPKPbc	20 42 03.0	+0.6
GERES	GERESS Array B	152.65	340	PKIKP	PKPdf	20 39 47.5	-0.1
GERES						20 39 54.8	
GERES						20 40 07.7	
SOP	Sopron	152.66	335	⇓*e*PKP	PKPbc	20 39 54.3	-0.9
SOP				*e*PKP	PKPab	20 40 09.1	+0.5
SOP				*e*pPKP/A	pPKPab	20 42 07.5	-2.9
TNS	Taunus Mts	152.68	348	*e*PKPab	PKPab	20 40 08.0	-0.6
CONA	Conrad Observa	152.71	337	⇓*i*PKPdf	PKPdf	20 39 47.9	+0.1
	comp=Z,6.8nm,1.6s						
CONA				⇓*i*PKiKP	PKiKP	20 39 55.4	0.0
	comp=Z,16nm,1.2s						
CONA				⇑*i*PKPab	PKPab	20 40 09.5	+0.7
	comp=Z,18nm,1.1s						
VTS	Vitosha	153.11	320	⇓PKIKP	PKPdf	20 39 49.3	+0.8
VTS	Vitosha	153.11	320	⇓*i*P	PKPdf	20 39 49.3	+0.8
VTS	Vitosha	153.11	320	*i* P	PKPbc	20 39 55.6	-0.8
GIVF	Givet	153.33	353	*e*PKP2	PKPab	20 40 11.2	-0.2
MMB	Musomiste	153.39	318	P	PKPbc	20 39 56.0	-1.0
BAIF	Baives	153.43	354	*e*PKP2	PKPab	20 40 11.0	-0.8
	comp=Z,11nm,0.9s						
WLF	Walferdange	153.59	351	PKPbc	PKPbc	20 39 58.1	+0.9
KKB	Krupnik	153.62	319	P	PKPbc	20 39 56.8	-0.7
FUR	Furstenfeldbru	153.97	343	*e*PKPab	PKPab	20 40 14.2	0.0
FUR	Furstenfeldbru	153.97	343	*e*PKP2	PKPab	20 40 14.2	0.0
SOKA	Soboth	154.07	336	⇑*i*PKPdf	PKPdf	20 39 48.7	-1.0
	comp=Z,5.4nm,1.4s						
SOKA				⇑*i*PKPab	PKPab	20 40 14.6	-0.1
	comp=Z,14nm,1.1s						
PERS	Pernice	154.07	336	*i* PKPbc	PKPab	20 40 14.2	-0.5
BFO	Black Forest	154.51	347	*e*PKPab	PKPab	20 40 15.9	-0.6
BFO	Black Forest	154.51	347	*e*PKP2	PKPab	20 40 15.9	-0.6
CDF	Champ du Feu	154.63	349	*e*PKP2	PKPab	20 40 16.2	-0.8
	comp=Z,19nm,1.1s						
MOTA	Moosalm	154.76	342	⇓*i*PKPdf	PKPdf	20 39 50.4	-0.2
	comp=Z,2.7nm,0.7s						
MOTA				⇑*i*PKiKP	PKPdf	20 40 00.1	+9.5
	comp=Z,6.1nm,0.9s						
MOTA				⇑*i*PKPab	PKPab	20 40 17.8	+0.2
	comp=Z,4.8nm,0.5s						
VISS	Visnje	154.88	335	*i* PKPbc	PKPab	20 40 17.6	-0.6
MEZF	Maizieres J'vi	154.88	352	*e*PKP2	PKPab	20 40 17.2	-0.9
	comp=Z,25nm,0.9s						
BOJS	Bojanci	154.96	334	*i* PKPbc	PKPab	20 40 18.3	-0.2
LDF	La Druitiere	155.09	0	*e*PKP2	PKPab	20 40 17.0	-2.0
	comp=Z,4.1nm,0.6s						
FETA	Feichten	155.16	343	⇑*i*PKPdf	PKPdf	20 39 50.7	-0.5
	comp=Z,4.9nm,1.0s						
SFTF	Sexfontaines	155.17	352	*e*PKP2	PKPab	20 40 18.4	-0.9
	comp=Z,44nm,1.0s						
HAU	Haudompre	155.18	350	*e*PKP2	PKPab	20 40 18.5	-0.9
	comp=Z,25nm,1.0s						
HINF	Hinteralfeld	155.28	349	*e*PKP2	PKPab	20 40 18.6	-1.2
	comp=Z,5.5nm,0.7s						
GRR	Gorron	155.28	2	*e*PKP2	PKPab	20 40 18.3	-1.5
	comp=Z,27nm,1.1s						
TUE	Stuetta	156.03	344	*e*PKPab	PKPab	20 40 23.2	+0.1
LOR	Lormes	156.23	354	*e*PKP2	PKPab	20 40 23.0	-0.9
	comp=Z,7.8nm,0.7s						
SSF	Saint Saulge	156.47	354	*e*PKP2	PKPab	20 40 24.0	-1.0
	comp=Z,16nm,0.8s						
CABF	La Chapelle	156.58	350	*e*PKP2	PKPab	20 40 24.7	-0.8
AVF	Avril sur Loir	156.75	354	*e*PKP2	PKPab	20 40 24.9	-1.3
	comp=Z,11nm,0.9s						
SMF	Signal de Mont	156.85	353	*e*PKP2	PKPab	20 40 25.5	-1.1
	comp=Z,45nm,1.1s						
TCF	Toulx Ste Croi	157.34	356	*e*PKP2	PKPab	20 40 27.5	-1.2
	comp=Z,14nm,1.1s						
LPL	La Plagne	157.52	348	*e*PKP2	PKPab	20 40 29.6	0.0
	comp=Z,18nm,1.0s						
LPG	La Plagne	157.53	348	*e*PKP2	PKPab	20 40 29.8	+0.2
	comp=Z,27nm,1.1s						
ORIF	Oris-en-Rattie	158.26	349	*e*PKP2	PKPab	20 40 32.5	-0.3
	comp=Z,15nm,0.9s						
RJF	Les Rejaudoux	158.35	357	*e*PKP2	PKPab	20 40 31.7	-1.5
	comp=Z,22nm,1.1s						
VIVF	Saint-Julien-l	158.51	351	*e*PKP2	PKPab	20 40 33.3	-0.6
CAF	Calviac	158.70	356	*e*PKP2	PKPab	20 40 33.8	-0.9
	comp=Z,25nm,1.3s						
LFF	La Frestale	158.74	359	*e*PKP2	PKPab	20 40 33.8	-1.1
	comp=Z,65nm,1.2s						
SBF	Sospel	158.95	345	*e*PKP2	PKPab	20 40 34.9	-0.9
	comp=Z,38nm,0.9s						
SMRF	Simiane la Rot	159.22	349	*e*PKP2	PKPab	20 40 36.7	-0.3
	comp=Z,15nm,1.0s						
FRF	La Foret Royal	159.41	346	*e*PKP2	PKPab	20 40 37.1	-0.8
LMR	La Mourre	159.66	347	*e*PKP2	PKPab	20 40 38.3	-0.7
	comp=Z,38nm,1.3s						
PGF	Pioggiola	159.75	341	*e*PKP2	PKPab	20 40 38.8	-0.6
	comp=Z,14nm,0.9s						
MTLF	Montolieu	160.27	355	*e*PKP2	PKPab	20 40 40.6	-1.0
ETSF	Etsaut	160.78	2	*e*PKP2	PKPab	20 40 43.0	-0.9
LIC	Lamto	161.99	163	*e*PKIKP	PKPdf	20 40 00.2	0.0
	comp=Z,28nm,1.0s						
LIC	Lamto	161.99	163	⇑*i*PKIKP	PKPdf	20 40 00.0	-0.2
	comp=Z,33nm,1.3s						
KIC	Kosan Boka	162.20	164	*e*PKIKP	PKPdf	20 39 59.7	-0.7
	comp=Z,23nm,1.0s						
TIC	Toumodi	162.40	163	*e*PKIKP	PKPdf	20 40 00.1	-0.5
	comp=Z,23nm,1.0s						
TIC	Toumodi	162.40	163	*e*PKIKP	PKPdf	20 40 00.1	-0.5
DBIC	Dimbokro	162.46	163	PKPab	PKPab	20 40 52.9	+0.9
	comp=Z,3.4nm,0.8s,baz=214,slow=6.5,SNR=3.8						
EVO	Evora	163.61	23	*e*PKIKP	PKPdf	20 40 01.5	+0.5
	comp=Z,46nm,1.3s						
ESDC	Sonseca Array	163.64	11	PKPab	PKPab	20 40 55.8	-0.8
	comp=Z,0.2nm,0.5s,baz=343,slow=4.8,SNR=4.8						
KEST	Kesra	165.54	329	PKPab	PKPab	20 41 04.0	-1.1
	comp=Z,3.1nm,0.9s,baz=75,slow=19,SNR=7.7						
TORD	Torodi Ar. Bea	169.46	188	PKPab	PKPab	20 41 23.6	+0.9
	comp=Z,3.3nm,0.7s,baz=172,slow=4.7,SNR=5.7						

TIR ***22*** *20:26:08.9±1.2, 40.°12N×20.°06E, h0km±999km, ML2.9*
CSEM ***22*** *20:26:10.9±0.3, 40.°08N×20.°04E, h5km, ML2.9, Error ellipse: s-maj=5.8km s-min=3.9km az=109.0*
ISCJB ***22*** *20:26:11.1±0.6, 40.°06N±0.°02×20.°00E±0.°04, h8km±3km, Error ellipse: s-maj=5.3km s-min=3.5km az=16.8*
ATH ***22*** *20:26:11.2, 40.°07N×20.°07E, h14km±2km, MD3.3/11*
THE ***22*** *20:26:11.5, 40.°06N×20.°03E, h2km±1km, ML2.3/3, Error ellipse: s-maj=2.5km s-min=0.9km az=302.0*

ISC 22 20:26:11.3±0.6, 40.°06N±0.°02×19.°98E±0.°04, h7km±3km, n50, σ1.9±04/76, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	Sarande	0.18	176	*e*PG	Pg	20 26 15.4	+0.4
SRN				*i* SG	Sg	20 26 18.6	+1.1
SRN	Sarande	0.18	176	*e*Pg	Pg	20 26 15.4	+0.4
	SNR=90						
SRN				*i* Sg	Sg	20 26 18.6	+1.1
	SNR=90						
KEK	Kerkira	0.38	202	*e*PG	Pg	20 26 19.0	+0.3
KEK				*e*SB	Sg	20 26 25.6	+2.0
KEK	Kerkira	0.38	202	P	Pg	20 26 19.8	+0.2
KEK				S	Sg	20 26 25.6	+2.0
KEK	Kerkira	0.38	202	*e*Pg	Pg	20 26 19.0	+0.3
KEK				S	Sg	20 26 25.6	+2.0
LSK	Leskovik	0.48	79	*e*PG	Pg	20 26 19.5	-1.1
LSK				*i* SG	Sg	20 26 26.6	-0.3
LSK	Leskovik	0.48	79	*e*Pg	Pg	20 26 19.5	-1.1
	SNR=91						
LSK				*i* Sg	Sg	20 26 26.6	-0.3
	SNR=91						
IGT	Igoumenitsa	0.59	153	P	Pg	20 26 21.8	-1.0
IGT				S	Sg	20 26 30.8	+0.3
IGT	Igoumenitsa	0.59	153	P	Pg	20 26 21.8	-1.0
IGT				S	Sg	20 26 30.8	+0.3
JAN	Janina	0.78	121	*e*PB	Pg	20 26 25.3	-1.0
JAN				*e*SB	Sg	20 26 35.2	-1.3
JAN	Janina	0.78	121	*e*Pb	Pg	20 26 25.3	-1.0
JAN				*e*Sb	Sg	20 26 35.2	-1.3
KBN	Korca	0.83	47	*e*PG	Pg	20 26 27.4	+0.1
KBN				*i* SG	Sg	20 26 40.1	+2.0
KBN	Korca	0.83	47	*e*Pg	Pg	20 26 27.4	+0.1
	SNR=91						
NEST	Nestorio	0.89	66	P	Pg	20 26 27.0	-1.4
NEST	Nestorio	0.89	66	P	Pg	20 26 27.0	-1.4
FNA	Florina	1.28	55	P	Pn	20 26 34.7	-1.0
FNA				S	Sb	20 26 53.5	+1.0
FNA	Florina	1.28	55	P	Pn	20 26 34.7	-1.0
FNA				S	Sb	20 26 53.5	+1.0
LKD2	Lefkada island	1.38	157	P	Pn	20 26 36.6	-0.3
LKD2				S	Sb	20 26 55.5	+0.4
LKD2	Lefkada island	1.38	157	P	Pn	20 26 36.6	-0.3
LKD2				S	Sb	20 26 55.5	+0.4
KZN	Kozani	1.39	79	*e*PB	Pb	20 26 36.6	-1.0
KZN	Kozani	1.39	79	*e*Pb	Pb	20 26 36.6	-1.0
BIA	Bitola	1.40	46	P	Pn	20 26 36.8	-0.4
BIA	Bitola	1.40	46	*e*Pn	Pn	20 26 36.2	-1.1
BIA				*e*Sg	Sg	20 26 58.6	+2.3
BIA	Bitola	1.40	46	P	Pn	20 26 36.8	-0.4
KRUS	Krusevo	1.62	36	*i* Pn	Pn	20 26 41.5	+1.2
THL	Klokotos Trika	1.64	107	P	Pn	20 26 40.7	+0.1
THL				S	Sn	20 27 02.6	+0.7
THL	Klokotos Trika	1.64	107	P	Pn	20 26 40.7	+0.1
THL				S	Sn	20 27 02.6	+0.7
EVR	Evrytania	1.82	128	*e*PG	Pg	20 26 44.4	-1.8
EVR	Evrytania	1.82	128	*e*Pg	Pg	20 26 44.4	-1.8
LIT	Litokhoron	1.92	88	*e*PG	Pn	20 26 45.3	+0.8
LIT	Litokhoron	1.92	88	*e*Pg	Pn	20 26 45.3	+0.8
VLS	Valsamata	1.94	166	*e*PG	Pg	20 26 47.0	-1.5
VLS	Valsamata	1.94	166	P	Pn	20 26 43.8	-0.9
VLS				S	Sn	20 27 09.4	+0.1
VLS	Valsamata	1.94	166	P	Pn	20 26 43.8	-0.9
VLS	Valsamata	1.94	166	*e*Pg	Pg	20 26 47.0	-1.5
VLS				S	Sn	20 27 09.4	+0.1
AGG	Agios Georgios	2.09	119	*e*PN	Pn	20 26 47.4	+0.6
AGG	Agios Georgios	2.09	119	*e*Pn	Pn	20 26 47.4	+0.6
EFP	Efpalio	2.21	137	*e*PN	Pn	20 26 49.5	+1.1
EFP	Efpalio	2.21	137	*e*Pn	Pn	20 26 49.5	+1.1
RLS	Riolos of Patr	2.31	150	*e*PB	Pn	20 26 50.2	+0.4
RLS	Riolos of Patr	2.31	150	*e*Pb	Pn	20 26 50.2	+0.4
NEO	Neokhori	2.61	106	*e*PB	Pn	20 26 54.0	+0.1
NEO	Neokhori	2.61	106	*e*Pb	Pn	20 26 54.0	+0.1
GUR	Goura	2.81	138	*e*PN	Pn	20 26 56.8	+0.2
GUR	Goura	2.81	138	*e*Pn	Pn	20 26 56.8	+0.2
STON	Ston	3.29	329	*e*Pn	Pn	20 27 02.9	-0.3
STON				Sn	Sn	20 27 42.1	-0.5
STON	Ston	3.29	329	*e*Pn	Pn	20 27 02.9	-0.3
STON				Sn	Sn	20 27 42.0	-0.6
DID	Didima	3.60	134	*e*PN	Pn	20 27 08.2	+0.7
DID				*e*SN	Sn	20 27 50.0	-0.3
DID	Didima	3.60	134	*e*Pn	Pn	20 27 08.2	+0.7
DID				*e*Sn	Sn	20 27 50.0	-0.3
NVLJ	Novalja	5.88	322	*e*Pn	Pn	20 27 42.0	+3.1
NVLJ				Sn	Sn	20 28 44.5	-2.0

NIED ***22*** *20:43:00, 36.°70N×141.°20E, h44km, Mw3.7 Best double couple: M0=4.42000×10^14 NP1:φ0=208.00000°, δ83.00000°, λ-86.00000°. NP2:φ0=0.00000°, δ8.00000°, λ-118.00000°.*
IDC ***22*** *20:43:32.9±1.4, 36.°65N×141.°47E, h0km, mb3.7/5, mb1 3.7/9, mb1mx3.6/27, mbtmp3.7/9, ML3.4/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/26, Error ellipse: s-maj=30.5km s-min=18.7km az=74.0*
ISCJB ***22*** *20:43:35.8±1.0, 36.°69N±0.°03×141.°40E±0.°06, h31km±5km, mb3.7/6, Error ellipse: s-maj=7.9km s-min=5.8km az=11.3*
NEIC ***22*** *20:43:37.6±1.1, 36.°69N×141.°41E, h35km, mb4.4/1, Error ellipse: s-maj=23.3km s-min=15.6km az=50.0*
JMA ***22*** *20:43:38.3±0.1, 36.°72N×141.°20E, h46km±1km, M3.7*
JMA Felt I J1.

ISC 22 20:43:37.2±1.0, 36.°72N±0.°03×141.°33E±0.°06, h27km±5km, n22, σ0.95/35, mb3.7/6, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.57	312	⇓P	Pb	20 43 49.0	+0.3
ONAJ				*e*S	Sb	20 43 56.4	-0.2
JHO	Hitachi	0.62	261	⇓P	Pb	20 43 49.5	0.0
JHO				S	Sb	20 43 57.5	-0.4
JFK	Kawauchi	0.74	331	⇓P	Pb	20 43 51.5	-0.1
JFK				*e*S	Sb	20 44 00.4	-1.0
JYT	Yasato	1.04	242	⇓P	Pn	20 43 55.3	-0.7
JYT				*e*S	Sn	20 44 07.7	-2.0
JFT	Otama	1.13	316	⇓P	Pn	20 43 57.7	+0.4
JFT				*e*S	Sn	20 44 11.2	-0.7
JMM	Marumori	1.23	340	⇓P	Pn	20 43 58.2	-0.4
JMM				*e*S	Sn	20 44 13.4	-0.9
JFY	Yanaizu	1.47	298	P	Pn	20 44 02.5	+0.5
JFY				*e*S	Sn	20 44 20.9	+0.5
JAG	Ashikaga	1.54	260	⇓P	Pn	20 44 02.6	-0.3
JAG				*e*S	Sn	20 44 20.8	-1.2
JKT	Katashina	1.67	272	P	Pn	20 44 05.4	+0.6
JKT				*e*S	Sn	20 44 24.0	-1.3
MJAR	Matsushiro Arr	2.52	267	Pn	Pn	20 44 16.3	-0.1
	8.5nm,0.3s,baz=89,slow=15,SNR=60						
MJAR				Sn	Sn	20 44 48.5	+2.3
	12nm,0.3s,baz=103,slow=28,SNR=8.8						
MJAR	Matsushiro Arr	2.52	267	Pn	Pn	20 44 16.3	-0.1
MJAR				Sn	Sn	20 44 48.5	+2.3
MAJO	Matsushiro	2.52	267	*e*P	Pn	20 44 17.6	+1.2
MAT	Matsushiro	2.52	267	P	Pn	20 44 17.7	+1.3
MAT				S	Sn	20 44 47.5	+1.3
JHJ	Hachijo jima 2	3.81	200	Pn	Pn	20 44 34.4	+0.2
	16nm,0.3s,baz=352,slow=12,SNR=8.6						
JHJ				Sn	Sn	20 45 17.9	-0.1
	35nm,0.3s,baz=85,slow=22,SNR=6.3						
ASAJ	Asahikawa	7.46	7	Pn	Pn	20 45 25.1	+1.0
	0.4nm,0.3s,baz=209,slow=13,SNR=5.5						
KSRS	Korea Array	10.74	278	Pn	Pn	20 46 11.5	+2.3
	baz=94,slow=8.5,SNR=2.6						
KSRS				LR	LR	20 49 42.6	
	comp=Z,45nm,20.0s,baz=339,slow=34						
SONM	Songino Array	27.91	304	P	P	20 49 25.7	+0.9
	2.0nm,0.8s,mb3.8,baz=105,slow=8.8,SNR=10						
ZALV	Zalesovo Beam	42.08	313	P	P	20 51 27.1	+0.5
	0.5nm,0.5s,mb3.4,baz=99,slow=8.9,SNR=2.5						
MKAR	Makanchi Array	44.23	302	P	P	20 51 44.0	-0.1
	0.6nm,0.6s,mb3.5,baz=85,slow=11,SNR=6.9						
KURK	Kurchatov	46.08	308	*e*P	P	20 51 57.2	-1.5
	6.8nm,1.4s,mb4.4						
WRA	Warramunga Arr	56.74	188	P	P	20 53 17.9	-0.8
	0.3nm,0.3s,mb3.8,baz=5.9,slow=7.5,SNR=4.2						
ASAR	Alice Springs	60.46	188	P	P	20 53 43.8	-0.8
	0.4nm,0.8s,mb3.5,baz=17,slow=5.0,SNR=4.6						

MAN 22 20:44:17, 6.°35N×125.°36E, h42km, mb4.3, ML3.1, MS2.9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	0.71	337	⇑*i*P	Pn	20 44 32.6	+2.0
KCP				*i* S	Sn	20 44 43.0	+2.6
DMPH	Davao City--Mi	0.74	11	⇑*i*P	Pn	20 44 32.6	+1.5
MATI	Mati	1.07	56	*e*P	Pn	20 44 36.4	+0.9
BUKP	Musuan	1.55	349	*e*P	Pn	20 44 44.6	+2.5
BUKP				*e*S	Sn	20 45 02.4	+1.4
PAGZ	Pagadian	2.47	307	*e*P	Pn	20 44 56.0	+1.3

IDC 22 20:56:27.0±1.7, 16.°87S×178.°18W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.8/17, mbtmp3.8/5, Error ellipse: s-maj=153.3km s-min=23.5km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.32	240	P	P	21 03 58.3	+0.3
	1.9nm,0.9s,baz=84,slow=9.2,SNR=3.9						
WRA	Warramunga Arr	45.04	258	P	P	21 04 44.5	-0.3
	0.2nm,0.3s,baz=92,slow=7.4,SNR=3.3						
ASAR	Alice Springs	45.29	253	P	P	21 04 46.6	-0.1
	2.0nm,0.5s,baz=89,slow=8.3,SNR=41						
NVAR	Mina Array Bea	78.53	44	P	P	21 08 31.0	+0.7
	0.6nm,0.7s,baz=220,slow=9.5,SNR=4.6						
TXAR	Lajitas Array	85.26	58	P	P	21 09 05.8	-0.1
	0.4nm,0.8s,baz=242,slow=6.9,SNR=4.7						

*ISCJB

SCLT Jiali 0.78 289 *eP* Pg 21 01 18.1 +0.2
baz=302
SCLT *eS* Sg 21 01 31.5 +3.5
baz=302
TWP Hsiaoliuchiu 0.82 225 *eP* Pg 21 01 19.1 +0.3
baz=214
WGK Gukeng 0.85 333 *eP* Pg 21 01 19.9 +0.5
baz=333
WGK *eS* Sg 21 01 32.3 +1.9
baz=333
SSLB Suanglung 0.86 358 *eP* Pg 21 01 18.2 -1.4
SSLB *eS* Sg 21 01 32.0 +1.4
HEN Hengchun 0.95 194 *eP* Pg 21 01 21.6 +0.4
baz=201
SMLT Sun Moon Lake 0.95 355 *eP* Pg 21 01 20.4 -1.0
baz=356
SMLT *eS* Sg 21 01 35.5 +1.7
baz=356
ESL Shilin 0.97 25 *eP* Pg 21 01 20.4 -1.3
baz=37
TYC Yuchr 0.98 353 *eP* Pg 21 01 20.6 -1.2
baz=2.0
TYC *eS* Sg 21 01 36.2 +1.6
baz=2.0
WNT Mingjian 0.99 343 *eP* Pg 21 01 21.7 -0.3
baz=345
WNT *eS* Sg 21 01 36.6 +1.7
baz=345
TWK1 Hengchun 0.99 190 *eP* Pg 21 01 22.3 +0.2
baz=179
WSF Szhu 1.00 315 *eP* Pg 21 01 22.0 -0.2
baz=315
WSF *eS* Sg 21 01 36.6 +1.4
baz=315
WTCT Ta-ch'eng 1.14 325 *eP* Pg 21 01 24.4 -0.5
baz=325
WTCT *eS* Sg 21 01 40.5 +0.8
baz=325
WHF Hehuan Shan 1.24 12 *eP* Pg 21 01 25.3 -1.6
baz=18
WHF *eS* Sg 21 01 42.8 -0.1
baz=18
TCU Taichung 1.25 347 *eP* Pg 21 01 27.2 +0.2
baz=349
TWD Chiawan 1.27 26 *eP* Pg 21 01 26.2 -1.4
baz=35
TWD *eS* Sg 21 01 43.0 -1.1
baz=35
TWT Tachien 1.33 7 *eP* Pg 21 01 27.4 -1.2
baz=17
TWT *eS* Sg 21 01 46.5 +0.6
baz=17
NACB Ninganchiao 1.36 24 *e*Pn Pn 21 01 26.4 -2.9
NACB *e*Sn Sn 21 01 45.1 -2.9
TWQ1 Liyutan 1.43 352 *eP* Pn 21 01 30.1 -0.1
baz=354
TWQ1 *eS* Sg 21 01 49.1 +0.1
baz=354
PNG Penghu 1.47 296 ⇓P Pn 21 01 28.5 -2.2
baz=295
PNG *eS* Sg 21 01 47.2 -3.0
baz=295
NSY Sanyi 1.50 352 *eP* Pn 21 01 31.1 0.0
baz=353
NSY *eS* Sg 21 01 52.7 +1.5
baz=353
ENA Nanau 1.65 25 *eP* Pn 21 01 32.5 -0.7
baz=26
NSTT Nanjuang 1.70 0 *eP* Pn 21 01 34.0 +0.2
baz=2.0
NSTT *eS* Sn 21 01 57.6 +1.3
baz=2.0
YHNB Yeheng 1.77 11 *e*Pn Pn 21 01 34.0 -0.9
YHNB *e*Sn Sn 21 01 55.5 -2.6
NSK Sanguang 1.77 11 P Pn 21 01 35.2 +0.3
baz=13
NSK *eS* Sn 21 01 59.2 +1.0
baz=13
ENTT Nioudou 1.79 17 P Pn 21 01 35.4 +0.3
baz=33
ENTT *eS* Sn 21 01 59.0 +0.5
baz=33
TWC Suao 1.85 25 *eP* Pn 21 01 35.2 -0.8
baz=28
TWC *eS* Sn 21 01 59.6 -0.5
baz=28
TWE Neicheng 1.89 19 *eP* Pn 21 01 36.7 +0.2
baz=41
TWE *eS* Sn 21 02 01.2 +0.2
baz=41
TATO Taipei 2.09 12 *e*Pn Pn 21 01 38.5 -0.8
TATO *e*Sn Sn 21 02 05.0 -1.0
TWA Mucha 2.12 15 *eP* Pn 21 01 41.9 +2.2
baz=41
TWA *eS* Sn 21 02 08.8 +2.2
baz=41
TAP1 Taipei 2.16 13 *eP* Pn 21 01 41.6 +1.4
baz=356
TWS1 Kuangyinshan 2.20 10 *eP* Pn 21 02 4.0 +1.2
baz=355
NWF Wu-fen Shan 2.25 19 *eP* Pn 21 01 42.5 +1.0
baz=37

*ISCJB **22** 21:24:17.5±1.3, 17°.32S±0°.06×174°.56W±0°.06, h105km±13km, mb4.5/21, Error ellipse: s-maj=11.8km s-min=8.7km az=138.6*
*NEIC **22** 21:24:19.4±0.9, 17°.33S×174°.58W, h108km±9km, mb4.7/12, Error ellipse: s-maj=7.5km s-min=5.8km az=139.0*
*IDC **22** 21:24:24.6±0.9, 17°.37S×174°.59W, h154km±7km, mb4.0/8, mb1 4.2/8, mb1mx4.0/17, mbtmp4.0/8, MS3.2/1, Ms1 3.2/1, ms1mx2.3/24, Error ellipse: s-maj=37.0km s-min=13.3km az=143.0*

ISC 22 21:24:19.0±1.2, 17°.32S±0°.07×174°.55W±0°.07, h103km±12km, h154km±2.0km:pP-P, n53, σ0s79/53, mb4.5/21, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.32**	**39**	P	**Pn**	**21 25 23.7**	**+1.2**
	131nm,0.3s,baz=211,slow=12,SNR=60						
AFI				S	**Sn**	**21 26 10.7**	**-1.1**
	75nm,0.3s,baz=198,slow=20,SNR=9.1						
AFI	**Afiamalu**	**4.32**	**39**	*e*Pn	**Pn**	**21 25 23.1**	**+0.6**
AFI				*e*Sn	**Sn**	**21 26 10.0**	**-1.8**
RAR	**Rarotonga**	**14.48**	**108**	P	**Pn**	**21 27 39.7**	**+0.7**
OUZ	**Omahuta**	**20.73**	**208**	*eP*	**P**	**21 28 51.8**	**+0.6**
	23nm,1.0s						
URZ	**Urewera**	**22.11**	**198**	P	**P**	**21 29 05.0**	**-0.9**
	43nm,0.5s,mb5.0,baz=16,slow=7.3,SNR=28						
URZ				S	**S**	**21 32 57.4**	**-5.4**
	5.7nm,0.4s,baz=315,slow=10.0,SNR=5.2						
URZ	**Urewera**	**22.11**	**198**	*eP*	**P**	**21 29 04.5**	**-1.4**
	48nm,0.5s,mb5.1						
URZ				S	**S**	**21 32 57.4**	**-5.4**
SNZO	**South Karori**	**25.64**	**199**	*eP*	**P**	**21 29 36.9**	**-1.9**
	36nm,0.8s,mb4.9						
HNR	**Honiara**	**26.00**	**284**	LR	LR	21 38 35.5	
	comp=Z,53nm,18.7s,baz=93,slow=33						
HNR	**Honiara**	**26.00**	**284**	P	**P**	**21 29 42.0**	**-0.4**
KHZ	**Kahutara**	**27.01**	**200**	*eP*	**P**	**21 29 51.9**	**+0.7**
	22nm,0.7s,mb4.8						
RPZ	**Rata Peaks**	**29.00**	**202**	P	**P**	**21 30 10.3**	**+1.4**
	20nm,0.7s,mb4.8,baz=90,slow=4.0,SNR=2.3						
ARMA	**Armidale**	**33.43**	**241**	*eP*	**P**	**21 30 49.0**	**+1.0**
RMQ	**Roma**	**35.14**	**248**	*eP*	**P**	**21 31 04.0**	**+1.1**
	22nm,1.6s,mb4.7						
CTAO	**Charters Tower**	**37.17**	**259**	*eP*	**P**	**21 31 20.3**	**+0.1**
	6.7nm,0.6s,mb4.8						
PMG	**Port Moresby**	**38.02**	**277**	P	**P**	**21 31 27.3**	**-0.1**
CMSA	**Cobar Meteorol**	**38.65**	**241**	*eP*	**P**	**21 31 32.6**	**+0.1**
QLP	**Quilpie**	**39.18**	**249**	*eP*	**P**	**21 31 37.0**	**0.0**
TOO	**Toolangi**	**40.41**	**232**	*eP*	**P**	**21 31 46.6**	**-0.5**
COEN	**Coen**	**40.79**	**269**	*eP*	**P**	**21 31 52.0**	**+1.5**
STKA	**Stephens Creek**	**42.14**	**241**	P	**P**	**21 32 01.5**	**+0.2**
	20nm,0.9s,mb4.8,baz=90,slow=9.4,SNR=19						
STKA	**Stephens Creek**	**42.14**	**241**	*eP*	**P**	**21 32 01.8**	**+0.5**
	15nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**42.14**	**241**	*eP*	**P**	**21 32 01.6**	**+0.3**
	3.7nm,0.8s,mb4.2						
BBOO	**Buckleboo**	**46.91**	**241**	*eP*	**P**	**21 32 38.8**	**-0.4**
	21nm,0.9s,mb4.9						
WB2	**Warramunga Arr**	**48.34**	**258**	*eP*	**P**	**21 32 50.0**	**-0.5**
WRA	**Warramunga Arr**	**48.36**	**258**	P	**P**	**21 32 50.4**	**-0.1**
	6.1nm,0.5s,mb4.7,baz=97,slow=6.8,SNR=66						
ASAR	**Alice Springs**	**48.49**	**254**	P	**P**	**21 32 51.8**	**+0.2**
	47nm,0.6s,mb5.5,baz=87,slow=8.5,SNR=427						
FITZ	**Fitzroy Crossi**	**56.76**	**259**	*eP*	**P**	**21 33 51.9**	**-0.7**
	1.4nm,0.6s,mb4.2						
RPN	**Rapa Nui**	**60.59**	**112**	*eP*	**P**	**21 34 19.2**	**+0.1**
SBA	**Scott Base**	**61.26**	**184**	*eP*	**P**	**21 34 22.8**	**0.0**
	6.1nm,0.7s,mb4.7						
MBWA	**Marble Bar**	**61.78**	**255**	*eP*	**P**	**21 34 27.0**	**-0.2**
	34nm,1.4s,mb5.2						
CASY	**Casey**	**68.21**	**205**	*eP*	**P**	**21 35 07.4**	**-0.6**
KKM	**Kota Kinabalu**	**72.19**	**282**	P	**P**	**21 35 33.5**	**+0.3**
QSPA	**South Pole Qui**	**72.74**	**180**	*eP*	**P**	**21 35 35.2**	**-0.2**
	6.8nm,0.9s,mb4.5						
TWG	**Pinlang**	**74.51**	**300**	*eP*	**P**	**21 35 46.4**	**-0.3**
YULB	**Yu-li**	**74.58**	**301**	P	**P**	**21 35 46.8**	**-0.3**
NACB	**Ninganchiao**	**74.69**	**302**	*eP*	**P**	**21 35 47.1**	**-0.6**
NVAR	**Mina Array Bea**	**76.48**	**42**	P	**P**	**21 35 58.5**	**+0.9**
	1.6nm,0.8s,mb3.8,baz=225,slow=9.3,SNR=12						
NVAR				pP	pP	21 36 35.4	+11
	0.1nm,0.3s,baz=227,slow=11,SNR=2.8						
NVAR	**Mina Array Bea**	**76.48**	**42**	P	**P**	**21 35 58.5**	**+0.9**
NVAR				pP	pP	21 36 35.4	+11
TXAR	**Lajitas Array**	**82.59**	**56**	P	**P**	**21 36 31.5**	**+0.6**
	0.2nm,0.6s,baz=215,slow=7.6,SNR=3.3						
ANMO	**Albuquerque**	**82.87**	**50**	P	**P**	**21 36 32.9**	**+0.7**
	0.9nm,0.6s,mb3.8,baz=235,slow=3.9,SNR=3.8						
ANMO	**Albuquerque**	**82.87**	**50**	P	**P**	**21 36 32.9**	**+0.7**
MCMT	**McKenzie Canyo**	**83.43**	**39**	*eP*	**P**	**21 36 34.5**	**-0.4**
	2.5nm,1.4s,mb3.9						
PDAR	**Pinedale Array**	**84.42**	**42**	P	**P**	**21 36 40.0**	**+0.1**
	1.7nm,0.7s,mb4.0,baz=245,slow=2.8,SNR=19						
PDAR				pP	pP	21 37 18.8	+12
	0.9nm,0.8s,baz=287,slow=3.7,SNR=4.2						
ILAR	**Eielson Array**	**84.53**	**12**	P	**P**	**21 36 40.5**	**+0.5**
	0.4nm,0.6s,mb3.5,baz=230,slow=6.5,SNR=5.5						
ILAR				pP	pP	21 37 19.4	+13
	1.3nm,1.0s,baz=219,slow=5.5,SNR=5.2						
MAW	**Mawson**	**85.63**	**199**	P	**P**	**21 36 44.6**	**-1.1**
	3.3nm,0.6s,mb4.4,baz=122,slow=7.2,SNR=8.4						
MAW	**Mawson**	**85.63**	**199**	*eP*	**P**	**21 36 44.5**	**-1.1**
	0.3nm,0.6s,mb3.4						
VNA3	**Neumayer Olymp**	**91.05**	**175**	*e*	**P**	**21 37 06.9**	**-4.5**
VNA2	**Neumayer--Watz**	**91.53**	**176**	*e*	**P**	**21 37 09.5**	**-4.1**
	baz=170,slow=3.7						
VNA1	**Neumayer--Stat**	**91.74**	**175**	*e*	**P**	**21 37 11.3**	**-3.3**
TRQA	**Tornquist**	**96.19**	**133**	*eP*	**P**	**21 37 35.8**	**+0.1**
	5.4nm,1.1s,mb4.9						
KEV	**Kevo**	**125.92**	**351**	PKPdf	PKPdf	21 43 08.3	+0.2
CLL	**Collm**	**145.56**	**352**	*e*PKPbc	PKPbc	21 43 45.0	-0.2
CLL				*i* PKiKP	PKiKP	21 43 49.1	+0.1
	comp=Z,8.0nm,1.2s						
GERES	**GERESS Array B**	**147.84**	**350**	PKPbc	PKPbc	21 43 50.9	-1.0
	comp=Z,0.3nm,0.6s,baz=354,slow=2.7,SNR=5.1						

ISC 22 21:46:46.5±2.0, 39°.3N±0°.1×74°.8E±0°.1, h35km, n9, σ1s08/13, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.96**	**78**	Pg	**Pn**	**21 47 02.3**	**-1.2**
KSH				Sg	**Sn**	**21 47 16.3**	**+0.3**
KSH				smax			
	comp=N,60nm,0.4s						
KSH				smax			
	comp=E,51nm,0.2s						
KZA	**Kyzart**	**2.77**	**8**	P	**Pn**	**21 47 29.5**	**+1.1**
	SNR=5.9						
UCH	**Uchtor**	**2.90**	**356**	P	**Pn**	**21 47 29.2**	**-0.9**
	SNR=13						
AML	**Almayashu**	**2.91**	**344**	P	**Pn**	**21 47 29.6**	**-0.7**
	SNR=7.5						
ULHL	**Ulahol**	**3.12**	**21**	P	**Pn**	**21 47 36.6**	**+3.3**
	SNR=12						
KBK	**Karagaybulak**	**3.33**	**2**	P	**Pn**	**21 47 35.8**	**-0.2**
	SNR=8.0						
EKS2	**Erkin-Say**	**3.41**	**348**	P	**Pn**	**21 47 38.5**	**+1.4**
	SNR=9.9						
TKM2	**Tokmak 2**	**3.64**	**10**	⇓Pn	**Pn**	**21 47 41.4**	**+1.0**
	comp=E,3.7nm,0.5s						
TKM2				⇓Sn	**Sn**	**21 48 21.1**	**-1.0**
	comp=E,9.3nm,0.7s						
KK31	**Karatay Array**	**4.94**	**321**	⇑Pn	**Pn**	**21 47 57.2**	**-1.0**
	comp=E,0.2nm,0.3s,baz=126,slow=13,SNR=4.7						
KK31				⇑Pg	**Pn**	**21 48 04.8**	**+6.6**
	comp=E,0.2nm,0.3s,baz=131,slow=15,SNR=4.2						
KK31				⇑Sn	**Sn**	**21 48 49.3**	**-4.9**
	comp=E,0.7nm,0.3s						
KK31				⇑Lg		21 48 58.3	
	comp=E,1.1nm,0.4s,baz=130,slow=27						

*ISCJB **22** 21:47:13.6±0.6, 26°.98N±0°.04×56°.01E±0°.07, h10km, Error ellipse: s-maj=9.2km s-min=5.6km az=5.7*
*CSEM **22** 21:47:13.7±0.2, 26°.95N×56°.09E, h2km, ML3.1, Error ellipse: s-maj=21.2km s-min=4.8km az=91.0*
*OMAN **22** 21:47:16.0±99.0, 26°.81N×56°.10E, h6km, Error ellipse: s-maj=72.2km s-min=14.6km az=37.0*
*TEH **22** 21:47:21.5, 27°.19N×55°.88E, h32km*

ISC 22 21:47:14.5±0.6, 26°.95N±0°.04×56°.13E±0°.09, h10km, n20, σ0s97/29, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.45**	**5**	*e*Pg	**Pg**	**21 47 22.2**	**-1.2**
BNDS				*e*Sg	**Sg**	**21 47 28.2**	**-1.1**
IBND	**Bandar-abas**	**0.62**	**36**	*e*Pg	**Pg**	**21 47 25.7**	**-0.8**
IBND				*e*		21 47 50.2	
	comp=Z,21μm,0.1s						
BANOM	**Banah**	**1.03**	**171**	P	**Pg**	**21 47 33.4**	**-1.0**
	SNR=225						
BANOM	**Banah**	**1.03**	**171**	P	**Pg**	**21 47 33.4**	**-1.0**
	SNR=225						
ASHO	**Ashiyiah**	**2.26**	**182**	P	**Pn**	**21 47 52.0**	**+0.1**
	SNR=27						
ASHO	**Ashiyiah**	**2.26**	**182**	P	**Pn**	**21 47 52.0**	**+0.1**
	SNR=27						
ASUD	**Al Ashush, Dub**	**2.42**	**198**	P	**Pn**	**21 47 54.3**	**+0.1**
	SNR=25						
ASUD	**Al Ashush, Dub**	**2.42**	**198**	P	**Pn**	**21 47 54.3**	**+0.1**
	SNR=25						
KRBR	**Kerman**	**3.07**	**10**	*e*Pn	**Pn**	**21 48 04.7**	**+1.6**
ISRV	**Sarvestan**	**3.60**	**313**	*e*Pn	**Pn**	**21 48 10.0**	**-0.4**
ISRV				*e*Sn	**Sn**	**21 48 47.5**	**-5.5**
ISRV				*e*		21 48 57.3	
	comp=Z,250nm,0.1s						
IPAR	**Pars**	**3.96**	**317**	*e*Pn	**Pn**	**21 48 15.5**	**+0.2**
IPAR				*e*Sn	**Sn**	**21 48 54.5**	**-7.3**
IPAR				*e*		21 49 08.5	
	comp=Z,172nm,0.3s						
IMEH	**Mehriz**	**4.62**	**344**	*e*Pn	**Pn**	**21 48 25.4**	**+1.0**
IMEH				*e*		21 48 30.4	
	comp=Z,229nm,0.1s						
IMEH				*e*Sn	**Sn**	**21 49 12.1**	**-6.0**
IBAF	**Bafgh**	**4.65**	**354**	*e*Pn	**Pn**	**21 48 25.3**	**+0.5**
IBAF				*e*		21 48 36.8	
	comp=Z,129nm,0.1s						
IBAF				*e*Sn	**Sn**	**21 49 12.7**	**-6.2**
ISAD	**Sadrabad**	**5.39**	**337**	*e*Pn	**Pn**	**21 48 36.2**	**+1.2**
ISAD				*e*		21 48 44.3	
	comp=Z,170nm,0.1s						
IKOO	**Kooshah**	**6.00**	**24**	*e*Pn	**Pn**	**21 48 45.8**	**+2.4**
IKOO				*e*		21 49 14.5	
	comp=N,86nm,0.1s						
IGAR	**Gharneh**	**6.50**	**328**	*e*Pn	**Pn**	**21 48 49.2**	**-1.0**
NASN	**Na'in**	**6.50**	**334**	*e*Pn	**Pn**	**21 48 50.4**	**+0.1**
IZEF	**Zefreh**	**6.78**	**332**	*e*Pn	**Pn**	**21 48 53.2**	**-0.9**
IZEF				*e*		21 49 06.9	
	comp=Z,45nm,0.1s						
IPIR	**Pirpir**	**7.30**	**323**	*e*	**Pn**	**21 49 06.4**	**+5.1**
	comp=Z,95nm,0.1s						
IPIR				*e*Pn	**Pn**	**21 49 01.6**	**+0.3**
IPIR				*e*Sn	**Sn**	**21 50 14.2**	**-10**
IKLH	**Kolahrood**	**7.47**	**329**	*e*	**Pn**	**21 49 10.9**	**+7.3**
	comp=Z,53nm,0.1s						
IKLH				*e*Pn	**Pn**	**21 49 03.3**	**-0.3**
IKLH				*e*Sn	**Sn**	**21 50 18.3**	**-10**

*ISCJB **22** 22:43:49.9±0.4, 40°.81N±0°.02×33°.67E±0°.03, h9km±4km, Error ellipse: s-maj=4.4km s-min=3.6km az=17.9*
*CSEM **22** 22:43:49.7±0.1, 40°.82N×33°.71E, h12km, MD3.0, Error ellipse: s-maj=2.4km s-min=1.8km az=86.0*
*DDA **22** 22:43:49.3, 40°.79N×33°.69E, h7km±4km, Md3.1, Ml3.4*
*ISK **22** 22:43:49.4, 40°.81N×33°.63E, h8km, MD3.0*

ISC 22 22:43:50.2±0.4, 40°.80N±0°.02×33°.68E±0°.03, h10km±4km, n39, σ0s90/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANT	**Cankiri**	**0.20**	**193**	PG	**Pg**	**22 43 54.2**	**-0.1**
CANT				*e*SG	**Sg**	**22 43 58.2**	**+1.2**
ILGA	**Ilgaz**	**0.26**	**7**	*i* P	**Pg**	**22 43 55.7**	**+0.3**
ILGA				*i* S	**Sg**	**22 43 59.6**	**+0.7**
ILGA	**Ilgaz**	**0.26**	**7**	*i* P	**Pg**	**22 43 55.7**	**+0.3**
ILGA				*i* S	**Sg**	**22 43 59.6**	**+0.7**
TOS	**Tosya**	**0.35**	**48**	PG	**Pg**	**22 43 57.6**	**+0.3**
TOS				*e*SG	**Sg**	**22 44 03.4**	**+1.4**
TOS	**Tosya**	**0.35**	**48**	*i* Pg	**Pg**	**22 43 57.6**	**+0.4**
ELDT	**Eldivan**	**0.36**	**212**	*i* P	**Pg**	**22 43 57.1**	**-0.3**
ELDT				*i* S	**Sg**	**22 44 02.9**	**+0.8**
ELDT	**Eldivan**	**0.36**	**212**	*i* P	**Pg**	**22 43 57.1**	**-0.2**
ELDT				*i* S	**Sg**	**22 44 02.9**	**+0.8**
BALT	**Daday**	**0.77**	**343**	*i* P	**Pg**	**22 44 04.1**	**-1.0**
BALT				*i* S	**Sg**	**22 44 15.1**	**0.0**
BALT	**Daday**	**0.77**	**343**	*i* P	**Pg**	**22 44 04.1**	**-1.0**
BALT				*i* S	**Sg**	**22 44 15.1**	**0.0**
CTKT	**Corum**	**0.86**	**101**	*i* P	**Pg**	**22 44 05.9**	**-1.0**
CTKT				*i* S	**Sg**	**22 44 17.6**	**-0.5**
CTKT	**Corum**	**0.86**	**101**	*i* P	**Pg**	**22 44 05.9**	**-0.9**
CTKT				*i* S	**Sg**	**22 44 17.6**	**-0.5**
SAFT	**Safranbolu**	**0.87**	**301**	PG	**Pg**	**22 44 05.8**	**-1.1**
SAFT				*e*SG	**Sg**	**22 44 17.9**	**-0.4**
SAFT	**Safranbolu**	**0.87**	**301**	*i* Pg	**Pg**	**22 44 05.8**	**-1.2**
SAFT				*e*Sg	**Sg**	**22 44 17.9**	**-0.4**
CORM	**Corum**	**0.95**	**130**	*e*PG	**Pg**	**22 44 08.0**	**-0.6**
CORM	**Corum**	**0.95**	**130**	*e*Pg	**Pg**	**22 44 08.0**	**-0.6**
BYBT	**Boyabat**	**1.06**	**50**	*e*PN	**Pg**	**22 44 10.1**	**-0.6**
BYBT	**Boyabat**	**1.06**	**50**	*e*Pn	**Pg**	**22 44 10.1**	**-0.5**
LOD	**Lodumlu**	**1.14**	**218**	*e*PN	**Pg**	**22 44 11.0**	**-1.2**
LOD	**Lodumlu**	**1.14**	**218**	*e*Pn	**Pg**	**22 44 11.0**	**-1.2**
SGKT	**Sivrigoynuk**	**1.25**	**260**	*i* P	**Pn**	**22 44 12.1**	**-1.7**
SGKT				*i* S	**Sb**	**22 44 31.4**	**+1.3**
SGKT	**Sivrigoynuk**	**1.25**	**260**	*i* P	**Pn**	**22 44 12.1**	**-1.7**
SGKT				*i* S	**Sb**	**22 44 31.4**	**+1.3**
CDAG	**Cicekdag**	**1.29**	**155**	*i* P	**Pn**	**22 44 13.9**	**-0.4**
CDAG				*i* S	**Sb**	**22 44 29.5**	**-1.6**
CDAG	**Cicekdag**	**1.29**	**155**	*i* P	**Pn**	**22 44 13.9**	**-0.4**
CDAG				*i* S	**Sb**	**22 44 29.5**	**-1.6**
BBAL	**Bala**	**1.32**	**199**	*i* P	**Pn**	**22 44 14.9**	**+0.1**
BBAL				*i* S	**Sb**	**22 44 32.7**	**+0.6**
BBAL	**Bala**	**1.32**	**199**	*i* P	**Pn**	**22 44 14.9**	**+0.1**
BBAL				*i* S	**Sb**	**22 44 32.7**	**+0.6**
AFSR	**Af¯ar-Bala (A**	**1.43**	**199**	*e*PN	**Pn**	**22 44 15.7**	**-0.5**
AFSR	**Af¯ar-Bala (A**	**1.43**	**199**	*e*Pn	**Pn**	**22 44 15.7**	**-0.5**
KAMT	**Kaman**	**1.43**	**179**	*e*PN	**Pn**	**22 44 16.2**	**0.0**
KAMT	**Kaman**	**1.43**	**179**	*e*Pn	**Pn**	**22 44 16.2**	**0.0**
YOZ	**Yozgat**	**1.71**	**132**	*e*PN	**Pn**	**22 44 21.4**	**+1.4**
YOZ	**Yozgat**	**1.71**	**132**	*e*Pn	**Pn**	**22 44 21.4**	**+1.3**
KVT	**Kavak**	**1.82**	**80**	*e*PN	**Pn**	**22 44 22.2**	**+0.6**
KVT	**Kavak**	**1.82**	**80**	*e*Pn	**Pn**	**22 44 22.2**	**+0.6**
MDU	**Mudurnu**	**1.90**	**261**	*e*PN	**Pn**	**22 44 23.2**	**+0.5**
MDU	**Mudurnu**	**1.90**	**261**	*e*Pn	**Pn**	**22 44 23.2**	**+0.5**
AVNT	**Avonos**	**2.21**	**155**	*i* P	**Pn**	**22 44 30.1**	**+3.1**
AVNT	**Avonos**	**2.21**	**155**	*i* P	**Pn**	**22 44 30.1**	**+3.1**
KIZT	**Kizilcal**	**2.36**	**216**	*e*PN	**Pn**	**22 44 29.5**	**+0.4**
KIZT	**Kizilcal**	**2.36**	**216**	*e*Pn	**Pn**	**22 44 29.5**	**+0.4**

MAN 22 23:09:46, 9°.07N×122°.47E, h32km, mb4.4, ML3.2, MS3.0, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**1.27**	**176**	*eP*	Pn	23 10 08.8	+1.3
IPIL				*e*S	Sn	23 10 22.8	-0.8
TBP	**Tagbilaran**	**1.50**	**66**	*eP*	Pn	23 10 11.4	+0.6
PAGZ	**Pagadian**	**1.51**	**143**	*eP*	Pn	23 10 13.5	+2.7
PAGZ				*e*S	Sn	23 10 23.4	-5.9
GUIM	**Jordan**	**1.55**	**4**	*eP*	Pn	23 10 12.4	+0.9

*THE **22** 23:16:31.4, 37°.02N×28°.44E, h5km±7km, Error ellipse: s-maj=9.2km s-min=1.1km az=109.0*
*ISCJB **22** 23:16:32.4±0.4, 37°.06N±0°.02×28°.11E±0°.02, h3km±4km, Error ellipse: s-maj=4.1km s-min=3.1km az=28.4*
*DDA **22** 23:16:32.2, 37°.06N×28°.08E, h23km±1km, Md3.2*
*ISK **22** 23:16:32.5, 37°.04N×28°.11E, h6km, MD3.1*
*CSEM **22** 23:16:33.1±0.1, 37°.05N×28°.11E, h10km, MD3.1, Error ellipse: s-maj=3.4km s-min=3.0km az=18.0*

ISC 22 23:16:33.1±0.4, 37°.06N±0°.02×28°.10E±0°.02, h8km±3km, n61, σ0s86/92, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.16**	**61**	PG	**Pg**	**23 16 36.3**	**-0.3**
YER				*e*SG	**Sg**	**23 16 39.4**	**+0.5**
YER	**Yerkesik**	**0.16**	**61**	*i* Pg	**Pg**	**23 16 36.3**	**-0.3**
YER				*e*Sg	**Sg**	**23 16 39.4**	**+0.5**
MLSB	**Milas**	**0.35**	**313**	PG	**Pg**	**23 16 40.5**	**+0.4**
MLSB				*e*SG	**Sg**	**23 16 46.3**	**+1.5**
MLSB	**Milas**	**0.35**	**313**	*i* Pg	**Pg**	**23 16 40.5**	**+0.4**
MLSB				*e*Sg	**Sg**	**23 16 46.3**	**+1.6**
TURN	**Turunc**	**0.44**	**114**	*i* P	**Pg**	**23 16 38.0**	**-3.7**
TURN				*i* S	**Sg**	**23 16 43.6**	**-3.9**
TURN	**Turunc**	**0.44**	**114**	*i* P	**Pg**	**23 16 38.0**	**-3.7**
TURN				*i* S	**Sg**	**23 16 43.6**	**-3.9**
DAT	**Datca**	**0.53**	**232**	*e*PG	**Pg**	**23 16 43.2**	**-0.2**
DAT				*e*SG	**Sg**	**23 16 51.2**	**+0.9**
DAT	**Datca**	**0.53**	**232**	*e*Pg	**Pg**	**23 16 43.2**	**-0.2**
DAT				*e*Sg	**Sg**	**23 16 51.3**	**+0.9**
AYDN	**Tasoluk**	**0.63**	**344**	*i* P	**Pg**	**23 16 45.4**	**+0.1**
AYDN				*i* S	**Sg**	**23 16 54.1**	**+0.6**
AYDN	**Tasoluk**	**0.63**	**344**	*i* P	**Pg**	**23 16 45.4**	**+0.1**
AYDN				*i* S	**Sg**	**23 16 54.1**	**+0.6**
BODT	**Bodrum**	**0.63**	**271**	*e*PG	**Pg**	**23 16 44.9**	**-0.5**
BODT	**Bodrum**	**0.63**	**271**	*e*Pg	**Pg**	**23 16 44.9**	**-0.5**
ARG	**Arkhangelos**	**0.84**	**179**	P	**Pg**	**23 16 48.4**	**-0.9**
ARG				S	**Sg**	**23 17 00.1**	**0.0**
ARG	**Arkhangelos**	**0.84**	**179**	P	**Pg**	**23 16 48.4**	**-0.9**
ARG				S	**Sg**	**23 17 00.1**	**0.0**
NIS1	**Nisyros Isl.**	**0.87**	**239**	P	**Pg**	**23 16 50.7**	**+0.9**
NIS1				S	**Sg**	**23 17 07.3**	**+6.2**
NIS1	**Nisyros Isl.**	**0.87**	**239**	P	**Pg**	**23 16 50.7**	**+0.9**
FETY	**Fethiye**	**0.89**	**118**	*e*PG	**Pg**	**23 16 49.6**	**-0.7**
**FETY

KORT *i* S **Sg** **23 17 30.9 -0.1**
AKHS Akhisar 1.83 353 *i* P **Pn** **23 17 04.6 -0.3**
AKHS *i* S **Sn** **23 17 27.8 -0.6**
AKHS Akhisar 1.83 353 *i* P **Pn** **23 17 04.6 -0.4**
AKHS *i* S **Sn** **23 17 27.8 -0.6**
DEMI Demirci 2.04 14 *i* P **Pn** **23 17 07.4 -0.4**
DEMI Demirci 2.04 14 *i* P **Pn** **23 17 07.4 -0.4**
CHOS Chios island 2.10 310 P **Pn** **23 17 09.1 +0.5**
CHOS S **Sg** **23 17 38.5 -2.1**
CHOS Chios island 2.10 310 P **Pn** **23 17 09.1 +0.5**
CHOS S **Sg** **23 17 38.5 -2.1**
GDZ Gediz 2.30 28 *i* P **Pn** **23 17 09.6 -1.8**
GDZ Gediz 2.30 28 *i* P **Pn** **23 17 09.6 -1.8**
SUTC Sutluce-Ispart 2.35 79 *e*PN **Pn** **23 17 13.1 +1.0**
SUTC Sutluce-Ispart 2.35 79 *e*Pn **Pn** **23 17 13.1 +1.1**
AYVA Ayvalik 2.51 334 *i* P **Pg** **23 17 19.6 -1.7**
DURS Dursunbey 2.56 6 *i* P **Pn** **23 17 14.8 -0.1**
DURS Dursunbey 2.56 6 *i* P **Pn** **23 17 14.8 -0.1**
BALY Balya 2.71 352 *i* P **Pn** **23 17 16.9 0.0**
BALY Balya 2.71 352 *i* P **Pn** **23 17 16.9 -0.1**
ERMK Ermenek 3.88 95 *i* P **Pn** **23 17 30.0 -3.1**
ERMK Ermenek 3.88 95 *i* P **Pn** **23 17 30.0 -3.1**

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*IDC **22** 23:21:20.1±1.1,4˙28S×131˙06E,h0km,mb3.9/3,*
mb1 3.9/6,mb1mx3.7/18,mbtmp3.8/6,ML3.8/3,Error
ellipse: s-maj=66.8km s-min=21.8km az=67.0
*ISCJB **22** 23:21:23.2±1.7,4˙40S±0˙05×131˙02E±0˙09,h42km±17km,*
mb4.2/8,Error ellipse: s-maj=14.7km s-min=7.5km
az=172.3
*NEIC **22** 23:21:24.8±0.3,4˙32S×131˙05E,h35km,mb4.3/6,Error*
ellipse: s-maj=9.9km s-min=5.8km az=73.0
ISC 22 23:21:25.0±1.3,4˙37S±0˙05×131˙02E±0˙09,h39km±14km,
n26,σ0s63/29,mb4.2/8,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 29nm,0.6s	**8.40**	**170**	*e*Pn		**Pn**	**23 23 26.0**	**+1.7**
KAKA				*e*Sn		**Sn**	**23 24 58.5**	**+0.5**
DAV	**Davao City (W)**	**12.60**	**334**	P		**Pn**	**23 24 21.4**	**-0.4**
FITZ	**Fitzroy Crossi** 1.0nm,0.3s,baz=13,slow=16,SNR=11	**14.62**	**201**	Pn		**Pn**	**23 24 49.2**	**-0.2**
FITZ	0.4nm,0.3s,baz=128,slow=17,SNR=5.3			Sn		**Sn**	**23 27 28.8**	**-1.4**
FITZ	**Fitzroy Crossi**	**14.62**	**201**	*e*Pn		**Pn**	**23 24 50.2**	**+0.8**
FITZ				*e*Sn		**Sn**	**23 27 29.9**	**-0.3**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=350,slow=14,SNR=3.7	**15.81**	**168**	Pn		**Pn**	**23 25 04.7**	**-0.2**
WRA	0.5nm,0.3s,baz=350,slow=23,SNR=6.0			Sn		**Sn**	**23 27 52.5**	**-6.6**
WRA	**Warramunga Arr**	**15.81**	**168**	Pn		**Pn**	**23 25 04.7**	**-0.2**
WRA				Sn		**Sn**	**23 27 52.5**	**-6.7**
ASAR	**Alice Springs** 0.1nm,0.3s,baz=356,slow=11,SNR=4.4	**19.38**	**172**	P		**Pn**	**23 25 48.5**	**-0.6**
ASAR	0.1nm,0.3s,baz=358,slow=23,SNR=3.0			S		**S**	**23 29 18.4**	**-6.6**
MBWA	**Marble Bar**	**19.96**	**212**	*e*P		**Pn**	**23 25 55.0**	**-0.9**
CTA	**Charters Tower** 1.9nm,0.5s,mb3.8,baz=307,slow=14,SNR=3.7	**21.55**	**138**	P		**P**	**23 26 10.7**	**-0.5**
CTAO	**Charters Tower** 5.7nm,0.9s,mb4.0	**21.55**	**138**	*e*P		**P**	**23 26 10.9**	**-0.3**
GUMO	**Guam**	**22.53**	**37**	*e*P		**P**	**23 26 20.7**	**-1.0**
STKA	**Stephens Creek**	**29.11**	**161**	*e*P		**P**	**23 27 21.8**	**-0.4**
HNR	**Honiara** 19nm,0.5s,mb5.1	**29.15**	**101**	*e*P		**P**	**23 27 23.0**	**+0.2**
NWAO	**Narrogin (SRO)**	**31.19**	**203**	P		**P**	**23 27 40.8**	**+0.2**
COCO	**West Island**	**34.67**	**255**	*e*P		**P**	**23 28 11.7**	**+0.4**
PALK	**Pallekele** 1.4nm,0.5s,mb4.2	**51.52**	**283**	*e*P		**P**	**23 30 27.6**	**+0.1**
MKAR	**Makanchi Array** 1.1nm,0.6s,mb4.0,baz=120,slow=8.7,SNR=7.8	**66.61**	**326**	P		**P**	**23 32 12.2**	**+0.8**
TKM2	**Tokmak 2** 2.1nm,0.7s,mb4.2	**68.63**	**320**	*e*P		**P**	**23 32 24.4**	**0.0**
UCH	**Uchtor** 0.9nm,0.4s,mb4.0	**69.02**	**318**	*e*P		**P**	**23 32 27.1**	**+0.4**
EKS2	**Erkin-Say**	**69.70**	**319**	P		**P**	**23 32 30.8**	**-0.2**
ZALV	**Zalesovo Beam** 1.2nm,0.8s,mb3.9,baz=104,slow=4.6,SNR=5.1	**69.70**	**333**	P		**P**	**23 32 30.4**	**-0.3**
ZALV	**Zalesovo Beam**	**69.70**	**333**	P		**P**	**23 32 30.4**	**-0.3**
KURK	**Kurchatov** 3.7nm,0.9s,mb4.3	**70.83**	**328**	*e*P		**P**	**23 32 38.4**	**+0.7**
CPUP	**Villa Florida** 0.4nm,0.4s,baz=284,slow=8.3,SNR=3.5	**148.43**	**166**	PKPbc		PKPbc	23 41 10.3	+2.1
LPAZ	**La Paz** 0.8nm,0.7s,baz=214,slow=3.6,SNR=4.2	**152.07**	**138**	PKPbc		PKPbc	23 41 19.8	+2.5
LPAZ	**La Paz**	**152.07**	**138**	PKPbc		PKPbc	23 41 19.8	+2.5

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*BJI **22** 23:33:57.0,54˙30N×35˙10W,h10km,mB5.2/9,mb4.9/18,*
Ms5.0/7,Ms7 4.8/8
*IDC **22** 23:33:59.0±0.5,54˙31N×35˙15W,h0km,mb4.2/22,*
mb1 4.4/24,mb1mx4.3/32,mbtmp4.2/24,ML3.5/2,MS3.9/32,
Ms1 3.9/32,ms1mx3.9/35,Error ellipse: s-maj=16.7km
s-min=10.5km az=176.0
*ISCJB **22** 23:33:59.4±0.1,54˙31N±0˙05×35˙16W±0˙03,h10km,*
mb4.6/113,MS4.0/38,Error ellipse: s-maj=7.3km
s-min=2.2km az=2.2
*CSEM **22** 23:34:00.8±0.1,54˙32N×35˙14W,h10km,mb4.7/74,Ms3.8,*
Mw4.8,Error ellipse: s-maj=6.4km s-min=2.5km az=3.0
*NEIC **22** 23:34:01.0±0.1,54˙27N×35˙15W,h10km,mb4.7/76,Error*
ellipse: s-maj=6.1km s-min=2.3km az=183.0
*GCMT **22** 23:34:02.5±0.3,54˙45N×35˙10W,h13km±1km,MW4.8,*
Moment Tensor Solution. s19,c23; s68,c101; Moment
tensor: Scale 10^{16}Nm; M_{rr}-1.99±.16; $M_{\theta\theta}$0.18±.09;
$M_{\phi\phi}$1.81±.11; $M_{r\theta}$0.22±.24; $M_{r\phi}$-0.05±.06; $M_{\theta\phi}$0.19±.22;
Best double couple: $M_0$1.90000×10^{16} NP1:ϕ_s352.00000°,
δ43.00000°,λ-99.00000°. NP2:ϕ_s184.00000°,δ48.00000°,
λ-82.00000°. Principal axes: T 1.8200, Plg3.0000°,
Azm268.0000°; N 0.2100, Plg6.0000°, Azm359.0000°; P
-2.0200, Plg84.0000°, Azm154.0000°; Data Used: II IC IU
G CN.
ISC 22 23:34:01.3±0.1,54˙31N±0˙05×35˙14W±0˙03,h10km,
(h15km±1.1km:pP-P),n468,σ0s87/446,mb4.6/113,
MS4.0/38,60C-51D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes** comp=Z,575nm,20.8s,baz=20,slow=30	**12.56**	**28**	LR		LR	23 40 17.4	
BORG	**Borgarnes**	**12.56**	**28**	Pn		**Pn**	**23 37 01.3**	**+1.5**
BORG	**Borgarnes**	**12.56**	**28**	Pn		**Pn**	**23 37 01.3**	**+1.5**
DSB	**Dublin** 29nm,1.1s	**16.99**	**82**	*e*Pn		**Pn**	**23 37 59.1**	**+0.3**
DSB	**Dublin** 29nm,1.1s	**16.99**	**82**	*e*Pn		**Pn**	**23 37 59.1**	**+0.3**
SCHQ	**Schefferville** 1.1nm,0.3s,baz=82,slow=9.8,SNR=15	**18.30**	**285**	P		**Pn**	**23 38 12.8**	**-2.3**
SCHQ	comp=Z,357nm,19.5s,baz=106,slow=33			LR		LR	23 44 06.0	
SCHQ	**Schefferville** 34nm,0.9s	**18.30**	**285**	*e*Pn		**Pn**	**23 38 13.8**	**-1.3**
SCHQ	**Schefferville** 34nm,0.9s	**18.30**	**285**	*e*Pn		**Pn**	**23 38 13.8**	**-1.3**
ESK	**Eskdalemuir**	**18.35**	**74**	*e*Pn		**Pn**	**23 38 16.3**	**+0.7**
ESK	**Eskdalemuir**	**18.35**	**74**	*e*Pn		**Pn**	**23 38 16.3**	**+0.7**
EKA	**Eskdalemuir Ar** 0.1nm,0.3s,baz=280,slow=9.9,SNR=13	**18.37**	**74**	P		**Pn**	**23 38 15.1**	**-0.8**
EKA	**Eskdalemuir Ar**	**18.37**	**74**	P		**Pn**	**23 38 15.1**	**-0.8**
SUMG	**Summit** 185nm,2.4s	**18.39**	**357**	*e*Pn		**Pn**	**23 38 16.5**	**+0.5**
SUMG	**Summit** 7.5nm,0.9s	**18.39**	**357**	*i* P		**Pn**	**23 38 15.1**	**-0.9**
SUMG	**Summit** 7.5nm,0.9s	**18.39**	**357**	*e*P		**Pn**	**23 38 15.1**	**-0.9**
SUMG	**Summit** 185nm,2.4s	**18.39**	**357**	*e*Pn		**Pn**	**23 38 16.5**	**+0.5**
FRB	**Frobisher Bay** comp=Z,435nm,18.2s,baz=220,slow=32	**19.38**	**312**	LR		LR	23 44 29.0	
JMIC	**Jan Mayen** comp=Z,415nm,21.5s,MS3.8,baz=78,slow=30	**20.41**	**25**	LR		LR	23 44 04.8	
ROSF	**Rostrenen**	**20.67**	**94**	*e*P		**P**	**23 38 41.5**	**+0.4**
ROSF	**Rostrenen**	**20.67**	**94**	*e*P		**P**	**23 38 41.5**	**+0.4**
QUIF	**Quistinic**	**20.94**	**95**	*e*P		**P**	**23 38 44.0**	**0.0**
QUIF	**Quistinic**	**20.94**	**95**	*e*P		**P**	**23 38 44.0**	**0.0**
SGMF	**Saint Gilles**	**21.13**	**93**	*e*P		**P**	**23 38 46.7**	**+0.7**
SGMF	**Saint Gilles**	**21.13**	**93**	*e*P		**P**	**23 38 46.7**	**+0.7**
PCAB	**Cabril** 47nm,1.5s,mb4.7	**21.93**	**114**	*e*P		**P**	**23 39 01.6**	**+7.0**
GRR	**Gorron** 130nm,1.5s,mb4.8	**22.06**	**91**	*e*P		**P**	**23 38 55.9**	**-0.1**
GRR	**Gorron** 65nm,1.5s,mb4.8	**22.06**	**91**	*e*P		**P**	**23 38 55.9**	**-0.1**
GRR	**Gorron** 65nm,1.5s,mb4.8	**22.06**	**91**	*e*P		**P**	**23 38 55.9**	**-0.1**
FLN	**La Foliniere** 131nm,1.5s,mb4.8	**22.10**	**90**	*e*P		**P**	**23 38 56.4**	**-0.1**
FLN	comp=Z,764nm,22.5s,MS3.8			*e*MLR		MLR		
FLN	**La Foliniere** comp=Z,65nm,1.5s,mb4.8	**22.10**	**90**	*e*P		**P**	**23 38 56.4**	**-0.1**
FLN	comp=Z,760nm,22.5s,MS4.1			LR		LR		
FLN	**La Foliniere** comp=Z,65nm,1.5s,mb4.8	**22.10**	**90**	*e*P		**P**	**23 38 56.4**	**-0.1**
LDF	**La Druitiere** comp=Z,25nm,1.0s,mb4.3	**22.39**	**90**	*e*P		**P**	**23 38 59.2**	**-0.4**
LDF	**La Druitiere** comp=Z,12nm,1.0s,mb4.3	**22.39**	**90**	*e*P		**P**	**23 38 59.2**	**-0.4**
LDF	**La Druitiere** comp=Z,12nm,1.0s,mb4.3	**22.39**	**90**	*e*P		**P**	**23 38 59.2**	**-0.4**
PBRG	**Braganca**	**22.55**	**112**	*e*P		**P**	**23 39 07.2**	**+5.9**
PBRG	comp=Z,439nm,16.1s			*i* LR		LR	23 44 19.9	
PVIS	**Viseu**	**22.70**	**116**	*e*P		**P**	**23 39 08.3**	**+5.4**
MVO	**Moncorvo** comp=Z,34nm,1.7s,mb4.5	**22.84**	**114**	*e*P		**P**	**23 39 07.6**	**+3.2**
MVO				*e*S		**S**	**23 43 26.0**	**+12**
MVO				*i* LR		LR	23 44 29.8	
MTE	**Manteigas**	**23.11**	**116**	*e*S		**S**	**23 43 19.7**	**+1.5**
MTE	comp=Z,379nm,17.8s			*i* LR		LR	23 44 43.0	
MTE	**Manteigas**	**23.11**	**116**	*e*S		**S**	**23 43 19.7**	**+1.5**
PTOM	**Tomar**	**23.23**	**118**	*e*P		**P**	**23 39 11.4**	**+2.9**
PMAFR	**Mafra**	**23.29**	**121**	*e*S		**S**	**23 43 27.9**	**+6.8**
PMAFR	comp=Z,390nm,19.1s			*i* LR		LR	23 44 36.4	
MFF	**Saint Martin d** comp=Z,62nm,1.4s,mb4.5	**23.38**	**95**	*e*P		**P**	**23 39 09.2**	**-0.8**
MFF	**Saint Martin d** comp=Z,31nm,1.4s,mb4.5	**23.38**	**95**	*e*P		**P**	**23 39 09.2**	**-0.8**
MFF	**Saint Martin d** comp=Z,31nm,1.4s,mb4.5	**23.38**	**95**	*e*P		**P**	**23 39 09.2**	**-0.8**
PCBR	**Castelo Branco** comp=Z,38nm,1.6s,mb4.6	**23.55**	**117**	*e*P		**P**	**23 39 11.4**	**-0.5**
PCBR	**Castelo Branco** comp=Z,38nm,1.6s,mb4.6	**23.55**	**117**	*e*P		**P**	**23 39 11.4**	**-0.5**
PKME	**Peaks-Kenny Pk** comp=Z,60nm,1.0s,mb5.0	**23.63**	**262**	*e*P		**P**	**23 39 10.7**	**-1.8**
PKME	**Peaks-Kenny Pk** comp=Z,60nm,1.0s,mb5.0	**23.63**	**262**	*e*P		**P**	**23 39 10.7**	**-1.8**
PMRV	**Marv??o**	**23.90**	**117**	*e*P		**P**	**23 39 19.4**	**+4.3**
PMRV	comp=Z,396nm,19.1s			*i* LR		LR	23 44 49.7	
PESTR	**Estremoz**	**24.22**	**118**	*e*S		**S**	**23 43 45.4**	**+9.3**
PESTR	comp=Z,535nm,22.2s			*i* LR		LR	23 45 22.7	
BAIF	**Baives**	**24.27**	**84**	*e*P		**P**	**23 39 18.7**	**+0.4**
BAIF	**Baives**	**24.27**	**84**	*e*P		**P**	**23 39 18.7**	**+0.4**
PBEJ	**Beja**	**24.71**	**120**	*e*P		**P**	**23 39 28.8**	**+6.4**
SJPF	**Ste Jean** comp=Z,12nm,0.8s,mb4.2	**24.78**	**103**	*e*P		**P**	**23 39 21.2**	**-1.8**
SJPF	**Ste Jean** comp=Z,6.2nm,0.8s,mb4.2	**24.78**	**103**	*e*P		**P**	**23 39 21.2**	**-1.8**
SJPF	**Ste Jean** comp=Z,6.2nm,0.8s,mb4.2	**24.78**	**103**	*e*P		**P**	**23 39 21.2**	**-1.8**
LFF	**La Frestale** comp=Z,17nm,0.8s,mb4.3	**24.82**	**97**	*e*P		**P**	**23 39 22.4**	**-0.9**
LFF	**La Frestale** comp=Z,8.4nm,0.8s,mb4.3	**24.82**	**97**	*e*P		**P**	**23 39 22.4**	**-0.9**
LFF	**La Frestale** comp=Z,8.4nm,0.8s,mb4.3	**24.82**	**97**	*e*P		**P**	**23 39 22.4**	**-0.9**
MORF	**Marmelete** comp=Z,311nm,20.4s	**24.88**	**122**	*i* LR		LR	23 45 55.8	
TCF	**Toulx Ste Croi** comp=Z,60nm,1.2s,mb4.7	**24.92**	**93**	*e*P		**P**	**23 39 23.8**	**-0.5**
TCF	**Toulx Ste Croi** comp=Z,30nm,1.2s,mb4.7	**24.92**	**93**	*e*P		**P**	**23 39 23.8**	**-0.5**
TCF	**Toulx Ste Croi** comp=Z,30nm,1.2s,mb4.7	**24.92**	**93**	*e*P		**P**	**23 39 23.8**	**-0.5**
PFVI	**Vila Bisbo** comp=Z,253nm,22.2s	**24.93**	**123**	*i* LR		LR	23 45 26.0	
PCVE	**Castro Verde**	**24.93**	**121**	*e*P		**P**	**23 39 31.2**	**+6.8**
PCVE	comp=Z,388nm,20.2s			A			23 47 00.0	
PBAR	**Barrancos**	**25.02**	**119**	*e*S		**S**	**23 44 06.3**	**+17**
PBAR	comp=Z,505nm,17.7s			*i* LR		LR	23 45 32.6	
RJF	**Les Rejaudoux** comp=Z,35nm,1.2s,mb4.5	**25.06**	**96**	*e*P		**P**	**23 39 24.2**	**-1.4**
RJF	comp=Z,733nm,22.2s,MS3.8			*e*MLR		MLR		
RJF	**Les Rejaudoux** comp=Z,18nm,1.2s,mb4.5	**25.06**	**96**	*e*P		**P**	**23 39 24.2**	**-1.4**
RJF	comp=Z,730nm,22.3s,MS4.1			LR		LR		
RJF	**Les Rejaudoux** comp=Z,18nm,1.2s,mb4.5	**25.06**	**96**	*e*P		**P**	**23 39 24.2**	**-1.4**
BGF	**Bois d'Agland** comp=Z,162nm,1.3s,mb5.1	**25.15**	**92**	*e*P		**P**	**23 39 25.6**	**-0.8**
BGF	**Bois d'Agland** comp=Z,81nm,1.3s,mb5.1	**25.15**	**92**	*e*P		**P**	**23 39 25.6**	**-0.8**
BGF	**Bois d'Agland** comp=Z,81nm,1.3s,mb5.1	**25.15**	**92**	*e*P		**P**	**23 39 25.6**	**-0.8**
NB2	**NORSAR Subarra** comp=Z,6.4nm,0.9s,mb4.2,baz=276,slow=9.3	**25.21**	**56**	P		**P**	**23 39 24.9**	**-1.9**
NB2	**NORSAR Subarra** comp=Z,6.4nm,0.9s,mb4.2,baz=276,slow=9.1,SNR=5.4	**25.21**	**56**	P		**P**	**23 39 24.9**	**-1.9**
NOA	**NORSAR Array B** comp=Z,5.4nm,0.9s,mb4.0,baz=276,slow=9.3,SNR=5.1	**25.21**	**56**	P		**P**	**23 39 26.2**	**-0.7**
NOA	comp=Z,267nm,20.3s,MS3.8,baz=270,slow=32			LR		LR	23 47 35.3	
NOA	**NORSAR Array B**	**25.21**	**56**	P		**P**	**23 39 26.1**	**-0.7**
PVAQ	**Vaqueiros**	**25.27**	**121**	*e*S		**S**	**23 44 08.9**	**+16**
PVAQ	comp=Z,328nm,26.0s			*i* LR		LR	23 45 42.6	
SSF	**Saint Saulge** comp=Z,79nm,1.4s,mb4.7	**25.28**	**91**	*e*P		**P**	**23 39 27.2**	**-0.3**
SSF	**Saint Saulge** comp=Z,40nm,1.4s,mb4.8	**25.28**	**91**	*e*P		**P**	**23 39 27.2**	**-0.3**
SSF	**Saint Saulge** comp=Z,40nm,1.4s,mb4.7	**25.28**	**91**	*e*P		**P**	**23 39 27.2**	**-0.3**
PBDV	**Barranco-do-Ve** comp=Z,328nm,15.6s	**25.28**	**121**	*i* LR		LR	23 45 42.6	
ETSF	**Etsaut**	**25.30**	**103**	*e*P		**P**	**23 39 26.3**	**-1.4**
ETSF	**Etsaut**	**25.30**	**103**	*e*P		**P**	**23 39 26.3**	**-1.4**
AVF	**Avril sur Loir** comp=Z,80nm,1.5s,mb4.7	**25.33**	**91**	*e*P		**P**	**23 39 27.7**	**-0.3**
AVF	**Avril sur Loir** comp=Z,40nm,1.5s,mb4.7	**25.33**	**91**	*e*P		**P**	**23 39 27.7**	**-0.3**
AVF	**Avril sur Loir** comp=Z,40nm,1.5s,mb4.7	**25.33**	**91**	*e*P		**P**	**23 39 27.7**	**-0.3**
LOR	**Lormes** comp=Z,82nm,1.5s,mb4.7	**25.38**	**90**	*e*P		**P**	**23 39 27.6**	**-0.8**
LOR	comp=Z,119nm,17.5s,MS3.2			*e*MLR		MLR		
LOR	**Lormes** comp=Z,41nm,1.5s,mb4.7	**25.38**	**90**	*e*P		**P**	**23 39 27.6**	**-0.8**
LOR	comp=Z,120nm,17.5s,MS3.5			LR		LR		
LOR	**Lormes** comp=Z,41nm,1.5s,mb4.7	**25.38**	**90**	*e*P		**P**	**23 39 27.6**	**-0.8**
ESDC	**Sonseca Array** comp=Z,1.7nm,0.7s,mb3.7,baz=317,slow=9.2,SNR=13	**25.55**	**112**	P		**P**	**23 39 29.3**	**-0.8**
ESDC	comp=Z,286nm,21.2s,MS3.8,baz=305,slow=31			LR		LR	23 47 00.1	
ESDC	**Sonseca Array**	**25.55**	**112**	P		**P**	**23 39 29.3**	**-0.8**
ESDC				LR		LR	23 47 00.1	
ESDC	**Sonseca Array**	**25.55**	**112**	P		**P**	**23 39 29.3**	**-0.8**
CAF	**Calviac** comp=Z,53nm,1.6s,mb4.5	**25.59**	**96**	*e*P		**P**	**23 39 29.4**	**-1.0**
CAF	**Calviac** comp=Z,26nm,1.6s,mb4.5	**25.59**	**96**	*e*P		**P**	**23 39 29.4**	**-1.0**
CAF	**Calviac** comp=Z,26nm,1.6s,mb4.5	**25.59**	**96**	*e*P		**P**	**23 39 29.4**	**-1.0**
SFTF	**Sexfontaines** comp=Z,76nm,1.4s,mb4.7	**25.60**	**87**	*e*P		**P**	**23 39 30.2**	**-0.2**
SFTF	**Sexfontaines** comp=Z,76nm,1.4s,mb5.0	**25.60**	**87**	*e*P		**P**	**23 39 30.2**	**-0.2**
SFTF	**Sexfontaines** comp=Z,38nm,1.4s,mb4.7	**25.60**	**87**	*e*P		**P**	**23 39 30.2**	**-0.2**
SMF	**Signal de Mont** comp=Z,38nm,1.2s,mb4.5	**25.69**	**91**	*e*P		**P**	**23 39 31.1**	**-0.1**
SMF	**Signal de Mont** comp=Z,19nm,1.2s,mb4.5	**25.69**	**91**	*e*P		**P**	**23 39 31.1**	**-0.1**
SMF	**Signal de Mont** comp=Z,19nm,1.2s,mb4.5	**25.69**	**91**	*e*P		**P**	**23 39 31.1**	**-0.1**
EPF	**Esparros** comp=Z,29nm,1.4s,mb4.3	**25.73**	**101**	*e*P		**P**	**23 39 31.2**	**-0.4**
EPF	**Esparros** comp=Z,15nm,1.4s,mb4.3	**25.73**	**101**	*e*P		**P**	**23 39 31.2**	**-0.4**
EPF	**Esparros** comp=Z,15nm,1.4s,mb4.3	**25.73**	**101**	*e*P		**P**	**23 39 31.2**	**-0.4**
FRNY	**Flat Rock** comp=Z,24nm,1.1s,mb4.6	**26.37**	**265**	*e*P		**P**	**23 39 37.6**	**+0.2**
FRNY	**Flat Rock** comp=Z,24nm,1.1s,mb4.6	**26.37**	**265**	*e*P		**P**	**23 39 37.6**	**+0.1**
HAU	**Haudompre** comp=Z,35nm,1.2s,mb4.4	**26.47**	**87**	*e*P		**P**	**23 39 38.7**	**+0.4**
HAU	comp=Z,650nm,17.5s,MS3.9			*e*MLR		MLR		
HAU	**Haudompre** comp=Z,17nm,1.3s,mb4.4	**26.47**	**87**	*e*P		**P**	**23 39 38.7**	**+0.4**
HAU	comp=Z,650nm,17.5s,MS4.2			LR		LR		
HAU	**Haudompre** comp=Z,17nm,1.2s,mb4.4	**26.47**	**87**	*e*P		**P**	**23 39 38.7**	**+0.4**
HFS	**Hagfors** comp=Z,3.8nm,0.9s,mb3.9,baz=300,slow=6.3,SNR=3.2	**26.55**	**57**	P		**P**	**23 39 38.4**	**-0.4**
HFS	comp=Z,358nm,19.9s,MS3.9,baz=270,slow=32			LR		LR	23 48 04.0	
HFS	**Hagfors**	**26.55**	**57**	P		**P**	**23 39 38.4**	**-0.5**
MTLF	**Montolieu**	**26.62**	**99**	*e*P		**P**	**23 39 39.4**	**-0.3**
MTLF	**Montolieu**	**26.62**	**99**	*e*P		**P**	**23 39 39.4**	**-0.3**
CDF	**Champ du Feu**	**26.81**	**85**	*e*P		**P**	**23 39 42.0**	**+0.6**
CDF	**Champ du Feu**	**26.81**	**85**	*e*P		**P**	**23 39 42.0**	**+0.6**
HINF	**Hinteralfeld**	**26.86**	**87**	*e*P		**P**	**23 39 42.3**	**+0.5**
HINF	**Hinteralfeld**	**26.86**	**87**	*e*P		**P**	**23 39 42.3**	**+0.5**
CABF	**La Chapelle**	**27.02**	**89**	*e*P		**P**	**23 39 43.6**	**+0.3**
CABF	**La Chapelle**	**27.02**	**89**	*e*P		**P**	**23 39 43.6**	**+0.3**
LONY	**Lake Ozonia** comp=Z,24nm,1.4s,mb4.5	**27.08**	**265**	*e*P		**P**	**23 39 45.8**	**+2.0**
LONY	**Lake Ozonia** comp=Z,24nm,1.4s,mb4.5	**27.08**	**265**	*e*P		**P**	**23 39 45.8**	**+2.0**
LASF	**Ste Croix** comp=Z,62nm,1.6s,mb4.6	**27.13**	**96**	*e*P		**P**	**23 39 44.0**	**-0.3**
LASF	**Ste Croix** comp=Z,31nm,1.6s,mb4.6	**27.13**	**96**	*e*P		**P**	**23 39 44.0**	**-0.3**
VIVF	**Saint-Julien-l** comp=Z,67nm,1.6s,mb4.6	**27.16**	**94**	*e*P		**P**	**23 39 45.3**	**+0.8**
VIVF	**Saint-Julien-l** comp=Z,34nm,1.6s,mb4.6	**27.16**	**94**	*e*P		**P**	**23 39 45.3**	**+0.8**
VIVF	**Saint-Julien-l** comp=Z,34nm,1.6s,mb4.6	**27.16**	**94**	*e*P		**P**	**23 39 45.3**	**+0.8**
ORIF	**Oris-en-Rattie** comp=Z,41nm,1.6s,mb4.5	**27.83**	**93**	*e*P		**P**	**23 39 50.7**	**+0.2**
ORIF	comp=Z,782nm,22.0s,MS4.0			*e*MLR		MLR		
ORIF	**Oris-en-Rattie** comp=Z,20nm,1.6s,mb4.5	**27.83**	**93**	*e*P		**P**	**23 39 50.7**	**+0.2**
ORIF	**Oris-en-Rattie** comp=Z,20nm,1.6s,mb4.5	**27.83**	**93**	*e*P		**P**	**23 39 50.7**	**+0.2**
LPL	**La Plagne**	**27.99**	**91**	*e*P		**P**	**23 39 52.4**	**+0.4**
LPL	**La Plagne**	**27.99**	**91**	*e*P		**P**	**23 39 52.4**	**+0.4**
LPG	**La Plagne**	**28.01**	**91**	*e*P		**P**	**23 39 52.1**	**-0.1**
LPG	**La Plagne**	**28.01**	**91**	*e*P		**P**	**23 39 52.1**	**-0.1**
SMRF	**Simiane la Rot**	**28.19**	**95**	*e*P		**P**	**23 39 53.9**	**+0.1**
SMRF	**Simiane la Rot**	**28.19**	**95**	*e*P		**P**	**23 39 53.9**	**+0.1**
MBDF	**Montbardon** comp=Z,35nm,1.6s,mb4.5	**28.46**	**92**	*e*P		**P**	**23 39 56.5**	**+0.3**
MBDF	**Montbardon** comp=Z,17nm,1.6s,mb4.4	**28.46**	**92**	*e*P		**P**	**23 39 56.5**	**+0.3**
MBDF	**Montbardon** comp=Z,17nm,1.6s,mb4.5	**28.46**	**92**	*e*P		**P**	**23 39 56.5**	**+0.3**
CLL	**Collm** comp=Z,9.0nm,1.2s,mb4.4	**28.81**	**76**	*e*P		**P**	**23 39 58.0**	**-1.2**
CLL	**Collm** comp=Z,9.0nm,1.2s,mb4.4	**28.81**	**76**	*e*P		**P**	**23 39 58.0**	**-1.2**
CLL	**Collm** comp=Z,9.0nm,1.2s,mb4.4	**28.81**	**76**	*e*P		**P**	**23 39 58.0**	**-1.2**
NKC	**Novy Kostel**	**28.96**	**78**	*e*P		**P**	**23 40 01.6**	**+1.0**
NKC	comp=Z,400nm,19.1s			AMS		AMS	23 51 10.0	
TUE	**Stuetta** comp=Z,32nm,1.7s,mb4.8	**29.01**	**87**	*e*P		**P**	**23 40 02.0**	**+1.0**
TUE	**Stuetta** comp=Z,32nm,1.7s,mb4.8	**29.01**	**87**	*e*P		**P**	**23 40 02.0**	**+1.0**
FRF	**La Foret Royal** comp=Z,18nm,1.1s,mb4.4	**29.07**	**94**	*e*P		**P**	**23 40 01.4**	**-0.2**
FRF	**La Foret Royal** comp=Z,9.0nm,1.1s,mb4.4	**29.07**	**94**	*e*P		**P**	**23 40 01.4**	**-0.2**
FRF	**La Foret Royal** comp=Z,9.0nm,1.1s,mb4.4	**29.07**	**94**	*e*P		**P**	**23 40 01.4**	**-0.2**
LMR	**La Mourre**	**29.12**	**95**	*e*P		**P**	**23 40 02.0**	**0.0**
LMR	**La Mourre**	**29.12**	**95**	*e*P		**P**	**23 40 02.0**	**0.0**
DAVOX	**Davos/Dischmat** comp=Z,703nm,18.1s,MS4.3,baz=297,slow=35	**29.16**	**86**	LR		LR	23 51 11.7	
SBF	**Sospel**	**29.35**	**93**	*e*P		**P**	**23 40 03.9**	**-0.2**
**S

comp=Z,13nm,0.8s,mb4.9
EYMN Ely 35.10 283 eP P 23 40 54.0 -0.4
comp=Z,13nm,0.8s,mb4.9
KOLS Kolonicke sedl 35.19 75 eP P 23 40 57.0 +1.9
comp=Z,5.8nm,1.4s,mb4.3
KOLS Kolonicke sedl 35.19 75 eP P 23 40 57.0 +1.9
KOLS Kolonicke sedl 35.19 75 eP P 23 40 57.0 +1.9
comp=Z,5.8nm,1.4s,mb4.3
KEST Kesra 35.78 103 P P 23 41 00.2 -0.2
comp=Z,3.3nm,1.0s,mb4.2,baz=275,slow=3.5,SNR=6.6
KEST LR LR 23 53 26.4
comp=Z,72nm,18.8s,MS3.5,baz=233,slow=33
KEST Kesra 35.78 103 eP P 23 41 00.7 +0.3
KEST Kesra 35.78 103 eP P 23 41 00.7 +0.3
FRGS Fruska Gora 35.83 82 eP P 23 41 00.5 -0.2
ULM Lac du Bonnet 36.37 289 P P 23 41 04.0 -1.2
comp=Z,4.3nm,1.0s,mb4.3,baz=55,slow=10,SNR=4.2
ULM LR LR 23 54 48.3
comp=Z,386nm,18.4s,MS4.2,baz=58,slow=34
ULM Lac du Bonnet 36.37 289 P P 23 41 04.1 -1.2
DIVS Divibare 36.55 83 eP P 23 41 06.6 -0.3
DRGR 36.58 77⇑iP P 23 41 07.8 +0.7
DRGR 36.58 77⇑iP P 23 41 07.8 +0.7
BZS Buzias 36.61 80⇑iP P 23 41 07.6 +0.2
BZS Buzias 36.61 80 eP P 23 41 07.1 -0.3
JFWS Jewell Farm 37.25 275 eP P 23 41 12.5 -0.3
comp=Z,6.9nm,0.7s,mb4.6
JFWS Jewell Farm 37.25 275 eP P 23 41 12.5 -0.3
comp=Z,6.9nm,0.7s,mb4.6
FFC Flin Flon 37.46 299 eP P 23 41 19.2 +4.7
comp=Z,7.2nm,1.0s,mb4.5
BUR08 Bucovina Ar. S 37.53 75 eP P 23 41 15.6 +0.5
BUR08 Bucovina Ar. S 37.53 75 eP P 23 41 15.6 +0.5
BURAR Bucovina Array 37.55 75⇓iP P 23 41 15.6 +0.2
BURAR Bucovina Array 37.55 75⇓iP P 23 41 15.6 +0.2
KIEV Kiev 38.13 68 eP P 23 41 21.6 +1.5
comp=Z,58nm,2.1s,mb4.9
KIEV Kiev 38.13 68 eP P 23 41 21.6 +1.4
comp=Z,58nm,2.1s,mb4.9
AKASG Malin Array Be 38.13 68 P P 23 41 18.9 -1.3
comp=Z,0.9nm,0.5s,mb3.7,baz=301,slow=8.1,SNR=13
AKASG LR LR 23 57 04.5
comp=Z,158nm,18.4s,MS3.9,baz=270,slow=36
AKASG Malin Array Be 38.13 68 P P 23 41 18.9 -1.3
BARS Barje 38.38 83 eP P 23 41 22.3 -0.1
VTS Vitosha 39.33 83 iP P 23 41 31.0 +0.6
VTS Vitosha 39.33 83 iP P 23 41 31.0 +0.6
KKB Krupnik 39.71 84 iP P 23 41 33.8 +0.3
KKB Krupnik 39.71 84 iP P 23 41 33.8 +0.3
SWET Sewanee 39.78 263 eP P 23 41 34.8 +0.6
SWET Sewanee 39.78 263 eP P 23 41 34.8 +0.6
YKA Yellowknife Ar 39.88 315 P P 23 41 33.9 -0.7
comp=Z,1.7nm,0.7s,mb3.9,baz=56,slow=5.5,SNR=3.7
YKA LR LR 23 56 41.6
comp=Z,14nm,19.2s,baz=80,slow=34
YKA Yellowknife Ar 39.88 315 P P 23 41 33.9 -0.7
YKA LR LR 23 56 41.6
YKA Yellowknife Ar 39.88 315 P P 23 41 33.9 -0.8
PGB Panagyurishte 39.91 82 P P 23 41 35.0 -0.2
PGB Panagyurishte 39.91 82 P P 23 41 35.0 -0.2
SIUC Southern Illin 39.98 268 eP P 23 41 35.9 +0.1
comp=Z,23nm,0.7s,mb5.0
SIUC Southern Illin 39.98 268 eP P 23 41 35.9 +0.1
comp=Z,23nm,0.7s,mb5.0
PVL Pavlikeni 40.18 80 P P 23 41 40.7 +3.3
MMB Musomiste 40.26 83 P P 23 41 38.5 +0.4
MMB Musomiste 40.26 83 P P 23 41 38.5 +0.4
ECSD EROS Data Cent 40.44 281 eP P 23 41 39.9 +0.3
comp=Z,9.8nm,0.9s,mb4.5
ECSD EROS Data Cent 40.44 281 eP P 23 41 39.9 +0.3
comp=Z,9.8nm,0.9s,mb4.5
SZH Strazhica 40.50 80 P P 23 41 41.6 +1.6
SZH Strazhica 40.50 80 P P 23 41 41.6 +1.6
FVM French Village 40.51 270 eP P 23 41 40.3 +0.1
comp=Z,25nm,1.4s,mb4.7
FVM French Village 40.51 270 eP P 23 41 40.3 +0.1
comp=Z,25nm,1.4s,mb4.7
A24A Westby 41.54 292 ⇓pP P 23 41 49.7 +1.1
baz=41
LRAL Lakeview Retre 41.96 261 eP P 23 41 52.2 +0.1
comp=Z,8.9nm,1.0s,mb4.3
LRAL Lakeview Retre 41.96 261 eP P 23 41 52.2 +0.1
comp=Z,8.9nm,1.0s,mb4.3
OXF Oxford 42.30 265 eP P 23 41 53.6 -1.3
comp=Z,54nm,1.1s,mb5.1
OXF Oxford 42.30 265 eP P 23 41 53.7 -1.3
comp=Z,54nm,1.1s,mb5.1
KSU1 Kansas State U 43.38 276 eP P 23 42 03.2 -0.4
comp=Z,20nm,0.8s,mb4.9
KSU1 Kansas State U 43.38 276 eP P 23 42 03.2 -0.5
comp=Z,20nm,0.8s,mb4.9
TAM Tamanrasset 43.75 120 eP P 23 42 06.5 -0.4
comp=Z,11nm,1.4s,mb4.4
TAM Tamanrasset 43.75 120 eP P 23 42 06.4 -0.4
comp=Z,11nm,1.4s,mb4.4
LAO LASA Array 44.07 291 ⇑pP P 23 42 10.1 +1.0
baz=44
LAO LASA Array 44.07 291 eP P 23 42 10.1 +1.0
comp=Z,16nm,1.0s,mb4.7
LAO LASA Array 44.07 291 eP P 23 42 10.1 +1.0
comp=Z,16nm,1.0s,mb4.7
MIAR Mount Ida 44.72 268 eP P 23 42 14.2 -0.2
comp=Z,22nm,1.0s,mb5.0
MIAR Mount Ida 44.72 268 eP P 23 42 14.2 -0.2
comp=Z,22nm,1.0s,mb5.0
EGMT Eagleton 45.17 294 P P 23 42 15.2 -2.7
comp=Z,10nm,0.8s,mb4.7
A16A West Butte Ran 45.59 296 ⇑P P 23 42 20.5 -0.7
baz=45
F20A Billings 45.67 291 ⇓P P 23 42 20.9 -0.9
baz=46
C16A Fuhringer Ranc 46.37 295 ⇓pP P 23 42 27.9 +0.5
baz=46
I21A Big Trails, Te 46.45 288 ⇑P P 23 42 27.0 -1.0
baz=46
B15A Bradely Ranch, 46.49 296 ⇓P P 23 42 27.8 -0.5
baz=46
A14A Double T Ranch 46.53 297 ⇑pP P 23 42 29.0 +0.4
baz=46
I20A Worland 46.82 289 ⇑pP P 23 42 31.5 +0.6
baz=47
A13A Flathead Natio 47.07 298 ⇓P P 23 42 31.2 -1.7
baz=47
J20A Shoshoni 47.18 288 ⇑P P 23 42 33.3 -0.4
baz=47
BR131 Keskin Array S 47.20 78 eP P 23 42 34.6 +0.6
comp=Z,5.6nm,0.8s,mb4.5
BR131 Keskin Array S 47.20 78 eP P 23 42 34.6 +0.6
comp=Z,5.6nm,0.8s,mb4.5
BRTR Keskin Array B 47.20 78 P P 23 42 34.5 +0.5
comp=Z,4.4nm,0.8s,mb4.4,baz=314,slow=5.1,SNR=25
BRTR LR LR 00 03 55.9
comp=Z,100nm,19.0s,MS3.8,baz=304,slow=38
BRTR Keskin Array B 47.20 78 P P 23 42 34.5 +0.5
D15A Lincoln 47.26 295 ⇑P P 23 42 33.4 -0.9
baz=47
C14A Swan Lake 47.45 296 ⇑P P 23 42 35.2 -0.6
baz=47
N23A Red Feather La 47.58 284 ⇑pP P 23 42 38.3 +1.4
baz=47
WMOK Wichita Mounta 47.63 273 eP P 23 42 37.0 -0.4
comp=Z,12nm,1.2s,mb4.8
WMOK Wichita Mounta 47.63 273 eP P 23 42 37.0 -0.4
comp=Z,12nm,1.2s,mb4.8
SWMT Swartz Lake 47.74 296 eP P 23 42 37.8 -0.3
SWMT Swartz Lake 47.74 296 eP P 23 42 37.8 -0.3
J19A Crowheart 47.78 289 ⇑P P 23 42 38.1 -0.3
baz=48
K19A Absolon Red Bu 47.95 288 ⇓P P 23 42 39.0 -0.7
baz=48
ISCO Idaho Springs 48.12 283 ⇑pP P 23 42 41.8 +0.7
baz=48
ISCO Idaho Springs 48.12 283 eP P 23 42 42.2 +1.1
comp=Z,6.6nm,0.9s,mb4.7
ISCO Idaho Springs 48.12 283 eP P 23 42 42.2 +1.1
comp=Z,6.6nm,0.9s,mb4.7
MSO Missoula 48.15 295 ⇓P P 23 42 40.5 -0.7
baz=48
E14A Clinton 48.17 295 ⇓pP P 23 42 41.9 +0.6
baz=48
J18A Kendall Valley 48.35 289 ⇑P P 23 42 41.7 -1.1
baz=48
DAWY Dawson 48.37 325 eP P 23 42 41.8 -0.9
DAWY Dawson 48.37 325 eP P 23 42 41.8 -0.9
BW06 Boulder Array 48.38 288 ⇑P P 23 42 42.3 -0.8
baz=48

PDAR Pinedale Array 48.38 288 P P 23 42 41.9 -1.2
comp=Z,1.6nm,0.7s,mb4.2,baz=63,slow=8.1,SNR=4.7
PDAR LR LR 00 02 04.0
comp=Z,310nm,19.5s,MS4.3,baz=50,slow=35
PDAR Pinedale Array 48.38 288 P P 23 42 41.9 -1.2
L19A Farson 48.71 288 ⇑P P 23 42 44.9 -0.7
baz=48
C11A Tepee Creek (N 48.72 298 ⇓P P 23 42 44.8 -0.7
baz=48
F13A Darby 49.02 294 ⇓P P 23 42 47.9 -0.1
baz=49
AMTX Amarillo 49.22 275 ⇓pP P 23 42 50.6 +0.9
baz=49
AMTX Amarillo 49.22 275 eP P 23 42 50.7 +1.0
comp=Z,18nm,0.6s,mb5.3
AMTX ePcP PcP 23 44 13.0 +0.5
AMTX Amarillo 49.22 275 eP P 23 42 50.7 +1.1
comp=Z,18nm,0.6s,mb5.3
AMTX Amarillo 49.22 275 ePcP PcP 23 44 13.0 +0.4
T25A Trinidad 49.24 279 ⇑P P 23 42 49.3 -0.4
baz=49
ARU Arti 49.25 47 eP P 23 42 49.3 -0.3
comp=Z,13nm,1.1s,mb4.9
ARU PcP PcP 23 44 11.9 -0.4
ARU Arti 49.25 47 eP P 23 42 49.3 -0.2
comp=Z,13nm,1.1s,mb4.9
E12A Beaver Dam Sad 49.27 296 ⇑P P 23 42 48.9 -0.9
baz=49
P21A Newcastle 49.36 284 ⇑pP P 23 42 52.0 +1.4
baz=49
N19A John Jarvie Ra 49.41 286 ⇑P P 23 42 50.8 -0.2
baz=49
G13A Cobalt 49.42 294 ⇓P P 23 42 50.7 -0.3
baz=49
F12A Elk City 49.53 295 ⇓P P 23 42 50.7 -1.1
baz=49
U25A Circle Dot Ran 49.75 279 ⇑P P 23 42 53.6 0.0
baz=50,SNR=6.8
H13A Challis 49.78 293 ⇓pP P 23 42 54.5 +0.8
baz=50
O19A Miners Draw (B 49.78 286 ⇑P P 23 42 52.9 -0.9
baz=50
R22A Saguache, Gunn 49.84 282 ⇑pP P 23 42 55.8 +1.5
baz=50
B08A Colville Reser 49.96 300 ⇑P P 23 42 53.9 -1.2
baz=50
H12A Diamond D Ranc 50.11 294 ⇑P P 23 42 55.6 -0.7
baz=50
I13A Wildhorse Cree 50.13 292 ⇑P P 23 42 56.1 -0.3
baz=50
TORD Torodi Ar. Bea 50.21 131 P P 23 42 55.8 -1.5
comp=Z,4.5nm,0.8s,mb4.5,baz=326,slow=8.3,SNR=6.7
TORD LR LR 00 00 54.2
comp=Z,92nm,18.7s,MS3.8,baz=300,slow=32
V25A Rancho No Teng 50.26 278 ⇓P P 23 42 55.7 -1.9
baz=50
HWUT Hardware Ranch 50.27 289 eP P 23 42 58.8 +1.3
comp=Z,10nm,1.0s,mb4.8
HWUT Hardware Ranch 50.27 289 eP P 23 42 58.8 +1.3
comp=Z,10nm,1.0s,mb4.8
ILAR Eielson Array 50.28 329 P P 23 42 56.1 -1.1
comp=Z,1.0nm,0.9s,mb3.9,baz=39,slow=5.7,SNR=9.6
ILAR PcP PcP 23 44 15.2 -0.7
comp=Z,0.4nm,0.8s,baz=20,slow=2.9,SNR=2.8
ILAR LR LR 00 03 19.7
comp=Z,124nm,21.7s,MS3.9,baz=306,slow=35
ILAR Eielson Array 50.28 329 P P 23 42 56.1 -1.1
ILAR Eielson Array 50.28 329 PcP PcP 23 44 15.2 -0.7
MSTX Muleshoe 50.51 275 ⇓P P 23 42 57.9 -1.4
baz=50
HLID Hailey 50.53 292 ⇑pP P 23 43 00.0 +0.6
baz=50
HLID Hailey 50.53 292 eP P 23 43 00.1 +0.7
comp=Z,20nm,1.8s,mb4.7
HLID Hailey 50.53 292 eP P 23 43 00.2 +0.8
comp=Z,20nm,1.8s,mb4.7
W25A X Bar L Ranch, 50.61 278 ⇑P P 23 43 00.4 +0.2
baz=50
N16A Rees Ranch, Co 50.68 288 ⇓P P 23 43 00.6 0.0
baz=50
I12A Atlanta 50.76 293 ⇓pP P 23 43 02.0 +0.8
baz=51
T22A Edith 50.77 281 ⇑pP P 23 43 02.5 +1.2
baz=51
S21A Coal Bank Pass 50.83 282 ⇑pP P 23 43 02.9 +1.2
baz=51
M15A Larsen Ranch, 50.86 289 ⇑P P 23 43 01.1 -0.8
baz=51
MALT Malatya 50.90 76 eP P 23 43 02.3 0.0
comp=Z,17nm,1.4s,mb4.8
MALT Malatya 50.90 76 eP P 23 43 02.3 0.0
comp=Z,17nm,1.4s,mb4.8
SPUT South Promonto 50.96 289 eP P 23 43 02.4 -0.3
comp=Z,12nm,1.3s,mb4.7
SPUT South Promonto 50.96 289 eP P 23 43 02.4 -0.3
comp=Z,12nm,1.3s,mb4.7
W24A Lazy 6 Ranch, 51.16 278 ⇓pP P 23 43 05.5 +1.2
baz=51,SNR=14
Q18A Rafter H Ranch 51.17 285 ⇑P P 23 43 04.4 +0.1
baz=51
JCT Junction City 51.28 270 ⇑P P 23 43 04.4 -0.9
baz=51
JCT Junction City 51.28 270 eP P 23 43 04.5 -0.8
comp=Z,106nm,2.3s,mb5.4
JCT Junction City 51.28 270 eP P 23 43 04.5 -0.8
comp=Z,106nm,2.3s,mb5.4
S19A Harvey Farm, M 51.54 283 ⇓P P 23 43 06.6 -0.5
baz=51
Y25A Mesa, Roswell 51.66 277 ⇓pP P 23 43 08.6 +0.5
baz=52
NLU North Lily Min 51.67 287 eP P 23 43 08.0 -0.1
NLU North Lily Min 51.67 287 eP P 23 43 08.0 -0.1
DUG Dugway 51.92 288 eP P 23 43 11.0 +1.0
comp=Z,20nm,1.8s,mb4.8
DUG Dugway 51.92 288 eP P 23 43 11.0 +1.1
comp=Z,20nm,1.8s,mb4.8
ANMO Albuquerque 51.96 279 eP P 23 43 11.0 +0.8
comp=Z,19nm,1.8s,mb4.7
ANMO Albuquerque 51.96 279 eP P 23 43 11.0 +0.7
comp=Z,19nm,1.8s,mb4.7
R17A Hanksville Air 51.97 285 ⇓pP P 23 43 10.8 +0.5
baz=52
BPAW Bear Paw Mtn. 51.99 330 eP P 23 43 10.1 0.0
comp=Z,28nm,1.7s,mb4.9
BPAW Bear Paw Mtn. 51.99 330 eP P 23 43 10.1 0.0
comp=Z,28nm,1.7s,mb4.9
S18A Hurst Farm, Bl 52.06 284 ⇑pP P 23 43 12.7 +1.7
baz=52
Y24A Capitan 52.09 277 ⇓pP P 23 43 12.0 +0.8
baz=52,SNR=7.1
Z25A Roswell 52.13 276 ⇑P P 23 43 10.8 -0.8
baz=52
TRF Thorofare Moun 52.27 329 eP P 23 43 13.9 +1.8
comp=Z,35nm,1.6s,mb5.0
TRF Thorofare Moun 52.27 329 eP P 23 43 13.9 +1.7
comp=Z,35nm,1.6s,mb5.0
328A Wristen Ranch, 52.39 273 ⇓P P 23 43 12.4 -1.1
baz=52
Y23A Lovelace Mesa, 52.45 278 ⇑P P 23 43 13.9 0.0
baz=52
P14A Drum Mountains 52.48 288 ⇓P P 23 43 14.0 -0.1
baz=52
125A Gardner Draw, 52.54 275 ⇑P P 23 43 14.5 -0.2
baz=52,SNR=6.5
BNM Barren Site 52.62 278 eP P 23 43 16.2 +1.0
comp=Z,12nm,1.4s,mb4.6
BNM Barren Site 52.62 278 eP P 23 43 16.2 +1.0
comp=Z,12nm,1.4s,mb4.6
MSU Marysvale 52.73 286 eP P 23 43 16.2 +0.3
comp=Z,3.5nm,1.0s,mb4.2
MSU Marysvale 52.73 286 eP P 23 43 16.2 +0.3
comp=Z,3.5nm,1.0s,mb4.2
LAZ Ladron 52.74 279 eP P 23 43 17.0 +0.9
comp=Z,7.2nm,1.4s,mb4.4
LAZ Ladron 52.74 279 eP P 23 43 17.0 +0.9
comp=Z,7.2nm,1.4s,mb4.4
SML Sawmill 52.88 327 eP P 23 43 17.1 +0.4
comp=Z,4.3nm,1.1s,mb4.3
SML Sawmill 52.88 327 eP P 23 43 17.1 +0.4
comp=Z,4.2nm,1.1s,mb4.3
S16A Weppner Ranch, 52.95 285 ⇓P P 23 43 17.0 -0.6
baz=53
Y22A Socorro 52.97 278 ⇓P P 23 43 17.8 0.0
baz=53
124A Stringfield Ra 52.98 276 ⇓P P 23 43 18.6 +0.8
baz=53,SNR=10
Q14A Sevier Lake (B 53.01 287 ⇓pP P 23 43 18.7 +0.7
baz=53

Z23A Rita Site, Whi 53.03 277 ⇑P P 23 43 18.9 +0.7
baz=53
225A Deer Hill, Car 53.04 275 ⇓P P 23 43 17.9 -0.5
baz=53,SNR=7.6
X21A Alamocita Cree 53.08 279 ⇓pP P 23 43 20.2 +1.6
baz=53
427A Hayter Ranch, 53.12 273 ⇓P P 23 43 18.6 -0.3
baz=53
528A Cox Ranch, San 53.27 272 ⇓P P 23 43 19.3 -0.7
baz=53
DBIC Dimbokro 53.41 141 P P 23 43 18.9 -2.3
comp=Z,5.5nm,0.8s,mb4.5,baz=326,slow=8.1,SNR=7.7
DBIC LR LR 00 03 32.3
comp=Z,224nm,19.1s,MS4.2,baz=315,slow=33
DBIC Dimbokro 53.41 141 P P 23 43 18.9 -2.2
Z22A Elephant Butte 53.46 278 ⇓pP P 23 43 22.6 +1.2
baz=53,SNR=9.1
224A Cornudas Mount 53.47 276 ⇑P P 23 43 21.1 -0.3
baz=53,SNR=11
WVOR Wild Horse Val 53.57 294 eP P 23 43 22.2 +0.1
comp=Z,5.8nm,0.9s,mb4.5
WVOR Wild Horse Val 53.57 294 eP P 23 43 22.2 +0.1
comp=Z,5.8nm,0.9s,mb4.5
426A McDonald Obser 53.62 273 ⇑P P 23 43 22.2 -0.4
baz=54,SNR=11
MNTX Cornudas Mount 53.66 275 ⇑P P 23 43 21.7 -1.2
baz=54
MNTX Cornudas Mount 53.66 275 eP P 23 43 21.8 -1.1
comp=Z,3.6nm,1.0s,mb4.3
MNTX Cornudas Mount 53.66 275 eP P 23 43 21.8 -1.1
comp=Z,3.6nm,1.0s,mb4.3
527A Woodward Ranch 53.76 273 ⇑P P 23 43 23.0 -0.6
baz=54
U16A Tuba City 53.80 283 ⇓P P 23 43 23.5 -0.4
baz=54
Y20A Horse Springs, 53.81 279 ⇑pP P 23 43 25.7 +1.7
baz=54
628A Black Gap, Mar 53.82 271 ⇑P P 23 43 23.4 -0.7
baz=54,SNR=7.6
425A Indio Mountain 54.09 274 ⇓P P 23 43 25.0 -1.0
baz=54
526A Mary Lane Ranc 54.10 273 ⇓P P 23 43 25.5 -0.6
baz=54
627A Terlingua Ranc 54.14 272 ⇑P P 23 43 25.9 -0.6
baz=54,SNR=9.2
Y19A Nutrioso 54.28 280 ⇓pP P 23 43 28.8 +1.4
baz=54
TXAR Lajitas Array 54.39 272 P P 23 43 27.9 -0.4
comp=Z,2.2nm,0.9s,mb4.1,baz=68,slow=8.2,SNR=13
TXAR LR LR 00 06 09.6
comp=Z,324nm,18.4s,MS4.4,baz=270,slow=36
TXAR Lajitas Array 54.39 272 P P 23 43 27.9 -0.4
121A Cookes Peak, D 54.46 278 ⇓P P 23 43 28.7 0.0
baz=54
626A Big Bend Ranch 54.50 272 ⇑P P 23 43 28.4 -0.6
baz=54
K05A Summer Lake 54.57 296 ⇑pP P 23 43 29.9 +0.6
baz=54
ABKAR Akbulak array 54.68 53 eP P 23 43 29.9 -0.2
comp=Z,3.4nm,1.0s,mb4.3
ABKAR Akbulak array 54.68 53 eP P 23 43 29.9 -0.2
comp=Z,3.3nm,1.0s,mb4.3
R11A Troy Canyon, C 54.75 288 ⇑P P 23 43 30.3 -0.4
baz=55
X16A Lo Mia Camp, P 55.21 282 ⇑pP P 23 43 35.3 +1.2
baz=55
U13A Pakoon Wash 55.21 286 ⇓pP P 23 43 34.9 +0.7
baz=55
V14A Boquillas Ranc 55.28 284 ⇑pP P 23 43 35.6 +1.0
baz=55
220A Playas Peak, P 55.34 278 ⇓P P 23 43 35.5 +0.4
baz=55
Y17A Roosevelt 55.38 281 ⇑pP P 23 43 36.6 +1.2
baz=55
X15A Humboldt 55.61 283 ⇑pP P 23 43 38.2 +1.2
baz=55
Y16A Circle Bar Ran 55.62 282 ⇓pP P 23 43 38.1 +1.1
baz=56
V13A Grand Canyon W 55.62 285 ⇓pP P 23 43 37.5 +0.4
baz=56
118A Homack Ranch, 55.64 279 ⇓P P 23 43 36.8 -0.5
baz=56
219A White Tail Can 55.70 278 ⇑P P 23 43 37.7 0.0
baz=56
320A Kipp Ranch, An 55.76 277 ⇓P P 23 43 38.2 +0.1
baz=56
SHPR Sheep Range 55.82 286 eP P 23 43 39.0 +0.5
comp=Z,4.3nm,1.3s,mb4.3
SHPR Sheep Range 55.82 286 eP P 23 43 39.0 +0.5
comp=Z,4.3nm,1.3s,mb4.3
Y15A Casa Rosa Ranc 56.05 282 ⇓pP P 23 43 40.8 +0.6
baz=56
W13A Hualapai Mount 56.11 284 ⇓pP P 23 43 41.7 +1.1
baz=56
117A Oracle 56.14 280 ⇑pP P 23 43 41.9 +1.1
baz=56
218A Dragoon 56.17 279 ⇑pP P 23 43 41.7 +0.6
baz=56
NVAR Mina Array Bea 56.20 290 P P 23 43 40.8 -0.4
comp=Z,0.8nm,0.7s,mb3.8,baz=71,slow=10,SNR=4.7
NVAR Mina Array Bea 56.20 290 P P 23 43 40.8 -0.4
BRVK Borovoye 56.49 44 eP P 23 43 43.7 +0.6
comp=Z,6.7nm,1.4s,mb4.5
BRVK Borovoye 56.49 44 eP P 23 43 43.7 +0.6
comp=Z,6.7nm,1.4s,mb4.5
U10A Ash Meadows, A 56.54 287 ⇓P P 23 43 43.1 -0.5
baz=56
Z13A Yuma Proving G 57.36 283 ⇑pP P 23 43 50.1 +0.6
baz=57
MPMC Manual Prospec 57.45 288 ⇑pP P 23 43 51.4 +1.4
baz=57
BC3 Big Chuckawall 58.05 284 ⇑pP P 23 43 55.1 +0.8
baz=58
ROSC El Rosal 58.62 228 P P 23 43 59.7 +1.3
comp=Z,30nm,0.8s,mb5.4,baz=81,slow=22,SNR=12
ROSC LR LR 00 06 00.1
comp=Z,41nm,20.9s,MS3.5,baz=13,slow=33
ROSC El Rosal 58.62 228 P P 23 43 59.7 +1.2
ZALV Zalesovo Beam 61.27 36 P P 23 44 15.8 -0.5
comp=Z,1.0nm,0.6s,mb4.1,baz=322,slow=4.4,SNR=4.4
ZALV LR LR 00 08 00.5
comp=Z,48nm,19.1s,MS3.7,baz=158,slow=33
KURK Kurchatov 61.61 41 eP P 23 44 17.4 -1.2
comp=Z,7.4nm,1.0s,mb4.8
KURK Kurchatov 61.61 41 eP P 23 44 17.4 -1.2
comp=Z,7.4nm,1.0s,mb4.8
MIB Mutribah 62.14 77 eP P 23 44 22.3 -0.1
MIB AMb AMB 23 44 23.6
comp=Z,22nm,1.2s,mb5.1
NAY Al-Naaiem 62.50 78 eP P 23 44 24.4 -0.5
NAY AMb AMB 23 44 27.2
comp=Z,7.1nm,1.8s,mb4.5
RDF Al-Radifah 62.92 78 eP P 23 44 27.8 +0.1
RDF AMb AMB 23 44 28.9
comp=Z,32nm,1.2s,mb5.3
EKS2 Erkin-Say 65.98 50 eP P 23 44 48.4 +0.8
comp=Z,14nm,1.3s,mb4.8
EKS2 Erkin-Say 65.98 50 eP P 23 44 48.3 +0.8
comp=Z,14nm,1.3s,mb4.8
MKAR Makanchi Array 66.22 42 P P 23 44 48.0 -0.9
comp=Z,4.1nm,0.9s,mb4.4,baz=335,slow=5.3,SNR=15
MKAR LR LR 00 11 08.8
comp=Z,76nm,19.9s,MS3.9,baz=95,slow=34
UCH Uchtor 66.66 50 eP P 23 44 52.7 +0.9
comp=Z,5.5nm,1.1s,mb4.5
UCH Uchtor 66.66 50 eP P 23 44 52.7 +0.9
comp=Z,5.5nm,1.1s,mb4.5
KSH Kashi 69.50 50 eP P 23 45 11.3 +1.6
KSH epP pP 23 45 15.9 +2.9
KSH esP sP 23 45 18.3 +4.1
KSH ePcP PcP 23 45 34.8 +1.9
KSH ePP PP 23 47 46.8 +4.0
KSH eS S 23 54 16.3 -0.7
KSH esS sS 23 54 24.3 +1.9
KSH eScS ScS 23 55 08.3 -2.6
KSH eSS SS 23 58 45.3 +1.8
KSH pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KSH pmax pmax
comp=Z,230nm,4.2s
KSH LR LR
comp=N,260nm,6.9s
KSH LR LR
comp=E,320nm,5.7s
KSH LR LR
comp=Z,660nm,14.6s,MS5.0
BDFB Brasilia 70.53 193 LR LR 00 11 48.9
comp=Z,61nm,18.7s,MS3.9,baz=56,slow=32

WMQ	**Urumqi**	**70.78**	**40**	*eP*	**P**	**23 45 19.0**	**+1.5**
WMQ				sP	sP	23 45 26.0	+4.0
WMQ				PP	PP	23 47 59.0	+5.3
WMQ				S	S	23 54 33.0	+1.0
WMQ				ScS	ScS	23 55 19.0	-1.9
WMQ				SS	SS	23 59 07.0	+4.0
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
WMQ				pmax	pmax		
	comp=Z,64nm,6.0s						
WMQ				LR	LR		
	comp=N,87nm,20.0s,MS4.2						
WMQ				LR	LR		
	comp=E,110nm,20.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,86nm,20.0s,MS4.0						
PETK	**Petropavlovsk-**	**72.42**	**352**	LR	LR	00 19 17.8	
	comp=Z,44nm,20.7s,MS3.7,baz=35,slow=38						
SONM	**Songino Array**	**73.16**	**26**	P	**P**	**23 45 31.1**	**-0.7**
	comp=Z,3.3nm,0.9s,mb4.2,baz=331,slow=6.2,SNR=11						
SONM				LR	LR	00 19 01.1	
	comp=Z,68nm,18.1s,MS4.0,baz=284,slow=37						
SONM	**Songino Array**	**73.16**	**26**	P	**P**	**23 45 31.0**	**-0.7**
ULN	**Ulaanbaatar**	**73.30**	**26**	*eP*	**P**	**23 45 32.6**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**73.30**	**26**	*eP*	**P**	**23 45 32.6**	**+0.1**
	comp=Z,3.5nm,0.8s,mb4.3						
LPAZ	**La Paz**	**75.75**	**213**	P	**P**	**23 45 46.6**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.8,baz=18,slow=3.2,SNR=2.6						
LPAZ	**La Paz**	**75.75**	**213**	P	**P**	**23 45 46.7**	**-0.3**
GTA	**Gaotai**	**78.95**	**34**	*eP*	**P**	**23 46 04.6**	**-0.2**
GTA				pP	pP	23 46 09.4	+1.3
GTA				sP	sP	23 46 11.6	+2.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
MDJ	**Mudanjiang**	**80.59**	**11**	P	**P**	**23 46 12.0**	**-1.7**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
HHC	**Hu-ho-hao-te**	**81.00**	**25**	*eP*	**P**	**23 46 16.3**	**+0.4**
HHC				pP	pP	23 46 21.0	+1.8
HHC				sP	sP	23 46 23.4	+3.0
HHC				PP	PP	23 49 24.1	+4.3
HHC				S	S	23 56 24.3	-0.4
HHC				sS	sS	23 56 32.1	+1.9
HHC				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0						
HHC				pmax	pmax		
	comp=Z,150nm,5.4s						
HHC				LR	LR		
	comp=N,250nm,14.1s,MS4.8						
HHC				LR	LR		
	comp=E,290nm,18.5s,MS4.8						
HHC				LR	LR		
	comp=Z,200nm,17.6s,MS4.5						
CPUP	**Villa Florida**	**82.56**	**200**	LR	LR	00 21 15.7	
	comp=Z,53nm,18.4s,MS3.9,baz=129,slow=34						
BJI	**Beijing**	**82.84**	**22**	P	**P**	**23 46 24.3**	**-1.3**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
LZH	**Lanzhou**	**83.28**	**32**	*eP*	**P**	**23 46 25.5**	**-2.4**
LZH				pP	pP	23 46 28.8	-2.5
LZH				sP	sP	23 46 30.3	-2.1
LZH				*e*PP	PP	23 49 38.5	-0.2
LZH				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
LZH				pmax	pmax		
	comp=Z,75nm,7.8s						
LZH				LR	LR		
	comp=N,340nm,17.5s						
LZH				LR	LR		
	comp=Z,390nm,20.0s,MS4.8						
KSRS	**Korea Array**	**87.44**	**13**	LR	LR	00 31 27.9	
	comp=Z,37nm,18.3s,MS3.8,baz=183,slow=39						
CD2	**Chengdu**	**88.01**	**34**	*eP*	**P**	**23 46 51.3**	**-0.3**
NJ2	**Nanjing**	**91.10**	**22**	*eP*	**P**	**23 47 07.6**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
KMI	**Kunming**	**92.97**	**38**	P	**P**	**23 47 16.3**	**+1.5**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb5.1						
BOSA	**Boshof**	**97.56**	**130**	LR	LR	00 30 09.1	
	comp=Z,129nm,19.1s,MS4.4,baz=144,slow=34						
CMAR	**Chiang Mai Arr**	**97.58**	**43**	P	**P**	**23 47 35.7**	**-0.2**
	comp=Z,0.5nm,0.3s,mb4.5,baz=318,slow=3.6,SNR=4.1						
CMAR				LR	LR	00 33 43.1	
	comp=Z,49nm,19.8s,MS4.0,baz=300,slow=37						
CMAR	**Chiang Mai Arr**	**97.58**	**43**	P	**P**	**23 47 35.7**	**-0.2**
PLCA	**Paso Flores**	**99.43**	**207**	LR	LR	00 33 00.3	
	comp=Z,62nm,19.0s,MS4.1,baz=52,slow=36						
WRA	**Warramunga Arr**	**144.76**	**17**	PKP	PKPdf	23 53 37.2	-1.0
	comp=Z,0.8nm,0.7s,baz=340,slow=3.4,SNR=3.3						
WRA	**Warramunga Arr**	**144.76**	**17**	PKIKP	PKPdf	23 53 37.2	-1.0
ASAR	**Alice Springs**	**148.31**	**19**	PKPbc	PKPbc	23 53 46.1	-1.3
	comp=Z,3.8nm,0.6s,baz=355,slow=2.4,SNR=32						
ASAR	**Alice Springs**	**148.31**	**19**	PKPbc	PKPbc	23 53 46.2	-1.3

*ISCJB **22** 23:41:43.4±6.2, 5°.21N±0°.08×93°.2E±0°.1, h14km±39km, mb3.9/11, Error ellipse: s-maj=23.3km s-min=9.3km az=154.1*
*NEIC **22** 23:41:44.6±3.4, 5°.19N×93°.20E, h11km±21km, mb3.8/3, Error ellipse: s-maj=11.3km s-min=4.3km az=64.0*
*IDC **22** 23:41:46.9±0.9, 5°.21N×93°.22E, h24km±4km, mb3.8/9, mb1 3.9/11, mb1mx3.7/26, mbtmp3.8/11, ML4.0/2, Error ellipse: s-maj=34.9km s-min=12.6km az=53.0*
ISC 22 23:41:45.1±6.2, 5°.19N±0°.08×93°.2E±0°.1, h13km±39km, h26km±1.1km; pP-P, n30, σ0°53/29, mb3.9/11, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.18**	**112**	Pn	**Pn**	**23 43 17.9**	**+1.8**
	0.7nm,0.3s,baz=333,slow=18,SNR=2.2						
KULM	**Kulim**	**7.41**	**89**	*e*Pn	**Pn**	**23 43 32.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**14.32**	**23**	Pn	**Pn**	**23 45 06.6**	**-1.1**
	0.7nm,0.3s,baz=234,slow=12,SNR=4.8						
CHTO	**Chiang Mai**	**14.65**	**22**	*e*Pn	**Pn**	**23 45 12.3**	**+0.1**
COCO	**West Island**	**17.64**	**168**	Pn	**Pn**	**23 45 50.0**	**-0.7**
KAPI	**Kappang**	**28.38**	**111**	*eP*	**P**	**23 47 38.9**	**-0.5**
KBL	**Kabul**	**36.79**	**326**	*eP*	**P**	**23 48 53.1**	**+0.4**
MBWA	**Marble Bar**	**36.91**	**136**	*eP*	**P**	**23 48 54.1**	**+0.2**
FITZ	**Fitzroy Crossi**	**39.49**	**127**	P	**P**	**23 49 15.1**	**-0.5**
	0.9nm,0.7s,mb3.6,baz=235,slow=9.3,SNR=3.6						
FITZ	**Fitzroy Crossi**	**39.49**	**127**	*eP*	**P**	**23 49 15.2**	**-0.4**
	1.0nm,0.6s,mb3.7						
UCH	**Uchtor**	**40.46**	**338**	*eP*	**P**	**23 49 23.9**	**+0.5**
	1.0nm,0.5s,mb3.8						
AAK	**Ala-Archa**	**40.82**	**339**	P	**P**	**23 49 26.7**	**+0.4**
EKS2	**Erkin-Say**	**41.10**	**338**	P	**P**	**23 49 29.0**	**+0.4**
MKAR	**Makanchi Array**	**42.51**	**349**	P	**P**	**23 49 40.0**	**0.0**
	1.5nm,0.7s,mb3.8,baz=178,slow=9.2,SNR=7.6						
MKAR				pP	pP	23 49 48.0	+3.7
	1.3nm,0.7s,baz=169,slow=9.3,SNR=4.2						
MKAR	**Makanchi Array**	**42.51**	**349**	P	**P**	**23 49 40.0**	**0.0**
MKAR				pP	pP	23 49 48.0	+3.7
SONM	**Songino Array**	**43.97**	**13**	P	**P**	**23 49 51.7**	**-0.1**
	0.8nm,0.7s,mb3.6,baz=194,slow=12,SNR=4.4						
SONM				pP	pP	23 49 59.5	+3.4
	1.0nm,0.7s,baz=199,slow=6.5,SNR=4.2						
SONM				PcP	PcP	23 51 38.5	+0.9
	0.3nm,0.3s,baz=176,slow=5.8,SNR=4.0						
ULN	**Ulaanbaatar**	**44.14**	**13**	P	**P**	**23 49 53.6**	**+0.4**
KURK	**Kurchatov**	**46.99**	**347**	*eP*	**P**	**23 50 15.6**	**-0.2**
	1.2nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**47.53**	**123**	P	**P**	**23 50 20.3**	**-0.1**
	3.7nm,0.8s,mb4.5,baz=302,slow=9.0,SNR=14						
WRA				pP	pP	23 50 28.1	+3.5
	2.7nm,0.7s,baz=302,slow=9.0,SNR=8.0						
WB2	**Warramunga Arr**	**47.54**	**123**	*eP*	**P**	**23 50 20.4**	**-0.1**
ASAR	**Alice Springs**	**48.97**	**128**	P	**P**	**23 50 31.6**	**+0.1**
	0.6nm,0.5s,mb3.9,baz=301,slow=7.3,SNR=6.0						
ASAR				pP	pP	23 50 39.4	+3.6
	1.0nm,0.8s,baz=295,slow=6.5,SNR=5.2						
ASAR				PcP	PcP	23 51 55.9	+0.2
	0.6nm,0.7s,baz=312,slow=4.7,SNR=4.5						
ZAA0	**Zalesovo Array**	**49.09**	**353**	*eP*	**P**	**23 50 31.8**	**-0.1**
ZAA0				*e*		23 50 39.6	
ZALV	**Zalesovo Beam**	**49.09**	**353**	P	**P**	**23 50 32.1**	**+0.1**
	1.5nm,0.4s,mb4.3,baz=176,slow=7.2,SNR=12						
ZALV				pP	pP	23 50 39.3	+3.1
	1.2nm,0.4s,baz=179,slow=6.9,SNR=7.2						
BRVK	**Borovoye**	**51.29**	**342**	P	**P**	**23 50 48.5**	**-0.2**
ARU	**Arti**	**58.00**	**338**	P	**P**	**23 51 36.9**	**-0.4**
BRTR	**Keskin Array B**	**63.50**	**312**	P	**P**	**23 52 14.8**	**-0.4**
	0.6nm,0.7s,mb3.8,baz=118,slow=9.9,SNR=4.7						
FINES	**FINESS Array B**	**74.64**	**333**	P	**P**	**23 53 23.5**	**-0.4**
	1.6nm,0.8s,mb4.0,baz=101,slow=7.2,SNR=4.4						
GERES	**GERESS Array B**	**79.20**	**319**	P	**P**	**23 53 50.7**	**+0.8**
	0.7nm,0.7s,mb3.7,baz=101,slow=4.2,SNR=9.5						
GERES				pP	pP	23 53 57.5	+3.1
	0.6nm,0.7s,baz=104,slow=3.1,SNR=4.0						
GERES	**GERESS Array B**	**79.20**	**319**	P	**P**	**23 53 50.7**	**+0.8**
GERES				pP	pP	23 53 57.5	+3.1
CPUP	**Villa Florida**	**144.87**	**230**	PKP	PKPdf	00 01 22.6	-0.1
	1.2nm,0.5s,baz=90,slow=2.0,SNR=4.2						

*NIED **23** 00:16:00, 28°.80N×129°.10E, h74km, Mw4.0 Best double couple: M0 1.13000×10^15 NP1:φs 106.00000°, δ55.00000°, λ-116.00000°. NP2:φs 327.00000°, δ43.00000°, λ-57.00000°.*
*ISCJB **23** 00:16:40.6±0.3, 28°.77N±0°.03×129°.27E±0°.05, h81km±4km, mb3.8/18, Error ellipse: s-maj=8.3km s-min=3.5km az=30.9*
*JMA **23** 00:16:41.5±0.1, 28°.85N×129°.13E, h39km±4km, M4.3*
JMA Felt I J1.
*IDC **23** 00:16:42.0±1.5, 28°.77N×129°.24E, h89km±15km, mb3.5/12, mb1 3.8/15, mb1mx3.7/27, mbtmp3.6/15, Error ellipse: s-maj=21.9km s-min=12.4km az=96.0*
*NEIC **23** 00:16:42.2±0.5, 28°.72N×129°.19E, h75km±6km, mb4.1/6, Error ellipse: s-maj=7.7km s-min=4.8km az=114.0*
NEIC Recorded [1 JMA] on Amami-oshima.
ISC 23 00:16:41.7±0.3, 28°.77N±0°.03×129°.29E±0°.05, h75km±4km, n52, σ1°04/64, mb3.8/18, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**0.45**	**142**	P	**Pn**	**00 16 53.3**	**-1.2**
JAM				S	**Sn**	**00 17 01.9**	**-2.0**
JZK	**Kikaishima**	**0.75**	**127**	P	**Pn**	**00 16 58.0**	**+0.5**
JZK				*e*S	**Sn**	**00 17 11.1**	**+1.9**
JTK	**Tokunoshima**	**1.02**	**197**	P	**Pn**	**00 17 00.5**	**-0.2**
JTK				*e*S	**Sn**	**00 17 14.4**	**-0.5**
JNN	**Nakanoshima**	**1.19**	**25**	P	**Pn**	**00 17 01.7**	**-1.1**
JKC	**Kuchinoerabu**	**1.86**	**25**	P	**Pn**	**00 17 11.2**	**-0.4**
JKC				*e*S	**Sn**	**00 17 33.6**	**-0.8**
JIH	**Iheya**	**2.08**	**215**	P	**Pn**	**00 17 15.1**	**+0.5**
JIH				*e*S	**Sn**	**00 17 40.2**	**+0.5**
JOW	**Kunigami**	**2.13**	**205**	P	**Pn**	**00 17 15.6**	**+0.4**
	baz=13,slow=12						
JOW				S	**Sn**	**00 17 41.8**	**+1.1**
	baz=90,slow=20						
JOW	**Kunigami**	**2.13**	**205**	*e*Pn	**Pn**	**00 17 15.4**	**+0.2**
JOW				*e*Sn	**Sn**	**00 17 40.7**	**+0.1**
JOW	**Kunigami**	**2.13**	**205**	P	**Pn**	**00 17 15.3**	**+0.2**
JOW				*e*S	**Sn**	**00 17 41.1**	**+0.4**
JTN	**Tanegashima 3**	**2.39**	**38**	P	**Pn**	**00 17 17.5**	**-1.1**
JTN				*e*S	**Sn**	**00 17 47.1**	**+0.2**
JAGN	**Aguni-jima**	**2.83**	**220**	P	**Pn**	**00 17 25.7**	**+1.1**
JAGN				*e*S	**Sn**	**00 17 57.8**	**+0.1**
NAH1	**Naha**	**2.92**	**210**	*e*S	**Sn**	**00 18 00.0**	**+0.1**
JJT2	**Tamagusuku 2**	**2.95**	**208**	P	**Pn**	**00 17 27.1**	**+0.8**
JKE	**Kume jima 2**	**3.29**	**223**	P	**Pn**	**00 17 31.7**	**+0.8**
JKE				*e*S	**Sn**	**00 18 09.2**	**+0.2**
JNU	**Nakatsue**	**4.55**	**17**	*e*Pn	**Pn**	**00 17 49.2**	**+1.2**
JNU				*e*Sn	**Sn**	**00 18 39.1**	**-0.6**
TATO	**Taipei**	**7.92**	**243**	*e*Pn	**Pn**	**00 18 32.8**	**-1.4**
YHNB	**Yeheng**	**8.17**	**242**	Pn	**Pn**	**00 18 36.4**	**-1.1**
KSRS	**Korea Array**	**8.74**	**353**	P	**Pn**	**00 18 45.8**	**+0.6**
	0.9nm,0.3s,baz=175,slow=14,SNR=9.5						
YULB	**Yu-li**	**8.96**	**235**	*e*Pn	**Pn**	**00 18 47.5**	**-0.8**
TWG	**Pinlang**	**9.48**	**233**	*e*Pn	**Pn**	**00 18 54.2**	**-1.2**
TPUB	**Ta-pu**	**9.50**	**237**	*e*Pn	**Pn**	**00 18 55.3**	**-0.4**
MAJO	**Matsushiro**	**10.79**	**42**	*e*Pn	**Pn**	**00 19 15.2**	**+2.0**
MJAR	**Matsushiro Arr**	**10.79**	**42**	P	**Pn**	**00 19 15.0**	**+1.8**
	0.6nm,0.3s,baz=62,slow=21,SNR=4.2						
BJT	**Baijiatuau**	**15.58**	**320**	*e*Pn	**Pn**	**00 20 17.2**	**+0.4**
MDJ	**Mudanjiang**	**15.82**	**1**	*e*Pn	**Pn**	**00 20 20.7**	**+0.9**
ASAJ	**Asahikawa**	**18.65**	**31**	P	**Pn**	**00 20 55.5**	**+1.0**
HIA	**Hailar**	**21.74**	**343**	*eP*	**P**	**00 21 27.9**	**+1.2**
	4.9nm,0.4s,mb4.2						
SONM	**Songino Array**	**26.01**	**323**	P	**P**	**00 22 06.5**	**-1.0**
	0.2nm,0.3s,mb3.0,baz=141,slow=9.3,SNR=2.7						
CHTO	**Chiang Mai**	**29.41**	**257**	P	**P**	**00 22 38.8**	**+0.6**
TLY	**Talaya**	**29.84**	**327**	*eP*	**P**	**00 22 43.6**	**+2.0**
MKAR	**Makanchi Array**	**40.60**	**309**	P	**P**	**00 24 13.6**	**-0.4**
	0.5nm,0.5s,mb3.6,baz=93,slow=11,SNR=6.3						
MKAR	**Makanchi Array**	**40.60**	**309**	P	**P**	**00 24 13.6**	**-0.4**
ZALV	**Zalesovo Beam**	**40.85**	**321**	P	**P**	**00 24 15.2**	**-0.6**
	0.6nm,0.5s,mb3.6,baz=98,slow=4.4,SNR=2.6						
KAKA	**Kakadu**	**41.34**	**175**	*eP*	**P**	**00 24 21.3**	**+1.0**
	19nm,0.5s						
KURK	**Kurchatov**	**43.67**	**315**	*eP*	**P**	**00 24 40.4**	**+1.6**
	0.9nm,0.6s,mb3.7						
TKM2	**Tokmak 2**	**45.03**	**303**	*eP*	**P**	**00 24 50.4**	**+0.5**
	1.5nm,0.6s,mb3.9						
UCH	**Uchtor**	**45.84**	**302**	*eP*	**P**	**00 24 57.9**	**+1.6**
	0.8nm,0.3s,mb3.9						
EKS2	**Erkin-Say**	**46.38**	**303**	*eP*	**P**	**00 24 59.8**	**-0.6**
	2.2nm,0.8s,mb3.9						
FITZ	**Fitzroy Crossi**	**46.73**	**185**	*eP*	**P**	**00 25 03.3**	**+0.1**
	2.0nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**48.67**	**174**	P	**P**	**00 25 17.6**	**-0.7**
	2.0nm,0.6s,mb4.2,baz=353,slow=8.3,SNR=8.3						
WB2	**Warramunga Arr**	**48.67**	**174**	*eP*	**P**	**00 25 17.4**	**-0.8**
BRVK	**Borovoye**	**49.11**	**317**	P	**P**	**00 25 21.8**	**+0.3**
ASAR	**Alice Springs**	**52.32**	**175**	P	**P**	**00 25 45.1**	**-0.6**
	0.6nm,0.6s,mb3.8,baz=8.2,slow=14,SNR=10						
ARU	**Arti**	**56.01**	**321**	P	**P**	**00 26 13.0**	**+0.7**
STKA	**Stephens Creek**	**61.43**	**168**	P	**P**	**00 26 51.7**	**+1.6**
ILAR	**Eielson Array**	**61.77**	**29**	P	**P**	**00 26 50.5**	**-1.6**
	0.6nm,0.7s,mb3.8,baz=264,slow=4.2,SNR=13						
FINES	**FINESS Array B**	**71.13**	**330**	P	**P**	**00 27 49.1**	**-2.7**
	0.9nm,0.6s,mb3.8,baz=63,slow=5.1,SNR=8.4						
YKA	**Yellowknife Ar**	**75.84**	**25**	P	**P**	**00 28 17.5**	**-1.9**
	1.3nm,0.7s,mb3.8,baz=295,slow=4.9,SNR=3.0						
BRTR	**Keskin Array B**	**76.23**	**308**	P	**P**	**00 28 20.8**	**-1.3**
	0.9nm,0.8s,mb3.5,baz=94,slow=7.4,SNR=5.2						
NVAR	**Mina Array Bea**	**88.08**	**47**	P	**P**	**00 29 23.7**	**-0.3**
	0.5nm,0.6s,mb3.7,baz=331,slow=5.4,SNR=3.8						
PDAR	**Pinedale Array**	**90.61**	**39**	P	**P**	**00 29 34.9**	**-0.9**
	0.4nm,0.9s,mb3.5,baz=337,slow=3.4,SNR=3.9						
ULM	**Lac du Bonnet**	**91.74**	**27**	P	**P**	**00 29 39.9**	**-0.9**
	1.3nm,0.5s,mb4.4,baz=314,slow=5.1,SNR=3.6						

*DJA **23** 00:28:36, 1°.45N×120°.69E, h10km, MLv4.1/4*
*IDC **23** 00:28:37.5±7.8, 0°.40N×121°.53E, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.7/21, mbtmp4.0/4, Error ellipse: s-maj=147.6km s-min=113.0km az=90.0*
*NEIC **23** 00:28:42.5±0.7, 0°.69N×122°.04E, h35km, mb3.6/3, Error ellipse: s-maj=25.8km s-min=10.8km az=71.0*
*ISCJB **23** 00:28:51.5±1.4, 0°.2N±0°.1×121°.3E±0°.1, h141km±13km, mb3.8/4, Error ellipse: s-maj=25.4km s-min=16.0km az=149.8*
ISC 23 00:28:52.4±1.5, 0°.2N±0°.1×121°.3E±0°.2, h132km±15km, n14, σ0°39/14, mb3.8/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.68**	**66**	P	**Pn**	**00 29 04.7**	**-8.1**
LUWI	**Luwuk**	**1.90**	**130**	P	**Pn**	**00 29 25.4**	**+0.1**
TTSI	**Tana Toraja**	**3.55**	**205**	P	**Pn**	**00 29 46.1**	**-0.2**
KAPI	**Kappang**	**5.41**	**197**	Pn	**Pn**	**00 30 11.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**18.67**	**167**	P	**Pn**	**00 32 59.7**	**-0.7**
	0.4nm,0.3s,baz=4.6,slow=8.4,SNR=10.0						
FITZ	**Fitzroy Crossi**	**18.67**	**167**	*eP*	**P**	**00 33 00.3**	**-0.1**
	1.8nm,0.4s						
WRA	**Warramunga Arr**	**23.73**	**148**	P	**P**	**00 33 52.9**	**+0.3**
	4.1nm,0.6s,mb4.2,baz=325,slow=11,SNR=19						
WB2	**Warramunga Arr**	**23.74**	**148**	*eP*	**P**	**00 33 52.7**	**0.0**
ASAR	**Alice Springs**	**26.68**	**154**	P	**P**	**00 34 19.1**	**-0.1**
	1.2nm,0.5s,mb3.8,baz=327,slow=8.5,SNR=15						
STKA	**Stephens Creek**	**37.22**	**151**	P	**P**	**00 35 50.8**	**-0.4**
	1.7nm,0.7s,mb3.8,baz=333,slow=11,SNR=3.6						
STKA	**Stephens Creek**	**37.22**	**151**	*eP*	**P**	**00 35 51.7**	**+0.5**
	0.4nm,0.7s,mb3.2						
LSA	**Lhasa**	**41.08**	**318**	*eP*	**P**	**00 36 24.1**	**+0.8**
TLY	**Talaya**	**53.43**	**346**	P	**P**	**00 37 58.0**	**-0.5**
BRVK	**Borovoye**	**67.53**	**329**	*eP*	**P**	**00 39 34.0**	**-0.3**
	1.7nm,0.9s,mb3.8						

IDC 23 01:14:29.6±1.8, 16°.98N×144°.65E, h0km, mb3.6/3, mb1 4.1/4, mb1mx3.6/23, mbtmp3.7/4, ML4.6/1, Error ellipse: s-maj=119.9km s-min=24.4km az=107.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.38**	**176**	Pn	Pn	01 15 22.9	-0.7
	65nm,0.3s,baz=24,slow=2.3,SNR=18						
GUMO				Sn	Sn	01 16 00.4	-4.0
	30nm,0.3s,baz=190,slow=22,SNR=4.3						
WRA	**Warramunga Arr**	**38.06**	**196**	P	P	01 21 50.4	+0.4
	0.7nm,1.1s,baz=10.0,slow=9.3,SNR=2.4						
ILAR	**Eielson Array**	**65.62**	**26**	P	P	01 25 15.6	+0.4
	0.3nm,0.5s,baz=257,slow=5.5,SNR=6.1						
NVAR	**Mina Array Bea**	**84.98**	**51**	P	P	01 27 06.9	-0.2
	0.4nm,0.4s,baz=290,slow=5.6,SNR=5.9						

*NEIC **23** 01:15:30.6, 15°.44N×95°.43W, h22km, MD4.3(MEX), After MEX.*
MEX 23 01:15:30.6±1.0, 15°.44N×95°.43W, h22km±18km, MD4.3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.73**	**296**	*eP*	Pb	01 15 42.3	-2.4
HUIG				*i* S	Sb	01 15 51.2	-3.1
HUIG	**Huatulco**	**0.73**	**296**	*eP*	Pb	01 15 42.3	-2.4
HUIG				*i* S	Sb	01 15 51.2	-3.1
CMIG	**Matias Romero**	**1.72**	**18**	*eP*	Pn	01 15 56.4	-2.8
CMIG				*e*S	Sn	01 16 17.0	-3.4
CMIG	**Matias Romero**	**1.72**	**18**	*eP*	Pn	01 15 56.4	-2.8
CMIG				*e*S	Sn	01 16 17.0	-3.4
VHO	**Vista Hermosa**	**2.05**	**322**	*eP*	Pn	01 16 02.4	-1.3
VHO				*e*S	Sn	01 16 25.1	-3.5
VHO	**Vista Hermosa**	**2.05**	**322**	*eP*	Pn	01 16 02.4	-1.3
VHO				*e*S	Sn	01 16 25.1	-3.5
OXX	**Oaxaca**	**2.05**	**323**	*i* P	Pn	01 16 02.0	-1.7
OXX				*i* S	Sn	01 16 26.1	-2.5
OXX	**Oaxaca**	**2.05**	**323**	*i* P	Pn	01 16 02.0	-1.7
OXX				*i* S	Sn	01 16 26.1	-2.5
PCIG		**2.14**	**83**	*eP*	Pn	01 16 02.6	-2.4
PCIG				*i* S	Sn	01 16 26.5	-4.4
TGIG		**2.58**	**59**	*i* P	Pn	01 16 09.3	-1.7
TGIG				*i* S	Sn	01 16 38.0	-3.8
PNIG	**Pinotepa**	**2.77**	**290**	*eP*	Pn	01 16 11.5	-2.1
PNIG				*i* S	Sn	01 16 42.2	-4.1
PNIG	**Pinotepa**	**2.77**	**290**	*eP*	Pn	01 16 11.5	-2.1
PNIG				*i* S	Sn	01 16 42.2	-4.1
SCX	**San Cristobal**	**2.98**	**64**	*i* P	Pn	01 16 18.8	+2.3
SCX				*i* S	Sn	01 16 52.5	+1.1
SCX	**San Cristobal**	**2.98**	**64**	*i* P	Pn	01 16 18.8	+2.3
SCX				*i* S	Sn	01 16 52.5	+1.1
THIG		**3.10**	**99**	*i* P	Pn	01 16 19.4	+1.3
THIG				*i* S	Sn	01 16 51.7	-2.8
CCIG	**Comitan**	**3.27**	**75**	*eP*	Pn	01 16 19.7	-0.8
CCIG				*i* S	Sn	01 16 56.2	-2.6
CCIG	**Comitan**	**3.27**	**75**	*eP*	Pn	01 16 19.7	-0.8
CCIG				*i* S	Sn	01 16 56.2	-2.6
UTMO	**Huajuapan**	**3.29**	**316**	*eP*	Pn	01 16 17.8	-3.0
UTMO				*i* S	Sn	01 16 57.2	-2.0
TPIG	**Tehuac#an**	**3.49**	**328**	*i* P	Pn	01 16 26.0	+2.4
TPIG				*i* S	Sn	01 17 01.6	-2.6
ACX	**Acapulco**	**4.49**	**289**	*i* P	Pn	01 16 36.5	-0.7
ACX				*i* S	Sn	01 17 26.7	-2.2
ACX	**Acapulco**	**4.49**	**289**	*i* P	Pn	01 16 36.5	-0.7
ACX				*i* S	Sn	01 17 26.7	-2.2
MEIG	**Mezcala**	**4.72**	**302**	*i* P	Pn	01 16 38.0	-2.4
MEIG				*i* S	Sn	01 17 31.9	-2.5
PLIG	**Platanillo**	**4.88**	**307**	*i* P	Pn	01 16 42.3	-0.4
PLIG				*i* S	Sn	01 17 34.3	-4.2
PLIG	**Platanillo**	**4.88**	**307**	*i* P	Pn	01 16 42.3	-0.4
PLIG				*i* S	Sn	01 17 34.3	-4.2
CAIG	**El Cayaco**	**4.92**	**290**	*eP*	Pn	01 16 42.1	-1.0
CAIG				*i* S	Sn	01 17 35.6	-3.8
CAIG	**El Cayaco**	**4.92**	**290**	*eP*	Pn	01 16 42.1	-1.0
CAIG				*i* S

Error ellipse: s-maj=8.4km s-min=5.2km az=142.2
*CSEM **23** 01:49:05.2±0.2, 37°.18N×36°.05E, h20km, ML2.3, Error ellipse: s-maj=6.2km s-min=4.1km az=159.0*
ISC 23 01:49:05.5±0.5, 37°.19N±0°.05×36°.02E±0°.05, h25km±7km, n21, σ0ᵉ90/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.28	230	*e*PG	Pb	01 49 11.9	-0.4
CEYT				*e*SG	Sb	01 49 17.6	+0.6
CEYT	Ceyhan	0.28	230	*e*Pg	Pb	01 49 11.9	-0.4
CEYT				*e*Sg	Sb	01 49 17.6	+0.6
KOZT	Kozan	0.32	332	*e*PG	Pb	01 49 12.0	-0.9
KOZT				*e*SG	Sb	01 49 17.8	-0.2
ANDN	Andirin	0.46	34	*i* P	Pb	01 49 15.6	+0.4
ANDN				*i* S	Sb	01 49 22.6	+0.9
ANDN	Andirin	0.46	34	*i* P	Pb	01 49 15.6	+0.4
ANDN				*i* S	Sb	01 49 22.6	+0.9
KMRS	Kahramanmaras	0.77	66	*e*PG	Pb	01 49 19.1	-1.1
KMRS	Kahramanmaras	0.77	66	*e*Pg	Pb	01 49 19.2	-1.0
KARA	Karaisali	0.77	275	*e*PG	Pb	01 49 21.3	+0.9
KARA	Karaisali	0.77	275	*e*Pg	Pb	01 49 21.3	+1.0
GAZ	Gaziantep	0.95	91	*e*PG	Pn	01 49 22.6	-0.6
GAZ	Gaziantep	0.95	91	*e*Pg	Pn	01 49 22.6	-0.7
GULE	Gulek	1.00	276	*i* P	Pn	01 49 23.4	-0.5
GULE				*i* S	Sb	01 49 36.5	-0.4
GULE	Gulek	1.00	276	*i* P	Pn	01 49 23.4	-0.5
GULE				*i* S	Sb	01 49 36.5	-0.3
YAYL	Yayladag	1.16	176	*i* P	Pn	01 49 26.1	0.0
YAYL				*i* S	Sn	01 49 41.6	+0.5
YAYL	Yayladag	1.16	176	*i* P	Pn	01 49 26.1	0.0
YAYL				*i* S	Sn	01 49 41.6	+0.5
GZT	Gaziantep	1.24	82	*i* S	Sn	01 49 41.9	-1.3
SARI	SarD1z-Kayseri	1.58	20	*e*PN	Pn	01 49 28.2	-3.7
AKCD	Akcadag	1.87	53	*i* P	Pn	01 49 36.9	+1.1
AKCD				*i* S	Sn	01 50 01.7	+3.2
AKCD	Akcadag	1.87	53	*i* P	Pn	01 49 36.9	+1.1
AKCD				*i* S	Sn	01 50 01.7	+3.1
URFA	Urfa	2.25	83	*e*PN	Pn	01 49 41.4	+0.3
URFA	Urfa	2.25	83	*e*Pn	Pn	01 49 41.4	+0.3

IDC 23 02:24:14.9±1.7, 5°.77S×146°.10E, h0km, mb3.4/3, mb1 3.8/5, mb1mx3.7/17, mbtmp3.6/5, ML3.9/2, Error ellipse: s-maj=73.3km s-min=26.1km az=123.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	14.23	179	Pn	Pn	02 27 38.6	+0.7
	1.0nm,0.3s,baz=359,slow=16,SNR=6.1						
WRA	Warramunga Arr	18.15	218	P	Pn	02 28 29.4	+0.9
	0.2nm,0.3s,baz=41,slow=12,SNR=4.2						
ASAR	Alice Springs	21.32	212	P	P	02 29 03.2	-0.3
	0.4nm,0.4s,baz=51,slow=8.9,SNR=6.1						
FITZ	Fitzroy Crossi	23.44	237	P	P	02 29 25.5	-0.7
	1.2nm,0.7s,baz=56,slow=9.1,SNR=12						
ILAR	Eielson Array	85.62	23	P	P	02 36 55.3	+0.3
	0.4nm,0.6s,baz=254,slow=5.1,SNR=9.3						

*LDG **23** 02:31:17.7±0.1, 42°.84N×1°.41W, h2km, Md1.5/2, Ml1.6/1, Error ellipse: s-maj=3.2km s-min=2.8km az=178.0*
*CSEM **23** 02:31:17.7±0.1, 42°.84N×1°.39W, h2km, ML1.3, Error ellipse: s-maj=3.1km s-min=2.5km az=171.0*
MDD 23 02:31:17.9±0.2, 42°.85N×1°.42W, h0km, mbLg1.1/6, 1C, Error ellipse: s-maj=2.7km s-min=2.0km az=17.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZUN	Zunzarren	0.03	295	⇑Pg	Pg	02 31 18.3	-0.1
	46nm,0.1s,SNR=18						
IZUN				Lg		02 31 19.3	
	116nm,0.2s,SNR=7.9						
IZUN	Zunzarren	0.03	295	Pg	Pg	02 31 18.3	-0.2
	46nm,0.1s,SNR=18						
IZUN				Lg		02 31 19.3	
	116nm,0.2s,SNR=7.9						
IPRE	Itoiz	0.06	133	Pg	Pg	02 31 18.7	-0.4
	3.9nm,0.1s,SNR=7.3						
IPRE				Lg		02 31 19.7	
	41nm,0.2s,SNR=7.9						
IPRE	Itoiz	0.06	133	Pg	Pg	02 31 18.7	-0.4
	3.9nm,0.1s,SNR=7.3						
IPRE				Lg		02 31 19.7	
	41nm,0.2s,SNR=7.9						
EARA	Aranguren	0.14	237	Pg	Pg	02 31 20.9	+0.3
	3.1nm,0.1s,SNR=8.6						
EARA				Lg		02 31 23.7	
	15nm,0.1s,SNR=7.9						
EARA	Aranguren	0.14	237	Pg	Pg	02 31 20.9	+0.3
	3.1nm,0.1s,SNR=8.6						
EARA				Lg		02 31 23.7	
	15nm,0.1s,SNR=7.9						
SJPF	Ste Jean	0.30	28	*e*Pg	Pg	02 31 23.5	-0.2
SJPF				*e*Sg	Sg	02 31 26.9	-0.7
	8.1nm,0.3s						
SJPF	Ste Jean	0.30	28	Pg	Pg	02 31 23.5	-0.2
SJPF				Lg		02 31 26.9	
	4.1nm,0.3s						
SJPF	Ste Jean	0.30	28	*e*Pg	Pg	02 31 23.5	-0.2
SJPF				*e*Sg	Sg	02 31 26.9	-0.7
	4.1nm,0.3s						
ELIZ	Elizondo	0.33	346	Pg	Pg	02 31 24.7	+0.6
	2.9nm,0.3s,SNR=7.9						
ELIZ				Lg		02 31 28.9	
	1.7nm,0.2s,SNR=7.9						
ELIZ	Elizondo	0.33	346	Pg	Pg	02 31 24.7	+0.5
	2.9nm,0.3s,SNR=7.9						
ELIZ				Lg		02 31 28.9	
	1.7nm,0.2s,SNR=7.9						
EALK	Alkurruntz	0.38	350	Pg	Pg	02 31 25.3	+0.1
	SNR=7.9						
EALK				Lg		02 31 30.6	
	2.4nm,0.2s,SNR=7.9						
EALK	Alkurruntz	0.38	350	Pg	Pg	02 31 25.3	+0.2
	SNR=7.9						
EALK				Lg		02 31 30.6	
	2.4nm,0.2s,SNR=7.9						
ETSF	Etsaut	0.64	85	*e*Pg	Pg	02 31 30.2	+0.1
ETSF				*e*Sg	Sg	02 31 39.1	+0.8
	1.5nm,0.4s						
ETSF	Etsaut	0.64	85	Pg	Pg	02 31 30.2	+0.1
ETSF				Lg		02 31 39.1	
	0.8nm,0.4s						
ETSF	Etsaut	0.64	85	*e*Sg	Sg	02 31 39.1	+0.8
	0.8nm,0.4s						
ETSF	Etsaut	0.64	85	*e*Pg	Pg	02 31 30.2	+0.1
EBIE	Bielsa	1.16	98	Pg	Pg	02 31 41.7	+1.5
	1.0nm,0.2s,SNR=7.9						
EBIE				Lg		02 32 00.2	
	0.4nm,0.2s,SNR=7.9						
EBIE	Bielsa	1.16	98	Pg	Pg	02 31 42.5	+2.3
	1.0nm,0.2s,SNR=7.9						
EBIE				Lg		02 31 58.4	
	0.4nm,0.2s,SNR=7.9						
EPF	Esparros	1.30	81	*e*Pg	Pg	02 31 42.1	-0.8
EPF				*e*Sg	Sg	02 31 59.2	-0.6
	1.2nm,0.3s						
EPF	Esparros	1.30	81	Pg	Pg	02 31 42.1	-0.8
EPF				Lg		02 31 59.2	
	0.6nm,0.3s						
EPF	Esparros	1.30	81	*e*Pg	Pg	02 31 42.1	-0.8
EPF				*e*Sg	Sg	02 31 59.2	-0.6
	0.6nm,0.3s						

GUC 23 03:15:46.5±0.6, 24°.24S×69°.04W, h116km±7km, ML3.6, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	Antofagasta	1.37	294	*e*P	Pn	03 16 12.5	+0.3
ANCH				*i* S	Sn	03 16 32.4	+0.7
ANCH				AML	AML	03 16 37.1	
	comp=E,931nm,0.4s						
SPCH	San Pedro de A	1.53	30	*e*P	Pn	03 16 15.0	+0.9
SPCH				*e*S	Sn	03 16 37.3	+2.2
SPCH				AML	AML	03 16 39.3	
	comp=N,3μm,0.5s						
MECH	Mejillones	1.72	311	*e*P	Pn	03 16 17.1	+0.8
MECH				AML	AML	03 16 51.4	
	comp=N,448nm,0.5s						
MACH	Maria Elena	2.14	342	*e*P	Pn	03 16 22.9	+1.4
MACH				*e*S	Sn	03 16 50.4	+2.0
TOCH	Tocopilla	2.39	333	*e*P	Pn	03 16 25.8	+1.0
TOCH				*e*S	Sn	03 16 56.7	+2.6
TOCH				AML	AML	03 17 10.7	
	comp=E,255nm,0.3s						
HMBC	Humberston	4.02	349	*e*P	Pn	03 16 45.8	-0.6

*DDA **23** 03:41:19.4, 40°.73N×29°.34E, h18km±2km, Md2.8*
*ISCJB **23** 03:41:20.4±0.4, 40°.72N±0°.03×29°.33E±0°.03, h12km±4km, Error ellipse: s-maj=4.9km s-min=4.0km az=29.5*
*ISK **23** 03:41:20.4, 40°.72N×29°.35E, h7km, MD2.7*
*CSEM **23** 03:41:20.6±0.1, 40°.71N×29°.34E, h10km, MD2.8, Error ellipse: s-maj=3.0km s-min=2.6km az=39.0*
ISC 23 03:41:20.7±0.4, 40°.72N±0°.03×29°.33E±0°.03, h12km±4km, n46, σ0ᵉ73/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUY	Buyukada	0.21	310	*i* P	Pg	03 41 25.6	+0.3
BUY				*i* S	Sg	03 41 28.4	+0.1
BUY	Buyukada	0.21	310	*i* P	Pg	03 41 25.6	+0.3
BUY				*i* S	Sg	03 41 28.4	0.0
HRT	Hereke	0.28	68	PG	Pg	03 41 26.2	-0.2
HRT				*e*SG	Sg	03 41 30.2	0.0
HRT	Hereke	0.28	68	*i* Pg	Pg	03 41 26.2	-0.2
HRT				*e*Sg	Sg	03 41 30.2	0.0
GEMT	Gemlik	0.30	201	PG	Pg	03 41 27.0	+0.1
GEMT				*e*SG	Sg	03 41 31.2	+0.3
GEMT	Gemlik	0.30	201	*i* Pg	Pg	03 41 27.0	+0.2
GEMT				*e*Sg	Sg	03 41 31.2	+0.2
ARMT	Armutlu	0.39	247	*e*PG	Pg	03 41 28.7	+0.3
ARMT	Armutlu	0.39	247	*e*Pg	Pg	03 41 28.7	+0.3
ISK	Istanbul-Kandi	0.41	329	*e*PG	Pg	03 41 28.4	-0.4
ISK	Istanbul-Kandi	0.41	329	*e*Pg	Pg	03 41 28.4	-0.4
ADVT	Abdulvahap	0.42	132	*e*PG	Pg	03 41 28.8	-0.2
ADVT	Abdulvahap	0.42	132	*e*Pg	Pg	03 41 28.8	-0.2
MDNY	Mudanya-Bursa	0.49	225	*e*PG	Pg	03 41 30.7	+0.4
MDNY	Mudanya-Bursa	0.49	225	*e*Pg	Pg	03 41 30.7	+0.4
SILT	Sile	0.49	28	*e*PG	Pg	03 41 30.4	-0.1
SILT	Sile	0.49	28	*e*Pg	Pg	03 41 30.4	0.0
KLYT	Kilyos	0.58	338	*e*PG	Pg	03 41 32.4	+0.4
KLYT	Kilyos	0.58	338	*e*Pg	Pg	03 41 32.4	+0.4
BGKT	Bogazkoy	0.63	318	*e*PG	Pg	03 41 33.1	+0.2
BGKT	Bogazkoy	0.63	318	*e*Pg	Pg	03 41 33.1	+0.2
ELBA	Catalca	0.81	302	*i* P	Pg	03 41 35.1	-1.2
ELBA				*i* S	Sg	03 41 45.9	-1.0
ELBA	Catalca	0.81	302	*i* P	Pg	03 41 35.1	-1.2
ELBA				*i* S	Sg	03 41 45.9	-1.0
CTKS	Kestanelik-??a	0.81	310	*e*PG	Pg	03 41 36.5	+0.1
CTKS	Kestanelik-??a	0.81	310	*e*Pg	Pg	03 41 36.5	+0.1
GPA	Golpazari	0.86	120	*e*PG	Pg	03 41 37.7	+0.4
GPA	Golpazari	0.86	120	*e*Pg	Pg	03 41 37.7	+0.4
KCTX	Karacabey (Bur	0.87	239	*e*PG	Pg	03 41 38.1	+0.6
KCTX	Karacabey (Bur	0.87	239	*e*Pg	Pg	03 41 38.1	+0.6
GULT	Gulveren	0.94	107	*e*PG	Pg	03 41 38.6	-0.4
GULT	Gulveren	0.94	107	*e*Pg	Pg	03 41 38.6	-0.3
SLVT	Silivri	0.99	301	*e*PG	Pg	03 41 40.0	+0.2
SLVT	Silivri	0.99	301	*e*Pg	Pg	03 41 40.0	+0.2
BORA	Eskisehir	1.20	134	*i* P	Pn	03 41 43.4	+0.1
BORA				*i* S	Sb	03 41 58.6	-0.2
BORA	Eskisehir	1.20	134	*i* P	Pn	03 41 43.4	+0.1
BORA				*i* S	Sb	03 41 58.6	-0.2
DURS	Dursunbey	1.29	211	*i* P	Pn	03 41 44.2	-0.4
DURS				*i* S	Sb	03 41 59.0	-2.5
DURS	Dursunbey	1.29	211	*i* P	Pn	03 41 44.2	-0.4
DURS				*i* S	Sb	03 41 59.0	-2.5
GONE	Gonen-Balikesi	1.43	243	*e*PN	Pn	03 41 47.3	+0.9
GONE	Gonen-Balikesi	1.43	243	*e*Pn	Pn	03 41 47.3	+0.9
MDU	Mudurnu	1.46	99	*e*PN	Pn	03 41 47.8	+1.0
MDU	Mudurnu	1.46	99	*e*Pn	Pn	03 41 47.8	+1.0
GDZ	Gediz	1.63	176	*i* P	Pn	03 41 48.2	-1.0
GDZ				*i* S	Sn	03 42 08.7	-1.5
GDZ	Gediz	1.63	176	*i* P	Pn	03 41 48.2	-1.0
GDZ				*i* S	Sn	03 42 08.7	-1.4
BALY	Balya	1.63	234	*i* P	Pn	03 41 50.6	+1.3
BALY				*i* S	Sn	03 42 10.5	+0.3
BALY	Balya	1.63	234	*i* P	Pn	03 41 50.6	+1.3
BALY				*i* S	Sn	03 42 10.5	+0.3
DEMI	Demirci	1.74	196	*i* P	Pn	03 41 50.5	-0.2
DEMI				*i* S	Sn	03 42 14.3	+1.5
DEMI	Demirci	1.74	196	*i* P	Pn	03 41 50.5	-0.2
DEMI				*i* S	Sn	03 42 14.3	+1.5

CASC 23 03:45:21.9±2.4, 11°.99N×87°.14W, h31km±10km, MD4.0, ML2.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.56	70	*e*P	Pb	03 45 33.0	-0.5
TEL3	Telica 3	0.65	26	*e*P	Pb	03 45 34.8	+0.1
CNGN	Cerro Negro	0.66	40	*e*P	Pb	03 45 35.0	-0.1
CRIN	San Cristobal	0.71	7	*e*P	Pn	03 45 36.0	+0.2
MOMN	Momotombo	0.72	54	*e*P	Pn	03 45 35.8	-0.1
CSAN		0.72	75	*e*P	Pn	03 45 35.4	-0.6
XAVN	Gruta Xavier	0.81	79	*e*P	Pn	03 45 36.0	-1.1
CRUN	El Crucero	0.82	90	*e*P	Pn	03 45 37.7	+0.4
TICN	Ticuantepe	0.89	87	*e*P	Pn	03 45 39.2	+1.0
WILN	Americas 2	0.94	80	*e*P	Pn	03 45 39.5	+0.5
HUEN		1.00	70	*e*P	Pn	03 45 39.4	-0.4
SSN	San Juan del S	1.43	118	*e*P	Pn	03 45 44.1	-1.7
CNCH	Conchagua	1.45	332	*e*P	Pn	03 45 45.6	-0.4
BOAB	BOACO BROADBAN	.51	72	*e*P	Pn	03 45 46.0	-0.8
CONN	Concepcion	1.54	106	*e*P	Pn	03 45 45.5	-1.8
CAHU	Cacacuatique	2.06	329	*e*P	Pn	03 45 54.3	0.0
JCR	Jicaral	2.91	137	*e*P	Pn	03 46 08.3	+2.2
PRS1	Puriscal	3.42	125	*e*P	Pn	03 46 14.5	+1.5
URSC	Urasca	3.93	123	*e*P	Pn	03 46 21.8	+1.6

*ISCJB **23** 03:48:19.8±0.4, 15°.72N±0°.04×93°.17W±0°.04, h103km±3km, mb4.3/40, Error ellipse: s-maj=7.4km s-min=4.4km az=40.3*
*MEX **23** 03:48:19.0±0.9, 15°.54N×93°.50W, h89km±7km, MD4.4*
*IDC **23** 03:48:19.1±0.7, 15°.63N×93°.24W, h99km±6km, mb3.8/14, mb1 4.1/19, mb1mx3.9/30, mbtmp3.9/19, MS3.4/6, Ms1 3.4/6, ms1mx2.8/33, Error ellipse: s-maj=14.7km s-min=7.8km az=37.0*
*NEIC **23** 03:48:19.0, 15°.54N×93°.50W, h89km, mb4.4/40, MD4.4(MEX), After MEX.*
*CASC **23** 03:48:21.5±1.1, 15°.67N×93°.19W, h90km±57km, MD4.3, mb4.4(NEIC)*
ISC 23 03:48:19.7±0.3, 15°.64N±0°.04×93°.35W±0°.03, h83km±3km, h97km±1.9km: pP-P, n299, σ1ᵉ10/316, mb4.3/40, 91C-92D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.14	63	*e*P	Pn	03 48 31.0	-0.6
PCIG				*i* S	Sn	03 48 40.7	+0.3
TGIG		1.15	11	*i* P	Pn	03 48 41.0	+0.3
TGIG				*i* S	Sn	03 48 57.1	+0.6
THIG		1.27	125	*e*P	Pn	03 48 41.4	-0.8
THIG				*e*S	Sn	03 48 59.4	+0.1
CCIG	Comitan	1.33	61	*e*P	Pn	03 48 43.6	+0.7
CCIG				*i* S	Sn	03 49 03.7	+3.2
CCIG	Comitan	1.33	61	*e*P	Pn	03 48 43.6	+0.7
CCIG				*i* S	Sn	03 49 03.7	+3.2
CMIG	Matias Romero	2.06	315	P	Pn	03 48 52.1	-0.3
	57nm,0.3s,baz=132,slow=11,SNR=482						
CMIG				S	Sn	03 49 14.1	-3.4
	218nm,0.3s,baz=134,slow=14,SNR=11						
CMIG	Matias Romero	2.06	315	*e*P	Pn	03 48 51.5	-0.9
CMIG				*i* S	Sn	03 49 14.3	-3.2
CMIG	Matias Romero	2.06	315	*e*P	Pn	03 48 51.5	-0.9
CMIG				*i* S	Sn	03 49 14.3	-3.2
JAT	Jato	2.11	128	*e*P	Pn	03 48 53.6	+0.5
TP2	Tecpan 2	2.40	110	*e*P	Pn	03 48 58.2	+1.2
TP2				*e*S	Sn	03 49 26.9	+1.2
FG6		2.61	114	*e*P	Pn	03 49 01.7	+1.9
HUIG	Huatulco	2.66	273	*e*P	Pn	03 48 56.7	-3.8
HUIG				*i* S	Sn	03 49 26.0	-5.8
HUIG	Huatulco	2.66	273	*e*P	Pn	03 48 56.7	-3.8
HUIG				*i* S	Sn	03 49 26.0	-5.8
FUG	Fuego 3	2.70	116	*e*P	Pn	03 49 02.6	+1.6
APG	El Apazote	2.85	102	P	Pn	03 49 02.6	-0.5
	28nm,0.3s,baz=308,slow=11,SNR=726						
APG				S	Sn	03 49 35.5	-1.0
	83nm,0.3s,baz=46,slow=17,SNR=12						
APG				LR	LR	03 50 02.2	
	comp=Z,247nm,18.0s,baz=276,slow=38						
NBG	Las Nubes	3.08	109	*e*P	Pn	03 49 07.4	+1.3
VHO	Vista Hermosa	3.55	294	*i* P	Pn	03 49 10.8	-1.7
VHO				*i* S	Sn	03 49 50.2	-3.2
VHO	Vista Hermosa	3.55	294	*i* P	Pn	03 49 10.8	-1.7
VHO				*i* S	Sn	03 49 50.2	-3.2
MRL	Marmol	3.57	99	*e*P	Pn	03 49 13.0	+0.2
SCIG	Sabancuy	3.90	32	*e*P	Pn	03 49 17.1	-0.1
SCIG				*i* S	Sn	03 50 03.2	+1.3
PNIG	Pinotepa	4.66	280	*i* P	Pn	03 49 24.9	-2.7
PNIG				*i* S	Sn	03 50 14.3	-6.1
PNIG	Pinotepa	4.66	280	*i* P	Pn	03 49 24.9	-2.7
PNIG				*i* S	Sn	03 50 14.3	-6.1
TPIG	Tehuac#an	4.73	306	*e*P	Pn	03 49 27.2	-1.4
TPIG				*i* S	Sn	03 50 19.0	-3.2
UTMO	Huajuapan	4.79	298	*e*P	Pn	03 49 27.9	-1.5
UTMO				*i* S	Sn	03 50 19.6	-4.1
TGUH	Tegucigalpa,Un	6.08	104	*e*Pn	Pn	03 49 47.3	+0.3
TEIG	Tepich	6.64	46	P	Pn	03 49 53.3	-1.3
	50nm,0.3s,baz=246,slow=6.8,SNR=152						
TEIG				S	Sn	03 51 06.4	-2.5
	69nm,0.3s,baz=289,slow=24,SNR=16						
TEIG				LR	LR	03 53 04.2	
	comp=Z,162nm,20.9s,baz=327,slow=43						
TEIG	Tepich	6.64	46	*e*Pn	Pn	03 49 53.0	-1.7
	332nm,0.6s						
TEIG				*e*S	Sn	03 51 07.1	-1.7
JTS	JuntasAbangare	9.76	122	P	Pn	03 50 35.7	-1.5
	1.1nm,0.3s,baz=312,slow=15,SNR=7.4						
JTS	JuntasAbangare	9.76	122	*e*Pn	Pn	03 50 37.2	0.0
KVTX	Kingsville	12.57	341	*e*Pn	Pn	03 51 18.3	+2.9
HKT	Hockley	14.42	351	*e*Pn	Pn	03 51 38.0	-1.7
	71nm,1.8s						
HKT				*e*		03 51 50.4	
JCT	Junction City	15.91	339	*e*P	Pn	03 52 00.9	+2.3
	15nm,0.8s						
628A	Black Gap, Mar	16.34	329	⇓P	Pn	03 52 05.8	+1.8
	baz=16,SNR=15						
BRAL	Brewton	16.35	20	*e*P	Pn	03 52 06.2	+2.1
	34nm,0.6s						
627A	Terlingua Ranc	16.57	328	⇑P	Pn	03 52 08.2	+1.4
	baz=17,SNR=25						
TXAR	Lajitas Array	16.62	327	P	Pn	03 52 07.8	+0.3
	0.3nm,0.3s,baz=145,slow=13,SNR=32						
TXAR				LR	LR	03 59 10.0	
	comp=Z,26nm,19.7s,baz=185,slow=39						
VBMS	Vicksburg	16.70	8	*e*P	Pn	03 52 09.0	+0.5
	53nm,1.1s						
528A	Cox Ranch, San	16.85	331	⇓P	Pn	03 52 11.4	+1.0
	baz=17,SNR=12						
626A	Big Bend Ranch	17.04	326	⇑P	Pn	03 52 14.5	+1.8
	baz=17,SNR=32						
527A	Woodward Ranch	17.24	329	⇓P	Pn	03 52 17.1	+2.0
	baz=17,SNR=30						
428A	Kincaid Ranch,	17.28	332	⇓P	Pn	03 52 17.4	+1.8
	baz=17,SNR=8.5						
526A	Mary Lane Ranc	17.42	327	⇓P	Pn	03 52 18.9	+1.7
	baz=18,SNR=23						
427A	Hayter Ranch,	17.72	330	⇑P	Pn	03 52 22.2	+1.3
	baz=18,SNR=12						
426A	McDonald Obser	17.88	329	⇓P	Pn	03 52 24.0	+1.2
	baz=18,SNR=13						
GTBY	Guantanamo Bay	17.88	74	*e*Pn	Pn	03 52 21.3	-1.7
328A	Wristen Ranch,	17.89	333	⇑P	Pn	03 52 23.4	+0.4
	baz=18,SNR=18						
LRAL	Lakeview Retre	18.25	17	*e*Pn	Pn	03 52 26.1	-1.3
	11nm,0.8s						
LRAL				*e*S	S	03 55 36.2	-15
326A	Caldwell Ranch	18.38	330	⇑P	Pn	03 52 28.5	-0.4
	baz=18,SNR=21						
425A	Indio Mountain	18.46	327	⇑P	Pn	03 52 29.4	-0.5
	baz=18,SNR=15						
227A	Bennet, Jal	18.64	333	⇓P	Pn	03 52 32.5	+0.4
	baz=19,SNR=8.2						
MIAR	Mount Ida	18.83	359	*e*P	Pn	03 52 31.4	-2.8
	28nm,0.9s						
MIAR				*e*S	S	03 55 46.5	-16
UALR	University of	19.07	3	*e*P	Pn	03 52 34.6	-2.6
	9.7nm,0.6s						
CLNB	Carlsbad	19.12	332	*e*P	Pn	03 52 36.0	-1.7
OXF	Oxford	19.12	10	*e*P	Pn	03 52 35.1	-2.6
	67nm,1.2s						
OXF				*e*S	S	03 55 54.1	-14
324A	Moseley Ranch,	19.24	327	⇓P	Pn	03 52 36.8	-2.4
	baz=19,SNR=9.0						
127A	Arkansas Junct	19.24	334	⇓P	Pn	03 52 37.8	-1.4
	baz=19,SNR=9.6						
GDL2	Guadalupe Moun	19.29	331	*e*P	Pn	03 52 39.8	0.0
MNTX	Cornudas Mount	19.39	328	⇑P	Pn	03 52 39.4	-1.5
	baz=19,SNR=8.8						
MNTX	Cornudas Mount	19.39	328	*e*P	Pn	03 52 39.0	-1.9
	2.0nm,0.6s						
225A	Deer Hill, Car	19.44	330	⇑P	Pn	03 52 40.6	-0.9
	baz=20,SNR=8.0						
126A	Clayton Basin,	19.51	332	⇑P	Pn	03 52 40.7	-1.6
	baz=20,SNR=17						
WMOK	Wichita Mounta	19.63	347	*e*P	Pn	03 52 39.6	-4.1
	15nm,1.1s						
WMOK				*e*S	S	03 56 11.6	-7.1
224A	Cornudas Mount	19.76	328	⇑P	Pn	03 52 43.5	-1.7
	baz=20,SNR=18						
CPRX	Cap Rock	19.77	333	*e*P	Pn	03 52 43.7	-1.6
	36nm,0.8s						
125A	Gardner Draw,	19.81	331	⇑P	Pn	03 52 44.0	-1.8
	baz=20,SNR=31						
GOGA	Godfrey	19.82	25	*e*P	Pn	03

120A	U Bar Ranch, L	21.82	323	⇓P	P	03 53 07.6 +2.5
	baz=22,SNR=9.7					
Z21A	St. Cloud Mine	21.85	326	⇓P	P	03 53 07.8 +2.3
	baz=22,SNR=6.1					
318A	Bisbee	21.86	319	⇑P	P	03 53 07.6 +1.9
	baz=22					
W25A	X Bar L Ranch,	21.89	335	⇑P	P	03 53 06.1 +0.2
	baz=22,SNR=8.9					
Y22A	Socorro	21.97	328	⇑P	P	03 53 07.9 +1.2
	baz=22					
BNM	Barren Site	21.98	329	eP	P	03 53 08.3 +1.6
	7.6nm,0.9s,mb4.0					
LPM	Los Pinos Moun	22.11	330	eP	P	03 53 09.4 +1.2
V26A	Tequesquite Ra	22.14	337	P	P	03 53 08.1 -0.4
	baz=22,SNR=20					
W24A	Lazy 6 Ranch,	22.29	333	⇑P	P	03 53 10.4 +0.4
	baz=22,SNR=12					
LAZ	Ladron	22.43	329	eP	P	03 53 12.6 +1.0
	5.6nm,1.0s,mb3.9					
LAZ				e		03 53 47.0
V25A	Rancho No Teng	22.49	335	⇑P	P	03 53 12.4 +0.2
	baz=23,SNR=12					
ANMO	Albuquerque	22.54	331	P	P	03 53 12.4 -0.4
	2.9nm,0.6s,mb3.8,baz=144,slow=12,SNR=20					
ANMO	Albuquerque	22.54	331	eP	P	03 53 12.7 -0.1
	4.1nm,0.8s,mb3.8					
W23A	Werner Place,	22.57	332	⇑P	P	03 53 13.0 -0.1
	baz=23,SNR=6.7					
U26A	Atchley Ranch,	22.65	338	⇑P	P	03 53 13.8 -0.1
	baz=23,SNR=17					
V24A	Rampart Ranch,	22.67	334	⇓P	P	03 53 14.2 +0.1
	baz=23,SNR=11					
U25A	Circle Dot Ran	22.90	337	⇑P	P	03 53 16.4 -0.1
	baz=23,SNR=9.6					
TUC	Tucson	22.95	319	eP	P	03 53 17.1 0.0
	1.6nm,0.7s,mb3.5					
TUC				e		03 53 35.6
Y19A	Nutrioso	23.20	325	⇑P	P	03 53 20.5 +1.1
	baz=23,SNR=6.7					
U24A	Moreno Valley	23.25	335	⇑P	P	03 53 21.1 +1.3
	baz=23,SNR=9.3					
WCI	Wyandotte Cave	23.34	14	eP	P	03 53 15.9 -4.7
	35nm,0.8s,mb4.7					
WCI				e		03 53 38.9
WCI				e		03 53 50.6
OLIL	Olney	23.46	10	eP	P	03 53 18.5 -3.2
	67nm,0.8s,mb5.0					
OLIL				e		03 53 40.5
V22A	San Miguel Ran	23.54	332	⇓P	P	03 53 23.1 +0.7
	baz=24					
KSU1	Kansas State U	23.55	354	eP	P	03 53 18.3 -4.2
	15nm,0.8s,mb4.4					
T25A	Trinidad	23.56	337	⇑P	P	03 53 23.5 +1.0
	baz=24					
U23A	El Rito	23.57	333	⇓P	P	03 53 23.9 +1.2
	baz=24,SNR=14					
W20A	Ramah	23.69	328	⇓P	P	03 53 24.7 +0.9
	baz=24					
T24A	Torres, Weston	23.74	336	⇓P	P	03 53 25.5 +1.2
	baz=24,SNR=25					
U22A	Llaves	23.90	332	⇓P	P	03 53 26.2 +0.4
	baz=24					
X18A	Snowflake	24.01	325	⇓P	P	03 53 27.7 +0.9
	baz=24					
S25A	Robets Cordova	24.03	338	⇓P	P	03 53 27.7 +0.8
	baz=24					
T23A	Casias Ranch,	24.10	335	⇑P	P	03 53 28.5 +0.9
	baz=24,SNR=6.7					
V20A	Brimhall	24.20	329	⇓P	P	03 53 29.0 +0.6
	baz=24					
S24A	Houchin Ranch,	24.30	337	⇑P	P	03 53 30.4 +1.0
	baz=24					
U21A	Nageezi	24.31	331	⇑P	P	03 53 30.3 +0.9
	baz=24					
R25A	Fountain Ranch	24.41	339	⇑P	P	03 53 31.4 +1.1
	baz=24,SNR=9.0					
T22A	Edith	24.45	333	⇓P	P	03 53 32.3 +1.6
	baz=24,SNR=5.7					
SDCO	Great Sand Dun	24.50	336	⇑P	P	03 53 31.9 +0.8
	baz=25,SNR=9.6					
SDCO	Great Sand Dun	24.50	336	eP	P	03 53 31.4 +0.2
	7.3nm,1.2s,mb4.0					
S23A	Nye Farm, Mont	24.66	335	⇑P	P	03 53 33.9 +1.2
	baz=25					
T21A	Navajo Lake	24.72	332	⇓P	P	03 53 34.5 +1.4
	baz=25					
R24A	Sanders Place,	24.78	337	⇑P	P	03 53 34.5 +0.8
	baz=25,SNR=8.4					
S22A	4UR Ranch, Cre	25.04	334	⇓P	P	03 53 36.8 +0.7
	baz=25,SNR=7.0					
HDIL	Hopedale	25.07	7	eP	P	03 53 33.1 -3.3
	14nm,0.6s,mb4.6					
V17A	Tonalea, Kykot	25.29	325	⇑P	P	03 53 39.2 +0.9
	baz=25					
S21A	Coal Bank Pass	25.39	333	⇑P	P	03 53 39.9 +0.7
	baz=26					
R22A	Saguache, Gunn	25.42	335	⇑P	P	03 53 40.6 +1.1
	baz=26					
P25A	Willow Gulch B	25.60	340	⇓P	P	03 53 44.1 +3.0
	baz=26					
S20A	Disappointment	25.78	332	⇓P	P	03 53 44.0 +1.2
	baz=26					
Q22A	Crested Butte,	26.02	335	⇓P	P	03 53 45.7 +0.7
	baz=26					
P23A	Jefferson	26.05	338	⇓P	P	03 53 46.2 +1.0
	baz=26					
S19A	Harvey Farm, M	26.07	331	⇑P	P	03 53 46.2 +0.8
	baz=26					
PV01	Paradox Valley	26.12	332	eP	P	03 53 47.2 +1.3
	449nm,1.0s					
SCIA	State Center	26.17	0	eP	P	03 53 43.7 -2.6
	16nm,0.7s,mb4.5					
V15A	Kaibab Nationa	26.20	324	⇑P	P	03 53 47.6 +1.0
	baz=26					
SMCO	Snowmass	26.32	336	eP	P	03 53 47.3 -0.3
	5.8nm,0.9s,mb4.0					
PV04	Paradox Valley	26.49	332	eP	P	03 53 49.8 +0.6
O22A	Kremmling	27.01	337	⇓P	P	03 53 53.7 -0.1
	baz=27					
Q19A	Hogan Spring (	27.11	332	⇑P	P	03 53 55.1 +0.4
	baz=27					
JFWS	Jewell Farm	27.31	5	eP	P	03 53 53.7 -2.8
	18nm,0.8s,mb4.6					
N22A	Wattenberg Ran	27.53	338	⇓P	P	03 53 58.7 +0.1
	baz=28					
N21A	Black Mountain	27.89	337	⇑P	P	03 54 02.5 +0.8
	baz=28,SNR=5.1					
ECSD	EROS Data Cent	28.14	355	eP	P	03 54 01.0 -2.9
	7.8nm,0.6s,mb4.4					
N20A	Spence Gulch,	28.25	336	⇑P	P	03 54 04.8 0.0
	baz=28,SNR=9.5					
M21A	Separation Pea	28.57	338	⇑P	P	03 54 08.8 +1.1
	baz=29					
L21A	Rawlins	28.88	338	⇑P	P	03 54 10.3 -0.2
	baz=29,SNR=6.1					
N18A	Larsen Ranch,	28.94	334	⇑P	P	03 54 11.9 +0.8
	baz=29,SNR=6.1					
RSSD	Black Hills	29.80	344	eP	P	03 54 17.9 -0.7
	3.1nm,0.8s,mb4.0					
J22A	Midwest	29.86	341	⇓P	P	03 54 18.8 -0.3
	baz=30					
L18A	Fontenelle, Gr	29.88	335	⇑P	P	03 54 19.4 0.0
	baz=30					
J21A	Lysite	30.12	339	⇑P	P	03 54 21.7 +0.3
	baz=30,SNR=8.0					
K19A	Absolon Red Bu	30.17	337	⇓P	P	03 54 21.4 -0.5
	baz=30					
PDAR	Pinedale Array	30.40	336	P	P	03 54 23.4 -0.4
	1.3nm,0.9s,mb3.5,baz=132,slow=8.0,SNR=9.1					
PDAR				pP	pP	03 54 44.9 +1.8
	0.8nm,0.8s,baz=155,slow=8.2,SNR=2.9					
K18A	Toltan Ranch,	30.48	335	⇑P	P	03 54 25.3 +0.7
	baz=31,SNR=8.9					
L16A	Fish Haven	30.55	333	⇓P	P	03 54 25.2 -0.1
	baz=31,SNR=5.1					
J19A	Crowheart	30.63	337	⇓P	P	03 54 25.9 0.0
	baz=31					
K17A	Gardner Place,	30.93	334	⇓P	P	03 54 29.0 +0.4
	baz=31,SNR=6.0					
J18A	Kendall Valley	30.95	336	⇑P	P	03 54 28.9 +0.1
	baz=31,SNR=7.3					
H21A	Big Horn, Sher	31.13	341	P	P	03 54 29.8 -0.6
	baz=31,SNR=8.5					
I19A	Meeteetse	31.27	338	⇓P	P	03 54 31.9 +0.3
	baz=31,SNR=7.1					
I18A	Diamond G Ranc	31.29	337	⇑P	P	03 54 31.8 0.0
	baz=31					
H20A	Greybull	31.32	340	P	P	03 54 31.3 -0.7
	baz=31,SNR=9.6					
J17A	Brown Place, J	31.36	335	P	P	03 54 33.0 +0.7
	baz=32,SNR=14					
L14A	Malta	31.39	331	P	P	03 54 33.2 +0.5
	baz=32,SNR=9.9					
REDW	Red Top Meadow	31.41	335	eP	P	03 54 33.1 +0.3
	20nm,1.0s,mb4.8					
SNOW	Snow King Moun	31.46	335	eP	P	03 54 33.8 +0.6
	29nm,0.7s,mb5.1					
LOHW	Long Hollow	31.52	336	eP	P	03 54 33.8 +0.1
	11nm,1.1s,mb4.5					
TPAW	Teton Pass	31.56	335	eP	P	03 54 34.2 +0.1
	11nm,1.0s,mb4.5					
K15A	Arbon	31.58	332	⇑P	P	03 54 34.4 +0.1
	baz=32					
NVAR	Mina Array Bea	31.58	321	P	P	03 54 34.5 +0.1
	1.4nm,0.7s,mb3.8,baz=134,slow=9.0,SNR=12					
NVAR				pP	pP	03 54 56.2 +2.6
	5.0nm,1.0s,baz=134,slow=9.3,SNR=9.3					
NVAR	Mina Array Bea	31.58	321	P	P	03 54 34.5 +0.1
NVAR				pP	pP	03 54 56.2 +2.6
J16A	Bone	31.65	334	⇓P	P	03 54 35.5 +0.6
	baz=32					
MOOW	Moose Ponds	31.69	336	eP	P	03 54 35.3 0.0
	5.7nm,0.9s,mb4.3					
H19A	Powell	31.82	339	⇑P	P	03 54 35.6 -0.8
	baz=32					
IMW	Indian Meadow	31.89	336	eP	P	03 54 37.0 0.0
	4.5nm,0.6s,mb4.4					
G20A	Bridger	32.04	340	⇓P	P	03 54 37.0 -1.3
	baz=32					
H18A	Shoshone NF, C	32.07	338	⇑P	P	03 54 38.5 -0.1
	baz=32,SNR=22					
RLMT	Red Lodge	32.31	339	⇑P	P	03 54 40.4 -0.3
	baz=32,SNR=5.7					
RLMT	Red Lodge	32.31	339	eP	P	03 54 40.2 -0.5
	3.1nm,0.6s,mb4.2					
F20A	Billings	32.53	341	⇓P	P	03 54 42.2 -0.4
	baz=33					
G18A	Lazy EL Ranch,	32.58	339	⇓P	P	03 54 42.7 -0.3
	baz=33					
D24A	Glendive	32.68	346	⇓P	P	03 54 43.3 -0.6
	baz=33					
F19A	Roth Farm, Mol	32.84	340	⇓P	P	03 54 44.2 -1.1
	baz=33					
E21A	Keefer Ranch,	32.87	342	⇑P	P	03 54 44.6 -0.9
	baz=33					
D23A	Lindsay	32.95	345	⇑P	P	03 54 45.1 -1.1
	baz=33					
I14A	Mackay	32.97	333	⇓P	P	03 54 47.6 +1.1
	baz=33					
HLID	Hailey	33.12	331	⇓P	P	03 54 48.3 +0.5
	baz=33					
HLID	Hailey	33.12	331	eP	P	03 54 47.8 +0.1
	2.7nm,0.9s,mb4.1					
F18A	Big Timber	33.15	339	⇑P	P	03 54 47.6 -0.4
	baz=33					
E20A	Meyer Farm, Mu	33.15	341	⇑P	P	03 54 47.5 -0.5
	baz=33					
D22A	Cohagen	33.18	344	⇓P	P	03 54 47.7 -0.5
	baz=33					
H15A	Lima	33.18	334	⇑P	P	03 54 49.7 +1.5
	baz=33					
I13A	Wildhorse Cree	33.26	332	⇑P	P	03 54 50.1 +1.1
	baz=33					
D21A	La Casta Ranch	33.32	343	⇓P	P	03 54 49.4 -0.1
	baz=34					
E19A	Rath Farm, Rou	33.32	340	⇑P	P	03 54 48.9 -0.6
	baz=33					
G16A	Moss Hill, Enn	33.34	336	⇓P	P	03 54 50.7 +1.0
	baz=33					
MCMT	McKenzie Canyo	33.44	334	eP	P	03 54 51.8 +1.3
	6.2nm,0.9s,mb4.4					
F17A	Fitzpatrick Pl	33.48	338	⇓P	P	03 54 51.1 +0.2
	baz=34					
H14A	Leadore	33.48	334	⇑P	P	03 54 52.1 +1.1
	baz=34					
C23A	Lambert	33.53	346	⇑P	P	03 54 50.3 -1.0
	baz=34					
G15A	Dillon	33.56	335	⇓P	P	03 54 52.7 +1.1
	baz=34					
I12A	Atlanta	33.63	331	⇑P	P	03 54 52.3 +0.1
	baz=34					
C22A	Vida	33.65	345	⇑P	P	03 54 51.8 -0.5
	baz=34					
D20A	Manuel Ranch,	33.68	342	⇓P	P	03 54 52.1 -0.5
	baz=34					
F16A	Kennard Place,	33.74	337	⇑P	P	03 54 52.5 -0.7
	baz=34					
H13A	Challis	33.83	333	⇑P	P	03 54 54.7 +0.8
	baz=34,SNR=13					
DGMT	Dagmar	33.93	347	⇓P	P	03 54 53.4 -1.3
	baz=34					
DGMT	Dagmar	33.93	347	eP	P	03 54 53.1 -1.6
	13nm,0.8s,mb4.8					
D19A	Cripps Ranch,	33.98	341	⇑P	P	03 54 54.5 -0.7
	baz=34					
E17A	Martinsdale	34.03	338	⇓P	P	03 54 55.5 -0.1
	baz=34					
C21A	Desert Coulee	34.05	343	⇓P	P	03 54 55.0 -0.8
	baz=34					
H12A	Diamond D Ranc	34.08	332	⇓P	P	03 54 56.4 +0.2
	baz=34,SNR=11					
LRM	Limekiln Ridge	34.09	336	eP	P	03 54 56.3 +0.1
B23A	Brockton	34.10	346	⇓P	P	03 54 56.0 -0.2
	baz=34					
F15A	Butte	34.12	336	⇓P	P	03 54 56.6 +0.2
	baz=34					
B22A	Reddig Ranch S	34.19	345	⇓P	P	03 54 56.2 -0.8
	baz=34					
C20A	Veseth Ranch,	34.20	342	⇑P	P	03 54 56.7 -0.4
	baz=34					
D18A	Linhart Farms,	34.30	340	⇑P	P	03 54 57.6 -0.4
	baz=34					
A24A	Westby	34.32	348	⇓P	P	03 54 57.4 -0.7
	baz=34					
E16A	East Helena	34.39	337	⇓P	P	03 54 58.1 -0.7
	baz=34					
F14A	Wisdom	34.45	335	⇑P	P	03 54 58.4 -0.9
	baz=34					
C19A	Slack Wire Ran	34.54	341	⇓P	P	03 54 59.3 -0.6
	baz=35					
A23A	Redstone	34.54	347	⇑P	P	03 54 59.1 -0.9
	baz=35					
D17A	Six Diamond Ra	34.56	339	⇓P	P	03 54 59.6 -0.6
	baz=35					
ULM	Lac du Bonnet	34.58	357	P	P	03 54 56.5 -3.8
	1.6nm,0.5s,mb4.1,baz=176,slow=9.7,SNR=5.0					
HRY	Holter Researc	34.60	337	eP	P	03 55 00.6 +0.1
E15A	Deer Lodge	34.66	336	⇑P	P	03 55 00.7 -0.4
	baz=35					
G12A	Big Creek, Yel	34.74	332	⇓P	P	03 55 02.2 +0.4
	baz=35					
D16A	Dana Ranch, Ca	34.76	338	⇑P	P	03 55 01.4 -0.6
	baz=35					
A22A	Carney Farms,	34.82	345	⇓P	P	03 55 01.8 -0.6
	baz=35					
F13A	Darby	34.83	334	⇑P	P	03 55 02.3 -0.3
	baz=35					
B20A	Solberg Farm,	34.86	343	⇓P	P	03 55 02.1 -0.6
	baz=35					
J08A	Circle Bar Ran	34.96	327	P	P	03 55 04.5 +0.8
	baz=35,SNR=5.1					
E14A	Clinton	34.99	335	⇓P	P	03 55 03.7 -0.2
	baz=35					
C17A	Wharram Farm,	35.00	339	⇑P	P	03 55 03.7 -0.3
	baz=35					
EGMT	Eagleton	35.01	341	⇑P	P	03 55 03.8 -0.3
	baz=35,SNR=7.4					
EGMT	Eagleton	35.01	341	eP	P	03 55 03.3 -0.8
	10nm,0.7s,mb4.8					
A21A	Bergtoll Ranch	35.07	344	⇓P	P	03 55 04.0 -0.5
	baz=35					
D15A	Lincoln	35.13	337	⇑P	P	03 55 05.1 0.0
	baz=35					
B19A	Brinkman Farms	35.15	342	⇑P	P	03 55 04.8 -0.4
	baz=35					
F12A	Elk City	35.20	333	⇑P	P	03 55 05.9 +0.2
	baz=35					
A20A	Cobblestone Ra	35.23	343	⇑P	P	03 55 05.4 -0.6
	baz=35					
E13A	Victor	35.30	335	⇓P	P	03 55 06.3 -0.2
	baz=35					
CHMT	Chamberlain Mo	35.30	336	eP	P	03 55 06.4 -0.2
B18A	Beardsley Farm	35.35	341	⇓P	P	03 55 06.5 -0.4
	baz=36					
C16A	Fuhringer Ranc	35.49	338	⇓P	P	03 55 08.1 -0.1
	baz=36					
MSO	Missoula	35.51	335	⇓P	P	03 55 08.1 -0.3
	baz=36,SNR=5.5					
MSO	Missoula	35.51	335	eP	P	03 55 08.0 -0.4
	2.0nm,0.9s,mb4.0					
A19A	Klindworth Far	35.51	342	⇓P	P	03 55 07.7 -0.6
	baz=36					
D14A	Greenough	35.54	336	⇑P	P	03 55 07.9 -0.8
	baz=36					
A18A	Metzger Ranch,	35.83	341	⇓P	P	03 55 10.5 -0.6
	baz=36					
E12A	Beaver Dam Sad	35.85	333	⇓P	P	03 55 10.6 -0.7
	baz=36					
D13A	Huson	35.93	335	⇓P	P	03 55 11.7 -0.3
	baz=36					
B16A	M & M Farms, S	36.00	339	⇓P	P	03 55 11.6 -1.0
	baz=36					
A17A	Triple J Farms	36.12	341	⇓P	P	03 55 12.8 -0.8
	baz=36					
B15A	Bradely Ranch,	36.21	338	⇓P	P	03 55 13.7 -0.7
	baz=36					
F10A	Beach Ranch, E	36.25	331	⇓P	P	03 55 14.5 -0.2
	baz=36					
D12A	Red Ives Fores	36.26	334	⇓P	P	03 55 14.0 -0.8
	baz=36					
A16A	West Butte Ran	36.42	340	⇑P	P	03 55 15.3 -0.8
	baz=36					
A15A	Johnson Ranch,	36.84	339	⇑P	P	03 55 18.8 -0.9
	baz=37					
B13A	Whitefish	36.97	336	⇑P	P	03 55 20.6 -0.2
	baz=37					
A14A	Double T Ranch	37.08	338	⇑P	P	03 55 21.3 -0.4
	baz=37					
C11A	Tepee Creek (N	37.26	334	⇑P	P	03 55 23.0 -0.3
	baz=37					
LPAZ	La Paz	40.32	141	P	P	03 55 47.5 -1.7
	0.8nm,0.7s,mb3.7,baz=321,slow=8.5,SNR=5.4					
YKA	Yellowknife Ar	49.14	347	P	P	03 56 56.5 -2.2
	3.4nm,0.6s,mb4.5,baz=152,slow=7.4,SNR=8.6					
YKA	Yellowknife Ar	49.14	347	P	P	03 56 56.5 -2.2
FRB	Frobisher Bay	51.03	14	P	P	03 57 08.8 -4.2
	27nm,1.1s,mb5.2,baz=165,slow=6.9,SNR=7.4					
FRB	Frobisher Bay	51.03	14	P	P	03 57 08.8 -4.2
CPUP	Villa Florida	54.47	140	P	P	03 57 34.9 -3.9
	2.1nm,0.9s,mb4.2,baz=0.3,slow=8.6,SNR=3.9					
CPUP	Villa Florida	54.47	140	P	P	03 57 34.9 -3.9
BDFB	Brasilia	54.50	123	P	P	03 57 35.5 -3.7
	5.8nm,0.9s,mb4.6,baz=261,slow=9.2,SNR=6.2					
PLCA	Paso Flores	59.95	160	P	P	03 58 14.2 -3.0
	3.7nm,0.9s,mb4.4,baz=307,slow=6.6,SNR=5.2					
PLCA				pP	pP	03 58 39.1 +0.9
	3.3nm,1.0s,baz=18,slow=18,SNR=3.3					
ILAR	Eielson Array	60.83	337	P	P	03 58 21.6 -1.3
	1.0nm,0.5s,mb4.1,baz=128,slow=5.2,SNR=18					
ILAR				pP	pP	03 58 44.5 +0.5
	0.7nm,0.9s,baz=112,slow=4.6,SNR=3.7					
TRF	Thorofare Moun	61.61	335	eP	P	03 58 27.9 -0.3
	4.2nm,0.7s,mb4.6					
AFI	Afiamalu	82.90	253	LR	LR	04 29 29.0
	comp=Z,85nm,18.1s,baz=133,slow=30					
NOA	NORSAR Array B	83.33	28	LR	LR	04 37 05.9
	comp=Z,59nm,18.6s,baz=0.0,slow=35					
ARCES	ARCESS Array B	84.99	18	P	P	04 00 43.5 -2.0
	2.9nm,0.9s,mb4.2,baz=289,slow=3.7,SNR=7.5					
KEST	Kesra	90.94	53	P	P	04 01 12.3 -2.4
	0.3nm,0.4s,mb3.8,baz=272,slow=20,SNR=5.4					
TORD	Torodi Ar. Bea	91.26	76	LR	LR	04 41 22.5
	comp=Z,21nm,18.4s,baz=290,slow=35					
HHC	Hu-ho-hao-te	119.23	339	ePKP	PKPdf	04 06 57.1 -2.4
HHC				sPKP		04 07 34.5
HHC				PKS		04 10 32.3
HHC				SKS	SKSdf	04 13 58.4 -5.9
HHC				LR	LR	
	comp=Z,160nm,18.3s					
NJ2	Nanjing	123.42	327	ePKP	PKPdf	04 07 01.0 -6.8
LZH	Lanzhou	126.04	343	ePKP	PKPdf	04 07 11.5 -1.2
LZH				LR	LR	
	comp=N,130nm,18.0s					
LZH				LR	LR	
	comp=Z,170nm,20.3s					
WRA	Warramunga Arr	134.51	257	PKP	PKPdf	04 07 26.8 -2.4
	comp=Z,0.3nm,0.3s,baz=87,slow=2.7,SNR=3.1					
HYB	Hyderabad	146.20	14	i PKP	PKPdf	04 07 49.0 -1.3

ISCJB ***23*** *04:18:32.9±0.6, 44°.89N±0°.10×141°.8E±0°.1, h294km±7km, mb3.2/4, Error ellipse: s-maj=15.7km s-min=13.1km az=166.9*

IDC ***23*** *04:18:33.2±0.7, 44°.95N×141°.64E, h282km±13km, mb3.0/4, mb1 3.3/5, mb1mx2.9/24, mbtmp3.0/5, Error ellipse: s-maj=40.5km s-min=18.9km az=163.0*

JMA ***23*** *04:18:33.1±0.2, 45°.05N×141°.69E, h284km, M3.3*

ISC 23 04:18:33.7±0.6, 44°.87N±0°.10×141°.8E±0°.1, h289km±7km, n21, σ0°93/25, mb3.2/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSS	Shosan	0.47	176	P	Pn	04 19 10.8	-0.3
JSE	Soyaes	0.56	80	P	Pn	04 19 10.0	-1.2
ASAJ	Asahikawa	0.94	143	P	Pn	04 19 12.5	-0.2
	3.2nm,0.3s,baz=329,slow=6.6,SNR=10						
ASAJ				S	S	04 19 43.1	-0.4
	1.7nm,0.3s,baz=137,slow=28,SNR=8.1						
ASAJ	Asahikawa	0.94	143	P	Pn	04 19 12.6	-0.1
JHR	Hokuryu	1.12	183	P	Pn	04 19 14.2	+0.6
JKK2	Kamakawa 2	1.20	146	P	Pn	04 19 14.4	+0.4
JMP	Maruseppu	1.40	127	P	Pn	04 19 15.6	+0.4
JTKR	Abashiri--Toko	1.75	120	P	Pn	04 19 18.4	+0.9
JEW	Eniwo	2.04	188	P	Pn	04 19 21.0	+1.1
JAR	Ashorobuto	2.11	137	P	Pn	04 19 21.7	+1.3
JAR				eS	S	04 19 59.7	+2.1
JCH	Churui	2.51	153	P	Pn	04 19 23.7	-0.3
JCH				eS	S	04 20 02.3	-1.8
JNBK	Urakawa-nobuka	2.67	165	P	Pn	04 19 26.6	+1.1
JNBK				eS	S	04 20 06.4	-0.4
JAK	Akkeshi	2.80	131	eS	S	04 20 08.4	-0.5
JKB	Kayabe	3.03	191	P	Pn	04 19 29.2	+0.1
NEM2	Nemuro 2	3.20	117	eS	S	04 20 14.5	-1.8
JOSM	Okushiri--Mats	3.26	212	P	Pn	04 19 31.4	0.0
MJAR	Matsushiro Arr	8.75	199	P	Pn	04 20 36.3	-0.2
	0.4nm,0.3s,baz=5.5,slow=12,SNR=5.7						
SONM	Songino Array	24.50	290	P	P	04 23 26.0	-1.0
	1.0nm,0.5s,mb3.4,baz=72,slow=8.1,SNR=5.0						
MKAR	Makanchi Array	40.66	295	P	P	04 25 45.0	-1.0
	0.7nm,0.6s,mb3.0,baz=85,slow=8.3,SNR=5.8						
ILAR	Eielson Array	42.87	37	P	P	04 26 03.4	-0.2
	0.5nm,0.6s,mb2.9,baz=278,slow=8.4,SNR=11						
PDAR	Pinedale Array	72.04	47	P	P	04 29 27.5	+1.2
	0.4nm,0.5s,mb3.3,baz=304,slow=1.6,SNR=5.3						

NNC ***23*** *04:27:52.2±5.8, 39°.60N×74°.18E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=45.6km s-min=23.0km az=162.0*

NEIC ***23*** *04:27:54.3±10.0, 39°.73N×74°.31E, h10km, Error ellipse: s-maj=122.0km s-min=20.6km az=170.0*

ISC 23 04:27:47.9±1.4, 39°.24N±0°.08×74°.40E±0°.10, h10km, n19, σ1°28/29, 3C-3D, Southern Xinjiang

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

EKS2 Erkin-Say 3.45 352 P **Pn 04 28 45.3 +3.6**
SNR=9.6
EKS2 Erkin-Say 3.45 352 *e*Pn **Pn 04 28 41.5 -0.1**
EKS2 *e*S **Sn 04 29 23.7 +1.2**
TKM2 Tokmak 2 3.79 13 ⇑Pn **Pn 04 28 46.7 +0.4**
comp=E,8.4nm,0.7s
TKM2 ⇓Sn **Sn 04 29 32.8 +2.0**
comp=E,27nm,0.7s
TKM2 Tokmak 2 3.79 13 P **Pn 04 28 47.8 +1.5**
SNR=13
TKM2 Tokmak 2 3.79 13 *e*Pn **Pn 04 28 46.8 +0.6**
TKM2 *e*S **Sn 04 29 30.8 -0.1**
KK31 Karatay Array 4.85 324 ⇓Pn **Pn 04 29 01.3 +0.5**
comp=E,0.7nm,0.5s,baz=136,slow=14,SNR=12
KK31 ⇓Pg **Pg 04 29 13.0 -7.7**
comp=E,0.7nm,0.3s,baz=139,slow=15,SNR=4.6
KK31 ⇑Sn **Sn 04 29 54.3 -2.7**
comp=E,1.9nm,0.3s,baz=130,slow=22,SNR=4.1
KK31 ⇑Lg 04 30 12.2
comp=E,4.1nm,0.5s,baz=135,slow=29,SNR=3.8
KKAR Karatay Array 4.85 324 *e*Pn **Pn 04 29 01.4 +0.6**
AB31 Akbulak array 14.38 319 P **Pn 04 31 09.6 -1.8**
comp=E,0.2nm,0.5s,baz=133,slow=14,SNR=4.3

IDC ***23*** *04:34:02.2±0.8, 32°.94N×60°.28E, h0km, mb3.8/11, mb1 4.0/14, mb1mx3.8/28, mbtmp3.9/14, ML2.8/1, MS3.1/3, Ms1 3.1/3, ms1mx2.7/34, Error ellipse: s-maj=19.1km s-min=16.1km az=9.0*
ISCJB ***23*** *04:34:02.5±0.4, 32°.96N±0°.04×60°.32E±0°.04, h10km, mb3.8/13, MS3.0/3, Error ellipse: s-maj=6.1km s-min=3.9km az=150.3*
CSEM ***23*** *04:34:03.2±0.2, 32°.96N×60°.33E, h2km, ML4.2, Error ellipse: s-maj=6.8km s-min=4.5km az=147.0*
TEH ***23*** *04:34:05.9, 33°.02N×60°.18E, h5km*
THR ***23*** *04:34:06.4±0.6, 33°.04N×60°.11E, h15km, ML3.9*
NEIC ***23*** *04:34:06.1, 33°.01N×60°.15E, h6km, mb3.8/2, ML4.0(THR), MN4.2(TEH), After TEH.*
ISC 23 04:34:04.4±0.4, 32°.99N±0°.03×60°.30E±0°.04, h10km, n116, σ1.9 17/126, mb3.8/13, MS3.0/3, 5C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDAH	**Dahanechah**	**0.44**	**235**	⇑*e*Pg	**Pg**	**04 34 12.2**	**-0.8**
IDAH				*e*Sg	**Sg**	**04 34 17.7**	**-1.1**
IDAH				*e*		04 34 21.7	
	comp=Z,6μm,0.1s						
IDAH	**Dahanechah**	**0.44**	**235**	⇑*e*Pg	**Pg**	**04 34 12.2**	**-0.8**
IDAH				*e*Sg	**Sg**	**04 34 17.7**	**-1.1**
IMON	**Monand**	**0.57**	**291**	⇓*e*Pg	**Pg**	**04 34 14.2**	**-1.2**
IMON				*e*Sg	**Sg**	**04 34 21.4**	**-1.5**
IMON				*e*		04 34 22.9	
	comp=Z,38μm,0.1s						
IMON	**Monand**	**0.57**	**291**	⇓*e*Pg	**Pg**	**04 34 14.2**	**-1.2**
IMON				*e*Sg	**Sg**	**04 34 21.4**	**-1.5**
IKOO	**Kooshah**	**1.23**	**243**	⇑*e*Pg	**Pg**	**04 34 26.8**	**-1.2**
IKOO				*e*		04 34 30.7	
	comp=Z,68μm,0.1s						
IKOO	**Kooshah**	**1.23**	**243**	⇑*e*Pg	**Pg**	**04 34 26.8**	**-1.2**
TABS	**Tabas**	**2.74**	**285**	*e*Pn	**Pn**	**04 34 49.8**	**+1.3**
TABS				AML	AML	04 35 32.2	
	comp=N,469nm,0.3s						
TABS	**Tabas**	**2.74**	**285**	*e*Pn	**Pn**	**04 34 49.8**	**+1.4**
IMOG	**Moghan**	**3.21**	**346**	Pn	**Pn**	**04 34 56.5**	**+1.6**
IMOG	**Moghan**	**3.21**	**346**	Pn	**Pn**	**04 34 56.5**	**+1.6**
IMOG	**Moghan**	**3.21**	**346**	*e*Pn	**Pn**	**04 34 56.8**	**+1.9**
IMYA	**Miami**	**3.35**	**357**	Pn	**Pn**	**04 34 57.7**	**+0.9**
IMYA	**Miami**	**3.35**	**357**	*e*Pn	**Pn**	**04 34 58.1**	**+1.3**
IMYA				*e*Sg	**Sg**	**04 35 49.6**	**-2.4**
IMYA				*e*		04 35 54.3	
	comp=N,10μm,0.3s						
IMYA	**Miami**	**3.35**	**357**	*e*Pn	**Pn**	**04 34 58.1**	**+1.3**
IMYA				*e*Sg	**Sg**	**04 35 49.6**	**-2.4**
ISRO	**Mashad**	**3.38**	**349**	*e*Pn	**Pn**	**04 34 58.4**	**+1.1**
ISRO				*e*Sg	**Sg**	**04 35 49.6**	**-3.4**
ISRO				*e*		04 35 58.1	
	comp=Z,10μm,0.4s						
ISRO	**Mashad**	**3.38**	**349**	*e*Pn	**Pn**	**04 34 58.4**	**+1.1**
ZHSF	**Zahedan**	**3.39**	**173**	*e*Pn	**Pn**	**04 35 02.9**	**+5.5**
ZHSF	**Zahedan**	**3.39**	**173**	*e*Pn	**Pn**	**04 35 02.0**	**+4.6**
ZHSF	**Zahedan**	**3.39**	**173**	*e*Pn	**Pn**	**04 35 02.0**	**+4.6**
IPAY	**Payeh**	**3.62**	**343**	Pn	**Pn**	**04 35 02.0**	**+1.5**
IPAY	**Payeh**	**3.62**	**343**	*e*	**Pn**	**04 35 02.7**	**+2.2**
	comp=Z,2μm,0.2s						
IPAY				*e*Pn	**Pn**	**04 35 01.7**	**+1.2**
IAKL	**Akhelmad**	**3.82**	**341**	Pn	**Pn**	**04 35 04.5**	**+1.2**
IAKL	**Akhelmad**	**3.82**	**341**	*e*	**Pn**	**04 35 05.3**	**+2.1**
	comp=Z,9μm,0.2s						
IAKL				⇑*e*Pn	**Pn**	**04 35 04.3**	**+1.0**
IKRD	**Kardeh**	**4.05**	**339**	Pn	**Pn**	**04 35 05.3**	**-1.2**
IKRD	**Kardeh**	**4.05**	**339**	*e*Pn	**Pn**	**04 35 04.7**	**-1.8**
IKRD				*e*		04 36 15.3	
	comp=Z,5μm,0.5s						
IBAF	**Bafgh**	**4.24**	**252**	Pn	**Pn**	**04 35 09.6**	**+0.5**
IBAF	**Bafgh**	**4.24**	**252**	*e*Pn	**Pn**	**04 35 09.5**	**+0.4**
IBAF				*e*		04 36 32.1	
	comp=Z,3μm,0.5s						
IBAF	**Bafgh**	**4.24**	**252**	*e*Pn	**Pn**	**04 35 09.5**	**+0.4**
KRBR	**Kerman**	**4.25**	**226**	*e*Pn	**Pn**	**04 35 11.5**	**+2.3**
KRBR				AML	AML	04 36 28.2	
	comp=N,137nm,0.8s						
KRBR	**Kerman**	**4.25**	**226**	*e*Pn	**Pn**	**04 35 11.7**	**+2.4**
ISFR	**Sfrayin**	**4.47**	**336**	Pn	**Pn**	**04 35 12.9**	**+0.7**
ISFR	**Sfrayin**	**4.47**	**336**	*e*Pn	**Pn**	**04 35 13.1**	**+0.9**
ISFR				*e*		04 35 33.0	
	comp=Z,3μm,0.3s						
ISFR	**Sfrayin**	**4.47**	**336**	*e*Pn	**Pn**	**04 35 13.1**	**+0.9**
IEMG	**Emamgholi**	**4.62**	**344**	Pn	**Pn**	**04 35 15.6**	**+1.4**
IEMG	**Emamgholi**	**4.62**	**344**	*e*Pn	**Pn**	**04 35 15.2**	**+1.0**
IEMG				*e*		04 35 44.1	
	comp=Z,1μm,0.3s						
IEMG	**Emamgholi**	**4.62**	**344**	Pn	**Pn**	**04 35 15.6**	**+1.4**
ISHV	**Shirvan**	**5.01**	**336**	*e*Pn	**Pn**	**04 35 20.6**	**+1.0**
ISHV				*e*		04 35 38.3	
	comp=Z,2μm,0.2s						
ISHV	**Shirvan**	**5.01**	**336**	*e*Pn	**Pn**	**04 35 20.6**	**+1.0**
ICHK	**Chekchek**	**5.02**	**263**	Pn	**Pn**	**04 35 19.7**	**-0.2**
ICHK	**Chekchek**	**5.02**	**263**	*e*Pn	**Pn**	**04 35 20.0**	**+0.1**
ICHK				*e*		04 36 50.7	
	comp=Z,2μm,0.3s						
ICHK	**Chekchek**	**5.02**	**263**	*e*Pn	**Pn**	**04 35 20.0**	**+0.1**
IMEH	**Mehriz**	**5.08**	**253**	Pn	**Pn**	**04 35 20.0**	**-0.5**
IMEH	**Mehriz**	**5.08**	**253**	*e*Pn	**Pn**	**04 35 20.0**	**-0.5**
IMEH	**Mehriz**	**5.08**	**253**	*e*Pn	**Pn**	**04 35 20.0**	**-0.5**
IMEH				*e*		04 36 49.6	
	comp=Z,2μm,0.5s						
ISAD	**Sadrabad**	**5.69**	**261**	Pn	**Pn**	**04 35 29.0**	**0.0**
ISAD	**Sadrabad**	**5.69**	**261**	*e*Pn	**Pn**	**04 35 29.0**	**0.0**
ISAD				*e*		04 37 14.1	
	comp=Z,2μm,0.4s						
ISAD	**Sadrabad**	**5.69**	**261**	*e*Pn	**Pn**	**04 35 29.0**	**0.0**
MRVT	**Maraveh tapeh**	**5.79**	**325**	*e*Pn	**Pn**	**04 35 30.2**	**-0.1**
MRVT	**Maraveh tapeh**	**5.79**	**325**	*e*Pn	**Pn**	**04 35 31.9**	**+1.5**
MRVT	**Maraveh tapeh**	**5.79**	**325**	*e*Pn	**Pn**	**04 35 30.2**	**-0.2**
IANJ	**Anjilo**	**5.83**	**297**	Pn	**Pn**	**04 35 31.4**	**+0.4**
IANJ	**Anjilo**	**5.83**	**297**	*e*Pn	**Pn**	**04 35 31.0**	**0.0**
IANJ				*e*		04 37 32.2	
	comp=Z,764nm,0.4s						
IANJ	**Anjilo**	**5.83**	**297**	*e*Pn	**Pn**	**04 35 31.0**	**0.0**
IGLO	**Ghaloghah**	**6.37**	**305**	Pn	**Pn**	**04 35 37.5**	**-0.9**
IGLO	**Ghaloghah**	**6.37**	**305**	*e*Pn	**Pn**	**04 35 37.6**	**-0.8**
IGLO				*e*		04 37 43.4	
	comp=Z,1μm,0.4s						
IGLO	**Ghaloghah**	**6.37**	**305**	*e*Pn	**Pn**	**04 35 37.6**	**-0.8**
ISHM	**Shahmirzad**	**6.43**	**298**	Pn	**Pn**	**04 35 38.7**	**-0.5**
ISHM	**Shahmirzad**	**6.43**	**298**	*e*Pn	**Pn**	**04 35 39.1**	**-0.1**
ISHM				*e*		04 37 50.7	
	comp=Z,734nm,0.4s						
ISHM	**Shahmirzad**	**6.43**	**298**	*e*Pn	**Pn**	**04 35 39.1**	**-0.1**
IZEF	**Zefreh**	**6.70**	**271**	*e*Pn	**Pn**	**04 35 42.8**	**-0.1**
IZEF				*e*		04 37 42.7	
	comp=Z,215nm,0.3s						
IZEF	**Zefreh**	**6.70**	**271**	*e*Pn	**Pn**	**04 35 42.8**	**-0.1**
IFIR	**Firoozkooh**	**6.78**	**295**	Pn	**Pn**	**04 35 43.7**	**-0.2**
IFIR	**Firoozkooh**	**6.78**	**295**	*e*Pn	**Pn**	**04 35 43.7**	**-0.2**
IFIR				*e*		04 35 50.5	
	comp=Z,438nm,0.2s						
IFIR	**Firoozkooh**	**6.78**	**295**	*e*Pn	**Pn**	**04 35 43.7**	**-0.2**
IDMV	**Damavand**	**7.31**	**293**	*e*Pn	**Pn**	**04 35 51.2**	**0.0**
IDMV				*e*		04 38 42.4	
	comp=Z,461nm,0.5s						
IDMV	**Damavand**	**7.31**	**293**	*e*Pn	**Pn**	**04 35 51.2**	**0.0**
IKLH	**Kolahrood**	**7.32**	**275**	*e*Pn	**Pn**	**04 35 52.8**	**+1.4**
IKLH				*e*		04 38 24.8	
	comp=Z,565nm,0.5s						
IKLH	**Kolahrood**	**7.32**	**275**	*e*Pn	**Pn**	**04 35 52.8**	**+1.4**
DAMV	**Damavand**	**7.38**	**293**	*e*Pn	**Pn**	**04 35 53.5**	**+1.3**
DAMV	**Damavand**	**7.38**	**293**	*e*Pn	**Pn**	**04 35 53.9**	**+1.8**
DAMV	**Damavand**	**7.38**	**293**	*e*Pn	**Pn**	**04 35 53.5**	**+1.4**
CHTH	**Charan**	**8.11**	**294**	*e*Pn	**Pn**	**04 36 04.0**	**+1.7**
CHTH	**Charan**	**8.11**	**294**	*e*Pn	**Pn**	**04 36 04.0**	**+1.7**
KKAR	**Karatay Array**	**12.90**	**36**	*e*Pn	**Pn**	**04 37 06.1**	**-1.7**
	comp=Z,3.0nm,0.6s						
KKAR				PcP	PcP	04 42 34.5	-7.8
KKAR	**Karatay Array**	**12.90**	**36**	*e*Pn	**Pn**	**04 37 06.1**	**-1.7**
	comp=Z,3.0nm,0.6s						
EKS2	**Erkin-Say**	**14.36**	**44**	*e*Pn	**Pn**	**04 37 25.6**	**-2.1**
	comp=Z,3.8nm,0.6s						
GNI	**Garni**	**14.39**	**304**	Pn	**Pn**	**04 37 29.9**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=76,slow=17,SNR=2.1						
GNI	**Garni**	**14.39**	**304**	Pn	**Pn**	**04 37 30.0**	**+1.9**
AAK	**Ala-Archa**	**14.77**	**45**	Pn	**Pn**	**04 37 30.9**	**-2.4**
	comp=Z,0.0nm,0.3s,baz=233,slow=9.7,SNR=6.3						
AAK	**Ala-Archa**	**14.77**	**45**	*e*Pn	**Pn**	**04 37 33.5**	**+0.2**
AAK	**Ala-Archa**	**14.77**	**45**	*e*Pn	**Pn**	**04 37 33.5**	**+0.3**
TKM2	**Tokmak 2**	**15.60**	**46**	*e*Pn	**Pn**	**04 37 45.2**	**+0.9**
TKM2	**Tokmak 2**	**15.60**	**46**	*e*Pn	**Pn**	**04 37 45.2**	**+0.9**
ABKAR	**Akbulak array**	**16.25**	**359**	*e*P	**Pn**	**04 37 50.1**	**-2.6**
AKTK	**Aktyubinsk**	**17.51**	**355**	P	**Pn**	**04 38 08.3**	**-0.3**
AKTK				S	**Sn**	**04 41 13.9**	**-10**
AKTK	**Aktyubinsk**	**17.51**	**355**	P	**Pn**	**04 38 08.3**	**-0.3**
AKTO	**Aktyubinsk**	**17.51**	**355**	P	**Pn**	**04 38 08.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=164,slow=18,SNR=9.3						
AKTO				S	**Sn**	**04 41 13.9**	**-10**
	comp=Z,0.1nm,0.3s,baz=64,slow=15,SNR=3.2						
MMAI	**Mount Meron Ar**	**20.87**	**277**	LR	LR	04 48 22.1	
	comp=Z,54nm,18.3s,MS3.0,baz=100,slow=41						
BVAR	**Boroye Array**	**21.30**	**17**	P	**P**	**04 38 51.6**	**+0.5**
	comp=Z,3.8nm,0.6s,mb3.9,baz=192,slow=13,SNR=12						
BVAR	**Borovoye Array**	**21.30**	**17**	P	**P**	**04 38 51.6**	**+0.5**
MK31	**Makanchi Array**	**21.70**	**44**	*e*P	**P**	**04 38 55.6**	**+0.2**
MK31	**Makanchi Array**	**21.70**	**44**	*e*P	**P**	**04 38 55.6**	**+0.2**
MKAR	**Makanchi Array**	**21.70**	**44**	P	**P**	**04 38 54.8**	**-0.6**
	comp=Z,2.1nm,0.7s,mb3.7,baz=236,slow=8.6,SNR=15						
MKAR	**Makanchi Array**	**21.70**	**44**	P	**P**	**04 38 54.8**	**-0.6**
KURK	**Kurchatov**	**22.26**	**32**	*e*P	**P**	**04 39 03.2**	**+1.9**
	comp=Z,7.8nm,1.1s,mb4.0						
KURK	**Kurchatov**	**22.26**	**32**	*e*P	**P**	**04 39 03.2**	**+1.9**
	comp=Z,7.8nm,1.1s,mb4.0						
BR131	**Keskin Array S**	**22.45**	**295**	*e*P	**P**	**04 38 59.8**	**-3.7**
	comp=Z,3.6nm,1.6s,mb3.5						
BRTR	**Keskin Array B**	**22.45**	**295**	P	**P**	**04 39 04.0**	**+0.6**
	comp=Z,1.5nm,0.9s,mb3.4,baz=111,slow=12,SNR=7.0						
BRTR	**Keskin Array B**	**22.45**	**295**	P	**P**	**04 39 04.1**	**+0.6**
ZALV	**Zalesovo Beam**	**27.24**	**32**	P	**P**	**04 39 48.8**	**+0.3**
	comp=Z,1.0nm,0.3s,mb3.8,baz=230,slow=8.8,SNR=6.8						
ZALV				LR	LR	04 52 37.6	
	comp=Z,18nm,20.2s,MS2.6,baz=228,slow=41						
AKASG	**Malin Array Be**	**28.84**	**317**	P	**P**	**04 40 02.5**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.7,baz=125,slow=8.0,SNR=6.0						
AKASG	**Malin Array Be**	**28.84**	**317**	P	**P**	**04 40 02.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**37.48**	**103**	P	**P**	**04 41 18.3**	**-0.1**
	comp=Z,0.5nm,0.4s,mb3.7,baz=288,slow=9.4,SNR=3.0						
CMAR	**Chiang Mai Arr**	**37.48**	**103**	P	**P**	**04 41 18.2**	**-0.2**
GERES	**GERESS Array B**	**37.97**	**309**	P	**P**	**04 41 20.5**	**-1.7**
	comp=Z,0.7nm,0.8s,mb3.4,baz=103,slow=5.9,SNR=4.6						
GERES	**GERESS Array B**	**37.97**	**309**	P	**P**	**04 41 20.5**	**-1.7**
NOA	**NORSAR Array B**	**42.16**	**327**	P	**P**	**04 41 56.7**	**-0.1**
	comp=Z,0.7nm,0.8s,mb3.4,baz=111,slow=7.7,SNR=2.5						
NOA				LR	LR	05 04 34.2	
	comp=Z,34nm,18.1s,MS3.3,baz=345,slow=43						
NOA	**NORSAR Array B**	**42.16**	**327**	P	**P**	**04 41 56.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**56.70**	**264**	P	**P**	**04 43 47.4**	**-1.0**
	comp=Z,1.0nm,0.6s,mb4.0,baz=62,slow=6.0,SNR=2.5						
BOSA	**Boshof**	**69.71**	**213**	P	**P**	**04 45 14.2**	**-0.2**
	comp=Z,2.9nm,0.9s,mb4.2,baz=69,slow=9.2,SNR=3.3						
BOSA	**Boshof**	**69.71**	**213**	P	**P**	**04 45 14.2**	**-0.2**
WRA	**Warramunga Arr**	**88.07**	**115**	P	**P**	**04 46 54.7**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.9,baz=308,slow=5.2,SNR=6.1						
WRA	**Warramunga Arr**	**88.07**	**115**	P	**P**	**04 46 54.7**	**-0.7**
WRA	**Warramunga Arr**	**88.07**	**115**	P	**P**	**04 46 54.7**	**-0.7**
ASAR	**Alice Springs**	**89.93**	**118**	P	**P**	**04 47 02.7**	**-1.4**
	comp=Z,0.3nm,0.8s,mb3.7,baz=323,slow=5.9,SNR=3.3						
ASAR	**Alice Springs**	**89.93**	**118**	P	**P**	**04 47 02.7**	**-1.3**

IDC 23 04:37:32.2±22.0, 24°.20S×179°.64W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.9/16, mbtmp4.1/4, ML4.3/1, Error ellipse: s-maj=406.5km s-min=60.3km az=68.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.29**	**190**	Pn	Pn	04 40 55.8	0.0
URZ				Sn	Sn	04 43 13.3	-22
	1.3nm,0.3s,baz=11,slow=22,SNR=14						
STKA	**Stephens Creek**	**34.92**	**249**	P	P	04 44 24.9	-0.8
	0.9nm,0.3s,baz=239,slow=18,SNR=8.7						
ASAR	**Alice Springs**	**42.32**	**261**	P	P	04 45 27.9	-0.1
	1.2nm,0.6s,baz=96,slow=9.2,SNR=3.3						
WRA	**Warramunga Arr**	**42.72**	**266**	P	P	04 45 31.9	+0.6
	1.0nm,0.4s,baz=91,slow=7.6,SNR=17						
	1.1nm,0.4s,baz=104,slow=8.0,SNR=6.2						

DJA 23 06:00:55, 1°.40S×121°.22E, h8km, MLv3.7/6, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.65**	**41**	P	Pg	06 01 07.4	-0.1
APSI				S	Sg	06 01 15.8	-0.2
MSSI	**Masamba**	**1.46**	**218**	P	Pn	06 01 20.3	-1.3
MSSI				S	Sn	06 01 38.8	-2.1
LUWI	**Luwuk**	**1.59**	**77**	P	Pn	06 01 22.9	-0.6
LUWI				S	Sn	06 01 44.3	0.0
MRSI	**Marisa**	**2.00**	**21**	P	Pn	06 01 30.3	+1.2
MRSI				S	Sn	06 01 54.9	+0.6
TTSI	**Tana Toraja**	**2.15**	**221**	P	Pn	06 01 31.1	-0.1
KDI	**Kendari**	**2.90**	**151**	P	Pn	06 01 43.5	+2.0
SPSI	**Sidrap Palu**	**2.93**	**210**	P	Pn	06 01 41.5	-0.4

ISCJB ***23*** *06:07:51.7±1.5, 17°.15S±0°.07×174°.28W±0°.08, h92km±13km, mb4.2/28, Error ellipse: s-maj=14.5km s-min=8.1km az=43.0*
NEIC ***23*** *06:07:53.0±0.9, 17°.11S×174°.29W, h89km±9km, mb4.3/17, Error ellipse: s-maj=10.0km s-min=5.3km az=134.0*
IDC ***23*** *06:07:57.2±0.6, 17°.26S×174°.16W, h129km±5km, mb4.2/14, mb1 4.4/15, mb1mx4.3/21, mbtmp4.3/15, MS3.4/4, Ms1 3.4/4, ms1mx3.0/22, Error ellipse: s-maj=21.2km s-min=12.7km az=134.0*
ISC 23 06:07:53.2±1.4, 17°.17S±0°.08×174°.26W±0°.08, h91km±13km, h129km±1.7km: pP-P, n188, σ0.9 75/50, mb4.2/28, 75C-57D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.03**	**37**	P	**Pn**	**06 08 52.2**	**-0.5**
	164nm,0.3s,baz=42,slow=1.2,SNR=236						
AFI				S	**Sn**	**06 09 33.6**	**-5.2**
	210nm,0.3s,baz=43,slow=23,SNR=20						
AFI	**Afiamalu**	**4.03**	**37**	*e*Pn	**Pn**	**06 08 51.9**	**-0.8**
AFI				*e*Sn	**Sn**	**06 09 33.4**	**-5.4**
RAR	**Rarotonga**	**14.26**	**109**	P	**Pn**	**06 11 11.2**	**+0.3**
	2.9nm,0.3s,baz=181,slow=2.8,SNR=4.2						
RAR				S	**Sn**	**06 13 40.9**	**-7.0**
	baz=66,slow=18,SNR=2.8						
OUZ	**Omahuta**	**20.99**	**209**	*e*P	**P**	**06 12 31.3**	**+2.2**
	31nm,1.0s						
URZ	**Urewera**	**22.33**	**198**	P	**P**	**06 12 43.3**	**-0.2**
	45nm,0.7s,mb4.9,baz=6.3,slow=5.0,SNR=16						
URZ				S	**S**	**06 16 37.9**	**-4.9**
	5.2nm,0.8s,baz=126,slow=19,SNR=3.0						
URZ	**Urewera**	**22.33**	**198**	*e*P	**P**	**06 12 43.4**	**0.0**
	47nm,0.7s,mb4.9						
PPT	**Papeete**	**23.56**	**95**	LR	LR	06 19 39.0	
	comp=Z,79nm,19.3s,baz=307,slow=30						
HNR	**Honiara**	**26.23**	**284**	LR	LR	06 21 23.5	
	comp=Z,52nm,21.2s,baz=90,slow=31						
RPZ	**Rata Peaks**	**29.24**	**202**	P	**P**	**06 13 47.5**	**+1.1**
	39nm,0.7s,mb5.2,baz=31,slow=16,SNR=2.5						
ARMA	**Armidale**	**33.74**	**241**	*e*P	**P**	**06 14 25.7**	**-0.5**
CTA	**Charters Tower**	**37.48**	**259**	*e*P	**P**	**06 14 58.4**	**+0.2**
	6.9nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**37.48**	**259**	*e*P	**P**	**06 14 57.8**	**-0.4**
	4.1nm,0.7s,mb4.5						
CMSA	**Cobar Meteorol**	**38.96**	**241**	*e*P	**P**	**06 15 10.3**	**-0.3**
QLP	**Quilpie**	**39.50**	**249**	*e*P	**P**	**06 15 15.0**	**-0.1**
STKA	**Stephens Creek**	**42.46**	**241**	P	**P**	**06 15 39.6**	**+0.3**
	25nm,1.0s,mb4.9,baz=91,slow=9.8,SNR=17						
STKA				LR	LR	06 32 01.1	
	comp=Z,99nm,21.5s,baz=208,slow=34						
STKA	**Stephens Creek**	**42.46**	**241**	*e*P	**P**	**06 15 39.8**	**+0.5**
	14nm,1.1s,mb4.6						
STKA	**Stephens Creek**	**42.46**	**241**	*e*P	**P**	**06 15 39.8**	**+0.5**
	7.9nm,1.1s,mb4.4						
WB2	**Warramunga Arr**	**48.65**	**258**	*e*P	**P**	**06 16 28.0**	**-0.3**
WRA	**Warramunga Arr**	**48.66**	**258**	P	**P**	**06 16 27.7**	**-0.7**
	8.3nm,0.8s,mb4.7,baz=93,slow=8.0,SNR=67						
ASAR	**Alice Springs**	**48.80**	**253**	P	**P**	**06 16 29.3**	**-0.1**
	35nm,0.7s,mb5.4,baz=88,slow=8.4,SNR=381						
ASAR				PcP	PcP	06 17 53.4	+0.3
	0.9nm,0.7s,baz=101,slow=4.8,SNR=4.4						
MBWA	**Marble Bar**	**62.09**	**255**	*e*P	**P**	**06 18 03.8**	**-1.1**
	37nm,1.5s,mb5.2						
CASY	**Casey**	**68.46**	**205**	*e*P	**P**	**06 18 44.8**	**-0.4**
	14nm,1.1s,mb4.7						
MJAR	**Matsushiro Arr**	**69.77**	**321**	P	**P**	**06 18 53.5**	**-0.2**
	1.3nm,0.6s,mb3.9,baz=172,slow=6.8,SNR=4.9						
QSPA	**South Pole Qui**	**72.88**	**180**	*e*P	**P**	**06 19 12.0**	**+0.1**
	9.4nm,1.0s,mb4.6						
PETK	**Petropavlovsk-**	**74.06**	**343**	P	**P**	**06 19 19.8**	**+0.8**
	6.1nm,0.7s,mb4.4,baz=136,slow=8.6,SNR=8.5						
PETK	**Petropavlovsk-**	**74.06**	**343**	P	**P**	**06 19 19.8**	**+0.8**
VES	**Vestal, Richgr**	**74.18**	**44**	⇑sP	sP	06 19 53.2	-0.4
	baz=74						
BFSC	**Mount Baldy Ra**	**74.24**	**46**	⇓sP	sP	06 19 53.6	-0.3
	baz=74						
MONP	**Monument Peak**	**74.36**	**48**	⇓sP	sP	06 19 54.6	-0.1
	baz=74						
EDW2	**Edwards Air Fo**	**74.37**	**45**	⇑sP	sP	06 19 54.7	+0.1
	baz=74						
DVTC	**Desert V Tower**	**74.46**	**48**	⇑sP	sP	06 19 55.0	-0.3
	baz=75						
ISA	**Isabella**	**74.49**	**44**	⇑sP	sP	06 19 55.5	+0.2
	baz=75						
ISA	**Isabella**	**74.49**	**44**	*e*P	**P**	**06 19 21.8**	**-0.1**
	3.6nm,1.1s,mb4.0						
ISA				*e*		06 19 54.8	
PFO	**Pinyon Flat Ob**	**74.72**	**47**	⇑sP	sP	06 19 56.2	-0.6
	baz=75						
LRMC	**Laurel Mountai**	**74.91**	**45**	⇑sP	sP	06 19 58.0	+0.2
	baz=75						
BELC	**Belle Mtn. Jos**	**75.26**	**47**	⇑sP	sP	06 19 59.8	0.0
	baz=75						
MPMC	**Manual Prospec**	**75.37**	**44**	⇓sP	sP	06 20 01.1	+0.7
	baz=76						
GSC	**Goldstone**	**75.41**	**45**	⇓sP	sP	06 20 01.2	+0.4
	baz=76						
GSC	**Goldstone**	**75.41**	**45**	*e*P	**P**	**06 19 27.6**	**+0.4**
	3.5nm,1.0s,mb4.0						
GSC				*e*		06 19 59.7	
BC3	**Big Chuckawall**	**75.45**	**47**	⇑sP	sP	06 20 00.9	-0.1
	baz=76						
HEC	**Hector,Ludlow**	**75.48**	**46**	⇑sP	sP	06 20 01.0	-0.1
	baz=76						
WAKR	**Walker**	**75.51**	**41**	P	**P**	**06 19 27.7**	**0.0**
WAKR				*e*		06 20 01.9	
WCN	**Washoe City**	**75.78**	**41**	⇑sP	sP	06 20 03.5	+0.7
	baz=76						
GMRC	**Granite Mounta

V17A	Tonalea, Kykot	79.75	48	⇓sP	sP	06 20 25.6 +0.5
	baz=80					
Q14A	Sevier Lake (B	79.77	44	⇓sP	sP	06 20 24.8 -0.3
	baz=80					
U16A	Tuba City	79.78	47	⇑sP	sP	06 20 25.8 +0.7
	baz=80					
Y19A	Nutrioso	80.06	50	⇓sP	sP	06 20 28.1 +1.3
	baz=80					
Z20A	Nine Sixteen R	80.15	51	⇑sP	sP	06 20 28.1 +0.8
	baz=80					
P14A	Drum Mountains	80.22	43	⇑sP	sP	06 20 27.7 +0.1
	baz=80					
S16A	Weppner Ranch,	80.25	46	⇑sP	sP	06 20 28.0 +0.3
	baz=80					
X19A	St. Johns	80.25	49	⇑sP	sP	06 20 28.8 +1.0
	baz=80					
V18A	Ganado	80.41	48	⇓sP	sP	06 20 29.1 +0.4
	baz=81					
T17A	Navajo Res., N	80.43	47	⇓sP	sP	06 20 29.1 +0.4
	baz=81					
R16A	Teasdale	80.61	45	⇑sP	sP	06 20 29.3 -0.3
	baz=81					
Y20A	Horse Springs,	80.68	50	⇓sP	sP	06 20 30.1 0.0
	baz=81					
U18A	Rough Rock, Ch	80.80	47	⇓sP	sP	06 20 30.5 -0.2
	baz=81					
X20A	Quemado	80.89	50	⇓sP	sP	06 20 32.3 +1.1
	baz=81					
T18A	Mexican Hat	81.14	47	⇑sP	sP	06 20 32.1 -0.5
	baz=81					
W20A	Ramah	81.16	49	⇓sP	sP	06 20 33.2 +0.5
	baz=81					
R17A	Hanksville Air	81.20	45	⇓sP	sP	06 20 32.2 -0.6
	baz=81					
I12A	Atlanta	81.20	39	⇓sP	sP	06 20 31.5 -1.2
	baz=81					
U19A	Dine' College,	81.20	48	⇑sP	sP	06 20 33.3 +0.4
	baz=81					
Z22A	Elephant Butte	81.43	51	⇓sP	sP	06 20 34.3 +0.1
	baz=82					
HLID	Hailey	81.51	39	⇑sP	sP	06 20 33.2 -1.1
	baz=82					
HLID	Hailey	81.51	39	eP	P	06 20 00.7 +0.2
	4.6nm,1.4s,mb4.1					
HLID				e		06 20 32.8
SRU	San Rafael	81.67	45	eP	P	06 20 02.1 +0.6
	1.1nm,0.8s,mb3.7					
SRU				e		06 20 35.9
Y22A	Socorro	81.73	51	⇓sP	sP	06 20 36.6 +0.9
	baz=82					
R18A	Canyonlands Na	81.74	46	⇓sP	sP	06 20 35.4 -0.3
	baz=82					
324A	Moseley Ranch,	81.75	54	⇓sP	sP	06 20 34.8 -1.1
	baz=82					
G12A	Big Creek, Yel	81.84	38	⇑sP	sP	06 20 34.6 -1.4
	baz=82					
425A	Indio Mountain	81.85	54	⇓sP	sP	06 20 36.6 +0.2
	baz=82					
J14A	Carey	81.93	40	⇓sP	sP	06 20 35.5 -1.0
	baz=82					
MNTX	Cornudas Mount	81.94	53	⇑sP	sP	06 20 36.2 -0.7
	baz=82					
S19A	Harvey Farm, M	81.95	47	⇑sP	sP	06 20 36.7 -0.1
	baz=82					
626A	Big Bend Ranch	82.00	56	⇑sP	sP	06 20 37.7 +0.4
	baz=82					
O17A	Robinson Place	82.07	44	⇓sP	sP	06 20 36.5 -0.9
	baz=82					
325A	Bean Ranch, Si	82.11	54	⇑sP	sP	06 20 37.5 -0.3
	baz=82					
R19A	Curley Farm, L	82.13	46	⇓sP	sP	06 20 36.6 -1.1
	baz=82					
TXAR	Lajitas Array	82.28	56	P	P	06 20 04.6 -0.3
	0.9nm,0.9s,mb3.6,baz=209,slow=9.4,SNR=8.0					
TXAR				pP	pP	06 20 37.3 +8.4
	1.8nm,1.1s,baz=224,slow=7.0,SNR=5.8					
U21A	Nageezi	82.37	48	⇑sP	sP	06 20 39.0 0.0
	baz=82					
225A	Deer Hill, Car	82.54	53	⇓sP	sP	06 20 39.8 -0.2
	baz=83					
426A	McDonald Obser	82.55	55	⇑sP	sP	06 20 39.9 -0.2
	baz=83					
627A	Terlingua Ranc	82.55	56	⇑sP	sP	06 20 40.0 -0.1
	baz=83					
J15A	Blackfoot	82.64	40	⇓sP	sP	06 20 39.6 -0.7
	baz=83					
527A	Woodward Ranch	82.66	55	⇓sP	sP	06 20 40.8 +0.1
	baz=83					
R20A	Redvale	82.69	46	⇑sP	sP	06 20 41.3 +0.7
	baz=83					
S21A	Coal Bank Pass	82.85	47	⇑sP	sP	06 20 41.4 -0.1
	baz=83					
Y24A	Capitan	82.87	51	⇓sP	sP	06 20 42.2 +0.5
	baz=83					
P19A	Cripple Cowboy	82.97	45	⇓sP	sP	06 20 41.7 -0.4
	baz=83					
226A	Malaga, Loving	83.08	54	⇑sP	sP	06 20 43.1 +0.3
	baz=83					
427A	Hayter Ranch,	83.11	55	⇓sP	sP	06 20 43.3 +0.3
	baz=83					
Q20A	Ridgley Place,	83.11	46	⇓sP	sP	06 20 42.5 -0.3
	baz=83					
V23A	Ortiz Mt. (NFS	83.12	49	⇑sP	sP	06 20 43.3 +0.3
	baz=83					
P20A	De Beque	83.31	45	⇑sP	sP	06 20 43.0 -0.8
	baz=84					
R21A	Cimarron	83.35	47	⇓sP	sP	06 20 43.4 -0.7
	baz=84					
U23A	El Rito	83.38	49	⇓sP	sP	06 20 44.1 -0.2
	baz=84					
G15A	Dillon	83.54	39	⇑sP	sP	06 20 43.7 -1.2
	baz=84					
S22A	4UR Ranch, Cre	83.57	47	⇑sP	sP	06 20 45.0 -0.2
	baz=84					
E14A	Clinton	83.62	37	⇑sP	sP	06 20 43.9 -1.3
	baz=84					
K18A	Toltan Ranch,	83.75	42	⇑sP	sP	06 20 45.0 -1.1
	baz=84					
R22A	Saguache, Gunn	83.84	47	⇑sP	sP	06 20 45.9 -0.7
	baz=84					
L19A	Farson	83.92	43	⇓sP	sP	06 20 45.4 -1.6
	baz=84					
D14A	Greenough	83.97	37	⇓sP	sP	06 20 44.8 -2.3
	baz=84					
Q22A	Crested Butte,	84.02	46	⇓sP	sP	06 20 46.5 -1.1
	baz=84					
N20A	Spence Gulch,	84.03	44	⇓sP	sP	06 20 46.1 -1.4
	baz=84					
H16A	Russell Place,	84.05	40	⇑sP	sP	06 20 46.4 -1.1
	baz=84					
J18A	Kendall Valley	84.05	41	⇑sP	sP	06 20 46.2 -1.4
	baz=84					
BW06	Boulder Array	84.12	42	⇓sP	sP	06 20 45.9 -2.1
	baz=84					
PDAR	Pinedale Array	84.12	42	P	P	06 20 13.8 -0.3
	1.0nm,0.8s,mb3.7,baz=251,slow=2.8,SNR=9.0					
PDAR				pP	pP	06 20 45.8 +7.6
	1.8nm,0.8s,baz=222,slow=2.2,SNR=9.2					
SMCO	Snowmass	84.12	46	eP	P	06 20 14.5 +0.3
	0.9nm,0.6s,mb3.8					
SMCO				e		06 20 46.5
COLA	College	84.25	11	eP	P	06 20 13.8 -0.4
	9.3nm,1.3s,mb4.5					
COLA				e		06 20 46.9
BOZ	Bozeman (W)	84.31	39	⇓sP	sP	06 20 47.7 -1.1
	baz=84					
BOZ	Bozeman (W)	84.31	39	eP	P	06 20 14.7 -0.3
	0.6nm,0.7s,mb3.5					
BOZ				e		06 20 47.5
ILAR	Eielson Array	84.33	11	P	P	06 20 13.9 -0.7
	0.7nm,0.7s,mb3.6,baz=237,slow=6.5,SNR=15					
ILAR				pP	pP	06 20 47.8 +9.1
	1.5nm,1.0s,baz=232,slow=6.2,SNR=4.8					
N21A	Black Mountain	84.49	45	⇑sP	sP	06 20 48.8 -1.1
	baz=85					
SDCO	Great Sand Dun	84.51	48	⇑sP	sP	06 20 48.7 -1.3
	baz=85					
L20A	Wamsutter	84.54	43	⇓sP	sP	06 20 48.8 -1.3
	baz=85					
O22A	Kremmling	84.87	45	⇑sP	sP	06 20 50.5 -1.3
	baz=85					
W27A	Bowe Ranch, En	85.12	51	⇑sP	sP	06 20 52.0 -1.2
	baz=85					
S25A	Robets Cordova	85.23	48	⇑sP	sP	06 20 53.2 -0.5
	baz=85					
DAWY	Dawson	85.33	15	eP	P	06 20 20.2 +0.5
DAWY				e		06 20 53.1
MAW	Mawson	85.86	199	P	P	06 20 22.3 -0.2
	3.6nm,0.9s,mb4.3,baz=137,slow=1.7,SNR=6.6					
VNA2	Neumayer--Watz	91.66	176	e	P	06 20 46.7 -3.2
VNA1	Neumayer--Stat	91.86	175	e	P	06 20 48.5 -2.3
CMAR	Chiang Mai Arr	92.39	288	P	P	06 20 55.7 +1.5
	1.0nm,0.3s,mb4.5,baz=113,slow=2.3,SNR=7.0					
MKAR	Makanchi Array	111.47	314	PKiKP	PKiKP	06 26 16.1 -0.7
	0.1nm,0.4s,baz=64,slow=3.4,SNR=2.7					
KMBO	Kilima Mbogo	144.01	243	PKP	PKPdf	06 27 18.0 -1.2
	6.8nm,0.9s,baz=180,slow=24,SNR=18					
CLL	Collm	145.45	352	i PKPbc	PKPbc	06 27 20.6 0.0
	comp=Z,8.0nm,1.2s					
CLL				ePKiKP	PKiKP	06 27 23.0 -1.5
BRG	Berggiesshubel	145.74	351	e(P)	PKPdf	06 27 20.9 -0.1
	comp=Z,5.2nm,1.1s					
CRVS	Cervenica-Dubn	145.86	341	ePKP	PKPdf	06 27 25.9 +4.6
BRTR	Keskin Array B	146.97	319	PKPbc	PKPbc	06 27 25.5 0.0
	comp=Z,2.1nm,0.7s,baz=127,slow=1.9,SNR=9.6					
BRTR				pPKPbc	pPKPbc	06 28 00.6 +10
	comp=Z,2.3nm,0.9s,baz=90,slow=2.5,SNR=4.2					
VYHS	Vyhne	146.98	344	ePKP	PKPdf	06 27 26.5 +3.3
GERES	GERESS Array B	147.75	350	PKPbc	PKPbc	06 27 27.4 0.0
	comp=Z,1.3nm,0.8s,baz=42,slow=2.2,SNR=10.0					
CONA	Conrad Observa	148.22	347	i PKiKP	PKiKP	06 27 29.1 -1.2
	comp=Z,7.4nm,1.1s					
SOKA	Soboth	149.59	347	i PKPbc	PKPbc	06 27 31.9 -0.3
	comp=Z,7.5nm,1.2s					
MOTA	Moosalm	149.59	353	i PKiKP	PKiKP	06 27 32.8 -0.3
	comp=Z,7.5nm,0.9s					
WTTA	Wattenberg	149.60	352	i PKiKP	PKiKP	06 27 32.2 -1.0
	comp=Z,15nm,1.3s					
DAVA	Damuels	149.78	354	i PKiKP	PKiKP	06 27 32.5 -1.0
	comp=Z,12nm,1.1s					
FETA	Feichten	149.95	353	i PKiKP	PKiKP	06 27 33.4 -0.5
	comp=Z,10nm,1.1s					
ABTA	Abfaltersbach	149.98	351	i PKiKP	PKiKP	06 27 32.9 -1.0
	comp=Z,11nm,1.0s					

MEX 23 06:49:40.9±1.1, 18°.21N×103°.46W, h5km, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.14	56		eP	Pg	06 49 42.7	-1.0
MMIG					i S	Sg	06 49 45.3	-0.2
R15V		1.07	333		eP	Pg	06 49 58.3	-3.2
R15V					i S	Sg	06 50 12.3	-3.1
EZ5V		1.27	354		eP	Pg	06 50 01.8	-3.5
EZ5V					i S	Sg	06 50 19.2	-2.5
ZIIG	Zihuatanejo	2.00	107		i P	Pn	06 50 12.2	-3.1
ZIIG					i S	Sn	06 50 36.5	-4.1
SFJM	Santa Fe	2.30	10		i P	Pn	06 50 18.5	-1.0
SFJM					i S	Sn	06 50 43.0	-5.2
MOIG	Morelia	2.60	56		eP	Pn	06 50 21.6	-2.1
MOIG					i S	Sn	06 50 52.0	-3.7
ANIG	Ahuacatlan	3.00	341		i P	Pn	06 50 26.0	-3.1
ANIG					i S	Sn	06 51 01.3	-4.2
MEIG	Mezcala	3.67	94		i P	Pn	06 50 40.8	+2.5
MEIG					i S	Sn	06 51 19.5	-2.5

TAP 23 07:03:35.8, 21°.84N×121°.65E, h137km, ML3.7, 1D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.22	335		P	Pn	07 03 54.2	-0.3
	baz=336							
LAY					eS	Sn	07 04 07.8	-0.9
	baz=336							
TSEB	Hengchuen, Pin	0.70	275		eP	Pn	07 03 58.3	+1.5
	baz=277							
TSEB					eS	Sn	07 04 13.7	+0.9
	baz=277							
TWK1	Hengchun	0.79	277		P	Pn	07 03 58.2	+0.7
	baz=277							
TWK1					eS	Sn	07 04 14.5	+0.5
	baz=277							
HEN	Hengchun	0.86	281		eP	Pn	07 03 58.9	+0.8
	baz=281							
EAST	Anshuo	0.92	306		i P	Pn	07 03 58.7	+0.2
	baz=303							
EAST					eS	Sn	07 04 15.8	0.0
	baz=303							
ECL	Taimali	0.99	319		eP	Pn	07 03 59.5	+0.3
	baz=317							
ECL					eS	Sn	07 04 15.9	-1.2
	baz=317							
TTN	Taitung	1.02	333		eP	Pn	07 03 59.7	+0.3
	baz=325							
TTN					eS	Sn	07 04 16.9	-0.7
	baz=325							
SCZT	Fangliau	1.09	299		i P	Pn	07 04 00.5	+0.4
	baz=303							
SCZT					eS	Sn	07 04 18.1	-0.6
	baz=303							
TWG	Pinlang	1.11	331		P	Pn	07 04 00.1	-0.3
	baz=331							
TWG					eS	Sn	07 04 17.9	-1.1
	baz=331							
CHKT	Chengkung	1.28	348		eP	Pn	07 04 01.2	-0.8
	baz=344							
CHKT					eS	Sn	07 04 21.9	-0.1
	baz=344							
ELDTW	Lidau	1.46	336		eP	Pn	07 04 05.2	+1.2
	baz=337							
TWM1	Shoushan	1.50	311		eP	Pn	07 04 05.8	+1.5
	baz=318							
TWM1					eS	Sn	07 04 28.8	+2.7
	baz=318							
TWF1	Yuli	1.54	348		eP	Pn	07 04 03.8	-1.0
	baz=342							
STYT	Tauyuan	1.55	328		eP	Pn	07 04 05.8	+0.8
	baz=322							
STYT					eS	Sn	07 04 27.2	0.0
	baz=322							
SGST	Jiashian	1.58	322		eP	Pn	07 04 05.8	+0.5
	baz=315							
SGST					eS	Sn	07 04 28.0	+0.3
	baz=315							
EHY	Hungye	1.68	350		eP	Pn	07 04 06.4	0.0
	baz=342							
EHY					eS	Sn	07 04 28.3	-1.5
	baz=342							
CHN1	Nanshi	1.69	322		i P	Pn	07 04 07.1	+0.6
	baz=322							
CHN1					S	Sn	07 04 29.8	-0.2
	baz=322							
WTP	Ta-pu	1.69	326		P	Pn	07 04 06.9	+0.4
	baz=320							
WTP					S	Sn	07 04 29.9	-0.1
	baz=320							
YUS	Yu-Shan	1.76	339		eP	Pn	07 04 07.8	+0.5
	baz=331							
ALS	Alishan	1.83	335		P	Pn	07 04 09.0	+0.9
	baz=335							
ALS					eS	Sn	07 04 33.6	+0.7
	baz=335							
TYC	Yuchr	2.18	341		P	Pn	07 04 12.6	+0.4
	baz=334							
TYC					eS	Sn	07 04 40.1	-0.2
	baz=334							

IDC 23 07:27:44.3±2.9, 24°.18S×115°.52W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.9/17, mbtmp3.8/4, Error ellipse: s-maj=89.8km s-min=37.1km az=41.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.30	119		T		07 35 31.4	
	16nm,0.3s,baz=284,slow=16,SNR=7.2							
RKT	Rikitea	17.86	269		eLR	LR	07 35 53.7	
	565nm,26.5s,baz=107							
RKT					eT		07 50 13.4	
	2.8nm,0.3s							
RKT	Rikitea	17.86	269		eLR	LR	07 45 14.0	
	765nm,27.0s							
RKT					eT		07 59 32.5	
	3.0nm,0.3s							
TAOE	Nuku Hiva Isla	28.03	299		eLR	LR	07 40 44.1	
	382nm,25.6s							
TBI	Tubuai	31.04	265		eLR	LR	07 42 04.7	
	190nm,28.2s							
PPT	Papeete	32.44	275		eLR	LR	07 42 36.9	
	206nm,30.5s,baz=99							
LPAZ	La Paz	44.98	89		P	P	07 36 02.4	+0.8
	1.0nm,0.6s,baz=306,slow=5.2,SNR=8.2							
TXAR	Lajitas Array	54.41	13		P	P	07 37 13.9	+0.7
	0.5nm,1.1s,baz=165,slow=4.3,SNR=3.4							
NVAR	Mina Array Bea	62.33	358		P	P	07 38 08.5	+0.1
	1.9nm,1.1s,baz=191,slow=9.2,SNR=7.1							
PDAR	Pinedale Array	66.84	5		P	P	07 38 37.8	0.0
	0.6nm,0.7s,baz=172,slow=7.3,SNR=3.6							
ZALV	Zalesovo Beam	146.59	338		PKPbc	PKPbc	07 47 27.1	-0.2
	0.5nm,0.3s,baz=58,slow=3.8,SNR=3.5							
BRTR	Keskin Array B	149.77	52		PKPbc	PKPbc	07 47 35.8	-0.5
	0.5nm,0.7s,baz=248,slow=1.6,SNR=2.4							
BRTR					PKPab	PKPab	07 47 41.0	-0.6
	1.1nm,0.8s,baz=248,slow=1.6,SNR=5.0							

CASC 23 07:50:55.0±1.3, 13°.00N×89°.03W, h38km±125km, MD3.8, ML3.4, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LFRS	El Faro	0.62	357		i P	Pn	07 51 07.5	+0.2
SNVI	San Vicente	0.63	17		eP	Pn	07 51 07.6	+0.1
SNVI					eS	Sn	07 51 17.5	+1.1
SNET	Serv Nac Est T	0.71	344		eP	Pn	07 51 08.8	+0.2
SNET					eS	Sn	07 51 18.3	0.0
SNET					AML	AML	07 51 22.4	
	comp=Z,1μm,0.4s							
LBRS	Las Brisas	0.73	359		eP	Pn	07 51 09.3	+0.4
LFU	La Fuente	0.75	353		eP	Pn	07 51 09.4	+0.3
BOQS	Boqueron	0.77	341		eP	Pn	07 51 09.9	+0.5
BOQS					eS	Sn	07 51 20.7	+0.9
VSM	San Miguel	0.84	60		eP	Pn	07 51 10.8	+0.4
BLLM	Bellamira	0.88	60		eP	Pn	07 51 11.2	+0.2
SBLS	San Blas	1.02	325		eP	Pn	07 51 13.5	+0.7
SNJE	San Jose	1.03	327		eP	Pn	07 51 13.4	+0.4
SNJE					eS	Sn	07 51 26.9	+0.8
RTR	El Retiro	1.08	326		eP	Pn	07 51 14.5	+0.9
CAHU	Cacacuatique	1.10	46		eP	Pn	07 51 14.2	+0.3
CNCH	Conchagua	1.19	77		eP	Pn	07 51 15.1	-0.1
CNCH					eS	Sn	07 51 31.2	+1.1
RBDL	Robledal	1.28	330		eP	Pn	07 51 17.1	+0.7
TGUH	Tegucigalpa,Un	2.00	58		eP	Pn	07 51 26.1	-0.2
LEON	Leon	2.16	105		eP	Pn	07 51 27.4	-1.2
TEL3	Telica 3	2.17	101		eP	Pn	07 51 29.1	+0.5
CNGN	Cerro Negro	2.32	102		eP	Pn	07 51 30.4	-0.3
CSAN		2.67	107		eP	Pn	07 51 36.7	+1.2
BOAB	BOACO BROADBAN	3.32	99		eP	Pn	07 51 43.0	-1.5

*NEIC **23** 08:04:09.0, 39°.55N×39°.85E, h5km, mb3.9/3, ML4.1(ISK), After ISK.*
*ISK **23** 08:04:09.7, 39°.56N×39°.86E, h2km, MD3.7*
*ISCJB **23** 08:04:10.2±0.4, 39°.55N±0°.02×39°.86E±0°.02, h2km±3km, mb4.0/10, MS3.2/7, Error ellipse: s-maj=2.9km s-min=2.1km az=135.0*
*MOS **23** 08:04:10.3±1.9, 39°.57N×39°.91E, h10km, mb4.3/3, Error ellipse: s-maj=11.3km s-min=6.5km az=73.7*
*IDC **23** 08:04:10.8±0.8, 39°.59N×39°.85E, h0km, mb4.1/8, mb1 3.9/14, mb1mx3.8/28, mbtmp3.9/14, ML3.3/5, MS3.2/11, Ms1 3.2/11, ms1mx3.0/37, Error ellipse: s-maj=18.1km s-min=10.8km az=175.0*
*CSEM **23** 08:04:10.9±0.1, 39°.58N×39°.89E, h2km, MD3.7, Error ellipse: s-maj=4.4km s-min=3.1km az=135.0*
*DDA **23** 08:04:11.4, 39°.55N×39°.89E, h21km, Ml3.9*
ISC 23 08:04:11.1±0.3, 39°.56N±0°.02×39°.88E±0°.02, h2km±3km, n177, σ1s14/207, mb4.0/10, MS3.2/7, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.45	296		PG	Pg	08 04 19.6	-0.2
EZC	Erzincan	0.45	296		i Pg	Pg	08 04 19.6	-0.2
KOPT	Kop Dagi	0.66	46		i P	Pg	08 04 23.8	0.0
KOPT					i S	Sg	08 04 34.1	+1.7
KOPT	Kop Dagi	0.66	46		i P	Pg	08 04 23.8	0.0
KOPT					i S	Sg	08 04 34.1	+1.7
PTK	Pertek	0.77	210		PG	Pg	08 04 24.8	-1.0
PTK					eSG	Sg	08 04 36.4	+0.7
PTK	Pertek	0.77	210		i Pg	Pg	08 04 24.8	-1.0
PTK					eSg	Sg	08 04 36.4	+0.7
BINT	Bingol	0.83	145		PG	Pg	08 04 26.8	-0.2
BINT					eSG	Sg	08 04 39.4	+1.7
BINT	Bingol	0.83	145		i Pg	Pg	08 04 26.8	-0.2
BINT					eSg	Sg	08 04 39.4	+1.7
BAYT	Ayd¯–ntepe-Bay	0.86	13		PG	Pg	08 04 27.1	-0.5
BAYT					eSG	Sg	08 04 39.5	+0.7
BAYT	Ayd¯–ntepe-Bay	0.86	13		i Pg	Pg	08 04 27.1	-0.5
BAYT					eSg	Sg	08 04 39.5	+0.7
GUMT	Gumushane	0.95	341		PG	Pg	08 04 28.7	-0.7
KEMA	Kemaliye	1.11	256		i P	Pg	08 04 31.7	-0.8
KEMA					i S	Sg	08 04 47.1	+0.2
KEMA	Kemaliye	1.11	256		i P	Pg	08 04 31.7	-0.8
KEMA					i S	Sg	08 04 47.1	+0.2
BNGL	BINGOL	1.15	121		i P	Pg	08 04 32.1	-1.1
BNGL					i S	Sg	08 04 49.3	+1.1
EZM	Erzurum	1.19	73		PN	Pn	08 04 33.8	-1.1
ERZM	Erzurum	1.20	73		i P	Pg	08 04 32.8	-1.2
ERZM	Erzurum	1.20	73		i P	Pg	08 04 32.8	-1.2
SVRC	Sivrice-ELAZID	1.26	201		PN	Pn	08 04 33.8	-1.9
SVRC	Sivrice-ELAZID	1.26	201		i Pn	Pn	08 04 33.8	-1.9
ELZG	Elazig	1.27	214		i P	Pg	08 04 34.2	-1.2
ELZG					i S	Sg	08 04 52.7	+0.8
ELZG	Elazig	1.27	214		i P	Pg	08 04 34.2	-1.2
ELZG					i S	Sg	08 04 52.7	+0.8
MACK	Trabzon	1.39	356		i P	Pn	08 04 36.6	-0.9
MACK					i S	Sg	08 04 56.0	+0.3
MACK	Trabzon	1.39	356		i P	Pn	08 04 36.6	-0.9
MACK					i S	Sg	08 04 56.0	+0.2
KTUT	Trabzon	1.43	356		PN	Pn	08 04 36.5	-1.6
KTUT	Trabzon	1.43	356		i Pn	Pn	08 04 36.5	-1.6
ESPY	Espiye-Giresun	1.62	327		ePN	Pn	08 04 40.1	-0.6
ESPY	Espiye-Giresun	1.62	327		ePn	Pn	08 04 40.1	-0.6
HOMI	Horasan	1.63	72		i P	Pn	08 04 40.4	-0.4
HOMI					i S	Sg	08 05 08.3	+4.7
DIYA	Diyarbakir	1.64	173		i P	Pg	08 04 41.6	-1.0
DIYA					i S	Sg	08 05 04.1	+0.2
DIYA	Diyarbakir	1.64	173		i P	Pg	08 04 41.6	-1.0
DIYA					i S	Sg	08 05 04.1	+0.3
MYA	Malataya	1.67	223		ePN	Pn	08 04 41.1	-0.3
MYA	Malataya	1.67	223		ePn	Pn	08 04 41.1	-0.3
MALT	Malatya	1.68	223		ePN	Pn	08 04 40.7	-0.8
MALT	Malatya	1.68	223		ePg	Pn	08 04 40.5	-1.0
MALT					eSg	Sg	08 05 04.4	-0.8
MALT	Malatya	1.68	223		eP	Pn	08 04 40.5	-1.0
MALT					e		08 05 04.4	
MALT	Malatya	1.68	223		ePn	Pn	08 04 40.7	-0.8
MALT					eS	Sg	08 05 04.4	-0.8
DARE	Darende-Malaty	1.72	250		ePN	Pg	08 04 47.3	+3.1
GRSN	GIRESUNGRSN	1.84	318		i P	Pn	08 04 43.5	-0.3
GRSN	GIRESUNGRSN	1.84	318		i P	Pn	08 04 43.5	-0.3
DDEM	Demirkent	1.96	46		i P	Pb	08 04 47.1	-0.4
DDEM					i S	Sg	08 05 14.7	+0.7
DDEM	Demirkent	1.96	46

ATAB	Bozova	2.43	211	*i* P		Pb	08 04 54.2 -1.3
SARI	SarD1z-Kayseri	2.63	252	*e*PN		Pb	08 04 59.1 +0.2
ERBA	Erbaa	2.65	296	*i* P		Pg	08 04 59.0 -2.9
ERBA				*i* S		Sg	08 05 37.5 +1.2
KARS	Kars	2.67	65	*e*PN		Pn	08 04 56.2 +1.1
KARS	Kars	2.67	65	*e*Pn		Pn	08 04 56.3 +1.1
TOKT	Tokat	2.68	288	*e*PN		Pn	08 04 55.3 +0.1
TOKT	Tokat	2.68	288	*e*Pn		Pn	08 04 55.3 +0.1
TOKA	Tokat	2.73	287	*i* P		Pb	08 05 00.9 +0.2
PINB	Pinarbasi	2.85	253	*i* P		Pn	08 04 59.9 +2.3
PINB	Pinarbasi	2.85	253	*i* P		Pn	08 04 59.9 +2.3
VANB	Van	2.89	108	*e*PN		Pn	08 04 59.1 +0.9
VANB	Van	2.89	108	*e*Pn		Pn	08 04 59.1 +0.9
DYDN	Diyadin	2.94	89	*i* P		Pb	08 05 04.7 +0.4
KMRS	Kahramanmaras	3.11	230	*e*PN		Pn	08 05 01.4 +0.3
KMRS	Kahramanmaras	3.11	230	*e*Pn		Pn	08 05 01.5 +0.3
GAZ	Gaziantep	3.17	222	*e*PN		Pn	08 05 01.9 -0.1
GAZ	Gaziantep	3.17	222	*e*Pn		Pn	08 05 01.9 -0.2
KVT	Kavak	3.31	299	*e*PN		Pn	08 05 04.3 +0.4
KVT	Kavak	3.31	299	*e*Pn		Pn	08 05 04.3 +0.4
ANDN	Andirin	3.40	236	*e*P		Pg	08 05 17.1 +0.7
ANDN				*e*S		Sg	08 06 01.3 +0.9
YOZ	Yozgat	3.53	273	*e*PN		Pn	08 05 07.6 +0.7
YOZ	Yozgat	3.53	273	*e*Pn		Pn	08 05 07.6 +0.7
GNI	Garni	3.79	79	Pn		Pn	08 05 11.8 +1.4
	1.7nm,0.3s,baz=259,slow=2.2,SNR=3.9						
GNI				Pg		Pg	08 05 21.7 -1.9
	4.5nm,0.3s,baz=242,slow=2.7,SNR=16						
GNI	Garni	3.79	79	P		Pn	08 05 11.8 +1.3
GNI				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GNI	Garni	3.79	79	P		Pn	08 05 11.8 +1.3
	comp=Z,2.0nm,0.3s						
GNI	Garni	3.79	79	Pg		Pg	08 05 21.8 -1.9
KOZT	Kozan	3.80	238	*e*PN		Pn	08 05 11.4 +0.8
AVNT	Avonos	3.98	260	*i* P		Pn	08 05 14.8 +1.6
AVNT	Avonos	3.98	260	*i* P		Pn	08 05 14.8 +1.6
GOR	Gori	4.02	52	P		Sg	08 06 23.7 +3.4
CTKT	Corum	4.05	287	*i* P		Pn	08 05 15.1 +1.0
CTKT	Corum	4.05	287	*i* P		Pn	08 05 15.1 +1.0
ONI	Oni	4.06	41	P		Pn	08 05 15.5 +1.3
ONI				S		Sg	08 06 21.3 -0.2
COBT	Iskenderun	4.17	225	*i* P		Pg	08 05 29.3 -1.8
TBLG	Delisi	4.29	58	P		Sg	08 06 35.1 +6.4
MTA	Mtatsminda	4.30	59	P		Sg	08 06 36.9 +7.5
ZEI	Tsey	4.42	42	*e*P		Pn	08 05 20.2 +1.1
ZEI				pmax	pmax		
	comp=Z,54nm,0.8s						
ZEI				MLR	MLR		
	comp=Z,1μm,11.0s						
ZEI	Tsey	4.42	42	*e*P		Pn	08 05 20.2 +1.1
	comp=Z,1μm,11.0s						
DGRG	David-gareji	4.59	64	P		Pn	08 05 22.0 +0.4
DGRG				S		Sg	08 06 51.0 +12
YAYL	Yayladag	4.62	222	*i* P		Pn	08 05 22.5 +0.6
YAYL	Yayladag	4.62	222	*i* P		Pn	08 05 22.5 +0.6
BR131	Keskin Array S	4.82	274	*e*PN		Pn	08 05 26.2 +1.5
BR131	Keskin Array S	4.82	274	*e*Pn		Pn	08 05 26.2 +1.5
BRTR	Keskin Array B	4.82	274	Pn		Pn	08 05 25.8 +1.1
	comp=Z,0.6nm,0.3s,baz=102,slow=14,SNR=17						
BRTR				Lg			08 06 48.6
	comp=Z,0.7nm,0.3s,baz=319,slow=28,SNR=2.8						
BRTR	Keskin Array B	4.82	274	P		Pn	08 05 25.8 +1.1
BRTR	Keskin Array B	4.82	274	P		Pn	08 05 25.8 +1.1
BRTR				Lg			08 06 48.7
KIV	Kislovodsk	4.87	25	*e*Pn		Pn	08 05 26.2 +0.9
KIV	Kislovodsk	4.87	25	*e*P		Pn	08 05 28.6 +3.3
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
KIV	Kislovodsk	4.87	25	*e*Pn		Pn	08 05 26.2 +0.9
KIV	Kislovodsk	4.87	25	*e*P		Pn	08 05 28.6 +3.3
	comp=Z,30nm,1.1s						
BALT	Daday	5.33	294	*i* P		Pn	08 05 29.9 -1.8
BALT	Daday	5.33	294	*i* P		Pn	08 05 29.9 -1.8
SUDU	Sudak	6.44	327	*e*P		Pn	08 05 49.1 +2.1
SUDU				*e*S		Sn	08 07 03.7 +2.6
SUDU	Sudak	6.44	327	*e*P		Pn	08 05 49.1 +2.1
MAK	Makhachkala	6.67	57	*e*P		Pn	08 05 46.8 -3.3
MAK				MLR	MLR		
	comp=Z,591nm,10.0s						
BHD	Baghdad	7.24	149	*ex*		x	08 05 56.0
BHD				*ex*		x	08 07 20.0
BHD				*ex*		x	08 08 05.0
MMAI	Mount Meron Ar	7.46	210	Pn		Pn	08 06 01.9 +0.9
	comp=Z,0.2nm,0.3s,baz=47,slow=15,SNR=3.0						
MMAI				Lg			08 08 13.7
	comp=Z,0.2nm,0.3s,baz=121,slow=36,SNR=1.9						
MMAI				LR	LR		08 09 32.2
	comp=Z,282nm,20.6s,baz=20,slow=43						
ASF	Jabal al Asfar	7.76	199	Pn		Pn	08 06 05.9 +0.9
	comp=Z,0.4nm,0.3s,baz=21,slow=14,SNR=3.9						
ASF				Lg			08 08 21.5
	comp=Z,0.4nm,0.3s,baz=252,slow=20,SNR=2.3						
ASF	Jabal al Asfar	7.76	199	P		Pn	08 06 05.9 +0.9
EIL	Elat	10.66	204	LR	LR		08 10 47.5
	comp=Z,83nm,18.3s,baz=228,slow=37						
VORD	Divnogorie	11.42	358	*e*P		Pn	08 06 55.9 +0.8
VORD				pmax	pmax		
	comp=N,20nm,0.7s						
VORD				pmax	pmax		
	comp=E,30nm,0.7s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORD	Divnogorie	11.42	358	*e*P		Pn	08 06 55.9 +0.8
VRHR	Novokhopersk	11.60	5	*e*P		Pn	08 07 00.0 +2.3
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	11.67	358	*e*P		Pn	08 06 56.4 -2.2
VSR				pmax	pmax		
	comp=N,10.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.8s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	11.67	358	*e*P		Pn	08 06 56.4 -2.2
AKASG	Malin Array Be	13.43	330	Pn	Pn	Pn	08 07 20.7 -1.9
	comp=Z,0.5nm,0.3s,baz=135,slow=13,SNR=3.0						
AKASG	Malin Array Be	13.43	330	Pn		Pn	08 07 20.7 -1.9
AKASG	Malin Array Be	13.43	330	P		Pn	08 07 20.7 -1.9
AKASG	Malin Array Be	13.43	330	P		Pn	08 07 20.7 -1.9
OBN	Obninsk	15.72	353⇑	*e*P		Pn	08 07 56.3 +2.8
OBN				*e*S		Sn	08 10 53.9 +5.7
OBN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s						
OBN	Obninsk	15.72	353	*e*P		Pn	08 07 56.3 +2.8
	comp=Z,100nm,14.0s						
AKTK	Aktyubinsk	16.77	44	Pn		Pn	08 08 04.9 -2.0
AKTK				LR	LR		08 16 24.0
AKTK	Aktyubinsk	16.77	44	Pn		Pn	08 08 04.9 -2.1
AKTO	Aktyubinsk	16.77	44	Pn		Pn	08 08 04.9 -2.0
	comp=Z,0.1nm,0.3s,baz=230,slow=7.9,SNR=2.6						
AKTO				LR	LR		08 16 24.0
	comp=Z,75nm,20.0s,baz=241,slow=44						
AKTO	Aktyubinsk	16.77	44	P		Pn	08 08 04.9 -2.1
ABKAR	Akbulak array	17.26	49	*e*P		Pn	08 08 12.8 -0.3
	comp=Z,1.5nm,0.6s						
ABKAR	Akbulak array	17.26	49	*e*P		Pn	08 08 12.9 -0.2
	comp=Z,1.5nm,0.6s						
VRAC	Vranov	19.21	308	LR	LR		08 16 09.0
	comp=Z,8.8nm,21.4s,baz=112,slow=38						
GERES	GERESS Array B	20.85	305	P		P	08 08 54.2 +0.1
	comp=Z,0.3nm,0.2s,baz=102,slow=9.1,SNR=3.3						
GERES	GERESS Array B	20.85	305	P		P	08 08 54.2 +0.1
GERES	GERESS Array B	20.85	305	P		P	08 08 54.2 +0.1
ARU	Arti	20.89	30	*e*P		P	08 08 53.5 -0.9
	comp=Z,12nm,0.7s						
ARU	Arti	20.89	30	*e*P		P	08 08 53.5 -0.9
ARU				pmax	pmax		
	comp=Z,12nm,0.7s						
ARU	Arti	20.89	30	*e*P		P	08 08 53.5 -0.9
	comp=Z,12nm,0.7s						
KKAR	Karatay Array	23.21	71	*e*P		P	08 09 19.5 +0.2
	comp=Z,3.2nm,0.8s,mb3.8						
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
KKAR	Karatay Array	23.21	71	*e*P		P	08 09 19.5 +0.2
	comp=Z,3.2nm,0.8s,mb3.8						
FINES	FINESS Array B	23.51	343	P		P	08 09 22.2 -0.1
	comp=Z,2.0nm,0.7s,mb3.6,baz=151,slow=13,SNR=3.5						
FINES				LR	LR		08 19 25.3
	comp=Z,106nm,18.2s,MS3.3,baz=160,slow=39						
FINES	FINESS Array B	23.51	343	P		P	08 09 22.2 -0.1
FINES	FINESS Array B	23.51	343	P		P	08 09 22.2 -0.1
BVAR	Borovoye Array	24.79	47	P		P	08 09 34.2 0.0
	comp=Z,2.3nm,0.7s,mb3.8,baz=256,slow=5.8,SNR=12						
BVAR	Borovoye Array	24.79	47	P		P	08 09 34.2 0.0
BVAR	Borovoye Array	24.79	47	P		P	08 09 34.2 0.0
AAK	Ala-Archa	26.16	72	LR	LR		08 20 23.6
	comp=Z,63nm,19.4s,MS3.2,baz=256,slow=37						
HFS	Hagfors	26.32	330	LR	LR		08 22 45.7
	comp=Z,102nm,18.5s,MS3.4,baz=319,slow=42						
NOA	NORSAR Array B	27.84	330	LR	LR		08 23 05.0
	comp=Z,49nm,19.1s,MS3.1,baz=105,slow=41						
ATD	Arta Tunnel	28.04	174	LR	LR		08 21 04.6
	comp=Z,82nm,21.8s,MS3.3,baz=51,slow=36						
ARCES	ARCESS Array B	31.00	350	P		P	08 10 28.5 -1.0
	comp=Z,5.0nm,1.1s,mb4.2,baz=148,slow=7.1,SNR=3.7						
ARCES	ARCESS Array B	31.00	350	P		P	08 10 28.5 -1.1
ARCES	ARCESS Array B	31.00	350	P		P	08 10 28.5 -1.1
MKAR	Makanchi Array	31.45	63	P		P	08 10 33.5 -0.3
	comp=Z,2.0nm,0.7s,mb4.1,baz=277,slow=7.3,SNR=16						
MKAR				LR	LR		08 24 12.6
	comp=Z,42nm,19.3s,MS3.1,baz=184,slow=38						
MKAR	Makanchi Array	31.45	63	P		P	08 10 33.5 -0.3
MKAR	Makanchi Array	31.45	63	P		P	08 10 33.5 -0.3
ZALV	Zalesovo Beam	33.37	49	P		P	08 10 49.7 -0.8
	comp=Z,1.2nm,0.5s,mb4.1,baz=270,slow=5.8,SNR=3.6						
ZALV				LR	LR		08 26 08.1
	comp=Z,37nm,18.4s,MS3.1,baz=268,slow=40						
ZALV	Zalesovo Beam	33.37	49	P		P	08 10 49.7 -0.8
TORD	Torodi Ar. Bea	42.67	243	P		P	08 12 08.0 -1.3
	comp=Z,2.7nm,0.7s,mb4.1,baz=58,slow=8.4,SNR=4.3						
TORD	Torodi Ar. Bea	42.67	243	P		P	08 12 08.0 -1.3
BOD	Bodaibo	49.53	43	*e*P		P	08 13 00.6 -2.3
BOD	Bodaibo	49.53	43	*e*P		P	08 13 00.6 -2.3
DBIC	Dimbokro	51.78	243	P		P	08 13 21.5 +1.1
	comp=Z,2.6nm,0.8s,mb4.2,baz=56,slow=7.6,SNR=2.9						
DBIC	Dimbokro	51.78	243	P		P	08 13 21.5 +1.1
DBIC	Dimbokro	51.78	243	P		P	08 13 21.5 +1.0
DBIC	Dimbokro	51.78	243	P		P	08 13 21.5 +1.0
CMAR	Chiang Mai Arr	54.77	95	P		P	08 13 41.5 -0.9
	comp=Z,1.0nm,0.4s,mb4.2,baz=298,slow=8.1,SNR=5.5						
CMAR	Chiang Mai Arr	54.77	95	P		P	08 13 41.5 -0.9
CMAR	Chiang Mai Arr	54.77	95	P		P	08 13 41.5 -0.9
KSRS	Korea Array	66.10	60	P		P	08 14 59.4 -0.3
	comp=Z,2.2nm,0.9s,mb4.2,baz=300,slow=8.6,SNR=4.0						
KSRS	Korea Array	66.10	60	P		P	08 14 59.4 -0.3
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
KSRS	Korea Array	66.10	60	P		P	08 14 59.4 -0.3
	comp=Z,2.0nm,0.9s,mb4.2						

IDC 23 08:09:28.4±1.4, 5°.55S×150°.73E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.8/15, mbtmp3.9/4, Error ellipse: s-maj=79.5km s-min=25.2km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.42	227	P	P	08 14 18.4	+0.2
	2.9nm,0.8s,baz=52,slow=11,SNR=12						
ASAR	Alice Springs	24.23	220	P	P	08 14 46.8	-0.4
	2.9nm,0.8s,baz=54,slow=9.3,SNR=29						
STKA	Stephens Creek	27.56	197	P	P	08 15 17.4	+0.2
	3.2nm,1.0s,baz=19,slow=7.6,SNR=3.4						
ILAR	Eielson Array	83.63	22	P	P	08 21 58.1	-0.4
	0.5nm,0.6s,baz=241,slow=5.8,SNR=12						
TORD	Torodi Ar. Bea	148.55	286	PKPbc	PKPbc	08 29 18.6	+0.2
	1.6nm,0.7s,baz=63,slow=4.3,SNR=2.7						

IDC 23 08:16:23.7±0.9, 2°.92S×101°.28E, h70km±6km, mb3.7/10, mb1 3.9/11, mb1mx3.7/23, mbtmp3.7/11, MS3.8/2, Ms1 3.8/2, ms1mx3.1/33, Error ellipse: s-maj=44.5km s-min=13.7km az=54.0

ISCJB 23 08:16:24.7±0.8, 2°.84S±0°.09×101°.4E±0°.1, h93km±6km, mb4.0/11, Error ellipse: s-maj=22.6km s-min=6.9km az=141.6

NEIC 23 08:16:25.2±1.7, 2°.92S×101°.29E, h84km±14km, mb3.9/2, Error ellipse: s-maj=28.4km s-min=9.8km az=55.0

DJA 23 08:16:27, 2°.81S×101°.41E, h49km, MLv4.3/10

ISC 23 08:16:25.8±0.8, 2°.85S±0°.09×101°.4E±0°.1, h84km±6km, n32, σ0°.83/28, mb4.0/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	0.76	5	P	Pn	08 16 41.7	-0.7
KRJI				S	Sn	08 16 54.0	-0.8
KSI	Kapahiang	1.43	124	P	Pn	08 16 50.7	+0.3
KSI				S	Sn	08 17 08.5	-0.4
SDSI	Sungai Dareh	1.91	1	P	Pn	08 16 56.6	0.0
PDSI	Padang	2.15	334	P	Pn	08 17 00.1	+0.4
PPI	Padang Panjang	2.58	337	P	Pn	08 17 06.0	+0.4
RGRI	Rengat	2.66	21	P	Pn	08 17 07.0	+0.4
SISI	Saibi	2.76	303	P	Pn	08 17 08.0	0.0
MDSI	Maura Dua	3.21	120	P	Pn	08 17 14.8	+0.8
LWLI	Liwa	3.41	129	P	Pn	08 17 21.5	+4.7
MNSI	Mandailing Nat	4.06	333	P	Pn	08 17 27.9	+2.4
PSI	Prapat	6.14	336	P	Pn	08 17 52.1	-1.8
	0.7nm,0.3s,baz=160,slow=12,SNR=4.1						
KULM	Kulim	8.12	355	*e*Pn	Pn	08 18 21.8	+0.8
CMAR	Chiang Mai Arr	21.31	354	P	P	08 21 05.8	-0.1
	0.9nm,0.3s,mb3.6,baz=151,slow=6.1,SNR=3.7						
WRA	Warramunga Arr	36.36	120	P	P	08 23 21.0	-0.9
	0.9nm,0.4s,mb4.1,baz=299,slow=10.0,SNR=8.2						
WRA				pP	pP	08 23 39.5	-2.3
	0.4nm,0.3s,baz=297,slow=9.6,SNR=3.4						
WRA	Warramunga Arr	36.36	120	P	P	08 23 21.0	-0.9
WRA				pP	pP	08 23 39.5	-2.3
ASAR	Alice Springs	37.62	126	P	P	08 23 32.5	-0.2
	1.0nm,0.3s,mb4.1,baz=300,slow=7.8,SNR=17						
STKA	Stephens Creek	47.54	132	P	P	08 24 53.4	+0.5
	2.0nm,0.6s,mb4.1,baz=307,slow=9.2,SNR=5.4						
STKA				sP	sP	08 25 18.2	-4.7
	2.5nm,0.7s,baz=312,slow=10,SNR=2.2						
STKA	Stephens Creek	47.54	132	*e*P	P	08 24 53.7	+0.8
	0.8nm,0.9s,mb3.5						
STKA				sP	sP	08 25 18.2	-4.7
SONM	Songino Array	50.67	4	P	P	08 25 17.1	+0.7
	0.6nm,0.4s,mb3.9,baz=187,slow=9.3,SNR=2.8						
SONM				LR	LR	08 50 48.6	
	comp=Z,69nm,18.5s,baz=202,slow=41						
SONM	Songino Array	50.67	4	P	P	08 25 17.1	+0.7
SONM				LR	LR	08 50 48.6	
MKAR	Makanchi Array	52.23	343	P	P	08 25 27.7	-0.4
	0.8nm,0.3s,mb4.2,baz=158,slow=9.7,SNR=6.7						
KURK	Kurchatov	56.82	343	*e*P	P	08 26 02.0	+0.7
	1.8nm,0.8s,mb4.2						
ZALV	Zalesovo Beam	58.27	349	P	P	08 26 10.7	-0.7
	1.7nm,0.4s,mb4.5,baz=167,slow=5.4,SNR=9.6						
BVAR	Borovoye Array	61.47	339	P	P	08 26 32.6	-0.7
	0.5nm,0.4s,mb3.9,baz=126,slow=7.3,SNR=3.4						
BRTR	Keskin Array B	74.93	312	P	P	08 27 56.5	-1.3
	0.5nm,0.6s,mb3.4,baz=103,slow=6.4,SNR=3.6						
AFI	Afiamalu	86.24	104	LR	LR	09 09 57.0	
	comp=Z,65nm,19.0s,baz=136,slow=37						
ARCES	ARCESS Array B	87.75	340	P	P	08 29 05.7	+0.8
	5.2nm,1.0s,mb4.5,baz=123,slow=6.5,SNR=3.3						
CFAA	Coronel Fontan	144.34	195	PKP	PKPdf	08 35 52.7	-0.1
	0.2nm,0.5s,baz=179,slow=4.3,SNR=5.3						
CFAA	Coronel Fontan	144.34	195	PKP	PKPdf	08 35 52.7	-0.1
CPUP	Villa Florida	144.44	214	PKP	PKPdf	08 35 53.3	+0.2
	0.6nm,0.5s,baz=207,slow=2.3,SNR=2.6						
CPUP				pPKP	pPKPdf	08 36 11.9	-4.8
	1.4nm,0.7s,baz=143,slow=5.3,SNR=2.2						
TXAR	Lajitas Array	144.50	40	PKP	PKPdf	08 35 52.6	-0.5
	0.6nm,0.4s,baz=336,slow=2.0,SNR=25						
TXAR				pPKP	pPKPdf	08 36 11.7	-5.1
	0.5nm,0.5s,baz=243,slow=0.4,SNR=5.1						
BDFB	Brasilia	144.60	238	PKP	PKPdf	08 35 52.7	-0.9
	1.1nm,0.4s,baz=117,slow=2.3,SNR=3.0						
BDFB				pPKP	pPKPdf	08 36 13.0	-4.2
	3.5nm,0.7s,baz=164,slow=7.4,SNR=3.4						

CASC 23 08:56:00.7±2.1, 11°.14N×87°.71W, h55km±138km, MD3.9, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	Leon	1.50	32	*e*P	Pn	08 56 25.4	+0.1
CRUN	El Crucero	1.62	58	*e*P	Pn	08 56 27.2	+0.3
CSAN		1.64	50	*e*P	Pn	08 56 27.3	+0.2
CNGN	Cerro Negro	1.68	36	*e*P	Pn	08 56 27.8	+0.1
CRIN	San Cristobal	1.69	23	*e*P	Pn	08 56 28.1	+0.3
TELN	Telica	1.69	30	*e*P	Pn	08 56 28.8	+0.9
TICN	Ticuantepe	1.70	58	*e*P	Pn	08 56 31.3	+3.3
TISN	Laguna Tiscapa	1.73	55	*e*P	Pn	08 56 27.9	-0.5
SSN	San Juan del S	1.83	85	*e*P	Pn	08 56 29.1	-0.6
SSN				*e*S	Sn	08 56 54.1	+2.2
HUEN		1.92	51	*e*P	Pn	08 56 30.8	-0.3
CONN	Concepcion	2.09	78	*e*P	Pn	08 56 33.5	+0.1
CNCH	Conchagua	2.13	357	*e*P	Pn	08 56 33.7	-0.2
BOAB	BOACO BROADBAN	2.39	57	*e*P	Pn	08 56 36.8	-0.6
JCR	Jicaral	2.86	116	*e*P	Pn	08 56 43.3	-0.6
JCR				*e*S	Sn	08 57 15.4	-1.7
TGUH	Tegucigalpa,Un	2.94	8	*e*P	Pn	08 56 45.3	+0.4
TGUH				*e*S	Sn	08 57 20.4	+1.4
CGA2	Cerro Gallo 2	3.38	109	*e*P	Pn	08 56 52.5	+1.5
PRS1	Puriscal	3.53	109	*e*P	Pn	08 56 54.9	+1.8
LAJ	Bijagual	3.75	109	*e*P	Pn	08 56 52.5	-3.6
LAJ				*e*S	Sn	08 57 29.8	-9.1
SJS	Escuela Geolog	3.79	108	*e*P	Pn	08 56 58.5	+2.0
URSC	Urasca	4.08	108	*e*P	Pn	08 57 03.2	+2.6
ACR	Cerro Adams	5.11	118	*e*P	Pn	08 57 11.2	-3.6

IDC 23 08:56:49.7±1.6, 5°.10S×145°.33E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/17, mbtmp3.9/8, ML3.5/1, Error ellipse: s-maj=52.2km s-min=23.7km az=111.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.22	215	P	Pn	09 01 04.2	-0.1
	0.2nm,0.3s,baz=40,slow=12,SNR=7.6						
ASAR	Alice Springs	21.50	210	P	P	09 01 40.0	-0.2
	0.8nm,0.8s,baz=33,slow=13,SNR=11						
FITZ	Fitzroy Crossi	23.18	235	P	P	09 01 58.6	+0.3
	1.0nm,0.5s,baz=52,slow=9.7,SNR=3.6						
CMAR	Chiang Mai Arr	51.36	298	P	P	09 05 56.7	+0.2
	4.2nm,0.5s,baz=122,slow=5.9,SNR=23						
MKAR	Makanchi Array	75.75	321	P	P	09 08 37.6	+0.3
	0.6nm,0.4s,baz=103,slow=12,SNR=3.6						
ZALV	Zalesovo Beam	77.37	328	P	P	09 08 45.4	-0.9
	1.4nm,0.5s,baz=120,slow=8.5,SNR=2.8						
BVAR	Borovoye Array	85.07	324	P	P	09 09 27.5	+0.2
	1.5nm,0.6s,baz=108,slow=8.3,SNR=3.5						
ILAR	Eielson Array	85.32	23	P	P	09 09 28.7	+0.4
	0.4nm,0.7s,baz=250,slow=4.9,SNR=6.6						
DBIC	Dimbokro	150.31	274	PKPbc	PKPbc	09 16 43.9	-0.3
	2.1nm,0.5s,baz=98,slow=0.5,SNR=4.8						

MOS 23 09:09:42.6±1.1, 39°.48N×33°.00E, h10km, mb4.4/22, Error ellipse: s-maj=6.5km s-min=4.4km az=108.7

ISK 23 09:09:42.5, 39°.46N×33°.04E, h4km, ML4.5

NEIC 23 09:09:42.0, 39°.46N×33°.05E, h4km, mb4.5/21, ML4.6(ISK), After ISK.

DDA 23 09:09:42.4, 39°.43N×33°.04E, h14km±1km, Ml4.7

CSEM 23 09:09:43.6±0.1, 39°.48N×33°.06E, h5km, mb4.4/26, Error ellipse: s-maj=3.0km s-min=2.3km az=176.0

IDC 23 09:09:43.3±0.6, 39°.52N×33°.03E, h0km, mb4.1/14, mb1 4.1/22, mb1mx4.0/32, mbtmp4.0/22, ML3.8/7, MS3.5/23, Ms1 3.5/23, ms1mx3.4/41, Error ellipse: s-maj=11.6km s-min=7.0km az=161.0

ISCJB 23 09:09:43.2±0.3, 39°.48N±0°.02×33°.03E±0°.02, h13km±2km, mb4.3/27, MS3.4/15, Error ellipse: s-maj=2.8km s-min=2.1km az=166.7

ISC 23 09:09:43.7±0.3, 39°.47N±0°.02×33°.05E±0°.02, h4km±2km, n400, σ1°.09/439, mb4.3/27, MS3.4/15, 32C-12D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	Af¨ar-Bala (A	0.03	140	PG	Pg	09 09 43.6	-0.9
AFSR	Af¨ar-Bala (A	0.03	140	*i* Pg	Pg	09 09 43.6	-0.9
BBAL	Bala	0.10	36	⇑*i*P	Pg	09 09 46.3	+0.6
BBAL				*i* S	Sg	09 09 48.3	+1.3
BBAL	Bala	0.10	36	*i* P	Pg	09 09 46.3	+0.6
BBAL				*i* S	Sg	09 09 48.3	+1.3
LOD	Lodumlu	0.48	333	PG	Pg	09 09 52.4	-0.5
LOD				*e*SG	Sg	09 09 59.8	+0.7
LOD	Lodumlu	0.48	333	*i* Pg	Pg	09 09 52.4	-0.5
LOD				*e*Sg	Sg	09 09 59.8	+0.7
BR131	Keskin Array S

BALT *i* S **Sn** **09 10 48.0 +2.3**
SHUT Suhut-Afyon 2.15 246 *e*PN **Pn** **09 10 20.7 +0.4**
SHUT Suhut-Afyon 2.15 246 *e*Pn **Pn** **09 10 20.7 +0.4**
GULT Gulveren 2.17 297 *e*PN **Pn** **09 10 20.5 -0.2**
GULT Gulveren 2.17 297 *e*Pn **Pn** **09 10 20.5 -0.1**
KDZE Karadeniz Ereo 2.22 327 *e*PN **Pn** **09 10 21.4 +0.2**
KDZE Karadeniz Ereo 2.22 327 *e*Pn **Pn** **09 10 21.5 +0.3**
GPA Golpazari 2.26 292 *e*PN **Pn** **09 10 21.6 -0.2**
GPA Golpazari 2.26 292 *e*Pn **Pn** **09 10 21.6 -0.3**
BYBT Boyabat 2.39 33 *e*PN **Pn** **09 10 23.4 -0.2**
BYBT Boyabat 2.39 33 *e*Pn **Pn** **09 10 23.4 -0.2**
BOYT Boyabat 2.41 35 *i* P **Pg** **09 10 27.1 -2.8**
BOYT Boyabat 2.41 35 *i* P **Pg** **09 10 27.1 -2.8**
SPNC Sapanca-Adapaz 2.43 301 *e*PN **Pn** **09 10 23.7 -0.4**
SPNC Sapanca-Adapaz 2.43 301 *e*Pn **Pn** **09 10 23.7 -0.5**
GULE Gulek 2.57 148 *i* P **Pn** **09 10 26.1 +0.1**
GULE Gulek 2.57 148 *i* P **Pn** **09 10 26.1 +0.1**
BZK Bozkurt 2.59 16 *e*PN **Pn** **09 10 26.3 -0.1**
BZK Bozkurt 2.59 16 *e*Pn **Pn** **09 10 26.3 -0.1**
KARA Karaisali 2.71 144 *e*PN **Pn** **09 10 28.7 +0.7**
KARA Karaisali 2.71 144 *e*Pn **Pn** **09 10 28.7 +0.7**
PINB Pinarbasi 2.73 106 ⇑*i*P **Pn** **09 10 28.7 +0.5**
PINB *i* S **Sn** **09 11 00.6 -1.0**
PINB Pinarbasi 2.73 106 *i* P **Pn** **09 10 28.7 +0.5**
PINB *i* S **Sn** **09 11 00.6 -1.0**
GDZ Gediz 2.79 263 ⇑*i*P **Pn** **09 10 27.6 -1.6**
GDZ *i* S **Sg** **09 11 12.0 -1.5**
GDZ Gediz 2.79 263 *i* P **Pn** **09 10 27.6 -1.6**
KVT Kavak 2.80 54 *e*PN **Pn** **09 10 29.2 -0.1**
KVT Kavak 2.80 54 *e*Pn **Pn** **09 10 29.2 -0.1**
TOKT Tokat 2.82 71 *e*PN **Pn** **09 10 29.9 +0.3**
TOKT Tokat 2.82 71 *e*Pn **Pn** **09 10 29.9 +0.4**
ERMK Ermenek 2.82 182 ⇓*i*P **Pn** **09 10 23.2 -6.3**
ERMK *e*S **Sn** **09 11 01.9 -2.1**
KOZT Kozan 2.95 131 *e*PN **Pn** **09 10 31.5 +0.2**
SARI SarD1z-Kayseri 2.95 104 *e*PN **Pn** **09 10 29.2 -2.0**
SARI SarD1z-Kayseri 2.95 104 *e*Pn **Pn** **09 10 29.2 -2.0**
SCER sogukcermik 3.17 82 ⇑*i*P **Pn** **09 10 34.6 +0.2**
SCER *e*S **Sn** **09 11 12.3 -0.3**
SCER sogukcermik 3.17 82 *i* P **Pn** **09 10 34.6 +0.2**
SCER *e*S **Sn** **09 11 12.4 -0.2**
ANDN Andirin 3.20 125 ⇑*i*P **Pn** **09 10 37.8 +3.1**
ANDN *i* S **Sg** **09 11 26.1 -0.3**
ANDN Andirin 3.20 125 *i* P **Pn** **09 10 37.8 +3.1**
CEYT Ceyhan 3.24 138 *e*PN **Pn** **09 10 35.7 +0.3**
CEYT Ceyhan 3.24 138 *e*Pn **Pn** **09 10 35.7 +0.4**
RSDY Resadiye-TOKAT 3.42 73 *e*PN **Pn** **09 10 38.6 +0.9**
RSDY Resadiye-TOKAT 3.42 73 *e*Pn **Pn** **09 10 38.6 +0.9**
KMRS Kahramanmaras 3.60 122 *e*PN **Pn** **09 10 40.6 +0.4**
KMRS Kahramanmaras 3.60 122 *e*Pn **Pn** **09 10 40.6 +0.4**
DARE Darende-Malaty 3.73 96 *e*PN **Pn** **09 10 40.5 -1.5**
DARE Darende-Malaty 3.73 96 *e*Pn **Pn** **09 10 40.5 -1.5**
MYA Malataya 4.35 103 *e*PN **Pn** **09 10 52.0 +1.5**
MYA Malataya 4.35 103 *e*Pn **Pn** **09 10 52.0 +1.5**
MALT Malatya 4.35 104 *e*PN **Pn** **09 10 51.9 +1.3**
MALT Malatya 4.35 104 *e*Pn **Pn** **09 10 51.4 +0.8**
MALT *e*Pg **Pb** **09 11 02.8 +2.1**
MALT Malatya 4.35 104 *e*P **Pn** **09 10 51.1 +0.5**
MALT Malatya 4.35 104 *e*P **Pn** **09 10 51.4 +0.8**
MALT Malatya 4.35 104 ⇑*i*P **Pn** **09 10 51.5 +0.9**
MALT Malatya 4.35 104 *e*Pn **Pn** **09 10 51.3 +0.7**
MALT Malatya 4.35 104 *e*Pg **Pb** **09 11 02.8 +2.1**
CSS Prodhromos 4.50 177 *e*Pn **Pn** **09 10 51.9 -0.7**
CSS Prodhromos 4.50 177 *e*P **Pn** **09 10 53.1 +0.5**
CSS Prodhromos 4.50 177 P **Pn** **09 10 52.7 +0.1**
CSS Prodhromos 4.50 177 *e*Pn **Pn** **09 10 51.9 -0.7**
CSS Prodhromos 4.50 177 P **Pn** **09 10 52.7 +0.1**
ESPY Espiye-Giresun 4.58 70 *e*PN **Pn** **09 10 54.7 +1.0**
ESPY Espiye-Giresun 4.58 70 *e*Pn **Pn** **09 10 54.7 +1.0**
BLCB Balcova 4.81 259 P **Pn** **09 10 57.0 +0.2**
BLCB Balcova 4.81 259 P **Pn** **09 10 57.0 +0.2**
ARG Arkhangelos 5.07 232 *e*P **Pg** **09 11 25.2 +4.4**
SEV Sevastopol' 5.10 5 ⇓*e*P **Pn** **09 10 58.5 -2.3**
SEV *e*S **Sn** **09 11 56.6 -3.4**
SEV Sevastopol' 5.10 5 *e*P **Pn** **09 10 58.5 -2.3**
SEV *e*S **Sn** **09 11 56.6 -3.4**
SMG Samos 5.17 252 *e*P **Pn** **09 11 02.2 +0.3**
PRK Paraskevi 5.26 270 *e*P **Pn** **09 11 03.5 +0.5**
PRK Paraskevi 5.26 270 P **Pn** **09 11 03.8 +0.8**
PRK Paraskevi 5.26 270 P **Pn** **09 11 03.8 +0.8**
NIS1 Nisyros Isl. 5.45 240 P **Pn** **09 11 06.8 +1.2**
NIS1 Nisyros Isl. 5.45 240 P **Pn** **09 11 06.8 +1.2**
SIM Simferopol' 5.54 8 *e*P **Pn** **09 11 10.7 +3.9**
SIM pmax pmax
comp=Z,35nm,0.8s
ALN Alexandroupoli 5.55 287 *e*P **Pn** **09 11 06.4 -0.6**
ALN Alexandroupoli 5.55 287 P **Pn** **09 11 06.1 -0.9**
ALN Alexandroupoli 5.55 287 P **Pn** **09 11 06.1 -0.9**
CHOS Chios island 5.56 261 *e*P **Pn** **09 11 08.2 +1.0**
CHOS Chios island 5.56 261 P **Pn** **09 11 07.5 +0.3**
CHOS Chios island 5.56 261 P **Pn** **09 11 07.5 +0.3**
SIGR SIGRI 5.58 270 P **Pn** **09 11 07.4 -0.1**
SIGR SIGRI 5.58 270 P **Pn** **09 11 07.4 -0.1**
SUDU Sudak 5.61 14 *e*P **Pn** **09 11 07.9 +0.1**
SUDU *e*S **Sn** **09 12 13.1 +0.4**
SUDU Sudak 5.61 14 *e*P **Pn** **09 11 07.9 +0.1**
SUDU *e*S **Sn** **09 12 13.1 +0.4**
RDO Rodhopi 5.98 289 *e*P **Pn** **09 11 12.8 -0.2**
RDO Rodhopi 5.98 289 P **Pn** **09 11 12.7 -0.3**
RDO Rodhopi 5.98 289 P **Pn** **09 11 12.7 -0.3**
TIRR Tirgusor 6.07 327 *e*Pn **Pn** **09 11 12.6 -1.5**
TIRR Tirgusor 6.07 327 ⇑P **Pn** **09 11 15.1 +1.0**
TIRR Tirgusor 6.07 327 ⇑*i*P **Pn** **09 11 15.1 +1.0**
TIRR Tirgusor 6.07 327 *e*Pn **Pn** **09 11 12.6 -1.5**
TIRR Tirgusor 6.07 327 P **Pn** **09 11 15.1 +1.0**
LIA Limnos Island 6.08 277 *e*P **Pn** **09 11 20.5 +6.1**
LIA Limnos Island 6.08 277 P **Pn** **09 11 15.1 +0.7**
LIA Limnos Island 6.08 277 P **Pn** **09 11 15.1 +0.7**
KARP Karpathos 6.10 232 *e*P **Pn** **09 11 14.8 +0.2**
ANN Anapa 6.25 30 *e*P **Pn** **09 11 14.9 -1.7**
ANN *e*S **Sn** **09 12 27.1 -1.3**
ANN Anapa 6.25 30 *e*P **Pn** **09 11 14.9 -1.7**
ANN *e*S **Sn** **09 12 27.1 -1.3**
APE Apeiranthos 6.38 250 *e*P **Pn** **09 11 19.1 +0.6**
KSDI Kefar Szold 6.61 161 *e*P **Pn** **09 11 22.5 +1.0**
KAVA Kavala 6.71 286 P **Pn** **09 11 22.3 -0.6**
KAVA Kavala 6.71 286 P **Pn** **09 11 22.3 -0.6**
MMAI Mount Meron Ar 6.71 163 Pn **Pn** **09 11 23.3 +0.3**
comp=Z,5.5nm,0.3s,baz=341,slow=12,SNR=7.9
MMAI LR LR 09 14 35.9
comp=Z,710nm,18.2s,baz=310,slow=43
CFR Carcaliu 6.77 329 ⇓P **Pn** **09 11 24.2 +0.5**
CFR Carcaliu 6.77 329 ⇓*i*P **Pn** **09 11 24.2 +0.5**
CFR Carcaliu 6.77 329 P **Pn** **09 11 24.2 +0.5**
ZKR Zakros 6.96 234 *e*P **Pn** **09 11 28.8 +2.3**
NPS Neapolis 7.26 237 *e*P **Pn** **09 11 30.7 +0.2**
LAST Lasithi 7.41 237 *e*P **Pn** **09 11 32.2 -0.3**
LAST Lasithi 7.41 237 P **Pn** **09 11 33.7 +1.2**
LAST Lasithi 7.41 237 P **Pn** **09 11 33.7 +1.2**
SRS Serrai 7.42 286 P **Pn** **09 11 31.7 -0.9**
SRS Serrai 7.42 286 P **Pn** **09 11 31.7 -0.9**
PLG Polygyros 7.44 280 *e*P **Pn** **09 11 32.2 -0.7**
PLG Polygyros 7.44 280 P **Pn** **09 11 32.7 -0.2**
PLG Polygyros 7.44 280 P **Pn** **09 11 32.7 -0.2**
NEO Neokhori 7.61 272 *e*P **Pn** **09 11 39.0 +3.6**
LKR Lokris 7.86 267 *e*P **Pn** **09 11 42.0 +3.2**
VRI Vrincioaia 7.91 326 ⇓P **Pn** **09 11 39.7 +0.3**
VRI Vrincioaia 7.91 326 ⇓*i*P **Pn** **09 11 39.7 +0.3**
VRI Vrincioaia 7.91 326 P **Pn** **09 11 39.7 +0.3**
ASF Jabal al Asfar 7.92 156 Pn **Pn** **09 11 40.4 +0.8**
comp=Z,0.4nm,0.3s,baz=224,slow=3.7,SNR=6.7
ASF LR LR 09 15 04.1
comp=Z,407nm,19.9s,baz=84,slow=40
ASF Jabal al Asfar 7.92 156 P **Pn** **09 11 40.4 +0.8**
ASF MLR MLR
comp=Z,407nm,19.9s
SIVA Sivas 7.93 239 *e*P **Pn** **09 11 42.6 +2.9**
SIVA Sivas 7.93 239 P **Pn** **09 11 42.1 +2.4**
SIVA Sivas 7.93 239 P **Pn** **09 11 42.1 +2.4**
PLOR Plostina 7.93 326 ⇑⇑P **Pn** **09 11 40.4 +0.7**
PLOR Plostina 7.93 326 ⇑*i*P **Pn** **09 11 40.4 +0.7**
PLOR Plostina 7.93 326 P **Pn** **09 11 40.4 +0.7**
KNT Kendrikon 7.94 286 P **Pn** **09 11 39.9 +0.1**
KNT Kendrikon 7.94 286 P **Pn** **09 11 39.9 +0.1**
DID Didima 7.94 259 *e*P **Pn** **09 11 41.3 +1.4**
MLR Muntele Rosu 7.99 321 ⇑⇑P **Pn** **09 11 40.3 -0.1**
MLR Muntele Rosu 7.99 321 ⇑*i*P **Pn** **09 11 40.3 -0.1**
MLR Muntele Rosu 7.99 321 P **Pn** **09 11 40.3 -0.1**
LTK Loutraki 8.01 263 *e*P **Pn** **09 11 42.6 +1.8**
LTK Loutraki 8.01 263 P **Pn** **09 11 42.4 +1.6**
LTK Loutraki 8.01 263 P **Pn** **09 11 42.4 +1.6**
VTS Vitosha 8.07 296 *e*P **Pn** **09 11 41.6 0.0**
VTS Vitosha 8.07 296 ⇓P **Pn** **09 11 41.1 -0.5**
VTS Vitosha 8.07 296 P **Pn** **09 11 41.4 -0.2**
VTS Vitosha 8.07 296 ⇓*i*P **Pn** **09 11 41.1 -0.5**
VTS Vitosha 8.07 296 P **Pn** **09 11 41.1 -0.5**
VAM Vamos 8.12 243 *e*P **Pn** **09 11 44.7 +2.4**
KIS Kishinev 8.14 339 *e* **Pg** **09 12 21.0 +1.6**
KIS LRM 09 15 54.0
comp=Z,500nm,14.0s
KARN Karanos 8.32 244 *e*P **Pn** **09 11 47.6 +2.6**
KARN Karanos 8.32 244 P **Pn** **09 11 47.3 +2.3**
KARN Karanos 8.32 244 P **Pn** **09 11 47.3 +2.3**
AGG Agios Georgios 8.33 270 *e*P **Pn** **09 11 44.7 -0.5**
AGG Agios Georgios 8.33 270 P **Pn** **09 11 46.1 +0.9**
AGG Agios Georgios 8.33 270 P **Pn** **09 11 46.1 +0.9**
VOIR 8.40 318 ⇑P **Pn** **09 11 46.4 +0.3**
VOIR 8.40 318 ⇑*i*P **Pn** **09 11 46.4 +0.3**
VOIR 8.40 318 P **Pn** **09 11 46.4 +0.3**
VLI Veliai 8.43 254 *e*P **Pn** **09 11 50.5 +3.9**
KIV Kislovodsk 8.49 55 *e*P **Pn** **09 11 49.5 +2.2**
KIV *e*S **Sn** **09 13 25.4 +1.9**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV Kislovodsk 8.49 55 *e*P **Pn** **09 11 49.5 +2.2**
comp=Z,9.0nm,1.0s
KIV *e*S **Sn** **09 13 25.4 +1.9**
GUR Goura 8.51 263 *e*P **Pn** **09 11 48.1 +0.4**
GUR Goura 8.51 263 P **Pn** **09 11 49.2 +1.5**
GUR Goura 8.51 263 P **Pn** **09 11 49.2 +1.5**
THL Klokotos Trika 8.53 274 *e*P **Pn** **09 11 55.6 +7.6**
VLX Vlachokerasia 8.63 259 *e*P **Pn** **09 11 51.0 +1.6**
VLX Vlachokerasia 8.63 259 P **Pn** **09 11 52.0 +2.6**
VLX Vlachokerasia 8.63 259 P **Pn** **09 11 52.0 +2.6**
EVR Evrytania 8.75 270 *e*P **Pn** **09 11 47.2 -3.7**
ZEI Tsey 8.83 65 *e*P **Pn** **09 11 56.6 +4.6**
ZEI pmax pmax
comp=Z,13nm,0.9s
GNI Garni 9.03 82 Pn **Pn** **09 11 58.0 +3.3**
comp=Z,0.1nm,0.3s,baz=166,slow=17,SNR=2.8
GNI LR LR 09 15 52.6
comp=Z,480nm,21.2s,baz=272,slow=41
GNI Garni 9.03 82 ⇑*e*P **Pn** **09 11 54.5 -0.2**
GNI pmax pmax
comp=Z,32nm,1.7s
GNI Garni 9.03 82 *e*P **Pn** **09 11 54.5 -0.2**
comp=Z,32nm,1.7s
ITM Ithomi 9.04 259 *e*P **Pn** **09 12 01.2 +6.3**
ITM Ithomi 9.04 259 P **Pn** **09 12 00.1 +5.2**
FNA Florina 9.04 282 P **Pn** **09 11 55.8 +0.9**
FNA Florina 9.04 282 P **Pn** **09 11 55.8 +0.9**
RLS Riolos of Patr 9.16 265 *e*P **Pn** **09 12 01.8 +5.3**
KRUS Krusevo 9.20 286 *e*Pn **Pn** **09 11 56.4 -0.7**
GOF Gofitskoye 9.27 50 *e*P **Pn** **09 11 51.1 -7.0**
EIL Elat 9.90 170 Pn **Pn** **09 12 06.5 -0.3**
comp=Z,0.8nm,0.3s,baz=331,slow=13,SNR=4.2
EIL LR LR 09 16 17.1
comp=Z,147nm,20.4s,baz=297,slow=40
EIL Elat 9.90 170 *e*P **Pn** **09 12 07.6 +0.9**
EIL Elat 9.90 170 Pn **Pn** **09 12 06.4 -0.3**
BURAR Bucovina Array 9.93 328 ⇑P **Pn** **09 12 07.9 +0.8**
BURAR Bucovina Array 9.93 328 ⇑*i*P **Pn** **09 12 07.9 +0.8**
BURAR Bucovina Array 9.93 328 ⇑*i*P **Pn** **09 12 07.9 +0.8**
BUR08 Bucovina Ar. S 9.96 328 *e*Pn **Pn** **09 12 07.4 0.0**
BUR08 Bucovina Ar. S 9.96 328 *e*Pn **Pn** **09 12 07.4 -0.1**
BHD Baghdad 11.03 121 *ex* x 09 12 21.0
BHD *ex* x 09 13 14.0
BHD *ex* x 09 14 25.0
BHD *ex* x 09 15 48.0
KIEV Kiev 11.55 348 *e*Pn **Pn** **09 12 27.3 -2.0**
KIEV Kiev 11.55 348 *e*P **Pn** **09 12 27.3 -1.9**
KIEV Kiev 11.55 348 *e*P **Pn** **09 12 27.3 -1.9**
AKASG Malin Array Be 11.55 348 Pn **Pn** **09 12 26.2 -3.1**
comp=Z,1.6nm,0.3s,baz=157,slow=13,SNR=5.4
AKASG Malin Array Be 11.55 348 P **Pn** **09 12 26.2 -3.1**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
VSR Storozhevoye 12.51 18 *e*P **Pn** **09 12 43.4 +1.1**
VSR *e*S **Sn** **09 15 03.5 +1.5**
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR smax
comp=E,50nm,1.2s
VSR smax
comp=Z,40nm,1.5s
VSR smax
comp=N,20nm,0.8s
VSR Storozhevoye 12.51 18 *e*P **Pn** **09 12 43.4 +1.1**
VSR *e*S **Sn** **09 15 03.5 +1.5**
comp=N,20nm,0.8s
VRHR Novokhopersk 13.09 25 *e*P **Pn** **09 12 52.6 +2.3**
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR pmax pmax
comp=N,2.0nm,0.2s
VRHR Novokhopersk 13.09 25 *e*P **Pn** **09 12 52.6 +2.3**
comp=N,2.0nm,0.2s
VAE Valguarnera 14.74 268 LR LR 09 18 36.5
comp=N,135nm,21.1s,baz=327,slow=36
SOKA Soboth 14.99 305 ⇑*i*P **Pn** **09 13 25.5 +9.3**
comp=N,3.5nm,0.8s
VRAC Vranov 15.30 315 LR LR 09 20 06.4
comp=N,163nm,19.7s,baz=131,slow=41
OBN Obninsk 15.83 7 ⇑*e*P **Pn** **09 13 26.7 -0.5**
OBN pmax pmax
comp=Z,27nm,1.4s
OBN MLR MLR
comp=Z,100nm,15.0s
MOA Molln 15.94 308 ⇑*i*P **Pn** **09 13 36.7 +8.0**
comp=Z,7.3nm,1.2s
MOS Moscow 16.57 9 *e*P **Pn** **09 13 38.3 +1.7**
MOS Moscow 16.57 9 *e*P **Pn** **09 13 38.3 +1.7**
GERES GERESS Array B 16.71 310 Pn **Pn** **09 13 38.7 +0.1**
comp=Z,0.3nm,0.3s,baz=102,slow=9.1,SNR=2.9
GERES GERESS Array B 16.71 310 P **Pn** **09 13 38.7 +0.1**
GERES GERESS Array B 16.71 310 P **Pn** **09 13 38.7 +0.1**
DAVOX Davos/Dischmat 18.39 301 Pn **Pn** **09 14 00.1 +0.7**
comp=Z,0.2nm,0.3s,baz=354,slow=18,SNR=2.5
DAVOX LR LR 09 21 18.1
comp=Z,180nm,18.3s,baz=89,slow=38
DAVOX Davos/Dischmat 18.39 301 P **Pn** **09 14 00.1 +0.7**
DAVOX Davos/Dischmat 18.39 301 P **Pn** **09 14 00.1 +0.7**
PGF Pioggiola 18.40 287 *e*P **Pn** **09 13 58.5 -1.0**
PGF Pioggiola 18.40 287 *e*P **Pn** **09 13 58.5 -1.0**
PGF Pioggiola 18.40 287 *e*P **Pn** **09 13 58.5 -1.0**
KEST Kesra 19.14 266 P **Pn** **09 14 08.7 +0.2**
comp=Z,0.1nm,0.3s,baz=52,slow=9.9,SNR=2.6
KEST LR LR 09 23 28.6
comp=Z,50nm,18.7s,baz=33,slow=43
KEST Kesra 19.14 266 P **Pn** **09 14 08.7 +0.1**
VSU Vasula 19.44 350 ⇓*e*P **Pn** **09 14 11.6 -0.5**
VSU pmax pmax
comp=Z,17nm,1.1s
VSU Vasula 19.44 350 *e*P **Pn** **09 14 11.6 -0.5**
comp=Z,17nm,1.1s
SBF Sospel 19.60 291 *e*P **Pn** **09 14 13.1 -1.0**
comp=Z,65nm,1.1s
SBF Sospel 19.60 291 *e*P **Pn** **09 14 13.1 -1.0**
comp=Z,32nm,1.1s
SBF Sospel 19.60 291 *e*P **Pn** **09 14 13.1 -1.0**
SBF pmax pmax
comp=Z,32nm,1.1s
SBF Sospel 19.60 291 *e*P **Pn** **09 14 13.1 -1.0**
comp=Z,32nm,1.1s
BFO Black Forest 19.83 305 *e*P **Pn** **09 14 14.9 -1.9**
comp=Z,12nm,1.0s
BFO Black Forest 19.83 305 *e*P **Pn** **09 14 14.9 -1.8**
BFO pmax pmax
comp=Z,12nm,1.0s
BFO Black Forest 19.83 305 *e*P **Pn** **09 14 14.9 -1.8**
comp=Z,12nm,1.0s
SENIN Lac Senin/Sane 20.03 299 *e*P **P** **09 14 18.3 +0.9**
comp=Z,10nm,0.9s
SENIN Lac Senin/Sane 20.03 299 *e*P **P** **09 14 18.3 +0.9**
comp=Z,10nm,0.9s
MBDF Montbardon 20.16 294 *e*P **P** **09 14 19.1 +0.3**
comp=Z,26nm,0.7s
MBDF Montbardon 20.16 294 *e*P **P** **09 14 19.1 +0.3**
comp=Z,13nm,0.7s
MBDF Montbardon 20.16 294 *e*P **P** **09 14 19.1 +0.3**
MBDF pmax pmax
comp=Z,13nm,0.7s
MBDF Montbardon 20.16 294 *e*P **P** **09 14 19.1 +0.3**
comp=Z,13nm,0.7s
FRF La Foret Royal 20.16 290 *e*P **P** **09 14 18.8 -0.1**
FRF La Foret Royal 20.16 290 *e*P **P** **09 14 18.8 -0.1**
FRF La Foret Royal 20.16 290 *e*P **P** **09 14 18.8 -0.1**
BNI Bardonecchia 20.26 295 *e*P **P** **09 14 17.9 -2.0**
comp=Z,18nm,1.1s
BNI Bardonecchia 20.26 295 *e*P **P** **09 14 17.9 -2.0**
BNI pmax pmax
comp=Z,19nm,1.1s
BNI Bardonecchia 20.26 295 *e*P **P** **09 14 17.9 -2.0**
comp=Z,18nm,1.1s
LPG La Plagne 20.26 296 *e*P **P** **09 14 20.7 +0.7**
comp=Z,14nm,0.7s
LPG La Plagne 20.26 296 *e*P **P** **09 14 20.7 +0.7**
comp=Z,6.8nm,0.7s
LPG La Plagne 20.26 296 *e*P **P** **09 14 20.7 +0.7**
LPG pmax pmax
comp=Z,7.0nm,0.7s
LPG La Plagne 20.26 296 *e*P **P** **09 14 20.7 +0.7**
comp=Z,6.8nm,0.7s
LPL La Plagne 20.28 296 *e*P **P** **09 14 20.9 +0.8**
LPL La Plagne 20.28 296 *e*P **P** **09 14 20.9 +0.8**
LPL La Plagne 20.28 296 *e*P **P** **09 14 20.9 +0.8**
CDF Champ du Feu 20.52 304 *e*P **P** **09 14 23.2 +0.4**
CDF Champ du Feu 20.52 304 *e*P **P** **09 14 23.2 +0.4**
CDF Champ du Feu 20.52 304 *e*P **P** **09 14 23.2 +0.4**
ECH Echery 20.54 304 *e*P **P** **09 14 23.6 +0.6**
comp=Z,14nm,0.9s
ECH Echery 20.54 304 *e*P **P** **09 14 23.6 +0.6**
ECH pmax pmax
comp=Z,14nm,0.9s
ECH Echery 20.54 304 *e*P **P** **09 14 23.6 +0.6**
comp=Z,14nm,0.9s
AKTK Aktyubinsk 20.70 50 P **P** **09 14 23.6 -1.1**
AKTK LR LR 09 25 17.2
AKTK Aktyubinsk 20.70 50 P **P** **09 14 23.6 -1.0**
comp=Z,66nm,18.5s
AKTO Aktyubinsk 20.70 50 P **P** **09 14 23.6 -1.1**
comp=Z,10.0nm,0.7s,baz=237,slow=10,SNR=15
AKTO LR LR 09 25 17.2
comp=Z,66nm,18.5s,MS3.0,baz=66,slow=45
AKTO Aktyubinsk 20.70 50 P **P** **09 14 23.6 -1.0**
AKTO pmax pmax
comp=Z,10.0nm,0.7s
AKTO MLR MLR
comp=Z,66nm,18.5s,MS3.0
ORIF Oris-en-Rattie 20.80 294 *e*P **P** **09 14 26.3 +0.4**
comp=Z,22nm,1.0s
ORIF Oris-en-Rattie 20.80 294 *e*P **P** **09 14 26.3 +0.4**
comp=Z,11nm,1.0s
ORIF Oris-en-Rattie 20.80 294 *e*P **P** **09 14 26.3 +0.4**
ORIF pmax pmax
comp=Z,11nm,1.0s
ORIF Oris-en-Rattie 20.80 294 *e*P **P** **09 14 26.3 +0.4**
comp=Z,11nm,1.0s
CABF La Chapelle 20.89 299 *e*P **P** **09 14 27.3 +0.5**
comp=Z,27nm,1.1s
CABF La Chapelle 20.89 299 *e*P **P** **09 14 27.3 +0.5**
comp=Z,14nm,1.0s
CABF La Chapelle 20.89 299 *e*P **P** **09 14 27.3 +0.5**
CABF pmax pmax
comp=Z,14nm,1.0s
CABF La Chapelle 20.89 299 *e*P **P** **09 14 27.3 +0.5**
comp=Z,14nm,1.0s
ABKAR Akbulak array 21.47 54 *e*P **P** **09 14 32.0 -1.1**
comp=Z,5.7nm,0.7s,mb4.0
ABKAR Akbulak array 21.47 54 *e*P **P** **09 14 32.0 -1.0**
comp=Z,5.7nm,0.7s,mb4.0
KLMR Klimovskoe 21.79 9 *e*P **P** **09 14 35.5 -0.8**
KLMR pmax pmax
comp=Z,44nm,1.0s,mb4.8
KLMR Klimovskoe 21.79 9 *e*P **P** **09 14 35.5 -0.8**
comp=Z,44nm,1.0s,mb4.8
FINES FINESS Array B 22.42 351 P **P** **09 14 43.0 0.0**
comp=Z,5.3nm,0.5s,mb4.2,baz=153,slow=9.4,SNR=13
FINES LR LR 09 24 45.6
comp=Z,162nm,18.0s,MS3.5,baz=329,slow=40
FINES FINESS Array B 22.42 351 P **P** **09 14 43.0 -0.1**
FINES pmax pmax
comp=Z,5.0nm,0.5s
FINES MLR MLR
comp=Z,163nm,18.0s
FINES FINESS Array B 22.42 351 P **P** **09 14 43.0 -0.1**
comp=Z,163nm,18.0s
SMF Signal de Mont 22.43 298 *e*P **P** **09 14 41.6 -1.7**
SMF Signal de Mont 22.43 298 *e*P **P** **09 14 41.6 -1.7**
SMF Signal de Mont 22.43 298 *e*P **P** **09 14 41.6 -1.7**
LOR Lormes 22.51 300 *e*P **P** **09 14 43.4 -0.8**
comp=Z,15nm,0.9s,mb4.1
LOR Lormes 22.51 300 *e*P **P** **09 14 43.4 -0.8**
comp=Z,7.7nm,0.9s,mb4.1
LOR Lormes 22.51 300 *e*P **P** **09 14 43.4 -0.8**
LOR pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
LOR Lormes 22.51 300 *e*P **P** **09 14 43.4 -0.8**
comp=Z,7.7nm,0.9s,mb4.1
SSF Saint Saulge 22.72 299 *e*P **P** **09 14 44.9 -1.4**
SSF Saint Saulge 22.72 299 *e*P **P** **09 14 44.9 -1.4**
SSF Saint Saulge 22.72 299 *e*P **P** **09 14 44.9 -1.4**
AVF Avril sur Loir 22.78 298 *e*P **P** **09 14 46.9 -0.1**
AVF Avril sur Loir 22.78 298 *e*P **P** **09 14 46.9 -0.1**
AVF Avril sur Loir 22.78 298 *e*P **P** **09 14 46.9 -0.1**
KAF Kangasniemi 23.05 352 *e*P **P** **09 14 47.9 -1.8**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
KAF Kangasniemi 23.05 352 *e*p **P** **09 14 47.9 -1.8**
comp=Z,6.0nm,0.7s,mb4.1
KAF Kangasniemi 23.05 352 *e*P **P** **09 14 47.9 -1.8**
comp=Z,6.0nm,0.7s,mb4.1
ARU Arti 23.87 36 *e*P **P** **09 14 58.2 +0.3**
comp=Z,15nm,1.0s,mb4.4
ARU Arti 23.87 36 *c i*P **P** **09 14 58.3 +0.4**
ARU 09 15 23.3
ARU S **S** **09 19 14.6 +0.4**
ARU pmax pmax
comp=Z,27nm,1.7s,mb4.4
ARU Arti 23.87 36 *e*P **P** **09 14 58.2 +0.3**
comp=Z,15nm,1.0s,mb4.4
ARU S **S** **09 19 14.6 +0.4**
HFS Hagfors 23.99 336 P **P** **09 14 58.8 -0.2**
comp=Z,1.8nm,0.7s,mb3.6,baz=119,slow=8.7,SNR=3.3
HFS LR LR 09 25 18.2
comp=Z,147nm,18.5s,MS3.5,baz=146,slow=39
HFS Hagfors 23.99 336 P **P** **09 14 58.8 -0.2**
HFS pmax pmax
comp=Z,2.0nm,0.7s
HFS MLR MLR
comp=Z,147nm,18.5s
HFS Hagfors 23.99 336 P **P** **09 14 58.8 -0.2**
comp=Z,147nm,18.5s
KONO Kongsberg 25.04 331 *e*P **P** **09 15 07.5 -1.2**
comp=Z,6.8nm,0.5s,mb4.4
KONO Kongsberg 25.04 331 *e*P **P** **09 15 07.5 -1.1**
KONO pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
KONO Kongsberg 25.04 331 *e*P **P** **09 15 07.5 -1.1**
comp=Z,7.0nm,0.5s,mb4.5
NOA NORSAR Array B 25.48 335 P **P** **09 15 12.3 -0.3**
comp=Z,1.1nm,0.8s,mb3.5,baz=148,slow=9.9,SNR=3.0
NOA LR LR 09 27 16.5
comp=Z,102nm,18.1s,MS3.4,baz=140,slow=41
NOA NORSAR Array B 25.48 335 P **P** **09 15 12.3 -0.3**
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,102nm,18.1s
NOA NORSAR Array B 25.48 335 P **P** **09 15 12.3 -0.3**
comp=Z,102nm,18.1s
EKA Eskdalemuir Ar 28.79 315 P **P** **09 15 42.2 -0.2**
comp=Z,2.0nm,0.9s,mb3.9,baz=119,slow=9.1,SNR=3.8
EKA Eskdalemuir Ar 28.79 315 P **P** **09 15 42.2 -0.1**
EKA pmax pmax
comp=Z,2.0nm,0.9s
EKA Eskdalemuir Ar 28.79 315 P **P** **09 15 42.2 -0.1**
comp=Z,2.0nm,0.9s,mb3.9
ATD Arta Tunnel 29.15 160 LR LR 09 26 03.6
comp=Z,90nm,19.5s,MS3.4,baz=53,slow=34
ARCES ARCESS Array B 30.40 355 P **P** **09 15 56.2 -0.3**
comp=Z,1.8nm,0.6s,mb4.0,baz=164,slow=10.0,SNR=8.1
ARCES ARCESS Array B 30.40 355 P **P** **09 15 56.2 -0.3**
ARCES pmax pmax

comp=Z,2.0nm,0.6s
ARCES **ARCESS Array B 30.40 355** P **P** 09 15 56.2 -0.3
comp=Z,2.0nm,0.6s,mb4.0
AAK **Ala-Archa 31.19 71** LR LR 09 31 39.6
comp=Z,42nm,19.2s,MS3.1,baz=78,slow=42
AAK **Ala-Archa 31.19 71** *eP* **P** 09 16 05.5 +1.7
AAK pmax pmax
comp=Z,1.0nm,1.2s,mb3.5
AAK **Ala-Archa 31.19 71** *eP* **P** 09 16 05.5 +1.7
comp=Z,1.0nm,1.2s,mb3.5
KURK **Kurchatov 33.58 55** *eP* **P** 09 16 24.8 +0.2
comp=Z,7.0nm,1.0s,mb4.5
KURK **Kurchatov 33.58 55** ⇓*iP* **P** 09 16 24.9 +0.3
KURK pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KURK **Kurchatov 33.58 55** *eP* **P** 09 16 24.8 +0.2
comp=Z,7.0nm,1.0s,mb4.5
MK31 **Makanchi Array 36.17 62** *eP* **P** 09 16 47.2 +0.1
MK31 **Makanchi Array 36.17 62** *eP* **P** 09 16 47.2 +0.1
MK31 **Makanchi Array 36.17 62** *eP* **P** 09 16 47.2 +0.1
MKAR **Makanchi Array 36.17 62** P **P** 09 16 46.9 -0.2
comp=Z,1.6nm,0.8s,mb4.0,baz=274,slow=7.1,SNR=7.3
MKAR LR LR 09 34 05.7
comp=Z,57nm,19.7s,MS3.4,baz=300,slow=40
MKAR **Makanchi Array 36.17 62** *ceP* **P** 09 16 47.4 +0.3
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR **Makanchi Array 36.17 62** *eP* **P** 09 16 47.4 +0.3
comp=Z,2.0nm,0.8s,mb4.1
ZALV **Zalesovo Beam 37.46 50** P **P** 09 16 56.7 -1.2
comp=Z,2.0nm,0.6s,mb4.2,baz=269,slow=8.4,SNR=5.5
ZALV LR LR 09 35 57.1
comp=Z,38nm,19.2s,MS3.2,baz=227,slow=42
ZALV **Zalesovo Beam 37.46 50** P **P** 09 16 56.7 -1.2
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
ZALV MLR MLR
comp=Z,38nm,19.2s,MS3.2
TORD **Torodi Ar. Bea 38.09 235** P **P** 09 17 04.8 +1.2
comp=Z,319nm,0.3s,baz=30,slow=8.9,SNR=4.0
TORD LR LR 09 34 48.4
comp=Z,94nm,20.3s,MS3.6,baz=335,slow=40
KMBO **Kilima Mbogo 40.58 174** P **P** 09 17 25.7 +1.3
comp=Z,0.9nm,0.6s,mb3.6,baz=180,slow=20,SNR=2.9
KMBO LR LR 09 37 02.7
comp=Z,45nm,18.9s,MS3.3,baz=272,slow=40
KMBO **Kilima Mbogo 40.58 174** P **P** 09 17 25.7 +1.3
KMBO pmax pmax
comp=Z,1.0nm,0.6s
KMBO MLR MLR
comp=Z,45nm,18.9s
KMBO **Kilima Mbogo 40.58 174** P **P** 09 17 25.7 +1.3
comp=Z,45nm,18.9s
DANN **Dangsing 43.02 89** *eP* **P** 09 17 43.8 -0.6
comp=Z,37nm,0.8s,mb5.2
DANN **Dangsing 43.02 89** *eP* **P** 09 17 43.8 -0.6
comp=Z,37nm,0.8s,mb5.2
KOLN **Koldanda 43.18 90** *eP* **P** 09 17 43.7 -1.9
comp=Z,20nm,0.8s,mb4.9
KOLN **Koldanda 43.18 90** *eP* **P** 09 17 43.7 -1.9
comp=Z,20nm,0.8s,mb4.9
GKN **Gorkha 43.87 89** *eP* **P** 09 17 50.3 -0.9
comp=Z,28nm,0.8s,mb5.0
GKN **Gorkha 43.87 89** *eP* **P** 09 17 50.3 -0.9
comp=Z,28nm,0.8s,mb5.0
DMN **Daman 44.42 89** *eP* **P** 09 17 54.3 -1.3
comp=Z,37nm,1.0s,mb5.0
DMN **Daman 44.42 89** *eP* **P** 09 17 54.3 -1.3
comp=Z,37nm,1.0s,mb5.1
KKN **Kakani 44.47 89** *eP* **P** 09 17 55.0 -1.0
comp=Z,9.0nm,0.5s,mb4.7
KKN **Kakani 44.47 89** *eP* **P** 09 17 55.0 -1.0
KKN pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
KKN **Kakani 44.47 89** *eP* **P** 09 17 55.0 -1.0
comp=Z,9.0nm,0.5s,mb4.8
ODAN **Odare 46.56 89** *eP* **P** 09 18 11.1 -1.5
comp=Z,20nm,1.0s,mb5.0
ODAN **Odare 46.56 89** *eP* **P** 09 18 11.1 -1.5
comp=Z,20nm,1.0s,mb5.0
TAPN **Taplejung 46.56 88** *eP* **P** 09 18 12.2 -0.4
comp=Z,15nm,0.8s,mb5.0
TAPN **Taplejung 46.56 88** *eP* **P** 09 18 12.2 -0.4
comp=Z,15nm,0.8s,mb5.0
DBIC **Dimbokro 47.18 236** P **P** 09 18 16.9 -0.6
comp=Z,3.4nm,0.9s,mb4.3,baz=59,slow=5.9,SNR=2.8
DBIC LR LR 09 40 12.0
comp=Z,77nm,18.2s,MS3.7,baz=16,slow=39
DBIC **Dimbokro 47.18 236** P **P** 09 18 16.9 -0.6
DBIC pmax pmax
comp=Z,3.0nm,0.9s
DBIC MLR MLR
comp=Z,77nm,18.2s
DBIC **Dimbokro 47.18 236** P **P** 09 18 16.9 -0.6
comp=Z,77nm,18.2s
CMAR **Chiang Mai Arr 60.05 90** P **P** 09 19 50.5 -1.4
comp=Z,1.0nm,0.3s,mb4.3,baz=301,slow=7.5,SNR=7.9
CMAR **Chiang Mai Arr 60.05 90** P **P** 09 19 50.5 -1.4
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR **Chiang Mai Arr 60.05 90** P **P** 09 19 50.5 -1.4
comp=Z,1.0nm,0.3s,mb4.3
SCHQ **Schefferville 63.93 321** LR LR 09 48 14.2
comp=Z,93nm,19.8s,MS4.0,baz=67,slow=36
BOSA **Boshof 68.12 187** P **P** 09 20 46.2 +1.6
comp=Z,3.4nm,0.6s,mb4.5,baz=8.9,slow=7.2,SNR=8.6
BOSA **Boshof 68.12 187** P **P** 09 20 46.2 +1.6
BOSA pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BOSA **Boshof 68.12 187** P **P** 09 20 46.2 +1.6
comp=Z,3.0nm,0.6s,mb4.5
KSRS **Korea Array 70.67 57** LR LR 09 55 24.5
comp=Z,43nm,19.3s,MS3.7,baz=287,slow=39
YKA **Yellowknife Ar 75.11 345** LR LR 09 54 51.6
comp=Z,3.3nm,18.6s,MS2.7,baz=150,slow=36
ILAR **Eielson Array 76.10 360** P **P** 09 21 33.9 +1.8
comp=Z,0.2nm,0.6s,baz=349,slow=5.7,SNR=5.6
ILAR **Eielson Array 76.10 360** P **P** 09 21 33.9 +1.8
ILAR **Eielson Array 76.10 360** P **P** 09 21 33.9 +1.8
ULM **Lac du Bonnet 80.03 330** P **P** 09 21 55.1 +1.0
comp=Z,1.5nm,0.5s,mb4.2,baz=323,slow=9.2,SNR=3.2
ULM **Lac du Bonnet 80.03 330** P **P** 09 21 55.1 +1.0
PDAR **Pinedale Array 91.41 333** LR LR 10 05 12.4
comp=Z,42nm,18.6s,MS3.9,baz=254,slow=36

*ISK **23** 09:17:09.0, 39°.51N×33°.02E, h5km, ML2.4*
*ISCJB **23** 09:17:10.5±0.5, 39°.45N±0°.03×33°.06E±0°.04, h7km±3km, Error ellipse: s-maj=6.4km s-min=4.5km az=145.5*
*CSEM **23** 09:17:10.2±0.2, 39°.48N×33°.00E, h4km±2km, ML2.4, Error ellipse: s-maj=6.4km s-min=5.0km az=161.0*
*DDA **23** 09:17:10.7, 39°.44N×33°.07E, h7km±1km, Ml3.0*
ISC 23 09:17:10.9±0.5, 39°.44N±0°.04×33°.06E±0°.04, h7km±3km, n27, σ1º13/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Af ar-Bala (A**	**0.01**	**63**	*e*PG	**Pg**	09 17 10.9	-1.2
AFSR				*e*SG	**Sg**	09 17 12.2	-0.8
AFSR	**Af ar-Bala (A**	**0.01**	**63**	*e*Pg	**Pg**	09 17 10.9	-1.2
AFSR				*e*Sg	**Sg**	09 17 12.2	-0.8
BBAL	**Bala**	**0.11**	**27**	*i* P	**Pg**	09 17 13.8	+0.4
BBAL				*i* S	**Sg**	09 17 15.5	+0.4
BBAL	**Bala**	**0.11**	**27**	*i* P	**Pg**	09 17 13.8	+0.4
BBAL				*i* S	**Sg**	09 17 15.5	+0.4
CDAG	**Cicekdag**	**1.03**	**79**	*i* P	**Pg**	09 17 30.1	-0.7
CDAG				*i* S	**Sg**	09 17 45.1	+1.0
CDAG	**Cicekdag**	**1.03**	**79**	*i* P	**Pg**	09 17 30.1	-0.7
CDAG				*i* S	**Sg**	09 17 45.2	+1.0
KIZT	**Kizilcal**	**1.07**	**239**	*e*PN	**Pg**	09 17 31.0	-0.5
KIZT				*e*SN	**Sg**	09 17 47.0	+1.6
KIZT	**Kizilcal**	**1.07**	**239**	*e*Pn	**Pg**	09 17 31.0	-0.5
KIZT				*e*Sn	**Sg**	09 17 47.0	+1.6
ELDT	**Eldivan**	**1.09**	**15**	*i* P	**Pg**	09 17 31.4	-0.4
ELDT				*i* S	**Sg**	09 17 46.9	+1.0
ELDT	**Eldivan**	**1.09**	**15**	*i* P	**Pg**	09 17 31.4	-0.4
ELDT				*i* S	**Sg**	09 17 46.9	+1.0
SVRH	**Sivrihisar-ESK**	**1.19**	**271**	*e*PN	**Pn**	09 17 32.4	-1.5
SVRH				*e*SN	**Sn**	09 17 49.3	-1.0
SVRH	**Sivrihisar-ESK**	**1.19**	**271**	*e*Pn	**Pn**	09 17 32.4	-1.5
SVRH				*e*Sn	**Sn**	09 17 49.3	-1.0
SULT	**Sultanhani-AKS**	**1.29**	**164**	*e*PN	**Pn**	09 17 36.9	+1.6
SULT	**Sultanhani-AKS**	**1.29**	**164**	*e*Pn	**Pn**	09 17 36.9	+1.6
SGKT	**Sivrigoynuk**	**1.37**	**326**	*i* P	**Pn**	09 17 29.1	-7.3
CORM	**Corum**	**1.42**	**58**	*e*PN	**Pn**	09 17 36.5	-0.6
CORM	**Corum**	**1.42**	**58**	*e*Pn	**Pn**	09 17 36.5	-0.6
AVNT	**Avonos**	**1.55**	**115**	*i* P	**Pn**	09 17 39.4	+0.6
AVNT				*i* S	**Sn**	09 17 57.4	-1.8
AVNT	**Avonos**	**1.55**	**115**	*i* P	**Pn**	09 17 39.4	+0.5
AVNT				*i* S	**Sn**	09 17 57.4	-1.8
KONT	**Konya--Tatoy**	**1.59**	**200**	*e*PN	**Pn**	09 17 40.3	+0.9
KONT	**Konya--Tatoy**	**1.59**	**200**	*e*Pn	**Pn**	09 17 40.3	+0.8
ILGA	**Ilgaz**	**1.69**	**17**	*i* P	**Pn**	09 17 43.0	+2.1
ILGA				*i* S	**Sn**	09 18 02.2	-0.4
ILGA	**Ilgaz**	**1.69**	**17**	*i* P	**Pn**	09 17 43.0	+2.2
ILGA				*i* S	**Sn**	09 18 02.2	-0.5
YOZ	**Yozgat**	**1.76**	**83**	*e*PN	**Pn**	09 17 42.6	+0.7
YOZ	**Yozgat**	**1.76**	**83**	*e*Pn	**Pn**	09 17 42.6	+0.8
CTKT	**Corum**	**1.78**	**48**	*i* P	**Pn**	09 17 38.9	-3.2
CTKT				*i* S	**Sn**	09 17 54.6	-10
CTKT	**Corum**	**1.78**	**48**	*i* P	**Pn**	09 17 38.9	-3.2

*IDC **23** 09:24:03.8±1.9, 2°.82N×124°.17E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/20, mbtmp3.7/3, Error ellipse: s-maj=185.6km s-min=27.8km az=63.0*
*ISCJB **23** 09:24:06.7±1.1, 2°.68N±0°.08×123°.87E±0°.07, h33km, mb3.6/3, Error ellipse: s-maj=11.6km s-min=10.0km az=147.3*
*DJA **23** 09:24:08, 2°.53N×122°.90E, h224km, MLv4.1/3*
ISC 23 09:24:09.3±1.2, 2°.62N±0°.08×123°.88E±0°.08, h35km, n8, σ0º61/10, mb3.6/3, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.51**	**140**	P	**Sn**	09 24 52.0	-0.4
SGSI	**Sangihe**	**1.96**	**57**	P	**Sn**	09 24 57.2	-6.3
MRSI	**Marisa**	**2.88**	**222**	P	**Pn**	09 24 51.8	-0.9
MRSI				S	**Sn**	09 25 25.8	-0.3
LUWI	**Luwuk**	**3.80**	**197**	P	**Pn**	09 24 58.5	-6.9
LUWI				S	**Sn**	09 25 49.0	+0.1
TTSI	**Tana Toraja**	**6.94**	**216**	P	**Pn**	09 25 49.8	+1.3
WRA	**Warramunga Arr**	**24.66**	**156**	P	**P**	09 29 27.3	+0.3
	2.8nm,0.6s,mb4.0,baz=334,slow=10,SNR=34						
ASAR	**Alice Springs**	**27.89**	**160**	P	**P**	09 29 56.5	+0.3
	0.4nm,0.5s,mb3.3,baz=346,slow=7.7,SNR=14						
MKAR	**Makanchi Array**	**56.88**	**327**	P	**P**	09 33 50.4	-0.3
	0.3nm,0.5s,mb3.5,baz=119,slow=6.0,SNR=3.4						

MAN 23 09:53:05, 8°.86N×122°.30E, h32km, mb4.2, ML3.0, MS2.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.04**	**62**	*e*P	Pn	09 53 24.0	+0.6
IPIL	**Ipil**	**1.10**	**166**	*e*P	Pn	09 53 25.6	+1.5
IPIL				*e*S	Sn	09 53 37.1	-1.1
PAGZ	**Pagadian**	**1.47**	**133**	*e*P	Pn	09 53 30.5	+1.2
GUIM	**Jordan**	**1.78**	**9**	*e*P	Pn	09 53 34.6	+1.1

*CSEM **23** 09:58:14.8±0.2, 38°.42N×21°.84E, h14km, ML2.5/6, Error ellipse: s-maj=5.3km s-min=4.1km az=108.0*
*ISCJB **23** 09:58:15.3±0.4, 38°.43N±0°.02×21°.86E±0°.03, h3km±4km, Error ellipse: s-maj=4.2km s-min=3.6km az=172.6*
*ATH **23** 09:58:15.1, 38°.40N×21°.85E, h8km±1km, MD3.1/11*
*THE **23** 09:58:15.8, 38°.42N×21°.89E, h8km±2km, ML2.5/6, Error ellipse: s-maj=2.0km s-min=0.9km az=178.0*
ISC 23 09:58:15.6±0.5, 38°.42N±0°.02×21°.84E±0°.03, h3km±5km, n43, σ0º72/78, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.05**	**78**	⇓*i*PG	**Pg**	09 58 16.7	0.0
EFP				*e*SG	**Sg**	09 58 18.0	+0.6
EFP	**Efpalio**	**0.05**	**78**	P	**Pg**	09 58 16.7	0.0
EFP				S	**Sg**	09 58 17.8	+0.4
EFP	**Efpalio**	**0.05**	**78**	P	**Pg**	09 58 16.7	0.0
EFP				*e*Sg	**Sg**	09 58 18.0	+0.6
UPR	**University Cam**	**0.14**	**199**	*e*PG	**Pg**	09 58 18.0	-0.3
UPR				*e*SG	**Sg**	09 58 20.2	0.0
UPR	**University Cam**	**0.14**	**199**	P	**Pg**	09 58 18.8	+0.5
UPR				S	**Sg**	09 58 22.2	+2.0
UPR	**University Cam**	**0.14**	**199**	*e*Pg	**Pg**	09 58 18.0	-0.3
UPR	**University Cam**	**0.14**	**199**	P	**Pg**	09 58 18.8	+0.5
UPR				*e*Sg	**Sg**	09 58 20.2	0.0
UPR				S	**Sg**	09 58 22.2	+2.0
TRIZ	**Trizonia**	**0.19**	**106**	P	**Pg**	09 58 19.1	-0.1
TRIZ				S	**Sg**	09 58 22.3	+0.6
TRIZ	**Trizonia**	**0.19**	**106**	P	**Pg**	09 58 19.1	-0.1
TRIZ				S	**Sg**	09 58 22.3	+0.6
LAKA	**Lakka**	**0.21**	**149**	P	**Pg**	09 58 19.6	0.0
LAKA	**Lakka**	**0.21**	**149**	P	**Pg**	09 58 19.6	0.0
KALE	**Kalithea**	**0.23**	**96**	P	**Pg**	09 58 19.8	-0.3
KALE				S	**Sg**	09 58 23.7	+0.5
KALE	**Kalithea**	**0.23**	**96**	P	**Pg**	09 58 19.8	-0.3
KALE				S	**Sg**	09 58 23.7	+0.5
RLS	**Riolos of Patr**	**0.47**	**220**	*e*PB	**Pg**	09 58 24.0	-0.5
RLS	**Riolos of Patr**	**0.47**	**220**	*e*Pb	**Pg**	09 58 24.0	-0.5
EVR	**Evrytania**	**0.50**	**357**	*e*PG	**Pg**	09 58 24.9	-0.3
EVR				*e*SB	**Sg**	09 58 32.7	+1.0
EVR	**Evrytania**	**0.50**	**357**	*e*Pg	**Pg**	09 58 24.9	-0.3
EVR				*e*Sb	**Sg**	09 58 32.7	+1.0
DSF	**Desfina**	**0.54**	**90**	P	**Pg**	09 58 24.7	-1.2
DSF				S	**Sg**	09 58 33.2	+0.3
DSF	**Desfina**	**0.54**	**90**	P	**Pg**	09 58 24.7	-1.2
DSF				S	**Sg**	09 58 33.2	+0.3
GUR	**Goura**	**0.62**	**141**	*e*PB	**Pg**	09 58 26.7	-0.8
GUR				*e*SB	**Sg**	09 58 35.5	0.0
GUR	**Goura**	**0.62**	**141**	P	**Pg**	09 58 26.5	-1.0
GUR				S	**Sg**	09 58 35.5	0.0
GUR	**Goura**	**0.62**	**141**	*e*Pb	**Pg**	09 58 26.7	-0.8
GUR				S	**Sg**	09 58 35.5	0.0
AGG	**Agios Georgios**	**0.71**	**32**	*e*PB	**Pg**	09 58 29.0	-0.3
AGG				*e*SB	**Sg**	09 58 38.6	0.0
AGG	**Agios Georgios**	**0.71**	**32**	P	**Pg**	09 58 28.1	-1.2
AGG				S	**Sg**	09 58 39.5	+0.9
AGG	**Agios Georgios**	**0.71**	**32**	P	**Pg**	09 58 28.1	-1.2
AGG	**Agios Georgios**	**0.71**	**32**	*e*Pb	**Pg**	09 58 29.0	-0.3
AGG				*e*Sb	**Sg**	09 58 38.6	0.0
AGG				S	**Sg**	09 58 39.5	+0.9
KFL	**Anninata**	**0.89**	**250**	P	**Pg**	09 58 32.7	+0.1
KFL				S	**Sg**	09 58 47.8	+3.8
KFL	**Anninata**	**0.89**	**250**	P	**Pg**	09 58 32.7	+0.1
LKR	**Lokris**	**0.94**	**75**	*e*PG	**Pg**	09 58 32.4	-1.1
LKR				*e*SB	**Sg**	09 58 46.1	+0.4
LKR	**Lokris**	**0.94**	**75**	P	**Pg**	09 58 32.2	-1.3
LKR	**Lokris**	**0.94**	**75**	*e*Pg	**Pg**	09 58 32.4	-1.1
LKR				*e*Sb	**Sg**	09 58 46.1	+0.4
LTK	**Loutraki**	**0.97**	**114**	*e*PB	**Pg**	09 58 33.5	-0.6
LTK				*e*SB	**Sg**	09 58 46.5	-0.2
LTK	**Loutraki**	**0.97**	**114**	P	**Pg**	09 58 34.6	+0.5
LTK	**Loutraki**	**0.97**	**114**	*e*Pb	**Pg**	09 58 33.5	-0.6
LTK	**Loutraki**	**0.97**	**114**	P	**Pg**	09 58 34.6	+0.5
LTK				*e*Sb	**Sg**	09 58 46.5	-0.2
THL	**Klokotos Trika**	**1.15**	**7**	*e*PB	**Pg**	09 58 37.7	0.0
THL				*e*SB	**Sg**	09 58 52.7	0.0
THL	**Klokotos Trika**	**1.15**	**7**	*e*Pb	**Pg**	09 58 37.7	0.0
THL				*e*Sb	**Sg**	09 58 52.7	0.0
ITM	**Ithomi**	**1.24**	**177**	*e*PB	**Pb**	09 58 38.2	-1.3
ITM				*e*SB	**Sb**	09 58 55.9	0.0
ITM	**Ithomi**	**1.24**	**177**	*e*Pb	**Pb**	09 58 38.2	-1.3
ITM				*e*Sb	**Sb**	09 58 55.9	0.0
DID	**Didima**	**1.43**	**129**	*e*PB	**Pb**	09 58 41.8	-1.0
DID				*e*SB	**Sb**	09 59 01.7	+0.3
DID	**Didima**	**1.43**	**129**	*e*Pb	**Pb**	09 58 41.8	-1.0
DID				*e*Sb	**Sb**	09 59 01.7	+0.3
VLI	**Veliai**	**1.91**	**153**	*e*PN	**Pn**	09 58 49.3	+0.4
VLI				*e*SN	**Sn**	09 59 14.9	+1.5
VLI	**Veliai**	**1.91**	**153**	*e*Pn	**Pn**	09 58 49.3	+0.4
VLI				*e*Sn	**Sn**	09 59 14.9	+1.5

IDC 23 10:09:56.6±2.0, 3°.80N×127°.04E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/20, mbtmp3.7/4, Error ellipse: s-maj=147.9km s-min=26.4km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.66**	**163**	P	P	10 15 19.1	-0.1
	1.6nm,0.4s,baz=344,slow=10,SNR=15						
ASAR	**Alice Springs**	**28.11**	**167**	P	P	10 15 50.5	+0.2
	0.2nm,0.4s,baz=352,slow=15,SNR=6.7						
STKA	**Stephens Creek**	**38.08**	**160**	P	P	10 17 17.1	0.0
	1.5nm,0.8s,baz=354,slow=10,SNR=3.7						
MKAR	**Makanchi Array**	**57.68**	**325**	P	P	10 19 48.9	0.0
	0.5nm,0.5s,baz=126,slow=7.3,SNR=4.1						

*ISCJB **23** 10:24:57.6±1.2, 20°.2S±0°.1×177°.7W±0°.1, h470km±16km, mb3.5/11, Error ellipse: s-maj=25.0km s-min=12.5km az=137.3*
*IDC **23** 10:24:58.9±1.9, 20°.23S×177°.61W, h479km±23km, mb3.1/8, mb1 3.4/10, mb1mx3.3/18, mbtmp3.2/10, Error ellipse: s-maj=29.0km s-min=12.1km az=145.0*
*NEIC **23** 10:24:59.1±1.3, 20°.22S×177°.58W, h479km±16km, mb3.9/4, Error ellipse: s-maj=21.3km s-min=11.6km az=141.0*
ISC 23 10:24:58.1±1.3, 20°.2S±0°.1×177°.6W±0°.1, h464km±17km, n18, σ0º99/20, mb3.5/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.34**	**43**	P	**P**	10 26 59.1	+1.6
	2.5nm,0.3s,baz=142,slow=19,SNR=3.2						
AFI				S	**S**	10 28 34.0	-1.4
	2.0nm,0.3s,baz=32,slow=19,SNR=4.5						
AFI	**Afiamalu**	**8.34**	**43**	*e*Pn	**P**	10 26 59.1	+1.6
AFI				*e*Sn	**S**	10 28 34.3	-1.1
URZ	**Urewera**	**18.61**	**193**	P	**P**	10 28 43.6	-2.2
	2.2nm,0.3s,baz=343,slow=7.0,SNR=17						
URZ	**Urewera**	**18.61**	**193**	*e*P	**P**	10 28 44.5	-1.4
	8.8nm,0.6s						
CTAO	**Charters Tower**	**33.91**	**264**	*e*P	**P**	10 31 02.4	+1.1
	4.6nm,1.0s,mb3.9						
STKA	**Stephens Creek**	**38.28**	**244**	P	**P**	10 31 37.5	-0.1
	1.6nm,0.7s,mb3.5,baz=87,slow=15,SNR=2.9						
STKA	**Stephens Creek**	**38.28**	**244**	*e*P	**P**	10 31 37.7	+0.1
	5.1nm,1.7s,mb3.7						
ASAR	**Alice Springs**	**44.98**	**256**	P	**P**	10 32 31.1	+0.1
	0.6nm,0.5s,mb3.3,baz=87,slow=8.6,SNR=16						
ASAR				S	**S**	10 38 30.5	-4.2
	0.4nm,0.9s,baz=93,slow=16,SNR=4.4						
WRA	**Warramunga Arr**	**45.03**	**262**	P	**P**	10 32 31.1	-0.3
	0.5nm,0.3s,mb3.4,baz=97,slow=7.8,SNR=16						
FITZ	**Fitzroy Crossi**	**53.46**	**262**	P	**P**	10 33 34.5	+0.4
	1.2nm,0.8s,mb3.3,baz=144,slow=8.7,SNR=3.6						
QSPA	**South Pole Qui**	**69.90**	**180**	*e*P	**P**	10 35 21.2	+0.4
	3.1nm,1.1s,mb3.8						
MJAR	**Matsushiro Arr**	**70.17**	**323**	P	**P**	10 35 22.9	-0.2
	0.8nm,0.6s,mb3.5,baz=158,slow=6.5,SNR=6.1						
NVAR	**Mina Array Bea**	**80.52**	**43**	P	**P**	10 36 22.2	+1.2
	0.8nm,0.9s,mb3.2,baz=222,slow=8.3,SNR=4.2						
CN2	**Changchun**	**82.28**	**322**	*e*P	**P**	10 36 28.8	-1.1
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
TXAR	**Lajitas Array**	**86.55**	**57**	P	**P**	10 36 52.3	+1.0
	comp=Z,0.6nm,0.8s,mb3.4,baz=214,slow=6.0,SNR=8.2						
ILAR	**Eielson Array**	**87.90**	**13**	P	**P**	10 36 55.4	-1.5
	comp=Z,0.7nm,0.7s,mb3.5,baz=216,slow=5.9,SNR=11						
PDAR	**Pinedale Array**	**88.45**	**43**	P	**P**	10 37 00.1	+0.1
	comp=Z,0.7nm,0.8s,mb3.5,baz=255,slow=5.7,SNR=5.1						
BRTR	**Keskin Array B**	**146.90**	**313**	PKPbc	PKPbc	10 43 46.2	-1.6
	comp=Z,0.4nm,0.5s,baz=59,slow=5.6,SNR=2.4						

IDC 23 11:15:17.1±2.0, 5°.14S×78°.43W, h0km, mb4.6/2, mb1 4.6/3, mb1mx4.0/18, mbtmp4.6/3, Error ellipse: s-maj=61.5km s-min=31.6km az=33.0, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**10.74**	**22**	Pn	Pn	11 17 53.1	+0.8
	3.0nm,0.3s,baz=96,slow=15,SNR=3.7						
TXAR	**Lajitas Array**	**41.98**	**326**	P	P	11 23 10.8	+0.7
	0.2nm,0.5s,baz=132,slow=6.2,SNR=3.8						
PDAR	**Pinedale Array**	**55.41**	**332**	P	P	11 24 52.6	-0.6
	0.4nm,0.6s,baz=126,slow=7.5,SNR=4.2						
DBIC	**Dimbokro**	**74.37**	**82**	P	P	11 26 57.6	+0.2
	1.3nm,0.4s,baz=265,slow=6.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**81.59**	**76**	P	P	11 27 37.3	-0.2
	0.7nm,0.4s,baz=278,slow=5.6,SNR=3.7						
ASAR	**Alice Springs**	**137.40**	**226**	PKP	PKPdf	11 34 43.9	+0.3
	0.5nm,0.8s,baz=122,slow=2.1,SNR=4.5						

IDC 23 11:39:28.6±1.3, 3°.52N×124°.88E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=196.4km s-min=22.8km az=70.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.10**	**159**	P	P	11 44 53.7	-1.5
	0.4nm,0.6s,baz=337,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**28.41**	**162**	P	P	11 45 26.3	+1.2
	0.2nm,0.5s,baz=341,slow=7.5,SNR=5.3						
SONM	**Songino Array**	**46.93**	**343**	P	P	11 48 01.4	+0.4
	0.8nm,0.7s,baz=169,slow=9.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**59.95**	**334**	P	P	11 49 36.4	-0.2
	1.9nm,0.6s,baz=122,slow=7.4,SNR=6.9						

*ISCJB **23** 11:48:22.9±0.9, 31°.2N±0°.1×104°.59E±0°.09, h10km, mb3.2/3, Error ellipse: s-maj=20.7km s-min=7.4km az=154.2*
*IDC **23** 11:48:22.7±3.0, 31°.35N×104°.54E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/25, mbtmp3.3/3, Error ellipse: s-maj=560.0km s-min=27.0km az=52.0*
*BJI **23** 11:48:25.8, 31°.61N×104°.22E, h11km, ML3.0/5*
ISC 23 11:48:25.4±0.8, 31°.3N±0°.1×104°.48E±0°.10, h10km, n5, σ1º08/7, mb3.2/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.70**	**242**	*e*Pg	**Pg**	11 48 38.6	-0.4
CD2				Sg	**Sg**	11 48 49.9	+1.8
CD2				smax			
	comp=N,560nm,0.4s						
CD2				smax			
	comp=E,360nm,0.7s						
XAN	**Xi'an**	**4.67**	**52**	P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHE	**Heguri**	**1.03**	**302**	⇓P	**Pn**	**11 54 08.5**	**-0.2**
JHE				S	**Sn**	**11 54 21.9**	**-0.3**
JWZ	**Kozaga**	**1.04**	**236**	⇑P	**Pn**	**11 54 08.5**	**-0.3**
JWZ				S	**Sn**	**11 54 21.6**	**-0.8**
JWM	**Minabe**	**1.19**	**257**	⇑P	**Pn**	**11 54 11.0**	**+0.1**
JWM				S	**Sn**	**11 54 26.2**	**+0.1**
MAJO	**Matsushiro**	**2.70**	**26**	*e*Pn	**Pn**	**11 54 33.4**	**+1.7**
MAJO				*e*Sn	**Sn**	**11 55 03.0**	**-0.4**
MAT	**Matsushiro**	**2.70**	**26**	P	**Pn**	**11 54 32.3**	**+0.6**
MAT				S	**Sn**	**11 55 04.4**	**+1.0**
JNU	**Nakatsue** 3.1nm,0.5s	**5.00**	**260**	*e*Pn	**Pn**	**11 55 04.5**	**+1.3**
ERM	**Erimo**	**9.36**	**31**	Pn	**Pn**	**11 56 02.4**	**-0.8**
YSS	**Yuzh-Sakhalins**	**13.61**	**18**	*e*Pn	**Pn**	**11 56 60.0**	**-1.2**

ISCJB ***23*** *12:10:06.3±1.0,20.°1S±0.°1×177.°8W±0.°1, h555km±13km, mb4.0/13, Error ellipse: s-maj=26.0km s-min=12.8km az=143.9*

NEIC ***23*** *12:10:06.3±0.9,20.°14S×177.°55W, h558km±11km, Error ellipse: s-maj=22.4km s-min=14.6km az=130.0*

IDC ***23*** *12:10:09.1±2.4,20.°13S×177.°87W, h569km±29km, mb3.4/9, mb1 3.7/10, mb1mx3.5/17, mbtmp3.4/10, Error ellipse: s-maj=29.2km s-min=12.3km az=149.0*

ISC 23 12:10:07.1±1.0,20.°1S±0.°1×177.7W±0.°1, h551km±11km, n24,σ1.9°05/22, mb4.0/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.65**	**300**	*e*P	**P**	**12 11 35.5**	**+1.3**
AFI	**Afiamalu**	**8.41**	**44**	P	**P**	**12 12 07.0**	**-2.0**
	5.2nm,0.3s,baz=55,slow=17,SNR=8.9						
AFI				S	**S**	**12 13 41.0**	**-8.0**
	3.1nm,0.3s,baz=72,slow=20,SNR=3.9						
URZ	**Urewera**	**18.61**	**193**	P	**P**	**12 13 49.7**	**-0.6**
	1.9nm,0.3s,baz=286,slow=2.9,SNR=15						
ARMA	**Armidale**	**29.45**	**244**	*e*P	**P**	**12 15 28.2**	**+1.4**
CTA	**Charters Tower**	**33.78**	**264**	*e*P	**P**	**12 16 04.0**	**+0.2**
	8.9nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**38.17**	**244**	P	**P**	**12 16 40.5**	**+0.6**
	4.5nm,0.7s,mb4.1,baz=79,slow=9.2,SNR=9.2						
STKA	**Stephens Creek**	**38.17**	**244**	*e*P	**P**	**12 16 40.4**	**+0.5**
	3.5nm,0.8s,mb3.9						
ASAR	**Alice Springs**	**44.85**	**256**	P	**P**	**12 17 32.9**	**+0.1**
	12nm,0.7s,mb4.5,baz=91,slow=7.8,SNR=183						
ASAR				PcP	PcP	12 19 03.0	+0.3
	1.3nm,0.7s,baz=100,slow=4.3,SNR=5.4						
ASAR				S	**S**	**12 23 29.1**	**-1.5**
	0.5nm,1.0s,baz=87,slow=16,SNR=3.8						
WB2	**Warramunga Arr**	**44.89**	**262**	*e*P	**P**	**12 17 32.5**	**-0.6**
WRA	**Warramunga Arr**	**44.90**	**262**	P	**P**	**12 17 32.6**	**-0.6**
	7.7nm,0.4s,mb4.6,baz=98,slow=8.4,SNR=125						
WRA				PcP	PcP	12 19 01.6	-1.3
	0.5nm,0.6s,baz=91,slow=3.8,SNR=3.0						
WRA				S	**S**	**12 23 28.4**	**-3.0**
	0.5nm,0.9s,baz=99,slow=15,SNR=3.9						
KAKA	**Kakadu**	**48.22**	**271**	*e*P	**P**	**12 17 57.9**	**-0.5**
	7.5nm,0.6s,mb4.4						
FORT	**Forrest**	**49.67**	**246**	*e*P	**P**	**12 18 08.1**	**-0.8**
	17nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.33**	**262**	*e*P	**P**	**12 18 35.4**	**0.0**
	4.5nm,0.4s,mb4.2						
MJAR	**Matsushiro Arr**	**70.06**	**323**	P	**P**	**12 20 23.2**	**-0.8**
	1.6nm,0.5s,mb3.8,baz=160,slow=6.1,SNR=8.0						
PETK	**Petropavlovsk-**	**75.98**	**345**	P	**P**	**12 20 57.2**	**-0.3**
	5.3nm,0.9s,mb4.0,baz=163,slow=5.7,SNR=3.7						
NVAR	**Mina Array Bea**	**80.58**	**43**	P	**P**	**12 21 24.2**	**+1.7**
	0.2nm,0.3s,mb3.0,baz=230,slow=5.6,SNR=3.7						
ILAR	**Eielson Array**	**87.90**	**13**	P	**P**	**12 21 57.1**	**-0.6**
	0.7nm,0.7s,mb3.5,baz=216,slow=5.5,SNR=12						
PDAR	**Pinedale Array**	**88.52**	**43**	P	**P**	**12 22 02.4**	**+1.2**
	0.4nm,0.6s,mb3.4,baz=164,slow=2.6,SNR=3.5						
CMAR	**Chiang Mai Arr**	**90.23**	**289**	P	**P**	**12 22 11.4**	**+1.7**
	1.7nm,0.8s,mb3.9,baz=112,slow=2.9,SNR=11						
MKAR	**Makanchi Array**	**111.13**	**313**	PKiKP	PKiKP	12 27 37.3	-0.9
	0.4nm,0.7s,baz=56,slow=3.1,SNR=4.0						
ARCES	**ARCESS Array B**	**128.61**	**350**	PKP	PKPdf	12 28 10.6	-0.5
	4.2nm,1.0s,baz=48,slow=1.8,SNR=6.5						
AKASG	**Malin Array Be**	**142.81**	**332**	PKhKP	PKPpre	12 28 34.4	
	1.2nm,0.3s,baz=43,slow=4.8,SNR=5.2						
BRTR	**Keskin Array B**	**146.78**	**313**	PKPbc	PKPbc	12 28 47.9	+0.1
	1.6nm,0.5s,baz=140,slow=5.0,SNR=8.7						
GERES	**GERESS Array B**	**149.91**	**345**	PKPbc	PKPbc	12 28 55.8	+0.5
	2.1nm,0.8s,baz=38,slow=2.4,SNR=12						

IDC 23 13:17:55.2±1.7,4.°47S×138.°40E, h0km, mb3.9/1, mb1 4.2/4, mb1mx3.8/14, mbtmp3.9/4, ML4.0/3, Error ellipse: s-maj=104.7km s-min=28.8km az=114.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.88**	**194**	Pn	Pn	13 21 38.6	-1.6
	0.3nm,0.3s,baz=17,slow=12,SNR=12						
WRA				Sn	Sn	13 24 27.8	-9.4
	0.2nm,0.3s,baz=9.0,slow=22,SNR=3.3						
FITZ	**Fitzroy Crossi**	**18.43**	**222**	P	Pn	13 22 11.4	-0.9
	0.4nm,0.3s,baz=54,slow=9.8,SNR=14						
FITZ				S	Sn	13 25 27.1	-12
	0.3nm,0.3s,baz=182,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**19.58**	**192**	P	Pn	13 22 26.1	0.0
	1.2nm,0.3s,baz=20,slow=11,SNR=79						
ASAR				S	Sn	13 26 01.4	-5.2
	0.1nm,0.3s,baz=14,slow=28,SNR=3.6						
ILAR	**Eielson Array**	**87.55**	**24**	P	P	13 30 44.8	0.0
	0.4nm,0.4s,baz=259,slow=4.5,SNR=9.8						

MOS 23 13:23:12.6±2.9,52.°42N×98.°58E, h8km, mb4.2/1, 1D, Error ellipse: s-maj=33.0km s-min=19.1km az=17.8, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**0.77**	**80**	*e*PG	Pg	13 23 26.8	-0.5
ORL				*e*		13 23 40.9	
ORL				pmax	pmax		
	comp=Z,115nm,0.2s						
ORL				smax			
	comp=N,187nm,0.3s						
MOY	**Mondy**	**1.67**	**116**	*e*PN	Pn	13 23 39.5	-2.6
MOY				*e*		13 24 03.1	
MOY				pmax	pmax		
	comp=Z,29nm,0.1s						
MOY				smax			
	comp=N,935nm,1.3s						
ARS	**Arshan**	**2.42**	**100**	*e*PN	Pn	13 23 54.2	+1.8
ARS				*e*		13 24 28.6	
ARS				pmax	pmax		
	comp=Z,118nm,0.4s						
ARS				smax			
	comp=E,906nm,0.5s						
TLY	**Talaya**	**3.21**	**101**	*e*PN	Pn	13 24 07.2	+3.9
TLY				*e*		13 24 50.9	
TLY				pmax	pmax		
	comp=Z,12nm,0.5s						
TLY				smax			
	comp=N,205nm,1.8s						
ORY	**Orie**	**3.31**	**323**	⇓*i*PN	Pn	13 24 06.1	+1.5
ORY				*e*		13 24 14.1	
ORY				*e*		13 24 47.9	
ORY						13 25 00.1	
IRK	**Irkutsk**	**3.50**	**91**	*e*PN	Pn	13 24 13.4	+6.2
IRK				*e*S	Sn	13 25 01.7	+13
IRK				smax			
	comp=N,313nm,0.4s						
OGRR	**Ongureny**	**5.58**	**74**	*e*PN	Pn	13 24 35.4	-0.4
OGRR				*e*		13 24 52.8	
OGRR				pmax	pmax		
	comp=Z,12nm,0.6s						

NIED ***23*** *13:26:00, 38.°70N×142.°30E, h44km, Mw4.3 Best double couple: M₀3.61000×10¹⁵ NP1:φ₀s31.00000°, δ71.00000°, λ97.00000°. NP2:φ₀s192.00000°, δ20.00000°, λ72.00000°.*

BJI ***23*** *13:26:48.1, 38.°79N×143.°03E, h60km, mB5.1/18, mb4.7/32, Ms4.4/9, Ms7 4.1/10*

MOS ***23*** *13:26:51.4±0.8, 38.°82N×142.°07E, h33km, mb4.5/29, Error ellipse: s-maj=11.1km s-min=6.8km az=110.9*

ISCJB ***23*** *13:26:51.9±0.7, 38.°72N±0.°04×142.°26E±0.°06, h49km±4km, mb4.4/50, MS3.7/12, Error ellipse: s-maj=8.8km s-min=5.1km az=29.0*

JMA ***23*** *13:26:52.1±0.1, 38.°70N×142.°28E, h38km±2km, M4.3*

JMA Felt II J1.

NEIC ***23*** *13:26:53.2±0.3, 38.°73N×142.°24E, mb4.8/13, MW4.3(NIED), Error ellipse: s-maj=8.1km s-min=5.2km az=127.0*

NEIC Recorded [2 JMA] in Miyagi and [1 JMA] in Fukushima and Iwate.

IDC ***23*** *13:26:53.1±0.6, 38.°62N×142.°16E, h42km±6km, mb3.9/21, mb1 4.1/24, mb1mx4.0/31, mbtmp4.0/24, ML3.7/3, MS3.6/11, Ms1 3.6/11, ms1mx3.3/36, Error ellipse: s-maj=14.4km s-min=10.2km az=106.0*

ISC 23 13:26:53.1±0.6, 38.°74N±0.°04×142.°26E±0.°05, h40km±4km, h46km±2.8km: pP-P, n125, σ0.91/135, mb4.4/50, MS3.7/12, 6C-10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.57**	**307**	⇓P	**Pn**	**13 27 04.3**	**-0.5**
OFUJ				*e*S	**Sn**	**13 27 12.9**	**-0.1**
JIO	**Ouri**	**0.77**	**249**	⇓P	**Pn**	**13 27 06.3**	**-1.1**
JIO				S	**Sn**	**13 27 16.2**	**-1.5**
JMK	**Ichinoseki**	**0.84**	**285**	⇓P	**Pn**	**13 27 08.0**	**-0.3**
JMK				*e*S	**Sn**	**13 27 19.3**	**-0.2**
JOM	**Ohasama**	**1.05**	**315**	⇓P	**Pn**	**13 27 11.4**	**+0.1**
JOM				*e*S	**Sn**	**13 27 25.3**	**+0.6**
JTH	**Tanohata**	**1.24**	**346**	⇓P	**Pn**	**13 27 13.6**	**-0.3**
JOU	**Okura**	**1.30**	**254**	⇓P	**Pn**	**13 27 14.4**	**-0.3**
JOU				*e*S	**Sn**	**13 27 31.1**	**+0.2**
JMM	**Marumori**	**1.44**	**233**	⇓P	**Pn**	**13 27 15.6**	**-1.1**
JMM				*e*S	**Sn**	**13 27 33.0**	**-1.4**
JYK	**Kaneyama**	**1.49**	**278**	⇓P	**Pn**	**13 27 17.4**	**+0.1**
ERM	**Erimo**	**3.35**	**12**	*e*Pn	**Pn**	**13 27 43.2**	**+0.5**
ERM	**Erimo**	**3.35**	**12**	*i* P	**Pn**	**13 27 43.7**	**+0.9**
MJAR	**Matsushiro Arr**	**3.89**	**237**	P	**Pn**	**13 27 51.4**	**+1.1**
	13nm,0.3s,baz=37,slow=12,SNR=113						
MJAR				LR	LR	13 29 30.4	
	comp=Z,589nm,19.8s,baz=45,slow=42						
MJAR	**Matsushiro Arr**	**3.89**	**237**	P	**Pn**	**13 27 51.4**	**+1.1**
MJAR				pmax	pmax		
	comp=Z,13nm,0.3s						
MAT	**Matsushiro**	**3.89**	**237**	P	**Pn**	**13 27 51.6**	**+1.3**
MAT				S	**Sn**	**13 28 37.1**	**+2.4**
ASAJ	**Asahikawa**	**5.38**	**3**	P	**Pn**	**13 28 11.2**	**+0.5**
	comp=Z,2.8nm,0.3s,baz=209,slow=13,SNR=18						
ASAJ				LR	LR	13 30 42.7	
	comp=Z,314nm,21.9s,baz=253,slow=42						
ASAJ	**Asahikawa**	**5.38**	**3**	*e*Pn	**Pn**	**13 28 11.6**	**+0.9**
	comp=Z,10nm,0.6s						
ASAJ	**Asahikawa**	**5.38**	**3**	P	**Pn**	**13 28 11.2**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.95**	**26**	⇑*i*P	**Pn**	**13 28 24.1**	**+5.6**
YUK				*e*S	**Sn**	**13 29 23.3**	**-2.0**
YUK				pmax	pmax		
	comp=Z,2μm,2.4s						
YUK				pmax	pmax		
	comp=N,516nm,1.5s						
YUK				pmax	pmax		
	comp=E,351nm,1.5s						
YUK				pmax	pmax		
	comp=Z,621nm,1.5s						
YUK				smax			
	comp=N,227nm,0.7s						
YUK				smax			
	comp=E,192nm,0.7s						
YUK				smax			
	comp=N,5μm,2.6s						
YUK				smax			
	comp=E,4μm,2.6s						
JHJ	**Hachijo jima 2**	**5.95**	**200**	P	**Pn**	**13 28 18.4**	**-0.3**
	comp=E,15nm,0.3s,baz=64,slow=22,SNR=8.6						
JHJ				S	**Sn**	**13 29 20.1**	**-5.5**
	comp=E,29nm,0.3s,baz=61,slow=23,SNR=7.5						
YSS	**Yuzh-Sakhalins**	**8.22**	**2**	*e*Pn	**Pn**	**13 28 51.1**	**+1.4**
YSS	**Yuzh-Sakhalins**	**8.22**	**2**	⇑*i*P	**Pn**	**13 28 51.0**	**+1.3**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
JNU	**Nakatsue**	**10.79**	**242**	*e*P	**Pn**	**13 29 27.0**	**+2.1**
MDJ	**Mudanjiang**	**11.14**	**306**	P	**Pn**	**13 29 35.3**	**+5.7**
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,180nm,4.1s						
KSRS	**Korea Array**	**11.37**	**268**	P	**Pn**	**13 29 33.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=76,slow=13,SNR=3.5						
KSRS				LR	LR	13 33 32.5	
	comp=Z,168nm,19.9s,baz=348,slow=35						
KSRS	**Korea Array**	**11.37**	**268**	P	**Pn**	**13 29 33.1**	**+0.3**
KSRS				MLR	MLR		
	comp=Z,168nm,19.9s						
CN2	**Changchun**	**13.61**	**297**	*e*P	**Pn**	**13 30 08.3**	**+4.9**
CN2				*e*sP		13 30 28.3	
CN2				*e*S	**Sn**	**13 32 43.8**	**+11**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,1μm,13.0s						
CN2				LR	LR		
	comp=E,1μm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
PET	**Petropavlovsk**	**18.22**	**33**	⇓*e*P	pP	13 31 12.4	-0.1
BJI	**Beijing**	**20.18**	**282**	P	**P**	**13 31 25.3**	**+1.2**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,180nm,4.1s						
NJ2	**Nanjing**	**20.18**	**258**	*e*P	**P**	**13 31 26.3**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,100nm,0.5s						
HHC	**Hu-ho-hao-te**	**23.62**	**285**	*e*P	**P**	**13 32 01.0**	**+0.6**
HHC				pP		13 32 15.3	
HHC				sP	sP	13 32 23.0	+7.0
HHC				PP		13 32 37.9	
HHC				PcP	PcP	13 35 41.1	-3.0
HHC				S	**S**	**13 36 12.9**	**+1.0**
HHC				sS	sS	13 36 37.8	+7.8
HHC				SS		13 37 08.8	
HHC				ScP	ScP	13 39 13.8	-5.2
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3						
HHC				pmax	pmax		
	comp=Z,160nm,7.6s						
HHC				LR	LR		
	comp=N,340nm,10.5s,MS4.3						
HHC				LR	LR		
	comp=E,420nm,11.0s,MS4.3						
HHC				LR	LR		
	comp=Z,410nm,11.5s,MS4.1						
YAK	**Yakutsk**	**24.57**	**346**	P	**P**	**13 32 06.8**	**-2.0**
	comp=Z,16nm,0.7s,mb4.7						
YAK	**Yakutsk**	**24.57**	**346**	*e*P	**P**	**13 32 08.6**	**-0.2**
YAK				*e*		13 32 23.8	
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
SEY	**Seymchan**	**24.99**	**11**	⇓*e*P	**P**	**13 32 13.7**	**+1.0**
GUMO	**Guam**	**25.15**	**174**	LR	LR	13 39 59.7	
	comp=Z,63nm,20.5s,MS3.1,baz=313,slow=31						
BOD	**Bodaibo**	**26.48**	**325**	*e*P	**P**	**13 32 24.6**	**-1.5**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.0						
ULN	**Ulaanbaatar**	**27.00**	**301**	P	**P**	**13 32 31.1**	**+0.2**
	comp=Z,1.8nm,0.6s,mb3.8						
ULN	**Ulaanbaatar**	**27.00**	**301**	P	**P**	**13 32 31.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
SONM	**Songino Array**	**27.43**	**301**	P	**P**	**13 32 35.1**	**+0.2**
	comp=Z,1.2nm,0.4s,mb3.8,baz=101,slow=8.9,SNR=6.4						
SONM				LR	LR	13 43 41.7	
	comp=Z,64nm,18.7s,MS3.2,baz=217,slow=37						
SONM	**Songino Array**	**27.43**	**301**	P	**P**	**13 32 35.1**	**+0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM				MLR	MLR		
	comp=Z,64nm,18.7s						
ENH	**Enshi**	**28.18**	**263**	P	**P**	**13 32 40.7**	**-1.0**
	comp=Z,16nm,0.6s,mb4.8						
TLY	**Talaya**	**29.76**	**308**	*e*P	**P**	**13 32 54.4**	**-1.1**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
TLY				MLR	MLR		
	comp=Z,94nm,17.0s,MS3.5						
ZAK	**Zakamensk**	**29.78**	**306**	*e*P	**P**	**13 32 55.6**	**0.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
GYA	**Guiyang**	**32.19**	**258**	*e*P	**P**	**13 33 18.0**	**+0.8**
GYA				pP	pP	13 33 32.1	+3.8
GYA				sP	sP	13 33 40.9	+7.8
GYA				PP	PP	13 34 27.5	-2.8
GYA				S	**S**	**13 38 27.4**	**0.0**
GYA				sS	sS	13 38 55.3	+9.4
GYA				ScP	ScP	13 39 40.0	-5.6
GYA				ScS	ScS	13 43 37.5	-7.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
BILL	**Bilibino**	**32.21**	**17**	P	**P**	**13 33 18.0**	**+1.1**
BILL				*PP	pP	13 33 30.0	+2.1
CD2	**Chengdu**	**32.37**	**268**	*e*P	**P**	**13 33 18.1**	**-0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
QIZ	**Qiongzhong**	**34.25**	**244**	P	**P**	**13 33 33.9**	**-1.3**
KMI	**Kunming**	**35.90**	**260**	P	**P**	**13 33 51.5**	**+2.1**
KMI				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.7						
WMQ	**Urumqi**	**40.69**	**295**	*e*P	**P**	**13 34 30.0**	**+0.5**
WMQ				sP	sP	13 34 53.0	+7.5
WMQ				PP	PP	13 36 10.0	+6.4
WMQ				S	**S**	**13 40 39.0**	**+2.2**
WMQ				sS	sS	13 41 06.0	+10
WMQ				SS	SS	13 43 42.0	+4.0
WMQ				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
WMQ				LR	LR		
	comp=N,47nm,14.0s,MS3.7						
WMQ				LR	LR		
	comp=E,64nm,14.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,44nm,14.0s,MS3.5						
ZAA0	**Zalesovo Array**	**41.28**	**311**	*e*P	**P**	**13 34 34.2**	**0.0**
ZALV	**Zalesovo Beam**	**41.28**	**311**	P	**P**	**13 34 34.2**	**+0.1**
	comp=Z,5.5nm,0.5s,mb4.5,baz=85,slow=7.9,SNR=31						
ZALV				PcP	PcP	13 36 31.7	-0.5
	comp=Z,0.7nm,0.4s,baz=98,slow=2.9,SNR=4.1						
ZALV				LR	LR	13 52 17.4	
	comp=Z,57nm,19.1s,MS3.5,baz=248,slow=37						
ZALV	**Zalesovo Beam**	**41.28**	**311**	P	**P**	**13 34 34.2**	**+0.1**
ZALV				PcP	PcP	13 36 31.6	-0.5
ZALV				LR	LR	13 52 17.4	
ZALV	**Zalesovo Beam**	**41.28**	**311**	P	**P**	**13 34 34.2**	**0.0**
ZALV						13 36 31.7	
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.5						
ZALV				MLR	MLR		
	comp=Z,57nm,19.1s,MS3.5						
NVS	**Novosibirsk**	**42.17**	**312**	*e*P	**P**	**13 34 40.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**42.59**	**254**	P	**P**	**13 34 45.3**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.4,baz=142,slow=4.3,SNR=4.0						
CMAR				pP	pP	13 34 56.5	-0.1
	comp=Z,1.1nm,0.5s,baz=44,slow=8.1,SNR=5.7						
CMAR	**Chiang Mai Arr**	**42.59**	**254**	P	**P**	**13 34 45.3**	**+0.1**
CMAR				*PP	pP	13 34 56.5	-0.1
MK31	**Makanchi Array**	**43.80**	**301**	*e*P	**P**	**13 34 54.6**	**-0.1**
MK31	**Makanchi Array**	**43.80**	**301**	*e*P	**P**	**13 34 54.6**	**-0.1**
MKAR	**Makanchi Array**	**43.80**	**301**	P	**P**	**13 34 54.7**	**-0.1**
	comp=Z,3.2nm,0.6s,mb4.2,baz=84,slow=10,SNR=24						
MKAR				LR	LR	13 53 32.1	
	comp=Z,51nm,18.6s,MS3.5,baz=351,slow=36						
MKAR	**Makanchi Array**	**43.80**	**301**	P	**P**	**13 34 54.7**	**-0.1**
MKAR				LR	LR	13 53 32.1	
MKAR	**Makanchi Array**	**43.80**	**301**	*c e*P	**P**	**13 34 54.7**	**0.0**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	**Kurchatov**	**45.43**	**307**	*e*P	**P**	**13 35 07.1**	**-0.5**
	comp=Z,20nm,0.8s,mb5.0						
KURK	**Kurchatov**	**45.43**	**307**	P	**P**	**13 35 07.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
GUN	**Gumba**	**47.67**	**275**	*e*P	**P**	**13 35 26.0**	**+0.5**
	comp=Z,22nm,0.5s,mb5.4						
ILAR	**Eielson Array**	**47.70**	**33**	P	**P**	**13 35 25.9**	**+0.6**
	comp=Z,1.2nm,0.7s,mb4.0,baz=266,slow=6.2,SNR=21						
ILAR				pP	pP	13 35 38.9	+2.1
	comp=Z,1.5nm,0.6s,baz=265,slow=6.0,SNR=9.8						
ILAR	**Eielson Array**	**47.70**	**33**	P	**P**	**13 35 25.9**	**+0.6**
ILAR				*PP	pP	13 35 38.9	+2.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KKN	**Kakani**	**48.19**	**275**	*e*P	**P**	**13 35 29.9**	**+0.3**
	comp=Z,22nm,0.8s,mb5.3						
KKN	**Kakani**	**48.19**	**275**	*e*P	**P**	**13 35 29.9**	**+0.3**
KKN				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
GKN	**Gorkha**	**48.59**	**275**	*e*P	**P**	**13 35 32.7**	**+0.1**
	comp=Z,12nm,0.6s,mb5.1						
DANN	**Dangsing**	**49.11**	**276**	*e*P	**P**	**13 35 37.3**	**+0.7**
	comp=Z,34nm,0.6s,mb5.6						
TKM2	**Tokmak 2**	**49.42**	**297**	*e*P	**P**	**13 35 39.2**	**+0.3**
	comp=Z,3.3nm,0.6s,mb4.5						
TKM2	**Tokmak 2**	**49.42**	**297**	P	**P**	**13 35 39.3**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KOLN	**Koldanda**	**49.51**	**276**	*e*P	**P**	**13 35 40.1**	**+0.4**
	comp=Z,6.9nm,0.5s,mb4.9						
BVA0	**Borovoye Array**	**49.94**	**311**	P	**P**	**13 35 42.2**	**-0.3**
BVAR	**Borovoye Array**	**49.94**	**311**	P	**P**	**13 35 42.4**	**-0.1**
	comp=Z,3.1nm,0.5s,mb4.6,baz=74,slow=8.2,SNR=19						
BVAR				PcP	PcP	13 37 02.2	-0.1
	comp=Z,1.5nm,0.6s,baz=80,slow=3.5,SNR=4.1						
BVAR	**Borovoye Array**	**49.94**	**311**	P	**P**	**13 35 42.4**	**-0.1**
BVAR						13 37 02.2	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	**Borovoye**	**49.99**	**311**	*e*P	**P**	**13 35 42.4**	**-0.5**
	comp=Z,2.7nm,0.4s,mb4.6						
BRVK	**Borovoye**	**49.99**	**311**	*e*P	**P**	**13 35 42.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
AAK	**Ala-Archa**	**50.28**	**297**	P	**P**	**13 35 45.4**	**+0.1**
	comp=Z,0.9nm,0.4s,mb4.2,baz=117,slow=4.5,SNR=2.9						
AAK	**Ala-Archa**	**50.28**	**297**	P	**P**	**13 35 45.4**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb

comp=Z,1.4nm,0.6s,mb4.3,baz=49,slow=8.3,SNR=8.0
ARCES LR LR 14 07 05.0
comp=Z,49nm,21.2s,MS3.6,baz=220,slow=38
ARCES ARCESS Array B 62.64 339 P **P** **13 37 12.9 +0.1**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
ARCES MLR MLR
comp=Z,49nm,21.2s
JOF Joensuu 64.78 332 *eP* **P** **13 37 26.3 -0.7**
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KAF Kangasniemi 67.10 333 *eP* **P** **13 37 40.9 -1.1**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
FINES FINESS Array B 67.62 332 P **P** **13 37 44.9 -0.3**
comp=Z,6.3nm,0.8s,mb4.7,baz=55,slow=7.2,SNR=13
FINES LR LR 14 12 49.9
comp=Z,76nm,18.0s,MS4.0,baz=129,slow=41
FINES FINESS Array B 67.62 332 P **P** **13 37 44.9 -0.3**
FINES LR LR 14 12 49.9
FINES FINESS Array B 67.62 332 P **P** **13 37 44.9 -0.3**
FINES pmax pmax
comp=Z,6.0nm,0.8s
FINES MLR MLR
comp=Z,76nm,18.0s
VSR Storozhevoye 68.09 319 *eP* **P** **13 37 46.2 -2.2**
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
KIV Kislovodsk 70.30 311 *eP* **P** **13 38 03.4 +1.2**
KIV pmax pmax
comp=Z,15nm,0.9s,mb4.9
KIV MLR MLR
comp=Z,33nm,18.0s,MS3.6
NB2 NORSAR Subarra 72.88 337 P **P** **13 38 17.1 -0.3**
comp=Z,1.7nm,0.7s,mb4.1,baz=40,slow=6.2
NOA NORSAR Array B 72.88 337 P **P** **13 38 17.4 +0.1**
comp=Z,1.6nm,0.6s,mb4.1,baz=38,slow=5.9,SNR=8.4
NOA LR LR 14 11 56.9
comp=Z,63nm,19.3s,MS3.9,baz=5.0,slow=37
NOA NORSAR Array B 72.88 337 P **P** **13 38 17.5 +0.1**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA MLR MLR
comp=Z,63nm,19.3s
AKASG Malin Array Be 73.36 322 P **P** **13 38 19.9 -0.5**
comp=Z,5.0nm,0.7s,mb4.6,baz=45,slow=5.9,SNR=13
AKASG Malin Array Be 73.36 322 P **P** **13 38 19.9 -0.5**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
NVAR Mina Array Bea 73.44 54 P **P** **13 38 22.6 +1.5**
comp=Z,0.7nm,0.8s,mb3.6,baz=274,slow=7.2,SNR=5.1
PDAR Pinedale Array 76.00 46 P **P** **13 38 36.8 +0.9**
comp=Z,1.0nm,0.6s,mb3.9,baz=295,slow=1.7,SNR=7.1
BUR08 Bucovina Ar. S 77.38 322 *eP* **P** **13 38 43.8 +0.3**
BRTR Keskin Array B 78.22 312 P **P** **13 38 48.7 +0.3**
comp=Z,0.8nm,0.4s,mb4.0,baz=104,slow=4.2,SNR=6.6
BRTR Keskin Array B 78.22 312 *eP* **P** **13 38 48.7 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.4s
CLL Collm 79.95 330 *i P* **P** **13 38 57.5 -0.1**
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 79.95 330 *i P* **P** **13 38 57.5 -0.1**
CLL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
KHC Kasperske Hory 81.44 329 *eP* **P** **13 39 05.9 +0.3**
KHC Kasperske Hory 81.44 329 *eP* **P** **13 39 05.9 +0.3**
GERES GERESS Array B 81.61 329 P **P** **13 39 06.3 -0.3**
comp=Z,1.1nm,0.8s,mb3.9,baz=55,slow=7.0,SNR=6.3
GERES GERESS Array B 81.61 329 P **P** **13 39 06.3 -0.3**
GERES pmax pmax
comp=Z,1.0nm,0.8s
RPZ Rata Peaks 86.11 160 LR LR 14 15 18.6
comp=Z,142nm,19.5s,MS4.4,baz=24,slow=34
TXAR Lajitas Array 88.56 53 P **P** **13 39 41.9 +0.2**
comp=Z,0.4nm,0.6s,mb3.9,baz=265,slow=3.9,SNR=8.4
TXAR pP pP 13 39 54.2 +0.2
comp=Z,0.3nm,0.6s,baz=313,slow=4.2,SNR=3.9
TXAR Lajitas Array 88.56 53 P **P** **13 39 41.9 +0.2**
TXAR pP pP 13 39 54.2 +0.2
TXAR Lajitas Array 88.56 53 P **P** **13 39 41.9 +0.2**
TXAR *PP pP 13 39 54.2 +0.2
LPAZ La Paz 145.25 58 PKPbc PKPbc 13 46 26.9 +0.5
comp=Z,0.6nm,0.5s,baz=333,slow=4.5,SNR=3.5

NIED ***23*** *13:58:00,38.70N×142.30E,h35km,Mw3.7 Best double couple: M₀4.40000×10¹⁴ NP1:φ₀296.00000°,δ74.00000°, λ-85.00000°. NP2:φ₀100.00000°,δ17.00000°, λ-105.00000°.*
JMA 23 13:58:28.2±0.1,38.70N×142.27E,h36km±2km,M3.5,4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.60**	**309**	⇓P	Pn	13 58 40.3	0.0
OFUJ				*eS*	Sn	13 58 48.7	-0.1
JIO	**Ouri**	**0.76**	**252**	⇓P	Pn	13 58 42.3	-0.1
JIO				*eS*	Sn	13 58 52.1	-0.6
JMK	**Ichinoseki**	**0.86**	**287**	⇓P	Pn	13 58 44.0	+0.3
JMK				*eS*	Sn	13 58 55.2	+0.1
JOM	**Ohasama**	**1.08**	**316**	⇓P	Pn	13 58 47.4	+0.5
JOM				*eS*	Sn	13 59 01.2	+0.6
JTH	**Tanohata**	**1.28**	**346**	P	Pn	13 58 49.7	+0.2
JTH				*eS*	Sn	13 59 05.8	+0.4
JOU	**Okura**	**1.30**	**256**	P	Pn	13 58 50.6	+0.7
JOU				*eS*	Sn	13 59 07.0	+1.0
JMM	**Marumori**	**1.43**	**235**	P	Pn	13 58 51.7	+0.1
JYK	**Kaneyama**	**1.51**	**279**	P	Pn	13 58 53.8	+1.1

CSEM ***23*** *13:58:33.0±0.4,32.60N×46.80E,h10km,ML2.9,Error ellipse: s-maj=21.3km s-min=4.7km az=97.0*
KISR ***23*** *13:58:34.8±0.8,32.34N×47.09E,h34km±37km,ML2.9*
ISCJB ***23*** *13:58:36.0±0.5,32.40N±0.02×47.40E±0.08,h10km,Error ellipse: s-maj=9.4km s-min=3.4km az=3.0*
TEH ***23*** *13:58:38.0,32.43N×47.33E,h18km*
ISC 23 13:58:36.9±0.5,32.41N±0.02×47.31E±0.07,h10km,n21, σ0.72/32,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.76**	**5**	*eSg*	**Sg**	**13 59 33.3**	**-0.3**
IKOM				*ePn*	**Pn**	**13 59 07.6**	**+0.2**
IKOM				*e*		13 59 40.7	
comp=Z,4μm,0.3s							
IGHG	**Ghaleghazi**	**2.01**	**342**	*ePn*	**Pn**	**13 59 11.4**	**+0.6**
IGHG				*e*		13 59 50.3	
comp=Z,2μm,0.2s							
IVIS	**Veis**	**2.14**	**350**	*ePn*	**Pn**	**13 59 13.2**	**+0.5**
IDHR	**Dehrash**	**2.41**	**341**	*ePn*	**Pn**	**13 59 16.6**	**+0.3**
IDHR				*eSg*	**Sg**	**13 59 52.3**	**-1.9**
IDHR				*e*		13 59 54.8	
comp=Z,3μm,0.2s							
ILIN	**Lien**	**2.52**	**353**	*e*	**Sg**	**14 00 06.5**	**+8.8**
comp=Z,824nm,0.2s							
MIB	**Mutribah**	**2.60**	**180**	*eP*	**Pn**	**13 59 18.6**	**-0.4**
MIB				*eS*	**Sn**	**13 59 51.7**	**+1.0**
MIB				AML	AML	13 59 59.6	
comp=Z,60nm,0.5s							
MIB	**Mutribah**	**2.60**	**180**	*eP*	**Pn**	**13 59 18.6**	**-0.4**
MIB				*eS*	**Sn**	**13 59 51.7**	**+1.1**
SNGE	**Sanandaj**	**2.67**	**1**	*ePg*	**Pn**	**13 59 21.6**	**+1.7**
SNGE				*eSg*	**Sn**	**13 59 53.4**	**+1.0**
IPIR	**Pirpir**	**3.03**	**84**	*ePn*	**Pn**	**13 59 25.3**	**+0.4**
IPIR				*e*		14 00 15.4	
comp=Z,815nm,0.3s							
ASAO	**Ashtian**	**3.11**	**46**	*ePn*	**Pn**	**13 59 26.2**	**+0.3**
NAY	**Al-Naaiem**	**3.15**	**181**	*eP*	**Pn**	**13 59 25.9**	**-0.7**
NAY				*eS*	**Sn**	**14 00 03.9**	**-0.4**
NAY				AML	AML	14 00 12.8	
comp=Z,16nm,0.5s							
NAY	**Al-Naaiem**	**3.15**	**181**	*eP*	**Pn**	**13 59 25.9**	**-0.7**
NAY				*eS*	**Sn**	**14 00 03.9**	**-0.4**
RDF	**Al-Radifah**	**3.48**	**177**	*eP*	**Pn**	**13 59 30.8**	**-0.3**
RDF				*eS*	**Sn**	**14 00 12.7**	**+0.3**
RDF				AML	AML	14 00 15.5	
comp=Z,23nm,0.4s							
RDF	**Al-Radifah**	**3.48**	**177**	*eP*	**Pn**	**13 59 30.8**	**-0.3**
RDF				*eS*	**Sn**	**14 00 12.7**	**+0.3**
IRAZ	**Razeghan**	**3.69**	**35**	*ePn*	**Pn**	**13 59 33.9**	**0.0**
IRAZ				*e*		13 59 47.6	
comp=Z,428nm,0.2s							
QRN	**Al-Qurain**	**3.69**	**172**	*eP*	**Pn**	**13 59 33.4**	**-0.6**
QRN				*eS*	**Sn**	**14 00 17.5**	**-0.1**
QRN				AML	AML	14 00 18.4	
comp=Z,23nm,0.4s							
IKLH	**Kolahrood**	**3.70**	**75**	*ePn*	**Pn**	**13 59 34.2**	**+0.1**
IKLH				*e*		13 59 37.7	
comp=Z,334nm,0.1s							
GHVR	**GHOM**	**3.91**	**57**	*ePn*	**Pn**	**13 59 36.7**	**-0.3**
IZEF	**Zefreh**	**4.26**	**82**	*ePn*	**Pn**	**13 59 41.8**	**+0.1**
IZEF				*e*		14 00 58.0	
comp=Z,156nm,0.2s							
IVRN	**Varamin**	**4.49**	**54**	*ePn*	**Pn**	**13 59 44.4**	**-0.5**
IVRN				*ePn*	**Pn**	**13 59 44.5**	**-0.4**
IDMV	**Damavand**	**5.03**	**50**	*ePn*	**Pn**	**13 59 51.1**	**-1.3**
IDMV				*e*		13 59 59.9	
comp=Z,114nm,0.1s							

DDA ***23*** *13:59:54.9,39.42N×33.05E,h6km±1km,Md2.9*
ISK ***23*** *13:59:54.5,39.48N×33.04E,h5km,ML2.5*
ISCJB ***23*** *13:59:55.4±0.6,39.43N±0.03×33.02E±0.03,h2km±4km, Error ellipse: s-maj=5.4km s-min=3.6km az=151.0*
CSEM ***23*** *13:59:55.4±0.2,39.46N×33.03E,h5km,ML2.5,Error ellipse: s-maj=5.6km s-min=4.2km az=147.0*
ISC 23 13:59:55.8±0.5,39.43N±0.03×33.04E±0.03,h4km±4km, n32,σ0.97/52,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Afşar-Bala (A**	**0.03**	**64**	*ePG*	**Pg**	**13 59 55.5**	**-1.1**
AFSR				*eSG*	**Sg**	**13 59 57.0**	**-0.2**
AFSR	**Afşar-Bala (A**	**0.03**	**64**	*ePg*	**Pg**	**13 59 55.5**	**-1.1**
AFSR				*eSg*	**Sg**	**13 59 57.0**	**-0.2**
BBAL	**Bala**	**0.13**	**32**	*i P*	**Pg**	**14 00 00.0**	**+1.7**
BBAL				*i S*	**Sg**	**14 00 00.5**	**+0.4**
BBAL	**Bala**	**0.13**	**32**	*i P*	**Pg**	**14 00 00.0**	**+1.7**
BBAL				*i S*	**Sg**	**14 00 00.5**	**+0.4**
LOD	**Lodumlu**	**0.50**	**335**	*ePG*	**Pg**	**14 00 04.2**	**-1.2**
LOD	**Lodumlu**	**0.50**	**335**	*ePg*	**Pg**	**14 00 04.2**	**-1.2**
CDAG	**Cicekdag**	**1.05**	**79**	*i P*	**Pg**	**14 00 14.9**	**-1.0**
CDAG				*i S*	**Sg**	**14 00 29.8**	**+0.2**
CDAG	**Cicekdag**	**1.05**	**79**	*i P*	**Pg**	**14 00 14.9**	**-1.0**
CDAG				*i S*	**Sg**	**14 00 29.8**	**+0.2**
KIZT	**Kizilcal**	**1.05**	**239**	*ePG*	**Pg**	**14 00 16.6**	**+0.6**
KIZT				*eSG*	**Sg**	**14 00 30.7**	**+1.1**
KIZT	**Kizilcal**	**1.05**	**239**	*ePg*	**Pg**	**14 00 16.6**	**+0.6**
KIZT				*eSg*	**Sg**	**14 00 30.7**	**+1.1**
ELDT	**Eldivan**	**1.10**	**16**	*i P*	**Pg**	**14 00 15.9**	**-0.9**
ELDT				*i S*	**Sg**	**14 00 31.8**	**+0.8**
ELDT	**Eldivan**	**1.10**	**16**	*i P*	**Pg**	**14 00 15.9**	**-0.9**
ELDT				*i S*	**Sg**	**14 00 31.8**	**+0.7**
KDHN	**Kadinhani**	**1.16**	**218**	*i P*	**Pg**	**14 00 17.3**	**-0.7**
KDHN				*i S*	**Sg**	**14 00 33.7**	**+0.7**
KDHN	**Kadinhani**	**1.16**	**218**	*i P*	**Pg**	**14 00 17.3**	**-0.7**
KDHN				*i S*	**Sg**	**14 00 33.7**	**+0.7**
SVRH	**Sivrihisar-ESK**	**1.17**	**271**	*ePN*	**Pn**	**14 00 17.1**	**-1.9**
SVRH	**Sivrihisar-ESK**	**1.17**	**271**	*ePn*	**Pn**	**14 00 17.1**	**-1.9**
SULT	**Sultanhani-AKS**	**1.29**	**163**	*ePN*	**Pn**	**14 00 21.1**	**+0.5**
SULT	**Sultanhani-AKS**	**1.29**	**163**	*ePn*	**Pn**	**14 00 21.1**	**+0.5**
SGKT	**Sivrigoynuk**	**1.36**	**327**	*i P*	**Pn**	**14 00 20.8**	**-0.8**
SGKT				*i S*	**Sg**	**14 00 41.1**	**+1.5**
SGKT	**Sivrigoynuk**	**1.36**	**327**	*i P*	**Pn**	**14 00 20.8**	**-0.8**
SGKT				*i S*	**Sg**	**14 00 41.2**	**+1.6**
CORM	**Corum**	**1.44**	**58**	*ePN*	**Pn**	**14 00 20.8**	**-1.9**
CORM	**Corum**	**1.44**	**58**	*ePn*	**Pn**	**14 00 20.8**	**-1.8**
AVNT	**Avonos**	**1.56**	**114**	*i P*	**Pn**	**14 00 23.9**	**-0.4**
AVNT				*i S*	**Sn**	**14 00 46.2**	**+1.2**
AVNT	**Avonos**	**1.56**	**114**	*i P*	**Pn**	**14 00 24.0**	**-0.3**
AVNT				*i S*	**Sn**	**14 00 46.2**	**+1.2**
KONT	**Konya--Tatoy**	**1.58**	**200**	*ePN*	**Pn**	**14 00 24.8**	**+0.2**
KONT	**Konya--Tatoy**	**1.58**	**200**	*ePn*	**Pn**	**14 00 24.8**	**+0.3**
ESKT	**Eskisehir**	**1.69**	**274**	*i P*	**Pn**	**14 00 26.7**	**+0.5**
ESKT				*i S*	**Sn**	**14 00 47.5**	**-0.8**
SEYT	**Eskypehyr**	**1.69**	**274**	*i P*	**Pn**	**14 00 26.7**	**+0.5**
SEYT				*i S*	**Sn**	**14 00 47.5**	**-0.8**
YOZ	**Yozgat**	**1.78**	**83**	*ePN*	**Pn**	**14 00 26.9**	**-0.5**
YOZ	**Yozgat**	**1.78**	**83**	*ePn*	**Pn**	**14 00 26.9**	**-0.4**
CTKT	**Corum**	**1.80**	**48**	*i P*	**Pn**	**14 00 27.9**	**+0.4**
CTKT				*i S*	**Sn**	**14 00 52.1**	**+1.3**
CTKT	**Corum**	**1.80**	**48**	*i P*	**Pn**	**14 00 28.0**	**+0.4**
CTKT				*i S*	**Sn**	**14 00 52.1**	**+1.2**

ISCJB ***23*** *14:11:37.3±1.2,25.40S±0.05×179.4W±0.1,h426km±13km, mb4.0/15,Error ellipse: s-maj=15.3km s-min=7.8km az=2.7*
NEIC ***23*** *14:11:39.1±0.4,25.30S×179.40W,mb4.4/3,Error ellipse: s-maj=14.1km s-min=11.1km az=135.0*
IDC ***23*** *14:11:40.3±0.9,25.36S×179.49W,h444km±7km,mb3.7/12, mb1 3.9/13,mb1mx3.8/17,mbtmp3.7/13,Error ellipse: s-maj=20.8km s-min=11.2km az=154.0*
ISC 23 14:11:38.4±1.1,25.42S±0.06×179.4W±0.1,h425km±13km, h435km±3.4km:pP-P,n46,σ1.09/45,mb4.0/15,1S,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.01**	**342**	*eP*	**P**	**14 13 33.7**	**0.0**
309nm,0.6s							
KUZ	**Kuaotunu**	**12.05**	**199**	PN	**P**	**14 14 20.6**	**+2.7**
MKAZ	**Moumakai**	**12.56**	**200**	PN	**P**	**14 14 25.7**	**+2.2**
PUZ	**Puketiti**	**12.78**	**189**	*ePN*	**P**	**14 14 24.9**	**-0.9**
PUZ				SN	**S**	**14 16 43.2**	**-1.1**
MWZ	**Matawai**	**13.15**	**191**	PN	**P**	**14 14 29.5**	**-0.3**
MWZ				SN	**S**	**14 16 51.5**	**-0.1**
URZ	**Urewera**	**13.15**	**192**	P	**P**	**14 14 28.9**	**-1.0**
13nm,0.3s,baz=313,slow=2.8,SNR=58							
URZ				S	**S**	**14 16 47.6**	**-4.0**
5.6nm,0.3s,baz=248,slow=20,SNR=26							
URZ	**Urewera**	**13.15**	**192**	*eP*	**P**	**14 14 28.4**	**-1.4**
URZ				*eS*	**S**	**14 16 47.5**	**-4.1**
URZ	**Urewera**	**13.15**	**192**	PN	**P**	**14 14 28.7**	**-1.1**
URZ				SN	**S**	**14 16 50.4**	**-1.2**
AFI	**Afiamalu**	**13.49**	**33**	P	**P**	**14 14 29.2**	**-4.7**
9.0nm,0.3s,baz=160,slow=19,SNR=13							
AFI				S	**S**	**14 16 49.0**	**-10**
16nm,0.3s,baz=211,slow=23,SNR=7.6							
AFI	**Afiamalu**	**13.49**	**33**	*eP*	**P**	**14 14 29.1**	**-4.8**
AFI				S	**S**	**14 16 49.0**	**-10**
RPZ	**Rata Peaks**	**19.86**	**201**	P	**P**	**14 15 39.4**	**-0.3**
1.9nm,0.3s,baz=347,slow=1.5,SNR=6.2							
HNR	**Honiara**	**25.28**	**305**	P	**P**	**14 16 27.1**	**-1.9**
50nm,0.5s,baz=346,slow=18,SNR=6.6							
ARMA	**Armidale**	**26.07**	**252**	*eP*	**P**	**14 16 37.8**	**+2.0**
CTA	**Charters Tower**	**32.09**	**272**	P	**P**	**14 17 29.6**	**+1.0**
11nm,0.5s,mb4.4,baz=94,slow=11,SNR=16							
CTA	**Charters Tower**	**32.09**	**272**	*eP*	**P**	**14 17 29.3**	**+0.7**
7.4nm,0.4s,mb4.4							
CTAO	**Charters Tower**	**32.09**	**272**	*eP*	**P**	**14 17 29.7**	**+1.1**
10nm,0.6s,mb4.3							
STKA	**Stephens Creek**	**34.72**	**250**	P	**P**	**14 17 51.8**	**+0.9**
7.6nm,0.4s,mb4.3,baz=98,slow=11,SNR=66							
STKA	**Stephens Creek**	**34.72**	**250**	*eP*	**P**	**14 17 51.8**	**+0.9**
6.7nm,0.4s,mb4.3							
STKA	**Stephens Creek**	**34.72**	**250**	*eP*	**P**	**14 17 51.9**	**+1.0**
ASAR	**Alice Springs**	**42.38**	**262**	P	**P**	**14 18 53.5**	**-0.1**
2.3nm,0.4s,mb3.9,baz=89,slow=7.1,SNR=136							
ASAR				pP	pP	14 20 15.6	+0.7
1.4nm,0.7s,baz=97,slow=8.6,SNR=3.5							
ASAR				S	**S**	**14 24 41.5**	**-1.5**
2.1nm,1.0s,baz=95,slow=16,SNR=8.5							
WRA	**Warramunga Arr**	**42.90**	**268**	P	**P**	**14 18 57.4**	**-0.4**
2.3nm,0.3s,mb4.0,baz=102,slow=18,SNR=53							
WRA				pP	pP	14 20 21.5	+2.2
0.7nm,0.5s,baz=98,slow=8.0,SNR=2.1							
WRA				S	**S**	**14 24 47.0**	**-3.7**
2.1nm,1.1s,baz=102,slow=15,SNR=4.4							
WRA	**Warramunga Arr**	**42.90**	**268**	P	**P**	**14 18 57.4**	**-0.4**
WRA				pP	pP	14 20 21.5	+2.2
WRA				S	**S**	**14 24 47.0**	**-3.7**
FITZ	**Fitzroy Crossi**	**51.30**	**267**	*eP*	**P**	**14 20 01.7**	**0.0**
6.0nm,0.5s,mb4.1							
QSPA	**South Pole Qui**	**64.67**	**180**	*eP*	**P**	**14 21 34.8**	**+2.6**
6.1nm,1.3s,mb4.1							
MJAR	**Matsushiro Arr**	**73.47**	**325**	P	**P**	**14 22 25.5**	**-0.5**
3.9nm,0.8s,mb4.0,baz=171,slow=6.0,SNR=12							
MAT	**Matsushiro**	**73.47**	**325**	P	**P**	**14 22 25.8**	**-0.2**
KSRS	**Korea Array**	**79.77**	**320**	P	**P**	**14 23 00.8**	**-0.1**
1.8nm,0.6s,mb3.9,baz=130,slow=5.9,SNR=6.8							
PETK	**Petropavlovsk-**	**80.70**	**346**	P	**P**	**14 23 05.2**	**-0.1**
4.3nm,0.6s,mb4.4,baz=118,slow=5.5,SNR=18							
PETK	**Petropavlovsk-**	**80.70**	**346**	P	**P**	**14 23 05.2**	**-0.1**
NVAR	**Mina Array Bea**	**85.44**	**44**	P	**P**	**14 23 30.6**	**+0.9**
0.9nm,0.7s,mb3.6,baz=219,slow=9.1,SNR=6.8							
CMAR	**Chiang Mai Arr**	**90.59**	**290**	P	**P**	**14 23 55.2**	**+0.9**
0.6nm,0.4s,mb3.8,baz=144,slow=3.5,SNR=5.7							
CMAR				pP	pP	14 25 35.1	+3.5
0.5nm,0.4s,baz=116,slow=4.1,SNR=1.7							
TXAR	**Lajitas Array**	**90.75**	**58**	P	**P**	**14 23 55.2**	**+0.4**
0.6nm,0.8s,mb3.5,baz=210,slow=7.2,SNR=6.0							
TRF	**Thorofare Moun**	**91.50**	**13**	*eP*	**P**	**14 23 56.7**	**-0.7**
5.4nm,1.0s,mb4.3							
ILAR	**Eielson Array**	**93.36**	**13**	P	**P**	**14 24 04.8**	**-1.2**
0.6nm,0.6s,mb3.7,baz=223,slow=5.3,SNR=18							
PDAR	**Pinedale Array**	**93.38**	**44**	P	**P**	**14 24 06.8**	**+0.1**
0.3nm,0.6s,mb3.4,baz=186,slow=2.7,SNR=3.7							
ARCES	**ARCESS Array B**	**133.48**	**348**	PKP	PKPdf	14 30 03.8	-0.5
1.7nm,0.5s,baz=48,slow=1.8,SNR=11							
FINES	**FINESS Array B**	**140.06**	**341**	PKhKP	PKPpre	14 30 08.8	
3.1nm,1.0s,baz=318,slow=1.9,SNR=3.8							
NOA	**NORSAR Array B**	**143.66**	**351**	PKP	PKPdf	14 30 20.0	-3.1
5.9nm,0.8s,baz=17,slow=2.4,SNR=17							
NAO01	**NORSAR Array S**	**143.89**	**351**	*ex*	PKPpre	PKPpre	14 30 21.7
AKASG	**Malin Array Be**	**146.55**	**326**	PKPbc	PKPbc	14 30 29.2	-1.4
2.1nm,0.3s,baz=44,slow=4.2,SNR=14							
MMAI	**Mount Meron Ar**	**148.83**	**292**	PKPbc	PKPbc	14 30 38.1	+1.0
6.6nm,0.6s,baz=64,slow=5.7,SNR=7.2							
BRTR	**Keskin Array B**	**148.94**	**305**	PKPbc	PKPbc	14 30 36.9	-0.3
1.0nm,0.5s,baz=122,slow=3.4,SNR=5.2							
BRTR				PKPab	PKPab	14 30 43.1	+0.3
1.8nm,0.6s,baz=90,slow=3.5,SNR=7.6							
BRTR				pPKPbc	pPKPbc	14 32 22.9	+3.5
1.5nm,0.8s,baz=130,slow=5.0,SNR=2.7							
EIL	**Elat**	**149.34**	**286**	PKPbc	PKPbc	14 30 37.7	-0.7
4.0nm,0.8s,baz=325,slow=8.1,SNR=3.6							
EIL	**Elat**	**149.34**	**286**	PKPbc	PKPbc	14 30 37.7	-0.8
BUR08	**Bucovina Ar. S**	**150.53**	**325**	*ePKPbc*	PKPbc	14 30 40.9	+0.2
CLL	**Collm**	**152.47**	**343**	⇑*i* PKPbc	PKPbc	14 30 45.1	+0.2
comp=Z,7.0nm,0.6s							

BJI ***23*** *14:14:17.6,34.83N×81.68E,h16km,ML3.9/6*
IDC ***23*** *14:14:22.5±1.9,35.36N×81.34E,h0km,mb3.6/5, mb1 3.8/8,mb1mx3.6/27,mbtmp3.6/8,ML3.4/3,MS3.0/4, Ms1 3.0/4,ms1mx2.7/34,Error ellipse: s-maj=57.2km s-min=20.3km az=72.0*
ISCJB ***23*** *14:14:25.2±0.4,35.38N±0.04×81.36E±0.08,h33km, mb3.6/5,MS3.3/2,Error ellipse: s-maj=9.9km s-min=4.6km az=160.3*
NEIC ***23*** *14:14:25.2±3.2,35.39N×81.35E,h17km±23km,mb3.8/2, Error ellipse: s-maj=14.2km s-min=4.9km az=68.0*
ISC 23 14:14:27.7±0.6,35.40N±0.04×81.40E±0.09,h36km±10km, n32,σ1.05/30,mb3.6/5,MS3.3/2,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**5.79**	**210**	*ex*	**Pn**	**14 15 51.0**	**-0.1**
KSH	**Kashi**	**5.96**	**315**	Pn	**Pn**	**14 15 56.6**	**+3.3**
KSH				Sn	**Sn**	**14 17 02.4**	**+2.1**
KSH				smax			
comp=N,250nm,1.5s							
KSH				smax			
comp=E,95nm,1.2s							
DANN	**Dangsing**	**7.31**	**163**	*eP*	**Pn**	**14 16 11.5**	**-0.4**
comp=E,25nm,0.5s							
NDI	**New Delhi**	**7.58**	**209**	*e*PKP	**Pn**	**14 16 15.5**	**-0.1**
KOLN	**Koldanda**	**7.83**	**166**	*eP*	**Pn**	**14 16 17.7**	**-1.4**
comp=E,20nm,0.5s							
GKN	**Gorkha**	**7.87**	**159**	*eP*	**Pn**	**14 16 20.2**	**+0.5**
comp=E,24nm,0.5s							
KKN	**Kakani**	**8.28**	**155**	*eP*	**Pn**	**14 16 25.3**	**+0.1**
comp=E,35nm,0.7s							
GUN	**Gumba**	**8.38**	**152**	*eP*	**Pn**	**14 16 27.8**	**+1.1**
comp=E,23nm,0.4s							
DMN	**Daman**	**8.38**	**157**	*eP*	**Pn**	**14 16 27.1**	**+0.4**
comp=E,20nm,0.4s							
PKIN	**Phulchoki**	**8.51**	**155**	*eP*	**Pn**	**14 16 28.9**	**+0.5**
comp=E,42nm,0.5s							
PKI	**Pulchoki**	**8.52**	**155**	*eP*	**Pn**	**14 16 28.9**	**+0.3**
comp=E,36nm,0.6s							
UCH	**Uchtor**	**8.68**	**324**	*eP*	**Pn**	**14 16 31.6**	**+1.0**
comp=E,11nm,1.0s							
AAK	**Ala-Archa**	**9.00**	**325**	LR	LR	14 20 18.0	
comp=E,119nm,18.9s,slow=40							
AML	**Almayashu**	**9.02**	**321**	P	**Pn**	**14 16 33.0**	**-2.3**
WMQ	**Urumqi**	**9.71**	**28**	*eP*	**Pn**	**14 16 48.0**	**+3.2**
ODAN	**Odare**	**9.94**	**147**	*eP*	**Pn**	**14 16 45.1**	**-2.9**
comp=E,24nm,0.7s							
MK31	**Makanchi Array**	**11.40**	**3**	*eP*	**Pn**	**14 17 07.9**	**-0.1**
MKAR	**Makanchi Array**	**11.40**	**3**	Pn	**Pn**	**14 17 06.9**	**-1.1**
comp=E,0.1nm,0.3s,baz=183,slow=13,SNR=10							
GTA	**Gaotai**	**15.17**	**69**	*eP*	**Pn**	**14 18 05.8**	**+6.6**
GTA				pP	pP	14 18 09.4	-3.8
GTA				sP	sP	14 18 11.8	-5.9
GTA				pmax	pmax		
comp=Z,5.0nm,1.6s							
ZAA0	**Zalesovo Array**	**18.70**	**6**	*eP*	**Pn**	**14 18 42.4**	**-1.0**
ZALV	**Zalesovo Beam**	**18.70**	**6**	P	**Pn**	**14 18 42.3**	**-1.0**
comp=Z,0.1nm,0.3s,baz=199,slow=12,SNR=8.4							
ZALV				LR	LR	14 25 43.0	
comp=Z,8.1n

KHET				*e*S	Sn	14 27 42.8	-0.9
KHET				AML	AML	14 28 37.3	
	comp=N,29nm,0.4s						
KHET				AML	AML	14 28 38.4	
	comp=E,50nm,0.1s						
AYAN	**Aya Nagar**	**6.99**	**154**	*e*PKP	**Pn**	**14 26 27.1**	**+1.6**
AYAN				*e*S	Sn	14 27 44.9	+1.2
BISR	**Bishrakh**	**7.03**	**152**	*e*x	**Sn**	**14 27 43.1**	**-1.6**
SONA	**Sohna**	**7.18**	**155**	*e*PKP	**Pn**	**14 26 28.1**	**-0.2**
SONA				*e*x	x	14 27 48.8	
AML	**Almayashu**	**7.29**	**0**	*e*P	**Pn**	**14 26 31.0**	**+1.5**
	comp=E,16nm,0.5s						
KZA	**Kyzart**	**7.34**	**9**	P	**Pn**	**14 26 32.4**	**+2.1**
	comp=E,7.1nm,0.6s						
UCH	**Uchtor**	**7.41**	**5**	*e*P	**Pn**	**14 26 33.3**	**+1.9**
	comp=E,8.0nm,0.4s						
AAK	**Ala-Archa**	**7.81**	**5**	LR	LR	14 29 44.8	
	comp=E,49nm,18.3s,baz=178,slow=39						
AAK	**Ala-Archa**	**7.81**	**5**	*e*P	**Pn**	**14 26 38.0**	**+1.1**
	comp=E,7.9nm,0.8s						
EKS2	**Erkin-Say**	**7.82**	**1**	*e*P	**Pn**	**14 26 38.9**	**+2.0**
	comp=E,11nm,0.5s						
TKM2	**Tokmak 2**	**8.21**	**10**	⇑P	**Pn**	**14 26 44.8**	**+2.5**
	comp=E,4.5nm,0.5s						
TKM2				⇑S	**Sn**	**14 28 12.1**	**-1.6**
	comp=E,7.3nm,0.6s						
TKM2	**Tokmak 2**	**8.21**	**10**	*e*P	**Pn**	**14 26 44.2**	**+1.9**
	comp=E,6.8nm,0.5s						
AGRA	**Agra**	**8.42**	**153**	*e*PKP	**Pn**	**14 26 47.0**	**+1.8**
AGRA				*e*S	**Sn**	**14 28 17.3**	**-1.7**
AGRA				AML	AML	14 29 22.7	
	comp=N,61nm,0.3s						
AGRA				AML	AML	14 29 26.1	
	comp=E,75nm,0.4s						
KK31	**Karatay Array**	**8.61**	**344**	⇑P	**Pn**	**14 26 48.2**	**+0.5**
	comp=E,4.3nm,0.3s,baz=149,slow=15,SNR=14						
KK31				⇓S	**Sn**	**14 28 22.2**	**-1.3**
	comp=E,8.7nm,0.5s,baz=170,slow=25,SNR=8.9						
KKAR	**Karatay Array**	**8.61**	**344**	*e*P	**Pn**	**14 26 48.1**	**+0.3**
	comp=E,10nm,0.4s						
DANN	**Dangsing**	**10.77**	**124**	*e*P	**Pn**	**14 27 16.8**	**-0.5**
	comp=E,23nm,0.4s						
KOLN	**Koldanda**	**11.04**	**127**	*e*P	**Pn**	**14 27 19.7**	**-1.3**
	comp=E,15nm,0.4s						
GKN	**Gorkha**	**11.59**	**123**	*e*P	**Pn**	**14 27 27.4**	**-1.1**
	comp=E,25nm,0.3s						
DMN	**Daman**	**12.15**	**123**	*e*P	**Pn**	**14 27 34.5**	**-1.8**
	comp=E,23nm,0.4s						
KKN	**Kakani**	**12.16**	**122**	*e*P	**Pn**	**14 27 34.8**	**-1.6**
	comp=E,25nm,0.5s						
PKIN	**Phulchoki**	**12.38**	**123**	*e*P	**Pn**	**14 27 37.8**	**-1.5**
	comp=E,20nm,0.5s						
PKI	**Pulchoki**	**12.39**	**123**	*e*P	**Pn**	**14 27 37.6**	**-1.9**
	comp=E,32nm,0.6s						
PKI	**Pulchoki**	**12.39**	**123**	*e*P	**Pn**	**14 27 37.8**	**-1.7**
	comp=E,20nm,0.5s						
GUN	**Gumba**	**12.51**	**120**	*e*P	**Pn**	**14 27 39.1**	**-2.1**
	comp=E,36nm,0.7s						
MK01	**Makanchi Array**	**13.59**	**26**	⇓P	**Pn**	**14 27 58.6**	**+2.8**
	comp=E,1.7nm,0.7s						
MK31	**Makanchi Array**	**13.61**	**26**	P	**Pn**	**14 27 59.4**	**+3.3**
	comp=E,2.3nm,0.8s,baz=203,slow=14,SNR=4.0						
MKAR	**Makanchi Array**	**13.61**	**26**	Pn	**Pn**	**14 27 56.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=198,slow=14,SNR=3.6						
TAPN	**Taplejung**	**14.16**	**118**	*e*P	**Pn**	**14 27 59.6**	**-4.0**
	comp=E,33nm,0.6s						
ODAN	**Odare**	**14.21**	**120**	*e*P	**Pn**	**14 28 00.0**	**-4.4**
	comp=E,20nm,0.6s						
KURBB	**Kurchatov Arra**	**16.17**	**11**	⇓P	**Pn**	**14 28 27.7**	**-2.1**
	comp=E,0.9nm,0.9s						
KURK	**Kurchatov**	**16.28**	**11**	*e*P	**Pn**	**14 28 32.9**	**+1.7**
	comp=E,6.7nm,1.0s						
AB31	**Akbulak array**	**17.60**	**329**	P	**Pn**	**14 28 46.1**	**-1.6**
	comp=E,2.4nm,0.7s,baz=164,slow=11,SNR=20						
AB31				S	**S**	**14 31 54.2**	**-15**
	comp=E,1.6nm,0.5s,baz=176,slow=22,SNR=5.4						
ABKAR	**Akbulak array**	**17.60**	**329**	*e*P	**Pn**	**14 28 47.0**	**-0.7**
	comp=E,1.5nm,0.4s						
VOSK	**Vostochnaya**	**17.98**	**355**	⇑P	**Pn**	**14 28 50.6**	**-1.7**
	comp=E,13nm,2.2s						
BVA0	**Borovoye Array**	**18.33**	**354**	⇓P	**Pn**	**14 28 56.3**	**-0.3**
	comp=E,0.6nm,0.6s,baz=162,slow=10,SNR=23						
BVAR	**Borovoye Array**	**18.33**	**354**	P	**Pn**	**14 28 54.6**	**-1.9**
	comp=E,0.9nm,0.3s,baz=151,slow=10,SNR=20						
BRVK	**Borovoye**	**18.38**	**354**	*e*P	**Pn**	**14 28 57.5**	**+0.4**
	comp=E,5.5nm,0.6s						
ZRNK	**Zerenda**	**18.41**	**351**	⇑P	**Pn**	**14 28 57.9**	**+0.3**
	comp=E,2.8nm,0.5s						
AKTK	**Aktyubinsk**	**19.31**	**329**	P	**Pn**	**14 29 06.9**	**-1.5**
AKTO	**Aktyubinsk**	**19.31**	**329**	P	**Pn**	**14 29 06.9**	**-1.5**
	comp=E,1.1nm,0.3s,baz=126,slow=10,SNR=6.2						
ZAA0	**Zalesovo Array**	**20.66**	**19**	*e*P	**P**	**14 29 20.0**	**-1.6**
ZALV	**Zalesovo Beam**	**20.66**	**19**	P	**P**	**14 29 21.2**	**-0.4**
	comp=E,8.2nm,0.6s,baz=214,slow=10,SNR=42						
GTA	**Gaotai**	**21.32**	**70**	*e*P	**P**	**14 29 30.0**	**+1.1**
GTA				pP		14 29 34.5	
GTA				sP	sP	14 29 37.0	-7.8
GTA				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.2						
SONM	**Songino Array**	**27.58**	**52**	P	**P**	**14 30 29.5**	**+0.9**
	comp=Z,1.6nm,0.9s,mb3.6,baz=255,slow=9.4,SNR=7.5						
CMAR	**Chiang Mai Arr**	**27.76**	**119**	P	**P**	**14 30 32.1**	**+1.6**
	comp=Z,1.2nm,0.9s,mb3.5,baz=309,slow=9.8,SNR=7.9						
FINES	**FINESS Array B**	**40.07**	**327**	P	**P**	**14 32 17.0**	**+0.5**
	comp=Z,24nm,0.7s,mb4.0,baz=92,slow=9.7,SNR=4.5						
KSRS	**Korea Array**	**43.40**	**70**	P	**P**	**14 32 44.9**	**+0.8**
	comp=Z,1.5nm,0.9s,mb3.7,baz=272,slow=7.7,SNR=3.7						
ARCES	**ARCESS Array B**	**43.51**	**338**	P	**P**	**14 32 45.8**	**+1.2**
	comp=Z,3.1nm,0.6s,mb4.2,baz=108,slow=7.9,SNR=14						
NB2	**NORSAR Subarra**	**47.00**	**324**	P	**P**	**14 33 12.4**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.8,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**47.00**	**324**	P	**P**	**14 33 12.7**	**+0.3**
	comp=Z,1.1nm,0.6s,mb3.9,baz=97,slow=7.7,SNR=5.0						
MJAR	**Matsushiro Arr**	**51.56**	**68**	P	**P**	**14 33 46.5**	**-1.0**
	comp=Z,2.2nm,1.0s,mb4.1,baz=281,slow=11,SNR=4.3						
MJAR	**Matsushiro Arr**	**51.56**	**68**	P	**P**	**14 33 46.5**	**-1.0**
TORD	**Torodi Ar. Bea**	**67.87**	**271**	P	**P**	**14 35 39.8**	**-0.2**
	comp=Z,1.9nm,0.7s,mb4.2,baz=56,slow=4.9,SNR=3.0						
ILAR	**Eielson Array**	**75.77**	**17**	P	**P**	**14 36 27.1**	**+0.5**
	comp=Z,1.0nm,0.8s,mb3.8,baz=316,slow=5.5,SNR=14						
WRA	**Warramunga Arr**	**79.27**	**123**	P	**P**	**14 36 47.3**	**+0.5**
	comp=Z,1.8nm,0.7s,mb4.1,baz=324,slow=5.4,SNR=14						
KDAK	**Kodiak Island**	**79.90**	**23**	P	**P**	**14 36 48.9**	**-0.8**
	comp=Z,1.5nm,0.5s,mb4.2,baz=307,slow=2.7,SNR=4.3						
KDAK	**Kodiak Island**	**79.90**	**23**	P	**P**	**14 36 48.9**	**-0.8**
ASAR	**Alice Springs**	**81.53**	**126**	P	**P**	**14 37 00.6**	**+1.7**
	comp=Z,1.1nm,0.6s,mb4.0,baz=310,slow=5.2,SNR=19						
YKA	**Yellowknife Ar**	**82.78**	**4**	P	**P**	**14 37 05.4**	**+0.6**
	comp=Z,1.1nm,0.6s,mb4.0,baz=353,slow=4.6,SNR=3.3						

IDC 23 14:27:56.3±32.0, 16°.00S×175°.15W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, Error ellipse: s-maj=635.2km s-min=161.5km az=86.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.28**	**240**	P	P	14 35 51.8	+0.1
	1.4nm,0.8s,baz=90,slow=8.8,SNR=4.8						
WRA	**Warramunga Arr**	**48.07**	**257**	P	P	14 36 37.6	-0.3
	0.5nm,0.5s,baz=93,slow=7.2,SNR=5.8						
ASAR	**Alice Springs**	**48.33**	**252**	P	P	14 36 39.8	-0.1
	3.4nm,0.6s,baz=89,slow=7.8,SNR=140						
FITZ	**Fitzroy Crossi**	**56.44**	**259**	P	P	14 37 40.3	+0.1
	0.9nm,0.9s,baz=90,slow=10,SNR=2.9						

*ISCJB **23** 14:36:49.9±0.5, 39°.82N±0°.03×40°.22E±0°.03, h10km, Error ellipse: s-maj=4.9km s-min=3.0km az=172.1*
*DDA **23** 14:36:50.3, 39°.86N×40°.23E, h7km±4km, Md2.8*
*ISK **23** 14:36:50.6, 39°.88N×40°.25E, h9km, MD2.6*
*CSEM **23** 14:36:51.0±0.2, 39°.87N×40°.27E, h5km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.2km az=158.0*

ISC 23 14:36:50.7±0.5, 39°.84N±0°.03×40°.22E±0°.03, h11km±7km, n24, σ1°09/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.28**	**51**	*i* P	**Pg**	**14 36 56.6**	**+0.3**
KOPT				*i* S	**Sg**	**14 37 01.3**	**+1.1**
KOPT	**Kop Dagi**	**0.28**	**51**	*i* P	**Pg**	**14 36 56.6**	**+0.2**
KOPT				*i* S	**Sg**	**14 37 01.3**	**+1.2**
BAYT	**Ayd¨–ntepe-Bay**	**0.55**	**354**	*e*PG	**Pg**	**14 37 01.3**	**-0.2**
BAYT				*e*SG	**Sg**	**14 37 08.9**	**+0.1**
BAYT	**Ayd¨–ntepe-Bay**	**0.55**	**354**	*e*Pg	**Pg**	**14 37 01.3**	**-0.2**
BAYT				*e*Sg	**Sg**	**14 37 08.9**	**+0.1**
EZC	**Erzincan**	**0.67**	**263**	*e*PG	**Pg**	**14 37 04.7**	**+0.9**
EZC	**Erzincan**	**0.67**	**263**	*e*Pg	**Pg**	**14 37 04.7**	**+0.9**
GUMT	**Gumushane**	**0.84**	**318**	*e*PG	**Pg**	**14 37 07.0**	**+0.1**
GUMT				*e*SG	**Sg**	**14 37 18.8**	**+1.0**
GUMT	**Gumushane**	**0.84**	**318**	*e*Pg	**Pg**	**14 37 07.0**	**+0.1**
GUMT				*e*Sg	**Sg**	**14 37 18.8**	**+1.0**
EZM	**Erzurum**	**0.88**	**86**	*e*PG	**Pg**	**14 37 07.4**	**-0.3**
ERZM	**Erzurum**	**0.89**	**86**	*i* P	**Pg**	**14 37 06.4**	**-1.4**
ERZM				*i* S	**Sg**	**14 37 17.9**	**-1.4**
ERZM	**Erzurum**	**0.89**	**86**	*i* P	**Pg**	**14 37 06.4**	**-1.4**
ERZM				*i* S	**Sg**	**14 37 17.9**	**-1.4**
PTK	**Pertek**	**1.15**	**214**	*e*PN	**Pg**	**14 37 12.9**	**+0.1**
PTK	**Pertek**	**1.15**	**214**	*e*Pn	**Pg**	**14 37 12.9**	**+0.2**
MACK	**Trabzon**	**1.15**	**343**	*i* P	**Pb**	**14 37 12.3**	**-0.4**
MACK				*i* S	**Sb**	**14 37 28.5**	**+0.8**
MACK	**Trabzon**	**1.15**	**343**	*i* P	**Pb**	**14 37 12.3**	**-0.4**
MACK				*i* S	**Sb**	**14 37 28.5**	**+0.8**
HOMI	**Horasan**	**1.31**	**81**	*i* P	**Pn**	**14 37 14.6**	**-0.4**
HOMI				*i* S	**Sg**	**14 37 35.5**	**+2.5**
KEMA	**Kemaliye**	**1.45**	**247**	*i* P	**Pg**	**14 37 18.6**	**0.0**
KEMA				*i* S	**Sg**	**14 37 39.3**	**+1.8**
KEMA	**Kemaliye**	**1.45**	**247**	*i* P	**Pg**	**14 37 18.6**	**0.0**
KEMA				*i* S	**Sg**	**14 37 39.3**	**+1.9**
DDEM	**Demirkent**	**1.57**	**48**	*i* P	**Pg**	**14 37 19.4**	**-1.5**
DDEM				*i* S	**Sg**	**14 37 42.4**	**+1.1**
DDEM	**Demirkent**	**1.57**	**48**	*i* P	**Pn**	**14 37 19.5**	**+0.9**
SUSE	**Susehri**	**1.59**	**284**	*i* P	**Pg**	**14 37 20.0**	**-1.3**
SUSE				*i* S	**Sg**	**14 37 42.2**	**+0.3**
SUSE	**Susehri**	**1.59**	**284**	*i* P	**Pg**	**14 37 20.0**	**-1.3**
SUSE				*i* S	**Sg**	**14 37 42.2**	**+0.3**
GRSN	**GIRESUNGRSN**	**1.84**	**307**	*i* P	**Pg**	**14 37 23.8**	**-2.3**
GRSN				*i* S	**Sg**	**14 37 48.3**	**-1.6**
GRSN	**GIRESUNGRSN**	**1.84**	**307**	*i* P	**Pg**	**14 37 23.8**	**-2.2**
GRSN				*i* S	**Sg**	**14 37 48.3**	**-1.6**

*DDA **23** 14:37:25.9, 39°.81N×40°.27E, h10km±4km, Md2.9*
*ISCJB **23** 14:37:26.4±0.6, 39°.87N±0°.03×40°.27E±0°.03, h3km±6km, Error ellipse: s-maj=5.7km s-min=4.1km az=160.6*
*ISK **23** 14:37:26.1, 39°.90N×40°.30E, h16km, MD2.7*
*CSEM **23** 14:37:26.8±0.1, 39°.89N×40°.26E, h5km, MD2.9, Error ellipse: s-maj=2.4km s-min=2.2km az=107.0*

ISC 23 14:37:27.0±0.6, 39°.86N±0°.03×40°.26E±0°.03, h5km±5km, n28, σ1°05/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.24**	**49**	*i* P	**Pg**	**14 37 32.1**	**+0.5**
KOPT				*i* S	**Sg**	**14 37 37.0**	**+2.3**
KOPT	**Kop Dagi**	**0.24**	**49**	*i* P	**Pg**	**14 37 32.1**	**+0.5**
KOPT				*i* S	**Sg**	**14 37 37.0**	**+2.3**
BAYT	**Ayd¨–ntepe-Bay**	**0.54**	**350**	*e*PG	**Pg**	**14 37 36.8**	**-0.5**
BAYT				*e*SG	**Sg**	**14 37 44.2**	**-0.1**
BAYT	**Ayd¨–ntepe-Bay**	**0.54**	**350**	*e*Pg	**Pg**	**14 37 36.8**	**-0.5**
BAYT				*e*Sg	**Sg**	**14 37 44.2**	**-0.1**
EZC	**Erzincan**	**0.71**	**261**	*e*PG	**Pg**	**14 37 40.4**	**-0.2**
EZC				*e*SG	**Sg**	**14 37 52.3**	**+2.5**
EZC	**Erzincan**	**0.71**	**261**	*e*Pg	**Pg**	**14 37 40.4**	**-0.2**
EZC				*e*Sg	**Sg**	**14 37 52.3**	**+2.5**
GUMT	**Gumushane**	**0.84**	**315**	*e*PG	**Pg**	**14 37 42.7**	**-0.5**
GUMT	**Gumushane**	**0.84**	**315**	*e*Pg	**Pg**	**14 37 42.7**	**-0.5**
EZM	**Erzurum**	**0.85**	**87**	*e*PG	**Pg**	**14 37 42.5**	**-0.7**
ERZM	**Erzurum**	**0.85**	**87**	*i* P	**Pg**	**14 37 42.5**	**-0.8**
ERZM				*i* S	**Sg**	**14 37 53.8**	**-0.5**
ERZM	**Erzurum**	**0.85**	**87**	*i* P	**Pg**	**14 37 42.5**	**-0.8**
ERZM				*i* S	**Sg**	**14 37 53.8**	**-0.5**
BINT	**Bingol**	**1.00**	**170**	*e*PG	**Pg**	**14 37 46.6**	**+0.4**
BINT	**Bingol**	**1.00**	**170**	*e*Pg	**Pg**	**14 37 46.6**	**+0.4**
MACK	**Trabzon**	**1.14**	**341**	*i* P	**Pg**	**14 37 48.0**	**-0.8**
MACK				*i* S	**Sg**	**14 38 02.9**	**-0.8**
MACK	**Trabzon**	**1.14**	**341**	*i* P	**Pg**	**14 37 48.0**	**-0.9**
MACK				*i* S	**Sg**	**14 38 02.9**	**-0.8**
PTK	**Pertek**	**1.18**	**215**	*e*PN	**Pn**	**14 37 49.0**	**-1.1**
PTK	**Pertek**	**1.18**	**215**	*e*Pn	**Pn**	**14 37 49.0**	**-1.1**
KTUT	**Trabzon**	**1.18**	**341**	*e*PN	**Pn**	**14 37 48.2**	**-2.0**
KTUT	**Trabzon**	**1.18**	**341**	*e*Pn	**Pn**	**14 37 48.2**	**-2.0**
KEMA	**Kemaliye**	**1.49**	**247**	*i* P	**Pn**	**14 37 54.8**	**+0.4**
KEMA				*i* S	**Sn**	**14 38 14.8**	**+0.6**
KEMA	**Kemaliye**	**1.49**	**247**	*i* P	**Pn**	**14 37 54.8**	**+0.4**
KEMA				*i* S	**Sn**	**14 38 14.9**	**+0.7**
DDEM	**Demirkent**	**1.53**	**47**	*i* P	**Pn**	**14 37 55.0**	**0.0**
DDEM				*i* S	**Sg**	**14 38 18.2**	**+2.0**
DDEM	**Demirkent**	**1.53**	**47**	*i* P	**Pn**	**14 37 55.0**	**0.0**
SUSE	**Susehri**	**1.62**	**283**	*i* P	**Pn**	**14 37 56.1**	**-0.1**
SUSE				*i* S	**Sn**	**14 38 17.6**	**+0.3**
SUSE	**Susehri**	**1.62**	**283**	*i* P	**Pn**	**14 37 56.1**	**-0.1**
SUSE				*i* S	**Sn**	**14 38 17.6**	**+0.2**
GRSN	**GIRESUNGRSN**	**1.86**	**305**	*i* P	**Pn**	**14 37 60.0**	**+0.6**
GRSN				*i* S	**Sn**	**14 38 24.1**	**+0.8**
GRSN	**GIRESUNGRSN**	**1.86**	**305**	*i* P	**Pn**	**14 38 00.0**	**+0.6**
GRSN				*i* S	**Sn**	**14 38 24.1**	**+0.9**
SCER	**sogukcermik**	**2.41**	**271**	*i* P	**Pg**	**14 38 10.7**	**-2.5**
SCER				*i* S	**Sg**	**14 38 45.0**	**+0.6**

*ISCJB **23** 14:40:15.2±0.6, 39°.85N±0°.03×40°.21E±0°.03, h1km±7km, Error ellipse: s-maj=5.8km s-min=3.5km az=171.4*
*DDA **23** 14:40:15.6, 39°.86N×40°.21E, h9km±3km, Md2.7*
*ISK **23** 14:40:15.3, 39°.88N×40°.25E, h12km, MD2.7*
*CSEM **23** 14:40:16.6±0.2, 39°.89N×40°.21E, h2km, MD2.7, Error ellipse: s-maj=3.9km s-min=2.6km az=170.0*

ISC 23 14:40:16.0±0.6, 39°.86N±0°.03×40°.23E±0°.03, h10km±6km, n27, σ0°92/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.26**	**52**	*i* P	**Pg**	**14 40 21.5**	**+0.3**
KOPT				*i* S	**Sg**	**14 40 25.4**	**+0.6**
KOPT	**Kop Dagi**	**0.26**	**52**	*i* P	**Pg**	**14 40 21.5**	**+0.2**
KOPT				*i* S	**Sg**	**14 40 25.5**	**+0.6**
BAYT	**Ayd¨–ntepe-Bay**	**0.54**	**353**	*e*PG	**Pg**	**14 40 26.0**	**-0.5**
BAYT				*e*SG	**Sg**	**14 40 33.7**	**+0.1**
BAYT	**Ayd¨–ntepe-Bay**	**0.54**	**353**	*e*Pg	**Pg**	**14 40 26.0**	**-0.5**
BAYT				*e*Sg	**Sg**	**14 40 33.7**	**+0.1**
EZC	**Erzincan**	**0.68**	**261**	*e*PG	**Pg**	**14 40 29.3**	**+0.2**
EZC				*e*SG	**Sg**	**14 40 39.6**	**+1.6**
EZC	**Erzincan**	**0.68**	**261**	*e*Pg	**Pg**	**14 40 29.3**	**+0.2**
EZC				*e*Sg	**Sg**	**14 40 39.7**	**+1.6**
KELT	**Kelkit**	**0.80**	**292**	*i* P	**Pg**	**14 40 30.5**	**-0.9**
KELT				*i* S	**Sg**	**14 40 41.8**	**0.0**
KELT	**Kelkit**	**0.80**	**292**	*i* P	**Pg**	**14 40 30.5**	**-0.9**
KELT				*i* S	**Sg**	**14 40 41.8**	**-0.1**
GUMT	**Gumushane**	**0.83**	**317**	*e*PG	**Pg**	**14 40 31.7**	**-0.3**
GUMT				*e*SG	**Sg**	**14 40 43.4**	**+0.6**
GUMT	**Gumushane**	**0.83**	**317**	*e*Pg	**Pg**	**14 40 31.7**	**-0.3**
GUMT				*e*Sg	**Sg**	**14 40 43.4**	**+0.6**
EZM	**Erzurum**	**0.87**	**86**	*e*PG	**Pg**	**14 40 32.2**	**-0.6**
ERZM	**Erzurum**	**0.88**	**86**	*i* P	**Pg**	**14 40 31.6**	**-1.3**
ERZM				*i* S	**Sg**	**14 40 46.1**	**+1.8**
ERZM	**Erzurum**	**0.88**	**86**	*i* P	**Pg**	**14 40 31.5**	**-1.4**
ERZM				*i* S	**Sg**	**14 40 46.1**	**+1.8**
MACK	**Trabzon**	**1.14**	**342**	*i* P	**Pb**	**14 40 37.4**	**-0.4**
MACK				*i* S	**Sb**	**14 40 53.6**	**+0.9**
MACK	**Trabzon**	**1.14**	**342**	*i* P	**Pb**	**14 40 37.4**	**-0.4**
MACK				*i* S	**Sb**	**14 40 53.6**	**+0.9**
PTK	**Pertek**	**1.16**	**214**	*e*PN	**Pn**	**14 40 37.5**	**-0.8**
PTK	**Pertek**	**1.16**	**214**	*e*Pn	**Pn**	**14 40 37.5**	**-0.8**
KTUT	**Trabzon**	**1.18**	**343**	*e*PN	**Pn**	**14 40 37.9**	**-0.6**
KTUT	**Trabzon**	**1.18**	**343**	*e*Pn	**Pn**	**14 40 37.9**	**-0.7**
KEMA	**Kemaliye**	**1.46**	**247**	*i* P	**Pg**	**14 40 43.9**	**-0.1**
KEMA				*i* S	**Sg**	**14 41 04.3**	**+1.3**
KEMA	**Kemaliye**	**1.46**	**247**	*i* P	**Pg**	**14 40 43.9**	**-0.2**
KEMA				*i* S	**Sg**	**14 41 04.3**	**+1.2**
SUSE	**Susehri**	**1.59**	**283**	*i* P	**Pg**	**14 40 45.2**	**-1.4**
SUSE				*i* S	**Sg**	**14 41 07.5**	**+0.3**
SUSE	**Susehri**	**1.59**	**283**	*i* P	**Pg**	**14 40 45.2**	**-1.4**
SUSE				*i* S	**Sg**	**14 41 07.5**	**+0.3**
GRSN	**GIRESUNGRSN**	**1.84**	**306**	*i* P	**Pg**	**14 40 49.2**	**-2.0**
GRSN				*i* S	**Sg**	**14 41 14.8**	**-0.2**
GRSN	**GIRESUNGRSN**	**1.84**	**306**	*i* P	**Pn**	**14 40 49.2**	**+1.6**
DBOC	**Borcka**	**1.85**	**36**	*i* P	**Pb**	**14 40 49.3**	**-0.5**
DBOC				*i* S	**Sb**	**14 41 13.6**	**+0.6**
DBOC	**Borcka**	**1.85**	**36**	*i* P	**Pb**	**14 40 49.3**	**-0.5**
DBOC				*i* S	**Sb**	**14 41 13.6**	**+0.6**

CASC 23 14:49:15.6±1.4, 8°.37N×83°.06W, h7km, MD3.5, 2C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.30**	**339**	⇓*e*P	Pg	14 49 22.3	+0.9
ACR				*e*S	Sg	14 49 27.1	+1.7
BRU2	**Volcan**	**0.56**	**41**	*e*P	Pg	14 49 27.9	+1.5
QCR	**Quepos**	**1.51**	**314**	*e*P	Pn	14 49 41.9	-1.2
QCR				*e*S	Sn	14 50 02.2	-0.8
URSC	**Urasca**	**1.61**	**334**	⇑*e*P	Pn	14 49 43.7	-0.9
URSC				*e*S	Sn	14 50 06.6	+1.0
LAJ	**Bijagual**	**1.81**	**325**	*e*P	Pn	14 49 49.8	+2.6
LAJ				*e*S	Sn	14 50 16.0	+5.5
PRS1	**Puriscal**	**2.02**	**322**	⇑*e*P	Pn	14 49 49.6	-0.5
PRS1				*e*S	Sn	14 50 15.3	-0.3
CGA2	**Cerro Gallo 2**	**2.14**	**320**	*e*P	Pn	14 49 52.3	+0.5
CGA2				*e*S	Sn	14 50 19.8	+1.2

CASC 23 15:05:07.4±4.1, 8°.96N×82°.67W, h33km±38km, MD4.0, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.17**	**187**	*e*P	Pb	15 05 13.6	0.0
BRU2				*e*S	Sb	15 05 19.7	+1.8
ACR	**Cerro Adams**	**0.58**	**238**	⇓*i*P	Pb	15 05 19.2	0.0
ACR				*e*S	Sb	15 05 28.3	+0.9
URSC	**Urasca**	**1.40**	**309**	⇑*e*P	Pn	15 05 29.2	-1.4
URSC				*e*S	Sn	15 05 47.5	-0.5
QCR	**Quepos**	**1.55**	**287**	⇓*e*P	Pn	15 05 32.5	-0.1
SJS	**Escuela Geolog**	**1.68**	**306**	*e*P	Pn	15 05 34.4	0.0
SJS				*e*S	Sn	15 05 53.9	-1.0
LAJ	**Bijagual**	**1.69**	**302**	⇑*e*P	Pn	15 05 40.5	+5.8
LAJ				*e*S	Sn	15 06 03.8	+8.6
PRS1	**Puriscal**	**1.91**	**302**	*e*P	Pn	15 05 38.0	+0.3
CGA2	**Cerro Gallo 2**	**2.06**	**301**	⇓*e*P	Pn	15 05 40.7	+1.0
CGA2				*e*S	Sn	15 06 05.1	+0.8
JCR	**Jicaral**	**2.57**	**290**	*e*P	Pn	15 05 47.0	+0.3
JCR				*e*S	Sn	15 06 16.9	+0.1
PTEN	**Parque Tenorio**	**2.87**	**308**	*i* P	Pn	15 05 53.6	+2.6
GPS2	**Hotel Rinc¨‡n**	**3.19**	**304**	*i* P	Pn	15 05 59.1	+3.8
LAPC	**Finca la Perla**	**3.26**	**304**	*i* P	Pn	15 06 00.0	+3.7

*IDC **23** 15:05:54.0±1.3, 28°.21N×105°.16E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.5/25, mbtmp3.6/5, ML3.9/2, Error ellipse: s-maj=49.7km s-min=22.9km az=69.0*
*BJI **23** 15:05:58.2, 28°.35N×104°.91E, h17km, ML3.2/4*

ISC 23 15:05:54.5±1.5, 28°.24N±0°.06×105°.2E±0°.1, h3km±11km, n8, σ0°48/10, mb3.7/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.78**	**216**	Pg	**Pg**	**15 07 06.5**	**-0.5**
XAN	**Xi'an**	**6.62**	**28**	Pg	**Sn**	**15 08 59.6**	**+11

MAW	**Mawson**	**79.23**	**199**	P		**P**	**15 32 12.1**	**+0.4**
	7.0nm,1.1s,mb4.5,baz=102,slow=7.2,SNR=8.9							
PETK	**Petropavlovsk-**	**80.12**	**344**	P		**P**	**15 32 13.9**	**-2.7**
	10nm,1.0s,mb4.7,baz=114,slow=3.6,SNR=5.4							
PETK				LR		LR	16 01 29.0	
	comp=Z,63nm,19.8s,MS4.0,baz=320,slow=31							
KSRS	**Korea Array**	**80.97**	**318**	P		**P**	**15 32 20.8**	**-0.7**
	3.9nm,1.1s,mb4.2,baz=142,slow=5.6,SNR=5.9							
KSRS				LR		LR	16 02 46.3	
	comp=Z,92nm,20.1s,MS4.1,baz=38,slow=32							
WAKR	**Walker**	**81.22**	**41**	*e*P		**P**	**15 32 23.5**	**+0.7**
	5.4nm,1.0s,mb4.4							
NVAR	**Mina Array Bea**	**81.86**	**42**	P		**P**	**15 32 26.7**	**+0.5**
	5.0nm,1.1s,mb4.4,baz=223,slow=7.9,SNR=14							
NJ2	**Nanjing**	**83.84**	**309**	*e*P		**P**	**15 32 38.3**	**+1.6**
SYO	**Syowa Base**	**83.98**	**192⇑**	*e*PcP		**P**	**15 32 35.5**	**-1.3**
WVOR	**Wild Horse Val**	**84.20**	**38**	*e*P		**P**	**15 32 37.6**	**-0.6**
	8.4nm,1.2s,mb4.8							
ARUT	**Antelope Range**	**84.52**	**45**	*e*P		**P**	**15 32 41.0**	**+1.1**
	4.9nm,1.0s,mb4.6							
MDJ	**Mudanjiang**	**84.62**	**324**	P		**P**	**15 32 40.9**	**+0.6**
MDJ				pmax		pmax		
	comp=Z,16nm,1.1s,mb5.1							
MDJ				pmax		pmax		
	comp=Z,99nm,4.7s							
PLCA	**Paso Flores**	**85.25**	**133**	LR		LR	16 04 01.2	
	comp=Z,83nm,18.2s,MS4.2,baz=163,slow=31							
MSU	**Marysvale**	**85.75**	**45**	*e*P		**P**	**15 32 47.6**	**+1.5**
	comp=Z,3.0nm,1.1s,mb4.4							
CN2	**Changchun**	**86.40**	**321**	*e*P		**P**	**15 32 49.3**	**+0.1**
CN2				*es*P		sP	15 33 04.0	-0.3
CN2				pmax		pmax		
	comp=Z,20nm,1.2s,mb5.2							
CN2				pmax		pmax		
	comp=Z,20nm,4.0s							
MNTX	**Cornudas Mount**	**86.77**	**53**	P		**P**	**15 32 50.7**	**-0.6**
	comp=Z,4.6nm,1.4s,mb4.5							
TXAR	**Lajitas Array**	**86.88**	**56**	P		**P**	**15 32 51.2**	**-0.6**
	comp=Z,1.3nm,1.0s,mb4.1,baz=201,slow=6.4,SNR=8.3							
ANMO	**Albuquerque**	**87.66**	**50**	*e*P		**P**	**15 32 55.7**	**+0.2**
	comp=Z,5.5nm,1.3s,mb4.6							
TRF	**Thorofare Moun**	**89.24**	**11**	*e*P		**P**	**15 33 01.0**	**-1.2**
	comp=Z,2.6nm,0.7s,mb4.7							
PDAR	**Pinedale Array**	**89.78**	**42**	P		**P**	**15 33 04.3**	**-1.0**
	comp=Z,0.6nm,0.8s,mb4.0,baz=197,slow=0.9,SNR=4.7							
ENH	**Enshi**	**89.88**	**303**	*e*P		**P**	**15 33 06.6**	**+0.5**
	comp=Z,41nm,1.3s,mb5.6							
BJI	**Beijing**	**89.94**	**314**	P		**P**	**15 33 06.4**	**+0.3**
BJI				S		S	15 44 00.6	+4.3
BJI				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb5.3							
GYA	**Guiyang**	**90.37**	**299**	*e*P		**P**	**15 33 08.9**	**+0.4**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb5.1							
ILAR	**Eielson Array**	**91.06**	**12**	P		**P**	**15 33 09.6**	**-1.1**
	comp=Z,1.4nm,1.0s,mb4.2,baz=222,slow=4.5,SNR=9.3							
KMI	**Kunming**	**92.98**	**296**	P		**P**	**15 33 18.3**	**-2.3**
KMI				pmax		pmax		
	comp=Z,13nm,2.0s,mb5.0							
HHC	**Hu-ho-hao-te**	**93.39**	**313**	*e*P		**P**	**15 33 24.4**	**+2.3**
HHC				pP		pP	15 33 35.0	+1.7
HHC				sP		sP	15 33 38.9	+1.6
HHC				PP		PP	15 37 13.5	+6.6
HHC				SKS			15 43 55.0	
HHC				S		S	15 44 30.3	+2.9
HHC				sS		sS	15 44 46.4	+0.4
HHC				SS		SS	15 50 54.4	+9.4
HHC				pmax		pmax		
	comp=Z,16nm,1.1s,mb5.4							
HHC				pmax		pmax		
	comp=Z,260nm,5.6s							
HHC				LR		LR		
	comp=N,360nm,17.9s,MS4.9							
HHC				LR		LR		
	comp=E,220nm,18.1s,MS4.9							
HHC				LR		LR		
	comp=Z,190nm,16.2s,MS4.6							
CMAR	**Chiang Mai Arr**	**93.47**	**289**	P		**P**	**15 33 23.4**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.9,baz=129,slow=3.3,SNR=29							
CHTO	**Chiang Mai**	**93.61**	**289**	*e*P		**P**	**15 33 24.5**	**+0.8**
	comp=Z,3.9nm,0.9s,mb4.8							
CD2	**Chengdu**	**94.59**	**302**	*e*P		**P**	**15 33 29.1**	**+1.2**
LZH	**Lanzhou**	**96.69**	**306**	*e*P		**P**	**15 33 40.3**	**+3.0**
LZH				pP		pP	15 33 50.8	+2.3
LZH				sP		sP	15 33 54.8	+2.3
LZH				*e*PP		PP	15 37 39.6	+7.0
LZH				pmax		pmax		
	comp=Z,17nm,1.5s,mb5.2							
LZH				pmax		pmax		
	comp=Z,53nm,8.7s							
LZH				LR		LR		
	comp=N,200nm,17.8s,MS4.8							
LZH				LR		LR		
	comp=E,190nm,17.1s,MS4.8							
LZH				LR		LR		
	comp=Z,280nm,20.0s,MS4.7							
LPAZ	**La Paz**	**98.58**	**112**	LR		LR	16 09 48.8	
	comp=Z,56nm,21.8s,MS4.0,baz=308,slow=30							
WMQ	**Urumqi**	**110.91**	**310**	*e*Pdif		Pdif	15 34 41.0	+0.5
WMQ				PP		PP	15 39 22.0	+3.5
WMQ				SKS		SKSdf	15 45 46.0	-3.3
WMQ				SS		SS	15 54 51.0	+3.6
WMQ				AMB		AMB		
	comp=Z,35nm,10.0s							
WMQ				LR		LR		
	comp=N,37nm,20.0s,MS4.2							
WMQ				LR		LR		
	comp=E,60nm,25.0s,MS4.2							
WMQ				LR		LR		
	comp=Z,63nm,25.0s,MS4.1							
AKASG	**Malin Array Be**	**147.09**	**331**	PKPbc		PKPbc	15 39 48.6	-0.9
	comp=Z,3.7nm,0.8s,baz=40,slow=3.0,SNR=11							
KIEV	**Kiev**	**147.10**	**331**	*e*PKPbc		PKPbc	15 39 48.7	-0.9
MALT	**Malatya**	**147.83**	**305**	*e*PKPbc		PKPbc	15 39 52.4	+0.4
BR131	**Keskin Array S**	**150.84**	**310**	*e*PKPbc		PKPbc	15 39 59.1	-0.3
BRTR	**Keskin Array B**	**150.84**	**310**	PKPbc		PKPbc	15 39 59.0	-0.4
	comp=Z,2.8nm,1.0s,baz=132,slow=1.8,SNR=9.3							
OJC	**Ojcow**	**151.13**	**340**	*e*PKP		PKPbc	15 39 59.0	-0.8
NIE	**Niedzica**	**151.65**	**338**	*e*PKP		PKPbc	15 40 01.6	+0.6
CLL	**Collm**	**151.83**	**349⇓**	*i*PKPbc		PKPbc	15 40 01.3	0.0
	comp=Z,9.0nm,1.2s							
CLL				*i* PKPab		PKPab	15 40 09.2	-1.2
CLL				*i* pPKPab		pPKPab	15 40 19.2	-2.4
CLL				*i*			15 40 27.9	
UPC	**Upice**	**151.94**	**344⇑**	*e*PKP		PKPbc	15 40 02.1	+0.5
DPC	**Dobruska-Polom**	**152.01**	**344⇑**	*e*PKP		PKPbc	15 40 02.1	+0.3
BRG	**Bergqiesshubel**	**152.06**	**347**	*e*PKP		PKPbc	15 40 01.9	0.0
	comp=Z,4.7nm,0.9s							
BRG				*e*			15 40 09.0	
	comp=Z,13nm,1.5s							
BRG				*e*			15 40 17.1	
	comp=Z,4.7nm,0.7s							
BRG				*e*			15 40 28.9	
	comp=Z,13nm,1.3s							
GERES	**GERESS Array B**	**154.04**	**346**	PKPab		PKPab	15 40 19.9	+0.2
	comp=Z,0.3nm,0.4s,baz=64,slow=3.1,SNR=5.9							
GERES	**GERESS Array B**	**154.04**	**346**	PKPab		PKPab	15 40 19.9	+0.2
TORD	**Torodi Ar. Bea**	**169.01**	**165**	PKP		PKPdf	15 40 16.9	+2.1
	comp=Z,0.7nm,0.7s,baz=256,slow=0.6,SNR=1.8							

MAN 23 15:48:39,6°.93N×126°.30E,h17km,mb4.4,ML3.3,MS3.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.05**	**293**	*e*P		Pg	15 48 42.1 0.0
MATI				*e*S		Sg	15 48 50.4 +6.2
DMPH	**Davao City--Mi**	**0.80**	**281**	*e*P		Pb	15 48 55.0 +0.5
BUKP	**Musuan**	**1.55**	**308**	*e*P		Pn	15 49 05.8 -0.1
BUKP				*e*S		Sn	15 49 27.0 +1.4

*ISCJB **23** 16:41:56.7±0.7,0°.30S±0°.06×127°.22E±0°.06,h100km±7km, mb3.9/6, Error ellipse: s-maj=10.5km s-min=9.5km az=26.8*
*DJA **23** 16:41:57,0°.34S×127°.22E,h80km,MLv4.1/4*
*IDC **23** 16:41:58.2±3.2,0°.29S×127°.24E,h92km±28km,mb3.4/5, mb1 3.5/6,mb1mx3.3/19,mbtmp3.5/6, Error ellipse: s-maj=41.2km s-min=18.7km az=71.0*
*NEIC **23** 16:41:59.1±4.1,0°.32S×127°.16E,h103km±41km,mb4.1/2, Error ellipse: s-maj=41.7km s-min=11.1km az=55.0*
ISC 23 16:41:57.8±0.7,0°.31S±0°.06×127°.23E±0°.06,h91km±7km, n17,σ1§03/20,mb3.9/6,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.08**	**7**	P		**Pn**	**16 42 18.7**	**+0.2**
TNTI				S		**Sn**	**16 42 34.6**	**+3.3**
NLAI	**Namlea**	**2.92**	**183**	P		**Pn**	**16 42 39.9**	**-2.3**
MNI	**Manado**	**2.96**	**306**	P		**Pn**	**16 42 43.5**	**+0.7**
MNI				S		**Sn**	**16 43 16.2**	**-1.0**
KMSI	**Cibinong**	**3.37**	**285**	P		**Pn**	**16 42 48.2**	**-0.1**
LUWI	**Luwuk**	**4.52**	**261**	P		**Pn**	**16 43 02.7**	**-1.2**
LUWI				S		**Sn**	**16 43 57.0**	**+1.7**
KAPI	**Kappang**	**8.81**	**238**	P		**Pn**	**16 44 03.5**	**+1.1**
	2.4nm,0.3s,baz=68,slow=15,SNR=5.0							
KAPI	**Kappang**	**8.81**	**238**	*e*P		**Pn**	**16 44 02.9**	**+0.5**
WRA	**Warramunga Arr**	**20.72**	**161**	P		**P**	**16 46 30.6**	**-0.4**
	0.5nm,0.5s,baz=340,slow=11,SNR=8.4							
WB2	**Warramunga Arr**	**20.72**	**161**	*e*P		**P**	**16 46 31.6**	**+0.5**
ASAR	**Alice Springs**	**24.11**	**165**	P		**P**	**16 47 06.3**	**+1.1**
	0.5nm,0.3s,mb3.3,baz=342,slow=9.1,SNR=32							
ASAR				ScP		ScP	16 54 14.7	-0.2
	0.4nm,1.1s,baz=350,slow=2.7,SNR=4.7							
PETK	**Petropavlovsk-**	**58.98**	**21**	P		**P**	**16 51 48.4**	**+0.7**
	2.3nm,0.8s,mb4.2,baz=204,slow=6.6,SNR=3.8							
MK31	**Makanchi Array**	**61.16**	**326**	*e*P		**P**	**16 52 02.8**	**+0.1**
MKAR	**Makanchi Array**	**61.16**	**326**	P		**P**	**16 52 03.2**	**+0.5**
	0.9nm,0.4s,mb4.2,baz=117,slow=7.6,SNR=18							
MKAR	**Makanchi Array**	**61.16**	**326**	P		**P**	**16 52 03.2**	**+0.5**
ZALV	**Zalesovo Beam**	**64.40**	**334**	P		**P**	**16 52 23.2**	**-0.9**
	0.6nm,0.7s,mb3.5,baz=134,slow=6.2,SNR=3.3							
KURK	**Kurchatov**	**65.41**	**328**	*e*P		**P**	**16 52 29.9**	**-0.9**
	2.2nm,0.6s,mb4.2							
BRVK	**Borovoye**	**71.04**	**328**	*e*P		**P**	**16 53 05.7**	**-0.2**
	1.6nm,0.8s,mb3.9							

MAN 23 16:45:47,8°.37N×125°.87E,h27km,mb4.7,ML3.6,MS3.6, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.64**	**337**	*e*P		Pb	16 46 00.5 +0.8
BUTP				*e*S		Sb	16 46 09.7 +1.4
BUKP	**Musuan**	**0.94**	**239**	*e*P		Pn	16 46 04.2 -0.2
BUKP				*e*S		Sb	16 46 15.4 -1.3
CGP	**Cagayan de Oro**	**1.17**	**274⇑**	*e*P		Pn	16 46 12.9 +5.4
DMPH	**Davao City--Mi**	**1.33**	**196**	*e*P		Pn	16 46 09.8 -0.1
MATI	**Mati**	**1.47**	**165**	*e*P		Pn	16 46 11.5 -0.2
KCP	**Kidapawan**	**1.56**	**210⇑**	*e*P		Pn	16 46 16.2 +3.2
KCP				*i* S		Sn	16 46 36.3 +3.9
TBP	**Tagbilaran**	**2.38**	**304**	*e*P		Pn	16 46 24.6 +0.3
TBP				*e*S		Sn	16 46 51.8 -0.7
PAGZ	**Pagadian**	**2.52**	**258**	*e*P		Pn	16 46 27.2 +1.0
LLP	**Lapu-Lapu**	**2.69**	**316**	*e*P		Pn	16 46 29.8 +1.2
LLP				*e*S		Sn	16 47 01.6 +1.2
SNPH	**Sibulan**	**2.78**	**290**	*e*P		Pn	16 46 32.0 +2.3
CNP	**Catarman**	**4.28**	**344**	*e*P		Pn	16 46 53.3 +2.9

CASC 23 16:46:18.1±0.5,13°.02N×89°.02W,h34km±1km,MD3.6, 1C-2D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.60**	**357**	*i*⇓*i*P		Pn	16 46 30.3 0.0
LFRS				*e*S		Sb	16 46 39.8 +0.9
SNVI	**San Vicente**	**0.62**	**17**	*e*P		Pn	16 46 30.6 +0.1
SNVI				*e*S		Sb	16 46 40.5 +1.3
LBRS	**Las Brisas**	**0.72**	**359⇓**	*e*P		Pn	16 46 32.1 +0.3
BOQS	**Boqueron**	**0.76**	**341**	*e*P		Pn	16 46 32.7 +0.3
BOQS				*e*S		Sn	16 46 44.0 +1.3
VSM	**San Miguel**	**0.84**	**61**	*e*P		Pn	16 46 33.9 +0.4
BLLM	**Bellamira**	**0.88**	**61**	*e*P		Pn	16 46 34.2 +0.2
SBLS	**San Blas**	**1.00**	**325**	*e*P		Pn	16 46 36.0 +0.2
SNJE	**San Jose**	**1.02**	**326**	*e*P		Pn	16 46 36.2 +0.2
SNJE				*e*S		Sn	16 46 50.5 +1.4
CAHU	**Cacacuatique**	**1.09**	**46**	*e*P		Pn	16 46 37.2 +0.3
CNCH	**Conchagua**	**1.19**	**77⇑**	*e*P		Pn	16 46 38.1 -0.2
CNCH				*e*S		Sn	16 46 54.4 +1.1
RBDL	**Robledal**	**1.27**	**329**	*e*P		Pn	16 46 39.9 +0.5
TGUH	**Tegucigalpa,Un**	**1.99**	**59**	*e*P		Pn	16 46 49.2 -0.2

*IDC **23** 18:37:27.2±1.6,10°.11S×152°.32E,h0km,mb4.0/4, mb1 4.1/6,mb1mx3.9/16,mbtmp3.9/6,ML3.7/2,MS3.3/5, Ms1 3.3/5,ms1mx3.0/18, Error ellipse: s-maj=60.2km s-min=25.1km az=127.0*
*ISCJB **23** 18:37:31.6±1.1,10°.2S±0°.1×152°.0E±0°.1,h33km,mb4.0/6, MS3.5/3, Error ellipse: s-maj=20.7km s-min=15.2km az=15.5*
*NEIC **23** 18:37:32.0±0.9,10°.12S×152°.14E,h30km,mb4.6/2, Error ellipse: s-maj=19.2km s-min=13.7km az=106.0*
ISC 23 18:37:32.2±6.1,10°.19S±0°.09×152°.1E±0°.2,h27km±41km, n15,σ0§90/14,mb4.0/6,MS3.5/3,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.91**	**279**	*e*Pn		**Pn**	**18 38 43.2**	**-1.0**
HNR	**Honiara**	**7.79**	**85**	LR		LR	18 41 20.2	
	comp=Z,50nm,19.9s,baz=108,slow=31							
CTA	**Charters Tower**	**11.33**	**209**	Pn		**Pn**	**18 40 11.8**	**-0.5**
	0.2nm,0.3s,baz=37,slow=17,SNR=3.3							
CTA				LR		LR	18 44 16.6	
	comp=Z,201nm,19.1s,baz=41,slow=36							
CTA	**Charters Tower**	**11.33**	**209**	Pn		**Pn**	**18 40 11.8**	**-0.5**
CTA				LR		LR	18 44 16.6	
CTAO	**Charters Tower**	**11.33**	**209**	*e*Pn		**Pn**	**18 40 12.9**	**+0.5**
CTAO				*e*Sn		**Sn**	**18 42 17.0**	**-1.2**
WRA	**Warramunga Arr**	**19.66**	**238**	P		**Pn**	**18 42 01.3**	**+0.6**
	0.3nm,0.3s,baz=61,slow=9.5,SNR=18							
ASAR	**Alice Springs**	**21.91**	**230**	P		**P**	**18 42 25.0**	**+1.5**
	2.3nm,0.6s,mb3.8,baz=61,slow=10,SNR=39							
STKA	**Stephens Creek**	**23.66**	**203**	P		**P**	**18 42 41.5**	**-0.1**
	1.6nm,0.8s,mb3.5,baz=36,slow=14,SNR=2.9							
STKA				LR		LR	18 51 17.4	
	comp=Z,229nm,20.1s,MS3.6,baz=24,slow=35							
STKA	**Stephens Creek**	**23.66**	**203**	P		**P**	**18 42 41.5**	**-0.1**
STKA				Pn		**P**	**18 42 41.6**	**0.0**
STKA				LR		LR	18 51 17.4	
FITZ	**Fitzroy Crossi**	**26.79**	**250**	P		**P**	**18 43 11.3**	**+1.1**
	2.9nm,0.7s,mb4.0,baz=93,slow=6.1,SNR=16							
FITZ				LR		LR	18 54 04.1	
	comp=Z,109nm,18.6s,MS3.4,baz=199,slow=37							
PETK	**Petropavlovsk-**	**63.23**	**4**	LR		LR	19 12 34.9	
	comp=Z,20nm,19.9s,MS3.3,baz=12,slow=33							
LSA	**Lhasa**	**70.76**	**306**	P		**P**	**18 48 46.3**	**-0.1**
	5.7nm,1.3s,mb4.3							
QSPA	**South Pole Qui**	**79.81**	**180**	*e*P		**P**	**18 49 38.0**	**+0.5**
	9.3nm,1.3s,mb4.5							
ILAR	**Eielson Array**	**87.39**	**22**	P		**P**	**18 50 15.3**	**-1.2**
	0.9nm,0.9s,mb4.0,baz=246,slow=4.4,SNR=7.2							
TORD	**Torodi Ar. Bea**	**150.85**	**279**	PKPbc		PKPbc	18 57 23.2	-0.1
	0.9nm,0.7s,baz=83,slow=3.5,SNR=2.4							

*TAP **23** 18:57:27.7,23°.06N×120°.22E,h15km,ML3.6,B*
*ISCJB **23** 18:57:28.8±0.4,23°.06N±0°.02×120°.16E±0°.03,h16km±3km, Error ellipse: s-maj=4.2km s-min=3.0km az=171.3*
*NEIC **23** 18:57:31.5±3.1,23°.15N×120°.42E,h10km,ML4.2(TAP), Error ellipse: s-maj=31.8km s-min=12.3km az=67.0*
NEIC Recorded [4 TAP] in T'ai-nan and [1 TAP] in Chia-i.
ISC 23 18:57:28.8±0.4,23°.07N±0°.02×120°.18E±0°.02,h14km±2km, n53,σ0§93/88,7C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAI1	**Yung-k'ang**	**0.05**	**124⇓**	*i*P		**Pg**	**18 57 31.1**	**-0.4**
	baz=143							
TAI1				*i* S		**Sg**	**18 57 33.6**	**+0.3**
	baz=143							
SCLT	**Jiali**	**0.11**	**6⇓**	*i*P		**Pg**	**18 57 32.0**	**0.0**
	baz=353							
SCLT				S		**Sg**	**18 57 35.5**	**+1.2**
	baz=353							
CHN3	**Shinhua**	**0.17**	**87⇑**	*i*P		**Pg**	**18 57 32.8**	**-0.1**
	baz=76							
CHN3				S		**Sg**	**18 57 36.6**	**+1.0**
	baz=76							
TWM1	**Shoushan**	**0.33**	**138**	⇑P		**Pg**	**18 57 36.2**	**+0.7**
	baz=141							
CHN1	**Nanshi**	**0.34**	**70⇑**	*i*P		**Pg**	**18 57 35.4**	**-0.3**
	baz=66							
CHN1				*e*S		**Sg**	**18 57 40.7**	**+0.3**
	baz=66							
SGST	**Jiashian**	**0.37**	**88**	P		**Pg**	**18 57 36.2**	**0.0**
	baz=72							
WTP	**Ta-pu**	**0.43**	**66⇑**	*i*P		**Pg**	**18 57 37.0**	**-0.5**
	baz=64							
WTP				*e*S		**Sg**	**18 57 44.1**	**+0.8**
	baz=64							
SGLT	**Jiouru**	**0.44**	**140**	*e*P		**Pg**	**18 57 38.5**	**+0.8**
	baz=142							
TPUB	**Ta-pu**	**0.47**	**61**	*e*Pg		**Pg**	**18 57 37.2**	**-1.0**
TPUB				*e*Sg		**Sg**	**18 57 41.5**	**-3.0**
CHY	**Chiayi**	**0.48**	**27**	⇑P		**Pg**	**18 57 38.2**	**-0.1**
	baz=13							
CHY				*e*S		**Sg**	**18 57 45.2**	**+0.4**
	baz=13							
KAU	**Kaohsiung**	**0.51**	**167**	*e*P		**Pg**	**18 57 39.7**	**+0.8**
	baz=170							
STYT	**Tauyuan**	**0.54**	**80**	*e*P		**Pg**	**18 57 38.9**	**-0.5**
	baz=68							
STYT				*e*S		**Sg**	**18 57 47.5**	**+1.0**
	baz=68							
WSF	**Szhu**	**0.57**	**4**	P		**Pg**	**18 57 39.9**	**-0.1**
	baz=1.0							
WSF				*e*S		**Sg**	**18 57 48.8**	**+1.3**
	baz=1.0							
WGK	**Gukeng**	**0.71**	**29**	*e*P		**Pg**	**18 57 42.4**	**-0.2**
	baz=41							
WGK				*e*S		**Sg**	**18 57 53.4**	**+1.5**
	baz=41							
ALS	**Alishan**	**0.72**	**52**	*e*P		**Pg**	**18 57 42.2**	**-0.7**
	baz=50							
ALS				*e*S		**Sg**	**18 57 52.8**	**+0.4**
	baz=50							
TWP	**Hsiaoliuchiu**	**0.74**	**167**	*e*P		**Pg**	**18 57 43.8**	**+0.7**
	baz=180							
PNG	**Penghu**	**0.76**	**311⇑**	*i*P		**Pg**	**18 57 42.9**	**-0.7**
	baz=311							
PNG				*e*S		**Sg**	**18 57 53.7**	**+0.1**
	baz=311							
ELDTW	**Lidau**	**0.78**	**81**	*e*P		**Pg**	**18 57 42.8**	**-1.1**
	baz=80							
ELDTW				*e*S		**Sg**	**18 57 54.3**	**+0.2**
	baz=80							
WTCT	**Ta-ch'eng**	**0.80**	**6**	*e*P		**Pg**	**18 57 43.3**	**-1.0**
	baz=5.0							
WTCT				*e*S		**Sg**	**18 57 55.5**	**+0.8**
	baz=5.0							
SCZT	**Fangliau**	**0.80**	**150**	P		**Pg**	**18 57 44.5**	**+0.2**
	baz=135							
SCZT				*e*S		**Sg**	**18 57 56.5**	**+1.6**
	baz=135							
YUS	**Yu-Shan**	**0.82**	**59**	P		**Pg**	**18 57 44.4**	**-0.3**
	baz=58							
YUS				S		**Sg**	**18 57 56.4**	**+0.8**
	baz=58							
ECL	**Taimali**	**0.85**	**123**	*e*P		**Pg**	**18 57 44.5**	**-0.8**
	baz=131							
TWG	**Pinlang**	**0.86**	**107**	*e*Pg		**Pg**	**18 57 44.4**	**-1.0**
TWG	**Pinlang**	**0.86**	**107**	*e*P		**Pg**	**18 57 44.9**	**-0.4**
	baz=115							
TWG				*e*S		**Sg**	**18 57 57.1**	**+0.5**
	baz=115							
EAST	**Anshuo**	**0.92**	**138⇓**	*i*P		**Pb**	**18 57 46.3**	**-0.1**
	baz=131							
EAST				*e*S		**Sb**	**18 57 59.8**	**+1.3**
	baz=131							
WNT	**Mingjian**	**0.93**	**30**	*e*P		**Pb**	**18 57 45.6**	**-1.1**
	baz=27							
WNT				*e*S		**Sb**	**18 57 59.2**	**+0.4**
	baz=27							
TTN	**Taitung**	**0.94**	**109**	*e*P		**Pb**	**18 57 44.8**	**-2.1**
	baz=109							
TAW	**Tawu**	**0.97**	**137**	*e*P		**Pb**	**18 57 46.3**	**-0.9**
	baz=131							
SSLB	**Suanglung**	**1.01**	**45**	*e*Pg		**Pg**	**18 57 46.1**	**-2.2**
SSLB				*e*Sg		**Sg**	**18 57 59.5**	**-2.0**
TYC	**Yuchr**	**1.04**	**37⇑**	*i*P		**Pb**	**18 57 47.3**	**-1.2**
	baz=35							
TYC				*e*S		**Sb**	**18 58 02.0**	**0.0**
	baz=35							
SMLT	**Sun Moon Lake**	**1.04**	**39**	*e*P		**Pb**	**18 57 47.4**	**-1.2**
	baz=37							
SMLT				*e*S		**Sb**	**18 58 01.6**	**-0.6**
	baz=37							
TWF1	**Yuli**	**1.06**	**74**	P		**Pb**	**18 57 48.0**	**-0.9**
	baz=66							
TWF1				*e*S		**Sb**	**18 58 02.7**	**0.0**
	baz=66							
YULB	**Yu-li**	**1.07**	**72**	*e*Pg		**Pg**	**18 57 47.8**	**-1.7**
YULB				*e*Sg		**Sg**	**18 58 03.1**	**-0.4**
CHKT	**Chengkung**	**1.09**	**88**	*e*P		**Pb**	**18 57 48.9**	**-0.4**
	baz=88							
CHKT				*e*S		**Sb**	**18 58 04.5**	**+1.1**
	baz=88							
EHY	**Hungye**	**1.14**	**67**	P		**Pb**	**18 57 49.2**	**-1.0**
	baz=66							
EHY				*e*S		**Sb**	**18 58 04.7**	**-0.1**
	baz=66							
TCU	**Taichung**	**1.17**	**23**	*e*P		**Pn**	**18 57 49.8**	**-0.8**
	baz=21							
HEN	**Hengchun**	**1.18**	**154**	*e*P		**Pn**	**18 57 50.0**	**-0.8**
	baz=174							
ESL	**Shilin**	**1.37**	**57**	*e*P		**Pn**	**18 57 52.9**	**-0.5**
	baz=56							
ESL				*e*S		**Sn**	**18 58 11.2**	**-0.1**
	baz=56							
**T

CEP	Cherat	2.44	170	⇑P	Pn	19 15 26.7	+3.0
CEP				S	Sn	19 15 58.0	+4.7
KBL	Kabul	2.56	230	Pn	Pn	19 15 25.6	+0.4
CHCP	Chirah Chowk	2.99	149	⇑P	Pn	19 15 34.7	+3.8
THW	Thamme Wali	3.44	175	⇑P	Pn	19 15 38.8	+1.9
THW				S	Sn	19 16 20.0	+3.0
KSH	Kashi	4.88	46	Pn	Pn	19 15 54.1	-2.1
KSH				Sn	Sn	19 16 43.3	-8.3
KSH				smax			
	comp=N,140nm,0.3s						
KSH				smax			
	comp=E,92nm,0.2s						
AML	Almayashu	6.16	16	P	Pn	19 16 13.9	+0.5
	SNR=44						
AML	Almayashu	6.16	16	*e*Pn	Pn	19 16 13.6	+0.2
	comp=E,66nm,0.4s						
AML				*e*Sn	Sn	19 17 14.7	-7.6
UCH	Uchtor	6.46	21	P	Pn	19 16 18.2	+0.7
	SNR=38						
UCH	Uchtor	6.46	21	*e*Pn	Pn	19 16 17.8	+0.3
	comp=E,21nm,0.4s						
KZA	Kyzart	6.56	26	P	Pn	19 16 20.0	+1.2
	SNR=8.8						
KZA	Kyzart	6.56	26	*e*Pn	Pn	19 16 18.1	-0.7
	comp=E,17nm,0.3s						
EKS2	Erkin-Say	6.68	15	P	Pn	19 16 20.9	+0.4
	SNR=31						
EKS2	Erkin-Say	6.68	15	*e*Pn	Pn	19 16 20.5	0.0
	comp=E,23nm,0.5s						
AAK	Ala-Archa	6.83	20	P	Pn	19 16 23.4	+0.9
	SNR=66						
KK31	Karatay Array	6.90	355	⇓P	Pn	19 16 21.6	-1.8
	comp=E,20nm,0.3s,baz=176,slow=12,SNR=445						
KK31				⇑S	Sn	19 17 32.6	-7.8
	comp=E,8.1nm,0.5s,baz=185,slow=25,SNR=7.0						
KKAR	Karatay Array	6.90	355	*e*Pn	Pn	19 16 21.5	-1.9
	comp=E,53nm,0.3s						
KBK	Karagaybulak	6.98	22	P	Pn	19 16 25.6	+1.1
	SNR=16						
SMLA	Simla	7.00	135	*i* P	Pn	19 16 25.8	+0.9
SMLA				*i* S	Sn	19 17 41.0	-1.9
SMLA				⇓		19 17 46.0	
	comp=E,1μm,0.3s						
SMLA						19 17 48.2	
	comp=N,784nm,0.3s						
ULHL	Ulahol	7.08	31	P	Pn	19 16 27.4	+1.5
	SNR=10						
CHMS	Chumysh	7.24	20	P	Pn	19 16 28.5	+0.5
	SNR=40						
USP	Ospenovka	7.42	18	P	Pn	19 16 30.9	+0.4
	SNR=29						
TKM2	Tokmak 2	7.42	25	⇑P	Pn	19 16 31.2	+0.7
	comp=N,7.8nm,0.4s						
TKM2				⇓S	Sn	19 17 52.9	-0.3
	comp=N,6.3nm,0.7s						
TKM2	Tokmak 2	7.42	25	P	Pn	19 16 31.5	+0.9
	SNR=27						
TKM2	Tokmak 2	7.42	25	*e*Pn	Pn	19 16 31.0	+0.5
	comp=N,15nm,0.5s						
DDI	Dehra Dun	8.11	135	*ex*	Pn	19 16 41.0	+1.1
KHET	Khetri	8.95	154	*e*PKP	Pn	19 16 51.6	+0.3
KHET				*e*S	Sn	19 18 27.7	-2.6
AYAN	Aya Nagar	9.12	146	*e*PKP	Pn	19 16 52.4	-1.2
SONA	Sohna	9.30	147	*e*PKP	Pn	19 16 57.6	+1.5
SONA				AMb	AMB	19 16 58.0	
	comp=Z,8.4nm,0.4s						
SONA				*e*S	Sn	19 18 36.8	-2.0
AJM	Ajmer	10.11	163	*e*PKP	Pn	19 17 06.4	-0.7
AJM				*e*S	Sn	19 18 53.8	-4.7
DANN	Dangsing	13.07	123	*e*P	Pn	19 17 46.0	-0.4
	comp=Z,13nm,0.3s						
MK31	Makanchi Array	13.32	34	*e*Pn	Pn	19 17 49.6	+0.1
MKAR	Makanchi Array	13.32	34	Pn	Pn	19 17 49.1	-0.5
	comp=Z,0.1nm,0.3s,baz=227,slow=17,SNR=4.5						
KOLN	Koldanda	13.34	126	*e*P	Pn	19 17 49.2	-0.8
	comp=Z,7.3nm,0.3s						
GKN	Gorkha	13.88	122	*e*P	Pn	19 17 56.3	-0.7
	comp=Z,24nm,0.5s						
DMN	Daman	14.46	123	*e*P	Pn	19 18 04.0	-0.3
	comp=Z,4.8nm,0.2s						
KKN	Kakani	14.46	122	*e*P	Pn	19 18 04.0	-0.3
	comp=Z,20nm,0.5s						
PKI	Pulchoki	14.69	122	*e*P	Pn	19 18 07.0	-0.2
	comp=Z,14nm,0.4s						
KURBB	Kurchatov Arra	15.28	17	P	Pn	19 18 16.8	+2.4
	comp=Z,0.3nm,0.4s						
AB31	Akbulak array	15.48	331	⇑P	Pn	19 18 12.4	-4.6
	comp=Z,2.2nm,0.3s,baz=132,slow=12,SNR=210						
ABKAR	Akbulak array	15.48	331	*e*Pn	Pn	19 18 11.9	-5.0
	comp=Z,5.7nm,0.3s						
ABKAR				*e*Sn	Sn	19 20 48.1	-20
TAPN	Taplejung	16.43	118	*e*P	Pn	19 18 29.7	+0.7
	comp=Z,19nm,0.5s						
ODAN	Odare	16.50	120	*e*P	Pn	19 18 30.0	+0.1
	comp=Z,7.9nm,0.4s						
BVA0	Borovoye Array	16.81	358	⇑P	Pn	19 18 31.6	-1.7
	comp=Z,0.5nm,1.1s,baz=170,slow=16,SNR=12						
BVAR	Borovoye Array	16.81	358	P	Pn	19 18 31.9	-1.4
	comp=Z,0.4nm,0.3s,baz=172,slow=11,SNR=10						
BRVK	Borovoye	16.84	358	*e*Pn	Pn	19 18 31.9	-1.8
	comp=Z,2.3nm,0.6s						
AKTK	Aktyubinsk	17.18	330	P	Pn	19 18 35.2	-2.6
AKTK				S	S	19 21 36.6	-13
AKTO	Aktyubinsk	17.18	330	P	Pn	19 18 35.2	-2.6
	comp=Z,0.6nm,0.3s,baz=131,slow=17,SNR=16						
AKTO				S	S	19 21 36.6	-13
	comp=Z,0.1nm,0.3s,baz=353,slow=23,SNR=3.6						
LSA	Lhasa	17.79	106	*e*P	Pn	19 18 48.6	+3.1
	comp=Z,2.7nm,0.6s						
ZAA0	Zalesovo Array	20.03	24	*e*P	P	19 19 09.4	+0.6
ZALV	Zalesovo Beam	20.03	24	P	P	19 19 09.8	+0.9
	comp=Z,1.9nm,0.4s,baz=228,slow=11,SNR=9.8						
GNI	Garni	21.29	289	*e*P	P	19 19 26.0	+3.6
	comp=Z,15nm,0.9s,mb4.3						
ARU	Arti	21.99	341	*e*P	P	19 19 31.1	+1.4
	comp=Z,3.3nm,0.8s,mb3.7						
AKASG	Malin Array Be	33.37	309	P	P	19 21 12.8	+0.4
	comp=Z,0.9nm,0.4s,mb3.9,baz=82,slow=8.0,SNR=16						
FINES	FINESS Array B	37.89	326	P	P	19 21 52.4	+1.5
	comp=Z,0.9nm,0.4s,mb4.0,baz=120,slow=9.2,SNR=8.5						
ARCES	ARCESS Array B	41.52	338	P	P	19 22 22.3	+1.6
	comp=Z,3.0nm,0.9s,mb4.0,baz=108,slow=7.7,SNR=6.3						
NB2	NORSAR Subarra	44.79	323	P	P	19 22 47.2	0.0
	comp=Z,0.9nm,0.4s,mb3.9,baz=97,slow=7.9						
NOA	NORSAR Array B	44.79	323	P	P	19 22 47.6	+0.4
	comp=Z,0.8nm,0.4s,mb3.8,baz=96,slow=7.7,SNR=8.6						
JHJ	Hachijo jima 2	55.25	72	LR	LR	19 48 12.2	
	comp=Z,1μm,20.8s,baz=138,slow=36						
TORD	Torodi Ar. Bea	66.04	269	P	P	19 25 18.0	-2.0
	comp=Z,399nm,0.3s,baz=41,slow=5.8,SNR=2.3						
WRA	Warramunga Arr	81.57	122	P	P	19 26 50.1	-0.3
	comp=Z,0.4nm,1.2s,mb3.1,baz=327,slow=4.8,SNR=2.6						
ASAR	Alice Springs	83.83	125	P	P	19 27 04.1	+2.0
	comp=Z,0.2nm,0.8s,mb3.0,baz=314,slow=4.4,SNR=3.6						

WEL 23 19:19:38.4±0.1, 40°.12S×175°.00E, h12km, ML3.6/41, 2C-3D, Error ellipse: s-maj=1.1km s-min=0.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	0.36	358	⇑P*	Pg	19 19 46.1	+0.4
WAZ				S*	Sg	19 19 51.8	+1.2
WAZ				S*	Sg	19 19 52.0	+1.4
MRZ	Mangatainoka R	0.70	141	⇑P*	Pb	19 19 52.0	-0.5
MRZ				S*	Sb	19 20 01.3	-0.7
OGWZ	Otaki Gorge	0.71	170	⇓P*	Pb	19 19 51.5	-1.2
OGWZ				S*	Sb	19 20 00.5	-1.9
TSZ	Takapari Road	0.74	86	P*	Pb	19 19 52.8	-0.4
TSZ				S*	Sb	19 20 02.7	-0.5
KIW	Kapiti Island	0.74	186	⇓P*	Pb	19 19 51.4	-1.9
MTVZ	Mangateitei	0.82	26	P*	Pb	19 19 53.3	-1.3
HOWZ	Holdsworth Sta	0.87	154	P*	Pb	19 19 54.9	-0.5
PKVZ	Pokaka	0.87	18	P*	Pb	19 19 54.0	-1.5
WNVZ	Wahianoa	0.92	30	P*	Pb	19 19 55.0	-1.2
MOVZ	Moawhango	0.92	39	P*	Pb	19 19 54.4	-1.8
TRVZ	Turoa	0.92	27	P*	Pb	19 19 54.9	-1.4
PNHZ	Pukenui	0.94	78	P*	Pb	19 19 56.2	-0.5
DRZ	Dome Shelter	0.95	27	P*	Pb	19 19 56.0	-0.8
RAEZ	Rainy Point	0.96	330	P*	Pb	19 19 56.6	-0.3
FWVZ	Far West T-bar	0.96	26	P*	Pb	19 19 55.5	-1.5
CAW	Cannon Point	0.99	177	P*	Pb	19 19 56.2	-1.2
TUVZ	Tukino	0.99	31	P*	Pb	19 19 56.3	-1.2
WPVZ	Whakapapa	1.01	25	⇓P*	Pb	19 19 56.3	-1.4
VRZ	Vera Road	1.01	349	P*	Pb	19 19 56.7	-1.1
BHHZ	Black Hill Sta	1.03	53	P*	Pb	19 19 56.7	-1.5
NGZ	Ngauruhoe	1.05	26	P*	Pb	19 19 57.1	-1.4
DFE	Dawson Falls	1.05	319	P*	Pb	19 19 57.9	-0.7
DUWZ	D'Urville Isla	1.07	230	P*	Pb	19 19 56.6	-2.2
OTVZ	Oturere	1.08	28	P*	Pb	19 19 57.7	-1.3
BFZ	Birch Farm	1.10	121	P*	Pb	19 19 59.1	-0.3
NEZ	North Egmont	1.10	320	P*	Pb	19 19 58.5	-0.9
WTVZ	West Tongariro	1.10	24	P*	Pb	19 19 57.9	-1.5
MTW	Mount Morrison	1.10	160	P*	Pb	19 19 59.0	-0.5
DREZ	Durham Road	1.12	326	P*	Pb	19 19 59.0	-0.7
KRVZ	Karewarewa	1.14	26	P*	Pb	19 19 58.4	-1.6
MHEZ	Mangahewa	1.17	333	P*	Pb	19 20 00.3	-0.2
WEL	Wellington	1.18	189	P*	Pb	19 19 58.6	-2.1
TMWZ	Te Maipa	1.19	146	P*	Pb	19 20 00.2	-0.8
SNZO	South Karori	1.21	191	P*	Pb	19 19 59.5	-1.7
PKE	Pukeiti	1.21	319	P*	Pb	19 20 00.5	-0.8
NWEZ	Newall Road	1.22	314	P*	Pb	19 20 00.5	-0.9
PRHZ	Porangahau	1.26	97	P*	Pb	19 20 01.7	-0.3
KATZ	Kakaramea	1.26	25	P*	Pb	19 20 00.5	-1.6
BHW	Baring Head	1.29	184	PN	Pn	19 20 01.3	-1.0
MSWZ	Moikau Station	1.31	172	PN	Pn	19 20 01.6	-0.9
RITZ	Rihia Road	1.32	30	PN	Pn	19 20 02.2	-0.4
TRWZ	Traveller	1.38	158	PN	Pn	19 20 03.4	-0.1
PLWZ	Palliser	1.46	173	PN	Pn	19 20 04.3	-0.3
MCHZ	McNeill Hill	1.47	63	PN	Pn	19 20 05.9	+1.2
HATZ	Hinemaiaia	1.49	35	PN	Pn	19 20 04.3	-0.7
BKZ	Black Stump Fm	1.49	51	PN	Pn	19 20 04.8	-0.3
WATZ	Wairara	1.52	22	PN	Pn	19 20 04.8	-0.6
TUWZ	Tuamarina	1.54	211	PN	Pn	19 20 04.4	-1.3
HIZ	Hauiti	1.61	356	PN	Pn	19 20 05.5	-1.1
NNZ	Nelson	1.65	228	PN	Pn	19 20 06.3	-0.9
BSWZ	Blackbirch Sta	1.81	208	PN	Pn	19 20 09.2	-0.1
QRZ	Quartz Range	2.02	249	PN	Pn	19 20 11.0	-1.2
THZ	Tophouse	2.29	223	PN	Pn	19 20 16.2	+0.2
URZ	Urewera	2.48	42	PN	Pn	19 20 17.4	-1.2
KHZ	Kahutara	2.55	205	PN	Pn	19 20 18.3	-1.2
MWZ	Matawai	2.65	48	PN	Pn	19 20 20.8	-0.1
MKAZ	Moumakai	3.01	2	PN	Pn	19 20 24.4	-1.5
LTZ	Lake Taylor	3.36	217	PN	Pn	19 20 29.2	-1.5
MQZ	McQueen's Vall	3.99	205	PN	Pn	19 20 35.7	-3.6

*IDC **23** 19:28:34.1±0.9, 6°.90S×154°.79E, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.3/17, mbtmp4.2/11, MS3.7/8, Ms1 3.8/8, ms1mx3.4/25, Error ellipse: s-maj=34.1km s-min=18.9km az=120.0*
*BJI **23** 19:28:35.5, 6°.90S×154°.70E, h25km, mB5.4/2, mb4.7/9, Ms5.2/1, Ms7 4.9/1*
*ISCJB **23** 19:28:40.0±1.8, 6°.94S±0°.10×154°.62E±0°.07, h46km±16km, mb4.6/28, MS3.7/8, Error ellipse: s-maj=16.0km s-min=10.8km az=169.5*
*NEIC **23** 19:28:42.5±1.4, 6°.91S×154°.68E, h59km±13km, mb4.8/18, Error ellipse: s-maj=12.8km s-min=11.1km az=162.0*
ISC 23 19:28:42.7±1.5, 6°.99S±0°.10×154°.66E±0°.07, h58km±14km, n48, σ1°.03/41, mb4.6/28, MS3.7/8, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.77	115	Pn	Pn	19 30 05.8	0.0
	2.6nm,0.3s,baz=165,slow=18,SNR=1.8						
PMG	Port Moresby	7.80	252	*e*Pn	Pn	19 30 33.4	-0.2
	28nm,0.8s						
PMG				*e*Sn	Sn	19 32 00.4	-0.2
CTA	Charters Tower	15.36	211	Pn	Pn	19 32 18.7	+2.7
	0.3nm,0.3s,baz=32,slow=12,SNR=18						
CTA	Charters Tower	15.36	211	*e*P	Pn	19 32 21.1	+5.1
	11nm,0.9s						
CTAO	Charters Tower	15.36	211	*e*Pn	Pn	19 32 20.6	+4.6
	13nm,0.8s						
GUMO	Guam	22.64	335	LR	LR	19 41 15.8	
	comp=Z,71nm,18.0s,MS3.1,baz=78,slow=34						
WB2	Warramunga Arr	23.54	235	*e*P	P	19 33 47.3	-0.7
WRA	Warramunga Arr	23.55	235	P	P	19 33 47.2	-0.8
	7.1nm,0.8s,mb4.1,baz=57,slow=9.6,SNR=31						
WRA				ScP	ScP	19 41 12.1	+6.5
	0.8nm,1.0s,baz=60,slow=3.4,SNR=3.8						
ASAR	Alice Springs	25.93	228	P	P	19 34 09.7	0.0
	4.2nm,0.8s,mb4.0,baz=63,slow=8.6,SNR=24						
ASAR				ScP	ScP	19 41 18.4	+6.1
	0.6nm,0.8s,baz=83,slow=3.0,SNR=6.0						
STKA	Stephens Creek	27.60	205	P	P	19 34 25.1	+0.4
	3.4nm,0.8s,mb4.0,baz=354,slow=9.9,SNR=6.2						
STKA				LR	LR	19 46 05.8	
	comp=Z,288nm,19.8s,MS3.9,baz=27,slow=38						
STKA	Stephens Creek	27.60	205	*e*P	P	19 34 27.5	+2.9
	2.9nm,0.9s,mb3.9						
FITZ	Fitzroy Crossi	30.35	246	P	P	19 34 49.1	-0.1
	4.0nm,0.7s,mb4.3,baz=78,slow=12,SNR=15						
FITZ				LR	LR	19 48 26.9	
	comp=Z,347nm,18.0s,MS4.0,baz=78,slow=39						
FITZ	Fitzroy Crossi	30.35	246	*e*P	P	19 34 48.9	-0.4
	7.5nm,0.6s,mb4.6						
YHNB	Yeheng	45.19	315	P	P	19 36 53.5	-0.7
	18nm,0.9s,mb4.9						
KSRS	Korea Array	50.78	332	LR	LR	19 58 16.4	
	comp=Z,29nm,20.1s,MS3.3,baz=240,slow=35						
PPT	Papeete	55.32	106	LR	LR	19 59 02.8	
	comp=Z,81nm,18.5s,MS3.8,baz=235,slow=33						
MDJ	Mudanjiang	56.11	339	P	P	19 38 19.2	+3.1
	9.2nm,0.7s,mb4.9						
ENH	Enshi	56.99	313	*e*P	P	19 38 21.8	-0.8
	20nm,1.0s,mb5.1						
CMAR	Chiang Mai Arr	60.48	296	P	P	19 38 48.2	+1.1
	2.2nm,0.8s,mb4.2,baz=122,slow=4.5,SNR=17						
CMAR				LR	LR	20 03 34.7	
	comp=Z,53nm,20.4s,MS3.7,baz=232,slow=35						
CHTO	Chiang Mai	60.60	296	*e*P	P	19 38 47.4	-0.5
	4.5nm,1.3s,mb4.4						
HIA	Hailar	63.78	335	P	P	19 39 10.0	+1.4
	8.6nm,0.8s,mb4.8						
SONM	Songino Array	69.15	327	P	P	19 39 43.0	+0.1
	1.7nm,0.9s,mb4.0,baz=129,slow=7.8,SNR=4.5						
LSA	Lhasa	71.00	305	*e*P	P	19 39 55.6	+1.0
	5.4nm,0.8s,mb4.5						
TAPN	Taplejung	73.11	301	*e*P	P	19 40 08.1	+0.7
	18nm,0.9s,mb5.0						
ODAN	Odare	73.24	301	*e*P	P	19 40 08.6	+0.5
	25nm,0.8s,mb5.2						
KKN	Kakani	75.31	301	*e*P	P	19 40 20.9	+0.8
	12nm,0.8s,mb4.9						
DMN	Daman	75.40	301	*e*P	P	19 40 21.2	+0.5
	22nm,0.9s,mb5.1						
GKN	Gorkha	75.91	301	*e*P	P	19 40 24.0	+0.4
	30nm,1.1s,mb5.1						
KOLN	Koldanda	76.73	301	*e*P	P	19 40 29.0	+0.7
	13nm,0.8s,mb4.9						
QSPA	South Pole Qui	82.99	180	*e*P	P	19 41 00.8	-0.2
	5.6nm,1.0s,mb4.5						
MK31	Makanchi Array	83.18	319	*e*P	P	19 41 02.9	+0.2
MKAR	Makanchi Array	83.18	319	P	P	19 41 02.2	-0.5
	1.9nm,0.8s,mb4.2,baz=104,slow=5.1,SNR=12						
MKAR	Makanchi Array	83.18	319	P	P	19 41 02.2	-0.5
ILAR	Eielson Array	83.49	22	P	P	19 41 01.8	-2.0
	0.6nm,0.8s,mb3.6,baz=254,slow=4.3,SNR=6.9						
ILAR				LR	LR	20 14 48.0	
	comp=Z,78nm,19.6s,MS4.1,baz=277,slow=33						
ZAA0	Zalesovo Array	83.99	326	P	P	19 41 03.5	-3.1
ZALV	Zalesovo Beam	83.99	326	P	P	19 41 05.1	-1.5
	1.2nm,0.7s,mb4.2,baz=137,slow=4.6,SNR=4.5						
MAW	Mawson	84.27	203	P	P	19 41 08.1	+0.2
	2.1nm,0.8s,mb4.3,baz=6.7,slow=3.9,SNR=3.8						
KURK	Kurchatov	86.62	322	P	P	19 41 22.2	+2.3
	8.3nm,1.5s,mb4.7						
TKM2	Tokmak 2	86.77	314	*e*P	P	19 41 20.2	-0.5
	2.1nm,0.8s,mb4.4						
UCH	Uchtor	87.41	313	P	P	19 41 22.9	-1.0
	8.9nm,1.5s,mb4.8						
EKS2	Erkin-Say	88.03	313	*e*P	P	19 41 26.9	0.0
	5.7nm,1.3s,mb4.6						
KBL	Kabul	90.32	305	P	P	19 41 35.2	-2.6
NVAR	Mina Array Bea	91.98	52	P	P	19 41 45.7	+0.3
	2.1nm,0.9s,mb4.5,baz=254,slow=7.0,SNR=10						
PDAR	Pinedale Array	98.94	48	LR	LR	20 27 17.4	
	comp=Z,38nm,18.5s,MS3.9,baz=76,slow=36						
GERES	GERESS Array B	126.88	329	PKP	PKPdf	19 47 40.8	+0.7
	0.9nm,0.7s,baz=48,slow=2.0,SNR=7.2						
TAM	Tamanrasset	146.40	301	*e*P	PKPdf	19 48 18.4	+1.7
TORD	Torodi Ar. Bea	152.70	285	PKPbc	PKPbc	19 48 33.0	-1.0
	2.8nm,0.8s,baz=100,slow=1.7,SNR=4.5						
TORD				PKPab	PKPab	19 48 43.7	-1.2
	4.0nm,0.8s,baz=68,slow=2.7,SNR=5.8						
TORD	Torodi Ar. Bea	152.70	285	PKPbc	PKPbc	19 48 33.0	-1.0
TORD				PKPab	PKPab	19 48 43.7	-1.2

*ISCJB **23** 19:54:57.9±0.9, 31°.66N±0°.03×104°.04E±0°.05, h11km±6km, mb4.1/30, MS3.4/4, Error ellipse: s-maj=7.0km s-min=5.2km az=13.7*
*IDC **23** 19:54:57.2±0.7, 31°.65N×104°.26E, h0km, mb3.8/15, mb1 3.9/17, mb1mx3.9/29, mbtmp3.8/17, ML3.4/2, MS3.4/4, Ms1 3.4/4, ms1mx2.9/36, Error ellipse: s-maj=28.1km s-min=13.9km az=54.0*
*BJI **23** 19:55:00.0, 31°.59N×104°.12E, h15km, mb4.5/6, ML4.1/18, Ms4.2/3, Ms7 4.1/3*
*NEIC **23** 19:55:02.2±0.4, 31°.61N×103°.95E, mb4.4/24, Error ellipse: s-maj=9.6km s-min=8.0km az=199.0*
ISC 23 19:54:59.7±0.8, 31°.59N±0°.03×104°.09E±0°.04, h12km±5km, h30km±1.0km: pP-P, n74, σ1°.26/79, mb4.1/30, MS3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.73	203	Pg	Pg	19 55 14.3	+0.4
CD2				Sg	Sg	19 55 24.6	+1.0
CD2				smax			
	comp=N,5μm,0.8s						
CD2				smax			
	comp=E,4μm,0.7s						
LZH	Lanzhou	4.49	358	Pn	Pn	19 56 10.5	+3.0
LZH				Pg	Pg	19 56 21.4	-4.3
LZH				Sg	Sg	19 57 24.5	+0.7
LZH				smax			
	comp=N,260nm,1.2s						
LZH				smax			
	comp=E,250nm,1.2s						
LZH				LR	LR		
	comp=N,1μm,8.5s						
LZH				LR	LR		
	comp=E,2μm,7.6s						
LZH				LR	LR		
	comp=Z,1μm,9.7s						
XAN	Xi'an	4.75	58	Pn	Pn	19 56 11.4	+0.4
XAN				Pg	Pg	19 56 27.3	-3.3
XAN				Sg	Sg	19 57 31.3	-0.9
XAN				smax			
	comp=N,540nm,0.4s						
XAN				smax			
	comp=E,420nm,0.8s						
ENH	Enshi	4.82	104	*e*Pn	Pn	19 56 13.2	+1.2
ENH				*e*Pb	Pb	19 56 29.5	+5.4
ENH				*e*S	Sg	19 57 32.9	-1.7
KMI	Kunming	6.55	191	Pg	Px	19 56 45.3	
KMI				Sg	Sn	19 57 48.4	-2.0
KMI				smax			
	comp=N,58nm,0.9s						
KMI				smax			
	comp=E,52nm,1.1s						
GTA	Gaotai	8.54	337	*e*P	Pn	19 57 12.1	+9.0
GTA				pP		19 57 15.9	
GTA				sP		19 57 18.1	
GTA				S	Sn	19 58 51.6	+12
GTA				sS		19 58 54.9	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,5.0s						
GTA				LR	LR		
	comp=N,620nm,11.4s						
GTA				LR	LR		
	comp=E,720nm,11.1s						
GTA				LR	LR		
	comp=Z,660nm,13.5s						
WHN	Wuhan	8.87	94	P	Pn	19 57 12.3	+4.7
LSA	Lhasa	11.30	264	*e*Pn	Pn	19 57 43.3	+2.4
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	13.54	201	*e*Pn	Pn	19 58 18.9	+7.2
	comp=Z,7.7nm,1.0s						
CM31	Chiang Mai Arr	13.88	201	*e*Pn	Pn	19 58 22.7	+6.5
	comp=Z,3.6nm,0.6s						
CMAR	Chiang Mai Arr	13.88	201	Pn	Pn	19 58 16.4	+0.2
	comp=Z,0.1nm,0.3s,baz=11,slow=9.8,SNR=13						
ODAN	Odare	15.32	256	*e*P	Pn	19 58 35.0	-0.7
	comp=Z,14nm,0.8s						
ODAN	Odare	15.32	256	*e*P	Pn	19 58 35.0	-0.7
	comp=Z,14nm,0.8s						
GUN	Gumba	16.23	262	*e*P	Pn	19 58 44.2	-3.3
	comp=Z,58nm,1.0s						
GUN	Gumba	16.23	262	*e*P	Pn	19 58 44.2	-3.3
	comp=Z,58nm,1.0s						
SONM	Songino Array	16.32	6	Pn	Pn	19 58 47.3	-1.3
	comp=Z,0.1nm,0.3s,baz=186,slow=13,SNR=7.6						
ULN	Ulaanbaatar	16.41	7	*e*Pn	Pn	19 58 50.5	+0.8
	comp=Z,5.2nm,1.0s						
YHNB	Yeheng	16.73	110	P	Pn	19 58 59.4	+5.6
	comp=Z,31nm,1.1s						
KKN	Kakani	16.77	262	*e*P	Pn	19 58 52.0	-2.4
	comp=Z,51nm,1.3s						
KKN	Kakani	16.77	262	*e*P	Pn	19 58 52.0	-2.4
	comp=Z,51nm,1.3s						
DMN	Daman	16.97	261	*e*P	Pn	19 58 54.8	-2.2
	comp=Z,48nm,1.0s						
DMN	Daman	16.97	261	*e*P	Pn	19 58 54.

FINES	FINESS Array B	57.16	326	P	P	20 04 45.4	-0.5
	comp=Z,1.1nm,0.6s,mb4.1,baz=87,slow=9.7,SNR=7.3						
FINES				LR	LR	20 31 46.1	
	comp=Z,36nm,20.2s,MS3.5,baz=309,slow=39						
WRA	Warramunga Arr	58.88	146	P	P	20 04 57.5	-1.0
	comp=Z,2.4nm,0.9s,mb4.2,baz=340,slow=7.2,SNR=9.7						
WB2	Warramunga Arr	58.89	146	eP	P	20 04 59.8	+1.3
ASAR	Alice Springs	61.91	149	P	P	20 05 19.1	-0.1
	comp=Z,0.9nm,0.9s,mb3.9,baz=326,slow=6.1,SNR=7.6						
NB2	NORSAR Subarra	64.24	327	P	P	20 05 39.6	+5.4
	comp=Z,0.8nm,0.7s,mb3.9,baz=72,slow=6.9						
NOA	NORSAR Array B	64.24	327	P	P	20 05 33.5	-0.7
	comp=Z,0.8nm,0.8s,mb3.8,baz=144,slow=16,SNR=2.5						
NOA	NORSAR Array B	64.24	327	P	P	20 05 33.5	-0.7
NWAO	Narrogin (SRO)	65.36	168	P	P	20 05 44.7	+3.0
	comp=Z,22nm,1.3s,mb5.0						
GERES	GERESS Array B	67.20	314	P	P	20 05 53.5	+0.1
	comp=Z,0.5nm,0.7s,mb3.7,baz=100,slow=6.9,SNR=5.1						
ILAR	Eielson Array	69.41	26	P	P	20 06 05.2	-1.8
	comp=Z,0.8nm,1.0s,mb3.6,baz=280,slow=6.6,SNR=6.9						
KMBO	Kilima Mbogo	71.00	256	eP	P	20 06 17.9	+0.3
	comp=Z,4.0nm,1.0s,mb4.3						
STKA	Stephens Creek	72.42	147	P	P	20 06 25.2	-0.5
	comp=Z,1.3nm,0.8s,mb3.9,baz=353,slow=9.3,SNR=2.4						
CABF	La Chapelle	72.80	314	eP	P	20 06 32.4	+4.5
LPG	La Plagne	72.91	313	eP	P	20 06 33.6	+5.0
	comp=Z,15nm,0.9s,mb4.6						
LPG	La Plagne	72.91	313	eP	P	20 06 33.6	+5.0
	comp=Z,7.3nm,0.9s,mb4.6						
LPL	La Plagne	72.91	313	eP	P	20 06 33.6	+5.0
	comp=Z,12nm,0.7s,mb4.6						
LPL	La Plagne	72.91	313	eP	P	20 06 33.6	+5.0
	comp=Z,6.2nm,0.7s,mb4.7						
SMF	Signal de Mont	74.14	315	eP	P	20 06 41.4	+5.6
	comp=Z,12nm,0.9s,mb4.5						
SMF	Signal de Mont	74.14	315	eP	P	20 06 41.4	+5.6
	comp=Z,5.8nm,0.9s,mb4.5						
AVF	Avril sur Loir	74.36	315	eP	P	20 06 42.2	+5.1
LSZ	Lusaka	86.32	250	eP	P	20 07 41.1	-0.8
	comp=Z,3.9nm,1.0s,mb4.6						
LAZ	Ladron	108.07	27	ePdif	Pdif	20 09 24.4	+3.9
	comp=Z,3.0nm,0.7s						
LENM	Lemitar	108.35	27	ePdif	Pdif	20 09 21.5	-0.3
	comp=Z,12nm,1.0s						

*ISCJB **23** 19:59:01.8±0.3, 43°.80N±0°.02×105°.25W±0°.03, h0km, Error ellipse: s-maj=3.1km s-min=2.2km az=177.3*
*NEIC **23** 19:59:03.0±0.3, 43°.82N×105°.24W, h0km, ML3.2, Error ellipse: s-maj=4.1km s-min=3.7km az=141.0, Suspected Mining explosion.*
NEIC 55 km [35 miles] SSE of Gillette.
*IDC **23** 19:59:03.5±1.5, 43°.89N×105°.59W, h0km, mb1 3.9/3, mb1mx3.5/27, mbtmp3.6/3, ML3.5/3, Error ellipse: s-maj=44.4km s-min=7.7km az=147.0*

ISC 23 19:59:03.6±0.3, 43°.78N±0°.02×105°.30W±0°.03, h0km, n122, σ0§97/138, 48C-40D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J22A	Midwest	0.93	247	⇑P	Pg	19 59 20.4	-1.0
	baz=0.9						
RSSD	Black Hills	0.98	69	ePg	Pg	19 59 21.8	-0.5
K22A	Casper	1.44	219	⇑P	Pn	19 59 29.3	-1.6
	baz=1.4,SNR=223						
K22A				⇑S	Sg	19 59 48.7	-1.0
	baz=1.4						
I21A	Big Trails, Te	1.44	272	⇑P	Pn	19 59 29.4	-1.5
	baz=1.4,SNR=271						
H21A	Big Horn, Sher	1.51	305	⇓P	Pn	19 59 31.8	-0.1
	baz=1.5,SNR=265						
H21A				⇓S	Sg	19 59 53.1	+0.9
	baz=1.5						
J21A	Lysite	1.62	255	⇓P	Pn	19 59 32.3	-1.0
	baz=1.5,SNR=100						
J21A				⇑S	Sn	19 59 54.0	-0.8
	baz=1.5						
L23A	Garrett	1.69	190	⇑P	Pn	19 59 33.4	-0.9
	baz=1.6						
L23A				⇑S	Sn	19 59 56.4	-0.1
	baz=1.6						
L24A	Wheatland	1.75	171	⇑P	Pn	19 59 34.5	-0.7
	baz=1.7						
L24A				⇑S	Sn	19 59 58.3	+0.2
	baz=1.7						
K21A	Alcova	1.83	232	⇓Pb	Pb	19 59 36.1	-1.7
	baz=1.7,SNR=56						
K21A				⇓S	Sn	20 00 00.0	0.0
	baz=1.7						
L22A	Ellis Ranch, M	1.93	206	⇑Sb	Sb	20 00 03.4	-0.8
	baz=1.9						
G21A	Lodge Grass	1.99	317	⇑P	Pn	19 59 39.2	+0.8
	baz=2.0,SNR=72						
I20A	Worland	2.05	276	⇑Pb	Pb	19 59 39.8	-1.9
	baz=2.0,SNR=111						
I20A				⇓Sb	Sb	20 00 07.3	-0.4
	baz=2.0						
J20A	Shoshoni	2.07	259	⇓Pb	Pb	19 59 40.8	-1.1
	baz=2.0,SNR=178						
J20A				⇓Sg	Sg	20 00 09.4	-0.5
	baz=2.0						
H20A	Greybull	2.07	291	⇑Pb	Pb	19 59 40.8	-1.2
	baz=2.0,SNR=33						
H20A				⇓Sb	Sb	20 00 08.6	+0.4
	baz=2.0						
M23A	Laramie	2.33	188	⇑P	Pn	19 59 44.6	+1.5
	baz=2.3						
M23A				⇓Sb	Sb	20 00 15.1	-0.5
	baz=2.3						
M24A	Cheyenne	2.33	171	⇓Pb	Pb	19 59 45.6	-0.8
	baz=2.3						
L21A	Rawlins	2.36	221	⇓Pb	Pb	19 59 45.0	-2.0
	baz=2.3,SNR=31						
L21A				⇓Sb	Sb	20 00 15.8	-0.9
	baz=2.3						
PHWY	Pilot Hill	2.48	183	ePn	Pn	19 59 44.8	-0.3
K20A	Yellowstone Ra	2.49	244	⇑Pb	Pb	19 59 47.4	-1.7
	baz=2.4,SNR=12						
K20A				⇑Sb	Sb	20 00 19.9	-0.3
	baz=2.4						
RWWY	Rawlins	2.52	215	ePn	Pn	19 59 46.5	+0.9
G20A	Bridger	2.54	306	⇑P	Pn	19 59 45.6	-0.4
	baz=2.5						
M22A	Cedar Creek Ra	2.56	202	⇓P	Pn	19 59 47.6	+1.4
	baz=2.5,SNR=52						
M21A	Separation Pea	2.65	216	⇑Pb	Pb	19 59 49.0	-2.8
	baz=2.6,SNR=126						
I19A	Meeteetse	2.68	277	⇑P	Pn	19 59 49.0	+1.1
	baz=2.6						
K19A	Absolon Red Bu	2.76	251	⇓Pb	Pb	19 59 52.0	-1.7
	baz=2.7,SNR=14						
K19A				⇑Sb	Sb	20 00 27.6	-0.4
	baz=2.7						
J19A	Crowheart	2.78	261	⇑P	Pn	19 59 50.7	+1.5
	baz=2.7						
J19A				⇑Sb	Sb	20 00 28.9	+0.4
	baz=2.7						
H19A	Powell	2.79	290	P	Pn	19 59 50.3	+0.8
	baz=2.8,SNR=31						
L20A	Wamsutter	2.85	233	⇑P	Pn	19 59 51.9	+1.7
	baz=2.8,SNR=8.4						
F20A	Billings	2.87	316	⇓P	Pn	19 59 50.3	-0.2
	baz=2.9,SNR=26						
N23A	Red Feather La	2.92	190	⇑P	Pn	19 59 51.7	+0.5
	baz=2.9						
LAO	LASA Array	2.98	348	ePn	Pn	19 59 51.3	-0.8
N22A	Wattenberg Ran	3.09	196	⇓Sb	Sb	20 00 37.4	-0.2
	baz=3.0						
M20A	Sweetwater, Wa	3.12	224	⇓Pb	Pb	19 59 58.4	-1.5
	baz=3.0,SNR=13						
RLMT	Red Lodge	3.14	297	⇑P	Pn	19 59 55.0	+0.7
	baz=3.1,SNR=30						
RLMT	Red Lodge	3.14	297	ePn	Pn	19 59 54.7	+0.4
H18A	Shoshone NF, C	3.26	288	⇓P	Pn	19 59 56.0	+0.1
	baz=3.2						
BW06	Boulder Array	3.27	253	⇑P	Pn	19 59 56.9	+0.9
	baz=3.2						
BW06				⇑Sb	Sb	20 00 42.8	+0.1
	baz=3.2						
BW06	Boulder Array	3.27	253	ePn	Pn	19 59 56.7	+0.7
PDAR	Pinedale Array	3.27	253	Pn	Pn	19 59 56.9	+0.8
	4.0nm,0.3s,baz=71,slow=17,SNR=46						
PDAR				Lg		20 00 40.9	
	11nm,0.3s,baz=81,slow=34,SNR=9.8						
I18A	Diamond G Ranc	3.27	270	⇓P	Pn	19 59 58.2	+2.2
	baz=3.2						
F19A	Roth Farm, Mol	3.32	310	⇓P	Pn	19 59 57.3	+0.6
	baz=3.3,SNR=17						
E20A	Meyer Farm, Mu	3.38	325	⇑P	Pn	19 59 57.2	-0.4
	baz=3.4						
D23A	Lindsay	3.40	1	⇑P	Pn	19 59 58.5	+0.7
	baz=3.5						
D24A	Glendive	3.41	11	⇑P	Pn	19 59 59.3	+1.3
	baz=3.5						
G18A	Lazy EL Ranch,	3.41	298	⇓P	Pn	19 59 58.3	+0.3
	baz=3.4,SNR=26						
N21A	Black Mountain	3.43	209	⇓P	Pn	19 59 59.5	+1.2
	baz=3.4,SNR=7.0						
E19A	Rath Farm, Rou	3.65	319	⇑P	Pn	20 00 01.1	-0.1
	baz=3.6,SNR=6.0						
K18A	Toltan Ranch,	3.65	253	⇑P	Pn	20 00 03.0	+1.8
	baz=3.6,SNR=12						
N20A	Spence Gulch,	3.67	218	⇑P	Pn	20 00 02.1	+0.6
	baz=3.6,SNR=8.1						
GCMT	Greycliff	3.70	304	ePn	Pn	20 00 01.8	-0.2
OGNE	Ogallala	3.72	138	ePn	Pn	20 00 01.3	-1.0
O22A	Kremmling	3.73	195	⇑Sb	Sb	20 00 57.5	+1.5
	baz=3.7						
O25A	Wiggins	3.77	166	⇓Sb	Sb	20 00 58.9	+1.9
	baz=3.7						
F18A	Big Timber	3.79	306	⇑P	Pn	20 00 04.3	+1.1
	baz=3.8,SNR=28						
I17A	Pilgrim Ck.	3.82	274	⇑P	Pn	20 00 05.3	+1.8
	baz=3.8						
LOHW	Long Hollow	3.85	269	ePn	Pn	20 00 02.8	-1.2
D20A	Manuel Ranch,	3.87	330	⇓P	Pn	20 00 04.1	-0.1
	baz=3.9						
MOOW	Moose Ponds	3.94	271	ePn	Pn	20 00 05.3	0.0
SNOW	Snow King Moun	3.97	267	ePn	Pn	20 00 02.7	-3.0
YNR	Norris Junctio	3.98	286	ePn	Pn	20 00 04.7	-1.0
ISCO	Idaho Springs	3.98	183	ePn	Pn	20 00 05.9	+0.1
C22A	Vida	3.99	354	⇑P	Pn	20 00 07.3	+1.4
	baz=4.0						
C23A	Lambert	4.03	1	⇑P	Pn	20 00 07.8	+1.3
	baz=4.1						
REDW	Red Top Meadow	4.05	266	ePn	Pn	20 00 02.5	-4.3
IMW	Indian Meadow	4.08	274	ePn	Pn	20 00 08.1	+0.9
TPAW	Teton Pass	4.11	268	ePn	Pn	20 00 08.6	+1.0
G17A	Pierce Place,	4.18	294	⇑P	Pn	20 00 09.0	+0.5
	baz=4.1,SNR=9.1						
E18A	Harlowton	4.29	312	⇓P	Pn	20 00 10.8	+0.7
	baz=4.3,SNR=10.0						
AHID	Auburn Hatcher	4.35	259	Pn	Pn	20 00 12.2	+1.3
F17A	Fitzpatrick Pl	4.37	301	⇑P	Pn	20 00 12.2	+1.1
	baz=4.3,SNR=23						
RRI2	Red Ridge	4.39	266	ePn	Pn	20 00 12.0	+0.5
O19A	Miners Draw (B	4.49	221	⇓P	Pn	20 00 13.2	+0.4
	baz=4.4,SNR=7.6						
DGMT	Dagmar	4.76	9	ePn	Pn	20 00 13.2	-3.3
BOZ	Bozeman (W)	4.88	295	ePn	Pn	20 00 16.8	-1.4
D17A	Six Diamond Ra	5.07	314	⇓P	Pn	20 00 20.7	-0.1
	baz=5.1,SNR=42						
HWUT	Hardware Ranch	5.10	247	ePn	Pn	20 00 20.6	-0.5
	8.7nm,0.5s						
EGMT	Eagleton	5.26	325	ePn	Pn	20 00 20.3	-3.1
	26nm,0.6s						
O17A	Robinson Place	5.40	230	⇑P	Pn	20 00 27.0	+1.6
	baz=5.3,SNR=11						
C17A	Wharram Farm,	5.43	317	⇓P	Pn	20 00 26.0	+0.2
	baz=5.4,SNR=10						
HRY	Holter Researc	5.46	305	ePn	Pn	20 00 26.1	-0.1
	12nm,0.3s						
LRM	Limekiln Ridge	5.48	294	ePn	Pn	20 00 26.8	+0.4
	25nm,0.4s						
MCMT	McKenzie Canyo	5.52	284	ePn	Pn	20 00 27.8	+0.9
	2.2nm,0.4s						
P18A	Preston Nutter	5.55	223	⇓P	Pn	20 00 28.0	+0.6
	baz=5.5,SNR=15						
DAU	Daniels Canyon	5.56	235	ePn	Pn	20 00 27.9	+0.4
	8.5nm,0.4s						
JLU	Jordanelle	5.56	237	Pn	Pn	20 00 28.5	+1.0
	6.2nm,0.5s						
Q19A	Hogan Spring (	5.66	213	⇑P	Pn	20 00 30.0	+1.1
	baz=5.6,SNR=6.4						
R25A	Fountain Ranch	5.67	172	⇑P	Pn	20 00 28.9	-0.2
	baz=5.6						
A19A	Klindworth Far	5.68	336	⇓P	Pn	20 00 27.9	-1.2
	baz=5.7						
SPUT	South Promonto	5.83	247	ePn	Pn	20 00 30.4	-0.7
	4.8nm,0.4s						
E15A	Deer Lodge	5.83	300	⇓P	Pn	20 00 31.1	-0.1
	baz=5.8,SNR=14						
HVU	Hansel Valley	5.85	253	ePn	Pn	20 00 31.8	+0.3
	4.5nm,0.4s						
Q18A	Rafter H Ranch	5.91	219	⇓P	Pn	20 00 32.5	+0.1
	baz=5.8						
P17A	Butcher Ranch,	5.92	225	⇓P	Pn	20 00 33.6	+1.1
	baz=5.8						
PV04	Paradox Valley	6.03	208	ePn	Pn	20 00 34.5	+0.6
SDCO	Great Sand Dun	6.03	182	ePn	Pn	20 00 33.4	-0.5
	1.2nm,0.4s						
C16A	Fuhringer Ranc	6.04	314	⇑P	Pn	20 00 33.6	-0.5
	baz=6.0,SNR=6.1						
SRU	San Rafael	6.09	222	⇓P	Pn	20 00 34.2	-0.6
	baz=6.0,SNR=15						
SRU	San Rafael	6.09	222	ePn	Pn	20 00 34.0	-0.8
	10nm,0.4s						
ECSD	EROS Data Cent	6.29	87	ePn	Pn	20 00 36.8	-0.7
	8.7nm,0.3s						
TMUT	Trail Mountain	6.30	227	ePn	Pn	20 00 38.1	+0.5
	7.8nm,0.4s						
BGU	Big Grassy Mou	6.39	246	ePn	Pn	20 00 39.6	+0.6
	1.8nm,0.4s						
R18A	Canyonlands Na	6.40	214	⇑P	Pn	20 00 38.8	-0.3
	baz=6.3,SNR=13						
CHMT	Chamberlain Mo	6.42	302	ePn	Pn	20 00 39.1	-0.2
	1.8nm,0.3s						
B16A	M & M Farms, S	6.43	318	⇑P	Pn	20 00 39.1	-0.3
	baz=6.4						
C15A	Salmond Ranch,	6.49	311	⇓P	Pn	20 00 39.7	-0.5
	baz=6.5,SNR=7.3						
CBKS	Cedar Bluff	6.49	138	Pn	Pn	20 00 33.9	-6.3
Q16A	Castle Valley	6.56	224	⇓P	Pn	20 00 41.7	+0.4
	baz=6.5						
DUG	Dugway	6.64	240	⇓P	Pn	20 00 42.5	+0.1
	baz=6.6						
DUG	Dugway	6.64	240	ePn	Pn	20 00 42.3	-0.1
	3.6nm,0.4s						
D14A	Greenough	6.65	303	⇑P	Pn	20 00 42.5	0.0
	baz=6.6,SNR=13						
A16A	West Butte Ran	6.76	322	⇑P	Pn	20 00 43.0	-1.0
	baz=6.8						
B15A	Bradely Ranch,	6.79	314	⇓P	Pn	20 00 43.7	-0.6
	baz=6.8						
S18A	Hurst Farm, Bl	7.04	212	⇓P	Pn	20 00 48.1	+0.2
	baz=7.0,SNR=11						
SWMT	Swartz Lake	7.15	305	ePn	Pn	20 00 48.8	-0.5
	2.5nm,0.3s						
MSU	Marysvale	7.38	227	ePn	Pn	20 00 52.9	+0.3
	2.4nm,0.4s						
JTMT	Jette	7.43	305	ePn	Pn	20 00 54.2	+1.1
WALA	Waterton Lakes	7.95	315	ePn	Pn	20 00 59.5	-0.9
AGMN	Agassiz Nation	7.97	52	ePn	Pn	20 00 59.7	-0.9
	13nm,0.4s						
CCUT	Cedar City	8.72	227	ePn	Pn	20 01 11.8	+0.8
	1.5nm,0.4s						
ANMO	Albuquerque	8.86	186	Pg	Pg	20 01 47.2	-6.0
	0.1nm,0.3s,baz=14,slow=12,SNR=3.6						
ULM	Lac du Bonnet	9.13	42	Pn	Pn	20 01 14.8	-1.7
	2.2nm,0.3s,baz=233,slow=12,SNR=13						
ULM				Pg	Pn	20 01 49.0	+33
	1.3nm,0.3s,baz=223,slow=17,SNR=4.2						
ULM				Sn	Sn	20 02 55.5	-4.3
	0.3nm,0.3s,baz=310,slow=22,SNR=1.7						
ULM				Lg		20 03 46.8	
	0.8nm,0.3s,baz=125,slow=17,SNR=2.3						
NVAR	Mina Array Bea	11.16	246	Pn	Pn	20 01 45.3	+1.0
	0.2nm,0.3s,baz=56,slow=13,SNR=3.6						

*IDC **23** 20:45:32.4±1.2, 18°.73N×147°.43E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.8/22, mbtmp3.8/9, ML4.1/1, MS3.5/7, Ms1 3.5/7, ms1mx3.1/35, Error ellipse: s-maj=42.0km s-min=19.4km az=92.0*
*NEIC **23** 20:45:33.6±8.0, 18°.80N×147°.32E, h8km±49km, mb4.3/3, Error ellipse: s-maj=35.1km s-min=12.3km az=87.0*
*ISCJB **23** 20:45:35.2±1.1, 18°.75N±0°.08×147°.4E±0°.3, h33km, mb3.9/10, MS3.5/7, Error ellipse: s-maj=35.4km s-min=12.1km az=1.9*

ISC 23 20:45:37.6±1.1, 18°.73N±0°.09×147°.4E±0°.3, h35km, n15, σ0§74/12, mb3.9/10, MS3.5/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.64	205	Pn	Pn	20 46 59.2	+0.2
	5.5nm,0.3s,baz=63,slow=2.3,SNR=3.5						
MAJO	Matsushiro	19.49	337	eP	Pn	20 49 59.3	-3.7
	19nm,1.5s						
KSRS	Korea Array	25.24	322	P	P	20 51 01.6	+1.2
	2.1nm,0.7s,mb3.8,baz=153,slow=8.3,SNR=6.7						
KSRS				LR	LR	21 00 57.2	
	comp=Z,67nm,18.1s,MS3.2,baz=11,slow=37						
CTA	Charters Tower	38.59	182	LR	LR	21 06 04.9	
	comp=Z,56nm,18.5s,MS3.4,baz=148,slow=32						
WRA	Warramunga Arr	40.49	199	P	P	20 53 12.9	-0.4
	0.5nm,0.5s,mb3.5,baz=21,slow=8.3,SNR=3.9						
SONM	Songino Array	44.11	321	P	P	20 53 42.5	+0.1
	0.8nm,0.7s,mb3.6,baz=137,slow=8.6,SNR=8.1						
SONM				LR	LR	21 12 14.1	
	comp=Z,72nm,18.4s,MS3.6,baz=144,slow=36						
ASAR	Alice Springs	44.13	198	P	P	20 53 42.8	0.0
	0.7nm,0.8s,mb3.4,baz=24,slow=9.6,SNR=5.7						
STKA	Stephens Creek	50.62	186	LR	LR	21 16 48.7	
	comp=Z,94nm,19.2s,MS3.8,baz=204,slow=37						
ZALV	Zalesovo Beam	58.95	322	P	P	20 55 32.9	-0.4
	1.2nm,0.6s,mb4.1,baz=102,slow=8.2,SNR=6.5						
ZALV				LR	LR	21 19 29.3	
	comp=Z,19nm,18.2s,MS3.3,baz=68,slow=34						
MKAR	Makanchi Array	59.57	314	P	P	20 55 38.0	+0.3
	0.8nm,0.8s,mb3.6,baz=87,slow=8.9,SNR=4.4						
KURK	Kurchatov	62.30	318	eP	P	20 55 55.0	-1.2
	2.6nm,1.0s,mb4.3						
ILAR	Eielson Array	62.93	26	P	P	20 56 00.1	0.0
	1.3nm,0.9s,mb4.0,baz=266,slow=5.2,SNR=8.1						
ABKAR	Akbulak array	74.39	317	eP	P	20 57 11.4	-0.5
	1.6nm,0.6s,mb4.1						
FINES	FINESS Array B	87.51	336	P	P	20 58 22.6	+1.1
	1.8nm,0.9s,mb4.3,baz=48,slow=2.8,SNR=5.4						
FINES				LR	LR	21 38 35.8	
	comp=Z,52nm,19.2s,MS4.0,baz=182,slow=36						
NOA	NORSAR Array B	93.08	340	LR	LR	21 42 32.9	
	comp=Z,20nm,18.9s,MS3.6,baz=270,slow=37						

*ISCJB **23** 20:48:06.3±0.7, 1°.89N±0°.06×99°.35E±0°.06, h10km, Error ellipse: s-maj=10.1km s-min=7.3km az=135.1*
*DJA **23** 20:48:07.1°.76N×99°.07E, h7km, ML v3.8/5*

ISC 23 20:48:07.4±0.7, 1°.88N±0°.06×99°.33E±0°.06, h10km, n13, σ1§21/15, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	1.10	167	P	Pb	20 48 23.1	-5.5
TSI	Tuntungan	1.78	335	P	Pn	20 48 38.7	+0.4
BKNI	Bangkinang	2.30	132	P	Pn	20 48 47.6	+2.2
BKNI				S	Sn	20 49 18.5	+4.6
TPTI		2.55	303	P	Pn	20 48 45.5	-3.3
TPTI				S	Sn	20 49 20.2	+0.3
PPI	Padang Panjang	2.55	155	P	Pn	20 48 50.4	+1.5
IPM	Ipoh	3.09	33	P	Pn	20 48 56.8	+0.6
SISI	Saibi	3.19	184	P	Pn	20 48 56.1	-1.6
SDSI	Sungai Dareh	3.49	143	P	Pn	20 49 07.4	+5.6
KULM	Kulim	3.64	21	P	Pn	20 49 03.6	-0.2
KGM	Kluang	3.99	88	P	Pn	20 49 07.3	-1.4
MYKOM	Kota Tinggi	4.52	91	P	Pn	20 49 14.6	-1.4
KTGM	Kuala Trenggan	5.12	48	P	Pn	20 49 24.1	-0.1
SNG	Songkhla	5.42	14	P	Pn	20 49 29.0	+0.7
	220nm,0.8s						

*ISCJB **23** 21:03:24.2±0.5, 65°.41N±0°.03×134°.82W±0°.09, h10km, Error ellipse: s-maj=6.0km s-min=4.6km az=28.8*
*IDC **23** 21:03:26.1±0.9, 65°.55N×135°.14W, h0km, mb3.8/1, mb1 3.8/5, mb1mx3.5/29, mbtmp3.6/5, ML3.6/4, Error ellipse: s-maj=11.1km s-min=10.9km az=92.0*
*PGC **23** 21:03:27.1±0.1, 65°.49N×135°.08W, h10km, ML3.4/4, 219km Ssw of Fort McPherson, Nt Northern Yukon Territory, Canada*
*NEIC **23** 21:03:27.1, 65°.49N×135°.08W, h10km, ML3.4(PGC), After PGC.*

ISC 23 21:03:26.4±0.5, 65°.42N±0°.03×134°.92W±0°.09, h10km, n22, σ1§38/47, 12D, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAWY	Dawson	2.35	237	ePn	Pn	21 04 05.0	+0.1
DAWY				eSn	Sn	21 04 35.0	+1.1
DAWY	Dawson	2.35	237	⇓Pn	Pn	21 04 05.1	+0.1
DAWY				⇑Sg	Sg	21 04 38.8	-3.1
EGAK	Eagle	2.72	259	ePn	Pn	21 04 08.8	-1.2
EGAK				eSn	Sn	21 04 42.5	-0.4
INK	Inuvik	2.95	10	Pn	Pn	21 04 13.3	+0.2
	2.4nm,0.3s,baz=194,slow=18,SNR=13						
INK				Pg	Pg	21 04 17.2	-5.6
	5.4nm,0.3s,baz=190,slow=13,SNR=23						
INK				Sn	Sn	21 04 47.1	-1.5
	4.4nm,0.3s,baz=100,slow=31,SNR=3.3						
INK				Lg		21 04 56.9	
	12nm,0.3s,baz=111,slow=32,SNR=4.7						
INK	Inuvik	2.95	10	⇑Pn	Pn	21 04 13.2	+0.1
INK				⇑Sn	Sn	21 04 48.5	-0.1
DOT	Dot Lake	4.33	250	ePn	Pn	21 04 32.4	+0.2
DOT				eSn	Sn	21 05 23.0	+0.4
MENT	Mentasta	4.59	241	ePn	Pn	21 04 38.5	+2.8
MENT				ePg	Pg	21 04 54.2	+0.1
MENT				eSg	Sg	21 05 49.5	-4.0
HYT	Haines Junctio	4.76	195	⇓Pn	Pn	21 04 40.0	+2.0
HYT				Sn	Sn	21 05 32.1	-1.1
HYT	Haines Junctio	4.76	195	⇓Pn	Pn	21 04 40.0	+2.0
HYT				⇓Sn	Sn	21 05 32.1	-1.1
WHY	Whitehorse	4.78	180	⇓Pn	Pn

DFRA	Djebel Bou Aff	0.47	109	P	Pg	22 07 27.0	+0.5
SET	Setif	0.50	174	P	Pg	22 07 26.2	-1.0
SET	Setif	0.50	174	P	Pg	22 07 26.2	-1.0
SET	Setif	0.50	174	P	Pg	22 07 26.2	-1.0
CKHR	Kef el Ahmar	0.69	168	P	Pg	22 07 30.0	-0.9
CKHR	Kef el Ahmar	0.69	168	P	Pg	22 07 30.0	-0.9
CKHR	Kef el Ahmar	0.69	168	P	Pg	22 07 30.0	-0.9
CASM	Ain Smara	1.03	115	P	Pg	22 07 37.0	-0.3
CASM	Ain Smara	1.03	115	P	Pg	22 07 37.0	-0.3
CASM	Ain Smara	1.03	115	P	Pg	22 07 37.0	-0.3
CTEI	Djebel Teioual	1.07	126	P	Pg	22 07 38.0	-0.1
CTEI	Djebel Teioual	1.07	126	P	Pg	22 07 38.0	-0.1
CTEI	Djebel Teioual	1.07	126	P	Pg	22 07 38.0	-0.1
CKFL	Kef-Lekhel	1.16	104	P	Pb	22 07 39.7	+0.2
CKFL	Kef-Lekhel	1.16	104	P	Pb	22 07 39.7	+0.2
CKFL	Kef-Lekhel	1.16	104	P	Pb	22 07 39.7	+0.2
CAEH	'Ain El Ouahch	1.22	86	P	Pn	22 07 39.3	-1.3
CAEH	'Ain El Ouahch	1.22	86	P	Pn	22 07 39.3	-1.3
CAEH	'Ain El Ouahch	1.22	86	P	Pn	22 07 39.3	-1.3
ETOS	Mallorca	3.65	328	P	Pn	22 08 16.0	+2.0
ETOS				S	Sn	22 08 55.6	-1.4
ETOS	Mallorca	3.65	328	P	Pn	22 08 16.0	+2.0
ETOS	0.8nm,0.1s,SNR=7.9			S	Sn	22 08 55.6	-1.4
ETOS	3.5nm,0.2s,SNR=6.8						
ETOS	Mallorca	3.65	328	P	Pn	22 08 16.0	+2.0
ETOS	0.8nm,0.1s,SNR=7.9			S	Sn	22 08 55.6	-1.5
ETOS	3.5nm,0.2s,SNR=6.8						
CFON	Fontmartina	5.54	337	P	Pn	22 08 41.1	+1.3
CFON				S	Sn	22 09 41.0	-2.5
CFON	Fontmartina	5.54	337	P	Pn	22 08 41.1	+1.3
CFON	0.4nm,0.2s,SNR=7.9			S	Sn	22 09 41.0	-2.5
CFON	2.8nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.54	337	P	Pn	22 08 41.1	+1.2
CFON	0.4nm,0.2s,SNR=7.9			S	Sn	22 09 41.0	-2.5
CFON	2.8nm,0.2s,SNR=7.9						
EPOB	Poblet	5.71	326	P	Pn	22 08 44.1	+1.9
EPOB				S	Sn	22 09 44.9	-2.9
EPOB	Poblet	5.71	326	P	Pn	22 08 44.1	+1.9
EPOB	0.3nm,0.1s,SNR=7.9			S	Sn	22 09 44.9	-2.9
EPOB	1.0nm,0.2s,SNR=7.9						
EPOB	Poblet	5.71	326	P	Pn	22 08 44.1	+1.9
EPOB	0.3nm,0.1s,SNR=7.9			S	Sn	22 09 44.8	-2.9
EPOB	1.0nm,0.2s,SNR=7.9						
EMIR	Miracle	5.99	332	P	Pn	22 08 48.7	+2.6
EMIR				S	Sn	22 09 53.7	-1.0
EMIR	Miracle	5.99	332	P	Pn	22 08 48.7	+2.6
EMIR	1.2nm,0.1s,SNR=5.6			S	Sn	22 09 53.7	-1.0
EMIR	0.5nm,0.1s,SNR=7.9						
EMIR	Miracle	5.99	332	P	Pn	22 08 48.7	+2.6
EMIR	1.2nm,0.1s,SNR=5.6			S	Sn	22 09 53.7	-0.9
EMIR	0.5nm,0.1s,SNR=7.9						
CLLI	Llivia	6.33	337	P	Pn	22 08 52.9	+2.1
CLLI				S	Sn	22 10 02.4	-0.7
CLLI	Llivia	6.33	337	P	Pn	22 08 52.9	+2.1
CLLI	0.2nm,0.1s,SNR=7.9			S	Sn	22 10 02.4	-0.7
CLLI	0.3nm,0.3s,SNR=7.9						
CLLI	Llivia	6.33	337	P	Pn	22 08 52.8	+2.0
CLLI	0.2nm,0.1s,SNR=7.9			S	Sn	22 10 02.4	-0.7
CLLI	0.3nm,0.3s,SNR=7.9						
CSOR	Sort	6.53	332	P	Pn	22 08 56.4	+2.9
CSOR				S	Sn	22 10 07.1	-1.0
CSOR	Sort	6.53	332	P	Pn	22 08 56.4	+2.9
CSOR	0.7nm,0.2s,SNR=7.9			S	Sn	22 10 07.1	-1.0
CSOR	0.4nm,0.3s,SNR=7.9						
CSOR	Sort	6.53	332	P	Pn	22 08 56.4	+2.9
CSOR	0.7nm,0.2s,SNR=7.9			S	Sn	22 10 07.1	-1.0
CSOR	0.4nm,0.3s,SNR=7.9						

*ISCJB **23** 22:08:26.0±0.3, 61°.60N±0°.02×146°.50W±0°.05, h61km±5km, mb3.8/15, Error ellipse: s-maj=4.4km s-min=3.6km az=33.0*
*IDC **23** 22:08:26.3±0.6, 61°.53N×146°.90W, h49km±6km, mb3.6/11, mb1 3.8/14, mb1mx3.6/29, mbtmp3.6/14, MS3.0/5, Ms1 3.0/5, ms1mx2.6/41, Error ellipse: s-maj=13.3km s-min=8.9km az=88.0*
*NEIC **23** 22:08:27.0, 61°.57N×146°.43W, h33km, mb4.1/4, ML3.8(AEIC), After AEIC.*

ISC 23 22:08:27.3±0.3, 61°.59N±0°.02×146°.52W±0°.05, h54km±5km, h49km±1.5km: pP-P, n50, σ1°06/69, mb3.8/15, MS3.1/2, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SML	Sawmill	0.89	285	ePn	Pn	22 08 42.5	-1.1
SML				eSn	Sn	22 08 55.2	-0.5
PMR	Palmer	1.25	271	ePn	Pn	22 08 48.2	-0.1
PMR				eSn	Sn	22 09 05.2	+1.0
RC01	Rabbit Creek A	1.63	254	ePn	Pn	22 08 54.0	+0.5
RC01				eSn	Sn	22 09 14.5	+1.2
MENT	Mentasta	1.89	43	ePn	Pn	22 08 56.0	-1.0
MENT				eSn	Sn	22 09 19.7	+0.1
SEW	Seward	2.06	225	ePn	Pn	22 08 59.4	-0.1
SEW				eSn	Sn	22 09 24.1	+0.2
SLKM	Skilak Lake	2.10	241	ePn	Pn	22 09 00.4	+0.5
SLKM				eSn	Sn	22 09 25.7	+0.9
MID	Middleton Isla	2.17	178	ePn	Pn	22 09 00.2	-0.6
MID				eSn	Sn	22 09 27.8	+1.4
DOT	Dot Lake	2.36	28	ePn	Pn	22 09 03.2	-0.3
DOT				eSn	Sn	22 09 32.3	+1.1
MCK	McKinley	2.43	334	ePn	Pn	22 09 04.5	+0.1
MCK				eSn	Sn	22 09 33.8	+1.0
TRF	Thorofare Moun	2.56	319	ePn	Pn	22 09 06.1	-0.1
TRF				eSn	Sn	22 09 36.5	+0.4
PPLA	Purkeypile	2.96	299	ePn	Pn	22 09 11.8	+0.1
ILAR	Eielson Array	3.20	357	P	Pn	22 09 13.5	-1.5
ILAR	9.5nm,0.3s,baz=179,slow=13,SNR=95			S	Sn	22 09 54.1	+2.3
ILAR	15nm,0.3s,baz=197,slow=17,SNR=12			LR	LR	22 10 46.2	
RSO	comp=Z,182nm,21.9s,baz=182,slow=43						
RSO	Redoubt South	3.24	252	ePn	Pn	22 09 15.7	+0.2
BPAW	Bear Paw Mtn.	3.25	323	ePn	Pn	22 09 53.8	+1.1
COLA	College	3.36	350	ePn	Pn	22 09 15.2	-0.4
COLA				eSn	Sn	22 09 15.7	-1.3
PNL	Peninsula	4.00	116	ePn	Pn	22 09 56.0	+0.3
PNL				eSn	Sn	22 09 25.3	-0.6
EGAK	Eagle	4.02	35	ePn	Pn	22 10 09.4	-2.0
EGAK				eSn	Sn	22 09 26.0	-0.1
DAWY	Dawson	4.11	50	ePn	Pn	22 10 11.6	-0.3
SVW2	Sparrevohn	4.39	268	eP	Pn	22 09 27.6	+0.2
TTA	Tatalina	4.64	291	eP	Pn	22 09 30.9	-0.4
KDAK	Kodiak Island	4.90	222	P	Pn	22 09 33.5	-1.1
KDAK	2.2nm,0.3s,baz=42,slow=11,SNR=24			S	Sn	22 09 36.5	-1.7
KDAK	6.2nm,0.3s,baz=328,slow=20,SNR=8.3						
KDAK	Kodiak Island	4.90	222	ePn	Pn	22 10 29.8	-3.7
KDAK				eSn	Sn	22 09 37.2	-1.0
OHAK	Old Harbor	5.57	221	ePn	Pn	22 10 30.7	-2.7
OHAK				eSn	Sn	22 09 46.1	-1.4
COLD	Coldfoot	5.88	346	ePn	Pn	22 10 46.2	-3.9
COLD				eSn	Sn	22 09 52.2	+0.6
SKAG	Skagway	5.92	106	eP	Pn	22 10 59.0	+1.3
INK	Inuvik	8.70	34	P	Pn	22 09 52.2	0.0
INK	0.2nm,0.3s,baz=230,slow=19,SNR=5.3			S	Sn	22 10 29.9	-0.2
INK	0.1nm,0.3s,baz=238,slow=24,SNR=1.8						
INK	Inuvik	8.70	34	P	Pn	22 12 00.2	-6.3
INK				S	Sn	22 10 29.9	-0.2
DLBC	Dease Lake	8.84	104	P	Pn	22 12 00.2	-6.3
DLBC	0.2nm,0.3s,baz=260,slow=12,SNR=4.5			LR	LR	22 10 31.0	-1.1
BBB	comp=Z,121nm,19.7s,baz=314,slow=38						
BBB	Bella Bella	13.73	125	LR	LR	22 14 04.6	
ETW	comp=Z,40nm,20.6s,baz=272,slow=36						
ETW	Entiat	20.44	121	eP	P	22 16 42.9	
WALA	Waterton Lakes	22.11	110	eP	P	22 13 00.7	+0.9
YBH	0.2nm,0.9s						
YBH	Yreka Blue Hor	24.51	133	P	P	22 13 19.3	+1.7
	2.7nm,0.9s,mb3.8,baz=98,slow=0.9,SNR=4.8						
YBH				LR	LR	22 13 41.8	+0.7
	comp=Z,49nm,21.6s,MS3.0,baz=311,slow=32						
WDC	Whiskeytown Da	25.59	134	eP	P	22 21 33.7	
	4.5nm,0.8s,mb4.0						
OHCM	Honcut	27.06	134	eP	P	22 13 53.8	+2.8
RLMT	Red Lodge	27.16	110	eP	P	22 14 05.6	+1.3
	3.9nm,0.9s,mb3.9						
FLWY	Flagg Ranch	27.34	113	eP	P	22 14 07.0	+1.9
	4.9nm,0.6s,mb4.2						
PDAR	Pinedale Array	28.89	114	P	P	22 14 14.1	+7.4
	0.4nm,0.3s,mb3.6,baz=339,slow=6.3,SNR=4.6						
PDAR				pP	pP	22 14 21.9	+1.4
	0.4nm,0.3s,baz=340,slow=7.7,SNR=2.5						
NVAR	Mina Array Bea	29.00	130	P	P	22 14 34.6	+0.4
	1.0nm,0.7s,mb3.6,baz=309,slow=8.3,SNR=6.1						
TXAR	Lajitas Array	42.76	119	P	P	22 14 22.8	+1.2
	0.5nm,0.6s,mb3.4,baz=337,slow=6.2,SNR=9.2						
TXAR				pP	pP	22 16 20.1	+1.1
	0.4nm,0.7s,baz=298,slow=5.5,SNR=2.6						
TKL	Tuckaleechee C	46.53	94	LR	LR	22 16 33.1	-0.1
	comp=Z,30nm,18.8s,MS3.3,baz=312,slow=37						
SONM	Songino Array	56.34	309	P	P	22 37 14.6	
	1.6nm,0.9s,mb4.0,baz=30,slow=6.4,SNR=10						
SONM				pP	pP	22 18 03.0	+0.9
	0.6nm,0.7s,baz=18,slow=4.7,SNR=3.5						
ZALV	Zalesovo Beam	57.88	327	P	P	22 18 14.4	-2.4
	0.3nm,0.3s,mb3.8,baz=1.1,slow=7.2,SNR=3.1						
BVAR	Borovoye Array	62.04	336	P	P	22 18 11.7	-1.2
	0.9nm,0.7s,mb4.0,baz=26,slow=3.7,SNR=6.5						
MKAR	Makanchi Array	65.06	325	P	P	22 18 40.9	-0.5
	0.3nm,0.6s,mb3.5,baz=19,slow=4.9,SNR=2.9						
MKAR				pP	pP	22 18 60.0	-1.5
	0.3nm,0.5s,baz=30,slow=6.1,SNR=2.4						
AKTK	Aktyubinsk	66.62	343	P	P	22 19 13.8	-2.5
AKTO	Aktyubinsk	66.62	343	P	P	22 19 10.2	-1.2
	0.8nm,0.4s,mb4.1,baz=10,slow=8.2,SNR=4.3					22 19 10.2	-1.2
ABKAR	Akbulak array	67.49	342	eP	P	22 19 16.5	-0.4
	0.8nm,0.5s,mb4.0						
AKASG	Malin Array Be	68.01	3	P	P	22 19 19.7	-0.5
	0.2nm,0.3s,mb3.6,baz=338,slow=5.4,SNR=3.8						
AKASG				pP	pP	22 19 33.3	-1.9
	1.1nm,0.6s,baz=2.5,slow=6.0,SNR=3.7						
HNR	Honiara	82.09	233	P	P	22 20 39.2	-2.4
	38nm,0.4s,baz=122,slow=9.5,SNR=3.7						
CMAR	Chiang Mai Arr	84.96	300	P	P	22 20 55.2	-1.2
	0.5nm,0.4s,mb4.0,baz=5.6,slow=6.0,SNR=4.8						
CMAR				pP	pP	22 21 09.7	-2.3
	0.4nm,0.3s,baz=7.6,slow=5.9,SNR=3.2						

*ISCJB **23** 22:13:35.5±0.7, 50°.28N±0°.04×18°.83E±0°.04, h0km, Error ellipse: s-maj=6.2km s-min=3.1km az=10.9*
*CSEM **23** 22:13:35.7±0.6, 50°.33N×18°.82E, h1km, ML2.5/4, Error ellipse: s-maj=9.7km s-min=4.6km az=21.0*
*PRU **23** 22:13:36.4, 50°.33N×18°.80E, h0km*

ISC 23 22:13:36.6±0.7, 50°.27N±0°.04×18°.82E±0°.03, h0km, n21, σ0°94/33, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.61	225	ePG	Pg	22 13 48.9	+0.6
OKC				eSG	Sg	22 13 57.1	+0.8
OKC	comp=Z,14nm,0.5s						
OKC	Ostrava-Krasne	0.61	225	Pg	Pg	22 13 48.9	+0.6
OKC				Sg	Sg	22 13 57.1	+0.8
OJC	comp=Z,14nm,0.5s						
OJC	Ojcow	0.63	94	ePg	Pg	22 13 48.6	0.0
OJC				eSg	Sg	22 13 56.5	-0.2
MORC	Moravsky Berou	0.96	240	ePg	Pg	22 13 55.5	+0.5
MORC				eSg	Sg	22 14 08.2	+0.7
NIE	Niedzica	1.29	131	ePg	Pg	22 14 01.0	-0.2
NIE				eSg	Sg	22 14 18.4	+0.5
NIE	Niedzica	1.29	131	ePG	Pg	22 14 00.2	-1.0
DPC	Dobruska-Polom	1.60	274	ePG	Pg	22 14 06.2	-1.1
DPC				eSG	Sg	22 14 28.5	+0.4
DPC	comp=Z,4.9nm,0.3s						
DPC	Dobruska-Polom	1.60	274	Pg	Pg	22 14 06.2	-1.1
DPC				Sg	Sg	22 14 28.5	+0.4
DPC	comp=Z,4.9nm,0.3s						
KSP	Ksiaz	1.71	290	ePg	Pg	22 14 09.8	+0.4
KSP				eSg	Sg	22 14 33.1	+1.5
KOLL	Kolacno	1.72	189	ePN	Pn	22 14 10.2	+2.5
KOLL				eSN	Sn	22 14 30.7	+0.4
KOLL	Kolacno	1.72	189	ePn	Pn	22 14 10.2	+2.5
KOLL				eSn	Sn	22 14 30.7	+0.4
VRAC	Vranov	1.74	237	eSg	Sg	22 14 31.3	-1.0
VYHS	Vyhne	1.78	180	ePN	Pn	22 14 08.5	0.0
VYHS				eSN	Sn	22 14 31.6	-0.2
VYHS	Vyhne	1.78	180	ePn	Pn	22 14 08.5	0.0
VYHS				eSn	Sn	22 14 31.6	-0.2
KECS	Kecovo	2.09	148	eSN	Sn	22 14 39.3	-0.3
CRVS	Cervenica-Dubn	2.20	128	eSN	Sn	22 14 41.3	-0.8
CRVS	Cervenica-Dubn	2.20	128	eSn	Sn	22 14 41.3	-0.8
PRU	Pruhonice	2.77	266	eSG	Sg	22 15 03.7	-1.8
PRU	comp=Z,1.9nm,0.3s						
PRU	Pruhonice	2.77	266	Sg	Sg	22 15 03.7	-1.8
KHC	comp=Z,1.9nm,0.3s						
KHC	Kasperske Hory	3.59	253	eSG	Sg	22 15 30.2	-1.7
KHC	comp=Z,3.3nm,0.5s						
KHC	Kasperske Hory	3.59	253	Sg	Sg	22 15 30.2	-1.7
	comp=Z,3.3nm,0.5s						

IDC 23 22:16:23.3±1.2, 12°.44N×120°.64E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.5/22, mbtmp3.5/6, Error ellipse: s-maj=31.6km s-min=13.4km az=92.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.67	10	Pg	Pg	22 16 55.4	-0.1
TGY	254nm,0.3s,baz=157,slow=1.1,SNR=19			Lg		22 17 15.7	
	173nm,0.3s,baz=158,slow=18,SNR=7.0						
CMAR	Chiang Mai Arr	21.74	289	P	P	22 21 17.1	+0.6
	0.7nm,0.5s,baz=106,slow=9.3,SNR=8.2						
WRA	Warramunga Arr	34.89	157	P	P	22 23 15.8	-1.0
	0.6nm,0.9s,baz=342,slow=8.9,SNR=2.9						
SONM	Songino Array	37.24	344	P	P	22 23 35.8	-0.7
	1.0nm,0.6s,baz=162,slow=9.9,SNR=11						
ASAR	Alice Springs	38.16	160	P	P	22 23 45.6	+1.0
	0.2nm,0.5s,baz=341,slow=6.5,SNR=3.8						
MKAR	Makanchi Array	47.01	324	P	P	22 24 57.5	+1.2
	0.4nm,0.8s,baz=106,slow=5.9,SNR=2.9						
ZALV	Zalesovo Beam	50.14	333	P	P	22 25 18.9	-1.5
	0.7nm,0.7s,baz=133,slow=10,SNR=2.7						

*NEIC **23** 22:24:10.1, 17°.32N×99°.79W, h18km, MD3.7(MEX), After MEX.*

MEX 23 22:24:10.1±0.7, 17°.32N×99°.79W, h18km±11km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.46	189	iP	Pg	22 24 17.9	-1.5
ACX				iS	Sg	22 24 24.6	-1.0
ACX	Acapulco	0.46	189	iP	Pg	22 24 17.9	-1.5
ACX				iS	Sg	22 24 24.6	-1.0
CAIG	El Cayaco	0.53	239	eP	Pg	22 24 19.3	-1.5
CAIG				iS	Sg	22 24 25.2	-2.7
CAIG	El Cayaco	0.53	239	eP	Pg	22 24 19.3	-1.5
CAIG				iS	Sg	22 24 25.2	-2.7
ZIIG	Zihuatanejo	1.62	280	iP	Pn	22 24 34.9	-2.9
ZIIG				iS	Sn	22 24 54.5	-3.9
ZIIG	Zihuatanejo	1.62	280	iP	Pn	22 24 34.9	-2.9
ZIIG				iS	Sn	22 24 54.5	-3.9
PNIG	Pinotepa	1.84	120	iP	Pn	22 24 36.4	-4.4
PNIG				iS	Sn	22 24 59.0	-4.7
PNIG	Pinotepa	1.84	120	iP	Pn	22 24 36.4	-4.4
PNIG				iS	Sn	22 24 59.0	-4.7
UTMO	Huajuapan	1.96	75	iP	Pn	22 24 38.9	-3.6
UTMO				iS	Sn	22 25 03.3	-3.3

*ISCJB **23** 22:26:40.3±0.8, 10°.62N±0°.05×62°.44W±0°.03, h85km±8km, Error ellipse: s-maj=8.3km s-min=4.6km az=158.6*
*TRN **23** 22:26:40.7, 10°.60N×62°.33W, h104km, MD3.1*
*FUNV **23** 22:26:41.2, 10°.68N×62°.36W, h80km, MW2.4*

ISC 23 22:26:41.1±0.8, 10°.63N±0°.05×62°.43W±0°.03, h81km±8km, n15, σ0°72/27, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.20	85	eP	Pn	22 26 53.2	+0.2
GUIV				eS	Sn	22 27 00.7	-1.0
GUNV	Guanoco	0.69	228	eP	Pn	22 26 56.7	0.0
GUNV				eS	Sn	22 27 09.7	+1.4
CRUV	Carupano	0.80	273	eP	Pn	22 26 57.9	+0.1
CRUV				eS	Sn	22 27 10.4	+0.1
ITEV	Isla Los Testi	1.00	316	eP	Pn	22 27 00.3	+0.1
ITEV				eS	Sn	22 27 13.7	-0.8
TRN	Trinidad (W)	1.01	89	⇑iP	Pn	22 27 01.4	+1.2
TRN				eS	Sn	22 27 14.8	+0.1
TBH	Brigand Hill	1.35	96	eS	Sn	22 27 22.2	+0.1
GRW	Mount Saint Ca	1.70	26	eP	Pn	22 27 09.6	+0.5
GRW				eS	Sn	22 27 30.7	+0.5
TPR	Prospect	1.71	71	eP	Pn	22 27 09.9	+0.7
TPR				eS	Sn	22 27 30.0	-0.6
GRIC	Isle de Caille	1.84	27	eP	Pn	22 27 10.9	-0.1
GRIC				eS	Sn	22 27 33.6	-0.1
GRSS	Sisters	1.84	26	eP	Pn	22 27 11.6	+0.6
GRSS				eS	Sn	22 27 34.2	+0.6
TOSP	Speyside	1.97	70	eP	Pn	22 27 11.5	-1.2
TOSP				eS	Sn	22 27 34.8	-1.9
GRCU	Cariacou	2.06	27	eP	Pn	22 27 14.0	+0.1
GRCU				eS	Sn	22 27 39.7	+0.8
PCRV	Puerto La Cruz	2.22	259	eP	Pn	22 27 16.1	+0.1
SVB	Belmont	2.87	24	eS	Sn	22 27 57.8	-0.4
CUPV	Cœpira	3.35	261	eP	Pn	22 27 31.1	-0.2
CUPV				eS	Sn	22 28 08.8	-1.2

*ISCJB **23** 22:42:08.7±0.3, 49°.00N±0°.02×18°.51E±0°.02, h10km, Error ellipse: s-maj=2.7km s-min=2.3km az=7.4*
*VIE **23** 22:42:08.7±0.4, 48°.83N×18°.46E, h5km, mb1.7/3, ML2.2/3, Error ellipse: s-maj=3.3km s-min=2.5km az=54.0 48 km SSW of Zilina*
*IPEC **23** 22:42:09.0±0.1, 48°.96N×18°.62E, h2km±1km, ML2.1/4, Error ellipse: s-maj=1.0km s-min=0.7km az=30.0*
*CSEM **23** 22:42:09.2±0.1, 48°.97N×18°.58E, h2km, ML2.9/9, Error ellipse: s-maj=2.8km s-min=2.2km az=8.0*
*PRU **23** 22:42:10.0, 48°.96N×18°.57E, h0km, Tectonic Event Near Zilina*

ISC 23 22:42:09.6±0.3, 48°.97N±0°.02×18°.57E±0°.02, h10km, n43, σ1°14/76, 2C, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIKS	Likavka	0.36	77	ePG	Pg	22 42 18.0	+1.2
LIKS	Likavka	0.36	77	ePg	Pg	22 42 17.9	+1.1
KOLL	baz=254 Kolacno	0.41	196	ePG	Pg	22 42 17.1	-0.4
KOLL				eSG	Sg	22 42 23.1	+0.2
KOLL	Kolacno	0.41	196	ePg	Pg	22 42 17.1	-0.4
KOLL				eSg	Sg	22 42 23.1	+0.2
VYHS	Vyhne	0.51	159	ePG	Pg	22 42 18.6	-0.8
VYHS				eSG	Sg	22 42 25.8	-0.3
VYHS	Vyhne	0.51	159	ePg	Pg	22 42 18.5	-0.9
VYHS	baz=343			eSg	Sg	22 42 25.8	-0.3
JAVC	Velka Javorina	0.60	260	ePg	Pg	22 42 22.1	+0.9
JAVC				eSg	Sg	22 42 28.9	-0.2
OKC	69nm,0.4s Ostrava-Krasne	0.91	343	ePG	Pg	22 42 27.6	+0.5
OKC				eSG	Sg	22 42 39.4	+0.4
OKC	comp=Z,28nm,0.2s Ostrava-Krasne	0.91	343	ePg	Pg	22 42 27.0	-0.1
OKC	baz=160			Sg	Sg	22 42 39.4	+0.4
MODS	comp=Z,28nm,0.2s Modra-Piesok	1.04	236	ePG	Pg	22 42 29.7	+0.1
MODS				eSG	Sg	22 42 44.8	+1.7
MODS	Modra-Piesok	1.04	236	ePg	Pg	22 42 29.7	+0.1
MODS				eSg	Sg	22 42 44.8	+1.7
MORC	Moravsky Berou	1.05	321	ePg	Pg	22 42 29.9	+0.1
MORC	baz=139			eSg	Sg	22 42 42.8	-0.6
NIE	comp=Z,46nm,0.4s,baz=139 Niedzica	1.23	68	ePg	Pg	22 42 31.2	-2.0
NIE				eSg	Sg	22 42 50.2	+1.0
NIE	Niedzica	1.23	68	ePG	Pg	22 42 31.1	-2.1
NIE	Niedzica	1.23	68	ePg	Pg	22 42 31.2	-2.0
NIE				eSg	Sg	22 42 50.2	+1.0
ZST	Bratislava	1.24	232	ePG	Pg	22 42 33.3	-0.1
ZST				eSG	Sg	22 42 50.5	+1.0
ZST	Bratislava	1.24	232	ePg	Pg	22 42 33.0	-0.4
ZST	baz=52			eSg	Sg	22 42 50.5	+1.0
VRAC	Vranov	1.34	285	ePg	Pg	22 42 34.8	-0.5
VRAC	baz=104			eSg	Sg	22 42 52.0	-0.7
KECS	comp=Z,15nm,0.3s,baz=104 Kecovo	1.36	110	ePN	Pn	22 42 33.5	-1.1
KECS				eSG	Sg	22 42 51.1	-2.2
PSZ	Piszkesteto	1.37	139	ePg	Pg	22 42 34.6	-1.3
PSZ	baz=321			eSg	Sg	22 42 50.9	-2.8
KRUC	baz=321 Moravsky	1.43	275	ePg	Pg	22 42 35.6	-1.5
KRUC	baz=93			eSg	Sg	22 42 55.0	-0.7
OJC	comp=Z,10nm,0.4s,baz=93 Ojcow	1.49	32	ePn	Pn	22 42 36.5	+0.2
OJC				ePg	Pg	22 42 37.2	-0.9
OJC				eSg	Sg	22 42 57.3	-0.1
OJC	Ojcow	1.49	32	ePn	Pn	22 42 36.4	+0.1
OJC	baz=212			ePg	Pg	22 42 37.2	-0.9
OJC	Ojcow	1.49	32	ePg	Pg	22 42 37.2	-0.9
OJC				eSg	Sn	22 42 55.0	-0.8
CRVS	baz=212 Cervenica-Dubn	1.91	91	ePN	Pn	22 42 43.7	+1.6
CRVS				eSN	Sn	22 43 08.7	+2.5
CRVS	Cervenica-Dubn	1.91	91	ePn	Pn	22 42 42.1	0.0
CRVS	baz=273			eSn	Sn	22 43 08.7	+2.5
DPC	Dobruska-Polom	2.01	314	ePN	Pn	22 42 45.4	+1.9
DPC				eSG	Sg	22 43 13.4	-0.8
DPC	comp=Z,9.9nm,0.4s Dobruska-Polom	2.01	314	ePn	Pn	22 42 44.5	+1.0
DPC	baz

CHNG			*i* S		Sb	22 43 26.5	-4.9
CHNG			AML		AML	22 43 29.1	
comp=E,219nm,0.3s							
ROCH	**El Roble**	**0.93 132**	⇓ *i* P		Pb	22 43 29.9	-0.7
ROCH			*i* S		Sb	22 43 43.0	+0.4
ROCH			AML		AML	22 43 45.7	
comp=E,401nm,0.4s							
JACH	**Jahuel**	**1.10 108**	⇑ *i* P		Pn	22 43 32.6	-0.5
JACH			*i* S		Sb	22 43 47.7	+0.3
JACH	**Jahuel**	**1.10 108**	⇑ *i* P		Pn	22 43 32.6	-0.5
JACH			*i* S		Sb	22 43 47.7	+0.3
PEL	**Peldehue**	**1.25 130**	⇓ *i* P		Pn	22 43 35.1	-0.1
PEL			*i* S		Sn	22 43 51.5	+0.2
PEL			AML		AML	22 43 54.0	
comp=E,575nm,0.3s							
RCDM	**Rinconada Maip**	**1.43 143**	⇑ *i* P		Pn	22 43 38.0	+0.4
RCDM			*e* S		Sn	22 43 56.3	+0.6
RCDM	**Rinconada Maip**	**1.43 143**	⇑ *i* P		Pn	22 43 38.0	+0.4
RCDM			*e* S		Sn	22 43 56.3	+0.6
RCDM			AML		AML	22 44 00.6	
comp=N,234nm,0.1s							
CLCH	**Cerro Calan**	**1.51 134**	⇑ *i* P		Pn	22 43 38.9	+0.1
CLCH			*i* S		Sn	22 43 58.9	+1.2
CLCH			AML		AML	22 44 08.4	
comp=N,162nm,0.4s							
FCH	**Farellones**	**1.63 127**	*e* P		Pn	22 43 41.7	+1.4
FCH			*i* S		Sn	22 44 02.9	+2.4
FCH			AML		AML	22 44 08.5	
comp=E,109nm,0.3s							
PCH	**Pirque**	**1.69 139**	*e* P		Pn	22 43 42.2	+1.0
PCH			*i* S		Sn	22 44 04.2	+2.2
PCH	**Pirque**	**1.69 139**	*e* P		Pn	22 43 42.2	+1.0
PCH			*i* S		Sn	22 44 04.2	+2.2
CHCH	**Chadas Angostu**	**1.87 148**	*e* P		Pn	22 43 44.6	+1.0
CHCH			*e* S		Sn	22 44 08.9	+2.5
CHCH	**Chadas Angostu**	**1.87 148**	*e* P		Pn	22 43 44.6	+1.0
CHCH			*e* S		Sn	22 44 08.9	+2.5
LMEL	**Las Melosas**	**2.03 138**	*e* P		Pn	22 43 47.2	+1.4
LMEL			*e* S		Sn	22 44 13.6	+3.2
LMEL	**Las Melosas**	**2.03 138**	*e* P		Pn	22 43 47.2	+1.4
LMEL			*e* S		Sn	22 44 13.6	+3.2

*IDC **23** 22:43:20.3±1.8, 8°.63S×111°.73E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/18, mbtmp3.6/5, Error ellipse: s-maj=122.9km s-min=11.1km az=51.0*
*NEIC **23** 22:43:24.9±0.3, 8°.61S×111°.78E, h35km, mb4.1/9, Error ellipse: s-maj=15.2km s-min=6.0km az=58.0*
*ISCJB **23** 22:43:27.5±0.7, 9°.02S±0°.07×111°.43E±0°.05, h85km±5km, mb3.9/13, Error ellipse: s-maj=12.6km s-min=6.4km az=20.7*
*DJA **23** 22:43:27, 9°.10S×111°.45E, h28km, MLv4.0/11*
ISC 23 22:43:28.3±0.7, **9°.05**S±0°.07×**111°.42E**±0°.04, **h74**km±6km, **n33**, σ1°**08**/40, **mb3.9**/13, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.88**	**344**	P	**Pn**	**22 43 44.0**	**-1.6**
PCJI				S	**Sn**	**22 43 56.0**	**-2.4**
PWJI	**Pagerwojo**	**1.09**	**20**	P	**Pn**	**22 43 47.6**	**-0.5**
PWJI				S	**Sn**	**22 44 01.8**	**-1.0**
KRKI	**Karangkates**	**1.35**	**49**	P	**Pn**	**22 43 51.7**	**+0.3**
SJI	**Sawahan**	**1.35**	**15**	P	**Pn**	**22 43 51.6**	**+0.2**
SJI				S	**Sn**	**22 44 10.9**	**+2.1**
UGM	**Wanagama**	**1.44**	**322**	P	**Pn**	**22 43 52.4**	**-0.2**
UGM				S	**Sn**	**22 44 11.3**	**+0.4**
YOGI	**Yogyakarta**	**1.66**	**318**	P	**Pn**	**22 43 55.1**	**-0.4**
YOGI				S	**Sn**	**22 44 16.1**	**+0.1**
NGJI	**Ngawi**	**1.67**	**1**	P	**Pn**	**22 43 59.3**	**+3.6**
SMRI	**Semarang**	**2.21**	**334**	P	**Pn**	**22 44 04.6**	**+1.7**
GRJI	**Gresik**	**2.36**	**26**	P	**Pn**	**22 44 05.4**	**+0.5**
GRJI				S	**Sn**	**22 44 34.9**	**+1.9**
BJII	**Banjamegara**	**2.41**	**315**	P	**Pn**	**22 44 06.4**	**+0.9**
JAGI	**Jajag, Banyuwa**	**2.76**	**78**	P	**Pn**	**22 44 10.2**	**-0.1**
JAGI				S	**Sn**	**22 44 41.8**	**-0.7**
LEM	**Lembang**	**4.37**	**300**	P	**Pn**	**22 44 33.8**	**+1.6**
KSM	**Kuching**	**10.51**	**354**	Pn	**Pn**	**22 45 46.9**	**-9.3**
MBWA	**Marble Bar**	**14.46**	**147**	*e*Pn	**Pn**	**22 46 48.3**	**-0.9**
1.7nm,0.6s							
KULM	**Kulim**	**17.84**	**323**	Pn	**Pn**	**22 47 29.2**	**-2.6**
WRA	**Warramunga Arr**	**24.65**	**119**	P	**P**	**22 48 42.4**	**+0.2**
0.6nm,0.4s,mb3.4,baz=294,slow=11,SNR=3.2							
ASAR	**Alice Springs**	**25.95**	**127**	P	**P**	**22 48 55.1**	**+1.1**
0.4nm,0.4s,mb3.2,baz=303,slow=9.4,SNR=6.4							
STKA	**Stephens Creek**	**36.04**	**133**	P	**P**	**22 50 23.6**	**+0.9**
0.8nm,0.5s,mb3.9,baz=286,slow=7.4,SNR=3.5							
STKA	**Stephens Creek**	**36.04**	**133**	*e*P	**P**	**22 50 23.7**	**+1.0**
2.8nm,1.5s,mb4.0							
MAJO	**Matsushiro**	**51.87**	**27**	*e*P	**P**	**22 52 25.7**	**-3.5**
KBL	**Kabul**	**59.06**	**320**	*e*P	**P**	**22 53 21.6**	**+0.6**
5.0nm,0.7s,mb4.7							
TKM2	**Tokmak 2**	**61.17**	**331**	*e*P	**P**	**22 53 34.3**	**-0.8**
0.7nm,0.5s,mb4.0							
UCH	**Uchtor**	**61.19**	**329**	*e*P	**P**	**22 53 35.1**	**-0.2**
0.4nm,0.4s,mb3.8							
MK31	**Makanchi Array**	**61.36**	**338**	*e*P	**P**	**22 53 35.9**	**-0.5**
MKAR	**Makanchi Array**	**61.36**	**338**	P	**P**	**22 53 36.4**	**0.0**
0.4nm,0.4s,mb3.8,baz=150,slow=7.3,SNR=7.6							
EKS2	**Erkin-Say**	**61.88**	**329**	*e*P	**P**	**22 53 39.7**	**-0.2**
6.4nm,1.7s,mb4.4							
KURK	**Kurchatov**	**65.97**	**338**	*e*P	**P**	**22 54 05.9**	**-0.7**
ZALV	**Zalesovo Beam**	**66.67**	**343**	P	**P**	**22 54 10.0**	**-1.1**
0.4nm,0.4s,mb3.6,baz=158,slow=4.7,SNR=3.0							
MAW	**Mawson**	**66.74**	**198**	P	**P**	**22 54 16.3**	**+4.9**
ABKAR	**Akbulak array**	**73.44**	**328**	*e*P	**P**	**22 54 52.5**	**-0.1**
2.2nm,0.7s,mb4.1							
ARU	**Arti**	**78.38**	**333**	*e*P	**P**	**22 55 20.3**	**-0.2**
1.3nm,0.7s,mb3.8							
KIV	**Kislovodsk**	**81.34**	**317**	*e*P	**P**	**22 55 37.9**	**+1.0**
1.7nm,0.6s,mb4.0							
BOSA	**Boshof**	**82.39**	**242**	*e*P	**P**	**22 55 46.3**	**+3.5**
0.4nm,0.5s,mb3.5							

*ISCJB **23** 22:45:42.5±0.8, 48°.1N±0°.1×147°.1E±0°.1, h417km±10km, mb3.5/13, Error ellipse: s-maj=20.0km s-min=11.9km az=143.6*
*IDC **23** 22:45:43.7±1.7, 48°.10N×147°.16E, h414km±28km, mb3.0/6, mb1 3.1/9, mb1mx2.9/26, mbtmp2.9/9, Error ellipse: s-maj=41.0km s-min=19.9km az=155.0*
*NEIC **23** 22:45:43.6±0.5, 48°.14N×147°.12E, h412km±7km, mb3.7/7, Error ellipse: s-maj=12.0km s-min=7.1km az=146.0*
ISC 23 22:45:43.6±0.8, **48°.1N**±0°.1×**147°.1E**±0°.1, **h411**km±11km, **n26**, σ0°**52**/26, **mb3.5**/13, **Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**3.19**	**250**	*e*P	**P**	**22 46 48.9**	**-0.2**
ASAJ	**Asahikawa**	**5.11**	**220**	P	**P**	**22 47 07.1**	**-0.1**
0.6nm,0.3s,baz=32,slow=18,SNR=3.0							
ASAJ	**Asahikawa**	**5.11**	**220**	*e*P	**P**	**22 47 07.6**	**+0.4**
PETK	**Petropavlovsk-**	**8.36**	**50**	P	**P**	**22 47 42.6**	**+0.3**
0.3nm,0.3s,baz=224,slow=10,SNR=3.6							
MJAR	**Matsushiro Arr**	**13.32**	**213**	P	**P**	**22 48 37.1**	**-0.3**
0.4nm,0.3s,baz=31,slow=11,SNR=3.8							
MJAR	**Matsushiro Arr**	**13.32**	**213**	P	**P**	**22 48 37.1**	**-0.3**
INCN	**Inchon**	**18.37**	**242**	*e*P	**P**	**22 49 31.6**	**+0.2**
TLY	**Talaya**	**27.92**	**294**	*e*P	**P**	**22 50 56.9**	**-1.0**
ILAR	**Eielson Array**	**38.03**	**39**	P	**P**	**22 52 24.4**	**+0.4**
0.4nm,0.7s,mb2.8,baz=279,slow=8.5,SNR=4.6							
INK	**Inuvik**	**42.66**	**33**	*e*P	**P**	**22 53 01.0**	**-0.4**
1.3nm,0.4s,mb3.6							
MKAR	**Makanchi Array**	**42.68**	**293**	P	**P**	**22 53 03.0**	**+1.1**
0.5nm,0.7s,mb3.0,baz=65,slow=4.3,SNR=3.8							
LSA	**Lhasa**	**46.21**	**268**	*e*P	**P**	**22 53 31.0**	**+1.4**
1.9nm,0.3s,mb3.9							
BRVK	**Borovoye**	**46.85**	**306**	*e*P	**P**	**22 53 33.4**	**-0.7**
6.3nm,1.7s,mb3.7							
AML	**Almayashu**	**50.34**	**292**	*e*P	**P**	**22 54 00.4**	**0.0**
1.1nm,0.4s,mb3.5							
ARU	**Arti**	**51.20**	**315**	*e*P	**P**	**22 54 06.5**	**-0.1**
1.6nm,0.5s,mb3.5							
KBL	**Kabul**	**57.78**	**287**	*e*P	**P**	**22 54 53.4**	**-0.1**
1.3nm,0.8s,mb3.3							
FINES	**FINESS Array B**	**60.98**	**332**	P	**P**	**22 55 14.6**	**-0.1**
1.8nm,0.5s,mb3.7,baz=40,slow=8.5,SNR=15							
OBN	**Obninsk**	**61.80**	**322**	*e*P	**P**	**22 55 20.3**	**+0.1**
FCC	**Fort Churchill**	**62.25**	**31**	P	**P**	**22 55 23.1**	**0.0**
NB2	**NORSAR Subarra**	**65.52**	**338**	P	**P**	**22 55 43.9**	**-0.1**
comp=Z,0.6nm,0.5s,mb3.5,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**65.52**	**338**	P	**P**	**22 55 44.0**	**-0.1**
comp=Z,0.6nm,0.5s,mb3.5,baz=29,slow=6.5,SNR=6.9							
NOA	**NORSAR Array B**	**65.52**	**338**	P	**P**	**22 55 44.0**	**-0.1**
CTAO	**Charters Tower**	**67.91**	**181**	*e*P	**P**	**22 55 59.0**	**-0.4**
comp=Z,9.1nm,1.3s,mb4.2							
AKASG	**Malin Array Be**	**68.06**	**323**	P	**P**	**22 55 59.7**	**-0.3**
comp=Z,0.8nm,0.4s,mb3.7,baz=33,slow=6.0,SNR=4.4							
AKASG	**Malin Array Be**	**68.06**	**323**	P	**P**	**22 55 59.7**	**-0.3**
TXAR	**Lajitas Array**	**80.24**	**57**	P	**P**	**22 57 09.9**	**0.0**
comp=Z,0.4nm,0.7s,mb3.1,baz=269,slow=3.6,SNR=2.7							

*IDC **23** 22:46:14.9±0.7, 16°.60N×99°.92W, h0km, mb4.5/18, mb1 4.7/24, mb1mx4.5/34, mbtmp4.5/24, ML3.8/5, MS4.2/27, Ms1 4.2/27, ms1mx4.1/32, Error ellipse: s-maj=20.3km s-min=10.8km az=53.0*
*NEIC **23** 22:46:15.9, 16°.45N×100°.11W, h10km, mb5.0/113, MD5.2(MEX), After MEX.*
NEIC Felt at Mexico.
*MEX **23** 22:46:15.9±0.8, 16°.45N×100°.11W, h10km±8km, MD5.2*
*ISCJB **23** 22:46:16.3±0.8, 16°.60N±0°.03×99°.92W±0°.02, h19km±5km, mb4.9/122, MS4.2/31, Error ellipse: s-maj=5.0km s-min=3.1km az=32.8*
*MOS **23** 22:46:19.1±0.9, 16°.75N×99°.84W, h33km, mb5.2/39, Error ellipse: s-maj=9.4km s-min=4.6km az=101.4*
*GCMT **23** 22:46:21.8±0.3, 16°.67N×99°.79W, h12km, MW5.0, Moment Tensor Solution. s43,c53; s73,c117; Moment tensor: Scale 10^{16}Nm; M_{rr}2.73±.10; $M_{\theta\theta}$-3.38±.08; $M_{\phi\phi}$0.65±.11; $M_{r\theta}$2.07±.25; $M_{r\phi}$0.03±.09; $M_{\theta\phi}$1.24±.37; Best double couple: $M_0$3.90000×10^{16} NP1:ϕ_s292.00000°, δ32.00000°, λ127.00000°. NP2:ϕ_s70.00000°, δ65.00000°, λ70.00000°. Principal axes: T 3.8200, Plg64.0000°, Azm306.0000°; N 0.2200, Plg18.0000°, Azm79.0000°; P -4.0400, Plg18.0000°, Azm175.0000°; Data Used: II IC IU CN G.*
ISC 23 22:46:17.4±0.8, **16°.62N**±0°.03×**99°.88W**±0°.02, **h13**km±4km, **n387**, σ0°**96**/389, **mb4.9**/122, **MS4.2**/31, **1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.24**	**5**	*e*P	**Pg**	**22 46 24.5**	**+1.9**
ACX				*i* S	**Sg**	**22 46 31.3**	**+5.1**
ACX	**Acapulco**	**0.24**	**5**	*e*P	**Pg**	**22 46 24.5**	**+1.9**
ACX				*i* S	**Sg**	**22 46 31.3**	**+5.1**
CAIG	**El Cayaco**	**0.56**	**319**	*e*P	**Pg**	**22 46 25.9**	**-2.5**
CAIG				*i* S	**Sg**	**22 46 34.9**	**-1.0**
CAIG	**El Cayaco**	**0.56**	**319**	*e*P	**Pg**	**22 46 25.9**	**-2.5**
CAIG				*i* S	**Sg**	**22 46 34.9**	**-1.0**
PNIG	**Pinotepa**	**1.70**	**98**	*e*P	**Pn**	**22 46 45.5**	**-1.3**
PNIG				*i* S	**Sn**	**22 47 07.2**	**-1.2**
PNIG	**Pinotepa**	**1.70**	**98**	*e*P	**Pn**	**22 46 45.5**	**-1.3**
PNIG				*i* S	**Sn**	**22 47 07.2**	**-1.2**
ZIIG	**Zihuatanejo**	**1.80**	**303**	*e*P	**Pn**	**22 46 42.7**	**-5.5**
ZIIG				*i* S	**Sn**	**22 47 04.1**	**-6.9**
ZIIG	**Zihuatanejo**	**1.80**	**303**	*e*P	**Pn**	**22 46 42.7**	**-5.5**
ZIIG				*i* S	**Sn**	**22 47 04.1**	**-6.9**
UTMO	**Huajuapan**	**2.32**	**59**	*e*P	**Pn**	**22 46 55.8**	**+0.5**
UTMO				*i* S	**Sn**	**22 47 27.6**	**+3.9**
MZVM		**2.62**	**14**	*i* P	**Pn**	**22 47 00.1**	**+0.5**
MZVM				*i* S	**Sn**	**22 47 30.7**	**-0.6**
SZVM	**Salazar**	**2.73**	**10**	*e*P	**Pn**	**22 47 00.2**	**-0.8**
SZVM				*i* S	**Sn**	**22 47 34.8**	**+1.0**
SZVM	**Salazar**	**2.73**	**10**	*e*P	**Pn**	**22 47 00.2**	**-0.8**
SZVM				*i* S	**Sn**	**22 47 34.8**	**+1.0**
VCVM	**Valle de Chalc**	**2.80**	**18**	*i* P	**Pn**	**22 47 01.9**	**-0.1**
VCVM				*i* S	**Sn**	**22 47 35.9**	**+0.2**
PBVM	**Pinon**	**2.90**	**15**	*e*P	**Pn**	**22 47 02.7**	**-0.7**
PBVM				*i* S	**Sn**	**22 47 38.8**	**+0.7**
PBVM	**Pinon**	**2.90**	**15**	*e*P	**Pn**	**22 47 02.7**	**-0.7**
PBVM				*i* S	**Sn**	**22 47 38.8**	**+0.7**
PTVM	**Pico Tres Padr**	**3.04**	**14**	*e*P	**Pn**	**22 47 04.2**	**-1.1**
PTVM				*i* S	**Sn**	**22 47 42.0**	**+0.4**
PTVM	**Pico Tres Padr**	**3.04**	**14**	*e*P	**Pn**	**22 47 04.2**	**-1.1**
PTVM				*i* S	**Sn**	**22 47 42.0**	**+0.4**
VHO	**Vista Hermosa**	**3.05**	**81**	*i* P	**Pn**	**22 47 05.4**	**0.0**
VHO				*i* S	**Sn**	**22 47 44.3**	**+2.5**
VHO	**Vista Hermosa**	**3.05**	**81**	*i* P	**Pn**	**22 47 05.4**	**0.0**
VHO				*i* S	**Sn**	**22 47 44.3**	**+2.5**
OXX	**Oaxaca**	**3.06**	**81**	*i* P	**Pn**	**22 47 04.3**	**-1.2**
OXX	**Oaxaca**	**3.06**	**81**	*i* P	**Pn**	**22 47 04.3**	**-1.2**
IIO	**Organos**	**3.15**	**20**	*e*P	**Pn**	**22 47 06.0**	**-0.7**
IIO				*i* S	**Sn**	**22 47 45.5**	**+1.2**
IIO	**Organos**	**3.15**	**20**	*e*P	**Pn**	**22 47 06.0**	**-0.7**
IIO				*i* S	**Sn**	**22 47 45.5**	**+1.2**
MOIG	**Morelia**	**3.28**	**338**	*e*P	**Pn**	**22 47 07.1**	**-1.5**
MOIG				*i* S	**Sn**	**22 47 46.6**	**-0.9**
MOIG	**Morelia**	**3.28**	**338**	*e*P	**Pn**	**22 47 07.1**	**-1.5**
MOIG				*i* S	**Sn**	**22 47 46.6**	**-0.9**
MMIG	**Aquila**	**3.70**	**297**	*e*P	**Pn**	**22 47 09.3**	**-5.0**
MMIG				*i* S	**Sn**	**22 47 50.4**	**-7.4**
HUIG	**Huatulco**	**3.72**	**103**	*e*P	**Pn**	**22 47 14.1**	**-0.6**
HUIG				*i* S	**Sn**	**22 47 58.2**	**-0.3**
HUIG	**Huatulco**	**3.72**	**103**	*e*P	**Pn**	**22 47 14.1**	**-0.6**
HUIG				*i* S	**Sn**	**22 47 58.2**	**-0.3**
LVIG	**Laguna Verde**	**4.51**	**46**	*e*P	**Pn**	**22 47 30.8**	**+5.3**
LVIG	**Laguna Verde**	**4.51**	**46**	*e*P	**Pn**	**22 47 30.8**	**+5.3**
EZ5V		**4.54**	**309**	*e*P	**Pn**	**22 47 23.0**	**-2.9**
EZ5V				*i* S	**Sn**	**22 48 14.6**	**-4.0**
R15V		**4.66**	**304**	*e*P	**Pn**	**22 47 23.6**	**-0.9**
R15V				*i* S	**Sn**	**22 48 15.2**	**-6.2**
CMIG	**Matias Romero**	**4.81**	**84**	Pn	**Pn**	**22 47 29.4**	**-0.1**
6.7nm,0.3s,baz=255,slow=12,SNR=42							
CMIG				Sn	**Sn**	**22 48 23.7**	**-1.5**
15nm,0.3s,baz=302,slow=19,SNR=7.4							
CMIG				Lg		22 48 52.6	
46nm,0.3s,baz=190,slow=15,SNR=9.0							
SFJM	**Santa Fe**	**4.87**	**323**	*i* P	**Pn**	**22 47 26.0**	**-4.5**
SFJM	**Santa Fe**	**4.87**	**323**	*i* P	**Pn**	**22 47 26.0**	**-4.5**
ANIG	**Ahuacatlan**	**6.22**	**316**	*i* P	**Pn**	**22 47 42.5**	**-6.5**
ANIG				*i* S	**Sn**	**22 48 54.2**	**-5.9**
PCIG		**6.47**	**97**	*e*P	**Pn**	**22 47 54.9**	**+2.5**
TGIG		**6.48**	**88**	*i* P	**Pn**	**22 48 00.3**	**+7.7**
CCIG	**Comitan**	**7.44**	**92**	*i* P	**Pn**	**22 48 08.4**	**+2.6**
CCIG	**Comitan**	**7.44**	**92**	*i* P	**Pn**	**22 48 08.4**	**+2.6**
THIG		**7.53**	**102**	*i* P	**Pn**	**22 48 04.8**	**-2.1**
LNIG	**Linares**	**8.24**	**3**	*e*P	**Pn**	**22 48 16.6**	**-0.2**
LNIG				*i* S	**Sn**	**22 49 51.5**	**+1.7**
APG	**El Apazote**	**9.21**	**99**	Pn	**Pn**	**22 48 30.5**	**+0.5**
0.6nm,0.3s,baz=342,slow=11,SNR=10							
APG				Sn	**Sn**	**22 50 14.0**	**+0.5**
0.3nm,0.3s,baz=36,slow=20,SNR=2.0							
APG				Lg		22 51 11.3	
0.7nm,0.3s,baz=207,slow=23,SNR=4.7							
APG	**El Apazote**	**9.21**	**99**	Pn	**Pn**	**22 48 30.5**	**+0.5**
APG				Sn	**Sn**	**22 50 14.0**	**+0.5**
APG				Lg		22 51 11.3	
HPIG		**11.58**	**333**	*i* P	**Pn**	**22 49 02.0**	**-0.5**
TEIG	**Tepich**	**11.58**	**70**	Pn	**Pn**	**22 49 02.7**	**+0.1**
1.1nm,0.3s,baz=112,slow=5.6,SNR=5.8							
TEIG				Sn	**Sn**	**22 51 08.9**	**-2.9**
1.5nm,0.3s,baz=69,slow=18,SNR=3.7							
TEIG				LR	LR	22 53 35.6	
comp=Z,540nm,20.6s,baz=240,slow=38							
TEIG	**Tepich**	**11.58**	**70**	*e*Pn	**Pn**	**22 49 02.9**	**+0.4**
TEIG				*e*Sn	**Sn**	**22 51 10.4**	**-1.5**
LPIG	**La Paz**	**12.28**	**309**	*i* P	**Pn**	**22 49 10.2**	**-1.9**
LPIG	**La Paz**	**12.28**	**309**	*i* P	**Pn**	**22 49 10.2**	**-1.9**
TGUH	**Tegucigalpa,Un**	**12.43**	**100**	*e*Pn	**Pn**	**22 49 16.7**	**+2.6**
TXAR	**Lajitas Array**	**13.12**	**345**	Pn	**Pn**	**22 49 23.9**	**+0.3**
0.1nm,0.3s,baz=164,slow=14,SNR=16							
TXAR				Sn	**Sn**	**22 51 37.9**	**-12**
0.3nm,0.3s,baz=134,slow=33,SNR=7.3							
TXAR				Lg		22 53 18.9	
0.1nm,0.3s,baz=164,slow=23,SNR=8.7							
TXAR				LR	LR	22 55 22.3	
comp=Z,2μm,21.3s,baz=255,slow=42							
TXAR	**Lajitas Array**	**13.12**	**345**	Pn	**Pn**	**22 49 23.9**	**+0.3**
TXAR				Sn	**Sn**	**22 51 37.9**	**-12**
TXAR				Lg		22 53 18.9	
TXAR				LR	LR	22 55 22.3	
TXAR	**Lajitas Array**	**13.12**	**345**	P	**Pn**	**22 49 23.9**	**+0.3**
HKT	**Hockley**	**13.77**	**15**	*e*Pn	**Pn**	**22 49 33.2**	**+0.7**
54nm,1.5s							
HKT	**Hockley**	**13.77**	**15**	*e*P	**Pn**	**22 49 33.2**	**+0.7**
HKT				pmax	pmax		
comp=Z,54nm,1.5s							
JCT	**Junction City**	**13.79**	**0**	*e*Pn	**Pn**	**22 49 32.9**	**+0.2**
JCT	**Junction City**	**13.79**	**0**	*e*P	**Pn**	**22 49 32.9**	**+0.2**
CGIG		**15.55**	**333**	*e*P	**Pn**	**22 49 56.7**	**+0.2**
NATX	**Nacogdoches**	**15.80**	**17**	*e*Pn	**Pn**	**22 50 00.3**	**+0.6**
comp=Z,122nm,1.1s							
JTS	**JuntasAbangare**	**15.82**	**112**	Pn	**Pn**	**22 50 01.5**	**+1.4**
comp=Z,0.8nm,0.3s,baz=302,slow=7.9,SNR=16							
JTS	**JuntasAbangare**	**15.82**	**112**	*e*Pn	**Pn**	**22 50 03.6**	**+3.6**
comp=Z,116nm,1.3s							
JTS	**JuntasAbangare**	**15.82**	**112**	*e*P	**Pn**	**22 50 03.6**	**+3.6**
JTS				pmax	pmax		
comp=Z,116nm,1.3s							
MNTX	**Cornudas Mount**	**15.82**	**343**	*e*Pn	**Pn**	**22 50 00.3**	**+0.4**
comp=Z,41nm,1.3s							
CLNB	**Carlsbad**	**15.99**	**348**	*e*Pn	**Pn**	**22 50 02.4**	**+0.3**
HSIG		**16.00**	**322**	*i* P	**Pn**	**22 50 02.0**	**-0.2**
GDL2	**Guadalupe Moun**	**16.03**	**346**	*e*Pn	**Pn**	**22 50 03.1**	**+0.4**
CPRX	**Cap Rock**	**16.73**	**348**	*e*Pn	**Pn**	**22 50 11.1**	**-0.5**
comp=Z,14nm,0.7s							
WMOK	**Wichita Mounta**	**18.07**	**3**	*e*Pn	**Pn**	**22 50 25.7**	**-2.5**
comp=Z,27nm,1.3s							
WMOK	**Wichita Mounta**	**18.07**	**3**	*e*P	**Pn**	**22 50 25.7**	**-2.5**
WMOK				pmax	pmax		
comp=Z,27nm,1.3s							
AMTX	**Amarillo**	**18.25**	**355**	*e*Pn	**Pn**	**22 50 29.2**	**-1.3**
comp=Z,61nm,1.2s							
BNM	**Barren Site**	**18.48**	**342**	*e*P	**Pn**	**22 50 34.0**	**+0.7**
comp=Z,68nm,1.3s							
TUC	**Tucson**	**18.48**	**330**	*e*P	**Pn**	**22 50 33.3**	**0.0**
comp=Z,58nm,1.4s							
TUC	**Tucson**	**18.48**	**330**	*e*P	**Pn**	**22 50 33.3**	**0.0**
TUC				pmax	pmax		
comp=Z,58nm,1.4s							
LENM	**Lemitar**	**18.59**	**341**	*e*Pn	**Pn**	**22 50 36.5**	**+1.8**
LPM	**Los Pinos Moun**	**18.63**	**342**	*e*Pn	**Pn**	**22 50 35.9**	**+0.8**
MIAR	**Mount Ida**	**18.72**	**16**	*e*P	**Pn**	**22 50 32.5**	**-3.7**
comp=Z,23nm,1.0s							
MIAR	**Mount Ida**	**18.72**	**16**	*e*P	**Pn**	**22 50 32.5**	**-3.7**
MIAR				pmax	pmax		
comp=Z,23nm,1.0s							
LAZ	**Ladron**	**18.86**	**341**	*e*P	**Pn**	**22 50 38.2**	**+0.2**
comp=Z,49nm,1.5s							
ANMO	**Albuquerque**	**19.18**	**343**	P	**Pn**	**22 50 41.0**	**-0.8**
comp=Z,0.3nm,0.3s,baz=153,slow=12,SNR=19							
ANMO				Lg		22 56 25.9	
comp=Z,0.1nm,0.3s,baz=38,slow=12,SNR=4.7							
ANMO				LR	LR	22 58 33.2	
comp=Z,1μm,21.6s,baz=318,slow=38							
ANMO	**Albuquerque**	**19.18**	**343**	*e*P	**Pn**	**22 50 41.0**	**-0.8**
comp=Z,169nm,2.5s							
ANMO	**Albuquerque**	**19.18**	**343**	*e*P	**Pn**	**22 50 41.0**	**-0.7**
ANMO				pmax	pmax		
comp=Z,169nm,2.5s							
UALR	**University of**	**19.30**	**19**	*e*Pn	**Pn**	**22 50 43.5**	**+0.3**
comp=Z,30nm,1.0s							
LRAL	**Lakeview Retre**	**20.06**	**33**	*e*Pn	**P**	**22 50 52.6**	**+2.2**
comp=Z,24nm,1.2s							
BCIP	**Isla Barro Col**	**20.88**	**108**	*e*P	**P**	**22 51 01.2**	**+1.7**
GNAR	**Gosnell**	**21.17**	**23**	*e*P	**P**	**22 51 02.0**	**-0.5**
GLA	**Glamis**	**21.21**	**323**	*e*P	**P**	**22 51 03.4**	**+0.4**
comp=Z,149nm,1.3s,mb5.2							
GLA	**Glamis**	**21.21**	**323**	*e*P	**P**	**22 51 03.4**	**+0.5**
GLA				pmax	pmax		
comp=Z,149nm,1.3s,mb5.2							
MTDJ	**Mount Denham**	**21.38**	**82**	*e*P	**P**	**22 51 10.5**	**+5.6**
comp=Z,55nm,1.1s,mb4.8							
SDCO	**Great Sand Dun**	**21.62**	**348**	*e*P	**P**	**22 51 07.0**	**-0.3**
comp=Z,43nm,1.2s,mb4.8							
UTMT

comp=Z,69nm,1.4s,mb5.0
DAU Daniels Canyon 25.68 340 *e*P **P 22 51 47.5 +0.4**
DAU Daniels Canyon 25.68 340 *e*P **P 22 51 47.5 +0.4**
RWWY Rawlins 25.76 347 *e*P **P 22 51 49.4 +1.5**
comp=Z,61nm,1.1s,mb5.0
JLU Jordanelle 25.91 340 *e*P **P 22 51 49.9 +0.6**
comp=Z,28nm,1.3s,mb4.6
DUG Dugway 26.04 337 *e*P **P 22 51 51.0 +0.6**
comp=Z,44nm,1.1s,mb4.9
DUG Dugway 26.04 337 *e*P **P 22 51 51.0 +0.6**
DUG pmax pmax
comp=Z,45nm,1.1s,mb4.9
CTU Camp Tracy 26.09 339 *e*P **P 22 51 51.7 +0.8**
comp=Z,71nm,1.6s,mb5.0
MTUM Tungsten Hills 26.43 325 *e*P **P 22 51 54.7 +0.7**
OTAV Otavalo 26.67 126 *e*P **P 22 51 59.6 +3.3**
comp=Z,22nm,1.3s,mb4.5
BGU Big Grassy Mou 26.75 337 *e*P **P 22 51 56.5 -0.3**
comp=Z,32nm,1.2s,mb4.7
BLA Blacksburg 26.76 36 *e*P **P 22 51 56.9 -0.1**
comp=Z,49nm,0.9s,mb5.0
BLA Blacksburg 26.76 36 *e*P **P 22 51 56.9 -0.1**
BLA pmax pmax
comp=Z,49nm,0.9s,mb5.0
HWUT Hardware Ranch 26.85 340 *e*P **P 22 51 57.9 +0.2**
comp=Z,50nm,1.1s,mb5.0
SPUT South Promonto 26.88 339 *e*P **P 22 51 58.7 +0.7**
comp=Z,37nm,1.2s,mb4.8
NVAR Mina Array Bea 27.08 327 P **P 22 52 00.8 +0.9**
comp=Z,28nm,1.1s,mb4.7,baz=152,slow=9.2,SNR=20
NVAR ScP ScP 22 59 02.4 +1.4
comp=Z,0.4nm,0.8s,baz=122,slow=3.3,SNR=3.9
NVAR LR LR 23 03 13.4
comp=Z,601nm,18.4s,MS4.2,baz=122,slow=38
ECSD EROS Data Cent 27.16 5 *e*P **P 22 51 59.9 -0.6**
comp=Z,40nm,1.3s,mb4.8
SDDR Presa de Saban 27.31 81 *e*P **P 22 52 03.0 +0.9**
comp=Z,24nm,1.0s,mb4.7
PDAR Pinedale Array 27.34 344 P **P 22 52 01.9 -0.1**
comp=Z,14nm,1.0s,mb4.5,baz=148,slow=8.7,SNR=84
PDAR LR LR 23 03 57.6
comp=Z,1μm,21.0s,MS4.4,baz=176,slow=39
HVU Hansel Valley 27.41 339 *e*P **P 22 52 03.1 +0.3**
comp=Z,28nm,1.1s,mb4.7
HVU Hansel Valley 27.41 339 *e*P **P 22 52 03.1 +0.3**
HVU pmax pmax
comp=Z,28nm,1.1s,mb4.7
RSSD Black Hills 27.64 354 *e*P **P 22 52 05.3 +0.6**
comp=Z,34nm,1.6s,mb4.7
RSSD Black Hills 27.64 354 *e*P **P 22 52 05.3 +0.6**
RSSD pmax pmax
comp=Z,34nm,1.6s,mb4.7
ROSC El Rosal 27.65 112 *e*P **P 22 52 06.6 +1.4**
SAO San Andreas Ge 27.70 321 *e*P **P 22 52 06.4 +1.0**
comp=Z,28nm,1.3s,mb4.7
SAO San Andreas Ge 27.70 321 *e*P **P 22 52 06.4 +1.0**
SAO pmax pmax
comp=Z,28nm,1.3s,mb4.7
ACSO Alum Creek Sta 27.72 29 *e*P **P 22 52 04.8 -0.8**
comp=Z,28nm,1.3s,mb4.7
WAKR Walker 27.74 326 *e*P **P 22 52 06.3 +0.6**
AHID Auburn Hatcher 27.76 342 *e*P **P 22 52 05.9 0.0**
comp=Z,6.0nm,0.6s,mb4.4
CMB Columbia Colle 27.93 324 *e*P **P 22 52 07.5 0.0**
comp=Z,23nm,1.3s,mb4.7
CMB Columbia Colle 27.93 324 *e*P **P 22 52 07.5 0.0**
CMB pmax pmax
comp=Z,23nm,1.3s,mb4.7
REDW Red Top Meadow 28.24 343 *e*P **P 22 52 10.7 +0.6**
comp=Z,159nm,2.3s,mb5.2
SNOW Snow King Moun 28.30 343 *e*P **P 22 52 11.6 +0.9**
comp=Z,150nm,2.0s,mb5.3
RRI2 Red Ridge 28.36 342 *e*P **P 22 52 11.6 +0.3**
comp=Z,37nm,1.4s,mb4.8
TPAW Teton Pass 28.39 343 *e*P **P 22 52 11.8 +0.3**
comp=Z,170nm,2.5s,mb5.2
LOHW Long Hollow 28.40 343 *e*P **P 22 52 11.6 0.0**
comp=Z,20nm,1.1s,mb4.7
WCN Washoe City 28.49 326 *e*P **P 22 52 14.0 +1.6**
comp=Z,34nm,1.4s,mb4.8
WCN Washoe City 28.49 326 *e*P **P 22 52 14.0 +1.6**
WCN pmax pmax
comp=Z,34nm,1.4s,mb4.8
MOOW Moose Ponds 28.57 343 *e*P **P 22 52 13.1 +0.1**
comp=Z,22nm,1.4s,mb4.7
PAHR Pah Rah Range 28.59 327 *e*P **P 22 52 14.6 +1.3**
comp=Z,76nm,2.0s,mb5.1
IMW Indian Meadow 28.76 343 *e*P **P 22 52 14.9 +0.2**
comp=Z,163nm,2.6s,mb5.3
OHCM Honcut 29.45 324 *e*P **P 22 52 21.9 +1.0**
RLMT Red Lodge 29.49 346 *e*P **P 22 52 21.4 +0.2**
comp=Z,36nm,1.4s,mb4.9
SDV Santo Domingo 29.51 101 *e*P **P 22 52 24.0 +2.2**
HLID Hailey 29.55 338 *e*P **P 22 52 22.0 +0.2**
comp=Z,27nm,1.3s,mb4.8
HOPS Hopland 30.13 322 *e*P **P 22 52 28.3 +1.3**
comp=Z,53nm,1.3s,mb5.1
MCMT McKenzie Canyo 30.16 341 *e*P **P 22 52 27.2 0.0**
comp=Z,8.6nm,1.2s,mb4.4
WVOR Wild Horse Val 30.32 332 *e*P **P 22 52 27.7 -1.0**
comp=Z,20nm,1.3s,mb4.7
WVOR Wild Horse Val 30.32 332 *e*P **P 22 52 27.7 -1.0**
WVOR pmax pmax
comp=Z,20nm,1.3s,mb4.7
BOZ Bozeman (W) 30.56 344 *e*P **P 22 52 31.0 +0.3**
comp=Z,18nm,1.3s,mb4.7
BOZ Bozeman (W) 30.56 344 *e*P **P 22 52 31.0 +0.3**
BOZ pmax pmax
comp=Z,18nm,1.3s,mb4.7
DLMT Dillon 30.57 342 *e*P **P 22 52 31.7 +0.9**
comp=Z,58nm,1.2s,mb5.3
MOD Modoc 30.70 329 *e*P **P 22 52 32.7 +0.7**
comp=Z,16nm,1.0s,mb4.8
KCPM Cahto Peak 30.88 323 *e*P **P 22 52 35.8 +2.2**
comp=Z,17nm,1.1s,mb4.8
LRM Limekiln Ridge 30.95 343 *e*P **P 22 52 34.7 +0.6**
HRY Holter Researc 31.60 344 *e*P **P 22 52 40.0 +0.1**
KHMM Horse Mountain 31.76 324 *e*P **P 22 52 42.2 +0.9**
comp=Z,28nm,1.3s,mb4.9
AGMN Agassiz Nation 31.76 5 *e*P **P 22 52 39.9 -1.4**
comp=Z,53nm,1.4s,mb5.2
ATAH Atahualpa 31.77 136 P **P 22 52 41.2 -0.4**
comp=Z,5.2nm,0.7s,mb4.5,baz=340,slow=18,SNR=4.5
ATAH LR LR 23 03 09.1
comp=Z,437nm,19.0s,MS4.2,baz=124,slow=32
YBH Yreka Blue Hor 31.80 327 P **P 22 52 40.4 -1.3**
comp=Z,1.9nm,0.8s,mb4.0,baz=167,slow=7.1,SNR=3.7
YBH Yreka Blue Hor 31.80 327 P **P 22 52 40.4 -1.3**
DGMT Dagmar 31.96 355 *e*P **P 22 52 43.2 +0.3**
comp=Z,91nm,1.3s,mb5.5
CHMT Chamberlain Mo 32.17 343 *e*P **P 22 52 44.8 -0.1**
SJG San Juan 32.20 82 LR LR 23 07 10.6
comp=Z,224nm,18.5s,MS3.9,baz=254,slow=39
MSO Missoula 32.30 342 *e*P **P 22 52 44.8 -1.2**
comp=Z,11nm,1.1s,mb4.6
EGMT Eagleton 32.35 348 *e*P **P 22 52 46.8 +0.3**
comp=Z,97nm,1.5s,mb5.2
SLMT Seeley Lake 32.54 343 *e*P **P 22 52 47.7 -0.4**
BINY Binghamton 32.69 34 *e*P **P 22 52 50.0 +0.5**
comp=Z,139nm,2.1s,mb5.5
VIPM Ingram Point 32.84 332 P **P 22 52 50.4 -0.4**
VIPM Ingram Point 32.84 332 P **P 22 52 50.4 -0.4**
SWMT Swartz Lake 32.93 342 *e*P **P 22 52 51.2 -0.3**
LNOR Lincton Mounta 32.97 336 *e*P **P 22 52 53.5 +1.7**
LNOR Lincton Mounta 32.97 336 *e*P **P 22 52 53.6 +1.7**
SADO Sadowa 33.05 28 P **P 22 52 51.8 -0.8**
comp=Z,5.8nm,1.0s,mb4.5,baz=258,slow=16,SNR=3.4
JTMT Jette 33.23 342 *e*P **P 22 52 54.3 +0.2**
YBMT Yellow Bay 33.25 343 *e*P **P 22 52 54.7 +0.3**
FRIS Frissel Point 33.30 330 P **P 22 52 55.4 +0.6**
KEBM Edson Butte 33.45 326 *e*P **P 22 52 58.2 +2.1**
comp=Z,143nm,1.4s,mb5.7
BSMT Bassoo Peak 33.47 342 *e*P **P 22 52 56.2 0.0**
BLMT Blacktail Moun 33.49 342 *e*P **P 22 52 56.5 +0.1**
ULM Lac du Bonnet 33.70 5 P **P 22 52 56.6 -1.6**
comp=Z,19nm,1.0s,mb5.0,baz=194,slow=8.4,SNR=12
ULM Lac du Bonnet 33.70 5 *e*P **P 22 52 57.0 -1.2**
comp=Z,39nm,1.2s,mb5.2
RNO Roman Nose 33.88 328 P **P 22 53 00.1 +0.2**
HOOD Mount Hood Mea 33.94 332 *e*P **P 22 53 01.2 +0.8**
comp=Z,40nm,1.0s,mb5.3
WALA Waterton Lakes 34.31 344 *e*P **P 22 53 04.1 +0.6**
comp=Z,1.0nm,1.1s,mb3.7
OD2 Odessa Site #2 34.40 337 *e*P **P 22 53 04.0 -0.3**
ASR Mount Adams--S 34.55 333 P **P 22 53 06.4 +0.7**
NEW Newport 34.58 340 *e*P **P 22 53 06.1 +0.2**
comp=Z,19nm,1.3s,mb4.9
NEW Newport 34.58 340 *e*P **P 22 53 06.1 +0.2**
NEW pmax pmax
comp=Z,19nm,1.3s
LON Longmire 35.12 333 *e*P **P 22 53 10.5 0.0**
comp=Z,17nm,1.0s,mb4.9
LON Longmire 35.12 333 *e*P **P 22 53 10.5 0.0**
LON pmax pmax
comp=Z,17nm,1.0s,mb4.9
ETW Entiat 35.19 336 P **P 22 53 11.4 +0.2**
GNW Green Mountain 36.19 333 *e*P **P 22 53 19.5 -0.2**
comp=Z,8.1nm,1.0s,mb4.6
JCW Jim Creek 36.30 335 *e*P **P 22 53 19.8 -0.9**
RPW Rockport 36.34 336 *e*P **P 22 53 20.8 -0.3**
NLWA Neilton Lookou 36.51 332 *e*P **P 22 53 23.1 +0.6**
comp=Z,30nm,1.1s,mb5.0
PGC Sidney 37.29 334 *e*P **P 22 53 29.3 +0.1**
comp=Z,11nm,2.5s,mb4.2
FFC Flin Flon 38.06 358 *e*P **P 22 53 34.8 -0.7**
comp=Z,40nm,1.0s,mb5.1
FFC Flin Flon 38.06 358 *e*P **P 22 53 34.8 -0.7**
FFC pmax pmax
comp=Z,40nm,1.0s,mb5.1
RPN Rapa Nui 44.45 192 Pn **P 22 54 31.3 +3.0**
RPN Rapa Nui 44.45 192 P **P 22 54 31.3 +3.0**
LPAZ La Paz 45.27 135 P **P 22 54 35.5 +0.4**
comp=Z,2.1nm,0.8s,mb4.0,baz=354,slow=9.4,SNR=8.2
LPAZ LR LR 23 11 51.1
comp=Z,378nm,18.9s,MS4.3,baz=54,slow=34
LPAZ La Paz 45.27 135 *e*P **P 22 54 35.8 +0.7**
comp=Z,7.5nm,1.1s,mb4.4
LPAZ La Paz 45.27 135 *e*P **P 22 54 35.8 +0.7**
LPAZ pmax pmax
comp=Z,7.0nm,1.1s
SCHQ Schefferville 45.82 26 P **P 22 54 38.4 -0.6**
comp=Z,13nm,1.0s,mb4.8,baz=231,slow=6.0,SNR=7.4
SCHQ LR LR 23 15 00.5
comp=Z,174nm,20.1s,MS4.0,baz=61,slow=38
SCHQ Schefferville 45.82 26 *e*P **P 22 54 38.9 -0.1**
comp=Z,27nm,1.1s,mb5.1
YKA Yellowknife Ar 46.97 351 P **P 22 54 46.9 -1.0**
comp=Z,7.1nm,0.9s,mb4.6,baz=157,slow=6.8,SNR=4.6
YKA LR LR 23 15 15.7
comp=Z,59nm,20.8s,MS3.5,baz=180,slow=37
YKA Yellowknife Ar 46.97 351 P **P 22 54 46.9 -1.0**
YKA LR LR 23 15 15.7
YKA Yellowknife Ar 46.97 351 P **P 22 54 46.9 -1.0**
DLBC Dease Lake 47.32 339 P **P 22 54 50.8 +0.2**
comp=Z,8.4nm,1.0s,mb4.6,baz=143,slow=7.3,SNR=12
DLBC Dease Lake 47.32 339 *e*P **P 22 54 51.8 +1.1**
RKT Rikitea 52.33 222 *e*LR LR 23 10 27.2
comp=Z,320nm,28.8s
RKT *e*T 23 51 24.5
comp=Z,10nm,0.3s
DAWY Dawson 54.51 340 *e*P **P 22 55 44.7 0.0**
EGAK Eagle 55.55 340 *e*P **P 22 55 51.7 -0.5**
comp=Z,14nm,1.2s,mb4.9
DOT Dot Lake 55.86 338 *e*P **P 22 55 55.0 +0.6**
comp=Z,81nm,1.2s,mb5.6
INK Inuvik 55.90 346 P **P 22 55 54.1 -0.5**
comp=Z,7.7nm,1.0s,mb4.7,baz=124,slow=9.3,SNR=9.1
INK Inuvik 55.90 346 *e*P **P 22 55 54.3 -0.3**
comp=Z,21nm,1.2s,mb5.0
INK Inuvik 55.90 346 *e*P **P 22 55 54.3 -0.3**
INK pmax pmax
comp=Z,21nm,1.2s
PAX Paxson 55.98 337 *e*P **P 22 55 55.5 +0.2**
comp=Z,11nm,0.7s,mb5.0
PAX Paxson 55.98 337 *e*P **P 22 55 55.5 +0.2**
PAX pmax pmax
comp=Z,11nm,0.7s,mb5.0
SML Sawmill 56.48 335 *e*P **P 22 55 58.8 -0.1**
comp=Z,6.6nm,1.2s,mb4.5
SML Sawmill 56.48 335 *e*P **P 22 55 58.8 -0.1**
SML pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
KDAK Kodiak Island 56.54 329 P **P 22 55 59.5 +0.1**
comp=Z,3.9nm,1.0s,mb4.4,baz=353,slow=9.8,SNR=3.9
KDAK Kodiak Island 56.54 329 P **P 22 55 59.5 +0.1**
SLKM Skilak Lake 56.64 333 *e*P **P 22 55 59.6 -0.5**
SLKM Skilak Lake 56.64 333 *e*P **P 22 55 59.6 -0.5**
OHAK Old Harbor 56.67 328 *e*P **P 22 56 00.3 0.0**
comp=Z,62nm,1.6s,mb5.4
PMR Palmer 56.70 334 *e*P **P 22 56 00.1 -0.4**
comp=Z,30nm,1.6s,mb5.1
PMR Palmer 56.70 334 *e*P **P 22 56 00.1 -0.4**
PMR pmax pmax
comp=Z,30nm,1.6s,mb5.1
PMOR Pomariorio Ree 56.87 239 *e*T 23 56 51.1
comp=Z,5.2nm,0.2s
ILAR Eielson Array 57.52 338 P **P 22 56 05.3 -0.8**
comp=Z,7.5nm,1.0s,mb4.7,baz=147,slow=4.9,SNR=53
ILAR LR LR 23 20 35.5
comp=Z,406nm,19.4s,MS4.5,baz=124,slow=36
ILAR Eielson Array 57.52 338 P **P 22 56 05.4 -0.8**
MCK McKinley 57.71 337 *e*P **P 22 56 07.7 +0.1**
comp=Z,93nm,2.2s,mb5.4
MCK McKinley 57.71 337 *e*P **P 22 56 07.7 +0.1**
MCK pmax pmax
comp=Z,93nm,2.2s,mb5.4
RSO Redoubt South 57.74 332 *e*P **P 22 56 07.8 -0.1**
COLA College 57.92 338 *e*P **P 22 56 08.1 -0.9**
COLA College 57.92 338 *e*P **P 22 56 08.1 -0.9**
TRF Thorofare Moun 58.09 336 *e*P **P 22 56 10.2 0.0**
comp=Z,93nm,1.7s,mb5.5
PPLA Purkeypile 58.58 335 *e*P **P 22 56 13.5 -0.2**
comp=Z,40nm,1.4s,mb5.2
BPAW Bear Paw Mtn. 58.68 336 *e*P **P 22 56 13.7 -0.6**
CPUP Villa Florida 59.44 135 P **P 22 56 18.7 -1.5**
comp=Z,2.9nm,0.8s,mb4.3,baz=275,slow=7.4,SNR=5.6
CPUP LR LR 23 21 42.1
comp=Z,136nm,18.7s,MS4.1,baz=58,slow=36
CPUP Villa Florida 59.44 135 P **P 22 56 18.7 -1.5**
CPUP LR LR 23 21 42.1
CPUP Villa Florida 59.44 135 P **P 22 56 18.7 -1.5**
PPT Papeete 59.58 238 *e*LR LR 23 13 44.9
comp=Z,148nm,24.2s
PPT Papeete 59.58 238 LR LR 23 14 36.8
comp=Z,216nm,18.2s,MS4.3,baz=48,slow=29
COLD Coldfoot 59.99 340 *e*P **P 22 56 23.8 +0.4**
BDFB Brasilia 60.38 119 P **P 22 56 26.5 -0.4**
comp=Z,2.3nm,0.5s,mb4.5,baz=332,slow=9.7,SNR=5.0
BDFB LR LR 23 22 12.1
comp=Z,137nm,20.0s,MS4.1,baz=311,slow=36
BDFB Brasilia 60.38 119 P **P 22 56 26.5 -0.4**
TBI Tuuai 62.66 232 *e*LR LR 23 15 07.8
comp=Z,103nm,26.8s
PLCA Paso Flores 63.23 155 P **P 22 56 45.2 -0.4**
comp=Z,12nm,1.1s,mb4.9,baz=327,slow=7.4,SNR=7.3
PLCA LR LR 23 18 24.2
comp=Z,179nm,18.0s,MS4.3,baz=302,slow=30
PLCA Paso Flores 63.23 155 *e*P **P 22 56 45.4 -0.2**
comp=Z,19nm,1.2s,mb5.1
PLCA Paso Flores 63.23 155 *e*P **P 22 56 45.4 -0.2**
PLCA pmax pmax
comp=Z,19nm,1.2s
TRQA Tornquist 65.00 148 *e*P **P 22 56 56.6 -0.6**
SUMG Summit 65.84 17 *e*P **P 22 57 02.0 -0.2**
comp=Z,182nm,2.3s,mb5.7
SUMG Summit 65.84 17 *i*P **P 22 57 01.4 -0.8**
comp=Z,6.7nm,1.1s,mb4.6
RCBR Riachuelo 67.06 104 *e*P **P 22 57 11.9 +0.8**
BORG Borgarnes 70.22 27 LR LR 23 27 21.0
comp=Z,217nm,21.1s,MS4.4,baz=250,slow=35
JMIC Jan Mayen 74.86 20 LR LR 23 32 33.0
comp=Z,175nm,18.8s,MS4.4,baz=73,slow=37
BILL Bilibino 76.16 337 *e*P **P 22 58 05.0 +0.1**
BILL *e* 22 58 21.1
BILL *e* 23 08 47.7
BILL pmax pmax
comp=Z,28nm,2.5s,mb4.8
BILL MLR MLR
comp=Z,300nm,16.0s,MS4.7
SPITS Spitsbergen Ar 79.00 11 LR LR 23 35 36.8
comp=Z,130nm,20.0s,MS4.3,baz=265,slow=38
ESK Eskdalemuir 80.24 35 *e*P **P 22 58 27.4 -0.3**
ESK Eskdalemuir 80.24 35 *e*P **P 22 58 27.4 -0.3**
PVIS Viseu 80.82 50 *e*P **P 22 58 31.8 +0.6**
comp=Z,38nm,1.7s,mb5.0
EVO Evora 81.26 52 *e*P **P 22 58 33.2 -0.4**
comp=Z,20nm,1.2s,mb4.6
EVO *e*MLR MLR
comp=Z,196nm,20.8s,MS4.2
EVO Evora 81.26 52 *e*P **P 22 58 32.8 -0.8**
comp=Z,20nm,1.9s,mb4.7
PESTR Estremoz 81.50 52 *e*P **P 22 58 36.8 +1.9**
comp=Z,18nm,1.6s,mb4.8
PMRV Marv??o 81.51 51 *e*P **P 22 58 35.1 +0.2**
comp=Z,25nm,1.9s,mb4.8
ROSF Rostrenen 82.06 42 *e*P **P 22 58 36.7 -0.9**
comp=Z,125nm,1.5s,mb5.3
ROSF Rostrenen 82.06 42 *e*P **P 22 58 36.7 -0.9**
comp=Z,62nm,1.5s,mb5.3
ROSF Rostrenen 82.06 42 *e*P **P 22 58 36.7 -0.9**
ROSF pmax pmax
comp=Z,62nm,1.5s,mb5.3
PBAR Barrancos 82.09 53 *e*P **P 22 58 38.2 +0.2**
comp=Z,20nm,1.8s,mb4.8
QUIF Quistinic 82.24 42 *e*P **P 22 58 37.9 -0.7**
comp=Z,75nm,1.3s,mb5.2
QUIF Quistinic 82.24 42 *e*P **P 22 58 37.9 -0.7**
comp=Z,38nm,1.3s,mb5.2
QUIF Quistinic 82.24 42 *e*P **P 22 58 37.9 -0.7**
QUIF pmax pmax
comp=Z,38nm,1.3s,mb5.2
SGMF Saint Gilles 82.54 42 *e*P **P 22 58 39.2 -0.9**
SGMF Saint Gilles 82.54 42 *e*P **P 22 58 39.2 -0.9**
GRR Gorron 83.58 41 *e*P **P 22 58 43.5 -2.0**
comp=Z,51nm,1.3s,mb5.2
GRR Gorron 83.58 41 *e*P **P 22 58 43.5 -2.0**
comp=Z,26nm,1.3s,mb5.2
GRR Gorron 83.58 41 *e*P **P 22 58 43.5 -2.0**
GRR pmax pmax
comp=Z,26nm,1.3s,mb5.2
FLN La Foliniere 83.71 41 *e*P **P 22 58 45.7 -0.4**
comp=Z,200nm,1.7s,mb5.7
FLN *e*MLR MLR
comp=Z,229nm,23.0s,MS4.2
FLN La Foliniere 83.71 41 *e*P **P 22 58 45.7 -0.4**
comp=Z,100nm,1.7s,mb5.7
FLN LR LR
comp=Z,230nm,23.0s,MS4.5
FLN La Foliniere 83.71 41 *e*P **P 22 58 45.7 -0.4**
FLN pmax pmax
comp=Z,100nm,1.7s,mb5.7
FLN MLR MLR
comp=Z,230nm,23.0s,MS4.5
LDF La Druitiere 83.99 41 *e*P **P 22 58 46.7 -0.9**
LDF La Druitiere 83.99 41 *e*P **P 22 58 46.7 -0.9**
ESDC Sonseca Array 84.00 51 P **P 22 58 48.3 +0.5**
comp=Z,1.6nm,0.9s,mb4.2,baz=295,slow=4.0,SNR=9.3
ESLA Sonseca Array 84.00 51 *e*P **P 22 58 47.8 0.0**
NOA NORSAR Array B 85.39 27 LR LR 23 36 10.5
comp=Z,104nm,19.8s,MS4.2,baz=285,slow=35
PMSA Palmer Station 85.63 165 *e*P **P 22 58 55.5 +0.2**
comp=Z,200nm,1.5s,mb6.1
LFF La Frestale 85.72 44 *e*P **P 22 58 55.7 -0.7**
comp=Z,75nm,1.4s,mb5.4
LFF La Frestale 85.72 44 *e*P **P 22 58 55.7 -0.7**
comp=Z,38nm,1.4s,mb5.4
LFF La Frestale 85.72 44 *e*P **P 22 58 55.7 -0.7**
LFF pmax pmax
comp=Z,37nm,1.4s,mb5.4
ARCES ARCESS Array B 85.94 17 LR LR 23 40 18.6
comp=Z,105nm,18.1s,MS4.3,baz=50,slow=38
TIXI Tiksi 86.02 346 *e*P **P 22 58 56.2 -1.1**
TIXI pmax pmax
comp=Z,15nm,1.2s,mb5.1
EPF Esparros 86.07 46 *e*P **P 22 58 57.6 -0.5**
comp=Z,76nm,1.6s,mb5.4
EPF Esparros 86.07 46 *e*P **P 22 58 57.6 -0.5**
comp=Z,38nm,1.6s,mb5.4
EPF Esparros 86.07 46 *e*P **P 22 58 57.6 -0.5**
EPF pmax pmax
comp=Z,38nm,1.6s,mb5.4
RJF Les Rejaudoux 86.12 44 *e*P **P 22 58 57.2 -1.1**
RJF *e*MLR MLR
comp=Z,115nm,19.2s,MS4.0
RJF Les Rejaudoux 86.12 44 *e*P **P 22 58 57.2 -1.1**
RJF LR LR
comp=Z,120nm,19.3s,MS4.3
RJF Les Rejaudoux 86.12 44 *e*P **P 22 58 57.2 -1.1**
RJF MLR MLR
comp=Z,120nm,19.3s,MS4.3
BAIF Baives 86.16 39 *e*P **P 22 58 57.8 -0.6**
BAIF Baives 86.16 39 *e*P **P 22 58 57.8 -0.6**
TCF Toulx Ste Croi 86.24 43 *e*P **P 22 58 57.8 -1.1**
comp=Z,87nm,1.8s,mb5.4
TCF Toulx Ste Croi 86.24 43 *e*P **P 22 58 57.8 -1.1**
comp=Z,44nm,1.8s,mb5.4
TCF Toulx Ste Croi 86.24 43 *e*P **P 22 58 57.8 -1.1**
TCF pmax pmax
comp=Z,43nm,1.8s,mb5.4
BGF Bois d'Agland 86.56 42 *e*P **P 22 58 59.4 -1.1**
comp=Z,17nm,1.0s,mb4.9
BGF Bois d'Agland 86.56 42 *e*P **P 22 58 59.4 -1.1**
comp=Z,8.4nm,1.0s,mb4.9
BGF Bois d'Agland 86.56 42 *e*P **P 22 58 59.4 -1.1**
BGF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
AVF Avril sur Loir 86.80 42 *e*P **P 22 59 00.0 -1.7**
AVF Avril sur Loir 86.80 42 *e*P **P 22 59 00.0 -1.7**
SSF Saint Saulge 86.80 42 *e*P **P 22 59 00.3 -1.4**
SSF Saint Saulge 86.80 42 *e*P **P 22 59 00.3 -1.4**
LOR Lormes 86.95 41 *e*P **P 22 59 01.3 -1.1**
comp=Z,15nm,1.0s,mb4.9
LOR *e*MLR MLR
comp=Z,127nm,19.2s,MS4.0
LOR Lormes 86.95 41 *e*P **P 22 59 01.3 -1.1**
comp=Z,7.5nm,1.0s,mb4.9
LOR LR LR
comp=Z,130nm,19.3s,MS4.3
LOR Lormes 86.95 41 *e*P **P 22 59 01.3 -1.1**
LOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
LOR MLR MLR
comp=Z,130nm,19.3s,MS4.3
SMF Signal de Mont 87.17 42 *e*P **P 22 59 02.1 -1.4**
SMF Signal de Mont 87.17 42 *e*P **P 22 59 02.1 -1.4**
SFTF Sexfontaines 87.35 40 *e*P **P 22 59 03.5 -0.8**
comp=Z,30nm,1.1s,mb5.1
SFTF Sexfontaines 87.35 40 *e*P **P 22 59 03.5 -0.8**
comp=Z,30nm,1.1s,mb5.4
CABF La Chapelle 88.62 42 *e*P **P 22 59 08.9 -1.5**
CABF La Chapelle 88.62 42 *e*P **P 22 59 08.9 -1.5**
CLL Collm 90.73 35 P **P 22 59 27.0 +6.9**
CLL *e*PP PP 23 02 48.0 -7.0
CLL *e*S S 23 10 26.0 +10
CLL Collm 90.73 35 *e*P **P 22 59 27.0 +6.9**
CLL Collm 90.73 35 *e*(sP) sP 22 59 27.0 +1.1
CLL *e*PP PP 23 02 48.0 -7.0
CLL *e*PPP 23 04 57.0
CLL *e*S S 23 10 18.0 +1.9
CLL *e*PS PS 23 11 28.0 +3.4
CLL *e*SS SS 23 16 27.0 +10
CLL *e* 23 17 50.0
CLL *e*SSS 23 19 42.0
CLL *e*SSSS 23 23 18.0
DAVOX Davos/Dischmat 90.93 40 LR LR 23 44 34.8
comp=Z,98nm,18.2s,MS4.3,baz=271,slow=38
FINES FINESS Array B 91.21 23 LR LR 23 42 44.8
comp=Z,112nm,18.1s,MS4.3,baz=314,slow=37
VRAC Vranov 93.71 36 LR LR 23 42 44.6
comp=Z,98nm,18.8s,MS4.3,baz=308,slow=36
KEST Kesra 95.25 50 LR LR 23 40 28.9
comp=Z,40nm,20.0s,MS3.9,baz=316,slow=34
TORD Torodi Ar. Bea 97.07 74 LR LR 23 40 09.7
comp=Z,132nm,19.8s,MS4.4,baz=320,slow=33
AKASG Malin Array Be 99.50 30 LR LR 23 44 15.5
comp=Z,119nm,18.4s,MS4.4,baz=340,slow=35
ZALV Zalesovo Beam 109.60 357 PP PP 23 05 15.9 -1.7
comp=Z,0.5nm,0.6s,baz=354,slow=7.4,SNR=3.7
HHC Hu-ho-hao-te 115.80 334 *e*PKP PKPdf 23 05 00.0 -0.1
HHC PP PP 23 06 03.5 +1.2
HHC PKS 23 08 35.3
HHC SKS SKSdf 23 12 07.3 -4.9
HHC AMB AMB
comp=Z,110nm,8.6s
HHC LR LR
comp=N,220nm,21.7s,MS5.1
HHC LR LR
comp=E,420nm,19.5s,MS5.1
HHC LR LR
comp=Z,210nm,19.6s,MS4.8
WMQ Urumqi 119.45 354 *e*PKP PKPdf 23 05 09.0 +2.0
WMQ PP PP 23 06 34.0 +6.7
WMQ SKS SKSdf 23 12 16.0 -3.0
WMQ SKKS SKKSac 23 13 23.0 -5.7
WMQ SS SS 23 22 49.0 +0.1
WMQ AMB AMB
comp=Z,47nm,10.0s
WMQ LR LR
comp=N,150nm,25.0s,MS4.7

WMQ					LR	LR		
	comp=E,150nm,25.0s,MS4.7							
WMQ					LR	LR		
	comp=Z,150nm,25.0s,MS4.5							
BHD	**Baghdad**	**119.78**	**34**	*ex*		x	23 01 29.0	
BHD				*ex*		x	23 06 30.0	
BHD				*ex*		x	23 08 44.0	
BHD				*ex*		x	23 12 01.0	
CD2	**Chengdu**	**127.56**	**334**	*e*PKP		PKPdf	23 05 23.8	+0.8
MAW	**Mawson**	**127.84**	**172**	PKP		PKPdf	23 05 23.4	+1.2
	comp=Z,2.0nm,0.8s,baz=277,slow=8.7,SNR=4.1							
MAW	**Mawson**	**127.84**	**172**	*e*PKPdf		PKPdf	23 05 22.6	+0.4
MAW	**Mawson**	**127.84**	**172**	*e*PKIKP		PKPdf	23 05 22.7	+0.4
WRA	**Warramunga Arr**	**128.59**	**258**	PKP		PKPdf	23 05 24.8	-0.3
	comp=Z,0.9nm,0.8s,baz=4.7,slow=0.7,SNR=3.1							
WRA	**Warramunga Arr**	**128.59**	**258**	PKIKP		PKPdf	23 05 24.8	-0.3
ASAR	**Alice Springs**	**129.26**	**253**	PKP		PKPdf	23 05 25.1	-1.2
	comp=Z,0.6nm,0.8s,baz=128,slow=2.7,SNR=5.5							
ASAR	**Alice Springs**	**129.26**	**253**	PKIKP		PKPdf	23 05 25.1	-1.2
GYA	**Guiyang**	**130.01**	**328**	*e*Pdif		Pdif	23 02 14.8	-0.9
GYA				PKP		PKPdf	23 05 26.3	-1.4
GYA				sPKP			23 05 45.8	
GYA				PP		PP	23 07 41.3	+2.7
GYA				AMB		AMB		
	comp=Z,110nm,7.8s							
KMI	**Kunming**	**133.01**	**332**	PKP		PKPdf	23 05 33.6	+0.1
CMAR	**Chiang Mai Arr**	**140.52**	**331**	PKP		PKPdf	23 05 46.5	-1.0
	comp=Z,0.6nm,0.4s,baz=346,slow=28,SNR=4.2							
CMAR	**Chiang Mai Arr**	**140.52**	**331**	PKIKP		PKPdf	23 05 46.6	-0.9
HYB	**Hyderabad**	**146.14**	**3**	*i* PKP		PKPdf	23 05 57.0	-0.4

*NEIC **23** 22:49:17.6, 16.°49N×100.°13W, h9km, MD3.6(MEX), After MEX.*

MEX 23 22:49:17.6±0.7, 16.°49N×100.°13W, h9km±15km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.57**	**347**	*e*P	Pg	22 49 27.7	-1.0
CAIG				*i* S	Sg	22 49 35.6	-0.6
CAIG	**El Cayaco**	**0.57**	**347**	*e*P	Pg	22 49 27.7	-1.0
CAIG				*i* S	Sg	22 49 35.6	-0.6
ZIIG	**Zihuatanejo**	**1.69**	**311**	*i* P	Pn	22 49 44.7	-2.7
ZIIG				*i* S	Sn	22 50 05.1	-4.1
ZIIG	**Zihuatanejo**	**1.69**	**311**	*i* P	Pn	22 49 44.7	-2.7
ZIIG				*i* S	Sn	22 50 05.1	-4.1
PNIG	**Pinotepa**	**1.92**	**93**	*i* P	Pn	22 49 47.1	-3.4
PNIG				*i* S	Sn	22 50 10.2	-4.6
PNIG	**Pinotepa**	**1.92**	**93**	*i* P	Pn	22 49 47.1	-3.4
PNIG				*i* S	Sn	22 50 10.2	-4.6
UTMO	**Huajuapan**	**2.59**	**59**	*i* P	Pn	22 49 58.3	-1.4
UTMO				*i* S	Sn	22 50 29.2	-2.1
VHO	**Vista Hermosa**	**3.31**	**79**	*i* P	Pn	22 50 09.0	-0.5
VHO				*i* S	Sn	22 50 48.8	-0.1
VHO	**Vista Hermosa**	**3.31**	**79**	*i* P	Pn	22 50 09.0	-0.5
VHO				*i* S	Sn	22 50 48.8	-0.1
MMIG	**Aquila**	**3.56**	**301**	*i* P	Pn	22 50 07.6	-5.4
MMIG				*i* S	Sn	22 50 48.6	-6.5

*CSEM **23** 23:28:27.1, 38.°44N×30.°32W, h5km, ML3.2, After PDA*

PDA 23 23:28:27.1±0.8, 38.°44N×30.°32W, h5km, MD3.6, ML3.2, Error ellipse: s-maj=19.3km s-min=5.8km az=173.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.28**	**83**	*e*P	Pn	23 28 47.3	-4.3
CALA				*e*S	Sg	23 29 01.8	-6.4
CALA	**Caldeira**	**1.28**	**83**	*e*P	Pn	23 28 47.3	-4.3
CALA				*e*S	Sg	23 29 01.8	-6.4
PCED	**Cedros**	**1.28**	**81**	*e*P	Pn	23 28 46.5	-5.2
PCED				*e*S	Sg	23 29 01.5	-6.9
PCED				A		23 29 03.6	
	72nm,0.2s						
PCED	**Cedros**	**1.28**	**81**	*e*P	Pn	23 28 46.5	-5.2
PCED				*e*S	Sg	23 29 01.5	-6.9
HOR	**Horta**	**1.33**	**86**	*e*P	Pn	23 28 47.3	-5.0
HOR				*e*S	Sg	23 29 02.8	-7.0
HOR	**Horta**	**1.33**	**86**	*e*P	Pn	23 28 47.3	-5.0
HOR				*e*S	Sg	23 29 02.8	-7.0
PCAN	**Candelaria**	**1.44**	**88**	*e*P	Pn	23 28 48.8	-5.0
PCAN				*e*S	Sb	23 29 05.6	-7.4
PCAN				A		23 29 06.9	
	38nm,0.1s						
PCAN	**Candelaria**	**1.44**	**88**	*e*P	Pn	23 28 48.8	-5.0
PCAN				*e*S	Sb	23 29 05.6	-7.4
PICO	**Pico**	**1.49**	**87**	*e*P	Pn	23 28 50.3	-4.2
PICO				*e*S	Sn	23 29 07.0	-7.3
PICO	**Pico**	**1.49**	**87**	*e*P	Pn	23 28 50.3	-4.2
PICO				*e*S	Sn	23 29 07.0	-7.3
ROSA	**Rosais**	**1.65**	**79**	*e*P	Pn	23 28 52.0	-4.8
ROSA				*e*S	Sn	23 29 10.7	-7.7
ROSA	**Rosais**	**1.65**	**79**	*e*P	Pn	23 28 52.0	-4.8
ROSA				*e*S	Sn	23 29 10.7	-7.7
PID	**Ribeirinha**	**1.73**	**89**	*e*P	Pn	23 28 53.4	-4.4
PID				*e*S	Sn	23 29 12.3	-7.9
PID	**Ribeirinha**	**1.73**	**89**	*e*P	Pn	23 28 53.4	-4.4
PID				*e*S	Sn	23 29 12.3	-7.9

JMA 23 23:42:32.4, 39.°17N×140.°83E, h8km±1km, M2.4, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.27**	**326**	P	Pg	23 42 38.1	+0.3
JRG				S	Sg	23 42 42.3	+0.8
JMK	**Ichinoseki**	**0.37**	**126**	P	Pg	23 42 39.3	-0.4
JMK				S	Sg	23 42 44.5	-0.1
JYK	**Kaneyama**	**0.45**	**236**	P	Pg	23 42 40.9	-0.1
JYK				S	Sg	23 42 47.1	+0.2
JOM	**Ohasama**	**0.47**	**50**	P	Pg	23 42 41.4	-0.1
JOM				S	Sg	23 42 47.7	0.0
JOU	**Okura**	**0.81**	**189**	P	Pg	23 42 47.9	-0.1
JOU				S	Sg	23 42 58.8	+0.2
JIO	**Ouri**	**0.82**	**150**	P	Pg	23 42 47.6	-0.6
JIO				S	Sg	23 42 58.4	-0.5

*NIED **23** 23:43:00, 39.°00N×141.°60E, h74km, Mw4.3 Best double couple: M0=3.62000×10^15 NP1:φ=210.00000°, δ=66.00000°, λ=87.00000°. NP2:φ=36.00000°, δ=25.00000°, λ=96.00000°.*

*BJI **23** 23:43:41.8, 38.°72N×142.°13E, h71km, mB5.0/12, mb4.8/25, Ms4.5/1, Ms7 4.3/2*

*MOS **23** 23:43:45.2±0.9, 38.°98N×141.°48E, h53km, mb4.7/40, Error ellipse: s-maj=9.1km s-min=6.4km az=111.6*

*ISCJB **23** 23:43:47.2±0.2, 39.°10N±0.°03×141.°58E±0.°04, h67km, mb4.5/75, Error ellipse: s-maj=5.3km s-min=2.9km az=36.5*

*JMA **23** 23:43:48.8, 38.°97N×141.°66E, h73km±1km, M4.3 Broadband fault plane solution: P waves. NP1: φ=37.00000°, δ=20.00000°, λ=106.00000°. NP2: φ=200.00000°, δ=70.00000°, λ=84.00000°. Principal axes: T Plg64.0000°, Azm101.0000°; N Plg6.0000°, Azm202.0000°; P Plg25.0000°, Azm295.0000°;*

JMA Felt III J1.

*IDC **23** 23:43:48.7±0.4, 38.°97N×141.°50E, h72km±3km, mb4.1/19, mb1 4.3/23, mb1mx4.2/30, mbtmp4.1/23, MS3.2/5, Ms1 3.3/5, ms1mx2.9/32 Error ellipse: s-maj=12.2km s-min=10.5km az=131.0*

*NEIC **23** 23:43:49.0±0.2, 39.°04N×141.°54E, mb4.7/36, MW4.3(NIED), Error ellipse: s-maj=5.6km s-min=3.6km az=147.0*

NEIC Recorded [3 JMA] in Iwate and Miyagi; [2 JMA] in Akita; [1 JMA] in Fukushima and Yamagata.

ISC 23 23:43:48.6±0.2, 39.°01N±0.°02×141.°64E±0.°04, h69km, h69km±2.8km: pP-P, n207, σ=0.96/222, mb4.5/75, 16C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.07**	**15**	⇑P	Pn	23 43 59.5	+0.9
OFUJ				S	Sn	23 44 07.1	+1.2
JMK	**Ichinoseki**	**0.34**	**260**	⇑P	Pn	23 44 00.4	+0.5
JMK				S	Sn	23 44 09.0	+0.9
JOM	**Ohasama**	**0.54**	**330**	⇑P	Pn	23 44 02.6	+0.9
JOM				S	Sn	23 44 12.8	+1.5
JIO	**Ouri**	**0.60**	**203**	⇓P	Pn	23 44 02.3	0.0
JIO				S	Sn	23 44 12.1	-0.2
JOU	**Okura**	**1.00**	**230**	⇑P	Pn	23 44 07.3	+0.3
JOU				S	Sn	23 44 21.1	+0.4
JYK	**Kaneyama**	**1.01**	**265**	⇑P	Pn	23 44 07.8	+0.7
JYK				S	Sn	23 44 22.2	+1.4
JYW	**Yuwa**	**1.23**	**296**	⇓P	Pn	23 44 11.1	+1.1
JYW				S	Sn	23 44 28.3	+2.3
JMM	**Marumori**	**1.32**	**211**	P	Pn	23 44 10.7	-0.5
JMM				S	Sn	23 44 27.3	-0.8
JANG	**Nango**	**1.37**	**356**	P	Pn	23 44 12.2	+0.4
JANG				S	Sn	23 44 30.0	+0.9
JAH	**Hinai**	**1.41**	**327**	⇓P	Pn	23 44 13.7	+1.3
JAH				S	Sn	23 44 32.7	+2.5
JYS	**Shirataka**	**1.47**	**238**	P	Pn	23 44 13.7	+0.7
JYS				S	Sn	23 44 32.5	+1.1
JYA	**Atsumi**	**1.56**	**255**	P	Pn	23 44 15.0	+0.7
JYA				S	Sn	23 44 35.0	+1.2
ERM	**Erimo**	**3.22**	**21**	*e*Pn	Pn	23 44 36.8	+0.1
ERM				*e*Sn	Sn	23 45 15.2	+1.3
ERM	**Erimo**	**3.22**	**21**	⇑*e*P	Pn	23 44 36.3	-0.4
MJAR	**Matsushiro Arr**	**3.67**	**229**	P	Pn	23 44 42.9	0.0
	11nm,0.3s,baz=40,slow=11,SNR=66						
MJAR	**Matsushiro Arr**	**3.67**	**229**	P	Pn	23 44 42.9	0.0
MJAR				pmax	pmax		
	comp=Z,11nm,0.3s						
MAJO	**Matsushiro**	**3.67**	**229**	*e*Pn	Pn	23 44 44.9	+2.0
MAJO				Sn	Sn	23 45 05.4	-20
MAJO	**Matsushiro**	**3.67**	**229**	*e*P	Pn	23 44 44.9	+2.0
MAT	**Matsushiro**	**3.67**	**229**	P	Pn	23 44 44.4	+1.5
MAT				*e*S	Sn	23 45 25.9	+0.9
ASAJ	**Asahikawa**	**5.15**	**8**	P	Pn	23 45 03.0	-0.1
	comp=Z,6.5nm,0.3s,baz=222,slow=7.9,SNR=8.9						
ASAJ				S	Sn	23 46 00.4	-0.8
	comp=Z,4.2nm,0.3s,baz=100,slow=28,SNR=3.8						
ASAJ	**Asahikawa**	**5.15**	**8**	*e*Pn	Pn	23 45 02.8	-0.3
ASAJ				Sn	Sn	23 46 01.0	-0.2
ASAJ	**Asahikawa**	**5.15**	**8**	P	Pn	23 45 03.1	0.0
ASAJ				S	Sn	23 46 00.4	-0.8
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.94**	**31**	*e*P	Pn	23 45 13.4	-0.4
YUK				*i* S	Sn	23 46 18.6	-1.8
YUK				pmax	pmax		
	comp=Z,50nm,0.3s						
YUK				pmax	pmax		
	comp=Z,167nm,0.3s						
YUK				pmax	pmax		
	comp=N,41nm,0.1s						
YUK				pmax	pmax		
	comp=E,69nm,0.2s						
YUK				smax			
	comp=N,156nm,0.1s						
YUK				smax			
	comp=E,190nm,0.1s						
YUK				smax			
	comp=E,280nm,0.3s						
JHJ	**Hachijo jima 2**	**6.07**	**195**	P	Pn	23 45 15.4	-0.3
	comp=E,28nm,0.3s,baz=66,slow=20,SNR=8.3						
JHJ				S	Sn	23 46 19.2	-4.5
	comp=E,58nm,0.3s,baz=252,slow=21,SNR=6.5						
YSS	**Yuzh-Sakhalins**	**7.98**	**5**	*e*P	Pn	23 45 50.0	+8.2
MDJ	**Mudanjiang**	**10.59**	**306**	P	Pn	23 46 21.3	+3.9
MDJ				pmax	pmax		
	comp=Z,17nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.8s						
MDJ	**Mudanjiang**	**10.59**	**306**	*e*Pn	Pn	23 46 18.9	+1.4
	comp=Z,10nm,0.6s						
MDJ				Sn	Sn	23 48 14.1	-0.2
KSRS	**Korea Array**	**10.91**	**266**	P	Pn	23 46 22.0	+0.2
	comp=Z,1.6nm,0.3s,baz=81,slow=14,SNR=11						
KSRS				S	Sn	23 48 26.5	+4.4
	comp=Z,0.4nm,0.3s,baz=72,slow=24,SNR=4.0						
KSRS				LR	LR	23 50 06.3	
	comp=Z,93nm,21.5s,baz=72,slow=35						
KSRS	**Korea Array**	**10.91**	**266**	P	Pn	23 46 22.0	+0.2
KSRS				S	Sn	23 48 26.5	+4.5
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CBIJ	**Chichi jima**	**11.89**	**178**	LR	LR	23 51 10.9	
	comp=Z,84nm,18.5s,baz=129,slow=37						
PETK	**Petropavlovsk-**	**17.91**	**33**	LR	LR	23 55 39.0	
	comp=Z,26nm,18.4s,baz=342,slow=40						
HIA	**Hailar**	**18.70**	**310**	P	Pn	23 48 00.0	-2.4
HIA	**Hailar**	**18.70**	**310**	P	Pn	23 48 00.0	-2.4
BJT	**Baijiatuau**	**19.67**	**281**	*e*P	Pn	23 48 10.1	-3.8
BJT	**Baijiatuau**	**19.67**	**281**	*e*P	Pn	23 48 10.1	-3.8
YHNB	**Yeheng**	**22.31**	**236**	*e*P	P	23 48 38.5	-1.9
SSLB	**Suanglung**	**23.20**	**235**	*e*P	P	23 48 45.6	-4.0
YUL B	**Yu-li**	**23.27**	**234**	*e*P	P	23 48 50.3	+0.1
TPUB	**Ta-pu**	**23.76**	**235**	*e*P	P	23 48 56.4	+1.7
TWG	**Pinlang**	**23.83**	**233**	*e*P	P	23 48 55.0	-0.3
YAK	**Yakutsk**	**24.19**	**346**	⇑*e*P	P	23 48 57.7	-0.6
BOD	**Bodaibo**	**25.98**	**325**	⇓*i*P	P	23 49 13.1	-1.5
BOD				*e*	pP	23 49 28.9	-1.9
BOD				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**26.45**	**301**	*e*P	P	23 49 18.2	-0.7
	comp=Z,3.0nm,0.5s,mb4.0						
ULN	**Ulaanbaatar**	**26.45**	**301**	*e*P	P	23 49 18.2	-0.7
ULN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
SONM	**Songino Array**	**26.89**	**301**	P	P	23 49 22.5	-0.3
	comp=Z,2.1nm,0.5s,mb3.9,baz=101,slow=8.5,SNR=11						
SONM	**Songino Array**	**26.89**	**301**	P	P	23 49 22.5	-0.3
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ENH	**Enshi**	**27.74**	**262**	*e*P	P	23 49 30.7	+0.1
	comp=Z,44nm,1.2s,mb4.9						
TLY	**Talaya**	**29.21**	**308**	*e*P	P	23 49 43.2	-0.3
TLY	**Talaya**	**29.21**	**308**	*e*P	P	23 49 42.4	-1.1
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
ZAK	**Zakamensk**	**29.23**	**306**	*e*P	P	23 49 42.9	-0.8
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
BILL	**Bilibino**	**32.09**	**17**	P	P	23 50 12.0	+3.4
BILL				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.3						
GTA	**Gaotai**	**32.21**	**284**	*e*P	P	23 50 09.1	-0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
NIKO	**Nikolski**	**36.37**	**51**	*e*P	P	23 50 45.2	-0.6
WMQ	**Urumqi**	**40.15**	**295**	*e*P	P	23 51 15.0	-2.7
WMQ				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.1						
ZAA0	**Zalesovo Array**	**40.74**	**311**	*e*P	P	23 51 21.4	-1.1
ZALV	**Zalesovo Beam**	**40.74**	**311**	P	P	23 51 22.0	-0.5
	comp=Z,27nm,0.6s,mb5.3,baz=86,slow=7.9,SNR=130						
ZALV				pP	pP	23 51 39.0	-0.4
	comp=Z,4.0nm,0.7s,baz=90,slow=7.9,SNR=2.8						
ZALV				PcP	PcP	23 53 22.7	+0.2
	comp=Z,0.7nm,0.5s,baz=94,slow=4.3,SNR=2.3						
ZALV				ScP	ScP	23 57 04.7	-1.2
	comp=Z,0.4nm,0.5s,baz=111,slow=3.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**40.74**	**311**	P	P	23 51 22.0	-0.5
ZALV				*PP	pP	23 51 39.0	-0.4
ZALV						23 53 22.7	
ZALV				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.2						
NVS	**Novosibirsk**	**41.63**	**312**	⇑*i*P	P	23 51 29.2	-0.5
NVS				pmax	pmax		
	comp=E,17nm,1.1s						
NVS				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.8						
CHTO	**Chiang Mai**	**41.99**	**254**	*e*P	P	23 51 32.8	-0.3
	comp=Z,4.1nm,0.8s,mb4.2						
CHTO	**Chiang Mai**	**41.99**	**254**	*e*P	P	23 51 32.8	-0.3
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
CMAR	**Chiang Mai Arr**	**42.20**	**253**	P	P	23 51 34.5	-0.3
	comp=Z,1.2nm,0.3s,mb4.0,baz=42,slow=7.1,SNR=6.7						
CMAR	**Chiang Mai Arr**	**42.20**	**253**	P	P	23 51 34.5	-0.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LSA	**Lhasa**	**42.25**	**273**	*e*P	P	23 51 34.6	-0.5
	comp=Z,7.3nm,0.6s,mb4.6						
LSA	**Lhasa**	**42.25**	**273**	*e*P	P	23 51 34.6	-0.5
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
MK31	**Makanchi Array**	**43.25**	**300**	*e*P	P	23 51 42.5	-0.5
MK31	**Makanchi Array**	**43.25**	**300**	*ce*P	P	23 51 42.7	-0.3
MK31				pmax	pmax		
	comp=Z,23nm,0.5s,mb5.2						
MKAR	**Makanchi Array**	**43.25**	**300**	P	P	23 51 42.5	-0.5
	comp=Z,28nm,0.7s,mb5.1,baz=85,slow=11,SNR=273						
MKAR	**Makanchi Array**	**43.25**	**300**	*ce*P	P	23 51 42.7	-0.3
MKAR				pmax	pmax		
	comp=Z,28nm,0.6s						
KURK	**Kurchatov**	**44.88**	**307**	*e*P	P	23 51 55.4	-0.6
	comp=Z,40nm,0.9s,mb5.2						
KURK	**Kurchatov**	**44.88**	**307**	*i* P	P	23 51 55.0	-1.0
KURK				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.2						
RSO	**Redoubt South**	**45.25**	**39**	P	P	23 51 59.6	+0.9
	comp=Z,12nm,0.6s,mb4.8						
KDAK	**Kodiak Island**	**45.52**	**43**	P	P	23 52 01.1	+0.2
	comp=Z,5.8nm,0.6s,mb4.5,baz=314,slow=7.1,SNR=10						
KDAK				pP	pP	23 52 20.4	+2.2
	comp=Z,3.3nm,0.6s,baz=273,slow=5.9,SNR=2.3						
KDAK				sP	sP	23 52 27.0	+1.0
	comp=Z,2.8nm,0.7s,baz=282,slow=10,SNR=2.5						
KDAK	**Kodiak Island**	**45.52**	**43**	P	P	23 52 01.1	+0.2
KDAK				pP	pP	23 52 20.4	+2.2
KDAK				sP	sP	23 52 27.0	+1.0
KDAK	**Kodiak Island**	**45.52**	**43**	*i* P	P	23 52 01.2	+0.2
TAPN	**Taplejung**	**46.02**	**272**	*e*P	P	23 52 05.2	-0.1
	comp=Z,11nm,0.6s,mb4.8						
ODAN	**Odare**	**46.50**	**272**	*e*P	P	23 52 08.9	-0.2
	comp=Z,8.8nm,0.4s,mb4.8						
GUN	**Gumba**	**47.17**	**274**	*e*P	P	23 52 14.3	0.0
	comp=Z,36nm,0.5s,mb5.4						
SML	**Sawmill**	**47.31**	**37**	*e*P	P	23 52 15.7	+0.8
	comp=Z,9.1nm,2.0s,mb4.2						
SML	**Sawmill**	**47.31**	**37**	*e*P	P	23 52 15.7	+0.8
SML				pmax	pmax		
	comp=Z,9.0nm,2.0s,mb4.2						
KKN	**Kakani**	**47.70**	**274**	*e*P	P	23 52 18.2	-0.2
	comp=Z,39nm,0.7s,mb5.3						
KKN	**Kakani**	**47.70**	**274**	*e*P	P	23 52 18.2	-0.2
KKN				pmax	pmax		
	comp=Z,39nm,0.7s,mb5.3						
ILAR	**Eielson Array**	**47.74**	**33**	P	P	23 52 18.4	+0.2
	comp=Z,3.6nm,0.7s,mb4.3,baz=271,slow=6.4,SNR=48						
ILAR				pP	pP	23 52 37.3	+1.8
	comp=Z,1.0nm,0.7s,baz=264,slow=5.8,SNR=3.1						
ILAR				sP	sP	23 52 44.3	+1.0
	comp=Z,2.3nm,0.6s,baz=264,slow=6.2,SNR=7.2						
ILAR	**Eielson Array**	**47.74**	**33**	P	P	23 52 18.4	+0.2
ILAR				*PP	pP	23 52 37.3	+1.8
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DMN	**Daman**	**47.92**	**274**	*e*P	P	23 52 19.8	-0.3
	comp=Z,7.5nm,0.5s,mb4.8						
GKN	**Gorkha**	**48.09**	**275**	*e*P	P	23 52 21.0	-0.4
	comp=Z,22nm,0.5s,mb5.2						
DANN	**Dangsing**	**48.61**	**276**	*e*P	P	23 52 25.5	+0.1
	comp=Z,87nm,0.7s						
TKM2	**Tokmak 2**	**48.88**	**297**	*e*P	P	23 52 27.7	+0.4
	comp=Z,10nm,0.8s,mb4.8						
TKM2				*e*	pP	23 52 45.8	+1.2
TKM2	**Tokmak 2**	**48.88**	**297**	*i* P	P	23 52 27.6	+0.4
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
KOLN	**Koldanda**	**49.01**	**275**	*e*P	P	23 52 27.9	-0.6
	comp=Z,15nm,0.5s,mb5.2						
MENT	**Mentasta**	**49.32**	**36**	*e*P	P	23 52 31.8	+1.5
KBK	**Karagaybulak**	**49.41**	**297**	*e*P	P	23 52 31.5	+0.1
	comp=Z,15nm,0.6s,mb5.1						
BRVK	**Borovoye**	**49.45**	**311**	*e*P	P	23 52 30.6	-0.9
BRVK				*e*	pP	23 52 51.3	+2.4
BRVK	**Borovoye**	**49.45**	**311**	*ce*P	P	23 52 30.5	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
AAK	**Ala-Archa**	**49.74**	**297**	*e*P	P	23 52 33.5	-0.3
	comp=Z,4.8nm,0.5s,mb4.7						
AAK	**Ala-Archa**	**49.74**	**297**	⇑*i*P	P	23 52 33.8	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
UCH	**Uchtor**	**49.86**	**296**	*e*P	P	23 52 33.6	-1.2
EKS2	**Erkin-Say**	**50.22**	**297**	*e*P	P	23 52 37.5	0.0
	comp=Z,3.7nm,0.7s,mb4.4						
AML	**Almayashu**	**50.47**	**297**	*e*P	P	23 52 40.0	+0.7
	comp=Z,5.4nm,0.7s,mb4.6						
HNR	**Honiara**	**51.11**	**157**	LR	LR	00 15 20.7	
	comp=Z,45nm,18.1s,baz=124,slow=37						
KK31	**Karatay Array**	**52.31**	**299**	*ce*P	P	23 52 52.1	-1.0
KK31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
KKAR	**Karatay Array**	**52.31**	**299**	*e*P	P	23 52 52.0	-1.1
	comp=Z,4.9nm,0.7s,mb4.7						
KKAR	**Karatay Array**	**52.31**	**299**	*e*P	P	23 52 52.0	-1.1
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
INK	**Inuvik**	**52.55**	**28**	*e*P	P	23 52 55.3	+0.7
	comp=Z,2.8nm,0.5s,mb4.5						
INK	**Inuvik**	**52.55**	**28**	*e*P	P	23 52 55.3	+0.8
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SVE	**Sverdlovsk**	**53.80**	**318**	⇑*e*P	P	23 53 03.8	0.0
SVE				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
ARU	**Arti**	**55.01**	**318**	*e*P	P	23 53 12.0	-0.7
	comp=Z,16nm,0.6s,mb5.2						
ARU	**Arti**	**55.01**	**318**	*d i*P	P	23 53 12.2	-0.4
ARU				*e*PP	pP	23 53 29.8	-0.5
ARU				*e*		23 54 12.0	
ARU				*e*		23 55 14.6	
ARU				S	**S**	**00 00 48.3**	**-1.1**
ARU						00 02 50.3	
ARU				SS	SS

comp=Z,5.0nm,0.6s
VSR Storozhevoye 67.58 318 *e*P **P** **23 54 36.8 -0.7**
VSR *e* pP 23 54 55.2 -0.6
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
SUMG Summit 68.72 0 *e*P **P** **23 54 43.6 -0.7**
YBH Yreka Blue Hor 69.00 53 P **P** **23 54 47.9 +1.3**
comp=Z,4.1nm,1.2s,mb4.1,baz=226,slow=3.4,SNR=5.7
YBH Yreka Blue Hor 69.00 53 P **P** **23 54 47.9 +1.3**
YBH pmax pmax
comp=Z,4.0nm,1.2s
KIV Kislovodsk 69.76 311 *e*P **P** **23 54 50.6 -0.6**
comp=Z,21nm,1.0s,mb4.9
KIV Kislovodsk 69.76 311 *e*P **P** **23 54 52.2 +0.9**
KIV pmax pmax
comp=Z,21nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,18nm,18.0s
STKA Stephens Creek 70.52 180 *e*P **P** **23 54 56.2 +0.3**
FCC Fort Churchill 72.16 27 *e*P **P** **23 55 05.9 +0.4**
FCC Fort Churchill 72.16 27 *e*P **P** **23 55 05.9 +0.4**
NB2 NORSAR Subarra 72.44 337 P **P** **23 55 06.5 -0.7**
comp=Z,1.2nm,0.7s,mb3.8,baz=37,slow=6.2
NOA NORSAR Array B 72.44 337 P **P** **23 55 06.5 -0.7**
comp=Z,1.9nm,0.7s,mb4.0,baz=39,slow=5.9,SNR=9.2
NOA pP pP 23 55 25.5 -0.1
comp=Z,7.0nm,0.8s,baz=39,slow=6.0,SNR=14
NOA LR LR 00 29 18.6
comp=Z,39nm,18.4s,baz=15,slow=38
NOA NORSAR Array B 72.44 337 P **P** **23 55 06.5 -0.7**
NOA *PP pP 23 55 25.5 -0.1
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,39nm,18.4s
CMB Columbia Colle 72.58 55 *e*P **P** **23 55 09.1 +0.7**
comp=Z,3.1nm,1.1s,mb4.0
CMB Columbia Colle 72.58 55 *e*P **P** **23 55 09.1 +0.7**
CMB pmax pmax
comp=Z,3.0nm,1.1s,mb4.0
NAO01 NORSAR Array S 72.69 337 P **P** **23 55 08.4 -0.3**
AKASG Malin Array Be 72.85 322 P **P** **23 55 08.9 -0.9**
comp=Z,4.5nm,0.6s,mb4.5,baz=44,slow=6.0,SNR=12
AKASG pP pP 23 55 27.6 -0.6
comp=Z,3.4nm,0.4s,baz=44,slow=5.6,SNR=8.9
AKASG Malin Array Be 72.85 322 P **P** **23 55 08.9 -0.9**
AKASG *PP pP 23 55 27.7 -0.5
AKASG pmax pmax
comp=Z,5.0nm,0.6s
NVAR Mina Array Bea 73.67 54 P **P** **23 55 15.8 +1.0**
comp=Z,2.7nm,0.7s,mb4.1,baz=296,slow=5.7,SNR=26
NVAR pP pP 23 55 36.1 +2.9
comp=Z,1.0nm,0.6s,baz=281,slow=4.4,SNR=3.9
IMW Indian Meadow 74.66 46 *e*P **P** **23 55 21.7 +1.2**
comp=Z,2.2nm,0.7s,mb4.0
RLMT Red Lodge 74.79 44 *e*P **P** **23 55 21.7 +0.5**
MIB Mutribah 74.98 296 *e*P **P** **23 55 21.1 -1.5**
MIB AMb AMB 23 55 25.3
comp=Z,14nm,1.2s,mb4.6
NWAO Narrogin (SRO) 75.07 201 P **P** **23 55 23.1 +0.4**
NWAO Narrogin (SRO) 75.07 201 P **P** **23 55 23.2 +0.4**
RDF Al-Radifah 75.35 295 *e*P **P** **23 55 23.4 -1.4**
RDF AMb AMB 23 55 26.9
comp=Z,40nm,1.2s,mb5.0
NAY Al-Naaiem 75.38 296 *e*P **P** **23 55 23.3 -1.6**
NAY AMb AMB 23 55 24.4
comp=Z,6.5nm,0.8s,mb4.4
MALT Malatya 75.71 308 *e*P **P** **23 55 26.5 -0.2**
comp=Z,4.0nm,0.9s,mb4.2
MALT Malatya 75.71 308 *e*P **P** **23 55 26.5 -0.1**
MALT pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
BORG Borgarnes 75.72 353 P **P** **23 55 25.4 -0.8**
BORG Borgarnes 75.72 353 P **P** **23 55 25.4 -0.8**
HWUT Hardware Ranch 75.77 48 *e*P **P** **23 55 27.9 +1.0**
comp=Z,1.8nm,0.8s,mb3.9
PDAR Pinedale Array 76.16 46 P **P** **23 55 29.4 +0.3**
comp=Z,2.1nm,0.6s,mb4.0,baz=286,slow=2.5,SNR=22
PDAR pP pP 23 55 49.6 +2.0
comp=Z,0.7nm,0.5s,baz=343,slow=3.1,SNR=3.0
KWP Kalwaria Pacla 76.64 324 *e*P **P** **23 55 31.8 +0.2**
comp=Z,5.9nm,0.9s,mb4.3
KWP *e* pP 23 55 50.0 -0.2
KWP Kalwaria Pacla 76.64 324 *e*P **P** **23 55 31.8 +0.1**
KWP *e* pP 23 55 50.0 -0.2
KWP pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
BUR08 Bucovina Ar. S 76.87 322 *e*P **P** **23 55 33.0 -0.1**
BUR08 *e* pP 23 55 51.7 +0.1
MSU Marysvale 77.38 51 *e*P **P** **23 55 38.1 +2.0**
comp=Z,6.1nm,1.2s,mb4.2
MSU Marysvale 77.38 51 *e*P **P** **23 55 38.1 +2.0**
MSU pmax pmax
comp=Z,6.0nm,1.2s,mb4.2
OJC Ojcow 77.51 326 *e*P pP 23 55 52.1 -3.0
BRTR Keskin Array B 77.68 311 P **P** **23 55 37.6 -0.2**
comp=Z,0.7nm,0.5s,mb3.6,baz=116,slow=3.9,SNR=6.7
BRTR pP pP 23 55 56.6 +0.2
comp=Z,0.4nm,0.4s,baz=102,slow=5.2,SNR=3.1
BRTR PP PP 23 58 32.5 -0.7
comp=Z,0.5nm,0.7s,baz=79,slow=6.4,SNR=4.2
BRTR Keskin Array B 77.68 311 *ce*P **P** **23 55 37.4 -0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
SRU San Rafael 77.98 49 *e*P **P** **23 55 40.0 +0.6**
comp=Z,7.1nm,0.7s,mb4.5
SRU San Rafael 77.98 49 *e*P **P** **23 55 40.0 +0.6**
SRU pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
MORC Moravsky Berou 78.81 327 P **P** **23 55 43.6 -0.1**
MORC Moravsky Berou 78.81 327 P **P** **23 55 43.7 -0.1**
PSZ Piszkesteto 79.16 324 P **P** **23 55 45.3 -0.5**
PSZ Piszkesteto 79.16 324 P **P** **23 55 45.3 -0.4**
CLL Collm 79.48 330 *e*P **P** **23 55 47.0 -0.4**
CLL *i* pP pP 23 56 05.8 -0.2
CLL Collm 79.48 330 *e*P **P** **23 55 47.0 -0.4**
CLL *i* *PP pP 23 56 05.8 -0.2
GERES GERESS Array B 81.13 328 P **P** **23 55 55.9 -0.4**
comp=Z,0.6nm,0.6s,mb3.6,baz=32,slow=5.3,SNR=5.8
GERES pP pP 23 56 15.1 +0.1
comp=Z,0.9nm,0.5s,baz=43,slow=6.0,SNR=7.1
GERES GERESS Array B 81.13 328 P **P** **23 55 55.9 -0.4**
GERES *PP pP 23 56 15.1 +0.1
GERES pmax pmax
comp=Z,1.0nm,0.6s
ANMO Albuquerque 83.18 50 P **P** **23 56 08.8 +1.5**
comp=Z,1.6nm,0.8s,mb3.9,baz=328,slow=6.9,SNR=4.4
ANMO Albuquerque 83.18 50 P **P** **23 56 08.8 +1.5**
ANMO pmax pmax
comp=Z,2.0nm,0.8s
SCHQ Schefferville 83.39 16 P **P** **23 56 08.7 +0.7**
SFTF Sexfontaines 85.00 333 *e*P **P** **23 56 20.3 +4.0**
LOR Lormes 86.21 333 *e*P **P** **23 56 26.2 +3.9**
LOR *ep*P pP 23 56 40.7 -0.5
LOR Lormes 86.21 333 *e*P **P** **23 56 26.2 +3.9**
LOR *e**PP pP 23 56 40.7 -0.5
LDF La Druitiere 86.42 336 *e*P **P** **23 56 27.5 +4.2**
LDF *ep*P pP 23 56 42.0 -0.2
LDF La Druitiere 86.42 336 *e*P **P** **23 56 27.5 +4.2**
LDF *e**PP pP 23 56 42.0 -0.2
SSF Saint Saulge 86.52 333 *e*P **P** **23 56 27.8 +4.0**
comp=Z,2.3nm,0.8s,mb4.2
SSF *ep*P pP 23 56 42.3 -0.4
SSF Saint Saulge 86.52 333 *e*P **P** **23 56 27.8 +4.0**
SSF *e**PP pP 23 56 42.3 -0.4
SSF pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
LPL La Plagne 86.62 330 *e*P **P** **23 56 28.6 +4.3**
LPL *ep*P pP 23 56 43.2 0.0
LPL La Plagne 86.62 330 *e*P **P** **23 56 28.6 +4.3**
LPL *e**PP pP 23 56 43.2 0.0
LPG La Plagne 86.63 330 *e*P **P** **23 56 28.2 +3.8**
comp=Z,3.5nm,0.7s,mb4.1
LPG La Plagne 86.63 330 *e*P **P** **23 56 28.2 +3.8**
comp=Z,1.8nm,0.6s,mb4.2
LPG *ep*P pP 23 56 42.6 -0.7
LPG La Plagne 86.63 330 *e*P **P** **23 56 28.2 +3.8**
LPG *e**PP pP 23 56 42.6 -0.7
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
AVF Avril sur Loir 86.80 333 *e*P **P** **23 56 29.4 +4.2**
AVF *ep*P pP 23 56 43.8 -0.3
AVF Avril sur Loir 86.80 333 *e*P **P** **23 56 29.4 +4.2**
AVF *e**PP pP 23 56 43.8 -0.3
GRR Gorron 86.83 336 *e*P **P** **23 56 29.4 +4.1**
GRR *ep*P pP 23 56 44.0 -0.2
GRR Gorron 86.83 336 *e*P **P** **23 56 29.4 +4.1**
GRR *e**PP pP 23 56 44.0 -0.2
MBDF Montbardon 87.26 330 *e*P **P** **23 56 28.9 +1.4**
comp=Z,3.6nm,0.7s,mb4.1
MBDF *ep*P pP 23 56 43.5 -2.9
MBDF Montbardon 87.26 330 *e*P **P** **23 56 28.9 +1.4**
comp=Z,1.8nm,0.7s,mb4.1
MBDF *ep*P pP 23 56 43.5 -2.9
MBDF Montbardon 87.26 330 *e*P **P** **23 56 28.9 +1.4**
MBDF *e**PP pP 23 56 43.5 -2.9
MBDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
TXAR Lajitas Array 88.78 53 P **P** **23 56 35.2 +0.2**
comp=Z,1.3nm,0.7s,mb4.1,baz=302,slow=3.4,SNR=15
TXAR pP pP 23 56 56.2 +2.3
comp=Z,0.7nm,0.8s,baz=268,slow=4.5,SNR=2.5
TXAR Lajitas Array 88.78 53 P **P** **23 56 35.2 +0.2**
TXAR *PP pP 23 56 56.2 +2.3
TXAR pmax pmax
comp=Z,1.0nm,0.7s
LFF La Frestale 89.32 333 *e*P **P** **23 56 41.9 +4.7**
LFF La Frestale 89.32 333 *e*P **P** **23 56 41.9 +4.7**
TRY Troy 92.56 25 P **P** **23 56 52.9 +0.6**
comp=Z,42nm,0.8s
QSPA South Pole Qui 128.75 180 PKP PKPdf 00 02 46.0 -0.5
comp=Z,0.8nm,0.6s,baz=249,slow=6.0,SNR=6.6
QSPA South Pole Qui 128.75 180 PKP PKPdf 00 02 46.0 -0.5
SNAA Sanae 142.68 198 PKhKP PKPpre 00 03 07.3
comp=Z,0.2nm,0.4s,baz=212,slow=7.0,SNR=9.1
SNAA Sanae 142.68 198 PKHKP PKPpre 00 03 07.3
LPAZ La Paz 145.51 57 PKPbc PKPbc 00 03 19.8 +0.4
comp=Z,4.4nm,0.7s,baz=334,slow=4.2,SNR=16

*NEIC **23** 23:45:31.3, 16°.68N×100°.23W, h5km, MD3.7(MEX), After MEX.*

MEX 23 23:45:31.3±0.9, 16°.68N×100°.23W, h5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.37**	**355**	*e*P	Pg	23 45 38.1	-0.3
CAIG				*i* S	Sg	23 45 45.2	+1.9
CAIG	**El Cayaco**	**0.37**	**355**	*e*P	Pg	23 45 38.1	-0.3
CAIG				*i* S	Sg	23 45 45.2	+1.9
ACX	**Acapulco**	**0.41**	**62**	*e*P	Pg	23 45 36.6	-2.5
ACX				*i* S	Sg	23 45 43.5	-1.0
ACX	**Acapulco**	**0.41**	**62**	*e*P	Pg	23 45 36.6	-2.5
ACX				*i* S	Sg	23 45 43.5	-1.0
ZIIG	**Zihuatanejo**	**1.50**	**308**	*e*P	Pn	23 45 56.4	-2.4
ZIIG				*i* S	Sn	23 46 13.3	-5.4
ZIIG	**Zihuatanejo**	**1.50**	**308**	*e*P	Pn	23 45 56.4	-2.4
ZIIG				*i* S	Sn	23 46 13.3	-5.4
PNIG	**Pinotepa**	**2.04**	**98**	*e*P	Pn	23 46 03.6	-2.8
PNIG				*i* S	Sn	23 46 28.4	-3.8
PNIG	**Pinotepa**	**2.04**	**98**	*e*P	Pn	23 46 03.6	-2.8
PNIG				*i* S	Sn	23 46 28.4	-3.8
UTMO	**Huajuapan**	**2.59**	**63**	*i* P	Pn	23 46 12.4	-1.4
UTMO				*i* S	Sn	23 46 41.8	-4.0

WEL 23 23:55:30.7±0.5, 37°.93S×176°.15E, h191km±4km, ML3.8/11, Error ellipse: s-maj=4.1km s-min=3.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.83**	**114**	PN	Pn	23 55 58.5	+0.1
URZ				SN	Sn	23 56 20.1	+0.2
MWZ	**Matawai**	**1.16**	**111**	PN	Pn	23 56 00.9	+0.1
MWZ				SN	Sn	23 56 23.8	-0.2
BKZ	**Black Stump Fm**	**1.27**	**168**	PN	Pn	23 56 01.7	+0.1
BKZ				SN	Sn	23 56 25.1	-0.6
TWVZ	**Taurewa**	**1.27**	**206**	PN	Pn	23 56 02.1	+0.4
FWVZ	**Far West T-bar**	**1.41**	**199**	PN	Pn	23 56 03.1	+0.4
MOVZ	**Moawhango**	**1.51**	**192**	PN	Pn	23 56 03.4	-0.4
BHHZ	**Black Hill Sta**	**1.56**	**182**	PN	Pn	23 56 03.9	-0.3
MCHZ	**McNeill Hill**	**1.58**	**164**	PN	Pn	23 56 05.0	+0.7
KNZ	**Kokohu**	**1.62**	**133**	PN	Pn	23 56 04.9	+0.2
KNZ				SN	Sn	23 56 30.2	-1.0
PUZ	**Puketiti**	**1.67**	**96**	PN	Pn	23 56 04.8	-0.5
CNGZ	**Carnagh Statio**	**1.72**	**110**	PN	Pn	23 56 06.3	+0.6
MXZ	**Matakaoa Point**	**1.75**	**79**	PN	Pn	23 56 06.0	0.0
CKHZ	**Cape Kidnapper**	**1.88**	**158**	PN	Pn	23 56 07.2	0.0
KAHZ	**Kahuranaki**	**1.95**	**163**	PN	Pn	23 56 08.0	-0.1
PNHZ	**Pukenui**	**1.99**	**179**	PN	Pn	23 56 07.7	-0.7
WAZ	**Wanganui**	**2.04**	**206**	PN	Pn	23 56 08.6	-0.4
TSZ	**Takapari Road**	**2.14**	**184**	PN	Pn	23 56 09.1	-0.9
WPHZ	**Waipukurau**	**2.15**	**174**	PN	Pn	23 56 09.5	-0.7
PXZ	**Pawanui**	**2.18**	**165**	PN	Pn	23 56 09.8	-0.6
PRHZ	**Porangahau**	**2.37**	**171**	PN	Pn	23 56 11.3	-1.3
POWZ	**Post Office Ro**	**2.48**	**187**	PN	Pn	23 56 12.3	-1.5
MRZ	**Mangatainoka R**	**2.77**	**189**	PN	Pn	23 56 15.1	-2.0
OGWZ	**Otaki Gorge**	**2.99**	**194**	PN	Pn	23 56 17.6	-2.1
HOWZ	**Holdsworth Sta**	**3.01**	**189**	PN	Pn	23 56 17.5	-2.4
KIW	**Kapiti Island**	**3.09**	**198**	PN	Pn	23 56 18.3	-2.6
CAW	**Cannon Point**	**3.29**	**194**	PN	Pn	23 56 20.6	-2.7
DUWZ	**D'Urville Isla**	**3.35**	**210**	PN	Pn	23 56 21.2	-2.9
TRWZ	**Traveller**	**3.49**	**186**	PN	Pn	23 56 23.0	-2.7
MSWZ	**Moikau Station**	**3.56**	**191**	PN	Pn	23 56 23.4	-3.2
SNZO	**South Karori**	**3.56**	**198**	PN	Pn	23 56 23.4	-3.2
TCW	**Tory Channel**	**3.59**	**203**	PN	Pn	23 56 23.9	-3.1
BHW	**Baring Head**	**3.62**	**195**	PN	Pn	23 56 24.0	-3.3
PLWZ	**Palliser**	**3.71**	**190**	PN	Pn	23 56 25.0	-3.4
TUWZ	**Tuamarina**	**3.89**	**205**	PN	Pn	23 56 27.5	-3.3
NNZ	**Nelson**	**3.92**	**212**	PN	Pn	23 56 27.8	-3.3
QRZ	**Quartz Range**	**4.03**	**223**	PN	Pn	23 56 28.5	-4.0
BSWZ	**Blackbirch Sta**	**4.17**	**204**	PN	Pn	23 56 30.8	-3.5
THZ	**Tophouse**	**4.58**	**212**	PN	Pn	23 56 35.2	-4.2
KHZ	**Kahutara**	**4.91**	**203**	PN	Pn	23 56 39.9	-3.8
DSZ	**Denniston Nort**	**5.07**	**220**	PN	Pn	23 56 40.9	-4.8
MQZ	**McQueen's Vall**	**6.36**	**204**	PN	Pn	23 56 56.8	-5.6

IDC 23 23:57:32.9±4.6, 49°.55S×110°.27E, h0km, mb4.1/2, mb1 4.3/2, mb1mx3.9/13, mbtmp4.1/2, Error ellipse: s-maj=221.4km s-min=49.9km az=115.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**31.79**	**44**	P	P	00 03 59.1	+0.2
	1.3nm,0.7s,baz=210,slow=8.3,SNR=11						
WRA	**Warramunga Arr**	**35.24**	**42**	P	P	00 04 28.9	-0.1
	1.1nm,0.6s,baz=207,slow=8.3,SNR=8.2						
NVAR	**Mina Array Bea**	**143.92**	**89**	PKP	PKPdf	00 17 07.8	-1.8
	0.9nm,0.8s,baz=220,slow=6.8,SNR=5.6						
TXAR	**Lajitas Array**	**147.32**	**115**	PKPbc	PKPbc	00 17 18.1	0.0
	0.5nm,0.8s,baz=196,slow=2.6,SNR=4.4						

*MDD **24** 00:03:49.9±2.8, 37°.47N×15°.95W, h0km, mb3.8/7, Error ellipse: s-maj=36.2km s-min=21.5km az=165.0, PRXIMO*
*NEIC **24** 00:03:50.0, 37°.50N×15°.94W, h0km, MG3.8(MDD), After MDD.*
*INMG **24** 00:03:51.8±1.1, 37°.30N×16°.32W, h10km, ML2.4, Error ellipse: s-maj=11.6km s-min=4.4km az=128.0*
*CSEM **24** 00:03:55.0±0.4, 37°.51N×15°.48W, h10km, ML3.2/10, Error ellipse: s-maj=12.5km s-min=5.8km az=170.0*

ISC 24 00:03:55.0±1.3, 37°.64N±0°.08×15°.50W±0°.08, h10km, n67, σ0=82/101, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAR	**Madeira**	**5.04**	**194**	*e*Sn	Sx	00 05 43.1	
PMAR				A		00 05 47.9	
	7.0nm,0.2s						
PMAR	**Madeira**	**5.04**	**194**	*e*Sn	Sx	00 05 43.1	
	7.0nm,0.2s						
PMAFR	**Mafra**	**5.06**	**73**	*e*Pn	**Pn**	**00 05 11.7**	**+0.8**
PMAFR				*e*Sn	**Sn**	**00 06 11.1**	**+1.7**
PMAFR				A		00 06 15.0	
	9.1nm,0.6s						
PMAFR	**Mafra**	**5.06**	**73**	P	**Pn**	**00 05 11.6**	**+0.6**
	4.7nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**00 06 11.3**	**+1.9**
	4.0nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**5.06**	**73**	*e*Pn	**Pn**	**00 05 11.7**	**+0.8**
PMAFR				*e*Sn	**Sn**	**00 06 11.1**	**+1.7**
	9.1nm,0.6s						
PVFI	**Vila Bisbo**	**5.33**	**93**	*e*Pn	**Pn**	**00 05 14.0**	**-0.7**
PVFI				*e*Sn	**Sn**	**00 06 16.4**	**+0.2**
PVFI				A		00 06 18.7	
	6.1nm,0.5s						
PVFI	**Vila Bisbo**	**5.33**	**93**	P	**Pn**	**00 05 13.8**	**-0.9**
PVFI				S	**Sn**	**00 06 16.0**	**-0.2**
PVFI	**Vila Bisbo**	**5.33**	**93**	P	**Pn**	**00 05 13.8**	**-0.9**
	0.7nm,0.1s,SNR=7.9						
PVFI				S	**Sn**	**00 06 16.0**	**-0.2**
	3.2nm,0.1s,SNR=7.9						
PVFI	**Vila Bisbo**	**5.33**	**93**	*e*Pn	**Pn**	**00 05 14.0**	**-0.7**
PVFI				S	**Sn**	**00 06 16.0**	**-0.2**
	3.2nm,0.1s,SNR=7.9						
PVFI				*e*Sn	**Sn**	**00 06 16.4**	**+0.2**
	6.1nm,0.5s						
PTEO	**Sao Teotonio**	**5.38**	**89**	*e*Pn	**Pn**	**00 05 14.7**	**-0.6**
PTEO				*e*Sn	**Sn**	**00 06 16.8**	**-0.5**
PTEO				A		00 06 21.5	
	2.0nm,0.3s						
PTEO	**Sao Teotonio**	**5.38**	**89**	P	**Pn**	**00 05 14.7**	**-0.6**
PTEO				S	**Sn**	**00 06 16.8**	**-0.5**
	1.0nm,0.3s						
PTEO	**Sao Teotonio**	**5.38**	**89**	*e*Pn	**Pn**	**00 05 14.7**	**-0.6**
PTEO				*e*Sn	**Sn**	**00 06 16.8**	**-0.5**
	2.0nm,0.3s						
MORF	**Marmelete**	**5.46**	**91**	*e*Pn	**Pn**	**00 05 15.6**	**-0.8**
MORF				*e*Sn	**Sn**	**00 06 19.1**	**0.0**
MORF				A		00 06 24.5	
	2.5nm,0.1s						
MORF	**Marmelete**	**5.46**	**91**	P	**Pn**	**00 05 15.6**	**-0.8**
MORF				S	**Sn**	**00 06 19.1**	**0.0**
	2.5nm,0.1s						
MORF	**Marmelete**	**5.46**	**91**	*e*Pn	**Pn**	**00 05 15.6**	**-0.8**
MORF				*e*Sn	**Sn**	**00 06 19.1**	**0.0**
	2.5nm,0.1s						
MOE	**Montemor**	**5.71**	**79**	*e*Sn	**Sn**	**00 06 26.9**	**+1.6**
MOE	**Montemor**	**5.71**	**79**	S	**Sn**	**00 06 26.9**	**+1.6**
MOE	**Montemor**	**5.71**	**79**	*e*Sn	**Sn**	**00 06 26.9**	**+1.6**
MESJ	**Messejana**	**5.77**	**86**	*e*P	**Pn**	**00 05 20.8**	**+0.1**
MESJ				*e*S	**Sn**	**00 06 27.7**	**+0.8**
MESJ				*e*S	**Sn**	**00 06 27.7**	**+0.8**
PTOM	**Tomar**	**5.89**	**68**	*e*Sn	**Sn**	**00 06 30.7**	**+0.9**
PTOM				A		00 06 38.7	
	2.5nm,0.2s						
PTOM	**Tomar**	**5.89**	**68**	S	**Sn**	**00 06 30.7**	**+0.9**
	1.2nm,0.2s						
PTOM	**Tomar**	**5.89**	**68**	*e*Sn	**Sn**	**00 06 30.7**	**+0.9**
	2.5nm,0.2s						
PCVE	**Castro Verde**	**5.92**	**88**	*e*Pn	**Pn**	**00 05 23.2**	**+0.5**
PCVE				*e*Sn	**Sn**	**00 06 30.9**	**+0.3**
PCVE				A		00 06 39.0	
	1.3nm,0.4s						
PCVE	**Castro Verde**	**5.92**	**88**	P	**Pn**	**00 05 23.2**	**+0.5**
PCVE				S	**Sn**	**00 06 30.9**	**+0.3**
	1.3nm,0.4s						
PCVE	**Castro Verde**	**5.92**	**88**	*e*Pn	**Pn**	**00 05 23.2**	**+0.5**
PCVE				*e*Sn	**Sn**	**00 06 30.9**	**+0.3**
	1.3nm,0.4s						
EVO	**Evora**	**5.97**	**79**	*e*Sn	**Sn**	**00 06 32.8**	**+1.0**
EVO	**Evora**	**5.97**	**79**	S	**Sn**	**00 06 32.8**	**+1.0**
EVO	**Evora**	**5.97**	**79**	*e*Sn	**Sn**	**00 06 32.8**	**+1.0**
PBDV	**Barranco-do-Ve**	**6.03**	**91**	*e*Sn	**Sn**	**00 06 34.7**	**+1.3**
PBDV				A		00 06 39.4	
	1.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**6.03**	**91**	S	**Sn**	**00 06 34.7**	**+1.3**
	1.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**6.03**	**91**	*e*Sn	**Sn**	**00 06 34.7**	**+1.3**
	1.2nm,0.2s						
PBEJ	**Beja**	**6.05**	**84**	*e*Sn	**Sn**	**00 06 33.5**	**-0.3**
PBEJ				A		00 06 39.2	
	1.3nm,0.3s						
PBEJ	**Beja**	**6.05**	**84**	S	**Sn**	**00 06 33.5**	**-0.3**
	0.6nm,0.3s						
PBEJ	**Beja**	**6.05**	**84**	*e*Sn	**Sn**	**00 06 33.5**	**-0.3**
	1.3nm,0.3s						
PVAQ	**Vaqueiros**	**6.19**	**90**	*e*Sn	**Sn**	**00 06 36.9**	**-0.3**
PVAQ				A		00 06 47.8	
	1.8nm,0.7s						
PVAQ	**Vaqueiros**	**6.19**	**90**	S	**Sn**	**00 06 36.9**	**-0.3**
	1.8nm,0.7s						
PVAQ	**Vaqueiros**	**6.19**	**90**	*e*Sn	**Sn**	**00 06 36.9**	**-0.3**
	1.8nm,0.7s						
PESTR	**Estremoz**	**6.34**	**76**	*e*Sn	**Sn**	**00 06 41.0**	**0.0**
PESTR	**Estremoz**	**6.34**	**76**	S	**Sn**	**00 06 41.0**	**0.0**
PESTR	**Estremoz**	**6.34**	**76**	*e*Sn	**Sn**	**00 06 41.0**	**0.0**
EGRO	**El Granado**	**6.36**	**89**	P	**Pn**	**00 05 29.2**	**+0.4**
EGRO				S	**Sn**	**00 06 41.0**	**-0.6**
EGRO	**El Granado**	**6.36**	**89**	P	**Pn**	**00 05 29.2**	**+0.4**
	0.2nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**00 06 41.0**	**-0.6**
	1.4nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**6.36**	**89**	P	**Pn**	**00 05 29.2**	**+0.4**
	0.2nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**00 06 41.0**	**-0.6**
	1.4nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**6.60**	**72**	*e*Pn	**Pn**	**00 05 33.1**	**+1.0**
PMRV				*e*Sn	**Sn**	**00 06 48.2**	**+0.9**
PMRV	**Marv??o**	**6.60**	**72**	P	**Pn**	**00 05 33.1**	**+1.0**
PMRV				S	**Sn**	**00 06 48.2**	**+0.9**
PMRV	**Marv??o**	**6.60**	**72**	*e*Pn	**Pn**	**00 05 33.1**	**+1.0**
PMRV				*e*Sn	**Sn**	**00 06 48.2**	**+0.9**
PBAR	**Barrancos**	**6.71**	**83**	*e*Sn	**Sn**	**00 06 50.1**	**+0.1**
PBAR				A		00 06 55.3	
	1.1nm,0.5s						
PBAR	**Barrancos**	**6.71**	**83**	S	**Sn**	**00 06 50.1**	**+0.1**
	1.1nm,0.5s						
PBAR	**Barrancos**	**6.71**	**83**	*e*Sn	**Sn**	**00 06 50.1**	**+0.1**
	1.1nm,0.5s						
EBAD	**Badajoz**	**6.77**	**78**	P	**Pn**	**00 05 34.3**	**-0.1**
EBAD				S	**Sn**	**00 06 50.9**	**-0.7**
EBAD	**Badajoz**	**6.77**	**78**	P	**Pn**	**00 05 34.3**	**-0.1**
	0.3nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**00 06 50.9**	**-0.7**
	2.7nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**6.77**	**78**	P	**Pn**	**00 05 34.3**	**-0.1**
	0.3nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**00 06 50.9**	**-0.7**
	2.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.00**	**86**	P	**Pn**	**00 05 37.6**	**+0.1**
EMIN				S	**Sn**	**00 06 56.6**	**-0.5**
EMIN	**Mina Concepcio**	**7.00**	**86**	P	**Pn**	**00 05 37.6**	**+0.1**
	0.2nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**00 06 56.6**	**-0.5**
	0.2nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.00**	**86**	P	**Pn**	**00 05 37.6**	**+0.1**
	0.2nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**00 06 56.6**	**-0.5**
	0.2nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**7.11**	**51**	S	**Sn**	**00 06 59.3**	**-0.7**
	1.5nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**7.44**	**59**	S	**Sn**	**00 07 06.3**	**-1.7**
	0.8nm,0.1s,SNR=7.9						
**ES

Error ellipse: s-maj=3.2km s-min=2.2km az=147.4
*ROM **24** 00:31:46.9±1.5,41°.46N×19°.48E, h10km, Md2.9/11, Ml2.6/6, Error ellipse: s-maj=23.8km s-min=5.1km az=86.0*
*CSEM **24** 00:31:46.8±0.1,41°.43N×19°.48E, h2km, ML2.6, Error ellipse: s-maj=3.0km s-min=2.2km az=65.0*
*THE **24** 00:31:47.5,41°.55N×19°.62E, h0km±5km, ML2.9/2, Error ellipse: s-maj=9.8km s-min=1.8km az=286.0*
*ATH **24** 00:31:47.7,41°.52N×19°.61E, h23km±13km, MD3.6/5*
*PDG **24** 00:31:48.2±0.3,41°.50N×19°.61E, h11km, ML2.7/10, Error ellipse: s-maj=1.2km s-min=1.2km az=0.0*
*NEIC **24** 00:31:48.2,41°.50N×19°.61E, h11km, ML2.7(PDG), After PDG.*
*BEO **24** 00:31:49.6±0.4,41°.51N×19°.77E, h7km±2km, ML2.6/9*
ISC 24 00:31:47.2±0.4,41°.42N±0°.02×19°.49E±0°.02, h4km±3km, n117, σ1§18/185, 13C-20D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**104**	*e*Pg	**Pg**	**00 31 52.5**	**-0.4**
TIR				*e*Sg	**Sg**	**00 31 56.9**	**+0.2**
TIR	**Tirane**	**0.29**	**104**	P	**Pg**	**00 31 52.4**	**-0.5**
TIR	**Tirane**	**0.29**	**104**	*e*Pg	**Pg**	**00 31 52.5**	**-0.4**
TIR				*e*Sg	**Sg**	**00 31 56.9**	**+0.2**
ULC	**Ulcinj**	**0.57**	**342**	⇓*i*Pg	**Pg**	**00 31 57.9**	**-0.4**
ULC				*e*Sg	**Sg**	**00 32 07.0**	**+1.3**
ULC	**Ulcinj**	**0.57**	**342**	⇓*i*Pg	**Pg**	**00 31 57.9**	**-0.4**
ULC				*e*Sg	**Sg**	**00 32 07.0**	**+1.3**
PUK	**Puka**	**0.69**	**26**	*e*PG	**Pg**	**00 31 59.0**	**-1.6**
PUK				*i* SG	**Sg**	**00 32 11.0**	**+1.4**
PUK	**Puka** SNR=100	**0.69**	**26**	*e*Pg	**Pg**	**00 31 59.0**	**-1.6**
PUK				*i* Sg	**Sg**	**00 32 11.0**	**+1.4**
	SNR=100						
BUM	**Brajici-Budva**	**0.99**	**334**	⇓*i*Pg	**Pg**	**00 32 06.4**	**+0.3**
BUM				*e*Sg	**Sg**	**00 32 21.1**	**+2.2**
BUM	**Brajici-Budva**	**0.99**	**334**	⇓*i*Pg	**Pg**	**00 32 06.4**	**+0.3**
BUM				*e*Sg	**Sg**	**00 32 21.1**	**+2.2**
PDG	**Podgorica**	**1.02**	**351**	*e*Pg	**Pg**	**00 32 06.4**	**-0.5**
PDG				*e*Sg	**Sg**	**00 32 21.2**	**+1.0**
PDG	**Podgorica**	**1.02**	**351**	*e*Pg	**Pg**	**00 32 06.4**	**-0.5**
PDG				*e*Sg	**Sg**	**00 32 21.2**	**+1.0**
TTG	**Podgorica**	**1.02**	**351**	⇓*i*Pg	**Pg**	**00 32 06.3**	**-0.6**
TTG				*e*Sg	**Sg**	**00 32 21.5**	**+1.3**
TTG	**Podgorica**	**1.02**	**351**	⇓*i*Pg	**Pg**	**00 32 06.3**	**-0.6**
TTG				*e*Sg	**Sg**	**00 32 21.5**	**+1.3**
BCI	**Bajram Curri**	**1.04**	**24**	*e*PG	**Pg**	**00 32 05.6**	**-1.6**
BCI				*i* SG	**Sg**	**00 32 22.6**	**+1.8**
BCI	**Bajram Curri** SNR=95	**1.04**	**24**	*e*Pg	**Pg**	**00 32 05.6**	**-1.6**
BCI				*i* Sg	**Sg**	**00 32 22.6**	**+1.8**
	SNR=95						
PVY	**Plav**	**1.23**	**17**	⇑*i*Pg	**Pg**	**00 32 09.3**	**-1.5**
PVY				*e*Sg	**Sg**	**00 32 26.9**	**+0.1**
PVY	**Plav**	**1.23**	**17**	⇑*i*Pg	**Pg**	**00 32 09.3**	**-1.5**
PVY				*e*Sg	**Sg**	**00 32 26.9**	**+0.1**
KBN	**Korca**	**1.26**	**128**	*e*PG	**Pg**	**00 32 11.3**	**-0.1**
KBN				*i* SG	**Sg**	**00 32 31.6**	**+3.8**
KBN	**Korca** SNR=94	**1.26**	**128**	*e*Pg	**Pg**	**00 32 11.3**	**-0.1**
HCY	**Herceg Novi**	**1.27**	**325**	⇑*i*Pg	**Pg**	**00 32 11.6**	**+0.1**
HCY				*e*Sg	**Sg**	**00 32 31.0**	**+3.1**
HCY	**Herceg Novi**	**1.27**	**325**	⇑*i*Pg	**Pg**	**00 32 11.6**	**+0.1**
HCY				*e*Sg	**Sg**	**00 32 31.0**	**+3.1**
KRUS	**Krusevo**	**1.33**	**92**	*e*Pg	**Pn**	**00 32 09.3**	**-3.2**
NKY	**Niksic**	**1.44**	**346**	⇑*i*Pg	**Pg**	**00 32 13.9**	**-1.0**
NKY				*e*Sg	**Sg**	**00 32 35.6**	**+2.1**
NKY	**Niksic**	**1.44**	**346**	⇑*i*Pg	**Pg**	**00 32 13.9**	**-1.0**
NKY				*e*Sg	**Sg**	**00 32 35.6**	**+2.1**
BIA	**Bitola**	**1.44**	**105**	P	**Pn**	**00 32 13.1**	**-1.0**
BIA				S	**Sb**	**00 33.4**	**0.0**
BIA	**Bitola**	**1.44**	**105**	*e*Pn	**Pn**	**00 32 11.6**	**-2.5**
BIA				*e*Sg	**Sg**	**00 32 32.2**	**-1.3**
BIA	**Bitola**	**1.44**	**105**	P	**Pn**	**00 32 13.1**	**-1.0**
BIA				S	**Sb**	**00 33.4**	**0.0**
BEY	**Berane**	**1.48**	**12**	⇑*i*Pg	**Pn**	**00 32 13.9**	**-0.9**
BEY				*e*Sg	**Sg**	**00 32 35.6**	**+0.6**
IVA	**Berane**	**1.48**	**12**	⇑*i*Pg	**Pn**	**00 32 13.9**	**-0.9**
IVA				*e*Sg	**Sg**	**00 32 35.6**	**+0.6**
IVA	**Berane**	**1.48**	**12**	⇑*i*Pg	**Pn**	**00 32 13.9**	**-0.9**
IVA				*e*Sg	**Sg**	**00 32 35.6**	**+0.6**
LSK	**Leskovik**	**1.52**	**146**	*e*PG	**Pg**	**00 32 17.6**	**+1.2**
LSK				*i* SG	**Sg**	**00 32 39.6**	**+3.5**
LSK	**Leskovik** SNR=93	**1.52**	**146**	*e*Pg	**Pg**	**00 32 17.6**	**+1.2**
LSK				*i* Sg	**Sg**	**00 32 39.6**	**+3.5**
	SNR=93						
NEST	**Nestorio**	**1.55**	**130**	P	**Pn**	**00 32 15.9**	**+0.3**
NEST				S	**Sn**	**00 32 38.5**	**+2.3**
NEST	**Nestorio**	**1.55**	**130**	P	**Pn**	**00 32 15.9**	**+0.3**
NEST				S	**Sn**	**00 32 38.5**	**+2.3**
SCTE	**Santa Cesarea**	**1.55**	**210**	Pn	**Pn**	**00 32 15.9**	**+0.3**
SCTE				Sn	**Sn**	**00 32 36.9**	**+0.7**
SCTE	**Santa Cesarea**	**1.55**	**210**	Pn	**Pn**	**00 32 15.9**	**+0.3**
SCTE				Sn	**Sn**	**00 32 36.9**	**+0.7**
FNA	**Florina**	**1.56**	**113**	P	**Pn**	**00 32 14.7**	**-1.1**
FNA				S	**Sn**	**00 32 36.8**	**+0.3**
FNA	**Florina**	**1.56**	**113**	P	**Pn**	**00 32 14.7**	**-1.1**
FNA				S	**Sn**	**00 32 36.8**	**+0.3**
SKO	**Skopje**	**1.56**	**69**	*e*Pg	**Pn**	**00 32 13.9**	**-1.9**
SKO				*e*Sg	**Sg**	**00 32 32.2**	**-5.3**
SKO	**Skopje**	**1.56**	**69**	*e*Pn	**Pn**	**00 32 12.2**	**-3.6**
SKO				*e*Sg	**Sg**	**00 32 33.5**	**-4.0**
SRN	**Sarande**	**1.58**	**166**	*e*PG	**Pg**	**00 32 18.3**	**+0.7**
SRN	**Sarande** SNR=93	**1.58**	**166**	*e*Pg	**Pg**	**00 32 18.3**	**+0.7**
BRY	**Bratogost**	**1.64**	**335**	⇓*i*Pn	**Pn**	**00 32 17.1**	**+0.2**
BRY				*e*Sn	**Sn**	**00 32 40.9**	**+2.5**
BRY	**Bratogost**	**1.64**	**335**	⇓*i*Pn	**Pn**	**00 32 17.1**	**+0.2**
BRY				*e*Sn	**Sn**	**00 32 40.9**	**+2.5**
KEK	**Kerkira**	**1.72**	**172**	*e*PN	**Pn**	**00 32 19.4**	**+1.4**
KEK				*e*SN	**Sn**	**00 32 42.8**	**+2.4**
KEK	**Kerkira**	**1.72**	**172**	*e*Pn	**Pn**	**00 32 19.4**	**+1.4**
KEK				*e*Sn	**Sn**	**00 32 42.8**	**+2.4**
UPM	**Unac-Piva**	**1.83**	**347**	⇓*i*Pn	**Pn**	**00 32 19.9**	**+0.3**
UPM				*e*Sn	**Sn**	**00 32 45.1**	**+1.8**
UPM	**Unac-Piva**	**1.83**	**347**	⇓*i*Pn	**Pn**	**00 32 19.9**	**+0.3**
UPM				*e*Sn	**Sn**	**00 32 45.1**	**+1.8**
SJES	**Sjenica**	**1.88**	**11**	⇑*i*Pn	**Pn**	**00 32 20.6**	**+0.4**
SJES				*e*Sg	**Sg**	**00 32 46.1**	**-1.5**
SJES	**Sjenica**	**1.88**	**11**	⇑*i*Pn	**Pn**	**00 32 20.6**	**+0.4**
SJES				*e*Sg	**Sg**	**00 32 46.1**	**-1.5**
PLE	**Pljevlja**	**1.91**	**358**	⇓*i*Pn	**Pn**	**00 32 21.0**	**+0.4**
PLE				*e*Sn	**Sn**	**00 32 46.4**	**+1.2**
PLE	**Pljevlja**	**1.91**	**358**	⇓*i*Pn	**Pn**	**00 32 21.0**	**+0.4**
PLE				*e*Sn	**Sn**	**00 32 46.4**	**+1.2**
NOCI	**Noci** 44nm,0.5s	**1.94**	**252**	Pn	**Pn**	**00 32 20.0**	**-0.9**
NOCI	**Noci** 44nm,0.5s	**1.94**	**252**	Pn	**Pn**	**00 32 20.0**	**-0.9**
STON	**Ston**	**1.97**	**318**	*e*Pn	**Pn**	**00 32 19.3**	**-2.1**
STON				Sn	**Sn**	**00 32 44.6**	**-2.0**
STON	**Ston**	**1.97**	**318**	*e*Pn	**Pn**	**00 32 19.2**	**-2.2**
STON				Sn	**Sn**	**00 32 44.5**	**-2.1**
BAI	**Bari**	**1.99**	**262**	*e*Pn	**Pn**	**00 32 20.6**	**-1.1**
BAI				*e*Sn	**Sn**	**00 32 43.9**	**-3.2**
JAN	**Janina**	**2.04**	**149**	*e*PB	**Pb**	**00 32 24.1**	**-0.8**
JAN				*e*SN	**Sn**	**00 32 49.8**	**+1.4**
JAN	**Janina**	**2.04**	**149**	*e*Pb	**Pb**	**00 32 24.1**	**-0.8**
JAN				*e*Sn	**Sn**	**00 32 49.8**	**+1.4**
KZN	**Kozani**	**2.06**	**122**	P	**Pn**	**00 32 22.9**	**+0.3**
KZN				S	**Sn**	**00 32 49.2**	**+0.5**
KZN	**Kozani**	**2.06**	**122**	P	**Pn**	**00 32 22.9**	**+0.3**
KZN				S	**Sn**	**00 32 49.2**	**+0.5**
LTRZ	**Laterza**	**2.18**	**249**	Pn	**Pn**	**00 32 22.8**	**-1.5**
LTRZ	**Laterza** 3μm,11.0s	**2.18**	**249**	Pn	**Pn**	**00 32 22.8**	**-1.5**
LTRZ	**Laterza** 3μm,11.0s	**2.18**	**249**	Pn	**Pn**	**00 32 22.8**	**-1.5**
BARS	**Barje**	**2.23**	**50**	⇓*i*Pn	**Pn**	**00 32 24.0**	**-0.9**
BARS				*e*Sg	**Sn**	**00 32 53.1**	**+0.2**
BARS	**Barje**	**2.23**	**50**	⇓*i*Pn	**Pn**	**00 32 24.0**	**-0.9**
MATE	**Matera** 23nm,0.6s	**2.24**	**251**	Pn	**Pn**	**00 32 24.1**	**-1.0**
MATE	**Matera** 23nm,0.6s	**2.24**	**251**	Pn	**Pn**	**00 32 24.1**	**-1.0**
GRG	**Griva**	**2.25**	**101**	P	**Pn**	**00 32 24.7**	**-0.5**
GRG				S	**Sn**	**00 32 53.2**	**-0.2**
GRG	**Griva**	**2.25**	**101**	P	**Pn**	**00 32 24.7**	**-0.5**
GRG				S	**Sn**	**00 32 53.2**	**-0.2**
VAY	**Valandovo**	**2.32**	**91**	*e*Pn	**Pn**	**00 32 27.5**	**+1.2**
VAY				*e*Sg	**Sg**	**00 32 59.6**	**-2.2**
LIT	**Litokhoron**	**2.63**	**119**	*e*PN	**Pn**	**00 32 31.3**	**+0.8**
LIT	**Litokhoron**	**2.63**	**119**	*e*Pn	**Pn**	**00 32 31.3**	**+0.8**
THL	**Klokotos Trika**	**2.67**	**133**	*e*PN	**Pn**	**00 32 31.1**	**0.0**
THL	**Klokotos Trika**	**2.67**	**133**	*e*Pn	**Pn**	**00 32 31.1**	**0.0**
DIVS	**Divibare**	**2.71**	**8**	*e*Pn	**Pn**	**00 32 31.8**	**+0.3**
DIVS				*e*Sn	**Sn**	**00 33 04.6**	**-0.1**
DIVS	**Divibare**	**2.71**	**8**	*e*Pn	**Pn**	**00 32 31.8**	**+0.3**
DIVS				*e*Sn	**Sn**	**00 33 04.6**	**-0.1**
ACER	**Acerenza**	**2.75**	**258**	Pn	**Pn**	**00 32 32.3**	**+0.1**
ACER	**Acerenza**	**2.75**	**258**	Pn	**Pn**	**00 32 32.3**	**+0.1**
ACER	**Acerenza**	**2.75**	**258**	Pn	**Pn**	**00 32 32.3**	**+0.1**
ZAPS	**Zavoj**	**2.98**	**50**	*e*Pn	**Pn**	**00 32 35.7**	**+0.4**
ZAPS				*e*Sn	**Sn**	**00 33 07.3**	**-4.2**
VTS	**Vitosha**	**3.01**	**66**	*e*Pn	**Pn**	**00 32 36.1**	**+0.4**
VTS				*e*Sn	**Sn**	**00 33 06.8**	**-5.5**
VTS	**Vitosha**	**3.01**	**66**	⇑*i*P	**Pn**	**00 32 35.8**	**+0.1**
VTS	**Vitosha**	**3.01**	**66**	S	**Sn**	**00 33 11.5**	**-0.8**
VTS	**Vitosha**	**3.01**	**66**	⇑*i*P	**Pn**	**00 32 35.8**	**+0.1**
VTS	**Vitosha**	**3.01**	**66**	*e*Pn	**Pn**	**00 32 36.1**	**+0.4**
EVR	**Evrytania**	**3.07**	**144**	*e*PN	**Pn**	**00 32 37.6**	**+1.1**
EVR	**Evrytania**	**3.07**	**144**	*e*Pn	**Pn**	**00 32 37.6**	**+1.1**
AGG	**Agios Georgios**	**3.23**	**137**	*e*PN	**Pn**	**00 32 39.0**	**+0.2**
AGG				*e*SN	**Sn**	**00 33 17.4**	**-0.4**
AGG	**Agios Georgios**	**3.23**	**137**	*e*Pn	**Pn**	**00 32 39.0**	**+0.2**
AGG				*e*Sn	**Sn**	**00 33 17.4**	**-0.4**
NVR	**Nevrokopi**	**3.29**	**90**	*e*PN	**Pn**	**00 32 39.1**	**-0.5**
NVR	**Nevrokopi**	**3.29**	**90**	*e*Pn	**Pn**	**00 32 39.1**	**-0.5**
MCRV	**Calabrutti - M** 17nm,1.0s	**3.32**	**260**	Pn	**Pn**	**00 32 39.3**	**-0.7**
MCRV	**Calabrutti - M** 17nm,1.0s	**3.32**	**260**	Pn	**Pn**	**00 32 39.3**	**-0.7**
SGG	**Gregorio Mates**	**3.84**	**271**	Pn	**Pn**	**00 32 47.4**	**+0.2**
SGG	**Gregorio Mates** 16nm,0.8s	**3.84**	**271**	Pn	**Pn**	**00 32 47.4**	**+0.2**
SGG	**Gregorio Mates** 16nm,0.8s	**3.84**	**271**	Pn	**Pn**	**00 32 47.4**	**+0.2**
VAGA	**Valle Agricola** 15nm,0.6s	**3.95**	**272**	Pn	**Pn**	**00 32 49.1**	**+0.5**
VAGA	**Valle Agricola** 15nm,0.6s	**3.95**	**272**	Pn	**Pn**	**00 32 49.1**	**+0.5**
SDI	**San Donato**	**4.27**	**276**	Pn	**Pn**	**00 32 53.4**	**+0.4**
SDI	**San Donato** 1.0nm,0.2s	**4.27**	**276**	Pn	**Pn**	**00 32 53.4**	**+0.4**
SDI	**San Donato** 1.0nm,0.2s	**4.27**	**276**	Pn	**Pn**	**00 32 53.4**	**+0.4**
BZS	**Buzias**	**4.47**	**20**	⇓*i*P	**Pn**	**00 32 54.2**	**-1.6**
BZS	**Buzias**	**4.47**	**20**	⇓*i*P	**Pn**	**00 32 54.2**	**-1.6**
BZS				S	**Sn**	**00 33 44.5**	**-3.8**
NVLJ	**Novalja**	**4.62**	**314**	*e*Pn	**Pn**	**00 32 57.1**	**-0.7**
NVLJ				Sn	**Sn**	**00 33 48.7**	**-3.2**
NVLJ	**Novalja**	**4.62**	**314**	*e*Pn	**Pn**	**00 32 57.1**	**-0.7**
NVLJ				Sn	**Sn**	**00 33 48.6**	**-3.3**
GZR	**Gura Zlata**	**4.64**	**30**	⇓*i*P	**Pn**	**00 32 57.4**	**-0.7**
GZR	**Gura Zlata**	**4.64**	**30**	⇓*i*P	**Pn**	**00 32 57.4**	**-0.7**
GZR				S	**Sn**	**00 33 54.9**	**+2.5**
NRCA	**Norcia**	**4.95**	**289**	Pn	**Pn**	**00 33 02.0**	**-0.3**
NRCA	**Norcia** 1.0nm,0.2s	**4.95**	**289**	Pn	**Pn**	**00 33 02.0**	**-0.3**
NRCA	**Norcia** 1.0nm,0.2s	**4.95**	**289**	Pn	**Pn**	**00 33 02.0**	**-0.3**
MURB	**Monte Urbino** 18nm,0.3s	**5.48**	**292**	Pn	**Pn**	**00 33 09.5**	**-0.1**
MURB	**Monte Urbino** 18nm,0.3s	**5.48**	**292**	Pn	**Pn**	**00 33 09.5**	**-0.1**
MURB	**Monte Urbino** 18nm,0.3s	**5.48**	**292**	Pn	**Pn**	**00 33 09.5**	**-0.1**
DRGR		**5.85**	**22**	S	**Sn**	**00 34 18.7**	**-3.6**
MLR	**Muntele Rosu**	**6.22**	**47**	⇓*i*P	**Pn**	**00 33 19.8**	**0.0**
MLR	**Muntele Rosu**	**6.22**	**47**	⇓*i*P	**Pn**	**00 33 19.8**	**0.0**

*NEIC **24** 00:50:03.6,16°.48N×100°.21W, h10km, MD3.5(MEX), After MEX.*
MEX 24 00:50:03.6±0.6,16°.48N×100°.21W, h10km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.52**	**41**	*i* P	Pg	00 50 12.9	-0.8
ACX				*i* S	Sg	00 50 19.3	-1.2
ACX	**Acapulco**	**0.52**	**41**	*i* P	Pg	00 50 12.9	-0.8
ACX				*i* S	Sg	00 50 19.3	-1.2
CAIG	**El Cayaco**	**0.57**	**355**	*e*P	Pg	00 50 13.9	-0.7
CAIG				*i* S	Sg	00 50 21.0	-1.1
CAIG	**El Cayaco**	**0.57**	**355**	*e*P	Pg	00 50 13.9	-0.7
CAIG				*i* S	Sg	00 50 21.0	-1.1
MEIG	**Mezcala**	**1.55**	**21**	*e*P	Pn	00 50 28.8	-2.4
MEIG				*i* S	Sn	00 50 47.0	-4.4
ZIIG	**Zihuatanejo**	**1.64**	**313**	*i* P	Pn	00 50 27.8	-4.7
ZIIG				*i* S	Sn	00 50 48.5	-5.3
ZIIG	**Zihuatanejo**	**1.64**	**313**	*i* P	Pn	00 50 27.8	-4.7
ZIIG				*i* S	Sn	00 50 48.5	-5.3
PNIG	**Pinotepa**	**2.00**	**92**	*e*P	Pn	00 50 33.3	-4.2
PNIG				*i* S	Sn	00 50 58.2	-4.4
PNIG	**Pinotepa**	**2.00**	**92**	*e*P	Pn	00 50 33.3	-4.2
PNIG				*i* S	Sn	00 50 58.2	-4.4
UTMO	**Huajuapan**	**2.67**	**59**	*e*P	Pn	00 50 42.8	-3.9
UTMO				*i* S	Sn	00 51 14.1	-4.9

*ISCJB **24** 00:53:19.2±4.4,7°.00S±0°.09×154°.99E±0°.07, h13km±28km, mb4.5/24, MS3.7/4, Error ellipse: s-maj=16.3km s-min=9.7km az=146.8*
*IDC **24** 00:53:19.3±0.9,6°.91S×154°.81E, h0km, mb4.2/10, mb1 4.3/11, mb1mx4.2/17, mbtmp4.2/11, ML3.2/1, MS3.7/4, Ms1 3.7/4, ms1mx3.1/27, Error ellipse: s-maj=36.3km s-min=18.0km az=119.0*
*NEIC **24** 00:53:24.0±0.3,7°.00S×155°.01E, h35km, mb4.6/7, Error ellipse: s-maj=8.8km s-min=7.1km az=114.0*
ISC 24 00:53:24.4±1.5,7°.04S±0°.10×155°.05E±0°.07, h39km±14km, n46, σ0§76/39, mb4.5/24, MS3.7/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.40**	**116**	*e*Pn	**Pn**	**00 54 42.0**	**-0.5**
PMG	**Port Moresby** 24nm,0.9s	**8.15**	**253**	*e*Pn	**Pn**	**00 55 20.4**	**+0.1**
PMG				*e*Sn	**Sn**	**00 56 52.2**	**+0.9**
CTA	**Charters Tower** 0.1nm,0.3s,baz=24,slow=20,SNR=2.7	**15.52**	**212**	Pn	**Pn**	**00 56 59.7**	**-0.8**
CTA	**Charters Tower**	**15.52**	**212**	Pn	**Pn**	**00 56 59.7**	**-0.9**
CTAO	**Charters Tower** 6.7nm,0.7s	**15.52**	**212**	*e*Pn	**Pn**	**00 57 02.9**	**+2.3**
WRA	**Warramunga Arr** 4.5nm,0.7s,mb4.0,baz=58,slow=9.8,SNR=15	**23.84**	**235**	P	**P**	**00 58 32.6**	**-1.5**
ASAR	**Alice Springs** 2.3nm,0.7s,mb3.8,baz=63,slow=8.4,SNR=14	**26.18**	**229**	P	**P**	**00 58 54.7**	**-0.8**
ASAR				ScP	ScP	01 06 04.1	+5.2
	0.6nm,0.7s,baz=66,slow=3.2,SNR=5.7						
STKA	**Stephens Creek** 0.9nm,0.5s,mb3.7,baz=350,slow=11,SNR=3.2	**27.71**	**205**	P	**P**	**00 59 10.1**	**+0.9**
STKA				LR	LR	01 08 39.5	
	comp=Z,144nm,19.7s,MS3.6,baz=26,slow=33						
STKA	**Stephens Creek** 0.7nm,0.8s	**27.71**	**205**	*e*P	**P**	**00 59 08.8**	**-0.4**
STKA				LR	LR	01 08 39.5	
FITZ	**Fitzroy Crossi** comp=Z,120nm,19.1s,MS3.6,baz=227,slow=39	**30.68**	**246**	LR	LR	01 13 13.4	
NACB	**Ninganchiao**	**45.03**	**315**	*e*P	**P**	**01 01 37.1**	**+0.5**
KULM	**Kulim**	**55.65**	**281**	P	**P**	**01 02 56.3**	**-0.8**
PETK	**Petropavlovsk-** 4.1nm,0.9s,mb4.5,baz=207,slow=2.9,SNR=3.4	**59.96**	**2**	P	**P**	**01 03 26.6**	**0.0**
CMAR	**Chiang Mai Arr** 1.6nm,0.5s,mb4.4,baz=124,slow=5.0,SNR=12	**60.85**	**296**	P	**P**	**01 03 33.6**	**+0.2**
CASY	**Casey**	**66.56**	**198**	P	**P**	**01 04 09.6**	**-0.6**
GTA	**Gaotai**	**68.81**	**317**	*e*P	**P**	**01 04 25.9**	**+1.1**
GTA				pP	pP	01 04 30.3	-6.2
GTA				sP	sP	01 04 32.8	-8.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
ULN	**Ulaanbaatar**	**69.07**	**328**	P	**P**	**01 04 25.6**	**-0.6**
SHL	**Shillong**	**69.36**	**301**	*e*PKP	**P**	**01 04 34.0**	**+5.4**
SONM	**Songino Array** comp=Z,0.8nm,0.4s,mb4.0,baz=141,slow=5.1,SNR=4.3	**69.40**	**327**	P	**P**	**01 04 27.9**	**-0.4**
GUN	**Gumba** comp=Z,27nm,0.7s,mb5.3	**75.19**	**301**	*e*P	**P**	**01 05 03.7**	**+0.4**
PKI	**Pulchoki** comp=Z,6.7nm,0.5s,mb4.8	**75.49**	**301**	*e*P	**P**	**01 05 05.0**	**-0.1**
PALK	**Pallekele**	**75.50**	**279**	*e*P	**P**	**01 05 06.0**	**+0.6**
PKIN	**Phulchoki** comp=Z,8.3nm,0.6s,mb4.9	**75.51**	**301**	*e*P	**P**	**01 05 05.0**	**-0.1**
KKN	**Kakani** comp=Z,22nm,0.8s,mb5.1	**75.67**	**301**	*e*P	**P**	**01 05 06.0**	**0.0**
DMN	**Daman** comp=Z,27nm,0.8s,mb5.2	**75.76**	**301**	*e*P	**P**	**01 05 06.5**	**-0.1**
GKN	**Gorkha** comp=Z,22nm,0.9s,mb5.1	**76.27**	**301**	*e*P	**P**	**01 05 09.4**	**-0.1**
KOLN	**Koldanda** comp=Z,12nm,0.7s,mb4.9	**77.09**	**300**	*e*P	**P**	**01 05 13.9**	**-0.2**
DANN	**Dangsing** comp=Z,13nm,0.6s,mb5.0	**77.11**	**301**	*e*P	**P**	**01 05 14.1**	**-0.1**
SML	**Sawmill** comp=Z,0.8nm,0.7s,mb3.8	**81.25**	**24**	*e*P	**P**	**01 05 35.9**	**-0.2**
QSPA	**South Pole Qui** comp=Z,51nm,2.1s,mb5.2	**82.93**	**180**	*e*P	**P**	**01 05 46.6**	**+1.9**
PAX	**Paxson** comp=Z,9.5nm,0.6s,mb5.0	**83.00**	**23**	P	**P**	**01 05 45.2**	**0.0**
ILAR	**Eielson Array** comp=Z,0.6nm,0.8s,mb3.7,baz=256,slow=5.4,SNR=7.0	**83.40**	**21**	P	**P**	**01 05 47.7**	**+0.4**
MK31	**Makanchi Array**	**83.47**	**319**	*e*P	**P**	**01 05 47.7**	**-0.3**
MKAR	**Makanchi Array** comp=Z,2.5nm,0.6s,mb4.4,baz=102,slow=5.6,SNR=19	**83.47**	**319**	P	**P**	**01 05 47.3**	**-0.7**
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.5s,mb4.1,baz=118,slow=6.3,SNR=4.7	**84.25**	**326**	P	**P**	**01 05 50.6**	**-1.2**
TKM2	**Tokmak 2** comp=Z,1.4nm,0.5s,mb4.5	**87.09**	**314**	*e*P	**P**	**01 06 06.5**	**+0.3**
BBB	**Bella Bella** comp=Z,33nm,18.6s,MS3.8,baz=66,slow=35	**87.52**	**37**	LR	LR	01 44 20.4	
AAK	**Ala-Archa** comp=Z,1.3nm,0.4s,mb4.5	**87.82**	**313**	*e*P	**P**	**01 06 09.9**	**+0.2**
YBH	**Yreka Blue Hor** comp=Z,47nm,19.9s,MS3.9,baz=178,slow=31	**88.88**	**48**	LR	LR	01 39 04.1	
NVAR	**Mina Array Bea** comp=Z,2.0nm,0.8s,mb4.5,baz=259,slow=6.1,SNR=13	**91.71**	**52**	P	**P**	**01 06 30.4**	**+2.4**
NVAR	**Mina Array Bea**	**91.71**	**52**	P	**P**	**01 06 30.4**	**+2.4**
AKASG	**Malin Array Be** comp=Z,0.7nm,0.4s,baz=50,slow=2.7,SNR=3.7	**117.61**	**324**	PKP	PKPdf	01 12 05.6	-0.7
BRTR	**Keskin Array B** comp=Z,0.5nm,0.6s,baz=44,slow=2.6,SNR=3.4	**118.45**	**312**	PKP	PKPdf	01 12 09.3	+1.1
NOA	**NORSAR Array B** comp=Z,0.4nm,0.8s,baz=83,slow=2.7,SNR=2.8	**119.76**	**341**	PKP	PKPdf	01 12 10.6	+0.5
GERES	**GERESS Array B** comp=Z,1.3nm,0.7s,baz=48,slow=2.0,SNR=12	**127.12**	**329**	PKP	PKPdf	01 12 25.7	+1.1
TORD	**Torodi Ar. Bea** comp=Z,3.3nm,0.7s,baz=85,slow=2.2,SNR=4.7	**153.09**	**285**	PKPbc	PKPbc	01 13 19.1	+0.1
TORD				PKPab	PKPab	01 13 28.9	-1.6
	comp=Z,4.1nm,0.9s,baz=80,slow=4.2,SNR=4.4						

*ISCJB **24** 01:08:35.6±1.2,55°.3S±0°.2×28°.9W±0°.6, h10km, mb4.1/2, Error ellipse: s-maj=52.0km s-min=18.2km az=156.9*
*IDC **24** 01:08:36.1±3.8,55°.27S×29°.05W, h0km, Error ellipse: s-maj=128.9km s-min=46.7km az=174.0*
ISC 24 01:08:37.5±1.2,55°.4S±0°.2×28°.9W±0°.6, h10km, n5, σ1§43/4, mb4.1/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.98**	**160**	*e*P	**Pn**	**01 12 48.2**	**+1.0**
VNA2	**Neumayer--Watz** baz=317°,slow=12	**18.21**	**157**	*e*P	**Pn**	**01 12 49.0**	**-1.0**
LPAZ	**La Paz** 1.7nm,0.6s,mb4.3,baz=146,slow=5.5,SNR=11	**49.17**	**307**	P	**P**	**01 17 25.5**	**-0.1**
TORD	**Torodi Ar. Bea** 0.8nm,0.6s,mb3.9,baz=199,slow=6.8,SNR=1.6	**72.95**	**31**	P	**P**	**01 20 07.0**	**+0.1**
ILAR	**Eielson Array** 0.8nm,0.5s,baz=118,slow=1

KOLN Kolanda 77.18 300 *eP* **P 01 42 14.6 +0.1**
comp=Z,13nm,0.8s,mb4.9
ILAR Eielson Array 83.52 21 P **P 01 42 46.8 -1.0**
comp=Z,0.6nm,0.9s,mb3.7,baz=260,slow=3.9,SNR=5.0
MK31 Makanchi Array 83.59 319 *eP* **P 01 42 48.1 -0.5**
MKAR Makanchi Array 83.59 319 P **P 01 42 48.4 -0.2**
comp=Z,2.2nm,0.7s,mb4.4,baz=105,slow=5.4,SNR=16
KSH Kashi 86.19 310 *eP* **P 01 43 03.6 +1.8**
KSH *eP*P pP 01 43 08.3 -4.6
KSH *eS*P sP 01 43 18.1 +1.2
KSH pmax pmax
comp=Z,3.0nm,0.5s,mb4.8
NVAR Mina Array Bea 91.78 52 P **P 01 43 29.1 +0.8**
comp=Z,1.4nm,0.8s,mb4.3,baz=251,slow=6.4,SNR=12
PDAR Pinedale Array 98.77 48 P **P 01 43 58.9 -1.2**
comp=Z,0.2nm,0.4s,mb4.0,baz=284,slow=3.6,SNR=3.1
AKASG Malin Array Be 117.73 324 PKP PKPdf 01 49 07.1 +0.6
comp=Z,0.6nm,0.5s,baz=62,slow=2.8,SNR=4.0
BRTR Keskin Array B 118.56 311 PKP PKPdf 01 49 09.3 +0.9
comp=Z,0.3nm,0.6s,baz=66,slow=3.0,SNR=3.9
NOA NORSAR Array B 119.89 341 PKP PKPdf 01 49 10.8 +0.5
comp=Z,0.6nm,0.8s,baz=50,slow=2.3,SNR=2.9
GERES GERESS Array B 127.25 329 PKP PKPdf 01 49 26.1 +1.3
comp=Z,0.8nm,0.6s,baz=64,slow=2.3,SNR=11
TORD Torodi Ar. Bea 153.14 285 PKPbc PKPbc 01 50 19.5 +0.5
comp=Z,2.5nm,0.8s,baz=49,slow=2.9,SNR=6.9

IDC 24 01:31:35.3±1.7, 27°.97S×67°.55W, h212km±16km, mb1 3.2/3, mb1mx3.0/17, mbtmp3.1/3, Error ellipse: s-maj=43.6km s-min=17.2km az=101.0, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**3.67**	**189**	P	Pn	01 32 34.8	+1.3
	4.3nm,0.3s,baz=17,slow=14,SNR=341						
CFAA				S	S	01 33 19.5	+0.1
	7.4nm,0.3s,baz=186,slow=13,SNR=27						
CPUP	**Villa Florida**	**9.25**	**82**	P	Pn	01 33 44.6	-0.1
	0.5nm,0.3s,baz=233,slow=10,SNR=3.1						
LPAZ	**La Paz**	**11.63**	**357**	P	Pn	01 34 15.4	+0.1
	0.6nm,0.3s,baz=186,slow=10.0,SNR=18						
SNAA	**Sanae**	**55.80**	**160**	P	P	01 40 49.8	-0.1
	0.2nm,0.5s,baz=249,slow=11,SNR=1.8						
TORD	**Torodi Ar. Bea**	**78.47**	**68**	P	P	01 43 13.3	+0.2
	1.3nm,0.7s,baz=249,slow=6.2,SNR=2.1						

ISCJB ***24*** *01:34:11.4±0.5, 44°.75N±0°.03×14°.95E±0°.07, h10km, Error ellipse: s-maj=7.3km s-min=3.4km az=167.4*
CSEM ***24*** *01:34:11.3±0.4, 44°.78N×14°.97E, h0km±3km, ML2.7/5, Error ellipse: s-maj=8.9km s-min=5.6km az=87.0*
VIE ***24*** *01:34:15.0±0.4, 44°.99N×14°.93E, h9km±1km, ML1.9/2, Error ellipse: s-maj=2.4km s-min=2.3km az=177.0 57 km SE of Rijeka*

ISC 24 01:34:11.4±0.8, 44°.73N±0°.03×15°.02E±0°.08, h1km±6km, n21, σ0=92/37, 3C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.20**	**211**	⇓*i*Pg	**Pg**	**01 34 14.7**	**-0.4**
NVLJ				Sg	**Sg**	**01 34 18.0**	**+0.3**
BOJS	**Bojanci**	**0.79**	**12**	*i* Pg	**Pg**	**01 34 25.5**	**-1.0**
BOJS				*i* Sg	**Sg**	**01 34 36.5**	**-0.2**
BOJS							
	comp=Z,15nm,0.2s						
BOJS	**Bojanci**	**0.79**	**12**	*i* Pg	**Pg**	**01 34 25.5**	**-1.0**
BOJS				*i* Sg	**Sg**	**01 34 36.5**	**-0.2**
	comp=Z,15nm,0.2s						
KNDS	**Knezji Dol**	**0.91**	**331**	*i* Sg	**Sg**	**01 34 42.6**	**+1.9**
VISS	**Visnje**	**1.08**	**353**	*i* Pg	**Pg**	**01 34 31.1**	**-0.8**
VISS							
	comp=Z,7.0nm,0.1s						
VISS	**Visnje**	**1.08**	**353**	*i* Pg	**Pg**	**01 34 31.1**	**-0.9**
	comp=Z,7.0nm,0.1s						
SKDS	**Skadanscina**	**1.08**	**319**	*i* Pg	**Pg**	**01 34 31.3**	**-0.7**
SKDS							
	comp=Z,5.0nm,0.1s						
CEY	**Cerknica**	**1.09**	**338**	*i* Pg	**Pg**	**01 34 31.1**	**-1.1**
CEY				*i* Sg	**Sg**	**01 34 47.5**	**+1.2**
CEY							
	comp=Z,13nm,0.2s						
CEY	**Cerknica**	**1.09**	**338**	*i* Pg	**Pg**	**01 34 31.1**	**-1.1**
PDKS	**Podkum**	**1.33**	**359**	*i* Pg	**Pg**	**01 34 36.6**	**-0.2**
PDKS				*e*Sg	**Sg**	**01 34 54.7**	**+0.7**
PDKS							
	comp=Z,18nm,0.4s						
JAVS	**Javornik**	**1.34**	**330**	*i* Pg	**Pg**	**01 34 36.2**	**-0.8**
JAVS	**Javornik**	**1.34**	**330**	*i* Pg	**Pg**	**01 34 36.2**	**-0.8**
CRNS	**Crni Vrh**	**1.45**	**339**	*i* Pn	**Pn**	**01 34 38.7**	**0.0**
CRNS				*i* Sn	**Sg**	**01 34 59.1**	**+1.3**
CRNS							
	comp=Z,16nm,0.2s						
VOY	**Vojsko**	**1.52**	**329**	*e*Pn	**Pn**	**01 34 39.2**	**-0.4**
VOY				*e*Sn	**Sg**	**01 35 00.6**	**+0.4**
VOJS	**Vojsko**	**1.52**	**329**	*i* Pn	**Pn**	**01 34 39.2**	**-0.4**
VOJS				*i* Sn	**Sg**	**01 35 00.5**	**+0.2**
VOJS							
	comp=Z,6.0nm,0.1s						
VOJS	**Vojsko**	**1.52**	**329**	*i* Pg	**Pn**	**01 34 39.2**	**-0.5**
VOJS				*i* Sg	**Sg**	**01 35 00.5**	**+0.2**
	comp=Z,6.0nm,0.1s						
OBKA	**Obir**	**1.81**	**350**	⇓*i*Pn	**Pn**	**01 34 43.1**	**-0.4**
OBKA				⇑*i*Sn	**Sn**	**01 35 04.1**	**-3.0**
OBKA				⇑*i*Sg	**Sn**	**01 35 06.5**	**-0.6**
	comp=Z,6.5nm,0.2s						
OBKA	**Obir**	**1.81**	**350**	Pn	**Pn**	**01 34 43.1**	**-0.5**
OBKA				Sn	**Sn**	**01 35 04.1**	**-3.0**
OBKA				Sg	**Sn**	**01 35 06.5**	**-0.6**
	comp=Z,6.5nm,0.2s						
SOKA	**Soboth**	**1.94**	**0**	⇓*i*Pn	**Pn**	**01 34 44.7**	**-0.8**
SOKA				⇑*i*Sg	**Sn**	**01 35 10.9**	**+0.4**
	comp=Z,1.4nm,0.3s						
SOKA	**Soboth**	**1.94**	**0**	Pn	**Pn**	**01 34 44.7**	**-0.8**
SOKA				Sg	**Sn**	**01 35 10.9**	**+0.4**
	comp=Z,1.4nm,0.3s						
STON	**Ston**	**2.69**	**133**	*e*Pn	**Pn**	**01 34 56.5**	**+0.7**
STON				Sn	**Sn**	**01 35 31.6**	**+2.7**

NOU ***24*** *01:36:51.3±1.7, 14°.15S×168°.07E, h30km, MD3.8, ML4.3*
IDC ***24*** *01:36:52.0±0.5, 14°.35S×167°.76E, h0km, mb4.6/19, mb1 4.8/19, mb1mx4.7/23, mbtmp4.6/19, MS4.2/7, Ms1 4.2/7, ms1mx3.9/19, Error ellipse: s-maj=19.0km s-min=14.8km az=135.0*
LDG ***24*** *01:36:53.8±0.3, 14°.25S×167°.43E, h10km, Mb4.9/4, Error ellipse: s-maj=36.8km s-min=8.8km az=88.0*
ISCJB ***24*** *01:36:55.5±0.3, 14°.63S±0°.03×167°.72E±0°.05, h33km, mb4.7/44, MS4.3/10, Error ellipse: s-maj=7.0km s-min=4.4km az=4.1*
GCMT ***24*** *01:36:57.1±0.2, 14°.47S×167°.81E, h13km, MW5.0, Moment Tensor Solution. s39,c46; s65,c89; Moment tensor: Scale 10^16Nm; Mrr3.46±.15; Mθθ-0.22±.12; Mφφ-3.23±.12; Mrθ-0.07±.30; Mθφ0.93±.09; Mφr0.97±.25; Best double couple: M0 3.60000×10^16 NP1:φs161.00000°, δ37.00000°, λ85.00000°. NP2:φs347.00000°, δ53.00000°, λ94.00000°. Principal axes: T 3.6000, Plg82.0000°, Azm276.0000°; N 0.0300, Plg3.0000°, Azm165.0000°; P -3.6200, Plg8.0000°, Azm75.0000°; Data Used: II IU CN IC G.*
NEIC ***24*** *01:36:60.0±1.6, 14°.50S×167°.74E, h58km±13km, mb4.9/18 Error ellipse: s-maj=8.7km s-min=7.9km az=104.0*
BJI ***24*** *01:37:07.5, 13°.54S×167°.79E, h103km, mB5.2/18, mb4.8/26*

ISC 24 01:36:57.5±0.3, 14°.60S±0°.03×167°.80E±0°.05, h35km, (h101km±1.7km:pP-P), n126, σ1=01/79, mb4.7/44, MS4.3/10, 2C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.55**	**190**	*e*P	**Pn**	**01 38 44.1**	**-0.9**
DZM				*e*S	**Sn**	**01 40 07.7**	**-1.7**
DZM				AMP		01 40 15.5	
	comp=Z,358nm,1.0s						
BAYA	**Yate Dam**	**7.57**	**186**	*e*P	**Pn**	**01 38 44.9**	**-0.4**
BAYA				*e*S	**Sn**	**01 40 09.6**	**-0.3**
NOUC	**Port Laguerre**	**7.60**	**191**	*e*P	**Pn**	**01 38 46.1**	**+0.3**
NOUC				*e*S	**Sn**	**01 40 10.3**	**-0.4**
NOUC				AMP		01 40 20.1	
	comp=Z,15nm,5.1s						
HNR	**Honiara**	**9.23**	**303**	Pn	**Pn**	**01 39 08.1**	**-0.2**
	comp=Z,16nm,0.3s,baz=141,slow=13,SNR=3.0						
HNR				Sn	**Sn**	**01 40 51.2**	**+0.2**
	comp=Z,13nm,0.3s,baz=107,slow=20,SNR=3.6						
OUZ	**Omahuta**	**21.19**	**167**	*e*P	**P**	**01 41 41.0**	**+1.1**
	comp=Z,18nm,0.6s,mb4.6						
CTA	**Charters Tower**	**21.27**	**252**	P	**P**	**01 41 42.5**	**+1.6**
	comp=Z,31nm,0.6s,mb4.8,baz=87,slow=12,SNR=34						
CTA				LR	LR	01 48 39.7	
	comp=Z,1μm,20.5s,MS4.3,baz=54,slow=33						
CTAO	**Charters Tower**	**21.27**	**252**	*e*P	**P**	**01 41 42.9**	**+2.0**
	comp=Z,31nm,0.6s,mb4.8						
ARMA	**Armidale**	**21.66**	**221**	*e*P	**P**	**01 41 48.0**	**+2.9**
URZ	**Urewera**	**24.97**	**162**	P	**P**	**01 42 19.3**	**+1.6**
	comp=Z,9.3nm,0.5s,mb4.5,baz=307,slow=5.1,SNR=4.4						
URZ	**Urewera**	**24.97**	**162**	*e*P	**P**	**01 42 20.0**	**+2.2**
	comp=Z,20nm,0.7s,mb4.8						
QLP	**Quilpie**	**25.02**	**238**	*e*P	**P**	**01 42 19.4**	**+1.0**
CNB	**Canberra Magne**	**26.46**	**215**	*e*P	**P**	**01 42 32.1**	**+0.8**
RPZ	**Rata Peaks**	**29.16**	**175**	P	**P**	**01 42 58.5**	**+3.3**
	comp=Z,15nm,0.6s,mb4.9,baz=14,slow=12,SNR=6.2						
STKA	**Stephens Creek**	**29.47**	**230**	P	**P**	**01 42 59.2**	**+1.0**
	comp=Z,25nm,0.5s,mb5.2,baz=42,slow=7.7,SNR=75						
STKA				PcP	PcP	01 46 03.6	+0.3
	comp=Z,5.2nm,0.8s,baz=71,slow=1.7,SNR=3.0						
STKA				LR	LR	01 53 39.5	
	comp=Z,658nm,21.4s,MS4.2,baz=42,slow=34						
STKA	**Stephens Creek**	**29.47**	**230**	*e*P	**P**	**01 42 59.3**	**+1.1**
	comp=Z,35nm,0.6s,mb5.3						
STKA	**Stephens Creek**	**29.47**	**230**	*e*P	**P**	**01 42 59.1**	**+0.9**
	comp=Z,7.2nm,0.6s,mb4.6						
TOO	**Toolangi**	**30.26**	**217**	*e*P	**P**	**01 43 05.7**	**+0.5**
WRA	**Warramunga Arr**	**32.35**	**256**	P	**P**	**01 43 23.0**	**-0.8**
	comp=Z,3.4nm,0.5s,mb4.4,baz=86,slow=9.2,SNR=13						
WRA				LR	LR	01 55 55.7	
	comp=Z,1μm,19.2s,MS4.5,baz=85,slow=35						
ASAR	**Alice Springs**	**33.20**	**249**	P	**P**	**01 43 30.5**	**-0.7**
	comp=Z,9.6nm,0.6s,mb4.9,baz=76,slow=9.2,SNR=16						
ASAR				PcP	PcP	01 46 12.9	-0.6
	comp=Z,1.2nm,0.7s,baz=64,slow=4.2,SNR=3.1						
BBOO	**Buckleboo**	**34.06**	**232**	*e*P	**P**	**01 43 39.1**	**+0.5**
	comp=Z,35nm,0.6s,mb5.5						
GUMO	**Guam**	**36.04**	**320**	LR	LR	01 55 46.0	
	comp=Z,245nm,18.6s,MS4.0,baz=126,slow=32						
FORT	**Forrest**	**39.80**	**239**	*e*P	**P**	**01 44 27.4**	**0.0**
	comp=Z,34nm,0.6s,mb5.3						
FITZ	**Fitzroy Crossi**	**40.54**	**259**	P	**P**	**01 44 33.7**	**0.0**
	comp=Z,5.6nm,0.5s,mb4.5,baz=85,slow=7.0,SNR=22						
FITZ				LR	LR	02 00 47.1	
	comp=Z,510nm,19.7s,MS4.4,baz=91,slow=35						
PPT	**Papeete**	**41.01**	**100**	*e*S	**S**	**01 50 41.3**	**-6.5**
	comp=Z,193nm,25.5s						
PPT				*e*LR	LR	01 56 02.3	
	comp=Z,838nm,28.2s,baz=261						
TBI	**Tubuai**	**41.22**	**109**	*e*S	**S**	**01 50 44.8**	**-6.1**
	comp=Z,180nm,25.5s						
TBI				*e*LQ		01 54 31.9	
	comp=Z,564nm,37.2s						
TBI				*e*LR	LR	01 56 07.2	
	comp=Z,627nm,27.5s,baz=282						
MBWA	**Marble Bar**	**46.07**	**255**	*e*P	**P**	**01 45 18.2**	**-0.1**
MBWA	**Marble Bar**	**46.07**	**255**	*e*P	**P**	**01 45 18.1**	**-0.2**
	comp=Z,14nm,0.6s,mb5.1						
MEEK	**Meekatharra**	**47.31**	**247**	*e*P	**P**	**01 45 27.7**	**-0.2**
KLBR	**Kellerberrin**	**48.61**	**241**	*e*P	**P**	**01 45 36.6**	**-1.4**
	comp=Z,9.6nm,0.6s,mb5.0						
MORW	**Morawa**	**49.78**	**244**	*e*P	**P**	**01 45 46.7**	**-0.3**
TAOE	**Nuku Hiva Isla**	**51.20**	**90**	*e*LR	LR	02 00 44.7	
	comp=Z,549nm,29.2s						
KKM	**Kota Kinabalu**	**55.10**	**288**	*e*P	**P**	**01 46 26.9**	**+0.3**
	comp=Z,18nm,0.8s,mb5.1						
MJAR	**Matsushiro Arr**	**58.02**	**332**	P	**P**	**01 46 45.3**	**-1.6**
	comp=Z,4.0nm,0.7s,mb4.6,baz=172,slow=8.8,SNR=10						
MAJO	**Matsushiro**	**58.02**	**332**	*e*P	**P**	**01 46 47.0**	**0.0**
	comp=Z,7.8nm,0.7s,mb4.8						
CASY	**Casey**	**63.84**	**202**	*e*P	**P**	**01 47 25.6**	**-0.5**
CASY	**Casey**	**63.84**	**202**	*e*P	**P**	**01 47 25.7**	**-0.4**
	comp=Z,12nm,0.7s,mb5.0						
KSRS	**Korea Array**	**63.92**	**325**	P	**P**	**01 47 26.4**	**-0.5**
	comp=Z,2.3nm,0.8s,mb4.3,baz=141,slow=7.8,SNR=6.8						
MDJ	**Mudanjiang**	**68.40**	**332**	P	**P**	**01 47 55.8**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,130nm,5.0s						
CN2	**Changchun**	**69.79**	**329**	⇑P	**P**	**01 48 04.0**	**-0.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=Z,400nm,17.0s,MS4.7						
GYA	**Guiyang**	**72.06**	**304**	*e*P	**P**	**01 48 20.0**	**+1.6**
GYA				PcP	PcP	01 48 37.6	+0.9
GYA				pP	pP	01 48 45.9	+17
GYA				sP	sP	01 48 57.4	+24
GYA				PP	PP	01 51 02.3	+3.3
GYA				S	S	01 57 31.5	-6.6
GYA				SKS		01 58 09.8	
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
BJT	**Baijiatuau**	**72.47**	**321**	*e*P	**P**	**01 48 20.0**	**-0.6**
	comp=Z,10nm,0.7s,mb4.9						
BJI	**Beijing**	**72.48**	**321**	P	**P**	**01 48 19.8**	**-0.8**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
BJI				pmax	pmax		
	comp=Z,260nm,4.2s						
CMAR	**Chiang Mai Arr**	**75.36**	**294**	P	**P**	**01 48 37.2**	**-0.7**
	comp=Z,2.0nm,0.6s,mb4.2,baz=125,slow=4.8,SNR=6.2						
CMAR				LR	LR	02 21 48.3	
	comp=Z,51nm,18.2s,MS3.9,baz=204,slow=36						
QSPA	**South Pole Qui**	**75.43**	**180**	*e*P	**P**	**01 48 36.3**	**-1.0**
	comp=Z,20nm,1.5s,mb4.8						
CHTO	**Chiang Mai**	**75.49**	**294**	*e*P	**P**	**01 48 38.2**	**-0.4**
	comp=Z,3.4nm,0.7s,mb4.4						
HHC	**Hu-ho-hao-te**	**75.81**	**319**	*e*P	**P**	**01 48 41.5**	**+1.5**
HHC				PcP	PcP	01 48 54.4	+1.9
HHC				pP	pP	01 49 06.8	+16
HHC				sP	sP	01 49 17.3	+22
HHC				PP	PP	01 51 35.3	+4.7
HHC				S	S	01 58 15.1	-4.7
HHC				SKS		01 58 36.5	
HHC				ScS	ScS	01 58 42.5	-9.1
HHC				sS	sS	01 58 56.8	+19
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,130nm,6.9s						
HHC				LR	LR		
	comp=N,210nm,16.2s,MS4.7						
HHC				LR	LR		
	comp=E,220nm,15.5s,MS4.7						
HHC				LR	LR		
	comp=Z,190nm,15.3s,MS4.5						
CD2	**Chengdu**	**76.33**	**307**	*e*P	**P**	**01 48 44.5**	**+1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
OHAK	**Old Harbor**	**78.48**	**20**	*e*P	**P**	**01 48 54.1**	**-0.5**
	comp=Z,13nm,0.9s,mb4.8						
LZH	**Lanzhou**	**78.61**	**312**	*e*P	**P**	**01 48 57.0**	**+1.2**
LZH				pP	pP	01 49 23.8	+17
LZH				sP	sP	01 49 35.3	+24
LZH				PP	PP	01 51 58.8	+4.6
LZH				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
LZH				pmax	pmax		
	comp=Z,69nm,9.0s						
LZH				LR	LR		
	comp=E,310nm,17.1s						
LZH				LR	LR		
	comp=Z,370nm,19.6s,MS4.7						
KDAK	**Kodiak Island**	**79.16**	**20**	P	**P**	**01 48 58.2**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.3,baz=225,slow=7.1,SNR=4.5						
MAW	**Mawson**	**82.20**	**202**	LR	LR	02 20 05.2	
	comp=Z,96nm,21.1s,MS4.1,baz=354,slow=32						
ULN	**Ulaanbaatar**	**82.33**	**324**	*e*P	**P**	**01 49 15.6**	**+0.1**
	comp=Z,6.1nm,0.7s,mb4.6						
SONM	**Songino Array**	**82.69**	**323**	P	**P**	**01 49 16.6**	**-0.9**
	comp=Z,2.2nm,0.5s,mb4.4,baz=140,slow=5.7,SNR=9.0						
GTA	**Gaotai**	**82.94**	**314**	*e*P	**P**	**01 49 19.3**	**+0.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
TRF	**Thorofare Moun**	**84.26**	**18**	*e*P	**P**	**01 49 23.9**	**-1.2**
MCK	**McKinley**	**84.87**	**18**	*e*P	**P**	**01 49 27.3**	**-0.9**
	comp=Z,5.4nm,0.8s,mb4.7						
YBH	**Yreka Blue Hor**	**84.96**	**45**	P	**P**	**01 49 28.6**	**-0.6**
	comp=Z,1.9nm,0.6s,mb4.4,baz=206,slow=3.1,SNR=5.2						
CMB	**Columbia Colle**	**85.13**	**49**	*e*P	**P**	**01 49 28.2**	**-1.9**
	comp=Z,4.2nm,1.1s,mb4.5						
WAKR	**Walker**	**86.00**	**49**	*e*P	**P**	**01 49 34.5**	**+0.1**
MTUM	**Tungsten Hills**	**86.21**	**50**	*e*P	**P**	**01 49 36.9**	**+1.4**
ILAR	**Eielson Array**	**86.24**	**18**	P	**P**	**01 49 32.9**	**-2.1**
	comp=Z,1.9nm,0.8s,mb4.4,baz=235,slow=5.5,SNR=27						
PAHR	**Pah Rah Range**	**86.49**	**48**	*e*P	**P**	**01 49 37.8**	**+1.0**
	comp=Z,112nm,3.0s						
NVAR	**Mina Array Bea**	**86.80**	**49**	P	**P**	**01 49 38.5**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.4,baz=213,slow=7.3,SNR=13						
GSC	**Goldstone**	**86.81**	**52**	*e*P	**P**	**01 49 39.5**	**+1.0**
	comp=Z,19nm,1.6s,mb5.1						
EGAK	**Eagle**	**88.02**	**19**	*e*P	**P**	**01 49 45.9**	**+2.3**
	comp=Z,39nm,2.5s,mb5.2						
LDFC	**Landfair**	**88.05**	**53**	*e*P	**P**	**01 49 42.6**	**-1.8**
SHPR	**Sheep Range**	**88.48**	**52**	*e*P	**P**	**01 49 45.8**	**-0.6**
ETW	**Entiat**	**88.88**	**40**	*e*P	**P**	**01 49 47.9**	**-0.2**
CCUT	**Cedar City**	**90.17**	**51**	*e*P	**P**	**01 49 55.2**	**+0.8**
TUC	**Tucson**	**90.62**	**57**	*e*P	**P**	**01 49 58.4**	**+1.8**
WMQ	**Urumqi**	**93.00**	**314**	*e*P	**P**	**01 50 07.0**	**-0.3**
VNA3	**Neumayer Olymp**	**94.36**	**181**	*e*P	**P**	**01 50 08.8**	**-4.3**
PDAR	**Pinedale Array**	**94.48**	**47**	P	**P**	**01 50 14.7**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.9,baz=219,slow=6.7,SNR=2.3						
VNA2	**Neumayer--Watz**	**94.63**	**182**	*e*P	**P**	**01 50 09.6**	**-4.8**
TXAR	**Lajitas Array**	**95.77**	**61**	P	**P**	**01 50 21.5**	**+1.1**
	comp=Z,1.0nm,0.9s,mb4.3,baz=218,slow=9.4,SNR=4.8						
MK31	**Makanchi Array**	**97.46**	**316**	*e*P	**P**	**01 50 27.3**	**-0.3**
MKAR	**Makanchi Array**	**97.46**	**316**	P	**P**	**01 50 26.9**	**-0.7**
	comp=Z,5.6nm,0.7s,mb5.1,baz=93,slow=6.3,SNR=35						
ZALV	**Zalesovo Beam**	**97.58**	**324**	P	**P**	**01 50 26.4**	**-1.6**
	comp=Z,2.2nm,0.7s,mb4.8,baz=120,slow=5.2,SNR=9.7						
CPUP	**Villa Florida**	**120.17**	**133**	PKP	PKPdf	01 55 44.1	-1.3
	comp=Z,0.6nm,0.5s,baz=50,slow=2.7,SNR=3.2						
ARCES	**ARCESS Array B**	**120.25**	**346**	PKP	PKPdf	01 55 43.0	-1.2
	comp=Z,3.9nm,0.6s,baz=89,slow=2.4,SNR=15						
BOSA	**Boshof**	**123.81**	**220**	PKP	PKPdf	01 55 52.4	0.0
	comp=Z,1.5nm,0.6s,baz=131,slow=1.2,SNR=3.9						
FINES	**FINESS Array B**	**125.79**	**338**	PKP	PKPdf	01 55 54.5	-0.5
	comp=Z,1.3nm,0.7s,baz=114,slow=2.3,SNR=7.1						
NB2	**NORSAR Subarra**	**130.63**	**345**	PKPdf	PKPdf	01 56 03.9	-0.4
	comp=Z,2.4nm,1.2s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**130.63**	**345**	PKP	PKPdf	01 56 03.8	-0.5
	comp=Z,0.9nm,0.6s,baz=30,slow=2.0,SNR=6.7						
AKASG	**Malin Array Be**	**130.91**	**326**	PKP	PKPdf	01 56 04.7	-0.5
	comp=Z,0.2nm,0.2s,baz=47,slow=2.9,SNR=4.2						
BRTR	**Keskin Array B**	**132.81**	**311**	PKP	PKPdf	01 56 08.2	-0.9
	comp=Z,0.8nm,0.7s,baz=100,slow=1.5,SNR=5.0						
BDFB	**Brasilia**	**133.58**	**129**	PKP	PKPdf	01 56 10.0	-1.2
	comp=Z,1.2nm,0.4s,baz=301,slow=26,SNR=3.7						
CONA	**Conrad Observa**	**139.45**	**331**	⇑*i*PKiKP	PKiKP	01 56 21.6	-1.9
	comp=Z,5.1nm,1.5s						
GERES	**GERESS Array B**	**139.75**	**333**	PKP	PKPdf	01 56 22.1	+0.4
	comp=Z,0.6nm,0.6s,baz=22,slow=1.4,SNR=6.3						
ABTA	**Abfaltersbach**	**141.87**	**332**	⇓*i*PKPdf	PKPdf	01 56 21.3	-4.2
	comp=Z,6.4nm,1.1s						
CDF	**Champ du Feu**	**142.64**	**339**	*e*PKP1	PKPdf	01 56 26.7	-0.2
	comp=Z,4.1nm,0.7s						
HAU	**Haudompre**	**143.31**	**339**	*e*PKP1	PKPdf	01 56 27.5	-0.6
MEZF	**Maizieres J'vi**	**143.31**	**341**	*e*PKP1	PKPdf	01 56 27.4	-0.7
SFTF	**Sexfontaines**	**143.58**	**340**	*e*PKP1	PKPdf	01 56 28.1	-0.5
AQU	**L'Aquila**	**144.61**	**326**	*e*PKPdf	PKPdf	01 56 29.6	-1.0
LDF	**La Druitiere**	**144.66**	**346**	*e*PKP1	PKPdf	01 56 28.8	-1.7
	comp=Z,6.0nm,0.7s						
LOR	**Lormes**	**144.78**	**341**	*e*PKP1	PKPdf	01 56 29.1	-1.6
	comp=Z,4.8nm,0.8s						
GRR	**Gorron**	**145.02**	**347**	*e*PKP1	PKPbc	01 56 31.2	+0.8
	comp=Z,24nm,0.8s						
SSF	**Saint Saulge**	**145.07**	**341**	*e*PKP1	PKPbc	01 56 30.0	-0.7
	comp=Z,11nm,0.9s						
LPL	**La Plagne**	**145.28**	**336**	*e*PKP1	PKPbc	01 56 31.3	-0.1
	comp=Z,9.5nm,0.8s						
LPG	**La Plagne**	**145.29**	**336**	*e*PKP1	PKPbc	01 56 31.4	0.0
	comp=Z,24nm,1.1s						
SMF	**Signal de Mont**	**145.34**	**340**	*e*PKP1	PKPbc	01 56 31.2	-0.3
AVF	**Avril sur Loir**	**145.36**	**341**	*e*PKP1	PKPbc	01 56 30.7	-0.9
	comp=Z,8.8nm,0.8s						
ROSF	**Rostrenen**	**145.56**	**349**	*e*PKP1	PKPdf	01 56 30.2	-1.8
BNI	**

R15V		**6.83**	**243**	*i* P	Pn	01 47 37.2	-8.9
HPIG		**8.61**	**303**	*i* P	Pn	01 47 59.9	-11

NEIC ***24*** *02:26:13.4, 16.°45N×100.°19W, h10km, MD3.6(MEX), After MEX.*

MEX 24 02:26:13.4±0.4, 16.°45N×100.°19W, h10km±6km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.52**	**37**	*i* P	Pg	02 26 22.3	-1.4
ACX				*i* S	Sg	02 26 29.1	-1.5
ACX	**Acapulco**	**0.52**	**37**	*i* P	Pg	02 26 22.3	-1.4
ACX				*i* S	Sg	02 26 29.1	-1.5
CAIG	**El Cayaco**	**0.60**	**353**	*e*P	Pg	02 26 23.8	-1.3
CAIG				*i* S	Sg	02 26 32.0	-0.9
CAIG	**El Cayaco**	**0.60**	**353**	*e*P	Pg	02 26 23.8	-1.3
CAIG				*i* S	Sg	02 26 32.0	-0.9
MEIG	**Mezcala**	**1.57**	**20**	*i* P	Pn	02 26 38.5	-2.7
MEIG				*i* S	Sn	02 26 56.5	-5.1
ZIIG	**Zihuatanejo**	**1.68**	**314**	*i* P	Pn	02 26 39.8	-3.0
ZIIG				*i* S	Sn	02 26 59.1	-5.2
ZIIG	**Zihuatanejo**	**1.68**	**314**	*i* P	Pn	02 26 39.8	-3.0
ZIIG				*i* S	Sn	02 26 59.1	-5.2
PNIG	**Pinotepa**	**1.98**	**91**	*i* P	Pn	02 26 43.1	-3.8
PNIG				*i* S	Sn	02 27 07.4	-4.4
PNIG	**Pinotepa**	**1.98**	**91**	*i* P	Pn	02 26 43.1	-3.8
PNIG				*i* S	Sn	02 27 07.4	-4.4
UTMO	**Huajuapan**	**2.66**	**59**	*e*P	Pn	02 26 53.0	-3.4
UTMO				*i* S	Sn	02 27 26.2	-2.5

NEIC ***24*** *02:28:37.8, 16.°52N×100.°24W, h4km, MD3.5(MEX), After MEX.*

MEX 24 02:28:37.8±0.5, 16.°52N×100.°24W, h4km±4km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.50**	**47**	*i* P	Pg	02 28 46.3	-1.2
ACX				*i* S	Sg	02 28 53.3	-0.8
ACX	**Acapulco**	**0.50**	**47**	*i* P	Pg	02 28 46.3	-1.2
ACX				*i* S	Sg	02 28 53.3	-0.8
CAIG	**El Cayaco**	**0.52**	**357**	*i* P	Pg	02 28 47.5	-0.4
CAIG				*i* S	Sg	02 28 54.9	+0.2
CAIG	**El Cayaco**	**0.52**	**357**	*i* P	Pg	02 28 47.5	-0.4
CAIG				*i* S	Sg	02 28 54.9	+0.2
MEIG	**Mezcala**	**1.52**	**23**	*i* P	Pn	02 29 02.6	-3.1
MEIG				*i* S	Sn	02 29 21.1	-4.9
ZIIG	**Zihuatanejo**	**1.59**	**313**	*i* P	Pn	02 29 04.2	-2.6
ZIIG				*i* S	Sn	02 29 23.2	-4.6
ZIIG	**Zihuatanejo**	**1.59**	**313**	*i* P	Pn	02 29 04.2	-2.6
ZIIG				*i* S	Sn	02 29 23.2	-4.6
PNIG	**Pinotepa**	**2.03**	**93**	*i* P	Pn	02 29 09.5	-3.4
PNIG				*i* S	Sn	02 29 33.9	-4.8
PNIG	**Pinotepa**	**2.03**	**93**	*i* P	Pn	02 29 09.5	-3.4
PNIG				*i* S	Sn	02 29 33.9	-4.8
UTMO	**Huajuapan**	**2.67**	**61**	*i* P	Pn	02 29 17.1	-4.5
UTMO				*i* S	Sn	02 29 50.5	-3.9

ISCJB ***24*** *02:33:03.8±0.2, 17.°56N±0.°02×105.°43W±0.°02, h10km, mb5.6/302, MS6.2/269, Error ellipse: s-maj=3.4km s-min=1.6km az=34.5*

BJI ***24*** *02:33:03.4, 17.°38N×106.°03W, h10km, mB6.2/19, mb6.0/3, Ms6.5/23, Ms7 6.3/25*

IDC ***24*** *02:33:03.3±0.5, 17.°57N×105.°57W, h0km, mb5.0/28, mb1 5.1/31, mb1mx5.1/34, mbtmp5.0/31, ML4.0/3, MS6.1/32, Ms1 6.1/32, ms1mx6.0/39, Error ellipse: s-maj=18.9km s-min=10.2km az=61.0*

MEX ***24*** *02:33:04.4±1.4, 17.°64N×105.°61W, h16km±40km, MD6.4*

NEIC ***24*** *02:33:05.6±0.2, 17.°61N×105.°50W, h12km, mb5.7/253, ME6.6, MS6.2/196, MW6.4, MW6.3, MD6.4(MEX), Error ellipse: s-maj=4.0km s-min=2.3km az=36.0 Broadband fault plane solution: P waves. NP1:ϕ_s30.00000°, δ88.00000°, λ-5.00000°. NP2:ϕ_s120.00000°, δ85.00000°, λ-178.00000°. Principal axes: T Plg2.0000°, Azm75.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm345.0000°; Moment Tensor Solution. s88 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.01; $M_{\theta\theta}$-3.08; $M_{\phi\phi}$3.09; $M_{r\theta}$0.00; $M_{\theta\phi}$-0.81; $M_{\phi r}$-0.47; Best double couple: M_o3.20000×10^{18} NP1:ϕ_s218.00000°, δ85.00000°, λ7.00000°. NP2:ϕ_s127.00000°, δ84.00000°, λ175.00000°. Principal axes: T 3.2600, Plg8.0000°, Azm82.0000°; N -0.0800, Plg81.0000°, Azm254.0000°; P -3.1900, Plg1.0000°, Azm352.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Guadalajara, Jalisco, Mexico and Puerto Vallarta.

MOS ***24*** *02:33:06.3±0.9, 17.°61N×105.°53W, h33km, mb5.8/82, MS6.2/55 Error ellipse: s-maj=9.5km s-min=4.8km az=88.0*

GCMT ***24*** *02:33:10.4±0.1, 17.°69N×105.°60W, h17km, MW6.4, Moment Tensor Solution. s116,c263; s99,c200; Moment tensor: Scale 10^{18}Nm; M_{rr}0.59±.03; $M_{\theta\theta}$-5.01±.03; $M_{\phi\phi}$4.42±.03; $M_{r\theta}$0.35±.07; $M_{\theta\phi}$-1.35±.02; $M_{\phi r}$0.23±.07; Best double couple: M_o4.90000×10^{18} NP1:ϕ_s307.00000°, δ86.00000°, λ-179.00000°. NP2: ϕ_s217.00000°, δ89.00000°, λ-4.00000°. Principal axes: T 4.6200, Plg2.0000°, Azm262.0000°; N 0.6100, Plg86.0000°, Azm26.0000°; P -5.2200, Plg4.0000°, Azm172.0000°; Data Used: II IU CN IC G. Mantle waves from 108 sta. Surface waves: sta=105, comp=244, per= 50.*

BGS ***24*** *02:33:18.0±2.1, 20.°14N×105.°17W, h10km, mb5.4, MS6.4*

ISC 24 02:33:05.3±0.2, 17.°52N±0.°02×105.°46W±0.°02, h10km, n1428, σ0=94/1241, mb5.6/302, MS6.2/269, 249C-324D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**2.15**	**69**	*e*P	Pn	02 33 37.5	-3.8
MMIG				*i* S	Sn	02 34 04.6	-3.4
R15V		**2.15**	**40**	*e*P	Pn	02 33 36.9	-4.4
R15V				*i* S	Sn	02 34 01.0	-7.1
EZ5V		**2.62**	**42**	*e*P	Pn	02 33 45.1	-2.6
EZ5V				*i* S	Sn	02 34 14.3	-5.4
ANIG	**Ahuacatlan**	**3.62**	**14**	*e*P	Pn	02 33 57.8	-3.7
ANIG				*i* S	Sn	02 34 36.4	-7.9
SFJM	**Santa Fe**	**3.73**	**37**	*e*P	Pn	02 34 01.2	-1.8
SFJM	**Santa Fe**	**3.73**	**37**	*e*P	Pn	02 34 01.2	-1.8
ZIIG	**Zihuatanejo**	**3.81**	**88**	*e*P	Pn	02 34 01.3	-2.7
ZIIG				*i* S	Sn	02 34 47.3	-1.6
ZIIG	**Zihuatanejo**	**3.81**	**88**	*e*P	Pn	02 34 01.3	-2.7
ZIIG				*i* S	Sn	02 34 47.3	-1.6
MOIG	**Morelia**	**4.58**	**61**	*e*P	Pn	02 34 11.8	-2.9
MOIG	**Morelia**	**4.58**	**61**	*e*P	Pn	02 34 11.8	-2.9
H06S		**5.37**	**284**	*e*P	Pn	02 34 18.3	-7.3
ACX	**Acapulco**	**5.39**	**96**	*e*P	Pn	02 34 22.1	-3.7
ACX	**Acapulco**	**5.39**	**96**	*e*P	Pn	02 34 22.1	-3.7
MEIG	**Mezcala**	**5.58**	**85**	*e*P	Pn	02 34 27.4	-1.0
MEIG				*i* S	Sn	02 35 32.0	-0.6
MAIG	**Mazatlaan**	**5.71**	**351**	*e*P	Pn	02 34 25.2	-5.0
MAIG	**Mazatlaan**	**5.71**	**351**	*e*P	Pn	02 34 25.2	-5.0
PLIG	**Platanillo**	**5.73**	**80**	*e*P	Pn	02 34 28.0	-2.5
PLIG	**Platanillo**	**5.73**	**80**	*e*P	Pn	02 34 28.0	-2.5
SZVM	**Salazar**	**6.04**	**72**	*e*P	Pn	02 34 35.0	+0.3
SZVM	**Salazar**	**6.04**	**72**	*e*P	Pn	02 34 35.0	+0.3
MZVM		**6.14**	**73**	*e*P	Pn	02 34 37.5	+1.4
YAIG	**Yautepec**	**6.22**	**77**	*e*P	Pn	02 34 36.5	-0.7
YAIG				*i* S	Sn	02 35 46.1	-2.3
YAIG	**Yautepec**	**6.22**	**77**	*e*P	Pn	02 34 36.5	-0.7
YAIG				*i* S	Sn	02 35 46.1	-2.3
PBVM	**Pinon**	**6.34**	**71**	*e*P	Pn	02 34 39.3	+0.4
PBVM	**Pinon**	**6.34**	**71**	*e*P	Pn	02 34 39.3	+0.4
PBVM				*i* P		02 34 40.6	
PTVM	**Pico Tres Padr**	**6.36**	**70**	*e*P	Pn	02 34 39.2	+0.1
PTVM	**Pico Tres Padr**	**6.36**	**70**	*e*P	Pn	02 34 39.2	+0.1
VCVM	**Valle de Chalc**	**6.42**	**73**	*e*P	Pn	02 34 41.6	+1.7
DEIG	**Demacu**	**6.68**	**65**	*e*P	Pn	02 34 43.3	-0.2
DEIG				*i* S	Sn	02 35 56.3	-3.4
IIO	**Organos**	**6.71**	**71**	*e*P	Pn	02 34 43.9	0.0
IIO	**Organos**	**6.71**	**71**	*e*P	Pn	02 34 43.9	0.0
PNIG	**Pinotepa**	**7.10**	**98**	*e*P	Pn	02 34 48.5	-0.8
PNIG				*i* S	Sn	02 36 10.0	-0.2
PNIG	**Pinotepa**	**7.10**	**98**	*e*P	Pn	02 34 48.5	-0.8
PNIG				*i* S	Sn	02 36 10.0	-0.2
UTMO	**Huajuapan**	**7.30**	**86**	*e*P	Pn	02 34 53.3	+1.2
TPIG	**Tehuac#an**	**7.75**	**82**	*e*P	Pn	02 34 58.7	+0.4
TPIG				*i* S	Sn	02 36 25.6	-0.7
LPIG	**La Paz**	**7.97**	**326**	*i* P	Pn	02 34 55.2	-6.0
LPIG				*i* S	Sn	02 36 22.5	-8.9
LPIG	**La Paz**	**7.97**	**326**	*i* P	Pn	02 34 55.2	-6.0
LPIG				*i* S	Sn	02 36 22.5	-8.9
VHO	**Vista Hermosa**	**8.34**	**92**	*e*P	Pn	02 35 07.3	+0.9
VHO				*i* S	Sn	02 36 41.3	+0.5
VHO	**Vista Hermosa**	**8.34**	**92**	*e*P	Pn	02 35 07.3	+0.9
VHO				*i* S	Sn	02 36 41.3	+0.5
OXX	**Oaxaca**	**8.35**	**92**	*i* P	Pn	02 35 03.7	-2.8
OXX	**Oaxaca**	**8.35**	**92**	*i* P	Pn	02 35 03.7	-2.8
LVIG	**Laguna Verde**	**8.84**	**74**	*e*P	Pn	02 35 12.6	-0.6
LVIG				*i* S	Sn	02 36 51.3	-1.8
LVIG	**Laguna Verde**	**8.84**	**74**	*e*P	Pn	02 35 12.6	-0.6
LVIG				*i* S	Sn	02 36 51.3	-1.8
HUIG	**Huatulco**	**9.13**	**100**	*e*P	Pn	02 35 17.4	+0.3
HUIG				*i* S	Sn	02 37 00.3	+0.2
HUIG	**Huatulco**	**9.13**	**100**	*e*P	Pn	02 35 17.4	+0.3
HUIG				*i* S	Sn	02 37 00.3	+0.2
LNIG	**Linares**	**9.22**	**36**	*i* P	Pn	02 35 16.2	-2.2
LNIG				*i* S	Sn	02 36 57.5	-4.8
HPIG		**9.37**	**359**	*i* P	Pn	02 35 17.9	-2.5
HPIG				*i* S	Sn	02 37 00.6	-5.3
CMIG	**Matias Romero** 1.8nm,0.3s,baz=254,slow=11,SNR=83	**10.11**	**91**	Pn	Pn	02 35 32.3	+1.7
CMIG				Lg		02 38 27.0	
	baz=346,slow=20,SNR=1.8						
SRIG	**Santa Rosalia**	**11.59**	**328**	*e*P	Pn	02 35 46.6	-4.3
SRIG				*i* S	Sn	02 37 51.4	-9.1
TGIG		**11.81**	**92**	*e*P	Pn	02 35 53.6	-0.4
TGIG				*i* S	Sn	02 38 04.5	-1.5
PCIG		**11.87**	**97**	*e*P	Pn	02 35 55.7	+1.0
PCIG				*i* S	Sn	02 38 05.9	-1.4
TXAR	**Lajitas Array** 9.9nm,0.3s,baz=193,slow=14,SNR=974	**11.87**	**8**	Pn	Pn	02 35 55.3	+0.6
TXAR				Lg		02 39 19.3	
	0.1nm,0.3s,baz=188,slow=24,SNR=3.2			P3KP		03 12 56.8	
TXAR	0.0nm,0.3s,baz=83,slow=2.8,SNR=3.4						
TXAR	**Lajitas Array**	**11.87**	**8**	Pn	Pn	02 35 55.3	+0.6
TXAR				Lg		02 39 19.3	
TXAR	**Lajitas Array**	**11.87**	**8**	P	Pn	02 35 55.3	+0.6
627A	**Terlingua Ranc** baz=12,SNR=1000	**12.03**	**9**	⇑P	Pn	02 35 58.0	+1.2
626A	**Big Bend Ranch** baz=12,SNR=398	**12.04**	**6**	⇓P	Pn	02 35 57.3	+0.3
628A	**Black Gap, Mar** baz=12,SNR=526	**12.14**	**11**	⇑P	Pn	02 35 58.6	+0.2
KVTX	**Kingsville**	**12.18**	**34**	*e*Pn	Pn	02 36 01.9	+3.0
SCX	**San Cristobal**	**12.28**	**92**	*i* P	Pn	02 36 00.0	-0.4
SCX	**San Cristobal**	**12.28**	**92**	*i* P	Pn	02 36 00.0	-0.4
HSIG		**12.51**	**337**	*i* P	Pn	02 35 59.2	-4.2
HSIG				*i* S	Sn	02 38 12.6	-10
526A	**Mary Lane Ranc** baz=12,SNR=514	**12.55**	**5**	⇓P	Pn	02 36 04.4	+0.4
527A	**Woodward Ranch** baz=13,SNR=458	**12.68**	**7**	⇓P	Pn	02 36 06.4	+0.6
CCIG	**Comitan**	**12.81**	**94**	*e*P	Pn	02 36 08.7	+1.1
CCIG				*i* S	Sn	02 38 27.3	-3.0
CCIG	**Comitan**	**12.81**	**94**	*e*P	Pn	02 36 08.7	+1.1
CCIG				*i* S	Sn	02 38 27.3	-3.0
528A	**Cox Ranch, San** baz=13	**12.82**	**10**	⇑P	Pn	02 36 08.2	+0.6
THIG		**12.93**	**100**	*e*P	Pn	02 36 07.1	-2.1
THIG				*i* S	Sn	02 38 33.5	+0.2
CGIG		**12.99**	**350**	*e*P	Pn	02 36 04.6	-5.4
CGIG				*i* S	Sn	02 38 26.5	-8.2
426A	**McDonald Obser** baz=13,SNR=173	**13.15**	**5**	⇑P	Pn	02 36 12.7	+0.5
425A	**Indio Mountain** baz=13,SNR=472	**13.21**	**2**	⇓P	Pn	02 36 13.7	+0.7
428A	**Kincaid Ranch,** baz=13,SNR=1000	**13.39**	**10**	⇑P	Pn	02 36 16.8	+1.4
427A	**Hayter Ranch,** baz=13,SNR=300	**13.40**	**8**	⇑P	Pn	02 36 16.5	+0.9
SCIG	**Sabancuy**	**13.63**	**82**	*e*P	Pn	02 36 17.4	-1.4
325A	**Bean Ranch, Si** baz=14,SNR=416	**13.80**	**2**	⇓P	Pn	02 36 21.4	+0.4
326A	**Caldwell Ranch** baz=14,SNR=173	**13.80**	**5**	⇓P	Pn	02 36 22.1	+1.1
324A	**Moseley Ranch,** baz=14,SNR=308	**13.86**	**360**	⇑P	Pn	02 36 22.1	+0.2
JCT	**Junction City** baz=14,SNR=175	**13.89**	**21**	⇓P	Pn	02 36 22.9	+0.6
JCT	**Junction City**	**13.89**	**21**	⇓*i*Pn	Pn	02 36 22.8	+0.5
JCT	**Junction City**	**13.89**	**21**	⇓*i*P	Pn	02 36 22.8	+0.5
327A	**Balmorhea Ranc** baz=14,SNR=16	**13.90**	**7**	⇑P	Pn	02 36 24.9	+2.4
328A	**Wristen Ranch,** baz=14,SNR=395	**14.01**	**9**	⇑P	Pn	02 36 24.3	+0.4
320A	**Kipp Ranch, An** baz=14,SNR=295	**14.04**	**349**	⇑P	Pn	02 36 24.8	+0.5
MNTX	**Cornudas Mount** baz=14,SNR=434	**14.12**	**0**	⇓P	Pn	02 36 25.2	-0.1
MNTX	**Cornudas Mount** 3μm,1.9s	**14.12**	**0**	⇓*i*Pn	Pn	02 36 24.9	-0.4
319A	**Douglas** baz=14,SNR=265	**14.22**	**347**	⇑P	Pn	02 36 27.5	+0.7
223A	**Chaparral, Ant** baz=14,SNR=24	**14.45**	**357**	⇑P	Pn	02 36 30.0	+0.1
318A	**Bisbee** baz=14	**14.46**	**344**	⇓P	Pn	02 36 29.9	-0.1
224A	**Cornudas Mount** baz=14,SNR=212	**14.49**	**360**	⇑P	Pn	02 36 30.8	+0.3
226A	**Malaga, Loving** baz=14,SNR=554	**14.53**	**5**	⇓P	Pn	02 36 32.0	+1.0
225A	**Deer Hill, Car** baz=14,SNR=554	**14.54**	**2**	⇑P	Pn	02 36 31.8	+0.7
220A	**Playas Peak, P** baz=15,SNR=336	**14.59**	**350**	⇑P	Pn	02 36 32.5	+0.7
222A	**Williams Famil** baz=15,SNR=128	**14.60**	**354**	⇓P	Pn	02 36 32.5	+0.6
APG	**El Apazote** 0.6nm,0.3s,baz=292,slow=11,SNR=34	**14.61**	**98**	Pn	Pn	02 36 33.8	+1.6
APG				Lg		02 40 56.7	
	0.1nm,0.3s,baz=343,slow=19,SNR=1.7						
APG				LR	LR	02 41 38.1	
	comp=Z,77μm,20.3s,baz=289,slow=35						
APG	**El Apazote**	**14.61**	**98**	Pn	Pn	02 36 33.8	+1.6
APG				Lg		02 40 56.7	
APG				LR	LR	02 41 38.1	
GDL2	**Guadalupe Moun**	**14.65**	**4**	*e*Pn	Pn	02 36 33.2	+0.6
CLNB	**Carlsbad** 957nm,1.8s	**14.75**	**5**	⇑*i*Pn	Pn	02 36 36.0	+2.0
219A	**White Tail Can** baz=15,SNR=143	**14.82**	**347**	⇑P	Pn	02 36 35.5	+0.5
218A	**Dragoon** baz=15,SNR=206	**14.98**	**345**	⇑P	Pn	02 36 37.5	+0.4
217A	**Green Valley** baz=15,SNR=270	**15.00**	**342**	⇓P	Pn	02 36 37.6	+0.2
123A	**Bell Site, Whi** baz=15,SNR=35	**15.07**	**357**	⇑P	Pn	02 36 38.8	+0.4
125A	**Gardner Draw,** baz=15,SNR=1000	**15.09**	**3**	⇓P	Pn	02 36 39.1	+0.5
121A	**Cookes Peak, D** baz=15,SNR=188	**15.09**	**352**	P	Pn	02 36 39.5	+0.8
124A	**Stringfield Ra** baz=15,SNR=604	**15.11**	**0**	⇓P	Pn	02 36 39.9	+0.9
126A	**Clayton Basin,** baz=15,SNR=73	**15.12**	**5**	⇓P	Pn	02 36 40.0	+1.0
HKT	**Hockley**	**15.18**	**34**	⇑*e*Pn	Pn	02 36 38.0	-1.7
HKT	**Hockley**	**15.18**	**34**	⇑*e*P	Pn	02 36 38.1	-1.7
127A	**Arkansas Junct** baz=15,SNR=54	**15.21**	**7**	⇑P	Pn	02 36 40.7	+0.5
120A	**U Bar Ranch, L** baz=15,SNR=162	**15.23**	**350**	⇑P	Pn	02 36 40.9	+0.4
216A	**Three Points,** baz=15,SNR=74	**15.41**	**340**	⇓P	Pn	02 36 42.7	-0.1
TUC	**Tucson**	**15.49**	**343**	⇓*i*Pn	Pn	02 36 43.4	-0.5
TUC	**Tucson**	**15.49**	**343**	⇓*i*P	Pn	02 36 43.4	-0.5
CPRX	**Cap Rock** 460nm,1.0s	**15.51**	**5**	*e*Pn	Pn	02 36 44.8	+0.7
119A	**Ashpeak Ranch,** baz=16,SNR=65	**15.57**	**348**	⇓P	Pn	02 36 45.3	+0.3
118A	**Homack Ranch,** baz=16,SNR=136	**15.60**	**346**	P	Pn	02 36 45.4	+0.2
Z23A	**Rita Site, Whi** baz=16,SNR=498	**15.69**	**358**	⇑P	Pn	02 36 47.3	+0.8
Z25A	**Roswell** baz=16,SNR=367	**15.71**	**2**	⇑P	Pn	02 36 46.9	+0.2
117A	**Oracle** baz=16,SNR=225	**15.73**	**343**	⇓P	Pn	02 36 47.1	+0.1
Z22A	**Elephant Butte** baz=16,SNR=539	**15.73**	**355**	⇓P	Pn	02 36 47.7	+0.7
Z26A	**Caprock** baz=16,SNR=284	**15.74**	**5**	⇑P	Pn	02 36 47.5	+0.3
Z24A	**Sheeppen Canyo** baz=16	**15.74**	**0**	⇓P	Pn	02 36 47.6	+0.5
Z20A	**Nine Sixteen R** baz=16,SNR=226	**15.78**	**350**	P	Pn	02 36 48.2	+0.5
214A	**Organ Pipe Nat** baz=16,SNR=100	**15.84**	**337**	⇓P	Pn	02 36 48.4	0.0
Z21A	**St. Cloud Mine** baz=16,SNR=387	**15.85**	**353**	P	Pn	02 36 49.0	+0.5
Z27A	**Tatum** baz=16	**15.86**	**7**	⇑P	Pn	02 36 49.0	+0.4
116A	**Eloy** baz=16,SNR=73	**16.00**	**341**	⇓P	Pn	02 36 50.6	0.0
Z19A	**T-Link Ranch,** baz=16,SNR=44	**16.07**	**348**	⇑P	Pn	02 36 51.9	+0.5
115A	**Sonoran Desert** baz=16,SNR=136	**16.30**	**339**	⇓P	Pn	02 36 54.8	+0.4
Y24A	**Capitan** baz=16,SNR=516	**16.34**	**0**	⇑P	Pn	02 36 55.2	+0.4
Z17A	**San Carlos Hig** baz=16,SNR=59	**16.34**	**345**	P	Pn	02 36 55.4	+0.4
Y25A	**Mesa, Roswell** baz=16,SNR=375	**16.35**	**2**	P	Pn	02 36 55.8	+0.8
Y23A	**Lovelace Mesa,** baz=16,SNR=629	**16.35**	**358**	P	Pn	02 36 56.0	+1.0
Y26A	**Elida** baz=16,SNR=40	**16.40**	**5**	⇓P	Pn	02 36 56.3	+0.7
Y22A	**Socorro** baz=16,SNR=666	**16.40**	**356**	⇑P	Pn	02 36 56.4	+0.8
Y27A	**Causey** baz=16,SNR=632	**16.42**	**7**	⇑P	Pn	02 36 56.2	+0.3
TEIG	**Tepich** 1.2nm,0.3s,baz=273,slow=12,SNR=23	**16.48**	**78**	Pn	Pn	02 36 53.8	-2.9
TEIG				LR	LR	02 44 43.4	
	comp=Z,96μm,18.5s,baz=251,slow=42						
TEIG	**Tepich**	**16.48**	**78**	*e*Pn	Pn	02 36 53.5	-3.2
Y20A	**Horse Springs,** baz=16,SNR=575	**16.53**	**351**	⇓P	Pn	02 36 57.7	+0.4
Y21A	**Point of Rocks** baz=16,SNR=355	**16.54**	**354**	⇑P	Pn	02 36 57.3	-0.1
MSTX	**Muleshoe** baz=16,SNR=453	**16.56**	**8**	⇓P	Pn	02 36 58.0	+0.4
114A	**Black Gap (USA** baz=16,SNR=147	**16.58**	**338**	⇑P	Pn	02 36 58.2	+0.3
BNM	**Barren Site** 179nm,1.0s	**16.59**	**357**	*e*Pn	Pn	02 36 58.9	+0.8
LENM	**Lemitar**	**16.63**	**356**	*e*Pn	Pn	02 36 59.1	+0.6
Z16A	**Peralta Trail,** baz=17,SNR=44	**16.64**	**342**	⇓P	Pn	02 36 59.4	+0.6
Y18A	**Canyon Day Jun** baz=17,SNR=161	**16.70**	**347**	⇑P	Pn	02 36 59.8	+0.3
Y19A	**Nutrioso** baz=17	**16.72**	**349**	⇓P	Pn	02 37 00.6	+1.0
LPM	**Los Pinos Moun**	**16.75**	**357**	*e*Pn	Pn	02 37 00.1	0.0
Y17A	**Roosevelt** baz=17,SNR=171	**16.82**	**344**	P	Pn	02 37 01.1	+0.2
Z15A	**Gila River Ind** baz=17,SNR=25	**16.82**	**340**	⇓P	Pn	02 37 01.2	+0.2
LAZ	**Ladron** 321nm,2.1s	**16.88**	**355**	*e*Pn	Pn	02 37 02.1	+0.4
113A	**Mohawk Valley,** baz=17,SNR=194	**16.93**	**335**	P	Pn	02 37 02.9	+0.5
X25A	**Clemmons Ranch** baz=17,SNR=66	**16.95**	**2**	⇑P	Pn	02 37 03.7	+1.1
X22A	**Bernardo** baz=17	**16.97**	**356**	⇑P	Pn	02 37 03.6	+0.7
X24A	**Lazy VL Ranch,** baz=17,SNR=26	**16.97**	**0**	⇓P	Pn	02 37 04.6	+1.7
X21A	**Alamocita Cree** baz=17,SNR=152	**16.98**	**353**	⇓P	Pn	02 37 03.6	+0.6
X23A	**Hourglass Bar** baz=17,SNR=362	**17.00**	**358**	⇓P	Pn	02 37 04.7	+1.4
X26A	**CR and CF Fran** baz=17,SNR=263	**17.02**	**5**	⇑P	Pn	02 37 04.4	+0.9
112A	**Yuma** baz=17,SNR=8.9	**17.07**	**333**	⇓P	Pn	02 37 05.1	+1.0
Z14A	**Wintersburg** baz=17,SNR=61	**17.15**	**338**	⇓P	Pn	02 37 05.7	+0.6
Y16A	**Circle Bar Ran** baz=17,SNR=271	**17.16**	**343**	P	Pn	02 37 05.7	+0.5
X20A	**Quemado** baz=17,SNR=313	**17.17**	**351**	⇑P	Pn	02 37 06.5	+1.2
X19A	**St. Johns** baz=17,SNR=151	**17.18**	**349**	P	Pn	02 37 06.5	+1.0
X27A	**F and S Farms,** baz=17,SNR=138	**17.19**	**7**	⇑P	Pn	02 37 06.2	+0.7
NATX	**Nacogdoches**	**17.22**	**33**	⇑*e*P	Pn	02 37 04.3	-1.7
MBIG	**Mexicali**	**17.24**	**331**	*e*P	Pn	02 37 06.3	+0.1
Z13A	**Yuma Proving G** baz=17,SNR=122	**17.27**	**336**	⇓P	Pn	02 37 07.0	+0.4
ANMO	**Albuquerque** 0.5nm,0.3s,baz=178,slow=13,SNR=137	**17.38**	**357**	P	Pn	02 37 08.0	0.0
ANMO				LR	LR	02 43 45.5	
	comp=Z,209μm,18.6s,baz=187,slow=37						
ANMO	**Albuquerque**	**17.38**	**357**	⇓*i*P	Pn	02 37 08.2	+0.2
ANMO	**Albuquerque**	**17.38**	**357**	⇓*i*P	Pn	02 37 08.2	+0.2
X18A	**Snowflake** baz=17,SNR=202	**17.41**	**348**	⇓P	Pn	02 37 09.2	+0.9
X17A	**Forest Lakes** baz=17,SNR=105	**17.42**	**345**	⇑P	Pn	02 37 09.0	+0.5
Y15A	**Casa Rosa Ranc** baz=18,SNR=146	**17.49**	**341**	⇑P	Pn	02 37 09.4	+0.1
W22A	**Albuquerque** baz=18,SNR=32	**17.52**	**356**	⇑P	Pn	02 37 11.3	+1.5
W26A	**Owens Ranch, T** baz=18,SNR=75	**17.56**	**5**	⇑P	Pn	02 37 10.8	+0.6
W23A	**Werner Place,** baz=18,SNR=276	**17.58**	**358**	P	Pn	02 37 11.6	+1.2
W27A	**Bowe

W16A **Flagstaff** 18.32 344 ⇓P Pn 02 37 20.6 +1.0
baz=18,SNR=26
V22A **San Miguel Ran** 18.37 356 ⇓P Pn 02 37 21.4 +1.3
baz=18,SNR=308
V19A **Window Rock** 18.40 351 ⇓P Pn 02 37 21.4 +0.9
baz=18,SNR=34
V20A **Brimhall** 18.40 352 ⇑P Pn 02 37 21.2 +0.6
baz=18,SNR=89
BC3 **Big Chuckawall** 18.40 333 ⇑P Pn 02 37 20.5 -0.1
baz=18,SNR=146
PDMCI **Parker Dam,Lak** 18.43 337 ⇓P Pn 02 37 21.4 +0.5
baz=18,SNR=27
V18A **Ganado** 18.55 348 ⇑P Pn 02 37 23.0 +0.6
baz=18,SNR=81
109C **Camp Elliot, M** 18.56 328 ⇓P Pn 02 37 23.1 +0.6
baz=18,SNR=15
X13A **Yucca** 18.58 338 P Pn 02 37 22.4 -0.4
baz=18,SNR=84
W15A **Williams** 18.60 342 ⇓P Pn 02 37 23.7 +0.6
baz=19,SNR=61
V17A **Tonalea, Kykot** 18.64 346 P Pn 02 37 23.7 +0.2
baz=19,SNR=294
IRM **Iron Mountain** 18.71 334 P Pn 02 37 23.6 -0.7
baz=19,SNR=125
U23A **El Rito** 18.75 358 P Pn 02 37 24.6 -0.1
baz=19,SNR=101
U24A **Moreno Valley** 18.82 0 ⇑P Pn 02 37 26.8 +1.2
baz=19,SNR=35
PFO **Pinyon Flat Ob** 18.82 330 P Pn 02 37 25.3 -0.4
baz=19,SNR=62
PFO **Pinyon Flat Ob** 18.82 330 *eP* Pn 02 37 24.5 -1.2
PFO **Pinyon Flat Ob** 18.82 330 *eP* Pn 02 37 24.5 -1.2
PFO **Pinyon Flat Ob** 18.82 330 Pn Pn 02 37 25.0 -0.7
621nm,4.1s,SNR=73
U22A **Llaves** 18.82 356 ⇑P Pn 02 37 25.9 +0.2
baz=19,SNR=160
U25A **Circle Dot Ran** 18.83 3 ⇑P Pn 02 37 25.5 -0.3
baz=19,SNR=471
U26A **Atchley Ranch,** 18.86 4 P Pn 02 37 26.0 -0.1
baz=19,SNR=211
W14A **Seligman** 18.89 340 ⇓P Pn 02 37 26.2 -0.2
baz=19,SNR=95
U21A **Nageezi** 18.93 355 ⇑P Pn 02 37 26.7 -0.4
baz=19,SNR=225
BELC **Belle Mtn. Jos** 18.94 332 P Pn 02 37 26.4 -0.7
baz=19,SNR=75
U20A **Newcomb** 18.98 352 ⇑P Pn 02 37 27.1 -0.4
baz=19,SNR=31
U19A **Dine' College,** 18.99 351 P Pn 02 37 27.3 -0.4
baz=19,SNR=119
NEE2 **Needles Airpor** 19.02 336 ⇓P Pn 02 37 28.2 0.0
baz=19,SNR=5.3
W13A **Hualapai Mount** 19.05 338 ⇑P Pn 02 37 28.6 +0.2
baz=19
MURC **Murrieta** 19.17 329 ⇑P Pn 02 37 29.6 -0.4
baz=19,SNR=22
V15A **Kaibab Nationa** 19.18 343 ⇓P Pn 02 37 29.4 -0.6
baz=19,SNR=184
U16A **Tuba City** 19.22 346 ⇑P Pn 02 37 30.7 +0.3
baz=19,SNR=69
U18A **Rough Rock, Ch** 19.23 349 ⇑P Pn 02 37 29.9 -0.7
baz=19,SNR=137
V14A **Boquillas Ranc** 19.28 341 P Pn 02 37 31.0 -0.2
baz=19,SNR=111
SCI **San Clemente I** 19.39 325 ⇑P Pn 02 37 31.4 -1.1
baz=19,SNR=20
T23A **Casias Ranch,** 19.45 359 ⇓P Pn 02 37 32.9 -0.3
baz=19,SNR=89
GMRC **Granite Mounta** 19.45 334 ⇑P Pn 02 37 32.8 -0.5
baz=19,SNR=81
T22A **Edith** 19.46 357 ⇓P Pn 02 37 33.0 -0.3
baz=19,SNR=400
T24A **Torres, Weston** 19.48 1 ⇓P Pn 02 37 32.8 -0.8
baz=20,SNR=163
T21A **Navajo Lake** 19.48 355 P Pn 02 37 33.2 -0.4
baz=20,SNR=155
LDFC **Landfair** 19.49 336 ⇓*iP* Pn 02 37 33.1 -0.6
T19A **Beclabito** 19.49 351 ⇓P Pn 02 37 32.2 -1.5
baz=20,SNR=230
U17A **Shonto** 19.55 347 ⇓P Pn 02 37 34.1 -0.4
baz=20
T25A **Trinidad** 19.56 2 ⇑P Pn 02 37 33.5 -1.1
baz=20,SNR=153
W12A **Cal Nev Ari** 19.59 336 ⇓P Pn 02 37 34.4 -0.5
baz=20,SNR=20
CIS **Catalina Islan** 19.64 326 ⇓P Pn 02 37 34.1 -1.4
baz=20,SNR=13
V13A **Grand Canyon W** 19.77 339 P Pn 02 37 36.1 -0.9
baz=20,SNR=103
U15A **North Rim** 19.78 344 ⇑P Pn 02 37 36.3 -0.8
baz=20,SNR=176
HEC **Hector,Ludlow** 19.78 333 ⇓P Pn 02 37 36.5 -0.7
baz=20,SNR=16
VBMS **Vicksburg** 19.91 40 ⇑*iP* Pn 02 37 36.3 -2.4
BFSC **Mount Baldy Ra** 19.91 329 ⇓P Pn 02 37 37.4 -1.4
baz=20,SNR=36
T18A **Mexican Hat** 19.93 350 ⇑P Pn 02 37 37.0 -1.9
baz=20,SNR=249
V12A **Nelson** 19.96 337 P Pn 02 37 37.9 -1.5
baz=20,SNR=112
T17A **Navajo Res., N** 19.97 347 ⇑P Pn 02 37 37.8 -1.6
baz=20,SNR=91
MIAR **Mount Ida** 20.01 30 ⇓*iP* Pn 02 37 36.5 -3.4
MIAR **Mount Ida** 20.01 30 ⇓*iP* Pn 02 37 36.5 -3.4
U14A **Mt Trumbull** 20.03 342 ⇑P P 02 37 39.1 +0.7
baz=20,SNR=203
S24A **Houchin Ranch,** 20.05 1 ⇑P P 02 37 39.8 +1.3
baz=20,SNR=183
S25A **Robets Cordova** 20.08 2 P P 02 37 39.4 +0.4
baz=20,SNR=190
MWC **Mount Wilson** 20.10 328 ⇓*iP* P 02 37 38.1 -1.1
MWC **Mount Wilson** 20.10 328 ⇓*iP* P 02 37 38.1 -1.1
T16A **Glen Canyon Da** 20.11 346 ⇓P P 02 37 40.4 +1.1
baz=20,SNR=58
S23A **Nye Farm, Mont** 20.11 359 ⇓P P 02 37 41.1 +1.8
baz=20,SNR=46
PASC **Pasadena Art C** 20.12 328 *eP* P 02 37 39.9 +0.5
TUQ **Turquoise Moun** 20.13 334 ⇑P P 02 37 39.4 0.0
baz=20,SNR=165
SDCO **Great Sand Dun** 20.15 360 ⇓P P 02 37 40.2 +0.5
baz=20,SNR=424
SDCO **Great Sand Dun** 20.15 360 ⇓*iP* P 02 37 39.8 +0.1
SDCO LR LR
comp=Z,229µm,20.0s,MS6.5
S21A **Coal Bank Pass** 20.17 355 ⇑P P 02 37 40.0 +0.1
baz=20,SNR=478
S22A **4UR Ranch, Cre** 20.18 357 ⇓P P 02 37 40.3 +0.2
baz=20,SNR=354
DECC **Green Verdugo** 20.26 328 ⇓P P 02 37 42.7 +1.8
baz=20,SNR=5.8
U13A **Pakoon Wash** 20.27 340 ⇓P P 02 37 42.5 +1.5
baz=20,SNR=188
V11A **Goodsprings** 20.28 336 ⇓P P 02 37 41.8 +0.7
baz=20,SNR=40
T15A **Red Dirt Ranch** 20.36 344 ⇓P P 02 37 43.4 +1.4
baz=20,SNR=115
GSC **Goldstone** 20.39 332 ⇑P P 02 37 43.1 +0.8
baz=20,SNR=73
GSC **Goldstone** 20.39 332 ⇑*iP* P 02 37 42.4 0.0
comp=Z,2µm,2.2s
GSC **Goldstone** 20.39 332 ⇑*iP* P 02 37 42.4 +0.1
GSC pmax pmax
comp=Z,2µm,2.2s
S20A **Disappointment** 20.39 353 ⇑P P 02 37 43.8 +1.4
baz=20,SNR=356
S19A **Harvey Farm, M** 20.41 352 ⇓P P 02 37 43.0 +0.5
baz=20,SNR=127
U12A **Valley of Fire** 20.48 339 ⇑P P 02 37 44.1 +0.8
baz=20,SNR=88
S18A **Hurst Farm, Bl** 20.49 350 ⇑P P 02 37 44.2 +0.8
baz=20,SNR=128
BLG **Laguna Peak** 20.53 326 ⇑P P 02 37 43.8 0.0
baz=20,SNR=15
R25A **Fountain Ranch** 20.57 3 ⇑P P 02 37 45.8 +1.5
baz=21,SNR=324
S17A **Black Ridge (B** 20.58 348 ⇑P P 02 37 45.5 +1.1
baz=21,SNR=127
EDW2 **Edwards Air Fo** 20.59 330 P P 02 37 43.9 -0.6
baz=20,SNR=58
T14A **Hurricane** 20.60 342 ⇑P P 02 37 45.6 +1.1
baz=21,SNR=50
R24A **Sanders Place,** 20.64 1 P P 02 37 46.0 +1.1
baz=21,SNR=233
R22A **Saguache, Gunn** 20.66 357 ⇓P P 02 37 46.9 +1.7
baz=21,SNR=241
SHOC **Shoshone** 20.67 334 ⇑P P 02 37 46.1 +0.7
baz=21,SNR=48
PV01 **Paradox Valley** 20.72 353 ⇓*iP* P 02 37 45.3 -0.5

OSI **Osito Adit** 20.74 328 *eP* P 02 37 46.1 -0.1
R20A **Redvale** 20.75 353 ⇓P P 02 37 47.4 +1.2
baz=21,SNR=231
SHPR **Sheep Range** 20.77 337 *eP* P 02 37 45.5 -0.9
comp=Z,341nm,1.4s
U11A **Corn Creek** 20.78 337 ⇑P P 02 37 47.5 +1.0
baz=21,SNR=27
UALR **University of** 20.79 32 *eP* P 02 37 46.8 +0.1
comp=Z,315nm,1.1s
UALR *ePn* P 02 37 47.6 +0.9
T12A **Moapa** 20.81 339 ⇓P P 02 37 47.5 +0.7
baz=21,SNR=48
T13A **Saint George** 20.81 341 ⇑P P 02 37 48.1 +1.2
baz=21,SNR=127
S16A **Weppner Ranch,** 20.84 346 ⇑P P 02 37 48.0 +0.9
baz=21,SNR=93
R21A **Cimarron** 20.85 355 ⇑P P 02 37 48.6 +1.3
baz=21,SNR=158
LRMC **Laurel Mountai** 20.93 331 ⇑P P 02 37 48.5 +0.2
baz=21,SNR=72
R19A **Curley Farm, L** 20.96 352 ⇓P P 02 37 48.7 +0.2
baz=21,SNR=84
S15A **Panguitch** 20.98 345 P P 02 37 49.7 +1.0
baz=21,SNR=46
PV04 **Paradox Valley** 21.01 352 ⇓*iP* P 02 37 48.1 -0.9
CCUT **Cedar City** 21.13 342 ⇓*iP* P 02 37 49.8 -0.5
comp=Z,1µm,1.7s,mb6.0
U10A **Ash Meadows, A** 21.14 335 ⇓P P 02 37 51.3 +0.8
baz=21,SNR=96
JTS **JuntasAbangare** 21.15 107 P P 02 37 53.3 +2.6
comp=Z,91nm,1.3s,mb5.0,baz=311,slow=6.6,SNR=36
JTS **JuntasAbangare** 21.15 107 ⇑*iP* P 02 37 52.3 +1.6
JTS *ePn* P 02 37 53.0 +2.3
JTS LR LR
comp=Z,34µm,20.0s,MS5.7
JTS **JuntasAbangare** 21.15 107 ⇑*iP* P 02 37 52.3 +1.6
JTS MLR MLR
comp=Z,34µm,20.0s
JTS **JuntasAbangare** 21.15 107 Pn P 02 37 53.9 +3.2
comp=Z,1µm,1.5s,mb6.0,SNR=27
R18A **Canyonlands Na** 21.15 350 ⇑P P 02 37 51.3 +0.8
baz=21,SNR=107
ARVC **Arvin** 21.20 328 ⇓P P 02 37 51.1 0.0
baz=21,SNR=38
S14A **Cedar City** 21.27 343 P P 02 37 52.5 +0.7
baz=21,SNR=147
Q22A **Crested Butte,** 21.30 357 ⇓P P 02 37 53.2 +1.0
baz=21,SNR=198
S13A **Holt Ranch, En** 21.31 341 P P 02 37 52.6 +0.4
baz=21,SNR=116
Q23A **Hartsel** 21.31 359 ⇓P P 02 37 52.7 +0.5
baz=21,SNR=161
Q21A **Lamborn Mesa,** 21.32 355 ⇑P P 02 37 53.1 +0.8
baz=21,SNR=60
R17A **Hanksville Air** 21.32 349 P P 02 37 52.7 +0.3
baz=21,SNR=72
MPMC **Manual Prospec** 21.33 332 ⇓P P 02 37 53.1 +0.7
baz=21,SNR=214
Q25A **Bedland, Calha** 21.34 3 ⇓P P 02 37 53.4 +0.8
baz=21,SNR=197
R16A **Teasdale** 21.35 347 P P 02 37 53.2 +0.6
baz=21,SNR=50
Q24A **Divide** 21.37 1 ⇑P P 02 37 52.9 0.0
baz=21,SNR=165
ARUT **Antelope Range** 21.37 342 *eP* P 02 37 52.7 -0.2
comp=Z,16µm,1.7s
ARUT **Antelope Range** 21.37 342 *eP* P 02 37 52.7 -0.2
FURC **Furnace Creek,** 21.40 334 ⇓P P 02 37 53.1 -0.2
baz=21,SNR=58
BRAL **Brewton** 21.44 48 ⇓*iP* P 02 37 58.3 +4.5
BRAL LR LR
comp=Z,46µm,22.0s,MS5.8
ISA **Isabella** 21.45 330 ⇓P P 02 37 53.5 -0.3
baz=21,SNR=78
ISA **Isabella** 21.45 330 *eP* P 02 37 53.4 -0.4
ISA **Isabella** 21.45 330 *eP* P 02 37 53.4 -0.4
R15A **Junction** 21.46 345 ⇓P P 02 37 54.5 +0.7
baz=21,SNR=53
Q20A **Ridgley Place,** 21.50 354 ⇑P P 02 37 54.7 +0.5
baz=22,SNR=94
PKM **Peak Mountain** 21.53 326 ⇓P P 02 37 54.7 +0.1
baz=22,SNR=17
DAC **Darwin (Calif)** 21.55 332 PFAKE 02 38 00.0 +5.1
DAC LR LR
comp=Z,24µm,19.0s,MS5.6
Q19A **Hogan Spring (** 21.61 352 ⇓P P 02 37 55.8 +0.3
baz=22,SNR=129
SMCO **Snowmass** 21.62 357 *eP* P 02 37 55.0 -0.5
MSU **Marysvale** 21.73 346 *eP* P 02 37 56.3 -0.4
comp=Z,465nm,1.2s,mb5.8
MSU **Marysvale** 21.73 346 *eP* P 02 37 56.3 -0.4
MSU pmax pmax
comp=Z,465nm,1.2s,mb5.8
MVU **Marysvale** 21.73 346 PFAKE 02 38 10.0 +13
MVU LR LR
comp=Z,71µm,20.0s,MS6.1
P23A **Jefferson** 21.78 359 ⇑P P 02 37 57.9 +0.6
baz=22
CBKS **Cedar Bluff** 21.80 12 ⇑P P 02 37 57.5 0.0
baz=22,SNR=110
CBKS **Cedar Bluff** 21.80 12 ⇓*iP* P 02 37 55.5 -2.0
comp=Z,4µm,1.7s,mb6.6
CBKS LR LR
comp=Z,295µm,19.0s,MS6.7
CBKS **Cedar Bluff** 21.80 12 ⇓*iP* P 02 37 55.5 -1.9
CBKS pmax pmax
comp=Z,4µm,1.7s,mb6.6
CBKS MLR MLR
comp=Z,295µm,19.0s,MS6.7
Q18A **Rafter H Ranch** 21.89 350 ⇓P P 02 37 58.6 +0.1
baz=22,SNR=59
R13A **O'Grain Ranch,** 21.89 342 ⇓P P 02 37 59.9 +1.4
baz=22,SNR=106
Q16A **Castle Valley** 21.89 348 ⇑P P 02 37 59.5 +1.0
baz=22,SNR=102
CWC **Cottonwood Cre** 21.91 332 ⇓P P 02 37 59.3 +0.6
baz=22,SNR=48
P24A **Kohler Place,** 21.92 1 ⇑P P 02 37 59.9 +1.1
baz=22,SNR=42
P25A **Willow Gulch B** 21.94 3 ⇓P P 02 37 59.2 +0.2
baz=22,SNR=52
SMMC **Simmler** 21.94 327 ⇓P P 02 37 59.2 +0.1
baz=22,SNR=39
SRU **San Rafael** 21.96 349 ⇓P P 02 37 59.3 +0.1
baz=22,SNR=52
P21A **Nevastle** 21.99 356 ⇑P P 02 37 59.6 0.0
baz=22,SNR=118
P22A **Eagle** 22.02 357 ⇑P P 02 38 01.0 +1.1
baz=22,SNR=253
P20A **De Beque** 22.05 354 ⇑P P 02 38 00.6 +0.5
baz=22
GRAC **Grapevine Rang** 22.07 334 ⇓P P 02 38 01.1 +0.7
baz=22,SNR=46
OXF **Oxford** 22.18 37 ⇑*eP* P 02 37 59.7 -1.9
comp=Z,493nm,1.1s,mb5.8
OXF LR LR
comp=Z,52µm,20.0s,MS6.0
OXF **Oxford** 22.18 37 ⇑*eP* P 02 37 59.7 -1.9
OXF pmax pmax
comp=Z,493nm,1.1s,mb5.8
OXF MLR MLR
comp=Z,52µm,20.0s,MS6.0
ISCO **Idaho Springs** 22.20 360 ⇓P P 02 38 03.0 +1.2
baz=22,SNR=202
ISCO **Idaho Springs** 22.20 360 ⇓*iP* P 02 38 01.1 -0.7
comp=Z,240nm,1.0s,mb5.6
ISCO LR LR
comp=Z,232µm,19.0s,MS6.6
ISCO **Idaho Springs** 22.20 360 ⇓*iP* P 02 38 01.1 -0.7
ISCO pmax pmax
comp=Z,240nm,1.0s,mb5.6
ISCO MLR MLR
comp=Z,232µm,19.0s,MS6.6
Q15A **Fillmore** 22.24 346 ⇑P P 02 38 02.6 +0.4
baz=22,SNR=26
P19A **Cripple Cowboy** 22.25 353 ⇓P P 02 38 02.5 +0.2
baz=22,SNR=64
HBAR **Harrisburg** 22.26 33 *eP* P 02 38 02.0 -0.4
TMUT **Trail Mountain** 22.27 348 ⇓*iP* P 02 38 01.6 -0.8
comp=Z,756nm,1.5s,mb5.9
MET **Memphis--Engin** 22.33 35 *eP* P 02 38 02.3 -0.9
comp=Z,1µm,1.1s,mb6.2
RCTC **Rector, Farmer** 22.34 330 ⇓P P 02 38 04.1 +0.8
baz=22,SNR=27
P17A **Butcher Ranch,** 22.35 349 ⇑P P 02 38 03.8 +0.4
baz=22,SNR=199
P18A **Preston Nutter** 22.42 350 ⇓P P 02 38 04.6 +0.5

baz=22
Q14A **Sevier Lake (B** 22.45 344 ⇑P P 02 38 05.4 +1.0
baz=22,SNR=279
TIN **Tinemaha** 22.48 332 ⇓P P 02 38 05.7 +0.9
baz=22,SNR=24
O24A **Longmont** 22.52 1 ⇓P P 02 38 05.8 +0.5
baz=22,SNR=94
O25A **Wiggins** 22.54 3 ⇑P P 02 38 05.5 +0.1
baz=22,SNR=43
R11A **Troy Canyon, C** 22.57 339 ⇓P P 02 38 05.2 -0.5
baz=22,SNR=110
O22A **Kremmling** 22.58 358 ⇓P P 02 38 06.6 +0.7
baz=23,SNR=157
O23A **Lake Granby, G** 22.61 359 ⇓P P 02 38 06.0 -0.2
baz=23,SNR=95
P16A **Fountain Green** 22.66 347 ⇓P P 02 38 07.3 +0.6
baz=23,SNR=26
O20A **White River Ci** 22.66 354 ⇓P P 02 38 07.1 +0.4
baz=23,SNR=86
O21A **Pagoda** 22.68 356 ⇑P P 02 38 07.7 +0.8
baz=23
LRAL **Lakeview Retre** 22.68 44 *eP* P 02 38 06.4 -0.6
LRAL LR LR
comp=Z,27µm,22.0s,MS5.6
P15A **Leamington** 22.76 346 ⇓P P 02 38 08.1 +0.4
baz=23,SNR=50
KSU1 **Kansas State U** 22.84 18 ⇓*iP* P 02 38 07.0 -1.6
comp=Z,546nm,1.0s,mb5.9
KSU1 LR LR
comp=Z,157µm,20.0s,MS6.5
MTUM **Tungsten Hills** 22.88 332 *eP* P 02 38 08.6 -0.4
GNAR **Gosnell** 22.91 34 *eP* P 02 38 08.8 -0.6
O19A **Miners Draw (B** 22.92 353 ⇑P P 02 38 09.6 +0.2
baz=23,SNR=100
P14A **Drum Mountains** 22.96 345 ⇑P P 02 38 10.8 +0.9
baz=23,SNR=142
O18A **Roosevelt** 23.00 351 ⇑P P 02 38 10.7 +0.4
baz=23,SNR=127
MPU **Maple Canyon** 23.05 348 ⇓*iP* P 02 38 09.5 -1.2
comp=Z,1µm,1.8s,mb6.0
O17A **Robinson Place** 23.05 350 ⇑P P 02 38 11.2 +0.3
baz=23,SNR=244
NLU **North Lily Min** 23.08 347 ⇓*iP* P 02 38 09.8 -1.3
O16A **Springville** 23.20 348 ⇓P P 02 38 12.6 +0.2
baz=23
N22A **Wattenberg Ran** 23.22 358 ⇑P P 02 38 12.9 +0.3
baz=23,SNR=145
N21A **Black Mountain** 23.23 356 P P 02 38 12.8 +0.2
baz=23,SNR=59
MLAC **Mammoth Lakes** 23.23 332 ⇓P P 02 38 13.4 +0.7
baz=23,SNR=16
N24A **Carr** 23.23 1 P P 02 38 12.6 -0.1
baz=23,SNR=45
HALT **Halls** 23.23 35 *eP* P 02 38 12.4 -0.4
N25A **Grover** 23.24 3 ⇓P P 02 38 12.6 -0.2
baz=23,SNR=76
N23A **Red Feather La** 23.30 359 ⇓P P 02 38 13.7 +0.3
baz=23,SNR=99
DAU **Daniels Canyon** 23.36 349 *eP* P 02 38 13.4 -0.6
comp=Z,3µm,1.8s,mb6.4
DAU **Daniels Canyon** 23.36 349 *eP* P 02 38 13.4 -0.6
DAU pmax pmax
comp=Z,3µm,1.8s,mb6.4
N20A **Spence Gulch,** 23.36 355 ⇓P P 02 38 14.1 +0.1
baz=23,SNR=117
PAYG **Puerto Ayora** 23.45 139 *eP* P 02 38 20.6 +5.3
comp=Z,664nm,1.8s,mb5.8
PAYG LR LR
comp=Z,33µm,22.0s,MS5.7
DUG **Dugway** 23.48 346 ⇑P P 02 38 15.0 -0.3
baz=24,SNR=159
DUG **Dugway** 23.48 346 ⇓*iP* P 02 38 14.3 -1.0
comp=Z,209nm,1.1s,mb5.5
DUG LR LR
comp=Z,72µm,20.0s,MS6.1
DUG **Dugway** 23.48 346 ⇓*iP* P 02 38 14.3 -1.0
DUG pmax pmax
comp=Z,209nm,1.1s,mb5.5
DUG MLR MLR
comp=Z,72µm,20.0s,MS6.1
O15A **The Old Anders** 23.48 346 ⇑P P 02 38 15.8 +0.5
baz=24,SNR=40
N19A **John Jarvie Ra** 23.51 353 P P 02 38 14.7 -1.0
baz=24,SNR=81
OGNE **Ogallala** 23.53 7 ⇓P P 02 38 15.6 -0.3
baz=24,SNR=112
OGNE **Ogallala** 23.53 7 *eP* P 02 38 14.4 -1.4
OGNE LR LR
comp=Z,178µm,19.0s,MS6.5
GLAT **Glass** 23.53 34 *eP* P 02 38 15.9 0.0
JLU **Jordanelle** 23.58 349 ⇓*iP* P 02 38 14.6 -1.7
N18A **Larsen Ranch,** 23.66 352 ⇑P P 02 38 16.8 -0.2
baz=24
NVAR **Mina Array Bea** 23.67 334 P P 02 38 16.8 -0.4
comp=Z,30nm,1.0s,mb4.7,baz=152,slow=9.1,SNR=147
NVAR PcP PcP 02 42 03.7 +2.2
comp=Z,1.1nm,0.8s,baz=163,slow=3.3,SNR=3.1
NVAR P3KPbc 03 11 37.1
comp=Z,0.3nm,0.9s,baz=282,slow=4.5,SNR=3.1
NVAR **Mina Array Bea** 23.67 334 P P 02 38 16.8 -0.4
NVAR PcP PcP 02 42 03.7 +2.2
PHWY **Pilot Hill** 23.70 360 *eP* P 02 38 16.7 -0.7
CTU **Camp Tracy** 23.72 348 ⇓*iP* P 02 38 17.3 -0.3
comp=Z,2µm,2.2s,mb6.1
NOQ **North Oquirrh** 23.76 347 *eP* P 02 38 18.4 +0.5
N17A **Moffit Pass** 23.80 350 ⇓P P 02 38 18.8 +0.5
baz=24,SNR=76
SAO **San Andreas Ge** 23.81 327 ⇓*iP* P 02 38 16.3 -2.1
comp=Z,165nm,1.6s,mb5.2
SAO LR LR
comp=Z,83µm,21.0s,MS6.2
SAO **San Andreas Ge** 23.81 327 ⇓*iP* P 02 38 16.3 -2.1
SAO pmax pmax
comp=Z,165nm,1.6s,mb5.2
SAO MLR MLR
comp=Z,83µm,21.0s,MS6.2
UTMT **University of** 23.81 35 *eP* P 02 38 18.7 +0.2
M22A **Cedar Creek Ra** 23.82 358 ⇓P P 02 38 18.7 +0.2
baz=24,SNR=24
N16A **Rees Ranch, Co** 23.85 349 ⇓P P 02 38 19.4 +0.6
baz=24,SNR=41
M23A **Laramie** 23.87 360 ⇓P P 02 38 19.2 +0.2
baz=24,SNR=82
M24A **Cheyenne** 23.87 1 P P 02 38 18.5 -0.5
baz=24,SNR=111
M20A **Sweetwater, Wa** 24.00 355 ⇑P P 02 38 19.9 -0.3
baz=24,SNR=25
M21A **Separation Pea** 24.06 356 ⇓P P 02 38 20.5 -0.1
baz=24,SNR=58
N15A **Stansbury Isla** 24.07 347 ⇓P P 02 38 21.0 +0.2
baz=24,SNR=15
M19A **Rock Springs** 24.11 353 ⇑P P 02 38 20.7 -0.5
baz=24,SNR=18
RWWY **Rawlins** 24.13 357 *eP* P 02 38 20.9 -0.5
M18A **Lyman** 24.15 352 ⇓P P 02 38 21.3 -0.2
baz=24,SNR=84
WAKR **Walker** 24.22 332 *eP* P 02 38 21.8 -0.4
BGU **Big Grassy Mou** 24.22 346 ⇓*iP* P 02 38 20.7 -1.5
comp=Z,1µm,2.1s,mb5.9
WVT **Waverly** 24.24 37 ⇑*eP* P 02 38 21.2 -1.2
comp=Z,386nm,1.5s,mb5.6
WVT **Waverly** 24.24 37 ⇑*eP* P 02 38 21.2 -1.2
WVT pmax pmax
comp=Z,386nm,1.5s,mb5.6
CMB **Columbia Colle** 24.27 330 ⇓*iP* P 02 38 20.5 -2.2
comp=Z,559nm,2.0s,mb5.7
CMB LR LR
comp=Z,36µm,21.0s,MS5.8
CMB **Columbia Colle** 24.27 330 ⇓*iP* P 02 38 20.5 -2.2
CMB pmax pmax
comp=Z,559nm,2.0s,mb5.7
CMB MLR MLR
comp=Z,36µm,21.0s,MS5.8
FVM **French Village** 24.28 30 *eP* P 02 38 20.9 -1.8
comp=Z,973nm,1.5s,mb6.0
FVM **French Village** 24.28 30 *eP* P 02 38 20.9 -1.8
FVM pmax pmax
comp=Z,973nm,1.5s,mb6.0
M17A **Scullys Gap (B** 24.29 350 ⇓P P 02 38 22.6 -0.1
baz=24,SNR=131
M16A **Huntsville** 24.30 349 ⇑P P 02 38 23.3 +0.5
baz=24,SNR=75
L21A **Rawlins** 24.42 357 ⇓P P 02 38 23.5 -0.5
baz=24,SNR=46
L22A **Ellis Ranch, M** 24.44 358 ⇑P P 02 38 24.9 +0.7
baz=24
L24A **Wheatland** 24.45 1 ⇓P P 02 38 24.4 +0.3

baz=24,SNR=18
SPUT **South Promonto** 24.46 347 *e*P P 02 38 24.1 -0.2
DWPF **Disney** 24.48 60⇑*i*P P 02 38 24.9 +0.2
comp=Z,2µm,1.6s,mb6.3
L23A **Garrett** 24.51 360 ⇑P P 02 38 24.6 -0.2
baz=24,SNR=153
L20A **Wamsutter** 24.53 355 ⇑P P 02 38 24.8 -0.2
baz=24,SNR=52
HWUT **Hardware Ranch** 24.57 349⇓*i*P P 02 38 24.3 -1.0
comp=Z,481nm,1.9s,mb5.7
HWUT LR LR
comp=Z,43µm,22.0s,MS5.9
M15A **Larsen Ranch,** 24.61 347 ⇓P P 02 38 26.0 +0.4
baz=25,SNR=96
L18A **Fontenelle, Gr** 24.64 352 ⇑P P 02 38 26.1 +0.1
baz=25,SNR=130
SIUC **Southern Illin** 24.66 32 *e*P P 02 38 26.4 +0.2
L19A **Farson** 24.73 353 P P 02 38 26.9 +0.2
baz=25,SNR=134
SWET **Sewanee** 24.75 41 *e*P P 02 38 26.5 -0.6
SLM **Saint Louis** 24.89 29 *e*P P 02 38 28.7 +0.4
comp=Z,584nm,0.8s,mb6.2
SLM **Saint Louis** 24.89 29 *e*P P 02 38 28.7 +0.4
SLM pmax pmax
comp=Z,584nm,0.8s,mb6.2
L17A **Cokeville** 24.93 350 ⇑P P 02 38 28.4 -0.3
baz=25,SNR=125
L16A **Fish Haven** 24.94 349 ⇓P P 02 38 28.8 +0.1
baz=25,SNR=106
HVU **Hansel Valley** 24.98 347⇓*i*P P 02 38 27.8 -1.2
comp=Z,106nm,1.0s,mb5.3
HVU **Hansel Valley** 24.98 347⇓*i*P P 02 38 27.8 -1.3
HVU pmax pmax
comp=Z,106nm,1.0s,mb5.3
WCN **Washoe City** 25.02 333 ⇓P P 02 38 30.3 +0.8
baz=25,SNR=52
WCN **Washoe City** 25.02 333⇓*i*P P 02 38 29.1 -0.3
comp=Z,160nm,1.2s,mb5.4
WCN **Washoe City** 25.02 333⇓*i*P P 02 38 29.1 -0.4
WCN pmax pmax
comp=Z,160nm,1.2s,mb5.4
K22A **Casper** 25.06 358 ⇑P P 02 38 29.6 -0.3
baz=25,SNR=128
K21A **Alcova** 25.08 357 ⇓P P 02 38 29.8 -0.2
baz=25,SNR=238
L15A **Malad City** 25.11 348 ⇑P P 02 38 30.5 +0.2
baz=25,SNR=131
K20A **Yellowstone Ra** 25.18 355 ⇑P P 02 38 30.5 -0.4
baz=25,SNR=53
PAHR **Pah Rah Range** 25.20 334⇓*i*P P 02 38 31.0 -0.1
comp=Z,537nm,1.8s,mb5.8
GOGA **Godfrey** 25.30 47⇑*i*P P 02 38 31.9 -0.3
comp=Z,489nm,1.2s,mb5.9
GOGA LR LR
comp=Z,32µm,21.0s,MS5.8
GOGA **Godfrey** 25.30 47⇑*i*P P 02 38 31.9 -0.2
GOGA pmax pmax
comp=Z,489nm,1.2s,mb5.9
GOGA MLR MLR
comp=Z,32µm,21.0s,MS5.8
L14A **Malta** 25.32 346 ⇓P P 02 38 32.6 +0.4
baz=25,SNR=101
K18A **Toltan Ranch,** 25.34 352 P P 02 38 32.1 -0.2
baz=25,SNR=27
K19A **Absolon Red Bu** 25.39 354 ⇓P P 02 38 32.6 -0.2
baz=25,SNR=213
BW06 **Boulder Array** 25.41 353 ⇑P P 02 38 32.8 -0.2
baz=25,SNR=182
BW06 **Boulder Array** 25.41 353⇓*i*P P 02 38 31.6 -1.4
comp=Z,142nm,1.0s,mb5.5
BW06 LR LR
comp=Z,15µm,19.0s,MS5.5
PDAR **Pinedale Array** 25.41 353 P P 02 38 31.2 -1.7
comp=Z,90nm,0.9s,mb5.3,baz=160,slow=9.1,SNR=215
PDAR PcP PcP 02 42 06.0 +0.9
comp=Z,1.8nm,0.8s,baz=195,slow=2.8,SNR=2.5
PDAR LR LR 02 48 29.1
comp=Z,77µm,19.3s,MS6.2,baz=182,slow=36
PDAR P3KPbc 03 11 33.4
comp=Z,0.3nm,0.8s,baz=352,slow=5.5,SNR=2.2
PDAR **Pinedale Array** 25.41 353 P P 02 38 31.2 -1.7
PDAR PcP PcP 02 42 06.0 +0.9
PDAR LR LR 02 48 29.1
K17A **Gardner Place,** 25.57 351 ⇓P P 02 38 34.4 0.0
baz=26,SNR=66
MCCM **Marconi Confer** 25.60 327⇓*i*P P 02 38 33.6 -1.1
comp=Z,302nm,1.5s,mb5.6
MCCM LR LR
comp=Z,63µm,20.0s,MS6.1
AHID **Auburn Hatcher** 25.62 350⇓*i*P P 02 38 33.1 -1.8
comp=Z,1µm,2.1s,mb6.1
AHID LR LR
comp=Z,45µm,19.0s,MS6.0
USIN **University of** 25.66 34 *e*P P 02 38 35.8 +0.5
comp=Z,1µm,1.4s,mb6.2
K16A **Soda Springs** 25.76 350 ⇑P P 02 38 36.5 +0.3
baz=26,SNR=45
CPCT **Cooper Cave** 25.79 42 *e*P P 02 38 36.2 -0.3
K14A **Jones Ranch, D** 25.80 347 ⇓P P 02 38 36.6 +0.1
baz=26,SNR=64
K15A **Arbon** 25.80 348 ⇑P P 02 38 36.8 +0.3
baz=26,SNR=187
J21A **Lysite** 25.80 357 ⇑P P 02 38 36.6 +0.2
baz=26,SNR=58
J22A **Midwest** 25.82 358 ⇑P P 02 38 36.2 -0.5
baz=26,SNR=44
J19A **Crowheart** 25.84 354 ⇑P P 02 38 36.5 -0.4
baz=26,SNR=188
J20A **Shoshoni** 25.85 356 ⇑P P 02 38 37.0 +0.1
baz=26,SNR=70
J18A **Kendall Valley** 25.90 352 ⇓P P 02 38 37.6 +0.2
baz=26,SNR=242
OLIL **Olney** 26.00 32 *e*P P 02 38 38.6 +0.1
comp=Z,295nm,1.1s,mb5.7
J17A **Brown Place, J** 26.14 351 ⇑P P 02 38 40.0 +0.4
baz=26,SNR=208
REDW **Red Top Meadow** 26.16 351⇓*i*P P 02 38 38.3 -1.5
comp=Z,527nm,1.3s,mb5.9
J16A **Bone** 26.20 350 ⇓P P 02 38 40.5 +0.4
baz=26,SNR=187
RRI2 **Red Ridge** 26.22 350⇓*i*P P 02 38 39.0 -1.3
comp=Z,1µm,1.6s,mb6.1
BCIP **Isla Barro Col** 26.25 105⇑*i*P P 02 38 41.2 +0.3
comp=Z,382nm,1.9s,mb5.6
BCIP LR LR
comp=Z,35µm,20.0s,MS5.9
SNOW **Snow King Moun** 26.25 351⇓*i*P P 02 38 39.1 -1.4
comp=Z,815nm,1.3s,mb6.1
I21A **Big Trails, Te** 26.25 357 ⇓P P 02 38 40.4 -0.2
baz=26,SNR=74
TPAW **Teton Pass** 26.30 351⇓*i*P P 02 38 39.5 -1.6
comp=Z,670nm,1.2s,mb6.0
HOPS **Hopland** 26.34 328⇓*i*P P 02 38 40.9 -0.6
comp=Z,210nm,1.6s,mb5.4
HOPS LR LR
comp=Z,93µm,20.0s,MS6.3
I18A **Diamond G Ranc** 26.36 353 ⇑P P 02 38 41.8 +0.3
baz=26,SNR=33
LOHW **Long Hollow** 26.37 352⇓*i*P P 02 38 40.7 -0.9
comp=Z,719nm,1.1s,mb6.1
TKL **Tuckaleechee C** 26.40 43 P P 02 38 42.4 +0.4
comp=Z,50nm,0.8s,mb5.1,baz=225,slow=6.5,SNR=26
TKL LR LR 02 51 06.0
comp=Z,27µm,20.9s,MS5.8,baz=233,slow=41
TKL **Tuckaleechee C** 26.40 43⇑*i*P P 02 38 41.6 -0.4
TKL **Tuckaleechee C** 26.40 43⇑*i*P P 02 38 41.6 -0.4
DCID1 **Drake Creek** 26.44 351⇓*i*P P 02 38 41.5 -0.8
comp=Z,469nm,1.3s,mb5.9
I20A **Worland** 26.44 356 ⇑P P 02 38 42.9 +0.6
baz=26,SNR=160
MCJ **Malvern** 26.45 85 *i*P P 02 38 27.0 -16
J15A **Blackfoot** 26.47 349 ⇓P P 02 38 43.0 +0.4
baz=26,SNR=120
SCIA **State Center** 26.47 21⇓*i*P P 02 38 41.5 -1.0
comp=Z,227nm,0.9s,mb5.7
SCIA LR LR
comp=Z,61µm,21.0s,MS6.1
MOOW **Moose Ponds** 26.53 351⇓*i*P P 02 38 41.6 -1.5
comp=Z,508nm,1.4s,mb5.9
RSSD **Black Hills** 26.55 2⇓*i*P P 02 38 41.8 -1.5
comp=Z,116nm,1.1s,mb5.3
RSSD **Black Hills** 26.55 2⇓*i*P P 02 38 41.8 -1.4
RSSD pmax pmax
comp=Z,115nm,1.1s,mb5.3
MTDJ **Mount Denham** 26.57 84⇑*i*P P 02 38 44.0 +0.2
comp=Z,1µm,1.5s,mb6.1
MTDJ LR LR
comp=Z,22µm,22.0s,MS5.7

WCI **Wyandotte Cave** 26.59 35 *e*P P 02 38 43.1 -0.6
comp=Z,107nm,0.8s,mb5.4
WCI **Wyandotte Cave** 26.59 35 *e*P P 02 38 43.1 -0.6
WCI pmax pmax
comp=Z,107nm,0.8s,mb5.4
I19A **Meeteetse** 26.60 354 ⇑P P 02 38 44.1 +0.4
baz=27,SNR=82
J14A **Carey** 26.61 347 ⇑P P 02 38 44.4 +0.5
baz=27,SNR=88
I17A **Pilgrim Ck.** 26.67 352 ⇓P P 02 38 44.7 +0.4
baz=27,SNR=36
IMW **Indian Meadow** 26.70 351⇓*i*P P 02 38 44.0 -0.7
comp=Z,103nm,1.1s,mb5.3
I16A **Newdale** 26.76 350 ⇑P P 02 38 45.1 0.0
baz=27,SNR=43
BBJ **Bamboo Saint A** 26.82 84 *i*P P 02 38 47.2 +1.2
J13A **Cove Ranch, Pi** 26.83 346 ⇑P P 02 38 46.1 +0.3
baz=27,SNR=49
FLWY **Flagg Ranch** 26.85 352⇓*i*P P 02 38 45.0 -0.9
comp=Z,356nm,1.3s,mb5.7
HDIL **Hopedale** 26.86 28⇓*e*P P 02 38 45.6 -0.6
comp=Z,373nm,1.3s,mb5.8
HDIL LR LR
comp=Z,92µm,19.0s,MS6.4
H20A **Greybull** 26.97 356 ⇓P P 02 38 46.6 -0.5
baz=27,SNR=28
HLID **Hailey** 27.05 346 ⇑P P 02 38 48.4 +0.6
baz=27,SNR=100
HLID **Hailey** 27.05 346⇓*i*P P 02 38 47.4 -0.4
comp=Z,162nm,1.4s,mb5.4
HLID LR LR
comp=Z,58µm,21.0s,MS6.1
I15A **Monteview** 27.06 349 ⇓P P 02 38 48.7 +0.8
baz=27,SNR=17
H21A **Big Horn, Sher** 27.06 358 ⇑P P 02 38 47.2 -0.6
baz=27,SNR=19
KCPM **Cahto Peak** 27.12 328⇓*i*P P 02 38 48.4 -0.1
comp=Z,72nm,1.4s,mb5.0
BNJ **Bonny Gate** 27.12 84⇓*i*P P 02 38 50.2 +1.5
H17A **Grant Village** 27.14 352 P P 02 38 49.5 +0.9
baz=27,SNR=35
BLO **Bloomington** 27.15 34 *e*P P 02 38 49.6 +0.8
comp=Z,145nm,1.2s,mb5.4
BLO **Bloomington** 27.15 34 *e*P P 02 38 49.6 +0.9
BLO pmax pmax
comp=Z,145nm,1.2s,mb5.4
KIPM **Iron Peak** 27.16 329 *e*P P 02 38 49.1 +0.3
comp=Z,223nm,1.6s,mb5.4
I14A **Mackay** 27.18 347 P P 02 38 49.4 +0.5
baz=27,SNR=101
ECSD **EROS Data Cent** 27.18 14⇓*i*P P 02 38 46.9 -2.0
comp=Z,90nm,1.1s,mb5.2
ECSD LR LR
comp=Z,63µm,21.0s,MS6.2
YFT **Old Faithful** 27.23 352⇓*i*P P 02 38 50.1 +0.7
comp=Z,341nm,1.6s,mb5.6
H19A **Powell** 27.23 354 ⇑P P 02 38 49.5 +0.1
baz=27,SNR=40
WVOR **Wild Horse Val** 27.26 338⇓*i*P P 02 38 48.7 -1.0
comp=Z,164nm,1.4s,mb5.4
WVOR LR LR
comp=Z,42µm,19.0s,MS6.0
WVOR **Wild Horse Val** 27.26 338⇓*i*P P 02 38 48.7 -1.0
WVOR pmax pmax
comp=Z,164nm,1.4s,mb5.4
WVOR MLR MLR
comp=Z,42µm,19.0s,MS6.0
COW **Cow Castle Cre** 27.27 50 *e*P P 02 38 50.7 +0.8
MFID **Camas Ranch** 27.27 343 ⇑P P 02 38 49.5 -0.3
baz=27,SNR=30
STH **Stony Hill** 27.27 84 *i*P P 02 38 51.1 +1.0
LKWY **Lake** 27.28 352⇓*i*P P 02 38 50.5 +0.7
comp=Z,161nm,1.3s,mb5.4
LKWY LR LR
comp=Z,85µm,20.0s,MS6.3
LKWY **Lake** 27.28 352⇓*i*P P 02 38 50.5 +0.6
LKWY pmax pmax
comp=Z,161nm,1.3s,mb5.4
LKWY MLR MLR
comp=Z,85µm,20.0s,MS6.3
H18A **Shoshone NF, C** 27.30 353 ⇑P P 02 38 49.7 -0.4
baz=27,SNR=44
WDC **Whiskeytown Da** 27.30 331⇓*i*P P 02 38 47.4 -2.8
comp=Z,32nm,1.3s,mb4.7
WDC LR LR
comp=Z,33µm,19.0s,MS5.9
WDC **Whiskeytown Da** 27.30 331⇓*i*P P 02 38 47.4 -2.7
WDC pmax pmax
comp=Z,32nm,1.3s,mb4.7
WDC MLR MLR
comp=Z,33µm,19.0s,MS5.9
I13A **Wildhorse Cree** 27.31 346 ⇑P P 02 38 50.9 +0.8
baz=27,SNR=178
JSC **Jenkinsville** 27.32 48 *e*P P 02 38 50.8 +0.5
JSC **Jenkinsville** 27.32 48 *e*P P 02 38 50.8 +0.4
HOJ **Hope** 27.33 85⇓*i*P P 02 38 51.5 +0.9
GWJ **Greenwich** 27.35 84⇓*i*P P 02 38 52.1 +1.3
MOD **Modoc** 27.43 335⇑*i*P P 02 38 50.4 -0.8
comp=Z,79nm,1.5s,mb5.0
MOD LR LR
comp=Z,23µm,21.0s,MS5.7
I12A **Atlanta** 27.44 345 ⇓P P 02 38 51.5 +0.2
baz=27,SNR=69
YMR **Madison River** 27.46 351⇓*i*P P 02 38 51.6 +0.1
comp=Z,243nm,1.4s,mb5.5
YNR **Norris Junctio** 27.46 352⇓*i*P P 02 38 51.6 +0.1
comp=Z,204nm,1.4s,mb5.5
NHSC **New Hope** 27.52 51 *e*P P 02 38 52.6 +0.4
comp=Z,2µm,1.8s,mb6.5
NHSC LR LR
comp=Z,21µm,22.0s,MS5.7
H16A **Russell Place,** 27.53 351 ⇑P P 02 38 52.9 +0.7
baz=28,SNR=101
G21A **Lodge Grass** 27.66 357 ⇓P P 02 38 52.5 -0.8
baz=28,SNR=8.3
CMJ **Castle Mountai** 27.68 84⇑*i*P P 02 38 55.7 +2.0
H15A **Lima** 27.68 349 P P 02 38 54.1 +0.6
baz=28,SNR=57
QLMT **Earthquake Lak** 27.69 351 *e*P P 02 38 54.5 +1.0
comp=Z,58nm,1.6s,mb5.0
RLMT **Red Lodge** 27.70 354 ⇓P P 02 38 53.4 -0.2
baz=28,SNR=47
RLMT **Red Lodge** 27.70 354⇓*i*P P 02 38 52.4 -1.3
comp=Z,205nm,1.0s,mb5.7
RLMT LR LR
comp=Z,66µm,21.0s,MS6.2
G20A **Bridger** 27.71 356 ⇓P P 02 38 52.9 -0.8
baz=28,SNR=46
H14A **Leadore** 27.82 348 ⇑P P 02 38 55.5 +0.8
baz=28,SNR=52
MCMT **McKenzie Canyo** 27.92 349 *e*P P 02 38 55.9 +0.3
comp=Z,34nm,1.1s,mb4.9
G18A **Lazy EL Ranch,** 27.93 354 P P 02 38 55.1 -0.5
baz=28,SNR=36
H13A **Challis** 27.96 347 ⇑P P 02 38 56.5 +0.6
baz=28,SNR=50
J08A **Circle Bar Ran** 28.02 340 ⇑P P 02 38 56.5 0.0
baz=28,SNR=12
G17A **Pierce Place,** 28.07 352 ⇑P P 02 38 58.2 +1.3
baz=28,SNR=16
H12A **Diamond D Ranc** 28.08 346 ⇓P P 02 38 57.6 +0.5
baz=28,SNR=75
KHMM **Horse Mountain** 28.10 330⇓*i*P P 02 38 56.5 -0.7
comp=Z,59nm,1.4s,mb5.0
G16A **Moss Hill, Enn** 28.13 350 ⇑P P 02 38 58.5 +1.1
baz=28,SNR=112
G15A **Dillon** 28.18 349 ⇓P P 02 38 58.8 +0.9
baz=28,SNR=108
F20A **Billings** 28.29 356 ⇓P P 02 38 58.5 -0.4
baz=28,SNR=23
YBH **Yreka Blue Hor** 28.30 332 P P 02 38 57.2 -1.8
comp=Z,9.5nm,0.9s,baz=158,slow=5.9,SNR=14
YBH LR LR 02 49 35.8
comp=Z,21µm,19.6s,MS5.7,baz=153,slow=35
YBH **Yreka Blue Hor** 28.30 332 *e*P P 02 38 56.8 -2.2
comp=Z,23nm,1.3s,mb4.6
YBH LR LR
comp=Z,20µm,19.0s,MS5.7
YBH **Yreka Blue Hor** 28.30 332 *e*P P 02 38 56.8 -2.2
YBH pmax pmax
comp=Z,23nm,1.3s
YBH MLR MLR
comp=Z,20µm,19.0s
K05A **Summer Lake** 28.35 336 ⇓P P 02 38 59.7 +0.3
baz=28,SNR=37
DLMT **Dillon** 28.39 349⇓*i*P P 02 38 59.6 -0.2
comp=Z,205nm,1.4s,mb5.6
F19A **Roth Farm, Mol** 28.40 355 ⇓P P 02 38 59.3 -0.6

baz=28,SNR=35
GCMT **Greycliff** 28.41 354 *e*P P 02 38 59.1 -0.8
comp=Z,75nm,1.2s,mb5.2
JFWS **Jewell Farm** 28.42 24⇓*i*P P 02 38 59.1 -1.0
comp=Z,343nm,1.3s,mb5.8
JFWS LR LR
comp=Z,70µm,19.0s,MS6.3
JFWS **Jewell Farm** 28.42 24⇓*i*P P 02 38 59.1 -1.0
JFWS pmax pmax
comp=Z,343nm,1.3s,mb5.8
JFWS MLR MLR
comp=Z,70µm,19.0s,MS6.3
G14A **Jackson** 28.44 348 ⇓P P 02 39 00.5 +0.3
baz=28,SNR=13
G13A **Cobalt** 28.46 347 P P 02 39 00.4 0.0
baz=28,SNR=91
BOZ **Bozeman (W)** 28.51 351 ⇑P P 02 39 01.0 +0.1
baz=28,SNR=99
BOZ **Bozeman (W)** 28.51 351⇓*i*P P 02 38 59.9 -0.9
comp=Z,169nm,1.4s,mb5.6
BOZ LR LR
comp=Z,43µm,19.0s,MS6.1
BOZ **Bozeman (W)** 28.51 351⇓*i*P P 02 38 59.9 -1.0
BOZ pmax pmax
comp=Z,169nm,1.4s,mb5.6
BOZ MLR MLR
comp=Z,43µm,19.0s,MS6.1
F18A **Big Timber** 28.52 354 ⇓P P 02 39 00.7 -0.2
baz=28,SNR=22
F17A **Fitzpatrick Pl** 28.63 352 P P 02 39 02.0 +0.1
baz=29,SNR=49
F16A **Kennard Place,** 28.65 351 ⇓P P 02 39 02.8 +0.7
baz=29,SNR=28
KRMB **Red Mountain** 28.69 330⇓*i*P P 02 39 01.9 -0.6
comp=Z,100nm,1.6s,mb5.3
G12A **Big Creek, Yel** 28.74 345 ⇓P P 02 39 02.9 0.0
baz=29
LRM **Limekiln Ridge** 28.82 350 *e*P P 02 39 03.4 -0.1
comp=Z,2µm,1.3s,mb6.6
F15A **Butte** 28.84 350 P P 02 39 03.6 -0.1
baz=29,SNR=100
E21A **Keefer Ranch,** 28.97 358 ⇓P P 02 39 04.3 -0.6
baz=29,SNR=26
F14A **Wisdom** 28.97 349 ⇓P P 02 39 05.3 +0.3
baz=29,SNR=11
E20A **Meyer Farm, Mu** 28.99 356 ⇑P P 02 39 04.9 -0.1
baz=29,SNR=41
E19A **Rath Farm, Rou** 28.99 355 ⇑P P 02 39 04.8 -0.3
baz=29,SNR=90
I07A **Izee** 29.01 339 ⇓P P 02 39 04.6 -0.7
baz=29,SNR=11
LAO **LASA Array** 29.09 359 ⇑P P 02 39 05.2 -0.7
baz=29,SNR=24
LAO **LASA Array** 29.09 359⇓*i*P P 02 39 03.8 -2.2
comp=Z,775nm,2.3s,mb6.0
LAO LR LR
comp=Z,291µm,20.0s,MS6.9
HUMO **Hull Mountain** 29.11 333⇓*i*P P 02 39 04.0 -2.3
comp=Z,65nm,1.7s,mb5.1
HUMO LR LR
comp=Z,58µm,19.0s,MS6.2
F13A **Darby** 29.14 347 ⇓P P 02 39 06.7 +0.3
baz=29,SNR=188
E18A **Harlowton** 29.20 354 ⇑P P 02 39 07.0 +0.1
baz=29,SNR=36
E17A **Martinsdale** 29.20 352 ⇑P P 02 39 07.2 +0.2
baz=29,SNR=49
ELN **Prospectdale** 29.29 43 *e*P P 02 39 08.7 +0.8
F12A **Elk City** 29.32 346 ⇓P P 02 39 07.7 -0.3
baz=29,SNR=145
KBO **Bosley Butte** 29.37 331⇓*i*P P 02 39 07.6 -0.9
comp=Z,214nm,1.5s,mb5.7
E16A **East Helena** 29.39 351 ⇓P P 02 39 08.5 -0.1
baz=29,SNR=22
E15A **Deer Lodge** 29.43 350 P P 02 39 08.5 -0.5
baz=29,SNR=68
D21A **La Casta Ranch** 29.49 358 P P 02 39 09.0 -0.5
baz=30,SNR=37
BLA **Blacksburg** 29.50 43 *e*P P 02 39 09.7 0.0
comp=Z,209nm,1.3s,mb5.7
BLA LR LR
comp=Z,22µm,20.0s,MS5.8
BLA **Blacksburg** 29.50 43 *e*P P 02 39 09.7 0.0
BLA pmax pmax
comp=Z,209nm,1.3s,mb5.7
BLA MLR MLR
comp=Z,22µm,20.0s,MS5.8
D24A **Glendive** 29.53 2 ⇓P P 02 39 09.2 -0.6
baz=30
D22A **Cohagen** 29.55 359 ⇑P P 02 39 10.0 -0.1
baz=30
D20A **Manuel Ranch,** 29.57 356 ⇑P P 02 39 10.2 -0.1
baz=30,SNR=54
D23A **Lindsay** 29.57 0 ⇑P P 02 39 09.6 -0.6
baz=30
E14A **Clinton** 29.57 349 P P 02 39 10.0 -0.3
baz=30,SNR=82
HRY **Holter Researc** 29.58 351 *e*P P 02 39 10.0 -0.4
comp=Z,60nm,1.0s,mb5.3
D19A **Cripps Ranch,** 29.70 355 ⇑P P 02 39 11.3 -0.1
baz=30,SNR=127
E13A **Victor** 29.73 348 ⇓P P 02 39 11.5 -0.2
baz=30,SNR=108
VIPM **Ingram Point** 29.77 338 P P 02 39 11.4 -0.7
VIPM **Ingram Point** 29.77 338 P P 02 39 11.4 -0.7
VWCC **Virginia Weste** 29.80 44 *e*P P 02 39 13.6 +1.1
D18A **Linhart Farms,** 29.81 354 ⇓P P 02 39 12.3 -0.1
baz=30,SNR=28
ACSO **Alum Creek Sta** 29.83 36 *e*P P 02 39 13.1 +0.5
comp=Z,85nm,1.0s,mb5.4
ACSO LR LR
comp=Z,48µm,20.0s,MS6.1
D16A **Dana Ranch, Ca** 29.86 352 ⇓P P 02 39 12.5 -0.3
baz=30,SNR=37
D17A **Six Diamond Ra** 29.86 353 ⇓P P 02 39 12.6 -0.2
baz=30,SNR=59
G08A **Pilot Rock** 29.90 341 ⇓P P 02 39 12.6 -0.6
baz=30,SNR=32
KEBM **Edson Butte** 29.94 332⇓*i*P P 02 39 12.7 -0.8
comp=Z,212nm,1.2s,mb5.8
C24A **Savage** 29.94 1 ⇓P P 02 39 13.2 -0.3
baz=30
E12A **Beaver Dam Sad** 30.01 346 ⇑P P 02 39 13.6 -0.5
baz=30,SNR=56
CHMT **Chamberlain Mo** 30.01 349 *e*P P 02 39 13.2 -0.9
comp=Z,206nm,1.7s,mb5.6
D15A **Lincoln** 30.01 350 ⇑P P 02 39 14.0 -0.1
baz=30,SNR=30
F10A **Beach Ranch, E** 30.01 343 ⇓P P 02 39 13.8 -0.4
baz=30,SNR=30
MSO **Missoula** 30.06 348 ⇓P P 02 39 14.4 -0.1
baz=30,SNR=104
MSO **Missoula** 30.06 348⇓*i*P P 02 39 13.5 -1.0
comp=Z,208nm,1.5s,mb5.6
MSO LR LR
comp=Z,21µm,20.0s,MS5.8
C22A **Vida** 30.14 359 ⇑P P 02 39 14.9 -0.4
baz=30
C20A **Veseth Ranch,** 30.18 357 ⇑P P 02 39 15.5 -0.2
baz=30,SNR=54
CNNC **Cliffs of the** 30.20 49 *e*P P 02 39 16.0 0.0
comp=Z,408nm,1.9s,mb5.8
CNNC LR LR
comp=Z,25µm,20.0s,MS5.9
C23A **Lambert** 30.20 0 ⇑P P 02 39 15.4 -0.4
baz=30
D14A **Greenough** 30.22 349 ⇓P P 02 39 15.8 -0.2
baz=30,SNR=73
LNOR **Lincton Mounta** 30.22 342 *e*P P 02 39 14.7 -1.3
comp=Z,38nm,1.3s,mb5.0
LNOR **Lincton Mounta** 30.22 342 *e*P P 02 39 14.7 -1.3
LNOR pmax pmax
comp=Z,38nm,1.3s,mb5.0
C21A **Desert Coulee** 30.25 358 ⇑P P 02 39 15.9 -0.4
baz=30,SNR=51
BROR **Big Rock Looko** 30.26 335 P P 02 39 15.2 -1.2
C19A **Slack Wire Ran** 30.28 355 ⇓P P 02 39 16.4 -0.1
baz=30,SNR=37
C17A **Wharram Farm,** 30.34 353 ⇓P P 02 39 16.8 -0.3
baz=30,SNR=56
SLMT **Seeley Lake** 30.37 349 *e*P P 02 39 16.6 -0.7
comp=Z,199nm,1.4s,mb5.7
G06A **Carlson Farm,** 30.41 339 ⇑P P 02 39 17.2 -0.5
baz=30,SNR=18
D13A **Huson** 30.41 348 ⇑P P 02 39 17.2 -0.5
baz=30,SNR=68
H04A **Detroit Lake** 30.51 336 ⇑P P 02 39 18.0 -0.6
baz=30,SNR=13

D12A **Red Ives Fores** 30.56 347 ⇑P P 02 39 18.1 -0.9
baz=30
EGMT **Eagleton** 30.62 354 ⇓P P 02 39 19.6 +0.1
baz=31,SNR=36
EGMT **Eagleton** 30.62 354 ⇓*i*P P 02 39 18.2 -1.3
comp=Z,314nm,1.6s,mb5.9
EGMT LR LR
comp=Z,42μm,19.0s,MS6.1
C16A **Fuhringer Ranc** 30.64 352 ⇑P P 02 39 19.4 -0.2
baz=31,SNR=33
B22A **Reddig Ranch S** 30.70 359 ⇑P P 02 39 19.8 -0.5
baz=31,SNR=21
SWMT **Swartz Lake** 30.72 349 *e*P P 02 39 19.4 -1.0
comp=Z,110nm,1.4s,mb5.5
C15A **Salmond Ranch,** 30.74 351 ⇓P P 02 39 20.1 -0.5
baz=31,SNR=11
E09A **Wood Farm, Sta** 30.76 343 ⇑P P 02 39 19.0 -1.9
baz=31,SNR=11
HOOD **Mount Hood Mea** 30.85 337 ⇓*i*P P 02 39 20.6 -1.0
comp=Z,127nm,1.3s,mb5.6
B21A **Ellsworth Farm** 30.85 358 ⇑P P 02 39 21.0 -0.5
baz=31,SNR=9.0
B23A **Brockton** 30.86 1 ⇑P P 02 39 21.6 -0.1
baz=31
COR **Corvallis** 30.87 335 ⇓*i*P P 02 39 20.7 -1.0
comp=Z,142nm,1.3s,mb5.6
COR **Corvallis** 30.87 335 ⇓*i*P P 02 39 20.7 -1.1
COR pmax pmax
comp=Z,142nm,1.3s,mb5.6
DGMT **Dagmar** 30.89 2 ⇑P P 02 39 21.6 -0.3
baz=31,SNR=30
DGMT **Dagmar** 30.89 2 ⇓*i*P P 02 39 20.8 -1.0
comp=Z,137nm,1.1s,mb5.7
DGMT LR LR
comp=Z,46μm,20.0s,MS6.1
MPOR **Mary's Peak** 30.91 334 P P 02 39 21.9 -0.2
B20A **Solberg Farm,** 30.91 357 ⇑P P 02 39 21.6 -0.5
baz=31
AAM **Ann Arbor** 30.92 32 *e*P P 02 39 22.9 +0.7
comp=Z,173nm,1.0s,mb5.8
AAM LR LR
comp=Z,61μm,20.0s,MS6.3
AAM **Ann Arbor** 30.92 32 *e*P P 02 39 22.9 +0.7
AAM pmax pmax
comp=Z,173nm,1.0s,mb5.8
AAM MLR MLR
comp=Z,61μm,20.0s,MS6.3
C14A **Swan Lake** 30.93 349 ⇑P P 02 39 22.0 -0.2
baz=31,SNR=36
B19A **Brinkman Farms** 30.98 355 ⇓P P 02 39 22.5 -0.2
baz=31,SNR=55
B18A **Beardsley Farm** 30.99 354 ⇓P P 02 39 22.7 -0.1
baz=31,SNR=53
C13A **Hot Springs** 31.00 348 ⇓P P 02 39 21.8 -1.0
baz=31
JTMT **Jette** 31.00 348 *e*P P 02 39 21.8 -1.1
comp=Z,124nm,1.9s,mb5.4
G04A **Mulino** 31.06 336 ⇑P P 02 39 23.3 -0.1
baz=31,SNR=9.3
YBMT **Yellow Bay** 31.06 349 *e*P P 02 39 22.5 -0.9
comp=Z,66nm,1.4s,mb5.3
HAWA **Hanford** 31.07 341 ⇓*i*P P 02 39 22.1 -1.3
comp=Z,54nm,1.4s,mb5.2
HAWA LR LR
comp=Z,47μm,20.0s,MS6.2
RSW **Rattlesnake Hi** 31.09 341 *e*P P 02 39 22.8 -0.8
comp=Z,58nm,1.2s,mb5.3
BSMT **Bassoo Peak** 31.20 348 *e*P P 02 39 23.6 -1.1
comp=Z,204nm,2.1s,mb5.6
C12B **Naegeli Ranch,** 31.21 347 P P 02 39 24.0 -0.7
baz=31,SNR=16
B16A **M & M Farms, S** 31.23 352 ⇑P P 02 39 24.4 -0.5
baz=31
B15A **Bradely Ranch,** 31.25 351 ⇑P P 02 39 24.5 -0.6
baz=31,SNR=45
BLMT **Blacktail Moun** 31.27 348 *e*P P 02 39 24.3 -1.0
comp=Z,92nm,1.6s,mb5.4
MCWV **Mont Chateau** 31.30 40 *e*P P 02 39 26.1 +0.4
comp=Z,246nm,1.2s,mb5.9
MCWV LR LR
comp=Z,44μm,19.0s,MS6.2
E07A **Sunnyside** 31.32 341 ⇑P P 02 39 25.3 -0.3
baz=31,SNR=13
A20A **Cobblestone Ra** 31.34 357 ⇑P P 02 39 25.7 -0.1
baz=31,SNR=70
A24A **Westby** 31.34 2 ⇑P P 02 39 25.7 -0.2
baz=31
A22A **Carney Farms,** 31.39 359 ⇑P P 02 39 26.2 -0.1
baz=31,SNR=58
A21A **Bergtoll Ranch** 31.41 358 ⇓P P 02 39 26.1 -0.4
baz=31,SNR=24
A19A **Klindworth Far** 31.44 356 ⇓P P 02 39 26.4 -0.3
baz=31,SNR=26
D08A **Wollman Farm,** 31.48 342 ⇓P P 02 39 25.9 -1.2
baz=32,SNR=9.3
C11A **Tepee Creek (N** 31.51 346 ⇑P P 02 39 26.6 -0.8
baz=32,SNR=30
A18A **Metzger Ranch,** 31.52 354 ⇓P P 02 39 27.1 -0.4
baz=32,SNR=31
COWI **Conover** 31.56 22 ⇓*i*P P 02 39 26.9 -0.9
comp=Z,251nm,1.3s,mb5.9
COWI LR LR
comp=Z,35μm,20.0s,MS6.0
HEBO **Mount Hebo** 31.57 335 ⇓*i*P P 02 39 27.6 -0.3
comp=Z,215nm,1.2s,mb5.8
A17A **Triple J Farms** 31.63 353 ⇓P P 02 39 28.1 -0.3
baz=32,SNR=60
OTAV **Otavalo** 31.64 120 ⇑*i*P P 02 39 31.1 +2.2
comp=Z,120nm,1.4s,mb5.5
OTAV LR LR
comp=Z,28μm,22.0s,MS5.9
B13A **Whitefish** 31.64 349 P P 02 39 28.1 -0.4
baz=32,SNR=23
OD2 **Odessa Site #2** 31.72 343 *e*P P 02 39 28.0 -1.3
comp=Z,116nm,1.6s,mb5.5
A16A **West Butte Ran** 31.74 352 ⇑P P 02 39 28.9 -0.4
baz=32
A15A **Johnson Ranch,** 31.93 351 P P 02 39 30.1 -0.9
baz=32,SNR=15
B12A **Libby** 31.96 347 ⇑P P 02 39 31.1 -0.2
baz=32
C09A **Chrisman Ranch** 31.98 344 ⇑P P 02 39 31.6 +0.1
baz=32,SNR=7.4
A14A **Double T Ranch** 32.03 350 ⇑P P 02 39 31.7 -0.2
baz=32,SNR=36
CBN **Corbin** 32.06 44 *e*P P 02 39 31.9 -0.4
comp=Z,481nm,1.6s,mb6.1
CBN LR LR
comp=Z,20μm,19.0s,MS5.8
F03A **Seaside** 32.08 336 ⇑P P 02 39 32.1 -0.3
baz=32,SNR=13
NEW **Newport** 32.11 345 P P 02 39 31.7 -1.0
baz=32,SNR=53
NEW **Newport** 32.11 345 ⇓*i*P P 02 39 31.3 -1.4
comp=Z,1μm,2.4s,mb6.2
NEW LR LR
comp=Z,42μm,21.0s,MS6.1
NEW **Newport** 32.11 345 ⇓*i*P P 02 39 31.3 -1.3
NEW pmax pmax
comp=Z,1μm,2.4s
NEW MLR MLR
comp=Z,42μm,21.0s
LON **Longmire** 32.13 339 ⇓*i*P P 02 39 31.6 -1.3
comp=Z,35nm,1.0s,mb5.1
LON **Longmire** 32.13 339 ⇓*i*P P 02 39 31.6 -1.2
LON pmax pmax
comp=Z,35nm,1.0s,mb5.1
WALA **Waterton Lakes** 32.20 350 ⇓*i*P P 02 39 32.5 -0.8
comp=Z,4.9nm,1.5s
GLMI **Grayling** 32.35 28 *e*P P 02 39 34.2 -0.5
comp=Z,247nm,1.0s,mb6.0
GLMI LR LR
comp=Z,79μm,20.0s,MS6.4
ALLY **Alegheny Colle** 32.38 37 *e*P P 02 39 34.0 -1.1
comp=Z,354nm,1.4s,mb6.0
ETW **Entiat** 32.40 341 P P 02 39 34.6 -0.6
A12A **Yaak River Ran** 32.41 347 ⇑P P 02 39 36.0 +0.8
baz=32,SNR=9.3
EYMN **Ely** 32.43 18 ⇓*i*P P 02 39 33.9 -1.5
comp=Z,177nm,0.9s,mb5.9
EYMN LR LR
comp=Z,174μm,20.0s,MS6.8
SDDR **Presa de Saban** 32.45 82 ⇑*i*P P 02 39 37.1 +1.1
comp=Z,420nm,1.8s,mb6.0
SDDR LR LR
comp=Z,15μm,20.0s,MS5.7
D05A **Enumclaw** 32.57 339 P P 02 39 36.8 +0.1
baz=32,SNR=12

E03A **Lebam** 32.60 337 P P 02 39 37.4 +0.5
baz=33,SNR=44
ERPA **Erie** 32.77 36 *e*P P 02 39 38.3 -0.2
comp=Z,95nm,1.1s,mb5.6
ERPA LR LR
comp=Z,37μm,19.0s,MS6.1
ROSC **El Rosal** 32.96 109 P P 02 39 44.4 +3.9
comp=Z,7.3nm,0.8s,mb4.6,baz=275,slow=22,SNR=20
ROSC LR LR 02 51 42.6
comp=Z,13μm,20.4s,MS5.6,baz=349,slow=34
ROSC **El Rosal** 32.96 109 ⇑*i*P P 02 39 43.7 +3.2
SDMD **Soldier's Deli** 33.06 43 *e*P P 02 39 41.0 -0.1
comp=Z,76nm,1.0s,mb5.6
SSPA **Standing Stone** 33.09 40 *e*P P 02 39 40.8 -0.5
comp=Z,123nm,1.0s,mb5.8
GNW **Green Mountain** 33.19 338 ⇓*i*P P 02 39 40.4 -1.7
comp=Z,28nm,1.1s,mb5.1
NLWA **Neilton Lookou** 33.42 337 ⇓*i*P P 02 39 43.2 -0.9
comp=Z,128nm,1.4s,mb5.7
NLWA LR LR
comp=Z,48μm,20.0s,MS6.2
JCW **Jim Creek** 33.42 340 *e*P P 02 39 42.6 -1.5
comp=Z,74nm,0.9s,mb5.6
RPW **Rockport** 33.51 341 *e*P P 02 39 43.5 -1.4
comp=Z,68nm,1.2s,mb5.5
ULM **Lac du Bonnet** 33.55 11 P P 02 39 42.8 -2.4
comp=Z,30nm,0.9s,mb5.2,baz=198,slow=9.2,SNR=22
ULM LR LR 02 53 48.0
comp=Z,146μm,20.7s,MS6.7,baz=196,slow=37
ULM **Lac du Bonnet** 33.55 11 ⇓*i*P P 02 39 42.8 -2.4
comp=Z,121nm,1.5s,mb5.6
ULM LR LR
comp=Z,278μm,20.0s,MS7.0
PGC **Sidney** 34.33 339 ⇓*i*P P 02 39 50.9 -1.2
comp=Z,14nm,1.9s,mb4.6
SDV **Santo Domingo** 34.92 100 ⇑*i*P P 02 39 58.7 +1.1
comp=Z,120nm,0.9s,mb5.8
SDV LR LR
comp=Z,10μm,22.0s,MS5.5
SADO **Sadowa** 34.99 33 P P 02 39 57.1 -0.7
comp=Z,36nm,1.0s,mb5.2,baz=250,slow=8.7,SNR=19
SADO LR LR 02 55 08.3
comp=Z,51μm,19.4s,MS6.3,baz=239,slow=38
BINY **Binghamton** 35.16 39 *e*P P 02 39 59.1 -0.2
comp=Z,208nm,1.0s,mb6.0
BINY LR LR
comp=Z,48μm,19.0s,MS6.3
BRNJ **Basking Ridge** 35.21 43 *e*P P 02 40 00.5 +0.8
CPNY **Central Park** 35.66 43 *e*P P 02 40 03.5 -0.1
comp=Z,141nm,1.4s,mb5.7
PAL **Palisades** 35.81 43 ⇑*e*P P 02 40 04.6 -0.3
comp=Z,891nm,2.1s,mb6.3
PAL **Palisades** 35.81 43 ⇑*e*P P 02 40 04.6 -0.3
PAL pmax pmax
comp=Z,891nm,2.1s,mb6.3
ATAH **Atahualpa** 36.26 130 LR LR 02 51 00.6
comp=Z,19μm,19.2s,MS5.7,baz=309,slow=30
YLE **Yale** 36.59 43 *e*P P 02 40 11.6 0.0
comp=Z,7μm,2.2s
TRY **Troy** 36.88 40 *e*P P 02 40 14.8 +0.8
comp=Z,122nm,1.0s,mb5.7
CELP **Cerrillos** 36.97 83 *e*P P 02 40 14.6 -0.6
FFC **Flin Flon** 37.23 3 ⇓*i*P P 02 40 14.8 -2.0
comp=Z,187nm,1.1s,mb5.8
FFC LR LR
comp=Z,77μm,21.0s,MS6.5
FFC **Flin Flon** 37.23 3 *i*P P 02 40 15.6 -1.2
FFC **Flin Flon** 37.23 3 P P 02 40 15.9 -0.9
comp=Z,839nm,1.0s,mb6.5,SNR=24
ACCN **Adirondack Com** 37.24 39 *e*P P 02 40 17.1 +0.1
comp=Z,121nm,1.1s,mb5.6
NCB **Newcomb** 37.24 38 PFAKE 02 40 30.0 +13
NCB LR LR
comp=Z,47μm,22.0s,MS6.2
SJG **San Juan** 37.38 83 LR LR 02 55 14.7
comp=Z,21μm,21.6s,MS5.9,baz=285,slow=36
SJG **San Juan** 37.38 83 ⇑*i*P P 02 40 18.1 -0.5
comp=Z,104nm,1.1s,mb5.6
SJG LR LR
comp=Z,22μm,22.0s,MS5.9
SJG **San Juan** 37.38 83 ⇑*i*P P 02 40 18.1 -0.5
SJG pmax pmax
comp=Z,104nm,1.1s
SJG MLR MLR
comp=Z,22μm,22.0s
LONY **Lake Ozonia** 37.41 37 *e*P P 02 40 19.2 +0.7
comp=Z,40nm,0.9s,mb5.2
LONY LR LR
comp=Z,37μm,21.0s,MS6.2
QUA2 **Belchertown** 37.46 42 *e*P P 02 40 19.2 +0.2
comp=Z,4μm,2.3s
MSNY **Massena** 37.48 36 *e*P P 02 40 18.7 -0.3
comp=Z,5μm,1.3s
BRYW **Bryant College** 37.80 43 *e*P P 02 40 20.9 -0.9
comp=Z,113nm,1.1s,mb5.5
MDV **Middlebury** 37.88 39 *e*P P 02 40 22.2 -0.2
FRNY **Flat Rock** 38.11 37 *e*P P 02 40 23.4 -1.0
comp=Z,184nm,1.5s,mb5.6
WES **Weston** 38.17 42 *e*P P 02 40 25.1 +0.1
comp=Z,440nm,1.4s,mb6.0
WES **Weston** 38.17 42 *e*P P 02 40 25.1 +0.1
WES pmax pmax
comp=Z,440nm,1.4s,mb6.0
HNH **Hanover** 38.26 40 *e*P P 02 40 25.8 +0.2
comp=Z,277nm,1.4s,mb5.8
FFD **Franklin Falls** 38.52 41 *e*P P 02 40 28.9 +1.1
comp=Z,372nm,1.5s,mb5.9
LBNH **Lisbon** 38.76 39 *e*P P 02 40 30.3 +0.4
comp=Z,177nm,1.3s,mb5.6
LBNH LR LR
comp=Z,37μm,19.0s,MS6.2
LBNH **Lisbon** 38.76 39 *e*P P 02 40 30.3 +0.4
LBNH pmax pmax
comp=Z,177nm,1.3s,mb5.6
LBNH MLR MLR
comp=Z,37μm,19.0s,MS6.2
BBB **Bella Bella** 38.93 338 P P 02 40 30.5 -0.7
comp=Z,26nm,1.0s,mb4.9,baz=343,slow=11,SNR=4.7
BBB LR LR 02 59 16.2
comp=Z,18μm,18.7s,MS5.9,baz=339,slow=40
BBSR **BB Station** 39.55 60 *e*P P 02 40 37.2 +0.5
comp=Z,311nm,1.8s,mb5.7
BBSR LR LR
comp=Z,18μm,22.0s,MS5.9
WVL **Waterville** 40.32 40 *e*P P 02 40 42.9 0.0
comp=Z,84nm,1.0s,mb5.4
NNA **Nana** 40.72 134 *e*P P 02 40 48.7 +2.2
comp=Z,486nm,2.3s,mb5.7
NNA LR LR
comp=Z,10μm,21.0s,MS5.6
NNA **Nana** 40.72 134 P P 02 40 48.9 +2.4
comp=Z,207nm,1.8s,mb5.5,SNR=9.3
PKME **Peaks-Kenny Pk** 40.90 40 *e*P P 02 40 47.7 0.0
comp=Z,103nm,1.3s,mb5.3
PKME LR LR
comp=Z,41μm,20.0s,MS6.3
ANWB **Willy Bob** 41.56 83 PFAKE 02 41 00.0 +6.6
ANWB LR LR
comp=Z,13μm,22.0s,MS5.7
EMMW **East Machias** 41.76 41 *e*P P 02 40 55.3 +0.6
comp=Z,1μm,1.7s,mb6.3
LZG **Guadaloupe-1** 41.77 85 *e*P P 02 40 54.8 -0.3
PHG **Guadaloupe-2** 41.91 85 *e*P P 02 40 57.1 +0.8
FCC **Fort Churchill** 42.02 9 ⇓*i*P P 02 40 55.0 -1.7
comp=Z,3.6nm,1.1s
FCC **Fort Churchill** 42.02 9 ⇓*i*P P 02 40 55.0 -1.7
FDF **Fort de France** 42.58 87 ⇑*i*P P 02 41 00.9 -1.0
comp=Z,64nm,0.9s,mb5.4
FDF LR LR
comp=Z,19μm,21.0s,MS6.0
FDF **Fort de France** 42.58 87 ⇑*i*P P 02 41 00.9 -1.0
FDF pmax pmax
comp=Z,65nm,0.9s,mb5.4
FDF MLR MLR
comp=Z,19μm,21.0s,MS6.0
GRGR **Grenville** 42.61 91 ⇑*i*P P 02 41 01.7 -0.4
comp=Z,797nm,1.4s,mb6.3
GRGR LR LR
comp=Z,17μm,21.0s,MS5.9
TAOE **Nuku Hiva Isla** 43.15 235 *e*S S 02 47 30.8 -2.3
comp=Z,10μm,26.6s
TAOE *e*LQ 02 51 01.6
comp=Z,74μm,28.5s
TAOE *e*LR LR 02 52 54.6
comp=Z,52μm,26.0s,baz=51
CRAG **Craig** 43.35 337 *e*P P 02 41 08.0 +0.5
comp=Z,241nm,1.6s,mb5.7
CRAG LR LR

comp=Z,17μm,17.0s,MS6.0
WRAK **Wrangell Islan** 43.81 339 ⇓*i*P P 02 41 10.6 -0.6
comp=Z,102nm,1.4s,mb5.4
WRAK LR LR
comp=Z,17μm,21.0s,MS5.9
BBGH **Gun Hill** 44.40 89 PFAKE 02 41 30.0 +13
BBGH LR LR
comp=Z,19μm,21.0s,MS6.0
RPN **Rapa Nui** 44.54 185 PFAKE 02 41 30.0 +13
RPN LR LR
comp=Z,50μm,22.0s,MS6.4
DLBC **Dease Lake** 44.69 342 P P 02 41 18.1 -0.2
comp=Z,163nm,1.2s,mb5.8,baz=155,slow=5.8,SNR=79
DLBC LR LR 03 00 15.1
comp=Z,37μm,19.8s,MS6.3,baz=151,slow=37
DLBC **Dease Lake** 44.69 342 ⇓*i*P P 02 41 18.1 -0.1
YKA **Yellowknife Ar** 45.38 354 P P 02 41 22.1 -1.5
comp=Z,20nm,0.9s,mb5.0,baz=167,slow=7.4,SNR=17
YKA LR LR 03 01 07.0
comp=Z,3μm,18.5s,MS5.2,baz=175,slow=37
YKA **Yellowknife Ar** 45.38 354 P P 02 41 22.2 -1.4
SKAG **Skagway** 47.17 340 *e*P P 02 41 37.3 -0.5
comp=Z,104nm,1.4s,mb5.6
SKAG LR LR
comp=Z,22μm,18.0s,MS6.2
POHA **Pohakuloa** 47.37 281 PFAKE 02 41 50.0 +10
POHA LR LR
comp=Z,31μm,20.0s,MS6.3
SCHQ **Schefferville** 47.52 29 P P 02 41 40.5 0.0
comp=Z,54nm,1.0s,mb5.5,baz=245,slow=5.1,SNR=20
SCHQ PP PP 02 43 38.0 +6.1
comp=Z,60nm,1.1s,baz=243,slow=11,SNR=4.5
SCHQ LR LR 03 02 35.6
comp=Z,22μm,20.1s,MS6.1,baz=241,slow=37
SCHQ **Schefferville** 47.52 29 *e*P P 02 41 40.0 -0.6
comp=Z,106nm,1.1s,mb5.8
SCHQ LR LR
comp=Z,35μm,19.0s,MS6.3
PTCN **Pitcairn Islan** 48.67 210 PFAKE 02 42 00.0 +10
PTCN LR LR
comp=Z,8μm,20.0s,MS5.7
PNL **Peninsula** 48.73 338 *e*P P 02 41 49.1 -0.7
comp=Z,131nm,1.4s,mb5.8
KIP **Kipapa** 49.52 283 PFAKE 02 42 10.0 +13
KIP LR LR
comp=Z,40μm,19.0s,MS6.4
RKT **Rikitea** 49.64 217 *e*LR LR 02 54 04.3
comp=Z,7μm,30.0s
LPAZ **La Paz** 49.81 130 P P 02 41 59.5 +0.8
comp=Z,14nm,1.0s,mb4.9,baz=335,slow=9.5,SNR=28
LPAZ LR LR 03 02 19.7
comp=Z,11μm,18.9s,MS5.9,baz=127,slow=35
LPAZ **La Paz** 49.81 130 *e*P P 02 41 59.7 +1.0
comp=Z,129nm,1.6s,mb5.7
LPAZ LR LR
comp=Z,10μm,20.0s,MS5.8
LPAZ **La Paz** 49.81 130 *e*P P 02 41 59.7 +1.0
LPAZ pmax pmax
comp=Z,129nm,1.6s
LPAZ MLR MLR
comp=Z,10μm,20.0s
DAWY **Dawson** 51.91 342 ⇓*i*P P 02 42 12.8 -1.1
FRB **Frobisher Bay** 52.60 20 P P 02 42 17.9 -1.1
comp=Z,20nm,1.1s,mb4.9,baz=211,slow=13,SNR=2.7
FRB **Frobisher Bay** 52.60 20 P P 02 42 17.9 -1.1
SEW **Seward** 52.93 334 ⇓*i*P P 02 42 19.8 -1.6
comp=Z,40nm,1.1s,mb5.3
EGAK **Eagle** 52.96 342 ⇓*i*P P 02 42 20.4 -1.3
comp=Z,84nm,1.4s,mb5.5
EGAK LR LR
comp=Z,16μm,19.0s,MS6.1
DOT **Dot Lake** 53.09 340 ⇓*i*P P 02 42 21.6 -1.1
comp=Z,369nm,1.6s,mb6.1
KDAK **Kodiak Island** 53.10 331 P P 02 42 22.2 -0.5
comp=Z,26nm,1.1s,mb5.1,baz=122,slow=7.4,SNR=11
KDAK **Kodiak Island** 53.10 331 ⇓*i*P P 02 42 21.6 -1.1
comp=Z,52nm,1.1s,mb5.4
KDAK LR LR
comp=Z,12μm,20.0s,MS6.0
KDAK **Kodiak Island** 53.10 331 *i*P P 02 42 22.7 -0.1
KDAK **Kodiak Island** 53.10 331 P P 02 42 22.6 -0.2
comp=Z,215nm,1.2s,mb6.0,SNR=8.5
PAX **Paxson** 53.13 338 ⇓*i*P P 02 42 21.5 -1.4
comp=Z,84nm,1.5s,mb5.5
PAX **Paxson** 53.13 338 ⇓*i*P P 02 42 21.5 -1.4
PAX pmax pmax
comp=Z,84nm,1.5s,mb5.5
OHAK **Old Harbor** 53.17 330 *e*P P 02 42 22.6 -0.7
comp=Z,370nm,2.3s,mb5.9
OHAK LR LR
comp=Z,12μm,17.0s,MS6.0
XMAS **Kiritimati** 53.29 259 PFAKE 02 42 30.0 +5.1
XMAS LR LR
comp=Z,49μm,20.0s,MS6.5
SML **Sawmill** 53.46 336 ⇓*i*P P 02 42 23.9 -1.5
comp=Z,18nm,1.1s,mb4.9
SML **Sawmill** 53.46 336 ⇓*i*P P 02 42 23.9 -1.5
SML pmax pmax
comp=Z,18nm,1.1s,mb4.9
SLKM **Skilak Lake** 53.47 334 *e*P P 02 42 24.5 -0.9
SLKM **Skilak Lake** 53.47 334 *e*P P 02 42 24.5 -1.0
RC01 **Rabbit Creek A** 53.60 335 *e*P P 02 42 25.2 -1.2
comp=Z,178nm,1.8s,mb5.7
PMR **Palmer** 53.64 336 *e*P P 02 42 25.8 -0.9
comp=Z,165nm,2.1s,mb5.6
PMR LR LR
comp=Z,14μm,18.0s,MS6.1
PMR **Palmer** 53.64 336 *e*P P 02 42 25.8 -0.9
PMR pmax pmax
comp=Z,165nm,2.1s,mb5.6
PMR MLR MLR
comp=Z,14μm,18.0s,MS6.1
INK **Inuvik** 53.79 347 P P 02 42 26.4 -1.3
comp=Z,67nm,1.0s,mb5.5,baz=145,slow=8.0,SNR=57
INK LR LR 03 06 15.4
comp=Z,48μm,18.8s,MS6.6,baz=152,slow=37
INK **Inuvik** 53.79 347 ⇓*i*P P 02 42 26.2 -1.4
comp=Z,150nm,1.2s,mb5.8
INK **Inuvik** 53.79 347 ⇓*i*P P 02 42 26.2 -1.5
INK pmax pmax
comp=Z,150nm,1.2s
RSO **Redoubt South** 54.51 333 *e*P P 02 42 32.0 -1.1
comp=Z,105nm,1.0s,mb5.8
ILAR **Eielson Array** 54.76 340 P P 02 42 33.0 -1.8
comp=Z,30nm,1.1s,mb5.2,baz=150,slow=5.6,SNR=115
ILAR LR LR 03 06 28.4
comp=Z,16μm,19.3s,MS6.1,baz=142,slow=37
ILAR PKP2bc 03 12 58.6
comp=Z,1.3nm,1.2s,baz=316,slow=4.1,SNR=6.0
ILAR **Eielson Array** 54.76 340 P P 02 42 33.0 -1.8
ILAR LR LR 03 06 28.4
ILAR ⇑*e* 03 12 58.6
ILAR **Eielson Array** 54.76 340 P P 02 42 33.1 -1.7
MCK **McKinley** 54.83 338 ⇓*i*P P 02 42 33.9 -1.4
comp=Z,112nm,1.5s,mb5.7
MCK **McKinley** 54.83 338 ⇓*i*P P 02 42 33.9 -1.4
MCK pmax pmax
comp=Z,113nm,1.5s,mb5.7
COLA **College** 55.15 339 ⇓*i*P P 02 42 35.4 -2.2
comp=Z,73nm,1.6s,mb5.5
COLA LR LR
comp=Z,15μm,19.0s,MS6.1
COLA **College** 55.15 339 ⇓*i*P P 02 42 35.4 -2.2
COLA pmax pmax
comp=Z,73nm,1.6s,mb5.5
COLA MLR MLR
comp=Z,15μm,19.0s,MS6.1
TRF **Thorofare Moun** 55.15 337 ⇓*i*P P 02 42 36.3 -1.3
comp=Z,125nm,1.1s,mb5.8
CHGN **Chignik** 55.33 327 *e*P P 02 42 37.5 -1.6
PPLA **Purkeypile** 55.56 336 ⇓*i*P P 02 42 39.1 -1.5
comp=Z,507nm,1.7s,mb6.3
PPT **Papeete** 55.69 234 *e*S S 02 50 27.5 -1.4
comp=Z,24μm,26.0s
PPT *e*LR LR 02 58 44.3
comp=Z,44μm,25.5s,baz=51
PPT **Papeete** 55.69 234 LR LR 03 01 08.7
comp=Z,13μm,18.1s,MS6.0,baz=55,slow=30
BPAW **Bear Paw Mtn.** 55.78 338 ⇓*i*P P 02 42 40.2 -2.0
comp=Z,102nm,1.6s,mb5.6
SVW2 **Sparrevohn** 56.03 333 *e*P P 02 42 42.0 -2.0
comp=Z,80nm,1.6s,mb5.5
SVW2 LR LR
comp=Z,7μm,18.0s,MS5.8
SDPT **Sand Point** 56.08 326 *e*P P 02 42 44.1 -0.4
comp=Z,32nm,0.8s,mb5.4
LCO **Las Campanas** 57.16 144 *e*P P 02 42 55.4 +2.9

comp=Z,54nm,1.2s,mb5.5
LCO LR LR
comp=Z,14µm,21.0s,MS6.0
COLD Coldfoot 57.35 341⇓ *i*P P 02 42 52.4 -1.0
comp=Z,164nm,1.7s,mb5.8
RES Resolute Bay 57.47 3 P **P 02 42 52.9 -1.1**
comp=Z,14nm,1.0s,mb4.9,baz=210,slow=16,SNR=2.8
RES Resolute Bay 57.47 3 P **P 02 42 52.9 -1.1**
RES Resolute Bay 57.47 3 P **P 02 42 52.9 -1.2**
UNV Unalaska Valle 59.02 323 *e*P **P 02 43 07.9 +2.7**
comp=Z,163nm,1.5s,mb5.8
TBI Tubuai 59.15 228 *e*S **S 02 51 16.4 +2.2**
comp=Z,20µm,27.2s
TBI *e*LQ 02 58 01.7
comp=Z,29µm,27.8s
TBI *e*LR LR 03 00 15.7
comp=Z,38µm,28.2s,baz=44
CFAA Coronel Fontan 60.51 144 P **P 02 43 16.3 +0.6**
comp=Z,0.7nm,0.4s,baz=292,slow=7.1,SNR=10
CFAA Coronel Fontan 60.51 144 P **P 02 43 16.3 +0.6**
SFJD Kangerlussuaq 60.59 22 *e*P **P 02 43 16.2 +0.5**
comp=Z,84nm,1.4s,mb5.7
SFJD LR LR
comp=Z,28µm,22.0s,MS6.4
SFJD Kangerlussuaq 60.59 22 *e*P **P 02 43 16.2 +0.4**
SFJD pmax pmax
comp=Z,84nm,1.4s,mb5.7
SFJD MLR MLR
comp=Z,28µm,22.0s,MS6.4
SFJD Kangerlussuaq 60.59 22 *i*P **P 02 43 21.5 +5.7**
FCH Farellones 60.70 146⇓ *i*P **P 02 43 17.1 +0.1**
JOHN Johnston Islan 60.96 280 PFAKE 02 43 30.0 +11
JOHN LR LR
comp=Z,35µm,20.0s,MS6.5
LMEL Las Melosas 61.14 147⇑ *i*P **P 02 43 21.3 +1.3**
LMEL Las Melosas 61.14 147⇑ *i*P **P 02 43 21.3 +1.3**
CPUP Villa Florida 63.92 132 P **P 02 43 38.9 +0.2**
comp=Z,2.3nm,0.7s,mb4.3,baz=278,slow=8.2,SNR=3.4
CPUP LR LR 03 11 25.0
comp=Z,9µm,18.6s,MS6.0,baz=134,slow=36
CPUP Villa Florida 63.92 132 *e*P **P 02 43 38.9 +0.2**
comp=Z,53nm,0.9s,mb5.6
CPUP LR LR
comp=Z,2µm,20.0s,MS5.2
CPUP Villa Florida 63.92 132 *e*P **P 02 43 38.9 +0.2**
CPUP pmax pmax
comp=Z,53nm,0.9s
CPUP MLR MLR
comp=Z,2µm,20.0s
ADK Adak 64.84 320 *e*P **P 02 43 43.5 -1.0**
comp=Z,156nm,1.4s,mb5.8
ADK Adak 64.84 320 *e*P **P 02 43 43.5 -0.9**
ADK pmax pmax
comp=Z,156nm,1.4s,mb5.8
BDFB Brasilia 65.51 117 P **P 02 43 49.7 +0.4**
comp=Z,19nm,0.9s,mb5.1,baz=285,slow=6.1,SNR=12
BDFB LR LR 03 11 20.6
comp=Z,13µm,18.3s,MS6.2,baz=295,slow=35
BDFB Brasilia 65.51 117 P **P 02 43 49.7 +0.4**
RAR Rarotonga 65.69 236 LR LR 03 04 40.6
comp=Z,13µm,19.5s,MS6.2,baz=60,slow=29
RAR Rarotonga 65.69 236 PFAKE 02 44 00.0 +10
RAR LR LR
comp=Z,13µm,20.0s,MS6.2
MIDW Midway 66.29 294 PFAKE 02 44 00.0 +5.8
MIDW LR LR
comp=Z,16µm,21.0s,MS6.2
PLCA Paso Flores 66.41 152 P **P 02 43 55.8 +1.2**
comp=Z,14nm,0.9s,mb5.0,baz=321,slow=8.0,SNR=18
PLCA LR LR 03 06 43.3
comp=Z,15µm,19.9s,MS6.2,baz=333,slow=30
PLCA Paso Flores 66.41 152⇓ *i*P **P 02 43 55.9 +1.3**
comp=Z,62nm,1.2s,mb5.5
PLCA LR LR
comp=Z,2µm,19.0s,MS5.4
PLCA Paso Flores 66.41 152⇓ *i*P **P 02 43 55.9 +1.3**
PLCA pmax pmax
comp=Z,63nm,1.2s
PLCA MLR MLR
comp=Z,2µm,19.0s
SUMG Summit 66.57 18 *e*P **P 02 43 55.2 -0.1**
comp=Z,42nm,1.0s,mb5.4
SUMG Summit 66.57 18 *i*P **P 02 43 55.4 +0.2**
comp=Z,26nm,0.9s,mb5.3
SUMG
comp=Z,60µm,15.0s
ALE Alert 67.16 6 P **P 02 43 57.2 -1.7**
comp=Z,176nm,1.2s,mb6.0,SNR=9.2
TRQA Tornquist 68.72 144⇓ *i*P **P 02 44 09.7 +0.4**
comp=Z,33nm,1.4s,mb5.1
TRQA LR LR
comp=Z,9µm,20.0s,MS6.0
LPA La Plata 68.95 139 *de*P **P 02 44 14.0 +3.2**
LPA *i*S S 02 53 22.0 +6.5
LPA SKIKS 02 57 42.0
LPA
comp=Z,8µm,18.0s
SPB Sao Paulo 69.85 124 *e*P **P 02 44 17.0 +0.4**
comp=Z,111nm,1.4s,mb5.6
SPB LR LR
comp=Z,14µm,19.0s,MS6.2
SCO Scoresbysund 71.45 21 *e*P **P 02 44 21.7 -3.9**
SCO MLR MLR
comp=Z,25µm,15.0s,MS6.6
SCO Scoresbysund 71.45 21 *i*P **P 02 44 21.7 -3.9**
SCO
comp=Z,25µm,15.0s
BORG Borgarnes 71.81 27 PFAKE 02 44 40.0 +12
BORG LR LR
comp=Z,28µm,21.0s,MS6.5
DAG Danmarks Havn 72.34 14⇓ *e*P **P 02 44 29.2 -1.6**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
DAG MLR MLR
comp=Z,62µm,17.0s,MS7.0
DAG Danmarks Havn 72.34 14⇓ *i*P **P 02 44 29.2 -1.6**
comp=Z,100nm,0.8s,mb5.8
DAG
comp=Z,82µm,17.0s
RCBR Riachuelo 72.46 102 P **P 02 44 31.5 -1.1**
comp=Z,17nm,1.1s,mb4.9,baz=301,slow=8.1
RCBR Riachuelo 72.46 102 *e*P **P 02 44 32.4 -0.2**
comp=Z,140nm,1.6s,mb5.6
RCBR LR LR
comp=Z,9µm,20.0s,MS6.0
AFI Afiamalu 72.50 249 PFAKE 02 44 40.0 +7.2
AFI LR LR
comp=Z,25µm,19.0s,MS6.5
BILL Bilibino 73.26 337⇓ *i*P **P 02 44 34.3 -2.1**
comp=Z,43nm,1.3s,mb5.2
BILL LR LR
comp=Z,11µm,20.0s,MS6.1
BILL Bilibino 73.26 337 *d i*P **P 02 44 34.9 -1.5**
BILL *e**PP pP 02 44 48.5 +8.8
BILL *e*S S 02 53 58.7 -5.9
BILL pmax pmax
comp=Z,38nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,12µm,21.0s,MS6.2
JMIC Jan Mayen 75.82 20 *e*P **P 02 44 55.2 +3.9**
JMIC *e*S S 02 54 35.1 +2.0
JMIC AMS AMS 03 18 50.5
comp=Z,22µm,17.9s,MS6.5
KBS Kingsbay 77.95 10 *e*P **P 02 45 03.3 +0.1**
KBS *e*S S 02 54 59.9 +3.6
KBS *e*SS SS 02 59 59.6 +3.2
KBS AMS AMS 03 21 05.0
comp=Z,85µm,15.5s,MS7.2
KBS Kingsbay 77.95 10 *e*P **P 02 45 03.3 +0.1**
SACV Santiago Islan 78.02 78 PFAKE 02 45 10.0 +5.3
SACV LR LR
comp=Z,10µm,21.0s,MS6.1
FUNA Funafuti 78.78 257 PFAKE 02 45 20.0 +11
FUNA LR LR
comp=Z,28µm,21.0s,MS6.6
PMAR Madeira 79.55 59 *e*P **P 02 45 17.3 +4.5**
comp=Z,114nm,1.3s,mb5.6
PET Petropavlovsk 79.67 322 PFAKE 02 45 20.0 +6.9
PET LR LR
comp=Z,4µm,22.0s,MS5.7
PET Petropavlovsk 79.67 322 *d i*P **P 02 45 12.2 -0.9**
PET *e*S S 02 55 09.8 -5.6
PET *e*PS 02 55 52.7
PET *e*SS SS 03 00 20.3 -2.9
PET pmax pmax
comp=Z,400nm,15.7s
PET pmax pmax
comp=Z,47nm,1.3s,mb5.3
PET MLR MLR
comp=Z,4µm,20.0s,MS5.7
CHIE El Hierro 79.89 64 P **P 02 45 14.1 -0.7**
comp=Z,57nm,1.4s,mb5.3
PETK Petropavlovsk- 80.20 323 P **P 02 45 16.2 +0.2**
comp=Z,4.1nm,0.8s,baz=116,slow=8.3,SNR=3.1
PETK Petropavlovsk- 80.20 323 P **P 02 45 16.2 +0.2**
PETK Petropavlovsk- 80.20 323 P **P 02 45 16.2 +0.3**
EFI East Falkland 80.32 152 PFAKE 02 45 30.0 +14
EFI LR LR
comp=Z,10µm,19.0s,MS6.2
RRR Rubha Reidh 80.36 32 P **P 02 45 17.4 +0.7**
RRR Rubha Reidh 80.36 32 *e*P **P 02 45 17.4 +0.7**
RSC Scourie 80.54 32 P **P 02 45 18.8 +1.1**
RSC Scourie 80.54 32⇑ *e*P **P 02 45 18.8 +1.1**
KPL Plockton 80.60 33 P **P 02 45 18.9 +1.0**
KPL AMB AMB 02 45 21.5
comp=Z,80nm,3.7s
KPL AMS AMS 03 17 48.0
comp=Z,14µm,23.2s
KPL Plockton 80.60 33 *e*P **P 02 45 18.9 +1.0**
KPL AMB AMB 02 45 21.5
comp=Z,80nm,3.7s
KPL AMS AMS 03 17 48.0
comp=Z,14µm,23.2s,MS6.2
KAR1 Arisaig 80.64 33 P **P 02 45 18.6 +0.4**
KAR1 Arisaig 80.64 33 *e*P **P 02 45 18.6 +0.4**
KAC Achnashellach 80.73 33 P **P 02 45 19.1 +0.4**
KAC Achnashellach 80.73 33⇑ *e*P **P 02 45 19.1 +0.4**
KSB Sheil Bridge 80.76 33 P **P 02 45 18.2 -0.6**
KSB Sheil Bridge 80.76 33 *e*P **P 02 45 18.2 -0.6**
CCAN Las Canadas 80.93 63 P **P 02 45 20.5 +0.2**
comp=Z,44nm,1.2s,mb5.3
MVH1 Achvaich 81.17 32 P **P 02 45 21.5 +0.5**
MVH1 Achvaich 81.17 32 *e*P **P 02 45 21.5 +0.5**
MDO Dochfour 81.23 32 P **P 02 45 21.7 +0.3**
MDO Dochfour 81.23 32 *e*P **P 02 45 21.7 +0.3**
DLF Lyons Farm 81.35 37 *e*P **P 02 45 17.3 -4.8**
GMM Mts of Mourne 81.39 36 P **P 02 45 21.7 -0.5**
GMM Mts of Mourne 81.39 36 *e*P **P 02 45 21.7 -0.5**
DSB Dublin 81.45 37 *e*P **P 02 45 22.5 -0.1**
comp=Z,45nm,1.1s,mb5.3
EAB Aberfoyle 81.65 34 P **P 02 45 23.2 -0.4**
EAB Aberfoyle 81.65 34⇑ *e*P **P 02 45 23.2 -0.4**
PGBU Glenifferbraes 81.69 34 P **P 02 45 24.0 +0.2**
PGBU AMB AMB 02 45 25.9
comp=Z,116nm,3.5s
PGBU AMS AMS 03 17 26.9
comp=Z,14µm,25.0s
PGBU Glenifferbraes 81.69 34 *e*P **P 02 45 24.0 +0.2**
PGBU AMB AMB 02 45 25.9
comp=Z,116nm,3.5s
PGBU AMS AMS 03 17 26.9
comp=Z,14µm,25.0s,MS6.2
MCD Coleburn Disti 81.75 32 P **P 02 45 24.3 +0.2**
MCD Coleburn Disti 81.75 32⇑ *e*P **P 02 45 24.3 +0.2**
BJO1 Bjornoya 81.78 13 *e*P **P 02 45 25.8 +1.8**
BJO1 LR LR
comp=Z,62µm,16.9s,MS7.0
BJO Bjornoya 81.81 13 *e*P **P 02 45 25.8 +1.6**
BJO *e*SKS 02 55 40.0
BJO *e*SS SS 03 00 54.9 +0.7
BJO AMS AMS 03 23 11.6
comp=Z,62µm,16.9s,MS7.0
EOSO Osorio 81.87 63 P **P 02 45 24.6 -0.8**
comp=Z,65nm,1.3s,mb5.4
GAL1 Galloway 81.88 35 P **P 02 45 25.6 +0.8**
GAL1 AMB AMB 02 45 32.7
comp=Z,91nm,6.3s
GAL1 AMS AMS 03 19 54.2
comp=Z,15µm,22.8s
GAL1 Galloway 81.88 35⇑ *e*P **P 02 45 25.6 +0.8**
GAL1 AMB AMB 02 45 32.7
comp=Z,91nm,6.3s
GAL1 AMS AMS 03 19 54.2
comp=Z,15µm,22.8s,MS6.3
LRW Lerwick 81.88 29 P **P 02 45 23.9 -0.9**
LRW AMB AMB 02 45 36.0
comp=Z,97nm,3.1s
LRW AMS AMS 03 20 08.9
comp=Z,12µm,22.5s
LRW Lerwick 81.88 29 *e*P **P 02 45 23.9 -0.9**
LRW AMB AMB 02 45 36.0
comp=Z,97nm,3.1s
LRW AMS AMS 03 20 08.9
comp=Z,12µm,22.5s,MS6.2
MME1 Meikle Cairn 81.99 32 P **P 02 45 26.1 +0.7**
MME1 Meikle Cairn 81.99 32⇑ *e*P **P 02 45 26.1 +0.7**
EBH Black Hill 82.07 33 P **P 02 45 25.5 -0.3**
EBH Black Hill 82.07 33 *e*P **P 02 45 25.5 -0.3**
GIM North Isle of 82.20 36 P **P 02 45 27.6 +1.0**
GIM North Isle of 82.20 36 *e*P **P 02 45 27.6 +1.0**
EAU Auchinoon 82.23 34 P **P 02 45 27.4 +0.7**
EAU Auchinoon 82.23 34 *e*P **P 02 45 27.4 +0.7**
EDI Edinburgh 82.35 34 P **P 02 45 27.6 +0.4**
EDI AMB AMB 02 45 32.0
comp=Z,139nm,2.6s,mb5.4
EDI AMS AMS 03 17 46.9
comp=Z,12µm,22.0s
EDI Edinburgh 82.35 34 *e*P **P 02 45 27.6 +0.4**
EDI AMB AMB 02 45 32.0
comp=Z,139nm,2.6s,mb5.4
EDI AMS AMS 03 17 46.9
comp=Z,12µm,22.0s,MS6.2
WAKE Wake Island 82.45 288 PFAKE 02 45 40.0 +11
WAKE LR LR
comp=Z,19µm,22.0s,MS6.4
EBL Broad Law 82.47 34 P **P 02 45 29.4 +1.5**
EBL Broad Law 82.47 34⇑ *e*P **P 02 45 29.4 +1.5**
ESK Eskdalemuir 82.54 34 P **P 02 45 28.3 0.0**
ESK AMB AMB 02 45 31.4
comp=Z,125nm,2.8s,mb5.5
ESK AMS AMS 03 18 01.6
comp=Z,15µm,22.1s
ESK Eskdalemuir 82.54 34⇑ *e*P **P 02 45 28.3 0.0**
ESK AMB AMB 02 45 31.4
comp=Z,125nm,2.8s,mb5.5
ESK AMS AMS 03 18 01.6
comp=Z,15µm,22.1s,MS6.3
ESK Eskdalemuir 82.54 34⇑ *i*P **P 02 45 29.7 +1.4**
comp=Z,192nm,1.8s,mb5.8
ESK LR LR
comp=Z,10µm,21.0s,MS6.2
ESK Eskdalemuir 82.54 34 *i*P **P 02 45 31.7 +3.4**
ESK Eskdalemuir 82.54 34 P **P 02 45 31.7 +3.4**
comp=Z,212nm,1.1s,mb6.1,SNR=6.0
WLF1 Llynfaes 82.56 36 AMS AMS 03 20 49.3
comp=Z,56µm,19.2s,MS7.0
WLF1 Llynfaes 82.56 36 AMS AMS 03 20 49.3
comp=Z,56µm,19.2s
ECK Cauldkaine Hil 82.63 34 P **P 02 45 30.4 +1.6**
ECK Cauldkaine Hil 82.63 34⇑ *e*P **P 02 45 30.4 +1.6**
ESY Stoneypath 82.65 34 P **P 02 45 28.8 -0.1**
ESY Stoneypath 82.65 34⇑ *e*P **P 02 45 28.8 -0.1**
XDE Dent Fell 82.67 35 P **P 02 45 29.2 +0.2**
XDE Dent Fell 82.67 35⇑ *e*P **P 02 45 29.2 +0.2**
KESW Keswick, Cumbr 82.85 35 P **P 02 45 29.7 -0.2**
KESW AMB AMB 02 45 35.7
comp=Z,137nm,2.4s,mb5.5
KESW Keswick, Cumbr 82.85 35 *e*P **P 02 45 29.7 -0.2**
KESW AMB AMB 02 45 35.7
comp=Z,137nm,2.4s,mb5.5
MSVF Nonsavu 83.00 249 *e*P **P 02 45 33.3 +1.9**
comp=Z,173nm,1.6s,mb5.8
MSVF LR LR
comp=Z,23µm,22.0s,MS6.5
CFTV Fuerteventura 83.02 63 P **P 02 45 31.2 -0.2**
comp=Z,27nm,1.0s,mb5.2
HTL Hartland 83.27 39 P **P 02 45 33.9 +1.7**
HTL AMB AMB 02 45 48.5
comp=Z,110nm,2.8s,mb5.4
HTL AMS AMS 03 19 33.9
comp=Z,15µm,20.3s
HTL Hartland 83.27 39 *e*P **P 02 45 33.9 +1.7**
HTL AMB AMB 02 45 48.5
comp=Z,110nm,2.8s,mb5.4
HTL AMS AMS 03 19 33.9
comp=Z,15µm,20.3s,MS6.3
EFAM Famara 83.29 62 P **P 02 45 31.9 -0.8**
comp=Z,202nm,2.4s,mb5.7
HEX Exmoor 83.66 38 P **P 02 45 34.7 +0.5**
HEX Exmoor 83.66 38 *e*P **P 02 45 34.7 +0.5**
DYA Yadsworthy 83.79 39 P **P 02 45 35.1 +0.2**
DYA AMB AMB 02 45 49.2
comp=Z,130nm,4.6s
DYA AMS AMS 03 22 13.6
comp=Z,14µm,18.9s
DYA Yadsworthy 83.79 39 *e*P **P 02 45 35.1 +0.2**
DYA AMB AMB 02 45 49.2
comp=Z,130nm,4.6s
DYA AMS AMS 03 22 13.6
comp=Z,14µm,18.9s,MS6.3
MCH1 Michaelchurch 83.81 37 P **P 02 45 36.6 +1.7**
MCH1 AMB AMB 02 45 42.5
comp=Z,99nm,3.3s
MCH1 AMS AMS 03 21 28.9
comp=Z,25µm,19.6s
MCH1 Michaelchurch 83.81 37 *e*P **P 02 45 36.6 +1.7**
MCH1 AMB AMB 02 45 42.5
comp=Z,99nm,3.3s
MCH1 AMS AMS 03 21 28.9
comp=Z,25µm,19.6s,MS6.6
TIXI Tiksi 83.83 345⇓ *i*P **P 02 45 31.8 -2.8**
comp=Z,283nm,2.0s,mb6.0
TIXI LR LR
comp=Z,15µm,20.0s,MS6.3
TIXI Tiksi 83.83 345 *e*P **P 02 45 32.7 -1.9**
TIXI *e* 02 48 47.3
TIXI *e*S S 02 55 51.9 -5.8
TIXI *e* 02 56 40.9
TIXI pmax pmax
comp=Z,36nm,1.5s,mb5.3
TIXI MLR MLR
comp=N,5µm,19.0s,MS6.0
TIXI MLR MLR
comp=Z,15µm,21.0s,MS6.3
TIXI MLR MLR
comp=E,6µm,23.0s,MS6.0
PMAFR Mafra 83.84 51 *e*P **P 02 45 35.5 +0.1**
comp=E,174nm,1.7s,mb5.9
PMAFR Mafra 83.84 51 *e*PP PP 02 48 47.3 -1.1
PMAFR *e*SKS 02 56 01.4
PMAFR *e*SS SS 03 01 36.9 +11
PMAFR *e*LQ 03 08 14.2
PMAFR *e*LR LR 03 12 33.8
comp=E,9µm,20.0s
ELOB Lobios 83.84 48 P **P 02 45 32.5 -2.8**
comp=E,170nm,2.3s,mb5.8
STNC Stoke 83.87 36 P **P 02 45 36.9 +1.7**
STNC AMB AMB 02 45 41.0
comp=E,174nm,2.0s,mb5.8
STNC AMS AMS 03 21 38.6
comp=E,16µm,19.5s
STNC Stoke 83.87 36 *e*P **P 02 45 36.9 +1.7**
STNC AMB AMB 02 45 41.0
comp=Z,174nm,2.0s,mb5.8
STNC AMS AMS 03 21 38.6
comp=Z,16µm,19.5s,MS6.4
LIS Lisbon 84.01 51 *e*P **P 02 45 36.6 +0.4**
LIS *e*SS SS 03 01 30.8 +2.3
LIS A 03 22 00.9
comp=Z,11µm,15.9s
LIS Lisbon 84.01 51 *e*P **P 02 45 36.6 +0.4**
LIS *e*S S 02 55 59.3 -1.4
LIS AMS AMS 03 22 00.9
comp=Z,11µm,15.9s,MS6.3
LIS Lisbon 84.01 51 *e*P **P 02 45 36.6 +0.4**
LIS *e*S S 02 55 59.3 -1.4
EPON Pontenova 84.03 47 P **P 02 45 34.4 -1.8**
comp=Z,216nm,2.3s,mb5.9
FOO Floro 84.09 27 *e*P **P 02 45 38.6 +2.4**
FOO AMb AMB 02 46 07.8
comp=Z,95nm,2.1s,mb5.6
FOO AMS AMS 03 24 49.5
comp=Z,15µm,16.4s,MS6.4
FOO Floro 84.09 27 *e*P pP 02 45 47.7 +8.3
FOO LR LR
comp=Z,15µm,16.4s,MS6.4
PVRL Vila Real 84.27 49 *e*P **P 02 45 35.2 -2.3**
comp=Z,102nm,1.7s,mb5.7
PTOM Tomar 84.28 50 *e*P **P 02 45 37.7 +0.1**
comp=Z,187nm,1.7s,mb5.9
PVIS Viseu 84.32 49 *e*P **P 02 45 38.0 +0.2**
comp=Z,90nm,1.7s,mb5.6
ERUA La Rua 84.33 47 P **P 02 45 36.4 -1.4**
comp=Z,53nm,1.0s,mb5.6
ERUA La Rua 84.33 47 P **P 02 45 36.4 -1.4**
ERUA pmax pmax
comp=Z,53nm,1.0s,mb5.6
MTE Manteigas 84.67 49 *e*P **P 02 45 40.0 +0.4**
comp=Z,120nm,1.9s,mb5.7
MTE Manteigas 84.67 49 *e*PP PP 02 48 54.0 -1.1
MTE *e*SKS 02 56 09.1
MTE *e*SS SS 03 01 47.9 +10
MTE *e*LQ 03 08 06.8
MTE *e*LR LR 03 12 10.2
comp=Z,12µm,20.0s
MTE Manteigas 84.67 49 *e*P **P 02 45 39.6 0.0**
comp=Z,106nm,1.3s,mb5.8
MTE LR LR
comp=Z,13µm,20.0s,MS6.3
PTEO Sao Teotonio 84.68 52 *e*P **P 02 45 39.7 0.0**
comp=Z,166nm,1.7s,mb5.9
MOL Molde 84.69 25 *e*P **P 02 45 40.5 +1.3**
MOL *e*S S 02 56 06.0 -0.6
MOL *e*SS SS 03 01 37.3 +0.1
MOL AMS AMS 03 20 16.9
comp=Z,11µm,30.5s,MS6.1
MOL Molde 84.69 25 *e*P pP 02 45 52.2 +10
MOL LR LR
comp=Z,11µm,30.5s,MS6.1
PFVI Vila Bisbo 84.73 53 *e*P **P 02 45 41.0 +1.1**
comp=Z,130nm,1.4s,mb5.9
PFVI *e*SKS 02 56 12.8
PFVI *e*SS SS 03 01 39.8 +0.5
PFVI *e*LQ 03 08 20.5
PFVI *e*LR LR 03 12 39.5
comp=Z,12µm,18.0s
PFVI Vila Bisbo 84.73 53 P **P 02 45 38.7 -1.2**
TRO Tromso 84.74 17 AMb AMB 02 45 56.6
comp=Z,131nm,2.9s,mb5.5
TRO *e*S S 02 56 05.4 -1.5
TRO *e*SS SS 03 01 39.7 +2.1
TRO AMS AMS 03 23 09.8
comp=Z,20µm,20.8s,MS6.5
TRO Tromso 84.74 17 *e*P pP 02 45 51.8 +9.2
TRO LR LR
comp=Z,20µm,20.8s,MS6.5
BER Bergen 84.75 28 *e*P pP 02 45 51.1 +8.2
BER *e*S S 02 56 08.3 +1.1
BER *e*SS SS 03 01 38.2 0.0
BER AMS AMS 03 24 58.6
comp=Z,9µm,17.5s,MS6.2
MVO Moncorvo 84.80 49 *e*P **P 02 45 40.6 +0.4**
comp=Z,176nm,1.6s,mb5.9
MVO Moncorvo 84.80 49 *e*PP PP 02 49 02.3 +6.2
MVO *e*SKS 02 56 11.5
MVO *e*SS SS 03 01 42.7 +2.7
MVO *e*LQ 03 08 15.1
MVO *e*LR LR 03 12 28.4
MVO Moncorvo 84.80 49 P **P 02 45 38.8 -1.4**
PBRG Braganca 84.80 48 *e*P **P 02 45 42.9 +2.7**
comp=Z,63nm,1.5s,mb5.5
PBRG Braganca 84.80 48 *e*PP PP 02 48 43.3 -13
PBRG *e*SKS 02 56 12.7
PBRG *e*SS SS 03 01 57.9 +18
PBRG *e*LQ 03 08 22.3
PBRG *e*LR LR 03 13 26.5
comp=Z,10µm,18.0s
MORF Marmelete 84.81 53 *e*P **P 02 45 41.3 +1.0**
comp=Z,99nm,1.8s,mb5.6
MORF Marmelete 84.81 53 *e*PP PP 02 49 18.2 +22
MORF *e*SKS 02 56 10.4
MORF *e*LQ 03 08 21.4
MORF *e*LR LR 03 12 34.0
comp=Z,11µm,18.0s
MORF Marmelete 84.81 53 *e*P **P 02 45 40.7 +0.4**
MORF *e*S S 02 56 06.0 -2.8
STOK Stokkvaagen 84.83 21 *e* pP 02 45 55.2 +12
STOK *e*SKS 02 56 04.0
EVOP Sao Brissos 84.83 51 *e*P **P 02 45 40.4 0.0**
comp=Z,186nm,1.2s,mb6.1
EVOP LR LR
comp=Z,15281µm,20.3s
EVOP Sao Brissos 84.83 51 *e*P **P 02 45 40.4 0.0**
EVOP pmax pmax
comp=Z,186nm,1.2s,mb6.1
PCBR Castelo Branco 84.90 50 *e*P **P 02 45 40.8 +0.1**

comp=Z,120nm,1.6s,mb5.8
EVO Evora 84.91 51 *e*P **P 02 45 40.4 -0.4**
comp=Z,186nm,1.2s,mb5.8
EVO *e*MLR MLR
comp=Z,15μm,20.2s,MS6.1
EVO Evora 84.91 51 *e*P **P 02 45 40.8 0.0**
comp=Z,150nm,1.6s,mb5.9
ROSF Rostrenen 84.92 41 *e*P **P 02 45 40.0 -0.6**
comp=Z,166nm,1.5s,mb5.6
ROSF Rostrenen 84.92 41 *e*P **P 02 45 40.0 -0.6**
comp=Z,83nm,1.5s,mb5.6
ROSF Rostrenen 84.92 41 *e*P **P 02 45 40.0 -0.6**
ROSF pmax pmax
comp=Z,83nm,1.5s,mb5.6
MESJ Messejana 84.97 52 *e*P **P 02 45 40.8 -0.3**
MESJ *e*S S 02 56 05.6 -4.7
MESJ *e*S S 02 56 06.0 -4.4
MESJ AMS AMS 03 20 26.6
comp=Z,7μm,20.0s,MS6.1
MESJ Messejana 84.97 52 *e*P **P 02 45 40.8 -0.3**
MESJ *e*S S 02 56 05.6 -4.8
PMRV Marv??o 85.09 50 *e*P **P 02 45 41.0 -0.7**
comp=Z,175nm,1.6s,mb5.9
PMRV *e*SKS 02 56 14.4
PMRV *e*SS SS 03 01 40.2 -4.2
PMRV *e*LQ 03 08 26.9
PMRV *e*LR LR 03 13 23.1
comp=Z,9μm,20.0s
PESTR Estremoz 85.12 51 *e*P **P 02 45 42.3 +0.4**
comp=Z,110nm,1.6s,mb5.7
PESTR Estremoz 85.12 51 *e*PP PP 02 48 53.1 -5.7
PESTR *e*SKS 02 56 16.2
PESTR *e*SS SS 03 01 44.4 -0.5
PESTR *e*LQ 03 08 20.9
PESTR *e*LR LR 03 12 18.9
comp=Z,9μm,20.0s
QUIF Quistinic 85.14 41 *e*P **P 02 45 41.6 -0.1**
comp=Z,182nm,1.7s,mb5.6
QUIF Quistinic 85.14 41 *e*P **P 02 45 41.6 -0.1**
comp=Z,91nm,1.7s,mb5.6
QUIF Quistinic 85.14 41 *e*P **P 02 45 41.6 -0.1**
QUIF pmax pmax
comp=Z,91nm,1.7s,mb5.6
PCVE Castro Verde 85.17 52 *e*P **P 02 45 43.2 +1.1**
comp=Z,115nm,1.8s,mb5.7
PCVE Castro Verde 85.17 52 *e*PP PP 02 49 19.7 +20
PCVE *e*SKS 02 56 14.3
PCVE *e*SS SS 03 01 48.5 +2.8
PCVE *e*LQ 03 08 29.8
PCVE *e*LR LR 03 13 30.8
comp=Z,9μm,20.0s
PBEJ Beja 85.18 52 *e*P **P 02 45 42.7 +0.5**
comp=Z,84nm,1.6s,mb5.6
JSA Saint Aubin 85.30 40 P **P 02 45 45.5 +2.9**
JSA AMB AMB 02 45 57.0
comp=Z,67nm,6.2s
JSA AMS AMS 03 23 12.4
comp=Z,15μm,19.3s
JSA Saint Aubin 85.30 40 *e*P **P 02 45 45.5 +2.9**
JSA AMB AMB 02 45 57.0
comp=Z,67nm,6.2s
JSA AMS AMS 03 23 12.4
comp=Z,15μm,19.3s,MS6.4
PBDV Barranco-do-Ve 85.38 53 *e*P **P 02 45 44.5 +1.3**
comp=Z,119nm,1.6s,mb5.8
PBDV Barranco-do-Ve 85.38 53 *e*PP PP 02 49 25.5 +25
PBDV *e*SKS 02 56 19.8
PBDV *e*SS SS 03 01 56.1 +7.3
PBDV *e*LQ 03 08 33.1
PBDV *e*LR LR 03 11 57.8
comp=Z,9μm,20.0s
EARI Arriondas 85.38 46 P **P 02 45 41.9 -1.1**
comp=Z,114nm,1.3s,mb5.8
SGMF Saint Gilles 85.40 41 *e*P **P 02 45 42.8 -0.2**
comp=Z,221nm,1.7s,mb5.7
SGMF Saint Gilles 85.40 41 *e*P **P 02 45 42.8 -0.2**
comp=Z,110nm,1.7s,mb5.7
SGMF Saint Gilles 85.40 41 *e*P **P 02 45 42.8 -0.2**
SGMF pmax pmax
comp=Z,110nm,1.7s,mb5.7
NSS Namsos 85.42 23 *e*P pP 02 45 55.0 +8.8
NSS *e*S S 02 56 13.7 -0.1
NSS *e*SS SS 03 01 48.5 +0.6
NSS AMS AMS 03 24 41.6
comp=Z,17μm,26.5s,MS6.3
PVAQ Vaqueiros 85.49 52 *e*P **P 02 45 46.9 +3.2**
comp=Z,114nm,1.6s,mb5.8
PVAQ Vaqueiros 85.49 52 *e*PP PP 02 48 57.2 -4.6
PVAQ *e*SKS 02 56 19.7
PVAQ *e*SS SS 03 01 31.1 -19
PVAQ *e*LQ 03 08 33.1
PVAQ *e*LR LR 03 12 25.9
comp=Z,9μm,20.0s
EBAD Badajoz 85.58 51 P **P 02 45 41.9 -2.3**
comp=Z,102nm,2.3s,mb5.7
EGRO El Granado 85.62 52 P **P 02 45 41.8 -2.6**
comp=Z,94nm,2.3s,mb5.6
PBAR Barrancos 85.75 51 *e*P **P 02 45 44.5 -0.5**
comp=Z,85nm,1.6s,mb5.7
PBAR Barrancos 85.75 51 *e*PP PP 02 48 58.8 -5.2
PBAR *e*SKS 02 56 19.8
PBAR *e*SS SS 03 01 45.2 -9.0
PBAR *e*LQ 03 08 41.9
PBAR *e*LR LR 03 13 34.0
comp=Z,11μm,20.0s
EPLA Plasencia 85.84 49 P **P 02 45 43.3 -2.1**
comp=Z,81nm,1.3s,mb5.8
EPLA Plasencia 85.84 49 P **P 02 45 43.3 -2.1**
EPLA pmax pmax
comp=Z,81nm,1.3s,mb5.8
EMIN Mina Concepcio 86.16 52 P **P 02 45 45.5 -1.5**
comp=Z,89nm,1.5s,mb5.8
KTK1 Kautokeino 86.32 16 *e* **P 02 45 47.8 +0.6**
KTK1 *e*SKS 02 56 11.9
KTK1 *e*SS SS 03 02 01.6 +0.9
KTK1 AMS AMS 03 23 41.6
comp=Z,36μm,22.2s,MS6.7
GRR Gorron 86.40 40 *e*P **P 02 45 47.9 -0.1**
comp=Z,74nm,1.2s,mb5.5
GRR Gorron 86.40 40 *e*P **P 02 45 47.9 -0.1**
comp=Z,37nm,1.2s,mb5.5
GRR Gorron 86.40 40 *e*P **P 02 45 47.9 -0.1**
GRR pmax pmax
comp=Z,37nm,1.2s,mb5.5
FLN La Foliniere 86.49 40 *e*P **P 02 45 50.6 +2.2**
comp=Z,50nm,1.0s,mb5.4
FLN *e*MLR MLR
comp=Z,24μm,21.0s,MS6.3
FLN La Foliniere 86.49 40 *e*P **P 02 45 50.6 +2.2**
comp=Z,25nm,1.0s,mb5.4
FLN LR LR
comp=Z,24μm,21.0s,MS6.6
FLN La Foliniere 86.49 40 *e*P **P 02 45 50.6 +2.2**
FLN pmax pmax
comp=Z,25nm,1.0s,mb5.4
FLN MLR MLR
comp=Z,24μm,21.0s,MS6.6
ARCES ARCESS Array B 86.56 15 P **P 02 45 48.6 +0.2**
comp=Z,4.2nm,1.0s,mb4.6,baz=355,slow=5.7,SNR=2.4
ARCES PP PP 02 49 08.1 -1.4
comp=Z,16nm,1.2s,baz=280,slow=5.4,SNR=4.1
ARCES LR LR 03 24 16.9
comp=Z,26μm,20.8s,MS6.6,baz=313,slow=36
ARCES ARCESS Array B 86.56 15 P **P 02 45 48.6 +0.3**
ARCES 02 49 08.1
KEV Kevo 86.77 15 PFAKE 02 46 00.0 +11
KEV LR LR
comp=Z,24μm,20.0s,MS6.6
LDF La Druitiere 86.78 40 *e*P **P 02 45 51.0 +1.2**
LDF La Druitiere 86.78 40 *e*P **P 02 45 51.0 +1.2**
NAO01 NORSAR Array S 86.93 26 *e*P **P 02 45 50.9 +0.5**
comp=Z,6.0nm,0.8s,mb4.9
NAO01 LR LR
comp=Z,12μm,19.0s,MS6.3
SFS San Fernando 86.94 53 PFAKE 02 46 00.0 +9.1
SFS LR LR
comp=Z,16μm,19.0s,MS6.4
NB2 NORSAR Subarra 86.97 26 P **P 02 45 50.9 +0.4**
comp=Z,81nm,1.7s,mb5.7,baz=296,slow=4.6
NOA NORSAR Array B 86.97 26 P **P 02 45 50.1 -0.4**
comp=Z,5.6nm,0.8s,mb4.8,baz=301,slow=4.6,SNR=25
NOA LR LR 03 26 12.3
comp=Z,8μm,19.4s,MS6.1,baz=300,slow=37
NOA NORSAR Array S 86.97 26 P **P 02 45 50.1 -0.4**
KONO Kongsberg 86.99 27 *e*P **P 02 45 51.2 +0.6**
comp=Z,55nm,1.2s,mb5.7
KONO LR LR
comp=Z,15μm,19.0s,MS6.4
KONO Kongsberg 86.99 27 *e*P **P 02 45 51.2 +0.6**
KONO pmax pmax
comp=Z,55nm,1.2s,mb5.7
KONO MLR MLR
comp=Z,15μm,19.0s,MS6.4
ECAB El Cabril 86.99 51 P **P 02 45 43.5 -7.7**
comp=Z,69nm,2.2s,mb5.5
GUD Guadarrama 87.03 48 P **P 02 45 51.6 +0.4**
comp=Z,55nm,1.6s,mb5.5
GUD Guadarrama 87.03 48 P **P 02 45 51.6 +0.3**
GUD pmax pmax
comp=Z,55nm,1.6s,mb5.5
ESPR Espera 87.07 52 P **P 02 45 51.3 -0.2**
comp=Z,52nm,1.8s,mb5.5
RTC Rabat Centre 87.25 55 PFAKE 02 46 00.0 +7.5
RTC LR LR
comp=Z,11μm,21.0s,MS6.2
PAB San Pablo 87.27 49 *e*P **P 02 45 53.9 +1.4**
comp=Z,40nm,1.3s,mb5.5
PAB LR LR
comp=Z,13μm,19.0s,MS6.3
PAB San Pablo 87.27 49 *e*P **P 02 45 53.9 +1.4**
PAB pmax pmax
comp=Z,40nm,1.3s,mb5.5
PAB MLR MLR
comp=Z,13μm,19.0s,MS6.3
EJIF Jimena Fronter 87.50 53 P **P 02 45 53.4 -0.2**
comp=Z,39nm,1.2s,mb5.5
EJIF Jimena Fronter 87.50 53 P **P 02 45 53.4 -0.2**
EJIF pmax pmax
comp=Z,39nm,1.2s,mb5.5
ESDC Sonseca Array 87.50 49 P **P 02 45 53.5 -0.1**
comp=Z,7.2nm,1.0s,mb4.9,baz=311,slow=5.4,SNR=13
ESDC LR LR 03 25 56.4
comp=Z,5μm,18.3s,MS6.0,baz=315,slow=36
ESDC Sonseca Array 87.50 49 P **P 02 45 53.1 -0.5**
comp=Z,12nm,1.0s,mb5.1
ESLA Sonseca Array 87.50 49 *e*P **P 02 45 54.5 +0.9**
comp=Z,4.4nm,1.1s,mb4.6
ESLA LR LR
comp=Z,40μm,21.0s,MS6.8
EADA Adamuz 87.58 51 P **P 02 45 54.1 +0.1**
comp=Z,37nm,1.1s,mb5.5
PMSA Palmer Station 87.92 164 PFAKE 02 46 10.0 +15
PMSA LR LR
comp=Z,15μm,20.0s,MS6.4
EBAN Banos Encina 88.17 51 P **P 02 45 59.1 +2.3**
comp=Z,17nm,1.0s,mb5.2
EBAN Banos Encina 88.17 51 P **P 02 45 59.1 +2.3**
EBAN pmax pmax
comp=Z,17nm,1.0s,mb5.2
ELOJ Sierra Loja 88.25 52 P **P 02 45 55.9 -1.3**
comp=Z,36nm,1.1s,mb5.5
ELOJ Sierra Loja 88.25 52 P **P 02 45 55.9 -1.3**
ELOJ pmax pmax
comp=Z,36nm,1.1s,mb5.5
MUD Monsted U'grnd 88.39 30 *i* P pP 02 46 10.1 +9.3
MUD
comp=Z,11μm,24.0s
ERON Agron 88.56 52 P **P 02 45 56.2 -2.4**
comp=Z,8.8nm,0.9s,mb5.1
ECOG Cogollos-Vega 88.64 51 P **P 02 45 58.1 -0.9**
comp=Z,19nm,1.0s,mb5.4
ECOG Cogollos-Vega 88.64 51 P **P 02 45 58.1 -1.0**
ECOG pmax pmax
comp=Z,19nm,1.0s,mb5.4
BAIF Baives 88.75 37 *e*P **P 02 45 59.2 -0.1**
BAIF Baives 88.75 37 *e*P **P 02 45 59.2 -0.1**
LFF La Frestale 88.76 43 *e*P **P 02 45 59.3 -0.1**
LFF La Frestale 88.76 43 *e*P **P 02 45 59.3 -0.1**
EQES Quesada 88.82 51 P **P 02 46 00.4 +0.5**
comp=Z,34nm,1.6s,mb5.4
EVIA Vianos 88.94 50 P **P 02 46 00.4 0.0**
comp=Z,24nm,0.8s,mb5.6
EVIA Vianos 88.94 50 P **P 02 46 00.4 0.0**
EVIA pmax pmax
comp=Z,24nm,0.8s,mb5.6
GIVF Givet 89.09 37 *e*P **P 02 46 02.1 +1.3**
GIVF Givet 89.09 37 *e*P **P 02 46 02.1 +1.3**
RJF Les Rejaudoux 89.12 42 *e*P **P 02 46 01.7 +0.6**
comp=Z,56nm,1.5s,mb5.4
RJF *e*MLR MLR
comp=Z,17μm,21.2s,MS6.1
RJF Les Rejaudoux 89.12 42 *e*P **P 02 46 01.7 +0.6**
comp=Z,28nm,1.5s,mb5.4
RJF LR LR
comp=Z,17μm,21.3s,MS6.4
RJF Les Rejaudoux 89.12 42 *e*P **P 02 46 01.7 +0.6**
RJF pmax pmax
comp=Z,28nm,1.5s,mb5.4
RJF MLR MLR
comp=Z,17μm,21.3s,MS6.4
TCF Toulx Ste Croi 89.15 41 *e*P **P 02 46 01.5 +0.3**
comp=Z,23nm,1.0s,mb5.1
TCF Toulx Ste Croi 89.15 41 *e*P **P 02 46 01.5 +0.3**
comp=Z,12nm,1.0s,mb5.2
TCF Toulx Ste Croi 89.15 41 *e*P **P 02 46 01.5 +0.3**
TCF pmax pmax
comp=Z,12nm,1.0s,mb5.2
EHUE Huescar 89.17 51 P **P 02 46 00.3 -1.2**
comp=Z,32nm,1.2s,mb5.5
EHUE Huescar 89.17 51 P **P 02 46 00.3 -1.2**
EHUE pmax pmax
comp=Z,32nm,1.2s,mb5.5
EPF Esparros 89.26 45 *e*P **P 02 46 01.7 -0.1**
comp=Z,16nm,0.9s,mb5.0
EPF Esparros 89.26 45 *e*P **P 02 46 01.7 -0.1**
comp=Z,7.8nm,0.9s,mb5.0
EPF Esparros 89.26 45 *e*P **P 02 46 01.7 -0.1**
EPF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
EBIE Bielsa 89.26 45 P **P 02 46 00.6 -1.2**
comp=Z,52nm,1.8s,mb5.6
BGF Bois d'Agland 89.44 41 *e*P **P 02 46 03.0 +0.4**
comp=Z,11nm,0.7s,mb5.0
BGF Bois d'Agland 89.44 41 *e*P **P 02 46 03.0 +0.4**
comp=Z,5.6nm,0.7s,mb5.0
BGF Bois d'Agland 89.44 41 *e*P **P 02 46 03.0 +0.4**
BGF pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
YAK Yakutsk 89.61 337 *e*P **P 02 46 04.6 +1.5**
comp=Z,52nm,0.8s,mb5.9
YAK LR LR
comp=Z,11μm,21.0s,MS6.3
YAK Yakutsk 89.61 337 *e*P pP 02 46 12.9 +6.5
YAK *e* 02 49 34.9
YAK *e*PPP 02 51 37.0
YAK *e* 02 56 50.9
YAK *e* 02 58 01.0
YAK *e*SSS 03 06 24.0
YAK pmax pmax
comp=Z,85nm,1.2s,mb6.0
YAK pmax pmax
comp=N,14nm,1.7s
YAK pmax pmax
comp=E,19nm,1.0s
YAK pmax pmax
comp=Z,494nm,4.2s
YAK MLR MLR
comp=Z,9μm,18.0s,MS6.3
YAK MLR MLR
comp=N,7μm,18.0s,MS6.2
YAK MLR MLR
comp=E,3μm,16.0s,MS6.2
CAF Calviac 89.63 43 *e*P **P 02 46 04.0 +0.5**
comp=E,27nm,1.3s,mb5.1
CAF Calviac 89.63 43 *e*P **P 02 46 04.0 +0.5**
comp=E,14nm,1.3s,mb5.1
CAF Calviac 89.63 43 *e*P **P 02 46 04.0 +0.5**
CAF pmax pmax
comp=Z,14nm,1.3s,mb5.1
SSF Saint Saulge 89.63 40 *e*P **P 02 46 03.9 +0.4**
comp=Z,43nm,1.3s,mb5.3
SSF Saint Saulge 89.63 40 *e*P **P 02 46 03.9 +0.4**
comp=Z,22nm,1.3s,mb5.3
SSF Saint Saulge 89.63 40 *e*P **P 02 46 03.9 +0.4**
SSF pmax pmax
comp=Z,22nm,1.3s,mb5.3
AVF Avril sur Loir 89.66 41 *e*P **P 02 46 03.7 +0.1**
comp=Z,40nm,1.5s,mb5.2
AVF Avril sur Loir 89.66 41 *e*P **P 02 46 03.7 +0.1**
comp=Z,20nm,1.5s,mb5.2
AVF Avril sur Loir 89.66 41 *e*P **P 02 46 03.7 +0.1**
AVF pmax pmax
comp=Z,20nm,1.5s,mb5.2
IBBN Ibbenburen 89.70 34 *e*P **P 02 46 07.6 +3.9**
comp=Z,104nm,2.0s,mb5.8
LOR Lormes 89.76 40 *e*P **P 02 46 04.7 +0.6**
comp=Z,48nm,1.3s,mb5.4
LOR *e*MLR MLR
comp=Z,23μm,19.5s,MS6.3
LOR Lormes 89.76 40 *e*P **P 02 46 04.7 +0.6**
comp=Z,24nm,1.3s,mb5.4
LOR LR LR
comp=Z,23μm,19.5s,MS6.6
LOR Lormes 89.76 40 *e*P **P 02 46 04.7 +0.6**
LOR pmax pmax
comp=Z,24nm,1.3s,mb5.4
LOR MLR MLR
comp=Z,23μm,19.5s,MS6.6
MEZF Maizieres J'vi 89.94 39 *e*P **P 02 46 05.3 +0.4**
comp=Z,18nm,0.9s,mb5.1
MEZF Maizieres J'vi 89.94 39 *e*P **P 02 46 05.3 +0.4**
comp=Z,18nm,0.9s,mb5.4
APA Apatity 89.97 15 ⇑ *i*P **P 02 46 08.0 +3.4**
APA *i* 02 56 56.0
APA *i* PS PS 02 58 10.0 +6.1
APA pmax pmax
comp=Z,54nm,1.6s,mb5.6
APA pmax pmax
comp=Z,600nm,5.5s
LVZ Lovozero 90.01 14 PFAKE 02 46 10.0 +5.2
LVZ LR LR
comp=Z,26μm,21.0s,MS6.6
SMF Signal de Mont 90.02 41 *e*P **P 02 46 05.4 +0.1**
comp=Z,19nm,1.1s,mb5.0
SMF Signal de Mont 90.02 41 *e*P **P 02 46 05.4 +0.1**
comp=Z,9.4nm,1.1s,mb5.0
SMF Signal de Mont 90.02 41 *e*P **P 02 46 05.4 +0.1**
SMF pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
WLF Walferdange 90.05 37 *e*PP PP 02 49 39.7 +1.7
WLF Walferdange 90.05 37 *e*P **P 02 46 05.9 +0.5**
comp=Z,8.4nm,0.8s,mb5.1
WLF LR LR
comp=Z,17μm,20.0s,MS6.5
WLF Walferdange 90.05 37 *e*P **P 02 46 05.9 +0.5**
WLF pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
WLF MLR MLR
comp=Z,17μm,20.0s,MS6.5
COP Copenhagen 90.35 30 *i* P pP 02 46 20.4 +10
COP
comp=Z,7μm,22.0s
MTLF Montolieu 90.39 44 *e*P **P 02 46 07.9 +0.8**
MTLF Montolieu 90.39 44 *e*P **P 02 46 07.9 +0.8**
YUK Yuzh-Kuril'sk 90.76 317 *d i*P **P 02 46 06.8 -2.0**
YUK *i* 02 49 41.7
YUK *i* PPP 02 51 39.5
YUK *i* S SKSac 02 56 35.1 -5.7
YUK *i* SS SS 03 03 02.9 -3.8
YUK *i* SSS 03 06 40.1
YUK pmax pmax
comp=Z,60nm,0.1s
YUK pmax pmax
comp=E,625nm,1.3s
YUK pmax pmax
comp=N,156nm,0.6s
YUK smax
comp=N,3μm,3.1s
YUK smax
comp=E,4μm,3.1s
NRDL Niedersach Rie 90.86 33 *e*P **P 02 46 12.2 +3.1**
comp=Z,35nm,1.6s,mb5.4
NRDL *e*PP PP 02 49 44.6 +0.3
HAU Haudompre 90.93 39 *e*P **P 02 46 10.2 +0.7**
comp=Z,44nm,1.4s,mb5.3
HAU *e*MLR MLR
comp=Z,33μm,20.8s,MS6.5
HAU Haudompre 90.93 39 *e*P **P 02 46 10.2 +0.7**
comp=Z,22nm,1.4s,mb5.3
HAU LR LR
comp=Z,33μm,20.8s,MS6.8
HAU Haudompre 90.93 39 *e*P **P 02 46 10.2 +0.7**
HAU pmax pmax
comp=Z,22nm,1.4s,mb5.3
HAU MLR MLR
comp=Z,33μm,20.8s,MS6.8
CDF Champ du Feu 91.29 38 *e*P **P 02 46 12.0 +0.8**
comp=Z,44nm,1.4s,mb5.3
CDF Champ du Feu 91.29 38 *e*P **P 02 46 12.0 +0.8**
comp=Z,22nm,1.4s,mb5.3
CDF Champ du Feu 91.29 38 *e*P **P 02 46 12.0 +0.8**
CDF pmax pmax
comp=Z,22nm,1.4s,mb5.3
ECH Echery 91.31 38 PFAKE 02 46 20.0 +8.7
ECH LR LR
comp=Z,28μm,19.0s,MS6.7
HINF Hinteralfeld 91.32 39 *e*P **P 02 46 11.8 +0.5**
comp=Z,20nm,1.2s,mb5.0
HINF Hinteralfeld 91.32 39 *e*P **P 02 46 11.8 +0.5**
comp=Z,9.9nm,1.2s,mb5.0
HINF Hinteralfeld 91.32 39 *e*P **P 02 46 11.8 +0.5**
HINF pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
CLZ Clausthal 91.33 34 *e*P **P 02 46 14.7 +3.4**
comp=Z,84nm,2.0s,mb5.7
CLZ *e*PP PP 02 49 48.2 +0.1
CLZ Clausthal 91.33 34 *e*P **P 02 46 14.7 +3.4**
CLZ *e* 02 49 48.2
CLZ pmax pmax
comp=Z,84nm,2.0s,mb5.7
YSS Yuzh-Sakhalins 91.41 320 PFAKE 02 46 20.0 +8.2
YSS LR LR
comp=Z,1μm,19.0s,MS5.4
CABF La Chapelle 91.42 40 *e*P **P 02 46 12.4 +0.6**
CABF La Chapelle 91.42 40 *e*P **P 02 46 12.4 +0.6**
UBBA Unterbreizbach 91.65 35 *e*P **P 02 46 13.3 +0.5**
comp=Z,111nm,2.3s,mb5.8
BSD Bornholm Skovb 91.85 30 *i* P pP 02 46 38.8 +22
BSD
comp=Z,12μm,24.0s
BFO Black Forest 91.95 38 PFAKE 02 46 20.0 +5.8
BFO LR LR
comp=Z,20μm,20.0s,MS6.6
KAF Kangasniemi 91.99 21 *e*P **P 02 46 17.1 +3.0**
KAF Kangasniemi 91.99 21 *e*p **P 02 46 17.1 +3.0**
ORIF Oris-en-Rattie 92.07 41 *e*P **P 02 46 15.7 +0.9**
comp=Z,31nm,1.4s,mb5.1
ORIF *e*MLR MLR
comp=Z,17μm,20.2s,MS6.2
ORIF Oris-en-Rattie 92.07 41 *e*P **P 02 46 15.7 +0.9**
comp=Z,16nm,1.4s,mb5.2
ORIF Oris-en-Rattie 92.07 41 *e*P **P 02 46 15.7 +0.9**
ORIF pmax pmax
comp=Z,16nm,1.4s,mb5.2
LPL La Plagne 92.33 41 *e*P **P 02 46 15.0 -1.0**
LPL La Plagne 92.33 41 *e*P **P 02 46 15.0 -1.0**
FINES FINESS Array B 92.38 21 P **P 02 46 15.8 -0.2**
comp=Z,2.7nm,0.8s,mb4.6,baz=322,slow=5.8,SNR=5.6
FINES PP PP 02 49 56.3 +0.3
comp=Z,4.6nm,0.9s,baz=343,slow=6.0,SNR=4.2
FINES LR LR 03 28 37.0
comp=Z,21μm,19.5s,MS6.6,baz=312,slow=36
FINES FINESS Array B 92.38 21 P **P 02 46 15.8 -0.1**
FINES 02 49 56.3
BNI Bardonecchia 92.51 41 PFAKE 02 46 30.0 +13
BNI LR LR
comp=Z,13μm,20.0s,MS6.4
MOX Moxa 92.62 35 *e*P **P 02 46 20.3 +3.0**
comp=Z,122nm,2.5s,mb5.9
MOX *e*PP PP 02 49 58.8 +0.5
MOX *e*S SKSac 02 57 02.0 +11
MOX
comp=Z,10μm,22.0s
MOX Moxa 92.62 35 *e*P **P 02 46 17.7 +0.4**
comp=Z,80nm,2.1s,mb5.8
MOX Moxa 92.62 35 *e*P **P 02 46 20.3 +3.0**
MOX *e* 02 49 58.8
MOX pmax pmax
comp=Z,122nm,2.5s,mb5.9
MOX MLR MLR
comp=Z,10μm,22.0s,MS6.2
OUZ Omahuta 92.80 234 *e*P **P 02 46 25.5 +7.2**
comp=Z,54nm,1.4s,mb5.8
GRA1 Grafenberg Arr 92.91 36 *e*P **P 02 46 18.6 0.0**
GRA1 LR LR
comp=Z,24μm,21.7s,MS6.6
GRF Grafenberg Arr 92.91 36 *e*P **P 02 46 18.6 0.0**
GRF *e*L 03 27 08.1
comp=Z,24μm,21.7s

GRF	**Grafenberg Arr**	**92.91**	**36**	*e*P	**P**	**02 46 18.6**	**0.0**
GRF				MLR	MLR		
comp=Z,24μm,21.7s,MS6.6							
GRF	**Grafenberg Arr**	**92.91**	**36**	*e*P	**P**	**02 46 18.6**	**0.0**
GRF				MLR	MLR		
comp=Z,24μm,21.7s,MS6.6							
GRFO	**Grafenberg**	**92.91**	**36**	*e*P	**P**	**02 46 18.2**	**-0.4**
comp=Z,64nm,1.5s,mb5.8							
GRFO	**Grafenberg**	**92.91**	**36**	*e*P	**P**	**02 46 18.2**	**-0.4**
GRFO				pmax	pmax		
comp=Z,64nm,1.5s,mb5.8							
JOF	**Joensuu**	**92.99**	**18**	*e*P	**P**	**02 46 18.4**	**-0.3**
JOF	**Joensuu**	**92.99**	**18**	*e*p	**P**	**02 46 18.4**	**-0.3**
CLL	**Collm**	**93.01**	**34**	*e*P	**P**	**02 46 20.3**	**+1.3**
CLL	**Collm**	**93.01**	**34**	*e*P	**P**	**02 46 20.0**	**+1.0**
comp=Z,13nm,1.3s,mb5.2							
CLL				*e*		02 46 41.0	
CLL				*e*PP	PP	02 49 59.0	-2.3
CLL				*e*S	S	02 57 15.0	-10
CLL	**Collm**	**93.01**	**34**	*e*P	**P**	**02 46 20.0**	**+1.0**
CLL				*e*		02 49 59.0	
CLL				*e*S	S	02 57 15.0	-10
CLL				pmax	pmax		
comp=Z,13nm,1.3s,mb5.2							
CLL	**Collm**	**93.01**	**34**	*e*P	**P**	**02 46 20.0**	**+1.0**
comp=Z,13nm,1.3s,mb5.2							
CLL				*e*		02 46 41.0	
CLL				*e*PP	PP	02 49 59.0	-2.3
CLL				*i*		02 50 14.0	
CLL				*i*		02 50 38.2	
CLL				*e*SKKSac	SKKSac	02 57 12.0	+0.2
CLL				*e*S	S	02 57 28.0	+2.7
CLL				*e*PS	PS	02 58 41.0	+2.9
CLL				*e*SS	SS	03 03 41.0	+2.5
CLL				*e*SSSS		03 10 32.0	
WERD	**Werda**	**93.10**	**35**	*e*P	**P**	**02 46 19.7**	**+0.2**
comp=Z,149nm,2.8s,mb5.9							
GUNZ	**Gunzen**	**93.16**	**35**	*e*P	**P**	**02 46 21.7**	**+1.9**
comp=Z,131nm,2.6s,mb5.9							
TANN	**Tannenbergstha**	**93.20**	**34**	*e*P	**P**	**02 46 22.1**	**+2.1**
comp=Z,53nm,2.1s,mb5.6							
WERN	**Wernitzgruen**	**93.22**	**35**	*e*P	**P**	**02 46 21.9**	**+1.8**
comp=Z,156nm,2.5s,mb6.0							
NKC	**Novy Kostel**	**93.29**	**35**	*e*P	**P**	**02 46 21.0**	**+0.6**
NKC				*e*		02 46 37.9	
NKC				*e*		02 50 04.2	
NKC				*e*SS	SS	03 03 41.0	-1.6
NKC				MLR	MLR		
comp=Z,15μm,18.7s,MS6.5							
NKC	**Novy Kostel**	**93.29**	**35**	*e*P	**P**	**02 46 21.0**	**+0.6**
NKC				*ex*	x	02 46 37.9	
NKC				*e*PP	PP	02 50 04.2	+0.7
NKC				*e*SS	SS	03 03 41.0	-1.6
NKC				AMS	AMS	03 28 40.0	
comp=Z,15μm,18.7s							
ROTZ	**Rotzenmuhle**	**93.41**	**35**	*e*P	**P**	**02 46 21.8**	**+0.9**
comp=Z,128nm,2.4s,mb5.9							
ROTZ				*e*PP	PP	02 50 06.3	+1.8
ERM	**Erimo**	**93.43**	**316**	PFAKE		02 46 30.0	+8.8
ERM				LR	LR		
comp=Z,8μm,21.0s,MS6.2							
TUE	**Stuetta**	**93.46**	**39**	PFAKE		02 46 30.0	+8.8
TUE				LR	LR		
comp=Z,28μm,20.0s,MS6.7							
BRG	**Berggiesshubel**	**93.74**	**34**	*e*P	**P**	**02 46 26.2**	**+3.7**
comp=Z,17nm,1.5s,mb5.2							
BRG				PP	PP	02 50 06.0	-1.0
comp=Z,31nm,1.8s							
BRG				*e*		02 56 52.4	
comp=Z,23nm,1.9s							
BRG				SKS		02 57 05.0	
BRG				S	S	02 57 32.0	+0.2
BRG				PS	PS	02 58 44.0	-2.2
BRG				SS	SS	03 03 43.0	-6.0
BRG							
comp=N,10μm,25.6s							
BRG							
comp=E,12μm,28.8s							
BRG							
comp=Z,13μm,28.5s							
SNZO	**South Karori**	**94.01**	**228**	PFAKE		02 46 30.0	+6.3
SNZO				LR	LR		
comp=Z,11μm,20.0s,MS6.3							
GKP	**Gorka Klasztor**	**94.03**	**30**	*e*P	**P**	**02 46 24.6**	**+0.8**
GKP				LMZ		03 25 24.2	
comp=Z,21μm,24.8s							
GKP	**Gorka Klasztor**	**94.03**	**30**	*e*P	**P**	**02 46 24.5**	**+0.8**
WET	**Wettzell**	**94.11**	**35**	*e*P	**P**	**02 46 24.3**	**+0.1**
comp=Z,222nm,3.0s							
WET				*e*PP	PP	02 50 09.9	-0.1
WET	**Wettzell**	**94.11**	**35**	*e*P	**P**	**02 46 24.3**	**+0.1**
WET				*e*		02 50 09.9	
WET				pmax	pmax		
comp=Z,222nm,3.0s							
PVCC	**Panska Ves**	**94.27**	**34**	*e*P	**P**	**02 46 26.5**	**+1.7**
PVCC				*e*		02 46 40.8	
PVCC				*e*		02 50 09.9	
PVCC				*e*SS	SS	03 03 56.9	+0.4
PVCC				MLR	MLR		
comp=Z,12μm,20.2s,MS6.3							
PVCC	**Panska Ves**	**94.27**	**34**	*e*P	**P**	**02 46 26.5**	**+1.7**
PVCC				*ex*	x	02 46 40.8	
PVCC				*e*PP	PP	02 50 09.9	-1.2
PVCC				*e*SS	SS	03 03 56.9	+0.4
PVCC				AMS	AMS	03 30 00.0	
comp=Z,12μm,20.2s							
WTTA	**Wattenberg**	**94.41**	**37**	⇑*i*PcP	PcP	02 46 25.6	-0.4
comp=Z,30nm,1.7s							
PRA	**Prague**	**94.45**	**34**	P	**P**	**02 46 24.0**	**-1.7**
PRA				PP	PP	02 50 18.0	+5.4
PRA				S	S	02 57 38.0	0.0
PRA				AMS	AMS	03 29 00.0	
KHC	**Kasperske Hory**	**94.51**	**35**	*e*P	**P**	**02 46 26.0**	**0.0**
comp=Z,12nm,1.3s,mb5.2							
KHC	**Kasperske Hory**	**94.51**	**35**	*e*P	**P**	**02 46 26.0**	**0.0**
KHC				*e*		02 46 43.9	
KHC				*e*		02 50 15.2	
KHC				*e*SS	SS	03 04 00.7	+0.7
KHC				*e*SS	SS	03 04 04.5	+4.5
KHC				MLR	MLR		
comp=Z,17μm,21.4s,MS6.5							
KHC	**Kasperske Hory**	**94.51**	**35**	*e*P	**P**	**02 46 26.0**	**0.0**
KHC				*ex*	x	02 46 43.9	
KHC				*e*PP	PP	02 50 15.2	+2.1
KHC				*ex*	x	02 57 10.6	
KHC				*e*SS	SS	03 04 00.7	+0.7
KHC				AMS	AMS	03 27 30.0	
comp=Z,17μm,21.4s							
PRU	**Pruhonice**	**94.55**	**34**	*e*P	**P**	**02 46 23.0**	**-3.2**
PRU				*e*		02 50 18.2	
PRU				*e*		02 57 37.2	
PRU				MLR	MLR		
comp=Z,12μm,18.7s,MS6.4							
PRU	**Pruhonice**	**94.55**	**34**	*e*P	**P**	**02 46 23.0**	**-3.2**
PRU				*ex*	x	02 46 44.3	
PRU				*e*PP	PP	02 50 18.2	+4.8
PRU				*e*S	S	02 57 37.2	-1.8
PRU				AMS	AMS	03 28 50.0	
comp=Z,12μm,18.7s							
VSU	**Vasula**	**94.72**	**23**	⇓*i*P	**P**	**02 46 27.2**	**+0.4**
VSU				pmax	pmax		
comp=Z,44nm,2.7s,mb5.4							
VSU				MLR	MLR		
comp=Z,21μm,20.0s,MS6.6							
GEC2	**GERESS Array S**	**94.73**	**35**	*e*P	**P**	**02 46 27.4**	**+0.4**
comp=Z,237nm,3.1s							
GEC2	**GERESS Array S**	**94.73**	**35**	*e*P	**P**	**02 46 27.4**	**+0.4**
GEC2				pmax	pmax		
comp=Z,237nm,3.1s							
GERES	**GERESS Array B**	**94.73**	**35**	P	**P**	**02 46 27.2**	**+0.2**
comp=Z,1.8nm,0.9s,baz=347,slow=5.5,SNR=11							
GERES				PP	PP	02 50 23.0	+8.2
comp=Z,0.9nm,0.8s,baz=329,slow=4.7,SNR=4.1							
GERES	**GERESS Array B**	**94.73**	**35**	P	**P**	**02 46 27.2**	**+0.2**
GERES						02 50 23.0	
KSP	**Ksiaz**	**94.99**	**33**	*e*P	**P**	**02 46 27.1**	**-1.0**
KSP				*e*PP	PP	02 50 18.1	+1.3
KSP				LMZ		03 23 55.8	
comp=Z,28μm,27.3s							
UPC	**Upice**	**95.04**	**33**	*e*P	**P**	**02 46 28.3**	**-0.1**
UPC	**Upice**	**95.04**	**33**	*e*P	**P**	**02 46 28.3**	**-0.1**
VLC	**Villacollemand**	**95.26**	**41**	PFAKE		02 46 40.0	+10
VLC				LR	LR		
comp=Z,8μm,20.0s,MS6.2							
DPC	**Dobruska-Polom**	**95.29**	**33**	*e*P	**P**	**02 46 28.6**	**-0.9**
DPC				*e*		02 46 46.3	
DPC				*e*		02 57 31.9	
DPC				*e*SS	SS	03 04 08.0	-3.0
DPC				MLR	MLR		
comp=Z,10μm,20.3s,MS6.3							
DPC	**Dobruska-Polom**	**95.29**	**33**	*e*P	**P**	**02 46 28.6**	**-0.9**
DPC				*ex*	x	02 46 46.3	
DPC				*e*PP	PP	02 50 12.5	-6.6
DPC				*e*S	S	02 57 31.9	-13
DPC				*e*SS	SS	03 04 08.0	-3.0
DPC				AMS	AMS	03 27 20.0	
comp=Z,10μm,20.3s							
TREC	**Trest**	**95.45**	**34**	*e*P	**P**	**02 46 31.8**	**+1.5**
TREC				*e*		02 46 47.7	
TREC				*e*		02 57 48.9	
TREC				*e*SS	SS	03 04 10.7	-2.7
TREC				MLR	MLR		
comp=Z,13μm,18.1s,MS6.4							
TREC	**Trest**	**95.45**	**34**	*e*P	**P**	**02 46 31.8**	**+1.5**
TREC				*ex*	x	02 46 47.7	
TREC				*e*PP	PP	02 50 09.2	-11
TREC				*e*S	S	02 57 48.9	+2.1
TREC				*e*SS	SS	03 04 10.7	-2.7
TREC				AMS	AMS	03 30 20.0	
comp=Z,13μm,18.1s							
KBA	**Koelnbreinsper**	**95.50**	**37**	⇑*i*PcP	PcP	02 46 30.1	-0.7
comp=Z,31nm,1.8s							
MOA	**Molln**	**95.59**	**36**	⇑*i*PcP	PcP	02 46 31.2	0.0
comp=Z,40nm,1.4s							
MORC	**Moravsky Berou**	**96.26**	**33**	*e*P	**P**	**02 46 33.7**	**-0.3**
comp=Z,3.3nm,1.1s,mb4.7							
MORC	**Moravsky Berou**	**96.26**	**33**	*e*P	**P**	**02 46 33.7**	**-0.3**
MORC				pmax	pmax		
comp=Z,3.0nm,1.1s,mb4.6							
SUW	**Suwalki**	**96.32**	**28**	*e*P	**P**	**02 46 36.1**	**+2.0**
SUW				*e*PP	PP	02 50 26.1	-0.8
SUW				LMZ		03 26 45.2	
comp=Z,18μm,24.7s							
SUW	**Suwalki**	**96.32**	**28**	*e*P	**P**	**02 46 36.1**	**+2.0**
SUW				*e*		02 50 26.1	
CONA	**Conrad Observa**	**96.44**	**35**	⇑*i*PcP	PcP	02 46 35.1	+0.1
comp=Z,29nm,1.3s							
OBKA	**Obir**	**96.50**	**37**	⇑*i*PcP	PcP	02 46 35.3	0.0
comp=Z,25nm,1.7s							
OKC	**Ostrava-Krasne**	**96.54**	**33**	*e*P	pP	02 46 44.7	+6.1
OKC				*e*		02 50 26.7	
OKC				*e*SS	SS	03 04 35.0	+6.3
OKC				MLR	MLR		
comp=Z,10μm,19.3s,MS6.3							
OKC	**Ostrava-Krasne**	**96.54**	**33**	*ex*	pP	02 46 44.7	+6.1
OKC				*e*PP	PP	02 50 26.7	-2.1
OKC				*e*SS	SS	03 04 35.0	+6.3
OKC				AMS	AMS	03 31 20.0	
comp=Z,10μm,19.3s							
JAVS	**Javornik**	**96.56**	**38**	*i* P	**P**	**02 46 35.8**	**+0.4**
JAVS				*e*PP	PP	02 50 22.4	-6.6
SOKA	**Soboth**	**96.68**	**37**	⇑*i*PcP	PcP	02 46 35.9	-0.1
comp=Z,27nm,1.2s							
SKDS	**Skadanscina**	**96.72**	**38**	*e*P	**P**	**02 46 36.2**	**0.0**
SKDS				*e*PP	PP	02 50 30.7	+0.4
LJU	**Ljubljana**	**96.75**	**37**	*i* P	**P**	**02 46 38.3**	**+2.0**
LJU				*i* PP	PP	02 50 33.4	+2.9
LJU				*e*SKSac	SKKSac	02 57 41.6	+2.1
LJU				*e*S	S	02 58 00.7	+2.6
LJU				*e*		02 58 20.3	
LJU				*e*SS	SS	03 04 30.8	-1.1
VSL	**Villasalto**	**96.92**	**45**	PFAKE		02 46 50.0	+13
VSL				LR	LR		
comp=Z,9μm,19.0s,MS6.2							
ZST	**Bratislava**	**96.96**	**35**	*e*P	**P**	**02 46 38.5**	**+1.3**
comp=Z,3.9nm,0.8s,mb4.9							
ZST				*e*PP	PP	02 50 30.0	-2.1
ZST				*e*S	S	02 58 03.0	+3.1
ZST				*e*SS	SS	03 04 36.9	+2.1
ZST	**Bratislava**	**96.96**	**35**	*e*P	**P**	**02 46 38.5**	**+1.3**
ZST				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.9							
ZST	**Bratislava**	**96.96**	**35**	*e*P	**P**	**02 46 38.5**	**+1.3**
ZST				*e*PP	PP	02 50 30.0	-2.1
ZST				*e*S	S	02 58 03.0	+3.1
ZST				*e*SS	SS	03 04 36.9	+2.1
SOP	**Sopron**	**96.96**	**35**	⇑*e*P	**P**	**02 46 37.6**	**+0.4**
KLMR	**Klimovskoe**	**96.98**	**16**	*e*P	**P**	**02 46 40.5**	**+3.5**
KLMR						02 50 33.5	
KLMR				S	SKSac	02 57 15.5	+1.4
KLMR				SS	SS	03 04 40.3	+6.1
KLMR				pmax	pmax		
comp=Z,215nm,7.4s							
HNR	**Honiara**	**97.13**	**262**	LR	LR	03 22 07.0	
comp=Z,16μm,19.7s,MS6.5,baz=83,slow=30							
HNR	**Honiara**	**97.13**	**262**	PFAKE		02 46 50.0	+11
HNR				LR	LR		
comp=Z,16μm,20.0s,MS6.5							
OJC	**Ojcow**	**97.15**	**32**	*e*P	pP	02 46 49.5	+8.1
OJC				*e*PP	PP	02 50 45.8	+12
OJC				*e*SKS		02 57 25.0	
OJC				*e*S	S	02 58 07.8	+6.4
OJC				*e*SS	SS	03 04 46.9	+10
OJC				L		03 32 37.6	
comp=Z,13nm,20.8s							
OJC	**Ojcow**	**97.15**	**32**	*e*P	pP	02 46 49.5	+8.1
OJC				*e*SS	SS	03 04 46.9	+10
OJC				MLR	MLR		
comp=Z,13μm,20.8s,MS6.4							
NACGM	**Naroch**	**97.25**	**26**	*e*P	**P**	**02 46 36.0**	**-2.3**
BOJS	**Bojanci**	**97.47**	**38**	*i* P	**P**	**02 46 42.6**	**+3.0**
BOJS				*i* PP	PP	02 50 37.8	+1.8
BOJS				*e*SKSac	SKKSac	02 57 41.5	-3.2
BOJS				*e*S	S	02 58 09.0	+4.7
BOJS				*e*SS	SS	03 04 38.2	-3.8
VYHS	**Vyhne**	**97.71**	**34**	*e*P	**P**	**02 46 41.0**	**+0.4**
comp=Z,24nm,2.3s,mb5.3							
VYHS				*e*		02 46 57.9	
VYHS				*e*PP	PP	02 50 38.2	+0.4
VYHS				*e*S	S	02 58 13.1	+6.8
VYHS				LR	LR		
comp=Z,7μm,30.1s,MS5.9							
VYHS	**Vyhne**	**97.71**	**34**	*e*P	**P**	**02 46 41.0**	**+0.4**
VYHS				*e*		02 46 57.9	
VYHS				*e*		02 50 38.2	
VYHS				pmax	pmax		
comp=Z,25nm,2.3s,mb5.3							
VYHS	**Vyhne**	**97.71**	**34**	*e*P	**P**	**02 46 41.0**	**+0.4**
VYHS				*e*		02 46 57.9	
VYHS				*e*PP	PP	02 50 38.2	+0.4
VYHS				*e*S	S	02 58 13.1	+6.8
TIC	**Toumodi**	**97.89**	**80**	*e*P	**P**	**02 46 41.5**	**-0.6**
comp=Z,57nm,1.3s,mb5.9							
TIC	**Toumodi**	**97.89**	**80**	*e*P	**P**	**02 46 41.5**	**-0.6**
TIC				pmax	pmax		
comp=Z,57nm,1.3s,mb5.9							
MNK	**Minsk**	**97.97**	**25**	*e*P	**P**	**02 46 31.0**	**-11**
MICGM	**Minsk**	**97.99**	**25**	*e*P	**P**	**02 46 31.0**	**-11**
LIC	**Lamto**	**98.02**	**81**	*e*P	**P**	**02 46 42.2**	**-0.5**
comp=Z,60nm,1.0s,mb6.1							
LIC	**Lamto**	**98.02**	**81**	*e*P	**P**	**02 46 41.6**	**-1.1**
comp=Z,47nm,1.0s,mb5.7							
LIC				*e*MLR	MLR		
comp=Z,9μm,21.5s,MS6.0							
LIC	**Lamto**	**98.02**	**81**	*e*P	**P**	**02 46 41.6**	**-1.1**
comp=Z,24nm,1.0s,mb5.7							
LIC				LR	LR		
comp=Z,5μm,21.5s,MS6.0							
DBIC	**Dimbokro**	**98.04**	**80**	P	**P**	**02 46 41.9**	**-0.9**
comp=Z,10nm,0.9s,mb5.3,baz=234,slow=2.8,SNR=4.0							
DBIC				LR	LR	03 26 12.8	
comp=Z,10μm,21.9s,MS6.3,baz=273,slow=32							
DBIC	**Dimbokro**	**98.04**	**80**	*e*P	**P**	**02 46 42.9**	**+0.2**
comp=Z,14nm,0.9s,mb5.5							
DBIC				LR	LR		
comp=Z,11μm,22.0s,MS6.3							
DBIC	**Dimbokro**	**98.04**	**80**	*e*P	**P**	**02 46 42.9**	**+0.2**
DBIC				pmax	pmax		
comp=Z,14nm,0.9s							
DBIC				MLR	MLR		
comp=Z,11μm,22.0s							
AQU	**L'Aquila**	**98.08**	**41**	PFAKE		02 46 50.0	+7.6
AQU				LR	LR		
comp=Z,15μm,21.0s,MS6.5							
KIC	**Kosan Boka**	**98.24**	**81**	*e*P	**P**	**02 46 43.2**	**-0.5**
comp=Z,43nm,1.1s,mb5.9							
BUD	**Budapest**	**98.42**	**34**	*e*P	**P**	**02 46 45.3**	**+1.5**
KECS	**Kecovo**	**98.58**	**33**	*e*P	**P**	**02 46 47.5**	**+3.0**
comp=Z,1.7nm,0.8s,mb4.6							
KECS	**Kecovo**	**98.58**	**33**	*e*P	**P**	**02 46 47.5**	**+3.0**
KECS				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.7							
KECS	**Kecovo**	**98.58**	**33**	PDIF	**P**	**02 46 47.5**	**+3.0**
PSZ	**Piszkesteto**	**98.62**	**34**	*e*P	**P**	**02 46 44.3**	**-0.4**
comp=Z,13nm,1.2s,mb5.3							
PSZ				LR	LR		
comp=Z,11μm,19.0s,MS6.4							
PSZ	**Piszkesteto**	**98.62**	**34**	*e*P	**P**	**02 46 44.3**	**-0.4**
PSZ				pmax	pmax		
comp=Z,13nm,1.2s,mb5.3							
PSZ				MLR	MLR		
comp=Z,11μm,19.0s,MS6.4							
PSZ	**Piszkesteto**	**98.62**	**34**	⇓*e*P	**P**	**02 46 47.4**	**+2.7**
KEST	**Kesra**	**98.72**	**48**	LR	LR	03 33 39.1	
comp=Z,3μm,18.6s,MS5.8,baz=255,slow=37							
KEST	**Kesra**	**98.72**	**48**	*e*P	**P**	**02 46 45.6**	**+0.2**
CRVS	**Cervenica-Dubn**	**98.82**	**32**	*e*P	**P**	**02 46 49.2**	**+3.7**
comp=Z,44nm,2.5s,mb5.5							
CRVS				*e*PP	PP	02 50 45.8	-0.5
CRVS				*e*S	S	02 58 17.0	+1.3
CRVS				*e*SS	SS	03 05 01.4	+0.6
CRVS				LR	LR		
comp=Z,6μm,27.5s,MS5.9							
CRVS	**Cervenica-Dubn**	**98.82**	**32**	*e*P	**P**	**02 46 49.2**	**+3.7**
CRVS				pmax	pmax		
comp=Z,44nm,2.5s,mb5.5							
CRVS	**Cervenica-Dubn**	**98.82**	**32**	PDIF	**P**	**02 46 49.2**	**+3.7**
CRVS				*e*PP	PP	02 50 45.8	-0.5
CRVS				*e*S	S	02 58 17.0	+1.3
CRVS				*e*SS	SS	03 05 01.4	+0.6
KWP	**Kalwaria Pacla**	**98.98**	**31**	PFAKE		02 47 00.0	+14
KWP				LR	LR		
comp=Z,6μm,21.0s,MS6.1							
KOLS	**Kolonicke sedl**	**99.21**	**32**	*e*P	**P**	**02 46 49.8**	**+2.5**
KOLS				*e*PP	PP	02 50 46.3	-2.9
KOLS				*e*S	S	02 58 25.3	+6.3
KOLS				*e*SS	SS	03 05 07.8	+1.5
KOLS				LR	LR		
comp=Z,10μm,17.8s,MS6.3							
KOLS	**Kolonicke sedl**	**99.21**	**32**	*e*P	**P**	**02 46 49.8**	**+2.5**
KOLS				*e*		02 50 46.3	
KOLS				*e*S	S	02 58 25.3	+6.3
KOLS				*e*SS	SS	03 05 07.8	+1.5
KOLS	**Kolonicke sedl**	**99.21**	**32**	PDIF	**P**	**02 46 49.8**	**+2.5**
KOLS				*e*PP	PP	02 50 46.3	-2.9
KOLS				*e*S	S	02 58 25.3	+6.3
KOLS				*e*SS	SS	03 05 07.8	+1.5
MJAR	**Matsushiro Arr**	**99.41**	**313**	LR	LR	03 21 59.0	
comp=Z,8μm,21.9s,MS6.2,baz=65,slow=30							
MAJO	**Matsushiro**	**99.41**	**313**	PFAKE		02 47 00.0	+12
MAJO				LR	LR		
comp=Z,8μm,22.0s,MS6.2							
UZH	**Uzhgorod**	**99.42**	**32**	*e*P	**P**	**02 46 51.0**	**+2.8**
UZH				*e*		02 50 59.8	
UZH				*e*PPP		02 53 06.0	
UZH				*e*		02 57 26.6	
UZH				*e*S	S	02 58 21.4	+0.7
UZH				*e*SS	SS	03 05 13.8	+4.6
JHJ	**Hachijo jima 2**	**99.94**	**309**	LR	LR	03 27 13.0	
comp=Z,12μm,19.4s,MS6.4,baz=87,slow=33							
MDJ	**Mudanjiang**	**100.43**	**323**	P	Pdif	02 46 50.5	-2.1
MDJ				PP	PP	02 50 55.5	-3.1
MDJ				S	Sdif	02 58 17.5	-11
MDJ				SS	SS	03 05 19.1	-4.4
MDJ				pmax	pmax		
comp=Z,3.0nm,0.6s							
MDJ				pmax	pmax		
comp=Z,130nm,4.7s							
MDJ				LR	LR		
comp=N,2μm,25.0s,MS5.8							
MDJ				LR	LR		
comp=E,3μm,25.0s,MS5.8							
MDJ				LR	LR		
comp=Z,5μm,26.2s,MS5.9							
MDJ	**Mudanjiang**	**100.43**	**323**	PFAKE		02 47 00.0	+7.4
MDJ				LR	LR		
comp=Z,4μm,19.0s,MS5.9							
MOS	**Moscow**	**100.64**	**20**	*e*P	Pdif	02 47 05.7	+12
MOS				*e*PPP		02 53 06.9	
MOS				pmax	pmax		
comp=Z,43nm,1.1s							
MOS				MLR	MLR		
comp=Z,18μm,17.0s,MS6.7							
MOS				MLR	MLR		
comp=N,17μm,17.0s							
OBN	**Obninsk**	**100.79**	**21**	PFAKE		02 47 00.0	+5.8
OBN				LR	LR		
comp=Z,27μm,20.0s,MS6.8							
OBN	**Obninsk**	**100.79**	**21**	*i* P	Pdif	02 46 56.1	+1.9
OBN				pmax	pmax		
comp=Z,6.0nm,0.9s							
OBN				MLR	MLR		
comp=Z,24μm,19.0s,MS6.7							
CUC	**Castrocucco**	**100.89**	**42**	PFAKE		02 47 00.0	+5.4
CUC				LR	LR		
comp=Z,11μm,19.0s,MS6.4							
KIEV	**Kiev**	**101.29**	**27**	*e*Pdif	Pdif	02 46 57.0	+0.6
KIEV				LR	LR		
comp=Z,15μm,20.0s,MS6.5							
KIEV	**Kiev**	**101.29**	**27**	*e*P	Pdif	02 46 57.0	+0.6
KIEV				MLR	MLR		
comp=Z,15μm,20.0s,MS6.5							
AKASG	**Malin Array Be**	**101.29**	**27**	P	Pdif	02 46 56.0	-0.4
comp=Z,5.1nm,0.9s,baz=323,slow=4.0,SNR=7.9							
AKASG				PP	PP	02 51 07.9	+3.1
comp=Z,0.5nm,0.3s,baz=306,slow=6.7,SNR=4.6							
AKASG				PKKP	PKKPbc	03 03 14.5	+7.2
comp=Z,0.2nm,0.3s,baz=116,slow=2.7,SNR=4.1							
AKASG	**Malin Array Be**	**101.29**	**27**	P	Pdif	02 46 56.0	-0.4
AKASG						02 51 07.9	
TAM	**Tamanrasset**	**101.54**	**62**	*e*Pdif	Pdif	02 46 58.7	+1.2
comp=Z,6.9nm,1.4s							
TAM				LR	LR		
comp=Z,9μm,21.0s,MS6.3							
TAM	**Tamanrasset**	**101.54**	**62**	*e*P	Pdif	02 46 58.7	+1.2
TAM				pmax	pmax		
comp=Z,7.0nm,1.4s							
TAM				MLR	MLR		
comp=Z,9μm,21.0s,MS6.3							
SOKR	**Solikamsk**	**101.83**	**9**	*e*P	Pdif	02 46 55.7	-3.1
SOKR				S	SKSac	02 57 33.8	-4.4
SOKR				SP	SP	03 00 14.1	+2.6
SOKR				pmax	pmax		
comp=Z,9.0nm,0.6s							
WDD	**Wield Dalam**	**102.28**	**46**	PFAKE		02 47 10.0	+9.2
WDD				LR	LR		
comp=Z,4μm,21.0s,MS5.9							
HIA	**Hailar**	**102.38**	**332**	PFAKE		02 47 10.0	+8.8
HIA				LR	LR		
comp=Z,8μm,19.0s,MS6.2

KIS	**Kishinev**	**103.76**	**30**	*e*P	Pdif	02 47 06.0	-1.4
KIS				*e*		02 51 27.0	
KIS				*e*		02 57 48.0	
KIS				*e*S	Sdif	02 58 48.0	-8.7
KIS				*e*PS	PS	03 00 29.0	-5.3
KIS				*e*PPS		03 01 27.0	
GUMO	**Guam**	**104.04**	**289**	PFAKE		02 47 20.0	+11
GUMO				LR	LR		
comp=Z,9μm,22.0s,MS6.3							
ARU	**Arti**	**105.12**	**9**	PFAKE		02 51 40.0	+12
ARU				LR	LR		
comp=Z,19μm,21.0s,MS6.6							
SBA	**Scott Base**	**106.54**	**193**	PFAKE		02 51 40.0	+10
SBA				LR	LR		
comp=Z,4μm,20.0s,MS6.0							
TLY	**Talaya**	**106.56**	**342**	PFAKE		02 51 40.0	+9.4
TLY				LR	LR		
comp=Z,6μm,21.0s,MS6.1							
INCN	**Inchon**	**106.56**	**319**	PFAKE		02 51 40.0	+9.0
INCN				LR	LR		
comp=Z,4μm,21.0s,MS6.0							
QSPA	**South Pole Qui**	**107.44**	**180**	PFAKE		02 51 40.0	+8.7
QSPA				LR	LR		
comp=Z,9μm,22.0s,MS6.3							
SIM	**Simferopol'**	**107.77**	**29**	P	Pdif	02 47 42.7	+18
SIM				pmax	pmax		
comp=Z,36nm,7.9s							
ZALV	**Zalesovo Beam**	**108.28**	**354**	PP	PP	02 51 56.3	0.0
comp=Z,0.6nm,0.4s,baz=1.9,slow=9.0,SNR=4.0							
DL2	**Dalian**	**108.65**	**323**	*e*PKP	PKiKP	02 51 45.5	+11
DL2				PP	PP	02 52 06.8	+7.0
DL2				SS	SS	03 07 24.5	+8.2
DL2				AMB	AMB		
comp=Z,310nm,4.7s							
DL2				LR	LR		
comp=N,1μm,15.3s,MS5.8							
DL2				LR	LR		
comp=E,2μm,18.6s,MS5.8							
DL2				LR	LR		
comp=Z,2μm,24.1s							
ULN	**Ulaanbaatar**	**108.70**	**338**	PFAKE		02 51 40.0	+5.3
ULN				LR	LR		
comp=Z,12μm,19.0s,MS6.5							
SONM	**Songino Array**	**108.97**	**338**	PKKP	PKKPdf	03 02 58.7	+0.6
comp=Z,1.2nm,0.9s,baz=248,slow=0.8,SNR=5.4							
PMG	**Port Moresby**	**109.26**	**266**	PFAKE		02 51 50.0	+13
PMG				LR	LR		
comp=Z,12μm,21.0s,MS6.5							
BRVK	**Borovoye**	**109.62**	**3**	PFAKE		02 51 50.0	+14
BRVK				LR	LR		
comp=Z,15μm,19.0s,MS6.6							
SNAA	**Sanae**	**110.47**	**161**	PP	PP	02 52 13.3	+0.3
comp=Z,0.5nm,0.9s,baz=266,slow=7.8,SNR=4.5							
BJI	**Beijing**	**110.84**	**327**	PKP	PKiKP	02 51 37.1	-1.9
BJI				PP	PP	02 52 16.3	+0.8
BJI				SS	SS	03 07 42.3	-3.2
BJI				AMB	AMB		
comp=Z,390nm,11.8s							
BJI				LR	LR		
comp=N,6μm,20.8s,MS6.2							
BJI				LR	LR		
comp=E,4μm,20.8s,MS6.2							
BJI				LR	LR		
comp=Z,7μm,22.7s,MS6.2							
BJT	**Baijiatuau**	**110.86**	**327**	PFAKE		02 51 50.0	+11
BJT				LR	LR		
comp=Z,9μm,22.0s,MS6.3							
SOC	**Sochi**	**111.32**	**26**	*e*P	Pdif	02 47 35.4	-5.6
SOC				*i*		02 51 37.0	
SOC				*e*		02 52 21.1	
SOC				*e*		02 58 43.4	
SOC				*e*PS	PS	03 01 51.5	+0.6
SOC				*e*		03 02 57.0	
BRTR	**Keskin Array B**	**111.45**	**33**	PKiKP	PKiKP	02 51 40.7	+0.6
comp=Z,0.7nm,0.8s,baz=346,slow=1.7,SNR=2.5							
BRTR	**Keskin Array B**	**111.45**	**33**	PKIKP	PKiKP	02 51 40.7	+0.6
KURK	**Kurchatov**	**111.97**	**357**	PFAKE		02 51 50.0	+9.2
KURK				LR	LR		
comp=Z,21μm,22.0s,MS6.7							
KIV	**Kislovodsk**	**112.23**	**24**	PFAKE		02 51 50.0	+8.5
KIV				LR	LR		
comp=Z,10μm,19.0s,MS6.4							
KIV	**Kislovodsk**	**112.23**	**24**	*i* PKIKP	PKiKP	02 51 42.7	+1.2
KIV				*e*		02 52 27.3	
KIV				*e*PS	PS	03 02 00.1	+0.9
KIV				*e*SS	SS	03 08 02.5	-1.1
KIV				*e*SSS		03 12 12.7	
KIV				pmax	pmax		
comp=Z,8.0nm,0.9s							
ABKAR	**Akbulak array**	**112.27**	**10**	*e*PKP	PKiKP	02 51 40.9	-0.5
CAN	**Canberra**	**112.42**	**238**	PFAKE		02 51 50.0	+8.0
CAN				LR	LR		
comp=Z,6μm,20.0s,MS6.2							
HHC	**Hu-ho-hao-te**	**112.52**	**330**	*e*PKP	PKiKP	02 51 41.0	-1.1
HHC				PP	PP	02 52 25.9	-1.5
HHC				PKS		02 55 16.8	
HHC				SKS	SKSdf	02 58 48.6	-5.9
HHC				AMB	AMB		
comp=Z,650nm,8.2s							
HHC				LR	LR		
comp=N,3μm,22.0s,MS6.2							
HHC				LR	LR		
comp=E,5μm,18.0s,MS6.2							
HHC				LR	LR		
comp=Z,6μm,19.3s,MS6.2							
CTAO	**Charters Tower**	**112.56**	**255**	PFAKE		02 51 50.0	+7.3
CTAO				LR	LR		
comp=Z,11μm,22.0s,MS6.4							
ONI	**Oni**	**113.68**	**25**	P	PP	02 52 36.2	+0.7
SSE	**Sheshan**	**114.09**	**317**	PKP	PKiKP	02 51 46.9	+1.5
SSE				PP	PP	02 52 44.5	+5.4
SSE				SS	SS	03 08 25.6	-3.8
SSE				AMB	AMB		
comp=Z,850nm,5.1s							
SSE				LR	LR		
comp=N,4μm,19.7s,MS6.1							
SSE				LR	LR		
comp=E,3μm,19.9s,MS6.1							
SSE				LR	LR		
comp=Z,4μm,20.2s,MS6.0							
CSS	**Prodhromos**	**114.76**	**37**	PFAKE		02 52 00.0	+13
CSS				LR	LR		
comp=Z,4μm,20.0s,MS6.0							
TBLG	**Delisi**	**114.92**	**24**	P	PP	02 52 42.7	-1.6
MALT	**Malatya**	**114.94**	**31**	PFAKE		02 52 00.0	+13
MALT				LR	LR		
comp=Z,5μm,22.0s,MS6.1							
NJ2	**Nanjing**	**114.95**	**319**	*e*PKP	PKiKP	02 51 42.5	-4.5
NJ2				PP	PP	02 52 45.5	+0.4
NJ2				AMB	AMB		
comp=Z,960nm,4.5s							
NJ2				LR	LR		
comp=N,3μm,26.5s,MS6.0							
NJ2				LR	LR		
comp=E,4μm,23.4s,MS6.0							
NJ2				LR	LR		
comp=Z,5μm,28.5s							
MTA	**Mtatsminda**	**114.97**	**24**	P	PP	02 52 43.3	-1.4
NVL	**N'lazarevskaya**	**115.30**	**161**	*e*PKIKP	PKPdf	02 51 52.6	+6.2
NVL				*e**PP		02 52 02.7	
NVL				*e*		02 55 19.5	
NVL				pmax	pmax		
comp=Z,10.0nm,0.9s							
DGRG	**David-gareji**	**115.40**	**24**	P	PP	02 52 34.0	-14
MK31	**Makanchi Array**	**115.61**	**354**	*e*PKP	PKPdf	02 51 47.6	-0.2
MK31	**Makanchi Array**	**115.61**	**354**	*e*PKIKP	PKPdf	02 51 47.7	-0.2
MKAR	**Makanchi Array**	**115.61**	**354**	PKP	PKPdf	02 51 46.5	-1.4
comp=Z,2.3nm,0.9s,baz=36,slow=2.3,SNR=4.6							
MKAR				PP	PP	02 52 52.1	+3.3
comp=Z,4.5nm,1.0s,baz=7.1,slow=4.9,SNR=6.2							
MKAR				PKKPbc	PKKPbc	03 02 24.0	+2.1
comp=Z,1.2nm,0.8s,baz=177,slow=4.5,SNR=5.0							
MKAR	**Makanchi Array**	**115.61**	**354**	PKP	PKPdf	02 51 46.5	-1.4
MKAR				PP	PP	02 52 52.1	+3.3
MKAR				PKKPbc	PKKPbc	03 02 24.0	+2.1
MKAR	**Makanchi Array**	**115.61**	**354**	PKIKP	PKPdf	02 51 46.5	-1.4
MKAR						02 52 52.1	
MKAR						03 02 24.0	
GNI	**Garni**	**116.26**	**25**	PFAKE		02 52 00.0	+11
GNI				LR	LR		
comp=Z,8μm,21.0s,MS6.3							
TATO	**Taipei**	**117.75**	**311**	PFAKE		02 52 00.0	+7.4
TATO				LR	LR		
comp=Z,7μm,20.0s,MS6.3							
WMQ	**Urumqi**	**117.78**	**349**	*e*PKP	PKPdf	02 51 52.0	-0.2
WMQ				PP	PP	02 53 09.0	+4.9
WMQ				SKS	SKSdf	02 58 59.0	-5.5
WMQ				SKKS	SKKSac	02 59 59.0	-7.3
WMQ				SS	SS	03 09 16.0	0.0
WMQ				AMB	AMB		
comp=Z,410nm,10.0s							
WMQ				LR	LR		
comp=N,16μm,25.0s,MS6.6							
WMQ				LR	LR		
comp=E,10μm,25.0s,MS6.6							
WMQ				LR	LR		
comp=Z,16μm,25.0s,MS6.5							
YHNB	**Yeheng**	**118.02**	**311**	PFAKE		02 52 00.0	+6.9
YHNB				LR	LR		
comp=Z,7μm,20.0s,MS6.2							
STKA	**Stephens Creek**	**118.28**	**243**	PKP	PKPdf	02 51 51.6	-1.7
comp=Z,3.6nm,1.0s,baz=112,slow=0.9,SNR=3.5							
GTA	**Gaotai**	**118.64**	**338**	*e*PKP	PKPdf	02 51 55.3	+1.4
GTA				PP	PP	02 53 08.8	-1.5
GTA				SKKS	SKKSac	03 00 05.8	-6.3
GTA				SS	SS	03 09 26.3	-1.2
GTA				AMB	AMB		
comp=Z,650nm,9.5s							
GTA				LR	LR		
comp=N,7μm,19.9s,MS6.4							
GTA				LR	LR		
comp=E,5μm,17.6s,MS6.4							
GTA				LR	LR		
comp=Z,9μm,16.6s,MS6.5							
TKM2	**Tokmak 2**	**119.85**	**359**	*e*PKPdf	PKPdf	02 51 57.9	+1.7
TKM2				LR	LR		
comp=Z,47μm,20.0s,MS7.1							
TKM2	**Tokmak 2**	**119.85**	**359**	*e*PKIKP	PKPdf	02 51 57.9	+1.7
TKM2				MLR	MLR		
comp=Z,47μm,20.0s,MS7.1							
LZH	**Lanzhou**	**119.91**	**333**	*e*PKP	PKPdf	02 51 54.0	-2.5
LZH				sPKP		02 51 58.6	
LZH				PP	PP	02 53 19.8	+0.7
LZH				SKS	SKSdf	02 59 03.9	-5.0
LZH				SKKS	SKKSac	03 00 11.3	-9.3
LZH				SS	SS	03 09 39.5	-4.6
LZH				AMB	AMB		
comp=Z,940nm,5.5s							
LZH				LR	LR		
comp=N,10μm,15.6s,MS6.6							
LZH				LR	LR		
comp=E,2μm,15.2s,MS6.6							
LZH				LR	LR		
comp=Z,10μm,18.8s,MS6.5							
EKS2	**Erkin-Say**	**120.12**	**1**	*e*PKPdf	PKPdf	02 51 59.6	+2.9
EKS2				LR	LR		
comp=Z,43μm,20.0s,MS7.1							
AAK	**Ala-Archa**	**120.15**	**0**	PFAKE		02 52 10.0	+13
AAK				LR	LR		
comp=Z,36μm,21.0s,MS7.0							
UCH	**Uchtor**	**120.56**	**0**	*e*PKPdf	PKPdf	02 51 59.6	+2.0
UCH				LR	LR		
comp=Z,42μm,21.0s,MS7.0							
ENH	**Enshi**	**121.78**	**324**	PFAKE		02 52 10.0	+10
ENH				LR	LR		
comp=Z,9μm,19.0s,MS6.5							
KSH	**Kashi**	**123.25**	**359**	*e*PKP	PKPdf	02 52 02.0	-0.8
KSH				*e*PKS		02 55 37.4	
KSH				*e*SKS	SKSdf	02 59 12.8	-2.3
KSH				AMB	AMB		
comp=Z,480nm,5.4s							
KSH				LR	LR		
comp=N,11μm,19.4s,MS6.6							
KSH				LR	LR		
comp=E,5μm,16.6s,MS6.6							
KSH				LR	LR		
comp=Z,36μm,29.0s							
WB2	**Warramunga Arr**	**123.57**	**257**	*e*PKPdf	PKPdf	02 52 02.4	-1.5
WRA	**Warramunga Arr**	**123.58**	**257**	PKP	PKPdf	02 52 01.2	-2.7
comp=Z,4.4nm,0.8s,baz=72,slow=1.7,SNR=13							
WRA	**Warramunga Arr**	**123.58**	**257**	PKP	PKPdf	02 52 01.2	-2.7
WRA	**Warramunga Arr**	**123.58**	**257**	PKIKP	PKPdf	02 52 01.2	-2.7
IKRD	**Kardeh**	**123.92**	**15**	*e*P	PKPdf	02 52 06.5	+2.3
DAV	**Davao City (W)**	**123.98**	**291**	PFAKE		02 52 10.0	+5.1
DAV				LR	LR		
comp=Z,6μm,22.0s,MS6.2							
SYO	**Syowa Base**	**124.12**	**166**	‖ *e*P	PP	02 53 21.8	-26
ISFB	**Sefidab**	**124.22**	**22**	*e*P	PKPdf	02 52 06.6	+1.8
CD2	**Chengdu**	**124.25**	**330**	*e*PKP	PKPdf	02 52 08.3	+3.3
CD2				sPKP		02 52 16.0	
CD2				PP	PP	02 53 52.6	+3.8
CD2				PKS		02 55 43.8	
CD2				SKS	SKSdf	02 59 15.1	-2.2
CD2				SKKS	SKKSac	03 00 44.1	-4.9
CD2				SS	SS	03 10 39.3	-0.5
CD2				LR	LR		
comp=N,6μm,23.0s							
CD2				LR	LR		
comp=E,10μm,17.9s							
CD2				LR	LR		
comp=Z,9μm,21.6s,MS6.4							
IPAY	**Payeh**	**124.35**	**15**	*e*P	PKPdf	02 52 05.3	+0.3
ASAR	**Alice Springs**	**124.42**	**253**	PKP	PKPdf	02 52 03.2	-2.1
comp=Z,3.6nm,0.9s,baz=91,slow=2.0,SNR=17							
ASAR				SKKPbc		03 05 39.8	
comp=Z,1.5nm,1.0s,baz=256,slow=3.7,SNR=4.1							
ASAR	**Alice Springs**	**124.42**	**253**	PKIKP	PKPdf	02 52 03.3	-2.1
IMYA	**Miami**	**124.72**	**14**	*e*Pn	PKPdf	02 52 06.0	+0.3
CASY	**Casey**	**125.87**	**197**	PFAKE		02 52 20.0	+13
CASY				LR	LR		
comp=Z,5μm,19.0s,MS6.2							
TSUM	**Tsumeb**	**126.12**	**101**	*e*PKPdf	PKPdf	02 52 10.5	+1.7
TSUM				LR	LR		
comp=Z,4μm,20.0s,MS6.1							
GYA	**Guiyang**	**126.29**	**324**	Pdif	Pdif	02 48 46.9	-0.6
GYA				PKP	PKPdf	02 52 07.6	-1.4
GYA				PKS		02 55 42.1	
GYA				SKKS	SKKSac	03 00 55.8	-6.3
GYA				PP	SP	03 04 04.8	+0.2
GYA				SS	SS	03 11 03.3	-2.5
GYA				AMB	AMB		
comp=Z,4μm,9.7s							
GYA				LR	LR		
comp=N,6μm,24.4s,MS6.3							
GYA				LR	LR		
comp=E,4μm,25.8s,MS6.3							
GYA				LR	LR		
comp=Z,7μm,26.0s,MS6.2							
IKOO	**Kooshah**	**128.16**	**17**	*e*P	PKPdf	02 52 10.9	-1.5
IPAR	**Pars**	**128.55**	**24**	*e*P	PKPdf	02 52 11.6	-1.6
ISRV	**Sarvestan**	**128.99**	**24**	*e*P	PKPdf	02 52 12.7	-1.4
NIL	**Nilore**	**129.10**	**1**	PFAKE		02 52 20.0	+5.8
NIL				LR	LR		
comp=Z,2μm,19.0s,MS5.9							
MAW	**Mawson**	**129.38**	**174**	PKP	PKPdf	02 52 13.3	-0.2
comp=Z,3.9nm,0.8s,baz=304,slow=7.1,SNR=4.2							
MAW	**Mawson**	**129.38**	**174**	PKP	PKPdf	02 52 13.3	-0.2
MAW				*e*PKPdf	PKPdf	02 52 16.7	+3.2
MAW				LR	LR		
comp=Z,12μm,19.0s,MS6.6							
MAW	**Mawson**	**129.38**	**174**	PKIKP	PKPdf	02 52 13.3	-0.2
MAW				MLR	MLR		
comp=Z,12μm,19.0s							
KMI	**Kunming**	**129.49**	**326**	PKP	PKPdf	02 52 10.8	-4.3
KMI				PP	PP	02 54 23.9	+0.3
KMI				PKS		02 55 47.0	
KMI				SKS	SKSdf	02 59 20.3	-6.9
KMI				SKKS	SKKSac	03 01 14.6	-7.6
KMI				SS	SS	03 11 42.3	-3.2
KMI				LR	LR		
comp=N,3μm,24.5s							
KMI				LR	LR		
comp=E,3μm,16.8s							
KMI				LR	LR		
comp=Z,7μm,21.4s,MS6.3							
MIR	**Mirnyy**	**129.52**	**189**	*e*PKIKP	PKPdf	02 52 20.0	+6.2
MIR				*e*		02 54 26.0	
MIR				pmax	pmax		
comp=Z,45nm,2.0s							
SUR	**Sutherland**	**129.57**	**118**	PFAKE		02 52 30.0	+15
SUR				LR	LR		
comp=Z,8μm,19.0s,MS6.4							
QIZ	**Qiongzhong**	**129.77**	**315**	PKP	PKPdf	02 52 13.8	-2.0
QIZ				PP	PP	02 54 22.9	-3.0
QIZ				PKS		02 55 50.3	
QIZ				SS	SS	03 11 46.9	-2.8
QIZ				AMB	AMB		
comp=Z,1μm,4.8s							
QIZ				LR	LR		
comp=N,4μm,19.6s,MS6.1							
QIZ				LR	LR		
comp=E,2μm,19.6s,MS6.1							
QIZ				LR	LR		
comp=Z,5μm,27.8s							
QIZ	**Qiongzhong**	**129.77**	**315**	PFAKE		02 52 30.0	+14
QIZ				LR	LR		
comp=Z,6μm,19.0s,MS6.3							
LSA	**Lhasa**	**130.40**	**341**	PFAKE		02 52 30.0	+13
LSA				LR	LR		
comp=Z,11μm,20.0s,MS6.5							
DDI	**Dehra Dun**	**132.31**	**356**	*e*PKP	PKPdf	02 52 20.5	+0.1
DDI				*ex*	x	02 54 37.0	
BOSA	**Boshof**	**133.61**	**113**	PKP	PKPdf	02 52 21.8	-1.0
comp=Z,2.4nm,0.8s,baz=257,slow=2.0,SNR=2.6							
BOSA	**Boshof**	**133.61**	**113**	PKP	PKPdf	02 52 21.8	-1.0
BOSA				LR	LR		
comp=Z,6μm,20.0s,MS6.3							
BOSA	**Boshof**	**133.61**	**113**	PKIKP	PKPdf	02 52 21.8	-0.9
BOSA				MLR	MLR		
comp=Z,6μm,20.0s,MS6.3							
LBTB	**Lobatse**	**133.98**	**108**	*e*PKPdf	PKPdf	02 52 23.2	-0.3
LBTB				LR	LR		
comp=Z,5μm,20.0s,MS6.3							
LBTB	**Lobatse**	**133.98**	**108**	*e*PKIKP	PKPdf	02 52 23.2	-0.3
LBTB				MLR	MLR		
comp=Z,5μm,20.0s,MS6.3							
LSZ	**Lusaka**	**135.56**	**94**	*e*PKPdf	PKPdf	02 52 28.9	+2.2
LSZ				LR	LR		
comp=Z,4μm,19.0s,MS6.2							
LSZ	**Lusaka**	**135.56**	**94**	*e*PKIKP	PKPdf	02 52 28.9	+2.2
LSZ				MLR	MLR		
comp=Z,4μm,19.0s,MS6.2							
AJM	**Ajmer**	**136.26**	**360**	*e*PKP	PKPdf	02 52 25.5	-2.3
CHTO	**Chiang Mai**	**136.65**	**325**	PFAKE		02 52 40.0	+11
CHTO				LR	LR		
comp=Z,4μm,20.0s,MS6.2							
CM31	**Chiang Mai Arr**	**136.94**	**325**	PFAKE		02 52 40.0	+11
CM31				LR	LR		
comp=Z,4μm,20.0s,MS6.1							
CMAR	**Chiang Mai Arr**	**136.94**	**325**	PKP	PKPdf	02 52 30.7	+1.4
comp=Z,2.8nm,0.8s,baz=2.7,slow=6.0,SNR=6.3							
CMAR	**Chiang Mai Arr**	**136.94**	**325**	PKIKP	PKPdf	02 52 30.7	+1.4
MBWA	**Marble Bar**	**137.31**	**258**	PFAKE		02 52 40.0	+10
MBWA				LR	LR		
comp=Z,12μm,19.0s,MS6.7							
NWAO	**Narrogin (SRO)**	**138.74**	**240**	PFAKE		02 52 40.0	+7.8
NWAO				LR	LR		
comp=Z,10μm,22.0s,MS6.5							
BHJ	**Bhuj**	**139.19**	**7**	*e*PKP	PKPdf	02 52 31.9	-1.5
BHPL	**Bhopal**	**139.39**	**356**	*e*PKP	PKPdf	02 52 32.8	-0.9
KMBO	**Kilima Mbogo**	**139.89**	**70**	PKP	PKPdf	02 52 36.8	+1.9
comp=Z,0.6nm,0.5s,baz=180,slow=24,SNR=6.9							
KMBO	**Kilima Mbogo**	**139.89**	**70**	*e*PKPdf	PKPdf	02 52 36.0	+1.2
KMBO				LR	LR		
comp=Z,9μm,20.0s,MS6.5							
KMBO	**Kilima Mbogo**	**139.89**	**70**	*c i*PKIKP	PKPdf	02 52 40.4	+5.6
KMBO				pmax	pmax		
comp=Z,1.0nm,0.5s							
KSM	**Kuching**	**140.03**	**295**	PFAKE		02 52 40.0	+4.9
KSM				LR	LR		
comp=Z,3μm,22.0s,MS6.0							
VIS	**Vishakhapatnam**	**143.93**	**346**	*e*PKP	PKPdf	02 52 39.3	-2.6
VIS				AMb	AMB	02 52 45.2	
comp=Z,31nm,1.5s							
POO	**Poona**	**144.17**	**1**	*e*PKP	PKPdf	02 52 40.8	-1.6
HYB	**Hyderabad**	**145.06**	**353**	*i* PKP	PKPdf	02 52 42.0	-1.9
HYB				*ep*PKP	pPKPdf	02 52 45.5	-1.8
KAD	**Karad**	**145.39**	**1**	*e*PKP	PKPbc	02 52 42.5	-1.8
KULM	**Kulim**	**145.67**	**309**	*e*PKPbc	PKPbc	02 52 43.6	-1.7
KULM				LR	LR		
comp=Z,6μm,20.0s,MS6.3							
IPM	**Ipoh**	**145.92**	**307**	*e*PKPbc	PKPbc	02 52 44.5	-1.6
PAF	**Port-aux-Franc**	**148.06**	**175**	PFAKE		02 53 00.0	+12
PAF				LR	LR		
comp=Z,6μm,20.0s,MS6.4							
TRD	**Trivandrum**	**154.03**	**355**	*e*PKP	PKPdf	02 52 54.7	-3.5
MSEY	**Mahe Island**	**157.38**	**58**	PFAKE		02 53 10.0	+7.3
MSEY				LR	LR		
comp=Z,5μm,19.0s,MS6.3							
COCO	**West Island**	**157.82**	**281**	PFAKE		02 53 10.0	+6.8
COCO				LR	LR		
comp=Z,5μm,21.0s,MS6.3							
RER	**Riviere de l'E**	**161.90**	**105**	PFAKE		02 53 20.0	+12
RER				LR	LR		
comp=Z,8μm,20.0s							
DGAR	**Diego Garcia**	**169.75**	**12**	PFAKE		02 53 20.0	+5.8
DGAR				LR	LR		
comp=Z,10μm,21.0s							

WEL 24 02:39:13.8±0.2, 45°.03S×170°.38E, h5km, ML3.8/17, 1D, Error ellipse: s-maj=1.4km s-min=1.3km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODZ	**Otahua Downs**	**0.19**	**96**	PG	Pg	02 39 18.0	+0.6
ODZ				SG	Sg	02 39 20.1	+0.1
ODZ				SG	Sg	02 39 20.1	+0.2
LBZ	**Lake Benmore**	**0.65**	**348**	‖ P*	Pb	02 39 27.0	-0.6
LBZ				SG	Sg	02 39 34.7	0.0
LBZ				SG	Sg	02 39 35.3	+0.5
EAZ	**Earnscleugh**	**0.79**	**254**	P*	Pb	02 39 29.1	-0.8
EAZ				S*	Sb	02 39 38.6	-2.3
WKZ	**Wanaka**	**0.99**	**281**	P*	Pb	02 39 33.2	-0.2
TUZ	**Tuapeka**	**1.07**	**209**	P*	Pb	02 39 33.6	-1.2
TUZ				S*	Sb	02 39 47.3	-1.7
RPZ	**Rata Peaks**	**1.40**	**20**	PN	Pn	02 39 38.9	-1.0
JCZ	**Jackson Bay**	**1.50**	**309**	PN	Pn	02 39 41.8	+0.5
FOZ	**Fox Glacier**	**1.54**	**341**	PN	Pn	02 39 43.3	+1.4
MLZ	**Mavora Lakes**	**1.59**	**258**	PN	Pn	02 39 43.2	+0.5
SYZ	**Scrubby Hill**	**1.75**	**209**	PN	Pn	02 39 44.1	-0.6
MSZ	**Milford Sound**	**1.78**	**281**	PN	Pn	02 39 45.4	+0.3
WHZ	**Wether Hill Ro**	**1.92**	**242**	PN	Pn	02 39 48.8	+1.7
WVZ	**Waitaha Valley**	**1.96**	**8**	PN	Pn	02 39 47.5	-0.2
DCZ	**Deep Cove**	**2.32**	**258**	PN	Pn	02 39 52.7	+0.1
LTZ	**Lake Taylor**	**2.62**	**32**	PN	Pn	02 39 55.9	-0.9
DSZ	**Denniston Nort**	**3.44**	**18**	PN	Pn	02 40 07.3	-0.7
THZ	**Tophouse**	**3.74**	**30**	PN	Pn	02 40 09.7	-2.4

DJA 24 02:49:27, 7°.85S×106°.16E, h26km, MLv4.2/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.93**	**25**	P	Pn	02 49 43.9	-0.5
SKJI				S	Sb	02 49 57.3	+0.9
CGJI	**Cibinong**	**1.31**	**339**	P	Pn	02 49 50.0	+0.3
CGJI				S	Sn	02 50 08.0	+1.6
DBJI	**Dramaga**	**1.41**	**24**	P	Pn	02 49 50.7	-0.4
DBJI				S	Sn	02 50 08.2	-0.7
CBJI	**Citeko**	**1.58**	**26**	P	Pn	02 49 50.5	-2.8
CBJI				S	Sn	02 50 07.5	-5.4
CISI	**Cisompet, Garu**	**1.67**	**80**	P	Pn	02 49 54.7	+0.2
CISI				S	Sn	02 50 14.2	-0.9

BSWZ	Blackbirch Sta	0.31	354	⇑P*	Pb	03 00 04.5	-0.6
BSWZ				S*	Sb	03 00 09.4	-0.4
CMWZ	Cape Campbell	0.35	38	⇑P*	Pb	03 00 06.2	+0.4
CMWZ				S*	Sb	03 00 13.0	+2.1
KHZ	Kahutara	0.48	216	⇑P*	Pb	03 00 08.0	0.0
KHZ				S*	Sb	03 00 15.5	+0.8
TUWZ	Tuamarina	0.59	2	P*	Pb	03 00 09.6	-0.2
THZ	Tophouse	0.80	289	⇓P*	Pb	03 00 13.1	-0.3
TCW	Tory Channel	0.85	18	P*	Pb	03 00 14.1	-0.2
NNZ	Nelson	0.90	333	P*	Pb	03 00 14.8	-0.4
SNZO	South Karori	0.92	40	P*	Pb	03 00 15.7	+0.2
SNZO				S*	Sb	03 00 29.0	+1.7
BHW	Baring Head	0.94	49	P*	Pb	03 00 15.8	+0.1
WEL	Wellington	0.97	41	P*	Pb	03 00 16.6	+0.3
PLWZ	Palliser	1.09	66	P*	Pb	03 00 17.6	-0.8
MSWZ	Moikau Station	1.17	59	P*	Pb	03 00 18.6	-1.0
DUWZ	D'Urville Isla	1.22	360	P*	Pb	03 00 20.1	-0.5
CAW	Cannon Point	1.26	44	P*	Pb	03 00 20.2	-0.9
KIW	Kapiti Island	1.38	33	P*	Pb	03 00 22.7	-0.6
LTZ	Lake Taylor	1.44	238	PN	Pn	03 00 23.0	0.0
TRWZ	Traveller	1.46	65	PN	Pn	03 00 22.1	-1.2
OGWZ	Otaki Gorge	1.53	38	PN	Pn	03 00 24.0	-0.2
QRZ	Quartz Range	1.59	318	PN	Pn	03 00 26.4	+1.3
DSZ	Denniston Nort	1.61	279	PN	Pn	03 00 27.0	+1.7
HOWZ	Holdsworth Sta	1.64	47	PN	Pn	03 00 25.1	-0.7
TMWZ	Te Maipa	1.74	59	PN	Pn	03 00 25.8	-1.3
MRZ	Mangatainoka R	1.85	43	PN	Pn	03 00 27.9	-0.7
WAZ	Wanganui	2.41	20	PN	Pn	03 00 40.4	+4.1
WVZ	Waitaha Valley	2.58	245	PN	Pn	03 00 39.1	+0.4
RPZ	Rata Peaks	2.70	230	PN	Pn	03 00 39.5	-0.9
HIZ	Hauiti	3.58	12	PN	Pn	03 00 55.3	+2.9
ODZ	Otahua Downs	3.85	217	PN	Pn	03 00 54.4	-1.7

*IDC **24** 03:04:14.5±0.9, 9.°89N×126.°02E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.7/21, mbtmp3.6/7, MS3.4/1, Ms1 3.4/1, ms1mx2.5/28, Error ellipse: s-maj=69.5km s-min=17.9km az=72.0*
*ISCJB **24** 03:04:21.3±1.4, 10.°04N±0.°08×126.°3E±0.°1, h61km±14km, mb3.6/7, Error ellipse: s-maj=19.7km s-min=11.0km az=158.5*
*MAN **24** 03:04:22, 10.°07N×126.°17E, h24km, mb4.4, ML3.3, MS3.1*
ISC 24 03:04:22.3±1.5, 10.°02N±0.°08×126.°3E±0.°1, h57km±15km, n17, σ1°02/19, mb3.6/7, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.23	212	eP	Pn	03 04 43.0	-0.2
MSLP	Maasin	1.40	275	eP	Pn	03 04 44.5	-1.0
MSLP				eS	Sn	03 05 01.6	-1.3
PLP	Palo	1.71	312	⇓eP	Pn	03 04 48.8	-0.9
LLP	Lapu-Lapu	2.29	278	eP	Pn	03 04 58.0	+0.4
LLP				eS	Sn	03 05 25.7	+1.0
TBP	Tagbilaran	2.40	262	eP	Pn	03 04 59.1	0.0
TBP				eS	Sn	03 05 22.6	-4.8
BUKP	Musuan	2.44	209	eP	Pn	03 05 01.3	+1.6
CNP	Cataman	2.93	328	eP	Pn	03 05 06.7	+0.2
DAV	Davao City (W)	3.01	193	LR	LR	03 06 19.7	
	comp=Z,625nm,20.3s,baz=34,slow=44						
PAGZ	Pagadian	3.58	233	eP	Pn	03 05 16.1	+0.8
GUIM	Jordan	3.67	280	eP	Pn	03 05 17.1	+0.5
WRA	Warramunga Arr	30.82	165	P	P	03 10 31.0	-1.8
	0.3nm,0.4s,mb3.4,baz=342,slow=8.9,SNR=3.0						
ASAR	Alice Springs	34.30	168	P	P	03 11 00.9	-2.4
	0.2nm,0.3s,mb3.6,baz=352,slow=6.7,SNR=5.7						
SONM	Songino Array	41.25	340	P	P	03 12 01.8	+0.1
	0.3nm,0.4s,mb3.3,baz=140,slow=7.0,SNR=2.4						
STKA	Stephens Creek	44.17	161	P	P	03 12 26.6	+1.1
	0.4nm,0.3s,mb3.6,baz=328,slow=9.5,SNR=2.5						
MKAR	Makanchi Array	52.23	323	P	P	03 13 27.4	-0.1
	1.0nm,0.7s,mb3.9,baz=136,slow=8.9,SNR=7.0						
ILAR	Eielson Array	79.66	26	P	P	03 16 24.8	+1.4
	0.3nm,0.7s,mb3.4,baz=242,slow=5.0,SNR=5.9						
FINES	FINESS Array B	86.11	332	P	P	03 16 56.6	-0.2
	2.5nm,1.0s,mb4.4,baz=64,slow=4.4,SNR=8.3						

*NDI **24** 03:14:45.0±1.5, 33.°93N×74.°60E, h10km, ML3.1*
ISC 24 03:14:46.8±3.9, 33.°64N±0.°08×74.°4E±0.°2, h15km±20km, n6, σ0°34/10, 2C-2D, Southwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDNR	Sundarnagar	3.05	134	ePB	Pb	03 15 40.5	-0.2
SDNR				eS	Sn	03 16 10.5	-0.2
SMLA	Simla	3.43	136	i P	Pn	03 15 40.2	+0.4
SMLA				i x	Sn	03 16 24.4	+4.2
SMLA				⇓		03 16 28.3	
	comp=N,2μm,0.3s						
SMLA				⇓		03 16 28.4	
	comp=E,4μm,0.3s						
AYAN	Aya Nagar	5.65	155	eS	Sn	03 17 14.8	-0.2
KHET	Khetri	5.68	167	ex	Pn	03 16 05.7	-5.0
KHET				eS	Sn	03 17 15.7	0.0
KHET				AML	AML	03 17 52.5	
	comp=E,23nm,0.2s						
KHET				AML	AML	03 17 53.1	
	comp=N,23nm,0.2s						
SONA	Sohna	5.85	156	eS	Sn	03 17 19.8	0.0
SONA				AML	AML	03 17 22.4	
	comp=E,45nm,0.3s						
SONA				AML	AML	03 17 23.0	
	comp=N,17nm,0.2s						
KK31	Karatay Array	9.93	343	⇑Pn	Pn	03 17 15.4	+6.5
	comp=N,0.2nm,0.2s,baz=154,slow=12,SNR=8.5						
KK31				⇑Sn	Sn	03 18 59.9	-0.1
	comp=N,1.2nm,0.5s,baz=150,slow=22,SNR=3.4						

*ISCJB **24** 03:21:53.4±1.0, 16.°2S±0.°2×176.°0W±0.°1, h366km±11km, mb3.9/12, Error ellipse: s-maj=32.9km s-min=13.4km az=147.1*
*IDC **24** 03:21:53.6±1.4, 16.°17S×176.°01W, h358km±15km, mb3.5/8, mb1 3.8/9, mb1mx3.6/19, mbtmp3.5/9, Error ellipse: s-maj=32.9km s-min=12.2km az=141.0*
*NEIC **24** 03:21:54.8±1.0, 16.°19S×176.°00W, h372km±10km, mb4.1/3, Error ellipse: s-maj=23.2km s-min=10.0km az=147.0*
ISC 24 03:21:54.0±1.0, 16.°2S±0.°2×176.°0W±0.°1, h359km±12km, n20, σ0°79/14, mb3.9/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.67	62	P	Pn	03 23 11.7	+1.2
	8.5nm,0.3s,baz=232,slow=19,SNR=4.5						
AFI				S	S	03 24 11.4	-0.9
	5.3nm,0.3s,baz=45,slow=20,SNR=2.4						
URZ	Urewera	22.84	194	P	P	03 26 26.1	-0.9
	3.8nm,0.4s,mb4.0,baz=360,slow=18,SNR=3.3						
PMG	Port Moresby	36.49	276	eP	P	03 28 26.6	-0.1
	15nm,1.0s,mb4.2						
COEN	Coen	39.43	268	eP	P	03 28 51.6	+0.7
	18nm,0.5s,mb4.6						
STKA	Stephens Creek	41.48	240	P	P	03 29 07.9	+0.6
	1.0nm,0.4s,mb3.4,baz=69,slow=7.0,SNR=3.0						
WRA	Warramunga Arr	47.22	258	P	P	03 29 51.9	-0.6
	2.6nm,0.5s,mb3.7,baz=90,slow=7.0,SNR=21						
WRA				PcP	PcP	03 31 17.0	-0.5
	0.8nm,0.7s,baz=94,slow=3.5,SNR=3.9						
ASAR	Alice Springs	47.48	253	P	P	03 29 54.5	+0.1
	4.7nm,0.4s,mb4.1,baz=89,slow=7.7,SNR=83						
ASAR				PcP	PcP	03 31 18.1	-0.3
	0.8nm,0.7s,baz=91,slow=4.6,SNR=4.6						
NVAR	Mina Array Bea	76.58	43	P	P	03 33 06.2	+0.5
	1.8nm,0.9s,mb3.8,baz=228,slow=8.5,SNR=11						
TXAR	Lajitas Array	83.13	57	P	P	03 33 42.1	+1.3
	1.0nm,0.5s,mb3.6,baz=207,slow=5.6,SNR=9.7						
ANMO	Albuquerque	83.22	51	eP	P	03 33 41.5	+0.4
	1.4nm,0.9s,mb3.8						
COLA	College	83.59	12	eP	P	03 33 41.2	-1.0
	2.9nm,0.8s,mb4.2						
ILAR	Eielson Array	83.69	12	P	P	03 33 41.5	-1.3
	1.0nm,0.5s,mb3.9,baz=214,slow=5.3,SNR=45						
PDAR	Pinedale Array	84.52	43	P	P	03 33 47.5	0.0
	0.7nm,0.6s,mb3.7,baz=221,slow=3.8,SNR=7.9						
ARCES	ARCESS Array B	124.98	351	PKP	PKPdf	03 40 10.3	-0.9
	4.6nm,1.0s,baz=48,slow=1.8,SNR=6.0						
ARCES	ARCESS Array B	124.98	351	PKP	PKPdf	03 40 10.3	-0.9
KMBO	Kilima Mbogo	142.94	246	PKP	PKPdf	03 40 44.4	-2.0
	1.6nm,0.8s,baz=0.0,slow=24,SNR=4.1						
CLL	Collm	144.20	350	ePKPdf	PKPdf	03 40 45.0	-2.4
MORC	Moravsky Berou	144.71	345	ePKPdf	PKPdf	03 40 47.5	-0.8
BRTR	Keskin Array B	145.10	318	PKPbc	PKPbc	03 40 49.0	-0.7
	2.1nm,0.8s,baz=128,slow=3.3,SNR=11						
GERES	GERESS Array B	146.44	348	PKPbc	PKPbc	03 40 52.6	-0.7
	0.4nm,0.5s,baz=18,slow=5.6,SNR=5.0						

IGQ 24 03:32:20.8, 0.°96N×79.°85W, h9km±3km, Mb4.0, Ms3.8, 9C-8D, Error ellipse: s-maj=3.5km s-min=1.8km az=57.9, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLV	Golondrinas	1.03	137	⇓S	Sg	03 32 55.2	+1.0
GOLV	Golondrinas	1.03	137	⇓P	Pg	03 32 41.2	+0.6
JAMA	Jama	1.27	196	S	Sb	03 33 00.6	-0.7
JAMA	Jama	1.27	196	P	Pn	03 32 44.2	-0.6
LITE	Lita	1.49	96	⇑S	Sn	03 33 08.0	+0.6
LITE	Lita	1.49	96	⇑P	Pn	03 32 48.5	+0.7
COTA	Cotacachi	1.64	112	⇓P	Pn	03 32 51.1	+1.4
YANA	Yana	1.67	130	P	Pn	03 32 51.8	+1.6
YANA	Yana	1.67	130	S	Sn	03 33 14.1	+2.3
TERV	Terraza Guagua	1.68	132	P	Pn	03 32 51.9	+1.5
GGP	Refugio Guagua	1.69	132	P	Pn	03 32 51.9	+1.4
JUA2	San Juan 2	1.71	133	P	Pn	03 32 52.4	+1.6
CAYA	Cayambe	2.06	115	⇑P	Pn	03 32 58.5	+2.9
CAYR	Refugio Cayamb	2.07	117	P	Pn	03 32 59.4	+3.6
PITA	Cotopaxi Volc	2.07	137	⇑P	Pn	03 32 58.6	+2.9
CAMI	Rancho Maria	2.11	140	P	Pn	03 32 59.6	+3.3
BREF	Cotopaxi Volca	2.15	139	⇓P	Pn	03 33 00.3	+3.5
VC1	Cotopaxi 1	2.15	138	P	Pn	03 33 00.0	+3.1
BVC2	Cotopaxi Volca	2.16	138	⇓P	Pn	03 33 00.2	+3.3
BTAM	Cotopaxi Volca	2.18	138	⇓P	Pn	03 33 00.7	+3.4
MOV1	Cotopaxi Vol s	2.18	140	P	Pn	03 33 00.5	+3.2
BMOR	Cotopaxi Volca	2.18	140	⇓P	Pn	03 33 00.3	+3.0
CHIS	Cerro-Chispas-	2.18	204	P	Pn	03 32 57.7	+0.4
ANTI	Antisana	2.19	130	⇑S	Sn	03 33 28.9	+4.0
ANTI	Antisana	2.19	130	⇑P	Pn	03 33 00.8	+3.3
COV1	Cotopaxi Volc	2.21	137	⇑P	Pn	03 33 00.2	+2.5
TAMB	Tambo	2.21	138	⇑P	Pn	03 33 01.2	+3.4
CHAR	Charly	2.42	116	P	Pn	03 33 05.2	+4.7
CONE	Cono NE Rev Vo	2.43	115	⇓P	Pn	03 33 06.3	+5.5
LAV4	Lava4-Reventad	2.46	115	P	Pn	03 33 05.3	+4.3
PISA	Pisayambo	2.48	144	P	Pn	03 33 05.3	+3.8
BRUN	Tungurahua Vol	2.77	149	P	Pn	03 33 10.8	+5.4
BMAS	Trigal station	2.81	151	⇑P	Pn	03 33 09.8	+3.9
ARRY	Arrayan	2.82	150	S	Sn	03 33 43.8	+3.5
ARRY	Arrayan	2.82	150	P	Pn	03 33 09.1	+3.0
PAT1	Patacocha	2.83	150	P	Pn	03 33 10.4	+4.2

*IDC **24** 03:54:46.1±0.7, 4.°04N×95.°92E, h54km±6km, mb3.7/11, mb1 3.8/12, mb1mx3.6/24, mbtmp3.7/12, Error ellipse: s-maj=26.0km s-min=9.2km az=38.0*
*NEIC **24** 03:54:46.3±0.5, 4.°00N×95.°91E, mb4.1/1, Error ellipse: s-maj=16.5km s-min=8.5km az=214.0*
*ISCJB **24** 03:54:51.4±1.8, 4.°25N±0.°09×96.°3E±0.°1, h115km±17km, mb3.9/12, Error ellipse: s-maj=20.0km s-min=13.5km az=154.5*
ISC 24 03:54:52.2±1.9, 4.°24N±0.°09×96.°3E±0.°1, h106km±17km, h56km±2.8km: pP-P, n21, σ0°79/21, mb3.9/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.98	119	P	Pn	03 55 36.8	-1.0
	14nm,0.3s,baz=295,slow=8.5,SNR=35						
PSI				S	Sn	03 56 14.4	+1.5
	14nm,0.3s,baz=329,slow=12,SNR=6.5						
KULM	Kulim	4.46	76	ePn	Pn	03 55 58.1	+0.5
KULM				eSn	Sn	03 56 48.9	+0.4
IPM	Ipoh	4.71	87	ePn	Pn	03 56 01.0	-0.2
	84nm,0.3s						
IPM				eSn	Sn	03 56 53.5	-1.2
CMAR	Chiang Mai Arr	14.37	10	P	Pn	03 58 16.0	+5.3
	baz=200,slow=11,SNR=6.7						
CMAR	Chiang Mai Arr	14.37	10	P	Pn	03 58 16.0	+5.3
FITZ	Fitzroy Crossi	36.46	128	P	P	04 01 46.7	-0.5
	2.9nm,1.0s,mb4.2,baz=328,slow=9.1,SNR=3.6						
MK31	Makanchi Array	44.10	346	eP	P	04 02 50.0	+0.2
MKAR	Makanchi Array	44.10	346	P	P	04 02 49.1	-0.6
	0.5nm,0.3s,mb3.6,baz=161,slow=8.4,SNR=14						
MKAR				pP	pP	04 03 03.3	-11
	0.6nm,0.4s,baz=161,slow=8.5,SNR=3.4						
SONM	Songino Array	44.29	10	P	P	04 02 52.6	+1.3
	1.7nm,0.8s,mb3.8,baz=189,slow=9.3,SNR=7.3						
WRA	Warramunga Arr	44.43	124	P	P	04 02 51.7	-1.2
	3.2nm,0.8s,mb4.1,baz=302,slow=9.3,SNR=15						
WRA				pP	pP	04 03 08.0	-9.5
	6.0nm,0.6s,baz=302,slow=9.3,SNR=12						
ASAR	Alice Springs	45.96	129	P	P	04 03 05.3	+0.5
	0.6nm,0.4s,mb3.6,baz=301,slow=7.7,SNR=7.9						
ZALV	Zalesovo Beam	50.44	351	P	P	04 03 38.8	0.0
	2.0nm,0.5s,mb4.3,baz=186,slow=7.7,SNR=7.3						
ABKAR	Akbulak array	54.43	331	eP	P	04 04 07.7	-0.7
	1.0nm,0.5s,mb4.1						
STKA	Stephens Creek	56.06	133	P	P	04 04 20.9	+0.5
	1.3nm,0.8s,mb4.0,baz=297,slow=2.3,SNR=2.9						
BRTR	Keskin Array B	66.43	312	P	P	04 05 29.4	-0.9
	0.2nm,0.4s,mb3.3,baz=115,slow=5.2,SNR=4.1						
BRTR				pP	pP	04 05 44.1	-13
	1.1nm,0.6s,baz=128,slow=7.5,SNR=6.4						
ARCES	ARCESS Array B	79.39	340	P	P	04 06 46.6	+0.4
	3.1nm,0.8s,mb4.2,baz=99,slow=5.8,SNR=4.5						
GERES	GERESS Array B	81.96	319	P	P	04 07 00.5	+0.2
	0.2nm,0.3s,mb3.4,baz=34,slow=3.7,SNR=3.5						
GERES				pP	pP	04 07 15.1	-12
	1.1nm,0.8s,baz=79,slow=6.9,SNR=4.4						
KEST	Kesra	85.08	305	P	P	04 07 17.6	+1.0
	1.5nm,1.1s,mb3.9,baz=37,slow=5.1,SNR=5.0						
TXAR	Lajitas Array	141.51	29	PKP	PKPdf	04 14 14.1	+2.5
	0.3nm,0.9s,baz=223,slow=2.2,SNR=2.2						
CPUP	Villa Florida	146.54	226	PKPbc	PKPbc	04 14 21.1	-0.9
	0.8nm,0.5s,baz=62,slow=5.7,SNR=5.0						
LPAZ	La Paz	160.58	231	PKPab	PKPab	04 15 20.3	-2.2
	1.0nm,0.6s,baz=182,slow=8.0,SNR=7.0						

*SKO **24** 04:02:02.7, 41.°54N×19.°55E, h1km*
*TIR **24** 04:02:02.7±3.1, 41.°46N×19.°52E, h11km±42km, ML2.5*
*ISCJB **24** 04:02:03.9±0.5, 41.°49N±0.°02×19.°60E±0.°04, h10km±3km, Error ellipse: s-maj=5.5km s-min=2.9km az=149.3*
*PDG **24** 04:02:04.0±0.3, 41.°50N×19.°60E, h2km±1km, ML2.2/9, Error ellipse: s-maj=1.4km s-min=1.5km az=0.0*
*CSEM **24** 04:02:03.3±0.3, 41.°45N×19.°54E, h2km, ML2.1, Error ellipse: s-maj=7.4km s-min=4.1km az=57.0*
*BEO **24** 04:02:04.2±0.8, 41.°41N×19.°65E, h14km±2km, ML2.1/6*
ISC 24 04:02:04.7±0.5, 41.°47N±0.°02×19.°59E±0.°04, h14km±3km, n44, σ1°16/80, 13C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.24	121	ePg	Pg	04 02 08.2	-1.7
TIR				eSg	Sg	04 02 12.7	-0.7
TIR	Tirane	0.24	121	ePg	Pg	04 02 08.2	-1.7
TIR				eSg	Sg	04 02 12.7	-0.7
ULC	Ulcinj	0.55	333	⇑iPg	Pg	04 02 13.8	-1.7
ULC	Ulcinj	0.55	333	⇑iPg	Pg	04 02 13.8	-1.7
PUK	Puka	0.61	22	ePG	Pg	04 02 15.8	-0.9
PUK				i SG	Sg	04 02 26.0	+1.1
PUK	Puka	0.61	22	ePg	Pg	04 02 15.8	-0.9
	SNR=95						
PUK				i Sg	Sg	04 02 26.0	+1.2
	SNR=95						
BCI	Bajram Curri	0.96	22	ePG	Pg	04 02 22.5	-0.8
BCI				i SG	Sg	04 02 37.9	+2.0
BCI	Bajram Curri	0.96	22	ePg	Pg	04 02 22.5	-0.8
	SNR=93						
BCI				i Sg	Sg	04 02 37.9	+2.0
	SNR=93						
BUM	Brajici-Budva	0.97	328	⇑iPg	Pg	04 02 21.6	-1.9
BUM				eSg	Sg	04 02 36.6	+0.3
BUM	Brajici-Budva	0.97	328	⇑iPg	Pg	04 02 21.6	-1.9
BUM				eSg	Sg	04 02 36.6	+0.3
PDG	Podgorica	0.99	346	ePg	Pg	04 02 22.7	-1.1
PDG				eSg	Sg	04 02 38.2	+1.5
PDG	Podgorica	0.99	346	ePg	Pg	04 02 22.7	-1.1
PDG				eSg	Sg	04 02 37.0	+0.3
TTG	Podgorica	0.99	346	⇑iPg	Pg	04 02 22.1	-1.7
TTG				eSg	Sg	04 02 37.0	+0.3
PVY	Plav	1.16	14	⇓iPg	Pg	04 02 24.4	-2.6
PVY				eSg	Sg	04 02 42.3	+0.2
PVY	Plav	1.16	14	⇓iPg	Pg	04 02 24.4	-2.6
PVY				eSg	Sg	04 02 42.3	+0.2
KBN	Korca	1.24	133	i PN	Pn	04 02 27.8	+0.2
KBN				i SN	Sn	04 02 46.1	+1.9
KBN	Korca	1.24	133	i Pn	Pn	04 02 27.8	+0.1
	SNR=56						
KBN				i Sn	Sn	04 02 46.1	+1.9
	SNR=56						
KRUS	Krusevo	1.25	94	ePg	Pn	04 02 24.9	-2.9
HCY	Herceg Novi	1.27	321	⇓iPg	Pn	04 02 27.2	-0.8
HCY				eSg	Sg	04 02 46.1	+0.5
HCY	Herceg Novi	1.27	321	⇓iPg	Pn	04 02 27.2	-0.8
HCY				eSg	Sg	04 02 46.1	+0.5
BIA	Bitola	1.39	108	ePn	Pn	04 02 29.5	-0.1
BIA				eSg	Sg	04 02 48.7	-0.7
NKY	Niksic	1.41	342	⇑iPg	Pn	04 02 29.4	-0.6
NKY				eSg	Sg	04 02 51.3	+1.2
NKY	Niksic	1.41	342	⇑iPg	Pn	04 02 29.4	-0.6
NKY				eSg	Sg	04 02 51.3	+1.2
BEY	Berane	1.42	9	⇓iPg	Pn	04 02 29.7	-0.4
BEY				eSg	Sg	04 02 51.1	+0.7
IVA	Berane	1.42	9	⇓iPg	Pn	04 02 29.7	-0.4
IVA				eSg	Sg	04 02 51.1	+0.7
SRN	Sarande	1.62	169	i PN	Pn	04 02 34.2	+1.4
SRN				i SN	Sg	04 02 58.7	+1.8
SRN	Sarande	1.62	169	i Pn	Pn	04 02 34.2	+1.3
	SNR=56						
BRY	Bratogost	1.62	332	⇑iPn	Pn	04 02 33.0	+0.1
BRY				eSn	Sg	04 02 58.6	+1.6
BRY	Bratogost	1.62	332	⇑iPn	Pn	04 02 33.0	+0.1
BRY				eSn	Sg	04 02 58.6	+1.6
UPM	Unac-Piva	1.80	344	⇑iPn	Pn	04 02 36.3	+0.9
UPM				eSn	Sg	04 03 02.8	+0.2
UPM	Unac-Piva	1.80	344	⇑iPn	Pn	04 02 36.3	+0.9
UPM				eSn	Sg	04 03 02.8	+0.2
SJES	Sjenica	1.81	9	ePn	Pn	04 02 36.5	+1.0
SJES				eSg	Sg	04 03 03.8	+0.9
SJES	Sjenica	1.81	9	ePn	Pn	04 02 36.5	+1.0
SJES				eSg	Sg	04 03 03.8	+0.9
PLE	Pljevlja	1.86	356	⇑iPn	Pn	04 02 37.9	+1.7
PLE				eSn	Sg	04 03 03.9	-0.7
PLE	Pljevlja	1.86	356	⇑iPn	Pn	04 02 37.9	+1.7
PLE				eSn	Sg	04 03 03.9	-0.7
STON	Ston	1.98	316	ePn	Pn	04 02 37.5	-0.3
STON				Sn	Sn	04 02 59.7	-2.8
STON	Ston	1.98	316	ePn	Pn	04 02 37.5	-0.3
STON				Sn	Sn	04 02 59.6	-2.9
BARS	Barje	2.13	50	ePn	Pn	04 02 40.4	+0.5
BARS				eSn	Sn	04 03 05.4	-0.8
BARS	Barje	2.13	50	ePn	Pn	04 02 40.4	+0.5
KNT	Kendrikon	2.51	96	P	Pn	04 02 45.4	+0.3
KNT				S	Pg	04 02 54.0	+1.1
KNT	Kendrikon	2.51	96	P	Pn	04 02 45.4	+0.3
DIVS	Divibare	2.64	6	ePn	Pn	04 02 46.0	-0.9
DIVS	Divibare	2.64	6	ePn	Pn	04 02 46.0	-0.9
ZAPS	Zavoj	2.89	50	ePn	Pn	04 02 50.6	+0.3
ZAPS				eSn	Sn	04 03 23.7	-1.1

IDC 24 04:08:09.5±2.6, 22.°04N×142.°83E, h243km±24km, mb3.2/7, mb1 3.4/8, mb1mx3.2/24, mbtmp3.2/8, Error ellipse: s-maj=30.8km s-min=15.3km az=94.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	5.07	353	P	Pn	04 09 26.2	+0.4
	8.9nm,0.3s,baz=270,slow=16,SNR=3.3						
CBIJ				S	S	04 10 23.4	-3.4
	5.8nm,0.3s,baz=0.0,slow=20,SNR=2.5						
WRA	Warramunga Arr	42.54	192	P	P	04 15 41.6	+0.1
	0.5nm,0.2s,baz=6.0,slow=8.2,SNR=7.5						
ASAR	Alice Springs	46.25	191	P	P	04 16 10.2	-0.6
	0.4nm,0.6s,baz=11,slow=9.4,SNR=5.6						
MKAR	Makanchi Array	54.23	312	P	P	04 17 10.9	+0.7
	0.3nm,0.3s,baz=86,slow=9.3,SNR=6.0						
ILAR	Eielson Array	61.89	27	P	P	04 18 02.5	-0.5
	0.3nm,0.6s,baz=252,slow=5.9,SNR=5.3						
ARCES	ARCESS Array B	78.50	341	P	P	04 19 43.6	+0.3
	4.1nm,1.0s,baz=91,slow=9.0,SNR=3.3						
FINES	FINESS Array B	82.73	334	P	P	04 20 04.5	-1.3
	1.0nm,0.3s,baz=72,slow=4.5,SNR=6.7						
NVAR	Mina Array Bea	83.19	51	P	P	04 20 08.7	0.0
	0.3nm,0.6s,baz=275,slow=5.2,SNR=2.8						
LPAZ	La Paz	150.24	84	PKPbc	PKPbc	04 27 34.3	+1.8
	0.6nm,0.5s,baz=243,slow=2.3,SNR=3.9						

*IDC **24** 04:23:36.1±1.0, 0.°32N×97.°72E, h0km, mb4.0/11, mb1 4.1/13, mb1mx3.9/24, mbtmp4.0/13, ML3.1/1, MS4.2/1, Ms1 4.2/1, ms1mx3.5/24, Error

az=43.7
BJI ***24*** *04:31:07.3, 35°.85N×88°.16E, h10km, mb4.4/1, ML3.5/3, Ms4.1/2, Ms7 4.0/2*
NEIC ***24*** *04:31:08.2±0.9, 35°.74N×88°.28E, h10km, mb3.7/1, Error ellipse: s-maj=19.7km s-min=11.3km az=47.0*
ISC 24 04:31:10.0±4.9, 35.7N±0.1×88.3E±0.1, h28km±40km, n13, σ1§24/13, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**11.99**	**340**	Pn	**Pn**	**04 33 57.3**	**-1.6**
	0.1nm,0.3s,baz=153,slow=13,SNR=4.2						
UCH	**Uchtor**	**12.56**	**306**	*e*Pn	**Pn**	**04 34 07.5**	**+0.8**
AAK	**Ala-Archa**	**12.76**	**307**	Pn	**Pn**	**04 34 10.2**	**+0.8**
	0.0nm,0.3s,baz=146,slow=3.6,SNR=4.7						
EKS2	**Erkin-Say**	**13.24**	**306**	*e*Pn	**Pn**	**04 34 16.5**	**+0.5**
KURK	**Kurchatov**	**16.58**	**338**	*e*P	**Pn**	**04 34 57.8**	**-2.4**
	7.1nm,1.0s						
SONM	**Songino Array**	**18.11**	**42**	P	**Pn**	**04 35 20.8**	**+1.5**
	0.3nm,0.3s,baz=229,slow=13,SNR=2.9						
ZALV	**Zalesovo Beam**	**18.43**	**353**	P	**Pn**	**04 35 23.5**	**+0.4**
	0.4nm,0.3s,baz=179,slow=9.7,SNR=2.7						
CMAR	**Chiang Mai Arr**	**19.57**	**148**	P	**Pn**	**04 35 36.2**	**-0.9**
	0.2nm,0.3s,baz=330,slow=10,SNR=3.3						
BVAR	**Borovoye Array**	**21.46**	**329**	P	**P**	**04 35 56.1**	**+0.2**
	0.6nm,0.5s,mb3.2,baz=106,slow=9.2,SNR=4.4						
NB2	**NORSAR Subarra**	**53.43**	**324**	P	**P**	**04 40 26.9**	**-0.1**
	comp=Z,1.9nm,1.0s,mb4.0,baz=83,slow=7.4						
NOA	**NORSAR Array B**	**53.43**	**324**	P	**P**	**04 40 25.9**	**-1.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=81,slow=7.3,SNR=5.0						
WRA	**Warramunga Arr**	**70.44**	**134**	P	**P**	**04 42 20.5**	**-1.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=320,slow=6.8,SNR=2.2						
ASAR	**Alice Springs**	**73.11**	**137**	P	**P**	**04 42 40.0**	**+2.3**
	comp=Z,0.6nm,0.8s,mb3.6,baz=339,slow=4.5,SNR=2.9						

IDC 24 05:47:44.1±8.8, 21°.34S×68°.02W, h141km±59km, mb4.2/1, mb1 3.5/3, mb1mx3.2/15, mbtmp3.5/3, MS3.4/2, Ms1 3.4/2, ms1mx3.1/18, Error ellipse: s-maj=89.1km s-min=42.7km az=39.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.03**	**359**	P	Pn	05 48 58.1	+0.3
	1.0nm,0.3s,baz=177,slow=7.9,SNR=42						
LPAZ				S	Sn	05 49 56.7	+1.5
	0.3nm,0.3s,baz=269,slow=18,SNR=2.2						
LPAZ				LR	LR	05 50 42.6	
	comp=Z,167nm,18.3s,baz=254,slow=36						
BDFB	**Brasilia**	**19.79**	**77**	P	P	05 52 05.0	+1.3
	0.2nm,0.3s,baz=236,slow=15,SNR=4.0						
BDFB				LR	LR	06 01 30.0	
	comp=Z,232nm,18.2s,baz=194,slow=42						
DBIC	**Dimbokro**	**67.89**	**73**	P	P	05 58 27.7	-0.2
	3.2nm,0.4s,baz=225,slow=7.8,SNR=10.0						
TORD	**Torodi Ar. Bea**	**76.52**	**70**	P	P	05 59 18.5	-0.6
	5.4nm,0.8s,baz=251,slow=5.3,SNR=7.7						
MKAR	**Makanchi Array**	**145.01**	**36**	PKPbc	PKPbc	06 07 04.7	+0.5
	0.7nm,0.7s,baz=332,slow=1.6,SNR=4.8						

DJA ***24*** *06:00:44, 10°.27S×162°.33E, h104km, mb5.4/21*
BJI ***24*** *06:00:47.3, 10°.02S×162°.03E, h94km, mB5.1/29, mb4.9/39*
IDC ***24*** *06:00:48.9±1.4, 10°.24S×161°.48E, h85km±11km, mb4.6/24, mb1 4.8/25, mb1mx4.7/26, mbtmp4.6/25, MS4.1/21, Ms1 4.1/21, ms1mx4.1/22, Error ellipse: s-maj=12.8km s-min=10.6km az=83.0*
ISCJB ***24*** *06:00:50.1±0.8, 10°.24S±0°.04×161°.29E±0°.03, h98km±6km, mb5.0/117, Error ellipse: s-maj=6.3km s-min=5.1km az=146.9*
MOS ***24*** *06:00:50.9±0.7, 10°.12S×161°.21E, h109km, mb5.2/27, Error ellipse: s-maj=11.1km s-min=8.0km az=60.6*
GCMT ***24*** *06:00:50.1±0.3, 10°.30S×161°.47E, h67km±3km, MW5.2, Moment Tensor Solution. s27,c32; s60,c81; Moment tensor: Scale 10^16Nm; Mrr3.19±.38; Mθθ-3.25±.34; Mφφ0.06±.33; Mrθ-0.13±.22; Mrφ6.74±.28; Mθφ-3.43±.19; Best double couple: M0 8.10000×10^16 NP1:φs=268.00000°, δ58.00000°, λ20.00000°. NP2:φs=167.00000°, δ73.00000°, λ146.00000°. Principal axes: T 7.3400, Plg35.0000°, Azm123.0000°; N 1.5500, Plg53.0000°, Azm323.0000°; P -8.8900, Plg10.0000°, Azm220.0000°; Data Used: IU IC G II CN.*
NEIC ***24*** *06:00:51.6±0.8, 10°.24S×161°.37E, h107km±7km, mb5.0/70 Error ellipse: s-maj=6.2km s-min=4.7km az=127.0*
ISC 24 06:00:50.6±0.8, 10°.22S±0°.03×161°.35E±0°.03, h89km±7km, h91km±3.9km: pP-P, n469, σ0§77/385, mb5.0/117, 76C-78D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.59**	**299**	P	**Pn**	**06 01 16.6**	**-0.9**
	820nm,0.3s,baz=157,slow=2.1,SNR=122						
HNR				S	**Sn**	**06 01 38.8**	**+2.3**
	8μm,0.3s,baz=195,slow=17,SNR=32						
HNR	**Honiara**	**1.59**	**299**	*e*Pn	**Pn**	**06 01 17.0**	**-0.5**
HNR				*e*Sn	**Sn**	**06 01 39.3**	**+2.8**
HNR	**Honiara**	**1.59**	**299**	*e*P	**Pn**	**06 01 17.0**	**-0.5**
HNR				*e*		06 01 39.3	
NOUC	**Port Laguerre**	**12.73**	**159**	*e*P	**Pn**	**06 03 45.5**	**-2.8**
DZM	**Mont Dzumac**	**12.75**	**158**	*e*P	**Pn**	**06 03 44.3**	**-4.2**
PMG	**Port Moresby**	**14.01**	**272**	*e*Pn	**Pn**	**06 04 06.3**	**+1.1**
PMG	**Port Moresby**	**14.01**	**272**	*d i*P	**Pn**	**06 04 07.8**	**+2.6**
PMG	**Port Moresby**	**14.01**	**272**	P	**Pn**	**06 04 08.8**	**+3.6**
	1μm117nm,1.3s						
CTA	**Charters Tower**	**17.55**	**234**	P	**Pn**	**06 04 50.2**	**+0.6**
	3.5nm,0.3s,baz=62,slow=13,SNR=78						
CTA				LR	LR	06 10 31.2	
	comp=Z,775nm,21.2s,baz=55,slow=33						
CTA	**Charters Tower**	**17.55**	**234**	*e*P	**Pn**	**06 04 51.2**	**+1.6**
	160nm,1.0s						
CTA	**Charters Tower**	**17.55**	**234**	P	**Pn**	**06 04 50.2**	**+0.6**
CTA				LR	LR	06 10 31.2	
CTA	**Charters Tower**	**17.55**	**234**	P	**Pn**	**06 04 50.2**	**+0.6**
CTAO	**Charters Tower**	**17.55**	**234**	*e*Pn	**Pn**	**06 04 51.2**	**+1.6**
	247nm,1.0s						
CTAO	**Charters Tower**	**17.55**	**234**	*e*P	**Pn**	**06 04 51.2**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,247nm,1.0s						
CTAO	**Charters Tower**	**17.55**	**234**	P	**Pn**	**06 04 51.6**	**+2.0**
	comp=Z,3μmcomp=Z,299nm,1.2s						
MSVF	**Nonsavu**	**17.83**	**117**	*e*Pn	**Pn**	**06 04 51.3**	**-1.7**
EIDS	**Eidsvold**	**17.94**	**212**	*e*P	**Pn**	**06 04 54.8**	**+0.5**
	comp=Z,60nm,1.0s						
COEN	**Coen**	**18.16**	**256**	*e*Pn	**Pn**	**06 04 59.4**	**+2.5**
	comp=Z,2μm,1.2s						
COEN	**Coen**	**18.16**	**256**	P	**Pn**	**06 04 59.3**	**+2.4**
	comp=Z,843nm,1.4s						
KWAJ	**Kwajalein Atol**	**19.90**	**18**	*e*P	**Pn**	**06 05 14.9**	**-2.7**
	comp=Z,74nm,0.6s						
ARMA	**Armidale**	**22.04**	**203**	*e*P	**P**	**06 05 37.8**	**-0.1**
ARMA	**Armidale**	**22.04**	**203**	*e*P	**P**	**06 05 37.6**	**-0.4**
	comp=Z,56nm,0.8s,mb4.9						
MGCD	**Mangrove Creek**	**24.74**	**201**	*e*P	**P**	**06 06 03.9**	**+0.1**
	comp=Z,42nm,0.9s,mb4.9						
AFI	**Afiamalu**	**26.52**	**101**	P	**P**	**06 06 18.2**	**-1.8**
	comp=Z,24nm,0.8s,mb4.8,baz=231,slow=13,SNR=3.3						
AFI				LR	LR	06 14 32.4	
	comp=Z,626nm,18.8s,baz=286,slow=31						
AFI	**Afiamalu**	**26.52**	**101**	P	**P**	**06 06 18.2**	**-1.9**
BAKI	**Biak**	**26.65**	**288**	P	**P**	**06 06 22.8**	**+1.5**
	comp=Z,104nm,1.0s,mb5.3						
CNB	**Canberra Magne**	**27.26**	**202**	*e*P	**P**	**06 06 26.9**	**+0.4**
OUZ	**Omahuta**	**27.27**	**158**	*e*P	**P**	**06 06 26.7**	**+0.1**
	comp=Z,31nm,1.1s,mb4.8						
CAN	**Canberra**	**27.40**	**202**	*e*P	**P**	**06 06 27.2**	**-0.6**
	comp=Z,10nm,0.7s,mb4.5						
CAN	**Canberra**	**27.40**	**202**	*e*P	**P**	**06 06 27.2**	**-0.5**
CAN				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
WB2	**Warramunga Arr**	**27.77**	**246**	*e*P	**P**	**06 06 31.0**	**-0.2**
WRA	**Warramunga Arr**	**27.78**	**246**	P	**P**	**06 06 30.9**	**-0.3**
	comp=Z,40nm,0.8s,mb5.0,baz=75,slow=9.2,SNR=168						
WRA				ScP	ScP	06 13 19.6	+0.9
	comp=Z,2.8nm,1.1s,baz=72,slow=3.8,SNR=6.3						
WRA				LR	LR	06 16 57.5	
	comp=Z,539nm,20.1s,baz=75,slow=35						
WRA	**Warramunga Arr**	**27.78**	**246**	P	**P**	**06 06 30.9**	**-0.3**
WRA				ScP	ScP	06 13 19.6	+0.9
WRA				LR	LR	06 16 57.5	
WRA	**Warramunga Arr**	**27.78**	**246**	P	**P**	**06 06 30.9**	**-0.4**
STKA	**Stephens Creek**	**28.26**	**217**	P	**P**	**06 06 36.1**	**+0.6**
	comp=Z,16nm,0.8s,mb4.6,baz=28,slow=11,SNR=19						
STKA				LR	LR	06 18 00.2	
	comp=Z,389nm,19.6s,baz=145,slow=36						
STKA	**Stephens Creek**	**28.26**	**217**	*e*P	**P**	**06 06 35.4**	**0.0**
	comp=Z,14nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**28.26**	**217**	*e*P	**P**	**06 06 35.7**	**+0.3**
	comp=Z,23nm,1.8s,mb4.4						
KAKA	**Kakadu**	**28.44**	**262**	*e*P	**P**	**06 06 36.9**	**-0.4**
	comp=Z,77nm,0.6s,mb5.4						
KAKA	**Kakadu**	**28.44**	**262**	P	**P**	**06 06 37.2**	**0.0**
	comp=Z,523nmcomp=Z,69nm,0.7s,mb5.3						
GUMO	**Guam**	**28.76**	**325**	LR	LR	06 16 56.0	
	comp=Z,465nm,21.3s,baz=116,slow=34						
GUMO	**Guam**	**28.76**	**325**	P	**P**	**06 06 37.3**	**-2.7**
	comp=Z,175nm,1.5s,mb5.5						
ASAR	**Alice Springs**	**29.39**	**239**	P	**P**	**06 06 44.5**	**-1.0**
	comp=Z,9.8nm,1.0s,mb4.4,baz=70,slow=9.4,SNR=54						
ASAR				ScP	ScP	06 13 24.2	+0.5
	comp=Z,2.3nm,0.9s,baz=78,slow=2.4,SNR=7.1						
ASAR	**Alice Springs**	**29.39**	**239**	P	**P**	**06 06 44.6**	**-1.0**
TOO	**Toolangi**	**30.75**	**205**	*e*P	**P**	**06 06 57.7**	**+0.3**
URZ	**Urewera**	**31.29**	**156**	P	**P**	**06 06 59.3**	**-2.9**
	comp=Z,20nm,0.7s,mb5.0,baz=336,slow=11,SNR=7.7						
URZ				LR	LR	06 17 11.8	
	comp=Z,250nm,21.8s,baz=318,slow=32						
BNDI	**Bandanaira**	**31.68**	**278**	P	**P**	**06 07 06.4**	**+0.5**
	comp=Z,328nm,1.5s,mb5.8						
KNA	**Kununurra**	**32.20**	**257**	P	**P**	**06 07 10.6**	**+0.2**
	comp=Z,3μmcomp=Z,346nm,1.0s,mb6.0						
BBOO	**Buckleboo**	**32.38**	**222**	*e*P	**P**	**06 07 11.4**	**-0.3**
	comp=Z,77nm,1.0s,mb5.4						
MOO	**Moorlands**	**34.41**	**199**	*e*P	**P**	**06 07 29.9**	**+0.6**
RPZ	**Rata Peaks**	**34.42**	**168**	P	**P**	**06 07 28.0**	**-1.3**
	comp=Z,21nm,0.7s,mb5.0,baz=316,slow=2.0,SNR=6.3						
RPZ				LR	LR	06 18 45.3	
	comp=Z,237nm,20.7s,baz=214,slow=31						
NLAI	**Namlea**	**34.69**	**279**	P	**P**	**06 07 32.7**	**+0.6**
	comp=Z,59nm,1.5s,mb5.2						
TAU	**Tasmania Unive**	**34.79**	**198**	*e*P	**P**	**06 07 32.5**	**-0.1**
TAU	**Tasmania Unive**	**34.79**	**198**	*e*P	**P**	**06 07 32.5**	**-0.1**
LBMI	**Labuha**	**34.98**	**284**	P	**P**	**06 07 36.0**	**+1.4**
	comp=Z,1μmcomp=Z,50nm,1.2s,mb5.2						
FITZ	**Fitzroy Crossi**	**35.45**	**253**	P	**P**	**06 07 38.3**	**-0.3**
	comp=Z,25nm,0.5s,mb5.3,baz=90,slow=6.6,SNR=54						
FITZ	**Fitzroy Crossi**	**35.45**	**253**	*e*P	**P**	**06 07 38.1**	**-0.5**
	comp=Z,62nm,0.9s,mb5.4						
FITZ	**Fitzroy Crossi**	**35.45**	**253**	*e*P	**P**	**06 07 37.9**	**-0.7**
	comp=Z,42nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**35.45**	**253**	P	**P**	**06 07 37.9**	**-0.7**
	comp=Z,107nm,1.0s,mb5.6						
TNTI	**Ternate**	**35.54**	**286**	P	**P**	**06 07 39.8**	**+0.4**
	comp=Z,80nm,1.0s,mb5.6						
FORT	**Forrest**	**37.07**	**232**	*e*P	**P**	**06 07 53.6**	**+1.4**
	comp=Z,41nm,0.9s,mb5.4						
FORT	**Forrest**	**37.07**	**232**	*e*P	**P**	**06 07 52.2**	**-0.1**
	comp=Z,59nm,0.9s,mb5.5						
MMRI	**Maumere**	**38.60**	**269**	P	**P**	**06 08 04.9**	**-0.5**
	comp=Z,2μmcomp=Z,140nm,1.4s,mb5.6						
RAR	**Rarotonga**	**38.88**	**111**	LR	LR	06 20 40.0	
	comp=Z,520nm,20.2s,baz=273,slow=31						
KDI	**Kendari**	**38.91**	**276**	P	**P**	**06 08 07.9**	**-0.1**
	comp=Z,18nm,1.3s,mb4.8						
LUWI	**Luwuk**	**39.42**	**281**	P	**P**	**06 08 13.1**	**+0.9**
	comp=Z,2μmcomp=Z,118nm,1.4s,mb5.5						
BKSI	**Bulukumba**	**41.12**	**274**	P	**P**	**06 08 26.0**	**-0.2**
	comp=Z,25nm,1.3s,mb4.9						
MBWA	**Marble Bar**	**41.40**	**250**	*e*P	**P**	**06 08 28.2**	**-0.3**
	comp=Z,35nm,0.8s,mb5.2						
MBWA	**Marble Bar**	**41.40**	**250**	P	**P**	**06 08 27.9**	**-0.5**
	comp=Z,62nm,1.2s,mb5.3						
CBIJ	**Chichi jima**	**41.50**	**334**	P	**P**	**06 08 29.2**	**+0.2**
	comp=Z,61nm,0.7s,mb5.6,baz=277,slow=20,SNR=5.0						
TTSI	**Tana Toraja**	**41.83**	**277**	P	**P**	**06 08 32.6**	**+0.5**
	comp=Z,2μmcomp=Z,23nm,1.4s,mb4.7						
BMNI	**Bima**	**42.10**	**269**	P	**P**	**06 08 33.0**	**-1.3**
	comp=Z,54nm,1.2s,mb5.2						
MJSI	**Majene**	**42.55**	**276**	P	**P**	**06 08 40.0**	**+2.1**
KLBR	**Kellerberrin**	**45.55**	**236**	*e*P	**P**	**06 09 00.9**	**-0.8**
	comp=Z,32nm,1.0s,mb5.0						
NWAO	**Narrogin (SRO)**	**46.39**	**234**	P	**P**	**06 09 08.3**	**+0.1**
	comp=Z,23nm,0.9s,mb4.9,baz=56,slow=8.6,SNR=6.8						
NWAO	**Narrogin (SRO)**	**46.39**	**234**	P	**P**	**06 09 08.3**	**+0.1**
NWAO	**Narrogin (SRO)**	**46.39**	**234**	P	**P**	**06 09 08.3**	**0.0**
PPT	**Papeete**	**48.08**	**104**	LR	LR	06 24 05.3	
	comp=Z,397nm,19.8s,baz=294,slow=29						
MJAR	**Matsushiro Arr**	**51.36**	**336**	P	**P**	**06 09 44.3**	**-1.8**
	comp=Z,5.0nm,0.7s,mb4.7,baz=170,slow=8.9,SNR=11						
MJAR				LR	LR	06 29 12.1	
	comp=Z,162nm,20.5s,baz=110,slow=33						
MJAR	**Matsushiro Arr**	**51.36**	**336**	P	**P**	**06 09 44.3**	**-1.8**
MAJO	**Matsushiro**	**51.36**	**336**	*e*P	**P**	**06 09 45.1**	**-1.0**
	comp=Z,8.8nm,0.7s,mb4.9						
MAJO	**Matsushiro**	**51.36**	**336**	*e*P	**P**	**06 09 45.2**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
MAT	**Matsushiro**	**51.36**	**336**	P	**P**	**06 09 45.1**	**-1.0**
MAT				S	**S**	**06 17 06.0**	**+7.1**
JNU	**Nakatsue**	**51.97**	**327**	*e*P	**P**	**06 09 49.9**	**-0.9**
	comp=Z,8.9nm,1.1s,mb4.7						
KSM	**Kuching**	**52.11**	**280**	*e*P	**P**	**06 09 51.9**	**-0.3**
	comp=Z,8.0nm,0.4s,mb5.1						
YUK	**Yuzh-Kuril'sk**	**55.80**	**347**	*d i*P	**P**	**06 10 13.7**	**-4.7**
YUK				*i*		06 12 18.3	
YUK				*i* S	**S**	**06 17 57.9**	**-0.7**
YUK				*i* SS	SS	06 21 41.4	-4.4
YUK				*i* SSS		06 23 56.9	
YUK				pmax	pmax		
	comp=Z,600nm,1.6s						
YUK				smax			
	comp=N,2μm,1.9s						
YUK				smax			
	comp=E,2μm,1.9s						
ASAJ	**Asahikawa**	**56.70**	**344**	*e*P	**P**	**06 10 25.0**	**+0.2**
KSRS	**Korea Array**	**56.84**	**328**	P	**P**	**06 10 25.9**	**0.0**
	comp=E,8.1nm,0.9s,mb4.7,baz=145,slow=7.2,SNR=18						
KSRS				LR	LR	06 33 00.0	
	comp=E,160nm,18.4s,baz=120,slow=34						
QIZ	**Qiongzhong**	**58.51**	**300**	P	**P**	**06 10 38.4**	**+0.4**
MDJ	**Mudanjiang**	**61.69**	**335**	P	**P**	**06 10 59.3**	**+0.1**
MDJ				pP	pP	06 11 19.3	-2.4
MDJ				sP	sP	06 11 31.1	-0.4
MDJ				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,140nm,4.0s						
CN2	**Changchun**	**62.89**	**332**	⇑P	**P**	**06 11 07.1**	**-0.1**
CN2				*e*pP	pP	06 11 31.6	+1.8
CN2				*e*S	**S**	**06 19 28.6**	**-1.4**
CN2				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
PETK	**Petropavlovsk-**	**63.16**	**358**	P	**P**	**06 11 08.5**	**-0.3**
	comp=Z,7.7nm,0.8s,mb4.7,baz=165,slow=12,SNR=5.6						
PETK				LR	LR	06 33 31.7	
	comp=Z,125nm,20.6s,baz=314,slow=31						
PETK	**Petropavlovsk-**	**63.16**	**358**	P	**P**	**06 11 08.5**	**-0.3**
GYA	**Guiyang**	**64.41**	**306**	P	**P**	**06 11 19.8**	**+2.2**
GYA				pP	pP	06 11 43.3	+3.0
GYA				sP	sP	06 11 52.0	+1.9
GYA				PP	PP	06 13 43.3	+2.8
GYA				ScP		06 15 45.6	
GYA				PcS		06 15 57.4	
GYA				S	**S**	**06 19 49.8**	**+0.2**
GYA				sS	sS	06 20 30.0	+1.7
GYA				SS	SS	06 24 03.3	+1.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,140nm,5.2s						
GYA				LR	LR		
	comp=N,580nm,19.4s						
GYA				LR	LR		
	comp=E,470nm,20.8s						
GYA				LR	LR		
	comp=Z,650nm,19.0s						
KLR	**Kul'dur**	**64.67**	**339**	*e*P	**P**	**06 11 14.9**	**-3.9**
BJI	**Beijing**	**65.18**	**323**	P	**P**	**06 11 21.6**	**-0.8**
BJI				S	S	06 20 05.6	+7.0
BJI				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.5						
BJI				pmax	pmax		
	comp=Z,130nm,3.1s						
BJI				LR	LR		
	comp=Z,160nm,36.6s						
CASY	**Casey**	**65.62**	**200**	*e*P	**P**	**06 11 23.1**	**-1.6**
CASY	**Casey**	**65.62**	**200**	*e*P	**P**	**06 11 23.5**	**-1.2**
	comp=Z,42nm,1.0s,mb5.2						
KMI	**Kunming**	**67.03**	**303**	P	**P**	**06 11 38.4**	**+3.9**
KMI				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.6						
CMAR	**Chiang Mai Arr**	**67.84**	**295**	P	**P**	**06 11 38.9**	**-0.8**
	comp=Z,2.4nm,0.6s,mb4.2,baz=128,slow=4.5,SNR=9.7						
CMAR				LR	LR	06 42 27.9	
	comp=Z,114nm,19.6s,baz=272,slow=37						
CMAR	**Chiang Mai Arr**	**67.84**	**295**	P	**P**	**06 11 38.9**	**-0.8**
HHC	**Hu-ho-hao-te**	**68.46**	**321**	*e*P	**P**	**06 11 44.5**	**+1.4**
HHC				pP	pP	06 12 09.3	+3.3
HHC				sP	sP	06 12 20.1	+4.3
HHC				PP	PP	06 14 19.1	+3.6
HHC				ScP		06 16 01.5	
HHC				PcS		06 16 13.0	
HHC				S	S	06 20 38.3	+0.3
HHC				sS	sS	06 21 21.0	+4.0
HHC				ScS	ScS	06 21 31.9	-2.9
HHC				SS	SS	06 25 06.0	+2.3
HHC				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
HHC				LR	LR		
	comp=N,250nm,16.0s						
HHC				LR	LR		
	comp=E,250nm,16.3s						
HHC				LR	LR		
	comp=Z,250nm,16.6s						
CD2	**Chengdu**	**68.70**	**309**	*e*P	**P**	**06 11 45.5**	**+0.6**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
CD2				pmax	pmax		
	comp=Z,150nm,4.8s						
HIA	**Hailar**	**69.58**	**332**	*e*P	**P**	**06 11 49.9**	**0.0**
	comp=Z,22nm,0.8s,mb5.0						
HIA	**Hailar**	**69.58**	**332**	*e*P	**P**	**06 11 49.9**	**0.0**
HIA				pmax	pmax		
	comp=Z,22nm,0.8s						
LZH	**Lanzhou**	**71.04**	**314**	*e*P	**P**	**06 12 00.3**	**+1.2**
LZH				pP	pP	06 12 21.8	-0.3
LZH				sP	sP	06 12 35.5	+3.6
LZH				PP	PP	06 14 41.6	+3.7
LZH				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.0						
LZH				pmax	pmax		
	comp=Z,97nm,8.0s						
LZH				LR	LR		
	comp=E,440nm,16.5s						
LZH				LR	LR		
	comp=Z,510nm,19.2s						
MIR	**Mirnyy**	**72.12**	**203**	⇓*i*P	**P**	**06 12 05.4**	**+0.3**
MIR				pmax	pmax		
	comp=Z,125nm,1.4s,mb5.5						
ULN	**Ulaanbaatar**	**75.14**	**326**	*e*P	**P**	**06 12 23.3**	**+0.3**
	comp=Z,27nm,1.1s,mb4.9						
ULN	**Ulaanbaatar**	**75.14**	**326**	*e*P	**P**	**06 12 23.3**	**+0.3**
ULN				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.9						
GTA	**Gaotai**	**75.41**	**315**	P	**P**	**06 12 25.3**	**+0.5**
GTA				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.6						
GTA				pmax	pmax		
	comp=Z,150nm,8.5s						
SONM	**Songino Array**	**75.49**	**325**	P	**P**	**06 12 24.5**	**-0.5**
	comp=Z,17nm,0.9s,mb4.8,baz=132,slow=5.9,SNR=49						
SONM				LR	LR	06 41 37.4	
	comp=Z,169nm,21.7s,baz=215,slow=32						
SONM	**Songino Array**	**75.49**	**325**	P	**P**	**06 12 24.5**	**-0.5**
YAK	**Yakutsk**	**76.14**	**345**	*e*P	**P**	**06 12 26.7**	**-1.7**
YAK				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.1						
SHL	**Shillong**	**76.34**	**299**	*e*PKP	**P**	**06 12 30.0**	**-0.4**
OHAK	**Old Harbor**	**76.80**	**23**	*e*P	**P**	**06 12 31.9**	**-0.4**
	comp=Z,43nm,1.2s,mb5.0						
KDAK	**Kodiak Island**	**77.47**	**23**	P	**P**	**06 12 35.9**	**-0.1**
	comp=Z,15nm,0.7s,mb4.8,baz=213,slow=2.3,SNR=11						
KDAK	**Kodiak Island**	**77.47**	**23**	*e*P	**P**	**06 12 35.7**	**-0.2**
	comp=Z,17nm,0.8s,mb4.8						
KDAK	**Kodiak Island**	**77.47**	**23**	*i* P	**P**	**06 12 35.6**	**-0.4**
KDAK	**Kodiak Island**	**77.47**	**23**	P	**P**	**06 12 36.0**	**0.0**
	comp=Z,133nm,0.8s,mb5.7,SNR=7.2						
BOD	**Bodaibo**	**78.00**	**336**	*e*P	**P**	**06 12 37.5**	**-1.4**
BOD				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
BILL	**Bilibino**	**78.14**	**2**	*e*P	**P**	**06 12 39.1**	**-0.3**
	comp=Z,49nm,1.2s,mb5.1						
BILL	**Bilibino**	**78.14**	**2**	*c i*P	**P**	**06 12 39.1**	**-0.4**
BILL				*e*		06 12 48.6	
BILL				*e**SP	sP	06 13 05.6	-6.9
BILL				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.1						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s						
ZAK	**Zakamensk**	**78.59**	**326**	⇑*i

comp=Z,6.4nm,1.0s,mb4.5
WMQ Urumqi 85.48 316 P **P 06 13 18.0 -0.6**
WMQ pmax pmax
comp=Z,14nm,1.0s,mb4.8
SKAG Skagway 85.75 27 *eP* **P 06 13 19.6 +0.1**
comp=Z,9.0nm,1.0s,mb4.7
EGAK Eagle 86.14 21 *eP* **P 06 13 21.5 +0.2**
comp=Z,64nm,1.3s,mb5.4
WDC Whiskeytown Da 86.23 48 *eP* **P 06 13 22.4 0.0**
comp=Z,18nm,1.3s,mb4.8
WDC Whiskeytown Da 86.23 48 *eP* **P 06 13 22.4 +0.1**
WDC pmax pmax
comp=Z,18nm,1.3s,mb4.8
DAWY Dawson 86.39 22 *eP* **P 06 13 22.8 +0.2**
YBH Yreka Blue Hor 86.44 47 *eP* **P 06 13 23.7 +0.3**
comp=Z,18nm,1.4s,mb4.8
YBH Yreka Blue Hor 86.44 47 *eP* **P 06 13 23.7 +0.3**
YBH pmax pmax
comp=Z,18nm,1.4s
HUMO Hull Mountain 86.52 46 *eP* **P 06 13 24.1 +0.3**
comp=Z,17nm,1.3s,mb4.8
SMMC Simmler 86.73 53 ⇑P **P 06 13 25.3 +0.4**
baz=87
F03A Seaside 87.10 42 ⇓P **P 06 13 26.8 +0.3**
baz=87
CMB Columbia Colle 87.14 51 *eP* **P 06 13 25.9 -0.9**
comp=Z,8.6nm,1.1s,mb4.6
CMB Columbia Colle 87.14 51 *eP* **P 06 13 25.9 -0.9**
CMB pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
E03A Lebam 87.29 42 ⇑P **P 06 13 27.8 +0.4**
baz=87
SCI San Clemente I 87.32 56 ⇓P **P 06 13 27.6 -0.2**
baz=87
VES Vestal, Richgr 87.59 53 ⇑P **P 06 13 29.1 0.0**
baz=88
G04A Mulino 87.61 43 ⇓P **P 06 13 29.8 +0.8**
baz=88
ARVC Arvin 87.61 54 ⇑P **P 06 13 29.2 0.0**
baz=88
H04A Detroit Lake 87.66 44 ⇓P **P 06 13 29.1 -0.1**
baz=88
PASC Pasadena Art C 87.90 55 *eP* **P 06 13 28.8 -1.7**
WCN Washoe City 87.94 50 ⇓P **P 06 13 30.3 -0.3**
baz=88
WCN Washoe City 87.94 50 *eP* **P 06 13 30.6 -0.1**
comp=Z,25nm,2.0s,mb4.9
WCN Washoe City 87.94 50 *eP* **P 06 13 30.6 -0.1**
WCN pmax pmax
comp=Z,25nm,2.0s,mb4.9
WAKR Walker 87.98 50 *eP* **P 06 13 30.5 -0.3**
comp=Z,35nm,1.9s,mb5.1
K05A Summer Lake 88.01 46 ⇓P **P 06 13 31.9 +1.0**
baz=88
MWC Mount Wilson 88.01 55 *eP* **P 06 13 30.8 -0.3**
comp=Z,64nm,1.6s,mb5.4
MWC Mount Wilson 88.01 55 *eP* **P 06 13 30.8 -0.3**
MWC pmax pmax
comp=Z,64nm,1.6s,mb5.4
ISA Isabella 88.02 53 ⇑P **P 06 13 30.4 -0.8**
baz=88,SNR=10
ISA Isabella 88.02 53 *eP* **P 06 13 29.2 -1.9**
comp=Z,21nm,1.4s,mb5.0
ISA Isabella 88.02 53 *eP* **P 06 13 29.2 -1.9**
ISA pmax pmax
comp=Z,21nm,1.4s,mb5.0
MOD Modoc 88.22 47 *eP* **P 06 13 32.2 +0.3**
comp=Z,7.4nm,1.3s,mb4.6
EDW2 Edwards Air Fo 88.22 54 P **P 06 13 32.3 +0.2**
baz=88,SNR=9.7
PAHR Pah Rah Range 88.32 49 *eP* **P 06 13 31.5 -0.9**
comp=Z,16nm,1.2s,mb4.9
BFSC Mount Baldy Ra 88.34 55 ⇑P **P 06 13 32.7 0.0**
baz=88,SNR=7.0
MURC Murrieta 88.56 56 ⇑P **P 06 13 33.8 0.0**
baz=89
LRMC Laurel Mountai 88.60 54 ⇑P **P 06 13 34.1 +0.2**
baz=89,SNR=24
BAR Barrett 88.79 57 *eP* **P 06 13 34.6 -0.2**
comp=Z,21nm,1.4s,mb5.0
NVAR Mina Array Bea 88.82 51 P **P 06 13 33.9 -1.0**
comp=Z,8.6nm,0.9s,mb4.8,baz=233,slow=6.4,SNR=35
NVAR LR LR 06 42 47.6
comp=Z,138nm,22.0s,baz=78,slow=28
NVAR Mina Array Bea 88.82 51 P **P 06 13 33.9 -1.0**
NVAR LR LR 06 42 47.6
G06A Carlson Farm, 88.87 44 ⇑P **P 06 13 35.0 +0.1**
baz=89
MPMC Manual Prospec 88.89 53 ⇑P **P 06 13 36.0 +0.7**
baz=89,SNR=13
MONP Monument Peak 89.04 56 ⇑P **P 06 13 36.4 +0.4**
baz=89,SNR=21
PFO Pinyon Flat Ob 89.17 56 ⇓P **P 06 13 36.7 +0.1**
baz=89,SNR=7.5
PFO Pinyon Flat Ob 89.17 56 *eP* **P 06 13 36.8 +0.2**
comp=Z,21nm,1.5s,mb5.0
PFO Pinyon Flat Ob 89.17 56 *eP* **P 06 13 36.8 +0.2**
PFO pmax pmax
comp=Z,21nm,1.5s,mb5.0
RPW Rockport 89.17 40 *eP* **P 06 13 32.5 -3.7**
comp=Z,3.5nm,0.7s,mb4.5
GRAC Grapevine Rang 89.20 52 ⇑P **P 06 13 36.8 +0.1**
baz=89,SNR=15
DVTC Desert V Tower 89.25 57 P **P 06 13 37.5 +0.5**
baz=89,SNR=8.4
GSC Goldstone 89.26 54 ⇓P **P 06 13 37.0 0.0**
baz=89,SNR=10
GSC Goldstone 89.26 54 *eP* **P 06 13 36.9 -0.1**
comp=Z,22nm,1.4s,mb5.0
GSC Goldstone 89.26 54 *eP* **P 06 13 36.9 -0.1**
GSC pmax pmax
comp=Z,22nm,1.4s,mb5.0
I07A Izee 89.35 45 ⇓P **P 06 13 37.8 +0.7**
baz=89,SNR=12
FURC Furnace Creek, 89.48 53 ⇓P **P 06 13 38.5 +0.5**
baz=90,SNR=22
HEC Hector,Ludlow 89.54 55 ⇑P **P 06 13 38.5 +0.2**
baz=90,SNR=13
WVOR Wild Horse Val 89.55 47 *eP* **P 06 13 38.7 +0.5**
comp=Z,46nm,1.4s,mb5.4
WVOR Wild Horse Val 89.55 47 *eP* **P 06 13 38.7 +0.6**
WVOR pmax pmax
comp=Z,46nm,1.4s,mb5.4
SWSC Sam W. Stewart 89.56 57 ⇑P **P 06 13 38.9 +0.4**
baz=90,SNR=9.9
BELC Belle Mtn. Jos 89.63 55 P **P 06 13 39.2 +0.5**
baz=90,SNR=22
ETW Entiat 89.71 42 *eP* **P 06 13 38.7 0.0**
comp=Z,15nm,1.2s,mb5.0
SHOC Shoshone 89.81 54 ⇑P **P 06 13 39.8 +0.2**
baz=90,SNR=22
J08A Circle Bar Ran 89.89 46 ⇑P **P 06 13 40.5 +0.8**
baz=90,SNR=10
U10A Ash Meadows, A 89.89 53 ⇑P **P 06 13 40.5 +0.6**
baz=90,SNR=15
MK31 Makanchi Array 89.99 318 *eP* **P 06 13 38.9 -1.2**
MK31 Makanchi Array 89.99 318 *eP* **P 06 13 38.9 -1.2**
MKAR Makanchi Array 89.99 318 P **P 06 13 38.2 -1.9**
comp=Z,4.9nm,0.8s,mb4.7,baz=102,slow=5.6,SNR=24
MKAR Makanchi Array 89.99 318 P **P 06 13 38.2 -1.9**
BC3 Big Chuckawall 90.00 56 ⇓P **P 06 13 40.9 +0.4**
baz=90,SNR=13
TUQ Turquoise Moun 90.00 54 ⇑P **P 06 13 40.8 +0.4**
baz=90,SNR=19
G08A Pilot Rock 90.03 44 ⇑P **P 06 13 40.2 -0.1**
baz=90,SNR=15
GMRC Granite Mounta 90.07 55 ⇑P **P 06 13 41.1 +0.4**
baz=90,SNR=15
E08A Dider Farm, El 90.26 43 ⇓P **P 06 13 41.6 +0.2**
baz=90,SNR=6.9
IRM Iron Mountain 90.35 55 ⇓P **P 06 13 42.8 +0.7**
baz=90,SNR=21
GLA Glamis 90.38 57 ⇓P **P 06 13 43.3 +1.0**
baz=90
GLA Glamis 90.38 57 *eP* **P 06 13 41.8 -0.5**
comp=Z,8.4nm,0.9s,mb4.9
GLA Glamis 90.38 57 *eP* **P 06 13 41.8 -0.5**
GLA pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
ZALV Zalesovo Beam 90.39 325 P **P 06 13 39.1 -2.6**
comp=Z,1.7nm,0.6s,mb4.4,baz=101,slow=6.3,SNR=5.0
ZALV LR LR 06 50 20.5
comp=Z,62nm,19.9s,baz=258,slow=33
ZALV Zalesovo Beam 90.39 325 P **P 06 13 39.1 -2.7**
V11A Goodsprings 90.47 54 ⇓P **P 06 13 42.9 +0.3**
baz=91,SNR=15
D08A Wollman Farm, 90.49 42 ⇑P **P 06 13 42.6 +0.2**
baz=91,SNR=6.1
B08A Colville Reser 90.55 41 ⇑P **P 06 13 42.1 -0.6**
baz=91,SNR=9.6
INK Inuvik 90.56 20 *eP* **P 06 13 41.0 -1.3**
comp=Z,11nm,1.3s,mb4.8
INK Inuvik 90.56 20 *eP* **P 06 13 41.0 -1.3**
INK pmax pmax
comp=Z,11nm,1.3s
LDFC Landfair 90.57 55 *eP* **P 06 13 42.9 -0.2**
comp=Z,55nm,1.3s,mb5.5
OD2 Odessa Site #2 90.72 42 *eP* **P 06 13 43.6 +0.2**
comp=Z,53nm,1.3s,mb5.5
Y12C Blythe 90.77 56 ⇓P **P 06 13 44.7 +0.6**
baz=91,SNR=6.7
E09A Wood Farm, Sta 90.88 43 ⇓P **P 06 13 44.2 0.0**
baz=91,SNR=14
R11A Troy Canyon, C 90.88 51 ⇓P **P 06 13 44.9 +0.5**
baz=91,SNR=25
V12A Nelson 90.91 54 ⇓P **P 06 13 44.7 0.0**
baz=91,SNR=13
C09A Chrisman Ranch 91.10 42 ⇓P **P 06 13 45.4 +0.2**
baz=91,SNR=5.9
PDMCI Parker Dam,Lak 91.20 56 ⇓P **P 06 13 46.5 +0.4**
baz=91
T12A Moapa 91.22 53 ⇓P **P 06 13 46.7 +0.6**
baz=91,SNR=5.8
SYO Syowa Base 91.27 198 *eP* **P 06 13 45.0 -0.7**
U12A Valley of Fire 91.30 53 ⇓P **P 06 13 47.0 +0.5**
baz=91,SNR=12
F10A Beach Ranch, E 91.37 44 ⇓P **P 06 13 46.7 +0.1**
baz=92,SNR=17
Z13A Yuma Proving G 91.38 57 ⇑P **P 06 13 47.3 +0.4**
baz=91,SNR=8.7
X13A Yucca 91.51 55 ⇓P **P 06 13 47.8 +0.3**
baz=92
NVS Novosibirsk 91.53 326 *eP* **P 06 13 41.6 -5.4**
W13A Hualapai Mount 91.56 55 ⇑P **P 06 13 47.7 0.0**
baz=92
V13A Grand Canyon W 91.63 54 ⇓P **P 06 13 48.6 +0.7**
baz=92,SNR=23
U13A Pakoon Wash 91.75 53 ⇓P **P 06 13 49.3 +0.7**
baz=92,SNR=13
MFID Camas Ranch 91.78 46 ⇓P **P 06 13 49.2 +0.7**
baz=92
214A Organ Pipe Nat 91.84 58 ⇑P **P 06 13 49.6 +0.6**
baz=92
T13A Saint George 91.92 53 ⇓P **P 06 13 49.7 +0.4**
baz=92,SNR=24
NEW Newport 91.96 41 ⇑P **P 06 13 49.0 -0.2**
baz=92,SNR=13
NEW Newport 91.96 41 *eP* **P 06 13 48.9 -0.3**
comp=Z,20nm,1.2s,mb5.2
NEW Newport 91.96 41 *eP* **P 06 13 48.9 -0.3**
NEW pmax pmax
comp=Z,21nm,1.2s
S13A Holt Ranch, En 92.06 52 ⇑P **P 06 13 50.4 +0.5**
baz=92,SNR=20
R13A O'Grain Ranch, 92.10 52 ⇑P **P 06 13 51.0 +0.9**
baz=92,SNR=10.0
W14A Seligman 92.23 55 ⇑P **P 06 13 51.6 +0.9**
baz=92,SNR=11
X14A Yava 92.24 56 ⇓P **P 06 13 50.9 0.0**
baz=92
V14A Boquillas Ranc 92.29 54 ⇑P **P 06 13 51.6 +0.5**
baz=92,SNR=9.2
I12A Atlanta 92.35 46 ⇑P **P 06 13 51.9 +0.8**
baz=92,SNR=24
U14A Mt Trumbull 92.38 54 ⇓P **P 06 13 52.1 +0.7**
baz=92,SNR=17
ARUT Antelope Range 92.43 52 *eP* **P 06 13 51.7 +0.1**
comp=Z,15nm,1.3s,mb5.1
ARUT Antelope Range 92.43 52 *eP* **P 06 13 51.7 +0.1**
ARUT pmax pmax
comp=Z,15nm,1.3s,mb5.1
C11A Tepee Creek (N 92.44 42 ⇑P **P 06 13 51.6 +0.2**
baz=92,SNR=10
G12A Big Creek, Yel 92.49 45 ⇑P **P 06 13 52.1 +0.3**
baz=93,SNR=46
E12A Beaver Dam Sad 92.59 43 ⇓P **P 06 13 52.1 -0.1**
baz=93
Y15A Casa Rosa Ranc 92.60 56 ⇓P **P 06 13 52.7 +0.2**
baz=93
F12A Elk City 92.67 44 ⇑P **P 06 13 52.5 -0.1**
baz=93,SNR=29
H12A Diamond D Ranc 92.70 45 ⇓P **P 06 13 53.0 +0.3**
baz=93,SNR=14
X15A Humboldt 92.78 56 ⇓P **P 06 13 53.7 +0.3**
baz=93,SNR=6.0
Q14A Sevier Lake (B 92.78 51 ⇑P **P 06 13 53.7 +0.4**
baz=93,SNR=11
HLID Hailey 92.82 46 ⇓P **P 06 13 53.5 +0.2**
baz=93,SNR=22
HLID Hailey 92.82 46 *eP* **P 06 13 53.7 +0.4**
comp=Z,18nm,1.2s,mb5.3
D12A Red Ives Fores 92.87 43 ⇓P **P 06 13 53.7 +0.2**
baz=93
J13A Cove Ranch, Pi 92.96 47 ⇓P **P 06 13 54.3 +0.4**
baz=93,SNR=5.3
P14A Drum Mountains 93.05 50 ⇓P **P 06 13 54.4 -0.1**
baz=93,SNR=6.5
V15A Kaibab Nationa 93.07 54 ⇑P **P 06 13 54.9 +0.2**
baz=93
U15A North Rim 93.08 54 ⇑P **P 06 13 54.8 +0.1**
baz=93,SNR=8.1
I13A Wildhorse Cree 93.10 46 ⇓P **P 06 13 55.3 +0.8**
baz=93,SNR=47
H13A Challis 93.13 45 ⇓P **P 06 13 54.9 +0.2**
baz=93,SNR=33
G13A Cobalt 93.24 45 ⇓P **P 06 13 55.0 -0.2**
baz=93,SNR=22
S15A Panguitch 93.25 52 ⇑P **P 06 13 56.4 +0.9**
baz=93
KURK Kurchatov 93.27 321 *eP* **P 06 13 53.7 -1.5**
comp=Z,2.5nm,0.4s,mb4.9
KURK Kurchatov 93.27 321 *eP* **P 06 13 53.7 -1.5**
KURK pmax pmax
comp=Z,2.0nm,0.4s,mb4.8
Y16A Circle Bar Ran 93.29 56 ⇑P **P 06 13 55.4 -0.3**
baz=93
F13A Darby 93.31 44 P **P 06 13 55.2 -0.3**
baz=93,SNR=32
DUG Dugway 93.36 50 ⇓P **P 06 13 55.2 -0.6**
baz=93
L14A Malta 93.38 48 ⇑P **P 06 13 56.2 +0.3**
baz=94,SNR=9.7
BSMT Bassoo Peak 93.41 42 *eP* **P 06 13 55.3 -0.6**
comp=Z,11nm,1.4s,mb5.0
X16A Lo Mia Camp, P 93.41 56 ⇓P **P 06 13 56.4 +0.2**
baz=94
J14A Carey 93.41 47 ⇓P **P 06 13 57.1 +1.0**
baz=94
217A Green Valley 93.48 59 ⇓P **P 06 13 57.1 +0.5**
baz=94,SNR=6.7
K14A Jones Ranch, D 93.52 48 ⇑P **P 06 13 56.6 +0.1**
baz=94,SNR=6.9
E13A Victor 93.53 44 ⇓P **P 06 13 56.4 -0.1**
baz=94,SNR=8.4
MSU Marysvale 93.54 52 *eP* **P 06 13 56.9 +0.2**
comp=Z,12nm,1.5s,mb5.0
MSU Marysvale 93.54 52 *eP* **P 06 13 56.9 +0.1**
MSU pmax pmax
comp=Z,12nm,1.5s,mb5.0
I14A Mackay 93.57 46 P **P 06 13 57.6 +0.8**
baz=94,SNR=20
117A Oracle 93.68 58 ⇑P **P 06 13 57.8 +0.2**
baz=94,SNR=6.4
H14A Leadore 93.76 46 ⇓P **P 06 13 58.4 +0.8**
baz=94,SNR=22
Y17A Roosevelt 93.78 57 ⇓P **P 06 13 58.2 +0.3**
baz=94
M15A Larsen Ranch, 93.86 49 ⇓P **P 06 13 58.2 +0.1**
baz=94
K15A Arbon 94.01 48 ⇓P **P 06 13 59.6 +0.8**
baz=94
R16A Teasdale 94.04 52 ⇓P **P 06 14 00.2 +1.1**
baz=94,SNR=5.5
MCMT McKenzie Canyo 94.16 45 *eP* **P 06 13 59.6 +0.2**
comp=Z,4.3nm,1.2s,mb4.7
J15A Blackfoot 94.20 47 ⇓P **P 06 14 00.7 +1.0**
baz=94
CHMT Chamberlain Mo 94.25 43 *eP* **P 06 13 59.4 -0.4**
comp=Z,7.8nm,1.6s,mb4.8
H15A Lima 94.27 46 ⇓P **P 06 14 00.6 +0.7**
baz=94
I15A Monteview 94.27 46 ⇓P **P 06 14 01.1 +1.1**
baz=94
118A Homack Ranch, 94.33 58 ⇑P **P 06 14 00.5 0.0**
baz=94
DLMT Dillon 94.43 45 *eP* **P 06 14 01.0 +0.4**
comp=Z,13nm,1.4s,mb5.1
Y18A Canyon Day Jun 94.46 57 ⇑P **P 06 14 02.0 +0.9**
baz=94
G15A Dillon 94.47 45 ⇑P **P 06 14 01.3 +0.5**
baz=95,SNR=9.7
E15A Deer Lodge 94.58 44 P **P 06 14 01.6 +0.2**
baz=95,SNR=5.5
F15A Butte 94.58 44 ⇑P **P 06 14 01.6 +0.3**
baz=95,SNR=5.6
LRM Limekiln Ridge 94.61 44 *eP* **P 06 14 01.2 -0.2**
comp=Z,51nm,1.1s,mb5.9
X18A Snowflake 94.65 56 ⇑P **P 06 14 02.5 +0.6**
baz=95
R17A Hanksville Air 94.66 52 ⇑P **P 06 14 02.2 +0.3**
baz=95,SNR=6.2
319A Douglas 94.70 59 ⇓P **P 06 14 03.2 +0.9**
baz=95
219A White Tail Can 94.82 58 ⇓P **P 06 14 02.5 -0.3**
baz=95,SNR=7.4
C15A Salmond Ranch, 94.84 42 ⇓P **P 06 14 02.2 -0.2**
baz=95
B15A Bradely Ranch, 94.96 42 ⇑P **P 06 14 02.1 -0.9**
baz=95
A15A Johnson Ranch, 94.96 41 ⇓P **P 06 14 01.9 -1.1**
baz=95
G16A Moss Hill, Enn 94.96 45 ⇑P **P 06 14 03.4 +0.3**
baz=95,SNR=6.8
I16A Newdale 94.96 46 ⇑P **P 06 14 03.9 +0.8**
baz=95,SNR=7.8
T18A Mexican Hat 95.11 53 ⇓P **P 06 14 05.0 +1.0**
baz=95
Y19A Nutrioso 95.13 57 ⇑P **P 06 14 04.0 -0.2**
baz=95,SNR=6.8
BOZ Bozeman (W) 95.15 45 ⇑P **P 06 14 04.5 +0.6**
baz=95
BOZ Bozeman (W) 95.15 45 *eP* **P 06 14 03.8 -0.1**
comp=Z,3.1nm,0.8s,mb4.8
BOZ Bozeman (W) 95.15 45 *eP* **P 06 14 03.8 -0.1**
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
F16A Kennard Place, 95.17 45 ⇑P **P 06 14 04.2 +0.2**
baz=95,SNR=5.9
E16A East Helena 95.26 44 ⇓P **P 06 14 05.1 +0.7**
baz=95
H16A Russell Place, 95.26 46 P **P 06 14 05.3 +0.9**
baz=95,SNR=8.9
R18A Canyonlands Na 95.29 52 ⇑P **P 06 14 05.6 +0.8**
baz=95
C16A Fuhringer Ranc 95.41 43 ⇓P **P 06 14 04.5 -0.6**
baz=96,SNR=6.7
U19A Dine' College, 95.52 54 ⇑P **P 06 14 06.3 +0.5**
baz=96
A16A West Butte Ran 95.69 41 P **P 06 14 06.0 -0.3**
baz=96,SNR=5.6
G17A Pierce Place, 95.72 45 ⇑P **P 06 14 06.5 -0.1**
baz=96
R19A Curley Farm, L 95.77 52 ⇓P **P 06 14 08.2 +1.3**
baz=96
E17A Martinsdale 95.81 44 ⇑P **P 06 14 07.2 +0.3**
baz=96
X20A Quemado 95.83 56 ⇓P **P 06 14 07.0 -0.3**
baz=96
Y20A Horse Springs, 95.84 57 ⇑P **P 06 14 07.1 -0.3**
baz=96
F17A Fitzpatrick Pl 95.86 45 ⇑P **P 06 14 07.4 +0.3**
baz=96,SNR=7.5
C17A Wharram Farm, 96.04 43 ⇓P **P 06 14 07.9 -0.1**
baz=96
B17A L&G Farms, Che 96.12 42 ⇓P **P 06 14 08.0 -0.3**
baz=96,SNR=5.9
PDAR Pinedale Array 96.19 48 P **P 06 14 07.9 -0.9**
comp=Z,0.9nm,0.8s,mb4.2,baz=184,slow=2.1,SNR=5.9
PDAR LR LR 06 49 31.0
comp=Z,101nm,21.1s,baz=278,slow=30
YKA Yellowknife Ar 96.24 28 P **P 06 14 07.2 -1.3**
comp=Z,2.9nm,0.6s,mb4.9,baz=257,slow=4.6,SNR=3.9
YKA LR LR 06 52 11.2
comp=Z,13nm,19.6s,baz=305,slow=32
YKA Yellowknife Ar 96.24 28 P **P 06 14 07.2 -1.3**
YKA LR LR 06 52 11.2
YKA Yellowknife Ar 96.24 28 P **P 06 14 07.2 -1.3**
A17A Triple J Farms 96.28 42 ⇑P **P 06 14 08.9 -0.1**
baz=96,SNR=11
PV01 Paradox Valley 96.28 52 *eP* **P 06 14 09.8 +0.5**
E18A Harlowton 96.47 44 ⇑P **P 06 14 09.8 -0.1**
baz=96,SNR=8.6
F18A Big Timber 96.51 45 ⇓P **P 06 14 09.4 -0.7**
baz=97
EGMT Eagleton 96.77 43 ⇑P **P 06 14 11.0 -0.3**
baz=97
U21A Nageezi 96.77 54 ⇓P **P 06 14 12.2 +0.6**
baz=97,SNR=5.9
B18A Beardsley Farm 96.81 42 ⇓P **P 06 14 10.8 -0.6**
baz=97
F19A Roth Farm, Mol 97.04 45 ⇓P **P 06 14 13.0 +0.4**
baz=97
C19A Slack Wire Ran 97.20 43 ⇑P **P 06 14 13.3 0.0**
baz=97
E19A Rath Farm, Rou 97.22 44 ⇑P **P 06 14 13.9 +0.5**
baz=97,SNR=10
D19A Cripps Ranch, 97.25 43 ⇓P **P 06 14 13.8 +0.3**
baz=97,SNR=5.6
B19A Brinkman Farms 97.36 42 ⇓P **P 06 14 14.0 +0.1**
baz=97
ANMO Albuquerque 97.55 56 *eP* **P 06 14 14.9 -0.2**
comp=Z,3.7nm,1.1s,mb4.8
ANMO Albuquerque 97.55 56 *eP* **P 06 14 14.9 -0.2**
ANMO pmax pmax
comp=Z,4.0nm,1.1s
F20A Billings 97.58 45 ⇑P **P 06 14 15.3 +0.3**
baz=98
Q22A Crested Butte, 97.67 52 ⇑P **P 06 14 16.4 +0.9**
baz=98
E20A Meyer Farm, Mu 97.68 44 ⇑P **P 06 14 16.2 +0.8**
baz=98,SNR=9.6
D20A Manuel Ranch, 97.74 44 ⇑P **P 06 14 15.8 +0.1**
baz=98,SNR=5.1
C20A Veseth Ranch, 97.90 43 ⇑P **P 06 14 16.2 -0.1**
baz=98
A20A Cobblestone Ra 98.08 42 ⇑P **P 06 14 16.3 -0.8**
baz=98,SNR=5.5
E21A Keefer Ranch, 98.41 44 ⇓P **P 06 14 19.5 +0.8**
baz=98,SNR=6.0
VNA3 Neumayer Olymp 98.49 183 *eP* **P 06 14 13.7 -4.9**
B21A Ellsworth Farm 98.64 42 ⇓P **P 06 14 18.7 -1.0**
baz=99,SNR=8.5
VNA2 Neumayer--Watz 98.68 184 *eP* **P 06 14 15.0 -4.4**
A21A Bergtoll Ranch 98.75 42 ⇓P **P 06 14 20.2 +0.1**
baz=99
LAO LASA Array 99.01 44 ⇑P **P 06 14 22.1 +0.8**
baz=99,SNR=5.7
TXAR Lajitas Array 99.24 62 P **P 06 14 22.1 -0.7**
comp=Z,0.3nm,0.7s,mb4.0,baz=235,slow=4.4,SNR=4.6
TXAR LR LR 06 50 56.3
comp=Z,150nm,20.9s,baz=170,slow=30
TXAR Lajitas Array 99.24 62 P **P 06 14 22.1 -0.7**
TXAR LR LR 06 50 56.2
TXAR Lajitas Array 99.24 62 P **P 06 14 22.1 -0.7**
ARCES ARCESS Array B 114.42 344 PKP PKiKP 06 19 18.3 -1.2
comp=Z,2.1nm,0.8s,baz=60,slow=2.0,SNR=7.4
ARCES ARCESS Array B 114.42 344 PKP PKiKP 06 19 18.3 -1.2
ARCES ARCESS Array B 114.42 344 PKIKP PKiKP 06 19 18.3 -1.2
BOSA Boshof 122.66 226 PKP PKPdf 06 19 34.3 -2.3
comp=Z,3.6nm,0.7s,baz=297,slow=9.1,SNR=4.0
BOSA Boshof 122.66 226 PKIKP PKPdf 06 19 34.3 -2.3
AKASG Malin Array Be 123.78 325 PKP PKPdf 06 19 35.8 -2.2
comp=Z,2.5nm,0.7s,baz=57,slow=3.1,SNR=7.7
AKASG Malin Array Be 123.78 325 PKIKP PKPdf 06 19 35.8 -2.2
LPAZ La Paz 124.40 118 PKP PKPdf 06 19 37.8 -2.4
comp=Z,2.6nm,0.8s,baz=309,slow=1.7,SNR=12
LPAZ La Paz 124.40 118 PKIKP PKPdf 06 19 37.8 -2.4
ROSC El Rosal 124.60 91 PKP PKPdf 06 19 38.8 -1.9
comp=Z,1.2nm,0.5s,baz=94,slow=8.2,SNR=4.5
NOA NORSAR Array B 124.72 343 PKP PKPdf 06 19 38.0 -1.5
comp=Z,1.3nm,0.8s,baz=339,slow=1.9,SNR=3.8
NOA NORSAR Array B 124.72 343 PKIKP PKPdf 06 19 38.0 -1.5
BRTR Keskin Array B 125.21 312 PKP PKPdf 06 19 39.6 -1.5
comp=Z,1.1nm,0.9s,baz=29,slow=2.8,SNR=4.0
BRTR Keskin Array B 125.21 312 PKIKP PKPdf 06 19 39.6 -1.5
CPUP Villa Florida 127.72 135 PKP PKPdf 06 19 43.9 -2.5
comp=Z,1.4nm,0.7s,baz=81,slow=1.9,SNR=5.7
CPUP Villa Florida 127.72 135 PKIKP PKPdf 06 19 43.9 -2.5
SDV Santo Domingo 128.76 87 *e*PKPdf PKPdf 06 19 47.5 -1.1
KHC Kasperske Hory 132.84 331 *e*PKIKP PKPdf 06 19 51.7 -3.6
KHC Kasperske Hory 132.84 331 *e*PKPdf PKPdf 06 19 51.7 -3.6
GERES GERESS Array B 132.98 331 PKP PKPdf 06 19 54.0 -1.6

comp=Z,0.4nm,0.4s,baz=139,slow=2.8,SNR=4.1
GERES **GERESS Array B** 132.98 331 PKIKP PKPdf 06 19 54.0 -1.6
CABF **La Chapelle** 138.08 334 *e*PKIKP PKPdf 06 20 04.3 -0.9
comp=Z,23nm,1.1s
CABF **La Chapelle** 138.08 334 *e*PKIKP PKPdf 06 20 04.3 -0.9
LOR **Lormes** 138.45 337 *e*PKIKP PKPdf 06 20 03.6 -2.3
LOR **Lormes** 138.45 337 *e*PKIKP PKPdf 06 20 03.6 -2.3
SMF **Signal de Mont** 138.97 336 *e*PKIKP PKPdf 06 20 05.1 -1.7
comp=Z,5.0nm,0.6s
SMF **Signal de Mont** 138.97 336 *e*PKIKP PKPdf 06 20 05.1 -1.7
GRR **Gorron** 139.13 342 *e*PKIKP PKPdf 06 20 05.1 -2.0
comp=Z,32nm,1.1s
GRR **Gorron** 139.13 342 *e*PKIKP PKPdf 06 20 05.1 -2.0
ROSF **Rostrenen** 139.87 344 *e*PKIKP PKPdf 06 20 05.9 -2.5
comp=Z,44nm,1.2s
ROSF **Rostrenen** 139.87 344 *e*PKIKP PKPdf 06 20 05.9 -2.5
LMR **La Mourre** 140.42 331 *e*PKIKP PKPdf 06 20 06.9 -2.7
comp=Z,17nm,0.9s
LMR **La Mourre** 140.42 331 *e*PKIKP PKPdf 06 20 06.9 -2.7
RJF **Les Rejaudoux** 140.99 337 *e*PKIKP PKPdf 06 20 09.2 -1.3
comp=Z,16nm,1.0s
RJF **Les Rejaudoux** 140.99 337 *e*PKIKP PKPdf 06 20 09.2 -1.3
CAF **Calviac** 141.09 336 *e*PKIKP PKPdf 06 20 09.0 -1.7
comp=Z,9.6nm,0.8s
CAF **Calviac** 141.09 336 *e*PKIKP PKPdf 06 20 09.0 -1.7
BDFB **Brasilia** 141.19 131 PKhKP PKPpre 06 20 03.3
comp=Z,2.2nm,0.6s,baz=205,slow=14,SNR=3.9
MTLF **Montolieu** 142.34 335 *e*PKIKP PKPdf 06 20 10.6 -2.4
comp=Z,15nm,0.9s
MTLF **Montolieu** 142.34 335 *e*PKIKP PKPdf 06 20 10.6 -2.4
EPF **Esparros** 143.36 336 *e*PKIKP PKPdf 06 20 12.4 -2.4
comp=Z,9.5nm,0.8s
EPF **Esparros** 143.36 336 *e*PKIKP PKPdf 06 20 12.4 -2.4
ETSF **Etsaut** 143.82 337 *e*PKIKP PKPdf 06 20 14.1 -1.5
comp=Z,17nm,0.7s
ETSF **Etsaut** 143.82 337 *e*PKIKP PKPdf 06 20 14.1 -1.5
SJPF **Ste Jean** 143.88 338 *e*PKIKP PKPdf 06 20 13.9 -1.8
comp=Z,46nm,1.2s
SJPF **Ste Jean** 143.88 338 *e*PKIKP PKPdf 06 20 13.9 -1.8
KEST **Kesra** 144.07 319 PKP PKPdf 06 20 12.8 -3.5
comp=Z,5.3nm,1.0s,baz=237,slow=2.1,SNR=7.9
CMAH **Djebel Manchou** 144.69 322 P PKPdf 06 20 15.0 -2.4
ABSA **Djebel Ababsia** 144.89 322 P PKPdf 06 20 15.0 -2.7
CKFL **Kef-Lekhel** 145.26 323 P PKPbc 06 20 17.3 -0.9
CASM **Ain Smara** 145.49 323 P PKPdf 06 20 19.0 +0.2
DFRA **Djebel Bou Aff** 145.66 324 P PKPdf 06 20 20.0 +1.0
SET **Setif** 146.18 324 P PKPdf 06 20 20.0 +0.1
PBRG **Braganca** 146.85 344 *e*PKPdf PKPdf 06 20 22.3 +1.4
MVO **Moncorvo** 147.52 344 *e*PKPdf PKPbc 06 20 24.3 -0.4
MVO **Moncorvo** 147.52 344 *e*PKPab pPKPdf 06 20 42.4 -4.5
PVRL **Vila Real** 147.60 345 *e*PKPdf PKPbc 06 20 24.8 -0.1
PVRL **Vila Real** 147.60 345 *e*PKPab pPKPdf 06 20 42.7 -4.3
ESDC **Sonseca Array** 147.89 338 PKPbc PKPbc 06 20 23.8 -1.9
comp=Z,0.6nm,0.4s,baz=19,slow=2.1,SNR=9.8
PVIS **Viseu** 148.17 344 *e*PKPdf PKPbc 06 20 26.4 0.0
PVIS **Viseu** 148.17 344 *e*PKPab pPKPdf 06 20 43.2 -4.8
MTE **Manteigas** 148.37 344 *e*PKPdf PKPbc 06 20 26.8 -0.2
MTE **Manteigas** 148.37 344 *e*PKPbc PKPbc 06 20 26.1 -0.9
PCBR **Castelo Branco** 148.88 343 *e*PKPdf PKPbc 06 20 28.0 -0.3
PCBR **Castelo Branco** 148.88 343 *e*PKPab pPKPdf 06 20 45.8 -3.4
PMRV **Marv??o** 149.23 343 *e*PKPdf PKPbc 06 20 29.0 -0.2
PMRV **Marv??o** 149.23 343 *e*PKPab pPKPdf 06 20 46.7 -3.1
PTOM **Tomar** 149.34 344 *e*PKPdf PKPbc 06 20 29.2 -0.2
PTOM **Tomar** 149.34 344 *e*PKPab pPKPdf 06 20 46.9 -3.0
PESTR **Estremoz** 149.81 343 *e*PKPdf PKPdf 06 20 25.3 -0.5
EVO **Evora** 150.24 343 *e*PKP1 PKPbc 06 20 30.5 -1.2
comp=Z,41nm,1.1s
EVO **Evora** 150.24 343 *e*PKPdf PKPbc 06 20 31.6 -0.1
EVO **Evora** 150.24 343 *e*PKPab pPKPdf 06 20 49.2 -2.2
EVOP **Sao Brissos** 150.28 343 *e*PKP PKPbc 06 20 30.5 -1.3
EVOP **Sao Brissos** 150.28 343 *e*PKIKP PKPbc 06 20 30.5 -1.3
PBAR **Barrancos** 150.28 341 *e*PKPdf PKPbc 06 20 31.6 -0.2
PBEJ **Beja** 150.67 342 *e*PKPdf PKPbc 06 20 32.6 -0.1
PBEJ **Beja** 150.67 342 *e*PKPab pPKPdf 06 20 50.9 -1.2
PCVE **Castro Verde** 151.09 342 *e*PKPdf PKPbc 06 20 33.6 -0.1
PCVE **Castro Verde** 151.09 342 *e*PKPab pPKPdf 06 20 51.8 -0.9
PVAQ **Vaqueiros** 151.20 342 *e*PKPdf PKPbc 06 20 34.0 0.0
PTEO **Sao Teotonio** 151.37 343 *e*PKPdf PKPbc 06 20 34.3 -0.1
PBDV **Barranco-do-Ve** 151.41 342 *e*PKPdf PKPdf 06 20 28.4 +0.1
MORF **Marmelete** 151.57 343 *e*PKPdf PKPbc 06 20 34.5 -0.3
MORF **Marmelete** 151.57 343 *e*PKPab pPKPdf 06 20 52.5 -1.0
TORD **Torodi Ar. Bea** 159.87 280 PKP PKPdf 06 20 38.9 -1.3
comp=Z,5.5nm,0.9s,baz=41,slow=1.4,SNR=5.4
LIC **Lamto** 165.95 255 *e*PKP2 PKPab 06 21 44.6 -2.0
comp=Z,96nm,1.7s

ROM ***24*** *06:06:56.6±0.3, 44°.37N×7°.30E, h15km±5km, Md2.2/12, Ml1.8/6, Error ellipse: s-maj=4.0km s-min=2.8km az=40.0*
LDG ***24*** *06:06:56.9±0.1, 44°.40N×7°.34E, h10km, Md2.5/2, Ml2.6/8, Error ellipse: s-maj=1.9km s-min=0.8km az=67.0*
CSEM ***24*** *06:06:56.3±0.1, 44°.39N×7°.31E, h20km, ML2.6/12, Error ellipse: s-maj=1.9km s-min=1.2km az=73.0*
NEIC ***24*** *06:06:56.6, 44°.37N×7°.30E, h15km, ML2.6(LDG), ML2.4(STR), After ROM.*
ISCJB ***24*** *06:06:57.0±0.3, 44°.38N±0°.02×7°.31E±0°.03, h16km±4km, Error ellipse: s-maj=3.9km s-min=2.5km az=160.3*
STR ***24*** *06:06:57.6±0.2, 44°.37N×7°.31E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 24 06:06:56.8±0.3, 44°.38N±0°.02×7°.33E±0°.03, h16km±2km, n67, σ0s75/123, 3C-5D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.13**	**334**	⇓*i*Pg	**Pg**	**06 07 01.0**	**+0.4**
DOI				Sg	**Sg**	**06 07 03.4**	**+0.2**
DOI	**San Damiano**	**0.13**	**334**	⇓*i*Pg	**Pg**	**06 07 01.0**	**+0.4**
DOI				Sg	**Sg**	**06 07 03.4**	**+0.2**
DOI	**San Damiano**	**0.13**	**334**	⇓*i*Pg	**Pg**	**06 07 01.0**	**+0.4**
DOI				Sg	**Sg**	**06 07 03.4**	**+0.2**
STV	**Sant Anna di V**	**0.14**	**181**	⇑*i*Pg	**Pg**	**06 07 00.7**	**0.0**
STV				Sg	**Sg**	**06 07 02.7**	**-0.5**
STV	**Sant Anna di V**	**0.14**	**181**	⇑*i*Pg	**Pg**	**06 07 00.7**	**0.0**
STV				Sg	**Sg**	**06 07 02.7**	**-0.5**
STV	**Sant Anna di V**	**0.14**	**181**	⇑*i*Pg	**Pg**	**06 07 00.7**	**0.0**
STV				Sg	**Sg**	**06 07 02.7**	**-0.5**
PZZ	**Stroppo**	**0.20**	**309**	⇓*i*Pg	**Pg**	**06 07 01.7**	**+0.2**
PZZ				Sg	**Sg**	**06 07 04.7**	**0.0**
PZZ	**Stroppo**	**0.20**	**309**	⇓*i*Pg	**Pg**	**06 07 01.7**	**+0.2**
PZZ				Sg	**Sg**	**06 07 04.7**	**0.0**
TOUF	**Mont Tournerai**	**0.38**	**189**	Pg	**Pg**	**06 07 04.6**	**+0.1**
TOUF				Sg	**Sg**	**06 07 09.0**	**-0.7**
TOUF	**Mont Tournerai**	**0.38**	**189**	Pg	**Pg**	**06 07 04.6**	**+0.1**
TOUF				Sg	**Sg**	**06 07 09.0**	**-0.7**
SURF	**Saint Ours**	**0.38**	**285**	Pg	**Pg**	**06 07 04.9**	**+0.3**
SURF				Sg	**Sg**	**06 07 10.2**	**+0.3**
SURF	**Saint Ours**	**0.38**	**285**	Pg	**Pg**	**06 07 04.9**	**+0.3**
SURF				Sg	**Sg**	**06 07 10.2**	**+0.3**
AUTN	**L'Aution**	**0.40**	**170**	Pg	**Pg**	**06 07 05.1**	**+0.2**
AUTN				Sg	**Sg**	**06 07 10.4**	**+0.1**
AUTN	**L'Aution**	**0.40**	**170**	Pg	**Pg**	**06 07 05.1**	**+0.2**
AUTN				Sg	**Sg**	**06 07 10.4**	**+0.1**
SAOF	**Saorge**	**0.43**	**158**	Pg	**Pg**	**06 07 05.7**	**+0.2**
SAOF				Sg	**Sg**	**06 07 11.1**	**-0.2**
SAOF	**Saorge**	**0.43**	**158**	Pg	**Pg**	**06 07 05.7**	**+0.2**
SAOF				Sg	**Sg**	**06 07 11.1**	**-0.2**
LUCF	**Luceram**	**0.49**	**178**	Pg	**Pg**	**06 07 06.8**	**+0.2**
LUCF				Sg	**Sg**	**06 07 13.4**	**+0.2**
LUCF	**Luceram**	**0.49**	**178**	Pg	**Pg**	**06 07 06.8**	**+0.2**
LUCF				Sg	**Sg**	**06 07 13.4**	**+0.2**
MVIF	**Mont Vial**	**0.50**	**195**	Pg	**Pg**	**06 07 06.9**	**0.0**
MVIF				Sg	**Sg**	**06 07 13.7**	**+0.1**
MVIF	**Mont Vial**	**0.50**	**195**	Pg	**Pg**	**06 07 06.9**	**0.0**
MVIF				Sg	**Sg**	**06 07 13.7**	**+0.1**
MBDF	**Montbardon**	**0.53**	**311**	*e*Pg	**Pg**	**06 07 07.3**	**0.0**
MBDF				*e*Sg	**Sg**	**06 07 13.9**	**-0.4**
58nm,0.3s							
MBDF	**Montbardon**	**0.53**	**311**	*e*Pg	**Pg**	**06 07 07.3**	**0.0**
MBDF				*e*Sg	**Sg**	**06 07 13.9**	**-0.4**
29nm,0.3s							
SBF	**Sospel**	**0.53**	**172**	*e*Pg	**Pg**	**06 07 07.5**	**+0.2**
SBF				*e*Sg	**Sg**	**06 07 14.2**	**-0.1**
149nm,0.4s							
SBF	**Sospel**	**0.53**	**172**	*e*Pg	**Pg**	**06 07 07.5**	**+0.2**
SBF				*e*Sg	**Sg**	**06 07 14.2**	**-0.1**
74nm,0.4s							
RORO	**Rocca Rossa**	**0.60**	**117**	Pg	**Pg**	**06 07 08.7**	**+0.1**
RORO				Sg	**Sg**	**06 07 16.7**	**+0.2**
RORO	**Rocca Rossa**	**0.60**	**117**	Pg	**Pg**	**06 07 08.7**	**+0.1**
RORO				Sg	**Sg**	**06 07 16.7**	**+0.2**
RORO	**Rocca Rossa**	**0.60**	**117**	Pg	**Pg**	**06 07 08.7**	**+0.1**
RORO				Sg	**Sg**	**06 07 16.7**	**+0.2**
IMI	**Imperia**	**0.62**	**139**	Pg	**Pg**	**06 07 09.2**	**+0.1**
IMI				Sg	**Sg**	**06 07 17.5**	**+0.1**
IMI	**Imperia**	**0.62**	**139**	Pg	**Pg**	**06 07 09.2**	**+0.1**
IMI				Sg	**Sg**	**06 07 17.5**	**+0.1**
64nm,0.1s							
IMI	**Imperia**	**0.62**	**139**	Pg	**Pg**	**06 07 09.2**	**+0.1**
IMI				Sg	**Sg**	**06 07 17.5**	**+0.1**
64nm,0.1s							
REVF	**Revere**	**0.65**	**177**	Pg	**Pg**	**06 07 10.1**	**+0.6**
REVF				Sg	**Sg**	**06 07 18.5**	**+0.5**
REVF	**Revere**	**0.65**	**177**	Pg	**Pg**	**06 07 10.1**	**+0.6**
REVF				Sg	**Sg**	**06 07 18.5**	**+0.5**
CALN	**Calern**	**0.71**	**207**	Pg	**Pg**	**06 07 10.8**	**+0.2**
CALN				Sg	**Sg**	**06 07 20.1**	**+0.1**
CALN	**Calern**	**0.71**	**207**	Pg	**Pg**	**06 07 10.8**	**+0.2**
CALN				Sg	**Sg**	**06 07 20.1**	**+0.1**
QLNO	**Quiliano**	**0.73**	**94**	Pg	**Pg**	**06 07 11.5**	**+0.4**
QLNO	**Quiliano**	**0.73**	**94**	Pg	**Pg**	**06 07 11.5**	**+0.4**
32nm,0.2s							
QLNO	**Quiliano**	**0.73**	**94**	Pg	**Pg**	**06 07 11.5**	**+0.4**
32nm,0.2s							
RSP	**Reno Superiore**	**0.77**	**357**	Pg	**Pg**	**06 07 10.4**	**-1.4**
RSP				Sg	**Sg**	**06 07 19.8**	**-2.1**
RSP	**Reno Superiore**	**0.77**	**357**	Pg	**Pg**	**06 07 10.4**	**-1.4**
RSP				Sg	**Sg**	**06 07 19.8**	**-2.1**
RSP	**Reno Superiore**	**0.77**	**357**	Pg	**Pg**	**06 07 10.4**	**-1.4**
RSP				Sg	**Sg**	**06 07 19.8**	**-2.1**
MONC	**Moncucco Torin**	**0.81**	**32**	Pg	**Pg**	**06 07 13.6**	**+1.0**
76nm,0.8s							
MONC	**Moncucco Torin**	**0.81**	**32**	Pg	**Pg**	**06 07 13.6**	**+1.0**
76nm,0.8s							
BNI	**Bardonecchia**	**0.81**	**325**	Pg	**Pg**	**06 07 12.5**	**-0.2**
BNI	**Bardonecchia**	**0.81**	**325**	Pg	**Pg**	**06 07 12.5**	**-0.2**
9.0nm,0.3s							
BNI	**Bardonecchia**	**0.81**	**325**	Pg	**Pg**	**06 07 12.5**	**-0.2**
9.0nm,0.3s							
PCP	**Piancastagn**	**0.89**	**79**	Pg	**Pg**	**06 07 14.2**	**+0.2**
PCP				Sg	**Sg**	**06 07 26.3**	**+0.6**
PCP	**Piancastagn**	**0.89**	**79**	Pg	**Pg**	**06 07 14.2**	**+0.2**
PCP				Sg	**Sg**	**06 07 26.3**	**+0.6**
82nm,1.3s							
PCP	**Piancastagn**	**0.89**	**79**	Pg	**Pg**	**06 07 14.2**	**+0.2**
PCP				Sg	**Sg**	**06 07 26.3**	**+0.6**
82nm,1.3s							
FRF	**La Foret Royal**	**0.96**	**211**	*e*Pg	**Pg**	**06 07 14.8**	**-0.6**
FRF				*e*Sg	**Sg**	**06 07 26.9**	**-1.1**
49nm,0.2s							
FRF	**La Foret Royal**	**0.96**	**211**	*e*Pg	**Pg**	**06 07 14.8**	**-0.6**
FRF				*e*Sg	**Sg**	**06 07 26.9**	**-1.1**
24nm,0.2s							
LSD	**Lago del Serru**	**1.08**	**353**	Pg	**Pg**	**06 07 16.6**	**-1.2**
LSD	**Lago del Serru**	**1.08**	**353**	Pg	**Pg**	**06 07 16.6**	**-1.2**
20nm,0.3s							
LSD	**Lago del Serru**	**1.08**	**353**	Pg	**Pg**	**06 07 16.6**	**-1.2**
20nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.16**	**298**	*e*Pg	**Pn**	**06 07 19.0**	**+0.6**
ORIF				*e*Sg	**Sn**	**06 07 34.4**	**+0.5**
8.9nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.16**	**298**	*e*Pg	**Pn**	**06 07 19.0**	**+0.6**
ORIF				*e*Sg	**Sn**	**06 07 34.4**	**+0.5**
4.4nm,0.3s							
LPG	**La Plagne**	**1.19**	**340**	*e*Pg	**Pn**	**06 07 19.1**	**+0.4**
LPG				*e*Sg	**Sn**	**06 07 34.4**	**-0.1**
10nm,0.3s							
LPG	**La Plagne**	**1.19**	**340**	*e*Pg	**Pn**	**06 07 19.1**	**+0.4**
LPG				*e*Sg	**Sn**	**06 07 34.4**	**-0.1**
5.1nm,0.3s							
LMR	**La Mourre**	**1.21**	**210**	*e*Pg	**Pn**	**06 07 19.2**	**+0.2**
LMR				*e*Sn	**Sn**	**06 07 33.3**	**-1.6**
39nm,0.2s							
LMR	**La Mourre**	**1.21**	**210**	*e*Pg	**Pn**	**06 07 19.2**	**+0.2**
LMR				*e*Sn	**Sn**	**06 07 33.3**	**-1.6**
19nm,0.2s							
LPL	**La Plagne**	**1.21**	**340**	*e*Pg	**Pn**	**06 07 19.4**	**+0.4**
LPL				*e*Sg	**Sn**	**06 07 35.0**	**-0.1**
7.8nm,0.3s							
LPL	**La Plagne**	**1.21**	**340**	*e*Pg	**Pn**	**06 07 19.4**	**+0.4**
LPL				*e*Sg	**Sn**	**06 07 35.0**	**-0.1**
3.9nm,0.3s							
SMRF	**Simiane la Rot**	**1.33**	**253**	*e*Pg	**Pn**	**06 07 22.3**	**+1.7**
SMRF				*e*Sg	**Sn**	**06 07 39.5**	**+1.6**
18nm,0.2s							
SMRF	**Simiane la Rot**	**1.33**	**253**	*e*Pg	**Pn**	**06 07 22.3**	**+1.7**
SMRF				*e*Sg	**Sn**	**06 07 39.5**	**+1.6**
8.9nm,0.2s							
VIVF	**Saint-Julien-l**	**1.95**	**285**	*e*P	**Pn**	**06 07 30.9**	**+1.6**
VIVF				*e*Sn	**Sn**	**06 07 51.9**	**-1.5**
2.7nm,0.3s							
VIVF	**Saint-Julien-l**	**1.95**	**285**	*e*P	**Pn**	**06 07 30.9**	**+1.6**
VIVF				*e*Sn	**Sn**	**06 07 51.9**	**-1.5**
1.4nm,0.3s							
PGF	**Pioggiola**	**2.20**	**146**	*e*Pn	**Pn**	**06 07 32.1**	**-0.6**
SNR=1.0							
PGF				*e*Sn	**Sn**	**06 07 57.2**	**-2.3**
20nm,1.0s,SNR=1.0							
PGF	**Pioggiola**	**2.20**	**146**	*e*Pn	**Pn**	**06 07 32.1**	**-0.6**
SNR=1.0							
PGF				*e*Sn	**Sn**	**06 07 57.2**	**-2.3**
9.9nm,1.0s,SNR=1.0							

NEIC ***24*** *06:20:35.5, 16°.50N×100°.04W, h14km, MD4.2(MEX), After MEX.*

MEX 24 06:20:35.5±1.7, 16°.50N×100°.04W, h14km±21km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.41**	**25**	*e*P	Pg	06 20 42.2	-1.6
ACX				*i* S	Sg	06 20 48.8	-0.5
ACX	**Acapulco**	**0.41**	**25**	*e*P	Pg	06 20 42.2	-1.6
ACX				*i* S	Sg	06 20 48.8	-0.5
CAIG	**El Cayaco**	**0.59**	**338**	*i* P	Pg	06 20 44.0	-3.0
CAIG				*i* S	Sg	06 20 52.6	-2.3
CAIG	**El Cayaco**	**0.59**	**338**	*i* P	Pg	06 20 44.0	-3.0
CAIG				*i* S	Sg	06 20 52.6	-2.3
MEIG	**Mezcala**	**1.48**	**16**	*e*P	Pn	06 20 58.3	-3.4
MEIG				*i* S	Sn	06 21 16.9	-3.9
ZIIG	**Zihuatanejo**	**1.75**	**309**	*e*P	Pn	06 21 03.9	-1.5
ZIIG				*i* S	Sn	06 21 23.6	-3.9
ZIIG	**Zihuatanejo**	**1.75**	**309**	*e*P	Pn	06 21 03.9	-1.5
ZIIG				*i* S	Sn	06 21 23.6	-3.9
PNIG	**Pinotepa**	**1.84**	**93**	*i* P	Pn	06 21 03.5	-3.2
PNIG				*i* S	Sn	06 21 24.3	-5.4
PNIG	**Pinotepa**	**1.84**	**93**	*i* P	Pn	06 21 03.5	-3.2
PNIG				*i* S	Sn	06 21 24.3	-5.4
PLIG	**Platanillo**	**1.95**	**15**	*i* P	Pn	06 21 05.8	-2.4
PLIG				*i* S	Sn	06 21 29.1	-3.4
PLIG	**Platanillo**	**1.95**	**15**	*i* P	Pn	06 21 05.8	-2.4
PLIG				*i* S	Sn	06 21 29.1	-3.4
UTMO	**Huajuapan**	**2.52**	**58**	*e*P	Pn	06 21 13.2	-2.7
UTMO				*i* S	Sn	06 21 43.6	-2.8
YAIG	**Yautepec**	**2.53**	**21**	*i* P	Pn	06 21 13.3	-2.8
YAIG	**Yautepec**	**2.53**	**21**	*i* P	Pn	06 21 13.3	-2.8
VHO	**Vista Hermosa**	**3.22**	**79**	*e*P	Pn	06 21 24.4	-1.2
VHO				*i* S	Sn	06 21 59.5	-4.3
VHO	**Vista Hermosa**	**3.22**	**79**	*e*P	Pn	06 21 24.4	-1.2
VHO				*i* S	Sn	06 21 59.5	-4.3
MOIG	**Morelia**	**3.34**	**341**	*e*P	Pn	06 21 23.7	-3.6
MOIG				*i* S	Sn	06 22 03.7	-3.2
MOIG	**Morelia**	**3.34**	**341**	*e*P	Pn	06 21 23.7	-3.6
MOIG				*i* S	Sn	06 22 03.7	-3.2
MMIG	**Aquila**	**3.62**	**300**	*e*P	Pn	06 21 22.6	-8.6

JMA 24 06:27:24.6±0.5, 44°.06N×148°.02E, h0km, M3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.79**	**248**	P	Pn	06 27 56.9	+0.2
NEM2				*e*S	Sn	06 28 20.1	-0.1
JRA	**Rausu**	**2.10**	**268**	P	Pn	06 28 01.6	+0.7
JNK	**Nakash**	**2.44**	**260**	P	Pn	06 28 06.3	+0.7
JNK				*e*S	Sn	06 28 37.1	+1.0
JAK	**Akkeshi**	**2.64**	**247**	P	Pn	06 28 09.1	+0.7
JAR	**Ashorobuto**	**3.18**	**258**	P	Pn	06 28 17.5	+1.7
JAR				*e*S	Sn	06 28 57.3	+3.0
JCH	**Churui**	**3.69**	**249**	P	Pn	06 28 24.9	+2.0
JCH				*e*S	Sn	06 29 09.3	+2.2
JNBK	**Urakawa-nobuka**	**4.24**	**247**	P	Pn	06 28 32.2	+1.8
JKB	**Kayabe**	**5.57**	**249**	P	Pn	06 28 50.2	+1.6

IDC ***24*** *06:35:13.8±1.1, 4°.74S×151°.67E, h0km, mb4.2/11, mb1 4.3/12, mb1mx4.2/18, mbtmp4.2/12, ML3.9/1, MS4.0/1, Ms1 4.0/1, ms1mx2.9/26, Error ellipse: s-maj=39.8km s-min=17.0km az=107.0*
ISCJB ***24*** *06:35:17.6±0.9, 4°.75S±0°.08×151°.5E±0°.2, h33km, mb4.5/17, Error ellipse: s-maj=25.6km s-min=10.4km az=14.4*
NEIC ***24*** *06:35:19.7±2.4, 4°.76S×151°.53E, h37km±21km, mb4.3/2, Error ellipse: s-maj=21.2km s-min=13.6km az=97.0*

ISC 24 06:35:19.5±0.9, 4°.77S±0°.08×151°.6E±0°.2, h35km, n24, σ0s78/23, mb4.5/17, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.35**	**223**	*e*Pn	**Pn**	**06 36 50.6**	**0.0**
28nm,0.7s							
CTA	**Charters Tower**	**16.08**	**198**	Pn	**Pn**	**06 39 03.7**	**+0.6**
0.3nm,0.3s,baz=323,slow=5.1,SNR=2.2							
CTA	**Charters Tower**	**16.08**	**198**	Pn	**Pn**	**06 39 03.7**	**+0.6**
KAKA	**Kakadu**	**20.46**	**246**	*e*P	**P**	**06 39 52.9**	**-1.5**
18nm,0.5s							
WRA	**Warramunga Arr**	**22.55**	**227**	P	**P**	**06 40 16.6**	**-0.1**
8.9nm,0.7s,mb4.3,baz=50,slow=9.6,SNR=53							
ASAR	**Alice Springs**	**25.35**	**220**	P	**P**	**06 40 44.2**	**+0.8**
5.9nm,0.6s,mb4.3,baz=53,slow=8.8,SNR=65							
ASAR				PcP	PcP	06 44 16.5	+0.8
0.7nm,0.7s,baz=57,slow=3.4,SNR=4.4							
STKA	**Stephens Creek**	**28.54**	**198**	P	**P**	**06 41 12.5**	**+0.5**
2.4nm,0.6s,mb4.1,baz=24,slow=17,SNR=5.3							
FITZ	**Fitzroy Crossi**	**28.59**	**240**	P	**P**	**06 41 11.4**	**-1.3**
2.1nm,0.6s,mb4.1,baz=74,slow=9.0,SNR=12							
FITZ	**Fitzroy Crossi**	**28.59**	**240**	*e*P	**P**	**06 41 11.4**	**-1.3**
2.0nm,0.6s,mb4.0							
CBIJ	**Chichi jima**	**32.95**	**345**	LR	LR	06 52 24.7	
comp=Z,238nm,19.5s,baz=122,slow=31							
CMAR	**Chiang Mai Arr**	**56.74**	**296**	P	**P**	**06 45 01.6**	**+1.2**
2.2nm,0.8s,mb4.2,baz=123,slow=5.9,SNR=8.3							
PETK	**Petropavlovsk-**	**57.89**	**4**	P	**P**	**06 45 07.9**	**+0.1**
5.5nm,1.0s,mb4.5,baz=193,slow=10,SNR=3.8							
SONM	**Songino Array**	**65.64**	**328**	P	**P**	**06 46 01.3**	**+1.2**
1.4nm,0.8s,mb4.1,baz=154,slow=4.1,SNR=6.2							
ODAN	**Odare**	**69.46**	**301**	*e*P	**P**	**06 46 24.9**	**+0.2**
22nm,0.8s,mb5.2							
GUN	**Gumba**	**71.05**	**301**	*e*P	**P**	**06 46 35.0**	**+0.6**
29nm,0.8s,mb5.2							
DMN	**Daman**	**71.62**	**301**	*e*P	**P**	**06 46 38.2**	**+0.3**
23nm,0.8s,mb5.2							
GKN	**Gorkha**	**72.13**	**301**	*e*P	**P**	**06 46 41.1**	**+0.2**
24nm,0.9s,mb5.1							
KOLN	**Koldanda**	**72.95**	**301**	*e*P	**P**	**06 46 46.0**	**+0.1**
19nm,0.8s,mb5.1							
DANN	**Dangsing**	**72.97**	**301**	*e*P	**P**	**06 46 46.1**	**+0.2**
16nm,0.7s,mb5.1							
MKAR	**Makanchi Array**	**79.49**	**319**	P	**P**	**06 47 22.6**	**0.0**
0.7nm,0.8s,mb3.6,baz=99,slow=9.5,SNR=2.5							
ZALV	**Zalesovo Beam**	**80.44**	**327**	P	**P**	**06 47 25.9**	**-1.6**
0.7nm,0.3s,mb4.0,baz=141,slow=9.6,SNR=4.5							
ZALV	**Zalesovo Beam**	**80.44**	**327**	P	**P**	**06 47 25.9**	**-1.6**
ILAR	**Eielson Array**	**82.60**	**22**	P	**P**	**06 47 37.5**	**-1.2**
0.6nm,0.7s,mb3.8,baz=250,slow=5.6,SNR=7.5							
MAW	**Mawson**	**85.12**	**203**	P	**P**	**06 47 51.3**	**-0.3**
2.0nm,0.8s,mb4.3,baz=54,slow=3.7,SNR=4.4							

IDC 24 06:44:29.4±12.0, 24°.74S×178°.43E, h689km±143km, mb3.1/4, mb1 3.4/4, mb1mx3.1/16, mbtmp3.1/4, Error ellipse: s-maj=176.5km s-min=55.7km az=150.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**30.06**	**272**	P	P	06 49 48.5	+0.8
9.4nm,0.6s,baz=95,slow=10,SNR=9.1							
ASAR	**Alice Springs**	**40.49**	**262**	P	P	06 51 12.7	-0.3
2.8nm,0.8s,baz=103,slow=8.3,SNR=24							
WRA	**Warramunga Arr**	**40.93**	**268**	P	P	06 51 16.1	-0.3
3.2nm,0.7s,baz=104,slow=7.9,SNR=18							
NVAR	**Mina Array Bea**	**86.35**	**45**	P	P	06 56 01.5	+0.

KNT	Kendrikon	0.64	175	P	Pg	08 20 50.1	0.0
KNT				S	Sg	08 20 58.7	+0.3
KNT	Kendrikon	0.64	175	P	Pg	08 20 50.1	0.0
KNT				S	Sg	08 20 58.7	+0.3
VTS	Vitosha	0.85	20⇑	iPg	Pg	08 20 53.5	-0.7
VTS				eSg	Sg	08 21 05.1	-0.1
VTS	Vitosha	0.85	20	P	Pg	08 20 53.7	-0.5
VTS				S	Sg	08 21 05.6	+0.4
VTS	Vitosha	0.85	20⇑	iPg	Pg	08 20 53.5	-0.7
VTS	Vitosha	0.85	20	P	Pg	08 20 53.7	-0.5
VTS				eSg	Sg	08 21 05.1	-0.1
VTS				S	Sg	08 21 05.6	+0.4
SRS	Serrai	0.89	139	P	Pg	08 20 54.5	-0.5
SRS				S	Sg	08 21 06.3	-0.3
SRS	Serrai	0.89	139	P	Pg	08 20 54.5	-0.5
SRS				S	Sg	08 21 06.3	-0.3
GRG	Griva	0.89	201	P	Pg	08 20 54.9	-0.2
GRG				S	Sg	08 21 07.3	+0.6
GRG	Griva	0.89	201	P	Pg	08 20 54.9	-0.2
GRG				S	Sg	08 21 07.3	+0.6
NVR	Nevrokopi	0.90	119	ePB	Pg	08 20 54.8	-0.4
NVR				eSB	Sg	08 21 06.5	-0.3
NVR	Nevrokopi	0.90	119	ePg	Pg	08 20 54.8	-0.4
NVR				eSb	Sg	08 21 06.5	-0.3
SOH	Sokhos	1.05	157	P	Pg	08 20 57.8	-0.3
SOH				S	Sg	08 21 11.6	-0.1
SOH	Sokhos	1.05	157	P	Pg	08 20 57.8	-0.3
SOH				S	Sg	08 21 11.6	-0.1
KRUS	Krusevo	1.25	251	ePg	Pg	08 21 01.7	-0.2
BARS	Barje	1.26	324⇑	iPg	Pg	08 21 01.8	-0.4
BARS				eSg	Sg	08 21 18.5	-0.1
BARS	Barje	1.26	324⇑	iPg	Pg	08 21 01.8	-0.4
BARS				eSg	Sg	08 21 18.5	-0.1
PLD	Plovdiv	1.44	77	eSg	Sg	08 21 25.4	+1.2
PLD	Plovdiv	1.44	77	eSg	Sg	08 21 25.4	+1.2
ZAPS	Zavoj	1.48	355⇑	ePg	Pg	08 21 06.0	-0.4
ZAPS				eSg	Sg	08 21 26.3	+0.6
PLG	Polygyros	1.50	161	ePG	Pb	08 21 05.6	-0.6
PLG	Polygyros	1.50	161	ePb	Pb	08 21 05.6	-0.6
KAVA	Kavala	1.50	121	P	Pn	08 21 05.3	-0.3
KAVA				S	Sn	08 21 25.2	-0.4
KAVA	Kavala	1.50	121	P	Pn	08 21 05.3	-0.3
KAVA				S	Sn	08 21 25.2	-0.4
RDO	Rodhopi	2.14	107	ePN	Pn	08 21 17.1	+2.7

*NEIC **24** 08:27:44.9, 16°.47N×100°.28W, h16km, MD3.7(MEX), After MEX.*

MEX 24 08:27:44.5±0.7, 16°.46N×100°.28W, h16km±999km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.57	44	eP	Pg	08 27 53.2	-2.6
ACX				i S	Sg	08 28 00.0	-3.6
ACX	Acapulco	0.57	44	eP	Pg	08 27 53.2	-2.6
ACX				i S	Sg	08 28 00.0	-3.6
CAIG	El Cayaco	0.59	1	i P	Pg	08 27 54.7	-1.5
CAIG				i S	Sg	08 28 01.9	-2.1
CAIG	El Cayaco	0.59	1	i P	Pg	08 27 54.7	-1.5
CAIG				i S	Sg	08 28 01.9	-2.1
MEIG	Mezcala	1.59	23	i P	Pn	08 28 09.3	-2.7
MEIG				i S	Sn	08 28 28.2	-4.0
ZIIG	Zihuatanejo	1.61	315	i P	Pn	08 28 08.8	-3.5
ZIIG				i S	Sn	08 28 27.2	-5.6
ZIIG	Zihuatanejo	1.61	315	i P	Pn	08 28 08.8	-3.5
ZIIG				i S	Sn	08 28 27.2	-5.6
PNIG	Pinotepa	2.06	91	i P	Pn	08 28 16.9	-1.6
PNIG				i S	Sn	08 28 40.4	-3.5
PNIG	Pinotepa	2.06	91	i P	Pn	08 28 14.1	-4.4
PNIG				i S	Sn	08 28 40.4	-3.5
UTMO	Huajuapan	2.73	60	i P	Pn	08 28 24.9	-2.8
UTMO				i S	Sn	08 28 57.2	-3.2
VHO	Vista Hermosa	3.45	79	eP	Pn	08 28 41.7	+4.1
VHO	Vista Hermosa	3.45	79	eP	Pn	08 28 41.7	+4.1

*ISK **24** 08:32:05.5, 39°.47N×33°.11E, h4km, ML2.5*
*DDA **24** 08:32:06.0, 39°.39N×33°.07E, h3km±2km, Md2.9*
*ISCJB **24** 08:32:06.5±0.6, 39°.44N±0°.04×33°.06E±0°.04, h4km±6km, Error ellipse: s-maj=6.3km s-min=4.9km az=164.2*
*CSEM **24** 08:32:06.2±0.1, 39°.39N×33°.01E, h0km±1km, ML2.5, Error ellipse: s-maj=2.8km s-min=1.7km az=14.0*

ISC 24 08:32:07.0±0.5, 39°.45N±0°.04×33°.06E±0°.04, h6km±5km, n27, σ0s95/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	Af¯ar-Bala (A	0.01	140	PG	Pg	08 32 06.6	-1.5
AFSR	Af¯ar-Bala (A	0.01	140	i Pg	Pg	08 32 06.6	-1.5
BBAL	Bala	0.10	27	i P	Pg	08 32 09.6	+0.4
BBAL				i S	Sg	08 32 12.1	+1.4
BBAL	Bala	0.10	27	i P	Pg	08 32 09.6	+0.4
BBAL				i S	Sg	08 32 12.1	+1.4
LOD	Lodumlu	0.49	332	ePG	Pg	08 32 15.6	-0.9
LOD				eSG	Sg	08 32 23.7	+0.7
LOD	Lodumlu	0.49	332	ePg	Pg	08 32 15.6	-0.9
LOD				eSg	Sg	08 32 23.7	+0.7
CDAG	Cicekdag	1.03	80	i P	Pg	08 32 25.5	-1.1
CDAG				i S	Sg	08 32 41.2	+1.2
CDAG	Cicekdag	1.03	80	i P	Pg	08 32 25.5	-1.2
CDAG				i S	Sg	08 32 41.2	+1.2
KIZT	Kizilcal	1.08	238	ePN	Pg	08 32 27.6	-0.2
KIZT				eSN	Sg	08 32 43.4	+1.6
KIZT	Kizilcal	1.08	238	ePn	Pg	08 32 27.6	-0.2
KIZT				eSn	Sg	08 32 43.4	+1.6
SVRH	Sivrihisar-ESK	1.19	270	ePN	Pn	08 32 29.7	-0.5
SVRH	Sivrihisar-ESK	1.19	270	ePn	Pn	08 32 29.7	-0.5
SULT	Sultanhani-AKS	1.30	164	ePN	Pn	08 32 31.3	-0.4
SULT	Sultanhani-AKS	1.30	164	ePn	Pn	08 32 31.3	-0.3
SGKT	Sivrigoynuk	1.36	326	i P	Pn	08 32 32.8	+0.3
SGKT	Sivrigoynuk	1.36	326	i P	Pn	08 32 32.8	+0.3
CORM	Corum	1.41	59	ePN	Pn	08 32 31.6	-1.5
AVNT	Avonos	1.55	115	i P	Pn	08 32 35.4	+0.3
AVNT				i S	Sn	08 32 56.3	+0.9
AVNT	Avonos	1.55	115	i P	Pn	08 32 35.4	+0.4
AVNT				i S	Sn	08 32 56.3	+0.9
KONT	Konya--Tatoy	1.60	200	ePN	Pn	08 32 35.8	+0.1
KONT	Konya--Tatoy	1.60	200	ePn	Pn	08 32 35.8	0.0
YOZ	Yozgat	1.75	83	ePN	Pn	08 32 37.2	-0.6
YOZ	Yozgat	1.75	83	ePn	Pn	08 32 37.2	-0.7
CTKT	Corum	1.77	48	i P	Pn	08 32 39.0	+1.0
CTKT	Corum	1.77	48	i P	Pn	08 32 39.0	+1.0
BALT	Daday	2.09	7	i P	Pg	08 32 46.0	-1.1
BALT	Daday	2.09	7	i P	Pg	08 32 46.0	-1.1

*IDC **24** 08:35:45.1±1.4, 24°.23S×71°.04W, h0km, mb1 3.5/2, mb1mx3.3/17, mbtmp3.3/2, ML3.4/2, Error ellipse: s-maj=84.8km s-min=28.6km az=88.0*
*NEIC **24** 08:35:52.5, 24°.41S×70°.05W, h45km, MD4.1(GUC), After GUC.*
*GUC **24** 08:35:52.5±0.6, 24°.41S×70°.05W, h45km±2km, MD4.1, ML3.7*

ISC 24 08:35:53.0±1.3, 24°.41S±0°.05×70°.1W±0°.1, h25km±13km, n14, σ0s69/19, 3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	Antofagasta	0.78	338	iP	Pb	08 36 07.9	-0.1
ANCH				i S	Sb	08 36 18.7	+0.6
ANCH	Antofagasta	0.78	338	iP	Pb	08 36 07.9	-0.1
ANCH				i S	Sb	08 36 18.7	+0.6
ANCH				AML	AML	08 36 20.6	
	comp=E,5μm,0.3s						
MECH	Mejillones	1.34	346	iP	Pn	08 36 15.8	-0.4
MECH				i S	Sn	08 36 33.5	+0.2
MECH				AML	AML	08 36 48.2	
	comp=N,2μm,0.7s						
SPCH	San Pedro de A	2.29	50	eP	Pn	08 36 29.3	0.0
SPCH				i S	Sn	08 36 57.1	+0.3
SPCH	San Pedro de A	2.29	50	eP	Pn	08 36 29.3	0.0
SPCH				i S	Sn	08 36 57.1	+0.3
SPCH				AML	AML	08 37 11.7	
	comp=E,886nm,0.3s						
TOCH	Tocopilla	2.31	358	eP	Pn	08 36 29.0	-0.5
TOCH				i S	Sn	08 36 57.3	+0.1
TOCH				AML	AML	08 37 03.2	
	comp=E,655nm,0.2s						
HMBC	Humberston	4.12	3	eP	Pn	08 36 54.7	+0.3
HMBC				eS	Sn	08 37 42.5	+0.6
LCO	Las Campanas	4.61	187	ePn	Pn	08 37 00.9	-0.3
CFAA	Coronel Fontan	7.35	168	Pn	Pn	08 37 39.8	+1.0
	comp=E,0.2nm,0.3s,baz=348,slow=13,SNR=14						
CFAA				Sn	Sn	08 39 08.8	+7.4
	comp=E,0.3nm,0.3s,baz=242,slow=17,SNR=5.9						
LPAZ	La Paz	8.29	13	Pn	Pn	08 37 49.7	-2.1
	comp=E,0.5nm,0.3s,baz=204,slow=5.6,SNR=21						
LPAZ	La Paz	8.29	13	Pn	Pn	08 37 49.7	-2.1
ASAR	Alice Springs	126.84	208	PKP	PKPdf	08 54 51.0	-4.3
	comp=E,0.8nm,1.1s,baz=162,slow=1.5,SNR=4.7						
WRA	Warramunga Arr	129.90	210	PKP	PKPdf	08 54 57.2	-4.0
	comp=E,0.2nm,0.7s,baz=148,slow=1.5,SNR=3.7						
ZALV	Zalesovo Beam	145.04	26	PKPbc	PKPbc	08 55 22.2	-5.1
	comp=E,1.8nm,0.7s,baz=325,slow=1.8,SNR=6.7						

*NEIC **24** 08:40:51.4, 16°.62N×100°.17W, h5km, MD3.8(MEX), After MEX.*

MEX 24 08:40:50.7±1.1, 16°.59N×100°.17W, h5km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.41	47	eP	Pg	08 40 56.9	-1.7
ACX				i S	Sg	08 41 03.7	-0.2
ACX	Acapulco	0.41	47	eP	Pg	08 40 56.9	-1.7
ACX				i S	Sg	08 41 03.7	-0.2
CAIG	El Cayaco	0.46	348	eP	Pg	08 40 58.5	-1.2
CAIG				i S	Sg	08 41 06.7	+1.0
CAIG	El Cayaco	0.46	348	eP	Pg	08 40 58.6	-1.1
CAIG				i S	Sg	08 41 06.7	+1.0
MEIG	Mezcala	1.43	21	i P	Pn	08 41 13.8	-3.5
MEIG				i S	Sb	08 41 31.4	-4.9
ZIIG	Zihuatanejo	1.60	309	i P	Pn	08 41 18.1	-1.5
ZIIG				i S	Sn	08 41 38.0	-2.7
ZIIG	Zihuatanejo	1.60	309	i P	Pn	08 41 17.2	-2.4
ZIIG				i S	Sn	08 41 37.0	-3.7
PLIG	Platanillo	1.90	19	i P	Pn	08 41 19.5	-4.3
PLIG				i S	Sn	08 41 43.8	-4.3
PLIG	Platanillo	1.90	19	i P	Pn	08 41 19.5	-4.3
PLIG				i S	Sn	08 41 43.8	-4.3
PNIG	Pinotepa	1.97	95	i P	Pn	08 41 23.6	-1.1
PNIG				i S	Sn	08 41 47.1	-2.7
PNIG	Pinotepa	1.97	95	i P	Pn	08 41 23.6	-1.1
PNIG				i S	Sn	08 41 47.1	-2.7
UTMO	Huajuapan	2.58	61	i P	Pn	08 41 31.1	-2.0
UTMO				i S	Sn	08 42 01.9	-2.9
VHO	Vista Hermosa	3.33	81	i P	Pn	08 41 49.9	+6.5
VHO				i S	Sn	08 42 15.4	-8.0
VHO	Vista Hermosa	3.33	81	i P	Pn	08 41 49.9	+6.5
VHO				i S	Sn	08 42 15.4	-8.0

*ISCJB **24** 08:59:47.2±0.7, 64°.73N±0°.03×30°.7E±0°.1, h0km, Error ellipse: s-maj=7.0km s-min=4.4km az=6.2*
*HEL **24** 08:59:48.7±0.1, 64°.71N×30°.66E, h0km, ML1.9, ML2.0(NAO), Explosion*
*IDC **24** 08:59:51.6±2.5, 64°.92N×30°.92E, h0km, mb1 3.2/4, mb1mx3.1/27, mbtmp3.2/4, ML2.6/4, Error ellipse: s-maj=36.2km s-min=10.1km az=95.0*
*CSEM **24** 08:59:53.1±0.5, 65°.04N×30°.26E, h1km, ML1.9, Error ellipse: s-maj=11.5km s-min=5.1km az=115.0, Mining explosion.*
*NAO **24** 08:59:53.7±1.1, 65°.05N×30°.70E, ML2.0*
*BER **24** 08:59:55.5±3.1, 65°.06N×30°.79E, h0km±22km, ML2.0(NAO)*

ISC 24 08:59:47.9±0.7, 64°.72N±0°.03×30°.6E±0°.1, h0km, n28, σ0s94/43, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	Riekki	1.35	347	eP	Pg	09 00 13.4	-0.2
KU6				eS	Sg	09 00 30.8	-0.3
KU6				MSG		09 00 39.1	
	comp=Z,15nm,0.2s						
KU6	Riekki	1.35	347	P	Pg	09 00 13.4	-0.2
MSF	Maaselka	1.37	331	eP	Pg	09 00 13.2	-0.8
MSF				eS	Sg	09 00 30.9	-0.9
MSF				MSG		09 00 43.6	
	comp=Z,4.9nm,0.2s						
MSF	Maaselka	1.37	331	P	Pg	09 00 13.2	-0.9
KJN	Kajaani	1.42	245	eP	Pn	09 00 14.3	-0.7
KJN				eS	Sg	09 00 32.0	-1.5
KJN				MSG		09 00 40.3	
	comp=Z,9.6nm,0.2s						
JOF	Joensuu	1.84	170	eP	Pn	09 00 20.7	+0.1
JOF				eS	Sn	09 00 43.9	-0.6
JOF				MSG		09 00 52.8	
	comp=Z,17nm,0.1s						
OUL	Oulu	2.05	282	eP	Pn	09 00 25.2	+1.6
OUL				eS	Sn	09 00 51.0	+1.1
OUL	Oulu	2.05	282	P	Pn	09 00 25.1	+1.5
OUL				S	Sn	09 00 50.9	+1.0
RNF	Rovaniemi	2.69	317	eS	Sn	09 01 06.4	+0.7
RNF				MSG		09 01 18.4	
	comp=Z,7.5nm,0.2s						
APA0	Apatity Array	3.05	17	Pn	Pn	09 00 38.2	+1.0
	baz=201,slow=12						
APA0				Lg		09 01 20.0	
	baz=201,slow=37						
APA0	Apatity Array	3.05	17	eP	Pn	09 00 38.2	+1.0
APA0				eSB	Sb	09 01 20.0	-0.7
APA0	Apatity Array	3.05	17	P	Pn	09 00 38.2	+0.9
APA0				Sb	Sb	09 01 19.9	-0.7
APA0				Lg		09 01 20.0	
	baz=201,slow=31,SNR=90						
FIA0	FINESS Array S	3.89	214	Sn	Sg	09 01 47.9	-4.8
	baz=35,slow=28						
FIA0	FINESS Array S	3.89	214	eSG	Sg	09 01 47.9	-4.8
FIA0	FINESS Array S	3.89	214	Sn	Sg	09 01 47.8	-4.9
	baz=35,slow=28,SNR=50						
FINES	FINESS Array B	3.89	214	Pn	Pn	09 00 54.8	+6.0
	comp=Z,0.4nm,0.3s,baz=33,slow=13,SNR=36						
FINES				Sn	Sg	09 01 48.6	-4.1
	comp=Z,1.2nm,0.3s,baz=20,slow=24,SNR=5.6						
ARA0	ARCESS Array S	5.23	340	Pn	Pn	09 01 07.3	+0.2
	baz=151,slow=14						
ARA0				Sn	Sn	09 02 03.7	-4.4
	baz=139,slow=37						
ARA0				Lg		09 02 28.2	
	baz=151,slow=37						
ARA0	ARCESS Array S	5.23	340	eP	Pn	09 01 07.3	+0.2
ARA0				eS	Sn	09 02 03.7	-4.4
ARA0				eSG	Sg	09 02 28.2	-7.5
ARA0	ARCESS Array S	5.23	340	P	Pn	09 01 07.3	+0.1
ARA0				S	Sn	09 02 03.7	-4.4
ARA0				Sg	Sg	09 02 28.1	-7.6
ARA0				Lg		09 02 28.2	
	baz=151,slow=33						
ARCES	ARCESS Array B	5.23	340	Pn	Pn	09 01 07.6	+0.4
	comp=Z,0.3nm,0.3s,baz=151,slow=13,SNR=14						
ARCES				Sn	Sn	09 02 03.7	-4.4
	comp=Z,0.2nm,0.3s,baz=156,slow=23,SNR=2.8						
ARCES				Lg		09 02 29.7	
	comp=Z,0.6nm,0.3s,baz=150,slow=29,SNR=5.4						
HFS	Hagfors	9.09	247	Pn	Pn	09 02 04.0	+3.9
	baz=48,slow=12						
HFS	Hagfors	9.09	247	Pn	Pn	09 02 01.9	+1.8
	comp=Z,0.2nm,0.3s,baz=74,slow=12,SNR=3.9						
HFS	Hagfors	9.09	247	eP	Pn	09 02 04.0	+3.9
HFS	Hagfors	9.09	247	P	Pn	09 02 04.1	+4.0
	baz=48,slow=12,SNR=47						
NB2	NORSAR Subarra	9.59	256	Pn	Pn	09 02 11.8	+4.8
	baz=55,slow=14						
NB2	NORSAR Subarra	9.59	256	eP	Pn	09 02 11.8	+4.8
NB2	NORSAR Subarra	9.59	256	P	Pn	09 02 11.8	+4.8
	baz=55,slow=13,SNR=47						
NOA	NORSAR Array B	9.59	256	Pn	Pn	09 02 09.5	+2.5
	comp=Z,0.1nm,0.3s,baz=70,slow=14,SNR=2.3						

*BYKL **24** 09:06:43.8±0.8, 57°.33N×119°.38E*

MOS 24 09:06:44.1±1.6, 57°.28N×119°.35E, h15km, mb4.4/1, 5C-4D, Error ellipse: s-maj=39.1km s-min=26.7km az=50.9, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNR	Khani	0.50	136	iPg	Pg	09 06 52.7	-1.2
KHNR				i Sg	Sg	09 06 59.9	-0.7
KHNR				eSb	Sb	09 07 03.5	+2.0
CRS	Chara	0.70	238	ePG	Pg	09 06 57.0	-0.8
CRS				e		09 07 05.9	
				pmax	pmax		
	comp=Z,605nm,0.6s						
CRS				smax			
	comp=E,1μm,0.9s						
CRS	Chara	0.70	238⇑	iPg	Pg	09 06 56.8	-1.0
CRS				Pmax		09 06 58.1	
	comp=E,628nm,0.8s						
CRS				i Sg	Sg	09 07 05.9	-1.1
CRS				Smax		09 07 22.0	
	comp=E,2μm,1.9s						
TUP	Tupik	2.88	173	ePN	Pn	09 07 30.8	+1.4
TUP				e		09 07 36.1	
TUP				eS	Sn	09 08 05.2	+1.5
TUP				e		09 08 13.0	
TUP				pmax	pmax		
	comp=Z,57nm,0.6s						
TUP				smax			
	comp=E,535nm,1.0s						
TUP	Tupik	2.88	173⇑	iPn	Pn	09 07 30.9	+1.5
TUP				⇓iPg	Pg	09 07 35.6	-3.7
TUP				ePgPg		09 07 40.2	
TUP				max		09 07 45.3	
	comp=E,65nm,0.7s						
TUP				e		09 07 48.6	
TUP				i		09 07 57.9	
TUP				i Sg	Sg	09 08 13.0	-3.6
TUP				Smax		09 08 22.9	
	comp=E,514nm,1.1s						
BOD	Bodaibo	2.93	283	ePN	Pn	09 07 31.1	+1.0
BOD				e		09 07 36.4	
BOD				e		09 08 13.1	
BOD				pmax	pmax		
	comp=Z,90nm,0.8s						
BOD				smax			
	comp=N,448nm,0.9s						
BOD	Bodaibo	2.93	283	⇓iPn	Pn	09 07 31.4	+1.3
BOD				ePg	Pg	09 07 35.5	-4.7
BOD				Pmax		09 07 44.2	
	comp=N,90nm,0.8s						
BOD				e		09 07 59.3	
BOD				eSg	Sg	09 08 13.3	-4.9
BOD				Smax		09 08 17.3	
	comp=N,438nm,1.2s						
CLNS	Chul'man	3.06	96	ePN	Pn	09 07 34.8	+3.0
CLNS				e		09 07 40.7	
CLNS				eS	Sn	09 08 11.3	+3.2
CLNS				e		09 08 18.3	
CLNS				pmax	pmax		
	comp=Z,14nm,0.3s						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,44nm,0.4s						
CLNS				pmax	pmax		
	comp=E,11nm,0.3s						
CLNS				pmax	pmax		
	comp=N,30nm,0.4s						
CLNS				smax			
	comp=N,31nm,0.3s						
CLNS				smax			
	comp=E,28nm,0.3s						
CLNS				smax			
	comp=Z,25nm,0.4s						
CLNS				smax			
	comp=N,239nm,0.5s						
CLNS				smax			
	comp=Z,179nm,0.4s						
CLNS				smax			
	comp=E,246nm,0.4s						
CLNS	Chul'man	3.06	96	⇓i	Pn	09 07 35.1	+3.3
CLNS				e		09 08 08.4	
CLNS				eSg	Sg	09 08 18.7	-3.6
IENR	Iengra	3.21	107⇑	iPn	Pn	09 07 36.5	+2.6
IENR				ePg	Pg	09 07 41.5	-4.1
IENR				ePgPg		09 07 43.7	
IENR				e		09 08 12.5	
IENR				i Sg	Sg	09 08 24.1	-3.1
SVKR	Severomuysk	3.40	252	ePn	Pn	09 07 33.8	-2.7
SVKR				e		09 07 41.0	
SVKR				Pg	Pg	09 07 44.1	-5.1
SVKR				Pmax		09 07 50.8	
	comp=E,123nm,0.5s						
SVKR				eSg	Sg	09 08 29.5	-3.7
SVKR				Smax		09 08 36.0	
	comp=E,755nm,0.7s						
UKT	Uakit	3.65	243	ePN	Pn	09 07 49.6	+10
UKT				e		09 08 36.3	
UKT				pmax	pmax		
	comp=Z,47nm,0.5s						
UKT				smax			
	comp=N,220nm,1.1s						
UKT	Uakit	3.65	243⇑	iPg	Pg	09 07 49.8	-4.2
UKT				Pmax		09 07 51.2	
	comp=N,46nm,0.6s						
UKT				e		09 07 55.7	
UKT				eSg	Sg	09 08 36.8	-4.5
UKT				Smax		09 08 47.6	
	comp=N,199nm,0.8s						
TNDR	Tynda	3.68	123	e	Pn	09 07 43.7	+3.3
TNDR				ePg	Pg	09 07 51.5	-3.1
TNDR				e		09 08 24.8	
TNDR				i		09 08 27.3	
TNDR				eSg	Sg	09 08 39.5	-2.8
YOA	Uoyan	4.36	258	eSg	Sg	09 09 00.5	-3.4
YOA				Smax		09 09 10.7	
	comp=N,1μm,2.2s						
KMO	Kumora	4.72	256	ePN	Pn	09 07 53.8	-0.8
KMO				e		09 08 05.6	
KMO	Kumora	4.72	256	ePn	Pn	09 07 54.0	-0.6
KMO				e		09 07 59.1	
KMO				⇓iPg	Pg	09 08 07.9	-6.4
KMO				e		09 08 15.2	
KMO				max		09 08 16.6	
	comp=N,31nm,0.5s						
KMO				i		09 08 41.9	
KMO				eSg	Sg	09 09 09.6	-5.8
KMO				Smax		09 09 24.7	
	comp=N,301nm,1.4s						
YLYR	Ulyunkhan	5.18	246	ePN	Pg	09 08 19.1	-4.1
YLYR				e		09 09 24.0	
YLYR				pmax	pmax		
	comp=Z,20nm,0.6s						
YLYR				smax			
	comp=N,217nm,1.5s						
YLYR	Ulyunkhan	5.18	246	ePn	Pn	09 08 00.2	-0.8
YLYR				ePg	Pg	09 08 16.8	-6.4
YLYR				Pmax		09 08 19.1	
	comp=N,11nm,1.4s						
YLYR				i Sg	Sg	09 09 24.3	-5.9
YLYR				e		09 09 32.2	
YLYR				max		09 09 33.0	
	comp=N,218nm,1.5s						
NIZ	Nizh Angarsk	5.63	259	e	Pb	09 08 20.3	-1.7
NIZ				max		09 08 21.0	
	comp=N,5.0nm,0.1s						
NIZ				e		09 08 43.0	
NIZ				eSg	Sg	09 09 38.5	-6.3
NIZ				Smax		09 09 46.0	
	comp=N,172nm,1.0s						
CIT	Chita	6.25	215	i Sg	Sg	09 10 01.0	-3.5
CIT				Smax			
	comp=N,323nm,1.2s						
SYVR	Suvo	6.44	240	e	Pn	09 08 15.3	-2.9
SYVR				ePg	Pg	09 08 40.4	-6.8
SYVR				Pmax		09 08 43.6	
	comp=N,10.0nm,0.8s						
SYVR				i Sg	Sg	09 10 05.0	-5.4
SYVR				Smax		09 10 15.9	
	comp=N,67nm,1.0s						
OGRR	Ongureny	7.61	246	eSg	Sn	09 10 42.3	+42
OGRR				Smax		09 10 48.9	
	comp=N,84nm,1.3s						
HIA	Hailar	8.03	178	e	Sx	09 10 26.7	
HIA				eSg	Sn	09 10 52.3	+42
KPC	Khapcheranga	8.65	212	e	Sx	09 10 56.6	

comp=N,62nm,2.2s

TRG				e		09 11 39.0	
KAB	**Kabansk**	**9.03**	**240**	eSg	Sn	09 11 27.3	+52
KAB				Smax		09 11 29.4	
comp=N,233nm,0.7s							
LSTR	**Listvyanka**	**10.01**	**243**	e	x	09 10 30.1	
LSTR				eSg	Sn	09 11 57.5	+58
LSTR				Smax		09 12 08.7	
comp=N,108nm,1.9s							
IRK	**Irkutsk**	**10.06**	**246**	eSg	Sn	09 11 57.8	+57
IRK				Smax		09 11 59.0	
comp=N,227nm,0.2s							
TLY	**Talaya**	**10.71**	**245**	eSg	Sn	09 12 14.3	+58
TLY				e		09 12 20.7	
TLY				max		09 12 22.3	
comp=N,37nm,1.9s							
ARS	**Arshan**	**11.18**	**248**	eSg	Sn	09 12 29.3	+62
ARS				Smax		09 12 37.7	
comp=N,74nm,1.8s							
ZAK	**Zakamensk**	**11.72**	**241**	eSg	Sn	09 12 48.0	+67
ZAK				e		09 13 02.0	
ZAK				max		09 13 06.0	
comp=N,33nm,2.0s							
ULN	**Ulaanbaatar**	**12.02**	**224**	eSg		09 12 59.1	
MOY	**Mondy**	**12.05**	**250**	eSg	Sn	09 12 57.1	+68
MOY				Smax		09 13 19.5	
comp=N,74nm,1.8s							

*IDC **24** 09:07:36.2±1.3, 34°.35N×69°.50E, h0km, mb3.7/6, mb1 3.9/10, mb1mx3.7/29, mbtmp3.8/10, ML3.8/4, MS3.3/3, Ms1 3.3/3, ms1mx2.6/36, Error ellipse: s-maj=33.8km s-min=21.4km az=77.0*

*ISCJB **24** 09:07:37.7±1.0, 34°.39N±0°.03×69°.68E±0°.06, h20km±10km, mb3.7/7, MS3.7/2, Error ellipse: s-maj=9.1km s-min=4.0km az=152.1*

*NEIC **24** 09:07:37.7±1.7, 34°.26N×69°.58E, h13km±12km, mb3.8/2, Error ellipse: s-maj=13.7km s-min=8.5km az=51.0*

*BJI **24** 09:07:38.7, 35°.18N×69°.15E, h12km, mb3.9/2, ML3.6/1*

*NNC **24** 09:07:42.4±8.1, 34°.76N×69°.32E, h0km, mb3.8, mpv4.0, Error ellipse: s-maj=91.2km s-min=63.0km az=144.0*

ISC 24 09:07:39.4±0.9, 34°.33N±0°.04×69°.54E±0°.07, h20km±8km, n47, σ1§42/64, mb3.7/7, MS3.7/2, 4C-5D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.46**	**297**	ePg	**Pg**	**09 07 48.2**	**-0.7**
KBL				eSg	**Sg**	**09 07 55.1**	**-0.1**
CEP	**Cherat**	**2.03**	**104**	⇓P	**Pn**	**09 08 15.6**	**+3.2**
CEP				S	**Sn**	**09 08 44.0**	**+6.9**
THW	**Thamme Wali**	**2.39**	**129**	P	**Pn**	**09 08 22.0**	**+4.6**
CHCP	**Chirah Chowk**	**3.16**	**101**	P	**Pn**	**09 08 30.6**	**+2.6**
SDNR	**Sundarnagar**	**6.85**	**112**	ePKP	**Pn**	**09 09 21.5**	**+2.8**
SDNR				eS	**Sn**	**09 10 37.5**	**+1.4**
SMLA	**Simla**	**7.17**	**114**	i P	**Pn**	**09 09 24.3**	**+1.1**
SMLA				i S	**Sn**	**09 10 44.1**	**+0.1**
SMLA				i S	**Sn**	**09 10 44.7**	**+0.7**
SMLA				⇓		09 10 47.8	
comp=E,1μm,0.3s							
SMLA						09 10 49.9	
comp=N,2μm,0.3s							
KSH	**Kashi**	**7.30**	**43**	Pn	**Pn**	**09 09 21.1**	**-3.7**
KSH				Sn	**Sn**	**09 10 35.5**	**-12**
KSH				smax			
comp=N,39nm,0.6s							
KSH				smax			
comp=E,35nm,0.7s							
KHET	**Khetri**	**8.22**	**138**	ePKP	**Pn**	**09 09 39.9**	**+2.3**
KHET				AMb	AMB	09 09 41.5	
comp=Z,2.7nm,0.7s							
KHET				eS	**Sn**	**09 11 10.2**	**+0.2**
DDI	**Dehra Dun**	**8.24**	**117**	ex	x	09 10 02.0	
NDI	**New Delhi**	**8.64**	**129**	ePKP	**Pn**	**09 09 44.5**	**+1.3**
NDI				eS	**Sn**	**09 11 18.0**	**-2.0**
AYAN	**Aya Nagar**	**8.72**	**130**	ePKP	**Pn**	**09 09 46.3**	**+2.0**
AYAN				eS	**Sn**	**09 11 20.7**	**-1.3**
KK31	**Karatay Array**	**8.79**	**5**	⇓Pn	**Pn**	**09 09 45.9**	**+0.7**
comp=Z,4.0nm,0.5s,baz=178,slow=13,SNR=60							
KK31				⇑Sn	**Sn**	**09 11 24.2**	**+0.5**
comp=Z,3.3nm,0.5s,baz=192,slow=22,SNR=4.9							
KKAR	**Karatay Array**	**8.79**	**5**	ePn	**Pn**	**09 09 46.0**	**+0.8**
comp=Z,6.4nm,0.5s							
KKAR				eSn	**Sn**	**09 11 24.7**	**+1.0**
UCH	**Uchtor**	**8.79**	**25**	Pn	**Pn**	**09 09 45.9**	**+0.6**
comp=Z,6.6nm,0.5s							
UCH				eSn	**Sn**	**09 11 21.8**	**-2.1**
EKS2	**Erkin-Say**	**8.95**	**20**	ePn	**Pn**	**09 09 47.3**	**-0.2**
comp=Z,4.9nm,0.6s							
EKS2				eSn	**Sn**	**09 11 25.3**	**-2.4**
AAK	**Ala-Archa**	**9.15**	**24**	Pn	**Pn**	**09 09 53.0**	**+2.9**
comp=Z,0.0nm,0.3s,baz=143,slow=5.4,SNR=11							
AAK				Sn	**Sn**	**09 11 33.1**	**+0.6**
comp=Z,0.0nm,0.3s,baz=319,slow=19,SNR=6.2							
AAK				LR	LR	09 13 13.7	
comp=Z,33nm,18.2s,baz=209,slow=37							
TKM2	**Tokmak 2**	**9.79**	**27**	⇓Pn	**Pn**	**09 10 02.0**	**+3.0**
comp=Z,3.6nm,0.6s							
TKM2				⇑Sn	**Sn**	**09 11 46.6**	**-1.7**
comp=Z,2.5nm,0.7s							
TKM2	**Tokmak 2**	**9.79**	**27**	ePn	**Pn**	**09 09 58.6**	**-0.4**
comp=Z,4.8nm,0.6s							
TKM2				eSn	**Sn**	**09 11 50.0**	**+1.7**
DANN	**Dangsing**	**13.53**	**112**	eSn	**Sn**	**09 13 13.6**	**-6.3**
comp=Z,15nm,0.5s							
KOLN	**Koldanda**	**13.70**	**115**	eSn	**Sn**	**09 13 19.6**	**-4.6**
comp=Z,26nm,0.5s							
GKN	**Gorkha**	**14.37**	**112**	ePn	**Pn**	**09 10 59.9**	**-1.8**
GKN				eSn	**Sn**	**09 13 33.1**	**-7.4**
comp=Z,18nm,0.4s							
DMN	**Daman**	**14.93**	**112**	ePn	**Pn**	**09 11 07.2**	**-2.1**
DMN				eSn	**Sn**	**09 13 47.3**	**-6.8**
comp=Z,23nm,0.7s							
KKN	**Kakani**	**14.97**	**112**	eSn	**Sn**	**09 13 47.5**	**-7.6**
comp=Z,17nm,0.6s							
PKIN	**Phulchoki**	**15.17**	**112**	ePn	**Pn**	**09 11 10.4**	**-2.0**
PKI	**Pulchoki**	**15.18**	**112**	ePn	**Pn**	**09 11 10.8**	**-1.8**
PKI				eSn	**Sn**	**09 13 53.0**	**-7.2**
comp=Z,28nm,0.8s							
MK31	**Makanchi Array**	**15.74**	**34**	P	**Pn**	**09 11 23.7**	**+3.8**
comp=Z,1.5nm,0.6s,baz=211,slow=11,SNR=8.0							
MKAR	**Makanchi Array**	**15.74**	**34**	Pn	**Pn**	**09 11 20.6**	**+0.7**
comp=Z,0.4nm,0.3s,baz=214,slow=11,SNR=9.3							
AB31	**Akbulak array**	**16.52**	**337**	⇑P	**Pn**	**09 11 29.1**	**-0.6**
comp=Z,1.6nm,0.5s,baz=166,slow=12,SNR=34							
ABKAR	**Akbulak array**	**16.52**	**337**	ePn	**Pn**	**09 11 29.0**	**-0.7**
comp=Z,3.0nm,0.5s							
KURK	**Kurchatov**	**17.66**	**19**	ePn	**Pn**	**09 11 42.8**	**-1.2**
comp=Z,13nm,1.1s							
KURK				eSn	**Sn**	**09 15 03.7**	**+3.6**
AKTK	**Aktyubinsk**	**18.17**	**336**	P	**Pn**	**09 11 50.9**	**+0.6**
AKTO	**Aktyubinsk**	**18.17**	**336**	P	**Pn**	**09 11 50.9**	**+0.6**
comp=Z,0.5nm,0.3s,baz=144,slow=11,SNR=3.9							
VOSK	**Vostochnaya**	**18.41**	**3**	⇓P	**Pn**	**09 11 50.8**	**-2.4**
comp=Z,1.2nm,0.6s							
ZRNK	**Zerenda**	**18.62**	**359**	⇑P	**Pn**	**09 11 57.2**	**+1.5**
comp=Z,1.0nm,0.5s							
BVA0	**Borovoye Array**	**18.70**	**2**	P	**Pn**	**09 11 56.9**	**+0.2**
comp=Z,0.2nm,0.5s,baz=162,slow=9.6,SNR=8.5							
BVAR	**Borovoye Array**	**18.70**	**2**	P	**Pn**	**09 11 55.7**	**-0.9**
comp=Z,0.5nm,0.3s,baz=162,slow=10,SNR=6.4							
ZAA0	**Zalesovo Array**	**22.38**	**24**	eP	**P**	**09 12 37.0**	**+1.0**
ZALV	**Zalesovo Beam**	**22.38**	**24**	P	**P**	**09 12 34.4**	**-1.6**
comp=Z,1.2nm,0.3s,mb3.8,baz=214,slow=8.9,SNR=6.4							
GTA	**Gaotai**	**24.68**	**69**	eP	**P**	**09 13 02.8**	**+4.0**
GTA				pP		09 13 09.3	
GTA				sP	sP	09 13 12.6	+5.3
GTA				pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.0							
ARCES	**ARCESS Array B**	**42.71**	**339**	P	**P**	**09 15 34.9**	**+0.4**
comp=Z,2.2nm,0.7s,mb4.0,baz=126,slow=9.5,SNR=7.2							
ARCES	**ARCESS Array B**	**42.71**	**339**	P	**P**	**09 15 34.9**	**+0.4**
NOA	**NORSAR Array B**	**45.42**	**324**	P	**P**	**09 15 56.0**	**-0.3**
comp=Z,0.8nm,0.7s,mb3.6,baz=100,slow=8.0,SNR=3.4							
MJAR	**Matsushiro Arr**	**54.88**	**67**	LR	LR	09 45 00.2	
comp=Z,47nm,20.3s,MS3.6,baz=215,slow=41							
JHJ	**Hachijo jima 2**	**57.31**	**70**	LR	LR	09 42 39.5	
comp=Z,88nm,20.1s,MS3.9,baz=250,slow=37							
ILAR	**Eielson Array**	**77.18**	**15**	P	**P**	**09 19 29.5**	**-1.8**
comp=Z,0.2nm,0.4s,mb3.4,baz=299,slow=4.8,SNR=3.1							
WRA	**Warramunga Arr**	**81.88**	**121**	P	**P**	**09 19 58.7**	**+1.2**
comp=Z,0.4nm,1.0s,mb3.3,baz=322,slow=5.0,SNR=4.8							
ASAR	**Alice Springs**	**84.02**	**124**	P	**P**	**09 20 09.2**	**+0.7**
comp=Z,0.3nm,0.6s,mb3.6,baz=317,slow=5.2,SNR=5.2							

*NEIC **24** 09:11:16.1, 16°.55N×100°.23W, h4km, MD3.6(MEX), After MEX.*

MEX 24 09:11:16.1±0.7, 16°.55N×100°.23W, h4km±8km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.48**	**48**	i P	Pg	09 11 24.7	-0.7
ACX				i S	Sg	09 11 30.2	-1.4
ACX	**Acapulco**	**0.48**	**48**	i P	Pg	09 11 24.7	-0.7
ACX				i S	Sg	09 11 30.2	-1.4
CAIG	**El Cayaco**	**0.50**	**356**	eP	Pg	09 11 25.2	-0.5
CAIG				i S	Sg	09 11 32.7	+0.4
CAIG	**El Cayaco**	**0.50**	**356**	eP	Pg	09 11 25.2	-0.5
CAIG				i S	Sg	09 11 32.7	+0.4
MEIG	**Mezcala**	**1.49**	**23**	eP	Pn	09 11 40.1	-3.6
MEIG				i S	Sn	09 11 59.6	-4.0
ZIIG	**Zihuatanejo**	**1.58**	**312**	i P	Pn	09 11 39.6	-5.3
ZIIG				i S	Sn	09 12 02.2	-3.6
ZIIG	**Zihuatanejo**	**1.58**	**312**	i P	Pn	09 11 39.6	-5.3
ZIIG				i S	Sn	09 12 02.2	-3.6
PNIG	**Pinotepa**	**2.02**	**94**	i P	Pn	09 11 46.9	-4.1
PNIG				i S	Sn	09 12 13.4	-3.4
PNIG	**Pinotepa**	**2.02**	**94**	i P	Pn	09 11 46.9	-4.1
PNIG				i S	Sn	09 12 13.4	-3.4
UTMO	**Huajuapan**	**2.65**	**61**	i P	Pn	09 11 57.1	-2.5
UTMO				i S	Sn	09 12 27.6	-4.6

*NEIC **24** 09:23:23.5, 16°.48N×100°.27W, h15km, MD3.5(MEX), After MEX.*

MEX 24 09:23:23.6±0.5, 16°.48N×100°.27W, h22km±25km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.55**	**45**	eP	Pb	09 23 32.4	-2.2
ACX				i S	Sb	09 23 39.1	-3.0
ACX	**Acapulco**	**0.55**	**45**	eP	Pb	09 23 32.4	-2.2
ACX				i S	Sb	09 23 39.1	-3.0
CAIG	**El Cayaco**	**0.57**	**0**	i P	Pb	09 23 33.2	-1.7
CAIG				i S	Sb	09 23 40.0	-2.6
CAIG	**El Cayaco**	**0.57**	**0**	i P	Pb	09 23 33.2	-1.7
CAIG				i S	Sb	09 23 40.0	-2.6
MEIG	**Mezcala**	**1.57**	**23**	i P	Pn	09 23 47.7	-2.4
MEIG				i S	Sn	09 24 06.8	-2.9
ZIIG	**Zihuatanejo**	**1.60**	**315**	i P	Pn	09 23 48.2	-2.5
ZIIG				i S	Sn	09 24 06.8	-3.8
ZIIG	**Zihuatanejo**	**1.60**	**315**	i P	Pn	09 23 48.2	-2.5
ZIIG				i S	Sn	09 24 06.8	-3.8
PNIG	**Pinotepa**	**2.06**	**92**	i P	Pn	09 23 54.0	-2.8
PNIG				i S	Sn	09 24 18.5	-3.4
PNIG	**Pinotepa**	**2.06**	**92**	i P	Pn	09 23 54.0	-2.8
PNIG				i S	Sn	09 24 18.5	-3.4
UTMO	**Huajuapan**	**2.71**	**60**	i P	Pn	09 24 04.1	-1.8
UTMO				i S	Sn	09 24 34.9	-3.2

*IDC **24** 09:29:33.5±0.8, 8°.67N×137°.97E, h0km, mb4.0/12, mb1 4.1/12, mb1mx4.1/21, mbtmp4.0/12, MS3.5/11, Ms1 3.6/11, ms1mx3.3/30, Error ellipse: s-maj=31.8km s-min=16.3km az=78.0*

*ISCJB **24** 09:29:36.5±0.7, 8°.63N±0°.09×137°.9E±0°.2, h33km, mb4.0/15, MS3.6/9, Error ellipse: s-maj=27.8km s-min=12.6km az=167.6*

*NEIC **24** 09:29:38.1±0.5, 8°.63N×137°.89E, h30km, mb4.3/3, Error ellipse: s-maj=21.2km s-min=10.7km az=74.0*

ISC 24 09:29:38.6±0.7, 8°.64N±0°.09×138°.0E±0°.2, h35km, n23, σ0§75/16, mb4.0/15, MS3.6/9, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**8.37**	**53**	LR	LR	09 34 46.0	
comp=Z,98nm,18.8s,baz=46,slow=37							
DAV	**Davao City (W)**	**12.37**	**264**	LR	LR	09 36 38.8	
comp=Z,87nm,19.9s,baz=251,slow=34							
HNR	**Honiara**	**28.31**	**129**	LR	LR	09 45 40.7	
comp=Z,93nm,18.7s,MS3.4,baz=346,slow=34							
WRA	**Warramunga Arr**	**28.62**	**187**	P	**P**	**09 35 31.0**	**-0.9**
0.4nm,0.6s,mb3.3,baz=6.5,slow=9.7,SNR=9.0							
KSRS	**Korea Array**	**30.09**	**344**	P	**P**	**09 35 43.4**	**-1.4**
1.1nm,0.7s,mb3.7,baz=162,slow=11,SNR=3.4							
KSRS				LR	LR	09 46 13.4	
comp=Z,58nm,19.7s,MS3.2,baz=333,slow=33							
ASAR	**Alice Springs**	**32.35**	**187**	P	**P**	**09 36 05.7**	**+0.8**
0.4nm,0.5s,mb3.5,baz=18,slow=12,SNR=11							
CMAR	**Chiang Mai Arr**	**39.09**	**289**	P	**P**	**09 37 02.9**	**+0.1**
1.5nm,0.6s,mb3.9,baz=108,slow=8.3,SNR=7.0							
CMAR				LR	LR	09 51 54.5	
comp=Z,55nm,19.5s,MS3.4,baz=258,slow=34							
STKA	**Stephens Creek**	**40.44**	**175**	P	**P**	**09 37 13.3**	**-0.4**
2.0nm,0.8s,mb3.9,baz=50,slow=9.5,SNR=3.7							
STKA				LR	LR	09 56 56.4	
comp=Z,127nm,18.4s,MS3.8,baz=204,slow=41							
STKA	**Stephens Creek**	**40.44**	**175**	P	**P**	**09 37 13.3**	**-0.4**
STKA				LR	LR	09 56 56.4	
SONM	**Songino Array**	**47.32**	**331**	P	**P**	**09 38 09.0**	**+0.1**
1.8nm,0.8s,mb4.0,baz=148,slow=8.5,SNR=4.9							
MKAR	**Makanchi Array**	**60.56**	**319**	P	**P**	**09 39 46.2**	**+0.6**
3.0nm,0.8s,mb4.5,baz=106,slow=9.2,SNR=18							
MKAR				LR	LR	10 06 12.6	
comp=Z,35nm,19.0s,MS3.5,baz=351,slow=36							
ZALV	**Zalesovo Beam**	**61.90**	**328**	P	**P**	**09 39 54.8**	**+0.3**
0.9nm,0.3s,mb4.3,baz=93,slow=5.2,SNR=4.6							
ZALV				LR	LR	10 05 10.2	
comp=Z,42nm,21.2s,MS3.6,baz=62,slow=34							
KURK	**Kurchatov**	**64.17**	**323**	eP	**P**	**09 40 09.7**	**0.0**
7.0nm,0.8s,mb4.7							
UCH	**Uchtor**	**64.65**	**313**	eP	**P**	**09 40 13.5**	**+0.5**
1.6nm,0.6s,mb4.2							
KKAR	**Karatay Array**	**67.71**	**313**	eP	**P**	**09 40 32.7**	**+0.2**
0.4nm,0.4s,mb3.8							
BVAR	**Borovoye Array**	**69.71**	**323**	P	**P**	**09 40 45.1**	**+0.3**
4.4nm,0.8s,mb4.5,baz=91,slow=6.5,SNR=14							
ILAR	**Eielson Array**	**75.91**	**25**	P	**P**	**09 41 20.9**	**-0.5**
0.5nm,0.7s,mb3.6,baz=245,slow=5.7,SNR=10.0							
ARCES	**ARCESS Array B**	**89.61**	**341**	LR	LR	10 25 26.9	
comp=Z,46nm,19.4s,MS3.9,baz=244,slow=37							
MAW	**Mawson**	**92.31**	**202**	LR	LR	10 19 24.0	
comp=Z,106nm,18.9s,MS4.3,baz=228,slow=32							
FINES	**FINESS Array B**	**92.65**	**333**	P	**P**	**09 42 45.3**	**-1.3**
1.6nm,0.8s,mb4.5,baz=116,slow=8.9,SNR=3.8							
NVAR	**Mina Array Bea**	**95.28**	**50**	P	**P**	**09 43 00.8**	**+1.5**
0.4nm,0.7s,mb3.9,baz=251,slow=4.1,SNR=4.1							
NOA	**NORSAR Array B**	**99.06**	**337**	LR	LR	10 30 18.9	
comp=Z,26nm,19.8s,MS3.7,baz=60,slow=37							
LPAZ	**La Paz**	**153.44**	**109**	PKPbc	PKPbc	09 49 37.1	+2.8
0.6nm,0.8s,baz=266,slow=7.1,SNR=3.0							

IDC 24 09:56:06.7±45.0, 15°.86S×175°.21W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=859.9km s-min=169.8km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.29**	**240**	P	P	10 04 03.2	+1.0
1.6nm,1.0s,baz=90,slow=9.1,SNR=4.8							
WRA	**Warramunga Arr**	**48.04**	**257**	P	P	10 04 47.5	-0.6
0.2nm,0.3s,baz=95,slow=8.4,SNR=11							
ASAR	**Alice Springs**	**48.31**	**252**	P	P	10 04 49.9	-0.3
1.4nm,0.5s,baz=89,slow=8.0,SNR=34							

*CSEM **24** 10:44:10.2±0.3, 30°.84N×56°.90E, h2km, ML3.7, Error ellipse: s-maj=8.0km s-min=7.6km az=124.0*

*ISCJB **24** 10:44:12.5±0.7, 31°.08N±0°.08×56°.89E±0°.04, h10km, Error ellipse: s-maj=11.3km s-min=5.3km az=179.7*

*TEH **24** 10:44:13.2, 31°.10N×56°.92E, h6km*

ISC 24 10:44:12.3±0.7, 30°.96N±0°.07×56°.89E±0°.05, h10km, n23, σ1§39/30, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.98**	**187**	ePg	**Pg**	**10 44 25.9**	**-5.3**
KRBR				eSg	**Sg**	**10 44 37.7**	**-6.3**
IBAF	**Bafgh**	**1.30**	**299**	ePg	**Pn**	**10 44 35.0**	**-1.4**
IBAF				eSg	**Sg**	**10 44 52.8**	**-1.2**
IBAF				e		10 44 57.5	
comp=Z,16μm,0.1s							
IBAF	**Bafgh**	**1.30**	**299**	ePg	**Pn**	**10 44 35.0**	**-1.4**
IBAF				eSg	**Sg**	**10 44 52.8**	**-1.2**
IMEH	**Mehriz**	**2.00**	**283**	ePn	**Pn**	**10 44 46.0**	**-0.1**
IMEH				eSn	**Sn**	**10 45 12.6**	**+1.4**
IMEH				e		10 45 16.6	
comp=Z,13μm,0.2s							
IMEH	**Mehriz**	**2.00**	**283**	ePn	**Pn**	**10 44 46.0**	**-0.1**
IMEH				eSn	**Sn**	**10 45 12.6**	**+1.4**
IKOO	**Kooshah**	**2.32**	**50**	ePn	**Pn**	**10 44 49.9**	**-0.5**
IKOO				e		10 45 30.8	
comp=Z,5μm,0.3s							
IKOO	**Kooshah**	**2.32**	**50**	ePn	**Pn**	**10 44 49.9**	**-0.5**
ICHK	**Chekchek**	**2.48**	**302**	ePn	**Pn**	**10 44 53.3**	**+0.7**
ICHK				eSg	**Sg**	**10 45 29.1**	**-2.7**
ICHK				e		10 45 39.2	
comp=Z,4μm,0.3s							
ICHK	**Chekchek**	**2.48**	**302**	ePn	**Pn**	**10 44 53.3**	**+0.7**
ICHK				eSg	**Sg**	**10 45 29.1**	**-2.7**
ITEG	**Tejag**	**2.49**	**39**	ePn	**Pn**	**10 44 52.8**	**-0.1**
ITEG				e		10 45 38.7	
comp=Z,3μm,0.2s							
ITEG	**Tejag**	**2.49**	**39**	ePn	**Pn**	**10 44 52.8**	**-0.1**
ISAD	**Sadrabad**	**2.90**	**290**	ePn	**Pn**	**10 44 59.7**	**+1.2**
ISAD				e		10 45 55.2	
comp=Z,4μm,0.2s							
ISAD	**Sadrabad**	**2.90**	**290**	ePn	**Pn**	**10 44 59.7**	**+1.2**
IDAH	**Dahanechah**	**3.09**	**54**	ePn	**Pn**	**10 45 01.0**	**-0.1**
IDAH				e		10 46 09.8	
comp=Z,2μm,0.5s							
IDAH	**Dahanechah**	**3.09**	**54**	ePn	**Pn**	**10 45 01.0**	**-0.1**
IMON	**Monand**	**3.24**	**46**	ePn	**Pn**	**10 45 03.5**	**+0.4**
IMON				e		10 45 31.0	
comp=Z,1μm,0.1s							
IMON	**Monand**	**3.24**	**46**	ePn	**Pn**	**10 45 03.5**	**+0.4**
IPAR	**Pars**	**3.50**	**252**	ePn	**Pn**	**10 45 09.6**	**+2.8**
IPAR				e		10 46 17.6	
comp=Z,1μm,0.4s							
IPAR	**Pars**	**3.50**	**252**	ePn	**Pn**	**10 45 09.6**	**+2.8**
BNDS	**Bandar-Abbas**	**3.61**	**190**	ePn	**Pn**	**10 45 06.9**	**-1.3**
ZHSF	**Zahedan**	**3.62**	**111**	ePn	**Pn**	**10 45 10.9**	**+2.5**
ISRV	**Sarvestan**	**3.63**	**245**	ePn	**Pn**	**10 45 10.8**	**+2.3**
ISRV				e		10 46 15.5	
comp=Z,1μm,0.4s							
ISRV	**Sarvestan**	**3.63**	**245**	ePn	**Pn**	**10 45 10.8**	**+2.3**

MAN 24 10:46:53, 8°.37N×126°.65E, h20km, mb4.7, ML3.6, MS3.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.18**	**300**	eP	Pn	10 47 14.0	-0.3
BUTP				eS	Sb	10 47 30.2	+0.7
BUKP	**Musuan**	**1.64**	**253**	eP	Pn	10 47 21.6	+0.9
BUKP				eS	Sn	10 47 42.8	+1.5
DMPH	**Davao City--Mi**	**1.71**	**221**	eP	Pn	10 47 21.4	-0.2
MSLP	**Maasin**	**2.49**	**315**	eP	Pn	10 47 33.4	+1.1
TBP	**Tagbilaran**	**3.05**	**296**	eP	Pn	10 47 41.8	+1.7
TBP				eS	Sn	10 48 21.0	+5.0
PAGZ	**Pagadian**	**3.27**	**261**	eP	Pn	10 47 48.0	+4.8
LLP	**Lapu-Lapu**	**3.28**	**306**	eP	Pn	10 47 43.6	+0.4
LLP				eS	Sn	10 48 26.9	+5.2

*MAN **24** 10:55:32, 8°.19N×127°.68E, h103km, mb5.2, ML4.1, MS4.3*

*IDC **24** 10:55:34.5±0.9, 8°.42N×127°.05E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, MS2.9/2, Ms1 2.9/2, ms1mx2.4/21, Error ellipse: s-maj=29.8km s-min=16.7km az=85.0*

*ISCJB **24** 10:55:36.8±2.7, 8°.31N±0°.06×127°.25E±0°.07, h20km±21km, mb3.6/7, Error ellipse: s-maj=12.5km s-min=8.4km az=141.1*

*NEIC **24** 10:55:46.0±3.3, 8°.22N×126°.56E, h93km±30km, Error ellipse: s-maj=58.4km s-min=13.7km az=71.0*

ISC 24 10:55:36.9±2.7, 8°.31N±0°.06×127°.23E±0°.06, h10km±18km, n21, σ1§17/25, mb3.6/7, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.66**	**216**	eP	**Pn**	**10 56 03.9**	**-2.2**
MATI				eS	**Sn**	**10 56 20.9**	**-6.5**
BUTP	**Butuan**	**1.72**	**293**	eP	**Pn**	**10 56 06.5**	**-0.4**
BUTP				eS	**Sn**	**10 56 34.7**	**+5.8**
DAV	**Davao City (W)**	**2.05**	**233**	Pn	**Pn**	**10 56 11.5**	**+0.2**
41nm,0.3s,baz=153,slow=2.3,SNR=4.0							
DAV				Sn	**Sn**	**10 56 36.5**	**-0.5**
89nm,0.3s,baz=113,slow=23,SNR=14							
DAV				LR	LR	10 57 12.7	
comp=Z,413nm,19.5s,baz=353,slow=50							
DAV	**Davao City (W)**	**2.05**	**233**	ePn	**Pn**	**10 56 11.9**	**+0.5**
DAV				Sn	**Sn**	**10 56 36.5**	**-0.5**
DAV				LR	LR	10 57 12.7	
DMPH	**Davao City--Mi**	**2.10**	**235**	eP	**Pn**	**10 56 12.6**	**+0.6**
BUKP	**Musuan**	**2.19**	**259**	eP	**Pn**	**10 56 12.8**	**-0.5**
MSLP	**Maasin**	**2.96**	**308**	eP	**Pn**	**10 56 24.7**	**+0.7**
TBP	**Tagbilaran**	**3.60**	**293**	eP	**Pn**	**10 56 33.0**	**+0.2**
LLP	**Lapu-Lapu**	**3.79**	**302**	eP	**Pn**	**10 56 35.7**	**+0.3**
LLP				eS	**Sn**	**10 57 19.2**	**-0.9**
PAGZ

comp=Z,64nm,19.9s,baz=1.5,slow=34
DBIC Dimbokro 92.68 84 LR LR 11 54 33.2
comp=Z,56nm,18.3s,baz=146,slow=33

*CSEM **24** 11:16:36.1, 42°.86N×1°.47W, h4km, ML1.1, After MDD*
MDD 24 11:16:36.5±0.3, 42°.84N×1°.45W, h0km, mbLg1.1/4, 1D, Error ellipse: s-maj=4.3km s-min=1.9km az=116.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZUN	**Zunzarren**	**0.02**	**356**	Pg	Pg	11 16 36.8	-0.2
	5.4nm,0.1s,SNR=7.9						
IZUN				Lg		11 16 37.4	
	16nm,0.1s,SNR=7.9						
IZUN	**Zunzarren**	**0.02**	**356**	Pg	Pg	11 16 36.8	-0.1
	5.4nm,0.1s,SNR=7.9						
IZUN				Lg		11 16 37.4	
	16nm,0.1s,SNR=7.9						
IUNC	**Unciti**	**0.09**	**202**	⇓Pg	Pg	11 16 38.1	-0.1
	9.3nm,0.1s,SNR=18						
IUNC				Lg		11 16 40.1	
	39nm,0.2s,SNR=7.9						
IUNC	**Unciti**	**0.09**	**202**	Pg	Pg	11 16 38.1	-0.1
	9.3nm,0.1s,SNR=18						
IUNC				Lg		11 16 40.1	
	39nm,0.2s,SNR=7.9						
EARA	**Aranguren**	**0.11**	**235**	Pg	Pg	11 16 38.6	-0.1
	4.8nm,0.1s,SNR=7.9						
EARA				Lg		11 16 40.7	
	15nm,0.0s,SNR=7.9						
EARA	**Aranguren**	**0.11**	**235**	Pg	Pg	11 16 38.6	0.0
	4.8nm,0.1s,SNR=7.9						
EARA				Lg		11 16 40.7	
	15nm,0.0s,SNR=7.9						
EORO	**Oroz-Betelu**	**0.12**	**63**	Pg	Pg	11 16 38.5	-0.3
	0.8nm,0.1s,SNR=7.9						
EORO				Lg		11 16 41.0	
	1.5nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	**0.12**	**63**	Pg	Pg	11 16 38.5	-0.3
	0.8nm,0.1s,SNR=7.9						
EORO				Lg		11 16 41.0	
	1.5nm,0.1s,SNR=7.9						

GUC 24 11:23:07.5±1.1, 22°.04S×70°.44W, h30km±18km, MD3.7, ML3.3, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**0.23**	**105**	*e*P	Pb	11 23 13.7	-0.4
TOCH				*i* S	Sb	11 23 18.2	-0.3
TOCH				AML	AML	11 23 18.8	
	comp=E,8μm,0.2s						
MECH	**Mejillones**	**1.06**	**181**	*e*P	Pn	11 23 26.0	-0.3
MECH				*i* S	Sn	11 23 40.1	0.0
ANCH	**Antofagasta**	**1.64**	**179**	*e*P	Pn	11 23 34.0	-0.2
ANCH				*i* S	Sn	11 23 55.8	+1.5
PSGC	**Pisagua**	**2.44**	**7**	*e*P	Pn	11 23 45.4	0.0
PSGC				*e*S	Sn	11 24 14.9	+0.8
MNMC	**Miæe Miæ**	**3.00**	**15**	*e*P	Pn	11 23 55.8	+2.9
MNMC				AML	AML	11 24 55.9	
	comp=E,72nm,0.4s						

WEL 24 11:45:53.7±0.9, 38°.32S×175°.86E, h188km±6km, ML3.6/11, 1C, Error ellipse: s-maj=4.9km s-min=3.4km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVZ	**Karewarewa**	**0.80**	**193**	PN	Pn	11 46 21.0	+0.3
TWVZ	**Taurewa**	**0.83**	**204**	PN	Pn	11 46 21.1	+0.2
WTVZ	**West Tongariro**	**0.83**	**195**	PN	Pn	11 46 21.2	+0.3
NGZ	**Ngauruhoe**	**0.88**	**193**	PN	Pn	11 46 21.7	+0.4
WPVZ	**Whakapapa**	**0.92**	**196**	PN	Pn	11 46 21.8	+0.3
TUVZ	**Tukino**	**0.97**	**190**	PN	Pn	11 46 22.2	+0.3
FWVZ	**Far West T-bar**	**0.97**	**194**	PN	Pn	11 46 22.2	+0.3
BKZ	**Black Stump Fm**	**0.98**	**150**	⇑PN	Pn	11 46 22.0	+0.1
URZ	**Urewera**	**0.98**	**87**	PN	Pn	11 46 21.5	-0.5
URZ				SN	Sn	11 46 42.8	-0.9
TRVZ	**Turoa**	**1.01**	**194**	PN	Pn	11 46 22.4	+0.2
PKVZ	**Pokaka**	**1.05**	**202**	PN	Pn	11 46 22.5	0.0
NMHZ	**Naumai**	**1.07**	**137**	PN	Pn	11 46 23.6	+1.0
MOVZ	**Moawhango**	**1.09**	**185**	PN	Pn	11 46 22.5	-0.2
MTVZ	**Mangateitei**	**1.11**	**196**	PN	Pn	11 46 23.0	+0.1
RAHZ	**Arahi**	**1.13**	**123**	PN	Pn	11 46 23.6	+0.6
BHHZ	**Black Hill Sta**	**1.18**	**173**	PN	Pn	11 46 23.3	-0.1
MCHZ	**McNeill Hill**	**1.30**	**150**	PN	Pn	11 46 25.2	+0.8
MWZ	**Matawai**	**1.31**	**91**	PN	Pn	11 46 24.3	-0.2
KNZ	**Kokohu**	**1.58**	**117**	PN	Pn	11 46 27.0	0.0
WAZ	**Wanganui**	**1.59**	**205**	PN	Pn	11 46 26.7	-0.3
PNHZ	**Pukenui**	**1.62**	**171**	PN	Pn	11 46 26.9	-0.4
CKHZ	**Cape Kidnapper**	**1.64**	**145**	PN	Pn	11 46 27.8	+0.3
KAHZ	**Kahuranaki**	**1.68**	**152**	PN	Pn	11 46 28.2	+0.3
NEZ	**North Egmont**	**1.68**	**235**	PN	Pn	11 46 28.4	+0.5
PRGZ	**Paritu Road**	**1.69**	**112**	PN	Pn	11 46 28.1	0.0
TSZ	**Takapari Road**	**1.74**	**178**	PN	Pn	11 46 28.0	-0.6
MHGZ	**Mahia Peninsul**	**1.80**	**118**	PN	Pn	11 46 29.3	+0.1
WPHZ	**Waipukurau**	**1.80**	**166**	PN	Pn	11 46 28.7	-0.4
CNGZ	**Carnagh Statio**	**1.85**	**96**	PN	Pn	11 46 30.1	+0.5
PXZ	**Pawanui**	**1.88**	**156**	PN	Pn	11 46 29.5	-0.4
PUZ	**Puketiti**	**1.90**	**83**	PN	Pn	11 46 29.6	-0.5
DVHZ	**Dannevirke**	**2.00**	**173**	PN	Pn	11 46 30.1	-1.0
PRHZ	**Porangahau**	**2.04**	**163**	PN	Pn	11 46 30.9	-0.7
MXZ	**Matakaoa Point**	**2.07**	**69**	PN	Pn	11 46 31.6	-0.4
POWZ	**Post Office Ro**	**2.08**	**182**	PN	Pn	11 46 30.8	-1.2
MRZ	**Mangatainoka R**	**2.35**	**185**	PN	Pn	11 46 33.4	-1.6
BFZ	**Birch Farm**	**2.38**	**173**	PN	Pn	11 46 33.9	-1.5
TIWZ	**Tintock**	**2.46**	**180**	PN	Pn	11 46 34.7	-1.5
OGWZ	**Otaki Gorge**	**2.56**	**192**	PN	Pn	11 46 35.7	-1.6
HOWZ	**Holdsworth Sta**	**2.59**	**186**	PN	Pn	11 46 35.7	-2.1
KIW	**Kapiti Island**	**2.65**	**196**	PN	Pn	11 46 36.4	-2.1
TMWZ	**Te Maipa**	**2.79**	**180**	PN	Pn	11 46 38.1	-2.0
MTW	**Mount Morrison**	**2.85**	**186**	PN	Pn	11 46 38.4	-2.5
CAW	**Cannon Point**	**2.86**	**192**	PN	Pn	11 46 38.7	-2.2
DUWZ	**D'Urville Isla**	**2.90**	**211**	PN	Pn	11 46 39.0	-2.4
TRWZ	**Traveller**	**3.08**	**182**	PN	Pn	11 46 41.3	-2.3
WEL	**Wellington**	**3.08**	**196**	PN	Pn	11 46 41.1	-2.5
SNZO	**South Karori**	**3.12**	**196**	PN	Pn	11 46 41.4	-2.6
MSWZ	**Moikau Station**	**3.13**	**188**	PN	Pn	11 46 41.5	-2.7
TCW	**Tory Channel**	**3.14**	**202**	PN	Pn	11 46 41.8	-2.5
BHW	**Baring Head**	**3.18**	**194**	PN	Pn	11 46 42.0	-2.8
PLWZ	**Palliser**	**3.28**	**188**	PN	Pn	11 46 43.1	-2.9
TUWZ	**Tuamarina**	**3.44**	**205**	PN	Pn	11 46 45.0	-3.0
NNZ	**Nelson**	**3.47**	**213**	PN	Pn	11 46 45.2	-3.2
QRZ	**Quartz Range**	**3.60**	**225**	PN	Pn	11 46 46.1	-3.8
BSWZ	**Blackbirch Sta**	**3.72**	**204**	PN	Pn	11 46 48.6	-2.8
THZ	**Tophouse**	**4.12**	**212**	PN	Pn	11 46 53.0	-3.5
KHZ	**Kahutara**	**4.46**	**203**	PN	Pn	11 46 57.6	-3.2
DSZ	**Denniston Nort**	**4.63**	**221**	PN	Pn	11 46 58.6	-4.3
LTZ	**Lake Taylor**	**5.24**	**210**	PN	Pn	11 47 06.6	-4.1
MQZ	**McQueen's Vall**	**5.91**	**203**	PN	Pn	11 47 14.5	-4.9
LBZ	**Lake Benmore**	**7.42**	**213**	PN	Pn	11 47 33.9	-5.3
ODZ	**Otahua Downs**	**7.77**	**208**	PN	Pn	11 47 39.5	-4.3

*MOS **24** 12:04:53.3±1.0, 36°.52N×70°.95E, h192km, mb4.7/62, Error ellipse: s-maj=6.7km s-min=3.8km az=121.6*
*ISCJB **24** 12:04:53.3±0.1, 36°.47N±0°.02×71°.01E±0°.02, h198km, mb4.5/154, Error ellipse: s-maj=2.5km s-min=1.7km az=44.7*
*NEIC **24** 12:04:55.0±0.1, 36°.49N×71°.02E, mb4.6/81, Error ellipse: s-maj=4.2km s-min=2.9km az=215.0*
*TEH **24** 12:04:54.0, 36°.56N×70°.94E, h183km*
*BJI **24** 12:04:54.2, 36°.71N×70°.85E, h200km, mB4.9/14, mb4.7/30*
*IDC **24** 12:04:55.6±0.6, 36°.51N×70°.95E, h206km±5km, mb4.3/30, mb1 4.4/34, mb1mx4.4/36, mbtmp4.3/34, Error ellipse: s-maj=7.8km s-min=7.0km az=172.0*
*NNC **24** 12:05:02.0±3.3, 37°.17N×71°.01E, h203km±25km, mb3.7, mpv5.0, Error ellipse: s-maj=28.0km s-min=19.9km az=19.0*
ISC 24 12:04:54.9±0.1, 36°.46N±0°.02×71°.03E±0°.02, h200km, h200km±2.5km: pP-P, n491, σ1904/532, mb4.5/154, 37C-26D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.50**	**221**	*e*Pn	**Pn**	**12 05 37.8**	**-1.2**
KBL	**Kabul**	**2.50**	**221**	*e*Pn	**Pn**	**12 05 37.8**	**-1.1**
CEP	**Cherat**	**2.72**	**164**	⇑P	**Pn**	**12 05 41.8**	**+0.4**
CEP				S	**Sn**	**12 06 17.0**	**-0.6**
CHCP	**Chirah Chowk**	**3.34**	**146**	P	**Pn**	**12 05 49.6**	**+1.0**
NIL	**Nilore**	**3.34**	**146**	*e*Sn	**Sn**	**12 06 31.7**	**+1.0**
THW	**Thamme Wali**	**3.70**	**171**	⇑P	**Pn**	**12 05 53.2**	**+0.2**
THW				S	**Sn**	**12 06 36.0**	**-2.6**
JMU	**Jammu**	**4.91**	**138**	*e*PKP	**Pn**	**12 06 06.0**	**-2.2**
JMU				*ex*	**Sn**	**12 07 07.0**	**+1.1**
KSH	**Kashi**	**4.96**	**50**	P	**Pn**	**12 06 04.0**	**-4.7**
KSH				S	**Sn**	**12 06 55.6**	**-11**
KSH				smax			
	comp=N,2μm,0.5s						
KSH				smax			
	comp=E,990nm,0.4s						
DLH	**Dalhousie**	**5.64**	**132**	*e*PKP	**Pn**	**12 06 16.0**	**-1.6**
DLH				*ex*	**Sn**	**12 07 23.0**	**+0.1**
AML	**Almayashu**	**6.03**	**19**	P	**Pn**	**12 06 20.7**	**-1.8**
	SNR=157						
AML	**Almayashu**	**6.03**	**19**	*e*Pn	**Pn**	**12 06 21.4**	**-1.1**
UCH	**Uchtor**	**6.36**	**24**	P	**Pn**	**12 06 25.7**	**-1.1**
	SNR=68						
UCH	**Uchtor**	**6.36**	**24**	*e*Pn	**Pn**	**12 06 25.7**	**-1.1**
KZA	**Kyzart**	**6.50**	**29**	P	**Pn**	**12 06 27.1**	**-1.4**
	SNR=12						
KZA	**Kyzart**	**6.50**	**29**	*e*Pn	**Pn**	**12 06 26.9**	**-1.6**
	comp=E,97nm,0.8s						
KZA				*e*Sn	**Sn**	**12 07 38.8**	**-4.0**
EKS2	**Erkin-Say**	**6.55**	**18**	P	**Pn**	**12 06 27.9**	**-1.3**
	SNR=188						
EKS2	**Erkin-Say**	**6.55**	**18**	*e*Pn	**Pn**	**12 06 28.0**	**-1.2**
KK31	**Karatay Array**	**6.65**	**357**	⇓P	**Pn**	**12 06 28.0**	**-2.4**
	comp=E,62nm,0.5s,baz=178,slow=13,SNR=1019						
KK31				S	**Sn**	**12 07 38.0**	**-8.3**
	comp=E,337nm,0.6s,baz=171,slow=25,SNR=18						
KK31	**Karatay Array**	**6.65**	**357**	*i* PN	**Pn**	**12 06 28.0**	**-2.5**
KK31				pmax	pmax		
	comp=Z,65nm,0.2s						
KKAR	**Karatay Array**	**6.65**	**357**	*e*Pn	**Pn**	**12 06 28.1**	**-2.4**
KKAR	**Karatay Array**	**6.65**	**357**	*e*PN	**Pn**	**12 06 28.1**	**-2.4**
AAK	**Ala-Archa**	**6.72**	**22**	P	**Pn**	**12 06 30.0**	**-1.5**
	SNR=92						
BHK	**Bhakra**	**6.73**	**137**	*e*PKP	**Pn**	**12 06 30.2**	**-1.5**
BHK				*e*S	**Sn**	**12 07 43.8**	**-4.6**
KBK	**Karagaybulak**	**6.89**	**25**	P	**Pn**	**12 06 32.9**	**-0.7**
	SNR=38						
KBK	**Karagaybulak**	**6.89**	**25**	*e*Pn	**Pn**	**12 06 32.9**	**-0.7**
FRU	**Bishkek**	**6.94**	**22**	*e*PN	**Pn**	**12 06 32.0**	**-2.3**
FRU				*i*		12 07 50.0	
FRU				pmax	pmax		
	comp=Z,100nm,1.0s						
FRU				pmax	pmax		
	comp=E,880nm,1.6s						
SDNR	**Sundarnagar**	**6.98**	**133**	*e*PKP	**Pn**	**12 06 34.5**	**-0.5**
SDNR				*ex*	x	12 07 37.5	
ULHL	**Ulahol**	**7.05**	**33**	P	**Pn**	**12 06 34.8**	**-0.9**
	SNR=20						
CHMS	**Chumysh**	**7.13**	**23**	P	**Pn**	**12 06 35.3**	**-1.5**
	SNR=25						
USP	**Ospenovka**	**7.31**	**20**	P	**Pn**	**12 06 36.8**	**-2.2**
	SNR=59						
TKM2	**Tokmak 2**	**7.35**	**27**	⇑P	**Pn**	**12 06 38.4**	**-1.2**
	comp=E,66nm,0.5s						
TKM2				⇓S	**Sn**	**12 07 56.3**	**-6.6**
	comp=E,66nm,0.7s						
TKM2	**Tokmak 2**	**7.35**	**27**	P	**Pn**	**12 06 38.4**	**-1.2**
	SNR=218						
TKM2	**Tokmak 2**	**7.35**	**27**	*i* PN	**Pn**	**12 06 38.4**	**-1.2**
TKM2				pmax	pmax		
	comp=Z,66nm,0.5s						
SMLA	**Simla**	**7.37**	**134**	*i* P	**Pn**	**12 06 38.8**	**-1.1**
SMLA				*i* S	**Sn**	**12 07 59.2**	**-4.3**
SMLA				⇓		12 08 02.3	
	comp=E,25μm,0.3s						
SMLA				⇓		12 08 05.5	
	comp=N,21μm,0.2s						
KLP	**Kalpa**	**7.75**	**127**	*e*PKP	**Pn**	**12 06 44.8**	**-0.1**
KLP				*e*S	**Sn**	**12 08 08.1**	**-4.3**
DDI	**Dehra Dun**	**8.48**	**134**	⇓*i* P	**Pn**	**12 06 53.8**	**-0.6**
DDI				*ex*	x	12 08 07.0	
KHET	**Khetri**	**9.28**	**153**	*e*PKP	**Pn**	**12 07 02.9**	**-2.0**
KHET				*e*S	**Sn**	**12 08 40.3**	**-8.6**
KHET				AML	AML	12 08 44.5	
	comp=N,453nm,0.4s						
KHET				AML	AML	12 08 48.1	
	comp=E,540nm,0.5s						
ISRO	**Mashad**	**9.32**	**273**	*e*P	**Pn**	**12 06 59.7**	**-5.6**
NDI	**New Delhi**	**9.34**	**144**	*e*PKP	**Pn**	**12 07 00.0**	**-5.6**
NDI				*e*S	**Sn**	**12 08 37.7**	**-13**
NDI				AML	AML	12 08 41.0	
	comp=E,390nm,0.5s						
NDI				AML	AML	12 08 41.6	
	comp=N,245nm,0.5s						
IMOG	**Moghan**	**9.45**	**271**	*e*P	**Pn**	**12 07 02.8**	**-4.1**
AYAN	**Aya Nagar**	**9.47**	**145**	*e*PKP	**Pn**	**12 07 06.1**	**-1.2**
AYAN				*e*S	**Sn**	**12 08 46.1**	**-7.3**
KUDL	**Kundal**	**9.49**	**149**	*e*PKP	**Pn**	**12 07 06.2**	**-1.4**
KUDL				*e*S	**Sn**	**12 08 45.4**	**-8.3**
KUDL				AML	AML	12 08 48.8	
	comp=N,284nm,0.4s						
KUDL				AML	AML	12 08 51.2	
	comp=E,300nm,0.6s						
SONA	**Sohna**	**9.65**	**146**	*e*PKP	**Pn**	**12 07 08.5**	**-1.1**
SONA				*e*S	**Sn**	**12 08 49.8**	**-7.9**
SONA				AML	AML	12 08 57.9	
	comp=N,337nm,0.3s						
IPAY	**Payeh**	**9.70**	**274**	*e*P	**Pn**	**12 07 05.2**	**-4.9**
IAKL	**Akhelmad**	**9.88**	**274**	*e*P	**Pn**	**12 07 06.9**	**-5.6**
IMON	**Monand**	**9.89**	**254**	*e*P	**Pn**	**12 07 12.3**	**-0.4**
IDAH	**Dahanechah**	**9.92**	**251**	*e*P	**Pn**	**12 07 13.0**	**-0.1**
IEMG	**Emamgholi**	**9.96**	**279**	*e*P	**Pn**	**12 07 09.3**	**-4.2**
PTH	**Pithoragarh**	**10.34**	**129**	*ex*	**Pn**	**12 07 16.3**	**-2.2**
PTH				*e*S	**Sn**	**12 09 07.9**	**-6.1**
AJM	**Ajmer**	**10.41**	**162**	*e*PKP	**Pn**	**12 07 17.4**	**-2.1**
AJM				*ex*	x	12 09 08.0	
AJM				AML	AML	12 09 11.8	
	comp=E,233nm,0.4s						
AJM				AML	AML	12 09 12.4	
	comp=N,377nm,0.5s						
VAN	**Vannovskaya**	**10.41**	**282**	*d i* P	**Pn**	**12 07 14.5**	**-4.9**
LGTI	**Lohaghat**	**10.43**	**129**	*e*PKP	**Pn**	**12 07 17.3**	**-2.3**
LGTI				*e*S	**Sn**	**12 09 08.9**	**-7.2**
ISFR	**Sfrayin**	**10.47**	**277**	*e*P	**Pn**	**12 07 16.4**	**-3.8**
ISHV	**Shirvan**	**10.71**	**280**	*e*P	**Pn**	**12 07 19.3**	**-4.0**
AGRA	**Agra**	**10.91**	**146**	*e*PKP	**Pn**	**12 07 24.6**	**-1.3**
AGRA				AML	AML	12 07 32.8	
	comp=N,163nm,0.3s						
AGRA				AML	AML	12 07 34.0	
	comp=E,149nm,0.5s						
BHJ	**Bhuj**	**13.21**	**186**	*e*PKP	**Pn**	**12 07 52.2**	**-2.9**
BHJ				*ex*	x	12 10 08.8	
MK31	**Makanchi Array**	**13.31**	**36**	⇑P	**Pn**	**12 07 56.4**	**+0.3**
	comp=E,3.7nm,0.4s,baz=317,slow=28,SNR=75						
MK31	**Makanchi Array**	**13.31**	**36**	*e*Pn	**Pn**	**12 07 56.3**	**+0.2**
MK31	**Makanchi Array**	**13.31**	**36**	*i* P	**Pn**	**12 07 56.4**	**+0.3**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.2s						
MKAR	**Makanchi Array**	**13.31**	**36**	P	**Pn**	**12 07 55.3**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=214,slow=12,SNR=28						
MKAR	**Makanchi Array**	**13.31**	**36**	*i* P	**Pn**	**12 07 55.7**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
DANN	**Dangsing**	**13.45**	**123**	*e*Pn	**Pn**	**12 07 56.8**	**-1.2**
DANN				*e*Sn	**Sn**	**12 10 19.5**	**-8.6**
	comp=Z,455nm,0.6s						
IBAF	**Bafgh**	**13.71**	**254**	*e*P	**Pn**	**12 08 00.6**	**-0.6**
KOLN	**Koldanda**	**13.72**	**126**	*e*Pn	**Pn**	**12 08 00.3**	**-1.1**
KOLN				*e*Sn	**Sn**	**12 10 26.9**	**-7.7**
	comp=Z,291nm,0.5s						
IGLO	**Ghaloghah**	**13.84**	**275**	*e*P	**Pn**	**12 08 00.7**	**-2.1**
GKN	**Gorkha**	**14.26**	**122**	*e*Pn	**Pn**	**12 08 07.0**	**-1.1**
GKN				*e*Sn	**Sn**	**12 10 37.4**	**-10**
	comp=Z,468nm,0.5s						
BHPL	**Bhopal**	**14.29**	**155**	*e*PKP	**Pn**	**12 08 07.8**	**-0.6**
ISHM	**Shahmirzad**	**14.35**	**273**	*e*P	**Pn**	**12 08 09.2**	**+0.1**
ICHK	**Chekchek**	**14.36**	**258**	*e*P	**Pn**	**12 08 09.3**	**+0.1**
WMQ	**Urumqi**	**14.70**	**55**	P	**Pn**	**12 08 14.0**	**+0.7**
WMQ				sP		12 09 03.0	
WMQ				S	**S**	**12 10 52.0**	**-4.6**
WMQ				PcP	PcP	12 13 14.0	+3.4
WMQ				pmax	pmax		
	comp=Z,31nm,0.8s						
WMQ				LR	LR		
	comp=N,42nm,8.0s						
WMQ				LR	LR		
	comp=E,46nm,8.0s						
WMQ				LR	LR		
	comp=Z,33nm,8.0s						
DMN	**Daman**	**14.83**	**123**	*e*Pn	**Pn**	**12 08 15.1**	**0.0**
DMN				*e*Sn	**Sn**	**12 10 51.0**	**-10**
	comp=Z,475nm,0.8s						
KKN	**Kakani**	**14.84**	**122**	*e*Pn	**Pn**	**12 08 14.6**	**-0.5**
KKN				*e*Sn	**Sn**	**12 10 51.0**	**-10**
	comp=Z,418nm,0.8s						
KKN	**Kakani**	**14.84**	**122**	*e*P	**Pn**	**12 08 14.6**	**-0.5**
KKN				*e*		12 10 51.0	
ISAD	**Sadrabad**	**15.05**	**258**	*e*P	**Pn**	**12 08 17.5**	**-0.2**
PKIN	**Phulchoki**	**15.05**	**122**	*e*Pn	**Pn**	**12 08 17.8**	**+0.1**
PKIN				*e*Sn	**Sn**	**12 10 57.7**	**-8.6**
	comp=Z,852nm,0.6s						
PKI	**Pulchoki**	**15.06**	**122**	*e*Pn	**Pn**	**12 08 18.0**	**+0.1**
PKI				*e*Sn	**Sn**	**12 10 56.3**	**-10**
	comp=Z,405nm,0.7s						
PKI	**Pulchoki**	**15.06**	**122**	*e*P	**Pn**	**12 08 18.0**	**+0.1**
PKI				*e*		12 10 56.3	
AB31	**Akbulak array**	**15.13**	**331**	P	**Pn**	**12 08 15.8**	**-2.8**
	comp=Z,30nm,0.5s,baz=162,slow=12,SNR=734						
AB31				⇑S	**S**	**12 10 55.9**	**-10**
	comp=Z,13nm,0.6s,baz=161,slow=26,SNR=3.8						
AB31	**Akbulak array**	**15.13**	**331**	*i* P	**Pn**	**12 08 15.7**	**-2.8**
AB31				pmax	pmax		
	comp=Z,51nm,0.4s						
ABKAR	**Akbulak array**	**15.13**	**331**	*e*Pn	**Pn**	**12 08 15.8**	**-2.7**
KURBB	**Kurchatov Arra**	**15.16**	**19**	⇓P	**Pn**	**12 08 19.1**	**+0.3**
	comp=Z,3.4nm,0.8s						
GUN	**Gumba**	**15.18**	**120**	*e*Pn	**Pn**	**12 08 18.9**	**-0.4**
GUN				*e*Sn	**S**	**12 11 00.7**	**-7.0**
	comp=Z,377nm,0.7s						
KURK	**Kurchatov**	**15.27**	**19**	⇑P	**Pn**	**12 08 20.6**	**+0.5**
	comp=Z,14nm,1.2s						
KURK	**Kurchatov**	**15.27**	**19**	*e*Pn	**Pn**	**12 08 18.5**	**-1.6**
	comp=Z,9.7nm,0.8s						
KURK	**Kurchatov**	**15.27**	**19**	*d i* P	**Pn**	**12 08 18.4**	**-1.7**
KURK				pmax	pmax		
	comp=Z,11nm,0.9s						
KURK	**Kurchatov**	**15.27**	**19**	P	**Pn**	**12 08 18.9**	**-1.2**
	SNR=5.7						
IDMV	**Damavand**	**15.40**	**272**	*e*P	**Pn**	**12 08 21.4**	**-0.5**
IZEF	**Zefreh**	**15.79**	**262**	*e*P	**Pn**	**12 08 26.4**	**-0.2**
IKLH	**Kolahrood**	**16.26**	**265**	*e*P	**P**	**12 08 33.7**	**+2.0**
VOSK	**Vostochnaya**	**16.27**	**360**	⇑P	**P**	**12 08 31.0**	**-0.4**
	comp=Z,12nm,0.6s						
VOSK				⇑S	**S**	**12 11 22.3**	**-9.1**
	comp=Z,32nm,1.2s						
IPAR	**Pars**	**16.43**	**251**	*e*P	**P**	**12 08 33.7**	**+0.2**
AKL	**Akola**	**16.55**	**160**	⇓*i x*	**P**	**12 08 37.2**	**+2.4**
AKL				*i x*	**S**	**12 11 32.5**	**-5.2**
ZRNK	**Zerenda**	**16.55**	**356**	⇑P	**P**	**12 08 34.8**	**+0.2**
	comp=Z,35nm,0.5s						
BVA0	**Borovoye Array**	**16.57**	**359**	⇑P	**P**	**12 08 34.9**	**0.0**
	comp=Z,2.6nm,0.6s,baz=156,slow=16,SNR=69						
BVA0				⇓S	**S**	**12 11 31.1**	**-6.5**
	comp=Z,4.7nm,1.2s,baz=166,slow=22,SNR=6.2						
BVAR	**Borovoye Array**	**16.57**	**359**	P	**P**	**12 08 34.1**	**-0.8**
	comp=Z,6.8nm,0.3s,baz=166,slow=12,SNR=61						
BVAR				S	**S**	**12 11 31.7**	**-5.9**
	comp=Z,0.8nm,0.3s,baz=173,slow=17,SNR=3.7						
BVAR	**Borovoye Array**	**16.57**	**359**	P	**P**	**12 08 34.1**	**-0.7**
BVAR				S	**S**	**12 11 31.7**	**-5.9**
BVAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
ISRV	**Sarvestan**	**16.60**	**250**	*e*P	**P**	**12 08 35.6**	**+0.2**
BRVK	**Borovoye**	**16.61**	**358**	*e*P	**P**	**12 08 34.8**	**-0.5**
	comp=N,34nm,1.0s						
BRVK	**Borovoye**	**16.61**	**358**	*i* P	**P**	**12 08 35.2**	**0.0**
BRVK				pmax	pmax		
	comp=Z,68nm,1.2s						
BRVK	**Borovoye**	**16.61**	**358**	P	**P**	**12 08 35.9**	**+0.7**
	SNR=10						
TAPN	**Taplejung**	**16.81**	**118**	*e*Pn	**Pn**	**12 08 39.6**	**+0.7**
TAPN				*e*Sn	**S**	**12 11 36.7**	**-6.1**
AKTK	**Aktyubinsk**	**16.83**	**330**	P	**P**	**12 08 37.7**	**0.0**
AKTK				S	**S**	**12 11 32.9**	**-10**
AKTO	**Aktyubinsk**	**16.83**	**330**	⇑P	**P**	**12 08 37.4**	**-0.3**
	comp=Z,8.2nm,0.5s						
AKTO				⇓S	**S**	**12 11 37.3**	**-5.5**
	comp=Z,4.7nm,0.9s						
AKTO	**Aktyubinsk**	**16.83**	**330**	P	**P**	**12 08 37.7**	**0.0**
	comp=Z,22nm,0.3s,baz=138,slow=11,SNR=265						
AKTO				S	**S**	**12 11 32.9**	**-10**
	comp=Z,0.

comp=Z,144nm,0.5s
NAY Al-Naaiem 21.20 257 *eP* **P 12 09 23.9 -1.1**
NAY AMb AMB 12 09 27.0
comp=Z,67nm,0.9s,mb5.2
SVE Sverdlovsk 21.54 344⇑ *eP* **P 12 09 28.3 0.0**
SVE *eS* **S 12 13 26.3 +13**
SVE pmax pmax
comp=Z,39nm,0.8s,mb5.0
VIS Vishakhapatnam 21.60 147 *ex* **P 12 09 34.9 +5.7**
ARU Arti 21.68 341 *eP* **P 12 09 28.1 -1.6**
comp=Z,47nm,0.9s,mb5.0
ARU Arti 21.68 341 *c iP* **P 12 09 29.3 -0.4**
ARU *e* 12 09 58.5
ARU S **S 12 13 16.5 +1.0**
ARU pmax pmax
comp=Z,75nm,1.2s,mb5.1
ZEI Tsey 21.78 295 *eP* **P 12 09 31.4 +0.5**
ZEI pmax pmax
comp=Z,39nm,1.0s,mb4.9
KIV Kislovodsk 22.83 298 *eP* **P 12 09 40.6 +0.1**
comp=Z,32nm,0.7s,mb5.0
KIV Kislovodsk 22.83 298 *eP* **P 12 09 40.8 +0.3**
KIV *e**PP 12 10 12.0
KIV *e**SP sP 12 10 38.8 -2.7
KIV *e*S **S 12 13 36.0 +1.6**
KIV pmax pmax
comp=Z,14nm,0.6s,mb4.7
KIV MLR MLR
comp=Z,41nm,12.0s
GTA Gaotai 22.86 74 *eP* **P 12 09 43.5 +2.7**
GTA pP 12 10 23.1
GTA sP sP 12 10 45.3 +3.5
GTA S **S 12 13 36.6 +1.7**
GTA SS 12 14 40.6
GTA pmax pmax
comp=Z,14nm,1.2s,mb4.4
SOKR Solikamsk 24.90 343 *c iP* **P 12 10 00.2 +1.1**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.7
VRHR Novokhopersk 25.57 314 *eP* **P 12 10 04.7 -0.5**
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.1
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
MALT Malatya 25.90 284 *eP* **P 12 10 10.2 +1.8**
comp=E,8.9nm,1.0s,mb4.3
MALT Malatya 25.90 284 *eP* **P 12 10 10.2 +1.8**
MALT pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
LZH Lanzhou 26.39 81 ⇓P **P 12 10 14.0 +1.2**
LZH pP pP 12 10 50.4 -2.7
LZH PP PP 12 11 06.3 -10
LZH pmax pmax
comp=Z,25nm,1.3s,mb4.7
LZH pmax pmax
comp=Z,73nm,4.5s
ANN Anapa 26.68 299 *eP* **P 12 10 12.4 -2.8**
VORD Divnogorie 26.89 313 *eP* **P 12 10 16.8 -0.2**
VORD pmax pmax
comp=Z,30nm,1.0s,mb4.9
VORD pmax pmax
comp=N,50nm,0.6s
VORD pmax pmax
comp=E,50nm,0.8s
ZAK Zakamensk 27.00 49 *eP* **P 12 10 18.6 +0.6**
ZAK pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
VSR Storozhevoye 27.05 313 *eP* **P 12 10 18.1 -0.4**
VSR pmax pmax
comp=Z,60nm,1.2s,mb5.1
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,60nm,1.1s
TLY Talaya 27.65 46 *eP* **P 12 10 27.1 +3.3**
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
CD2 Chengdu 27.71 92 *eP* **P 12 10 26.9 +2.3**
CD2 pmax pmax
comp=Z,20nm,1.0s,mb4.7
CD2 pmax pmax
comp=Z,120nm,5.2s
SONM Songino Array 28.34 55 P **P 12 10 32.1 +2.1**
comp=Z,1.8nm,0.5s,mb4.0,baz=263,slow=9.1,SNR=17
SONM pP pP 12 11 13.1 +2.6
comp=Z,3.4nm,1.0s,baz=261,slow=9.5,SNR=4.6
SONM Songino Array 28.34 55 P **P 12 10 32.1 +2.1**
SONM *PP pP 12 11 13.1 +2.5
SONM pmax pmax
comp=Z,2.0nm,0.5s
BRTR Keskin Array B 29.47 288 P **P 12 10 40.2 +0.2**
comp=Z,1.9nm,0.4s,mb4.0,baz=92,slow=7.5,SNR=13
BRTR pP pP 12 11 20.9 +0.1
comp=Z,1.6nm,0.8s,baz=99,slow=7.8,SNR=2.4
BRTR PcP PcP 12 13 39.4 -0.9
comp=Z,1.2nm,0.5s,baz=129,slow=4.0,SNR=3.8
BRTR Keskin Array B 29.47 288 *i* P **P 12 10 40.5 +0.5**
BRTR pmax pmax
comp=Z,2.0nm,0.4s
MOS Moscow 29.71 321 *eP* **P 12 10 40.2 -1.7**
MOS *e* pP 12 11 23.9 +1.2
MOS *e* 12 11 38.2
MOS *eS* **S 12 15 17.3 -5.4**
MOS pmax pmax
comp=Z,68nm,1.1s,mb5.2
OBN Obninsk 29.99 319 *eP* **P 12 10 44.6 +0.2**
comp=Z,68nm,0.9s,mb5.3
OBN Obninsk 29.99 319 *c iP* **P 12 10 44.5 +0.1**
OBN *e* 12 11 46.9
OBN *e* 12 13 40.6
CHTO Chiang Mai 30.18 118 *eP* **P 12 10 49.1 +2.6**
comp=Z,7.6nm,0.5s,mb4.6
CHTO Chiang Mai 30.18 118 *eP* **P 12 10 49.1 +2.6**
CHTO pmax pmax
comp=Z,8.0nm,0.5s,mb4.6
CM31 Chiang Mai Arr 30.41 119 *eP* **P 12 10 50.6 +2.0**
comp=Z,4.4nm,0.5s,mb4.3
CMAR Chiang Mai Arr 30.41 119 P **P 12 10 50.5 +1.9**
comp=Z,9.2nm,0.8s,mb4.5,baz=299,slow=8.4,SNR=35
CMAR pP pP 12 11 31.8 +2.4
comp=Z,2.8nm,0.7s,baz=304,slow=9.4,SNR=2.6
CMAR ScP ScP 12 17 05.6 -0.8
comp=Z,1.0nm,0.8s,baz=294,slow=4.4,SNR=3.4
CMAR Chiang Mai Arr 30.41 119 P **P 12 10 50.5 +1.9**
CMAR *PP pP 12 11 31.8 +2.4
CMAR pmax pmax
comp=Z,9.0nm,0.8s
EIL Elat 30.86 268 P **P 12 10 52.1 -0.3**
comp=Z,6.1nm,1.0s,mb4.2,baz=62,slow=8.2,SNR=4.0
KLMR Klimovskoe 31.53 331 *eP* **P 12 10 57.1 -0.8**
KLMR pmax pmax
comp=Z,50nm,1.3s,mb4.9
HHC Hu-ho-hao-te 31.76 70 *eP* **P 12 11 02.1 +2.0**
HHC PP PP 12 12 14.5 -1.5
HHC PcP PcP 12 13 51.0 +4.6
HHC S **S 12 15 56.9 +1.9**
HHC ScP ScP 12 17 15.5 +4.9
HHC ScS ScS 12 21 13.0 +3.9
HHC pmax pmax
comp=Z,9.0nm,1.1s,mb4.2
HHC pmax pmax
comp=Z,92nm,5.4s
HHC LR LR
comp=N,200nm,15.5s
HHC LR LR
comp=E,190nm,15.9s
HHC LR LR
comp=Z,140nm,15.8s
GYA Guiyang 31.84 98 P **P 12 11 02.8 +1.8**
GYA pP pP 12 11 41.3 -0.7
GYA PP PP 12 12 16.9 -0.2
GYA PcP PcP 12 13 48.0 +1.2
GYA S **S 12 15 59.1 +2.6**
GYA ScP ScP 12 17 14.8 +3.7
GYA ScS ScS 12 21 11.0 +1.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
ENH Enshi 32.55 90 *eP* **P 12 11 09.4 +2.2**
comp=Z,10nm,0.4s,mb4.7
AKASG Malin Array Be 32.99 309 P **P 12 11 10.3 -0.4**
comp=Z,36nm,0.5s,mb5.2,baz=80,slow=7.4,SNR=85
AKASG Malin Array Be 32.99 309 P **P 12 11 10.3 -0.4**
AKASG Malin Array Be 32.99 309 *i* P **P 12 11 10.3 -0.4**
AKASG pmax pmax
comp=Z,36nm,0.5s
AKBB Malin Array Si 32.99 309 *eP* **P 12 11 10.6 -0.1**
AKBB Malin Array Si 32.99 309 *eP* **P 12 11 10.6 -0.1**
KIEV Kiev 33.00 309 *eP* **P 12 11 10.4 -0.4**
comp=Z,48nm,0.6s,mb5.2
KIEV Kiev 33.00 309 *eP* **P 12 11 10.4 -0.4**
KIEV pmax pmax
comp=Z,48nm,0.6s,mb5.2
VRI Vrincioaia 34.27 300 ⇑P **P 12 11 23.4 +1.6**
VRI Vrincioaia 34.27 300⇑ *iP* **P 12 11 23.4 +1.6**
PLOR Plostina 34.32 300 ⇑P **P 12 11 23.7 +1.4**
PLOR Plostina 34.32 300⇑ *iP* **P 12 11 23.7 +1.4**
TESR 34.33 301 ⇓*iP* **P 12 11 22.8 +0.5**
MLR Muntele Rosu 34.82 299 ⇓P **P 12 11 28.2 +1.6**
MLR Muntele Rosu 34.82 299⇓ *iP* **P 12 11 28.2 +1.6**
BURAR Bucovina Array 35.33 303 ⇑P **P 12 11 31.3 +0.5**
BURAR Bucovina Array 35.33 303⇑ *iP* **P 12 11 31.3 +0.5**
BUR08 Bucovina Ar. S 35.34 303 *eP* **P 12 11 31.6 +0.6**
BJI Beijing 35.35 70 P **P 12 11 31.3 +0.2**
BJI pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
IDID Didziasalis 35.38 316 *eP* **P 12 11 31.3 +0.1**
IDID AMB AMB 12 11 33.1
comp=Z,24nm,1.0s,mb4.7
VOIR 35.45 299 ⇑P **P 12 11 32.9 +1.0**
VOIR 35.45 299⇑ *iP* **P 12 11 32.9 +1.0**
IIGN Ignalina 35.68 316 *eP* **P 12 11 33.8 +0.1**
IIGN AMB AMB 12 11 35.6
comp=Z,31nm,0.7s,mb5.0
IZAR Zarasai 35.76 317 *eP* **P 12 11 34.4 +0.1**
IZAR AMB AMB 12 11 35.5
comp=Z,27nm,0.8s,mb4.8
ISAL Salakas 35.78 317 *eP* **P 12 11 34.6 0.0**
ISAL AMB AMB 12 11 36.7
comp=Z,22nm,1.1s,mb4.6
JOF Joensuu 35.92 330 *eP* **P 12 11 34.9 -0.7**
JOF pmax pmax
comp=Z,69nm,0.4s,mb5.5
JOF Joensuu 35.92 330 *ep* **P 12 11 34.9 -0.7**
comp=Z,69nm,0.4s,mb5.5
DRGR 37.04 302 ⇓P **P 12 11 46.4 +1.1**
DRGR 37.04 302⇓ *iP* **P 12 11 46.4 +1.1**
KWP Kalwaria Pacla 37.05 306 *eP* **P 12 11 46.5 +1.0**
KWP Kalwaria Pacla 37.05 306 ⇑P **P 12 11 46.8 +1.4**
KWP Kalwaria Pacla 37.05 306⇑ *iP* **P 12 11 46.8 +1.4**
GZR Gura Zlata 37.05 299⇑ *iP* **P 12 11 46.0 +0.5**
TRPA Tarpa 37.14 304⇑ *iP* **P 12 11 47.2 +1.1**
SUW Suwalki 37.16 314 *eP* **P 12 11 46.0 -0.3**
SUW Suwalki 37.16 314 *eP* **P 12 11 46.2 -0.1**
comp=Z,63nm,1.0s,mb5.1
SUW Suwalki 37.16 314 *eP* **P 12 11 46.2 -0.1**
SUW pmax pmax
comp=Z,63nm,1.0s,mb5.1
KOLS Kolonicke sedl 37.32 305 *eP* **P 12 11 48.2 +0.5**
comp=Z,12nm,1.1s,mb4.3
KOLS Kolonicke sedl 37.32 305 *eP* **P 12 11 48.2 +0.5**
KOLS pmax pmax
comp=Z,12nm,1.1s,mb4.3
KOLS Kolonicke sedl 37.32 305 *eP* **P 12 11 48.2 +0.5**
LVZ Lovozero 37.51 338 *eP* **P 12 11 49.2 +0.3**
comp=Z,38nm,0.8s,mb5.0
LVZ Lovozero 37.51 338 *i* P **P 12 11 49.3 +0.3**
LVZ pmax pmax
comp=Z,139nm,2.6s,mb5.0
FINES FINESS Array B 37.53 326 P **P 12 11 49.2 -0.1**
comp=Z,18nm,0.4s,mb4.9,baz=122,slow=8.7,SNR=38
FINES FINESS Array B 37.53 326 P **P 12 11 49.2 -0.1**
FINES pmax pmax
comp=Z,19nm,0.4s
APA Apatity 37.69 337⇓ *iP* **P 12 11 50.6 +0.1**
APA pmax pmax
comp=Z,43nm,1.2s,mb4.8
APA MLR MLR
comp=Z,600nm,17.0s
BZS Buzias 37.85 300 ⇑P **P 12 11 52.9 +0.7**
BZS Buzias 37.85 300⇑ *iP* **P 12 11 52.9 +0.7**
CRVS Cervenica-Dubn 37.85 305 *eP* **P 12 11 52.8 +0.6**
comp=Z,5.4nm,1.1s,mb4.0
CRVS Cervenica-Dubn 37.85 305 *eP* **P 12 11 52.8 +0.6**
CRVS Cervenica-Dubn 37.85 305 *eP* **P 12 11 52.8 +0.6**
KECS Kecovo 38.51 304 *eP* **P 12 11 58.3 +0.7**
comp=Z,3.5nm,0.6s,mb4.1
KECS Kecovo 38.51 304 *eP* **P 12 11 58.3 +0.7**
KECS pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
KECS Kecovo 38.51 304 *eP* **P 12 11 58.3 +0.7**
NIE Niedzica 38.61 306 *eP* **P 12 12 01.8 +3.4**
NIE Niedzica 38.61 306 *eP* **P 12 12 01.8 +3.4**
OJC Ojcow 38.95 307 *eP* **P 12 12 01.3 +0.1**
OJC Ojcow 38.95 307 *eP* **P 12 12 01.2 0.0**
comp=Z,18nm,0.7s,mb4.7
OJC Ojcow 38.95 307 *eP* **P 12 12 01.3 +0.1**
VYHS Vyhne 39.60 304 *eP* **P 12 12 07.1 +0.4**
comp=Z,3.7nm,1.2s,mb3.7
VYHS Vyhne 39.60 304 *eP* **P 12 12 07.1 +0.4**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb3.7
VYHS Vyhne 39.60 304 *eP* **P 12 12 07.1 +0.4**
MORC Moravsky Berou 40.41 307 *eP* **P 12 12 14.1 +0.9**
comp=Z,18nm,1.1s,mb4.4
MORC Moravsky Berou 40.41 307 ⇓P **P 12 12 14.5 +1.2**
MORC Moravsky Berou 40.41 307⇓ *iP* **P 12 12 14.5 +1.2**
GKP Gorka Klasztor 40.62 312 *eP* **P 12 12 15.3 +0.3**
GKP Gorka Klasztor 40.62 312 *eP* **P 12 12 15.3 +0.4**
KEV Kevo 40.85 338 *eP* **P 12 12 16.9 +0.3**
comp=Z,1μm,2.2s
KEV Kevo 40.85 338 *eP* **P 12 12 16.9 +0.3**
KEV Kevo 40.85 338 *ep* **P 12 12 16.2 -0.4**
comp=Z,17nm,0.4s,mb4.8
VRAC Vranov 41.04 306 ⇓P **P 12 12 20.5 +2.0**
VRAC Vranov 41.04 306⇓ *iP* **P 12 12 20.5 +2.0**
DPC Dobruska-Polom 41.18 307 *eP* **P 12 12 20.0 +0.4**
comp=Z,22nm,0.6s,mb4.8
DPC Dobruska-Polom 41.18 307 *eP* **P 12 12 20.6 +1.1**
DPC Dobruska-Polom 41.18 307 *eP* **P 12 12 20.6 +1.1**
DPC *ex* x 12 12 48.9
KSP Ksiaz 41.18 308 *eP* **P 12 12 20.6 +1.1**
ARCES ARCESS Array B 41.19 338 P **P 12 12 19.9 +0.5**
comp=Z,52nm,0.7s,mb5.0,baz=113,slow=8.6,SNR=189
ARCES ARCESS Array B 41.19 338 P **P 12 12 19.9 +0.5**
ARCES pmax pmax
comp=Z,52nm,0.7s
ARE0 ARCESS Array S 41.19 338 *eP* **P 12 12 20.1 +0.6**
UPC Upice 41.37 308 *eP* **P 12 12 21.9 +0.8**
UPC Upice 41.37 308 *eP* **P 12 12 21.9 +0.8**
UPC *ex* x 12 12 41.7
CN2 Changchun 41.61 62 *eP* **P 12 12 25.3 +2.2**
CN2 *ep*P pP 12 13 06.1 +0.3
CN2 *eS* **S 12 18 27.0 +3.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
CN2 pmax pmax
comp=Z,200nm,4.0s
KTK1 Kautokeino 41.67 336 *eP* **P 12 12 23.4 +0.1**
ARSA Arzberg 41.91 303 P pP 12 12 54.4 -14
comp=Z,13nm,0.8s
IPM Ipoh 42.10 132 *eP* **P 12 12 28.2 +0.8**
comp=Z,28nm,0.9s,mb4.7
PSI Prapat 42.23 136 P **P 12 12 29.6 +1.1**
comp=Z,14nm,0.5s,mb4.6,baz=306,slow=6.3,SNR=21
PSI Prapat 42.23 136 P **P 12 12 29.6 +1.1**
PSI pmax pmax
comp=Z,15nm,0.5s,mb4.7
SOKA Soboth 42.31 302⇑ *iP* **P 12 12 29.1 +0.4**
comp=Z,9.9nm,0.6s,mb4.5
PRU Pruhonice 42.34 307 *eP* **P 12 12 30.3 +1.4**
PRU Pruhonice 42.34 307 *eP* **P 12 12 30.3 +1.4**
PRU *ex* x 12 12 54.9
BRG Berggiesshubel 42.67 308 *eP* **P 12 12 31.1 -0.4**
comp=Z,44nm,1.1s,mb4.8
BRG *e* pP 12 13 14.8 +0.3
comp=Z,7.3nm,0.9s
BRG *e* 12 14 16.1
comp=Z,4.7nm,0.7s
BRG *e* 12 17 51.1
comp=Z,4.3nm,0.7s
BRG *e* 12 22 10.0
comp=Z,3.8nm,0.8s
GERES GERESS Array B 42.97 305 P **P 12 12 33.9 -0.2**
comp=Z,1.3nm,0.4s,mb3.7,baz=100,slow=7.2,SNR=10
GERES PP PP 12 14 15.5 -2.4
comp=Z,1.5nm,0.7s,baz=81,slow=12,SNR=4.8
GERES GERESS Array B 42.97 305 P **P 12 12 33.9 -0.2**
GERES PP PP 12 14 15.5 -2.4
GERES GERESS Array B 42.97 305 P **P 12 12 33.9 -0.2**
GERES 12 14 15.5
GERES pmax pmax
comp=Z,1.0nm,0.4s
GERES pmax pmax
comp=Z,2.0nm,0.7s
KHC Kasperske Hory 43.03 306 *eP* **P 12 12 35.2 +0.7**
KHC Kasperske Hory 43.03 306 *eP* **P 12 12 35.2 +0.7**
KHC *ex* x 12 13 09.9
CLL Collm 43.24 309 *i* P **P 12 12 36.0 -0.1**
comp=Z,14nm,1.0s,mb4.3
CLL Collm 43.24 309 *i* P **P 12 12 36.0 -0.1**
CLL pmax pmax
comp=Z,14nm,1.0s,mb4.3
TRO Tromso 43.32 336 *eP* **P 12 12 36.4 -0.1**
TRO AMb AMB 12 12 39.0
comp=Z,59nm,2.9s,mb4.5
TRO Tromso 43.32 336 *eP* **P 12 12 36.4 -0.1**
comp=Z,59nm,2.9s,mb4.5
TRO Tromso 43.32 336 *eP* **P 12 12 36.4 -0.1**
TRO pmax pmax
comp=Z,59nm,2.9s,mb4.5
KBA Koelnbreinsper 43.41 303⇑ *iP* **P 12 12 37.9 +0.3**
comp=Z,5.2nm,0.4s,mb4.3
NKC Novy Kostel 43.66 307 *eP* **P 12 12 41.1 +1.5**
NKC Novy Kostel 43.66 307 *eP* **P 12 12 41.1 +1.5**
MOR8 Moi Rana 43.87 331 *eP* **P 12 12 40.5 -0.5**
MOR8 AMb AMB 12 12 41.3
comp=Z,86nm,0.8s,mb5.2
MOR8 Moi Rana 43.87 331 *eP* **P 12 12 40.5 -0.5**
comp=Z,86nm,0.8s,mb5.1
STEI Steigen 44.02 333 *eP* **P 12 12 42.3 +0.2**
MOX Moxa 44.16 308 *eP* **P 12 12 44.4 +0.9**
MOX Moxa 44.16 308 *eP* **P 12 12 44.4 +0.9**
FLOS Flostrand 44.33 331 *eP* **P 12 12 45.0 +0.4**
NB2 NORSAR Subarra 44.43 323 P **P 12 12 45.1 -0.4**
comp=Z,53nm,0.6s,mb5.0,baz=95,slow=7.9
NOA NORSAR Array B 44.43 323 P **P 12 12 45.0 -0.5**
comp=Z,43nm,0.6s,mb5.0,baz=96,slow=7.9,SNR=186
NOA NORSAR Array B 44.43 323 P **P 12 12 45.0 -0.5**
NOA NORSAR Array B 44.43 323 P **P 12 12 45.0 -0.5**
NOA pmax pmax
comp=Z,43nm,0.6s
KONS Konsvik 44.46 331 *eP* **P 12 12 45.7 0.0**
STOK Stokkvaagen 44.47 331 *eP* **P 12 12 45.9 +0.2**
WTTA Wattenberg 44.54 303⇑ *iP* **P 12 12 46.1 -0.5**
comp=Z,8.8nm,0.4s,mb4.4
NSS Namsos 44.55 328 *eP* **P 12 12 46.0 -0.3**
NAO01 NORSAR Array S 44.57 323 *eP* **P 12 12 46.2 -0.4**
comp=Z,28nm,0.8s,mb4.6
LOF Lofoten 44.69 333 *eP* **P 12 12 47.1 -0.4**
KSRS Korea Array 44.87 71 P **P 12 12 50.0 +0.7**
comp=Z,1.2nm,0.6s,mb3.4,baz=270,slow=7.2,SNR=6.1
KSRS pP pP 12 13 34.0 +1.5
comp=Z,2.6nm,0.9s,baz=277,slow=7.2,SNR=4.1
KSRS Korea Array 44.87 71 P **P 12 12 50.1 +0.8**
KSRS *PP pP 12 13 34.1 +1.5
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb3.6
MOTA Moosalm 44.89 303⇑ *iP* **P 12 12 48.4 -0.9**
comp=Z,5.0nm,0.6s,mb4.0
RETA Reutte 45.09 304⇑ *iP* **P 12 12 50.4 -0.6**
comp=Z,2.9nm,0.4s,mb4.0
FETA Feichten 45.19 303⇑ *iP* **P 12 12 50.7 -1.0**
comp=Z,7.3nm,0.4s,mb4.3
FUORN Ofenpass-Fuorn 45.57 303 *eP* **P 12 12 55.0 +0.3**
comp=Z,7.1nm,0.6s,mb4.2
DAVA Damuels 45.72 304⇑ *iP* **P 12 12 55.2 -0.6**
comp=Z,25nm,0.4s,mb4.9
TIXI Tiksi 45.81 22 *eP* **P 12 12 56.7 +0.5**
TIXI pmax pmax
comp=Z,9.0nm,0.6s,mb4.3
ODD1 Odda 46.64 321 *eP* **P 12 13 03.1 +0.3**
BLS5 Blasjo 46.73 321 *eP* **P 12 13 03.9 +0.4**
CDF Champ du Feu 47.26 306 *eP* **P 12 13 07.1 -0.6**
comp=Z,4.8nm,0.5s,mb3.8
CDF Champ du Feu 47.26 306 *eP* **P 12 13 07.1 -0.6**
comp=Z,2.4nm,0.5s,mb3.8
CDF Champ du Feu 47.26 306 *eP* **P 12 13 07.1 -0.6**
CDF pmax pmax
comp=Z,2.0nm,0.5s,mb3.7
RUND Rundenannen 47.27 322 *eP* **P 12 13 07.1 -0.6**
PGF Pioggiola 47.31 297 *eP* **P 12 13 07.6 -0.7**
comp=Z,32nm,0.8s,mb4.4
PGF Pioggiola 47.31 297 *eP* **P 12 13 07.6 -0.7**
comp=Z,16nm,0.8s,mb4.4
PGF Pioggiola 47.31 297 *eP* **P 12 13 07.6 -0.7**
PGF pmax pmax
comp=Z,16nm,0.8s,mb4.4
ASK Askoy 47.36 322 *eP* **P 12 13 07.6 -0.7**
SPB4 Spitsbergen Ar 47.55 347 *eP* **P 12 13 10.5 +0.9**
SENIN Lac Senin/Sane 47.63 303 *eP* **P 12 13 10.6 -0.1**
comp=Z,13nm,0.6s,mb4.4
HINF Hinteralfeld 47.64 305 *eP* **P 12 13 10.3 -0.4**
comp=Z,14nm,0.6s,mb4.2
HINF Hinteralfeld 47.64 305 *eP* **P 12 13 10.3 -0.4**
comp=Z,6.8nm,0.6s,mb4.2
HINF Hinteralfeld 47.64 305 *eP* **P 12 13 10.3 -0.4**
HINF pmax pmax
comp=Z,7.0nm,0.6s,mb4.2
HAU Haudompre 47.94 305 *eP* **P 12 13 12.6 -0.4**
comp=Z,20nm,0.5s,mb4.4
HAU Haudompre 47.94 305 *eP* **P 12 13 12.6 -0.4**
comp=Z,9.8nm,0.5s,mb4.4
HAU Haudompre 47.94 305 *eP* **P 12 13 12.6 -0.4**
HAU pmax pmax
comp=Z,10.0nm,0.5s,mb4.4
SBF Sospel 48.10 299 *eP* **P 12 13 14.1 -0.2**
comp=Z,41nm,0.7s,mb4.5
SBF Sospel 48.10 299 *eP* **P 12 13 14.1 -0.2**
comp=Z,21nm,0.7s,mb4.6
SBF Sospel 48.10 299 *eP* **P 12 13 14.1 -0.2**
SBF pmax pmax
comp=Z,21nm,0.7s,mb4.6
LPG La Plagne 48.19 302 *eP* **P 12 13 15.4 +0.4**
comp=Z,10.0nm,0.4s,mb4.2
LPL La Piagne 48.20 302 *eP* **P 12 13 15.2 +0.2**
comp=Z,16nm,0.3s,mb4.5
MBDF Montbardon 48.35 301 *eP* **P 12 13 15.8 -0.4**
comp=Z,22nm,0.6s,mb4.4
MBDF Montbardon 48.35 301 *eP* **P 12 13 15.8 -0.4**
comp=Z,11nm,0.6s,mb4.4
MBDF Montbardon 48.35 301 *eP* **P 12 13 15.8 -0.4**
MBDF pmax pmax
comp=Z,11nm,0.6s,mb4.4
CABF La Chapelle 48.40 303 *eP* **P 12 13 17.3 +0.8**
comp=Z,26nm,0.5s,mb4.5
CABF La Chapelle 48.40 303 *eP* **P 12 13 17.3 +0.8**
comp=Z,13nm,0.5s,mb4.5
CABF La Chapelle 48.40 303 *eP* **P 12 13 17.3 +0.8**
CABF pmax pmax
comp=Z,13nm,0.5s,mb4.5
GIVF Givet 48.54 308 *eP* **P 12 13 17.6 0.0**
comp=Z,6.1nm,0.4s,mb4.0
MEZF Maizieres J'vi 48.69 306 *eP* **P 12 13 18.9 +0.1**
comp=Z,20nm,0.5s,mb4.4
MEZF Maizieres J'vi 48.69 306 *eP* **P 12 13 18.9 +0.1**
comp=Z,20nm,0.5s,mb4.7
FRF La Foret Royal 48.73 299 *eP* **P 12 13 18.5 -0.6**
comp=Z,23nm,0.7s,mb4.3
FRF La Foret Royal 48.73 299 *eP* **P 12 13 18.5 -0.6**
comp=Z,12nm,0.7s,mb4.3
FRF La Foret Royal 48.73 299 *eP* **P 12 13 18.5 -0.6**
FRF pmax pmax
comp=Z,12nm,0.7s,mb4.3
KMBO Kilima Mbogo 48.82 228 P **P 12 13 21.9 +1.7**
comp=Z,13nm,0.6s,mb4.5,baz=180,slow=24,SNR=44
KMBO Kilima Mbogo 48.82 228 *eP* **P 12 13 21.8 +1.7**
comp=Z,13nm,0.6s,mb4.4
KMBO Kilima Mbogo 48.82 228 P **P 12 13 21.9 +1.8**
KMBO pmax pmax
comp=Z,13nm,0.6s
ORIF Oris-en-Rattie 48.92 301 *eP* **P 12 13 20.4 -0.2**
comp=Z,9.0nm,0.5s,mb4.1
ORIF Oris-en-Rattie 48.92 301 *eP* **P 12 13 20.4 -0.2**
comp=Z,4.5nm,0.5s,mb4.0
ORIF Oris-en-Rattie 48.92 301 *eP* **P 12 13 20.4 -0.2**
ORIF pmax pmax
comp=Z,5.0nm,0.5s,mb4.1
BAIF Baives 48.94 308 *eP* **P 12 13 21.0 +0.4**
comp=Z,10nm,0.4s,mb4.2
JOW Kunigami 49.05 84 P **P 12 13 22.8 +1.0**
comp=Z,6.2nm,0.4s,mb4.3,baz=282,slow=19
JOW Kunigami 49.05 84 P **P 12 13 22.8 +1.0**
KEST Kesra 49.07 289 P **P 12 13 22.2 +0.4**

comp=Z,1.5nm,0.5s,mb3.6,baz=242,slow=1.3,SNR=6.8
LOR Lormes 49.74 305 *eP* **P 12 13 25.9 -0.8**
comp=Z,6.8nm,0.6s,mb3.9
LOR Lormes 49.74 305 *eP* **P 12 13 25.9 -0.8**
comp=Z,3.4nm,0.6s,mb3.9
LOR Lormes 49.74 305 *eP* **P 12 13 25.9 -0.8**
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb3.8
VIVF Saint-Julien-l 49.77 301 *eP* **P 12 13 26.7 -0.3**
comp=Z,20nm,0.5s,mb4.4
VIVF Saint-Julien-l 49.77 301 *eP* **P 12 13 26.7 -0.3**
comp=Z,10nm,0.5s,mb4.4
VIVF Saint-Julien-l 49.77 301 *eP* **P 12 13 26.7 -0.3**
VIVF pmax pmax
comp=Z,10.0nm,0.5s,mb4.4
SMF Signal de Mont 49.90 304 *eP* **P 12 13 27.5 -0.4**
comp=Z,27nm,0.6s,mb4.5
SMF Signal de Mont 49.90 304 *eP* **P 12 13 27.5 -0.4**
comp=Z,14nm,0.6s,mb4.5
SMF Signal de Mont 49.90 304 *eP* **P 12 13 27.5 -0.4**
SMF pmax pmax
comp=Z,14nm,0.6s,mb4.5
SSF Saint Saulge 50.02 204 *eP* **P 12 13 28.2 -0.6**
comp=Z,5.4nm,0.5s,mb3.8
SSF Saint Saulge 50.02 204 *eP* **P 12 13 28.2 -0.6**
comp=Z,2.7nm,0.5s,mb3.8
SSF Saint Saulge 50.02 204 *eP* **P 12 13 28.2 -0.6**
SSF pmax pmax
comp=Z,3.0nm,0.5s,mb3.9
AVF Avril sur Loir 50.19 304 *eP* **P 12 13 29.7 -0.4**
comp=Z,22nm,0.5s,mb4.4
AVF Avril sur Loir 50.19 304 *eP* **P 12 13 29.7 -0.4**
comp=Z,11nm,0.5s,mb4.4
AVF Avril sur Loir 50.19 304 *eP* **P 12 13 29.7 -0.4**
AVF pmax pmax
comp=Z,11nm,0.5s,mb4.4
LASF Ste Croix 50.54 301 *eP* **P 12 13 33.0 +0.3**
comp=Z,14nm,0.5s,mb4.3
HYF Humbligny 50.55 305 *eP* **P 12 13 32.8 0.0**
BGF Bois d'Agland 50.58 304 *eP* **P 12 13 32.5 -0.5**
BGF Bois d'Agland 50.58 304 *eP* **P 12 13 32.5 -0.5**
TCF Toulx Ste Croi 51.08 304 *eP* **P 12 13 36.7 0.0**
comp=Z,12nm,0.5s,mb4.3
TCF Toulx Ste Croi 51.08 304 *eP* **P 12 13 36.7 0.0**
comp=Z,5.8nm,0.5s,mb4.3
TCF Toulx Ste Croi 51.08 304 *eP* **P 12 13 36.7 0.0**
TCF pmax pmax
comp=Z,6.0nm,0.5s,mb4.3
CAF Calviac 51.54 302 *eP* **P 12 13 40.4 +0.2**
comp=Z,13nm,0.6s,mb4.2
CAF Calviac 51.54 302 *eP* **P 12 13 40.4 +0.2**
comp=Z,6.6nm,0.6s,mb4.2
CAF Calviac 51.54 302 *eP* **P 12 13 40.4 +0.2**
CAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
RJF Les Rejaudoux 51.81 303 *eP* **P 12 13 42.4 +0.2**
comp=Z,16nm,0.8s,mb4.2
RJF Les Rejaudoux 51.81 303 *eP* **P 12 13 42.4 +0.2**
comp=Z,7.8nm,0.8s,mb4.2
RJF Les Rejaudoux 51.81 303 *eP* **P 12 13 42.4 +0.2**
RJF pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
MTLF Montolieu 51.89 300 *eP* **P 12 13 42.7 -0.1**
comp=Z,11nm,0.6s,mb4.2
MTLF Montolieu 51.89 300 *eP* **P 12 13 42.7 -0.1**
comp=Z,5.7nm,0.6s,mb4.2
MTLF Montolieu 51.89 300 *eP* **P 12 13 42.7 -0.1**
MTLF pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
LDF La Druitiere 52.02 307 *eP* **P 12 13 43.7 0.0**
comp=Z,13nm,0.5s,mb4.3
LDF La Druitiere 52.02 307 *eP* **P 12 13 43.7 0.0**
comp=Z,6.7nm,0.5s,mb4.3
LDF La Druitiere 52.02 307 *eP* **P 12 13 43.7 0.0**
LDF pmax pmax
comp=Z,7.0nm,0.5s,mb4.3
FLN La Foliniere 52.21 307 *eP* **P 12 13 44.9 -0.2**
comp=Z,30nm,0.8s,mb4.5
FLN La Foliniere 52.21 307 *eP* **P 12 13 44.9 -0.2**
comp=Z,15nm,0.8s,mb4.5
FLN La Foliniere 52.21 307 *eP* **P 12 13 44.9 -0.2**
FLN pmax pmax
comp=Z,15nm,0.8s,mb4.5
LFF La Frestale 52.44 302 *eP* **P 12 13 46.8 0.0**
comp=Z,23nm,0.6s,mb4.5
LFF La Frestale 52.44 302 *eP* **P 12 13 46.8 0.0**
comp=Z,11nm,0.6s,mb4.5
LFF La Frestale 52.44 302 *eP* **P 12 13 46.8 0.0**
LFF pmax pmax
comp=Z,11nm,0.6s,mb4.5
GRR Gorron 52.55 307 *eP* **P 12 13 47.5 0.0**
comp=Z,30nm,0.7s,mb4.5
GRR Gorron 52.55 307 *eP* **P 12 13 47.5 0.0**
comp=Z,15nm,0.7s,mb4.5
GRR Gorron 52.55 307 *eP* **P 12 13 47.5 0.0**
GRR pmax pmax
comp=Z,15nm,0.7s,mb4.5
MFF Saint Martin d 52.56 305 *eP* **P 12 13 47.9 +0.2**
comp=Z,14nm,0.7s,mb4.2
MFF Saint Martin d 52.56 305 *eP* **P 12 13 47.9 +0.2**
comp=Z,7.3nm,0.7s,mb4.2
MFF Saint Martin d 52.56 305 *eP* **P 12 13 47.9 +0.2**
MFF pmax pmax
comp=Z,7.0nm,0.7s,mb4.2
ETOS Mallorca 52.59 296 P **P 12 13 47.7 -0.3**
comp=Z,3.5nm,0.5s,mb4.0
CSOR Sort 52.94 299 P **P 12 13 51.2 +0.7**
comp=Z,2.4nm,0.6s,mb3.8
MJAR Matsushiro Arr 52.95 68 pP pP 12 14 37.5 +2.1
comp=Z,2.8nm,0.8s,baz=288,slow=9.5,SNR=5.6
EPF Esparros 53.29 300 *eP* **P 12 13 52.4 -0.7**
comp=Z,7.1nm,0.4s,mb4.2
SGMF Saint Gilles 53.68 307 *eP* **P 12 13 55.4 -0.4**
comp=Z,10nm,0.6s,mb4.3
SGMF Saint Gilles 53.68 307 *eP* **P 12 13 55.4 -0.4**
comp=Z,5.1nm,0.6s,mb4.2
SGMF Saint Gilles 53.68 307 *eP* **P 12 13 55.4 -0.4**
SGMF pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
ETSF Etsaut 53.96 300 *eP* **P 12 13 58.1 +0.2**
comp=Z,16nm,0.5s,mb4.5
ETSF Etsaut 53.96 300 *eP* **P 12 13 58.1 +0.2**
comp=Z,8.1nm,0.5s,mb4.5
ETSF Etsaut 53.96 300 *eP* **P 12 13 58.1 +0.2**
ETSF pmax pmax
comp=Z,8.0nm,0.5s,mb4.5
ROSF Rostrenen 54.11 308 *eP* **P 12 13 58.4 -0.5**
comp=Z,20nm,0.6s,mb4.5
ROSF Rostrenen 54.11 308 *eP* **P 12 13 58.4 -0.5**
comp=Z,10nm,0.6s,mb4.5
ROSF Rostrenen 54.11 308 *eP* **P 12 13 58.4 -0.5**
ROSF pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
QUIF Quistinic 54.16 307 *eP* **P 12 13 58.5 -0.8**
comp=Z,15nm,0.6s,mb4.4
QUIF Quistinic 54.16 307 *eP* **P 12 13 58.5 -0.8**
comp=Z,7.4nm,0.6s,mb4.4
QUIF Quistinic 54.16 307 *eP* **P 12 13 58.5 -0.8**
QUIF pmax pmax
comp=Z,7.0nm,0.6s,mb4.4
DAG Danmarks Havn 54.78 344 *iP* **P 12 14 02.7 -0.6**
DAG pmax pmax
comp=Z,13nm,0.8s,mb4.5
DAG Danmarks Havn 54.78 344 *iP* **P 12 14 02.7 -0.6**
comp=Z,133nm,0.8s,mb5.5
ELAN Lanestosa 55.83 302 P **P 12 14 11.3 0.0**
comp=Z,3.6nm,0.5s,mb4.2
EVIA Vianos 56.85 296 P **P 12 14 18.8 +0.2**
comp=Z,6.6nm,0.5s,mb4.5
EVIA Vianos 56.85 296 P **P 12 14 18.8 +0.2**
EVIA pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
GUD Guadarrama 57.27 299 P **P 12 14 21.1 -0.3**
comp=Z,9.2nm,0.6s,mb4.6
GUD Guadarrama 57.27 299 P **P 12 14 21.2 -0.3**
GUD pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
ESDC Sonseca Array 57.50 298 P **P 12 14 22.7 -0.4**
comp=Z,2.5nm,0.5s,mb4.1,baz=54,slow=7.7,SNR=10
ESDC pP pP 12 15 08.8 +0.3
comp=Z,1.3nm,0.7s,baz=50,slow=8.4,SNR=2.2
ESDC Sonseca Array 57.50 298 P **P 12 14 22.8 -0.3**
comp=Z,5.6nm,0.6s,mb4.4
EQES Quesada 57.58 296 P **P 12 14 23.2 -0.5**
comp=Z,11nm,0.5s,mb4.8
EBER Berja 57.81 294 P **P 12 14 25.5 +0.2**
comp=Z,13nm,0.7s,mb4.7

BILL Bilibino 58.64 26 *eP* **P 12 14 32.2 +1.7**
BILL *e* pP 12 15 16.9 +0.8
BILL *eS* **S 12 22 23.1 +4.7**
BILL pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
EPLA Plasencia 58.85 299 P **P 12 14 31.7 -0.7**
comp=Z,2.1nm,0.6s,mb3.9
EPLA Plasencia 58.85 299 P **P 12 14 31.7 -0.7**
EPLA pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
EMIJ Mijas 59.33 295 P **P 12 14 33.9 -1.9**
comp=Z,5.2nm,0.5s,mb4.4
EMAZ Mazaricos 59.71 303 P **P 12 14 38.5 +0.2**
comp=Z,5.8nm,0.5s,mb4.5
PVIS Viseu 59.86 300 *eP* **P 12 14 40.0 +0.7**
comp=Z,31nm,1.8s,mb4.6
EBAD Badajoz 60.04 298 P **P 12 14 40.1 -0.5**
comp=Z,12nm,0.6s,mb4.7
PBAR Barrancos 60.30 297 *eP* **P 12 14 41.8 -0.6**
comp=Z,18nm,1.3s,mb4.5
EVO Evora 60.84 298 *eP* **P 12 14 45.7 -0.3**
comp=Z,6.6nm,0.7s,mb4.1
EVO Evora 60.84 298 *eP* **P 12 14 45.8 -0.2**
comp=Z,15nm,1.8s,mb4.3
EVOP Sao Brissos 60.92 298 *eP* **P 12 14 45.7 -0.9**
comp=Z,6.6nm,0.7s,mb4.4
EVOP Sao Brissos 60.92 298 *eP* **P 12 14 45.7 -0.9**
EVOP pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
PBEJ Beja 60.95 298 *eP* **P 12 14 46.4 -0.4**
comp=Z,12nm,1.3s,mb4.3
PVAQ Vaqueiros 61.11 297 *eP* **P 12 14 47.7 -0.2**
comp=Z,28nm,1.5s,mb4.7
SUMG Summit 61.11 341 *eP* **P 12 14 49.2 +1.9**
comp=Z,33nm,1.0s,mb4.9
SUMG Summit 61.11 341 *iP* **P 12 14 47.7 +0.4**
comp=Z,17nm,0.9s,mb4.7
PBDV Barranco-do-Ve 61.33 297 *eP* **P 12 14 49.9 +0.5**
comp=Z,17nm,1.0s,mb4.6
PTEO Sao Teotonio 61.77 297 *eP* **P 12 14 49.4 -2.9**
comp=Z,31nm,1.6s,mb4.7
MSKU Masuku 65.35 248 P **P 12 15 14.9 -1.1**
comp=Z,18nm,0.5s,mb5.0,baz=287,slow=23,SNR=20
TORD Torodi Ar. Bea 65.74 269 P **P 12 15 16.5 -2.0**
comp=Z,11nm,0.6s,mb4.7,baz=57,slow=5.9,SNR=17
TORD Torodi Ar. Bea 65.74 269 P **P 12 15 16.5 -2.0**
COLD Coldfoot 72.01 16 *eP* **P 12 15 57.4 +1.1**
comp=Z,9.4nm,0.9s,mb4.4
INK Inuvik 73.94 9 P **P 12 16 08.3 +0.6**
comp=Z,14nm,0.8s,mb4.6,baz=10,slow=7.0,SNR=9.5
INK Inuvik 73.94 9 *eP* **P 12 16 08.3 +0.7**
comp=Z,17nm,0.9s,mb4.7
INK Inuvik 73.94 9 P **P 12 16 08.3 +0.7**
INK pmax pmax
comp=Z,14nm,0.8s
BPAW Bear Paw Mtn. 74.43 18 *eP* **P 12 16 10.8 +0.3**
comp=Z,3.5nm,0.6s,mb4.2
COLA College 74.51 16 *eP* **P 12 16 11.7 +0.7**
comp=Z,12nm,0.8s,mb4.6
COLA College 74.51 16 *eP* **P 12 16 11.7 +0.7**
COLA pmax pmax
comp=Z,12nm,0.8s,mb4.6
LBTB Lobatse 74.66 222 P **P 12 16 13.4 +1.1**
comp=Z,15nm,0.5s,mb4.9,baz=58,slow=5.1,SNR=24
LBTB Lobatse 74.66 222 *eP* **P 12 16 13.5 +1.2**
comp=Z,21nm,0.6s,mb5.0
LBTB Lobatse 74.66 222 *eP* **P 12 16 13.5 +1.2**
LBTB pmax pmax
comp=Z,21nm,0.6s,mb4.9
DBIC Dimbokro 74.72 267 P **P 12 16 11.5 -1.5**
comp=Z,3.6nm,0.4s,mb4.3,baz=10,slow=4.7,SNR=12
DBIC Dimbokro 74.72 267 P **P 12 16 11.5 -1.5**
DBIC pmax pmax
comp=Z,4.0nm,0.4s
KIC Kosan Boka 74.81 267 *eP* **P 12 16 12.0 -1.5**
comp=Z,8.7nm,0.4s,mb4.7
ILAR Eielson Array 74.82 16 P **P 12 16 12.7 0.0**
comp=Z,4.9nm,1.0s,mb4.1,baz=314,slow=4.6,SNR=28
ILAR pP pP 12 16 59.9 -0.5
comp=Z,1.5nm,0.9s,baz=321,slow=4.5,SNR=3.4
ILAR Eielson Array 74.82 16 P **P 12 16 12.7 0.0**
ILAR *PP pP 12 16 59.9 -0.5
ILAR pmax pmax
comp=Z,5.0nm,1.0s
TIC Toumodi 74.86 267 *eP* **P 12 16 12.2 -1.6**
comp=Z,14nm,0.5s,mb4.9
TIC Toumodi 74.86 267 *eP* **P 12 16 12.2 -1.6**
TIC pmax pmax
comp=Z,14nm,0.5s,mb4.8
TSUM Tsumeb 74.91 232 *eP* **P 12 16 14.6 +0.7**
comp=Z,12nm,0.7s,mb4.6
LIC Lamto 75.12 267 *eP* **P 12 16 13.6 -1.7**
comp=Z,59nm,1.2s,mb5.1
LIC Lamto 75.12 267 *eP* **P 12 16 13.7 -1.6**
comp=Z,14nm,0.6s,mb4.5
LIC Lamto 75.12 267 *eP* **P 12 16 13.7 -1.6**
comp=Z,6.8nm,0.6s,mb4.5
PPLA Purkeypile 75.12 19 *eP* **P 12 16 15.4 +1.0**
EGAK Eagle 75.98 14 *eP* **P 12 16 20.3 +1.0**
comp=Z,5.3nm,0.9s,mb4.2
DAWY Dawson 76.96 13 *eP* **P 12 16 25.6 +0.8**
SML Sawmill 77.02 18 *eP* **P 12 16 25.9 +0.7**
comp=Z,4.2nm,1.0s,mb4.0
SML Sawmill 77.02 18 *eP* **P 12 16 25.9 +0.7**
SML pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
BOSA Boshof 77.73 220 P **P 12 16 30.1 +0.5**
comp=Z,11nm,0.4s,mb4.8,baz=26,slow=4.1,SNR=21
BOSA Boshof 77.73 220 P **P 12 16 30.1 +0.6**
BOSA pmax pmax
comp=Z,11nm,0.4s,mb4.8
KDAK Kodiak Island 79.23 22 P **P 12 16 38.4 +0.9**
comp=Z,8.8nm,0.8s,mb4.4,baz=1.3,slow=4.2,SNR=6.2
KDAK Kodiak Island 79.23 22 *iP* **P 12 16 38.1 +0.7**
OHAK Old Harbor 79.48 23 *eP* **P 12 16 39.2 +0.5**
comp=Z,9.9nm,1.0s,mb4.4
YKA Yellowknife Ar 81.29 3 P **P 12 16 49.0 +0.7**
comp=Z,11nm,0.3s,mb4.9,baz=348,slow=5.4,SNR=70
YKA Yewknife Ar 81.29 3 P **P 12 16 49.0 +0.7**
YKA Yellowknife Ar 81.29 3 P **P 12 16 49.0 +0.7**
YKA pmax pmax
comp=Z,11nm,0.4s
WRA Warramunga Arr 81.95 122 P **P 12 16 52.5 +0.1**
comp=Z,6.2nm,0.4s,mb4.6,baz=324,slow=4.9,SNR=234
WRA Warramunga Arr 81.95 122 P **P 12 16 52.5 +0.1**
WRA pmax pmax
comp=Z,6.0nm,0.4s
WB2 Warramunga Arr 81.96 122 *eP* **P 12 16 52.5 +0.1**
SCHQ Schefferville 82.15 337 P **P 12 16 52.8 -0.1**
comp=Z,4.6nm,0.7s,mb4.2,baz=58,slow=17,SNR=4.5
SUR Sutherland 83.04 221 P **P 12 16 59.0 +1.3**
comp=Z,7.2nm,0.7s,mb4.5,baz=27,slow=2.3,SNR=5.1
DLBC Dease Lake 83.83 11 P **P 12 17 02.5 +1.0**
comp=Z,1.7nm,0.7s,mb3.9,baz=350,slow=5.1,SNR=5.6
ASAR Alice Springs 84.21 125 P **P 12 17 04.1 +0.2**
comp=Z,6.3nm,0.6s,mb4.5,baz=311,slow=5.0,SNR=181
ASAR pP pP 12 17 53.8 +1.0
comp=Z,0.9nm,0.5s,baz=310,slow=4.7,SNR=2.3
ASAR PKKPbc PKKPbc 12 35 15.9 +0.5
comp=Z,0.4nm,0.8s,baz=144,slow=2.9,SNR=4.0
ASAR Alice Springs 84.21 125 P **P 12 17 04.1 +0.2**
ASAR *PP pP 12 17 53.8 +1.1
ASAR pmax pmax
comp=Z,6.0nm,0.6s
FFC Flin Flon 88.99 356 *iP* **P 12 17 28.5 +1.9**
ULM Lac du Bonnet 92.90 352 P **P 12 17 44.6 -0.2**
comp=Z,2.7nm,0.8s,mb4.3,baz=14,slow=8.3,SNR=2.6
PDAR Pinedale Array 101.15 0 P Pdif 12 18 23.4 +1.2
comp=Z,0.2nm,0.5s,baz=38,slow=3.6,SNR=3.7
TXAR Lajitas Array 114.37 355 PKP PKiKP 12 23 11.4 +0.4
comp=Z,0.3nm,0.8s,baz=1.3,slow=4.0,SNR=2.9
TXAR Lajitas Array 114.37 355 PKIKP PKiKP 12 23 11.4 +0.4
SNAA Sanae 119.36 200 PKP PKPdf 12 23 19.0 -0.1
comp=Z,0.5nm,0.7s,baz=4.8,slow=12,SNR=4.6
SNAA Sanae 119.36 200 PKIKP PKPdf 12 23 19.0 -0.1
SNAA pmax pmax
comp=Z,1.0nm,0.7s
URZ Urewera 122.73 116 PKP PKPdf 12 23 24.2 -2.4
comp=Z,3.4nm,0.5s,baz=11,slow=5.2,SNR=1.8
QSPA South Pole Qui 126.25 180 PKP PKPdf 12 23 31.6 -0.5
comp=Z,2.2nm,0.7s,baz=287,slow=1.1,SNR=20
CPUP Villa Florida 135.23 268 PKP PKPdf 12 23 48.7 -2.0
comp=Z,1.3nm,0.5s,baz=58,slow=3.1,SNR=7.9
CPUP Villa Florida 135.23 268 PKP PKPdf 12 23 48.7 -2.1
LPAZ La Paz 138.65 288 PKP PKPdf 12 23 57.3 0.0
comp=Z,1.7nm,0.8s,baz=224,slow=6.6,SNR=6.5
TRQA Tornquist 142.87 253 *e*PKPdf PKPdf 12 24 01.1 -3.2

PLCA Paso Flores 149.83 250 PKPbc PKPbc 12 24 19.4 -1.5
comp=Z,6.9nm,0.8s,baz=22,slow=2.5,SNR=14
PLCA Paso Flores 149.83 250 *e*PKPdf PKPdf 12 24 17.1 +1.2
PLCA *e*PKPbc PKPbc 12 24 21.5 +0.6

DJA 24 12:17:59.4±0.99S×102.99E,h55km,MLv3.4/8,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.63**	**357**	P	Pn	12 18 13.1	+1.0
MNAI				S	Sn	12 18 23.6	+2.0
LWLI	**Liwa**	**1.06**	**92**	P	Pn	12 18 19.6	+1.9
LWLI				S	Sn	12 18 32.6	+1.0
MDSI	**Maura Dua**	**1.29**	**67**	P	Pn	12 18 22.1	+1.4
MDSI				S	Sn	12 18 38.4	+1.5
KSI	**Kapahiang**	**1.39**	**343**	P	Pn	12 18 22.3	+0.2
KSI				S	Sn	12 18 41.2	+1.8
KASI	**Kota Agung**	**1.59**	**110**	P	Pn	12 18 26.2	+1.4
KASI				S	Sn	12 18 44.9	+0.6
KLSI		**1.76**	**80**	P	Pn	12 18 28.9	+1.8
KLSI				S	Sn	12 18 51.0	+2.6
RGRI	**Rengat**	**4.66**	**352**	P	Pn	12 19 05.8	-1.0
PPI	**Padang Panjang**	**5.19**	**330**	P	Pn	12 19 15.7	+1.5

*BJI **24** 12:19:51.0,63.70N×150.14W,h8km,mB4.9/6,mb4.8/10, Ms4.7/6,Ms7 4.5/6*
*ISCJB **24** 12:19:52.2±0.5,63.52N±0.02×150.13W±0.04,h8km±3km, mb4.4/65,MS3.9/4,Error ellipse: s-maj=3.4km s-min=3.0km az=4.4*
*NEIC **24** 12:19:52.9,63.44N×150.06W,h7km,mb4.6/44, ML4.5(PMR),ML4.3(AEIC),MW4.1(SLM),After AEIC.*
NEIC Felt [III] at Chugiak, Talkeetna, Wasilla and Willow; [II] at Anchorage, Eagle River, Elmendorf AFB, Fairbanks, Fort Richardson and Palmer. Also felt at Clear, Denali National Park, Girdwood, Healy, Indian and Kenai.
*IDC **24** 12:19:55.7±2.2,63.60N×150.01W,h18km±13km,mb4.0/19, mb1 4.2/23,mb1mx4.2/30,mbtmp4.0/23,ML3.9/4,MS3.0/4, Ms1 3.0/4,ms1mx2.6/38,Error ellipse: s-maj=12.8km s-min=10.2km az=77.0*

ISC 24 12:19:52.8±0.5,63.51N±0.02×150.13W±0.04,h0km±3km, n293,g0s86/303,mb4.5/65,MS3.9/4,57C-76D,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.09**	**231**	P	**Pg**	**12 19 55.4**	**+0.9**
TRF				S	**Sg**	**12 19 57.0**	**+1.2**
MCK	**McKinley**	**0.58**	**67**	P	**Pg**	**12 20 04.2**	**+0.4**
MCK				S	**Sg**	**12 20 12.3**	**+1.1**
RND	**Reindeer**	**0.58**	**100**	P	**Pg**	**12 20 02.9**	**-0.9**
RND				S	**Sg**	**12 20 10.2**	**-1.1**
BPAW	**Bear Paw Mtn.**	**0.70**	**328**	P	**Pg**	**12 20 08.0**	**+1.7**
BPAW				S	**Sg**	**12 20 19.9**	**+4.6**
CHUM	**Lake Minchumin**	**1.04**	**292**	P	**Pg**	**12 20 13.6**	**+0.8**
CHUM				S	**Sg**	**12 20 28.6**	**+2.4**
PPLA	**Purkeypile**	**1.12**	**238**	P	**Pg**	**12 20 12.9**	**-1.3**
DHY	**Denali Highway**	**1.32**	**108**	P	**Pg**	**12 20 16.1**	**-1.9**
DHY				S	**Sg**	**12 20 33.2**	**-1.8**
HDA	**Harding Lake**	**1.66**	**56**	P	**Pn**	**12 20 22.4**	**-0.8**
SKT	**Skwentna**	**1.67**	**203**	P	**Pn**	**12 20 21.7**	**-1.5**
SKT				S	**Sn**	**12 20 42.2**	**-3.0**
MDM	**Murphy Dome**	**1.67**	**29**	P	**Pn**	**12 20 23.0**	**-0.2**
COLA	**College**	**1.69**	**35**	P	**Pn**	**12 20 23.1**	**-0.5**
SML	**Sawmill**	**1.90**	**153**	P	**Pn**	**12 20 23.7**	**-2.6**
ILAR	**Eielson Array**	**1.90**	**47**	Pn	**Pn**	**12 20 25.6**	**-0.7**
	185nm,0.3s,baz=228,slow=14,SNR=977						
ILAR				Pg	**Pg**	**12 20 28.7**	**-0.5**
	200nm,0.3s,baz=232,slow=17,SNR=464						
ILAR				Lg		12 20 54.1	
	486nm,0.3s,baz=231,slow=29,SNR=31						
PMR	**Palmer**	**1.98**	**166**	P	**Pn**	**12 20 25.0**	**-2.5**
SCM	**Sheep Creek Mo**	**2.12**	**141**	P	**Pn**	**12 20 27.1**	**-2.3**
PAX	**Paxson**	**2.17**	**102**	P	**Pn**	**12 20 29.8**	**-0.4**
FIB	**Fire Island**	**2.35**	**181**	P	**Pn**	**12 20 32.1**	**-0.4**
RC01	**Rabbit Creek A**	**2.44**	**176**	P	**Pn**	**12 20 31.8**	**-1.9**
SPU	**Mount Spurr**	**2.50**	**202**	*e*Pn	**Pn**	**12 20 33.7**	**-0.9**
SPU				*e*Sn	**Sn**	**12 21 04.8**	**-1.0**
DOT	**Dot Lake**	**2.71**	**84**	P	**Pn**	**12 20 36.6**	**-0.9**
MENT	**Mentasta**	**2.96**	**98**	*e*P	**Pn**	**12 20 41.6**	**+0.7**
IMA2	**Indian Mountai**	**2.99**	**331**	*e*Pn	**Pn**	**12 20 42.1**	**+0.8**
SLKM	**Skilak Lake**	**3.01**	**181**	P	**Pn**	**12 20 40.9**	**-0.8**
GCSA	**Galena City Sc**	**3.21**	**296**	P	**Pn**	**12 20 44.5**	**+0.2**
RSO	**Redoubt South**	**3.30**	**203**	*e*Pn	**Pn**	**12 20 45.2**	**-0.3**
SEW	**Seward**	**3.43**	**174**	P	**Pn**	**12 20 47.2**	**-0.3**
SVW2	**Sparrevohn**	**3.51**	**229**	*e*P	**Pn**	**12 20 47.8**	**-0.7**
COLD	**Coldfoot**	**3.73**	**360**	P	**Pn**	**12 20 52.5**	**+0.9**
BRLK	**Bradley Lake**	**3.78**	**186**	P	**Pn**	**12 20 51.5**	**-0.7**
CNPM	**China Poot**	**4.03**	**188**	P	**Pn**	**12 20 55.9**	**+0.2**
RAGM	**Ragged Mountai**	**4.05**	**138**	*e*Pn	**Pn**	**12 20 55.9**	**0.0**
EGAK	**Eagle**	**4.13**	**68**	P	**Pn**	**12 20 56.4**	**-0.5**
MID	**Middleton Isla**	**4.48**	**154**	P	**Pn**	**12 21 02.0**	**+0.2**
DAWY	**Dawson**	**4.79**	**79**	P	**Pn**	**12 21 05.2**	**-0.9**
KDAK	**Kodiak Island**	**5.87**	**193**	Pn	**Pn**	**12 21 19.4**	**-1.5**
	2.2nm,0.3s,baz=38,slow=7.6,SNR=28						
KDAK				Sn	**Sn**	**12 22 26.3**	**-2.5**
	4.7nm,0.3s,baz=122,slow=23,SNR=7.2						
KDAK	**Kodiak Island**	**5.87**	**193**	P	**Pn**	**12 21 19.4**	**-1.4**
PNL	**Peninsula**	**6.41**	**122**	P	**Pn**	**12 21 28.3**	**+0.1**
OHAK	**Old Harbor**	**6.50**	**195**	P	**Pn**	**12 21 27.5**	**-2.0**
DHAK	**Deception Hill**	**7.24**	**122**	P	**Pn**	**12 21 39.6**	**-0.1**
WHY	**Whitehorse**	**7.70**	**105**	P	**Pn**	**12 21 45.5**	**-0.5**
TNA	**Tin City**	**7.94**	**293**	P	**Pn**	**12 21 50.1**	**+0.9**
SKAG	**Skagway**	**8.15**	**113**	*e*P	**Pn**	**12 21 52.4**	**+0.2**
INK	**Inuvik**	**8.30**	**47**	Pn	**Pn**	**12 21 53.4**	**-0.8**
	3.5nm,0.3s,baz=241,slow=17,SNR=90						
INK				Sn	**Sn**	**12 23 25.4**	**-3.2**
	2.1nm,0.3s,baz=175,slow=18,SNR=3.2						
INK				LR	LR	12 25 42.6	
	comp=Z,170nm,21.9s,baz=305,slow=42						
INK	**Inuvik**	**8.30**	**47**	*e*Pn	**Pn**	**12 21 54.5**	**+0.3**
CHGN	**Chignik**	**8.34**	**214**	*e*P	**Pn**	**12 21 57.8**	**+3.1**
BESE	**Bessie Mountai**	**8.89**	**117**	P	**Pn**	**12 22 00.7**	**-1.7**
SDPT	**Sand Point**	**9.72**	**217**	*e*Pn	**Pn**	**12 22 15.6**	**+1.9**
SIT	**Sitka**	**9.77**	**125**	P	**Pn**	**12 22 13.1**	**-1.2**
DLBC	**Dease Lake**	**10.98**	**108**	Pn	**Pn**	**12 22 31.3**	**+0.4**
	0.2nm,0.3s,baz=254,slow=20,SNR=6.9						
YKA	**Yellowknife Ar**	**16.04**	**78**	Pn	**Pn**	**12 23 37.7**	**-1.5**
	0.5nm,0.3s,baz=293,slow=13,SNR=7.0						
YKA				LR	LR	12 30 30.0	
	comp=Z,13nm,20.7s,baz=20,slow=40						
YKA	**Yellowknife Ar**	**16.04**	**78**	Pn	**Pn**	**12 23 37.7**	**-1.5**
YKA				LR	LR	12 30 30.0	
PGC	**Sidney**	**20.81**	**123**	*e*P	**P**	**12 24 35.1**	**-0.3**
	1.0nm,0.9s						
NLWA	**Neilton Lookou**	**21.71**	**126**	*e*P	**P**	**12 24 45.7**	**+0.7**
	18nm,1.1s,mb4.4						
D05A	**Enumclaw**	**22.58**	**123**	⇓P	**P**	**12 24 55.2**	**+0.9**
	baz=22						
B08A	**Colville Reser**	**22.65**	**118**	⇓P	**P**	**12 24 55.6**	**+0.6**
	baz=22						
ETW	**Entiat**	**22.87**	**120**	*e*P	**P**	**12 24 56.5**	**-0.9**
NEW	**Newport**	**23.61**	**115**	⇓P	**P**	**12 25 05.1**	**0.0**
	baz=24						
NEW	**Newport**	**23.61**	**115**	*e*P	**P**	**12 25 04.6**	**-0.6**
	7.2nm,0.9s,mb4.2						
B12A	**Libby**	**24.08**	**112**	⇑P	**P**	**12 25 10.2**	**+0.8**
	baz=24,SNR=7.6						
A13A	**Flathead Natio**	**24.21**	**110**	⇓P	**P**	**12 25 11.0**	**+0.4**
	baz=24						
HOOD	**Mount Hood Mea**	**24.28**	**125**	*e*P	**P**	**12 25 11.3**	**0.0**
	12nm,0.9s,mb4.4						
C11A	**Tepee Creek (N**	**24.30**	**114**	⇓P	**P**	**12 25 10.9**	**-0.6**
	baz=24						
WALA	**Waterton Lakes**	**24.33**	**109**	*e*P	**P**	**12 25 11.4**	**-0.3**
	0.5nm,1.1s						
A14A	**Double T Ranch**	**24.60**	**109**	⇓P	**P**	**12 25 14.3**	**+0.1**
	baz=24						
B13A	**Whitefish**	**24.62**	**111**	⇑P	**P**	**12 25 14.9**	**+0.5**
	baz=24,SNR=10						
C12B	**Naegeli Ranch,**	**24.73**	**113**	⇑P	**P**	**12 25 15.6**	**+0.2**
	baz=25						
A15A	**Johnson Ranch,**	**24.89**	**108**

D12A **Red Ives Fores** 25.30 114 ⇓P P 12 25 20.3 -0.2
baz=25
C14A **Swan Lake** 25.40 111 ⇑P P 12 25 21.6 +0.2
baz=25
A16A **West Butte Ran** 25.40 107 ⇓P P 12 25 21.2 -0.2
baz=25,SNR=6.9
F10A **Beach Ranch, E** 25.42 118 ⇓P P 12 25 22.2 +0.5
baz=25
B15A **Bradely Ranch,** 25.47 109 ⇓P P 12 25 22.0 -0.1
baz=25,SNR=6.7
D13A **Huson** 25.63 113 ⇑P P 12 25 23.4 -0.2
baz=26
E12A **Beaver Dam Sad** 25.73 115 ⇑P P 12 25 24.1 -0.3
baz=26
A17A **Triple J Farms** 25.79 106 ⇓P P 12 25 24.3 -0.7
baz=26
C15A **Salmond Ranch,** 25.87 110 ⇑P P 12 25 26.0 +0.3
baz=26,SNR=7.6
SLMT **Seeley Lake** 25.92 112 eP P 12 25 26.1 0.0
D14A **Greenough** 26.04 112 ⇓P P 12 25 27.4 +0.2
baz=26,SNR=5.1
MSO **Missoula** 26.06 113 ⇑P P 12 25 27.3 -0.1
baz=26
MSO **Missoula** 26.06 113 eP P 12 25 27.7 +0.3
4.8nm,1.0s,mb4.1
I07A **Izee** 26.13 124 ⇑P P 12 25 28.2 +0.1
baz=26
A18A **Metzger Ranch,** 26.18 105 ⇓P P 12 25 27.6 -0.9
baz=26
C16A **Fuhringer Ranc** 26.21 109 ⇓P P 12 25 28.6 -0.2
baz=26,SNR=9.9
B17A **L&G Farms, Che** 26.24 107 P P 12 25 29.2 +0.1
baz=26,SNR=9.4
E13A **Victor** 26.27 114 ⇑P P 12 25 28.5 -0.9
baz=26
CHMT **Chamberlain Mo** 26.28 112 eP P 12 25 28.9 -0.6
F12A **Elk City** 26.39 116 ⇑P P 12 25 30.7 +0.3
baz=26
D15A **Lincoln** 26.48 111 ⇑P P 12 25 30.6 -0.6
baz=26
E14A **Clinton** 26.58 113 ⇑P P 12 25 31.8 -0.3
baz=26
B18A **Beardsley Farm** 26.60 106 ⇑P P 12 25 32.2 -0.2
baz=26
A19A **Klindworth Far** 26.65 104 ⇓P P 12 25 32.6 -0.2
baz=26,SNR=7.4
F13A **Darby** 26.74 115 ⇓P P 12 25 33.9 +0.4
baz=27,SNR=8.8
C17A **Wharram Farm,** 26.77 108 ⇑P P 12 25 33.4 -0.4
baz=27,SNR=8.6
G12A **Big Creek, Yel** 26.88 117 ⇓P P 12 25 34.8 -0.1
baz=27
EGMT **Eagleton** 26.90 106 ⇑P P 12 25 35.3 +0.4
baz=27,SNR=5.6
EGMT **Eagleton** 26.90 106 eP P 12 25 35.4 +0.4
14nm,0.9s,mb4.7
D16A **Dana Ranch, Ca** 26.90 109 ⇑P P 12 25 34.9 -0.1
baz=27,SNR=8.3
B19A **Brinkman Farms** 26.92 104 ⇑P P 12 25 35.2 0.0
baz=27
HRY **Holter Researc** 27.03 110 eP P 12 25 36.2 0.0
YBH **Yreka Blue Hor** 27.04 131 P P 12 25 37.2 +0.8
0.8nm,0.6s,mb3.6,baz=220,slow=7.7,SNR=3.8
YBH LR LR 12 34 57.5
comp=Z,33nm,18.6s,MS2.9,baz=20,slow=33
YBH **Yreka Blue Hor** 27.04 131 P P 12 25 37.2 +0.8
YBH LR LR 12 34 57.5
A20A **Cobblestone Ra** 27.04 103 ⇑P P 12 25 36.7 +0.4
baz=27,SNR=7.7
F14A **Wisdom** 27.11 113 ⇓P P 12 25 37.8 +0.9
baz=27
J08A **Circle Bar Ran** 27.14 123 ⇓P P 12 25 38.1 +0.9
baz=27
D17A **Six Diamond Ra** 27.17 108 ⇓P P 12 25 37.3 -0.1
baz=27,SNR=5.7
E16A **East Helena** 27.24 110 ⇓P P 12 25 38.1 0.0
baz=27
G13A **Cobalt** 27.34 115 ⇓P P 12 25 39.6 +0.6
baz=27
A21A **Bergtoll Ranch** 27.40 102 ⇓P P 12 25 40.3 +0.8
baz=27,SNR=10
C19A **Slack Wire Ran** 27.42 106 ⇑P P 12 25 40.0 +0.3
baz=27
F15A **Butte** 27.45 112 ⇓P P 12 25 40.1 +0.1
baz=27
LRM **Limekiln Ridge** 27.48 112 eP P 12 25 41.1 +0.8
E17A **Martinsdale** 27.64 109 ⇓P P 12 25 42.4 +0.7
baz=28
H13A **Challis** 27.77 116 ⇓P P 12 25 43.2 +0.3
baz=28
B21A **Ellsworth Farm** 27.78 102 ⇓P P 12 25 43.4 +0.5
baz=28,SNR=6.4
DLMT **Dillon** 27.80 113 eP P 12 25 42.9 -0.2
7.4nm,1.2s,mb4.4
A22A **Carney Farms,** 27.84 100 ⇑P P 12 25 43.4 0.0
baz=28
F16A **Kennard Place,** 27.86 111 ⇓P P 12 25 43.8 +0.1
baz=28
C20A **Veseth Ranch,** 27.89 104 ⇑P P 12 25 43.8 -0.1
baz=28
D19A **Cripps Ranch,** 27.94 106 ⇓P P 12 25 44.6 +0.3
baz=28,SNR=8.9
BOZ **Bozeman (W)** 27.97 111 ⇓P P 12 25 45.1 +0.4
baz=28
BOZ **Bozeman (W)** 27.97 111 eP P 12 25 45.4 +0.8
3.9nm,1.1s,mb4.2
C21A **Desert Coulee** 28.20 103 ⇓P P 12 25 46.6 -0.1
baz=28
G16A **Moss Hill, Enn** 28.23 112 ⇓P P 12 25 47.8 +0.8
baz=28,SNR=5.8
D20A **Manuel Ranch,** 28.31 105 ⇑P P 12 25 48.3 +0.6
baz=28,SNR=7.7
A23A **Redstone** 28.32 99 ⇓P P 12 25 47.7 0.0
baz=28
I13A **Wildhorse Cree** 28.37 117 ⇑P P 12 25 47.7 -0.5
baz=28,SNR=6.4
HLID **Hailey** 28.54 117 ⇑P P 12 25 50.7 +1.0
baz=28
HLID **Hailey** 28.54 117 eP P 12 25 50.6 +0.9
4.6nm,1.3s,mb4.2
I14A **Mackay** 28.62 116 ⇑P P 12 25 50.5 +0.1
baz=28
B23A **Brockton** 28.64 100 ⇑P P 12 25 50.3 -0.3
baz=28
J13A **Cove Ranch, Pi** 28.77 117 ⇓P P 12 25 51.4 -0.4
baz=29
H16A **Russell Place,** 28.89 112 ⇓P P 12 25 53.6 +0.8
baz=29,SNR=11
F19A **Roth Farm, Mol** 28.94 108 ⇓P P 12 25 52.6 -0.7
baz=29
C23A **Lambert** 29.06 101 ⇓P P 12 25 54.0 -0.3
baz=29
YNR **Norris Junctio** 29.12 111 eP P 12 25 56.0 +1.1
11nm,1.1s,mb4.6
D22A **Cohagen** 29.12 103 ⇓P P 12 25 56.0 +1.2
baz=29
YFT **Old Faithful** 29.27 112 eP P 12 25 59.0 +2.8
8.7nm,0.4s,mb4.9
RLMT **Red Lodge** 29.38 109 ⇑P P 12 25 57.7 +0.5
baz=29,SNR=6.2
RLMT **Red Lodge** 29.38 109 eP P 12 25 58.2 +1.1
22nm,1.5s,mb4.8
LAO **LASA Array** 29.45 104 eP P 12 25 57.9 +0.1
9.5nm,1.1s,mb4.5
FLWY **Flagg Ranch** 29.62 112 eP P 12 26 01.2 +1.9
20nm,1.4s,mb4.8
H19A **Powell** 29.86 109 ⇓P P 12 26 02.5 +1.0
baz=30
K14A **Jones Ranch, D** 29.89 117 ⇑P P 12 26 02.6 +1.0
baz=30
J16A **Bone** 29.91 114 ⇓P P 12 26 02.9 +1.0
baz=30
D24A **Glendive** 29.96 101 ⇓P P 12 26 03.5 +1.3
baz=30
RRI2 **Red Ridge** 29.97 114 eP P 12 26 03.1 +0.6
5.3nm,0.8s,mb4.4
TPAW **Teton Pass** 30.00 113 eP P 12 26 03.6 +0.9
7.3nm,1.3s,mb4.3
LOHW **Long Hollow** 30.05 113 eP P 12 26 04.5 +1.4
3.2nm,0.9s,mb4.2
REDW **Red Top Meadow** 30.15 113 eP P 12 26 05.5 +1.5
11nm,1.4s,mb4.5
I19A **Meeteetse** 30.37 110 ⇓P P 12 26 07.1 +1.1
baz=30
H20A **Greybull** 30.43 109 ⇑P P 12 26 07.2 +0.8
baz=30
J18A **Kendall Valley** 30.62 112 ⇑P P 12 26 09.2 +1.0
baz=30

BW06 **Boulder Array** 31.18 112 ⇑P P 12 26 13.8 +0.7
baz=31,SNR=6.9
BW06 **Boulder Array** 31.18 112 eP P 12 26 13.9 +0.8
7.0nm,1.1s,mb4.5
PDAR **Pinedale Array** 31.18 112 P P 12 26 13.8 +0.7
2.6nm,0.8s,mb4.2,baz=335,slow=6.6,SNR=16
I21A **Big Trails, Te** 31.27 109 ⇑P P 12 26 14.2 +0.3
baz=31,SNR=6.5
ULM **Lac du Bonnet** 31.41 89 P P 12 26 14.9 -0.1
12nm,0.8s,mb4.9,baz=310,slow=8.6,SNR=10
NVAR **Mina Array Bea** 31.51 128 P P 12 26 17.1 +1.0
0.9nm,0.6s,mb3.9,baz=316,slow=8.0,SNR=8.0
J21A **Lysite** 31.59 109 ⇓P P 12 26 17.2 +0.5
baz=31
J22A **Midwest** 31.95 108 ⇑P P 12 26 20.3 +0.5
baz=32,SNR=5.5
RSSD **Black Hills** 32.43 105 eP P 12 26 24.6 +0.6
5.0nm,0.8s,mb4.5
R11A **Troy Canyon, C** 32.57 124 ⇑P P 12 26 25.6 +0.2
baz=32
O17A **Robinson Place** 32.85 116 ⇑P P 12 26 28.8 +1.0
baz=33,SNR=7.0
Q14A **Sevier Lake (B** 32.89 121 ⇓P P 12 26 28.1 -0.1
baz=33
N19A **John Jarvie Ra** 32.90 114 ⇓P P 12 26 28.1 -0.1
baz=33
L22A **Ellis Ranch, M** 33.09 110 ⇑P P 12 26 31.3 +1.4
baz=33
N20A **Spence Gulch,** 33.32 113 P P 12 26 32.6 +0.7
baz=33,SNR=15
O19A **Miners Draw (B** 33.42 114 ⇑P P 12 26 33.7 +0.9
baz=33
P18A **Preston Nutter** 33.53 116 ⇑P P 12 26 34.8 +1.0
baz=33
MSU **Marysvale** 33.73 120 eP P 12 26 36.5 +1.1
Q16A **Castle Valley** 33.77 118 ⇑P P 12 26 37.1 +1.2
baz=34
M23A **Laramie** 33.86 109 ⇓P P 12 26 36.8 +0.2
baz=34
SRU **San Rafael** 33.86 117 ⇓P P 12 26 37.2 +0.6
baz=34
SRU **San Rafael** 33.86 117 eP P 12 26 37.9 +1.3
3.4nm,0.7s,mb4.4
ARUT **Antelope Range** 33.87 122 eP P 12 26 37.0 +0.3
5.6nm,1.1s,mb4.4
S13A **Holt Ranch, En** 33.89 123 ⇓P P 12 26 37.5 +0.6
baz=34
FRB **Frobisher Bay** 33.93 52 P P 12 26 35.8 -1.2
9.4nm,0.8s,mb4.7,baz=308,slow=5.2,SNR=4.7
CCUT **Cedar City** 34.11 122 eP P 12 26 40.4 +1.6
3.2nm,1.1s,mb4.2
Q19A **Hogan Spring (** 34.50 116 ⇓P P 12 26 41.6 -0.5
baz=34
S16A **Weppner Ranch,** 34.64 120 ⇓P P 12 26 43.7 +0.3
baz=34
S17A **Black Ridge (B** 35.03 119 ⇓P P 12 26 47.2 +0.5
baz=35,SNR=5.7
EYMN **Ely** 35.05 88 eP P 12 26 46.9 0.0
25nm,0.8s,mb5.2
U14A **Mt Trumbull** 35.17 123 ⇑P P 12 26 48.5 +0.5
baz=35
PV01 **Paradox Valley** 35.48 116 P P 12 26 50.4 -0.3
676nm,1.2s
U15A **North Rim** 35.50 122 ⇑P P 12 26 51.7 +0.9
baz=35
T17A **Navajo Res., N** 35.58 119 ⇓P P 12 26 51.0 -0.4
baz=35
R21A **Cimarron** 35.70 114 ⇑P P 12 26 52.7 +0.2
baz=36
T18A **Mexican Hat** 35.82 118 ⇑P P 12 26 53.3 -0.3
baz=36,SNR=7.0
ECSD **EROS Data Cent** 36.00 97 eP P 12 26 54.5 -0.5
6.5nm,0.6s,mb4.6
V15A **Kaibab Nationa** 36.08 122 ⇑P P 12 26 56.4 +0.5
baz=36,SNR=8.4
S21A **Coal Bank Pass** 36.20 115 ⇓P P 12 26 57.9 +1.1
baz=36
V17A **Tonalea, Kykot** 36.79 120 ⇑P P 12 27 02.5 +0.7
baz=37,SNR=11
V18A **Ganado** 37.04 119 ⇓P P 12 27 03.3 -0.7
baz=37
SDCO **Great Sand Dun** 37.07 113 ⇓P P 12 27 04.6 +0.3
baz=37
SDCO **Great Sand Dun** 37.07 113 eP P 12 27 05.0 +0.8
59nm,3.0s
MONP **Monument Peak** 37.16 129 ⇓P P 12 27 06.1 +1.1
baz=37
Z13A **Yuma Proving G** 37.86 126 ⇑P P 12 27 11.8 +0.8
baz=38
W20A **Ramah** 38.12 118 ⇓P P 12 27 13.4 +0.3
baz=38
X19A **St. Johns** 38.42 120 ⇓P P 12 27 15.2 -0.4
baz=38
U25A **Circle Dot Ran** 38.67 112 ⇑P P 12 27 18.5 +0.7
baz=38,SNR=5.5
Y18A **Canyon Day Jun** 38.70 121 ⇑P P 12 27 18.6 +0.6
baz=39
Y19A **Nutrioso** 38.85 120 ⇓P P 12 27 19.5 +0.2
baz=39
V24A **Rampart Ranch,** 38.90 114 ⇓P P 12 27 20.6 +0.9
baz=39
ANMO **Albuquerque** 39.09 116 P P 12 27 22.1 +0.8
1.2nm,0.7s,mb3.6,baz=325,slow=7.9,SNR=5.8
Z22A **Elephant Butte** 40.37 118 ⇓P P 12 27 32.6 +0.7
baz=40
Y24A **Capitan** 40.39 116 ⇑P P 12 27 33.1 +0.9
baz=40
X26A **CR and CF Fran** 40.51 113 ⇓P P 12 27 33.4 +0.3
baz=40
219A **White Tail Can** 40.58 121 ⇓P P 12 27 34.9 +1.2
baz=40
Z23A **Rita Site, Whi** 40.65 117 ⇑P P 12 27 35.1 +0.8
baz=40
Z24A **Sheeppen Canyo** 40.94 116 ⇓P P 12 27 37.3 +0.6
baz=41
MSTX **Muleshoe** 41.44 113 ⇓P P 12 27 40.7 -0.1
baz=41
Z26A **Caprock** 41.55 114 ⇓P P 12 27 41.9 +0.2
baz=41,SNR=7.5
Z27A **Tatum** 41.83 114 ⇓P P 12 27 43.8 -0.2
baz=42
GDL2 **Guadalupe Moun** 42.33 116 eP P 12 27 53.8 +5.8
WMOK **Wichita Mounta** 42.47 108 eP P 12 27 48.8 -0.4
8.7nm,1.1s,mb4.4
226A **Malaga, Loving** 42.56 115 ⇓P P 12 27 49.2 -0.7
baz=42
227A **Bennet, Jal** 42.93 115 ⇓P P 12 27 52.3 -0.6
baz=43
326A **Caldwell Ranch** 43.27 116 ⇑P P 12 27 55.0 -0.6
baz=43
425A **Indio Mountain** 43.33 117 ⇓P P 12 27 56.6 +0.4
baz=43,SNR=6.6
427A **Hayter Ranch,** 43.91 115 ⇓P P 12 27 59.6 -1.2
baz=44
428A **Kincaid Ranch,** 44.31 115 ⇑P P 12 28 03.3 -0.7
baz=44
526A **Mary Lane Ranc** 44.33 117 ⇑P P 12 28 04.7 +0.5
baz=44,SNR=5.2
527A **Woodward Ranch** 44.44 116 ⇓P P 12 28 05.0 -0.2
baz=44
626A **Big Bend Ranch** 44.76 117 ⇑P P 12 28 07.8 +0.2
baz=45
528A **Cox Ranch, San** 44.76 115 ⇓P P 12 28 08.2 +0.5
baz=45
ACSO **Alum Creek Sta** 44.90 88 eP P 12 28 08.1 -0.5
22nm,0.8s,mb5.1
TXAR **Lajitas Array** 45.14 117 P P 12 28 10.9 +0.2
2.0nm,0.7s,mb4.2,baz=329,slow=6.1,SNR=25
627A **Terlingua Ranc** 45.15 116 ⇑P P 12 28 10.9 +0.2
baz=45
628A **Black Gap, Mar** 45.32 116 ⇑P P 12 28 11.4 -0.7
baz=45
JCT **Junction City** 45.71 112 ⇓P P 12 28 14.4 -0.8
baz=46
JCT **Junction City** 45.71 112 eP P 12 28 14.8 -0.4
10nm,0.9s,mb4.9
MCWV **Mont Chateau** 46.77 86 eP P 12 28 22.3 -1.1
59nm,1.4s,mb5.5
ARCES **ARCESS Array B** 47.20 2 P P 12 28 27.0 +0.6
3.3nm,0.9s,mb4.5,baz=338,slow=9.0,SNR=2.4
TKL **Tuckaleechee C** 48.30 92 P P 12 28 34.6 -0.7
4.7nm,0.7s,mb4.8,baz=11,slow=23,SNR=4.3
CN2 **Changchun** 49.61 289 eP P 12 28 45.4 +0.1
SONM **Songino Array** 53.84 306 P P 12 29 17.3 +0.4
0.6nm,0.8s,mb3.7,baz=31,slow=8.6,SNR=2.8
SONM LR LR 12 54 02.5
comp=Z,41nm,18.1s,MS3.5,baz=265,slow=38
NB2 **NORSAR Subarra** 54.97 11 P P 12 29 24.1 -0.8
comp=Z,0.8nm,0.6s,mb3.9,baz=349,slow=7.4
NOA **NORSAR Array B** 54.97 11 P P 12 29 24.1 -0.7
comp=Z,1.9nm,0.8s,mb4.2,baz=350,slow=7.1,SNR=5.2
FINES **FINESS Array B** 55.33 2 P P 12 29 27.1 -0.4
comp=Z,3.2nm,0.6s,mb4.5,baz=12,slow=9.8,SNR=6.7
ZALV **Zalesovo Beam** 55.34 324 P P 12 29 27.8 +0.1
comp=Z,2.1nm,0.8s,mb4.2,baz=36,slow=5.3,SNR=4.3
HHC **Hu-ho-hao-te** 57.78 297 eP P 12 29 43.9 -1.3
HHC pP 12 29 48.5
HHC sP 12 29 51.1
HHC PcP PcP 12 30 37.5 -0.4
HHC PP PP 12 31 53.6 +0.8
HHC ScP ScP 12 34 35.5 -3.2
HHC S S 12 37 41.1 -3.9
HHC sS 12 37 47.3
HHC ScS ScS 12 39 29.5 -6.1
HHC SS SS 12 41 28.3 -6.3
HHC pmax pmax
comp=Z,15nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,150nm,5.0s
HHC LR LR
comp=N,150nm,16.8s,MS4.5
HHC LR LR
comp=E,250nm,15.9s,MS4.5
HHC LR LR
comp=Z,180nm,15.4s,MS4.3
MKAR **Makanchi Array** 62.52 322 P P 12 30 18.4 +0.9
comp=Z,0.5nm,0.4s,mb4.0,baz=43,slow=6.8,SNR=2.9
WMQ **Urumqi** 63.65 317 eP P 12 30 27.0 +1.8
LZH **Lanzhou** 64.92 301 eP P 12 30 30.8 -2.8
LZH pP 12 30 34.0
LZH pmax pmax
comp=Z,19nm,1.3s,mb5.2
LZH pmax pmax
comp=Z,56nm,7.8s
LZH LR LR
comp=E,330nm,15.0s
LZH LR LR
comp=Z,390nm,18.7s,MS4.6
BAIF **Baives** 64.98 18 eP P 12 30 32.0 -1.8
comp=Z,14nm,0.8s,mb5.0
BAIF **Baives** 64.98 18 eP P 12 30 32.0 -1.8
comp=Z,7.3nm,0.8s,mb5.0
GIVF **Givet** 65.03 18 eP P 12 30 33.0 -1.1
ABKAR **Akbulak array** 65.11 339 eP P 12 30 34.1 -0.5
comp=Z,0.9nm,0.5s,mb4.3
GRR **Gorron** 65.84 22 eP P 12 30 38.1 -1.3
DPC **Dobruska-Polom** 65.98 9 eP P 12 30 40.2 -0.1
AKASG **Malin Array Be** 66.13 0 P P 12 30 40.3 -0.9
comp=Z,1.7nm,0.4s,mb4.6,baz=358,slow=7.0,SNR=4.1
KHC **Kasperske Hory** 66.97 12 eP P 12 30 46.6 0.0
comp=Z,3.3nm,0.8s,mb4.6
KHC **Kasperske Hory** 66.97 12 eP P 12 30 46.7 +0.1
CDF **Champ du Feu** 67.00 16 eP P 12 30 46.0 -0.8
GERES **GERESS Array B** 67.26 12 P P 12 30 48.0 -0.4
comp=Z,1.9nm,0.8s,mb4.4,baz=345,slow=4.7,SNR=11
HINF **Hinteralfeld** 67.53 17 eP P 12 30 49.0 -1.2
LOR **Lormes** 67.67 19 eP P 12 30 49.9 -1.1
comp=Z,16nm,1.0s,mb4.9
LOR **Lormes** 67.67 19 eP P 12 30 49.9 -1.1
comp=Z,8.1nm,1.0s,mb4.9
MFF **Saint Martin d** 67.69 22 eP P 12 30 50.3 -0.9
comp=Z,35nm,1.2s,mb5.2
MFF **Saint Martin d** 67.69 22 eP P 12 30 50.3 -0.9
comp=Z,18nm,1.2s,mb5.2
SSF **Saint Saulge** 67.81 19 eP P 12 30 50.9 -1.1
comp=Z,13nm,0.8s,mb4.9
SSF **Saint Saulge** 67.81 19 eP P 12 30 50.9 -1.1
comp=Z,6.7nm,0.8s,mb4.9
AVF **Avril sur Loir** 68.06 19 eP P 12 30 52.2 -1.3
comp=Z,24nm,1.2s,mb5.0
AVF **Avril sur Loir** 68.06 19 eP P 12 30 52.2 -1.3
comp=Z,12nm,1.2s,mb5.0
SMF **Signal de Mont** 68.27 19 eP P 12 30 54.4 -0.5
comp=Z,15nm,0.9s,mb4.9
SMF **Signal de Mont** 68.27 19 eP P 12 30 54.4 -0.5
comp=Z,7.7nm,0.9s,mb4.9
TCF **Toulx Ste Croi** 68.37 20 eP P 12 30 54.3 -1.2
comp=Z,11nm,1.0s,mb4.7
TCF **Toulx Ste Croi** 68.37 20 eP P 12 30 54.3 -1.2
comp=Z,5.3nm,1.0s,mb4.7
CABF **La Chapelle** 68.62 17 eP P 12 30 56.3 -0.7
comp=Z,21nm,1.0s,mb5.0
CABF **La Chapelle** 68.62 17 eP P 12 30 56.3 -0.7
comp=Z,11nm,1.0s,mb5.0
LFF **La Frestale** 69.45 22 eP P 12 31 01.3 -0.9
CAF **Calviac** 69.68 21 eP P 12 31 02.3 -1.3
comp=Z,13nm,0.9s,mb4.7
CAF **Calviac** 69.68 21 eP P 12 31 02.3 -1.3
comp=Z,6.5nm,0.9s,mb4.8
LPL **La Plagne** 69.78 17 eP P 12 31 04.3 +0.1
comp=Z,11nm,0.9s,mb4.7
LPL **La Plagne** 69.78 17 eP P 12 31 04.3 +0.1
comp=Z,5.7nm,0.9s,mb4.7
LPG **La Plagne** 69.80 17 eP P 12 31 04.7 +0.3
comp=Z,18nm,1.1s,mb4.8
LPG **La Plagne** 69.80 17 eP P 12 31 04.7 +0.3
comp=Z,8.9nm,1.1s,mb4.8
VIVF **Saint-Julien-l** 70.14 19 eP P 12 31 05.4 -1.1
comp=Z,14nm,0.9s,mb4.8
VIVF **Saint-Julien-l** 70.14 19 eP P 12 31 05.4 -1.1
comp=Z,6.8nm,0.9s,mb4.8
ORIF **Oris-en-Rattie** 70.25 18 eP P 12 31 06.4 -0.8
MBDF **Montbardon** 70.56 17 eP P 12 31 08.2 -0.8
comp=Z,18nm,1.1s,mb4.8
MBDF **Montbardon** 70.56 17 eP P 12 31 08.2 -0.8
comp=Z,9.0nm,1.1s,mb4.8
GYA **Guiyang** 72.29 294 eP P 12 31 18.8 -1.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ESDC **Sonseca Array** 73.69 27 P P 12 31 26.4 -1.5
comp=Z,0.9nm,0.6s,mb4.0,baz=337,slow=5.3,SNR=8.3
BRTR **Keskin Array B** 77.06 357 P P 12 31 46.5 -0.8
comp=Z,1.6nm,0.9s,mb4.1,baz=348,slow=4.9,SNR=4.2
CMAR **Chiang Mai Arr** 82.58 297 P P 12 32 16.6 -0.8
comp=Z,0.4nm,0.4s,mb4.0,baz=12,slow=4.6,SNR=3.4
BOSA **Boshof** 144.97 7 PKP PKPdf 12 39 28.8 -2.4
comp=Z,5.0nm,0.8s,baz=347,slow=3.3,SNR=5.5
CASY **Casey** 147.87 229 ePKPbc PKPbc 12 39 35.6 -2.2

BJI ***24*** *12:53:38.5, 35°.29N×81°.61E, h13km, ML4.1/6*
IDC ***24*** *12:53:39.7±0.9, 35°.45N×81°.71E, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.8/27, mbtmp3.7/12, ML3.8/3, MS3.6/3, Ms1 3.6/3, ms1mx2.7/32, Error ellipse: s-maj=30.9km s-min=15.8km az=55.0*
ISCJB ***24*** *12:53:40.3±0.3, 35°.60N±0°.04×81°.86E±0°.08, h10km, mb3.6/11, MS3.6/2, Error ellipse: s-maj=10.0km s-min=4.1km az=160.5*
NEIC ***24*** *12:53:42.9±0.4, 35°.57N×81°.82E, h10km, mb3.9/1, Error ellipse: s-maj=14.4km s-min=5.0km az=65.0*
ISC 24 12:53:42.8±0.3, 35°.59N±0°.03×81°.81E±0°.08, h10km, n35, σ1§18/36, mb3.6/11, MS3.6/2, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDNR	Sundarnagar	5.74	226	ePKP	Pn	12 55 06.5	-1.6
KSH	Kashi	6.07	312	Pn	Pn	12 55 12.4	-0.1
KSH				Sn	Sn	12 56 18.1	-3.9
KSH				smax			
	comp=N,160nm,0.7s						
KSH				smax			
	comp=E,190nm,0.9s						
DANN	Dangsing	7.41	167	eP	Pn	12 55 30.2	-0.8
	comp=E,17nm,0.5s						
GKN	Gorkha	7.94	162	eP	Pn	12 55 38.8	+0.5
	comp=E,15nm,0.5s						
KOLN	Koldanda	7.95	168	eP	Pn	12 55 36.9	-1.5
	comp=E,17nm,0.6s						
KKN	Kakani	8.32	158	eP	Pn	12 55 44.0	+0.5
	comp=E,23nm,0.5s						
GUN	Gumba	8.41	155	eP	Pn	12 55 46.3	+1.6
	comp=E,18nm,0.5s						
DMN	Daman	8.44	160	eP	Pn	12 55 45.8	+0.6
	comp=E,15nm,0.6s						
PKIN	Phulchoki	8.56	158	eP	Pn	12 55 47.7	+1.0
	comp=E,19nm,0.4s						
PKI	Pulchoki	8.57	158	eP	Pn	12 55 48.2	+1.3
	comp=E,39nm,0.7s						
TKM2	Tokmak 2	8.76	329	ePn	Pn	12 55 51.0	+1.6
	comp=E,7.3nm,0.6s						
TKM2				eSg	Sn	12 58 14.5	+46
AAK	Ala-Archa	9.04	323	LR	LR	12 59 58.1	
	comp=E,165nm,18.3s,slow=42						

AML	Almayashu	9.09	318	Pn		Pn		12 55 55.7	+1.7
	comp=E,11nm,0.7s								
WMQ	Urumqi	9.38	27	*e*P		Pn		12 56 03.0	+5.0
EKS2	Erkin-Say	9.42	321	*e*Pn		Pn		12 55 59.6	+1.2
	comp=E,6.7nm,0.6s								
ODAN	Odare	9.93	150	*e*P		Pn		12 56 06.0	+0.4
	comp=E,15nm,0.6s								
MK31	Makanchi Array	11.20	2	*e*Pn		Pn		12 56 24.1	+1.3
MK31				*e*Sn		Sn		12 58 27.5	-0.5
MKAR	Makanchi Array	11.20	2	Pn		Pn		12 56 23.2	+0.4
	comp=E,0.7nm,0.3s,baz=177,slow=13,SNR=20								
MKAR				Sn		Sn		12 58 27.2	-0.8
	comp=E,0.6nm,0.3s,baz=194,slow=21,SNR=4.3								
CHM	Chimkent	11.63	309	Pn		Pn		12 56 29.9	+1.2
ZALV	Zalesovo Beam	18.48	6	P		Pn		12 57 59.0	+0.3
	comp=E,0.3nm,0.3s,baz=190,slow=15,SNR=4.6								
BVAR	Borovoye Array	19.20	339	P		Pn		12 58 06.4	-1.1
	comp=E,0.3nm,0.3s,baz=148,slow=8.7,SNR=3.7								
ABKAR	Akbulak array	21.04	317	*e*P		P		12 58 28.3	+1.6
	comp=E,4.4nm,0.8s,mb3.8								
SONM	Songino Array	21.95	49	P		P		12 58 37.5	+1.0
	comp=E,1.9nm,0.9s,mb3.5,baz=233,slow=9.6,SNR=9.1								
SONM				PcP		PcP		13 02 33.4	-1.6
	comp=E,0.2nm,0.4s,baz=230,slow=3.6,SNR=2.9								
AKTK	Aktyubinsk	22.72	318	P		P		12 58 43.4	-1.3
AKTK				LR		LR		13 08 28.1	
AKTO	Aktyubinsk	22.72	318	P		P		12 58 43.4	-1.3
	comp=E,0.6nm,0.3s,mb3.5,baz=117,slow=11,SNR=2.5								
AKTO				LR		LR		13 08 28.1	
	comp=E,83nm,19.1s,MS3.2,baz=120,slow=39								
CMAR	Chiang Mai Arr	22.84	134	P		P		12 58 43.4	-2.8
	comp=E,0.4nm,0.6s,mb3.0,baz=300,slow=11,SNR=3.1								
BRTR	Keskin Array B	37.99	291	P		P		13 01 02.2	+1.3
	comp=E,0.7nm,0.8s,mb3.4,baz=102,slow=5.2,SNR=4.1								
FINES	FINESS Array B	43.22	325	P		P		13 01 43.1	-0.7
	comp=E,1.9nm,0.7s,mb4.0,baz=35,slow=7.0,SNR=4.3								
NB2	NORSAR Subarra	50.36	323	P		P		13 02 37.8	-1.8
	comp=Z,2.0nm,0.8s,mb4.2,baz=89,slow=7.9								
NOA	NORSAR Array B	50.36	323	P		P		13 02 38.3	-1.3
	comp=Z,1.6nm,0.8s,mb4.1,baz=89,slow=7.5,SNR=4.5								
GERES	GERESS Array B	50.52	307	P		P		13 02 40.4	-0.7
	comp=Z,0.3nm,0.2s,mb3.8,baz=97,slow=7.1,SNR=3.7								
ILAR	Eielson Array	72.97	20	P		P		13 05 10.8	-1.2
	comp=Z,0.6nm,0.8s,mb3.6,baz=329,slow=4.2,SNR=6.1								
WRA	Warramunga Arr	74.34	129	P		P		13 05 19.6	-1.1
	comp=Z,0.8nm,1.0s,mb3.6,baz=330,slow=5.8,SNR=4.5								
TORD	Torodi Ar. Bea	74.50	275	LR		LR		13 39 53.3	
	comp=Z,86nm,18.0s,MS4.1,baz=245,slow=37								
ASAR	Alice Springs	76.83	132	P		P		13 05 33.6	-1.3
	comp=Z,0.3nm,0.8s,mb3.2,baz=331,slow=6.4,SNR=4.3								

*NEIC **24** 12:58:09.8, 16°.59N×100°.20W, h2km, MD3.6(MEX), After MEX.*

MEX 24 12:58:09.8±1.2, 16°.59N×100°.20W, h2km±7km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	Acapulco	0.43	50	*e*P		Pg 12 58 16.3	-1.8
ACX				*i* S		Sg 12 58 22.7	-0.9
ACX	Acapulco	0.43	50	*e*P		Pg 12 58 16.3	-1.8
ACX				*i* S		Sg 12 58 22.7	-0.9
CAIG	El Cayaco	0.46	352	*e*P		Pg 12 58 18.1	-0.5
CAIG				*i* S		Sg 12 58 25.7	+1.2
CAIG	El Cayaco	0.46	352	*e*P		Pg 12 58 18.1	-0.5
CAIG				*i* S		Sg 12 58 25.7	+1.2
MEIG	Mezcala	1.44	23	*i* P		Pn 12 58 33.9	-3.1
MEIG				*i* S		Sg 12 58 51.1	-4.9
ZIIG	Zihuatanejo	1.57	310	*i* P		Pn 12 58 35.0	-3.9
ZIIG				*i* S		Sn 12 58 54.3	-5.5
ZIIG	Zihuatanejo	1.57	310	*i* P		Pn 12 58 35.0	-3.9
ZIIG				*i* S		Sn 12 58 54.3	-5.5
PLIG	Platanillo	1.91	20	*i* P		Pn 12 58 40.0	-3.4
PLIG				*i* S		Sn 12 59 04.2	-3.9
PLIG	Platanillo	1.91	20	*i* P		Pn 12 58 40.0	-3.4
PLIG				*i* S		Sn 12 59 04.2	-3.9
PNIG	Pinotepa	2.00	95	*i* P		Pn 12 58 42.7	-2.0
PNIG				*i* S		Sn 12 59 05.1	-5.2
PNIG	Pinotepa	2.00	95	*i* P		Pn 12 58 42.7	-2.0
PNIG				*i* S		Sn 12 59 05.1	-5.2
UTMO	Huajuapan	2.60	61	*i* P		Pn 12 58 48.9	-4.1
UTMO				*i* S		Sn 12 59 21.6	-3.6

WEL 24 13:00:01.8±0.4, 41°.24S×172°.79E, h147km±2km, ML2.8/7, Error ellipse: s-maj=2.9km s-min=2.2km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNZ	Nelson	0.45	88	PN	Pn	13 00 22.4	0.0
NNZ				SN	Sn	13 00 37.8	-0.4
QRZ	Quartz Range	0.45	334	PN	Pn	13 00 22.5	0.0
QRZ				SN	Sn	13 00 37.0	-1.3
THZ	Tophouse	0.53	171	PN	Pn	13 00 22.9	0.0
THZ				SN	Sn	13 00 38.1	-0.9
TUWZ	Tuamarina	0.89	103	PN	Pn	13 00 25.6	+0.4
TUWZ				SN	Sn	13 00 43.1	-0.1
TCW	Tory Channel	1.12	89	PN	Pn	13 00 27.6	+0.3
KHZ	Kahutara	1.31	155	PN	Pn	13 00 28.8	-0.2
SNZO	South Karori	1.45	94	PN	Pn	13 00 30.1	-0.4
KIW	Kapiti Island	1.65	78	PN	Pn	13 00 32.5	-0.1
KIW	Kapiti Island	1.65	78	PN	Pn	13 00 32.5	-0.1
CAW	Cannon Point	1.73	87	PN	Pn	13 00 33.1	-0.4
CAW	Cannon Point	1.73	87	PN	Pn	13 00 33.1	-0.4
OGWZ	Otaki Gorge	1.85	78	PN	Pn	13 00 34.6	-0.3
PLWZ	Palliser	1.89	101	PN	Pn	13 00 34.8	-0.5
MTW	Mount Morrison	2.05	89	PN	Pn	13 00 36.5	-0.7

IDC 24 13:01:02.7±67.0, 14°.28S×166°.75E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/17, mbtmp3.6/3, Error ellipse: s-maj=1125.0km s-min=110.8km az=64.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	28.90	228	P		P 13 07 03.4	-0.1
	1.3nm,0.5s,baz=41,slow=9.6,SNR=7.4						
WRA	Warramunga Arr	31.45	255	P		P 13 07 26.3	+0.2
	0.1nm,0.4s,baz=85,slow=9.0,SNR=3.0						
ASAR	Alice Springs	32.36	248	P		P 13 07 34.2	+0.1
	0.2nm,0.5s,baz=76,slow=9.4,SNR=10						

*ISK **24** 13:04:33.5, 36°.30N×26°.40E, h107km, ML3.2*
*ISCJB **24** 13:04:34.1±0.4, 36°.42N±0°.03×26°.61E±0°.03, h141km±5km, Error ellipse: s-maj=5.4km s-min=3.4km az=158.2*
*CSEM **24** 13:04:34.7±0.2, 36°.42N×26°.60E, h139km±3km, ML3.1/1, Error ellipse: s-maj=4.1km s-min=2.9km az=157.0*
*ATH **24** 13:04:34.8, 36°.50N×26°.49E, h137km±2km*
*HLW **24** 13:04:34.2, 36°.47N×26°.93E, h31km±44km, Md3.6, Ml3.9*
*DDA **24** 13:04:36.5, 36°.45N×26°.45E, h43km±3km, Md3.4*
*THE **24** 13:04:37.2, 36°.49N×26°.55E, h155km±7km, ML3.1/1, Error ellipse: s-maj=8.0km s-min=1.3km az=146.0*

ISC 24 13:04:34.9±0.4, 36°.43N±0°.03×26°.59E±0°.03, h139km±5km, n102, σ0°.94/144, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIS1	Nisyros Isl.	0.50	70	P	Pn	13 04 56.1	+1.1
NIS1				S	Sn	13 05 09.5	-0.7
NIS1	Nisyros Isl.	0.50	70	P	Pn	13 04 56.1	+1.1
NIS1				S	Sn	13 05 09.5	-0.7
BODT	Bodrum	0.86	42	PG	Pn	13 04 56.3	-1.1
BODT				*e*SG	Sn	13 05 11.4	-3.1
BODT	Bodrum	0.86	42	*i* Pg	Pn	13 04 56.3	-1.1
BODT				*e*Sg	Sn	13 05 11.4	-3.1
THR1	Thera Island	0.92	267	P	Pn	13 04 58.4	+0.5
THR1	Thera Island	0.92	267	P	Pn	13 04 58.4	+0.5
THR2	Thira island,	0.93	271	P	Pn	13 04 58.4	+0.4
THR2	Thira island,	0.93	271	P	Pn	13 04 58.4	+0.4
THR3	Thira Island,	0.96	269	P	Pn	13 04 58.6	+0.4
THR3	Thira Island,	0.96	269	P	Pn	13 04 58.6	+0.4
THR6	Thira Island,	0.97	266	P	Pn	13 04 59.0	+0.7
THR6	Thira Island,	0.97	266	P	Pn	13 04 59.0	+0.7
THR5	Thira Island,	1.00	270	P	Pn	13 04 59.3	+0.7
THR5	Thira Island,	1.00	270	P	Pn	13 04 59.3	+0.7
APE	Apeiranthos	1.06	307	*e*P	Pn	13 04 59.5	+0.3
APE	Apeiranthos	1.06	307	*e*P	Pn	13 04 59.5	+0.3
ARG	Arkhangelos	1.26	99	*e*P	Pn	13 05 02.5	+1.5
ARG	Arkhangelos	1.26	99	P	Pn	13 05 02.6	+1.6
ARG				S	Sn	13 05 21.5	+0.5
ARG	Arkhangelos	1.26	99	*e*P	Pn	13 05 02.5	+1.5
ARG				S	Sn	13 05 21.5	+0.5
MLSB	Milas	1.28	47	*e*PN	Pn	13 05 00.9	-0.4
MLSB				*e*SN	Sn	13 05 20.9	-0.6
MLSB	Milas	1.28	47	*e*Pn	Pn	13 05 00.9	-0.4
MLSB				*e*Sn	Sn	13 05 21.0	-0.5
SMG	Samos	1.29	9	*e*P	Pn	13 05 01.5	+0.1
SMG	Samos	1.29	9	*e*P	Pn	13 05 01.5	+0.1
ZKR	Zakros	1.35	193	*e*P	Pn	13 05 03.3	+1.3
ZKR				*e*S	Sn	13 05 23.9	+1.3
ZKR	Zakros	1.35	193	*e*P	Pn	13 05 03.3	+1.3
ZKR				*e*S	Sn	13 05 23.9	+1.3
GCAM	G?zelcaml?	1.37	22	*i* P	Pn	13 05 02.3	+0.1
GCAM				*i* S	Sn	13 05 23.0	-0.1
GCAM	G?zelcaml?	1.37	22	*i* P	Pn	13 05 02.3	+0.1
GCAM				*i* S	Sn	13 05 23.0	-0.1
NPS	Neapolis	1.41	215	*e*P	Pn	13 05 03.4	+0.7
NPS				*e*S	Sn	13 05 23.2	-0.6
NPS	Neapolis	1.41	215	*e*P	Pn	13 05 03.4	+0.7
NPS				*e*S	Sn	13 05 23.2	-0.6
YER	Yerkesik	1.53	62	*e*PN	Pn	13 05 04.2	+0.3
YER	Yerkesik	1.53	62	*e*Pn	Pn	13 05 04.3	+0.4
LAST	Lasithi	1.56	216	*e*P	Pn	13 05 05.0	+0.8
LAST	Lasithi	1.56	216	*e*P	Pn	13 05 05.0	+0.8
AYDN	Tasoluk	1.60	40	*i* P	Pn	13 05 05.8	+1.0
AYDN				*i* S	Sn	13 05 27.2	-0.4
AYDN	Tasoluk	1.60	40	*i* P	Pn	13 05 05.8	+1.1
AYDN				*i* S	Sn	13 05 27.2	-0.4
TURN	Turunc	1.68	74	*i* P	Pn	13 05 03.2	-2.3
TURN				*i* S	Sn	13 05 22.9	-6.1
TURN	Turunc	1.68	74	*i* P	Pn	13 05 03.2	-2.4
BLCB	Balcova	1.99	10	*e*PN	Pn	13 05 08.9	-0.2
BLCB	Balcova	1.99	10	P	Pn	13 05 09.2	+0.1
BLCB	Balcova	1.99	10	*e*Pn	Pn	13 05 08.9	-0.2
BLCB	Balcova	1.99	10	P	Pn	13 05 09.2	+0.1
CHOS	Chios island	2.00	348	*e*P	Pn	13 05 08.9	-0.4
CHOS	Chios island	2.00	348	P	Pn	13 05 09.2	-0.1
CHOS	Chios island	2.00	348	P	Pn	13 05 09.2	-0.1
FETY	Fethiye	2.02	83	*e*PN	Pn	13 05 09.3	-0.2
FETY	Fethiye	2.02	83	*e*Pn	Pn	13 05 09.3	-0.2
VAM	Vamos	2.19	243	*e*P	Pn	13 05 12.0	+0.3
VAM				*e*S	Sn	13 05 39.2	-0.7
VAM	Vamos	2.19	243	*e*P	Pn	13 05 12.0	+0.3
VAM				*e*S	Sn	13 05 39.2	-0.7
DNZL	Cakiroluk	2.33	57	*i* P	Pn	13 05 14.5	+1.2
DNZL				*i* S	Sn	13 05 43.1	+0.2
DNZL	Cakiroluk	2.33	57	*i* P	Pn	13 05 14.5	+1.2
DNZL				*i* S	Sn	13 05 43.1	+0.1
KARN	Karanos	2.40	246	*e*P	Pn	13 05 14.7	+0.5
KARN				*e*S	Sn	13 05 43.5	-0.9
KARN	Karanos	2.40	246	P	Pn	13 05 15.7	+1.5
KARN				S	Sn	13 05 43.6	-0.8
KARN	Karanos	2.40	246	*e*P	Pn	13 05 14.7	+0.5
KARN				S	Sn	13 05 43.6	-0.8
AKAS	Kas	2.44	94	*i* P	Pn	13 05 14.9	+0.2
AKAS				*i* S	Sn	13 05 43.6	-1.8
AKAS	Kas	2.44	94	*i* P	Pn	13 05 14.9	+0.2
AKAS				*i* S	Sn	13 05 43.6	-1.7
GLHS	Gihisar (BURDU	2.44	72	*e*PN	Pn	13 05 15.8	+1.1
GLHS	Gihisar (BURDU	2.44	72	*e*Pn	Pn	13 05 15.8	+1.1
GOLH	Golhisar	2.52	70	*i* P	Pn	13 05 15.8	+0.2
GOLH				*i* S	Sn	13 05 44.9	-2.1
GOLH	Golhisar	2.52	70	*i* P	Pn	13 05 15.8	+0.2
GOLH				*i* S	Sn	13 05 44.9	-2.1
ELL	Elmali	2.69	82	*e*PN	Pn	13 05 18.8	+1.0
ELL	Elmali	2.69	82	*e*Pn	Pn	13 05 18.8	+1.0
DID	Didima	2.89	293	*e*P	Pn	13 05 20.4	0.0
DID	Didima	2.89	293	P	Pn	13 05 20.5	+0.1
DID	Didima	2.89	293	P	Pn	13 05 20.5	+0.1
VLI	Veliai	2.96	277	*e*P	Pn	13 05 21.0	-0.2
VLI				*e*S	Sn	13 05 54.6	-2.4
VLI	Veliai	2.96	277	*e*P	Pn	13 05 21.0	-0.2
VLI				*e*S	Sn	13 05 54.6	-2.4
KHL	Karahalli	3.00	50	*e*PN	Pn	13 05 22.5	+0.7
KHL	Karahalli	3.00	50	*e*Pn	Pn	13 05 22.5	+0.7
KHAL	Karahalli	3.02	49	*i* P	Pn	13 05 23.0	+1.0
KHAL				*i* S	Sn	13 05 57.6	-0.7
KHAL	Karahalli	3.02	49	*i* P	Pn	13 05 23.0	+1.0
KHAL				*i* S	Sn	13 05 57.7	-0.6
KORT	Korkueli	3.07	78	*i* P	Pn	13 05 24.2	+1.4
KORT				*i* S	Sn	13 06 00.4	+0.7
KORT	Korkueli	3.07	78	*i* P	Pn	13 05 24.2	+1.5
KORT				*i* S	Sn	13 06 00.4	+0.7
LTK	Loutraki	3.30	300	*e*P	Pn	13 05 26.4	+0.7
LTK	Loutraki	3.30	300	*e*P	Pn	13 05 26.4	+0.7
VLX	Vlachokerasia	3.50	287	*e*P	Pn	13 05 28.3	0.0
VLX	Vlachokerasia	3.50	287	*e*P	Pn	13 05 28.3	0.0
GUR	Goura	3.71	295	*e*P	Pn	13 05 31.1	+0.1
GUR	Goura	3.71	295	*e*P	Pn	13 05 31.1	+0.1
ITM	Ithomi	3.82	283	*e*P	Pn	13 05 32.6	+0.2
ITM				*e*S	Sn	13 06 14.9	-2.1
ITM	Ithomi	3.82	283	*e*P	Pn	13 05 32.6	+0.2
ITM				*e*S	Sn	13 06 14.9	-2.1
GAZI	Gazipasa	4.63	91	*i* P	Pn	13 05 42.2	-0.9
GAZI				*i* S	Sn	13 06 31.7	-4.5
GAZI	Gazipasa	4.63	91	*i* P	Pn	13 05 42.2	-0.9
GAZI				*i* S	Sn	13 06 31.7	-4.4
HDMB	Hadim	4.77	82	*e*PN	Pn	13 05 46.2	+1.3
HDMB	Hadim	4.77	82	*e*Pn	Pn	13 05 46.2	+1.2
SLUM		5.06	193	P	Pn	13 05 48.8	-0.1
	baz=197						
SLUM				AMP		13 06 00.0	
	comp=N,120μm,0.2s,logA/T=5.8,baz=197						
SLUM		5.06	193	P	Pn	13 05 48.8	-0.1
ERMK	Ermenek	5.09	86	*i* P	Pn	13 05 44.8	-4.5
ERMK				*i* S	Sn	13 06 41.1	-6.2
ERMK	Ermenek	5.09	86	*i* P	Pn	13 05 44.8	-4.5
HMAT	Matruh	5.34	175	P	Pn	13 05 53.0	+0.4
	baz=178						
HMAT				AMP		13 06 00.0	
	comp=E,100μm,0.2s,logA/T=5.7,baz=178						
HMAT				S	Sn	13 06 47.6	-5.6
	baz=178						
HMAT	Matruh	5.34	175	P	Pn	13 05 53.0	+0.4
HBRG	Burj al 'Arab	6.44	154	P	Pn	13 06 06.6	-0.8
	baz=156						
HSAF	As Saff	7.97	147	P	Pn	13 06 26.8	-1.1
	baz=149						
HSAF	As Saff	7.97	147	P	Pn	13 06 26.8	-1.1
AMAG	Maghara	7.99	134	P	Pn	13 06 26.4	-1.7
	baz=136						
AMAG				S	Sn	13 07 46.2	-11
	baz=136						
AMAG	Maghara	7.99	134	P	Pn	13 06 26.4	-1.7
GLL	Jalalah	8.07	146	P	Pn	13 06 28.7	-0.6
	baz=148						
GLL	Jalalah	8.07	146	P	Pn	13 06 28.7	-0.6
AWBH		8.32	166	P	Pn	13 06 32.2	-0.4
	baz=167						
AWBH		8.32	166	P	Pn	13 06 32.2	-0.4
SUZ		8.40	140	P	Pn	13 06 32.7	-1.0
	baz=141						
SUZ		8.40	140	P	Pn	13 06 32.7	-0.9
STON	Ston	9.40	316	*i* Pn	Pn	13 06 42.0	-5.0
STON				Sn	Sn	13 08 19.9	-11

*IDC **24** 13:11:25.6±3.7, 29°.78S×177°.46W, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.9/16, mbtmp4.1/4, ML3.1/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/17, Error ellipse: s-maj=73.3km s-min=41.0km az=101.0*

ISC 24 13:11:31.9±1.3, 29°.8S±0°.1×177°.6W±0°.2, h35km, n16, σ1°.00/7, mb4.0/3, MS3.4/2, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	9.52	206	Pn	Pn	13 13 44.3	-2.1
	0.2nm,0.3s,baz=222,slow=14,SNR=2.2						
URZ				Sn	Sn	13 15 32.9	+0.7
	0.5nm,0.3s,baz=223,slow=19,SNR=4.6						
RAR	Rarotonga	18.22	66	LR		LR 13 20 49.1	
	comp=Z,196nm,21.9s,baz=250,slow=31						
TBI	Tubuai	25.96	82	*e*LR		LR 13 23 35.6	
	89nm,29.0s						
TBI				*e*T		13 44 20.1	
	99nm,0.3s						
PAE	Paea	28.29	71	*e*T		13 47 10.3	
	24nm,0.3s						
PPT	Papeete	28.34	71	*e*LR		LR 13 24 36.1	
	76nm,28.2s						
PPT				*e*T		13 47 15.0	
	44nm,0.3s						
TIAR	Tiarei	28.54	71	*e*T		13 47 25.4	
	27nm,0.3s						
MEH	Mehetia	29.44	73	*e*T		13 48 36.4	
	74nm,0.3s						
PMOR	Pomariorio Ree	31.06	68	*e*T		13 50 34.7	
	15nm,0.3s						
CTA	Charters Tower	34.02	278	LR		LR 13 31 07.2	
	comp=Z,45nm,18.2s,MS3.2,baz=50,slow=35						
STKA	Stephens Creek	34.94	256	P		P 13 18 21.9	+1.4
	1.7nm,0.9s,mb4.0,baz=100,slow=11,SNR=3.1						
STKA				LR		LR 13 30 03.2	
	comp=Z,113nm,19.4s,MS3.6,baz=205,slow=32						
RKT	Rikitea	38.60	90	*e*T		14 00 13.7	
	5.6nm,0.3s						
ASAR	Alice Springs	43.47	266	P		P 13 19 31.4	-0.5
	2.5nm,0.8s,mb4.0,baz=96,slow=7.5,SNR=20						
WRA	Warramunga Arr	44.40	271	P		P 13 19 38.9	-0.5
	2.5nm,0.6s,mb4.1,baz=110,slow=8.1,SNR=18						
VNA3	Neumayer Olymp	78.91	176	*e*		P 13 23 31.5	+0.3
VNA3				*e*		13 23 36.1	
VNA2	Neumayer--Watz	79.34	177	*e*		P 13 23 34.0	+0.4
	baz=178,slow=3.3						
VNA2				*e*		13 23 38.8	
FINES	FINESS Array B	144.67	340	PKP	PKPdf	13 31 03.2	-0.9
	1.5nm,0.5s,baz=15,slow=7.9,SNR=4.7						

*NEIC **24** 13:26:56.4, 19°.52N×64°.83W, h15km, MD3.5(RSPR), After RSPR.*

RSPR 24 13:26:56.4, 19°.52N×64°.83W, h15km±31km, MD3.5/11, 18C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	Tortola	1.12	170	↑*e*P		Pb 13 27 14.6	-2.9
TBVI				*e*S		Sb 13 27 28.8	-3.0
TBVI	Tortola	1.12	170	↑*e*P		Pb 13 27 14.6	-2.9
TBVI				*e*S		Sb 13 27 28.8	-3.0
STVI	Saint Thomas	1.17	186	↓*e*P		Pn 13 27 15.0	-3.2
STVI				*e*S		Sb 13 27 30.4	-2.9
STVI	Saint Thomas	1.17	186	↓*e*P		Pn 13 27 15.3	-3.0
STVI				*e*S		Sb 13 27 30.4	-2.9
HUMP	Col San Antoni	1.68	215	↑*e*P		Pn 13 27 21.9	-3.4
HUMP				*e*S		Sn 13 27 42.9	-3.6
HUMP	Col San Antoni	1.68	215	↑*e*P		Pn 13 27 21.9	-3.4
HUMP				*e*S		Sn 13 27 42.9	-3.6
CDVI	St. Croix	1.76	178	↑*e*P		Pn 13 27 25.1	-1.3
CDVI	St. Croix	1.76	178	↑*e*P		Pn 13 27 25.8	-0.6
SJG	San Juan	1.88	222	↑*e*P		Pn 13 27 24.9	-3.2
SJG				*e*S		Sn 13 27 47.2	-4.3
SJG	San Juan	1.88	222	↑*e*P		Pn 13 27 25.3	-2.8
SJG				*e*S		Sn 13 27 47.4	-4.1
SJG	San Juan	1.88	222	↑*e*P		Pn 13 27 24.9	-3.2
SJG	San Juan	1.88	222	↑*e*P		Pn 13 27 25.3	-2.8
SJG				*e*S		Sn 13 27 47.2	-4.3
SJG				*e*S		Sn 13 27 47.4	-4.1
AOPR	Arecibo Observ	2.17	238	↑*e*P		Pn 13 27 29.7	-2.3
AOPR				*e*S		Sn 13 27 55.4	-3.2
AOPR	Arecibo Observ	2.17	238	↑*e*P		Pn 13 27 29.7	-2.3
AOPR				*e*S		Sn 13 27 55.4	-3.2
CELP	Cerrillos	2.20	229	↑*e*P		Pn 13 27 29.4	-3.0
CELP				*e*S		Sn 13 27 56.4	-2.9
CELP	Cerrillos	2.20	229	↑*e*P		Pn 13 27 29.4	-3.0
CELP				*e*S		Sn 13 27 56.4	-2.9
OBIP	Obispado Ponce	2.24	229	↑*e*P		Pn 13 27 30.4	-2.5
OBIP				*e*S		Sn 13 27 57.4	-2.9
OBIP	Obispado Ponce	2.24	229	↑*e*P		Pn 13 27 30.4	-2.5
OBIP				*e*S		Sn 13 27 57.4	-2.9
ICM	Isla Caja Muer	2.28	225	↓*e*P		Pn 13 27 31.5	-2.0
ICM	Isla Caja Muer	2.28	225	↓*e*P		Pn 13 27 31.5	-2.0
AGPR	Aguadilla, PR	2.40	245	*e*Pn		Pn 13 27 31.8	-3.4
CRPR	Cabo Rojo, PR	2.64	236	↑*e*P		Pn 13 27 36.4	-2.0
CRPR				*e*S		Sn 13 28 08.5	-1.6
CRPR	Cabo Rojo, PR	2.64	236	↑*e*P		Pn 13 27 36.4	-2.0
CRPR				*e*S		Sn 13 28 08.5	-1.6
SDDR	Presa de Saban	6.13	266	*e*Pn		Pn 13 28 25.6	-0.8
	15nm,0.5s						

IDC 24 15:10:47.0±26.0, 22°.43S×172°.30W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/19, mbtmp4.0/4, Error ellipse: s-maj=486.2km s-min=148.0km az=78.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	38.61	266	P		P 15 18 12.8	+0.6
	2.

JTKR	**Abashiri--Toko**	**1.52 123**	⇓P	**Pn**	**15 54 01.8**	**+0.6**
JTKR			*e*S	**S**	**15 54 32.9**	**+0.8**
JFR	**Furan**	**1.68 169**	P	**Pn**	**15 54 02.7**	**+0.2**
JAR	**Ashorobuto**	**1.91 142**	⇓P	**Pn**	**15 54 05.2**	**+0.8**
JAR			*e*S	**S**	**15 54 38.7**	**+0.8**
JEW	**Eniwo**	**2.03 195**	⇑P	**Pn**	**15 54 06.3**	**+0.8**
JEW			*e*S	**S**	**15 54 40.6**	**+0.8**
YSS	**Yuzh-Sakhalins**	**2.19 11**	*e*P	**Pn**	**15 54 05.7**	**-1.0**
YSS	**Yuzh-Sakhalins**	**2.19 11**	⇓*i*PN	**Pn**	**15 54 05.7**	**-1.0**
YSS			*i*		15 54 39.0	
YSS			pmax	pmax		
	comp=Z,70nm,0.9s					
YSS			smax			
	comp=N,140nm,0.9s					
YSS			smax			
	comp=E,110nm,0.9s					
JRA	**Rausu**	**2.31 111**	⇓P	**Pn**	**15 54 08.9**	**+1.0**
JCH	**Churui**	**2.37 158**	P	**Pn**	**15 54 07.5**	**-1.1**
JCH			*e*S	**S**	**15 54 42.8**	**-2.6**
JNBK	**Urakawa-nobuka**	**2.57 170**	P	**Pn**	**15 54 10.8**	**+0.2**
JNBK			*e*S	**S**	**15 54 47.4**	**-1.5**
JAK	**Akkeshi**	**2.59 134**	P	**Pn**	**15 54 10.5**	**-0.2**
JAK			*e*S	**S**	**15 54 45.7**	**-3.5**
ERM	**Erimo**	**2.89 165**	*e*P	**Pn**	**15 54 14.8**	**+1.0**
ERM	**Erimo**	**2.89 165**	*e*PN	**Pn**	**15 54 14.9**	**+1.0**
NEM2	**Nemuro 2**	**2.97 118**	P	**Pn**	**15 54 13.4**	**-1.2**
NEM2			*e*S	**S**	**15 54 53.4**	**-2.9**
JKB	**Kayabe**	**3.03 196**	⇑P	**Pn**	**15 54 14.8**	**-0.6**
JKB			*e*S	**S**	**15 54 55.7**	**-1.9**
MAJO	**Matsushiro**	**8.78 201**	*e*P	**Pn**	**15 55 24.1**	**-1.2**
	comp=E,12nm,0.6s					
MAJO	**Matsushiro**	**8.78 201**	*e*PN	**Pn**	**15 55 24.1**	**-1.1**
MAJO			pmax	pmax		
	comp=Z,12nm,0.6s					
MAT	**Matsushiro**	**8.78 201**	P	**Pn**	**15 55 24.5**	**-0.7**
MJAR	**Matsushiro Arr**	**8.78 201**	P	**Pn**	**15 55 24.8**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=11,slow=14,SNR=15					
MJAR	**Matsushiro Arr**	**8.78 201**	PN	**Pn**	**15 55 24.8**	**-0.4**
MJAR			pmax	pmax		
	comp=Z,1.0nm,0.3s					
KSRS	**Korea Array**	**12.99 240**	P	**Pn**	**15 56 19.8**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=42,slow=15,SNR=3.8					
KSRS	**Korea Array**	**12.99 240**	PN	**Pn**	**15 56 19.8**	**+2.3**
PEA0B	**Petropavlovsk-**	**13.14 45**	*e*P	**Pn**	**15 56 20.0**	**+0.8**
PETK	**Petropavlovsk-**	**13.14 45**	P	**Pn**	**15 56 20.1**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=213,slow=7.8,SNR=10					
PETK	**Petropavlovsk-**	**13.14 45**	PN	**Pn**	**15 56 20.1**	**+0.9**
PETK			pmax	pmax		
	comp=Z,1.0nm,0.3s					
JNU	**Nakatsue**	**14.58 221**	*e*P	**Pn**	**15 56 37.8**	**+0.9**
ULN	**Ulaanbaatar**	**24.29 290**	*e*P	**P**	**15 58 16.3**	**+0.4**
	comp=Z,2.9nm,0.8s,mb3.7					
ULN	**Ulaanbaatar**	**24.29 290**	*e*P	**P**	**15 58 16.3**	**+0.4**
ULN			pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.7					
SONM	**Songino Array**	**24.74 290**	P	**P**	**15 58 20.4**	**+0.5**
	comp=Z,3.7nm,0.5s,mb4.1,baz=84,slow=8.6,SNR=28					
SONM	**Songino Array**	**24.74 290**	P	**P**	**15 58 20.4**	**+0.5**
SONM			pmax	pmax		
	comp=Z,4.0nm,0.5s					
ZALV	**Zalesovo Beam**	**37.47 305**	P	**P**	**16 00 10.2**	**-0.5**
	comp=Z,0.3nm,0.3s,mb3.1,baz=90,slow=10,SNR=2.3					
ZALV			PcP	PcP	16 02 23.1	0.0
	comp=Z,0.6nm,0.5s,baz=102,slow=3.5,SNR=3.7					
ZALV	**Zalesovo Beam**	**37.47 305**	P	**P**	**16 00 10.2**	**-0.5**
ZALV					16 02 23.1	
MK31	**Makanchi Array**	**40.89 295**	*e*P	**P**	**16 00 39.0**	**0.0**
MK31	**Makanchi Array**	**40.89 295**	*e*P	**P**	**16 00 39.0**	**0.0**
MKAR	**Makanchi Array**	**40.89 295**	P	**P**	**16 00 39.0**	**0.0**
	comp=Z,3.0nm,0.6s,mb3.7,baz=80,slow=10,SNR=26					
MKAR			PcP	PcP	16 02 34.2	+0.1
	comp=Z,0.3nm,0.5s,baz=75,slow=0.7,SNR=3.6					
MKAR	**Makanchi Array**	**40.89 295**	P	**P**	**16 00 39.1**	**+0.1**
MKAR					16 02 34.2	
MKAR			pmax	pmax		
	comp=Z,3.0nm,0.6s					
KDAK	**Kodiak Island**	**41.18 48**	P	**P**	**16 00 41.4**	**+0.2**
	comp=Z,2.3nm,0.6s,mb3.6,baz=315,slow=7.1,SNR=4.2					
KDAK	**Kodiak Island**	**41.18 48**	P	**P**	**16 00 41.4**	**+0.2**
KDAK			pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.5					
KURK	**Kurchatov**	**41.94 302**	*e*P	**P**	**16 00 45.8**	**-1.5**
	comp=Z,1.3nm,0.3s,mb3.6					
KURK	**Kurchatov**	**41.94 302**	*e*P	**P**	**16 00 45.8**	**-1.6**
KURK			pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.5					
SML	**Sawmill**	**42.58 41**	*e*P	**P**	**16 00 53.3**	**+0.9**
	comp=Z,6.4nm,1.7s,mb3.6					
SML	**Sawmill**	**42.58 41**	*e*P	**P**	**16 00 53.3**	**+1.0**
SML			pmax	pmax		
	comp=Z,6.0nm,1.7s,mb3.5					
ILAR	**Eielson Array**	**42.77 37**	P	**P**	**16 00 53.1**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.1,baz=275,slow=8.6,SNR=16					
ILAR	**Eielson Array**	**42.77 37**	P	**P**	**16 00 53.2**	**-0.7**
ILAR			pmax	pmax		
	comp=Z,1.0nm,0.6s					
INK	**Inuvik**	**47.30 30**	P	**P**	**16 01 28.2**	**-1.1**
	comp=Z,1.4nm,0.5s,mb3.6,baz=321,slow=6.5,SNR=5.5					
INK	**Inuvik**	**47.30 30**	*e*P	**P**	**16 01 28.1**	**-1.2**
INK	**Inuvik**	**47.30 30**	P	**P**	**16 01 28.2**	**-1.1**
INK			pmax	pmax		
	comp=Z,1.0nm,0.5s					
ABKAR	**Akbulak array**	**53.57 306**	*e*P	**P**	**16 02 16.1**	**-0.2**
	comp=Z,2.6nm,0.4s,mb3.9					
ARCES	**ARCESS Array B**	**56.96 338**	P	**P**	**16 02 40.6**	**+0.5**
	comp=Z,2.4nm,0.8s,mb3.7,baz=1.4,slow=4.9,SNR=3.2					
ARCES	**ARCESS Array B**	**56.96 338**	P	**P**	**16 02 40.6**	**+0.5**
ARCES			pmax	pmax		
	comp=Z,2.0nm,0.8s					
FINES	**FINESS Array B**	**62.25 331**	P	**P**	**16 03 14.6**	**-1.5**
	comp=Z,0.5nm,0.4s,mb3.5,baz=32,slow=8.2,SNR=3.9					
FINES	**FINESS Array B**	**62.25 331**	P	**P**	**16 03 14.6**	**-1.5**
FINES			pmax	pmax		
	comp=Z,1.0nm,0.4s					
FITZ	**Fitzroy Crossi**	**64.39 197**	P	**P**	**16 03 31.1**	**+0.4**
	comp=Z,1.3nm,0.7s,mb3.7,baz=18,slow=9.6,SNR=3.3					
WRA	**Warramunga Arr**	**64.83 188**	P	**P**	**16 03 34.2**	**+0.8**
	comp=Z,0.5nm,0.6s,mb3.3,baz=7.7,slow=6.9,SNR=8.0					
WRA			pP	pP	16 04 33.4	+1.7
	comp=Z,0.4nm,0.8s,baz=0.3,slow=7.7,SNR=2.6					
WRA	**Warramunga Arr**	**64.83 188**	P	**P**	**16 03 34.2**	**+0.8**
WRA			*PP	pP	16 04 33.4	+1.7
WRA			pmax	pmax		
	comp=Z,1.0nm,0.6s					
NOA	**NORSAR Array B**	**67.26 337**	P	**P**	**16 03 46.7**	**-1.6**
	comp=Z,0.3nm,0.6s,mb3.2,baz=36,slow=6.8,SNR=2.8					
NOA	**NORSAR Array B**	**67.26 337**	P	**P**	**16 03 46.7**	**-1.7**
AKASG	**Malin Array Be**	**68.55 321**	P	**P**	**16 03 55.7**	**-0.8**
	comp=Z,1.3nm,0.4s,mb4.0,baz=42,slow=6.6,SNR=5.6					
AKASG	**Malin Array Be**	**68.55 321**	P	**P**	**16 03 55.7**	**-0.8**
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.4s					
ASAR	**Alice Springs**	**68.56 188**	P	**P**	**16 03 58.5**	**+1.7**
	comp=Z,1.1nm,0.8s,mb3.7,baz=354,slow=4.7,SNR=9.1					
ASAR	**Alice Springs**	**68.56 188**	P	**P**	**16 03 58.6**	**+1.8**
ASAR			pmax	pmax		
	comp=Z,1.0nm,0.8s					
BRTR	**Keskin Array B**	**74.17 311**	P	**P**	**16 04 30.4**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.3,baz=72,slow=4.0,SNR=4.7					
BRTR	**Keskin Array B**	**74.17 311**	P	**P**	**16 04 30.4**	**+0.1**
BRTR			pmax	pmax		
	comp=Z,1.0nm,0.7s					
CLL	**Collm**	**74.65 330**	⇑*i*P	**P**	**16 04 32.5**	**-0.3**
	comp=Z,4.0nm,0.6s,mb4.2					
STKA	**Stephens Creek**	**76.32 180**	P	**P**	**16 04 43.9**	**+1.5**
	comp=Z,0.4nm,0.4s,mb3.5,baz=27,slow=6.8,SNR=3.5					
GERES	**GERESS Array B**	**76.41 328**	P	**P**	**16 04 42.7**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.2,baz=11,slow=2.9,SNR=4.2					
GERES	**GERESS Array B**	**76.41 328**	P	**P**	**16 04 42.7**	**-0.1**
GERES	**GERESS Array B**	**76.41 328**	P	**P**	**16 04 42.7**	**-0.1**
VNA2	**Neumayer--Watz**	**149.89 199**	*e*	PKPdf	16 12 37.9	+2.8
	baz=116,slow=1.6					
VNA3	**Neumayer Olymp**	**150.18 198**	*e*	PKPdf	16 12 38.4	+2.9

NEIC 24 16:01:49.2, 63°.42N×150°.05W, h4km, ML3.5(PMR), ML3.3(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.11**	**288**	P	Pg	16 01 52.1	+0.6
TRF				S	Sg	16 01 53.6	+0.6
RND	**Reindeer**	**0.54**	**91**	P	Pg	16 01 59.3	-0.2
RND				S	Sg	16 02 06.9	+0.4
MCK	**McKinley**	**0.59**	**57**	P	Pg	16 02 00.7	+0.2
MCK				S	Sg	16 02 09.0	+0.8
BPAW	**Bear Paw Mtn.**	**0.80**	**329**	P	Pg	16 02 04.6	0.0
PPLA	**Purkeypile**	**1.10**	**243**	*e*P	Pg	16 02 09.0	-1.3
CHUM	**Lake Minchumin**	**1.11**	**296**	P	Pg	16 02 10.2	-0.3
CHUM				S	Sg	16 02 24.3	-0.7
DHY	**Denali Highway**	**1.26**	**105**	P	Pg	16 02 12.5	-0.8
DHY				S	Sg	16 02 30.4	+0.9
SKT	**Skwentna**	**1.60**	**206**	P	Pn	16 02 17.8	-0.3
SKT				S	Sn	16 02 40.2	+1.1
HDA	**Harding Lake**	**1.69**	**53**	P	Pn	16 02 19.1	-0.3
GHO	**Glory Hole Cre**	**1.73**	**162**	P	Pn	16 02 19.4	-0.6
MDM	**Murphy Dome**	**1.74**	**26**	P	Pn	16 02 19.7	-0.4
MDM				S	Sn	16 02 44.1	+1.5
COLA	**College**	**1.75**	**32**	P	Pn	16 02 19.8	-0.5
SML	**Sawmill**	**1.80**	**153**	P	Pn	16 02 20.3	-0.6
PMR	**Palmer**	**1.88**	**167**	P	Pn	16 02 21.5	-0.5
SCM	**Sheep Creek Mo**	**2.03**	**140**	P	Pn	16 02 23.6	-0.4
PAX	**Paxson**	**2.12**	**100**	P	Pn	16 02 26.4	+1.0
FIB	**Fire Island**	**2.26**	**182**	P	Pn	16 02 28.9	+1.6
RC01	**Rabbit Creek A**	**2.34**	**176**	*e*P	Pn	16 02 28.5	+0.2
DOT	**Dot Lake**	**2.69**	**82**	*e*P	Pn	16 02 33.4	+0.2
MENT	**Mentasta**	**2.91**	**97**	*e*P	Pn	16 02 37.8	+1.6
SLKM	**Skilak Lake**	**2.92**	**182**	*e*P	Pn	16 02 36.8	+0.5
RSO	**Redoubt South**	**3.23**	**205**	*e*P	Pn	16 02 41.6	+1.1
SEW	**Seward**	**3.34**	**175**	*e*P	Pn	16 02 44.2	+2.2
SVW2	**Sparrevohn**	**3.48**	**231**	*e*P	Pn	16 02 44.4	+0.4
COLD	**Coldfoot**	**3.83**	**359**	P	Pn	16 02 49.4	+0.6
CNPM	**China Poot**	**3.95**	**189**	P	Pn	16 02 52.0	+1.6
EGAK	**Eagle**	**4.13**	**67**	P	Pn	16 02 53.5	+0.6
DAWY	**Dawson**	**4.78**	**77**	P	Pn	16 03 02.1	+0.2
KDAK	**Kodiak Island**	**5.79**	**194**	*e*P	Pn	16 03 16.1	+0.4
	15nm,0.8s						
PNL	**Peninsula**	**6.33**	**122**	P	Pn	16 03 25.0	+1.9
DHAK	**Deception Hill**	**7.16**	**122**	P	Pn	16 03 36.0	+1.4

ISCJB ***24*** *16:13:12.1±0.3, 38°.22N±0°.01×8°.21W±0°.02, h12km±2km, Error ellipse: s-maj=3.0km s-min=2.1km az=169.1*
CSEM ***24*** *16:13:12.6±0.1, 38°.21N×8°.23W, h8km, ML3.3/24, Error ellipse: s-maj=2.8km s-min=1.9km az=76.0*
LDG ***24*** *16:13:12.4±0.2, 38°.19N×8°.38W, h2km, Md3.6/1, Ml2.9/3, Error ellipse: s-maj=3.2km s-min=2.5km az=82.0*
INMG ***24*** *16:13:13.4±1.2, 38°.19N×8°.29W, h5km±2km, MD2.8, ML2.9, Error ellipse: s-maj=1.8km s-min=1.0km az=88.0*
NEIC ***24*** *16:13:13.3, 38°.20N×8°.28W, h4km, ML2.9(LDG), MN2.9(MDD), After MDD.*
MDD ***24*** *16:13:13.6±0.3, 38°.19N×8°.29W, h11km, mbLg3.0/26, Error ellipse: s-maj=2.8km s-min=1.9km az=78.0, PRXIMO*
IGIL ***24*** *16:13:13.8, 38°.18N×8°.29W, h5km, ML2.9*
ISC 24 16:13:12.6±0.3, 38°.21N±0°.01×8°.25W±0°.02, h11km±2km, n173, σ1$02/292, 6C-2D, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOE	**Montemor**	**0.33**	**346**	*e*Pg	**Pg**	**16 13 20.1**	**+1.0**
MOE				*e*Sg	**Sg**	**16 13 24.8**	**+1.3**
MOE	**Montemor**	**0.33**	**346**	Pg	**Pg**	**16 13 20.1**	**+1.0**
MOE				Lg		16 13 24.8	
MOE	**Montemor**	**0.33**	**346**	*e*Pg	**Pg**	**16 13 20.1**	**+1.0**
MOE				*e*Sg	**Sg**	**16 13 24.8**	**+1.3**
EVOP	**Sao Brissos**	**0.34**	**17**	*e*Pg	**Pg**	**16 13 20.2**	**+0.9**
EVOP				*e*Sg	**Sg**	**16 13 25.2**	**+1.3**
EVOP	**Sao Brissos**	**0.34**	**17**	*e*Pg	**Pg**	**16 13 20.2**	**+0.9**
EVOP				*e*Sg	**Sg**	**16 13 25.2**	**+1.3**
	368nm,0.2s						
PBEJ	**Beja**	**0.35**	**120**	*e*Pg	**Pg**	**16 13 20.1**	**+0.5**
PBEJ				*e*Sg	**Sg**	**16 13 25.2**	**+0.8**
PBEJ				A		16 13 25.2	
	226nm,0.1s						
PBEJ	**Beja**	**0.35**	**120**	Pg	**Pg**	**16 13 20.1**	**+0.5**
PBEJ				Lg		16 13 25.2	
	113nm,0.1s						
PBEJ	**Beja**	**0.35**	**120**	*e*Pg	**Pg**	**16 13 20.1**	**+0.5**
PBEJ				*e*Sg	**Sg**	**16 13 25.2**	**+0.8**
	226nm,0.1s						
MESJ	**Messejana**	**0.37**	**176**	*e*P	**Pg**	**16 13 19.9**	**+0.1**
MESJ				*e*S	**Sg**	**16 13 24.4**	**-0.4**
EVO	**Evora**	**0.38**	**30**	*e*Pg	**Pg**	**16 13 20.2**	**+0.1**
EVO				*e*Sg	**Sg**	**16 13 25.2**	**+0.1**
	737nm,0.2s						
EVO	**Evora**	**0.38**	**30**	*i* Pg	**Pg**	**16 13 20.9**	**+0.8**
EVO				*e*Sg	**Sg**	**16 13 26.6**	**+1.5**
EVO				A		16 13 30.2	
	461nm,0.1s						
EVO	**Evora**	**0.38**	**30**	⇑Pg	**Pg**	**16 13 20.9**	**+0.8**
EVO				Lg		16 13 26.6	
	461nm,0.1s						
PCVE	**Castro Verde**	**0.60**	**164**	*i* Pg	**Pg**	**16 13 24.1**	**-0.1**
PCVE				*e*Sg	**Sg**	**16 13 31.9**	**-0.2**
PCVE				A		16 13 34.1	
	172nm,0.3s						
PCVE	**Castro Verde**	**0.60**	**164**	⇓Pg	**Pg**	**16 13 24.1**	**-0.1**
PCVE				Lg		16 13 31.9	
	172nm,0.3s						
PTEO	**Sao Teotonio**	**0.76**	**210**	*i* Pg	**Pg**	**16 13 27.0**	**-0.2**
PTEO				*e*Sg	**Sg**	**16 13 36.0**	**-1.1**
PTEO				A		16 13 40.8	
	361nm,0.4s						
PTEO	**Sao Teotonio**	**0.76**	**210**	⇑Pg	**Pg**	**16 13 27.0**	**-0.2**
PTEO				Lg		16 13 36.0	
	180nm,0.4s						
PESTR	**Estremoz**	**0.84**	**38**	*e*P	**Pg**	**16 13 29.4**	**+0.6**
PESTR				*e*S	**Sg**	**16 13 41.5**	**+1.7**
PESTR				A		16 13 43.4	
	136nm,0.2s						
PESTR	**Estremoz**	**0.84**	**38**	Pg	**Pg**	**16 13 29.4**	**+0.6**
PESTR				Lg		16 13 41.5	
	136nm,0.2s						
PESTR	**Estremoz**	**0.84**	**38**	*e*P	**Pg**	**16 13 29.4**	**+0.6**
PESTR				*e*S	**Sg**	**16 13 41.5**	**+1.7**
	136nm,0.2s						
LIS	**Lisbon**	**0.87**	**306**	*e*P	**Pg**	**16 13 29.8**	**+0.4**
LIS				*e*S	**Sg**	**16 13 40.8**	**+0.1**
LIS	**Lisbon**	**0.87**	**306**	*e*S	**Sg**	**16 13 40.6**	**-0.1**
LIS				AML	AML	16 13 42.5	
	comp=E,280nm,0.2s						
LIS	**Lisbon**	**0.87**	**306**	Pg	**Pg**	**16 13 29.8**	**+0.4**
LIS				Lg		16 13 40.8	
LIS	**Lisbon**	**0.87**	**306**	*e*P	**Pg**	**16 13 29.8**	**+0.4**
LIS				*e*S	**Sg**	**16 13 40.8**	**+0.1**
EGRO	**El Granado**	**0.91**	**138**	Pg	**Pg**	**16 13 29.5**	**-0.6**
EGRO				Lg		16 13 43.0	
EGRO	**El Granado**	**0.91**	**138**	Pg	**Pg**	**16 13 29.5**	**-0.6**
	comp=E,8.3nm,0.1s,SNR=117						
EGRO				Lg		16 13 43.0	
	comp=E,85nm,0.1s,SNR=8.9						
EGRO	**El Granado**	**0.91**	**138**	Pg	**Pg**	**16 13 29.5**	**-0.6**
	comp=E,8.3nm,0.1s,SNR=117						
EGRO				Lg		16 13 43.0	
	comp=E,85nm,0.1s,SNR=8.9						
PVAQ	**Vaqueiros**	**0.91**	**152**	*e*P	**Pg**	**16 13 29.6**	**-0.5**
PVAQ				*e*S	**Sg**	**16 13 42.4**	**+0.5**
PVAQ				A		16 13 45.3	
	comp=E,232nm,0.1s						
PVAQ	**Vaqueiros**	**0.91**	**152**	Pg	**Pg**	**16 13 29.6**	**-0.5**
PVAQ				Lg		16 13 42.4	
	comp=E,232nm,0.1s						
PVAQ	**Vaqueiros**	**0.91**	**152**	*e*P	**Pg**	**16 13 29.6**	**-0.5**
PVAQ				*e*S	**Sg**	**16 13 42.4**	**+0.5**
	comp=E,232nm,0.1s						
MORF	**Marmelete**	**0.95**	**199**	*e*P	**Pg**	**16 13 30.7**	**-0.2**
MORF				*e*S	**Sg**	**16 13 42.5**	**-0.8**
MORF				A		16 13 44.4	
	comp=E,699nm,0.2s						
MORF	**Marmelete**	**0.95**	**199**	Pg	**Pg**	**16 13 30.7**	**-0.2**
MORF				Lg		16 13 42.5	
	comp=E,699nm,0.2s						
MORF	**Marmelete**	**0.95**	**199**	*e*P	**Pg**	**16 13 30.7**	**-0.2**
MORF				*e*S	**Sg**	**16 13 42.5**	**-0.8**
	comp=E,699nm,0.2s						
PBAR	**Barrancos**	**0.96**	**91**	*e*P	**Pg**	**16 13 31.3**	**+0.3**
PBAR				*e*S	**Sg**	**16 13 44.9**	**+1.4**
PBAR				A		16 13 47.8	
	comp=E,286nm,0.2s						
PBAR	**Barrancos**	**0.96**	**91**	Pg	**Pg**	**16 13 31.3**	**+0.3**
PBAR				Lg		16 13 44.9	
	comp=E,286nm,0.2s						
PBAR	**Barrancos**	**0.96**	**91**	*e*P	**Pg**	**16 13 31.3**	**+0.3**
PBAR				*e*S	**Sg**	**16 13 44.9**	**+1.4**
	comp=E,286nm,0.2s						
ALMR	**Almeirim**	**0.98**	**345**	*e*P	**Pg**	**16 13 31.6**	**+0.1**
ALMR						**16 13 44.7**	**+0.4**
ALMR	**Almeirim**	**0.98**	**345**	*e*P	**Pg**	**16 13 31.6**	**+0.1**
ALMR				*e*S	**Sg**	**16 13 44.7**	**+0.4**
ALMR				*e*S	**Sg**	**16 13 44.8**	**+0.5**
ALMR				AML	AML	16 13 46.0	
	comp=E,232nm,0.3s						
ALMR	**Almeirim**	**0.98**	**345**	Pg	**Pg**	**16 13 31.6**	**+0.1**
ALMR				Lg		16 13 44.7	
ALMR	**Almeirim**	**0.98**	**345**	*e*P	**Pg**	**16 13 31.6**	**+0.1**
ALMR				*e*S	**Sg**	**16 13 44.7**	**+0.4**
PBDV	**Barranco-do-Ve**	**0.99**	**165**	*e*P	**Pg**	**16 13 31.6**	**-0.1**
PBDV				*e*S	**Sg**	**16 13 44.9**	**+0.2**
PBDV				A		16 13 48.4	
	comp=E,132nm,0.4s						
PBDV	**Barranco-do-Ve**	**0.99**	**165**	Pg	**Pg**	**16 13 31.6**	**-0.1**
PBDV				Lg		16 13 44.9	
	comp=E,132nm,0.4s						
PBDV	**Barranco-do-Ve**	**0.99**	**165**	*e*P	**Pg**	**16 13 31.6**	**-0.1**
PBDV				*e*S	**Sg**	**16 13 44.9**	**+0.2**
	comp=E,132nm,0.4s						
PMAFR	**Mafra**	**1.10**	**313**	*e*P	**Pb**	**16 13 33.8**	**+0.2**
PMAFR				*e*S	**Sb**	**16 13 48.3**	**+0.3**
PMAFR				A		16 13 50.1	
	comp=E,326nm,0.3s						
PMAFR	**Mafra**	**1.10**	**313**	⇓Pg	**Pg**	**16 13 33.8**	**0.0**
	comp=E,365nm,0.2s,SNR=18						
PMAFR				Lg		16 13 48.2	
	comp=E,396nm,0.2s,SNR=9.0						
PMAFR	**Mafra**	**1.10**	**313**	*e*P	**Pb**	**16 13 33.8**	**+0.2**
PMAFR				Lg		16 13 48.2	
	comp=E,396nm,0.2s,SNR=9.0						
PMAFR				*e*S	**Sb**	**16 13 48.3**	**+0.3**
	comp=E,326nm,0.3s						
EBAD	**Badajoz**	**1.12**	**60**	⇑Pg	**Pg**	**16 13 34.4**	**+0.3**
EBAD				Lg		16 13 50.0	
EBAD	**Badajoz**	**1.12**	**60**	⇑Pg	**Pg**	**16 13 34.4**	**+0.3**
	comp=E,223nm,0.2s,SNR=18						
EBAD				Lg		16 13 50.0	
	comp=E,226nm,0.1s,SNR=19						
EBAD	**Badajoz**	**1.12**	**60**	Pg	**Pg**	**16 13 34.4**	**+0.3**
	comp=E,223nm,0.2s,SNR=18						
EBAD				Lg		16 13 50.0	
	comp=E,226nm,0.1s,SNR=19						
PFVI	**Vila Bisbo**	**1.16**	**203**	*e*P	**Pb**	**16 13 34.1**	**-0.6**
PFVI				*e*S	**Sb**	**16 13 49.0**	**-0.8**
PFVI				A		16 13 52.0	
	comp=E,235nm,0.2s						
PFVI	**Vila Bisbo**	**1.16**	**203**	Pn	**Pn**	**16 13 34.0**	**-0.7**
PFVI				Pg	**Pg**	**16 13 34.5**	**-0.5**
PFVI				Lg		16 13 48.7	
PFVI	**Vila Bisbo**	**1.16**	**203**	Pn	**Pn**	**16 13 34.1**	**-0.7**
	comp=E,1.6nm,0.1s,SNR=7.9						
PFVI				Pg	**Pg**	**16 13 34.5**	**-0.5**
	comp=E,24nm,0.1s,SNR=66						
PFVI				Lg		16 13 48.7	
	comp=E,294nm,0.1s,SNR=11						
PFVI	**Vila Bisbo**	**1.16**	**203**	*e*P	**Pb**	**16 13 34.1**	**-0.6**
PFVI	**Vila Bisbo**	**1.16**	**203**	Pg	**Pg**	**16 13 34.5**	**-0.5**
	comp=E,24nm,0.1s,SNR=66						
PFVI				Lg		16 13 48.7	
	comp=E,294nm,0.1s,SNR=11						
PFVI				*e*S	**Sb**	**16 13 49.0**	**-0.8**
	comp=E,235nm,0.2s						
EMIN	**Mina Concepcio**	**1.32**	**109**	Pn	**Pn**	**16 13 37.2**	**+0.3**
EMIN				Pg	**Pg**	**16 13 37.9**	**-0.1**
EMIN				Lg		16 13 55.4	
EMIN	**Mina Concepcio**	**1.32**	**109**	Pn	**Pn**	**16 13 37.2**	**+0.3**
	comp=E,0.5nm,0.1s,SNR=123						
EMIN				Pg	**Pg**	**16 13 37.9**	**-0.1**
	comp=E,11nm,0.1s,SNR=7.9						
EMIN				Lg		16 13 55.4	
	comp=E,164nm,0.2s,SNR=35						
EMIN	**Mina Concepcio**	**1.32**	**109**	Pn	**Pn**	**16 13 37.2**	**+0.2**
	comp=E,0.5nm,0.1s,SNR=123						
EMIN	**Mina Concepcio**	**1.32**	**109**	Pg	**Pg**	**16 13 37.9**	**-0.1**
	comp=E,11nm,0.1s,SNR=7.9						
EMIN				Lg		16 13 55.4	
	comp=E,164nm,0.2s,SNR=35						
PMRV	**Marv??o**	**1.39**	**29**	*e*P	**Pn**	**16 13 38.6**	**+0.7**
PMRV				*e*S	**Sn**	**16 13 57.3**	**+1.0**
PMRV				A		16 13 59.7	
	comp=E,108nm,0.2s						
PMRV	**Marv??o**	**1.39**	**29**	Pg	**Pn**	**16 13 38.6**	**+0.7**
PMRV				Lg		16 13 57.3	
	comp=E,108nm,0.2s						
PMRV	**Marv??o**	**1.39**	**29

EPLA	**Plasencia**	**2.51**	**42**	Pg	**Pg**	**16 13 59.8**	**-0.9**
	comp=E,2.9nm,0.1s,SNR=6.1						
EPLA				Sn	**Sn**	**16 14 23.5**	**-0.3**
	comp=E,10nm,0.1s,SNR=7.9						
EPLA				Lg		16 14 31.7	
	comp=E,18nm,0.2s,SNR=9.9						
LIJA	**Lijar**	**2.61**	**119**	Pn	**Pn**	**16 13 55.0**	**+0.4**
LIJA				Lg		16 14 35.0	
LIJA	**Lijar**	**2.61**	**119**	*e*P	**Pn**	**16 13 55.0**	**+0.4**
EJIF	**Jimena Fronter**	**2.83**	**127**	Pn	**Pn**	**16 13 58.2**	**+0.6**
EJIF				Pg	**Pg**	**16 14 07.0**	**+0.3**
EJIF				Lg		16 14 45.8	
EJIF	**Jimena Fronter**	**2.83**	**127**	Pn	**Pn**	**16 13 58.2**	**+0.6**
	comp=E,1.1nm,0.2s,SNR=4.0						
EJIF				Pg	**Pg**	**16 14 05.5**	**-1.3**
	comp=E,2.0nm,0.3s,SNR=4.0						
EJIF				Lg		16 14 44.5	
	comp=E,3.5nm,0.2s,SNR=4.0						
EJIF	**Jimena Fronter**	**2.83**	**127**	Pn	**Pn**	**16 13 58.2**	**+0.6**
	comp=E,1.1nm,0.2s,SNR=4.0						
EJIF	**Jimena Fronter**	**2.83**	**127**	Pg	**Pg**	**16 14 07.1**	**+0.3**
	comp=E,2.0nm,0.3s,SNR=4.0						
EJIF				Lg		16 14 45.8	
	comp=E,3.5nm,0.2s,SNR=4.0						
EADA	**Adamuz**	**2.90**	**90**	Pn	**Pn**	**16 13 58.9**	**+0.3**
EADA				Pg	**Pg**	**16 14 06.2**	**-1.9**
EADA				Sn	**Sn**	**16 14 34.5**	**+1.1**
EADA				Lg		16 14 43.5	
EADA	**Adamuz**	**2.90**	**90**	Pn	**Pn**	**16 13 58.9**	**+0.3**
	comp=E,1.3nm,0.1s,SNR=7.9						
EADA				Pg	**Pg**	**16 14 06.2**	**-1.9**
	comp=E,1.3nm,0.1s,SNR=4.6						
EADA				Sn	**Sn**	**16 14 34.5**	**+1.1**
	comp=E,7.3nm,0.1s,SNR=7.9						
EADA				Lg		16 14 43.5	
	comp=E,14nm,0.1s,SNR=22						
EADA	**Adamuz**	**2.90**	**90**	Pn	**Pn**	**16 13 58.9**	**+0.3**
	comp=E,1.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**2.90**	**90**	Pg	**Pg**	**16 14 06.2**	**-1.9**
	comp=E,1.3nm,0.1s,SNR=4.6						
EADA				Sn	**Sn**	**16 14 34.5**	**+1.1**
	comp=E,7.3nm,0.1s,SNR=7.9						
EADA				Lg		16 14 43.5	
	comp=E,14nm,0.1s,SNR=22						
PVRL	**Vila Real**	**3.09**	**8**	*e*Sn	**Sn**	**16 14 38.5**	**+0.3**
PVRL				*e*Sg	**Sg**	**16 14 52.2**	**+0.3**
PVRL				A		16 14 59.5	
	comp=E,36nm,0.5s						
PVRL	**Vila Real**	**3.09**	**8**	Sn	**Sn**	**16 14 38.5**	**+0.3**
PVRL				Lg		16 14 52.2	
	comp=E,18nm,0.5s						
PVRL	**Vila Real**	**3.09**	**8**	*e*Sn	**Sn**	**16 14 38.5**	**+0.3**
PVRL				*e*Sg	**Sg**	**16 14 52.2**	**+0.3**
	comp=E,36nm,0.5s						
MVO	**Moncorvo**	**3.10**	**17**	*e*Pn	**Pn**	**16 14 02.2**	**+0.8**
MVO				*e*Sn	**Sn**	**16 14 37.8**	**-0.6**
MVO				*e*Sg	**Sg**	**16 14 50.8**	**-1.4**
MVO				A		16 14 52.8	
	comp=E,31nm,0.5s						
MVO	**Moncorvo**	**3.10**	**17**	Pn	**Pn**	**16 14 02.2**	**+0.8**
MVO				Pg	**Pg**	**16 14 09.9**	**-2.1**
MVO				Sn	**Sn**	**16 14 37.6**	**-0.8**
MVO				Lg		16 14 50.4	
MVO	**Moncorvo**	**3.10**	**17**	Pn	**Pn**	**16 14 02.2**	**+0.8**
	comp=E,4.8nm,0.1s,SNR=16						
MVO				Pg	**Pg**	**16 14 09.9**	**-2.1**
	comp=E,1.6nm,0.1s,SNR=7.4						
MVO				Sn	**Sn**	**16 14 37.6**	**-0.8**
	comp=E,3.6nm,0.1s,SNR=7.9						
MVO				Lg		16 14 50.4	
	comp=E,17nm,0.2s						
MVO	**Moncorvo**	**3.10**	**17**	Pn	**Pn**	**16 14 02.2**	**+0.8**
	comp=E,4.8nm,0.1s,SNR=16						
MVO	**Moncorvo**	**3.10**	**17**	Pg	**Pg**	**16 14 09.9**	**-2.1**
	comp=E,1.6nm,0.1s,SNR=7.4						
MVO				*e*Sn	**Sn**	**16 14 37.8**	**-0.6**
MVO				Lg		16 14 50.4	
	comp=E,17nm,0.2s						
MVO				*e*Sg	**Sg**	**16 14 50.8**	**-1.4**
	comp=E,31nm,0.5s						
ELUQ	**Luque**	**3.22**	**100**	Sn	**Sn**	**16 14 41.0**	**-0.3**
	comp=E,5.1nm,0.2s,SNR=7.9						
ELUQ				Lg		16 14 56.6	
	comp=E,14nm,0.3s,SNR=4.0						
ELUQ	**Luque**	**3.22**	**100**	Sn	**Sn**	**16 14 41.0**	**-0.3**
	comp=E,5.1nm,0.2s,SNR=7.9						
ELUQ				Lg		16 14 56.6	
	comp=E,14nm,0.3s,SNR=4.0						
EMIJ	**Mijas**	**3.22**	**120**	Pn	**Pn**	**16 14 03.8**	**+0.8**
EMIJ				Sn	**Sn**	**16 14 40.4**	**-0.9**
EMIJ				Lg		16 14 57.7	
EMIJ	**Mijas**	**3.22**	**120**	Pn	**Pn**	**16 14 03.8**	**+0.7**
	comp=E,1.7nm,0.1s,SNR=7.9						
EMIJ				Sn	**Sn**	**16 14 40.4**	**-0.9**
	comp=E,2.6nm,0.2s,SNR=7.9						
EMIJ				Lg		16 14 57.7	
	comp=E,14nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**3.22**	**120**	Pn	**Pn**	**16 14 03.8**	**+0.8**
	comp=E,1.7nm,0.1s,SNR=7.9						
EMIJ				Sn	**Sn**	**16 14 40.4**	**-1.0**
	comp=E,2.6nm,0.2s,SNR=7.9						
EMIJ				Lg		16 14 57.7	
	comp=E,14nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**3.33**	**65**	*e*Pn	**Pn**	**16 14 05.7**	**+1.2**
PAB				*e*Pg	**Pg**	**16 14 14.8**	**-1.5**
PAB	**San Pablo**	**3.33**	**65**	*e*Pn	**Pn**	**16 14 05.7**	**+1.2**
PCAB	**Cabril**	**3.50**	**3**	*e*Pn	**Pn**	**16 14 07.6**	**+0.7**
PCAB				*e*Sn	**Sn**	**16 14 48.2**	**-0.2**
PCAB				*e*Sg	**Sg**	**16 15 04.3**	**-0.8**
PCAB				A		16 15 08.8	
	comp=E,22nm,0.5s						
PCAB	**Cabril**	**3.50**	**3**	Pn	**Pn**	**16 14 07.6**	**+0.7**
PCAB				Sn	**Sn**	**16 14 48.2**	**-0.2**
PCAB				Lg		16 15 04.3	
	comp=E,11nm,0.5s						
PCAB	**Cabril**	**3.50**	**3**	*e*Pn	**Pn**	**16 14 07.6**	**+0.7**
PCAB				*e*Sn	**Sn**	**16 14 48.2**	**-0.2**
PCAB				*e*Sg	**Sg**	**16 15 04.3**	**-0.8**
	comp=E,22nm,0.5s						
EBAN	**Banos Encina**	**3.52**	**89**	Sn	**Sn**	**16 14 48.1**	**-0.6**
	comp=E,4.6nm,0.2s,SNR=7.9						
EBAN				Lg		16 15 05.2	
	comp=E,24nm,0.3s,SNR=12						
EBAN	**Banos Encina**	**3.52**	**89**	Sn	**Sn**	**16 14 48.1**	**-0.7**
	comp=E,4.6nm,0.2s,SNR=7.9						
EBAN				Lg		16 15 05.2	
	comp=E,24nm,0.3s,SNR=12						
ESDC	**Sonseca Array**	**3.65**	**65**	Pn	**Pn**	**16 14 09.6**	**+0.6**
ESDC				Pg	**Pg**	**16 14 20.5**	**-2.1**
ESDC				Sn	**Sn**	**16 14 51.3**	**-0.7**
ESDC				Lg		16 15 07.8	
ESDC	**Sonseca Array**	**3.65**	**65**	Pn	**Pn**	**16 14 09.6**	**+0.6**
	comp=E,2.1nm,0.1s,baz=348,slow=44,SNR=3.9						
ESDC				Pg	**Pg**	**16 14 20.5**	**-2.1**
	comp=E,2.5nm,0.1s,baz=256,slow=16,SNR=9.7						
ESDC				Sn	**Sn**	**16 14 51.3**	**-0.7**
	comp=E,6.8nm,0.2s,baz=247,slow=22,SNR=12						
ESDC				Lg		16 15 07.9	
	comp=E,2.0nm,0.2s,baz=254,slow=28,SNR=13						
ESDC	**Sonseca Array**	**3.65**	**65**	Pn	**Pn**	**16 14 09.6**	**+0.6**
	comp=E,2.1nm,0.1s,SNR=3.9						
ESDC	**Sonseca Array**	**3.65**	**65**	Pg	**Pg**	**16 14 20.5**	**-2.0**
	comp=E,2.5nm,0.1s,slow=16,SNR=9.7						
ESDC				Sn	**Sn**	**16 14 51.3**	**-0.7**
	comp=E,6.8nm,0.2s,baz=247,slow=22,SNR=12						
ESDC				Lg		16 15 07.9	
	comp=E,2.0nm,0.2s,SNR=13						
ELOB	**Lobios**	**3.66**	**2**	Pn	**Pn**	**16 14 09.6**	**+0.5**
ELOB				Sn	**Sn**	**16 14 50.0**	**-2.1**
ELOB				Lg		16 15 08.3	
ELOB	**Lobios**	**3.66**	**2**	Pn	**Pn**	**16 14 09.6**	**+0.5**
	comp=E,0.8nm,0.1s,SNR=7.2						
ELOB				Sn	**Sn**	**16 14 50.0**	**-2.1**
	comp=E,2.0nm,0.1s,SNR=8.8						
ELOB				Lg		16 15 08.3	
	comp=E,14nm,0.3s,SNR=5.0						
ELOB	**Lobios**	**3.66**	**2**	Pn	**Pn**	**16 14 09.6**	**+0.5**
	comp=E,0.8nm,0.1s,SNR=7.2						
ELOB				Sn	**Sn**	**16 14 50.0**	**-2.2**
	comp=E,2.0nm,0.1s,SNR=8.8						
ELOB				Lg		16 15 08.3	
	comp=E,14nm,0.3s,SNR=5.0						
PBRG	**Braganca**	**3.78**	**17**	*e*Pn	**Pn**	**16 14 11.3**	**+0.6**
PBRG				*e*Sn	**Sn**	**16 14 54.3**	**-0.8**
PBRG				*e*Sg	**Sg**	**16 15 11.4**	**-2.5**
PBRG				A		16 15 19.4	
	comp=E,13nm,0.8s						
PBRG	**Braganca**	**3.78**	**17**	Pn	**Pn**	**16 14 11.3**	**+0.6**
PBRG				Sn	**Sn**	**16 14 54.3**	**-0.8**
PBRG				Lg		16 15 11.4	
	comp=E,6.7nm,0.8s						
PBRG	**Braganca**	**3.78**	**17**	*e*Pn	**Pn**	**16 14 11.3**	**+0.6**
PBRG				*e*Sn	**Sn**	**16 14 54.3**	**-0.8**
PBRG				*e*Sg	**Sg**	**16 15 11.4**	**-2.5**
	comp=E,13nm,0.8s						
ECAL	**Calabor**	**3.91**	**17**	Pn	**Pn**	**16 14 13.3**	**+0.8**
ECAL				Sn	**Sn**	**16 14 56.5**	**-1.8**
ECAL				Lg		16 15 16.3	
ECAL	**Calabor**	**3.91**	**17**	Pn	**Pn**	**16 14 13.3**	**+0.8**
	comp=E,4.2nm,0.2s,SNR=12						
ECAL				Sn	**Sn**	**16 14 56.5**	**-1.8**
	comp=E,8.3nm,0.3s,SNR=9.0						
ECAL				Lg		16 15 16.3	
	comp=E,26nm,0.3s,SNR=5.0						
ECAL	**Calabor**	**3.91**	**17**	Pn	**Pn**	**16 14 13.3**	**+0.8**
	comp=E,4.2nm,0.2s,SNR=12						
ECAL				Sn	**Sn**	**16 14 56.5**	**-1.8**
	comp=E,8.3nm,0.3s,SNR=9.0						
ECAL				Lg		16 15 16.3	
	comp=E,26nm,0.3s,SNR=5.0						
EQUE	**Quentar**	**3.94**	**103**	Pn	**Pn**	**16 14 15.0**	**+2.0**
	comp=E,0.6nm,0.1s,SNR=7.9						
EQUE				Sn	**Sn**	**16 14 59.4**	**+0.1**
	comp=E,5.0nm,0.3s,SNR=7.9						
EQUE				Lg		16 15 19.6	
	comp=E,14nm,0.4s,SNR=4.8						
EQUE	**Quentar**	**3.94**	**103**	Pn	**Pn**	**16 14 15.0**	**+2.0**
	comp=E,0.6nm,0.1s,SNR=7.9						
EQUE				Sn	**Sn**	**16 14 59.4**	**+0.1**
	comp=E,5.0nm,0.3s,SNR=7.9						
EQUE				Lg		16 15 19.6	
	comp=E,14nm,0.4s,SNR=4.8						
EZAM	**Zamans**	**3.95**	**355**	Pn	**Pn**	**16 14 14.2**	**+1.1**
EZAM				Sn	**Sn**	**16 14 56.7**	**-2.7**
EZAM				Lg		16 15 17.2	
EZAM	**Zamans**	**3.95**	**355**	Pn	**Pn**	**16 14 14.2**	**+1.1**
	comp=E,6.7nm,0.2s,SNR=4.0						
EZAM				Sn	**Sn**	**16 14 56.7**	**-2.7**
	comp=E,2.4nm,0.1s,SNR=4.0						
EZAM				Lg		16 15 17.2	
	comp=E,12nm,0.3s,SNR=4.0						
EZAM	**Zamans**	**3.95**	**355**	Pn	**Pn**	**16 14 14.2**	**+1.1**
	comp=E,6.7nm,0.2s,SNR=4.0						
EZAM				Sn	**Sn**	**16 14 56.7**	**-2.7**
	comp=E,2.4nm,0.1s,SNR=4.0						
EZAM				Lg		16 15 17.2	
	comp=E,12nm,0.3s,SNR=4.0						
EGUA	**Guajares**	**3.97**	**109**	Pn	**Pn**	**16 14 15.2**	**+1.9**
EGUA				Sn	**Sn**	**16 14 59.7**	**-0.2**
EGUA				Lg		16 15 19.2	
EGUA	**Guajares**	**3.97**	**109**	Pn	**Pn**	**16 14 15.2**	**+1.9**
	comp=E,2.4nm,0.1s,SNR=4.0						
EGUA				Sn	**Sn**	**16 14 59.7**	**-0.2**
	comp=E,8.1nm,0.2s,SNR=7.9						
EGUA				Lg		16 15 19.2	
	comp=E,6.0nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**3.97**	**109**	Pn	**Pn**	**16 14 15.2**	**+1.8**
	comp=E,2.4nm,0.1s,SNR=4.0						
EGUA				Sn	**Sn**	**16 14 59.7**	**-0.2**
	comp=E,8.1nm,0.2s,SNR=7.9						
EGUA				Lg		16 15 19.2	
	comp=E,6.0nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**4.00**	**51**	Pn	**Pn**	**16 14 14.5**	**+0.7**
GUD				Pg	**Pg**	**16 14 26.5**	**-2.7**
GUD				Sn	**Sn**	**16 15 00.1**	**-0.5**
GUD				Lg		16 15 19.7	
GUD	**Guadarrama**	**4.00**	**51**	Pn	**Pn**	**16 14 14.5**	**+0.7**
	comp=E,1.2nm,0.2s,SNR=7.9						
GUD				Pg	**Pg**	**16 14 26.5**	**-2.7**
	comp=E,4.4nm,0.3s,SNR=7.9						
GUD				Sn	**Sn**	**16 15 00.1**	**-0.5**
	comp=E,8.2nm,0.3s,SNR=7.9						
GUD				Lg		16 15 19.7	
	comp=E,9.2nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**4.00**	**51**	Pn	**Pn**	**16 14 14.5**	**+0.8**
	comp=E,1.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.11**	**94**	Lg		16 15 23.1	
	comp=E,2.9nm,0.1s,SNR=4.0						
EQES	**Quesada**	**4.11**	**94**	Lg		16 15 23.1	
	comp=E,2.9nm,0.1s,SNR=4.0						
EBER	**Berja**	**4.46**	**105**	Pn	**Pn**	**16 14 23.0**	**+3.0**
EBER				Sn	**Sn**	**16 15 15.2**	**+3.4**
EBER				Lg		16 15 37.8	
EBER	**Berja**	**4.46**	**105**	Pn	**Pn**	**16 14 23.0**	**+3.0**
	comp=E,0.9nm,0.2s,SNR=4.0						
EBER				Sn	**Sn**	**16 15 15.2**	**+3.4**
	comp=E,5.4nm,0.3s,SNR=7.9						
EBER				Lg		16 15 37.8	
	comp=E,6.5nm,0.3s,SNR=4.0						
EBER	**Berja**	**4.46**	**105**	Pn	**Pn**	**16 14 23.0**	**+3.0**
	comp=E,0.9nm,0.2s,SNR=4.0						
EBER				Sn	**Sn**	**16 15 15.2**	**+3.3**
	comp=E,5.4nm,0.3s,SNR=7.9						
EBER				Lg		16 15 37.8	
	comp=E,6.5nm,0.3s,SNR=4.0						
EHUE	**Huescar**	**4.49**	**93**	Sn	**Sn**	**16 15 11.9**	**-0.7**
	comp=E,0.7nm,0.1s,SNR=7.9						
EHUE				Lg		16 15 35.7	
	comp=E,1.5nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**4.49**	**93**	Sn	**Sn**	**16 15 11.9**	**-0.7**
	comp=E,0.7nm,0.1s,SNR=7.9						
EHUE				Lg		16 15 35.7	
	comp=E,1.5nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**4.54**	**83**	Sn	**Sn**	**16 15 13.0**	**-0.8**
	comp=E,1.9nm,0.2s,SNR=7.9						
EVIA				Lg		16 15 37.1	
	comp=E,23nm,0.4s,SNR=13						
EVIA	**Vianos**	**4.54**	**83**	Sn	**Sn**	**16 15 13.0**	**-0.8**
	comp=E,1.9nm,0.2s,SNR=7.9						
EVIA				Lg		16 15 37.1	
	comp=E,23nm,0.4s,SNR=13						
EPON	**Pontenova**	**5.18**	**9**	Pn	**Pn**	**16 14 29.9**	**-0.2**
EPON				Lg		16 15 56.3	
EPON	**Pontenova**	**5.18**	**9**	Pn	**Pn**	**16 14 29.9**	**-0.1**
	comp=E,0.6nm,0.2s,SNR=4.0						
EPON				Lg		16 15 56.3	
	comp=E,4.0nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**5.18**	**9**	Pn	**Pn**	**16 14 29.9**	**-0.1**
	comp=E,0.6nm,0.2s,SNR=4.0						
EPON				Lg		16 15 56.3	
	comp=E,4.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.28**	**83**	Pn	**Pn**	**16 14 31.7**	**+0.3**
ETOB				Lg		16 16 02.1	
ETOB	**Tobarra**	**5.28**	**83**	Pn	**Pn**	**16 14 31.7**	**+0.3**
	comp=E,0.4nm,0.2s,SNR=4.0						
ETOB				Lg		16 16 02.1	
	comp=E,1.9nm,0.2s,SNR=5.1						
ETOB	**Tobarra**	**5.28**	**83**	Pn	**Pn**	**16 14 31.7**	**+0.3**
	comp=E,0.4nm,0.2s,SNR=4.0						
ETOB				Lg		16 16 02.1	
	comp=E,1.9nm,0.2s,SNR=5.1						
EARI	**Arriondas**	**5.59**	**23**	Pn	**Pn**	**16 14 36.5**	**+1.0**
EARI				Lg		16 16 10.6	
EARI	**Arriondas**	**5.59**	**23**	Pn	**Pn**	**16 14 36.5**	**+1.0**
	comp=E,0.3nm,0.3s,SNR=7.9						
EARI				Lg		16 16 10.6	
	comp=E,1.1nm,0.3s,SNR=4.0						
EARI	**Arriondas**	**5.59**	**23**	Pn	**Pn**	**16 14 36.5**	**+0.9**
	comp=E,0.3nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**6.21**	**35**	Pn	**Pn**	**16 14 44.2**	**+0.1**
ELAN				Lg		16 16 33.1	
ELAN	**Lanestosa**	**6.21**	**35**	Pn	**Pn**	**16 14 44.3**	**+0.1**
	comp=E,0.1nm,0.1s,SNR=4.0						
ELAN				Lg		16 16 33.1	
	comp=E,0.7nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**6.21**	**35**	Pn	**Pn**	**16 14 44.3**	**+0.2**
	comp=E,0.1nm,0.1s,SNR=4.0						
EMOS	**Mosqueruela**	**6.41**	**68**	Sn	**Sn**	**16 15 58.5**	**-1.4**
	comp=E,1.2nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**6.41**	**68**	Sn	**Sn**	**16 15 58.5**	**-1.5**
	comp=E,1.2nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**7.07**	**47**	Pn	**Pn**	**16 14 56.6**	**+0.7**
	comp=E,0.8nm,0.1s,SNR=7.9						
IELO	**Elcoad**	**7.07**	**47**	Pn	**Pn**	**16 14 56.6**	**+0.7**
	comp=E,0.8nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**7.25**	**45**	*e*Pn	**Pn**	**16 14 58.8**	**+0.4**
SJPF				*e*Sn	**Sn**	**16 16 16.9**	**-3.7**
	comp=E,1.0nm,0.3s						
SJPF	**Ste Jean**	**7.25**	**45**	Pn	**Pn**	**16 14 58.8**	**+0.4**
SJPF				Sn	**Sn**	**16 16 16.9**	**-3.7**
	comp=E,0.0nm,0.3s						
SJPF	**Ste Jean**	**7.25**	**45**	*e*Pn	**Pn**	**16 14 58.8**	**+0.4**
ETSF	**Etsaut**	**7.50**	**49**	*e*Pn	**Pn**	**16 15 01.8**	**0.0**
ETSF				*e*Sn	**Sn**	**16 16 23.7**	**-3.1**
	comp=E,0.7nm,0.3s						
ETSF	**Etsaut**	**7.50**	**49**	Pn	**Pn**	**16 15 01.8**	**0.0**
ETSF				Sn	**Sn**	**16 16 23.7**	**-3.1**
	comp=E,0.3nm,0.3s						
ETSF	**Etsaut**	**7.50**	**49**	*e*Pn	**Pn**	**16 15 01.8**	**0.0**
EBIE	**Bielsa**	**7.81**	**52**	Pn	**Pn**	**16 15 06.6**	**+0.6**
EBIE				Sn	**Sn**	**16 16 31.2**	**-3.2**
EBIE	**Bielsa**	**7.81**	**52**	Pn	**Pn**	**16 15 06.6**	**+0.6**
	comp=E,0.1nm,0.1s,SNR=7.9						
EBIE				Sn	**Sn**	**16 16 31.2**	**-3.2**
	comp=E,0.2nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**7.81**	**52**	Pn	**Pn**	**16 15 06.6**	**+0.5**
	comp=E,0.1nm,0.1s,SNR=7.9						
EPF	**Esparros**	**8.12**	**51**	*e*Pn	**Pn**	**16 15 10.3**	**0.0**
EPF				*e*Sn	**Sn**	**16 16 38.1**	**-3.9**
	comp=E,1.8nm,0.4s						
EPF	**Esparros**	**8.12**	**51**	Pn	**Pn**	**16 15 10.3**	**0.0**
EPF				Sn	**Sn**	**16 16 38.1**	**-3.9**
	comp=E,0.9nm,0.4s						
EPF	**Esparros**	**8.12**	**51**	*e*Pn	**Pn**	**16 15 10.3**	**0.0**

ISCJB ***24*** *16:16:17.4±0.2, 36°.66N±0°.02×28°.20E±0°.03, h88km±3km, mb3.8/2, Error ellipse: s-maj=3.5km s-min=2.9km az=158.4*
CSEM ***24*** *16:16:18.8±0.1, 36°.67N×28°.16E, h80km, MD3.0, Error ellipse: s-maj=3.4km s-min=2.3km az=68.0*
ISK ***24*** *16:16:19.0, 36°.81N×28°.12E, h81km, ML3.6*
DDA ***24*** *16:16:19.5, 36°.81N×28°.19E, h71km±1km, Md3.0*
ATH ***24*** *16:16:19.6, 36°.71N×28°.08E, h68km±5km*
THE ***24*** *16:16:20.2, 36°.75N×28°.22E, h70km±4km, ML3.6/4, Error ellipse: s-maj=4.8km s-min=0.7km az=259.0*
IDC ***24*** *16:16:21.7±3.5, 36°.58N×28°.51E, h114km±42km, mb3.6/2, mb1 3.4/7, mb1mx3.2/27, mbtmp3.3/7, Error ellipse: s-maj=34.8km s-min=15.4km az=82.0*
HLW ***24*** *16:16:22.2, 36°.27N×28°.28E, h32km±48km, Md3.7, Ml3.9*

ISC 24 16:16:18.9±0.2, 36°.68N±0°.02×28°.19E±0°.03, h76km±4km, n159, σ0°98/203, mb3.8/2, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.39**	**59**	*i* P	**Pn**	**16 16 30.4**	**-0.9**
TURN				*i* S	**Sn**	**16 16 38.2**	**-2.2**
TURN	**Turunc**	**0.39**	**59**	*i* P	**Pn**	**16 16 30.4**	**-0.9**
ARG	**Arkhangelos**	**0.46**	**186**	*e*P	**Pn**	**16 16 33.1**	**+1.2**
ARG				*e*S	**Sn**	**16 16 42.3**	**+0.8**
ARG	**Arkhangelos**	**0.46**	**186**	*e*P	**Pn**	**16 16 33.1**	**+1.2**
ARG				*e*S	**Sn**	**16 16 42.3**	**+0.8**
YER	**Yerkesik**	**0.46**	**9**	PG	**Pn**	**16 16 32.9**	**+0.9**
YER				*e*SG	**Sn**	**16 16 41.6**	**0.0**
YER	**Yerkesik**	**0.46**	**9**	*i* Pg	**Pn**	**16 16 32.9**	**+1.0**
YER				*e*Sg	**Sn**	**16 16 41.6**	**+0.1**
MLSB	**Milas**	**0.70**	**332**	PG	**Pn**	**16 16 34.6**	**+0.3**
MLSB				*e*SG	**Sn**	**16 16 44.9**	**-0.7**
MLSB	**Milas**	**0.70**	**332**	*i* Pg	**Pn**	**16 16 34.6**	**+0.4**
MLSB				*e*Sg	**Sn**	**16 16 44.9**	**-0.7**
BODT	**Bodrum**	**0.80**	**299**	PG	**Pn**	**16 16 34.6**	**-0.7**
BODT				*e*SG	**Sn**	**16 16 46.6**	**-0.9**
BODT	**Bodrum**	**0.80**	**299**	*i* Pg	**Pn**	**16 16 34.6**	**-0.8**
BODT				*e*Sg	**Sn**	**16 16 46.7**	**-0.9**
NIS1	**Nisyros Isl.**	**0.82**	**265**	P	**Pn**	**16 16 35.8**	**+0.3**
NIS1				S	**Sn**	**16 16 48.3**	**+0.4**
NIS1	**Nisyros Isl.**	**0.82**	**265**	P	**Pn**	**16 16 35.8**	**+0.3**
NIS1				S	**Sn**	**16 16 48.3**	**+0.4**
AYDN	**Tasoluk**	**1.01**	**346**	*i* P	**Pn**	**16 16 38.4**	**+0.6**
AYDN	**Tasoluk**	**1.01**	**346**	*i* P	**Pn**	**16 16 38.4**	**+0.5**
GLHS	**Glhisar (BURDU**	**1.15**	**65**	*e*PN	**Pn**	**16 16 40.8**	**+1.3**
GLHS	**Glhisar (BURDU**	**1.15**	**65**	*e*Pn	**Pn**	**16 16 40.8**	**+1.2**
DNZL	**Cakiroluk**	**1.22**	**34**	*i* P	**Pn**	**16 16 40.9**	**+0.5**
DNZL				*i* S	**Sn**	**16 16 56.2**	**-0.4**
DNZL	**Cakiroluk**	**1.22**	**34**	*i* P	**Pn**	**16 16 40.9**	**+0.5**
DNZL				*i* S	**Sn**	**16 16 56.2**	**-0.4**
AKAS	**Kas**	**1.22**	**111**	*i* P	**Pn**	**16 16 40.6**	**+0.2**
AKAS				*i* S	**Sn**	**16 16 56.8**	**+0.2**
AKAS	**Kas**	**1.22**	**111**	*i* P	**Pn**	**16 16 40.6**	**+0.1**
AKAS				*i* S	**Sn**	**16 16 56.8**	**+0.1**
GOLH	**Golhisar**	**1.23**	**63**	*i* P	**Pn**	**16 16 40.9**	**+0.3**
GOLH				*i* S	**Sn**	**16 16 57.4**	**+0.5**
GOLH	**Golhisar**	**1.23**	**63**	*i* P	**Pn**	**16 16 40.9**	**+0.3**
GOLH				*i* S	**Sn**	**16 16 57.3**	**

SIGR			S	Sn	16 17 40.9	-1.3
SIGR	**SIGRI**	**3.13 325**	P	**Pn**	**16 17 05.7**	**-0.2**
SIGR			S	Sn	16 17 40.9	-1.3
GONE	**Gonen-Balikesi**	**3.39 353**	*e*PN	**Pn**	**16 17 09.3**	**-0.1**
GONE	**Gonen-Balikesi**	**3.39 353**	*e*Pn	**Pn**	**16 17 09.3**	**-0.1**
HDMB	**Hadim**	**3.46 84**	*e*PN	**Pn**	**16 17 13.4**	**+3.0**
HDMB	**Hadim**	**3.46 84**	*e*Pn	**Pn**	**16 17 13.4**	**+3.0**
KONT	**Konya--Tatoy**	**3.56 68**	*e*PN	**Pn**	**16 17 14.0**	**+2.3**
KONT	**Konya--Tatoy**	**3.56 68**	*e*Pn	**Pn**	**16 17 14.0**	**+2.3**
KCTX	**Karacabey (Bur**	**3.58 2**	*e*PN	**Pn**	**16 17 11.7**	**-0.4**
KCTX	**Karacabey (Bur**	**3.58 2**	*e*Pn	**Pn**	**16 17 11.7**	**-0.4**
KIZT	**Kizilcal**	**3.66 52**	*e*PN	**Pn**	**16 17 14.6**	**+1.5**
KIZT	**Kizilcal**	**3.66 52**	*e*Pn	**Pn**	**16 17 14.6**	**+1.5**
BNT	**Bandirma**	**3.68 357**	*e*PN	**Pn**	**16 17 13.3**	**-0.1**
BNT	**Bandirma**	**3.68 357**	*e*Pn	**Pn**	**16 17 13.3**	**-0.1**
KARN	**Karanos**	**3.69 251**	*e*P	**Pn**	**16 17 15.8**	**+2.3**
KARN	**Karanos**	**3.69 251**	*e*P	**Pn**	**16 17 15.8**	**+2.3**
CAVI	**Cavuskoy**	**3.75 20**	*e*PN	**Pn**	**16 17 15.1**	**+0.7**
CAVI	**Cavuskoy**	**3.75 20**	*e*Pn	**Pn**	**16 17 15.1**	**+0.7**
GEMT	**Gemlik**	**3.83 11**	*e*PN	**Pn**	**16 17 15.9**	**+0.4**
GEMT	**Gemlik**	**3.83 11**	*e*Pn	**Pn**	**16 17 15.9**	**+0.4**
LPK	**Lapseki**	**3.86 344**	*e*PN	**Pn**	**16 17 15.3**	**-0.4**
LPK	**Lapseki**	**3.86 344**	*e*Pn	**Pn**	**16 17 15.4**	**-0.4**
ARMT	**Armutlu**	**3.92 8**	*e*PN	**Pn**	**16 17 16.8**	**+0.1**
ARMT	**Armutlu**	**3.92 8**	*e*Pn	**Pn**	**16 17 16.8**	**+0.2**
GADA	**Gvkgeada**	**3.94 334**	*e*PN	**Pn**	**16 17 17.1**	**+0.2**
GADA	**Gvkgeada**	**3.94 334**	*e*Pn	**Pn**	**16 17 17.1**	**+0.1**
GELI	**Tayfur-Gelibol**	**3.95 341**	*e*PN	**Pn**	**16 17 17.9**	**+0.8**
GELI	**Tayfur-Gelibol**	**3.95 341**	*e*Pn	**Pn**	**16 17 17.9**	**+0.8**
RKY	**Sarkoy-Tekirda**	**4.08 349**	*e*PN	**Pn**	**16 17 18.9**	**0.0**
RKY	**Sarkoy-Tekirda**	**4.08 349**	*e*Pn	**Pn**	**16 17 18.9**	**0.0**
GULT	**Gulveren**	**4.17 25**	*e*PN	**Pn**	**16 17 20.4**	**+0.3**
GULT	**Gulveren**	**4.17 25**	*e*Pn	**Pn**	**16 17 20.4**	**+0.4**
VLI	**Veliai**	**4.22 272**	*e*P	**Pn**	**16 17 23.5**	**+2.7**
VLI	**Veliai**	**4.22 272**	*e*P	**Pn**	**16 17 23.5**	**+2.7**
CSS	**Prodhromos**	**4.51 111**	P	**Pn**	**16 17 24.6**	**-0.2**
CSS	**Prodhromos**	**4.51 111**	P	**Pn**	**16 17 24.6**	**-0.2**
BRTR	**Keskin Array B**	**5.26 53**	P	**Pn**	**16 17 35.9**	**+0.9**
	0.5nm,0.3s,baz=230,slow=15,SNR=20					
BRTR			S	**Sn**	**16 18 34.6**	**+0.4**
	0.7nm,0.3s,baz=225,slow=26,SNR=10					
HMAT	**Matruh**	**5.64 190**	P	**Pn**	**16 17 39.4**	**-0.8**
	baz=192					
HMAT			S	**Sn**	**16 18 32.7**	**-11**
	baz=192					
HMAT	**Matruh**	**5.64 190**	P	**Pn**	**16 17 39.4**	**-0.8**
SLUM		**5.73 206**	P	**Pn**	**16 17 40.8**	**-0.6**
	baz=210					
SLUM			AMP		16 18 00.0	
	comp=E,70μm,0.3s,logA/T=5.4,baz=210					
SLUM			S	**Sn**	**16 18 36.2**	**-10**
	baz=210					
SLUM		**5.73 206**	P	**Pn**	**16 17 40.8**	**-0.6**
HBRG	**Burj al 'Arab**	**6.24 167**	P	**Pn**	**16 17 47.5**	**-0.9**
	baz=166					
HBRG	**Burj al 'Arab**	**6.24 167**	P	**Pn**	**16 17 47.4**	**-1.0**
MMAI	**Mount Meron Ar**	**6.96 120**	P	**Pn**	**16 17 58.2**	**-0.1**
	comp=E,4.9nm,0.3s,baz=297,slow=13,SNR=14					
MMAI			S	**Sn**	**16 19 12.4**	**-3.5**
	comp=E,20nm,0.3s,baz=314,slow=25,SNR=14					
HNAT	**Natroun**	**7.31 163**	P	**Pn**	**16 18 01.9**	**-1.2**
	baz=162					
HNAT	**Natroun**	**7.31 163**	P	**Pn**	**16 18 01.9**	**-1.1**
AMAG	**Maghara**	**7.33 144**	P	**Pn**	**16 18 01.9**	**-1.4**
	baz=142					
AMAG	**Maghara**	**7.33 144**	P	**Pn**	**16 18 01.9**	**-1.3**
AYT	**Al 'Ayyat**	**7.38 160**	P	**Pn**	**16 18 03.2**	**-0.8**
	baz=159					
AYT	**Al 'Ayyat**	**7.38 160**	P	**Pn**	**16 18 03.2**	**-0.8**
KOT	**Kottamia**	**7.39 155**	P	**Pn**	**16 18 03.6**	**-0.5**
	baz=153					
KOT	**Kottamia**	**7.39 155**	P	**Pn**	**16 18 03.6**	**-0.4**
HHAG	**Hagoal**	**7.46 153**	P	**Pn**	**16 18 04.7**	**-0.3**
	baz=152					
HHAG	**Hagoal**	**7.46 153**	P	**Pn**	**16 18 04.7**	**-0.3**
HSAF	**As Saff**	**7.58 157**	P	**Pn**	**16 18 05.6**	**-1.1**
	baz=156					
HSAF	**As Saff**	**7.58 157**	P	**Pn**	**16 18 05.6**	**-1.1**
GLL	**Jalalah**	**7.67 156**	P	**Pn**	**16 18 07.2**	**-0.7**
	baz=155					
GLL	**Jalalah**	**7.67 156**	P	**Pn**	**16 18 07.2**	**-0.7**
SWA2		**7.76 198**	P	**Pn**	**16 18 08.7**	**-0.4**
	baz=200					
SWA2			AMP		16 19 00.0	
	comp=E,90μm,0.4s,logA/T=5.4,baz=200					
SWA2		**7.76 198**	P	**Pn**	**16 18 08.7**	**-0.4**
ZAF		**8.23 152**	P	**Pn**	**16 18 15.1**	**-0.5**
	baz=151					
ZAF		**8.23 152**	P	**Pn**	**16 18 15.1**	**-0.5**
ZNM		**8.27 150**	P	**Pn**	**16 18 15.7**	**-0.4**
	baz=149					
ZNM		**8.27 150**	P	**Pn**	**16 18 15.7**	**-0.4**
HNKL	**Nakhl**	**8.29 143**	P	**Pn**	**16 18 15.0**	**-1.4**
	baz=141					
HNKL	**Nakhl**	**8.29 143**	P	**Pn**	**16 18 15.0**	**-1.4**
AWBH		**8.35 176**	P	**Pn**	**16 18 15.7**	**-1.5**
	baz=176					
AWBH		**8.35 176**	P	**Pn**	**16 18 15.7**	**-1.5**
ASF	**Jabal al Asfar**	**8.48 119**	P	**Pn**	**16 18 19.6**	**+0.7**
	comp=E,0.4nm,0.3s,baz=178,slow=5.2,SNR=3.9					
ASF			S	**Sn**	**16 19 51.8**	**-1.2**
	comp=E,0.7nm,0.3s,baz=38,slow=24,SNR=4.3					
EIL	**Elat**	**8.99 139**	P	**Pn**	**16 18 25.0**	**-1.0**
	comp=E,1.0nm,0.3s,baz=213,slow=18,SNR=18					
EIL			S	**Sn**	**16 20 00.2**	**-5.4**
	comp=E,4.1nm,0.3s,baz=27,slow=19,SNR=11					
HKAT	**Jabal Katrina**	**9.49 147**	P	**Pn**	**16 18 32.1**	**-0.6**
	baz=146					
HKAT	**Jabal Katrina**	**9.49 147**	P	**Pn**	**16 18 32.1**	**-0.6**
HFRF	**Wahat Farafira**	**9.50 179**	P	**Pn**	**16 18 31.2**	**-1.7**
	baz=179					
HFRF	**Wahat Farafira**	**9.50 179**	P	**Pn**	**16 18 31.2**	**-1.7**
SHRM		**10.10 148**	P	**Pn**	**16 18 40.3**	**-0.7**
	baz=147					
SHRM		**10.10 148**	P	**Pn**	**16 18 40.3**	**-0.7**
GERES	**GERESS Array B**	**16.12 323**	P	**Pn**	**16 20 04.3**	**+3.6**
	comp=E,0.2nm,0.3s,baz=140,slow=10,SNR=5.9					
FINES	**FINESS Array B**	**24.82 358**	P	**P**	**16 21 34.0**	**+0.3**
	comp=E,1.3nm,0.6s,mb3.6,baz=181,slow=9.7,SNR=7.1					
ARCES	**ARCESS Array B**	**32.95 358**	P	**P**	**16 22 45.8**	**0.0**
	comp=E,2.0nm,0.9s,mb4.0,baz=174,slow=9.1,SNR=4.1					

*ISCJB **24** 16:53:14.5±0.6,50°.20N±0°.04×19°.01E±0°.03,h0km, Error ellipse: s-maj=6.4km s-min=2.6km az=10.0*
*CSEM **24** 16:53:15.9±0.6,50°.19N×19°.01E,h2km,ML2.6/4, Error ellipse: s-maj=13.8km s-min=5.1km az=14.0*
*PRU **24** 16:53:16.6,50°.18N×19°.04E,h0km*

ISC 24 16:53:16.0±0.6,50°.16N±0°.04×19°.04E±0°.03,h0km,n25,σ1°03/38,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.49**	**83**	*e*Pg	**Pg**	**16 53 24.6**	**-0.8**
OJC				*e*Sg	**Sg**	**16 53 31.0**	**-0.8**
OKC	**Ostrava-Krasne**	**0.66**	**241**	*e*PG	**Pg**	**16 53 29.2**	**+0.6**
OKC				*e*SG	**Sg**	**16 53 37.7**	**+0.6**
	comp=Z,13nm,0.4s						
OKC	**Ostrava-Krasne**	**0.66**	**241**	Pg	**Pg**	**16 53 29.2**	**+0.6**
OKC				Sg	**Sg**	**16 53 37.7**	**+0.6**
	comp=Z,13nm,0.4s						
MORC	**Moravsky Berou**	**1.04**	**249**	*e*Pg	**Pg**	**16 53 36.3**	**+0.4**
MORC				*e*Sg	**Sg**	**16 53 50.9**	**+1.6**
NIE	**Niedzica**	**1.11**	**132**	*e*Pg	**Pg**	**16 53 37.1**	**-0.2**
NIE				*e*Sg	**Sg**	**16 53 52.4**	**+0.7**
KOLL	**Kolacno**	**1.64**	**195**	*e*SN	**Sn**	**16 54 07.3**	**-0.5**
KOLL	**Kolacno**	**1.64**	**195**	*e*Sn	**Sn**	**16 54 07.3**	**-0.5**
VYHS	**Vyhne**	**1.68**	**185**	*e*PN	**Pn**	**16 53 45.4**	**-1.1**
VYHS				*e*SN	**Sn**	**16 54 06.9**	**-1.8**
VYHS	**Vyhne**	**1.68**	**185**	*e*Pn	**Pn**	**16 53 45.4**	**-1.1**
VYHS				*e*Sn	**Sn**	**16 54 06.9**	**-1.8**
DPC	**Dobruska-Polom**	**1.75**	**277**	*e*PG	**Pg**	**16 53 47.5**	**-2.0**
DPC				*e*SG	**Sg**	**16 54 12.1**	**-0.1**
	comp=Z,8.8nm,0.4s						
DPC	**Dobruska-Polom**	**1.75**	**277**	Pg	**Pg**	**16 53 47.5**	**-2.0**
DPC				Sg	**Sg**	**16 54 12.1**	**-0.1**
	comp=Z,8.8nm,0.4s						
VRAC	**Vranov**	**1.80**	**243**	*e*Pn	**Pn**	**16 53 49.1**	**+0.9**
VRAC				*e*Sg	**Sg**	**16 54 13.2**	**-0.6**
KECS	**Kecovo**	**1.93**	**150**	*e*PN	**Pn**	**16 53 49.1**	**-0.9**
KECS				*e*SN	**Sn**	**16 54 15.4**	**+0.4**
UPC	**Upice**	**1.97**	**281**	*e*SG	**Sg**	**16 54 19.1**	**-0.1**
UPC	**Upice**	**1.97**	**281**	Sg	**Sg**	**16 54 19.1**	**-0.1**
CRVS	**Cervenica-Dubn**	**2.02**	**128**	*e*PN	**Pn**	**16 53 52.9**	**+1.6**
CRVS				*e*SN	**Sn**	**16 54 18.1**	**+0.9**
CRVS	**Cervenica-Dubn**	**2.02**	**128**	*e*Pn	**Pn**	**16 53 52.9**	**+1.6**
CRVS				*e*Sn	**Sn**	**16 54 18.1**	**+0.9**
KOLS	**Kolonicke sedl**	**2.44**	**119**	*e*	**Pg**	**16 54 05.0**	**+2.3**
KOLS	**Kolonicke sedl**	**2.44**	**119**	*e*SG	**Sg**	**16 54 33.8**	**-0.6**
KOLS	**Kolonicke sedl**	**2.44**	**119**	*e*Sg	**Sg**	**16 54 33.8**	**-0.6**
PRU	**Pruhonice**	**2.90**	**268**	*e*SG	**Sg**	**16 54 48.7**	**-0.4**
	comp=Z,3.4nm,0.2s						
PRU	**Pruhonice**	**2.90**	**268**	Sg	**Sg**	**16 54 48.7**	**-0.4**
	comp=Z,3.4nm,0.2s						
BRG	**Berggiesshubel**	**3.33**	**284**	SG	**Sg**	**16 55 04.2**	**+1.4**
	comp=Z,4.0nm,0.3s						
KHC	**Kasperske Hory**	**3.69**	**256**	*e*SG	**Sg**	**16 55 13.4**	**-1.2**
	comp=Z,2.6nm,0.4s						
KHC	**Kasperske Hory**	**3.69**	**256**	Sg	**Sg**	**16 55 13.4**	**-1.2**
	comp=Z,2.6nm,0.4s						

*NNC **24** 16:58:14.0±4.7,38°.65N×70°.25E,h0km,mb3.9,mpv4.1, Error ellipse: s-maj=40.5km s-min=28.3km az=3.0*

ISC 24 16:58:20.1±2.4,38°.8N±0°.2×70°.16E±0°.09,h35km,n16,σ0°82/19,3C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.27**	**38**	P	**Pn**	**16 59 22.6**	**+0.1**
	SNR=47						
KK31	**Karatay Array**	**4.29**	**3**	⇑Pn	**Pn**	**16 59 24.4**	**+1.7**
	14nm,0.5s,baz=183,slow=13,SNR=9.7						
KK31				Sn	**Sn**	**17 00 17.9**	**+6.5**
	14nm,0.5s,baz=187,slow=26,SNR=5.9						
EKS2	**Erkin-Say**	**4.72**	**34**	P	**Pn**	**16 59 28.9**	**+0.2**
	SNR=30						
UCH	**Uchtor**	**4.75**	**43**	P	**Pn**	**16 59 29.3**	**+0.1**
	SNR=52						
AAK	**Ala-Archa**	**5.04**	**39**	P	**Pn**	**16 59 33.6**	**+0.5**
	SNR=46						
KZA	**Kyzart**	**5.07**	**48**	P	**Pn**	**16 59 33.5**	**0.0**
	SNR=7.9						
KBK	**Karagaybulak**	**5.28**	**42**	P	**Pn**	**16 59 37.2**	**+0.8**
	SNR=86						
CHMS	**Chumysh**	**5.43**	**38**	P	**Pn**	**16 59 38.4**	**-0.1**
	SNR=28						
USP	**Ospenovka**	**5.52**	**35**	P	**Pn**	**16 59 39.2**	**-0.5**
	SNR=29						
TKM2	**Tokmak 2**	**5.81**	**43**	⇓Pn	**Pn**	**16 59 43.4**	**-0.3**
	23nm,0.8s						
TKM2				⇑Sn	**Sn**	**17 00 49.0**	**0.0**
	13nm,0.7s						
TKM2	**Tokmak 2**	**5.81**	**43**	P	**Pn**	**16 59 44.1**	**+0.4**
	SNR=7.7						
AB31	**Akbulak array**	**12.75**	**328**	⇓P	**Pn**	**17 01 18.9**	**+0.2**
	1.8nm,0.5s,baz=166,slow=13,SNR=56						
AB31				⇓S	**Sn**	**17 03 39.9**	**+0.8**
	2.3nm,0.6s,baz=130,slow=28,SNR=6.4						
VOSK	**Vostochnaya**	**13.92**	**2**	⇓P	**Pn**	**17 01 33.2**	**-1.4**
	1.4nm,0.9s						
ZRNK	**Zerenda**	**14.15**	**357**	⇑P	**Pn**	**17 01 36.1**	**-1.8**
	1.0nm,0.6s						
BVA0	**Borovoye Array**	**14.21**	**1**	P	**Pn**	**17 01 37.1**	**-1.4**
	0.3nm,0.7s,baz=164,slow=14,SNR=7.3						
AKTO	**Aktyubinsk**	**14.45**	**327**	⇓P	**Pn**	**17 01 42.2**	**+0.3**
	0.4nm,0.6s						

*IDC **24** 16:58:33.9±1.4,5°.82S×151°.02E,h0km,mb3.9/5, mb1 4.2/6,mb1mx3.8/17,mbtmp4.1/6,ML4.3/1,MS2.8/2, Ms1 2.8/2,ms1mx2.7/24, Error ellipse: s-maj=41.5km s-min=25.1km az=140.0*
*ISCJB **24** 16:58:36.9±1.1,5°.9S±0°.2×151°.2E±0°.1,h33km,mb3.8/5, Error ellipse: s-maj=26.6km s-min=13.3km az=165.8*
*NEIC **24** 16:58:40.6±2.1,5°.96S×151°.15E,h52km±20km,mb4.5/1, Error ellipse: s-maj=30.5km s-min=12.1km az=162.0*

ISC 24 16:58:38.9±1.1,5°.9S±0°.2×151°.1E±0°.1,h35km,n12,σ0°82/11,mb3.8/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.26**	**228**	*e*P	**Pn**	**16 59 57.0**	**+1.8**
HNR	**Honiara**	**9.46**	**113**	Pn	**Pn**	**17 00 52.3**	**-0.5**
	3.0nm,0.3s,baz=27,slow=19,SNR=2.4						
HNR				LR	LR	17 04 09.6	
	comp=Z,58nm,19.9s,baz=156,slow=35						
HNR	**Honiara**	**9.46**	**113**	P	**Pn**	**17 00 52.8**	**0.0**
HNR				LR	LR	17 04 09.6	
KAKA	**Kakadu**	**19.63**	**248**	*e*P	**Pn**	**17 03 05.9**	**-0.3**
	12nm,0.5s						
GUMO	**Guam**	**20.28**	**342**	LR	LR	17 08 49.2	
	comp=Z,31nm,20.4s,baz=258,slow=30						
WB2	**Warramunga Arr**	**21.48**	**228**	*e*P	**P**	**17 03 23.9**	**-0.7**
WRA	**Warramunga Arr**	**21.48**	**228**	P	**P**	**17 03 23.7**	**-1.0**
	2.8nm,0.5s,mb3.8,baz=54,slow=11,SNR=15						
WRA	**Warramunga Arr**	**21.48**	**228**	P	**P**	**17 03 23.7**	**-1.0**
ASAR	**Alice Springs**	**24.24**	**221**	P	**P**	**17 03 52.1**	**-0.5**
	4.4nm,0.7s,mb4.0,baz=53,slow=9.4,SNR=50						
STKA	**Stephens Creek**	**27.37**	**198**	P	**P**	**17 04 21.8**	**+0.8**
	2.0nm,0.9s,mb3.7,baz=23,slow=7.7,SNR=3.6						
FITZ	**Fitzroy Crossi**	**27.67**	**242**	P	**P**	**17 04 23.7**	**-0.1**
	1.3nm,0.6s,mb3.7,baz=65,slow=11,SNR=6.1						
ILAR	**Eielson Array**	**83.77**	**22**	P	**P**	**17 11 04.7**	**+0.5**
	0.4nm,0.6s,mb3.7,baz=252,slow=5.0,SNR=6.2						

*ISCJB **24** 17:00:29.8±1.7,4°.8S±0°.2×68°.6E±0°.3,h10km,mb3.7/8, MS3.8/5, Error ellipse: s-maj=46.4km s-min=21.5km az=139.7*
*IDC **24** 17:00:30.2±1.7,4°.86S×68°.75E,h0km,mb3.7/7,mb1 3.8/7, mb1mx3.6/22,mbtmp3.7/7,MS3.8/5,Ms1 3.9/5, ms1mx3.5/28, Error ellipse: s-maj=51.4km s-min=15.1km az=53.0*
*NEIC **24** 17:00:32.4±1.3,4°.72S×68°.69E,h10km,mb3.8/1, Error ellipse: s-maj=39.4km s-min=19.3km az=49.0*
*GCMT **24** 17:00:34.8±0.4,5°.13S×68°.59E,h12km,MW4.8, Moment Tensor Solution. s23,c29; s57,c80; Moment tensor: Scale 10^16Nm; Mrr=1.91±.08; Mθθ0.97±.08; Mφφ0.94±.08; Mrθ=0.02±.26; Mrφ=0.80±.07; Mθφ0.15±.29; Best double couple: M0=1.80000×10^16 NP1:φs=312.00000°,δ43.00000°, λ-94.00000°. NP2:φs=137.00000°,δ47.00000°, λ-87.00000°. Principal axes: T 1.7600, Plg2.0000°, Azm225.0000°; N 0.1600, Plg2.0000°, Azm315.0000°; P -1.9200, Plg87.0000°, Azm97.0000°; Data Used: IC II IU G.*

ISC 24 17:00:32.2±1.7,4°.8S±0°.2×68°.7E±0°.3,h10km,n11,σ0°78/8, mb3.7/8,MS3.8/5,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**31.16**	**77**	LR	LR	17 17 42.9	
	comp=Z,361nm,18.5s,MS4.1,baz=235,slow=33						
CMAR	**Chiang Mai Arr**	**37.72**	**51**	P	**P**	**17 07 48.6**	**+0.2**
	0.3nm,0.4s,mb3.4,baz=232,slow=8.5,SNR=5.2						
CMAR				LR	LR	17 20 21.2	
	comp=Z,126nm,20.9s,MS3.7,baz=64,slow=32						
MKAR	**Makanchi Array**	**52.72**	**12**	P	**P**	**17 09 46.1**	**-1.0**
	0.3nm,0.5s,mb3.5,baz=194,slow=7.3,SNR=5.4						
MKAR				LR	LR	17 33 43.8	
	comp=Z,60nm,20.8s,MS3.6,baz=347,slow=38						
ABKAR	**Akbulak array**	**54.31**	**353**	*e*P	**P**	**17 09 60.0**	**+1.3**
	0.3nm,0.3s,mb3.7						
BRTR	**Keskin Array B**	**54.75**	**327**	P	**P**	**17 10 01.9**	**-0.2**
	0.2nm,0.5s,mb3.4,baz=193,slow=4.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**60.03**	**11**	P	**P**	**17 10 38.0**	**-1.0**
	1.0nm,0.6s,mb4.0,baz=196,slow=8.1,SNR=5.3						
ZALV				LR	LR	17 36 58.8	
	comp=Z,59nm,21.1s,MS3.7,baz=234,slow=36						
SONM	**Songino Array**	**61.95**	**28**	P	**P**	**17 10 53.0**	**+0.8**
	1.4nm,1.0s,mb4.1,baz=237,slow=6.9,SNR=9.0						
ASAR	**Alice Springs**	**65.45**	**114**	P	**P**	**17 11 16.4**	**+0.5**
	0.6nm,1.0s,mb3.6,baz=265,slow=5.5,SNR=5.0						
WRA	**Warramunga Arr**	**65.55**	**110**	P	**P**	**17 11 16.0**	**-0.6**
	1.1nm,1.0s,mb3.9,baz=279,slow=6.8,SNR=4.6						
MJAR	**Matsushiro Arr**	**76.61**	**51**	LR	LR	17 47 19.1	
	comp=Z,78nm,18.1s,MS4.1,baz=245,slow=37						
NVAR	**Mina Array Bea**	**145.88**	**10**	PKPbc	PKPbc	17 20 13.7	+1.3
	2.0nm,1.0s,baz=318,slow=2.0,SNR=5.0						

*ISCJB **24** 17:12:14.3±0.2,22°.65S±0°.04×12°.84W±0°.05,h10km, mb5.1/145,MS5.0/195, Error ellipse: s-maj=6.6km s-min=5.5km az=19.7*
*IDC **24** 17:12:14.2±0.4,22°.75S×12°.77W,h0km,mb4.7/24, mb1 4.8/24,mb1mx4.8/26,mbtmp4.7/24,MS4.8/21, Ms1 4.8/21,ms1mx4.6/36, Error ellipse: s-maj=13.3km s-min=11.9km az=155.0*
*MOS **24** 17:12:14.1±0.8,22°.62S×12°.84W,h10km,mb5.3/59, MS4.8/24, Error ellipse: s-maj=13.6km s-min=5.0km az=74.2*
*NEIC **24** 17:12:15.8±0.2,22°.71S×12°.76W,h10km,mb5.2/84, MS5.0/162, Error ellipse: s-maj=5.3km s-min=4.3km az=117.0*
*GCMT **24** 17:12:16.6±0.1,22°.77S×12°.80W,h12km,MW5.3, Moment Tensor Solution. s67,c102; s99,c180; Moment tensor: Scale 10^17Nm; Mrr=1.10±.02; Mθθ0.06±.02; Mφφ1.04±.02; Mrθ=0.19±.05; Mθφ0.04±.02; Mφr0.31±.04; Best double couple: M0=1.10000×10^17 NP1:φs=11.00000°, δ38.00000°,λ-76.00000°. NP2:φs=173.00000°,δ54.00000°, λ-101.00000°. Principal axes: T 1.0800, Plg8.0000°, Azm271.0000°; N 0.0900, Plg9.0000°, Azm179.0000°; P -1.1700, Plg78.0000°, Azm42.0000°; Data Used: II IU IC CN G. Surface waves from 100 sta.*

ISC 24 17:12:16.1±0.2,22°.70S±0°.04×12°.81W±0°.05,h10km,(h21km±.3km:pP-P),n588,σ0°85/402,mb5.1/145,MS5.0/195,16C-22D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**27.89**	**303**	P	**P**	**17 18 06.9**	**+0.5**
	9.5nm,1.0s,mb4.4,baz=115,slow=15,SNR=3.8						
RCBR				LR	LR	17 26 10.1	
	comp=Z,3μm,21.8s,MS4.8,baz=118,slow=30						
TSUM	**Tsumeb**	**28.57**	**89**	*e*P	**P**	**17 18 11.8**	**-0.6**
	34nm,1.1s,mb5.0						
TSUM				LR	LR		
	comp=Z,4μm,21.0s,MS5.0						
LIC	**Lamto**	**29.74**	**16**	*e*PKP2	**P**	**17 18 22.9**	**+0.2**
	comp=Z,106nm,1.8s,mb5.3						
LIC	**Lamto**	**29.74**	**16**	*e*P	**P**	**17 18 21.9**	**-0.8**
	comp=Z,152nm,1.8s,mb5.1,baz=201						
LIC				*e*MLR	MLR		
	comp=Z,2μm,20.8s,MS4.5						
LIC	**Lamto**	**29.74**	**16**	*e*P	**P**	**17 18 21.9**	**-0.8**
	comp=Z,76nm,1.8s,mb5.1						
LIC				LR	LR		
	comp=Z,1μm,20.8s,MS4.5						
KIC	**Kosan Boka**	**29.94**	**16**	*e*PKP2	**P**	**17 18 23.6**	**-0.9**
	comp=Z,126nm,1.7s,mb5.4						
TIC	**Toumodi**	**30.14**	**16**	*e*PKP2	**P**	**17 18 24.6**	**-1.7**
	comp=Z,170nm,1.7s,mb5.5						
DBIC	**Dimbokro**	**30.21**	**16**	P	**P**	**17 18 26.9**	**0.0**
	comp=Z,6.3nm,0.9s,mb4.3,baz=189,slow=10.0,SNR=4.5						
DBIC				LR	LR	17 27 32.6	
	comp=Z,1μm,21.2s,MS4.6,baz=172,slow=30						
DBIC	**Dimbokro**	**30.21**	**16**	P	**P**	**17 18 26.9**	**0.0**
SUR	**Sutherland**	**31.22**	**115**	P	**P**	**17 18 36.3**	**+0.6**
	comp=Z,12nm,1.0s,mb4.7,baz=212,slow=1.0,SNR=3.4						
SUR				LR	LR	17 28 16.6	
	comp=Z,2μm,21.2s,MS4.8,baz=256,slow=31						
SPB	**Sao Paulo**	**31.81**	**262**	PFAKE		17 18 50.0	+8.9
SPB				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
MSKU	**Masuku**	**33.10**	**55**	LR	LR	17 29 17.4	
	comp=Z,2μm,20.3s,MS4.8,baz=216,slow=31						
BDFB	**Brasilia**	**33.93**	**276**	P	**P**	**17 19 00.0**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9,baz=80,slow=13,SNR=11						
BDFB				LR	LR	17 30 19.3	
	comp=Z,4μm,21.3s,MS5.1,baz=125,slow=32						
BDFB	**Brasilia**	**33.93**	**276**	P	**P**	**17 19 00.0**	**+0.3**
BOSA	**Boshof**	**34.71**	**108**	P	**P**	**17 19 05.8**	**-0.6**
	comp=Z,15nm,0.8s,mb5.0,baz=277,slow=9.6,SNR=20						
BOSA				LR	LR	17 30 43.3	
	comp=Z,3μm,19.2s,MS5.0,baz=272,slow=32						
BOSA	**Boshof**	**34.71**	**108**	P	**P**	**17 19 05.8**	**-0.5**
LBTB	**Lobatse**	**35.12**	**102**	P	**P**	**17 19 09.4**	**-0.5**
	comp=Z,16nm,0.7s,mb5.0,baz=282,slow=9.1,SNR=19						
LBTB				LR	LR	17 31 32.5	
	comp=Z,3μm,19.0s,MS5.0,baz=265,slow=33						
LBTB	**Lobatse**	**35.12**	**102**	*e*P	**P**	**17 19 09.3**	**-0.6**
	comp=Z,21nm,0.8s,mb5.1						
LBTB				LR	LR		
	comp=Z,3μm,20.0s,MS5.1						
LBTB	**Lobatse**	**35.12**	**102**	*e*P	**P**	**17 19 09.3**	**-0.6**
LBTB				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1

comp=Z,2.7nm,0.9s,mb4.2,baz=93,slow=7.3,SNR=11
LPAZ LR LR 17 43 20.4
comp=Z,2µm,18.4s,MS5.1,baz=98,slow=36
LPAZ La Paz 52.30 267 *e*P **P 17 21 28.2 0.0**
comp=Z,14nm,1.4s,mb4.7
LPAZ LR LR
comp=Z,1µm,19.0s,MS4.9
LPAZ La Paz 52.30 267 *e*P **P 17 21 28.2 -0.1**
LPAZ pmax pmax
comp=Z,14nm,1.4s
LPAZ MLR MLR
comp=Z,1µm,19.0s
PMSA Palmer Station 53.53 205 LR LR 17 39 38.6
comp=Z,762nm,19.2s,MS4.8,baz=255,slow=31
PMSA Palmer Station 53.53 205 PFAKE 17 21 50.0 +13
PMSA LR LR
comp=Z,927nm,19.0s,MS4.9
SYO Syowa Base 55.88 160 ⇓*i*P **P 17 21 52.2 -1.4**
RTC Rabat Centre 56.66 6 PFAKE 17 22 10.0 +11
RTC LR LR
comp=Z,496nm,20.0s,MS4.6
BBGH Gun Hill 58.02 303 PFAKE 17 22 20.0 +11
BBGH LR LR
comp=Z,1µm,20.0s,MS5.0
GRGR Grenville 59.06 301 PFAKE 17 22 30.0 +13
GRGR LR LR
comp=Z,340nm,20.0s,MS4.5
SFS San Fernando 59.17 6 PFAKE 17 22 30.0 +13
SFS LR LR
comp=Z,1µm,22.0s,MS5.0
ESPR Espera 59.61 6 P **P 17 22 21.7 +1.6**
comp=Z,127nm,2.3s,mb5.5
PFVI Vila Bisbo 59.63 4 *e*LR LR 17 41 17.0
comp=Z,329nm,20.0s
PBDV Barranco-do-Ve 59.80 5 *e*P **P 17 22 21.0 -0.4**
comp=Z,28nm,1.0s,mb5.2
PBDV *e*LR LR 17 41 50.8
comp=Z,348nm,20.0s
MORF Marmelete 59.81 4 *e*P **P 17 22 20.5 -1.0**
PVAQ Vaqueiros 59.97 5 *e*P **P 17 22 23.2 +0.6**
comp=Z,30nm,2.2s,mb4.9
PVAQ *e*LR LR 17 41 34.0
comp=Z,376nm,22.0s
ERON Agron 60.00 8 P **P 17 22 22.2 -0.6**
comp=Z,10nm,0.8s,mb4.9
PTEO Sao Teotonio 60.04 4 *e*P **P 17 22 24.1 +1.0**
comp=Z,67nm,2.0s,mb5.3
ELOJ Sierra Loja 60.08 8 P **P 17 22 23.2 -0.1**
comp=Z,16nm,0.8s,mb5.1
ELOJ Sierra Loja 60.08 8 P **P 17 22 23.2 -0.2**
ELOJ pmax pmax
comp=Z,18nm,0.8s,mb5.2
PCVE Castro Verde 60.17 4 *e*P **P 17 22 24.8 +0.8**
FDF Fort de France 60.20 304 PFAKE 17 22 40.0 +15
FDF LR LR
comp=Z,357nm,21.0s,MS4.5
ECOG Cogollos-Vega 60.28 8 P **P 17 22 24.4 -0.4**
ECOG Cogollos-Vega 60.28 8 P **P 17 22 24.4 -0.4**
EMIN Mina Concepcio 60.42 6 P **P 17 22 25.9 +0.2**
comp=Z,33nm,1.0s,mb5.3
PBEJ Beja 60.58 4 *e*P **P 17 22 27.7 +1.0**
PBAR Barrancos 60.79 5 *e*P **P 17 22 28.8 +0.6**
comp=Z,26nm,2.2s,mb5.0
PBAR *e*LR LR 17 41 33.0
comp=Z,261nm,22.0s
ECAB El Cabril 60.85 7 P **P 17 22 27.8 -0.8**
comp=Z,109nm,1.3s,mb5.8
EHUE Huescar 60.95 9 P **P 17 22 28.2 -1.1**
EHUE Huescar 60.95 9 P **P 17 22 28.2 -1.1**
EADA Adamuz 61.03 7 P **P 17 22 30.4 +0.6**
comp=Z,4.9nm,0.8s,mb4.7
EVOP Sao Brissos 61.06 4 *e*P **P 17 22 30.4 +0.4**
comp=Z,40nm,0.8s,mb5.6
EVOP LR LR
comp=Z,361µm,22.0s
EVOP Sao Brissos 61.06 4 *e*P **P 17 22 30.4 +0.4**
EVOP pmax pmax
comp=Z,40nm,0.8s,mb5.6
EVO Evora 61.07 4 *e*P **P 17 22 30.4 +0.3**
comp=Z,40nm,0.8s,mb5.3
EVO *e*MLR MLR
comp=Z,361nm,22.0s,MS4.2
EVO Evora 61.07 4 *e*P **P 17 22 30.9 +0.8**
comp=Z,42nm,2.1s,mb5.2
EBAN Banos Encina 61.13 8 P **P 17 22 29.6 -0.8**
comp=Z,11nm,0.7s,mb5.1
EBAN Banos Encina 61.13 8 P **P 17 22 29.6 -0.9**
EBAN pmax pmax
comp=Z,11nm,0.7s,mb5.1
PMAFR Mafra 61.42 3 *e*LR LR 17 42 03.0
comp=Z,186nm,18.0s
PESTR Estremoz 61.44 5 *e*P **P 17 22 33.8 +1.3**
comp=Z,40nm,2.2s,mb5.2
PESTR *e*LR LR 17 42 12.3
comp=Z,340nm,22.0s
NNA Nana 61.66 268 PFAKE 17 22 50.0 +15
NNA LR LR
comp=Z,798nm,22.0s,MS4.8
EVIA Vianos 61.77 9 P **P 17 22 35.5 +0.7**
comp=Z,15nm,0.7s,mb5.2
EVIA Vianos 61.77 9 P **P 17 22 35.5 +0.7**
EVIA pmax pmax
comp=Z,15nm,0.7s,mb5.2
KEST Kesra 61.78 20 P **P 17 22 36.1 +1.2**
comp=Z,4.7nm,0.9s,mb4.6,baz=173,slow=3.0,SNR=11
KEST LR LR 17 47 39.2
comp=Z,374nm,19.7s,MS4.5,baz=16,slow=34
KEST Kesra 61.78 20 *e*P **P 17 22 36.0 +1.1**
PMRV Marv??o 62.01 5 *e*P **P 17 22 37.4 +1.0**
comp=Z,49nm,2.1s,mb5.3
PMRV *e*LR LR 17 43 05.0
comp=Z,284nm,22.0s
PCBR Castelo Branco 62.41 5 *e*P **P 17 22 39.9 +0.8**
PAB San Pablo 62.42 7 PFAKE 17 22 50.0 +11
PAB LR LR
comp=Z,260nm,20.0s,MS4.4
ANWB Willy Bob 62.48 306 PFAKE 17 22 50.0 +10
ANWB LR LR
comp=Z,464nm,20.0s,MS4.7
ESDC Sonseca Array 62.59 8 P **P 17 22 40.5 +0.2**
comp=Z,4.7nm,0.8s,mb4.7,baz=185,slow=7.1,SNR=23
ESDC Sonseca Array 62.59 8 P **P 17 22 40.3 0.0**
comp=Z,4.5nm,0.8s,mb4.7
ESLA Sonseca Array 62.59 8 *e*P **P 17 22 40.3 0.0**
ESLA LR LR
comp=Z,1µm,21.0s,MS5.1
MTE Manteigas 62.96 5 *e*P **P 17 22 43.5 +0.7**
comp=Z,47nm,1.4s,mb5.4
MTE *e*LR LR 17 42 58.7
comp=Z,246nm,22.0s
MTE Manteigas 62.96 5 *e*P **P 17 22 43.3 +0.6**
comp=Z,203nm,2.3s,mb5.8
MTE LR LR
comp=Z,276nm,19.0s,MS4.5
PVIS Viseu 63.25 4 *e*P **P 17 22 45.0 +0.3**
GUD Guadarrama 63.53 7 P **P 17 22 46.7 +0.2**
comp=Z,16nm,0.8s,mb5.1
GUD Guadarrama 63.53 7 P **P 17 22 46.7 +0.2**
GUD pmax pmax
comp=Z,16nm,0.8s,mb5.1
WDD Wield Dalam 63.73 25 PFAKE 17 23 00.0 +12
WDD LR LR
comp=Z,492nm,19.0s,MS4.7
MVO Moncorvo 63.76 5 *e*P **P 17 22 48.9 +0.9**
comp=Z,42nm,2.2s,mb5.1
MVO *e*LR LR 17 43 18.3
comp=Z,270nm,22.0s
MVO Moncorvo 63.76 5 P **P 17 22 48.9 +0.9**
MAW Mawson 63.77 156 P **P 17 22 48.3 +0.4**
comp=Z,19nm,0.8s,mb5.2,baz=273,slow=6.9,SNR=44
MAW Mawson 63.77 156 *e*P **P 17 22 48.3 +0.5**
comp=Z,6.7nm,0.9s,mb4.7
MAW LR LR
comp=Z,935nm,21.0s,MS4.9
MAW Mawson 63.77 156 *e*P **P 17 22 48.3 +0.4**
MAW pmax pmax
comp=Z,7.0nm,0.9s
MAW MLR MLR
comp=Z,935nm,21.0s
EMOS Mosqueruela 63.78 10 P **P 17 22 49.1 +0.9**
comp=Z,41nm,0.9s,mb5.5
PVRL Vila Real 63.82 4 *e*P **P 17 22 48.7 +0.3**
PCAB Cabril 64.23 4 *e*P **P 17 22 51.7 +0.6**
ELOB Lobios 64.39 4 P **P 17 22 52.6 +0.5**
comp=Z,88nm,1.6s,mb5.5
PBRG Braganca 64.42 5 *e*P **P 17 22 53.1 +0.7**
comp=Z,47nm,1.6s,mb5.3
PBRG *e*LR LR 17 43 35.0
comp=Z,264nm,22.0s
ERTA Horta de San J 64.50 11 P **P 17 22 53.3 +0.4**
comp=Z,136nm,2.1s,mb5.6
ECAL Calabor 64.56 5 P **P 17 22 54.2 +1.0**
comp=Z,268nm,2.5s,mb5.8
SDV Santo Domingo 64.72 292 *e*P **P 17 22 55.6 +0.6**
comp=Z,48nm,1.0s,mb5.5
SDV LR LR
comp=Z,626nm,19.0s,MS4.8
ATAH Atahualpa 64.78 273 P **P 17 22 57.0 +1.6**
comp=Z,4.2nm,0.8s,mb4.5,baz=117,slow=12,SNR=4.7
ESAC San Caprasio 65.10 10 P **P 17 22 57.9 +1.0**
comp=Z,40nm,0.8s,mb5.5
STVI Saint Thomas 65.28 304 *e*P **P 17 22 58.8 +0.3**
comp=Z,48nm,1.0s,mb5.5
STS Santiago 65.37 3 P **P 17 22 58.4 -0.1**
comp=Z,12nm,0.8s,mb5.0
STS Santiago 65.37 3 P **P 17 22 58.4 -0.1**
STS pmax pmax
comp=Z,12nm,0.8s,mb5.0
HUMP Col San Antoni 65.85 304 *e*P **P 17 23 02.7 +0.5**
comp=Z,114nm,1.8s,mb5.6
ROSC El Rosal 66.02 287 P **P 17 23 04.8 +1.4**
comp=Z,12nm,0.6s,mb5.1,baz=98,slow=17,SNR=13
ROSC LR LR 17 51 00.8
comp=Z,1µm,18.7s,MS5.2,baz=189,slow=35
ROSC El Rosal 66.02 287 *e*P **P 17 23 05.2 +1.8**
EARI Arriondas 66.04 6 P **P 17 23 03.9 +1.0**
comp=Z,33nm,1.0s,mb5.3
SJG San Juan 66.06 303 PFAKE 17 23 20.0 +16
SJG LR LR
comp=Z,596nm,21.0s,MS4.8
ETSF Etsaut 66.24 10 *e*P **P 17 23 03.7 -0.4**
comp=Z,26nm,1.2s,mb4.8
ETSF Etsaut 66.24 10 *e*P **P 17 23 03.7 -0.4**
comp=Z,13nm,1.2s,mb4.8
ETSF Etsaut 66.24 10 *e*P **P 17 23 03.7 -0.4**
ETSF pmax pmax
comp=Z,13nm,1.2s,mb4.8
CLLI Llivia 66.27 12 P **P 17 23 04.4 +0.1**
SJPF Ste Jean 66.35 9 *e*P **P 17 23 04.6 -0.2**
comp=Z,25nm,0.8s,mb5.0
SJPF Ste Jean 66.35 9 *e*P **P 17 23 04.6 -0.2**
comp=Z,12nm,0.8s,mb5.0
SJPF Ste Jean 66.35 9 *e*P **P 17 23 04.6 -0.2**
SJPF pmax pmax
comp=Z,12nm,0.8s,mb5.0
ELIZ Elizondo 66.35 9 P **P 17 23 05.2 +0.4**
comp=Z,18nm,1.2s,mb5.0
ELIZ Elizondo 66.35 9 P **P 17 23 05.2 +0.4**
ELIZ pmax pmax
comp=Z,18nm,1.2s,mb5.0
CELP Cerrillos 66.37 303 *e*P **P 17 23 06.0 +0.5**
OBIP Obispado Ponce 66.37 303 *e*P **P 17 23 05.5 0.0**
comp=Z,32nm,0.8s,mb5.4
EPF Esparros 66.51 10 *e*P **P 17 23 05.4 -0.5**
comp=Z,28nm,1.2s,mb4.9
EPF Esparros 66.51 10 *e*P **P 17 23 05.4 -0.5**
comp=Z,14nm,1.2s,mb4.9
EPF Esparros 66.51 10 *e*P **P 17 23 05.4 -0.5**
EPF pmax pmax
comp=Z,14nm,1.2s,mb4.9
MTLF Montolieu 67.15 12 *e*P **P 17 23 08.5 -1.4**
comp=Z,15nm,1.1s,mb4.6
MTLF Montolieu 67.15 12 *e*P **P 17 23 08.5 -1.4**
comp=Z,7.7nm,1.1s,mb4.7
MTLF Montolieu 67.15 12 *e*P **P 17 23 08.5 -1.4**
MTLF pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
QSPA South Pole Qui 67.50 180 LR LR 17 49 05.2
comp=Z,319nm,20.0s,MS4.5,baz=56,slow=33
QSPA South Pole Qui 67.50 180 *e*P **P 17 23 12.9 +1.1**
comp=Z,61nm,1.0s,mb5.6
QSPA LR LR
comp=Z,357nm,20.0s,MS4.6
OTAV Otavalo 67.71 280 PFAKE 17 23 30.0 +16
OTAV LR LR
comp=Z,1µm,21.0s,MS5.0
LASF Ste Croix 68.18 13 *e*P **P 17 23 15.7 -0.7**
comp=Z,39nm,1.4s,mb5.0
MSEY Mahe Island 68.19 86 PFAKE 17 23 30.0 +13
MSEY LR LR
comp=Z,3µm,21.0s,MS5.5
LFF La Frestale 68.44 10 *e*P **P 17 23 17.4 -0.6**
comp=Z,47nm,1.0s,mb5.2
LFF La Frestale 68.44 10 *e*P **P 17 23 17.4 -0.6**
comp=Z,24nm,1.0s,mb5.2
LFF La Frestale 68.44 10 *e*P **P 17 23 17.4 -0.6**
LFF pmax pmax
comp=Z,24nm,1.0s,mb5.2
CAF Calviac 68.65 11 *e*P **P 17 23 18.4 -1.0**
CAF Calviac 68.65 11 *e*P **P 17 23 18.4 -1.0**
RJF Les Rejaudoux 68.92 11 *e*P **P 17 23 20.2 -0.8**
comp=Z,43nm,1.4s,mb4.9
RJF *e*MLR MLR
comp=Z,746nm,20.8s,MS4.6
RJF Les Rejaudoux 68.92 11 *e*P **P 17 23 20.2 -0.8**
comp=Z,22nm,1.4s,mb4.9
RJF LR LR
comp=Z,750nm,20.8s,MS4.9
RJF Les Rejaudoux 68.92 11 *e*P **P 17 23 20.2 -0.8**
RJF pmax pmax
comp=Z,22nm,1.4s,mb4.9
RJF MLR MLR
comp=Z,750nm,20.8s,MS4.9
VIVF Saint-Julien-l 69.10 13 *e*P **P 17 23 21.6 -0.5**
comp=Z,41nm,1.3s,mb4.9
VIVF Saint-Julien-l 69.10 13 *e*P **P 17 23 21.6 -0.5**
comp=Z,21nm,1.3s,mb4.9
VIVF Saint-Julien-l 69.10 13 *e*P **P 17 23 21.6 -0.5**
VIVF pmax pmax
comp=Z,21nm,1.3s,mb4.9
ORIF Oris-en-Rattie 69.42 14 *e*P **P 17 23 23.9 -0.2**
comp=Z,25nm,1.4s,mb4.7
ORIF *e*MLR MLR
comp=Z,1µm,19.5s,MS4.9
ORIF Oris-en-Rattie 69.42 14 *e*P **P 17 23 23.9 -0.2**
comp=Z,13nm,1.4s,mb4.7
ORIF Oris-en-Rattie 69.42 14 *e*P **P 17 23 23.9 -0.2**
ORIF pmax pmax
comp=Z,13nm,1.4s,mb4.7
MBDF Montbardon 69.44 15 *e*P **P 17 23 24.3 0.0**
comp=Z,54nm,1.3s,mb5.0
MBDF Montbardon 69.44 15 *e*P **P 17 23 24.3 0.0**
comp=Z,27nm,1.3s,mb5.0
MBDF Montbardon 69.44 15 *e*P **P 17 23 24.3 0.0**
MBDF pmax pmax
comp=Z,27nm,1.3s,mb5.0
MFF Saint Martin d 69.92 9 *e*P **P 17 23 26.4 -0.8**
comp=Z,52nm,1.2s,mb5.0
MFF Saint Martin d 69.92 9 *e*P **P 17 23 26.4 -0.8**
comp=Z,26nm,1.2s,mb5.0
MFF Saint Martin d 69.92 9 *e*P **P 17 23 26.4 -0.8**
MFF pmax pmax
comp=Z,26nm,1.2s,mb5.0
TCF Toulx Ste Croi 70.00 11 *e*P **P 17 23 27.1 -0.5**
comp=Z,36nm,1.2s,mb4.9
TCF Toulx Ste Croi 70.00 11 *e*P **P 17 23 27.1 -0.5**
comp=Z,18nm,1.2s,mb4.9
TCF Toulx Ste Croi 70.00 11 *e*P **P 17 23 27.1 -0.5**
TCF pmax pmax
comp=Z,18nm,1.2s,mb4.9
LPG La Plagne 70.17 14 *e*P **P 17 23 28.6 -0.1**
comp=Z,25nm,1.0s,mb4.8
LPG La Plagne 70.17 14 *e*P **P 17 23 28.6 -0.1**
comp=Z,12nm,1.0s,mb4.8
LPG La Plagne 70.17 14 *e*P **P 17 23 28.6 -0.1**
LPG pmax pmax
comp=Z,12nm,1.0s,mb4.8
LPL La Plagne 70.18 14 *e*P **P 17 23 28.6 -0.2**
comp=Z,51nm,1.2s,mb5.0
LPL La Plagne 70.18 14 *e*P **P 17 23 28.6 -0.2**
comp=Z,26nm,1.2s,mb5.0
LPL La Plagne 70.18 14 *e*P **P 17 23 28.6 -0.2**
LPL pmax pmax
comp=Z,26nm,1.2s,mb5.0
BGF Bois d'Agland 70.37 11 *e*P **P 17 23 29.2 -0.7**
BGF Bois d'Agland 70.37 11 *e*P **P 17 23 29.2 -0.7**
SDDR Presa de Saban 70.56 301 PFAKE 17 23 40.0 +8.3
SDDR LR LR
comp=Z,513nm,22.0s,MS4.7
SMF Signal de Mont 70.64 12 *e*P **P 17 23 30.8 -0.8**
SMF Signal de Mont 70.64 12 *e*P **P 17 23 30.8 -0.8**
AVF Avril sur Loir 70.69 12 *e*P **P 17 23 31.2 -0.7**
comp=Z,19nm,1.0s,mb4.7
AVF Avril sur Loir 70.69 12 *e*P **P 17 23 31.2 -0.7**
comp=Z,9.6nm,1.0s,mb4.7
AVF Avril sur Loir 70.69 12 *e*P **P 17 23 31.2 -0.7**
AVF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SSF Saint Saulge 70.98 12 *e*P **P 17 23 32.9 -0.7**
comp=Z,34nm,1.2s,mb4.9
SSF Saint Saulge 70.98 12 *e*P **P 17 23 32.9 -0.7**
comp=Z,17nm,1.2s,mb4.8
SSF Saint Saulge 70.98 12 *e*P **P 17 23 32.9 -0.7**
SSF pmax pmax
comp=Z,17nm,1.2s,mb4.8
CABF La Chapelle 71.07 14 *e*P **P 17 23 33.2 -1.0**
comp=Z,50nm,1.2s,mb5.0
CABF La Chapelle 71.07 14 *e*P **P 17 23 33.2 -1.0**
comp=Z,25nm,1.2s,mb5.0
CABF La Chapelle 71.07 14 *e*P **P 17 23 33.2 -1.0**
CABF pmax pmax
comp=Z,25nm,1.2s,mb5.0
AYDN Tasoluk 71.20 33 *i*P **P 17 23 35.5 +0.3**
ROSF Rostrenen 71.22 7 *e*P **P 17 23 34.4 -0.7**
comp=Z,89nm,1.3s,mb5.2
ROSF Rostrenen 71.22 7 *e*P **P 17 23 34.4 -0.7**
comp=Z,44nm,1.3s,mb5.2
ROSF Rostrenen 71.22 7 *e*P **P 17 23 34.4 -0.7**
ROSF pmax pmax
comp=Z,44nm,1.3s,mb5.2
LOR Lormes 71.24 12 *e*P **P 17 23 34.3 -0.9**
comp=Z,84nm,1.8s,mb5.1
LOR *e*MLR MLR
comp=Z,600nm,22.5s,MS4.5
LOR Lormes 71.24 12 *e*P **P 17 23 34.3 -0.9**
comp=Z,42nm,1.8s,mb5.1
LOR LR LR
comp=Z,600nm,22.5s,MS4.8
LOR Lormes 71.24 12 *e*P **P 17 23 34.3 -0.9**
LOR pmax pmax
comp=Z,42nm,1.8s,mb5.1
LOR MLR MLR
comp=Z,600nm,22.5s,MS4.8
GRR Gorron 71.56 8 *e*P **P 17 23 36.1 -1.0**
comp=Z,55nm,1.3s,mb5.0
GRR Gorron 71.56 8 *e*P **P 17 23 36.1 -1.0**
comp=Z,27nm,1.3s,mb5.0
GRR Gorron 71.56 8 *e*P **P 17 23 36.1 -1.0**
GRR pmax pmax
comp=Z,27nm,1.3s,mb5.0
GOLH Golhisar 71.74 34 *i*P **P 17 23 38.9 +0.4**
DNZL Cakiroluk 71.81 34 *i*P **P 17 23 39.6 +0.7**
LDF La Druitiere 71.87 9 *e*P **P 17 23 37.9 -1.1**
comp=Z,13nm,1.1s,mb4.5
LDF La Druitiere 71.87 9 *e*P **P 17 23 37.9 -1.1**
comp=Z,6.7nm,1.1s,mb4.5
LDF La Druitiere 71.87 9 *e*P **P 17 23 37.9 -1.1**
LDF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
FUORN Ofenpass-Fuorn 72.08 16 *e*P **P 17 23 40.3 0.0**
comp=Z,122nm,2.6s,mb5.4
AKHS Akhisar 72.11 32 *i*P **P 17 23 40.6 0.0**
CSS Prodhromos 72.14 38 PFAKE 17 23 50.0 +9.1
CSS LR LR
comp=Z,315nm,21.0s,MS4.6
SFTF Sexfontaines 72.37 12 *e*P **P 17 23 41.0 -1.0**
HINF Hinteralfeld 72.38 14 *e*P **P 17 23 40.7 -1.4**
comp=Z,30nm,1.6s,mb4.7
HINF Hinteralfeld 72.38 14 *e*P **P 17 23 40.7 -1.4**
comp=Z,15nm,1.6s,mb4.7
HINF Hinteralfeld 72.38 14 *e*P **P 17 23 40.7 -1.4**
HINF pmax pmax
comp=Z,15nm,1.6s,mb4.7
HAU Haudompre 72.45 13 *e*P **P 17 23 41.3 -1.2**
comp=Z,51nm,1.4s,mb5.0
HAU *e*MLR MLR
comp=Z,437nm,22.0s,MS4.4
HAU Haudompre 72.45 13 *e*P **P 17 23 41.3 -1.2**
comp=Z,25nm,1.4s,mb5.0
HAU LR LR
comp=Z,440nm,22.0s,MS4.7
HAU Haudompre 72.45 13 *e*P **P 17 23 41.3 -1.2**
HAU pmax pmax
comp=Z,25nm,1.4s,mb5.0
HAU MLR MLR
comp=Z,440nm,22.0s,MS4.7
JAVS Javornik 72.50 19 *i*P **P 17 23 42.7 -0.1**
BOJS Bojanci 72.52 20 *i*P **P 17 23 43.0 0.0**
FETA Feichten 72.58 17 ⇑*i*P **P 17 23 42.3 -0.9**
comp=Z,14nm,1.1s,mb4.8
DAVA Damuels 72.60 16 ⇓*i*P **P 17 23 42.6 -0.8**
comp=Z,34nm,1.4s,mb5.1
MEZF Maizieres J'vi 72.66 12 *e*P **P 17 23 43.0 -0.7**
comp=Z,70nm,1.3s,mb5.1
MEZF Maizieres J'vi 72.66 12 *e*P **P 17 23 43.0 -0.7**
comp=Z,70nm,1.3s,mb5.4
BALY Balya 72.68 32 *i*P **P 17 23 42.4 -1.7**
LJU Ljubljana 72.78 20 *i*P **P 17 23 44.5 +0.1**
ABTA Abfaltersbach 72.81 18 ⇑*i*P **P 17 23 44.0 -0.7**
comp=Z,22nm,1.5s,mb4.9
ECH Echery 72.83 14 PFAKE 17 24 00.0 +15
ECH LR LR
comp=Z,393nm,20.0s,MS4.7
BCIP Isla Barro Col 72.84 288 PFAKE 17 24 00.0 +14
BCIP LR LR
comp=Z,1µm,21.0s,MS5.1
RETA Reutte 73.02 16 ⇓*i*P **P 17 23 44.9 -0.9**
comp=Z,17nm,1.6s,mb4.7
MYKA Terra Mystica 73.03 19 ⇓*i*P **P 17 23 46.4 +0.4**
comp=Z,12nm,1.0s,mb4.8
CDF Champ du Feu 73.04 14 *e*P **P 17 23 44.7 -1.2**
CDF Champ du Feu 73.04 14 *e*P **P 17 23 44.7 -1.2**
WTTA Wattenberg 73.04 17 ⇓*i*P **P 17 23 45.5 -0.5**
comp=Z,26nm,1.3s,mb5.0
GDZ Gediz 73.10 33 *i*P **P 17 23 46.0 -0.5**
BFO Black Forest 73.20 15 *e*P **P 17 23 46.4 -0.5**
comp=Z,34nm,1.4s,mb5.1
BFO LR LR
comp=Z,512nm,21.0s,MS4.8
BFO Black Forest 73.20 15 *e*P **P 17 23 46.4 -0.5**
BFO pmax pmax
comp=Z,34nm,1.4s,mb5.1
BFO MLR MLR
comp=Z,512nm,21.0s,MS4.8
SART Tekirdag 73.21 31 *i*P **P 17 23 45.5 -1.6**
KBA Koelnbreinsper 73.35 18 ⇓*i*P **P 17 23 47.6 -0.3**
comp=Z,10nm,1.0s,mb4.7
PERS Pernice 73.49 20 *i*P **P 17 23 48.7 +0.1**
SOKA Soboth 73.50 20 ⇓*i*P **P 17 23 48.7 0.0**
comp=Z,18nm,1.1s,mb4.9
BOLV Bolvadin 73.57 34 *i*P **P 17 23 50.1 +0.8**
BBSR BB Station 73.87 316 PFAKE 17 24 00.0 +8.8
BBSR LR LR
comp=Z,317nm,19.0s,MS4.6
WLF Walferdange 73.99 13 P **P 17 23 51.3 -0.2**
comp=Z,32nm,1.8s,mb4.9
WLF Walferdange 73.99 13 *e*P **P 17 23 51.1 -0.4**
comp=Z,65nm,1.5s,mb5.3
WLF LR LR
comp=Z,492nm,21.0s,MS4.8
WLF Walferdange 73.99 13 *e*P **P 17 23 51.1 -0.4**
WLF pmax pmax
comp=Z,65nm,1.5s,mb5.3
WLF MLR MLR
comp=Z,492nm,21.0s,MS4.8
BAIF Baives 73.99 11 *e*P **P 17 23 50.5 -1.0**
comp=Z,43nm,1.3s,mb4.9
BAIF Baives 73.99 11 *e*P **P 17 23 50.5 -1.0**
comp=Z,21nm,1.3s,mb4.9
BAIF Baives 73.99 11 *e*P **P 17 23 50.5 -1.0**
BAIF pmax pmax
comp=Z,21nm,1.3s,mb4.9
KDHN Kadinhani 74.04 35 *i*P **P 17 23 52.1 -0.1**
GIVF Givet 74.14 12 *e*P **P 17 23 51.4 -1.0**
comp=Z,45nm,1.1s,mb5.0
GIVF Givet 74.14 12 *e*P **P 17 23 51.4 -1.0**
comp=Z,23nm,1.1s,mb5.0
GIVF Givet 74.14 12 *e*P **P 17 23 51.4 -1.0**
GIVF pmax pmax
comp=Z,23nm,1.1s,mb5.0
ARSA Arzberg 74.16 20 ⇑*i*P **P 17 23 51.9 -0.7**
comp=Z,20nm,1.1s,mb5.0
PKSM Moragy 74.28 22 P **P 17 23 53.0 -0.3**
PKSM Moragy 74.28 22 ⇑*i*P **P 17 23 52.5 -0.8**
MOA Molln 74.32 19 ⇓*i*P **P 17 23 52.4 -1.1**
comp=Z,15nm,1.1s,mb4.8
SNF Seneffe 74.44 11 P **P 17 23 54.2 +0.1**
comp=Z,16nm,2.6s,mb4.5
BCLA Clavier 74.54 12 P **P 17 23 54.6 -0.1**
comp=Z,23nm,2.0s,mb4.8

GULE Gulek 74.61 38 *i* P **P 17 23 56.0 +0.6**
BZS Buzias 74.85 24 P **P 17 23 56.9 +0.3**
BZS Buzias 74.85 24⇓*i*P **P 17 23 56.6 0.0**
MEM Membach 74.86 12 P **P 17 23 57.2 +0.7**
comp=Z,19nm,2.3s,mb4.6
CONA Conrad Observa 74.87 20⇓*i*P **P 17 23 56.8 +0.1**
comp=Z,18nm,1.1s,mb4.9
SOP Sopron 74.87 20⇓*e*P **P 17 23 56.5 -0.2**
BEBN Eben Emael 74.97 12 P **P 17 23 58.0 +0.8**
GERES GERESS Array B 75.06 18 P **P 17 23 57.2 -0.6**
comp=Z,1.9nm,0.8s,mb4.1,baz=197,slow=4.2,SNR=18
GERES GERESS Array B 75.06 18 P **P 17 23 57.2 -0.5**
GRFO Grafenberg 75.17 16 *e*P **P 17 23 58.2 -0.1**
comp=Z,45nm,1.4s,mb5.2
GRFO Grafenberg 75.17 16 *e*P **P 17 23 58.2 -0.2**
GRFO pmax pmax
comp=Z,45nm,1.4s,mb5.2
MTDJ Mount Denham 75.20 297 PFAKE 17 24 10.0 +11
MTDJ LR LR
comp=Z,380nm,22.0s,MS4.7
KHC Kasperske Hory 75.28 18 *e*P **P 17 23 58.2 -0.8**
comp=Z,21nm,1.5s,mb4.8
KHC Kasperske Hory 75.28 18 *e*P **P 17 23 58.3 -0.7**
KHC *e* 17 24 04.1
KHC MLR MLR
comp=Z,500nm,21.5s,MS4.8
KHC Kasperske Hory 75.28 18 *e*P **P 17 23 58.3 -0.7**
KHC *e*pP pP 17 24 04.1 +1.8
KHC AMS AMS 17 54 20.0
comp=Z,500nm,21.5s
MIR Mirnyy 75.47 157⇓*i*P **P 17 23 59.8 -0.3**
MIR pmax pmax
comp=Z,72nm,1.4s,mb5.4
ZST Bratislava 75.50 20 *e*P **P 17 24 01.1 +0.8**
comp=Z,9.1nm,1.1s,mb4.6
ZST Bratislava 75.50 20 *e*P **P 17 24 01.1 +0.8**
ZST pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ZST Bratislava 75.50 20 *e*P **P 17 24 01.1 +0.8**
BUD Budapest 75.51 22⇓*e*P **P 17 24 00.3 -0.1**
SGKT Sivrigoynuk 75.52 34 *i* P **P 17 24 00.7 +0.1**
ANDN Andirin 75.71 38 *i* P **P 17 24 03.6 +1.9**
AVNT Avonos 75.71 37 *i* P **P 17 24 01.5 -0.2**
BRTR Keskin Array B 75.73 35 P **P 17 24 01.5 -0.3**
comp=Z,8.4nm,1.0s,mb4.6,baz=199,slow=6.4,SNR=41
BRTR Keskin Array B 75.73 35*c*e**P 17 24 02.2 +0.4**
BRTR pmax pmax
comp=Z,8.0nm,1.0s
TREC Trest 75.97 19 *e*P **P 17 24 02.6 -0.4**
TREC MLR MLR
comp=Z,400nm,18.6s,MS4.8
TREC Trest 75.97 19 *e*P **P 17 24 02.6 -0.4**
TREC AMS AMS 17 57 10.0
comp=Z,400nm,18.6s
NKC Novy Kostel 75.98 16 *e*P **P 17 24 02.6 -0.4**
NKC *e* 17 24 09.0
NKC MLR MLR
comp=Z,700nm,18.9s,MS5.0
NKC Novy Kostel 75.98 16 *e*P **P 17 24 02.6 -0.4**
NKC *e*pP pP 17 24 09.0 +2.7
NKC AMS AMS 17 56 20.0
comp=Z,700nm,18.9s
CDAG Cicekdag 76.05 36 *i* P **P 17 24 03.5 -0.2**
VOIR 76.06 26 P **P 17 24 03.6 0.0**
VOIR 76.06 26⇑*i*P **P 17 24 03.3 -0.3**
MOX Moxa 76.14 16 *e*P **P 17 24 03.6 -0.3**
comp=Z,40nm,1.8s,mb5.0
MOX Moxa 76.14 16 *e*P **P 17 24 03.6 -0.3**
MOX pmax pmax
comp=Z,40nm,1.8s,mb5.0
PSZ Piszkesteto 76.18 22⇓*e*P **P 17 24 03.5 -0.7**
DRGR 76.25 24 P **P 17 24 04.0 -0.6**
KOLL Kolacno 76.25 21 *e*P **P 17 24 04.7 +0.1**
KOLL Kolacno 76.25 21 *e*P **P 17 24 04.7 +0.1**
KOLL Kolacno 76.25 21 *e*P **P 17 24 04.7 +0.1**
VRAC Vranov 76.32 19 P **P 17 24 05.0 0.0**
VRAC Vranov 76.32 19⇓*i*P **P 17 24 01.9 -3.1**
VYHS Vyhne 76.32 21 *e*P **P 17 24 04.8 -0.2**
comp=Z,11nm,1.1s,mb4.7
VYHS Vyhne 76.32 21 *e*P **P 17 24 04.8 -0.2**
VYHS pmax pmax
comp=Z,11nm,1.1s,mb4.7
VYHS Vyhne 76.32 21 *e*P **P 17 24 04.8 -0.2**
PRU Pruhonice 76.33 18 *e*P **P 17 24 05.3 +0.3**
PRU *e* 17 24 11.4
PRU MLR MLR
comp=Z,500nm,22.4s,MS4.8
PRU Pruhonice 76.33 18 *e*P **P 17 24 05.3 +0.3**
PRU *e*pP pP 17 24 11.4 +3.1
PRU AMS AMS 17 56 10.0
comp=Z,500nm,22.4s
MLR Muntele Rosu 76.47 27 P **P 17 24 05.9 0.0**
MLR Muntele Rosu 76.47 27⇑*i*P **P 17 24 05.4 -0.5**
PINB Pinarbasi 76.50 38 *i* P **P 17 24 06.1 -0.2**
TIRR Tirgusor 76.72 29 *e*P **P 17 24 07.0 -0.4**
comp=Z,102nm,2.1s,mb5.4
TIRR Tirgusor 76.72 29⇑P **P 17 24 07.1 -0.3**
TIRR Tirgusor 76.72 29⇑*i*P **P 17 24 07.1 -0.3**
ILGA Ilgaz 76.73 34 *i* P **P 17 24 06.7 -0.8**
PVCC Panska Ves 76.82 18 *e*P **P 17 24 07.5 -0.3**
PVCC MLR MLR
comp=Z,500nm,22.2s,MS4.8
PVCC Panska Ves 76.82 18 *e*P **P 17 24 07.5 -0.3**
PVCC AMS AMS 17 56 00.0
comp=Z,500nm,22.2s
KECS Kecovo 76.87 22 *e*P **P 17 24 08.1 0.0**
comp=Z,6.8nm,1.0s,mb4.5
KECS Kecovo 76.87 22 *e*P **P 17 24 08.1 0.0**
KECS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KECS Kecovo 76.87 22 *e*P **P 17 24 08.1 0.0**
BRG Berggiesshubel 76.96 17 *e*P **P 17 24 08.4 -0.2**
comp=Z,13nm,1.3s,mb4.7
BRG S S 17 33 56.0 -0.5
BRG
comp=N,239nm,18.4s
BRG
comp=E,391nm,18.0s
BRG
comp=Z,543nm,16.9s
CTKT Corum 76.99 35 *i* P **P 17 24 10.0 +1.0**
MORC Moravsky Berou 77.03 20 *e*P **P 17 24 09.0 0.0**
comp=Z,22nm,1.3s,mb4.9
MORC Moravsky Berou 77.03 20 P **P 17 24 09.4 +0.5**
MORC Moravsky Berou 77.03 20⇓*i*P **P 17 24 08.8 -0.1**
PLOR Plostina 77.06 27⇑*i*P **P 17 24 06.6 -2.6**
VRI Vrincioaia 77.10 27 P **P 17 24 09.0 -0.5**
VRI Vrincioaia 77.10 27⇑*i*P **P 17 24 08.3 -1.2**
AKCD Akcadag 77.11 39 *i* P **P 17 24 10.9 +1.2**
CLL Collm 77.11 16 *e*P **P 17 24 08.0 -1.4**
comp=Z,31nm,1.8s,mb4.9
CLL *e*PP PP 17 27 02.0 -1.4
CLL *e*S S 17 33 58.0 -0.1
CLL LR LR
comp=Z,400nm,20.3s,MS4.7
CLL Collm 77.11 16 *e*P **P 17 24 08.0 -1.4**
CLL *e* 17 27 02.0
CLL *e*S S 17 33 58.0 -0.1
CLL pmax pmax
comp=Z,31nm,1.8s,mb4.9
CLL MLR MLR
comp=Z,400nm,20.3s,MS4.7
CLL Collm 77.11 16 *e*P **P 17 24 08.0 -1.4**
comp=Z,31nm,1.8s,mb4.9
CLL *e*PP PP 17 27 02.0 -1.4
CLL *e*S S 17 33 58.0 -0.1
CLL *e*SS SS 17 39 06.0 +10
CLL *e* 17 43 18.0
CLL Lm 17 56 00.0
comp=N,300nm,20.5s
CLL Lm 17 56 00.0
comp=E,200nm,19.5s
CLL Lm 17 56 00.0
comp=Z,400nm,20.3s
DPC Dobruska-Polom 77.16 19 *e*P **P 17 24 09.3 -0.4**
comp=Z,21nm,1.2s,mb5.0
DPC Dobruska-Polom 77.16 19 *e*P **P 17 24 09.3 -0.4**
DPC *e* 17 24 15.4
DPC MLR MLR
comp=Z,500nm,18.2s,MS4.9
DPC Dobruska-Polom 77.16 19 *e*P **P 17 24 09.3 -0.4**
DPC *e*pP pP 17 24 15.4 +2.4
DPC AMS AMS 17 57 50.0
comp=Z,500nm,18.2s

UPC Upice 77.21 18 *e*P **P 17 24 09.8 -0.2**
UPC *e* 17 24 16.0
UPC Upice 77.21 18 *e*P **P 17 24 09.8 -0.2**
UPC *e*pP pP 17 24 16.0 +2.7
OKC Ostrava-Krasne 77.27 20 *e*P **P 17 24 10.1 -0.2**
OKC *e* 17 24 16.4
OKC MLR MLR
comp=Z,600nm,17.1s,MS5.0
OKC Ostrava-Krasne 77.27 20 *e*P **P 17 24 10.1 -0.2**
OKC *e*pP pP 17 24 16.4 +2.8
OKC AMS AMS 17 58 10.0
comp=Z,600nm,17.1s
MALT Malatya 77.41 39 *e*P **P 17 24 12.8 +1.4**
comp=Z,39nm,1.5s,mb5.1
MALT LR LR
comp=Z,585nm,19.0s,MS4.9
MALT Malatya 77.41 39 *e*P **P 17 24 12.8 +1.4**
MALT pmax pmax
comp=Z,39nm,1.5s,mb5.1
MALT MLR MLR
comp=Z,585nm,19.0s,MS4.9
MALT Malatya 77.41 39⇓*i*P **P 17 24 12.3 +0.9**
NAY Al-Naaiem 77.50 51 *e*P **P 17 24 13.0 +0.9**
NAY AMb AMB 17 24 14.0
comp=Z,41nm,1.1s,mb5.2
CRVS Cervenica-Dubn 77.57 22 *e*P **P 17 24 12.1 +0.1**
comp=Z,25nm,1.3s,mb5.0
CRVS Cervenica-Dubn 77.57 22 *e*P **P 17 24 12.1 +0.1**
CRVS pmax pmax
comp=Z,25nm,1.3s,mb5.0
CRVS Cervenica-Dubn 77.57 22 *e*P **P 17 24 12.1 +0.1**
TESR 77.59 27⇑*i*P **P 17 24 11.1 -1.1**
KSP Ksiaz 77.59 18 *e*P **P 17 24 12.0 -0.1**
UZH Uzhgorod 77.63 23*c i*P **P 17 24 11.3 -1.1**
KBD Kabd 77.78 51 *e*P **P 17 24 14.2 +0.5**
JTS JuntasAbangare 77.85 287 PFAKE 17 24 30.0 +16
JTS LR LR
comp=Z,898nm,20.0s,MS5.1
ELZG Elazig 77.86 39 *i* P **P 17 24 15.0 +1.1**
KOLS Kolonicke sedl 77.88 23 *e*P **P 17 24 14.0 +0.2**
comp=Z,26nm,1.7s,mb4.9
KOLS Kolonicke sedl 77.88 23 *e*P **P 17 24 14.0 +0.2**
KOLS pmax pmax
comp=Z,26nm,1.7s,mb4.9
KOLS Kolonicke sedl 77.88 23 *e*P **P 17 24 14.0 +0.2**
MIB Mutribah 77.89 50 *e*P **P 17 24 14.9 +0.6**
MIB AMb AMB 17 24 16.0
comp=Z,42nm,1.2s,mb5.2
BURAR Bucovina Array 77.90 25⇓*i*P **P 17 24 13.1 -0.8**
BURAR Bucovina Array 77.90 25⇓*i*P **P 17 24 13.1 -0.8**
BUR08 Bucovina Ar. S 77.91 25 *e*P **P 17 24 14.0 0.0**
UMR Umm Al-Rimmam 78.01 51 *e*P **P 17 24 15.6 +0.6**
KEMA Kemaliye 78.09 38 *i* P **P 17 24 16.0 +0.8**
OJC Ojcow 78.13 21 *e*P **P 17 24 14.5 -0.6**
OJC Ojcow 78.13 21 *e*P **P 17 24 14.9 -0.2**
comp=Z,15nm,0.9s,mb4.9
OJC Ojcow 78.13 21 *e*P **P 17 24 14.9 -0.2**
OJC pmax pmax
comp=Z,15nm,0.9s,mb4.9
ESK Eskdalemuir 78.13 6 PFAKE 17 24 30.0 +15
ESK LR LR
comp=Z,293nm,19.0s,MS4.6
ESK Eskdalemuir 78.13 6 *i* P **P 17 24 16.7 +1.7**
DIYA Diyarbakir 78.14 40 *i* P **P 17 24 16.2 +0.7**
PAYG Puerto Ayora 78.19 274 PFAKE 17 24 30.0 +14
PAYG LR LR
comp=Z,2μm,20.0s,MS5.5
KWP Kalwaria Pacla 78.62 23 *e*P **P 17 24 17.7 -0.2**
KWP Kalwaria Pacla 78.62 23 PFAKE 17 24 30.0 +12
KWP LR LR
comp=Z,863nm,19.0s,MS5.1
KWP Kalwaria Pacla 78.62 23⇓P **P 17 24 18.2 +0.3**
KWP Kalwaria Pacla 78.62 23⇓*i*P **P 17 24 18.2 +0.3**
KIS Kishinev 78.88 28 *e*P **P 17 24 19.0 -0.4**
KIS Kishinev 78.88 28 *e*PcP PcP 17 24 30.0 +2.0
KIS LRM 18 01 24.0
comp=Z,300nm,20.0s
KIS Kishinev 78.88 28 *e*P **P 17 24 19.0 -0.4**
KIS *e* 17 24 30.0
KIS *e* 17 27 25.0
KIS *e* 17 34 34.0
KIS MLR MLR
comp=Z,300nm,20.0s,MS4.6
LVV L'vov 79.25 23 *e*P **P 17 24 20.1 -1.2**
BNGL BINGOL 79.43 40 *i* P **P 17 24 21.9 -0.7**
SBA Scott Base 79.67 180 *e*P **P 17 24 24.8 +1.4**
comp=Z,85nm,1.6s,mb5.4
SBA LR LR
comp=Z,365nm,19.0s,MS4.7
SBA Scott Base 79.67 180 *e*P **P 17 24 24.8 +1.4**
SBA pmax pmax
comp=Z,85nm,1.6s,mb5.4
SBA MLR MLR
comp=Z,365nm,19.0s,MS4.7
KOPT Kop Dagi 79.74 39 *i* P **P 17 24 25.9 +1.7**
MACK Trabzon 79.94 38 *i* P **P 17 24 25.8 +0.5**
IDHR Dehrash 80.08 46 *e*P **P 17 24 27.3 +1.1**
HAKT HAKKARI 80.09 42 *i* P **P 17 24 23.6 -2.6**
DBOC Borcka 81.28 38 *i* P **P 17 24 32.2 -0.3**
ANN Anapa 81.31 34 *e*P **P 17 24 31.7 -0.8**
DYDN Diyadin 81.32 41 *i* P **P 17 24 33.5 +0.8**
ARTV Artvin 81.33 39 *i* P **P 17 24 32.4 -0.4**
TGUH Tegucigalpa,Un 81.53 289 PFAKE 17 24 50.0 +16
TGUH LR LR
comp=Z,501nm,22.0s,MS4.8
CASY Casey 81.63 160 *e*P **P 17 24 33.9 -0.1**
CASY LR LR
comp=Z,662nm,19.0s,MS5.0
SOC Sochi 81.68 36*c i*P **P 17 24 35.1 +0.6**
SOC *e*S S 17 34 47.7 +0.7
SOC *e*SSS 17 43 24.8
SOC pmax pmax
comp=Z,33nm,1.1s,mb5.2
DIGO Kars 81.68 40 *i* P **P 17 24 34.2 -0.5**
ISRV Sarvestan 81.86 54 *e*P **P 17 24 37.2 +1.4**
KIEV Kiev 81.94 25 *e*P **P 17 24 34.6 -1.1**
comp=Z,21nm,1.1s,mb5.0
KIEV LR LR
comp=Z,275nm,20.0s,MS4.6
KIEV Kiev 81.94 25 *e*P **P 17 24 34.6 -1.1**
KIEV pmax pmax
comp=Z,21nm,1.1s,mb5.0
KIEV MLR MLR
comp=Z,275nm,20.0s,MS4.6
AKASG Malin Array Be 81.95 25 P **P 17 24 35.0 -0.8**
comp=Z,9.9nm,0.8s,mb4.8,baz=221,slow=5.6,SNR=37
AKASG Malin Array Be 81.95 25 P **P 17 24 35.0 -0.8**
AKASG Malin Array Be 81.95 25*c*e**P 17 24 35.0 -0.7**
AKASG pmax pmax
comp=Z,10.0nm,0.8s
AKBB Malin Array Si 81.95 25 *e*P **P 17 24 34.9 -0.8**
AKBB Malin Array Si 81.95 25 *e*P **P 17 24 34.9 -0.8**
IPIR Pirpir 82.02 50 *e*P **P 17 24 38.0 +1.4**
GNI Garni 82.33 41 *e*P **P 17 24 38.9 +0.9**
comp=Z,119nm,1.6s,mb5.6
GNI LR LR
comp=Z,1μm,19.0s,MS5.3
GNI Garni 82.33 41*d i*P **P 17 24 38.8 +0.8**
GNI pmax pmax
comp=Z,64nm,1.7s
GNI MLR MLR
comp=Z,471nm,21.0s
SUW Suwalki 82.46 20 *e*P **P 17 24 38.4 +0.1**
SUW Suwalki 82.46 20 *e*P **P 17 24 38.4 +0.1**
DGAR Diego Garcia 82.83 95 PFAKE 17 24 50.0 +8.7
DGAR LR LR
comp=Z,1μm,19.0s,MS5.3
IKLH Kolahrood 82.85 50 *e*P **P 17 24 42.0 +1.1**
IZEF Zefreh 83.15 50 *e*P **P 17 24 43.5 +1.0**
ZEI Tsey 83.47 38 *e*P **P 17 24 40.4 -3.5**
ZEI pmax pmax
comp=Z,38nm,1.9s,mb5.1
KIV Kislovodsk 83.54 37 *e*P **P 17 24 43.8 -0.4**
comp=Z,44nm,1.2s,mb5.5
KIV LR LR
comp=Z,723nm,20.0s,MS5.0
KIV Kislovodsk 83.54 37 *e*P **P 17 24 43.0 -1.2**
KIV *e*S S 17 35 00.0 -6.1
KIV *e*SS SS 17 40 26.9 -6.0
KIV *e*SSS 17 43 56.2
KIV pmax pmax
comp=Z,31nm,1.2s,mb5.3
KIV Kislovodsk 83.54 37 P **P 17 24 44.4 +0.2**
comp=Z,147nm,1.2s,mb6.0,SNR=5.1

IR3 Iran Long-Peri 83.64 47 *e*P **P 17 24 45.8 +0.9**
KONO Kongsberg 84.08 11 PFAKE 17 25 00.0 +13
KONO LR LR
comp=Z,189nm,19.0s,MS4.5
CNNC Cliffs of the 84.37 312 PFAKE 17 25 00.0 +11
CNNC LR LR
comp=Z,1μm,20.0s,MS5.3
IDMV Damavand 84.39 48 *e*P **P 17 24 49.5 +0.8**
IBAF Bafgh 84.81 53 *e*P **P 17 24 51.4 +0.4**
NHSC New Hope 84.86 309 PFAKE 17 25 00.0 +8.8
NHSC LR LR
comp=Z,630nm,20.0s,MS5.0
PKME Peaks-Kenny Pk 84.92 324 PFAKE 17 25 00.0 +8.8
PKME LR LR
comp=Z,292nm,21.0s,MS4.7
TEIG Tepich 85.08 294 P **P 17 24 52.3 -0.3**
comp=Z,13nm,1.0s,mb5.0,baz=302,slow=20,SNR=3.5
TEIG Tepich 85.08 294 P **P 17 24 52.3 -0.3**
TEIG LR LR
comp=Z,464nm,20.0s,MS4.9
IANJ Anjilo 85.62 49 *e*P **P 17 24 56.4 +1.4**
CBN Corbin 85.63 314 PFAKE 17 25 10.0 +15
CBN LR LR
comp=Z,363nm,19.0s,MS4.8
NB2 NORSAR Subarra 85.68 11 P **P 17 24 54.8 +0.2**
comp=Z,69nm,2.5s,mb5.4,baz=202,slow=5.1
NOA NORSAR Array B 85.68 11 P **P 17 24 55.2 +0.7**
comp=Z,2.0nm,0.9s,mb4.3,baz=201,slow=5.2,SNR=5.0
NOA LR LR 18 05 07.9
comp=Z,161nm,18.1s,MS4.5,baz=180,slow=37
NOA NORSAR Array B 85.68 11 P **P 17 24 55.3 +0.7**
MAK Makhachkala 85.69 40 *e*P **P 17 24 57.6 +2.5**
MAK *e* 17 28 10.8
MAK *e*S S 17 35 23.3 -4.2
MAK *e*SS SS 17 40 56.8 -7.7
MAK pmax pmax
comp=Z,165nm,1.1s,mb6.2
LBNH Lisbon 85.76 322 PFAKE 17 25 10.0 +15
LBNH LR LR
comp=Z,595nm,20.0s,MS5.0
IKIA Kiasar 85.85 48 *e*P **P 17 24 57.6 +1.5**
IGLO Ghaloghah 86.11 48 *e*P **P 17 24 58.9 +1.6**
VORD Divnogorie 86.47 30 *e*P **P 17 24 58.6 -0.2**
VORD pmax pmax
comp=Z,30nm,1.3s,mb5.4
VORD pmax pmax
comp=N,30nm,0.7s
VORD pmax pmax
comp=E,20nm,0.8s
VSR Storozhevoye 86.59 30 *e*P **P 17 24 58.8 -0.5**
VSR pmax pmax
comp=N,30nm,1.4s
VSR pmax pmax
comp=Z,40nm,1.4s,mb5.5
VSR pmax pmax
comp=E,10.0nm,0.8s
NCB Newcomb 86.93 321 PFAKE 17 25 10.0 +8.8
NCB LR LR
comp=Z,1μm,20.0s,MS5.4
BINY Binghamton 86.97 318 PFAKE 17 25 10.0 +8.6
BINY LR LR
comp=Z,405nm,20.0s,MS4.8
BLA Blacksburg 87.15 312 PFAKE 17 25 10.0 +7.6
BLA LR LR
comp=Z,627nm,21.0s,MS5.0
VSU Vasula 87.25 20 *i* P **P 17 25 00.8 -1.6**
VSU pmax pmax
comp=Z,24nm,1.2s,mb5.3
GOGA Godfrey 87.39 308 PFAKE 17 25 10.0 +6.3
GOGA LR LR
comp=Z,432nm,22.0s,MS4.8
LONY Lake Ozonia 87.52 321 PFAKE 17 25 20.0 +16
LONY LR LR
comp=Z,481nm,19.0s,MS4.9
VRHR Novokhopersk 87.65 31 *e*P **P 17 25 05.1 +0.6**
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.4
VRHR pmax pmax
comp=N,20nm,1.1s
VRHR pmax pmax
comp=E,20nm,0.7s
IKOO Kooshah 87.76 54 *e*P **P 17 25 07.1 +1.6**
MCWV Mont Chateau 88.04 315 PFAKE 17 25 20.0 +13
MCWV LR LR
comp=Z,477nm,19.0s,MS4.9
OBN Obninsk 88.20 26 PFAKE 17 25 20.0 +13
OBN LR LR
comp=Z,465nm,21.0s,MS4.9
OBN Obninsk 88.20 26⇑*e*P **P 17 25 06.8 -0.2**
OBN *e* 17 28 35.1
OBN pmax pmax
comp=Z,44nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.5
IDAH Dahanechah 88.55 54 *e*P **P 17 25 11.0 +1.8**
BRAL Brewton 88.94 304 PFAKE 17 25 20.0 +8.9
BRAL LR LR
comp=Z,501nm,20.0s,MS4.9
MOS Moscow 89.07 26 *e*P **P 17 25 09.6 -1.5**
MOS pmax pmax
comp=Z,62nm,1.0s,mb5.9
ISFR Sfrayin 89.27 49 *e*P **P 17 25 13.7 +1.2**
ERPA Erie 89.42 317 PFAKE 17 25 20.0 +6.9
ERPA LR LR
comp=Z,440nm,19.0s,MS4.9
CMIG Matias Romero 89.45 289 P **P 17 25 14.1 +0.3**
comp=Z,7.1nm,1.0s,mb5.0,baz=111,slow=6.8,SNR=4.5
CMIG Matias Romero 89.45 289 P **P 17 25 14.1 +0.3**
FINES FINESS Array B 89.49 18 P **P 17 25 13.5 +0.6**
comp=Z,7.1nm,0.8s,mb5.0,baz=80,slow=2.1,SNR=15
FINES FINESS Array B 89.49 18 P **P 17 25 13.5 +0.6**
IAKL Akhelmad 89.58 50 *e*P **P 17 25 15.1 +1.1**
IPAY Payeh 89.68 50 *e*P **P 17 25 16.0 +1.5**
LRAL Lakeview Retre 89.82 306 PFAKE 17 25 30.0 +15
LRAL LR LR
comp=Z,534nm,19.0s,MS5.0
SCHQ Schefferville 89.95 332 LR LR 17 59 06.6
comp=Z,650nm,19.7s,MS5.1,baz=97,slow=31
SCHQ Schefferville 89.95 332 PFAKE 17 25 30.0 +15
SCHQ LR LR
comp=Z,982nm,20.0s,MS5.2
SWET Sewanee 90.04 308 *e*P **P 17 25 17.1 +0.9**
SADO Sadowa 90.30 319 P **P 17 25 16.4 -0.7**
comp=Z,5.2nm,0.8s,mb4.9,baz=237,slow=13,SNR=3.9
ACSO Alum Creek Sta 90.41 314 PFAKE 17 25 30.0 +12
ACSO LR LR
comp=Z,473nm,22.0s,MS4.9
IMYA Miami 90.41 51 *e*P **P 17 25 19.3 +1.4**
AAM Ann Arbor 91.86 315 PFAKE 17 25 40.0 +16
AAM LR LR
comp=Z,519nm,19.0s,MS5.0
VBMS Vicksburg 92.12 304 PFAKE 17 25 40.0 +14
VBMS LR LR
comp=Z,745nm,20.0s,MS5.1
OXF Oxford 92.28 306 PFAKE 17 25 40.0 +13
OXF LR LR
comp=Z,583nm,21.0s,MS5.0
GLMI Grayling 93.69 317 PFAKE 17 25 40.0 +7.2
GLMI LR LR
comp=Z,406nm,21.0s,MS4.9
HDIL Hopedale 94.82 312 PFAKE 17 25 50.0 +12
HDIL LR LR
comp=Z,570nm,20.0s,MS5.0
NATX Nacogdoches 95.14 302 PFAKE 17 25 50.0 +10
NATX LR LR
comp=Z,447nm,21.0s,MS4.9
MIAR Mount Ida 95.41 305 PFAKE 17 25 50.0 +9.0
MIAR LR LR
comp=Z,512nm,22.0s,MS5.0
ABKAR Akbulak array 96.34 39 *e*P **P 17 25 44.2 -0.6**
comp=Z,3.4nm,0.9s,mb4.8
KEV Kevo 96.47 13 PFAKE 17 26 00.0 +15
KEV LR LR
comp=Z,564nm,22.0s,MS5.0
JFWS Jewell Farm 96.48 314 PFAKE 17 26 00.0 +14
JFWS LR LR
comp=Z,379nm,20.0s,MS4.9
LVZ Lovozero 96.83 16 PFAKE 17 26 00.0 +13
LVZ LR LR
comp=Z,705nm,20.0s,MS5.1
COWI Conover 97.11 317 PFAKE 17 26 00.0 +12
COWI LR LR
comp=Z,425nm,20.0s,MS4.9
SCIA State Center 98.08 312 PFAKE 17 26 00.0 +7.1
SCIA LR LR

comp=Z,623nm,22.0s,MS5.1
JCT Junction City 98.73 299 PFAKE 17 26 10.0 +14
JCT LR LR
comp=Z,264nm,19.0s,MS4.8
ARU Arti 98.92 32 PFAKE 17 26 10.0 +14
ARU LR LR
comp=Z,863nm,20.0s,MS5.2
NIL Nilore 99.13 57 PFAKE 17 26 10.0 +12
NIL LR LR
comp=Z,80nm,19.0s,MS4.2
EYMN Ely 99.34 318 PFAKE 17 26 10.0 +12
EYMN LR LR
comp=Z,332nm,19.0s,MS4.9
KSU1 Kansas State U 99.41 308 PFAKE 17 26 10.0 +11
KSU1 LR LR
comp=Z,458nm,20.0s,MS5.0
WMOK Wichita Mounta 99.45 304 PFAKE 17 26 10.0 +11
WMOK LR LR
comp=Z,607nm,22.0s,MS5.1
ECSD EROS Data Cent 101.08 313 PFAKE 17 26 20.0 +14
ECSD LR LR
comp=Z,415nm,22.0s,MS4.9
CBKS Cedar Bluff 101.59 307 PFAKE 17 26 20.0 +11
CBKS LR LR
comp=Z,412nm,19.0s,MS5.0
AMTX Amarillo 101.74 303 PFAKE 17 26 20.0 +11
AMTX LR LR
comp=Z,507nm,20.0s,MS5.0
AGMN Agassiz Nation 102.18 317 PFAKE 17 26 20.0 +8.8
AGMN LR LR
comp=Z,390nm,20.0s,MS4.9
AML Almayashu 102.39 49 PFAKE 17 26 20.0 +7.9
AML LR LR
comp=Z,4μm,21.0s,MS5.9
EKS2 Erkin-Say 102.62 49 PFAKE 17 26 20.0 +6.9
EKS2 LR LR
comp=Z,536nm,20.0s,MS5.1
ULM Lac du Bonnet 102.86 319 PFAKE 17 26 30.0 +16
ULM LR LR
comp=Z,576nm,20.0s,MS5.1
COCO West Island 102.89 109 PFAKE 17 26 30.0 +16
COCO LR LR
comp=Z,737nm,20.0s,MS5.2
BRVK Borovoye 103.82 38 PFAKE 17 26 30.0 +12
BRVK LR LR
comp=Z,312nm,20.0s,MS4.8
OGNE Ogallala 103.95 309 PFAKE 17 26 30.0 +11
OGNE LR LR
comp=Z,543nm,19.0s,MS5.1
TKM2 Tokmak 2 103.97 49 PFAKE 17 26 30.0 +11
TKM2 LR LR
comp=Z,3μm,20.0s,MS5.8
ANMO Albuquerque 105.50 302 PFAKE 17 30 50.0 +10
ANMO LR LR
comp=Z,529nm,21.0s,MS5.1
SDCO Great Sand Dun 105.56 305 PFAKE 17 30 50.0 +10
SDCO LR LR
comp=Z,416nm,20.0s,MS5.0
ISCO Idaho Springs 106.23 307 PFAKE 17 30 50.0 +9.1
ISCO LR LR
comp=Z,515nm,21.0s,MS5.0
DGMT Dagmar 107.53 316 PFAKE 17 30 50.0 +7.0
DGMT LR LR
comp=Z,308nm,19.0s,MS4.9
RKT Rikitea 107.63 235 *e*LR LR 18 02 15.1
comp=Z,451nm,36.0s
FFC Flin Flon 107.75 322 PFAKE 17 30 50.0 +6.8
FFC LR LR
comp=Z,689nm,19.0s,MS5.2
KURK Kurchatov 108.11 42 PFAKE 17 31 00.0 +16
KURK LR LR
comp=Z,469nm,19.0s,MS5.1
TUC Tucson 108.22 298 PFAKE 17 31 00.0 +15
TUC LR LR
comp=Z,433nm,20.0s,MS5.0
LAO LASA Array 108.43 314 PFAKE 17 31 00.0 +15
LAO LR LR
comp=Z,277nm,20.0s,MS4.8
BW06 Boulder Array 109.85 309 PFAKE 17 31 00.0 +12
BW06 LR LR
comp=Z,438nm,19.0s,MS5.0
PDAR Pinedale Array 109.85 309 PP PP 17 31 25.1 +5.0
comp=Z,0.5nm,0.8s,baz=101,slow=7.7,SNR=4.0
RLMT Red Lodge 110.15 311 PFAKE 17 31 00.0 +12
RLMT LR LR
comp=Z,413nm,21.0s,MS5.0
LKWY Lake 110.83 311 PFAKE 17 31 00.0 +11
LKWY LR LR
comp=Z,870nm,22.0s,MS5.3
MVU Marysvale 110.87 304 PFAKE 17 31 00.0 +10
MVU LR LR
comp=Z,341nm,19.0s,MS5.0
AHID Auburn Hatcher 110.96 309 PFAKE 17 31 00.0 +10
AHID LR LR
comp=Z,589nm,21.0s,MS5.1
HWUT Hardware Ranch 111.06 307 PFAKE 17 31 00.0 +10
HWUT LR LR
comp=Z,548nm,19.0s,MS5.2
EGMT Eagleton 111.06 314 PFAKE 17 31 00.0 +10
EGMT LR LR
comp=Z,327nm,19.0s,MS4.9
DUG Dugway 111.69 306 PFAKE 17 31 00.0 +8.9
DUG LR LR
comp=Z,388nm,21.0s,MS5.0
BOZ Bozeman (W) 111.89 312 PFAKE 17 31 00.0 +8.7
BOZ LR LR
comp=Z,357nm,22.0s,MS4.9
ZALV Zalesovo Beam 112.45 39 PP PP 17 31 33.8 -4.7
comp=Z,0.3nm,0.3s,baz=241,slow=4.9,SNR=3.6
LSA Lhasa 112.51 66 PFAKE 17 31 00.0 +7.0
LSA LR LR
comp=Z,793nm,19.0s,MS5.3
WMQ Urumqi 112.74 51 *e*PKP PKiKP 17 30 54.0 +1.0
WMQ PP PP 17 31 46.0 +5.1
WMQ SKS SKSdf 17 38 05.0 -0.2
WMQ SKKS SKKSac 17 38 39.0 -3.9
WMQ SS SS 17 47 26.0 +2.7
WMQ AMB AMB
comp=Z,120nm,10.0s
WMQ LR LR
comp=N,360nm,25.0s,MS5.0
WMQ LR LR
comp=E,330nm,25.0s,MS5.0
WMQ LR LR
comp=Z,370nm,25.0s,MS4.9
PFO Pinyon Flat Ob 113.16 298 PFAKE 17 31 10.0 +16
PFO LR LR
comp=Z,374nm,20.0s,MS5.0
HLID Hailey 113.49 309 PFAKE 17 31 10.0 +16
HLID LR LR
comp=Z,465nm,20.0s,MS5.1
KULM Kulim 113.65 94 PFAKE 17 31 10.0 +14
KULM LR LR
comp=Z,298nm,19.0s,MS4.9
MSO Missoula 113.67 313 PFAKE 17 31 10.0 +15
MSO LR LR
comp=Z,260nm,19.0s,MS4.8
DAC Darwin (Calif) 114.61 301 PFAKE 17 31 10.0 +13
DAC LR LR
comp=Z,419nm,21.0s,MS5.0
NEW Newport 115.98 314 PFAKE 17 31 10.0 +11
NEW LR LR
comp=Z,405nm,20.0s,MS5.0
WVOR Wild Horse Val 116.39 307 PFAKE 17 31 10.0 +10
WVOR LR LR
comp=Z,452nm,19.0s,MS5.1
MBWA Marble Bar 116.43 130 PFAKE 17 31 10.0 +9.2
MBWA LR LR
comp=Z,675nm,20.0s,MS5.3
CM31 Chiang Mai Arr 116.46 80 PFAKE 17 31 10.0 +9.1
CM31 LR LR
comp=Z,730nm,20.0s,MS5.3
CMAR Chiang Mai Arr 116.46 80 PKP PKPdf 17 30 59.5 -1.4
comp=Z,0.8nm,0.5s,baz=234,slow=4.2,SNR=5.1
CMAR Chiang Mai Arr 116.46 80 PKIKP PKPdf 17 30 59.5 -1.4
CHTO Chiang Mai 116.56 80 PFAKE 17 31 10.0 +8.9
CHTO LR LR
comp=Z,780nm,22.0s,MS5.3
CMB Columbia Colle 117.11 302 PFAKE 17 31 10.0 +8.4
CMB LR LR
comp=Z,220nm,19.0s,MS4.8
HAWA Hanford 117.44 312 PFAKE 17 31 10.0 +8.1
HAWA LR LR
comp=Z,303nm,19.0s,MS4.9
MOD Modoc 117.55 307 PFAKE 17 31 10.0 +7.7
MOD LR LR
comp=Z,215nm,19.0s,MS4.8
SAO San Andreas Ge 117.75 301 PFAKE 17 31 10.0 +7.1
SAO LR LR
comp=Z,412nm,20.0s,MS5.0
TBI Tubuai 117.78 225 *e*LR LR 18 07 01.7
comp=Z,296nm,35.5s
MCCM Marconi Confer 119.07 302 PFAKE 17 31 20.0 +15
MCCM LR LR
comp=Z,224nm,19.0s,MS4.8
WDC Whiskeytown Da 119.09 305 PFAKE 17 31 20.0 +15
WDC LR LR
comp=Z,225nm,20.0s,MS4.8
HOPS Hopland 119.32 303 PFAKE 17 31 20.0 +14
HOPS LR LR
comp=Z,474nm,20.0s,MS5.1
YBH Yreka Blue Hor 119.33 306 PFAKE 17 31 20.0 +14
YBH LR LR
comp=Z,347nm,19.0s,MS5.0
HUMO Hull Mountain 119.58 307 PFAKE 17 31 20.0 +14
HUMO LR LR
comp=Z,431nm,20.0s,MS5.1
TAOE Nuku Hiva Isla 119.66 245 *e*LR LR 18 07 49.5
comp=Z,476nm,25.3s
STKA Stephens Creek 120.46 155 PKP PKPdf 17 31 07.2 -1.2
comp=Z,2.5nm,0.9s,baz=277,slow=7.9,SNR=3.9
NLWA Neilton Lookou 120.47 313 PFAKE 17 31 20.0 +12
NLWA LR LR
comp=Z,319nm,20.0s,MS5.0
KSM Kuching 120.94 103 PFAKE 17 31 20.0 +10
KSM LR LR
comp=Z,610nm,19.0s,MS5.3
GTA Gaotai 121.18 57 PKP PKPdf 17 31 08.8 -0.6
GTA PP PP 17 32 40.9 +1.0
PPT Papeete 121.79 230 *e*S Sdif 17 40 40.4 +2.5
comp=Z,100nm,25.0s
PPT *e*LR LR 17 44 10.9
comp=Z,391nm,27.5s,baz=226
PPT Papeete 121.79 230 *e*SS SS 17 49 26.1 +5.6
comp=Z,245nm,26.8s
PPT *e*LR LR 18 08 45.6
comp=Z,479nm,26.2s
CMSA Cobar Meteorol 122.27 158 *e*P PKPdf 17 31 10.8 -1.0
FITZ Fitzroy Crossi 122.60 132 *e*P PKPdf 17 31 11.9 -0.9
comp=Z,12nm,0.9s
CD2 Chengdu 123.44 67 *e*PKP PKPdf 17 31 13.1 -0.9
CD2 sPKP 17 31 21.0
CD2 PP PP 17 32 59.8 +4.3
CD2 SKS SKSdf 17 38 19.9 -6.3
CD2 SKKS SKKSac 17 39 46.9 -7.5
CD2 AMB AMB
comp=Z,90nm,10.2s
CD2 LR LR
comp=N,600nm,15.6s,MS5.4
CD2 LR LR
comp=E,330nm,19.2s,MS5.4
CD2 LR LR
comp=Z,290nm,18.0s,MS5.0
ASAR Alice Springs 123.69 143 PKP PKPdf 17 31 13.4 -1.3
comp=Z,3.1nm,0.8s,baz=178,slow=2.3,SNR=23
ASAR Alice Springs 123.69 143 PKIKP PKPdf 17 31 13.5 -1.3
TLY Talaya 123.80 42 PFAKE 17 31 30.0 +16
TLY LR LR
comp=Z,343nm,20.0s,MS5.0
LZH Lanzhou 124.09 61 *e*PKP PKPdf 17 31 15.0 -0.1
LZH sPKP 17 31 19.6
LZH PP PP 17 33 04.1 +4.4
LZH *e*SS SS 17 49 51.3 +0.5
LZH AMB AMB
comp=Z,150nm,8.5s
LZH LR LR
comp=N,350nm,18.1s,MS5.2
LZH LR LR
comp=E,380nm,17.6s,MS5.2
LZH LR LR
comp=Z,400nm,20.1s,MS5.1
GYA Guiyang 125.26 73 Pdif Pdif 17 27 53.3 -0.5
GYA PKP PKPdf 17 31 16.8 -0.8
GYA PP PP 17 33 10.0 +2.1
GYA PKS 17 34 51.3
GYA SKKS SKKSac 17 40 01.0 -5.3
GYA SS SS 17 50 05.6 -0.4
GYA AMB AMB
comp=Z,180nm,7.9s
GYA LR LR
comp=N,380nm,24.4s,MS5.0
GYA LR LR
comp=E,270nm,25.8s,MS5.0
GYA LR LR
comp=Z,350nm,23.0s,MS5.0
SONM Songino Array 125.95 47 PKP PKPdf 17 31 17.3 -0.9
comp=Z,1.4nm,0.9s,baz=209,slow=3.6,SNR=8.9
SONM PP PP 17 33 13.3 +1.6
comp=Z,0.8nm,1.0s,baz=270,slow=7.4,SNR=5.5
SONM Songino Array 125.95 47 PKIKP PKPdf 17 31 17.3 -0.9
SONM 17 33 13.3
KAPI Kappang 126.08 115 PFAKE 17 31 30.0 +10
KAPI LR LR
comp=Z,333nm,21.0s,MS5.0
QLP Quilpie 126.21 154 *e*P PKPdf 17 31 19.1 -0.4
EGAK Eagle 126.31 335 PFAKE 17 31 30.0 +12
EGAK LR LR
comp=Z,308nm,19.0s,MS5.0
ULN Ulaanbaatar 126.39 47 PFAKE 17 31 30.0 +11
ULN LR LR
comp=Z,459nm,19.0s,MS5.2
TIXI Tiksi 126.40 14 PFAKE 17 31 30.0 +12
TIXI LR LR
comp=Z,369nm,20.0s,MS5.0
QIZ Qiongzhong 126.56 83 PKP PKPdf 17 31 19.1 -1.2
QIZ PP PP 17 33 15.4 -1.2
QIZ SS SS 17 50 22.0 -0.5
QIZ LR LR
comp=Z,930nm,30.7s,MS5.3
QIZ Qiongzhong 126.56 83 PFAKE 17 31 30.0 +10
QIZ LR LR
comp=Z,847nm,21.0s,MS5.4
WRA Warramunga Arr 126.85 140 PKP PKPdf 17 31 19.6 -1.3
comp=Z,2.7nm,0.8s,baz=239,slow=2.2,SNR=17
WRA PP PP 17 33 15.2 -2.0
comp=Z,1.8nm,1.1s,baz=211,slow=5.2,SNR=4.2
WRA Warramunga Arr 126.85 140 PKP PKPdf 17 31 19.6 -1.2
WRA PP PP 17 33 15.2 -2.0
WRA Warramunga Arr 126.85 140 PKIKP PKPdf 17 31 19.6 -1.3
WRA 17 33 15.2
KKM Kota Kinabalu 128.20 101 PFAKE 17 31 30.0 +6.4
KKM LR LR
comp=Z,824nm,22.0s,MS5.4
ENH Enshi 128.26 69 PFAKE 17 31 30.0 +6.8
ENH LR LR
comp=Z,542nm,21.0s,MS5.2
ILAR Eielson Array 128.46 337 PKP PKPdf 17 31 21.4 -1.1
comp=Z,1.6nm,0.7s,baz=2.4,slow=1.5,SNR=27
ILAR Eielson Array 128.46 337 PKIKP PKPdf 17 31 21.4 -1.1
COLA College 128.75 337 PFAKE 17 31 30.0 +6.9
COLA LR LR
comp=Z,250nm,21.0s,MS4.9
HHC Hu-ho-hao-te 130.20 55 *e*PKP PKPdf 17 31 26.5 -0.1
HHC PP PP 17 33 38.6 -1.3
HHC PKS 17 35 01.6
HHC SKS SKSdf 17 38 37.3 -1.0
HHC SKKS SKKSac 17 40 30.4 -6.3
HHC AMB AMB
comp=Z,190nm,9.2s
HHC LR LR
comp=N,350nm,19.9s,MS5.2
HHC LR LR
comp=E,330nm,21.0s,MS5.2
HHC LR LR
comp=Z,370nm,21.4s,MS5.0
CTA Charters Tower 132.82 153 PKP PKPdf 17 31 31.7 -0.5
comp=Z,7.4nm,0.8s,baz=225,slow=1.4,SNR=4.1
CTA Charters Tower 132.82 153 *e*P PKPdf 17 31 32.8 +0.6
comp=Z,7.0nm,0.9s
CTA Charters Tower 132.82 153 PKIKP PKPdf 17 31 31.7 -0.5
YAK Yakutsk 133.13 23 PFAKE 17 31 40.0 +8.6
YAK LR LR
comp=Z,285nm,20.0s,MS5.0
BJT Baijiatuau 133.77 56 PFAKE 17 31 40.0 +6.6
BJT LR LR
comp=Z,509nm,21.0s,MS5.2
BJI Beijing 133.78 56 PKP PKPdf 17 31 32.8 -0.6
BJI PP PP 17 34 03.1 +0.1
BJI SS SS 17 51 52.1 +1.9
BJI AMB AMB
comp=Z,130nm,7.2s
BJI LR LR
comp=N,460nm,10.2s,MS5.6
BJI LR LR
comp=E,350nm,10.4s,MS5.6
BJI LR LR
comp=Z,320nm,34.2s
HIA Hailar 134.34 42 PFAKE 17 31 50.0 +16
HIA LR LR
comp=Z,373nm,20.0s,MS5.1
KDAK Kodiak Island 134.56 331 PFAKE 17 31 50.0 +16
KDAK LR LR
comp=Z,409nm,22.0s,MS5.1
BILL Bilibino 134.65 0 PFAKE 17 31 50.0 +16
BILL LR LR
comp=Z,364nm,21.0s,MS5.1
BILL Bilibino 134.65 0 *e*PKIKP PKPdf 17 31 34.5 +0.4
BILL *e* 17 44 24.1
BILL *e*SS SS 17 52 04.0 +5.8
BILL pmax pmax
comp=Z,5.0nm,1.3s
YHNB Yeheng 138.14 78 PFAKE 17 31 50.0 +8.1
YHNB LR LR
comp=Z,724nm,22.0s,MS5.4
TATO Taipei 138.28 77 PFAKE 17 31 50.0 +7.8
TATO LR LR
comp=Z,708nm,19.0s,MS5.4
CN2 Changchun 139.78 48 *e*PKP PKPdf 17 31 42.5 -1.8
CN2 *e*PP PP 17 34 42.6 +2.4
CN2 *e*SS SS 17 52 57.4 -3.8
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,300nm,20.0s,MS5.3
CN2 LR LR
comp=E,400nm,20.0s,MS5.3
CN2 LR LR
comp=Z,600nm,22.0s,MS5.3
INCN Inchon 142.24 58 PFAKE 17 32 00.0 +11
INCN LR LR
comp=Z,494nm,19.0s,MS5.3
MDJ Mudanjiang 142.29 45 PFAKE 17 32 00.0 +11
MDJ LR LR
comp=Z,381nm,22.0s,MS5.1
PMG Port Moresby 142.54 146 PFAKE 17 32 00.0 +10
PMG LR LR
comp=Z,497nm,20.0s,MS5.3
KSRS Korea Array 143.25 57 PKhKP PKPpre 17 31 46.1
comp=Z,3.3nm,0.8s,baz=279,slow=2.3,SNR=8.6
HNR Honiara 147.29 167 PKPbc PKPbc 17 31 59.7 -1.0
comp=Z,59nm,0.9s,baz=220,slow=6.5,SNR=4.6
HNR Honiara 147.29 167 PFAKE 17 32 10.0 +12
HNR LR LR
comp=Z,259nm,21.0s,MS5.0
PETK Petropavlovsk- 148.79 11 PKPbc PKPbc 17 32 02.8 -0.7
comp=Z,6.7nm,1.0s,baz=195,slow=0.3,SNR=4.1
MAJO Matsushiro 151.40 55 *e*PKPbc PKPbc 17 32 09.4 -1.1
MAJO LR LR
comp=Z,331nm,20.0s,MS5.1
MAJO Matsushiro 151.40 55 *e*PKIKP PKPdf 17 32 09.4 +5.1
MAJO MLR MLR
comp=Z,331nm,20.0s,MS5.1
MAT Matsushiro 151.40 55 PKP PKPdf 17 32 09.0 +4.7
MJAR Matsushiro Arr 151.40 55 PKPbc PKPbc 17 32 09.5 -0.9
comp=Z,5.8nm,0.9s,baz=275,slow=2.6,SNR=14
ERM Erimo 152.17 41 PFAKE 17 32 20.0 +15
ERM LR LR
comp=Z,300nm,19.0s,MS5.1

*ISCJB **24** 17:24:44.8±0.7,22°.7S±0°.1×12°.8W±0°.1,h10km,mb4.1/10, MS4.2/7,Error ellipse: s-maj=19.4km s-min=17.0km az=27.3*

*IDC **24** 17:24:45.1±0.8,22°.67S×12°.80W,h0km,mb4.1/8, mb1 4.2/8,mb1mx4.0/18,mbtmp4.1/8,MS4.3/7,Ms1 4.2/7, ms1mx3.9/32,Error ellipse: s-maj=24.3km s-min=20.0km az=110.0*

*NEIC **24** 17:24:47.0±0.6,22°.70S×12°.88W,h10km,mb4.9/1,Error ellipse: s-maj=18.9km s-min=15.5km az=126.0*

ISC 24 17:24:47.0±0.7,22°.7S±0°.1×12°.8W±0°.1,h10km,n15, σ0.79/12,mb4.1/10,MS4.2/7,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**27.87**	**303**	LR	LR	LR	17 38 29.5	
	comp=Z,655nm,18.8s,MS4.2,baz=119,slow=30							
SUR	**Sutherland**	**31.25**	**115**	LR	LR	LR	17 41 08.0	
	comp=Z,330nm,19.6s,MS4.0,baz=66,slow=32							
BDFB	**Brasilia**	**33.90**	**276**	P	**P**	**P**	**17 31 30.8**	**+0.4**
	7.5nm,0.8s,mb4.7,baz=85,slow=10,SNR=5.9							
BDFB				LR	LR	LR	17 42 26.7	
	comp=Z,705nm,18.2s,MS4.4,baz=97,slow=31							
BOSA	**Boshof**	**34.73**	**108**	LR	LR	LR	17 43 02.9	
	comp=Z,430nm,18.4s,MS4.2,baz=190,slow=32							
TORD	**Torodi Ar. Bea**	**38.35**	**23**	P	**P**	**P**	**17 32 07.5**	**-0.8**
	165nm,0.3s,baz=206,slow=7.9,SNR=2.1							
TORD				LR	LR	LR	17 45 00.4	
	comp=Z,226nm,18.8s,MS4.0,baz=145,slow=32							
CPUP	**Villa Florida**	**40.51**	**256**	P	**P**	**P**	**17 32 26.2**	**-0.1**
	3.1nm,0.9s,mb4.0,baz=96,slow=10,SNR=6.0							
CPUP				LR	LR	LR	17 47 02.7	
	comp=Z,482nm,18.3s,MS4.4,baz=148,slow=33							
SNAA	**Sanae**	**49.34**	**176**	P	**P**	**P**	**17 33 35.6**	**-0.4**
	1.0nm,0.8s,mb3.9,baz=335,slow=6.3,SNR=14							
PLCA	**Paso Flores**	**51.39**	**235**	P	**P**	**P**	**17 33 51.5**	**-0.4**
	2.0nm,0.8s,mb4.1,baz=85,slow=11,SNR=5.7							
PLCA				LR	LR	LR	17 53 55.9	
	comp=Z,228nm,18.9s,MS4.2,baz=302,slow=34							
LPAZ	**La Paz**	**52.28**	**267**	P	**P**	**P**	**17 33 59.0**	**0.0**
	0.7nm,0.7s,mb3.7,baz=0.0,slow=0.0,SNR=3.9							
KEST	**Kesra**	**61.78**	**20**	P	**P**	**P**	**17 35 05.6**	**-0.2**
	0.6nm,0.7s,mb3.8,baz=166,slow=8.3,SNR=2.9							
MAW	**Mawson**	**63.79**	**156**	P	**P**	**P**	**17 35 18.4**	**-0.6**
	2.7nm,0.9s,mb4.3,baz=323,slow=5.1,SNR=7.9							
SDV	**Santo Domingo**	**64.70**	**292**	*e*P		**P**	**17 35 25.5**	**-0.2**
	7.8nm,0.9s,mb4.7							
QSPA	**South Pole Qui**	**67.52**	**180**	P		**P**	**17 35 43.9**	**+1.1**
	7.7nm,1.0s,mb4.7,baz=238,slow=5.2,SNR=17							
QSPA	**South Pole Qui**	**67.52**	**180**	P	**P**	**P**	**17 35 43.9**	**+1.1**
BRTR	**Keskin Array B**	**75.73**	**35**	P	**P**	**P**	**17 36 35.8**	**+3.0**
	0.4nm,0.6s,mb3.5,baz=194,slow=8.4,SNR=4.4							

*IDC **24** 17:29:51.5±0.5,33°.63S×179°.46W,h0km,mb4.4/15, mb1 4.6/16,mb1mx4.5/22,mbtmp4.4/16,ML4.8/1,MS3.8/6, Ms1 3.8/6,ms1mx3.5/22,Error ellipse: s-maj=19.0km s-min=16.0km az=50.0*

*ISCJB **24** 17:30:01.0±1.2,34°.12S±0°.07×179°.49W±0°.09,h81km±9km, mb4.4/20,Error ellipse: s-maj=12.0km s-min=10.8km az=164.8*

*NEIC **24** 17:30:05.5±2.0,33°.75S×179°.74W,h108km±16km,mb5.1/4, Error ellipse: s-maj=14.4km s-min=11.7km az=57.0*

ISC 24 17:30:01.0±1.0,34°.03S±0°.07×179°.39W±0°.08,h69km±8km, h58km±.6km:pP-P,n110,σ1.91/86,mb4.4/20,1C,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.99**	**207**	PN	**Pn**	**Pn**	**17 31 00.0**	**+0.4**
MXZ				SN	**Sn**	**Sn**	**17 31 50.9**	**+5.8**
PUZ	**Puketiti**	**4.46**	**205**	PN	**Pn**	**Pn**	**17 31 06.0**	**-0.1**
PUZ				SN	**Sn**	**Sn**	**17 32 01.5**	**+4.9**
KUZ	**Kuaotunu**	**4.83**	**234**	PN	**Pn**	**Pn**	**17 31 13.4**	**+2.3**
MWZ	**Matawai**	**4.97**	**209**	PN	**Pn**	**Pn**	**17 31 13.0**	**0.0**
MWZ				SN	**Sn**	**Sn**	**17 32 14.0**	**+5.0**
OPRZ	**Ohinepanea**	**5.03**	**220**	PN	**Pn**	**Pn**	**17 31 15.6**	**+1.8**
URZ	**Urewera**	**5.08**	**213**	Pn	**Pn**	**Pn**	**17 31 14.5**	**0.0**
	30nm,0.3s,baz=71,slow=7.0,SNR=90							
URZ				Sn	**Sn**	**Sn**	**17 32 13.1**	**+1.2**
	24nm,0.3s,baz=306,slow=22,SNR=3.2							
URZ	**Urewera**	**5.08**	**213**	PN	**Pn**	**Pn**	**17 31 14.0**	**-0.6**
URZ				SN	**Sn**	**Sn**	**17 32 13.1**	**+1.3**
KARZ	**Kaharoa**	**5.33**	**220**	PN	**Pn**	**Pn**	**17 31 19.4**	**+1.6**
TARZ	**Mount Tarawera**	**5.35**	**217**	PN	**Pn**	**Pn**	**17 31 20.0**	**+1.8**
PRGZ	**Paritu Road**	**5.36**	**203**	PN	**Pn**	**Pn**	**17 31 17.7**	**-0.5**
MKAZ	**Moumakai**	**5.40**	**234**	PN	**Pn**	**Pn**	**17 31 21.5**	**+2.7**
WCZ	**Waipu Caves**	**5.49**	**248**	PN	**Pn**	**Pn**	**17 31 22.1**	**+2.0**
KNZ	**Kokohu**	**5.51**	**205**	PN	**Pn**	**Pn**	**17 31 19.2**	**-1.2**
MHGZ	**Mahia Peninsul**	**5.56**	**202**	PN	**Pn**	**Pn**	**17 31 19.9**	**-1.1**
RAHZ	**Arahi**	**5.64**	**209**	PN	**Pn**	**Pn**	**17 31 22.6**	**+0.4**
OUZ	**Omahuta**	**5.90**	**256**	*e*P		**Pn**	**17 31 26.9**	**+1.1**
	235nm,0.8s							

OUZ	**Omahuta**	5.90 256	PN	Pn	17 31 27.1	+1.3
NMHZ	**Naumai**	5.91 210	PN	Pn	17 31 26.5	+0.7
BKZ	**Black Stump Fm**	6.10 212	PN	Pn	17 31 27.1	-1.4
BKZ			SN	Sn	17 32 39.2	+2.4
MCHZ	**McNeill Hill**	6.25 209	PN	Pn	17 31 31.6	+1.1
HIZ	**Hauiti**	6.45 224	PN	Pn	17 31 33.9	+0.7
NGZ	**Ngauruhoe**	6.53 217	PN	Pn	17 31 34.6	+0.3
BHHZ	**Black Hill Sta**	6.56 213	PN	Pn	17 31 34.2	-0.5
PXZ	**Pawanui**	6.70 205	SN	Sn	17 32 48.6	-2.8
TSZ	**Takapari Road**	7.07 210	PN	Pn	17 31 39.8	-1.9
WAZ	**Wanganui**	7.28 217	PN	Pn	17 31 46.0	+1.5
BFZ	**Birch Farm**	7.49 206	PN	Pn	17 31 44.4	-3.0
HOWZ	**Holdsworth Sta**	7.96 209	PN	Pn	17 31 51.6	-2.3
OGWZ	**Otaki Gorge**	8.04 211	PN	Pn	17 31 54.1	-0.9
MTW	**Mount Morrison**	8.19 208	PN	Pn	17 31 53.2	-3.7
CAW	**Cannon Point**	8.32 210	PN	Pn	17 31 55.4	-3.4
PLWZ	**Palliser**	8.64 208	PN	Pn	17 32 00.1	-3.0
TCW	**Tory Channel**	8.75 213	PN	Pn	17 32 02.5	-2.2
QRZ	**Quartz Range**	9.34 221	SN	Sn	17 33 54.9	-1.2
KHZ	**Kahutara**	10.05 211 *eP*	Pn	Pn	17 32 17.6	-4.8
KHZ	**Kahutara**	10.05 211	SN	Sn	17 34 06.1	-7.3
MQZ	**McQueen's Vall**	11.47 210	SN	Sn	17 34 38.9	-9.3
RPZ	**Rata Peaks**	12.20 215	Pn	Pn	17 32 45.8	-5.9
	1.3nm,0.3s,baz=347,slow=4.3,SNR=8.5					
RPZ			Sn	Sn	17 34 57.6	-8.2
	1.9nm,0.3s,baz=233,slow=20,SNR=7.2					
ODZ	**Otahua Downs**	13.41 212 *eP*	Pn	Pn	17 33 06.2	-1.9
ODZ	**Otahua Downs**	13.41 212	PN	Pn	17 33 03.7	-4.4
ODZ			SN	Sn	17 35 26.8	-8.5
AFI	**Afiamalu**	21.19 21	LR	LR	17 41 27.0	
	comp=Z,125nm,18.1s,baz=150,slow=33					
RAR	**Rarotonga**	21.52 59	LR	LR	17 40 32.0	
	comp=Z,383nm,21.9s,baz=36,slow=30					
YNG	**Young**	26.60 260 *eP*	P	P	17 35 35.1	+2.3
	2.8nm,0.6s,mb4.0					
EIDS	**Eidsvold**	26.99 281 *eP*	P	P	17 35 37.8	+1.4
CMSA	**Cobar Meteorol**	29.38 265 *eP*	P	P	17 35 59.0	+1.4
HNR	**Honiara**	30.98 317 P	P	P	17 36 09.5	-2.3
	44nm,0.6s,mb5.3,baz=192,slow=2.8,SNR=5.7					
HNR			LR	LR	17 46 50.5	
	comp=Z,114nm,19.0s,baz=163,slow=33					
QLP	**Quilpie**	32.15 273 *eP*	P	P	17 36 22.8	+0.8
STKA	**Stephens Creek**	32.68 263 P	P	P	17 36 24.1	-2.5
	3.1nm,0.8s,mb4.2,baz=67,slow=6.9,SNR=2.9					
STKA			PcP	PcP	17 39 09.8	-1.3
	1.6nm,0.8s,baz=120,slow=19,SNR=3.1					
STKA			LR	LR	17 47 54.9	
	comp=Z,332nm,19.8s,baz=287,slow=33					
STKA	**Stephens Creek**	32.68 263 P	P	P	17 36 24.1	-2.5
STKA			PcP	PcP	17 39 09.8	-1.3
STKA			LR	LR	17 47 54.9	
CTA	**Charters Tower**	33.43 286 P	P	P	17 36 32.4	-0.9
	9.0nm,0.5s,mb4.9,baz=108,slow=10,SNR=17					
CTA			LR	LR	17 46 23.1	
	comp=Z,121nm,21.6s,baz=153,slow=30					
CTA	**Charters Tower**	33.43 286 *eP*	P	P	17 36 34.0	+0.7
	8.6nm,0.5s,mb4.8					
ASAR	**Alice Springs**	41.88 272 P	P	P	17 37 43.0	-1.6
	6.2nm,0.7s,mb4.4,baz=112,slow=7.8,SNR=105					
ASAR			S	S	17 43 58.6	+0.8
	0.7nm,1.0s,baz=110,slow=15,SNR=3.6					
WRA	**Warramunga Arr**	43.20 277 P	P	P	17 37 54.7	-0.7
	6.8nm,0.6s,mb4.6,baz=115,slow=7.9,SNR=122					
FORT	**Forrest**	44.09 259 *eP*	P	P	17 38 02.2	-0.2
	11nm,0.5s,mb4.8					
FITZ	**Fitzroy Crossi**	51.29 274 P	P	P	17 38 57.2	-1.0
	3.7nm,0.6s,mb4.6,baz=151,slow=7.4,SNR=21					
FITZ	**Fitzroy Crossi**	51.29 274 *eP*	P	P	17 38 57.2	-1.0
	9.4nm,0.6s,mb5.0					
CASY	**Casey**	51.40 209 *eP*	P	P	17 38 59.5	+1.2
CASY	**Casey**	51.40 209 *eP*	P	P	17 38 59.1	+0.7
	5.5nm,0.7s,mb4.7					
MEEK	**Meekatharra**	53.31 260 *eP*	P	P	17 39 11.5	-1.7
MORW	**Morawa**	54.45 256 *eP*	P	P	17 39 20.1	-1.3
QSPA	**South Pole Qui**	56.09 180 P	P	P	17 39 36.9	+4.4
	9.7nm,0.7s,mb5.0,baz=29,slow=1.6,SNR=60					
MAW	**Mawson**	68.51 201 P	P	P	17 40 57.0	+1.5
	5.5nm,0.7s,mb4.5,baz=112,slow=7.3,SNR=25					
MAW			LR	LR	18 07 19.0	
	comp=Z,102nm,18.8s,baz=275,slow=33					
MAW	**Mawson**	68.51 201 *eP*	P	P	17 40 57.1	+1.6
	6.7nm,1.0s,mb4.4					
SYO	**Syowa Base**	73.32 194⇑ *iP*	P	P	17 41 24.8	+0.1
SNAA	**Sanae**	74.56 179 P	P	P	17 41 34.1	+2.2
	2.4nm,1.0s,mb3.9,baz=175,slow=8.5,SNR=19					
VNA3	**Neumayer Olymp**	74.77 177 *e*	P	P	17 41 32.6	-0.4
VNA3		*e*			17 41 37.8	
VNA3		*e*	pP		17 41 48.7	-2.9
VNA2	**Neumayer--Watz**	75.19 177 *e*	P	P	17 41 35.3	-0.2
	baz=181,slow=3.7					
VNA2		*e*	pP		17 41 51.0	-3.0
VNA1	**Neumayer--Stat**	75.42 177 *e*	P	P	17 41 37.2	+0.4
VNA1		*e*			17 41 42.3	
VNA1		*e*	pP		17 41 52.8	-2.6
PLCA	**Paso Flores**	80.89 133 P	P	P	17 42 10.5	+2.9
	1.5nm,0.7s,mb3.9,baz=250,slow=7.2,SNR=5.5					
KSRS	**Korea Array**	86.37 321 P	P	P	17 42 34.4	-1.0
	0.6nm,0.7s,mb3.7,baz=155,slow=7.3,SNR=3.9					
CFAA	**Coronel Fontan**	88.00 127 P	P	P	17 42 45.2	+1.5
	0.1nm,0.3s,mb3.3,baz=250,slow=2.1,SNR=4.2					
PETK	**Petropavlovsk-**	89.04 346 P	P	P	17 42 46.4	-1.3
	4.4nm,0.7s,mb4.6,baz=126,slow=7.5,SNR=3.7					
PETK	**Petropavlovsk-**	89.04 346 P	P	P	17 42 46.4	-1.3
ISA	**Isabella**	89.69 45 *eP*	P	P	17 42 52.2	+1.0
	5.2nm,1.3s,mb4.5					
YBH	**Yreka Blue Hor**	91.60 39 P	P	P	17 43 00.1	+0.1
	0.3nm,0.3s,mb4.0,baz=262,slow=7.1,SNR=1.8					
NVAR	**Mina Array Bea**	91.69 43 P	P	P	17 43 01.6	+1.1
	1.1nm,0.7s,mb4.2,baz=221,slow=7.9,SNR=8.0					
CHGN	**Chignik**	91.73 12 *eP*	P	P	17 42 59.6	-0.6
CMAR	**Chiang Mai Arr**	93.50 290 P	P	P	17 43 09.1	-0.3
	0.8nm,0.7s,mb4.1,baz=132,slow=5.0,SNR=4.3					
BJT	**Baijiatuan**	94.68 316 P	P	P	17 43 13.0	-1.2
	20nm,0.6s					
ILAR	**Eielson Array**	101.72 14 P	P	Pdif	17 43 46.2	+0.1
	0.3nm,0.6s,baz=234,slow=5.7,SNR=5.1					
ILAR			PP	PP	17 47 54.9	-2.2
	0.6nm,1.1s,baz=227,slow=7.9,SNR=4.1					
ILAR			PKiKP	PKiKP	17 48 07.8	-0.3
	0.3nm,0.6s,baz=224,slow=3.8,SNR=5.3					
ILAR	**Eielson Array**	101.72 14 P	P	Pdif	17 43 46.2	+0.1
ILAR			PP	PP	17 47 54.9	-2.2
MKAR	**Makanchi Array**	119.17 309 PKP	PKPdf	PKPdf	17 48 39.9	-1.8
	0.5nm,0.5s,baz=179,slow=1.5,SNR=4.9					
ZALV	**Zalesovo Beam**	119.92 317 PKP	PKPdf	PKPdf	17 48 40.2	-2.6
	0.8nm,0.6s,baz=150,slow=3.3,SNR=3.9					
BVAR	**Borovoye Array**	128.12 314 PKP	PKPdf	PKPdf	17 48 57.4	-1.2
	0.7nm,0.4s,baz=169,slow=1.5,SNR=8.0					
AKTK	**Aktyubinsk**	135.59 310 PKP	PKPdf	PKPdf	17 49 11.5	-1.3
AKTO	**Aktyubinsk**	135.59 310 PKP	PKPdf	PKPdf	17 49 11.5	-1.3
	1.7nm,0.6s,baz=102,slow=4.2,SNR=7.9					
ARCES	**ARCESS Array B**	141.85 346 PKP	PKPdf	PKPdf	17 49 18.2	-5.5
	4.5nm,0.9s,baz=29,slow=2.8,SNR=7.8					
JOF	**Joensuu**	145.30 336 *ep*	PKPbc	PKPbc	17 49 27.3	-2.5
	4.8nm,0.5s					
KAF	**Kangasniemi**	147.51 338 *ep*	PKPdf	PKPdf	17 49 32.1	-1.6
	4.8nm,0.5s					
FINES	**FINESS Array B**	148.08 337 PKPbc	PKPbc	PKPbc	17 49 36.2	-1.7
	15nm,0.8s,baz=48,slow=3.9,SNR=31					
MALT	**Malatya**	149.32 289 *e*PKPbc	PKPbc	PKPbc	17 49 40.9	-0.9
ASF	**Jabal al Asfar**	149.64 277 PKPbc	PKPbc	PKPbc	17 49 42.4	-0.4
	2.7nm,0.7s,baz=15,slow=3.0,SNR=4.6					
EIL	**Elat**	150.59 271 PKPbc	PKPbc	PKPbc	17 49 43.7	-1.5
	6.2nm,0.8s,baz=20,slow=4.5,SNR=5.4					
EIL	**Elat**	150.59 271 PKPbc	PKPbc	PKPbc	17 49 43.7	-1.5
MMAI	**Mount Meron Ar**	151.06 278 PKPbc	PKPbc	PKPbc	17 49 45.8	-0.3
	6.8nm,0.6s,baz=81,slow=5.3,SNR=13					
LIC	**Lamto**	151.84 168 *e*PKIKP	PKPbc	PKPbc	17 49 45.1	+1.0
	59nm,0.6s					
KIC	**Kosan Boka**	152.02 169 *e*PKIKP	PKPbc	PKPbc	17 49 49.6	+0.7
	44nm,0.9s					
NOA	**NORSAR Array B**	152.12 349 PKP	PKPdf	PKPdf	17 49 40.8	-0.1
	2.4nm,0.8s,baz=19,slow=1.8,SNR=8.1					
NOA			PKPbc	PKPbc	17 49 46.9	-0.7
	4.8nm,0.9s,baz=15,slow=4.6,SNR=19					
NOA	**NORSAR Array B**	152.12 349 PKP	PKPdf	PKPdf	17 49 40.8	-0.1
NOA			PKPbc	PKPbc	17 49 46.9	-0.7
TIC	**Toumodi**	152.25 168 *e*PKIKP	PKPbc	PKPbc	17 49 50.3	+0.9
	27nm,0.7s					
DBIC	**Dimbokro**	152.31 168 PKP	PKPdf	PKPdf	17 49 43.8	+1.0
	3.7nm,0.8s,baz=134,slow=6.2,SNR=3.2					
DBIC			PKPbc	PKPbc	17 49 50.0	+0.4
	6.9nm,0.6s,baz=109,slow=3.4,SNR=3.1					
NAO01	**NORSAR Array S**	152.36 349 *e*PKPbc	PKPbc	PKPbc	17 49 45.6	-2.6
BRTR	**Keskin Array B**	153.07 292 PKPbc	PKPbc	PKPbc	17 49 48.8	-1.7
	1.9nm,0.6s,baz=144,slow=3.1,SNR=11					
AKASG	**Malin Array Be**	153.32 317 PKP	PKPdf	PKPdf	17 49 42.5	-0.6
	0.2nm,0.3s,baz=46,slow=2.5,SNR=3.8					
AKASG			PKPbc	PKPbc	17 49 49.0	-1.6
	1.1nm,0.4s,baz=60,slow=2.7,SNR=12					
AKASG	**Malin Array Be**	153.32 317 PKP	PKPdf	PKPdf	17 49 42.5	-0.6
AKASG			PKPbc	PKPbc	17 49 49.0	-1.6
KIEV	**Kiev**	153.33 317 *e*PKPbc	PKPbc	PKPbc	17 49 47.7	-3.0
TORD	**Torodi Ar. Bea**	159.19 183 PKPab	PKPab	PKPab	17 50 30.5	+1.7
	5.2nm,0.8s,baz=172,slow=3.8,SNR=2.1					
CLL	**Collm**	160.53 336 *i* PKPab	PKPab	PKPab	17 50 31.8	-2.0
	comp=Z,5.0nm,1.0s					
GERES	**GERESS Array B**	162.28 331 PKP	PKPdf	PKPdf	17 49 53.3	-0.9
	comp=Z,0.6nm,0.7s,baz=108,slow=1.7,SNR=5.3					
ESDC	**Sonseca Array**	173.28 32 PKP	PKPdf	PKPdf	17 50 02.0	-0.1
	comp=Z,0.7nm,0.7s,baz=332,slow=2.4,SNR=4.3					

*ISCJB **24** 17:43:46.4±0.9, 9°.03S±0°.09×127°.2E±0°.2, h33km, mb3.8/2, Error ellipse: s-maj=24.8km s-min=9.5km az=156.0*
*NEIC **24** 17:43:48.8±0.7, 9°.00S×127°.12E, h35km, Error ellipse: s-maj=22.2km s-min=9.7km az=74.0*
*IDC **24** 17:43:55.3±8.1, 9°.41S×127°.01E, h110km±95km, mb3.5/2, mb1 3.8/5, mb1mx3.5/16, mbtmp3.6/5, ML4.2/3, Error ellipse: s-maj=62.4km s-min=37.2km az=26.0*

ISC 24 17:43:48.8±0.9, 9°.11S±0°.07×127°.1E±0°.1, h35km, n8, σ1°36/12, mb3.8/2, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	9.05	189	P	Pn	17 45 59.5	+2.5
	1.6nm,0.3s,baz=25,slow=9.7,SNR=37						
FITZ				S	Sn	17 47 36.0	-1.7
	4.2nm,0.3s,baz=258,slow=23,SNR=12						
WRA	**Warramunga Arr**	12.83	148	P	Pn	17 46 49.8	+1.1
	1.6nm,0.3s,baz=320,slow=13,SNR=81						
WRA				S	Sn	17 49 09.0	-1.4
	1.8nm,0.3s,baz=325,slow=25,SNR=11						
WRA	**Warramunga Arr**	12.83	148	P	Pn	17 46 49.8	+1.1
WRA				S	Sn	17 49 09.0	-1.4
MBWA	**Marble Bar**	13.93	210	P	Pn	17 47 04.4	+0.6
	8.5nm,1.0s						
ASAR	**Alice Springs**	15.86	157	P	Pn	17 47 31.1	+1.7
	0.8nm,0.3s,baz=326,slow=9.7,SNR=53						
ASAR				S	S	17 50 24.8	-13
	0.6nm,0.3s,baz=322,slow=18,SNR=9.0						
CMAR	**Chiang Mai Arr**	39.03	315	P	P	17 51 12.6	+0.2
	0.6nm,0.6s,mb3.5,baz=149,slow=6.7,SNR=4.3						
ZAA0	**Zalesovo Array**	72.25	335 *eP*		P	17 55 08.6	-1.7
ZALV	**Zalesovo Beam**	72.25	335	P	P	17 55 09.8	-0.4
	0.9nm,0.4s,mb4.1,baz=134,slow=6.8,SNR=6.2						

*MOS **24** 17:49:51.1±1.2, 40°.54N×53°.04E, h33km, mb4.0/7, Error ellipse: s-maj=11.1km s-min=9.5km az=87.1*
*ISCJB **24** 17:49:52.5±0.7, 40°.78N±0°.07×53°.03E±0°.05, h33km, mb3.6/7, Error ellipse: s-maj=10.0km s-min=4.4km az=157.2*
*NEIC **24** 17:49:52.6±0.9, 40°.42N×53°.11E, mb4.0/4, Error ellipse: s-maj=17.6km s-min=7.1km az=160.0*
*IDC **24** 17:49:53.2±1.8, 40°.38N×53°.07E, h44km±8km, mb3.5/7, mb1 3.7/13, mb1mx3.6/27, mbtmp3.6/13, ML3.6/4, Error ellipse: s-maj=37.2km s-min=14.6km az=179.0*
*CSEM **24** 17:49:53.6±0.5, 40°.53N×53°.15E, h42km, mb3.8/6, Error ellipse: s-maj=17.7km s-min=6.6km az=173.0*
*NNC **24** 17:49:55.3±10.0, 41°.07N×53°.17E, h0km, mb4.1, Error ellipse: s-maj=113.3km s-min=64.4km az=72.0*

ISC 24 17:49:54.3±0.7, 40°.71N±0°.07×53°.06E±0°.05, h35km, (h44km±1.3km: pP-P), n92, σ1°16/98, mb3.6/7, 5C-8D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	5.85	280	P	Pn	17 51 17.7	-0.8
DGRG				S	Sn	17 52 24.8	+0.4
TBLG	**Delisi**	6.36	282	P	Sn	17 52 34.7	-2.0
GNI	**Garni**	6.37	268	P	Pn	17 51 25.3	-0.4
	2.0nm,0.3s,baz=307,slow=5.8,SNR=6.6						
GNI				S	Sn	17 52 31.2	-5.8
	1.0nm,0.3s,baz=315,slow=14,SNR=2.3						
GNI	**Garni**	6.37	268	*i* P	Pn	17 51 25.1	-0.5
GNI				pmax	pmax		
	comp=Z,14nm,1.0s						
GNI	**Garni**	6.37	268	P	Pn	17 51 25.3	-0.3
GNI				S	Sn	17 52 31.2	-5.9
ZEI	**Tsey**	7.15	290	*e*P	Px	17 51 52.0	
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZEI	**Tsey**	7.15	290	*e*P	Px	17 51 52.0	
	comp=Z,3.0nm,0.5s						
KIV	**Kislovodsk**	8.34	296	*e*P	Pn	17 52 01.8	+9.2
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	**Kislovodsk**	8.34	296	*e*P	Pn	17 52 01.8	+9.2
	comp=Z,5.0nm,1.0s						
AB31	**Akbulak array**	9.83	27	⇑Pn	Pn	17 52 14.7	+1.7
	comp=Z,2.2nm,0.3s,baz=212,slow=14,SNR=9.3						
AB31				⇓Sn	Sn	17 53 59.6	-2.4
	comp=Z,3.8nm,0.5s,baz=219,slow=27,SNR=3.6						
AB31	**Akbulak array**	9.83	27	Pn	Pn	17 52 14.7	+1.7
	comp=Z,2.2nm,0.3s,SNR=9.3						
AB31				Sn	Sn	17 53 59.6	-2.4
	comp=Z,3.8nm,0.5s,SNR=3.6						
ABKAR	**Akbulak array**	9.83	27	*e*P	Pn	17 52 13.4	+0.4
	comp=Z,5.1nm,0.4s						
ABKAR	**Akbulak array**	9.83	27	*e*P	Pn	17 52 13.4	+0.4
	comp=Z,5.1nm,0.4s						
AKTK	**Aktyubinsk**	10.32	18	P	Pn	17 52 21.3	+1.6
AKTK				S	Sn	17 54 13.4	-0.7
AKTK	**Aktyubinsk**	10.32	18	P	Pn	17 52 21.3	+1.6
	comp=Z,1.0nm,0.3s						
AKTK				S	Sn	17 54 13.4	-0.6
	comp=Z,3.0nm,0.3s						
AKTO	**Aktyubinsk**	10.32	18	⇓Pn	Pn	17 52 21.7	+1.9
	comp=Z,0.7nm,0.5s						
AKTO				⇓Sn	Sn	17 54 13.0	-1.1
	comp=Z,1.6nm,0.5s						
AKTO	**Aktyubinsk**	10.32	18	P	Pn	17 52 21.3	+1.6
	comp=Z,0.7nm,0.3s,baz=211,slow=11,SNR=14						
AKTO				S	Sn	17 54 13.4	-0.7
	comp=Z,2.5nm,0.3s,baz=76,slow=19,SNR=5.9						
AKTO	**Aktyubinsk**	10.32	18	P	Pn	17 52 21.3	+1.6
AKTO				S	Sn	17 54 13.4	-0.6
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,3.0nm,0.3s						
AKTO	**Aktyubinsk**	10.32	18	Pn	Pn	17 52 21.7	+2.0
	comp=N,0.7nm,0.5s						
AKTO				Sn	Sn	17 54 13.0	-1.0
	comp=N,1.6nm,0.5s						
KK31	**Karatay Array**	13.22	74	⇓P	Pn	17 52 57.9	-1.5
	comp=N,4.3nm,0.8s,baz=259,slow=17,SNR=29						
KK31	**Karatay Array**	13.22	74	P	Pn	17 52 57.9	-1.5
	comp=N,4.3nm,0.8s,SNR=29						
KKAR	**Karatay Array**	13.22	74	*e*P	Pn	17 52 57.8	-1.6
	comp=N,2.4nm,0.5s						
BRTR	**Keskin Array B**	14.87	273	P	Pn	17 53 20.7	-1.2
	comp=N,0.1nm,0.3s,baz=102,slow=12,SNR=4.2						
BRTR	**Keskin Array B**	14.87	273	P	Pn	17 53 20.7	-1.2
BRTR	**Keskin Array B**	14.87	273	P	Pn	17 53 20.7	-1.2
ASF	**Jabal al Asfar**	15.53	242	P	Pn	17 53 25.6	-5.0
	comp=N,0.1nm,0.3s,baz=32,slow=13,SNR=2.2						
ASF	**Jabal al Asfar**	15.53	242	P	Pn	17 53 25.6	-5.0
ARU	**Arti**	16.14	11	*e*P	Pn	17 53 38.0	-0.2
	comp=N,5.8nm,0.6s						
ARU	**Arti**	16.14	11	*e*P	Pn	17 53 36.7	-1.5
ARU				S	S	17 56 34.5	-14
ARU	**Arti**	16.14	11	*e*P	Pn	17 53 38.0	-0.2
	comp=N,5.8nm,0.6s						
ARU				S	S	17 56 34.5	-14
ZRNK	**Zerenda**	16.35	36	⇑P	Pn	17 53 40.5	-0.4
	comp=N,3.8nm,0.6s						
BRVK	**Borovoye**	17.00	38	*e*P	Pn	17 53 49.3	+0.2
	comp=N,7.7nm,0.7s						
BRVK	**Borovoye**	17.00	38	*e*P	Pn	17 53 49.3	+0.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BRVK	**Borovoye**	17.00	38	*e*P	Pn	17 53 49.3	+0.1
	comp=Z,8.0nm,0.7s						
BVA0	**Borovoye Array**	17.03	38	⇓P	Pn	17 53 52.5	+3.0
	comp=Z,1.3nm,0.6s,baz=225,slow=11,SNR=8.1						
BVAR	**Borovoye Array**	17.03	38	P	Pn	17 53 49.8	+0.3
	comp=Z,0.9nm,0.3s,baz=231,slow=13,SNR=25						
BVAR				S	S	17 56 55.2	-11
	comp=Z,0.2nm,0.3s,baz=225,slow=22,SNR=3.0						
BVAR	**Borovoye Array**	17.03	38	P	Pn	17 53 49.8	+0.3
BVAR				S	S	17 56 55.2	-11
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	**Borovoye Array**	17.03	38	P	Pn	17 53 49.8	+0.3
	comp=Z,1.0nm,0.3s						
BVAR				S	S	17 56 55.2	-11
OBN	**Obninsk**	18.09	328	*i* P	pP	17 54 16.1	+4.3
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,100nm,20.0s						
AKASG	**Malin Array Be**	19.33	309	P	Pn	17 54 16.8	-0.8
	comp=Z,1.7nm,0.3s,baz=101,slow=8.9,SNR=6.5						
AKASG	**Malin Array Be**	19.33	309	*e*P	Pn	17 54 17.7	+0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	**Malin Array Be**	19.33	309	*e*P	Pn	17 54 17.7	+0.1
	comp=Z,2.0nm,0.3s						
AKBB	**Malin Array Si**	19.33	309	*e*P	Pn	17 54 17.3	-0.3
AKBB	**Malin Array Si**	19.33	309	*e*P	Pn	17 54 17.3	-0.3
AKBB	**Malin Array Si**	19.33	309	*e*P	Pn	17 54 17.3	-0.3
KIEV	**Kiev**	19.34	309	*e*P	Pn	17 54 16.4	-1.3
	comp=Z,4.5nm,0.6s						
KIEV	**Kiev**	19.34	309	*e*P	Pn	17 54 16.4	-1.3
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIEV	**Kiev**	19.34	309	*e*P	Pn	17 54 16.4	-1.3
	comp=Z,5.0nm,0.6s						
VRI	**Vrincioaia**	19.80	294	⇓P	pP	17 54 34.8	+4.0
PLOR	**Plostina**	19.86	294	⇑P	Pn	17 54 28.2	+4.3
PLOR	**Plostina**	19.86	294	P	Pn	17 54 28.2	+4.3
MLR	**Muntele Rosu**	20.32	293	⇑P	P	17 54 28.8	+1.6
MLR	**Muntele Rosu**	20.32	293	P	P	17 54 28.8	+1.6
KURK	**Kurchatov**	20.36	52	*e*P	P	17 54 29.2	+1.6
	comp=Z,6.3nm,0.9s						
KURK				*e*		17 54 39.4	
KURK	**Kurchatov**	20.36	52	*e*P	P	17 54 29.2	+1.6
KURK				*e*		17 54 39.4	
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	20.36	52	*e*P	P	17 54 29.2	+1.6
	comp=Z,6.0nm,0.9s						
VOIR		20.95	292	⇓P	P	17 54 34.9	+1.0
VOIR		20.95	292	P	P	17 54 34.9	+1.0
BURAR	**Bucovina Array**	21.06	298	⇑P	P	17 54 36.4	+1.3
BUR08	**Bucovina Ar. S**	21.07	298	*e*P	P	17 54 34.9	-0.4
BUR08				*e*		17 54 44.6	
BUR08	**Bucovina Ar. S**	21.07	298	*e*P	P	17 54 34.9	-0.4
MKAR	**Makanchi Array**	21.90	64	P	P	17 54 44.2	+0.1
	comp=Z,0.6nm,0.4s,mb3.4,baz=254,slow=10,SNR=5.0						
MKAR				pP		17 54 55.4	
	comp=Z,3.0nm,0.8s,baz=254,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	21.90	64	P	P	17 54 44.2	+0.1
MKAR				pP		17 54 55.4	
MKAR	**Makanchi Array**	21.90	64	P	P	17 54 44.2	+0.1
MKAR				*PP		17 54 55.4	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	21.90	64	P	P	17 54 44.2	+0.1
	comp=Z,1.0nm,0.4s,mb3.6						
DRGR		22.66	296	⇓P	pP	17 55 05.1	+3.5
ZALV	**Zalesovo Beam**	25.02	47	P	P	17 55 15.3	+0.6
	comp=Z,1.1nm,0.5s,mb3.6,baz=267,slow=11,SNR=6.7						
ZALV				pP	pP	17 55 26.8	+2.0
	comp=Z,1.7nm,0.5s,baz=256,slow=11,SNR=6.8						
ZALV	**Zalesovo Beam**	25.02	47	P	P	17 55 15.3	+0.6
ZALV				pP	pP	17 55 26.8	+2.0
ZALV	**Zalesovo Beam**	25.02	47	P	P	17 55 15.3	+0.5
ZALV				*PP	pP	17 55 26.8	+2.1
ZALV				pmax	pm

GTA LR LR
comp=Z,110nm,10.9s
BVAR Borovoye Array 20.67 303 P **P** **17 55 45.5 +0.3**
comp=Z,0.4nm,0.3s,baz=107,slow=9.8,SNR=1.8
BVAR Borovoye Array 20.67 303 P **P** **17 55 45.5 +0.3**
CMAR Chiang Mai Arr 26.66 182 P **P** **17 56 44.2 -0.2**
comp=Z,0.6nm,0.8s,mb3.2,baz=360,slow=9.3,SNR=4.5
WRA Warramunga Arr 72.05 146 P **P** **18 02 28.5 -1.0**
comp=Z,0.3nm,0.7s,mb3.4,baz=346,slow=6.8,SNR=3.2
ASAR Alice Springs 75.25 148 P **P** **18 02 47.9 -0.5**
comp=Z,0.2nm,0.5s,mb3.3,baz=342,slow=5.7,SNR=5.3

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*BGS **24** 17:59:08.3±1.7,34°.12N×74°.68E,h100km,mb5.0*
*NNC **24** 17:59:28.6±6.1,36°.44N×70°.31E,h0km,mb5.7,mpv6.0, Error ellipse: s-maj=59.1km s-min=43.0km az=32.0*
*ISCJB **24** 17:59:31.6±0.1,36°.10N±0°.02×71°.29E±0°.02,h98km, mb5.1/258,Error ellipse: s-maj=2.3km s-min=1.7km az=26.9*
*MOS **24** 17:59:31.9±1.4,36°.20N×71°.34E,h97km,mb5.2/90, MS4.0/22,Error ellipse: s-maj=5.6km s-min=3.1km az=128.9*
*BJI **24** 17:59:32.3,36°.32N×71°.33E,h86km,mB5.2/27,mb5.0/51, Ms4.7/37,Ms7 4.4/29*
*IDC **24** 17:59:33.6±0.4,36°.13N×71°.19E,h104km±3km,mb4.6/36, mb1 4.7/36,mb1mx4.7/36,mbtmp4.6/36,MS4.1/22, Ms1 4.1/22,ms1mx3.8/46,Error ellipse: s-maj=10.5km s-min=6.7km az=17.0*
*NEIC **24** 17:59:33.5±0.2,36°.15N×71°.25E,mb5.2/131,Error ellipse: s-maj=5.3km s-min=3.8km az=187.0*
NEIC Felt at Islamabad, Pakistan.
*TEH **24** 17:59:33.0,36°.24N×71°.17E,h92km*
*SZGRF **24** 17:59:33.5,35°.85N×71°.39E,h136km,mb5.3,Pakistan*
*DJA **24** 17:59:35,36°.12N×71°.13E,h95km,mb5.6/29*
*GCMT **24** 17:59:35.8±0.2,36°.10N×71°.12E,h107km±1km,MW5.2, Moment Tensor Solution. s74,c110; s86,c166; Moment tensor: Scale 10^{16}Nm; M_{rr}5.42±.17; $M_{\theta\theta}$-0.20±.18; $M_{\phi\phi}$-5.22±.19; $M_{r\theta}$-3.31±.13; $M_{\theta\phi}$-4.18±.17; $M_{r\phi}$4.03±.14; Best double couple: $M_0$8.50000×10^{16} NP1:ϕ_s238.00000°, δ46.00000°,λ141.00000°. NP2:ϕ_s358.00000°,δ63.00000°, λ51.00000°. Principal axes: T 9.0600, Plg54.0000°, Azm219.0000°; N -1.1600, Plg34.0000°, Azm18.0000°; P -7.9100, Plg10.0000°, Azm115.0000°; Data Used: II IU IC G CN.*

ISC 24 17:59:33.4±0.1,36°.09N±0°.02×71°.28E±0°.02,h100km, h100km±1.2km:pP-P,n935,σ1°.25/964,mb5.1/258,75C-72D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.32**	**167**	⇑P		**Pn**		**18 00 12.2**	**+2.0**
CEP					S	**Sn**		**18 00 43.0**	**+4.7**
KBL	**Kabul**	**2.40**	**230**	*e*P		**Pn**		**18 00 11.1**	**0.0**
KBL	**Kabul**	**2.40**	**230**	*e*PN		**Pn**		**18 00 11.1**	**0.0**
CHCP	**Chirah Chowk**	**2.93**	**146**	⇑P		**Pn**		**18 00 20.4**	**+2.2**
NIL	**Nilore**	**2.93**	**146**	P		**Pn**		**18 00 26.3**	**+8.1**
NIL				*e*S		**Sn**		**18 00 58.3**	**+5.7**
NIL	**Nilore**	**2.93**	**146**	PN		**Pn**		**18 00 26.3**	**+8.1**
NIL				*e*S		**Sn**		**18 00 58.3**	**+5.6**
THW	**Thamme Wali**	**3.31**	**173**	P		**Pn**		**18 00 24.8**	**+1.5**
JMU	**Jammu**	**4.51**	**137**	*e*PKP		**Pn**		**18 00 40.0**	**+0.6**
JMU				*e*S		**Sn**		**18 01 30.5**	**-0.2**
KSH	**Kashi**	**5.05**	**46**	P		**Pn**		**18 00 41.8**	**-4.9**
KSH				S		**Sn**		**18 01 31.9**	**-12**
KSH				smax					
	comp=N,4μm,0.4s								
KSH				smax					
	comp=E,5μm,0.4s								
AML	**Almayashu**	**6.32**	**17**	P		**Pn**		**18 01 03.5**	**-0.4**
	SNR=700								
AML	**Almayashu**	**6.32**	**17**	*e*P		**Pn**		**18 01 03.2**	**-0.6**
	comp=E,2μm,0.7s								
BHK	**Bhakra**	**6.33**	**136**	*e*PKP		**Pn**		**18 01 03.4**	**-0.8**
BHK				*ex*		**Sn**		**18 02 13.6**	**-1.4**
SDNR	**Sundarnagar**	**6.59**	**132**	*e*PKP		**Pn**		**18 01 07.5**	**-0.2**
SDNR				*ex*		**Sn**		**18 02 19.5**	**-1.8**
UCH	**Uchtor**	**6.62**	**21**	P		**Pn**		**18 01 07.8**	**-0.2**
	SNR=733								
UCH	**Uchtor**	**6.62**	**21**	*e*P		**Pn**		**18 01 07.6**	**-0.4**
	comp=E,35nm,0.8s								
KZA	**Kyzart**	**6.73**	**26**	P		**Pn**		**18 01 09.4**	**-0.1**
	SNR=84								
KZA	**Kyzart**	**6.73**	**26**	*e*P		**Pn**		**18 01 09.6**	**+0.1**
	comp=E,608nm,0.7s								
EKS2	**Erkin-Say**	**6.84**	**16**	P		**Pn**		**18 01 10.5**	**-0.5**
	SNR=822								
EKS2	**Erkin-Say**	**6.84**	**16**	*e*P		**Pn**		**18 01 10.3**	**-0.7**
	comp=E,9.7nm,0.6s								
SMLA	**Simla**	**6.97**	**134**	*i* P		**Pn**		**18 01 11.6**	**-1.4**
SMLA				*i* x		**Sn**		**18 02 29.5**	**-1.2**
SMLA								18 02 32.9	
	comp=N,29μm,0.2s								
SMLA				⇓				18 02 33.3	
	comp=E,33μm,0.3s								
AAK	**Ala-Archa**	**6.99**	**20**	P		**Pn**		**18 01 12.9**	**-0.1**
	SNR=1074								
KK31	**Karatay Array**	**7.03**	**355**	⇓P		**Pn**		**18 01 11.6**	**-2.0**
	comp=E,576nm,0.5s,baz=182,slow=13								
KK31				⇑S		**Sn**		**18 02 25.1**	**-6.7**
	comp=E,510nm,0.6s,baz=187,slow=20,SNR=4.7								
KKAR	**Karatay Array**	**7.03**	**355**	*e*P		**Pn**		**18 01 10.4**	**-3.2**
	comp=E,866nm,0.4s								
KKAR	**Karatay Array**	**7.03**	**355**	*e*PN		**Pn**		**18 01 10.4**	**-3.1**
KKAR				pmax		pmax			
	comp=Z,866nm,0.4s								
KBK	**Karagaybulak**	**7.14**	**22**	P		**Pn**		**18 01 15.1**	**-0.1**
	SNR=225								
FRU	**Bishkek**	**7.21**	**20**	⇓*i*PN		**Pn**		**18 01 15.0**	**-1.0**
FRU				pmax		pmax			
	comp=Z,2μm,1.6s								
FRU				pmax		pmax			
	comp=Z,2μm,2.0s								
ULHL	**Ulahol**	**7.25**	**31**	P		**Pn**		**18 01 16.1**	**-0.5**
	SNR=128								
KLP	**Kalpa**	**7.37**	**126**	*e*PKP		**Pn**		**18 01 18.1**	**-0.3**
KLP				*e*S		**Sn**		**18 02 36.2**	**-4.2**
KLP				AML		AML		18 02 50.6	
	comp=N,9μm,0.5s								
KLP				AML		AML		18 02 52.6	
	comp=E,10μm,0.8s								
CHMS	**Chumysh**	**7.40**	**20**	P		**Pn**		**18 01 17.9**	**-0.7**
	SNR=137								
USP	**Ospenovka**	**7.58**	**18**	P		**Pn**		**18 01 19.7**	**-1.4**
	SNR=486								
TKM2	**Tokmak 2**	**7.59**	**25**	⇓P		**Pn**		**18 01 21.1**	**-0.1**
	comp=E,477nm,0.6s								
TKM2	**Tokmak 2**	**7.59**	**25**	P		**Pn**		**18 01 20.7**	**-0.5**
	SNR=418								
TKM2	**Tokmak 2**	**7.59**	**25**	*e*P		**Pn**		**18 01 20.9**	**-0.3**
	comp=E,11nm,0.4s								
TKM2	**Tokmak 2**	**7.59**	**25**	*e*PN		**Pn**		**18 01 20.9**	**-0.3**
TKM2				pmax		pmax			
	comp=Z,11nm,0.4s								
KKR	**Kurukshetra**	**7.68**	**141**	*e*PKP		**Pn**		**18 01 22.6**	**0.0**
DDI	**Dehra Dun**	**8.08**	**133**	*e*PKP		**Pn**		**18 01 27.0**	**-1.0**
DDI				*ex*		**Sn**		**18 02 55.0**	**-2.7**
RTK	**Rohtak**	**8.27**	**147**	*e*PKP		**Pn**		**18 01 30.0**	**-0.5**
KNDC	**Almaty**	**8.36**	**30**	⇓P		**Pn**		**18 01 32.1**	**+0.5**
	comp=Z,314nm,0.5s								
AAA	**Alma-Ata**	**8.39**	**30**	*e*PN		**Pn**		**18 01 31.1**	**-1.0**
AAA				pmax		pmax			
	comp=Z,2μm,1.8s								
AAA				MLR		MLR			
	comp=Z,6μm,5.0s								
BHGR	**Bahadurgarh**	**8.80**	**145**	*ex*		**Pn**		**18 01 33.9**	**-3.9**
KHET	**Khetri**	**8.87**	**153**	*e*PKP		**Pn**		**18 01 37.0**	**-1.7**
KHET				*e*S		**Sn**		**18 03 09.7**	**-7.2**
KHET				AML		AML		18 03 14.1	
	comp=E,2μm,0.6s								
KHET				AML		AML		18 03 14.6	
	comp=N,1μm,0.5s								
NDI	**New Delhi**	**8.93**	**144**	*e*PKP		**Pn**		**18 01 32.4**	**-7.2**
NDI				*e*S		**Sn**		**18 03 02.4**	**-16**
NDI				AML		AML		18 03 15.4	
	comp=N,677nm,0.5s								
NDI				AML		AML		18 03 16.7	
	comp=E,828nm,0.5s								
IMYA	**Miami**	**9.04**	**275**	*e*P		**Pn**		**18 01 36.8**	**-4.1**
AYAN	**Aya Nagar**	**9.06**	**145**	*e*PKP		**Pn**		**18 01 38.6**	**-2.7**
KUDL	**Kundal**	**9.07**	**149**	*e*PKP		**Pn**		**18 01 39.7**	**-1.8**
KUDL				*e*S		**Sn**		**18 03 14.4**	**-7.4**
KUDL				AML		AML		18 03 19.2	
	comp=E,1μm,0.3s								
KUDL				AML		AML		18 03 20.6	
	comp=N,680nm,0.7s								
BISR	**Bishrakh**	**9.13**	**143**	*e*PKP		**Pn**		**18 01 41.7**	**-0.6**
SONA	**Sohna**	**9.24**	**146**	*e*PKP		**Pn**		**18 01 42.0**	**-1.7**
SONA				*e*S		**Sn**		**18 03 19.3**	**-6.5**
SONA				AML		AML		18 03 27.2	
	comp=E,1μm,0.5s								
SONA				AML		AML		18 03 27.5	
	comp=N,542nm,0.7s								
ISRO	**Mashad**	**9.55**	**275**	*e*P		**Pn**		**18 01 42.9**	**-5.0**
IMOG	**Moghan**	**9.66**	**274**	*e*P		**Pn**		**18 01 45.4**	**-4.1**
IPAY	**Payeh**	**9.93**	**276**	*e*P		**Pn**		**18 01 48.8**	**-4.2**
PTH	**Pithoragarh**	**9.95**	**128**	*e*PKP		**Pn**		**18 01 51.3**	**-2.1**
PTH				*ex*		x		18 03 37.6	
IDAH	**Dahanechah**	**10.00**	**254**	*e*P		**Pn**		**18 01 53.7**	**-0.4**
AJM	**Ajmer**	**10.01**	**162**	*e*PKP		**Pn**		**18 01 52.5**	**-1.7**
LGTI	**Lohaghat**	**10.04**	**129**	*e*PKP		**Pn**		**18 01 51.5**	**-3.1**
LGTI				*ex*		x		18 03 38.6	
IAKL	**Akhelmad**	**10.12**	**277**	*e*P		**Pn**		**18 01 51.3**	**-4.3**
IEMG	**Emamgholi**	**10.22**	**281**	*e*P		**Pn**		**18 01 51.1**	**-5.9**
IQHU	**Qucahn**	**10.29**	**279**	*e*P		**Pn**		**18 01 53.0**	**-5.0**
AGRA	**Agra**	**10.50**	**145**	*e*PKP		**Pn**		**18 01 58.1**	**-2.8**
AGRA				*e*S		**Sn**		**18 03 48.0**	**-8.6**
AGRA				AML		AML		18 03 58.1	
	comp=E,1μm,0.6s								
AGRA				AML		AML		18 03 59.6	
	comp=N,774nm,0.5s								
ABKT	**Ailbek**	**10.68**	**284**	Pn		**Pn**		**18 01 57.2**	**-6.1**
	comp=N,1μm,0.8s								
VAN	**Vannovskaya**	**10.69**	**284**	⇑*i*P		**Pn**		**18 01 55.0**	**-8.4**
ISFR	**Sfrayin**	**10.72**	**279**	*e*P		**Pn**		**18 01 59.1**	**-4.8**
IKOO	**Kooshah**	**10.79**	**254**	*e*P		**Pn**		**18 02 03.2**	**-1.7**
ISHV	**Shirvan**	**10.98**	**282**	*e*P		**Pn**		**18 02 03.1**	**-4.2**
BHJ	**Bhuj**	**12.87**	**187**	*ex*		**Pn**		**18 02 30.0**	**-2.6**
DANN	**Dangsing**	**13.08**	**123**	*e*Pn		**Pn**		**18 02 31.7**	**-3.6**
DANN				*e*Sn		**Sn**		**18 04 50.4**	**-8.7**
	comp=N,2μm,0.9s								
KOLN	**Koldanda**	**13.35**	**125**	*e*Pn		**Pn**		**18 02 35.1**	**-3.7**
KOLN				*e*Sn		**Sn**		**18 04 56.5**	**-9.1**
	comp=N,1μm,0.8s								
MK31	**Makanchi Array**	**13.49**	**34**	⇑P		**Pn**		**18 02 38.5**	**-2.1**
	comp=N,48nm,0.8s,baz=222,slow=19,SNR=114								
MK31	**Makanchi Array**	**13.49**	**34**	*e*P		**Pn**		**18 02 38.4**	**-2.2**
MK31	**Makanchi Array**	**13.49**	**34**	*e*P		**Pn**		**18 02 38.4**	**-2.2**
MKAR	**Makanchi Array**	**13.49**	**34**	P		**Pn**		**18 02 37.6**	**-3.0**
	comp=N,1.6nm,0.3s,baz=225,slow=12,SNR=73								
MKAR	**Makanchi Array**	**13.49**	**34**	P		**Pn**		**18 02 37.6**	**-3.0**
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.3s								
IBAF	**Bafgh**	**13.81**	**256**	*e*P		**Pn**		**18 02 44.0**	**-0.8**
BHPL	**Bhopal**	**13.87**	**156**	*ex*		**Pn**		**18 02 43.0**	**-2.7**
BHPL				*ex*		x		18 05 08.2	
BHPL				AML		AML		18 05 11.9	
	comp=N,320nm,0.4s								
BHPL				AML		AML		18 05 11.9	
	comp=E,360nm,0.5s								
GKN	**Gorkha**	**13.90**	**122**	*e*Pn		**Pn**		**18 02 41.8**	**-4.2**
GKN				*e*Sn		**Sn**		**18 05 08.7**	**-10**
	comp=E,1μm,0.7s								
ALBI	**Allahabad**	**14.04**	**137**	*ex*		**Pn**		**18 02 42.0**	**-5.9**
IGLO	**Ghaloghah**	**14.08**	**277**	*e*P		**Pn**		**18 02 46.9**	**-1.4**
IANJ	**Anjilo**	**14.11**	**273**	*e*P		**Pn**		**18 02 46.8**	**-1.9**
IKIA	**Kiasar**	**14.22**	**276**	*e*P		**Pn**		**18 02 48.6**	**-1.5**
DMN	**Daman**	**14.47**	**122**	*e*Pn		**Pn**		**18 02 49.1**	**-4.2**
DMN				*e*Sn		**Sn**		**18 05 23.2**	**-10**
	comp=E,5μm,1.4s								
KKN	**Kakani**	**14.47**	**121**	*e*Pn		**Pn**		**18 02 49.1**	**-4.3**
KKN				*e*Sn		**Sn**		**18 05 23.7**	**-9.2**
	comp=E,2μm,1.0s								
KKN	**Kakani**	**14.47**	**121**	*e*P		**Pn**		**18 02 49.1**	**-4.3**
KKN				*e*				18 05 23.7	
ICHK	**Chekchek**	**14.48**	**260**	*e*P		**Pn**		**18 02 52.9**	**-0.6**
ISHM	**Shahmirzad**	**14.58**	**274**	*e*P		**Pn**		**18 02 52.7**	**-2.0**
IMEH	**Mehriz**	**14.63**	**256**	*e*P		**Pn**		**18 02 54.6**	**-0.9**
PKIN	**Phulchoki**	**14.69**	**121**	*e*Pn		**Pn**		**18 02 51.9**	**-4.3**
PKIN				*e*Sn		**Sn**		**18 05 28.6**	**-9.5**
	comp=E,1μm,0.7s								
PKI	**Pulchoki**	**14.70**	**121**	*e*Pn		**Pn**		**18 02 52.1**	**-4.2**
PKI				*e*Sn		**Sn**		**18 05 28.8**	**-10**
	comp=E,1μm,0.8s								
PKI	**Pulchoki**	**14.70**	**121**	*e*P		**Pn**		**18 02 52.1**	**-4.2**
PKI				*e*				18 05 28.8	
WMQ	**Urumqi**	**14.75**	**53**	⇓*i*P		**Pn**		**18 02 54.0**	**-2.8**
WMQ				pP				18 03 08.0	
WMQ				sP		sP		18 03 22.0	-9.4
WMQ				S		**Sn**		**18 05 35.0**	**-4.4**
WMQ				SS				18 05 56.0	
WMQ				pmax		pmax			
	comp=Z,100nm,0.7s								
WMQ				LR		LR			
	comp=N,900nm,8.0s								
WMQ				LR		LR			
	comp=E,750nm,8.0s								
WMQ				LR		LR			
	comp=Z,780nm,8.0s								
GUN	**Gumba**	**14.82**	**119**	*e*Pn		**Pn**		**18 02 54.0**	**-3.8**
GUN				*e*Sn		**Sn**		**18 05 34.3**	**-7.0**
	comp=Z,2μm,0.9s								
JBP	**Jabalpur**	**14.93**	**147**	*ex*		**Pn**		**18 02 55.0**	**-4.3**
JBP				*ex*		x		18 05 32.0	
IFIR	**Firoozkooh**	**15.03**	**274**	*e*P		**Pn**		**18 03 01.0**	**+0.5**
IPRN	**Peran**	**15.30**	**276**	*e*P		**Pn**		**18 03 03.2**	**-0.7**
KURK	**Kurchatov**	**15.55**	**18**	*e*P		**Pn**		**18 03 01.1**	**-5.7**
	comp=Z,160nm,0.9s								
KURK	**Kurchatov**	**15.55**	**18**	*e*P		**Pn**		**18 03 01.1**	**-5.7**
KURK				pmax		pmax			
	comp=Z,160nm,0.9s								
KURK	**Kurchatov**	**15.55**	**18**	Pn		**Pn**		**18 03 02.7**	**-4.1**
	comp=Z,628nm,0.7s,SNR=12								
KURK	**Kurchatov**	**15.55**	**18**	P		**Pn**		**18 03 02.1**	**-4.7**
	SNR=28								
AB31	**Akbulak array**	**15.55**	**331**	P		**Pn**		**18 03 02.4**	**-4.5**
	comp=Z,37nm,0.3s,baz=141,slow=12,SNR=2169								
AB31				⇓S		S		18 05 40.7	-27
	comp=Z,106nm,0.7s,baz=159,slow=24,SNR=5.3								
ABKAR	**Akbulak array**	**15.55**	**331**	*e*P		**Pn**		**18 03 01.5**	**-5.3**
	comp=Z,1.4nm,1.0s								
IDMV	**Damavand**	**15.62**	**274**	*e*P		**Pn**		**18 03 07.4**	**-0.5**
ISFB	**Sefidab**	**15.66**	**269**	*e*P		**Pn**		**18 03 08.0**	**-0.4**
IZEF	**Zefreh**	**15.95**	**264**	*e*P		**Pn**		**18 03 10.6**	**-1.4**
IVRN	**Varamin**	**15.96**	**272**	*e*P		**Pn**		**18 03 10.5**	**-1.6**
AKL	**Akola**	**16.14**	**160**	⇑*i*P		**Pn**		**18 03 13.8**	**-0.6**
AKL				*i* x		x		18 06 00.9	
BANOM	**Banah**	**16.34**	**236**	P		**Pn**		**18 03 18.1**	**+1.2**
	SNR=26								
IKLH	**Kolahrood**	**16.43**	**266**	*e*P		**Pn**		**18 03 17.1**	**-0.9**
IR3	**Iran Long-Peri**	**16.45**	**274**	*e*P		**Pn**		**18 03 16.0**	**-2.2**
TAPN	**Taplejung**	**16.46**	**117**	*e*Pn		**Pn**		**18 03 14.7**	**-3.6**
TAPN				*e*Sn		**Sn**		**18 06 09.1**	**-12**
	comp=Z,1μm,1.1s								
IPAR	**Pars**	**16.51**	**253**	*e*P		**Pn**		**18 03 19.1**	**+0.1**
ODAN	**Odare**	**16.52**	**119**	*e*Pn		**Pn**		**18 03 15.7**	**-3.4**
ODAN				*e*Sn		**Sn**		**18 06 10.3**	**-12**
	comp=Z,998nm,0.9s								
VOSK	**Vostochnaya**	**16.63**	**359**	⇓P		**Pn**		**18 03 16.3**	**-3.9**
	comp=Z,216nm,1.1s								
ISRV	**Sarvestan**	**16.67**	**252**	*e*P		**Pn**		**18 03 20.4**	**-0.6**
IMHD	**Mahdasht**	**16.71**	**275**	*e*P		**Pn**		**18 03 21.0**	**-0.4**
ZRNK	**Zerenda**	**16.93**	**355**	⇓P		**Pn**		**18 03 20.4**	**-3.5**
	comp=Z,56nm,0.6s								
BVA0	**Borovoye Array**	**16.94**	**358**	P		**Pn**		**18 03 21.0**	**-3.0**
	comp=Z,29nm,1.0s,baz=170,slow=14,SNR=322								
BVA0				⇓S		**S**		**18 06 31.8**	**-3.9**
	comp=Z,21nm,1.2s,baz=170,slow=21,SNR=6.9								
BVAR	**Borovoye Array**	**16.94**	**358**	P		**Pn**		**18 03 20.3**	**-3.7**
	comp=Z,5.7nm,0.3s,baz=172,slow=5.9,SNR=146								
BVAR	**Borovoye Array**	**16.94**	**358**	P		**Pn**		**18 03 20.3**	**-3.7**
BVAR				pmax		pmax			
	comp=Z,6.0nm,0.3s								
BRVK	**Borovoye**	**16.98**	**358**	*e*P		**Pn**		**18 03 20.7**	**-3.8**
	comp=Z,133nm,0.8s								
BRVK	**Borovoye**	**16.98**	**358**	*e*P		**Pn**		**18 03 20.7**	**-3.8**
BRVK				pmax		pmax			
	comp=Z,133nm,0.8s								
BRVK	**Borovoye**	**16.98**	**358**	Pn		**Pn**		**18 03 21.6**	**-2.9**
	comp=Z,1μm,0.8s,SNR=83								
BRVK	**Borovoye**	**16.98**	**358**	P		**Pn**		**18 03 21.3**	**-3.2**
	SNR=103								
IPIR	**Pirpir**	**17.17**	**264**	*e*P		**Pn**		**18 03 27.1**	**+0.1**
WBK	**Wadi Bani Khal**	**17.17**	**222**	P		**Pn**		**18 03 27.4**	**+0.3**
	SNR=48								
HATD	**Hatta, Dubai**	**17.20**	**233**	P		**Pn**		**18 03 28.4**	**+1.0**
	SNR=13								
AKTK	**Aktyubinsk**	**17.24**	**330**	P		**Pn**		**18 03 24.9**	**-2.9**
AKTK				S		**S**		**18 06 23.3**	**-17**
AKTK				LR		LR		18 10 28.1	
AKTO	**Aktyubinsk**	**17.24**	**330**	⇓P		**Pn**		**18 03 25.0**	**-2.8**
	comp=Z,119nm,1.1s								
AKTO	**Aktyubinsk**	**17.24**	**330**	P		**Pn**		**18 03 24.9**	**-2.9**
	comp=Z,14nm,0.3s,baz=138,slow=13,SNR=364								
AKTO				S		**S**		**18 06 23.3**	**-17**
	comp=Z,2.4nm,0.3s,baz=17,slow=20,SNR=3.8								
AKTO				LR		LR		18 10 28.1	
	comp=Z,743nm,20.1s,baz=31,slow=38								
AKTO	**Aktyubinsk**	**17.24**	**330**	P		**Pn**		**18 03 24.9**	**-2.9**
AKTO				S		**S**		**18 06 23.3**	**-17**
AKTO				pmax		pmax			
	comp=Z,14nm,0.3s								
AKTO				smax					
	comp=N,2.0nm,0.3s								
AKTO				MLR		MLR			
	comp=Z,743nm,20.1s								
SMDO	**Samad**	**17.33**	**225**	P		**Pn**		**18 03 29.3**	**+0.3**
	SNR=27								
ASHO	**Ashiyiah**	**17.34**	**233**	P		**Pn**		**18 03 29.8**	**+0.6**
	SNR=37								
HOQ	**Hoqain**	**17.36**	**228**	⇓P		**Pn**		**18 03 30.2**	**+0.8**
	SNR=30								
POO	**Poona**	**17.64**	**172**	*e*PKP		**Pn**		**18 03 30.4**	**-2.5**
JMDO	**Jabal Madar**	**17.84**	**224**	P		**Pn**		**18 03 36.5**	**+1.3**
	SNR=44								
LSA	**Lhasa**	**17.85**	**105**	*e*P		**Pn**		**18 03 35.0**	**-0.3**
	comp=Z,363nm,1.2s								
LSA	**Lhasa**	**17.85**	**105**	*e*P		**Pn**		**18 03 35.1**	**-0.2**
LSA				pmax		pmax			
	comp=Z,363nm,1.2s								
ASUD	**Al Ashush, Dub**	**17.86**	**235**	P		**Pn**		**18 03 35.5**	**+0.1**
	SNR=33								
ARQ	**Araqi**	**18.02**	**229**	P		**Pn**		**18 03 38.4**	**+1.0**
	SNR=72								
BSY	**Bisya**	**18.06**	**226**	P		**Pn**		**18 03 38.9**	**+1.0**
	SNR=65								
LATR	**Latur**	**18.22**	**164**	*e*PKP		**Pn**		**18 03 39.5**	**-0.3**
LATR				*ex*		x		18 06 46.0	
KAD	**Karad**	**18.89**	**171**	*e*PKP		**Pn**		**18 03 45.1**	**-2.6**
KAD				*ex*		x		18 07 06.4	
ISRB	**Sarab**	**18.94**	**282**	*e*P		**Pn**		**18 03 47.7**	**-0.5**
IKOM	**Komasi**	**19.53**	**271**	*e*P		**Pn**		**18 03 53.0**	**-2.1**
MAK	**Makhachkala**	**19.54**	**298**	*e*P		**Pn**		**18 03 56.4**	**+1.2**
MAK				*e*S		**S**		**18 07 27.5**	**-0.7**
MAK				MLR		MLR			
	comp=Z,558nm,11.0s								
HYB	**Hyderabad**	**19.69**	**159**	*i* P		**Pn**		**18 03 55.0**	**-2.1**
HYB				*e*S		**S**		**18 07 36.0**	**+4.5**
IVIS	**Veis**	**19.99**	**273**	*e*P		**Pn**		**18 03 57.9**	**-2.6**
CAL	**Calcutta**	**20.05**	**128**	*ex*		**P**		**18 03 52.8**	**-5.8**
CAL				*e*S		**S**		**18 07 39.0**	**+0.5**
ITBZ	**Tabriz**	**20.13**	**284**	*e*P		**P**		**18 04 00.3**	**+0.9**
ZAA0	**Zalesovo Array**	**20.19**	**24**	*e*P		**P**		**18 03 58.8**	**-1.1**
ZALV	**Zalesovo Beam**	**20.19**	**24**	P		**P**		**18 03 58.9**	**-1.0**
	comp=Z,62nm,0.4s,baz=217,slow=11,SNR=279								
ZALV				LR		LR		18 11 39.0	
	comp=Z,284nm,19.6s,baz=229,slow=36								
ZALV	**Zalesovo Beam**	**20.19**	**24**	P		**P**		**18 03 58.9**	**-1.0**
ZALV				pmax		pmax			
	comp=Z,62nm,0.4s								
ZALV				MLR		MLR			
	comp=Z,284nm,19.6s								
BWNR	**Bhubaneshwar**	**20.25**	**137**	*ex*		**P**		**18 03 57.0**	**-3.8**
BWNR				*ex*		x		18 07 34.0	
IGHG	**Ghaleghazi**	**20.26**	**272**	*e*P		**P**		**18 04 01.2**	**+0.4**
IDHR	**Dehrash**	**20.33**	**273**	*e*P		**P**		**18 04 01.6**	**0.0**
IMRD	**Marand**	**20.47**	**285**	*e*P		**P**		**18 04 03.6**	**+0.6**
NVS	**Novosibirsk**	**20.48**	**20**	⇓*i*P		**P**		**18 04 01.6**	**-1.4**
NVS				*e**PP				18 04 21.4	
NVS				*e*S		**S**		**18 07 43.0**	**-3.

SOC e*SS sS 18 09 43.6 -3.2
SOC pmax pmax
comp=Z,144nm,1.1s,mb5.3
SOC MLR MLR
comp=Z,560nm,17.0s
SOKR Solikamsk 25.31 343c iP **P 18 04 50.3 -0.1**
SOKR S **S 18 09 14.0 +5.2**
SOKR pmax pmax
comp=Z,130nm,0.9s,mb5.4
SOKR MLR MLR
comp=Z,610nm,18.0s
KELT Kelkit 25.44 289⇑ iP **P 18 04 52.5 +0.7**
VRHR Novokhopersk 25.97 315 eP **P 18 04 55.5 -0.9**
VRHR pmax pmax
comp=E,70nm,0.9s
VRHR pmax pmax
comp=Z,90nm,0.9s,mb5.2
VRHR pmax pmax
comp=N,40nm,0.8s
KEMA Kemaliye 26.06 287⇑ iP **P 18 04 58.9 +1.5**
GRSN GIRESUNGRSN 26.18 291⇑ iP **P 18 04 59.0 +0.4**
MALT Malatya 26.19 285 Pn **P 18 04 59.0 +0.4**
MALT Malatya 26.19 285 ⇑P **P 18 05 00.3 +1.7**
MALT Malatya 26.19 285⇑ iP **P 18 05 00.3 +1.7**
MALT Malatya 26.19 285 P **P 18 04 59.5 +0.9**
comp=N,649nmcomp=N,52nm,1.2s,mb4.8
MOY Mondy 26.24 44 eP **P 18 05 01.9 +3.0**
MOY pmax pmax
comp=Z,66nm,2.0s,mb4.7
SUSE Susehri 26.25 289⇑ iP **P 18 04 59.1 0.0**
LZH Lanzhou 26.25 80 ⇓P **P 18 05 01.8 +2.6**
LZH pP pP 18 05 23.0 +1.7
LZH sP sP 18 05 35.1 +2.2
LZH PP 18 05 49.0
LZH S **S 18 09 25.3 +1.0**
LZH sS sS 18 10 02.5 -0.4
LZH SS 18 10 41.6
LZH pmax pmax
comp=Z,54nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,240nm,5.2s
LZH LR LR
comp=N,670nm,8.6s
LZH LR LR
comp=E,340nm,10.0s
LZH LR LR
comp=Z,700nm,13.2s
AKCD Akcadag 26.58 285⇑ iP **P 18 05 04.0 +1.9**
ANN Anapa 27.03 299c iP **P 18 05 06.2 +0.2**
ANN e*PP pP 18 05 26.8 -1.4
ANN e 18 05 56.1
ANN eS **S 18 09 38.8 +2.5**
ANN e*SS sS 18 10 15.5 +0.5
ANN pmax pmax
comp=Z,147nm,1.3s,mb5.3
ANN MLR MLR
comp=N,417nm,16.0s
ANN MLR MLR
comp=E,463nm,16.0s
ANN MLR MLR
comp=Z,483nm,16.0s
ZAK Zakamensk 27.09 48 eP **P 18 05 07.7 +1.2**
ZAK e pP 18 05 32.8 +4.1
ZAK pmax pmax
comp=Z,14nm,0.9s,mb4.5
VORD Divnogorie 27.28 313 eP **P 18 05 07.2 -1.0**
VORD e*PP pP 18 05 28.7 -1.7
VORD eS **S 18 09 40.4 +0.3**
VORD pmax pmax
comp=N,30nm,0.9s
VORD pmax pmax
comp=E,80nm,0.9s
VORD pmax pmax
comp=Z,40nm,0.9s,mb5.0
VORD smax
comp=E,330nm,6.8s
VORD smax
comp=Z,200nm,8.2s
VORD smax
comp=N,100nm,5.4s
VSR Storozhevoye 27.45 313 eP **P 18 05 08.5 -1.2**
VSR e*PP pP 18 05 28.1 -3.8
VSR eS **S 18 09 46.1 +3.4**
VSR pmax pmax
comp=Z,80nm,0.9s,mb5.2
VSR pmax pmax
comp=N,40nm,1.3s
VSR pmax pmax
comp=E,100nm,1.0s
VSR smax
comp=E,280nm,6.0s
VSR smax
comp=Z,220nm,7.4s
VSR smax
comp=N,120nm,6.9s
CD2 Chengdu 27.50 91⇓ iP **P 18 05 12.0 +1.6**
CD2 pP pP 18 05 33.4 +0.8
CD2 sP sP 18 05 45.3 +1.1
CD2 PP PP 18 06 04.0 -10
CD2 S **S 18 09 43.3 -0.7**
CD2 sS sS 18 10 20.9 -1.7
CD2 SS SS 18 11 07.8 -36
CD2 pmax pmax
comp=Z,30nm,1.0s,mb4.8
CD2 pmax pmax
comp=Z,120nm,7.2s
CD2 LR LR
comp=N,540nm,13.2s
CD2 LR LR
comp=E,420nm,15.6s
CD2 LR LR
comp=Z,520nm,15.6s
VOR Voronezh 27.61 315 P **P 18 05 11.0 -0.2**
VOR pmax pmax
comp=Z,260nm,1.2s,mb5.6
SONM Songino Array 28.38 55 P **P 18 05 19.5 +1.4**
comp=Z,8.2nm,0.7s,mb4.4,baz=256,slow=9.7,SNR=48
SONM LR LR 18 18 35.8
comp=Z,357nm,20.8s,baz=264,slow=40
SONM Songino Array 28.38 55 P **P 18 05 19.5 +1.4**
SONM pmax pmax
comp=Z,8.0nm,0.7s
SONM MLR MLR
comp=Z,357nm,20.8s
ASF Jabal al Asfar 28.64 272 P **P 18 05 21.0 +0.5**
comp=Z,2.8nm,0.7s,mb4.0,baz=306,slow=1.9,SNR=6.3
ASF LR LR 18 18 47.5
comp=Z,267nm,21.8s,baz=107,slow=40
ASF Jabal al Asfar 28.64 272 P **P 18 05 21.0 +0.5**
ULN Ulaanbaatar 28.82 55 eP **P 18 05 23.2 +1.2**
comp=Z,16nm,0.8s,mb4.7
ULN pmax pmax
comp=Z,16nm,0.8s,mb4.7
ULN Ulaanbaatar 28.82 55 P **P 18 05 23.5 +1.5**
comp=Z,23nm,0.8s,mb4.8
CTKT Corum 28.83 290⇑ iP **P 18 05 23.0 +0.9**
AVNT Avonos 28.93 286⇑ iP **P 18 05 24.3 +1.2**
KMI Kunming 29.08 103 ⇓P **P 18 05 26.0 +1.5**
KMI pP pP 18 05 48.1 +1.3
KMI sP sP 18 06 00.1 +1.7
KMI PP PP 18 06 24.9 -7.0
KMI S **S 18 10 11.3 +2.3**
KMI sS sS 18 10 50.1 +2.3
KMI SS SS 18 11 50.1 -26
KMI pmax pmax
comp=Z,20nm,1.3s,mb4.6
HMDM Hanimaadhoo 29.23 176 P **P 18 05 29.0 +3.1**
comp=Z,108nm,1.1s,mb5.4
HRI Mount Hermon 29.27 275 Pn **P 18 05 27.4 +1.3**
HRI Mount Hermon 29.27 275 P **P 18 05 27.4 +1.3**
KSHT Keshet 29.28 274 Pn **P 18 05 27.3 +1.1**
KSDI Kefar Szold 29.35 275 Pn **P 18 05 27.1 +0.3**
SIM Simferopol' 29.39 299 P **P 18 05 29.5 +2.5**
MMAI Mount Meron Ar 29.60 275 P **P 18 05 29.9 +0.8**
comp=Z,7.3nm,0.8s,mb4.3,baz=58,slow=10.0,SNR=6.2
MMAI PcP PcP 18 08 31.3 -0.1
comp=Z,8.8nm,1.1s,baz=53,slow=4.3,SNR=3.9
MMAI ScP ScP 18 12 02.6 -1.6
comp=Z,3.7nm,0.7s,baz=94,slow=2.5,SNR=4.6
MMAI LR LR 18 19 17.0
comp=Z,192nm,20.4s,baz=135,slow=40
HMDT Nahal Hemdat 29.72 273 Pn **P 18 05 30.2 +0.1**
CHRT Chiangrai 29.77 115 P **P 18 05 31.0 +0.4**
comp=Z,237nm,1.0s,mb5.8
HNTI Hanita 29.77 275 Pn **P 18 05 31.6 +1.1**
BRTR Keskin Array B 29.77 288 P **P 18 05 30.0 -0.5**
comp=Z,22nm,0.7s,mb4.9,baz=103,slow=7.5,SNR=56
BRTR pP pP 18 05 52.1 -0.7
comp=Z,8.7nm,0.8s,baz=90,slow=7.6,SNR=4.6
BRTR ScP ScP 18 12 01.4 -3.3
comp=Z,1.0nm,0.7s,baz=130,slow=5.5,SNR=4.1
BRTR LR LR 18 19 46.6
comp=Z,135nm,21.6s,baz=267,slow=41
BRTR Keskin Array B 29.77 288 P **P 18 05 30.0 -0.5**
BRTR *PP pP 18 05 52.2 -0.6
BRTR 18 12 01.4
BRTR pmax pmax
comp=Z,22nm,0.7s
CHG Chiang Mai 29.83 118 ⇓P **P 18 05 33.4 +2.2**
CHG Chiang Mai 29.83 118 S pP 18 05 56.6 +3.1
comp=Z,16nm,1.2s
CHTO Chiang Mai 29.83 118 eP **P 18 05 32.4 +1.2**
comp=Z,24nm,0.8s,mb4.9
CHTO Chiang Mai 29.83 118 eP **P 18 05 32.4 +1.2**
CHTO pmax pmax
comp=Z,24nm,0.8s,mb4.9
CHTO Chiang Mai 29.83 118 P **P 18 05 33.2 +2.0**
comp=Z,43nm,1.0s,mb5.0
CHTO Chiang Mai 29.83 118 P **P 18 05 33.1 +1.9**
SNR=6.0
CHTO mb 18 05 35.6
baz=0.0,slow=0.0,SNR=12
CM31 Chiang Mai Arr 30.06 118 eP **P 18 05 34.5 +1.3**
comp=Z,36nm,0.8s,mb5.1
CMAR Chiang Mai Arr 30.06 118 P **P 18 05 34.6 +1.4**
comp=Z,12nm,0.9s,mb4.5,baz=299,slow=8.4,SNR=44
CMAR ScP ScP 18 12 04.1 -1.8
comp=Z,5.9nm,0.9s,baz=301,slow=5.1,SNR=10.0
CMAR Chiang Mai Arr 30.06 118 P **P 18 05 34.6 +1.4**
CMAR 18 12 04.1
CMAR pmax pmax
comp=Z,12nm,0.9s
CMAR pmax pmax
comp=N,6.0nm,0.9s
MOS Moscow 30.12 321 eP **P 18 05 32.5 -0.8**
MOS e 18 06 10.6
MOS e 18 06 37.2
MOS eS **S 18 10 25.1 +0.5**
MOS pmax pmax
comp=Z,117nm,1.0s,mb5.5
SLTI Sal'it 30.12 273 Pn **P 18 05 33.4 -0.2**
OBN Obninsk 30.39 320 eP **P 18 05 35.4 -0.4**
comp=Z,105nm,0.7s,mb5.6
OBN Obninsk 30.39 320c iP **P 18 05 35.2 -0.6**
OBN e*PP pP 18 05 54.9 -3.2
OBN e*SP sP 18 06 05.6 -4.1
OBN e 18 06 33.1
OBN pmax pmax
comp=Z,137nm,1.0s,mb5.5
OBN MLR MLR
comp=Z,600nm,21.0s
OBN Obninsk 30.39 320 P **P 18 05 35.1 -0.7**
comp=Z,961nm,0.7s,mb6.5,SNR=8.6
BTO Baotou 30.55 70 eP **P 18 05 38.1 +0.8**
ZFRI Zfri 30.55 270 Pn **P 18 05 38.0 +0.6**
XAN Xi'an 30.76 83 P **P 18 05 40.6 +1.4**
XAN pP pP 18 06 04.8 +3.2
XAN pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
XAN LR LR
comp=N,320nm,21.5s
XAN LR LR
comp=E,120nm,20.4s
PRNI Paran 30.76 270 Pn **P 18 05 39.7 +0.4**
PRNI Paran 30.76 270 P **P 18 05 39.7 +0.4**
RTMI Retamim 30.77 271 Pn **P 18 05 39.5 +0.1**
HRFI Mount Harif 30.84 269 Pn **P 18 05 40.4 +0.3**
RMNI Mount Ramon 30.87 270 Pn **P 18 05 41.4 +1.1**
SGKT Sivrigoynuk 30.91 290⇑ iP **P 18 05 41.0 +0.4**
BDT Bhumibol Dam 30.91 120 P **P 18 05 36.0 -4.8**
comp=E,16nm,0.9s,mb4.7
EIL Elat 31.05 269 P **P 18 05 41.2 -0.6**
comp=E,20nm,1.0s,mb4.8,baz=43,slow=2.6,SNR=13
KZIT Kziot 31.06 271 Pn **P 18 05 42.3 +0.3**
KRMI Paran Flat 31.07 270 Pn **P 18 05 42.5 +0.5**
GYA Guiyang 31.59 98⇑ iP **P 18 05 47.8 +1.2**
GYA pP pP 18 06 11.0 +2.0
GYA sP sP 18 06 23.6 +3.1
GYA PP PP 18 06 55.9 -3.8
GYA PcP PcP 18 08 38.3 +1.5
GYA S **S 18 10 48.8 +0.6**
GYA sS sS 18 11 28.4 +1.4
GYA ScP ScP 18 12 11.0 +0.2
GYA PcS PcS 18 12 23.3 +1.9
GYA ScS ScS 18 16 07.8 -1.3
GYA pmax pmax
comp=Z,20nm,0.8s,mb4.9
GYA pmax pmax
comp=Z,140nm,5.0s
GYA LR LR
comp=N,680nm,14.4s
GYA LR LR
comp=E,570nm,15.8s
GYA LR LR
comp=Z,650nm,14.0s
HHC Hu-ho-hao-te 31.70 69 eP **P 18 05 48.8 +1.4**
HHC pP pP 18 06 10.8 +1.0
HHC sP sP 18 06 22.4 +1.0
HHC PP PP 18 06 56.9 -3.8
HHC PcP PcP 18 08 39.1 +2.3
HHC S **S 18 10 49.9 +0.3**
HHC sS sS 18 11 28.0 -0.5
HHC ScP ScP 18 12 12.5 +1.5
HHC SS SS 18 12 45.6 -24
HHC ScS ScS 18 16 08.1 -1.1
HHC pmax pmax
comp=Z,23nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,84nm,5.8s
HHC LR LR
comp=N,570nm,8.6s
HHC LR LR
comp=E,530nm,9.8s
HHC LR LR
comp=Z,530nm,11.3s
ESKT Eskisehir 31.94 289⇑ iP **P 18 05 47.9 -1.6**
KLMR Klimovskoe 31.95 331 eP **P 18 05 47.8 -1.5**
KLMR e*PP pP 18 06 09.7 -2.1
KLMR pmax pmax
comp=Z,127nm,1.4s,mb5.5
ENH Enshi 32.35 89 eP **P 18 05 55.3 +2.0**
comp=Z,73nm,0.9s,mb5.4
NST Nakhon Sawan 32.77 121 P **P 18 05 57.0 -0.1**
comp=Z,33nm,0.9s,mb5.2
TLCR 33.15 299 ⇓P **P 18 06 02.4 +2.3**
TLCR 33.15 299 ⇓iP **P 18 06 02.4 +2.3**
KIS Kishinev 33.22 302 ⇓iP **P 18 06 01.0 +0.4**
comp=Z,400nm,1.0s
KIS epP pP 18 06 31.0 +7.9
KIS eS **S 18 11 18.0 +4.9**
KIS LRM 18 21 28.0
comp=Z,300nm,16.0s
KIS Kishinev 33.22 302k iP **P 18 06 01.0 +0.4**
KIS e*PP pP 18 06 31.0 +7.9
KIS eS **S 18 11 18.0 +4.9**
KIS e 18 13 14.0
KIS pmax pmax
comp=Z,400nm,1.0s
KIS pmax pmax
comp=Z,300nm,1.0s
KIS MLR MLR
comp=Z,300nm,15.0s
AKASG Malin Array Be 33.38 309 P **P 18 06 00.1 -1.8**
comp=Z,6.9nm,0.4s,mb4.8,baz=87,slow=7.2,SNR=44
AKASG pP pP 18 06 23.9 -0.5
comp=Z,20nm,0.7s,baz=80,slow=7.5,SNR=7.1
AKASG ScP ScP 18 12 13.6 -2.9
comp=Z,0.9nm,0.5s,baz=94,slow=3.8,SNR=4.1
AKASG LR LR 18 22 46.9
comp=Z,323nm,18.9s,baz=100,slow=42
AKASG Malin Array Be 33.38 309 P **P 18 06 00.1 -1.8**
AKASG pP pP 18 06 23.9 -0.5
AKASG ScP ScP 18 12 13.6 -2.9
AKASG LR LR 18 22 46.9
AKASG Malin Array Be 33.38 309 P **P 18 06 00.2 -1.8**
AKASG *PP pP 18 06 24.0 -0.5
AKASG pmax pmax
comp=Z,7.0nm,0.4s
AKASG MLR MLR
comp=Z,323nm,18.9s
AKBB Malin Array Si 33.38 309 eP **P 18 05 58.9 -3.1**
AKBB Malin Array Si 33.38 309 eP **P 18 05 58.9 -3.1**
KIEV Kiev 33.38 309 eP **P 18 06 00.3 -1.7**
comp=Z,67nm,1.1s,mb5.4
KIEV Kiev 33.38 309 eP **P 18 06 00.3 -1.7**
KIEV pmax pmax
comp=Z,67nm,1.1s,mb5.4
TIRR Tirgusor 33.44 298 eP **P 18 06 02.8 +0.2**
comp=Z,49nm,1.5s,mb5.1
TIRR Tirgusor 33.44 298 ⇓P **P 18 06 04.2 +1.6**
TIRR Tirgusor 33.44 298 ⇓iP **P 18 06 04.2 +1.6**
LEOM Leova 33.59 302 P **P 18 06 06.2 +2.4**
LEOM Leova 33.59 302 ⇓iP **P 18 06 06.5 +2.7**
CFR Carcaliu 33.63 299 P **P 18 06 06.1 +1.8**
CFR Carcaliu 33.63 299⇑ iP **P 18 06 06.8 +2.5**
VRI Vrincioaia 34.63 300 P **P 18 06 14.0 +1.2**
VRI Vrincioaia 34.63 300⇑ iP **P 18 06 16.2 +3.4**
PLOR Plostina 34.68 300⇑ P **P 18 06 16.5 +3.2**
PLOR Plostina 34.68 300⇑ iP **P 18 06 16.5 +3.2**
TESR 34.69 302 ⇓iP **P 18 06 14.0 +0.6**
MICGM Minsk 34.95 316 eP **P 18 06 14.0 -1.5**
MNK Minsk 34.98 316 eP **P 18 06 14.0 -1.7**
MLR Muntele Rosu 35.18 300 P **P 18 06 18.9 +1.3**
MLR Muntele Rosu 35.18 300⇑ iP **P 18 06 18.5 +0.9**
BJT Baijiatuau 35.28 70 eP **P 18 06 20.7 +2.2**
comp=Z,19nm,0.6s,mb5.1
BJT Baijiatuau 35.28 70 eP **P 18 06 20.7 +2.2**
BJT pmax pmax
comp=Z,19nm,0.6s
BJI Beijing 35.28 70 P **P 18 06 20.8 +2.2**
BJI S **S 18 11 46.3 +1.2**
BJI pmax pmax
comp=Z,28nm,0.6s,mb5.3
BJI LR LR
comp=N,450nm,16.7s
BJI LR LR
comp=E,300nm,13.5s
BJI LR LR
comp=Z,380nm,24.0s
PUL Pulkovo 35.38 325 iP **P 18 06 19.5 +0.4**
PUL pmax pmax
comp=Z,126nm,0.8s,mb5.8
ALN Alexandroupoli 35.42 292 P **P 18 06 20.2 +0.5**
ATD Arta Tunnel 35.46 234 P **P 18 06 21.1 +0.8**
comp=Z,10.0nm,0.3s,mb5.1,baz=169,slow=17,SNR=9.8
BOD Bodaibo 35.52 39 eP **P 18 06 20.2 -0.2**
BOD e pP 18 06 43.1 +0.1
DOPR Dopca 35.56 301 ⇓iP **P 18 06 23.9 +3.0**
NACGM Naroch 35.66 316 eP **P 18 06 18.0 -3.6**
BURAR Bucovina Array 35.70 303 P **P 18 06 24.4 +2.4**
BURAR Bucovina Array 35.70 303 ⇓iP **P 18 06 24.8 +2.8**
BUR08 Bucovina Ar. S 35.71 303 eP **P 18 06 20.5 -1.5**
RDO Rodhopi 35.77 292 P **P 18 06 26.9 +4.2**
VOIR 35.81 300⇑ P **P 18 06 25.7 +2.7**
VOIR 35.81 300⇑ iP **P 18 06 25.7 +2.7**
WHN Wuhan 36.19 86 P **P 18 06 28.3 +1.8**
WHN S **S 18 12 06.9 +7.7**
WHN pmax pmax
comp=Z,45nm,0.7s,mb5.5
WHN LR LR
comp=N,2μm,40.2s
WHN LR LR
comp=E,810nm,19.1s
WHN LR LR
comp=Z,1μm,14.2s
JOF Joensuu 36.33 330 eP **P 18 06 26.4 -0.8**
JOF pmax pmax
comp=Z,76nm,0.5s,mb5.9
JOF Joensuu 36.33 330 ep **P 18 06 26.4 -0.8**
comp=Z,76nm,0.5s,mb5.9
UBT Ubonrachathani 36.55 116⇑ P **P 18 06 31.3 +1.7**
LVV L'vov 36.59 307 eP **P 18 06 29.1 -0.4**
VSU Vasula 36.64 322c iP **P 18 06 29.3 -0.6**
VSU pmax pmax
comp=Z,121nm,0.9s,mb5.8
TIA Tai'an 36.75 76 eP pP 18 06 56.8 +2.9
BMR Baia Mare 36.86 303⇑ P **P 18 06 34.8 +2.9**
BMR Baia Mare 36.86 303⇑ iP **P 18 06 34.8 +2.9**
SRS Serrai 37.23 293 P **P 18 06 35.0 -0.1**
VTS Vitosha 37.33 295 ⇓P **P 18 06 37.6 +1.7**
VTS Vitosha 37.33 295 P **P 18 06 36.2 +0.3**
VTS Vitosha 37.33 295 ⇓iP **P 18 06 37.6 +1.7**
DRGR 37.40 302⇑ P **P 18 06 37.4 +0.9**
DRGR 37.40 302⇑ iP **P 18 06 37.4 +0.9**
KWP Kalwaria Pacla 37.43 307 eP **P 18 06 37.1 +0.4**
KWP Kalwaria Pacla 37.43 307 eP **P 18 06 36.5 -0.2**
comp=Z,122nm,1.1s,mb5.8
KWP Kalwaria Pacla 37.43 307 ⇓P **P 18 06 38.9 +2.2**
KWP Kalwaria Pacla 37.43 307 ⇓iP **P 18 06 38.9 +2.2**
PLG Polygyros 37.46 291 P **P 18 06 37.4 +0.4**
TRPA Tarpa 37.51 304 ⇓iP **P 18 06 38.9 +1.5**
SUW Suwalki 37.56 314 eP **P 18 06 36.9 -0.8**
SUW Suwalki 37.56 314 eP **P 18 06 36.8 -0.9**
comp=Z,37nm,0.8s,mb5.3
SUW Suwalki 37.56 314 eP **P 18 06 36.9 -0.8**
ATHU Athens Univers 37.64 287 P **P 18 06 39.6 +1.0**
UZH Uzhgorod 37.68 305c iP **P 18 06 38.4 -0.4**
UZH i pP 18 06 58.3 -3.3
KOLS Kolonicke sedl 37.70 306 eP **P 18 06 39.5 +0.6**
comp=Z,31nm,1.0s,mb5.1
KOLS e 18 06 41.3
KOLS ePP PP 18 08 09.0 +2.3
KOLS Kolonicke sedl 37.70 306 eP **P 18 06 39.5 +0.6**
KOLS e 18 08 09.0
KOLS pmax pmax
comp=Z,31nm,1.0s,mb5.1
KOLS Kolonicke sedl 37.70 306 eP **P 18 06 39.5 +0.6**
KOLS e 18 06 41.3
KOLS ePP PP 18 08 09.0 +2.3
KNT Kendrikon 37.75 293 P **P 18 06 37.3 -2.2**
LVZ Lovozero 37.92 338 eP **P 18 06 40.3 -0.2**
comp=Z,70nm,0.8s,mb5.5
LVZ Lovozero 37.92 338⇑ eP **P 18 06 41.1 +0.5**
LVZ pmax pmax
comp=Z,56nm,0.8s,mb5.5
FINES FINESS Array B 37.95 326 P **P 18 06 40.5 -0.3**
comp=Z,48nm,0.8s,mb5.4,baz=101,slow=9.9,SNR=94
FINES LR LR 18 23 33.9
comp=Z,424nm,19.0s,baz=110,slow=38
FINES FINESS Array B 37.95 326 P **P 18 06 40.6 -0.3**
FINES pmax pmax
comp=Z,48nm,0.8s
FINES MLR MLR
comp=Z,424nm,19.0s
VAY Valandovo 37.97 293 eP **P 18 06 41.3 0.0**
KAF Kangasniemi 38.09 327 eP **P 18 06 41.7 -0.4**
KAF pmax pmax
comp=Z,28nm,0.8s,mb5.1
KAF Kangasniemi 38.09 327 ep **P 18 06 41.7 -0.4**
comp=Z,28nm,0.8s,mb5.2
APA Apatity 38.10 338 ⇓iP **P 18 06 42.2 +0.1**
APA i S **S 18 12 28.0 +0.8**
APA pmax pmax
comp=Z,54nm,1.2s,mb5.2
APA MLR MLR
comp=Z,1μm,17.0s
BZS Buzias 38.21 300 ⇓P **P 18 06 43.9 +0.6**
BZS Buzias 38.21 300 ⇓iP **P 18 06 43.9 +0.6**
CRVS Cervenica-Dubn 38.23 305 eP **P 18 06 44.7 +1.3**
comp=Z,29nm,1.9s,mb4.8
CRVS ePP PP 18 08 13.5 +0.9
CRVS Cervenica-Dubn 38.23 305 eP **P 18 06 44.7 +1.3**
CRVS pmax pmax
comp=Z,29nm,1.9s,mb4.8
CRVS Cervenica-Dubn 38.23 305 eP **P 18 06 44.7 +1.3**
CRVS ePP PP 18 08 13.5 +0.9
AGG Agios Georgios 38.54 289 P **P 18 06 44.9 -1.3**
WAR Warsaw 38.65 311 eP **P 18 06 48.7 +1.7**
WAR Warsaw 38.65 311 eP **P 18 06 48.7 +1.8**
KECS Kecovo 38.88 305 eP **P 18 06 51.0 +2.2**
comp=Z,7.9nm,0.9s,mb4.5
KECS ePP PP 18 08 17.5 -2.2
KECS Kecovo 38.88 305 eP **P 18 06 51.0 +2.2**
KECS pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
KECS Kecovo 38.88 305 eP **P 18 06 51.0 +2.2**
KECS ePP PP 18 08 17.5 -2.2
KRUS Krusevo 38.94 293 eP **P 18 06 49.0 -0.5**
NIE Niedzica 38.99 306 eP **P 18 06 52.4 +2.7**
NIE Niedzica 38.99 306 eP **P 18 06 52.4 +2.7**
PSZ Piszkesteto 39.28 304 ⇓eP **P 18 06 54.6 +2.3**
NJ2 Nanjing 39.31 82 eP **P 18 06 56.5 +3.8**

NJ2 S **S** **18 12 53.0 +6.7**
NJ2 pmax pmax
comp=Z,40nm,1.1s,mb5.2
NJ2 LR LR
comp=N,360nm,15.0s
NJ2 LR LR
comp=E,410nm,20.5s
NJ2 LR LR
comp=Z,450nm,14.4s
OJC Ojcow 39.33 308 *e*P **P** **18 06 53.8 +1.2**
OJC Ojcow 39.33 308 *e*P **P** **18 06 53.8 +1.2**
SNG Songkhla 39.34 130 P **P** **18 06 53.0 -0.1**
DIVS Divibare 39.49 298 P **P** **18 06 54.2 +0.2**
BUD Budapest 39.89 303⇓ *e*P **P** **18 06 59.3 +2.0**
KFL Anninata 39.92 288 P **P** **18 06 56.4 -1.3**
VYHS Vyhne 39.97 305 *e*P **P** **18 06 57.8 -0.2**
comp=Z,28nm,1.4s,mb4.9
VYHS *e* 18 07 00.5
VYHS *e*PP PP 18 08 30.6 -1.0
VYHS Vyhne 39.97 305 *e*P **P** **18 06 57.8 -0.2**
VYHS *e* 18 08 30.6
VYHS pmax pmax
comp=Z,28nm,1.4s,mb4.9
VYHS Vyhne 39.97 305 *e*P **P** **18 06 57.8 -0.2**
VYHS *e* 18 07 00.5
VYHS *e*PP PP 18 08 30.6 -1.0
PKSM Moragy 40.24 301 ⇓P **P** **18 07 02.0 +1.8**
PKSM Moragy 40.24 301⇓ *i*P **P** **18 07 02.0 +1.8**
KOLL Kolacno 40.26 305 *e*P **P** **18 07 02.6 +2.3**
KOLL Kolacno 40.26 305 *e*P **P** **18 07 02.6 +2.3**
KOLL Kolacno 40.26 305 *e*P **P** **18 07 02.6 +2.3**
OKC Ostrava-Krasne 40.39 307 *e*P **P** **18 07 03.1 +1.7**
OKC Ostrava-Krasne 40.39 307 *e*P **P** **18 07 03.1 +1.7**
TPTI 40.49 138 P **P** **18 07 03.9 +1.3**
comp=Z,618nmcomp=Z,19nm,1.2s,mb4.8
TPTI 40.49 138 P **P** **18 07 05.8 +3.2**
comp=Z,629nmcomp=Z,19nm,1.2s,mb4.8
MORC Moravsky Berou 40.79 307 *e*P **P** **18 07 03.1 -1.5**
comp=Z,64nm,1.3s,mb5.3
MORC Moravsky Berou 40.79 307 ⇑P **P** **18 07 05.1 +0.5**
MORC Moravsky Berou 40.79 307⇑ *i*P **P** **18 07 05.1 +0.5**
GKP Gorka Klasztor 41.01 312 *e*P **P** **18 07 06.2 -0.2**
GKP Gorka Klasztor 41.01 312 *e*P **P** **18 07 06.3 -0.1**
ZST Bratislava 41.14 304 *e*P **P** **18 07 08.3 +0.7**
comp=Z,11nm,0.8s,mb4.7
ZST Bratislava 41.14 304 *e*P **P** **18 07 08.3 +0.7**
ZST pmax pmax
comp=Z,11nm,0.8s,mb4.7
ZST Bratislava 41.14 304 *e*P **P** **18 07 08.3 +0.7**
KEV Kevo 41.26 338 *e*P **P** **18 07 07.6 -0.7**
KEV pmax pmax
comp=Z,14nm,0.5s,mb5.0
KEV Kevo 41.26 338 *e*p **P** **18 07 07.6 -0.7**
comp=Z,14nm,0.5s,mb5.0
VRAC Vranov 41.42 306 P **P** **18 07 10.2 +0.4**
comp=Z,38nm,1.0s,mb5.2,baz=88,slow=7.7,SNR=19
VRAC Vranov 41.42 306 ⇓P **P** **18 07 10.3 +0.5**
VRAC Vranov 41.42 306⇓ *i*P **P** **18 07 10.3 +0.5**
SSE Sheshan 41.51 82 P **P** **18 07 06.9 -3.9**
SSE sP sP 18 07 38.5 -6.8
SSE PcP PcP 18 09 01.5 -5.1
SSE S **S** **18 13 18.9 -0.1**
SSE pmax pmax
comp=Z,33nm,0.7s,mb5.2
SSE pmax pmax
comp=Z,230nm,4.4s
SSE LR LR
comp=N,310nm,24.8s
SSE LR LR
comp=E,190nm,24.9s
SSE LR LR
comp=Z,250nm,33.0s
SOP Sopron 41.54 304⇓ *e*P **P** **18 07 12.5 +1.6**
DPC Dobruska-Polom 41.56 308 *e*P **P** **18 07 11.0 +0.1**
DPC *e* 18 08 51.4
DPC Dobruska-Polom 41.56 308 *e*P **P** **18 07 11.0 +0.1**
DPC *e*PP PP 18 08 51.4 +2.7
KSP Ksiaz 41.56 308 *e*P **P** **18 07 11.1 +0.1**
CN2 Changchun 41.60 62 *e*P **P** **18 07 12.3 +0.9**
CN2 *e*pP pP 18 07 35.3 +0.8
CN2 *e*S **S** **18 13 20.1 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,3.0s
ARCES ARCESS Array B 41.61 338 P **P** **18 07 11.1 0.0**
comp=Z,61nm,0.8s,mb5.4,baz=110,slow=6.4,SNR=130
ARCES LR LR 18 25 28.8
comp=Z,685nm,19.4s,baz=120,slow=37
ARCES ARCESS Array B 41.61 338 P **P** **18 07 11.1 0.0**
ARCES pmax pmax
comp=Z,61nm,0.8s
ARCES MLR MLR
comp=Z,685nm,19.4s
IPM Ipoh 41.70 132 *e*P **P** **18 07 13.6 +1.1**
comp=Z,28nm,0.8s,mb5.0
UPC Upice 41.75 308 *e*P **P** **18 07 12.5 0.0**
UPC *e* pP 18 07 36.1 +0.4
UPC Upice 41.75 308 *e*P **P** **18 07 12.5 0.0**
UPC *e*pP pP 18 07 36.1 +0.4
PSI Prapat 41.83 136 P **P** **18 07 13.7 +0.1**
comp=Z,8.4nm,0.5s,mb4.7,baz=329,slow=9.3,SNR=13
PSI Prapat 41.83 136 P **P** **18 07 13.7 +0.1**
PSI pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
CONA Conrad Observa 41.99 304⇑ *i*P **P** **18 07 14.2 -0.3**
comp=Z,92nm,1.2s,mb5.4,SNR=41
KTK1 Kautokeino 42.08 336 *e*P **P** **18 07 14.7 -0.2**
KTK1 *e*pP pP 18 07 37.9 -0.2
TREC Trest 42.14 306 *e*P **P** **18 07 15.6 -0.1**
TREC Trest 42.14 306 *e*P **P** **18 07 15.6 -0.1**
ARSA Arzberg 42.28 303⇓ *i*P **P** **18 07 18.6 +1.8**
comp=Z,30nm,1.4s,mb4.8,SNR=12
CRES Cresnjev 42.49 301 *e*P **P** **18 07 20.5 +1.9**
PERS Pernice 42.62 302 *e*P **P** **18 07 20.3 +0.7**
BOJS Bojanci 42.67 301 *e*P **P** **18 07 18.5 -1.5**
PVCC Panska Ves 42.67 308 *e*P **P** **18 07 21.9 +1.9**
PVCC Panska Ves 42.67 308 *e*P **P** **18 07 21.9 +1.9**
PVCC *ex* x 18 07 34.1
SOKA Soboth 42.68 302⇑ *i*P **P** **18 07 19.7 -0.4**
comp=Z,61nm,1.0s,mb5.3
PRU Pruhonice 42.72 307 *e*P **P** **18 07 21.0 +0.6**
PRU Pruhonice 42.72 307 *e*P **P** **18 07 21.0 +0.6**
BRG Berggiesshubel 43.05 309 *e*P **P** **18 07 25.2 +2.2**
comp=Z,80nm,1.3s,mb5.3
BRG Berggiesshubel 43.05 309 *e*P **P** **18 07 22.6 -0.5**
comp=Z,8.7nm,1.0s,mb4.5
BRG *i* 18 07 25.2
comp=Z,83nm,1.3s
BRG pP pP 18 07 40.0 -6.3
BRG sP sP 18 07 53.0 -4.7
BRG PP PP 18 09 27.0 +22
BRG S **S** **18 13 44.0 +2.8**
BRG *e*SCS ScS 18 17 13.0 0.0
comp=Z,4.3nm,1.0s
BRG *e*PKPPKP 18 39 24.4
comp=Z,7.5nm,1.7s
BRG
comp=N,259nm,20.9s
BRG
comp=E,227nm,17.2s
BRG
comp=Z,411nm,17.9s
MOA Molln 43.07 304⇑ *i*P **P** **18 07 22.2 -1.0**
comp=Z,45nm,1.1s,mb5.1,SNR=15
RUE Ruedersdorf 43.10 311 *e*P **P** **18 07 24.8 +1.4**
comp=Z,64nm,1.0s,mb5.3
RUE Ruedersdorf 43.10 311 *e*P **P** **18 07 24.5 +1.1**
comp=Z,64nm,0.9s,mb5.3
LJU Ljubljana 43.10 302 *i* P **P** **18 07 25.6 +2.1**
LJU *e*pP pP 18 07 56.0 +9.2
LJU *e*PP PP 18 09 09.9 +4.5
CUC Castrocucco 43.26 293 P **P** **18 07 25.7 +0.8**
GEC2 GERESS Array S 43.35 306 *e*P **P** **18 07 27.4 +1.9**
comp=Z,43nm,1.6s,mb4.9
GEC2 GERESS Array S 43.35 306 *e*P **P** **18 07 27.4 +1.9**
GEC2 pmax pmax
comp=Z,43nm,1.6s,mb4.9
GERES GERESS Array B 43.35 306 P **P** **18 07 24.3 -1.1**
comp=Z,7.1nm,1.0s,mb4.4,baz=85,slow=8.2,SNR=37
GERES PP PP 18 09 10.0 +2.1
comp=Z,4.9nm,1.0s,baz=82,slow=9.6,SNR=4.8
GERES ScP ScP 18 12 52.2 -2.3
comp=Z,0.9nm,0.8s,baz=88,slow=3.2,SNR=3.9
GERES GERESS Array B 43.35 306 P **P** **18 07 24.3 -1.1**
GERES PP PP 18 09 10.0 +2.1
GERES ScP ScP 18 12 52.2 -2.3
GERES GERESS Array B 43.35 306 P **P** **18 07 24.3 -1.2**
GERES 18 09 10.0
RGN Rugen 43.36 314 *e*pP sP 18 07 58.5 -1.6
FG5 Orsara di Pugl 43.39 295 P **P** **18 07 27.2 +1.3**
FG5 Orsara di Pugl 43.39 295 P **P** **18 07 27.2 +1.3**
KHC Kasperske Hory 43.41 306 *e*P **P** **18 07 24.9 -1.0**
comp=Z,28nm,1.3s,mb4.8
KHC Kasperske Hory 43.41 306 *e*P **P** **18 07 24.9 -1.0**
KHC pmax pmax
comp=Z,27nm,1.3s,mb4.8
HFS Hagfors 43.52 322 P **P** **18 07 25.7 -1.0**
comp=Z,39nm,0.8s,mb5.2,baz=94,slow=13,SNR=85
HFS pP pP 18 07 50.0 0.0
comp=Z,31nm,0.7s,baz=88,slow=10,SNR=4.1
HFS LR LR 18 28 32.2
comp=Z,342nm,18.3s,baz=92,slow=40
HFS Hagfors 43.52 322 P **P** **18 07 25.7 -1.0**
HFS *PP pP 18 07 50.0 0.0
HFS pmax pmax
comp=Z,39nm,0.8s
HFS MLR MLR
comp=Z,342nm,18.3s
VOY Vojsko 43.54 302 *e*P **P** **18 07 29.2 +2.2**
VOY *e* 18 08 01.9
CLL Collm 43.62 309 *e*P **P** **18 07 29.2 +1.6**
comp=Z,40nm,1.1s,mb5.1
CLL Collm 43.62 309 *i* P **P** **18 07 28.2 +0.6**
comp=Z,120nm,1.9s,mb5.3
CLL *e*pP pP 18 07 48.0 -2.9
CLL *e*S **S** **18 13 53.0 +3.5**
CLL Collm 43.62 309 *i* P **P** **18 07 28.2 +0.6**
CLL *e**PP pP 18 07 48.0 -2.9
CLL *e*S **S** **18 13 53.0 +3.5**
CLL pmax pmax
comp=Z,120nm,1.9s,mb5.3
CLL Collm 43.62 309 *i* P **P** **18 07 28.2 +0.6**
comp=Z,120nm,1.9s,mb5.3
CLL *e*(pP) pP 18 07 48.0 -2.9
CLL *e* 18 07 57.0
CLL *e*sP sP 18 08 03.0 +0.7
CLL *e*PP PP 18 09 09.0 -1.8
CLL *e*PPP 18 09 43.0
CLL *e*S **S** **18 13 53.0 +3.5**
CLL *e*sS sS 18 14 27.0 -2.7
CLL *e*ScS ScS 18 14 14.0 -2.6
CLL LmV 18 28 00.0
comp=Z,200nm,19.0s
MYKA Terra Mystica 43.63 302⇓ *i*P **P** **18 07 29.6 +1.8**
comp=Z,42nm,1.4s,mb5.0
TRO Tromso 43.73 336 *e*P **P** **18 07 28.1 -0.1**
TRO Tromso 43.73 336 *e*P **P** **18 07 28.1 -0.1**
KBA Koelnbreinsper 43.78 303 *i* P **P** **18 07 30.9 +2.0**
comp=Z,30nm,1.5s,mb4.8,SNR=7.6
MNSI Mandailing Nat 43.85 137 P **P** **18 07 30.6 +0.7**
comp=Z,1µmcomp=Z,68nm,0.8s,mb5.4
MNSI Mandailing Nat 43.85 137 P **P** **18 07 31.1 +1.2**
comp=Z,1µmcomp=Z,70nm,0.8s,mb5.5
TANN Tannenbergstha 44.02 308 *e*P **P** **18 07 33.1 +2.3**
comp=Z,47nm,1.5s,mb5.0
NKC Novy Kostel 44.05 308 *e*P **P** **18 07 31.1 +0.1**
NKC Novy Kostel 44.05 308 *e*P **P** **18 07 31.1 +0.1**
WERN Wernitzgruen 44.09 308 *e*P **P** **18 07 33.7 +2.3**
comp=Z,65nm,1.8s,mb5.1
GUNZ Gunzen 44.11 308 *e*P **P** **18 07 33.8 +2.3**
WERD Werda 44.12 308 *e*P **P** **18 07 33.7 +2.1**
YAK Yakutsk 44.17 35 *e*P **P** **18 07 31.2 -0.7**
comp=Z,57nm,0.8s,mb5.4
YAK Yakutsk 44.17 35 *e*P **P** **18 07 29.8 -2.0**
YAK pmax pmax
comp=Z,16nm,0.7s,mb4.9
ROTZ Rotzenmuhle 44.24 307 *e*P **P** **18 07 35.4 +2.8**
YHNB Yeheng 44.26 91 *e*P **P** **18 07 33.5 +0.4**
comp=Z,36nm,1.0s,mb5.1
MOR8 Moi Rana 44.28 331 *e*P **P** **18 07 31.5 -1.2**
MOR8 AMb AMB 18 07 32.7
comp=Z,118nm,0.8s,mb5.7
MOR8 *e*pP pP 18 07 55.8 -0.3
MOR8 Moi Rana 44.28 331 *e*P **P** **18 07 31.5 -1.2**
comp=Z,118nm,0.8s,mb5.7
SSLB Suanglung 44.33 92 *e*P **P** **18 07 36.9 +3.2**
comp=Z,31nm,0.9s,mb5.0
SSLB *e*pP pP 18 08 00.3 +3.3
NEUB Neuenburg 44.40 309 *e*P **P** **18 07 35.8 +2.0**
MDJ Mudanjiang 44.41 60 P **P** **18 07 33.8 -0.2**
MDJ pP pP 18 07 55.1 -2.3
MDJ sP sP 18 08 05.6 -3.1
MDJ PP PP 18 09 18.6 -0.7
MDJ S **S** **18 14 01.3 +0.2**
MDJ sS sS 18 14 37.8 -3.6
MDJ pmax pmax
comp=Z,9.0nm,1.5s,mb4.3
MDJ pmax pmax
comp=Z,120nm,5.2s
MDJ LR LR
comp=N,230nm,15.6s
MDJ LR LR
comp=E,260nm,23.9s
MDJ LR LR
comp=Z,330nm,25.0s
MOX Moxa 44.54 308 *e*P **P** **18 07 34.4 -0.6**
comp=Z,54nm,1.4s,mb5.1
MOX Moxa 44.54 308 *e*P **P** **18 07 37.1 +2.1**
comp=Z,75nm,1.6s,mb5.2
MOX Moxa 44.54 308 *e*P **P** **18 07 34.4 -0.6**
MOX pmax pmax
comp=Z,54nm,1.4s,mb5.1
YULB Yu-li 44.79 92 *e*P **P** **18 07 40.6 +3.3**
comp=Z,15nm,0.8s,mb4.8
KSRS Korea Array 44.80 71 P **P** **18 07 37.7 +0.5**
comp=Z,7.3nm,0.8s,mb4.5,baz=270,slow=7.4,SNR=26
KSRS pP pP 18 08 01.6 +0.9
comp=Z,17nm,0.9s,baz=280,slow=7.2,SNR=9.8
KSRS sP sP 18 08 11.8 -0.2
comp=Z,43nm,1.2s,baz=284,slow=6.7,SNR=6.0
KSRS ScP ScP 18 12 58.0 -2.7
comp=Z,2.4nm,1.0s,baz=308,slow=6.0,SNR=4.3
KSRS Korea Array 44.80 71 P **P** **18 07 37.7 +0.5**
KSRS *PP pP 18 08 01.6 +0.9
KSRS *SP sP 18 08 11.8 -0.2
KSRS pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
NB2 NORSAR Subarra 44.84 323 P **P** **18 07 36.1 -1.1**
comp=Z,66nm,0.9s,mb5.4,baz=96,slow=7.9
NOA NORSAR Array B 44.84 323 P **P** **18 07 35.9 -1.3**
comp=Z,42nm,0.8s,mb5.2,baz=97,slow=7.9,SNR=160
NOA pP pP 18 07 59.9 -0.7
comp=Z,40nm,1.0s,baz=96,slow=8.0,SNR=4.3
NOA LR LR 18 29 34.3
comp=Z,200nm,18.1s,baz=85,slow=40
NOA NORSAR Array B 44.84 323 P **P** **18 07 35.9 -1.3**
NOA pP pP 18 07 59.9 -0.7
NOA LR LR 18 29 34.3
NOA NORSAR Array B 44.84 323 P **P** **18 07 35.9 -1.3**
NOA *PP pP 18 07 59.9 -0.7
NOA pmax pmax
comp=Z,43nm,0.8s
NOA MLR MLR
comp=Z,200nm,18.2s
TWG Pinlang 44.88 93 *e*P **P** **18 07 41.5 +3.5**
comp=Z,45nm,0.9s,mb5.2
TWG *e*pP pP 18 08 05.6 +4.1
GRA1 Grafenberg Arr 44.88 307 *e*P **P** **18 07 40.5 +2.8**
comp=Z,137nm,1.5s,mb5.5
GRA1 *e*pP sP 18 08 11.4 -1.0
GRF Grafenberg Arr 44.88 307 *e*P **P** **18 07 40.5 +2.8**
comp=Z,137nm,1.5s,mb5.5
GRF *e*pP sP 18 08 11.4 -1.0
GRF Grafenberg Arr 44.88 307 *e*P **P** **18 07 40.5 +2.8**
GRF *e**PP sP 18 08 11.4 -1.0
GRF pmax pmax
comp=Z,137nm,1.5s,mb5.5
GRF Grafenberg Arr 44.88 307 *e*P **P** **18 07 40.5 +2.8**
GRF *e**PP sP 18 08 11.4 -1.0
GRF pmax pmax
comp=Z,137nm,1.5s,mb5.5
GRFO Grafenberg 44.88 307 *e*P **P** **18 07 38.5 +0.7**
comp=Z,105nm,1.5s,mb5.3
GRFO Grafenberg 44.88 307 *e*P **P** **18 07 38.5 +0.8**
GRFO pmax pmax
comp=Z,105nm,1.5s,mb5.3
WTTA Wattenberg 44.91 304⇑ *i*P **P** **18 07 36.3 -1.7**
comp=Z,38nm,1.1s,mb5.0
MURB Monte Urbino 44.97 298 P **P** **18 07 39.4 +0.9**
NAO01 NORSAR Array S 44.98 323 *e*P **P** **18 07 36.9 -1.5**
comp=Z,43nm,1.0s,mb5.1
FUR Furstenfeldbru 45.03 305 *e*P **P** **18 07 41.0 +2.1**
FUR Furstenfeldbru 45.03 305 *e*P **P** **18 07 41.0 +2.1**
BKNI Bangkinang 45.06 135 P **P** **18 07 40.7 +1.2**
comp=Z,1µmcomp=Z,124nm,0.9s,mb5.6
BKNI Bangkinang 45.06 135 P **P** **18 07 47.3 +7.8**
LOF Lofoten 45.11 333 *e*P **P** **18 07 38.2 -1.0**
KLR Kul'dur 45.20 53 *e*P **P** **18 07 36.3 -3.9**
KLR *e* pP 18 08 00.0 -3.7
KLR MLR MLR
comp=Z,600nm,13.0s
CLZ Clausthal 45.23 310 *e*P **P** **18 07 42.4 +2.0**
comp=Z,97nm,1.4s,mb5.3
CLZ *e*pP sP 18 08 13.2 -1.9
CLZ Clausthal 45.23 310 *e*P **P** **18 07 42.4 +2.0**
CLZ *e**PP sP 18 08 13.2 -1.9
CLZ pmax pmax
comp=Z,97nm,1.4s,mb5.3
MOTA Moosalm 45.26 304⇓ *i*P **P** **18 07 39.1 -1.5**
comp=Z,30nm,1.1s,mb5.0,SNR=7.8
PPI Padang Panjang 45.34 137 P **P** **18 07 42.4 +0.7**
comp=Z,65nm,0.9s,mb5.4
PPI Padang Panjang 45.34 137 P **P** **18 07 42.8 +1.1**
comp=Z,65nm,0.9s,mb5.4
NRDL Niedersach Rie 45.34 311 *e*P **P** **18 07 43.4 +2.1**
SISI Saibi 45.35 139 P **P** **18 07 43.6 +1.8**
comp=Z,56nm,1.3s,mb5.2
KONO Kongsberg 45.54 321 *e*P **P** **18 07 41.9 -0.9**
comp=Z,22nm,0.8s,mb5.0
KONO Kongsberg 45.54 321 *e*P **P** **18 07 41.9 -0.9**
KONO pmax pmax
comp=Z,22nm,0.8s,mb4.9
FETA Feichten 45.56 303⇑ *i*P **P** **18 07 41.1 -2.0**
comp=Z,20nm,1.0s,mb4.8,SNR=8.0
PDSI Padang 45.75 137 P **P** **18 07 45.4 +0.5**
comp=Z,2µmcomp=Z,135nm,0.9s,mb5.7
PDSI Padang 45.75 137 P **P** **18 07 45.6 +0.7**
comp=Z,2µmcomp=Z,135nm,0.9s,mb5.7
TIXI Tiksi 46.07 22 *e*P **P** **18 07 46.3 -0.4**
comp=Z,36nm,0.8s,mb5.2
TIXI Tiksi 46.07 22 *e*P **P** **18 07 46.1 -0.6**
TIXI *i* pP 18 08 09.3 -1.0
TIXI pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
DAVA Damuels 46.09 304⇑ *i*P **P** **18 07 45.7 -1.5**
comp=Z,66nm,1.1s,mb5.3,SNR=22
DAVOX Davos/Dischmat 46.17 303 P **P** **18 07 46.7 -1.2**
comp=Z,12nm,0.7s,mb4.7,baz=86,slow=5.1,SNR=12
DAVOX pP pP 18 08 10.6 -0.8
comp=Z,11nm,0.8s,baz=111,slow=11,SNR=4.5
DAVOX ScP ScP 18 13 03.9 -2.3
comp=Z,4.1nm,0.8s,baz=140,slow=8.1,SNR=4.1
DAVOX LR LR 18 31 06.9
comp=Z,220nm,19.0s,baz=85,slow=41
DAVOX Davos/Dischmat 46.17 303 P **P** **18 07 46.7 -1.2**
DAVOX *PP pP 18 08 10.6 -0.8
ERBM Eremo 46.24 300 P **P** **18 07 49.4 +0.9**
SDSI Sungai Dareh 46.31 136 P **P** **18 07 49.2 -0.1**
comp=Z,17nm,0.8s,mb4.8
SDSI Sungai Dareh 46.31 136 P **P** **18 07 49.7 +0.4**
comp=Z,17nm,0.8s,mb4.8
VLA Vladivostok 46.33 62 *i* P **P** **18 07 53.0 +3.8**
TNS Taunus Mts 46.60 308 *e*P **P** **18 07 53.3 +2.1**
TNS Taunus Mts 46.60 308 *e*P **P** **18 07 53.3 +2.1**
SPAK Spaichingen-Ko 46.69 305 *e*P **P** **18 07 52.7 +0.8**
IBBN Ibbenburen 46.79 311 *e*P **P** **18 07 54.8 +2.1**
BFO Black Forest 46.95 306 *e*P **P** **18 07 55.5 +1.5**
comp=Z,27nm,1.4s,mb4.8
BFO *e*pP pP 18 08 26.5 +8.9
BFO Black Forest 46.95 306 *e*P **P** **18 07 55.5 +1.5**
BFO *e**PP pP 18 08 26.5 +8.9
BFO pmax pmax
comp=Z,27nm,1.4s,mb4.8
BFO Black Forest 46.95 306 P **P** **18 07 55.9 +1.9**
comp=Z,79nm,1.1s,mb5.3,SNR=5.5
BUG Bochum--Univer 47.19 310 *e*P **P** **18 07 57.7 +1.9**
comp=Z,64nm,1.1s,mb5.3
LANF Langenberg 47.19 307 *e*P **P** **18 07 58.3 +2.5**
LANF Langenberg 47.19 307 *e*P **P** **18 07 58.3 +2.5**
FELD Feldberg im Sc 47.24 305 *e*P **P** **18 07 58.0 +1.8**
RUP Ruppelstein 47.56 308 *e*P **P** **18 08 01.2 +2.5**
RUP Ruppelstein 47.56 308 *e*P **P** **18 08 01.2 +2.5**
CDF Champ du Feu 47.63 306 *e*P **P** **18 08 00.5 +1.3**
comp=Z,26nm,1.0s,mb4.7
CDF *e*pP pP 18 08 22.2 -0.7
CDF Champ du Feu 47.63 306 *e*P **P** **18 08 00.5 +1.3**
comp=Z,13nm,1.0s,mb4.7
CDF *e*pP pP 18 08 22.2 -0.7
CDF Champ du Feu 47.63 306 *e*P **P** **18 08 00.5 +1.3**
CDF *e**PP pP 18 08 22.2 -0.7
CDF pmax pmax
comp=Z,13nm,1.0s,mb4.7
PGF Pioggiola 47.66 298 *e*P **P** **18 07 59.3 -0.2**
PGF *e*pP pP 18 08 21.8 -1.4
PGF Pioggiola 47.66 298 *e*P **P** **18 07 59.3 -0.2**
PGF *e**PP pP 18 08 21.8 -1.4
ECH Echery 47.74 306 *e*P **P** **18 08 00.1 0.0**
comp=Z,16nm,1.2s,mb4.7
ECH Echery 47.74 306 *e*P **P** **18 08 00.1 0.0**
ECH pmax pmax
comp=Z,16nm,1.2s,mb4.7
MOF Molkenrain 47.82 305 *e*P **P** **18 08 02.7 +2.0**
MOF Molkenrain 47.82 305 *e*P **P** **18 08 02.7 +2.0**
SPITS Spitsbergen Ar 47.94 347 P **P** **18 08 00.9 -0.3**
comp=Z,4.9nm,0.5s,mb4.6,baz=130,slow=14,SNR=17
SPITS pP pP 18 08 25.0 +0.1
comp=Z,21nm,0.9s,baz=147,slow=12,SNR=3.3
SPITS Spitsbergen Ar 47.94 347 P **P** **18 08 00.9 -0.3**
SPITS *PP pP 18 08 25.0 +0.1
SPITS pmax pmax
comp=Z,5.0nm,0.5s
SPB4 Spitsbergen Ar 47.94 347 *e*P **P** **18 08 01.8 +0.5**
HINF Hinteralfeld 48.02 305 *e*P **P** **18 08 03.0 +0.8**
comp=Z,35nm,1.0s,mb4.8
HINF *e*pP pP 18 08 24.6 -1.3
HINF Hinteralfeld 48.02 305 *e*P **P** **18 08 03.0 +0.8**
comp=Z,18nm,1.0s,mb4.8
HINF *e*pP pP 18 08 24.6 -1.3
HINF Hinteralfeld 48.02 305 *e*P **P** **18 08 03.0 +0.8**
HINF *e**PP pP 18 08 24.6 -1.3
HINF pmax pmax
comp=Z,18nm,1.0s,mb4.9
MEM Membach 48.09 309 P **P** **18 08 04.6 +1.8**
comp=Z,21nm,1.1s,mb4.9
MEM AP pP 18 08 26.8 +0.3
MEM XP sP 18 08 35.6 -2.1
LOMF Lomont 48.12 305 *e*P **P** **18 08 04.7 +1.7**
LOMF Lomont 48.12 305 *e*P **P** **18 08 04.7 +1.7**
WLF Walferdange 48.15 308 P **P** **18 08 05.8 +2.6**
WLF XP sP 18 08 36.2 -1.9
comp=Z,38nm,1.3s
WLF Walferdange 48.15 308 *e*P **P** **18 08 05.7 +2.5**
comp=Z,58nm,1.0s,mb5.4
WLF *e*pP pP 18 08 36.1 +9.2
WLF Walferdange 48.15 308 *e*P **P** **18 08 02.5 -0.7**
comp=Z,56nm,1.0s,mb5.3
WLF Walferdange 48.15 308 *e*P **P** **18 08 02.5 -0.7**
WLF pmax pmax
comp=Z,57nm,1.0s,mb5.4
HAU Haudompre 48.31 305 *e*P **P** **18 08 05.4 +0.9**
comp=Z,34nm,0.9s,mb4.9
HAU *e*MLR MLR
comp=Z,202nm,17.5s
HAU Haudompre 48.31 305 *e*P **P** **18 08 05.4 +0.9**
comp=Z,17nm,0.9s,mb4.9
HAU LR LR
comp=Z,200nm,17.5s
HAU Haudompre 48.31 305 *e*P **P** **18 08 05.4 +0.9**
HAU pmax pmax
comp=Z,17nm,0.9s,mb4.9
HAU MLR MLR
comp=Z,200nm,17.5s
SAOF Saorge 48.34 300 *e*P **P** **18 08 06.9 +2.1**
SAOF Saorge 48.34 300 *e*P **P** **18 08 06.9 +2.1**
AUTN L'Aution 48.43 300 *e*P **P** **18 08 06.8 +1.4**
AUTN L'Aution 48.43 300 *e*P **P** **18 08 06.8 +1.4**
SBF Sospel 48.45 300 *e*P **P** **18 08 06.7 +1.1**
comp=Z,82nm,1.0s,mb5.2
SBF Sospel 48.45 300 *e*P **P** **18 08 06.7 +1.1**
comp=Z,41nm,1.0s,mb5.2
SBF Sospel 48.45 300 *e*P **P** **18 08 06.7 +1.1**
SBF pmax pmax
comp=Z,41nm,1.0s,mb5.2

THEF They Montfort 48.51 306 *eP* **P 18 08 08.1 +2.1**
THEF They Montfort 48.51 306 *eP* **P 18 08 08.1 +2.1**
TOUF Mont Tournerai 48.55 300 *eP* **P 18 08 07.4 +1.0**
TOUF Mont Tournerai 48.55 300 *eP* **P 18 08 07.4 +1.0**
LPG La Plagne 48.55 302 *eP* **P 18 08 05.5 -0.9**
comp=Z,29nm,0.8s,mb4.9
LPG La Plagne 48.55 302 *eP* **P 18 08 05.5 -0.9**
comp=Z,15nm,0.8s,mb5.0
LPG La Plagne 48.55 302 *eP* **P 18 08 05.5 -0.9**
LPG pmax pmax
comp=Z,15nm,0.8s,mb5.0
LPL La Plagne 48.56 302 *eP* **P 18 08 05.6 -0.8**
comp=Z,55nm,1.1s,mb5.1
LPL La Plagne 48.56 302 *eP* **P 18 08 05.6 -0.8**
comp=Z,28nm,1.1s,mb5.1
LPL La Plagne 48.56 302 *eP* **P 18 08 05.6 -0.8**
LPL pmax pmax
comp=Z,28nm,1.1s,mb5.1
BCLA Clavier 48.57 309 P **P 18 08 07.9 +1.5**
BCLA XP sP 18 08 39.3 -2.0
MBDF Montbardon 48.71 301 *eP* **P 18 08 06.1 -1.5**
comp=Z,26nm,0.8s,mb4.9
MBDF Montbardon 48.71 301 *eP* **P 18 08 06.1 -1.5**
comp=Z,13nm,0.8s,mb4.9
MBDF Montbardon 48.71 301 *eP* **P 18 08 06.1 -1.5**
MBDF pmax pmax
comp=Z,13nm,0.8s,mb4.9
CABF La Chapelle 48.77 304 *eP* **P 18 08 08.4 +0.4**
comp=Z,69nm,1.0s,mb5.2
CABF *ep*P pP 18 08 31.1 -0.6
CABF La Chapelle 48.77 304 *eP* **P 18 08 08.4 +0.4**
comp=Z,34nm,1.0s,mb5.2
CABF *ep*P pP 18 08 31.1 -0.6
CABF La Chapelle 48.77 304 *eP* **P 18 08 08.4 +0.4**
CABF *e**PP pP 18 08 31.1 -0.6
CABF pmax pmax
comp=Z,35nm,1.0s,mb5.2
JOW Kunigami 48.89 84 P **P 18 08 10.3 +1.1**
comp=Z,6.8nm,0.4s,mb4.9,baz=294,slow=8.0,SNR=8.6
GIVF Givet 48.92 308 *eP* **P 18 08 10.8 +1.7**
comp=Z,225nm,1.7s,mb5.5
GIVF Givet 48.92 308 *eP* **P 18 08 10.8 +1.7**
comp=Z,113nm,1.7s,mb5.5
GIVF Givet 48.92 308 *eP* **P 18 08 10.8 +1.7**
GIVF pmax pmax
comp=Z,113nm,1.7s,mb5.5
KBS Kingsbay 49.06 347 *eP* **P 18 08 10.7 +0.9**
comp=Z,53nm,1.1s,mb5.4
KBS Kingsbay 49.06 347 *eP* **P 18 08 10.7 +0.9**
KBS pmax pmax
comp=Z,53nm,1.1s,mb5.4
DOU Dourbes 49.07 308 P **P 18 08 12.2 +2.0**
comp=Z,14nm,1.2s,mb4.8
DOU XP sP 18 08 42.5 -2.8
MEZF Maizieres J'vi 49.07 306 *eP* **P 18 08 12.0 +1.7**
FRF La Foret Royal 49.08 300 *eP* **P 18 08 11.0 +0.6**
comp=Z,58nm,1.1s,mb5.1
FRF La Foret Royal 49.08 300 *eP* **P 18 08 11.0 +0.6**
comp=Z,29nm,1.1s,mb5.1
FRF La Foret Royal 49.08 300 *eP* **P 18 08 11.0 +0.6**
FRF pmax pmax
comp=Z,29nm,1.1s,mb5.1
SFTF Sexfontaines 49.14 306 *eP* **P 18 08 12.0 +1.2**
comp=Z,107nm,1.3s,mb5.3
SFTF Sexfontaines 49.14 306 *eP* **P 18 08 12.0 +1.2**
comp=Z,107nm,1.3s,mb5.6
SNF Seneffe 49.20 309 P **P 18 08 13.0 +1.8**
comp=Z,30nm,1.8s,mb4.9
SNF AP pP 18 08 35.3 +0.4
SNF XP sP 18 08 44.5 -1.7
KSI Kapahiang 49.20 137 P **P 18 08 12.2 +0.6**
comp=Z,3µmcomp=Z,238nm,0.8s
KSI Kapahiang 49.20 137 P **P 18 08 12.0 +0.4**
comp=Z,3µmcomp=Z,238nm,0.8s
ORIF Oris-en-Rattie 49.28 302 *eP* **P 18 08 11.2 -0.8**
comp=Z,11nm,0.8s,mb4.5
ORIF *e*MLR MLR
comp=Z,322nm,21.5s
ORIF Oris-en-Rattie 49.28 302 *eP* **P 18 08 11.2 -0.8**
comp=Z,5.6nm,0.8s,mb4.5
ORIF Oris-en-Rattie 49.28 302 *eP* **P 18 08 11.2 -0.8**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BAIF Baives 49.32 308 *eP* **P 18 08 13.9 +1.7**
comp=Z,138nm,1.2s,mb5.5
BAIF Baives 49.32 308 *eP* **P 18 08 13.9 +1.7**
comp=Z,69nm,1.2s,mb5.5
BAIF Baives 49.32 308 *eP* **P 18 08 13.9 +1.7**
BAIF pmax pmax
comp=Z,69nm,1.2s,mb5.5
KEST Kesra 49.38 289 P **P 18 08 13.1 +0.2**
comp=Z,7.0nm,0.9s,mb4.6,baz=46,slow=3.3,SNR=12
KEST Kesra 49.38 289 *eP* **P 18 08 12.6 -0.3**
TGY Tagaytay City 49.41 103 P **P 18 08 14.5 +1.3**
comp=Z,48nm,0.5s,mb5.7,baz=142,slow=19,SNR=2.3
TGY pP pP 18 08 39.6 +2.6
comp=Z,133nm,0.9s,baz=278,slow=6.4,SNR=3.5
TGY Tagaytay City 49.41 103 P **P 18 08 14.5 +1.3**
TGY *PP pP 18 08 39.6 +2.6
TGY pmax pmax
comp=Z,48nm,0.5s
SMRF Simiane la Rot 49.73 300 *eP* **P 18 08 15.3 0.0**
comp=Z,22nm,1.0s,mb4.7
SMRF *ep*P pP 18 08 39.0 -0.2
SMRF Simiane la Rot 49.73 300 *eP* **P 18 08 15.3 0.0**
comp=Z,22nm,1.0s,mb5.0
SMRF *ep*P pP 18 08 39.0 -0.2
KSM Kuching 49.91 125 P **P 18 08 17.9 +0.8**
comp=Z,21nm,0.8s,mb5.1
LOR Lormes 50.11 305 *eP* **P 18 08 18.8 +0.6**
LOR *e*MLR MLR
comp=Z,190nm,19.8s
LOR Lormes 50.11 305 *eP* **P 18 08 18.8 +0.6**
LOR LR LR
comp=Z,190nm,19.8s
LOR Lormes 50.11 305 *eP* **P 18 08 18.8 +0.6**
LOR MLR MLR
comp=Z,190nm,19.8s
VIVF Saint-Julien-l 50.13 302 *eP* **P 18 08 17.2 -1.2**
comp=Z,51nm,1.2s,mb5.0
VIVF Saint-Julien-l 50.13 302 *eP* **P 18 08 17.2 -1.2**
comp=Z,26nm,1.2s,mb5.0
VIVF Saint-Julien-l 50.13 302 *eP* **P 18 08 17.2 -1.2**
VIVF pmax pmax
comp=Z,26nm,1.2s,mb5.0
SMF Signal de Mont 50.27 304 *eP* **P 18 08 18.0 -1.4**
comp=Z,57nm,1.0s,mb5.1
SMF *ep*P pP 18 08 42.0 -1.2
SMF Signal de Mont 50.27 304 *eP* **P 18 08 18.0 -1.4**
comp=Z,28nm,1.0s,mb5.2
SMF *ep*P pP 18 08 42.0 -1.2
SMF Signal de Mont 50.27 304 *eP* **P 18 08 18.0 -1.4**
SMF *e**PP pP 18 08 42.0 -1.2
SMF pmax pmax
comp=Z,28nm,1.0s,mb5.2
SSF Saint Saulge 50.40 305 *eP* **P 18 08 21.3 +1.0**
comp=Z,64nm,1.4s,mb5.0
SSF Saint Saulge 50.40 305 *eP* **P 18 08 21.3 +1.0**
comp=Z,32nm,1.4s,mb5.1
SSF Saint Saulge 50.40 305 *eP* **P 18 08 21.3 +1.0**
SSF pmax pmax
comp=Z,32nm,1.4s,mb5.1
AVF Avril sur Loir 50.56 304 *eP* **P 18 08 20.0 -1.6**
comp=Z,42nm,0.9s,mb5.2
AVF Avril sur Loir 50.56 304 *eP* **P 18 08 20.0 -1.6**
comp=Z,21nm,0.9s,mb5.2
AVF Avril sur Loir 50.56 304 *eP* **P 18 08 20.0 -1.6**
AVF pmax pmax
comp=Z,21nm,0.9s,mb5.2
PLDF La Plantade 50.58 303 *eP* **P 18 08 22.5 +0.8**
PLDF La Plantade 50.58 303 *eP* **P 18 08 22.5 +0.8**
KKM Kota Kinabalu 50.84 115 *eP* **P 18 08 26.1 +2.1**
comp=Z,35nm,1.1s,mb5.3
AGO Saint Agoulin 50.89 304 *eP* **P 18 08 24.9 +0.8**
LASF Ste Croix 50.90 301 *eP* **P 18 08 23.1 -1.1**
comp=Z,72nm,1.2s,mb5.3
LRW Lerwick 50.95 322 P **P 18 08 23.2 -1.1**
LRW AMB AMB 18 08 25.9
comp=Z,56nm,1.5s,mb5.4
LRW Lerwick 50.95 322 *eP* **P 18 08 23.2 -1.1**
LRW AMB AMB 18 08 25.9
comp=Z,56nm,1.5s,mb5.4
BGF Bois d'Agland 50.95 304 *eP* **P 18 08 25.4 +0.9**
comp=Z,21nm,0.9s,mb4.9
BGF *ep*P pP 18 08 47.0 -1.5
BGF Bois d'Agland 50.95 304 *eP* **P 18 08 25.4 +0.9**
comp=Z,10nm,0.9s,mb4.9
BGF *ep*P pP 18 08 47.0 -1.5
BGF Bois d'Agland 50.95 304 *eP* **P 18 08 25.4 +0.9**
BGF *e**PP pP 18 08 47.0 -1.5
BGF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LBL Lubilhac 51.02 303 *eP* **P 18 08 26.0 +1.0**
LBL Lubilhac 51.02 303 *eP* **P 18 08 26.0 +1.0**
KLSI 51.25 135 P **P 18 08 26.2 -0.9**
comp=Z,38nm,1.0s,mb5.4
TPI Tanjungpandan 51.44 131 P **P 18 08 30.5 +2.0**
comp=Z,40nm,1.3s,mb5.3
TCF Toulx Ste Croi 51.45 304 *eP* **P 18 08 27.1 -1.1**
comp=Z,36nm,1.0s,mb5.0
TCF Toulx Ste Croi 51.45 304 *eP* **P 18 08 27.1 -1.1**
comp=Z,18nm,1.0s,mb5.1
TCF Toulx Ste Croi 51.45 304 *eP* **P 18 08 27.1 -1.1**
TCF pmax pmax
comp=Z,18nm,1.0s,mb5.1
STKI Sintang 51.73 125 P **P 18 08 36.1 +5.3**
KASI Kota Agung 51.80 136 P **P 18 08 32.1 +0.9**
comp=Z,38nm,0.8s,mb5.5
CAF Calviac 51.90 302 *eP* **P 18 08 29.8 -1.9**
comp=Z,8.7nm,0.7s,mb4.6
CAF *ep*P pP 18 08 55.2 -0.5
CAF Calviac 51.90 302 *eP* **P 18 08 29.8 -1.9**
comp=Z,4.3nm,0.7s,mb4.6
CAF *ep*P pP 18 08 55.2 -0.5
CAF Calviac 51.90 302 *eP* **P 18 08 29.8 -1.9**
CAF *e**PP pP 18 08 55.2 -0.5
CAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
RJF Les Rejaudoux 52.17 303 *eP* **P 18 08 33.3 -0.4**
RJF *e*MLR MLR
comp=Z,196nm,21.5s
RJF Les Rejaudoux 52.17 303 *eP* **P 18 08 33.3 -0.4**
RJF LR LR
comp=Z,200nm,21.5s
RJF Les Rejaudoux 52.17 303 *eP* **P 18 08 33.3 -0.4**
RJF MLR MLR
comp=Z,200nm,21.5s
MTLF Montolieu 52.24 300 *eP* **P 18 08 33.3 -0.9**
MTLF *ep*P pP 18 08 57.3 -0.9
MTLF Montolieu 52.24 300 *eP* **P 18 08 33.3 -0.9**
MTLF *e**PP pP 18 08 57.3 -0.9
XAL Allendale 52.30 316 P **P 18 08 33.6 -0.8**
XAL Allendale 52.30 316 *eP* **P 18 08 33.6 -0.8**
ESY Stoneypath 52.32 317 P **P 18 08 33.6 -1.0**
ESY Stoneypath 52.32 317 *eP* **P 18 08 33.6 -1.0**
MCD Coleburn Disti 52.37 319 P **P 18 08 33.4 -1.6**
MCD Coleburn Disti 52.37 319 *eP* **P 18 08 33.4 -1.6**
LDF La Druitiere 52.40 307 *eP* **P 18 08 33.0 -2.3**
comp=Z,10nm,0.6s,mb4.7
LDF La Druitiere 52.40 307 *eP* **P 18 08 33.0 -2.3**
comp=Z,5.1nm,0.6s,mb4.7
LDF La Druitiere 52.40 307 *eP* **P 18 08 33.0 -2.3**
LDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
WOL Wolverton 52.45 311 P **P 18 08 34.9 -0.7**
WOL AMB AMB 18 08 38.1
comp=Z,89nm,2.0s,mb5.4
WOL Wolverton 52.45 311 *eP* **P 18 08 34.9 -0.7**
WOL AMB AMB 18 08 38.1
comp=Z,89nm,2.0s,mb5.4
MBAR Mbarara 52.46 235 P **P 18 08 35.3 -0.8**
comp=Z,71nm,0.7s,mb5.8,SNR=9.6
ORE Reay 52.48 320 P **P 18 08 35.1 -0.6**
ORE Reay 52.48 320 *eP* **P 18 08 35.1 -0.6**
FLN La Foliniere 52.59 308 *eP* **P 18 08 36.5 -0.2**
comp=Z,36nm,0.8s,mb5.2,baz=76
FLN *ep*P pP 18 09 00.3 -0.4
FLN *e*MLR MLR
comp=Z,176nm,22.5s
FLN La Foliniere 52.59 308 *eP* **P 18 08 36.5 -0.2**
comp=Z,18nm,0.8s,mb5.2
FLN *ep*P pP 18 09 00.3 -0.4
FLN LR LR
comp=Z,180nm,22.5s
FLN La Foliniere 52.59 308 *eP* **P 18 08 36.5 -0.2**
FLN *e**PP pP 18 09 00.3 -0.4
FLN pmax pmax
comp=Z,18nm,0.8s,mb5.2
FLN MLR MLR
comp=Z,180nm,22.5s
EDI Edinburgh 52.64 317 P **P 18 08 35.7 -1.2**
EDI AMB AMB 18 08 38.5
comp=Z,44nm,1.0s,mb5.4
EDI Edinburgh 52.64 317 *eP* **P 18 08 35.7 -1.2**
EDI AMB AMB 18 08 38.5
comp=Z,44nm,1.0s,mb5.4
ECK Cauldkaine Hil 52.75 316 P **P 18 08 36.6 -1.1**
ECK Cauldkaine Hil 52.75 316 *eP* **P 18 08 36.6 -1.1**
EBH Black Hill 52.75 317 P **P 18 08 36.6 -1.1**
EBH Black Hill 52.75 317 *eP* **P 18 08 36.6 -1.1**
ESK Eskdalemuir 52.77 316 P **P 18 08 35.3 -2.5**
ESK AMB AMB 18 08 39.0
comp=Z,40nm,1.2s,mb5.3
ESK Eskdalemuir 52.77 316 *eP* **P 18 08 35.3 -2.5**
ESK AMB AMB 18 08 39.0
comp=Z,40nm,1.2s,mb5.3
ESK Eskdalemuir 52.77 316 *i* P **P 18 08 37.8 0.0**
MVH1 Achvaich 52.80 320 P **P 18 08 36.1 -2.0**
MVH1 Achvaich 52.80 320 *eP* **P 18 08 36.1 -2.0**
KESW Keswick, Cumbr 52.85 315 P **P 18 08 38.3 -0.2**
KESW AMB AMB 18 08 41.0
comp=Z,55nm,2.5s,mb5.1
KESW Keswick, Cumbr 52.85 315 *eP* **P 18 08 38.3 -0.2**
KESW AMB AMB 18 08 41.0
comp=Z,55nm,2.5s,mb5.1
YSS Yuzh-Sakhalins 52.88 55 *eP* **P 18 08 39.4 +0.6**
comp=Z,93nm,1.0s,mb5.8
YSS Yuzh-Sakhalins 52.88 55 *eP* **P 18 08 39.0 +0.2**
YSS *e* pP 18 09 04.0 +1.1
YSS *e* 18 09 09.5
MAJO Matsushiro 52.89 68 *eP* **P 18 08 39.3 +0.2**
comp=Z,22nm,0.8s,mb5.2
MAJO *ep*P pP 18 09 00.2 -3.0
MAJO Matsushiro 52.89 68 *eP* **P 18 08 39.3 +0.2**
MAJO *e**PP pP 18 09 00.2 -3.0
MAJO pmax pmax
comp=Z,22nm,0.8s,mb5.2
MAT Matsushiro 52.89 68 P **P 18 08 39.3 +0.2**
MAT S **S 18 16 02.6 +2.1**
MJAR Matsushiro Arr 52.90 68 P **P 18 08 40.1 +1.0**
comp=Z,11nm,1.0s,mb4.8,baz=284,slow=9.4,SNR=24
MJAR pP pP 18 09 03.9 +0.8
comp=Z,19nm,0.9s,baz=286,slow=9.2,SNR=8.8
MJAR ScP ScP 18 13 32.8 -2.4
comp=Z,1.8nm,0.8s,baz=273,slow=5.9,SNR=4.6
MJAR Matsushiro Arr 52.90 68 P **P 18 08 40.1 +0.9**
MJAR pP pP 18 09 03.9 +0.7
MJAR ScP ScP 18 13 32.8 -2.4
MJAR Matsushiro Arr 52.90 68 P **P 18 08 40.1 +1.0**
MJAR *PP pP 18 09 03.9 +0.7
MJAR pmax pmax
comp=Z,11nm,1.0s
GRR Gorron 52.93 307 *eP* **P 18 08 39.5 +0.3**
comp=Z,45nm,1.0s,mb5.2
GRR *ep*P pP 18 09 01.7 -1.5
GRR Gorron 52.93 307 *eP* **P 18 08 39.5 +0.3**
comp=Z,22nm,1.0s,mb5.2
GRR *ep*P pP 18 09 01.7 -1.5
GRR Gorron 52.93 307 *eP* **P 18 08 39.5 +0.3**
GRR *e**PP pP 18 09 01.7 -1.5
GRR pmax pmax
comp=Z,22nm,1.0s,mb5.1
MFF Saint Martin d 52.94 305 *eP* **P 18 08 39.6 +0.3**
comp=Z,14nm,0.7s,mb4.8
MFF Saint Martin d 52.94 305 *eP* **P 18 08 39.6 +0.3**
comp=Z,7.0nm,0.7s,mb4.8
MFF Saint Martin d 52.94 305 *eP* **P 18 08 39.6 +0.3**
MFF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
MDO Dochfour 52.99 319 P **P 18 08 38.7 -0.7**
MDO Dochfour 52.99 319 *eP* **P 18 08 38.7 -0.7**
EAB Aberfoyle 53.22 317 P **P 18 08 39.5 -1.6**
EAB Aberfoyle 53.22 317 *eP* **P 18 08 39.5 -1.6**
RSC Scourie 53.24 320 P **P 18 08 39.4 -1.9**
RSC Scourie 53.24 320 *eP* **P 18 08 39.4 -1.9**
GCD Castle Douglas 53.27 316 P **P 18 08 40.8 -0.8**
GCD Castle Douglas 53.27 316 *eP* **P 18 08 40.8 -0.8**
HGH Gray Hill 53.34 312 P **P 18 08 41.5 -0.6**
HGH Gray Hill 53.34 312 *eP* **P 18 08 41.5 -0.6**
CGJI Cibinong 53.37 136 P **P 18 08 41.1 -1.7**
MCH1 Michaelchurch 53.37 312 P **P 18 08 41.2 -1.1**
MCH1 AMB AMB 18 08 45.1
comp=Z,69nm,0.9s,mb5.7
MCH1 Michaelchurch 53.37 312 *eP* **P 18 08 41.2 -1.1**
MCH1 AMB AMB 18 08 45.1
comp=Z,69nm,0.9s,mb5.7
PGBU Glenifferbraes 53.38 317 P **P 18 08 41.4 -0.9**
PGBU AMB AMB 18 08 45.7
comp=Z,39nm,1.8s,mb5.2
PGBU Glenifferbraes 53.38 317 *eP* **P 18 08 41.4 -0.9**
PGBU AMB AMB 18 08 45.7
comp=Z,39nm,1.8s,mb5.2
KAC Achnashellach 53.47 319 P **P 18 08 41.3 -1.7**
KAC Achnashellach 53.47 319 *eP* **P 18 08 41.3 -1.7**
ASAJ Asahikawa 53.58 58 P **P 18 08 44.0 0.0**
comp=Z,9.5nm,0.9s,mb4.8,baz=122,slow=3.6,SNR=5.9
ASAJ Asahikawa 53.58 58 P **P 18 08 44.1 +0.1**
ASAJ pmax pmax
comp=Z,10.0nm,0.9s
RRR Rubha Reidh 53.67 320 P **P 18 08 42.7 -1.7**
RRR Rubha Reidh 53.67 320 *eP* **P 18 08 42.7 -1.7**
KPL Plockton 53.69 319 P **P 18 08 43.5 -1.1**
KPL AMB AMB 18 08 47.9
comp=Z,49nm,1.8s,mb5.2
KPL Plockton 53.69 319 *eP* **P 18 08 43.5 -1.1**
KPL AMB AMB 18 08 47.9
comp=Z,49nm,1.8s,mb5.2
KAR1 Arisaig 53.88 319 P **P 18 08 44.5 -1.4**
KAR1 Arisaig 53.88 319 *eP* **P 18 08 44.5 -1.4**
EBIE Bielsa 53.89 300 P **P 18 08 44.8 -1.5**
comp=Z,171nm,3.9s
SGMF Saint Gilles 54.06 308 *eP* **P 18 08 48.3 +0.9**
SGMF Saint Gilles 54.06 308 *eP* **P 18 08 48.3 +0.9**
ETSF Etsaut 54.32 301 *eP* **P 18 08 48.5 -0.9**
comp=Z,16nm,0.7s,mb4.8
ETSF Etsaut 54.32 301 *eP* **P 18 08 48.5 -0.9**
comp=Z,7.9nm,0.7s,mb4.8
ETSF Etsaut 54.32 301 *eP* **P 18 08 48.5 -0.9**
ETSF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
ROSF Rostrenen 54.49 308 *eP* **P 18 08 51.3 +0.7**
ROSF Rostrenen 54.49 308 *eP* **P 18 08 51.3 +0.7**
QUIF Quistinic 54.54 307 *eP* **P 18 08 51.5 +0.6**
QUIF Quistinic 54.54 307 *eP* **P 18 08 51.5 +0.6**
DAG Danmarks Havn 55.18 344 *i* P **P 18 08 54.4 -0.7**
DAG *i* pP 18 09 19.3 -0.1
DAG pmax pmax
comp=Z,24nm,0.9s,mb5.2
DAG Danmarks Havn 55.18 344 *i* P **P 18 08 54.4 -0.7**
comp=Z,244nm,0.9s
DAG *i* pP 18 09 19.3 -0.1
JHJ Hachijo jima 2 55.39 72 LR LR 18 34 46.5
comp=Z,338nm,22.0s,baz=292,slow=38
YUK Yuzh-Kuril'sk 55.84 57 P **P 18 08 57.5 -2.8**
YUK S **S 18 16 35.8 -4.0**
YUK pmax pmax
comp=Z,1.0nm,1.4s
YUK smax
comp=N,3µm,2.6s
YUK smax
comp=E,5µm,2.6s
ELAN Lanestosa 56.20 302 P **P 18 09 02.0 -0.9**
comp=E,86nm,1.7s,mb5.5
ETOB Tobarra 56.49 296 P **P 18 09 04.4 -0.7**
comp=E,118nm,2.5s,mb5.5
EHUE Huescar 57.57 296 P **P 18 09 11.1 -1.6**
comp=E,27nm,1.2s,mb5.2
EHUE Huescar 57.57 296 P **P 18 09 11.1 -1.6**
EHUE pmax pmax
comp=Z,27nm,1.2s,mb5.2
GUD Guadarrama 57.62 299 P **P 18 09 10.0 -2.9**
comp=Z,87nm,3.1s
GUD Guadarrama 57.62 299 P **P 18 09 10.0 -3.0**
GUD pmax pmax
comp=Z,87nm,3.1s
TAM Tamanrasset 57.80 276 *eP* **P 18 09 13.3 -1.2**
comp=Z,40nm,1.4s,mb5.3
TAM Tamanrasset 57.80 276 *eP* **P 18 09 13.3 -1.2**
TAM pmax pmax
comp=Z,40nm,1.4s,mb5.3
ESDC Sonseca Array 57.85 298 P **P 18 09 13.5 -1.1**
comp=Z,12nm,1.0s,mb4.9,baz=60,slow=7.6,SNR=20
ESDC pP pP 18 09 39.3 +0.3
comp=Z,11nm,1.0s,baz=61,slow=7.4,SNR=5.8
ESDC Sonseca Array 57.85 298 P **P 18 09 12.1 -2.5**
comp=Z,9.2nm,0.9s,mb4.8
ESLA Sonseca Array 57.85 298 *eP* **P 18 09 12.9 -1.7**
comp=Z,2.3nm,0.9s,mb4.2
EQES Quesada 57.92 296 P **P 18 09 13.3 -1.8**
comp=Z,90nm,3.4s
EBER Berja 58.15 295 P **P 18 09 16.1 -0.6**
comp=Z,112nm,2.1s,mb5.5
PCI Palu 58.21 118 P **P 18 09 25.0 +7.6**
comp=Z,1µmcomp=Z,167nm,0.9s,mb6.1
EBAN Banos Encina 58.30 296 P **P 18 09 16.8 -1.0**
comp=Z,4.0nm,0.5s,mb4.7
EBAN Banos Encina 58.30 296 P **P 18 09 16.8 -1.0**
EBAN pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
ERON Agron 58.77 295 P **P 18 09 17.5 -3.6**
MRSI Marisa 58.78 115 P **P 18 09 23.6 +2.2**
comp=Z,898nmcomp=Z,111nm,1.1s,mb5.8
EADA Adamuz 58.87 297 P **P 18 09 20.6 -1.1**
comp=Z,15nm,0.9s,mb5.0
BILL Bilibino 58.87 26 *eP* **P 18 09 21.7 +0.5**
comp=Z,19nm,0.9s,mb5.1
BILL Bilibino 58.87 26 *eP* **P 18 09 22.0 +0.7**
BILL *e**PP pP 18 09 45.4 -0.3
BILL *e* 18 10 05.1
BILL *e*SS SS 18 21 12.4 -0.7
BILL pmax pmax
comp=Z,23nm,2.5s,mb4.8
BILL MLR MLR
comp=Z,200nm,19.0s
ELUQ Luque 58.89 296 P **P 18 09 20.1 -1.7**
comp=Z,10nm,0.6s,mb5.0
ELUQ Luque 58.89 296 P **P 18 09 20.1 -1.8**
ELUQ pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
EPLA Plasencia 59.20 299 P **P 18 09 22.6 -1.3**
comp=Z,15nm,0.6s,mb5.2
EPLA Plasencia 59.20 299 P **P 18 09 22.6 -1.4**
EPLA pmax pmax
comp=Z,15nm,0.6s,mb5.2
MVO Moncorvo 59.44 301 *eP* **P 18 09 24.8 -0.8**
comp=Z,28nm,1.5s,mb5.1
TTSI Tana Toraja 59.70 120 P **P 18 09 29.9 +2.2**
comp=Z,21nm,1.1s,mb5.1
ELOB Lobios 59.88 302 P **P 18 09 30.2 +1.6**
comp=Z,14nm,0.7s,mb5.1
PCAB Cabril 59.91 302 *eP* **P 18 09 28.5 -0.3**
comp=Z,37nm,1.6s,mb5.2
MTE Manteigas 60.10 300 *eP* **P 18 09 29.4 -0.7**
comp=Z,40nm,1.3s,mb5.3
PETK Petropavlovsk- 60.10 44 P **P 18 09 29.8 -0.1**
comp=Z,4.6nm,1.0s,mb4.5,baz=319,slow=4.2,SNR=3.6
PETK LR LR 18 36 48.5
comp=Z,165nm,20.6s,baz=306,slow=37
PETK Petropavlovsk- 60.10 44 P **P 18 09 29.8 -0.1**
PETK pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
PETK MLR MLR
comp=Z,165nm,20.7s
PVIS Viseu 60.22 301 *eP* **P 18 09 30.6 -0.3**
KMSI Cibinong 60.22 114 P **P 18 09 33.9 +2.6**
comp=Z,157nm,1.0s,mb6.0
MNI Manado 60.29 112 P **P 18 09 36.6 +4.8**
comp=Z,1µmcomp=Z,47nm,1.1s,mb5.5
ESPR Espera 60.33 296 P **P 18 09 30.3 -1.5**
comp=Z,7.1nm,0.6s,mb4.9
PMRV Marv??o 60.38 299 *eP* **P 18 09 31.5 -0.6**
comp=Z,14nm,1.8s,mb4.7
EBAD Badajoz 60.39 298 P **P 18 09 31.2 -0.9**
comp=Z,20nm,1.0s,mb5.1
EMIN Mina Concepcio 60.55 297 P **P 18 09 32.0 -1.2**
comp=Z,14nm,0.9s,mb5.0
PBAR Barrancos 60.64 298 *eP* **P 18 09 32.9 -1.0**
comp=Z,22nm,1.2s,mb5.1
PESTR Estremoz 60.75 299 *eP* **P 18 09 33.6 -1.0**
comp=Z,23nm,1.2s,mb5.1
PTOM Tomar 61.02 300 *eP* **P 18 09 35.7 -0.7**
comp=Z,33nm,1.2s,mb5.2
MDT Midelt 61.15 291 P **P 18 09 36.5 -0.9**
comp=Z,6.1nm,1.0s,mb4.6,baz=62,slow=8.0,SNR=2.4
EVO Evora 61.19 298 *eP* **P 18 09 36.9 -0.7**
comp=Z,68nm,1.4s,mb5.2

EVO *e*pP pP 18 10 02.9 +0.7
EVO *e*MLR MLR
comp=Z,132nm,20.2s
EVO Evora 61.19 298 *e*P **P 18 09 36.3 -1.3**
comp=Z,22nm,1.1s,mb5.1
EGRO El Granado 61.23 297 P **P 18 09 36.8 -1.0**
comp=Z,11nm,0.6s,mb5.1
EVOP Sao Brissos 61.27 298 *e*P **P 18 09 36.9 -1.2**
comp=Z,68nm,1.4s,mb5.5
EVOP *e*pP pP 18 10 02.9 +0.1
EVOP LR LR
comp=Z,132μm,20.3s
EVOP Sao Brissos 61.27 298 *e*P **P 18 09 36.9 -1.2**
EVOP *e**PP pP 18 10 02.9 +0.1
EVOP pmax pmax
comp=Z,68nm,1.4s,mb5.5
PBEJ Beja 61.30 298 *e*P **P 18 09 37.7 -0.6**
comp=Z,20nm,1.4s,mb5.0
PVAQ Vaqueiros 61.45 297 *e*P **P 18 09 38.3 -1.1**
comp=Z,15nm,1.5s,mb4.8
SUMG Summit 61.52 341 *e*P **P 18 09 39.6 +0.4**
comp=Z,75nm,1.1s,mb5.6
SUMG Summit 61.52 341 *i*P **P 18 09 39.5 +0.3**
comp=Z,43nm,0.9s,mb5.5
SUMG *i* pP 18 10 04.6 +0.7
PBDV Barranco-do-Ve 61.68 297 *e*P **P 18 09 40.3 -0.6**
comp=Z,32nm,1.6s,mb5.1
KDI Kendari 62.32 118 P **P 18 09 48.4 +3.0**
comp=Z,530nmcomp=Z,21nm,1.2s,mb5.0
TNTI Ternate 62.63 111 P **P 18 09 49.5 +2.0**
BBSI Bau Bau 63.35 120 P **P 18 09 56.9 +4.6**
comp=Z,58nm,0.9s,mb5.5
LSZ Lusaka 65.34 227 *e*P **P 18 10 05.6 +0.5**
comp=Z,82nm,0.9s,mb5.6
LSZ Lusaka 65.34 227 *e*P **P 18 10 05.6 +0.5**
LSZ pmax pmax
comp=Z,82nm,0.9s,mb5.6
LSZ Lusaka 65.34 227 P **P 18 10 06.2 +1.1**
SNR=12
TORD Torodi Ar. Bea 65.93 269 P **P 18 10 06.7 -2.4**
comp=Z,47nm,0.9s,mb5.3,baz=48,slow=6.1,SNR=28
TORD LR LR 18 42 32.9
comp=Z,97nm,20.8s,baz=350,slow=39
SWI Sorong 66.65 109 P **P 18 10 14.8 +1.1**
SFJD Kangerlussuaq 68.22 339 *e*P **P 18 10 21.4 -1.3**
SFJD Kangerlussuaq 68.22 339 *i*P **P 18 10 21.4 -1.3**
RES Resolute Bay 69.12 356 LR LR 18 45 28.1
comp=Z,120nm,18.3s,baz=37,slow=40
BAKI Biak 70.59 106 P **P 18 10 40.6 +2.4**
comp=Z,1μmcomp=Z,125nm,1.2s,mb5.6
COLD Coldfoot 72.30 16 *e*P **P 18 10 47.2 -0.4**
comp=Z,33nm,1.0s,mb5.1
MBWA Marble Bar 73.09 133⇑*i*P **P 18 10 53.6 +0.7**
MBWA Marble Bar 73.09 133 *e*P **P 18 10 53.5 +0.6**
comp=Z,49nm,0.9s,mb5.3
MBWA Marble Bar 73.09 133 P **P 18 10 54.2 +1.3**
comp=Z,67nm,0.9s,mb5.5
INK Inuvik 74.27 9 *e*P **P 18 10 58.9 -0.3**
comp=Z,59nm,1.1s,mb5.2
INK Inuvik 74.27 9 *e*P **P 18 10 58.9 -0.3**
INK pmax pmax
comp=Z,59nm,1.1s
FITZ Fitzroy Crossi 74.47 127 *e*P **P 18 11 02.2 +1.2**
comp=Z,57nm,0.9s,mb5.3
FITZ Fitzroy Crossi 74.47 127 *e*P **P 18 11 02.2 +1.3**
comp=Z,47nm,1.1s,mb5.1
FITZ Fitzroy Crossi 74.47 127 P **P 18 11 02.4 +1.4**
comp=Z,84nm,1.1s,mb5.4
LBTB Lobatse 74.53 222 *e*P **P 18 11 02.2 +1.0**
comp=Z,215nm,0.9s,mb5.9
LBTB Lobatse 74.53 222 *e*P **P 18 11 02.2 +1.0**
LBTB pmax pmax
comp=Z,215nm,0.9s,mb5.9
BPAW Bear Paw Mtn. 74.71 18 *e*P **P 18 11 00.9 -0.8**
comp=Z,21nm,1.0s,mb4.8
COLA College 74.81 16 *e*P **P 18 11 02.0 -0.3**
comp=Z,26nm,0.8s,mb5.0
COLA College 74.81 16 *e*P **P 18 11 02.0 -0.3**
COLA pmax pmax
comp=Z,26nm,0.8s,mb5.0
TSUM Tsumeb 74.84 232 *e*P **P 18 11 03.4 +0.2**
comp=Z,85nm,1.3s,mb5.3
KNA Kununurra 74.87 123 *e*P **P 18 11 04.3 +0.9**
comp=Z,40nm,0.5s,mb5.4
KNA Kununurra 74.87 123 P **P 18 11 04.7 +1.3**
comp=Z,2μmcomp=Z,250nm,0.7s,mb6.0
DBIC Dimbokro 74.90 267 P **P 18 11 01.7 -2.0**
comp=Z,28nm,1.0s,mb5.0,baz=35,slow=6.7,SNR=20
DBIC LR LR 18 47 37.0
comp=Z,83nm,18.2s,baz=32,slow=38
DBIC Dimbokro 74.90 267 *e*P **P 18 11 01.2 -2.5**
comp=Z,34nm,1.1s,mb5.0
DBIC Dimbokro 74.90 267 P **P 18 11 01.7 -2.0**
DBIC pmax pmax
comp=Z,28nm,1.0s
DBIC MLR MLR
comp=Z,83nm,18.2s
KIC Kosan Boka 74.99 267 *e*P **P 18 11 02.2 -2.0**
comp=Z,122nm,1.0s,mb5.6
TIC Toumodi 75.05 267 *e*P **P 18 11 02.5 -2.1**
comp=Z,159nm,1.1s,mb5.7
TIC Toumodi 75.05 267 *e*P **P 18 11 02.5 -2.1**
TIC pmax pmax
comp=Z,159nm,1.1s,mb5.7
ILAR Eielson Array 75.11 16 P **P 18 11 02.9 -1.1**
comp=Z,9.0nm,1.0s,mb4.5,baz=316,slow=4.7,SNR=64
ILAR pP pP 18 11 29.9 +0.4
comp=Z,8.9nm,0.9s,baz=319,slow=4.4,SNR=7.1
ILAR Eielson Array 75.11 16 P **P 18 11 02.9 -1.1**
ILAR *PP pP 18 11 30.0 +0.4
ILAR pmax pmax
comp=Z,9.0nm,1.0s
LIC Lamto 75.30 267 *e*P **P 18 11 03.9 -2.1**
comp=Z,120nm,1.3s,mb5.5
LIC Lamto 75.30 267⇑*i*P **P 18 11 04.0 -2.0**
comp=Z,56nm,0.9s,mb5.0
LIC *e*MLR MLR
comp=Z,133nm,17.5s
LIC Lamto 75.30 267⇑*i*P **P 18 11 04.0 -2.0**
comp=Z,28nm,0.9s,mb5.0
LIC LR LR
comp=Z,70nm,17.5s
PPLA Purkeypile 75.40 19 *e*P **P 18 11 05.6 -0.1**
comp=Z,35nm,1.1s,mb5.0
TRF Thorofare Moun 75.43 18 *e*P **P 18 11 05.7 -0.2**
comp=Z,10nm,0.9s,mb4.6
FRB Frobisher Bay 75.52 343 LR LR 18 44 57.2
comp=Z,190nm,19.6s,baz=22,slow=36
MCK McKinley 75.52 17 *e*P **P 18 11 06.0 -0.4**
comp=Z,8.9nm,0.8s,mb4.5
MCK McKinley 75.52 17 *e*P **P 18 11 06.0 -0.4**
MCK pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
EGAK Eagle 76.29 14 *e*P **P 18 11 10.6 -0.2**
comp=Z,19nm,0.9s,mb4.8
DOT Dot Lake 76.70 15 *e*P **P 18 11 12.9 -0.2**
comp=Z,27nm,0.9s,mb5.0
PAX Paxson 76.98 16 *e*P **P 18 11 14.4 -0.3**
comp=Z,24nm,1.0s,mb4.9
PAX Paxson 76.98 16 *e*P **P 18 11 14.5 -0.2**
PAX pmax pmax
comp=Z,24nm,1.0s,mb4.9
DAWY Dawson 77.27 13 *e*P **P 18 11 15.8 -0.4**
PMR Palmer 77.28 19 *e*P **P 18 11 15.4 -1.0**
comp=Z,15nm,1.1s,mb4.6
PMR Palmer 77.28 19 *e*P **P 18 11 15.4 -1.0**
PMR pmax pmax
comp=Z,15nm,1.1s,mb4.6
SML Sawmill 77.30 18 *e*P **P 18 11 16.0 -0.5**
comp=Z,13nm,0.9s,mb4.7
SML Sawmill 77.30 18 *e*P **P 18 11 16.0 -0.5**
SML pmax pmax
comp=Z,13nm,0.9s,mb4.7
BOSA Boshof 77.58 220 P **P 18 11 19.1 +0.7**
comp=Z,212nm,0.8s,mb5.9,baz=35,slow=4.8,SNR=185
BOSA LR LR 18 45 00.5
comp=Z,116nm,18.9s,baz=353,slow=35
BOSA Boshof 77.58 220 *e*P **P 18 11 19.0 +0.5**
comp=Z,221nm,0.8s,mb5.9
BOSA Boshof 77.58 220 P **P 18 11 19.2 +0.8**
BOSA pmax pmax
comp=Z,212nm,0.8s,mb5.9
BOSA MLR MLR
comp=Z,116nm,18.9s
KDAK Kodiak Island 79.49 22 *i*P **P 18 11 28.2 -0.4**
KDAK Kodiak Island 79.49 22 P **P 18 11 28.0 -0.6**
comp=Z,166nm,1.0s,mb5.8,SNR=6.7

OHAK Old Harbor 79.73 23 *e*P **P 18 11 29.6 -0.4**
comp=Z,34nm,1.0s,mb5.1
KLBR Kellerberrin 80.20 141 *e*P **P 18 11 32.5 -0.2**
comp=Z,34nm,0.8s,mb5.2
NWAO Narrogin (SRO) 81.01 142 P **P 18 11 36.3 -0.7**
comp=Z,18nm,0.8s,mb5.0,baz=286,slow=6.3,SNR=9.7
NWAO Narrogin (SRO) 81.01 142 P **P 18 11 36.3 -0.7**
NWAO pmax pmax
comp=Z,19nm,0.8s
PNL Peninsula 81.27 15 *e*P **P 18 11 38.1 0.0**
comp=Z,24nm,1.0s,mb5.0
WRA Warramunga Arr 81.58 122 P **P 18 11 40.3 0.0**
comp=Z,12nm,0.5s,mb5.0,baz=325,slow=4.9,SNR=290
WRA pP pP 18 12 06.7 +0.5
comp=Z,24nm,0.9s,baz=322,slow=5.1,SNR=10
WRA Warramunga Arr 81.58 122 P **P 18 11 40.3 0.0**
WRA *PP pP 18 12 06.7 +0.5
WRA pmax pmax
comp=Z,12nm,0.5s
WB2 Warramunga Arr 81.59 122 *e*P **P 18 11 40.2 -0.2**
YKA Yellowknife Ar 81.64 3 P **P 18 11 39.6 -0.4**
comp=Z,26nm,0.7s,mb5.2,baz=352,slow=5.4,SNR=39
YKA pP pP 18 12 07.1 +1.3
comp=Z,12nm,0.7s,baz=349,slow=5.3,SNR=4.6
YKA Yellowknife Ar 81.64 3 P **P 18 11 39.6 -0.4**
YKA pP pP 18 12 07.1 +1.3
YKA Yellowknife Ar 81.64 3 P **P 18 11 39.7 -0.3**
YKA *PP pP 18 12 07.1 +1.2
SKAG Skagway 82.27 13 *e*P **P 18 11 44.0 +0.6**
comp=Z,33nm,1.1s,mb5.1
SCHQ Schefferville 82.56 337 pP pP 18 12 10.0 -0.9
comp=Z,9.0nm,0.9s,baz=42,slow=8.7,SNR=3.5
SCHQ LR LR 18 50 08.4
comp=Z,148nm,18.1s,baz=88,slow=37
SUR Sutherland 82.90 221 *e*P **P 18 11 48.4 +1.5**
comp=Z,82nm,1.0s,mb5.5
SUR Sutherland 82.90 221 P **P 18 11 48.7 +1.8**
comp=Z,510nm,0.9s,mb6.3,SNR=7.8
ASAR Alice Springs 83.84 125 P **P 18 11 51.9 -0.1**
comp=Z,10nm,0.6s,mb4.8,baz=312,slow=4.9,SNR=283
ASAR pP pP 18 12 18.4 +0.5
comp=Z,21nm,0.8s,baz=321,slow=5.4,SNR=13
ASAR Alice Springs 83.84 125 P **P 18 11 51.9 0.0**
ASAR *PP pP 18 12 18.5 +0.6
ASAR pmax pmax
comp=Z,10.0nm,0.6s
COEN Coen 84.04 112 *e*P **P 18 11 53.2 0.0**
comp=Z,78nm,0.8s,mb5.6
COEN *e*pP pP 18 12 17.2 -1.9
DLBC Dease Lake 84.15 11 *e*P **P 18 11 53.4 +0.3**
PMG Port Moresby 84.28 106 *e*pP pP 18 12 20.9 +0.5
comp=Z,38nm,1.0s
FORT Forrest 85.22 134 *e*P **P 18 11 58.7 0.0**
comp=Z,56nm,0.7s,mb5.6
FORT Forrest 85.22 134 *e*P **P 18 11 59.1 +0.3**
comp=Z,39nm,0.8s,mb5.4
FFC Flin Flon 89.36 356 *e*P **P 18 12 18.0 -0.5**
comp=Z,30nm,1.3s,mb5.2
FFC Flin Flon 89.36 356 *i*P **P 18 12 18.9 +0.5**
CTA Charters Tower 90.17 115 *e*P **P 18 12 22.1 -0.6**
comp=Z,13nm,0.6s,mb5.2
CTA *e* pP 18 12 48.9 0.0
ULM Lac du Bonnet 93.28 352 P **P 18 12 35.2 -1.5**
comp=Z,10nm,0.9s,mb5.2,baz=23,slow=5.5,SNR=6.3
ULM LR LR 18 56 29.7
comp=Z,177nm,18.2s,baz=344,slow=37
ULM Lac du Bonnet 93.28 352 P **P 18 12 35.2 -1.5**
ULM LR LR 18 56 29.7
STKA Stephens Creek 94.37 127 P **P 18 12 41.4 -0.5**
comp=Z,1.7nm,0.5s,mb4.6,baz=348,slow=5.0,SNR=11
STKA Stephens Creek 94.37 127 *e*P **P 18 12 39.5 -2.3**
comp=Z,3.4nm,1.2s,mb4.5
HNR Honiara 94.41 98 LR LR 18 57 38.1
comp=Z,98nm,18.3s,baz=272,slow=37
A14A Double T Ranch 95.21 3⇑P **P 18 12 45.1 -0.4**
baz=95,SNR=8.1
A15A Johnson Ranch, 95.23 3⇑P **P 18 12 45.2 -0.4**
baz=95,SNR=9.6
A22A Carney Farms, 95.25 358⇓P **P 18 12 45.7 0.0**
baz=95
A24A Westby 95.25 357⇓P **P 18 12 46.4 +0.6**
baz=95
JCW Jim Creek 95.26 9 *e*P **P 18 12 45.4 -0.4**
comp=Z,28nm,0.8s,mb5.7
JCW *e*pP pP 18 13 11.4 -0.7
A21A Bergtoll Ranch 95.28 359⇑P **P 18 12 45.9 +0.1**
baz=95
A16A West Butte Ran 95.30 2⇑P **P 18 12 45.2 -0.7**
baz=95
A17A Triple J Farms 95.32 1⇑P **P 18 12 46.0 -0.1**
baz=95,SNR=10
A18A Metzger Ranch, 95.36 1⇑P **P 18 12 45.7 -0.5**
baz=95,SNR=14
A20A Cobblestone Ra 95.40 359⇑P **P 18 12 45.9 -0.5**
baz=95,SNR=6.7
NEW Newport 95.68 6⇑P **P 18 12 47.4 -0.4**
baz=95
DGMT Dagmar 95.72 357⇓P **P 18 12 48.9 +1.0**
baz=95
B13A Whitefish 95.75 4⇑P **P 18 12 48.3 +0.2**
baz=95
B23A Brockton 95.75 358⇓P **P 18 12 48.4 +0.3**
baz=95
B14A Marquette Ranc 95.82 3⇑P **P 18 12 47.9 -0.5**
baz=95,SNR=8.1
B19A Brinkman Farms 95.83 0⇓P **P 18 12 48.3 -0.1**
baz=95
B20A Solberg Farm, 95.84 360⇓P **P 18 12 48.3 -0.2**
baz=95
B21A Ellsworth Farm 95.84 359⇑P **P 18 12 47.8 -0.7**
baz=95
B18A Beardsley Farm 95.88 1⇓P **P 18 12 49.0 +0.4**
baz=95,SNR=6.5
B15A Bradely Ranch, 95.90 3⇓P **P 18 12 48.2 -0.5**
baz=96,SNR=11
B22A Reddig Ranch S 95.95 358⇓P **P 18 12 48.9 -0.1**
baz=96
B17A L&G Farms, Che 95.97 1⇑P **P 18 12 49.0 0.0**
baz=96,SNR=6.1
EGMT Eagleton 96.25 1⇓P **P 18 12 50.4 +0.1**
baz=96
EGMT Eagleton 96.25 1 *e*P **P 18 12 50.6 +0.3**
comp=Z,8.6nm,1.0s,mb5.1
BSMT Bassoo Peak 96.26 4 *e*P **P 18 12 50.5 +0.2**
comp=Z,14nm,1.2s,mb5.3
C12B Naegeli Ranch, 96.36 5⇓P **P 18 12 51.4 +0.6**
baz=96
C15A Salmond Ranch, 96.44 3⇑P **P 18 12 50.4 -0.7**
baz=96,SNR=5.6
C16A Fuhringer Ranc 96.44 2⇑P **P 18 12 50.4 -0.8**
baz=96
C13A Hot Springs 96.44 4⇑P **P 18 12 50.5 -0.6**
baz=96
C21A Desert Coulee 96.44 359⇑P **P 18 12 51.7 +0.5**
baz=96,SNR=9.2
C22A Vida 96.50 358⇑P **P 18 12 51.9 +0.4**
baz=96
C19A Slack Wire Ran 96.55 0⇑P **P 18 12 50.1 -1.5**
baz=96
C20A Veseth Ranch, 96.57 360⇓P **P 18 12 51.6 -0.1**
baz=96,SNR=5.8
C17A Wharram Farm, 96.63 1⇑P **P 18 12 52.0 0.0**
baz=96
SLMT Seeley Lake 96.93 3 *e*P **P 18 12 53.6 +0.2**
comp=Z,24nm,1.5s,mb5.4
D12A Red Ives Fores 97.02 5⇓P **P 18 12 52.7 -1.1**
baz=97
D17A Six Diamond Ra 97.11 1⇓P **P 18 12 54.1 -0.1**
baz=97,SNR=8.4
D19A Cripps Ranch, 97.12 0⇑P **P 18 12 54.5 +0.2**
baz=97
D21A La Casta Ranch 97.20 359⇑P **P 18 12 55.2 +0.6**
baz=97,SNR=5.6
LAO LASA Array 97.56 358 *e*P **P 18 12 57.8 +1.5**
comp=Z,6.4nm,0.6s,mb5.3
E16A East Helena 97.71 2⇑P **P 18 12 57.3 +0.4**
baz=97,SNR=5.3
E19A Rath Farm, Rou 97.82 0⇓P **P 18 12 57.2 -0.2**
baz=97
F12A Elk City 98.31 5⇓P **P 18 12 59.0 -0.7**
baz=98
F13A Darby 98.34 4⇑P **P 18 12 59.4 -0.4**
baz=98
F17A Fitzpatrick Pl 98.36 1⇓P **P 18 12 59.9 0.0**
baz=98
F15A Butte 98.37 3⇓P **P 18 12 59.5 -0.4**
baz=98

F18A Big Timber 98.37 1⇓P **P 18 12 59.5 -0.4**
baz=98
F19A Roth Farm, Mol 98.43 0⇑P **P 18 12 59.9 -0.3**
baz=98
F16A Kennard Place, 98.46 2⇑P **P 18 13 00.7 +0.4**
baz=98
GCMT Greycliff 98.49 1 *e*P **P 18 13 01.3 +0.9**
comp=Z,3.9nm,1.2s,mb4.8
G15A Dillon 99.05 3⇓P **P 18 13 02.8 -0.2**
baz=99
H14A Leadore 99.56 3⇑P Pdif 18 13 05.2 -0.1
baz=99
I21A Big Trails, Te 100.46 359⇓P Pdif 18 13 09.4 +0.1
baz=100
J19A Crowheart 101.02 0⇑P Pdif 18 13 12.6 +0.8
baz=101
PDAR Pinedale Array 101.51 1 P Pdif 18 13 14.2 +0.3
comp=Z,0.7nm,0.8s,baz=29,slow=3.4,SNR=6.5
PDAR PP PP 18 17 19.4 -4.2
comp=Z,0.8nm,1.0s,baz=17,slow=6.2,SNR=3.6
PDAR PKKP PKKPbc 18 29 44.6 +24
comp=Z,2.2nm,1.0s,baz=157,slow=4.9,SNR=9.3
MAW Mawson 103.57 183 Pdiff Pdif 18 13 24.2 +1.0
comp=Z,5.5nm,0.9s,baz=1.8,slow=7.4,SNR=9.1
MAW Mawson 103.57 183 *e*P Pdif 18 13 23.8 +0.6
comp=Z,4.3nm,0.9s
MAW Mawson 103.57 183 *e*P Pdif 18 13 24.3 +1.1
comp=Z,1.7nm,1.0s
MAW Mawson 103.57 183 P Pdif 18 13 24.2 +1.0
MAW pmax pmax
comp=Z,6.0nm,0.9s
NVAR Mina Array Bea 105.32 8 Pdiff Pdif 18 13 31.7 +0.7
comp=Z,0.5nm,0.8s,baz=330,slow=5.2,SNR=3.2
ANMO Albuquerque 109.29 358 PKKP PKKPab 18 29 10.8 -3.1
comp=Z,3.6nm,0.9s,baz=201,slow=6.1,SNR=6.7
TXAR Lajitas Array 114.75 355 PKP PKiKP 18 18 01.4 -1.1
comp=Z,0.2nm,0.4s,baz=200,slow=5,SNR=3.6
TXAR PKKPbc PKKPbc 18 28 46.5 +7.0
comp=Z,4.3nm,0.8s,baz=186,slow=8.8,SNR=4.1
TXAR Lajitas Array 114.75 355 PKP PKiKP 18 18 01.4 -1.1
TXAR PKKPbc PKKPbc 18 28 46.5 +7.0
TXAR Lajitas Array 114.75 355 PKIKP PKiKP 18 18 01.4 -1.1
TXAR 18 28 46.5
VNA2 Neumayer--Watz 120.11 202 *e*PKPdf PKPdf 18 18 08.8 -2.5
baz=30,slow=3.3
VNA2 *e* 18 18 36.5
VNA3 Neumayer Olymp 120.91 202 *e*PKPdf PKPdf 18 18 09.0 -3.8
VNA3 *e* 18 18 37.6
QSPA South Pole Qui 125.89 180 *e*PKPdf PKPdf 18 18 21.2 -1.0
QSPA *e*pPKPdf pPKPdf 18 18 48.4 -1.2
ROSC El Rosal 128.07 314 PKP PKPdf 18 18 27.9 -0.5
comp=Z,3.8nm,0.3s,baz=272,slow=23,SNR=5.1
CPUP Villa Florida 135.42 268 PKP PKPdf 18 18 40.5 -1.3
comp=Z,3.8nm,0.8s,baz=147,slow=1.0,SNR=9.3
CPUP Villa Florida 135.42 268 PKP PKPdf 18 18 40.5 -1.3
CPUP Villa Florida 135.42 268 PKIKP PKPdf 18 18 40.5 -1.3
CPUP pmax pmax
comp=Z,4.0nm,0.8s
LPAZ La Paz 138.95 288 PKP PKPdf 18 18 47.5 -1.1
comp=Z,1.9nm,0.9s,baz=62,slow=0.9,SNR=6.9
LPAZ La Paz 138.95 288 PKIKP PKPdf 18 18 47.5 -1.1
LPAZ pmax pmax
comp=Z,2.0nm,0.9s
TRQA Tornquist 142.96 253 *e*PKPpre PKPpre 18 18 51.5
PLCA Paso Flores 149.90 249 PKPbc PKPbc 18 19 11.3 -0.4
comp=Z,28nm,1.1s,baz=101,slow=2.6,SNR=24
PLCA pPKPbc pPKPbc 18 19 40.3 +1.3
comp=Z,9.7nm,1.0s,baz=6.4,slow=1.5,SNR=2.7
PLCA Paso Flores 149.90 249 *e*PKPbc PKPbc 18 19 11.4 -0.4

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*MAN **24** 18:15:02, 7.°81N×127.°67E, h9km, mb4.9, ML3.9, MS4.0*
*IDC **24** 18:15:06.6±1.7, 8.°01N×127.°31E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/21, mbtmp3.5/4, Error ellipse: s-maj=33.7km s-min=26.2km az=58.0*
*ISCJB **24** 18:15:09.5±2.2, 7.°99N±0.°09×127.°4E±0.°1, h36km±22km, mb3.4/4, Error ellipse: s-maj=19.3km s-min=14.3km az=8.4*
ISC 24 18:15:09.9±4.0, 7.°96N±0.°09×127.°35E±0.°07, h21km±33km, n9, σ0s74/12, mb3.4/4, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.48**	**227**	*e*P	**Pn**	**18 15 31.1**	**-4.3**
MATI				*e*S	**Sn**	**18 15 53.7**	**-0.4**
DAV	**Davao City (W)**	**1.97**	**243**	Pn	**Pn**	**18 15 42.2**	**+0.1**
70nm,0.3s,baz=48,slow=9.0,SNR=3.8							
DAV				Sn	**Sn**	**18 16 05.5**	**-0.7**
54nm,0.3s,baz=95,slow=23,SNR=7.7							
DMPH	**Davao City--Mi**	**2.03**	**245**	⇓*i*P	**Pn**	**18 15 43.1**	**+0.2**
BUKP	**Musuan**	**2.27**	**268**	*e*P	**Pn**	**18 15 46.2**	**0.0**
BUKP				*e*S	**Sn**	**18 16 14.7**	**+1.1**
MSLP	**Maasin**	**3.27**	**311**	*e*P	**Pn**	**18 15 59.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**25.95**	**184**	P	**P**	**18 20 41.3**	**+0.2**
1.2nm,0.7s,mb3.6,baz=5.2,slow=11,SNR=5.8							
WRA	**Warramunga Arr**	**28.57**	**166**	P	**P**	**18 21 06.2**	**+1.6**
0.2nm,0.5s,mb3.1,baz=347,slow=10,SNR=3.4							
ASAR	**Alice Springs**	**32.08**	**169**	P	**P**	**18 21 34.6**	**-1.0**
0.4nm,0.9s,mb3.2,baz=342,slow=7.4,SNR=4.8							
MKAR	**Makanchi Array**	**54.50**	**323**	P	**P**	**18 24 35.6**	**-0.5**
0.7nm,0.7s,mb3.8,baz=120,slow=7.4,SNR=4.5							

IDC 24 18:21:26.2±14.0, 18.°13S×177.°43W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/19, mbtmp3.9/5, Error ellipse: s-maj=283.3km s-min=47.8km az=61.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.61**	**192**	P	P	18 26 07.5	+0.5
2.3nm,0.3s,baz=314,slow=3.4,SNR=4.9							
STKA	**Stephens Creek**	**39.34**	**242**	P	P	18 28 56.6	-0.8
0.7nm,0.8s,baz=45,slow=8.6,SNR=3.4							
WRA	**Warramunga Arr**	**45.51**	**260**	P	P	18 29 48.8	+1.1
0.7nm,0.3s,baz=97,slow=7.4,SNR=16							
ASAR	**Alice Springs**	**45.63**	**254**	P	P	18 29 49.0	+0.3
1.0nm,0.6s,baz=88,slow=8.0,SNR=9.0							
FITZ	**Fitzroy Crossi**	**53.91**	**261**	P	P	18 30 50.6	-1.2
0.6nm,0.5s,baz=40,slow=7.9,SNR=4.7							

DJA 24 18:23:50, 2.°24N×121.°54E, h10km, MLv4.3/4, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLI	**Toli-Toli**	**1.34**	**214**	P	Pn	18 24 13.7	-1.1
TOLI				S	Sb	18 24 28.6	-3.8
MRSI	**Marisa**	**1.80**	**167**	P	Pn	18 24 21.7	+0.6
MRSI				S	Sn	18 24 42.8	-1.1
APSI	**Ampana**	**3.13**	**178**	P	Pn	18 24 40.6	+1.1
MNI	**Manado**	**3.39**	**103**	P	Pn	18 24 43.9	+0.9
MNI				S	Sn	18 25 20.8	-2.6
LUWI	**Luwuk**	**3.48**	**159**	P	Pn	18 24 47.3	+3.0
LUWI				S	Sn	18 25 29.1	+3.4
TTSI	**Tana Toraja**	**5.52**	**198**	P	Pn	18 25 14.3	+1.9

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*ISCJB **24** 18:31:57.1±0.3, 43.°70N±0.°02×105.°24W±0.°03, h0km, Error ellipse: s-maj=3.2km s-min=2.2km az=168.7*
*NEIC **24** 18:31:58.6±0.6, 43.°71N×105.°26W, h0km, ML3.2, Error ellipse: s-maj=8.3km s-min=6.6km az=129.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **24** 18:31:59.5±1.2, 44.°44N×106.°30W, h0km, mb4.4/1, mb1 4.3/3, mb1mx3.6/26, mbtmp4.1/3, ML3.6/2, Error ellipse: s-maj=69.3km s-min=9.0km az=140.0*
ISC 24 18:31:58.4±0.3, 43.°68N±0.°02×105.°29W±0.°03, h0km, n85, σ1s14/106, 41C-31D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J22A	**Midwest**	**0.90**	**253**	⇑P	**Pg**	**18 32 15.3**	**-0.4**
baz=0.9,SNR=86							
J22A				⇓S	**Sg**	**18 32 27.7**	**+0.3**
baz=0.9							
K22A	**Casper**	**1.37**	**222**	⇓P	**Pg**	**18 32 23.1**	**-1.5**
baz=1.4							
I21A	**Big Trails, Te**	**1.46**	**276**	⇑P	**Pn**	**18 32 24.5**	**-1.4**
baz=1.5,SNR=109							
I21A				⇓S	**Sg**	**18 32 44.3**	**-0.9**
baz=1.5							
H21A	**Big Horn, Sher**	**1.58**	**308**	⇓P	**Pn**	**18 32 25.9**	**-1.7**

	baz=1.6						
H21A			⇓S		Sn	18 32 48.0	-0.7
	baz=1.6						
L23A	**Garrett**	**1.59 191**	⇑P		**Pn**	**18 32 27.0**	**-0.8**
	baz=1.6						
L23A			⇑S		**Sn**	**18 32 48.8**	**-0.3**
	baz=1.6						
J21A	**Lysite**	**1.60 259**	⇓P		**Pn**	**18 32 27.2**	**-0.7**
	baz=1.6,SNR=536						
J21A			⇓S		**Sn**	**18 32 48.6**	**-0.7**
	baz=1.6						
L24A	**Wheatland**	**1.66 171**	⇑P		**Pn**	**18 32 28.3**	**-0.4**
	baz=1.7						
K21A	**Alcova**	**1.77 235**	⇑Pb		**Pb**	**18 32 30.5**	**-1.3**
	baz=1.8						
K21A			⇓Sb		**Sb**	**18 32 54.5**	**-0.1**
	baz=1.8						
J20A	**Shoshoni**	**2.06 262**	⇓Pb		**Pb**	**18 32 34.2**	**-2.4**
	baz=2.1,SNR=391						
J20A			⇓Sb		**Sb**	**18 33 02.9**	**+0.2**
	baz=2.1						
G21A	**Lodge Grass**	**2.07 319**	⇑Pb		**Pb**	**18 32 35.2**	**-1.5**
	baz=2.1						
G21A			⇑Sb		**Sb**	**18 33 02.8**	**-0.2**
	baz=2.1						
I20A	**Worland**	**2.07 278**	⇑Pb		**Pb**	**18 32 35.3**	**-1.5**
	baz=2.1,SNR=234						
I20A			⇑Sb		**Sb**	**18 33 02.6**	**-0.5**
	baz=2.1						
H20A	**Greybull**	**2.11 293**	⇓Pb		**Pb**	**18 32 35.7**	**-1.9**
	baz=2.1,SNR=42						
H20A			⇑Sb		**Sb**	**18 33 04.1**	**-0.1**
	baz=2.1						
M23A	**Laramie**	**2.23 188**	⇓Pb		**Pb**	**18 32 38.0**	**-1.6**
	baz=2.3						
M24A	**Cheyenne**	**2.24 171**	⇓Pb		**Pb**	**18 32 38.7**	**-0.9**
	baz=2.3						
L21A	**Rawlins**	**2.30 222**	⇑Pb		**Pb**	**18 32 38.8**	**-1.9**
	baz=2.3						
L21A			⇓Sb		**Sb**	**18 33 09.2**	**-0.4**
	baz=2.3						
K20A	**Yellowstone Ra**	**2.46 246**	⇑Pb		**Pb**	**18 32 41.3**	**-2.1**
	baz=2.5,SNR=112						
K20A			⇑Sb		**Sb**	**18 33 14.5**	**+0.3**
	baz=2.5						
M22A	**Cedar Creek Ra**	**2.47 203**	⇓Pb		**Pb**	**18 32 42.0**	**-1.6**
	baz=2.5						
M22A			⇑Sb		**Sb**	**18 33 14.8**	**+0.2**
	baz=2.5						
F21A	**Absaloka Mine,**	**2.51 329**	⇓Sb		**Sb**	**18 33 15.8**	**+0.1**
	baz=2.5						
M21A	**Separation Pea**	**2.58 217**	⇑Pb		**Pb**	**18 32 43.3**	**-2.2**
	baz=2.6						
M21A			⇓Sb		**Sb**	**18 33 17.5**	**-0.1**
	baz=2.6						
G20A	**Bridger**	**2.60 307**	⇓Sb		**Sb**	**18 33 19.0**	**+0.7**
	baz=2.6						
I19A	**Meeteetse**	**2.70 279**	⇑Pb		**Pb**	**18 32 44.5**	**-3.1**
	baz=2.7						
I19A			⇑Sb		**Sb**	**18 33 21.0**	**-0.3**
	baz=2.7						
K19A	**Absolon Red Bu**	**2.73 253**	⇑Pb		**Pb**	**18 32 46.6**	**-1.5**
	baz=2.8						
J19A	**Crowheart**	**2.77 263**	⇑Pb		**Pb**	**18 32 45.6**	**-3.1**
	baz=2.8						
J19A			⇓Sb		**Sb**	**18 33 23.6**	**+0.4**
	baz=2.8						
L20A	**Wamsutter**	**2.80 234**	⇑Sb		**Sb**	**18 33 24.8**	**+0.8**
	baz=2.8						
N23A	**Red Feather La**	**2.83 190**	⇓Pb		**Pb**	**18 32 45.8**	**-3.9**
	baz=2.9						
N23A			⇑Sb		**Sb**	**18 33 24.9**	**+0.1**
	baz=2.9						
H19A	**Powell**	**2.84 292**	⇑Pb		**Pb**	**18 32 46.1**	**-3.8**
	baz=2.8,SNR=43						
N24A	**Carr**	**2.87 174**	⇑Sb		**Sb**	**18 33 27.1**	**+1.1**
	baz=2.9						
F20A	**Billings**	**2.94 317**	⇓Sb		**Sb**	**18 33 29.2**	**+1.1**
	baz=2.9						
N25A	**Grover**	**3.00 162**	⇓Pb		**Pb**	**18 32 51.9**	**-0.8**
	baz=3.0						
N22A	**Wattenberg Ran**	**3.00 197**	⇓Pb		**Pb**	**18 32 51.4**	**-1.3**
	baz=3.0						
N22A			⇓Sb		**Sb**	**18 33 30.2**	**+0.3**
	baz=3.0						
M20A	**Sweetwater, Wa**	**3.06 225**	⇑Pb		**Pb**	**18 32 51.9**	**-1.8**
	baz=3.1						
M20A			⇓Sb		**Sb**	**18 33 32.4**	**+0.9**
	baz=3.1						
E21A	**Keefer Ranch,**	**3.13 337**	⇑P		**Pn**	**18 32 48.3**	**-0.6**
	baz=3.1						
RLMT	**Red Lodge**	**3.19 298**	⇑P		**Pn**	**18 32 50.4**	**+0.6**
	baz=3.2						
BW06	**Boulder Array**	**3.25 255**	⇑P		**Pn**	**18 32 51.3**	**+0.7**
	baz=3.3						
BW06			⇓Sb		**Sb**	**18 33 36.2**	**-0.9**
	baz=3.3						
BW06	**Boulder Array**	**3.25 255**	*e*Pn		**Pn**	**18 32 50.2**	**-0.4**
PDAR	**Pinedale Array**	**3.25 255**	Pn		**Pn**	**18 32 51.2**	**+0.7**
	5.8nm,0.3s,baz=80,slow=17,SNR=88						
PDAR			Pg		**Pg**	**18 32 54.4**	**-6.3**
	24nm,0.3s,baz=80,slow=33,SNR=23						
PDAR			Lg			18 33 38.4	
	31nm,0.3s,baz=60,slow=33,SNR=23						
I18A	**Diamond G Ranc**	**3.28 272**	⇓P		**Pn**	**18 32 51.9**	**+0.9**
	baz=3.3						
H18A	**Shoshone NF, C**	**3.30 289**	⇑P		**Pn**	**18 32 51.8**	**+0.5**
	baz=3.3,SNR=27						
N21A	**Black Mountain**	**3.35 210**	⇑P		**Pn**	**18 32 53.4**	**+1.4**
	baz=3.4						
L19A	**Farson**	**3.38 244**	⇑P		**Pn**	**18 32 53.9**	**+1.6**
	baz=3.4						
F19A	**Roth Farm, Mol**	**3.39 311**	⇑P		**Pn**	**18 32 53.2**	**+0.7**
	baz=3.4						
G18A	**Lazy EL Ranch,**	**3.47 300**	⇓P		**Pn**	**18 32 54.6**	**+1.0**
	baz=3.5,SNR=57						
J18A	**Kendall Valley**	**3.48 264**	⇑Sb		**Sb**	**18 33 43.6**	**+0.1**
	baz=3.5						
O23A	**Lake Granby, G**	**3.50 188**	⇑Sb		**Sb**	**18 33 44.7**	**+0.5**
	baz=3.5						
D24A	**Glendive**	**3.50 11**	⇓P		**Pn**	**18 32 55.6**	**+1.5**
	baz=3.5						
D21A	**La Casta Ranch**	**3.59 341**	⇑P		**Pn**	**18 32 55.3**	**0.0**
	baz=3.6						
N20A	**Spence Gulch,**	**3.60 219**	⇑P		**Pn**	**18 32 56.4**	**+1.1**
	baz=3.6						
K18A	**Toltan Ranch,**	**3.63 255**	⇑P		**Pn**	**18 32 57.6**	**+1.8**
	baz=3.6						
O22A	**Kremmling**	**3.64 195**	⇑P		**Pn**	**18 32 57.5**	**+1.6**
	baz=3.7						
O22A			⇓Sb		**Sb**	**18 33 49.4**	**+1.2**
	baz=3.7						
E19A	**Rath Farm, Rou**	**3.72 320**	⇑P		**Pn**	**18 32 57.0**	**-0.1**
	baz=3.7						
GCMT	**Greycliff**	**3.77 306**	*e*Pn		**Pn**	**18 32 58.4**	**+0.7**
LKWY	**Lake**	**3.78 285**	*e*Pn		**Pn**	**18 32 55.4**	**-2.6**
LOHW	**Long Hollow**	**3.86 271**	*e*Pn		**Pn**	**18 33 00.4**	**+1.5**
C24A	**Savage**	**3.90 9**	⇑P		**Pn**	**18 33 00.6**	**+1.1**
	baz=3.9						
L18A	**Fontenelle, Gr**	**3.91 245**	⇓Sb		**Sb**	**18 33 57.1**	**+1.1**
	baz=3.9						
J17A	**Brown Place, J**	**3.96 267**	⇑Sb		**Sb**	**18 33 58.2**	**+0.9**
	baz=4.0						
MOOW	**Moose Ponds**	**3.96 273**	*e*Pn		**Pn**	**18 33 01.4**	**+1.2**
SNOW	**Snow King Moun**	**3.98 269**	*e*Pn		**Pn**	**18 33 03.5**	**+2.9**
REDW	**Red Top Meadow**	**4.06 267**	*e*Pn		**Pn**	**18 33 02.4**	**+0.7**
YFT	**Old Faithful**	**4.07 283**	*e*Pg		**Pg**	**18 33 09.7**	**-6.7**
IMW	**Indian Meadow**	**4.09 275**	*e*Pn		**Pn**	**18 33 03.9**	**+1.6**
TPAW	**Teton Pass**	**4.12 269**	*e*Pn		**Pn**	**18 33 03.7**	**+1.2**
AHID	**Auburn Hatcher**	**4.34 260**	*e*Pn		**Pn**	**18 33 06.3**	**+0.7**
RRI2	**Red Ridge**	**4.40 268**	*e*Pn		**Pn**	**18 33 07.1**	**+0.8**
SMCO	**Snowmass**	**4.67 196**	*e*Pg		**Pg**	**18 33 20.3**	**-7.7**
DGMT	**Dagmar**	**4.85 9**	*e*Pn		**Pn**	**18 33 13.6**	**+1.0**
BOZ	**Bozeman (W)**	**4.93 296**	*e*Pn		**Pn**	**18 33 13.3**	**-0.4**
HWUT	**Hardware Ranch**	**5.07 248**	*e*Pn		**Pn**	**18 33 16.2**	**+0.6**
	7.6nm,0.3s						
EGMT	**Eagleton**	**5.35 326**	*e*Pn		**Pn**	**18 33 19.0**	**-0.3**
	12nm,0.3s						
DAU	**Daniels Canyon**	**5.51 236**	Pn		**Pn**	**18 33 23.5**	**+1.9**
	8.2nm,0.3s						
HRY	**Holter Researc**	**5.53 306**	*e*Pn		**Pn**	**18 33 22.5**	**+0.6**
	8.2nm,0.3s						
LRM	**Limekiln Ridge**	**5.53 295**	*e*Pn		**Pn**	**18 33 21.9**	**0.0**
	26nm,0.3s						
MCMT	**McKenzie Canyo**	**5.55 285**	Pn		**Pn**	**18 33 24.2**	**+2.0**
	1.6nm,0.3s						
HVU	**Hansel Valley**	**5.83 254**	*e*Pn		**Pn**	**18 33 24.8**	**-1.3**
	4.0nm,0.3s						
PV04	**Paradox Valley**	**5.95 209**	*e*Pn		**Pn**	**18 33 28.9**	**+1.3**
SRU	**San Rafael**	**6.03 223**	*e*Pn		**Pn**	**18 33 28.3**	**-0.4**
	11nm,0.3s						
PV01	**Paradox Valley**	**6.07 205**	*e*P		**Pn**	**18 33 30.9**	**+1.5**
	241nm,0.4s						
TMUT	**Trail Mountain**	**6.24 227**	*e*P		**Pn**	**18 33 33.1**	**+1.5**
	5.1nm,0.3s						
ECSD	**EROS Data Cent**	**6.29 87**	*e*Pn		**Pn**	**18 33 32.5**	**+0.1**
	3.3nm,0.4s						
BGU	**Big Grassy Mou**	**6.36 247**	*e*Pn		**Pn**	**18 33 32.9**	**-0.4**
	2.2nm,0.3s						
CHMT	**Chamberlain Mo**	**6.48 303**	*e*Pn		**Pn**	**18 33 35.3**	**+0.4**
	1.5nm,0.3s						
MSU	**Marysvale**	**7.33 228**	*e*Pn		**Pn**	**18 33 47.4**	**+0.8**
	2.1nm,0.4s						
ULM	**Lac du Bonnet**	**9.19 41**	Pn		**Pn**	**18 34 10.4**	**-1.8**
	2.1nm,0.3s,baz=237,slow=12,SNR=11						
ULM			Lg			18 36 42.6	
	0.5nm,0.3s,baz=135,slow=19,SNR=2.0						
TXAR	**Lajitas Array**	**14.38 174**	Pg		Px	18 36 37.6	
	0.1nm,0.3s,baz=357,slow=17,SNR=3.4						
ARCES	**ARCESS Array B**	**61.48 18**	P		**P**	**18 42 14.3**	**-1.9**
	4.1nm,1.0s,baz=327,slow=6.8,SNR=5.7						

IDC 24 18:52:06.9±3.3, 8°.36S×119°.48E, $h168^{km}\pm32^{km}$, mb3.2/3, mb1 3.2/5, mb1mx3.0/19, mbtmp3.1/5, Error ellipse: s-maj=69.1km s-min=16.4km az=51.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.33**	**5**	P	Pn	18 52 58.9	-0.2
	0.4nm,0.3s,baz=57,slow=23,SNR=3.7						
WRA	**Warramunga Arr**	**18.43**	**130**	P	P	18 56 08.9	-0.8
	0.2nm,0.3s,baz=311,slow=10,SNR=14						
WRA				S	S	18 59 31.6	+0.1
	0.1nm,0.3s,baz=295,slow=22,SNR=4.9						
ASAR	**Alice Springs**	**20.56**	**139**	P	P	18 56 33.1	+0.5
	0.7nm,0.6s,baz=316,slow=11,SNR=40						
STKA	**Stephens Creek**	**31.15**	**142**	P	P	18 58 10.7	+0.7
	3.5nm,1.1s,baz=320,slow=8.4,SNR=9.2						
MKAR	**Makanchi Array**	**64.11**	**333**	P	P	19 02 23.0	-0.1
	0.2nm,0.4s,baz=147,slow=7.0,SNR=3.5						

IDC 24 18:56:32.3±1.8, 1°.51N×126°.42E, $h0^{km}$, mb3.4/4, mb1 3.6/4, mb1mx3.4/17, mbtmp3.5/4, Error ellipse: s-maj=164.7km s-min=23.8km az=65.0, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.69**	**160**	P	P	19 01 36.4	+0.8
	0.7nm,0.6s,baz=337,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**26.06**	**164**	P	P	19 02 08.9	+1.3
	0.2nm,0.6s,baz=354,slow=8.6,SNR=6.9						
STKA	**Stephens Creek**	**36.19**	**158**	P	P	19 03 35.2	-1.6
	1.5nm,0.8s,baz=337,slow=9.4,SNR=3.5						
MKAR	**Makanchi Array**	**59.20**	**326**	P	P	19 06 35.3	+0.1
	0.3nm,0.3s,baz=116,slow=7.7,SNR=6.7						

*ISCJB **24** 19:39:11.4±2.5, 12°.1N±0°.1×142°.1E±0°.2, $h147^{km}\pm30^{km}$, mb3.6/6, Error ellipse: s-maj=36.2km s-min=20.8km az=2.2*
*NEIC **24** 19:39:11.5±1.9, 12°.14N×142°.07E, $h132^{km}\pm23^{km}$, Error ellipse: s-maj=27.4km s-min=14.4km az=89.0*
*IDC **24** 19:39:12.9±2.3, 12°.15N×142°.07E, $h145^{km}\pm27^{km}$, mb3.4/6, mb1 3.6/7, mb1mx3.4/23, mbtmp3.4/7, Error ellipse: s-maj=29.1km s-min=16.0km az=94.0*

ISC 24 19:39:12.4±2.5, 12°.1N±0°.1×142°.0E±0°.2, $h139^{km}\pm29^{km}$, n8, σ0°57/10, mb3.6/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.12**	**62**	P	**Pn**	**19 40 01.4**	**+0.5**
	20nm,0.3s,baz=247,slow=1.8,SNR=38						
GUMO				S	**Sn**	**19 40 38.8**	**+0.4**
	32nm,0.3s,baz=126,slow=23,SNR=12						
GUMO	**Guam**	**3.12**	**62**	*e*Pn	**Pn**	**19 39 59.3**	**-1.6**
GUMO				S	**Sn**	**19 40 38.8**	**+0.4**
WRA	**Warramunga Arr**	**32.76**	**193**	P	**P**	**19 45 32.2**	**0.0**
	2.8nm,0.7s,mb4.1,baz=13,slow=9.7,SNR=20						
ASAR	**Alice Springs**	**36.45**	**193**	P	**P**	**19 46 04.2**	**+0.2**
	0.4nm,0.3s,mb3.5,baz=22,slow=11,SNR=15						
CMAR	**Chiang Mai Arr**	**41.96**	**284**	P	**P**	**19 46 49.5**	**-0.4**
	1.3nm,0.7s,mb3.7,baz=88,slow=6.2,SNR=7.4						
STKA	**Stephens Creek**	**43.76**	**181**	P	**P**	**19 47 04.2**	**+0.2**
	1.3nm,0.3s,mb4.0,baz=23,slow=8.6,SNR=11						
SONM	**Songino Array**	**46.39**	**327**	P	**P**	**19 47 25.5**	**+0.8**
	0.2nm,0.3s,mb3.2,baz=148,slow=5.9,SNR=4.2						
ILAR	**Eielson Array**	**71.06**	**25**	P	**P**	**19 50 14.5**	**-0.6**
	0.4nm,0.6s,mb3.3,baz=246,slow=6.2,SNR=6.0						

*BJI **24** 20:08:08.4, 55°.22N×166°.41E, $h26^{km}$, mB4.9/4, mb4.6/10*
*ISCJB **24** 20:08:12.5±0.7, 54°.93N±0°.04×165°.64E±0°.04, $h29^{km}\pm4^{km}$, mb4.4/44, MS3.3/5, Error ellipse: s-maj=6.1km s-min=3.5km az=172.7*
*KRSC **24** 20:08:12.5±0.2, 54°.93N×165°.65E, $h33^{km}\pm37^{km}$, ML4.7*
*MOS **24** 20:08:13.3±1.1, 55°.03N×165°.60E, $h35^{km}$, mb4.5/22, Error ellipse: s-maj=9.4km s-min=7.9km az=75.3*
*IDC **24** 20:08:17.4±0.7, 55°.02N×165°.55E, $h52^{km}\pm7^{km}$, mb3.9/21, mb1 4.1/23, mb1mx4.1/29, mbtmp3.9/23, MS3.2/6, Ms1 3.2/6, ms1mx3.0/36, Error ellipse: s-maj=17.9km s-min=9.4km az=157.0*
*NEIC **24** 20:08:17.2±0.4, 54°.96N×165°.57E, mb4.8/16, Error ellipse: s-maj=14.1km s-min=5.8km az=158.0*

ISC 24 20:08:13.6±0.7, 54°.95N±0°.04×165°.65E±0°.04, $h23^{km}\pm5^{km}$, $h49^{km}\pm6.4^{km}$: pP-P, n122, σ1.9 05/148, mb4.4/44, MS3.3/5, 1C, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.32**	**36**	*e*P	**Pb**	**20 08 20.1**	**-0.6**
BKI				*i* S	**Sb**	**20 08 25.0**	**-0.6**
BKI	**Bering**	**0.32**	**36**	PN	**Pb**	**20 08 20.1**	**-0.6**
BKI				S	**Sb**	**20 08 25.0**	**-0.6**
KBTR	**Krutoberegovo**	**2.04**	**309**	*e*P	**Pn**	**20 08 44.0**	**-2.6**
KBTR				*i* S	**Sn**	**20 09 07.7**	**-3.6**
KBTR	**Krutoberegovo**	**2.04**	**309**	PN	**Pn**	**20 08 44.0**	**-2.6**
KBTR				S	**Sn**	**20 09 07.7**	**-3.6**
MKZ	**Mys Kozlova**	**2.31**	**262**	*e*P	**Pn**	**20 08 49.2**	**-0.9**
MKZ				*i* S	**Sn**	**20 09 15.7**	**-2.1**
MKZ	**Mys Kozlova**	**2.31**	**262**	PN	**Pn**	**20 08 49.2**	**-0.9**
MKZ				S	**Sn**	**20 09 15.7**	**-2.1**
ZLN	**Zelenaya**	**2.96**	**293**	*e*P	**Pn**	**20 08 59.2**	**+0.1**
ZLN				*i* S	**Sn**	**20 09 33.7**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**2.99**	**291**	*e*P	**Pn**	**20 09 00.3**	**+0.7**
BZGR				*i* S	**Sn**	**20 09 35.4**	**+0.7**
SRKR	**Sorokina**	**3.05**	**306**	*e*P	**Pn**	**20 09 00.1**	**-0.3**
SRKR				*i* S	**Sn**	**20 09 35.7**	**-0.5**
BZMR	**Bezymyannaya**	**3.10**	**291**	*e*P	**Pn**	**20 09 01.6**	**+0.5**
BZMR				*e*S	**Sn**	**20 09 38.3**	**+0.9**
BZWR	**Bezymyannyi-We**	**3.11**	**291**	*e*P	**Pn**	**20 09 01.6**	**+0.5**
BZWR				*i* S	**Sn**	**20 09 37.6**	**+0.1**
KLY	**Klyuchi**	**3.15**	**298**	*e*P	**Pn**	**20 08 59.8**	**-1.9**
KLY				*i* S	**Sn**	**20 09 35.2**	**-3.3**
KLY	**Klyuchi**	**3.15**	**298**	PN	**Pn**	**20 08 59.8**	**-1.9**
KLY				S	**Sn**	**20 09 35.2**	**-3.3**
TUMR	**Tumrok**	**3.18**	**278**	*e*P	**Pn**	**20 09 02.5**	**+0.4**
TUMR				*i* S	**Sn**	**20 09 40.4**	**+1.1**
KIRR	**Kirishev**	**3.19**	**291**	*e*P	**Pn**	**20 09 02.5**	**+0.3**
KIRR				*i* S	**Sn**	**20 09 37.9**	**-1.6**
KMNR	**Kamenistaya**	**3.19**	**287**	*e*P	**Pn**	**20 09 03.5**	**+1.1**
KMNR				*i* S	**Sn**	**20 09 41.9**	**+2.2**
KPT	**Kopyto**	**3.25**	**290**	*e*P	**Pn**	**20 09 03.6**	**+0.4**
KOZR	**Kozyr**	**3.46**	**291**	PN	**Pn**	**20 09 07.4**	**+1.4**
KOZR				S	**Sn**	**20 09 47.9**	**+1.7**
KOZ	**Kozyrevsk**	**3.47**	**291**	*e*P	**Pn**	**20 09 07.4**	**+1.3**
KOZ				*i* S	**Sn**	**20 09 47.9**	**+1.5**
SRDR	**Sredinnyy**	**3.63**	**295**	*e*P	**Pn**	**20 09 09.1**	**+0.7**
SRDR				*i* S	**Sn**	**20 09 50.4**	**0.0**
SPN	**Mys Shipunski**	**3.80**	**243**	*e*P	**Pn**	**20 09 09.7**	**-1.0**
SPN				*i* S	**Sn**	**20 09 50.4**	**-4.2**
SPN	**Mys Shipunski**	**3.80**	**243**	PN	**Pn**	**20 09 09.7**	**-1.0**
NLC	**Nalytchevo**	**4.12**	**247**	*e*P	**Pn**	**20 09 14.3**	**-0.8**
NLC				*i* S	**Sn**	**20 09 58.6**	**-3.9**
NLC	**Nalytchevo**	**4.12**	**247**	PN	**Pn**	**20 09 14.3**	**-0.8**
AVH	**Avacha**	**4.40**	**250**	*e*P	**Pn**	**20 09 19.8**	**+0.8**
AVH				*i* S	**Sn**	**20 10 07.8**	**-1.7**
PET	**Petropavlovsk**	**4.56**	**248**	*e*P	**Pn**	**20 09 21.0**	**-0.1**
PET				*i* S	**Sn**	**20 10 09.4**	**-3.9**
PET	**Petropavlovsk**	**4.56**	**248**	*e*P	**Pn**	**20 09 20.4**	**-0.6**
PET	**Petropavlovsk**	**4.56**	**248**	PN	**Pn**	**20 09 21.0**	**-0.1**
GNL	**Ganaly**	**4.69**	**258**	*e*P	**Pn**	**20 09 23.8**	**+1.0**
GNL				*i* S	**Sn**	**20 10 16.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**5.04**	**252**	*e*P	**Pn**	**20 09 28.2**	**+0.5**
PEA0B				*e*S	**Sn**	**20 10 22.8**	**-2.3**
PETK	**Petropavlovsk-**	**5.04**	**252**	P	**Pn**	**20 09 27.9**	**+0.3**
	13nm,0.3s,baz=74,slow=18,SNR=52						
PETK				S	**Sn**	**20 10 24.1**	**-0.9**
	15nm,0.3s,baz=302,slow=12,SNR=8.5						
PETK				LR	LR	20 11 27.7	
	comp=Z,162nm,20.7s,baz=76,slow=38						
PETK	**Petropavlovsk-**	**5.04**	**252**	*e*PN	**Pn**	**20 09 28.3**	**+0.6**
PETK				pmax	pmax		
	comp=Z,13nm,0.3s						
GRL	**Gorelyy**	**5.10**	**245**	*e*P	**Pn**	**20 09 29.1**	**+0.6**
GRL				*i* S	**Sn**	**20 10 24.4**	**-2.1**
SKR	**Severo-Kuril's**	**7.18**	**237**	*e*PN	**Pn**	**20 09 56.5**	**-0.6**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SEY	**Seymchan**	**10.52**	**325**	*i* PN	**Pn**	**20 10 44.0**	**+1.3**
BILL	**Bilibino**	**13.14**	**1**	*e*PN	**Pn**	**20 11 18.8**	**+0.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,300nm,16.0s						
ASAJ	**Asahikawa**	**18.39**	**243**	P	**Pn**	**20 12 29.2**	**+2.5**
	comp=Z,0.5nm,0.3s,baz=324,slow=18,SNR=3.6						
ASAJ	**Asahikawa**	**18.39**	**243**	P	**Pn**	**20 12 29.3**	**+2.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	**19.87**	**305**	*i* P	**Pn**	**20 12 42.8**	**-1.7**
KDAK	**Kodiak Island**	**23.04**	**66**	P	**P**	**20 13 16.7**	**-0.1**
	comp=Z,4.8nm,0.7s,mb4.1,baz=251,slow=5.4,SNR=7.2						
KDAK	**Kodiak Island**	**23.04**	**66**	*i* P	**P**	**20 13 16.7**	**-0.1**
BPAW	**Bear Paw Mtn.**	**23.36**	**50**	*e*P	**P**	**20 13 19.7**	**-0.4**
	comp=Z,11nm,1.3s,mb4.1						
COLD	**Coldfoot**	**24.00**	**42**	*e*P	**P**	**20 13 25.2**	**-0.9**
	comp=Z,12nm,0.9s,mb4.3						
SML	**Sawmill**	**24.62**	**55**	*e*P	**P**	**20 13 31.5**	**-0.2**
	comp=Z,2.4nm,0.9s,mb3.7						
SML	**Sawmill**	**24.62**	**55**	*e*P	**P**	**20 13 31.5**	**-0.3**
SML				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
COLA	**College**	**24.75**	**48**	*e*P	**P**	**20 13 31.5**	**-1.3**
	comp=Z,11nm,0.9s,mb4.4						
COLA	**College**	**24.75**	**48**	*e*P	**P**	**20 13 31.5**	**-1.4**
COLA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
ILAR	**Eielson Array**	**25.16**	**48**	P	**P**	**20 13 36.1**	**-0.5**
	comp=Z,7.3nm,0.8s,mb4.2,baz=258,slow=8.7,SNR=52						
ILAR	**Eielson Array**	**25.16**	**48**	P	**P**	**20 13 36.1**	**-0.5**
ILAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAJO	**Matsushiro**	**26.29**	**237**	*i* P	**P**	**20 13 48.5**	**+1.3**
MJAR	**Matsushiro Arr**	**26.29**	**237**	P	**P**	**20 13 47.9**	**+0.7**
	comp=Z,1.7nm,0.8s,mb3.6,baz=9.4,slow=8.0,SNR=6.3						
MJAR				pP	pP	20 14 01.9	+7.8
	comp=Z,2.6nm,0.8s,baz=27,slow=7.4,SNR=5.3						
MJAR	**Matsushiro Arr**	**26.29**	**237**	P	**P**	**20 13 47.9**	**+0.7**
MJAR				*PP	pP	20 14 01.9	+7.9
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOD	**Bodaibo**	**28.17**	**297**	*e*P	**P**	**20 14 03.2**	**-0.6**
BOD				pmax	pmax		
	comp=Z,26nm,0.8s,mb4.9						
INK	**Inuvik**	**30.37**	**40**	P	**P**	**20 14 23.9**	**+0.7**
	comp=Z,2.3nm,0.5s,mb4.1,baz=302,slow=5.9,SNR=4.8						
INK	**Inuvik**	**30.37**	**40**	P	**P**	**20 14 23.9**	**+0.7**
INK	**Inuvik**	**30.37**	**40**	P	**P**	**20 14 23.9**	**+0.7**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSRS	**Korea Array**	**30.94**	**251**	P	**P**	**20 14 30.4**	**+1.9**
	comp=Z,3.0nm,0.8s,mb4.2,baz=46,slow=9.1,SNR=10.0						
KSRS				LR	LR	20 26 08.7	
	comp=Z,55nm,19.0s,MS3.2,baz=50,slow=35						
KSRS	**Korea Array**	**30.94**	**251**	*e*P	**P**	**20 14 30.4**	**+1.9**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**36.27**	**284**	*e*P	**P**	**20 15 15.

ABKAR **Akbulak array** 59.02 313 *eP* P 20 18 09.3 -1.8
comp=Z,1.6nm,0.5s,mb4.3
FINES **FINESS Array B** 59.65 339 P P 20 18 14.8 -0.4
comp=Z,3.1nm,0.7s,mb4.5,baz=36,slow=10.0,SNR=7.9
FINES **FINESS Array B** 59.65 339 P P 20 18 14.8 -0.4
FINES **FINESS Array B** 59.65 339 P P 20 18 14.8 -0.5
FINES pmax pmax
comp=Z,3.0nm,0.7s
TAPN **Taplejung** 61.28 277 *eP* P 20 18 26.5 -0.4
comp=Z,1.6nm,0.8s,mb5.2
CHTO **Chiang Mai** 61.45 262 *eP* P 20 18 28.4 +0.3
comp=Z,8.4nm,1.4s,mb4.7
CHTO **Chiang Mai** 61.45 262 *eP* P 20 18 28.4 +0.3
CHTO pmax pmax
comp=Z,8.0nm,1.4s,mb4.7
CMAR **Chiang Mai Arr** 61.73 262 P P 20 18 30.6 +0.6
comp=Z,1.3nm,0.7s,mb4.2,baz=25,slow=6.4,SNR=9.7
CMAR LR LR 20 45 15.4
comp=Z,28nm,18.8s,MS3.5,baz=110,slow=36
CMAR **Chiang Mai Arr** 61.73 262 P P 20 18 30.7 +0.7
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR MLR MLR
comp=Z,28nm,18.8s
ODAN **Odare** 61.84 277 *eP* P 20 18 30.8 +0.1
comp=Z,12nm,0.9s,mb5.1
KKN **Kakani** 62.33 280 *eP* P 20 18 33.4 -0.6
comp=Z,15nm,0.9s,mb5.1
KKN **Kakani** 62.33 280 *eP* P 20 18 33.4 -0.6
PKI **Pulchoki** 62.43 279 *eP* P 20 18 34.7 +0.1
PKI **Pulchoki** 62.43 279 *eP* P 20 18 35.0 +0.4
comp=Z,9.0nm,0.7s,mb5.0
PKI **Pulchoki** 62.43 279 *eP* P 20 18 35.0 +0.4
GKN **Gorkha** 62.54 280 *eP* P 20 18 35.2 -0.2
comp=Z,17nm,0.9s,mb5.2
DMN **Daman** 62.57 280 *eP* P 20 18 35.4 -0.2
comp=Z,9.1nm,0.9s,mb4.9
NB2 **NORSAR Subarra** 62.60 346 P P 20 18 34.1 -1.1
comp=Z,3.3nm,0.7s,mb4.6,baz=18,slow=6.9
NOA **NORSAR Array B** 62.60 346 P P 20 18 34.7 -0.6
comp=Z,2.5nm,0.7s,mb4.5,baz=18,slow=6.7,SNR=17
NOA **NORSAR Array B** 62.60 346 P P 20 18 34.7 -0.6
NOA **NORSAR Array B** 62.60 346 P P 20 18 34.7 -0.5
NOA pmax pmax
comp=Z,3.0nm,0.7s
OBN **Obninsk** 62.64 330 *i* P P 20 18 34.8 -0.8
OBN *e* 20 20 53.2
OBN pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
DANN **Dangsing** 62.77 281 *eP* P 20 18 37.1 +0.2
comp=Z,19nm,0.8s,mb5.3
TXAR **Lajitas Array** 66.92 72 P P 20 19 04.5 +0.6
comp=Z,1.4nm,0.7s,mb4.1,baz=302,slow=5.4,SNR=15
TXAR **Lajitas Array** 66.92 72 P P 20 19 04.5 +0.6
TXAR pmax pmax
comp=Z,1.0nm,0.7s
GERES **GERESS Array B** 73.93 341 P P 20 19 46.3 -0.1
comp=Z,0.7nm,0.6s,mb3.8,baz=28,slow=6.0,SNR=8.8
GERES **GERESS Array B** 73.93 341 P P 20 19 46.3 -0.1
GERES pmax pmax
comp=Z,1.0nm,0.6s
BRTR **Keskin Array B** 77.17 324 P P 20 20 05.2 +0.1
comp=Z,0.9nm,0.7s,mb3.8,baz=62,slow=3.1,SNR=5.9
BRTR **Keskin Array B** 77.17 324 *eP* P 20 20 04.9 -0.2
BRTR pmax pmax
comp=Z,1.0nm,0.7s
WRA **Warramunga Arr** 79.24 210 P P 20 20 16.4 -0.2
comp=Z,2.0nm,0.8s,mb4.1,baz=26,slow=6.0,SNR=12
WRA pP pP 20 20 32.0 +7.9
comp=Z,1.9nm,0.8s,baz=23,slow=6.0,SNR=8.5
WRA **Warramunga Arr** 79.24 210 P P 20 20 16.4 -0.2
WRA *PP pP 20 20 32.1 +8.0
WRA pmax pmax
comp=Z,2.0nm,0.8s
ASAR **Alice Springs** 82.89 209 P P 20 20 36.2 +0.3
comp=Z,2.3nm,0.8s,mb4.2,baz=16,slow=5.6,SNR=20
ASAR pP pP 20 20 51.6 +8.1
comp=Z,1.3nm,0.7s,baz=15,slow=5.4,SNR=5.8
ASAR **Alice Springs** 82.89 209 *eP* P 20 20 36.2 +0.2
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ESDC **Sonseca Array** 85.33 352 P P 20 20 48.9 +0.5
comp=Z,6.6nm,1.0s,mb4.3,baz=4.7,slow=5.6,SNR=5.7
ESDC **Sonseca Array** 85.33 352 P P 20 20 48.9 +0.5
QSPA **South Pole Qui** 144.70 180 PKP PKPdf 20 27 44.0 -2.4
comp=Z,3.7nm,0.6s,baz=357,slow=0.7,SNR=37

IDC 24 20:20:03.4±3.6, 14°.16N×145°.96E, h84km±92km, mb3.6/3, mb1 3.7/3, mb1mx3.2/21, mbtmp3.6/3, Error ellipse: s-maj=226.3km s-min=42.8km az=170.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.20**	**242**	P	Pn	20 20 26.3	+1.3
	38nm,0.3s,baz=79,slow=5.2,SNR=30						
GUMO				S	Sn	20 20 41.2	-0.1
	70nm,0.3s,baz=312,slow=23,SNR=20						
MKAR	**Makanchi Array**	**61.82**	**316**	P	P	20 30 14.6	+1.0
	0.5nm,0.3s,baz=92,slow=8.3,SNR=16						
ILAR	**Eielson Array**	**67.61**	**25**	P	P	20 30 50.4	-0.5
	0.2nm,0.4s,baz=252,slow=5.7,SNR=4.5						
FINES	**FINESS Array B**	**91.09**	**335**	P	P	20 32 57.4	-1.1
	1.2nm,0.8s,baz=45,slow=3.0,SNR=7.1						

IDC 24 20:28:03.0±2.2, 8°.11S×117°.88E, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.7/20, mbtmp3.8/6, ML3.7/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/24, Error ellipse: s-maj=54.5km s-min=21.4km az=76.0
NEIC 24 20:28:03.0±6.3, 8°.14S×117°.81E, h2km±42km, Error ellipse: s-maj=28.6km s-min=10.2km az=86.0
DJA 24 20:28:04, 8°.12S×117°.77E, h7km, MLv4.0/12
ISCJB 24 20:28:05.0±0.4, 8°.16S±0°.04×117°.74E±0°.04, h33km, mb3.9/3, MS3.1/2, Error ellipse: s-maj=6.3km s-min=4.8km az=157.0
ISC 24 20:28:06.8±0.4, 8°.16S±0°.04×117°.72E±0°.04, h35km, n24, σ1°.00/28, mb3.9/3, MS3.1/2, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTNI	**Mataram**	**1.60**	**253**	P	Pn	20 28 31.8	-0.9
MTNI				S	Sn	20 28 56.0	+3.8
KHKI	**Kahang-Kahang**	**2.10**	**264**	P	Pn	20 28 40.5	+1.0
KHKI				S	Sn	20 29 09.5	+5.1
SRBI	**Singaraja**	**2.48**	**272**	P	Pn	20 28 44.4	-0.4
IGBI	**Denpasar**	**2.63**	**255**	P	Pn	20 28 46.8	0.0
WSI	**Waingapu**	**2.96**	**121**	P	Pn	20 28 51.7	+0.4
JAGI	**Jajag, Banyuwa**	**3.54**	**265**	P	Pn	20 28 58.7	-0.7
BKSI	**Bulukumba**	**3.69**	**40**	P	Pn	20 29 01.4	-0.1
BKSI				S	Sn	20 29 44.0	+0.2
KAPI	**Kappang**	**3.72**	**33**	Pn	Pn	20 29 00.7	-1.2
	25nm,0.3s,baz=330,slow=2.4,SNR=113						
KAPI				Sn	Sn	20 29 42.6	-1.9
	34nm,0.3s,baz=42,slow=24,SNR=3.8						
KMMI	**Kalianget**	**3.88**	**286**	P	Pn	20 29 04.8	+0.8
GMJI	**Gumukmas**	**4.23**	**268**	P	Pn	20 29 08.4	-0.5
MMRI	**Maumere**	**4.50**	**96**	P	Pn	20 29 12.6	+0.1
MMRI				S	Sn	20 30 05.7	+2.1
SPSI	**Sidrap Palu**	**4.64**	**26**	P	Pn	20 29 13.7	-0.8
MJSI	**Majene**	**4.75**	**15**	P	Pn	20 29 17.4	+1.4
KBKI	**Kotabaru**	**5.07**	**342**	P	Pn	20 29 20.2	-0.2
	0.2nm29nm,0.9s						
TTSI	**Tana Toraja**	**5.49**	**22**	P	Pn	20 29 27.3	+1.1
FITZ	**Fitzroy Crossi**	**12.53**	**143**	Pn	Pn	20 31 02.1	-0.6
	0.1nm,0.3s,baz=330,slow=13,SNR=2.6						
FITZ				Sn	Sn	20 33 16.7	-4.5
	0.1nm,0.3s,baz=207,slow=14,SNR=3.4						
MBWA	**Marble Bar**	**13.07**	**172**	*eP*	Pn	20 31 09.7	-0.4
	1.9nm,0.3s						
WRA	**Warramunga Arr**	**19.91**	**128**	P	Pn	20 32 35.0	-2.4
	0.3nm,0.3s,baz=302,slow=12,SNR=18						
WRA	**Warramunga Arr**	**19.91**	**128**	P	Pn	20 32 35.0	-2.4
PSI	**Prapat**	**21.68**	**299**	LR	LR	20 43 17.5	
	comp=Z,64nm,19.4s,MS3.0,baz=320,slow=42						
ASAR	**Alice Springs**	**21.87**	**137**	P	P	20 32 57.2	+0.5
	2.7nm,0.3s,mb4.1,baz=309,slow=8.5,SNR=55						
CTA	**Charters Tower**	**30.05**	**116**	LR	LR	20 47 49.0	
	comp=Z,42nm,19.2s,MS3.1,baz=317,slow=40						
STKA	**Stephens Creek**	**32.41**	**140**	P	P	20 34 34.0	+0.5
	1.5nm,0.6s,mb4.0,baz=312,slow=10,SNR=5.5						
SONM	**Songino Array**	**56.64**	**351**	P	P	20 37 47.8	+1.4
	0.3nm,0.6s,mb3.5,baz=165,slow=6.2,SNR=3.6						

NEIC 24 20:29:58.8, 16°.73N×100°.16W, h5km, MD3.6(MEX), After MEX.
MEX 24 20:29:58.8±1.0, 16°.73N×100°.16W, h5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.32**	**64**	*eP*	Pg	20 30 02.8	-2.1
ACX				*i* S	Sg	20 30 07.8	-1.2
ACX	**Acapulco**	**0.32**	**64**	*eP*	Pg	20 30 02.8	-2.1
ACX				*i* S	Sg	20 30 07.8	-1.2
CAIG	**El Cayaco**	**0.33**	**341**	*eP*	Pg	20 30 04.2	-1.0
CAIG				*i* S	Sg	20 30 10.3	+0.8
CAIG	**El Cayaco**	**0.33**	**341**	*eP*	Pg	20 30 04.2	-1.0
CAIG				*i* S	Sg	20 30 10.3	+0.8
MEIG	**Mezcala**	**1.29**	**23**	*i* P	Pn	20 30 19.6	-4.0
MEIG				*i* S	Sg	20 30 37.5	-2.8
ZIIG	**Zihuatanejo**	**1.52**	**305**	*i* P	Pn	20 30 24.3	-2.4
ZIIG				*i* S	Sn	20 30 43.8	-3.2
ZIIG	**Zihuatanejo**	**1.52**	**305**	*i* P	Pn	20 30 24.3	-2.4
ZIIG				*i* S	Sn	20 30 43.8	-3.2
PLIG	**Platanillo**	**1.76**	**21**	*i* P	Pn	20 30 27.8	-2.2
PLIG				*i* S	Sn	20 30 49.7	-3.1
PLIG	**Platanillo**	**1.76**	**21**	*i* P	Pn	20 30 27.8	-2.2
PLIG				*i* S	Sn	20 30 49.7	-3.1
PNIG	**Pinotepa**	**1.97**	**100**	*i* P	Pn	20 30 30.5	-2.4
PNIG				*i* S	Sn	20 30 54.5	-3.5
PNIG	**Pinotepa**	**1.97**	**100**	*i* P	Pn	20 30 30.5	-2.4
PNIG				*i* S	Sn	20 30 54.5	-3.5
UTMO	**Huajuapan**	**2.50**	**64**	*i* P	Pn	20 30 37.1	-3.0
UTMO				*i* S	Sn	20 31 08.1	-2.8

IDC 24 20:38:29.6±3.8, 6°.47S×151°.89E, h0km, mb3.2/2, mb1 3.6/2, mb1mx3.3/15, mbtmp3.3/2, Error ellipse: s-maj=170.8km s-min=48.6km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.68**	**230**	P	P	20 43 21.4	-0.7
	0.9nm,0.8s,baz=58,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**24.32**	**223**	P	P	20 43 50.0	+0.9
	0.8nm,0.7s,baz=55,slow=9.2,SNR=9.3						
TORD	**Torodi Ar. Bea**	**149.91**	**285**	PKPbc	PKPbc	20 58 22.4	-0.6
	0.8nm,0.7s,baz=95,slow=4.1,SNR=1.7						

DJA 24 21:02:58, 4°.96S×103°.74E, h50km, MLv3.6/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**0.32**	**100**	P	Pn	21 03 05.7	-1.6
LWLI				S	Sn	21 03 18.1	+4.1
MDSI	**Maura Dua**	**0.64**	**43**	P	Pn	21 03 13.4	+2.4
MNAI	**Manna**	**0.98**	**307**	P	Pn	21 03 15.6	+0.1
KLSI		**1.02**	**75**	P	Pn	21 03 15.2	-0.8
SKJI	**Sukabumi**	**3.46**	**126**	P	Pn	21 03 51.6	+2.2
CISI	**Cisompet, Garu**	**4.80**	**123**	P	Pn	21 04 05.1	-2.7

ISCJB 24 21:29:39.2±0.6, 39°.46N±0°.04×28°.29E±0°.05, h12km±7km, Error ellipse: s-maj=7.4km s-min=5.0km az=139.8
DDA 24 21:29:39.4, 39°.45N×28°.29E, h7km±1km, Md2.9
ISK 24 21:29:39.1, 39°.47N×28°.29E, h10km, MD2.8
CSEM 24 21:29:39.5±0.1, 39°.46N×28°.30E, h10km, MD2.9, Error ellipse: s-maj=3.7km s-min=2.4km az=64.0
ISC 24 21:29:39.6±0.7, 39°.46N±0°.04×28°.30E±0°.05, h14km±9km, n22, σ0°.46/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.20**	**45**	*i* P	**Pg**	**21 29 44.0**	**-0.1**
DURS				*i* S	**Sg**	**21 29 47.4**	**+0.2**
DURS	**Dursunbey**	**0.20**	**45**	*i* P	**Pg**	**21 29 44.0**	**-0.1**
DURS				*i* S	**Sg**	**21 29 47.4**	**+0.3**
BALB	**Balikesir**	**0.37**	**299**	*e*PG	**Pg**	**21 29 46.9**	**-0.1**
BALB				*e*SG	**Sg**	**21 29 52.8**	**+0.7**
BALB	**Balikesir**	**0.37**	**299**	*e*Pg	**Pg**	**21 29 46.9**	**-0.2**
BALB				*e*Sg	**Sg**	**21 29 52.8**	**+0.8**
DEMI	**Demirci**	**0.53**	**142**	*i* P	**Pg**	**21 29 50.1**	**0.0**
DEMI				*i* S	**Sg**	**21 29 57.6**	**+0.4**
DEMI	**Demirci**	**0.53**	**142**	*i* P	**Pg**	**21 29 50.1**	**0.0**
DEMI				*i* S	**Sg**	**21 29 57.6**	**+0.5**
BALY	**Balya**	**0.59**	**298**	*i* P	**Pg**	**21 29 51.1**	**-0.1**
BALY	**Balya**	**0.59**	**298**	*i* P	**Pg**	**21 29 51.1**	**-0.1**
AKS	**Akhisar**	**0.69**	**213**	*e*PG	**Pg**	**21 29 53.2**	**+0.1**
AKS	**Akhisar**	**0.69**	**213**	*e*Pg	**Pg**	**21 29 53.2**	**+0.1**
GONE	**Gonen-Balikesi**	**0.75**	**321**	*e*PG	**Pg**	**21 29 53.5**	**-0.7**
GONE				*e*SG	**Sg**	**21 30 04.5**	**+0.4**
GONE	**Gonen-Balikesi**	**0.75**	**321**	*e*Pg	**Pg**	**21 29 53.5**	**-0.7**
GONE				*e*Sg	**Sg**	**21 30 04.5**	**+0.4**
KCTX	**Karacabey (Bur**	**0.80**	**3**	*e*PG	**Pg**	**21 29 54.8**	**-0.5**
KCTX	**Karacabey (Bur**	**0.80**	**3**	*e*Pg	**Pg**	**21 29 54.8**	**-0.4**
BNT	**Bandirma**	**0.94**	**342**	*e*PG	**Pg**	**21 29 57.0**	**-0.8**
BNT	**Bandirma**	**0.94**	**342**	*e*Pg	**Pg**	**21 29 57.0**	**-0.8**
KULA	**Kula-Manisa**	**0.99**	**163**	*e*PG	**Pg**	**21 29 58.1**	**-0.6**
KULA	**Kula-Manisa**	**0.99**	**163**	*e*Pg	**Pg**	**21 29 58.1**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.01**	**26**	*e*PG	**Pg**	**21 29 59.4**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.01**	**26**	*e*Pg	**Pg**	**21 29 59.4**	**+0.2**
ARMT	**Armutlu**	**1.19**	**21**	*e*PN	**Pn**	**21 30 02.5**	**+0.7**
ARMT	**Armutlu**	**1.19**	**21**	*e*Pn	**Pn**	**21 30 02.5**	**+0.7**

CSEM 24 21:43:49.8, 37°.94N×26°.10W, h1km, ML2.0, After PDA
PDA 24 21:43:49.8±0.9, 37°.94N×26°.10W, h1km±5km, MD3.7, ML2.0, Error ellipse: s-maj=12.0km s-min=1.6km az=24.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**0.32**	**111**	*eP*	Pg	21 43 55.3	-0.6
PSET				*e*S	Sg	21 44 00.4	+0.3
PSET				A		21 44 04.8	
	43nm,0.3s						
PSET	**Sete Cidades**	**0.32**	**111**	*eP*	Pg	21 43 55.3	-0.6
PSET				*e*S	Sg	21 44 00.4	+0.3
PDA	**Ponta Delgada**	**0.40**	**119**	*eP*	Pg	21 44 04.0	+6.6
GRON	**Grota Negra**	**0.48**	**111**	*eP*	Pg	21 44 00.6	+1.6
GRON				*e*S	Sg	21 44 08.0	+2.8
GRON				A		21 44 10.4	
	9.2nm,0.2s						
ADH	**Angra Heroismo**	**1.15**	**309**	*e*S	Sg	21 44 21.5	-5.1
ADH				A		21 44 22.4	
	22nm,0.1s						
ADH	**Angra Heroismo**	**1.15**	**309**	*e*S	Sg	21 44 21.5	-5.1
PID	**Ribeirinha**	**1.67**	**288**	*e*S	Sn	21 44 34.3	-7.9
PID	**Ribeirinha**	**1.67**	**288**	*e*S	Sn	21 44 34.3	-7.9
PMAN	**Manadas**	**1.71**	**294**	*eP*	Px	21 44 34.7	
ROSA	**Rosais**	**1.86**	**295**	*eP*	Pn	21 44 18.1	-4.6
ROSA				*e*S	Sn	21 44 39.2	-7.6
ROSA	**Rosais**	**1.86**	**295**	*eP*	Pn	21 44 18.1	-4.6
ROSA				*e*S	Sn	21 44 39.2	-7.6
PICO	**Pico**	**1.92**	**288**	*eP*	Pn	21 44 19.0	-4.5
PICO				*e*S	Sn	21 44 40.6	-7.7
PICO	**Pico**	**1.92**	**288**	*eP*	Pn	21 44 19.0	-4.5
PICO				*e*S	Sn	21 44 40.6	-7.7
PCAN	**Candelaria**	**1.95**	**286**	*eP*	Pn	21 44 19.2	-4.8
PCAN				*e*S	Sn	21 44 41.4	-7.7
PCAN				A		21 44 42.0	
	13nm,0.3s						
PCAN	**Candelaria**	**1.95**	**286**	*eP*	Pn	21 44 19.2	-4.8
PCAN				*e*S	Sn	21 44 41.4	-7.7
CALA	**Caldeira**	**2.15**	**288**	*eP*	Pn	21 44 21.9	-4.8
CALA	**Caldeira**	**2.15**	**288**	*eP*	Pn	21 44 21.9	-4.8

IDC 24 21:45:52.7±27.0, 21°.04S×173°.77W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/19, mbtmp4.1/4, Error ellipse: s-maj=507.2km s-min=154.2km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.38**	**264**	P	P	21 53 08.2	+0.7
	3.9nm,0.5s,baz=84,slow=11,SNR=7.4						
STKA	**Stephens Creek**	**41.14**	**245**	P	P	21 53 38.3	-0.5
	1.2nm,0.7s,baz=102,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**48.25**	**257**	P	P	21 54 35.5	-0.2
	1.4nm,0.7s,baz=100,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	**48.44**	**262**	P	P	21 54 37.1	-0.2
	1.0nm,0.5s,baz=96,slow=8.4,SNR=12						

IDC 24 22:03:42.4±0.6, 3°.77S×103°.03W, h0km, mb4.5/18, mb1 4.7/18, mb1mx4.5/25, mbtmp4.5/18, MS3.9/19, Ms1 3.9/19, ms1mx3.8/30, Error ellipse: s-maj=24.6km s-min=14.5km az=76.0
ISCJB 24 22:03:43.2±0.4, 3°.81S±0°.05×102°.91W±0°.06, h10km, mb4.7/70, MS4.0/22, Error ellipse: s-maj=10.1km s-min=5.7km az=145.1
NEIC 24 22:03:44.6±0.3, 3°.77S×102°.95W, h10km, mb4.8/53, Error ellipse: s-maj=7.7km s-min=4.8km az=61.0
BJI 24 22:03:45.6, 3°.80S×102°.90W, h10km, mB5.4/6, Ms5.4/7, Ms7 5.1/8
ISC 24 22:03:45.3±0.4, 3°.78S±0°.05×102°.89W±0°.06, h10km, n324, σ0°.69/287, mb4.7/70, MS4.0/22, 84C-85D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**12.96**	**77**	*e*Pn	**Pn**	**22 06 50.1**	**+0.4**
CMIG	**Matias Romero**	**22.19**	**21**	P	**P**	**22 08 41.3**	**-0.6**
	3.2nm,1.0s,mb3.7,baz=178,slow=10,SNR=3.6						
CMIG				LR	LR	22 15 14.9	
	comp=Z,227nm,21.6s,MS3.6,baz=49,slow=31						
APG	**El Apazote**	**22.36**	**33**	P	**P**	**22 08 43.8**	**+0.2**
	35nm,1.0s,mb4.7,baz=226,slow=7.1,SNR=25						
APG				LR	LR	22 15 15.4	
	comp=Z,160nm,21.4s,MS3.4,baz=219,slow=31						
JTS	**JuntasAbangare**	**22.68**	**52**	*eP*	**P**	**22 08 46.0**	**-1.1**
	226nm,2.3s,mb5.2						
TGUH	**Tegucigalpa,Un**	**23.53**	**41**	*eP*	**P**	**22 08 57.0**	**+0.9**
	44nm,1.2s,mb4.8						
RPN	**Rapa Nui**	**24.02**	**194**	*eP*	**P**	**22 09 09.1**	**+8.6**
	1um,1.9s						
ATAH	**Atahualpa**	**24.60**	**99**	LR	LR	22 16 26.9	
	comp=Z,619nm,19.3s,MS4.1,baz=261,slow=31						
OTAV	**Otavalo**	**24.74**	**81**	*eP*	**P**	**22 09 08.8**	**+1.6**
	26nm,1.4s,mb4.6						
NNA	**Nana**	**27.03**	**109**	LR	LR	22 17 46.4	
	comp=Z,405nm,18.6s,MS4.0,baz=302,slow=31						
NNA	**Nana**	**27.03**	**109**	P	**P**	**22 09 29.0**	**+1.0**
ROSC	**El Rosal**	**29.79**	**73**	LR	LR	22 18 31.4	
	comp=Z,66nm,18.8s,MS3.3,baz=211,slow=30						
TXAR	**Lajitas Array**	**32.93**	**359**	P	**P**	**22 10 18.9**	**-1.1**
	3.0nm,1.0s,mb4.2,baz=184,slow=11,SNR=16						
TXAR				PcP	PcP	22 13 03.4	-1.0
	1.4nm,0.7s,baz=183,slow=4.4,SNR=13						
TXAR				LR	LR	22 21 58.9	
	comp=Z,243nm,21.8s,MS3.9,baz=190,slow=33						
627A	**Terlingua Ranc**	**33.05**	**359**	⇑P	**P**	**22 10 21.4**	**+0.3**
	baz=33,SNR=7.4						
628A	**Black Gap, Mar**	**33.08**	**360**	⇑P	**P**	**22 10 22.0**	**+0.7**
	baz=33						
626A	**Big Bend Ranch**	**33.16**	**358**	⇓P	**P**	**22 10 22.3**	**+0.2**
	baz=33,SNR=7.0						
PTCN	**Pitcairn Islan**	**33.66**	**228**	P	**P**	**22 10 27.9**	**+1.5**
526A	**Mary Lane Ranc**	**33.67**	**358**	⇑P	**P**	**22 10 27.0**	**+0.5**
	baz=34						
527A	**Woodward Ranch**	**33.74**	**359**	⇓P	**P**	**22 10 27.5**	**+0.4**
	baz=34,SNR=12						
528A	**Cox Ranch, San**	**33.75**	**0**	⇑P	**P**	**22 10 27.5**	**+0.3**
	baz=34						
JCT	**Junction City**	**34.19**	**5**	⇓P	**P**	**22 10 30.8**	**-0.2**
	baz=34						
JCT	**Junction City**	**34.19**	**5**	*eP*	**P**	**22 10 30.6**	**-0.4**
	11nm,0.8s,mb4.8						
427A	**Hayter Ranch,**	**34.44**	**359**	P	**P**	**22 10 33.5**	**+0.4**
	baz=35,SNR=5.6						
SDV	**Santo Domingo**	**34.53**	**68**	*eP*	**P**	**22 10 35.1**	**+0.9**
	23nm,0.8s,mb5.2						
325A	**Bean Ranch, Si**	**35.01**	**357**	⇑P	**P**	**22 10 38.1**	**0.0**
	baz=35,SNR=5.3						
324A	**Moseley Ranch,**	**35.11**	**356**	⇓P	**P**	**22 10 38.9**	**0.0**
	baz=35,SNR=6.1						
320A	**Kipp Ranch, An**	**35.33**	**352**	⇓P	**P**	**22 10 40.9**	**+0.1**
	baz=36						
319A	**Douglas**	**35.49**	**351**	⇓P	**P**	**22 10 42.2**	**0.0**
	baz=36,SNR=5.9						
226A	**Malaga, Loving**	**35.66**	**358**	⇑P	**P**	**22 10 43.8**	**+0.1**
	baz=36,SNR=9.4						
318A	**Bisbee**	**35.67**	**350**	⇓P	**P**	**22 10 43.8**	**+0.1**
	baz=36						
220A	**Playas Peak, P**	**35.89**	**352**	⇓P	**P**	**22 10 45.8**	**+0.2**
	baz=36,SNR=8.0						
219A	**White Tail Can**	**36.09**	**351**	⇑P	**P**	**22 10 47.6**	**+0.3**
	baz=36,SNR=7.6						
217A	**Green Valley**	**36.16**	**349**	⇓P	**P**	**22 10 48.2**	**+0.3**
	baz=36,SNR=11						
218A	**Dragoon**	**36.20**	**350**	⇑P	**P**	**22 10 48.3**	**0.0**
	baz=36,SNR=8.0						
126A	**Clayton Basin,**	**36.24**	**358**	⇓P	**P**	**22 10 48.4**	**-0.2**
	baz=36						
LPAZ	**La Paz**	**36.33**	**112**	P	**P**	**22 10 51.8**	**+2.1**
	3.1nm,1.1s,mb4.1,baz=351,slow=6.0,SNR=3.8						
LPAZ				LR	LR	22 23 00.7	
	comp=Z,212nm,19.3s,MS3.9,baz=46,slow=32						
124A	**Stringfield Ra**	**36.36**	**356**	⇓P	**P**	**22 10 50.8**	**+1.1**
	baz=37,SNR=6.4						
121A	**Cookes Peak, D**	**36.41**	**353**	⇑P	**P**	**22 10 50.7**	**+0.6**
	baz=37						
RKT	**Rikitea**	**36.50**	**235**	*e*LR	LR	22 20 23.4	
	117nm,27.0s						
216A	**Three Points,**	**36.51**	**348**	⇑P	**P**	**22 10 50.9**	**0.0**
	baz=37,SNR=5.3						
120A	**U Bar Ranch, L**	**36.54**	**352**	⇓P	**P**	**22 10 51.4**	**+0.2**
	baz=37						
TUC	**Tucson**	**36.67**	**349**	*eP*	**P**	**22 10 52.1**	**-0.1**
	6.7nm,1.0s,mb4.4						
214A	**Organ Pipe Nat**	**36.77**	**346**	⇓P	**P**	**22 10 52.9**	**-0.3**
	baz=37						
118A	**Homack Ranch,**	**36.84**	**350**	⇓P	**P**	**22 10 53.8**	**+0.1**
	baz=37						
Z27A	**Tatum**	**36.90**	**360**	⇑P	**P**	**22 10 54.2**	**0.0**
	baz=37						
Z25A	**Roswell**	**36.90**	**357**	⇑P	**P**	**22 10 53.7**	**-0.5**
	baz=37						
117A	**Oracle**	**36.91**	**349**	⇑P	**P**	**22 10 54.3**	**-0.1**
	baz=37						
Z23A	**Rita Site, Whi**	**36.98**	**355**	⇑P	**P**	**22 10 55.2**	**+0.3**
	baz=37						
Z22A	**Elephant

Y14A **Wickenburg** 38.71 346 ⇓P P 22 11 09.5 0.0
baz=39,SNR=7.0
W25A **X Bar L Ranch,** 38.82 358 ⇑P P 22 11 11.1 +0.6
baz=39
X16A **Lo Mia Camp, P** 38.84 349 ⇑P P 22 11 11.1 +0.5
baz=39,SNR=5.8
X15A **Humboldt** 39.07 348 ⇓P P 22 11 13.1 +0.5
baz=39,SNR=13
BC3 **Big Chuckawall** 39.08 343 ⇑P P 22 11 12.6 0.0
baz=39,SNR=5.6
MIAR **Mount Ida** 39.12 12 eP P 22 11 12.7 -0.2
26nm,1.1s,mb4.9
X14A **Yava** 39.20 347 P P 22 11 14.0 +0.4
baz=39,SNR=5.7
PDMCI **Parker Dam,Lak** 39.34 345 ⇓P P 22 11 15.0 +0.3
baz=40
V24A **Rampart Ranch,** 39.36 357 ⇓P P 22 11 16.0 +1.0
baz=40
V25A **Rancho No Teng** 39.44 358 ⇑P P 22 11 15.4 -0.2
baz=40,SNR=5.7
IRM **Iron Mountain** 39.47 344 ⇑P P 22 11 15.8 -0.1
baz=40
W16A **Flagstaff** 39.51 349 ⇑P P 22 11 17.5 +1.3
baz=40
LCO **Las Campanas** 39.53 133 eP P 22 11 18.0 +1.5
17nm,1.0s,mb4.7
X13A **Yucca** 39.54 346 ⇓P P 22 11 16.6 +0.2
baz=40,SNR=6.6
BELC **Belle Mtn. Jos** 39.56 343 ⇑P P 22 11 16.8 +0.2
baz=40,SNR=5.7
V22A **San Miguel Ran** 39.66 355 ⇓P P 22 11 18.1 +0.6
baz=40
V20A **Brimhall** 39.72 353 ⇓P P 22 11 18.4 +0.4
baz=40
W15A **Williams** 39.74 348 ⇓P P 22 11 19.1 +1.0
baz=40,SNR=6.8
V18A **Ganado** 39.84 351 ⇓P P 22 11 19.2 +0.3
baz=40,SNR=5.2
V17A **Tonalea, Kykot** 39.89 350 ⇑P P 22 11 19.8 +0.5
baz=40,SNR=10
U26A **Atchley Ranch,** 39.97 359 ⇑P P 22 11 21.0 +0.9
baz=40
U25A **Circle Dot Ran** 40.00 358 ⇑P P 22 11 20.5 +0.3
baz=40,SNR=8.2
W13A **Hualapai Mount** 40.03 346 ⇓P P 22 11 21.2 +0.7
baz=40
U22A **Llaves** 40.12 355 ⇑P P 22 11 22.3 +1.0
baz=40
GMRC **Granite Mounta** 40.20 344 ⇓P P 22 11 22.1 +0.2
baz=40,SNR=11
U21A **Nageezi** 40.25 354 ⇑P P 22 11 22.7 +0.4
baz=40,SNR=7.4
BFSC **Mount Baldy Ra** 40.30 341 ⇓P P 22 11 23.3 +0.5
baz=40
V15A **Kaibab Nationa** 40.34 348 ⇓P P 22 11 23.8 +0.7
baz=40,SNR=15
V14A **Boquillas Ranc** 40.36 347 ⇓P P 22 11 24.0 +0.8
baz=40,SNR=12
U16A **Tuba City** 40.46 350 ⇓P P 22 11 24.5 +0.5
baz=41,SNR=7.4
U18A **Rough Rock, Ch** 40.52 351 ⇑P P 22 11 24.9 +0.3
baz=41,SNR=6.8
T24A **Torres, Weston** 40.69 357 ⇑P P 22 11 26.6 +0.6
baz=41
T22A **Edith** 40.76 355 ⇑P P 22 11 27.0 +0.4
baz=41,SNR=6.1
V13A **Grand Canyon W** 40.77 346 ⇑P P 22 11 27.1 +0.4
baz=41,SNR=9.7
T19A **Beclabito** 40.80 352 ⇓P P 22 11 27.3 +0.4
baz=41,SNR=6.8
V12A **Nelson** 40.87 345 ⇓P P 22 11 27.6 +0.1
baz=41,SNR=8.4
U15A **North Rim** 40.95 348 ⇑P P 22 11 28.8 +0.6
baz=41,SNR=8.6
EDW2 **Edwards Air Fo** 41.00 341 ⇑P P 22 11 28.1 -0.5
baz=41,SNR=8.7
GSC **Goldstone** 41.01 343 ⇑P P 22 11 29.0 +0.3
baz=41
GSC **Goldstone** 41.01 343 eP P 22 11 29.1 +0.4
14nm,1.0s,mb4.5
U14A **Mt Trumbull** 41.13 347 ⇓P P 22 11 30.2 +0.6
baz=41,SNR=7.5
T18A **Mexican Hat** 41.22 352 ⇓P P 22 11 30.5 +0.2
baz=41,SNR=7.5
T17A **Navajo Res., N** 41.23 350 ⇓P P 22 11 31.1 +0.7
baz=41,SNR=7.8
U13A **Pakoon Wash** 41.31 346 ⇓P P 22 11 31.4 +0.3
baz=42,SNR=8.5
SDCO **Great Sand Dun** 41.39 357 ⇑P P 22 11 32.5 +0.8
baz=42
SDCO **Great Sand Dun** 41.39 357 eP P 22 11 32.1 +0.4
26nm,2.0s,mb4.5
SHOC **Shoshone** 41.42 343 ⇓P P 22 11 32.1 +0.1
baz=42
S22A **4UR Ranch, Cre** 41.48 355 ⇑P P 22 11 33.1 +0.6
baz=42,SNR=9.0
SHPR **Sheep Range** 41.69 345 eP P 22 11 34.3 +0.1
S20A **Disappointment** 41.71 353 ⇓P P 22 11 34.7 +0.4
baz=42
S19A **Harvey Farm, M** 41.72 353 ⇑P P 22 11 34.5 0.0
baz=42
T14A **Hurricane** 41.73 348 ⇑P P 22 11 35.1 +0.5
baz=42,SNR=7.2
S18A **Hurst Farm, Bl** 41.78 352 P P 22 11 35.4 +0.4
baz=42,SNR=16
S17A **Black Ridge (B** 41.86 351 ⇑P P 22 11 35.9 +0.3
baz=42,SNR=6.1
ISA **Isabella** 41.87 341 ⇑P P 22 11 35.9 +0.2
baz=42,SNR=8.8
ISA **Isabella** 41.87 341 eP P 22 11 35.9 +0.2
8.5nm,1.0s,mb4.3
T13A **Saint George** 41.87 347 ⇓P P 22 11 36.3 +0.7
baz=42
MPMC **Manual Prospec** 41.92 342 ⇓P P 22 11 36.5 +0.3
baz=42,SNR=12
R22A **Saguache, Gunn** 41.95 355 ⇓P P 22 11 37.1 +0.8
baz=42
PV01 **Paradox Valley** 42.03 353 eP P 22 11 36.9 -0.1
402nm,0.8s
S16A **Weppner Ranch,** 42.08 350 ⇓P P 22 11 37.8 +0.5
baz=42,SNR=10.0
FURC **Furnace Creek,** 42.12 343 ⇑P P 22 11 38.2 +0.5
baz=42
WVT **Waverly** 42.13 18 eP P 22 11 36.8 -1.0
24nm,1.0s,mb4.8
R21A **Cimarron** 42.16 355 ⇓P P 22 11 38.6 +0.6
baz=42
CCUT **Cedar City** 42.26 348 eP P 22 11 39.8 +0.9
6.4nm,1.0s,mb4.2
PV04 **Paradox Valley** 42.33 353 eP P 22 11 39.5 +0.1
S13A **Holt Ranch, En** 42.40 347 ⇑P P 22 11 40.6 +0.7
baz=43
R18A **Canyonlands Na** 42.45 352 P P 22 11 40.5 0.0
baz=43,SNR=10.0
ARUT **Antelope Range** 42.50 348 eP P 22 11 41.1 +0.3
25nm,1.1s,mb4.8
Q23A **Hartsel** 42.56 357 ⇑P P 22 11 41.8 +0.5
baz=43
Q24A **Divide** 42.58 357 ⇑P P 22 11 42.1 +0.6
baz=43
Q22A **Crested Butte,** 42.59 355 ⇓P P 22 11 41.8 +0.3
baz=43,SNR=5.2
R16A **Teasdale** 42.60 350 ⇓P P 22 11 42.3 +0.6
baz=43,SNR=12
R17A **Hanksville Air** 42.61 351 ⇑P P 22 11 42.1 +0.4
baz=43,SNR=7.8
CFAA **Coronel Fontan** 42.73 134 P P 22 11 42.5 -0.3
0.4nm,0.7s,baz=288,slow=11,SNR=5.4
CFAA LR LR 22 25 04.5
comp=Z,45nm,19.1s,MS3.4,baz=314,slow=30
Q19A **Hogan Spring (** 42.93 353 P P 22 11 44.3 +0.1
baz=43,SNR=10
R13A **O'Grain Ranch,** 42.99 347 ⇑P P 22 11 45.8 +1.0
baz=43,SNR=7.9
KSU1 **Kansas State U** 43.06 7 eP P 22 11 45.0 -0.4
36nm,1.1s,mb5.0
TKL **Tuckaleechee C** 43.13 23 P P 22 11 45.1 -0.9
8.7nm,0.9s,mb4.5,baz=183,slow=7.8,SNR=4.2
Q16A **Castle Valley** 43.17 351 ⇓P P 22 11 46.7 +0.5
baz=43
SRU **San Rafael** 43.26 351 ⇓P P 22 11 47.1 +0.1
baz=44,SNR=7.2
SRU **San Rafael** 43.26 351 eP P 22 11 47.2 +0.3
10nm,1.0s,mb4.5
P22A **Eagle** 43.31 356 ⇓P P 22 11 47.8 +0.4
baz=44
P20A **De Beque** 43.36 354 ⇑P P 22 11 48.2 +0.4
baz=44

ISCO **Idaho Springs** 43.44 357 ⇓P P 22 11 48.6 +0.3
baz=44,SNR=5.8
ISCO **Idaho Springs** 43.44 357 eP P 22 11 48.7 +0.3
14nm,1.4s,mb4.5
MTUM **Tungsten Hills** 43.45 342 eP P 22 11 48.8 +0.3
R11A **Troy Canyon, C** 43.54 345 ⇓P P 22 11 49.8 +0.6
baz=44,SNR=20
TMUT **Trail Mountain** 43.55 351 eP P 22 11 50.2 +0.9
18nm,1.2s,mb4.7
P19A **Cripple Cowboy** 43.56 353 P P 22 11 49.5 +0.1
baz=44,SNR=6.2
Q14A **Sevier Lake (B** 43.62 348 ⇑P P 22 11 50.6 +0.7
baz=44,SNR=15
P18A **Preston Nutter** 43.72 352 P P 22 11 51.2 +0.5
baz=44,SNR=8.9
O22A **Kremmling** 43.86 356 P P 22 11 52.2 +0.4
baz=44,SNR=8.3
O23A **Lake Granby, G** 43.86 357 ⇑P P 22 11 52.5 +0.7
baz=44
P15A **Leamington** 44.00 350 ⇓P P 22 11 53.0 +0.1
baz=44
P14A **Drum Mountains** 44.16 349 P P 22 11 55.1 +0.9
baz=44,SNR=5.3
O19A **Miners Draw (B** 44.23 353 P P 22 11 55.1 +0.3
baz=44,SNR=6.3
O18A **Roosevelt** 44.32 352 ⇓P P 22 11 55.8 +0.4
baz=44
NVAR **Mina Array Bea** 44.36 343 P P 22 11 56.1 +0.3
2.6nm,0.8s,mb4.0,baz=170,slow=8.5,SNR=15
NVAR LR LR 22 26 23.9
comp=Z,171nm,21.7s,MS3.9,baz=269,slow=31
NVAR **Mina Array Bea** 44.36 343 P P 22 11 56.1 +0.3
NVAR LR LR 22 26 23.9
OLIL **Olney** 44.46 17 eP P 22 11 55.9 -0.7
30nm,0.9s,mb5.0
N21A **Black Mountain** 44.53 355 ⇓P P 22 11 57.8 +0.7
baz=45
DAU **Daniels Canyon** 44.64 351 eP P 22 11 58.7 +0.7
CMB **Columbia Colle** 44.66 340 eP P 22 11 57.7 -0.5
5.5nm,0.9s,mb4.4
N20A **Spence Gulch,** 44.67 354 ⇓P P 22 11 58.6 +0.3
baz=45,SNR=14
DUG **Dugway** 44.70 349 P P 22 11 58.9 +0.4
baz=45,SNR=9.8
DUG **Dugway** 44.70 349 eP P 22 11 58.8 +0.3
23nm,1.4s,mb4.8
WAKR **Walker** 44.78 341 eP P 22 11 60.0 +0.8
JLU **Jordanelle** 44.86 351 eP P 22 12 00.4 +0.6
18nm,1.3s,mb4.7
N18A **Larsen Ranch,** 44.97 353 ⇑P P 22 12 00.8 +0.2
baz=45,SNR=5.6
N17A **Moffit Pass** 45.10 351 ⇓P P 22 12 01.6 0.0
baz=45
N16A **Rees Ranch, Co** 45.13 351 ⇓P P 22 12 02.8 +0.9
baz=45
M16A **Huntsville** 45.58 351 ⇓P P 22 12 05.8 +0.3
baz=46
M17A **Scullys Gap (B** 45.59 352 ⇑P P 22 12 05.8 +0.2
baz=46
SPUT **South Promonto** 45.72 350 eP P 22 12 07.0 +0.5
20nm,1.3s,mb4.9
HWUT **Hardware Ranch** 45.86 351 eP P 22 12 07.5 -0.2
26nm,1.0s,mb5.1
M15A **Larsen Ranch,** 45.87 350 ⇓P P 22 12 07.6 -0.1
baz=46,SNR=11
L19A **Farson** 46.04 353 ⇑P P 22 12 08.9 -0.2
baz=46,SNR=9.9
HVU **Hansel Valley** 46.23 350 eP P 22 12 10.6 0.0
16nm,1.0s,mb4.9
L16A **Fish Haven** 46.24 351 ⇑P P 22 12 10.7 0.0
baz=46
L15A **Malad City** 46.38 350 ⇑P P 22 12 11.5 -0.3
baz=47,SNR=13
L14A **Malta** 46.56 349 P P 22 12 13.2 0.0
baz=47,SNR=12
K19A **Absolon Red Bu** 46.70 354 ⇓P P 22 12 14.0 -0.3
baz=47,SNR=7.9
PDAR **Pinedale Array** 46.72 353 P P 22 12 13.4 -1.0
6.2nm,1.0s,mb4.5,baz=165,slow=6.2,SNR=32
PDAR PcP PcP 22 13 46.3 -1.6
1.3nm,0.9s,baz=141,slow=3.5,SNR=3.9
PDAR LR LR 22 28 42.9
comp=Z,71nm,19.9s,MS3.6,baz=52,slow=32
BW06 **Boulder Array** 46.72 353 ⇑P P 22 12 13.8 -0.6
baz=47,SNR=12
BW06 **Boulder Array** 46.72 353 eP P 22 12 13.6 -0.9
22nm,1.4s,mb4.9
PLCA **Paso Flores** 46.90 146 LR LR 22 26 50.5
comp=Z,277nm,21.2s,MS4.2,baz=323,slow=30
PLCA **Paso Flores** 46.90 146 eP P 22 12 15.8 -0.1
3.7nm,1.0s,mb4.3
J22A **Midwest** 47.09 356 ⇓P P 22 12 16.4 -0.9
baz=47,SNR=5.5
J20A **Shoshoni** 47.15 355 ⇓P P 22 12 17.7 -0.1
baz=47,SNR=12
REDW **Red Top Meadow** 47.47 352 eP P 22 12 20.2 -0.1
18nm,1.3s,mb4.8
RRI2 **Red Ridge** 47.52 352 eP P 22 12 20.3 -0.4
16nm,0.8s,mb5.1
TPAW **Teton Pass** 47.61 352 eP P 22 12 21.0 -0.4
12nm,1.1s,mb4.8
WDC **Whiskeytown Da** 47.68 340 eP P 22 12 20.7 -1.3
5.7nm,1.1s,mb4.5
LOHW **Long Hollow** 47.69 352 eP P 22 12 21.3 -0.7
18nm,1.3s,mb5.0
PPT **Papeete** 47.73 250 eS S 22 19 14.3 -5.1
59nm,24.5s
PPT eLR LR 22 25 31.5
270nm,24.5s
PPT **Papeete** 47.73 250 LR LR 22 27 39.9
comp=Z,237nm,19.6s,MS4.2,baz=139,slow=30
I20A **Worland** 47.75 355 ⇓P P 22 12 21.8 -0.6
baz=48,SNR=5.3
MOOW **Moose Ponds** 47.84 352 eP P 22 12 22.5 -0.7
16nm,1.3s,mb4.9
J14A **Carey** 47.86 350 ⇑P P 22 12 23.1 -0.2
baz=48,SNR=7.2
IMW **Indian Meadow** 48.01 352 eP P 22 12 23.9 -0.6
20nm,1.0s,mb5.1
J13A **Cove Ranch, Pi** 48.05 349 ⇓P P 22 12 24.8 0.0
baz=48,SNR=11
I16A **Newdale** 48.07 352 P P 22 12 24.9 0.0
baz=48,SNR=6.1
MOD **Modoc** 48.15 343 eP P 22 12 25.5 -0.1
14nm,1.3s,mb4.8
WVOR **Wild Horse Val** 48.17 344 eP P 22 12 24.7 -1.0
17nm,1.2s,mb5.0
HLID **Hailey** 48.26 349 ⇓P P 22 12 26.5 +0.1
baz=48,SNR=16
HLID **Hailey** 48.26 349 eP P 22 12 26.0 -0.4
12nm,1.0s,mb4.9
KHMM **Horse Mountain** 48.36 339 eP P 22 12 27.7 +0.4
29nm,1.4s,mb5.1
MFID **Camas Ranch** 48.41 347 ⇑P P 22 12 27.3 -0.2
baz=49,SNR=8.4
I14A **Mackay** 48.43 350 ⇑P P 22 12 28.0 +0.3
baz=49,SNR=9.9
I13A **Wildhorse Cree** 48.54 349 P P 22 12 28.6 +0.1
baz=49,SNR=32
I12A **Atlanta** 48.62 348 ⇑P P 22 12 29.3 +0.1
baz=49,SNR=21
YBH **Yreka Blue Hor** 48.76 340 P P 22 12 28.9 -1.4
5.0nm,0.8s,mb4.6,baz=125,slow=4.5,SNR=12
YBH **Yreka Blue Hor** 48.76 340 eP P 22 12 28.7 -1.6
11nm,1.3s,mb4.7
H16A **Russell Place,** 48.84 352 P P 22 12 31.1 +0.3
baz=49,SNR=11
H15A **Lima** 48.97 351 ⇓P P 22 12 32.4 +0.5
baz=49,SNR=8.2
TBI **Tubuai** 48.99 242 eLR LR 22 26 06.3
122nm,24.5s
QLMT **Earthquake Lak** 48.99 352 eP P 22 12 32.5 +0.5
CPUP **Villa Florida** 49.01 122 P P 22 12 31.8 -0.8
1.0nm,0.5s,mb4.1,baz=267,slow=9.1,SNR=5.4
CPUP LR LR 22 30 13.4
comp=Z,108nm,18.4s,MS3.9,baz=79,slow=32
RLMT **Red Lodge** 49.02 354 eP P 22 12 31.6 -0.7
7.7nm,1.0s,mb4.7
K05A **Summer Lake** 49.08 342 ⇓P P 22 12 33.2 +0.4
baz=49,SNR=8.3
H14A **Leadore** 49.09 350 ⇑P P 22 12 33.0 +0.2
baz=49,SNR=15
H13A **Challis** 49.20 349 ⇓P P 22 12 33.5 -0.1
baz=49,SNR=11
MCMT **McKenzie Canyo** 49.20 351 eP P 22 12 33.2 -0.4
11nm,1.3s,mb4.7
G18A **Lazy EL Ranch,** 49.24 354 ⇓P P 22 12 33.1 -0.8
baz=49,SNR=7.3

H12A **Diamond D Ranc** 49.30 349 ⇑P P 22 12 34.1 -0.2
baz=50,SNR=26
G15A **Dillon** 49.48 351 ⇑P P 22 12 35.2 -0.5
baz=50
DLMT **Dillon** 49.69 351 eP P 22 12 36.7 -0.7
19nm,1.5s,mb4.9
G13A **Cobalt** 49.70 349 ⇓P P 22 12 36.9 -0.6
baz=50,SNR=15
F19A **Roth Farm, Mol** 49.71 354 ⇓P P 22 12 36.3 -1.2
baz=50,SNR=5.5
I07A **Izee** 49.93 344 ⇑P P 22 12 39.5 +0.3
baz=50,SNR=26
F17A **Fitzpatrick Pl** 49.95 353 ⇑P P 22 12 38.8 -0.5
baz=50,SNR=5.3
LRM **Limekiln Ridge** 50.11 351 eP P 22 12 39.7 -0.8
E20A **Meyer Farm, Mu** 50.28 355 ⇓P P 22 12 41.2 -0.6
baz=50,SNR=6.9
E19A **Rath Farm, Rou** 50.30 355 P P 22 12 40.8 -1.2
baz=50,SNR=5.9
F13A **Darby** 50.39 350 ⇑P P 22 12 41.8 -0.9
baz=51,SNR=10
F12A **Elk City** 50.53 349 ⇑P P 22 12 43.1 -0.7
baz=51,SNR=11
TRQA **Tornquist** 50.54 138 P P 22 12 44.4 +0.4
E15A **Deer Lodge** 50.73 351 ⇓P P 22 12 44.2 -1.0
baz=51
D21A **La Casta Ranch** 50.76 356 ⇓P P 22 12 44.7 -0.7
baz=51
E14A **Clinton** 50.86 351 ⇑P P 22 12 45.4 -0.7
baz=51,SNR=5.5
G08A **Pilot Rock** 50.92 345 ⇑P P 22 12 46.3 -0.3
baz=51,SNR=6.1
D19A **Cripps Ranch,** 51.00 355 ⇓P P 22 12 46.6 -0.7
baz=51,SNR=13
D17A **Six Diamond Ra** 51.18 353 ⇑P P 22 12 47.7 -0.9
baz=51,SNR=14
H04A **Detroit Lake** 51.25 342 ⇑P P 22 12 48.3 -0.9
baz=51
CHMT **Chamberlain Mo** 51.30 351 eP P 22 12 49.3 -0.2
G06A **Carlson Farm,** 51.31 344 ⇓P P 22 12 49.2 -0.4
baz=52
D15A **Lincoln** 51.31 352 ⇑P P 22 12 48.7 -0.9
baz=52,SNR=5.9
C20A **Veseth Ranch,** 51.47 356 ⇓P P 22 12 49.8 -1.0
baz=52,SNR=7.2
D14A **Greenough** 51.51 351 ⇑P P 22 12 49.9 -1.2
baz=52
C19A **Slack Wire Ran** 51.58 355 ⇑P P 22 12 50.7 -0.9
baz=52,SNR=5.9
HOOD **Mount Hood Mea** 51.67 343 eP P 22 12 52.5 +0.1
35nm,1.2s,mb5.2
C15A **Salmond Ranch,** 52.04 352 P P 22 12 54.4 -0.6
baz=52,SNR=7.4
HAWA **Hanford** 52.09 345 eP P 22 12 55.1 -0.3
11nm,0.9s,mb4.8
RSW **Rattlesnake Hi** 52.10 345 eP P 22 12 54.3 -1.2
21nm,1.0s,mb5.0
C14A **Swan Lake** 52.21 351 ⇑P P 22 12 55.9 -0.4
baz=52
AGMN **Agassiz Nation** 52.22 6 eP P 22 12 55.0 -1.3
11nm,1.1s,mb4.7
JTMT **Jette** 52.28 350 eP P 22 12 56.4 -0.4
YBMT **Yellow Bay** 52.35 351 eP P 22 12 56.4 -0.9
C12B **Naegeli Ranch,** 52.45 349 P P 22 12 57.1 -1.0
baz=53,SNR=5.2
A20A **Cobblestone Ra** 52.63 356 ⇑P P 22 12 59.0 -0.3
baz=53,SNR=5.4
SADO **Sadowa** 52.80 21 P P 22 12 58.6 -2.1
8.8nm,0.7s,mb4.8,baz=229,slow=8.0,SNR=7.7
A17A **Triple J Farms** 52.95 354 P P 22 13 01.2 -0.6
baz=53,SNR=7.7
A16A **West Butte Ran** 53.06 353 ⇑P P 22 13 02.0 -0.5
baz=53,SNR=7.1
A15A **Johnson Ranch,** 53.24 352 ⇑P P 22 13 02.9 -1.0
baz=53,SNR=5.7
NEW **Newport** 53.30 348 P P 22 13 03.3 -1.1
baz=54,SNR=5.2
NEW **Newport** 53.30 348 eP P 22 13 03.2 -1.2
13nm,1.0s,mb4.8
ETW **Entiat** 53.42 345 eP P 22 13 04.5 -0.7
WALA **Waterton Lakes** 53.49 351 eP P 22 13 05.2 -0.6
0.7nm,1.3s
ULM **Lac du Bonnet** 54.15 6 P P 22 13 08.4 -2.2
12nm,1.0s,mb4.8,baz=198,slow=8.9,SNR=6.0
JCW **Jim Creek** 54.38 344 eP P 22 13 10.9 -1.4
FRNY **Flat Rock** 55.03 25 eP P 22 13 15.2 -1.8
13nm,1.3s,mb4.8
BDFB **Brasilia** 55.20 106 LR LR 22 35 05.9
comp=Z,222nm,20.2s,MS4.2,baz=287,slow=34
SCHQ **Schefferville** 65.58 22 P P 22 14 27.5 -1.6
12nm,1.0s,mb4.8,baz=301,slow=7.3,SNR=5.1
YKA **Yellowknife Ar** 66.69 354 P P 22 14 34.3 -1.7
11nm,1.0s,mb4.8,baz=160,slow=6.0,SNR=5.5
YKA LR LR 22 41 00.3
comp=Z,12nm,20.0s,MS3.1,baz=30,slow=34
PMSA **Palmer Station** 66.90 163 LR LR 22 35 47.2
comp=Z,233nm,20.7s,MS4.4,baz=350,slow=29
FRB **Frobisher Bay** 72.07 15 P P 22 15 08.1 -1.3
11nm,0.8s,mb4.8,baz=236,slow=6.1,SNR=4.4
FRB **Frobisher Bay** 72.07 15 P P 22 15 08.1 -1.3
EGAK **Eagle** 73.95 344 eP P 22 15 19.4 -1.1
7.7nm,1.1s,mb4.5
INK **Inuvik** 75.02 349 P P 22 15 24.6 -2.0
3.3nm,0.7s,mb4.4,baz=130,slow=4.4,SNR=4.7
ILAR **Eielson Array** 75.61 342 P P 22 15 28.5 -1.6
2.0nm,0.9s,mb4.0,baz=160,slow=5.6,SNR=4.7
ILAR LR LR 22 43 22.9
comp=Z,50nm,20.9s,MS3.8,baz=101,slow=32
BPAW **Bear Paw Mtn.** 76.48 340 eP P 22 15 32.6 -2.4
3.3nm,0.9s,mb4.3
URZ **Urewera** 79.82 232 LR LR 22 44 39.9
comp=Z,3µm,18.6s,baz=109,slow=31
SUMG **Summit** 86.14 16 i P P 22 16 25.5 -0.7
8.4nm,1.0s,mb4.9
QSPA **South Pole Qui** 86.27 180 P P 22 16 26.6 -0.1
8.4nm,0.8s,mb5.0,baz=131,slow=2.6,SNR=33
QSPA **South Pole Qui** 86.27 180 eP P 22 16 26.4 -0.3
9.3nm,0.9s,mb5.0
VNA3 **Neumayer Olymp** 87.49 161 eP P 22 16 29.3 -3.5
VNA2 **Neumayer--Watz** 88.25 161 eP P 22 16 32.5 -4.0
baz=267,slow=3.9
DBIC **Dimbokro** 98.39 84 LR LR 22 58 05.9
comp=Z,57nm,18.9s,MS4.1,baz=196,slow=33
SPITS **Spitsbergen Ar** 99.48 11 LR LR 23 04 28.4
comp=Z,51nm,19.2s,MS4.0,baz=245,slow=37
ASAR **Alice Springs** 118.36 241 PKP PKPdf 22 22 31.3 -2.6
0.6nm,0.6s,baz=92,slow=1.9,SNR=6.5
WRA **Warramunga Arr** 119.08 245 PKP PKPdf 22 22 32.9 -2.4
1.2nm,0.6s,baz=97,slow=1.5,SNR=7.6
CN2 **Changchun** 121.70 321 ePKP PKPdf 22 22 38.9 -0.8
BRTR **Keskin Array B** 126.88 42 PKP PKPdf 22 22 48.0 -1.7
2.8nm,0.8s,baz=314,slow=0.4,SNR=16
SONM **Songino Array** 129.41 335 PKP PKPdf 22 22 53.0 -1.3
2.9nm,1.1s,baz=48,slow=2.1,SNR=12
ZALV **Zalesovo Beam** 129.59 354 PKP PKPdf 22 22 52.7 -1.8
2.0nm,0.8s,baz=357,slow=1.8,SNR=11
ZALV **Zalesovo Beam** 129.59 354 PKP PKPdf 22 22 52.7 -1.8
BRVK **Borovoye** 130.56 5 ePKPdf PKPdf 22 22 55.5 -0.9
HHC **Hu-ho-hao-te** 131.83 325 ePKP PKPdf 22 23 00.0 +0.8
HHC PKS 22 26 35.1
HHC SKS SKSdf 22 30 10.3 -0.6
HHC SKKS SKKSac 22 32 08.4 -7.8
HHC AMB AMB
comp=Z,44nm,7.3s
HHC LR LR
comp=N,130nm,19.3s,MS4.8
HHC LR LR
comp=E,150nm,19.4s,MS4.8
HHC LR LR
comp=Z,96nm,21.0s,MS4.5
ABKAR **Akbulak array** 132.39 15 ePKPdf PKPdf 22 22 59.0 -1.0
KURK **Kurchatov** 133.21 359 ePKPdf PKPdf 22 22 59.5 -2.0
MKAR **Makanchi Array** 136.92 355 PKP PKPdf 22 23 07.0 -1.6
comp=Z,4.5nm,1.0s,baz=27,slow=2.3,SNR=9.5
GTA **Gaotai** 138.99 333 PKP PKPdf 22 23 11.8 -0.8
WMQ **Urumqi** 139.04 348 ePKP PKPdf 22 23 16.0 +3.5
LZH **Lanzhou** 139.49 326 ePKP PKPdf 22 23 14.5 +0.9
LZH sPKP 22 23 19.3
LZH LR LR
comp=N,160nm,18.0s,MS5.0
LZH LR LR
comp=E,160nm,18.1s,MS5.0
LZH LR LR
comp=Z,200nm,20.0s,MS4.9
EKS2 **Erkin-Say** 141.17 4 ePKPdf PKPdf 22 23 16.5 +0.1
UCH **Uchtor** 141.65 3 ePKPdf PKPdf 22 23 17.7 +0.4
CD2 **Chengdu** 143.14 320 ePKP PKPdf 22 23 21.1 +0.8

GYA	Guiyang	143.82	311	*e*PKP	PKPdf	22 23 22.3	+0.7
GYA				PP	PP	22 26 38.8	+4.6
GYA				PKS		22 26 57.6	
GYA				SKKS	SKKSac	22 33 26.0	-2.0
GYA				SS	SS	22 45 17.3	-0.4
GYA				AMB	AMB		
	comp=Z,90nm,7.8s						
GYA				LR	LR		
	comp=N,130nm,20.4s,MS4.8						
GYA				LR	LR		
	comp=E,110nm,21.8s,MS4.8						
GYA				LR	LR		
	comp=Z,140nm,22.0s,MS4.7						
KSH	**Kashi**	**144.41**	**2**	*e*PKP	PKPdf	22 23 21.3	-1.0
KSH				*e*PKS		22 26 55.6	
KSH				*e*SKS	SKSdf	22 30 29.8	-2.2
KSH				AMB	AMB		
	comp=Z,350nm,6.4s						
KSH				LR	LR		
	comp=N,240nm,5.4s						
KSH				LR	LR		
	comp=E,270nm,4.3s						
KSH				LR	LR		
	comp=Z,420nm,6.3s						
KBL	**Kabul**	**148.49**	**13**	*e*PKPdf	PKPdf	22 23 29.7	+0.4
LSA	**Lhasa**	**150.99**	**334**	*e*PKPbc	PKPbc	22 23 38.9	-0.3
CHTO	**Chiang Mai**	**153.95**	**307**	*e*PKPdf	PKPdf	22 23 37.8	-0.2
CMAR	**Chiang Mai Arr**	**154.14**	**306**	PKP	PKPdf	22 23 37.0	-1.3
	comp=Z,1.5nm,1.0s,baz=325,slow=1.1,SNR=6.5						
CMAR				PKPbc	PKPbc	22 23 45.3	-1.2
	comp=Z,3.3nm,0.8s,baz=44,slow=1.6,SNR=18						
CMAR				PKPab	PKPab	22 23 58.5	-1.5
	comp=Z,1.6nm,0.9s,baz=32,slow=3.3,SNR=8.9						

WEL 24 22:05:22.5±0.1, 39°.00S×175°.23E, h5km, ML3.6/45, 11C-7D, Error ellipse: s-maj=0.5km s-min=0.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.17**	**115**	⇓PG	Pg	22 05 26.7	+0.8
TWVZ				SG	Sg	22 05 29.7	+1.4
WTVZ	**West Tongariro**	**0.30**	**113**	⇓PG	Pg	22 05 28.8	+0.5
PKVZ	**Pokaka**	**0.31**	**163**	⇑PG	Pg	22 05 28.9	+0.5
PKVZ				SG	Sg	22 05 33.3	+0.8
WPVZ	**Whakapapa**	**0.32**	**131**	⇑PG	Pg	22 05 29.1	+0.5
WPVZ				SG	Sg	22 05 34.0	+1.2
KRVZ	**Karewarewa**	**0.33**	**107**	⇓PG	Pg	22 05 29.3	+0.4
NGZ	**Ngauruhoe**	**0.34**	**122**	⇓PG	Pg	22 05 29.5	+0.5
NGZ				SG	Sg	22 05 34.3	+0.9
FWVZ	**Far West T-bar**	**0.36**	**136**	PG	Pg	22 05 29.8	+0.4
KATZ	**Kakaramea**	**0.36**	**87**	⇓PG	Pg	22 05 29.9	+0.5
KATZ				SG	Sg	22 05 35.6	+1.5
OTVZ	**Oturere**	**0.38**	**117**	⇓PG	Pg	22 05 30.3	+0.5
DRZ	**Dome Shelter**	**0.38**	**137**	⇓PG	Pg	22 05 30.3	+0.5
TRVZ	**Turoa**	**0.39**	**141**	PG	Pg	22 05 30.3	+0.4
VRZ	**Vera Road**	**0.39**	**251**	⇑PG	Pg	22 05 30.2	+0.2
TUVZ	**Tukino**	**0.42**	**130**	⇑PG	Pg	22 05 31.2	+0.5
MTVZ	**Mangateitei**	**0.43**	**155**	⇑PG	Pg	22 05 30.7	0.0
MTVZ				SG	Sg	22 05 36.8	+0.5
WNVZ	**Wahianoa**	**0.43**	**140**	⇑PG	Pg	22 05 31.2	+0.3
RATZ	**Rangitukua**	**0.44**	**73**	⇑PG	Pg	22 05 31.4	+0.5
WATZ	**Wairara**	**0.48**	**54**	⇑PG	Pg	22 05 31.8	+0.1
RITZ	**Rihia Road**	**0.49**	**88**	PG	Pg	22 05 32.5	+0.7
HIZ	**Hauiti**	**0.56**	**328**	⇑PG	Pg	22 05 33.1	-0.2
MOVZ	**Moawhango**	**0.57**	**136**	⇑PG	Pg	22 05 33.6	0.0
HATZ	**Hinemaiaia**	**0.68**	**81**	P*	Pb	22 05 36.5	-0.3
MHEZ	**Mangahewa**	**0.71**	**263**	P*	Pb	22 05 36.8	-0.6
RAEZ	**Rainy Point**	**0.71**	**246**	P*	Pb	22 05 36.4	-1.0
WAZ	**Wanganui**	**0.78**	**194**	⇑P*	Pb	22 05 37.2	-1.3
BHHZ	**Black Hill Sta**	**0.81**	**128**	P*	Pb	22 05 38.0	-1.0
DREZ	**Durham Road**	**0.83**	**256**	P*	Pb	22 05 38.4	-0.9
NEZ	**North Egmont**	**0.93**	**252**	P*	Pb	22 05 40.4	-0.6
DFE	**Dawson Falls**	**0.94**	**249**	P*	Pb	22 05 40.4	-0.8
ALRZ	**Allen Road**	**0.97**	**64**	P*	Pb	22 05 40.9	-0.8
PKE	**Pukeiti**	**0.99**	**258**	P*	Pb	22 05 41.2	-0.9
BKZ	**Black Stump Fm**	**0.99**	**100**	P*	Pb	22 05 41.7	-0.5
NWEZ	**Newall Road**	**1.10**	**255**	P*	Pb	22 05 43.3	-0.6
UTU	**Utuhina**	**1.11**	**43**	P*	Pb	22 05 43.2	-0.9
PNHZ	**Pukenui**	**1.18**	**141**	P*	Pb	22 05 45.1	-0.3
TSZ	**Takapari Road**	**1.20**	**152**	P*	Pb	22 05 45.0	-0.7
KARZ	**Kaharoa**	**1.25**	**39**	P*	Pb	22 05 45.4	-1.2
TOZ	**Tahuroa Road**	**1.28**	**10**	P*	Pb	22 05 44.6	-2.4
POWZ	**Post Office Ro**	**1.45**	**164**	PN	Pn	22 05 49.3	-0.1
DVHZ	**Dannevirke**	**1.49**	**151**	PN	Pn	22 05 50.4	+0.6
TGRZ	**Tauranga**	**1.50**	**33**	P*	Pb	22 05 48.2	-2.6
KAHZ	**Kahuranaki**	**1.50**	**123**	PN	Pn	22 05 51.1	+1.0
PRHZ	**Porangahau**	**1.67**	**140**	PN	Pn	22 05 52.9	+0.5
MRZ	**Mangatainoka R**	**1.68**	**171**	PN	Pn	22 05 52.6	+0.1
OGWZ	**Otaki Gorge**	**1.82**	**182**	PN	Pn	22 05 54.4	0.0
TIWZ	**Tintock**	**1.85**	**164**	PN	Pn	22 05 56.1	+1.3
KIW	**Kapiti Island**	**1.88**	**188**	PN	Pn	22 05 55.3	0.0
MKAZ	**Moumakai**	**1.88**	**358**	PN	Pn	22 05 54.0	-1.3
HOWZ	**Holdsworth Sta**	**1.91**	**174**	PN	Pn	22 05 56.6	+0.9
DUWZ	**D'Urville Isla**	**2.07**	**209**	PN	Pn	22 05 57.4	-0.4
KUZ	**Kuaotunu**	**2.28**	**10**	PN	Pn	22 05 58.0	-2.7
TCW	**Tory Channel**	**2.33**	**198**	PN	Pn	22 06 01.2	-0.3
MSWZ	**Moikau Station**	**2.42**	**180**	PN	Pn	22 06 02.7	+0.1
BHW	**Baring Head**	**2.42**	**186**	PN	Pn	22 06 02.7	0.0
PLWZ	**Palliser**	**2.57**	**180**	PN	Pn	22 06 04.6	-0.2
TUWZ	**Tuamarina**	**2.62**	**202**	PN	Pn	22 06 06.2	+0.7
QRZ	**Quartz Range**	**2.77**	**228**	PN	Pn	22 06 06.0	-1.4
BSWZ	**Blackbirch Sta**	**2.91**	**200**	PN	Pn	22 06 10.7	+1.3
WCZ	**Waipu Caves**	**3.13**	**347**	PN	Pn	22 06 11.1	-1.3
THZ	**Tophouse**	**3.29**	**212**	PN	Pn	22 06 14.9	+0.3
JCZ	**Jackson Bay**	**7.02**	**222**	PN	Pn	22 07 04.5	-1.4

WEL 24 22:22:53.2±0.5, 39°.44S×174°.29E, h207km±3km, ML3.6/6, Error ellipse: s-maj=3.8km s-min=1.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.48**	**49**	PN	Pn	22 23 20.5	-0.5
WAZ	**Wanganui**	**0.62**	**120**	PN	Pn	22 23 22.4	+0.9
WAZ				SN	Sn	22 23 44.2	+0.7
PKVZ	**Pokaka**	**0.83**	**80**	PN	Pn	22 23 22.5	-0.2
MTVZ	**Mangateitei**	**0.92**	**87**	PN	Pn	22 23 23.3	+0.2
MTVZ				SN	Sn	22 23 46.9	+0.6
TWVZ	**Taurewa**	**0.97**	**68**	PN	Pn	22 23 23.0	-0.4
WPVZ	**Whakapapa**	**1.00**	**77**	PN	Pn	22 23 23.7	+0.1
WNVZ	**Wahianoa**	**1.02**	**84**	PN	Pn	22 23 24.1	+0.4
WNVZ				SN	Sn	22 23 47.8	+0.4
HIZ	**Hauiti**	**1.03**	**26**	PN	Pn	22 23 23.1	-0.8
NGZ	**Ngauruhoe**	**1.05**	**76**	PN	Pn	22 23 24.1	+0.1
WTVZ	**West Tongariro**	**1.06**	**73**	PN	Pn	22 23 23.9	-0.1
TUVZ	**Tukino**	**1.07**	**81**	PN	Pn	22 23 24.5	+0.3
OTVZ	**Oturere**	**1.10**	**76**	PN	Pn	22 23 24.6	+0.3
KRVZ	**Karewarewa**	**1.11**	**72**	PN	Pn	22 23 24.2	-0.1
MOVZ	**Moawhango**	**1.14**	**89**	PN	Pn	22 23 24.3	-0.2
MOVZ				SN	Sn	22 23 47.1	-1.8
BHHZ	**Black Hill Sta**	**1.38**	**92**	PN	Pn	22 23 26.0	-0.4
DUWZ	**D'Urville Isla**	**1.39**	**192**	PN	Pn	22 23 26.6	+0.1
DUWZ				SN	Sn	22 23 50.8	-1.8
TSZ	**Takapari Road**	**1.43**	**116**	PN	Pn	22 23 27.0	+0.1
POWZ	**Post Office Ro**	**1.48**	**130**	PN	Pn	22 23 27.1	-0.2
KIW	**Kapiti Island**	**1.50**	**162**	PN	Pn	22 23 27.5	+0.2
OGWZ	**Otaki Gorge**	**1.53**	**154**	PN	Pn	22 23 27.9	+0.2
OGWZ				SN	Sn	22 23 53.1	-1.6
PNHZ	**Pukenui**	**1.55**	**108**	PN	Pn	22 23 27.9	0.0
MRZ	**Mangatainoka R**	**1.57**	**141**	PN	Pn	22 23 28.0	0.0
DVHZ	**Dannevirke**	**1.68**	**121**	PN	Pn	22 23 28.9	-0.1
HOWZ	**Holdsworth Sta**	**1.73**	**147**	PN	Pn	22 23 28.1	-1.5
BKZ	**Black Stump Fm**	**1.73**	**82**	PN	Pn	22 23 28.9	-0.6
BKZ				SN	Sn	22 23 54.9	-2.9
TCW	**Tory Channel**	**1.77**	**180**	PN	Pn	22 23 30.0	+0.1
WPHZ	**Waipukurau**	**1.77**	**111**	PN	Pn	22 23 30.0	+0.1
MCHZ	**McNeill Hill**	**1.87**	**91**	PN	Pn	22 23 31.1	+0.3
NNZ	**Nelson**	**1.91**	**201**	PN	Pn	22 23 30.8	-0.4
QRZ	**Quartz Range**	**1.93**	**224**	PN	Pn	22 23 30.4	-1.1
BFZ	**Birch Farm**	**1.95**	**130**	PN	Pn	22 23 31.3	-0.3
MTW	**Mount Morrison**	**1.95**	**152**	PN	Pn	22 23 31.3	-0.3
NMHZ	**Naumai**	**1.99**	**81**	PN	Pn	22 23 31.9	-0.2
PRHZ	**Porangahau**	**1.99**	**115**	PN	Pn	22 23 32.1	+0.1
KAHZ	**Kahuranaki**	**2.03**	**101**	PN	Pn	22 23 32.7	+0.3
TMWZ	**Te Maipa**	**2.07**	**144**	PN	Pn	22 23 32.5	-0.3
PXZ	**Pawanui**	**2.07**	**107**	PN	Pn	22 23 32.9	0.0
CKHZ	**Cape Kidnapper**	**2.17**	**97**	PN	Pn	22 23 34.0	+0.1
BSWZ	**Blackbirch Sta**	**2.29**	**188**	PN	Pn	22 23 35.4	+0.2
THZ	**Tophouse**	**2.55**	**204**	PN	Pn	22 23 37.0	-1.0
KNZ	**Kokohu**	**2.66**	**82**	PN	Pn	22 23 38.2	-1.1
MHGZ	**Mahia Peninsul**	**2.82**	**85**	PN	Pn	22 23 40.6	-0.5
PRGZ	**Paritu Road**	**2.84**	**81**	PN	Pn	22 23 40.4	-0.9
DSZ	**Denniston Nort**	**2.98**	**219**	PN	Pn	22 23 41.4	-1.5
KHZ	**Kahutara**	**3.03**	**191**	PN	Pn	22 23 42.5	-0.9
LTZ	**Lake Taylor**	**3.67**	**204**	PN	Pn	22 23 49.5	-1.5
MQZ	**McQueen's Vall**	**4.43**	**196**	PN	Pn	22 23 57.3	-3.2

*ISCJB **24** 22:23:19.7±0.6, 18°.81S±0°.07×177°.62W±0°.07, h491km±7km, mb4.1/19, Error ellipse: s-maj=11.9km s-min=8.2km az=136.7*
*IDC **24** 22:23:19.3±1.6, 18°.92S×177°.55W, h475km±21km, mb3.7/9, mb1 3.9/11, mb1mx3.6/21, mbtmp3.8/11, Error ellipse: s-maj=22.5km s-min=11.6km az=128.0*
*NEIC **24** 22:23:20.9±0.7, 18°.81S×177°.57W, h493km±7km, mb4.3/11, Error ellipse: s-maj=12.0km s-min=8.6km az=112.0*
ISC 24 22:23:20.0±0.7, 18°.82S±0°.07×177°.58W±0°.07, h482km±7km, n56, σ0s90/56, mb4.1/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.29**	**284**	*e*P	**P**	**22 24 43.0**	**+3.4**
MSVF				S	**S**	**22 25 43.6**	**-0.9**
AFI	**Afiamalu**	**7.41**	**50**	P	**P**	**22 25 11.2**	**+1.3**
	23nm,0.3s,baz=233,slow=20,SNR=15						
AFI				S	**S**	**22 26 38.6**	**-1.3**
	15nm,0.3s,baz=263,slow=19,SNR=5.9						
AFI	**Afiamalu**	**7.41**	**50**	*e*P	**P**	**22 25 09.3**	**-0.5**
AFI				*e*S	**S**	**22 26 39.5**	**-0.4**
FUNA	**Funafuti**	**10.70**	**343**	P	**P**	**22 25 45.8**	**+1.0**
OUZ	**Omahuta**	**18.11**	**204**	*e*P	**P**	**22 27 04.5**	**+2.3**
	50nm,0.7s						
URZ	**Urewera**	**19.92**	**192**	P	**P**	**22 27 16.8**	**-1.8**
	5.6nm,0.3s,baz=1.0,slow=4.2,SNR=19						
URZ	**Urewera**	**19.92**	**192**	*e*P	**P**	**22 27 17.5**	**-1.1**
	18nm,0.5s						
RPZ	**Rata Peaks**	**26.60**	**199**	P	**P**	**22 28 17.9**	**-0.5**
	4.6nm,0.6s,mb4.1,baz=0.0,slow=4.0,SNR=5.4						
ARMA	**Armidale**	**30.18**	**242**	*e*P	**P**	**22 28 50.9**	**+0.9**
CNB	**Canberra Magne**	**33.51**	**234**	*e*P	**P**	**22 29 19.3**	**+0.9**
YNG	**Young**	**33.92**	**236**	*e*P	**P**	**22 29 22.7**	**+0.8**
	4.1nm,0.8s,mb3.9						
CTA	**Charters Tower**	**34.08**	**262**	P	**P**	**22 29 23.0**	**-0.5**
	6.5nm,0.7s,mb4.2,baz=99,slow=9.4,SNR=3.9						
CTAO	**Charters Tower**	**34.08**	**262**	*e*P	**P**	**22 29 23.6**	**+0.2**
	4.1nm,0.6s,mb4.0						
PMG	**Port Moresby**	**35.39**	**280**	*e*P	**P**	**22 29 34.5**	**0.0**
	12nm,0.6s,mb4.5						
CMSA	**Cobar Meteorol**	**35.40**	**242**	*e*P	**P**	**22 29 34.6**	**+0.2**
QLP	**Quilpie**	**35.96**	**251**	*e*P	**P**	**22 29 38.6**	**-0.5**
TOO	**Toolangi**	**37.22**	**232**	*e*P	**P**	**22 29 49.9**	**+0.5**
COEN	**Coen**	**37.90**	**271**	*e*P	**P**	**22 29 54.7**	**-0.6**
STKA	**Stephens Creek**	**38.89**	**242**	P	**P**	**22 30 03.8**	**+0.6**
	9.7nm,0.4s,mb4.6,baz=88,slow=8.2,SNR=40						
STKA	**Stephens Creek**	**38.89**	**242**	*e*P	**P**	**22 30 03.6**	**+0.4**
	6.8nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**38.89**	**242**	*e*P	**P**	**22 30 03.9**	**+0.7**
	2.3nm,0.5s,mb3.9						
BBOO	**Buckleboo**	**43.66**	**242**	*e*P	**P**	**22 30 41.1**	**-0.1**
	13nm,0.4s,mb4.7						
WRA	**Warramunga Arr**	**45.25**	**260**	P	**P**	**22 30 53.1**	**-0.5**
	0.7nm,0.3s,mb3.6,baz=97,slow=7.0,SNR=11						
WRA				S	**S**	**22 36 50.9**	**-7.2**
	0.6nm,0.8s,baz=99,slow=13,SNR=2.2						
ASAR	**Alice Springs**	**45.31**	**255**	P	**P**	**22 30 53.7**	**-0.3**
	10nm,0.5s,mb4.5,baz=91,slow=8.3,SNR=152						
ASAR				S	**S**	**22 36 53.2**	**-5.6**
	2.0nm,0.8s,baz=92,slow=16,SNR=10						
KAKA	**Kakadu**	**48.36**	**270**	*e*P	**P**	**22 31 16.4**	**-0.9**
	7.9nm,0.6s,mb4.2						
GUMO	**Guam**	**49.05**	**308**	*e*P	**P**	**22 31 22.4**	**0.0**
MBWA	**Marble Bar**	**58.62**	**256**	*e*P	**P**	**22 32 29.4**	**-0.9**
	4.5nm,0.9s,mb3.8						
SBA	**Scott Base**	**59.57**	**184**	*e*P	**P**	**22 32 39.7**	**+4.0**
	5.3nm,0.8s,mb4.0						
CASY	**Casey**	**65.65**	**205**	*e*P	**P**	**22 33 15.8**	**+0.5**
	2.5nm,0.6s,mb4.0						
MJAR	**Matsushiro Arr**	**69.10**	**323**	P	**P**	**22 33 37.0**	**0.0**
	3.4nm,0.6s,mb4.0,baz=170,slow=6.7,SNR=10						
KKM	**Kota Kinabalu**	**69.72**	**284**	*e*P	**P**	**22 33 41.6**	**+0.4**
QSPA	**South Pole Qui**	**71.24**	**180**	*e*P	**P**	**22 33 51.8**	**+2.7**
	9.7nm,0.7s,mb4.4						
YULB	**Yu-li**	**72.92**	**303**	*e*P	**P**	**22 34 00.3**	**+0.5**
NACB	**Ninganchiao**	**73.07**	**304**	*e*P	**P**	**22 34 01.2**	**+0.5**
SSLB	**Suanglung**	**73.39**	**303**	*e*P	**P**	**22 34 01.3**	**-1.1**
	7.1nm,0.4s,mb4.5						
TPUB	**Ta-pu**	**73.41**	**302**	*e*P	**P**	**22 34 01.2**	**-1.4**
YHNB	**Yeheng**	**73.49**	**304**	*e*P	**P**	**22 34 03.6**	**+0.6**
YSS	**Yuzh-Sakhalins**	**74.58**	**333**	*e*P	**P**	**22 34 07.7**	**-1.1**
PETK	**Petropavlovsk-**	**74.75**	**345**	P	**P**	**22 34 10.7**	**+1.1**
	5.9nm,0.6s,mb4.3,baz=116,slow=7.8,SNR=6.1						
MDJ	**Mudanjiang**	**79.38**	**325**	P	**P**	**22 34 34.6**	**-0.5**
MAW	**Mawson**	**83.27**	**200**	P	**P**	**22 34 54.0**	**-0.8**
KULM	**Kulim**	**83.93**	**278**	*e*P	**P**	**22 34 59.0**	**-0.2**
TRF	**Thorofare Moun**	**84.73**	**12**	*e*P	**P**	**22 35 02.3**	**+0.4**
	2.0nm,0.4s,mb4.1						
BJT	**Baijiatuao**	**84.97**	**315**	P	**P**	**22 35 04.3**	**+0.6**
COLA	**College**	**86.49**	**12**	*e*P	**P**	**22 35 10.4**	**0.0**
ILAR	**Eielson Array**	**86.59**	**13**	P	**P**	**22 35 11.5**	**+0.6**
	0.5nm,0.4s,mb3.6,baz=221,slow=4.8,SNR=11						
ILAR				pP	pP	22 37 03.5	+5.2
	0.9nm,0.9s,baz=229,slow=6.0,SNR=5.6						
PDAR	**Pinedale Array**	**87.47**	**43**	P	**P**	**22 35 16.1**	**+0.6**
	0.6nm,0.4s,mb3.7,baz=183,slow=3.6,SNR=6.0						
PDAR	**Pinedale Array**	**87.47**	**43**	P	**P**	**22 35 16.1**	**+0.5**
VNA3	**Neumayer Olymp**	**89.79**	**176**	*e*	**P**	**22 35 24.4**	**-1.5**
VNA2	**Neumayer--Watz**	**90.23**	**177**	*e*	**P**	**22 35 26.8**	**-1.2**
VNA1	**Neumayer--Stat**	**90.46**	**176**	*e*	**P**	**22 35 28.6**	**-0.4**
EKA	**Eskdalemuir Ar**	**143.30**	**5**	PKP	PKPdf	22 41 58.0	-0.4
	0.5nm,0.7s,baz=354,slow=2.5,SNR=3.6						
BRTR	**Keskin Array B**	**145.98**	**314**	PKPbc	PKPbc	22 42 06.0	+0.6
	0.5nm,0.5s,baz=72,slow=4.0,SNR=5.0						
CLL	**Collm**	**146.51**	**348**	*i* PKPbc	PKPbc	22 42 07.5	+1.1
	comp=Z,7.0nm,0.9s						
GERES	**GERESS Array B**	**148.69**	**346**	PKPbc	PKPbc	22 42 12.0	-0.1
	comp=Z,0.8nm,0.7s,baz=45,slow=2.1,SNR=9.8						
GERES	**GERESS Array B**	**148.69**	**346**	PKPbc	PKPbc	22 42 12.0	-0.1

*TUN **24** 22:28:56.3, 34°.24N×8°.61E, h9km, MD3.8*
*CSEM **24** 22:28:57.8±0.5, 34°.16N×8°.50E, h25km±4km, mb4.6/8, Error ellipse: s-maj=6.2km s-min=5.3km az=80.0*
*LDG **24** 22:28:59.1±0.2, 34°.11N×8°.35E, h40km, Ml3.2/6, ms3.0/8, Error ellipse: s-maj=7.5km s-min=6.3km az=69.0*
*NEIC **24** 22:28:59.1±0.7, 34°.20N×8°.46E, h36km±8km, mb4.6/8, Error ellipse: s-maj=8.2km s-min=5.6km az=121.0*
*IDC **24** 22:29:00.7±1.5, 34°.19N×8°.49E, h56km±14km, mb3.7/16, mb1 3.8/22, mb1mx3.8/34, mbtmp3.7/22, MS3.2/11, Ms1 3.3/11, ms1mx3.0/51, Error ellipse: s-maj=18.2km s-min=10.2km az=115.0*
*CRAAG **24** 22:29:01.5, 34°.00N×8°.30E, Mb4.2*
ISC 24 22:28:57.7±0.8, 34°.14N±0°.03×8°.46E±0°.04, h23km±6km, n154, σ1s37/168, mb4.2/23, MS3.3/8, 3C-3D, Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OAR	**Oum El Arais**	**0.39**	**352**	*i* P	**Pb**	**22 29 05.5**	**-0.6**
BERT	**Berda**	**0.47**	**77**	*i* P	**Pb**	**22 29 05.5**	**-1.8**
SYA	**Sidi Yaiche**	**0.66**	**25**	*i* P	**Pb**	**22 29 10.2**	**-0.4**
KEST	**Kesra**	**1.75**	**24**	P	**Pn**	**22 29 26.3**	**-0.3**
	13nm,0.3s,baz=159,slow=4.3,SNR=158						
KEST				S	**Sn**	**22 29 49.1**	**+1.1**
	24nm,0.3s,baz=162,slow=19,SNR=8.1						
KEST	**Kesra**	**1.75**	**24**	*e*Pn	**Pn**	**22 29 26.1**	**-0.5**
KEST				*e*Sn	**Sn**	**22 29 48.5**	**+0.4**
KEST	**Kesra**	**1.75**	**24**	*e*Pn	**Pn**	**22 29 26.1**	**-0.5**
KEST				*e*Sn	**Sn**	**22 29 48.5**	**+0.4**
KRIT	**Krib**	**2.25**	**13**	*i* P	**Pn**	**22 29 35.4**	**+1.9**
GHAT	**Ghardimaou**	**2.35**	**357**	*i* P	**Pn**	**22 29 36.4**	**+1.5**
ZGN	**Zaghouan**	**2.60**	**31**	*i* P	**Pn**	**22 29 39.5**	**+1.2**
BLIT	**Baltah**	**2.60**	**9**	*i* P	**Pn**	**22 29 40.2**	**+1.9**
CASM	**Ain Smara**	**2.66**	**323**	P	**Pn**	**22 29 42.0**	**+2.8**
CASM	**Ain Smara**	**2.66**	**323**	P	**Pn**	**22 29 42.0**	**+2.8**
ALAS	**Alassa**	**2.93**	**115**	*i* P	**Pn**	**22 29 44.1**	**+1.2**
	SNR=92						
SET	**Setif**	**3.24**	**310**	P	**Pn**	**22 29 50.0**	**+2.8**
SET	**Setif**	**3.24**	**310**	P	**Pn**	**22 29 50.0**	**+2.8**
LGHD	**Ghdames**	**4.19**	**168**	*i* P	**Pn**	**22 30 01.5**	**+1.3**
	SNR=91						
GHAR	**Gharyan**	**4.37**	**116**	*i* P	**Pn**	**22 30 02.7**	**+0.1**
	SNR=91						
EMHD	**Djebel Mahouad**	**4.96**	**296**	P	**Pn**	**22 30 10.1**	**-0.6**
EMHD	**Djebel Mahouad**	**4.96**	**296**	P	**Pn**	**22 30 10.1**	**-0.6**
WDD	**Wield Dalam**	**5.26**	**69**	*e*Pn	**Pn**	**22 30 13.6**	**-1.3**
WDD	**Wield Dalam**	**5.26**	**69**	*e*Pn	**Pn**	**22 30 13.6**	**-1.3**
VAE	**Valguarnera**	**5.87**	**54**	P	**Pn**	**22 30 23.1**	**-0.1**
	1.2nm,0.3s,baz=197,slow=20,SNR=12						
VAE	**Valguarnera**	**5.87**	**54**	P	**Pn**	**22 30 23.1**	**-0.1**
ETRT	**Tiaret**	**6.03**	**284**	P	**Pn**	**22 30 26.0**	**+0.6**
ETRT	**Tiaret**	**6.03**	**284**	P	**Pn**	**22 30 26.0**	**+0.6**
EBNR	**Beni Rached**	**6.07**	**293**	P	**Pn**	**22 30 24.3**	**-1.7**
EBNR	**Beni Rached**	**6.07**	**293**	P	**Pn**	**22 30 24.3**	**-1.7**
ECHA	**Ech Chlef**	**6.15**	**291**	P	**Pn**	**22 30 25.0**	**-2.1**
EANR	**'Ain N'Sour**	**6.30**	**289**	P	**Pn**	**22 30 30.0**	**+0.8**
EANR	**'Ain N'Sour**	**6.30**	**289**	P	**Pn**	**22 30 30.0**	**+0.8**
LSHF	**Shwairf**	**6.42**	**129**	*i* P	**Pn**	**22 30 30.8**	**0.0**
	SNR=91						
LJFR	**Jufra**	**8.03**	**127**	*i* P	**Pn**	**22 30 52.0**	**-0.9**
	SNR=91						
PGF	**Pioggiola**	**8.40**	**3**	*e*P	**Pn**	**22 31 00.5**	**+2.5**
PGF				*e*Sn	**Sn**	**22 32 27.2**	**-4.9**
	1.8nm,0.5s						
PGF	**Pioggiola**	**8.40**	**3**	*e*Pn	**Pn**	**22 30 56.5**	**-1.5**
PGF				*e*P		22 31 00.5	
PGF				*e*Sn	**Sn**	**22 32 27.2**	**-4.9**
PGF	**Pioggiola**	**8.40**	**3**	*e*Pn	**Pn**	**22 30 56.5**	**-1.5**
CART	**Cartagena**	**8.42**	**297**	*e*Pn	**Pn**	**22 30 58.9**	**+0.7**
CART	**Cartagena**	**8.42**	**297**	*e*Pn	**Pn**	**22 30 58.9**	**+0.7**
LMR	**La Mourre**	**9.31**	**351**	*e*P	**Pn**	**22 31 14.4**	**+4.0**
LMR				*e*Sn	**Sn**	**22 32 48.2**	**-6.0**
	1.2nm,0.4s						
LMR	**La Mourre**	**9.31**	**351**	*e*Pn	**Pn**	**22 31 08.8**	**-1.6**
LMR				*e*P		22 31 14.4	
LMR				*e*Sn	**Sn**	**22 32 48.2**	**-6.0**
LMR	**La Mourre**	**9.31**	**351**	*e*Pn	**Pn**	**22 31 08.8**	**-1.6**
FRF	**La Foret Royal**	**9.51**	**352**	*e*Pn	**Pn**	**22 31 11.9**	**-1.3**
FRF				*e*Sn	**Sn**	**22 32 53.4**	**-5.9**
	0.9nm,0.5s						
FRF	**La Foret Royal**	**9.51**	**352**	*e*Pn	**Pn**	**22 31 11.9**	**-1.3**
LUMB	**Murzuk**	**9.65**	**144**	*i* P	**Pn**	**22 31 13.3**	**-1.9**
	SNR=90						
SMRF	**Simiane la Rot**	**10.07**	**348**	*e*Pn	**Pn**	**22 31 19.1**	**-1.8**
SMRF				*e*Sn	**Sn**	**22 33 06.9**	**-6.2**
SMRF	**Simiane la Rot**	**10.07**	**348**	*e*P

NB2	NORSAR Subarra	26.97	3	P	P	22 34 36.4	-0.9
	comp=Z,3.8nm,1.4s,mb3.7,baz=185,slow=9.3						
NB2	NORSAR Subarra	26.97	3	P	P	22 34 36.4	-0.9
	comp=Z,3.8nm,1.4s,mb3.7,baz=185,slow=9.0,SNR=4.8						
NOA	NORSAR Array B	26.97	3	P	P	22 34 37.0	-0.2
	comp=Z,0.9nm,0.7s,mb3.4,baz=192,slow=8.8,SNR=4.7						
NOA				LR	LR	22 44 55.9	
	comp=Z,30nm,20.1s,MS2.9,baz=185,slow=36						
NOA	NORSAR Array B	26.97	3	P	P	22 34 37.0	-0.3
FINES	FINESS Array B	29.57	17	P	P	22 34 59.3	-1.1
	comp=Z,2.3nm,0.7s,mb4.0,baz=213,slow=6.3,SNR=11						
FINES	FINESS Array B	29.57	17	P	P	22 34 59.3	-1.1
DBIC	Dimbokro	29.98	207	P	P	22 35 03.8	-0.7
	comp=Z,5.6nm,0.7s,mb4.4,baz=4.4,slow=10,SNR=9.1						
DBIC	Dimbokro	29.98	207	P	P	22 35 03.8	-0.7
TIC	Toumodi	30.07	208	*e*P	P	22 35 04.8	-0.5
	comp=Z,4.9nm,0.2s,mb4.9						
TIC	Toumodi	30.07	208	*e*P	P	22 35 04.8	-0.5
	comp=Z,4.9nm,0.2s,mb4.9						
KIC	Kosan Boka	30.22	207	*e*P	P	22 35 07.3	+0.6
	comp=Z,46nm,1.5s,mb5.0						
KIC	Kosan Boka	30.22	207	*e*P	P	22 35 07.3	+0.6
	comp=Z,46nm,1.5s,mb5.0						
LIC	Lamto	30.46	207	*e*P	P	22 35 09.4	+0.7
	comp=Z,52nm,0.7s						
LIC	Lamto	30.46	207	⇓*i*P	P	22 35 09.3	+0.6
	comp=Z,25nm,0.7s,mb4.8,baz=30						
LIC				*e*MLR	MLR		
	comp=Z,337nm,47.0s,MS3.3						
LIC	Lamto	30.46	207	⇓*i*P	P	22 35 09.3	+0.6
	comp=Z,12nm,0.7s,mb4.8						
LIC				LR	LR		
	comp=Z,170nm,47.0s,MS3.3						
LIC	Lamto	30.46	207	⇓*i*P	P	22 35 09.3	+0.6
	comp=Z,12nm,0.7s,mb4.8,baz=30						
MSKU	Masuku	35.93	171	P	P	22 35 56.0	-0.5
	comp=Z,4.9nm,0.6s,mb4.7,baz=34,slow=3.6,SNR=8.4						
MSKU	Masuku	35.93	171	P	P	22 35 56.0	-0.5
ARCES	ARCESS Array B	36.69	10	P	P	22 36 00.9	-1.5
	comp=Z,4.5nm,0.9s,mb4.3,baz=213,slow=9.7,SNR=7.2						
ARCES				LR	LR	22 51 56.2	
	comp=Z,56nm,18.4s,MS3.4,baz=81,slow=38						
ARCES	ARCESS Array B	36.69	10	P	P	22 36 00.9	-1.5
BRVK	Borovoye	47.01	47	*e*P	P	22 37 26.9	-0.1
	comp=Z,2.9nm,0.8s,mb4.3						
BRVK	Borovoye	47.01	47	*e*P	P	22 37 26.9	0.0
	comp=Z,2.8nm,0.8s,mb4.2						
KURK	Kurchatov	52.40	49	*e*P	P	22 38 06.5	-1.4
	comp=Z,4.1nm,0.8s,mb4.4						
KURK	Kurchatov	52.40	49	*e*P	P	22 38 06.6	-1.3
	comp=Z,4.1nm,0.8s,mb4.4						
ZALV	Zalesovo Beam	55.51	44	P	P	22 38 28.6	-2.0
	comp=Z,1.0nm,0.6s,mb4.0,baz=290,slow=7.1,SNR=5.3						
ZALV	Zalesovo Beam	55.51	44	P	P	22 38 28.6	-2.0
MKAR	Makanchi Array	55.62	53	P	P	22 38 30.9	-0.6
	comp=Z,0.8nm,0.8s,mb3.8,baz=284,slow=5.8,SNR=4.9						
LBTB	Lobatse	61.04	162	LR	LR	23 08 49.0	
	comp=Z,83nm,18.2s,MS3.9,baz=41,slow=39						
BOSA	Boshof	64.41	164	P	P	22 39 32.8	+0.9
	comp=Z,5.4nm,0.9s,mb4.6,baz=83,slow=4.6,SNR=6.8						
BOSA				LR	LR	23 08 42.9	
	comp=Z,89nm,20.9s,MS3.9,baz=167,slow=37						
BOSA	Boshof	64.41	164	P	P	22 39 32.8	+0.9
SONM	Songino Array	70.39	45	P	P	22 40 07.8	-1.9
	comp=Z,0.4nm,1.0s,mb3.3,baz=283,slow=7.2,SNR=3.4						
SONM	Songino Array	70.39	45	P	P	22 40 07.8	-1.9
BDFB	Brasilia	73.04	237	P	P	22 40 26.2	+0.2
	comp=Z,4.1nm,0.8s,mb4.4,baz=69,slow=6.7,SNR=5.2						
BDFB	Brasilia	73.04	237	P	P	22 40 26.2	+0.2
ILAR	Eielson Array	79.53	350	P	P	22 41 00.7	-1.5
	comp=Z,0.1nm,0.4s,mb3.1,baz=354,slow=7.2,SNR=2.6						
ILAR	Eielson Array	79.53	350	P	P	22 41 00.7	-1.5
EGMT	Eagleton	81.33	323	P	P	22 41 11.1	-1.0
EGMT	Eagleton	81.33	323	P	P	22 41 11.1	-1.0
PDAR	Pinedale Array	84.78	319	P	P	22 41 30.1	0.0
	comp=Z,0.6nm,0.8s,mb3.8,baz=74,slow=6.7,SNR=3.2						
PDAR	Pinedale Array	84.78	319	P	P	22 41 30.1	0.0

*ISCJB **24** 22:40:37.2±0.6, 42°.35S±0°.03×173°.98E±0°.06, h29km±4km, mb4.8/7, Error ellipse: s-maj=7.8km s-min=4.4km az=35.4*
*WEL **24** 22:40:38.0±0.1, 42°.34S×174°.00E, h21km±1km, ML4.7/23, Error ellipse: s-maj=1.5km s-min=1.1km az=90.0*

ISC 24 22:40:37.4±0.7, 42°.34S±0°.03×173°.99E±0°.06, h21km±6km, n65, σ0s54/59, mb4.8/7, 7C-6D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.34	257	⇓P*	Pb	22 40 45.0	+0.1
CMWZ	Cape Campbell	0.62	16	P*	Pb	22 40 50.6	+1.1
BSWZ	Blackbirch Sta	0.63	352	⇑P*	Pb	22 40 49.4	-0.3
BSWZ				S*	Sb	22 40 58.0	-0.2
BSWZ	Blackbirch Sta	0.63	352	S*	Sb	22 40 58.4	+0.2
TUWZ	Tuamarina	0.91	358	⇑P*	Pb	22 40 54.6	+0.1
TUWZ				S*	Sb	22 41 06.6	+0.4
TUWZ	Tuamarina	0.91	358	S*	Sb	22 41 06.9	+0.7
THZ	Tophouse	1.00	305	P*	Pb	22 40 55.3	-0.7
BHW	Baring Head	1.14	35	⇓P*	Pb	22 40 58.6	+0.1
TCW	Tory Channel	1.15	11	⇑P*	Pb	22 40 58.3	-0.3
TCW				S*	Sb	22 41 11.9	-1.1
SNZO	South Karori	1.16	28	P*	Pb	22 40 58.8	0.0
SNZO	South Karori	1.16	28	⇓*e*Pn	Pn	22 40 58.8	+0.3
SNZO				*e*S	Sb	22 41 14.2	+0.8
WEL	Wellington	1.20	29	P*	Pb	22 40 59.5	-0.1
NNZ	Nelson	1.21	338	PN	Pn	22 40 58.7	-0.4
NNZ				SN	Sn	22 41 14.5	-0.4
PLWZ	Palliser	1.22	51	⇓P*	Pb	22 40 59.5	-0.2
MSWZ	Moikau Station	1.32	46	⇓P*	Pb	22 41 00.9	-0.6
LTZ	Lake Taylor	1.35	250	⇑PN	Pn	22 41 01.3	+0.3
CAW	Cannon Point	1.47	34	PN	Pn	22 41 03.1	+0.3
DUWZ	D'Urville Isla	1.54	358	PN	Pn	22 41 03.6	0.0
TRWZ	Traveller	1.58	54	PN	Pn	22 41 04.1	-0.1
CRLZ	Canterbury Las	1.59	219	PN	Pn	22 41 04.3	-0.1
KIW	Kapiti Island	1.63	25	PN	Pn	22 41 05.4	+0.5
MTW	Mount Morrison	1.64	44	PN	Pn	22 41 04.8	-0.2
MQZ	McQueen's Vall	1.68	215	⇑PN	Pn	22 41 05.3	-0.3
MQZ				SN	Sn	22 41 26.4	-0.1
DSZ	Denniston Nort	1.74	289	⇑PN	Pn	22 41 06.8	+0.4
QRZ	Quartz Range	1.87	324	⇓PN	Pn	22 41 08.8	+0.6
MRZ	Mangatainoka R	2.06	36	PN	Pn	22 41 10.7	-0.1
RPZ	Rata Peaks	2.56	237	PN	Pn	22 41 17.0	-0.6
RPZ	Rata Peaks	2.56	237	Pn	Pn	22 41 17.7	+0.1
	839nm,0.3s,baz=75,slow=2.4,SNR=3514						
RPZ				Sn	Sn	22 41 52.4	+4.4
	602nm,0.3s,baz=32,slow=23,SNR=11						
RPZ	Rata Peaks	2.56	237	*e*Pn	Pn	22 41 17.2	-0.4
RPZ				Sn	Sn	22 41 51.1	+3.1
LBZ	Lake Benmore	3.45	232	PN	Pn	22 41 29.7	-0.2
ODZ	Otahua Downs	3.63	221	PN	Pn	22 41 32.1	-0.3
ODZ	Otahua Downs	3.63	221	*e*Pn	Pn	22 41 32.3	-0.1
ODZ				S	Sn	22 42 19.9	+5.3
TOO	Toolangi	22.31	273	*e*P	P	22 45 34.7	+1.3
ARPS	Mount Arapiles	25.31	272	*e*P	P	22 46 03.5	+1.0
	51nm,1.0s,mb5.0						
EIDS	Eidsvold	25.34	305	*e*P	P	22 46 02.7	-0.2
STKA	Stephens Creek	27.72	281	P	P	22 46 23.5	-0.8
	12nm,0.9s,mb4.5,baz=100,slow=10,SNR=4.0						
ASAR	Alice Springs	38.01	286	P	P	22 47 53.5	-0.5
	2.4nm,0.4s,mb4.3,baz=122,slow=6.5,SNR=55						
ASAR				PcP	PcP	22 50 08.7	-0.6
	0.7nm,0.6s,baz=123,slow=4.3,SNR=4.0						
ASAR	Alice Springs	38.01	286	P	P	22 47 53.5	-0.5
ASAR				PcP	PcP	22 50 08.8	-0.6
WRA	Warramunga Arr	40.13	291	P	P	22 48 11.3	-0.6
	8.9nm,0.6s,mb4.7,baz=127,slow=8.6,SNR=31						
WRA				PcP	PcP	22 50 15.7	-0.4
	0.7nm,0.6s,baz=131,slow=2.9,SNR=2.3						
WRA	Warramunga Arr	40.13	291	P	P	22 48 11.3	-0.6
WRA				PcP	PcP	22 50 15.7	-0.4
KAKA	Kakadu	46.52	297	*e*P	P	22 49 03.4	0.0
	15nm,0.9s,mb4.9						
KAKA	Kakadu	46.52	297	*e*P	P	22 49 03.9	+0.5
	127nm,1.4s,mb5.7						
KNA	Kununurra	46.86	290	*e*P	P	22 49 06.6	+0.5
	46nm,0.7s,mb5.5						
MEEK	Meekatharra	47.45	271	*e*P	P	22 49 10.1	-0.5
FITZ	Fitzroy Crossi	47.48	285	P	P	22 49 10.1	-0.9
	2.7nm,0.4s,mb4.5,baz=152,slow=8.8,SNR=17						
FITZ	Fitzroy Crossi	47.48	285	*e*P	P	22 49 10.3	-0.6
	26nm,1.3s,mb5.0						
FITZ	Fitzroy Crossi	47.48	285	P	P	22 49 10.1	-0.9
MORW	Morawa	48.03	266	*e*P	P	22 49 15.1	0.0
SYO	Syowa Base	63.95	197	⇑*e*P	P	22 51 08.8	+0.4
VNA2	Neumayer--Watz	67.04	180	*e*	P	22 51 28.2	-0.2
	baz=163,slow=4.7						
MKAR	Makanchi Array	120.18	307	PKP	PKPdf	22 59 26.1	+0.1
	0.5nm,0.5s,baz=72,slow=1.0,SNR=8.8						
MKAR	Makanchi Array	120.18	307	PKP	PKPdf	22 59 26.1	+0.1
ZALV	Zalesovo Beam	122.34	316	PKP	PKPdf	22 59 29.2	-0.8
	0.3nm,0.3s,baz=106,slow=4.7,SNR=2.8						
ZALV	Zalesovo Beam	122.34	316	PKP	PKPdf	22 59 29.2	-0.8
ARCES	ARCESS Array B	148.27	340	PKPbc	PKPbc	23 00 20.3	-0.4
	1.9nm,0.5s,baz=29,slow=1.2,SNR=35						
ARCES	ARCESS Array B	148.27	340	PKPbc	PKPbc	23 00 20.3	-0.4
TORD	Torodi Ar. Bea	150.15	195	PKPbc	PKPbc	23 00 28.1	+1.1
	2.1nm,0.6s,baz=153,slow=2.8,SNR=51						
TORD	Torodi Ar. Bea	150.15	195	PKPbc	PKPbc	23 00 28.1	+1.1
BRTR	Keskin Array B	150.16	278	PKPbc	PKPbc	23 00 27.1	+0.8
	2.9nm,0.7s,baz=144,slow=3.8,SNR=17						
BRTR	Keskin Array B	150.16	278	PKPbc	PKPbc	23 00 27.1	+0.8
FINES	FINESS Array B	152.92	326	PKPbc	PKPbc	23 00 31.6	-0.3
	0.9nm,0.3s,baz=76,slow=2.9,SNR=16						
FINES	FINESS Array B	152.92	326	PKPbc	PKPbc	23 00 31.6	-0.3
AKASG	Malin Array Be	154.56	301	PKPbc	PKPbc	23 00 35.5	-0.3
	1.4nm,0.6s,baz=67,slow=2.2,SNR=4.0						
AKASG				PKPab	PKPab	23 00 50.1	-0.5
	2.1nm,0.8s,baz=83,slow=2.2,SNR=3.4						
AKASG	Malin Array Be	154.56	301	PKPbc	PKPbc	23 00 35.5	-0.3
AKASG				PKPab	PKPab	23 00 50.1	-0.5
GERES	GERESS Array B	164.77	302	PKPab	PKPab	23 01 34.5	-0.5
	0.6nm,0.8s,baz=57,slow=3.6,SNR=3.0						

*IDC **24** 22:40:34.9±0.6, 42°.04S×173°.86E, h0km, mb4.2/9, mb1 4.4/10, mb1mx4.3/15, mbtmp4.2/10, ML4.6/2, MS4.1/17, Ms1 4.2/17, ms1mx4.1/21, Error ellipse: s-maj=18.8km s-min=17.3km az=81.0*
*BJI **24** 22:40:39.9, 42°.20S×174°.00E, h10km, mB5.4/7, mb5.4/5, Ms5.2/6, Ms7 4.9/7*
*ISCJB **24** 22:40:40.7±0.6, 42°.27S±0°.03×174°.04E±0°.04, h25km±4km, mb4.8/23, MS4.2/18, Error ellipse: s-maj=6.6km s-min=4.0km az=136.5*
*NEIC **24** 22:40:41.9, 42°.20S×173°.98E, h16km, mb5.1/13, ML5.1(WEL), After WEL.*
NEIC Felt [IV] at Blenheim, Christchurch, Kaikoura, Nelson and Wellington. Felt widely in central New Zealand.
*WEL **24** 22:40:41.9±0.2, 42°.20S×173°.98E, h17km±1km, ML5.1/69, Error ellipse: s-maj=1.7km s-min=1.1km az=90.0, reported intensity MM 6.*
WEL Felt from Nelson to Canterbury, and from West Coast to Wellington, maximum.
*GCMT **24** 22:40:43.2±0.3, 42°.47S×173°.89E, h20km±1km, MW5.0, Moment Tensor Solution. s37,c52; s55,c76; Moment tensor: Scale 10^{16}Nm; M_{rr}3.22±.20; $M_{\theta\theta}$-0.38±.14; $M_{\phi\phi}$-2.85±.14; $M_{r\theta}$0.06±.23; $M_{\theta\phi}$-1.64±.09; $M_{\phi r}$3.03±.26; Best double couple: $M_0$4.60000×10^{16} NP1:ϕ_s224.00000°, δ28.00000°, λ121.00000°. NP2:ϕ_s10.00000°, δ66.00000°, λ75.00000°. Principal axes: T 4.5500, Plg65.0000°, Azm253.0000°; N 0.1100, Plg14.0000°, Azm16.0000°; P -4.6600, Plg20.0000°, Azm111.0000°; Data Used: II IU IC G.*

ISC 24 22:40:41.4±0.8, 42°.24S±0°.03×174°.04E±0°.04, h18km±4km, n113, σ1s09/82, mb4.8/23, MS4.2/18, 1D, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.41	244	P*	Pb	22 40 50.1	+0.1
KHZ				S*	Sb	22 40 54.8	-1.0
KHZ				S*	Sb	22 40 54.9	-1.0
KHZ	Kahutara	0.41	244	Pg	Pg	22 40 50.3	+0.5
KHZ				*e*S	Sg	22 40 55.5	0.0
THZ	Tophouse	0.97	299	P*	Pb	22 40 59.9	+0.3
THZ				S*	Sb	22 41 11.9	-0.2
BHW	Baring Head	1.04	37	P*	Pb	22 41 00.9	+0.1
SNZO	South Karori	1.06	28	P*	Pb	22 41 01.9	+0.9
NNZ	Nelson	1.13	334	S*	Sb	22 41 15.9	-0.8
CAW	Cannon Point	1.37	35	P*	Pb	22 41 06.0	-0.4
LTZ	Lake Taylor	1.41	247	PN	Pn	22 41 06.7	+0.5
LTZ				SN	Sn	22 41 23.0	-1.3
DUWZ	D'Urville Isla	1.44	357	P*	Pb	22 41 05.6	-2.0
MTW	Mount Morrison	1.54	46	PN	Pn	22 41 08.0	+0.1
OGWZ	Otaki Gorge	1.66	31	PN	Pn	22 41 08.9	-0.6
CRLZ	Canterbury Las	1.69	217	PN	Pn	22 41 09.6	-0.3
DSZ	Denniston Nort	1.74	286	*e*PN	Pn	22 41 12.4	+1.9
DSZ				SN	Sn	22 41 30.3	-1.9
HOWZ	Holdsworth Sta	1.74	40	*e*PN	Pn	22 41 10.6	-0.1
HOWZ				S*	Sb	22 41 32.2	-2.0
MQZ	McQueen's Vall	1.78	214	PN	Pn	22 41 10.7	-0.5
RPZ	Rata Peaks	2.64	235	PN	Pn	22 41 22.8	-0.2
ODZ	Otahua Downs	3.73	220	PN	Pn	22 41 37.8	-0.2
EAZ	Earnscleugh	4.55	227	*e*PN	Pn	22 41 48.7	-0.5
URZ	Urewera	4.62	32	Pn	Pn	22 41 44.6	-5.7
	3.8nm,0.3s,baz=243,slow=8.7,SNR=19						
URZ				Sn	Sn	22 42 37.9	-5.4
	16nm,0.3s,baz=279,slow=19,SNR=5.2						
URZ	Urewera	4.62	32	*e*Pn	Pn	22 41 48.1	-2.1
URZ				Sn	Sn	22 42 37.9	-5.4
TUZ	Tuapeka	4.88	219	*e*PN	Pn	22 41 53.6	-0.2
MLZ	Mavora Lakes	5.26	232	*e*PN	Pn	22 41 58.6	-0.4
SYZ	Scrubby Hill	5.55	218	PN	Pn	22 42 03.4	+0.4
APZ	The Paps	6.30	221	PN	Pn	22 42 13.0	-0.3
OUZ	Omahuta	7.02	357	*e*Pn	Pn	22 42 24.2	+1.0
TAU	Tasmania Unive	19.66	259	*e*P	Pn	22 45 09.4	-1.1
	29nm,0.8s						
CNB	Canberra Magne	20.40	282	*e*P	P	22 45 15.3	-1.9
CAN	Canberra	20.66	281	*e*P	P	22 45 20.1	+0.1
	21nm,1.0s						
ARMA	Armidale	21.50	296	*e*P	P	22 45 32.3	+3.2
YNG	Young	21.58	283	*e*P	P	22 45 31.9	+1.9
	7.8nm,1.3s,mb4.0						
STKA	Stephens Creek	27.73	281	*e*P	P	22 46 30.4	+1.7
	10nm,0.9s,mb4.5						
STKA	Stephens Creek	27.73	281	*e*P	P	22 46 28.9	+0.2
STKA				LR	LR	22 56 30.1	
STKA	Stephens Creek	27.73	281	LR	LR	22 56 30.1	
	comp=Z,530nm,18.9s,MS4.1,baz=309,slow=35						
BBOO	Buckleboo	31.34	275	*e*P	P	22 47 01.2	+0.5
	12nm,0.9s,mb4.7						
BBOO	Buckleboo	31.34	275	*e*P	P	22 47 01.2	+0.6
	159nm,1.5s,mb5.6						
CTA	Charters Tower	32.20	305	LR	LR	22 59 51.4	
	comp=Z,483nm,20.1s,MS4.2,baz=83,slow=36						
CTAO	Charters Tower	32.20	305	*e*P	P	22 47 08.3	0.0
HNR	Honiara	34.95	335	LR	LR	22 58 31.7	
	comp=Z,145nm,20.6s,MS3.7,baz=2.0,slow=31						
HNR	Honiara	34.95	335	*e*P	P	22 47 32.7	+0.4
TBI	Tubuai	35.66	70	*e*LR	LR	22 57 13.2	
	308nm,26.5s,baz=237						
TBI				*e*T		23 25 13.0	
	65nm,0.3s						
FORT	Forrest	38.26	272	*e*P	P	22 47 59.2	-1.2
	39nm,0.9s,mb5.1						
FORT	Forrest	38.26	272	*e*P	P	22 48 01.5	+1.0
	63nm,1.0s,mb5.3						
PAE	Paea	39.47	63	*e*T		23 29 56.5	
	9.2nm,0.3s						
PPT	Papeete	39.54	63	*e*S	S	22 54 11.5	-1.4
	129nm,26.8s						
PPT				*e*LQ		22 57 14.8	
	4μm,38.2s						
PPT				*e*LR	LR	22 58 59.2	
	402nm,24.2s						
PPT	Papeete	39.54	63	LR	LR	23 01 52.9	
	comp=Z,434nm,20.2s,MS4.3,baz=218,slow=32						
WRA	Warramunga Arr	40.13	291	LR	LR	23 05 00.7	
	comp=Z,768nm,18.3s,MS4.6,baz=140,slow=37						
WRA	Warramunga Arr	40.13	291	LR	LR	23 05 00.7	
PMG	Port Moresby	40.33	316	*e*P	P	22 48 19.5	+1.7
	46nm,1.1s,mb5.1						
CASY	Casey	41.71	213	*e*P	P	22 48 28.8	+0.2
	5.6nm,0.9s,mb4.2						
PMOR	Pomariorio Ree	42.51	62	*e*T		23 33 43.2	
	6.6nm,0.3s						
NWAO	Narrogin (SRO)	45.23	262	LR	LR	23 04 38.0	
	comp=Z,373nm,18.4s,MS4.3,baz=21,slow=32						
RKT	Rikitea	46.23	82	*e*LR	LR	23 02 08.5	
	295nm,28.0s						
RKT				*e*T		23 38 29.2	
	11nm,0.2s						
QSPA	South Pole Qui	47.89	180	P	P	22 49 16.6	-1.1
	4.0nm,1.0s,mb4.4,baz=42,slow=2.7,SNR=7.8						
QSPA				LR	LR	23 08 04.2	
	comp=Z,183nm,19.1s,MS4.1,baz=221,slow=34						
QSPA	South Pole Qui	47.89	180	*e*P	P	22 49 19.6	+1.9
	12nm,1.1s,mb4.8						
QSPA				LR	LR	23 08 04.2	
MBWA	Marble Bar	49.85	277	*e*P	P	22 49 33.1	-0.4
MAW	Mawson	58.94	205	P	P	22 50 36.2	-2.7
	2.2nm,0.9s,mb4.2,baz=84,slow=10,SNR=3.3						
MAW				PcP	PcP	22 51 25.4	-2.5
	3.1nm,0.8s,baz=143,slow=2.8,SNR=3.4						
MAW				LR	LR	23 15 30.2	
	comp=Z,857nm,18.1s,MS4.9,baz=103,slow=36						
MAW	Mawson	58.94	205	*e*P	P	22 50 40.1	+1.2
	1.1nm,1.1s,mb3.8						
MAW				*e*PcP	PcP	22 51 28.9	+1.0
MAW				LR	LR	23 15 30.1	
SYO	Syowa Base	64.06	197	⇓*e*P	P	22 51 13.6	+0.1
SNAA	Sanae	66.37	181	P	P	22 51 25.8	-2.7
	0.7nm,0.9s,mb3.7,baz=165,slow=10.0,SNR=8.3						
SNAA				LR	LR	23 18 53.7	
	comp=Z,107nm,18.2s,MS4.1,baz=14,slow=34						
SNAA	Sanae	66.37	181	P	P	22 51 25.8	-2.6
SNAA				LR	LR	23 18 53.7	
MAIT	Maitri	66.57	186	*e*P	P	22 51 27.3	-2.4
MAIT				*e*	pP	22 51 32.4	-3.3
VNA3	Neumayer Olymp	66.80	179	*e*	P	22 51 31.0	-0.1
KSM	Kuching	71.85	289	*e*P	P	22 52 03.9	+0.6
SDSI	Sungai Dareh	76.54	281	P	P	22 52 32.4	+1.7
PDSI	Padang	77.26	280	P	P	22 52 35.2	+0.5
	0.1nm40nm,1.1s,mb5.3						
PPI	Padang Panjang	77.61	281	P	P	22 52 37.4	+0.7
	0.1nm20nm,1.4s,mb4.9						
PLCA	Paso Flores	78.86	136	P	P	22 52 41.7	-1.5
	2.7nm,1.3s,mb4.0,baz=243,slow=2.3,SNR=2.1						
PLCA				LR	LR	23 18 57.8	
	comp=Z,74nm,18.9s,MS4.0,baz=222,slow=29						
PLCA	Paso Flores	78.86	136	*e*P	P	22 52 44.3	+1.1
MNSI	Mandailing Nat	79.06	281	P	P	22 52 44.6	-0.1
	0.1nm37nm,1.1s,mb5.2						
SBSI	Sibolga	80.08	281	P	P	22 52 47.5	-2.7
	0.2nm2μm55nm,1.2s,mb5.4						
TWG	Pinlang	81.12	312	*e*P	P	22 52 56.1	+0.7
KULM	Kulim	81.37	285	*e*P	P	22 52 57.7	+0.6
	38nm,1.3s,mb5.2						
YULB	Yu-li	81.45	312	P	P	22 52 57.5	+0.3
SSLB	Suanglung	81.95	312	*e*P	P	22 53 00.5	+0.6
TPTI		82.49	281	P	P	22 53 03.6	+0.6
	0.1nm3μm18nm,1.0s,mb5.0						
MJAR	Matsushiro Arr	84.96	332	LR	LR	23 26 42.8	
	comp=Z,52nm,18.1s,MS4.0,baz=185,slow=33						
MAJO	Matsushiro	84.96	332	*e*P	P	22 53 15.6	+0.6
	3.2nm,0.4s,mb4.8						
TRQA	Tornquist	85.21	139	*e*P	P	22 53 17.8	+1.2
	20nm,1.6s,mb5.0						
KSRS	Korea Array	89.77	325	P	P	22 53 37.5	-0.8
	2.5nm,0.9s,mb4.5,baz=149,slow=5.2,SNR=4.6						
KSRS				LR	LR	23 31 33.5	
	comp=Z,74nm,18.5s,MS4.1,baz=158,slow=34						
CMAR	Chiang Mai Arr	91.69	293	P	P	22 53 44.5	-3.2
	1.4nm,0.5s,mb4.5,baz=150,slow=3.5,SNR=8.9						
CMAR				LR	LR	23 40 41.5	
	comp=Z,76nm,18.4s,MS4.2,baz=263,slow=39						
CMAR	Chiang Mai Arr	91.69	293	P	P	22 53 44.5	-3.2
CMAR				LR	LR	23 40 41.5	
CHTO	Chiang Mai	91.93	294	*e*P	P	22 53 49.6	+0.8
	16nm,1.5s,mb5.1						
GYA	Guiyang	92.33	304	P	P	22 53 52.8	+2.3
GYA				PP	PP	22 57 36.5	+4.9
GYA				SKS		23 04 24.3	
GYA				S	S	23 04 53.9	+1.1
GYA				SS	SS	23 11 10.3	+6.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=N,330nm,19.4s,MS4.9						
GYA				LR	LR		
	comp=E,210nm,19.8s,MS4.9						
GYA				LR	LR		
	comp=Z,440nm,18.0s,MS5.0						
ENH	Enshi	93.43	309	*e*P	P	22 53 56.4	+0.9
	comp=Z,10nm,0.8s,m

OTAV	Otavalo	19.23 133	*e*P		Pn	23 08 35.6	+0.3
	0.6nm,0.4s						
ROSC	El Rosal	19.83 115	*e*P		Pn	23 08 41.9	-0.6
MNTX	Cornudas Mount	21.48 328	*e*P		P	23 08 58.4	-0.3
	0.8nm,0.5s,mb3.3						
ILAR	Eielson Array	62.92 337	P		P	23 14 35.5	-0.4
	0.3nm,0.7s,mb3.5,baz=134,slow=7.7,SNR=4.5						
CMAR	Chiang Mai Arr	146.10 341	PKPbc		PKPbc	23 23 51.6	+0.8
	0.5nm,0.4s,baz=343,slow=2.5,SNR=6.3						

CASC 24 23:05:03.6±2.8, 16°.36N×87°.68W, h36km±999km, MD4.1, ML4.6, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	2.32 170		*e*Pn	Pn	23 05 38.0	-1.3
TGUH				*e*Sn	Sn	23 06 06.7	0.0
TGUH	Tegucigalpa,Un	2.32 170		*e*P	Pn	23 05 39.2	-0.1
TGUH				*e*S	Sn	23 06 06.0	-0.8
TGUH				AML	AML	23 06 08.6	
	comp=E,6μm,0.4s						
MTO2	Montecristo 2	2.54 220		*e*P	Pn	23 05 43.4	+1.1
MTO2				*e*S	Sn	23 06 13.0	+1.1
CAHU	Cacacuatique	2.63 191		*e*P	Pn	23 05 44.7	+1.2
CAHU				*e*S	Sn	23 06 18.5	+4.3
SNVI	San Vicente	2.95 202		*e*P	Pn	23 05 49.5	+1.5
SNVI				*e*S	Sn	23 06 22.3	0.0
BOQS	Boqueron	3.03 211		*e*P	Pn	23 05 50.7	+1.6
CNCH	Conchagua	3.07 183		*e*P	Pn	23 05 53.5	+3.8
TEIG	Tepich	3.89 352		*e*P	Pn	23 06 00.1	-0.8
BOAB	BOACO BROADBAN	4.35 153		*e*P	Pn	23 06 11.9	+4.6

IDC 24 23:26:10.6±4.1, 11°.15S×164°.37E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.7/3, Error ellipse: s-maj=207.8km s-min=33.8km az=139.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.18 249		P	P	23 32 22.9	0.0
	0.8nm,0.5s,baz=80,slow=9.2,SNR=7.2						
ASAR	Alice Springs	31.54 243		P	P	23 32 35.0	+0.1
	0.9nm,0.9s,baz=66,slow=10,SNR=6.4						
ILAR	Eielson Array	84.05 19		P	P	23 38 42.8	+0.1
	0.2nm,0.7s,baz=237,slow=4.7,SNR=4.8						

*IDC **24** 23:32:16.1±2.0, 2°.28S×78°.64W, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.7/18, mbtmp3.6/3, ML3.7/1, Error ellipse: s-maj=97.6km s-min=27.3km az=41.0*
*IGQ **24** 23:32:20.6, 2°.82S×79°.40W, h6km±3km, Mb4.4, Ms4.2, Error ellipse: s-maj=5.2km s-min=1.9km az=49.0*
*NEIC **24** 23:32:20.0, 3°.03S×79°.05W, h14km, MD4.4(IGQ), After IGQ.*
*ISCJB **24** 23:32:21.9±0.8, 3°.06S±0°.05×79°.38W±0°.09, h75km±11km, mb3.5/5, Error ellipse: s-maj=14.6km s-min=7.7km az=170.9*

ISC 24 23:32:23.5±0.7, 3°.02S±0°.04×79°.34W±0°.09, h71km±10km, n44, σ0s99/46, mb3.5/5, 8C-8D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGUA	Igualata	1.67	25	S	Sn	23 33 11.5	+0.1
IGUA	Igualata	1.67	25	P	Pn	23 32 50.2	-0.5
BMAS	Trigal station	1.73	30	⇑S	Sn	23 33 12.4	-0.4
BMAS	Trigal station	1.73	30	⇑P	Pn	23 32 51.2	-0.4
ARRY	Arrayan	1.74	30	⇑P	Pn	23 32 50.8	-0.9
PAT1	Patacocha	1.75	31	⇓P	Pn	23 32 51.4	-0.4
BIL2	Estacion Bilba	1.76	28	P	Pn	23 32 51.2	-0.8
BBIL	Ulba Tungurahu	1.78	29	⇑P	Pn	23 32 52.0	-0.2
RETU	Refugio	1.79	30	⇓S	Sn	23 33 14.7	+0.3
RETU	Refugio	1.79	30	⇓P	Pn	23 32 52.3	-0.1
JUI6	Juive	1.81	29	⇓S	Sn	23 33 13.3	-1.3
JUI6	Juive	1.81	29	⇓P	Pn	23 32 52.2	-0.3
ULBA	Ulba	1.82	31	P	Pn	23 32 52.7	0.0
BULB	Ulba Tungurahu	1.83	31	⇑S	Sn	23 33 14.8	-0.3
BULB	Ulba Tungurahu	1.83	31	⇑P	Pn	23 32 52.5	-0.3
RUN5	Runtun	1.84	30	P	Pn	23 32 52.7	-0.3
BRUN	Tungurahua Vol	1.84	30	P	Pn	23 32 52.8	-0.2
CHIS	Cerro-Chispas-	2.40	325	P	Pn	23 32 59.3	-1.2
BMOR	Cotopaxi Volca	2.44	21	P	Pn	23 33 01.1	0.0
BREF	Cotopaxi Volca	2.50	21	⇓P	Pn	23 33 03.1	+1.2
TAMB	Tambo	2.50	23	P	Pn	23 33 03.0	+1.1
BTAM	Cotopaxi Volca	2.51	22	P	Pn	23 33 03.4	+1.3
BVC2	Cotopaxi Volca	2.52	22	⇑P	Pn	23 33 02.8	+0.6
VC1	Cotopaxi 1	2.54	22	P	Pn	23 33 03.1	+0.6
COV1	Cotopaxi Volc	2.54	23	P	Pn	23 33 03.1	+0.6
PITA	Cotopaxi Volc	2.61	20	P	Pn	23 33 03.5	+0.1
ANTI	Antisana	2.81	25	⇓P	Pn	23 33 06.6	+0.4
JAMA	Jama	2.87	342	P	Pn	23 33 05.6	-1.4
JUA2	San Juan 2	2.88	15	⇑P	Pn	23 33 08.6	+1.5
TERV	Terraza Guagua	2.92	15	P	Pn	23 33 08.6	+1.0
GGP	Refugio Guagua	2.92	15	⇓P	Pn	23 33 08.2	+0.5
CAYA	Cayambe	3.35	24	P	Pn	23 33 15.1	+1.6
OTAV	Otavalo	3.35	15	*e*Pn	Pn	23 33 13.1	-0.5
OTAV				*e*Sn	Sn	23 33 45.5	-6.7
COTA	Cotacachi	3.48	17	P	Pn	23 33 17.8	+2.5
LITE	Lita	3.92	14	P	Pn	23 33 21.4	0.0
NNA	Nana	9.25	165	*e*Pn	Pn	23 34 31.8	-2.3
NNA				*e*Sn	Sn	23 36 17.5	+0.9
ROSC	El Rosal	9.29	33	Pn	Pn	23 34 31.9	-2.8
LPAZ	La Paz	17.19	141	P	Pn	23 36 20.2	+1.2
	0.1nm,0.3s,baz=325,slow=11,SNR=2.8						
LPAZ	La Paz	17.19	141	*e*Pn	Pn	23 36 17.4	-1.7
	1.3nm,0.7s						
PLCA	Paso Flores	38.37	169	*e*P	P	23 39 39.4	+1.6
	0.6nm,0.6s,mb3.6						
TXAR	Lajitas Array	39.73	326	P	P	23 39 49.2	-0.1
	0.2nm,0.7s,mb3.1,baz=126,slow=10,SNR=3.0						
PDAR	Pinedale Array	53.12	332	P	P	23 41 33.0	-0.9
	0.8nm,0.6s,mb3.9,baz=123,slow=9.0,SNR=6.1						
NVAR	Mina Array Bea	54.73	323	P	P	23 41 46.6	+0.8
	0.3nm,0.5s,mb3.6,baz=148,slow=5.3,SNR=3.0						
TORD	Torodi Ar. Bea	81.97	76	P	P	23 44 34.3	-2.0
	0.1nm,0.4s,mb3.0,baz=270,slow=5.5,SNR=5.8						

*ISCJB **25** 00:29:01.2±0.4, 49°.84N±0°.03×18°.41E±0°.03, h0km, Error ellipse: s-maj=4.5km s-min=2.4km az=10.8*
*IPEC **25** 00:29:02.7±0.1, 49°.83N×18°.49E, h9km±1km, ML1.6/3, Error ellipse: s-maj=1.1km s-min=0.7km az=174.0*
*CSEM **25** 00:29:02.3±0.2, 49°.84N×18°.42E, h1km, ML2.5/6, Error ellipse: s-maj=5.7km s-min=3.3km az=9.0, Mining induced.*
*PRU **25** 00:29:03.2, 49°.87N×18°.38E, h0km, Rockburst In Region Felt In Orlova Mining induced.*

ISC 25 00:29:02.3±0.4, 49°.83N±0°.03×18°.42E±0°.03, h0km, n27, σ1s18/47, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.18 274		*e*PG	Pg	00 29 07.2	+1.5
OKC				*e*SG	Sg	00 29 10.4	+2.3
	comp=Z,65nm,0.5s						
OKC	Ostrava-Krasne	0.18 274		*e*Pg	Pg	00 29 06.9	+1.2
	baz=92						
OKC				*e*Sg	Sg	00 29 10.3	+2.2
	baz=92						
MORC	Moravsky Berou	0.57 265		*e*Pg	Pg	00 29 13.9	+0.6
	baz=85						
MORC				*e*Sg	Sg	00 29 22.5	+1.8
	comp=Z,10nm,0.2s,baz=85						
OJC	Ojcow	0.97	66	*e*Pg	Pg	00 29 19.3	-1.6
	baz=246						
OJC				*e*Sg	Sg	00 29 33.3	-0.1
	baz=246						
JAVC	Velka Javorina	1.09 207		*e*Pn	Pn	00 29 24.6	-0.1
	baz=28						
KOLL	Kolacno	1.25 181		*e*PN	Pn	00 29 27.0	0.0
KOLL				*e*SN	Sn	00 29 43.7	-0.7
NIE	Niedzica	1.29 108		*e*Pg	Pg	00 29 26.1	-1.0
NIE				*e*Sg	Sg	00 29 43.7	-0.1
VRAC	Vranov	1.30 247		*e*Pn	Pn	00 29 27.0	-0.7
	baz=66						
VRAC				*e*Sg	Sg	00 29 44.8	+0.8
	comp=Z,13nm,0.4s,baz=66						
VYHS	Vyhne	1.36 168		*e*PN	Pn	00 29 27.8	-0.7
VYHS				*e*SN	Sn	00 29 46.6	-0.6
VYHS	Vyhne	1.36 168		*e*Pn	Pn	00 29 27.7	-0.8
	baz=350						
VYHS				*e*Sg	Sg	00 29 45.5	-0.5
	baz=350						
VYHS				*e*Sn	Sn	00 29 46.6	-0.6
DPC	Dobruska-Polom	1.45 292		*e*PG	Pg	00 29 29.6	-0.5
DPC				*e*SG	Sg	00 29 49.8	+0.9
	comp=Z,6.6nm,0.5s						
DPC	Dobruska-Polom	1.45 292		*e*Pn	Pn	00 29 29.4	-0.4
	baz=110						
DPC				Sg	Sg	00 29 49.8	+0.9
	comp=Z,6.6nm,0.5s						
KRUC	Moravsky	1.53 241		*e*Pn	Pn	00 29 30.5	-0.3
	baz=60						
KRUC				*e*Sg	Sg	00 29 51.5	+0.1
	comp=Z,6.0nm,0.2s,baz=60						
UPC	Upice	1.69 295		*e*PG	Pg	00 29 33.5	-1.3
UPC				*e*SG	Sg	00 29 56.7	0.0
UPC	Upice	1.69 295		Pg	Pg	00 29 33.5	-1.3
UPC				Sg	Sg	00 29 56.7	0.0
ZST	Bratislava	1.85 209		*e*SN	Sn	00 29 57.8	-1.5
ZST	Bratislava	1.85 209		*e*Sn	Sn	00 29 57.8	-1.5
KECS	Kecovo	1.91 134		*e*PN	Pn	00 29 36.0	0.0
KECS				*e*SN	Sn	00 30 00.9	+0.2
CRVS	Cervenica-Dubn	2.19 114		*e*PN	Pn	00 29 42.4	+2.5
CRVS				*e*SN	Sn	00 30 10.4	+2.7
CRVS	Cervenica-Dubn	2.19 114		*e*Pn	Pn	00 29 42.4	+2.5
CRVS				*e*Sn	Sn	00 30 10.4	+2.7
PRU	Pruhonice	2.52 275		*e*PG	Pg	00 29 48.1	-2.4
PRU				*e*SG	Sg	00 30 22.5	-0.6
	comp=Z,2.3nm,0.4s						
KOLS	Kolonicke sedl	2.67 108		*e*	Pg	00 29 55.2	+1.8
KOLS	Kolonicke sedl	2.67 108		*e*SG	Sg	00 30 31.0	+3.0
KOLS	Kolonicke sedl	2.67 108		*e*Sg	Sg	00 30 31.0	+3.0
BRG	Berggiesshubel	3.06 292		PG	Pg	00 29 58.5	-2.3
BRG				SG	Sg	00 30 35.1	-5.3
	comp=Z,3.3nm,0.8s						
KHC	Kasperske Hory	3.24 259		*e*SG	Sg	00 30 46.7	+0.5
	comp=Z,3.2nm,0.6s						
KHC	Kasperske Hory	3.24 259		Sg	Sg	00 30 46.7	+0.5
	comp=Z,3.2nm,0.6s						

WEL 25 00:34:16.2±0.3, 40°.35S×173°.62E, h206km±2km, ML3.5/13, 1C, Error ellipse: s-maj=2.8km s-min=2.2km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.51 154		⇑PN	Pn	00 34 43.8	-0.2
DUWZ				SN	Sn	00 35 05.1	-0.6
NNZ	Nelson	0.89 192		PN	Pn	00 34 45.4	-0.3
NNZ				SN	Sn	00 35 07.9	-1.1
TCW	Tory Channel	1.00 150		PN	Pn	00 34 46.9	+0.4
TCW				SN	Sn	00 35 09.5	-0.7
KIW	Kapiti Island	1.11 118		PN	Pn	00 34 47.2	0.0
TUWZ	Tuamarina	1.11 168		PN	Pn	00 34 47.4	+0.2
WAZ	Wanganui	1.20 61		PN	Pn	00 34 47.9	0.0
WAZ				SN	Sn	00 35 11.6	-0.9
SNZO	South Karori	1.27 140		PN	Pn	00 34 48.3	0.0
OGWZ	Otaki Gorge	1.27 112		PN	Pn	00 34 48.4	0.0
CAW	Cannon Point	1.34 125		PN	Pn	00 34 48.9	0.0
BSWZ	Blackbirch Sta	1.38 172		PN	Pn	00 34 49.6	+0.3
BHW	Baring Head	1.42 139		PN	Pn	00 34 49.6	-0.1
THZ	Tophouse	1.52 201		PN	Pn	00 34 50.2	-0.2
THZ				SN	Sn	00 35 15.9	-1.4
MRZ	Mangatainoka R	1.52 103		PN	Pn	00 34 50.2	-0.3
HOWZ	Holdsworth Sta	1.54 112		PN	Pn	00 34 50.5	-0.2
MSWZ	Moikau Station	1.63 131		PN	Pn	00 34 51.5	0.0
MTW	Mount Morrison	1.64 120		PN	Pn	00 34 51.4	-0.2
PLWZ	Palliser	1.74 135		PN	Pn	00 34 52.3	-0.1
WNVZ	Wahianoa	1.83 57		PN	Pn	00 34 52.0	-1.4
TMWZ	Te Maipa	1.88 115		PN	Pn	00 34 53.8	0.0
TWVZ	Taurewa	1.89 48		PN	Pn	00 34 51.9	-2.1
TUVZ	Tukino	1.90 56		PN	Pn	00 34 52.7	-1.4
WTVZ	West Tongariro	1.95 52		PN	Pn	00 34 52.6	-2.0
PNHZ	Pukenui	2.02 79		PN	Pn	00 34 54.4	-0.9
BFZ	Birch Farm	2.03 100		PN	Pn	00 34 55.0	-0.3
BHHZ	Black Hill Sta	2.06 66		PN	Pn	00 34 53.8	-1.9
KHZ	Kahutara	2.07 182		PN	Pn	00 34 55.2	-0.5
BKZ	Black Stump Fm	2.50 63		PN	Pn	00 34 58.6	-1.9
KAHZ	Kahuranaki	2.56 79		PN	Pn	00 35 00.3	-0.7
NMHZ	Naumai	2.75 64		PN	Pn	00 35 02.2	-1.0

*NIED **25** 00:36:00, 41°.90N×144°.10E, h20km, Mw4.0 Best double couple: M0 1.6000×10^15 NP1:φ0=27.00000°, δ49.00000°, λ114.00000°. NP2:φ0=173.00000°, δ46.00000°, λ64.00000°.*
*IDC **25** 00:36:18.6±1.1, 41°.75N×144°.00E, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.7/25, mbtmp3.7/11, ML3.6/1, Error ellipse: s-maj=27.5km s-min=23.3km az=37.0*
*ISCJB **25** 00:36:22.2±1.0, 41°.82N±0°.05×144°.07E±0°.08, h36km±9km, mb3.7/10, Error ellipse: s-maj=11.3km s-min=7.5km az=37.6*
*JMA **25** 00:36:23.1±0.1, 41°.89N×144°.05E, h35km±3km, M3.8*
*NEIC **25** 00:36:24.3±0.6, 41°.91N×143°.92E, h35km, MG3.8(JMA), Error ellipse: s-maj=11.1km s-min=8.2km az=123.0*

ISC 25 00:36:22.6±1.4, 41°.88N±0°.04×144°.06E±0°.07, h24km±9km, n26, σ0s72/33, mb3.7/10, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	0.69 281		*e*Pn	Pn	00 36 35.6	-1.2
ERM				*e*Sn	Sn	00 36 47.6	+0.9
JEM	Erimo	0.69 281		P	Pb	00 36 35.9	0.0
JCH	Churui	0.90 325		P	Pb	00 36 39.2	-0.3
JCH				*e*S	Sb	00 36 52.0	+1.0
JOB	Onbets	1.03 351		P	Pn	00 36 41.8	+0.2
JNBK	Urakawa-nobuka	1.05 293		P	Pn	00 36 42.2	+0.4
JAK	Akkeshi	1.21 23		P	Pn	00 36 43.8	-0.2
JAK				*e*S	Sn	00 36 59.0	-0.6
JAR	Ashorobuto	1.43 351		P	Pn	00 36 46.9	-0.1
JAR				*e*S	Sn	00 37 05.2	+0.2
JBT2	Biratori 2	1.54 306		P	Pn	00 36 48.4	-0.2
JFR	Furan	1.68 320		P	Pn	00 36 51.1	+0.7
JFR				*e*S	Sn	00 37 10.7	-0.5
ASAJ	Asahikawa	2.48 335		Pn	Pn	00 37 03.0	+1.5
	7.2nm,0.3s,baz=184,slow=10.0,SNR=14						
ASAJ				Sn	Sn	00 37 35.6	+4.8
	6.1nm,0.3s,baz=24,slow=30,SNR=6.3						
ASAJ	Asahikawa	2.48 335		*e*Pn	Pn	00 37 00.9	-0.5
ASAJ				*e*Sn	Sn	00 37 29.4	-1.4
YSS	Yuzh-Sakhalins	5.16 350		Pn	Pn	00 37 36.6	-1.6
MAJO	Matsushiro	7.01 222		*e*Pn	Pn	00 38 03.8	+0.1
MDJ	Mudanjiang	10.90 289		*e*Pn	Pn	00 38 56.7	-0.4
JNU	Nakatsue	13.63 234		*e*Pn	Pn	00 39 33.8	-0.5
SONM	Songino Array	27.16 296		P	P	00 42 04.9	+1.0
	0.3nm,0.5s,mb3.1,baz=62,slow=10,SNR=4.2						
ZALV	Zalesovo Beam	40.34 308		P	P	00 43 57.6	-0.3
	0.6nm,0.5s,mb3.5,baz=91,slow=7.4,SNR=4.0						
MKAR	Makanchi Array	43.45 298		P	P	00 44 23.4	-0.1
	3.4nm,1.1s,mb4.0,baz=74,slow=6.0,SNR=3.4						
ILAR	Eielson Array	44.33 35		P	P	00 44 31.1	+0.9
	0.8nm,0.7s,mb3.5,baz=278,slow=5.5,SNR=9.0						
WRA	Warramunga Arr	62.17 190		P	P	00 46 40.9	-1.0
	0.2nm,0.3s,mb3.7,baz=14,slow=6.4,SNR=2.4						
FINES	FINESS Array B	65.48 332		P	P	00 47 03.1	-0.2
	1.4nm,0.6s,mb4.2,baz=35,slow=7.4,SNR=6.3						
NOA	NORSAR Array B	70.50 338		P	P	00 47 34.5	-0.2
	0.4nm,0.6s,mb3.5,baz=34,slow=6.4,SNR=3.2						
HFS	Hagfors	70.50 336		P	P	00 47 34.6	-0.2
	0.6nm,0.5s,mb3.8,baz=86,slow=4.8,SNR=4.1						
PDAR	Pinedale Array	72.85 48		P	P	00 47 50.2	+1.0
	0.2nm,0.4s,mb3.4,baz=328,slow=3.2,SNR=3.1						
TXAR	Lajitas Array	85.58 54		P	P	00 49 00.3	+1.3
	0.6nm,0.7s,mb3.9,baz=289,slow=3.0,SNR=5.6						
TXAR	Lajitas Array	85.58 54		P	P	00 49 00.3	+1.3

*IDC **25** 00:47:25.8±2.0, 8°.05S×117°.91E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.6/18, mbtmp3.6/4, ML3.8/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/21, Error ellipse: s-maj=51.8km s-min=22.2km az=75.0*
*ISCJB **25** 00:47:28.3±1.6, 8°.08S±0°.05×117°.78E±0°.04, h33km±13km, mb4.0/5, Error ellipse: s-maj=8.4km s-min=6.4km az=147.9*
*DJA **25** 00:47:29, 8°.14S×117°.74E, h62km, MLv4.2/8*
*NEIC **25** 00:47:30.8±0.4, 8°.05S×118°.01E, h35km, mb4.0/2, Error ellipse: s-maj=11.2km s-min=6.8km az=73.0*

ISC 25 00:47:28.8±1.5, 8°.09S±0°.05×117°.75E±0°.04, h23km±13km, n28, σ1s15/32, mb4.0/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	Bima	1.03 116		P	Pn	00 47 47.8	-0.1
BMNI				S	Sb	00 48 02.3	+1.1
MTNI	Mataram	1.66 251		P	Pn	00 47 56.5	0.0
MTNI				S	Sn	00 48 16.9	-0.1
KHKI	Kahang-Kahang	2.14 263		P	Pn	00 48 01.7	-1.4
IGBI	Denpasar	2.68 254		P	Pn	00 48 09.9	-0.6
JAGI	Jajag, Banyuwa	3.58 264		P	Pn	00 48 21.9	-1.1
BKSI	Bulukumba	3.62 41		P	Pn	00 48 23.3	-0.2
KAPI	Kappang	3.65 33		Pn	Pn	00 48 22.7	-1.2
	40nm,0.3s,baz=214,slow=4.6,SNR=176						
KAPI				Sn	Sn	00 49 04.1	-2.1
	14nm,0.3s,baz=58,slow=23,SNR=8.6						
KAPI	Kappang	3.65 33		*e*Pn	Pn	00 48 22.6	-1.3
KAPI				*e*Sn	Sn	00 49 06.2	0.0
KAPI	Kappang	3.65 33		P	Pn	00 48 22.7	-1.2
TTSI	Tana Toraja	5.42 22		P	Pn	00 48 49.3	+1.0
KSM	Kuching	12.05 322		Pn	Pn	00 50 21.8	+2.4
MBWA	Marble Bar	13.13 172		*e*Pn	Pn	00 50 32.7	-1.3
MBWA				*e*Sn	Sn	00 52 45.1	-14
WRA	Warramunga Arr	19.92 128		P	Pn	00 51 57.5	-3.3
	0.1nm,0.3s,baz=303,slow=13,SNR=3.8						
COCO	West Island	20.98 257		P	P	00 52 14.5	+3.8
PSI	Prapat	21.67 299		LR	LR	01 01 39.1	
	comp=Z,67nm,18.6s,baz=209,slow=39						
ASAR	Alice Springs	21.90 137		P	P	00 52 20.3	-0.2
	1.0nm,0.7s,mb3.3,baz=314,slow=9.2,SNR=5.8						
NWAO	Narrogin (SRO)	24.72 181		*e*Pn	P	00 52 49.9	+1.5
STKA	Stephens Creek	32.44 140		P	P	00 53 57.1	-0.2
	2.5nm,0.9s,mb4.0,baz=326,slow=11,SNR=3.1						
STKA	Stephens Creek	32.44 140		*e*P	P	00 53 57.8	+0.5
	0.6nm,0.8s,mb3.5						
ARMA	Armidale	38.69 130		*e*P	P	00 54 50.7	-0.4
	5.2nm,0.9s,mb4.3						
LSA	Lhasa	45.46 327		P	P	00 55 48.4	+2.1
BJT	Baijiatuan	47.89 358		*e*P	P	00 56 05.0	-0.2
MAJO	Matsushiro	48.38 22		*e*P	P	00 56 07.8	-1.2
	4.6nm,0.4s,mb4.9						
SONM	Songino Array	56.58 351		P	P	00 57 10.1	+0.5
	0.2nm,0.4s,mb3.5,baz=143,slow=5.0,SNR=2.6						
CASY	Casey	58.31 183		*e*P	P	00 57 22.5	+0.9
YSS	Yuzh-Sakhalins	59.14 20		P	P	00 57 26.1	-1.5
EKS2	Erkin-Say	64.45 325		P	P	00 58 05.1	+1.6
MAW	Mawson	69.67 200		P	P	00 58 36.8	+0.6

*TIF **25** 00:48:47.2, 43°.35N×43°.77E, h10km*
*CSEM **25** 00:48:50.2±0.6, 42°.52N×43°.30E, h2km, ML1.8, Error ellipse: s-maj=16.7km s-min=8.3km az=176.0*
*DDA **25** 00:48:51.3, 42°.14N×43°.54E, h7km±8km, Md2.9*

ISC 25 00:48:50.8±0.9, 42°.54N±0°.09×43°.31E±0°.05, h7km±9km, n16, σ1s13/30, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	Oni	0.12	65	P	Pg	00 48 53.2	-0.2
ONI				S	Sg	00 48 55.8	+0.7
ONI	Oni	0.12	65	P	Pg	00 48 53.2	-0.2
ONI				S	Sg	00 48 55.8	+0.7
GOR	Gori	0.81	133	P	Sg	00 49 16.8	-0.2
GOR	Gori	0.81	133	S	Sg	00 49 16.8	-0.2
TBLG	Delisi	1.34	127	P	Pn	00 49 13.4	-2.5
TBLG				S	Sb	00 49 32.7	-0.8
TBLG	Delisi	1.34	127	P	Pn	00 49 13.4	-2.5
TBLG				S	Sb	00 49 32.7	-0.8
MTA	Mtatsminda	1.39	127	P	Pn	00 49 15.5	-1.1
MTA				S	Sb	00 49 35.3	+0.3
ARTV	Artvin	1.70	218	*i* P	Pn	00 49 19.4	-1.6
ARTV				*i* S	Sn	00 49 41.6	-1.4
ARTV	Artvin	1.70	218	*i* P	Pn	00 49 19.4	-1.5
ARTV				*i* S	Sn	00 49 41.6	-1.3
DBOC	Borcka	1.71	226	*i* P	Pn	00 49 20.6	-0.4
DBOC				*i* S	Sn	00 49 43.2	0.0
DBOC	Borcka	1.71	226	*i* P	Pn	00 49 20.6	-0.4
DBOC				*i* S	Sn	00 49 43.2	0.0
DAGI	Agillar	1.80	216	*i* P	Pn	00 49 22.7	+0.5
DAGI				*i* S	Sn	00 49 45.7	+0.5
DGRG	David-gareji	1.89	125	P	Pn	00 49 24.0	+0.6
DGRG				S	Sn	00 49 50.0	+2.6
DGRG	David-gareji	1.89	125	P	Pn	00 49 24.0	+0.6
DGRG				S	Sn	00 49 50.0	+2.6
DDEM	Demirkent	2.02	216	*i* P	Pn	00 49 26.9	+1.6
DDEM				*i* S	Sn	00 49 52.2	+1.5
DDEM	Demirkent	2.02	216	*i* P	Pn	00 49 26.9	+1.6
DDEM				*i* S	Sn	00 49 52.2	+1.5

IDC 25 01:21:52.1±19.0, 23°.62S×179°.53W, h495km±184km, mb3.3/6, mb1 3.4/6, mb1mx3.2/19, mbtmp3.3/6, Error ellipse: s-maj=134.3km s-min=25.2km az=54.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	31.91 270		P	P	01 27 37.4	+1.0
	5.2nm,0.3s,baz=90,slow=12,SNR=13						
STKA	Stephens Creek	35.23 248		P	P	01 28 03.1	-1.2
	1.2nm,0.4s,baz=90,slow=9.1,SNR=3.3						
ASAR	Alice Springs	42.51 260		P	P	01 29 03.0	-0.6
	0.7nm,0.4s,baz=93,slow=7.5,SNR=11						
WRA	Warramunga Arr

JYT	Yasato	0.43 236	⇓P	Pn	01 36 54.7	-0.1
JYT			S	Sn	01 37 01.9	-0.7
JFK	Kawauchi	0.92 12	P	Pn	01 37 00.4	-0.4
JFK			eS	Sn	01 37 12.4	-0.7
JAG	Ashikaga	0.96 268	⇓P	Pn	01 37 01.2	-0.1
JAG			eS	Sn	01 37 13.0	-1.0
JFT	Otama	1.07 347	⇓P	Pn	01 37 03.0	+0.1
JFT			eS	Sn	01 37 16.8	0.0
JKT	Katashina	1.16 285	P	Pn	01 37 04.1	+0.1
JKT			eS	Sn	01 37 19.2	+0.4
MJAR	Matsushiro Arr	1.96 273	P	Pn	01 37 14.9	+0.1
	34nm,0.3s,baz=104,slow=8.2,SNR=162					
MJAR			S	Sn	01 37 30.0	-8.3
	43nm,0.3s,baz=107,slow=7.3,SNR=28					
MAJO	Matsushiro	1.96 273	ePn	Pn	01 37 15.6	+0.7
MAT	Matsushiro	1.96 273	P	Pn	01 37 15.6	+0.7
MAT			S	Sn	01 37 38.6	+0.3
JHJ	Hachijo jima 2	3.42 192	P	Pn	01 37 36.8	+2.0
	13nm,0.3s,baz=247,slow=20,SNR=5.1					
JHJ			S	Sn	01 38 13.1	-0.9
	19nm,0.3s,baz=89,slow=22,SNR=3.8					
ERM	Erimo	5.87 19	ePn	Pn	01 38 09.1	+0.7
ERM			eS	Sn	01 39 14.4	+0.1
KSRS	Korea Array	10.22 279	P	Pn	01 39 11.7	+3.7
	0.2nm,0.3s,baz=94,slow=14,SNR=3.8					
SONM	Songino Array	27.59 305	P	P	01 42 25.4	-0.5
	0.7nm,0.7s,mb3.4,baz=98,slow=8.9,SNR=3.2					
ZAA0	Zalesovo Array	41.84 313	eP	P	01 44 28.2	-0.1
ZALV	Zalesovo Beam	41.84 313	P	P	01 44 28.3	0.0
	2.6nm,0.6s,mb4.1,baz=88,slow=8.1,SNR=11					
MKAR	Makanchi Array	43.90 302	P	P	01 44 45.4	+0.3
	0.9nm,0.6s,mb3.7,baz=90,slow=11,SNR=4.5					
ILAR	Eielson Array	50.30 32	P	P	01 45 35.1	+0.5
	0.4nm,0.7s,mb3.5,baz=248,slow=5.4,SNR=4.6					
WRA	Warramunga Arr	56.42 187	P	P	01 46 19.5	-0.4
	0.7nm,0.4s,mb4.0,baz=3.7,slow=7.4,SNR=9.2					
ABKAR	Akbulak array	57.83 310	eP	P	01 46 29.1	-0.6
	0.5nm,0.4s,mb3.9					
ASAR	Alice Springs	60.15 187	P	P	01 46 46.2	+0.2
	1.7nm,1.2s,mb4.0,baz=34,slow=6.7,SNR=3.6					
FINES	FINESS Array B	69.02 332	P	P	01 47 43.0	-0.4
	0.9nm,0.4s,mb4.0,baz=90,slow=5.2,SNR=7.4					
HFS	Hagfors	74.34 335	P	P	01 48 15.4	-0.1
	0.4nm,0.3s,mb3.8,baz=70,slow=5.5,SNR=7.1					
AKASG	Malin Array Be	74.36 322	P	P	01 48 15.3	-0.4
	0.5nm,0.4s,mb3.8,baz=124,slow=2.3,SNR=4.5					
NB2	NORSAR Subarra	74.47 337	P	P	01 48 15.5	-0.6
	comp=Z,0.8nm,0.7s,mb3.8,baz=41,slow=5.9					
NOA	NORSAR Array B	74.47 337	P	P	01 48 15.9	-0.2
	comp=Z,1.2nm,0.8s,mb3.9,baz=39,slow=5.8,SNR=7.5					
BRTR	Keskin Array B	78.76 311	P	P	01 48 41.2	+0.5
	comp=Z,0.6nm,0.7s,mb3.6,baz=77,slow=6.2,SNR=3.4					
GERES	GERESS Array B	82.86 328	P	P	01 49 02.2	-0.2
	comp=Z,0.3nm,0.4s,mb3.7,baz=46,slow=5.8,SNR=4.9					

DMN ***25*** *01:46:58.8±0.3, 31°.90N×83°.16E, h2km, Ml6.3/5, Error ellipse: s-maj=7.4km s-min=6.4km az=115.0*
BGS ***25*** *01:47:04.1±1.7, 28°.40N×82°.06E, h10km, mb5.2, MS6.0*
LDG ***25*** *01:47:09.9±0.2, 30°.99N×83°.11E, h10km, Mb5.2/26, Ms5.5/10, Error ellipse: s-maj=11.1km s-min=5.7km az=114.0*
IDC ***25*** *01:47:09.8±0.4, 30°.74N×83°.59E, h0km, mb4.9/32, mb1 5.0/35, mb1mx5.0/35, mbtmp4.9/35, ML4.4/3, MS5.7/38, Ms1 5.7/38, ms1mx5.6/42, Error ellipse: s-maj=13.2km s-min=10.2km az=29.0*
ISCJB ***25*** *01:47:10.6±0.1, 30°.87N±0°.01×83°.57E±0°.02, h10km, mb5.4/309, MS5.8/282, Error ellipse: s-maj=2.2km s-min=1.8km az=26.5*
NEIC ***25*** *01:47:11.2±0.2, 30°.84N×83°.49E, h4km, mb5.6/169, ME6.0, MS5.8/187, MW5.9, MW5.8, Error ellipse: s-maj=6.0km s-min=3.7km az=41.0 Broadband fault plane solution: P waves. NP1:φs=100.00000°, δ85.00000°, λ150.00000°. NP2:φs=193.00000°, δ60.00000°, λ6.00000°. Principal axes: T Plg24.0000°, Azm52.0000°; N Plg0.0000°, Azm0.0000°; P Plg17.0000°, Azm150.0000°; Moment Tensor Solution. s72 Moment tensor: Scale 10^17 Nm; Mrr=0.60; Mθθ=3.94; Mφφ=4.54; Mrθ=1.36; Mθφ=-3.18; Mφr=0.43; Best double couple: M0=5.50000×10^17 NP1:φs=297.00000°, δ86.00000°, λ-165.00000°. NP2:φs=206.00000°, δ75.00000°, λ-5.00000°. Principal axes: T 5.7100, Plg7.0000°, Azm70.0000°; N -0.4200, Plg73.0000°, Azm312.0000°; P -5.2900, Plg14.0000°, Azm162.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
BJI ***25*** *01:47:12.5, 31°.05N×83°.77E, h14km, mB5.8/42, mb5.3/51, Ms6.2/70, Ms7 6.0/63*
TEH ***25*** *01:47:13.0, 30°.93N×83°.45E, h10km*
DJA ***25*** *01:47:14, 30°.97N×83°.64E, h10km, mb5.4/32*
MOS ***25*** *01:47:14.3±1.1, 30°.91N×83°.52E, h33km, mb5.6/112, MS5.8/96, Error ellipse: s-maj=7.0km s-min=3.7km az=119.9*
GCMT ***25*** *01:47:17.9±0.1, 30°.66N×83°.69E, h21km, MW6.0, Moment Tensor Solution. s103,c207; s76,c106; Moment tensor: Scale 10^18Nm; Mrr=0.27±.01; Mθθ=0.77±.01; Mφφ=1.04±.01; Mrθ=0.26±.02; Mθφ=-0.53±.01; Mφr=0.04±.02; Best double couple: M0=1.10000×10^18 NP1:φs=208.00000°, δ75.00000°, λ-13.00000°. NP2:φs=302.00000°, δ77.00000°, λ-165.00000°. Principal axes: T 1.1800, Plg1.0000°, Azm75.0000°; N -0.1800, Plg70.0000°, Azm341.0000°; P -1.0100, Plg20.0000°, Azm165.0000°; Data Used: II IU IC G CN. Surface waves: sta=124, comp=274, per= 50.*
NDI ***25*** *01:47:20.3±3.4, 30°.06N×83°.23E, h10km, mb5.7, mb5.6(NEIC)*
SZGRF ***25*** *01:47:25.2, 31°.79N×83°.44E, h33km, mb5.5, MS6.2, Xizang*
ISC 25 01:47:12.2±0.1, 30°.84N±0°.01×83°.59E±0°.01, h10km, (h15km±1.1km:pP-P), n999, σ1§44/942, mb5.4/309, MS5.8/282, 39C-16D, Xizang

Code	Station Name	Δ°	ΔZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	2.49	176	ePn	Pn	01 47 53.6	+0.8
PYUN	Piuthan	2.78	191	ePn	Pn	01 47 56.4	-0.4
PYUN				eSn	Sg	01 48 39.2	-2.4
	60μm,1.1s						
GKN	Gorkha	2.97	162	ePn	Pn	01 47 59.9	+0.4
GKN				eSn	Sg	01 48 45.8	-2.0
KOLN	Koldanda	3.06	180	ePn	Pn	01 48 01.1	+0.4
KOLN				eSn	Sg	01 48 47.3	-3.3
	107μm,1.4s						
KOLN	Koldanda	3.06	180	ePn	Pn	01 48 01.1	+0.4
KOLN				eSn	Sb	01 48 45.8	+1.6
KOLN				eSn	Sg	01 48 47.3	-3.3
PTH	Pithoragarh	3.19	247	ePKP	Pn	01 48 04.0	+1.6
PTH				ex	Sb	01 48 45.3	-2.6
LGTI	Lohaghat	3.21	245	ex	Pb	01 48 07.7	-1.6
LGTI				ex	Sg	01 48 53.4	-1.9
KKN	Kakani	3.38	154	ePn	Pn	01 48 05.9	+0.8
KKN	Kakani	3.38	154	eP	Pn	01 48 05.9	+0.8
DMN	Daman	3.48	157	ePn	Pn	01 48 07.2	+0.7
DMN				eSn	Sb	01 48 58.7	+2.3
	36μm,1.2s						
GUN	Gumba	3.54	145	ePn	Pn	01 48 08.0	+0.7
GUN				eSn	Sb	01 48 59.0	+1.0
	30μm,0.8s						
PKIN	Phulchoki	3.62	154	ePn	Pn	01 48 09.8	+1.5
PKI	Pulchoki	3.63	153	ePn	Pn	01 48 09.2	+0.7
PKI				eSn	Sb	01 49 01.1	+0.6
	22μm,1.1s						
PKI	Pulchoki	3.63	153	eP	Pn	01 48 09.2	+0.7
PKI				e		01 49 01.1	
KLP	Kalpa	4.62	280	ePKP	Pb	01 48 30.8	-2.6
KLP				ex	x	01 49 06.4	
DDI	Dehra Dun	4.80	265	⇑x	Pn	01 48 26.0	+1.5
DDI				ex	Sn	01 49 25.0	+4.8
TAPN	Taplejung	5.01	133	ePn	Pn	01 48 27.1	-0.4
ODAN	Odare	5.18	139	ePn	Pn	01 48 29.5	-0.4
SMLA	Simla	5.52	275	i P	Pn	01 48 39.3	+4.8
SDNR	Sundarnagar	5.71	278	ex	Pb	01 48 54.5	+2.6
ALBI	Allahabad	5.73	196	ePKP	Pn	01 48 34.5	-2.9
KKR	Kurukshetra	5.91	263	ex	Pn	01 48 40.7	+0.9
SLGI	Shiliguri	5.92	133	ex	Pn	01 48 41.5	+1.6
NDI	New Delhi	5.94	250	ex	Pn	01 48 39.0	-1.2
NDI				ex	Sg	01 50 20.0	-3.0
AYAN	Aya Nagar	6.09	249	ePKP	Pn	01 48 43.1	+0.7
BHGR	Bahadurgarh	6.16	251	ePKP	Pn	01 48 44.2	+0.9
BHK	Bhakra	6.17	277	ePKP	Pn	01 48 48.2	+4.7
BHK				ex	x	01 50 39.8	
SONA	Sohna	6.22	247	ePKP	Pn	01 48 44.3	+0.1
SONA				ex	Sn	01 49 49.4	-6.0
LSA	Lhasa	6.64	98	Pn	Pn	01 48 53.1	+3.2
LSA				Sn	Sn	01 50 11.3	+5.7
LSA				LR	LR		
	comp=N,200μm,10.2s						
LSA				LR	LR		
	comp=E,93μm,10.2s						
LSA	Lhasa	6.64	98	ePn	Pn	01 48 53.2	+3.3
	comp=E,5μm,1.3s						
LSA				eS	Sn	01 50 04.1	-1.6
LSA	Lhasa	6.64	98	eP	Pn	01 48 53.2	+3.3
LSA				eS	Sn	01 50 04.1	-1.5
LSA				pmax	pmax		
	comp=Z,5μm,1.3s						
DLH	Dalhousie	6.71	287	ex	Pn	01 48 54.0	+3.2
DLH				ex	Sg	01 50 52.0	+4.3
KUDL	Kundal	6.74	248	ePKP	Pn	01 48 50.1	-1.2
KUDL				ex	x	01 49 47.2	
JHNI	Jhansi	6.96	221	ePKP	Pn	01 48 52.0	-2.3
JHNI				ex	Sg	01 50 48.0	-7.8
BOK	Bokaro	7.31	163	ex	Pn	01 49 08.0	+8.9
BOK				ex	x	01 50 31.0	
KHET	Khetri	7.32	250	ePKP	Pn	01 48 59.8	+0.6
AJM	Ajmer	8.98	243	ePKP	Pn	01 49 21.7	-0.3
AJM				ex	Sn	01 51 03.8	+0.7
SHL	Shillong	9.01	124	⇓i P	Pn	01 49 27.5	+5.1
	comp=Z,85nm,0.8s						
SHL				i x	Sn	01 51 01.0	-2.9
CAL	Calcutta	9.29	152	ePKP	Pn	01 49 25.5	-0.8
CAL				ex	Sn	01 51 02.6	-8.3
BHPL	Bhopal	9.35	217	ex	Sn	01 51 09.6	-2.8
BHPL				ex	x	01 51 57.7	
AGT	Agartala	9.71	134	ex	Pn	01 49 27.0	-5.1
AGT				eS	Sn	01 51 15.0	-6.3
KSH	Kashi	10.66	326	eP	Pn	01 49 42.5	-2.5
KSH				ePP		01 49 50.8	
KSH				S	Sn	01 51 37.8	-6.5
KSH				pmax	pmax		
	comp=Z,130nm,1.4s						
KSH				LR	LR		
	comp=Z,133μm,14.5s						
BWNR	Bhubaneshwar	10.69	169	ex	Pn	01 49 38.0	-7.5
BWNR				ex	x	01 51 34.0	
AKL	Akola	11.70	212	i P	Pn	01 49 54.6	-4.7
AKL				i x	x	01 51 59.3	
KBL	Kabul	12.79	291	ePn	Pn	01 50 11.7	-2.4
KBL				eS	Sn	01 52 30.7	-5.9
KBL	Kabul	12.79	291	eP	Pn	01 50 11.7	-2.5
KBL				eS	Sn	01 52 30.7	-5.9
ULHL	Ulahol	12.81	335	P	Pn	01 50 13.2	-1.2
	SNR=12						
KZA	Kyzart	13.06	331	ePn	Pn	01 50 16.9	-0.8
KZA				eS	Sn	01 52 42.3	-0.7
VIS	Vishakhapatnam	13.06	181	ePKP	Pn	01 50 13.8	-4.1
WMQ	Urumqi	13.36	13	P	Pn	01 50 24.0	+2.1
WMQ				sP		01 50 31.0	
WMQ				PP		01 50 35.0	
WMQ				S	Sn	01 52 54.0	+3.6
WMQ				pmax	pmax		
	comp=Z,280nm,0.7s						
WMQ				LR	LR		
	comp=N,43μm,8.0s						
WMQ				LR	LR		
	comp=E,105μm,8.0s						
WMQ				LR	LR		
	comp=Z,38μm,8.0s						
AAA	Alma-Ata	13.49	339	i P	Pn	01 50 25.2	+1.6
AAA				i S	Sn	01 52 57.4	+3.9
AAA				pmax	pmax		
	comp=Z,9μm,3.2s						
AAA				smax			
	comp=E,7μm,13.2s						
AAA				MLR	MLR		
	comp=Z,61μm,13.0s						
UCH	Uchtor	13.49	330	P	Pn	01 50 21.9	-1.7
	SNR=43						
UCH	Uchtor	13.49	330	ePn	Pn	01 50 21.9	-1.8
TKM2	Tokmak 2	13.64	334	P	Pn	01 50 25.8	+0.1
	SNR=12						
TKM2	Tokmak 2	13.64	334	ePn	Pn	01 50 24.6	-1.1
TKM2	Tokmak 2	13.64	334	i P	Pn	01 50 24.2	-1.5
TKM2				pmax	pmax		
	comp=Z,165nm,1.4s						
KBK	Karagaybulak	13.66	332	P	Pn	01 50 24.9	-1.2
	SNR=12						
KBK	Karagaybulak	13.66	332	ePn	Pn	01 50 24.9	-1.2
BHV	Bhavnagar	13.68	231	ePKP	Pn	01 50 24.2	-2.1
AML	Almayashu	13.78	328	P	Pn	01 50 26.4	-1.2
	SNR=11						
AML	Almayashu	13.78	328	ePn	Pn	01 50 25.9	-1.7
AML				eS	Sn	01 52 46.7	-14
AAK	Ala-Archa	13.83	331	P	Pn	01 50 26.6	-1.7
	SNR=12						
AAK	Ala-Archa	13.83	331	Pn	Pn	01 50 27.9	-0.5
	comp=Z,0.0nm,0.3s,baz=154,slow=5.2,SNR=14						
AAK				LR	LR	01 56 24.5	
	comp=Z,72μm,18.9s,baz=131,slow=40						
AAK	Ala-Archa	13.83	331	ePn	Pn	01 50 26.6	-1.8
AAK	Ala-Archa	13.83	331	dePP	Pn	01 50 27.1	-1.2
AAK				pmax	pmax		
	comp=Z,20nm,1.7s						
AAK				MLR	MLR		
	comp=Z,39μm,25.0s						
AAK	Ala-Archa	13.83	331	Pn	Pn	01 50 27.9	-0.4
	comp=Z,499nm,1.0s,SNR=14						
AAK	Ala-Archa	13.83	331	P	Pn	01 50 26.9	-1.4
	comp=Z,2μmcomp=Z,49nm,2.8s						
AAK	Ala-Archa	13.83	331	P	Pn	01 50 27.1	-1.2
	SNR=113						
LATR	Latur	13.91	209	ePKP	Pn	01 50 24.8	-4.8
LATR				ex	x	01 52 44.5	
FRU	Bishkek	13.95	332	eP	Pn	01 50 29.0	-0.9
FRU				eS	Sn	01 53 09.0	+4.3
FRU				pmax	pmax		
	comp=Z,4μm,3.0s						
CHMS	Chumysh	14.03	332	P	Pn	01 50 28.8	-2.2
	SNR=11						
HYB	Hyderabad	14.13	200	i P	Pn	01 50 27.0	-5.5
	comp=Z,320nm,1.0s						
HYB				e		01 50 39.0	
HYB				e		01 51 41.0	
HYB				eS	Sn	01 53 10.0	+0.6
EKS2	Erkin-Say	14.16	329	P	Pn	01 50 32.0	-0.9
	SNR=24						
EKS2	Erkin-Say	14.16	329	ePn	Pn	01 50 31.9	-0.9
EKS2				eS	Sn	01 53 05.4	-4.6
USP	Ospenovka	14.36	332	P	Pn	01 50 40.1	+4.7
	SNR=6.3						
BHJ	Bhuj	14.52	242	ePKP	Pn	01 50 35.8	-2.1
BHJ				ex	x	01 53 26.4	
POO	Poona	15.11	218	ePKP	Pn	01 50 43.9	-1.8
POO				AMb	AMB	01 50 58.8	
	comp=Z,453nm,1.8s						
GTA	Gaotai	15.78	53	⇑P	Pn	01 50 52.4	-2.0
GTA				sP	sP	01 50 58.3	-4.2
GTA				PP		01 51 04.0	
GTA				S	Sn	01 53 46.8	-2.5
GTA				sS	sS	01 53 52.6	-16
GTA				SS		01 54 03.3	
GTA				pmax	pmax		
	comp=Z,1μm,6.2s						
GTA				LR	LR		
	comp=N,101μm,14.2s						
GTA				LR	LR		
	comp=E,42μm,13.8s						
GTA				LR	LR		
	comp=Z,49μm,9.0s						
KAD	Karad	15.96	215	ePKP	Pn	01 50 53.0	-4.0
KAD				AMb	AMB	01 51 07.7	
	comp=Z,338nm,1.5s						
KAD				ex	x	01 53 35.9	
KAD				ex	x	01 53 44.8	
MK31	Makanchi Array	15.96	357	ePn	Pn	01 50 56.2	-0.6
MK31	Makanchi Array	15.96	357	i P	Pn	01 50 54.3	-2.5
MK31				pmax	pmax		
	comp=Z,242nm,0.9s						
MKAR	Makanchi Array	15.96	357	Pn	Pn	01 50 55.3	-1.5
	comp=Z,1.9nm,0.3s,baz=173,slow=11,SNR=25						
MKAR				LR	LR	01 58 07.7	
	comp=Z,31μm,19.2s,baz=292,slow=41						
MKAR				P3KPbc		02 26 23.6	
	comp=Z,0.1nm,0.3s,baz=328,slow=4.3,SNR=4.7						
MKAR	Makanchi Array	15.96	357	Pn	Pn	01 50 55.3	-1.5
MKAR				LR	LR	01 58 07.7	
MKAR	Makanchi Array	15.96	357	cePP	Pn	01 50 57.7	+0.9
MKAR				pmax	pmax		
	comp=Z,47nm,0.9s						
KK31	Karatay Array	16.07	323	i P	Pn	01 50 53.6	-4.6
KK31				S	Sn	01 53 51.6	-4.7
KK31				pmax	pmax		
	comp=Z,97nm,0.8s						
KK31				smax			
	comp=Z,33nm,0.9s						
KKAR	Karatay Array	16.07	323	ePn	Pn	01 50 55.3	-2.9
KKAR				eS	Sn	01 53 55.1	-1.3
KKAR	Karatay Array	16.07	323	eP	Pn	01 50 55.3	-2.9
KKAR				eS	Sn	01 53 55.1	-1.2
CD2	Chengdu	17.32	85	⇓i P	Pn	01 51 13.4	-0.8
CD2				pP	pP	01 51 17.0	-1.4
CD2				sP	sP	01 51 20.5	+0.8
CD2				PP		01 51 28.0	
CD2				S	Sn	01 54 25.3	-1.6
CD2				sS	sS	01 54 31.0	-9.2
CD2				SS		01 54 46.9	
CD2				pmax	pmax		
	comp=Z,170nm,2.0s						
CD2				pmax	pmax		
	comp=Z,4μm,8.2s						
CD2				LR	LR		
	comp=N,97μm,13.2s						
CD2				LR	LR		
	comp=E,49μm,7.2s						
CD2				LR	LR		
	comp=Z,54μm,8.4s						
LZH	Lanzhou	17.69	67	eP	Pn	01 51 16.4	-2.3
LZH				pP	pP	01 51 19.9	-2.5
LZH				sP	sP	01 51 22.8	-0.9
LZH				PP		01 51 30.3	
LZH				eS	Sn	01 54 32.3	-3.4
LZH				sS	sS	01 54 37.1	-10
LZH				SS		01 54 50.0	
LZH				pmax	pmax		
	comp=Z,450nm,1.3s						
LZH				pmax	pmax		
	comp=Z,3μm,5.1s						
LZH				LR	LR		
	comp=N,44μm,8.1s						
LZH				LR	LR		
	comp=E,88μm,9.8s						
LZH				LR	LR		
	comp=Z,86μm,11.0s						
GOA	Goa	17.70	213	⇑i P	Pn	01 51 16.6	-2.3
GOA				ex	x	01 54 11.6	
KMI	Kunming	17.84	104	⇑P	Pn	01 51 18.4	-2.3
KMI				pP	pP	01 51 22.8	-1.4
KMI				PP		01 51 36.4	
KMI				S	Sn	01 54 28.0	-12
KMI				sS	sS	01 54 41.6	-9.3
KMI				pmax	pmax		
	comp=Z,480nm,1.1s						
KMI				pmax	pmax		
	comp=Z,4μm,5.7s						
KMI				LR	LR		
	comp=N,36μm,13.7s						
KMI				LR	LR		
	comp=E,34μm,12.8s						
KMI				LR	LR		
	comp=Z,47μm,12.5s						
MDRS	Chennai	17.95	191	⇓i P	Pn	01 51 29.2	+7.1
MDRS				eS	Sn	01 54 40.7	-1.7
MDRS				ex	x	01 55 25.2	
MDRS				ex	x	01 56 36.2	
MDRS				ex	x	01 57 04.2	
CHTO	Chiang Mai	18.35	127	eP	Pn	01 51 25.0	-1.9
	comp=Z,216nm,1.1s						
CHTO	Chiang Mai	18.35	127	eP	Pn	01 51 25.0	-1.9
CHTO				pmax	pmax		
	comp=Z,216nm,1.1s						
CHTO	Chiang Mai	18.35	127	P	Pn	01 51 24.7	-2.2
	comp=Z,9μmcomp=Z,258nm,1.2s						
CHTO	Chiang Mai	18.35	127	P	Pn	01 51 24.8	-2.1
	SNR=56						
CM31	Chiang Mai Arr	18.60	128	eP	Pn	01 51 29.9	-0.1
	comp=Z,48nm,0.8s						
CMAR	Chiang Mai Arr	18.60	128	P	Pn	01 51 28.2	-1.7
	comp=Z,1.4nm,0.3s,baz=318,slow=10,SNR=71						
CMAR				PcP	PcP	01 56 02.5	+3.8
	comp=Z,0.4nm,0.3s,baz=300,slow=3.0,SNR=7.0						
CMAR				LR	LR	01 59 28.4	
	comp=Z,32μm,18.3s,baz=323,slow=40						
CMAR				ScP	ScP	01 59 37.9	+3.5
	comp=Z,0.3nm,0.3s,baz=313,slow=4.5,SNR=4.1						
CMAR	Chiang Mai Arr	18.60	128	P	Pn	01 51 28.2	-1.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,32μm,18.3s						
KURK	Kurchatov	20.20	351	eP	P	01 51 46.0	-0.9
	comp=Z,3μm,2.2s						
KURK				LR	LR		
	comp=Z,39μm,19.0s,MS5.8						
KURK	Kurchatov	20.20	351	d i P	P	01 51 45.8	-1.2
KURK				pmax	pmax		
	comp=Z,165nm,1.1s						
KURK				MLR	MLR		
	comp=Z,42μm,19.0s,MS5.8						
KURK	Kurchatov	20.20	351	P	P	01 51 46.0	-1.0
	comp=Z,2μm,2.1s,SNR=93						
KURK	Kurchatov	20.20	351	P	P	01 51 46.1	-0.8
	SNR=263						
IDAH	Dahanechah	20.24	282	eP	P	01 51 47.6	0.0
IMYA	Miami	20.30	292	eP	P	01 51 50.5	+2.3
IMON	Monand	20.41	283	eP	P	01 51 49.7	+0.3
GYA	Guiyang	20.71	96	⇑i P	P	01 51 51.5	-1.2
GYA				PP		01 52 16.8	
GYA				S	S	01 55 34.3	-10
GYA				ScP	ScP	01 59 38.9	-0.3
GYA				pmax	pmax		
	comp=Z,260nm,1.0s						
GYA				pmax	pmax		
	comp=Z,4μm,6.2s						
GYA				LR	LR		
	comp=N,39μm,12.2s,MS6.0						
GYA				LR	LR		
	comp=E,15μm,13.1s,MS6.0						
GYA				LR	LR		
	comp=Z,16μm,12.8s,MS5.6						
IMOG	Moghan	20.88	291	eP	P	01 51 55.4	+0.9
IKOO	Kooshah	20.98	281	eP	P	01 51 55.9	+0.2
IPAY	Payeh	21.20	292	eP	P	01 51 58.6	+0.7
IAKL	Akhelmad	21.41	292	eP	P	01 52 00.5	+0.3
XAN	Xi'an	21.60	75	P	P	01 52 00.3	-2.0
XAN				sP	sP	01 52 07.0	+0.5
XAN				PP		01 52 20.8	
XAN				S	S	01 55 51.3	-10
XAN				SS		01 56 23.1	
XAN				LR	LR		
	comp=Z,12μm,11.6s,MS5.5						
IEMG	Emamgholi	21.62	294	eP	P	01 52 02.8	+0.3
IKRD	Kardeh	21.63	293	eP	P	01 51 55.2	-7.4
ABKT	Ailbek	22.13	296	P	P	01 52 08.9	+0.9
	comp=Z,799nm,0.9s,mb6.2,SNR=29						
VAN	Vannovskaya	22.15	296	eP	P	01 52 07.9	-0.2
ENH	Enshi	22.30	85	eP	P	01 52 10.3	+0.5
	comp=Z,240nm,0.9s,mb5.6						
ENH				LR	LR		
	comp=Z,26μm,22.0s,MS5.6						
ISHV	Shirvan	22.39	294	eP	P	01 52 13.3	+2.6
ZAA0	Zalesovo Array	23.11	2	eP	P	01 52 17.9	-0.3
ZALV	Zalesovo Beam	23.11	2	P	P	01 52 18.0	-0.1
	comp=Z,61nm,0.9s,mb5.0,baz=191,slow=9.5,SNR=73						
ZALV				LR	LR	02 01 55.6	
	comp=Z,6μm,18.2s,MS5.1,baz=184,slow=38						
ZALV	Zalesovo Beam	23.11	2	P	P	01 52 18.0	-0.1
ZALV				LR	LR	02 01 55.6	

comp=Z,526nm,1.7s,mb5.7,SNR=10
PALK Pallekele 23.60 187 P P 01 52 23.9 +0.3
comp=Z,5μmcomp=Z,118nm,2.8s,mb4.8
PALK Pallekele 23.60 187 P P 01 52 24.8 +1.2
SNR=12
PALK mb 01 52 30.7
SNR=12
IBND Bandar-abas 23.84 269 *e*P **P 01 52 26.5 +0.8**
IBAF Bafgh 23.95 279 *e*P **P 01 52 26.3 -0.4**
NVS Novosibirsk 23.99 360 *e*P **P 01 52 26.1 -0.7**
NVS *e*S **S 01 56 43.1 -0.3**
NVS pmax pmax
comp=N,1μm,2.5s
NVS pmax pmax
comp=Z,2μm,2.5s,mb6.1
NVS smax
comp=E,867nm,4.1s
NVS smax
comp=N,119nm,1.8s
SMDO Samad 24.01 257 P **P 01 52 28.6 +1.3**
SNR=21
BVA0 Borovoye Array 24.17 340 *i* P **P 01 52 27.7 -0.7**
BVAR Borovoye Array 24.17 340 P **P 01 52 28.9 +0.5**
comp=N,16nm,0.8s,mb4.5,baz=149,slow=9.8,SNR=49
BVAR PcP PcP 01 56 13.0 +4.0
comp=N,8.5nm,0.9s,baz=102,slow=0.8,SNR=4.5
BVAR P3KPbc 02 25 43.2
comp=N,0.6nm,0.4s,baz=340,slow=3.9,SNR=4.1
BVAR Borovoye Array 24.17 340 P **P 01 52 28.9 +0.5**
BVAR PcP PcP 01 56 13.0 +4.0
BVAR Borovoye Array 24.17 340 P **P 01 52 28.9 +0.5**
BVAR 01 56 13.0
BRVK Borovoye 24.23 340 *e*P **P 01 52 29.6 +0.7**
comp=N,2μm,2.4s,mb6.1
BRVK *e*S **S 01 56 57.6 +10**
BRVK LR LR
comp=Z,21μm,22.0s,MS5.6
BRVK Borovoye 24.23 340 *e*P **P 01 52 29.6 +0.6**
BRVK pmax pmax
comp=Z,2μm,2.4s,mb6.1
BRVK MLR MLR
comp=Z,21μm,22.0s,MS5.6
BRVK Borovoye 24.23 340 P **P 01 52 29.6 +0.6**
comp=Z,555nm,0.7s,mb6.1
BRVK Borovoye 24.23 340 P **P 01 52 29.0 0.0**
SNR=132
BRVK mb 01 52 36.2
SNR=127
JMDO Jabal Madar 24.25 256 P **P 01 52 31.3 +1.8**
SNR=19
SONM Songino Array 24.34 39 P **P 01 52 30.7 +0.7**
comp=Z,27nm,0.7s,mb4.8,baz=231,slow=9.2,SNR=66
SONM PcP PcP 01 56 10.9 +1.4
comp=Z,4.5nm,0.8s,baz=226,slow=4.1,SNR=3.1
SONM ScP ScP 01 59 45.5 -2.6
comp=Z,4.0nm,1.1s,baz=210,slow=5.1,SNR=4.7
SONM LR LR 02 03 00.7
comp=Z,21μm,19.5s,MS5.6,baz=233,slow=39
SONM Songino Array 24.34 39 P **P 01 52 30.7 +0.7**
SONM 01 56 10.9
SONM pmax pmax
comp=Z,27nm,0.7s
SONM MLR MLR
comp=Z,21μm,19.5s
HOQ Hoqain 24.42 259 P **P 01 52 33.2 +2.1**
SNR=24
ZAK Zakamensk 24.45 31 *e*P **P 01 52 31.0 -0.1**
ZAK pmax pmax
comp=Z,56nm,1.8s,mb4.7
MOY Mondy 24.46 27 *e*P **P 01 52 32.4 +1.3**
MOY pmax pmax
comp=Z,662nm,3.0s
HHC Hu-ho-hao-te 24.69 58 ⇑P **P 01 52 33.8 +0.5**
HHC pP 01 52 38.0
HHC sP sP 01 52 40.8 +3.2
HHC PP 01 53 10.3
HHC S **S 01 56 54.8 -0.2**
HHC sS sS 01 57 00.0 0.0
HHC ScP ScP 01 59 48.5 -0.8
HHC pmax pmax
comp=Z,53nm,1.2s,mb5.0
HHC pmax pmax
comp=Z,2μm,7.6s
HHC LR LR
comp=N,14μm,10.0s,MS6.0
HHC LR LR
comp=E,18μm,10.8s,MS6.0
HHC LR LR
comp=Z,18μm,10.3s,MS5.8
ULN Ulaanbaatar 24.72 40 *e*P **P 01 52 34.4 +0.9**
comp=Z,187nm,1.0s,mb5.6
ULN LR LR
comp=Z,19μm,21.0s,MS5.6
ULN Ulaanbaatar 24.72 40 *e*P **P 01 52 34.4 +0.9**
ULN pmax pmax
comp=Z,187nm,1.0s,mb5.6
ULN MLR MLR
comp=Z,19μm,21.0s,MS5.6
ULN Ulaanbaatar 24.72 40 P **P 01 52 33.9 +0.4**
comp=Z,5μmcomp=Z,235nm,1.2s,mb5.6
ULN Ulaanbaatar 24.72 40 mb 01 52 42.4
SNR=68
IMEH Mehriz 24.78 279 *e*P **P 01 52 34.5 +0.2**
BSY Bisya 24.85 257 P **P 01 52 37.0 +2.0**
SNR=16
ICHK Chekchek 24.88 281 *e*P **P 01 52 35.8 +0.7**
HATD Hatta, Dubai 24.97 263 ⇑P **P 01 52 36.3 +0.2**
SNR=11
HATD mb 01 52 55.1
SNR=13
ASHO Ashiyiah 25.08 263 P **P 01 52 38.7 +1.6**
SNR=41
ASHO mb 01 52 48.5
SNR=66
ARQ Araqi 25.18 259 P **P 01 52 39.6 +1.6**
SNR=34
ARQ mb 01 52 46.9
SNR=37
IANJ Anjilo 25.22 288 *e*P **P 01 52 39.7 +1.5**
IGLO Ghaloghah 25.34 291 *e*P **P 01 52 44.9 +5.6**
IKIA Kiasar 25.44 290 *e*P **P 01 52 42.9 +2.7**
ISAD Sadrabad 25.52 280 *e*P **P 01 52 41.0 +0.1**
TLY Talaya 25.55 30 *e*P **P 01 52 42.8 +1.7**
comp=Z,59nm,1.1s,mb5.0
TLY LR LR
comp=Z,12μm,20.0s,MS5.4
TLY Talaya 25.55 30 *e*P **P 01 52 43.1 +2.1**
TLY *e*PPP 01 53 18.7
TLY *e*S **S 01 57 09.8 +1.3**
TLY *e*SS 01 58 09.0
TLY pmax pmax
comp=Z,38nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,13μm,15.0s,MS5.6
TLY Talaya 25.55 30 P **P 01 52 43.2 +2.2**
comp=Z,218nm,1.0s,mb5.6,SNR=11
TLY Talaya 25.55 30 ⇑P **P 01 52 40.6 -0.4**
SNR=16
TLY mb 01 52 54.2
SNR=21
AB31 Akbulak array 25.63 323 *i* P **P 01 52 41.5 -0.3**
AB31 pmax pmax
comp=Z,276nm,1.2s,mb5.7
ABKAR Akbulak array 25.63 323 *e*P **P 01 52 41.8 0.0**
comp=Z,56nm,0.7s,mb5.2
ASUD Al Ashush, Dub 25.73 263 ⇑P **P 01 52 44.0 +1.1**
SNR=15
ASUD mb 01 52 51.8
SNR=19
ISHM Shahmirzad 25.74 289 *e*P **P 01 52 43.3 +0.4**
HMDM Hanimaadhoo 25.85 204 P **P 01 52 46.2 +2.1**
comp=Z,9μmcomp=Z,452nm,1.4s,mb5.8
ILAS Lasjerd 26.00 288 *e*P **P 01 52 47.5 +2.2**
IFIR Firoozkooh 26.17 289 *e*P **P 01 52 48.8 +2.0**
IRK Irkutsk 26.23 29 *e*P **P 01 52 49.1 +2.0**
IRK pmax pmax
comp=Z,347nm,2.8s,mb5.4
ISRV Sarvestan 26.36 275 *e*P **P 01 52 49.3 +0.6**
WHN Wuhan 26.42 83 ⇑P **P 01 52 49.9 +0.8**
WHN S **S 01 57 20.3 -2.4**
WHN LR LR
comp=N,29μm,9.0s
WHN LR LR
comp=E,30μm,8.7s
WHN LR LR
comp=Z,44μm,10.8s,MS6.3

QIZ Qiongzhong 26.48 110 P **P 01 52 50.8 +1.0**
QIZ pP pP 01 52 54.6 +1.8
QIZ sP sP 01 52 56.3 +2.2
QIZ S **S 01 57 19.6 -4.3**
QIZ pmax pmax
comp=Z,1μm,9.1s
QIZ LR LR
comp=N,30μm,21.4s,MS5.8
QIZ LR LR
comp=E,9μm,22.9s,MS5.8
QIZ LR LR
comp=Z,17μm,17.9s,MS5.6
QIZ Qiongzhong 26.48 110 PFAKE 01 53 00.0 +10
QIZ LR LR
comp=Z,17μm,19.0s,MS5.6
IPRN Peran 26.53 290 *e*P **P 01 52 53.6 +3.5**
IZEF Zefreh 26.58 283 *e*P **P 01 52 54.8 +4.3**
ISFB Sefidab 26.59 286 *e*P **P 01 52 52.4 +1.8**
IKLH Kolahrood 27.18 284 *e*P **P 01 52 58.2 +2.2**
AKTK Aktyubinsk 27.34 323 P **P 01 52 56.5 -0.6**
AKTK LR LR 02 05 03.5
AKTK *e* 02 25 38.5
AKTO Aktyubinsk 27.34 323 P **P 01 52 56.5 -0.6**
comp=Z,5.7nm,0.5s,mb4.4,baz=115,slow=8.4,SNR=21
AKTO LR LR 02 05 03.5
comp=Z,17μm,20.5s,MS5.6,baz=291,slow=39
AKTO P3KPbc 02 25 38.5
comp=Z,1.5nm,1.0s,baz=316,slow=2.5,SNR=3.7
AKTO Aktyubinsk 27.34 323 *i* P **P 01 52 56.4 -0.8**
AKTO pmax pmax
comp=Z,36nm,2.3s,mb4.5
IPIR Pirpir 27.80 282 *e*P **P 01 53 02.9 +1.3**
BJT Baijiatuau 27.96 62 *e*P **P 01 53 04.8 +1.9**
comp=Z,87nm,1.0s,mb5.3
BJT LR LR
comp=Z,25μm,22.0s,MS5.8
BJT Baijiatuau 27.96 62 *e*P **P 01 53 04.8 +1.9**
BJT pmax pmax
comp=Z,87nm,1.0s
BJT MLR MLR
comp=Z,25μm,22.0s
BJI Beijing 27.97 62 P **P 01 53 03.1 +0.2**
BJI S **S 01 57 42.5 -4.4**
BJI sS sS 01 57 49.3 -2.7
BJI pmax pmax
comp=Z,41nm,1.2s,mb4.9
BJI LR LR
comp=N,50μm,13.1s,MS6.3
BJI LR LR
comp=E,13μm,12.8s,MS6.3
BJI LR LR
comp=Z,16μm,22.3s
IRAZ Razeghan 28.47 288 *e*P **P 01 53 09.8 +2.3**
NJ2 Nanjing 30.04 78 *e*P **P 01 53 24.5 +3.1**
NJ2 pP pP 01 53 34.0 +10
NJ2 S **S 01 58 17.5 -2.1**
NJ2 sS sS 01 58 33.0 +8.3
NJ2 pmax pmax
comp=Z,680nm,10.9s
NJ2 LR LR
comp=N,17μm,9.5s
NJ2 LR LR
comp=E,14μm,11.6s
NJ2 LR LR
comp=Z,80μm,11.2s,MS6.6
KULM Kulim 30.06 144 *e*P **P 01 53 18.0 -3.7**
comp=Z,93nm,1.4s,mb5.3
KULM LR LR
comp=Z,7μm,21.0s,MS5.3
TPTI 30.29 152 P **P 01 53 30.2 +6.5**
comp=Z,15nm,1.3s,mb4.6
ISRB Sarab 30.33 293 *e*P **P 01 53 27.5 +3.5**
SVE Sverdlovsk 30.51 335⇑ *e*P **P 01 53 26.1 +0.8**
SVE *e*S **S 01 58 25.6 -0.9**
SVE pmax pmax
comp=Z,210nm,1.5s,mb5.8
SVE MLR MLR
comp=Z,24μm,16.0s,MS5.9
ARU Arti 31.00 333 *e*P **P 01 53 29.7 0.0**
comp=Z,760nm,2.1s,mb6.2
ARU LR LR
comp=Z,24μm,20.0s,MS5.9
ARU Arti 31.00 333*c i*P **P 01 53 29.7 0.0**
ARU *e* 01 54 29.6
ARU *e*PPP 01 54 40.6
ARU *e* 01 56 23.0
ARU S **S 01 58 37.3 +3.0**
ARU SS SS 02 00 20.3 -26
ARU SSS 02 00 39.5
ARU pmax pmax
comp=Z,67nm,1.2s,mb5.3
ARU MLR MLR
comp=Z,20μm,20.0s,MS5.8
ARU Arti 31.00 333 P **P 01 53 29.4 -0.3**
comp=Z,502nm,0.9s,mb6.3,SNR=14
KBD Kabd 31.05 276 *e*P **P 01 53 30.2 -0.2**
KBD AMb AMB 01 53 38.3
comp=Z,108nm,1.5s,mb5.5
MAK Makhachkala 31.05 303*c i*P **P 01 53 34.0 +3.7**
MAK *i* 01 54 33.2
MAK *e*PPP 01 54 43.0
MAK *e* 01 56 21.9
MAK *i* S **S 01 58 40.6 +5.2**
MAK *e*SS SS 02 00 19.9 -28
MAK *e*SSS 02 00 35.8
MAK pmax pmax
comp=Z,159nm,1.3s,mb5.7
MAK MLR MLR
comp=Z,12μm,12.0s,MS5.8
MIB Mutribah 31.22 278 *e*P **P 01 53 32.0 +0.1**
MIB AMb AMB 01 53 37.4
comp=Z,210nm,0.7s,mb6.1
IGHG Ghaleghazi 31.27 286 *e*P **P 01 53 34.2 +1.9**
KTGM Kuala Trenggan 31.34 140 P **P 01 53 34.4 +1.4**
IDHR Dehrash 31.40 287 *e*P **P 01 53 35.5 +2.1**
QZH Quanzhou 31.41 92⇑ *i*P **P 01 53 35.0 +1.4**
QZH S **S 01 58 38.8 -2.4**
QZH pmax pmax
comp=Z,1μm,3.4s
QZH LR LR
comp=N,64μm,11.4s,MS6.6
QZH LR LR
comp=E,23μm,10.9s,MS6.6
QZH LR LR
comp=Z,33μm,9.6s
NAY Al-Naaiem 31.42 277 *e*P **P 01 53 33.2 -0.4**
NAY AMb AMB 01 53 38.9
comp=Z,53nm,0.7s,mb5.5
PSI Prapat 31.43 150 LR LR 02 08 15.6
comp=Z,9μm,18.3s,MS5.5,baz=167,slow=40
ITBZ Tabriz 31.55 294 *e*P **P 01 53 38.6 +3.9**
ISHB Shabestar 31.97 294 *e*P **P 01 53 40.2 +1.8**
DL2 Dalian 32.05 65 P **P 01 53 40.6 +1.5**
DL2 pmax pmax
comp=Z,50nm,0.8s,mb5.4
DL2 pmax pmax
comp=Z,310nm,7.7s
DL2 LR LR
comp=E,17μm,13.2s
DL2 LR LR
comp=Z,18μm,13.0s,MS5.9
SSE Sheshan 32.14 80 P **P 01 53 41.8 +1.8**
SSE pP pP 01 53 44.8 +1.7
SSE S **S 01 58 53.5 +0.9**
SSE sS sS 01 58 59.8 +2.1
SSE pmax pmax
comp=Z,30nm,0.8s,mb5.2
SSE pmax pmax
comp=Z,510nm,5.9s
SSE LR LR
comp=N,25μm,19.5s,MS5.9
SSE LR LR
comp=E,5μm,19.6s,MS5.9
SSE LR LR
comp=Z,12μm,12.4s
GNI Garni 32.74 297 P **P 01 53 46.4 +1.3**
comp=Z,23nm,0.9s,mb5.1,baz=264,slow=6.3,SNR=8.3
GNI LR LR 02 10 41.7
comp=Z,11μm,18.8s,MS5.6,baz=310,slow=43
GNI Garni 32.74 297 *e*P **P 01 53 46.9 +1.7**
comp=Z,321nm,1.6s,mb6.0
GNI LR LR
comp=Z,10μm,19.0s,MS5.5
GNI Garni 32.74 297*d i*P **P 01 53 48.5 +3.3**
GNI pmax pmax
comp=Z,33nm,0.9s
GNI MLR MLR
comp=Z,11μm,18.0s
GNI Garni 32.74 297 mb 01 54 00.2
SNR=34
HIA Hailar 32.82 45 *e*P **P 01 53 46.0 +0.3**
comp=Z,24nm,0.9s,mb5.1
HIA LR LR
comp=Z,13μm,20.0s,MS5.6
HIA Hailar 32.82 45 *e*P **P 01 53 46.0 +0.2**
HIA pmax pmax
comp=Z,24nm,0.9s
HIA MLR MLR
comp=Z,13μm,20.0s
TBLG Delisi 32.90 300 *e*P **P 01 53 49.6 +3.1**
ZEI Tsey 33.64 302 *e*P **P 01 53 52.6 -0.4**
ZEI *e* 01 55 04.7
ZEI *e*S **S 01 59 20.4 +4.7**
ZEI pmax pmax
comp=Z,118nm,1.4s,mb5.6
ZEI MLR MLR
comp=Z,8μm,14.0s,MS5.6
TPUB Ta-pu 33.71 94 *e*P **P 01 53 57.3 +3.4**
comp=Z,103nm,1.3s,mb5.6
SNY Shenyang 33.76 60 ⇑P **P 01 53 52.0 -2.0**
SNY S **S 01 59 05.3 -12**
SNY pmax pmax
comp=Z,46nm,1.2s,mb5.3
SNY pmax pmax
comp=Z,310nm,3.4s
SNY LR LR
comp=N,33μm,27.4s,MS6.0
SNY LR LR
comp=E,6μm,23.3s,MS6.0
SNY LR LR
comp=Z,15μm,21.0s,MS5.7
SSLB Suanglung 33.82 93 *e*P **P 01 53 55.4 +0.6**
comp=Z,223nm,1.9s,mb5.8
TATO Taipei 33.89 90 PFAKE 01 54 10.0 +15
TATO LR LR
comp=Z,14μm,19.0s,MS5.7
YHNB Yeheng 33.89 91 *e*P **P 01 53 56.6 +1.2**
comp=Z,46nm,1.1s,mb5.3
YHNB LR LR
comp=Z,13μm,20.0s,MS5.7
BOD Bodaibo 34.12 29 *e*P **P 01 53 56.7 -0.2**
BOD pmax pmax
comp=Z,68nm,2.2s,mb5.2
NACB Ninganchiao 34.24 92 *e*P **P 01 53 59.6 +1.2**
comp=Z,133nm,1.1s,mb5.8
YULB Yu-li 34.26 93 *e*P **P 01 54 00.4 +1.9**
comp=Z,192nm,1.6s,mb5.8
TWG Pinlang 34.27 94 *e*P **P 01 54 00.8 +2.2**
comp=Z,214nm,1.3s,mb5.9
GOF Gofitskoye 34.61 306 *e*P **P 01 53 55.5 -5.8**
GOF pmax pmax
comp=Z,110nm,1.3s,mb5.6
KIV Kislovodsk 34.68 304 *e*P **P 01 54 02.0 +0.1**
comp=Z,53nm,0.8s,mb5.5
KIV Kislovodsk 34.68 304 *e*P **P 01 54 03.0 +1.0**
KIV *e*S **S 01 59 34.3 +2.6**
KIV pmax pmax
comp=Z,151nm,4.0s
KIV pmax pmax
comp=Z,77nm,1.1s,mb5.5
KIV MLR MLR
comp=Z,5μm,15.0s,MS5.4
KIV Kislovodsk 34.68 304 P **P 01 54 02.5 +0.5**
comp=Z,411nm,0.7s,mb6.5,SNR=13
KIV Kislovodsk 34.68 304 P **P 01 54 04.3 +2.4**
SNR=19
KIV mb 01 54 15.1
SNR=23
CN2 Changchun 35.35 57 *e*P **P 01 54 07.6 -0.1**
CN2 *e*pP pP 01 54 11.4 +0.6
CN2 *e*S **S 01 59 39.4 -2.6**
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,33μm,14.0s,MS6.3
CN2 LR LR
comp=E,9μm,14.0s,MS6.3
CN2 LR LR
comp=Z,41μm,14.0s,MS6.3
INCN Inchon 35.99 68 *e*P **P 01 54 13.8 +0.4**
comp=Z,75nm,0.8s,mb5.7
SOC Sochi 36.77 303*d i*P **P 01 54 20.3 +0.4**
SOC *e* 01 55 42.1
SOC *e*PPP 01 56 06.6
SOC *e*S **S 02 00 06.3 +2.5**
SOC pmax pmax
comp=Z,61nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,12μm,19.0s,MS5.7
VRHR Novokhopersk 36.95 315 *e*P **P 01 54 20.3 -1.0**
VRHR pmax pmax
comp=E,50nm,0.8s
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.3
VRHR pmax pmax
comp=N,20nm,1.0s
KSRS Korea Array 37.02 67 P **P 01 54 21.8 -0.4**
comp=N,13nm,0.8s,mb4.8,baz=272,slow=8.8,SNR=18
KSRS ScP ScP 02 00 28.4 -1.7
comp=N,2.1nm,0.8s,baz=241,slow=4.1,SNR=4.3
KSRS LR LR 02 11 05.7
comp=N,15μm,18.6s,MS5.8,baz=281,slow=39
KSRS Korea Array 37.02 67 P **P 01 54 21.8 -0.3**
KSRS pmax pmax
comp=Z,13nm,0.8s,mb4.8
KSRS MLR MLR
comp=Z,15μm,18.6s,MS5.8
MALT Malatya 37.62 294 *e*P **P 01 54 27.8 +0.6**
comp=Z,143nm,1.8s,mb5.4
MALT LR LR
comp=Z,8μm,19.0s,MS5.5
MALT Malatya 37.62 294 *e*P **P 01 54 27.8 +0.6**
MALT pmax pmax
comp=Z,143nm,1.8s,mb5.4
MALT MLR MLR
comp=Z,8μm,19.0s,MS5.5
MALT Malatya 37.62 294 P **P 01 54 28.8 +1.6**
comp=Z,1μmcomp=Z,38nm,1.3s,mb5.0
TGY Tagaytay City 38.10 107 P **P 01 54 32.6 +1.0**
comp=Z,68nm,0.3s,mb5.8,baz=255,slow=10,SNR=2.3
TGY LR LR 02 10 07.9
comp=Z,24nm,20.0s,baz=289,slow=36
TGY Tagaytay City 38.10 107 P **P 01 54 32.6 +1.1**
TGY pmax pmax
comp=Z,68nm,0.3s
TGY MLR MLR
comp=Z,24nm,20.0s
VORD Divnogorie 38.33 315 *e*P **P 01 54 31.6 -1.4**
VORD *e*S **S 02 00 31.6 +4.4**
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,40nm,0.9s
VORD smax
comp=N,640nm,3.0s
VORD smax
comp=Z,160nm,2.8s
VORD smax
comp=E,600nm,3.6s
VORD MLR MLR
comp=N,12μm,13.0s
VORD MLR MLR
comp=Z,17μm,13.0s,MS6.0
VORD MLR MLR
comp=E,23μm,20.0s
MDJ Mudanjiang 38.40 56 P **P 01 54 33.4 -0.3**
MDJ pP pP 01 54 36.4 -0.4
MDJ sP sP 01 54 38.1 +0.1
MDJ PP PP 01 55 58.8 -2.6
MDJ PcP PcP 01 56 47.5 +0.5
MDJ S **S 02 00 27.3 -1.2**
MDJ pmax pmax
comp=Z,270nm,9.0s
MDJ LR LR
comp=N,20μm,18.1s,MS6.0
MDJ LR LR
comp=E,3μm,17.7s,MS6.0
MDJ LR LR
comp=Z,14μm,11.2s
MDJ Mudanjiang 38.40 56 *e*P **P 01 54 34.8 +1.1**

comp=Z,32nm,0.9s,mb5.0
MDJ LR LR
comp=Z,9μm,20.0s,MS5.6
VSR Storozhevoye 38.47 315 *e*P **P** **01 54 33.5 -0.7**
VSR *e*S **S** **02 00 33.5 +4.2**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,40nm,1.1s
VSR smax
comp=N,950nm,4.2s
VSR smax
comp=E,450nm,3.4s
VSR smax
comp=Z,200nm,3.4s
VSR MLR MLR
comp=Z,11μm,10.0s,MS6.0
VSR MLR MLR
comp=N,6μm,11.0s,MS5.9
VSR MLR MLR
comp=E,8μm,11.0s,MS5.9
ANN Anapa 38.52 304*c i*P **P** **01 54 35.9 +1.2**
ANN *i*S **S** **02 00 33.8 +3.5**
ANN *i*SS SS 02 03 14.3 -5.0
ANN *i*SSS 02 03 40.6
ANN pmax pmax
comp=Z,118nm,1.0s,mb5.6
ANN MLR MLR
comp=Z,7μm,15.0s,MS5.6
CLNS Chul'man 38.62 36 *e*P **P** **01 54 37.6 +2.2**
CLNS *e**PP pP 01 54 46.7 +8.2
CLNS *e* 01 56 05.7
CLNS *e*PPP 01 56 25.4
CLNS *e* 01 56 48.2
CLNS *e*S **S** **02 00 31.1 -0.5**
CLNS *e*SS SS 02 03 17.9 -3.5
CLNS *e* 02 04 41.6
CLNS pmax pmax
comp=N,10.0nm,1.0s
CLNS pmax pmax
comp=Z,30nm,1.4s,mb4.8
CLNS pmax pmax
comp=E,19nm,1.0s
CLNS pmax pmax
comp=N,14nm,1.0s
CLNS pmax pmax
comp=Z,15nm,1.4s,mb4.5
CLNS pmax pmax
comp=E,12nm,0.8s
CLNS smax
comp=E,830nm,12.5s
CLNS smax
comp=N,891nm,14.6s
CLNS MLR MLR
comp=E,10μm,12.0s
CLNS MLR MLR
comp=Z,11μm,12.0s,MS5.9
CLNS MLR MLR
comp=N,4μm,9.0s
KSM Kuching 38.65 134 P **P** **01 54 37.5 +1.4**
KSM Kuching 38.65 134 *e*P **P** **01 54 36.9 +0.8**
comp=N,129nm,1.4s,mb5.5
KSM LR LR
comp=Z,7μm,19.0s,MS5.5
KSI Kapahiang 38.80 149 P **P** **01 54 36.3 -1.0**
comp=Z,226nm,0.9s,mb5.9
PPBI Pangkal Pinang 39.22 143 P **P** **01 54 40.5 -0.4**
comp=Z,3μmcomp=Z,75nm,1.1s,mb5.3
KKM Kota Kinabalu 39.31 122 *e*P **P** **01 54 42.3 +0.6**
comp=Z,189nm,1.2s,mb5.7
KKM LR LR
comp=Z,9μm,19.0s,MS5.6
DGAR Diego Garcia 39.50 198 PFAKE 01 54 50.0 +6.8
DGAR LR LR
comp=Z,17μm,19.0s,MS5.9
ASF Jabal al Asfar 39.59 284 P **P** **01 54 45.5 +1.7**
comp=Z,7.5nm,0.8s,mb4.5,baz=254,slow=1.4,SNR=11
ASF LR LR 02 12 55.3
comp=Z,12μm,20.8s,MS5.7,baz=126,slow=39
ASF Jabal al Asfar 39.59 284 P **P** **01 54 45.5 +1.7**
ASF MLR MLR
comp=Z,12μm,20.8s
JNU Nakatsue 39.92 74 *e*P **P** **01 54 47.9 +1.3**
comp=Z,40nm,1.5s,mb4.9
VLA Vladivostok 39.98 58 *i*P **P** **01 54 47.3 +0.4**
VLA pmax pmax
comp=Z,117nm,1.7s,mb5.3
VLA MLR MLR
comp=Z,15μm,19.0s,MS5.9
KLR Kul'dur 40.42 49 *e*P **P** **01 54 46.2 -4.3**
KLR *e*SSS 02 03 46.5
KLR pmax pmax
comp=E,220nm,2.4s
KLR pmax pmax
comp=Z,480nm,2.4s,mb5.8
KLR MLR MLR
comp=N,10μm,11.0s,MS6.3
KLR MLR MLR
comp=E,20μm,11.0s,MS6.3
KLR MLR MLR
comp=Z,29μm,11.0s,MS6.4
STKI Sintang 40.47 134 P **P** **01 54 52.5 +1.2**
comp=Z,104nm,1.9s,mb5.2
TPI Tanjungpandan 40.53 141 P **P** **01 54 57.3 +5.6**
comp=Z,1μmcomp=Z,46nm,1.3s,mb5.0
MOS Moscow 40.64 321 *e*P **P** **01 54 53.9 +1.7**
MOS *e* 01 56 26.6
MOS *e*PPP 01 56 53.3
MOS *e*S **S** **02 01 01.4 -0.4**
MOS *e*SS SS 02 03 53.5 -8.2
MOS *e* 02 04 55.6
MOS pmax pmax
comp=Z,3μm,2.8s,mb6.4
MOS pmax pmax
comp=N,500nm,3.0s
MOS pmax pmax
comp=E,1μm,3.3s
MOS pmax pmax
comp=Z,642nm,2.0s,mb5.9
MOS smax
comp=N,1μm,5.3s
MOS smax
comp=E,2μm,5.3s
MOS MLR MLR
comp=Z,16μm,19.0s,MS5.9
MMAI Mount Meron Ar 40.67 286 P **P** **01 54 53.1 +0.3**
comp=Z,2.9nm,0.7s,mb4.0,baz=80,slow=12,SNR=5.2
MMAI LR LR 02 13 07.4
comp=Z,9μm,19.8s,MS5.7,baz=75,slow=38
LWLI Liwa 40.67 148 P **P** **01 54 50.6 -2.3**
comp=Z,7μmcomp=Z,184nm,0.9s,mb5.7
SIM Simferopol' 40.88 304*de*P **P** **01 54 55.2 +0.8**
SIM 01 56 36.1
SIM *e*S **S** **02 01 05.7 0.0**
SIM SS SS 02 04 02.0 -4.9
SIM pmax pmax
comp=Z,86nm,0.8s,mb5.4
SIM MLR MLR
comp=Z,13μm,20.0s,MS5.8
OBN Obninsk 41.02 320 *e*P **P** **01 54 54.8 -0.6**
comp=Z,391nm,1.4s,mb5.8
OBN LR LR
comp=Z,11μm,19.0s,MS5.7
OBN Obninsk 41.02 320⇑ *i*P **P** **01 54 54.8 -0.6**
OBN *i* 01 56 29.8
OBN *i*S **S** **02 01 09.2 +1.6**
OBN *e*SS SS 02 04 06.0 -3.4
OBN pmax pmax
comp=Z,222nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,9μm,17.0s,MS5.7
OBN Obninsk 41.02 320 P **P** **01 54 56.7 +1.3**
comp=Z,787nm,1.6s,mb6.1,SNR=11
BRTR Keskin Array B 41.27 297 P **P** **01 54 57.5 -0.2**
comp=Z,23nm,1.1s,mb4.7,baz=101,slow=6.4,SNR=38
BRTR LR LR 02 16 33.0
comp=Z,5μm,18.1s,MS5.4,baz=231,slow=43
BRTR Keskin Array B 41.27 297*ce*P **P** **01 54 59.7 +2.0**
BRTR pmax pmax
comp=Z,23nm,1.1s
KASI Kota Agung 41.32 147 P **P** **01 54 54.8 -3.5**
comp=Z,91nm,1.1s,mb5.3
KLMR Klimovskoe 41.64 329*d i*P **P** **01 55 01.0 +0.6**
KLMR *e* 01 56 36.0
KLMR S **S** **02 01 20.2 +3.7**
KLMR pmax pmax
comp=Z,486nm,6.0s
KLMR pmax pmax
comp=Z,498nm,1.5s,mb5.9
KLMR MLR MLR
comp=Z,9μm,12.0s,MS5.9
EIL Elat 41.76 281 P **P** **01 55 01.9 0.0**
comp=Z,14nm,0.9s,mb4.6,baz=122,slow=2.4,SNR=12
EIL LR LR 02 14 47.2
comp=Z,16μm,18.3s,MS5.9,baz=74,slow=40
CSS Prodhromos 42.04 289 *e*P **P** **01 55 04.8 +0.7**
comp=Z,38nm,0.9s,mb5.0
CSS LR LR
comp=Z,14μm,22.0s,MS5.8
ATD Arta Tunnel 42.27 252 P **P** **01 55 05.8 -0.3**
comp=Z,21nm,0.6s,mb4.9,baz=278,slow=22,SNR=7.0
ATD LR LR 02 11 34.7
comp=Z,7μm,19.9s,MS5.5,baz=62,slow=35
YAK Yakutsk 43.02 30 PFAKE 01 55 20.0 +8.4
YAK LR LR
comp=Z,9μm,19.0s,MS5.7
YAK Yakutsk 43.02 30 *e*P **P** **01 55 14.4 +2.8**
YAK *e* 01 57 03.5
YAK *e*S **S** **02 01 43.8 +6.9**
YAK *e* 02 05 34.1
YAK pmax pmax
comp=Z,23nm,0.9s,mb4.9
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,14nm,1.5s
YAK smax
comp=E,292nm,3.3s
YAK smax
comp=N,565nm,4.0s
YAK MLR MLR
comp=Z,7μm,16.0s,MS5.7
YAK MLR MLR
comp=E,6μm,14.0s,MS5.7
YAK MLR MLR
comp=N,3μm,13.0s,MS5.7
MSEY Mahe Island 44.36 222 PFAKE 01 55 30.0 +7.0
MSEY LR LR
comp=Z,4μm,20.0s,MS5.3
AKASG Malin Array Be 44.57 313 P **P** **01 55 22.6 -1.7**
comp=Z,13nm,0.5s,mb5.0,baz=86,slow=8.0,SNR=17
AKASG PP PP 01 57 09.8 +1.7
comp=Z,8.7nm,0.9s,baz=85,slow=7.4,SNR=4.4
AKASG LR LR 02 17 38.8
comp=Z,9μm,18.3s,MS5.7,baz=110,slow=41
AKASG Malin Array Be 44.57 313*ce*P **P** **01 55 24.2 0.0**
AKASG pmax pmax
comp=Z,13nm,0.5s
AKBB Malin Array Si 44.57 313 *e*P **P** **01 55 22.6 -1.7**
AKBB *e* 01 57 10.0
AKBB Malin Array Si 44.57 313 *e*P **P** **01 55 22.6 -1.6**
AKBB *e* 01 57 10.0
KIEV Kiev 44.58 313 *e*P **P** **01 55 22.7 -1.6**
comp=Z,37nm,0.8s,mb5.3
KIEV *e*PcP PcP 01 57 10.2 +3.0
KIEV LR LR
comp=Z,10μm,19.0s,MS5.8
KIEV Kiev 44.58 313 *e*P **P** **01 55 22.7 -1.6**
KIEV *e* 01 57 10.2
KIEV pmax pmax
comp=Z,37nm,0.8s,mb5.3
KIEV MLR MLR
comp=Z,10μm,19.0s,MS5.8
COCO West Island 44.64 161 PFAKE 01 55 40.0 +15
COCO LR LR
comp=Z,6μm,19.0s,MS5.5
TLCR 44.64 305⇑ P **P** **01 55 25.5 +0.6**
KIS Kishinev 44.64 307 *e*P **P** **01 55 25.0 +0.1**
KIS *e* 01 57 12.0
KIS *e* 01 57 50.0
KIS *e*S **S** **02 02 03.0 +2.0**
KIS *e*SS SS 02 05 23.0 +2.3
KIS pmax pmax
comp=Z,600nm,2.6s,mb6.0
KIS pmax pmax
comp=Z,900nm,3.0s
KIS smax
comp=N,2μm,13.0s
KIS MLR MLR
comp=N,7μm,14.0s,MS5.9
KIS MLR MLR
comp=E,8μm,14.0s,MS5.9
KIS MLR MLR
comp=Z,9μm,14.0s,MS5.8
TIRR Tirgusor 44.94 304 *e*P **P** **01 55 27.8 +0.5**
comp=Z,264nm,2.3s,mb5.7
TIRR Tirgusor 44.94 304 *e*P **P** **01 55 27.8 +0.5**
TIRR pmax pmax
comp=Z,264nm,2.3s,mb5.7
LEOM Leova 45.03 307 P **P** **01 55 28.3 +0.3**
MAJO Matsushiro 45.30 67 *e*P **P** **01 55 29.8 -0.4**
comp=Z,28nm,0.8s,mb5.2
MAJO *e*S **S** **02 02 00.6 -10**
MAJO LR LR
comp=Z,10μm,22.0s,MS5.7
MAJO Matsushiro 45.30 67 *e*P **P** **01 55 29.8 -0.4**
MAJO *e*S **S** **02 02 00.6 -10**
MAJO pmax pmax
comp=Z,28nm,0.8s,mb5.1
MAJO MLR MLR
comp=Z,10μm,22.0s,MS5.7
MJAR Matsushiro Arr 45.30 67 P **P** **01 55 29.3 -0.9**
comp=Z,25nm,1.0s,mb5.0,baz=280,slow=10,SNR=18
MJAR LR LR 02 15 51.8
comp=Z,10μm,19.3s,MS5.8,baz=280,slow=38
MJAR Matsushiro Arr 45.30 67 P **P** **01 55 29.3 -0.9**
MJAR pmax pmax
comp=Z,25nm,1.0s
MJAR MLR MLR
comp=Z,10μm,19.3s
BBKI Banjar Baru 45.30 133 P **P** **01 55 31.6 +1.1**
comp=Z,4μmcomp=Z,128nm,1.5s,mb5.5
PUL Pulkovo 45.55 325 *i*P **P** **01 55 33.7 +1.8**
PUL pmax pmax
comp=Z,70nm,0.9s,mb5.6
PUL MLR MLR
comp=Z,19μm,17.0s,MS6.1
SMRI Semarang 45.62 141 P **P** **01 55 34.4 +1.5**
comp=Z,7μmcomp=Z,177nm,1.9s,mb5.7
MNK Minsk 45.84 318 *e*P **P** **01 55 32.0 -2.2**
MNK *e* 01 57 26.0
MNK *e*PPP 01 58 10.0
MNK *e*S **S** **02 02 16.0 -2.1**
MNK *e*SS SS 02 05 25.0 -17
MNK *e*SSS 02 06 34.0
MNK pmax pmax
comp=Z,410nm,2.0s,mb6.0
MNK pmax pmax
comp=E,280nm,1.8s
MNK MLR MLR
comp=Z,46μm,15.0s,MS6.5
MNK MLR MLR
comp=E,34μm,15.0s
JOF Joensuu 46.02 330 *e*P **P** **01 55 35.9 +0.4**
KBKI Kotabaru 46.02 132 P **P** **01 55 36.9 +0.8**
comp=E,4μmcomp=E,87nm,1.2s,mb5.5
VRI Vrincioaia 46.09 306⇑ P **P** **01 55 36.9 +0.5**
PLOR Plostina 46.15 306⇓ P **P** **01 55 37.2 +0.4**
MLR Muntele Rosu 46.66 305⇓ P **P** **01 55 41.5 +0.7**
LVZ Lovozero 46.69 337 *e*P **P** **01 55 42.4 +1.7**
comp=E,81nm,0.9s,mb5.7
LVZ LR LR
comp=Z,10μm,19.0s,MS5.8
LVZ Lovozero 46.69 337⇑ *e*P **P** **01 55 41.2 +0.5**
LVZ pmax pmax
comp=Z,64nm,1.5s,mb5.3
LVZ MLR MLR
comp=Z,15μm,22.0s,MS5.9
PCI Palu 46.72 126 P **P** **01 55 43.1 +1.4**
comp=Z,629nmcomp=Z,32nm,1.2s,mb5.1
APA Apatity 46.97 336⇑ *i*P **P** **01 55 43.0 +0.1**
APA *i* 01 57 36.0
APA *i*S **S** **02 02 27.0 -6.9**
APA pmax pmax
comp=Z,1μm,5.6s
APA pmax pmax
comp=Z,39nm,2.0s,mb5.0
APA MLR MLR
comp=Z,20μm,14.0s,MS6.2
VSU Vasula 47.06 323 *i*P **P** **01 55 43.5 -0.3**
VSU pmax pmax
comp=Z,36nm,1.1s,mb5.2
VSU MLR MLR
comp=Z,17μm,17.0s,MS6.1
BURAR Bucovina Array 47.09 308⇓ P **P** **01 55 44.1 -0.1**
BUR08 Bucovina Ar. S 47.10 308 *e*P **P** **01 55 44.1 -0.1**
FURI Furi 47.13 252 *e*P **P** **01 55 45.6 +0.7**
comp=Z,63nm,1.0s,mb5.5
MRSI Marisa 47.26 122 P **P** **01 55 46.6 +0.7**
comp=Z,2μmcomp=Z,82nm,1.0s,mb5.6
VOIR 47.29 305⇑ P **P** **01 55 45.3 -0.5**
TIXI Tiksi 47.50 18 *e*P **P** **01 55 46.7 -0.4**
comp=Z,844nm,2.1s,mb6.4
TIXI *e* 02 01 03.7
TIXI LR LR
comp=Z,9μm,22.0s,MS5.7
TIXI Tiksi 47.50 18 *e*P **P** **01 55 47.2 +0.1**
TIXI *e* 01 57 40.1
TIXI *e*S **S** **02 02 39.3 -2.2**
TIXI pmax pmax
comp=Z,297nm,4.5s
TIXI pmax pmax
comp=E,65nm,1.7s
TIXI pmax pmax
comp=N,43nm,1.9s
TIXI pmax pmax
comp=Z,303nm,2.2s,mb5.9
TIXI MLR MLR
comp=Z,6μm,11.0s,MS5.8
YSS Yuzh-Sakhalins 47.66 53 *e*P **P** **01 55 47.4 -1.2**
comp=Z,56nm,1.0s,mb5.5
YSS LR LR
comp=Z,3μm,19.0s,MS5.3
YSS Yuzh-Sakhalins 47.66 53 *e*P **P** **01 55 48.0 -0.6**
YSS *e**SP sP 01 55 54.1 +1.1
YSS *e* 01 57 23.0
YSS *e*S **S** **02 02 42.0 -2.3**
YSS pmax pmax
comp=Z,260nm,2.0s,mb5.9
YSS pmax pmax
comp=Z,600nm,3.0s
YSS MLR MLR
comp=Z,11μm,13.0s,MS6.0
YSS MLR MLR
comp=E,8μm,12.0s
ASAJ Asahikawa 47.72 57 LR LR 02 17 29.1
comp=E,11μm,18.3s,MS5.9,baz=98,slow=38
ASAJ Asahikawa 47.72 57 *e*P **P** **01 55 50.9 +1.8**
comp=E,40nm,1.3s,mb5.3
SGSI Sangihe 47.85 116 P **P** **01 55 54.9 +4.4**
comp=E,150nm,1.5s,mb5.8
LVV L'vov 47.86 311 *e*P **P** **01 55 50.5 +0.4**
LVV *e* 01 57 47.1
LVV *e*S **S** **02 02 46.9 -0.2**
LVV *e* 02 03 02.1
LVV MLR MLR
comp=N,2μm,18.0s,MS5.7
LVV MLR MLR
comp=Z,7μm,18.0s,MS5.7
LVV MLR MLR
comp=E,6μm,17.0s,MS5.7
FINES FINESS Array B 47.98 327 P **P** **01 55 50.2 -0.6**
comp=E,45nm,0.7s,mb5.6,baz=101,slow=9.9,SNR=36
FINES LR LR 02 17 32.7
comp=E,18μm,18.6s,MS6.1,baz=107,slow=38
FINES FINESS Array B 47.98 327 P **P** **01 55 50.3 -0.6**
FINES pmax pmax
comp=Z,45nm,0.7s
FINES MLR MLR
comp=Z,18μm,18.6s
KAF Kangasniemi 48.02 328 *e*P **P** **01 55 50.4 -0.8**
KAF pmax pmax
comp=Z,48nm,1.0s,mb5.5
TTSI Tana Toraja 48.25 128 P **P** **01 55 54.1 +0.5**
comp=Z,3μmcomp=Z,120nm,1.6s,mb5.7
BMR Baia Mare 48.25 308 P **P** **01 55 53.4 +0.2**
ERM Erimo 48.34 59 *e*P **P** **01 55 55.2 +1.3**
comp=Z,63nm,1.1s,mb5.6
ERM LR LR
comp=Z,9μm,21.0s,MS5.7
ERM Erimo 48.34 59 *e*P **P** **01 55 55.2 +1.3**
ERM pmax pmax
comp=Z,63nm,1.1s,mb5.6
ERM MLR MLR
comp=Z,9μm,21.0s,MS5.7
SUW Suwalki 48.51 317 *e*P **P** **01 55 53.8 -1.3**
SUW *e*pP pP 01 55 57.4 -0.9
SUW *e*sP sP 01 55 58.3 -1.1
SUW *e*S **S** **02 02 59.1 +3.0**
SUW LMZ 02 16 02.7
comp=Z,21μm,25.9s
SUW Suwalki 48.51 317 *e*P **P** **01 55 53.7 -1.4**
comp=Z,94nm,0.9s,mb5.8
SUW Suwalki 48.51 317 *e*P **P** **01 55 53.8 -1.3**
SUW *e*S **S** **02 02 59.1 +3.0**
SUW MLR MLR
comp=Z,21μm,25.9s,MS6.0
KWP Kalwaria Pacla 48.72 311 *e*P **P** **01 55 56.5 -0.3**
KWP *e*sP sP 01 56 00.9 -0.3
KWP *e*S **S** **02 03 03.8 +4.5**
KWP LMZ 02 17 52.2
comp=Z,9μm,22.4s
KWP Kalwaria Pacla 48.72 311 *e*P **P** **01 55 56.7 -0.1**
comp=Z,141nm,1.3s,mb5.8
KWP LR LR
comp=Z,9μm,19.0s,MS5.8
KWP Kalwaria Pacla 48.72 311 *e*P **P** **01 55 56.5 -0.3**
KWP *e*S **S** **02 03 03.8 +4.5**
KWP MLR MLR
comp=Z,9μm,22.4s,MS5.7
DRGR 48.83 307⇑ P **P** **01 55 57.8 +0.1**
VTS Vitosha 48.86 302⇑ P **P** **01 55 58.0 0.0**
GZR Gura Zlata 48.89 305⇑ P **P** **01 55 58.1 0.0**
SPSI Sidrap Palu 48.89 129 P **P** **01 56 01.0 +2.5**
comp=Z,2μmcomp=Z,36nm,2.4s,mb5.0
UZH Uzhgorod 49.02 310 *e*P **P** **01 55 58.0 -1.1**
UZH *i* 01 56 03.0
UZH *e* 01 56 13.7
UZH *e* 01 57 57.7
UZH *e*S **S** **02 03 00.0 -3.5**
UZH *e*PS 02 03 11.0
UZH *e* 02 05 49.0
UZH MLR MLR
comp=N,6μm,16.0s,MS5.9
UZH MLR MLR
comp=E,7μm,16.0s,MS5.9
UZH MLR MLR
comp=Z,4μm,16.0s,MS5.5
KOLS Kolonicke sedl 49.02 310 *e*P **P** **01 55 59.6 +0.5**
comp=Z,22nm,1.4s,mb5.0
KOLS *e*S **S** **02 03 06.2 +2.7**
KOLS *e*ScS ScS 02 05 54.2 +2.8
KOLS *e*SS SS 02 06 42.7 +8.5
KOLS LR LR
comp=Z,7μm,27.6s,MS5.5
KOLS Kolonicke sedl 49.02 310 *e*P **P** **01 55 59.6 +0.5**
KOLS pmax pmax
comp=Z,23nm,1.4s,mb5.0
CRVS Cervenica-Dubn 49.56 310 *e*P **P** **01 56 05.2 +2.0**
comp=Z,122nm,2.6s,mb5.5
CRVS *e*S **S** **02 03 14.8 +3.7**
CRVS *e*SS SS 02 06 46.2 +3.4
CRVS LR LR
comp=Z,6μm,28.1s,MS5.4
CRVS Cervenica-Dubn 49.56 310 *e*P **P** **01 56 05.2 +2.0**
CRVS pmax pmax
comp=Z,122nm,2.6s,mb5.5
KAPI Kappang 49.65 130 LR LR 02 19 03.0
comp=Z,5μm,21.6s,MS5.5,baz=319,slow=39
KAPI Kappang 49.65 130 *e*P **P** **01 56 05.6 +1.3**
comp=Z,18nm,1.1s,mb5.0
KAPI LR LR
comp=Z,5μm,22.0s,MS5.5
KAPI Kappang 49.65 130 P **P** **01 56 07.1 +2.8**
comp=Z,452nmcomp=Z,19nm,1.1s,mb5.0
BZS Buzias 49.68 306⇑ P **P** **01 56 03.9 -0.3**
WAR Warsaw 49.76 314 *e*P **P** **01 56 07.7 +3.0**
WAR *e* 01 58 06.7
WAR MLR MLR
comp=Z,18μm,24.9s,MS6.0
KEV Kevo 49.98 338 *e*P **P** **01 56 06.9 +0.8**
comp=Z,468nm,2.1s,mb6.2
KEV LR LR
comp=Z,13μm,20.0s,MS5.9
KEV Kevo 49.98 338 *e*P **P** **01 56 06.9 +0.8**

KEV pmax pmax
comp=Z,468nm,2.1s,mb6.2
KEV MLR MLR
comp=Z,13µm,20.0s,MS5.9
YUK Yuzh-Kuril'sk 50.06 56 *e*P **P** **01 56 05.6 -1.5**
YUK *i* 01 57 59.1
YUK *i* S **S** **02 03 18.1 -0.1**
YUK pmax pmax
comp=Z,2µm,1.6s,mb6.9
YUK pmax pmax
comp=N,520nm,1.4s
YUK pmax pmax
comp=E,770nm,1.4s
YUK pmax pmax
comp=Z,1µm,1.4s,mb6.7
YUK smax
comp=N,2µm,2.0s
YUK smax
comp=E,660nm,2.0s
YUK MLR MLR
comp=E,7µm,17.0s
YUK MLR MLR
comp=Z,8µm,17.0s,MS5.8
BKSI Bulukumba 50.12 129 P **P** **01 56 11.8 +3.9**
comp=Z,795nmcomp=Z,32nm,1.2s,mb5.2
KECS Kecovo 50.23 309 *e*P **P** **01 56 11.9 +3.6**
comp=Z,12nm,1.6s,mb4.7
KECS Kecovo 50.23 309 *e*P **P** **01 56 11.9 +3.6**
NIE Niedzica 50.29 311 *e*P **P** **01 56 09.2 +0.5**
NIE *e* 01 57 32.5
ARCES ARCESS Array B 50.40 337 P **P** **01 56 09.4 +0.1**
comp=Z,20nm,0.8s,mb5.2,baz=86,slow=6.4,SNR=23
ARCES LR LR 02 18 07.4
ARCES ARCESS Array B 50.40 337 P **P** **01 56 09.4 +0.1**
ARCES pmax pmax
comp=Z,21nm,0.8s
ARCES MLR MLR
comp=Z,12µm,18.1s
ARE0 ARCESS Array S 50.40 337 *e*P **P** **01 56 10.1 +0.8**
OJC Ojcow 50.58 312 *e*P **P** **01 56 09.8 -1.1**
OJC *e*pP pP 01 56 14.4 +0.3
OJC *e*PcP PcP 01 57 30.7 +2.1
OJC *e*PP PP 01 58 06.1 -0.5
OJC *e*sS sS 02 03 28.7 -1.8
OJC L 02 16 32.6
comp=Z,10nm,22.2s
OJC Ojcow 50.58 312 *e*P **P** **01 56 11.3 +0.3**
comp=Z,143nm,2.0s,mb5.5
OJC Ojcow 50.58 312 *e*P **P** **01 56 09.8 -1.1**
OJC *e* 01 57 30.7
OJC *e* 01 58 06.1
OJC *e**SS sS 02 03 28.7 -1.8
PSZ Piszkesteto 50.66 309 *e*P **P** **01 56 12.0 +0.4**
comp=Z,431nm,2.8s,mb5.9
PSZ LR LR
comp=Z,7µm,21.0s,MS5.6
PSZ Piszkesteto 50.66 309 *e*P **P** **01 56 12.0 +0.4**
PSZ pmax pmax
comp=Z,431nm,2.8s,mb5.9
PSZ MLR MLR
comp=Z,7µm,21.0s,MS5.6
KDI Kendari 50.83 126 P **P** **01 56 18.7 +5.4**
comp=Z,956nmcomp=Z,38nm,1.8s,mb5.0
KTK1 Kautokeino 51.01 336 *e*P **P** **01 56 19.5 +5.6**
KTK1 AMS AMS 02 18 46.3
comp=Z,38µm,12.6s,MS6.6
VYHS Vyhne 51.32 310 *e*P **P** **01 56 16.5 -0.1**
comp=Z,35nm,1.7s,mb5.0
VYHS *e*PP PP 01 58 19.0 +5.6
VYHS *e*S **S** **02 03 36.5 +0.9**
VYHS *e*ScS ScS 02 06 02.9 -4.2
VYHS *e*SS SS 02 07 16.8 +5.9
VYHS LR LR
comp=Z,5µm,25.9s,MS5.4
VYHS Vyhne 51.32 310 *e*P **P** **01 56 16.5 -0.1**
VYHS pmax pmax
comp=Z,35nm,1.7s,mb5.0
KOLL Kolacno 51.60 310 *e*P **P** **01 56 17.9 -0.8**
KOLL Kolacno 51.60 310 *e*P **P** **01 56 17.9 -0.8**
OKC Ostrava-Krasne 51.67 311 *e*P **P** **01 56 18.7 -0.4**
OKC *e*S **S** **02 03 45.9 +5.6**
OKC MLR MLR
comp=Z,4µm,13.8s,MS5.6
OKC Ostrava-Krasne 51.67 311 *e*P **P** **01 56 18.7 -0.4**
OKC *e*pP pP 01 56 23.1 +0.8
OKC *e*S **S** **02 03 45.9 +5.6**
OKC AMS AMS 02 21 40.0
comp=Z,4µm,13.8s
PKSM Moragy 51.68 307 ⇑P **P** **01 56 18.0 -1.3**
GKP Gorka Klasztor 52.04 316 *e*P **P** **01 56 20.1 -1.8**
GKP *e**SP sP 01 56 25.5 -0.8
GKP *e* 01 58 22.8
GKP *e*S **S** **02 03 49.2 +3.9**
GKP MLR MLR
comp=Z,15µm,19.5s,MS6.0
MORC Moravsky Berou 52.06 311 *e*P **P** **01 56 21.0 -1.1**
comp=Z,47nm,1.3s,mb5.3
MORC Moravsky Berou 52.06 311 *e*P **P** **01 56 21.0 -1.1**
MORC pmax pmax
comp=Z,47nm,1.3s,mb5.3
LBMI Labuha 52.13 119 P **P** **01 56 28.2 +5.2**
comp=Z,4µmcomp=Z,132nm,2.2s,mb5.5
ZST Bratislava 52.50 309 *e*P **P** **01 56 28.6 +3.2**
comp=Z,9.0nm,0.9s,mb4.7
ZST *e*ScS ScS 02 06 20.3 +5.0
ZST LR LR
comp=Z,4µm,18.5s,MS5.5
ZST Bratislava 52.50 309 *e*P **P** **01 56 28.6 +3.2**
ZST pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TRO Tromso 52.65 337 *e*P **P** **01 56 27.3 +1.2**
TRO AMS AMS 02 19 37.9
comp=Z,16µm,14.5s,MS6.2
TRO Tromso 52.65 337 *e*P **P** **01 56 27.3 +1.2**
TRO MLR MLR
comp=Z,16µm,14.5s,MS6.2
VRAC Vranov 52.72 311 P **P** **01 56 26.6 -0.3**
comp=Z,16nm,0.8s,mb5.0,baz=108,slow=7.5,SNR=13
VRAC Vranov 52.72 311 P **P** **01 56 26.6 -0.4**
VRAC pmax pmax
comp=Z,16nm,0.8s
DPC Dobruska-Polom 52.80 312 *e*P **P** **01 56 27.0 -0.5**
DPC *e*S **S** **02 03 56.0 +0.2**
DPC MLR MLR
comp=Z,10µm,15.8s,MS6.0
DPC Dobruska-Polom 52.80 312 *e*P **P** **01 56 27.0 -0.5**
DPC *e*pP pP 01 56 31.4 +0.7
DPC *e*S **S** **02 03 56.0 +0.2**
DPC AMS AMS 02 21 00.0
comp=Z,10µm,15.8s
UPC Upice 52.98 312 *e*P **P** **01 56 28.6 -0.3**
UPC Upice 52.98 312 *e*P **P** **01 56 28.6 -0.3**
BSD Bornholm Skovb 53.33 318 *e*P **P** **01 56 32.3 +1.0**
BSD *i* S **S** **02 04 06.8 +4.0**
BSD pmax pmax
comp=Z,32nm,1.1s,mb5.2
BSD MLR MLR
comp=Z,10µm,16.0s,MS6.0
CONA Conrad Observa 53.36 309 ⇑*i*pP **P** **01 56 31.0 -0.7**
comp=Z,50nm,1.3s,mb5.3
SEY Seymchan 53.42 32 ⇓*e*P **P** **01 56 32.8 +0.9**
TREC Trest 53.44 311 *e*P **P** **01 56 32.0 -0.3**
TREC *e*S **S** **02 04 09.4 +4.8**
TREC MLR MLR
comp=Z,8µm,17.9s,MS5.8
TREC Trest 53.44 311 *e*P **P** **01 56 32.0 -0.3**
TREC *e*pP pP 01 56 36.4 +0.9
TREC *e*S **S** **02 04 09.4 +4.8**
TREC AMS AMS 02 21 20.0
comp=Z,8µm,17.9s
ARSA Arzberg 53.68 308 ⇑*i*pP **P** **01 56 33.2 -0.8**
comp=Z,21nm,1.3s,mb4.9
BJO Bjornoya 53.76 343 *e*P **P** **01 56 40.7 +6.5**
BJO AMS AMS 02 24 14.6
comp=Z,5µm,21.4s,MS5.5
BJO1 Bjornoya 53.80 342 *e*P **P** **01 56 40.7 +6.1**
BJO1 LR LR
comp=Z,5µm,21.4s,MS5.5
MOR8 Moi Rana 53.81 332 *e*P **P** **01 56 33.0 -1.6**
MOR8 *e*pP pP 01 56 37.0 -0.9
HFS Hagfors 53.87 324 P **P** **01 56 34.2 -1.0**
comp=Z,23nm,0.5s,mb5.4,baz=94,slow=7.9,SNR=46
HFS Hagfors 53.87 324 P **P** **01 56 34.2 -1.0**
HFS pmax pmax
comp=Z,23nm,0.5s
PVCC Panska Ves 53.89 312 *e*P **P** **01 56 32.7 -2.9**
PVCC *e* 01 56 38.8
PVCC MLR MLR
comp=Z,13µm,15.2s,MS6.1
PVCC Panska Ves 53.89 312 *e*P **P** **01 56 32.7 -2.9**
PVCC *e*pP pP 01 56 38.8 0.0
PVCC AMS AMS 02 21 40.0
comp=Z,13µm,15.2s
PRU Pruhonice 53.97 312 *e*P **P** **01 56 35.8 -0.4**
PRU *e*S **S** **02 04 15.5 +3.7**
PRU MLR MLR
comp=Z,11µm,15.8s,MS6.0
PRU Pruhonice 53.97 312 *e*P **P** **01 56 35.8 -0.4**
PRU *e*pP pP 01 56 40.2 +0.9
PRU *e*S **S** **02 04 15.5 +3.7**
PRU AMS AMS 02 21 50.0
comp=Z,11µm,15.8s
PRA Prague 54.03 312 P **P** **01 56 36.0 -0.6**
PRA PP PP 01 58 46.0 +8.2
PRA S **S** **02 04 16.0 +3.4**
PRA AMS AMS 02 22 00.0
SOKA Soboth 54.09 308 ⇓*i*pP **P** **01 56 36.2 -0.9**
comp=Z,41nm,0.9s,mb5.4
RUE Ruedersdorf 54.19 315 *e*P **P** **01 56 41.3 +3.6**
comp=Z,125nm,1.6s,mb5.6
BRG Berggiesshubel 54.25 313 *e*P **P** **01 56 42.1 +3.9**
comp=Z,99nm,1.7s,mb5.5
BRG Berggiesshubel 54.25 313 *e*P **P** **01 56 37.3 -0.9**
comp=Z,18nm,1.2s,mb4.9
BRG *i* pP 01 56 41.9 +0.5
comp=Z,20nm,0.9s
BRG *i* 01 57 21.5
comp=Z,27nm,1.0s
BRG S **S** **02 04 15.0 -0.5**
BRG SS SS 02 08 00.0 +3.0
BRG
comp=N,9µm,15.2s
BRG
comp=E,12µm,15.7s
BRG
comp=Z,16µm,15.7s
ORI Oriolo Calabro 54.30 299 P **P** **01 56 42.4 +3.7**
ORI Oriolo Calabro 54.30 299 P **P** **01 56 42.4 +3.7**
MOA Molln 54.44 309 ⇑*i*P **P** **01 56 37.0 -2.6**
comp=Z,15nm,0.9s,mb4.9
OBKA Obir 54.45 308 ⇑*i*P **P** **01 56 36.7 -3.0**
comp=Z,31nm,1.8s,mb4.9
RGNG Rignano Grg 54.60 302 P **P** **01 56 43.3 +2.4**
GEC2 GERESS Array S 54.66 311 *e*P **P** **01 56 45.2 +4.0**
comp=Z,51nm,1.5s,mb5.3
GEC2 *e*PP PP 01 58 48.7 +5.2
GEC2 GERESS Array S 54.66 311 *e*P **P** **01 56 45.2 +4.0**
GEC2 *e* 01 58 48.7
GEC2 pmax pmax
comp=Z,51nm,1.5s,mb5.3
GERES GERESS Array B 54.66 311 P **P** **01 56 40.7 -0.5**
comp=Z,4.8nm,0.8s,mb4.6,baz=87,slow=6.8,SNR=23
GERES PKP2bc 02 27 09.8
comp=Z,0.2nm,0.4s,baz=282,slow=6.4,SNR=3.8
GERES GERESS Array B 54.66 311 P **P** **01 56 40.7 -0.5**
GERES ⇑*e* 02 27 09.8
GERES GERESS Array B 54.66 311 P **P** **01 56 40.7 -0.5**
KHC Kasperske Hory 54.70 311 *e*P **P** **01 56 40.2 -1.3**
KHC *e*S **S** **02 04 23.5 +1.8**
KHC MLR MLR
comp=Z,7µm,16.0s,MS5.8
KHC Kasperske Hory 54.70 311 *e*P **P** **01 56 40.2 -1.3**
KHC *e*pP pP 01 56 45.0 +0.3
KHC *e*S **S** **02 04 23.5 +1.8**
KHC AMS AMS 02 22 10.0
comp=Z,7µm,16.0s
COP Copenhagen 54.71 319 *e*P **P** **01 56 43.4 +2.0**
COP *i* S **S** **02 04 28.3 +6.8**
COP MLR MLR
comp=Z,5µm,18.0s,MS5.7
CLL Collm 54.79 314 *e*P **P** **01 56 45.4 +3.3**
comp=Z,99nm,2.0s,mb5.5
CLL Collm 54.79 314 *i* P **P** **01 56 42.7 +0.6**
comp=Z,99nm,2.0s,mb5.5
CLL *e* 01 56 56.0
CLL *e*S **S** **02 04 23.0 +0.3**
CLL LR LR
comp=Z,10µm,21.8s,MS5.8
CLL Collm 54.79 314 *i* P **P** **01 56 42.7 +0.6**
CLL *e* 01 56 56.0
CLL *e*S **S** **02 04 23.0 +0.3**
CLL pmax pmax
comp=Z,99nm,2.0s,mb5.5
CLL MLR MLR
comp=Z,10µm,21.8s,MS5.8
FG5 Orsara di Pugl 54.92 301 P **P** **01 56 45.0 +1.8**
comp=Z,93nm,1.1s,mb5.7
FG5 Orsara di Pugl 54.92 301 P **P** **01 56 45.0 +1.8**
NB2 NORSAR Subarra 55.08 326 P **P** **01 56 42.7 -1.3**
comp=Z,92nm,1.1s,mb5.7,baz=87,slow=7.4
NOA NORSAR Array B 55.08 326 P **P** **01 56 42.7 -1.4**
comp=Z,15nm,0.7s,mb5.1,baz=94,slow=6.7,SNR=40
NOA LR LR 02 21 42.0
comp=Z,14µm,18.2s,MS6.1,baz=95,slow=38
NOA NORSAR Array B 55.08 326 P **P** **01 56 42.7 -1.4**
NOA LR LR 02 21 42.0
NOA NORSAR Array B 55.08 326 P **P** **01 56 42.7 -1.3**
NOA pmax pmax
comp=Z,15nm,0.7s
NOA MLR MLR
comp=Z,14µm,18.3s
SWI Sorong 55.15 116 P **P** **01 56 44.7 -0.5**
comp=Z,3µmcomp=Z,103nm,2.1s,mb5.5
WET Wettzell 55.16 311 *e*P **P** **01 56 48.7 +3.9**
comp=Z,103nm,1.9s,mb5.5
WET Wettzell 55.16 311 *e*P **P** **01 56 48.7 +3.9**
WET pmax pmax
comp=Z,103nm,1.9s,mb5.5
TANN Tannenbergstha 55.24 313 *e*P **P** **01 56 49.2 +3.8**
comp=Z,67nm,1.8s,mb5.4
NAO01 NORSAR Array S 55.25 325 *e*P **P** **01 56 43.8 -1.4**
comp=Z,20nm,0.8s,mb5.2
NAO01 LR LR
comp=Z,12µm,20.0s,MS6.0
SCLL Scilla 55.28 297 P **P** **01 56 47.7 +1.9**
comp=Z,52nm,1.0s,mb5.5
NKC Novy Kostel 55.28 312 *e*P **P** **01 56 44.8 -0.8**
NKC *e*S **S** **02 04 34.2 +4.9**
NKC Novy Kostel 55.28 312 *e*P **P** **01 56 44.8 -0.8**
NKC *e*S **S** **02 04 34.2 +4.9**
NKC AMS AMS 02 22 40.0
PTCC Patocco-Chiusa 55.28 308 P **P** **01 56 48.6 +2.9**
comp=Z,9.5nm,0.9s,mb4.8
WERN Wernitzgruen 55.32 312 *e*P **P** **01 56 49.8 +3.9**
comp=Z,76nm,1.9s,mb5.4
GUNZ Gunzen 55.33 312 *e*P **P** **01 56 49.9 +3.9**
comp=Z,78nm,1.8s,mb5.4
WERD Werda 55.34 313 *e*P **P** **01 56 49.8 +3.7**
comp=Z,70nm,1.8s,mb5.4
OSL Oslo 55.37 324 *e*P **P** **01 56 44.3 -1.8**
SPITS Spitsbergen Ar 55.40 347 P **P** **01 56 45.9 -0.2**
comp=Z,11nm,0.7s,mb5.0,baz=106,slow=8.8,SNR=7.8
SPITS Spitsbergen Ar 55.40 347 P **P** **01 56 45.9 -0.2**
SPITS pmax pmax
comp=Z,11nm,0.7s
SPB4 Spitsbergen Ar 55.41 347 *e*P **P** **01 56 47.2 +1.0**
ROTZ Rotzenmuhle 55.50 312 *e*P **P** **01 56 51.6 +4.4**
comp=Z,116nm,1.9s,mb5.6
NEUB Neuenburg 55.57 314 *e*P **P** **01 56 51.4 +3.7**
comp=Z,108nm,1.7s,mb5.6
MOX Moxa 55.75 313 *e*P **P** **01 56 48.0 -1.0**
MOX *e* 01 56 53.0
MOX *e*S **S** **02 04 41.0 +5.4**
MOX
comp=Z,9µm,20.0s
MOX Moxa 55.75 313 *e*P **P** **01 56 52.8 +3.8**
comp=Z,102nm,1.9s,mb5.5
MOX Moxa 55.75 313 *e*P **P** **01 56 48.0 -1.0**
MOX *e*S **S** **02 04 41.0 +5.4**
MOX MLR MLR
comp=Z,9µm,20.0s,MS5.9
KONO Kongsberg 55.95 324 *e*P **P** **01 56 49.1 -1.1**
comp=Z,139nm,1.5s,mb5.8
KONO *e*PP PP 01 58 54.6 -0.2
KONO LR LR
comp=Z,18µm,19.0s,MS6.2
KONO Kongsberg 55.95 324 *e*P **P** **01 56 49.2 -1.1**
KONO *e* 01 58 54.6
KONO pmax pmax
comp=Z,139nm,1.5s,mb5.8
KONO MLR MLR
comp=Z,18µm,19.0s,MS6.2
CING Cingoli 55.97 304 P **P** **01 56 54.2 +3.4**
AQU L'Aquila 56.05 303 P **P** **01 56 52.9 +1.6**
AQU L'Aquila 56.05 303 P **P** **01 56 52.9 +1.6**
GRA1 Grafenberg Arr 56.14 312 *e*P **P** **01 56 55.7 +3.9**
comp=Z,199nm,2.0s,mb5.8
GRA1 *e*PP PP 01 59 03.0 +6.3
GRA1 LR LR
comp=Z,17µm,18.3s,MS6.2
GRF Grafenberg Arr 56.14 312 *e*P **P** **01 56 55.7 +3.9**
comp=Z,199nm,2.0s,mb5.8
GRF *e*PP PP 01 59 03.0 +6.3
GRF *e*L 02 23 26.2
comp=Z,17µm,18.3s
GRF Grafenberg Arr 56.14 312 *e*P **P** **01 56 55.7 +3.9**
GRF *e* 01 59 03.0
GRF pmax pmax
comp=Z,199nm,2.0s,mb5.8
GRF MLR MLR
comp=Z,17µm,18.3s,MS6.2
GRF Grafenberg Arr 56.14 312 *e*P **P** **01 56 55.7 +3.9**
GRF *e* 01 59 03.0
GRF pmax pmax
comp=Z,199nm,2.0s,mb5.8
GRF MLR MLR
comp=Z,17µm,18.3s,MS6.2
GRFO Grafenberg 56.14 312 *e*P **P** **01 56 52.4 +0.6**
comp=Z,29nm,1.1s,mb5.2
GRFO *e* 01 59 04.9
GRFO Grafenberg 56.14 312 *e*P **P** **01 56 52.4 +0.5**
GRFO *e* 01 59 04.9
GRFO pmax pmax
comp=Z,29nm,1.1s,mb5.2
WTTA Wattenberg 56.29 309 ⇑*i*P **P** **01 56 50.4 -2.5**
comp=Z,21nm,1.1s,mb5.1
WATA Walderalm 56.31 309 *i* pP **P** **01 56 53.0 -0.1**
comp=Z,15nm,0.7s,mb5.1
HVZN Vizzini 56.32 296 P **P** **01 56 54.5 +1.2**
FUR Furstenfeldbru 56.37 310 *e*P **P** **01 56 57.6 +4.1**
comp=Z,152nm,1.7s,mb5.8
FUR Furstenfeldbru 56.37 310 *e*P **P** **01 56 57.6 +4.1**
FUR pmax pmax
comp=Z,152nm,1.7s,mb5.8
KBS Kingsbay 56.44 347 *e* **P** **01 56 55.5 +2.0**
KBS *e*P pP 01 56 59.1 +2.3
KBS AMS AMS 02 24 14.6
comp=Z,8µm,15.6s,MS5.9
KBS Kingsbay 56.44 347 *e*P **P** **01 56 57.0 +3.5**
comp=Z,159nm,1.5s,mb5.8
KBS LR LR
comp=Z,6µm,21.0s,MS5.7
KBS Kingsbay 56.44 347 *e*P **P** **01 56 57.0 +3.5**
KBS pmax pmax
comp=Z,159nm,1.5s,mb5.8
KBS MLR MLR
comp=Z,6µm,21.0s,MS5.7
MUD Monsted U'grnd 56.46 320 *i* P **P** **01 56 55.0 +1.0**
MUD pmax pmax
comp=Z,16nm,1.0s,mb5.0
MUD MLR MLR
comp=Z,10µm,18.0s,MS5.9
VAE Valguarnera 56.47 297 P **P** **01 56 59.9 +5.5**
comp=Z,38nm,1.0s,mb5.4,baz=350,slow=8.9,SNR=6.0
MURB Monte Urbino 56.48 304 P **P** **01 56 56.1 +1.8**
CTI Castel Tesino 56.51 307 P **P** **01 56 56.6 +2.1**
CTI Castel Tesino 56.51 307 P **P** **01 56 56.6 +2.1**
MOTA Moosalm 56.63 309 ⇓*i*P **P** **01 56 52.5 -2.9**
comp=Z,19nm,1.0s,mb5.1
PETK Petropavlovsk- 56.71 44 P **P** **01 56 57.3 +1.5**
comp=Z,12nm,0.8s,mb5.0,baz=246,slow=2.8,SNR=7.6
PETK LR LR 02 22 08.9
comp=Z,4µm,20.2s,MS5.5,baz=15,slow=37
PETK Petropavlovsk- 56.71 44 P **P** **01 56 57.3 +1.5**
PETK pmax pmax
comp=Z,12nm,0.8s,mb5.0
PETK MLR MLR
comp=Z,4µm,20.3s,MS5.5
MOL Molde 56.76 327 *e*P **P** **01 56 57.3 +1.3**
MOL AMS AMS 02 22 29.7
comp=Z,15µm,15.3s,MS6.2
WDD Wield Dalam 56.83 295 PFAKE 01 57 10.0 +13
WDD LR LR
comp=Z,3µm,20.0s,MS5.3
RETA Reutte 56.83 309 ⇑*i*P **P** **01 56 55.0 -1.8**
comp=Z,19nm,0.9s,mb5.1
FETA Feichten 56.94 309 ⇑*i*P **P** **01 56 55.5 -2.1**
comp=Z,16nm,1.0s,mb5.0
PET Petropavlovsk 57.29 44 PFAKE 01 57 10.0 +10
PET LR LR
comp=Z,7µm,21.0s,MS5.8
PET Petropavlovsk 57.29 44 *e*P **P** **01 57 05.7 +5.8**
PET *e*S **S** **02 04 57.2 +1.3**
PET pmax pmax
comp=Z,85nm,1.4s,mb5.6
PET MLR MLR
comp=Z,14µm,15.0s,MS6.2
PET MLR MLR
comp=Z,15µm,15.0s
CSNT Castellina Chi 57.31 305 P **P** **01 57 01.8 +1.6**
ZCCA Zocca 57.33 306 P **P** **01 57 03.4 +3.0**
DAVA Damuels 57.46 309 ⇑*i*pP **P** **01 57 00.5 -0.7**
comp=Z,33nm,1.2s,mb5.2
DAVOX Davos/Dischmat 57.56 309 P **P** **01 57 02.7 +0.7**
comp=Z,5.9nm,0.6s,mb4.8,baz=120,slow=5.1,SNR=11
DAVOX Davos/Dischmat 57.56 309 P **P** **01 57 02.7 +0.7**
BDI Bagni Di Lucca 57.66 305 P **P** **01 57 03.4 +0.7**
BDI Bagni Di Lucca 57.66 305 P **P** **01 57 03.4 +0.7**
TNS Taunus Mts 57.81 313 *e*P **P** **01 57 07.5 +3.8**
comp=Z,126nm,2.0s,mb5.6
TNS *e*PP PP 01 59 17.3 +5.7
TNS Taunus Mts 57.81 313 *e*P **P** **01 57 07.5 +3.8**
TNS *e* 01 59 17.3
TNS pmax pmax
comp=Z,126nm,2.0s,mb5.6
IBBN Ibbenburen 57.87 315 *e*P **P** **01 57 07.8 +3.8**
comp=Z,108nm,1.6s,mb5.6
RUND Rundenannen 57.99 325 *e*P **P** **01 57 03.3 -1.5**
RUND *e*pP pP 01 57 07.1 -0.9
BER Bergen 58.01 325 *e*P **P** **01 57 03.0 -1.9**
BER AMS AMS 02 23 25.6
comp=Z,13µm,17.8s,MS6.1
BER Bergen 58.01 325 *e*P **P** **01 57 03.0 -1.9**
BER MLR MLR
comp=Z,13µm,17.8s,MS6.1
SPAK Spaichingen-Ko 58.01 310 *e*P **P** **01 57 05.7 +0.6**
ASK Askoy 58.07 325 *e*P **P** **01 57 04.1 -1.2**
RER Riviere de l'E 58.21 211 PFAKE 01 57 20.0 +13
RER LR LR
comp=Z,6µm,20.0s,MS5.7
BFO Black Forest 58.27 311 *e*P **P** **01 57 09.5 +2.6**
comp=Z,65nm,2.1s,mb5.3
BFO LR LR
comp=Z,6µm,22.0s,MS5.7
BFO Black Forest 58.27 311 *e*P **P** **01 57 09.5 +2.6**
BFO pmax pmax
comp=Z,65nm,2.1s,mb5.3
BFO MLR MLR
comp=Z,6µm,22.0s,MS5.7
BUG Bochum--Univer 58.32 314 *e*P **P** **01 57 11.0 +3.8**
comp=Z,93nm,1.6s,mb5.6
BUG *e*PP PP 01 59 19.9 +3.9
FELD Feldberg im Sc 58.58 310 *e*P **P** **01 57 08.3 -0.8**
GUMO Guam 58.60 93 LR LR 02 21 43.6
comp=Z,3µm,21.9s,MS5.4,baz=113,slow=35
GUMO Guam 58.60 93 PFAKE 01 57 20.0 +10
GUMO LR LR
comp=Z,4µm,21.0s,MS5.5
CDF Champ du Feu 58.93 311 *e*P **P** **01 57 08.9 -2.6**
CDF Champ du Feu 58.93 311 *e*P **P** **01 57 08.9 -2.6**
ECH Echery 59.05 311 *e*P **P** **01 57 12.8 +0.4**
ECH Echery 59.05 311 *e*P **P** **01 57 12.2 -0.2**
comp=Z,4.9nm,0.9s,mb4.5
ECH LR LR
comp=Z,4µm,20.0s,MS5.6
ECH Echery 59.05 311 *e*P **P** **01 57 12.2 -0.2**
ECH MLR MLR
comp=Z,4µm,20.0s,MS5.6
BILL Bilibino 59.08 26 PFAKE 01 57 20.0 +7.8
BILL LR LR
comp=Z,7µm,19.0s,MS5.8
BILL Bilibino 59.08 26 ⇓*e*P **P** **01 57 13.8 +1.6**
BILL *e* 01 59 26.7
BILL *i* S **S** **02 05 20.3 +1.4**

BILL pmax pmax
comp=Z,156nm,2.5s,mb5.6
BILL MLR MLR
comp=Z,4µm,15.0s,MS5.7
MOF Molkenrain 59.15 310 *eP* **P 01 57 13.7 +0.6**
MOF Molkenrain 59.15 310 *eP* **P 01 57 13.7 +0.6**
BAKI Biak 59.16 112 P **P 01 57 14.2 +0.6**
comp=Z,3µmcomp=Z,81nm,1.4s,mb5.6
PGF Pioggiola 59.16 304 *eP* **P 01 57 10.5 -2.7**
comp=Z,65nm,1.2s,mb5.2
PGF Pioggiola 59.16 304 *eP* **P 01 57 10.5 -2.7**
comp=Z,32nm,1.2s,mb5.2
PGF Pioggiola 59.16 304 *eP* **P 01 57 10.5 -2.7**
PGF pmax pmax
comp=Z,32nm,1.2s,mb5.2
HINF Hinteralfeld 59.34 310 *eP* **P 01 57 11.5 -2.9**
comp=Z,38nm,0.8s,mb5.2
HINF Hinteralfeld 59.34 310 *eP* **P 01 57 11.5 -2.9**
comp=Z,19nm,0.8s,mb5.2
HINF Hinteralfeld 59.34 310 *eP* **P 01 57 11.5 -2.9**
HINF pmax pmax
comp=Z,19nm,0.8s,mb5.2
WLF Walferdange 59.38 313 P **P 01 57 15.2 +0.6**
WLF Walferdange 59.38 313 *eP* **P 01 57 15.8 +1.2**
comp=Z,21nm,0.9s,mb5.2
WLF LR LR
comp=Z,8µm,22.0s,MS5.8
WLF Walferdange 59.38 313 *eP* **P 01 57 15.9 +1.3**
WLF pmax pmax
comp=Z,21nm,0.9s,mb5.2
WLF MLR MLR
comp=Z,8µm,22.0s,MS5.8
LOMF Lomont 59.47 310 *eP* **P 01 57 15.0 -0.3**
LOMF Lomont 59.47 310 *eP* **P 01 57 15.0 -0.3**
HAU Haudompre 59.63 311 *eP* **P 01 57 13.6 -2.8**
comp=Z,35nm,0.9s,mb5.1
HAU *e*MLR MLR
comp=Z,8µm,18.2s,MS5.6
HAU Haudompre 59.63 311 *eP* **P 01 57 13.6 -2.8**
comp=Z,18nm,0.9s,mb5.1
HAU LR LR
comp=Z,8µm,18.3s,MS5.9
HAU Haudompre 59.63 311 *eP* **P 01 57 13.6 -2.8**
HAU pmax pmax
comp=Z,18nm,0.9s,mb5.1
HAU MLR MLR
comp=Z,8µm,18.3s,MS5.9
SAOF Saorge 59.81 306 *eP* **P 01 57 17.7 0.0**
SAOF Saorge 59.81 306 *eP* **P 01 57 17.7 0.0**
THEF They Montfort 59.81 311 *eP* **P 01 57 17.3 -0.3**
THEF They Montfort 59.81 311 *eP* **P 01 57 17.3 -0.3**
SBF Sospel 59.92 306 *eP* **P 01 57 16.1 -2.4**
comp=Z,99nm,0.8s,mb5.6
SBF Sospel 59.92 306 *eP* **P 01 57 16.1 -2.4**
comp=Z,50nm,0.8s,mb5.6
SBF Sospel 59.92 306 *eP* **P 01 57 16.1 -2.4**
SBF pmax pmax
comp=Z,50nm,0.8s,mb5.6
LPG La Plagne 59.97 308 *eP* **P 01 57 16.8 -2.0**
comp=Z,78nm,1.0s,mb5.4
LPG La Plagne 59.97 308 *eP* **P 01 57 16.8 -2.0**
comp=Z,39nm,1.0s,mb5.4
LPG La Plagne 59.97 308 *eP* **P 01 57 16.8 -2.0**
LPG pmax pmax
comp=Z,39nm,1.0s,mb5.4
LUCF Luceram 59.98 306 *eP* **P 01 57 18.7 -0.1**
LPL La Plagne 59.98 308 *eP* **P 01 57 16.8 -2.0**
comp=Z,56nm,0.8s,mb5.3
LPL La Plagne 59.98 308 *eP* **P 01 57 16.8 -2.0**
comp=Z,28nm,0.8s,mb5.3
LPL La Plagne 59.98 308 *eP* **P 01 57 16.8 -2.0**
LPL pmax pmax
comp=Z,28nm,0.8s,mb5.3
TOUF Mont Tournerai 60.01 306 *eP* **P 01 57 20.4 +1.3**
TOUF Mont Tournerai 60.01 306 *eP* **P 01 57 20.4 +1.3**
MVIF Mont Vial 60.11 306 *eP* **P 01 57 19.8 0.0**
MVIF Mont Vial 60.11 306 *eP* **P 01 57 19.8 0.0**
GIVF Givet 60.12 313 *eP* **P 01 57 17.5 -2.2**
GIVF Givet 60.12 313 *eP* **P 01 57 17.5 -2.2**
CABF La Chapelle 60.14 309 *eP* **P 01 57 17.3 -2.6**
comp=Z,17nm,0.8s,mb4.8
CABF La Chapelle 60.14 309 *eP* **P 01 57 17.3 -2.6**
comp=Z,8.5nm,0.8s,mb4.8
CABF La Chapelle 60.14 309 *eP* **P 01 57 17.3 -2.6**
CABF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MBDF Montbardon 60.16 307 *eP* **P 01 57 17.0 -3.1**
comp=Z,21nm,0.7s,mb5.0
MBDF Montbardon 60.16 307 *eP* **P 01 57 17.0 -3.1**
comp=Z,11nm,0.7s,mb5.0
MBDF Montbardon 60.16 307 *eP* **P 01 57 17.0 -3.1**
MBDF pmax pmax
comp=Z,11nm,0.7s,mb5.0
MEZF Maizieres J'vi 60.35 311 *eP* **P 01 57 18.9 -2.4**
comp=Z,43nm,0.8s,mb5.2
MEZF Maizieres J'vi 60.35 311 *eP* **P 01 57 18.9 -2.4**
comp=Z,43nm,0.8s,mb5.5
SFTF Sexfontaines 60.44 311 *eP* **P 01 57 19.1 -2.8**
comp=Z,86nm,1.4s,mb5.3
SFTF Sexfontaines 60.44 311 *eP* **P 01 57 19.1 -2.8**
comp=Z,86nm,1.4s,mb5.6
BAIF Baives 60.52 313 *eP* **P 01 57 20.2 -2.2**
comp=Z,47nm,1.2s,mb5.2
BAIF Baives 60.52 313 *eP* **P 01 57 20.2 -2.2**
comp=Z,24nm,1.2s,mb5.2
BAIF Baives 60.52 313 *eP* **P 01 57 20.2 -2.2**
BAIF pmax pmax
comp=Z,24nm,1.2s,mb5.2
FRF La Foret Royal 60.55 306 *eP* **P 01 57 20.1 -2.7**
comp=Z,80nm,1.2s,mb5.4
FRF La Foret Royal 60.55 306 *eP* **P 01 57 20.1 -2.7**
comp=Z,40nm,1.2s,mb5.4
FRF La Foret Royal 60.55 306 *eP* **P 01 57 20.1 -2.7**
FRF pmax pmax
comp=Z,40nm,1.2s,mb5.4
LMR La Mourre 60.71 305 *eP* **P 01 57 21.2 -2.7**
LMR La Mourre 60.71 305 *eP* **P 01 57 21.2 -2.7**
KEST Kesra 60.88 296 P **P 01 57 25.3 +0.2**
comp=Z,20nm,0.8s,mb5.3,baz=16,slow=0.8,SNR=21
KEST LR LR 02 29 20.1
comp=Z,1µm,20.2s,MS5.1,baz=184,slow=42
KEST Kesra 60.88 296 *eP* **P 01 57 24.7 -0.5**
LRW Lerwick 61.26 325 *eP* **P 01 57 28.1 +0.8**
LRW AMB AMB 01 57 31.5
comp=Z,117nm,2.0s,mb5.7
LRW AMS AMS 02 25 16.6
comp=Z,9µm,16.4s,MS6.0
WAL1 Walls 61.44 326 *eP* **P 01 57 28.6 +0.1**
LOR Lormes 61.45 310 *eP* **P 01 57 25.6 -3.2**
LOR *e*MLR MLR
comp=Z,7µm,23.0s,MS5.5
LOR Lormes 61.45 310 *eP* **P 01 57 25.6 -3.2**
LOR LR LR
comp=Z,7µm,23.0s,MS5.8
LOR Lormes 61.45 310 *eP* **P 01 57 25.6 -3.2**
LOR MLR MLR
comp=Z,7µm,23.0s,MS5.8
VIVF Saint-Julien-l 61.56 307 *eP* **P 01 57 27.0 -2.6**
VIVF Saint-Julien-l 61.56 307 *eP* **P 01 57 27.0 -2.6**
SMF Signal de Mont 61.63 310 *eP* **P 01 57 27.0 -3.0**
comp=Z,46nm,1.0s,mb5.3
SMF Signal de Mont 61.63 310 *eP* **P 01 57 27.0 -3.0**
comp=Z,23nm,1.0s,mb5.3
SMF Signal de Mont 61.63 310 *eP* **P 01 57 27.0 -3.0**
SMF pmax pmax
comp=Z,23nm,1.0s,mb5.3
SSF Saint Saulge 61.73 310 *eP* **P 01 57 27.7 -3.0**
comp=Z,38nm,1.0s,mb5.2
SSF Saint Saulge 61.73 310 *eP* **P 01 57 27.7 -3.0**
comp=Z,19nm,1.0s,mb5.2
SSF Saint Saulge 61.73 310 *eP* **P 01 57 27.7 -3.0**
SSF pmax pmax
comp=Z,19nm,1.0s,mb5.2
AVF Avril sur Loir 61.91 310 *eP* **P 01 57 28.9 -3.0**
comp=Z,38nm,1.1s,mb5.2
AVF Avril sur Loir 61.91 310 *eP* **P 01 57 28.9 -3.0**
comp=Z,19nm,1.0s,mb5.2
AVF Avril sur Loir 61.91 310 *eP* **P 01 57 28.9 -3.0**
AVF pmax pmax
comp=Z,19nm,1.0s,mb5.2
PLDF La Plantade 61.96 309 *eP* **P 01 57 32.5 +0.2**
PLDF La Plantade 61.96 309 *eP* **P 01 57 32.5 +0.2**
AGO Saint Agoulin 62.26 309 *eP* **P 01 57 32.1 -2.2**
MBWA Marble Bar 62.27 142 *eP* **P 01 57 33.1 -1.5**
comp=Z,24nm,1.0s,mb5.3
MBWA LR LR
comp=Z,3µm,19.0s,MS5.5
MBWA Marble Bar 62.27 142 P **P 01 57 33.0 -1.6**
BGF Bois d'Agland 62.31 310 *eP* **P 01 57 31.7 -2.9**
comp=Z,18nm,0.9s,mb4.9
BGF Bois d'Agland 62.31 310 *eP* **P 01 57 31.7 -2.9**
comp=Z,8.8nm,0.9s,mb4.9
BGF Bois d'Agland 62.31 310 *eP* **P 01 57 31.7 -2.9**
BGF pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
LASF Ste Croix 62.35 307 *eP* **P 01 57 32.6 -2.3**
LBL Lubilhac 62.42 308 *eP* **P 01 57 35.3 -0.1**
LBL Lubilhac 62.42 308 *eP* **P 01 57 35.3 -0.1**
TCF Toulx Ste Croi 62.81 310 *eP* **P 01 57 35.5 -2.4**
TCF Toulx Ste Croi 62.81 310 *eP* **P 01 57 35.5 -2.4**
MME1 Meikle Cairn 62.83 322 *eP* **P 01 57 37.7 -0.2**
MCD Coleburn Disti 62.91 323 *eP* **P 01 57 37.8 -0.6**
DAG Danmarks Havn 62.97 345 *i P* **P 01 57 39.6 +1.0**
DAG pmax pmax
comp=Z,19nm,0.8s,mb5.3
DAG MLR MLR
comp=Z,4µm,20.0s,MS5.6
ESY Stoneypath 63.02 321 *eP* **P 01 57 38.9 -0.3**
XAL Allendale 63.09 320 *eP* **P 01 57 38.5 -1.1**
EBL Broad Law 63.29 321 *eP* **P 01 57 39.6 -1.3**
MVH1 Achvaich 63.30 323 *eP* **P 01 57 40.4 -0.6**
CAF Calviac 63.31 308 *eP* **P 01 57 38.9 -2.4**
CAF Calviac 63.31 308 *eP* **P 01 57 38.9 -2.4**
EDI Edinburgh 63.33 321 *eP* **P 01 57 39.3 -2.0**
EDI AMB AMB 01 57 44.3
comp=Z,92nm,1.9s,mb5.6
EDI AMS AMS 02 26 04.7
comp=Z,11µm,23.3s,MS6.0
EBH Black Hill 63.41 321 *eP* **P 01 57 40.9 -0.8**
EKA Eskdalemuir Ar 63.48 320 P **P 01 57 40.5 -1.7**
comp=Z,11nm,0.9s,mb5.0,baz=73,slow=6.5,SNR=18
EKA Eskdalemuir Ar 63.48 320 P **P 01 57 40.5 -1.7**
EKA pmax pmax
comp=Z,11nm,0.9s
ECK Cauldkaine Hil 63.50 320 *eP* **P 01 57 40.9 -1.4**
ESK Eskdalemuir 63.51 320 *eP* **P 01 57 40.8 -1.6**
ESK AMB AMB 01 57 45.6
comp=Z,54nm,3.3s
ESK AMS AMS 02 27 36.9
comp=Z,12µm,15.2s,MS6.2
ESK Eskdalemuir 63.51 320 *eP* **P 01 57 40.9 -1.5**
comp=Z,25nm,1.0s,mb5.2
ESK LR LR
comp=Z,10µm,20.0s,MS6.0
ESK Eskdalemuir 63.51 320 *i P* **P 01 57 44.4 +2.0**
WOL Wolverton 63.52 316 AMS AMS 02 26 01.3
comp=Z,9µm,21.0s,MS5.9
EJON La Jonquera 63.52 305 P **P 01 57 38.0 -4.7**
comp=Z,215nm,2.8s,mb5.7
MDO Dochfour 63.53 323 *eP* **P 01 57 42.0 -0.5**
RJF Les Rejaudoux 63.57 309 *eP* **P 01 57 40.8 -2.2**
RJF *e*MLR MLR
comp=Z,6µm,21.8s,MS5.5
RJF Les Rejaudoux 63.57 309 *eP* **P 01 57 40.8 -2.2**
RJF LR LR
comp=Z,6µm,21.8s,MS5.8
RJF Les Rejaudoux 63.57 309 *eP* **P 01 57 40.8 -2.2**
RJF MLR MLR
comp=Z,6µm,21.8s,MS5.8
STNC Stoke 63.58 318 AMS AMS 02 28 49.6
comp=Z,8µm,17.8s,MS5.9
LDF La Druitiere 63.64 313 *eP* **P 01 57 40.3 -3.1**
comp=Z,24nm,0.7s,mb5.0
LDF La Druitiere 63.64 313 *eP* **P 01 57 40.3 -3.1**
comp=Z,12nm,0.7s,mb5.0
LDF La Druitiere 63.64 313 *eP* **P 01 57 40.3 -3.1**
LDF pmax pmax
comp=Z,12nm,0.7s,mb5.0
KESW Keswick, Cumbr 63.66 320 *eP* **P 01 57 41.5 -2.0**
KESW AMB AMB 01 57 46.2
comp=Z,118nm,3.1s
RSC Scourie 63.69 324 *eP* **P 01 57 43.1 -0.4**
MTLF Montolieu 63.70 306 *eP* **P 01 57 41.4 -2.5**
comp=Z,19nm,1.0s,mb4.8
MTLF Montolieu 63.70 306 *eP* **P 01 57 41.4 -2.5**
comp=Z,9.4nm,1.0s,mb4.8
MTLF Montolieu 63.70 306 *eP* **P 01 57 41.4 -2.5**
MTLF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
SET Setif 63.74 298 P **P 01 57 45.0 +0.7**
SWN1 Swindon 63.80 316 AMS AMS 02 29 55.4
comp=Z,10µm,15.7s,MS6.1
KAKA Kakadu 63.85 125 *eP* **P 01 57 42.8 -2.4**
comp=Z,14nm,0.7s,mb5.1
KAKA Kakadu 63.85 125 *eP* **P 01 57 44.0 -1.1**
comp=Z,67nm,0.9s,mb5.7
EAB Aberfoyle 63.87 322 *eP* **P 01 57 44.1 -0.8**
XDE Dent Fell 63.90 320 *eP* **P 01 57 44.5 -0.6**
KAC Achnashellach 64.00 323 *eP* **P 01 57 45.0 -0.6**
CFON Fontmartina 64.06 305 P **P 01 57 48.5 +2.3**
comp=Z,344nm,2.5s,mb5.9
PGBU Glenifferbraes 64.06 321 *eP* **P 01 57 44.7 -1.3**
PGBU AMB AMB 01 57 50.4
comp=Z,111nm,3.0s
PGBU AMS AMS 02 26 26.4
comp=Z,9µm,22.1s,MS5.9
CLLI Llivia 64.15 306 P **P 01 57 49.2 +2.3**
RRR Rubha Reidh 64.15 324 *eP* **P 01 57 46.9 +0.2**
GRR Gorron 64.17 313 *eP* **P 01 57 43.8 -3.1**
comp=Z,30nm,0.7s,mb5.1
GRR Gorron 64.17 313 *eP* **P 01 57 43.8 -3.1**
comp=Z,15nm,0.7s,mb5.1
GRR Gorron 64.17 313 *eP* **P 01 57 43.8 -3.1**
GRR pmax pmax
comp=Z,15nm,0.7s,mb5.1
LFF La Frestale 64.20 308 *eP* **P 01 57 44.8 -2.4**
LFF La Frestale 64.20 308 *eP* **P 01 57 44.8 -2.4**
KPL Plockton 64.23 323 *eP* **P 01 57 46.3 -0.9**
KPL AMB AMB 01 57 51.3
comp=Z,74nm,3.2s
KPL AMS AMS 02 25 30.0
comp=Z,11µm,27.3s,MS5.9
MFF Saint Martin d 64.27 310 *eP* **P 01 57 44.5 -3.1**
comp=Z,26nm,0.9s,mb4.9
MFF Saint Martin d 64.27 310 *eP* **P 01 57 44.5 -3.1**
comp=Z,13nm,0.9s,mb5.0
MFF Saint Martin d 64.27 310 *eP* **P 01 57 44.5 -3.1**
MFF pmax pmax
comp=Z,13nm,0.9s,mb5.0
HGH Gray Hill 64.36 316 *eP* **P 01 57 45.4 -2.8**
MCH1 Michaelchurch 64.37 317 *eP* **P 01 57 46.0 -2.1**
MCH1 AMB AMB 01 57 52.6
comp=Z,65nm,2.0s,mb5.3
MCH1 AMS AMS 02 24 55.6
comp=Z,8µm,25.3s,MS5.8
ETOS Mallorca 64.45 303 P **P 01 57 52.8 +3.9**
comp=Z,448nm,2.7s,mb6.0
GAL1 Galloway 64.47 320 AMS AMS 02 28 23.0
comp=Z,12µm,16.4s,MS6.2
EMIR Miracle 64.65 305 P **P 01 57 52.5 +2.4**
comp=Z,367nm,2.8s,mb5.9
JSA Saint Aubin 64.74 314 AMS AMS 02 25 34.5
comp=Z,7µm,20.2s,MS5.9
CSOR Sort 64.77 306 P **P 01 57 52.9 +2.0**
comp=Z,128nm,2.4s,mb5.5
EPF Esparros 65.10 307 *eP* **P 01 57 49.6 -3.5**
EPF Esparros 65.10 307 *eP* **P 01 57 49.6 -3.5**
EPOB Poblet 65.15 305 P **P 01 57 55.7 +2.3**
comp=Z,191nm,2.3s,mb5.7
RESF Ens 65.18 306 *eP* **P 01 57 52.0 -1.6**
SGMF Saint Gilles 65.28 313 *eP* **P 01 57 51.5 -2.7**
comp=Z,38nm,0.9s,mb5.1
SGMF Saint Gilles 65.28 313 *eP* **P 01 57 51.5 -2.7**
comp=Z,19nm,0.9s,mb5.1
SGMF Saint Gilles 65.28 313 *eP* **P 01 57 51.5 -2.7**
SGMF pmax pmax
comp=Z,19nm,0.9s,mb5.1
GMM Mts of Mourne 65.35 320 *eP* **P 01 57 53.2 -1.3**
EBIE Bielsa 65.36 306 P **P 01 57 56.7 +1.9**
comp=Z,266nm,2.7s,mb5.8
VIEF Viey 65.37 307 *eP* **P 01 57 54.1 -0.7**
DYA Yadsworthy 65.42 315 AMS AMS 02 29 46.4
comp=Z,10µm,16.7s,MS6.1
HTL Hartland 65.57 316 AMS AMS 02 31 00.2
comp=Z,9µm,16.1s,MS6.0
EMHD Djebel Mahouad 65.59 299 P **P 01 58 00.0 +3.6**
ALE Alert 65.66 355 P **P 01 57 56.0 -0.1**
comp=Z,153nm,0.7s,mb6.1,SNR=5.5
ROSF Rostrenen 65.71 313 *eP* **P 01 57 54.2 -2.7**
comp=Z,40nm,0.8s,mb5.2
ROSF Rostrenen 65.71 313 *eP* **P 01 57 54.2 -2.7**
comp=Z,20nm,0.8s,mb5.2
ROSF Rostrenen 65.71 313 *eP* **P 01 57 54.2 -2.7**
ROSF pmax pmax
comp=Z,20nm,0.8s,mb5.2
ETSF Etsaut 65.77 307 *eP* **P 01 57 55.1 -2.3**
comp=Z,30nm,0.9s,mb5.0
ETSF Etsaut 65.77 307 *eP* **P 01 57 55.1 -2.3**
comp=Z,15nm,0.9s,mb5.0
ETSF Etsaut 65.77 307 *eP* **P 01 57 55.1 -2.3**
ETSF pmax pmax
comp=Z,15nm,0.9s,mb5.0
ESAC San Caprasio 66.11 305 P **P 01 58 04.4 +4.8**
comp=Z,265nm,2.7s,mb5.8
SJPF Ste Jean 66.15 307 *eP* **P 01 57 57.6 -2.3**
SJPF Ste Jean 66.15 307 *eP* **P 01 57 57.6 -2.3**
ELIZ Elizondo 66.34 307 P **P 01 58 03.2 +2.1**
comp=Z,48nm,1.3s,mb5.4
ELIZ Elizondo 66.34 307 P **P 01 58 03.2 +2.1**
ELIZ pmax pmax
comp=Z,48nm,1.3s,mb5.4
EMOS Mosqueruela 66.60 304 P **P 01 58 05.4 +2.5**
comp=Z,368nm,2.7s,mb5.9
EBNR Beni Rached 66.63 299 P **P 01 58 07.0 +3.9**
EANR 'Ain N'Sour 67.08 299 P **P 01 58 09.0 +3.1**
ETRT Tiaret 67.14 299 P **P 01 58 11.0 +4.7**
ECHE Chera 67.24 303 P **P 01 58 08.7 +1.8**
comp=Z,68nm,1.7s,mb5.4
ECHE Chera 67.24 303 P **P 01 58 08.7 +1.8**
ECHE pmax pmax
comp=Z,68nm,1.7s,mb5.4
ELAN Lanestosa 67.61 308 P **P 01 58 11.1 +1.9**
comp=Z,146nm,2.1s,mb5.6
ETOB Tobarra 68.01 303 P **P 01 58 14.6 +2.8**
comp=Z,236nm,3.3s
CART Cartagena 68.02 301 *eP* **P 01 58 12.9 +1.1**
comp=Z,60nm,0.8s,mb5.7
BORG Borgarnes 68.54 334 PFAKE 01 58 20.0 +5.4
BORG LR LR
comp=Z,5µm,21.0s,MS5.7
EVIA Vianos 68.71 303 P **P 01 58 19.0 +2.8**
comp=Z,20nm,0.6s,mb5.2
EVIA Vianos 68.71 303 P **P 01 58 19.0 +2.9**
EVIA pmax pmax
comp=Z,20nm,0.6s,mb5.2
EARI Arriondas 68.79 308 P **P 01 58 19.9 +3.4**
comp=Z,116nm,2.1s,mb5.4
TAM Tamanrasset 68.86 285 *eP* **P 01 58 17.0 -0.3**
comp=Z,9.4nm,1.0s,mb4.7
TAM *e* 02 00 57.3
TAM LR LR
comp=Z,4µm,21.0s,MS5.6
TAM Tamanrasset 68.86 285 *eP* **P 01 58 17.0 -0.3**
TAM *e* 02 00 57.3
TAM pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TAM MLR MLR
comp=Z,4µm,21.0s,MS5.6
GAMB Gambell 68.90 27 *eP* **P 01 58 19.5 +2.6**
comp=Z,370nm,2.0s,mb6.0
EHUE Huescar 69.09 302 P **P 01 58 18.9 +0.3**
comp=Z,49nm,1.1s,mb5.3
EHUE Huescar 69.09 302 P **P 01 58 18.9 +0.3**
EHUE pmax pmax
comp=Z,49nm,1.1s,mb5.3
GUD Guadarrama 69.10 306 P **P 01 58 17.1 -1.5**
comp=Z,150nm,2.3s,mb5.5
GUD Guadarrama 69.10 306 P **P 01 58 17.1 -1.4**
GUD pmax pmax
comp=Z,150nm,2.3s,mb5.5
ESBB Sonseca Array 69.34 305 P **P 01 58 22.1 +2.1**
comp=Z,172nm,2.1s,mb5.6
ESDC Sonseca Array 69.34 305 P **P 01 58 18.4 -1.6**
comp=Z,3.7nm,0.9s,mb4.3,baz=54,slow=6.6,SNR=8.1
ESDC LR LR 02 33 45.9
comp=Z,3µm,18.5s,MS5.5,baz=50,slow=40
ESDC Sonseca Array 69.34 305 P **P 01 58 18.6 -1.5**
comp=Z,49nm,1.6s,mb5.2
ESLA Sonseca Array 69.34 305 *eP* **P 01 58 17.9 -2.1**
comp=Z,13nm,1.4s,mb4.7
ESLA LR LR
comp=Z,17µm,19.0s,MS6.3
EQES Quesada 69.45 302 P **P 01 58 22.3 +1.5**
comp=Z,462nm,3.0s
TNA Tin City 69.49 25 *eP* **P 01 58 25.1 +4.6**
comp=Z,546nm,2.3s,mb6.1
SUMG Summit 69.58 344 *eP* **P 01 58 21.7 +0.8**
comp=Z,192nm,0.9s,mb6.0
PAB San Pablo 69.67 305 *eP* **P 01 58 21.1 -1.0**
comp=Z,30nm,1.3s,mb5.1
PAB LR LR
comp=Z,3µm,19.0s,MS5.5
PAB San Pablo 69.67 305 *eP* **P 01 58 21.1 -1.0**
PAB pmax pmax
comp=Z,30nm,1.3s,mb5.1
PAB MLR MLR
comp=Z,3µm,19.0s,MS5.5
EBER Berja 69.68 301 P **P 01 58 25.9 +3.7**
comp=Z,451nm,2.4s,mb6.0
EBAN Banos Encina 69.82 303 P **P 01 58 22.4 -0.7**
comp=Z,24nm,0.9s,mb5.1
EBAN Banos Encina 69.82 303 P **P 01 58 22.4 -0.6**
EBAN pmax pmax
comp=Z,24nm,0.9s,mb5.1
ECOG Cogollos-Vega 70.02 302 P **P 01 58 28.1 +3.8**
comp=Z,16nm,1.0s,mb4.9
ECOG Cogollos-Vega 70.02 302 P **P 01 58 28.1 +3.8**
ECOG pmax pmax
comp=Z,16nm,1.0s,mb4.9
WRA Warramunga Arr 70.19 129 P **P 01 58 23.5 -1.9**
comp=Z,32nm,0.8s,mb5.3,baz=322,slow=6.2,SNR=103
WRA PKPPKP 02 26 29.8
comp=Z,2.5nm,1.0s,baz=136,slow=3.3,SNR=9.9
WRA LR LR 02 35 35.9
comp=Z,1µm,19.9s,MS5.2,baz=320,slow=41
WRA Warramunga Arr 70.19 129 P **P 01 58 23.5 -1.9**
WRA P'P' 02 26 29.8
WRA LR LR 02 35 35.9
WRA Warramunga Arr 70.19 129 P **P 01 58 23.5 -1.9**
WRA pmax pmax
comp=Z,32nm,0.8s
WB2 Warramunga Arr 70.19 129 *eP* **P 01 58 23.8 -1.7**
EGUA Guajares 70.20 302 P **P 01 58 30.6 +5.2**
comp=Z,306nm,1.2s,mb6.1
EGUA Guajares 70.20 302 P **P 01 58 30.6 +5.2**
EGUA pmax pmax
comp=Z,306nm,1.2s,mb6.1
LSZ Lusaka 70.25 238 *eP* **P 01 58 24.4 -1.5**
comp=Z,365nm,2.4s,mb5.9
LSZ LR LR
comp=Z,5µm,20.0s,MS5.7
LSZ Lusaka 70.25 238 *eP* **P 01 58 24.4 -1.5**
LSZ pmax pmax
comp=Z,365nm,2.4s,mb5.9
LSZ MLR MLR
comp=Z,5µm,20.0s,MS5.7
LSZ Lusaka 70.25 238 P **P 01 58 29.4 +3.5**
SNR=8.0
ERON Agron 70.30 302 P **P 01 58 29.7 +3.7**
comp=Z,23nm,0.9s,mb5.1
ECAL Calabor 70.36 308 P **P 01 58 28.2 +1.9**
comp=Z,214nm,2.5s,mb5.6
EADA Adamuz 70.39 303 P **P 01 58 28.3 +1.8**
comp=Z,264nm,2.3s,mb5.8
ELUQ Luque 70.41 303 P **P 01 58 30.4 +3.7**
comp=Z,27nm,0.9s,mb5.2
ELUQ Luque 70.41 303 P **P 01 58 30.4 +3.7**
ELUQ pmax pmax
comp=Z,27nm,0.9s,mb5.2
PBRG Braganca 70.42 307 *eP* **P 01 58 26.4 -0.3**
comp=Z,32nm,1.9s,mb4.9
PBRG *e*LR LR 02 22 13.1
comp=Z,3µm,20.0s
ELOJ Sierra Loja 70.50 302 P **P 01 58 30.5 +3.3**
comp=Z,21nm,1.2s,mb4.9
ELOJ Sierra Loja 70.50 302 P **P 01 58 30.5 +3.3**
ELOJ pmax pmax
comp=Z,21nm,1.2s,mb4.9
EPLA Plasencia 70.68 306 P **P 01 58 29.5 +1.2**
comp=Z,263nm,2.5s,mb5.7
EPLA Plasencia 70.68 306 P **P 01 58 29.5 +1.2**
EPLA pmax pmax
comp=Z,263nm,2.5s,mb5.7
MVO Moncorvo 70.88 307 *eP* **P 01 58 28.3 -1.2**
comp=Z,36nm,1.6s,mb5.0
MVO *e*S S 02 07 45.4 +0.5
MVO *e*LQ 02 15 59.5
MVO *e*LR LR 02 22 35.8
comp=Z,4µm,20.0s

MVO Moncorvo 70.88 307 P **P** **01 58 31.0 +1.5**
NWAO Narrogin (SRO) 70.96 150 *e*P **P** **01 58 27.4 -2.5**
comp=Z,59nm,1.1s,mb5.4
NWAO LR LR
comp=Z,3µm,19.0s,MS5.6
NWAO Narrogin (SRO) 70.96 150 *e*P **P** **01 58 27.4 -2.4**
NWAO pmax pmax
comp=Z,59nm,1.1s
NWAO MLR MLR
comp=Z,3µm,19.0s
ECAB El Cabril 71.03 303 P **P** **01 58 32.4 +2.0**
comp=Z,295nm,2.7s,mb5.7
STS Santiago 71.20 309 P **P** **01 58 35.8 +4.5**
comp=Z,61nm,1.7s,mb5.2
STS Santiago 71.20 309 P **P** **01 58 35.8 +4.4**
STS pmax pmax
comp=Z,61nm,1.7s,mb5.2
ELOB Lobios 71.29 308 P **P** **01 58 35.0 +3.0**
comp=Z,178nm,2.0s,mb5.7
MTE Manteigas 71.56 306 *e*P **P** **01 58 32.8 -0.8**
comp=Z,51nm,1.6s,mb5.2
MTE *e*S S 02 07 53.2 +0.5
MTE *e*LQ 02 15 56.6
MTE *e*LR LR 02 21 11.9
comp=Z,5µm,20.0s
MTE Manteigas 71.56 306 *e*P **P** **01 58 33.8 +0.2**
comp=Z,21nm,0.9s,mb5.1
MTE LR LR
comp=Z,6µm,20.0s,MS5.9
PVIS Viseu 71.67 307 *e*P **P** **01 58 35.8 +1.6**
comp=Z,41nm,1.4s,mb5.2
PCBR Castelo Branco 71.75 306 *e*P **P** **01 58 35.2 +0.5**
comp=Z,32nm,1.8s,mb5.0
EJIF Jimena Fronter 71.75 302 P **P** **01 58 36.7 +1.9**
comp=Z,74nm,1.4s,mb5.4
EJIF Jimena Fronter 71.75 302 P **P** **01 58 36.7 +1.9**
EJIF pmax pmax
comp=Z,74nm,1.4s,mb5.4
ESPR Espera 71.85 302 P **P** **01 58 34.5 -0.9**
comp=Z,271nm,2.4s,mb5.8
PMRV Marv??o 71.86 305 *e*P **P** **01 58 35.2 -0.2**
comp=Z,22nm,1.3s,mb4.9
PMRV *e*S S 02 07 57.7 +1.4
PMRV *e*LQ 02 16 16.2
PMRV *e*LR LR 02 23 52.5
comp=Z,3µm,18.0s
EBAD Badajoz 71.88 305 P **P** **01 58 37.2 +1.6**
comp=Z,214nm,2.8s,mb5.6
EMIN Mina Concepcio 72.06 304 P **P** **01 58 38.5 +1.8**
comp=Z,226nm,2.4s,mb5.7
PBAR Barrancos 72.15 304 *e*P **P** **01 58 35.7 -1.5**
comp=Z,49nm,1.4s,mb5.2
PBAR *e*S S 02 08 02.9 +3.3
PBAR *e*LQ 02 16 26.2
PBAR *e*LR LR 02 22 28.6
comp=Z,4µm,20.0s
PESTR Estremoz 72.24 305 *e*P **P** **01 58 38.2 +0.5**
comp=Z,24nm,2.0s,mb4.8
PESTR *e*S S 02 08 01.9 +1.3
PESTR *e*LQ 02 16 36.9
PESTR A 02 33 11.6
comp=Z,4µm,18.0s
SFS San Fernando 72.28 302 PFAKE 01 58 50.0 +12
SFS LR LR
comp=Z,8µm,19.0s,MS6.0
PTOM Tomar 72.49 306 *e*P **P** **01 58 39.6 +0.4**
comp=Z,46nm,2.4s,mb5.0
ASAR Alice Springs 72.55 132 P **P** **01 58 37.8 -1.8**
comp=Z,8.1nm,0.7s,mb4.8,baz=318,slow=5.8,SNR=73
ASAR Alice Springs 72.55 132 P **P** **01 58 37.8 -1.8**
ASAR pmax pmax
comp=Z,8.0nm,0.7s
EVO Evora 72.68 305 *e*P **P** **01 58 38.8 -1.6**
comp=Z,44nm,1.3s,mb4.9
EVO *e*MLR MLR
comp=Z,4µm,19.8s,MS5.4
EGRO El Granado 72.74 304 P **P** **01 58 42.6 +1.9**
comp=Z,182nm,2.0s,mb5.7
EVOP Sao Brissos 72.76 305 *e*P **P** **01 58 38.8 -2.0**
comp=Z,44nm,1.3s,mb5.2
EVOP LR LR
comp=Z,3720µm,19.8s
EVOP Sao Brissos 72.76 305 *e*P **P** **01 58 38.8 -2.0**
EVOP pmax pmax
comp=Z,44nm,1.3s,mb5.2
PBEJ Beja 72.80 304 *e*P **P** **01 58 41.3 +0.2**
comp=Z,27nm,1.9s,mb4.8
PMG Port Moresby 72.85 112 *e*P **P** **01 58 41.6 0.0**
comp=Z,27nm,0.8s,mb5.2
PMG LR LR
comp=Z,2µm,19.0s,MS5.3
PMG Port Moresby 72.85 112 *i*P **P** **01 58 41.6 0.0**
PVAQ Vaqueiros 72.97 304 *e*P **P** **01 58 41.0 -1.1**
comp=Z,53nm,1.6s,mb5.2
PVAQ *e*S S 02 08 12.0 +3.0
PVAQ *e*LQ 02 16 40.7
PVAQ *e*LR LR 02 21 25.7
comp=Z,3µm,20.0s
PCVE Castro Verde 73.09 304 *e*P **P** **01 58 42.7 -0.1**
comp=Z,21nm,2.3s,mb4.7
PCVE *e*S S 02 08 14.1 +3.7
PCVE *e*LQ 02 16 43.5
PCVE *e*LR LR 02 24 24.8
comp=Z,4µm,20.0s
MESJ Messejana 73.13 304 *e*P **P** **01 58 43.0 0.0**
MESJ *e*S S 02 08 10.3 -0.6
MESJ AMS AMS 02 30 06.5
comp=N,5µm,22.0s
MESJ Messejana 73.13 304 *e*P **P** **01 58 43.0 0.0**
MESJ *e*S S 02 08 10.3 -0.5
PBDV Barranco-do-Ve 73.19 304 *e*P **P** **01 58 43.0 -0.4**
comp=N,58nm,1.3s,mb5.3
PBDV *e*S S 02 08 13.0 +1.5
PBDV *e*LQ 02 16 52.4
PBDV *e*LR LR 02 21 04.3
comp=N,2µm,18.0s
PMAFR Mafra 73.39 306 *e*P **P** **01 58 47.6 +3.0**
comp=N,104nm,1.9s,mb5.4
PMAFR *e*S S 02 08 15.7 +2.0
PMAFR *e*LQ 02 16 50.3
PMAFR *e*LR LR 02 22 41.9
comp=N,2µm,18.0s
LIS Lisbon 73.40 305 *e*P **P** **01 58 44.6 -0.1**
LIS *e*S S 02 08 11.8 -2.1
LIS AMS AMS 02 34 39.2
comp=E,4µm,28.7s
LIS Lisbon 73.40 305 *e*P **P** **01 58 44.6 0.0**
LIS *e*S S 02 08 11.8 -2.1
PTEO Sao Teotonio 73.62 304 *e*P **P** **01 58 45.1 -0.8**
comp=E,61nm,1.4s,mb5.3
MORF Marmelete 73.67 304 *e*P **P** **01 58 47.4 +1.1**
comp=E,29nm,1.8s,mb4.9
MORF *e*S S 02 08 19.3 +2.3
MORF *e*LQ 02 16 35.1
MORF *e*LR LR 02 21 15.0
comp=E,3µm,18.0s
MORF Marmelete 73.67 304 *e*P **P** **01 58 46.1 -0.2**
MORF *e*S S 02 08 15.8 -1.2
RTC Rabat Centre 73.84 300 PFAKE 01 59 00.0 +13
RTC LR LR
comp=Z,3µm,22.0s,MS5.5
PFVI Vila Bisbo 73.88 304 *e*P **P** **01 58 49.2 +1.7**
comp=Z,70nm,1.6s,mb5.3
PFVI *e*S S 02 08 21.8 +2.5
PFVI *e*LR LR 02 24 24.4
comp=Z,3µm,18.0s
PFVI Vila Bisbo 73.88 304 P **P** **01 58 49.4 +2.0**
COLD Coldfoot 74.21 19 *e*P **P** **01 58 49.0 +0.1**
comp=Z,268nm,1.5s,mb6.0
WAKE Wake Island 74.60 77 PFAKE 01 59 00.0 +8.1
WAKE LR LR
comp=Z,2µm,20.0s,MS5.4
TTA Tatalina 75.26 24 *e*P **P** **01 58 55.4 +0.4**
TTA Tatalina 75.26 24 *e*P **P** **01 58 55.4 +0.4**
BPAW Bear Paw Mtn. 76.16 22 *e*P **P** **01 59 00.0 -0.1**
comp=Z,174nm,1.4s,mb5.8
TORD Torodi Ar. Bea 76.50 277 P **P** **01 59 00.7 -2.1**
comp=Z,15nm,0.9s,mb4.9,baz=52,slow=4.6,SNR=11
TORD LR LR 02 36 13.3
comp=Z,5µm,21.4s,MS5.8,baz=70,slow=38
SFJD Kangerlussuaq 76.51 343 *e*P **P** **01 59 03.0 +1.0**
comp=Z,2µm,2.8s,mb6.4
SFJD LR LR
comp=Z,2µm,20.0s,MS5.5
SFJD Kangerlussuaq 76.51 343 *e*P **P** **01 59 03.0 +1.0**
SFJD pmax pmax
comp=Z,2µm,2.8s,mb6.4
SFJD MLR MLR
comp=Z,2µm,20.0s,MS5.5
SFJD Kangerlussuaq 76.51 343 *i*P **P** **01 59 03.7 +1.7**
COLA College 76.56 20 *e*P **P** **01 59 02.0 -0.4**
comp=Z,376nm,1.4s,mb6.1
COLA LR LR
comp=Z,6µm,20.0s,MS5.9
COLA College 76.56 20 *e*P **P** **01 59 02.0 -0.4**
COLA pmax pmax
comp=Z,376nm,1.4s,mb6.1
COLA MLR MLR
comp=Z,6µm,20.0s,MS5.9
PPLA Purkeypile 76.59 23 *e*P **P** **01 59 03.0 +0.4**
comp=Z,334nm,1.4s,mb6.1
SVW2 Sparrevohn 76.60 25 *e*P **P** **01 59 01.4 -1.3**
comp=Z,376nm,2.4s,mb5.9
ILAR Eielson Array 76.92 20 P **P** **01 59 03.5 -0.9**
comp=Z,14nm,0.9s,mb4.9,baz=302,slow=4.5,SNR=114
ILAR LR LR 02 36 33.4
comp=Z,5µm,18.1s,MS5.8,baz=333,slow=38
ILAR Eielson Array 76.92 20 P **P** **01 59 03.6 -0.8**
ILAR pmax pmax
comp=Z,14nm,0.9s
ILAR MLR MLR
comp=Z,5µm,18.2s
MCK McKinley 77.06 21 *e*P **P** **01 59 05.3 +0.1**
comp=Z,538nm,2.1s,mb6.1
MCK McKinley 77.06 21 *e*P **P** **01 59 05.3 +0.1**
MCK pmax pmax
comp=Z,538nm,2.1s,mb6.1
INK Inuvik 77.38 13 *e*P **P** **01 59 06.7 -0.2**
comp=Z,411nm,1.7s,mb6.1
INK Inuvik 77.38 13 *e*P **P** **01 59 06.7 -0.2**
INK pmax pmax
comp=Z,411nm,1.7s
LBTB Lobatse 78.51 232 *e*P **P** **01 59 12.9 -0.9**
comp=Z,54nm,1.0s,mb5.4
LBTB LR LR
comp=Z,3µm,19.0s,MS5.6
LBTB Lobatse 78.51 232 *e*P **P** **01 59 12.9 -0.9**
LBTB pmax pmax
comp=Z,53nm,1.0s,mb5.4
LBTB MLR MLR
comp=Z,3µm,19.0s,MS5.6
EGAK Eagle 78.51 18 *e*P **P** **01 59 13.2 -0.1**
comp=Z,265nm,1.5s,mb6.0
EGAK LR LR
comp=Z,5µm,21.0s,MS5.8
PMR Palmer 78.53 23 *e*P **P** **01 59 13.4 0.0**
comp=Z,50nm,1.3s,mb5.3
PMR Palmer 78.53 23 *e*P **P** **01 59 13.4 0.0**
PMR pmax pmax
comp=Z,50nm,1.3s,mb5.3
CHGN Chignik 78.56 30 *e*P **P** **01 59 14.5 +0.8**
DOT Dot Lake 78.59 20 *e*P **P** **01 59 13.3 -0.4**
comp=Z,240nm,1.1s,mb6.0
CTAO Charters Tower 78.64 122 *e*P **P** **01 59 15.2 +0.6**
comp=Z,56nm,1.0s,mb5.5
CTAO LR LR
comp=Z,1µm,21.0s,MS5.3
CTAO Charters Tower 78.64 122 *e*P **P** **01 59 15.2 +0.6**
CTAO pmax pmax
comp=Z,56nm,1.0s,mb5.5
CTAO MLR MLR
comp=Z,1µm,21.0s,MS5.3
SML Sawmill 78.64 22 *e*P **P** **01 59 14.1 +0.1**
comp=Z,151nm,1.3s,mb5.8
SML Sawmill 78.64 22 *e*P **P** **01 59 14.1 +0.1**
SML pmax pmax
comp=Z,151nm,1.3s,mb5.8
PAX Paxson 78.68 21 *e*P **P** **01 59 13.3 -0.9**
comp=Z,217nm,1.7s,mb5.8
PAX Paxson 78.68 21 *e*P **P** **01 59 13.4 -0.9**
PAX pmax pmax
comp=Z,217nm,1.7s,mb5.8
RC01 Rabbit Creek A 78.69 23 *e*P **P** **01 59 14.0 -0.3**
comp=Z,203nm,1.2s,mb5.9
SLKM Skilak Lake 78.93 24 *e*P **P** **01 59 14.4 -1.2**
SLKM Skilak Lake 78.93 24 *e*P **P** **01 59 14.4 -1.3**
MENT Mentasta 79.23 20 *e*P **P** **01 59 17.6 +0.4**
SEW Seward 79.49 24 *e*P **P** **01 59 18.3 -0.4**
comp=Z,181nm,1.2s,mb5.9
DAWY Dawson 79.55 18 *e*P **P** **01 59 18.5 -0.5**
KDAK Kodiak Island 79.97 27 PFAKE 01 59 30.0 +8.6
KDAK LR LR
comp=Z,8µm,19.0s,MS6.1
KDAK Kodiak Island 79.97 27 *i*P **P** **01 59 21.3 -0.1**
KDAK Kodiak Island 79.97 27 P **P** **01 59 21.6 +0.2**
comp=Z,622nm,1.4s,mb6.3,SNR=9.1
OHAK Old Harbor 80.08 28 *e*P **P** **01 59 24.7 +2.8**
comp=Z,304nm,1.6s,mb6.0
TSUM Tsumeb 80.57 241 PFAKE 01 59 30.0 +4.8
TSUM LR LR
comp=Z,4µm,19.0s,MS5.8
PAF Port-aux-Franc 80.72 189 PFAKE 01 59 40.0 +15
PAF LR LR
comp=Z,8µm,19.0s,MS6.1
RAGM Ragged Mountai 80.89 22 *e*P **P** **01 59 27.4 +1.1**
BOSA Boshof 81.14 229 P **P** **01 59 26.4 -1.6**
comp=Z,38nm,0.8s,mb5.4,baz=63,slow=5.7,SNR=55
BOSA LR LR 02 33 13.0
comp=Z,4µm,19.3s,MS5.8,baz=50,slow=34
BOSA Boshof 81.14 229 *e*P **P** **01 59 26.8 -1.2**
comp=Z,45nm,0.9s,mb5.4
BOSA LR LR
comp=Z,4µm,20.0s,MS5.8
BOSA Boshof 81.14 229 P **P** **01 59 26.4 -1.6**
BOSA pmax pmax
comp=Z,39nm,0.8s,mb5.4
EFAM Famara 81.15 299 P **P** **01 59 31.6 +3.3**
comp=Z,718nm,3.2s
CFTV Fuerteventura 81.93 298 P **P** **01 59 36.6 +4.2**
comp=Z,14nm,0.8s,mb4.9
MIDW Midway 83.07 61 PFAKE 01 59 50.0 +12
MIDW LR LR
comp=Z,2µm,19.0s,MS5.5
PNL Peninsula 83.10 20 *e*P **P** **01 59 39.3 +1.4**
comp=Z,202nm,1.2s,mb6.0
STKA Stephens Creek 83.13 133 P **P** **01 59 36.4 -2.0**
comp=Z,11nm,0.7s,mb5.0,baz=317,slow=7.1,SNR=18
STKA LR LR 02 42 04.1
comp=Z,3µm,20.5s,MS5.6,baz=311,slow=40
STKA Stephens Creek 83.13 133 *e*P **P** **01 59 37.4 -1.0**
comp=Z,7.3nm,1.1s,mb4.6
HNR Honiara 83.28 105 PFAKE 01 59 50.0 +10
HNR LR LR
comp=Z,952nm,20.0s,MS5.2
SKAG Skagway 84.44 19 *e*P **P** **01 59 45.2 +0.4**
comp=Z,129nm,1.9s,mb5.7
DBIC Dimbokro 85.29 275 P **P** **01 59 49.0 -0.9**
comp=Z,15nm,0.8s,mb5.2,baz=35,slow=6.6,SNR=18
DBIC LR LR 02 41 31.2
comp=Z,5µm,19.2s,MS5.9,baz=232,slow=38
DBIC Dimbokro 85.29 275 *e*P **P** **01 59 49.2 -0.7**
comp=Z,32nm,1.0s,mb5.4
DBIC LR LR
comp=Z,5µm,19.0s,MS6.0
DBIC Dimbokro 85.29 275 P **P** **01 59 49.0 -0.9**
DBIC pmax pmax
comp=Z,15nm,0.8s
DBIC MLR MLR
comp=Z,5µm,19.2s
KIC Kosan Boka 85.35 275 *e*PKIKP **P** **01 59 50.1 -0.1**
comp=Z,83nm,1.0s,mb5.8
TIC Toumodi 85.44 275 *e*PKIKP **P** **01 59 50.6 0.0**
comp=Z,78nm,1.1s,mb5.8
TIC Toumodi 85.44 275 *e*P **P** **01 59 50.6 0.0**
LIC Lamto 85.66 275 *e*P **P** **01 59 50.5 -1.2**
comp=Z,73nm,1.2s,mb5.5
LIC *e*MLR MLR
comp=Z,6µm,18.8s,MS5.7
LIC Lamto 85.66 275 *e*P **P** **01 59 50.5 -1.2**
comp=Z,37nm,1.2s,mb5.5
LIC LR LR
comp=Z,3µm,18.8s,MS5.7
YKA Yellowknife Ar 85.85 8 P **P** **01 59 51.7 -0.1**
comp=Z,15nm,0.7s,mb5.3,baz=340,slow=5.1,SNR=14
YKA LR LR 02 40 39.4
comp=Z,469nm,20.8s,MS4.9,baz=195,slow=37
YKA Yellowknife Ar 85.85 8 P **P** **01 59 51.7 -0.1**
YKA LR LR 02 40 39.4
YKA Yellowknife Ar 85.85 8 P **P** **01 59 51.7 -0.1**
YKA pmax pmax
comp=Z,15nm,0.7s
YKA MLR MLR
comp=Z,469nm,20.8s
SIT Sitka 86.47 20 *e*P **P** **01 59 59.0 +4.1**
comp=Z,166nm,1.8s,mb6.0
SIT Sitka 86.47 20 *e*P **P** **01 59 59.0 +4.1**
SIT pmax pmax
comp=Z,166nm,1.8s,mb6.0
SUR Sutherland 86.50 229 LR LR 02 36 48.4
comp=Z,5µm,18.6s,MS6.0,baz=54,slow=34
SUR Sutherland 86.50 229 *e*P **P** **01 59 55.9 +0.5**
comp=Z,131nm,1.3s,mb6.0
SUR LR LR
comp=Z,5µm,19.0s,MS6.0
DLBC Dease Lake 86.73 17 LR LR 02 41 40.8
comp=Z,6µm,18.9s,MS6.0,baz=320,slow=38
DLBC Dease Lake 86.73 17 *e*P **P** **01 59 56.8 +0.6**
WRAK Wrangell Islan 87.88 19 PFAKE 02 00 10.0 +8.2
WRAK LR LR
comp=Z,3µm,19.0s,MS5.7
ARMA Armidale 88.81 127 *e*P **P** **02 00 05.6 -0.9**
ARMA Armidale 88.81 127 *e*P **P** **02 00 07.9 +1.5**
comp=Z,30nm,1.2s,mb5.5
CAN Canberra 90.05 132 *e*P **P** **02 00 11.9 -0.2**
comp=Z,48nm,1.2s,mb5.7
CAN LR LR
comp=Z,3µm,21.0s,MS5.7
CAN Canberra 90.05 132 *e*P **P** **02 00 12.0 -0.2**
CAN pmax pmax
comp=Z,48nm,1.2s,mb5.7
CAN MLR MLR
comp=Z,3µm,21.0s,MS5.7
SCHQ Schefferville 90.96 343 P **P** **02 00 16.1 -0.2**
comp=Z,6.4nm,0.9s,mb5.0,baz=27,slow=6.8,SNR=3.4
SCHQ LR LR 02 42 21.6
comp=Z,3µm,21.1s,MS5.7,baz=45,slow=36
SCHQ Schefferville 90.96 343 *e*P **P** **02 00 17.8 +1.5**
SCHQ LR LR
comp=Z,4µm,21.0s,MS5.8
BBB Bella Bella 92.79 19 LR LR 02 44 50.9
comp=Z,1µm,20.0s,MS5.4,baz=156,slow=37
FFC Flin Flon 94.65 3 *e*P **P** **02 00 36.0 +2.7**
comp=Z,461nm,2.6s,mb6.5
FFC LR LR
comp=Z,4µm,21.0s,MS5.8
FFC Flin Flon 94.65 3 *e*P **P** **02 00 36.0 +2.7**
FFC pmax pmax
comp=Z,461nm,2.6s,mb6.5
FFC MLR MLR
comp=Z,4µm,21.0s,MS5.8
JOHN Johnston Islan 95.36 67 PFAKE 02 00 50.0 +13
JOHN LR LR
comp=Z,2µm,22.0s,MS5.6
SACV Santiago Islan 96.59 292 PFAKE 02 00 50.0 +7.1
SACV LR LR
comp=Z,2µm,22.0s,MS5.5
MIR Mirnyy 97.35 176 *e*P **P** **02 00 43.0 -2.0**
MIR *e*S SKSac 02 11 20.0 -1.6
MIR pmax pmax
comp=Z,22nm,1.2s,mb5.5
MIR smax
comp=N,980nm,11.0s
MIR MLR MLR
comp=N,2µm,16.0s,MS5.6
MIR MLR MLR
comp=E,900nm,16.0s,MS5.6
MIR MLR MLR
comp=Z,3µm,16.0s,MS5.9
SHEL Horse Pasture 97.45 256 PFAKE 02 01 00.0 +13
SHEL LR LR
comp=Z,2µm,19.0s,MS5.6
JCW Jim Creek 98.06 17 *e*P **P** **02 00 53.8 +4.9**
NLWA Neilton Lookou 98.30 18 PFAKE 02 01 00.0 +10
NLWA LR LR
comp=Z,4µm,22.0s,MS5.8
CASY Casey 98.99 169 PFAKE 02 01 00.0 +7.7
CASY LR LR
comp=Z,3µm,20.0s,MS5.8
NEW Newport 99.10 14 PFAKE 02 01 00.0 +6.5
NEW LR LR
comp=Z,4µm,21.0s,MS5.9
FUNA Funafuti 99.11 94 PFAKE 02 01 00.0 +5.8
FUNA LR LR
comp=Z,11µm,20.0s,MS6.3
ULM Lac du Bonnet 99.27 360 P **P** **02 00 57.1 +2.9**
comp=Z,2.1nm,0.7s,mb4.8,baz=343,slow=9.1,SNR=3.5
ULM LR LR 02 50 06.3
comp=Z,4µm,21.0s,MS5.9,baz=348,slow=38
MAW Mawson 99.37 188 P **P** **02 00 53.9 -0.1**
comp=Z,7.7nm,1.0s,mb5.2,baz=1.4,slow=6.0,SNR=6.4
MAW LR LR 02 39 30.4
comp=Z,4µm,20.2s,MS5.9,baz=14,slow=32
MAW Mawson 99.37 188 PFAKE 02 01 00.0 +6.0
MAW LR LR
comp=Z,6µm,21.0s,MS6.1
MAW Mawson 99.37 188 P **P** **02 00 53.9 -0.1**
MAW pmax pmax
comp=Z,8.0nm,1.0s
HAWA Hanford 100.33 16 PFAKE 02 01 10.0 +11
HAWA LR LR
comp=Z,2µm,20.0s,MS5.7
PKME Peaks-Kenny Pk 100.34 341 PFAKE 02 01 10.0 +11
PKME LR LR
comp=Z,3µm,20.0s,MS5.8
EGMT Eagleton 100.59 9 PFAKE 02 01 10.0 +10
EGMT LR LR
comp=Z,4µm,21.0s,MS5.9
DGMT Dagmar 100.74 5 PFAKE 02 01 10.0 +9.1
DGMT LR LR
comp=Z,4µm,20.0s,MS5.9
MSO Missoula 101.09 12 PFAKE 02 01 10.0 +7.6
MSO LR LR
comp=Z,2µm,21.0s,MS5.7
KIP Kipapa 101.30 57 PFAKE 02 01 10.0 +6.6
KIP LR LR
comp=Z,2µm,21.0s,MS5.6
EYMN Ely 101.45 357 PFAKE 02 01 10.0 +5.9
EYMN LR LR
comp=Z,4µm,20.0s,MS5.9
LBNH Lisbon 102.00 342 PFAKE 02 01 20.0 +13
LBNH LR LR
comp=Z,3µm,19.0s,MS5.9
BMO Blue Mountains 102.30 15 PFAKE 02 01 20.0 +12
BMO LR LR
comp=Z,3µm,19.0s,MS5.8
LONY Lake Ozonia 102.31 344 PFAKE 02 01 20.0 +12
LONY LR LR
comp=Z,4µm,21.0s,MS5.9
LAO LASA Array 102.33 7 PFAKE 02 01 20.0 +12
LAO LR LR
comp=Z,3µm,19.0s,MS5.9
MSVF Nonsavu 102.61 103 PFAKE 02 01 20.0 +11
MSVF LR LR
comp=Z,1µm,21.0s,MS5.5
BOZ Bozeman (W) 102.63 11 PFAKE 02 01 20.0 +11
BOZ LR LR
comp=Z,3µm,21.0s,MS5.8
NCB Newcomb 102.83 344 PFAKE 02 01 20.0 +10
NCB LR LR
comp=Z,4µm,22.0s,MS5.9
HUMO Hull Mountain 102.94 20 PFAKE 02 01 20.0 +9.3
HUMO LR LR
comp=Z,3µm,20.0s,MS5.8
COWI Conover 103.14 355 PFAKE 02 01 20.0 +8.4
COWI LR LR
comp=Z,5µm,19.0s,MS6.1
RLMT Red Lodge 103.50 9 PFAKE 02 01 20.0 +6.8
RLMT LR LR
comp=Z,5µm,22.0s,MS6.0
YBH Yreka Blue Mon 103.82 20 PFAKE 02 01 20.0 +5.4
YBH LR LR
comp=Z,3µm,22.0s,MS5.7
LKWY Lake 103.88 10 PFAKE 02 01 30.0 +15
LKWY LR LR
comp=Z,8µm,19.0s,MS6.2
GLMI Grayling 103.93 351 PFAKE 02 01 30.0 +15
GLMI LR LR
comp=Z,5µm,20.0s,MS6.0
HLID Hailey 104.14 13 PFAKE 02 01 30.0 +14
HLID LR LR
comp=Z,4µm,19.0s,MS6.0
POHA Pohakuloa 104.15 56 PFAKE 02 01 30.0 +14
POHA LR LR
comp=Z,2µm,22.0s,MS5.6
WVOR Wild Horse Val 104.27 17 PFAKE 02 01 30.0 +13
WVOR LR LR
comp=Z,2µm,21.0s,MS5.7
MOD Modoc 104.34 18 PFAKE 02 01 30.0 +13
MOD LR LR

comp=Z,2μm,21.0s,MS5.5
BINY Binghamton 104.92 344 PFAKE 02 01 30.0 +10
BINY LR LR
comp=Z,4μm,21.0s,MS6.0
WDC Whiskeytown Da 104.93 20 PFAKE 02 01 30.0 +10
WDC LR LR
comp=Z,3μm,21.0s,MS5.8
AHID Auburn Hatcher 105.52 11 PFAKE 02 05 50.0 +14
AHID LR LR
comp=Z,3μm,19.0s,MS5.9
BW06 Boulder Array 105.77 10 PFAKE 02 05 50.0 +14
BW06 LR LR
comp=Z,4μm,19.0s,MS6.0
PDAR Pinedale Array 105.77 10 PKiKP PKiKP 02 05 35.7 -0.4
comp=Z,1.6nm,1.0s,baz=30,slow=1.9,SNR=6.5
PDAR PKKPbc PKKPbc 02 16 58.9 -0.8
comp=Z,1.0nm,0.9s,baz=129,slow=4.5,SNR=4.9
ECSD EROS Data Cent 105.79 0 PFAKE 02 05 50.0 +14
ECSD LR LR
comp=Z,3μm,21.0s,MS5.8
ERPA Erie 105.84 347 PFAKE 02 05 50.0 +14
ERPA LR LR
comp=Z,3μm,21.0s,MS5.9
HOPS Hopland 106.22 21 PFAKE 02 05 50.0 +13
HOPS LR LR
comp=Z,2μm,20.0s,MS5.6
AAM Ann Arbor 106.28 350 PFAKE 02 05 50.0 +13
AAM LR LR
comp=Z,4μm,19.0s,MS6.0
JFWS Jewell Farm 106.39 355 PFAKE 02 05 50.0 +13
JFWS LR LR
comp=Z,6μm,20.0s,MS6.1
HWUT Hardware Ranch 106.57 12 PFAKE 02 05 50.0 +12
HWUT LR LR
comp=Z,3μm,21.0s,MS5.9
MCCM Marconi Confer 107.06 22 PFAKE 02 05 50.0 +11
MCCM LR LR
comp=Z,2μm,22.0s,MS5.6
SCIA State Center 107.55 357 PFAKE 02 05 50.0 +11
SCIA LR LR
comp=Z,5μm,19.0s,MS6.1
DUG Dugway 107.70 13 PFAKE 02 05 50.0 +10
DUG LR LR
comp=Z,3μm,20.0s,MS5.8
CMB Columbia Colle 107.92 20 PFAKE 02 05 50.0 +10
CMB LR LR
comp=Z,3μm,21.0s,MS5.8
NVAR Mina Array Bea 108.12 18 PKiKP PKiKP 02 05 42.4 +1.8
comp=Z,1.4nm,0.7s,baz=277,slow=1.6,SNR=9.3
NVAR PP PP 02 06 03.7 +1.5
comp=Z,1.6nm,0.8s,baz=330,slow=6.7,SNR=6.1
NVAR PKKPbc PKKPbc 02 16 52.1 -0.2
comp=Z,0.7nm,0.8s,baz=178,slow=4.3,SNR=3.9
NVAR Mina Array Bea 108.12 18 PKPdf PKiKP 02 05 42.4 +1.8
NVAR PP PP 02 06 03.7 +1.5
NVAR PKKPbc PKKPbc 02 16 52.1 -0.2
MCWV Mont Chateau 108.19 347 PFAKE 02 05 50.0 +9.3
MCWV LR LR
comp=Z,4μm,20.0s,MS6.0
ACSO Alum Creek Sta 108.20 349 PFAKE 02 05 50.0 +9.3
ACSO LR LR
comp=Z,3μm,19.0s,MS5.8
OGNE Ogallala 108.39 4 PFAKE 02 05 50.0 +9.0
OGNE LR LR
comp=Z,4μm,20.0s,MS6.0
HDIL Hopedale 108.66 354 PFAKE 02 05 50.0 +8.5
HDIL LR LR
comp=Z,4μm,19.0s,MS6.0
SAO San Andreas Ge 108.77 21 PFAKE 02 05 50.0 +8.2
SAO LR LR
comp=Z,2μm,22.0s,MS5.7
CBN Corbin 109.05 344 PFAKE 02 05 50.0 +7.7
CBN LR LR
comp=Z,4μm,20.0s,MS5.9
ISCO Idaho Springs 109.20 7 PFAKE 02 05 50.0 +7.4
ISCO LR LR
comp=Z,3μm,20.0s,MS5.8
AFI Afiamalu 109.44 95 PFAKE 02 05 50.0 +6.5
AFI LR LR
comp=Z,2μm,22.0s,MS5.5
MVU Marysvale 109.46 13 PFAKE 02 05 50.0 +6.9
MVU LR LR
comp=Z,4μm,21.0s,MS6.0
BBSR BB Station 110.33 332 PFAKE 02 05 50.0 +5.1
BBSR LR LR
comp=Z,2μm,21.0s,MS5.6
DAC Darwin (Calif) 110.34 18 PFAKE 02 06 00.0 +15
DAC LR LR
comp=Z,2μm,19.0s,MS5.8
SNZO South Karori 110.37 127 PFAKE 02 05 50.0 +5.5
SNZO LR LR
comp=Z,2μm,21.0s,MS5.7
KSU1 Kansas State U 110.42 0 PFAKE 02 05 50.0 +5.1
KSU1 LR LR
comp=Z,4μm,20.0s,MS6.0
CBKS Cedar Bluff 110.64 3 PFAKE 02 06 00.0 +15
CBKS LR LR
comp=Z,3μm,20.0s,MS5.9
BLA Blacksburg 110.67 346 PFAKE 02 06 00.0 +15
BLA LR LR
comp=Z,3μm,21.0s,MS5.9
SDCO Great Sand Dun 111.24 8 PFAKE 02 06 00.0 +14
SDCO LR LR
comp=Z,4μm,21.0s,MS6.0
CNNC Cliffs of the 112.00 344 PFAKE 02 06 00.0 +12
CNNC LR LR
comp=Z,6μm,21.0s,MS6.1
TRIS Tristan da Cun 112.14 239 PFAKE 02 06 00.0 +12
TRIS LR LR
comp=Z,3μm,22.0s,MS5.8
PFO Pinyon Flat Ob 113.16 18 PFAKE 02 06 00.0 +10
PFO LR LR
comp=Z,2μm,22.0s,MS5.7
XMAS Kiritimati 113.47 72 PFAKE 02 06 00.0 +8.7
XMAS LR LR
comp=Z,3μm,19.0s,MS5.8
ANMO Albuquerque 113.88 9 PFAKE 02 06 00.0 +8.4
ANMO LR LR
comp=Z,4μm,20.0s,MS6.0
AMTX Amarillo 114.44 5 PFAKE 02 06 00.0 +7.3
AMTX LR LR
comp=Z,4μm,19.0s,MS6.1
NHSC New Hope 114.57 345 PFAKE 02 06 00.0 +7.0
NHSC LR LR
comp=Z,4μm,19.0s,MS6.0
OXF Oxford 114.66 354 PFAKE 02 06 00.0 +6.9
OXF LR LR
comp=Z,4μm,19.0s,MS6.1
WMOK Wichita Mounta 114.73 2 PFAKE 02 06 00.0 +6.8
WMOK LR LR
comp=Z,4μm,20.0s,MS6.1
MIAR Mount Ida 114.91 357 PFAKE 02 06 00.0 +6.4
MIAR LR LR
comp=Z,4μm,20.0s,MS6.1
GOGA Godfrey 114.93 348 PFAKE 02 06 00.0 +6.4
GOGA LR LR
comp=Z,4μm,20.0s,MS6.0
TUC Tucson 115.73 13 *e*PKPdf PKPdf 02 05 55.9 +0.7
TUC LR LR
comp=Z,2μm,21.0s,MS5.7
TUC Tucson 115.73 13 *e*PKIKP PKPdf 02 05 55.9 +0.7
TUC MLR MLR
comp=Z,2μm,21.0s,MS5.7
LRAL Lakeview Retre 115.85 351 PFAKE 02 06 10.0 +15
LRAL LR LR
comp=Z,4μm,20.0s,MS6.0
GDL2 Guadalupe Moun 116.85 8 *e*PKPdf PKPdf 02 05 59.2 +1.9
VBMS Vicksburg 117.04 354 PFAKE 02 06 10.0 +12
VBMS LR LR
comp=Z,3μm,19.0s,MS6.0
NATX Nacogdoches 117.72 358 PFAKE 02 06 10.0 +11
NATX LR LR
comp=Z,3μm,20.0s,MS5.9
BRAL Brewton 117.85 351 PFAKE 02 06 10.0 +11
BRAL LR LR
comp=Z,4μm,19.0s,MS6.0
RCBR Riachuelo 118.21 281 PFAKE 02 06 10.0 +10
RCBR LR LR
comp=Z,2μm,22.0s,MS5.6
SBA Scott Base 118.48 166 PFAKE 02 06 10.0 +11
SBA LR LR
comp=Z,2μm,19.0s,MS5.8
JCT Junction City 118.93 3 *e*PKPdf PKPdf 02 06 03.5 +2.1
JCT LR LR
comp=Z,4μm,19.0s,MS6.1
JCT Junction City 118.93 3 *e*PKIKP PKPdf 02 06 03.5 +2.1
JCT MLR MLR
comp=Z,4μm,19.0s,MS6.1
TXAR Lajitas Array 119.76 7 PKP PKPdf 02 06 02.5 -0.6
comp=Z,4.4nm,0.8s,baz=123,slow=0.5,SNR=21
TXAR PKKPbc PKKPbc 02 16 12.2 -0.5
comp=Z,1.6nm,0.8s,baz=169,slow=5.2,SNR=7.6
TXAR Lajitas Array 119.76 7 PKIKP PKPdf 02 06 02.5 -0.6
TXAR pmax pmax
comp=Z,4.0nm,0.8s
QSPA South Pole Qui 120.64 180 PKP PKPdf 02 06 02.7 -0.4
comp=Z,9.4nm,0.8s,baz=265,slow=1.5,SNR=22
QSPA South Pole Qui 120.64 180 *e*PKPdf PKPdf 02 06 02.2 -0.9
QSPA LR LR
comp=Z,3μm,20.0s,MS5.9
ANWB Willy Bob 121.39 321 PFAKE 02 06 20.0 +14
ANWB LR LR
comp=Z,1μm,22.0s,MS5.6
KVTX Kingsville 121.92 2 PFAKE 02 06 20.0 +13
KVTX LR LR
comp=Z,4μm,19.0s,MS6.1
SJG San Juan 123.29 325 PFAKE 02 06 20.0 +10
SJG LR LR
comp=Z,2μm,22.0s,MS5.7
FDF Fort de France 123.41 318 PFAKE 02 06 20.0 +10
FDF LR LR
comp=Z,2μm,22.0s,MS5.7
BBGH Gun Hill 123.72 315 PFAKE 02 06 20.0 +9.0
BBGH LR LR
comp=Z,2μm,22.0s,MS5.8
SDDR Presa de Saban 124.89 331 PFAKE 02 06 20.0 +6.9
SDDR LR LR
comp=Z,2μm,20.0s,MS5.7
GRGR Grenville 125.77 317 PFAKE 02 06 20.0 +5.1
GRGR LR LR
comp=Z,1μm,22.0s,MS5.5
MTDJ Mount Denham 127.95 337 PFAKE 02 06 30.0 +11
MTDJ LR LR
comp=Z,2μm,21.0s,MS5.7
TEIG Tepich 128.63 350 PFAKE 02 06 30.0 +10
TEIG LR LR
comp=Z,2μm,20.0s,MS5.8
PPT Papeete 130.16 87 *e*SS SS 02 25 58.5 -4.4
PPT *e*LR LR 02 47 41.8
comp=Z,1μm,27.5s
comp=Z,5μm,32.2s
TBI Tubuai 132.55 94 *e*SS SS 02 26 33.3 +1.1
comp=Z,930nm,29.8s
TBI *e*LR LR 02 48 41.9
comp=Z,2μm,26.5s
BDFB Brasília 133.38 278 PKP PKPdf 02 06 29.7 +0.5
comp=Z,1.3nm,0.7s,baz=111,slow=25,SNR=2.6
BDFB Brasília 133.38 278 PKIKP PKPdf 02 06 29.7 +0.5
SDV Santo Domingo 133.40 324 *e*PKPdf PKPdf 02 06 32.6 +3.2
SDV LR LR
comp=Z,698nm,21.0s,MS5.3
TAOE Nuku Hiva Isla 133.80 71 *e*LR LR 02 49 16.2
comp=Z,3μm,24.2s
TGUH Tegucigalpa,Un 134.50 348 *e*PKPdf PKPdf 02 06 32.8 +1.4
TGUH LR LR
comp=Z,1μm,20.0s,MS5.7
SPB Sao Paulo 136.12 267 PFAKE 02 06 40.0 +5.8
SPB LR LR
comp=Z,2μm,20.0s,MS5.9
BCIP Isla Barro Col 137.16 336 PFAKE 02 06 50.0 +14
BCIP LR LR
comp=Z,1μm,22.0s,MS5.6
JTS JuntasAbangare 137.65 343 PFAKE 02 06 50.0 +13
JTS LR LR
comp=Z,2μm,22.0s,MS5.9
ROSC El Rosal 138.70 325 PKhKP PKPpre 02 06 35.7
comp=Z,3.1nm,0.3s,baz=83,slow=17,SNR=4.3
PMSA Palmer Station 140.55 201 PFAKE 02 06 50.0 +9.0
PMSA LR LR
comp=Z,2μm,20.0s,MS6.0
OTAV Otavalo 144.69 328 *e*PKPdf PKPdf 02 06 50.4 +0.3
OTAV LR LR
comp=Z,2μm,22.0s,MS5.8
RKT Rikitea 144.92 87 *e*SS SS 02 28 49.1 -9.1
comp=Z,653nm,30.2s
RKT *e*LR LR 02 54 25.3
comp=Z,2μm,27.5s
EFI East Falkland 145.00 222 PFAKE 02 07 00.0 +11
EFI LR LR
comp=Z,2μm,21.0s,MS5.8
CPUP Villa Florida 145.51 268 PKPbc PKPbc 02 06 50.0 -1.1
comp=Z,10nm,0.7s,baz=51,slow=3.3,SNR=28
CPUP Villa Florida 145.51 268 PKPbc PKPbc 02 06 50.0 -1.1
CPUP LR LR
comp=Z,293nm,19.0s,MS5.1
CPUP Villa Florida 145.51 268 PKIKP PKPdf 02 06 50.0 -1.0
CPUP pmax pmax
comp=Z,10.0nm,0.7s
USHA Ushuaia 148.82 212 PKPbc PKPbc 02 06 58.0 -1.4
comp=Z,12nm,0.7s,baz=103,slow=3.5,SNR=5.8
PAYG Puerto Ayora 149.44 348 PFAKE 02 07 10.0 +12
PAYG LR LR
comp=Z,1μm,20.0s,MS5.8
LPAZ La Paz 150.41 293 PKPbc PKPbc 02 07 04.2 -0.4
comp=Z,24nm,0.8s,baz=104,slow=6.4,SNR=4.2
LPAZ La Paz 150.41 293 PKPbc PKPbc 02 07 04.2 -0.4
TRQA Tornquist 150.82 246 *e*PKPdf PKPdf 02 06 59.6 +0.3
TRQA *e*PKPbc PKPbc 02 07 05.0 0.0
TRQA LR LR
comp=Z,3μm,20.0s,MS6.0
ATAH Atahualpa 151.00 321 PKPbc PKPbc 02 07 06.5 +0.4
comp=Z,5.7nm,0.7s,baz=90,slow=16,SNR=6.6
NNA Nana 153.93 312 PKPab PKPab 02 07 25.9 +0.2
comp=Z,6.0nm,0.4s,baz=165,slow=2.3,SNR=4.2
NNA Nana 153.93 312 PKPab PKPab 02 07 25.9 +0.2
NNA LR LR
comp=Z,1μm,19.0s,MS5.8
CFAA Coronel Fontan 155.91 261 PKPab PKPab 02 07 32.1 -1.8
comp=Z,1.9nm,0.5s,baz=344,slow=13,SNR=6.8
CFAA Coronel Fontan 155.91 261 PKPab PKPab 02 07 32.1 -1.8
PLCA Paso Flores 156.89 238 PKP PKPdf 02 07 07.5 -0.3
comp=Z,2.1nm,1.1s,baz=93,slow=3.3,SNR=3.4
PLCA PKPab PKPab 02 07 37.9 +0.1
comp=Z,9.0nm,0.9s,baz=102,slow=5.5,SNR=5.6
PLCA Paso Flores 156.89 238 *e*PKPdf PKPdf 02 07 07.4 -0.5
PLCA LR LR
comp=Z,2μm,19.0s,MS6.0
PLCA Paso Flores 156.89 238 *e*PKIKP PKPdf 02 07 07.4 -0.4
PLCA MLR MLR
comp=Z,2μm,19.0s

DJA 25 01:51:31.0˝57S×100˝49E, h10km, MLv4.0/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.15**	**320**	P	Pg	01 51 31.7	-2.6
PDSI	**Padang**	**0.34**	**185**	P	Pg	01 51 37.9	+0.1
PDSI				S	Sg	01 51 44.1	+1.7
SDSI	**Sungai Dareh**	**1.00**	**111**	P	Pg	01 51 49.2	-1.2
BKNI	**Bangkinang**	**1.05**	**32**	P	Pg	01 51 48.9	-2.3
BKNI				S	Sg	01 52 05.7	+0.9
SISI	**Saibi**	**1.59**	**242**	P	Pn	01 51 58.6	-0.6
MNSI	**Mandailing Nat**	**1.63**	**326**	P	Pn	01 51 58.9	-0.9

*IDC **25** 01:55:55.5±0.8, 30˝35N×83˝23E, h0km, mb3.9/10, mb1 4.1/12, mb1mx4.0/27, mbtmp4.0/12, ML4.0/2, Error ellipse: s-maj=30.5km s-min=16.6km az=50.0*
*DMN **25** 01:55:59.2±0.6, 31˝02N×83˝44E, h10km, Ml4.6/3, Error ellipse: s-maj=14.5km s-min=8.8km az=142.0*
*NEIC **25** 01:55:59.8±0.4, 30˝79N×83˝40E, h10km, mb4.3/2, Error ellipse: s-maj=11.7km s-min=5.7km az=67.0*
*ISCJB **25** 01:56:01.9±1.0, 30˝81N±0˝06×83˝53E±0˝09, h57km±12km, mb3.9/11, Error ellipse: s-maj=12.6km s-min=9.3km az=160.8*
ISC 25 01:56:03.7±0.8, 30˝77N±0˝06×83˝49E±0˝08, h54km±11km, n30, σ1§16/33, mb3.9/11, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.42**	**174**	*e*Pn	**Pn**	**01 56 40.8**	**-0.1**
DANN				*e*Sn	**Sn**	**01 57 11.4**	**+2.1**
1μm,0.7s							
PYUN	**Piuthan**	**2.70**	**189**	*e*Pn	**Pn**	**01 56 44.7**	**+0.1**
GKN	**Gorkha**	**2.94**	**160**	*e*Pn	**Pn**	**01 56 47.4**	**-0.4**
GKN				*e*Sn	**Sn**	**01 57 23.8**	**+2.0**
363nm,0.3s							
KOLN	**Koldanda**	**2.99**	**178**	*e*Pn	**Pn**	**01 56 47.8**	**-0.8**
KOLN				*e*Sn	**Sn**	**01 57 24.2**	**+0.9**
1μm,0.8s							
DMN	**Daman**	**3.45**	**156**	*e*Pn	**Pn**	**01 56 55.3**	**+0.4**
GUN	**Gumba**	**3.53**	**143**	*e*Pn	**Pn**	**01 56 55.9**	**-0.1**
PKIN	**Phulchoki**	**3.59**	**152**	*e*Pn	**Pn**	**01 56 56.3**	**-0.5**
PKI	**Pulchoki**	**3.60**	**152**	*e*Pn	**Pn**	**01 56 56.8**	**-0.2**
PKI	**Pulchoki**	**3.60**	**152**	*e*Pn	**Pn**	**01 56 56.3**	**-0.7**
TAPN	**Taplejung**	**5.03**	**132**	*e*Pn	**Pn**	**01 57 15.6**	**-0.9**
ODAN	**Odare**	**5.18**	**138**	*e*Pn	**Pn**	**01 57 17.7**	**-1.0**
LSA	**Lhasa**	**6.71**	**97**	Pn	**Pn**	**01 57 39.5**	**-0.1**
KBL	**Kabul**	**12.74**	**291**	*e*Pn	**Pn**	**01 59 00.2**	**-1.8**
MKAR	**Makanchi Array**	**16.02**	**357**	Pn	**Pn**	**01 59 46.0**	**+0.6**
0.2nm,0.3s,baz=178,slow=13,SNR=6.0							
CMAR	**Chiang Mai Arr**	**18.62**	**128**	P	**Pn**	**02 00 15.1**	**-2.5**
0.4nm,0.3s,baz=310,slow=9.6,SNR=5.8							
KURK	**Kurchatov**	**20.25**	**351**	*e*P	**P**	**02 00 33.8**	**-0.5**
9.1nm,1.0s							
ZALV	**Zalesovo Beam**	**23.18**	**2**	P	**P**	**02 01 08.1**	**+2.6**
1.8nm,0.7s,mb3.6,baz=189,slow=8.2,SNR=3.5							
BVAR	**Borovoye Array**	**24.20**	**340**	P	**P**	**02 01 17.8**	**+2.8**
1.0nm,0.5s,mb3.5,baz=158,slow=14,SNR=4.0							
BRVK	**Borovoye**	**24.26**	**340**	P	**P**	**02 01 16.1**	**+0.5**
SONM	**Songino Array**	**24.44**	**39**	P	**P**	**02 01 21.3**	**+4.1**
2.1nm,1.0s,mb3.5,baz=224,slow=6.0,SNR=3.9							
ULN	**Ulaanbaatar**	**24.82**	**40**	*e*P	**P**	**02 01 22.1**	**+1.5**
3.9nm,0.3s,mb4.4							
AKASG	**Malin Array Be**	**44.56**	**313**	P	**P**	**02 04 10.9**	**+0.8**
0.3nm,0.3s,mb3.6,baz=87,slow=6.7,SNR=4.1							
FINES	**FINESS Array B**	**47.99**	**327**	P	**P**	**02 04 36.6**	**-0.2**
2.8nm,0.7s,mb4.4,baz=104,slow=8.0,SNR=7.3							
HFS	**Hagfors**	**53.88**	**324**	P	**P**	**02 05 20.4**	**-0.7**
2.1nm,0.8s,mb4.1,baz=97,slow=10,SNR=3.7							
NB2	**NORSAR Subarra**	**55.09**	**326**	P	**P**	**02 05 28.8**	**-1.1**
comp=Z,1.5nm,0.7s,mb4.1,baz=89,slow=7.4							
NOA	**NORSAR Array B**	**55.09**	**326**	P	**P**	**02 05 31.6**	**+1.7**
comp=Z,1.0nm,0.7s,mb4.0,baz=88,slow=7.2,SNR=4.7							
WRA	**Warramunga Arr**	**70.20**	**129**	P	**P**	**02 07 09.7**	**-1.3**
comp=Z,2.3nm,0.6s,mb4.3,baz=324,slow=6.3,SNR=16							
ASAR	**Alice Springs**	**72.56**	**132**	P	**P**	**02 07 24.2**	**-1.0**
comp=Z,0.9nm,0.7s,mb3.8,baz=314,slow=6.5,SNR=5.9							
TORD	**Torodi Ar. Bea**	**76.43**	**277**	P	**P**	**02 07 46.6**	**-1.3**
comp=Z,172nm,0.5s,baz=27,slow=3.8,SNR=1.9							
ILAR	**Eielson Array**	**77.01**	**20**	P	**P**	**02 07 51.0**	**+0.7**
comp=Z,0.8nm,0.9s,mb3.7,baz=309,slow=4.0,SNR=7.2							

*IDC **25** 02:03:29.2±3.3, 30˝60N×83˝04E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/24, mbtmp3.5/4, Error ellipse: s-maj=103.2km s-min=36.2km az=78.0*
*ISCJB **25** 02:03:34.8±5.4, 30˝8N±0˝1×84˝3E±0˝2, h23km±41km, mb3.4/4, Error ellipse: s-maj=30.8km s-min=12.9km az=139.9*
ISC 25 02:03:35.1±5.6, 30˝8N±0˝1×84˝3E±0˝1, h13km±36km, n7, σ1§52/8, mb3.4/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.74**	**251**	*e*PKP	**Pn**	**02 04 31.2**	**-1.4**
PTH				*e*S	Sg	02 05 45.3	+10
LGTI	**Lohaghat**	**3.75**	**250**	*e*PKP	**Pn**	**02 04 33.5**	**+0.8**
LGTI				*e*S	**Sn**	**02 05 17.1**	**+0.3**
MKAR	**Makanchi Array**	**16.03**	**355**	Pn	**Pn**	**02 07 21.7**	**+1.5**
0.2nm,0.3s,baz=174,slow=12,SNR=7.1							
ZALV	**Zalesovo Beam**	**23.12**	**1**	P	**P**	**02 08 39.4**	**-1.3**
0.5nm,0.5s,mb3.2,baz=190,slow=9.4,SNR=3.6							
SONM	**Songino Array**	**23.98**	**39**	P	**P**	**02 08 53.2**	**+4.0**
0.5nm,0.5s,mb3.2,baz=208,slow=12,SNR=2.3							
WRA	**Warramunga Arr**	**69.71**	**130**	P	**P**	**02 14 45.4**	**+0.5**
0.5nm,0.8s,mb3.5,baz=324,slow=6.0,SNR=3.0							
ILAR	**Eielson Array**	**76.74**	**20**	P	**P**	**02 15 25.1**	**-0.7**
0.7nm,0.9s,mb3.6,baz=300,slow=5.1,SNR=7.1							

*ISCJB **25** 02:04:58.5±0.4, 22˝49S±0˝03×70˝10W±0˝06, h87km±3km, mb4.0/10, Error ellipse: s-maj=9.2km s-min=5.0km az=5.2*
*GUC **25** 02:04:59.9±0.6, 22˝51S×69˝95W, h70km±5km, ML4.7*
*IDC **25** 02:04:59.5±0.6, 22˝55S×69˝94W, h79km±4km, mb3.8/8, mb1 4.0/12, mb1mx3.9/20, mbtmp3.8/12, MS3.1/2, Ms1 3.2/2, ms1mx2.7/29, Error ellipse: s-maj=18.5km s-min=13.0km az=81.0*
*NEIC **25** 02:04:59.9, 22˝51S×69˝95W, h70km, mb4.6/1, After GUC.*
NEIC Felt [II] at Maria Elena and Tocopilla.
ISC 25 02:04:59.5±0.4, 22˝50S±0˝03×70˝08W±0˝06, h80km±3km, n39, σ1§20/44, mb4.0/10, 5C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**0.42**	**345**	⇓*i*P	**Pn**	**02 05 12.5**	**-0.3**
TOCH				*i* S	**Sn**	**02 05 22.0**	**-0.4**
TOCH				AML	AML	02 05 22.9	
comp=N,80μm,0.3s							
MACH	**Maria Elena**	**0.43**	**44**	⇓*i*P	**Pn**	**02 05 11.9**	**-0.8**
MACH				*i* S	**Sn**	**02 05 21.4**	**-1.0**
MECH	**Mejillones**	**0.69**	**210**	⇑*i*P	**Pn**	**02 05 16.1**	**+0.9**
MECH				*i* S	**Sn**	**02 05 27.8**	**+1.1**
MECH				AML	AML	02 05 36.1	
comp=N,22μm,0.3s							
CEN1	**Los Morros**	**0.89**	**187**	⇓*i*P	**Pn**	**02 05 20.4**	**+3.1**
CEN1				*i* S	**Sn**	**02 05 35.9**	**+5.3**
ANCH	**Antofagasta**	**1.21**	**194**	⇑*i*P	**Pn**	**02 05 21.6**	**+0.4**
ANCH				*i* S	**Sn**	**02 05 38.3**	**+0.9**
ANCH	**Antofagasta**	**1.21**	**194**	⇑*i*P	**Pn**	**02 05 21.6**	**+0.4**
ANCH				*i* S	**Sn**	**02 05 38.3**	**+0.9**
ANCH				AML	AML	02 05 40.1	
comp=N,9μm,0.6s							
SPCH	**San Pedro de A**	**1.78**	**103**	⇑*i*P	**Pn**	**02 05 30.0**	**+1.5**
SPCH				*i* S	**Sn**	**02 05 52.1**	**+1.5**
SPCH	**San Pedro de A**	**1.78**	**103**	⇑*i*P	**Pn**	**02 05 30.0**	**+1.5**
SPCH				*i* S	**Sn**	**02 05 52.1**	**+1.5**
SPCH				AML	AML	02 06 02.2	
comp=N,10μm,0.4s							
HMBC	**Humberston**	**2.22**	**5**	⇓*i*P	**Pn**	**02 05 33.3**	**-1.1**
HMBC				*i* S	**Sn**	**02 06 00.4**	**-0.6**
HMBC				AML	AML	02 06 04.7	
comp=N,4μm,0.3s							
PSGC	**Pisagua**	**2.89**	**359**	AML	AML	02 06 15.8	
comp=E,3μm,0.4s							
MNMC	**Miaee Miaé**	**3.39**	**8**	AML	AML	02 06 45.1	
comp=E,4μm,0.8s							
LPAZ	**La Paz**	**6.45**	**17**	P	**Pn**	**02 06 33.3**	**+1.4**
comp=E,8.5nm,0.3s,baz=192,slow=7.4,SNR=261							
LPAZ				S	**Sn**	**02 07 45.8**	**+1.7**
comp=E,2.5nm,0.3s,baz=166,slow=16,SNR=2.6							
LPAZ				LR	LR	02 08 31.9	
comp=E,130nm,20.3s,baz=215,slow=33							
LPAZ	**La Paz**	**6.45**	**17**	*e*Pn	**Pn**	**02 06 33.3**	**+1.4**
LPAZ	**La Paz**	**6.45**	**17**	S	**Sn**	**02 07 45.8**	**+1.7**
LPAZ				LR	LR	02 08 31.9	
LCO	**Las Campanas**	**6.50**	**185**	*e*Pn	**Pn**	**02 06 30.2**	**-2.4**
comp=E,33nm,0.4s							
LCO				*e*S	**Sn**	**02 07 44.1**	**-1.3**
CFAA	**Coronel Fontan**	**9.21**	**170**	P	**Pn**	**02 07 07.2**	**-2.3**
comp=E,0.2nm,0.3s,baz=349,slow=9.6,SNR=23							
CFAA				S	**Sn**	**02 08 42.8**	**-8.8**
comp=E,0.2nm,0.3s,baz=345,slow=15,SNR=5.3							
CFAA	**Coronel Fontan**	**9.21**	**170**	P	**Pn**	**02 07 07.2**	**-2.3**
CFAA				S	**Sn**	**02 08 42.8**	**-8.8**
CPUP	**Villa Florida**	**12.23**	**111**	P	**Pn**	**02 07 47.2**	**-3.4**
comp=E,0.5nm,0.3s,baz=27,slow=3.0,SNR=1.7							
CPUP				LR	LR	02 13 05.8	
comp=E,117nm,20.9s,baz=172,slow=40							
CPUP	**Villa Florida**	**12.23**	**111**	P	**Pn**	**02 07 47.2**	**-3.4**
CPUP				LR	LR	02 13 05.8	
NNA	**Nana**	**12.29**	**327**	S	**Sn**	**02 10 05.5**	**-1.2**
comp=E,4.4nm,0.3s,baz=228,slow=18,SNR=5.6							
PLCA	**Paso Flores**	**18.18**	**181**	P	**Pn**	**02 09 05.8**	**-0.6**
comp=E,0.3nm,0.3s,baz=17,slow=13,SNR=6.5							
BDFB	**Brasília**	**21.93**	**76**	P	**P**	**02 09 46.1**	**-0.4**
comp=E,7.2nm,0.4s,mb4.3,baz=233,slow=9.5,SNR=16							
RCBR	**Riachuelo**	**36.91**	**69**	P	**P**	**02 12 00.1**	**-0.7**
comp=E,9.2nm,1.0s,mb4.7,baz=268,slow=4.2,SNR=3.6							
RCBR	**Riachuelo**	**36.91**	**69**	P	**P**	**02 11 59.8**	**-1.1**
comp=E,38nm,1.3s,mb5.2							
TXAR	**Lajitas Array**	**60.84**	**326**	P	**P**	**02 15 04.9**	**+1.3**
comp=E,0.2nm,0.6s,mb3.4,baz=180,slow=9.0,SNR=3.1							
TXAR				sP	sP	02 15 33.5	+0.5
comp=E,0.8nm,0.9s,baz=142,slow=6.3,SNR=5.2							
SNAA	**Sanae**	**61.70**	**161**	P	**P**	**02 15 09.3**	**+0.5**
comp=E,1.2nm,0.8s,mb4.0,baz=289,slow=4.8,SNR=12							
SNAA				pP	pP	02 15 29.6	+0.3
comp=E,0.5nm,0.6s,baz=268,slow=7.6,SNR=2.6							
QSPA	**South Pole Qui**	**67.69**	**180**	P	**P**	**02 15 49.3**	**+1.6**
comp=E,8.4nm,1.1s,mb4.5							

PDAR	Pinedale Array	74.44 331	P	P		02 16 29.6	+0.8
	comp=E,0.2nm,0.5s,mb3.1,baz=134,slow=3.9,SNR=2.6						
NVAR	Mina Array Bea	75.62 323	P	P		02 16 37.1	+1.3
	comp=E,1.1nm,0.9s,mb3.6,baz=164,slow=6.6,SNR=6.0						
SYO	Syowa Base	75.95 160‖	eP	P		02 16 36.4	-0.8
TORD	Torodi Ar. Bea	78.71 71	P	P		02 16 52.3	-1.3
	comp=E,1.2nm,0.4s,mb4.1,baz=254,slow=5.3,SNR=5.7						
TORD			pP	pP		02 17 12.9	-2.1
	comp=E,1.1nm,0.3s,baz=256,slow=5.4,SNR=2.4						
MAW	Mawson	83.68 164	P	P		02 17 19.0	0.0
	comp=E,4.6nm,1.1s,mb4.2,baz=214,slow=8.8,SNR=6.7						
BOSA	Boshof	83.93 118	P	P		02 17 20.8	-0.3
	comp=E,4.4nm,0.9s,mb4.3,baz=250,slow=7.3,SNR=6.0						
ASAR	Alice Springs	128.52 208	PKP	PKPdf		02 23 56.3	-1.5
	comp=E,1.3nm,0.9s,baz=176,slow=2.4,SNR=8.3						
ZALV	Zalesovo Beam	143.32 25	PKP	PKPdf		02 24 22.2	-2.0
	comp=E,0.7nm,0.4s,baz=225,slow=0.2,SNR=6.3						
ZALV			pPKP	pPKPdf		02 24 46.4	-0.5
	comp=E,1.2nm,0.7s,baz=318,slow=4.0,SNR=2.7						
MKAR	Makanchi Array	147.08 36	PKPbc	PKPbc		02 24 33.0	-0.1
	comp=E,2.4nm,0.9s,baz=316,slow=3.3,SNR=5.7						
MKAR			pPKPbc	pPKPbc		02 24 55.9	+0.3
	comp=E,0.5nm,0.5s,baz=309,slow=3.4,SNR=2.6						
MJAR	Matsushiro Arr	151.81 306	PKPbc	PKPbc		02 24 45.7	+0.4
	comp=E,0.7nm,0.3s,baz=148,slow=0.8,SNR=6.0						
MJAR			pPKPbc	pPKPbc		02 25 07.0	-0.8
	comp=E,2.0nm,0.7s,baz=127,slow=0.9,SNR=2.7						
MJAR	Matsushiro Arr	151.81 306	PKPbc	PKPbc		02 24 45.7	+0.4
MJAR			pPKPbc	pPKPbc		02 25 07.0	-0.8
SONM	Songino Array	154.57 6	PKPab	PKPab		02 25 06.2	+0.6
	comp=E,0.3nm,0.4s,baz=31,slow=0.9,SNR=4.5						

IDC 25 02:18:11.8±2.3, 6°.46S×129°.61E, h0km, mb3.8/1, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, ML4.0/2, 1C, Error ellipse: s-maj=145.7km s-min=31.5km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.16	162	Pn	Pn	02 21 33.1	-0.7
	0.8nm,0.3s,baz=344,slow=14,SNR=9.5						
WRA				Sn	Sn	02 23 58.4	-13
	0.8nm,0.3s,baz=332,slow=23,SNR=7.0						
ASAR	Alice Springs	17.60	167	P	Pn	02 22 19.2	+0.6
	0.5nm,0.3s,baz=343,slow=9.3,SNR=24						
ASAR				S	Sn	02 25 21.4	-14
	0.1nm,0.3s,baz=355,slow=29,SNR=3.9						
MKAR	Makanchi Array	67.57	327	P	P	02 29 10.2	+0.1
	1.3nm,1.0s,baz=114,slow=7.8,SNR=5.8						
SYO	Syowa Base	84.02	201⇑	eP	P	02 29 40.0	-64

*ISCJB **25** 02:22:41.6±2.6, 59°.06S×0°.09×26°.7W±0°.2, h166km±26km, mb4.3/19, Error ellipse: s-maj=17.8km s-min=10.9km az=136.3*

*IDC **25** 02:22:43.2±4.7, 59°.08S×26°.75W, h166km±45km, mb3.9/10, mb1 3.9/11, mb1mx3.9/17, mbtmp3.9/11, Error ellipse: s-maj=18.1km s-min=12.6km az=38.0*

*NEIC **25** 02:22:43.9±2.3, 59°.10S×26°.73W, h174km±22km, mb4.6/10, Error ellipse: s-maj=11.8km s-min=8.4km az=219.0*

ISC 25 02:22:42.2±2.8, 59°.1S±0°.1×26°.7W±0°.2, h154km±29km, n32, σ0°.45/29, mb4.3/19, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.93	154	eP	Pn	02 25 53.2	+0.6
VNA3	Neumayer Olymp	14.08	157	eP	Pn	02 25 49.1	-5.4
VNA3				e		02 25 54.9	
VNA2				eS	Sn	02 28 21.2	-9.1
VNA2	Neumayer--Watz	14.32	154	eP	Pn	02 25 57.4	-0.2
	baz=316,slow=16						
SNAA	Sanae	15.91	152	P	Pn	02 26 16.7	-0.5
	0.3nm,0.3s,baz=310,slow=9.6,SNR=52						
SNAA				S	S	02 29 07.5	-6.5
	0.1nm,0.3s,baz=328,slow=14,SNR=6.1						
MAIT	Maitri	19.62	142	eP	P	02 26 57.9	-0.4
TRQA	Tornquist	30.85	297	eP	P	02 28 43.9	+0.4
	5.4nm,0.6s,mb4.5						
QSPA	South Pole Qui	31.18	180	P	P	02 28 46.6	+0.6
	6.9nm,0.5s,mb4.6,baz=209,slow=2.0,SNR=118						
QSPA	South Pole Qui	31.18	180	P	P	02 28 46.6	+0.6
PLCA	Paso Flores	32.90	284	P	P	02 29 00.9	-0.5
	1.5nm,0.8s,mb3.8,baz=154,slow=2.5,SNR=3.9						
MAW	Mawson	37.59	141	P	P	02 29 41.2	0.0
	2.1nm,0.4s,mb4.1,baz=269,slow=7.2,SNR=19						
CFAA	Coronel Fontan	39.06	296	P	P	02 29 53.4	-0.6
	1.1nm,0.7s,mb3.6,baz=150,slow=7.5,SNR=22						
BDFB	Brasilia	46.12	331	P	P	02 30 50.7	-0.2
	2.2nm,0.5s,mb4.0,baz=149,slow=10,SNR=3.9						
BOSA	Boshof	46.54	73	P	P	02 30 53.9	-0.1
	5.4nm,0.9s,mb4.2,baz=236,slow=9.8,SNR=6.9						
LBTB	Lobatse	49.70	70	P	P	02 31 18.0	-0.4
	3.8nm,0.9s,mb4.0,baz=233,slow=8.7,SNR=7.0						
LBTB	Lobatse	49.70	70	eP	P	02 31 18.3	0.0
	1.0nm,0.5s,mb3.7						
CASY	Casey	50.98	159	eP	P	02 31 27.9	+0.5
	9.2nm,1.3s,mb4.2						
LPAZ	La Paz	52.37	307	P	P	02 31 38.9	+0.6
	1.9nm,0.4s,mb4.1,baz=117,slow=5.6,SNR=12						
LPAZ	La Paz	52.37	307	eP	P	02 31 38.9	+0.6
	2.4nm,0.6s,mb4.0						
LSZ	Lusaka	59.27	67	eP	P	02 32 27.7	+0.3
	3.5nm,0.8s,mb4.2						
LIC	Lamto	67.35	23	eP	P	02 33 19.9	-0.6
	71nm,1.5s,mb5.3						
KIC	Kosan Boka	67.54	24	eP	P	02 33 21.9	+0.2
	12nm,0.8s,mb4.7						
TIC	Toumodi	67.76	23	eP	P	02 33 23.3	+0.3
	16nm,0.8s,mb4.8						
DBIC	Dimbokro	67.81	24	P	P	02 33 23.2	-0.1
	4.9nm,0.9s,mb4.2,baz=169,slow=7.9,SNR=6.3						
OTAV	Otavalo	71.56	304	eP	P	02 33 46.5	+0.1
	3.1nm,1.1s,mb4.0						
TORD	Torodi Ar. Bea	75.57	29	P	P	02 34 10.2	+0.6
	4.4nm,0.4s,mb4.4,baz=199,slow=6.2,SNR=14						
CAN	Canberra	85.90	176	eP	P	02 35 11.8	+7.4
	17nm,0.8s,mb4.8						
ASAR	Alice Springs	96.03	162	P	P	02 35 50.9	-1.0
	0.6nm,0.6s,mb4.1,baz=181,slow=4.3,SNR=8.9						
FINES	FINESS Array B	126.92	29	PKP	PKPdf	02 41 25.2	-0.9
	0.9nm,0.7s,baz=40,slow=3.2,SNR=3.5						
FINES	FINESS Array B	126.92	29	PKP	PKPdf	02 41 25.2	-0.9
ZALV	Zalesovo Beam	143.38	67	PKP	PKPdf	02 41 53.6	-3.3
	1.0nm,0.6s,baz=204,slow=3.2,SNR=3.2						
SONM	Songino Array	150.51	91	PKPbc	PKPbc	02 42 14.4	-0.1
	0.2nm,0.4s,baz=234,slow=2.7,SNR=5.3						
ILAR	Eielson Array	152.24	307	PKPbc	PKPbc	02 42 17.0	-0.9
	1.1nm,0.9s,baz=144,slow=2.3,SNR=12						

*ISCJB **25** 02:23:37.3±1.4, 3°.03N±0°.06×96°.04E±0°.09, h59km±13km, mb4.2/19, Error ellipse: s-maj=16.4km s-min=9.1km az=161.4*

*IDC **25** 02:23:39.6±3.4, 3°.07N×96°.10E, h63km±31km, mb3.8/16, mb1 4.0/18, mb1mx3.9/26, mbtmp3.9/18, ML3.6/1, MS3.8/1, Ms1 3.8/1, ms1mx2.7/37, Error ellipse: s-maj=26.2km s-min=12.7km az=59.0*

*DJA **25** 02:23:39, 2°.93N×96°.20E, h20km, MLv4.2/4*

*NEIC **25** 02:23:40.6±1.6, 3°.08N×96°.15E, h73km±14km, mb4.3/3, Error ellipse: s-maj=16.5km s-min=6.8km az=61.0*

ISC 25 02:23:39.0±1.3, 3°.05N±0°.06×96°.06E±0°.09, h57km±13km, n43, σ0°.86/43, mb4.2/19, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		1.14	79	P	Pn	02 23 57.1	-1.7
TPTI				S	Sn	02 24 12.2	-1.3
TSI	Tuntungan	2.54	80	P	Pn	02 24 19.5	+1.7
PSI	Prapat	2.87	95	P	Pn	02 24 23.2	+0.8
	9.2nm,0.3s,baz=300,slow=7.7,SNR=26						
PSI				S	Sn	02 24 56.5	+0.8
	13nm,0.3s,baz=92,slow=19,SNR=5.2						
PSI				LR	LR	02 25 48.8	
	comp=Z,1μm,18.5s,baz=113,slow=45						
PSI	Prapat	2.87	95	P	Pn	02 24 23.2	+0.8
PSI				S	Sn	02 24 56.5	+0.8
PSI				LR	LR	02 25 48.8	
MNSI	Mandailing Nat	4.17	122	P	Pn	02 24 40.4	+0.3
KULM	Kulim	5.09	64	ePn	Pn	02 24 53.2	+0.4
IPM	Ipoh	5.15	74	ePn	Pn	02 24 53.7	0.0
	22nm,0.6s						
SISI	Saibi	5.29	145	P	Pn	02 24 55.8	+0.2
	0.3nm61nm,0.7s						

PPI	Padang Panjang	5.56	129	P	Pn	02 24 59.2	0.0
	0.2nm7μm47nm,1.7s						
MNAI	Manna	10.08	137	P	Pn	02 26 01.6	+0.4
	194nm,1.3s						
MDSI	Maura Dua	11.03	133	P	Pn	02 26 12.2	-2.0
CMAR	Chiang Mai Arr	15.57	10	P	Pn	02 27 16.5	+1.4
	baz=198,slow=11,SNR=10						
KAPI	Kappang	24.98	109	eP	P	02 28 57.5	-0.1
	8.1nm,0.8s,mb4.3						
MBWA	Marble Bar	33.41	137	eP	P	02 30 13.2	+0.7
WRA	Warramunga Arr	43.98	123	P	P	02 31 40.8	-0.2
	2.7nm,0.4s,mb4.3,baz=293,slow=12,SNR=43						
MK31	Makanchi Array	45.19	347	eP	P	02 31 50.3	+0.1
MKAR	Makanchi Array	45.19	347	P	P	02 31 50.2	0.0
	2.8nm,0.5s,mb4.4,baz=162,slow=8.2,SNR=22						
ASAR	Alice Springs	45.41	128	P	P	02 31 52.2	-0.1
	2.3nm,0.7s,mb4.1,baz=301,slow=7.9,SNR=26						
ASAR				PcP	PcP	02 33 31.6	+0.7
	0.8nm,0.7s,baz=313,slow=4.1,SNR=5.2						
SONM	Songino Array	45.50	10	P	P	02 31 52.9	+0.2
	3.8nm,0.7s,mb4.3,baz=191,slow=8.9,SNR=20						
KURK	Kurchatov	49.73	346	eP	P	02 32 25.6	+0.1
	3.6nm,0.9s,mb4.4						
ZALV	Zalesovo Beam	51.57	352	P	P	02 32 39.3	+0.1
	2.2nm,0.4s,mb4.4,baz=174,slow=6.0,SNR=11						
ABKAR	Akbulak array	55.36	332	eP	P	02 33 07.5	+0.4
	3.2nm,0.9s,mb4.3						
STKA	Stephens Creek	55.43	132	P	P	02 33 06.0	-1.9
	2.5nm,0.9s,mb4.2,baz=270,slow=6.1,SNR=2.7						
AKTK	Aktyubinsk	57.08	332	P	P	02 33 18.2	-1.1
AKTO	Aktyubinsk	57.08	332	P	P	02 33 18.2	-1.1
	0.5nm,0.4s,mb3.9,baz=78,slow=5.3,SNR=3.4						
BRTR	Keskin Array B	67.04	312	P	P	02 34 25.5	-0.9
	0.3nm,0.4s,mb3.6,baz=149,slow=6.2,SNR=2.9						
AKASG	Malin Array Be	73.11	322	P	P	02 35 02.4	-0.9
	0.6nm,0.5s,mb3.8,baz=73,slow=6.4,SNR=4.4						
AKASG	Malin Array Be	73.11	322	P	P	02 35 02.4	-0.9
LBTB	Lobatse	73.69	243	P	P	02 35 07.8	+0.5
	4.9nm,0.8s,mb4.5,baz=74,slow=7.4,SNR=7.0						
BOSA	Boshof	74.72	239	P	P	02 35 14.1	+0.9
	2.1nm,0.9s,mb4.1,baz=124,slow=3.6,SNR=4.4						
FINES	FINESS Array B	77.85	332	P	P	02 35 30.2	-0.1
	1.7nm,0.7s,mb4.1,baz=126,slow=9.7,SNR=5.9						
FINES	FINESS Array B	77.85	332	P	P	02 35 30.2	-0.1
ARCES	ARCESS Array B	80.43	340	P	P	02 35 44.4	+0.2
	0.9nm,0.4s,mb4.1,baz=97,slow=6.2,SNR=12						
ARCES	ARCESS Array B	80.43	340	P	P	02 35 44.4	+0.2
GERES	GERESS Array B	82.69	319	P	P	02 35 56.7	+0.1
	0.9nm,0.7s,mb3.9,baz=99,slow=6.9,SNR=9.3						
GERES	GERESS Array B	82.69	319	P	P	02 35 56.7	+0.1
NB2	NORSAR Subarra	84.85	331	P	P	02 36 07.0	-0.3
	comp=Z,1.0nm,0.9s,mb4.0,baz=91,slow=5.1						
NOA	NORSAR Array B	84.85	331	P	P	02 36 07.5	+0.1
	comp=Z,0.5nm,0.7s,mb3.8,baz=97,slow=5.3,SNR=2.9						
QSPA	South Pole Qui	92.98	180	P	P	02 36 47.1	+1.6
	comp=Z,0.8nm,0.7s,mb4.3,baz=319,slow=3.4,SNR=4.7						
QSPA	South Pole Qui	92.98	180	P	P	02 36 47.1	+1.6
TXAR	Lajitas Array	142.66	29	PKP	PKPdf	02 43 05.3	-1.3
	comp=Z,0.1nm,0.5s,baz=299,slow=0.9,SNR=2.9						
CPUP	Villa Florida	145.54	225	PKPbc	PKPbc	02 43 12.0	+0.2
	comp=Z,0.4nm,0.4s,baz=181,slow=2.6,SNR=4.9						
CPUP	Villa Florida	145.54	225	PKPbc	PKPbc	02 43 12.0	+0.2

IDC 25 02:25:39.1±8.8, 49°.00S×107°.52E, h0km, mb3.5/2, mb1 3.6/2, mb1mx3.5/13, mbtmp3.5/2, Error ellipse: s-maj=402.0km s-min=33.0km az=115.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	32.72	49	P	P	02 32 13.8	+0.5
	0.3nm,0.4s,baz=209,slow=9.1,SNR=4.6						
QSPA	South Pole Qui	41.13	180	P	P	02 33 24.9	+0.6
	0.5nm,0.7s,baz=58,slow=9.5,SNR=3.3						
NVAR	Mina Array Bea	145.72	90	PKPbc	PKPbc	02 45 18.6	-0.7
	0.7nm,0.7s,baz=224,slow=5.0,SNR=4.6						
TXAR	Lajitas Array	149.18	118	PKPbc	PKPbc	02 45 28.3	-0.8
	0.4nm,0.7s,baz=193,slow=5.1,SNR=5.5						

*CSEM **25** 02:37:42.0±0.5, 28°.89N×34°.82E, h8km, ML2.5, Error ellipse: s-maj=11.0km s-min=5.1km az=95.0*

SGS 25 02:37:40.5, 28°.94N×34°.76E, h17km, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HQLS		0.44	37	P	Pg	02 37 49.6	0.0
HQLS		0.44	37	P	Pg	02 37 49.6	0.0
BDAS	Al Bad'	0.59	150	P	Pg	02 37 52.6	+0.3
BDAS	Al Bad'	0.59	150	P	Pg	02 37 52.6	+0.3
BDAS				S	Sg	02 38 00.6	+0.3
RSHS		0.64	177	P	Pg	02 37 53.0	-0.3
RSHS		0.64	177	P	Pg	02 37 53.0	-0.2
JLOS		0.68	108	P	Pg	02 37 53.1	-0.7
JLOS		0.68	108	P	Pg	02 37 53.1	-0.7
JLOS				S	Sg	02 38 03.4	+0.5

*NEIC **25** 03:26:03.1, 17°.83N×95°.01W, h41km, MD3.8(MEX), After MEX.*

MEX 25 03:26:03.1±1.4, 17°.83N×95°.01W, h38km±41km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.75	170	eP	Pn	03 26 15.2	-1.9
CMIG				i S	Sn	03 26 25.3	-2.0
CMIG	Matias Romero	0.75	170	eP	Pn	03 26 15.2	-1.9
CMIG				i S	Sn	03 26 25.3	-2.0
VHO	Vista Hermosa	1.81	246	i P	Pn	03 26 30.8	-0.9
VHO				i S	Sn	03 26 51.5	-2.0
VHO	Vista Hermosa	1.81	246	i P	Pn	03 26 30.8	-0.9
VHO				i S	Sn	03 26 51.5	-2.0
TGIG		2.09	120	i P	Pn	03 26 34.9	-0.7
TGIG				i S	Sn	03 26 58.0	-2.4
HUIG	Huatulco	2.30	207	eP	Pn	03 26 35.8	-2.8
HUIG				i S	Sn	03 27 03.9	-1.9
HUIG	Huatulco	2.30	207	eP	Pn	03 26 35.8	-2.8
HUIG				i S	Sn	03 27 03.9	-1.9
TPIG	Tehuac#an	2.31	285	i P	Pn	03 26 37.6	-1.0
TPIG				i S	Sn	03 27 03.6	-2.2
UTMO	Huajuapan	2.66	270	i P	Pn	03 26 43.7	+0.2
UTMO				i S	Sn	03 27 10.9	-3.6
PCIG		2.73	141	eP	Pn	03 26 43.8	-0.6
PCIG				i S	Sn	03 27 14.4	-1.7
CCIG	Comitan	3.15	119	eP	Pn	03 26 47.5	-2.8
CCIG				i S	Sn	03 27 24.5	-2.2
CCIG	Comitan	3.15	119	eP	Pn	03 26 47.5	-2.8
CCIG				i S	Sn	03 27 24.5	-2.2
PNIG	Pinotepa	3.30	245	i P	Pn	03 26 48.7	-3.6
PNIG				i S	Sn	03 27 26.6	-3.8
PNIG	Pinotepa	3.30	245	i P	Pn	03 26 48.7	-3.6
PNIG				i S	Sn	03 27 26.6	-3.8
TEIG	Tepich	6.80	68	ePn	Pn	03 27 39.5	-0.9
TEIG				eS	Sn	03 28 47.3	-9.3

*NIED **25** 03:31:00, 40°.10N×143°.90E, h8km, Mw4.3 Best double couple: M0:2.96000×10^15 NP1:φ=306.00000°, δ=65.00000°, λ=-135.00000°. NP2:φ=192.00000°, δ=50.00000°, λ=-34.00000°.*

*BJI **25** 03:31:18.5, 40°.00N×144°.10E, h15km, mB4.4/1, mb4.3/4*

*ISCJB **25** 03:31:19.8±1.5, 40°.05N±0°.04×144°.05E±0°.05, h21km±11km, mb4.0/23, Error ellipse: s-maj=8.0km s-min=4.8km az=136.2*

*MOS **25** 03:31:20.9±1.1, 40°.03N×144°.19E, h33km, mb4.4/16, Error ellipse: s-maj=12.8km s-min=8.4km az=92.3*

*JMA **25** 03:31:21.7±0.1, 40°.11N×143°.94E, h31km, M4.3*

*IDC **25** 03:31:24.0±0.5, 39°.98N×144°.09E, h39km±4km, mb3.8/18, mb1 3.9/20, mb1mx3.9/28, mbtmp3.8/20, ML3.9/2, MS3.1/1, Ms1 3.1/1, ms1mx2.8/41, Error ellipse: s-maj=17.0km s-min=12.2km az=86.0*

*NEIC **25** 03:31:23.6±0.4, 40°.02N×144°.07E, h35km, mb4.6/4, MW4.3(NIED), Error ellipse: s-maj=9.7km s-min=6.9km az=108.0*

ISC 25 03:31:21.0±1.8, 40°.06N±0°.04×143°.99E±0°.05, h15km±11km, h39km±1.7km: pP-P, n76, σ0°.91/88, mb4.0/23, 1C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.64	267	P	Pn	03 31 48.6	-0.6
JTH				eS	Sn	03 32 08.4	-1.6
MIYJ	Miyakonagasawa	1.74	255	P	Pn	03 31 50.5	-0.1
MIYJ				eS	Sn	03 32 11.3	-1.2
JANG	Nango	1.92	280	P	Pn	03 31 53.0	-0.1
JANG				eS	Sn	03 32 15.6	-1.4
ERM	Erimo	2.06	342	ePn	Pn	03 31 54.6	-0.3
ERM	Erimo	2.06	342	i P	Pn	03 31 54.4	-0.5
JOM	Ohasama	2.16	255	P	Pn	03 31 57.1	+0.7
JOM				eS	Sn	03 32 23.1	+0.2
JNBK	Urakawa-nobuka	2.41	338	P	Pn	03 31 59.7	-0.1
JMK	Ichinoseki	2.41	244	P	Pn	03 32 00.0	+0.2
JMK				eS	Sn	03 32 28.6	-0.5
JCH	Churui	2.60	350	P	Pn	03 32 01.4	-1.0
JOT	Ohata	2.60	302	P	Pn	03 32 02.9	+0.5
JOT				eS	Sn	03 32 33.0	-0.7
JKB	Kayabe	2.89	310	P	Pn	03 32 06.7	+0.3
ASAJ	Asahikawa	4.19	346	Pn	Pn	03 32 24.8	+0.5
	4.9nm,0.3s,baz=9.1,slow=32,SNR=15						
ASAJ				Sn	Sn	03 33 13.2	+0.3
	6.6nm,0.3s,baz=12,slow=28,SNR=6.2						
ASAJ	Asahikawa	4.19	346	ePn	Pn	03 32 24.4	+0.2
ASAJ	Asahikawa	4.19	346	P	Pn	03 32 24.8	+0.6
ASAJ						03 33 13.2	
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,7.0nm,0.3s						
YUK	Yuzh-Kuril'sk	4.21	19⇑	iP	Pn	03 32 22.8	-1.8
YUK				i S	Sn	03 33 09.3	-4.1
YUK				pmax	pmax		
	comp=N,270nm,0.3s						
YUK				pmax	pmax		
	comp=E,160nm,0.3s						
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=Z,250nm,0.3s						
YUK				smax			
	comp=E,520nm,0.1s						
YUK				smax			
	comp=N,1μm,0.3s						
YUK				smax			
	comp=N,270nm,0.3s						
YUK				smax			
	comp=E,1μm,0.7s						
MAJO	Matsushiro	5.74	234	ePn	Pn	03 32 46.7	+1.1
	comp=E,37nm,0.5s						
MAJO				eS	Sn	03 33 56.1	+4.9
MAJO	Matsushiro	5.74	234	eP	Pn	03 32 46.7	+1.0
MAJO				eS	Sn	03 33 56.2	+4.9
MAJO				pmax	pmax		
	comp=Z,37nm,0.5s						
MAT	Matsushiro	5.74	234	P	Pn	03 32 46.2	+0.5
MAT				eS	Sn	03 33 51.8	+0.5
MJAR	Matsushiro Arr	5.74	234	Pn	Pn	03 32 46.4	+0.7
	comp=Z,4.0nm,0.3s,baz=38,slow=14,SNR=39						
MJAR				LR	LR	03 35 16.1	
	comp=Z,187nm,18.8s,baz=75,slow=40						
MJAR	Matsushiro Arr	5.74	234	P	Pn	03 32 46.4	+0.7
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KUR	Kuril'sk	5.91	28	P	Pn	03 32 45.5	-2.4
KUR				eS	Sn	03 33 49.6	-5.7
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax			
	comp=N,240nm,0.5s						
KUR				smax			
	comp=E,230nm,0.5s						
JHJ	Hachijo jima 2	7.71	207	Pn	Pn	03 33 10.1	-2.5
	comp=E,6.9nm,0.3s,baz=234,slow=21,SNR=9.1						
JHJ				Sn	Sn	03 34 31.4	-8.2
	comp=E,18nm,0.3s,baz=293,slow=24,SNR=6.9						
KSRS	Korea Array	12.81	263	Pn	Pn	03 34 27.1	+4.6
	comp=E,0.3nm,0.3s,baz=78,slow=13,SNR=4.3						
KSRS	Korea Array	12.81	263	P	Pn	03 34 27.1	+4.6
SONM	Songino Array	27.94	299	P	P	03 37 12.1	+1.6
	comp=E,2.2nm,0.7s,mb3.9,baz=90,slow=7.4,SNR=8.4						
SONM	Songino Array	27.94	299	P	P	03 37 12.1	+1.6
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA	Gaotai	33.72	283	eP	P	03 38 03.4	+1.8
GTA				pP	pP	03 38 08.3	+2.1
GTA				sP	sP	03 38 10.8	+2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ZALV	Zalesovo Beam	41.45	310	P	P	03 39 07.4	+0.6
	comp=Z,1.6nm,0.6s,mb3.8,baz=86,slow=8.3,SNR=6.7						
ZALV				PcP	PcP	03 41 03.9	-0.5
	comp=Z,1.5nm,0.6s,baz=76,slow=3.0,SNR=4.0						
ZALV	Zalesovo Beam	41.45	310	P	P	03 39 07.4	+0.6
ZALV						03 41 03.9	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
MKAR	Makanchi Array	44.30	300	P	P	03 39 29.2	-0.7
	comp=Z,0.5nm,0.3s,mb3.8,baz=88,slow=12,SNR=4.2						
MKAR	Makanchi Array	44.30	300	i P	P	03 39 30.2	+0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	Kurchatov	45.72	306	eP	P	03 39 41.6	+0.4
	comp=Z,5.0nm,0.6s,mb4.6						
KURK	Kurchatov	45.72	306	eP	P	03 39 41.6	+0.4
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ILAR	Eielson Array	45.86	34	P	P	03 39 41.2	-0.9
	comp=Z,0.4nm,0.7s,mb3.5,baz=246,slow=6.7,SNR=6.5						
ILAR	Eielson Array	45.86	34	P	P	03 39 41.3	-0.

ASAR pmax pmax
comp=Z,1.0nm,0.7s
JOF Joensuu 64.25 332 *e*P **P** **03 41 55.0 +0.1**
KAF Kangasniemi 66.54 333 *e*P **P** **03 42 08.6 -1.2**
FINES FINESS Array B 67.08 333 P **P** **03 42 13.6 +0.3**
comp=Z,2.8nm,0.6s,mb4.5,baz=56,slow=7.1,SNR=13
FINES pP pP 03 42 25.3 +7.2
comp=Z,0.6nm,0.4s,baz=45,slow=8.4,SNR=1.8
FINES FINESS Array B 67.08 333 P **P** **03 42 13.6 +0.4**
FINES *PP pP 03 42 25.3 +7.2
FINES pmax pmax
comp=Z,3.0nm,0.6s
NVAR Mina Array Bea 71.58 55 pP pP 03 42 55.0 +8.6
comp=Z,0.9nm,0.8s,baz=283,slow=9.3,SNR=6.6
STKA Stephens Creek 71.61 182 P **P** **03 42 39.9 -1.5**
comp=Z,1.8nm,0.7s,mb4.1,baz=11,slow=5.2,SNR=3.9
NB2 NORSAR Subarra 72.17 338 P **P** **03 42 44.6 0.0**
comp=Z,1.1nm,0.6s,mb4.0,baz=37,slow=6.2
NOA NORSAR Array B 72.17 338 P **P** **03 42 44.8 +0.2**
comp=Z,1.4nm,0.6s,mb4.0,baz=38,slow=6.0,SNR=11
NOA pP pP 03 42 56.8 +7.2
comp=Z,0.7nm,0.7s,baz=36,slow=6.1,SNR=3.4
NOA NORSAR Array B 72.17 338 P **P** **03 42 44.8 +0.2**
NOA *PP pP 03 42 56.8 +7.2
NOA pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 73.13 323 P **P** **03 42 50.6 +0.1**
comp=Z,3.2nm,0.6s,mb4.5,baz=43,slow=5.9,SNR=15
AKASG pP pP 03 43 03.2 +7.7
comp=Z,0.7nm,0.5s,baz=43,slow=5.9,SNR=2.9
AKASG Malin Array Be 73.13 323 P **P** **03 42 50.6 +0.1**
AKASG pP pP 03 43 03.2 +7.7
AKASG Malin Array Be 73.13 323 *i* P **P** **03 42 50.5 0.0**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
PDAR Pinedale Array 74.12 47 P **P** **03 42 57.1 +0.6**
comp=Z,0.2nm,0.4s,mb3.4,baz=225,slow=14,SNR=3.0
PDAR pP pP 03 43 08.7 +7.2
comp=Z,0.5nm,0.6s,baz=284,slow=2.0,SNR=4.3
BUR08 Bucovina Ar. S 77.16 323 *e* P **P** **03 43 14.9 +1.1**
BUR08 *e* 03 43 27.1
BRTR Keskin Array B 78.34 312 P **P** **03 43 21.4 +0.9**
comp=Z,0.5nm,0.6s,mb3.6,baz=57,slow=3.7,SNR=3.5
BRTR Keskin Array B 78.34 312 *i* P **P** **03 43 21.3 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
EKA Eskdalemuir Ar 80.93 342 P **P** **03 43 34.8 +0.5**
comp=Z,1.2nm,1.0s,mb3.8,baz=67,slow=30,SNR=3.1
EKA Eskdalemuir Ar 80.93 342 P **P** **03 43 34.8 +0.5**
EKA pmax pmax
comp=Z,1.0nm,1.0s
GERES GERESS Array B 81.18 329 P **P** **03 43 36.2 +0.4**
comp=Z,0.2nm,0.4s,mb3.4,baz=76,slow=11,SNR=4.6
GERES GERESS Array B 81.18 329 P **P** **03 43 36.2 +0.4**
TXAR Lajitas Array 86.69 54 P **P** **03 44 04.4 +0.1**
comp=Z,0.4nm,0.8s,mb3.7,baz=279,slow=2.2,SNR=5.1
TXAR pP pP 03 44 16.4 +7.1
comp=Z,0.6nm,0.6s,baz=293,slow=4.7,SNR=7.6
TXAR Lajitas Array 86.69 54 P **P** **03 44 04.4 +0.1**
TXAR pP pP 03 44 16.4 +7.1
TXAR Lajitas Array 86.69 54 P **P** **03 44 04.4 +0.1**
TXAR *PP pP 03 44 16.4 +7.1

*ISCJB **25** 03:35:54.9±0.5, 24°.32N±0°.02×122°.03E±0°.02, h10km±3km, Error ellipse: s-maj=3.5km s-min=2.9km az=137.1*
*JMA **25** 03:35:54.3±0.3, 25°.14N×122°.09E, h32km, M2.5*
*TAP **25** 03:35:55.1, 24°.33N×121°.96E, h22km, ML3.2, C*
ISC 25 03:35:55.4±0.4, 24°.33N±0°.02×122°.01E±0°.02, h14km±3km, n32, σ0°78/58, 3C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.24**	**265**	*e*P	**Pg**	**03 36 00.4**	**-0.2**
	baz=270						
ENA	**Nanau**	**0.26**	**292**	⇑*i*P	**Pg**	**03 36 00.8**	**-0.2**
	baz=297						
ENA				S	**Sg**	**03 36 04.9**	**+0.2**
	baz=297						
TWC	**Suao**	**0.31**	**333**	⇑*i*P	**Pg**	**03 36 01.9**	**+0.1**
	baz=348						
TWC				*i* S	**Sg**	**03 36 06.6**	**+0.4**
	baz=348						
TWD	**Chiawan**	**0.45**	**236**	P	**Pg**	**03 36 04.2**	**-0.2**
	baz=234						
TWD				*e*S	**Sg**	**03 36 11.6**	**+1.1**
	baz=234						
ILA	**Ilan**	**0.49**	**332**	*e*P	**Pg**	**03 36 05.1**	**0.0**
	baz=336						
ILA				*e*S	**Sg**	**03 36 12.4**	**+0.6**
	baz=336						
TWE	**Neicheng**	**0.50**	**322**	⇑*i*P	**Pg**	**03 36 05.1**	**-0.1**
	baz=329						
TWE				*e*S	**Sg**	**03 36 11.6**	**-0.3**
	baz=329						
HWA	**Hwalien**	**0.51**	**226**	*e*P	**Pg**	**03 36 05.8**	**+0.4**
	baz=234						
TWB1	**Santiao Chiao**	**0.67**	**359**	P	**Pg**	**03 36 08.3**	**-0.3**
	baz=356						
TWB1				S	**Sg**	**03 36 17.9**	**+0.4**
	baz=356						
NSK	**Sanguang**	**0.68**	**300**	*i* P	**Pg**	**03 36 08.4**	**-0.3**
	baz=303						
NSK				S	**Sg**	**03 36 17.3**	**-0.5**
	baz=303						
WHF	**Hehuan Shan**	**0.70**	**255**	P	**Pg**	**03 36 08.6**	**-0.5**
	baz=253						
WHF				*e*S	**Sg**	**03 36 18.6**	**+0.3**
	baz=253						
ESL	**Shilin**	**0.73**	**226**	*e*P	**Pg**	**03 36 08.4**	**-1.3**
	baz=230						
ESL				*e*S	**Sg**	**03 36 20.0**	**+0.6**
	baz=230						
TWA	**Mucha**	**0.75**	**329**	*e*P	**Pg**	**03 36 09.9**	**-0.2**
	baz=324						
TWA				*e*S	**Sg**	**03 36 20.1**	**+0.2**
	baz=324						
TWT	**Tachien**	**0.76**	**264**	P	**Pg**	**03 36 10.2**	**0.0**
	baz=264						
TWT				S	**Sg**	**03 36 21.1**	**+0.9**
	baz=264						
NWF	**Wu-fen Shan**	**0.77**	**345**	*e*P	**Pg**	**03 36 10.2**	**0.0**
	baz=341						
NWF				*e*S	**Sg**	**03 36 20.9**	**+0.6**
	baz=341						
TAP1	**Taipei**	**0.83**	**328**	*e*P	**Pg**	**03 36 11.0**	**-0.5**
	baz=324						
TAP1				*e*S	**Sg**	**03 36 22.4**	**0.0**
	baz=324						
YOJ	**Yonaguni jima**	**0.93**	**82**	P	**Pb**	**03 36 13.4**	**+0.2**
YOJ				S	**Sg**	**03 36 27.0**	**+1.6**
NSTT	**Nanjuang**	**0.96**	**288**	P	**Pb**	**03 36 13.4**	**-0.4**
	baz=283						
NSTT				S	**Sb**	**03 36 25.8**	**-0.6**
	baz=283						
TWY	**Chenhua**	**1.01**	**339**	*e*P	**Pb**	**03 36 14.2**	**-0.4**
	baz=343						
TWY				*e*S	**Sb**	**03 36 27.6**	**-0.1**
	baz=343						
EHY	**Hungye**	**1.03**	**217**	*e*P	**Pb**	**03 36 13.4**	**-1.6**
	baz=215						
SMLT	**Sun Moon Lake**	**1.10**	**246**	*e*P	**Pb**	**03 36 15.3**	**-0.9**
	baz=237						
SMLT				*e*S	**Sb**	**03 36 30.6**	**+0.1**
	baz=237						
TWQ1	**Liyutan**	**1.12**	**271**	*e*P	**Pb**	**03 36 16.5**	**-0.1**
	baz=271						
TWQ1				*e*S	**Sb**	**03 36 32.0**	**+1.0**
	baz=271						
TYC	**Yuchr**	**1.13**	**248**	*e*P	**Pb**	**03 36 15.3**	**-1.4**
	baz=234						
TYC				*e*S	**Sb**	**03 36 31.9**	**+0.6**
	baz=234						
NSY	**Sanyi**	**1.14**	**275**	*e*P	**Pb**	**03 36 16.6**	**-0.2**
	baz=275						
NSY				*e*S	**Sb**	**03 36 31.7**	**+0.2**
	baz=275						
TWF1	**Yuli**	**1.17**	**214**	*e*P	**Pn**	**03 36 14.7**	**-2.6**
	baz=225						
YUS	**Yu-Shan**	**1.28**	**229**	P	**Pn**	**03 36 17.9**	**-0.8**
	baz=211						
YUS				*e*S	**Sb**	**03 36 35.6**	**+0.1**
	baz=211						
ALS	**Alishan**	**1.37**	**234**	P	**Pn**	**03 36 19.7**	**-0.3**
	baz=231						
ALS				*e*S	**Sn**	**03 36 39.0**	**+1.0**
	baz=231						
IRIF	**Iriomote-Funau**	**1.57**	**90**	P	**Pn**	**03 36 22.3**	**-0.5**
IRIF				S	**Sn**	**03 36 43.9**	**+0.9**
WTP	**Ta-pu**	**1.67**	**230**	*e*P	**Pn**	**03 36 23.8**	**-0.4**
	baz=216						
WTP				*e*S	**Sn**	**03 36 47.6**	**+2.3**
	baz=216						
TWG	**Pinlang**	**1.73**	**210**	*e*P	**Pn**	**03 36 22.4**	**-2.6**
	baz=195						
CHN1	**Nanshi**	**1.77**	**230**	*e*P	**Pn**	**03 36 26.2**	**+0.7**
	baz=228						
CHN1				*e*S	**Sn**	**03 36 49.2**	**+1.4**
	baz=228						
JKRS	**Kuro-shima**	**1.83**	**93**	P	**Pn**	**03 36 26.6**	**+0.2**
JKRS				S	**Sn**	**03 36 49.8**	**+0.5**
JIJ	**Ishigaki jima**	**1.95**	**89**	S	**Sn**	**03 36 51.7**	**-0.6**

*ISCJB **25** 03:50:29.4±0.3, 51°.45N±0°.02×16°.12E±0°.02, h0km, Error ellipse: s-maj=2.5km s-min=1.8km az=24.2*
*IDC **25** 03:50:30.3±0.6, 51°.38N×15°.70E, h0km, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML3.3/7, Error ellipse: s-maj=10.0km s-min=6.0km az=97.0*
*CSEM **25** 03:50:30.9±0.1, 51°.49N×16°.10E, h2km, ML3.7/10, Error ellipse: s-maj=2.6km s-min=1.9km az=20.0*
*NEIC **25** 03:50:30.6±0.4, 51°.60N×16°.06E, h5km, ML3.0(BRA), Error ellipse: s-maj=7.1km s-min=5.5km az=3.0*
*BGR **25** 03:50:31.8±0.8, 51°.48N×16°.15E, h1km, ML3.1/3, Error ellipse: s-maj=12.2km s-min=8.9km az=171.0*
*IPEC **25** 03:50:32.2±0.2, 51°.46N×16°.12E, h8km±1km, ML2.7/4, Error ellipse: s-maj=1.2km s-min=0.5km az=39.0*
*WAR **25** 03:50:32.4, 51°.48N×16°.10E, ML3.1, Mining Induced*
*PRU **25** 03:50:32.1, 51°.45N×16°.12E, h0km, Felt In Harrachov*
*VIE **25** 03:50:33.4±0.5, 51°.27N×16°.12E, h0km, mb2.6/5, ML3.3/5, Error ellipse: s-maj=2.9km s-min=2.4km az=9.0 65 km WNW of Wroclaw Suspected Mining induced.*
*LDG **25** 03:50:35.2±0.1, 51°.21N×15°.81E, h1km, Ml3.6/3, Error ellipse: s-maj=3.8km s-min=2.1km az=179.0, Suspected Mining induced.*
ISC 25 03:50:30.8±0.3, 51°.49N±0°.02×16°.13E±0°.02, h0km, n143, σ1°07/240, 5C-9D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**171**	*e*Pg	**Pg**	**03 50 44.2**	**+1.0**
KSP				*i* Sg	**Sg**	**03 50 52.7**	**+1.1**
KSP	**Ksiaz**	**0.65**	**171**	*i* Pg	**Pg**	**03 50 44.2**	**+1.0**
KSP				*i* Sg	**Sg**	**03 50 52.7**	**+1.1**
KSP				e		03 50 56.2	
KSP	**Ksiaz**	**0.65**	**171**	*e*Pg	**Pg**	**03 50 44.1**	**+0.9**
	baz=350						
KSP				*e*Sg	**Sg**	**03 50 52.5**	**+0.9**
	baz=350						
UPC	**Upice**	**0.98**	**184**	*e*PG	**Pg**	**03 50 50.2**	**+0.7**
UPC	**Upice**	**0.98**	**184**	*e*Pg	**Pg**	**03 50 50.2**	**+0.7**
	baz=3.9						
UPC				*e*Sg	**Sg**	**03 51 02.6**	**+0.4**
	baz=3.9						
DPC	**Dobruska-Polom**	**1.14**	**174**	*e*PG	**Pg**	**03 50 53.0**	**+0.4**
DPC				*e*SG	**Sg**	**03 51 07.3**	**-0.1**
	comp=Z,99nm,0.4s						
DPC	**Dobruska-Polom**	**1.14**	**174**	Pg	**Pg**	**03 50 53.0**	**+0.4**
DPC				Sg	**Sg**	**03 51 07.3**	**-0.1**
	comp=Z,99nm,0.4s						
PVCC	**Panska Ves**	**1.37**	**226**	*e*PG	**Pg**	**03 50 57.3**	**+0.2**
PVCC				*e*SG	**Sg**	**03 51 15.6**	**+0.8**
	comp=Z,321nm,0.2s						
PVCC	**Panska Ves**	**1.37**	**226**	Pg	**Pg**	**03 50 57.3**	**+0.2**
PVCC				*e*Sg	**Sg**	**03 51 15.4**	**+0.6**
	baz=46						
BRG	**Berggiesshubel**	**1.50**	**247**	*e*Pn	**Pn**	**03 50 58.5**	**-0.4**
	SNR=29						
BRG				*e*Sg	**Sg**	**03 51 20.3**	**+1.2**
	SNR=7.3						
BRG	**Berggiesshubel**	**1.50**	**247**	PN	**Pn**	**03 50 58.5**	**-0.5**
BRG				PG	**Pg**	**03 50 59.8**	**+0.2**
BRG				SG	**Sg**	**03 51 20.2**	**+1.1**
	comp=Z,220nm,0.4s						
BRG	**Berggiesshubel**	**1.50**	**247**	*e*Pn	**Pn**	**03 50 59.5**	**+0.5**
	baz=66						
BRG				*e*Sg	**Sg**	**03 51 19.4**	**+0.3**
	baz=66						
RUE	**Ruedersdorf**	**1.76**	**305**	*e*Pn	**Pn**	**03 51 01.7**	**-0.8**
RUE				*e*S	**Sn**	**03 51 28.9**	**+3.4**
RUE	**Ruedersdorf**	**1.76**	**305**	*e*Pn	**Pn**	**03 51 01.7**	**-0.8**
	baz=124						
RUE				*e*Sg	**Sg**	**03 51 28.1**	**+0.8**
	baz=124						
RUE				*e*S	**Sn**	**03 51 28.9**	**+3.3**
PRU	**Pruhonice**	**1.81**	**215**	*e*PN	**Pn**	**03 51 03.8**	**+0.7**
PRU				*e*PG	**Pg**	**03 51 05.5**	**+0.2**
PRU				*e*SG	**Sg**	**03 51 27.8**	**-0.9**
	comp=Z,82nm,0.4s						
PRU	**Pruhonice**	**1.81**	**215**	*e*Pn	**Pn**	**03 51 03.8**	**+0.7**
	baz=34						
PRU	**Pruhonice**	**1.81**	**215**	Pg	**Pg**	**03 51 05.5**	**+0.2**
PRU				*e*Sg	**Sg**	**03 51 28.5**	**-0.2**
	baz=34						
GKP	**Gorka Klasztor**	**1.91**	**20**	*e*Pg	**Pg**	**03 51 13.4**	**+6.0**
GKP				*e*Sg	**Sg**	**03 51 34.0**	**+1.9**
GKP	**Gorka Klasztor**	**1.91**	**20**	*e*Pg	**Pg**	**03 51 13.4**	**+6.0**
GKP				*e*Sg	**Sg**	**03 51 34.1**	**+1.9**
RAC	**Raciborz**	**1.92**	**136**	*e*Pg	**Pg**	**03 51 08.1**	**+0.6**
RAC				*e*Sg	**Sg**	**03 51 35.0**	**+2.6**
MORC	**Moravsky Berou**	**1.93**	**152**	*e*Pn	**Pn**	**03 51 04.7**	**-0.1**
MORC				*e*S	**Sn**	**03 51 31.8**	**+2.0**
MORC	**Moravsky Berou**	**1.93**	**152**	⇓*i*P	**Pn**	**03 51 04.8**	**0.0**
MORC	**Moravsky Berou**	**1.93**	**152**	⇓*i*P	**Pn**	**03 51 04.8**	**0.0**
MORC				*e*S	**Sn**	**03 51 31.8**	**+2.0**
MORC				*e*Sg	**Sg**	**03 51 32.5**	**-0.3**
	comp=Z,47nm,0.3s,baz=332						
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**03 51 04.8**	**-0.5**
	SNR=19						
CLL				*i* Pg	**Pg**	**03 51 08.0**	**-0.4**
CLL				*e*Sg	**Sg**	**03 51 34.2**	**+0.3**
	SNR=4.1						
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**03 51 05.0**	**-0.3**
CLL				*i* Pg	**Pg**	**03 51 08.0**	**-0.4**
CLL				*i* Sg	**Sg**	**03 51 33.5**	**-0.4**
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**03 51 05.0**	**-0.3**
CLL				*i* Pg	**Pg**	**03 51 08.0**	**-0.4**
CLL				*i*		03 51 12.0	
CLL				*e*		03 51 23.0	
CLL				*i* Sg	**Sg**	**03 51 33.5**	**-0.4**
	comp=Z,75nm,0.7s						
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**03 51 05.0**	**-0.3**
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*PG	**Pg**	**03 51 10.7**	**-0.1**
OKC				*e*SG	**Sg**	**03 51 36.9**	**-1.0**
OKC	**Ostrava-Krasne**	**2.09**	**141**	Pg	**Pg**	**03 51 10.7**	**-0.1**
OKC				Sg	**Sg**	**03 51 36.9**	**-1.0**
VRAC	**Vranov**	**2.20**	**172**	Pn	**Pn**	**03 51 08.9**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=338,slow=14,SNR=12						
VRAC				Lg		03 51 37.9	
	comp=Z,4.1nm,0.3s,baz=267,slow=21,SNR=5.4						
VRAC	**Vranov**	**2.20**	**172**	⇑*i*P	**Pn**	**03 51 09.7**	**+1.2**
VRAC	**Vranov**	**2.20**	**172**	Pn	**Pn**	**03 51 08.9**	**+0.4**
VRAC	**Vranov**	**2.20**	**172**	⇑*i*P	**Pn**	**03 51 09.7**	**+1.2**
VRAC				Lg		03 51 37.9	
VRAC				*e*Sg	**Sg**	**03 51 39.5**	**-1.9**
	comp=Z,43nm,0.3s,baz=352						
TREC	**Trest**	**2.23**	**191**	*e*PN	**Pn**	**03 51 10.1**	**+1.2**
TREC				*e*PG	**Pg**	**03 51 12.9**	**-0.6**
TREC	**Trest**	**2.23**	**191**	*e*Pn	**Pn**	**03 51 09.7**	**+0.8**
	baz=10						
TREC	**Trest**	**2.23**	**191**	Pg	**Pg**	**03 51 12.9**	**-0.6**
TREC				*e*Sg	**Sg**	**03 51 41.0**	**-1.4**
	baz=10						
KRUC	**Moravsky**	**2.43**	**176**	*e*Pn	**Pn**	**03 51 12.7**	**+1.0**
	baz=356						
KRUC	**Moravsky**	**2.43**	**176**	*e*Pg	**Pg**	**03 51 16.2**	**-1.1**
	baz=356						
KRUC				*e*Sg	**Sg**	**03 51 47.2**	**-1.6**
	comp=Z,31nm,0.3s,baz=356						
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**	**03 51 15.3**	**+0.7**
NKC				*e*PG	**Pg**	**03 51 20.9**	**-0.6**
NKC				*e*SG	**Sg**	**03 51 55.7**	**-0.1**
	comp=Z,100nm,0.5s						
NKC	**Novy Kostel**	**2.65**	**243**	*e*Pn	**Pn**	**03 51 15.2**	**+0.6**
	baz=61						
OJC	**Ojcow**	**2.65**	**117**	*e*Pn	**Pn**	**03 51 13.3**	**-1.4**
OJC				*e*Pg	**Pg**	**03 51 22.2**	**+0.7**
OJC				*e*Sg	**Sg**	**03 51 57.3**	**+1.5**
OJC	**Ojcow**	**2.65**	**117**	*e*Pn	**Pn**	**03 51 13.3**	**-1.4**
OJC				*e*Pg	**Pg**	**03 51 22.2**	**+0.7**
OJC				*e*Sg	**Sg**	**03 51 57.3**	**+1.5**
OJC	**Ojcow**	**2.65**	**117**	*e*Pn	**Pn**	**03 51 13.3**	**-1.4**
	baz=64						
GUNZ	**Gunzen**	**2.65**	**246**	*e*Pn	**Pn**	**03 51 15.1**	**+0.4**
	baz=64						
GUNZ	**Gunzen**	**2.65**	**246**	*e*Pg	**Pg**	**03 51 21.5**	**0.0**
	baz=64						
JAVC	**Velka Javorina**	**2.81**	**159**	*e*Pn	**Pn**	**03 51 18.3**	**+1.4**
	baz=340						
JAVC				*e*Sg	**Sg**	**03 52 00.2**	**-0.8**
	comp=Z,44nm,0.8s,baz=340						
KHC	**Kasperske Hory**	**2.87**	**216**	*e*Pn	**Pn**	**03 51 17.8**	**+0.1**
KHC				*e*S	**Sn**	**03 51 52.7**	**-0.1**
KHC	**Kasperske Hory**	**2.87**	**216**	*e*PN	**Pn**	**03 51 18.5**	**+0.8**
KHC				*e*PG	**Pg**	**03 51 24.1**	**-1.6**
KHC				*e*SN	**Sn**	**03 51 52.2**	**-0.6**
KHC				*e*SG	**Sg**	**03 52 02.1**	**-0.7**
	comp=Z,56nm,0.7s						
KHC	**Kasperske Hory**	**2.87**	**216**	*e*Pn	**Pn**	**03 51 17.8**	**+0.1**
KHC	**Kasperske Hory**	**2.87**	**216**	Pg	**Pg**	**03 51 24.1**	**-1.6**
KHC				Sn	**Sn**	**03 51 52.2**	**-0.6**
KHC				*e*S	**Sn**	**03 51 52.7**	**-0.1**
KHC				Sg	**Sg**	**03 52 02.1**	**-0.7**
	comp=Z,56nm,0.7s						
MGBB	**Grossbuechelbe**	**2.91**	**240**	⇓*i*Pn	**Pn**	**03 51 18.6**	**+0.3**
MGBB	**Grossbuechelbe**	**2.91**	**240**	Pn	**Pn**	**03 51 18.6**	**+0.3**
MOX	**Moxa**	**2.97**	**255**	*e*PN	**Pn**	**03 51 19.0**	**-0.1**
MOX				*e*PG	**Pg**	**03 51 27.9**	**+0.3**
MOX				*e*SG	**Sg**	**03 52 07.3**	**+1.2**
MOX	**Moxa**	**2.97**	**255**	Pn	**Pn**	**03 51 19.0**	**-0.1**
GERES	**GERESS Array B**	**3.07**	**211**	Pn	**Pn**	**03 51 15.8**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=57,slow=9.7,SNR=3.5						
GERES				Pg	**Pg**	**03 51 21.4**	**-8.1**
	comp=Z,1.8nm,0.3s,baz=29,slow=12,SNR=45						
GERES				Sn	**Sn**	**03 51 51.7**	**-6.1**
	comp=Z,2.1nm,0.3s,baz=32,slow=24,SNR=4.6						
GERES				Lg		03 52 03.8	
	comp=Z,9.1nm,0.3s,baz=32,slow=27,SNR=13						
GERES	**GERESS Array B**	**3.07**	**211**	Pn	**Pn**	**03 51 15.8**	**-4.6**
GERES				Pg	**Pg**	**03 51 21.4**	**-8.1**
GERES				Sn	**Sn**	**03 51 51.7**	**-6.1**
GERES				Lg		03 52 03.9	
GERES	**GERESS Array B**	**3.07**	**211**	Pn	**Pn**	**03 51 15.9**	**-4.5**
LIKS	**Likavka**	**3.10**	**141**	*e*SG	**Sg**	**03 52 12.4**	**+2.2**
LIKS	**Likavka**	**3.10**	**141**	*e*Sg	**Sg**	**03 52 12.4**	**+2.2**
WET	**Wettzell**	**3.13**	**223**	*e*Pn	**Pn**	**03 51 21.5**	**+0.1**
	baz=41						
KOLL	**Kolacno**	**3.26**	**152**	*e*P	**Pg**	**03 51 33.6**	**+0.4**
KOLL				*e*Sg	**Sg**	**03 52 15.5**	**+0.1**
KOLL	**Kolacno**	**3.26**	**152**	*e*	**Pg**	**03 51 33.6**	**+0.4**
KOLL	**Kolacno**	**3.26**	**152**	*e*SG	**Sg**	**03 52 15.5**	**+0.1**
ZST	**Bratislava**	**3.35**	**169**	*e*P	**Pg**	**03 51 34.3**	**-0.7**
ZST				*e*Sg	**Sg**	**03 52 18.8**	**+0.4**
ZST	**Bratislava**	**3.35**	**169**	*e*	**Pg**	**03 51 34.3**	**-0.7**
ZST	**Bratislava**	**3.35**	**169**	*e*SG	**Sg**	**03 52 18.8**	**+0.4**
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pg**	**03 51 35.3**	**-0.2**
NIE				*e*S	**Sg**	**03 52 18.9**	**-0.4**
ASSE	**Asse, Remlinge**	**3.45**	**283**	*e*Pg	**Pg**	**03 51 36.2**	**-0.5**
	SNR=3.2						
ASSE				*e*Sg	**Sg**	**03 52 22.2**	**+0.8**
	SNR=3.9						
ASSE	**Asse, Remlinge**	**3.45**	**283**	Pg	**Pg**	**03 51 36.2**	**-0.6**
	SNR=3.2						
ASSE				Sg	**Sg**	**03 52 22.2**	**+0.8**
	SNR=3.9						
VYHS	**Vyhne**	**3.47**	**149**	*e*Pn	**Pn**	**03 51 26.1**	**+0.2**
VYHS				*e*		03 51 38.1	
VYHS				*e*Sg	**Sg**	**03 52 22.0**	**-0.1**
VYHS	**Vyhne**	**3.47**	**149**	*e*PN	**Pn**	**03 51 26.1**	**+0.2**
VYHS				*e*		03 51 38.1	
VYHS	**Vyhne**	**3.47**	**149**	*e*SG	**Sg**	**03 52 22.0**	**-0.1**
VYHS	**Vyhne**	**3.47**	**149**	*e*Pn	**Pn**	**03 51 26.1**	**+0.2**
VYHS				*e*Sg	**Sg**	**03 52 22.0**	**-0.1**
CONA	**Conrad Observa**	**3.56**	**183**	⇓*i*Pn	**Pn**	**03 51 26.7**	**-0.5**
CONA				⇓*i*Sg	**Sg**	**03 52 24.6**	**-0.6**
	comp=Z,48nm,0.6s						
CONA	**Conrad Observa**	**3.56**	**183**	Pn	**Pn**	**03 51 26.7**	**-0.6**
CONA				Sg	**Sg**	**03 52 24.6**	**-0.6**
	comp=Z,48nm,0.6s						
CLZ	**Clausthal**	**3.60**	**278**	*e*Pn	**Pn**	**03 51 29.0**	**+1.2**
	baz=94						
CLZ				*e*Sg	**Sg**	**03 52 25.0**	**-1.4**
	baz=94						
GRA1	**Grafenberg Arr**	**3.60**	**242**	Pn	**Pn**	**03 51 28.3**	**+0.5**
	SNR=3.3						
GRF	**Grafenberg Arr**	**3.60**	**242**	*e*Pn	**Pn**	**03 51 28.3**	**+0.5**
	SNR=3.3						
GRFO	**Grafenberg**	**3.61**	**242**	*e*Pn	**Pn**	**03 51 27.7**	**-0.1**
GRFO				*e*S	**Sg**	**03 52 28.8**	**+2.3**
GRFO	**Grafenberg**	**3.61**	**242**	*e*Pn	**Pn**	**03 51 27.7**	**-0.1**
BSD	**Bornholm Skovb**	**3.71**	**349**	*i* P	**Pn**	**03 51 28.2**	**-1.0**
BSD				*i* S	**Sn**	**03 52 09.1**	**-4.5**
BSD	**Bornholm Skovb**	**3.71**	**349**	*i* P	**Pn**	**03 51 28.2**	**-1.0**
SOP	**Sopron**	**3.82**	**176**	*e*PB	**Pb**	**03 51 38.4**	**-0.5**
SOP				*e*SB	**Sb**	**03 52 28.3**	**+2.7**
MOA	**Molln**	**3.83**	**199**	⇑*i*Pn	**Pn**	**03 51 31.5**	**+0.6**
MOA				⇓*i*Sg	**Sg**	**03 52 33.6**	**-0.3**
	comp=Z,55nm,0.6s						
MOA	**Molln**	**3.83**	**199**	Pn	**Pn**	**03 51 31.5**	**+0.5**
MOA				Sg	**Sg**	**03 52 33.6**	**-0.3**
	comp=Z,55nm,0.6s						
HROE	**Hohe Rhon--Fla**	**3.89**	**258**	⇓*i*Pn	**Pn**	**03 51 31.9**	**+0.2**
HROE	**Hohe Rhon--Fla**	**3.89**	**258**	Pn	**Pn**	**03 51 31.9**	**+0.2**
KECS	**Kecovo**	**4.12**	**135**	*e*Pn	**Pn**	**03 51 34.7**	**-0.1**
KECS				*e*		03 51 52.8	
KECS				*e*Sg	**Sg**	**03 52 41.7**	**-1.2**
KECS	**Kecovo**	**4.12**	**135**	*e*PN	**Pn**	**03 51 34.7**	**-0.1**
KECS				*e*		03 51 52.8	
KECS	**Kecovo**	**4.12**	**135**	*e*SG	**Sg**	**03 52 41.7**	**-1.2**
**

DAVOX				Lg						03 53 53.3	
	comp=Z,0.5nm,0.3s,baz=3.7,slow=17,SNR=4.0										
DAVOX	**Davos/Dischmat**	**6.24**	**223**	Pn		**Pn**				**03 52 05.9**	**+1.9**
CDF	**Champ du Feu**	**6.49**	**245**	*e*Pn		**Pn**				**03 52 05.7**	**-1.7**
CDF				*e*Sg		**Sg**				**03 53 49.5**	**-9.5**
	comp=Z,35nm,0.8s										
CDF	**Champ du Feu**	**6.49**	**245**	*e*Pn		**Pn**				**03 52 05.7**	**-1.7**
WLF	**Walferdange**	**6.61**	**258**	*e*Sg		**Sg**				**03 54 03.6**	**+0.7**
	SNR=3.1										
WLF	**Walferdange**	**6.61**	**258**	Sg		**Sg**				**03 54 03.6**	**+0.7**
	SNR=3.1										
BUR08	**Bucovina Ar. S**	**7.04**	**120**	*e*Pn		**Pn**				**03 52 16.3**	**+1.3**
BUR08	**Bucovina Ar. S**	**7.04**	**120**	*e*Pn		**Pn**				**03 52 16.3**	**+1.3**
HINF	**Hinteralfeld**	**7.05**	**242**	*e*Sg		**Sg**				**03 54 07.1**	**-10**
	comp=Z,27nm,0.9s										
MEZF	**Maizieres J'vi**	**7.74**	**252**	*e*Pn		**Pn**				**03 52 22.6**	**-1.9**
MEZF	**Maizieres J'vi**	**7.74**	**252**	*e*Pn		**Pn**				**03 52 22.6**	**-1.9**
KIEV	**Kiev**	**8.28**	**90**	*e*Pn		**Pn**				**03 52 32.8**	**+0.9**
	comp=Z,4.9nm,0.8s										
KIEV	**Kiev**	**8.28**	**90**	*e*Pn		**Pn**				**03 52 32.8**	**+0.9**
	comp=Z,4.9nm,0.8s										
AKASG	**Malin Array Be**	**8.29**	**90**	Pn		**Pn**				**03 52 31.7**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=280,slow=12,SNR=5.7										
AKASG				Pg		**Pg**				**03 53 06.3**	**-3.0**
	comp=Z,0.6nm,0.3s,baz=278,slow=16,SNR=7.9										
AKASG				Sn		**Sn**				**03 54 02.5**	**-3.7**
	comp=Z,0.9nm,0.3s,baz=195,slow=18,SNR=3.6										
AKASG				Lg						03 55 03.9	
	comp=Z,0.8nm,0.3s,baz=267,slow=26,SNR=4.9										
AKASG	**Malin Array Be**	**8.29**	**90**	Pn		**Pn**				**03 52 31.7**	**-0.4**
AKASG				Pg		**Pg**				**03 53 06.3**	**-3.0**
AKASG				Sn		**Sn**				**03 54 02.5**	**-3.7**
AKASG				Lg						03 55 03.9	
AKASG	**Malin Array Be**	**8.29**	**90**	Pn		**Pn**				**03 52 31.7**	**-0.3**
AKBB	**Malin Array Si**	**8.29**	**90**	*e*Pn		**Pn**				**03 52 33.0**	**+1.0**
AKBB	**Malin Array Si**	**8.29**	**90**	*e*Pn		**Pn**				**03 52 33.0**	**+1.0**
LPL	**La Plagne**	**8.63**	**230**	*e*Pn		**Pn**				**03 52 34.2**	**-2.6**
LPL				*e*Sg		**Sg**				**03 54 56.3**	**-11**
	comp=Z,4.7nm,0.8s										
HFS	**Hagfors**	**8.78**	**352**	Pn		**Pn**				**03 52 37.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=162,slow=11,SNR=7.2										
HFS				Sn		**Sn**				**03 54 14.1**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=169,slow=30,SNR=3.0										
HFS	**Hagfors**	**8.78**	**352**	Pn		**Pn**				**03 52 37.7**	**-1.0**
HFS				Sn		**Sn**				**03 54 14.1**	**-4.2**
HFS	**Hagfors**	**8.78**	**352**	Pn		**Pn**				**03 52 37.7**	**-1.0**
SBF	**Sospel**	**9.61**	**221**	*e*P		**Pn**				**03 52 52.1**	**+1.9**
SBF	**Sospel**	**9.61**	**221**	*e*P		**Pn**				**03 52 52.1**	**+1.9**
NB2	**NORSAR Subarra**	**9.96**	**346**	Pn		**Pn**				**03 52 52.2**	**-2.7**
	comp=Z,1.6nm,1.1s,baz=163,slow=14										
NB2	**NORSAR Subarra**	**9.96**	**346**	Pn		**Pn**				**03 52 52.2**	**-2.7**
	comp=Z,1.6nm,1.1s,SNR=4.8										
NOA	**NORSAR Array B**	**9.96**	**346**	Pn		**Pn**				**03 52 52.5**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=163,slow=12,SNR=6.8										
NOA				Sn		**Sn**				**03 54 40.7**	**-6.5**
	comp=Z,0.1nm,0.3s,baz=88,slow=17,SNR=3.0										
NOA				Lg						03 55 43.1	
	comp=Z,0.1nm,0.3s,baz=28,slow=15,SNR=3.5										
FINES	**FINESS Array B**	**11.38**	**25**	Pn		**Pn**				**03 53 12.6**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=8.3										
FINES				Sn		**Sn**				**03 55 16.0**	**-6.1**
	comp=Z,0.5nm,0.3s,baz=209,slow=19,SNR=4.7										
EKA	**Eskdalemuir Ar**	**12.13**	**296**	Pn		**Pn**				**03 53 19.9**	**-4.7**
	comp=Z,0.1nm,0.3s,baz=98,slow=14,SNR=4.0										
ARCES	**ARCESS Array B**	**18.65**	**10**	Pn		**Pn**				**03 54 45.6**	**-4.3**
	comp=Z,0.4nm,0.3s,baz=191,slow=12,SNR=13										

IDC 25 03:51:23.4±13.0, 17°.94S×178°.21W, h568km±137km, mb3.3/4, mb1 3.5/4, mb1mx3.1/18, mbtmp3.3/4, Error ellipse: s-maj=86.0km s-min=33.5km az=53.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.78**	**241**	P	P	03 58 00.1	0.0
	2.2nm,0.5s,baz=97,slow=9.3,SNR=7.2						
WRA	**Warramunga Arr**	**44.82**	**260**	P	P	03 58 47.4	-0.3
	1.5nm,0.4s,baz=96,slow=7.5,SNR=55						
WRA				PcP	PcP	04 00 16.9	-0.5
	0.4nm,0.6s,baz=89,slow=3.5,SNR=5.4						
ASAR	**Alice Springs**	**44.97**	**254**	P	P	03 58 49.0	+0.1
	7.0nm,0.5s,baz=86,slow=8.8,SNR=86						
ASAR				PcP	PcP	04 00 17.4	-0.4
	0.7nm,0.6s,baz=108,slow=4.1,SNR=4.3						
QSPA	**South Pole Qui**	**72.11**	**180**	P	P	04 01 50.6	+0.4
	0.8nm,0.7s,baz=275,slow=2.3,SNR=7.1						
BRTR	**Keskin Array B**	**144.94**	**315**	PKP	PKPdf	04 09 56.9	+0.4
	0.9nm,0.7s,baz=131,slow=5.1,SNR=4.8						
GERES	**GERESS Array B**	**147.69**	**345**	PKPbc	PKPbc	04 10 04.0	-0.6
	0.6nm,0.5s,baz=20,slow=4.3,SNR=5.4						

*IDC **25** 03:57:16.1±0.6, 42°.09S×173°.82E, h0km, mb4.2/6, mb1 4.4/8, mb1mx4.3/14, mbtmp4.3/8, ML4.2/2, Error ellipse: s-maj=21.5km s-min=12.9km az=132.0*
*ISCJB **25** 03:57:17.4±0.5, 42°.39S±0°.03×173°.97E±0°.04, h23km±4km, mb4.2/9, Error ellipse: s-maj=6.7km s-min=3.0km az=44.5*
*WEL **25** 03:57:18.7±0.2, 42°.28S×173°.89E, h20km±1km, ML4.6/49, Error ellipse: s-maj=1.8km s-min=1.1km az=90.0, MM 5. WEL Felt between Nelson, Canterbury and Marlborough, maximum reported intensity.*
*NEIC **25** 03:57:18.4, 42°.32S×173°.95E, h18km, mb4.5/1, ML4.6(WEL), After WEL.*

ISC 25 03:57:18.4±0.7, 42°.34S±0°.03×173°.94E±0°.04, h20km±5km, n87, σ1°.95/86, mb4.2/9, 4C-4D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.31**	**255**	P*	**Pg**	**03 57 25.5**	**+0.3**
KHZ				S*	**Sg**	**03 57 30.4**	**+0.5**
KHZ	**Kahutara**	**0.31**	**255**	*e*Pg	**Pg**	**03 57 25.7**	**+0.5**
KHZ				*e*S	**Sg**	**03 57 30.4**	**+0.5**
CMWZ	**Cape Campbell**	**0.62**	**19**	⇑P*	**Pb**	**03 57 31.0**	**+0.4**
BSWZ	**Blackbirch Sta**	**0.62**	**355**	⇓P*	**Pb**	**03 57 29.7**	**-0.9**
BSWZ				S*	**Sb**	**03 57 37.1**	**-1.8**
TUWZ	**Tuamarina**	**0.91**	**360**	P*	**Pb**	**03 57 35.2**	**-0.2**
TUWZ				S*	**Sb**	**03 57 47.0**	**0.0**
THZ	**Tophouse**	**0.96**	**306**	⇓P*	**Pb**	**03 57 35.7**	**-0.7**
THZ				S*	**Sb**	**03 57 47.4**	**-1.3**
TCW	**Tory Channel**	**1.15**	**13**	P*	**Pb**	**03 57 38.8**	**-0.8**
BHW	**Baring Head**	**1.16**	**37**	P*	**Pb**	**03 57 39.1**	**-0.6**
BHW				S*	**Sb**	**03 57 55.9**	**+1.6**
SNZO	**South Karori**	**1.17**	**29**	P*	**Pb**	**03 57 39.2**	**-0.7**
SNZO	**South Karori**	**1.17**	**29**	*e*Pn	**Pn**	**03 57 39.5**	**-0.1**
NNZ	**Nelson**	**1.20**	**339**	⇑PN	**Pn**	**03 57 39.3**	**-0.6**
WEL	**Wellington**	**1.22**	**31**	P*	**Pb**	**03 57 40.3**	**-0.4**
WEL				S*	**Sb**	**03 57 56.5**	**+0.5**
PLWZ	**Palliser**	**1.24**	**52**	P*	**Pb**	**03 57 40.2**	**-0.9**
LTZ	**Lake Taylor**	**1.31**	**250**	⇑PN	**Pn**	**03 57 41.9**	**+0.3**
MSWZ	**Moikau Station**	**1.34**	**47**	P*	**Pb**	**03 57 41.3**	**-1.5**
CAW	**Cannon Point**	**1.49**	**35**	PN	**Pn**	**03 57 43.5**	**-0.5**
DUWZ	**D'Urville Isla**	**1.53**	**359**	PN	**Pn**	**03 57 44.5**	**-0.1**
CRLZ	**Canterbury Las**	**1.57**	**218**	PN	**Pn**	**03 57 45.1**	**0.0**
TRWZ	**Traveller**	**1.60**	**55**	⇓PN	**Pn**	**03 57 44.9**	**-0.7**
KIW	**Kapiti Island**	**1.64**	**26**	PN	**Pn**	**03 57 46.1**	**0.0**
MTW	**Mount Morrison**	**1.66**	**45**	PN	**Pn**	**03 57 45.5**	**-0.8**
MQZ	**McQueen's Vall**	**1.67**	**214**	⇑PN	**Pn**	**03 57 45.9**	**-0.5**
DSZ	**Denniston Nort**	**1.70**	**290**	PN	**Pn**	**03 57 47.5**	**+0.6**
OGWZ	**Otaki Gorge**	**1.78**	**32**	PN	**Pn**	**03 57 47.5**	**-0.4**
TMWZ	**Te Maipa**	**1.91**	**50**	PN	**Pn**	**03 57 48.8**	**-0.9**
MRZ	**Mangatainoka R**	**2.08**	**37**	PN	**Pn**	**03 57 51.3**	**-0.7**
TIWZ	**Tintock**	**2.13**	**44**	PN	**Pn**	**03 57 51.8**	**-1.0**
POWZ	**Post Office Ro**	**2.38**	**36**	PN	**Pn**	**03 57 55.7**	**-0.5**
BFZ	**Birch Farm**	**2.39**	**47**	PN	**Pn**	**03 57 55.1**	**-1.3**
WVZ	**Waitaha Valley**	**2.48**	**252**	PN	**Pn**	**03 57 57.8**	**+0.2**
RPZ	**Rata Peaks**	**2.53**	**236**	PN	**Pn**	**03 57 57.8**	**-0.4**
RPZ	**Rata Peaks**	**2.53**	**236**	Pn	**Pn**	**03 57 58.1**	**-0.2**
	403nm,0.3s,baz=89,slow=1.8,SNR=607						
RPZ				Sn	**Sn**	**03 58 25.7**	**-2.7**
	68nm,0.3s,baz=10,slow=23,SNR=6.1						
RPZ				Lg		03 58 40.5	
	52nm,0.3s,baz=198,slow=20,SNR=3.9						
RPZ	**Rata Peaks**	**2.53**	**236**	*e*Pn	**Pn**	**03 57 58.0**	**-0.3**
DVHZ	**Dannevirke**	**2.64**	**40**	PN	**Pn**	**03 57 58.2**	**-1.6**
WAZ	**Wanganui**	**2.70**	**17**	PN	**Pn**	**03 58 02.3**	**+1.7**
TSZ	**Takapari Road**	**2.74**	**34**	PN	**Pn**	**03 58 00.2**	**-1.0**
PKE	**Pukeiti**	**3.14**	**1**	PN	**Pn**	**03 58 09.1**	**+2.4**
PKVZ	**Pokaka**	**3.23**	**20**	PN	**Pn**	**03 58 09.0**	**+1.2**
MOVZ	**Moawhango**	**3.23**	**26**	PN	**Pn**	**03 58 07.9**	**0.0**
WNVZ	**Wahianoa**	**3.26**	**23**	PN	**Pn**	**03 58 10.1**	**+1.8**
VRZ	**Vera Road**	**3.27**	**11**	PN	**Pn**	**03 58 09.8**	**+1.4**
FOZ	**Fox Glacier**	**3.36**	**247**	PN	**Pn**	**03 58 09.6**	**-0.1**
NGZ	**Ngauruhoe**	**3.40**	**22**	PN	**Pn**	**03 58 11.9**	**+1.6**
LBZ	**Lake Benmore**	**3.42**	**232**	PN	**Pn**	**03 58 10.6**	**+0.1**
OTVZ	**Oturere**	**3.43**	**23**	PN	**Pn**	**03 58 11.5**	**+0.9**
WTVZ	**West Tongariro**	**3.45**	**22**	PN	**Pn**	**03 58 12.7**	**+1.7**
TWVZ	**Taurewa**	**3.45**	**20**	PN	**Pn**	**03 58 12.7**	**+1.7**
KRVZ	**Karewarewa**	**3.49**	**22**	PN	**Pn**	**03 58 13.6**	**+2.2**
ODZ	**Otahua Downs**	**3.61**	**220**	PN	**Pn**	**03 58 12.9**	**-0.3**
ODZ	**Otahua Downs**	**3.61**	**220**	*e*Pn	**Pn**	**03 58 12.8**	**-0.3**
HIZ	**Hauiti**	**3.88**	**11**	PN	**Pn**	**03 58 18.1**	**+1.2**
JCZ	**Jackson Bay**	**4.17**	**244**	PN	**Pn**	**03 58 20.8**	**-0.1**
WKZ	**Wanaka**	**4.36**	**234**	PN	**Pn**	**03 58 22.9**	**-0.5**
EAZ	**Earnscleugh**	**4.43**	**228**	PN	**Pn**	**03 58 23.9**	**-0.5**
URZ	**Urewera**	**4.74**	**32**	Pn	**Pn**	**03 58 27.5**	**-1.2**
	1.2nm,0.3s,baz=219,slow=4.7,SNR=5.8						
URZ				Pg	**Pg**	**03 58 41.0**	**-8.1**
	4.8nm,0.3s,baz=228,slow=7.0,SNR=12						
URZ				Sn	**Sn**	**03 59 21.1**	**-1.9**
	7.1nm,0.3s,baz=91,slow=19,SNR=4.1						
URZ				Lg		03 59 43.8	
	5.4nm,0.3s,baz=25,slow=17,SNR=2.7						
URZ	**Urewera**	**4.74**	**32**	*e*Pn	**Pn**	**03 58 30.4**	**+1.7**
TUZ	**Tuapeka**	**4.76**	**219**	PN	**Pn**	**03 58 28.8**	**-0.2**
MLZ	**Mavora Lakes**	**5.14**	**232**	PN	**Pn**	**03 58 34.0**	**-0.2**
MKAZ	**Moumakai**	**5.30**	**11**	PN	**Pn**	**03 58 36.7**	**+0.3**
SYZ	**Scrubby Hill**	**5.43**	**218**	PN	**Pn**	**03 58 38.3**	**+0.2**
MXZ	**Matakaoa Point**	**5.83**	**37**	PN	**Pn**	**03 58 43.3**	**-0.4**
CTZ	**Chatham Island**	**7.06**	**105**	PN	**Pn**	**03 59 00.1**	**-0.4**
OUZ	**Omahuta**	**7.11**	**358**	*e*Pn	**Pn**	**03 59 02.9**	**+1.6**
	21nm,0.7s						
OUZ				*e*S	**Sn**	**04 00 26.1**	**+4.7**
STKA	**Stephens Creek**	**27.68**	**282**	P	**P**	**04 03 06.0**	**+1.0**
	5.2nm,0.9s,mb4.1,baz=318,slow=14,SNR=4.9						
ASAR	**Alice Springs**	**37.97**	**287**	P	**P**	**04 04 34.0**	**-0.8**
	2.0nm,0.5s,mb4.1,baz=125,slow=6.6,SNR=31						
ASAR				PcP	PcP	04 06 49.1	-1.2
	0.8nm,0.8s,baz=112,slow=3.4,SNR=4.1						
WRA	**Warramunga Arr**	**40.10**	**291**	P	**P**	**04 04 51.8**	**-0.9**
	11nm,0.7s,mb4.7,baz=129,slow=7.5,SNR=63						
WRA				PcP	PcP	04 06 56.3	-0.8
	0.9nm,0.8s,baz=141,slow=3.0,SNR=5.4						
CASY	**Casey**	**41.59**	**213**	*e*P	**P**	**04 05 05.3**	**+1.0**
	2.1nm,0.9s,mb3.8						
FITZ	**Fitzroy Crossi**	**47.45**	**285**	*e*P	**P**	**04 05 51.2**	**-0.6**
	2.5nm,0.5s,mb4.4						
FITZ				*e*PcP	PcP	04 07 22.0	0.0
QSPA	**South Pole Qui**	**47.79**	**180**	P	**P**	**04 05 57.3**	**+3.7**
	2.1nm,1.1s,mb4.1,baz=30,slow=4.7,SNR=5.1						
QSPA	**South Pole Qui**	**47.79**	**180**	P	**P**	**04 05 57.3**	**+3.7**
MAW	**Mawson**	**58.83**	**205**	P	**P**	**04 07 17.4**	**+2.5**
	1.8nm,0.8s,mb4.1,baz=180,slow=6.9,SNR=3.6						
MAW				PcP	PcP	04 08 06.1	+1.9
	2.3nm,0.7s,baz=102,slow=6.2,SNR=9.2						
SYO	**Syowa Base**	**63.95**	**197**	*e*P	**P**	**04 07 49.0**	**-0.5**
PLCA	**Paso Flores**	**78.84**	**136**	P	**P**	**04 09 23.1**	**+3.2**
	0.5nm,0.7s,mb3.6,baz=209,slow=4.0,SNR=3.1						
PLCA	**Paso Flores**	**78.84**	**136**	P	**P**	**04 09 23.1**	**+3.2**
CMAR	**Chiang Mai Arr**	**91.66**	**293**	P	**P**	**04 10 25.7**	**+1.4**
	0.9nm,0.3s,mb4.5,baz=158,slow=2.9,SNR=6.5						
ILAR	**Eielson Array**	**111.09**	**17**	PKiKP	PKiKP	04 15 51.7	+2.5
	0.4nm,1.0s,baz=205,slow=3.6,SNR=4.0						
YKA	**Yellowknife Ar**	**119.00**	**30**	PKP	PKPdf	04 16 04.6	+0.2
	3.2nm,0.7s,baz=285,slow=0.8,SNR=4.3						
MKAR	**Makanchi Array**	**120.15**	**307**	PKP	PKPdf	04 16 06.6	-0.5
	0.4nm,0.2s,baz=180,slow=0.5,SNR=3.0						
DBIC	**Dimbokro**	**144.46**	**182**	PKP	PKPdf	04 16 53.1	-0.6
	4.1nm,0.9s,baz=154,slow=9.3,SNR=3.2						
ASF	**Jabal al Asfar**	**144.66**	**268**	PKP	PKPdf	04 16 53.9	+0.4
	0.9nm,0.4s,baz=39,slow=6.7,SNR=4.1						
EIL	**Elat**	**144.83**	**262**	PKP	PKPdf	04 16 53.8	0.0
	6.7nm,0.4s,baz=16,slow=7.5,SNR=6.4						
MALT	**Malatya**	**146.14**	**278**	PKPdf	PKPdf	04 16 56.6	+0.9
MMAI	**Mount Meron Ar**	**146.18**	**268**	PKPbc	PKPbc	04 16 58.6	+1.6
	2.9nm,0.5s,baz=94,slow=6.9,SNR=7.4						
ARCES	**ARCESS Array B**	**148.25**	**340**	PKPbc	PKPbc	04 17 01.0	-0.7
	2.6nm,0.7s,baz=64,slow=2.8,SNR=11						
BRTR	**Keskin Array B**	**150.13**	**279**	PKPbc	PKPbc	04 17 07.5	+0.2
	3.1nm,0.8s,baz=139,slow=5.9,SNR=9.8						
TORD	**Torodi Ar. Bea**	**150.15**	**195**	PKP	PKPdf	04 17 03.7	+0.7
	142nm,0.4s,baz=359,slow=0.2,SNR=0.8						
TORD				PKPbc	PKPbc	04 17 08.5	+0.4
	17nm,1.0s,baz=159,slow=1.5,SNR=4.4						
FINES	**FINESS Array B**	**152.90**	**326**	PKPbc	PKPbc	04 17 12.1	-0.9
	1.4nm,0.6s,baz=90,slow=1.4,SNR=3.1						

*NDI **25** 04:05:16.6±2.3, 26°.51N×86°.30E, h10km, ML3.3*
*ISCJB **25** 04:05:51.5±0.8, 30°.8N±0°.1×84°.02E±0°.07, h10km, mb3.4/5, Error ellipse: s-maj=15.9km s-min=6.2km az=153.0*
*IDC **25** 04:05:51.1±2.8, 30°.79N×83°.92E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.5/25, mbtmp3.5/6, ML3.3/1, Error ellipse: s-maj=94.0km s-min=24.1km az=78.0*

ISC 25 04:05:53.1±0.7, 30°.84N±0°.10×84°.00E±0°.08, h10km, n12, σ0°.74/16, mb3.4/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.52**	**250**	*e*PKP	**Pn**	**04 06 47.2**	**-0.7**
PTH				*ex*	**Sn**	**04 07 29.0**	**-0.6**
LGTI	**Lohaghat**	**3.54**	**248**	*e*PKP	**Pn**	**04 06 49.1**	**+1.0**
LGTI				*ex*	**Sb**	**04 07 35.2**	**-3.6**
KLP	**Kalpa**	**4.98**	**279**	*e*PKP	**Pb**	**04 07 20.3**	**-0.1**
KLP				*e*S	Sx	04 08 53.0	
KLP				AML	AML	04 08 57.7	
	comp=N,25nm,0.6s						
KLP				AML	AML	04 08 59.6	
	comp=E,40nm,0.9s						
DDI	**Dehra Dun**	**5.15**	**266**	*e*PKP	**Pn**	**04 07 04.5**	**-5.9**
DDI				*e*S	**Sb**	**04 08 31.0**	**+5.6**
SONA	**Sohna**	**6.56**	**249**	*e*S	**Sn**	**04 08 45.6**	**+1.1**
SONA				AML	AML	04 09 17.6	
	comp=E,13nm,0.1s						
SONA				AML	AML	04 09 18.2	
	comp=N,12nm,0.2s						
KUDL	**Kundal**	**7.08**	**250**	*e*PKP	**Pn**	**04 07 29.9**	**-6.9**
KUDL				*e*S	**Sn**	**04 09 02.7**	**+5.4**
KUDL				AML	AML	04 09 33.6	
	comp=N,7.5nm,0.5s						
KUDL				AML	AML	04 09 34.6	
	comp=E,9.2nm,0.8s						
MKAR	**Makanchi Array**	**15.99**	**356**	Pn	**Pn**	**04 09 38.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=185,slow=13,SNR=5.1						
ZALV	**Zalesovo Beam**	**23.10**	**1**	P	**P**	**04 10 59.0**	**+0.1**
	comp=E,0.9nm,0.5s,mb3.5,baz=192,slow=13,SNR=5.0						
SONM	**Songino Array**	**24.11**	**39**	P	**P**	**04 11 09.4**	**+0.5**
	comp=E,1.0nm,0.8s,mb3.3,baz=246,slow=11,SNR=16						
WRA	**Warramunga Arr**	**69.91**	**130**	P	**P**	**04 17 04.9**	**+0.3**
	comp=E,0.3nm,0.3s,mb3.6,baz=321,slow=6.6,SNR=12						
ASAR	**Alice Springs**	**72.28**	**133**	P	**P**	**04 17 18.4**	**-0.5**
	comp=E,0.2nm,0.3s,mb3.5,baz=334,slow=8.2,SNR=4.1						
ILAR	**Eielson Array**	**76.80**	**20**	P	**P**	**04 17 43.9**	**-0.7**
	comp=E,0.3nm,0.8s,mb3.3,baz=316,slow=6.5,SNR=4.4						

*ISK **25** 04:08:02.2, 37°.42N×26°.70E, h2km, MD2.9*
*CSEM **25** 04:08:03.8±0.7, 37°.41N×26°.79E, h20km, MD2.8, Error ellipse: s-maj=14.1km s-min=6.0km az=58.0*
*ISCJB **25** 04:08:04.9±1.3, 37°.42N±0°.05×26°.86E±0°.10, h31km±6km, Error ellipse: s-maj=14.3km s-min=6.9km az=151.9*
*DDA **25** 04:08:06.0, 37°.52N×26°.96E, h7km±5km, Md2.8*

ISC 25 04:08:04.9±1.3, 37°.42N±0°.05×26°.84E±0°.10, h29km±7km, n18, σ1°.00/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.42**	**48**	*i* P	**Pb**	**04 08 12.9**	**-1.0**
GCAM				*i* S	**Sb**	**04 08 19.3**	**-0.8**
GCAM	**G?zelcaml?**	**0.42**	**48**	*i* P	**Pb**	**04 08 12.9**	**-1.0**
GCAM				*i* S	**Sb**	**04 08 19.3**	**-0.8**
BODT	**Bodrum**	**0.52**	**134**	*e*PG	**Pb**	**04 08 14.7**	**-0.9**
BODT				*e*SG	**Sb**	**04 08 24.0**	**+1.2**
BODT	**Bodrum**	**0.52**	**134**	*e*Pg	**Pb**	**04 08 14.7**	**-0.9**
BODT				*e*Sg	**Sb**	**04 08 24.0**	**+1.2**
MLSB	**Milas**	**0.75**	**99**	*e*PG	**Pb**	**04 08 19.4**	**-0.1**
MLSB				*e*SG	**Sb**	**04 08 32.3**	**+2.9**
MLSB	**Milas**	**0.75**	**99**	*e*Pg	**Pb**	**04 08 19.4**	**-0.1**
MLSB				*e*Sg	**Sb**	**04 08 32.3**	**+2.9**
AYDN	**Tasoluk**	**0.86**	**74**	*i* P	**Pn**	**04 08 20.9**	**-0.2**
AYDN				*i* S	**Sb**	**04 08 32.5**	**+0.1**
AYDN	**Tasoluk**	**0.86**	**74**	*i* P	**Pn**	**04 08 20.9**	**-0.2**
AYDN				*i* S	**Sb**	**04 08 32.5**	**+0.1**
URLA	**Izmir**	**0.96**	**348**	*i* P	**Pn**	**04 08 22.1**	**-0.4**
URLA				*i* S	**Sn**	**04 08 36.0**	**+0.9**
URLA	**Izmir**	**0.96**	**348**	*i* P	**Pn**	**04 08 22.1**	**-0.4**
URLA				*i* S	**Sn**	**04 08 36.0**	**+0.9**
BLCB	**Balcova**	**0.97**	**9**	*e*PG	**Pn**	**04 08 22.2**	**-0.5**
BLCB	**Balcova**	**0.97**	**9**	*e*Pg	**Pn**	**04 08 22.2**	**-0.5**
IZM	**Izmir**	**1.03**	**19**	*e*PG	**Pn**	**04 08 23.9**	**+0.4**
IZM	**Izmir**	**1.03**	**19**	*e*Pg	**Pn**	**04 08 23.9**	**+0.5**
TURN	**Turunc**	**1.51**	**111**	*i* P	**Pn**	**04 08 29.8**	**-0.3**
TURN				*i* S	**Sn**	**04 08 47.1**	**-1.6**
TURN	**Turunc**	**1.51**	**111**	*i* P	**Pn**	**04 08 29.8**	**-0.2**
TURN				*i* S	**Sn**	**04 08 47.1**	**-1.6**
KULA	**Kula-Manisa**	**1.80**	**52**	*e*PN	**Pn**	**04 08 35.7**	**+1.6**
KULA	**Kula-Manisa**	**1.80**	**52**	*e*Pn	**Pn**	**04 08 35.7**	**+1.6**

*NEIC **25** 04:36:18.3, 16°.86N×100°.18W, h5km, MD3.7(MEX), After MEX.*

MEX 25 04:36:18.3±1.0, 16°.86N×100°.18W, h5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.21**	**336**	*e*P	Pg	04 36 21.3	-1.0
CAIG				*i* S	Sg	04 36 25.0	-0.1
CAIG	**El Cayaco**	**0.21**	**336**	*e*P	Pg	04 36 21.3	-1.0
CAIG				*i* S	Sg	04 36 25.0	-0.1
ACX	**Acapulco**	**0.31**	**88**	*e*P	Pg	04 36 22.6	-1.7
ACX				*i* S	Sg	04 36 26.9	-1.5
ACX	**Acapulco**	**0.31**	**88**	*e*P	Pg	04 36 22.6	-1.7
ACX				*i* S	Sg	04 36 26.9	-1.5
MEIG	**Mezcala**	**1.19**	**27**	*e*P	Pg	04 36 37.4	-3.8
MEIG				*i* S	Sg	04 36 54.0	-2.6
ZIIG	**Zihuatanejo**	**1.44**	**301**	*e*P	Pn	04 36 41.8	-3.2
ZIIG				*i* S	Sb	04 37 00.8	-3.3
ZIIG	**Zihuatanejo**	**1.44**	**301**	*e*P	Pn	04 36 41.8	-3.2
ZIIG				*i* S	Sb	04 37 00.8	-3.3
PLIG	**Platanillo**	**1.66**	**23**	*i* P	Pn	04 36 44.5	-3.5
PLIG				*i* S	Sn	04 37 05.4	-4.3
PLIG	**Platanillo**	**1.66**	**23**	*i* P	Pn	04 36 44.5	-3.5
PLI

	baz=77,SNR=10						
V14A	Boquillas Ranc	77.09	47	⇓P	P	05 00 35.4	+0.6
	baz=77,SNR=6.1						
X15A	Humboldt	77.14	48	⇓P	P	05 00 35.3	+0.2
	baz=77						
TUC	Tucson	77.14	51	eP	P	05 00 35.3	+0.1
	15nm,1.8s,mb4.4						
T13A	Saint George	77.25	45	⇓P	P	05 00 35.9	+0.2
	baz=77						
117A	Oracle	77.30	51	⇑P	P	05 00 36.5	+0.5
	baz=77						
318A	Bisbee	77.33	52	⇑P	P	05 00 36.0	-0.2
	baz=77						
Y16A	Circle Bar Ran	77.38	49	⇓P	P	05 00 36.5	0.0
	baz=78						
U14A	Mt Trumbull	77.44	46	P	P	05 00 37.3	+0.5
	baz=78,SNR=10						
S13A	Holt Ranch, En	77.58	45	⇓P	P	05 00 37.7	+0.2
	baz=78,SNR=5.9						
X16A	Lo Mia Camp, P	77.67	49	⇑P	P	05 00 38.5	+0.4
	baz=78						
R13A	O'Grain Ranch,	77.81	44	⇑P	P	05 00 39.3	+0.5
	baz=78						
319A	Douglas	77.84	52	⇓P	P	05 00 39.2	+0.1
	baz=78						
V15A	Kaibab Nationa	77.84	47	⇓P	P	05 00 39.4	+0.4
	baz=78						
CCUT	Cedar City	77.90	45	eP	P	05 00 40.0	+0.8
	2.5nm,0.8s,mb4.0						
118A	Homack Ranch,	77.90	51	⇑P	P	05 00 39.8	+0.3
	baz=78						
U15A	North Rim	78.06	46	⇑P	P	05 00 41.1	+0.9
	baz=78,SNR=6.7						
X17A	Forest Lakes	78.09	49	⇑P	P	05 00 41.3	+0.8
	baz=78						
219A	White Tail Can	78.14	52	⇑P	P	05 00 40.8	+0.1
	baz=78						
T15A	Red Dirt Ranch	78.30	46	⇓P	P	05 00 42.1	+0.6
	baz=78,SNR=11						
S15A	Panguitch	78.64	45	⇑P	P	05 00 44.5	+1.1
	baz=79						
220A	Playas Peak, P	78.65	52	⇑P	P	05 00 43.1	-0.5
	baz=79						
Q14A	Sevier Lake (B	78.70	44	⇓P	P	05 00 43.9	+0.3
	baz=79						
G08A	Pilot Rock	78.71	36	⇓P	P	05 00 43.6	+0.1
	baz=79						
V17A	Tonalea, Kykot	78.72	48	⇓P	P	05 00 43.5	-0.3
	baz=79						
U16A	Tuba City	78.74	47	⇑P	P	05 00 44.7	+0.7
	baz=79,SNR=5.0						
T16A	Glen Canyon Da	78.89	46	⇓P	P	05 00 45.2	+0.5
	baz=79						
Y19A	Nutrioso	79.05	50	⇓P	P	05 00 46.3	+0.6
	baz=79						
Z20A	Nine Sixteen R	79.15	51	⇓P	P	05 00 47.0	+0.8
	baz=79						
P14A	Drum Mountains	79.15	43	⇑P	P	05 00 46.1	0.0
	baz=79,SNR=7.6						
S16A	Weppner Ranch,	79.19	46	⇓P	P	05 00 46.6	+0.2
	baz=79,SNR=5.6						
MSU	Marysvale	79.19	45	eP	P	05 00 47.3	+0.9
MDJ	Mudanjiang	79.24	323	P	P	05 00 49.8	+3.3
MDJ				pmax	pmax		
	comp=Z,9.0nm,2.5s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,48nm,4.0s						
V18A	Ganado	79.38	48	⇓P	P	05 00 47.9	+0.5
	baz=80						
T17A	Navajo Res., N	79.38	47	⇓P	P	05 00 47.7	+0.2
	baz=80						
MFID	Camas Ranch	79.46	39	⇑P	P	05 00 47.5	-0.2
	baz=80						
121A	Cookes Peak, D	79.49	52	⇑P	P	05 00 48.1	-0.1
	baz=80						
R16A	Teasdale	79.55	45	⇓P	P	05 00 49.3	+1.0
	baz=80,SNR=5.1						
DUG	Dugway	79.63	43	⇓P	P	05 00 48.2	-0.5
	baz=80						
Y20A	Horse Springs,	79.67	50	⇑P	P	05 00 48.9	-0.2
	baz=80						
S17A	Black Ridge (B	79.70	46	⇑P	P	05 00 48.8	-0.4
	baz=80						
U18A	Rough Rock, Ch	79.76	47	⇓P	P	05 00 49.9	+0.4
	baz=80						
D08A	Wollman Farm,	79.79	35	⇓P	P	05 00 49.3	-0.1
	baz=80						
X20A	Quemado	79.87	50	⇓P	P	05 00 50.5	+0.3
	baz=80						
E09A	Wood Farm, Sta	79.89	35	⇑P	P	05 00 49.7	-0.3
	baz=80						
Z21A	St. Cloud Mine	79.93	51	⇑P	P	05 00 51.5	+1.0
	baz=80						
V19A	Window Rock	80.02	48	⇑P	P	05 00 50.9	0.0
	baz=80						
I12A	Atlanta	80.09	39	⇑P	P	05 00 51.3	+0.2
	baz=80,SNR=8.0						
F10A	Beach Ranch, E	80.09	36	⇓P	P	05 00 50.4	-0.7
	baz=80,SNR=5.9						
T18A	Mexican Hat	80.10	47	P	P	05 00 51.8	+0.4
	baz=80,SNR=14						
W20A	Ramah	80.14	49	⇑P	P	05 00 52.5	+0.9
	baz=80						
R17A	Hanksville Air	80.14	45	⇑P	P	05 00 51.3	-0.2
	baz=80,SNR=5.6						
U19A	Dine' College,	80.17	48	⇓P	P	05 00 52.2	+0.5
	baz=80						
N15A	Stansbury Isla	80.18	42	⇓P	P	05 00 51.4	-0.2
	baz=80						
Y21A	Point of Rocks	80.24	50	⇑P	P	05 00 53.1	+1.0
	baz=80						
L14A	Malta	80.31	41	⇑P	P	05 00 52.4	0.0
	baz=80						
B08A	Colville Reser	80.35	33	⇑P	P	05 00 51.7	-0.7
	baz=80						
HLID	Hailey	80.40	39	⇑P	P	05 00 53.0	+0.2
	baz=80,SNR=9.5						
HLID	Hailey	80.40	39	eP	P	05 00 52.8	0.0
	comp=Z,5.0nm,0.9s,mb4.3						
J13A	Cove Ranch, Pi	80.46	40	⇑P	P	05 00 53.4	+0.3
	baz=81,SNR=5.8						
M15A	Larsen Ranch,	80.52	42	⇑P	P	05 00 53.2	-0.3
	baz=81						
T19A	Beclabito	80.56	47	⇑P	P	05 00 53.9	+0.1
	baz=81						
SRU	San Rafael	80.61	45	⇑P	P	05 00 53.9	-0.1
	baz=81						
K14A	Jones Ranch, D	80.62	41	⇑P	P	05 00 54.0	0.0
	baz=81						
P17A	Butcher Ranch,	80.64	44	⇓P	P	05 00 54.3	+0.1
	baz=81						
H12A	Diamond D Ranc	80.67	38	⇑P	P	05 00 54.2	0.0
	baz=81						
R18A	Canyonlands Na	80.69	46	⇑P	P	05 00 54.6	+0.1
	baz=81						
G12A	Big Creek, Yel	80.72	38	⇓P	P	05 00 54.2	-0.2
	baz=81,SNR=6.9						
I13A	Wildhorse Cree	80.77	39	⇓P	P	05 00 54.9	+0.2
	baz=81						
324A	Moseley Ranch,	80.78	54	⇑P	P	05 00 55.0	-0.2
	baz=81						
J14A	Carey	80.82	40	⇓P	P	05 00 55.7	+0.7
	baz=81,SNR=5.5						
L15A	Malad City	80.84	42	⇓P	P	05 00 54.9	-0.2
	baz=81						
Q18A	Rafter H Ranch	80.87	45	⇓P	P	05 00 55.3	-0.1
	baz=81						
425A	Indio Mountain	80.89	54	⇑P	P	05 00 56.1	+0.4
	baz=81,SNR=14						
S19A	Harvey Farm, M	80.91	47	⇑P	P	05 00 55.9	+0.3
	baz=81						
MNTX	Cornudas Mount	80.97	53	⇓P	P	05 00 56.1	0.0
	baz=81						
O17A	Robinson Place	81.00	44	⇓P	P	05 00 56.3	+0.3
	baz=81						
224A	Cornudas Mount	81.02	53	⇓P	P	05 00 56.7	+0.3
	baz=81						
P18A	Preston Nutter	81.05	44	⇑P	P	05 00 56.6	+0.2
	baz=81						
626A	Big Bend Ranch	81.06	56	⇓P	P	05 00 56.9	+0.3
	baz=81,SNR=5.2						
R19A	Curley Farm, L	81.08	46	⇑P	P	05 00 56.6	+0.1
	baz=81						
K15A	Arbon	81.10	41	⇑P	P	05 00 56.5	0.0
	baz=81						
F12A	Elk City	81.11	37	P	P	05 00 56.2	-0.3
	baz=81,SNR=9.6						
325A	Bean Ranch, Si	81.15	54	⇓P	P	05 00 57.1	0.0
	baz=81,SNR=9.4						
HWUT	Hardware Ranch	81.17	42	eP	P	05 00 56.5	-0.4
	comp=Z,1.1nm,0.6s,mb3.9						
CN2	Changchun	81.27	320	eP	P	05 01 01.6	+4.2
526A	Mary Lane Ranc	81.30	55	⇑P	P	05 00 58.0	+0.2
	baz=81,SNR=5.1						
N17A	Moffit Pass	81.31	43	⇓P	P	05 00 57.9	+0.3
	baz=81						
TRF	Thorfare Moun	81.32	10	eP	P	05 00 56.2	-1.0
	comp=Z,6.4nm,1.0s,mb4.4						
124A	Stringfield Ra	81.33	52	⇓P	P	05 00 58.5	+0.5
	baz=81						
TXAR	Lajitas Array	81.34	56	P	P	05 00 57.6	-0.6
	comp=Z,1.4nm,0.8s,mb3.9,baz=230,slow=7.0,SNR=17						
U21A	Nageezi	81.34	48	⇓P	P	05 00 57.8	-0.2
	baz=81,SNR=7.6						
PV04	Paradox Valley	81.38	46	eP	P	05 00 58.1	0.0
L16A	Fish Haven	81.46	42	⇓P	P	05 00 58.0	-0.4
	baz=82						
S20A	Disappointment	81.49	47	⇓P	P	05 00 59.0	+0.3
	baz=82						
J15A	Blackfoot	81.54	40	⇑P	P	05 00 59.4	+0.6
	baz=82						
ANMO	Albuquerque	81.55	50	eP	P	05 00 59.2	+0.1
	comp=Z,2.8nm,1.0s,mb4.0						
225A	Deer Hill, Car	81.57	53	P	P	05 00 59.5	+0.2
	baz=82,SNR=6.8						
426A	McDonald Obser	81.59	55	⇓P	P	05 00 59.8	+0.4
	baz=82,SNR=11						
H14A	Leadore	81.60	39	⇑P	P	05 00 59.2	+0.1
	baz=82						
627A	Terlingua Ranc	81.61	56	⇑P	P	05 00 59.8	+0.2
	baz=82						
V22A	San Miguel Ran	81.65	49	⇑P	P	05 00 59.7	+0.1
	baz=82						
F13A	Darby	81.66	38	⇑P	P	05 00 58.8	-0.7
	baz=82						
Z24A	Sheeppen Canyo	81.67	52	⇑P	P	05 00 60.0	+0.2
	baz=82						
527A	Woodward Ranch	81.71	55	⇓P	P	05 00 59.4	-0.7
	baz=82,SNR=5.3						
C11A	Tepee Creek (N	81.71	35	⇓P	P	05 00 59.2	-0.4
	baz=82						
D12A	Red Ives Fores	81.77	36	⇓P	P	05 00 58.8	-1.2
	baz=82						
S21A	Coal Bank Pass	81.81	47	⇑P	P	05 01 00.5	0.0
	baz=82,SNR=8.3						
MCK	McKinley	81.82	11	eP	P	05 00 59.3	-0.6
	comp=Z,10.0nm,0.8s,mb4.7						
Y24A	Capitan	81.87	51	⇑P	P	05 01 00.6	-0.2
	baz=82						
W23A	Werner Place,	81.88	50	⇓P	P	05 01 00.8	-0.1
	baz=82						
U22A	Llaves	81.90	49	⇓P	P	05 01 00.9	0.0
	baz=82						
GDL2	Guadalupe Moun	81.96	53	eP	P	05 01 01.6	+0.2
J16A	Bone	81.98	41	⇑P	P	05 01 01.5	+0.3
	baz=82						
628A	Black Gap, Mar	82.02	56	⇑P	P	05 01 01.6	-0.1
	baz=82						
H15A	Lima	82.04	39	⇑P	P	05 01 01.8	+0.4
	baz=82						
Q20A	Ridgley Place,	82.06	46	⇓P	P	05 01 01.8	+0.1
	baz=82						
E13A	Victor	82.10	37	P	P	05 01 01.0	-0.7
	baz=82,SNR=7.0						
V23A	Ortiz Mt. (NFS	82.11	49	⇓P	P	05 01 01.6	-0.4
	baz=82						
226A	Malaga, Loving	82.11	54	⇓P	P	05 01 01.5	-0.6
	baz=82						
T22A	Edith	82.15	48	⇓P	P	05 01 02.2	0.0
	baz=82						
427A	Hayter Ranch,	82.16	55	P	P	05 01 02.6	+0.2
	baz=82,SNR=6.2						
RRI2	Red Ridge	82.20	41	eP	P	05 01 03.1	+0.7
	comp=Z,6.4nm,0.9s,mb4.5						
P20A	De Beque	82.25	45	⇑P	P	05 01 02.7	0.0
	baz=82						
D13A	Huson	82.30	36	⇑P	P	05 01 01.6	-1.2
	baz=82						
R21A	Cimarron	82.31	47	⇓P	P	05 01 03.1	+0.2
	baz=82,SNR=8.2						
U23A	El Rito	82.36	49	P	P	05 01 03.7	+0.4
	baz=82,SNR=9.8						
I16A	Newdale	82.37	40	⇑P	P	05 01 03.8	+0.7
	baz=82,SNR=6.1						
528A	Cox Ranch, San	82.37	56	⇓P	P	05 01 03.7	+0.2
	baz=82						
G15A	Dillon	82.42	39	⇑P	P	05 01 03.5	0.0
	baz=83,SNR=7.0						
Y25A	Mesa, Roswell	82.43	52	⇓P	P	05 01 03.5	-0.2
	baz=82						
W24A	Lazy 6 Ranch,	82.44	50	⇑P	P	05 01 03.7	-0.1
	baz=82,SNR=5.2						
E14A	Clinton	82.49	37	⇓P	P	05 01 03.5	-0.3
	baz=83,SNR=9.9						
REDW	Red Top Meadow	82.51	41	eP	P	05 01 03.9	0.0
	comp=Z,6.7nm,1.1s,mb4.4						
TPAW	Teton Pass	82.51	41	eP	P	05 01 04.2	+0.3
	comp=Z,4.7nm,0.8s,mb4.4						
S22A	4UR Ranch, Cre	82.53	47	⇑P	P	05 01 04.9	+0.8
	baz=83,SNR=8.8						
J17A	Brown Place, J	82.60	41	⇑P	P	05 01 04.5	+0.1
	baz=83						
SNOW	Snow King Moun	82.62	41	eP	P	05 01 04.5	0.0
	comp=Z,5.1nm,1.0s,mb4.3						
K18A	Toltan Ranch,	82.66	42	⇑P	P	05 01 05.0	+0.3
	baz=83,SNR=7.1						
428A	Kincaid Ranch,	82.68	55	⇓P	P	05 01 04.7	-0.4
	baz=83						
M19A	Rock Springs	82.69	43	⇑P	P	05 01 04.8	-0.1
	baz=83						
IMW	Indian Meadow	82.72	40	eP	P	05 01 05.1	+0.1
	comp=Z,4.8nm,0.8s,mb4.4						
V24A	Rampart Ranch,	82.77	50	⇑P	P	05 01 05.7	+0.3
	baz=83						
LOHW	Long Hollow	82.79	41	eP	P	05 01 04.2	-1.2
	comp=Z,4.0nm,1.1s,mb4.2						
R22A	Saguache, Gunn	82.80	47	⇑P	P	05 01 06.4	+0.9
	baz=83,SNR=7.0						
328A	Wristen Ranch,	82.84	55	⇓P	P	05 01 05.6	-0.4
	baz=83						
L19A	Farson	82.84	43	⇑P	P	05 01 05.5	-0.2
	baz=83,SNR=6.1						
QLMT	Earthquake Lak	82.89	39	eP	P	05 01 06.5	+0.6
	comp=Z,0.9nm,0.6s,mb3.8						
H16A	Russell Place,	82.94	40	P	P	05 01 06.8	+0.7
	baz=83,SNR=16						
J18A	Kendall Valley	82.96	41	⇓P	P	05 01 06.3	+0.1
	baz=83,SNR=16						
N20A	Spence Gulch,	82.96	44	⇓P	P	05 01 06.4	0.0
	baz=83						
Q22A	Crested Butte,	82.98	46	⇑P	P	05 01 07.0	+0.5
	baz=83,SNR=6.9						
BW06	Boulder Array	83.04	42	P	P	05 01 06.3	-0.3
	baz=83,SNR=7.9						
PDAR	Pinedale Array	83.04	42	P	P	05 01 05.5	-1.1
	comp=Z,5.1nm,0.8s,mb4.4,baz=224,slow=2.5,SNR=42						
COLA	College	83.06	11	eP	P	05 01 05.7	-0.6
	comp=Z,10nm,0.9s,mb4.7						
SMCO	Snowmass	83.08	46	eP	P	05 01 07.2	+0.2
	comp=Z,2.8nm,0.8s,mb4.1						
ILAR	Eielson Array	83.15	11	P	P	05 01 05.6	-1.1
	comp=Z,1.2nm,0.7s,mb3.8,baz=222,slow=6.7,SNR=13						
W25A	X Bar L Ranch,	83.15	51	⇓P	P	05 01 06.9	-0.5
	baz=83						
BOZ	Bozeman (W)	83.19	39	⇓P	P	05 01 07.3	-0.1
	baz=83,SNR=6.7						
BOZ	Bozeman (W)	83.19	39	eP	P	05 01 07.2	-0.2
	comp=Z,4.2nm,0.8s,mb4.3						
H17A	Grant Village	83.20	40	⇓P	P	05 01 08.4	+1.0
	baz=83,SNR=6.5						
F16A	Kennard Place,	83.26	39	⇑P	P	05 01 07.7	-0.1
	baz=83						
V25A	Rancho No Teng	83.30	50	⇓P	P	05 01 08.1	-0.1
	baz=83						
M20A	Sweetwater, Wa	83.32	44	⇑P	P	05 01 08.3	+0.1
	baz=83						
I18A	Diamond G Ranc	83.33	41	⇓P	P	05 01 07.7	-0.5
	baz=84						
D15A	Lincoln	83.39	37	⇓P	P	05 01 08.0	-0.3
	baz=84,SNR=5.0						
P22A	Eagle	83.41	46	⇑P	P	05 01 08.6	-0.1
	baz=84						
N21A	Black Mountain	83.43	44	⇓P	P	05 01 08.8	+0.1
	baz=84,SNR=5.4						
L20A	Wamsutter	83.46	43	⇓P	P	05 01 09.1	+0.3
	baz=84,SNR=8.8						
SDCO	Great Sand Dun	83.47	48	⇓P	P	05 01 08.9	-0.1
	baz=84						
SDCO	Great Sand Dun	83.47	48	eP	P	05 01 08.8	-0.2
	comp=Z,0.8nm,0.7s,mb3.7						
T24A	Torres, Weston	83.50	49	⇑P	P	05 01 10.0	+0.8
	baz=84						
G17A	Pierce Place,	83.56	39	⇑P	P	05 01 09.6	+0.3
	baz=84						
Y27A	Causey	83.57	52	⇓P	P	05 01 09.0	-0.6
	baz=84,SNR=5.2						
J19A	Crowheart	83.60	42	P	P	05 01 09.0	-0.5
	baz=84,SNR=6.9						
E16A	East Helena	83.62	38	P	P	05 01 09.4	-0.2
	baz=84,SNR=5.9						
HRY	Holter Researc	83.62	38	eP	P	05 01 09.4	-0.2
U25A	Circle Dot Ran	83.69	49	⇑P	P	05 01 09.8	-0.4
	baz=84						
C15A	Salmond Ranch,	83.73	37	⇑P	P	05 01 09.4	-0.7
	baz=84						
Q23A	Hartsel	83.75	47	⇓P	P	05 01 10.6	+0.2
	baz=84						
K20A	Yellowstone Ra	83.77	42	⇓P	P	05 01 09.4	-1.1
	baz=84						
O22A	Kremmling	83.81	45	⇑P	P	05 01 10.7	0.0
	baz=84						
V26A	Tequesquite Ra	83.89	50	⇓P	P	05 01 10.7	-0.5
	baz=84						
H18A	Shoshone NF, C	83.90	40	⇑P	P	05 01 11.4	+0.4
	baz=84						
MSTX	Muleshoe	83.90	52	⇓P	P	05 01 10.8	-0.6
	baz=84,SNR=6.5						
F17A	Fitzpatrick Pl	83.91	39	⇓P	P	05 01 11.1	+0.1
	baz=84						
A14A	Double T Ranch	83.91	35	⇓P	P	05 01 10.4	-0.6
	baz=84						
M21A	Separation Pea	83.92	44	P	P	05 01 11.0	-0.2
	baz=84,SNR=6.2						
X27A	F and S Farms,	83.93	52	⇑P	P	05 01 11.6	+0.1
	baz=84						
D16A	Dana Ranch, Ca	83.95	38	⇓P	P	05 01 11.1	-0.1
	baz=84						
I19A	Meeteetse	84.01	41	⇑P	P	05 01 11.7	0.0
	baz=84						
N22A	Wattenberg Ran	84.17	45	⇓P	P	05 01 12.7	+0.2
	baz=84,SNR=5.4						
U26A	Atchley Ranch,	84.17	50	⇓P	P	05 01 12.3	-0.3
	baz=84						
S25A	Robets Cordova	84.20	48	⇑P	P	05 01 12.8	0.0
	baz=84						
C16A	Fuhringer Ranc	84.24	37	⇓P	P	05 01 11.7	-1.0
	baz=84						
J20A	Shoshoni	84.27	42	P	P	05 01 12.7	-0.2
	baz=84,SNR=7.1						
A15A	Johnson Ranch,	84.30	35	⇑P	P	05 01 12.0	-1.0
	baz=84						
H19A	Powell	84.32	40	⇓P	P	05 01 13.3	+0.1
	baz=84						
RLMT	Red Lodge	84.37	40	⇓P	P	05 01 13.7	+0.3
	baz=84						
K21A	Alcova	84.47	43	⇓P	P	05 01 13.4	-0.6
	baz=85						
F18A	Big Timber	84.48	39	⇓P	P	05 01 14.1	+0.2
	baz=85						
D17A	Six Diamond Ra	84.52	38	⇑P	P	05 01 14.1	-0.1
	baz=85,SNR=6.3						
N23A	Red Feather La	84.55	45	⇓P	P	05 01 14.8	+0.3
	baz=85						
B16A	M & M Farms, S	84.58	36	⇑P	P	05 01 13.2	-1.2
	baz=85,SNR=5.6						
J21A	Lysite	84.67	42	⇓P	P	05 01 14.9	-0.1
	baz=85,SNR=10.0						
E18A	Harlowton	84.69	39	⇑P	P	05 01 14.4	-0.6
	baz=85						
C17A	Wharram Farm,	84.72	37	P	P	05 01 14.8	-0.3
	baz=85,SNR=12						
A16A	West Butte Ran	84.92	36	⇓P	P	05 01 15.8	-0.3
	baz=85						
F19A	Roth Farm, Mol	84.92	39	⇓P	P	05 01 15.8	-0.4
	baz=85						
K22A	Casper	84.95	43	⇑P	P	05 01 15.9	-0.5
	baz=85						
I21A	Big Trails, Te	84.99	42	⇑P	P	05 01 15.8	-0.8
	baz=85						
D18A	Linhart Farms,	85.07	38	⇓P	P	05 01 17.0	+0.1
	baz=85						
P25A	Willow Gulch B	85.18	47	⇑P	P	05 01 17.3	-0.3
	baz=85						
E19A	Rath Farm, Rou	85.31	39	⇓P	P	05 01 17.9	-0.2
	baz=86						
J22A	Midwest	85.33	42	⇓P	P	05 01 18.0	-0.2
	baz=86						
A17A	Triple J Farms	85.42	36	⇑P	P	05 01 18.3	-0.3
	baz=86,SNR=6.7						
B18A	Beardsley Farm	85.68	37	⇑P	P	05 01 19.5	-0.4
	baz=86						
E20A	Meyer Farm, Mu	85.73	39	⇓P	P	05 01 20.1	-0.1
	baz=86						
C19A	Slack Wire Ran	85.78	38	⇑P	P	05 01 20.4	0.0
	baz=86						
D20A	Manuel Ranch,	86.01	39	⇑P	P	05 01 21.5	-0.1
	baz=86						
D21A	La Casta Ranch	86.69	39	⇑P	P	05 01 24.8	-0.1
	baz=87						
A20A	Cobblestone Ra	86.99	37	⇑P	P	05 01 25.7	-0.6
	baz=87						
MAW	Mawson	87.05	199	P	P	05 01 25.9	-0.6
	comp=Z,4.1nm,0.9s,mb4.3,baz=133,slow=7.0,SNR=7.6						
MAW	Mawson	87.05	199	eP	P	05 01 26.2	-0.2
	comp=Z,0.9nm,1.2s,mb3.6						
D22A	Cohagen	87.22	39	⇑P	P	05 01 27.2	-0.2
	baz=87						
B21A	Ellsworth Farm	87.31	38	⇑P	P	05 01 27.3	-0.5
	baz=87						
GYA	Guiyang	87.93	298	eP	P	05 01 33.3	+1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
B23A	Brockton	88.52	38	⇑P	P	05 01 33.3	-0.3
	baz=89						
HHC	Hu-ho-hao-te	89.12	313	eP	P	05 01 38.8	+2.2
HHC				pP	pP	05 02 08.3	+10
HHC				sP	sP	05 02 19.8	+12
HHC				SKS		05 11 57.8	
HHC				S	S	05 12 18.5	-0.4
HHC				sS	sS	05 13 08.5	+12
HHC				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
HHC				pmax	pmax		
	comp=Z,120nm,6.3s						
HHC				LR	LR		
	comp=N,160nm,19.4s						
HHC				LR	LR		
	comp=E,160nm,17.9s						
HHC				LR	LR		
	comp=Z,130nm,18.0s						
YKA	Yellowknife Ar	90.85	24	LR	LR	05 39 05.0	
	comp=Z,7.3nm,18.1s,baz=190,slow=33						
CD2	Chengdu	91.75	302	eP	P	05 01 51.1	+2.0
CD2				pP	pP	05 02 20.3	+9.1
CD2				sP	sP	05 02 32.1	+12
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.2						
CD2				pmax	pmax		
	comp=Z,30nm,5.8s						
SYO	Syowa Base	91.89	191	eP	P	05 01 46.6	-2.5
BRTR	Keskin

az=156.5
*IDC **25** 05:09:50.7±3.2, 30°.63N×84°.01E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.5/25, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=108.5km s-min=30.7km az=75.0*
*NDI **25** 05:10:06.0±2.5, 29°.94N×83°.68E, h10km, ML2.7*
ISC 25 05:09:52.0±0.9, 30°.68N±0°.09×83°.82E±0°.07, h10km, n11, σ0s91/14, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.32**	**251**	*e*P	**Sb**	**05 11 20.0**	**-0.3**
KLP	**Kalpa**	**4.85**	**282**	*e*PKP	**Pb**	**05 11 20.5**	**+3.4**
KLP				*e*S	**Sb**	**05 12 14.4**	**-1.1**
KLP				AML	AML	05 12 14.5	
	comp=N,5.5nm,0.2s						
KLP				AML	AML	05 12 14.6	
	comp=E,7.2nm,0.1s						
DDI	**Dehra Dun**	**4.99**	**267**	*ex*	**Pn**	**05 11 07.5**	**+0.6**
DDI				*e*S	**Sn**	**05 12 13.0**	**+8.4**
NDI	**New Delhi**	**6.08**	**253**	*ex*	**Pb**	**05 11 36.0**	**-2.0**
SONA	**Sohna**	**6.35**	**249**	*ex*	**Pn**	**05 11 25.9**	**+0.2**
SONA				*e*S	**Sn**	**05 12 38.7**	**+0.4**
SONA				AML	AML	05 13 18.8	
	comp=E,14nm,0.3s						
SONA				AML	AML	05 13 19.6	
	comp=N,13nm,0.4s						
KHET	**Khetri**	**7.46**	**252**	*e*S	**Sn**	**05 13 06.6**	**+1.1**
KHET				AML	AML	05 13 23.3	
	comp=N,5.9nm,0.1s						
KHET				AML	AML	05 13 23.5	
	comp=E,4.6nm,0.1s						
MKAR	**Makanchi Array**	**16.14**	**356**	Pn	**Pn**	**05 13 39.0**	**+0.2**
	comp=E,0.1nm,0.3s,baz=175,slow=11,SNR=4.7						
ZALV	**Zalesovo Beam**	**23.27**	**1**	P	**P**	**05 14 59.1**	**-0.5**
	comp=E,0.9nm,0.5s,mb3.5,baz=186,slow=12,SNR=4.5						
SONM	**Songino Array**	**24.34**	**39**	P	**P**	**05 15 09.9**	**+0.1**
	comp=E,0.5nm,0.4s,mb3.3,baz=248,slow=7.6,SNR=2.9						
WRA	**Warramunga Arr**	**69.93**	**129**	P	**P**	**05 21 02.8**	**-0.7**
	comp=E,0.5nm,0.7s,mb3.6,baz=324,slow=6.3,SNR=4.9						
ILAR	**Eielson Array**	**77.01**	**20**	P	**P**	**05 21 45.2**	**+0.6**
	comp=E,0.8nm,0.8s,mb3.7,baz=308,slow=5.4,SNR=9.2						

KRSC 25 05:13:56.3±0.1, 54°.78N×161°.88E, h32km±32km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.24**	**201**	*e*P	Pb	05 14 04.0	+0.8
MKZ				*e*S	Sb	05 14 09.0	+1.2
TUMR	**Tumrok**	**1.12**	**298**	*e*P	Pn	05 14 16.7	+1.0
TUMR				*e*S	Sn	05 14 32.0	+2.1
BZGR	**Bezymyannyi-Gr**	**1.34**	**330**	*e*P	Pn	05 14 20.6	+1.8
BZGR				*e*S	Sn	05 14 38.0	+2.5
KMNR	**Kamenistaya**	**1.36**	**317**	*e*P	Pn	05 14 20.9	+1.9
KMNR				*e*S	Sn	05 14 38.7	+2.9
ZLN	**Zelenaya**	**1.38**	**334**	*e*P	Pn	05 14 21.4	+2.1
ZLN				*e*S	Sn	05 14 39.4	+2.9
BZMR	**Bezymyannaya**	**1.40**	**326**	*e*P	Pn	05 14 21.6	+2.0
BZMR				*e*S	Sn	05 14 39.4	+2.4
BZWR	**Bezymyannyi-We**	**1.43**	**327**	*e*P	Pn	05 14 21.9	+2.0
BZWR				*e*S	Sn	05 14 40.6	+3.1
KIRR	**Kirishev**	**1.47**	**324**	*e*P	Pn	05 14 22.9	+2.4
KIRR				*e*S	Sn	05 14 41.5	+2.9
KBTR	**Krutoberegovo**	**1.53**	**20**	*e*P	Pn	05 14 23.4	+2.1
KBTR				*e*S	Sn	05 14 44.0	+4.0
KII	**Karymskiy**	**1.60**	**243**	*e*P	Pn	05 14 24.0	+1.6
KII				S	Sn	05 14 44.9	+3.0
KRSR	**Krestovskiy**	**1.62**	**333**	*e*P	Pn	05 14 24.0	+1.4
KRSR				*e*S	Sn	05 14 44.7	+2.3
KLY	**Klyuchi**	**1.69**	**336**	*e*P	Pn	05 14 24.9	+1.4
KLY				*e*S	Sn	05 14 45.7	+1.7
KOZ	**Kozyrevsk**	**1.72**	**319**	*e*P	Pn	05 14 26.0	+2.1
KOZ				*e*S	Sn	05 14 47.5	+2.8
SRDR	**Sredinnyy**	**1.97**	**322**	*e*P	Pn	05 14 28.7	+1.3
SRDR				*e*S	Sn	05 14 52.9	+1.9
NLC	**Nalytchevo**	**2.20**	**224**	*e*S	Sn	05 14 58.9	+2.3
AVH	**Avacha**	**2.40**	**232**	*e*P	Pn	05 14 36.2	+3.0
AVH				*e*S	Sn	05 15 05.1	+3.7
GNL	**Ganaly**	**2.55**	**246**	*e*P	Pn	05 14 37.9	+2.5
PET	**Petropavlovsk**	**2.60**	**229**	*e*P	Pn	05 14 38.5	+2.5
PET				*e*S	Sn	05 15 09.4	+3.0

*ISCJB **25** 05:16:51.2±1.4, 41°.26N±0°.06×43°.35E±0°.04, h2km±11km, Error ellipse: s-maj=10.5km s-min=4.1km az=161.1*
*DDA **25** 05:16:53.6, 41°.45N×43°.15E, h7km±4km, Md2.8*
ISC 25 05:16:51.9±0.8, 41°.26N±0°.06×43°.34E±0°.04, h10km±7km, n9, σ0s50/17, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOR	**Gori**	**0.93**	**38**	P	**Sg**	**05 17 22.1**	**+0.3**
ARTV	**Artvin**	**1.06**	**266**	*i* P	**Pg**	**05 17 11.5**	**-0.8**
ARTV				*i* S	**Sg**	**05 17 25.4**	**-0.7**
DAGI	**Agillar**	**1.09**	**261**	*i* P	**Pb**	**05 17 13.4**	**+0.6**
DAGI				*i* S	**Sg**	**05 17 27.7**	**+0.8**
TBLG	**Delisi**	**1.15**	**65**	P	**Pb**	**05 17 13.3**	**-0.6**
TBLG				S	**Sb**	**05 17 28.3**	**-0.6**
MTA	**Mtatsminda**	**1.18**	**68**	P	**Pb**	**05 17 13.9**	**-0.4**
MTA				S	**Sb**	**05 17 29.7**	**+0.1**
DDEM	**Demirkent**	**1.25**	**253**	*i* P	**Pn**	**05 17 15.7**	**+0.3**
DDEM				*i* S	**Sb**	**05 17 31.9**	**+0.2**
DBOC	**Borcka**	**1.26**	**274**	*i* P	**Pn**	**05 17 15.9**	**+0.4**
DBOC				*i* S	**Sb**	**05 17 31.2**	**-0.7**
ONI	**Oni**	**1.33**	**4**	P	**Pn**	**05 17 16.4**	**-0.1**
ONI				S	**Sb**	**05 17 34.5**	**+0.4**
DGRG	**David-gareji**	**1.55**	**82**	P	**Pn**	**05 17 19.8**	**+0.3**
DGRG				S	**Sg**	**05 17 42.0**	**+0.4**

*IDC **25** 05:31:34.7±1.6, 30°.73N×83°.83E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.5/5, ML3.3/1, MS3.2/3, Ms1 3.2/3, ms1mx2.6/28, Error ellipse: s-maj=40.6km s-min=30.8km az=58.0*
*ISCJB **25** 05:31:35.9±0.7, 30°.89N±0°.08×83°.58E±0°.05, h10km, mb3.4/5, MS3.1/2, Error ellipse: s-maj=11.1km s-min=6.0km az=166.4*
*NEIC **25** 05:31:37.8±1.1, 30°.97N×83°.60E, h10km, mb3.8/2, Error ellipse: s-maj=24.1km s-min=11.9km az=223.0*
*NDI **25** 05:31:43.4±1.6, 31°.15N×83°.47E, h10km, mb4.0, mb3.8(NEIC)*
ISC 25 05:31:37.6±0.7, 30°.99N±0°.07×83°.56E±0°.05, h10km, n15, σ1s38/17, mb3.4/5, MS3.1/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.23**	**244**	*e*PKP	**Pb**	**05 32 33.2**	**-1.9**
PTH				*ex*	**Sb**	**05 33 18.0**	**+3.5**
KLP	**Kalpa**	**4.58**	**278**	*e*PKP	**Pg**	**05 33 02.7**	**-2.7**
KLP				*e*S	**Sb**	**05 33 52.3**	**-1.1**
SONA	**Sohna**	**6.27**	**246**	*e*PKP	**Pn**	**05 33 15.8**	**+5.7**
SONA				AMb	AMB	05 33 16.9	
	comp=Z,10nm,0.2s						
SONA				*e*S	**Sn**	**05 34 23.3**	**+1.5**
LSA	**Lhasa**	**6.68**	**99**	*e*Pn	**Pn**	**05 33 16.6**	**+0.8**
KUDL	**Kundal**	**6.78**	**247**	*e*PKP	**Pn**	**05 33 23.1**	**+5.8**
KUDL				AMb	AMB	05 33 29.5	
	comp=Z,5.3nm,1.0s						
KUDL				*e*S	**Sn**	**05 34 34.4**	**-0.1**
KHET	**Khetri**	**7.36**	**249**	*ex*	x	05 35 01.3	
MKAR	**Makanchi Array**	**15.81**	**357**	Pn	**Pn**	**05 35 22.3**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=182,slow=8.3,SNR=8.2						
MKAR				LR	LR	05 42 26.9	
	comp=Z,59nm,18.2s,baz=172,slow=40						
CMAR	**Chiang Mai Arr**	**18.70**	**128**	P	**Pn**	**05 35 55.9**	**-0.8**
	baz=316,slow=12,SNR=5.6						
KURK	**Kurchatov**	**20.05**	**351**	*e*P	**P**	**05 36 09.5**	**-1.2**
	comp=Z,9.3nm,1.1s						
ZALV	**Zalesovo Beam**	**22.96**	**2**	P	**P**	**05 36 42.6**	**+0.6**
	comp=Z,0.7nm,0.5s,mb4.4,baz=202,slow=11,SNR=4.0						
SONM	**Songino Array**	**24.23**	**40**	P	**P**	**05 36 53.9**	**-0.6**
	comp=Z,0.8nm,0.7s,mb3.3,baz=228,slow=11,SNR=4.3						
SONM				LR	LR	05 48 35.3	
	comp=Z,74nm,20.3s,MS3.2,baz=2.9,slow=42						
ABKAR	**Akbulak array**	**25.50**	**322**	*e*P	**P**	**05 37 06.2**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.5						
KSRS	**Korea Array**	**36.98**	**68**	LR	LR	05 55 08.7	
	comp=Z,28nm,18.7s,MS3.1,baz=265,slow=38						
BRTR	**Keskin Array B**	**41.19**	**296**	P	**P**	**05 39 23.6**	**+1.2**
	comp=Z,0.5nm,0.8s,mb3.2,baz=76,slow=6.1,SNR=3.6						
WRA	**Warramunga Arr**	**70.30**	**129**	P	**P**	**05 42 48.2**	**-3.2**

comp=Z,0.3nm,0.6s,mb3.4,baz=328,slow=6.5,SNR=4.1

*CSEM **25** 05:42:08.2±2.5, 38°.66N×36°.07E, h2km, MD2.7, Error ellipse: s-maj=59.1km s-min=15.1km az=137.0*
*ISK **25** 05:42:14.6, 38°.21N×36°.45E, h2km, ML1.8*
DDA 25 05:42:16.1, 38°.18N×36°.44E, h7km±2km, Md2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.50**	**357**	*i* P	Pg	05 42 25.6	-0.1
PINB				*i* S	Sg	05 42 33.9	+1.6
PINB	**Pinarbasi**	**0.50**	**357**	*i* P	Pg	05 42 25.6	-0.1
PINB				*i* S	Sg	05 42 33.9	+1.6
KOZT	**Kozan**	**0.85**	**215**	*e*PG	Pg	05 42 32.3	0.0
KOZT				*e*SG	Sg	05 42 45.3	+1.9
AKCD	**Akcadag**	**1.18**	**84**	*i* P	Pg	05 42 38.1	-0.6
AKCD				*i* S	Sg	05 42 55.3	+1.4
AKCD	**Akcadag**	**1.18**	**84**	*i* P	Pg	05 42 38.1	-0.5
AKCD				*i* S	Sg	05 42 55.3	+1.4
GZT	**Gaziantep**	**1.21**	**132**	*i* P	Pb	05 42 39.2	-0.2
GZT				*i* S	Sg	05 42 56.7	+1.6
MALT	**Malatya**	**1.57**	**84**	*e*PN	Pn	05 42 44.8	+0.4
MALT				*e*SN	Sn	05 43 06.0	+1.0
MALT	**Malatya**	**1.57**	**84**	*e*Pn	Pn	05 42 44.8	+0.4
MALT				*e*Sn	Sn	05 43 06.0	+1.0

*ISCJB **25** 05:53:04.2±1.5, 5°.26S±0°.10×146°.99E±0°.10, h194km±13km, mb4.0/8, Error ellipse: s-maj=19.6km s-min=10.8km az=43.4*
*NEIC **25** 05:53:05.7±1.7, 5°.33S×146°.99E, h197km±16km, mb4.2/2, Error ellipse: s-maj=17.9km s-min=12.7km az=152.0*
*IDC **25** 05:53:09.2±3.0, 5°.46S×147°.00E, h229km±28km, mb3.7/7, mb1 4.0/8, mb1mx3.7/16, mbtmp3.7/8, Error ellipse: s-maj=35.0km s-min=11.7km az=118.0*
ISC 25 05:53:07.1±1.4, 5°.41S±0°.10×147°.0E±0°.1, h207km±13km, n20, σ1s05/22, mb4.0/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.97**	**178**	*e*Pn	**Pn**	**05 54 06.9**	**-1.9**
COEN	**Coen**	**9.29**	**204**	*e*Pn	**Pn**	**05 55 17.8**	**+0.7**
COEN				*e*S	**Sn**	**05 57 02.2**	**+0.8**
HNR	**Honiara**	**13.45**	**108**	*e*Pn	**Pn**	**05 56 09.3**	**-0.7**
CTAO	**Charters Tower**	**14.61**	**183**	*e*Pn	**Pn**	**05 56 25.0**	**+0.7**
KAKA	**Kakadu**	**16.09**	**242**	*e*P	**P**	**05 56 41.3**	**-0.4**
	27nm,0.6s						
KAKA	**Kakadu**	**16.09**	**242**	*e*P	**P**	**05 56 41.3**	**-0.4**
WRA	**Warramunga Arr**	**18.98**	**219**	P	**P**	**05 57 13.1**	**0.0**
	3.9nm,0.3s,baz=38,slow=12,SNR=136						
WRA				S	**S**	**06 00 35.1**	**-2.6**
	0.3nm,0.3s,baz=34,slow=20,SNR=5.7						
WRA				PcP	PcP	06 01 29.5	0.0
	0.1nm,0.3s,baz=22,slow=1.7,SNR=5.0						
EIDS	**Eidsvold**	**20.23**	**169**	P	**P**	**05 57 28.3**	**+1.8**
	3.4nm,0.6s						
ASAR	**Alice Springs**	**22.10**	**214**	P	**P**	**05 57 46.4**	**+0.7**
	5.3nm,0.4s,mb4.4,baz=47,slow=8.6,SNR=54						
ASAR				S	**S**	**06 01 34.5**	**+0.3**
	4.8nm,1.0s,baz=30,slow=18,SNR=6.9						
ASAR	**Alice Springs**	**22.10**	**214**	P	**P**	**05 57 46.4**	**+0.7**
ASAR				S	**S**	**06 01 34.5**	**+0.3**
FITZ	**Fitzroy Crossi**	**24.38**	**237**	P	**P**	**05 58 06.8**	**+0.3**
	11nm,0.5s,mb4.7,baz=49,slow=9.9,SNR=53						
FITZ	**Fitzroy Crossi**	**24.38**	**237**	*e*P	**P**	**05 58 06.6**	**+0.1**
	20nm,0.5s,mb5.0						
ARMA	**Armidale**	**25.26**	**171**	*e*P	**P**	**05 58 13.8**	**-0.5**
	12nm,1.2s,mb4.4						
STKA	**Stephens Creek**	**26.81**	**190**	P	**P**	**05 58 28.4**	**+0.2**
	1.5nm,0.7s,mb3.7,baz=13,slow=14,SNR=1.9						
STKA	**Stephens Creek**	**26.81**	**190**	*e*P	Px	05 58 40.4	
	6.8nm,0.9s						
SONM	**Songino Array**	**63.89**	**331**	P	**P**	**06 03 18.7**	**+1.0**
	0.9nm,0.7s,mb3.5,baz=157,slow=5.5,SNR=3.6						
MAW	**Mawson**	**82.79**	**203**	P	**P**	**06 05 06.8**	**-0.8**
	0.9nm,0.7s,mb3.6,baz=99,slow=5.8,SNR=6.4						
ILAR	**Eielson Array**	**84.94**	**23**	P	**P**	**06 05 17.0**	**-1.5**
	0.8nm,0.6s,mb3.6,baz=251,slow=5.0,SNR=16						
NVAR	**Mina Array Bea**	**97.01**	**52**	P	**P**	**06 06 16.6**	**+1.1**
	0.6nm,0.6s,mb4.0,baz=258,slow=4.5,SNR=5.5						
TORD	**Torodi Ar. Bea**	**144.94**	**285**	PKP	PKPdf	06 12 19.0	-1.6
	0.8nm,0.6s,baz=80,slow=4.2,SNR=1.7						

*NEIC **25** 05:55:23.3, 16°.66N×99°.72W, h6km, MD3.8(MEX), After MEX.*
MEX 25 05:55:23.3±0.9, 16°.66N×99°.72W, h6km±5km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.25**	**329**	*e*P	Pg	05 55 28.7	+0.6
ACX				*i* S	Sg	05 55 32.2	+0.8
ACX	**Acapulco**	**0.25**	**329**	*e*P	Pg	05 55 28.7	+0.6
ACX				*i* S	Sg	05 55 32.2	+0.8
CAIG	**El Cayaco**	**0.65**	**307**	*e*P	Pg	05 55 35.0	-0.8
CAIG				*e*S	Sg	05 55 43.8	-0.5
CAIG	**El Cayaco**	**0.65**	**307**	*e*P	Pg	05 55 35.0	-0.8
CAIG				*e*S	Sg	05 55 43.8	-0.5
MEIG	**Mezcala**	**1.27**	**5**	*e*P	Pn	05 55 43.2	-4.3
MEIG				*i* S	Sg	05 55 58.8	-5.2
PNIG	**Pinotepa**	**1.55**	**100**	*e*P	Pn	05 55 48.1	-3.4
PNIG				*i* S	Sn	05 56 05.5	-6.5
PNIG	**Pinotepa**	**1.55**	**100**	*e*P	Pn	05 55 48.1	-3.4
PNIG				*i* S	Sn	05 56 05.5	-6.5
PLIG	**Platanillo**	**1.74**	**7**	*e*P	Pn	05 55 51.0	-3.0
PLIG				*i* S	Sn	05 56 12.5	-4.1
PLIG	**Platanillo**	**1.74**	**7**	*e*P	Pn	05 55 51.0	-3.0
PLIG				*i* S	Sn	05 56 12.5	-4.1
ZIIG	**Zihuatanejo**	**1.91**	**300**	*e*P	Pn	05 55 54.3	-2.2
ZIIG				*e*S	Sn	05 56 16.9	-3.9
ZIIG	**Zihuatanejo**	**1.91**	**300**	*e*P	Pn	05 55 54.3	-2.2
ZIIG				*e*S	Sn	05 56 16.9	-3.9
UTMO	**Huajuapan**	**2.17**	**57**	*i* P	Pn	05 55 56.7	-3.4
UTMO				*i* S	Sn	05 56 24.5	-2.8
YAIG	**Yautepec**	**2.28**	**16**	*i* P	Pn	05 55 57.1	-4.4
YAIG				*i* S	Sn	05 56 27.6	-2.3
YAIG	**Yautepec**	**2.28**	**16**	*i* P	Pn	05 55 57.1	-4.4
YAIG				*i* S	Sn	05 56 27.6	-2.3
VHO	**Vista Hermosa**	**2.89**	**81**	*e*P	Pn	05 56 07.4	-2.5
VHO				*i* S	Sn	05 56 42.6	-2.4
VHO	**Vista Hermosa**	**2.89**	**81**	*e*P	Pn	05 56 07.4	-2.5
VHO				*i* S	Sn	05 56 42.6	-2.4

*NIED **25** 06:04:00, 38°.90N×140°.90E, h5km, Mw4.2 Best double couple: M0=2.15000×10^15 NP1:φs=7.00000°, δ56.00000°, λ80.00000°. NP2:φs=205.00000°, δ36.00000°, λ105.00000°.*
*BJI **25** 06:04:55.9, 38°.27N×140°.92E, h35km, mB4.7/1, mb4.4/4*
*IDC **25** 06:04:55.8±0.5, 38°.88N×140°.76E, h0km, mb4.2/21, mb1 4.4/22, mb1mx4.3/28, mbtmp4.2/22, ML3.7/2, MS3.4/3, Ms1 3.4/3, ms1mx2.7/38, Error ellipse: s-maj=15.9km s-min=10.4km az=112.0*
*ISCJB **25** 06:04:57.3±0.4, 38°.87N±0°.03×140°.88E±0°.04, h20km±3km, mb4.2/27, Error ellipse: s-maj=5.3km s-min=3.8km az=35.9*
*NEIC **25** 06:04:57.6, 38°.88N×140°.86E, h6km, MG4.2(JMA), After JMA.*
NEIC Recorded [3 JMA] in Iwate and Miyagi; [1 JMA] in Akita and Yamagata.
*JMA **25** 06:04:57.6, 38°.87N×140°.86E, h6km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs=218.00000°, δ39.00000°, λ114.00000°. NP2:φs=8.00000°, δ55.00000°, λ72.00000°. Principal axes: T Plg73.0000°, Azm228.0000°; N Plg15.0000°, Azm19.0000°; P Plg8.0000°, Azm111.0000°;*
JMA Felt III J1.
*MOS **25** 06:04:59.5±1.2, 38°.85N×140°.75E, h33km, mb4.3/14 Error ellipse: s-maj=13.3km s-min=8.8km az=79.2*
ISC 25 06:04:57.4±0.4, 38°.86N±0°.02×140°.85E±0°.03, h7km±3km, n72, σ0s92/82, mb4.2/27, 11C-7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.30**	**73**	⇓P	**Pg**	**06 05 03.1**	**-0.2**
JMK				S	**Sg**	**06 05 07.2**	**-0.1**
JYK	**Kaneyama**	**0.39**	**278**	⇓P	**Pg**	**06 05 05.3**	**+0.3**
JYK				S	**Sg**	**06 05 10.5**	**+0.4**
JOU	**Okura**	**0.52**	**197**	⇑P	**Pg**	**06 05 07.7**	**+0.3**
JOU				S	**Sg**	**06 05 14.8**	**+0.7**
JIO	**Ouri**	**0.56**	**136**	⇓P	**Pg**	**06 05 08.0**	**-0.3**
JIO				S	**Sg**	**06 05 15.9**	**+0.3**
JOM	**Ohasama**	**0.70**	**29**	⇑P	**Pg**	**06 05 10.3**	**-0.6**
JOM				S	**Sg**	**06 05 19.7**	**-0.3**
JYS	**Shiratake**	**0.89**	**224**	⇑P	**Pg**	**06 05 14.5**	**0.0**
JYS				S	**Sg**	**06 05 26.6**	**+0.6**
JYA	**Atsumi**	**0.93**	**254**	⇓P	**Pg**	**06 05 15.2**	**0.0**
JMM	**Marumori**	**0.99**	**183**	⇑P	**Pg**	**06 05 15.6**	**-0.9**
JMM				S	**Sg**	**06 05 29.2**	**-0.2**
MJAR	**Matsushiro Arr**	**3.12**	**223**	Pn	**Pn**	**06 05 47.6**	**+0.7**
	2.9nm,0.3s,baz=44,slow=16,SNR=16						
MJAR				Pg	**Pg**	**06 05 51.7**	**-5.5**
	5.4nm,0.3s,baz=28,slow=10.0,SNR=26						
MJAR				Lg		06 06 32.6	
	6.4nm,0.3s,baz=35,slow=26,SNR=6.8						
MJAR	**Matsushiro Arr**	**3.12**	**223**	P	**Pn**	**06 05 47.6**	**+0.6**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MAJO	**Matsushiro**	**3.12**	**223**	*e*Pn	**Pn**	**06 05 48.0**	**+1.0**
MAJO				*e*Sg	**Sg**	**06 06 35.4**	**-2.4**
MAJO	**Matsushiro**	**3.12**	**223**	*e*P	**Pn**	**06 05 48.0**	**+1.0**
MAT	**Matsushiro**	**3.12**	**223**	P	**Pn**	**06 05 47.5**	**+0.5**
MAT				*e*S	**Sn**	**06 06 29.9**	**+5.4**
ERM	**Erimo**	**3.61**	**28**	*e*Pn	**Pn**	**06 05 55.0**	**+1.4**
ERM				*e*Sn	**Sn**	**06 06 38.8**	**+2.4**
ERM	**Erimo**	**3.61**	**28**	*c i* P	**Pn**	**06 05 55.6**	**+2.0**
ASAJ	**Asahikawa**	**5.41**	**13**	Pn	**Pn**	**06 06 22.9**	**+4.5**
	comp=Z,2.6nm,0.3s,baz=222,slow=15,SNR=4.8						
ASAJ				Sn	**Sn**	**06 07 26.9**	**+6.1**
	comp=Z,1.2nm,0.3s,baz=37,slow=20,SNR=2.5						
ASAJ	**Asahikawa**	**5.41**	**13**	P	**Pn**	**06 06 22.9**	**+4.5**
ASAJ						06 07 26.9	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
JHJ	**Hachijo jima 2**	**5.80**	**189**	Pn	**Pn**	**06 06 25.2**	**+1.6**
	comp=N,19nm,0.3s,baz=94,slow=16,SNR=3.4						
JHJ				Sn	**Sn**	**06 07 31.0**	**+0.6**
	comp=N,18nm,0.3s,baz=66,slow=19,SNR=2.9						
YUK	**Yuzh-Kuril'sk**	**6.39**	**34**	*i* S	**Sn**	**06 07 41.3**	**-3.7**
YUK				pmax	pmax		
	comp=N,90nm,0.3s						
YUK				pmax	pmax		
	comp=E,60nm,0.3s						
YUK				pmax	pmax		
	comp=Z,220nm,0.3s						
YUK				smax			
	comp=N,180nm,0.5s						
YUK				smax			
	comp=E,240nm,0.5s						
KSRS	**Korea Array**	**10.28**	**266**	Pn	**Pn**	**06 07 28.4**	**+3.2**
	comp=E,0.9nm,0.3s,baz=81,slow=14,SNR=16						
KSRS				Sn	**Sn**	**06 09 24.2**	**+3.6**
	comp=E,0.7nm,0.3s,baz=76,slow=24,SNR=5.2						
KSRS				LR	LR	06 10 35.8	
	comp=E,72nm,20.4s,baz=344,slow=33						
KSRS	**Korea Array**	**10.28**	**266**	P	**Pn**	**06 07 28.4**	**+3.2**
KSRS						06 09 24.2	
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
JOW	**Kunigami**	**15.97**	**225**	LR	LR	06 14 53.2	
	comp=N,1μm,21.6s,baz=171,slow=38						
PETK	**Petropavlovsk-**	**18.37**	**34**	LR	LR	06 16 45.3	
	comp=N,40nm,19.9s,baz=12,slow=39						
SEY	**Seymchan**	**25.09**	**12**	*c e*P	**P**	**06 10 24.3**	**+2.0**
SONM	**Songino Array**	**26.43**	**301**	P	**P**	**06 10 33.5**	**-1.0**
	comp=N,0.4nm,0.4s,mb3.3,baz=82,slow=10,SNR=2.7						
SONM	**Songino Array**	**26.43**	**301**	P	**P**	**06 10 33.5**	**-1.0**
BILL	**Bilibino**	**32.41**	**18**	⇓*e*P	**P**	**06 11 27.9**	**+0.5**
BILL				*e*		06 12 34.0	
BILL				*e*S	**S**	**06 16 36.4**	**-5.3**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
ZALV	**Zalesovo Beam**	**40.37**	**311**	PcP	PcP	06 14 38.0	-0.6
	comp=Z,1.1nm,0.5s,baz=72,slow=3.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**41.57**	**253**	P	**P**	**06 12 45.4**	**-0.3**
	comp=Z,0.9nm,0.5s,mb3.7,baz=42,slow=5.4,SNR=3.9						
CMAR	**Chiang Mai Arr**	**41.57**	**253**	P	**P**	**06 12 45.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**41.57**	**253**	P	**P**	**06 12 45.4**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**42.79**	**300**	P	**P**	**06 12 55.5**	**+0.1**
	comp=Z,1.0nm,0.8s,mb3.6,baz=70,slow=8.4,SNR=4.5						
MKAR	**Makanchi Array**	**42.79**	**300**	*c e*P	**P**	**06 12 57.4**	**+2.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**44.47**	**307**	*d i* P	**P**	**06 13 08.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
KDAK	**Kodiak Island**	**46.05**	**43**	P	**P**	**06 13 21.2**	**-0.2**
	comp=Z,2.1nm,0.4s,mb4.4,baz=280,slow=1.3,SNR=8.0						
KDAK	**Kodiak Island**	**46.05**	**43**	*c e*P	**P**	**

NOA	**NORSAR Array B**	**72.33 337**	P	**P**		**06 16 22.1**	**-1.2**
NOA			pmax	pmax			
comp=Z,3.0nm,1.0s							
AKASG	**Malin Array Be**	**72.59 322**	P	**P**		**06 16 23.9**	**-1.1**
comp=Z,1.0nm,0.3s,mb4.2,baz=44,slow=6.8,SNR=6.4							
AKASG	**Malin Array Be**	**72.59 322**	*ce*P	**P**		**06 16 23.8**	**-1.2**
AKASG			pmax	pmax			
comp=Z,1.0nm,0.3s							
NVAR	**Mina Array Bea**	**74.25 53**	P	**P**		**06 16 35.9**	**+0.9**
comp=Z,1.9nm,0.7s,mb4.1,baz=286,slow=5.6,SNR=19							
PDAR	**Pinedale Array**	**76.70 45**	P	**P**		**06 16 49.1**	**+0.1**
comp=Z,1.4nm,0.6s,mb4.0,baz=294,slow=1.8,SNR=14							
BRTR	**Keskin Array B**	**77.31 311**	P	**P**		**06 16 51.6**	**-0.9**
comp=Z,0.7nm,0.5s,mb3.8,baz=54,slow=6.3,SNR=4.6							
BRTR	**Keskin Array B**	**77.31 311**	*ce*P	**P**		**06 16 52.4**	**-0.1**
BRTR			pmax	pmax			
comp=Z,1.0nm,0.5s							
GERES	**GERESS Array B**	**80.93 328**	P	**P**		**06 17 12.0**	**-0.1**
comp=Z,0.6nm,0.6s,mb3.7,baz=30,slow=8.0,SNR=3.6							
GERES	**GERESS Array B**	**80.93 328**	P	**P**		**06 17 12.0**	**-0.1**
GERES			pmax	pmax			
comp=Z,1.0nm,0.6s							
TXAR	**Lajitas Array**	**89.35 52**	P	**P**		**06 17 54.9**	**+0.2**
comp=Z,0.5nm,0.6s,mb4.0,baz=292,slow=4.1,SNR=9.9							
TXAR	**Lajitas Array**	**89.35 52**	P	**P**		**06 17 54.9**	**+0.2**
TXAR			pmax	pmax			
comp=Z,1.0nm,0.6s							
QSPA	**South Pole Qui**	**128.60 180**	PKP	PKPdf		06 24 02.6	-1.0
comp=Z,0.5nm,0.5s,baz=276,slow=5.0,SNR=9.4							
LPAZ	**La Paz**	**146.10 57**	PKPbc	PKPbc		06 24 38.8	+0.3
comp=Z,2.6nm,0.5s,baz=356,slow=3.1,SNR=13							

IDC 25 06:05:57.6±6.4, 8°.64S×129°.18E, h195km±66km, mb3.5/2, mb1 3.6/5, mb1mx3.4/16, mbtmp3.5/5, MS4.1/1, Ms1 4.1/1, ms1mx2.7/19, Error ellipse: s-maj=57.7km s-min=26.6km az=48.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.02**	**200**	P	Pn	06 08 17.5	+0.3
baz=18,slow=12							
FITZ				S	Sn	06 10 09.1	+0.1
4.4nm,0.3s,baz=155,slow=19,SNR=9.2							
WRA	**Warramunga Arr**	**12.30**	**157**	P	Pn	06 08 46.2	-0.2
1.9nm,0.3s,baz=334,slow=13,SNR=63							
WRA				S	Sn	06 11 01.6	-1.8
3.6nm,0.3s,baz=330,slow=22,SNR=11							
ASAR	**Alice Springs**	**15.61**	**164**	P	Pn	06 09 29.3	+1.8
0.7nm,0.3s,baz=344,slow=10,SNR=26							
ASAR				S	S	06 12 22.6	+1.8
1.0nm,0.3s,baz=349,slow=25,SNR=9.2							
STKA	**Stephens Creek**	**25.84**	**155**	P	P	06 11 11.0	-0.2
2.9nm,0.9s,baz=324,slow=17,SNR=2.9							
JHJ	**Hachijo jima 2**	**42.73**	**13**	LR	LR	06 30 00.9	
comp=Z,253nm,19.2s,baz=115,slow=34							
MKAR	**Makanchi Array**	**69.15**	**328**	P	P	06 16 42.9	0.0
0.6nm,0.5s,baz=118,slow=7.9,SNR=8.3							

IDC 25 06:08:31.7±3.5, 22°.75S×66°.26W, h243km±25km, mb2.9/2, mb1 3.4/5, mb1mx3.3/16, mbtmp3.1/5, Error ellipse: s-maj=49.6km s-min=16.8km az=33.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.67**	**344**	P	Pn	06 10 09.3	+1.1
3.0nm,0.3s,baz=174,slow=11,SNR=108							
LPAZ				S	S	06 11 26.2	+0.7
0.3nm,0.3s,baz=284,slow=15,SNR=5.0							
CPUP	**Villa Florida**	**8.88**	**115**	P	Pn	06 10 35.7	-0.4
0.2nm,0.3s,baz=276,slow=9.2,SNR=3.4							
BDFB	**Brasilia**	**18.62**	**71**	P	P	06 12 32.7	+1.1
0.9nm,0.3s,baz=241,slow=13,SNR=12							
TXAR	**Lajitas Array**	**63.07**	**323**	P	P	06 18 33.5	+0.1
0.2nm,0.5s,baz=152,slow=6.7,SNR=7.9							
TORD	**Torodi Ar. Bea**	**75.49**	**69**	P	P	06 19 48.7	-1.0
0.8nm,0.5s,baz=260,slow=6.1,SNR=3.5							
PDAR	**Pinedale Array**	**76.43**	**329**	P	P	06 19 54.9	+0.4
0.3nm,0.5s,baz=146,slow=5.5,SNR=3.4							
MKAR	**Makanchi Array**	**145.13**	**39**	PKPbc	PKPbc	06 27 40.5	+0.4
0.5nm,0.5s,baz=338,slow=3.1,SNR=6.2							

*NEIC **25** 06:13:09.6, 16°.54N×100°.26W, h5km, MD3.5(MEX), After MEX.*

MEX 25 06:13:09.4±1.0, 16°.53N×100°.24W, h3km±9km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.50**	**48**	*e*P	Pg	06 13 17.6	-1.4
ACX				*i* S	Sg	06 13 24.1	-1.3
ACX	**Acapulco**	**0.50**	**48**	*e*P	Pg	06 13 17.6	-1.4
ACX				*i* S	Sg	06 13 24.1	-1.3
CAIG	**El Cayaco**	**0.51**	**357**	*e*P	Pg	06 13 19.0	-0.3
CAIG				*i* S	Sg	06 13 27.2	+1.3
CAIG	**El Cayaco**	**0.51**	**357**	*e*P	Pg	06 13 19.0	-0.3
CAIG				*i* S	Sg	06 13 27.2	+1.3
MEIG	**Mezcala**	**1.51**	**23**	*e*P	Pn	06 13 33.3	-4.0
MEIG				*i* S	Sn	06 13 52.6	-4.9
ZIIG	**Zihuatanejo**	**1.58**	**313**	*e*P	Pn	06 13 34.5	-3.9
ZIIG				*i* S	Sn	06 13 53.9	-5.4
ZIIG	**Zihuatanejo**	**1.58**	**313**	*e*P	Pn	06 13 34.5	-3.9
ZIIG				*i* S	Sn	06 13 53.9	-5.4
PLIG	**Platanillo**	**1.98**	**21**	*i* P	Pn	06 13 40.6	-3.1
PLIG				*i* S	Sn	06 14 03.1	-6.0
PLIG	**Platanillo**	**1.98**	**21**	*i* P	Pn	06 13 40.6	-3.1
PLIG				*i* S	Sn	06 14 03.1	-6.0
PNIG	**Pinotepa**	**2.03**	**94**	*i* P	Pn	06 13 43.0	-1.5
PNIG				*i* S	Sn	06 14 07.9	-2.5
PNIG	**Pinotepa**	**2.03**	**94**	*i* P	Pn	06 13 43.0	-1.5
PNIG				*i* S	Sn	06 14 07.9	-2.5
UTMO	**Huajuapan**	**2.66**	**61**	*i* P	Pn	06 13 51.3	-1.9
UTMO				*i* S	Sn	06 14 23.6	-2.4
VHO	**Vista Hermosa**	**3.40**	**80**	*i* P	Pn	06 14 05.7	+2.3
VHO	**Vista Hermosa**	**3.40**	**80**	*i* P	Pn	06 14 05.7	+2.3

IGQ 25 06:13:27.3, 1°.79N×79°.43W, h12km±10km, Mb4.0, Ms3.8, 7C-5D, Error ellipse: s-maj=10.6km s-min=5.4km az=13.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLV	**Golondrinas**	**1.60**	**170**	S	Sn	06 14 18.4	+2.4
GOLV	**Golondrinas**	**1.60**	**170**	P	Pn	06 14 55.3	-0.1
COTA	**Cotacachi**	**1.81**	**143**	⇑P	Pn	06 14 00.2	+1.9
YANA	**Yana**	**2.08**	**156**	S	Sn	06 14 33.3	+5.4
YANA	**Yana**	**2.08**	**156**	P	Pn	06 14 03.9	+1.9
TERV	**Terraza Guagua**	**2.12**	**157**	P	Pn	06 14 04.9	+2.3
GGP	**Refugio Guagua**	**2.12**	**157**	⇓S	Sn	06 14 33.8	+4.8
GGP	**Refugio Guagua**	**2.12**	**157**	⇓P	Pn	06 14 04.6	+2.0
JUA2	**San Juan 2**	**2.15**	**158**	P	Pn	06 14 05.0	+2.0
CAYA	**Cayambe**	**2.23**	**140**	⇑S	Sn	06 14 38.9	+7.2
CAYA	**Cayambe**	**2.23**	**140**	⇑P	Pn	06 14 07.7	+3.6
CAYR	**Refugio Cayamb**	**2.27**	**141**	P	Pn	06 14 08.3	+3.8
PITA	**Cotopaxi Volc**	**2.54**	**157**	P	Pn	06 14 11.6	+3.3
ANTI	**Antisana**	**2.56**	**150**	⇑P	Pn	06 14 12.3	+3.7
CHAR	**Charly**	**2.56**	**137**	P	Pn	06 14 14.0	+5.4
CAMI	**Rancho Maria**	**2.62**	**159**	P	Pn	06 14 13.2	+3.8
VC1	**Cotopaxi 1**	**2.62**	**157**	⇓P	Pn	06 14 13.2	+3.7
BREF	**Cotopaxi Volca**	**2.64**	**158**	⇑P	Pn	06 14 13.7	+4.0
BVC2	**Cotopaxi Volca**	**2.64**	**157**	⇑P	Pn	06 14 13.6	+3.9
BTAM	**Cotopaxi Volca**	**2.66**	**157**	⇑P	Pn	06 14 13.8	+3.9
COV1	**Cotopaxi Volc**	**2.67**	**156**	⇓S	Sn	06 14 48.7	+6.3
COV1	**Cotopaxi Volc**	**2.67**	**156**	⇓P	Pn	06 14 13.7	+3.6
MOV1	**Cotopaxi Vol s**	**2.68**	**158**	P	Pn	06 14 14.1	+3.8
BMOR	**Cotopaxi Volca**	**2.69**	**159**	P	Pn	06 14 13.9	+3.5
TAMB	**Tambo**	**2.69**	**157**	P	Pn	06 14 14.3	+3.9
IGUA	**Igualata**	**3.35**	**166**	P	Pn	06 14 23.2	+3.7
BULB	**Ulba Tungurahu**	**3.36**	**162**	P	Pn	06 14 23.6	+3.9
ARRY	**Arrayan**	**3.42**	**163**	P	Pn	06 14 23.7	+3.3
PAT1	**Patacocha**	**3.42**	**163**	P	Pn	06 14 24.1	+3.6

IDC 25 06:18:35.8±6.4, 28°.69S×177°.91W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.7/15, mbtmp3.9/2, Error ellipse: s-maj=322.2km s-min=94.1km az=164.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.41**	**202**	Sn	Sn	06 22 41.5	-22
0.3nm,0.3s,baz=75,slow=20,SNR=4.8							
ASAR	**Alice Springs**	**43.31**	**265**	P	P	06 26 39.2	-0.4
1.2nm,0.8s,baz=101,slow=8.5,SNR=10.0							
WRA	**Warramunga Arr**	**44.14**	**270**	P	P	06 26 46.6	+0.3
2.1nm,0.9s,baz=109,slow=8.1,SNR=8.0							
FINES	**FINESS Array B**	**143.57**	**341**	PKP	PKPdf	06 38 11.3	-0.5
0.5nm,0.3s,baz=35,slow=5.1,SNR=2.7							

*MOS **25** 06:22:56.6±1.2, 49°.33N×156°.23E, h43km, mb4.5/4, Error ellipse: s-maj=32.5km s-min=10.3km az=70.2*
*KRSC **25** 06:22:56.7±0.4, 49°.38N×156°.41E, h53km±52km, ML4.7*
*ISCJB **25** 06:22:57.1±1.3, 49°.37N±0°.08×156°.1E±0°.1, h45km±14km, mb3.7/7, MS3.2/2, Error ellipse: s-maj=20.2km s-min=7.5km az=39.5*
*IDC **25** 06:22:59.2±0.8, 49°.35N×156°.13E, h48km±8km, mb3.4/7, mb1 3.9/9, mb1mx3.5/26, mbtmp3.6/9, ML3.7/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/31, Error ellipse: s-maj=30.2km s-min=11.8km az=118.0*
*NEIC **25** 06:22:59.0±0.5, 49°.37N×156°.07E, Error ellipse: s-maj=20.6km s-min=7.6km az=122.0*

ISC 25 06:22:59.3±1.1, 49°.40N±0°.08×156°.1E±0°.1, h47km±13km, h50km±2.9km: pP-P, n34, σ1°.06/42, mb3.7/7, MS3.2/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.28**	**1**	*e*PN	**Pn**	**06 23 19.0**	**-1.8**
SKR				*i* S	**Sn**	**06 23 34.0**	**-2.7**
SKR				pmax	pmax		
comp=Z,220nm,0.3s							
SKR				smax			
comp=N,4μm,0.3s							
SKR				smax			
comp=E,2μm,0.5s							
ALID	**Alaid**	**1.50**	**347**	*e*P	**Pn**	**06 23 23.3**	**-0.5**
ALID				*i* S	**Sn**	**06 23 41.9**	**-0.3**
GRL	**Gorelyy**	**3.40**	**21**	*e*P	**Pn**	**06 23 49.7**	**0.0**
GRL				*i* S	**Sn**	**06 24 29.6**	**+0.9**
PEA0B	**Petropavlovsk-**	**3.85**	**15**	*e*Pn	**Pn**	**06 23 56.6**	**+0.7**
PETK	**Petropavlovsk-**	**3.85**	**15**	P	**Pn**	**06 23 56.1**	**+0.2**
comp=E,3.5nm,0.3s,baz=180,slow=12,SNR=50							
PETK				S	**Sn**	**06 24 40.8**	**+1.0**
comp=E,2.5nm,0.3s,baz=161,slow=23,SNR=3.8							
PETK	**Petropavlovsk-**	**3.85**	**15**	PN	**Pn**	**06 23 56.1**	**+0.2**
PETK				S	**Sn**	**06 24 40.8**	**+1.0**
PETK				pmax	pmax		
comp=Z,4.0nm,0.3s							
PETK				smax			
comp=N,3.0nm,0.3s							
PET	**Petropavlovsk**	**3.97**	**23**	*e*P	**Pn**	**06 23 57.8**	**+0.2**
PET				*i* S	**Sn**	**06 24 42.7**	**-0.1**
PET	**Petropavlovsk**	**3.97**	**23**	*e*Pn	**Pn**	**06 23 57.6**	**0.0**
PET				*e*Sn	**Sn**	**06 24 42.9**	**+0.1**
PET	**Petropavlovsk**	**3.97**	**23**	*e*PN	**Pn**	**06 23 57.7**	**+0.1**
PET				*e*S	**Sn**	**06 24 44.0**	**+1.2**
PET				smax			
comp=N,124nm,0.7s							
PET				smax			
comp=E,173nm,0.9s							
AVH	**Avacha**	**4.21**	**22**	*e*P	**Pn**	**06 24 02.6**	**+1.7**
AVH				*i* S	**Sn**	**06 24 49.3**	**+0.5**
GNL	**Ganaly**	**4.45**	**14**	*e*P	**Pn**	**06 24 06.0**	**+1.8**
SPN	**Mys Shipunski**	**4.45**	**32**	*e*P	**Pn**	**06 24 03.9**	**-0.3**
SPN				*i* S	**Sn**	**06 24 51.7**	**-3.0**
SPN	**Mys Shipunski**	**4.45**	**32**	PN	**Pn**	**06 24 03.9**	**-0.3**
KBTR	**Krutoberegovo**	**7.94**	**28**	*e*P	**Pn**	**06 24 50.6**	**-1.4**
KBTR	**Krutoberegovo**	**7.94**	**28**	PN	**Pn**	**06 24 50.6**	**-1.4**
ASAJ	**Asahikawa**	**10.65**	**245**	P	**Pn**	**06 25 30.1**	**+1.1**
comp=E,0.7nm,0.3s,baz=72,slow=20,SNR=2.2							
ASAJ	**Asahikawa**	**10.65**	**245**	PN	**Pn**	**06 25 30.2**	**+1.1**
ASAJ				pmax	pmax		
comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**11.66**	**236**	*e*Pn	**Pn**	**06 25 42.2**	**-0.7**
ERM	**Erimo**	**11.66**	**236**	*e*PN	**Pn**	**06 25 42.2**	**-0.7**
KSRS	**Korea Array**	**23.53**	**250**	P	**P**	**06 28 06.4**	**+1.3**
comp=Z,0.7nm,0.5s,mb3.4,baz=42,slow=12,SNR=3.7							
KSRS	**Korea Array**	**23.53**	**250**	P	**P**	**06 28 06.4**	**+1.2**
KSRS				pmax	pmax		
comp=Z,1.0nm,0.5s,mb3.5							
ILAR	**Eielson Array**	**33.24**	**41**	P	**P**	**06 29 30.6**	**-0.9**
comp=Z,0.7nm,0.7s,mb3.7,baz=258,slow=6.6,SNR=13							
ILAR	**Eielson Array**	**33.24**	**41**	P	**P**	**06 29 30.6**	**-0.9**
ILAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**42.71**	**304**	LR	LR	06 51 15.0	
comp=Z,17nm,18.4s,MS3.0,baz=338,slow=40							
MKAR	**Makanchi Array**	**47.51**	**297**	LR	LR	06 52 12.3	
comp=Z,39nm,18.9s,MS3.4,baz=353,slow=37							
NVAR	**Mina Array Bea**	**59.48**	**65**	P	**P**	**06 32 57.4**	**0.0**
comp=Z,0.6nm,0.8s,mb3.7,baz=315,slow=7.3,SNR=5.4							
PDAR	**Pinedale Array**	**61.60**	**57**	P	**P**	**06 33 12.1**	**+0.4**
comp=Z,0.8nm,0.9s,mb3.9,baz=339,slow=3.8,SNR=5.4							
PDAR				pP	pP	06 33 27.0	+2.1
comp=Z,0.4nm,0.8s,baz=356,slow=4.8,SNR=3.6							
WRA	**Warramunga Arr**	**71.69**	**202**	P	**P**	**06 34 14.8**	**-1.3**
comp=Z,0.7nm,0.9s,mb3.6,baz=17,slow=6.2,SNR=3.5							
WRA				pP	pP	06 34 28.2	-1.4
comp=Z,0.4nm,0.6s,baz=16,slow=5.8,SNR=2.5							
WRA	**Warramunga Arr**	**71.69**	**202**	P	**P**	**06 34 14.8**	**-1.3**
WRA				pP	pP	06 34 28.2	-1.4
WRA	**Warramunga Arr**	**71.69**	**202**	P	**P**	**06 34 14.8**	**-1.3**
WRA				*PP	pP	06 34 28.2	-1.4
WRA				pmax	pmax		
comp=Z,1.0nm,0.9s							
TXAR	**Lajitas Array**	**74.49**	**63**	P	**P**	**06 34 32.8**	**0.0**
comp=Z,1.0nm,0.8s,mb3.8,baz=311,slow=4.9,SNR=13							
TXAR	**Lajitas Array**	**74.49**	**63**	P	**P**	**06 34 32.8**	**0.0**
TXAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**75.38**	**201**	P	**P**	**06 34 37.6**	**0.0**
comp=Z,0.2nm,0.3s,mb3.6,baz=13,slow=4.9,SNR=3.8							
ASAR				pP	pP	06 34 50.8	-0.5
comp=Z,0.4nm,0.7s,baz=19,slow=6.1,SNR=3.3							
ASAR	**Alice Springs**	**75.38**	**201**	P	**P**	**06 34 37.6**	**-0.1**
ASAR				*PP	pP	06 34 50.8	-0.4

*ISCJB **25** 06:23:40.9±0.7, 51°.43N±0°.04×16°.11E±0°.04, h0km, Error ellipse: s-maj=5.5km s-min=2.9km az=16.5*
*IPEC **25** 06:23:42.7±0.2, 51°.49N×16°.16E, h5km, ML2.3/3, Error ellipse: s-maj=1.4km s-min=0.7km az=25.0*
*CSEM **25** 06:23:42.3±0.3, 51°.46N×16°.11E, h2km, ML3.4/9, Error ellipse: s-maj=4.4km s-min=2.6km az=20.0*
*WAR **25** 06:23:43.5, 51°.48N×16°.10E, ML2.6, Mining Induced*
*PRU **25** 06:23:44.6, 51°.40N×16°.15E, h0km*
*VIE **25** 06:23:44.5±0.6, 51°.23N×16°.11E, h0km, mb2.2/3, ML2.8/4, Error ellipse: s-maj=3.5km s-min=3.0km az=177.0 64 km WNW of Wroclaw Suspected Mining induced.*

ISC 25 06:23:42.4±0.7, 51°.46N±0°.04×16°.10E±0°.04, h0km, n33, σ0°.85/62, 2C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**169**	*e*Pg	**Pg**	**06 23 55.4**	**+1.0**
KSP				*e*Sg	**Sg**	**06 24 04.0**	**+1.6**
KSP	**Ksiaz**	**0.63**	**169**	*i* Pg	**Pg**	**06 23 55.4**	**+1.1**
KSP				*i* Sg	**Sg**	**06 24 04.0**	**+1.6**
KSP	**Ksiaz**	**0.63**	**169**	*e*Pg	**Pg**	**06 23 55.3**	**+1.0**
baz=352							
KSP				*e*Sg	**Sg**	**06 24 03.8**	**+1.4**
baz=352							
UPC	**Upice**	**0.95**	**184**	*e*PG	**Pg**	**06 24 01.5**	**+0.9**
UPC	**Upice**	**0.95**	**184**	*e*Pg	**Pg**	**06 24 01.3**	**+0.7**
baz=5.3							
DPC	**Dobruska-Polom**	**1.12**	**173**	*e*PG	**Pg**	**06 24 04.2**	**+0.5**
DPC				*e*SG	**Sg**	**06 24 18.6**	**+0.4**
comp=Z,40nm,0.4s							
DPC	**Dobruska-Polom**	**1.12**	**173**	Pg	**Pg**	**06 24 04.2**	**+0.5**
DPC				Sg	**Sg**	**06 24 18.6**	**+0.4**
comp=Z,40nm,0.4s							
PVCC	**Panska Ves**	**1.34**	**227**	*e*PG	**Pg**	**06 24 08.7**	**+0.6**
PVCC				*e*SG	**Sg**	**06 24 27.0**	**+1.5**
comp=Z,142nm,0.3s							
PVCC	**Panska Ves**	**1.34**	**227**	Pg	**Pg**	**06 24 08.7**	**+0.6**
PVCC				Sg	**Sg**	**06 24 27.0**	**+1.5**
comp=Z,142nm,0.3s							
BRG	**Berggiesshubel**	**1.48**	**248**	PN	**Pn**	**06 24 10.2**	**0.0**
BRG				PG	**Pg**	**06 24 11.2**	**+0.5**
BRG				SG	**Sg**	**06 24 30.8**	**+0.9**
comp=Z,70nm,0.4s							
BRG	**Berggiesshubel**	**1.48**	**248**	*e*Pn	**Pn**	**06 24 10.4**	**+0.2**
baz=65							
BRG				*e*Sg	**Sg**	**06 24 30.7**	**+0.8**
baz=65							
PRU	**Pruhonice**	**1.77**	**215**	*e*PG	**Pg**	**06 24 16.5**	**+0.2**
PRU				*e*SG	**Sg**	**06 24 39.8**	**+0.5**
comp=Z,32nm,0.4s							
PRU	**Pruhonice**	**1.77**	**215**	Pg	**Pg**	**06 24 16.5**	**+0.2**
PRU				*e*Sg	**Sg**	**06 24 39.6**	**+0.3**
baz=34							
MORC	**Moravsky Berou**	**1.92**	**151**	*e*Pn	**Pn**	**06 24 15.8**	**-0.4**
baz=333							
MORC				*e*Sg	**Sg**	**06 24 42.9**	**-1.0**
comp=Z,29nm,0.4s,baz=333							
CLL	**Collm**	**1.95**	**267**	*e*Pn	**Pn**	**06 24 16.0**	**-0.6**
CLL				*e*Pg	**Pg**	**06 24 19.0**	**-0.7**
CLL				*i* Sg	**Sg**	**06 24 45.0**	**+0.1**
comp=Z,27nm,0.4s							
CLL	**Collm**	**1.95**	**267**	*e*Pn	**Pn**	**06 24 16.0**	**-0.6**
baz=84							
CLL				*e*Sg	**Sg**	**06 24 44.4**	**-0.5**
baz=84							
VRAC	**Vranov**	**2.17**	**172**	*e*Pn	**Pn**	**06 24 20.7**	**+1.0**
baz=353							
VRAC				*e*Sg	**Sg**	**06 24 52.3**	**+0.1**
comp=Z,16nm,0.4s,baz=353							
KRUC	**Moravsky**	**2.41**	**175**	*e*Pg	**Pg**	**06 24 27.0**	**-1.4**
baz=356							
KRUC				*e*Sg	**Sg**	**06 24 59.3**	**-0.3**
comp=Z,9.4nm,0.3s,baz=356							
NKC	**Novy Kostel**	**2.62**	**244**	*e*PN	**Pn**	**06 24 26.6**	**+0.7**
NKC				*e*PG	**Pg**	**06 24 32.3**	**-0.3**
NKC				*e*SG	**Sg**	**06 25 06.6**	**+0.1**
comp=Z,42nm,0.4s							
NKC	**Novy Kostel**	**2.62**	**244**	*e*Pn	**Pn**	**06 24 26.4**	**+0.5**
baz=60							
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**06 24 32.7**	**-0.4**
OJC				*e*Sg	**Sg**	**06 25 08.1**	**+0.7**
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**06 24 32.7**	**-0.4**
OJC				*e*Sg	**Sg**	**06 25 08.1**	**+0.7**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**06 24 29.5**	**+0.7**
KHC				*e*PG	**Pg**	**06 24 34.5**	**-2.2**
KHC				*e*SG	**Sg**	**06 25 12.6**	**-0.8**
comp=Z,16nm,0.6s							
KHC	**Kasperske Hory**	**2.84**	**216**	*e*Pn	**Pn**	**06 24 28.4**	**-0.4**
baz=34							
KHC	**Kasperske Hory**	**2.84**	**216**	Pg	**Pg**	**06 24 34.5**	**-2.2**
KHC				Sg	**Sg**	**06 25 12.6**	**-0.8**
comp=Z,16nm,0.6s							
MOX	**Moxa**	**2.95**	**256**	*e*PG	**Pg**	**06 24 38.4**	**-0.4**
MOX				*e*SG	**Sg**	**06 25 17.8**	**+0.8**
MOX	**Moxa**	**2.95**	**256**	*e*Pg	**Pg**	**06 24 38.4**	**-0.4**
baz=72							
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pg**	**06 24 46.4**	**-0.6**
NIE				*e*S	**Sg**	**06 25 31.7**	**+0.9**
VYHS	**Vyhne**	**3.45**	**148**	*e*SG	**Sg**	**06 25 28.2**	**-5.0**
CONA	**Conrad Observa**	**3.54**	**183**	⇑*i* Sg	**Sg**	**06 25 34.9**	**-1.0**
comp=Z,11nm,0.3s							
CONA	**Conrad Observa**	**3.54**	**183**	Sg	**Sg**	**06 25 34.9**	**-1.0**
comp=Z,11nm,0.3s							
MOA	**Molln**	**3.80**	**199**	⇑*i* Pn	**Pn**	**06 24 41.2**	**-1.0**
MOA				⇓*i* Sg	**Sg**	**06 25 42.8**	**-1.7**
comp=Z,12nm,0.4s							
MOA	**Molln**	**3.80**	**199**	Pn	**Pn**	**06 24 41.2**	**-0.9**
MOA				Sg	**Sg**	**06 25 42.8**	**-1.7**
comp=Z,12nm,0.4s							

*ISCJB **25** 06:24:23.6±0.8, 31°.1N±0°.1×138°.9E±0°.2, h415km±12km, mb3.1/3, Error ellipse: s-maj=33.9km s-min=16.8km az=173.0*
*IDC **25** 06:24:23.0±5.0, 30°.73N×137°.86E, h345km±123km, mb2.9/3, mb1 3.1/5, mb1mx2.8/25, mbtmp2.9/5, Error ellipse: s-maj=226.5km s-min=20.7km az=63.0*
*JMA **25** 06:24:24.9±0.4, 31°.24N×138°.76E, h405km, M3.6*

ISC 25 06:24:25.0±0.8, 31°.23N±0°.10×139°.0E±0°.2, h412km±11km, n14, σ0°.82/21, mb3.1/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.00**	**19**	P	**P**	**06 25 21.5**	**-0.5**
20nm,0.3s,baz=246,slow=23,SNR=10							
JHJ				S	**S**	**06 26 07.9**	**-0.3**
22nm,0.3s,baz=233,slow=20,SNR=4.0							
JHJ2	**Mitsune**	**2.00**	**20**	P	**P**	**06 25 22.8**	**+0.8**
JHJ2				S	**S**	**06 26 06.7**	**-1.5**
BSO3	**Boso 3**	**3.78**	**19**	P	**P**	**06 25 35.6**	**-0.1**
BSO3				*e*S	**S**	**06 26 33.8**	**+0.6**
BSO1	**Boso 1**	**3.80**	**25**	P	**P**	**06 25 36.0**	**+0.2**
BSO1				*e*S	**S**	**06 26 33.6**	**+0.2**
BSO4	**Boso 4**	**3.92**	**16**	*e*S	**S**	**06 26 37.1**	**+1.7**
JAO	**Obara**	**

CLL				*e*			06 25 32.0	
CLL				*i* Sg		**Sg**	**06 25 42.5**	**-1.1**
	comp=Z,23nm,0.5s							
OKC	**Ostrava-Krasne**	**2.06**	**140**	*e*SG		**Sg**	**06 25 46.2**	**-1.0**
	comp=Z,30nm,0.4s							
OKC	**Ostrava-Krasne**	**2.06**	**140**	Sg		**Sg**	**06 25 46.2**	**-1.0**
	comp=Z,30nm,0.4s							
VRAC	**Vranov**	**2.15**	**172**	*e*Pn		**Pn**	**06 25 18.0**	**-0.1**
	baz=354							
VRAC				*e*Sg		**Sg**	**06 25 50.1**	**-0.1**
	comp=Z,16nm,0.5s,baz=354							
KRUC	**Moravsky**	**2.39**	**175**	*e*Sg		**Sg**	**06 25 56.3**	**-1.3**
	comp=Z,15nm,0.5s,baz=358							
NKC	**Novy Kostel**	**2.62**	**244**	*e*SG		**Sg**	**06 26 05.1**	**+0.1**
	comp=Z,44nm,0.3s							
NKC	**Novy Kostel**	**2.62**	**244**	Sg		**Sg**	**06 26 05.1**	**+0.1**
	comp=Z,44nm,0.3s							
OJC	**Ojcow**	**2.64**	**116**	*e*Pg		**Pg**	**06 25 32.1**	**+0.6**
OJC				*e*Sg		**Sg**	**06 26 06.7**	**+1.0**
OJC	**Ojcow**	**2.64**	**116**	*e*Pg		**Pg**	**06 25 32.1**	**+0.6**
OJC				*e*Sg		**Sg**	**06 26 06.7**	**+1.0**
KHC	**Kasperske Hory**	**2.82**	**216**	*e*SG		**Sg**	**06 26 11.2**	**-0.4**
	comp=Z,16nm,0.7s							
KHC	**Kasperske Hory**	**2.82**	**216**	Sg		**Sg**	**06 26 11.2**	**-0.4**
	comp=Z,16nm,0.7s							
MOX	**Moxa**	**2.94**	**256**	*e*SG		**Sg**	**06 26 16.4**	**+0.8**
NIE	**Niedzica**	**3.36**	**125**	*e*P		**Pg**	**06 25 45.6**	**+0.2**
NIE				*e*S		**Sg**	**06 26 30.9**	**+1.9**
VYHS	**Vyhne**	**3.43**	**148**	*e*SG		**Sg**	**06 26 29.5**	**-1.7**
VYHS	**Vyhne**	**3.43**	**148**	*e*Sg		**Sg**	**06 26 29.5**	**-1.7**

NNC 25 06:35:48.0±3.2, 53°.76N×86°.92E, h0km, mb3.8, mpv3.5, 10C-2D, Error ellipse: s-maj=27.0km s-min=19.6km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.94**	**242**	⇑Pn	Pn	06 37 18.8	+1.6
	6.4nm,0.7s						
KURK				⇑Sn	Sn	06 38 28.3	+2.5
	4.2nm,0.8s						
KURK				⇓Lg		06 38 59.8	
	22nm,1.3s						
KURBB	**Kurchatov Arra**	**6.04**	**242**	⇑Pn	Pn	06 37 20.3	+1.8
	2.2nm,0.7s,baz=53,slow=14						
KURBB				⇑Sn	Sn	06 38 30.0	+1.7
	1.7nm,0.6s						
KURBB				⇑Lg		06 39 01.0	
	8.6nm,0.9s,baz=54,slow=33						
MK31	**Makanchi Array**	**7.58**	**205**	⇑Pn	Pn	06 37 43.3	+3.8
	1.3nm,0.7s,baz=34,slow=14,SNR=8.0						
MK31				⇑Sn	Sn	06 39 10.6	+4.6
	2.3nm,0.7s,baz=23,slow=19,SNR=8.5						
MK31				⇑Lg		06 39 49.7	
	21nm,1.2s,baz=28,slow=28,SNR=4.5						
VOSK	**Vostochnaya**	**9.62**	**270**	⇑Pn	Pn	06 38 05.9	-1.6
	2.6nm,0.5s						
BVA0	**Borovoye Array**	**9.91**	**272**	⇓Pn	Pn	06 38 08.4	-3.1
	0.4nm,0.8s,baz=70,slow=15,SNR=6.0						
ZRNK	**Zerenda**	**10.74**	**273**	⇑Pn	Pn	06 38 20.1	-2.8
	2.3nm,0.8s						

DJA 25 06:37:31, 3°.67S×127°.41E, h6km, MLv4.0/6, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.53**	**324**	P	Pg	06 37 41.6	+0.4
NLAI				S	Sg	06 37 48.8	+0.7
LBMI	**Labuha**	**3.01**	**2**	P	Pn	06 38 20.3	+1.0
LBMI				S	Sn	06 38 58.5	+2.8
TNTI	**Ternate**	**4.41**	**359**	P	Pn	06 38 41.1	+2.5
SWI	**Sorong**	**4.75**	**54**	P	Pn	06 38 43.1	-0.1
SWI				S	Sn	06 39 34.8	-3.9
KDI	**Kendari**	**4.79**	**266**	P	Pn	06 38 44.6	+0.9
LUWI	**Luwuk**	**5.32**	**299**	P	Pn	06 38 52.2	+1.2
	0.3nm115nm,0.9s						
KAPI	**Kappang**	**7.75**	**260**	P	Pn	06 39 25.2	+0.7

IDC ***25*** *06:46:44.9±3.2, 30°.66N×83°.16E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.6/26, mbtmp3.5/5, ML3.9/2, MS3.7/2, Ms1 3.7/2, ms1mx2.6/33, Error ellipse: s-maj=97.3km s-min=29.0km az=73.0*

ISCJB ***25*** *06:46:45.6±0.8, 30°.74N±0°.09×83°.41E±0°.05, h10km, mb3.5/3, MS3.7/2, Error ellipse: s-maj=12.8km s-min=6.0km az=172.0*

NDI ***25*** *06:47:35.9±2.8, 29°.93N×82°.10E, h10km, ML2.5*

ISC 25 06:46:48.4±0.8, 30°.71N±0°.10×83°.52E±0°.05, h10km, n13, σ1§13/15, mb3.4/3, MS3.7/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.08**	**249**	*ex*	**Pb**	**06 47 45.0**	**+1.7**
PTH				*e*S	**Sg**	**06 48 27.2**	**-0.2**
KLP	**Kalpa**	**4.59**	**282**	*ex*	**Pg**	**06 48 19.2**	**+2.9**
KLP				*e*S	**Sg**	**06 49 15.3**	**-0.5**
KLP				AML	AML	06 49 26.5	
	comp=E,21nm,0.3s						
KLP				AML	AML	06 49 26.8	
	comp=N,14nm,0.4s						
DDI	**Dehra Dun**	**4.73**	**267**	*ex*	**Pg**	**06 48 19.0**	**+0.1**
SONA	**Sohna**	**6.12**	**248**	*e*PKP	**Pg**	**06 48 46.9**	**+1.4**
SONA				*e*S	**Sb**	**06 49 38.9**	**-9.5**
SONA				AML	AML	06 50 28.7	
	comp=N,7.2nm,0.3s						
SONA				AML	AML	06 50 29.5	
	comp=E,14nm,0.1s						
KUDL	**Kundal**	**6.64**	**249**	*e*PKP	**Pg**	**06 48 54.0**	**-1.5**
KUDL				*e*S	**Sb**	**06 49 51.6**	**-12**
KUDL				AML	AML	06 50 39.4	
	comp=E,3.5nm,0.5s						
KUDL				AML	AML	06 50 40.6	
	comp=N,4.9nm,0.9s						
KHET	**Khetri**	**7.22**	**251**	*ex*	**Pg**	**06 49 05.3**	**-1.3**
MKAR	**Makanchi Array**	**16.09**	**357**	Pn	**Pn**	**06 50 30.4**	**-4.2**
	comp=N,0.1nm,0.3s,baz=179,slow=12,SNR=3.1						
CMAR	**Chiang Mai Arr**	**18.56**	**128**	P	**Pn**	**06 51 06.1**	**+0.4**
	comp=N,0.7nm,0.3s,baz=312,slow=11,SNR=6.2						
SONM	**Songino Array**	**24.48**	**39**	P	**P**	**06 52 07.9**	**+0.4**
	comp=N,0.5nm,0.7s,mb3.0,baz=220,slow=11,SNR=3.9						
KSRS	**Korea Array**	**37.12**	**67**	LR	LR	07 10 23.3	
	comp=N,20nm,20.3s,MS2.9,baz=225,slow=38						
WRA	**Warramunga Arr**	**70.15**	**129**	P	**P**	**06 58 00.5**	**-0.8**
	comp=N,1.4nm,0.9s,mb3.9,baz=326,slow=6.1,SNR=7.5						
ILAR	**Eielson Array**	**77.07**	**20**	P	**P**	**06 58 40.8**	**-0.6**
	comp=N,0.3nm,0.7s,mb3.3,baz=309,slow=5.7,SNR=3.9						
HNR	**Honiara**	**83.30**	**105**	LR	LR	07 32 19.5	
	comp=N,231nm,20.7s,MS4.5,baz=131,slow=33						

BJI ***25*** *06:54:27.1, 38°.40N×30°.20W, h10km, mB5.3/5, mb5.1/7, Ms4.9/5, Ms7 4.5/5*

IDC ***25*** *06:54:28.4±0.6, 38°.39N×30°.39W, h0km, mb4.2/22, mb1 4.4/22, mb1mx4.2/31, mbtmp4.2/22, MS3.8/22, Ms1 3.8/22, ms1mx3.7/34, Error ellipse: s-maj=18.5km s-min=12.6km az=154.0*

CSEM ***25*** *06:54:30.7±0.2, 38°.26N×30°.01W, h10km, mb4.6/20, Ms3.2, Error ellipse: s-maj=10.7km s-min=4.3km az=2.0*

INMG ***25*** *06:54:31.0, 38°.30N×30°.20W, h5km, ML4.1*

NEIC ***25*** *06:54:31.1±0.4, 38°.43N×30°.25W, h10km, mb4.6/25, ML4.1(SVSA), Error ellipse: s-maj=12.4km s-min=5.1km az=175.0*

PDA ***25*** *06:54:31.1±1.1, 38°.32N×30°.27W, h5km, MD3.8, ML4.1, Error ellipse: s-maj=6.7km s-min=6.1km az=165.0*

ISC 25 06:54:30.3±0.9, 38°.23N±0°.06×29°.98W±0°.03, h7km±4km, n200, σ1§22/201, mb4.4/48, MS3.7/25, 1C, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.06**	**71**	*e*P	**Pg**	**06 54 50.3**	**-0.4**
CALA				*e*S	**Sg**	**06 55 05.0**	**+0.5**
CALA	**Caldeira**	**1.06**	**71**	*e*P	**Pg**	**06 54 50.3**	**-0.4**
CALA				*e*S	**Sg**	**06 55 05.0**	**+0.5**
PCED	**Cedros**	**1.08**	**68**	*i* P	**Pg**	**06 54 50.2**	**-0.8**
PCED				*e*S	**Sg**	**06 55 04.7**	**-0.3**
PCED				A		06 55 07.8	
	1μm,0.3s						
HOR	**Horta**	**1.10**	**74**	*e*P	**Pg**	**06 54 51.1**	**-0.3**
HOR				*e*S	**Sg**	**06 55 06.3**	**+0.6**
HOR	**Horta**	**1.10**	**74**	*e*P	**Pg**	**06 54 51.1**	**-0.3**
HOR				*e*S	**Sg**	**06 55 06.3**	**+0.6**
PCAN	**Candelaria**	**1.20**	**79**	*i* P	**Pg**	**06 54 52.0**	**-1.3**
PCAN				*e*S	**Sg**	**06 55 08.8**	**0.0**
PCAN				A		06 55 12.4	
	942nm,0.5s						
PICO	**Pico**	**1.25**	**77**	*e*P	**Pg**	**06 54 53.3**	**-1.0**
PICO				*e*S	**Sg**	**06 55 10.8**	**+0.3**
PICO	**Pico**	**1.25**	**77**	*e*P	**Pg**	**06 54 53.3**	**-1.0**
PICO				*e*S	**Sg**	**06 55 10.8**	**+0.3**
ROSA	**Rosais**	**1.45**	**70**	*e*P	**Pn**	**06 54 56.1**	**-0.9**
ROSA				*e*S	**Sn**	**06 55 14.2**	**-2.0**
ROSA	**Rosais**	**1.45**	**70**	*e*P	**Pn**	**06 54 56.1**	**-0.9**
ROSA				*e*S	**Sn**	**06 55 14.2**	**-2.0**
PID	**Ribeirinha**	**1.48**	**81**	*e*P	**Pn**	**06 54 57.0**	**-0.4**
PID	**Ribeirinha**	**1.48**	**81**	*e*P	**Pn**	**06 54 57.0**	**-0.4**
PMAN	**Manadas**	**1.54**	**74**	*e*P	**Pn**	**06 54 56.9**	**-1.3**
PMAN				*e*S	**Sn**	**06 55 16.6**	**-1.8**
PMAN				A		06 55 19.7	
	392nm,0.3s						
PMAN	**Manadas**	**1.54**	**74**	*e*P	**Pn**	**06 54 56.9**	**-1.3**
PMAN				*e*S	**Sn**	**06 55 16.6**	**-1.8**
ADH	**Angra Heroismo**	**2.20**	**78**	*e*P	**Pn**	**06 55 06.4**	**-0.8**
ADH				*e*S	**Sn**	**06 55 33.0**	**-1.7**
ADH				A		06 55 38.7	
	308nm,0.3s						
ADH	**Angra Heroismo**	**2.20**	**78**	*e*P	**Pn**	**06 55 06.4**	**-0.8**
ADH				*e*S	**Sn**	**06 55 33.0**	**-1.7**
PSET	**Sete Cidades**	**3.39**	**96**	*e*P	**Pn**	**06 55 23.5**	**-0.1**
PSET				*e*S	**Sn**	**06 56 02.6**	**-1.5**
PSET				A		06 56 06.2	
	35nm,0.4s						
PSET	**Sete Cidades**	**3.39**	**96**	*e*P	**Pn**	**06 55 23.5**	**-0.1**
PSET				*e*S	**Sn**	**06 56 02.6**	**-1.5**
PDA	**Ponta Delgada**	**3.45**	**97**	*e*P	**Pn**	**06 55 24.4**	**0.0**
PDA				*e*S	**Sn**	**06 56 04.5**	**-1.0**
PDA	**Ponta Delgada**	**3.45**	**97**	*e*P	**Pn**	**06 55 24.4**	**0.0**
PDA				*e*S	**Sn**	**06 56 04.5**	**-1.0**
GRON	**Grota Negra**	**3.54**	**96**	*e*P	**Pn**	**06 55 27.7**	**+1.9**
GRON				*e*S	**Sn**	**06 56 09.3**	**+1.4**
GRON				A		06 56 14.9	
	31nm,0.3s						
BART	**Pico Bartolome**	**3.83**	**95**	*e*P	**Pn**	**06 55 30.1**	**+0.4**
BART				*e*S	**Sn**	**06 56 13.1**	**-1.8**
BART				A		06 56 20.1	
	136nm,0.3s						
BART	**Pico Bartolome**	**3.83**	**95**	*e*P	**Pn**	**06 55 30.1**	**+0.4**
BART				*e*S	**Sn**	**06 56 13.1**	**-1.8**
PSMA	**Santa Maria**	**4.05**	**106**	*e*P	**Pn**	**06 55 32.2**	**-0.5**
PSMA				*e*S	**Sn**	**06 56 18.5**	**-1.8**
PSMA				A		06 56 20.9	
	54nm,0.3s						
PSMN	**Pico do Norte,**	**4.09**	**106**	*e*P	**Pn**	**06 55 32.8**	**-0.5**
PSMN				*e*S	**Sn**	**06 56 19.6**	**-1.8**
PSMN	**Pico do Norte,**	**4.09**	**106**	*e*P	**Pn**	**06 55 32.8**	**-0.5**
PSMN				*e*S	**Sn**	**06 56 19.6**	**-1.8**
PMAR	**Madeira**	**11.98**	**113**	*e*P	**Pn**	**06 57 23.3**	**+1.8**
	82nm,1.5s						
PMAR	**Madeira**	**11.98**	**113**	*e*P	**Pn**	**06 57 23.3**	**+1.8**
	82nm,1.5s						
FUL	**Funchal**	**12.04**	**114**	*e*P	**Pn**	**06 57 26.2**	**+3.9**
	88nm,2.1s						
PMAFR	**Mafra**	**16.20**	**81**	*e*S	Sx	07 01 41.6	
PFVI	**Vila Bisbo**	**16.78**	**87**	*e*S	Sx	07 01 53.0	
MORF	**Marmelete**	**16.89**	**87**	*e*S	Sx	07 02 08.6	
EVOP	**Sao Brissos**	**17.14**	**82**	*e*P	**Pn**	**06 58 34.5**	**+4.2**
	69nm,1.7s						
EVOP	**Sao Brissos**	**17.14**	**82**	*e*P	**Pn**	**06 58 34.5**	**+4.2**
	34nm,1.7s						
EVO	**Evora**	**17.23**	**82**	*e*P	**Pn**	**06 58 34.5**	**+3.1**
	69nm,1.7s						
EVO				*e*MLR	MLR		
	comp=Z,347nm,19.5s						
EVO	**Evora**	**17.23**	**82**	*e*P	**Pn**	**06 58 40.1**	**+8.7**
	comp=Z,32nm,1.9s						
PCVE	**Castro Verde**	**17.32**	**85**	*e*S	Sx	07 02 14.3	
PBDV	**Barranco-do-Ve**	**17.47**	**86**	*e*P	Px	06 58 46.2	
	comp=Z,32nm,3.1s						
PBDV				*e*S	**Sn**	**07 01 56.5**	**+7.4**
MTE	**Manteigas**	**17.49**	**76**	*e*S	Sx	07 02 17.7	
PESTR	**Estremoz**	**17.52**	**81**	*e*S	Sx	07 02 06.3	
PVAQ	**Vaqueiros**	**17.61**	**86**	*e*S	**Sn**	**07 02 00.8**	**+8.3**
PVAQ	**Vaqueiros**	**17.61**	**86**	*e*S	**Sn**	**07 02 00.8**	**+8.3**
PMRV	**Marv??o**	**17.64**	**79**	*e*S	Sx	07 02 16.1	
MVO	**Moncorvo**	**17.89**	**73**	*e*P	Px	06 58 50.9	
	comp=Z,34nm,1.9s						
MVO				*e*S	Sx	07 02 27.2	
PBAR	**Barrancos**	**18.03**	**83**	*e*S	Sx	07 02 16.7	
PAB	**San Pablo**	**19.98**	**78**	P	**Pn**	**06 59 04.5**	**-0.3**
	comp=Z,3.5nm,0.8s						
PAB	**San Pablo**	**19.98**	**78**	P	**Pn**	**06 59 04.6**	**-0.3**
	comp=Z,3.5nm,0.8s						
ESDC	**Sonseca Array**	**20.27**	**78**	P	**P**	**06 59 10.3**	**+4.0**
	comp=Z,0.3nm,0.3s,baz=276,slow=10.0,SNR=4.2						
ESDC				LR	LR	07 05 40.8	
	comp=Z,201nm,18.9s,MS3.5,baz=265,slow=33						
ESLA	**Sonseca Array**	**20.27**	**78**	*e*P	**P**	**06 59 06.7**	**+0.4**
	comp=Z,2.6nm,1.2s						
ESLA	**Sonseca Array**	**20.27**	**78**	*e*P	**P**	**06 59 06.7**	**+0.4**
	comp=Z,2.6nm,1.2s						
MDT	**Midelt**	**21.31**	**97**	P	**P**	**06 59 23.7**	**+6.0**
	comp=Z,2.3nm,1.0s,mb3.5,baz=276,slow=10,SNR=4.2						
MDT				LR	LR	07 06 07.6	
	comp=Z,320nm,18.5s,MS3.7,baz=114,slow=32						
SJPF	**Ste Jean**	**22.29**	**68**	*e*P	**P**	**06 59 31.0**	**+2.9**
ETSF	**Etsaut**	**22.77**	**69**	*e*P	**P**	**06 59 36.1**	**+2.9**
	comp=Z,45nm,1.4s,mb4.4						
ETSF	**Etsaut**	**22.77**	**69**	*e*P	**P**	**06 59 36.1**	**+2.9**
	comp=Z,23nm,1.4s,mb4.4						
GRR	**Gorron**	**23.37**	**55**	*e*P	**P**	**06 59 38.4**	**-1.0**
GRR	**Gorron**	**23.37**	**55**	*e*P	**P**	**06 59 38.4**	**-1.0**
EPF	**Esparros**	**23.43**	**69**	*e*P	**P**	**06 59 42.4**	**+2.2**
EPF	**Esparros**	**23.43**	**69**	*e*P	**P**	**06 59 42.4**	**+2.2**
CAF	**Calviac**	**24.78**	**64**	*e*P	**P**	**06 59 53.4**	**+0.8**
CAF	**Calviac**	**24.78**	**64**	*e*P	**P**	**06 59 53.4**	**+0.8**
EKA	**Eskdalemuir Ar**	**24.86**	**38**	P	**P**	**06 59 52.5**	**-0.7**
	comp=Z,1.1nm,0.8s,mb3.4,baz=201,slow=6.8,SNR=4.5						
EKA	**Eskdalemuir Ar**	**24.86**	**38**	P	**P**	**06 59 52.5**	**-0.7**
TCF	**Toulx Ste Croi**	**25.02**	**61**	*e*P	**P**	**06 59 55.7**	**+0.9**
	comp=Z,46nm,1.1s,mb4.6						
TCF	**Toulx Ste Croi**	**25.02**	**61**	*e*P	**P**	**06 59 55.7**	**+0.9**
	comp=Z,23nm,1.1s,mb4.6						
TCF	**Toulx Ste Croi**	**25.02**	**61**	*e*P	**P**	**06 59 55.7**	**+0.9**
	comp=Z,23nm,1.1s,mb4.6						
BGF	**Bois d'Agland**	**25.48**	**60**	*e*P	**P**	**06 59 59.9**	**+0.9**
BGF	**Bois d'Agland**	**25.48**	**60**	*e*P	**P**	**06 59 59.9**	**+0.9**
AVF	**Avril sur Loir**	**25.86**	**60**	*e*P	**P**	**07 00 03.6**	**+1.2**
	comp=Z,12nm,1.0s,mb4.1						
AVF	**Avril sur Loir**	**25.86**	**60**	*e*P	**P**	**07 00 03.6**	**+1.2**
	comp=Z,5.9nm,1.0s,mb4.1						
AVF	**Avril sur Loir**	**25.86**	**60**	*e*P	**P**	**07 00 03.6**	**+1.2**
	comp=Z,5.9nm,1.0s,mb4.1						
SSF	**Saint Saulge**	**26.00**	**59**	*e*P	**P**	**07 00 04.2**	**+0.5**
SSF	**Saint Saulge**	**26.00**	**59**	*e*P	**P**	**07 00 04.2**	**+0.5**
SMF	**Signal de Mont**	**26.18**	**60**	*e*P	**P**	**07 00 06.8**	**+1.5**
SMF	**Signal de Mont**	**26.18**	**60**	*e*P	**P**	**07 00 06.8**	**+1.5**
LOR	**Lormes**	**26.27**	**59**	*e*P	**P**	**07 00 06.8**	**+0.7**
LOR				*e*MLR	MLR		
	comp=Z,90nm,20.8s,MS3.0						
LOR	**Lormes**	**26.27**	**59**	*e*P	**P**	**07 00 06.8**	**+0.7**
LOR				LR	LR		
	comp=Z,90nm,20.8s,MS3.3						
LOR	**Lormes**	**26.27**	**59**	*e*P	**P**	**07 00 06.8**	**+0.7**
BBTS	**Babate**	**26.32**	**149**	LR	LR	07 08 23.1	
	comp=Z,146nm,19.8s,MS3.5,baz=128,slow=31						
VIVF	**Saint-Julien-l**	**26.62**	**64**	*e*P	**P**	**07 00 10.9**	**+1.6**
	comp=Z,14nm,0.9s,mb4.2						
VIVF	**Saint-Julien-l**	**26.62**	**64**	*e*P	**P**	**07 00 10.9**	**+1.6**
	comp=Z,7.3nm,0.9s,mb4.2						
VIVF	**Saint-Julien-l**	**26.62**	**64**	*e*P	**P**	**07 00 10.9**	**+1.6**
	comp=Z,7.3nm,0.9s,mb4.2						
BORG	**Borgarnes**	**27.04**	**8**	LR	LR	07 07 50.2	
	comp=Z,406nm,20.4s,MS4.0,baz=232,slow=30						
ORIF	**Oris-en-Rattie**	**27.48**	**64**	*e*P	**P**	**07 00 19.6**	**+2.5**
ORIF				*e*MLR	MLR		
	comp=Z,70nm,20.8s,MS2.9						
ORIF	**Oris-en-Rattie**	**27.48**	**64**	*e*P	**P**	**07 00 19.6**	**+2.5**
CABF	**La Chapelle**	**27.71**	**61**	*e*P	**P**	**07 00 20.0**	**+0.9**
CABF	**La Chapelle**	**27.71**	**61**	*e*P	**P**	**07 00 20.0**	**+0.9**
LPL	**La Plagne**	**28.10**	**63**	*e*P	**P**	**07 00 25.3**	**+2.7**
LPL	**La Plagne**	**28.10**	**63**	*e*P	**P**	**07 00 25.3**	**+2.7**
LPG	**La Plagne**	**28.11**	**63**	*e*P	**P**	**07 00 25.4**	**+2.7**
LPG	**La Plagne**	**28.11**	**63**	*e*P	**P**	**07 00 25.4**	**+2.7**
CDF	**Champ du Feu**	**28.69**	**57**	*e*P	**P**	**07 00 29.1**	**+1.3**
CDF	**Champ du Feu**	**28.69**	**57**	*e*P	**P**	**07 00 29.1**	**+1.3**
BFO	**Black Forest**	**29.38**	**57**	*e*P	**P**	**07 00 35.0**	**+1.0**
	comp=Z,8.9nm,1.2s,mb4.4						
BFO	**Black Forest**	**29.38**	**57**	*e*P	**P**	**07 00 35.0**	**+1.0**
	comp=Z,8.9nm,1.2s,mb4.4						
SCHQ	**Schefferville**	**29.86**	**316**	P	**P**	**07 00 36.0**	**-2.1**
	comp=Z,6.1nm,0.9s,mb4.3,baz=101,slow=16,SNR=3.9						
SCHQ				LR	LR	07 11 54.0	
	comp=Z,241nm,18.4s,MS3.9,baz=268,slow=35						
SCHQ	**Schefferville**	**29.86**	**316**	P	**P**	**07 00 36.0**	**-2.1**
SCHQ				LR	LR	07 11 54.0	
SCHQ	**Schefferville**	**29.86**	**316**	P	**P**	**07 00 36.0**	**-2.1**
MOX	**Moxa**	**31.77**	**53**	*e*P	**P**	**07 00 56.4**	**+1.4**
MOX	**Moxa**	**31.77**	**53**	*e*P	**P**	**07 00 56.4**	**+1.4**
KBA	**Koelnbreinsper**	**32.71**	**60⇑**	*i*pP	pP	07 01 05.2	-0.2
	comp=Z,11nm,1.2s						
CLL	**Collm**	**32.71**	**52**	P	**P**	**07 01 05.0**	**+1.7**
CLL	**Collm**	**32.71**	**52**	P	**P**	**07 01 05.0**	**+1.7**
GERES	**GERESS Array B**	**32.98**	**57**	P	**P**	**07 01 06.3**	**+0.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=280,slow=8.0,SNR=8.4						
GERES	**GERESS Array B**	**32.98**	**57**	P	**P**	**07 01 06.3**	**+0.7**
NB2	**NORSAR Subarra**	**34.23**	**35**	P	**P**	**07 01 16.1**	**-0.3**
	comp=Z,10nm,1.1s,mb4.7,baz=249,slow=9.3						
NOA	**NORSAR Array B**	**34.23**	**35**	P	**P**	**07 01 17.0**	**+0.6**
	comp=Z,5.0nm,1.0s,mb4.4,baz=249,slow=9.0,SNR=9.1						
NOA				LR	LR	07 13 32.4	
	comp=Z,85nm,18.5s,MS3.5,baz=260,slow=33						
NOA	**NORSAR Array B**	**34.23**	**35**	P	**P**	**07 01 17.0**	**+0.6**
SADO	**Sadowa**	**36.93**	**296**	P	**P**	**07 01 34.1**	**-5.6**
	comp=Z,3.3nm,0.8s,mb4.2,baz=95,slow=14,SNR=2.5						
TORD	**Torodi Ar. Bea**	**37.61**	**123**	P	**P**	**07 01 47.5**	**+1.7**
	comp=Z,377nm,0.3s,baz=309,slow=5.9,SNR=3.2						
TORD				LR	LR	07 15 58.6	
	comp=Z,158nm,21.0s,MS3.8,baz=310,slow=34						
FINES	**FINESS Array B**	**41.26**	**37**	P	**P**	**07 02 15.6**	**-0.1**
	comp=Z,6.3nm,0.9s,mb4.2,baz=241,slow=6.3,SNR=9.6						
FINES				LR	LR	07 17 34.4	
	comp=Z,122nm,18.4s,MS3.8,baz=133,slow=34						
FINES	**FINESS Array B**	**41.26**	**37**	P	**P**	**07 02 15.6**	**-0.1**
ARCES	**ARCESS Array B**	**42.79**	**25**	P	**P**	**07 02 27.0**	**-1.2**
	comp=Z,6.5nm,0.9s,mb4.3,baz=232,slow=6.0,SNR=6.6						
ARCES				LR	LR	07 16 44.7	
	comp=Z,110nm,21.1s,MS3.7,baz=343,slow=31						
ARCES	**ARCESS Array B**	**42.79**	**25**	P	**P**	**07 02 27.0**	**-1.2**
KIEV	**Kiev**	**42.94**	**53**	*e*P	**P**	**07 02 29.1**	**-0.5**
	comp=Z,5.4nm,0.8s,mb4.3						
KIEV	**Kiev**	**42.94**	**53**	*e*P	**P**	**07 02 29.1**	**-0.5**
	comp=Z,5.4nm,0.8s,mb4.3						
AKASG	**Malin Array Be**	**42.94**	**53**	P	**P**	**07 02 29.1**	**-0.6**
	comp=Z,2.6nm,0.6s,mb4.2,baz=274,slow=8.1,SNR=9.4						
AKASG	**Malin Array Be**	**42.94**	**53**	P	**P**	**07 02 29.1**	**-0.6**
AKBB	**Malin Array Si**	**42.94**	**53**	P	**P**	**07 02 29.6**	**0.0**
AKBB	**Malin Array Si**	**42.94**	**53**	P	**P**	**07 02 29.6**	**-0.1**
SPITS	**Spitsbergen Ar**	**44.34**	**12**	P	**P**	**07 02 38.9**	**-1.7**
	comp=Z,14nm,1.0s,mb4.6,baz=328,slow=6.9,SNR=7.0						
SPITS	**Spitsbergen Ar**	**44.34**	**12**	P	**P**	**07 02 38.9**	**-1.7**
ULM	**Lac du Bonnet**	**47.23**	**307**	LR	LR	07 22 32.6	
	comp=Z,124nm,19.9s,MS3.9,baz=29,slow=36						
OXF	**Oxford**	**47.28**	**285**	*e*P	**P**	**07 03 05.0**	**+0.6**
	comp=Z,22nm,0.8s,mb5.1						
OXF	**Oxford**	**47.28**	**285**	*e*P	**P**	**07 03 05.0**	**+0.6**
	comp=Z,22nm,0.8s,mb5.1						
BRTR	**Keskin Array B**	**48.53**	**67**	P	**P**	**07 03 15.0**	**+1.0**
	comp=Z,1.4nm,0.8s,mb4.0,baz=274,slow=6.9,SNR=6.1						
BRTR				LR	LR	07 22 05.3	
	comp=Z,32nm,19.0s,MS3.3,baz=302,slow=34						
BRTR	**Keskin Array B**	**48.53**	**67**	P	**P**	**07 03 15.0**	**+1.0**
ECSD	**EROS Data Cent**	**49.39**	**299**	*e*P	**P**	**07 03 20.7**	**+0.2**
	comp=Z,

TKM2	**Tokmak 2**	74.76	47	*e*P		P	07 06 12.1	+1.1
	comp=Z,4.9nm,1.1s,mb4.3							
TKM2	**Tokmak 2**	74.76	47	*e*P		P	07 06 12.1	+1.1
	comp=Z,4.9nm,1.1s,mb4.3							
MK31	**Makanchi Array**	75.95	41	*e*P		P	07 06 17.9	+0.2
MK31	**Makanchi Array**	75.95	41	*e*P		P	07 06 17.9	+0.1
MKAR	**Makanchi Array**	75.95	41	P		P	07 06 17.6	-0.1
	comp=Z,4.4nm,0.9s,mb4.4,baz=316,slow=3.3,SNR=12							
MKAR				LR		LR	07 38 26.8	
	comp=Z,37nm,21.8s,MS3.6,baz=354,slow=35							
KSH	**Kashi**	77.11	50	*e*P		P	07 06 26.0	+1.6
KSH				*e*pP		pP	07 06 30.8	+4.2
KSH				*e*sP		sP	07 06 33.0	+5.6
KSH				*e*PcP		PcP	07 06 37.5	+2.2
KSH				*e*PP		PP	07 09 20.8	+3.3
KSH				*e*S		S	07 16 13.0	-0.7
KSH				*e*sS		sS	07 16 20.5	+3.2
KSH				*e*SKS			07 16 32.8	
KSH				*e*ScS		ScS	07 16 39.0	-3.2
KSH				*e*SS		SS	07 21 12.5	+2.4
KSH				pmax		pmax		
	comp=Z,12nm,0.9s,mb4.8							
KSH				pmax		pmax		
	comp=Z,240nm,3.0s							
KSH				LR		LR		
	comp=N,280nm,9.9s							
KSH				LR		LR		
	comp=E,210nm,8.1s							
KSH				LR		LR		
	comp=Z,240nm,5.6s							
WMQ	**Urumqi**	80.77	40	*e*P		P	07 06 45.0	+0.6
BOSA	**Boshof**	84.19	133	LR		LR	07 39 46.6	
	comp=Z,166nm,21.2s,MS4.4,baz=347,slow=32							
SONM	**Songino Array**	85.91	28	P		P	07 07 10.6	-0.3
	comp=Z,3.1nm,1.1s,mb4.5,baz=328,slow=5.8,SNR=12							
SONM	**Songino Array**	85.91	28	P		P	07 07 10.6	-0.3
PLCA	**Paso Flores**	86.90	210	P		P	07 07 15.7	+0.2
	comp=Z,1.7nm,0.8s,mb4.3,baz=31,slow=7.0,SNR=5.1							
PLCA	**Paso Flores**	86.90	210	P		P	07 07 15.7	+0.2
PETK	**Petropavlovsk-**	88.79	355	LR		LR	07 47 12.8	
	comp=Z,64nm,18.5s,MS4.1,baz=266,slow=36							
HHC	**Hu-ho-hao-te**	93.80	28	*e*P		P	07 07 48.5	+0.3
HHC				PP		PP	07 11 37.5	+5.0
HHC				SKS			07 18 20.8	
HHC				S		S	07 18 56.3	-1.8
HHC				sS		sS	07 19 04.0	+2.2
HHC				pmax		pmax		
	comp=Z,22nm,1.0s,mb5.5							
HHC				pmax		pmax		
	comp=Z,140nm,5.8s							
HHC				LR		LR		
	comp=N,130nm,19.4s,MS4.7							
HHC				LR		LR		
	comp=E,210nm,19.4s,MS4.7							
HHC				LR		LR		
	comp=Z,170nm,18.8s,MS4.5							
CN2	**Changchun**	95.36	18	*e*P		P	07 07 54.3	-1.0
BJI	**Beijing**	96.16	25	P		P	07 07 55.8	-3.2
CD2	**Chengdu**	98.80	39	*e*P		P	07 08 10.0	-1.1
MAW	**Mawson**	125.75	152	PKP		PKPdf	07 13 30.3	-1.3
	comp=Z,1.7nm,0.7s,baz=221,slow=11,SNR=6.4							
FITZ	**Fitzroy Crossi**	150.76	53	PKPbc		PKPbc	07 14 22.5	-1.3
	comp=Z,3.8nm,1.0s,baz=31,slow=5.9,SNR=3.3							
ASAR	**Alice Springs**	160.00	48	PKPab		PKPab	07 15 08.7	-1.3
	comp=Z,0.8nm,0.8s,baz=308,slow=4.5,SNR=3.4							

IDC 25 07:00:42.5±3.3, 2°.65N×98°.98W, h0km, mb3.7/6, mb1 4.1/6, mb1mx3.9/20, mbtmp3.7/6, MS3.4/4, Ms1 3.4/4, ms1mx3.0/24, Error ellipse: s-maj=141.7km s-min=20.4km az=50.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	14.90	15	LR	LR	07 08 41.6	
	comp=Z,144nm,21.5s,baz=196,slow=32						
TEIG	**Tepich**	20.35	30	LR	LR	07 11 56.5	
	comp=Z,50nm,21.8s,baz=80,slow=33						
ATAH	**Atahualpa**	22.73	115	P	P	07 05 46.5	+0.2
	3.0nm,0.7s,baz=307,slow=5.1,SNR=3.6						
ATAH				LR	LR	07 12 15.7	
	comp=Z,76nm,20.8s,baz=321,slow=30						
TXAR	**Lajitas Array**	26.91	351	P	P	07 06 25.6	+0.3
	0.9nm,0.8s,baz=171,slow=8.0,SNR=6.8						
LPAZ	**La Paz**	35.82	123	P	P	07 07 45.1	+1.1
	1.5nm,0.9s,baz=287,slow=6.8,SNR=3.5						
NVAR	**Mina Array Bea**	39.75	336	P	P	07 08 18.8	+1.8
	0.7nm,0.8s,baz=156,slow=6.9,SNR=4.8						
PDAR	**Pinedale Array**	41.04	348	P	P	07 08 27.8	+0.2
	1.1nm,0.8s,baz=148,slow=6.7,SNR=8.9						
PLCA	**Paso Flores**	50.38	152	LR	LR	07 25 45.8	
	comp=Z,99nm,19.6s,baz=306,slow=30						
ILAR	**Eielson Array**	70.82	340	P	P	07 11 59.5	-1.2
	0.6nm,0.8s,baz=138,slow=4.2,SNR=7.6						

BJI 25 07:06:06.8, 44°.38N×116°.59E, h10km, ML3.7/8, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJI	**Beijing**	4.35	184	Pg	Pg	07 07 24.5	-5.6
BJI				smax			
	comp=N,79nm,0.9s						
BJI				smax			
	comp=E,190nm,0.8s						
BTO	**Baotou**	6.15	234	*e*Pg	Pg	07 07 59.8	-4.7
BTO				Sg	Sg	07 09 12.0	-12
BTO				smax			
	comp=N,11nm,0.7s						
BTO				smax			
	comp=E,9.0nm,0.4s						
LZH	**Lanzhou**	12.77	234	*e*P	Pn	07 09 09.0	+0.6
LZH				pP		07 09 12.0	
LZH				PP		07 09 19.5	
LZH				*e*S	Sn	07 11 32.0	+1.4

*IDC **25** 07:08:21.2±1.3, 0°.61N×125°.58E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.6/18, mbtmp3.6/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/22, Error ellipse: s-maj=134.7km s-min=21.1km az=68.0*

*ISCJB **25** 07:08:26.7±0.8, 0°.75N±0°.10×125°.98E±0°.09, h61km±12km, mb3.5/4, Error ellipse: s-maj=19.3km s-min=11.7km az=40.0*

*DJA **25** 07:08:26, 0°.73N×125°.98E, h69km, MLv3.8/5*

ISC 25 07:08:27.5±0.9, 0°.7N±0°.1×125°.97E±0°.09, h49km±13km, n10, σ0°53/9, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	1.34	302	P	Pn	07 08 49.8	0.0
TNTI	**Ternate**	1.40	88	P	Pn	07 08 51.2	+0.6
KMSI	**Cibinong**	2.00	266	P	Pn	07 08 59.2	+0.4
LBMI	**Labuha**	2.04	131	P	Pn	07 08 58.9	-0.5
SGSI	**Sangihe**	2.98	351	P	Pn	07 09 11.8	-0.5
WRA	**Warramunga Arr**	22.11	159	P	P	07 13 18.5	-0.5
	1.0nm,0.6s,mb3.4,baz=337,slow=11,SNR=13						
ASAR	**Alice Springs**	25.44	163	P	P	07 13 51.3	+0.4
	0.4nm,0.7s,mb3.1,baz=331,slow=6.5,SNR=8.0						
PSI	**Prapat**	27.11	275	LR	LR	07 24 20.8	
	comp=Z,58nm,19.1s,baz=98,slow=36						
SONM	**Songino Array**	49.91	343	P	P	07 17 17.0	+0.8
	0.4nm,0.6s,mb3.6,baz=155,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	59.61	327	P	P	07 18 25.7	-0.7
	0.7nm,0.5s,mb3.9,baz=117,slow=7.9,SNR=5.6						

IDC 25 07:22:04.8±1.9, 15°.46S×176°.05E, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.9/16, mbtmp3.9/5, MS3.6/11, Ms1 3.6/11, ms1mx3.4/27, Error ellipse: s-maj=121.4km s-min=23.4km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	11.88	84	LR	LR	07 28 06.0	
	comp=Z,245nm,20.0s,baz=247,slow=30						
RAR	**Rarotonga**	23.64	108	LR	LR	07 33 22.1	
	comp=Z,300nm,21.9s,baz=79,slow=29						
RPZ	**Rata Peaks**	28.48	188	LR	LR	07 36 49.5	
	comp=Z,160nm,20.9s,baz=348,slow=31						
CTA	**Charters Tower**	28.72	256	LR	LR	07 37 07.3	
	comp=Z,98nm,18.9s,baz=260,slow=31						
PPT	**Papeete**	33.00	99	LR	LR	07 40 56.6	
	comp=Z,5.9nm,18.1s,baz=306,slow=34						

STKA	**Stephens Creek**	35.34	236	P		P	07 29 02.5	+0.4
	5.7nm,0.8s,baz=78,slow=5.7,SNR=6.6							
STKA				LR		LR	07 41 02.9	
	comp=Z,126nm,21.6s,baz=25,slow=32							
WRA	**Warramunga Arr**	39.91	257	P		P	07 29 41.1	+0.2
	2.3nm,0.8s,baz=90,slow=8.9,SNR=9.3							
ASAR	**Alice Springs**	40.42	252	P		P	07 29 44.2	-0.9
	3.9nm,1.0s,baz=82,slow=8.9,SNR=8.8							
ASAJ	**Asahikawa**	66.69	334	LR		LR	07 56 35.8	
	comp=Z,86nm,19.9s,baz=352,slow=31							
KSRS	**Korea Array**	69.40	321	LR		LR	07 57 39.3	
	comp=Z,36nm,21.6s,baz=213,slow=31							
NVAR	**Mina Array Bea**	81.47	46	P		P	07 34 24.1	0.0
	0.2nm,0.4s,baz=238,slow=5.2,SNR=2.8							
CMAR	**Chiang Mai Arr**	83.06	291	LR		LR	08 05 58.9	
	comp=Z,36nm,21.6s,baz=125,slow=32							
ILAR	**Eielson Array**	84.81	15	P		P	07 34 41.1	+0.4
	0.8nm,1.0s,baz=230,slow=5.2,SNR=5.8							
TXAR	**Lajitas Array**	89.26	59	LR		LR	08 09 30.5	
	comp=Z,39nm,19.3s,baz=185,slow=32							
PDAR	**Pinedale Array**	89.33	45	LR		LR	08 05 41.7	
	comp=Z,29nm,19.8s,baz=88,slow=29							
YKA	**Yellowknife Ar**	94.40	26	LR		LR	08 12 48.8	
	comp=Z,3.9nm,18.5s,baz=165,slow=32							
GERES	**GERESS Array B**	143.70	340	PKP		PKPdf	07 41 42.7	+0.9
	1.5nm,0.8s,baz=15,slow=4.1,SNR=5.5							

IDC 25 07:23:24.4±5.3, 10°.76S×160°.86E, h65km±39km, mb3.7/5, mb1 4.0/5, mb1mx3.7/17, mbtmp3.7/5, Error ellipse: s-maj=45.6km s-min=25.4km az=116.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	1.60	326	P	Pn	07 23 51.1	+0.5
	23nm,0.3s,baz=170,slow=12,SNR=3.4						
HNR				S	Sn	07 24 10.2	-0.1
	92nm,0.3s,baz=294,slow=20,SNR=9.6						
WRA	**Warramunga Arr**	27.12	247	P	P	07 29 02.4	+0.8
	2.1nm,0.7s,baz=75,slow=10,SNR=14						
ASAR	**Alice Springs**	28.71	240	P	P	07 29 14.9	-0.8
	1.6nm,0.8s,baz=67,slow=9.4,SNR=10.0						
CMAR	**Chiang Mai Arr**	67.62	295	P	P	07 34 14.5	-0.4
	0.6nm,0.4s,baz=113,slow=6.9,SNR=3.3						
SONM	**Songino Array**	75.66	326	P	P	07 35 03.6	+1.0
	0.6nm,0.6s,baz=134,slow=6.2,SNR=4.7						
VIB	**Van Inlet**	85.05	34	T		09 09 02.0	
DIB	**Dawson Inlet,**	85.06	34	T		09 09 00.9	
	SNR=4.9						
NVAR	**Mina Array Bea**	89.53	51	P	P	07 36 14.6	-0.3
	0.1nm,0.3s,baz=236,slow=6.1,SNR=2.9						

IDC 25 07:24:42.0±2.6, 22°.94S×66°.13W, h233km±29km, mb1 3.5/3, mb1mx3.1/16, mbtmp3.4/3, Error ellipse: s-maj=33.4km s-min=23.6km az=101.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	6.88	344	P	Pn	07 26 22.4	+1.3
	2.5nm,0.3s,baz=156,slow=8.1,SNR=88						
LPAZ				S	S	07 27 40.6	+0.3
	baz=234,slow=19,SNR=2.5						
PLCA	**Paso Flores**	18.12	191	P	P	07 28 36.7	-0.1
	0.1nm,0.3s,baz=15,slow=12,SNR=3.0						
BDFB	**Brasilia**	18.57	70	P	P	07 28 42.6	+0.8
	0.9nm,0.3s,baz=220,slow=12,SNR=8.1						
TORD	**Torodi Ar. Bea**	75.44	69	P	P	07 35 59.7	-1.0
	12nm,0.9s,baz=255,slow=5.9,SNR=5.1						
WRA	**Warramunga Arr**	132.93	207	PKP		PKPdf	07 43 29.8	-0.4
	0.4nm,1.0s,baz=159,slow=1.9,SNR=3.4						
MKAR	**Makanchi Array**	145.20	39	PKPbc		PKPbc	07 43 52.0	+0.2
	0.6nm,0.4s,baz=297,slow=3.1,SNR=4.8						

*ISCJB **25** 07:25:29.7±0.5, 23°.08N±0°.02×120°.14E±0°.03, h19km±3km, Error ellipse: s-maj=4.5km s-min=3.4km az=166.1*

*TAP **25** 07:25:29.0, 23°.06N×120°.21E, h16km, ML3.5, B*

*NEIC **25** 07:25:32.6±3.4, 23°.14N×120°.40E, h10km, ML4.3(TAP), Error ellipse: s-maj=33.7km s-min=12.2km az=70.0*

NEIC Recorded [3 TAP] at T'ai-nan.

ISC 25 07:25:29.6±0.5, 23°.08N±0°.02×120°.15E±0°.03, h16km±2km, n44, σ0°81/69, 3C-8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAI1	**Yung-k'ang**	0.08	115	⇓P	Pg	07 25 32.3	-0.6
	baz=139						
TAI1				*e*S	Sg	07 25 35.2	+0.2
	baz=139						
SCLT	**Jiali**	0.11	23	⇓*i*P	Pg	07 25 33.3	+0.2
	baz=354						
SCLT				*i* S	Sg	07 25 37.0	+1.5
	baz=354						
CHN3	**Shinhua**	0.20	90	⇑*i*P	Pg	07 25 34.0	-0.3
	baz=76						
CHN3				*i* S	Sg	07 25 38.0	+0.3
	baz=76						
TWM1	**Shoushan**	0.36	135	⇓*e*P	Pg	07 25 37.6	+0.6
	baz=140						
CHN1	**Nanshi**	0.37	73	⇑P	Pg	07 25 36.7	-0.5
	baz=67						
CHN1				*e*S	Sg	07 25 42.4	+0.1
	baz=67						
SGST	**Jiashian**	0.40	89	⇓P	Pg	07 25 37.7	-0.1
	baz=76						
SGST				*e*S	Sg	07 25 44.1	+0.8
	baz=76						
WTP	**Ta-pu**	0.46	68	P	Pg	07 25 38.2	-0.7
	baz=64						
WTP				*e*S	Sg	07 25 45.2	+0.1
	baz=64						
CHY	**Chiayi**	0.49	31	P	Pg	07 25 39.5	0.0
	baz=14						
CHY				*e*S	Sg	07 25 46.8	+0.7
	baz=14						
TPUB	**Ta-pu**	0.50	63	*e*Pg	Pg	07 25 38.5	-1.0
STYT	**Tauyuan**	0.57	81	⇓*i*P	Pg	07 25 40.3	-0.5
	baz=68						
STYT				*e*S	Sg	07 25 48.6	+0.1
	baz=68						
PNG	**Penghu**	0.73	312	⇑*i*P	Pg	07 25 44.2	+0.3
	baz=311						
PNG				*e*S	Sg	07 25 55.0	+1.4
	baz=311						
ALS	**Alishan**	0.74	54	*e*P	Pb	07 25 43.8	-0.4
	baz=50						
ALS				*e*S	Sg	07 25 54.5	+0.5
	baz=50						
TWP	**Hsiaoliuchiu**	0.75	165	*e*P	Pb	07 25 44.5	+0.2
	baz=181						
TWP				*e*S	Sb	07 25 55.4	+1.0
	baz=181						
WTCT	**Ta-ch'eng**	0.80	9	*e*P	Pb	07 25 45.0	0.0
	baz=14						
WTCT				*e*S	Sb	07 25 56.5	+1.0
	baz=14						
ELDTW	**Lidau**	0.81	82	*e*P	Pb	07 25 44.6	-0.6
	baz=80						
ELDTW				S	Sb	07 25 56.3	+0.3
	baz=80						
SCZT	**Fangliau**	0.82	148	⇓*i*P	Pb	07 25 45.9	+0.3
	baz=135						
SCZT				S	Sb	07 25 57.8	+1.4
	baz=135						
YUS	**Yu-Shan**	0.85	61	P	Pb	07 25 45.6	-0.3
	baz=58						
YUS				S	Sb	07 25 57.3	+0.3
	baz=58						
ECL	**Taimali**	0.88	122	*e*P	Pb	07 25 46.1	-0.4
	baz=124						
TWG	**Pinlang**	0.89	106	*e*Pg	Pg	07 25 45.8	-1.1
TWG	**Pinlang**	0.89	106	P	Pb	07 25 46.3	-0.3
	baz=107						
TWG				*e*S	Sb	07 25 59.1	+0.8
	baz=107						
WNT	**Mingjian**	0.94	32	*e*P	Pb	07 25 47.2	-0.3
	baz=28						
WNT				*e*S	Sb	07 26 00.7	+1.0
	baz=28						
EAST	**Anshuo**	0.94	137	*e*P	Pb	07 25 47.2	-0.4
	baz=132						
TTN	**Taitung**	0.98	109	*e*P	Pb	07 25 48.6	+0.5
	baz=109						
TAW	**Tawu**	0.99	136	*e*P	Pb	07 25 48.2	-0.2
	baz=126						
TAW				*e*S	Sb	07 26 02.1	+0.9
	baz=126						
SSLB	**Suanglung**	1.03	46	*e*Pg	Pg	07 25 47.8	-1.7
TYC	**Yuchr**	1.05	38	⇓*i*P	Pb	07 25 48.8	-0.6
	baz=35						
TYC				*e*S	Sb	07 26 03.3	+0.4
	baz=35						
SMLT	**Sun Moon Lake**	1.06	41	*e*P	Pb	07 25 48.9	-0.7
	baz=37						
TWF1	**Yuli**	1.09	75	P	Pb	07 25 49.4	-0.7
	baz=66						
TWF1				*e*S	Sb	07 26 03.9	-0.2
	baz=66						
YULB	**Yu-li**	1.10	73	*e*Pg	Pg	07 25 49.2	-1.7
CHKT	**Chengkung**	1.12	89	P	Pn	07 25 50.4	-0.2
	baz=88						
CHKT				*e*S	Sb	07 26 06.0	+1.0
	baz=88						
EHY	**Hungye**	1.16	68	⇓*i*P	Pn	07 25 50.7	-0.5
	baz=66						
EHY				S	Sb	07 26 06.0	-0.2
	baz=66						
TCU	**Taichung**	1.17	24	*e*P	Pn	07 25 50.2	-1.2
	baz=21						
TWK1	**Hengchun**	1.28	152	*e*P	Pn	07 25 50.7	-2.1
	baz=171						
ESL	**Shilin**	1.39	58	*e*P	Pn	07 25 53.6	-0.7
	baz=55						
TWQ1	**Liyutan**	1.39	24	*e*P	Pn	07 25 54.6	+0.3
	baz=21						
WHF	**Hehuan Shan**	1.48	44	*e*P	Pn	07 25 55.7	+0.2
	baz=41						
WHF				*e*S	Sn	07 26 14.5	0.0
	baz=41						
TWT	**Tachien**	1.50	39	*e*P	Pn	07 25 55.9	0.0
	baz=35						
LAY	**Lan-yu**	1.66	128	*e*P	Pn	07 25 57.1	-0.9
	baz=130						
NACB	**Ninganchiao**	1.72	50	*e*Pn	Pn	07 26 00.2	+1.3
NACB				*e*Sg	Sg	07 26 21.8	-3.3
YHNB	**Yeheng**	1.94	35	*e*Pn	Pn	07 26 03.3	+1.3
ENA	**Nanau**	1.99	47	*e*P	Pn	07 26 04.2	+1.7
	baz=62						
ENTT	**Nioudou**	2.03	40	*e*P	Pn	07 26 03.5	+0.4
	baz=21						
TWC	**Suao**	2.18	45	*e*P	Pn	07 26 05.5	+0.3
	baz=59						
QZH	**Quanzhou**	2.34	323	*e*Pn	Pn	07 26 01.0	-6.4
QZH				Sn	Sn	07 26 34.3	-1.5
QZH				smax			
	comp=N,160nm,0.6s						
QZH				smax			
	comp=E,190nm,0.8s						

CASC 25 07:46:14.8±1.5, 13°.42N×90°.83W, h52km±99km, MD3.5, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	1.02	359	*e*P	Pn	07 46 34.4	+1.5
FG6		1.14	357	*e*P	Pn	07 46 35.1	+0.7
JAT	**Jato**	1.19	319	*e*P	Pn	07 46 35.3	+0.2
RTR	**El Retiro**	1.25	67	⇑*e*P	Pn	07 46 36.1	+0.3
SBLS	**San Blas**	1.25	70	*e*P	Pn	07 46 35.8	-0.1
RBDL	**Robledal**	1.31	58	*e*P	Pn	07 46 37.1	+0.4
TP2	**Tecpan 2**	1.37	352	*e*P	Pn	07 46 38.8	+1.3
TP2				*e*S	Sn	07 46 56.4	+1.8
BOQS	**Boqueron**	1.54	78	*e*P	Pn	07 46 40.6	+0.8
BOQS				*e*S	Sn	07 47 00.4	+1.7
LFRS	**El Faro**	1.73	83	*e*P	Pn	07 46 43.1	+0.6
LFRS				*e*S	Sn	07 47 04.3	+0.8
SNVI	**San Vicente**	1.95	84	*e*P	Pn	07 46 46.2	+0.8

NNC 25 07:49:26.9±12.0, 38°.04N×70°.59E, h0km, mb3.5, mpv3.3, 2C-3D, Error ellipse: s-maj=95.0km s-min=87.8km az=16.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	5.05	359	⇓Pn	Pn	07 50 47.6	+3.8
	0.9nm,0.2s,baz=179,slow=13,SNR=54						
KK31				⇑Sn	Sn	07 51 49.9	+6.9
	0.3nm,0.2s,baz=188,slow=25						
TKM2	**Tokmak 2**	6.19	36	⇓Pn	Pn	07 50 57.6	-1.9
	1.8nm,0.6s						
TKM2				⇓Sn	Sn	07 52 09.4	-1.4
	0.6nm,0.5s						
AB31	**Akbulak array**	13.59	329	⇑Pn	Pn	07 52 40.1	-0.6
	0.2nm,0.5s,baz=173,slow=8.9,SNR=5.8						

NNC 25 07:51:36.4±5.5, 53°.03N×86°.97E, h0km, mb3.7, mpv3.2, 7C-5D, Error ellipse: s-maj=43.4km s-min=29.1km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	5.67	249	⇑Pn	Pn	07 53 01.0	-0.8
	1.2nm,0.3s						
KURK				⇑Sn	Sn	07 54 11.5	+4.0
	2.7nm,0.6s						
KURK				⇓Lg		07 54 38.3	
	36nm,1.1s						
KURBB	**Kurchatov Arra**	5.76	249	⇑Pn	Pn	07 53 00.8	-2.2
	0.7nm,0.4s,baz=60,slow=13						
KURBB				⇓Sn	Sn	07 54 11.9	+2.1
	2.9nm,1.3s						
KURBB				⇑Lg		07 54 40.9	
	6.8nm,1.3s,baz=67,slow=31						
MK31	**Makanchi Array**	6.94	208	⇓Pn	Pn	07 53 23.6	+4.4
	1.8nm,0.8s,baz=182,slow=24,SNR=8.9						
MK31				⇑Sn	Sn	07 54 43.4	+4.7
MK31				⇑Lg		07 55 15.9	
	7.4nm,1.1s,baz=22,slow=33,SNR=4.5						
VOSK	**Vostochnaya**	9.68	275	⇓Pn	Pn	07 53 52.5	-4.3
	3.3nm,1.4s						
VOSK				⇓Sn	Sn	07 55 42.3	-3.7
	3.8nm,0.8s						
VOSK				⇑Lg		07 56 48.1	
	11nm,1.4s						

*NIED **25** 07:51:00, 21°.30N×121°.10E, h17km, Mw3.9 Best double couple: $M_0$6.81000×10^14 NP1:ϕ_s95.00000°, δ82.00000°, λ-9.00000°. NP2:ϕ_s186.00000°, δ81.00000°, λ-172.00000°.*

*TAP **25** 07:51:54.6, 21°.20N×121°.20E, h74km±1km, ML4.0, D*

*NEIC **25** 07:51:54.3±0.8, 21°.13N×121°.14E, h10km, MG3.9(JMA), Error ellipse: s-maj=19.9km s-min=11.1km az=92.0*

*ISCJB **25** 07:51:55.5±0.9, 21°.12N±0°.05×121°.19E±0°.06, h33km±9km, mb3.7/9, MS3.0/2, Error ellipse: s-maj=10.0km s-min=8.5km az=159.8*

*IDC **25** 07:52:02.2±6.3, 21°.17N×121°.13E, h82km±64km, mb3.5/9, mb1 3.7/10, mb1mx3.5/22, mbtmp3.5/10, MS3.1/2, Ms1 3.1/2, ms1mx2.4/38, Error ellipse: s-maj=25.0km s-min=16.0km az=76.0*

ISC 25 07:51:56.4±1.0, 21°.16N±0°.04×121°.16E±0°.06, h28km±6km, n50, σ1°08/61, mb3.7/9, MS3.0/2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	0.77	342	P	Pb	07 52 11.3	0.0
	baz=330						
TSEB				S	Sb	07 52 23.3	+1.8
	baz=330						
TWK1	**Hengchun**	0.84	337	*i* P	Pb	07 52 11.6	-0.9
	baz=334						
TWK1				S	Sb	07 52 24.6	+1.1

SCZT	Fangliau	1.30	338	P	Pn	07 52 17.6	-1.2
	baz=335						
SCZT				eS	Sn	07 52 34.1	-1.2
	baz=335						
TWP	Hsiaoliuchiu	1.39	328	eP	Pn	07 52 19.8	-0.2
	baz=326						
TWP				eS	Sn	07 52 37.8	+0.3
	baz=326						
ECL	Taimali	1.44	353	eP	Pn	07 52 19.2	-1.5
	baz=356						
TTN	Taitung	1.58	360	eP	Pn	07 52 23.0	+0.3
	baz=5.0						
TWG	Pinlang	1.65	357	ePn	Pn	07 52 22.2	-1.5
TWG	Pinlang	1.65	357	eP	Pn	07 52 22.6	-1.1
	baz=356						
SGLT	Jiouru	1.67	339	eP	Pn	07 52 23.6	-0.3
	baz=346						
SGLT				eS	Sn	07 52 45.6	+1.1
	baz=346						
TWM1	Shoushan	1.79	338	eP	Pn	07 52 25.1	-0.4
	baz=324						
CHKT	Chengkung	1.94	6	eP	Pn	07 52 26.9	-0.6
	baz=356						
SGST	Jiashian	1.98	345	eP	Pn	07 52 27.5	-0.7
	baz=333						
ELDTW	Lidau	2.02	356	eP	Pn	07 52 24.9	-3.8
	baz=360						
STYT	Tauyuan	2.02	350	eP	Pn	07 52 28.2	-0.5
	baz=348						
CHN1	Nanshi	2.10	344	eP	Pn	07 52 30.6	+0.8
	baz=343						
WTP	Ta-pu	2.13	347	eP	Pn	07 52 29.6	-0.7
	baz=345						
TPUB	Ta-pu	2.18	347	ePn	Pn	07 52 33.5	+2.6
TWF1	Yuli	2.18	3	P	Pn	07 52 29.7	-1.2
	baz=357						
YULB	Yu-li	2.22	3	ePn	Pn	07 52 29.6	-1.9
YUS	Yu-Shan	2.32	355	eP	Pn	07 52 32.6	-0.3
	baz=354						
EHY	Hungye	2.34	4	P	Pn	07 52 32.2	-0.8
	baz=3.0						
ALS	Alishan	2.36	352	eP	Pn	07 52 33.9	+0.5
	baz=351						
SSLB	Suanglung	2.62	356	ePn	Pn	07 52 36.9	-0.1
ESL	Shilin	2.65	6	eP	Pn	07 52 38.3	+0.9
	baz=360						
SMLT	Sun Moon Lake	2.72	355	P	Pn	07 52 38.2	-0.1
	baz=354						
TYC	Yuchr	2.74	354	P	Pn	07 52 38.5	-0.2
	baz=354						
PNG	Penghu	2.81	329	eP	Pn	07 52 37.7	-1.9
	baz=322						
PNG				eS	Sn	07 53 08.4	-4.2
	baz=322						
WHF	Hehuan Shan	2.97	2	eP	Pn	07 52 42.8	+1.0
	baz=351						
WHF				eS	Sn	07 53 15.1	-1.4
	baz=351						
NACB	Ninganchiao	3.02	8	ePn	Pn	07 52 42.8	+0.3
NACB				eSn	Sn	07 53 20.6	+2.8
TWQ1	Liyutan	3.19	354	eP	Pn	07 52 46.0	+1.2
	baz=353						
ENA	Nanau	3.29	9	eP	Pn	07 52 47.9	+1.6
	baz=358						
ENTT	Nioudou	3.48	6	eP	Pn	07 52 49.7	+0.9
	baz=6.0						
TWC	Suao	3.49	10	eP	Pn	07 52 50.5	+1.6
	baz=10.0						
YHNB	Yeheng	3.50	3	ePn	Pn	07 52 50.4	+1.3
YHNB				eSn	Sn	07 53 29.0	-0.5
KSRS	Korea Array	17.27	18	P	Pn	07 55 57.3	+1.8
	0.1nm,0.3s,baz=196,slow=12,SNR=6.7						
CMAR	Chiang Mai Arr	21.07	267	P	P	07 56 39.2	+0.6
	0.9nm,0.3s,mb3.5,baz=43,slow=8.4,SNR=5.5						
MJAR	Matsushiro Arr	21.35	40	P	P	07 56 43.5	+2.1
	2.2nm,0.8s,mb3.5,baz=241,slow=15,SNR=6.6						
SONM	Songino Array	29.15	339	P	P	07 57 55.3	+0.2
	1.5nm,0.7s,mb3.8,baz=157,slow=8.9,SNR=8.0						
MKAR	Makanchi Array	40.53	318	P	P	07 59 33.6	+0.5
	0.8nm,0.6s,mb3.6,baz=108,slow=8.7,SNR=5.0						
ZALV	Zalesovo Beam	42.78	329	P	P	07 59 51.5	0.0
	1.2nm,0.3s,mb4.1,baz=99,slow=9.2,SNR=4.1						
ZALV				LR	LR	08 18 20.1	
	comp=Z,14nm,20.5s,MS2.8,baz=286,slow=37						
ZALV	Zalesovo Beam	42.78	329	P	P	07 59 51.5	0.0
ZALV				LR	LR	08 18 20.1	
WRA	Warramunga Arr	42.84	162	P	P	07 59 51.8	-0.4
	0.5nm,0.5s,mb3.5,baz=345,slow=8.8,SNR=12						
AAK	Ala-Archa	44.36	310	LR	LR	08 21 56.7	
	comp=Z,35nm,21.6s,MS3.2,baz=65,slow=40						
ASAR	Alice Springs	46.26	164	P	P	08 00 20.1	+0.6
	0.3nm,0.5s,mb3.5,baz=345,slow=7.1,SNR=7.0						
STKA	Stephens Creek	56.26	159	P	P	08 01 34.9	+0.5
	3.0nm,1.1s,mb4.2,baz=331,slow=10,SNR=3.0						
ILAR	Eielson Array	71.91	27	P	P	08 03 15.8	-0.9
	0.3nm,0.5s,mb3.4,baz=272,slow=5.5,SNR=6.8						

WEL 25 07:57:12.5±0.7, 36°.77S×177°.06E, h234km±5km, ML3.8/17,
Error ellipse: s-maj=5.2km s-min=4.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	1.15	200	PN	Pn	07 57 47.5	+0.8
MXZ	Matakaoa Point	1.27	129	PN	Pn	07 57 47.4	-0.1
MXZ				SN	S	07 58 14.3	-0.8
URZ	Urewera	1.49	179	PN	Pn	07 57 49.1	-0.1
URZ				SN	S	07 58 18.4	+0.3
MWZ	Matawai	1.61	167	PN	Pn	07 57 50.5	+0.4
PUZ	Puketiti	1.61	144	PN	Pn	07 57 50.2	+0.1
PUZ				SN	S	07 58 18.3	-1.5
CNGZ	Carnagh Statio	1.94	152	PN	Pn	07 57 53.6	+0.6
RAHZ	Arahi	2.15	179	PN	Pn	07 57 55.3	+0.3
PRGZ	Paritu Road	2.25	163	PN	Pn	07 57 56.4	+0.4
KNZ	Kokohu	2.30	168	PN	Pn	07 57 56.3	-0.2
NMHZ	Naumai	2.33	185	PN	Pn	07 57 57.5	+0.6
BKZ	Black Stump Fm	2.44	190	PN	Pn	07 57 57.1	-0.8
MHGZ	Mahia Peninsul	2.47	165	PN	Pn	07 57 58.5	+0.2
MCHZ	McNeill Hill	2.69	186	PN	Pn	07 58 00.7	+0.2
TUVZ	Tukino	2.73	204	PN	Pn	07 58 01.6	+0.6
WNVZ	Wahianoa	2.81	204	PN	Pn	07 58 01.8	0.0
BHHZ	Black Hill Sta	2.83	196	PN	Pn	07 58 01.4	-0.6
CKHZ	Cape Kidnapper	2.89	180	PN	Pn	07 58 02.4	-0.3
MTVZ	Mangateitei	2.90	205	PN	Pn	07 58 03.1	+0.3
KAHZ	Kahuranaki	3.03	183	PN	Pn	07 58 03.8	-0.4
PNHZ	Pukenui	3.21	192	PN	Pn	07 58 05.3	-1.0
PXZ	Pawanui	3.26	183	PN	Pn	07 58 05.7	-1.2
WPHZ	Waipukurau	3.33	188	PN	Pn	07 58 06.7	-0.9
TSZ	Takapari Road	3.40	194	PN	Pn	07 58 07.2	-1.2
DVHZ	Dannevirke	3.60	191	ePN	Pn	07 58 08.9	-1.9
POWZ	Post Office Ro	3.76	195	PN	Pn	07 58 10.9	-1.8
BFZ	Birch Farm	3.96	189	PN	Pn	07 58 13.3	-1.7
MRZ	Mangatainoka R	4.06	196	PN	Pn	07 58 13.9	-2.3
TIWZ	Tintock	4.11	193	PN	Pn	07 58 15.4	-1.4
HOWZ	Holdsworth Sta	4.30	196	PN	Pn	07 58 16.7	-2.4
OGWZ	Otaki Gorge	4.30	199	PN	Pn	07 58 16.9	-2.3
KIW	Kapiti Island	4.42	202	PN	Pn	07 58 18.3	-2.3
TMWZ	Te Maipa	4.43	192	PN	Pn	07 58 18.6	-2.1
MTW	Mount Morrison	4.55	195	PN	Pn	07 58 19.6	-2.6
CAW	Cannon Point	4.60	199	PN	Pn	07 58 20.1	-2.7
MSWZ	Moikau Station	4.85	196	PN	Pn	07 58 23.5	-2.4
SNZO	South Karori	4.89	201	PN	Pn	07 58 23.1	-3.2
TCW	Tory Channel	4.94	205	ePN	Pn	07 58 24.2	-2.7
PLWZ	Palliser	5.00	196	PN	Pn	07 58 25.0	-2.7
TUWZ	Tuamarina	5.25	207	PN	Pn	07 58 27.9	-2.9
NNZ	Nelson	5.29	212	PN	Pn	07 58 29.1	-2.2
THZ	Tophouse	5.94	212	PN	Pn	07 58 37.4	-2.1
KHZ	Kahutara	6.26	205	PN	Pn	07 58 40.5	-3.0
LTZ	Lake Taylor	7.05	210	PN	Pn	07 58 50.2	-3.3
ODZ	Otahua Downs	9.59	208	PN	Pn	07 59 22.7	-3.1

*NEIC **25** 08:20:23.1, 31°.67S×71°.24W, h13km, ML3.0(GUC), After GUC.*

GUC 25 08:20:23.1±0.9, 31°.67S×71°.24W, h13km±6km, MD3.7, ML3.0, 5C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.30	226	⇓iP	Pg	08 20 24.5	-4.9
CHNG				iS	Sg	08 20 29.5	-4.0
CHNG				AML	AML	08 20 30.1	
	comp=E,2μm,0.3s						
OVCH	Ovalle	1.06	2	⇓iP	Pb	08 20 41.9	-1.4
OVCH				iS	Sb	08 20 56.6	-0.4
OVCH	Ovalle	1.06	2	⇓iP	Pb	08 20 41.9	-1.4
OVCH				iS	Sb	08 20 56.6	-0.4
OVCH				AML	AML	08 21 00.6	
	comp=N,356nm,0.4s						
ROCH	El Roble	1.31	171	eP	Pn	08 20 46.1	-1.0
ROCH				iS	Sb	08 21 04.1	-0.1
PEL	Peldehue	1.54	162	⇑iP	Pn	08 20 50.6	+0.3
PEL				iS	Sn	08 21 10.7	+0.6
PEL				AML	AML	08 21 13.6	
	comp=E,690nm,0.3s						
TLL	Tololo Astrono	1.55	14	eP	Pn	08 20 50.2	-0.1
TLL				iS	Sn	08 21 10.8	+0.5
TLL	Tololo Astrono	1.55	14	eP	Pn	08 20 50.2	-0.1
TLL				iS	Sn	08 21 10.8	+0.5
TLL				AML	AML	08 21 13.6	
	comp=N,225nm,0.3s						
CLCH	Cerro Calan	1.82	161	⇓iP	Pn	08 20 54.5	+0.4
CLCH				iS	Sn	08 21 17.9	+0.9
CLCH				AML	AML	08 21 22.3	
	comp=E,230nm,0.5s						
FCH	Farellones	1.84	154	⇓iP	Pn	08 20 53.4	-0.9
FCH				iS	Sn	08 21 17.3	-0.1
FCH				AML	AML	08 21 24.7	
	comp=E,149nm,0.2s						
ANTU	Antumapu	1.96	165	eP	Pn	08 20 56.7	+0.7
ANTU				iS	Sn	08 21 21.0	+0.6
ANTU	Antumapu	1.96	165	eP	Pn	08 20 56.7	+0.7
ANTU				iS	Sn	08 21 21.0	+0.6
ANTU				AML	AML	08 21 27.2	
	comp=E,171nm,0.2s						
TACH	Talagante	1.99	173	⇑iP	Pn	08 20 55.9	-0.5
TACH				iS	Sn	08 21 21.5	+0.3
TACH	Talagante	1.99	173	⇑iP	Pn	08 20 55.9	-0.5
TACH				iS	Sn	08 21 21.5	+0.3
PCH	Pirque	2.04	163	eP	Pn	08 20 57.6	+0.6
PCH	Pirque	2.04	163	eP	Pn	08 20 57.6	+0.6
LMEL	Las Melosas	2.34	158	⇑iP	Pn	08 21 02.5	+1.2
LMEL				iS	Sn	08 21 33.1	+3.3
LMEL	Las Melosas	2.34	158	⇑iP	Pn	08 21 02.5	+1.2
LMEL				iS	Sn	08 21 33.1	+3.3
LMEL				AML	AML	08 21 39.2	
	comp=N,292nm,0.2s						
LCO	Las Campanas	2.69	10	eP	Pn	08 21 05.1	-1.0
LCO				iS	Sn	08 21 38.2	-0.3
LCO	Las Campanas	2.69	10	eP	Pn	08 21 05.1	-1.0
LCO				iS	Sn	08 21 38.2	-0.3
LCO				AML	AML	08 21 49.5	
	comp=E,58nm,0.2s						

*NEIC **25** 08:36:44.7±3.6, 19°.48N×69°.34W, h10km, MD3.7(RSPR), Error ellipse: s-maj=103.0km s-min=9.0km az=186.0*
*ISCJB **25** 08:36:47.1±1.5, 19°.3N±0°.2×69°.34W±0°.06, h33km, Error ellipse: s-maj=34.5km s-min=5.3km az=9.4*
*RSPR **25** 08:36:48.7, 20°.53N×68°.31W, h25km±8km, MD3.6/4*
ISC 25 08:36:47.8±1.5, 19°.4N±0°.2×69°.34W±0°.06, h35km, n11, σ1°.02/19, 3C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	Presa de Saban	1.89	257	ePn	Pn	08 37 17.3	-0.3
SDDR				eS	Sn	08 37 40.5	+0.2
AGPR	Aguadilla, PR	2.31	114	ePn	Pn	08 37 23.7	+0.4
AGPR				eSn	Sn	08 37 53.4	+2.9
LSP	Las Mesas	2.46	120	ePn	Pn	08 37 25.3	-0.1
LSP				eSn	Sn	08 37 57.5	+3.2
CRPR	Cabo Rojo, PR	2.53	123	ePn	Pn	08 37 26.2	-0.2
CRPR				Sn	Sn	08 37 54.7	-1.3
LRS	Lares	2.61	115	⇑iP	Pn	08 37 27.8	+0.3
LRS				eS	Sn	08 37 58.3	+0.3
AOPR	Arecibo Observ	2.67	113	⇑eP	Pn	08 37 28.1	-0.1
OBIP	Obispado Ponce	2.92	117	eS	Sn	08 38 06.7	+0.9
OBIP	Obispado Ponce	2.92	117	ePn	Pn	08 37 31.6	-0.2
OBIP				eSn	Sn	08 38 04.7	-1.1
CELP	Cerrillos	2.93	116	⇑eP	Pn	08 37 32.7	+0.8
CELP				eS	Sn	08 38 06.3	+0.3
SJG	San Juan	3.29	113	eS	Sn	08 38 11.7	-3.0
SJG	San Juan	3.29	113	⇑eP	Pn	08 37 35.9	-0.9
SJG				eS	Sn	08 38 12.2	-2.5

*IDC **25** 08:49:12.7±1.3, 30°.73N×83°.85E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.8/26, mbtmp3.8/9, ML3.3/1, MS3.2/3, Ms1 3.3/3, ms1mx2.7/36, Error ellipse: s-maj=35.8km s-min=24.4km az=47.0*
*NEIC **25** 08:49:14.9±1.1, 30°.84N×83°.43E, h10km, mb3.6/1, Error ellipse: s-maj=24.0km s-min=11.4km az=215.0*
*NDI **25** 08:49:22.5±2.1, 30°.78N×83°.42E, h10km, ML3.1, mb3.3(NEIC)*
ISC 25 08:49:16.0±1.6, 30°.83N±0°.05×83°.55E±0°.05, h16km±10km, n28, σ1°.47/32, mb3.6/9, MS3.2/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	Pithoragarh	3.16	247	ePKP	Pb	08 50 12.0	+0.3
PTH				ex	Sb	08 50 55.5	+5.6
LGTI	Lohaghat	3.18	245	ePKP	Pb	08 50 13.5	+1.5
LGTI				ex	x	08 51 11.5	
KLP	Kalpa	4.60	280	ePKP	Pb	08 50 30.4	-5.8
KLP				ex	Sb	08 51 35.3	+4.0
KLP				AML	AML	08 52 08.2	
	comp=N,41nm,0.5s						
KLP				AML	AML	08 52 10.7	
	comp=E,44nm,0.8s						
SDNR	Sundarnagar	5.68	278	ex	Pg	08 51 04.5	-0.3
NDI	New Delhi	5.91	250	ex	Pn	08 50 42.0	-0.8
SONA	Sohna	6.19	247	ePKP	Pn	08 50 52.6	+5.9
SONA				eS	Sn	08 51 57.3	+0.1
LSA	Lhasa	6.67	98	ePn	Pn	08 50 56.1	+2.9
	comp=E,20nm,0.9s						
LSA				eSn	Sn	08 52 14.0	+5.1
KUDL	Kundal	6.71	248	ePKP	Pn	08 50 58.0	+4.1
KUDL				eS	Sn	08 52 09.3	-0.7
SHL	Shillong	9.03	123	ex	Pn	08 51 23.0	-2.6
SHL				eS	Sn	08 53 08.0	+1.1
KBL	Kabul	12.77	291	P	Pn	08 52 15.0	-1.8
	comp=E,6.4nm,1.0s						
UCH	Uchtor	13.49	330	ePn	Pn	08 52 26.6	+0.1
	comp=E,4.5nm,0.9s						
TKM2	Tokmak 2	13.63	334	eP	Pn	08 52 26.3	-2.2
AAK	Ala-Archa	13.83	331	LR	LR	08 58 26.0	
	comp=E,105nm,18.9s,baz=25,slow=39						
EKS2	Erkin-Say	14.16	329	P	Pn	08 52 37.9	+2.2
MKAR	Makanchi Array	15.97	357	Pn	Pn	08 52 57.7	-2.1
	comp=E,0.1nm,0.3s,baz=180,slow=12,SNR=3.1						
MKAR	Makanchi Array	15.97	357	Pn	Pn	08 52 57.7	-2.1
CMAR	Chiang Mai Arr	18.61	128	P	Pn	08 53 31.9	-1.2
	comp=E,0.6nm,0.3s,baz=310,slow=10,SNR=13						
ZALV	Zalesovo Beam	23.12	2	P	P	08 54 21.9	+0.8
	comp=E,2.1nm,0.7s,mb3.7,baz=179,slow=8.6,SNR=6.7						
BVAR	Borovoye Array	24.17	340	P	P	08 54 32.0	+0.8
	comp=E,0.4nm,0.4s,mb3.2,baz=160,slow=4.6,SNR=2.9						
SONM	Songino Array	24.36	39	P	P	08 54 33.0	-0.1
	comp=E,1.0nm,0.8s,mb3.3,baz=228,slow=11,SNR=6.2						
ABKAR	Akbulak array	25.62	323	eP	P	08 54 46.4	+2.0
	comp=E,1.0nm,0.7s,mb3.5						
KSRS	Korea Array	37.05	67	LR	LR	09 11 39.9	
	comp=E,21nm,18.9s,MS3.0,baz=2.7,slow=37						
BRTR	Keskin Array B	41.25	297	P	P	08 57 03.1	+2.9
	comp=E,0.4nm,0.6s,mb3.2,baz=60,slow=4.0,SNR=4.4						
FINES	FINESS Array B	47.97	327	P	P	08 57 54.7	+1.2
	comp=E,1.0nm,0.7s,mb4.0,baz=78,slow=9.9,SNR=4.5						
FINES	FINESS Array B	47.97	327	P	P	08 57 54.7	+1.2
NOA	NORSAR Array B	55.08	326	P	P	08 58 46.1	-0.5
	comp=E,1.2nm,0.9s,mb3.9,baz=87,slow=7.1,SNR=3.4						
NOA				LR	LR	09 23 34.9	
	comp=E,34nm,18.6s,MS3.5,baz=290,slow=37						
WRA	Warramunga Arr	70.20	129	P	P	09 00 26.1	-2.0
	comp=E,2.0nm,0.8s,mb4.1,baz=323,slow=6.4,SNR=7.0						
ILAR	Eielson Array	76.94	20	P	P	09 01 05.6	-1.6
	comp=E,0.6nm,0.8s,mb3.6,baz=305,slow=4.9,SNR=7.9						

*IDC **25** 08:51:38.4±4.6, 36°.92N×72°.30E, h218km±40km, mb3.6/3, mb1 3.6/8, mb1mx3.2/27, mbtmp3.5/8, Error ellipse: s-maj=50.9km s-min=30.4km az=142.0*
*ISCJB **25** 08:51:41.1±0.4, 37°.37N±0°.03×72°.07E±0°.08, h224km±7km, mb3.5/4, Error ellipse: s-maj=10.0km s-min=4.8km az=14.6*
*NEIC **25** 08:51:41.7±0.6, 37°.27N×72°.22E, h229km±8km, mb4.0/4, Error ellipse: s-maj=16.0km s-min=8.1km az=114.0*
*NNC **25** 08:51:48.3±9.1, 38°.15N×71°.52E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=76.8km s-min=61.4km az=1.0*
ISC 25 08:51:42.2±0.4, 37°.37N±0°.03×72°.10E±0°.09, h210km±6km, n36, σ0°.99/48, mb3.5/4, 6C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.54	182	⇑P	Pn	08 52 39.0	+0.2
CEP				S	S	08 53 23.0	-0.3
KSH	Kashi	3.72	54	⇑iPn	Pn	08 52 36.3	-4.6
KSH				Sn	S	08 53 15.8	-11
KSH				smax			
	comp=N,190nm,0.5s						
KSH				smax			
	comp=E,92nm,0.4s						
KBL	Kabul	3.76	222	ePn	Pn	08 52 42.5	+1.1
KBL				eS	S	08 53 26.4	-1.5
CHCP	Chirah Chowk	3.83	165	⇑P	Pn	08 52 42.8	+0.5
NIL	Nilore	3.83	165	ePn	Pn	08 52 41.4	-1.0
AML	Almayashu	4.91	14	P	Pn	08 52 57.1	+1.5
	SNR=7.9						
AML	Almayashu	4.91	14	ePn	Pn	08 52 56.8	+1.2
AML				eS	S	08 53 52.3	-1.4
UCH	Uchtor	5.19	20	P	Pn	08 53 00.2	+1.0
	SNR=12						
UCH	Uchtor	5.19	20	ePn	Pn	08 53 00.1	+0.9
UCH				eS	S	08 53 58.8	-1.4
EKS2	Erkin-Say	5.44	13	P	Pn	08 53 03.4	+1.1
	SNR=20						
EKS2	Erkin-Say	5.44	13	ePn	Pn	08 53 03.2	+0.9
EKS2				eS	S	08 54 05.1	-0.7
AAK	Ala-Archa	5.57	19	P	Pn	08 53 05.3	+1.4
	SNR=13						
AAK	Ala-Archa	5.57	19	P	Pn	08 53 05.2	+1.3
	comp=E,0.1nm,0.3s,baz=178,slow=3.8,SNR=37						
AAK				S	S	08 54 08.8	0.0
	comp=E,0.0nm,0.3s,baz=193,slow=12,SNR=5.1						
ULHL	Ulahol	5.82	32	P	Pn	08 53 07.3	+0.1
	SNR=7.9						
KK31	Karatay Array	5.85	349	⇑Pn	Pn	08 53 08.5	+1.0
	comp=E,3.8nm,0.3s,baz=161,slow=10,SNR=60						
KK31				⇑Sn	S	08 54 09.4	-5.9
	comp=E,70nm,0.8s,baz=178,slow=23,SNR=40						
KKAR	Karatay Array	5.85	349	ePn	Pn	08 53 08.7	+1.1
	comp=E,10nm,0.3s						
KKAR				eS	S	08 54 13.8	-1.5
CHMS	Chumysh	5.98	19	P	Pn	08 53 09.8	+0.7
	SNR=5.6						
CHMS	Chumysh	5.98	19	ePn	Pn	08 53 09.7	+0.6
TKM2	Tokmak 2	6.16	25	⇑Pn	Pn	08 53 11.7	+0.2
	comp=E,15nm,0.7s						
TKM2				⇓Sn	S	08 54 22.3	-0.2
	comp=E,9.3nm,0.8s						
TKM2	Tokmak 2	6.16	25	P	Pn	08 53 12.4	+0.9
	SNR=19						
TKM2	Tokmak 2	6.16	25	ePn	Pn	08 53 12.1	+0.6
	comp=E,14nm,0.6s						
MKAR	Makanchi Array	12.07	36	P	Pn	08 54 27.8	+0.3
	comp=E,0.2nm,0.3s,baz=206,slow=11,SNR=2.2						
KURK	Kurchatov	14.13	17	ePn	Pn	08 54 50.2	-2.9
AB31	Akbulak array	14.79	327	Pn	Pn	08 55 01.5	+0.4
	comp=E,1.4nm,0.5s,baz=154,slow=9.9,SNR=20						
AB31				⇓Sn	S	08 57 38.8	-6.2
	comp=E,1.1nm,0.5s						
ABKAR	Akbulak array	14.79	327	ePn	Pn	08 55 00.9	-0.2
	comp=E,1.0nm,0.7s						
ABKAR				eS	S	08 57 37.5	-7.5
BVAR	Borovoye Array	15.70	356	P	Pn	08 55 12.8	+0.7
	comp=E,1.0nm,0.3s,baz=170,slow=10,SNR=10						
BRVK	Borovoye	15.74	356	eP	Pn	08 55 13.1	+0.5
	comp=E,2.0nm,0.5s						
AKTK	Aktyubinsk	16.50	327	P	P	08 55 21.8	+1.2
AKTO	Aktyubinsk	16.50	327	P	P	08 55 21.8	+1.2
	comp=E,1.5nm,0.3s,baz=129,slow=14,SNR=28						
ZAA0	Zalesovo Array	18.76	24	eP	P	08 55 44.5	-0.8
ZALV	Zalesovo Beam	18.76	24	P	P	08 55 44.6	-0.6
	comp=E,2.5nm,0.3s,baz=223,slow=11,SNR=45						
FINES	FINESS Array B	37.26	325	P	P	08 58 32.4	-0.9
	comp=E,0.8nm,0.4s,mb3.6,baz=110,slow=12,SNR=4.3						
FINES	FINESS Array B	37.26	325	P	P	08 58 32.4	-0.9
ARCES	ARCESS Array B	40.68	337	P	P	08 59 01.0	-0.6
	comp=E,2.0nm,0.6s,mb3.8,baz=119,slow=9.4,SNR=5.9						
NOA	NORSAR Array B	44.22	322	P	P	08 59 29.1	-0.9
	comp=E,0.4nm,0.6s,mb3.0,baz=94,slow=7.1,SNR=3.4						
TORD	Torodi Ar. Bea	66.61	269	P	P	09 02 06.7	-3.5
	comp=E,0.8nm,0.5s,mb3.6,baz=50,slow=5.7,SNR=2.0						

*CSEM **25** 09:11:38.7±0.3, 38°.44N×21°.76E, h20km, MD2.5, Error ellipse: s-maj=6.8km s-min=6.2km az=79.0*
*ATH **25** 09:11:38.7, 38°.43N×21°.86E, h22km±4km, MD2.5/5*
*ISCJB **25** 09:11:39.7±0.5, 38°.46N±0°.03×21°.75E±0°.04, h9km±4km, Error ellipse: s-maj=4.9km s-min=4.9km az=5.9*
*THE **25** 09:11:39.5, 38°.44N×21°.75E, h13km±1km, ML1.9/5, Error ellipse: s-maj=1.1km s-min=0.5km az=131.0*
ISC 25 09:11:39.6±0.6, 38°.45N±0°.03×21°.76E±0°.04, h15km±5km, n25, σ0°.82/46, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.12	100	⇓iPB	Pg	09 11 42.4	-0.7
EFP				eSB	Sg	09 11 45.2	-0.3
EFP	Efpalio	0.12	100	P	Pg	09 11 42.4	-0.7
EFP				S	Sg	09 11 44.9	-0.6
EFP	Efpalio	0.12	100	P	Pg	09 11 42.4	-0.7
EFP				eSb	Sg	09 11 45.2	-0.3
UPR	University Cam	0.17	172	ePB	Pg	09 11 43.1	-0.6
UPR				eSB	Sg	09 11 47.4	+0.9

CEN1			AML	AML	09 16 33.9	
	comp=E,126nm,0.6s					
ANCH	**Antofagasta**	**3.03 211**	⇑ *i* P	Pn	09 15 55.8	+0.1
ANCH			*i* S	Sn	09 16 31.5	-0.3
ANCH			AML	AML	09 16 33.5	
	comp=N,498nm,0.1s					

TAP ***25*** *09:29:03.4, 24°.48N×122°.85E, h87km±1km, ML3.2, D*
ISCJB ***25*** *09:29:04.2±0.8, 24°.42N±0°.06×122°.78E±0°.02, h85km±8km, Error ellipse: s-maj=9.8km s-min=3.7km az=179.0*
JMA ***25*** *09:29:04.3±0.2, 24°.62N×122°.83E, h88km±2km, M1.9*
ISC 25 09:29:04.7±0.8, 24°.42N±0°.06×122°.78E±0°.02, h85km±8km, n27, σ0ˢ55/46, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.22**	**79**	P	**Pn**	**09 29 17.2**	**+0.1**
YOJ				S	**Sn**	**09 29 26.9**	**+0.7**
TWC	**Suao**	**0.87**	**283**	*i* P	**Pn**	**09 29 21.9**	**-0.6**
	baz=277						
TWC				S	**Sn**	**09 29 34.9**	**-0.9**
	baz=277						
IRIF	**Iriomote-Funau**	**0.87**	**95**	P	**Pn**	**09 29 22.5**	**0.0**
IRIF				S	**Sn**	**09 29 36.2**	**+0.3**
ENA	**Nanau**	**0.95**	**271**	P	**Pn**	**09 29 23.2**	**-0.1**
	baz=260						
ENA				*e*S	**Sn**	**09 29 37.6**	**+0.2**
	baz=260						
HATJ	**Hateruma jima**	**1.00**	**111**	S	**Sn**	**09 29 39.4**	**+0.8**
TWE	**Neicheng**	**1.05**	**287**	P	**Pn**	**09 29 24.4**	**-0.3**
	baz=282						
TWE				S	**Sn**	**09 29 40.1**	**+0.5**
	baz=282						
NWF	**Wu-fen Shan**	**1.11**	**306**	*e*P	**Pn**	**09 29 25.0**	**-0.3**
	baz=294						
ENTT	**Nioudou**	**1.13**	**281**	*i* P	**Pn**	**09 29 25.5**	**0.0**
	baz=277						
ENTT				S	**Sn**	**09 29 41.4**	**+0.3**
	baz=277						
TWD	**Chiawan**	**1.13**	**253**	P	**Pn**	**09 29 25.0**	**-0.6**
	baz=250						
TWD				S	**Sn**	**09 29 40.6**	**-0.7**
	baz=250						
JKRS	**Kuro-shima**	**1.14**	**99**	P	**Pn**	**09 29 25.9**	**+0.3**
JKRS				S	**Sn**	**09 29 41.8**	**+0.4**
JIJ	**Ishigaki jima**	**1.25**	**92**	P	**Pn**	**09 29 26.7**	**-0.3**
JIJ				S	**Sn**	**09 29 42.7**	**-1.0**
NSK	**Sanguang**	**1.32**	**281**	*e*P	**Pn**	**09 29 27.7**	**-0.2**
	baz=277						
NSK				*e*S	**Sn**	**09 29 44.9**	**-0.5**
	baz=277						
ESL	**Shilin**	**1.37**	**244**	P	**Pn**	**09 29 28.2**	**-0.3**
	baz=236						
ESL				S	**Sn**	**09 29 46.1**	**-0.4**
	baz=236						
WHF	**Hehuan Shan**	**1.41**	**259**	*e*P	**Pn**	**09 29 28.8**	**-0.2**
	baz=257						
WHF				*e*S	**Sn**	**09 29 47.7**	**+0.3**
	baz=257						
TWS1	**Kuangyinshan**	**1.41**	**299**	*e*P	**Pn**	**09 29 28.6**	**-0.5**
	baz=287						
TWT	**Tachien**	**1.47**	**264**	*e*P	**Pn**	**09 29 30.5**	**+0.7**
	baz=261						
TWT				*e*S	**Sn**	**09 29 49.1**	**+0.3**
	baz=261						
EHY	**Hungye**	**1.61**	**236**	*e*P	**Pn**	**09 29 31.5**	**-0.2**
	baz=234						
EHY				*e*S	**Sn**	**09 29 51.0**	**-1.0**
	baz=234						
TWF1	**Yuli**	**1.72**	**232**	*e*P	**Pn**	**09 29 32.9**	**-0.2**
	baz=227						
TWF1				*e*S	**Sn**	**09 29 53.8**	**-0.8**
	baz=227						
JTJ	**Tarama**	**1.77**	**82**	S	**Sn**	**09 29 54.8**	**-0.8**
SMLT	**Sun Moon Lake**	**1.80**	**253**	*e*P	**Pn**	**09 29 34.8**	**+0.8**
	baz=249						
SMLT				*e*S	**Sn**	**09 29 56.9**	**+0.6**
	baz=249						
TYC	**Yuchr**	**1.83**	**254**	*e*P	**Pn**	**09 29 35.2**	**+0.8**
	baz=248						
TYC				*e*S	**Sn**	**09 29 57.7**	**+0.6**
	baz=248						
TWQ1	**Liyutan**	**1.83**	**268**	*e*P	**Pn**	**09 29 35.6**	**+1.1**
	baz=265						
YUS	**Yu-Shan**	**1.91**	**241**	*e*P	**Pn**	**09 29 35.7**	**+0.2**
	baz=240						
YUS				*e*S	**Sn**	**09 29 59.0**	**0.0**
	baz=240						
ALS	**Alishan**	**2.02**	**244**	*e*P	**Pn**	**09 29 38.4**	**+1.4**
	baz=236						
ALS				*e*S	**Sn**	**09 30 01.4**	**-0.2**
	baz=236						
ELDTW	**Lidau**	**2.03**	**233**	*e*P	**Pn**	**09 29 37.1**	**0.0**
	baz=226						
TWG	**Pinlang**	**2.23**	**225**	*e*P	**Pn**	**09 29 39.3**	**-0.5**
	baz=231						
STYT	**Tauyuan**	**2.23**	**236**	*e*P	**Pn**	**09 29 40.0**	**+0.2**
	baz=229						

ISK ***25*** *09:31:02.6, 39°.48N×44°.14E, h6km, ML2.6*
ISCJB ***25*** *09:31:05.7±1.8, 39°.34N±0°.05×44°.0E±0°.1, h26km±20km, Error ellipse: s-maj=15.3km s-min=8.2km az=167.5*
CSEM ***25*** *09:31:06.7±0.7, 39°.32N×43°.89E, h15km, MD2.9, Error ellipse: s-maj=16.8km s-min=9.5km az=69.0*
DDA ***25*** *09:31:11.2, 39°.50N×43°.57E, h6km±6km, Md2.9*
ISC 25 09:31:05.2±1.5, 39°.34N±0°.06×44°.1E±0°.1, h27km±6km, n12, σ0ˢ80/24, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.22**	**209**	PG	**Pb**	**09 31 10.0**	**-1.3**
CLDR				*e*SG	**Sb**	**09 31 15.7**	**+0.3**
CLDR	**Caldiran**	**0.22**	**209**	*i* Pg	**Pb**	**09 31 10.0**	**-1.3**
CLDR				*e*Sg	**Sb**	**09 31 15.7**	**+0.3**
DYDN	**Diyadin**	**0.35**	**306**	*i* P	**Pb**	**09 31 13.4**	**+0.3**
DYDN				*i* S	**Sb**	**09 31 19.0**	**+0.5**
DYDN	**Diyadin**	**0.35**	**306**	*i* P	**Pb**	**09 31 13.4**	**+0.4**
DYDN				*i* S	**Sb**	**09 31 19.0**	**+0.6**
AGRB	**Hanur-Agry**	**0.86**	**286**	*e*PG	**Pn**	**09 31 20.5**	**-1.0**
AGRB				*e*SG	**Sb**	**09 31 32.8**	**+0.3**
AGRB	**Hanur-Agry**	**0.86**	**286**	*e*Pg	**Pn**	**09 31 20.5**	**-1.0**
AGRB				*e*Sg	**Sb**	**09 31 32.8**	**+0.3**
VANB	**Van**	**0.91**	**215**	*e*PG	**Pn**	**09 31 23.8**	**+1.7**
VANB				*e*SG	**Sb**	**09 31 39.1**	**+5.2**
VANB	**Van**	**0.91**	**215**	*e*Pg	**Pn**	**09 31 23.8**	**+1.6**
VANB				*e*Sg	**Sb**	**09 31 39.1**	**+5.2**
TUTA	**Tutak**	**0.96**	**274**	*i* P	**Pn**	**09 31 22.6**	**-0.4**
TUTA				*i* S	**Sb**	**09 31 35.1**	**-0.5**
TUTA	**Tutak**	**0.96**	**274**	*i* P	**Pn**	**09 31 22.6**	**-0.4**
TUTA				*i* S	**Sb**	**09 31 35.1**	**-0.5**
DIGO	**Kars**	**1.20**	**334**	*i* P	**Pn**	**09 31 30.4**	**+4.3**
DIGO				*i* S	**Sn**	**09 31 41.5**	**0.0**
DIGO	**Kars**	**1.20**	**334**	*i* P	**Pn**	**09 31 30.4**	**+4.3**
DIGO				*i* S	**Sn**	**09 31 41.5**	**0.0**

IDC ***25*** *09:32:39.1±13.0, 11°.35N×85°.32W, h0km, mb3.4/4, mb1 3.9/4, mb1mx3.7/22, mbtmp3.4/4, MS2.9/2, Ms1 3.0/2, ms1mx2.7/17, Error ellipse: s-maj=329.2km s-min=129.9km az=13.0*
NEIC ***25*** *09:32:39.9±0.8, 11°.29N×85°.32W, h10km, Error ellipse: s-maj=29.1km s-min=9.2km az=57.0*
ISCJB ***25*** *09:32:41.2±0.8, 11°.4N±0°.1×85°.2W±0°.2, h33km, mb3.4/4, Error ellipse: s-maj=28.5km s-min=10.5km az=144.7*
ISC 25 09:32:42.8±0.8, 11°.3N±0°.1×85°.3W±0°.2, h35km, n10, σ1ˢ33/8, mb3.4/4, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**1.02**	**161**	*e*Pg	**Pn**	**09 32 59.8**	**-0.9**
TGUH	**Tegucigalpa,Un**	**3.38**	**325**	*e*Pn	**Pn**	**09 33 31.3**	**-1.9**
BCIP	**Isla Barro Col**	**5.76**	**111**	*e*Pn	**Pn**	**09 34 06.0**	**+0.1**
TEIG	**Tepich**	**9.36**	**343**	*e*Pn	**Pn**	**09 34 54.1**	**-1.2**
ROSC	**El Rosal**	**12.58**	**120**	LR	LR	09 40 47.1	
	comp=Z,38nm,20.7s,baz=241,slow=39						
TXAR	**Lajitas Array**	**24.84**	**319**	P	**P**	**09 38 01.4**	**-0.5**
	1.4nm,0.8s,mb3.5,baz=139,slow=10,SNR=14						
PDAR	**Pinedale Array**	**37.83**	**330**	P	**P**	**09 39 57.8**	**+1.7**
	0.5nm,0.7s,mb3.3,baz=125,slow=7.8,SNR=4.9						
NVAR	**Mina Array Bea**	**39.98**	**318**	P	**P**	**09 40 16.5**	**+2.4**
	0.2nm,0.4s,mb3.2,baz=125,slow=8.9,SNR=2.8						
CPUP	**Villa Florida**	**46.21**	**144**	LR	LR	10 04 21.8	
	comp=Z,24nm,18.9s,baz=33,slow=41						
ILAR	**Eielson Array**	**67.95**	**336**	P	**P**	**09 43 38.7**	**+0.8**
	0.2nm,0.6s,mb3.3,baz=93,slow=6.3,SNR=4.0						

ISCJB ***25*** *09:46:31.7±0.6, 50°.30N±0°.04×18°.79E±0°.03, h0km, Error ellipse: s-maj=5.9km s-min=2.8km az=11.8*
CSEM ***25*** *09:46:32.6±0.2, 50°.27N×18°.84E, h2km, ML2.7/5, Error ellipse: s-maj=5.5km s-min=2.7km az=7.0*
IPEC ***25*** *09:46:32.6±0.2, 50°.26N×18°.87E, h1km±1km, ML1.9/3, Error ellipse: s-maj=2.2km s-min=0.8km az=170.0*
WAR ***25*** *09:46:32.6, 50°.24N×18°.92E*
PRU ***25*** *09:46:33.8, 50°.26N×18°.80E, h0km*
ISC 25 09:46:32.8±0.6, 50°.28N±0°.04×18°.81E±0°.03, h0km, n28, σ1ˢ09/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.61**	**225**	*e*PG	**Pg**	**09 46 45.1**	**+0.5**
OKC				*e*SG	**Sg**	**09 46 53.0**	**+0.5**
	comp=Z,18nm,0.3s						
OKC	**Ostrava-Krasne**	**0.61**	**225**	*e*Pg	**Pg**	**09 46 45.0**	**+0.4**
	baz=47						
OKC				Sg	**Sg**	**09 46 53.0**	**+0.5**
	comp=Z,18nm,0.3s						
OJC	**Ojcow**	**0.64**	**95**	*e*Pg	**Pg**	**09 46 43.9**	**-1.1**
OJC				*e*Sg	**Sg**	**09 46 51.6**	**-1.6**
OJC	**Ojcow**	**0.64**	**95**	*e*Pg	**Pg**	**09 46 43.9**	**-1.1**
	baz=275						
OJC				*e*Sg	**Sg**	**09 46 51.6**	**-1.6**
	baz=275						
MORC	**Moravsky Berou**	**0.96**	**239**	*e*Pg	**Pg**	**09 46 51.1**	**-0.1**
	baz=60						
MORC				*e*Sg	**Sg**	**09 47 04.2**	**+0.6**
	comp=Z,30nm,0.4s,baz=60						
NIE	**Niedzica**	**1.30**	**131**	*e*Pg	**Pg**	**09 46 56.4**	**-1.3**
NIE				*e*Sg	**Sg**	**09 47 14.0**	**-0.4**
NIE	**Niedzica**	**1.30**	**131**	*e*Pg	**Pg**	**09 46 56.4**	**-1.3**
NIE				*e*Sg	**Sg**	**09 47 14.0**	**-0.4**
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*PG	**Pg**	**09 47 02.0**	**-1.4**
DPC				*e*SG	**Sg**	**09 47 23.6**	**-0.5**
	comp=Z,19nm,0.7s						
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*Pn	**Pn**	**09 47 01.9**	**-0.4**
	baz=92						
DPC				*e*Sg	**Sg**	**09 47 23.9**	**-0.2**
	baz=92						
JAVC	**Velka Javorina**	**1.60**	**208**	*e*Pn	**Pn**	**09 47 03.1**	**+0.8**
	baz=28						
KSP	**Ksiaz**	**1.70**	**290**	*e*Pg	**Pg**	**09 47 05.6**	**+0.1**
KSP				*e*Sg	**Sg**	**09 47 29.1**	**+1.5**
KSP	**Ksiaz**	**1.70**	**290**	*e*Pg	**Pg**	**09 47 05.6**	**+0.1**
KSP				*e*Sg	**Sg**	**09 47 29.1**	**+1.5**
KOLL	**Kolacno**	**1.72**	**189**	*e*SN	**Sn**	**09 47 26.8**	**+0.2**
KOLL	**Kolacno**	**1.72**	**189**	*e*Sn	**Sn**	**09 47 26.8**	**+0.2**
VRAC	**Vranov**	**1.73**	**237**	*e*Pn	**Pn**	**09 47 04.2**	**0.0**
	baz=56						
VRAC				*e*Sg	**Sg**	**09 47 27.4**	**-1.1**
	comp=Z,15nm,0.3s,baz=56						
VYHS	**Vyhne**	**1.78**	**179**	*e*PN	**Pn**	**09 47 06.5**	**+1.6**
VYHS				*e*SN	**Sn**	**09 47 26.9**	**-1.3**
VYHS	**Vyhne**	**1.78**	**179**	*e*Pn	**Pn**	**09 47 03.8**	**-1.1**
	baz=0.6						
VYHS				*e*Sn	**Sn**	**09 47 26.9**	**-1.3**
KRUC	**Moravsky**	**1.98**	**233**	*e*Pn	**Pn**	**09 47 07.6**	**0.0**
	baz=52						
KECS	**Kecovo**	**2.10**	**148**	*e*PN	**Pn**	**09 47 11.1**	**+1.9**
KECS				*e*SN	**Sn**	**09 47 32.6**	**-3.4**
CRVS	**Cervenica-Dubn**	**2.21**	**128**	*e*PN	**Pn**	**09 47 12.1**	**+1.5**
CRVS				*e*SN	**Sn**	**09 47 40.2**	**+1.6**
CRVS	**Cervenica-Dubn**	**2.21**	**128**	*e*Pn	**Pn**	**09 47 12.1**	**+1.5**
CRVS				*e*Sn	**Sn**	**09 47 40.2**	**+1.6**
KOLS	**Kolonicke sedl**	**2.62**	**119**	*e*SN	**Sn**	**09 47 51.1**	**+2.2**
KOLS	**Kolonicke sedl**	**2.62**	**119**	*e*Sn	**Sn**	**09 47 51.1**	**+2.2**
PRU	**Pruhonice**	**2.76**	**266**	*e*SG	**Sg**	**09 48 00.3**	**-1.2**
	comp=Z,4.2nm,0.6s						
PRU	**Pruhonice**	**2.76**	**266**	Sg	**Sg**	**09 48 00.3**	**-1.2**
	comp=Z,4.2nm,0.6s						
BRG	**Berggiesshubel**	**3.16**	**283**	SG	**Sg**	**09 48 14.8**	**+0.5**
	comp=Z,2.7nm,0.5s						
KHC	**Kasperske Hory**	**3.58**	**253**	*e*SG	**Sg**	**09 48 27.8**	**-0.2**
	comp=Z,5.3nm,0.5s						
KHC	**Kasperske Hory**	**3.58**	**253**	Sg	**Sg**	**09 48 27.8**	**-0.2**
	comp=Z,5.3nm,0.5s						

ISK ***25*** *10:04:34.8, 37°.16N×37°.35E, h8km, MD2.9*
CSEM ***25*** *10:04:34.9±0.2, 37°.28N×37°.35E, h2km, MD2.9, Error ellipse: s-maj=10.9km s-min=5.3km az=143.0*
ISCJB ***25*** *10:04:35.7±0.9, 37°.11N±0°.08×37°.34E±0°.06, h10km, Error ellipse: s-maj=11.2km s-min=6.2km az=168.7*
ISC 25 10:04:35.5±1.3, 37°.11N±0°.08×37°.4E±0°.1, h7km±11km, n15, σ1ˢ14/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.13**	**298**	PG	**Pg**	**10 04 37.7**	**-0.7**
GAZ				*e*SG	**Sg**	**10 04 40.1**	**-0.2**
GAZ	**Gaziantep**	**0.13**	**298**	*i* Pg	**Pg**	**10 04 37.7**	**-0.7**
GAZ				*e*Sg	**Sg**	**10 04 40.1**	**-0.2**
ATAB	**Bozova**	**0.83**	**64**	*i* P	**Pg**	**10 04 59.1**	**+7.6**
COBT	**Iskenderun**	**1.06**	**237**	*i* P	**Pg**	**10 04 57.4**	**+1.5**
COBT	**Iskenderun**	**1.06**	**237**	*i* P	**Pg**	**10 04 57.4**	**+1.5**
URFA	**Urfa**	**1.21**	**74**	*e*PN	**Pn**	**10 04 58.3**	**-0.6**
URFA				*e*SN	**Sn**	**10 05 15.4**	**-0.2**
URFA	**Urfa**	**1.21**	**74**	*e*Pn	**Pn**	**10 04 58.3**	**-0.6**
URFA				*e*Sn	**Sn**	**10 05 15.4**	**-0.2**
AKCD	**Akcadag**	**1.27**	**21**	*i* P	**Pn**	**10 05 00.7**	**+1.1**
AKCD				*i* S	**Sb**	**10 05 18.0**	**+1.8**
AKCD	**Akcadag**	**1.27**	**21**	*i* P	**Pn**	**10 05 00.7**	**+1.1**
AKCD				*i* S	**Sb**	**10 05 18.0**	**+1.8**
KOZT	**Kozan**	**1.28**	**287**	*e*PN	**Pn**	**10 04 59.8**	**+0.1**
KOZT	**Kozan**	**1.28**	**287**	*e*Pn	**Pn**	**10 04 59.8**	**+0.1**
MYA	**Malataya**	**1.48**	**35**	*e*PN	**Pn**	**10 05 01.6**	**-1.0**
MYA	**Malataya**	**1.48**	**35**	*e*Pn	**Pn**	**10 05 01.6**	**-1.0**
SARI	**SarD1z-Kayseri**	**1.65**	**342**	*e*PN	**Pn**	**10 05 02.1**	**-2.8**
SARI	**SarD1z-Kayseri**	**1.65**	**342**	*e*Pn	**Pn**	**10 05 02.1**	**-2.8**

IDC ***25*** *10:19:21.8±1.6, 8°.16S×130°.73E, h0km, mb4.1/2, mb1 4.1/5, mb1mx3.8/15, mbtmp4.0/5, ML3.8/3, Error ellipse: s-maj=65.2km s-min=24.5km az=72.0*
ISCJB ***25*** *10:19:26.7±1.9, 8°.45S±0°.08×130°.5E±0°.1, h61km±24km, mb4.0/2, Error ellipse: s-maj=19.4km s-min=10.7km az=152.1*
NEIC ***25*** *10:19:27.1±1.4, 8°.32S×130°.59E, h35km, Error ellipse: s-maj=30.5km s-min=12.3km az=52.0*
ISC 25 10:19:27.6±1.7, 8°.38S±0°.09×130°.6E±0°.1, h39km±22km, n12, σ1ˢ15/16, mb4.0/2, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**4.69**	**157**	*e*P	**Pn**	**10 20 37.8**	**+2.0**
	11nm,0.4s						
KAKA	**Kakadu**	**4.69**	**157**	*e*Pn	**Pn**	**10 20 37.0**	**+1.2**
FITZ	**Fitzroy Crossi**	**10.79**	**206**	Pn	**Pn**	**10 22 00.8**	**+1.3**
	0.3nm,0.3s,baz=30,slow=12,SNR=13						
FITZ				Sn	**Sn**	**10 23 58.7**	**-0.3**
	0.8nm,0.3s,baz=200,slow=16,SNR=6.3						
FITZ	**Fitzroy Crossi**	**10.79**	**206**	*e*P	**Pn**	**10 22 00.9**	**+1.4**
	5.7nm,0.6s						
FITZ				*e*S	**Sn**	**10 23 59.4**	**+0.4**
KAPI	**Kappang**	**11.24**	**287**	Pn	**Pn**	**10 22 05.3**	**-0.5**
WRA	**Warramunga Arr**	**12.06**	**163**	Pn	**Pn**	**10 22 16.4**	**-0.6**
	0.6nm,0.3s,baz=349,slow=13,SNR=15						
WRA				Sn	**Sn**	**10 24 30.4**	**+0.1**
	0.4nm,0.3s,baz=336,slow=24,SNR=5.0						
WB2	**Warramunga Arr**	**12.07**	**163**	*e*Pn	**Pn**	**10 22 16.4**	**-0.7**
ASAR	**Alice Springs**	**15.54**	**168**	Pn	**Pn**	**10 23 02.8**	**-1.1**
	0.5nm,0.3s,baz=341,slow=8.7,SNR=65						
ASAR				Sn	**Sn**	**10 25 51.9**	**-3.1**
	0.1nm,0.3s,baz=347,slow=25,SNR=4.7						
STKA	**Stephens Creek**	**25.54**	**158**	P	**P**	**10 24 54.7**	**+2.0**
	1.7nm,0.7s,mb3.7,baz=310,slow=11,SNR=3.7						
STKA	**Stephens Creek**	**25.54**	**158**	*e*P	**P**	**10 24 56.2**	**+3.6**
	2.6nm,0.8s,mb3.8						
STKA	**Stephens Creek**	**25.54**	**158**	P	**P**	**10 24 54.7**	**+2.0**
MKAR	**Makanchi Array**	**69.67**	**327**	P	**P**	**10 30 32.7**	**-0.4**
	1.3nm,0.5s,mb4.2,baz=125,slow=7.5,SNR=9.1						

BJI ***25*** *11:18:53.9, 30°.05N×83°.03E, h10km, mb4.0/4, Ms3.8/1, Ms7 3.8/1*
DMN ***25*** *11:18:59.2±0.3, 31°.41N×83°.31E, h10km, Ml4.6/4, Error ellipse: s-maj=7.5km s-min=5.5km az=121.0*
IDC ***25*** *11:19:01.2±0.8, 30°.58N×83°.73E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.9/26, mbtmp3.9/11, ML4.0/2, MS3.3/8, Ms1 3.4/8, ms1mx3.1/31, Error ellipse: s-maj=27.4km s-min=17.0km az=51.0*
NDI ***25*** *11:19:05.0±2.9, 30°.95N×83°.60E, h10km, mb4.3, mb4.1(NEIC)*
NEIC ***25*** *11:19:05.3±0.3, 30°.82N×83°.51E, h10km, mb4.1/3, Error ellipse: s-maj=12.4km s-min=4.3km az=65.0*
ISC 25 11:19:04.3±1.8, 30°.86N±0°.03×83°.49E±0°.04, h0km±13km, n45, σ1ˢ31/48, mb4.0/10, MS3.3/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.52**	**175**	*e*Pn	**Pn**	**11 19 46.3**	**0.0**
DANN				*e*Sn	**Sn**	**11 20 20.3**	**+2.6**
	1μm,0.6s						
GKN	**Gorkha**	**3.02**	**160**	*e*Pn	**Pn**	**11 19 53.3**	**0.0**
GKN				*e*Sn	**Sn**	**11 20 33.3**	**+3.1**
	437nm,0.3s						
KOLN	**Koldanda**	**3.08**	**178**	*e*Pn	**Pn**	**11 19 54.0**	**-0.2**
KOLN				*e*Sn	**Sn**	**11 20 34.3**	**+2.6**
	973nm,0.8s						
PTH	**Pithoragarh**	**3.12**	**246**	*e*PB	**Pb**	**11 20 01.1**	**+0.5**
PTH				*ex*	x	11 20 44.5	
KKN	**Kakani**	**3.44**	**152**	*e*Pn	**Pn**	**11 19 58.5**	**-0.5**
DMN	**Daman**	**3.54**	**156**	*e*Pn	**Pn**	**11 20 00.1**	**-0.3**
GUN	**Gumba**	**3.61**	**144**	*e*Pn	**Pn**	**11 20 00.9**	**-0.4**
GUN				*e*Sn	**Sn**	**11 20 46.5**	**+1.9**
	292nm,0.5s						
PKIN	**Phulchoki**	**3.67**	**153**	*e*Pn	**Pn**	**11 20 01.7**	**-0.6**
PKI	**Pulchoki**	**3.68**	**152**	*e*Pn	**Pn**	**11 20 02.0**	**-0.4**
PKI	**Pulchoki**	**3.68**	**152**	*e*Pn	**Pn**	**11 20 01.7**	**-0.7**
KLP	**Kalpa**	**4.54**	**280**	*e*PKP	**Pn**	**11 20 16.3**	**+2.1**
KLP				*e*S	**Sn**	**11 21 05.3**	**-2.3**
DDI	**Dehra Dun**	**4.71**	**265**	*e*PKP	**Pn**	**11 20 18.0**	**+1.4**
DDI				*ex*	x	11 21 40.0	
TAPN	**Taplejung**	**5.09**	**132**	*e*Pn	**Pn**	**11 20 20.8**	**-0.9**
ODAN	**Odare**	**5.25**	**138**	*e*Pn	**Pn**	**11 20 23.0**	**-1.0**
SDNR	**Sundarnagar**	**5.62**	**278**	*ex*	**Pb**	**11 20 40.5**	**-2.7**
NDI	**New Delhi**	**5.87**	**250**	*ex*	x	11 20 39.0	
NDI				*ex*	x	11 22 25.0	
SONA	**Sohna**	**6.16**	**247**	*e*PKP	**Pn**	**11 20 36.6**	**+0.2**
SONA				AMb	AMB	11 20 37.3	
	comp=Z,7.9nm,0.6s						
SONA				*e*S	**Sn**	**11 21 46.4**	**-1.2**
LSA	**Lhasa**	**6.73**	**98**	Pg	**Pn**	**11 20 44.0**	**-0.2**
LSA				Sg	**Sn**	**11 22 02.5**	**+0.9**
LSA				smax			
	comp=N,10.0nm,1.3s						
LSA				smax			
	comp=E,30nm,1.7s						
KHET	**Khetri**	**7.25**	**249**	*ex*	**Sn**	**11 22 18.6**	**+4.1**
SHL	**Shillong**	**9.09**	**123**	*ex*	**Pn**	**11 21 12.0**	**-4.7**
SHL				*e*S	**Sn**	**11 22 50.0**	**-10**
KBL	**Kabul**	**12.71**	**291**	*e*Pn	**Pn**	**11 22 04.7**	**-1.5**
	comp=E,8.1nm,0.7s						
UCH	**Uchtor**	**13.43**	**330**	*e*Pn	**Pn**	**11 22 16.4**	**+0.4**
	comp=E,6.7nm,0.8s						
TKM2	**Tokmak 2**	**13.58**	**335**	*e*Pn	**Pn**	**11 22 17.6**	**-0.5**
	comp=E,10nm,1.4s						
EKS2	**Erkin-Say**	**14.10**	**329**	*e*Pn	**Pn**	**11 22 27.1**	**+1.9**
	comp=E,5.9nm,1.0s						
GTA	**Gaotai**	**15.83**	**53**	*e*P	**Pn**	**11 22 52.5**	**+4.1**
GTA				pP	pP	11 22 58.0	+5.6
GTA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MK31	**Makanchi Array**	**15.94**	**357**	*e*Pn	**Pn**	**11 22 51.8**	**+2.1**
MKAR	**Makanchi Array**	**15.94**	**357**	Pn	**Pn**	**11 22 50.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=182,slow=10,SNR=13						
MKAR				LR	LR	11 29 57.9	
	comp=Z,105nm,18.9s,baz=175,slow=40						
KKAR	**Karatay Array**	**16.00**	**323**	*e*Pn	**Pn**	**11 22 50.7**	**+0.1**
	comp=Z,5.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.68**	**128**	Pn	**Pn**	**11 23 18.0**	**-6.2**
	comp=Z,0.3nm,0.3s,baz=313,slow=11,SNR=18						
KURK	**Kurchatov**	**20.16**	**351**	*e*P	**P**	**11 23 39.7**	**-0.3**
	comp=Z,25nm,1.4s						
ZALV	**Zalesovo Beam**	**23.09**	**2**	P	**P**	**11 24 11.6**	**+0.2**
	comp=Z,3.8nm,0.8s,mb4.0,baz=184,slow=10,SNR=14						
ZALV				LR	LR	11 34 11.4	
	comp=Z,28nm,20.7s,MS2.7,baz=78,slow=39						
BVAR	**Borovoye Array**	**24.12**	**340**	P	**P**	**11 24 22.8**	**+1.4**
	comp=Z,0.6nm,0.5s,mb3.4,baz=172,slow=12,SNR=4.6						
SONM	**Songino Array**	**24.37**	**39**	P	**P**	**11 24 22.3**	**-1.6**
	comp=Z,1.6nm,0.7s,mb3.7,baz=226,slow=11,SNR=7.7						
ABKAR	**Akbulak array**	**25.56**	**323**	*e*P	**P**	**11 24 35.4**	**+0.7**
	comp=Z,2.9nm,0.7s,mb4.0						
GNI	**Garni**	**32.66**	**297**	LR	LR	11 42 30.7	
	comp=Z,51nm,19.1s,MS3.2,baz=101,slow=43						
KSRS	**Korea Array**	**37.09**	**68**	LR	LR	11 42 58.3	
	comp=Z,16nm,19.4s

baz=263
WHF S **Sb** **11 41 11.6 -0.5**
baz=263
TWB1 Santiao Chiao 1.18 335 *e*P **Pb** **11 40 57.3 +0.4**
baz=351
TWB1 *e*S **Sb** **11 41 11.6 -0.7**
baz=351
EHY Hungye 1.18 249 P **Pb** **11 40 56.5 -0.4**
baz=245
EHY S **Sb** **11 41 12.0 -0.3**
baz=245
TWF1 Yuli 1.27 243 *e*P **Pn** **11 40 57.7 -0.4**
baz=239
TWF1 S **Sb** **11 41 14.5 -0.2**
baz=239
NSK Sanguang 1.30 305 *e*P **Pn** **11 40 58.5 -0.1**
baz=290
NSK *e*S **Sb** **11 41 15.0 -0.7**
baz=290
NWF Wu-fen Shan 1.33 329 *e*P **Pn** **11 40 59.1 +0.1**
baz=328
NWF *e*S **Sb** **11 41 17.1 +0.6**
baz=328
CHKT Chengkung 1.35 233 *e*P **Pn** **11 40 58.4 -0.9**
baz=217
CHKT *e*S **Sb** **11 41 14.8 -2.3**
baz=217
TWA Mucha 1.36 321 *e*P **Pn** **11 40 59.9 +0.5**
baz=319
TWA *e*S **Sb** **11 41 17.3 0.0**
baz=319
JKRS Kuro-shima 1.39 77 P **Pn** **11 41 00.4 +0.6**
JKRS S **Sb** **11 41 17.9 -0.3**
SMLT Sun Moon Lake 1.49 269 *e*P **Pn** **11 41 01.5 +0.2**
baz=265
SMLT *e*S **Sn** **11 41 20.3 -0.5**
baz=265
YUS Yu-Shan 1.51 254 *e*P **Pn** **11 41 01.9 +0.4**
baz=250
YUS *e*S **Sn** **11 41 20.4 -0.8**
baz=250
TYC Yuchr 1.53 269 *e*P **Pn** **11 41 02.1 +0.3**
baz=266
TYC *e*S **Sn** **11 41 21.0 -0.7**
baz=266
JIJ Ishigaki jima 1.54 73 P **Pn** **11 41 01.7 -0.1**
JIJ S **Sn** **11 41 20.8 -1.1**
TWS1 Kuangyinshan 1.55 319 *e*P **Pn** **11 41 02.1 +0.2**
baz=335
ELDTW Lidau 1.57 242 *e*P **Pn** **11 41 01.7 -0.6**
baz=239
ELDTW *e*S **Sn** **11 41 21.2 -1.5**
baz=239
TWY Chenhua 1.59 328 *e*P **Pn** **11 41 03.5 +1.0**
baz=327
ALS Alishan 1.63 256 *e*P **Pn** **11 41 03.9 +0.7**
baz=252
ALS *e*S **Sn** **11 41 24.0 -0.3**
baz=252
TWQ1 Liyutan 1.66 285 *e*P **Pn** **11 41 05.0 +1.5**
baz=282
TTN Taitung 1.73 228 *e*P **Pn** **11 41 04.7 +0.2**
baz=225
TTN *e*S **Sn** **11 41 26.4 -0.1**
baz=225
TWG Pinlang 1.73 231 *e*P **Pn** **11 41 04.1 -0.4**
baz=217
TWG *e*S **Sn** **11 41 25.1 -1.7**
baz=217
STYT Tauyuan 1.80 245 *e*P **Pn** **11 41 06.2 +0.8**
baz=233
STYT *e*S **Sn** **11 41 27.5 -0.8**
baz=233
WTP Ta-pu 1.88 249 *e*P **Pn** **11 41 07.8 +1.2**
baz=236
WTP *e*S **Sn** **11 41 31.8 +1.4**
baz=236
SGST Jiashian 1.98 245 *e*P **Pn** **11 41 08.6 +0.7**
baz=233
SGST *e*S **Sn** **11 41 33.0 +0.3**
baz=233
CHN1 Nanshi 1.98 248 *e*P **Pn** **11 41 09.4 +1.5**
baz=236
CHN1 *e*S **Sn** **11 41 34.8 +2.0**
baz=236
JTJ Tarama 2.11 70 P **Pn** **11 41 10.8 +1.1**
JTJ *e*S **Sn** **11 41 36.2 +0.3**
EAST Anshuo 2.18 226 *e*P **Pn** **11 41 10.5 -0.2**
baz=223
EAST *e*S **Sn** **11 41 37.5 -0.3**
baz=223
SCZT Fangliau 2.34 229 *e*P **Pn** **11 41 15.3 +2.3**
baz=219

OMAN ***25*** *12:05:25.4, 26°.58N×60°.44E, h50km*
KISR ***25*** *12:05:32.8±0.6, 25°.35N×58°.54E, h0km±999km, ML4.3*
CSEM ***25*** *12:05:36.8±2.2, 26°.04N×59°.47E, h40km, ML3.6, Error ellipse: s-maj=58.0km s-min=22.8km az=60.0*
SGS ***25*** *12:05:36.3, 26°.06N×59°.40E, h15km*
ISCJB ***25*** *12:05:37.5±0.8, 26°.19N±0°.08×58°.98E±0°.06, h10km, mb3.8/7, Error ellipse: s-maj=11.6km s-min=7.0km az=163.4*
IDC ***25*** *12:05:48.5±6.7, 27°.60N×58°.64E, h0km, mb3.9/7, mb1 3.9/7, mb1mx3.6/28, mbtmp3.9/7, Error ellipse: s-maj=122.7km s-min=35.1km az=173.0*
ISC 25 12:05:38.6±0.9, 26°.12N±0°.08×59°.10E±0°.06, h10km, n25, σ1§32/32, mb3.8/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	**Banah** SNR=26	**2.53**	**266**	P	**Pn**	**12 06 21.1**	**+1.4**
BANOM	**Banah** SNR=26	**2.53**	**266**	P	**Pn**	**12 06 21.1**	**+1.3**
WBK	**Wadi Bani Khal** SNR=18	**3.50**	**182**	P	**Pn**	**12 06 26.8**	**-6.2**
ARQ	**Araqi** SNR=25	**3.63**	**221**	P	**Pn**	**12 06 35.3**	**+0.4**
ARQ	**Araqi** SNR=25	**3.63**	**221**	P	**Pn**	**12 06 35.3**	**+0.4**
BTHS		**7.77**	**256**	P	**Pn**	**12 07 33.5**	**+1.8**
BTHS				S	**Sn**	**12 08 59.3**	**-0.5**
HRDDS		**9.34**	**252**	S	**Sn**	**12 09 35.6**	**-2.8**
HRDDS		**9.34**	**252**	P	**Pn**	**12 07 53.2**	**-0.1**
KFJS		**10.15**	**284**	P	**Pn**	**12 08 03.9**	**-0.6**
KFJS		**10.15**	**284**	P	**Pn**	**12 08 03.9**	**-0.5**
UMR	**Umm Al-Rimmam**	**10.64**	**291**	*e*P	**Pn**	**12 08 11.9**	**+0.8**
UMR				*e*S	**Sn**	**12 10 10.9**	**+0.5**
UMR				AML	AML	12 10 13.0	
	comp=Z,7.7nm,0.4s						
UMR	**Umm Al-Rimmam**	**10.64**	**291**	*e*P	**Pn**	**12 08 11.9**	**+0.8**
UMR				*e*S	**Sn**	**12 10 10.9**	**+0.5**
	comp=Z,2.0nm,0.5s						
NAY	**Al-Naaiem**	**10.96**	**289**	*e*P	**Pn**	**12 08 15.9**	**+0.4**
NAY				*e*S	**Sn**	**12 10 18.0**	**-0.3**
NAY				AML	AML	12 10 20.1	
	comp=Z,2.3nm,0.5s						
NAY	**Al-Naaiem**	**10.96**	**289**	*e*P	**Pn**	**12 08 15.9**	**+0.3**
NAY				*e*S	**Sn**	**12 10 18.0**	**-0.3**
MIB	**Mutribah**	**11.03**	**292**	*e*P	**Pn**	**12 08 17.0**	**+0.6**
MIB				*e*S	**Sn**	**12 10 20.8**	**+1.0**
MIB				AML	AML	12 10 23.3	
	comp=Z,9.2nm,0.5s						
MIB	**Mutribah**	**11.03**	**292**	*e*P	**Pn**	**12 08 17.0**	**+0.6**
MIB				*e*S	**Sn**	**12 10 20.8**	**+1.0**
ASYS		**13.26**	**279**	P	**Pn**	**12 08 45.0**	**-1.9**
ASYS		**13.26**	**279**	P	**Pn**	**12 08 45.0**	**-1.9**
AKTO	**Aktyubinsk** comp=Z,1.3nm,0.5s,mb3.6,baz=176,slow=12,SNR=6.5	**24.29**	**358**	P	**P**	**12 10 53.4**	**-2.5**
BRTR	**Keskin Array B** comp=Z,1.3nm,0.8s,mb3.5,baz=119,slow=10,SNR=6.7	**25.21**	**309**	P	**P**	**12 11 05.5**	**+1.1**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.2s,mb3.6,baz=227,slow=8.5,SNR=2.7	**27.63**	**36**	P	**P**	**12 11 28.8**	**+2.6**
BVAR	**Borovoye Array** comp=Z,0.6nm,0.3s,mb3.6,baz=184,slow=9.8,SNR=2.8	**28.17**	**14**	P	**P**	**12 11 30.3**	**-0.7**
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.5s,mb3.8,baz=256,slow=5.8,SNR=3.5	**33.70**	**28**	P	**P**	**12 12 22.9**	**+3.2**
FINES	**FINESS Array B** comp=Z,1.1nm,0.3s,mb3.9,baz=138,slow=8.9,SNR=5.4	**41.74**	**337**	P	**P**	**12 13 26.1**	**-1.4**
ARCES	**ARCESS Array B** comp=Z,4.3nm,0.9s,mb4.5,baz=130,slow=8.4,SNR=5.1	**47.68**	**345**	P	**P**	**12 14 13.3**	**-1.6**

DJA 25 12:08:30, 7°.42S×122°.42E, h96km, MLv3.8/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.22**	**188**	P	Pn	12 08 53.4	+0.7
MMRI				S	Sn	12 09 11.3	+1.5
BBSI	**Bau Bau**	**1.93**	**4**	P	Pn	12 09 02.0	+0.5
WSI	**Waingapu**	**3.07**	**223**	P	Pn	12 09 16.9	+0.3
WSI				S	Sn	12 09 54.6	+2.2

IDC 25 12:08:45.8±5.8, 8°.08S×124°.81E, h284km±63km, mb3.1/2, mb1 3.2/4, mb1mx3.0/16, mbtmp3.1/4, Error ellipse: s-maj=322.1km s-min=16.3km az=61.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=316,slow=12,SNR=19	**14.98**	**143**	P	Pn	12 12 02.4	-2.2
WRA				S	S	12 14 42.0	-5.7
	0.3nm,0.3s,baz=316,slow=20,SNR=6.0						
ASAR	**Alice Springs** 0.3nm,0.3s,baz=325,slow=12,SNR=30	**17.79**	**152**	P	P	12 12 33.9	-0.2
ASAR				S	S	12 15 43.6	-0.2
	0.2nm,0.3s,baz=320,slow=24,SNR=11						
STKA	**Stephens Creek** 0.7nm,0.3s,baz=321,slow=14,SNR=4.6	**28.37**	**149**	P	P	12 14 16.0	+1.7
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=144,slow=6.9,SNR=2.7	**66.42**	**330**	P	P	12 19 04.6	-0.1

SZGRF ***25*** *12:30:17.7, 21°.17S×177°.73W, h33km, Fiji Islands region*
ISCJB ***25*** *12:30:22.6±0.9, 21°.01S±0°.05×178°.13W±0°.06, h502km±10km, mb4.3/44, Error ellipse: s-maj=10.0km s-min=7.4km az=35.9*
NEIC ***25*** *12:30:23.9±0.8, 20°.95S×178°.14W, h505km±9km, mb4.4/30, Error ellipse: s-maj=10.1km s-min=7.0km az=142.0*
IDC ***25*** *12:30:24.6±2.1, 21°.02S×178°.04W, h517km±23km, mb3.7/13, mb1 4.0/14, mb1mx3.9/18, mbtmp3.7/14, Error ellipse: s-maj=15.9km s-min=10.1km az=140.0*
ISC 25 12:30:23.0±0.9, 21°.07S±0°.05×178°.08W±0°.06, h498km±9km, n126, σ1§00/79, mb4.3/44, 14C-10D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.94**	**312**	*e*P	**P**	**12 31 49.6**	**+0.2**
AFI	**Afiamalu** 44nm,0.3s,baz=45,slow=2.3,SNR=49	**9.31**	**41**	P	**P**	**12 32 27.0**	**-6.3**
AFI				S	**S**	**12 34 07.3**	**-13**
	11nm,0.3s,baz=240,slow=23,SNR=5.0						
AFI	**Afiamalu**	**9.31**	**41**	*e*P	**P**	**12 32 27.1**	**-6.2**
DZM	**Mont Dzumac**	**14.44**	**263**	*e*P	**P**	**12 33 26.5**	**-0.9**
NOUC	**Port Laguerre**	**14.57**	**263**	*e*P	**P**	**12 33 27.8**	**-1.0**
MXZ	**Matakaoa Point**	**16.74**	**190**	PN	**P**	**12 33 49.3**	**-1.8**
MXZ				SN	**S**	**12 36 43.1**	**+0.8**
PUZ	**Puketiti**	**17.24**	**190**	PN	**P**	**12 33 59.0**	**+2.6**
PUZ				SN	**S**	**12 36 50.9**	**+0.3**
URZ	**Urewera** 2.5nm,0.3s,baz=329,slow=3.8,SNR=20	**17.63**	**193**	P	**P**	**12 33 59.1**	**-0.8**
URZ				S	**S**	**12 36 56.4**	**-0.7**
	0.9nm,0.3s,baz=7.1,slow=16,SNR=4.1						
URZ	**Urewera** 15nm,0.4s	**17.63**	**193**	*e*P	**P**	**12 33 59.8**	**-0.2**
URZ	**Urewera**	**17.63**	**193**	PN	**P**	**12 33 58.3**	**-1.7**
URZ				SN	**S**	**12 37 01.7**	**+4.6**
BFZ	**Birch Farm**	**20.14**	**193**	PN	**P**	**12 34 21.4**	**-1.5**
NNZ	**Nelson**	**21.36**	**198**	PN	**P**	**12 34 33.6**	**-0.3**
KHZ	**Kahutara** 9.9nm,0.5s,mb4.6	**22.43**	**196**	*e*P	**P**	**12 34 44.5**	**+1.0**
RPZ	**Rata Peaks** 15nm,0.6s,mb4.6,baz=27,slow=4.5,SNR=17	**24.33**	**199**	P	**P**	**12 35 03.0**	**+2.5**
ARMA	**Armidale**	**28.76**	**245**	*e*P	**P**	**12 35 41.6**	**+1.9**
CNB	**Canberra Magne**	**31.85**	**237**	*e*P	**P**	**12 36 06.5**	**+0.1**
CTA	**Charters Tower** 4.1nm,0.4s,mb4.2	**33.37**	**265**	*e*P	**P**	**12 36 20.7**	**+1.2**
PMG	**Port Moresby** 24nm,0.6s,mb4.8	**35.40**	**284**	*e*P	**P**	**12 36 37.6**	**+1.0**
STKA	**Stephens Creek** 2.9nm,0.3s,mb4.2,baz=125,slow=8.6,SNR=3.8	**37.48**	**245**	P	**P**	**12 36 54.9**	**+1.2**
ASAR	**Alice Springs** 9.5nm,0.6s,mb4.4,baz=98,slow=7.8,SNR=42	**44.32**	**257**	P	**P**	**12 37 48.8**	**+0.4**
ASAR				PcP	PcP	12 39 22.1	+0.2
	1.9nm,0.7s,baz=97,slow=4.4,SNR=8.0						
ASAR				S	**S**	**12 43 45.7**	**-0.2**
	2.5nm,0.9s,baz=95,slow=14,SNR=13						
WB2	**Warramunga Arr**	**44.44**	**263**	*e*P	**P**	**12 37 49.0**	**-0.3**
WRA	**Warramunga Arr** 4.5nm,0.5s,mb4.1,baz=96,slow=7.6,SNR=206	**44.45**	**263**	P	**P**	**12 37 48.9**	**-0.5**
WRA				S	**S**	**12 43 48.2**	**+0.4**
	1.3nm,0.7s,baz=94,slow=13,SNR=5.3						
KAKA	**Kakadu** 16nm,0.4s,mb4.7	**47.92**	**272**	↓*i*P	**P**	**12 38 15.7**	**-0.2**
KAKA	**Kakadu** 47nm,0.6s,mb5.0	**47.92**	**272**	*e*P	**P**	**12 38 15.6**	**-0.2**
FITZ	**Fitzroy Crossi** 4.7nm,0.3s,mb4.3	**52.88**	**263**	*e*P	**P**	**12 38 52.7**	**+0.5**
CASY	**Casey**	**63.42**	**205**	*e*P	**P**	**12 40 03.6**	**+0.7**
MJAR	**Matsushiro Arr** 6.6nm,0.6s,mb4.3,baz=158,slow=6.2,SNR=22	**70.62**	**324**	P	**P**	**12 40 46.8**	**-0.9**
MAT	**Matsushiro**	**70.62**	**324**	P	**P**	**12 40 46.5**	**-1.3**
TWG	**Pinlang** 19nm,0.5s,mb4.9	**73.63**	**303**	*e*P	**P**	**12 41 04.4**	**-1.2**
YULB	**Yu-li** 21nm,1.4s,mb4.5	**73.75**	**303**	*e*P	**P**	**12 41 05.5**	**-0.7**
TPUB	**Ta-pu** 30nm,0.6s,mb5.0	**74.22**	**303**	*e*P	**P**	**12 41 08.1**	**-0.9**
PETK	**Petropavlovsk-** 5.9nm,0.6s,mb4.3,baz=126,slow=6.8,SNR=15	**76.80**	**345**	P	**P**	**12 41 22.2**	**-0.4**
PETK	**Petropavlovsk-**	**76.80**	**345**	P	**P**	**12 41 22.2**	**-0.4**
KSRS	**Korea Array** 3.0nm,0.6s,mb4.0,baz=125,slow=5.8,SNR=14	**77.26**	**319**	P	**P**	**12 41 26.0**	**+0.5**
ISA	**Isabella** 3.8nm,1.0s,mb3.9	**79.78**	**46**	*e*P	**P**	**12 41 39.3**	**+0.3**
CMB	**Columbia Colle** 5.1nm,1.1s,mb4.0	**79.92**	**43**	*e*P	**P**	**12 41 40.1**	**+0.3**
YBH	**Yreka Blue Hor** 6.3nm,0.8s,mb4.2	**80.77**	**39**	*e*P	**P**	**12 41 44.8**	**+0.8**
WAKR	**Walker**	**80.80**	**43**	*e*P	**P**	**12 41 44.8**	**+0.5**
HUMO	**Hull Mountain** 5.0nm,0.8s,mb4.1	**81.18**	**38**	*e*P	**P**	**12 41 47.1**	**+1.0**
NVAR	**Mina Array Bea** 3.4nm,0.8s,mb3.9,baz=225,slow=9.2,SNR=27	**81.48**	**43**	P	**P**	**12 41 47.9**	**+0.1**
LDFC	**Landfair** 8.6nm,0.7s,mb4.4	**81.74**	**48**	*e*P	**P**	**12 41 49.9**	**+0.7**
MOD	**Modoc**	**82.30**	**40**	*e*P	**P**	**12 41 52.6**	**+0.7**
TUC	**Tucson** 4.2nm,1.0s,mb3.9	**83.38**	**52**	*e*P	**P**	**12 41 57.7**	**+0.1**
WVOR	**Wild Horse Val** 7.3nm,1.4s,mb4.0	**83.61**	**40**	*e*P	**P**	**12 41 57.5**	**-1.0**
CCUT	**Cedar City** 7.9nm,1.4s,mb4.0	**84.25**	**46**	*e*P	**P**	**12 42 02.5**	**+0.7**
BMO	**Blue Mountains** 14nm,2.0s,mb4.2	**85.80**	**38**	*e*P	**P**	**12 42 09.3**	**+0.2**
SYO	**Syowa Base**	**86.16**	**193**	↓*e*P	**P**	**12 42 09.0**	**-1.5**
ENH	**Enshi** 6.0nm,0.6s,mb4.4	**86.30**	**304**	*e*P	**P**	**12 42 11.7**	**-0.2**
SRU	**San Rafael** 4.2nm,0.8s,mb4.2	**86.97**	**46**	*e*P	**P**	**12 42 14.8**	**0.0**
TRF	**Thorofare Moun** 7.0nm,0.8s,mb4.4	**87.02**	**12**	*e*P	**P**	**12 42 13.4**	**-1.0**
TXAR	**Lajitas Array** 1.8nm,0.8s,mb3.9,baz=218,slow=6.8,SNR=20	**87.42**	**57**	P	**P**	**12 42 17.4**	**+0.3**
MCK	**McKinley**	**87.54**	**13**	*e*P	**P**	**12 42 16.0**	**-0.9**
VNA3	**Neumayer Olymp**	**87.58**	**176**	*e*P	**P**	**12 42 14.6**	**-2.6**
VNA3				*e*	pP	12 44 06.6	-1.1
ANMO	**Albuquerque** 26nm,2.5s,mb4.5	**87.81**	**51**	*e*P	**P**	**12 42 19.5**	**+0.6**
VNA2	**Neumayer--Watz** baz=195,slow=3.6	**88.02**	**177**	*e*P	**P**	**12 42 16.9**	**-2.4**
VNA2				*e*	pP	12 44 09.4	-0.5
GDL2	**Guadalupe Moun** 0.9nm,0.5s,mb3.8	**88.13**	**55**	*e*P	**P**	**12 42 21.0**	**+0.5**
VNA1	**Neumayer--Stat**	**88.25**	**177**	*e*P	**P**	**12 42 18.5**	**-1.8**
MCMT	**McKenzie Canyo** 3.8nm,1.1s,mb4.0	**88.43**	**40**	*e*P	**P**	**12 42 22.0**	**+0.5**
RRI2	**Red Ridge** 4.7nm,0.8s,mb4.4	**88.60**	**42**	*e*P	**P**	**12 42 23.2**	**+0.8**
COLA	**College** 5.9nm,0.9s,mb4.4	**88.77**	**12**	*e*P	**P**	**12 42 21.1**	**-1.6**
ILAR	**Eielson Array** 1.6nm,0.5s,mb4.1,baz=221,slow=5.9,SNR=25	**88.88**	**13**	P	**P**	**12 42 21.4**	**-1.8**
REDW	**Red Top Meadow** 9.7nm,1.2s,mb4.5	**88.90**	**42**	*e*P	**P**	**12 42 24.4**	**+0.7**
SNOW	**Snow King Moun** 4.2nm,0.8s,mb4.3	**89.01**	**42**	*e*P	**P**	**12 42 25.0**	**+0.7**
IMW	**Indian Meadow**	**89.12**	**42**	*e*P	**P**	**12 42 25.3**	**+0.5**
LOHW	**Long Hollow** 22nm,2.3s,mb4.6	**89.18**	**42**	*e*P	**P**	**12 42 25.1**	**+0.1**
PDAR	**Pinedale Array** 2.6nm,0.8s,mb4.1,baz=218,slow=2.6,SNR=23	**89.42**	**43**	P	**P**	**12 42 25.4**	**-0.8**
BOZ	**Bozeman (W)** 14nm,1.8s,mb4.5	**89.59**	**40**	*e*P	**P**	**12 42 27.4**	**+0.5**
DAWY	**Dawson**	**90.02**	**16**	*e*P	**P**	**12 42 28.2**	**-0.2**
EGAK	**Eagle** 5.1nm,0.9s,mb4.3	**90.17**	**15**	*e*P	**P**	**12 42 28.4**	**-0.7**
CMAR	**Chiang Mai Arr** 4.5nm,0.9s,mb4.3,baz=122,slow=3.3,SNR=22	**90.24**	**290**	P	**P**	**12 42 32.0**	**+1.5**
CHTO	**Chiang Mai** 3.8nm,0.7s,mb4.3	**90.37**	**290**	*e*P	**P**	**12 42 32.8**	**+1.6**
SONM	**Songino Array** 0.5nm,0.8s,mb3.7,baz=96,slow=2.9,SNR=2.9	**96.13**	**319**	P	**P**	**12 42 57.7**	**+0.9**
ZALV	**Zalesovo Beam** 1.0nm,0.6s,baz=53,slow=2.1,SNR=5.5	**110.89**	**321**	PKiKP	PKiKP	12 47 57.1	-1.6
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=59,slow=4.7,SNR=4.2	**111.53**	**313**	PKiKP	PKiKP	12 47 58.6	-1.6
BVAR	**Borovoye Array** 2.7nm,0.5s,baz=105,slow=1.9,SNR=13	**119.47**	**320**	PKP	PKPdf	12 48 14.0	-1.2
AKTO	**Aktyubinsk** 1.5nm,0.5s,baz=88,slow=4.8,SNR=6.0	**127.44**	**318**	PKP	PKPdf	12 48 30.9	+0.2
ARCES	**ARCESS Array B** 3.9nm,0.6s,baz=28,slow=1.6,SNR=18	**129.46**	**349**	PKP	PKPdf	12 48 33.3	-0.6
FINES	**FINESS Array B** 1.7nm,0.7s,baz=111,slow=4.3,SNR=5.1	**136.29**	**343**	PKP	PKPdf	12 48 46.0	-1.0
NOA	**NORSAR Array B** 0.5nm,0.5s,baz=14,slow=4.8,SNR=3.6	**139.53**	**353**	PKhKP	PKPpre	12 48 46.1	
AKASG	**Malin Array Be** 8.9nm,0.5s,baz=42,slow=4.2,SNR=25	**143.47**	**331**	PKhKP	PKPpre	12 48 56.9	
EKA	**Eskdalemuir Ar** 2.9nm,0.7s,baz=334,slow=3.4,SNR=9.7	**145.57**	**5**	PKPbc	PKPbc	12 49 04.0	-1.0
KIS	**Kishinev**	**146.17**	**326**	*e*P	PKPdf	12 49 04.0	-1.0
KWP	**Kalwaria Pacla**	**147.06**	**335**	↑*i*P	PKPbc	12 49 09.5	+0.1
BRTR	**Keskin Array B** 3.6nm,0.6s,baz=134,slow=3.6,SNR=15	**147.16**	**312**	PKPbc	PKPbc	12 49 09.3	-0.7
TLCR		**147.32**	**324**	↑↑*i*P	PKPbc	12 49 09.5	-0.7
BURAR	**Bucovina Array**	**147.52**	**330**	↓*i*P	PKPbc	12 49 12.4	+1.7
KOLS	**Kolonicke sedl**	**147.79**	**335**	*e*PKP	PKPab	12 49 13.6	-1.9
VRI	**Vrincioaia**	**148.00**	**326**	↓*i*P	PKPbc	12 49 12.1	+0.2
CRVS	**Cervenica-Dubn**	**148.14**	**335**	*e*PKP	PKPbc	12 49 12.7	+0.5
TRPA	**Tarpa**	**148.31**	**333**	↓*i*P	PKPbc	12 49 12.2	-0.5
CLZ	**Clausthal**	**148.59**	**350**	*e*PKPbc	PKPbc	12 49 12.9	-0.3
UPC	**Upice**	**148.59**	**343**	↑*e*PKP	PKPbc	12 49 13.4	+0.1
UPC				*e*PKPAB	PKPab	12 49 18.3	-0.4
CLL	**Collm**	**148.60**	**347**	*e*PKPbc	PKPbc	12 49 12.8	-0.5
CLL	**Collm**	**148.60**	**347**	↓*i*PKPbc	PKPbc	12 49 13.1	-0.2
	comp=Z,18nm,0.9s						
CLL				↓↓*i*PKiKP	PKiKP	12 49 15.1	+0.7
	comp=Z,11nm,0.7s						
CLL				*e*PKPab	PKPab	12 49 18.0	-0.7
	comp=Z,7.0nm,0.6s						
DOPR	**Dopca**	**148.61**	**328**	↑↑*i*P	PKPbc	12 49 14.0	+0.5
DPC	**Dobruska-Polom**	**148.64**	**342**	↑*e*PKP	PKPbc	12 49 13.2	-0.2
DPC				*e*PKPAB	PKPab	12 49 19.1	+0.2
MLR	**Muntele Rosu**	**148.66**	**327**	↑↑*i*P	PKPbc	12 49 12.8	-0.8
MORC	**Moravsky Berou**	**148.78**	**340**	↓↓*i*P	PKPbc	12 49 14.0	+0.2
BRG	**Berggiesshubel**	**148.79**	**345**	*e*PKPbc	PKPbc	12 49 13.5	-0.2
BRG	**Berggiesshubel**	**148.79**	**345**	*i* PKP	PKPbc	12 49 13.7	0.0
	comp=Z,7.3nm,0.8s						
BRG				*e*		12 49 19.0	
	comp=Z,7.7nm,0.8s						
KECS	**Kecovo**	**148.86**	**336**	*e*PKP	PKPbc	12 49 14.3	+0.3
KECS				*e*		12 49 20.1	
VOIR		**149.15**	**327**	↑↑*i*P	PKPbc	12 49 13.4	-1.4
DRGR		**149.27**	**331**	↑↑*i*P	PKPbc	12 49 13.5	-1.6
VYHS	**Vyhne**	**149.46**	**338**	*e*PKP	PKPbc	12 49 15.6	+0.2
VYHS				*e*		12 49 22.7	
PRU	**Pruhonice**	**149.46**	**344**	↑*e*PKP	PKPbc	12 49 15.7	+0.3
KOLL	**Kolacno**	**149.54**	**338**	*e*PKP	PKPbc	12 49 16.2	+0.6
PSZ	**Piszkesteto**	**149.55**	**336**	↑↑*i*P	PKPbc	12 49 15.6	-0.1
TANN	**Tannenbergstha**	**149.55**	**347**	*e*PKPbc	PKPbc	12 49 15.5	-0.1
WERD	**Werda**	**149.56**	**347**	*e*PKPbc	PKPbc	12 49 15.3	-0.3
GUNZ	**Gunzen**	**149.63**	**347**	*e*PKPbc	PKPbc	12 49 15.6	-0.2
NKC	**Novy Kostel**	**149.73**	**347**	↑*e*PKP	PKPbc	12 49 16.0	0.0
NKC				*e*PKPAB	PKPab	12 49 24.1	+0.7
GZR	**Gura Zlata**	**150.29**	**330**	↓↓*i*P	PKPbc	12 49 17.4	-0.1
TNS	**Taunus Mts**	**150.45**	**351**	*e*PKPbc	PKPbc	12 49 17.5	-0.2
KHC	**Kasperske Hory**	**150.49**	**344**	*e*PKPDF	PKPdf	12 49 12.0	+0.1
KHC				↑↑*e*PKP	PKPbc	12 49 17.5	-0.4
KHC				*e*PKPAB	PKPab	12 49 26.0	-0.6
WET	**Wettzell**	**150.65**	**345**	*e*PKPbc	PKPbc	12 49 18.0	-0.2
BZS	**Buzias**	**150.66**	**331**	↑↑*i*P	PKPbc	12 49 18.1	-0.3
GEC2	**GERESS Array S**	**150.72**	**344**	*e*PKPbc	PKPbc	12 49 18.2	-0.2
GERES	**GERESS Array B** comp=Z,3.8nm,0.7s,baz=11,slow=2.7,SNR=21	**150.72**	**344**	*e*PKPbc	PKPbc	12 49 17.9	-0.4
GERES				PKPab	PKPab	12 49 28.5	+0.9
	comp=Z,0.9nm,0.6s,baz=35,slow=4.9,SNR=3.9						
PKSM	**Moragy**	**151.44**	**335**	↑↑*i*P	PKPbc	12 49 19.8	-0.3
VTS	**Vitosha**	**152.08**	**325**	↓↓*i*P	PKPbc	12 49 21.6	-0.1
PERS	**Pernice**	**152.32**	**340**	*i* PKPbc	PKPbc	12 49 21.1	-0.9
CRES	**Cresnjev**	**152.93**	**339**	*e*PKPbc	PKPbc	12 49 22.7	-0.7
VISS	**Visnje**	**153.15**	**340**	*i* PKPbc	PKPbc	12 49 21.0	-2.9
BOJS	**Bojanci**	**153.28**	**339**	*i* PKPbc	PKPbc	12 49 23.8	-0.3
DAVOX	**Davos/Dischmat** comp=Z,3.1nm,0.6s,baz=356,slow=17,SNR=5.4	**153.54**	**348**	PKPbc	PKPbc	12 49 23.6	-1.1
TORD	**Torodi Ar. Bea** comp=Z,2.4nm,0.9s,baz=172,slow=3.9,SNR=2.4	**172.12**	**178**	PKPab	PKPab	12 51 01.6	0.0

IDC 25 12:40:26.1±4.5, 30°.78N×84°.14E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/25, mbtmp3.5/3, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.3/25, Error ellipse: s-maj=131.4km s-min=36.3km az=85.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=177,slow=11,SNR=4.1	**16.05**	**355**	Pn	Pn	12 44 10.9	-2.2
SONM	**Songino Array** 0.8nm,0.7s,baz=228,slow=9.3,SNR=5.5	**24.09**	**39**	P	P	12 45 43.8	+0.6
PSI	**Prapat** comp=Z,60nm,18.6s,baz=74,slow=41	**31.14**	**150**	LR	LR	13 01 43.5	
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=326,slow=6.2,SNR=4.9	**69.

VYHS	**Vyhne**	**1.70 183**	*e*PN	**Pn**	**12 41 18.9**	**+0.1**
VYHS			*e*SN	**Sn**	**12 41 41.0**	**-0.2**
VYHS	**Vyhne**	**1.70 183**	*e*Pn	**Pn**	**12 41 18.6**	**-0.2**
	baz=3.2					
VYHS			*e*Sg	**Sg**	**12 41 40.7**	**-1.8**
	baz=3.2					
VYHS			*e*Sn	**Sn**	**12 41 41.0**	**-0.2**
VRAC	**Vranov**	**1.77 241**	*e*Pn	**Pn**	**12 41 20.0**	**+0.2**
	baz=60					
VRAC			*e*Sg	**Sg**	**12 41 44.0**	**-0.7**
	comp=Z,12nm,0.3s,baz=60					
KSP	**Ksiaz**	**1.82 292**	*e*Pg	**Pg**	**12 41 22.3**	**-0.6**
KSP			*e*Sg	**Sg**	**12 41 47.1**	**+0.6**
KSP	**Ksiaz**	**1.82 292**	*e*Pg	**Pg**	**12 41 22.3**	**-0.6**
KSP			*e*Sg	**Sg**	**12 41 47.1**	**+0.6**
UPC	**Upice**	**1.91 281**	*e*PG	**Pg**	**12 41 24.2**	**-0.4**
UPC	**Upice**	**1.91 281**	Pg	**Pg**	**12 41 24.2**	**-0.4**
KECS	**Kecovo**	**1.98 149**	*e*PN	**Pn**	**12 41 25.4**	**+2.7**
KECS			*e*SN	**Sn**	**12 41 46.6**	**-1.5**
KRUC	**Moravsky**	**2.01 237**	*e*Pn	**Pn**	**12 41 22.4**	**-0.7**
	baz=55					
KRUC			*e*Sg	**Sg**	**12 41 50.9**	**-1.6**
	comp=Z,4.4nm,0.2s,baz=55					
CRVS	**Cervenica-Dubn**	**2.08 127**	*e*PN	**Pn**	**12 41 27.2**	**+3.1**
CRVS			*e*SN	**Sn**	**12 41 49.8**	**-0.8**
CRVS	**Cervenica-Dubn**	**2.08 127**	*e*Pn	**Pn**	**12 41 27.2**	**+3.1**
CRVS			*e*Sn	**Sn**	**12 41 49.8**	**-0.8**
KOLS	**Kolonicke sedl**	**2.50 119**	*e*SN	**Sn**	**12 41 59.9**	**-1.1**
KOLS	**Kolonicke sedl**	**2.50 119**	*e*Sn	**Sn**	**12 41 59.9**	**-1.1**
PRU	**Pruhonice**	**2.85 268**	*e*SG	**Sg**	**12 42 20.1**	**+0.6**
	comp=Z,3.4nm,0.2s					
PRU	**Pruhonice**	**2.85 268**	Sg	**Sg**	**12 42 20.1**	**+0.6**
	comp=Z,3.4nm,0.2s					
KHC	**Kasperske Hory**	**3.65 255**	*e*SG	**Sg**	**12 42 44.8**	**-0.4**
	comp=Z,4.1nm,0.5s					
KHC	**Kasperske Hory**	**3.65 255**	Sg	**Sg**	**12 42 44.8**	**-0.4**
	comp=Z,4.1nm,0.5s					

SGS ***25*** *12:51:20.3,27°.10N×55°.85E,h15km*
OMAN ***25*** *12:51:20.4±11.0,26°.87N×55°.93E,h0km,Error ellipse: s-maj=135.7km s-min=35.2km az=31.0*
CSEM ***25*** *12:51:20.6±0.4,26°.83N×55°.78E,h2km,ML3.7,Error ellipse: s-maj=12.3km s-min=8.3km az=71.0*
ISCJB ***25*** *12:51:20.0±0.5,26°.85N±0°.03×55°.65E±0°.05,h10km,Error ellipse: s-maj=6.4km s-min=4.5km az=20.2*
THR ***25*** *12:51:20.6±0.4,26°.95N×55°.79E,h3km±2km,ML3.5*
TEH ***25*** *12:51:21.6,26°.85N×55°.93E,h5km*
ISC 25 12:51:21.4±0.5,26°.82N±0°.03×55°.75E±0°.05,h10km,n35, σ1§**13**/40**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.69**	**33**	*e*Pg	**Pg**	**12 51 32.2**	**-2.6**
BNDS				AML	AML	12 51 45.4	
	comp=E,3μm,0.4s						
IBND	**Bandar-abas**	**0.95**	**48**	*e*Pg	**Pg**	**12 51 36.5**	**-3.1**
IBND				*e*Sg	**Sg**	**12 51 46.6**	**-5.4**
IBND				*e*		12 51 57.9	
	comp=Z,55μm,0.1s						
IBND	**Bandar-abas**	**0.95**	**48**	*e*Pg	**Pg**	**12 51 36.5**	**-3.1**
BANOM	**Banah**	**1.02 151**		P	**Pg**	**12 51 39.7**	**-1.3**
	SNR=1000						
BANOM	**Banah**	**1.02 151**		P	**Pg**	**12 51 39.7**	**-1.2**
	SNR=1154						
HATD	**Hatta, Dubai**	**2.01 170**		P	**Pn**	**12 51 56.6**	**+1.2**
	SNR=8.0						
HATD	**Hatta, Dubai**	**2.01 170**		P	**Pn**	**12 51 56.6**	**+1.2**
	SNR=8.0						
ASHO	**Ashiyiah**	**2.14 172**		P	**Pn**	**12 51 57.7**	**+0.5**
	SNR=42						
ASHO	**Ashiyiah**	**2.14 172**		P	**Pn**	**12 51 57.7**	**+0.5**
	SNR=42						
ASUD	**Al Ashush, Dub**	**2.21 190**		P	**Pn**	**12 51 59.8**	**+1.6**
	SNR=40						
ASUD	**Al Ashush, Dub**	**2.21 190**		P	**Pn**	**12 51 59.8**	**+1.6**
	SNR=40						
KRBR	**Kerman**	**3.28**	**16**	*e*Pn	**Pn**	**12 52 13.1**	**+0.2**
KRBR				Sn	**Sn**	**12 52 51.6**	**-0.3**
KRBR				AML	AML	12 53 06.2	
	comp=E,124nm,0.5s						
KRBR				AML	AML	12 53 08.5	
	comp=N,123nm,0.5s						
ISRV	**Sarvestan**	**3.46 318**		*e*Pn	**Pn**	**12 52 17.3**	**+2.0**
ISRV				*e*		12 53 37.5	
	comp=Z,2μm,0.6s						
ISRV	**Sarvestan**	**3.46 318**		*e*Pn	**Pn**	**12 52 17.3**	**+2.0**
IPAR	**Pars**	**3.84 322**		*e*Pn	**Pn**	**12 52 21.9**	**+1.3**
IPAR				*e*		12 53 50.4	
	comp=Z,875nm,0.4s						
IPAR	**Pars**	**3.84 322**		*e*Pn	**Pn**	**12 52 21.9**	**+1.3**
IMEH	**Mehriz**	**4.67 348**		*e*Pn	**Pn**	**12 52 32.4**	**+0.5**
IMEH				*e*Sn	**Sn**	**12 53 24.8**	**-1.3**
IMEH				*e*		12 53 29.5	
	comp=Z,310nm,0.1s						
IMEH	**Mehriz**	**4.67 348**		*e*Pn	**Pn**	**12 52 32.4**	**+0.5**
IMEH				*e*Sn	**Sn**	**12 53 24.8**	**-1.3**
BTHS		**5.22 239**		P	**Pn**	**12 52 39.4**	**-0.1**
BTHS		**5.22 239**		P	**Pn**	**12 52 39.4**	**-0.1**
BTHS				S	**Sn**	**12 53 38.9**	**-0.9**
ZHSF	**Zahedan**	**5.24**	**57**	*e*Pn	**Pn**	**12 52 40.7**	**+1.0**
IGAR	**Gharneh**	**6.43 331**		*e*Pn	**Pn**	**12 52 56.5**	**+0.3**
IGAR				*e*		12 53 01.2	
	comp=Z,240nm,0.1s						
NASN	**Na'in**	**6.49 338**		*e*Pn	**Pn**	**12 52 58.1**	**+1.2**
HRDDS		**6.90**	**237**	S	**Sn**	**12 54 19.4**	**-1.7**
HRDDS		**6.90**	**237**	P	**Pn**	**12 53 02.4**	**-0.2**
IPIR	**Pirpir**	**7.21 325**		*e*Pn	**Pn**	**12 53 07.3**	**+0.4**
IPIR	**Pirpir**	**7.21 325**		*e*Pn	**Pn**	**12 53 07.3**	**+0.4**
UMR	**Umm Al-Rimmam**	**7.59 293**		*e*P	**Pn**	**12 53 12.3**	**+0.2**
UMR				AML	AML	12 54 38.6	
	comp=Z,18nm,0.3s						
UMR	**Umm Al-Rimmam**	**7.59 293**		*e*P	**Pn**	**12 53 12.3**	**+0.2**
NAY	**Al-Naaiem**	**7.90 290**		*e*P	**Pn**	**12 53 16.4**	**+0.1**
NAY				AML	AML	12 54 43.0	
	comp=Z,3.9nm,0.5s						
NAY	**Al-Naaiem**	**7.90 290**		*e*P	**Pn**	**12 53 16.4**	**+0.1**
MIB	**Mutribah**	**7.99 294**		*e*P	**Pn**	**12 53 17.5**	**-0.1**
MIB				AML	AML	12 54 46.3	
	comp=Z,13nm,0.5s						
MIB	**Mutribah**	**7.99 294**		*e*P	**Pn**	**12 53 17.5**	**0.0**
ASYS		**10.18 276**		P	**Pn**	**12 53 46.1**	**-1.5**
ASYS		**10.18 276**		P	**Pn**	**12 53 46.2**	**-1.5**

IDC 25 12:57:50.3±3.5,6°.06N×126°.87E,h87km±32km,mb3.3/7, mb1 3.4/7,mb1mx3.3/20,mbtmp3.3/7,Error ellipse: s-maj=63.9km s-min=14.3km az=70.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.63 308**		P	Pn	12 58 17.3	-0.4
	164nm,0.3s,baz=153,slow=3.4,SNR=5.6						
DAV				S	Sn	12 58 38.6	+0.2
	37nm,0.3s,baz=274,slow=18,SNR=1.2						
FITZ	**Fitzroy Crossi**	**24.03 183**		P	P	13 02 57.0	-0.3
	1.1nm,0.7s,baz=27,slow=6.8,SNR=3.5						
WRA	**Warramunga Arr**	**26.86 164**		P	P	13 03 21.4	-1.5
	0.9nm,0.5s,baz=343,slow=10,SNR=12						
ASAR	**Alice Springs**	**30.33 167**		P	P	13 03 54.8	+1.1
	0.2nm,0.3s,baz=337,slow=7.1,SNR=12						
STKA	**Stephens Creek**	**40.25 160**		P	P	13 05 19.7	+1.0
	1.0nm,0.6s,baz=343,slow=14,SNR=4.0						
MKAR	**Makanchi Array**	**55.75 324**		P	P	13 07 18.9	+0.8
	0.3nm,0.3s,baz=111,slow=9.2,SNR=4.6						
ZALV	**Zalesovo Beam**	**58.60 332**		P	P	13 07 37.2	-0.8
	0.3nm,0.3s,baz=134,slow=8.3,SNR=1.9						
ILAR	**Eielson Array**	**82.96**	**26**	P	P	13 10 05.7	+0.2
	0.2nm,0.7s,baz=265,slow=5.0,SNR=4.5						

CSEM ***25*** *13:38:14.5±0.2,40°.13N×24°.90E,h2km,ML2.3/6,Error ellipse: s-maj=5.5km s-min=4.3km az=31.0*
ATH ***25*** *13:38:14.8,40°.14N×24°.87E,h5km,MD2.9/8*
ISCJB ***25*** *13:38:15.1±0.4,40°.14N±0°.03×24°.88E±0°.03,h10km,Error ellipse: s-maj=4.5km s-min=3.2km az=35.1*
THE ***25*** *13:38:15.2,40°.14N×24°.89E,h9km±1km,ML2.3/6,Error ellipse: s-maj=1.5km s-min=0.8km az=126.0*
SOF ***25*** *13:38:17.3,40°.37N×25°.12E,h5km,MD2.8*
ISC 25 13:38:15.0±0.5,40°.14N±0°.03×24°.90E±0°.03,h5km±5km, n40, σ1§**06**/62**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.33 137**		*e*PB	**Pg**	**13 38 22.3**	**+1.0**
LIA				*e*SB	**Sg**	**13 38 26.6**	**+1.1**
LIA	**Limnos Island**	**0.33 137**		P	**Pg**	**13 38 22.2**	**+0.9**
LIA				S	**Sg**	**13 38 26.6**	**+1.1**
LIA	**Limnos Island**	**0.33 137**		P	**Pg**	**13 38 22.2**	**+0.9**
LIA				S	**Sg**	**13 38 26.6**	**+1.1**
OUR	**Ouranopolis**	**0.73 286**		P	**Pg**	**13 38 28.9**	**-0.1**
OUR				S	**Sg**	**13 38 39.1**	**+0.7**
OUR	**Ouranopolis**	**0.73 286**		P	**Pg**	**13 38 28.9**	**-0.1**
OUR				S	**Sg**	**13 38 39.1**	**+0.7**
KAVA	**Kavala**	**0.91 341**		P	**Pg**	**13 38 33.0**	**+0.6**
KAVA				S	**Sg**	**13 38 45.0**	**+0.8**
KAVA	**Kavala**	**0.91 341**		P	**Pg**	**13 38 33.0**	**+0.6**
KAVA				S	**Sg**	**13 38 45.0**	**+0.8**
RDO	**Rodhopi**	**1.12**	**26**	*e*PG	**Pg**	**13 38 35.5**	**-1.0**
RDO	**Rodhopi**	**1.12**	**26**	*e*Pg	**Pg**	**13 38 35.5**	**-1.0**
PLG	**Polygyros**	**1.13 283**		*e*PN	**Pg**	**13 38 36.1**	**-0.7**
PLG				*e*SB	**Sg**	**13 38 51.1**	**-0.4**
PLG	**Polygyros**	**1.13 283**		P	**Pg**	**13 38 36.1**	**-0.7**
PLG				S	**Sg**	**13 38 52.0**	**+0.5**
PLG	**Polygyros**	**1.13 283**		P	**Pg**	**13 38 36.1**	**-0.7**
PLG				*e*Sb	**Sg**	**13 38 51.1**	**-0.4**
PLG				S	**Sg**	**13 38 52.0**	**+0.5**
ALN	**Alexandroupoli**	**1.16**	**49**	*e*PB	**Pb**	**13 38 37.9**	**+0.3**
ALN	**Alexandroupoli**	**1.16**	**49**	P	**Pg**	**13 38 35.8**	**-1.5**
ALN				S	**Sg**	**13 38 53.0**	**+0.7**
ALN	**Alexandroupoli**	**1.16**	**49**	P	**Pg**	**13 38 35.8**	**-1.5**
ALN	**Alexandroupoli**	**1.16**	**49**	*e*Pb	**Pb**	**13 38 37.9**	**+0.3**
ALN				S	**Sg**	**13 38 53.0**	**+0.7**
AOS	**Alonnisos**	**1.24 219**		P	**Pg**	**13 38 37.0**	**-1.8**
AOS				S	**Sg**	**13 38 56.0**	**+1.1**
AOS	**Alonnisos**	**1.24 219**		P	**Pg**	**13 38 37.0**	**-1.8**
AOS				S	**Sg**	**13 38 56.0**	**+1.1**
SOH	**Sokhos**	**1.36 301**		*e*PB	**Pb**	**13 38 41.1**	**+0.2**
SOH	**Sokhos**	**1.36 301**		P	**Pn**	**13 38 39.4**	**-1.2**
SOH				S	**Sb**	**13 38 58.3**	**-0.3**
SOH	**Sokhos**	**1.36 301**		P	**Pn**	**13 38 39.4**	**-1.2**
SOH	**Sokhos**	**1.36 301**		*e*Pb	**Pb**	**13 38 41.1**	**+0.2**
SOH				S	**Sb**	**13 38 58.3**	**-0.3**
SOH				*e*Sb	**Sb**	**13 39 00.1**	**+1.5**
PRK	**Paraskevi**	**1.39 129**		*e*PG	**Pg**	**13 38 41.0**	**-0.6**
PRK				*e*SB	**Sb**	**13 39 00.5**	**+1.2**
PRK	**Paraskevi**	**1.39 129**		*e*Pg	**Pg**	**13 38 41.0**	**-0.6**
PRK				*e*Sb	**Sb**	**13 39 00.5**	**+1.2**
SRS	**Serrai**	**1.39 315**		P	**Pn**	**13 38 39.9**	**-1.2**
SRS				S	**Sb**	**13 38 59.5**	**-0.1**
SRS	**Serrai**	**1.39 315**		P	**Pn**	**13 38 39.9**	**-1.2**
SRS				S	**Sb**	**13 38 59.5**	**-0.1**
NVR	**Nevrokopi**	**1.45 327**		*e*PN	**Pn**	**13 38 40.9**	**-0.9**
NVR	**Nevrokopi**	**1.45 327**		*e*Pn	**Pn**	**13 38 40.9**	**-0.9**
RZN	**Rozhen**	**1.56 355**		*i* P	**Pn**	**13 38 44.6**	**+1.3**
RZN	**Rozhen**	**1.56 355**		*i* P	**Pn**	**13 38 44.6**	**+1.3**
KDZ	**Kurdzhali**	**1.56**	**14**	*i* P	**Pn**	**13 38 41.6**	**-1.8**
KDZ	**Kurdzhali**	**1.56**	**14**	*i* P	**Pn**	**13 38 41.6**	**-1.8**
MMB	**Musomiste**	**1.70 329**		P	**Pg**	**13 38 48.0**	**+0.4**
MMB	**Musomiste**	**1.70 329**		P	**Pg**	**13 38 48.0**	**+0.4**
CHOS	**Chios island**	**1.96 152**		*e*PG	**Pg**	**13 38 50.8**	**-1.9**
CHOS	**Chios island**	**1.96 152**		*e*Pg	**Pg**	**13 38 50.8**	**-1.9**
KKB	**Krupnik**	**2.21 322**		*i* P	**Pn**	**13 38 54.4**	**+2.1**
KKB	**Krupnik**	**2.21 322**		*i* P	**Pn**	**13 38 54.4**	**+2.1**
VTS	**Vitosha**	**2.76 333**		*i* P	**Pn**	**13 39 01.0**	**+1.1**
VTS	**Vitosha**	**2.76 333**		*i* P	**Pn**	**13 39 01.0**	**+1.1**

DJA 25 13:44:18,2°.64N×97°.74E,h13km,MLv3.5/4,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**0.83 318**		P	Pg	13 44 33.0	-1.1
TPTI				S	Sg	13 44 45.3	+0.2
TSI	**Tuntungan**	**1.19**	**44**	P	Pn	13 44 38.8	-1.5
TSI				S	Sb	13 44 55.0	-0.7
MNSI	**Mandailing Nat**	**2.60 135**		P	Pn	13 45 00.8	+1.1

DJA 25 13:53:48,1°.57S×122°.18E,h23km,MLv4.0/6,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.79**	**48**	P	Pb	13 54 03.4	+0.3
APSI	**Ampana**	**0.84 321**		P	Pb	13 54 04.9	+0.9
MSSI	**Masamba**	**2.10 242**		P	Pn	13 54 21.6	-0.1
KDI	**Kendari**	**2.41 170**		P	Pn	13 54 27.1	+1.0
TOLI	**Toli-Toli**	**3.01 333**		P	Pn	13 54 33.6	-0.7
MNI	**Manado**	**4.00**	**42**	P	Pn	13 54 49.2	+1.2

IDC 25 13:59:48.1±54.0,15°.87S×173°.38W,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.6/18,mbtmp3.8/3,Error ellipse: s-maj=1029.0km s-min=182.7km az=79.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.83 240**		P	P	14 07 56.2	+0.1
	1.0nm,0.7s,baz=73,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**49.76 257**		P	P	14 08 42.8	0.0
	0.4nm,0.4s,baz=94,slow=7.0,SNR=23						
ASAR	**Alice Springs**	**49.99 252**		P	P	14 08 44.3	-0.2
	1.2nm,0.6s,baz=91,slow=7.8,SNR=24						

IDC 25 14:03:53.9±1.7,6°.64S×154°.28E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.6/16,mbtmp3.5/4,MS3.4/2,Ms1 3.4/2, ms1mx2.6/31,Error ellipse: s-maj=77.8km s-min=30.7km az=132.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.45 234**		P	P	14 09 04.9	-0.4
	0.9nm,0.8s,baz=55,slow=9.3,SNR=5.8						
ASAR	**Alice Springs**	**25.89 227**		P	P	14 09 27.4	-0.4
	0.2nm,0.4s,baz=60,slow=9.8,SNR=5.0						
STKA	**Stephens Creek**	**27.77 204**		LR	LR	14 20 29.3	
	comp=Z,126nm,20.7s,baz=205,slow=36						
AFI	**Afiamalu**	**34.14 105**		LR	LR	14 20 44.1	
	comp=Z,46nm,19.3s,baz=326,slow=30						
MKAR	**Makanchi Array**	**82.67 319**		P	P	14 16 20.4	+1.0
	0.4nm,0.2s,baz=96,slow=5.9,SNR=4.3						
NVAR	**Mina Array Bea**	**92.06**	**52**	P	P	14 17 05.1	-0.1
	0.3nm,0.8s,baz=253,slow=5.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**152.25 286**		PKPbc	PKPbc	14 23 52.7	-0.1
	1.5nm,0.8s,baz=41,slow=4.6,SNR=2.1						

NEIC ***25*** *14:12:13.0,44°.24N×110°.79W,h1km,ML2.6(SLC),After SLC.*
ISCJB ***25*** *14:12:15.0±0.2,44°.24N±0°.01×110°.78W±0°.02,h10km, Error ellipse: s-maj=2.1km s-min=1.7km az=160.7*
ISC 25 14:12:15.0±0.2,44°.24N±0°.01×110°.78W±0°.02,h10km,n87, σ1§**25**/110**,46C-31D,Yellowstone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FLWY	**Flagg Ranch**	**0.17 159**		*e*Pg	**Pg**	**14 12 17.5**	**-1.1**
H17A	**Grant Village**	**0.22**	**43**	⇑P	**Pg**	**14 12 18.7**	**-0.9**
	baz=0.2,SNR=759						
YFT	**Old Faithful**	**0.22 350**		*e*Pg	**Pg**	**14 12 18.2**	**-1.3**
I17A	**Pilgrim Ck.**	**0.35 155**		⇓P	**Pg**	**14 12 21.5**	**-0.4**
	baz=0.4,SNR=89						
I17A				⇑S	**Sg**	**14 12 25.7**	**-0.9**
	baz=0.4						
IMW	**Indian Meadow**	**0.36 198**		*e*P	**Pg**	**14 12 20.9**	**-1.1**
LKWY	**Lake**	**0.43**	**40**	*e*Pg	**Pg**	**14 12 22.8**	**-0.7**
YMR	**Madison River**	**0.45 343**		*e*Pg	**Pg**	**14 12 23.0**	**-0.8**
YNR	**Norris Junctio**	**0.48**	**9**	*e*Pg	**Pg**	**14 12 23.7**	**-0.8**
MOOW	**Moose Ponds**	**0.49 177**		*e*Pg	**Pg**	**14 12 23.0**	**-1.5**
H16A	**Russell Place,**	**0.57 325**		⇓P	**Pg**	**14 12 25.1**	**-1.1**
	baz=0.6						
H16A				⇑S	**Sg**	**14 12 32.6**	**-1.1**
	baz=0.6						
I16A	**Newdale**	**0.62 235**		⇓P	**Pg**	**14 12 26.0**	**-1.0**
	baz=0.6,SNR=26						
LOHW	**Long Hollow**	**0.64 168**		*e*Pg	**Pg**	**14 12 26.1**	**-1.3**
DCID1	**Drake Creek**	**0.70 204**		*e*Pg	**Pg**	**14 12 27.9**	**-0.7**
QLMT	**Earthquake Lak**	**0.75 322**		*e*Pg	**Pg**	**14 12 27.9**	**-1.7**
TPAW	**Teton Pass**	**0.76 189**		*e*Pg	**Pg**	**14 12 28.1**	**-1.5**
SNOW	**Snow King Moun**	**0.77 178**		*e*Pg	**Pg**	**14 12 28.9**	**-1.0**
J17A	**Brown Place, J**	**0.88 177**		⇓P	**Pg**	**14 12 31.1**	**-0.8**
	baz=0.9,SNR=66						
J17A				⇑S	**Sg**	**14 12 42.8**	**-0.4**
	baz=0.9						
REDW	**Red Top Meadow**	**0.88 183**		*e*Pg	**Pg**	**14 12 30.6**	**-1.3**
I18A	**Diamond G Ranc**	**0.88 127**		⇓P	**Pg**	**14 12 30.8**	**-1.1**
	baz=0.9,SNR=36						
I18A				⇑S	**Sg**	**14 12 42.8**	**-0.6**
	baz=0.9						
H18A	**Shoshone NF, C**	**0.91**	**61**	⇓P	**Pg**	**14 12 31.3**	**-1.3**
	baz=0.9,SNR=36						
RRI2	**Red Ridge**	**0.97 204**		*e*Pg	**Pg**	**14 12 32.3**	**-1.3**
J16A	**Bone**	**1.13 212**		⇓P	**Pb**	**14 12 35.5**	**-1.2**
	baz=1.1,SNR=83						
J16A				⇑S	**Sb**	**14 12 51.1**	**-0.4**
	baz=1.1						
J18A	**Kendall Valley**	**1.17 151**		⇑P	**Pb**	**14 12 35.9**	**-1.3**
	baz=1.2,SNR=315						
G16A	**Moss Hill, Enn**	**1.23 324**		⇑P	**Pn**	**14 12 37.2**	**-1.0**
	baz=1.2						
I15A	**Monteview**	**1.25 260**		⇓P	**Pn**	**14 12 37.4**	**-1.1**
	baz=1.2						
I15A				⇑S	**Sb**	**14 12 54.3**	**-0.5**
	baz=1.2						
I19A	**Meeteetse**	**1.30**	**98**	⇓P	**Pn**	**14 12 38.8**	**-0.5**
	baz=1.3,SNR=71						
H19A	**Powell**	**1.36**	**71**	⇓P	**Pn**	**14 12 39.5**	**-0.5**
	baz=1.4,SNR=26						
H15A	**Lima**	**1.39 287**		⇑P	**Pn**	**14 12 40.1**	**-0.3**
	baz=1.4						
H15A				⇓S	**Sb**	**14 12 59.4**	**+0.6**
	baz=1.4						
RLMT	**Red Lodge**	**1.40**	**50**	⇓P	**Pn**	**14 12 40.3**	**-0.3**
	baz=1.4,SNR=17						
RLMT	**Red Lodge**	**1.40**	**50**	*e*Pn	**Pn**	**14 12 39.9**	**-0.7**
AHID	**Auburn Hatcher**	**1.49 189**		*e*Pn	**Pn**	**14 12 41.5**	**-0.3**
K17A	**Gardner Place,**	**1.49 184**		⇑P	**Pn**	**14 12 41.6**	**-0.2**
	baz=1.5						
K16A	**Soda Springs**	**1.52 203**		⇓P	**Pn**	**14 12 42.3**	**+0.1**
	baz=1.5,SNR=21						
K16A				⇑S	**Sn**	**14 13 03.6**	**+1.5**
	baz=1.5						
G15A	**Dillon**	**1.53 308**		⇓P	**Pn**	**14 12 42.3**	**-0.1**
	baz=1.5						
BOZ	**Bozeman (W)**	**1.53 337**		⇑P	**Pn**	**14 12 42.1**	**-0.3**
	baz=1.5						
BOZ	**Bozeman (W)**	**1.53 337**		*e*Pn	**Pn**	**14 12 41.7**	**-0.8**
J19A	**Crowheart**	**1.59 127**		⇑Pb	**Pb**	**14 12 43.7**	**-0.7**
	baz=1.6,SNR=19						
J19A				⇑S	**Sn**	**14 13 05.1**	**+1.4**
	baz=1.6						
MCMT	**McKenzie Canyo**	**1.59 293**		*e*Pn	**Pn**	**14 12 43.3**	**+0.1**
F16A	**Kennard Place,**	**1.66 339**		⇓Pb	**Pb**	**14 12 45.0**	**-0.6**
	baz=1.7						
F17A	**Fitzpatrick Pl**	**1.67**	**3**	⇑Pg	**Pg**	**14 12 45.8**	**-1.3**
	baz=1.7,SNR=16						
K18A	**Toltan Ranch,**	**1.69 161**		⇑Pb	**Pb**	**14 12 45.2**	**-0.9**
	baz=1.7						
K18A				⇑S	**Sn**	**14 13 07.6**	**+1.4**
	baz=1.7						
DLMT	**Dillon**	**1.71 312**		*e*Pn	**Pn**	**14 12 45.4**	**+0.5**
BW06	**Boulder Array**	**1.72 148**		⇓Pb	**Pb**	**14 12 46.0**	**-0.6**
	baz=1.7,SNR=78						
GCMT	**Greycliff**	**1.74**	**27**	*e*Pn	**Pn**	**14 12 46.2**	**+0.9**
F18A	**Big Timber**	**1.83**	**24**	⇑Pb	**Pb**	**14 12 48.1**	**-0.5**
	baz=1.8						
F18A				⇑Sb	**Sb**	**14 13 13.2**	**+1.6**
	baz=1.8						
H14A	**Leadore**	**1.89 282**		⇑Pb	**Pb**	**14 12 48.7**	**-0.9**
	baz=1.9,SNR=22						
H14A				⇑Sb	**Sb**	**14 13 14.3**	**+1.0**
	baz=1.9						
I20A	**Worland**	**1.93**	**98**	⇓Pb	**Pb**	**14 12 49.4**	**-0.9**
	baz=1.9,SNR=32						
I20A				⇓S	**Sn**	**14 13 14.8**	**+2.6**
	baz=1.9						
I14A	**Mackay**	**1.95 262**		⇑Pb	**Pb**	**14 12 49.6**	**-0.9**
	baz=1.9,SNR=47						
I14A				⇑S	**Sn**	**14 13 13.9**	**+1.3**
	baz=1.9						
LRM	**Limekiln Ridge**	**1.98 324**		*e*Pn	**Pn**	**14 12 49.4**	**+0.9**
K19A	**Absolon Red Bu**	**1.99 134**		⇑Pb	**Pb**	**14 12 50.4**	**-1.0**
	baz=2.0,SNR=34						
K19A				⇑S	**Sn**	**14 13 15.4**	**+1.7**
	baz=2.0						
K15A	**Arbon**	**2.01 220**		⇓Pb	**Pb**	**14 12 51.0**	**-0.6**
	baz=2.0						
K15A				⇑Sb	**Sb**	**14 13 17.9**	**+1.3**
	baz=2.0						
F15A	**Butte**	**2.01 324**		⇑Pb	**Pb**	**14 12 51.1**	**-0.5**
	baz=2.0,SNR=22						
F15A				⇓Sb	**Sb**	**14 13 18.1**	**+1.4**
	baz=2.0						
H20A	**Greybull**	**2.01**	**82**	⇓S	**Sn**	**14 13 15.6**	**+1.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.20**	**325**	P	Pg	14 17 08.8	0.0
JWT				S	Sg	14 17 11.6	0.0
JHE	**Heguri**	**0.48**	**166**	P	Pg	14 17 13.8	-0.1
JHE				S	Sg	14 17 20.4	+0.1
JKS	**Kasai**	**0.59**	**257**	P	Pg	14 17 15.7	-0.2
JKS				S	Sg	14 17 23.6	0.0
JKY	**Yasaka**	**0.62**	**325**	P	Pg	14 17 16.3	-0.2
JKY				S	Sg	14 17 24.6	-0.1
TSUJ	**Tsu 2**	**0.83**	**119**	P	Pg	14 17 20.2	-0.3
TSUJ				S	Sg	14 17 30.9	-0.5
JKSM	**Kasumi**	**0.85**	**303**	P	Pg	14 17 20.5	-0.5
JKSM				S	Sg	14 17 31.7	-0.5
JAJ2	**Tsuna**	**0.88**	**218**	P	Pg	14 17 21.2	-0.3
JAJ2				S	Sg	14 17 32.9	-0.1
JWY	**Kouya**	**0.90**	**177**	P	Pg	14 17 21.4	-0.5
JWY				S	Sg	14 17 33.1	-0.5
MAT	**Matsushiro**	**2.59**	**56**	P	Pn	14 17 50.4	+4.1
MAT				*e*S	Sn	14 18 21.2	+3.4

KRSC 25 14:19:16.5±0.7, 51°.61N×158°.05E, h101km±101km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PET	**Petropavlovsk**	**1.46**	**14**	*e*P	Pn	14 19 45.3	+3.0
PET				*i* S	Sn	14 20 06.6	+4.7
AVH	**Avacha**	**1.71**	**14**	*e*P	Pn	14 19 48.8	+3.5
AVH				*i* S	Sn	14 20 11.9	+4.6
NLC	**Nalytchevo**	**1.75**	**26**	*e*P	Pn	14 19 48.6	+2.7
NLC				*i* S	Sn	14 20 12.1	+3.8
SPN	**Mys Shipunski**	**1.92**	**38**	*e*P	Pn	14 19 51.3	+3.3
SPN				*i* S	Sn	14 20 16.4	+4.4
GNL	**Ganaly**	**2.09**	**358**	*e*P	Pn	14 19 52.4	+2.2
GNL				*i* S	Sn	14 20 19.1	+3.2
MKZ	**Mys Kozlova**	**3.69**	**35**	*e*P	Pn	14 20 14.6	+3.2
MKZ				*i* S	Sn	14 20 56.1	+2.1
KBTR	**Krutoberegovo**	**5.40**	**30**	P	Pn	14 20 37.6	+3.1

ISCJB ***25*** *14:26:22.1±0.8, 35°.9N±0°.1×137°.5E±0°.1, h248km±6km, mb3.1/3, Error ellipse: s-maj=21.8km s-min=10.3km az=148.2*
IDC ***25*** *14:26:23.2±1.9, 35°.38N×137°.34E, h214km±45km, mb2.9/3, mb1 3.1/3, mb1mx2.8/24, mbtmp2.9/3, Error ellipse: s-maj=113.8km s-min=21.5km az=65.0*
JMA ***25*** *14:26:23.0±0.2, 35°.88N×137°.49E, h243km±2km, M2.6*
ISC 25 14:26:23.1±0.8, 35°.9N±0°.1×137°.4E±0°.1, h243km±6km, n17, σ0°37/23, mb3.1/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGF	**Kuroka**	**0.27**	**194**	P	**Pn**	**14 26 54.1**	**-0.5**
JGF				S	**S**	**14 27 18.6**	**-0.8**
JGM	**Miyama**	**0.60**	**255**	P	**Pn**	**14 26 55.5**	**0.0**
JGM				S	**S**	**14 27 20.7**	**-0.1**
MAT	**Matsushiro**	**0.92**	**42**	P	**Pn**	**14 26 56.9**	**+0.1**
MAT				S	**S**	**14 27 23.5**	**+0.1**
MAT	**Matsushiro**	**0.92**	**42**	P	**Pn**	**14 26 56.9**	**+0.1**
MJAR	**Matsushiro Arr**	**0.92**	**42**	P	**Pn**	**14 26 56.6**	**-0.2**
	7.8nm,0.3s,baz=214,slow=7.1,SNR=105						
MJAR				S	**S**	**14 27 23.7**	**+0.3**
	baz=98,slow=14,SNR=4.3						
JYN	**Shimob**	**0.97**	**112**	P	**Pn**	**14 26 57.3**	**+0.1**
JKG	**Kaga**	**0.98**	**295**	P	**Pn**	**14 26 57.5**	**+0.3**
JRY	**Ryogami san**	**1.20**	**82**	P	**Pn**	**14 26 58.8**	**+0.3**
JRY				S	**S**	**14 27 26.6**	**+0.3**
JIE	**Ise**	**1.58**	**202**	P	**Pn**	**14 27 01.9**	**+0.5**
JAG	**Ashikaga**	**1.73**	**70**	P	**Pn**	**14 27 02.0**	**-0.5**
JWT	**Wachi**	**1.76**	**251**	P	**Pn**	**14 27 03.2**	**+0.4**
JWT				S	**S**	**14 27 33.5**	**-0.4**
JWY	**Kouya**	**2.23**	**223**	P	**Pn**	**14 27 07.7**	**+0.6**
JSD	**Sado**	**2.27**	**17**	P	**Pn**	**14 27 07.4**	**0.0**
JWZ	**Kozaga**	**2.72**	**212**	P	**Pn**	**14 27 12.4**	**+0.2**
ZALV	**Zalesovo Beam**	**40.36**	**314**	P	**P**	**14 33 42.0**	**+5.0**
	0.3nm,0.3s,mb3.2,baz=89,slow=7.8,SNR=2.1						
WRA	**Warramunga Arr**	**55.58**	**184**	P	**P**	**14 35 32.9**	**-0.6**
	0.3nm,0.4s,mb3.2,baz=360,slow=7.6,SNR=8.4						
ASAR	**Alice Springs**	**59.30**	**184**	P	**P**	**14 35 59.5**	**+0.1**
	0.2nm,0.6s,mb2.9,baz=358,slow=6.4,SNR=4.6						

IDC ***25*** *14:40:27.9±1.0, 13°.96N×146°.57E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.8/23, mbtmp3.8/9, MS4.2/1, Ms1 4.2/1, ms1mx2.7/31, Error ellipse: s-maj=24.7km s-min=19.7km az=107.0*
ISCJB ***25*** *14:40:33.9±3.1, 14°.0N±0°.1×146°.4E±0°.2, h58km±25km, mb3.8/10, MS3.5/2, Error ellipse: s-maj=30.3km s-min=19.6km az=173.6*
NEIC ***25*** *14:40:34.2±2.7, 13°.91N×146°.47E, h44km±23km, mb4.5/1, Error ellipse: s-maj=24.3km s-min=14.3km az=82.0*
ISC 25 14:40:34.5±3.4, 13°.9N±0°.1×146°.4E±0°.2, h47km±29km, n15, σ0°76/14, mb3.8/10, MS3.5/2, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.54**	**258**	P	**Pn**	**14 40 59.7**	**+0.1**
	74nm,0.3s,baz=126,slow=7.4,SNR=48						
GUMO				Sn	**Sn**	**14 41 18.1**	**-0.3**
	56nm,0.3s,baz=353,slow=23,SNR=7.9						
JOW	**Kunigami**	**21.28**	**310**	P	**P**	**14 45 18.5**	**+1.4**
	9.2nm,0.7s,mb4.2,baz=140,slow=14,SNR=6.2						
JOW	**Kunigami**	**21.28**	**310**	P	**P**	**14 45 18.5**	**+1.4**
KSRS	**Korea Array**	**28.64**	**328**	P	**P**	**14 46 25.6**	**-1.2**
	1.6nm,0.7s,mb3.8,baz=147,slow=9.9,SNR=4.5						
KSRS				LR	LR	14 56 32.2	
	comp=Z,17nm,20.7s,MS2.6,baz=210,slow=34						
WRA	**Warramunga Arr**	**35.69**	**200**	P	**P**	**14 47 28.4**	**-0.2**
	0.7nm,0.6s,mb3.8,baz=20,slow=9.9,SNR=9.6						
ASAR	**Alice Springs**	**39.31**	**198**	P	**P**	**14 47 59.2**	**0.0**
	0.2nm,0.5s,mb3.1,baz=22,slow=9.2,SNR=7.0						
CMAR	**Chiang Mai Arr**	**45.72**	**282**	P	**P**	**14 48 52.1**	**+0.7**
	0.9nm,0.7s,mb3.8,baz=85,slow=6.6,SNR=5.7						
SONM	**Songino Array**	**47.34**	**324**	P	**P**	**14 49 03.9**	**+0.2**
	0.3nm,0.3s,mb3.7,baz=126,slow=7.5,SNR=4.5						
SONM	**Songino Array**	**47.34**	**324**	P	**P**	**14 49 03.9**	**+0.2**
MKAR	**Makanchi Array**	**62.30**	**316**	P	**P**	**14 50 52.0**	**0.0**
	0.5nm,0.2s,mb4.2,baz=83,slow=10,SNR=4.5						
KURK	**Kurchatov**	**65.30**	**320**	*e*P	**P**	**14 51 10.9**	**-0.8**
	4.5nm,1.0s,mb4.5						
ILAR	**Eielson Array**	**67.62**	**25**	P	**P**	**14 51 25.3**	**-0.9**
	0.5nm,1.0s,mb3.5,baz=248,slow=5.8,SNR=3.1						
NVAR	**Mina Array Bea**	**85.54**	**52**	P	**P**	**14 53 09.2**	**+1.2**
	0.4nm,0.6s,mb3.8,baz=256,slow=6.3,SNR=3.5						
MMAI	**Mount Meron Ar**	**99.38**	**307**	LR	LR	15 41 22.9	
	comp=Z,104nm,19.8s,MS4.3,baz=110,slow=37						
DBIC	**Dimbokro**	**144.91**	**304**	PKPbc	PKPdf	15 00 07.3	-0.3
	3.7nm,0.8s,baz=31,slow=5.6,SNR=4.8						

JMA 25 15:06:23.5±0.2, 37°.62N×142°.18E, h29km±3km, M1.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.06**	**322**	P	Pn	15 06 42.7	+0.3
JIO				*e*S	Sn	15 06 56.4	+0.2
JFK	**Kawauchi**	**1.07**	**257**	*e*S	Sn	15 06 56.0	-0.4
JMM	**Marumori**	**1.13**	**283**	P	Pn	15 06 43.4	+0.1
JMM				*e*S	Sn	15 06 58.1	+0.3
JOU	**Okura**	**1.41**	**302**	*e*S	Sn	15 07 06.4	+1.6
JFT	**Otama**	**1.47**	**267**	*e*S	Sn	15 07 08.2	+2.0
JMK	**Ichinoseki**	**1.53**	**331**	P	Pn	15 06 49.7	+0.9
JMK				*e*S	Sn	15 07 08.7	+1.0

NIED ***25*** *15:06:00, 36°.70N×142°.30E, h23km, Mw4.9 Best double couple: M0=2.21000×10^16 NP1:φs=18.00000°, δ67.00000°, λ83.00000°. NP2:φs=214.00000°, δ24.00000°, λ105.00000°.*
JMA ***25*** *15:06:41.2±0.3, 36°.73N×142°.28E, h21km±5km, M4.7*
NEIC ***25*** *15:06:42.4±2.5, 36°.77N×142°.18E, h14km±15km, mb4.8/47, MW4.8(NIED), Error ellipse: s-maj=7.5km s-min=4.4km az=143.0*
ISCJB ***25*** *15:06:43.0±0.2, 36°.70N±0°.02×142°.24E±0°.03, h32km, mb4.7/83, MS4.3/38, Error ellipse: s-maj=3.6km s-min=3.2km az=144.5*
BJI ***25*** *15:06:43.9, 36°.96N×142°.01E, h28km, mB4.8/18, mb4.8/34, Ms4.5/26, Ms7 4.5/25*

MOS ***25*** *15:06:45.3±1.0, 37°.06N×142°.06E, h33km, mb4.9/49, Error ellipse: s-maj=7.9km s-min=5.3km az=108.4*
IDC ***25*** *15:06:45.1±0.4, 36°.67N×142°.14E, h32km±2km, mb4.2/20, mb1 4.3/26, mb1mx4.3/32, mbtmp4.2/26, ML3.8/6, MS4.1/22, Ms1 4.1/22, ms1mx3.9/47, Error ellipse: s-maj=12.7km s-min=9.3km az=108.0*
ISC 25 15:06:45.3±0.2, 36.74N±0°.02×142°.20E±0°.03, h34km, h34km±.7km: pP-P, n240, σ1°.05/252, mb4.7/83, MS4.3/38, 11C-9D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.18**	**288**	⇓P	**Pn**	**15 07 03.3**	**-2.0**
JFK	**Kawauchi**	**1.23**	**301**	⇓P	**Pn**	**15 07 03.9**	**-2.1**
JFK				S	**Sn**	**15 07 21.2**	**-0.2**
JHO	**Hitachi**	**1.32**	**265**	⇓P	**Pn**	**15 07 05.1**	**-2.1**
JHO				*e*S	**Sn**	**15 07 23.8**	**+0.2**
JMM	**Marumori**	**1.58**	**315**	⇓P	**Pn**	**15 07 09.4**	**-1.5**
JMM				*e*S	**Sn**	**15 07 29.4**	**-0.8**
JFT	**Otama**	**1.68**	**298**	⇓P	**Pn**	**15 07 11.4**	**-0.8**
JFT				S	**Sn**	**15 07 33.8**	**+1.3**
JIO	**Ouri**	**1.84**	**339**	P	**Pn**	**15 07 13.1**	**-1.3**
JIO				S	**Sn**	**15 07 36.5**	**0.0**
JOU	**Okura**	**2.03**	**324**	P	**Pn**	**15 07 16.2**	**-0.8**
JOU				*e*S	**Sn**	**15 07 43.3**	**+2.1**
JFY	**Yanaizu**	**2.10**	**289**	P	**Pn**	**15 07 17.5**	**-0.5**
JAG	**Ashikaga**	**2.23**	**263**	⇑P	**Pn**	**15 07 19.2**	**-0.6**
JAG				*e*S	**Sn**	**15 07 46.3**	**+0.1**
BSO1	**Boso 1**	**2.31**	**206**	P	**Pn**	**15 07 20.4**	**-0.5**
BSO1				*e*S	**Sn**	**15 07 46.8**	**-1.3**
JMK	**Ichinoseki**	**2.34**	**341**	⇑P	**Pn**	**15 07 20.4**	**-0.9**
JMK				*e*S	**Sn**	**15 07 49.4**	**+0.6**
JNS	**Sasagawa**	**2.54**	**296**	P	**Pn**	**15 07 25.8**	**+1.8**
JNS				*e*S	**Sn**	**15 07 56.2**	**+2.5**
JYK	**Kaneyama**	**2.62**	**327**	⇑P	**Pn**	**15 07 24.7**	**-0.4**
JRY	**Ryogami san**	**2.76**	**256**	P	**Pn**	**15 07 26.3**	**-0.7**
JRY				*e*S	**Sn**	**15 08 00.9**	**+1.8**
JOM	**Ohasama**	**2.82**	**346**	P	**Pn**	**15 07 27.0**	**-0.9**
JOM				*e*S	**Sn**	**15 08 00.5**	**-0.2**
MJAR	**Matsushiro Arr**	**3.21**	**268**	Pn	**Pn**	**15 07 33.4**	**0.0**
	36nm,0.3s,baz=80,slow=8.1,SNR=347						
MJAR				LR	LR	15 09 02.3	
	comp=Z,3μm,18.4s,baz=90,slow=44						
MJAR	**Matsushiro Arr**	**3.21**	**268**	P	**Pn**	**15 07 33.4**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,36nm,0.3s						
MAJO	**Matsushiro**	**3.22**	**268**	*e*Pn	**Pn**	**15 07 34.0**	**+0.6**
MAJO	**Matsushiro**	**3.22**	**268**	*e*P	**Pn**	**15 07 34.0**	**+0.6**
MAT	**Matsushiro**	**3.22**	**268**	P	**Pn**	**15 07 33.6**	**+0.2**
MAT				*e*S	**Sn**	**15 08 12.0**	**+1.5**
JHJ	**Hachijo jima 2**	**4.12**	**209**	Pn	**Pn**	**15 07 43.2**	**-2.6**
	comp=Z,42nm,0.3s,baz=76,slow=22,SNR=16						
JHJ				Sn	**Sn**	**15 08 29.2**	**-3.7**
	comp=Z,74nm,0.3s,baz=227,slow=23,SNR=5.9						
ERM	**Erimo**	**5.32**	**8**	*e*Pn	**Pn**	**15 08 00.2**	**-2.0**
	comp=Z,73nm,0.7s						
ERM				*e*Sn	**Sn**	**15 08 52.8**	**-9.4**
ERM	**Erimo**	**5.32**	**8**	*d i*P	**Pn**	**15 08 00.6**	**-1.6**
ASAJ	**Asahikawa**	**7.37**	**2**	Pn	**Pn**	**15 08 28.9**	**-1.5**
	comp=Z,8.6nm,0.3s,baz=198,slow=10,SNR=36						
ASAJ				Sn	**Sn**	**15 09 50.6**	**-2.2**
	comp=Z,3.0nm,0.3s,baz=151,slow=19,SNR=2.6						
ASAJ				LR	LR	15 12 25.7	
	comp=Z,1μm,18.4s,baz=184,slow=46						
ASAJ	**Asahikawa**	**7.37**	**2**	*e*Pn	**Pn**	**15 08 28.3**	**-2.2**
	comp=Z,12nm,0.4s						
ASAJ	**Asahikawa**	**7.37**	**2**	P	**Pn**	**15 08 28.9**	**-1.5**
ASAJ						15 09 50.7	
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**7.80**	**20**	⇑*i*P	**Pn**	**15 08 33.4**	**-2.9**
YUK				*i* S	**Sn**	**15 09 55.8**	**-7.6**
YUK				pmax	pmax		
	comp=Z,220nm,0.7s						
YUK				pmax	pmax		
	comp=N,80nm,0.5s						
YUK				pmax	pmax		
	comp=Z,160nm,0.5s						
YUK				pmax	pmax		
	comp=E,70nm,0.2s						
YUK				smax			
	comp=N,250nm,0.7s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,140nm,0.6s						
YUK				smax			
	comp=E,780nm,0.6s						
KUR	**Kuril'sk**	**9.50**	**25**	P	**Pn**	**15 09 00.5**	**+0.9**
KUR				*e*S	**Sn**	**15 10 38.2**	**-6.9**
KUR				smax			
	comp=N,170nm,0.5s						
KUR				smax			
	comp=E,80nm,0.5s						
CBIJ	**Chichi jima**	**9.62**	**180**	Pn	**Pn**	**15 08 59.5**	**-1.7**
	comp=E,7.3nm,0.3s,baz=295,slow=19,SNR=4.8						
CBIJ				Sn	**Sn**	**15 10 37.5**	**-11**
	comp=E,12nm,0.3s,baz=300,slow=20,SNR=3.0						
JNU	**Nakatsue**	**9.97**	**252**	*e*Pn	**Pn**	**15 09 07.4**	**+1.3**
	comp=E,28nm,1.2s						
YSS	**Yuzh-Sakhalins**	**10.21**	**2**	*e*Pn	**Pn**	**15 09 07.2**	**-2.2**
	comp=E,38nm,0.8s						
YSS	**Yuzh-Sakhalins**	**10.21**	**2**	*e*P	**Pn**	**15 09 07.8**	**-1.5**
YSS				*e*S	**Sn**	**15 10 56.7**	**-5.8**
YSS				pmax	pmax		
	comp=N,20nm,0.8s						
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,13.0s						
YSS				MLR	MLR		
	comp=E,600nm,14.0s						
KSRS	**Korea Array**	**11.43**	**278**	Pn	**Pn**	**15 09 26.1**	**+0.2**
	comp=E,0.2nm,0.3s,baz=88,slow=13,SNR=8.5						
KSRS				LR	LR	15 13 41.1	
	comp=E,1μm,18.9s,baz=120,slow=36						
KSRS	**Korea Array**	**11.43**	**278**	P	**Pn**	**15 09 26.2**	**+0.2**
KSRS				MLR	MLR		
	comp=Z,1μm,18.9s						
MDJ	**Mudanjiang**	**12.38**	**313**	*e*Pn	**Pn**	**15 09 45.1**	**+6.1**
	comp=Z,19nm,1.0s						
CN2	**Changchun**	**14.59**	**304**	*e*P	**Pn**	**15 10 06.8**	**-2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,600nm,15.0s						
CN2				LR	LR		
	comp=E,1μm,15.0s						
CN2				LR	LR		
	comp=Z,900nm,15.0s						
KLR	**Kul'dur**	**14.62**	**332**	*e*P	**Pn**	**15 10 06.8**	**-2.7**
KLR				MLR	MLR		
	comp=N,1μm,14.0s						
KLR				MLR	MLR		
	comp=E,1μm,14.0s						
KLR				MLR	MLR		
	comp=Z,2μm,14.0s						
JOW	**Kunigami**	**15.40**	**234**	Pn	**Pn**	**15 10 20.6**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=114,slow=16,SNR=1.8						
SSE	**Sheshan**	**18.31**	**258**	P	**Pn**	**15 10 55.8**	**-0.8**
SSE				pP	pP	15 11 07.5	+2.1
SSE				S	**Sn**	**15 14 12.5**	**-7.5**
SSE				pmax	pmax		
	comp=Z,25nm,0.7s						
SSE				pmax	pmax		
	comp=Z,180nm,4.0s						
SSE				LR	LR		
	comp=N,400nm,13.8s						
SSE				LR	LR		
	comp=E,830nm,13.8s						
SSE				LR	LR		
	comp=Z,1μm,14.1s						
PETK	**Petropavlovsk-**	**19.63**	**29**	P	**Pn**	**15 11 11.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=189,slow=7.5,SNR=8.1						
PETK				LR	LR	15 17 31.6	
	comp=Z,123nm,20.2s,baz=213,slow=33						
PETK	**Petropavlovsk-**	**19.63**	**29**	P	**Pn**	**15 11 11.3**	**-1.0**
NJ2	**Nanjing**	**19.81**	**263**	*e*P	**Pn**	**15 11 18.5**	**+4.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				LR	LR		
	comp=N,750nm,17.0s						
NJ2				LR	LR		
	comp=E,1μm,14.0s						
NJ2				LR	LR		
	comp=Z,5μm,15.8s						
HIA	**Hailar**	**20.56**	**315**	*e*P	**P**	**15 11 18.2**	**-2.6**
	comp=Z,12nm,1.0s						
HIA	**Hailar**	**20.56**	**315**	*e*P	**P**	**15 11 18.2**	**-2.6**
HIA				pmax	pmax		
	comp=Z,12nm,1.0s						
BJI	**Beijing**	**20.64**	**287**	P	**P**	**15 11 22.8**	**+1.0**
BJI				pmax	pmax		
	comp=Z,15nm,0.8s						
BJI				LR	LR		
	comp=N,560nm,12.8s,MS4.2						
BJI				LR	LR		
	comp=E,600nm,15.1s,MS4.2						
BJT	**Baijiatuau**	**20.64**	**287**	P	**P**	**15 11 17.9**	**-4.0**
BJT	**Baijiatuau**	**20.64**	**287**	P	**P**	**15 11 17.9**	**-3.9**
TATO	**Taipei**	**21.25**	**242**	*e*P	**P**	**15 11 24.0**	**-4.4**
GUMO	**Guam**	**23.18**	**173**	LR	LR	15 21 04.8	
	comp=E,166nm,18.3s,MS3.5,baz=11,slow=37						
GUMO	**Guam**	**23.18**	**173**	*e*P	**P**	**15 11 53.1**	**+4.1**
	comp=E,116nm,1.2s,mb5.2						
GUMO	**Guam**	**23.18**	**173**	*e*P	**P**	**15 11 53.1**	**+4.1**
GUMO				pmax	pmax		
	comp=Z,116nm,1.2s,mb5.2						
CLNS	**Chul'man**	**23.21**	**335**	*e*P	**P**	**15 11 40.9**	**-8.1**
CLNS				*e**PP		15 11 51.5	
CLNS				*e*PPP		15 12 12.3	
CLNS				*e*		15 15 33.8	
CLNS				*e*S	**S**	**15 15 45.4**	**-13**
CLNS				*e*SS		15 16 57.0	
CLNS				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.8s						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.6s						
CLNS				smax			
	comp=N,49nm,10.8s						
CLNS				smax			
	comp=E,119nm,13.0s						
CLNS				MLR	MLR		
	comp=N,619nm,13.0s,MS4.3						
CLNS				MLR	MLR		
	comp=Z,705nm,14.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,373nm,13.0s,MS4.3						
WHN	**Wuhan**	**23.95**	**263**	P	**P**	**15 11 55.0**	**-1.3**
WHN				S	**S**	**15 15 58.3**	**-12**
WHN				LR	LR		
	comp=N,920nm,13.9s,MS4.6						
WHN				LR	LR		
	comp=E,1μm,15.3s,MS4.6						
WHN				LR	LR		
	comp=Z,1μm,15.2s,MS4.5						
CIT	**Chita**	**25.32**	**316**	*e*P	**P**	**15 12 08.0**	**-0.6**
CIT				*e*	pP	15 12 15.0	-3.4
CIT				*e*	pP	15 12 19.6	+1.2
CIT				*e*		15 12 38.2	
CIT				pmax	pmax		
	comp=Z,174nm,1.3s,mb5.4						
YAK	**Yakutsk**	**26.49**	**347**	*e*P	**P**	**15 12 18.2**	**-0.9**
	comp=Z,56nm,0.8s,mb5.1						
YAK	**Yakutsk**	**26.49**	**347**	*e*P	**P**	**15 12 18.6**	**-0.5**
YAK				*e**PP	pP	15 12 29.0	+0.1
YAK				*e*		15 12 59.3	
YAK				*e*S	**S**	**15 16 46.0**	**-4.6**
YAK				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.0						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,20nm,1.0s						
YAK				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.7						
YAK				pmax	pmax		
	comp=E,138nm,2.5s						
YAK				pmax	pmax		
	comp=N,150nm,2.8s						
YAK				smax			
	comp=N,313nm,6.4s						
YAK				smax			
	comp=E,169nm,4.4s						
YAK				MLR	MLR		
	comp=Z,627nm,14.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,209nm,14.0s,MS4.3						
YAK				MLR	MLR		
	comp=N,527nm,14.0s,MS4.3						
ENH	**Enshi**	**27.94**	**266**	*e*P	**P**	**15 12 31.6**	**-0.9**
	comp=N,101nm,1.2s,mb5.3						
ULN	**Ulaanbaatar**	**28.04**	**304**	*e*P	**P**	**15 12 33.6**	**+0.5**
	comp=N,18nm,1.0s,mb4.7						
ULN	**Ulaanbaatar**	**28.04**	**304**	*e*P	**P**	**15 12 33.6**	**+0.5**
ULN				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.7						
BOD	**Bodaibo**	**28.11**	**328**	*e*P	**P**	**15 12 33.3**	**-0.3**
BOD				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.7						
SONM	**Songino Array**	**28.47**	**304**	P	**P**	**15 12 37.0**	**+0.1**
	comp=Z,28nm,1.0s,mb4.8,baz=102,slow=9.0,SNR=130						
SONM				LR	LR	15 24 08.1	
	comp=Z,266nm,20.2s,MS3.8,baz=74,slow=37						
SONM	**Songino Array**	**28.47**	**304**	P	**P**	**15 12 37.0**	**0.0**
SONM				pmax	pmax		
	comp=Z,28nm,1.0s						
SONM				MLR	MLR		
	comp=Z,267nm,20.3s						
LZH	**Lanzhou**	**30.74**	**280**	*e*P	**P**	**15 12 56.8**	**-0.4**
LZH				pP	pP	15 13 06.5	-0.6
LZH				sP	sP	15 13 10.5	-0.7
LZH				pmax	pmax		
	comp=Z,57nm,1.3s,mb5.2						
LZH				pmax	pmax		
	comp=Z,120nm,4.4s						
LZH				LR	LR		
	comp=N,380nm,11.3s,MS4.8						
LZH				LR	LR		
	comp=E,1μm,15.9s,MS4.8						
LZH				LR	LR		
	comp=Z,1μm,16.2s,MS4.7						
IRK	**Irkutsk**	**30.76**	**312**	*e*P	**P**	**15 12 56.9**	**-0.3**
IRK				pmax	pmax		
	comp=Z,29nm,1.4s,mb4.9						
ZAK	**Zakamensk**	**30.94**	**309**	*e*P	**P**	**15 12 58.7**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
TLY	**Talaya**	**31.00**	**311**	*e*P	**P**	**15 12 59.4**	**+0.2**
	comp=Z,14nm,1.1s,mb4.7						
TLY	**Talaya**	**31.00**	**311**	*e*P	**P**	**15 12 58.3**	**-1.0**
TLY				*e*S	**S**	**15 18 04.0**	**+2.4**
TLY				*e*SS	ScP	15 19 34.1	-0.7
TLY				*e*SSS		15 20 05.7	
TLY				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.7						
TLY				MLR	MLR		
	comp=Z,461nm,17.0s,MS4.2						
GYA	**Guiyang**	**31.80**	**261**	⇑*i*P	**P

BILL *i* 15 14 38.4
BILL *e*S **S** **15 18 56.9 +6.9**
BILL pmax pmax
comp=Z,17nm,2.5s,mb4.5
BILL MLR MLR
comp=Z,100nm,17.0s,MS3.6
KMI Kunming 35.54 262 P **P** **15 13 38.5 -0.7**
KMI pP pP 15 13 43.8 -5.3
KMI pmax pmax
comp=Z,14nm,1.0s,mb4.8
KMI LR LR
comp=N,290nm,17.2s,MS4.3
KMI LR LR
comp=E,340nm,17.7s,MS4.3
KMI LR LR
comp=Z,430nm,18.2s,MS4.2
CHTO Chiang Mai 41.83 257 *e*P **P** **15 14 31.2 -0.7**
comp=Z,8.4nm,1.1s,mb4.3
CHTO Chiang Mai 41.83 257 *e*P **P** **15 14 31.3 -0.7**
CHTO pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
CM31 Chiang Mai Arr 42.03 256 P **P** **15 14 31.4 -2.3**
comp=Z,2.4nm,0.7s,mb3.9
CMAR Chiang Mai Arr 42.03 256 P **P** **15 14 33.1 -0.5**
comp=Z,1.1nm,0.8s,mb3.6,baz=45,slow=6.3,SNR=8.8
CMAR Chiang Mai Arr 42.03 256 P **P** **15 14 33.1 -0.5**
ZAA0 Zalesovo Array 42.58 313 *e*P **P** **15 14 37.6 -0.1**
ZALV Zalesovo Beam 42.58 313 P **P** **15 14 37.7 0.0**
comp=Z,9.7nm,0.9s,mb4.5,baz=87,slow=6.4,SNR=36
ZALV PcP PcP 15 16 29.1 -0.3
comp=Z,2.3nm,0.6s,baz=92,slow=5.0,SNR=4.2
ZALV LR LR 15 32 59.0
comp=Z,259nm,19.5s,MS4.1,baz=76,slow=37
ZALV Zalesovo Beam 42.58 313 P **P** **15 14 37.7 +0.1**
ZALV 15 16 29.1
ZALV pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
ZALV MLR MLR
comp=Z,259nm,19.5s,MS4.1
LSA Lhasa 42.86 276 P **P** **15 14 41.8 +1.5**
LSA Lhasa 42.86 276 *e*P **P** **15 14 42.5 +2.2**
comp=Z,7.1nm,0.8s,mb4.5
LSA Lhasa 42.86 276 *e*P **P** **15 14 42.5 +2.2**
LSA pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
NVS Novosibirsk 43.50 314⇑ *e*P **P** **15 14 44.9 -0.2**
NVS pmax pmax
comp=E,13nm,1.5s
NVS pmax pmax
comp=Z,21nm,1.5s,mb4.7
NVS pmax pmax
comp=N,4.0nm,1.1s
MK31 Makanchi Array 44.81 302 *e*P **P** **15 14 55.5 -0.2**
MK31 Makanchi Array 44.81 302 *e*P **P** **15 14 55.5 -0.2**
MKAR Makanchi Array 44.81 302 P **P** **15 14 55.7 +0.1**
comp=N,4.8nm,0.7s,mb4.4,baz=88,slow=9.7,SNR=24
MKAR LR LR 15 34 06.7
comp=N,132nm,20.6s,MS3.9,baz=98,slow=37
MKAR Makanchi Array 44.81 302 P **P** **15 14 55.7 +0.1**
MKAR LR LR 15 34 06.7
MKAR Makanchi Array 44.81 302 P **P** **15 14 55.7 0.0**
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MKAR MLR MLR
comp=Z,132nm,20.6s
KSM Kuching 45.81 227 *e*P **P** **15 15 03.3 -0.7**
TAPN Taplejung 46.59 275 *e*P **P** **15 15 10.6 +0.6**
comp=Z,16nm,0.6s,mb5.1
KURK Kurchatov 46.61 308 *e*P **P** **15 15 09.5 -0.3**
comp=Z,24nm,0.9s,mb5.1
KURK Kurchatov 46.61 308 *e*P **P** **15 15 09.5 -0.3**
KURK pmax pmax
comp=Z,24nm,0.9s,mb5.1
KDAK Kodiak Island 46.90 42 P **P** **15 15 12.0 0.0**
comp=Z,6.6nm,0.6s,mb4.7,baz=61,slow=1.1,SNR=5.1
KDAK Kodiak Island 46.90 42 *e*P **P** **15 15 11.8 -0.2**
comp=Z,22nm,1.0s,mb5.0
KDAK Kodiak Island 46.90 42 *ce*P **P** **15 15 12.6 +0.6**
ODAN Odare 47.06 274 *e*P **P** **15 15 14.3 +0.6**
comp=Z,33nm,0.9s,mb5.3
GUN Gumba 47.81 276 *e*P **P** **15 15 20.4 +0.9**
comp=Z,13nm,0.4s,mb5.3
PKI Pulchoki 48.33 276 *e*P **P** **15 15 23.8 +0.2**
comp=Z,9.9nm,0.7s,mb5.0
PKI Pulchoki 48.33 276 *e*P **P** **15 15 23.8 +0.2**
PKI pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
PKIN Phulchoki 48.34 276 *e*P **P** **15 15 23.8 +0.2**
comp=Z,9.9nm,0.7s,mb5.0
KKN Kakani 48.34 276 *e*P **P** **15 15 24.2 +0.6**
comp=Z,22nm,0.7s,mb5.3
KKN Kakani 48.34 276 *e*P **P** **15 15 24.2 +0.6**
KKN pmax pmax
comp=Z,22nm,0.7s,mb5.3
PMR Palmer 48.48 37 *e*P **P** **15 15 24.3 +0.1**
comp=Z,19nm,1.1s,mb5.0
PMR Palmer 48.48 37 *e*P **P** **15 15 24.3 +0.1**
PMR pmax pmax
comp=Z,19nm,1.1s,mb5.0
MCK McKinley 48.53 34 *e*P **P** **15 15 23.1 -1.5**
comp=Z,8.7nm,0.9s,mb4.8
MCK McKinley 48.53 34 *e*P **P** **15 15 23.1 -1.4**
MCK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
DMN Daman 48.56 276 *e*P **P** **15 15 25.9 +0.6**
GKN Gorkha 48.76 277 *e*P **P** **15 15 27.4 +0.5**
comp=Z,34nm,0.8s,mb5.5
SML Sawmill 48.86 36 *e*P **P** **15 15 26.9 -0.2**
comp=Z,3.8nm,0.9s,mb4.4
SML Sawmill 48.86 36 *e*P **P** **15 15 26.9 -0.2**
SML pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
COLA College 48.99 32 *e*P **P** **15 15 27.5 -0.6**
comp=Z,10nm,0.9s,mb4.9
COLA College 48.99 32 *e*P **P** **15 15 27.5 -0.6**
COLA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
DANN Dangsing 49.31 278 *e*P **P** **15 15 31.9 +0.8**
comp=Z,49nm,0.7s,mb5.6
ILAR Eielson Array 49.41 32 P **P** **15 15 31.6 +0.3**
comp=Z,4.8nm,0.7s,mb4.6,baz=265,slow=6.5,SNR=60
ILAR pP pP 15 15 41.6 +0.1
comp=Z,7.9nm,0.8s,baz=267,slow=6.6,SNR=18
ILAR Eielson Array 49.41 32 P **P** **15 15 31.6 +0.3**
ILAR *PP pP 15 15 41.7 +0.2
ILAR pmax pmax
comp=Z,5.0nm,0.7s
TKM2 Tokmak 2 50.32 299 *e*P **P** **15 15 38.4 -0.1**
comp=Z,12nm,0.9s,mb4.9
TKM2 Tokmak 2 50.32 299 *e*P **P** **15 15 38.4 -0.2**
TKM2 pmax pmax
comp=Z,12nm,0.9s,mb4.9
MENT Mentasta 50.92 35 *e*P **P** **15 15 43.6 +0.9**
AAK Ala-Archa 51.18 299 LR LR 15 38 48.6
comp=Z,737nm,19.0s,MS4.7,baz=349,slow=38
AAK Ala-Archa 51.18 299 *e*P **P** **15 15 44.8 -0.3**
comp=Z,6.4nm,1.0s,mb4.5
AAK Ala-Archa 51.18 299 *e*P **P** **15 15 44.0 -1.0**
AAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
BRVK Borovoye 51.29 313 *e*P **P** **15 15 45.6 0.0**
comp=Z,4.4nm,0.8s,mb4.4
BRVK Borovoye 51.29 313 *e*P **P** **15 15 45.7 0.0**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
UCH Uchtor 51.29 298 *e*P **P** **15 15 45.8 0.0**
comp=Z,4.5nm,0.9s,mb4.4
AML Almayashu 51.90 298 *e*P **P** **15 15 51.3 +0.9**
comp=Z,23nm,1.0s,mb5.1
KKAR Karatay Array 53.81 301 *e*P **P** **15 16 04.3 -0.3**
comp=Z,16nm,1.2s,mb4.8
KKAR Karatay Array 53.81 301 *e*P **P** **15 16 04.3 -0.2**
KKAR pmax pmax
comp=Z,16nm,1.2s,mb4.8
INK Inuvik 54.36 27 P **P** **15 16 08.9 +0.8**
comp=Z,2.1nm,0.6s,mb4.2,baz=292,slow=11,SNR=6.1
INK pP pP 15 16 18.6 +0.2
comp=Z,6.1nm,0.8s,baz=292,slow=5.1,SNR=5.7
INK Inuvik 54.36 27 *e*P **P** **15 16 08.2 +0.1**
comp=Z,8.7nm,0.8s,mb4.7
INK pP pP 15 16 18.6 +0.2
INK Inuvik 54.36 27 *e*P **P** **15 16 08.2 +0.1**
INK *PP pP 15 16 18.6 +0.1
INK pmax pmax
comp=Z,9.0nm,0.8s
SVE Sverdlovsk 55.78 319⇑ *e*P **P** **15 16 19.6 +1.1**
SVE *e* 15 18 18.3
SVE *e*PPP 15 19 33.2
SVE *e*SSS 15 29 55.3
SVE pmax pmax
comp=Z,25nm,1.2s,mb5.1
SVE MLR MLR
comp=Z,534nm,18.0s,MS4.7
FITZ Fitzroy Crossi 56.74 199 P **P** **15 16 26.0 +0.2**
comp=Z,2.0nm,0.8s,mb4.2,baz=46,slow=5.6,SNR=10.0
FITZ pP pP 15 16 35.5 -0.7
comp=Z,3.0nm,0.7s,baz=18,slow=9.6,SNR=4.4
WRA Warramunga Arr 56.86 189 P **P** **15 16 25.7 -0.9**
comp=Z,3.2nm,0.8s,mb4.4,baz=7.7,slow=7.6,SNR=18
WRA pP pP 15 16 35.8 -1.2
comp=Z,3.6nm,0.6s,baz=6.9,slow=7.3,SNR=14
WRA Warramunga Arr 56.86 189 P **P** **15 16 25.7 -0.9**
WRA *PP pP 15 16 35.8 -1.2
WRA pmax pmax
comp=Z,3.0nm,0.8s
SOKR Solikamsk 56.95 323 *d i*P **P** **15 16 27.7 +0.9**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ARU Arti 56.99 319 *e*P **P** **15 16 26.1 -1.0**
comp=Z,19nm,1.0s,mb5.1
ARU *e* pP 15 16 37.6 0.0
ARU Arti 56.99 319 *c i*P **P** **15 16 25.7 -1.5**
ARU *e* 15 17 20.5
ARU *e* 15 18 28.2
ARU S **S** **15 24 10.7 -8.2**
ARU pmax pmax
comp=Z,25nm,1.2s,mb5.1
KBL Kabul 58.11 291 *e*P **P** **15 16 34.8 -0.6**
comp=Z,10nm,0.2s,mb5.5
KBL Kabul 58.11 291 *e*P **P** **15 16 34.8 -0.6**
KBL pmax pmax
comp=Z,10.0nm,0.2s,mb5.5
DLBC Dease Lake 58.47 38 *e*P **P** **15 16 38.6 +1.1**
ABKAR Akbulak array 58.61 310 *e*P **P** **15 16 38.4 -0.2**
comp=Z,2.4nm,0.5s,mb4.5
ASAR Alice Springs 60.59 189 P **P** **15 16 51.7 -0.7**
comp=Z,2.1nm,0.8s,mb4.3,baz=11,slow=6.8,SNR=21
ASAR pP pP 15 17 01.4 -1.5
comp=Z,4.1nm,0.9s,baz=7.4,slow=6.1,SNR=14
ASAR Alice Springs 60.59 189 P **P** **15 16 51.7 -0.7**
ASAR *PP pP 15 17 01.4 -1.5
ASAR pmax pmax
comp=Z,2.0nm,0.8s
MBWA Marble Bar 61.37 204 *e*P **P** **15 16 56.7 -1.1**
MBWA *e* pP 15 17 07.5 -0.8
RES Resolute Bay 62.73 15 LR LR 15 48 16.5
comp=Z,91nm,19.2s,MS4.0,baz=342,slow=40
DZM Mont Dzumac 62.81 155 *e*LR LR 15 35 17.8
comp=Z,272nm,22.0s
PALK Pallekele 62.92 258 *i* P **P** **15 17 11.2 +2.7**
KLMR Klimovskoe 64.34 328 *e*P **P** **15 17 21.6 +4.5**
KLMR pmax pmax
comp=Z,15nm,1.5s,mb4.8
ARCES ARCESS Array B 64.49 340 P **P** **15 17 17.2 -0.8**
comp=Z,1.7nm,0.8s,mb4.2,baz=52,slow=10,SNR=3.4
ARCES LR LR 15 50 36.9
comp=Z,167nm,18.5s,MS4.3,baz=358,slow=41
ARCES ARCESS Array B 64.49 340 P **P** **15 17 17.2 -0.8**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES MLR MLR
comp=Z,167nm,18.5s
JOF Joensuu 66.52 332 *e*P **P** **15 17 31.1 -0.1**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
STKA Stephens Creek 68.26 181 P **P** **15 17 41.8 -0.6**
comp=Z,1.1nm,0.8s,mb4.0,baz=335,slow=23,SNR=3.0
STKA pP pP 15 17 52.3 -0.7
comp=Z,2.3nm,0.8s,baz=341,slow=10,SNR=2.7
OBN Obninsk 68.70 324⇓ *e*P **P** **15 17 44.6 -0.5**
OBN *e* 15 20 13.6
OBN *e*S S 15 26 40.7 -4.9
OBN pmax pmax
comp=Z,19nm,1.1s,mb4.9
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.4
KAF Kangasniemi 68.85 333 *e*P **P** **15 17 45.3 -0.6**
FINES FINESS Array B 69.36 333 P **P** **15 17 49.1 0.0**
comp=Z,5.3nm,0.7s,mb4.6,baz=44,slow=6.4,SNR=14
FINES pP pP 15 17 59.7 0.0
comp=Z,8.1nm,0.8s,baz=52,slow=9.0,SNR=9.4
FINES LR LR 15 50 27.7
comp=Z,167nm,19.9s,MS4.3,baz=121,slow=38
FINES FINESS Array B 69.36 333 P **P** **15 17 49.1 0.0**
FINES *PP pP 15 17 59.7 0.0
FINES pmax pmax
comp=Z,5.0nm,0.7s
FINES MLR MLR
comp=Z,167nm,19.9s
ZEI Tsey 71.48 310 *e*P **P** **15 18 01.2 -1.2**
ZEI pmax pmax
comp=Z,13nm,1.8s,mb4.6
KIV Kislovodsk 71.57 311 *e*P **P** **15 18 03.7 +0.8**
comp=Z,25nm,1.1s,mb5.1
KIV *e* pP 15 18 14.3 +0.8
KIV Kislovodsk 71.57 311 *e*P **P** **15 18 03.0 +0.1**
KIV pmax pmax
comp=Z,26nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,189nm,18.0s,MS4.4
JTMT Jette 71.77 44 *e*P **P** **15 18 05.0 +0.9**
GNI Garni 72.38 307 LR LR 15 52 59.8
comp=Z,140nm,18.1s,MS4.3,baz=68,slow=38
HRY Holter Researc 73.73 44 *e*P **P** **15 18 16.9 +1.3**
comp=Z,10nm,1.0s,mb4.7
HRY *e* pP 15 18 27.2 +0.9
BOZ Bozeman (W) 74.48 44 *e*P **P** **15 18 20.6 +0.5**
comp=Z,6.3nm,0.9s,mb4.5
BOZ *e* pP 15 18 31.3 +0.6
BOZ Bozeman (W) 74.48 44 *e*P **P** **15 18 20.6 +0.5**
BOZ *e* pP 15 18 31.3 +0.5
BOZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
NVAR Mina Array Bea 74.66 53 P **P** **15 18 23.0 +1.8**
comp=Z,1.9nm,0.8s,mb4.0,baz=294,slow=6.3,SNR=13
NVAR pP pP 15 18 32.3 +0.4
comp=Z,2.5nm,0.8s,baz=287,slow=6.5,SNR=9.7
NB2 NORSAR Subarra 74.70 338 P **P** **15 18 21.3 +0.3**
comp=Z,6.4nm,0.8s,mb4.6,baz=39,slow=5.9
NOA NORSAR Array B 74.70 338 P **P** **15 18 21.6 +0.6**
comp=Z,2.7nm,0.8s,mb4.2,baz=39,slow=5.7,SNR=7.2
NOA pP pP 15 18 31.8 +0.1
comp=Z,4.3nm,0.8s,baz=39,slow=5.8,SNR=12
NOA PP PP 15 21 09.2 +1.6
comp=Z,0.8nm,0.8s,baz=45,slow=8.2,SNR=3.3
NOA LR LR 15 54 48.4
comp=Z,213nm,18.4s,MS4.5,baz=35,slow=39
NOA NORSAR Array B 74.70 338 P **P** **15 18 21.6 +0.6**
NOA pP pP 15 18 31.8 +0.1
NOA PP PP 15 21 09.2 +1.6
NOA LR LR 15 54 48.4
NOA NORSAR Array B 74.70 338 P **P** **15 18 21.6 +0.6**
NOA *PP pP 15 18 31.8 +0.1
NOA 15 21 09.2
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,213nm,18.4s
AKASG Malin Array Be 74.91 323 P **P** **15 18 22.6 +0.1**
comp=Z,6.2nm,0.7s,mb4.7,baz=47,slow=6.1,SNR=8.2
AKASG pP pP 15 18 32.5 -0.7
comp=Z,3.3nm,0.5s,baz=44,slow=5.5,SNR=5.2
AKASG LR LR 15 54 45.4
comp=Z,212nm,18.1s,MS4.5,baz=50,slow=38
AKASG Malin Array Be 74.91 323 P **P** **15 18 22.6 +0.1**
AKASG pP pP 15 18 32.5 -0.7
AKASG LR LR 15 54 45.4
AKASG Malin Array Be 74.91 323 P **P** **15 18 22.6 +0.1**
AKASG *PP pP 15 18 32.5 -0.7
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG MLR MLR
comp=Z,212nm,18.1s
AKBB Malin Array Si 74.91 323 *e*P **P** **15 18 21.2 -1.3**
AKBB Malin Array Si 74.91 323 *e*P **P** **15 18 21.2 -1.3**
KIEV Kiev 74.92 323 *e*P **P** **15 18 22.5 0.0**
KIEV *e* pP 15 18 32.2 -1.0
KIEV Kiev 74.92 323 *e*P **P** **15 18 22.5 0.0**
KIEV *e* pP 15 18 32.2 -1.0
LAO LASA Array 76.78 41 *e*P **P** **15 18 34.3 +1.1**
comp=Z,7.8nm,0.9s,mb4.6
LAO *e* pP 15 18 44.5 +0.6
HWUT Hardware Ranch 76.96 48 *e*P **P** **15 18 35.7 +1.4**
comp=Z,7.2nm,1.0s,mb4.6
PDAR Pinedale Array 77.42 46 P **P** **15 18 37.6 +0.7**
comp=Z,1.5nm,0.6s,mb4.1,baz=293,slow=2.8,SNR=14
PDAR pP pP 15 18 48.0 +0.4
comp=Z,2.3nm,0.7s,baz=289,slow=2.8,SNR=10.0
MSU Marysvale 78.48 50 *e*P **P** **15 18 43.5 +0.6**
comp=Z,6.3nm,1.3s,mb4.4
MSU Marysvale 78.48 50 *e*P **P** **15 18 43.5 +0.6**
MSU pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
BUR08 Bucovina Ar. S 78.92 322 *e*P **P** **15 18 45.9 +0.8**
BUR08 *e* pP 15 18 55.9 +0.1
SRU San Rafael 79.13 49 *e*P **P** **15 18 46.5 +0.1**
comp=Z,14nm,1.0s,mb4.8
SRU San Rafael 79.13 49 *e*P **P** **15 18 46.5 +0.1**
SRU pmax pmax
comp=Z,14nm,1.0s,mb4.8
KOLS Kolonicke sedl 79.43 324 *e*P **P** **15 18 48.8 +1.0**
comp=Z,3.8nm,1.0s,mb4.3
KOLS Kolonicke sedl 79.43 324 *e*P **P** **15 18 48.8 +1.0**
KOLS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BRTR Keskin Array B 79.52 312 P **P** **15 18 49.1 +0.6**
comp=Z,4.0nm,1.0s,mb4.3,baz=103,slow=3.9,SNR=14
BRTR pP pP 15 18 59.5 +0.2
comp=Z,1.9nm,0.8s,baz=77,slow=4.0,SNR=5.7
BRTR LR LR 16 00 04.5
comp=Z,92nm,18.9s,MS4.1,baz=303,slow=40
BRTR Keskin Array B 79.52 312 P **P** **15 18 49.1 +0.6**
BRTR *PP pP 15 18 59.5 +0.2
BRTR pmax pmax
comp=Z,4.0nm,1.0s
OJC Ojcow 79.63 327 *e*P **P** **15 18 49.7 +0.8**
CRVS Cervenica-Dubn 79.83 325 *e*P **P** **15 18 51.0 +1.0**
comp=Z,37nm,2.7s,mb4.8
CRVS *e*PP pP 15 19 01.1 +0.3
CRVS Cervenica-Dubn 79.83 325 *e*P **P** **15 18 51.0 +1.0**
CRVS pmax pmax
comp=Z,37nm,2.7s,mb4.8
NIE Niedzica 79.98 326 *e*P **P** **15 18 52.4 +1.6**
KECS Kecovo 80.58 325 *e*P **P** **15 18 54.8 +0.7**
comp=Z,2.3nm,1.4s,mb3.9
KECS *e*PP pP 15 19 05.6 +0.8
KECS Kecovo 80.58 325 *e*P **P** **15 18 54.8 +0.7**
KECS pmax pmax
comp=Z,2.0nm,1.4s,mb3.9
OKC Ostrava-Krasne 80.64 327 *e*P **P** **15 18 55.5 +1.1**
OKC MLR MLR
comp=Z,200nm,14.7s,MS4.6
OKC Ostrava-Krasne 80.64 327 *e*P **P** **15 18 55.5 +1.1**
OKC AMS AMS 15 57 40.0
comp=Z,200nm,14.7s
PV01 Paradox Valley 80.93 49 *e*P **P** **15 18 57.8 +1.6**
comp=Z,743nm,1.0s
MORC Moravsky Berou 80.95 327 *e*P **P** **15 18 56.4 +0.4**
comp=Z,7.2nm,1.1s,mb4.5
MORC Moravsky Berou 80.95 327 *e*P **P** **15 18 56.4 +0.4**
MORC pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
DPC Dobruska-Polom 81.04 328 *e*P **P** **15 18 57.9 +1.4**
DPC *e* pP 15 19 08.1 +0.8
DPC MLR MLR
comp=Z,200nm,17.6s,MS4.5
DPC Dobruska-Polom 81.04 328 *e*P **P** **15 18 57.9 +1.4**
DPC *ex* x 15 19 08.1
DPC AMS AMS 15 57 40.0
comp=Z,200nm,17.6s
UPC Upice 81.05 329 *e*P **P** **15 18 57.7 +1.2**
UPC Upice 81.05 329 *e*P **P** **15 18 57.7 +1.2**
PSZ Piszkesteto 81.26 325 *e*P **P** **15 18 58.2 +0.5**
comp=Z,20nm,1.4s,mb4.8
PSZ Piszkesteto 81.26 325 *e*P **P** **15 18 58.2 +0.5**
PSZ pmax pmax
comp=Z,20nm,1.4s,mb4.8
VYHS Vyhne 81.32 326 *e*P **P** **15 18 59.3 +1.3**
comp=Z,3.9nm,1.2s,mb4.2
VYHS *e*PP pP 15 19 09.2 +0.4
VYHS Vyhne 81.32 326 *e*P **P** **15 18 59.3 +1.3**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
PVCC Panska Ves 81.63 329 *e*P **P** **15 19 00.9 +1.3**
PVCC MLR MLR
comp=Z,200nm,14.2s,MS4.6
PVCC Panska Ves 81.63 329 *e*P **P** **15 19 00.9 +1.3**
PVCC AMS AMS 15 58 20.0
comp=Z,200nm,14.2s
CLL Collm 81.66 331⇑ *i*P **P** **15 19 00.0 +0.2**
comp=Z,8.0nm,1.1s,mb4.6
CLL *e* pP 15 19 09.0 -1.6
CLL *i* 15 19 26.1
CLL Collm 81.66 331⇑ *i*P **P** **15 19 00.0 +0.2**
CLL *e* pP 15 19 09.0 -1.6
CLL pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
VRAC Vranov 81.71 327 LR LR 15 59 12.4
comp=Z,172nm,18.5s,MS4.4,baz=5.6,slow=38
PRU Pruhonice 82.06 329 *e*P **P** **15 19 03.5 +1.6**
PRU *e* pP 15 19 13.8 +1.1
PRU MLR MLR
comp=Z,300nm,15.2s,MS4.8
PRU Pruhonice 82.06 329 *e*P **P** **15 19 03.5 +1.6**
PRU *ex* x 15 19 13.8
PRU AMS AMS 15 58 10.0
comp=Z,300nm,15.2s
TREC Trest 82.19 328 *e*P **P** **15 19 03.4 +0.8**
TREC MLR MLR
comp=Z,300nm,13.8s,MS4.8
TREC Trest 82.19 328 *e*P **P** **15 19 03.4 +0.8**
TREC AMS AMS 16 00 30.0
comp=Z,300nm,13.8s
NKC Novy Kostel 82.72 330 *e*P **P** **15 19 06.2 +0.9**
NKC MLR MLR
comp=Z,300nm,12.8s,MS4.8
NKC Novy Kostel 82.72 330 *e*P **P** **15 19 06.2 +0.9**
NKC AMS AMS 15 59 10.0
comp=Z,300nm,12.8s
KHC Kasperske Hory 83.12 329 *e*P **P** **15 19 07.8 +0.4**
comp=Z,8.2nm,1.1s,mb4.7
KHC *e* pP 15 19 17.6 -0.6
KHC Kasperske Hory 83.12 329 *e*P **P** **15 19 07.9 +0.5**
KHC *e* pP 15 19 18.2 0.0
KHC MLR MLR
comp=Z,200nm,14.8s,MS4.6
KHC Kasperske Hory 83.12 329 *e*P **P** **15 19 07.9 +0.5**
KHC *ex* x 15 19 18.2
KHC AMS AMS 15 59 00.0
comp=Z,200nm,14.8s
GERES GERESS Array B 83.29 329 P **P** **15 19 08.9 +0.6**
comp=Z,1.9nm,0.7s,mb4.2,baz=28,slow=6.0,SNR=10.0
GERES pP pP 15 19 18.9 -0.3
comp=Z,2.4nm,0.8s,baz=40,slow=3.8,SNR=7.5
GERES GERESS Array B 83.29 329 P **P** **15 19 09.0 +0.7**
GERES *PP pP 15 19 18.9 -0.2
GERES pmax pmax
comp=Z,2.0nm,0.7s
PMOR Pomariorio Ree 83.49 114 *e*T 16 50 59.6
comp=Z,1.9nm,0.2s
PPT Papeete 83.94 117 *e*LR LR 15 44 59.8
comp=Z,176nm,27.5s
PPT Papeete 83.94 117 LR LR 15 47 07.3
comp=Z,145nm,21.5s,MS4.3,baz=336,slow=29
LAZ Ladron 84.23 51 P **P** **15 19 11.8 -1.5**
SCHQ Schefferville 85.44 16 LR LR 16 00 22.9
comp=Z,69nm,21.9s,MS4.0,baz=14,slow=38
TAOE Nuku Hiva Isla 85.49 104 *e*LR LR 15 45 38.3
comp=Z,271nm,27.4s
DAVOX Davos/Dischmat 86.50 329 LR LR 16 01 30.7
comp=Z,202nm,18.2s,MS4.6,baz=69,slow=38
TBI Tubuai 87.84 121 *e*LR LR 15 46 50.2
comp=Z,159nm,24.0s,baz=313
TBI *e*T 16 56 25.7
comp=Z,7.8nm,0.3s
TXAR Lajitas Array 89.80 53 P **P** **15 19 41.6 +1.0**
comp=Z,1.4nm,0.8s,mb4.3,baz=301,slow=3.2,SNR=14
TXAR pP pP 15 19 51.4 -0.1
comp=Z,2.3nm,0.7s,baz=310,slow=3.4,SNR=12
TXAR Lajitas Array 89.80 53 P **P** **15 19 41.6 +1.0**
TXAR pP pP 15 19 51.4 -0.1
TXAR Lajitas Array 89.80 53 P **P** **15 19 41.6 +1.1**
TXAR *PP pP 15 19 51.4 -0.1
TXAR pmax pmax

comp=Z,1.0nm,0.8s
KEST Kesra 95.64 323 LR LR 16 09 06.9
comp=Z,52nm,19.1s,MS4.0,baz=292,slow=39
ESDC Sonseca Array 97.83 334 LR LR 16 09 05.5
comp=Z,153nm,19.2s,MS4.5,baz=15,slow=38
LPAZ La Paz 146.29 61 PKPbc PKPbc 15 26 23.2 +0.5

IDC 25 15:25:14.5±2.4, 5°.84S×130°.86E, h0km, mb3.9/1, mb1 3.7/4, mb1mx3.5/15, mbtmp3.6/4, ML3.3/3, Error ellipse: s-maj=96.8km s-min=29.2km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.21**	**202**	Pn	Pn	15 28 24.1	+0.7
	0.1nm,0.3s,baz=24,slow=11,SNR=4.0						
FITZ				Sn	Sn	15 30 38.0	-13
	0.2nm,0.3s,baz=274,slow=20,SNR=5.7						
WRA	**Warramunga Arr**	**14.42**	**167**	Pn	Pn	15 28 38.6	-1.4
	0.1nm,0.3s,baz=349,slow=14,SNR=9.4						
WRA				Sn	Sn	15 31 08.4	-12
	0.4nm,0.3s,baz=336,slow=24,SNR=8.3						
ASAR	**Alice Springs**	**17.96**	**171**	P	Pn	15 29 26.1	+0.3
	0.2nm,0.3s,baz=349,slow=10,SNR=16						
ASAR				S	Sn	15 32 35.0	-12
	0.1nm,0.3s,baz=356,slow=23,SNR=5.3						
MKAR	**Makanchi Array**	**67.74**	**326**	P	P	15 36 14.0	+0.1
	0.5nm,0.4s,baz=115,slow=7.7,SNR=4.5						

*ISCJB **25** 15:27:29.4±0.7, 5°.82N±0°.08×93°.07E±0°.09, h33km, mb3.8/7, Error ellipse: s-maj=14.2km s-min=10.0km az=138.9*
*NEIC **25** 15:27:30.2±2.5, 5°.83N×93°.09E, h22km±19km, Error ellipse: s-maj=11.4km s-min=7.7km az=45.0*
*IDC **25** 15:27:31.5±1.8, 5°.90N×93°.24E, h26km±5km, mb3.6/7, mb1 3.7/9, mb1mx3.6/25, mbtmp3.6/9, ML3.6/2, Error ellipse: s-maj=68.9km s-min=14.9km az=62.0*
ISC 25 15:27:31.9±0.7, 5°.82N±0°.08×93°.07E±0°.09, h35km, (h26km±1.7km:pP-P), n16, σ0s76/18, mb3.8/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.56**	**117**	Pn	Pn	15 29 05.3	-0.6
	0.9nm,0.3s,baz=312,slow=13,SNR=2.8						
KULM	**Kulim**	**7.56**	**94**	*e*Pn	Pn	15 29 20.0	+0.4
	7.2nm,0.6s						
PALK	**Pallekele**	**12.38**	**277**	*e*Pn	Pn	15 30 25.6	-0.2
PALK				*e*Sn	Sn	15 32 30.1	-12
CM31	**Chiang Mai Arr**	**13.80**	**24**	Pn	Pn	15 30 43.9	-1.3
CM31				*e*Sn	Sn	15 33 06.8	-11
CMAR	**Chiang Mai Arr**	**13.80**	**24**	Pn	Pn	15 30 44.8	-0.4
	0.1nm,0.3s,baz=230,slow=14,SNR=3.4						
CHTO	**Chiang Mai**	**14.12**	**23**	*e*Pn	Pn	15 30 52.0	+2.4
	2.1nm,0.7s						
COCO	**West Island**	**18.28**	**168**	P	Pn	15 31 48.0	+5.2
UCH	**Uchtor**	**39.83**	**338**	P	P	15 34 56.8	-5.1
FITZ	**Fitzroy Crossi**	**39.97**	**127**	P	P	15 35 03.0	-0.4
	1.6nm,1.0s,mb3.7,baz=321,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**41.87**	**349**	P	P	15 35 18.7	+0.1
	0.3nm,0.3s,mb3.5,baz=164,slow=9.2,SNR=3.1						
SONM	**Songino Array**	**43.38**	**13**	P	P	15 35 31.0	+0.1
	0.5nm,0.7s,mb3.3,baz=164,slow=7.1,SNR=4.6						
WRA	**Warramunga Arr**	**47.98**	**123**	P	P	15 36 07.6	-0.1
	1.6nm,0.7s,mb4.2,baz=302,slow=9.0,SNR=13						
WRA				pP	pP	15 36 15.5	-2.6
	1.5nm,0.7s,baz=303,slow=9.0,SNR=6.4						
WRA	**Warramunga Arr**	**47.98**	**123**	P	P	15 36 07.6	-0.1
WRA				pP	pP	15 36 15.5	-2.6
ZALV	**Zalesovo Beam**	**48.45**	**353**	P	P	15 36 10.7	0.0
	0.6nm,0.3s,mb4.0,baz=167,slow=7.4,SNR=6.0						
ZALV				pP	pP	15 36 19.2	-1.9
	1.5nm,0.6s,baz=165,slow=8.9,SNR=4.6						
ASAR	**Alice Springs**	**49.46**	**128**	P	P	15 36 19.2	+0.3
	0.7nm,0.7s,mb3.8,baz=302,slow=8.1,SNR=11						
ASAR				pP	pP	15 36 27.0	-2.4
	0.6nm,0.6s,baz=298,slow=7.7,SNR=4.7						
ASAR				PcP	PcP	15 37 42.0	+1.2
	0.3nm,0.7s,baz=306,slow=3.7,SNR=3.9						
STKA	**Stephens Creek**	**59.49**	**132**	P	P	15 37 32.4	+0.7
	1.7nm,0.8s,mb4.1,baz=312,slow=7.8,SNR=4.1						

*SGS **25** 15:32:06.9, 30°.98N×49°.71E, h11km*
*IDC **25** 15:32:06.8±0.6, 30°.66N×49°.71E, h0km, mb4.2/23, mb1 4.3/27, mb1mx4.2/35, mbtmp4.2/27, ML4.3/3, MS3.4/11, Ms1 3.4/11, ms1mx3.2/32, Error ellipse: s-maj=15.5km s-min=12.3km az=9.0*
*BJI **25** 15:32:07.7, 30°.51N×49°.36E, h32km, mB4.9/6, mb4.6/20, Ms4.4/8, Ms7 4.0/7*
*CSEM **25** 15:32:08.9±0.1, 30°.62N×49°.68E, h10km, mb4.4/57, Error ellipse: s-maj=3.6km s-min=2.8km az=4.0*
*THR **25** 15:32:08.1±0.8, 30°.59N×49°.73E, h15km, ML4.3*
*ISCJB **25** 15:32:09.8±0.5, 30°.61N±0°.02×49°.74E±0°.02, h32km±4km, mb4.4/75, MS3.6/11, Error ellipse: s-maj=3.0km s-min=3.0km az=15.7*
*MOS **25** 15:32:10.5±1.1, 30°.68N×49°.73E, h33km, mb4.5/44, Error ellipse: s-maj=8.1km s-min=5.1km az=121.4*
*TEH **25** 15:32:11.6, 30°.64N×49°.73E, h20km*
*NEIC **25** 15:32:12.0, 30°.58N×49°.71E, h35km, mb4.3/37, ML4.3(THR), MN4.4(TEH), After TEH.*
*OMAN **25** 15:32:17.4, 30°.70N×50°.41E, h128km*
ISC 25 15:32:11.0±0.5, 30°.63N±0°.02×49°.70E±0°.02, h24km±4km, h32km±2.4km:pP-P, n472, σ1s06/490, mb4.4/75, MS3.6/11, 17C-17D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIB	**Mutribah**	**2.20**	**249**	*e*P	Pb	15 32 49.5	-0.6
MIB	**Mutribah**	**2.20**	**249**	*e*P	Pb	15 32 49.5	-0.6
KBD	**Kabd**	**2.26**	**231**	*e*P	Pb	15 32 50.6	-0.5
KBD				AML	AML	15 33 24.8	
	comp=Z,756nm,0.4s						
KBD	**Kabd**	**2.26**	**231**	*e*P	Pb	15 32 50.7	-0.5
IPIR	**Pirpir**	**2.29**	**26**	*e*Pn	Pn	15 32 48.8	+1.5
IPIR				*e*Sg	Sn	15 33 22.2	+7.5
IPIR				*e*		15 33 23.7	
	comp=Z,31μm,0.3s						
IPIR	**Pirpir**	**2.29**	**26**	*e*Pn	Pn	15 32 48.8	+1.5
IPIR				*e*Sg	Sn	15 33 22.2	+7.5
QRN	**Al-Qurain**	**2.43**	**220**	*e*P	Pb	15 32 53.2	-0.8
QRN				AML	AML	15 33 27.3	
	comp=Z,1μm,0.4s						
RDF	**Al-Radifah**	**2.52**	**228**	*e*P	Pb	15 32 55.0	-0.6
RDF				AML	AML	15 33 34.5	
	comp=Z,642nm,0.4s						
RDF	**Al-Radifah**	**2.52**	**228**	*e*P	Pb	15 32 55.0	-0.6
NAY	**Al-Naaiem**	**2.54**	**238**	*e*P	Pb	15 32 54.6	-1.2
NAY				AML	AML	15 33 33.7	
	comp=Z,908nm,0.5s						
NAY	**Al-Naaiem**	**2.54**	**238**	*e*P	Pb	15 32 54.6	-1.2
IGAR	**Gharneh**	**2.67**	**48**	*e*Pn	Pn	15 32 53.4	+0.9
IGAR				*e*Sn	Sn	15 33 24.2	0.0
IGAR				*e*		15 33 28.8	
	comp=Z,8μm,0.2s						
IGAR	**Gharneh**	**2.67**	**48**	*e*Pn	Pn	15 32 53.4	+0.9
IGAR				*e*Sn	Sn	15 33 24.2	0.0
KFJS		**2.87**	**213**	S	Sn	15 33 46.9	+18
KFJS		**2.87**	**213**	P	Pn	15 32 57.6	+2.3
KFJS		**2.87**	**213**	P	Pn	15 32 57.6	+2.3
IPAR	**Pars**	**3.00**	**104**	*e*Pn	Pn	15 32 58.3	+1.2
IPAR	**Pars**	**3.00**	**104**	*e*Pn	Pn	15 32 58.3	+1.2
IKLH	**Kolahrood**	**3.12**	**30**	*e*Pn	Pn	15 33 00.2	+1.5
IKLH				*e*Sn	Sn	15 33 34.1	-1.2
IKLH				*e*		15 33 51.9	
	comp=Z,13μm,0.3s						
IKLH	**Kolahrood**	**3.12**	**30**	*e*Pn	Pn	15 33 00.2	+1.5
IKLH				*e*Sn	Sn	15 33 34.1	-1.2
IZEF	**Zefreh**	**3.18**	**44**	↓*e*Pn	Pn	15 33 00.3	+0.7
IZEF				*e*		15 33 08.7	
	comp=Z,4μm,0.2s						
IZEF	**Zefreh**	**3.18**	**44**	↓*e*Pn	Pn	15 33 00.3	+0.7
ISRV	**Sarvestan**	**3.21**	**112**	*e*Pn	Pn	15 33 00.9	+1.0
ISRV				*e*		15 34 24.7	
	comp=Z,9μm,0.4s						
ISRV	**Sarvestan**	**3.21**	**112**	*e*Pn	Pn	15 33 00.9	+1.0
NASN	**Na'in**	**3.42**	**50**	Pn	Pn	15 33 03.0	+0.2
NASN	**Na'in**	**3.42**	**50**	*e*Pn	Pn	15 33 03.3	+0.4
NASN	**Na'in**	**3.42**	**50**	*e*Pn	Pn	15 33 03.3	+0.5
ISAD	**Sadrabad**	**3.65**	**68**	Pn	Pn	15 33 06.4	+0.5
ISAD	**Sadrabad**	**3.65**	**68**	*e*Pn	Pn	15 33 06.5	+0.6
ISAD				*e*		15 34 03.9	
	comp=Z,8μm,0.4s						
ISAD	**Sadrabad**	**3.65**	**68**	Pn	Pn	15 33 06.4	+0.5
ASAO	**Ashtian**	**3.92**	**4**	Pn	Pn	15 33 10.0	+0.3
ASAO	**Ashtian**	**3.92**	**4**	*e*Pn	Pn	15 33 11.3	+1.6
ASAO				AML	AML	15 34 24.9	
	comp=N,489nm,0.6s						
ASAO	**Ashtian**	**3.92**	**4**	Pn	Pn	15 33 10.0	+0.3
IKOM	**Komasi**	**3.99**	**333**	*e*Pn	Pn	15 33 11.0	+0.3
IKOM				*e*		15 34 37.2	
	comp=Z,6μm,0.4s						
IKOM	**Komasi**	**3.99**	**333**	*e*Pn	Pn	15 33 11.0	+0.3
GHVR	**GHOM**	**4.07**	**19**	*e*Pn	Pn	15 33 12.9	+1.1
GHVR				AML	AML	15 34 23.4	
	comp=E,403nm,0.7s						
IMEH	**Mehriz**	**4.29**	**79**	Pn	Pn	15 33 15.0	+0.3
IMEH	**Mehriz**	**4.29**	**79**	*e*Pn	Pn	15 33 15.0	+0.3
IMEH				*e*		15 34 44.3	
	comp=Z,4μm,0.7s						
IMEH	**Mehriz**	**4.29**	**79**	*e*Pn	Pn	15 33 15.0	+0.3
ISFB	**Sefidab**	**4.29**	**29**	Pn	Pn	15 33 14.4	-0.4
ISFB	**Sefidab**	**4.29**	**29**	*e*Pn	Pn	15 33 14.8	0.0
ISFB				*e*		15 33 16.4	
	comp=Z,3μm,0.2s						
ISFB	**Sefidab**	**4.29**	**29**	*e*Pn	Pn	15 33 14.8	0.0
ICHK	**Chekchek**	**4.34**	**67**	Pn	Pn	15 33 15.3	-0.1
ICHK	**Chekchek**	**4.34**	**67**	*e*Pn	Pn	15 33 15.3	-0.1
ICHK				*e*Sn	Sn	15 34 03.3	-1.9
ICHK				*e*		15 34 09.2	
	comp=Z,3μm,0.2s						
ICHK	**Chekchek**	**4.34**	**67**	*e*Pn	Pn	15 33 15.3	-0.1
ICHK				*e*Sn	Sn	15 34 03.3	-1.9
IGHG	**Ghaleghazi**	**4.54**	**325**	Pn	Pb	15 33 29.0	-1.0
IGHG	**Ghaleghazi**	**4.54**	**325**	*e*Pn	Pb	15 33 29.1	-0.9
IGHG				*e*		15 34 56.9	
	comp=Z,7μm,0.4s						
IGHG	**Ghaleghazi**	**4.54**	**325**	*e*Pn	Pb	15 33 29.1	-0.9
IVRN	**Varamin**	**4.68**	**21**	Pn	Pn	15 33 20.2	+0.1
IVRN	**Varamin**	**4.68**	**21**	*e*Pn	Pn	15 33 20.3	+0.2
IVRN				*e*Pn	Pn	15 33 20.3	+0.2
IVRN				*e*		15 33 42.9	
	comp=Z,2μm,0.2s						
IVRN	**Varamin**	**4.68**	**21**	*e*Pn	Pn	15 33 20.3	+0.2
BOQSS		**4.75**	**184**	S	Sn	15 34 19.4	+4.0
BOQSS		**4.75**	**184**	P	Pn	15 33 22.7	+1.6
IRAZ	**Razeghan**	**4.77**	**2**	Pn	Pn	15 33 22.7	+1.4
IRAZ	**Razeghan**	**4.77**	**2**	*e*Pn	Pn	15 33 22.0	+0.7
IRAZ				*e*		15 34 46.7	
	comp=Z,3μm,0.3s						
IRAZ	**Razeghan**	**4.77**	**2**	*e*Pn	Pn	15 33 22.0	+0.7
ILIN	**Lien**	**4.86**	**332**	Pn	Pn	15 33 23.3	+0.7
ILIN	**Lien**	**4.86**	**332**	*e*Pn	Pn	15 33 23.4	+0.8
ILIN				*e*		15 34 32.9	
	comp=Z,3μm,0.2s						
ILIN	**Lien**	**4.86**	**332**	*e*Pn	Pn	15 33 23.4	+0.8
SNGE	**Sanandaj**	**4.87**	**337**	Pn	Pn	15 33 23.0	+0.2
SNGE	**Sanandaj**	**4.87**	**337**	*e*Pn	Pn	15 33 23.5	+0.8
SNGE				AML	AML	15 34 29.7	
	comp=E,236nm,0.6s						
SNGE	**Sanandaj**	**4.87**	**337**	Pn	Pn	15 33 23.0	+0.2
IDHR	**Dehrash**	**4.93**	**326**	Pn	Pn	15 33 23.9	+0.4
IDHR	**Dehrash**	**4.93**	**326**	*e*Pn	Pn	15 33 23.9	+0.4
IDHR				*e*		15 34 36.6	
	comp=Z,4μm,0.2s						
IDHR	**Dehrash**	**4.93**	**326**	*e*Pn	Pn	15 33 23.9	+0.4
IR3	**Iran Long-Peri**	**4.96**	**13**	*e*Pn	Pn	15 33 24.6	+0.6
IR3	**Iran Long-Peri**	**4.96**	**13**	*e*Pn	Pn	15 33 24.6	+0.6
IMHD	**Mahdasht**	**5.11**	**9**	*e*Pn	Pn	15 33 26.2	+0.2
IMHD				*e*		15 33 50.5	
	comp=Z,1μm,0.2s						
IMHD	**Mahdasht**	**5.11**	**9**	*e*Pn	Pn	15 33 26.2	+0.2
IBAF	**Bafgh**	**5.12**	**78**	Pn	Pn	15 33 25.7	-0.5
IBAF	**Bafgh**	**5.12**	**78**	*e*Pn	Pn	15 33 25.8	-0.4
IBAF				*e*		15 34 27.3	
	comp=Z,926nm,0.4s						
IBAF	**Bafgh**	**5.12**	**78**	*e*Pn	Pn	15 33 25.8	-0.4
BHD	**Baghdad**	**5.23**	**302**	*ex*	x	15 33 28.0	
BHD				*ex*	x	15 34 32.0	
BHD				*ex*	x	15 35 04.0	
IDMV	**Damavand**	**5.31**	**21**	Pn	Pn	15 33 29.0	+0.2
IDMV	**Damavand**	**5.31**	**21**	*e*Pn	Pn	15 33 29.1	+0.3
IDMV				*e*		15 33 52.4	
	comp=Z,1μm,0.2s						
IDMV	**Damavand**	**5.31**	**21**	*e*Pn	Pn	15 33 29.1	+0.3
DAMV	**Damavand**	**5.34**	**20**	Pn	Pn	15 33 29.0	-0.2
DAMV	**Damavand**	**5.34**	**20**	*e*Pn	Pn	15 33 29.8	+0.6
DAMV				AML	AML	15 35 06.6	
	comp=N,116nm,0.6s						
DAMV	**Damavand**	**5.34**	**20**	*e*Pn	Pn	15 33 29.8	+0.6
THKV	**Tehran--Karaj**	**5.37**	**10**	*e*Pn	Pn	15 33 30.4	+0.9
THKV				AML	AML	15 35 12.6	
	comp=N,96nm,0.6s						
THKV	**Tehran--Karaj**	**5.37**	**10**	*e*Pn	Pn	15 33 30.4	+0.8
CHTH	**Charan**	**5.40**	**12**	*e*Pn	Pn	15 33 30.5	+0.5
CHTH	**Charan**	**5.40**	**12**	*e*Pn	Pn	15 33 30.5	+0.5
ILAS	**Lasjerd**	**5.48**	**29**	Pn	Pn	15 33 31.5	+0.4
ILAS	**Lasjerd**	**5.48**	**29**	*e*Pn	Pn	15 33 31.6	+0.5
ILAS				*e*		15 35 15.3	
	comp=Z,1μm,0.3s						
ILAS	**Lasjerd**	**5.48**	**29**	Pn	Pn	15 33 31.5	+0.4
IFIR	**Firoozkooh**	**5.62**	**26**	Pn	Pn	15 33 33.3	+0.3
IFIR	**Firoozkooh**	**5.62**	**26**	*e*Pn	Pn	15 33 33.3	+0.3
IFIR				*e*		15 33 40.3	
	comp=Z,1μm,0.2s						
IFIR	**Firoozkooh**	**5.62**	**26**	*e*Pn	Pn	15 33 33.3	+0.3
ASYS		**5.63**	**238**	P	Pn	15 33 33.5	+0.3
ASYS		**5.63**	**238**	P	Pn	15 33 33.5	+0.3
ASYS				S	Sn	15 34 38.2	+1.2
SLWS		**5.87**	**172**	P	Pn	15 33 37.8	+1.3
SLWS		**5.87**	**172**	P	Pn	15 33 37.8	+1.3
SLWS				S	Sn	15 34 44.5	+1.5
ISHM	**Shahmirzad**	**5.98**	**29**	Pn	Pn	15 33 38.2	+0.2
ISHM	**Shahmirzad**	**5.98**	**29**	*e*Pn	Pn	15 33 38.4	+0.4
ISHM				*e*		15 33 59.1	
	comp=Z,2μm,0.2s						
ISHM	**Shahmirzad**	**5.98**	**29**	*e*Pn	Pn	15 33 38.4	+0.4
IANJ	**Anjilo**	**5.99**	**35**	Pn	Pn	15 33 36.3	-1.8
IANJ	**Anjilo**	**5.99**	**35**	*e*Pn	Pn	15 33 36.4	-1.7
IANJ				*e*		15 33 47.1	
	comp=Z,830nm,0.1s						
IANJ	**Anjilo**	**5.99**	**35**	*e*Pn	Pn	15 33 36.4	-1.7
KRBR	**Kerman**	**6.14**	**94**	Pn	Pn	15 33 40.0	-0.2
KRBR	**Kerman**	**6.14**	**94**	Pn	Pn	15 33 40.0	-0.2
IKIA	**Kiasar**	**6.49**	**30**	*e*Pn	Pn	15 33 46.6	+1.7
IKIA				*e*		15 33 54.3	
	comp=Z,722nm,0.2s						
IKIA	**Kiasar**	**6.49**	**30**	*e*Pn	Pn	15 33 46.6	+1.7
BNDS	**Bandar-Abbas**	**6.52**	**118**	Pn	Pn	15 33 44.0	-1.4
BNDS	**Bandar-Abbas**	**6.52**	**118**	*e*Pn	Pn	15 33 45.5	+0.1
BNDS	**Bandar-Abbas**	**6.52**	**118**	*e*Pn	Pn	15 33 45.5	+0.1
BTHS		**6.63**	**171**	P	Pn	15 33 47.7	+0.7
BTHS		**6.63**	**171**	P	Pn	15 33 47.7	+0.7
BTHS				S	Sn	15 35 03.1	+1.2
IBND	**Bandar-abas**	**6.77**	**116**	*e*Pn	Pn	15 33 48.0	-0.9
IBND				*e*		15 35 37.2	
	comp=Z,2μm,0.1s						
IBND	**Bandar-abas**	**6.77**	**116**	*e*Pn	Pn	15 33 48.0	-0.9
IGLO	**Ghaloghah**	**6.80**	**29**	*e*Pn	Pn	15 33 49.7	+0.5
IGLO				*e*		15 34 09.0	
	comp=Z,1μm,0.2s						
IGLO	**Ghaloghah**	**6.80**	**29**	*e*Pn	Pn	15 33 49.7	+0.5
TABS	**Tabas**	**6.98**	**62**	*e*Pn	Pn	15 33 51.8	+0.1
TABS	**Tabas**	**6.98**	**62**	*e*Pn	Pn	15 33 51.8	+0.1
ISRB	**Sarab**	**7.38**	**347**	Pn	Pn	15 33 58.7	+1.6
ISRB	**Sarab**	**7.38**	**347**	*e*Pn	Pn	15 33 58.1	+1.0
ISRB				*e*		15 34 41.4	
	comp=Z,221nm,0.3s						
BANOM	**Banah**	**7.47**	**127**	P	Pn	15 33 58.0	-0.5
BANOM	**Banah**	**7.47**	**127**	↓P	Pn	15 33 58.0	-0.5
BANOM				↓S	Sn	15 35 18.5	-4.0
HRDDS		**7.67**	**182**	P	Pn	15 34 02.1	+0.8
IAZR	**Azarshahr**	**7.68**	**337**	*e*Pn	Pn	15 34 01.2	-0.1
IAZR				*e*		15 35 58.7	
	comp=Z,730nm,0.2s						
IAZR	**Azarshahr**	**7.68**	**337**	*e*Pn	Pn	15 34 01.2	-0.1
ASUD	**Al Ashush, Dub**	**7.79**	**139**	P	Pn	15 34 03.6	+0.8
	SNR=14						
ASUD				S	Sn	15 35 28.7	-1.6
ASUD	**Al Ashush, Dub**	**7.79**	**139**	P	Pn	15 34 03.6	+0.8
	SNR=14						
ASUD				ml		15 34 17.1	
	SNR=4.6						
ASUD				⇑S	Sn	15 35 28.7	-1.6
HATD	**Hatta, Dubai**	**8.12**	**134**	P	Pn	15 34 06.8	-0.6
HATD	**Hatta, Dubai**	**8.12**	**134**	⇓P	Pn	15 34 06.8	-0.5
ASHO	**Ashiyiah**	**8.17**	**135**	P	Pn	15 34 08.5	+0.3
	SNR=18						
ASHO	**Ashiyiah**	**8.17**	**135**	P	Pn	15 34 08.5	+0.3
	SNR=18						
ASHO				ml		15 34 23.6	
	SNR=6.2						
ASHO				⇑S	Sn	15 35 34.8	-5.0
ISHB	**Shabestar**	**8.35**	**337**	Pn	Pn	15 34 15.6	+5.1
ISHB	**Shabestar**	**8.35**	**337**	*e*Pn	Pn	15 34 11.1	+0.6
ISHB				*e*		15 35 53.6	
	comp=Z,246nm,0.3s						
MRVT	**Maraveh tapeh**	**8.79**	**35**	*e*Pn	Pn	15 34 17.2	+0.7
MRVT	**Maraveh tapeh**	**8.79**	**35**	*e*Pn	Pn	15 34 17.2	+0.7
ISFR	**Sfrayin**	**9.42**	**45**	*e*Pn	Pn	15 34 25.3	+0.1
ISFR				*e*		15 34 28.9	
	comp=Z,1μm,0.3s						
ISFR	**Sfrayin**	**9.42**	**45**	*e*Pn	Pn	15 34 25.3	+0.1
ARQ	**Araqi**	**9.47**	**138**	P	Pn	15 34 25.5	-0.5
ARQ	**Araqi**	**9.47**	**138**	⇑P	Pn	15 34 25.5	-0.5
IKRD	**Kardeh**	**9.56**	**48**	*e*Pn	Pn	15 34 35.8	+8.6
IAKL	**Akhelmad**	**9.62**	**49**	*e*Pn	Pn	15 34 27.6	-0.3
IAKL				*e*		15 34 45.1	
	comp=Z,113nm,0.3s						
HOQ	**Hoqain**	**9.76**	**134**	P	Pn	15 34 29.2	-0.6
HOQ	**Hoqain**	**9.76**	**134**	⇓P	Pn	15 34 29.2	-0.6
IEMG	**Emamgholi**	**10.05**	**45**	*e*Pn	Pn	15 34 33.2	-0.6
IEMG	**Emamgholi**	**10.05**	**45**	*e*Pn	Pn	15 34 33.2	-0.6
BSY	**Bisya**	**10.32**	**138**	⇑P	Pn	15 34 36.8	-0.8
GNI	**Garni**	**10.32**	**338**	LR	LR	15 39 23.8	
	comp=Z,94nm,19.2s,baz=333,slow=42						
BSYO	**Bisya**	**10.36**	**138**	P	Pn	15 34 36.8	-1.3
ASF	**Jabal al Asfar**	**11.05**	**281**	Pn	Pn	15 34 45.6	-1.9
	comp=Z,2.3nm,0.3s,baz=330,slow=11,SNR=30						
ASF				Sn	Sn	15 36 36.4	-14
	comp=Z,0.8nm,0.3s,baz=307,slow=13,SNR=3.6						
ASF				LR	LR	15 38 51.8	
	comp=Z,80nm,21.7s,baz=152,slow=37						
ASF	**Jabal al Asfar**	**11.05**	**281**	P	Pn	15 34 45.6	-1.9
ASF				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JMDO	**Jabal Madar**	**11.14**	**136**	P	Pn	15 34 48.7	-0.2
JMDO	**Jabal Madar**	**11.14**	**136**	⇓P	Pn	15 34 48.7	-0.2
WBK	**Wadi Bani Khal**	**11.51**	**132**	⇓P	Pn	15 34 53.5	-0.3
	SNR=8.4						
MALT	**Malatya**	**12.05**	**313**	*e*Pn	Pn	15 34 58.0	-3.1
	comp=Z,2.8nm,0.5s						
MALT	**Malatya**	**12.05**	**313**	*e*P	Pn	15 34 58.1	-3.0
MALT				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MMAI	**Mount Meron Ar**	**12.39**	**285**	Pn	Pn	15 35 05.5	-0.4
	comp=Z,1.9nm,0.3s,baz=112,slow=17,SNR=6.2						
MMAI				Sn	Sn	15 37 21.1	-2.0
	comp=Z,2.1nm,0.3s,baz=91,slow=30,SNR=7.3						
EIL	**Elat**	**12.80**	**269**	Pn	Pn	15 35 11.0	-0.5
	comp=Z,1.5nm,0.3s,baz=78,slow=11,SNR=16						
EIL				LR	LR	15 40 53.1	
	comp=Z,107nm,21.2s,baz=279,slow=41						
EIL	**Elat**	**12.80**	**269**	Pn	Pn	15 35 11.0	-0.5
EIL				LR	LR	15 40 53.1	
EIL	**Elat**	**12.80**	**269**	Pn	Pn	15 35 11.0	-0.5
ZEI	**Tsey**	**12.98**	**341**	*e*P	Pn	15 35 18.1	+4.3
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KIV	**Kislovodsk**	**14.42**	**339**	*e*Pn	Pn	15 35 37.4	+4.0
	comp=Z,29nm,0.5s						
KIV	**Kislovodsk**	**14.42**	**339**	*e*P	Pn	15 35 40.9	+7.4
KIV				pmax	pmax		
	comp=Z,34nm,0.7s						
KIV	**Kislovodsk**	**14.42**	**339**	*e*P	Pn	15 35 40.9	+7.4
	comp=Z,34nm,0.7s						
SOC	**Sochi**	**15.17**	**331**	*e*P	Pn	15 35 48.8	+5.2
SOC				pmax	pmax		
	comp=Z,29nm,0.8s						
SOC				MLR	MLR		
	comp=Z,140nm,11.0s						
SOC	**Sochi**	**15.17**	**331**	*e*P	Pn	15 35 48.8	+5.2
	comp=Z,140nm,11.0s						
BRTR	**Keskin Array B**	**15.94**	**309**	Pn	Pn	15 35 53.9	+0.2
	comp=Z,0.0nm,0.3s,baz=125,slow=12,SNR=6.5			

AAK Ala-Archa 23.14 52 P **P 15 37 15.9 +0.5**
KSH Kashi 23.20 60 *e*P **P 15 37 12.5 -3.6**
KSH *e*pP 15 37 21.8
KSH *es*P sP 15 37 26.0 +0.1
KSH *e*PP 15 37 41.3
KSH *e*PcP PcP 15 41 06.5 +2.8
KSH *e*S **S 15 41 13.0 -13**
KSH pmax pmax
comp=Z,10.0nm,1.0s,mb4.2
KSH pmax pmax
comp=Z,92nm,2.7s,mb4.7
KSH LR LR
comp=N,370nm,6.4s
KSH LR LR
comp=E,240nm,4.4s
KSH LR LR
comp=Z,230nm,8.6s
PLOR Plostina 23.52 317 ⇑P **P 15 37 23.0 +3.7**
PLOR Plostina 23.52 317 ⇑*i*P **P 15 37 23.0 +3.7**
MLR Muntele Rosu 23.75 315 ⇓P **P 15 37 24.2 +2.7**
MLR Muntele Rosu 23.75 315 ⇓*i*P **P 15 37 24.2 +2.7**
MLR Muntele Rosu 23.75 315 P **P 15 37 24.2 +2.7**
TESR 23.88 318 ⇑*i*P **P 15 37 22.8 +0.2**
TESR 23.88 318 ⇑*i*P **P 15 37 22.8 +0.2**
NDI New Delhi 23.97 88 *e*PKP **P 15 37 20.0 -3.6**
TKM2 Tokmak 2 24.00 52 *e*P **P 15 37 23.4 -0.4**
comp=Z,6.0nm,0.7s,mb4.1
TKM2 *e* 15 37 48.1
TKM2 Tokmak 2 24.00 52 *e*P **P 15 37 23.4 -0.3**
TKM2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
TKM2 Tokmak 2 24.00 52 *e*P **P 15 37 23.4 -0.3**
comp=Z,6.0nm,0.7s,mb4.1
VOIR 24.27 314 ⇑P **P 15 37 27.9 +1.7**
VOIR 24.27 314 ⇑*i*P **P 15 37 27.9 +1.7**
VOIR 24.27 314 P **P 15 37 27.9 +1.7**
AKASG Malin Array Be 25.21 329 P **P 15 37 33.4 -1.3**
comp=Z,5.8nm,0.5s,mb4.4,baz=119,slow=7.0,SNR=15
AKASG PcP PcP 15 41 07.5 -0.3
comp=Z,1.7nm,0.5s,baz=111,slow=2.1,SNR=6.6
AKASG Malin Array Be 25.21 329 P **P 15 37 33.4 -1.3**
AKASG 15 41 07.5
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKASG Malin Array Be 25.21 329 P **P 15 37 33.4 -1.3**
comp=Z,6.0nm,0.5s,mb4.4
AKASG Malin Array Be 25.21 329 PcP PcP 15 41 07.5 -0.3
AKBB Malin Array Si 25.21 329 *e*P **P 15 37 34.1 -0.6**
AKBB Malin Array Si 25.21 329 *e*P **P 15 37 34.1 -0.6**
AKBB Malin Array Si 25.21 329 *e*P **P 15 37 34.1 -0.6**
KIEV Kiev 25.21 328 *e*P **P 15 37 34.2 -0.5**
comp=Z,14nm,0.5s,mb4.7
KIEV Kiev 25.21 328 *e*P **P 15 37 34.2 -0.5**
KIEV pmax pmax
comp=Z,14nm,0.5s,mb4.8
KIEV Kiev 25.21 328 *e*P **P 15 37 34.2 -0.5**
comp=Z,14nm,0.5s,mb4.8
BURAR Bucovina Array 25.30 319 ⇓P **P 15 37 36.5 +0.9**
BURAR Bucovina Array 25.30 319 ⇓*i*P **P 15 37 36.5 +0.9**
BURAR Bucovina Array 25.30 319 ⇓*i*P **P 15 37 36.5 +0.9**
BARS Barje 25.32 306 *e*P **P 15 37 37.2 +1.4**
BUR08 Bucovina Ar. S 25.33 319 *e*P **P 15 37 36.2 +0.4**
BUR08 Bucovina Ar. S 25.33 319 *e*P **P 15 37 36.2 +0.4**
BOLS Boljevac 25.59 309 *e*P **P 15 37 38.6 +0.4**
GZR Gura Zlata 25.68 313 ⇑P **P 15 37 41.7 +2.7**
GZR Gura Zlata 25.68 313 ⇑*i*P **P 15 37 41.7 +2.7**
GZR Gura Zlata 25.68 313 P **P 15 37 41.7 +2.7**
OBN Obninsk 26.21 343 *e*P **P 15 37 42.4 -1.2**
comp=Z,35nm,0.5s,mb5.2
OBN Obninsk 26.21 343 ⇑*i*P **P 15 37 44.9 +1.2**
OBN *e*S **S 15 42 10.3 -3.9**
OBN pmax pmax
comp=Z,15nm,0.5s,mb4.8
OBN Obninsk 26.21 343 *e*P **P 15 37 42.4 -1.3**
comp=Z,35nm,0.5s,mb5.2
OBN *e*S **S 15 42 10.3 -3.9**
DRGR 26.35 315 ⇓P **P 15 37 46.2 +1.1**
DRGR 26.35 315 ⇓*i*P **P 15 37 46.2 +1.1**
DRGR 26.35 315 P **P 15 37 46.2 +1.1**
ARU Arti 26.54 11 P **P 15 37 51.3 +4.7**
ARU Arti 26.54 11 P **P 15 37 52.4 +5.8**
TRUS Trudelj 26.77 309 *e*P **P 15 37 49.9 +1.0**
BRVK Borovoye 26.97 28 *e*P **P 15 37 48.9 -1.6**
comp=Z,2.3nm,0.7s,mb3.8
BRVK Borovoye 26.97 28 *e*P **P 15 37 48.9 -1.7**
BRVK pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
BRVK Borovoye 26.97 28 *e*P **P 15 37 48.9 -1.7**
comp=Z,2.0nm,0.7s,mb3.8
BVAR Borovoye Array 26.99 28 P **P 15 37 50.7 0.0**
comp=Z,1.0nm,0.4s,mb3.7,baz=243,slow=6.3,SNR=5.3
BVAR PcP PcP 15 41 11.7 -0.2
comp=Z,0.9nm,0.5s,baz=238,slow=3.1,SNR=4.4
BVAR Borovoye Array 26.99 28 P **P 15 37 50.7 0.0**
BVAR 15 41 11.7
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR Borovoye Array 26.99 28 P **P 15 37 50.7 0.0**
comp=Z,1.0nm,0.4s,mb3.7
BVAR Borovoye Array 26.99 28 PcP PcP 15 41 11.7 -0.1
BBLS Lazići 27.33 307 *e*P **P 15 37 54.4 +0.5**
KOLS Kolonicke sedl 27.67 319 *e*P **P 15 37 59.0 +2.1**
comp=Z,16nm,1.7s,mb4.4
KOLS Kolonicke sedl 27.67 319 *e*P **P 15 37 59.0 +2.1**
KOLS pmax pmax
comp=Z,16nm,1.7s,mb4.4
KOLS Kolonicke sedl 27.67 319 *e*P **P 15 37 59.0 +2.1**
KOLS Kolonicke sedl 27.67 319 *e*P **P 15 37 59.0 +2.1**
comp=Z,16nm,1.7s,mb4.4
KWP Kalwaria Pacla 27.80 321 *e*P **P 15 37 57.7 -0.4**
comp=Z,5.7nm,0.5s,mb4.5
KWP Kalwaria Pacla 27.80 321 *e*P **P 15 37 57.7 -0.4**
KWP pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
KWP Kalwaria Pacla 27.80 321 *e*P **P 15 37 57.7 -0.4**
comp=Z,6.0nm,0.5s,mb4.5
CRVS Cervenica-Dubn 28.12 319 *e*P **P 15 38 03.9 +3.0**
comp=Z,9.5nm,1.7s,mb4.2
CRVS Cervenica-Dubn 28.12 319 *e*P **P 15 38 03.9 +3.0**
CRVS pmax pmax
comp=Z,10.0nm,1.7s,mb4.2
CRVS Cervenica-Dubn 28.12 319 *e*P **P 15 38 03.9 +3.0**
KECS Kecovo 28.48 317 *e*P **P 15 38 05.2 +1.1**
comp=Z,2.2nm,0.6s,mb4.0
KECS Kecovo 28.48 317 *e*P **P 15 38 05.2 +1.1**
KECS pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
KECS Kecovo 28.48 317 *e*P **P 15 38 05.2 +1.1**
PSZ Piszkesteto 28.57 316 *e*P **P 15 38 00.6 -4.3**
comp=Z,5.0nm,0.9s,mb4.2
PSZ Piszkesteto 28.57 316 *e*P **P 15 38 00.6 -4.3**
PSZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
HYB Hyderabad 29.36 110 *i*P **P 15 38 11.0 -1.2**
KURK Kurchatov 29.43 39 *e*P **P 15 38 13.3 +0.8**
comp=Z,3.9nm,0.9s,mb4.1
KURK Kurchatov 29.43 39 *e*P **P 15 38 14.1 +1.5**
KURK pmax pmax
comp=Z,6.0nm,1.2s,mb4.2
KURK Kurchatov 29.43 39 *e*P **P 15 38 13.3 +0.7**
comp=Z,3.9nm,0.9s,mb4.1
VYHS Vyhne 29.46 316 *e*P **P 15 38 15.5 +2.7**
comp=Z,1.8nm,0.9s,mb3.8
VYHS Vyhne 29.46 316 *e*P **P 15 38 15.5 +2.7**
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
VYHS Vyhne 29.46 316 *e*P **P 15 38 15.5 +2.7**
VYHS Vyhne 29.46 316 *e*P **P 15 38 15.5 +2.7**
comp=Z,1.8nm,0.9s,mb3.8
OJC Ojcow 29.71 320 *e*P **P 15 38 15.2 +0.1**
OJC Ojcow 29.71 320 *e*P **P 15 38 15.2 +0.1**
OJC Ojcow 29.71 320 *e*P **P 15 38 15.2 +0.1**
MK31 Makanchi Array 29.85 48 *e*P **P 15 38 15.9 -0.4**
MK31 Makanchi Array 29.85 48 *e*P **P 15 38 15.9 -0.4**
MK31 Makanchi Array 29.85 48 *e*P **P 15 38 15.9 -0.4**
MKAR Makanchi Array 29.85 48 P **P 15 38 15.9 -0.4**
comp=Z,1.7nm,0.6s,mb3.9,baz=243,slow=8.0,SNR=8.8
MKAR LR LR 15 51 59.9
comp=Z,135nm,18.0s,MS3.6,baz=69,slow=40
MKAR Makanchi Array 29.85 48 P **P 15 38 15.9 -0.4**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR MLR MLR
comp=Z,135nm,18.0s

MKAR Makanchi Array 29.85 48 P **P 15 38 15.9 -0.4**
comp=Z,135nm,18.0s
ZST Bratislava 30.39 315 *e*P **P 15 38 22.7 +1.7**
comp=Z,5.9nm,0.6s,mb4.5
ZST Bratislava 30.39 315 *e*P **P 15 38 22.7 +1.7**
ZST pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
ZST Bratislava 30.39 315 *e*P **P 15 38 22.7 +1.7**
ZST Bratislava 30.39 315 *e*P **P 15 38 22.7 +1.7**
comp=Z,6.0nm,0.6s,mb4.5
MORC Moravsky Berou 30.79 318 *e*P **P 15 38 23.8 -0.7**
comp=Z,6.2nm,1.0s,mb4.4
MORC Moravsky Berou 30.79 318 *e*P **P 15 38 23.8 -0.8**
MORC pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
MORC Moravsky Berou 30.79 318 *e*P **P 15 38 23.8 -0.8**
comp=Z,6.0nm,1.0s,mb4.4
KLMR Klimovskoe 30.98 350 *e*P **P 15 38 21.6 -4.5**
KLMR pmax pmax
comp=Z,28nm,1.7s,mb4.8
VRAC Vranov 31.15 316 P **P 15 38 28.1 +0.4**
comp=Z,2.5nm,0.6s,mb4.2,baz=112,slow=13,SNR=3.1
VRAC Vranov 31.15 316 P **P 15 38 28.1 +0.4**
VRAC pmax pmax
comp=Z,3.0nm,0.6s
VRAC Vranov 31.15 316 P **P 15 38 28.1 +0.4**
comp=Z,3.0nm,0.6s,mb4.3
DPC Dobruska-Polom 31.75 318 *e*P **P 15 38 32.9 -0.1**
DPC Dobruska-Polom 31.75 318 *e*P **P 15 38 32.9 -0.1**
DPC Dobruska-Polom 31.75 318 *e*P **P 15 38 32.9 -0.1**
UPC Upice 31.99 318 *e*P **P 15 38 35.2 0.0**
UPC Upice 31.99 318 *e*P **P 15 38 35.2 0.0**
UPC Upice 31.99 318 *e*P **P 15 38 35.2 0.0**
MOA Molln 32.03 313 ⇓*i*P **P 15 38 36.0 +0.5**
comp=Z,8.2nm,1.1s,mb4.5
MOA Molln 32.03 313 P **P 15 38 36.0 +0.5**
comp=Z,8.2nm,1.1s,mb4.5
WMQ Urumqi 32.71 56 *e*P **P 15 38 44.0 +2.5**
WMQ pP pP 15 38 54.0 +5.3
WMQ sP sP 15 38 58.0 +6.3
WMQ PP PP 15 39 54.0 -1.5
WMQ S **S 15 43 58.0 +1.5**
WMQ SS SS 15 45 57.0 -20
WMQ pmax pmax
comp=Z,16nm,0.8s,mb5.0
WMQ pmax pmax
comp=Z,54nm,3.0s
WMQ LR LR
comp=N,60nm,12.0s,MS3.7
WMQ LR LR
comp=E,66nm,12.0s,MS3.7
WMQ LR LR
comp=Z,84nm,12.0s,MS3.7
GERES GERESS Array B 32.73 314 P **P 15 38 40.5 -1.1**
comp=Z,0.6nm,0.5s,mb3.8,baz=123,slow=6.6,SNR=6.0
GERES GERESS Array B 32.73 314 P **P 15 38 40.5 -1.1**
GERES GERESS Array B 32.73 314 P **P 15 38 40.5 -1.1**
KHC Kasperske Hory 32.90 315 *e*P **P 15 38 42.6 -0.6**
comp=Z,5.1nm,1.3s,mb4.3
KHC Kasperske Hory 32.90 315 *e*P **P 15 38 43.6 +0.4**
KHC Kasperske Hory 32.90 315 *e*P **P 15 38 43.6 +0.4**
KHC *ex* x 15 39 03.2
KHC Kasperske Hory 32.90 315 *e*P **P 15 38 43.6 +0.4**
BRG Berggiesshubel 33.34 318 *e* **P 15 38 47.5 +0.5**
comp=Z,5.3nm,1.3s,mb4.3
BRG
comp=N,222nm,14.8s
BRG
comp=E,157nm,14.0s
BRG
comp=Z,319nm,14.2s
BRG Berggiesshubel 33.34 318 *e*(P) **P 15 38 32.5 -14**
comp=Z,4.2nm,1.2s,mb4.2
WTTA Wattenberg 33.55 311 ⇑*i*P **P 15 38 48.5 -0.3**
comp=Z,5.1nm,0.5s,mb4.7
WTTA Wattenberg 33.55 311 P **P 15 38 48.5 -0.3**
comp=Z,5.1nm,0.5s,mb4.7
CLL Collm 34.06 318 *e*P **P 15 38 56.0 +2.8**
CLL Collm 34.06 318 *e*P **P 15 38 56.0 +2.8**
CLL Collm 34.06 318 *e*(P) **P 15 38 56.0 +2.8**
FETA Feichten 34.08 310 ⇓*i*P **P 15 38 53.8 +0.3**
comp=Z,3.2nm,0.6s,mb4.5
FETA Feichten 34.08 310 P **P 15 38 53.8 +0.3**
comp=Z,3.2nm,0.6s,mb4.5
ZAA0 Zalesovo Array 34.35 37 *e*P **P 15 38 52.2 -3.4**
ZALV Zalesovo Beam 34.35 37 P **P 15 38 55.2 -0.5**
comp=Z,1.6nm,0.5s,mb4.2,baz=263,slow=5.8,SNR=7.4
ZALV LR LR 15 54 27.7
comp=Z,53nm,19.5s,MS3.3,baz=223,slow=39
ZALV Zalesovo Beam 34.35 37 P **P 15 38 55.2 -0.5**
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
ZALV MLR MLR
comp=Z,53nm,19.5s,MS3.3
PGF Pioggiola 34.47 302 *e*P **P 15 38 58.0 +1.1**
PGF Pioggiola 34.47 302 *e*P **P 15 38 58.0 +1.1**
PGF Pioggiola 34.47 302 *e*P **P 15 38 58.0 +1.1**
FINES FINESS Array B 34.51 340 P **P 15 38 55.4 -1.6**
comp=Z,2.4nm,0.4s,mb4.4,baz=148,slow=9.2,SNR=14
FINES PcP PcP 15 41 31.2 -0.3
comp=Z,2.2nm,0.5s,baz=108,slow=6.2,SNR=5.7
FINES FINESS Array B 34.51 340 P **P 15 38 55.4 -1.6**
FINES 15 41 31.2
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 34.51 340 P **P 15 38 55.4 -1.6**
comp=Z,2.0nm,0.4s,mb4.4
FINES FINESS Array B 34.51 340 PcP PcP 15 41 31.2 -0.3
DAVA Damuels 34.71 310 ⇑*i*P **P 15 38 58.5 -0.4**
comp=Z,9.7nm,0.5s,mb5.0
DAVA Damuels 34.71 310 P **P 15 38 58.5 -0.4**
comp=Z,9.7nm,0.5s,mb5.0
SBF Sospel 35.76 304 *e*P **P 15 39 07.5 -0.5**
comp=Z,33nm,0.7s,mb5.0
SBF Sospel 35.76 304 *e*P **P 15 39 07.5 -0.5**
comp=Z,17nm,0.7s,mb5.1
SBF Sospel 35.76 304 *e*P **P 15 39 07.5 -0.5**
SBF pmax pmax
comp=Z,17nm,0.7s,mb5.1
SBF Sospel 35.76 304 *e*P **P 15 39 07.5 -0.5**
comp=Z,17nm,0.7s,mb5.0
MBDF Montbardon 36.35 305 *e*P **P 15 39 13.2 +0.2**
comp=Z,12nm,0.6s,mb4.7
MBDF Montbardon 36.35 305 *e*P **P 15 39 13.2 +0.2**
comp=Z,6.0nm,0.6s,mb4.7
MBDF Montbardon 36.35 305 *e*P **P 15 39 13.2 +0.2**
MBDF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
MBDF Montbardon 36.35 305 *e*P **P 15 39 13.2 +0.2**
comp=Z,6.0nm,0.6s,mb4.7
LPG La Plagne 36.48 306 *e*P **P 15 39 13.9 -0.2**
comp=Z,14nm,0.8s,mb4.7
LPG La Plagne 36.48 306 *e*P **P 15 39 13.9 -0.2**
comp=Z,6.9nm,0.8s,mb4.6
LPG La Plagne 36.48 306 *e*P **P 15 39 13.9 -0.2**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LPG La Plagne 36.48 306 *e*P **P 15 39 13.9 -0.2**
comp=Z,6.9nm,0.8s,mb4.7
LPL La Plagne 36.49 306 *e*P **P 15 39 13.8 -0.4**
LPL La Plagne 36.49 306 *e*P **P 15 39 13.8 -0.4**
LPL La Plagne 36.49 306 *e*P **P 15 39 13.8 -0.4**
CDF Champ du Feu 36.68 311 *e*P **P 15 39 15.5 -0.3**
CDF Champ du Feu 36.68 311 *e*P **P 15 39 15.5 -0.3**
CDF Champ du Feu 36.68 311 *e*P **P 15 39 15.5 -0.3**
HINF Hinteralfeld 36.83 310 *e*P **P 15 39 16.3 -0.7**
comp=Z,4.6nm,0.6s,mb4.2
HINF Hinteralfeld 36.83 310 *e*P **P 15 39 16.3 -0.7**
comp=Z,2.3nm,0.6s,mb4.2
HINF Hinteralfeld 36.83 310 *e*P **P 15 39 16.3 -0.7**
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
HINF Hinteralfeld 36.83 310 *e*P **P 15 39 16.3 -0.7**
comp=Z,2.3nm,0.6s,mb4.2
SMRF Simiane la Rot 37.11 304 *e*P **P 15 39 19.5 0.0**
SMRF Simiane la Rot 37.11 304 *e*P **P 15 39 19.5 0.0**
CABF La Chapelle 37.11 308 *e*P **P 15 39 19.2 -0.3**
comp=Z,18nm,0.8s,mb4.7
CABF La Chapelle 37.11 308 *e*P **P 15 39 19.2 -0.3**
comp=Z,9.0nm,0.8s,mb4.7
CABF La Chapelle 37.11 308 *e*P **P 15 39 19.2 -0.3**
CABF pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
CABF La Chapelle 37.11 308 *e*P **P 15 39 19.2 -0.3**
comp=Z,9.0nm,0.8s,mb4.7
VIVF Saint-Julien-l 37.85 305 *e*P **P 15 39 25.3 -0.4**

VIVF Saint-Julien-l 37.85 305 *e*P **P 15 39 25.3 -0.4**
VIVF Saint-Julien-l 37.85 305 *e*P **P 15 39 25.3 -0.4**
HFS Hagfors 38.01 331 P **P 15 39 25.5 -1.5**
comp=Z,6.5nm,0.4s,mb4.7,baz=119,slow=9.3,SNR=49
HFS Hagfors 38.01 331 P **P 15 39 25.5 -1.4**
HFS pmax pmax
comp=Z,7.0nm,0.4s
HFS Hagfors 38.01 331 P **P 15 39 25.5 -1.4**
comp=Z,7.0nm,0.4s,mb4.7
LASF Ste Croix 38.35 304 *e*P **P 15 39 29.3 -0.7**
comp=Z,16nm,0.9s,mb4.4
LASF Ste Croix 38.35 304 *e*P **P 15 39 29.3 -0.7**
comp=Z,7.8nm,0.9s,mb4.4
SMF Signal de Mont 38.65 308 *e*P **P 15 39 31.4 -1.0**
comp=Z,12nm,0.7s,mb4.5
SMF Signal de Mont 38.65 308 *e*P **P 15 39 31.4 -1.0**
comp=Z,5.8nm,0.6s,mb4.5
SMF Signal de Mont 38.65 308 *e*P **P 15 39 31.4 -1.0**
SMF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
SMF Signal de Mont 38.65 308 *e*P **P 15 39 31.4 -1.0**
comp=Z,5.8nm,0.7s,mb4.5
SSF Saint Saulge 38.93 308 *e*P **P 15 39 33.3 -1.5**
comp=Z,5.7nm,0.6s,mb4.2
SSF Saint Saulge 38.93 308 *e*P **P 15 39 33.3 -1.5**
comp=Z,2.8nm,0.6s,mb4.2
SSF Saint Saulge 38.93 308 *e*P **P 15 39 33.3 -1.5**
SSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
SSF Saint Saulge 38.93 308 *e*P **P 15 39 33.3 -1.5**
comp=Z,2.8nm,0.6s,mb4.2
MTLF Montolieu 39.49 302 *e*P **P 15 39 39.6 0.0**
comp=Z,5.4nm,0.8s,mb4.0
MTLF Montolieu 39.49 302 *e*P **P 15 39 39.6 0.0**
comp=Z,2.7nm,0.8s,mb4.0
MTLF Montolieu 39.49 302 *e*P **P 15 39 39.6 0.0**
MTLF pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
MTLF Montolieu 39.49 302 *e*P **P 15 39 39.6 0.0**
comp=Z,2.7nm,0.8s,mb4.0
NB2 NORSAR Subarra 39.54 332 P **P 15 39 37.8 -1.9**
comp=Z,2.4nm,0.5s,mb4.2,baz=122,slow=8.6
NB2 NORSAR Subarra 39.54 332 P **P 15 39 37.8 -1.9**
comp=Z,2.4nm,0.5s,mb4.2,baz=122,slow=8.4,SNR=4.8
NOA NORSAR Array B 39.54 332 P **P 15 39 37.8 -1.9**
comp=Z,2.4nm,0.5s,mb4.2,baz=122,slow=8.3,SNR=16
NOA PP PP 15 41 08.2 -2.3
comp=Z,1.7nm,0.7s,baz=126,slow=11,SNR=3.7
NOA NORSAR Array B 39.54 332 P **P 15 39 37.8 -1.9**
NOA 15 41 08.2
NOA pmax pmax
comp=Z,2.0nm,0.5s
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 39.54 332 P **P 15 39 37.8 -1.9**
comp=Z,2.0nm,0.5s,mb4.1
NOA NORSAR Array B 39.54 332 PP PP 15 41 08.1 -2.4
NAO01 NORSAR Array S 39.57 331 *e*P **P 15 39 37.9 -2.0**
comp=Z,1.8nm,0.6s,mb4.0
NAO01 NORSAR Array S 39.57 331 *e*P **P 15 39 37.9 -2.0**
comp=Z,1.8nm,0.6s,mb4.0
TAM Tamanrasset 40.02 270 *e*P **P 15 39 45.6 +1.4**
comp=Z,0.9nm,0.4s,mb3.9
TAM Tamanrasset 40.02 270 *e*P **P 15 39 45.6 +1.4**
TAM pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
TAM Tamanrasset 40.02 270 *e*P **P 15 39 45.6 +1.4**
comp=Z,1.0nm,0.4s,mb3.9
RJF Les Rejaudoux 40.12 305 *e*P **P 15 39 44.3 -0.4**
RJF Les Rejaudoux 40.12 305 *e*P **P 15 39 44.3 -0.4**
RJF Les Rejaudoux 40.12 305 *e*P **P 15 39 44.3 -0.4**
ARCES ARCESS Array B 41.32 347 PcP PcP 15 41 52.4 0.0
comp=Z,2.7nm,1.0s,baz=154,slow=3.9,SNR=3.6
ETSF Etsaut 41.52 302 *e*P **P 15 39 57.6 +1.3**
comp=Z,5.5nm,0.7s,mb4.0
ETSF Etsaut 41.52 302 *e*P **P 15 39 57.6 +1.3**
comp=Z,2.8nm,0.7s,mb4.0
ETSF Etsaut 41.52 302 *e*P **P 15 39 57.6 +1.3**
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
ETSF Etsaut 41.52 302 *e*P **P 15 39 57.6 +1.3**
comp=Z,2.8nm,0.7s,mb4.0
GTA Gaotai 41.52 64 *e*P **P 15 39 57.0 +0.6**
GTA pP pP 15 40 03.5 -0.2
GTA sP sP 15 40 06.8 +0.2
GTA S **S 15 46 13.0 +2.3**
GTA SS SS 15 49 12.5 -3.0
GTA pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
GTA pmax pmax
comp=Z,51nm,4.7s
GTA LR LR
comp=N,68nm,11.2s,MS4.1
GTA LR LR
comp=E,110nm,10.2s,MS4.1
GTA LR LR
comp=Z,80nm,19.4s
LDF La Druitiere 41.56 310 *e*P **P 15 39 55.4 -1.1**
comp=Z,5.1nm,0.4s,mb4.2
LDF La Druitiere 41.56 310 *e*P **P 15 39 55.4 -1.1**
comp=Z,2.5nm,0.4s,mb4.2
LDF La Druitiere 41.56 310 *e*P **P 15 39 55.4 -1.1**
LDF pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
LDF La Druitiere 41.56 310 *e*P **P 15 39 55.4 -1.1**
comp=Z,2.5nm,0.4s,mb4.2
SJPF Ste Jean 42.00 302 *e*P **P 15 40 00.6 +0.3**
comp=Z,11nm,0.6s,mb4.4
SJPF Ste Jean 42.00 302 *e*P **P 15 40 00.6 +0.3**
comp=Z,5.3nm,0.6s,mb4.3
SJPF Ste Jean 42.00 302 *e*P **P 15 40 00.6 +0.3**
SJPF pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
SJPF Ste Jean 42.00 302 *e*P **P 15 40 00.6 +0.3**
comp=Z,5.3nm,0.6s,mb4.4
SGMF Saint Gilles 43.14 309 *e*P **P 15 40 08.3 -1.1**
SGMF Saint Gilles 43.14 309 *e*P **P 15 40 08.3 -1.1**
SGMF Saint Gilles 43.14 309 *e*P **P 15 40 08.3 -1.1**
QUIF Quistinic 43.52 309 *e*P **P 15 40 11.2 -1.3**
comp=Z,6.1nm,0.5s,mb4.3
QUIF Quistinic 43.52 309 *e*P **P 15 40 11.2 -1.3**
comp=Z,3.0nm,0.5s,mb4.3
QUIF Quistinic 43.52 309 *e*P **P 15 40 11.2 -1.3**
QUIF pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
QUIF Quistinic 43.52 309 *e*P **P 15 40 11.2 -1.3**
comp=Z,3.0nm,0.5s,mb4.3
ROSF Rostrenen 43.62 309 *e*P **P 15 40 12.0 -1.3**
ROSF Rostrenen 43.62 309 *e*P **P 15 40 12.0 -1.3**
ROSF Rostrenen 43.62 309 *e*P **P 15 40 12.0 -1.3**
ZAK Zakamensk 44.19 48 *e*P **P 15 40 17.4 -0.5**
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb3.8
ZAK Zakamensk 44.19 48 *e*P **P 15 40 17.4 -0.5**
comp=Z,2.0nm,1.0s,mb3.8
EKA Eskdalemuir Ar 44.49 319 P **P 15 40 18.9 -1.3**
comp=Z,1.7nm,0.4s,mb4.1,baz=109,slow=7.9,SNR=15
EKA Eskdalemuir Ar 44.49 319 P **P 15 40 18.9 -1.3**
EKA pmax pmax
comp=Z,2.0nm,0.4s
EKA Eskdalemuir Ar 44.49 319 P **P 15 40 18.9 -1.3**
comp=Z,2.0nm,0.4s,mb4.2
LZH Lanzhou 45.07 68 *e*P **P 15 40 26.0 +0.9**
LZH pP pP 15 40 36.5 +4.0
LZH sP sP 15 40 41.0 +5.6
LZH pmax pmax
comp=Z,23nm,1.1s,mb4.9
CHTO Chiang Mai 45.93 93 P **P 15 40 30.6 -1.5**
comp=Z,7.0nm,1.2s,mb4.5
CHTO Chiang Mai 45.93 93 P **P 15 40 30.7 -1.4**
CHTO pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
CHTO Chiang Mai 45.93 93 P **P 15 40 30.7 -1.4**
comp=Z,7.0nm,1.2s,mb4.5
CD2 Chengdu 46.06 75 *e*P **P 15 40 33.8 +0.8**
CD2 pP pP 15 40 42.5 +2.2
CD2 sP sP 15 40 47.5 +4.2
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CD2 pmax pmax
comp=Z,20nm,5.2s
CMAR Chiang Mai Arr 46.08 93 P **P 15 40 32.2 -1.1**
comp=Z,0.7nm,0.8s,mb3.6,baz=279,slow=7.9,SNR=6.5
CMAR LR LR 16 00 04.3
comp=Z,38nm,21.1s,MS3.3,baz=300,slow=36
CMAR Chiang Mai Arr 46.08 93 P **P 15 40 32.2 -1.1**

CMAR				LR	LR	16 00 04.3	
CMAR	**Chiang Mai Arr**	**46.08**	**93**	P	**P**	**15 40 32.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**46.08**	**93**	P	**P**	**15 40 32.2**	**-1.1**
SONM	**Songino Array**	**46.09**	**51**	P	**P**	**15 40 33.0**	**-0.1**
	comp=Z,1.1nm,0.6s,mb4.0,baz=270,slow=10,SNR=9.5						
SONM				LR	LR	16 01 53.9	
	comp=Z,40nm,20.5s,MS3.4,baz=333,slow=39						
SONM	**Songino Array**	**46.09**	**51**	P	**P**	**15 40 33.0**	**0.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,40nm,20.5s						
SONM	**Songino Array**	**46.09**	**51**	P	**P**	**15 40 33.0**	**0.0**
	comp=Z,40nm,20.5s						
ULN	**Ulaanbaatar**	**46.54**	**51**	*e*P	**P**	**15 40 36.2**	**-0.3**
	comp=Z,4.5nm,0.9s,mb4.4						
ULN	**Ulaanbaatar**	**46.54**	**51**	*e*P	**P**	**15 40 36.2**	**-0.3**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ULN	**Ulaanbaatar**	**46.54**	**51**	*e*P	**P**	**15 40 36.2**	**-0.3**
	comp=Z,5.0nm,0.9s,mb4.4						
TORD	**Torodi Ar. Bea**	**47.44**	**259**	P	**P**	**15 40 43.9**	**-0.1**
	comp=Z,1.5nm,0.5s,mb4.1,baz=57,slow=8.1,SNR=3.8						
TORD				LR	LR	16 03 27.0	
	comp=Z,71nm,18.4s,MS3.7,baz=55,slow=40						
GYA	**Guiyang**	**49.77**	**80**	*e*P	**P**	**15 41 01.0**	**-0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
SPITS	**Spitsbergen Ar**	**49.87**	**351**	P	**P**	**15 41 00.8**	**-1.0**
	comp=Z,7.2nm,0.9s,mb4.7,baz=122,slow=9.4,SNR=3.0						
SPITS	**Spitsbergen Ar**	**49.87**	**351**	P	**P**	**15 41 00.8**	**-1.0**
SPITS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SPITS	**Spitsbergen Ar**	**49.87**	**351**	P	**P**	**15 41 00.8**	**-1.0**
	comp=Z,7.0nm,0.9s,mb4.7						
HHC	**Hu-ho-hao-te**	**50.31**	**60**	*e*P	**P**	**15 41 06.0**	**+0.3**
HHC				pP	pP	15 41 16.0	+2.9
HHC				sP	sP	15 41 19.8	+3.8
HHC				PcP	PcP	15 42 25.8	+1.5
HHC				PP	PP	15 43 02.8	+1.7
HHC				ScP	ScP	15 46 16.8	-1.9
HHC				S	**S**	**15 48 15.3**	**-1.8**
HHC				sS	sS	15 48 31.8	+2.5
HHC				ScS	ScS	15 50 52.0	-3.4
HHC				SS	SS	15 51 44.5	-6.1
HHC				pmax	pmax		
	comp=Z,110nm,7.1s						
HHC				LR	LR		
	comp=N,130nm,17.6s,MS4.2						
HHC				LR	LR		
	comp=E,190nm,17.1s,MS4.2						
HHC				LR	LR		
	comp=Z,110nm,15.2s,MS4.0						
BOD	**Bodaibo**	**51.08**	**38**	*e*P	**P**	**15 41 10.6**	**-0.6**
BOD				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
BOD	**Bodaibo**	**51.08**	**38**	*e*P	**P**	**15 41 10.6**	**-0.6**
	comp=Z,11nm,1.2s,mb4.7						
DBIC	**Dimbokro**	**56.29**	**257**	P	**P**	**15 41 50.5**	**+0.5**
	comp=Z,1.8nm,0.6s,mb4.3,baz=35,slow=7.3,SNR=3.6						
DBIC				LR	LR	16 08 20.8	
	comp=Z,78nm,20.8s,MS3.8,baz=18,slow=39						
DBIC	**Dimbokro**	**56.29**	**257**	P	**P**	**15 41 50.5**	**+0.5**
DBIC				LR	LR	16 08 20.8	
DBIC	**Dimbokro**	**56.29**	**257**	P	**P**	**15 41 50.5**	**+0.5**
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DBIC				MLR	MLR		
	comp=Z,79nm,20.8s						
DBIC	**Dimbokro**	**56.29**	**257**	P	**P**	**15 41 50.5**	**+0.5**
	comp=Z,79nm,20.8s						
TIXI	**Tiksi**	**57.85**	**22**	*i* P	**P**	**15 42 01.9**	**+1.7**
TIXI	**Tiksi**	**57.85**	**22**	*i* P	**P**	**15 42 01.9**	**+1.7**
YAK	**Yakutsk**	**58.82**	**33**	*e*P	**P**	**15 42 09.0**	**+1.9**
YAK	**Yakutsk**	**58.82**	**33**	*e*P	**P**	**15 42 09.0**	**+1.9**
CN2	**Changchun**	**59.78**	**54**	*e*P	**P**	**15 42 15.8**	**+1.7**
BOSA	**Boshof**	**63.35**	**204**	P	**P**	**15 42 39.0**	**+0.8**
	comp=Z,2.2nm,0.6s,mb4.5,baz=16,slow=8.7,SNR=7.2						
BOSA				LR	LR	16 13 22.3	
	comp=Z,54nm,18.4s,MS3.8,baz=355,slow=39						
BOSA	**Boshof**	**63.35**	**204**	P	**P**	**15 42 39.0**	**+0.8**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
BOSA				MLR	MLR		
	comp=Z,55nm,18.4s,MS3.8						
BOSA	**Boshof**	**63.35**	**204**	P	**P**	**15 42 39.0**	**+0.8**
	comp=Z,55nm,18.4s						
KSRS	**Korea Array**	**63.45**	**61**	P	**P**	**15 42 37.8**	**-1.2**
	comp=Z,2.7nm,0.7s,mb4.5,baz=283,slow=6.5,SNR=8.9						
KSRS	**Korea Array**	**63.45**	**61**	P	**P**	**15 42 37.8**	**-1.2**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
KSRS	**Korea Array**	**63.45**	**61**	P	**P**	**15 42 37.8**	**-1.2**
	comp=Z,3.0nm,0.7s,mb4.5						
BILL	**Bilibino**	**71.06**	**21⇑**	*e*P	**P**	**15 43 27.2**	**+0.6**
BILL				*e**PP	PcP	15 43 53.0	+6.2
BILL				*e*	PP	15 46 07.8	+4.1
BILL				*i* S	S	15 52 36.8	-4.3
BILL				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.7						
BILL	**Bilibino**	**71.06**	**21**	*e*P	**P**	**15 43 27.2**	**+0.6**
	comp=Z,15nm,1.7s,mb4.7						
ILAR	**Eielson Array**	**84.04**	**7**	P	**P**	**15 44 38.2**	**-0.9**
	comp=Z,0.9nm,0.6s,mb4.1,baz=309,slow=4.0,SNR=13						
ILAR	**Eielson Array**	**84.04**	**7**	P	**P**	**15 44 38.2**	**-0.9**
ILAR	**Eielson Array**	**84.04**	**7**	P	**P**	**15 44 38.3**	**-0.8**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**84.04**	**7**	P	**P**	**15 44 38.3**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.1						
EGAK	**Eagle**	**84.53**	**5**	*e*P	**P**	**15 44 41.0**	**-0.7**
	comp=Z,4.9nm,1.1s,mb4.5						
EGAK	**Eagle**	**84.53**	**5**	*e*P	**P**	**15 44 41.0**	**-0.7**
	comp=Z,4.9nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**87.56**	**113**	P	**P**	**15 44 56.5**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.3,baz=317,slow=7.2,SNR=8.1						
FITZ	**Fitzroy Crossi**	**87.56**	**113**	P	**P**	**15 44 56.5**	**-0.8**
NWAO	**Narrogin (SRO)**	**89.84**	**129**	P	**P**	**15 45 07.5**	**-0.3**
	comp=Z,2.8nm,0.5s,mb4.8,baz=297,slow=4.5,SNR=4.9						
NWAO	**Narrogin (SRO)**	**89.84**	**129**	P	**P**	**15 45 07.5**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NWAO	**Narrogin (SRO)**	**89.84**	**129**	P	**P**	**15 45 07.5**	**-0.3**
	comp=Z,3.0nm,0.5s,mb4.9						
KDAK	**Kodiak Island**	**89.96**	**12**	*ce*P	**P**	**15 45 08.8**	**+0.8**
KDAK	**Kodiak Island**	**89.96**	**12**	*e*P	**P**	**15 45 08.8**	**+0.8**
WRA	**Warramunga Arr**	**95.52**	**110**	P	**P**	**15 45 33.0**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.9,baz=316,slow=3.9,SNR=5.7						
WRA	**Warramunga Arr**	**95.52**	**110**	P	**P**	**15 45 33.0**	**-1.3**
WRA	**Warramunga Arr**	**95.52**	**110**	P	**P**	**15 45 33.0**	**-1.3**
ASAR	**Alice Springs**	**97.04**	**113**	P	**P**	**15 45 39.6**	**-1.5**
	comp=Z,0.2nm,0.6s,mb3.8,baz=305,slow=4.7,SNR=7.8						
ASAR	**Alice Springs**	**97.04**	**113**	P	**P**	**15 45 39.7**	**-1.4**

*ISK **25** 15:34:02.5, 35°.51N×32°.64E, h21km, ML1.9*
*ISCJB **25** 15:34:04.1±1.6, 35°.0N±0°.1×32°.75E±0°.08, h53km±10km,*
Error ellipse: s-maj=24.9km s-min=10.3km az=170.2
*CSEM **25** 15:34:04.6±0.5, 35°.07N×32°.76E, h45km±4km, Mw2.7,*
Error ellipse: s-maj=16.1km s-min=5.9km az=166.0
*NIC **25** 15:34:05.0±0.2, 35°.07N×32°.80E, h43km, ML2.4, MW2.7*

ISC 25 15:34:04.3±1.6, 35°.0N±0°.1×32°.74E±0°.08, h51km±11km,
n14, σ0**s53/24, 2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEF	**Lefka**	**0.16**	**49**	*e*PG	**Pn**	**15 34 11.9**	**-0.7**
LEF				*e*SG	**Sn**	**15 34 18.5**	**+0.1**
LEF	**Lefka**	**0.16**	**49**	*e*Pg	**Pn**	**15 34 11.9**	**-0.6**
LEF				*e*Sg	**Sn**	**15 34 18.5**	**+0.1**
ALFC	**Alevga**	**0.18**	**322**	P	**Pn**	**15 34 12.3**	**-0.4**
	34nm,0.1s						
ALFC				S	**Sn**	**15 34 18.5**	**-0.1**
ALFC	**Alevga**	**0.18**	**322**	P	**Pn**	**15 34 12.3**	**-0.4**
	34nm,0.1s						
ALFC				S	**Sn**	**15 34 18.5**	**-0.1**
PPCY	**Paphos**	**0.35**	**249**	P	**Pn**	**15 34 15.0**	**+1.1**
PPCY	**Paphos**	**0.35**	**249**	P	**Pn**	**15 34 15.0**	**+1.1**
MAMC	**Mammari**	**0.42**	**68**	P	**Pn**	**15 34 14.4**	**-0.3**
MAMC	**Mammari**	**0.42**	**68**	P	**Pn**	**15 34 14.4**	**-0.3**
CSS	**Prodhromos**	**0.49**	**96**	⇓P	**Pn**	**15 34 15.1**	**-0.4**
	2.2nm,0.2s						
CSS				S	**Sn**	**15 34 23.3**	**-0.2**
CSS	**Prodhromos**	**0.49**	**96**	⇓P	**Pn**	**15 34 15.1**	**-0.4**
	2.2nm,0.2s						
CSS				S	**Sn**	**15 34 23.3**	**-0.2**
LFK	**Lefkose**	**0.70**	**67**	*e*PG	**Pn**	**15 34 17.9**	**-0.2**
LFK				*e*SG	**Sn**	**15 34 29.3**	**+1.2**
LFK	**Lefkose**	**0.70**	**67**	*e*Pg	**Pn**	**15 34 17.9**	**-0.2**
LFK				*e*Sg	**Sn**	**15 34 29.3**	**+1.2**
EREN	**Erenkoy**	**1.28**	**66**	*e*PN	**Pn**	**15 34 25.6**	**-0.2**
EREN				*e*SN	**Sn**	**15 34 41.9**	**0.0**
EREN	**Erenkoy**	**1.28**	**66**	*e*Pn	**Pn**	**15 34 25.6**	**-0.2**
EREN				*e*Sn	**Sn**	**15 34 41.9**	**0.0**

*IDC **25** 15:34:09.4±1.1, 77°.47N×20°.74E, h0km, mb3.7/3,*
mb1 3.8/7, mb1mx3.5/26, mbtmp3.7/7, ML3.4/4, Error
ellipse: s-maj=28.0km s-min=6.1km az=52.0
*CSEM **25** 15:34:09.7±0.2, 77°.27N×19°.52E, h10km, ML3.4, Error*
ellipse: s-maj=8.8km s-min=3.0km az=62.0
*NAO **25** 15:34:09.1±1.0, 77°.09N×18°.61E, ML3.5*
*NEIC **25** 15:34:09.3±1.4, 77°.34N×20°.15E, h7km±10km, ML3.4(BER),*
Error ellipse: s-maj=16.9km s-min=5.9km az=67.0
*BER **25** 15:34:13.5±2.7, 77°.31N×19°.45E, h21km±12km, MD2.7,*
ML3.5

ISC 25 15:34:09.7±0.6, 77°.23N±0°.03×19°.3E±0°.2, h8km±6km**, n58,**
σ1**s18/84, mb3.4/3, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.86**	**257**	*e*P	**Pg**	**15 34 28.7**	**+2.5**
SPA0	**Spitsbergen Ar**	**1.13**	**328**	Pg	**Pg**	**15 34 31.9**	**+0.4**
	baz=146,slow=18						
SPA0				Lg		15 34 47.6	
	baz=158,slow=37						
SPA0	**Spitsbergen Ar**	**1.13**	**328**	Pg	**Pg**	**15 34 31.9**	**+0.5**
	baz=146,slow=18,SNR=999						
SPA0				Lg		15 34 47.6	
	baz=158,slow=36,SNR=8.3						
SPITS	**Spitsbergen Ar**	**1.13**	**328**	Pg	**Pg**	**15 34 31.9**	**+0.4**
	baz=138,slow=21,SNR=5754						
SPITS				Lg		15 34 46.5	
	baz=154,slow=33,SNR=24						
SPITS	**Spitsbergen Ar**	**1.13**	**328**	Pg	**Pg**	**15 34 31.9**	**+0.5**
SPB4	**Spitsbergen Ar**	**1.14**	**328**	*e*Pg	**Pg**	**15 34 31.8**	**+0.3**
SPB4				*e*Sg	**Sg**	**15 34 46.4**	**+0.2**
SPB4	**Spitsbergen Ar**	**1.14**	**328**	*e*Pg	**Pg**	**15 34 31.8**	**+0.3**
SPB4				*e*Sg	**Sg**	**15 34 46.4**	**+0.2**
HOPEN	**Hopen**	**1.50**	**116**	*e*P	**Pn**	**15 34 36.4**	**-0.4**
HOPEN				*e*Sg	**Sg**	**15 34 59.2**	**+1.4**
HOPEN				AML	AML	15 35 00.7	
	comp=Z,2μm,0.2s						
HOPEN	**Hopen**	**1.50**	**116**	*e*P	**Pn**	**15 34 36.4**	**-0.4**
	SNR=55						
HOPEN				*e*Sg	**Sg**	**15 34 59.2**	**+1.4**
	comp=Z,2μm,0.2s,SNR=94						
KBS	**Kingsbay**	**2.28**	**322**	Pn	**Pn**	**15 34 47.1**	**-0.3**
KBS				Pg	**Pg**	**15 34 52.7**	**-0.6**
KBS				Lg		15 35 20.5	
KBS	**Kingsbay**	**2.28**	**322**	*e*P	**Pn**	**15 34 47.4**	**-0.1**
KBS				*e*Pg	**Pg**	**15 34 52.8**	**-0.6**
KBS				*e*Sg	**Sg**	**15 35 20.3**	**-2.5**
KBS				AML	AML	15 35 27.5	
	comp=Z,2μm,0.4s						
KBS	**Kingsbay**	**2.28**	**322**	*e*Pn	**Pn**	**15 34 46.9**	**-0.6**
KBS				*e*Pg	**Pg**	**15 34 52.8**	**-0.6**
KBS				*e*Pg	**Pg**	**15 34 52.8**	**-0.6**
KBS				*e*Sn	**Sn**	**15 35 10.9**	**-4.8**
KBS				*e*Sg	**Sg**	**15 35 20.3**	**-2.5**
KBS				*e*Sg	**Sg**	**15 35 20.6**	**-2.2**
KBS	**Kingsbay**	**2.28**	**322**	Pn	**Pn**	**15 34 47.1**	**-0.4**
KBS	**Kingsbay**	**2.28**	**322**	*e*P	**Pn**	**15 34 47.4**	**-0.1**
	SNR=55						
KBS	**Kingsbay**	**2.28**	**322**	*e*Pg	**Pg**	**15 34 52.8**	**-0.5**
	SNR=92						
KBS				*e*Sg	**Sg**	**15 35 20.3**	**-2.5**
	comp=Z,2μm,0.4s,SNR=92						
KBS				Lg		15 35 20.5	
BJO	**Bjornoya**	**2.74**	**180**	*e*P	**Pn**	**15 34 54.2**	**+0.3**
BJO				*e*Pg	**Pg**	**15 35 02.0**	**-0.2**
BJO				*e*Sg	**Sg**	**15 35 37.0**	**-0.6**
BJO				AML	AML	15 35 47.4	
	comp=Z,471nm,0.4s						
BJO	**Bjornoya**	**2.74**	**180**	*e*P	**Pn**	**15 34 54.2**	**+0.4**
	SNR=55						
BJO	**Bjornoya**	**2.74**	**180**	*e*Pg	**Pg**	**15 35 02.0**	**-0.2**
	SNR=92						
BJO				*e*Sg	**Sg**	**15 35 37.0**	**-0.7**
	comp=Z,471nm,0.4s,SNR=92						
BJO1	**Bjornoya**	**2.75**	**181**	*e*P	**Pn**	**15 34 54.2**	**+0.3**
BJO1				*e*Pg	**Pg**	**15 35 02.0**	**-0.3**
BJO1				*e*Sg	**Sg**	**15 35 37.0**	**-0.8**
BJO1	**Bjornoya**	**2.75**	**181**	*e*P	**Pn**	**15 34 54.2**	**+0.3**
BJO1	**Bjornoya**	**2.75**	**181**	*e*Pg	**Pg**	**15 35 02.0**	**-0.3**
TRO	**Tromso**	**7.64**	**181**	*e*P	**Pn**	**15 36 02.0**	**+0.9**
TRO				*e*S	**Sn**	**15 37 21.3**	**-6.4**
TRO				AML	AML	15 37 42.2	
	comp=Z,12nm,0.5s						
TRO	**Tromso**	**7.64**	**181**	*e*P	**Pn**	**15 36 02.0**	**+0.9**
TRO				*e*S	**Sn**	**15 37 21.3**	**-6.4**
TRO	**Tromso**	**7.64**	**181**	*e*P	**Pn**	**15 36 02.0**	**+0.9**
	SNR=51						
KEV	**Kevo**	**7.82**	**160**	*e*Pn	**Pn**	**15 36 04.3**	**+0.8**
KEV				*e*Sn	**Sn**	**15 37 25.8**	**-6.2**
KEV	**Kevo**	**7.82**	**160**	*e*p	**Pn**	**15 36 03.2**	**-0.3**
KEV	**Kevo**	**7.82**	**160**	*e*P	**Pn**	**15 36 03.2**	**-0.3**
KEV	**Kevo**	**7.82**	**160**	*e*Pn	**Pn**	**15 36 04.3**	**+0.8**
ARA0	**ARCESS Array S**	**7.94**	**164**	Pn	**Pn**	**15 36 04.5**	**-0.6**
	baz=349,slow=12						
ARA0				Sn	**Sn**	**15 37 25.6**	**-9.2**
	slow=22						
ARA0	**ARCESS Array S**	**7.94**	**164**	Pn	**Pn**	**15 36 04.5**	**-0.6**
	baz=349,slow=12,SNR=248						
ARCES	**ARCESS Array B**	**7.94**	**164**	Pn	**Pn**	**15 36 05.3**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=359,slow=11,SNR=87						
ARCES				Sn	**Sn**	**15 37 25.7**	**-9.1**
	comp=Z,4.7nm,0.3s,baz=357,slow=21,SNR=6.9						
ARCES	**ARCESS Array B**	**7.94**	**164**	Pn	**Pn**	**15 36 05.3**	**+0.3**
ARCES				Sn	**Sn**	**15 37 25.7**	**-9.1**
ARCES	**ARCESS Array B**	**7.94**	**164**	Pn	**Pn**	**15 36 05.3**	**+0.2**
ARE0	**ARCESS Array S**	**7.94**	**164**	*e*Pn	**Pn**	**15 36 05.1**	**+0.1**
ARE0				*e*Sn	**Sn**	**15 37 23.5**	**-11**
ARE0	**ARCESS Array S**	**7.94**	**164**	*e*Pn	**Pn**	**15 36 05.1**	**0.0**
KTK1	**Kautokeino**	**8.34**	**170**	*e*P	**Pn**	**15 36 11.2**	**+0.6**
KTK1				*e*S	**Sn**	**15 37 38.4**	**-6.4**
KTK1				AML	AML	15 38 01.1	
	comp=Z,30nm,0.8s						
KTK1	**Kautokeino**	**8.34**	**170**	*e*P	**Pn**	**15 36 11.2**	**+0.6**
KTK1				*e*S	**Sn**	**15 37 38.4**	**-6.4**
KTK1	**Kautokeino**	**8.34**	**170**	*e*P	**Pn**	**15 36 11.2**	**+0.6**
	SNR=51						
LVZ	**Lovozero**	**10.39**	**146**	*e*Pn	**Pn**	**15 36 38.3**	**-0.4**
LVZ				*e*Sn	**Sn**	**15 38 26.8**	**-8.3**
LVZ	**Lovozero**	**10.39**	**146**	*e*Pn	**Pn**	**15 36 38.3**	**-0.4**
APA0	**Apatity Array**	**10.48**	**150**	Pn	**Pn**	**15 36 36.5**	**-3.3**
	baz=347,slow=12						
JOF	**Joensuu**	**14.90**	**158**	*e*p	**Pn**	**15 37 35.3**	**-4.8**
SUMG	**Summit**	**15.11**	**282**	*e*Pn	**Pn**	**15 37 45.1**	**+2.2**
SUMG	**Summit**	**15.11**	**282**	*e*Pn	**Pn**	**15 37 45.1**	**+2.2**
KAF	**Kangasniemi**	**15.37**	**167**	*e*p	**Pn**	**15 37 45.5**	**-0.9**
FIA0	**FINESS Array S**	**16.03**	**168**	P	**Pn**	**15 37 52.7**	**-2.3**
	baz=354,slow=12						
FINES	**FINESS Array B**	**16.03**	**168**	Pn	**Pn**	**15 37 52.2**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=357,slow=12,SNR=3.6						
FINES	**FINESS Array B**	**16.03**	**168**	Pn	**Pn**	**15 37 52.2**	**-2.7**
NOA	**NORSAR Array B**	**16.49**	**194**	Pn	**Pn**	**15 38 04.3**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=9.0,slow=11,SNR=2.7						
NOA	**NORSAR Array B**	**16.49**	**194**	Pn	**Pn**	**15 38 04.3**	**+3.4**
HFS	**Hagfors**	**17.29**	**189**	P	**Pn**	**15 38 13.7**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=176,slow=7.3,SNR=3.5						
HFS	**Hagfors**	**17.29**	**189**	P	**Pn**	**15 38 13.7**	**+2.8**
AKASG	**Malin Array Be**	**26.91**	**166**	P	**P**	**15 39 54.8**	**+4.2**
	comp=Z,0.4nm,0.3s,mb3.4,baz=350,slow=9.5,SNR=3.9						
ILAR	**Eielson Array**	**37.97**	**350**	P	**P**	**15 41 26.9**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.2,baz=2.2,slow=6.9,SNR=5.9						
ILAR	**Eielson Array**	**37.97**	**350**	P	**P**	**15 41 26.9**	**-0.2**
BRTR	**Keskin Array B**	**38.12**	**162**	P	**P**	**15 41 31.8**	**+3.2**
	comp=Z,1.1nm,0.8s,mb3.6,baz=343,slow=6.8,SNR=3.7						
ASAR	**Alice Springs**	**118.31**	**71**	PKP	PKPdf	15 52 56.3	-0.3
	comp=Z,0.2nm,0.6s,baz=1.3,slow=1.0,SNR=6.7						
ASAR	**Alice Springs**	**118.31**	**71**	PKIKP	PKPdf	15 52 56.3	-0.3

*ISCJB **25** 15:38:17.8±0.2, 44°.22N±0°.01×110°.78W±0°.02, h10km,*
Error ellipse: s-maj=1.8km s-min=1.6km az=9.2
*NEIC **25** 15:38:17.0, 44°.24N×110°.78W, h0km, ML2.5(SLC), After*
SLC.

ISC 25 15:38:17.9±0.2, 44°.23N±0°.01×110°.78W±0°.02, h10km**, n80,**
σ0**s92**/106**, 37C-37D, Yellowstone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FLWY	**Flagg Ranch**	**0.16**	**159**	*e*Pg	**Pg**	**15 38 21.0**	**-0.4**
H17A	**Grant Village**	**0.22**	**41**	⇓P	**Pg**	**15 38 22.1**	**-0.3**
	baz=0.2,SNR=135						
H17A				⇑S	**Sg**	**15 38 25.1**	**-0.4**
	baz=0.2						
YFT	**Old Faithful**	**0.22**	**349**	*e*Pg	**Pg**	**15 38 21.7**	**-0.8**
I17A	**Pilgrim Ck.**	**0.34**	**155**	⇓P	**Pg**	**15 38 24.9**	**+0.3**
	baz=0.3,SNR=121						
I17A				⇑S	**Sg**	**15 38 29.5**	**+0.3**
	baz=0.3						
IMW	**Indian Meadow**	**0.35**	**199**	*e*Pg	**Pg**	**15 38 24.4**	**-0.4**
IMW				*e*Sg	**Sg**	**15 38 29.7**	**+0.1**
LKWY	**Lake**	**0.43**	**39**	*e*Pg	**Pg**	**15 38 26.2**	**-0.1**
YMR	**Madison River**	**0.46**	**343**	*e*Pg	**Pg**	**15 38 26.8**	**0.0**
MOOW	**Moose Ponds**	**0.48**	**177**	*e*Pg	**Pg**	**15 38 26.4**	**-0.9**
MOOW				*e*Sg	**Sg**	**15 38 33.0**	**-0.7**
YNR	**Norris Junctio**	**0.49**	**8**	*e*Pg	**Pg**	**15 38 28.1**	**+0.7**
H16A	**Russell Place,**	**0.58**	**325**	⇓P	**Pg**	**15 38 28.7**	**-0.5**
	baz=0.6						
I16A	**Newdale**	**0.62**	**235**	⇑P	**Pg**	**15 38 29.7**	**-0.3**
	baz=0.6,SNR=9.2						
I16A				⇓S	**Sg**	**15 38 38.3**	**+0.2**
	baz=0.6						
LOHW	**Long Hollow**	**0.63**	**169**	*e*Pg	**Pg**	**15 38 29.5**	**-0.6**
LOHW				*e*Sg	**Sg**	**15 38 37.5**	**-0.8**
DCID1	**Drake Creek**	**0.70**	**205**	*e*Pg	**Pg**	**15 38 31.2**	**-0.3**
TPAW	**Teton Pass**	**0.75**	**190**	*e*Pg	**Pg**	**15 38 31.6**	**-0.7**
TPAW				*e*Sg	**Sg**	**15 38 41.5**	**-0.7**
QLMT	**Earthquake Lak**	**0.76**	**322**	*e*Pg	**Pg**	**15 38 31.7**	**-0.9**
SNOW	**Snow King Moun**	**0.77**	**179**	*e*Pg	**Pg**	**15 38 32.0**	**-0.7**
J17A	**Brown Place, J**	**0.87**	**177**	⇑P	**Pg**	**15 38 34.4**	**-0.2**
	baz=0.9,SNR=73						
J17A				⇑S	**Sg**	**15 38 46.5**	**+0.6**
	baz=0.9						
REDW	**Red Top Meadow**	**0.87**	**184**	*e*Pg	**Pg**	**15 38 34.1**	**-0.6**
I18A	**Diamond G Ranc**	**0.87**	**127**	⇑P	**Pg**	**15 38 34.3**	**-0.3**
	baz=0.9,SNR=50						
I18A				⇑S	**Sg**	**15 38 46.3**	**+0.2**
	baz=0.9						
H18A	**Shoshone NF, C**	**0.91**	**60**	P	**Pg**	**15 38 34.7**	**-0.8**
	baz=0.9,SNR=15						
RRI2	**Red Ridge**	**0.97**	**204**	*e*Pg	**Pg**	**15 38 35.4**	**-1.1**
J16A	**Bone**	**1.13**	**213**	⇓P	**Pb**	**15 38 39.2**	**-0.3**
	baz=1.1						
J16A				⇓S	**Sb**	**15 38 54.8**	**+0.5**
	baz=1.1						
J18A	**Kendall Valley**	**1.16**	**151**	⇓P	**Pb**	**15 38 39.2**	**-0.7**
	baz=1.2,SNR=155						
G16A	**Moss Hill, Enn**	**1.24**	**324**	⇑P	**Pn**	**15 38 40.7**	**-0.5**
	baz=1.2						
I15A	**Monteview**	**1.25**	**260**	⇓S	**Sb**	**15 38 58.0**	**+0.3**
	baz=1.2						
I19A	**Meeteetse**	**1.30**	**98**	Pg	**Pg**	**15 38 42.0**	**-0.8**
	baz=1.3,SNR=87						
I19A				⇓S	**Sb**	**15 38 59.3**	**+0.2**
	baz=1.3						
H19A	**Powell**	**1.36**	**71**	⇓Pg	**Pg**	**15 38 43.0**	**-0.9**
	baz=1.4,SNR=17						
H19A				⇓S	**Sb**	**15 39 01.0**	**+0.2**
	baz=1.4						
G18A	**Lazy EL Ranch,**	**1.39**	**38**	⇑Pg	**Pg**	**15 38 43.5**	**-1.0**
	baz=1.4,SNR=17						
H15A	**Lima**	**1.39**	**287**	⇑Pg	**Pg**	**15 38 43.6**	**-1.0**
	baz=1.4						
H15A				⇓S	**Sn**	**15 39 02.0**	**+0.3**
	baz=1.4						
RLMT	**Red Lodge**	**1.40**	**50**	⇓Pg	**Pg**	**15 38 43.9**	**-0.8**
	baz=1.4						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=2.6						
E19A				⇑Sb	**Sb**	**15 39 38.8**	**+1.3**
	baz=2.6						
HWUT	**Hardware Ranch**	**2.69**	**193**	*e*Pn	**Pn**	**15 39 01.9**	**+0.7**
H21A	**Big Horn, Sher**	**2.71**	**80**	⇓Sb	**Sb**	**15 39 40.6**	**+1.1**
	baz=2.7						
HLID	**Hailey**	**2.71**	**257**	⇑Pb	**Pb**	**15 39 05.3**	**-1.1**
	baz=2.7,SNR=10						
HLID	**Hailey**	**2.71**	**257**	*e*Pn	**Pn**	**15 39 03.4**	**+1.9**
G21A	**Lodge Grass**	**2.73**	**67**	⇑Sb	**Sb**	**15 39 41.1**	**+0.8**
	baz=2.7						
M17A	**Scullys Gap (B**	**2.76**	**178**	⇓Pb	**Pb**	**15 39 07.4**	**+0.2**
	baz=2.8						
HVU	**Hansel Valley**	**2.86**	**212**	*e*Pn	**Pn**	**15 39 05.0**	**+1.6**
E14A	**Clinton**	**2.91**	**320**	⇑Sb	**Sb**	**15 39 47.6**	**+2.3**
	baz=2.9						
F13A	**Darby**	**2.96**	**303**	⇑Pg	**Pg**	**15 39 12.8**	**-1.9**
	baz=3.0						
K21A	**Alcova**	**3.02**	**121**	⇑Sb	**Sb**	**15 39 50.4**	**+1.6**
	baz=3.0						
SRU	**San Rafael**	**5.12**	**178**	Pn	**Pn**	**15 39 36.3**	**+1.7**
	4.3nm,0.7s						

MAN 25 15:39:56,16°.90N×120°.05E,h29km,mb4.4,ML3.3,MS3.1, Luzon

TAP ***25*** *15:40:23.0,24°.68N×122°.41E,h97km,ML3.3,C*
JMA ***25*** *15:40:22.8±0.2,24°.88N×122°.47E,h92km,M1.8*
ISCJB ***25*** *15:40:23.4±0.8,24°.63N±0°.05×122°.43E±0°.02,h92km±7km, Error ellipse: s-maj=7.5km s-min=3.6km az=174.5*
ISC 25 15:40:23.8±0.8,24°.64N±0°.05×122°.43E±0°.02,h92km±7km, n32,σ0s84/56,2C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.53**	**267**	*e*P	**Pn**	**15 40 38.1**	**-0.8**
	baz=259						
TWC				S	**Sn**	**15 40 49.6**	**-0.6**
	baz=259						
TWB1	**Santiao Chiao**	**0.55**	**313**	P	**Pn**	**15 40 38.7**	**-0.3**
	baz=306						
TWB1				*e*S	**Sn**	**15 40 50.3**	**-0.2**
	baz=306						
YOJ	**Yonaguni jima**	**0.56**	**108**	P	**Pn**	**15 40 39.0**	**-0.1**
YOJ				*e*S	**Sn**	**15 40 51.1**	**+0.5**
ENA	**Nanau**	**0.66**	**252**	P	**Pn**	**15 40 40.2**	**+0.2**
	baz=245						
ENA				*e*S	**Sn**	**15 40 52.9**	**+0.7**
	baz=245						
TWE	**Neicheng**	**0.70**	**277**	P	**Pn**	**15 40 40.3**	**-0.1**
	baz=276						
TWE				S	**Sn**	**15 40 52.6**	**-0.2**
	baz=276						
ENTT	**Nioudou**	**0.79**	**270**	P	**Pn**	**15 40 41.5**	**+0.2**
	baz=269						
ENTT				*e*S	**Sn**	**15 40 55.1**	**+0.8**
	baz=269						
TWA	**Mucha**	**0.84**	**294**	*e*P	**Pn**	**15 40 41.3**	**-0.5**
	baz=284						
TWA				*e*S	**Sn**	**15 40 54.3**	**-1.0**
	baz=284						
TWD	**Chiawan**	**0.94**	**234**	*e*P	**Pn**	**15 40 42.4**	**-0.5**
	baz=226						
TWD				S	**Sn**	**15 40 57.1**	**-0.2**
	baz=226						
NSK	**Sanguang**	**0.98**	**272**	P	**Pn**	**15 40 43.4**	**+0.1**
	baz=262						
NSK				S	**Sn**	**15 40 57.8**	**-0.1**
	baz=262						
HWA	**Hwalien**	**1.00**	**229**	*e*P	**Pn**	**15 40 43.9**	**+0.3**
	baz=219						
TWS1	**Kuangyinshan**	**1.03**	**297**	P	**Pn**	**15 40 43.4**	**-0.5**
	baz=295						
TWS1				*e*S	**Sn**	**15 40 58.4**	**-0.6**
	baz=295						
WHF	**Hehuan Shan**	**1.17**	**245**	⇑*i*P	**Pn**	**15 40 45.9**	**+0.3**
	baz=243						
WHF				S	**Sn**	**15 41 02.3**	**+0.3**
	baz=243						
TWT	**Tachien**	**1.21**	**252**	*e*P	**Pn**	**15 40 46.8**	**+0.8**
	baz=244						
TWT				*e*S	**Sn**	**15 41 03.4**	**+0.7**
	baz=244						
IRIF	**Iriomote-Funau**	**1.22**	**104**	P	**Pn**	**15 40 45.7**	**-0.5**
IRIF				*e*S	**Sn**	**15 41 03.3**	**+0.3**
ESL	**Shilin**	**1.23**	**228**	P	**Pn**	**15 40 45.5**	**-0.8**
	baz=235						
ESL				*e*S	**Sn**	**15 41 01.9**	**-1.2**
	baz=235						
HATJ	**Hateruma jima**	**1.38**	**114**	*e*S	**Sn**	**15 41 08.0**	**+1.5**
JKRS	**Kuro-shima**	**1.49**	**105**	P	**Pn**	**15 40 49.6**	**+0.1**
JKRS				*e*S	**Sn**	**15 41 09.3**	**+0.3**
EHY	**Hungye**	**1.52**	**222**	*e*P	**Pn**	**15 40 49.0**	**-0.8**
	baz=220						
EHY				*e*S	**Sn**	**15 41 08.1**	**-1.4**
	baz=220						
TWQ1	**Liyutan**	**1.54**	**260**	*e*P	**Pn**	**15 40 50.1**	**+0.1**
	baz=257						
TWQ1				S	**Sn**	**15 41 09.7**	**-0.2**
	baz=257						
JIJ	**Ishigaki jima**	**1.58**	**100**	P	**Pn**	**15 40 50.3**	**-0.3**
JIJ				*e*S	**Sn**	**15 41 10.2**	**-0.8**
SMLT	**Sun Moon Lake**	**1.59**	**242**	*e*P	**Pn**	**15 40 51.5**	**+0.9**
	baz=235						
SMLT				*e*S	**Sn**	**15 41 13.1**	**+2.0**
	baz=235						
TYC	**Yuchr**	**1.61**	**243**	⇑*i*P	**Pn**	**15 40 52.0**	**+1.0**
	baz=238						
TYC				S	**Sn**	**15 41 13.2**	**+1.6**
	baz=238						
TWF1	**Yuli**	**1.65**	**219**	P	**Pn**	**15 40 50.7**	**-0.7**
	baz=225						
YUS	**Yu-Shan**	**1.77**	**230**	*e*P	**Pn**	**15 40 53.7**	**+0.7**
	baz=222						
YUS				*e*S	**Sn**	**15 41 16.3**	**+1.0**
	baz=222						
CHKT	**Chengkung**	**1.81**	**213**	P	**Pn**	**15 40 52.7**	**-0.9**
	baz=204						
CHKT				*e*S	**Sn**	**15 41 14.6**	**-1.7**
	baz=204						
ALS	**Alishan**	**1.86**	**233**	P	**Pn**	**15 40 55.3**	**+1.0**
	baz=225						
ALS				*e*S	**Sn**	**15 41 19.8**	**+2.4**
	baz=225						
ELDTW	**Lidau**	**1.94**	**222**	P	**Pn**	**15 40 54.6**	**-0.6**
	baz=217						
JTJ	**Tarama**	**2.07**	**89**	*e*S	**Sn**	**15 41 23.0**	**+0.8**
WTP	**Ta-pu**	**2.16**	**231**	*e*P	**Pn**	**15 40 58.9**	**+0.8**
	baz=228						
TWG	**Pinlang**	**2.19**	**215**	*e*P	**Pn**	**15 40 57.5**	**-1.1**
	baz=218						
TWG				*e*S	**Sn**	**15 41 23.9**	**-1.4**
	baz=218						
CHN1	**Nanshi**	**2.26**	**231**	*e*P	**Pn**	**15 41 00.1**	**+0.6**
	baz=229						
LAY	**Lan-yu**	**2.71**	**198**	*e*P	**Pn**	**15 41 04.4**	**-1.1**
	baz=195						

TAP 25 15:48:09.2,23°.06N×120°.22E,h16km,ML3.6,11C-6D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAI1	**Yung-k'ang**	**0.02**	**161**	⇓P	**Pg**	15 48 12.3	+0.4
	baz=146						
TAI1				*i* S	Sg	15 48 15.2	+1.4
	baz=146						
SCLT	**Jiali**	**0.12**	**348**	⇓*i*P	Pg	15 48 13.5	+0.8
	baz=352						
SCLT				*i* S	Sg	15 48 17.0	+1.9
	baz=352						
CHN3	**Shinhua**	**0.13**	**84**	⇑*i*P	Pg	15 48 14.1	+1.2
	baz=76						
CHN3				*i* S	Sg	15 48 18.0	+2.5
	baz=76						
TWM1	**Shoushan**	**0.30**	**142**	⇓*i*P	Pg	15 48 17.6	+2.0
	baz=141						
CHN1	**Nanshi**	**0.31**	**67**	⇑*i*P	Pg	15 48 16.8	+1.1
	baz=66						
CHN1				*e*S	Sg	15 48 22.6	+2.5
	baz=66						
SGST	**Jiashian**	**0.34**	**87**	⇑P	Pg	15 48 17.6	+1.5
	baz=73						
WTP	**Ta-pu**	**0.41**	**63**	⇑*i*P	Pg	15 48 18.3	+0.9
	baz=64						
WTP				S	Sg	15 48 25.7	+2.7
	baz=64						
SGLT	**Jiouru**	**0.42**	**143**	*e*P	Pg	15 48 19.7	+2.0
	baz=143						
CHY	**Chiayi**	**0.47**	**23**	*e*P	Pg	15 48 19.6	+1.0
	baz=13						
CHY				*e*S	Sg	15 48 27.3	+2.2
	baz=13						
KAU	**Kaohsiung**	**0.50**	**171**	*e*P	Pg	15 48 20.9	+1.8
	baz=170						
KAU				*e*S	Sg	15 48 30.1	+4.3
	baz=170						
STYT	**Tauyuan**	**0.51**	**78**	*e*S	Sg	15 48 29.2	+3.2
	baz=68						
WSF	**Szhu**	**0.57**	**0**	⇓*i*P	Pg	15 48 21.3	+0.8
	baz=1.0						
WSF				*e*S	Sg	15 48 30.4	+2.2
	baz=1.0						
WGK	**Gukeng**	**0.70**	**27**	*e*P	Pg	15 48 23.8	+1.0
	baz=41						
WGK				*e*S	Sg	15 48 35.0	+3.0
	baz=41						
ALS	**Alishan**	**0.70**	**50**	*e*P	Pg	15 48 23.6	+0.7
	baz=50						
ALS				*e*S	Sg	15 48 34.3	+2.2
	baz=50						
TWP	**Hsiaoliuchiu**	**0.72**	**170**	*e*P	Pg	15 48 25.0	+1.7
	baz=183						
TWP				*e*S	Sg	15 48 37.4	+4.5
	baz=183						
ELDTW	**Lidau**	**0.74**	**80**	*e*P	Pg	15 48 24.7	+1.0
	baz=80						
ELDTW				S	Sg	15 48 36.0	+2.5
	baz=80						
SCZT	**Fangliau**	**0.78**	**152**	P	Pb	15 48 25.8	+1.5
	baz=136						
SCZT				*e*S	Sg	15 48 38.0	+3.4
	baz=136						
PNG	**Penghu**	**0.79**	**310**	⇑*i*P	Pb	15 48 24.3	-0.3
	baz=310						
PNG				S	Sg	15 48 35.2	+0.2
	baz=310						
YUS	**Yu-Shan**	**0.80**	**58**	⇑P	Pb	15 48 25.6	+1.0
	baz=58						
YUS				S	Sb	15 48 37.5	+2.3
	baz=58						
WTCT	**Ta-ch'eng**	**0.80**	**4**	P	Pb	15 48 25.1	+0.3
	baz=14						
WTCT				*e*S	Sb	15 48 36.6	+1.3
	baz=14						
ECL	**Taimali**	**0.82**	**124**	*e*P	Pb	15 48 25.6	+0.6
	baz=125						
ECL				*e*S	Sb	15 48 38.9	+3.0
	baz=125						
TWG	**Pinlang**	**0.82**	**107**	⇓P	Pb	15 48 26.2	+1.2
	baz=114						
TWG				*e*S	Sb	15 48 38.4	+2.5
	baz=114						
EAST	**Anshuo**	**0.89**	**139**	⇑*e*P	Pb	15 48 27.3	+1.1
	baz=131						
EAST				*e*S	Sb	15 48 41.3	+3.4
	baz=131						
TTN	**Taitung**	**0.91**	**110**	*e*P	Pb	15 48 27.9	+1.3
	baz=109						
WNT	**Mingjian**	**0.92**	**28**	*e*P	Pb	15 48 27.1	+0.4
	baz=27						
WNT				*e*S	Sb	15 48 40.6	+1.9
	baz=27						
TAW	**Tawu**	**0.94**	**138**	⇑*i*P	Pb	15 48 28.5	+1.4
	baz=126						
TAW				*e*S	Sb	15 48 42.2	+2.9
	baz=126						
TYC	**Yuchr**	**1.02**	**35**	⇑*i*P	Pb	15 48 28.8	+0.3
	baz=34						
TYC				*e*S	Sb	15 48 43.5	+1.8
	baz=34						
SMLT	**Sun Moon Lake**	**1.03**	**37**	⇑P	Pb	15 48 28.9	+0.2
	baz=37						
SMLT				*e*S	Sb	15 48 43.2	+1.3
	baz=37						
TWF1	**Yuli**	**1.03**	**74**	⇓P	Pb	15 48 29.6	+0.9
	baz=66						
TWF1				*e*S	Sb	15 48 44.4	+2.4
	baz=66						
CHKT	**Chengkung**	**1.05**	**88**	*e*P	Pb	15 48 30.3	+1.2
	baz=88						
CHKT				*e*S	Sb	15 48 45.5	+2.9
	baz=88						
EHY	**Hungye**	**1.10**	**66**	⇑P	Pb	15 48 30.8	+0.8
	baz=76						
EHY				*e*S	Sb	15 48 46.0	+1.9
	baz=76						
HEN	**Hengchun**	**1.16**	**155**	*e*P	Pn	15 48 31.9	+1.2
	baz=174						
HEN				*e*S	Sb	15 48 48.0	+2.5
	baz=174						
TCU	**Taichung**	**1.16**	**21**	*e*P	Pn	15 48 31.2	+0.4
	baz=20						
TCU				*e*S	Sb	15 48 47.0	+1.3
	baz=20						
TWK1	**Hengchun**	**1.24**	**154**	*e*P	Pn	15 48 32.5	+0.6
	baz=172						
ESL	**Shilin**	**1.34**	**56**	*e*P	Pn	15 48 33.8	+0.6
	baz=55						
TWQ1	**Liyutan**	**1.38**	**21**	*e*P	Pn	15 48 34.7	+0.9
	baz=20						
TWQ1				*e*S	Sn	15 48 52.8	+1.1
	baz=20						
NSY	**Sanyi**	**1.44**	**20**	*e*P	Pn	15 48 34.9	+0.3
	baz=19						
NSY				*e*S	Sn	15 48 55.5	+2.3
	baz=19						
WHF	**Hehuan Shan**	**1.44**	**41**	*e*P	Pn	15 48 35.7	+1.1
	baz=41						
WHF				*e*S	Sn	15 48 55.2	+1.9
	baz=41						
TWT	**Tachien**	**1.48**	**36**	*e*P	Pn	15 48 35.3	+0.2
	baz=43						
TWT				*e*S	Sn	15 48 55.5	+1.5
	baz=43						
LAY	**Lan-yu**	**1.60**	**129**	*e*P	Pn	15 48 36.5	-0.3
	baz=130						
NSK	**Sanguang**	**1.92**	**33**	*e*P	Pn	15 48 42.1	+0.9
	baz=31						
NSK				*e*S	Sn	15 49 07.6	+2.7
	baz=31						
ENA	**Nanau**	**1.95**	**45**	*e*P	Pn	15 48 42.8	+1.2
	baz=62						
ENTT	**Nioudou**	**2.00**	**38**	*e*P	Pn	15 48 43.9	+1.6
	baz=20						
TWE	**Neicheng**	**2.12**	**38**	*e*P	Pn	15 48 45.9	+1.9
	baz=21						
TWC	**Suao**	**2.14**	**44**	*e*P	Pn	15 48 46.4	+2.1
	baz=60						

ISCJB ***25*** *15:53:27.7±1.8,5°.99S±0°.08×149°.9E±0°.1,h36km±15km, mb4.2/13,MS3.6/11,Error ellipse: s-maj=21.6km s-min=10.2km az=23.3*
IDC ***25*** *15:53:30.1±0.8,6°.09S×149°.77E,h43km±5km,mb3.9/11, mb1 4.1/12,mb1mx4.0/17,mbtmp4.0/12,ML3.8/1,MS3.6/12, Ms1 3.6/12,ms1mx3.5/20,Error ellipse: s-maj=27.7km s-min=10.2km az=115.0*
NEIC ***25*** *15:53:31.4±1.5,6°.06S×149°.83E,h56km±13km,mb4.6/5, Error ellipse: s-maj=14.2km s-min=9.4km az=92.0*
ISC 25 15:53:32.3±1.6,6°.08S±0°.08×149°.8E±0°.1,h62km±13km, h40km±1.7km:pP-P,n38,σ0s54/27,mb4.2/13,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.21**	**218**	*e*Pn	**Pn**	**15 54 34.2**	**+0.3**
PMG				*e*Sn	**Sn**	**15 55 21.8**	**-0.2**
HNR	**Honiara**	**10.60**	**109**	LR	LR	15 59 32.8	
	comp=Z,134nm,21.6s,baz=154,slow=34						
CTA	**Charters Tower**	**14.34**	**194**	P	**Pn**	**15 56 51.5**	**-0.6**
	10.0nm,0.7s						
CTAO	**Charters Tower**	**14.34**	**194**	Pn	**Pn**	**15 56 51.2**	**-0.9**
	10.0nm,0.7s						
KAKA	**Kakadu**	**18.34**	**248**	*e*P	**Pn**	**15 57 42.2**	**-0.2**
	18nm,0.6s						
KAKA	**Kakadu**	**18.34**	**248**	*e*Pn	**Pn**	**15 57 41.9**	**-0.5**
	52nm,0.6s						
GUMO	**Guam**	**20.14**	**346**	LR	LR	16 04 27.4	
	comp=Z,174nm,19.4s,baz=91,slow=33						
WRA	**Warramunga Arr**	**20.38**	**226**	P	**P**	**15 58 04.5**	**+0.4**
	8.4nm,0.5s,baz=52,slow=11,SNR=88						
WRA				pP		15 58 13.5	
	10nm,0.4s,baz=50,slow=10,SNR=14						
WRA				S	**S**	**16 01 48.6**	**-0.5**
	3.2nm,1.1s,baz=49,slow=21,SNR=3.7						
ASAR	**Alice Springs**	**23.23**	**220**	P	**P**	**15 58 34.4**	**+0.1**
	1.7nm,0.5s,mb3.7,baz=51,slow=8.4,SNR=38						
ASAR				pP		15 58 43.9	
	8.8nm,0.7s,baz=53,slow=9.3,SNR=23						
ASAR				S	**S**	**16 02 41.5**	**-0.1**
	0.3nm,0.8s,baz=32,slow=16,SNR=2.9						
ARMA	**Armidale**	**24.27**	**176**	*e*P	**P**	**15 58 44.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**26.42**	**241**	P	**P**	**15 59 03.9**	**+0.5**
	6.1nm,0.3s,mb4.5,baz=5.4,slow=1.2						
FITZ				pP	pP	15 59 13.6	-4.8
	baz=180,slow=0.0						
FITZ	**Fitzroy Crossi**	**26.42**	**241**	*e*P	**P**	**15 59 03.9**	**+0.5**
	63nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**26.79**	**196**	P	**P**	**15 59 07.2**	**+0.7**
	4.2nm,0.7s,mb4.1,baz=18,slow=10,SNR=7.7						
STKA				pP	pP	15 59 17.5	-4.1
	4.7nm,0.7s,baz=5.1,slow=11,SNR=4.5						
STKA				LR	LR	16 09 59.1	
	comp=Z,183nm,20.7s,baz=24,slow=37						
STKA	**Stephens Creek**	**26.79**	**196**	*e*P	**P**	**15 59 08.4**	**+1.9**
	4.1nm,0.7s,mb4.1						
STKA	**Stephens Creek**	**26.79**	**196**	*e*P	**P**	**15 59 06.9**	**+0.4**
	14nm,1.9s,mb4.2						
STKA				pP	pP	15 59 17.5	-4.1
STKA				LR	LR	16 09 59.1	
DAV	**Davao City (W)**	**27.46**	**298**	LR	LR	16 07 57.3	
	comp=Z,78nm,21.0s,baz=250,slow=32						
MBWA	**Marble Bar**	**32.74**	**240**	*e*P	**P**	**15 59 59.5**	**0.0**
	12nm,0.9s,mb4.8						
AFI	**Afiamalu**	**38.59**	**105**	LR	LR	16 14 08.6	
	comp=Z,105nm,21.7s,baz=158,slow=32						
KLBR	**Kellerberrin**	**39.26**	**226**	*e*P	**P**	**16 00 54.8**	**-0.3**
	8.6nm,0.7s,mb4.6						
MJAR	**Matsushiro Arr**	**43.76**	**346**	P	**P**	**16 01 32.2**	**+0.5**
	1.1nm,0.6s,mb3.8,baz=158,slow=7.4,SNR=3.1						
KSRS	**Korea Array**	**47.87**	**336**	P	**P**	**16 02 04.8**	**+0.6**
	1.5nm,0.8s,mb4.1,baz=160,slow=7.6,SNR=4.1						
CMAR	**Chiang Mai Arr**	**55.74**	**297**	LR	LR	16 24 29.0	
	comp=Z,22nm,20.8s,baz=150,slow=33						
PETK	**Petropavlovsk-**	**59.34**	**6**	P	**P**	**16 03 27.2**	**-0.5**
	1.8nm,0.5s,mb4.3,baz=165,slow=6.7,SNR=7.7						
PETK				pP	pP	16 03 39.1	-5.0
	2.9nm,0.8s,baz=160,slow=6.9,SNR=1.4						
PETK				LR	LR	16 24 32.3	
	comp=Z,89nm,19.9s,baz=234,slow=31						
SONM	**Songino Array**	**65.85**	**330**	P	**P**	**16 04 11.8**	**+0.5**
	0.7nm,0.6s,mb3.9,baz=141,slow=4.2,SNR=5.9						
SONM				sP	sP	16 04 29.4	-5.4
	1.1nm,0.9s,baz=140,slow=5.7,SNR=5.3						
SONM				LR	LR	16 30 27.9	
	comp=Z,44nm,18.9s,baz=216,slow=34						
ZALV	**Zalesovo Beam**	**80.57**	**327**	P	**P**	**16 05 36.9**	**-1.0**
	0.7nm,0.5s,mb3.9,baz=104,slow=6.1,SNR=3.4						
MAW	**Mawson**	**83.24**	**203**	P	**P**	**16 05 51.6**	**-0.1**
	1.1nm,0.6s,mb4.1,baz=66,slow=8.0,SNR=4.0						
MAW				LR	LR	16 41 17.9	
	comp=Z,53nm,18.1s,baz=328,slow=34						
MAW	**Mawson**	**83.24**	**203**	P	**P**	**16 05 51.5**	**-0.2**
	0.7nm,1.0s,mb3.6						
MAW				LR	LR	16 41 17.9	
AAK	**Ala-Archa**	**83.38**	**314**	LR	LR	16 42 50.4	
	comp=Z,53nm,19.8s,baz=267,slow=36						
QSPA	**South Pole Qui**	**83.89**	**180**	*e*P	**P**	**16 05 55.1**	**+0.3**
	12nm,1.3s,mb4.9						
ILAR	**Eielson Array**	**84.47**	**23**	P	**P**	**16 05 57.2**	**-0.8**
	0.7nm,0.7s,mb3.9,baz=254,slow=4.9,SNR=11						
ILAR				LR	LR	16 39 59.1	
	comp=Z,35nm,19.4s,baz=243,slow=33						
AKTO	**Aktyubinsk**	**95.77**	**320**	LR	LR	16 49 46.2	
	comp=Z,35nm,19.8s,baz=163,slow=35						
LPAZ	**La Paz**	**136.39**	**121**	PKP	PKPdf	16 12 48.7	+0.6
	1.6nm,0.7s,baz=323,slow=1.4,SNR=9.4						
LPAZ	**La Paz**	**136.39**	**121**	PKP	PKPdf	16 12 48.7	+0.6
CPUP	**Villa Florida**	**138.41**	**142**	PKP	PKPdf	16 12 52.2	+0.6
	0.3nm,0.3s,baz=90,slow=7.1,SNR=2.6						
CPUP	**Villa Florida**	**138.41**	**142**	PKP	PKPdf	16 12 52.2	+0.6
TORD	**Torodi Ar. Bea**	**147.80**	**285**	PKPbc	PKPbc	16 13 10.8	-0.5
	2.6nm,0.6s,baz=64,slow=3.4,SNR=6.0						
TORD	**Torodi Ar. Bea**	**147.80**	**285**	PKPbc	PKPbc	16 13 10.8	-0.5
BDFB	**Brasilia**	**152.13**	**141**	PKPbc	PKPbc	16 13 21.7	-0.1
	5.4nm,0.7s,baz=290,slow=25,SNR=5.3						

IDC ***25*** *16:26:07.8±3.0,30°.54N×83°.67E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.5/24,mbtmp3.5/5,Error ellipse: s-maj=104.9km s-min=26.6km az=78.0*
ISCJB ***25*** *16:26:08.1±0.5,30°.58N±0°.06×83°.48E±0°.05,h10km, mb3.4/5,Error ellipse: s-maj=9.4km s-min=5.6km az=174.8*
NEIC ***25*** *16:26:13.9±1.3,30°.60N×83°.43E,h46km±14km,mb3.5/2, Error ellipse: s-maj=17.9km s-min=9.5km az=224.0*
ISC 25 16:26:10.4±0.5,30°.63N±0°.06×83°.49E±0°.05,h10km,n16, σ1s26/18,mb3.4/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.03**	**250**	*e*PKP	**Pg**	**16 27 07.8**	**-0.8**
PTH				*e*S	**Sg**	**16 27 49.2**	**+1.3**
LSA	**Lhasa**	**6.70**	**96**	*e*Pn	**Pn**	**16 27 50.3**	**+1.5**
	19nm,1.0s						
LSA				*e*Sn	**Sn**	**16 29 06.5**	**+1.3**
KBL	**Kabul**	**12.79**	**292**	*e*Pn	**Pn**	**16 29 11.9**	**-0.5**
UCH	**Uchtor**	**13.64**	**331**	Pn	**Pn**	**16 29 24.0**	**+0.1**
MK31	**Makanchi Array**	**16.17**	**357**	Pn	**Pn**	**16 29 58.4**	**+0.7**
MKAR	**Makanchi Array**	**16.17**	**357**	Pn	**Pn**	**16 29 59.1**	**+1.4**
	0.1nm,0.3s,baz=178,slow=12,SNR=6.5						
KKAR	**Karatay Array**	**16.19**	**324**	Pn	**Pn**	**16 29 59.9**	**+1.9**
	2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.53**	**127**	P	**Pn**	**16 30 28.7**	**+1.3**
	0.0nm,0.3s,baz=318,slow=12,SNR=2.4						
KURK	**Kurchatov**	**20.40**	**351**	P	**P**	**16 30 46.5**	**-0.8**
	2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**23.33**	**2**	P	**P**	**16 31 18.1**	**-0.6**
	1.2nm,0.8s,mb3.4,baz=188,slow=9.6,SNR=5.6						
SONM	**Songino Array**	**24.55**	**39**	P	**P**	**16 31 29.5**	**-0.7**
	0.6nm,0.7s,mb3.2,baz=228,slow=9.0,SNR=5.6						
YSS	**Yuzh-Sakhalins**	**47.85**	**53**	P	**P**	**16 34 46.0**	**-2.3**
	12nm,1.0s						
WRA	**Warramunga Arr**	**70.11**	**129**	P	**P**	**16 37 20.9**	**-2.2**
	0.5nm,0.7s,mb3.6,baz=324,slow=6.4,SNR=8.5						
WRA	**Warramunga Arr**	**70.11**	**129**	P	**P**	**16 37 20.9**	**-2.2**
ASAR	**Alice Springs**	**72.46**	**132**	P	**P**	**16 37 35.8**	**-1.5**
	0.3nm,0.8s,mb3.3,baz=325,slow=6.3,SNR=3.4						
ILAR	**Eielson Array**	**77.15**	**20**	P	**P**	**16 38 03.1**	**-0.8**
	0.6nm,0.6s,mb3.7,baz=305,slow=4.3,SNR=5.5						

NEIC ***25*** *16:35:57.1,19°.67N×69°.51W,h37km,MD3.6(RSPR), After RSPR.*
RSPR 25 16:35:57.1,19°.67N×69°.51W,h37km±58km,MD3.6/11, 10C-3D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**1.81**	**248**	⇓*e*P	Pn	16 36 23.9	-1.

NIED ***25*** *16:38:00,36′.70N×142′.30E,h17km,Mw4.1 Best double couple: M₀1.50000×10¹⁵ NP1:φ₀17.00000°,δ71.00000°,λ81.00000°. NP2:φ₀223.00000°,δ21.00000°,λ115.00000°.*
IDC ***25*** *16:38:15.9±1.1,36′.68N×142′.28E,h0km,mb3.6/7, mb1 3.8/11,mb1mx3.7/27,mbtmp3.7/11,ML3.8/4,MS3.1/4, Ms1 3.1/4,ms1mx2.6/41,Error ellipse: s-maj=25.0km s-min=20.0km az=94.0*
ISCJB ***25*** *16:38:16.7±1.3,36′.71N±0′.03×142′.36E±0′.06,h19km±9km, mb3.8/10,Error ellipse: s-maj=7.7km s-min=5.8km az=172.4*
JMA ***25*** *16:38:17.7±0.2,36′.71N×142′.28E,h25km,M4.0*
NEIC ***25*** *16:38:18.3±5.7,36′.71N×142′.30E,h16km±35km,mb4.2/3, Error ellipse: s-maj=18.1km s-min=11.6km az=123.0*

ISC 25 16:38:17.2±1.7,36°.73N±0°.03×142°.29E±0°.06,h8km±12km, n30,σ0°.86/42,mb3.8/10,1C-2D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.25**	**288**	P	**Pn**	**16 38 39.7**	**-1.3**
ONAJ				*e*S	**Sb**	**16 38 56.4**	**-0.9**
JFK	**Kawauchi**	**1.30**	**300**	P	**Pn**	**16 38 40.9**	**-0.7**
JFK				*e*S	**Sb**	**16 38 57.6**	**-1.0**
JHO	**Hitachi**	**1.39**	**266**	P	**Pn**	**16 38 41.4**	**-1.4**
JMM	**Marumori**	**1.64**	**314**	⇓P	**Pn**	**16 38 45.7**	**-0.7**
JMM				*e*S	**Sn**	**16 39 06.2**	**-1.5**
JFT	**Otama**	**1.75**	**297**	⇓P	**Pn**	**16 38 47.7**	**-0.1**
JFT				S	**Sn**	**16 39 09.7**	**-0.5**
JIO	**Ouri**	**1.88**	**337**	⇑P	**Pn**	**16 38 49.4**	**-0.1**
JIO				S	**Sn**	**16 39 12.9**	**-0.5**
JOU	**Okura**	**2.08**	**322**	P	**Pn**	**16 38 52.7**	**+0.3**
JOU				S	**Sn**	**16 39 19.3**	**+0.9**
JFY	**Yanaizu**	**2.17**	**289**	P	**Pn**	**16 38 54.0**	**+0.3**
JAG	**Ashikaga**	**2.30**	**263**	P	**Pn**	**16 38 55.6**	**+0.2**
JYS	**Shiratake**	**2.31**	**311**	P	**Pn**	**16 38 56.5**	**+1.0**
JYS				*e*S	**Sn**	**16 39 24.0**	**-0.1**
BSO1	**Boso 1**	**2.33**	**208**	P	**Pn**	**16 38 55.8**	**0.0**
BSO1				S	**Sn**	**16 39 24.0**	**-0.6**
JMK	**Ichinoseki**	**2.37**	**339**	P	**Pn**	**16 38 57.1**	**+0.7**
JYK	**Kaneyama**	**2.66**	**326**	P	**Pn**	**16 39 00.9**	**+0.5**
MJAR	**Matsushiro Arr**	**3.29**	**268**	Pn	**Pn**	**16 39 09.6**	**+0.6**
	12nm,0.3s,baz=119,slow=10,SNR=108						
MJAR				Sn	**Sn**	**16 39 52.1**	**+3.9**
	4.4nm,0.3s,baz=94,slow=15,SNR=5.3						
MJAR				LR	LR	16 40 39.2	
	comp=Z,380nm,18.8s,baz=100,slow=44						
MAJO	**Matsushiro**	**3.29**	**268**	*e*Pn	**Pn**	**16 39 09.9**	**+0.9**
MAT	**Matsushiro**	**3.29**	**268**	P	**Pn**	**16 39 10.3**	**+1.3**
MAT				*e*S	**Sn**	**16 39 49.4**	**+1.2**
JHJ	**Hachijo jima 2**	**4.15**	**210**	Pn	**Pn**	**16 39 20.1**	**-0.7**
	12nm,0.3s,baz=90,slow=21,SNR=11						
JHJ				Sn	**Sn**	**16 40 05.1**	**-4.4**
	43nm,0.3s,baz=72,slow=19,SNR=9.2						
ASAJ	**Asahikawa**	**7.38**	**2**	Pn	**Pn**	**16 40 05.0**	**-0.1**
	2.6nm,0.3s,baz=219,slow=5.7,SNR=13						
ASAJ				LR	LR	16 44 01.6	
	comp=Z,109nm,18.4s,baz=151,slow=46						
YSS	**Yuzh-Sakhalins**	**10.22**	**2**	*e*Pn	**Pn**	**16 40 43.6**	**-0.5**
	18nm,1.1s						
KSRS	**Korea Array**	**11.50**	**278**	Pn	**Pn**	**16 41 03.4**	**+1.8**
	0.1nm,0.3s,baz=90,slow=29,SNR=2.4						
KSRS				Sn	**Sn**	**16 43 11.6**	**+1.4**
	0.3nm,0.3s,baz=93,slow=26,SNR=4.3						
KSRS				LR	LR	16 45 09.0	
	comp=Z,77nm,20.6s,baz=345,slow=36						
ENH	**Enshi**	**28.01**	**266**	*e*P	**P**	**16 44 08.0**	**-0.6**
	5.2nm,0.7s,mb4.3						
SONM	**Songino Array**	**28.54**	**304**	P	**P**	**16 44 13.4**	**+0.3**
	2.0nm,0.8s,mb3.9,baz=108,slow=8.8,SNR=16						
ZALV	**Zalesovo Beam**	**42.64**	**313**	P	**P**	**16 46 13.1**	**-0.7**
	0.8nm,0.5s,mb3.7,baz=64,slow=6.9,SNR=4.7						
ZALV				LR	LR	17 03 26.4	
	comp=Z,22nm,18.1s,baz=184,slow=35						
MKAR	**Makanchi Array**	**44.87**	**303**	P	**P**	**16 46 32.2**	**+0.3**
	0.6nm,0.6s,mb3.6,baz=82,slow=8.3,SNR=7.5						
ILAR	**Eielson Array**	**49.38**	**32**	P	**P**	**16 47 08.1**	**+1.3**
	0.5nm,0.8s,mb3.6,baz=268,slow=7.0,SNR=6.4						
TKM2	**Tokmak 2**	**50.39**	**299**	*e*P	**P**	**16 47 10.9**	**-3.9**
	1.6nm,0.6s,mb4.2						
EKS2	**Erkin-Say**	**51.75**	**299**	P	**P**	**16 47 25.2**	**+0.2**
	1.3nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**56.86**	**189**	P	**P**	**16 48 00.9**	**-1.5**
	0.4nm,0.9s,mb3.5,baz=8.3,slow=7.3,SNR=3.3						
ASAR	**Alice Springs**	**60.59**	**189**	P	**P**	**16 48 28.6**	**+0.4**
	0.3nm,0.8s,mb3.5,baz=13,slow=8.6,SNR=3.1						
FINES	**FINESS Array B**	**69.41**	**333**	P	**P**	**16 49 25.3**	**+0.1**
	0.9nm,0.7s,mb3.8,baz=49,slow=13,SNR=2.1						

ISCJB ***25*** *16:43:44.4±0.4,6′.83N±0′.04×73′.02W±0′.04,h166km±4km, mb4.0/11,Error ellipse: s-maj=8.9km s-min=4.8km az=43.2*
IDC ***25*** *16:43:44.5±2.0,6′.84N×73′.01W,h148km±16km,mb3.6/8, mb1 3.9/12,mb1mx3.6/27,mbtmp3.7/12,Error ellipse: s-maj=28.2km s-min=14.4km az=77.0*
NEIC ***25*** *16:43:45.3±0.7,6′.74N×73′.08W,h161km±7km,mb4.5/8, Error ellipse: s-maj=11.1km s-min=8.6km az=114.0*
FUNV ***25*** *16:43:46.1,6′.79N×73′.09W,h168km,MW4.2*

ISC 25 16:43:45.3±0.4,6°.81N±0°.04×73°.00W±0°.04,h159km±5km, n52,σ1°.07/63,mb4.0/11,13D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.25**	**33**	⇓*i*P	**Pn**	**16 44 14.6**	**+1.4**
CAPV				*e*S	**Sn**	**16 44 35.8**	**+1.3**
ROSC	**El Rosal**	**2.34**	**214**	P	**Pn**	**16 44 25.8**	**+0.8**
	53nm,0.3s,baz=79,slow=4.5,SNR=49						
ROSC				S	**Sn**	**16 44 55.4**	**-0.4**
	251nm,0.3s,baz=98,slow=23,SNR=20						
ROSC	**El Rosal**	**2.34**	**214**	P	**Pn**	**16 44 25.8**	**+0.8**
ROSC				*e*Pn	**Pn**	**16 44 25.9**	**+0.9**
ROSC				*e*Sn	**Sn**	**16 44 54.3**	**-1.5**
ROSC				S	**Sn**	**16 44 55.4**	**-0.4**
SOCV	**Socops**	**2.58**	**55**	⇓*i*P	**Pn**	**16 44 29.3**	**+1.3**
SOCV				*e*S	**Sn**	**16 45 01.0**	**+0.1**
VIGV	**El Vigia**	**2.59**	**39**	⇓*i*P	**Pn**	**16 44 29.1**	**+1.1**
VIGV				*e*S	**Sn**	**16 45 01.1**	**+0.1**
SDV	**Santo Domingo**	**3.13**	**49**	*e*Pn	**Pn**	**16 44 36.0**	**+1.4**
SDV				*e*Sn	**Sn**	**16 45 12.0**	**-0.9**
ELOV	**Elorza**	**3.50**	**87**	*e*P	**Pn**	**16 44 40.9**	**+1.5**
VIRV	**Villa del Rosa**	**3.72**	**9**	⇓*i*P	**Pn**	**16 44 41.5**	**-0.7**
VIRV				*e*S	**Sn**	**16 45 24.1**	**-2.3**
QARV	**Quebrada Arrib**	**4.17**	**36**	⇓*i*P	**Pn**	**16 44 49.2**	**+1.1**
QARV				*e*S	**Sn**	**16 45 35.0**	**-2.0**
SANV	**Sanarito**	**4.35**	**52**	⇓*i*P	**Pn**	**16 44 50.8**	**+0.4**
SANV				*e*S	**Sn**	**16 45 39.1**	**-2.0**
CURV	**Curarigua**	**4.38**	**43**	⇓*i*P	**Pn**	**16 44 51.4**	**+0.6**
CURV				*e*S	**Sn**	**16 45 39.0**	**-2.9**
DABV	**Dabajuro**	**4.71**	**30**	*e*P	**Pn**	**16 44 55.7**	**+0.7**
TEPV	**Terepaima**	**4.90**	**50**	⇓*i*P	**Pn**	**16 44 58.2**	**+0.6**
SIQV	**Siquisique**	**4.95**	**39**	⇓*i*P	**Pn**	**16 44 58.5**	**+0.2**
BAUV	**El Baul**	**5.35**	**66**	⇓*i*P	**Pn**	**16 45 02.9**	**-0.7**
BAUV				*e*S	**Sn**	**16 46 01.0**	**-3.7**
MAPV	**Macapo**	**5.41**	**56**	⇓*i*P	**Pn**	**16 45 04.8**	**+0.4**
IMOV	**Isla Los Monje**	**5.89**	**20**	*e*P	**Pn**	**16 45 09.8**	**-0.9**
JACV	**Jacura**	**5.92**	**44**	*e*P	**Pn**	**16 45 11.7**	**+0.6**
MONV	**Montecano**	**5.92**	**30**	⇓*i*P	**Pn**	**16 45 10.5**	**-0.7**
TURV	**Turiamo**	**6.26**	**54**	*e*P	**Pn**	**16 45 15.5**	**0.0**
CAOV	**Caicara del Or**	**6.65**	**85**	*e*P	**Pn**	**16 45 20.2**	**-0.6**
MERV	**Las Mercedes**	**7.07**	**69**	*e*P	**Pn**	**16 45 26.2**	**-0.1**
BCIP	**Isla Barro Col**	**7.16**	**290**	*e*Pn	**Pn**	**16 45 24.4**	**-3.2**
BIRV	**Birongo**	**7.59**	**61**	*e*P	**Pn**	**16 45 32.6**	**-0.7**
CUPV	**Cœpira**	**7.83**	**65**	⇓*e*P	**Pn**	**16 45 35.9**	**-0.6**
OTAV	**Otavalo**	**8.49**	**220**	*e*Pn	**Pn**	**16 45 43.9**	**-1.4**
	6.5nm,0.5s						
OTAV				*e*Sn	**Sn**	**16 47 18.9**	**-1.1**
MTDJ	**Mount Denham**	**12.18**	**339**	*e*Pn	**Pn**	**16 46 35.0**	**+1.3**
	18nm,0.4s						
MTDJ				*e*Sn	**Sn**	**16 48 41.5**	**-7.1**
SDDR	**Presa de Saban**	**12.21**	**8**	*e*Pn	**Pn**	**16 46 36.3**	**+2.2**
	10nm,0.5s						
JTS	**JuntasAbangare**	**12.31**	**287**	*e*Pn	**Pn**	**16 46 35.6**	**+0.1**
	12nm,0.6s						
JTS				*e*		16 46 42.7	
SJG	**San Juan**	**13.07**	**30**	P	**Pn**	**16 46 45.1**	**0.0**
	4.3nm,0.3s,baz=32,slow=18,SNR=3.8						
SJG	**San Juan**	**13.07**	**30**	P	**Pn**	**16 46 45.1**	**0.0**
APG	**El Apazote**	**18.97**	**297**	P	**P**	**16 47 54.1**	**-0.5**
	0.2nm,0.3s,baz=150,slow=14,SNR=3.9						
TEIG	**Tepich**	**19.93**	**313**	P	**P**	**16 48 05.8**	**+0.8**
	1.2nm,0.3s,baz=144,slow=15,SNR=5.1						
LPAZ	**La Paz**	**23.45**	**168**	P	**P**	**16 48 41.8**	**+1.3**
	1.8nm,0.8s,mb3.6,baz=344,slow=14,SNR=6.3						
LPAZ	**La Paz**	**23.45**	**168**	*e*P	**P**	**16 48 39.6**	**-0.8**
	2.4nm,0.9s,mb3.6						
TXAR	**Lajitas Array**	**36.56**	**312**	P	**P**	**16 50 37.2**	**+1.3**
	1.0nm,0.4s,mb3.8,baz=127,slow=9.3,SNR=19						
TXAR				PcP	PcP	16 52 58.0	+2.0
	0.2nm,0.6s,baz=163,slow=6.6,SNR=3.2						
TXAR	**Lajitas Array**	**36.56**	**312**	P	**P**	**16 50 37.2**	**+1.3**
TXAR				PcP	PcP	16 52 58.0	+2.0
EYMN	**Ely**	**43.92**	**342**	*e*P	**P**	**16 51 36.5**	**+0.4**
	117nm,1.4s,mb5.3						
ULM	**Lac du Bonnet**	**47.34**	**340**	P	**P**	**16 52 01.6**	**-1.3**
	3.9nm,0.4s,mb4.4,baz=148,slow=5.5,SNR=5.6						
PDAR	**Pinedale Array**	**48.16**	**324**	P	**P**	**16 52 09.4**	**0.0**
	0.9nm,0.5s,mb3.6,baz=124,slow=9.0,SNR=9.1						
PDAR				PcP	PcP	16 53 34.7	+0.4
	0.4nm,0.8s,baz=91,slow=5.6,SNR=2.5						
HWUT	**Hardware Ranch**	**48.68**	**322**	P	**P**	**16 52 13.6**	**+0.1**
	2.0nm,0.7s,mb3.9						
BGU	**Big Grassy Mou**	**49.23**	**320**	*e*P	**P**	**16 52 18.8**	**+1.2**
	5.0nm,0.7s,mb4.2						
MCMT	**McKenzie Canyo**	**51.30**	**324**	*e*P	**P**	**16 52 31.5**	**-1.6**
NVAR	**Mina Array Bea**	**51.57**	**315**	P	**P**	**16 52 35.5**	**+0.3**
	0.6nm,0.6s,mb3.4,baz=128,slow=7.9,SNR=4.4						
NVAR				PcP	PcP	16 53 48.2	+1.2
	0.4nm,0.5s,baz=130,slow=4.1,SNR=3.0						
YBH	**Yreka Blue Hor**	**56.03**	**316**	P	**P**	**16 53 07.0**	**-0.6**
	1.2nm,0.5s,mb4.0,baz=153,slow=5.1,SNR=3.9						
YKA	**Yellowknife Ar**	**63.31**	**340**	P	**P**	**16 53 56.4**	**-0.5**
	2.5nm,0.5s,mb4.3,baz=134,slow=6.4,SNR=7.7						
YKA	**Yellowknife Ar**	**63.31**	**340**	P	**P**	**16 53 56.4**	**-0.5**
ILAR	**Eielson Array**	**77.02**	**335**	P	**P**	**16 55 21.0**	**+0.6**
	0.4nm,0.7s,mb3.2,baz=106,slow=4.7,SNR=4.9						
MKAR	**Makanchi Array**	**122.30**	**20**	PKP	PKPdf	17 02 21.4	-0.2
	0.1nm,0.3s,baz=281,slow=2.2,SNR=3.6						
ASAR	**Alice Springs**	**149.20**	**234**	PKPbc	PKPbc	17 03 15.8	0.0
	0.7nm,0.5s,baz=113,slow=2.7,SNR=22						
WRA	**Warramunga Arr**	**150.43**	**241**	PKPbc	PKPbc	17 03 19.1	+0.2
	0.8nm,0.4s,baz=108,slow=2.6,SNR=54						
CMAR	**Chiang Mai Arr**	**153.67**	**17**	PKPbc	PKPbc	17 03 27.2	+0.9
	0.5nm,0.5s,baz=322,slow=3.2,SNR=7.6						

IDC ***25*** *16:46:02.1±1.7,30′.43N×83′.42E,h0km,mb3.4/6, mb1 3.7/7,mb1mx3.5/25,mbtmp3.4/7,ML3.4/1,MS2.9/1, Ms1 2.9/1,ms1mx2.3/28,Error ellipse: s-maj=59.7km s-min=23.2km az=65.0*
NEIC ***25*** *16:46:05.5±2.1,30′.36N×83′.04E,h35km±17km,mb3.9/1, Error ellipse: s-maj=31.7km s-min=10.4km az=53.0*
ISCJB ***25*** *16:46:12.8±1.2,30′.6N±0′.1×83′.67E±0′.08,h99km±14km, mb3.2/6,Error ellipse: s-maj=17.3km s-min=10.8km az=19.1*

ISC 25 16:46:14.2±1.1,30°.7N±0°.1×83°.63E±0°.08,h93km±13km, n16,σ1°.41/17,mb3.2/6,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.17**	**249**	*e*PKP	**Pn**	**16 47 02.8**	**+0.7**
PTH				*e*S	**Sn**	**16 47 45.5**	**+6.5**
LSA	**Lhasa**	**6.59**	**97**	*e*Pn	**Pn**	**16 47 46.6**	**-1.8**
	13nm,0.6s						
LSA				*e*Sn	**Sn**	**16 49 03.3**	**+1.2**
UCH	**Uchtor**	**13.62**	**330**	*e*Pn	**Pn**	**16 49 17.4**	**-5.8**
	4.8nm,1.1s						
MKAR	**Makanchi Array**	**16.09**	**357**	Pn	**Pn**	**16 49 55.0**	**+0.3**
	0.1nm,0.3s,baz=177,slow=12,SNR=4.9						
MKAR	**Makanchi Array**	**16.09**	**357**	Pn	**Pn**	**16 49 55.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**18.49**	**128**	P	**Pn**	**16 50 20.4**	**-3.8**
	0.1nm,0.3s,baz=314,slow=13,SNR=5.8						
KURK	**Kurchatov**	**20.32**	**351**	*e*P	**P**	**16 50 40.4**	**-2.2**
	8.7nm,1.4s						
ZAA0	**Zalesovo Array**	**23.23**	**2**	P	**P**	**16 51 11.9**	**-1.0**
ZALV	**Zalesovo Beam**	**23.23**	**2**	P	**P**	**16 51 12.4**	**-0.6**
	0.5nm,0.5s,mb3.1,baz=177,slow=8.8,SNR=4.3						
SONM	**Songino Array**	**24.41**	**39**	P	**P**	**16 51 26.4**	**+2.6**
	0.2nm,0.6s,mb2.6,baz=239,slow=11,SNR=3.0						
ASF	**Jabal al Asfar**	**39.65**	**285**	LR	LR	17 11 47.1	
	comp=Z,16nm,21.8s,baz=250,slow=39						
FINES	**FINESS Array B**	**48.10**	**327**	P	**P**	**16 54 45.4**	**+1.2**
	1.4nm,0.8s,mb3.8,baz=92,slow=14,SNR=2.6						
FINES	**FINESS Array B**	**48.10**	**327**	P	**P**	**16 54 45.4**	**+1.2**
WRA	**Warramunga Arr**	**70.08**	**129**	P	**P**	**16 57 16.6**	**+0.1**
	0.7nm,0.9s,mb3.5,baz=326,slow=6.3,SNR=5.6						
ASAR	**Alice Springs**	**72.44**	**132**	P	**P**	**16 57 28.9**	**-1.7**
	0.2nm,0.8s,mb3.0,baz=324,slow=7.1,SNR=3.4						
ILAR	**Eielson Array**	**77.03**	**20**	P	**P**	**16 57 58.0**	**+1.5**
	0.1nm,0.4s,mb2.9,baz=297,slow=4.0,SNR=5.1						

ISK ***25*** *17:05:49.6,37′.76N×26′.63E,h16km,MD2.9*
ISCJB ***25*** *17:05:50.2±0.7,37′.75N±0′.03×26′.63E±0′.04,h10km±6km, Error ellipse: s-maj=6.2km s-min=4.2km az=145.3*
ATH ***25*** *17:05:50.8,37′.74N×26′.69E,h18km±2km,MD2.9/3*
CSEM ***25*** *17:05:50.6±0.2,37′.78N×26′.65E,h19km,MD2.9,Error ellipse: s-maj=5.1km s-min=3.6km az=63.0*
DDA ***25*** *17:05:52.1,37′.82N×26′.74E,h7km±4km,Md2.9*

ISC 25 17:05:50.9±0.7,37°.75N±0°.03×26°.64E±0°.04,h11km±5km, n24,σ0°.83/40,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.17**	**106**	*e*PB	**Pg**	**17 05 54.9**	**+0.3**
SMG				*e*SB	**Sg**	**17 05 57.5**	**+0.4**
SMG	**Samos**	**0.17**	**106**	*e*Pb	**Pg**	**17 05 54.9**	**+0.3**
SMG				*e*Sb	**Sg**	**17 05 57.5**	**+0.4**
GCAM	**G?zelcaml?**	**0.48**	**96**	*i* P	**Pg**	**17 05 60.0**	**-0.2**
GCAM				*i* S	**Sg**	**17 06 06.8**	**+0.2**
GCAM	**G?zelcaml?**	**0.48**	**96**	*i* P	**Pg**	**17 06 00.0**	**-0.2**
GCAM				*i* S	**Sg**	**17 06 06.8**	**+0.3**
URLA	**Izmir**	**0.61**	**357**	*i* P	**Pg**	**17 06 01.2**	**-1.5**
URLA				*i* S	**Sg**	**17 06 10.1**	**-0.6**
URLA	**Izmir**	**0.61**	**357**	*i* P	**Pg**	**17 06 01.2**	**-1.5**
URLA				*i* S	**Sg**	**17 06 10.1**	**-0.6**
BLCB	**Balcova**	**0.71**	**27**	*e*PG	**Pg**	**17 06 03.9**	**-0.7**
BLCB				*e*SG	**Sg**	**17 06 14.1**	**+0.3**
BLCB	**Balcova**	**0.71**	**27**	*e*Pg	**Pg**	**17 06 03.9**	**-0.7**
BLCB				*e*Sg	**Sg**	**17 06 14.1**	**+0.2**
CHOS	**Chios island**	**0.78**	**324**	*e*PN	**Pg**	**17 06 06.3**	**+0.3**
CHOS				*e*SN	**Sg**	**17 06 17.9**	**+1.7**
CHOS	**Chios island**	**0.78**	**324**	*e*Pn	**Pg**	**17 06 06.3**	**+0.3**
CHOS				*e*Sn	**Sg**	**17 06 17.9**	**+1.7**
IZM	**Izmir**	**0.81**	**37**	*e*PG	**Pg**	**17 06 05.8**	**-0.8**
IZM				*e*SG	**Sg**	**17 06 17.6**	**+0.5**
BODT	**Bodrum**	**0.87**	**142**	*e*PG	**Pg**	**17 06 07.0**	**-0.8**
BODT				*e*SG	**Sg**	**17 06 19.9**	**+0.8**
BODT	**Bodrum**	**0.87**	**142**	*e*Pg	**Pg**	**17 06 07.0**	**-0.7**
BODT				*e*Sg	**Sg**	**17 06 19.9**	**+0.8**
AYDN	**Tasoluk**	**0.99**	**95**	*i* P	**Pg**	**17 06 09.2**	**-0.7**
AYDN				*i* S	**Sg**	**17 06 23.7**	**+0.8**
AYDN	**Tasoluk**	**0.99**	**95**	*i* P	**Pg**	**17 06 09.2**	**-0.7**
AYDN				*i* S	**Sg**	**17 06 23.7**	**+0.9**
MLSB	**Milas**	**1.01**	**116**	*e*PG	**Pg**	**17 06 09.9**	**-0.6**
MLSB	**Milas**	**1.01**	**116**	*e*Pg	**Pg**	**17 06 09.9**	**-0.5**
APE	**Apeiranthos**	**1.11**	**233**	*e*PN	**Pg**	**17 06 12.6**	**+0.3**
APE	**Apeiranthos**	**1.11**	**233**	*e*Pn	**Pg**	**17 06 12.6**	**+0.3**
AKS	**Akhisar**	**1.46**	**39**	*e*PN	**Pn**	**17 06 15.9**	**-1.2**
AKS	**Akhisar**	**1.46**	**39**	*e*Pn	**Pn**	**17 06 15.9**	**-1.2**
AKHS	**Akhisar**	**1.46**	**39**	*i* P	**Pn**	**17 06 18.3**	**+1.2**
AKHS				*i* S	**Sn**	**17 06 37.4**	**+1.3**
KULA	**Kula-Manisa**	**1.77**	**64**	*e*PN	**Pn**	**17 06 20.4**	**-1.0**
KULA	**Kula-Manisa**	**1.77**	**64**	*e*Pn	**Pn**	**17 06 20.4**	**-1.0**

IDC 25 17:08:27.5±22.0,11°.64S×166°.65E,h282km±200km, mb2.9/3,mb1 3.2/3,mb1mx2.9/17,mbtmp2.9/3,Error ellipse: s-maj=203.0km s-min=55.8km az=131.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.12**	**251**	P	P	17 14 29.6	+0.4
	0.4nm,0.9s,baz=82,slow=8.9,SNR=4.5						
ASAR	**Alice Springs**	**33.33**	**245**	P	P	17 14 39.2	-0.3
	0.3nm,0.8s,baz=70,slow=9.8,SNR=6.9						
ILAR	**Eielson Array**	**83.79**	**18**	P	P	17 20 24.9	+0.1
	1.3nm,0.6s,baz=240,slow=5.3,SNR=21						
ARCES	**ARCESS Array B**	**117.13**	**346**	PKP	PKPdf	17 26 38.3	-0.2
	1.9nm,0.8s,baz=72,slow=2.9,SNR=3.6						

ISCJB ***25*** *17:45:33.6±0.6,24′.75N±0′.03×122′.00E±0′.02,h81km±4km, Error ellipse: s-maj=5.6km s-min=3.4km az=158.4*
TAP ***25*** *17:45:33.5,24′.75N×121′.97E,h83km,ML3.5,C*
JMA ***25*** *17:45:33.5±0.4,24′.89N×122′.02E,h78km,M2.6*

ISC 25 17:45:34.1±0.6,24°.76N±0°.03×122°.00E±0°.02,h80km±5km, n41,σ0°.88/79,4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.20**	**224**	P	**Pn**	**17 45 46.0**	**+0.1**
	baz=214						
TWC				*e*S	**Sn**	**17 45 54.5**	**-0.2**
	baz=214						
ILA	**Ilan**	**0.23**	**272**	P	**Pn**	**17 45 46.3**	**+0.3**
	baz=280						
ILA				*e*S	**Sn**	**17 45 55.2**	**+0.4**
	baz=280						
TWB1	**Santiao Chiao**	**0.25**	**357**	⇓*i*P	**Pn**	**17 45 46.0**	**-0.1**
	baz=11						
TWB1				S	**Sn**	**17 45 54.5**	**-0.5**
	baz=11						
TWE	**Neicheng**	**0.31**	**264**	P	**Pn**	**17 45 46.5**	**+0.1**
	baz=263						
TWE				*e*S	**Sn**	**17 45 56.1**	**+0.6**
	baz=263						
NWF	**Wu-fen Shan**	**0.37**	**327**	P	**Pn**	**17 45 46.7**	**-0.2**
	baz=336						
NWF				*e*S	**Sn**	**17 45 55.8**	**-0.5**
	baz=336						
ENA	**Nanau**	**0.41**	**216**	⇓*i*P	**Pn**	**17 45 47.2**	**+0.2**
	baz=208						
ENA				S	**Sn**	**17 45 57.4**	**+0.7**
	baz=208						
ENTT	**Nioudou**	**0.41**	**254**	⇓*i*P	**Pn**	**17 45 47.5**	**+0.4**
	baz=252						
ENTT				*e*S	**Sn**	**17 45 57.8**	**+1.0**
	baz=252						
TWA	**Mucha**	**0.44**	**300**	P	**Pn**	**17 45 47.1**	**-0.3**
	baz=307						
TWA				S	**Sn**	**17 45 56.6**	**-0.6**
	baz=307						
TAP1	**Taipei**	**0.52**	**303**	P	**Pn**	**17 45 47.6**	**-0.4**
	baz=310						
TAP1				*e*S	**Sn**	**17 45 57.8**	**-0.5**
	baz=310						
NSK	**Sanguang**	**0.59**	**262**	⇓*i*P	**Pn**	**17 45 48.5**	**-0.2**
	baz=262						
NSK				*e*S	**Sn**	**17 45 59.1**	**-0.4**
	baz=262						
TWS1	**Kuangyinshan**	**0.63**	**303**	P	**Pn**	**17 45 49.0**	**0.0**
	baz=311						
TWS1				*e*S	**Sn**	**17 46 00.2**	**0.0**
	baz=311						
TWY	**Chenhua**	**0.63**	**325**	*e*P	**Pn**	**17 45 49.1**	**+0.1**
	baz=328						
TWY				*e*S	**Sn**	**17 46 00.1**	**-0.2**
	baz=328						
TWD	**Chiawan**	**0.77**	**209**	*i* P	**Pn**	**17 45 49.9**	**-0.6**
	baz=217						
TWD				*e*S	**Sn**	**17 46 01.9**	**-0.8**
	baz=217						
NCU	**National Centr**	**0.77**	**286**	*e*P	**Pn**	**17 45 50.4**	**-0.1**
	baz=278						
NCU				*e*S	**Sn**	**17 46 03.4**	**+0.7**
	baz=278						
TWT	**Tachien**	**0.91**	**237**	P	**Pn**	**17 45 52.8**	**+0.8**
	baz=228						
TWT				*e*S	**Sn**	**17 46 06.2**	**+0.8**
	baz=228						
WHF	**Hehuan Shan**	**0.91**	**228**	*i* P	**Pn**	**17 45 52.2**	**+0.2**
	baz=226						
WHF				*e*S	**Sn**	**17 46 06.1**	**+0.7**
	baz=226						
HSN	**Hsinchu**	**0.94**	**273**	*e*P	**Pn**	**17 45 51.9**	**-0.5**
	baz=275						
HSN				*e*S	**Sn**	**17 46 05.4**	**-0.7**
	baz=275						
YOJ	**Yonaguni jima**	**0.96**	**108**	P	**Pn**	**17 45 52.5**	**-0.2**

s-min=14.5km az=85.0

ISC 25 17:46:59.1±1.5,8°.07S±0°.08×159°.10E±0°.07,h61km±15km, n81,σ0°91/59,mb4.8/42,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.59**	**148**	P	**Pn**	**17 47 23.6**	**-1.5**
	883nm,0.3s,baz=244,slow=2.2,SNR=560						
HNR				S	**Sn**	**17 47 45.9**	**+1.3**
	2μm,0.3s,baz=150,slow=22,SNR=23						
COEN	**Coen**	**16.69**	**248**	*eP*	**Pn**	**17 50 53.3**	**+4.2**
	47nm,0.8s						
CTA	**Charters Tower**	**17.25**	**225**	P	**Pn**	**17 51 00.1**	**+4.2**
	1.0nm,0.3s,baz=59,slow=15,SNR=7.2						
CTA	**Charters Tower**	**17.25**	**225**	*eP*	**Pn**	**17 51 01.3**	**+5.3**
	9.7nm,0.6s						
CTAO	**Charters Tower**	**17.25**	**225**	*eP*	**Pn**	**17 51 01.1**	**+5.1**
ARMA	**Armidale**	**23.31**	**196**	*eP*	**P**	**17 52 03.0**	**+1.1**
ARMA	**Armidale**	**23.31**	**196**	*eP*	**P**	**17 52 03.2**	**+1.3**
	20nm,0.9s,mb4.5						
GUMO	**Guam**	**25.75**	**327**	LR	LR	18 01 18.4	
	comp=Z,138nm,21.5s,baz=185,slow=33						
KAKA	**Kakadu**	**26.62**	**258**	*eP*	**P**	**17 52 32.4**	**+0.2**
	16nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**26.72**	**241**	P	**P**	**17 52 33.0**	**-0.1**
	17nm,0.5s,mb4.8,baz=66,slow=9.1,SNR=188						
WRA				PcP	PcP	17 55 54.4	-1.0
	1.2nm,0.8s,baz=65,slow=2.3,SNR=6.3						
WRA				LR	LR	18 02 51.3	
	comp=Z,126nm,19.4s,baz=130,slow=36						
ASAR	**Alice Springs**	**28.69**	**234**	P	**P**	**17 52 50.0**	**-0.6**
	5.6nm,0.4s,mb4.7,baz=61,slow=10,SNR=198						
STKA	**Stephens Creek**	**28.75**	**212**	P	**P**	**17 52 51.2**	**+0.2**
	4.7nm,0.4s,mb4.6,baz=39,slow=13,SNR=26						
STKA	**Stephens Creek**	**28.75**	**212**	*eP*	**P**	**17 52 51.2**	**+0.2**
	6.2nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**28.75**	**212**	*eP*	**P**	**17 52 50.9**	**-0.2**
AFI	**Afiamalu**	**29.15**	**104**	LR	LR	18 02 51.6	
	comp=Z,103nm,20.0s,baz=314,slow=33						
FITZ	**Fitzroy Crossi**	**34.03**	**250**	*eP*	**P**	**17 53 36.4**	**-1.2**
	21nm,0.4s,mb5.4						
FITZ	**Fitzroy Crossi**	**34.03**	**250**	*eP*	**P**	**17 53 36.4**	**-1.3**
	10.0nm,0.5s,mb5.0						
URZ	**Urewera**	**34.17**	**154**	P	**P**	**17 53 40.3**	**+1.7**
	2.9nm,0.6s,mb4.4,baz=297,slow=14,SNR=3.3						
FORT	**Forrest**	**36.76**	**228**	*eP*	**P**	**17 54 00.8**	**-0.1**
	14nm,0.7s,mb4.9						
RPZ	**Rata Peaks**	**37.01**	**166**	P	**P**	**17 54 01.4**	**-1.5**
	5.2nm,0.6s,mb4.5,baz=48,slow=13,SNR=4.7						
MBWA	**Marble Bar**	**40.13**	**247**	*eP*	**P**	**17 54 27.9**	**-1.5**
	22nm,1.1s,mb4.8						
KLBR	**Kellerberrin**	**45.00**	**233**	*eP*	**P**	**17 55 08.5**	**-0.3**
	13nm,0.8s,mb4.8						
NWAO	**Narrogin (SRO)**	**45.92**	**231**	*eP*	**P**	**17 55 15.9**	**-0.1**
MJAR	**Matsushiro Arr**	**48.52**	**337**	P	**P**	**17 55 33.3**	**-2.9**
	2.6nm,0.7s,mb4.4,baz=169,slow=9.9,SNR=8.3						
MJAR				LR	LR	18 14 23.6	
	comp=Z,48nm,20.3s,baz=260,slow=34						
KSRS	**Korea Array**	**53.86**	**329**	P	**P**	**17 56 16.1**	**0.0**
	4.6nm,1.0s,mb4.4,baz=137,slow=8.6,SNR=7.4						
KSRS				LR	LR	18 17 12.2	
	comp=Z,25nm,20.6s,baz=135,slow=34						
PETK	**Petropavlovsk-**	**60.95**	**359**	P	**P**	**17 57 05.0**	**-0.7**
	1.9nm,0.5s,mb4.5,baz=155,slow=5.2,SNR=11						
ENH	**Enshi**	**60.98**	**311**	*eP*	**P**	**17 57 05.2**	**-1.2**
	9.7nm,1.1s,mb4.8						
CM31	**Chiang Mai Arr**	**64.92**	**295**	*eP*	**P**	**17 57 33.3**	**+0.5**
	9.5nm,0.7s,mb4.9						
CMAR	**Chiang Mai Arr**	**64.92**	**295**	P	**P**	**17 57 33.7**	**+0.9**
	9.8nm,0.7s,mb5.0,baz=122,slow=5.0,SNR=72						
CHTO	**Chiang Mai**	**65.04**	**295**	*eP*	**P**	**17 57 33.3**	**-0.3**
	13nm,1.1s,mb4.9						
HIA	**Hailar**	**66.66**	**333**	*eP*	**P**	**17 57 43.2**	**-0.2**
LZH	**Lanzhou**	**67.96**	**314**	*eP*	**P**	**17 57 53.5**	**+1.6**
LZH				pP	pP	17 58 07.0	-1.4
LZH				sP	sP	17 58 13.0	-2.2
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
ULN	**Ulaanbaatar**	**72.12**	**326**	*eP*	**P**	**17 58 17.5**	**+0.4**
	comp=Z,14nm,1.4s,mb4.7						
GTA	**Gaotai**	**72.33**	**316**	*eP*	**P**	**17 58 19.5**	**+0.9**
GTA				pP	pP	17 58 28.5	-6.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
SONM	**Songino Array**	**72.47**	**326**	P	**P**	**17 58 19.9**	**+0.6**
	comp=Z,3.7nm,0.7s,mb4.4,baz=142,slow=5.8,SNR=30						
LSA	**Lhasa**	**75.25**	**303**	*eP*	**P**	**17 58 37.7**	**+1.8**
	comp=Z,5.7nm,0.8s,mb4.5						
TAPN	**Taplejung**	**77.45**	**300**	*eP*	**P**	**17 58 49.1**	**+0.7**
	comp=Z,34nm,0.9s,mb5.3						
ODAN	**Odare**	**77.59**	**300**	*eP*	**P**	**17 58 49.9**	**+0.7**
	comp=Z,61nm,0.8s,mb5.6						
GUN	**Gumba**	**79.16**	**300**	*eP*	**P**	**17 58 58.8**	**+0.9**
	comp=Z,43nm,0.8s,mb5.4						
PKI	**Pulchoki**	**79.48**	**300**	*eP*	**P**	**17 59 00.0**	**+0.4**
	comp=Z,25nm,0.7s,mb5.3						
PKIN	**Phulchoki**	**79.49**	**300**	*eP*	**P**	**17 59 00.0**	**+0.3**
KKN	**Kakani**	**79.64**	**300**	*eP*	**P**	**17 59 01.0**	**+0.5**
	comp=Z,13nm,0.6s,mb5.1						
DMN	**Daman**	**79.75**	**300**	*eP*	**P**	**17 59 01.8**	**+0.7**
	comp=Z,70nm,1.0s,mb5.5						
GKN	**Gorkha**	**80.25**	**300**	*eP*	**P**	**17 59 04.0**	**+0.2**
	comp=Z,63nm,0.9s,mb5.5						
KOLN	**Koldanda**	**81.08**	**300**	*eP*	**P**	**17 59 08.3**	**+0.1**
	comp=Z,30nm,0.8s,mb5.3						
DANN	**Dangsing**	**81.08**	**300**	*eP*	**P**	**17 59 08.1**	**-0.1**
QSPA	**South Pole Qui**	**81.91**	**180**	*eP*	**P**	**17 59 10.9**	**-0.8**
	comp=Z,7.3nm,1.1s,mb4.5						
ILAR	**Eielson Array**	**82.91**	**20**	P	**P**	**17 59 15.8**	**-1.1**
	comp=Z,1.3nm,0.5s,mb4.2,baz=248,slow=5.0,SNR=16						
ILAR				LR	LR	18 32 01.3	
	comp=Z,37nm,20.9s,baz=238,slow=33						
VIB	**Van Inlet**	**83.80**	**34**	T		19 31 28.2	
DIB	**Dawson Inlet,**	**83.82**	**34**	T		19 31 42.5	
	SNR=79						
EGAK	**Eagle**	**84.96**	**22**	*eP*	**P**	**17 59 27.1**	**-0.4**
	comp=Z,4.5nm,0.8s,mb4.7						
MAW	**Mawson**	**84.97**	**202**	P	**P**	**17 59 26.5**	**-1.0**
	comp=Z,6.0nm,1.0s,mb4.7,baz=69,slow=6.4,SNR=13						
MK31	**Makanchi Array**	**86.91**	**318**	*eP*	**P**	**17 59 37.0**	**-0.5**
MKAR	**Makanchi Array**	**86.91**	**318**	P	**P**	**17 59 37.1**	**-0.4**
	comp=Z,2.4nm,0.5s,mb4.7,baz=92,slow=6.1,SNR=44						
ZALV	**Zalesovo Beam**	**87.36**	**325**	P	**P**	**17 59 37.6**	**-1.8**
	comp=Z,0.4nm,0.3s,mb4.1,baz=131,slow=4.1,SNR=4.3						
NVAR	**Mina Array Bea**	**89.20**	**51**	P	**P**	**17 59 49.2**	**+0.7**
	comp=Z,1.8nm,0.8s,mb4.5,baz=241,slow=7.3,SNR=12						
NVAR	**Mina Array Bea**	**89.20**	**51**	P	**P**	**17 59 49.2**	**+0.7**
BMO	**Blue Mountains**	**91.11**	**45**	*eP*	**P**	**17 59 57.0**	**-0.3**
	comp=Z,2.1nm,0.8s,mb4.5						
CCUT	**Cedar City**	**92.91**	**53**	*eP*	**P**	**18 00 06.8**	**+1.0**
	comp=Z,5.1nm,1.1s,mb4.9						
BGU	**Big Grassy Mou**	**93.62**	**49**	*eP*	**P**	**18 00 09.5**	**+0.5**
YKA	**Yellowknife Ar**	**95.38**	**28**	P	**P**	**18 00 15.5**	**-1.0**
	comp=Z,3.6nm,0.6s,mb5.0,baz=263,slow=4.9,SNR=7.0						
YKA				LR	LR	18 39 31.9	
	comp=Z,4.7nm,18.4s,baz=165,slow=33						
PDAR	**Pinedale Array**	**96.40**	**48**	P	**P**	**18 00 21.4**	**-0.2**
	comp=Z,0.5nm,0.6s,mb4.1,baz=265,slow=7.4,SNR=4.5						
ARCES	**ARCESS Array B**	**111.76**	**344**	PKiKP	PKiKP	18 05 26.9	+0.4
	comp=Z,3.8nm,1.0s,baz=130,slow=1.4,SNR=3.6						
AKASG	**Malin Array Be**	**120.76**	**325**	PKP	PKPdf	18 05 42.8	-1.6
	comp=Z,0.7nm,0.4s,baz=48,slow=2.9,SNR=6.8						
BRTR	**Keskin Array B**	**122.13**	**312**	PKP	PKPdf	18 05 46.6	-0.8
	comp=Z,0.9nm,0.9s,baz=0.0,slow=1.7,SNR=2.9						
LPAZ	**La Paz**	**127.36**	**117**	PKP	PKPdf	18 05 58.5	+0.5
	comp=Z,1.6nm,0.7s,baz=251,slow=4.9,SNR=8.1						
BRG	**Berggiesshubel**	**128.52**	**332**	*eP*	PKPdf	18 05 59.7	+0.5
	comp=Z,2.3nm,0.6s						
GERES	**GERESS Array B**	**130.03**	**331**	PKP	PKPdf	18 06 01.5	-0.7
	comp=Z,0.6nm,0.5s,baz=64,slow=3.1,SNR=3.5						
SDV	**Santo Domingo**	**130.83**	**85**	*eP*	PKPdf	18 06 04.1	-0.6
PBRG	**Braganca**	**144.14**	**342**	*eP*	PKiKP	18 06 32.4	+0.5
BDFB	**Brasilia**	**144.27**	**131**	PKP	PKPdf	18 06 26.4	-2.9
	comp=Z,9.0nm,0.6s,baz=280,slow=3.1,SNR=13						
ESDC	**Sonseca Array**	**145.06**	**337**	PKPbc	PKPbc	18 06 29.1	-0.4
	comp=Z,0.4nm,0.5s,baz=14,slow=3.4,SNR=5.3						
PVIS	**Viseu**	**145.49**	**342**	*eP*	PKiKP	18 06 31.8	-2.9
MTE	**Manteigas**	**145.67**	**342**	*eP*	PKiKP	18 06 32.6	-2.5
PCBR	**Castelo Branco**	**146.16**	**341**	*eP*	PKiKP	18 06 33.4	-2.7
PMRV	**Marv??o**	**146.51**	**341**	*eP*	PKiKP	18 06 33.5	-3.4
PTOM	**Tomar**	**146.65**	**342**	*eP*	PKiKP	18 06 35.0	-2.2
PMTG	**Montargil**	**147.10**	**342**	*eP*	PKiKP	18 06 35.5	-2.6
EVO	**Evora**	**147.52**	**341**	*eP*	PKiKP	18 06 36.8	-2.2
PCVE	**Castro Verde**	**148.35**	**340**	*eP*	PKiKP	18 06 39.7	-1.0
TAM	**Tamanrasset**	**150.70**	**303**	*e*PKPbc	PKPbc	18 06 46.2	+0.8

*ISCJB **25** 17:54:46.6±1.0,24°.33S±0°.05×67°.0W±0°.1,h167km±11km, mb3.4/4,Error ellipse: s-maj=18.2km s-min=8.2km az=176.7*

*IDC **25** 17:54:47.4±1.7,24°.27S×67°.01W,h155km±15km,mb3.3/4, mb1 3.7/7,mb1mx3.6/16,mbtmp3.4/7,Error ellipse: s-maj=20.5km s-min=13.1km az=84.0*

*NEIC **25** 17:54:48.3±1.1,24°.28S×66°.86W,h166km±10km,mb4.2/2, Error ellipse: s-maj=14.7km s-min=11.4km az=78.0*

ISC 25 17:54:47.3±0.9,24°.32S±0°.05×67°.0W±0°.1,h155km±10km, n23,σ1°12/18,mb3.4/4,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.34**	**188**	P	**Pn**	**17 56 33.6**	**+1.7**
	0.2nm,0.3s,baz=8.8,slow=13,SNR=7.9						
CFAA				S	**Sn**	**17 57 52.9**	**-1.2**
	0.3nm,0.3s,baz=166,slow=14,SNR=6.6						
LPAZ	**La Paz**	**8.06**	**352**	P	**Pn**	**17 56 42.9**	**+1.3**
	2.1nm,0.3s,baz=154,slow=9.2,SNR=43						
LPAZ				S	**Sn**	**17 58 09.9**	**-1.7**
	0.1nm,0.3s,baz=96,slow=18,SNR=2.8						
LPAZ	**La Paz**	**8.06**	**352**	*eP*	**Pn**	**17 56 43.1**	**+1.5**
	5.7nm,0.4s						
CPUP	**Villa Florida**	**8.96**	**105**	P	**Pn**	**17 56 55.5**	**+2.1**
	0.3nm,0.3s,baz=270,slow=12,SNR=5.7						
CPUP	**Villa Florida**	**8.96**	**105**	*eP*	**Pn**	**17 56 52.3**	**-1.2**
TRQA	**Tornquist**	**14.34**	**164**	*eP*	**Pn**	**17 58 07.8**	**+4.6**
	4.3nm,0.6s						
BDFB	**Brasilia**	**19.79**	**68**	P	**P**	**17 59 05.9**	**+0.1**
	1.3nm,0.3s,baz=244,slow=12,SNR=14						
VNA3	**Neumayer Olymp**	**56.84**	**161**	*e*	**P**	**18 04 14.1**	**-1.1**
VNA1	**Neumayer--Stat**	**57.04**	**160**	*e*	**P**	**18 04 16.2**	**-0.4**
VNA2	**Neumayer--Watz**	**57.41**	**160**	*e*	**P**	**18 04 18.0**	**-1.2**
	baz=288,slow=7.0						
TXAR	**Lajitas Array**	**63.95**	**325**	P	**P**	**18 05 03.4**	**-0.5**
	0.3nm,0.6s,mb3.3,baz=148,slow=7.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**76.67**	**69**	P	**P**	**18 06 21.2**	**-0.4**
	169nm,0.4s,baz=254,slow=6.0,SNR=2.5						
TORD	**Torodi Ar. Bea**	**76.67**	**69**	P	**P**	**18 06 21.2**	**-0.4**
PDAR	**Pinedale Array**	**77.43**	**329**	P	**P**	**18 06 25.6**	**+0.4**
	0.4nm,0.6s,mb3.2,baz=134,slow=6.5,SNR=2.4						
NVAR	**Mina Array Bea**	**78.80**	**321**	P	**P**	**18 06 33.9**	**+1.1**
	0.4nm,0.5s,mb3.3,baz=148,slow=5.3,SNR=3.7						
MAW	**Mawson**	**81.13**	**163**	P	**P**	**18 06 46.2**	**+1.3**
	1.7nm,0.6s,mb3.9,baz=206,slow=7.2,SNR=13						
ASAR	**Alice Springs**	**128.17**	**205**	PKP	PKPdf	18 13 35.7	-0.1
	0.6nm,0.5s,baz=132,slow=1.8,SNR=17						
WRA	**Warramunga Arr**	**131.35**	**207**	PKP	PKPdf	18 13 41.9	0.0
	0.6nm,0.5s,baz=155,slow=1.7,SNR=27						
ZALV	**Zalesovo Beam**	**143.67**	**28**	PKP	PKPdf	18 14 01.0	-2.3
	1.5nm,0.5s,baz=299,slow=5.0,SNR=9.3						
ZALV	**Zalesovo Beam**	**143.67**	**28**	PKP	PKPdf	18 14 01.0	-2.3
MKAR	**Makanchi Array**	**146.76**	**40**	PKPbc	PKPbc	18 14 09.8	-1.1
	3.8nm,0.8s,baz=322,slow=2.6,SNR=24						
MKAR	**Makanchi Array**	**146.76**	**40**	PKPbc	PKPbc	18 14 09.8	-1.1
SONM	**Songino Array**	**155.95**	**11**	PKPab	PKPab	18 14 50.6	+0.1
	0.3nm,0.6s,baz=306,slow=5.5,SNR=3.0						

*ISCJB **25** 17:59:21.5±0.9,38°.84N±0°.04×26°.1E±0°.1,h4km±9km, Error ellipse: s-maj=13.4km s-min=6.3km az=168.2*

*ATH **25** 17:59:21.3,38°.85N×26°.06E,h20km±12km,MD3.0/4*

*CSEM **25** 17:59:21.9±0.2,38°.85N×26°.10E,h2km,ML2.6/3,Error ellipse: s-maj=8.4km s-min=3.7km az=78.0*

*THE **25** 17:59:22.5,38°.91N×26°.08E,h0km±3km,ML2.6/3,Error ellipse: s-maj=3.4km s-min=1.1km az=101.0*

ISC 25 17:59:21.9±0.9,38°.84N±0°.04×26°.1E±0°.1,h7km±8km,n16, σ0°62/25,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.41**	**335**	P	**Pg**	**17 59 29.8**	**0.0**
SIGR				S	**Sg**	**17 59 34.8**	**-0.3**
SIGR	**SIGRI**	**0.41**	**335**	P	**Pg**	**17 59 29.8**	**0.0**
SIGR				S	**Sg**	**17 59 34.8**	**-0.3**
PRK	**Paraskevi**	**0.43**	**21**	*e*PB	**Pg**	**17 59 29.8**	**-0.4**
PRK				*e*SB	**Sg**	**17 59 36.0**	**+0.1**
PRK	**Paraskevi**	**0.43**	**21**	P	**Pg**	**17 59 29.9**	**-0.3**
PRK				S	**Sg**	**17 59 35.6**	**-0.3**
PRK	**Paraskevi**	**0.43**	**21**	P	**Pg**	**17 59 29.9**	**-0.3**
PRK				S	**Sg**	**17 59 35.6**	**-0.3**
PRK				*e*Sb	**Sg**	**17 59 36.0**	**+0.1**
CHOS	**Chios island**	**0.46**	**182**	*e*PB	**Pg**	**17 59 31.5**	**+0.8**
CHOS	**Chios island**	**0.46**	**182**	P	**Pg**	**17 59 31.5**	**+0.8**
CHOS				S	**Sg**	**17 59 41.8**	**+5.1**
CHOS	**Chios island**	**0.46**	**182**	P	**Pg**	**17 59 31.5**	**+0.8**
LIA	**Limnos Island**	**1.26**	**327**	P	**Pn**	**17 59 45.2**	**-0.7**
LIA				S	**Sb**	**18 00 02.9**	**+0.6**
LIA	**Limnos Island**	**1.26**	**327**	P	**Pn**	**17 59 45.2**	**-0.7**
LIA				S	**Sb**	**18 00 02.9**	**+0.6**
SMG	**Samos**	**1.28**	**152**	*e*PN	**Pn**	**17 59 46.3**	**+0.1**
SMG	**Samos**	**1.28**	**152**	*e*Pn	**Pn**	**17 59 46.3**	**+0.1**
APE	**Apeiranthos**	**1.82**	**194**	*e*PB	**Pn**	**17 59 52.5**	**-1.1**
APE	**Apeiranthos**	**1.82**	**194**	*e*Pb	**Pn**	**17 59 52.5**	**-1.1**
ALN	**Alexandroupoli**	**2.05**	**359**	*e*PN	**Pn**	**17 59 57.7**	**+1.0**
ALN	**Alexandroupoli**	**2.05**	**359**	*e*Pn	**Pn**	**17 59 57.7**	**+1.0**

*NEIC **25** 18:07:01.0,44°.23N×110°.78W,h2km,ML2.9(SLC),After SLC.*

*ISCJB **25** 18:07:02.5±0.2,44°.25N±0°.01×110°.78W±0°.01,h10km, Error ellipse: s-maj=1.6km s-min=1.5km az=44.6*

ISC 25 18:07:02.4±0.2,44°.25N±0°.01×110°.79W±0°.01,h10km, n104,σ1°12/139,53C-50D,Yellowstone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FLWY	**Flagg Ranch**	**0.18**	**159**	*e*Pg	**Pg**	**18 07 05.7**	**-0.5**
YFT	**Old Faithful**	**0.21**	**350**	*e*Pg	**Pg**	**18 07 06.1**	**-0.6**
H17A	**Grant Village**	**0.21**	**45**	⇑P	**Pg**	**18 07 06.7**	**-0.1**
	baz=0.2,SNR=166						
H17A				⇓S	**Sg**	**18 07 09.8**	**+0.1**
	baz=0.2						
I17A	**Pilgrim Ck.**	**0.36**	**155**	⇓P	**Pg**	**18 07 09.7**	**+0.2**
	baz=0.3,SNR=252						
I17A				⇑S	**Sg**	**18 07 14.4**	**+0.1**
	baz=0.3						
IMW	**Indian Meadow**	**0.37**	**198**	*e*Pg	**Pg**	**18 07 08.8**	**-0.8**
LKWY	**Lake**	**0.42**	**41**	*e*Pg	**Pg**	**18 07 10.6**	**-0.1**
YMR	**Madison River**	**0.44**	**343**	*e*Pg	**Pg**	**18 07 11.3**	**+0.3**
YNR	**Norris Junctio**	**0.47**	**9**	*e*Pg	**Pg**	**18 07 11.8**	**+0.2**
MOOW	**Moose Ponds**	**0.50**	**177**	*e*Pg	**Pg**	**18 07 10.6**	**-1.5**
H16A	**Russell Place,**	**0.56**	**324**	⇓P	**Pg**	**18 07 13.3**	**-0.1**
	baz=0.6						
H16A				⇓S	**Sg**	**18 07 21.3**	**+0.6**
	baz=0.6						
I16A	**Newdale**	**0.63**	**234**	⇓P	**Pg**	**18 07 14.2**	**-0.3**
	baz=0.6,SNR=47						
I16A				⇑S	**Sg**	**18 07 22.7**	**0.0**
	baz=0.6						
LOHW	**Long Hollow**	**0.65**	**168**	*e*Pg	**Pg**	**18 07 14.1**	**-0.8**
DCID1	**Drake Creek**	**0.71**	**204**	*e*Pg	**Pg**	**18 07 15.0**	**-1.1**
QLMT	**Earthquake Lak**	**0.74**	**322**	*e*Pg	**Pg**	**18 07 16.2**	**-0.5**
TPAW	**Teton Pass**	**0.77**	**189**	*e*Pg	**Pg**	**18 07 16.3**	**-0.9**
J17A	**Brown Place, J**	**0.89**	**177**	⇓P	**Pg**	**18 07 19.0**	**-0.4**
	baz=0.9,SNR=86						
J17A				⇓S	**Sg**	**18 07 30.9**	**-0.1**
	baz=0.9						
REDW	**Red Top Meadow**	**0.89**	**183**	*e*Pg	**Pg**	**18 07 18.6**	**-0.8**
I18A	**Diamond G Ranc**	**0.89**	**128**	⇑P	**Pg**	**18 07 18.8**	**-0.6**
	baz=0.9,SNR=57						
I18A				⇓S	**Sg**	**18 07 30.8**	**-0.2**
	baz=0.9						
H18A	**Shoshone NF, C**	**0.91**	**61**	⇑P	**Pg**	**18 07 19.4**	**-0.5**
	baz=0.9,SNR=54						
RRI2	**Red Ridge**	**0.98**	**203**	*e*Pg	**Pg**	**18 07 20.3**	**-0.9**
G17A	**Pierce Place,**	**1.07**	**2**	⇓P	**Pg**	**18 07 22.8**	**-0.3**
	baz=1.1						
J16A	**Bone**	**1.14**	**212**	⇑P	**Pb**	**18 07 23.6**	**-0.5**
	baz=1.1,SNR=17						
J16A				⇑S	**Sb**	**18 07 39.2**	**+0.1**
	baz=1.1						
J18A	**Kendall Valley**	**1.18**	**152**	P	**Pb**	**18 07 24.0**	**-0.8**
	baz=1.2,SNR=127						
G16A	**Moss Hill, Enn**	**1.22**	**324**	⇓P	**Pn**	**18 07 25.1**	**-0.4**
	baz=1.2						
I15A	**Monteview**	**1.25**	**259**	⇓S	**Sb**	**18 07 42.2**	**+0.1**
	baz=1.2						
I19A	**Meeteetse**	**1.31**	**99**	⇓Pg	**Pg**	**18 07 26.7**	**-0.7**
	baz=1.3,SNR=55						
I19A				⇓S	**Sb**	**18 07 44.0**	**+0.2**
	baz=1.3						
H19A	**Powell**	**1.36**	**71**	⇑Pg	**Pg**	**18 07 27.9**	**-0.6**
	baz=1.4,SNR=40						
H19A				⇑S	**Sb**	**18 07 45.6**	**+0.4**
	baz=1.4						
G18A	**Lazy EL Ranch,**	**1.38**	**39**	⇑Pb	**Pb**	**18 07 27.9**	**-0.4**
	baz=1.4						
G18A				⇑S	**Sb**	**18 07 46.7**	**+0.8**
	baz=1.4						
H15A	**Lima**	**1.38**	**286**	⇓Pb	**Pb**	**18 07 27.8**	**-0.5**
	baz=1.4						
H15A				⇑S	**Sb**	**18 07 46.5**	**+0.5**
	baz=1.4						
RLMT	**Red Lodge**	**1.39**	**51**	⇑Pg	**Pg**	**18 07 28.6**	**-0.5**
	baz=1.4						
RLMT				⇓S	**Sn**	**18 07 46.6**	**+0.3**
	baz=1.4						
RLMT	**Red Lodge**	**1.39**	**51**	*e*Pg	**Pg**	**18 07 28.0**	**-1.1**
J15A	**Blackfoot**	**1.46**	**235**	⇑Pn	**Pn**	**18 07 28.3**	**-0.5**
	baz=1.5						
J15A				⇑S	**Sn**	**18 07 48.0**	**0.0**
	baz=1.5						
AHID	**Auburn Hatcher**	**1.50**	**189**	*e*Pg	**Pg**	**18 07 29.2**	**-1.9**
K17A	**Gardner Place,**	**1.50**	**184**	⇓Pg	**Pg**	**18 07 30.1**	**-1.0**
	baz=1.5						
K17A				⇑S	**Sn**	**18 07 49.5**	**+0.6**
	baz=1.5						
BOZ	**Bozeman (W)**	**1.52**	**337**	⇑Pb	**Pb**	**18 07 30.2**	**-0.5**
	baz=1.5						
BOZ	**Bozeman (W)**	**1.52**	**337**	*e*Pg	**Pg**	**18 07 29.4**	**-2.2**
G15A	**Dillon**	**1.52**	**308**	⇑Pb	**Pb**	**18 07 30.2**	**-0.5**
	baz=1.5						
G15A				⇓S	**Sn**	**18 07 49.8**	**+0.3**
	baz=1.5						
MCMT	**McKenzie Canyo**	**1.59**	**292**	*e*Pg	**Pg**	**18 07 31.1**	**-1.7**
J19A	**Crowheart**	**1.59**	**127**	⇓Pg	**Pg**	**18 07 31.9**	**-1.1**
	baz=1.6,SNR=37						
J19A				⇓S	**Sn**	**18 07 51.3**	**+0.1**
	baz=1.6						
F16A	**Kennard Place,**	**1.65**	**339**	⇑Pg	**Pg**	**18 07 33.5**	**-0.5**
	baz=1.7,SNR=13						
F17A	**Fitzpatrick Pl**	**1.66**	**3**	⇓Pg	**Pg**	**18 07 33.8**	**-0.4**
	baz=1.7,SNR=26						
K18A	**Toltan Ranch,**	**1.70**	**161**	⇓Pb	**Pb**	**18 07 33.0**	**-0.6**
	baz=1.7						
DLMT	**Dillon**	**1.71**	**311**	*e*Pg	**Pg**	**18 07 33.3**	**-1.8**
BW06	**Boulder Array**	**1.73**	**148**	⇓Pb	**Pb**	**18 07 33.7**	**-0.5**
	baz=1.7,SNR=42						
BW06				⇑Sb	**Sb**	**18 07 56.6**	**+0.7**
	baz=1.7						
GCMT	**Greycliff**	**1.74**	**27**	*e*Pg	**Pg**	**18 07 34.0**	**-1.6**
F18A	**Big Timber**	**1.82**	**24**	⇓Pb	**Pb**	**18 07 35.7**	**-0.1**
	baz=1.8,SNR=40						
H14A	**Leadore**	**1.89**	**282**	⇓Pb	**Pb**	**18 07 36.2**	**-0.6**
	baz=1.9,SNR=25						
I20A	**Worland**	**1.94**	**98**	⇑Pb	**Pb**	**18 07 37.4**	**-0.4**
	baz=1.9,SNR=81						
I20A				⇑Sb	**Sb**	**18 08 02.8**	**+0.8**
	baz=1.9						
I14A	**Mackay**	**1.95**	**262**	⇓Pb	**Pb**	**18 07 37.5**	**-0.4**
	baz=1.9,SNR=42						
I14A				⇑Sb	**Sb**	**18 08 03.1**	**+0.8**
	baz=1.9						
LRM	**Limekiln Ridge**	**1.97**	**324**	*e*Pg	**Pg**	**18 07 37.9**	**-2.2**
F15A	**Butte**	**2.00**	**323**	⇑Pb	**Pb**	**18 07 38.8**	**0.0**
	baz=2.0,SNR=16						
F15A				⇑Sb	**Sb**	**18 08 05.3**	**+1.5**
	baz=2.0						
K19A	**Absolon Red Bu**	**2.00**	**135**	⇑Pb	**Pb**	**18 07 38.1**	**-0.7**
	baz=2.0,S

	baz=3.2					
E13A	Victor	3.25 314	⇓Sb	Sb	18 08 42.1	+2.3
	baz=3.3					
N17A	Moffit Pass	3.30 181	⇓Pb	Pb	18 08 00.8	-0.2
	baz=3.3					
M20A	Sweetwater, Wa	3.35 144	⇑Sb	Sb	18 08 44.7	+2.0
	baz=3.3					
N18A	Larsen Ranch,	3.37 166	⇓Sb	Sb	18 08 45.6	+2.4
	baz=3.4					
MSO	Missoula	3.40 320	*e*Pn	Pn	18 07 54.2	-1.3
SLMT	Seeley Lake	3.54 329	*e*Pg	Pg	18 08 08.6	-1.6
N19A	John Jarvie Ra	3.56 160	⇓Sb	Sb	18 08 51.3	+2.8
	baz=3.5					
N15A	Stansbury Isla	3.59 201	⇓Pb	Pb	18 08 05.0	-0.9
	baz=3.6					
CTU	Camp Tracy	3.62 192	*e*Pg	Pg	18 08 08.9	-2.9
RWWY	Rawlins	3.66 133	*e*Pg	Pg	18 08 06.7	-5.8
JLU	Jordanelle	3.68 188	*e*Pg	Pg	18 08 10.0	-2.7
BGU	Big Grassy Mou	3.71 207	*e*Pg	Pg	18 08 05.4	-8.1
EGMT	Eagleton	3.84 10	*e*Pn	Pn	18 08 00.9	-0.6
DUG	Dugway	4.32 201	P	Pn	18 08 10.8	+2.7

ISCJB ***25*** *18:31:49.5±0.3, 38°.19N±0°.01×22°.56E±0°.02, h9km±2km, mb3.7/10, MS3.2/2, Error ellipse: s-maj=2.6km s-min=2.0km az=38.3*
ATH ***25*** *18:31:49.5, 38°.17N×22°.54E, h20km±1km, ML4.0*
CSEM ***25*** *18:31:49.7±0.1, 38°.19N×22°.57E, h10km, ML3.6/6, Ms2.6, Error ellipse: s-maj=3.6km s-min=2.8km az=32.0*
THE ***25*** *18:31:50.2, 38°.19N×22°.55E, h5km±1km, ML3.6/6, Error ellipse: s-maj=1.3km s-min=0.6km az=62.0*
NEIC ***25*** *18:31:50.4, 38°.19N×22°.55E, h5km, mb3.7/8, ML3.9(ATH), After ATH.*
IDC ***25*** *18:31:52.3±5.5, 38°.35N×22°.40E, h33km±45km, mb3.5/11, mb1 3.7/13, mb1mx3.6/28, mbtmp3.6/13, ML3.3/2, MS3.2/2, Ms1 3.1/2, ms1mx2.3/43, Error ellipse: s-maj=21.8km s-min=16.5km az=164.0*

ISC 25 18:31:50.3±0.3, 38°.18N±0°.02×22°.56E±0°.02, h9km±2km, n247, σ1$27/309, mb3.7/10, MS3.2/2, 6C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSF	**Desfina**	**0.23**	**353**	P	**Pg**	18 31 54.4	-0.6
DSF				S	**Sg**	18 31 58.3	0.0
DSF	**Desfina**	**0.23**	**353**	P	**Pg**	18 31 54.4	-0.6
DSF				S	**Sg**	18 31 58.3	0.0
GUR	**Goura**	**0.30**	**216**	*e*PB	**Pg**	18 31 55.8	-0.3
GUR				*e*SB	**Sg**	18 32 00.4	+0.3
GUR	**Goura**	**0.30**	**216**	P	**Pg**	18 31 55.9	-0.2
GUR				S	**Sg**	18 32 00.1	0.0
GUR	**Goura**	**0.30**	**216**	*e*Pb	**Pg**	18 31 55.8	-0.3
GUR				S	**Sg**	18 32 00.1	0.0
GUR				*e*Sb	**Sg**	18 32 00.4	+0.3
LTK	**Loutraki**	**0.35**	**116**	*e*PB	**Pg**	18 31 57.0	-0.2
LTK				*e*SB	**Sg**	18 32 02.8	+0.8
LTK	**Loutraki**	**0.35**	**116**	P	**Pg**	18 31 57.1	-0.1
LTK				S	**Sg**	18 32 02.7	+0.7
LTK	**Loutraki**	**0.35**	**116**	P	**Pg**	18 31 57.1	-0.1
LTK				S	**Sg**	18 32 02.7	+0.7
KALE	**Kalithea**	**0.40**	**303**	P	**Pg**	18 31 57.5	-0.5
KALE	**Kalithea**	**0.40**	**303**	P	**Pg**	18 31 57.5	-0.5
LAKA	**Lakka**	**0.46**	**278**	P	**Pg**	18 31 59.0	-0.3
LAKA				S	**Sg**	18 32 05.3	-0.1
LAKA	**Lakka**	**0.46**	**278**	P	**Pg**	18 31 59.0	-0.3
LAKA				S	**Sg**	18 32 05.3	-0.1
EFP	**Efpalio**	**0.57**	**296**	*e*PN	**Pg**	18 32 00.6	-0.8
EFP	**Efpalio**	**0.57**	**296**	P	**Pg**	18 32 01.0	-0.4
EFP	**Efpalio**	**0.57**	**296**	*e*Pn	**Pg**	18 32 00.6	-0.8
EFP	**Efpalio**	**0.57**	**296**	P	**Pg**	18 32 01.0	-0.4
LKR	**Lokris**	**0.58**	**36**	P	**Pg**	18 31 59.7	-1.9
LKR	**Lokris**	**0.58**	**36**	*e*PB	**Pg**	18 32 00.3	-1.3
LKR				*e*SN	**Sg**	18 32 09.9	+0.7
LKR	**Lokris**	**0.58**	**36**	P	**Pg**	18 32 00.1	-1.5
LKR				S	**Sg**	18 32 10.0	+0.8
LKR	**Lokris**	**0.58**	**36**	*e*Pb	**Pg**	18 32 00.3	-1.3
LKR				S	**Sg**	18 32 10.0	+0.8
UPR	**University Cam**	**0.62**	**280**	*e*PN	**Pg**	18 32 01.9	-0.4
UPR				*e*SN	**Sg**	18 32 10.2	-0.2
UPR	**University Cam**	**0.62**	**280**	P	**Pg**	18 32 01.9	-0.4
UPR	**University Cam**	**0.62**	**280**	P	**Pg**	18 32 01.9	-0.4
ATAL	**Atalanti**	**0.63**	**35**	P	**Pg**	18 32 01.2	-1.2
ATAL				S	**Sg**	18 32 11.5	+0.8
ATAL	**Atalanti**	**0.63**	**35**	P	**Pg**	18 32 01.2	-1.2
ATAL				S	**Sg**	18 32 11.5	+0.8
VLX	**Vlachokerasia**	**0.82**	**190**	*e*PN	**Pg**	18 32 05.2	-0.8
VLX				*e*SN	**Sg**	18 32 16.6	-0.1
VLX	**Vlachokerasia**	**0.82**	**190**	P	**Pg**	18 32 05.1	-0.9
VLX	**Vlachokerasia**	**0.82**	**190**	P	**Pg**	18 32 05.1	-0.9
VLX				*e*Sn	**Sg**	18 32 16.6	-0.1
DID	**Didima**	**0.86**	**141**	*e*PN	**Pg**	18 32 05.8	-1.0
DID				*e*SN	**Sg**	18 32 19.2	+1.3
DID	**Didima**	**0.86**	**141**	P	**Pg**	18 32 05.8	-1.0
DID				S	**Sg**	18 32 18.5	+0.6
DID	**Didima**	**0.86**	**141**	P	**Pg**	18 32 05.8	-1.0
DID				S	**Sg**	18 32 18.5	+0.6
DID				*e*Sn	**Sg**	18 32 19.2	+1.3
AGG	**Agios Georgios**	**0.86**	**348**	*e*PB	**Pg**	18 32 05.4	-1.5
AGG				*e*SN	**Sg**	18 32 18.0	-0.1
AGG	**Agios Georgios**	**0.86**	**348**	P	**Pg**	18 32 05.7	-1.2
AGG				S	**Sg**	18 32 18.3	+0.2
AGG	**Agios Georgios**	**0.86**	**348**	*e*Pb	**Pg**	18 32 05.4	-1.5
AGG	**Agios Georgios**	**0.86**	**348**	P	**Pg**	18 32 05.7	-1.2
AGG				*e*Sn	**Sg**	18 32 18.0	-0.1
AGG				S	**Sg**	18 32 18.3	+0.2
RLS	**Riolos of Patr**	**0.87**	**262**	P	**Pg**	18 32 05.6	-1.5
RLS	**Riolos of Patr**	**0.87**	**262**	*e*PN	**Pg**	18 32 05.9	-1.2
RLS	**Riolos of Patr**	**0.87**	**262**	P	**Pg**	18 32 05.8	-1.3
RLS	**Riolos of Patr**	**0.87**	**262**	P	**Pg**	18 32 05.8	-1.3
ATH	**Athens Observa**	**0.93**	**102**	P	**Pg**	18 32 08.3	+0.1
ATH	**Athens Observa**	**0.93**	**102**	*e*PN	**Pg**	18 32 08.3	+0.1
ATH				*e*SN	**Sg**	18 32 21.3	+0.9
ATH	**Athens Observa**	**0.93**	**102**	P	**Pg**	18 32 08.3	+0.1
ATH				S	**Sg**	18 32 22.3	+1.9
ATH	**Athens Observa**	**0.93**	**102**	P	**Pg**	18 32 08.3	+0.1
ATH				*e*Sn	**Sg**	18 32 21.3	+0.9
EVR	**Evrytania**	**0.94**	**322**	P	**Pg**	18 32 07.9	-0.6
EVR	**Evrytania**	**0.94**	**322**	*e*PN	**Pg**	18 32 08.4	-0.1
EVR				*e*SN	**Sg**	18 32 21.2	+0.4
EVR	**Evrytania**	**0.94**	**322**	P	**Pg**	18 32 08.5	0.0
EVR				S	**Sg**	18 32 21.2	+0.4
EVR	**Evrytania**	**0.94**	**322**	P	**Pg**	18 32 07.9	-0.6
EVR	**Evrytania**	**0.94**	**322**	*e*Pn	**Pg**	18 32 08.4	-0.1
EVR				S	**Sg**	18 32 21.2	+0.4
ATHU	**Athens Univers**	**0.99**	**102**	P	**Pg**	18 32 09.9	+0.6
ATHU				S	**Sg**	18 32 23.6	+1.5
ATHU	**Athens Univers**	**0.99**	**102**	P	**Pg**	18 32 09.9	+0.6
ATHU				S	**Sg**	18 32 23.6	+1.5
VLY	**Voula,Athens**	**1.03**	**108**	P	**Pg**	18 32 09.5	-0.5
VLY	**Voula,Athens**	**1.03**	**108**	*e*PN	**Pg**	18 32 10.0	0.0
VLY				*e*SN	**Sg**	18 32 23.2	-0.1
VLY	**Voula,Athens**	**1.03**	**108**	P	**Pg**	18 32 10.3	+0.3
VLY				S	**Sg**	18 32 24.6	+1.3
VLY	**Voula,Athens**	**1.03**	**108**	P	**Pg**	18 32 09.5	-0.5
VLY	**Voula,Athens**	**1.03**	**108**	*e*Pn	**Pg**	18 32 10.0	0.0
VLY				*e*Sn	**Sg**	18 32 23.2	-0.1
VLY				S	**Sg**	18 32 24.6	+1.3
PTL	**Penteli**	**1.04**	**97**	P	**Pg**	18 32 09.6	-0.6
PTL	**Penteli**	**1.04**	**97**	*e*PN	**Pg**	18 32 10.1	-0.1
PTL				*e*SN	**Sg**	18 32 23.6	0.0
PTL	**Penteli**	**1.04**	**97**	P	**Pg**	18 32 09.9	-0.3
PTL				S	**Sg**	18 32 24.6	+1.0
PTL	**Penteli**	**1.04**	**97**	P	**Pg**	18 32 09.6	-0.6
PTL	**Penteli**	**1.04**	**97**	*e*Pn	**Pg**	18 32 10.1	-0.1
PTL				*e*Sn	**Sg**	18 32 23.6	0.0
PTL				S	**Sg**	18 32 24.6	+1.0
ITM	**Ithomi**	**1.12**	**207**	P	**Pg**	18 32 10.0	-1.7
ITM	**Ithomi**	**1.12**	**207**	*e*PN	**Pg**	18 32 10.6	-1.1
ITM	**Ithomi**	**1.12**	**207**	P	**Pg**	18 32 10.4	-1.3
ITM	**Ithomi**	**1.12**	**207**	P	**Pg**	18 32 10.4	-1.3
NEO	**Neokhori**	**1.24**	**24**	P	**Pn**	18 32 12.4	-1.4
NEO	**Neokhori**	**1.24**	**24**	*e*PN	**Pn**	18 32 12.9	-0.9
NEO				*e*SN	**Sn**	18 32 30.8	+0.1
NEO	**Neokhori**	**1.24**	**24**	P	**Pn**	18 32 12.7	-1.1
NEO	**Neokhori**	**1.24**	**24**	P	**Pn**	18 32 12.7	-1.1
NEO				*e*Sn	**Sn**	18 32 30.8	+0.1
KFL	**Anninata**	**1.40**	**268**	P	**Pn**	18 32 16.5	+0.5
KFL	**Anninata**	**1.40**	**268**	P	**Pn**	18 32 16.5	+0.5
AOS	**Alonnisos**	**1.43**	**46**	P	**Pn**	18 32 14.9	-1.5
AOS	**Alonnisos**	**1.43**	**46**	P	**Pn**	18 32 14.9	-1.5
PYL	**PYLOS**	**1.44**	**207**	*e*PN	**Pn**	18 32 16.5	0.0
PYL	**PYLOS**	**1.44**	**207**	P	**Pn**	18 32 16.4	-0.1
PYL	**PYLOS**	**1.44**	**207**	P	**Pn**	18 32 16.4	-0.1
THL	**Klokotos Trika**	**1.45**	**343**	*e*PN	**Pn**	18 32 16.5	-0.2
THL				*e*SN	**Sn**	18 32 36.8	+0.9
THL	**Klokotos Trika**	**1.45**	**343**	P	**Pn**	18 32 16.3	-0.4
THL				S	**Sn**	18 32 36.4	+0.5
THL	**Klokotos Trika**	**1.45**	**343**	P	**Pn**	18 32 16.3	-0.4
THL				S	**Sn**	18 32 36.4	+0.5
THL				*e*Sn	**Sn**	18 32 36.8	+0.9
VLI	**Veliai**	**1.49**	**168**	P	**Pn**	18 32 16.2	-1.0
VLI	**Veliai**	**1.49**	**168**	*e*PN	**Pn**	18 32 16.6	-0.6
VLI				*e*SN	**Sn**	18 32 37.4	+0.6
VLI	**Veliai**	**1.49**	**168**	P	**Pn**	18 32 16.5	-0.7
VLI				S	**Sn**	18 32 37.6	+0.8
VLI	**Veliai**	**1.49**	**168**	P	**Pn**	18 32 16.2	-1.0
VLI	**Veliai**	**1.49**	**168**	*e*Pn	**Pn**	18 32 16.6	-0.6
VLI				*e*Sn	**Sn**	18 32 37.4	+0.6
VLS	**Valsamata**	**1.55**	**271**	P	**Pn**	18 32 18.6	+0.5
VLS	**Valsamata**	**1.55**	**271**	*e*PN	**Pn**	18 32 18.3	+0.2
VLS	**Valsamata**	**1.55**	**271**	P	**Pn**	18 32 18.6	+0.5
VLS	**Valsamata**	**1.55**	**271**	*e*Pn	**Pn**	18 32 18.3	+0.2
VLS	**Valsamata**	**1.55**	**271**	P	**Pn**	18 32 18.6	+0.5
LKD2	**Lefkada island**	**1.61**	**293**	P	**Pn**	18 32 19.3	+0.3
LKD2	**Lefkada island**	**1.61**	**293**	P	**Pn**	18 32 19.3	+0.3
LIT	**Litokhoron**	**1.92**	**358**	P	**Pn**	18 32 22.3	-0.9
LIT	**Litokhoron**	**1.92**	**358**	P	**Pn**	18 32 22.3	-0.9
KYTH	**Kithira**	**1.93**	**169**	P	**Pn**	18 32 23.7	+0.4
KYTH	**Kithira**	**1.93**	**169**	P	**Pn**	18 32 23.7	+0.4
PAIG	**Paliouri**	**1.95**	**26**	P	**Pn**	18 32 22.2	-1.4
PAIG	**Paliouri**	**1.95**	**26**	P	**Pn**	18 32 22.2	-1.4
JAN	**Janina**	**1.99**	**318**	P	**Pg**	18 32 27.4	-1.1
JAN	**Janina**	**1.99**	**318**	P	**Pg**	18 32 27.4	-1.1
KZN	**Kozani**	**2.21**	**344**	P	**Pn**	18 32 27.8	+0.6
KZN	**Kozani**	**2.21**	**344**	*e*PN	**Pn**	18 32 27.8	+0.6
KZN	**Kozani**	**2.21**	**344**	*e*Pn	**Pn**	18 32 27.8	+0.6
PLG	**Polygyros**	**2.30**	**17**	P	**Pn**	18 32 27.0	-1.4
PLG	**Polygyros**	**2.30**	**17**	P	**Pn**	18 32 27.1	-1.3
PLG	**Polygyros**	**2.30**	**17**	P	**Pn**	18 32 27.1	-1.3
OUR	**Ouranopolis**	**2.42**	**27**	P	**Pn**	18 32 28.7	-1.3
OUR	**Ouranopolis**	**2.42**	**27**	P	**Pn**	18 32 28.7	-1.3
LSK	**Leskovik**	**2.49**	**323**	*e*PN	**Pn**	18 32 35.1	+4.1
LSK				*i* SN	**Pg**	18 32 40.4	+2.3
APE	**Apeiranthos**	**2.60**	**114**	P	**Pn**	18 32 31.9	-0.7
APE	**Apeiranthos**	**2.60**	**114**	P	**Pn**	18 32 31.9	-0.7
SRN	**Sarande**	**2.62**	**311**	*e*PN	**Pn**	18 32 34.1	+1.3
SRN				*i* SN	**Sn**	18 32 57.6	-7.1
SRN	**Sarande**	**2.62**	**311**	*e*Pn	**Pn**	18 32 34.1	+1.3
KEK	**Kerkira**	**2.64**	**306**	P	**Pg**	18 32 35.8	-5.2
KEK	**Kerkira**	**2.64**	**306**	P	**Pg**	18 32 35.8	-5.2
LIA	**Limnos Island**	**2.67**	**49**	*e*PN	**Pn**	18 32 33.4	-0.1
LIA	**Limnos Island**	**2.67**	**49**	*e*Pn	**Pn**	18 32 33.4	-0.1
KBN	**Korca**	**2.80**	**331**	*e*PN	**Pn**	18 32 42.2	+6.9
KBN				*i* SN	**Sn**	18 33 17.6	+8.4
KARN	**Karanos**	**2.98**	**158**	P	**Pn**	18 32 37.8	+0.1
KARN	**Karanos**	**2.98**	**158**	P	**Pn**	18 32 37.8	+0.1
BIA	**Bitola**	**3.00**	**342**	*e*Pn	**Pn**	18 32 38.8	+0.8
BIA				*e*Sg	**Sn**	18 33 18.2	+4.2
VAM	**Vamos**	**3.06**	**154**	P	**Pn**	18 32 39.9	+1.0
VAM	**Vamos**	**3.06**	**154**	P	**Pn**	18 32 39.4	+0.5
VAM	**Vamos**	**3.06**	**154**	P	**Pn**	18 32 39.4	+0.5
PRK	**Paraskevi**	**3.09**	**69**	P	**Pg**	18 32 43.9	-5.6
VAY	**Valandovo**	**3.14**	**0**	*i* Pn	**Pn**	18 32 39.7	-0.2
VAY				*e*Sg	**Sn**	18 33 20.0	+2.5
NVR	**Nevrokopi**	**3.32**	**17**	P	**Pn**	18 32 41.5	-1.0
NVR	**Nevrokopi**	**3.32**	**17**	P	**Pn**	18 32 41.5	-1.0
KRUS	**Krusevo**	**3.34**	**343**	*e*Pn	**Pn**	18 32 43.3	+0.6
RDO	**Rodhopi**	**3.75**	**37**	P	**Pn**	18 32 47.9	-0.4
RDO	**Rodhopi**	**3.75**	**37**	P	**Pn**	18 32 47.9	-0.4
NPS	**Neapolis**	**3.80**	**139**	P	**Pn**	18 32 52.5	+3.4
NPS	**Neapolis**	**3.80**	**139**	P	**Pn**	18 32 52.5	+3.4
PUK	**Puka**	**4.37**	**333**	*e*PN	**Pn**	18 32 59.3	+2.5
PUK	**Puka**	**4.37**	**333**	*e*PN	**Pn**	18 32 59.3	+2.5
VTS	**Vitosha**	**4.44**	**6**	⇑*i*P	**Pn**	18 32 58.2	+0.4
VTS	**Vitosha**	**4.44**	**6**	⇑*i*P	**Pn**	18 32 58.2	+0.4
BCI	**Bajram Curri**	**4.60**	**336**	*e*PN	**Pn**	18 33 02.3	+2.3
BCI	**Bajram Curri**	**4.60**	**336**	*e*Pn	**Pn**	18 33 02.3	+2.3
BARS	**Barje**	**4.67**	**353**	*e*Pn	**Pn**	18 33 00.4	-0.5
PIPA	**Pietrapaola**	**4.67**	**288**	Pn	**Pn**	18 33 02.1	+1.1
PIPA	**Pietrapaola**	**4.67**	**288**	Pn	**Pn**	18 33 02.1	+1.1
TAR1	**Taranto**	**4.71**	**301**	*e*Pn	**Pn**	18 33 00.9	-0.7
ORI	**Oriolo Calabro**	**5.11**	**294**	Pn	**Pn**	18 33 10.5	+3.4
ORI	**Oriolo Calabro**	**5.11**	**294**	Pn	**Pn**	18 33 10.5	+3.4
SG1	**Sgolgore (BA)**	**5.27**	**302**	*e*Pn	**Pn**	18 33 09.7	+0.5
SG1				*e*Sn	**Sn**	18 34 07.1	-2.9
CUC	**Castrocucco**	**5.55**	**291**	Pn	**Pn**	18 33 15.5	+2.4
CDT	**Castel del Mon**	**5.65**	**303**	*e*Pn	**Pn**	18 33 15.0	+0.5
CDT				*e*Sn	**Sn**	18 34 20.1	+0.6
ACER	**Acerenza**	**5.75**	**299**	*i* Pnu		18 33 16.5	
STON	**Ston**	**5.97**	**323**	*e*Pn	**Pn**	18 33 16.8	-2.1
STON				Sn	**Sn**	18 34 22.6	-4.8
STON	**Ston**	**5.97**	**323**	*e*Pn	**Pn**	18 33 16.7	-2.2
SGO	**Sicignano**	**6.10**	**295**	Pn	**Pn**	18 33 21.4	+0.7
SGO	**Sicignano**	**6.10**	**295**	Pn	**Pn**	18 33 21.4	+0.7
DIVS	**Divibare**	**6.22**	**343**	*e*Pn	**Pn**	18 33 23.5	+1.2
BZS	**Buzias**	**7.47**	**355**	⇓*i*P	**Pn**	18 33 40.2	+0.8
BZS	**Buzias**	**7.47**	**355**	⇓*i*P	**Pn**	18 33 40.2	+0.8
VOIR		**7.49**	**14**	⇓*i*P	**Pn**	18 33 40.1	+0.5
VOIR		**7.49**	**14**	⇓*i*P	**Pn**	18 33 40.1	+0.5
MLR	**Muntele Rosu**	**7.73**	**18**	⇑*i*P	**Pn**	18 33 43.2	+0.2
MLR	**Muntele Rosu**	**7.73**	**18**	⇑*i*P	**Pn**	18 33 43.2	+0.2
PLOR	**Plostina**	**8.25**	**20**	⇑*i*P	**Pn**	18 33 51.0	+0.9
PLOR	**Plostina**	**8.25**	**20**	⇑*i*P	**Pn**	18 33 51.0	+0.9
NVLJ	**Novalja**	**8.61**	**320**	*e*Pn	**Pn**	18 33 53.7	-1.3
NVLJ				Sn	**Sn**	18 35 28.5	-3.7
NVLJ	**Novalja**	**8.61**	**320**	*e*Pn	**Pn**	18 33 53.6	-1.4
NVLJ				Sn	**Sn**	18 35 28.5	-3.7
BRTR	**Keskin Array B**	**8.77**	**76**	Pn	**Pn**	18 33 58.0	+0.8
	0.2nm,0.3s,baz=260,slow=12,SNR=5.1						
BRTR	**Keskin Array B**	**8.77**	**76**	Pn	**Pn**	18 33 58.0	+0.8
BOJS	**Bojanci**	**9.12**	**326**	*i* Pn	**Pn**	18 34 02.4	+0.3
BOJS				*i* Sn	**Sn**	18 35 38.6	-6.3
BOJS	**Bojanci**	**9.12**	**326**	*i* Pn	**Pn**	18 34 02.4	+0.3
CRES	**Cresnjev**	**9.29**	**328**	*i* Pn	**Pn**	18 34 03.7	-0.6
CRES				*i* Sn	**Sn**	18 35 45.7	-3.3
CRES	**Cresnjev**	**9.29**	**328**	*i* Pn	**Pn**	18 34 03.7	-0.7
CRES				*i* Sn	**Sn**	18 35 45.7	-3.2
JAVS	**Javornik**	**9.96**	**323**	*i* Pn	**Pn**	18 34 12.9	-0.7
JAVS				*i* Sn	**Sn**	18 36 00.1	-5.4
JAVS	**Javornik**	**9.96**	**323**	*i* Pn	**Pn**	18 34 12.9	-0.7
MMAI	**Mount Meron Ar**	**11.65**	**112**	Pn	**Pn**	18 34 38.7	+1.9
	0.4nm,0.3s,baz=298,slow=12,SNR=3.6						
MALT	**Malatya**	**12.48**	**84**	P	**Pn**	18 34 52.5	+4.5
	4.9nm,1.1s						
EIL	**Elat**	**13.32**	**126**	Pn	**Pn**	18 35 05.1	+5.5
	0.2nm,0.3s,baz=1.1,slow=15,SNR=3.9						
MBDF	**Montbardon**	**13.52**	**304**	*e*P	**Pn**	18 35 06.7	+4.5
	4.5nm,0.6s						
MBDF	**Montbardon**	**13.52**	**304**	*e*P	**Pn**	18 35 06.7	+4.5
	2.3nm,0.6s						
LPG	**La Plagne**	**13.86**	**307**	*e*P	**Pn**	18 35 10.6	+3.8
LPL	**La Plagne**	**13.88**	**307**	*e*P	**Pn**	18 35 10.8	+3.7
CABF	**La Chapelle**	**14.78**	**310**	*e*P	**Pn**	18 35 22.4	+3.0
	26nm,1.2s						
CABF	**La Chapelle**	**14.78**	**310**	*e*P	**Pn**	18 35 22.4	+3.0
	13nm,1.2s						
CABF	**La Chapelle**	**14.78**	**310**	*e*P	**Pn**	18 35 22.4	+3.0
	13nm,1.2s						
VIVF	**Saint-Julien-l**	**14.96**	**302**	*e*P	**Pn**	18 35 24.9	+3.1
VIVF	**Saint-Julien-l**	**14.96**	**302**	*e*P	**Pn**	18 35 24.9	+3.1
HINF	**Hinteralfeld**	**14.97**	**315**	*e*P	**Pn**	18 35 23.9	+1.9
CDF	**Champ du Feu**	**15.09**	**318**	*e*P	**Pn**	18 35 25.7	+2.1
CDF	**Champ du Feu**	**15.09**	**318**	*e*P	**Pn**	18 35 25.7	+2.1
HAU	**Haudompre**	**15.36**	**315**	*e*P	**Pn**	18 35 32.4	+5.3
HAU	**Haudompre**	**15.36**	**315**	*e*P	**Pn**	18 35 32.4	+5.3
SMF	**Signal de Mont**	**16.18**	**307**	*e*P	**Pn**	18 35 39.3	+1.5
	7.2nm,0.7s						
SMF	**Signal de Mont**	**16.18**	**307**	*e*P	**Pn**	18 35 39.3	+1.5
	3.6nm,0.7s						
SMF	**Signal de Mont**	**16.18**	**307**	*e*P	**Pn**	18 35 39.3	+1.5
	3.6nm,0.7s						
LOR	**Lormes**	**16.44**	**310**	*e*P	**Pn**	18 35 43.8	+2.7
	6.0nm,0.8s						
LOR				*e*MLR	MLR		
	comp=Z,53nm,19.6s						
LOR	**Lormes**	**16.44**	**310**	*e*P	**Pn**	18 35 43.8	+2.7
	comp=Z,3.0nm,0.8s						
LOR	**Lormes**	**16.44**	**310**	*e*P	**Pn**	18 35 43.8	+2.7
	comp=Z,3.0nm,0.8s						
AVF	**Avril sur Loir**	**16.55**	**307**	*e*P	**Pn**	18 35 45.0	+2.5
	comp=Z,15nm,1.1s						
AVF	**Avril sur Loir**	**16.55**	**307**	*e*P	**Pn**	18 35 45.0	+2.5
	comp=Z,7.3nm,1.1s						
AVF	**Avril sur Loir**	**16.55**	**307**	*e*P	**Pn**	18 35 45.0	+2.5
	comp=Z,7.3nm,1.1s						
SSF	**Saint Saulge**	**16.57**	**308**	*e*P	**Pn**	18 35 45.8	+3.1
	comp=Z,15nm,1.0s						
SSF	**Saint Saulge**	**16.57**	**308**	*e*P	**Pn**	18 35 45.8	+3.1
	comp=Z,7.7nm,1.0s						
SSF	**Saint Saulge**	**16.57**	**308**	*e*P	**Pn**	18 35 45.8	+3.1
	comp=Z,7.7nm,1.0s						
BGF	**Bois d'Agland**	**16.77**	**306**	*e*P	**Pn**	18 35 48.7	+3.4
	comp=Z,8.4nm,0.7s						
BGF	**Bois d'Agland**	**16.77**	**306**	*e*P	**Pn**	18 35 48.7	+3.4
	comp=Z,4.2nm,0.6s						
BGF	**Bois d'Agland**	**16.77**	**306**	*e*P	**Pn**	18 35 48.7	+3.4
	comp=Z,4.2nm,0.7s						
MFF	**Saint Martin d**	**18.72**	**304**	*e*P	**Pn**	18 36 10.7	+1.3
	comp=Z,39nm,1.3s						
MFF	**Saint Martin d**	**18.72**	**304**	*e*P	**Pn**	18 36 10.7	+1.3
	comp=Z,20nm,1.3s						
LDF	**La Druitiere**	**19.43**	**310**	*e*P	**Pn**	18 36 18.9	+1.0
	comp=Z,4.9nm,0.5s						
LDF	**La Druitiere**	**19.43**	**310**	*e*P	**Pn**	18 36 18.9	+1.0
	comp=Z,2.5nm,0.5s						
FLN	**La Foliniere**	**19.71**	**310**	*e*P	**Pn**	18 36 20.6	-0.8
	comp=Z,4.8nm,0.4s						
FLN	**La Foliniere**	**19.71**	**310**	*e*P	**Pn**	18 36 20.6	-0.8
	comp=Z,2.4nm,0.4s						
FLN	**La Foliniere**	**19.71**	**310**	*e*P	**Pn**	18 36 20.6	-0.8
	comp=Z,2.4nm,0.4s						
GRR	**Gorron**	**19.80**	**309**	*e*P	**Pn**	18 36 20.4	-2.0
GRR	**Gorron**	**19.80**	**309**	*e*P	**Pn**	18 36 20.4	-2.0
ESDC	**Sonseca Array**	**20.67**	**282**	P	**P**	18 36 27.1	-3.3
	comp=Z,1.3nm,0.6s,baz=76,slow=11,SNR=5.8						
ESDC	**Sonseca Array**	**20.67**	**282**	P	**P**	18 36 27.1	-3.3
SGMF

NVAR	**Mina Array Bea**	87.38	51	P		**P**	19 12 52.4 +0.5
	0.6nm,0.4s,mb3.7,baz=260,slow=6.9,SNR=3.7						
LPAZ	**La Paz**	148.30	100	PKPbc		PKPbc	19 12 52.9 +2.0
	0.9nm,0.7s,baz=315,slow=1.4,SNR=5.2						
LPAZ	**La Paz**	148.30	100	PKPbc		PKPbc	19 12 52.9 +2.0

NIED ***25*** *19:05:00,32.°20N×131.°10E,h107km,Mw4.3 Best double couple: M₀3.00000×10¹⁵ NP1:φs13.00000°, δ72.00000°,λ84.00000°. NP2:φs212.00000°,δ19.00000°, λ107.00000°.*

ISCJB ***25*** *19:05:19.5±0.3,32.°15N±0.°05×131.°07E±0.°06, h119km±2km,mb4.1/26,Error ellipse: s-maj=9.0km s-min=7.1km az=29.7*

NEIC ***25*** *19:05:20.3±0.3,32.°23N×131.°03E,mb4.4/9,Error ellipse: s-maj=8.0km s-min=6.6km az=109.0*

IDC ***25*** *19:05:20.9±0.7,32.°23N×131.°05E,h118km±7km,mb3.8/16, mb1 3.9/20,mb1mx3.9/29,mbtmp3.8/20,Error ellipse: s-maj=15.4km s-min=10.1km az=83.0*

BJI ***25*** *19:05:20.1,32.°20N×131.°08E,h121km,mB4.6/5,mb4.1/8*

JMA ***25*** *19:05:21.2±0.1,32.°22N×131.°07E,h109km±1km,M3.8 Broadband fault plane solution: P waves. NP1: φs232.00000°,δ22.00000°,λ130.00000°. NP2: φs10.00000°,δ73.00000°,λ76.00000°. Principal axes: T Plg59.0000°, Azm260.0000°; N Plg14.0000°, Azm14.0000°; P Plg27.0000°, Azm111.0000°;*

JMA Felt II J1.

ISC 25 19:05:20.5±0.3,32.°18N±0.°05×131.°06E±0.°06,h115km±2km, h119km±3.7km:pP-P,n67,σ0§80/74,mb4.1/26,2C-2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTZ	**Takazaki**	**0.28**	**175**	⇑P	**Pn**	**19 05 36.8**	**0.0**
JTZ				*e*S	**Sn**	19 05 48.7	-0.4
JTSN	**Tsuno**	**0.38**	**80**	⇑P	**Pn**	**19 05 37.3**	**+0.1**
JTSN				*e*S	**Sn**	19 05 49.4	-0.4
JIU2	**Izumi 2**	**0.42**	**330**	⇓P	**Pn**	**19 05 37.4**	**-0.1**
JIU2				S	**Sn**	19 05 49.3	-0.9
JNU	**Nakatsue**	**0.95**	**351**	*e*P	**Pn**	**19 05 41.4**	**-0.2**
JSJ	**Shimokoshiki**	**1.25**	**247**	⇓P	**Pn**	**19 05 45.4**	**+0.6**
JOW	**Kunigami**	**5.86**	**205**	P	**Pn**	**19 06 45.2**	**+0.2**
	baz=98,slow=18						
JOW				S	**Sn**	19 07 49.1	-1.8
	3.2nm,0.3s,baz=106,slow=28,SNR=13						
JOW	**Kunigami**	**5.86**	**205**	P	**Pn**	**19 06 45.2**	**+0.2**
JOW				S	**Sn**	19 07 49.1	-1.8
KSRS	**Korea Array**	**5.86**	**335**	P	**Pn**	**19 06 46.6**	**+1.7**
	2.7nm,0.3s,baz=153,slow=14,SNR=30						
MAJO	**Matsushiro**	**7.33**	**52**	*e*P	**Pn**	**19 07 05.7**	**+0.8**
	10nm,0.3s						
MAT	**Matsushiro**	**7.33**	**52**	P	**Pn**	**19 07 05.9**	**+1.0**
MAT				S	**Sn**	19 08 23.3	-3.3
MJAR	**Matsushiro Arr**	**7.34**	**52**	P	**Pn**	**19 07 05.9**	**+0.9**
	5.1nm,0.3s,baz=193,slow=13,SNR=71						
MJAR				S	**Sn**	19 08 18.8	-7.8
	0.9nm,0.3s,baz=226,slow=16,SNR=4.8						
JHJ	**Hachijo jima 2**	**7.42**	**80**	P	**Pn**	**19 07 06.9**	**+0.9**
	13nm,0.3s,baz=258,slow=19,SNR=3.9						
ENH	**Enshi**	**18.55**	**270**	*e*P	**P**	**19 09 30.1**	**+1.8**
	15nm,0.8s						
HIA	**Hailar**	**19.06**	**337**	*e*P	**P**	**19 09 34.2**	**+0.5**
LZH	**Lanzhou**	**22.83**	**287**	*e*P	**P**	**19 10 14.5**	**+0.7**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.2						
ULN	**Ulaanbaatar**	**24.01**	**318**	*e*P	**P**	**19 10 25.2**	**+0.8**
	comp=Z,7.2nm,0.6s,mb4.2						
SONM	**Songino Array**	**24.37**	**317**	P	**P**	**19 10 28.5**	**+0.8**
	comp=Z,7.5nm,0.8s,mb4.1,baz=136,slow=10.0,SNR=49						
SONM				PcP	PcP	19 14 04.7	+0.8
	comp=Z,0.3nm,0.4s,baz=152,slow=1.4,SNR=5.5						
DAV	**Davao City (W)**	**25.50**	**193**	P	**P**	**19 10 39.0**	**+0.8**
	comp=Z,85nm,0.4s,baz=99,slow=3.6,SNR=2.4						
GTA	**Gaotai**	**26.26**	**295**	*e*P	**P**	**19 10 45.3**	**+0.4**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
CMAR	**Chiang Mai Arr**	**31.95**	**252**	P	**P**	**19 11 36.5**	**+1.0**
	comp=Z,0.7nm,0.6s,mb3.6,baz=51,slow=7.5,SNR=8.7						
ZALV	**Zalesovo Beam**	**39.27**	**318**	P	**P**	**19 12 37.7**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.7,baz=103,slow=4.6,SNR=2.1						
ZALV				PcP	PcP	19 14 43.6	-0.5
	comp=Z,0.7nm,0.4s,baz=114,slow=3.6,SNR=6.3						
MK31	**Makanchi Array**	**39.73**	**306**	*e*P	**P**	**19 12 41.7**	**+0.1**
MKAR	**Makanchi Array**	**39.73**	**306**	P	**P**	**19 12 41.7**	**+0.2**
	comp=Z,6.0nm,0.5s,mb4.7,baz=91,slow=10,SNR=45						
MKAR				PcP	PcP	19 14 45.5	-0.2
	comp=Z,0.4nm,0.3s,baz=75,slow=3.7,SNR=3.2						
MKAR	**Makanchi Array**	**39.73**	**306**	P	**P**	**19 12 41.7**	**+0.1**
MKAR				PcP	PcP	19 14 45.5	-0.2
KURK	**Kurchatov**	**42.46**	**312**	*e*P	**P**	**19 13 03.8**	**-0.1**
KURK				*e*pP	pP	19 13 33.2	+3.0
TKM2	**Tokmak 2**	**44.54**	**300**	*e*P	**P**	**19 13 21.8**	**+1.2**
TKM2				*e*pP	pP	19 13 47.4	+0.3
BVAR	**Borovoye Array**	**47.68**	**315**	P	**P**	**19 13 44.4**	**-0.6**
	comp=Z,1.3nm,0.5s,mb4.0,baz=83,slow=12,SNR=4.6						
BVAR				PcP	PcP	19 15 12.5	-0.2
	comp=Z,2.3nm,0.4s,baz=123,slow=1.8,SNR=7.5						
WRA	**Warramunga Arr**	**51.92**	**176**	P	**P**	**19 14 17.9**	**+0.4**
	comp=Z,2.5nm,0.7s,mb4.3,baz=355,slow=8.1,SNR=28						
WRA				pP	pP	19 14 44.2	-0.5
	comp=Z,1.0nm,0.9s,baz=352,slow=8.2,SNR=3.2						
ASAR	**Alice Springs**	**55.60**	**177**	P	**P**	**19 14 45.0**	**+0.8**
	comp=Z,1.5nm,0.6s,mb4.2,baz=359,slow=6.4,SNR=91						
ASAR				pP	pP	19 15 12.3	+0.6
	comp=Z,0.8nm,0.8s,baz=4.5,slow=7.9,SNR=4.0						
ILAR	**Eielson Array**	**58.05**	**30**	P	**P**	**19 14 59.8**	**-1.2**
	comp=Z,0.2nm,0.7s,mb3.2,baz=279,slow=6.0,SNR=3.0						
ILAR				pP	pP	19 15 29.8	+1.0
	comp=Z,0.7nm,0.7s,baz=286,slow=7.5,SNR=6.1						
INK	**Inuvik**	**62.47**	**25**	P	**P**	**19 15 31.8**	**+0.8**
	comp=Z,1.9nm,1.0s,mb4.1,baz=206,slow=19,SNR=4.0						
STKA	**Stephens Creek**	**64.49**	**170**	P	**P**	**19 15 45.5**	**+0.7**
	comp=Z,1.9nm,0.9s,mb3.9,baz=90,slow=23,SNR=6.0						
STKA	**Stephens Creek**	**64.49**	**170**	P	**P**	**19 15 45.8**	**+1.0**
ARCES	**ARCESS Array B**	**65.41**	**338**	P	**P**	**19 15 50.7**	**+0.4**
	comp=Z,6.5nm,1.1s,mb4.3,baz=72,slow=9.2,SNR=5.9						
FINES	**FINESS Array B**	**68.93**	**330**	P	**P**	**19 16 11.9**	**-0.8**
	comp=Z,2.4nm,0.3s,mb4.5,baz=66,slow=5.6,SNR=51						
FINES				PcP	PcP	19 16 34.7	-1.5
	comp=Z,1.0nm,0.4s,baz=61,slow=4.0,SNR=3.8						
AKASG	**Malin Array Be**	**72.64**	**319**	P	**P**	**19 16 33.3**	**-2.0**
	comp=Z,1.5nm,0.3s,mb4.2,baz=57,slow=6.4,SNR=4.6						
AKASG	**Malin Array Be**	**72.64**	**319**	P	**P**	**19 16 33.3**	**-2.0**
NB2	**NORSAR Subarra**	**75.07**	**334**	P	**P**	**19 16 48.0**	**-1.3**
	comp=Z,2.7nm,0.7s,mb4.1,baz=47,slow=5.9						
NOA	**NORSAR Array B**	**75.07**	**334**	P	**P**	**19 16 48.4**	**-0.9**
	comp=Z,1.6nm,0.5s,mb4.0,baz=50,slow=5.7,SNR=8.8						
NOA	**NORSAR Array B**	**75.07**	**334**	P	**P**	**19 16 48.4**	**-0.9**
BRTR	**Keskin Array B**	**75.35**	**308**	P	**P**	**19 16 50.9**	**-0.4**
	comp=Z,1.1nm,1.0s,mb3.5,baz=61,slow=3.1,SNR=3.8						
GERES	**GERESS Array B**	**81.92**	**324**	P	**P**	**19 17 27.2**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.7,baz=75,slow=11,SNR=2.9						
NVAR	**Mina Array Bea**	**84.64**	**48**	P	**P**	**19 17 42.5**	**+1.2**
	comp=Z,0.6nm,0.4s,mb3.9,baz=291,slow=6.8,SNR=4.1						
CDF	**Champ du Feu**	**85.35**	**326**	*e*P	**P**	**19 17 44.6**	**0.0**
HINF	**Hinteralfeld**	**85.97**	**326**	*e*P	**P**	**19 17 47.2**	**-0.5**
MEZF	**Maizieres J'vi**	**86.32**	**327**	*e*P	**P**	**19 17 49.9**	**+0.5**
	comp=Z,4.6nm,0.4s,mb4.4						
MEZF	**Maizieres J'vi**	**86.32**	**327**	*e*P	**P**	**19 17 49.9**	**+0.5**
	comp=Z,4.6nm,0.4s,mb4.8						
SFTF	**Sexfontaines**	**86.54**	**327**	*e*P	**P**	**19 17 50.0**	**-0.5**
CABF	**La Chapelle**	**87.20**	**326**	*e*P	**P**	**19 17 52.7**	**-1.0**
LPL	**La Plagne**	**87.67**	**324**	*e*P	**P**	**19 17 55.7**	**-0.3**
	comp=Z,6.1nm,0.8s,mb4.4						
LPL	**La Plagne**	**87.67**	**324**	*e*P	**P**	**19 17 55.7**	**-0.3**
	comp=Z,3.0nm,0.8s,mb4.4						
LPG	**La Plagne**	**87.67**	**324**	*e*P	**P**	**19 17 55.9**	**-0.1**
	comp=Z,5.1nm,0.6s,mb4.4						
LPG	**La Plagne**	**87.67**	**324**	*e*P	**P**	**19 17 55.9**	**-0.1**
	comp=Z,2.5nm,0.6s,mb4.4						
SSF	**Saint Saulge**	**88.08**	**327**	*e*P	**P**	**19 17 57.3**	**-0.6**
MBDF	**Montbardon**	**88.21**	**324**	*e*P	**P**	**19 17 58.1**	**-0.5**
SMF	**Signal de Mont**	**88.23**	**327**	*e*P	**P**	**19 17 57.9**	**-0.8**
	comp=Z,8.9nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**88.23**	**327**	*e*P	**P**	**19 17 57.9**	**-0.8**
	comp=Z,4.4nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	**88.35**	**327**	*e*P	**P**	**19 17 58.6**	**-0.6**
	comp=Z,3.7nm,0.7s,mb4.2						
AVF	**Avril sur Loir**	**88.35**	**327**	*e*P	**P**	**19 17 58.6**	**-0.6**
	comp=Z,1.9nm,0.7s,mb4.2						
ORIF	**Oris-en-Rattie**	**88.52**	**324**	*e*P	**P**	**19 17 59.4**	**-0.6**
VIVF	**Saint-Julien-l**	**89.15**	**325**	*e*P	**P**	**19 18 02.2**	**-0.8**
TCF	**Toulx Ste Croi**	**89.25**	**327**	*e*P	**P**	**19 18 02.9**	**-0.6**
	comp=Z,8.0nm,0.8s,mb4.5						
TCF	**Toulx Ste Croi**	**89.25**	**327**	*e*P	**P**	**19 18 02.9**	**-0.6**
	comp=Z,4.0nm,0.8s,mb4.5						
MFF	**Saint Martin d**	**90.07**	**329**	*e*P	**P**	**19 18 06.8**	**-0.5**
LASF	**Ste Croix**	**90.12**	**325**	*e*P	**P**	**19 18 06.9**	**-0.7**
RJF	**Les Rejaudoux**	**90.31**	**327**	*e*P	**P**	**19 18 08.1**	**-0.3**
CAF	**Calviac**	**90.35**	**326**	*e*P	**P**	**19 18 08.4**	**-0.2**

ISCJB ***25*** *19:07:34.9±0.5,37.°16N±0.°03×71.°98E±0.°06,h139km±7km, mb3.6/6,Error ellipse: s-maj=8.6km s-min=4.5km az=170.6*

BJI ***25*** *19:07:34.1,37.°47N×71.°59E,h125km,mb3.7/2*

NEIC ***25*** *19:07:34.0±0.6,37.°09N×71.°84E,h112km±8km,mb4.4/11, Error ellipse: s-maj=8.9km s-min=5.4km az=67.0*

IDC ***25*** *19:07:37.3±7.0,37.°28N×71.°61E,h127km±59km,mb3.5/5, mb1 3.6/8,mb1mx3.3/25,mbtmp3.5/8,Error ellipse: s-maj=47.0km s-min=23.9km az=173.0*

NNC ***25*** *19:07:41.1±4.9,37.°78N×71.°43E,h196km±53km,mb2.8, mpv3.9,Error ellipse: s-maj=47.1km s-min=26.8km az=21.0*

ISC 25 19:07:35.4±0.5,37.°13N±0.°03×71.°94E±0.°07,h125km±7km, n47,σ1§16/58,mb3.7/6,4C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.29**	**180**	⇑P	**Pn**	**19 08 27.8**	**+2.0**
CEP				S	**Sn**	19 09 08.0	+3.4
KBL	**Kabul**	**3.49**	**223**	*e*P	**Pn**	**19 08 26.8**	**-1.5**
CHCP	**Chirah Chowk**	**3.62**	**162**	P	**Pn**	**19 08 33.3**	**+3.2**
KSH	**Kashi**	**3.97**	**52**	P	**Pn**	**19 08 33.0**	**-1.6**
KSH				S	**Sn**	19 09 13.5	-7.1
KSH				smax			
	comp=N,160nm,0.5s						
KSH				smax			
	comp=E,240nm,0.9s						
THW	**Thamme Wali**	**4.32**	**182**	P	**Pn**	**19 08 40.4**	**+1.0**
AML	**Almayashu**	**5.18**	**15**	P	**Pn**	**19 08 50.9**	**+0.1**
	SNR=34						
AML	**Almayashu**	**5.18**	**15**	*e*P	**Pn**	**19 08 50.6**	**-0.2**
SARP	**Sargodha**	**5.23**	**173**	P	**Pn**	**19 08 52.3**	**+0.8**
UCH	**Uchtor**	**5.47**	**20**	P	**Pn**	**19 08 55.1**	**+0.4**
	SNR=15						
UCH	**Uchtor**	**5.47**	**20**	*e*P	**Pn**	**19 08 54.7**	**0.0**
	comp=E,20nm,0.5s						
EKS2	**Erkin-Say**	**5.71**	**14**	P	**Pn**	**19 08 57.9**	**0.0**
	SNR=17						
EKS2	**Erkin-Say**	**5.71**	**14**	*e*P	**Pn**	**19 08 57.4**	**-0.5**
	comp=E,11nm,0.8s						
AAK	**Ala-Archa**	**5.84**	**19**	P	**Pn**	**19 09 00.3**	**+0.6**
	SNR=23						
KBK	**Karagaybulak**	**5.99**	**22**	P	**Pn**	**19 09 03.1**	**+1.4**
	SNR=7.9						
KK31	**Karatay Array**	**6.07**	**350**	⇑P	**Pn**	**19 08 59.5**	**-3.3**
	comp=E,4.2nm,0.3s,baz=181,slow=14,SNR=152						
KK31				⇑S	**Sn**	19 10 03.4	-7.5
	comp=E,6.1nm,0.4s,baz=177,slow=23,SNR=9.4						
KKAR	**Karatay Array**	**6.07**	**350**	*e*P	**Pn**	**19 08 59.2**	**-3.6**
	comp=E,10nm,0.3s						
ULHL	**Ulahol**	**6.10**	**32**	P	**Pn**	**19 09 04.2**	**+1.1**
	SNR=11						
CHMS	**Chumysh**	**6.25**	**19**	P	**Pn**	**19 09 05.2**	**0.0**
	SNR=21						
TKM2	**Tokmak 2**	**6.43**	**25**	⇓P	**Pn**	**19 09 08.3**	**+0.6**
	comp=E,14nm,0.9s						
TKM2				⇓S	**Sn**	19 10 19.1	-0.6
	comp=E,15nm,1.2s						
TKM2	**Tokmak 2**	**6.43**	**25**	P	**Pn**	**19 09 08.4**	**+0.7**
	SNR=14						
TKM2	**Tokmak 2**	**6.43**	**25**	*e*P	**Pn**	**19 09 07.8**	**+0.1**
	comp=E,13nm,0.8s						
USP	**Ospenovka**	**6.44**	**17**	P	**Pn**	**19 09 07.1**	**-0.7**
	SNR=13						
SDNR	**Sundarnagar**	**6.99**	**142**	*e*PKP	**Pn**	**19 09 18.5**	**+3.3**
SDNR				*e*S	**Sn**	19 10 31.5	-1.7
SMLA	**Simla**	**7.38**	**143**	*i* P	**Pn**	**19 09 22.0**	**+1.3**
SMLA				*i* S	**Sn**	19 10 40.4	-2.5
SMLA				*i* S	**Sn**	19 10 40.9	-2.0
SMLA				⇓		19 10 47.6	
	comp=E,836nm,0.4s						
SMLA				⇓		19 10 48.3	
	comp=N,1μm,0.3s						
MKAR	**Makanchi Array**	**12.35**	**35**	P	**Pn**	**19 10 28.1**	**+1.3**
	comp=N,0.1nm,0.3s,baz=222,slow=14,SNR=13						
MKAR	**Makanchi Array**	**12.35**	**35**	P	**Pn**	**19 10 28.1**	**+1.3**
DANN	**Dangsing**	**13.24**	**128**	*e*P	**Pn**	**19 10 38.2**	**-0.4**
	comp=N,13nm,0.4s						
KOLN	**Koldanda**	**13.55**	**130**	*e*P	**Pn**	**19 10 43.0**	**+0.4**
	comp=N,7.4nm,0.3s						
GKN	**Gorkha**	**14.04**	**127**	*e*P	**Pn**	**19 10 48.6**	**-0.2**
	comp=N,20nm,0.5s						
GKN				*e*S	**Sn**	19 13 19.4	-4.4
KURK	**Kurchatov**	**14.40**	**17**	*e*P	**Pn**	**19 10 56.7**	**+3.5**
	comp=N,2.7nm,0.9s						
KKN	**Kakani**	**14.60**	**126**	*e*P	**Pn**	**19 10 55.3**	**-0.6**
	comp=N,8.7nm,0.4s						
DMN	**Daman**	**14.61**	**127**	*e*P	**Pn**	**19 10 55.6**	**-0.4**
	comp=N,17nm,0.7s						
DMN				*e*S	**Sn**	19 13 32.8	-4.8
GUN	**Gumba**	**14.91**	**124**	*e*P	**Pn**	**19 10 58.9**	**-0.9**
AB31	**Akbulak array**	**14.93**	**328**	P	**Pn**	**19 10 54.1**	**-5.7**
	comp=N,1.4nm,0.6s,baz=132,slow=14,SNR=23						
AB31				S	**Sn**	19 13 27.1	-18
	comp=N,4.0nm,0.9s,baz=153,slow=23,SNR=6.9						
ABKAR	**Akbulak array**	**14.93**	**328**	*e*P	**Pn**	**19 10 53.9**	**-6.0**
	comp=N,1.1nm,0.3s						
AKTK	**Aktyubinsk**	**16.64**	**327**	P	**Pn**	**19 11 19.9**	**-1.1**
AKTO	**Aktyubinsk**	**16.64**	**327**	⇑P	**Pn**	**19 11 16.6**	**-4.4**
	comp=N,1.1nm,0.8s						
AKTO				⇓S	**S**	**19 14 09.1**	**-17**
	comp=N,0.7nm,0.8s						
AKTO	**Aktyubinsk**	**16.64**	**327**	P	**Pn**	**19 11 19.9**	**-1.1**
	comp=N,0.8nm,0.3s,baz=133,slow=10.0,SNR=10						
ZAA0	**Zalesovo Array**	**19.04**	**24**	*e*P	**P**	**19 11 48.3**	**+0.9**
ZALV	**Zalesovo Beam**	**19.04**	**24**	P	**P**	**19 11 48.5**	**+1.1**
	comp=N,0.6nm,0.3s,baz=233,slow=10,SNR=16						
GTA	**Gaotai**	**21.97**	**75**	*e*P	**P**	**19 12 25.5**	**+6.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.8						
SONM	**Songino Array**	**27.36**	**56**	P	**P**	**19 13 13.0**	**+4.4**
	comp=Z,0.4nm,0.8s,mb3.0,baz=255,slow=9.3,SNR=4.8						
FINES	**FINESS Array B**	**37.39**	**325**	P	**P**	**19 14 36.0**	**+0.3**
	comp=Z,1.7nm,0.9s,mb4.0,baz=128,slow=9.0,SNR=4.2						
ARCES	**ARCESS Array B**	**40.86**	**337**	P	**P**	**19 15 04.1**	**-0.4**
	comp=Z,4.2nm,0.8s,mb4.3,baz=111,slow=8.9,SNR=6.2						
NOA	**NORSAR Array B**	**44.34**	**323**	P	**P**	**19 15 32.2**	**-0.4**
	comp=Z,1.6nm,0.8s,mb3.9,baz=94,slow=7.8,SNR=6.1						
TORD	**Torodi Ar. Bea**	**66.48**	**269**	P	**P**	**19 18 11.7**	**-0.1**
	comp=Z,321nm,0.2s,baz=43,slow=6.2,SNR=2.0						
ILAR	**Eielson Array**	**73.97**	**16**	P	**P**	**19 18 57.1**	**+0.5**
	comp=Z,0.5nm,0.9s,mb3.2,baz=323,slow=6.0,SNR=5.2						

IDC ***25*** *19:28:26.2±1.7,61.°11S×58.°68W,h0km,mb4.0/5, mb1 4.1/5,mb1mx3.9/16,mbtmp4.0/5,MS3.3/4,Ms1 3.3/4, ms1mx2.9/22,Error ellipse: s-maj=60.7km s-min=42.3km az=74.0*

NEIC ***25*** *19:28:28.3±1.0,60.°89S×57.°49W,h10km,mb4.6/1,Error ellipse: s-maj=28.0km s-min=21.5km az=114.0*

ISC 25 19:28:25.4±2.1,60.°8S±0.°2×58.°5W±0.°5,h10km,n16, σ0§22/9,mb3.9/5,MS3.3/4,South Shetland Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**4.77**	**210**	Pn	**Pn**	**19 29 43.3**	**+6.2**
	3.3nm,0.3s,baz=60,slow=13,SNR=11						
PMSA				Sn	**Sn**	19 30 32.3	0.0
	3.3nm,0.3s,baz=266,slow=20,SNR=6.8						
PLCA	**Paso Flores**	**21.38**	**334**	LR	LR	19 40 47.3	
	comp=Z,82nm,18.4s,MS3.2,baz=314,slow=34						
SNAA	**Sanae**	**23.94**	**140**	P	**P**	**19 33 39.0**	**-0.1**
	0.4nm,0.5s,mb3.1,baz=175,slow=17,SNR=3.7						
SNAA				LR	LR	19 40 33.0	
	comp=Z,24nm,21.2s,MS2.6,baz=16,slow=31						
SNAA	**Sanae**	**23.94**	**140**	P	**P**	**19 33 39.0**	**-0.1**
SNAA				LR	LR	19 40 33.0	
QSPA	**South Pole Qui**	**29.48**	**180**	P	**P**	**19 34 29.2**	**+0.3**
	6.2nm,0.7s,mb4.5,baz=156,slow=3.5,SNR=44						
QSPA	**South Pole Qui**	**29.48**	**180**	*e*P	**P**	**19 34 28.7**	**-0.1**
	8.8nm,0.9s,mb4.5						
MAW	**Mawson**	**45.04**	**152**	P	**P**	**19 36 40.6**	**+0.1**
	0.8nm,0.4s,mb3.9,baz=187,slow=6.7,SNR=8.7						
SUR	**Sutherland**	**57.23**	**99**	LR	LR	19 59 17.9	
	comp=Z,34nm,18.7s,MS3.5,baz=70,slow=32						
BOSA	**Boshof**	**62.49**	**100**	LR	LR	19 59 46.9	
	comp=Z,56nm,19.0s,MS3.8,baz=346,slow=30						
ASAR	**Alice Springs**	**95.28**	**191**	P	**P**	**19 41 49.5**	**+0.3**
	0.2nm,0.5s,mb3.8,baz=169,slow=4.3,SNR=5.8						
WRA	**Warramunga Arr**	**98.92**	**192**	P	**P**	**19 42 05.4**	**-0.3**
	0.4nm,0.6s,mb4.2,baz=177,slow=4.0,SNR=12						
CMAR	**Chiang Mai Arr**	**134.80**	**149**	PKP	PKPdf	19 47 46.4	+2.4
	0.8nm,0.5s,baz=220,slow=2.5,SNR=5.6						
ILAR	**Eielson Array**	**141.36**	**317**	PKP	PKPdf	19 47 57.6	+3.1
	1.1nm,0.7s,baz=172,slow=2.3,SNR=17						
ARCES	**ARCESS Array B**	**142.89**	**35**	PKP	PKPdf	19 47 59.6	+2.5
	1.0nm,0.4s,baz=227,slow=2.9,SNR=16						
MKAR	**Makanchi Array**	**153.44**	**104**	PKPbc	PKPbc	19 48 25.7	+3.1
	0.4nm,0.3s,baz=177,slow=1.5,SNR=4.1						
SONM	**Songino Array**	**164.40**	**139**	PKPab	PKPab	19 49 23.5	+1.0
	0.5nm,0.7s,baz=207,slow=4.5,SNR=3.5						

BJI ***25*** *19:34:05.4,63.°90N×148.°80W,h10km,mB4.8/4,mb4.8/7, Ms4.3/3,Ms7 4.1/4*

ISCJB ***25*** *19:34:08.8±0.2,63.°91N±0.°02×148.°99W±0.°05,h10km, mb4.2/30,MS3.3/3,Error ellipse: s-maj=3.4km s-min=2.9km az=26.4*

NEIC ***25*** *19:34:09.4,63.°86N×148.°81W,h10km,mb4.4/10, ML4.4(PMR),ML4.1(AEIC),MW4.0(SLM),After AEIC.*

NEIC Felt [IV] at Denali National Park and [III] at Fairbanks and Healy. Felt at Cantwell, Nenana and North Pole.

IDC ***25*** *19:34:11.2±2.7,64.°14N×148.°93W,h19km±17km,mb4.1/17, mb1 4.2/21,mb1mx4.1/30,mbtmp4.0/21,ML3.7/4,MS3.0/5, Ms1 3.0/5,ms1mx2.6/44,Error ellipse: s-maj=12.2km s-min=10.7km az=81.0*

ISC 25 19:34:10.1±0.2,63.°96N±0.°02×149.°04W±0.°05,h10km, n152,σ1§42/147,mb4.2/30,MS3.3/3,38C-34D,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	**McKinley**	**0.23**	**169**	P	**Pg**	**19 34 12.4**	**-2.4**
MCK				S	**Sg**	19 34 14.6	-3.4
RND	**Reindeer**	**0.56**	**172**	P	**Pg**	**19 34 17.6**	**-3.4**
RND				S	**Sg**	19 34 23.5	-4.8
TRF	**Thorofare Moun**	**0.76**	**228**	P	**Pg**	**19 34 24.1**	**-0.6**
TRF				S	**Sg**	19 34 34.7	+0.2
BPAW	**Bear Paw Mtn.**	**0.87**	**280**	P	**Pg**	**19 34 27.9**	**+1.1**
BPAW				S	**Sg**	19 34 42.3	+4.2
HDA	**Harding Lake**	**1.01**	**63**	P	**Pg**	**19 34 27.3**	**-2.3**
COLA	**College**	**1.05**	**29**	P	**Pg**	**19 34 29.5**	**-0.8**
COLA				S	**Sg**	19 34 44.1	+0.2
MDM	**Murphy Dome**	**1.06**	**19**	P	**Pg**	**19 34 30.1**	**-0.3**
MDM				S	**Sg**	19 34 44.9	+0.7
DHY	**Denali Highway**	**1.16**	**139**	P	**Pb**	**19 34 27.7**	**-4.4**
ILAR	**Eielson Array**	**1.24**	**48**	Pg	**Pg**	**19 34 31.3**	**-2.5**
	130nm,0.3s,baz=228,slow=15,SNR=1377						
ILAR				Lg		19 34 47.5	
	747nm,0.3s,baz=237,slow=21,SNR=87						
ILB	**Eielson Array**	**1.24**	**48**	P	**Pn**	**19 34 31.4**	**-1.9**
GLM	**Gilmore Dome**	**1.25**	**34**	P	**Pn**	**19 34 33.2**	**-0.4**
DDM	**Donnelly Dome**	**1.42**	**96**	P	**Pn**	**19 34 33.0**	**-2.8**
CHUM	**Lake Minchumin**	**1.45**	**268**	P	**Pn**	**19 34 36.0**	**-0.3**
CHUM				S	**Sn**	19 34 58.3	+3.0
PPLA	**Purkeypile**	**1.77**	**234**	P	**Pn**	**19 34 39.6**	**-1.1**
PPLA				S	**Sn**	19 35 05.4	+2.1
PAX	**Paxson**	**1.89**	**120**	P	**Pn**	**

	baz=27					
DLMT	Dillon	27.54	115	*e*Pn	P	19 40 00.9 +4.3
	3.9nm,0.9s,mb4.0					
C20A	Veseth Ranch,	27.55	107	⇓P	P	19 39 55.6 -1.0
	baz=27					
D19A	Cripps Ranch,	27.61	108	⇓P	P	19 39 56.7 -0.4
	baz=27					
BOZ	Bozeman (W)	27.69	114	⇑P	P	19 39 58.8 +0.9
	baz=28					
MCMT	McKenzie Canyo	27.88	116	*e*Pn	P	19 40 03.1 +3.5
	2.7nm,0.8s,mb3.9					
H15A	Lima	28.14	116	⇓pP	pP	19 40 01.8 -3.1
	baz=28					
I13A	Wildhorse Cree	28.15	119	⇑pP	pP	19 40 02.6 -2.5
	baz=28,SNR=7.4					
HLID	Hailey	28.33	120	⇓pP	pP	19 40 04.6 -2.1
	baz=28					
HLID	Hailey	28.33	120	*e*P	P	19 40 04.3 +0.6
	5.4nm,1.1s,mb4.1					
IMW	Indian Meadow	29.41	115	*e*P	P	19 40 17.7 +4.4
	12nm,0.8s,mb4.7					
RRI2	Red Ridge	29.72	116	*e*P	P	19 40 19.2 +3.2
	7.6nm,0.7s,mb4.5					
LOHW	Long Hollow	29.79	115	*e*P	P	19 40 20.1 +3.5
	5.2nm,0.6s,mb4.4					
I19A	Meeteetse	30.09	112	⇑pP	pP	19 40 19.7 -2.6
	baz=30					
BW06	Boulder Array	30.91	114	⇓pP	pP	19 40 26.8 -2.7
	baz=31,SNR=8.0					
PDAR	Pinedale Array	30.91	114	P	P	19 40 26.5 0.0
	6.0nm,0.8s,mb4.5,baz=333,slow=4.4,SNR=42					
J20A	Shoshoni	31.02	112	⇑pP	pP	19 40 28.2 -2.3
	baz=31,SNR=6.2					
K19A	Absolon Red Bu	31.15	113	⇑pP	pP	19 40 29.6 -2.1
	baz=31					
NVAR	Mina Array Bea	31.42	130	P	P	19 40 31.9 +0.9
	3.0nm,0.7s,mb4.2,baz=321,slow=7.5,SNR=21					
L19A	Farson	31.55	115	⇑P	P	19 40 32.9 +0.7
	baz=31					
K21A	Alcova	31.96	112	⇓P	P	19 40 36.4 +0.7
	baz=32					
L20A	Wamsutter	32.04	114	⇑P	P	19 40 37.5 +1.1
	baz=32					
K22A	Casper	32.24	111	⇓P	P	19 40 38.8 +0.6
	baz=32					
P14A	Drum Mountains	32.26	122	⇓P	P	19 40 39.1 +0.7
	baz=32					
N18A	Larsen Ranch,	32.38	116	⇑P	P	19 40 40.1 +0.7
	baz=32					
M20A	Sweetwater, Wa	32.54	114	⇑P	P	19 40 42.8 +2.0
	baz=32					
O17A	Robinson Place	32.63	118	⇑P	P	19 40 43.4 +1.8
	baz=32,SNR=6.1					
L22A	Ellis Ranch, M	32.80	111	⇑P	P	19 40 43.8 +0.7
	baz=33					
N20A	Spence Gulch,	33.06	115	⇑P	P	19 40 47.1 +1.7
	baz=33,SNR=9.4					
MSU	Marysvale	33.54	122	*e*P	P	19 40 53.5 +4.0
	1.8nm,0.6s,mb4.2					
SRU	San Rafael	33.65	119	⇑P	P	19 40 52.7 +2.2
	baz=33					
SRU	San Rafael	33.65	119	*e*P	P	19 40 53.6 +3.1
	8.0nm,1.1s,mb4.6					
S13A	Holt Ranch, En	33.74	125	⇓P	P	19 40 52.1 +0.8
	baz=34					
P19A	Cripple Cowboy	33.80	117	⇓P	P	19 40 53.3 +1.5
	baz=34					
MPMC	Manual Prospec	33.83	130	⇓P	P	19 40 53.4 +1.3
	baz=34					
R18A	Canyonlands Na	34.52	119	⇓P	P	19 40 58.6 +0.5
	baz=34					
TUQ	Turquoise Moun	34.93	129	⇓P	P	19 41 03.6 +1.9
	baz=35					
U14A	Mt Trumbull	35.02	125	⇓P	P	19 41 05.1 +2.7
	baz=35					
S18A	Hurst Farm, Bl	35.09	120	⇑P	P	19 41 04.9 +1.9
	baz=35					
T17A	Navajo Res., N	35.39	121	⇑P	P	19 41 07.5 +1.9
	baz=35					
S20A	Disappointment	35.60	118	⇑P	P	19 41 09.6 +2.2
	baz=35					
T18A	Mexican Hat	35.62	120	⇑P	P	19 41 10.0 +2.4
	baz=35					
V14A	Boquillas Ranc	35.75	125	⇓P	P	19 41 09.5 +0.8
	baz=36					
V15A	Kaibab Nationa	35.92	124	⇓P	P	19 41 13.2 +3.0
	baz=36,SNR=5.9					
S21A	Coal Bank Pass	35.97	117	⇓P	P	19 41 13.5 +2.9
	baz=36					
V17A	Tonalea, Kykot	36.61	122	⇓P	P	19 41 16.6 +0.5
	baz=36,SNR=6.6					
R25A	Fountain Ranch	36.96	113	⇑P	P	19 41 20.8 +1.9
	baz=37					
MONP	Monument Peak	37.08	131	⇓P	P	19 41 22.1 +2.0
	baz=37					
S25A	Robets Cordova	37.31	113	⇑P	P	19 41 25.0 +2.9
	baz=37					
Z13A	Yuma Proving G	37.74	128	⇑P	P	19 41 27.9 +2.2
	baz=38					
U25A	Circle Dot Ran	38.41	114	⇑P	P	19 41 32.6 +1.3
	baz=38					
Y19A	Nutrioso	38.66	122	⇓P	P	19 41 35.6 +2.2
	baz=38					
X21A	Alamocita Cree	38.79	120	⇓P	P	19 41 37.7 +3.2
	baz=39					
Z26A	Caprock	41.31	116	⇑P	P	19 41 55.7 +0.3
	baz=41					
425A	Indio Mountain	43.11	119	⇑P	P	19 42 12.9 +2.8
	baz=43					
526A	Mary Lane Ranc	44.11	118	⇓P	P	19 42 18.8 +0.6
	baz=44					
527A	Woodward Ranch	44.22	118	⇓P	P	19 42 20.0 +0.9
	baz=44					
TXAR	Lajitas Array	44.92	118	P	P	19 42 24.3 -0.3
	1.2nm,0.6s,mb3.9,baz=330,slow=6.8,SNR=13					
ARCES	ARCESS Array B	46.73	3	P	P	19 42 35.8 -2.7
	4.7nm,0.9s,mb4.4,baz=356,slow=8.5,SNR=6.6					
ARCES				PcP	PcP	19 44 09.8 -1.8
	3.2nm,0.8s,baz=357,slow=3.1,SNR=9.1					
ARCES	ARCESS Array B	46.73	3	P	P	19 42 35.8 -2.7
ARCES				PcP	PcP	19 44 09.8 -1.8
CN2	Changchun	49.92	289	*e*P	P	19 43 02.8 -0.6
SONM	Songino Array	53.97	306	P	P	19 43 34.0 +0.5
	1.5nm,0.7s,mb4.0,baz=27,slow=5.2,SNR=10					
KSRS	Korea Array	54.13	283	P	P	19 43 34.7 -0.1
	0.4nm,0.4s,mb3.7,baz=28,slow=6.2,SNR=3.3					
KSRS				LR	LR	20 11 15.5
	comp=Z,13nm,18.6s,MS3.0,baz=225,slow=41					
NB2	NORSAR Subarra	54.43	12	P	P	19 43 35.5 -1.2
	comp=Z,0.9nm,0.7s,mb3.8,baz=352,slow=6.9					
NOA	NORSAR Array B	54.43	12	P	P	19 43 35.9 -0.8
	comp=Z,2.0nm,0.9s,mb4.1,baz=350,slow=7.1,SNR=6.2					
FINES	FINESS Array B	54.86	3	P	P	19 43 38.4 -1.4
	comp=Z,1.7nm,0.5s,mb4.4,baz=3.6,slow=8.3,SNR=20					
ZALV	Zalesovo Beam	55.26	324	P	P	19 43 41.0 -1.7
	comp=Z,1.0nm,0.4s,mb4.2,baz=19,slow=6.4,SNR=6.0					
ZALV				PcP	PcP	19 44 41.8 -1.6
	comp=Z,0.6nm,0.7s,baz=349,slow=5.9,SNR=2.3					
HHC	Hu-ho-hao-te	58.00	298	*e*P	P	19 44 04.0 +1.6
HHC				pP	pP	19 44 08.5 +2.9
HHC				sP	sP	19 44 11.0 +4.2
HHC				PcP	PcP	19 44 56.0 +1.7
HHC				PP	PP	19 46 14.8 +4.3
HHC				ScP	ScP	19 48 53.8 -0.3
HHC				S	S	19 52 03.3 +0.8
HHC				sS	sS	19 52 11.8 +4.1
HHC				ScS	ScS	19 53 49.5 -2.1
HHC				SS	SS	19 55 57.0 +4.2
HHC				pmax	pmax	
	comp=Z,12nm,1.0s,mb4.9					
HHC				pmax	pmax	
	comp=Z,69nm,6.8s					
HHC				LR	LR	
	comp=N,100nm,15.6s,MS4.2					
HHC				LR	LR	
	comp=E,91nm,16.5s,MS4.2					
HHC				LR	LR	
	comp=Z,73nm,15.9s,MS3.9					
TEIG	Tepich	59.28	108	P	P	19 44 12.9 +1.3
	comp=Z,2.9nm,0.6s,mb4.5,baz=0.0,slow=5.1,SNR=3.8					
MKAR	Makanchi Array	62.45	323	P	P	19 44 31.1 -1.7
	comp=Z,0.8nm,0.4s,mb4.2,baz=42,slow=7.3,SNR=6.9					
APG	El Apazote	63.05	112	P	P	19 44 38.1 +0.9
	comp=Z,2.5nm,0.6s,mb4.6,baz=140,slow=23,SNR=6.2					
GTA	Gaotai	63.64	306	*e*P	P	19 44 41.5 +0.7
GTA				pP	pP	19 44 45.0 +0.9
GTA				sP	sP	19 44 48.3 +3.0
GTA				pmax	pmax	
	comp=Z,2.0nm,0.7s,mb4.3					
AKASG	Malin Array Be	65.67	1	P	P	19 44 53.0 -0.9
	comp=Z,3.9nm,0.5s,mb4.7,baz=0.5,slow=6.6,SNR=18					
AKASG	Malin Array Be	65.67	1	P	P	19 44 53.0 -0.9
VYHS	Vyhne	67.48	9	*e*P	P	19 45 05.3 -0.2
KECS	Kecovo	67.60	8	*e*P	P	19 45 05.8 -0.4
CONA	Conrad Observa	67.82	11	⇑*i*P	P	19 45 07.6 -0.1
	comp=Z,3.9nm,0.8s,mb4.5					
ESDC	Sonseca Array	73.06	28	P	P	19 45 38.9 -0.9
	comp=Z,1.1nm,0.7s,mb3.9,baz=344,slow=6.4,SNR=6.7					
BRTR	Keskin Array B	76.64	358	P	P	19 45 59.9 -0.6
	comp=Z,0.8nm,0.6s,mb3.8,baz=342,slow=4.7,SNR=3.9					
CMAR	Chiang Mai Arr	82.80	298	P	P	19 46 33.5 -0.8
	comp=Z,0.8nm,0.6s,mb3.9,baz=0.7,slow=6.5,SNR=5.6					
BOSA	Boshof	144.45	9	PKP	PKPdf	19 53 42.5 -3.4
	comp=Z,4.7nm,0.5s,baz=339,slow=3.4,SNR=22					
SUR	Sutherland	147.76	16	PKPbc	PKPbc	19 53 52.8 -1.4
	comp=Z,10nm,1.1s,baz=72,slow=6.4,SNR=3.7					
QSPA	South Pole Qui	153.78	180	PKPbc	PKPbc	19 54 05.2 -1.9
	comp=Z,0.7nm,0.7s,baz=249,slow=1.2,SNR=5.2					

DMN ***25*** *20:17:20.5±0.5,31°.47N×83°.23E,h10km,Ml5.1/2,Error ellipse: s-maj=11.1km s-min=6.8km az=132.0*

IDC ***25*** *20:17:22.5±0.6,30°.66N×83°.52E,h0km,mb4.2/18, mb1 4.3/20,mb1mx4.3/28,mbtmp4.2/20,ML3.7/2,MS4.1/28, Ms1 4.1/28,ms1mx4.0/41,Error ellipse: s-maj=18.6km s-min=13.1km az=39.0*

BJI ***25*** *20:17:23.9,30°.85N×83°.58E,h17km,mB4.7/12,mb4.5/27, Ms4.8/26,Ms7 4.6/21*

NEIC ***25*** *20:17:25.6±0.3,30°.88N×83°.48E,h10km,mb4.6/14,Error ellipse: s-maj=10.0km s-min=4.8km az=61.0*

MOS ***25*** *20:17:26.5±1.4,30°.81N×83°.49E,h33km,mb4.7/13,Error ellipse: s-maj=11.0km s-min=5.9km az=111.2*

NDI ***25*** *20:17:27.5±3.4,30°.66N×83°.54E,h10km,mb4.8, mb4.6(NEIC)*

ISCJB ***25*** *20:17:28.2±0.5,30°.82N±0°.03×83°.52E±0°.03,h50km±6km, mb4.4/39,MS4.1/30,Error ellipse: s-maj=5.1km s-min=3.8km az=23.5*

GCMT ***25*** *20:17:30.2±0.3,30°.72N×83°.71E,h23km±1km,MW4.9, Moment Tensor Solution. s21,c27; s60,c100; Moment tensor: Scale 10^16Nm; Mrr-0.76±.12; Mθθ-1.56±.09; Mφφ2.32±.10; Mrθ1.05±.17; Mθφ-1.49±.08; Mφr-0.40±.14; Best double couple: M0 2.70000×10^16 NP1:φ=204.00000°, δ62.00000°,λ-12.00000°. NP2:φ=300.00000°,δ79.00000°, λ-152.00000°. Principal axes: T 2.9700, Plg11.0000°, Azm69.0000°; N -0.4500, Plg60.0000°, Azm319.0000°; P -2.5200, Plg27.0000°, Azm165.0000°; Data Used: IU II IC G CN.*

ISC 25 20:17:28.8±1.0,30°.85N±0°.03×83°.59E±0°.03,h34km±8km, n164,σ1$21/159,mb4.4/39,MS4.1/30,2C-2D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	2.50	177	*e*Pn	Pn	20 18 08.6	+1.6
DANN				*e*Sn	Sb	20 18 43.1	-0.2
	6μm,0.8s						
GKN	Gorkha	2.98	162	*e*Pn	Pn	20 18 15.5	+1.8
GKN				*e*Sn	Sb	20 18 55.9	-1.3
KOLN	Koldanda	3.07	180	*e*Pn	Pn	20 18 16.3	+1.4
KOLN				*e*Sn	Sb	20 18 57.8	-2.0
	1μm,0.6s						
KOLN	Koldanda	3.07	180	*e*Pn	Pn	20 18 16.3	+1.4
KOLN				*e*Sn	Sb	20 18 55.9	-3.9
KOLN				*e*Sn	Sb	20 18 57.8	-2.0
PTH	Pithoragarh	3.20	247	*e*PKP	Pn	20 18 15.5	-1.1
PTH				*ex*	x	20 19 36.2	
KKN	Kakani	3.39	154	*e*Pn	Pn	20 18 21.0	+1.7
KKN	Kakani	3.39	154	*e*P	Pn	20 18 21.0	+1.7
DMN	Daman	3.49	157	*e*Pn	Pn	20 18 22.6	+1.9
GUN	Gumba	3.55	145	*e*Pn	Pn	20 18 23.4	+2.0
PKIN	Phulchoki	3.62	154	*e*Pn	Pn	20 18 24.2	+1.7
PKI	Pulchoki	3.63	154	*e*Pn	Pn	20 18 24.5	+1.8
PKI	Pulchoki	3.63	154	*e*Pn	Pn	20 18 24.2	+1.5
PKI	Pulchoki	3.63	154	*e*P	Pn	20 18 24.2	+1.5
KLP	Kalpa	4.63	280	*e*PKP	Pn	20 18 36.1	-0.2
DDI	Dehra Dun	4.80	265	*ex*	Pn	20 18 39.5	+0.8
DDI				*ex*	x	20 20 13.0	
TAPN	Taplejung	5.02	133	*e*Pn	Pn	20 18 43.4	+1.8
ODAN	Odare	5.19	139	*e*Pn	Pn	20 18 45.6	+1.6
SMLA	Simla	5.52	274	*i* P	Pn	20 18 48.6	0.0
SDNR	Sundarnagar	5.71	278	*ex*	Pn	20 18 54.5	+3.3
SDNR				*ex*	Sn	20 20 24.5	+29
ALBI	Allahabad	5.74	196	*ex*	Sn	20 20 14.0	+18
BISR	Bishrakh	5.81	249	*e*PKP	Pn	20 18 53.2	+0.6
NDI	New Delhi	5.95	250	*e*PKP	Pn	20 18 54.0	-0.5
NDI				*ex*	x	20 20 30.0	
AYAN	Aya Nagar	6.10	249	*e*PKP	Pn	20 18 56.8	+0.2
AGRA	Agra	6.12	235	*e*PKP	Pn	20 18 56.7	-0.1
BHK	Bhakra	6.18	277	*ex*	Pn	20 19 24.0	+26
SONA	Sohna	6.24	247	*e*PKP	Pn	20 18 58.9	+0.5
LSA	Lhasa	6.64	98	Pg	Pn	20 19 06.8	+2.9
LSA				Sg	Sn	20 20 25.0	+6.7
LSA				smax			
	comp=N,90nm,1.3s						
LSA				smax			
	comp=E,100nm,1.4s						
LSA	Lhasa	6.64	98	*e*P	Pn	20 19 07.0	+3.1
	comp=E,185nm,0.9s						
LSA	Lhasa	6.64	98	*e*P	Pn	20 19 07.0	+3.1
LSA				pmax	pmax		
	comp=Z,185nm,0.9s						
KHET	Khetri	7.33	250	*e*PKP	Pn	20 19 13.5	+0.1
KHET				AMb	AMB	20 19 32.5	
	comp=Z,45nm,1.9s						
AJM	Ajmer	8.99	243	*e*PKP	Pn	20 19 35.5	-0.6
AJM				AMb	AMB	20 19 42.1	
	comp=Z,60nm,1.6s						
SHL	Shillong	9.01	124	*e*PKP	Pn	20 19 36.0	-0.5
	comp=Z,6.0nm,0.6s						
SHL				*ex*	x	20 21 13.0	
CHCP	Chirah Chowk	9.18	290	P	Pn	20 19 41.3	+2.5
CAL	Calcutta	9.30	152	*ex*	x	20 20 38.9	
CAL				*ex*	x	20 22 34.8	
BHPL	Bhopal	9.36	217	*e*PKP	Pn	20 19 38.1	-3.2
BHPL				AMb	AMB	20 19 44.5	
	comp=Z,50nm,1.3s						
BHPL				*e*S	Sn	20 21 15.0	-10
AGT	Agartala	9.72	134	*ex*	Pn	20 19 42.0	-4.2
THW	Thamme Wali	10.27	284	P	Pn	20 19 53.4	-0.3
CEP	Cherat	10.32	290	P	Pn	20 19 55.0	+0.6
NGP	Nagpur	10.49	204	*ex*	Pn	20 19 50.3	-6.5
NGP				AMb	AMB	20 19 53.5	
	comp=Z,27nm,0.8s						
AKL	Akola	11.71	212	⇓*i*P	Pn	20 20 10.7	-2.8
AKL				*i x*	x	20 22 13.4	
KBL	Kabul	12.79	291	*e*P	Pn	20 20 25.6	-2.6
	comp=Z,10nm,0.6s						
KBL	Kabul	12.79	291	*e*P	Pn	20 20 25.6	-2.6
KBL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VIS	Vishakhapatnam	13.08	181	*e*PKP	Pn	20 20 29.7	-2.4
WMQ	Urumqi	13.35	13	P	Pn	20 20 32.0	-3.7
WMQ				PP		20 20 44.0	
WMQ				S	Sn	20 23 07.0	+4.2
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				LR	LR		
	comp=N,2μm,10.0s						
WMQ				LR	LR		
	comp=E,2μm,10.0s						
WMQ				LR	LR		
	comp=Z,1μm,10.0s						
UCH	Uchtor	13.48	330	*e*P	Pn	20 20 38.2	+0.6
	comp=Z,21nm,0.9s						
TKM2	Tokmak 2	13.63	334	*e*P	Pn	20 20 40.5	+0.9
	comp=Z,3.9nm,0.8s						
TKM2	Tokmak 2	13.63	334	*e*P	Pn	20 20 40.5	+0.9
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AML	Almayashu	13.77	328	*e*P	Pn	20 20 42.0	+0.5
LATR	Latur	13.93	209	*ex*	Pn	20 20 38.3	-5.5
LATR				AMb	AMB	20 20 39.4	
	comp=Z,28nm,0.9s						
LATR				*ex*	x	20 23 03.5	
FRU	Bishkek	13.94	332	*e*P	Pn	20 20 44.0	+0.2
FRU				*e*S	Sn	20 23 25.0	+7.7
FRU				pmax	pmax		
	comp=Z,100nm,2.0s						
HYB	Hyderabad	14.14	200	*i* P	Pn	20 20 40.5	-6.2
HYB				*e*S	Sn	20 23 24.0	+1.6
EKS2	Erkin-Say	14.16	329	*e*P	Pn	20 20 45.0	-1.8
	comp=Z,13nm,1.1s						
POO	Poona	15.12	218	*ex*	x	20 20 49.9	
POO				AMb	AMB	20 21 05.9	
	comp=Z,42nm,1.3s						
GTA	Gaotai	15.76	53	*e*P	Pn	20 21 08.0	-0.1
GTA				pP	pP	20 21 12.0	-8.6
GTA				sP	sP	20 21 15.3	-10
GTA				S	Sn	20 24 02.5	+0.8
GTA				SS		20 24 19.3	
GTA				pmax	pmax		
	comp=Z,100nm,5.2s						
GTA				LR	LR		
	comp=N,1μm,14.2s						
GTA				LR	LR		
	comp=E,1μm,11.9s						
GTA				LR	LR		
	comp=Z,2μm,10.4s						
MK31	Makanchi Array	15.95	357	*e*P	Pn	20 21 10.7	+0.2
MK31	Makanchi Array	15.95	357	*e*P	Pn	20 21 10.7	+0.2
MKAR	Makanchi Array	15.95	357	Pn	Pn	20 21 09.5	-1.0
	comp=Z,0.2nm,0.3s,baz=179,slow=14,SNR=9.1						
MKAR				LR	LR	20 28 19.4	
	comp=Z,1μm,18.6s,baz=176,slow=41						
MKAR	Makanchi Array	15.95	357	P	Pn	20 21 09.5	-1.0
KAD	Karad	15.98	215	*e*PKP	Pn	20 21 09.7	-1.3
KAD				AMb	AMB	20 21 11.9	
	comp=Z,22nm,2.1s						
KKAR	Karatay Array	16.06	323	*e*P	Pn	20 21 10.2	-1.7
	comp=Z,9.6nm,0.9s						
KKAR	Karatay Array	16.06	323	*e*P	Pn	20 21 10.2	-1.7
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	Lanzhou	17.68	67	*e*P	Pn	20 21 33.3	+1.0
LZH				pP	pP	20 21 36.5	-5.4
LZH				sP	sP	20 21 39.0	-7.2
LZH				PP		20 21 47.0	
LZH				*e*S	Sn	20 24 47.3	-0.8
LZH				sS	sS	20 24 52.5	-16
LZH				SS		20 25 08.5	
LZH				pmax	pmax		
	comp=Z,39nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,4.3s						
LZH				LR	LR		
	comp=N,1μm,8.2s						
LZH				LR	LR		
	comp=E,3μm,10.1s						
LZH				LR	LR		
	comp=Z,4μm,11.4s						
KMI	Kunming	17.84	104	P	Pn	20 21 32.8	-1.6
KMI				S	Sn	20 24 47.0	-5.3
KMI				sS	sS	20 24 57.0	-15
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
KMI				LR	LR		
	comp=N,850nm,10.7s						
KMI				LR	LR		
	comp=E,720nm,9.3s						
KMI				LR	LR		
	comp=Z,930nm,12.5s						
CHRT	Chiangrai	18.24	123	P	Pn	20 21 39.0	-0.3
CHG	Chiang Mai	18.35	127	⇓P	Pn	20 21 40.3	-0.4
	comp=Z,16nm,1.3s						
CHTO	Chiang Mai	18.35	127	*e*P	Pn	20 21 38.5	-2.2
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	18.35	127	*e*P	Pn	20 21 38.5	-2.2
CHTO				pmax	pmax		
	comp=Z,13nm,1.0s						
CM31	Chiang Mai Arr	18.60	128	*e*P	Pn	20 21 41.8	-1.9
	comp=Z,13nm,0.9s						
CMAR	Chiang Mai Arr	18.60	128	P	Pn	20 21 40.7	-3.0
	comp=Z,0.1nm,0.3s,baz=312,slow=10,SNR=41						
CMAR				LR	LR	20 28 50.5	
	comp=Z,557nm,20.2s,baz=305,slow=37						
CMAR	Chiang Mai Arr	18.60	128	P	Pn	20 21 40.7	-3.0
KURK	Kurchatov	20.19	351	*e*P	P	20 21 59.3	-1.0
	comp=Z,68nm,1.4s						
KURK	Kurchatov	20.19	351	*e*P	P	20 21 59.3	-1.0
KURK				pmax	pmax		
	comp=Z,68nm,1.4s						
GYA	Guiyang	20.70	96	⇑*i*P	P	20 22 06.8	+0.7
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
NST	Nakhon Sawan	21.39	131	P	P	20 22 13.0	-0.5
XAN	Xi'an	21.59	75	P	P	20 22 14.5	-1.2
XAN				PP		20 22 39.5	
XAN				S	S	20 26 09.5	-3.5
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.0						
XAN				pmax	pmax		
	comp=Z,19nm,3.5s						
XAN				LR	LR		
	comp=N,170nm,8.6s						
XAN				LR	LR		
	comp=E,350nm,10.6s						
XAN				LR	LR		
	comp=Z,390nm,11.1s,MS4.1						
ENH	Enshi	22.29	85	*e*P	P	20 22 22.4	-0.8
	comp=Z,30nm,1.1s,mb4.6						
ZAA0	Zalesovo Array	23.10	2	*e*P	P	20 22 31.3	-0.1
ZALV	Zalesovo Beam	23.10	2	P	P	20 22 31.4	0.0
	comp=Z,12nm,0.8s,mb4.4,baz=187,slow=9.9,SNR=29						
ZALV				LR	LR	20 32 08.2	
	comp=Z,163nm,18.0s,MS3.5,baz=337,slow=38						
ZALV	Zalesovo Beam	23.10	2	P	P	20 22 31.5	+0.1
BTO	Baotou	23.48	58	*e*P	P	20 22 34.3	-1.2
NVS	Novosibirsk	23.98	359	*e*P	P	20 22 39.5	-0.4
NVS				pmax	pmax		
	comp=N,37nm,1.9s						
NVS				pmax	pmax		
	comp=Z,43nm,1.9s,mb4.5						
BVAR	Borovoye Array	24.16	340	P	P	20 22 42.1	+0.6
	comp=Z,1.3nm,0.6s,mb3.6,baz=155,slow=11,SNR=8.9						
BVAR	Borovoye Array	24.16	340	P	P	20 22 42.1	+0.6
BRVK	Borovoye	24.22	340	*e*P	P	20 22 43.4	+1.3
	comp=Z,38nm,1.8s,mb4.5						
BRVK	Borovoye	24.22	340	*e*P	P	20 22 43.4	+1.3
BRVK				pmax	pmax		
	comp=Z,38nm,1.8s,mb4.5						
SONM	Songino Array	24.32	39	P	P	20 22 44.4	+1.2
	comp=Z,4.1nm,0.8s,mb3.9,baz=229,slow=9.5,SNR=25						
SONM				ScP	ScP	20 29 59.9	+1.7
	comp=Z,0.6nm,1.0s,baz=219,slow=1.8,SNR=4.1						
SONM				LR	LR	20 33 12.5	
	comp=Z,852nm,19.4s,MS4.2,baz=233,slow=39						
SONM	Songino Array	24.32	39	P	P	20 22 44.4	+1.3
ZAK	Zakamensk	24.44	31	*e*P	P	20 22 44.0	-0.1
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.1						
ULN	Ulaanbaatar	24.70	40	*e*P	P	20 22 47.3	+0.7
	comp=Z,14nm,1.1s,mb4.4						
ULN	Ulaanbaatar	24.70	40	*e*P	P	20 22 47.3	+0.7
ULN				pmax	pmax		
	comp=Z,13nm

BOD pmax pmax
comp=Z,5.0nm,1.8s,mb4.1
KIV Kislovodsk 34.68 304 *eP* **P 20 24 18.4 +3.3**
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KIV MLR MLR
comp=Z,134nm,14.0s,MS3.8
KSRS Korea Array 37.01 68 P **P 20 24 34.8 -0.3**
comp=Z,2.8nm,0.8s,mb4.1,baz=278,slow=8.6,SNR=6.3
KSRS LR LR 20 40 39.6
comp=Z,310nm,18.3s,MS4.1,baz=283,slow=38
KSRS Korea Array 37.01 68 P **P 20 24 34.8 -0.3**
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
KSRS MLR MLR
comp=Z,310nm,18.3s,MS4.1
ASF Jabal al Asfar 39.59 284 LR LR 20 43 06.4
comp=Z,201nm,19.9s,MS4.0,baz=105,slow=39
KLR Kul'dur 40.41 49 *eP* **P 20 25 11.7 +8.2**
BRTR Keskin Array B 41.27 296 P **P 20 25 10.1 -0.7**
comp=Z,2.1nm,1.2s,mb3.7,baz=88,slow=4.6,SNR=5.9
BRTR Keskin Array B 41.27 296 P **P 20 25 10.1 -0.7**
AKASG Malin Array Be 44.57 313 P **P 20 25 36.9 -0.4**
comp=Z,1.8nm,0.6s,mb4.1,baz=80,slow=7.4,SNR=9.9
AKASG LR LR 20 47 30.8
comp=Z,161nm,21.3s,MS3.9,baz=130,slow=40
AKASG Malin Array Be 44.57 313 P **P 20 25 36.9 -0.4**
MJAR Matsushiro Arr 45.29 68 P **P 20 25 43.0 -0.3**
comp=Z,3.3nm,1.0s,mb4.1,baz=278,slow=10.0,SNR=4.7
MJAR LR LR 20 46 03.8
comp=Z,243nm,19.2s,MS4.2,baz=260,slow=38
MJAR Matsushiro Arr 45.29 68 P **P 20 25 43.0 -0.2**
JOF Joensuu 46.01 330 *eP* **P 20 25 51.6 +3.1**
JOF pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
JOF Joensuu 46.01 330 *ep* **P 20 25 51.6 +3.1**
comp=Z,5.3nm,0.4s,mb4.8
FINES FINESS Array B 47.98 327 P **P 20 26 04.0 +0.1**
comp=Z,4.4nm,0.7s,mb4.6,baz=105,slow=7.6,SNR=14
FINES LR LR 20 49 00.6
comp=Z,228nm,18.8s,MS4.2,baz=121,slow=40
FINES FINESS Array B 47.98 327 P **P 20 26 04.0 +0.1**
FINES LR LR 20 49 00.6
FINES FINESS Array B 47.98 327 P **P 20 26 04.0 +0.1**
KAF Kangasniemi 48.02 328 *eP* **P 20 26 01.5 -2.7**
KAF Kangasniemi 48.02 328 *ep* **P 20 26 01.5 -2.7**
ARCES ARCESS Array B 50.39 337 P **P 20 26 22.8 +0.5**
comp=Z,4.6nm,0.8s,mb4.5,baz=96,slow=6.7,SNR=6.0
ARCES LR LR 20 49 11.3
comp=Z,169nm,19.1s,MS4.1,baz=149,slow=38
ARCES ARCESS Array B 50.39 337 P **P 20 26 22.8 +0.5**
ARCES LR LR 20 49 11.3
ARCES ARCESS Array B 50.39 337 P **P 20 26 22.8 +0.6**
NB2 NORSAR Subarra 55.08 326 P **P 20 26 56.4 -0.6**
comp=Z,5.8nm,1.0s,mb4.6,baz=86,slow=7.4
NOA NORSAR Array B 55.08 326 P **P 20 26 56.5 -0.5**
comp=Z,2.1nm,0.8s,mb4.2,baz=88,slow=7.2,SNR=8.1
NOA LR LR 20 51 53.6
comp=Z,397nm,18.2s,MS4.5,baz=90,slow=38
NOA NORSAR Array B 55.08 326 P **P 20 26 56.5 -0.5**
SPITS Spitsbergen Ar 55.39 347 LR LR 20 55 46.8
comp=Z,161nm,18.3s,MS4.1,baz=160,slow=42
PETK Petropavlovsk- 56.69 44 LR LR 20 52 30.9
comp=Z,125nm,19.0s,MS4.0,baz=117,slow=37
GUMO Guam 58.60 93 LR LR 20 50 59.1
comp=Z,62nm,19.2s,MS3.7,baz=297,slow=34
KEST Kesra 60.88 296 P **P 20 27 37.5 -0.6**
comp=Z,2.1nm,1.0s,mb4.2,baz=53,slow=5.1,SNR=2.6
SUMG Summit 69.57 344 *i P* **P 20 28 37.2 +3.4**
comp=Z,8.1nm,0.7s,mb4.8
WRA Warramunga Arr 70.19 129 P **P 20 28 37.3 -1.0**
comp=Z,6.5nm,1.0s,mb4.5,baz=325,slow=6.4,SNR=42
WRA Warramunga Arr 70.19 129 P **P 20 28 37.3 -1.0**
ASAR Alice Springs 72.55 132 P **P 20 28 51.5 -1.0**
comp=Z,2.4nm,1.0s,mb4.1,baz=318,slow=6.0,SNR=14
ASAR Alice Springs 72.55 132 P **P 20 28 51.5 -1.0**
COLD Coldfoot 74.20 19 *eP* **P 20 29 02.2 +0.5**
comp=Z,5.8nm,0.9s,mb4.5
RES Resolute Bay 74.72 360 LR LR 21 07 39.2
comp=Z,83nm,19.1s,MS4.0,baz=36,slow=40
BPAW Bear Paw Mtn. 76.14 22 *eP* **P 20 29 13.4 +0.6**
comp=Z,5.3nm,1.0s,mb4.4
TORD Torodi Ar. Bea 76.50 277 P **P 20 29 13.6 -2.2**
comp=Z,8.5nm,0.8s,mb4.7,baz=54,slow=5.1,SNR=4.4
TORD LR LR 21 07 41.8
comp=Z,145nm,18.1s,MS4.3,baz=65,slow=40
COLA College 76.55 20 *eP* **P 20 29 14.2 -1.0**
comp=Z,13nm,1.0s,mb4.8
COLA College 76.55 20 *eP* **P 20 29 14.2 -1.0**
COLA pmax pmax
comp=Z,13nm,1.0s,mb4.8
PPLA Purkeypile 76.58 23 *eP* **P 20 29 16.2 +0.8**
comp=Z,43nm,1.5s,mb5.2
ILAR Eielson Array 76.91 20 P **P 20 29 16.9 -0.3**
comp=Z,2.6nm,0.7s,mb4.2,baz=305,slow=4.7,SNR=22
ILAR LR LR 21 06 36.7
comp=Z,130nm,20.0s,MS4.2,baz=311,slow=38
ILAR Eielson Array 76.91 20 P **P 20 29 16.9 -0.3**
INK Inuvik 77.37 13 P **P 20 29 19.5 -0.2**
comp=Z,3.3nm,0.7s,mb4.3,baz=339,slow=6.6,SNR=5.6
INK LR LR 21 07 31.0
comp=Z,130nm,20.6s,MS4.2,baz=327,slow=39
INK Inuvik 77.37 13 P **P 20 29 19.5 -0.2**
EGAK Eagle 78.50 18 *eP* **P 20 29 26.3 +0.3**
comp=Z,5.7nm,0.8s,mb4.5
SML Sawmill 78.63 22 *eP* **P 20 29 27.6 +0.7**
comp=Z,5.4nm,0.8s,mb4.5
SML Sawmill 78.63 22 *eP* **P 20 29 27.6 +0.8**
SML pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
DAWY Dawson 79.53 18 *eP* **P 20 29 32.0 +0.3**
BOSA Boshof 81.15 229 P **P 20 29 39.4 -1.5**
comp=Z,7.1nm,1.1s,mb4.5,baz=63,slow=5.9,SNR=4.4
BOSA LR LR 21 02 43.0
comp=Z,156nm,19.4s,MS4.4,baz=34,slow=34
BOSA Boshof 81.15 229 P **P 20 29 39.4 -1.5**
BOSA LR LR 21 02 43.0
BOSA Boshof 81.15 229 P **P 20 29 39.4 -1.5**
STKA Stephens Creek 83.14 133 P **P 20 29 50.0 -1.2**
comp=Z,1.5nm,0.7s,mb4.1,baz=326,slow=8.5,SNR=4.0
FRB Frobisher Bay 83.17 348 LR LR 21 10 46.2
comp=Z,140nm,21.9s,MS4.3,baz=25,slow=38
DBIC Dimbokro 85.30 275 LR LR 21 11 60.0
comp=Z,156nm,18.5s,MS4.4,baz=43,slow=38
YKA Yellowknife Ar 85.84 8 LR LR 21 10 51.5
comp=Z,12nm,19.8s,MS3.3,baz=310,slow=37
DLBC Dease Lake 86.72 17 LR LR 21 11 51.6
comp=Z,100nm,18.7s,MS4.2,baz=313,slow=38
SCHQ Schefferville 90.95 343 LR LR 21 15 32.2
comp=Z,86nm,18.7s,MS4.2,baz=64,slow=38
ULM Lac du Bonnet 99.26 360 LR LR 21 20 07.7
comp=Z,108nm,18.6s,MS4.4,baz=312,slow=38
MAW Mawson 99.39 188 LR LR 21 09 22.1
comp=Z,128nm,20.5s,MS4.4,baz=189,slow=32
TXAR Lajitas Array 119.75 7 PKP PKPdf 20 36 15.3 -0.4
comp=Z,0.2nm,0.6s,baz=225,slow=1.6,SNR=3.5
CPUP Villa Florida 145.51 268 PKPbc PKPbc 20 37 02.8 -1.0
comp=Z,0.6nm,0.4s,baz=60,slow=1.8,SNR=5.6
LPAZ La Paz 150.41 293 PKPbc PKPbc 20 37 16.8 -0.5
comp=Z,0.8nm,0.8s,baz=0,0,slow=4.0,SNR=3.8
LPAZ La Paz 150.41 293 PKPbc PKPbc 20 37 16.8 -0.5
TRQA Tornquist 150.84 246 *e*PKPbc PKPbc 20 37 16.8 -0.9

IDC ***25*** *20:33:02.0±0.9, 2°.31S×99°.79E, h0km, mb4.0/11, mb1 4.0/12, mb1mx3.9/23, mbtmp4.0/12, ML2.9/1, Error ellipse: s-maj=47.1km s-min=14.4km az=55.0*
ISCJB ***25*** *20:33:07.9±1.1, 2°.24S±0°.07×99°.92E±0°.09, h58km±9km, mb4.2/14, Error ellipse: s-maj=18.2km s-min=7.4km az=145.9*
NEIC ***25*** *20:33:07.4±0.6, 2°.25S×99°.89E, h35km, mb4.3/4, Error ellipse: s-maj=28.9km s-min=9.5km az=59.0*
DJA ***25*** *20:33:08, 2°.21S×99°.96E, h19km, MLv4.3/9*
ISC 25 20:33:08.9±1.1, **2°.22S**±0°.07×**99°.91E**±0°.09, **h47**km±9km,
n36,σ0°83/33, mb4.2/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.21**	**318**	P	**Pn**	**20 33 29.2**	**-0.2**
PDSI	**Padang**	**1.42**	**23**	P	**Pn**	**20 33 31.5**	**-0.8**
PDSI				S	**Sn**	**20 33 49.4**	**-0.3**
KRJI	**Kerinci**	**1.56**	**85**	P	**Pn**	**20 33 34.5**	**+0.3**
PPI	**Padang Panjang**	**1.82**	**16**	P	**Pn**	**20 33 37.4**	**-0.4**
SDSI	**Sungai Dareh**	**1.99**	**50**	P	**Pn**	**20 33 40.7**	**+0.6**
BKNI	**Bangkinang**	**2.77**	**24**	P	**Pn**	**20 33 51.3**	**+0.4**
MNSI	**Mandailing Nat**	**3.02**	**354**	P	**Pn**	**20 33 55.6**	**+1.4**
KSI	**Kapahiang**	**3.04**	**118**	P	**Pn**	**20 33 55.8**	**+1.3**
MDSI	**Maura Dua**	**4.82**	**118**	P	**Pn**	**20 34 19.0**	**0.0**
LWLI	**Liwa**	**4.99**	**124**	P	**Pn**	**20 34 20.1**	**-1.2**
PSI	**Prapat**	**5.09**	**349**	Pn	**Pn**	**20 34 19.2**	**-3.5**
	0.4nm,0.3s,baz=176,slow=19,SNR=2.3						
PSI	**Prapat**	**5.09**	**349**	Pn	**Pn**	**20 34 19.2**	**-3.5**
KLSI		**5.40**	**117**	P	**Pn**	**20 34 27.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**20.57**	**357**	P	**P**	**20 37 41.7**	**-2.3**
	0.8nm,0.8s,baz=190,slow=9.6,SNR=5.8						
LSA	**Lhasa**	**32.83**	**346**	*eP*	**P**	**20 39 39.0**	**+0.9**
	3.8nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**37.96**	**120**	P	**P**	**20 40 21.2**	**-1.2**
	1.5nm,0.6s,mb3.9,baz=304,slow=9.1,SNR=28						
WRA				PcP	PcP	20 42 37.9	+0.3
	0.3nm,0.5s,baz=313,slow=2.1,SNR=5.1						
WRA	**Warramunga Arr**	**37.96**	**120**	P	**P**	**20 40 21.2**	**-1.2**
WRA				PcP	PcP	20 42 37.9	+0.3
ASAR	**Alice Springs**	**39.20**	**126**	P	**P**	**20 40 32.4**	**-0.4**
	0.8nm,0.6s,mb3.6,baz=299,slow=7.6,SNR=18						
ASAR				PcP	PcP	20 42 42.3	+0.8
	0.6nm,0.5s,baz=310,slow=2.4,SNR=7.2						
STKA	**Stephens Creek**	**49.07**	**132**	P	**P**	**20 41 52.2**	**+0.5**
	0.8nm,0.5s,mb4.0,baz=287,slow=16,SNR=5.4						
STKA	**Stephens Creek**	**49.07**	**132**	P	**P**	**20 41 52.2**	**+0.5**
SONM	**Songino Array**	**50.17**	**6**	P	**P**	**20 42 00.7**	**+0.9**
	2.7nm,0.7s,mb4.4,baz=188,slow=9.4,SNR=23						
EKS2	**Erkin-Say**	**50.52**	**335**	*eP*	**P**	**20 42 03.9**	**+1.4**
	2.4nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**51.22**	**345**	*eP*	**P**	**20 42 08.2**	**+0.5**
MKAR	**Makanchi Array**	**51.22**	**345**	P	**P**	**20 42 08.1**	**+0.4**
	4.0nm,0.7s,mb4.5,baz=146,slow=8.1,SNR=33						
KURK	**Kurchatov**	**55.79**	**344**	*eP*	**P**	**20 42 41.4**	**+0.2**
	2.6nm,1.0s,mb4.2						
ZALV	**Zalesovo Beam**	**57.37**	**349**	P	**P**	**20 42 52.4**	**+0.1**
	0.7nm,0.3s,mb4.2,baz=177,slow=5.8,SNR=8.0						
BVAR	**Borovoye Array**	**60.36**	**340**	P	**P**	**20 43 12.7**	**-0.3**
	0.4nm,0.4s,mb3.8,baz=157,slow=7.1,SNR=3.4						
ABKAR	**Akbulak array**	**61.79**	**331**	*eP*	**P**	**20 43 22.4**	**-0.5**
	3.2nm,0.7s,mb4.6						
AKTK	**Aktyubinsk**	**63.51**	**332**	P	**P**	**20 43 33.6**	**-0.7**
AKTO	**Aktyubinsk**	**63.51**	**332**	P	**P**	**20 43 33.6**	**-0.7**
	1.7nm,0.9s,mb4.1,baz=122,slow=4.1,SNR=4.6						
BRTR	**Keskin Array B**	**73.40**	**313**	P	**P**	**20 44 36.1**	**-0.2**
	1.4nm,0.8s,mb4.0,baz=93,slow=6.9,SNR=8.8						
FINES	**FINESS Array B**	**84.26**	**332**	P	**P**	**20 45 35.8**	**+0.4**
	1.6nm,0.6s,mb4.3,baz=104,slow=6.1,SNR=8.7						
CPUP	**Villa Florida**	**144.09**	**216**	PKP	PKPdf	20 52 38.4	-1.9
	0.8nm,0.4s,baz=122,slow=3.5,SNR=6.3						
TXAR	**Lajitas Array**	**144.94**	**37**	PKPbc	PKPdf	20 52 41.9	+0.2
	1.3nm,0.5s,baz=244,slow=0.8,SNR=20						
TXAR	**Lajitas Array**	**144.94**	**37**	PKPbc	PKPdf	20 52 41.9	+0.2
JCT	**Junction City**	**146.26**	**32**	*e*PKPbc	PKPbc	20 52 45.8	+0.7

FUNV 25 20:44:18.7, 6°.77N×73°.15W, h160km, MW3.6, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.36**	**37**	⇓*iP*	Pn	20 44 47.2	-0.5
CAPV				*e*S	Sn	20 45 08.4	-1.6
VIGV	**El Vigia**	**2.71**	**41**	*eP*	Pn	20 45 01.8	-1.1
VIGV				*e*S	Sn	20 45 33.4	-3.7
SOCV	**Socops**	**2.72**	**56**	*eP*	Pn	20 45 02.0	-1.0
SOCV				*e*S	Sn	20 45 33.6	-3.7
ELOV	**Elorza**	**3.64**	**86**	*eP*	Pn	20 45 13.6	-1.1
ELOV				*e*S	Sn	20 45 54.0	-4.0
VIRV	**Villa del Rosa**	**3.78**	**11**	*eP*	Pn	20 45 14.2	-2.2
VIRV				*e*S	Sn	20 45 56.9	-4.4
CURV	**Curarigua**	**4.50**	**44**	*eP*	Pn	20 45 24.5	-1.3
TEPV	**Terepaima**	**5.03**	**51**	*eP*	Pn	20 45 31.0	-1.7
SIQV	**Siquisique**	**5.07**	**40**	*eP*	Pn	20 45 32.5	-0.8
BAUV	**El Baul**	**5.50**	**67**	*eP*	Pn	20 45 36.1	-2.8
BAUV				*e*S	Sn	20 46 34.8	-6.8
MAPV	**Macapo**	**5.54**	**56**	*eP*	Pn	20 45 37.4	-2.1
IMOV	**Isla Los Monje**	**5.97**	**22**	*eP*	Pn	20 45 42.6	-2.6
MONV	**Montecano**	**6.03**	**31**	*eP*	Pn	20 45 44.6	-1.2
TURV	**Turiamo**	**6.39**	**55**	*eP*	Pn	20 45 49.0	-1.7
CAOV	**Caicara del Or**	**6.79**	**85**	*eP*	Pn	20 45 53.1	-3.0
CAOV				*e*S	Sn	20 47 04.3	-8.3
CUPV	**Cœpira**	**7.97**	**65**	*eP*	Pn	20 46 09.3	-2.5

ISCJB ***25*** *20:47:57.6±1.1, 16°.6S±0°.2×176°.6W±0°.2, h393km±12km, mb4.1/12, Error ellipse: s-maj=35.8km s-min=12.9km az=145.4*
IDC ***25*** *20:47:57.1±2.0, 16°.58S×176°.64W, h370km±23km, mb3.7/9, mb1 4.0/10, mb1mx3.7/20, mbtmp3.8/10, Error ellipse: s-maj=28.7km s-min=12.2km az=144.0*
NEIC ***25*** *20:47:58.5±1.0, 16°.63S×176°.51W, h390km±11km, mb4.5/2, Error ellipse: s-maj=34.4km s-min=13.1km az=149.0*
ISC 25 20:47:58.7±1.0, **16°.6S**±0°.2×**176°.5W**±0°.1, **h390**km±11km,
n22,σ1°10/21, mb4.1/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.29**	**61**	P	**Pn**	**20 49 22.1**	**-1.2**
	18nm,0.3s,baz=248,slow=11,SNR=11						
MSVF	**Nonsavu**	**5.32**	**257**	*eP*	**Pn**	**20 49 25.2**	**+1.5**
	111nm,0.8s						
URZ	**Urewera**	**22.32**	**193**	P	**P**	**20 52 23.9**	**-0.9**
	11nm,0.3s,mb4.8,baz=11,slow=5.2,SNR=19						
URZ	**Urewera**	**22.32**	**193**	*eP*	**P**	**20 52 24.0**	**-0.9**
ARMA	**Armidale**	**32.17**	**239**	*eP*	**P**	**20 53 53.0**	**+0.9**
CNB	**Canberra Magne**	**35.67**	**232**	*eP*	**P**	**20 54 22.6**	**+0.8**
TOO	**Toolangi**	**39.41**	**230**	*eP*	**P**	**20 54 54.1**	**+1.4**
STKA	**Stephens Creek**	**40.86**	**240**	P	**P**	**20 55 04.1**	**-0.4**
	2.3nm,0.4s,mb3.8,baz=71,slow=9.2,SNR=13						
STKA	**Stephens Creek**	**40.86**	**240**	*eP*	**P**	**20 55 04.6**	**+0.1**
	3.0nm,0.9s,mb3.6						
STKA	**Stephens Creek**	**40.86**	**240**	P	**P**	**20 55 04.1**	**-0.4**
WRA	**Warramunga Arr**	**46.66**	**258**	P	**P**	**20 55 49.1**	**-1.2**
	4.9nm,0.5s,mb4.1,baz=92,slow=7.4,SNR=143						
ASAR	**Alice Springs**	**46.90**	**253**	P	**P**	**20 55 51.5**	**-0.6**
	31nm,0.5s,mb4.9,baz=88,slow=8.0,SNR=612						
FORT	**Forrest**	**52.21**	**244**	*eP*	**P**	**20 56 30.6**	**-1.0**
	16nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**55.04**	**259**	P	**P**	**20 56 51.5**	**-0.5**
	2.0nm,0.4s,mb3.7,baz=144,slow=7.0,SNR=11						
FITZ	**Fitzroy Crossi**	**55.04**	**259**	*eP*	**P**	**20 56 51.6**	**-0.4**
	6.3nm,1.0s,mb3.8						
MBWA	**Marble Bar**	**60.16**	**255**	*eP*	**P**	**20 57 26.4**	**-0.8**
	5.9nm,0.7s,mb4.1						
KLBR	**Kellerberrin**	**61.04**	**243**	*eP*	**P**	**20 57 32.6**	**-0.4**
	30nm,1.5s,mb4.5						
NVAR	**Mina Array Bea**	**77.21**	**43**	P	**P**	**20 59 12.7**	**+1.8**
	1.1nm,0.6s,mb3.6,baz=233,slow=8.4,SNR=7.5						
TXAR	**Lajitas Array**	**83.75**	**57**	P	**P**	**20 59 48.2**	**+2.7**
	1.8nm,0.9s,mb3.8,baz=224,slow=5.2,SNR=15						
ILAR	**Eielson Array**	**84.19**	**12**	P	**P**	**20 59 46.0**	**-0.8**
	1.5nm,0.6s,mb3.9,baz=217,slow=6.1,SNR=21						
PDAR	**Pinedale Array**	**85.14**	**43**	P	**P**	**20 59 51.7**	**-0.3**
	0.4nm,0.5s,mb3.4,baz=215,slow=1.8,SNR=4.2						
BRTR	**Keskin Array B**	**145.08**	**317**	PKPbc	PKPbc	21 06 51.0	0.0
	0.3nm,0.4s,baz=116,slow=5.6,SNR=4.4						

THE ***25*** *20:53:47.8, 37°.75N×21°.44E, h15km±2km, ML2.0/2, Error ellipse: s-maj=2.8km s-min=0.9km az=333.0*
CSEM ***25*** *20:53:48.6±0.5, 37°.81N×21°.43E, h0km±2km, MD2.9, Error ellipse: s-maj=11.1km s-min=8.2km az=48.0*
ISCJB ***25*** *20:53:49.2±0.8, 37°.84N±0°.06×21°.39E±0°.05, h22km±8km, Error ellipse: s-maj=9.5km s-min=6.4km az=0.5*
ATH ***25*** *20:53:49.1, 37°.85N×21°.37E, h16km±6km, MD2.9/4*
ISC 25 20:53:49.1±0.9, **37°.84N**±0°.06×**21°.39E**±0°.05, **h20**km±8km,
n24,σ1°20/36, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.23**	**15**	*e*PB	**Pb**	**20 53 54.0**	**-0.7**
RLS				*e*SB	**Sb**	**20 53 58.4**	**-0.1**
RLS	**Riolos of Patr**	**0.23**	**15**	P	**Pb**	**20 53 54.1**	**-0.6**
RLS				S	**Sb**	**20 53 58.4**	**-0.1**
RLS	**Riolos of Patr**	**0.23**	**15**	P	**Pb**	**20 53 54.1**	**-0.6**
RLS				S	**Sb**	**20 53 58.4**	**-0.1**
UPR	**University Cam**	**0.54**	**35**	P	**Pb**	**20 53 58.8**	**-1.1**
UPR				S	**Sb**	**20 54 08.9**	**+1.6**
UPR	**University Cam**	**0.54**	**35**	P	**Pb**	**20 53 58.8**	**-1.1**
UPR				S	**Sb**	**20 54 08.9**	**+1.6**
KFL	**Anninata**	**0.55**	**300**	P	**Pb**	**20 53 59.9**	**-0.1**
KFL				S	**Sb**	**20 54 09.3**	**+1.8**
KFL	**Anninata**	**0.55**	**300**	P	**Pb**	**20 53 59.9**	**-0.1**
KFL				S	**Sb**	**20 54 09.3**	**+1.8**
EFP	**Efpalio**	**0.71**	**34**	*e*PB	**Pb**	**20 54 01.8**	**-1.0**
EFP				*e*SN	**Sn**	**20 54 13.0**	**-1.4**
EFP	**Efpalio**	**0.71**	**34**	P	**Pb**	**20 54 01.9**	**-0.9**
EFP				S	**Sb**	**20 54 13.6**	**+1.4**
EFP	**Efpalio**	**0.71**	**34**	P	**Pb**	**20 54 01.9**	**-0.9**
EFP				S	**Sb**	**20 54 13.6**	**+1.4**
VLS	**Valsamata**	**0.72**	**298**	*e*PN	**Pn**	**20 54 02.8**	**-1.3**
GUR	**Goura**	**0.76**	**82**	*e*PB	**Pb**	**20 54 03.2**	**-0.3**
GUR	**Goura**	**0.76**	**82**	P	**Pb**	**20 54 01.7**	**-1.8**
GUR				S	**Sb**	**20 54 13.4**	**0.0**
GUR	**Goura**	**0.76**	**82**	P	**Pb**	**20 54 01.7**	**-1.8**
GUR	**Goura**	**0.76**	**82**	*e*Pb	**Pb**	**20 54 03.2**	**-0.3**
GUR				S	**Sb**	**20 54 13.4**	**0.0**
ITM	**Ithomi**	**0.78**	**147**	*e*PN	**Pn**	**20 54 04.3**	**-0.6**
ITM	**Ithomi**	**0.78**	**147**	*e*Pn	**Pn**	**20 54 04.3**	**-0.6**
VLX	**Vlachokerasia**	**0.91**	**120**	*e*PN	**Pn**	**20 54 07.7**	**+1.0**
VLX	**Vlachokerasia**	**0.91**	**120**	*e*Pn	**Pn**	**20 54 07.7**	**+1.0**
EVR	**Evrytania**	**1.13**	**17**	*e*Pb	**Pb**	**20 54 08.9**	**-1.0**
LTK	**Loutraki**	**1.26**	**81**	*e*PN	**Pn**	**20 54 13.5**	**+2.0**
LTK	**Loutraki**	**1.26**	**81**	*e*Pn	**Pn**	**20 54 13.5**	**+2.0**
DID	**Didima**	**1.50**	**102**	*e*PN	**Pn**	**20 54 18.3**	**+3.5**
DID	**Didima**	**1.50**	**102**	*e*Pn	**Pn**	**20 54 18.3**	**+3.5**

IDC 25 21:18:07.1±2.7, **7°.10N**×**91°.89E, h0**km, **mb3.4/4, mb1 3.6/5, mb1mx3.4/23, mbtmp3.4/5, ML3.7/1, Error ellipse: s-maj=86.8km s-min=24.7km az=68.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.21**	**31**	Pn	Pn	21 21 15.7	-0.3
	0.1nm,0.3s,baz=231,slow=14,SNR=6.0						
MKAR	**Makanchi Array**	**40.40**	**350**	P	P	21 25 47.5	+0.6
	0.3nm,0.2s,baz=166,slow=7.9,SNR=3.6						
SONM	**Songino Array**	**42.43**	**14**	P	P	21 26 03.3	-0.1
	0.3nm,0.5s,baz=205,slow=6.4,SNR=3.1						
WRA	**Warramunga Arr**	**49.66**	**124**	P	P	21 27 01.1	+0.1
	0.4nm,0.6s,baz=303,slow=8.8,SNR=5.8						
ASAR	**Alice Springs**	**51.17**	**128**	P	P	21 27 12.0	-0.3
	0.2nm,0.5s,baz=302,slow=7.2,SNR=3.9						

TAP ***25*** *21:27:29.9, 23°.06N×120°.22E, h17km, ML3.5, B*
NEIC ***25*** *21:27:29.8, 23°.03N×120°.19E, h19km, mb4.1/1, ML4.2(TAP), After TAP.*
NEIC Recorded [4 TAP] at T'ai-nan and [1 TAP] in Chia-i.
ISCJB ***25*** *21:27:30.6±0.4, 23°.07N±0°.02×120°.14E±0°.02, h21km±2km, Error ellipse: s-maj=3.9km s-min=2.9km az=171.7*
ISC 25 21:27:30.7±0.4, **23°.07N**±0°.02×**120°.16E**±0°.02, **h17**km±1km,
n55,σ0°86/96, 8C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAI1	**Yung-k'ang**	**0.07**	**116**	⇑*iP*	**Pg**	**21 27 33.3**	**-0.6**
	baz=143						
TAI1				*i* S	**Sg**	**21 27 36.2**	**+0.1**
	baz=143						
SCLT	**Jiali**	**0.11**	**19**	⇓*iP*	**Pg**	**21 27 34.3**	**0.0**
	baz=353						
SCLT				S	**Sg**	**21 27 37.6**	**+0.9**
	baz=353						
CHN3	**Shinhua**	**0.19**	**89**	⇑*iP*	**Pg**	**21 27 34.9**	**-0.4**
	baz=77						
CHN3				*i* S	**Sg**	**21 27 38.8**	**+0.2**
	baz=77						
TWM1	**Shoushan**	**0.35**	**135**	*eP*	**Pg**	**21 27 38.3**	**+0.3**
	baz=141						
CHN1	**Nanshi**	**0.36**	**72**	⇑*iP*	**Pg**	**21 27 37.6**	**-0.6**
	baz=67						
CHN1				S	**Sg**	**21 27 43.3**	**+0.1**
	baz=67						
SGST	**Jiashian**	**0.39**	**88**	⇑*iP*	**Pg**	**21 27 38.4**	**-0.3**
	baz=76						
SGST				*e*S	**Sg**	**21 27 44.9**	**+0.7**
	baz=76						
WTP	**Ta-pu**	**0.46**	**68**	⇑*iP*	**Pg**	**21 27 39.1**	**-0.7**
	baz=64						
WTP				*e*S	**Sg**	**21 27 46.2**	**+0.1**
	baz=64						
SGLT	**Jiouru**	**0.46**	**138**	*eP*	**Pg**	**21 27 40.4**	**+0.4**
	baz=142						
CHY	**Chiayi**	**0.49**	**30**	*eP*	**Pg**	**21 27 40.5**	**-0.1**
	baz=16						
CHY				*e*S	**Sg**	**21 27 47.8**	**+0.7**
	baz=16						
TPUB	**Ta-pu**	**0.49**	**62**	*eP*	**Pg**	**21 27 39.2**	**-1.3**
TPUB				*e*S	**Sg**	**21 27 46.5**	**-0.7**
KAU	**Kaohsiung**	**0.52**	**164**	*eP*	**Pg**	**21 27 42.1**	**+1.1**
	baz=170						
STYT	**Tauyuan**	**0.56**	**81**	⇑P	**Pg**	**21 27 41.1**	**-0.7**
	baz=68						
STYT				*e*S	**Sg**	**21 27 49.3**	**-0.1**
	baz=68						
WSF	**Szhu**	**0.57**	**6**	⇓*iP*	**Pg**	**21 27 42.1**	**+0.2**
	baz=1.0						
WSF				*e*S	**Sg**	**21 27 51.0**	**+1.4**
	baz=1.0						
WGK	**Gukeng**	**0.72**	**31**	*eP*	**Pb**	**21 27 44.5**	**-0.2**
	baz=27						
WGK				*e*S	**Sg**	**21 27 56.0**	**+1.8**
	baz=27						
ALS	**Alishan**	**0.74**	**54**	⇓P	**Pb**	**21 27 44.5**	**-0.6**
	baz=50						
ALS		

TWF1				*e*S		**Sb**	**21 28 04.9**	**0.0**
	baz=73							
YULB	**Yu-li**	**1.10**	**73**	*e*P		**Pb**	**21 27 50.2**	**-1.0**
YULB				*e*S		**Sb**	**21 28 05.9**	**+0.6**
CHKT	**Chengkung**	**1.11**	**88**	*e*P		**Pb**	**21 27 51.0**	**-0.5**
	baz=88							
CHKT				*e*S		**Sb**	**21 28 06.0**	**+0.3**
	baz=88							
EHY	**Hungye**	**1.16**	**68**	*e*P		**Pn**	**21 27 51.3**	**-0.8**
	baz=66							
EHY				*e*S		**Sb**	**21 28 06.6**	**-0.3**
	baz=66							
TCU	**Taichung**	**1.17**	**24**	*e*P		**Pn**	**21 27 51.6**	**-0.7**
	baz=21							
TCU				*e*S		**Sb**	**21 28 07.9**	**+0.5**
	baz=21							
HEN	**Hengchun**	**1.19**	**153**	*e*P		**Pn**	**21 27 53.0**	**+0.4**
	baz=174							
ESL	**Shilin**	**1.39**	**58**	*e*P		**Pn**	**21 27 54.7**	**-0.5**
	baz=56							
ESL				*e*S		**Sn**	**21 28 12.2**	**-1.0**
	baz=56							
TWQ1	**Liyutan**	**1.39**	**24**	*e*P		**Pn**	**21 27 55.4**	**0.0**
	baz=21							
TWQ1				*e*S		**Sn**	**21 28 14.7**	**+1.4**
	baz=21							
NSY	**Sanyi**	**1.45**	**22**	*e*P		**Pn**	**21 27 54.9**	**-1.2**
	baz=19							
NSY				*e*S		**Sn**	**21 28 16.2**	**+1.5**
	baz=19							
WHF	**Hehuan Shan**	**1.48**	**43**	*e*P		**Pn**	**21 27 57.4**	**+0.9**
	baz=41							
WHF				*e*S		**Sn**	**21 28 15.9**	**+0.5**
	baz=41							
TWT	**Tachien**	**1.50**	**38**	*e*P		**Pn**	**21 27 56.5**	**-0.4**
	baz=35							
LAY	**Lan-yu**	**1.65**	**128**	*e*P		**Pn**	**21 27 58.2**	**-0.7**
	baz=131							
NACB	**Ninganchiao**	**1.72**	**50**	*e*Pn		**Pn**	**21 27 58.3**	**-1.5**
NACB				*e*Sn		**Sn**	**21 28 19.8**	**-1.5**
NSK	**Sanguang**	**1.94**	**34**	*e*P		**Pn**	**21 28 04.1**	**+1.2**
	baz=31							
NSK				*e*S		**Sn**	**21 28 28.1**	**+1.3**
	baz=31							
YHNB	**Yeheng**	**1.94**	**35**	*e*Pn		**Pn**	**21 28 02.5**	**-0.4**
YHNB				*e*Sn		**Sn**	**21 28 26.5**	**-0.5**
ENA	**Nanau**	**1.98**	**47**	*e*P		**Pn**	**21 28 03.2**	**-0.2**
	baz=62							
ENTT	**Nioudou**	**2.03**	**39**	*e*P		**Pn**	**21 28 04.7**	**+0.6**
	baz=19							
ENTT				*e*S		**Sn**	**21 28 30.2**	**+1.3**
	baz=19							
TWE	**Neicheng**	**2.15**	**40**	*e*P		**Pn**	**21 28 08.2**	**+2.5**
	baz=22							
TATO	**Taipei**	**2.25**	**32**	*e*Pn		**Pn**	**21 28 04.9**	**-2.2**
TATO				Sn		**Sn**	**21 28 33.2**	**-1.3**
QZH	**Quanzhou**	**2.35**	**323**	Pn		**Pn**	**21 28 13.3**	**+4.8**
QZH				Sn		**Sn**	**21 28 41.0**	**+4.0**
QZH				smax				
	comp=N,180nm,0.6s							
QZH				smax				
	comp=E,160nm,0.5s							
QIZ	**Qiongzhong**	**10.44**	**249**	Pn		**Pn**	**21 29 58.3**	**-1.3**
ENH	**Enshi**	**11.93**	**309**	P		**Pn**	**21 30 20.4**	**+0.4**
KURK	**Kurchatov**	**42.35**	**321**	P		**P**	**21 35 22.5**	**-1.2**
KBL	**Kabul**	**45.80**	**296**	*e*P		**P**	**21 35 51.9**	**+0.3**
	comp=E,1.2nm,0.5s							

*IDC **25** 21:32:51.1±2.8, 30°.66N×83°.07E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/25, mbtmp3.3/6, ML3.5/1, Error ellipse: s-maj=91.5km s-min=24.7km az=76.0*
*NEIC **25** 21:32:52.5±0.4, 30°.69N×83°.11E, h10km, mb3.3/3, Error ellipse: s-maj=10.1km s-min=4.9km az=42.0*
ISC 25 21:32:51.9±3.5, 30°.65N±0°.09×83°.08E±0°.07, h6km±22km, n18, σ0°55/20, mb3.3/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**7.05**	**96**	*e*Pn	**Pn**	**21 34 36.1**	**+0.4**
	8.8nm,0.9s						
LSA				*e*Sn	**Sn**	**21 35 56.9**	**+0.6**
KBL	**Kabul**	**12.45**	**292**	*e*Pn	**Pn**	**21 35 50.9**	**+1.3**
KBL				*e*Sn	**Sn**	**21 38 08.4**	**-0.3**
UCH	**Uchtor**	**13.44**	**332**	*e*Pn	**Pn**	**21 36 03.5**	**+0.4**
AML	**Almayashu**	**13.71**	**329**	Pn	**Pn**	**21 36 07.2**	**+0.4**
KKAR	**Karatay Array**	**15.96**	**325**	*e*Pn	**Pn**	**21 36 36.7**	**-0.2**
	0.6nm,0.6s						
MK31	**Makanchi Array**	**16.13**	**358**	Pn	**Pn**	**21 36 38.5**	**-0.6**
MKAR	**Makanchi Array**	**16.13**	**358**	Pn	**Pn**	**21 36 44.1**	**+5.0**
	0.1nm,0.3s,baz=174,slow=12,SNR=5.3						
CM31	**Chiang Mai Arr**	**18.83**	**127**	*e*P	**Pn**	**21 37 12.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**18.83**	**127**	P	**Pn**	**21 37 12.3**	**-0.6**
	0.1nm,0.3s,baz=317,slow=9.9,SNR=3.5						
KURK	**Kurchatov**	**20.32**	**352**	*e*P	**P**	**21 37 28.1**	**-0.3**
	1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**23.31**	**3**	P	**P**	**21 38 00.2**	**-0.3**
	0.3nm,0.3s,mb3.1,baz=186,slow=12,SNR=2.6						
SONM	**Songino Array**	**24.76**	**40**	P	**P**	**21 38 14.6**	**+0.4**
	0.6nm,0.6s,mb3.3,baz=232,slow=11,SNR=5.5						
ULN	**Ulaanbaatar**	**25.14**	**40**	*e*P	**P**	**21 38 17.3**	**-0.3**
	0.8nm,0.7s,mb3.4						
GNI	**Garni**	**32.44**	**298**	P	**P**	**21 39 22.3**	**-0.5**
YAK	**Yakutsk**	**43.40**	**30**	*e*P	**P**	**21 40 54.5**	**-0.5**
WRA	**Warramunga Arr**	**70.41**	**129**	P	**P**	**21 44 07.6**	**+0.5**
	0.3nm,0.5s,mb3.5,baz=325,slow=6.3,SNR=11						
ASAR	**Alice Springs**	**72.75**	**132**	P	**P**	**21 44 21.3**	**+0.2**
	0.2nm,0.5s,mb3.3,baz=322,slow=5.9,SNR=3.3						
ILAR	**Eielson Array**	**77.25**	**20**	P	**P**	**21 44 46.9**	**+0.4**
	0.5nm,1.0s,mb3.4,baz=313,slow=6.0,SNR=3.7						

*IDC **25** 21:38:14.1±1.9, 17°.78N×106°.10W, h0km, mb3.7/5, mb1 4.1/8, mb1mx3.9/25, mbtmp3.8/8, ML3.4/3, MS3.6/18, Ms1 3.6/18, ms1mx3.5/40, Error ellipse: s-maj=57.7km s-min=23.6km az=53.0*
*MEX **25** 21:38:17.8±1.0, 18°.91N×106°.27W, h12km±125km, MD4.4*
*NEIC **25** 21:38:17.8, 18°.91N×106°.27W, h12km, mb4.1/7, MD4.4(MEX), After MEX.*
*ISCJB **25** 21:38:18.5±1.0, 18°.93N±0°.08×106°.17W±0°.05, h50km, mb3.9/4, MS3.6/16, Error ellipse: s-maj=12.9km s-min=5.3km az=23.0*
ISC 25 21:38:18.8±1.0, 18°.83N±0°.08×106°.18W±0°.05, h50km, n108, σ1°30/29, mb3.9/4, MS3.6/16, 28C-30D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R15V		**2.11**	**80**	*e*P	**Pn**	**21 38 50.1**	**-1.5**
R15V				*i* S	**Sn**	**21 39 15.6**	**-1.1**
EZ5V		**2.52**	**75**	*e*P	**Pn**	**21 38 57.6**	**+0.3**
EZ5V				*i* S	**Sn**	**21 39 28.8**	**+1.9**
ANIG	**Ahuacatlan**	**2.71**	**35**	*i* P	**Pn**	**21 38 57.9**	**-2.0**
ANIG				*i* S	**Sn**	**21 39 29.4**	**-2.1**
MMIG	**Aquila**	**2.74**	**101**	*i* P	**Pn**	**21 39 00.1**	**-0.3**
MMIG				*i* S	**Sn**	**21 39 34.1**	**+1.8**
SFJM	**Santa Fe**	**3.39**	**60**	*i* P	**Pn**	**21 39 10.0**	**+0.8**
SFJM	**Santa Fe**	**3.39**	**60**	*i* P	**Pn**	**21 39 10.0**	**+0.8**
TXAR	**Lajitas Array**	**10.71**	**12**	Pn		21 41 04.4	
	0.1nm,0.3s,baz=190,slow=15,SNR=26						
TXAR				LR	LR	21 45 35.4	
	comp=Z,136nm,18.3s,baz=355,slow=38						
626A	**Big Bend Ranch**	**10.84**	**10**	⇑P		21 41 08.2	
	baz=11						
627A	**Terlingua Ranc**	**10.88**	**13**	⇓P		21 41 07.7	
	baz=11						
CMIG	**Matias Romero**	**10.89**	**97**	Pn	**Pn**	**21 40 48.8**	**-3.3**
	0.2nm,0.3s,baz=274,slow=13,SNR=3.2						
CMIG				LR	LR	21 45 20.7	
	comp=Z,153nm,20.6s,baz=354,slow=40						
628A	**Black Gap, Mar**	**11.03**	**15**	⇓P		21 41 09.4	
	baz=11						
526A	**Mary Lane Ranc**	**11.35**	**9**	⇓P		21 41 15.7	
	baz=11						
527A	**Woodward Ranch**	**11.51**	**11**	⇓P		21 41 16.7	
	baz=12						
426A	**McDonald Obser**	**11.95**	**9**	⇓P		21 41 24.0	
	baz=12						
427A	**Hayter Ranch,**	**12.23**	**11**	⇓P		21 41 27.0	
	baz=12						
428A	**Kincaid Ranch,**	**12.27**	**14**	⇓P		21 41 27.1	
	baz=12						
325A	**Bean Ranch, Si**	**12.54**	**5**	⇓P		21 41 33.6	
	baz=12						
324A	**Moseley Ranch,**	**12.58**	**3**	⇓P		21 41 32.6	
	baz=13						
326A	**Caldwell Ranch**	**12.60**	**9**	⇑P		21 41 32.7	
	baz=13						
320A	**Kipp Ranch, An**	**12.64**	**351**	⇓P		21 41 34.3	
	baz=13						
319A	**Douglas**	**12.81**	**348**	⇑P		21 41 35.5	
	baz=13						
MNTX	**Cornudas Mount**	**12.84**	**3**	P		21 41 37.1	
	baz=13						
MNTX	**Cornudas Mount**	**12.84**	**3**	*e*Pn	**Pn**	**21 41 18.5**	**-0.1**
328A	**Wristen Ranch,**	**12.87**	**13**	⇑P		21 41 35.7	
	baz=13						
JCT	**Junction City**	**12.96**	**25**	⇑P		21 41 34.1	
	baz=13						
JCT	**Junction City**	**12.96**	**25**	*e*Pn	**Pn**	**21 41 20.6**	**+0.2**
318A	**Bisbee**	**13.02**	**345**	⇓P		21 41 38.0	
	baz=13,SNR=9.8						
220A	**Playas Peak, P**	**13.19**	**351**	⇑P		21 41 40.0	
	baz=13,SNR=7.4						
224A	**Cornudas Mount**	**13.21**	**2**	⇑P		21 41 42.6	
	baz=13						
225A	**Deer Hill, Car**	**13.28**	**5**	⇓P		21 41 42.9	
	baz=13						
GDL2	**Guadalupe Moun**	**13.42**	**7**	*e*Pn	**Pn**	**21 41 26.6**	**+0.1**
124A	**Stringfield Ra**	**13.83**	**3**	⇑P		21 41 50.2	
	baz=14						
TUC	**Tucson**	**14.05**	**344**	*e*Pn	**Pn**	**21 41 32.9**	**-2.3**
	20nm,1.8s						
118A	**Homack Ranch,**	**14.17**	**347**	⇓P		21 41 53.2	
	baz=14						
117A	**Oracle**	**14.29**	**344**	⇓P		21 41 54.3	
	baz=14						
CPRX	**Cap Rock**	**14.30**	**8**	*e*Pn	**Pn**	**21 41 38.2**	**-0.3**
	7.5nm,0.8s						
Z22A	**Elephant Butte**	**14.39**	**357**	⇑P		21 41 56.4	
	baz=14						
Z20A	**Nine Sixteen R**	**14.39**	**352**	⇓P		21 41 57.0	
	baz=14						
Z25A	**Roswell**	**14.45**	**5**	⇓P		21 41 57.7	
	baz=14						
Z24A	**Sheeppen Canyo**	**14.46**	**3**	⇓P		21 41 57.2	
	baz=14						
Z27A	**Tatum**	**14.67**	**10**	⇓P	pP	21 41 58.7	-1.1
	baz=15,SNR=7.3						
115A	**Sonoran Desert**	**14.85**	**340**	⇑P	pP	21 42 01.1	-0.7
	baz=15						
Y23A	**Lovelace Mesa,**	**15.04**	**0**	⇑P	pP	21 42 04.7	+0.7
	baz=15						
Y24A	**Capitan**	**15.05**	**2**	⇓P	pP	21 42 04.4	+0.4
	baz=15						
Y20A	**Horse Springs,**	**15.15**	**353**	⇓P	pP	21 42 07.9	+2.8
	baz=15						
Y19A	**Nutrioso**	**15.32**	**350**	⇓P	pP	21 42 08.7	+1.7
	baz=15						
113A	**Mohawk Valley,**	**15.46**	**335**	⇓P		21 42 09.8	
	baz=15						
Y16A	**Circle Bar Ran**	**15.72**	**344**	⇓P	pP	21 42 13.3	+1.8
	baz=16						
Z13A	**Yuma Proving G**	**15.80**	**336**	⇑P	pP	21 42 14.2	+1.8
	baz=16,SNR=7.2						
Y15A	**Casa Rosa Ranc**	**16.04**	**341**	⇑P	pP	21 42 16.3	+1.3
	baz=16						
ANMO	**Albuquerque**	**16.06**	**359**	P	pP	21 42 15.2	-0.1
	0.1nm,0.3s,baz=195,slow=9.4,SNR=3.7						
ANMO				LR	LR	21 48 22.8	
	comp=Z,132nm,21.9s,baz=24,slow=36						
ANMO	**Albuquerque**	**16.06**	**359**	*e*Pn	**Pn**	**21 42 02.1**	**+0.8**
	14nm,2.0s						
ANMO				LR	LR	21 48 22.9	
GLA	**Glamis**	**16.15**	**333**	⇑P	pP	21 42 17.9	+1.6
	baz=16						
GLA	**Glamis**	**16.15**	**333**	Pn	**Pn**	**21 42 01.9**	**-0.6**
X16A	**Lo Mia Camp, P**	**16.22**	**344**	⇑P	pP	21 42 19.1	+2.1
	baz=16						
AMTX	**Amarillo**	**16.49**	**13**	*e*Pn	**Pn**	**21 42 07.2**	**+0.5**
	14nm,1.0s						
MONP	**Monument Peak**	**16.75**	**329**	⇓P	pP	21 42 23.9	+0.9
	baz=17						
BC3	**Big Chuckawall**	**16.93**	**333**	⇑P	pP	21 42 27.4	+2.5
	baz=17,SNR=5.8						
V22A	**San Miguel Ran**	**17.03**	**358**	⇓P	pP	21 42 29.4	+3.3
	baz=17,SNR=5.6						
V26A	**Tequesquite Ra**	**17.04**	**7**	⇓P	pP	21 42 28.4	+2.3
	baz=17						
X13A	**Yucca**	**17.12**	**338**	⇓P	pP	21 42 29.4	+2.4
	baz=17						
WMOK	**Wichita Mounta**	**17.16**	**21**	*e*Pn	**Pn**	**21 42 16.5**	**+1.4**
	21nm,1.6s						
W15A	**Williams**	**17.16**	**343**	⇑P	pP	21 42 31.4	+3.9
	baz=17						
V17A	**Tonalea, Kykot**	**17.22**	**347**	⇑P	pP	21 42 31.4	+3.3
	baz=17						
PFO	**Pinyon Flat Ob**	**17.35**	**330**	⇓P	pP	21 42 30.7	+1.1
	baz=17						
W14A	**Seligman**	**17.43**	**341**	⇑P	pP	21 42 34.6	+4.1
	baz=17						
BELC	**Belle Mtn. Jos**	**17.47**	**332**	⇑P	pP	21 42 33.7	+2.9
	baz=17,SNR=5.6						
U25A	**Circle Dot Ran**	**17.58**	**5**	⇑P	pP	21 42 34.1	+2.1
	baz=18						
U26A	**Atchley Ranch,**	**17.63**	**6**	⇑P	pP	21 42 35.9	+3.2
	baz=18						
LDFC	**Landfair**	**18.02**	**336**	*e*Pn	**Pn**	**21 42 25.3**	**-0.4**
	19nm,0.4s						
T22A	**Edith**	**18.13**	**358**	⇑P	pP	21 42 41.6	+3.4
	baz=18						
S21A	**Coal Bank Pass**	**18.82**	**356**	⇓P	pP	21 42 49.1	+3.4
	baz=19,SNR=8.1						
S25A	**Robets Cordova**	**18.83**	**4**	⇓P	pP	21 42 49.2	+3.3
	baz=19						
S22A	**4UR Ranch, Cre**	**18.86**	**358**	⇑P	pP	21 42 49.5	+3.2
	baz=19						
SDCO	**Great Sand Dun**	**18.86**	**2**	⇑P	pP	21 42 50.5	+4.3
	baz=19,SNR=5.8						
SDCO	**Great Sand Dun**	**18.86**	**2**	*e*Pn	**Pn**	**21 42 36.0**	**+0.2**
GSC	**Goldstone**	**18.92**	**332**	*e*P	**Pn**	**21 42 36.5**	**0.0**
S20A	**Disappointment**	**19.03**	**355**	⇑P	pP	21 42 51.1	+3.1
	baz=19						
SHPR	**Sheep Range**	**19.31**	**338**	*e*P	**Pn**	**21 42 40.7**	**-0.5**
R18A	**Canyonlands Na**	**19.76**	**351**	⇑P	pP	21 42 59.5	+3.4
	baz=20						
MPMC	**Manual Prospec**	**19.86**	**332**	⇑P	pP	21 42 58.7	+1.5
	baz=20,SNR=5.7						
CBKS	**Cedar Bluff**	**20.69**	**14**	P	**P**	**21 42 56.8**	**+2.1**
	43nm,1.3s						
DUG	**Dugway**	**22.05**	**346**	P	**P**	**21 43 11.4**	**+2.1**
	4.2nm,0.9s,mb3.9						
NVAR	**Mina Array Bea**	**22.20**	**334**	P	pP	21 43 21.1	-1.5
	3.0nm,1.1s,baz=162,slow=12,SNR=4.0						
NVAR				LR	LR	21 51 10.6	
	comp=Z,90nm,20.4s,MS3.2,baz=287,slow=34						
WAKR	**Walker**	**22.75**	**332**	*e*P	**P**	**21 43 18.1**	**+1.3**
	12nm,1.4s,mb4.1						
PDAR	**Pinedale Array**	**24.04**	**354**	P	pP	21 43 40.6	-1.3
	0.3nm,0.7s,baz=154,slow=11,SNR=2.6						
TKL	**Tuckaleechee C**	**25.94**	**45**	LR	LR	21 56 42.9	
	comp=Z,99nm,18.8s,MS3.4,baz=295,slow=42						
YBH	**Yreka Blue Hor**	**26.83**	**332**	LR	LR	21 55 12.2	
	comp=Z,109nm,18.6s,MS3.4,baz=186,slow=37						
BBB	**Bella Bella**	**37.47**	**338**	LR	LR	22 00 56.1	
	comp=Z,44nm,21.3s,MS3.2,baz=262,slow=35						
DLBC	**Dease Lake**	**43.24**	**342**	P	pP	21 46 25.8	-2.6
	2.7nm,0.7s,baz=180,slow=12,SNR=4.9						
DLBC	**Dease Lake**	**43.24**	**342**	P	pP	21 46 25.8	-2.6
YKA	**Yellowknife Ar**	**44.02**	**354**	LR	LR	22 04 30.2	
	comp=Z,5.9nm,19.6s,MS2.5,baz=70,slow=35						
RKT	**Rikitea**	**50.29**	**215**	*e*LR	LR	22 01 13.2	
	187nm,28.0s						
LPAZ	**La Paz**	**51.18**	**131**	P	**P**	**21 47 14.5**	**-2.8**
	0.8nm,0.7s,mb3.8,baz=298,slow=8.6,SNR=4.0						
LPAZ				LR	LR	22 06 04.7	
	comp=Z,75nm,21.8s,MS3.7,baz=244,slow=33						
INK	**Inuvik**	**52.37**	**348**	LR	LR	22 09 41.1	
	comp=Z,54nm,21.6s,MS3.6,baz=275,slow=35						
ILAR	**Eielson Array**	**53.31**	**340**	P	**P**	**21 47 42.0**	**+10**
	1.4nm,0.9s,mb3.9,baz=147,slow=5.6,SNR=10						
PPT	**Papeete**	**55.92**	**232**	*e*LR	LR	22 03 48.4	
	193nm,27.0s						
PPT	**Papeete**	**55.92**	**232**	LR	LR	22 04 11.6	
	comp=Z,130nm,21.0s,MS4.0,baz=3.8,slow=28						
RES	**Resolute Bay**	**56.22**	**4**	LR	LR	22 12 21.8	
	comp=Z,45nm,18.1s,MS3.6,baz=285,slow=36						
TBI	**Tubuai**	**59.51**	**227**	*e*LR	LR	22 05 36.4	
	150nm,25.2s						
CPUP	**Villa Florida**	**65.30**	**132**	LR	LR	22 14 42.0	
	comp=Z,51nm,19.1s,MS3.7,baz=174,slow=34						
PLCA	**Paso Flores**	**67.88**	**151**	LR	LR	22 10 03.2	
	comp=Z,96nm,18.8s,MS4.0,baz=288,slow=28						
PETK	**Petropavlovsk-**	**78.75**	**322**	LR	LR	22 18 26.5	
	comp=Z,38nm,19.4s,MS3.7,baz=232,slow=30						
BBTS	**Babate**	**85.05**	**76**	LR	LR	22 25 10.9	
	comp=Z,33nm,20.4s,MS3.7,baz=303,slow=33						
URZ	**Urewera**	**91.51**	**230**	LR	LR	22 22 54.6	
	comp=Z,94nm,18.3s,MS4.3,baz=259,slow=30						
DZM	**Mont Dzumac**	**94.57**	**248**	*e*LR	LR	22 21 53.4	
	130nm,23.8s						
RPZ	**Rata Peaks**	**97.72**	**227**	LR	LR	22 26 19.9	
	comp=Z,122nm,21.9s,MS4.3,baz=201,slow=30						
KEST	**Kesra**	**98.37**	**48**	LR	LR	22 35 17.7	
	comp=Z,28nm,20.1s,MS3.8,baz=264,slow=35						

DJA 25 21:45:31.1±24S×99°.74E, h9km, MLv3.5/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.66**	**262**	P	Pg	21 45 43.5	-0.2
SISI				S	Sg	21 45 54.5	+2.2
PDSI	**Padang**	**0.79**	**66**	P	Pg	21 45 44.0	-2.3
PDSI				S	Sg	21 45 58.9	+2.3
PPI	**Padang Panjang**	**1.02**	**40**	P	Pg	21 45 46.8	-3.8
PPI				S	Sg	21 46 03.4	-0.5
SDSI	**Sungai Dareh**	**1.71**	**80**	P	Pn	21 46 00.6	-0.5
SDSI				S	Sn	21 46 24.6	+1.5
BKNI	**Bangkinang**	**2.03**	**40**	P	Pn	21 46 05.8	+0.4
MNSI	**Mandailing Nat**	**2.03**	**355**	P	Pn	21 46 05.0	-0.4
MNSI				S	Sn	21 46 32.7	+1.8
RGRI	**Rengat**	**2.74**	**71**	P	Pn	21 46 16.1	+0.9

*ISCJB **25** 21:50:46.2±0.5, 50°.06N±0°.04×19°.12E±0°.03, h0km, Error ellipse: s-maj=5.8km s-min=2.8km az=9.4*
*IPEC **25** 21:50:46.6±0.1, 50°.06N×19°.15E, h4km±1km, ML1.5/3, Error ellipse: s-maj=1.6km s-min=0.7km az=161.0*
*CSEM **25** 21:50:46.3±0.2, 50°.17N×19°.04E, h2km, ML2.5/5, Error ellipse: s-maj=6.2km s-min=3.0km az=5.0*
*WAR **25** 21:50:46.6, 50°.08N×19°.16E*
*PRU **25** 21:50:47.3, 50°.13N×19°.01E, h0km*
ISC 25 21:50:46.9±0.5, 50°.07N±0°.04×19°.10E±0°.03, h0km, n31, σ0°82/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.47**	**71**	*e*Pg	**Pg**	**21 50 55.4**	**-0.6**
OJC				*e*Sg	**Sg**	**21 51 01.7**	**-0.4**
OJC	**Ojcow**	**0.47**	**71**	*e*Pg	**Pg**	**21 50 55.2**	**-0.8**
	baz=250						
OJC				*e*Sg	**Sg**	**21 51 01.0**	**-1.1**
	baz=250						
OKC	**Ostrava-Krasne**	**0.66**	**250**	*e*PG	**Pg**	**21 50 59.5**	**0.0**
OKC				*e*SG	**Sg**	**21 51 07.5**	**-0.6**
	comp=Z,13nm,0.3s						
OKC	**Ostrava-Krasne**	**0.66**	**250**	Pg	**Pg**	**21 50 59.5**	**0.0**
OKC				Sg	**Sg**	**21 51 07.5**	**-0.6**
	comp=Z,13nm,0.3s						
NIE	**Niedzica**	**1.02**	**129**	*e*Pg	**Pg**	**21 51 05.9**	**-0.5**
NIE				*e*Sg	**Sg**	**21 51 20.7**	**+1.1**
MORC	**Moravsky Berou**	**1.05**	**255**	*e*Pg	**Pg**	**21 51 06.6**	**-0.4**
	baz=74						
MORC				*e*Sg	**Sg**	**21 51 20.6**	**0.0**
	comp=Z,7.6nm,0.2s,baz=74						
JAVC	**Velka Javorina**	**1.53**	**218**	*e*Pn	**Pn**	**21 51 15.8**	**+0.4**
	baz=38						
KOLL	**Kolacno**	**1.56**	**197**	*e*SN	**Sn**	**21 51 37.0**	**+0.3**
KOLL	**Kolacno**	**1.56**	**197**	*e*Sn	**Sn**	**21 51 37.0**	**+0.3**
VYHS	**Vyhne**	**1.58**	**186**	*e*PN	**Pn**	**21 51 15.4**	**-0.8**
VYHS				*e*SN	**Sn**	**21 51 36.6**	**-0.7**
VYHS	**Vyhne**	**1.58**	**186**	*e*Pn	**Pn**	**21 51 15.3**	**-0.9**
	baz=7.2						
VYHS				*e*Sn	**Sn**	**21 51 36.7**	**-0.6**
VRAC	**Vranov**	**1.80**	**246**	*e*Pn	**Pn**	**21 51 18.5**	**-0.7**
	baz=65						
VRAC				*e*Sg	**Sn**	**21 51 42.8**	**+0.2**
	comp=Z,3.7nm,0.4s,baz=65						
DPC	**Dobruska-Polom**	**1.81**	**280**	*e*PG	**Pn**	**21 51 19.3**	**0.0**
DPC				*e*SG	**Sn**	**21 51 42.7**	**-0.2**
	comp=Z,9.8nm,0.3s						
DPC	**Dobruska-Polom**	**1.81**	**280**	*e*Pn	**Pn**	**21 51 18.1**	**-1.2**
	baz=98						
DPC	**Dobruska-Polom**	**1.81**	**280**	Pg	**Pn**	**21 51 19.3**	**0.0**
DPC				Sg	**Sn**	**21 51 42.7**	**-0.2**
	comp=Z,9.8nm,0.3s						
KECS	**Kecovo**	**1.82**	**150**	*e*PN	**Pg**	**21 51 21.3**	**-0.6**
KECS				*e*SN	**Sn**	**21 51 43.3**	**0.0**
CRVS	**Cervenica-Dubn**	**1.93**	**126**	*e*PN	**Pg**	**21 51 24.4**	**+0.5**
CRVS				*e*SN	**Sg**	**21 51 49.1**	**+0.3**
CRVS	**Cervenica-Dubn**	**1.93**	**126**	*e*Pn	**Pg**	**21 51 24.4**	**+0.5**
CRVS				*e*Sn	**Sg**	**21 51 49.1**	**+0.3**
KRUC	**Moravsky**	**2.03**	**241**	*e*Pn	**Pn**	**21 51 22.6**	**+0.3**
	baz=60						
UPC	**Upice**	**2.03**	**284**	*e*SG	**Sn**	**21 51 49.4**	**+1.0**
UPC	**Upice**	**2.03**	**284**	Sg	**Sn**	**21 51 49.4**	**+1.0**
KOLS	**Kolonicke sedl**	**2.36**	**118**	*e*SN	**Sn**	**21 51 57.5**	**+1.1**
KOLS	**Kolonicke sedl**	**2.36**	**118**	*e*Sn	**Sn**	**21 51 57.5**	**+1.1**
PRU	**Pruhonice**	**2.94**	**270**	*e*SG	**Sb**	**21 52

ENTT			*e*S		**Sg**	**23 02 56.2 +0.7**
	baz=248					
TWY	**Chenhua**	**0.64 316**	*e*P		**Pg**	**23 02 51.3 -0.2**
	baz=309					
TWS1	**Kuangyinshan**	**0.68 295**	*e*P		**Pg**	**23 02 52.5 +0.4**
	baz=295					
NSK	**Sanguang**	**0.68 259**	*e*P		**Pg**	**23 02 51.5 -0.7**
	baz=257					
NSK			*e*S		**Sg**	**23 03 01.6 +0.6**
	baz=257					
TWD	**Chiawan**	**0.86 212**	*e*P		**Pg**	**23 02 55.6 +0.1**
	baz=212					
TWD			*e*S		**Sg**	**23 03 06.2 -0.5**
	baz=212					
YOJ	**Yonaguni jima**	**0.91 112**	P		**Pg**	**23 02 56.9 +0.4**
YOJ			S		**Sg**	**23 03 10.1 +1.8**
TWT	**Tachien**	**1.00 236**	*e*P		**Pg**	**23 02 58.7 +0.4**
	baz=230					
TWT			*e*S		**Sg**	**23 03 11.9 +0.6**
	baz=230					
WHF	**Hehuan Shan**	**1.00 229**	*e*P		**Pg**	**23 02 58.1 -0.2**
	baz=229					
WHF			*e*S		**Sg**	**23 03 10.8 -0.6**
	baz=229					
ESL	**Shilin**	**1.16 211**	*e*P		**Pg**	**23 03 00.6 -0.8**
	baz=212					
SMLT	**Sun Moon Lake**	**1.43 230**	*e*P		**Pn**	**23 03 05.4 0.0**
	baz=230					
TYC	**Yuchr**	**1.44 231**	*e*P		**Pn**	**23 03 06.0 +0.4**
	baz=224					
IRIF	**Iriomote-Funau**	**1.57 107**	*e*S		**Sn**	**23 03 27.9 +0.1**
YUS	**Yu-Shan**	**1.68 219**	*e*P		**Pn**	**23 03 09.8 +1.0**
	baz=229					
HATJ	**Hateruma jima**	**1.73 115**	P		**Pn**	**23 03 09.5 -0.1**
ALS	**Alishan**	**1.75 222**	*e*P		**Pn**	**23 03 11.9 +2.1**
	baz=211					
JKRS	**Kuro-shima**	**1.84 108**	P		**Pn**	**23 03 10.6 -0.5**
JKRS			*e*S		**Sn**	**23 03 34.3 -0.3**
JIJ	**Ishigaki jima**	**1.92 103**	P		**Pn**	**23 03 11.7 -0.5**
JIJ			*e*S		**Sn**	**23 03 35.2 -1.4**

*ISCJB **25** 23:13:27.4±2.5, 11°.3S±0°.1×164°.58E±0°.09, h41km±21km, mb4.0/12, MS3.4/4, Error ellipse: s-maj=17.5km s-min=14.3km az=22.7*
*IDC **25** 23:13:28.5±8.7, 11°.22S×164°.68E, h36km±67km, mb3.8/6, mb1 4.1/8, mb1mx3.9/19, mbtmp4.0/8, ML4.5/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/27, Error ellipse: s-maj=52.5km s-min=27.8km az=129.0*
*NEIC **25** 23:13:29.1±1.4, 11°.20S×164°.66E, h43km±13km, mb4.3/4, Error ellipse: s-maj=10.2km s-min=8.5km az=174.0*

ISC 25 23:13:28.8±2.0, 11°.2S±0°.1×164°.63E±0°.09, h39km±18km, n26, σ0°48/23, mb4.0/12, MS3.4/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.95**	**291**	Pn	**Pn**	**23 14 40.8**	**+0.2**
	18nm,0.3s,baz=166,slow=12,SNR=2.8						
HNR				Sn	**Sn**	**23 15 35.6**	**-1.0**
	10nm,0.3s,baz=197,slow=19,SNR=4.5						
HNR				LR	LR	23 16 29.3	
	comp=Z,408nm,21.9s,baz=172,slow=36						
HNR	**Honiara**	**4.95**	**291**	*e*Pn	**Pn**	**23 14 40.9**	**+0.3**
HNR				*e*Sn	**Sn**	**23 15 37.5**	**+0.9**
HNR				LR	LR	23 16 29.3	
CTA	**Charters Tower**	**19.75**	**241**	P	**Pn**	**23 17 57.4**	**+0.2**
	0.6nm,0.3s,baz=66,slow=13,SNR=4.5						
CTA	**Charters Tower**	**19.75**	**241**	P	**Pn**	**23 17 57.4**	**+0.2**
CTAO	**Charters Tower**	**19.75**	**241**	*e*P	**Pn**	**23 17 55.8**	**-1.4**
	32nm,1.2s						
AFI	**Afiamalu**	**23.18**	**99**	LR	LR	23 25 01.3	
	comp=Z,86nm,21.8s,MS3.2,baz=89,slow=30						
AFI	**Afiamalu**	**23.18**	**99**	*e*P	**P**	**23 18 32.1**	**-0.2**
	22nm,0.7s,mb4.7						
URZ	**Urewera**	**29.14**	**160**	*e*P	**P**	**23 19 26.1**	**0.0**
STKA	**Stephens Creek**	**29.56**	**222**	*e*P	**P**	**23 19 29.7**	**-0.2**
	0.2nm,0.6s,mb3.0						
WB2	**Warramunga Arr**	**30.38**	**250**	*e*P	**P**	**23 19 37.7**	**+0.3**
WRA	**Warramunga Arr**	**30.39**	**250**	P	**P**	**23 19 37.6**	**+0.1**
	4.0nm,0.8s,mb4.2,baz=77,slow=8.8,SNR=11						
GUMO	**Guam**	**31.50**	**321**	LR	LR	23 30 56.2	
	comp=Z,77nm,21.7s,MS3.3,baz=132,slow=33						
ASAR	**Alice Springs**	**31.73**	**243**	P	**P**	**23 19 49.4**	**+0.1**
	2.2nm,0.6s,mb4.2,baz=63,slow=10,SNR=41						
FITZ	**Fitzroy Crossi**	**38.28**	**255**	LR	LR	23 34 02.4	
	comp=Z,54nm,20.0s,MS3.4,baz=35,slow=32						
FITZ	**Fitzroy Crossi**	**38.28**	**255**	*e*P	**P**	**23 20 45.4**	**-0.3**
	5.3nm,0.7s,mb4.4						
MBWA	**Marble Bar**	**44.10**	**251**	*e*P	**P**	**23 21 33.8**	**+0.2**
	2.8nm,0.6s,mb4.2						
KKM	**Kota Kinabalu**	**51.15**	**287**	*e*P	**P**	**23 22 27.9**	**-0.5**
	3.0nm,0.5s,mb4.5						
PETK	**Petropavlovsk-**	**64.36**	**355**	LR	LR	23 51 59.5	
	comp=Z,54nm,19.1s,MS3.8,baz=257,slow=36						
KULM	**Kulim**	**65.74**	**281**	P	**P**	**23 24 10.0**	**-0.3**
BJT	**Baijiatuan**	**67.94**	**322**	*e*P	**P**	**23 24 23.2**	**-0.4**
SONM	**Songino Array**	**78.17**	**324**	P	**P**	**23 25 25.0**	**+0.9**
	0.8nm,0.6s,mb3.8,baz=139,slow=6.8,SNR=6.0						
QSPA	**South Pole Qui**	**78.77**	**180**	*e*P	**P**	**23 25 27.5**	**+0.7**
	1.1nm,0.8s,mb3.8						
DIB	**Dawson Inlet,**	**83.44**	**33**	T		00 57 53.1	
	SNR=5.3						
ILAR	**Eielson Array**	**84.04**	**19**	P	**P**	**23 25 55.4**	**+0.5**
	0.6nm,0.9s,mb3.7,baz=225,slow=4.6,SNR=5.8						
NVAR	**Mina Array Bea**	**86.98**	**50**	P	**P**	**23 26 09.6**	**-0.5**
	0.2nm,0.5s,mb3.6,baz=218,slow=5.7,SNR=3.1						
MKAR	**Makanchi Array**	**92.91**	**317**	P	**P**	**23 26 37.5**	**-0.2**
	0.3nm,0.2s,mb4.3,baz=97,slow=4.9,SNR=3.4						

IDC 25 23:25:23.5±1.6, 6°.70S×122°.59E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.5/20, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=61.4km s-min=20.8km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.29**	**300**	Pn	Pn	23 26 16.5	+0.2
	4.9nm,0.3s,baz=133,slow=13,SNR=7.3						
KAPI				Sn	Sn	23 26 57.0	+0.9
	5.5nm,0.3s,baz=42,slow=20,SNR=3.6						
FITZ	**Fitzroy Crossi**	**11.72**	**166**	Pn	Pn	23 28 11.8	-0.3
	0.1nm,0.3s,baz=4.2,slow=11,SNR=3.9						
WRA	**Warramunga Arr**	**17.42**	**140**	P	Pn	23 29 26.4	-1.7
	0.1nm,0.3s,baz=311,slow=14,SNR=6.1						
ASAR	**Alice Springs**	**20.07**	**148**	P	P	23 29 59.9	+1.3
	1.3nm,0.5s,baz=326,slow=12,SNR=17						
SONM	**Songino Array**	**56.15**	**347**	P	P	23 35 04.8	0.0
	0.8nm,0.7s,baz=165,slow=7.1,SNR=4.3						

*MOS **25** 23:50:33.7±1.4, 55°.18N×111°.85E, h7km, mb4.2/1, Error ellipse: s-maj=23.9km s-min=11.1km az=82.2*

BYKL 25 23:50:25.4±0.2, 54°.94N×113°.04E, 9C-4D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UKT	**Uakit**	**0.65**	**31**	⇓*i*Pg	Pg	23 50 37.0	-0.7
UKT				*e*Sg	Sg	23 50 45.3	-0.8
UKT				*e*Sb	Sb	23 50 47.3	+1.2
UKT				Pmax			
	108nm,1.0s						
UKT				max			
	809nm,1.4s						
YLYR	**Ulyunkhan**	**1.09**	**267**	⇓*i*PG	Pg	23 50 44.9	-1.3
YLYR				pmax	pmax		
	comp=Z,60nm,0.2s						
YLYR	**Ulyunkhan**	**1.09**	**267**	⇑*i*Pg	Pg	23 50 44.9	-1.3
YLYR				*i* Sg	Sg	23 50 59.4	-0.9
YLYR				*e*Sb	Sb	23 51 02.4	+0.7
YLYR				Pmax			
	comp=Z,59nm,0.2s						
YLYR				Smax			
	comp=Z,1μm,0.8s						
SVKR	**Severomuysk**	**1.22**	**14**	*e*Pg	Pg	23 50 48.7	0.0
SVKR				*e*Pb	Pb	23 50 50.1	+0.9
SVKR				*e*		23 50 54.7	
SVKR				*e*Sg	Sg	23 51 06.1	+1.7
SVKR				*e*		23 51 10.6	
SVKR				max			
	comp=Z,243nm,0.2s						
SVKR				max			
	comp=Z,2μm,0.6s						
YOA	**Uoyan**	**1.41**	**329**	*e*PG	Pg	23 50 51.6	-0.8
YOA				*e*		23 51 10.8	
YOA				pmax	pmax		
	comp=Z,365nm,0.2s						
YOA				smax			
	comp=N,874nm,0.5s						
YOA	**Uoyan**	**1.41**	**329**	*e*Pg	Pg	23 50 49.6	-2.8
YOA				*e*Sg	Sg	23 51 08.6	-2.1
YOA				Pmax			
	comp=N,255nm,0.2s						
YOA				Smax			
	comp=N,1μm,1.0s						
KMO	**Kumora**	**1.42**	**313**	*e*PG	Pg	23 50 51.1	-1.4
KMO				pmax	pmax		
	comp=Z,63nm,0.2s						
KMO	**Kumora**	**1.42**	**313**	⇑*i*Pg	Pg	23 50 50.5	-2.0
KMO				*e*		23 50 54.8	
KMO				*i* Sg	Sg	23 51 10.1	-0.7
KMO				*e*		23 51 13.0	
KMO				Pmax			
	comp=Z,161nm,0.4s						
KMO				max			
	comp=Z,568nm,0.9s						
NIZ	**Nizh Angarsk**	**2.17**	**294**	*e*PG	Pg	23 51 02.8	-4.1
NIZ				pmax	pmax		
	comp=Z,52nm,0.7s						
NIZ	**Nizh Angarsk**	**2.17**	**294**	⇑*i*Pg	Pg	23 51 04.1	-2.8
NIZ				*e*		23 51 07.2	
NIZ				*i* Sg	Sg	23 51 32.4	-2.5
NIZ				*e*		23 51 34.9	
NIZ				Pmax			
	comp=Z,51nm,0.6s						
NIZ				max			
	comp=Z,324nm,0.9s						
SYVR	**Suvo**	**2.20**	**235**	*e*PN	Pn	23 51 02.8	-0.3
SYVR				*e*		23 51 34.2	
SYVR				pmax	pmax		
	comp=Z,125nm,0.4s						
SYVR				smax			
	comp=N,229nm,0.5s						
SYVR	**Suvo**	**2.20**	**235**	⇓*i*Pn	Pn	23 51 02.7	-0.4
SYVR				⇓*i*Pg	Pg	23 51 04.4	-3.1
SYVR				*i* Sg	Sg	23 51 34.5	-1.4
SYVR				*e*		23 51 36.2	
SYVR				Pmax			
	comp=N,123nm,0.7s						
SYVR				max			
	comp=N,234nm,1.3s						
BOD	**Bodaibo**	**2.94**	**10**	*e*PN	Pn	23 51 18.0	+4.8
BOD				*e*		23 51 55.1	
BOD				pmax	pmax		
	comp=Z,19nm,0.3s						
BOD				smax			
	comp=E,463nm,1.6s						
BOD	**Bodaibo**	**2.94**	**10**	*e*Pg	Pg	23 51 17.5	-4.1
BOD				*e*		23 51 48.4	
BOD				*i* Sg	Sg	23 51 55.6	-4.0
BOD				Pmax			
	comp=E,27nm,0.8s						
BOD				Smax			
	comp=E,463nm,1.6s						
CIT	**Chita**	**2.94**	**174**	*e*Pn	Pn	23 51 10.8	-2.5
CIT				*e*Pg	Pg	23 51 17.4	-4.3
CIT				*e*		23 51 37.0	
CIT				*e*Sg	Sg	23 51 56.9	-2.9
CIT				Pmax			
	comp=E,48nm,0.2s						
CIT				Smax			
	comp=E,616nm,0.2s						
OGRR	**Ongureny**	**3.44**	**250**	*e*PN	Pn	23 51 19.8	-0.4
OGRR				*e*		23 51 27.5	
OGRR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OGRR	**Ongureny**	**3.44**	**250**	⇑*i*Pn	Pn	23 51 19.9	-0.3
OGRR				*e*Pg	Pg	23 51 26.4	-5.0
OGRR				*e*		23 51 34.4	
OGRR				*e*Sg	Sg	23 52 11.5	-4.5
OGRR				max			
	comp=Z,14nm,1.0s						
OGRR				Smax			
	comp=Z,102nm,1.0s						
CRS	**Chara**	**3.54**	**54**	*e*PN	Pn	23 51 22.5	+1.0
CRS				pmax	pmax		
	comp=Z,61nm,0.8s						
CRS	**Chara**	**3.54**	**54**	*e*Pn	Pn	23 51 21.9	+0.4
CRS				⇑*i*		23 51 23.7	
CRS				⇑*i*Pg	Pg	23 51 29.0	-4.1
CRS				*e*		23 51 34.5	
CRS				*e*		23 52 03.5	
CRS				*i* Sg	Sg	23 52 16.0	-3.0
CRS				Pmax			
	comp=Z,61nm,0.8s						
CRS				Smax			
	comp=Z,191nm,1.0s						
TUP	**Tupik**	**4.05**	**95**	*e*PN	Pn	23 51 35.8	+7.3
TUP				pmax	pmax		
	comp=Z,10.0nm,0.4s						
TUP	**Tupik**	**4.05**	**95**	*e*Pn	Pn	23 51 24.7	-3.8
TUP				*e*		23 51 28.0	
TUP				*e*Pg	Pg	23 51 37.8	-5.1
TUP				*e*		23 52 14.5	
TUP				*e*Sg	Sg	23 52 30.8	-4.5
TUP				*e*		23 52 34.7	
TUP				Pmax			
	comp=Z,19nm,1.0s						
TUP				max			
	comp=Z,463nm,1.1s						
ZRHB	**Zarechye**	**4.23**	**238**	*e*	Pg	23 51 42.9	-3.6
ZRHB				*e*Sg	Sg	23 52 36.5	-4.8
ZRHB				*e*		23 52 39.9	
ZRHB				max			
	comp=Z,516nm,1.1s						
UUDB	**Ulan-Yde**	**4.45**	**228**	⇑*i*Pg	Pg	23 51 44.5	-6.2
UUDB				*i* Sg	Sg	23 52 43.7	-4.6
UUDB				Pmax			
	comp=Z,81nm,0.8s						
UUDB				Smax			
	comp=Z,96nm,1.5s						
TRG	**Tyrgan**	**4.52**	**244**	⇑*i*Pn	Pn	23 51 34.6	-0.5
TRG				*e*Pg	Pg	23 51 44.7	-7.3
TRG				*e*Sg	Sg	23 52 44.3	-6.3
TRG				Pmax			
	comp=Z,3.0nm,0.1s						
TRG				Smax			
	comp=Z,60nm,1.3s						
KAB	**Kabansk**	**4.79**	**235**	*e*Sg	Sg	23 52 55.4	-3.7
KAB				*e*		23 53 02.1	
KAB				max			
	comp=Z,287nm,1.2s						
HRMR	**Khuramsha**	**4.93**	**230**	⇑*i*Pn	Pn	23 51 40.7	0.0
HRMR				*e*Pg	Pg	23 51 53.9	-6.0
HRMR				*e*		23 51 56.2	
HRMR				*e*		23 52 03.7	
HRMR				*e*		23 52 32.7	
HRMR				*e*Sg	Sg	23 52 59.8	-3.9
HRMR				*e*		23 53 05.8	
HRMR				Pmax			
	comp=Z,46nm,0.6s						
HRMR				max			
	comp=Z,227nm,1.0s						
KPC	**Khapcheranga**	**5.26**	**185**	*e*PN	Pg	23 52 01.0	-5.1
KPC				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KPC	**Khapcheranga**	**5.26**	**185**	*e*Pn	Pn	23 51 45.3	+0.1
KPC				*e*		23 52 01.6	
KPC				*e*		23 52 47.6	
KPC				*e*Sg	Sg	23 53 08.1	-6.2
KPC				max			
	comp=Z,6.0nm,0.7s						
KPC				Smax			
	comp=Z,138nm,1.5s						
LSTR	**Listvyanka**	**5.79**	**241**	*e*Sg	Sg	23 53 24.7	-6.6
TLY	**Talaya**	**6.51**	**244**	*e*Sg	Sg	23 53 46.6	-7.7
TLY				Smax			
	comp=Z,31nm,1.0s						
IENR	**Iengra**	**6.82**	**74**	*e*	Pb	23 52 17.8	-6.9
IENR				*e*		23 52 19.9	
IENR				*e*		23 53 14.6	
IENR				*e*		23 53 23.1	
IENR				*i* Sg	Sg	23 53 56.2	-8.1
IENR				*e*		23 54 05.2	
CLNS	**Chul'man**	**6.93**	**69**	*e*PN	Pb	23 52 26.7	+0.1
CLNS				pmax	pmax		
	comp=N,6.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.1s						
ARS	**Arshan**	**7.03**	**249**	*e*	Sb	23 53 48.1	-4.4
ARS				*e*Sg	Sg	23 54 01.5	-9.4
ARS				Smax			
	comp=E,95nm,0.9s						
ZAK	**Zakamensk**	**7.49**	**236**	*e*Sg	Sg	23 54 18.0	-7.6
ZAK				Smax			
	comp=E,15nm,1.4s						
MOY	**Mondy**	**7.93**	**251**	*e*Pn	Pg	23 52 52.9	-4.2
MOY				*e*		23 54 08.7	
MOY				*i* Sg	Sg	23 54 30.7	-9.0
MOY				Smax			
	comp=E,39nm,2.2s						
ULN	**Ulaanbaatar**	**8.01**	**210**	*e*Sg	Sg	23 54 34.6	-7.8
ULN				*e*		23 54 43.0	
ORL	**Orlik**	**8.21**	**258**	*e*	Pn	23 52 35.5	+10
ORL				*e*		23 52 40.1	
ORL				*e*		23 53 56.6	
ORL				*e*Sg	Sg	23 54 38.5	-10
ORL				Smax			
	comp=E,56nm,1.4s						

IDC 25 23:54:35.5±2.1, 2°.01N×127°.57E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, Error ellipse: s-maj=119.0km s-min=25.0km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.08**	**185**	P	P	23 59 11.2	+0.5
	1.2nm,0.8s,baz=6.0,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	**22.81**	**163**	P	P	23 59 40.3	+0.2
	1.4nm,0.4s,baz=341,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.26**	**167**	P	P	00 00 12.2	-0.3
	0.7nm,0.6s,baz=349,slow=7.4,SNR=11						
MKAR	**Makanchi Array**	**59.43**	**325**	P	P	00 04 40.1	+0.1
	0.4nm,0.5s,baz=124,slow=7.1,SNR=4.8						

WEL 26 00:07:33.2±0.6, 38°.33S×175°.68E, h176km±4km, ML3.7/16, Error ellipse: s-maj=4.3km s-min=4.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.77**	**194**	*e*PN	Pn	00 07 59.4	+0.5
TUVZ	**Tukino**	**0.94**	**181**	PN	Pn	00 08 00.6	+0.5
WNVZ	**Wahianoa**	**1.00**	**184**	PN	Pn	00 08 01.0	+0.5
BKZ	**Black Stump Fm**	**1.05**	**143**	PN	Pn	00 08 01.1	+0.2
BKZ				SN	Sn	00 08 22.0	-0.4
MOVZ	**Moawhango**	**1.08**	**177**	PN	Pn	00 08 01.1	0.0
URZ	**Urewera**	**1.13**	**87**	PN	Pn	00 08 01.3	-0.2
URZ				SN	Sn	00 08 22.9	-0.3
BHHZ	**Black Hill Sta**	**1.20**	**166**	PN	Pn	00 08 02.0	-0.1
RAHZ	**Arahi**	**1.25**	**119**	PN	Pn	00 08 03.1	+0.6
MCHZ	**McNeill Hill**	**1.37**	**145**	PN	Pn	00 08 04.4	+0.8
MWZ	**Matawai**	**1.45**	**91**	PN	Pn	00 08 04.3	-0.1
WAZ	**Wanganui**	**1.53**	**201**	PN	Pn	00 08 05.0	0.0
PNHZ	**Pukenui**	**1.64**	**166**	PN	Pn	00 08 05.9	-0.2
KNZ	**Kokohu**	**1.71**	**115**	PN	Pn	00 08 06.9	+0.1
KAHZ	**Kahuranaki**	**1.74**	**148**	PN	Pn	00 08 07.3	+0.2
TSZ	**Takapari Road**	**1.75**	**173**	PN	Pn	00 08 06.7	-0.6
PRGZ	**Paritu Road**	**1.83**	**110**	PN	Pn	00 08 08.3	+0.1
WPHZ	**Waipukurau**	**1.84**	**161**	PN	Pn	00 08 07.8	-0.4
MHGZ	**Mahia Peninsul**	**1.93**	**116**	PN	Pn	00 08 09.3	+0.1
PXZ	**Pawanui**	**1.94**	**152**	PN	Pn	00 08 08.8	-0.4
CNGZ	**Carnagh Statio**	**1.99**	**95**	PN	Pn	00 08 10.2	+0.3
DVHZ	**Dannevirke**	**2.01**	**169**	PN	Pn	00 08 09.0	-1.0
PRHZ	**Porangahau**	**2.08**	**159**	PN	Pn	00 08 10.2	-0.6
MXZ	**Matakaoa Point**	**2.21**	**71**	PN	Pn	00 08 12.0	-0.4
MRZ	**Mangatainoka R**	**2.33**	**182**	PN	Pn	00 08 12.1	-1.7
BFZ	**Birch Farm**	**2.39**	**170**	PN	Pn	00 08 13.0	-1.4
OGWZ	**Otaki Gorge**	**2.52**	**189**	PN	Pn	00 08 14.0	-1.8
HOWZ	**Holdsworth Sta**	**2.57**	**183**	PN	Pn	00 08 14.3	-2.2
KIW	**Kapiti Island**	**2.60**	**193**	PN	Pn	00 08 14.6	-2.2
CAW	**Cannon Point**	**2.82**	**189**	PN	Pn	00 08 17.1	-2.3
DUWZ	**D'Urville Isla**	**2.82**	**208**	PN	Pn	00 08 16.8	-2.7
TRWZ	**Traveller**	**3.07**	**180**	PN	Pn	00 08 19.8	-2.6
SNZO	**South Karori**	**3.07**	**194**	PN	Pn	00 08 19.8	-2.7
TCW	**Tory Channel**	**3.08**	**200**	PN	Pn	00 08 19.9	-2.7
MSWZ	**Moikau Station**	**3.10**	**186**	PN	Pn	00 08 20.0	-2.9
PLWZ	**Palliser**	**3.26**	**186**	PN	Pn	00 08 21.6	-3.2
TUWZ	**Tuamarina**	**3.38**	**203**	PN	Pn	00 08 23.3	-3.0
NNZ	**Nelson**	**3.39**	**211**	PN	Pn	00 08 22.9	-3.5
THZ	**Tophouse**	**4.04**	**211**	PN	Pn	00 08 32.3	-2.4
KHZ	**Kahutara**	**4.40**	**201**	PN	Pn	00 08 35.7	-3.6

*NEIC **26** 00:19:16.9, 16°.40N×94°.46W, h84km, MD3.7(MEX), After MEX.*

MEX 26 00:19:16.9±1.6, 16°.40N×94°.46W, h84km±31km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.80**	**329**	*i* S	Sn	00 19 45.9	-0.7
CMIG	**Matias Romero**	**0.80**	**329**	*i* S	Sn	00 19 45.9	-0.7
TGIG		**1.33**	**74**	*i* P	Pn	00 19 38.6	-1.6
TGIG				*i* S	Sn	00 19 55.4	-2.5
PCIG		**1.38**	**120**	*i* P	Pn	00 19 39.8	-1.0
PCIG				*i* S	Sn	00 19 58.4	-0.4
HUIG	**Huatulco**	**1.71**	**249**	*i* P	Pn	00 19 42.5	-2.6
HUIG				*i* S	Sn	00 20 04.2	-2.4
HUIG	**Huatulco**	**1.71**	**249**	*i* P	Pn	00 19 42.5	-2.6
HUIG				*i* S	Sn	00 20 04.2	-2.4
CCIG	**Comitan**	**2.23**	**93**	*e*P	Pn	00 19 51.0	-1.0
CCIG				*i* S	Sn	00 20 17.0	-1.8
CCIG	**Comitan**	**2.23**	**93**	*e*P	Pn	00 19 51.0	-1.0
CCIG				*i* S	Sn	00 20 17.0	-1.8
VHO	**Vista Hermosa**	**2.28**	**287**	*i* P	Pn	00 19 52.9	+0.2
VHO				*i* S	Sn	00 20 19.6	-0.5
VHO	**Vista Hermosa**	**2.28**	**287**	*i* P	Pn	00 19 52.9	+0.2
VHO				*i* S	Sn	00 20 19.6	-0.5
UTMO	**Huajuapan**	**3.50**	**294**	*i* P	Pn	00 20 08.9	-0.3
UTMO				*i* S	Sn	00 20 47.1	-2.4
PNIG	**Pinotepa**	**3.52**	**270**	*e*P	Pn	00 20 07.1	-2.3
PNIG				*i* S	Sn	00 20 47.7	-2.4
PNIG	**Pinotepa**	**3.52**	**270**	*e*P	Pn	00 20 07.1	-2.3
PNIG				*i* S	Sn	00 20 47.7	-2.4

*SKO **26** 00:26:52.5, 42°.21N×19°.57E, h0km*
*TIR **26** 00:26:52.1±1.0, 42°.13N×19°.58E, h25km±5km, ML2.9*
*NEIC **26** 00:26:53.5, 42°.16N×19°.56E, h16km, ML2.9(PDG), After PDG.*
*PDG **26** 00:26:53.5±0.3, 42°.16N×19°.56E, h16km, MD3.0/8, ML2.9/7, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*CSEM **26** 00:26:53.7±0.1, 42°.19N×19°.58E, h8km, Ms3.0, Error ellipse: s-maj=2.8km s-min=2.3km az=25.0*
*BEO **26** 00:26:54.9±0.4, 42°.24N×19°.65E, h10km±2km, ML2.8/12*
*VIE **26** 00:26:56.0±0.5, 42°.31N×19°.55E, h10km, mb2.7/3, ML2.2/1, Ms3.0/2, Error ellipse: s-maj=5.3km s-min=3.5km az=51.0*
53 km NE of Shkoder
*THE **26** 00:26:55.1, 42°.24N×19°.65E, h13km±4km, ML2.9/3, Error ellipse: s-maj=5.9km s-min=1.3km az=252.0*

ISC 26 00:26:54.0±0.3, 42°.19N±0°.01×19°.60E±0°.02, h10km±2km, n125, σ1$13/207, 30C-29D, Northwestern Balkan Peninsula

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

TTG				*e*Sg		Sg	00 27 06.6	+1.1
TTG	**Podgorica**	**0.35**	**314**	⇓*i*Pg		Pg	00 27 00.7	-0.1
TTG				*e*Sg		Sg	00 27 06.6	+1.1
BCI	**Bajram Curri**	**0.39**	**63**	*e*PG		Pg	00 27 01.8	+0.2
BCI				*i* SG		Sg	00 27 08.9	+2.1
BCI	**Bajram Curri**	**0.39**	**63**	*e*Pg		Pg	00 27 01.8	+0.2
	SNR=110							
PVY	**Plav**	**0.49**	**34**	⇓*i*Pg		Pg	00 27 03.4	-0.1
PVY				*e*Sg		Sg	00 27 12.1	+2.1
PVY	**Plav**	**0.49**	**34**	⇓*i*Pg		Pg	00 27 03.4	-0.1
PVY				*e*Sg		Sg	00 27 12.1	+2.1
BUM	**Brajici-Budva**	**0.53**	**282**	⇓*i*Pg		Pg	00 27 03.4	-0.9
BUM				*e*Sg		Sg	00 27 12.1	+0.8
BUM	**Brajici-Budva**	**0.53**	**282**	⇓*i*Pg		Pg	00 27 03.4	-0.9
BUM				*e*Sg		Sg	00 27 12.1	+0.8
BEY	**Berane**	**0.72**	**18**	⇓*i*Pg		Pg	00 27 07.6	-0.2
BEY				*e*Sg		Sg	00 27 19.4	+2.2
IVA	**Berane**	**0.72**	**18**	⇓*i*Pg		Pg	00 27 07.6	-0.2
IVA				*e*Sg		Sg	00 27 19.4	+2.2
IVA	**Berane**	**0.72**	**18**	⇓*i*Pg		Pg	00 27 07.6	-0.2
IVA				*e*Sg		Sg	00 27 19.4	+2.2
NKY	**Niksic**	**0.77**	**325**	⇓*i*Pg		Pg	00 27 08.0	-0.7
NKY				*e*Sg		Sg	00 27 20.5	+1.8
NKY	**Niksic**	**0.77**	**325**	⇓*i*Pg		Pg	00 27 08.0	-0.7
NKY				*e*Sg		Sg	00 27 20.5	+1.8
HCY	**Herceg Novi**	**0.86**	**288**	⇑*i*Pg		Pg	00 27 09.2	-1.3
HCY				*e*Sg		Sg	00 27 22.8	+1.2
HCY	**Herceg Novi**	**0.86**	**288**	⇑*i*Pg		Pg	00 27 09.2	-1.3
HCY				*e*Sg		Sg	00 27 22.8	+1.2
BRY	**Bratogost**	**1.06**	**313**	⇓*i*Pg		Pg	00 27 12.9	-1.4
BRY				*e*Sg		Sg	00 27 29.9	+1.9
BRY	**Bratogost**	**1.06**	**313**	⇓*i*Pg		Pg	00 27 12.9	-1.4
BRY				*e*Sg		Sg	00 27 29.9	+1.9
SJES	**Sjenica**	**1.11**	**14**	⇑*i*Pg		Pg	00 27 14.5	-0.7
SJES				*e*Sg		Sg	00 27 29.7	+0.1
SJES	**Sjenica**	**1.11**	**14**	⇑*i*Pg		Pg	00 27 14.5	-0.7
SJES				*e*Sg		Sg	00 27 29.7	+0.1
UPM	**Unac-Piva**	**1.13**	**334**	⇓*i*Pg		Pg	00 27 14.6	-1.2
UPM				*e*Sg		Sg	00 27 33.0	+2.5
UPM	**Unac-Piva**	**1.13**	**334**	⇓*i*Pg		Pg	00 27 14.6	-1.2
UPM				*e*Sg		Sg	00 27 33.0	+2.5
PLE	**Pljevlja**	**1.15**	**353**	⇑*i*Pg		Pg	00 27 15.2	-0.9
PLE				*e*Sg		Sg	00 27 34.1	+3.1
PLE	**Pljevlja**	**1.15**	**353**	⇑*i*Pg		Pg	00 27 15.2	-0.9
PLE				*e*Sg		Sg	00 27 34.1	+3.1
SKO	**Skopje**	**1.39**	**98**	*e*Pg		Pg	00 27 19.6	-1.0
SKO				*e*Sg		Sg	00 27 38.7	+0.1
SKO	**Skopje**	**1.39**	**98**	P		Pn	00 27 19.4	0.0
SKO				S		Sb	00 27 40.1	+2.4
SKO	**Skopje**	**1.39**	**98**	*e*Pn		Pn	00 27 17.8	-1.6
SKO				*e*Sg		Sg	00 27 39.3	+0.7
SKO	**Skopje**	**1.39**	**98**	P		Pn	00 27 19.4	0.0
SKO				*e*Sg		Sg	00 27 38.7	+0.1
SKO				S		Sb	00 27 40.1	+2.4
KRUS	**Krusevo**	**1.48**	**123**	*e*Pn		Pn	00 27 19.2	-1.4
KRUS				*e*Sg		Sg	00 27 41.9	+0.3
SELS	**Selova**	**1.52**	**47**	⇑*i*Pg		Pg	00 27 20.3	-2.9
SELS				*e*Sg		Sg	00 27 40.4	-2.5
STON	**Ston**	**1.56**	**297**	*i* Pn		Pn	00 27 20.4	-1.4
STON				Sn		Sn	00 27 44.4	+2.3
STON	**Ston**	**1.56**	**297**	*i* Pn		Pn	00 27 20.4	-1.4
STON				Sn		Sn	00 27 44.3	+2.2
BBLS	**Lazići**	**1.68**	**355**	⇑*i*Pn		Pn	00 27 24.3	+0.8
BBLS				*e*Sg		Sg	00 27 46.7	-1.4
BBLS	**Lazići**	**1.68**	**355**	⇑*i*Pn		Pn	00 27 24.3	+0.8
BBLS				*e*Sg		Sg	00 27 46.7	-1.4
BIA	**Bitola**	**1.74**	**132**	P		Pn	00 27 24.4	+0.1
BIA	**Bitola**	**1.74**	**132**	*e*Pn		Pn	00 27 24.3	0.0
BIA				*e*Sg		Sg	00 27 48.6	-1.3
BIA	**Bitola**	**1.74**	**132**	P		Pn	00 27 24.4	+0.1
BARS	**Barje**	**1.75**	**68**	*e*Pn		Pn	00 27 24.3	-0.2
BARS				*e*Sg		Sg	00 27 48.3	-2.1
KBN	**Korca**	**1.80**	**150**	*e*PG		Pg	00 27 25.7	-2.8
KBN				*i* SG		Sg	00 27 48.4	-3.4
GRUS	**Gruza**	**1.89**	**25**	*e*Pn		Pn	00 27 26.1	-0.2
GRUS				*e*Sn		Sn	00 27 49.1	-1.0
GRUS	**Gruza**	**1.89**	**25**	*e*Pn		Pn	00 27 26.1	-0.2
GRUS				*e*Sn		Sn	00 27 49.1	-1.0
DIVS	**Divibare**	**1.93**	**8**	⇑*i*Pn		Pn	00 27 26.9	0.0
DIVS				*e*Sg		Sg	00 27 53.7	-2.3
DIVS	**Divibare**	**1.93**	**8**	P		Pn	00 27 27.0	+0.1
DIVS				S		Sn	00 27 49.9	-1.3
DIVS	**Divibare**	**1.93**	**8**	⇑*i*Pn		Pn	00 27 26.9	0.0
DIVS				S		Sn	00 27 49.9	-1.3
DIVS				*e*Sg		Sg	00 27 53.7	-2.3
FNA	**Florina**	**1.94**	**136**	P		Pn	00 27 27.7	+0.7
FNA				S		Sn	00 27 53.2	+1.9
FNA	**Florina**	**1.94**	**136**	P		Pn	00 27 27.7	+0.7
FNA				S		Sn	00 27 53.2	+1.9
NEST	**Nestorio**	**2.08**	**148**	P		Pn	00 27 29.4	+0.5
NEST	**Nestorio**	**2.08**	**148**	P		Pn	00 27 29.4	+0.5
TRUS	**Trudelj**	**2.12**	**16**	*e*Pn		Pn	00 27 29.0	-0.4
TRUS	**Trudelj**	**2.12**	**16**	*e*Pn		Pn	00 27 29.0	-0.4
BAI	**Bari**	**2.31**	**243**	*e*Pn		Pn	00 27 30.1	-1.9
VAY	**Valandovo**	**2.39**	**110**	*e*Pn		Pn	00 27 32.9	-0.2
SVIS	**Svilajnac**	**2.39**	**29**	*e*Pn		Pn	00 27 33.2	0.0
SVIS				*e*Sn		Sn	00 28 01.6	-0.9
GRG	**Griva**	**2.44**	**119**	P		Pn	00 27 33.5	-0.3
GRG				S		Sn	00 28 04.6	+0.9
GRG	**Griva**	**2.44**	**119**	P		Pn	00 27 33.5	-0.3
GRG				S		Sn	00 28 04.6	+0.9
ZAPS	**Zavoj**	**2.48**	**63**	⇑*i*Pn		Pn	00 27 35.4	+0.9
ZAPS				*e*Sn		Sn	00 28 05.0	+0.1
KZN	**Kozani**	**2.49**	**138**	P		Pn	00 27 35.8	+1.2
KZN				S		Sn	00 28 05.9	+0.8
KZN	**Kozani**	**2.49**	**138**	P		Pn	00 27 35.8	+1.2
KZN				S		Sn	00 28 05.9	+0.8
VTS	**Vitosha**	**2.70**	**80**	⇑*i*Pn		Pn	00 27 37.7	+0.2
VTS				*e*Sn		Sn	00 28 10.3	0.0
VTS	**Vitosha**	**2.70**	**80**	⇑*i*P		Pn	00 27 38.2	+0.7
VTS	**Vitosha**	**2.70**	**80**	⇑*i*Pn		Pn	00 27 37.7	+0.2
VTS	**Vitosha**	**2.70**	**80**	⇑*i*P		Pn	00 27 38.2	+0.7
VTS				*e*Sn		Sn	00 28 10.3	0.0
VTS				S		Sn	00 28 12.9	+2.6
FRGS	**Fruska Gora**	**2.97**	**3**	⇑*i*Pn		Pn	00 27 41.3	+0.1
LIT	**Litokhoron**	**3.02**	**133**	P		Pn	00 27 42.3	+0.5
LIT	**Litokhoron**	**3.02**	**133**	P		Pn	00 27 42.3	+0.5
RGNG	**Rignano Grg**	**3.04**	**262**	Pn		Pn	00 27 40.0	-2.1
RGNG	**Rignano Grg**	**3.04**	**262**	Pn		Pn	00 27 40.0	-2.1
BLY	**Banja Luka**	**3.10**	**326**	*e*Pn		Pn	00 27 43.8	+0.8
BLY	**Banja Luka**	**3.10**	**326**	*e*Pn		Pn	00 27 43.8	+0.8
PLG	**Polygyros**	**3.42**	**121**	P		Pn	00 27 47.6	+0.3
PLG				S		Sn	00 28 28.7	+0.8
PLG	**Polygyros**	**3.42**	**121**	P		Pn	00 27 47.6	+0.3
PLG				S		Sn	00 28 28.7	+0.8
BZS	**Buzias**	**3.72**	**22**	⇑*i*Pn		Pn	00 27 51.3	-0.2
BZS				*e*Sn		Sn	00 28 33.8	-1.6
BZS	**Buzias**	**3.72**	**22**	⇓*i*P		Pn	00 27 51.7	+0.2
BZS	**Buzias**	**3.72**	**22**	⇑*i*Pn		Pn	00 27 51.3	-0.2
BZS	**Buzias**	**3.72**	**22**	⇓*i*P		Pn	00 27 51.7	+0.2
BZS				S		Sn	00 28 33.9	-1.5
GZR	**Gura Zlata**	**3.94**	**35**	⇑*i*P		Pn	00 27 55.3	+0.8
GZR	**Gura Zlata**	**3.94**	**35**	⇑*i*P		Pn	00 27 55.3	+0.8
GZR				S		Sn	00 28 39.6	-1.2
SGG	**Gregorio Mates**	**3.98**	**260**	Pn		Pn	00 27 54.4	-0.7
SGG	**Gregorio Mates**	**3.98**	**260**	Pn		Pn	00 27 54.4	-0.7
PKSM	**Moragy**	**4.08**	**351**	⇑*i*Pn		Pn	00 27 56.2	-0.2
PKSM	**Moragy**	**4.08**	**351**	⇑*i*P		Pn	00 27 56.2	-0.2
PKSM	**Moragy**	**4.08**	**351**	⇑*i*P		Pn	00 27 56.2	-0.2
PKSM				S		Sn	00 28 44.2	0.0
NVLJ	**Novalja**	**4.18**	**306**	*e*Pn		Pn	00 27 58.1	+0.3
NVLJ				Sn		Sn	00 28 46.6	-0.2
NVLJ	**Novalja**	**4.18**	**306**	*e*Pn		Pn	00 27 58.1	+0.3
NVLJ				Sn		Sn	00 28 46.6	-0.2
INTR	**Introdacqua**	**4.24**	**270**	Pn		Pn	00 27 57.9	-0.7
INTR	**Introdacqua**	**4.24**	**270**	Pn		Pn	00 27 57.9	-0.7
SDI	**San Donato**	**4.34**	**266**	Pn		Pn	00 27 59.4	-0.6
SDI	**San Donato**	**4.34**	**266**	Pn		Pn	00 27 59.4	-0.6
NRCA	**Norcia**	**4.84**	**280**	Pn		Pn	00 28 06.6	-0.2
NRCA	**Norcia**	**4.84**	**280**	Pn		Pn	00 28 06.6	-0.2
VOIR		**5.11**	**49**	⇓*i*P		Pn	00 28 11.8	+1.3
VOIR		**5.11**	**49**	⇓*i*P		Pn	00 28 11.8	+1.3
VOIR				S		Sn	00 29 08.5	-1.0
DRGR		**5.11**	**25**	⇑*i*P		Pn	00 28 10.9	+0.3
DRGR		**5.11**	**25**	⇑*i*P		Pn	00 28 10.9	+0.3
DRGR				S		Sn	00 29 08.4	-1.2
SOKA	**Soboth**	**5.55**	**325**	⇓*i*Pn		Pn	00 28 17.6	+0.9
SOKA				⇓*i*Sn		Sn	00 29 19.9	-0.6
SOKA	**Soboth**	**5.55**	**325**	Pn		Pn	00 28 17.6	+1.0
SOKA				Sn		Sn	00 29 19.9	-0.6
VOY	**Vojsko**	**5.62**	**315**	*e*Pn		Sn	00 29 22.1	-0.1
VOY				*e*Sn		Sg	00 29 58.8	+4.4
OBKA	**Obir**	**5.64**	**322**	⇓*i*Pn		Pn	00 28 18.1	+0.3
OBKA				⇓*i*Sn		Sn	00 29 22.2	-0.4
OBKA	**Obir**	**5.64**	**322**	Pn		Pn	00 28 18.1	+0.3
OBKA				Sn		Sn	00 29 22.2	-0.3
PSZ	**Piszkesteto**	**5.73**	**2**	⇑*i*P		Pn	00 28 19.5	+0.4
PSZ	**Piszkesteto**	**5.73**	**2**	⇑*i*P		Pn	00 28 19.5	+0.4
PSZ				S		Sn	00 29 24.5	-0.4
ARSA	**Arzberg**	**5.83**	**332**	⇓*i*Pn		Pn	00 28 21.1	+0.7
ARSA				⇓*i*Sn		Sn	00 29 27.1	-0.3
ARSA	**Arzberg**	**5.83**	**332**	Pn		Pn	00 28 21.1	+0.6
ARSA				Sn		Sn	00 29 27.1	-0.3
ZST	**Bratislava**	**6.26**	**344**	*e*Pn		Pn	00 28 27.9	+1.6
ZST	**Bratislava**	**6.26**	**344**	*e*PN		Pn	00 28 27.9	+1.6
ZST	**Bratislava**	**6.26**	**344**	*e*Pn		Pn	00 28 27.9	+1.6
CONA	**Conrad Observa**	**6.32**	**337**	⇓*i*Pn		Pn	00 28 27.6	+0.5
CONA				⇓*i*Sn		Sn	00 29 40.0	+0.6
CONA	**Conrad Observa**	**6.32**	**337**	Pn		Pn	00 28 27.6	+0.4
CONA				Sn		Sn	00 29 40.0	+0.6
KECS	**Kecovo**	**6.33**	**5**	*e*Pn		Pn	00 28 28.6	+1.4
KECS				*e*			00 29 39.0	
KECS	**Kecovo**	**6.33**	**5**	*e*PN		Pn	00 28 28.6	+1.4
KECS				*e*SN		Sn	00 29 39.0	-0.5
VYHS	**Vyhne**	**6.33**	**355**	*e*Pn		Pn	00 28 28.5	+1.2
VYHS				*e*			00 29 36.5	
VYHS	**Vyhne**	**6.33**	**355**	*e*PN		Pn	00 28 28.5	+1.2
VYHS				*e*SN		Sn	00 29 36.5	-3.1
VYHS	**Vyhne**	**6.33**	**355**	*e*Pn		Pn	00 28 28.5	+1.2
KOLL	**Kolacno**	**6.45**	**353**	*e*Pn		Pn	00 28 29.3	+0.4
KOLL				*e*			00 29 42.4	
KOLL	**Kolacno**	**6.45**	**353**	*e*PN		Pn	00 28 29.3	+0.4
KOLL				*e*SN		Sn	00 29 42.4	-0.1
KOLL	**Kolacno**	**6.45**	**353**	*e*Pn		Pn	00 28 29.3	+0.4
CRVS	**Cervenica-Dubn**	**6.84**	**10**	*e*Pn		Pn	00 28 36.2	+1.9
CRVS				*e*			00 29 46.0	
CRVS	**Cervenica-Dubn**	**6.84**	**10**	*e*PN		Pn	00 28 36.2	+1.9
CRVS				*e*			00 29 46.0	
CRVS	**Cervenica-Dubn**	**6.84**	**10**	*e*Pn		Pn	00 28 36.2	+1.9
KOLS	**Kolonicke sedl**	**7.00**	**15**	*e*SN		Sn	00 30 00.0	+3.9

ISCJB ***26*** *00:34:18.8±1.3, 7°91N±0°09×126°4E±0°2, h162km±11km, mb3.6/11, Error ellipse: s-maj=33.5km s-min=11.9km az=166.6*
IDC ***26*** *00:34:19.7±2.6, 7°94N×126°49E, h153km±21km, mb3.3/8, mb1 3.5/8, mb1mx3.3/22, mbtmp3.3/8, MS4.5/1, Ms1 4.5/1, ms1mx2.8/16, Error ellipse: s-maj=54.5km s-min=14.2km az=69.0*
NEIC ***26*** *00:34:20.0±2.4, 7°93N×126°45E, h158km±24km, mb3.9/5, Error ellipse: s-maj=22.8km s-min=7.5km az=75.0*

ISC 26 00:34:19.7±1.4, 7°93N±0°09×126°5E±0°2, h154km±11km, n19, σ0°52/19, mb3.6/11, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.24**	**226**	P	**Pn**	**00 34 46.6**	**-0.4**
	64nm,0.3s,baz=254,slow=7.5,SNR=3.8						
DAV				S	**Sn**	**00 35 08.0**	**+0.2**
	35nm,0.3s,baz=264,slow=20,SNR=16						
TPUB	**Ta-pu**	**16.28**	**340**	P	**Pn**	**00 37 59.5**	**-0.2**
JOW	**Kunigami**	**18.88**	**5**	LR	LR	00 45 03.8	
	comp=Z,1μm,19.8s,baz=127,slow=34						
FITZ	**Fitzroy Crossi**	**25.88**	**182**	P	**P**	**00 39 37.5**	**+0.2**
	0.8nm,0.4s,mb3.8,baz=5.3,slow=5.8,SNR=7.0						
FITZ	**Fitzroy Crossi**	**25.88**	**182**	*e*P	**P**	**00 39 37.7**	**+0.4**
	1.7nm,0.8s,mb3.7						
WRA	**Warramunga Arr**	**28.75**	**164**	P	**P**	**00 40 02.6**	**-0.4**
	0.1nm,0.3s,mb3.0,baz=331,slow=10,SNR=5.0						
ASAR	**Alice Springs**	**32.23**	**167**	P	**P**	**00 40 33.1**	**-0.4**
	0.3nm,0.4s,mb3.4,baz=355,slow=7.5,SNR=5.8						
ASAR				PcP	PcP	00 43 19.5	+1.0
	0.6nm,0.6s,baz=2.1,slow=1.9,SNR=6.4						
ASAR	**Alice Springs**	**32.23**	**167**	P	**P**	**00 40 33.1**	**-0.4**
ASAR				PcP	PcP	00 43 19.5	+1.0
YSS	**Yuzh-Sakhalins**	**41.30**	**17**	*e*P	**P**	**00 41 50.1**	**+0.1**
	14nm,0.2s						
NWAO	**Narrogin (SRO)**	**41.57**	**192**	P	**P**	**00 41 52.5**	**+0.2**
STKA	**Stephens Creek**	**42.13**	**161**	P	**P**	**00 41 57.5**	**+0.6**
	1.1nm,0.5s,mb3.7,baz=67,slow=21,SNR=3.6						
STKA	**Stephens Creek**	**42.13**	**161**	*e*P	**P**	**00 41 57.2**	**+0.3**
	0.3nm,0.7s,mb3.0						
MKAR	**Makanchi Array**	**54.02**	**324**	P	**P**	**00 43 28.1**	**+0.2**
	0.8nm,0.5s,mb3.8,baz=113,slow=6.4,SNR=14						
TKM2	**Tokmak 2**	**56.49**	**317**	*e*P	**P**	**00 43 46.1**	**+0.4**
	1.3nm,0.7s,mb3.9						
UCH	**Uchtor**	**56.97**	**316**	*e*P	**P**	**00 43 50.0**	**+0.9**
	1.7nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**63.70**	**326**	P	**P**	**00 44 34.8**	**+0.2**
	0.4nm,0.5s,mb3.5,baz=119,slow=8.4,SNR=3.5						
KIV	**Kislovodsk**	**80.09**	**313**	*e*P	**P**	**00 46 11.1**	**-1.4**
	2.6nm,0.4s,mb4.2						
ILAR	**Eielson Array**	**81.44**	**26**	P	**P**	**00 46 19.7**	**+0.4**
	0.2nm,0.5s,mb3.0,baz=273,slow=4.5,SNR=4.1						
FINES	**FINESS Array B**	**88.04**	**332**	P	**P**	**00 46 51.6**	**-0.7**
	2.2nm,1.0s,mb3.9,baz=62,slow=4.5,SNR=6.0						

IDC ***26*** *01:43:45.8±1.2, 31°35N×60°11E, h0km, mb3.7/12, mb1 3.8/16, mb1mx3.7/32, mbtmp3.7/16, ML2.9/2, MS3.4/13, Ms1 3.4/13, ms1mx3.1/39, Error ellipse: s-maj=27.7km s-min=17.8km az=2.0*
THR ***26*** *01:43:46.9±1.2, 31°75N×60°25E, h15km, ML4.1*
CSEM ***26*** *01:43:47.9±0.3, 31°61N×60°30E, h10km, ML4.2, Error ellipse: s-maj=8.2km s-min=4.7km az=131.0*
TEH ***26*** *01:43:50.9, 31°61N×60°24E, h22km*
NEIC ***26*** *01:43:50.0, 31°61N×60°24E, h22km, mb4.0/6, ML4.1(THR), MN4.2(TEH), After TEH.*

ISC 26 01:43:48.2±1.6, 31°60N±0°04×60°28E±0°05, h10km±10km, n119, σ1$14/119, mb3.6/15, MS3.4/9, 3D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDAH	**Dahanechah**	**1.19**	**343**	*e*Sg	**Sg**	**01 44 28.8**	**+2.3**
IDAH				⇓*e*Pg	**Pg**	**01 44 08.7**	**-2.4**
IDAH				*e*		01 44 35.3	
	comp=Z,56μm,0.5s						
IKOO	**Kooshah**	**1.36**	**307**	⇓*e*Pn	**Pn**	**01 44 10.4**	**-2.8**
IKOO				*e*Sg	**Sg**	**01 44 32.0**	**-0.1**
IKOO				*e*		01 44 35.2	
	comp=Z,51μm,0.2s						
IKOO	**Kooshah**	**1.36**	**307**	⇓*e*Pn	**Pn**	**01 44 10.4**	**-2.8**
IKOO				*e*Sg	**Sg**	**01 44 32.0**	**-0.1**
IMON	**Monand**	**1.67**	**342**	*e*Pn	**Pn**	**01 44 17.3**	**-0.2**
IMON				*e*		01 44 53.0	
	comp=Z,22μm,0.2s						
IMON	**Monand**	**1.67**	**342**	*e*Pn	**Pn**	**01 44 17.3**	**-0.2**
ZHSF	**Zahedan**	**2.03**	**168**	*e*Pn	**Pn**	**01 44 25.0**	**+2.7**
ZHSF				AML	AML	01 45 05.7	
	comp=E,1μm,0.7s						
SHRT	**Shahrakht**	**2.04**	**0**	*e*Pg	**Pg**	**01 44 21.0**	**-6.3**
SHRT				AML	AML	01 44 55.3	
	comp=E,1μm,0.6s						
SHRT	**Shahrakht**	**2.04**	**0**	*e*Pn	**Pn**	**01 44 21.0**	**-1.6**
TABS	**Tabas**	**3.36**	**308**	*e*Pn	**Pn**	**01 44 40.2**	**-0.5**
TABS				AML	AML	01 45 41.0	
	comp=N,456nm,0.6s						
TABS	**Tabas**	**3.36**	**308**	*e*Pn	**Pn**	**01 44 40.2**	**-0.5**
KRBR	**Kerman**	**3.43**	**243**	Pn	**Pn**	**01 44 42.0**	**+0.3**
KRBR				Sg	**Sg**	**01 45 35.0**	**-3.5**
KRBR	**Kerman**	**3.43**	**243**	*e*Pn	**Pn**	**01 44 42.4**	**+0.7**
KRBR				*e*Sg	**Sg**	**01 45 35.1**	**-3.4**
KRBR				AML	AML	01 45 42.2	
	comp=N,658nm,0.6s						
KRBR	**Kerman**	**3.43**	**243**	Pn	**Pn**	**01 44 42.0**	**+0.3**
KRBR				*e*Sg	**Sg**	**01 45 35.2**	**-3.3**
IBAF	**Bafgh**	**4.02**	**271**	Pn	**Pn**	**01 44 49.9**	**+0.1**
IBAF	**Bafgh**	**4.02**	**271**	*e*Pn	**Pn**	**01 44 49.9**	**+0.1**
IBAF				*e*		01 46 07.7	
	comp=Z,4μm,0.4s						
IBAF	**Bafgh**	**4.02**	**271**	*e*Pn	**Pn**	**01 44 49.9**	**+0.1**
IMOG	**Moghan**	**4.56**	**350**	Pn	**Pn**	**01 44 58.5**	**+1.2**
IMOG	**Moghan**	**4.56**	**350**	*e*Pn	**Pn**	**01 44 58.3**	**+1.1**
IMOG				*e*		01 45 18.7	
	comp=Z,2μm,0.5s						
IMOG	**Moghan**	**4.56**	**350**	*e*Pn	**Pn**	**01 44 58.3**	**+1.1**
IMYA	**Miami**	**4.73**	**358**	Pn	**Pn**	**01 45 00.3**	**+0.8**
IMYA	**Miami**	**4.73**	**358**	*e*Pn	**Pn**	**01 45 00.4**	**+0.9**
IMYA				*e*		01 46 32.8	
	comp=Z,4μm,0.6s						
IMYA	**Miami**	**4.73**	**358**	*e*Pn	**Pn**	**01 45 00.4**	**+0.9**
ISRO	**Mashad**	**4.75**	**352**	*e*Pn	**Pn**	**01 45 00.3**	**+0.6**
ISRO	**Mashad**	**4.75**	**352**	*e*Pn	**Pn**	**01 45 00.3**	**+0.6**
IMEH	**Mehriz**	**4.85**	**269**	*e*Pn	**Pn**	**01 45 01.7**	**+0.5**
IMEH				*e*		01 46 27.6	
	comp=Z,4μm,0.4s						
IMEH	**Mehriz**	**4.85**	**269**	*e*Pn	**Pn**	**01 45 01.7**	**+0.5**
IPAY	**Payeh**	**4.95**	**348**	*e*	**Pn**	**01 45 06.7**	**+4.1**
	comp=Z,1μm,0.2s						
IPAY				*e*Pn	**Pn**	**01 45 03.3**	**+0.7**
ICHK	**Chekchek**	**5.04**	**279**	*e*Pn	**Pn**	**01 45 04.2**	**+0.4**
ICHK				*e*		01 46 35.5	
	comp=Z,5μm,0.5s						
ICHK	**Chekchek**	**5.04**	**279**	*e*Pn	**Pn**	**01 45 04.2**	**+0.4**
IAKL	**Akhelmad**	**5.15**	**346**	Pn	**Pn**	**01 45 06.0**	**+0.7**
IAKL	**Akhelmad**	**5.15**	**346**	*e*	Px	01 45 44.6	
	comp=Z,668nm,0.4s						
IAKL				*e*Pn	**Pn**	**01 45 06.1**	**+0.8**
IBND	**Bandar-abas**	**5.27**	**219**	*e*Pn	**Pn**	**01 45 07.3**	**+0.4**
IBND				*e*		01 47 03.1	
	comp=Z,3μm,0.3s						
IBND	**Bandar-abas**	**5.27**	**219**	*e*Pn	**Pn**	**01 45 07.3**	**+0.4**
IKRD	**Kardeh**	**5.37**	**345**	Pn	**Pn**	**01 45 07.2**	**-1.1**
IKRD	**Kardeh**	**5.37**	**345**	*e*Pn	**Pn**	**01 45 07.3**	**-1.0**
IKRD				*e*		01 46 51.6	
	comp=Z,1μm,0.6s						
BNDS	**Bandar-Abbas**	**5.51**	**222**	Pn	**Pn**	**01 45 11.0**	**+0.7**
BNDS	**Bandar-Abbas**	**5.51**	**222**	*e*Pn	**Pn**	**01 45 11.3**	**+1.0**
BNDS	**Bandar-Abbas**	**5.51**	**222**	*e*Pn	**Pn**	**01 45 11.3**	**+1.0**
ISAD	**Sadrabad**	**5.63**	**275**	*e*Pn	**Pn**	**01 45 12.9**	**+1.0**
ISAD				*e*		01 46 55.4	
	comp=Z,2μm,0.5s						
ISAD	**Sadrabad**	**5.63**	**275**	*e*Pn	**Pn**	**01 45 12.9**	**+1.0**
IEMG	**Emamgholi**	**5.96**	**347**	*e*Pn	**Pn**	**01 45 16.8**	**+0.4**
IEMG				*e*		01 47 22.4	
	comp=Z,1μm,0.5s						
IEMG	**Emamgholi**	**5.96**	**347**	*e*Pn	**Pn**	**01 45 16.8**	**+0.4**
ISHV	**Shirvan**	**6.29**	**341**	Pn	**Pn**	**01 45 21.1**	**+0.1**
ISHV	**Shirvan**	**6.29**	**341**	*e*Pn	**Pn**	**01 45 21.2**	**+0.2**
ISHV				*e*		01 48 07.5	
	comp=Z,2μm,0.5s						
ISHV	**Shirvan**	**6.29**	**341**	*e*Pn	**Pn**	**01 45 21.2**	**+0.2**
IPAR	**Pars**	**6.47**	**256**	*e*Pn	**Pn**	**01 45 23.8**	**+0.3**
IPAR				*e*		01 47 20.0	
	comp=Z

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GERES	GERESS Array B	38.84	310	P	P	01 51 11.9	-1.3
	comp=Z,0.6nm,0.6s,mb3.5,baz=103,slow=6.0,SNR=4.2						
GERES	GERESS Array B	38.84	310	P	P	01 51 11.9	-1.3
ARCES	ARCESS Array B	42.73	343	LR	LR	02 10 47.1	
	comp=Z,90nm,19.1s,MS3.7,baz=47,slow=38						
NOA	NORSAR Array B	43.32	328	P	P	01 51 50.2	+0.3
	comp=Z,0.6nm,0.7s,mb3.4,baz=111,slow=7.8,SNR=3.5						
NOA				LR	LR	02 12 43.0	
	comp=Z,44nm,18.1s,MS3.4,baz=295,slow=40						
NOA	NORSAR Array B	43.32	328	P	P	01 51 50.2	+0.3
KSRS	Korea Array	54.96	64	LR	LR	02 19 11.6	
	comp=Z,41nm,19.2s,MS3.5,baz=229,slow=38						
TORD	Torodi Ar. Bea	56.56	265	LR	LR	02 19 42.0	
	comp=Z,58nm,20.8s,MS3.7,baz=75,slow=38						
DBIC	Dimbokro	65.39	262	LR	LR	02 22 46.5	
	comp=Z,35nm,19.5s,MS3.6,baz=44,slow=36						
WRA	Warramunga Arr	87.49	115	P	P	01 56 34.9	-1.4
	comp=Z,0.8nm,1.0s,mb3.9,baz=318,slow=3.9,SNR=4.0						
ASAR	Alice Springs	89.28	118	P	P	01 56 43.5	-1.2
	comp=Z,0.3nm,0.6s,mb3.8,baz=308,slow=4.6,SNR=3.8						

ISCJB ***26*** *01:56:46.8±0.2, 54.°72N±0.°02×109.°99E±0.°04, h10km, mb3.9/17, Error ellipse: s-maj=3.8km s-min=2.3km az=141.6*
MOS ***26*** *01:56:47.8±1.1, 54.°88N×109.°86E, h8km, mb4.6/4, Error ellipse: s-maj=10.6km s-min=6.4km az=68.8*
IDC ***26*** *01:56:47.6±0.8, 54.°84N×109.°84E, h0km, mb3.8/11, mb1 4.1/14, mb1mx3.9/31, mbtmp3.9/14, ML3.6/3, Error ellipse: s-maj=18.1km s-min=15.2km az=121.0*
BYKL ***26*** *01:56:48.2±0.2, 54.°87N×109.°85E*
NEIC ***26*** *01:56:49.4±0.4, 54.°88N×109.°83E, h10km, mb4.0/6, Error ellipse: s-maj=8.4km s-min=5.9km az=151.0*
ISC 26 01:56:48.5±0.2**, 54.°76N**±0.°02×**109.°98E**±0.°03**, h10**km**, n97,** σ**1.°39**/158**, mb3.9**/17**, 24C-10D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.70**	**80**	⇓iPG	**Pg**	**01 57 01.3**	**-0.6**
YLYR				e		01 57 11.2	
YLYR				pmax	pmax		
	comp=Z,770nm,0.4s						
YLYR				smax			
	comp=N,1µm,0.4s						
YLYR	**Ulyunkhan**	**0.70**	**80**	⇑iPg	**Pg**	**01 57 01.2**	**-0.7**
	comp=N,21nm,0.6s						
YLYR				⇓iPg	**Pg**	**01 57 01.2**	**-0.7**
	comp=N,161nm,0.6s						
YLYR				⇓iPg	**Pg**	**01 57 01.2**	**-0.7**
	comp=N,150nm,0.6s						
YLYR				Pmax		01 57 01.6	
	comp=N,765nm,0.4s						
YLYR				i Sg	**Sg**	**01 57 11.5**	**+0.5**
YLYR				Smax		01 57 11.9	
	comp=N,1µm,0.6s						
NIZ	**Nizh Angarsk**	**1.05**	**346**	⇑iPG	**Pg**	**01 57 05.4**	**-3.3**
NIZ				e		01 57 18.3	
NIZ				pmax	pmax		
	comp=Z,383nm,0.4s						
NIZ				smax			
	comp=N,738nm,0.9s						
NIZ	**Nizh Angarsk**	**1.05**	**346**	⇑iPg	**Pg**	**01 57 05.4**	**-3.3**
NIZ				Pmax		01 57 06.1	
	comp=N,383nm,0.4s						
NIZ				ePb	**Pb**	**01 57 08.8**	**+0.1**
NIZ				i Sg	**Sg**	**01 57 18.3**	**-4.0**
NIZ				Smax		01 57 23.2	
	comp=N,742nm,0.7s						
SYVR	**Suvo**	**1.10**	**179**	ePG	**Pg**	**01 57 10.2**	**+0.6**
SYVR				e		01 57 27.0	
SYVR				pmax	pmax		
	comp=Z,407nm,0.5s						
SYVR				smax			
	comp=E,4µm,0.7s						
SYVR	**Suvo**	**1.10**	**179**	⇑iPg	**Pg**	**01 57 10.3**	**+0.7**
SYVR				ePb	**Pb**	**01 57 11.9**	**+2.4**
SYVR				max		01 57 12.9	
	comp=E,403nm,0.5s						
SYVR				i Sg	**Sg**	**01 57 27.0**	**+3.2**
SYVR				e		01 57 32.0	
SYVR				max		01 57 32.9	
	comp=E,4µm,0.7s						
KMO	**Kumora**	**1.33**	**31**	ePG	**Pn**	**01 57 10.9**	**-2.2**
KMO				e		01 57 27.3	
KMO				pmax	pmax		
	comp=Z,1µm,0.3s						
KMO				smax			
	comp=N,3µm,1.0s						
KMO	**Kumora**	**1.33**	**31**	⇑iPg	**Pn**	**01 57 11.0**	**-2.1**
KMO				Pmax		01 57 11.9	
	comp=N,1µm,0.4s						
KMO				ePb	**Pb**	**01 57 12.9**	**-0.6**
KMO				i Sg	**Sg**	**01 57 28.5**	**-2.8**
KMO				e		01 57 33.2	
KMO				max		01 57 34.2	
	comp=N,3µm,1.0s						
YOA	**Uoyan**	**1.70**	**35**	⇑iPN	**Pn**	**01 57 18.5**	**+0.3**
YOA	**Uoyan**	**1.70**	**35**	⇑iPg	**Pn**	**01 57 18.4**	**+0.2**
YOA				Pmax		01 57 19.0	
	comp=N,2µm,0.4s						
YOA				e		01 57 20.3	
YOA				i Sg	**Sg**	**01 57 41.9**	**-1.2**
YOA				Smax		01 57 45.4	
	comp=N,6µm,0.8s						
OGRR	**Ongureny**	**1.79**	**232**	ePN	**Pn**	**01 57 20.4**	**+1.1**
OGRR				e		01 57 21.7	
OGRR				e		01 57 46.1	
OGRR				pmax	pmax		
	comp=Z,790nm,0.9s						
OGRR				smax			
	comp=E,757nm,1.2s						
OGRR	**Ongureny**	**1.79**	**232**	⇓iPg	**Pg**	**01 57 22.0**	**-0.7**
	comp=E,38nm,0.7s						
OGRR				⇓iPg	**Pg**	**01 57 22.0**	**-0.7**
	comp=E,70nm,0.7s						
OGRR				⇑iPg	**Pg**	**01 57 22.0**	**-0.7**
	comp=E,77nm,0.7s						
OGRR				Pmax		01 57 22.8	
	comp=E,788nm,0.9s						
OGRR				eSg	**Sg**	**01 57 46.5**	**+0.6**
OGRR				Smax		01 57 49.0	
	comp=E,745nm,0.9s						
UKT	**Uakit**	**2.22**	**69**	⇑iPN	**Pn**	**01 57 27.2**	**+1.9**
UKT				e		01 57 59.3	
UKT				pmax	pmax		
	comp=Z,820nm,0.6s						
UKT				smax			
	comp=N,2µm,0.3s						
UKT	**Uakit**	**2.22**	**69**	⇑iPg	**Pb**	**01 57 27.3**	**-1.3**
	comp=N,52nm,1.0s						
UKT				⇑iPg	**Pb**	**01 57 27.3**	**-1.3**
	comp=N,52nm,1.0s						
UKT				⇑iPg	**Pb**	**01 57 27.3**	**-1.3**
	comp=N,105nm,1.0s						
UKT				Pmax		01 57 28.7	
	comp=N,823nm,0.6s						
UKT				i Sg	**Sg**	**01 57 57.8**	**-2.0**
UKT				Smax		01 58 00.2	
	comp=N,2µm,1.1s						
SVKR	**Severomuysk**	**2.46**	**55**	ePn	**Pn**	**01 57 30.6**	**+2.1**
SVKR				⇓iPg	**Pg**	**01 57 32.3**	**-3.2**
SVKR				Pmax		01 57 32.6	
	comp=N,843nm,0.5s						
SVKR				e		01 57 37.8	
SVKR				eSg	**Sg**	**01 58 06.0**	**-1.3**
SVKR				Smax		01 58 07.6	
	comp=N,5µm,0.9s						
ZRHB	**Zarechye**	**2.77**	**218**	ePn	**Pn**	**01 57 33.8**	**+0.9**
ZRHB				ePg	**Pg**	**01 57 39.6**	**-2.0**
ZRHB				Pmax		01 57 40.7	
	comp=N,237nm,0.7s						
ZRHB				i Sg	**Sg**	**01 58 16.5**	**-1.0**
ZRHB				Smax		01 58 21.0	
	comp=N,2µm,0.9s						
ZRHB				e		01 58 27.6	
TRG	**Tyrgan**	**2.94**	**229**	ePN	**Pn**	**01 57 37.5**	**+2.4**
TRG				e		01 57 41.6	
TRG				eS	**Sn**	**01 58 09.2**	**-1.2**
TRG	**Tyrgan**	**2.94**	**229**	e	**Pn**	**01 57 31.1**	**-4.0**
TRG				max		01 57 38.7	
	comp=N,75nm,0.6s						
TRG				⇑iPg	**Pg**	**01 57 40.8**	**-3.9**
TRG				e		01 57 46.1	
TRG				eSg	**Sg**	**01 58 19.4**	**-3.4**
TRG				Smax		01 58 26.2	
	comp=N,314nm,0.9s						
UUDB	**Ulan-Yde**	**3.21**	**207**	ePn	**Pn**	**01 57 39.3**	**+0.4**
UUDB				⇑iPg	**Pg**	**01 57 46.6**	**-3.3**
UUDB				ePgPg		01 57 50.2	
UUDB				max		01 57 51.6	
	comp=N,209nm,0.8s						
UUDB				e		01 57 57.9	
UUDB				e		01 58 08.2	
UUDB				i Sg	**Sg**	**01 58 30.0**	**-1.4**
UUDB				Smax		01 58 46.4	
	comp=N,367nm,0.8s						
KAB	**Kabansk**	**3.36**	**218**	ePN	**Pb**	**01 57 49.9**	**+1.8**
KAB				e		01 58 34.7	
KAB				pmax	pmax		
	comp=Z,223nm,0.2s						
KAB				smax			
	comp=N,910nm,0.9s						
KAB	**Kabansk**	**3.36**	**218**	e	**Sn**	**01 58 20.8**	**-0.1**
KAB				eSg	**Sg**	**01 58 32.8**	**-3.5**
KAB				e		01 58 42.4	
KAB				max		01 58 47.4	
	comp=N,917nm,0.9s						
STDB	**Stepnoy Dvoret**	**3.37**	**221**	eSg	**Sg**	**01 58 34.1**	**-2.6**
STDB				e		01 58 37.0	
STDB				max		01 59 27.2	
	comp=N,1µm,1.0s						
CIT	**Chita**	**3.48**	**141**	e	**Pn**	**01 57 43.4**	**+0.9**
CIT				e		01 57 46.0	
CIT				ePg	**Pg**	**01 57 52.8**	**-2.2**
CIT				Pmax		01 57 55.0	
	comp=N,135nm,0.9s						
CIT				eSg	**Sg**	**01 58 39.2**	**-0.8**
CIT				e		01 58 45.0	
CIT				max		01 58 45.8	
	comp=N,900nm,1.0s						
HRMR	**Khuramsha**	**3.62**	**211**	⇑iPn	**Pn**	**01 57 47.2**	**+2.7**
HRMR				⇑iPg	**Pg**	**01 57 53.7**	**-4.1**
HRMR				Pmax		01 58 02.2	
	comp=N,156nm,0.8s						
HRMR				eSg	**Sg**	**01 58 41.0**	**-3.7**
HRMR				Smax		01 58 44.6	
	comp=N,1µm,0.7s						
HRMR				e		01 58 49.5	
BOD	**Bodaibo**	**3.80**	**35**	ePn	**Pn**	**01 57 47.2**	**+0.2**
BOD				⇑iPg	**Pg**	**01 57 54.2**	**-7.0**
BOD				Pmax		01 57 55.5	
	comp=N,64nm,0.4s						
BOD				ePgPg		01 57 57.4	
BOD				e		01 58 23.4	
BOD				e		01 58 33.2	
BOD				i Sg	**Sg**	**01 58 42.7**	**-7.8**
BOD				eSgSg		01 58 47.1	
BOD				max		01 58 54.6	
	comp=N,281nm,0.9s						
LSTR	**Listvyanka**	**4.23**	**229**	ePn	**Pn**	**01 57 54.4**	**+1.5**
LSTR				ePg	**Pg**	**01 58 04.9**	**-4.5**
LSTR				Pmax		01 58 06.0	
	comp=N,49nm,1.2s						
LSTR				e		01 58 08.1	
LSTR				e		01 58 45.2	
LSTR				e		01 58 57.1	
LSTR				i Sg	**Sg**	**01 59 01.1**	**-3.0**
LSTR				Smax		01 59 03.4	
	comp=N,524nm,1.4s						
IRK	**Irkutsk**	**4.24**	**236**	ePN	**Pb**	**01 58 04.8**	**+1.8**
IRK				e		01 58 59.1	
IRK				pmax	pmax		
	comp=Z,130nm,0.1s						
IRK				smax			
	comp=N,961nm,0.7s						
IRK	**Irkutsk**	**4.24**	**236**	ePg	**Pb**	**01 58 03.5**	**+0.5**
IRK				Pmax		01 58 06.2	
	comp=N,113nm,0.2s						
IRK				e		01 58 51.6	
IRK				eSg	**Sg**	**01 58 59.6**	**-4.7**
IRK				e		01 59 10.9	
IRK				max		01 59 12.0	
	comp=N,997nm,0.9s						
TLY	**Talaya**	**4.89**	**234**	ePn	**Pn**	**01 58 03.3**	**+1.3**
TLY				ePg	**Pg**	**01 58 16.6**	**-5.6**
TLY				eSg	**Sg**	**01 59 17.7**	**-7.8**
TLY	**Talaya**	**4.89**	**234**	ePN	**Pn**	**01 58 03.4**	**+1.4**
TLY				e		01 58 16.6	
TLY				eS	**Sn**	**01 58 58.0**	**-0.7**
TLY				e		01 59 18.2	
TLY				pmax	pmax		
	comp=Z,51nm,0.6s						
TLY				smax			
	comp=E,188nm,1.2s						
TLY	**Talaya**	**4.89**	**234**	ePn	**Pn**	**01 58 01.8**	**-0.2**
TLY				e		01 58 03.8	
TLY				ePg	**Pg**	**01 58 15.4**	**-6.7**
TLY				Pmax		01 58 22.1	
	comp=E,51nm,0.5s						
TLY				eSn	**Sn**	**01 58 59.6**	**+0.9**
TLY				e		01 59 17.4	
TLY				i Sg	**Sg**	**01 59 19.8**	**-5.7**
TLY				Smax		01 59 30.6	
	comp=E,188nm,1.2s						
CRS	**Chara**	**5.14**	**62**	ePN	**Pn**	**01 58 06.6**	**+1.2**
CRS				e		01 58 20.7	
CRS				e		01 59 28.3	
CRS				pmax	pmax		
	comp=Z,124nm,1.1s						
CRS				smax			
	comp=E,248nm,0.9s						
CRS	**Chara**	**5.14**	**62**	⇑iPn	**Pn**	**01 58 06.8**	**+1.4**
CRS				⇑i		01 58 16.2	
CRS				ePg	**Pg**	**01 58 21.2**	**-5.7**
CRS				Pmax		01 58 23.0	
	comp=E,125nm,1.1s						
CRS				e		01 58 30.5	
CRS				eSn	**Sn**	**01 59 01.0**	**-3.8**
CRS				eSg	**Sg**	**01 59 28.7**	**-4.8**
CRS				Smax		01 59 46.5	
	comp=E,272nm,1.1s						
KPC	**Khapcheranga**	**5.27**	**163**	ePN	**Pn**	**01 58 08.9**	**+1.7**
KPC				e		01 58 25.2	
KPC				eS	**Sn**	**01 59 08.5**	**+0.6**
KPC				e		01 59 35.9	
KPC				pmax	pmax		
	comp=Z,30nm,0.9s						
KPC				smax			
	comp=E,305nm,0.9s						
KPC	**Khapcheranga**	**5.27**	**163**	⇑iPn	**Pn**	**01 58 08.5**	**+1.3**
KPC				e		01 58 17.2	
KPC				⇓iPg	**Pg**	**01 58 25.2**	**-4.1**
KPC				Pmax		01 58 30.6	
	comp=E,29nm,1.0s						
KPC				eSn	**Sn**	**01 59 08.5**	**+0.6**
KPC				i Sg	**Sg**	**01 59 35.8**	**-1.7**
KPC				Smax		01 59 38.5	
	comp=E,306nm,1.0s						
ARS	**Arshan**	**5.34**	**241**	ePN	**Pg**	**01 58 24.7**	**-6.0**
ARS				e		01 59 32.5	
ARS				pmax	pmax		
	comp=Z,118nm,0.5s						
ARS				smax			
	comp=E,1µm,0.8s						
ARS	**Arshan**	**5.34**	**241**	⇑iPn	**Pn**	**01 58 09.3**	**+1.1**
ARS				ePg	**Pg**	**01 58 24.4**	**-6.3**
ARS				Pmax		01 58 26.7	
	comp=E,118nm,0.5s						
ARS				eSn	**Sn**	**01 59 03.4**	**-6.3**
ARS				e		01 59 13.2	
ARS				i Sg	**Sg**	**01 59 33.6**	**-6.2**
ARS				Smax		01 59 47.9	
	comp=E,1µm,0.8s						
TUP	**Tupik**	**5.81**	**89**	ePN	**Pn**	**01 58 15.5**	**+0.9**
TUP				e		01 58 33.1	
TUP				eS	**Sn**	**01 59 21.8**	**+0.6**
TUP				e		01 59 49.5	
TUP				pmax	pmax		
	comp=Z,32nm,0.6s						
TUP				smax			
	comp=N,284nm,0.9s						
TUP	**Tupik**	**5.81**	**89**	⇑iPn	**Pn**	**01 58 15.7**	**+1.1**
TUP				⇓i		01 58 23.6	
TUP				ePg	**Pg**	**01 58 33.6**	**-6.0**
TUP				Pmax		01 58 36.0	
	comp=N,31nm,0.6s						
TUP				e		01 58 40.1	
TUP				eSn	**Sn**	**01 59 22.4**	**+1.2**
TUP				eSg	**Sg**	**01 59 49.7**	**-5.1**
TUP				Smax		02 00 01.0	
	comp=N,286nm,0.8s						
ZAK	**Zakamensk**	**5.99**	**226**	ePN	**Pn**	**01 58 19.7**	**+2.7**
ZAK				e		01 58 38.6	
ZAK				e		01 59 53.4	
ZAK				pmax	pmax		
	comp=Z,11nm,0.8s						
ZAK				smax			
	comp=E,77nm,0.9s						
MOY	**Mondy**	**6.22**	**244**	ePN	**Pn**	**01 58 22.4**	**+2.2**
MOY				e		01 58 40.9	
MOY				eS	**Sn**	**01 59 31.5**	**+0.2**
MOY				e		01 59 58.6	
MOY				pmax	pmax		
	comp=Z,31nm,0.5s						
MOY				smax			
	comp=N,326nm,1.4s						
MOY	**Mondy**	**6.22**	**244**	⇑iPn	**Pn**	**01 58 22.3**	**+2.1**
MOY				e		01 58 31.4	
MOY				ePg	**Pg**	**01 58 38.6**	**-8.9**
MOY				Pmax		01 58 39.3	
	comp=N,37nm,0.8s						
MOY				eSn	**Sn**	**01 59 32.3**	**+1.0**
MOY				eSg	**Sg**	**01 59 58.9**	**-9.1**
MOY				e		02 00 06.6	
MOY				max		02 00 09.1	
	comp=N,328nm,1.0s						
ORL	**Orlik**	**6.44**	**254**	ePN	**Pn**	**01 58 24.6**	**+1.4**
ORL				e		01 58 44.6	
ORL				e		02 00 07.2	
ORL				pmax	pmax		
	comp=Z,21nm,0.4s						
ORL				smax			
	comp=N,302nm,1.1s						
ORL	**Orlik**	**6.44**	**254**	⇓iPn	**Pn**	**01 58 25.2**	**+2.0**
ORL				max		01 58 26.7	
	comp=N,54nm,0.8s						
ORL				e		01 58 38.2	
ORL				e		01 59 37.4	
ORL				eSg	**Sg**	**02 00 07.6**	**-7.4**
ORL				Smax		02 00 15.0	
	comp=N,302nm,0.9s						
ULN	**Ulaanbaatar**	**7.14**	**196**	ePg	**Pg**	**01 58 59.5**	**-5.5**
	comp=N,13nm,0.7s						
ULN	**Ulaanbaatar**	**7.14**	**196**	ePG	**Pg**	**01 58 59.5**	**-5.5**
ULN				pmax	pmax		
	comp=Z,13nm,0.7s						
ULN	**Ulaanbaatar**	**7.14**	**196**	ePg	**Pg**	**01 58 59.1**	**-5.9**
ULN				eSg	**Sg**	**02 00 32.8**	**-4.6**
SONM	**Songino Array**	**7.28**	**199**	Pn	**Pn**	**01 58 37.5**	**+2.7**
	comp=Z,0.6nm,0.3s,baz=11,slow=13,SNR=16						
SONM				Pg	**Pg**	**01 59 00.5**	**-7.3**
	comp=Z,1.0nm,0.3s,baz=13,slow=16,SNR=9.2						
SONM				Sn	**Sn**	**02 00 02.6**	**+5.1**
	comp=Z,0.6nm,0.3s,baz=21,slow=29,SNR=4.0						
SONM				Lg		02 00 40.3	
	comp=Z,3.3nm,0.3s,baz=15,slow=30,SNR=19						
SONM	**Songino Array**	**7.28**	**199**	PN	**Pn**	**01 58 37.5**	**+2.7**
SONM						01 59 00.5	
SONM						02 00 02.6	
SONM						02 00 40.3	
HIA	**Hailar**	**8.15**	**128**	e	**Sn**	**02 00 12.9**	**-5.9**
HIA				e		02 00 30.1	
HIA				e		02 00 59.1	
HIA				eSg	Sx	02 01 04.9	
ORY	**Orie**	**8.58**	**278**j	iPN	**Pn**	**01 58 51.0**	**-1.5**
ORY				e		01 59 22.7	
ORY				e		02 00 27.2	
ZAA0	**Zalesovo Array**	**14.67**	**277**	ePn	**Pn**	**02 00 15.6**	**-0.2**
ZALV	**Zalesovo Beam**	**14.67**	**277**	Pn	**Pn**	**02 00 15.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=76,slow=9.7,SNR=28						
ZALV				Lg		02 04 32.2	
	comp=Z,0.1nm,0.3s,baz=68,slow=24,SNR=3.1						
ZALV	**Zalesovo Beam**	**14.67**	**277**	P	**Pn**	**02 00 15.7**	**-0.1**
NVS	**Novosibirsk**	**15.39**	**281**	eP	**Pn**	**02 00 29.4**	**+4.0**
NVS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=N,1.0nm,0.4s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.3s						
TIXI	**Tiksi**	**18.80**	**19**	eP	**Pn**	**02 01 07.2**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MK31	**Makanchi Array**	**19.14**	**257**	eP	**Pn**	**02 01 11.6**	**-0.8**
MK31	**Makanchi Array**	**19.14**	**257**	eP	**Pn**	**02 01 11.6**	**-0.7**
MKAR	**Makanchi Array**	**19.14**	**257**	P	**Pn**	**02 01 11.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=71,slow=11,SNR=15						
MKAR	**Makanchi Array**	**19.14**	**257**	i P	**Pn**	**02 01 11.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**19.32**	**271**	eP	**Pn**	**02 01 12.6**	**-1.9**
	comp=Z,8.2nm,1.1s						
KURK	**Kurchatov**	**19.32**	**271**	eP	**Pn**	**02 01 13.7**	**-0.8**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVAR	**Borovoye Array**	**23.19**	**282**	P	**P**	**02 01 53.1**	**-1.9**
	comp=Z,6.2nm,0.7s,mb4.2,baz=83,slow=15,SNR=13						
BVAR	**Borovoye Array**	**23.19**	**282**	P	**P**	**02 01 53.1**	**-1.9**
BRVK	**Borovoye**	**23.23**	**282**	eP	**P**	**02 01 55.2**	**-0.3**
	comp=Z,7.4nm,0.8s,mb4.2						
BRVK	**Borovoye**	**23.23**	**282**	eP	**P**	**02 01 55.3**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
TKM2	**Tokmak 2**	**25.27**	**256**	eP	**P**	**02 02 15.8**	**+1.2**
	comp=Z,2.4nm,0.7s,mb3.8						
TKM2	**Tokmak 2**	**25.27**	**256**	eP	**P**	**02 02 15.8**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
EKS2	**Erkin-Say**	**26.46**	**258**	eP	**P**	**02 02 26.8**	**+1.4**
	comp=Z,1.4nm,0.5s,mb3.8						
BILL	**Bilibino**	**28.84**	**40**	eP	**P**	**02 02 47.2**	**+0.8**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
ABKAR	**Akbulak array**	**30.73**	**281**	eP	**P**	**02 03 03.5**	**+0.1**
	comp=Z,0.7nm,0.8s,mb3.5						
AKTK	**Aktyubinsk**	**31.25**	**284**	P	**P**	**02 03 08.9**	**+1.0**
AKTO	**Aktyubinsk**	**31.25**	**284**	P	**P**	**02 03 08.9**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.7,baz=53,slow=10,SNR=4.1						
AKTO	**Aktyubinsk**	**31.25**	**284**	P	**P**	**02 03 09.0**	**+1.1**
FINES	**FINESS Array B**	**41.91**	**314**	P	**P**	**02 04 38.1**	**-0.4**
	comp=Z,1.0nm,0.5s,mb3.7,baz=64,slow=11,SNR=4.7						
FINES	**FINESS Array B**	**41.91**	**314**	P	**P**	**02 04 38.1**	**-0.4**
COLA	**College**	**46.79**	**35**	eP	**P**	**02 05 18.5**	**+1.0**
	comp=Z,3.7nm,0.8s,mb4.4						
COLA	**College**	**46.79**	**35**	eP	**P**	**02 05 18.5**	**+1.0**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**47.17**	**35**	P	**P**	**02 05 21.6**	**+1.0**
	comp=Z,2.8nm,0.9s,mb4.2,baz=300,slow=6.4,SNR=26						
ILAR	**Eielson Array**	**47.17**	**35**	P	**P**	**02 05 21.6**	**+1.1**
NOA	**NORSAR Array B**	**48.02**	**320**	P	**P**	**02 05 26.7**	**-0.4**
	comp=Z,0.6nm,0.8s,mb3.7,baz=176,slow=9.2,SNR=3.4						
NOA	**NORSAR Array B**	**48.02**	**320**	P	**P**	**02 05 26.7**	**-0.4**
INK	**Inuvik**	**48.68**	**26**	P	**P**	**02 05 32.0**	**-0.1**
	comp=Z,1.7nm,0.8s,mb4.1,baz=10,slow=6.6,SNR=4.1						
INK	**Inuvik**	**48.68**	**26**	P	**P**	**02 05 32.0**	**-0.1**
CLL	**Collm**	**53.83**	**309**	eP	**P**	**02 06 11.0**	**0.0**
CLL	**Collm**	**53.83**	**309**	eP	**P**	**02 06 11.0**	**0.0**
CLL	**Collm**	**53.83**	**309**	eP	**P**	**02 06 11.0**	**0.0**
GERES	**GERESS Array B**	**55.26**	**307**	P	**P**	**02 06 21.4**	**0.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=41,slow=12,SNR=3.1						
GERES	**GERESS Array B**	**55.26**	**307**	P	**P**	**02 06 21.4**	**0.0**
DLBC	**Dease Lake**	**57.28**	**33**	P	**P**	**02 06 36.8**	**+1.1**
	comp=Z,1.9nm,0.8s,mb4.2,baz=275,slow=12,SNR=5.1						
PDAR	**Pinedale Array**	**77.17**	**29**	P	**P**	**02 08 42.6**	**+0.6**
	comp=Z,0.2nm,0.6s,mb3.2,baz=10,slow=5.5,SNR=3.3						
WRA	**Warramunga Arr**	**77.26**	**157**	P	**P**	**02 08 43.3**	**+0.7**
	comp=Z,0.7nm,0.7s,mb3.7,baz=312,slow=2.7,SNR=5.3						
WRA	**Warramunga Arr**	**77.26**	**157**	P	**P**	**02 08 43.3**	**+0.7**
ASAR	**Alice Springs**	**80.76**	**158**	P	**P**	**02 09 03.4**	**+1.7**
	comp=Z,0.8nm,1.0s,mb3.6,baz=337,slow=3.7,SNR=4.8						
ASAR	**Alice Springs**	**80.76**	**158**	P	**P**	**02 09 03.4**	**+1.7**
VNA2	**Neumayer--Watz**	**149.00**	**215**	ePKPdf	PKPdf	02 16 33.6	+2.8
	baz=29,slow=3.2						
VNA3	**Neumayer Olymp**	**149.75**	**214**	ePKPdf	PKPdf	02 16 35.4	+3.4

IDC 26 01:59:26.4±17.0**, 19.°05S**×**179.°17W, h563**km±171km**, mb2.9**/3**, mb1 3.2**/3**, mb1mx2.9**/16**, mbtmp2.9**/3**, Error ellipse: s-maj=269.3km s-min=65.1km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.72**	**261**	P	P	02 06 42.5	-0.2
	0.4nm,0.2s,baz=97,slow=7.9,SNR=11						
ASAR	**Alice Springs**	**43.80**	**255**	P	P	02 06 43.3	+0.1
	0.9nm,0.6s,baz=92,slow=7.9,SNR=13						
ILAR	**Eielson Array**	**87.15**	**13**	P	P	02 11 12.8	+0.3
	0.3nm,0.5s,baz=215,slow=4.6,SNR=6.8						
AKASG	**Malin Array Be**	**141.21**	**331**	PKhKP	PKPpre	02 17 47.4	
	1.0nm,0.5s,baz=46,slow=4.6,SNR=4.7						
BRTR	**Keskin Array B**	**145.04**	**313**	PKPbc	PKPbc	02 17 59.7	-1.3
	0.4nm,0.6s,baz=108,slow=2.5,SNR=3.0						

*ISCJB **26** 02:21:23.9±0.9, 28°.57S±0°.09×67°.40W±0°.10, h129km±16km, mb3.5/2, Error ellipse: s-maj=15.6km s-min=13.5km az=35.9*
*IDC **26** 02:21:24.6±1.9, 28°.58S×67°.36W, h125km±18km, mb3.5/1, mb1 3.3/3, mb1mx3.2/15, mbtmp3.1/3, MS2.5/1, Ms1 2.7/1, ms1mx2.0/29, Error ellipse: s-maj=33.2km s-min=16.3km az=122.0*
*NEIC **26** 02:21:24.8±0.7, 28°.53S×67°.37W, h129km±8km, Error ellipse: s-maj=13.2km s-min=10.0km az=143.0*

ISC 26 02:21:24.7±0.9, 28°.55S±0°.09×67°.39W±0°.09, h123km±16km, n11, σ0°68/10, mb3.5/2, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**2.94**	**260**	*e*Pn	**Pn**	**02 22 10.6**	**+0.3**
LCO				*e*Sn	**Sn**	**02 22 44.8**	**-0.8**
CFAA	**Coronel Fontan**	**3.13**	**193**	P	**Pn**	**02 22 13.9**	**+1.1**
	0.9nm,0.3s,baz=4.6,slow=12,SNR=73						
CFAA				S	**Sn**	**02 22 49.6**	**-0.3**
	4.5nm,0.3s,baz=150,slow=20,SNR=19						
CPUP	**Villa Florida**	**9.21**	**78**	P	**Pn**	**02 23 34.5**	**-0.1**
	0.5nm,0.3s,baz=250,slow=15,SNR=5.3						
LPAZ	**La Paz**	**12.22**	**357**	P	**Pn**	**02 24 15.4**	**+0.7**
	0.1nm,0.3s,baz=192,slow=9.3,SNR=3.3						
LPAZ				LR	LR	02 28 33.0	
	comp=Z,22nm,18.3s,baz=169,slow=35						
BDFB	**Brasilia**	**22.03**	**58**	P	**P**	**02 26 08.1**	**-1.3**
	1.4nm,0.4s,mb3.7,baz=274,slow=15,SNR=3.0						
TORD	**Torodi Ar. Bea**	**78.55**	**68**	P	**P**	**02 33 13.1**	**+0.1**
	123nm,0.3s,baz=235,slow=5.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.55**	**68**	P	**P**	**02 33 13.1**	**+0.1**
PDAR	**Pinedale Array**	**80.88**	**330**	P	**P**	**02 33 25.2**	**+0.3**
	0.3nm,0.5s,mb3.4,baz=130,slow=8.3,SNR=4.5						
ASAR	**Alice Springs**	**124.18**	**204**	PKP	PKPdf	02 40 08.4	-1.0
	0.4nm,0.5s,baz=136,slow=2.1,SNR=5.2						
WRA	**Warramunga Arr**	**127.42**	**206**	PKP	PKPdf	02 40 14.9	-0.7
	0.4nm,1.0s,baz=167,slow=1.5,SNR=1.1						
MKAR	**Makanchi Array**	**150.14**	**44**	PKPbc	PKPbc	02 41 00.6	-0.2
	0.7nm,0.8s,baz=343,slow=2.5,SNR=3.8						

*ISCJB **26** 02:30:18.3±0.3, 40°.41N±0°.01×26°.01E±0°.02, h12km±2km, Error ellipse: s-maj=2.5km s-min=2.3km az=42.1*
*ATH **26** 02:30:18.7, 40°.43N×26°.07E, h34km±2km, MD3.3/10*
*DDA **26** 02:30:19.0, 40°.37N×26°.15E, h4km±7km, MI3.6*
*ISK **26** 02:30:19.0, 40°.38N×26°.09E, h14km, MD3.4*
*CSEM **26** 02:30:19.1±0.1, 40°.40N×26°.02E, h15km, MD3.4, Error ellipse: s-maj=2.0km s-min=1.8km az=19.0*
*NEIC **26** 02:30:19.0, 40°.38N×26°.10E, h8km, MD3.4(ISK), After ISK.*
*THE **26** 02:30:20.2, 40°.40N×26°.00E, h19km±2km, ML3.0/8, Error ellipse: s-maj=2.6km s-min=0.7km az=38.0*
*SOF **26** 02:30:21.8, 40°.50N×25°.65E, h20km, MD3.2*

ISC 26 02:30:19.0±0.3, 40°.41N±0°.01×26°.02E±0°.02, h14km±2km, n168, σ0°79/215, 5C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.23**	**203**	PG	**Pg**	**02 30 24.9**	**+0.8**
GADA				*e*SG	**Sg**	**02 30 28.7**	**+1.2**
GADA	**Gvkgeada**	**0.23**	**203**	*i* Pg	**Pg**	**02 30 24.9**	**+0.8**
GADA				*e*Sg	**Sg**	**02 30 28.7**	**+1.2**
ENEZ	**Enez**	**0.35**	**17**	PG	**Pg**	**02 30 26.7**	**+0.6**
ENEZ				*e*SG	**Sg**	**02 30 32.0**	**+1.2**
ENEZ	**Enez**	**0.35**	**17**	*i* Pg	**Pg**	**02 30 26.7**	**+0.6**
ENEZ				*e*Sg	**Sg**	**02 30 32.0**	**+1.2**
GELI	**Tayfur-Gelibol**	**0.35**	**91**	PG	**Pg**	**02 30 25.9**	**-0.2**
GELI				*e*SG	**Sg**	**02 30 30.8**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.35**	**91**	*i* Pg	**Pg**	**02 30 25.9**	**-0.2**
GELI				*e*Sg	**Sg**	**02 30 30.8**	**0.0**
ERIK	**Erikli-Kesan**	**0.46**	**55**	PG	**Pg**	**02 30 28.0**	**-0.1**
ERIK				*e*SG	**Sg**	**02 30 34.3**	**0.0**
ERIK	**Erikli-Kesan**	**0.46**	**55**	*i* Pg	**Pg**	**02 30 28.0**	**-0.2**
ERIK				*e*Sg	**Sg**	**02 30 34.3**	**-0.1**
ALN	**Alexandroupoli**	**0.49**	**2**	P	**Pg**	**02 30 28.7**	**-0.1**
ALN	**Alexandroupoli**	**0.49**	**2**	*e*PB	**Pg**	**02 30 29.1**	**+0.3**
ALN				*e*SB	**Sg**	**02 30 36.1**	**+0.7**
ALN	**Alexandroupoli**	**0.49**	**2**	P	**Pg**	**02 30 29.2**	**+0.4**
ALN				S	**Sg**	**02 30 37.3**	**+1.9**
ALN	**Alexandroupoli**	**0.49**	**2**	P	**Pg**	**02 30 29.2**	**+0.4**
ALN				*e*Sb	**Sg**	**02 30 36.1**	**+0.7**
ALN				S	**Sg**	**02 30 37.3**	**+1.9**
BOZC	**Bozcaada**	**0.56**	**177**	*i* P	**Pg**	**02 30 30.8**	**+0.7**
BOZC				*i* S	**Sg**	**02 30 38.5**	**+1.0**
LPK	**Lapseki**	**0.57**	**93**	PG	**Pg**	**02 30 28.5**	**-1.7**
LPK	**Lapseki**	**0.57**	**93**	*i* Pg	**Pg**	**02 30 28.5**	**-1.6**
EZN	**Ezine**	**0.62**	**158**	*e*PG	**Pg**	**02 30 30.7**	**-0.5**
EZN	**Ezine**	**0.62**	**158**	*e*Pg	**Pg**	**02 30 30.7**	**-0.5**
LIA	**Limnos Island**	**0.82**	**232**	P	**Pg**	**02 30 35.4**	**+0.5**
LIA	**Limnos Island**	**0.82**	**232**	*e*PN	**Pg**	**02 30 36.0**	**+1.1**
LIA				*e*SN	**Sn**	**02 30 47.6**	**-0.4**
LIA	**Limnos Island**	**0.82**	**232**	P	**Pg**	**02 30 35.8**	**+0.9**
LIA				S	**Sg**	**02 30 47.1**	**+1.5**
LIA	**Limnos Island**	**0.82**	**232**	P	**Pg**	**02 30 35.4**	**+0.5**
LIA	**Limnos Island**	**0.82**	**232**	*e*Pn	**Pg**	**02 30 36.0**	**+1.1**
LIA				S	**Sg**	**02 30 47.1**	**+1.5**
LIA				*e*Sn	**Sn**	**02 30 47.6**	**-0.4**
RDO	**Rodhopi**	**0.83**	**334**	P	**Pg**	**02 30 34.8**	**-0.3**
RDO	**Rodhopi**	**0.83**	**334**	*e*PN	**Pg**	**02 30 35.2**	**+0.1**
RDO				*e*SN	**Sg**	**02 30 46.3**	**+0.4**
RDO	**Rodhopi**	**0.83**	**334**	P	**Pg**	**02 30 35.2**	**+0.1**
RDO				S	**Sg**	**02 30 48.0**	**+2.1**
RDO	**Rodhopi**	**0.83**	**334**	P	**Pg**	**02 30 35.2**	**+0.1**
RDO				*e*Sn	**Sg**	**02 30 46.3**	**+0.4**
RDO				S	**Sg**	**02 30 48.0**	**+2.1**
RKY	**Sarkoy-Tekirda**	**0.93**	**72**	*e*PG	**Pg**	**02 30 35.9**	**-1.0**
RKY	**Sarkoy-Tekirda**	**0.93**	**72**	*e*Pg	**Pg**	**02 30 35.9**	**-1.1**
SART	**Tekirdag**	**0.93**	**72**	*i* P	**Pg**	**02 30 35.1**	**-1.9**
SART				*i* S	**Sg**	**02 30 48.8**	**-0.3**
SART	**Tekirdag**	**0.93**	**72**	*i* P	**Pg**	**02 30 35.1**	**-1.9**
SART				*i* S	**Sg**	**02 30 48.8**	**-0.3**
MFT	**Murefte**	**1.03**	**68**	*e*PG	**Pg**	**02 30 38.5**	**-0.5**
MFT	**Murefte**	**1.03**	**68**	*e*Pg	**Pg**	**02 30 38.5**	**-0.5**
PRK	**Paraskevi**	**1.17**	**170**	P	**Pn**	**02 30 40.6**	**-0.5**
PRK	**Paraskevi**	**1.17**	**170**	*e*PN	**Pn**	**02 30 41.2**	**+0.1**
PRK				*e*SN	**Sn**	**02 30 56.8**	**0.0**
PRK	**Paraskevi**	**1.17**	**170**	P	**Pn**	**02 30 40.7**	**-0.4**
PRK				S	**Sb**	**02 30 57.1**	**+0.9**
PRK	**Paraskevi**	**1.17**	**170**	P	**Pn**	**02 30 40.7**	**-0.4**
PRK	**Paraskevi**	**1.17**	**170**	*e*Pn	**Pn**	**02 30 41.2**	**+0.1**
PRK				*e*Sn	**Sn**	**02 30 56.8**	**0.0**
PRK				S	**Sb**	**02 30 57.1**	**+0.9**
SIGR	**SIGRI**	**1.20**	**186**	P	**Pn**	**02 30 40.6**	**-0.8**
SIGR	**SIGRI**	**1.20**	**186**	P	**Pn**	**02 30 40.9**	**-0.5**
SIGR				S	**Sb**	**02 30 57.3**	**+0.4**
SIGR	**SIGRI**	**1.20**	**186**	P	**Pn**	**02 30 40.9**	**-0.5**
SIGR				S	**Sb**	**02 30 57.3**	**+0.4**
AYVA	**Ayvalik**	**1.21**	**155**	*i* P	**Pn**	**02 30 41.6**	**+0.1**
AYVA				*i* S	**Sb**	**02 30 56.6**	**-0.6**
AYVA	**Ayvalik**	**1.21**	**155**	*i* P	**Pn**	**02 30 41.6**	**0.0**
AYVA				*i* S	**Sb**	**02 30 56.6**	**-0.6**
KAVA	**Kavala**	**1.29**	**298**	P	**Pn**	**02 30 42.2**	**-0.4**
KAVA				S	**Sb**	**02 30 59.8**	**+0.3**
KAVA	**Kavala**	**1.29**	**298**	P	**Pn**	**02 30 42.2**	**-0.4**
KAVA				S	**Sb**	**02 30 59.8**	**+0.3**
TKR	**Tekirdag**	**1.29**	**63**	*e*PN	**Pn**	**02 30 42.6**	**0.0**
TKR	**Tekirdag**	**1.29**	**63**	*e*Pn	**Pn**	**02 30 42.7**	**0.0**
GONE	**Gonen-Balikesi**	**1.32**	**105**	*e*PN	**Pn**	**02 30 42.5**	**-0.7**
GONE	**Gonen-Balikesi**	**1.32**	**105**	*e*Pn	**Pn**	**02 30 42.5**	**-0.6**
KDZ	**Kurdzhali**	**1.32**	**340**	*i* P	**Pn**	**02 30 43.0**	**-0.2**
KDZ	**Kurdzhali**	**1.32**	**340**	*i* P	**Pn**	**02 30 43.0**	**-0.2**
BALY	**Balya**	**1.40**	**118**	*i* P	**Pn**	**02 30 44.4**	**+0.3**
BALY				*i* S	**Sn**	**02 31 02.9**	**+0.5**
BALY	**Balya**	**1.40**	**118**	*i* P	**Pn**	**02 30 44.4**	**+0.3**
BALY				*i* S	**Sn**	**02 31 02.9**	**+0.6**
BNT	**Bandirma**	**1.45**	**91**	*e*PN	**Pn**	**02 30 44.7**	**-0.2**
CRLT	**Corlu**	**1.49**	**60**	*e*PN	**Pn**	**02 30 46.0**	**+0.6**
CRLT	**Corlu**	**1.49**	**60**	*e*Pn	**Pn**	**02 30 46.0**	**+0.6**
EDRB	**Edirne**	**1.54**	**21**	*e*PN	**Pn**	**02 30 46.3**	**+0.2**
EDRB	**Edirne**	**1.54**	**21**	*e*Pn	**Pn**	**02 30 46.3**	**+0.2**
OUR	**Ouranopolis**	**1.56**	**268**	P	**Pn**	**02 30 45.0**	**-1.3**
OUR	**Ouranopolis**	**1.56**	**268**	P	**Pn**	**02 30 45.3**	**-1.0**
OUR				S	**Sn**	**02 31 05.7**	**-0.7**
OUR	**Ouranopolis**	**1.56**	**268**	P	**Pn**	**02 30 45.3**	**-1.0**
OUR				S	**Sn**	**02 31 05.7**	**-0.7**
RZN	**Rozhen**	**1.62**	**323**	*i* P	**Pn**	**02 30 47.5**	**+0.3**
RZN	**Rozhen**	**1.62**	**323**	*i* P	**Pn**	**02 30 47.5**	**+0.3**
BALB	**Balikesir**	**1.62**	**118**	*e*PN	**Pn**	**02 30 47.3**	**+0.1**
BALB	**Balikesir**	**1.62**	**118**	*e*Pn	**Pn**	**02 30 47.3**	**+0.1**
DIM	**Dimitrovgrad**	**1.68**	**348**	*i* P	**Pn**	**02 30 49.1**	**+1.0**
DIM	**Dimitrovgrad**	**1.68**	**348**	*i* P	**Pn**	**02 30 49.1**	**+1.0**
KCTX	**Karacabey (Bur**	**1.79**	**94**	*e*PN	**Pn**	**02 30 48.8**	**-0.7**
KCTX	**Karacabey (Bur**	**1.79**	**94**	*e*Pn	**Pn**	**02 30 48.8**	**-0.8**
PAIG	**Paliouri**	**1.85**	**256**	P	**Pn**	**02 30 49.4**	**-1.0**
PAIG				S	**Sn**	**02 31 13.2**	**-0.5**
PAIG	**Paliouri**	**1.85**	**256**	P	**Pn**	**02 30 49.4**	**-1.0**
PAIG				S	**Sn**	**02 31 13.2**	**-0.5**
SLVT	**Silivri**	**1.86**	**63**	*e*PN	**Pn**	**02 30 51.6**	**+1.1**
SLVT	**Silivri**	**1.86**	**63**	*e*Pn	**Pn**	**02 30 51.6**	**+1.2**
NVR	**Nevrokopi**	**1.89**	**301**	P	**Pn**	**02 30 50.9**	**0.0**
NVR	**Nevrokopi**	**1.89**	**301**	*e*PB	**Pn**	**02 30 51.2**	**+0.3**
NVR	**Nevrokopi**	**1.89**	**301**	P	**Pn**	**02 30 50.9**	**0.0**
NVR	**Nevrokopi**	**1.89**	**301**	*e*Pb	**Pn**	**02 30 51.2**	**+0.3**
PLG	**Polygyros**	**1.97**	**270**	P	**Pn**	**02 30 52.5**	**+0.5**
PLG	**Polygyros**	**1.97**	**270**	*e*PN	**Pn**	**02 30 51.6**	**-0.4**
PLG	**Polygyros**	**1.97**	**270**	P	**Pn**	**02 30 51.7**	**-0.3**
PLG	**Polygyros**	**1.97**	**270**	P	**Pn**	**02 30 51.7**	**-0.3**
PLD	**Plovdiv**	**1.97**	**330**	P	**Pn**	**02 30 52.5**	**+0.5**
PLD	**Plovdiv**	**1.97**	**330**	*i* P	**Pg**	**02 30 56.4**	**-0.4**
PLD	**Plovdiv**	**1.97**	**330**	P	**Pn**	**02 30 52.5**	**+0.5**
SRS	**Serrai**	**1.98**	**292**	P	**Pn**	**02 30 52.5**	**+0.4**
SRS	**Serrai**	**1.98**	**292**	P	**Pn**	**02 30 51.9**	**-0.2**
SRS	**Serrai**	**1.98**	**292**	P	**Pn**	**02 30 51.9**	**-0.2**
CHOS	**Chios island**	**2.02**	**179**	*e*PN	**Pn**	**02 30 52.5**	**-0.1**
CHOS	**Chios island**	**2.02**	**179**	P	**Pn**	**02 30 52.2**	**-0.4**
CHOS				S	**Sn**	**02 31 17.4**	**-0.2**
CHOS	**Chios island**	**2.02**	**179**	P	**Pn**	**02 30 52.2**	**-0.4**
CHOS	**Chios island**	**2.02**	**179**	*e*Pn	**Pn**	**02 30 52.5**	**-0.1**
CHOS				S	**Sn**	**02 31 17.4**	**-0.2**
CTYL	**Yal??k??y-??at**	**2.02**	**57**	*e*PN	**Pn**	**02 30 52.7**	**-0.1**
CTYL	**Yal??k??y-??at**	**2.02**	**57**	*e*Pn	**Pn**	**02 30 52.7**	**-0.1**
DURS	**Dursunbey**	**2.05**	**112**	*i* P	**Pn**	**02 30 53.3**	**+0.2**
DURS				*i* S	**Sn**	**02 31 18.9**	**+0.4**
DURS	**Dursunbey**	**2.05**	**112**	*i* P	**Pn**	**02 30 53.3**	**+0.2**
DURS				*i* S	**Sn**	**02 31 18.9**	**+0.4**
AKS	**Akhisar**	**2.06**	**137**	*e*PN	**Pn**	**02 30 53.2**	**0.0**
AKS	**Akhisar**	**2.06**	**137**	*e*Pn	**Pn**	**02 30 53.2**	**0.0**
AOS	**Alonnisos**	**2.06**	**234**	P	**Pg**	**02 30 57.9**	**-0.6**
AOS	**Alonnisos**	**2.06**	**234**	P	**Pn**	**02 30 52.3**	**-0.9**
AOS	**Alonnisos**	**2.06**	**234**	P	**Pn**	**02 30 52.3**	**-0.9**
AKHS	**Akhisar**	**2.06**	**137**	*i* P	**Pn**	**02 30 53.4**	**+0.1**
AKHS				*i* S	**Sg**	**02 31 24.9**	**-0.4**
AKHS	**Akhisar**	**2.06**	**137**	*i* P	**Pn**	**02 30 53.4**	**+0.2**
CTKS	**Kestanelik-??a**	**2.06**	**65**	*e*PN	**Pn**	**02 30 52.6**	**-0.6**
CTKS	**Kestanelik-??a**	**2.06**	**65**	*e*Pn	**Pn**	**02 30 52.6**	**-0.7**
SOH	**Sokhos**	**2.07**	**282**	P	**Pn**	**02 30 53.9**	**+0.5**
SOH	**Sokhos**	**2.07**	**282**	*e*PN	**Pn**	**02 30 53.5**	**+0.1**
SOH	**Sokhos**	**2.07**	**282**	P	**Pn**	**02 30 53.2**	**-0.2**
SOH	**Sokhos**	**2.07**	**282**	P	**Pn**	**02 30 53.2**	**-0.2**
SOH	**Sokhos**	**2.07**	**282**	*e*Pn	**Pn**	**02 30 53.5**	**+0.1**
URLA	**Izmir**	**2.09**	**167**	*i* P	**Pn**	**02 30 52.7**	**-1.0**
URLA				*i* S	**Sg**	**02 31 24.7**	**-1.5**
URLA	**Izmir**	**2.09**	**167**	*i* P	**Pn**	**02 30 52.7**	**-1.0**
MMB	**Musomiste**	**2.10**	**305**	P	**Pn**	**02 30 53.2**	**-0.6**
MMB				Pg	**Pg**	**02 30 58.2**	**-1.1**
MMB	**Musomiste**	**2.10**	**305**	P	**Pn**	**02 30 53.2**	**-0.6**
JMB	**Yambol**	**2.10**	**11**	P	**Pn**	**02 30 54.3**	**+0.5**
JMB	**Yambol**	**2.10**	**11**	*i* P	**Pg**	**02 30 58.5**	**-0.9**
JMB	**Yambol**	**2.10**	**11**	P	**Pn**	**02 30 54.3**	**+0.5**
BLCB	**Balcova**	**2.17**	**158**	*e*PN	**Pn**	**02 30 55.0**	**+0.3**
BLCB	**Balcova**	**2.17**	**158**	*e*Pn	**Pn**	**02 30 55.1**	**+0.4**
ARMT	**Armutlu**	**2.17**	**85**	*e*PN	**Pn**	**02 30 55.5**	**+0.6**
ARMT	**Armutlu**	**2.17**	**85**	*e*Pn	**Pn**	**02 30 55.5**	**+0.7**
MDNY	**Mudanya-Bursa**	**2.19**	**90**	*e*PN	**Pn**	**02 30 54.7**	**-0.3**
MDNY	**Mudanya-Bursa**	**2.19**	**90**	*e*Pn	**Pn**	**02 30 54.7**	**-0.3**
IZM	**Izmir**	**2.22**	**154**	*e*PN	**Pn**	**02 30 55.9**	**+0.4**
IZM	**Izmir**	**2.22**	**154**	*e*Pn	**Pn**	**02 30 55.9**	**+0.4**
BGKT	**Bogazkoy**	**2.23**	**69**	*e*PN	**Pn**	**02 30 56.6**	**+1.1**
BGKT	**Bogazkoy**	**2.23**	**69**	*e*Pn	**Pn**	**02 30 56.6**	**+1.0**
ISK	**Istanbul-Kandi**	**2.40**	**73**	*e*PN	**Pn**	**02 30 58.1**	**+0.2**
ISK	**Istanbul-Kandi**	**2.40**	**73**	*e*Pn	**Pn**	**02 30 58.1**	**+0.1**
GEMT	**Gemlik**	**2.42**	**88**	*e*PN	**Pn**	**02 30 58.6**	**+0.4**
GEMT	**Gemlik**	**2.42**	**88**	*e*Pn	**Pn**	**02 30 58.6**	**+0.4**
KLYT	**Kilyos**	**2.44**	**69**	*e*PN	**Pn**	**02 30 59.4**	**+0.9**
KLYT	**Kilyos**	**2.44**	**69**	*e*Pn	**Pn**	**02 30 59.4**	**+0.9**
DEMI	**Demirci**	**2.48**	**122**	*i* P	**Pn**	**02 30 59.7**	**+0.6**
DEMI	**Demirci**	**2.48**	**122**	*i* P	**Pn**	**02 30 59.7**	**+0.6**
KNT	**Kendrikon**	**2.49**	**289**	P	**Pn**	**02 30 59.6**	**+0.5**
KNT	**Kendrikon**	**2.49**	**289**	P	**Pn**	**02 30 59.6**	**+0.5**
PGB	**Panagyurishte**	**2.56**	**328**	*i* P	**Pg**	**02 31 06.5**	**-1.5**
KKB	**Krupnik**	**2.66**	**304**	*i* P	**Pg**	**02 31 07.2**	**-2.7**
SMG	**Samos**	**2.77**	**166**	*e*PN	**Pn**	**02 31 02.7**	**-0.3**
SMG	**Samos**	**2.77**	**166**	*e*Pn	**Pn**	**02 31 02.7**	**-0.3**
VAY	**Valandovo**	**2.77**	**290**	*e*Pn	**Pn**	**02 31 01.8**	**-1.2**
VAY				*e*Sg	**Sg**	**02 31 48.0**	**-0.1**
KULA	**Kula-Manisa**	**2.78**	**132**	*e*PN	**Pn**	**02 31 03.6**	**+0.5**
KULA	**Kula-Manisa**	**2.78**	**132**	*e*Pn	**Pn**	**02 31 03.7**	**+0.5**
GRG	**Griva**	**2.81**	**283**	P	**Pg**	**02 31 07.6**	**-5.2**
GRG	**Griva**	**2.81**	**283**	P	**Pg**	**02 31 07.6**	**-5.2**
VTS	**Vitosha**	**3.04**	**317**	P	**Pg**	**02 31 10.2**	**-7.1**
VTS	**Vitosha**	**3.04**	**317**	P	**Pn**	**02 31 06.1**	**-0.6**
VTS	**Vitosha**	**3.04**	**317**	↑*i*P	**Pg**	**02 31 16.6**	**-0.7**
VTS	**Vitosha**	**3.04**	**317**	P	**Pg**	**02 31 16.5**	**-0.8**
VTS	**Vitosha**	**3.04**	**317**	P	**Pn**	**02 31 06.1**	**-0.6**
VLY	**Voula,Athens**	**3.08**	**215**	P	**Pn**	**02 31 08.5**	**+1.2**
VLY	**Voula,Athens**	**3.08**	**215**	P	**Pn**	**02 31 08.5**	**+1.2**
AGG	**Agios Georgios**	**3.16**	**245**	*e*PN	**Pn**	**02 31 08.4**	**0.0**
AGG	**Agios Georgios**	**3.16**	**245**	*e*Pn	**Pn**	**02 31 08.4**	**0.0**
APE	**Apeiranthos**	**3.35**	**187**	P	**Pn**	**02 31 12.3**	**+1.3**
APE	**Apeiranthos**	**3.35**	**187**	P	**Pn**	**02 31 12.3**	**+1.3**
FNA	**Florina**	**3.56**	**278**	P	**Pn**	**02 31 16.8**	**+3.0**
FNA	**Florina**	**3.56**	**278**	P	**Pn**	**02 31 16.8**	**+3.0**
DID	**Didima**	**3.62**	**218**	P	**Pn**	**02 31 13.7**	**-1.0**
DID	**Didima**	**3.62**	**218**	P	**Pn**	**02 31 13.7**	**-1.0**
KRUS	**Krusevo**	**3.74**	**286**	*e*Pn	**Pn**	**02 31 16.5**	**+0.1**
BARS	**Barje**	**3.97**	**309**	↑*i*Pn	**Pn**	**02 31 20.6**	**+1.1**
MLR	**Muntele Rosu**	**5.08**	**359**	*i*P	**Pn**	**02 31 38.7**	**+3.9**
MLR	**Muntele Rosu**	**5.08**	**359**	↓*i*P	**Pn**	**02 31 38.7**	**+3.9**
PLOR	**Plostina**	**5.46**	**5**	↑*i*P	**Pn**	**02 31 44.3**	**+4.3**
GZR	**Gura Zlata**	**5.53**	**336**	↑*i*P	**Pn**	**02 31 40.8**	**-0.1**
GZR	**Gura Zlata**	**5.53**	**336**	↑*i*P	**Pn**	**02 31 40.8**	**-0.1**
BZS	**Buzias**	**6.13**	**330**	↓*i*P	**Pn**	**02 31 49.3**	**+0.2**
BZS	**Buzias**	**6.13**	**330**	↓*i*P	**Pn**	**02 31 49.3**	**+0.2**

IDC 26 03:03:24.1±1.9, 4°.30N×124°.57E, h410km±28km, mb3.2/5, mb1 3.3/6, mb1mx3.0/21, mbtmp3.3/6, Error ellipse: s-maj=79.1km s-min=12.9km az=70.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.93**	**20**	P	Pn	03 04 28.0	+0.4
	106nm,0.3s,baz=329,slow=22,SNR=6.1						
FITZ	**Fitzroy Crossi**	**22.28**	**177**	P	P	03 07 50.0	+1.3
	1.4nm,0.5s,baz=349,slow=9.5,SNR=12						
WRA	**Warramunga Arr**	**25.93**	**159**	P	P	03 08 19.9	-1.6
	0.9nm,0.3s,baz=332,slow=11,SNR=26						
ASAR	**Alice Springs**	**29.25**	**162**	P	P	03 08 50.6	0.0
	0.7nm,0.4s,baz=345,slow=7.5,SNR=14						
STKA	**Stephens Creek**	**39.45**	**157**	P	P	03 10 17.6	+0.7
	1.6nm,0.9s,baz=338,slow=9.3,SNR=3.6						
MKAR	**Makanchi Array**	**55.87**	**326**	P	P	03 12 20.6	-0.5
	1.2nm,0.4s,baz=130,slow=7.8,SNR=22						
MKAR				PcP	PcP	03 13 16.0	+1.8
	0.2nm,0.2s,baz=123,slow=4.0,SNR=3.7						

*HLW **26** 03:15:33.4, 36°.14N×31°.30E, h33km±35km, Md3.3, MI3.4*
*DDA **26** 03:15:33.5, 36°.04N×31°.29E, h28km±30km, Md3.4*
*CSEM **26** 03:15:34.4±0.1, 35°.97N×31°.26E, h15km, Mw3.4, Error ellipse: s-maj=3.5km s-min=2.8km az=62.0*
*ISK **26** 03:15:35.3, 35°.99N×31°.29E, h30km, ML3.6*
*NIC **26** 03:15:36.9±0.2, 35°.96N×31°.50E, h35km, ML3.6, MW3.4*
*NEIC **26** 03:15:36.9, 35°.96N×31°.50E, h35km, ML3.6(NIC), ML3.6(ISK), After NIC.*

ISC 26 03:15:34.7±0.9, 35°.97N±0°.02×31°.27E±0°.03, h18km±7km, n106, σ0°88/128, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**1.05**	**332**	*e*PG	**Pg**	**03 15 54.0**	**-1.1**
ANTB				*e*SG	**Sg**	**03 16 07.7**	**-1.2**
ANTB	**Antalya**	**1.05**	**332**	*e*Pg	**Pg**	**03 15 54.0**	**-1.1**
ANTB				*e*Sg	**Sg**	**03 16 07.7**	**-1.2**
KORT	**Korkueli**	**1.27**	**325**	*i* P	**Pn**	**03 15 57.9**	**+0.4**
KORT				*i* S	**Sb**	**03 16 19.8**	**+5.8**
KORT	**Korkueli**	**1.27**	**325**	*i* P	**Pn**	**03 15 57.9**	**+0.4**
ELL	**Elmali**	**1.34**	**306**	*e*PN	**Pn**	**03 15 58.8**	**+0.2**
ELL	**Elmali**	**1.34**	**306**	*e*Pn	**Pn**	**03 15 58.8**	**+0.2**
ALFC	**Alevga**	**1.36**	**126**	P	**Pn**	**03 15 57.3**	**-1.4**
	46nm,0.2s						
ALFC				S	**Sn**	**03 16 13.0**	**-3.3**
ALFC	**Alevga**	**1.36**	**126**	P	**Pn**	**03 15 57.3**	**-1.4**
	46nm,0.2s						
ALFC				S	**Sn**	**03 16 13.0**	**-3.3**
AKAS	**Kas**	**1.37**	**282**	*i* P	**Pn**	**03 15 58.3**	**-0.6**
AKAS				*i* S	**Sn**	**03 16 21.2**	**+4.5**
AKAS	**Kas**	**1.37**	**282**	*i* P	**Pn**	**03 15 58.3**	**-0.6**
PPCY	**Paphos**	**1.40**	**141**	P	**Pn**	**03 15 58.5**	**-0.8**
PPCY	**Paphos**	**1.40**	**141**	P	**Pn**	**03 15 58.5**	**-0.8**
HDMB	**Hadim**	**1.40**	**44**	*e*PN	**Pn**	**03 15 58.4**	**-1.0**
HDMB	**Hadim**	**1.40**	**44**	*e*Pn	**Pn**	**03 15 58.4**	**-0.9**
ERMK	**Ermenek**	**1.49**	**63**	*i* P	**Pn**	**03 15 53.4**	**-7.2**
ERMK				*i* S	**Sn**	**03 16 18.2**	**

Ms4.4/7, Ms7 4.1/7
*IDC **26** 03:36:29.8±0.8, 26°.87N×55°.88E, h0km, mb4.0/20, mb1 4.1/23, mb1mx4.1/31, mbtmp4.0/23, ML3.4/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/28, Error ellipse: s-maj=18.7km s-min=14.3km az=166.0*
*ISCJB **26** 03:36:30.9±0.2, 26°.95N±0°.02×55°.74E±0°.03, h10km, mb4.2/54, MS3.5/3, Error ellipse: s-maj=3.6km s-min=3.3km az=138.8*
*TEH **26** 03:36:31.7, 26°.87N×55°.90E, h20km*
*OMAN **26** 03:36:32.2±4.8, 26°.99N×56°.11E, h0km±24km, Error ellipse: s-maj=31.1km s-min=23.2km az=78.0*
*CSEM **26** 03:36:32.4±0.2, 26°.94N×55°.77E, h10km, mb4.3/26, Error ellipse: s-maj=7.0km s-min=5.8km az=66.0*
*THR **26** 03:36:32.3±0.4, 26°.98N×55°.82E, h6km±7km, ML4.1*
*NEIC **26** 03:36:32.2, 27°.01N×55°.80E, h2km, mb4.2/23, ML4.1(THR), MN4.1(TEH), After THR.*
NEIC Felt lightly in the northern United Arab Emirates.
*MOS **26** 03:36:33.0±0.9, 26°.89N×55°.79E, h33km, mb4.4/19, Error ellipse: s-maj=9.6km s-min=5.4km az=122.5*
ISC 26 03:36:32.5±0.2, 26°.93N±0°.02×55°.77E±0°.03, h10km, (h14km±7km:pP-P), n303, σ1.9 33/309, mb4.2/53, MS3.5/3, 5C-6D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.59**	**37**	Pn	**Pg**	**03 36 42.0**	**-2.0**
BNDS				Sg	**Sg**	**03 36 50.0**	**-1.8**
BNDS	**Bandar-Abbas**	**0.59**	**37**	*e*Pg	**Pg**	**03 36 42.7**	**-1.3**
BNDS				*e*Sg	**Sg**	**03 36 50.4**	**-1.4**
BNDS				AML	AML	03 36 52.2	
	comp=E,12μm,0.4s						
BNDS				AML	AML	03 36 59.8	
	comp=N,11μm,0.4s						
IBND	**Bandar-abas**	**0.86**	**53**	*e*Pg	**Pg**	**03 36 48.2**	**-0.9**
IBND				*e*Pg	**Pg**	**03 36 48.2**	**-0.9**
IBND				*e*Sg	**Sg**	**03 37 00.5**	**+0.2**
IBND				*e*		03 37 05.8	
	comp=Z,5μm,0.2s						
IBND				*e*		03 37 17.7	
	comp=Z,22μm,0.2s						
IBND	**Bandar-abas**	**0.86**	**53**	*e*Pg	**Pg**	**03 36 48.2**	**-0.9**
BANOM	**Banah**	**1.11**	**155**	P	**Pb**	**03 36 52.9**	**-0.9**
	SNR=1000						
BANOM				S	**Sg**	**03 37 07.9**	**-0.4**
BANOM	**Banah**	**1.11**	**155**	P	**Pb**	**03 36 52.9**	**-0.9**
	SNR=1211						
BANOM				⇓S	**Sg**	**03 37 08.0**	**-0.3**
BANOM				ml		03 37 11.1	
	SNR=859						
HATD	**Hatta, Dubai**	**2.12**	**171**	P	**Pn**	**03 37 11.3**	**+3.3**
	SNR=10						
HATD	**Hatta, Dubai**	**2.12**	**171**	⇑P	**Pn**	**03 37 11.3**	**+3.2**
	SNR=10						
HATD				ml		03 37 24.5	
	SNR=208						
ASHO	**Ashiyiah**	**2.25**	**173**	P	**Pn**	**03 37 11.3**	**+1.5**
	SNR=122						
ASHO	**Ashiyiah**	**2.25**	**173**	P	**Pn**	**03 37 11.3**	**+1.4**
	SNR=122						
ASHO				ml		03 37 27.9	
	SNR=270						
ASHO				ml		03 37 49.8	
	SNR=760						
ASUD	**Al Ashush, Dub**	**2.33**	**190**	P	**Pn**	**03 37 13.7**	**+2.8**
	SNR=13						
ASUD	**Al Ashush, Dub**	**2.33**	**190**	P	**Pn**	**03 37 13.7**	**+2.8**
	SNR=13						
ASUD				ml		03 37 23.7	
	SNR=34						
ASUD				ml		03 38 06.3	
	SNR=214						
KRBR	**Kerman**	**3.16**	**16**	Pn	**Pn**	**03 37 24.0**	**+1.6**
KRBR	**Kerman**	**3.16**	**16**	*e*Pn	**Pn**	**03 37 24.2**	**+1.8**
KRBR				AML	AML	03 38 15.9	
	comp=N,624nm,0.4s						
KRBR				AML	AML	03 38 16.6	
	comp=E,605nm,0.6s						
KRBR	**Kerman**	**3.16**	**16**	*e*Pn	**Pn**	**03 37 24.2**	**+1.8**
ISRV	**Sarvestan**	**3.39**	**317**	Pn	**Pn**	**03 37 28.9**	**+3.4**
ISRV	**Sarvestan**	**3.39**	**317**	*e*Pn	**Pn**	**03 37 28.9**	**+3.4**
ISRV				*e*		03 38 56.7	
	comp=Z,5μm,0.5s						
ISRV	**Sarvestan**	**3.39**	**317**	*e*Pn	**Pn**	**03 37 28.9**	**+3.4**
HOQ	**Hoqain**	**3.61**	**157**	P	**Pn**	**03 37 29.5**	**+0.9**
HOQ	**Hoqain**	**3.61**	**157**	⇑P	**Pn**	**03 37 29.5**	**+1.0**
ARQ	**Araqi**	**3.64**	**169**	P	**Pn**	**03 37 30.2**	**+1.2**
	SNR=13						
ARQ	**Araqi**	**3.64**	**169**	P	**Pn**	**03 37 30.2**	**+1.2**
	SNR=13						
IPAR	**Pars**	**3.76**	**321**	*e*Pn	**Pn**	**03 37 33.9**	**+3.2**
IPAR				*e*		03 39 07.2	
	comp=Z,3μm,0.4s						
IPAR	**Pars**	**3.76**	**321**	*e*Pn	**Pn**	**03 37 33.9**	**+3.2**
BSY	**Bisya**	**4.36**	**162**	⇓P	**Pn**	**03 37 40.2**	**+1.3**
SMDO	**Samad**	**4.37**	**151**	P	**Pn**	**03 37 40.0**	**+1.0**
SMDO	**Samad**	**4.37**	**151**	⇓P	**Pn**	**03 37 40.0**	**+0.9**
BSYO	**Bisya**	**4.39**	**162**	P	**Pn**	**03 37 40.2**	**+1.0**
IMEH	**Mehriz**	**4.56**	**347**	*e*Pn	**Pn**	**03 37 44.2**	**+2.6**
IMEH				*e*		03 38 54.4	
	comp=Z,1μm,0.4s						
IMEH	**Mehriz**	**4.56**	**347**	*e*Pn	**Pn**	**03 37 44.2**	**+2.6**
IBAF	**Bafgh**	**4.65**	**358**	Pn	**Pn**	**03 37 44.6**	**+1.8**
IBAF	**Bafgh**	**4.65**	**358**	*e*Pn	**Pn**	**03 37 44.7**	**+1.9**
IBAF				*e*		03 38 03.9	
	comp=Z,1μm,0.3s						
IBAF	**Bafgh**	**4.65**	**358**	*e*Pn	**Pn**	**03 37 44.7**	**+1.9**
JMDO	**Jabal Madar**	**5.01**	**154**	P	**Pn**	**03 37 48.7**	**+0.9**
JMDO	**Jabal Madar**	**5.01**	**154**	⇑P	**Pn**	**03 37 48.7**	**+0.9**
WBK	**Wadi Bani Khal**	**5.19**	**145**	P	**Pn**	**03 37 49.6**	**-0.7**
	SNR=14						
ISAD	**Sadrabad**	**5.29**	**340**	Pn	**Pn**	**03 37 54.4**	**+2.8**
ISAD	**Sadrabad**	**5.29**	**340**	*e*Pn	**Pn**	**03 37 54.5**	**+2.9**
ISAD				*e*		03 38 59.9	
	comp=Z,1μm,0.2s						
ISAD	**Sadrabad**	**5.29**	**340**	*e*Pn	**Pn**	**03 37 54.5**	**+2.9**
ICHK	**Chekchek**	**5.43**	**348**	Pn	**Pn**	**03 37 55.9**	**+2.4**
ICHK	**Chekchek**	**5.43**	**348**	*e*Pn	**Pn**	**03 37 55.9**	**+2.4**
ICHK				*e*		03 38 01.6	
	comp=Z,745nm,0.2s						
ICHK	**Chekchek**	**5.43**	**348**	*e*Pn	**Pn**	**03 37 55.9**	**+2.4**
IKOO	**Kooshah**	**6.16**	**26**	*e*Pn	**Pn**	**03 38 04.7**	**+1.2**
IKOO				*e*		03 38 53.7	
	comp=Z,562nm,0.2s						
IKOO	**Kooshah**	**6.16**	**26**	*e*Pn	**Pn**	**03 38 04.7**	**+1.2**
IGAR	**Gharneh**	**6.35**	**330**	*e*	Px	03 38 16.7	
	comp=Z,816nm,0.1s						
IGAR				*e*Pn	**Pn**	**03 38 08.5**	**+2.4**
NASN	**Na'in**	**6.39**	**337**	*e*P	**Pn**	**03 38 09.0**	**+2.3**
NASN	**Na'in**	**6.39**	**337**	*e*Pn	**Pn**	**03 38 09.1**	**+2.4**
NASN	**Na'in**	**6.39**	**337**	*e*P	**Pn**	**03 38 09.0**	**+2.3**
IZEF	**Zefreh**	**6.65**	**334**	Pn	**Pn**	**03 38 11.9**	**+1.5**
IZEF	**Zefreh**	**6.65**	**334**	*e*Pn	**Pn**	**03 38 11.9**	**+1.5**
IZEF				*e*		03 38 12.8	
	comp=Z,222nm,0.2s						
IZEF	**Zefreh**	**6.65**	**334**	*e*Pn	**Pn**	**03 38 11.9**	**+1.5**
IDAH	**Dahanechah**	**6.80**	**31**	*e*Pn	**Pn**	**03 38 13.2**	**+0.9**
IDAH				*e*		03 40 31.0	
	comp=Z,636nm,0.6s						
IDAH	**Dahanechah**	**6.80**	**31**	*e*Pn	**Pn**	**03 38 13.2**	**+0.9**
IPIR	**Pirpir**	**7.13**	**325**	Pn	**Pn**	**03 38 19.7**	**+2.8**
IPIR	**Pirpir**	**7.13**	**325**	*e*Pn	**Pn**	**03 38 19.8**	**+2.9**
IPIR				*e*		03 39 41.9	
	comp=Z,883nm,0.3s						
IPIR	**Pirpir**	**7.13**	**325**	*e*Pn	**Pn**	**03 38 19.8**	**+2.9**
IKLH	**Kolahrood**	**7.33**	**331**	Pn	**Pn**	**03 38 21.9**	**+2.3**
IKLH	**Kolahrood**	**7.33**	**331**	*e*Pn	**Pn**	**03 38 21.9**	**+2.3**
IKLH				*e*		03 38 36.8	
	comp=Z,304nm,0.2s						
IKLH	**Kolahrood**	**7.33**	**331**	*e*Pn	**Pn**	**03 38 21.9**	**+2.3**
UMR	**Umm Al-Rimmam**	**7.57**	**292**	*e*P	**Pn**	**03 38 24.8**	**+1.8**
UMR				AML	AML	03 39 51.1	
	comp=Z,24nm,0.4s						
UMR	**Umm Al-Rimmam**	**7.57**	**292**	*e*P	**Pn**	**03 38 24.8**	**+1.9**
NAY	**Al-Naaiem**	**7.88**	**289**	*e*P	**Pn**	**03 38 28.8**	**+1.6**
NAY				AML	AML	03 39 57.5	
	comp=Z,17nm,0.6s						
NAY	**Al-Naaiem**	**7.88**	**289**	*e*P	**Pn**	**03 38 28.8**	**+1.6**
MIB	**Mutribah**	**7.96**	**293**	*e*P	**Pn**	**03 38 30.4**	**+2.1**
MIB				AML	AML	03 40 01.6	
	comp=Z,46nm,0.6s						
MIB	**Mutribah**	**7.96**	**293**	*e*P	**Pn**	**03 38 30.4**	**+2.1**
BHD	**Baghdad**	**11.71**	**305**	*ex*	x	03 39 19.0	
BHD				*ex*	x	03 41 32.0	
BHD				*i* x	x	03 44 02.0	
GNI	**Garni**	**16.05**	**328**	Pn	**Pn**	**03 40 20.5**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=150,slow=20,SNR=2.5						
GNI	**Garni**	**16.05**	**328**	*e*Pn	**Pn**	**03 40 19.0**	**+0.6**
	comp=Z,15nm,0.9s						
GNI	**Garni**	**16.05**	**328**	*e*P	**Pn**	**03 40 17.5**	**-0.9**
GNI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GNI	**Garni**	**16.05**	**328**	*e*Pn	**Pn**	**03 40 19.0**	**+0.6**
	comp=Z,15nm,0.9s						
DGRG	**David-gareji**	**16.82**	**332**	P	**Pn**	**03 40 30.0**	**+1.8**
ASF	**Jabal al Asfar**	**17.23**	**292**	P	**Pn**	**03 40 33.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=45,slow=7.1,SNR=2.4						
ASF	**Jabal al Asfar**	**17.23**	**292**	P	**Pn**	**03 40 33.9**	**+0.6**
MTA	**Mtatsminda**	**17.27**	**331**	P	**Pn**	**03 40 35.6**	**+1.8**
TBLG	**Delisi**	**17.33**	**331**	*e*P	**Pn**	**03 40 34.1**	**-0.3**
TBLG	**Delisi**	**17.33**	**331**	P	**Pn**	**03 40 34.1**	**-0.3**
TBLG	**Delisi**	**17.33**	**331**	*e*P	**Pn**	**03 40 34.1**	**-0.3**
GOR	**Gori**	**17.81**	**330**	P	**Pn**	**03 40 35.0**	**-5.4**
MALT	**Malatya**	**18.47**	**312**	*e*P	**Pn**	**03 40 48.0**	**-0.6**
	comp=Z,12nm,1.2s						
MALT	**Malatya**	**18.47**	**312**	*e*P	**Pn**	**03 40 48.0**	**-0.6**
MALT				pmax	pmax		
	comp=Z,12nm,1.2s						
MALT	**Malatya**	**18.47**	**312**	*e*P	**Pn**	**03 40 48.0**	**-0.6**
	comp=Z,12nm,1.2s						
EIL	**Elat**	**18.53**	**283**	P	**Pn**	**03 40 50.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=14,slow=9.3,SNR=3.8						
EIL				LR	LR	03 49 10.2	
	comp=Z,31nm,20.7s,baz=191,slow=41						
EIL	**Elat**	**18.53**	**283**	P	**Pn**	**03 40 50.0**	**+0.5**
ZEI	**Tsey**	**18.53**	**332**	*e*P	**Pn**	**03 40 51.1**	**+1.8**
ZEI				pmax	pmax		
	comp=Z,37nm,1.5s						
ZEI	**Tsey**	**18.53**	**332**	*e*P	**Pn**	**03 40 51.1**	**+1.8**
	comp=Z,37nm,1.5s						
ONI	**Oni**	**18.58**	**330**	P	**Pn**	**03 40 52.1**	**+2.1**
KIV	**Kislovodsk**	**20.01**	**331**	*e*P	**P**	**03 41 07.5**	**+2.2**
	comp=Z,40nm,1.0s						
KIV	**Kislovodsk**	**20.01**	**331**	⇓*i*P	**P**	**03 41 06.9**	**+1.6**
KIV				*i*		03 41 23.1	
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	**Kislovodsk**	**20.01**	**331**	*i* P	**P**	**03 41 06.9**	**+1.6**
	comp=Z,3.0nm,1.0s						
KKAR	**Karatay Array**	**20.10**	**33**	*e*P	**P**	**03 41 05.8**	**-0.5**
KKAR	**Karatay Array**	**20.10**	**33**	*e*P	**P**	**03 41 05.8**	**-0.5**
KKAR	**Karatay Array**	**20.10**	**33**	*e*P	**P**	**03 41 05.9**	**-0.4**
KKAR	**Karatay Array**	**20.10**	**33**	*e*P	**P**	**03 41 05.8**	**-0.5**
KSH	**Kashi**	**21.00**	**48**	*e*P	**P**	**03 41 11.0**	**-5.1**
KSH				*e*pP		03 41 15.0	
KSH				*e*sP	sP	03 41 18.0	-2.2
KSH				*e*PP		03 41 30.8	
KSH				*e*S	**S**	**03 44 51.5**	**-18**
KSH				pmax	pmax		
	comp=Z,21nm,1.9s						
KSH				LR	LR		
	comp=N,330nm,6.5s						
KSH				LR	LR		
	comp=E,210nm,6.5s						
KSH				LR	LR		
	comp=Z,240nm,9.9s						
AML	**Almayashu**	**21.10**	**39**	*e*P	**P**	**03 41 17.4**	**+0.2**
	comp=Z,10nm,0.9s,mb4.2						
AML	**Almayashu**	**21.10**	**39**	*e*P	**P**	**03 41 17.4**	**+0.2**
	comp=Z,10nm,0.9s,mb4.2						
EKS2	**Erkin-Say**	**21.49**	**38**	*e*P	**P**	**03 41 21.1**	**-0.3**
	comp=Z,10nm,0.8s,mb4.2						
EKS2	**Erkin-Say**	**21.49**	**38**	*e*P	**P**	**03 41 21.1**	**-0.3**
	comp=Z,10nm,0.8s,mb4.2						
UCH	**Uchtor**	**21.63**	**40**	*e*P	**P**	**03 41 24.7**	**+1.8**
	comp=Z,5.7nm,0.9s,mb4.0						
UCH	**Uchtor**	**21.63**	**40**	*e*P	**P**	**03 41 24.7**	**+1.8**
	comp=Z,5.7nm,0.9s,mb4.0						
AAK	**Ala-Archa**	**21.88**	**39**	P	**P**	**03 41 25.5**	**0.0**
	comp=Z,2.6nm,0.5s,mb3.9,baz=236,slow=13,SNR=13						
AAK	**Ala-Archa**	**21.88**	**39**	*e*P	**P**	**03 41 28.1**	**+2.6**
	comp=Z,12nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**21.88**	**39**	*d i*P	**P**	**03 41 26.6**	**+1.1**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.0						
AAK	**Ala-Archa**	**21.88**	**39**	*i* P	**P**	**03 41 26.6**	**+1.1**
	comp=Z,8.0nm,1.2s,mb4.0						
KBK	**Karagaybulak**	**22.15**	**40**	*e*P	**P**	**03 41 30.4**	**+1.9**
KBK	**Karagaybulak**	**22.15**	**40**	*e*P	**P**	**03 41 30.4**	**+2.0**
BRTR	**Keskin Array B**	**22.40**	**310**	P	**P**	**03 41 32.5**	**+1.4**
	comp=Z,3.7nm,1.0s,mb3.8,baz=125,slow=11,SNR=7.7						
BRTR	**Keskin Array B**	**22.40**	**310**	*i* P	**P**	**03 41 32.9**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRTR	**Keskin Array B**	**22.40**	**310**	*i* P	**P**	**03 41 32.9**	**+1.8**
	comp=Z,4.0nm,1.0s,mb3.8						
ABKAR	**Akbulak array**	**22.52**	**7**	*e*P	**P**	**03 41 31.1**	**-1.2**
	comp=Z,4.1nm,0.6s,mb4.0						
ABKAR	**Akbulak array**	**22.52**	**7**	*e*P	**P**	**03 41 31.1**	**-1.2**
	comp=Z,4.1nm,0.6s,mb4.0						
TKM2	**Tokmak 2**	**22.69**	**40**	*e*P	**P**	**03 41 35.2**	**+1.0**
	comp=Z,7.7nm,1.2s,mb4.0						
TKM2	**Tokmak 2**	**22.69**	**40**	*e*P	**P**	**03 41 35.1**	**+0.9**
TKM2	**Tokmak 2**	**22.69**	**40**	*e*P	**P**	**03 41 35.1**	**+0.9**
AKTK	**Aktyubinsk**	**23.54**	**4**	P	**P**	**03 41 42.5**	**-0.5**
AKTK				LR	LR	03 50 49.2	
AKTK	**Aktyubinsk**	**23.54**	**4**	P	**P**	**03 41 42.5**	**-0.5**
AKTO	**Aktyubinsk**	**23.54**	**4**	P	**P**	**03 41 42.5**	**-0.5**
	comp=Z,5.4nm,0.6s,mb4.2,baz=177,slow=9.9,SNR=23						
AKTO				LR	LR	03 50 49.2	
	comp=Z,42nm,19.0s,MS2.9,baz=342,slow=36						
AKTO	**Aktyubinsk**	**23.54**	**4**	P	**P**	**03 41 42.5**	**-0.5**
BRVK	**Borovoye**	**28.26**	**19**	*e*P	**P**	**03 42 25.1**	**-0.6**
	comp=Z,2.7nm,0.6s,mb4.0						
BRVK	**Borovoye**	**28.26**	**19**	*e*P	**P**	**03 42 25.1**	**-0.6**
BRVK	**Borovoye**	**28.26**	**19**	*e*P	**P**	**03 42 25.1**	**-0.6**
BVAR	**Borovoye Array**	**28.26**	**19**	P	**P**	**03 42 24.7**	**-1.0**
	comp=Z,4.8nm,0.7s,mb4.2,baz=198,slow=9.2,SNR=21						
BVAR	**Borovoye Array**	**28.26**	**19**	P	**P**	**03 42 24.7**	**-1.0**
BVAR	**Borovoye Array**	**28.26**	**19**	P	**P**	**03 42 24.7**	**-1.0**
MKAR	**Makanchi Array**	**28.82**	**40**	P	**P**	**03 42 29.7**	**-1.1**
	comp=Z,0.4nm,0.3s,mb3.7,baz=227,slow=7.2,SNR=6.8						
MKAR	**Makanchi Array**	**28.82**	**40**	*i* P	**P**	**03 42 33.4**	**+2.6**
MKAR	**Makanchi Array**	**28.82**	**40**	P	**P**	**03 42 29.7**	**-1.1**
KURK	**Kurchatov**	**29.45**	**30**	*e*P	**P**	**03 42 36.2**	**-0.2**
	comp=Z,1.8nm,0.7s,mb3.9						
KURK	**Kurchatov**	**29.45**	**30**	*e*P	**P**	**03 42 35.3**	**-1.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
KURK	**Kurchatov**	**29.45**	**30**	*e*P	**P**	**03 42 35.3**	**-1.1**
	comp=Z,2.0nm,0.8s,mb3.9						
WMQ	**Urumqi**	**30.76**	**48**	*e*P	**P**	**03 42 50.0**	**+2.0**
WMQ				sP	sP	03 42 57.0	+4.6
WMQ				PP	PP	03 43 51.0	-6.4
WMQ				S	**S**	**03 47 52.0**	**+0.9**
WMQ				SS	SS	03 49 35.0	-27
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,54nm,3.0s						
WMQ				LR	LR		
	comp=N,48nm,12.0s,MS3.5						
WMQ				LR	LR		
	comp=E,53nm,12.0s,MS3.5						
WMQ				LR	LR		
	comp=Z,45nm,12.0s,MS3.3						
AKASG	**Malin Array Be**	**31.18**	**327**	P	**P**	**03 42 50.5**	**-1.1**
	comp=Z,0.6nm,0.4s,mb3.7,baz=204,slow=8.9,SNR=4.4						
AKASG	**Malin Array Be**	**31.18**	**327**	*i* P	**P**	**03 42 52.7**	**+1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**31.18**	**327**	*i* P	**P**	**03 42 52.7**	**+1.1**
	comp=Z,1.0nm,0.4s,mb4.0						
AKBB	**Malin Array Si**	**31.18**	**327**	*e*P	**P**	**03 42 51.3**	**-0.4**
AKBB	**Malin Array Si**	**31.18**	**327**	*e*P	**P**	**03 42 51.3**	**-0.3**
AKBB	**Malin Array Si**	**31.18**	**327**	*e*P	**P**	**03 42 51.3**	**-0.3**
KIEV	**Kiev**	**31.18**	**327**	*e*P	**P**	**03 42 51.4**	**-0.3**
	comp=Z,3.0nm,0.4s,mb4.5						
KIEV	**Kiev**	**31.18**	**327**	*e*P	**P**	**03 42 51.4**	**-0.3**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
KIEV	**Kiev**	**31.18**	**327**	*e*P	**P**	**03 42 51.4**	**-0.3**
	comp=Z,3.0nm,0.4s,mb4.5						
OBN	**Obninsk**	**31.45**	**339**	*e*P	**P**	**03 42 53.5**	**-0.4**
OBN				*e*		03 45 42.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
OBN	**Obninsk**	**31.45**	**339**	*e*P	**P**	**03 42 53.5**	**-0.4**
	comp=Z,5.0nm,1.0s,mb4.3						
ZAA0	**Zalesovo Array**	**34.44**	**30**	*e*P	**P**	**03 43 18.4**	**-1.7**
ZAA0	**Zalesovo Array**	**34.44**	**30**	*e*P	**P**	**03 43 18.5**	**-1.6**
ZALV	**Zalesovo Beam**	**34.44**	**30**	P	**P**	**03 43 18.9**	**-1.2**
	comp=Z,2.1nm,0.4s,mb4.4,baz=248,slow=8.7,SNR=14						
ZALV	**Zalesovo Beam**	**34.44**	**30**	P	**P**	**03 43 18.9**	**-1.2**
ZALV	**Zalesovo Beam**	**34.44**	**30**	P	**P**	**03 43 18.9**	**-1.2**
OJC	**Ojcow**	**35.96**	**320**	*e*P	**P**	**03 43 33.5**	**+0.2**
OJC	**Ojcow**	**35.96**	**320**	*e*P	**P**	**03 43 33.5**	**+0.2**
OJC	**Ojcow**	**35.96**	**320**	*e*P	**P**	**03 43 33.5**	**+0.2**
MORC	**Moravsky Berou**	**37.09**	**318**	*e*P	**P**	**03 43 42.6**	**-0.3**
	comp=Z,5.4nm,1.1s,mb4.3						
MORC	**Moravsky Berou**	**37.09**	**318**	*e*P	**P**	**03 43 42.6**	**-0.3**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
MORC	**Moravsky Berou**	**37.09**	**318**	*e*P	**P**	**03 43 42.6**	**-0.3**
	comp=Z,5.0nm,1.1s,mb4.3						
GTA	**Gaotai**	**38.56**	**60**	*e*P	**P**	**03 43 55.3**	**-0.1**
GTA				pP	pP	03 43 59.0	+0.5
GTA				sP	sP	03 44 01.0	+1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb3.8						
GERES	**GERESS Array B**	**39.10**	**315**	P	**P**	**03 43 59.2**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.5,baz=116,slow=6.2,SNR=5.1						
GERES	**GERESS Array B**	**39.10**	**315**	P	**P**	**03 43 59.2**	**-0.7**
GERES	**GERESS Array B**	**39.10**	**315**	P	**P**	**03 43 59.2**	**-0.7**
GERES	**GERESS Array B**	**39.10**	**315**	P	**P**	**03 43 59.2**	**-0.7**
FINES	**FINESS Array B**	**39.85**	**338**	P	**P**	**03 44 05.5**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.0,baz=133,slow=8.4,SNR=7.7						
FINES	**FINESS Array B**	**39.85**	**338**	P	**P**	**03 44 05.5**	**-0.4**
FINES	**FINESS Array B**	**39.85**	**338**	P	**P**	**03 44 05.5**	**-0.4**
WTTA	**Wattenberg**	**39.98**	**312** ⇑*i*P		**P**	**03 44 06.5**	**-0.7**
	comp=Z,4.0nm,0.6s,mb4.3						
WTTA	**Wattenberg**	**39.98**	**312**	P	**P**	**03 44 06.5**	**-0.7**
	comp=Z,4.0nm,0.6s,mb4.3						
CLL	**Collm**	**40.35**	**319**	*e*P	**P**	**03 44 10.0**	**-0.2**
CLL	**Collm**	**40.35**	**319**	*e*P	**P**	**03 44 10.0**	**-0.2**
CLL	**Collm**	**40.35**	**319**	*e*P	**P**	**03 44 10.0**	**-0.2**
CLL	**Collm**	**40.35**	**319**	*e*P	**P**	**03 44 10.0**	**-0.2**
FETA	**Feichten**	**40.52**	**312** ⇑*i*P		**P**	**03 44 11.3**	**-0.4**
	comp=Z,4.2nm,0.7s,mb4.2						
FETA	**Feichten**	**40.52**	**312**	P	**P**	**03 44 11.3**	**-0.4**
	comp=Z,4.2nm,0.7s,mb4.2						
PGF	**Pioggiola**	**40.94**	**305**	*e*P	**P**	**03 44 14.3**	**-0.9**
	comp=Z,98nm,1.5s,mb4.9						
PGF	**Pioggiola**	**40.94**	**305**	*e*P	**P**	**03 44 14.3**	**-0.9**
	comp=Z,49nm,1.5s,mb4.9						
PGF	**Pioggiola**	**40.94**	**305**	*e*P	**P**	**03 44 14.3**	**-0.9**
PGF				pmax	pmax		
	comp=Z,49nm,1.5s,mb4.9						
PGF	**Pioggiola**	**40.94**	**305**	*e*P	**P**	**03 44 14.3**	**-0.9**
	comp=Z,49nm,1.5s,mb4.9						
DAVOX	**Davos/Dischmat**	**41.04**	**311**	P	**P**	**03 44 15.4**	**-0.5**
	comp=Z,1.3nm,0.4s,mb3.9,baz=144,slow=13,SNR=3.8						
DAVOX	**Davos/Dischmat**	**41.04**	**311**	P	**P**	**03 44 15.4**	**-0.6**
DAVOX	**Davos/Dischmat**	**41.04**	**311**	P	**P**	**03 44 15.4**	**-0.6**
DAVA	**Damuels**	**41.15**	**312** ⇓*i*P		**P**	**03 44 16.2**	**-0.7**
	comp=Z,7.3nm,0.5s,mb4.5						
DAVA	**Damuels**	**41.15**	**312**	P	**P**	**03 44 16.2**	**-0.7**
	comp=Z,7.3nm,0.5s,mb4.5						
LZH	**Lanzhou**	**41.64**	**65**	*e*P	**P**	**03 44 20.5**	**-0.6**
LZH				pP	pP	03 44 24.0	-0.2
LZH				sP	sP	03 44 27.0	+1.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
CD2	**Chengdu**	**41.94**	**73**	*e*P	**P**	**03 44 24.5**	**+0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
KMI	**Kunming**	**42.06**	**82**	P	**P**	**03 44 26.0**	**+1.4**
KMI				pP	pP	03 44 30.0	+2.2
KMI				sP	sP	03 44 32.3	+3.3
KMI				pmax	pmax		
	comp=Z,7.

ARCES	ARCESS Array B	46.14	346	P		P	03 44 56.5 -0.3
CAF	Calviac	46.17	307	*e*P		P	03 44 56.2 -1.2
	comp=Z,5.2nm,0.7s,mb4.2						
CAF	Calviac	46.17	307	*e*P		P	03 44 56.2 -1.2
	comp=Z,2.6nm,0.7s,mb4.3						
CAF	Calviac	46.17	307	*e*P		P	03 44 56.2 -1.2
CAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
CAF	Calviac	46.17	307	*e*P		P	03 44 56.2 -1.2
	comp=Z,2.6nm,0.7s,mb4.2						
TCF	Toulx Ste Croi	46.19	309	*e*P		P	03 44 56.9 -0.6
	comp=Z,6.2nm,0.8s,mb4.3						
TCF	Toulx Ste Croi	46.19	309	*e*P		P	03 44 56.9 -0.6
	comp=Z,3.1nm,0.8s,mb4.3						
TCF	Toulx Ste Croi	46.19	309	*e*P		P	03 44 56.9 -0.6
TCF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TCF	Toulx Ste Croi	46.19	309	*e*P		P	03 44 56.9 -0.6
	comp=Z,3.1nm,0.8s,mb4.3						
RJF	Les Rejaudoux	46.59	308	*e*P		P	03 44 59.7 -0.9
RJF	Les Rejaudoux	46.59	308	*e*P		P	03 44 59.7 -0.9
RJF	Les Rejaudoux	46.59	308	*e*P		P	03 44 59.7 -0.9
LFF	La Frestale	47.11	307	*e*P		P	03 45 03.8 -1.0
LFF	La Frestale	47.11	307	*e*P		P	03 45 03.8 -1.0
LFF	La Frestale	47.11	307	*e*P		P	03 45 03.8 -1.0
HHC	Hu-ho-hao-te	47.60	58	*e*P		P	03 45 11.0 +2.4
HHC				pP	pP		03 45 15.5 +3.7
HHC				sP	sP		03 45 18.0 +5.0
HHC				PcP	PcP		03 46 41.8 +3.5
HHC				PP	PP		03 47 01.5 +1.4
HHC				ScP	ScP		03 50 33.8 +1.1
HHC				S	S		03 52 07.0 +2.9
HHC				sS	sS		03 52 12.3 +3.0
HHC				ScS	ScS		03 55 01.5 -1.1
HHC				SS	SS		03 55 28.0 -4.0
HHC				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
HHC				pmax	pmax		
	comp=Z,87nm,5.4s						
HHC				LR	LR		
	comp=N,100nm,15.6s,MS4.1						
HHC				LR	LR		
	comp=E,110nm,15.9s,MS4.1						
HHC				LR	LR		
	comp=Z,100nm,14.5s,MS3.9						
ETSF	Etsaut	47.99	305	*e*P		P	03 45 11.2 -0.4
	comp=Z,9.7nm,0.9s,mb4.5						
ETSF	Etsaut	47.99	305	*e*P		P	03 45 11.2 -0.4
	comp=Z,4.8nm,0.9s,mb4.5						
ETSF	Etsaut	47.99	305	*e*P		P	03 45 11.2 -0.4
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
ETSF	Etsaut	47.99	305	*e*P		P	03 45 11.2 -0.4
	comp=Z,4.8nm,0.9s,mb4.5						
LDF	La Druitiere	47.99	312	*e*P		P	03 45 10.1 -1.4
LDF	La Druitiere	47.99	312	*e*P		P	03 45 10.1 -1.4
LDF	La Druitiere	47.99	312	*e*P		P	03 45 10.1 -1.4
FLN	La Foliniere	48.25	312	*e*P		P	03 45 11.6 -1.9
FLN	La Foliniere	48.25	312	*e*P		P	03 45 11.6 -1.9
FLN	La Foliniere	48.25	312	*e*P		P	03 45 11.6 -1.9
GRR	Gorron	48.46	312	*e*P		P	03 45 13.7 -1.4
GRR	Gorron	48.46	312	*e*P		P	03 45 13.7 -1.4
GRR	Gorron	48.46	312	*e*P		P	03 45 13.7 -1.4
SJPF	Ste Jean	48.48	305	*e*P		P	03 45 14.7 -0.7
SJPF	Ste Jean	48.48	305	*e*P		P	03 45 14.7 -0.7
SJPF	Ste Jean	48.48	305	*e*P		P	03 45 14.7 -0.7
ESDC	Sonseca Array	50.67	300	P		P	03 45 31.6 -0.6
	comp=Z,0.6nm,0.7s,mb3.6,baz=75,slow=6.8,SNR=3.3						
ESDC	Sonseca Array	50.67	300	P		P	03 45 31.6 -0.6
BOD	Bodaibo	50.80	36	*e*P		P	03 45 30.4 -2.4
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
BOD	Bodaibo	50.80	36	*e*P		P	03 45 30.4 -2.4
	comp=Z,5.0nm,1.3s,mb4.3						
WHN	Wuhan	51.00	71	*e*P		P	03 45 27.0 -7.8
TORD	Torodi Ar. Bea	52.26	266	P		P	03 45 44.1 -0.3
	comp=Z,7.0nm,0.6s,mb4.8,baz=63,slow=7.4,SNR=15						
EVO	Evora	53.93	299	*e*P		P	03 45 56.7 +0.3
EVOP	Sao Brissos	54.02	299	*e*P		P	03 45 56.7 -0.3
EVOP	Sao Brissos	54.02	299	*e*P		P	03 45 56.7 -0.3
EVOP	Sao Brissos	54.02	299	*e*P		P	03 45 56.7 -0.3
NJ2	Nanjing	54.47	68	*e*P		P	03 46 02.5 +2.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
MDJ	Mudanjiang	60.47	52	P		P	03 46 42.0 -0.5
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.5						
KSRS	Korea Array	60.62	60	P		P	03 46 41.0 -2.8
	comp=Z,1.1nm,0.7s,mb4.1,baz=269,slow=5.7,SNR=4.5						
KSRS	Korea Array	60.62	60	P		P	03 46 41.0 -2.7
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
KSRS	Korea Array	60.62	60	P		P	03 46 41.0 -2.7
	comp=Z,1.0nm,0.7s,mb4.0						
DBIC	Dimbokro	60.86	262	P		P	03 46 45.0 -0.7
	comp=Z,3.2nm,0.8s,mb4.5,baz=23,slow=4.0,SNR=3.6						
DBIC	Dimbokro	60.86	262	P		P	03 46 45.0 -0.7
DBIC	Dimbokro	60.86	262	P		P	03 46 45.0 -0.6
DBIC	Dimbokro	60.86	262	P		P	03 46 45.0 -0.6
KLR	Kul'dur	61.19	47	*e*P		P	03 46 41.8 -5.5
BOSA	Boshof	62.51	210	P		P	03 46 56.0 -0.3
	comp=Z,3.9nm,1.1s,mb4.5,baz=176,slow=18,SNR=3.6						
BOSA	Boshof	62.51	210	P		P	03 46 56.0 -0.4
BOSA	Boshof	62.51	210	P		P	03 46 56.0 -0.4
ILAR	Eielson Array	86.91	10	P		P	03 49 15.9 -1.4
	comp=Z,1.4nm,0.6s,mb4.3,baz=321,slow=4.5,SNR=26						
ILAR	Eielson Array	86.91	10	P		P	03 49 15.9 -1.4
WRA	Warramunga Arr	89.21	113	P		P	03 49 27.4 -1.6
	comp=Z,0.6nm,0.7s,mb4.0,baz=312,slow=4.2,SNR=7.0						
WRA	Warramunga Arr	89.21	113	P		P	03 49 27.4 -1.6
ASAR	Alice Springs	90.66	116	P		P	03 49 34.0 -1.7
	comp=Z,0.4nm,0.8s,mb3.8,baz=308,slow=4.6,SNR=4.1						
ASAR	Alice Springs	90.66	116	P		P	03 49 34.0 -1.7
TXAR	Lajitas Array	120.69	339	PKP		PKPdf	03 55 24.1 -1.1
	comp=Z,0.2nm,0.6s,baz=90,slow=1.8,SNR=3.0						
TXAR	Lajitas Array	120.69	339	PKIKP		PKPdf	03 55 24.1 -1.1

IDC ***26*** *03:39:18.2±0.9, 17°.77N×106°.11W, h0km, mb3.9/6, mb1 4.2/11, mb1mx4.1/26, mbtmp4.0/11, ML3.7/5, MS4.0/23, Ms1 4.1/23, ms1mx4.0/28, Error ellipse: s-maj=33.0km s-min=16.9km az=55.0*

ISCJB ***26*** *03:39:19.8±1.7, 17°.72N±0°.05×105°.76W±0°.03, h12km±10km, mb4.3/21, MS4.1/21, Error ellipse: s-maj=8.8km s-min=4.1km az=19.8*

MEX ***26*** *03:39:21.1±0.8, 17°.99N×105°.90W, h10km, MD4.6*

NEIC ***26*** *03:39:21.9±4.2, 17°.75N×105°.79W, h14km±25km, mb4.4/23, MD4.6(MEX), Error ellipse: s-maj=14.3km s-min=5.5km az=221.0*

GCMT ***26*** *03:39:24.2±0.3, 18°.06N×105°.94W, h21km±1km, MW5.1, Moment Tensor Solution. s38,c55; s71,c116; Moment tensor: Scale 10^16^Nm; Mrr-1.22±.16; Mθθ-1.89±.13; Mφφ3.11±.16; Mrθ-0.17±.22; Mθφ-4.01±.11; Mφr0.56±.23; Best double couple: M0 4.80000×10^16^ NP1:φs286.00000°, δ85.00000°, λ178.00000°. NP2:φs16.00000°, δ88.00000°, λ5.00000°. Principal axes: T 5.3900, Plg5.0000°, Azm241.0000°; N -1.2700, Plg84.0000°, Azm34.0000°; P -4.1200, Plg2.0000°, Azm151.0000°; Data Used: IU II IC CN G.*

ISC 26 03:39:22.1±2.0, 17°.72N±0°.05×105°.78W±0°.03, h16km±12km, n262, σ0s84/253, mb4.3/21, MS4.1/21, 75C-65D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R15V		**2.23**	**50**	*e*P	**Pn**	**03 39 53.0**	**-5.4**
R15V				*i* S	**Sn**	**03 40 19.3**	**-6.4**
MMIG	**Aquila**	**2.38**	**76**	*e*P	**Pn**	**03 39 58.3**	**-2.2**
MMIG				*e*S	**Sn**	**03 40 28.2**	**-1.3**
EZ5V		**2.70**	**49**	*e*P	**Pn**	**03 40 01.2**	**-3.8**
EZ5V				*e*S	**Sn**	**03 40 30.5**	**-6.9**
ANIG	**Ahuacatlan**	**3.52**	**19**	*e*P	**Pn**	**03 40 11.8**	**-4.3**
ANIG				*i* S	**Sn**	**03 40 50.0**	**-7.6**
SFJM	**Santa Fe**	**3.78**	**43**	*i* P	**Pn**	**03 40 15.4**	**-4.3**
SFJM				*i* S	**Sn**	**03 40 58.7**	**-5.1**
SFJM	**Santa Fe**	**3.78**	**43**	*i* P	**Pn**	**03 40 15.4**	**-4.3**
SFJM				*i* S	**Sn**	**03 40 58.7**	**-5.1**
ZIIG	**Zihuatanejo**	**4.11**	**91**	*i* P	**Pn**	**03 40 24.3**	**-0.1**
ZIIG				*i* S	**Sn**	**03 41 13.1**	**+0.9**
ZIIG	**Zihuatanejo**	**4.11**	**91**	*i* P	**Pn**	**03 40 24.3**	**-0.1**
ZIIG				*i* S	**Sn**	**03 41 13.1**	**+0.9**
MOIG	**Morelia**	**4.76**	**65**	*i* P	**Pn**	**03 40 32.2**	**-1.1**
MOIG				*i* S	**Sn**	**03 41 26.8**	**-1.4**
MOIG	**Morelia**	**4.76**	**65**	*i* P	**Pn**	**03 40 32.2**	**-1.1**
MOIG				*i* S	**Sn**	**03 41 26.8**	**-1.4**
CAIG	**El Cayaco**	**5.30**	**96**	*i* P	**Pn**	**03 40 39.4**	**-1.3**
CAIG				*i* S	**Sn**	**03 41 41.0**	**-0.6**
CAIG	**El Cayaco**	**5.30**	**96**	*i* P	**Pn**	**03 40 39.4**	**-1.3**
CAIG				*i* S	**Sn**	**03 41 41.0**	**-0.6**
MEIG	**Mezcala**	**5.87**	**87**	*i* P	**Pn**	**03 40 46.2**	**-2.3**
PLIG	**Platanillo**	**6.01**	**83**	*i* P	**Pn**	**03 40 49.9**	**-0.5**
PLIG	**Platanillo**	**6.01**	**83**	*i* P	**Pn**	**03 40 49.9**	**-0.5**
CMIG	**Matias Romero**	**10.42**	**92**	Pn	**Pn**	**03 41 53.3**	**+2.3**
	0.5nm,0.3s,baz=272,slow=9.8,SNR=7.1						
CMIG				LR	LR	03 45 16.4	
	comp=Z,830nm,21.4s,baz=271,slow=33						
TXAR	**Lajitas Array**	**11.72**	**9**	Pn	**Pn**	**03 42 09.3**	**+0.6**
	0.3nm,0.3s,baz=185,slow=14,SNR=46						
TXAR				LR	LR	03 46 39.5	
	comp=Z,999nm,18.7s,baz=165,slow=38						
626A	**Big Bend Ranch**	**11.87**	**7**	⇑P	**Pn**	**03 42 12.2**	**+1.4**
	baz=12,SNR=7.6						
627A	**Terlingua Ranc**	**11.88**	**10**	⇑P	**Pn**	**03 42 11.4**	**+0.4**
	baz=12,SNR=10						
628A	**Black Gap, Mar**	**12.01**	**12**	⇑P	**Pn**	**03 42 12.2**	**-0.4**
	baz=12,SNR=8.4						
526A	**Mary Lane Ranc**	**12.38**	**7**	⇑P	**Pn**	**03 42 18.6**	**+0.8**
	baz=12,SNR=6.3						
527A	**Woodward Ranch**	**12.52**	**9**	⇑P	**Pn**	**03 42 21.0**	**+1.2**
	baz=13,SNR=7.7						
528A	**Cox Ranch, San**	**12.68**	**12**	⇓P	**Pn**	**03 42 22.6**	**+0.8**
	baz=13						
425A	**Indio Mountain**	**13.03**	**3**	⇑P	**Pn**	**03 42 26.0**	**-0.6**
	baz=13						
428A	**Kincaid Ranch,**	**13.25**	**12**	⇑P	**Pn**	**03 42 31.0**	**+1.4**
	baz=13,SNR=7.2						
325A	**Bean Ranch, Si**	**13.61**	**3**	⇓P	**Pn**	**03 42 35.8**	**+1.2**
	baz=14						
320A	**Kipp Ranch, An**	**13.78**	**350**	P	**Pn**	**03 42 37.7**	**+0.8**
	baz=14,SNR=11						
JCT	**Junction City**	**13.82**	**22**	⇑P	**Pn**	**03 42 38.0**	**+0.6**
	baz=14						
JCT	**Junction City**	**13.82**	**22**	*e*Pn	**Pn**	**03 42 38.2**	**+0.8**
319A	**Douglas**	**13.96**	**347**	⇑P	**Pn**	**03 42 39.6**	**+0.3**
	baz=14,SNR=12						
318A	**Bisbee**	**14.18**	**345**	⇑P	**Pn**	**03 42 42.1**	**-0.3**
	baz=14,SNR=21						
220A	**Playas Peak, P**	**14.34**	**351**	⇓P	**Pn**	**03 42 44.2**	**-0.3**
	baz=14,SNR=14						
225A	**Deer Hill, Car**	**14.35**	**3**	⇑P	**Pn**	**03 42 46.0**	**+1.3**
	baz=14,SNR=6.2						
226A	**Malaga, Loving**	**14.36**	**6**	⇑P	**Pn**	**03 42 46.3**	**+1.6**
	baz=14						
GDL2	**Guadalupe Moun**	**14.47**	**5**	*e*Pn	**Pn**	**03 42 47.9**	**+1.6**
219A	**White Tail Can**	**14.56**	**348**	⇑P	**Pn**	**03 42 47.3**	**-0.2**
	baz=15,SNR=11						
CLNB	**Carlsbad**	**14.58**	**6**	*e*Pn	**Pn**	**03 42 47.4**	**-0.5**
	1.7nm,0.5s						
125A	**Gardner Draw,**	**14.91**	**4**	⇓P	**Pn**	**03 42 53.5**	**+1.2**
	baz=15,SNR=11						
APG	**El Apazote**	**14.94**	**98**	Pn	**Pn**	**03 42 57.3**	**+4.5**
	0.4nm,0.3s,baz=277,slow=17,SNR=3.4						
216A	**Three Points,**	**15.12**	**341**	⇓P	**Pn**	**03 42 54.6**	**-0.4**
	baz=15						
HKT	**Hockley**	**15.18**	**35**	*e*Pn	**Pn**	**03 42 53.3**	**-2.7**
TUC	**Tucson**	**15.21**	**344**	*e*Pn	**Pn**	**03 42 55.1**	**-1.2**
118A	**Homack Ranch,**	**15.33**	**347**	⇑P	**Pn**	**03 42 56.7**	**-1.1**
	baz=15						
CPRX	**Cap Rock**	**15.34**	**6**	*e*Pn	**Pn**	**03 42 57.8**	**-0.2**
	14nm,1.0s						
117A	**Oracle**	**15.45**	**344**	⇓P	**Pn**	**03 42 58.6**	**-0.8**
	baz=16,SNR=5.5						
Z23A	**Rita Site, Whi**	**15.48**	**359**	⇓P	**Pn**	**03 43 00.1**	**+0.3**
	baz=16						
Z22A	**Elephant Butte**	**15.50**	**356**	⇓P	**Pn**	**03 43 01.5**	**+1.3**
	baz=16						
Z25A	**Roswell**	**15.52**	**3**	⇑P	**Pn**	**03 43 00.8**	**+0.4**
	baz=16,SNR=5.4						
Z20A	**Nine Sixteen R**	**15.53**	**351**	⇑P	**Pn**	**03 43 00.9**	**+0.4**
	baz=16,SNR=5.5						
214A	**Organ Pipe Nat**	**15.54**	**337**	⇓P	**Pn**	**03 43 00.6**	**+0.1**
	baz=16,SNR=8.6						
Z24A	**Sheeppen Canyo**	**15.55**	**1**	⇓P	**Pn**	**03 43 00.9**	**+0.2**
	baz=16						
Z26A	**Caprock**	**15.57**	**6**	P	**Pn**	**03 43 01.2**	**+0.2**
	baz=16,SNR=15						
Z21A	**St. Cloud Mine**	**15.61**	**354**	⇓P	**Pn**	**03 43 02.0**	**+0.4**
	baz=16						
Z27A	**Tatum**	**15.70**	**8**	⇓P	**Pn**	**03 43 02.9**	**+0.3**
	baz=16						
115A	**Sonoran Desert**	**16.01**	**340**	⇑P	**Pn**	**03 43 06.4**	**-0.3**
	baz=16,SNR=8.0						
Y24A	**Capitan**	**16.14**	**1**	⇓P	**Pn**	**03 43 08.7**	**+0.3**
	baz=16,SNR=9.6						
Y23A	**Lovelace Mesa,**	**16.14**	**359**	⇑P	**Pn**	**03 43 08.3**	**-0.1**
	baz=16						
Y25A	**Mesa, Roswell**	**16.16**	**3**	P	**Pn**	**03 43 09.3**	**+0.7**
	baz=16,SNR=14						
Y22A	**Socorro**	**16.18**	**356**	⇓P	**Pn**	**03 43 09.2**	**+0.3**
	baz=16						
Y27A	**Causey**	**16.26**	**8**	⇑P	**Pn**	**03 43 09.5**	**-0.5**
	baz=16,SNR=14						
114A	**Black Gap (USA**	**16.28**	**338**	P	**Pn**	**03 43 09.7**	**-0.4**
	baz=16,SNR=8.0						
Y20A	**Horse Springs,**	**16.29**	**352**	⇓P	**Pn**	**03 43 10.9**	**+0.7**
	baz=16						
Y21A	**Point of Rocks**	**16.31**	**354**	⇑P	**Pn**	**03 43 11.3**	**+0.8**
	baz=16						
Z16A	**Peralta Trail,**	**16.36**	**343**	⇑P	**Pn**	**03 43 10.6**	**-0.6**
	baz=16						
BNM	**Barren Site**	**16.38**	**357**	*e*Pn	**Pn**	**03 43 11.3**	**-0.1**
	30nm,1.7s						
MSTX	**Muleshoe**	**16.40**	**9**	⇓P	**Pn**	**03 43 11.8**	**+0.1**
	baz=16,SNR=14						
Y18A	**Canyon Day Jun**	**16.44**	**347**	⇑P	**Pn**	**03 43 11.7**	**-0.5**
	baz=16						
Y19A	**Nutrioso**	**16.46**	**350**	P	**Pn**	**03 43 12.7**	**+0.2**
	baz=16,SNR=6.9						
LPM	**Los Pinos Moun**	**16.54**	**358**	*e*Pn	**Pn**	**03 43 13.4**	**0.0**
Y17A	**Roosevelt**	**16.54**	**345**	⇑P	**Pn**	**03 43 13.0**	**-0.5**
	baz=17,SNR=6.6						
113A	**Mohawk Valley,**	**16.62**	**336**	P	**Pn**	**03 43 14.1**	**-0.4**
	baz=17,SNR=6.3						
LAZ	**Ladron**	**16.66**	**356**	*e*Pn	**Pn**	**03 43 13.8**	**-1.1**
	10nm,1.6s						
TEIG	**Tepich**	**16.74**	**79**	P	**Pn**	**03 43 19.9**	**+3.8**
	0.3nm,0.3s,baz=200,slow=16,SNR=3.8						
TEIG				LR	LR	03 51 15.5	
	comp=Z,397nm,18.2s,baz=129,slow=42						
X21A	**Alamocita Cree**	**16.75**	**354**	⇑P	**Pn**	**03 43 16.6**	**+0.5**
	baz=17						
X25A	**Clemmons Ranch**	**16.77**	**3**	⇓P	**Pn**	**03 43 16.7**	**+0.4**
	baz=17						
X24A	**Lazy VL Ranch,**	**16.78**	**1**	⇑P	**Pn**	**03 43 16.7**	**+0.3**
	baz=17						
X26A	**CR and CF Fran**	**16.85**	**6**	P	**Pn**	**03 43 17.9**	**+0.5**
	baz=17,SNR=5.4						
Y16A	**Circle Bar Ran**	**16.88**	**343**	⇑P	**Pn**	**03 43 17.1**	**-0.7**
	baz=17,SNR=13						
X20A	**Quemado**	**16.93**	**352**	P	**Pn**	**03 43 18.9**	**+0.6**
	baz=17,SNR=15						
X19A	**St. Johns**	**16.93**	**350**	⇑P	**Pn**	**03 43 18.6**	**+0.2**
	baz=17						
Z13A	**Yuma Proving G**	**16.96**	**337**	P	**Pn**	**03 43 18.4**	**-0.4**
	baz=17,SNR=14						
X17A	**Forest Lakes**	**17.15**	**346**	⇑P	**Pn**	**03 43 20.9**	**-0.2**
	baz=17,SNR=5.5						
X18A	**Snowflake**	**17.15**	**348**	⇓P	**Pn**	**03 43 20.7**	**-0.5**
	baz=17						
ANMO	**Albuquerque**	**17.17**	**358**	P	**Pn**	**03 43 20.7**	**-0.7**
	0.1nm,0.3s,baz=192,slow=9.1,SNR=9.4						
ANMO				LR	LR	03 50 48.3	
	comp=Z,78nm,19.9s,baz=188,slow=40						
ANMO	**Albuquerque**	**17.17**	**358**	*e*Pn	**Pn**	**03 43 21.5**	**+0.1**
GLA	**Glamis**	**17.30**	**334**	⇑P	**Pn**	**03 43 22.6**	**-0.4**
	baz=17						
GLA	**Glamis**	**17.30**	**334**	*e*Pn	**Pn**	**03 43 22.3**	**-0.7**
W23A	**Werner Place,**	**17.37**	**359**	⇓P	**Pn**	**03 43 24.1**	**+0.2**
	baz=17						
X16A	**Lo Mia Camp, P**	**17.38**	**344**	⇑P	**Pn**	**03 43 23.5**	**-0.5**
	baz=17						
W26A	**Owens Ranch, T**	**17.39**	**6**	⇑P	**Pn**	**03 43 24.8**	**+0.7**
	baz=17						
Y14A	**Wickenburg**	**17.40**	**340**	⇓P	**Pn**	**03 43 24.0**	**-0.2**
	baz=17,SNR=8.4						
W24A	**Lazy 6 Ranch,**	**17.42**	**1**	⇓P	**Pn**	**03 43 24.8**	**+0.3**
	baz=18						
W27A	**Bowe Ranch, En**	**17.44**	**7**	P	**Pn**	**03 43 24.8**	**0.0**
	baz=18,SNR=13						
W25A	**X Bar L Ranch,**	**17.46**	**4**	⇓P	**Pn**	**03 43 25.1**	**+0.1**
	baz=18,SNR=8.9						
AMTX	**Amarillo**	**17.48**	**11**	*e*Pn	**Pn**	**03 43 24.5**	**-0.8**
DVTC	**Desert V Tower**	**17.54**	**330**	⇑P	**Pn**	**03 43 25.7**	**-0.4**
	baz=18						
X15A	**Humboldt**	**17.66**	**342**	⇓P	**Pn**	**03 43 27.8**	**+0.2**
	baz=18						
BAR	**Barrett**	**17.84**	**329**	*e*Pn	**Pn**	**03 43 29.1**	**-0.7**
	92nm,2.0s						
V23A	**Ortiz Mt. (NFS**	**17.95**	**359**	⇑P	**Pn**	**03 43 31.2**	**+0.1**
	baz=18,SNR=6.7						
W16A	**Flagstaff**	**18.05**	**345**	⇓P	**Pn**	**03 43 32.6**	**+0.4**
	baz=18						
WMOK	**Wichita Mounta**	**18.06**	**19**	*e*P	**Pn**	**03 43 30.3**	**-2.1**
	70nm,2.0s						
V25A	**Rancho No Teng**	**18.07**	**3**	⇑P	**Pn**	**03 43 32.9**	**+0.3**
	baz=18,SNR=6.1						
BC3	**Big Chuckawall**	**18.09**	**333**	⇓P	**Pn**	**03 43 32.5**	**-0.2**
	baz=18,SNR=8.7						
V26A	**Tequesquite Ra**	**18.09**	**5**	⇑P	**Pn**	**03 43 33.1**	**+0.3**
	baz=18,SNR=16						
V22A	**San Miguel Ran**	**18.15**	**357**	⇓P	**Pn**	**03 43 33.8**	**+0.3**
	baz=18,SNR=8.5						
V20A	**Brimhall**	**18.16**	**353**	⇓P	**Pn**	**03 43 33.8**	**+0.1**
	baz=18						
X13A	**Yucca**	**18.28**	**338**	⇓P	**Pn**	**03 43 35.2**	**+0.2**
	baz=18						
W15A	**Williams**	**18.32**	**343**	⇓P	**Pn**	**03 43 35.9**	**+0.2**
	baz=18,SNR=5.2						
V17A	**Tonalea, Kykot**	**18.38**	**347**	⇓P	**Pn**	**03 43 36.3**	**0.0**
	baz=18						
IRM	**Iron Mountain**	**18.39**	**335**	⇑P	**Pn**	**03 43 36.2**	**-0.3**
	baz=18						
U23A	**El Rito**	**18.54**	**359**	⇑P	**Pn**	**03 43 38.7**	**+0.5**
	baz=19						
W14A	**Seligman**	**18.59**	**341**	⇓P	**Pn**	**03 43 39.2**	**+0.2**
	baz=19						
BELC	**Belle Mtn. Jos**	**18.62**	**332**	⇑P	**Pn**	**03 43 39.1**	**-0.2**
	baz=19,SNR=9.5						
U25A	**Circle Dot Ran**	**18.64**	**3**	P	**Pn**	**03 43 39.5**	**-0.1**
	baz=19,SNR=14						
U26A	**Atchley Ranch,**	**18.69**	**5**	⇓P	**Pn**	**03 43 40.3**	**+0.3**
	baz=19,SNR=5.3						
U21A	**Nageezi**	**18.71**	**355**	⇑P	**Pn**	**03 43 40.5**	**+0.2**
	baz=19						
U19A	**Dine' College,**	**18.75**	**351**	⇓P	**Pn**	**03 43 41.1**	**+0.3**
	baz=19						
V15A	**Kaibab Nationa**	**18.90**	**344**	⇓P	**Pn**	**03 43 41.9**	**-0.8**
	baz=19						
U16A	**Tuba City**	**18.95**	**347**	⇑P	**Pn**	**03 43 42.4**	**-0.9**
	baz=19,SNR=11						
U18A	**Rough Rock, Ch**	**18.97**	**350**	⇑P	**Pn**	**03 43 43.2**	**-0.3**
	baz=19						
V14A	**Boquillas Ranc**	**18.99**	**341**	⇓P	**Pn**	**03 43 43.7**	**0.0**
	baz=19						
LDFC	**Landfair**	**19.18**	**336**	*e*P	**Pn**	**03 43 46.2**	**+0.1**
T23A	**Casias Ranch,**	**19.24**	**359**	⇑P	**Pn**	**03 43 46.1**	**-0.7**
	baz=19						
T22A	**Edith**	**19.24**	**357**	⇓P	**Pn**	**03 43 46.4**	**-0.4**
	baz=19,SNR=8.4						
T24A	**Torres, Weston**	**19.29**	**2**	⇓P	**Pn**	**03 43 46.6**	**-0.7**
	baz=19						
V13A	**Grand Canyon W**	**19.47**	**340**	⇑P	**Pn**	**03 43 48.3**	**-1.2**
	baz=20,SNR=6.5						
U15A	**North Rim**	**19.50**	**344**	⇑P	**Pn**	**03 43 48.8**	**-1.1**
	baz=20,SNR=8.0						
V12A	**Nelson**	**19.66**	**338**	⇑P	**Pn**	**03 43 50.8**	**-1.0**
	baz=20,SNR=10.0						
T18A	**Mexican Hat**	**19.67**	**350**	P	**Pn**	**03 43 51.4**	**-0.6**
	baz=20,SNR=12						
T17A	**Navajo Res., N**	**19.70**	**348**	⇑P	**Pn**	**03 43 50.9**	**-1.4**
	baz=20						
U14A	**Mt Trumbull**	**19.74**	**342**	⇓P	**Pn**	**03 43 51.4**	**-1.3**
	baz=20,SNR=8.1						
MWC	**Mount Wilson**	**19.77**	**329**	*e*P	**Pn**	**03 43 52.9**	**-0.2**
TUQ	**Turquoise Moun**	**19.82**	**335**	⇓P	**Pn**	**03 43 52.5**	**-1.1**
	baz=20,SNR=5.4						
S21A	**Coal Bank Pass**	**19.94**	**355**	⇑P	**Pn**	**03 43 54.4**	**-0.7**
	baz=20,S

Q14A	Sevier Lake (B	22.17	344	⇑P		P	03 44 17.2 -0.3
	baz=22,SNR=8.7						
R11A	Troy Canyon, C	22.27	339	⇑P		P	03 44 17.9 -0.6
	baz=22,SNR=7.7						
O23A	Lake Granby, G	22.41	360	⇑P		P	03 44 20.7 +0.8
	baz=22						
O20A	White River Ci	22.43	355	⇑P		P	03 44 21.4 +1.1
	baz=22						
MTUM	Tungsten Hills	22.56	333	*e*P		P	03 44 22.6 +1.0
P14A	Drum Mountains	22.69	345	⇓P		P	03 44 22.4 -0.6
	baz=23,SNR=6.1						
LRAL	Lakeview Retre	22.75	44	*e*P		P	03 44 24.0 +0.2
O17A	Robinson Place	22.80	350	⇓P		P	03 44 24.2 +0.1
	baz=23						
O16A	Springville	22.95	349	⇑P		P	03 44 26.0 +0.3
	baz=23						
N22A	Wattenberg Ran	23.01	359	⇓P		P	03 44 26.7 +0.4
	baz=23						
DAU	Daniels Canyon	23.10	349	*e*P		P	03 44 27.9 +0.6
DUG	Dugway	23.21	346	⇑P		P	03 44 28.4 0.0
	baz=23,SNR=8.1						
DUG	Dugway	23.21	346	*e*P		P	03 44 27.4 -1.1
	14nm,1.3s,mb4.2						
JLU	Jordanelle	23.32	349	*e*P		P	03 44 29.6 0.0
NVAR	Mina Array Bea	23.36	335	P		P	03 44 26.7 -3.3
	3.5nm,1.1s,mb3.7,baz=157,slow=9.2,SNR=10.0						
NVAR				LR	LR		03 52 36.5
	comp=Z,307nm,20.9s,MS3.7,baz=205,slow=34						
N18A	Larsen Ranch,	23.42	353	⇑P		P	03 44 30.9 +0.3
	baz=24						
PARMO	Parma	23.58	34	*e*P		P	03 44 31.3 -1.0
WAKR	Walker	23.90	333	*e*P		P	03 44 34.9 -0.3
FVM	French Village	24.26	31	*e*P		P	03 44 37.0 -1.5
HWUT	Hardware Ranch	24.32	349	*e*P		P	03 44 39.7 +0.8
	3.7nm,1.0s,mb3.8						
SWET	Sewanee	24.80	42	*e*P		P	03 44 43.9 +0.4
PAHR	Pah Rah Range	24.88	334	*e*P		P	03 44 44.0 -0.1
PDAR	Pinedale Array	25.17	353	P		P	03 44 43.5 -3.2
	0.8nm,0.6s,mb3.4,baz=163,slow=6.6,SNR=3.4						
PDAR				LR	LR		03 54 21.5
	comp=Z,493nm,19.9s,MS4.0,baz=184,slow=36						
GOGA	Godfrey	25.39	48	*e*P		P	03 44 48.1 -0.7
K15A	Arbon	25.54	348	⇑P		P	03 44 50.0 -0.1
	baz=26						
J19A	Crowheart	25.61	354	⇑P		P	03 44 51.2 +0.4
	baz=26						
J18A	Kendall Valley	25.66	353	⇓P		P	03 44 51.8 +0.6
	baz=26						
USIN	University of	25.66	35	*e*P		P	03 44 52.8 +1.5
REDW	Red Top Meadow	25.92	352	*e*P		P	03 44 55.3 +1.8
J16A	Bone	25.95	350	⇓P		P	03 44 54.5 +0.7
	baz=26						
RRI2	Red Ridge	25.97	351	*e*P		P	03 44 52.9 -1.1
	54nm,1.9s,mb4.8						
OLIL	Olney	26.00	33	*e*P		P	03 44 55.9 +1.6
SNOW	Snow King Moun	26.00	352	*e*P		P	03 44 56.3 +2.0
TPAW	Teton Pass	26.06	351	*e*P		P	03 44 54.3 -0.4
	25nm,1.6s,mb4.5						
I18A	Diamond G Ranc	26.12	353	⇓P		P	03 44 56.7 +1.4
	baz=26						
LOHW	Long Hollow	26.13	352	*e*P		P	03 44 56.0 +0.6
	21nm,1.4s,mb4.5						
J15A	Blackfoot	26.21	349	⇓P		P	03 44 57.5 +1.4
	baz=26						
MOOW	Moose Ponds	26.28	352	*e*P		P	03 44 57.5 +0.7
	64nm,2.3s,mb4.7						
J14A	Carey	26.35	347	⇑P		P	03 44 58.9 +1.5
	baz=26						
TKL	Tuckaleechee C	26.46	43	LR	LR		03 58 09.1
	comp=Z,454nm,21.4s,MS4.0,baz=239,slow=42						
HLID	Hailey	26.78	346	⇑P		P	03 45 00.7 -0.6
	baz=27						
HLID	Hailey	26.78	346	*e*P		P	03 44 59.8 -1.4
	3.1nm,1.1s,mb3.8						
I12A	Atlanta	27.17	345	⇑P		P	03 45 05.0 +0.2
	baz=27						
YBH	Yreka Blue Hor	27.98	332	LR	LR		03 55 46.9
	comp=Z,406nm,18.1s,MS4.0,baz=160,slow=36						
BOZ	Bozeman (W)	28.27	351	*e*P		P	03 45 13.9 -0.7
	18nm,1.9s,mb4.4						
E17A	Martinsdale	28.97	353	⇑P		P	03 45 20.3 -0.4
	baz=29						
F10A	Beach Ranch, E	29.73	344	⇑P		P	03 45 27.9 +0.2
	baz=30						
OTAV	Otavalo	32.01	120	*e*P		P	03 45 52.4 +4.3
	12nm,1.5s,mb4.5						
SDV	Santo Domingo	35.26	100	*e*P		P	03 46 18.1 +1.7
	3.8nm,0.7s,mb4.4						
ATAH	Atahualpa	36.63	130	LR	LR		03 56 59.5
	comp=Z,130nm,20.9s,MS3.7,baz=310,slow=29						
TAOE	Nuku Hiva Isla	43.01	235	*e*S		S	03 53 38.7 -7.7
	121nm,25.3s						
TAOE				*e*LR	LR		03 59 01.6
	952nm,26.7s						
YKA	Yellowknife Ar	45.15	354	LR	LR		04 07 12.2
	comp=Z,47nm,18.3s,MS3.5,baz=135,slow=37						
RKT	Rikitea	49.62	216	*e*S		S	03 55 20.9 0.0
	181nm,29.5s						
RKT				*e*LR	LR		04 02 15.3
	896nm,28.0s,baz=31						
RKT				*e*T			04 41 15.8
	2.7nm,0.3s						
LPAZ	La Paz	50.17	130	P		P	03 48 18.9 +1.5
	2.2nm,0.8s,mb4.3,baz=327,slow=9.3,SNR=8.3						
LPAZ				LR	LR		04 07 12.2
	comp=Z,245nm,20.9s,MS4.2,baz=316,slow=33						
LPAZ	La Paz	50.17	130	*e*P		P	03 48 18.9 +1.6
	3.1nm,0.9s,mb4.3						
INK	Inuvik	53.52	348	*e*P		P	03 48 41.6 -0.1
	5.4nm,1.1s,mb4.4						
ILAR	Eielson Array	54.47	340	P		P	03 48 45.9 -2.7
	3.3nm,1.2s,mb4.2,baz=144,slow=5.4,SNR=12						
ILAR				LR	LR		04 15 57.3
	comp=Z,130nm,19.8s,MS4.0,baz=268,slow=40						
PPT	Papeete	55.56	233	*e*S		S	03 56 37.1 -5.3
	238nm,27.5s						
PPT				*e*LR	LR		04 04 51.7
	915nm,25.8s,baz=46						
PPT	Papeete	55.56	233	LR	LR		04 06 06.4
	comp=Z,343nm,21.0s,MS4.4,baz=105,slow=29						
TBI	Tubuai	59.05	228	*e*S		S	03 57 24.5 -3.7
	463nm,30.0s						
TBI				*e*LR	LR		04 06 25.9
	917nm,27.8s,baz=43						
CPUP	Villa Florida	64.28	132	P		P	03 49 56.7 -0.3
	1.1nm,0.7s,mb4.0,baz=321,slow=8.2,SNR=4.2						
CPUP				LR	LR		04 17 33.2
	comp=Z,118nm,18.3s,MS4.1,baz=307,slow=36						
CPUP	Villa Florida	64.28	132	P		P	03 49 56.7 -0.3
CPUP				LR	LR		04 17 33.2
BDFB	Brasilia	65.87	117	P		P	03 50 07.4 -0.1
	1.8nm,0.5s,mb4.4,baz=310,slow=23,SNR=3.8						
PLCA	Paso Flores	66.73	152	LR	LR		04 13 07.5
	comp=Z,262nm,19.7s,MS4.5,baz=94,slow=30						
PLCA	Paso Flores	66.73	152	*e*P		P	03 50 15.1 +2.6
	2.7nm,0.9s,mb4.3						
PETK	Petropavlovsk-	79.86	323	LR	LR		04 18 48.3
	comp=Z,56nm,20.0s,MS3.9,baz=289,slow=30						
ARCES	ARCESS Array B	86.44	15	LR	LR		04 30 10.4
	comp=Z,122nm,18.5s,MS4.3,baz=325,slow=35						
NOA	NORSAR Array B	86.92	26	LR	LR		04 29 49.0
	comp=Z,135nm,19.6s,MS4.4,baz=310,slow=35						
ESDC	Sonseca Array	87.61	49	LR	LR		04 30 23.5
	comp=Z,105nm,19.4s,MS4.3,baz=295,slow=35						
FINES	FINESS Array B	92.31	21	LR	LR		04 33 16.4
	comp=Z,295nm,18.7s,MS4.8,baz=311,slow=35						
DZM	Mont Dzumac	94.52	248	*e*LR	LR		04 22 52.2
	834nm,26.9s,baz=76						
DBIC	Dimbokro	98.31	80	LR	LR		04 32 36.6
	comp=Z,91nm,20.1s,MS4.3,baz=272,slow=32						
KEST	Kesra	98.82	48	LR	LR		04 37 26.6
	comp=Z,46nm,21.6s,MS3.9,baz=193,slow=35						
MJAR	Matsushiro Arr	99.05	313	LR	LR		04 36 52.1
	comp=Z,32nm,18.3s,MS3.9,baz=255,slow=35						
HHC	Hu-ho-hao-te	112.19	330	*e*PKP	PKiKP		03 57 56.5 -0.8
HHC				PP	PP		03 58 43.5 +2.5
HHC				SKS	SKSdf		04 05 04.0 -5.0
HHC				SKKS	SKKSac		04 05 34.3 -10
HHC				SS	SS		04 14 15.5 -3.1
HHC				AMB	AMB		
	comp=Z,59nm,7.5s						
HHC				LR	LR		
	comp=N,100nm,20.5s,MS4.5						
HHC				LR	LR		
	comp=E,100nm,19.8s,MS4.5						
HHC				LR	LR		
	comp=Z,100nm,20.9s,MS4.4						
NJ2	Nanjing	114.59	319	*e*PKP	PKiKP		03 58 02.5 +0.3
WMQ	Urumqi	117.53	349	*e*PKP	PKPdf		03 58 11.0 +3.5
WMQ				PP	PP		03 59 27.0 +8.8
WMQ				SKS	SKSdf		04 05 22.0 +2.9
WMQ				SS	SS		04 15 35.0 +7.1
WMQ				AMB	AMB		
	comp=Z,24nm,10.0s						
WMQ				LR	LR		
	comp=N,140nm,25.0s,MS4.6						
WMQ				LR	LR		
	comp=E,140nm,25.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,110nm,25.0s,MS4.4						
LZH	Lanzhou	119.59	333	*e*PKP	PKPdf		03 58 11.0 -0.7
LZH				sPKP			03 58 22.5
WRA	Warramunga Arr	123.32	257	PKP	PKPdf		03 58 18.1 -1.0
	comp=Z,0.4nm,0.6s,baz=72,slow=2.3,SNR=4.3						
ASAR	Alice Springs	124.19	253	PKP	PKPdf		03 58 19.6 -1.2
	comp=Z,0.4nm,0.7s,baz=67,slow=2.4,SNR=3.4						

ISC 26 04:00:00.0±1.9, 22°.4N±0°.1×91°.5E±0°.1, h10km, n10, σ0s84/15, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	Agartala	1.47	353	*e*PKP	Pn	04 00 26.0	-0.5
AGT				*e*S	Sn	04 00 53.0	+7.2
SHL	Shillong	3.15	7	*e*PN	Pn	04 00 51.5	+1.7
SHL				*e*SN	Sn	04 01 26.5	-1.0
ODAN	Odare	5.76	321	*e*Pn	Pn	04 01 26.9	+1.3
ODAN				*e*Sn	Sn	04 02 32.7	+0.9
	97nm,0.3s						
TAPN	Taplejung	5.97	326	*e*Pn	Pn	04 01 28.5	0.0
TAPN				*e*Sn	Sn	04 02 36.7	-0.2
	198nm,0.7s						
GUN	Gumba	7.44	318	*e*Pn	Pn	04 01 49.3	+0.6
PKI	Pulchoki	7.51	314	*e*Pn	Pn	04 01 48.8	-0.8
PKI				*e*Sn	Sn	04 03 14.8	0.0
	90nm,0.9s						
PKIN	Phulchoki	7.52	314	*e*Pn	Pn	04 01 48.8	-0.9
GKN	Gorkha	8.30	313	*e*Pn	Pn	04 02 00.9	+0.4
KOLN	Koldanda	8.89	308	*e*Pn	Pn	04 02 08.0	-0.5
DANN	Dangsing	9.12	312	*e*Pn	Pn	04 02 10.8	-0.9

*BJI **26** 05:48:49.3, 17°.46S×177°.77W, h558km, mB4.9/17, mb4.8/29*
*ISCJB **26** 05:48:50.8±0.1, 17°.74S±0°.04×178°.25W±0°.03, h566km, mb4.9/168, Error ellipse: s-maj=5.5km s-min=2.7km az=154.6*
*BGS **26** 05:48:51.1±7.9, 17°.66S×178°.20W, h571km, mb4.8(NEIC)*
*NEIC **26** 05:48:51.9±0.1, 17°.66S×178°.20W, mb4.8/92, Error ellipse: s-maj=5.5km s-min=3.6km az=144.0*
*IDC **26** 05:48:52.2±0.5, 17°.72S×178°.22W, h572km±5km, mb4.3/24, mb1 4.5/25, mb1mx4.5/26, mbtmp4.3/25, Error ellipse: s-maj=9.3km s-min=7.3km az=144.0*
*DJA **26** 05:48:53, 17°.82S×178°.20W, h590km, mb5.4/54*
*SZGRF **26** 05:48:53.2, 18°.46S×178°.51W, h596km, Fiji Islands region*
*GCMT **26** 05:48:57.1±0.6, 17°.58S×178°.21W, h596km±3km, MW5.3, Moment Tensor Solution. s49,c68; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{r\phi}$0.00; Best double couple: $M_0$1.00000×10^{17} NP1:ϕ_s263.00000°, δ45.00000°, λ-13.00000°. NP2: ϕ_s2.00000°, δ81.00000°, λ-135.00000°. Principal axes: T 1.2800, Plg23.0000°, Azm125.0000°; N -0.5000, Plg44.0000°, Azm11.0000°; P -0.7900, Plg38.0000°, Azm233.0000°; Data Used: II IU IC CN G.*

ISC 26 05:48:52.2±0.1, 17°.70S±0°.04×178°.23W±0°.03, h568km, h568km±.7km: pP-P, n719, σ0s71/451, mb4.9/168, 131C-182D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.54	269	*e*Pn	P	05 50 15.5	+3.4
MSVF				*e*S	S	05 51 25.4	+8.2
AFI	Afiamalu	7.27	60	P	P	05 50 41.0	-2.5
	58nm,0.3s,baz=350,slow=2.9,SNR=100						
AFI				S	S	05 52 06.6	-7.9
	3.2nm,0.3s,baz=49,slow=19,SNR=2.5						
AFI	Afiamalu	7.27	60	*e*Pn	P	05 50 40.8	-2.6
AFI				*e*S	S	05 52 09.9	-4.7
FUNA	Funafuti	9.45	344	*e*Pn	P	05 51 03.6	-1.4
FUNA				*e*S	S	05 52 53.4	-0.6
DZM	Mont Dzumac	15.05	251	*e*P	P	05 52 03.4	+1.4
	104nm,0.9s						
NOUC	Port Laguerre	15.19	251	*e*P	P	05 52 02.4	-1.0
RAR	Rarotonga	17.76	104	P	P	05 52 26.2	-0.9
	5.3nm,0.3s,baz=247,slow=6.0,SNR=21						
RAR	Rarotonga	17.76	104	*e*P	P	05 52 26.2	-0.8
	224nm,0.9s						
OUZ	Omahuta	18.91	201	*e*P	P	05 52 39.6	+2.2
	273nm,0.9s						
URZ	Urewera	20.89	190	P	P	05 52 53.1	-2.2
	90nm,0.8s,baz=14,slow=5.2,SNR=33						
URZ				S	S	05 56 03.2	-8.4
	11nm,0.7s,baz=167,slow=23,SNR=3.8						
URZ	Urewera	20.89	190	*e*P	P	05 52 53.2	-2.0
	87nm,0.9s						
URZ				*e*S	S	05 56 06.2	-5.4
SNZO	South Karori	24.30	193	*e*P	P	05 53 23.5	-2.1
	69nm,0.8s,mb5.3						
KHZ	Kahutara	25.62	194	*e*P	P	05 53 35.6	-1.7
	55nm,0.7s,mb5.3						
PAE	Paea	27.29	94	*e*P	P	05 53 50.4	-1.9
	22nm,0.7s,mb4.9						
PPT	Papeete	27.30	94	*e*P	P	05 53 51.7	-0.7
	152nm,0.8s,mb5.7						
PPT	Papeete	27.30	94	P	P	05 53 51.5	-0.9
	174nm,0.7s,mb5.8,baz=232,slow=4.4,SNR=23						
RPZ	Rata Peaks	27.47	197	P	P	05 53 53.0	-0.5
	24nm,0.5s,mb5.1,baz=87,slow=2.3,SNR=10						
RPZ				PcP	PcP	05 56 52.5	-0.5
	8.0nm,0.6s,baz=297,slow=4.5,SNR=2.3						
RPZ	Rata Peaks	27.47	197	*e*P	P	05 53 54.7	+1.2
	31nm,0.7s,mb5.0						
TBI	Tubuai	27.50	107	*e*P	P	05 53 54.0	-0.1
	358nm,0.8s,mb6.1						
TIAR	Tiarei	27.52	94	*e*P	P	05 53 52.6	-1.7
	275nm,0.8s,mb5.9						
XMAS	Kiritimati	28.37	48	*e*P	P	05 54 00.4	-1.3
	53nm,0.8s,mb5.2						
MEH	Mehetia	28.71	95	*e*P	P	05 54 02.6	-2.1
	116nm,0.9s,mb5.5						
ODZ	Otahua Downs	28.81	196	*e*P	P	05 54 03.4	-1.8
	66nm,0.6s,mb5.4						
PMOR	Pomariorio Ree	29.22	89	*e*P	P	05 54 08.2	-0.9
	327nm,1.1s,mb5.9						
EIDS	Eidsvold	29.50	250	*e*P	P	05 54 11.2	-0.2
	52nm,0.9s,mb5.2						
ARMA	Armidale	30.19	240	⇓*i*P	P	05 54 18.4	+1.1
ARMA	Armidale	30.19	240	*e*P	P	05 54 18.5	+1.2
	66nm,0.8s,mb5.2						
RIV	Riverview	31.75	234	*e*P	P	05 54 31.2	+0.7
CTA	Charters Tower	33.65	260	P	P	05 54 47.0	+0.2
	38nm,0.7s,mb5.0,baz=85,slow=11,SNR=22						
CTA				PcP	PcP	05 57 10.2	+0.1
	2.0nm,0.3s,baz=343,slow=0.9,SNR=3.8						
CTA	Charters Tower	33.65	260	*e*P	P	05 54 46.9	+0.1
	32nm,0.7s,mb5.0						
CTA				*e*PCP	PcP	05 57 09.9	-0.2
CTA	Charters Tower	33.65	260	P	P	05 54 47.0	+0.2
CTA				PcP	PcP	05 57 10.2	+0.1
CTAO	Charters Tower	33.65	260	*e*P	P	05 54 46.6	-0.2
	33nm,0.7s,mb5.0						
CTAO	Charters Tower	33.65	260	P	P	05 54 47.3	+0.5
	63nm,0.8s,mb5.2						
CNB	Canberra Magne	33.69	232	⇓*i*P	P	05 54 47.9	+1.0
CNB				*e*PCP	PcP	05 57 11.1	+1.2
CAN	Canberra	33.96	232	*e*P	P	05 54 49.9	+0.6
	216nm,1.3s,mb5.5						
PMG	Port Moresby	34.59	279	*e*P	P	05 54 55.9	+1.2
	73nm,0.9s,mb5.2						
PMG	Port Moresby	34.59	279	P	P	05 54 56.2	+1.4
	1um96nm,0.9s,mb5.3						
COEN	Coen	37.27	270	*e*P	P	05 55 17.8	+0.9
	923nm,0.9s						
COEN	Coen	37.27	270	P	P	05 55 17.8	+0.9
	505nm,0.8s,mb6.1						
TOO	Toolangi	37.43	231	⇓*i*P	P	05 55 18.5	+0.7
MOO	Moorlands	38.36	223	*e*P	P	05 55 25.8	+0.5
TAU	Tasmania Unive	38.51	222	*e*P	P	05 55 26.9	+0.5
	189nm,0.9s,mb5.6						
STKA	Stephens Creek	38.88	241	P	P	05 55 30.6	+0.9
	186nm,0.8s,mb5.6,baz=87,slow=8.6,SNR=224						
STKA				PcP	PcP	05 57 26.3	+0.4
	3.4nm,0.5s,baz=289,slow=1.1,SNR=2.8						
STKA	Stephens Creek	38.88	241	⇓*i*P	P	05 55 30.4	+0.7
	148nm,0.9s,mb5.5						
STKA				*e*PCP	PcP	05 57 26.3	+0.4
STKA				*e*S	S	06 00 47.2	-0.5
STKA	Stephens Creek	38.88	241	*e*P	P	05 55 30.4	+0.7
	41nm,0.9s,mb5.0						
RKT	Rikitea	40.79	105	*e*P	P	05 55 44.5	-0.6
	146nm,1.1s,mb5.4						
POHA	Pohakuloa	43.39	32	*e*P	P	05 56 04.8	-0.6
	56nm,0.7s,mb5.2						
KIP	Kipapa	43.64	28	*e*P	P	05 56 06.4	-0.9
	73nm,1.0s,mb5.2						
BBOO	Buckleboo	43.65	241	*e*P	P	05 56 07.4	0.0
	447nm,0.8s,mb6.0						
WRA	Warramunga Arr	44.83	259	P	P	05 56 16.0	-0.7
	74nm,0.7s,mb5.3,baz=92,slow=7.3,SNR=828						
WRA				PcP	PcP	05 57 45.0	-1.3
	15nm,0.8s,baz=95,slow=3.3,SNR=11						
WRA				S	S	06 02 11.2	-2.3
	6.0nm,1.0s,baz=98,slow=16,SNR=14						
ASAR	Alice Springs	45.01	254	P	P	05 56 18.1	+0.1
	441nm,0.7s,mb6.1,baz=87,slow=8.4,SNR=3159						
ASAR				PcP	PcP	05 57 46.4	-0.4
	22nm,0.8s,baz=96,slow=4.3,SNR=7.9						
ASAR				S	S	06 02 14.2	-1.6
	20nm,0.9s,baz=89,slow=15,SNR=44						
BAKI	Biak	47.75	285	P	P	05 56 40.0	+1.2
	119nm,0.8s,mb5.5						
KAKA	Kakadu	47.75	269	⇓*i*P	P	05 56 38.4	-0.4
	82nm,0.6s,mb5.4						
KAKA				*e*S	S	06 02 53.3	-1.0
KAKA	Kakadu	47.75	269	*e*P	P	05 56 38.7	-0.1
	246nm,0.6s,mb5.9						
KAKA	Kakadu	47.75	269	P	P	05 56 38.3	-0.5
	2um218nm,0.6s,mb5.8						
GUMO	Guam	47.88	308	P	P	05 56 39.7	0.0
	35nm,0.5s,mb5.2,baz=192,slow=20,SNR=3.7						
TLE	Tual	49.34	278	P	P	05 56 50.8	+0.2
	151nm,0.8s,mb5.5						
FORT	Forrest	50.25	244	⇓*i*P	P	05 56 56.4	-0.6
	258nm,0.6s,mb5.8						
FORT	Forrest	50.25	244	*e*P	P	05 56 56.4	-0.6
	251nm,0.6s,mb5.8						
KNA	Kununurra	50.66	264	P	P	05 56 59.9	-0.3
	4um436nm,0.8s,mb5.8						
SWI	Sorong	52.36	283	P	P	05 57 13.3	+0.8
	3um335nm,0.8s,mb5.7						
FITZ	Fitzroy Crossi	53.23	260	⇓*i*P	P	05 57 18.6	0.0
	24nm,0.6s,mb4.7						
FITZ				*e*S	S	06 04 08.4	+0.5
FITZ	Fitzroy Crossi	53.23	260	*e*P	P	05 57 18.3	-0.3
	33nm,1.0s,mb4.6						
FITZ	Fitzroy Crossi	53.23	260	P	P	05 57 18.9	+0.3
	69nm,1.4s,mb4.8						
NLAI	Namlea	55.43	278	P	P	05 57 33.8	-0.4
	1um115nm,1.0s,mb5.1						
TNTI	Ternate	56.58	283	P	P	05 57 43.0	+1.0
	187nm,0.9s,mb5.3						
MBWA	Marble Bar	58.29	256	*e*P	P	05 57 53.0	-0.6
	69nm,0.7s,mb5.0						
MBWA	Marble Bar	58.29	256	P	P	05 57 52.8	-0.8
	115nm,0.9s,mb5.1						
MMRI	Maumere	58.46	271	P	P	05 57 54.6	-0.2
	144nm,0.8s,mb5.2						
KDI	Kendari	59.44	276	P	P	05 58 01.4	0.0
	48nm,1.1s,mb4.6						
NWAO	Narrogin (SRO)	59.45	242	*e*P	P	05 58 00.7	-0.5
	75nm,1.1s,mb4.8						
KMSI	Cibinong	59.66	281	P	P	05 58 02.8	-0.1
	261nm,0.8s,mb5.6						
SBA	Scott Base	60.64	184	*e*P	P	05 58 09.9	+1.7
	49nm,0.9s,mb4.8						
BKSI	Bulukumba	61.40	274	P	P	05 58 13.8	-0.5
	568nm23nm,0.7s,mb4.6						
MRSI	Marisa	61.53	280	P	P	05 58 15.2	0.0
	616nm50nm,0.9s,mb5.0						
KAPI	Kappang	61.84	274	*e*P	P	05 58 16.0	-1.3
	26nm,0.9s,mb4.7						
KAPI	Kappang	61.84	274	P	P	05 58 16.5	-0.7
	20nm,1.0s,mb4.5						
BMNI	Bima	61.87	270	P	P	05 58 17.0	-0.4
	4um362nm,0.8s,mb5.8						
MTNI	Mataram	64.24	269	P	P	05 58 31.3	-1.3
	145nm,0.8s,mb5.5						
IGBI	Denpasar	65.17	268	P	P	05 58 38.7	+0.2
	432nm,1.0s,mb5.8						
SRBI	Singaraja	65.30	269	P	P	05 58 38.3	-1.0
	102nm,1.1s,mb5.2						
KBKI	Kotabaru	65.77	274	P	P	05 58 43.0	+0.8
	3um56nm,1.0s,mb5.0						
JAGI	Jajag, Banyuwa	66.21	268	P	P	05 58 43.8	-1.1
	1um184nm,0.8s,mb5.7						
CASY	Casey	66.40	205	*e*P	P	05 58 44.8	-0.3
CASY	Casey	66.40	205	*e*P	P	05 58 44.9	-0.2
	81nm,1.0s,mb5.2						
GMJI	Gumukmas	66.94	268	P	P	05 58 48.9	-0.5
	85nm,0.8s,mb5.3						
BBKI	Banjar Baru	66.98	274	P	P	05 58 50.6	+0.9
	103nm,0.9s,mb5.3						
MJAR	Matsushiro Arr	67.84	323	P	P	05 58 54.0	-0.5
	13nm,0.8s,mb4.5,baz=167,slow=6.3,SNR=21						
MAJO	Matsushiro	67.84	323	*e*P	P	05 58 53.8	-0.6
	23nm,0.9s,mb4.7						
KRKI	Karangkates	67.92	268	P	P	05 58 59.0	+3.6
PWJI	Pagerwojo	68.57	268	P	P	05 58 58.9	-0.5
	89nm,0.8s,mb5.3						
SJI	Sawahan	68.68	268	P	P	05 59 00.1	+0.1
	2um102nm,1.

56nm,0.8s,mb5.0
ISA Isabella 77.55 46 ⇑P P 05 59 50.5 +0.3
baz=78,SNR=15
ISA Isabella 77.55 46 eP P 05 59 50.0 -0.2
20nm,1.0s,mb4.4
MONP Monument Peak 77.55 49 ⇑P P 05 59 51.0 +0.7
baz=78,SNR=9.2
CMB Columbia Colle 77.57 43 eP P 05 59 49.9 -0.3
11nm,0.8s,mb4.2
CMB epP pP 06 01 51.2 +1.5
NJ2 Nanjing 77.93 309 eP P 05 59 52.3 0.0
NJ2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.1
LRMC Laurel Mountai 77.99 47 ⇓P P 05 59 52.8 +0.2
baz=78,SNR=6.2
MDJ Mudanjiang 78.11 325 P P 05 59 53.3 +0.3
MDJ sP sP 06 02 52.0 +1.4
MDJ PP PP 06 03 00.0 -0.3
MDJ S S 06 09 02.3 +1.0
MDJ ScS ScS 06 09 20.8 0.0
MDJ pmax pmax
comp=Z,42nm,1.3s,mb4.6
MDJ pmax pmax
comp=Z,110nm,4.1s
KDAK Kodiak Island 78.16 14 P P 05 59 52.1 -0.8
comp=Z,25nm,0.6s,mb4.7,baz=196,slow=4.4,SNR=24
KDAK Kodiak Island 78.16 14 eP P 05 59 51.8 -1.1
comp=Z,46nm,0.8s,mb4.9
YBH Yreka Blue Hor 78.26 39 P P 05 59 54.1 +0.3
comp=Z,11nm,0.8s,mb4.2,baz=168,slow=1.6,SNR=20
YBH pP pP 06 01 53.6 +0.1
comp=Z,3.4nm,1.0s,baz=132,slow=15,SNR=3.5
YBH Yreka Blue Hor 78.26 39 eP P 05 59 54.0 +0.1
comp=Z,14nm,0.8s,mb4.3
BELC Belle Mtn. Jos 78.42 49 ⇑P P 05 59 55.0 +0.1
baz=78,SNR=5.9
MPMC Manual Prospec 78.44 46 ⇓P P 05 59 55.5 +0.5
baz=79,SNR=9.7
MPMC ⇓pP pP 06 01 55.0 +0.3
baz=79
WAKR Walker 78.45 43 eP P 05 59 55.5 +0.5
comp=Z,30nm,0.9s,mb4.6
TIN Tinemaha 78.47 45 ⇑P P 05 59 55.6 +0.5
baz=79
GSC Goldstone 78.52 47 ⇑P P 05 59 55.2 -0.2
baz=79
KSI Kapahiang 78.59 270 P P 05 59 58.0 +1.7
comp=Z,110nm,1.0s,mb5.1
HEC Hector,Ludlow 78.61 48 ⇑P P 05 59 55.3 -0.6
baz=79
HUMO Hull Mountain 78.63 38 eP P 05 59 55.8 0.0
comp=Z,12nm,1.0s,mb4.2
BC3 Big Chuckawall 78.64 49 ⇑P P 05 59 55.8 -0.3
baz=79
WCN Washoe City 78.69 42 ⇑P P 05 59 56.6 +0.4
baz=79,SNR=14
WCN ⇑pP pP 06 01 56.6 +0.6
baz=79
WCN Washoe City 78.69 42 eP P 05 59 56.4 +0.2
comp=Z,13nm,0.9s,mb4.3
WCN epP pP 06 01 55.8 -0.3
GLA Glamis 78.79 50 ⇑P P 05 59 56.9 -0.1
baz=79
GRAC Grapevine Rang 79.02 45 P P 05 59 58.4 +0.4
baz=79,SNR=15
GRAC ⇓pP pP 06 01 58.3 +0.3
baz=79
GMRC Granite Mounta 79.06 48 ⇓pP pP 06 01 59.0 +0.7
baz=79
FURC Furnace Creek, 79.09 46 ⇓P P 05 59 58.5 +0.1
baz=79,SNR=5.4
FURC ⇑pP pP 06 01 59.6 +1.2
baz=79
IRM Iron Mountain 79.11 49 ⇑P P 05 59 58.9 +0.3
baz=79
IRM ⇓pP pP 06 01 58.9 +0.3
baz=79
PAHR Pah Rah Range 79.16 42 eP P 05 59 58.5 -0.2
comp=Z,21nm,1.2s,mb4.3
PAHR epP pP 06 01 59.6 +0.9
NVAR Mina Array Bea 79.16 44 P P 05 59 58.9 +0.2
comp=Z,10nm,0.8s,mb4.2,baz=225,slow=8.9,SNR=78
NVAR pP pP 06 02 00.1 +1.4
comp=Z,7.2nm,1.0s,baz=232,slow=9.4,SNR=10
SHOC Shoshone 79.19 47 ⇑P P 05 59 59.1 +0.1
baz=79
SHOC ⇓pP pP 06 01 59.3 +0.3
baz=79
TUQ Turquoise Moun 79.20 47 ⇑P P 05 59 59.3 +0.3
baz=79,SNR=5.4
Y12C Blythe 79.36 49 ⇑P P 05 59 59.9 0.0
baz=80
U10A Ash Meadows, A 79.43 46 ⇓P P 06 00 00.1 -0.1
baz=80
LDFC Landfair 79.60 48 eP P 06 00 01.1 0.0
comp=Z,43nm,1.2s,mb4.7
Z13A Yuma Proving G 79.72 50 ⇓P P 06 00 01.8 0.0
baz=80,SNR=5.2
Z13A ⇓pP pP 06 02 03.0 +1.0
baz=80
MOD Modoc 79.82 40 eP P 06 00 01.8 -0.3
comp=Z,8.9nm,0.6s,mb4.3
MOD epP pP 06 02 02.6 +0.2
IRO Indian Ridge 79.88 37 P P 06 00 02.4 0.0
Y13A Salome 79.89 50 ⇓P P 06 00 03.1 +0.4
baz=80,SNR=7.4
K05A Summer Lake 79.93 39 P P 06 00 03.3 +0.6
baz=80,SNR=12
CN2 Changchun 79.96 322 eP P 06 00 02.5 -0.3
CN2 pmax pmax
comp=Z,40nm,1.1s,mb4.7
114A Black Gap (USA 80.08 51 ⇓P P 06 00 03.5 -0.2
baz=80
V12A Nelson 80.10 48 ⇑P P 06 00 04.0 +0.3
baz=80
V12A ⇓pP pP 06 02 04.8 +0.7
baz=80
X13A Yucca 80.27 49 ⇓P P 06 00 05.1 +0.5
baz=80
X13A ⇑pP pP 06 02 06.5 +1.4
baz=80
SHPR Sheep Range 80.28 47 eP P 06 00 04.9 +0.3
comp=Z,5.5nm,0.9s,mb3.9
H04A Detroit Lake 80.33 37 ⇓P P 06 00 04.3 -0.4
baz=80,SNR=7.0
G04A Mulino 80.47 36 ⇑P P 06 00 05.6 +0.2
baz=81
SDSI Sungai Dareh 80.51 272 P P 06 00 05.5 -0.9
comp=Z,43nm,1.2s,mb4.8
Y14A Wickenburg 80.55 50 ⇓P P 06 00 06.1 0.0
baz=81
Y14A ⇓pP pP 06 02 06.4 -0.2
baz=81
RSO Redoubt South 80.56 12 eP P 06 00 04.2 -1.4
comp=Z,83nm,0.9s,mb5.2
WHN Wuhan 80.62 306 P P 06 00 06.8 +0.3
U12A Valley of Fire 80.68 47 ⇑P P 06 00 07.0 +0.3
baz=81,SNR=6.1
U12A ⇓pP pP 06 02 09.0 +1.7
baz=81
V13A Grand Canyon W 80.78 48 ⇑P P 06 00 07.6 +0.4
baz=81
X14A Yava 80.89 50 ⇓P P 06 00 08.1 +0.2
baz=81,SNR=5.7
X14A ⇓pP pP 06 02 10.2 +1.7
baz=81
R11A Troy Canyon, C 80.93 45 ⇑P P 06 00 08.0 +0.1
baz=81,SNR=7.6
R11A ⇓pP pP 06 02 09.7 +1.1
baz=81
F04A Amboy 80.94 36 ⇓P P 06 00 07.7 -0.1
baz=81
HOOD Mount Hood Mea 81.01 37 eP P 06 00 08.0 -0.2
comp=Z,34nm,0.9s,mb4.8
LVP Lakeview Peak 81.03 36 P P 06 00 08.3 0.0
Y15A Casa Rosa Ranc 81.05 50 ⇓P P 06 00 08.7 0.0
baz=81,SNR=11
Y15A ⇑pP pP 06 02 09.9 +0.4
baz=81
U13A Pakoon Wash 81.07 47 ⇑P P 06 00 08.8 +0.1
baz=81,SNR=16
U13A ⇑pP pP 06 02 11.2 +1.7
baz=81
W14A Seligman 81.11 49 ⇑P P 06 00 09.2 +0.2
baz=81,SNR=9.0
W14A ⇑pP pP 06 02 09.3 -0.4
baz=81
VIPM Ingram Point 81.13 38 P P 06 00 08.8 0.0

WVOR Wild Horse Val 81.14 40 eP P 06 00 09.0 +0.1
comp=Z,27nm,0.9s,mb4.7
WVOR epP pP 06 02 11.1 +1.4
BKNI Bangkinang 81.26 273 P P 06 00 11.5 +1.2
comp=Z,1μmcomp=Z,98nm,1.3s,mb5.1
V14A Boquillas Ranc 81.30 48 ⇓P P 06 00 10.2 +0.3
baz=81,SNR=11
X15A Humboldt 81.37 50 ⇓P P 06 00 10.6 +0.3
baz=82,SNR=7.8
X15A ⇓pP pP 06 02 11.2 0.0
baz=82
GULW Guler Mountain 81.40 36 P P 06 00 10.2 +0.1
T13A Saint George 81.41 47 ⇑P P 06 00 10.8 +0.3
baz=82,SNR=8.5
Z16A Peralta Trail, 81.43 51 ⇑P P 06 00 10.5 -0.1
baz=82
TUC Tucson 81.44 52 eP P 06 00 11.3 +0.6
comp=Z,2.5nm,1.0s
TUC epP pP 06 02 12.4 +0.8
I07A Izee 81.54 39 P P 06 00 11.3 +0.4
baz=82,SNR=22
I07A ⇓pP pP 06 02 13.0 +1.2
baz=82
G06A Carlson Farm, 81.54 37 ⇑P P 06 00 10.9 -0.1
baz=82,SNR=5.7
117A Oracle 81.59 52 ⇓P P 06 00 11.8 +0.3
baz=82
U14A Mt Trumbull 81.62 48 P P 06 00 12.2 +0.7
baz=82,SNR=25
Y16A Circle Bar Ran 81.64 51 ⇑P P 06 00 12.2 +0.5
baz=82,SNR=7.8
318A Bisbee 81.65 53 ⇓P P 06 00 12.1 +0.3
baz=82,SNR=5.4
S13A Holt Ranch, En 81.72 46 ⇑P P 06 00 12.0 0.0
baz=82
J08A Circle Bar Ran 81.75 40 ⇓P P 06 00 12.5 +0.4
baz=82,SNR=14
LON Longmire 81.77 35 eP P 06 00 11.1 -0.9
comp=Z,9.1nm,0.8s,mb4.3
218A Dragoon 81.85 53 ⇑P P 06 00 13.7 +0.9
baz=82,SNR=6.8
X16A Lo Mia Camp, P 81.92 50 ⇑P P 06 00 13.8 +0.6
baz=82
X16A ⇑pP pP 06 02 14.6 +0.4
baz=82
D05A Enumclaw 81.94 35 ⇓P P 06 00 13.5 +0.6
baz=82,SNR=5.7
R13A O'Grain Ranch, 81.94 46 ⇓P P 06 00 13.7 +0.6
baz=82
T14A Hurricane 82.00 47 ⇑P P 06 00 13.5 +0.1
baz=82
CCUT Cedar City 82.05 47 eP P 06 00 14.4 +0.7
comp=Z,11nm,0.9s,mb4.3
CCUT epP pP 06 02 16.5 +1.6
V15A Kaibab Nationa 82.05 49 ⇓P P 06 00 14.9 +1.1
baz=82,SNR=9.5
319A Douglas 82.17 54 ⇓P P 06 00 15.7 +1.2
baz=82
W16A Flagstaff 82.17 49 ⇑P P 06 00 15.0 +0.6
baz=82,SNR=5.7
118A Homack Ranch, 82.20 52 ⇓P P 06 00 15.0 +0.4
baz=82
TTA Tatalina 82.24 10 eP P 06 00 13.4 -0.6
U15A North Rim 82.25 48 P P 06 00 15.7 +1.0
baz=82,SNR=31
U15A ⇑pP pP 06 02 15.7 -0.3
baz=82
F07A Phinny Hill Vi 82.33 37 ⇑P P 06 00 14.9 0.0
baz=82
X17A Forest Lakes 82.35 50 ⇑P P 06 00 15.4 +0.1
baz=82,SNR=5.1
PMR Palmer 82.36 14 eP P 06 00 13.4 -1.3
comp=Z,19nm,0.5s,mb4.8
219A White Tail Can 82.46 53 ⇑P P 06 00 15.8 -0.1
baz=83
T15A Red Dirt Ranch 82.47 47 ⇓P P 06 00 16.0 +0.1
baz=83,SNR=10.0
G08A Pilot Rock 82.54 38 ⇓P P 06 00 16.3 +0.3
baz=83,SNR=19
G08A ⇓pP pP 06 02 19.4 +2.1
baz=83,SNR=8.4
IPM Ipoh 82.56 277 eP P 06 00 17.1 +0.3
comp=Z,57nm,0.9s,mb5.1
Y18A Canyon Day Jun 82.67 51 ⇓P P 06 00 17.8 +0.9
baz=83,SNR=7.5
Y18A ⇓pP pP 06 02 19.9 +1.6
baz=83
320A Kipp Ranch, An 82.73 54 ⇓P P 06 00 17.8 +0.5
baz=83,SNR=9.2
SML Sawmill 82.73 14 eP P 06 00 14.1 -2.5
comp=Z,2.7nm,0.7s,mb3.9
E07A Sunnyside 82.75 36 ⇑P P 06 00 17.3 +0.2
baz=83,SNR=6.8
S15A Panguitch 82.80 47 ⇑P P 06 00 18.6 +1.1
baz=83,SNR=7.4
Q14A Sevier Lake (B 82.81 45 P P 06 00 17.9 +0.4
baz=83,SNR=23
Q14A ⇓pP pP 06 02 19.6 +0.6
baz=83
HAWA Hanford 82.84 37 eP P 06 00 17.1 -0.4
comp=Z,22nm,0.9s,mb4.7
PPLA Purkeypile 82.89 12 eP P 06 00 16.1 -1.2
comp=Z,8.6nm,0.7s,mb4.4
U16A Tuba City 82.95 49 ⇑P P 06 00 18.9 +0.6
baz=83,SNR=15
V17A Tonalea, Kykot 82.95 49 ⇓P P 06 00 18.6 +0.3
baz=83,SNR=9.1
V17A ⇑pP pP 06 02 19.9 +0.1
baz=83
X18A Snowflake 83.07 51 ⇑P P 06 00 19.3 +0.4
baz=83
T16A Glen Canyon Da 83.07 48 ⇓P P 06 00 18.9 +0.1
baz=83
ETW Entiat 83.09 35 P P 06 00 18.4 -0.3
R15A Junction 83.12 46 ⇑P P 06 00 19.3 +0.3
baz=83
E08A Dider Farm, El 83.16 37 ⇓P P 06 00 19.2 +0.2
baz=83
P14A Drum Mountains 83.25 45 ⇓P P 06 00 20.0 +0.3
baz=83,SNR=11
P14A ⇓pP pP 06 02 21.6 +0.3
baz=83
BMO Blue Mountains 83.28 39 eP P 06 00 19.1 -0.6
comp=Z,4.2nm,0.8s,mb4.0
BMO epP pP 06 02 22.9 +1.6
PNL Peninsula 83.31 19 eP P 06 00 18.6 -0.9
comp=Z,21nm,0.9s,mb4.7
Y19A Nutrioso 83.33 51 ⇓P P 06 00 20.8 +0.6
baz=83,SNR=6.7
Y19A ⇓pP pP 06 02 23.1 +1.3
baz=83
MSU Marysvale 83.33 46 eP P 06 00 20.7 +0.6
comp=Z,19nm,1.4s,mb4.4
WTV Waterville 83.35 35 P P 06 00 19.4 -0.5
S16A Weppner Ranch, 83.36 47 ⇑P P 06 00 20.1 -0.2
baz=84
MFID Camas Ranch 83.41 41 ⇓P P 06 00 20.7 +0.3
baz=84,SNR=14
MFID ⇑pP pP 06 02 23.9 +1.9
baz=84
Q15A Fillmore 83.43 46 ⇓P P 06 00 20.9 +0.3
baz=84,SNR=6.7
U17A Shonto 83.49 48 ⇓P P 06 00 21.4 +0.5
baz=84
D08A Wollman Farm, 83.56 36 ⇓P P 06 00 21.2 +0.1
baz=84,SNR=9.3
T17A Navajo Res., N 83.58 48 ⇓P P 06 00 22.0 +0.6
baz=84,SNR=10
R16A Teasdale 83.70 47 ⇑P P 06 00 22.5 +0.5
baz=84,SNR=7.1
DUG Dugway 83.72 44 ⇓P P 06 00 22.2 +0.2
baz=84
DUG ⇓pP pP 06 02 25.0 +1.3
baz=84
BJI Beijing 83.75 315 P P 06 00 22.5 +0.3
BJI sP sP 06 03 19.3 -2.1
BJI S S 06 09 51.0 -7.5
BJI sS sS 06 13 33.0 -2.6
BJI pmax pmax
comp=Z,30nm,1.0s,mb4.8
TRF Thorofare Moun 83.77 12 eP P 06 00 20.0 -1.7
comp=Z,62nm,0.7s,mb5.2
OD2 Odessa Site #2 83.87 36 P P 06 00 22.2 -0.3
S17A Black Ridge (B 83.87 48 ⇑P P 06 00 22.8 -0.1
baz=84
F10A Beach Ranch, E 83.93 38 P P 06 00 22.4 -0.5
baz=84,SNR=19
F10A ⇓pP pP 06 02 26.6 +1.8

baz=84
Y20A Horse Springs, 83.96 52 ⇑P P 06 00 24.0 +0.7
baz=84
Y20A ⇑pP pP 06 02 25.6 +0.3
baz=84
U18A Rough Rock, Ch 83.98 49 ⇓P P 06 00 23.7 +0.3
baz=84
I12A Atlanta 84.03 40 ⇓P P 06 00 23.7 +0.3
baz=84,SNR=20
I12A ⇓pP pP 06 02 26.8 +1.4
baz=84,SNR=6.3
B08A Colville Reser 84.07 35 ⇑P P 06 00 22.9 -0.6
baz=84,SNR=14
MAW Mawson 84.11 200 P P 06 00 23.6 +0.1
comp=Z,44nm,0.7s,mb5.1,baz=136,slow=4.9,SNR=133
X20A Quemado 84.15 51 ⇑pP pP 06 02 26.3 +0.1
baz=84
BPAW Bear Paw Mtn. 84.22 12 eP P 06 00 21.1 -2.8
comp=Z,8.4nm,0.7s,mb4.4
Z21A St. Cloud Mine 84.23 53 ⇓pP pP 06 02 27.5 +0.8
baz=84,SNR=8.6
N15A Stansbury Isla 84.25 44 ⇑P P 06 00 24.5 -0.1
baz=84
MCK McKinley 84.30 13 eP P 06 00 22.6 -1.7
comp=Z,38nm,0.9s,mb4.9
T18A Mexican Hat 84.30 48 P P 06 00 25.3 +0.4
baz=84,SNR=15
T18A ⇓pP pP 06 02 27.8 +0.9
baz=84
R17A Hanksville Air 84.30 47 ⇑P P 06 00 24.9 0.0
baz=84
R17A ⇑pP pP 06 02 28.2 +1.3
baz=84
L14A Malta 84.34 43 ⇑P P 06 00 25.2 +0.2
baz=84
HLID Hailey 84.36 41 P P 06 00 25.5 +0.5
baz=84,SNR=16
HLID ⇑pP pP 06 02 28.4 +1.3
baz=84,SNR=6.9
HLID Hailey 84.36 41 eP P 06 00 25.1 0.0
comp=Z,21nm,1.0s,mb4.6
HLID epP pP 06 02 28.7 +1.6
U19A Dine' College, 84.40 49 ⇓P P 06 00 25.8 +0.4
baz=84,SNR=5.3
U19A ⇑pP pP 06 02 27.8 +0.4
baz=84
W20A Ramah 84.40 51 ⇓pP pP 06 02 28.3 +0.7
baz=84
PAX Paxson 84.41 14 eP P 06 00 23.1 -1.7
comp=Z,16nm,1.0s,mb4.5
J13A Cove Ranch, Pi 84.43 41 ⇓P P 06 00 25.6 +0.2
baz=85,SNR=18
J13A ⇑pP pP 06 02 28.9 +1.4
baz=85
SKAG Skagway 84.44 20 eP P 06 00 25.1 0.0
comp=Z,44nm,1.6s,mb4.7
M15A Larsen Ranch, 84.58 44 ⇓P P 06 00 26.2 0.0
baz=85
M15A ⇑pP pP 06 02 28.2 -0.1
baz=85
H12A Diamond D Ranc 84.60 40 ⇓P P 06 00 26.4 +0.2
baz=85,SNR=21
H12A ⇓pP pP 06 02 28.9 +0.6
baz=85
G12A Big Creek, Yel 84.61 39 ⇑P P 06 00 26.4 +0.1
baz=85,SNR=18
G12A ⇓pP pP 06 02 29.2 +0.8
baz=85,SNR=8.4
K14A Jones Ranch, D 84.63 42 ⇑P P 06 00 26.9 +0.5
baz=85,SNR=7.0
K14A ⇑pP pP 06 02 28.9 +0.3
baz=85
X21A Alamocita Cree 84.63 51 ⇑pP pP 06 02 31.0 +2.2
baz=85,SNR=5.7
I13A Wildhorse Cree 84.73 41 ⇓P P 06 00 27.1 +0.3
baz=85,SNR=6.7
I13A ⇑pP pP 06 02 30.1 +1.1
baz=85
Z22A Elephant Butte 84.75 53 ⇑pP pP 06 02 29.7 +0.3
baz=85
SRU San Rafael 84.75 46 P P 06 00 27.2 +0.1
baz=85,SNR=7.0
SRU San Rafael 84.75 46 eP P 06 00 27.1 +0.1
comp=Z,6.6nm,0.7s,mb4.3
SRU epP pP 06 02 30.3 +1.1
J14A Carey 84.81 41 ⇑P P 06 00 27.4 +0.2
baz=85,SNR=16
R18A Canyonlands Na 84.86 47 ⇓P P 06 00 27.5 -0.2
baz=85
L15A Malad City 84.88 43 ⇓P P 06 00 27.6 0.0
baz=85
H13A Challis 84.97 40 ⇓P P 06 00 28.1 0.0
baz=85,SNR=8.3
F12A Elk City 84.98 39 ⇑P P 06 00 28.0 -0.1
baz=85
Q18A Rafter H Ranch 85.02 46 ⇓P P 06 00 28.4 0.0
baz=85
M16A Huntsville 85.04 44 ⇓P P 06 00 28.5 0.0
baz=85
GYA Guiyang 85.08 300 P P 06 00 29.8 +0.8
GYA pP pP 06 02 32.8 +1.5
GYA sP sP 06 03 29.0 +0.4
GYA PP PP 06 03 58.5 +1.5
GYA SKS 06 09 56.5
GYA S S 06 10 11.0 -0.9
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
GYA pmax pmax
comp=Z,110nm,5.0s
S19A Harvey Farm, M 85.10 48 ⇑P P 06 00 28.8 0.0
baz=85
O17A Robinson Place 85.11 45 P P 06 00 29.4 +0.6
baz=85,SNR=11
O17A ⇑pP pP 06 02 30.2 -0.9
baz=85
K15A Arbon 85.12 42 P P 06 00 28.9 +0.1
baz=85,SNR=6.4
I14A Mackay 85.15 41 P P 06 00 29.8 +0.9
baz=85,SNR=15
HWUT Hardware Ranch 85.22 44 eP P 06 00 28.1 -1.2
comp=Z,2.3nm,0.8s,mb3.8
NEW Newport 85.24 36 ⇑P P 06 00 28.7 -0.5
baz=85,SNR=8.0
NEW Newport 85.24 36 eP P 06 00 28.1 -1.1
comp=Z,5.3nm,0.7s,mb4.2
G13A Cobalt 85.26 40 ⇓P P 06 00 29.4 0.0
baz=85
R19A Curley Farm, L 85.26 47 ⇑P P 06 00 29.4 -0.2
baz=85,SNR=5.2
425A Indio Mountain 85.26 56 ⇑pP pP 06 02 32.0 -0.2
baz=85
BNM Barren Site 85.38 52 eP P 06 00 30.5 +0.3
comp=Z,1.6nm,0.7s,mb3.7
PV10 Paradox Valley 85.45 47 eP P 06 00 30.5 +0.1
comp=Z,94nm,0.9s,mb5.3
626A Big Bend Ranch 85.45 57 ⇓pP pP 06 02 32.8 -0.3
baz=86
C11A Tepee Creek (N 85.50 37 ⇓P P 06 00 30.6 +0.1
baz=86,SNR=26
325A Bean Ranch, Si 85.51 55 ⇑P P 06 00 30.9 -0.1
baz=86
J15A Blackfoot 85.53 42 ⇓P P 06 00 31.0 +0.3
baz=86,SNR=14
J15A ⇑pP pP 06 02 34.4 +1.2
baz=86
COLA College 85.53 13 eP P 06 00 28.3 -1.9
comp=Z,44nm,1.1s,mb5.0
H14A Leadore 85.55 40 P P 06 00 31.3 +0.5
baz=86,SNR=10
H14A ⇑pP pP 06 02 34.2 +0.9
baz=86
F13A Darby 85.55 39 ⇓P P 06 00 30.5 -0.2
baz=86,SNR=14
PV04 Paradox Valley 85.55 48 eP P 06 00 30.6 -0.3
DLBC Dease Lake 85.57 23 eP P 06 00 30.2 -0.4
DLBC epP pP 06 02 35.0 +2.0
U21A Nageezi 85.58 50 ⇑P P 06 00 31.4 +0.2
baz=86,SNR=9.5
U21A ⇓pP pP 06 02 35.2 +1.5
baz=86,SNR=5.5
D12A Red Ives Fores 85.61 38 ⇓P P 06 00 30.8 -0.2
baz=86
ILAR Eielson Array 85.65 13 P P 06 00 28.9 -1.8
comp=Z,9.5nm,0.7s,mb4.6,baz=223,slow=5.0,SNR=142
ILAR pP pP 06 02 32.5 -0.8
comp=Z,2.1nm,1.0s,baz=238,slow=4.8,SNR=4.9
ILAR PKKPbc PKKPbc 06 18 27.9 -4.5
comp=Z,0.4nm,0.6s,baz=339,slow=2.3,SNR=8.8

PV01	Paradox Valley	85.67	48	eP		P	06 00 31.4	-0.1
	comp=Z,346nm,0.8s,mb6.0							
526A	Mary Lane Ranc	85.69	57	⇓pP		pP	06 02 34.8	+0.4
	baz=86							
TXAR	Lajitas Array	85.74	58	P		P	06 00 33.1	+1.0
	comp=Z,3.3nm,0.7s,mb4.1,baz=218,slow=6.0,SNR=50							
TXAR				pP		pP	06 02 33.4	-1.2
	comp=Z,1.1nm,0.9s,baz=240,slow=4.2,SNR=4.1							
TXAR				PKKPbc		PKKPbc	06 18 30.7	+0.1
	comp=Z,0.3nm,0.7s,baz=64,slow=2.9,SNR=3.9							
TXAR	Lajitas Array	85.74	58	P		P	06 00 33.1	+1.0
TXAR				pP		pP	06 02 33.4	-1.2
TXAR				PKKPbc		PKKPbc	06 18 30.7	+0.1
K16A	Soda Springs	85.80	43	⇓P		P	06 00 32.7	+0.6
	baz=86,SNR=6.2							
TPTI		85.83	275	P		P	06 00 33.0	+0.1
	comp=Z,44nm,1.2s,mb5.0							
ANMO	Albuquerque	85.84	51	eP		P	06 00 32.6	+0.1
	comp=Z,5.3nm,1.0s,mb4.1							
ANMO				epP		pP	06 02 36.5	+1.4
C12B	Naegeli Ranch,	85.88	37	⇓P		P	06 00 32.1	-0.2
	baz=86							
L17A	Cokeville	85.91	44	⇑P		P	06 00 32.5	-0.1
	baz=86							
MCMT	McKenzie Canyo	85.97	40	eP		P	06 00 33.5	+0.7
	comp=Z,7.8nm,1.1s,mb4.2							
426A	McDonald Obser	85.97	56	⇑pP		pP	06 02 36.1	+0.3
	baz=86							
J16A	Bone	85.99	42	⇑P		P	06 00 33.1	+0.1
	baz=86,SNR=18							
J16A				⇓pP		pP	06 02 36.5	+0.9
	baz=86							
H15A	Lima	86.00	41	P		P	06 00 33.4	+0.5
	baz=86,SNR=14							
627A	Terlingua Ranc	86.01	58	⇓pP		pP	06 02 36.9	+0.9
	baz=86							
S21A	Coal Bank Pass	86.02	49	⇓P		P	06 00 33.1	-0.1
	baz=86,SNR=5.0							
S21A				⇓pP		pP	06 02 36.8	+0.9
	baz=86							
527A	Woodward Ranch	86.10	57	⇓P		P	06 00 33.8	0.0
	baz=86							
M18A	Lyman	86.13	44	⇓P		P	06 00 34.0	+0.3
	baz=86,SNR=5.3							
F14A	Wisdom	86.14	39	⇓P		P	06 00 33.6	0.0
	baz=86							
Y24A	Capitan	86.18	53	⇓pP		pP	06 02 38.0	+1.2
	baz=86							
K17A	Gardner Place,	86.19	43	P		P	06 00 34.5	+0.6
	baz=86,SNR=5.4							
RRI2	Red Ridge	86.22	42	eP		P	06 00 34.1	+0.1
	comp=Z,19nm,0.9s,mb4.7							
RRI2				epP		pP	06 02 37.8	+1.0
B12A	Libby	86.22	36	⇑P		P	06 00 34.0	+0.2
	baz=86							
Q20A	Ridgley Place,	86.23	47	⇓pP		pP	06 02 38.5	+1.5
	baz=86							
O19A	Miners Draw (B	86.25	46	⇓pP		pP	06 02 36.8	-0.2
	baz=86							
XAN	Xi'an	86.27	307	P		P	06 00 35.0	+0.5
XAN				pP		pP	06 02 34.0	-3.2
XAN				sP		sP	06 03 27.5	-6.9
XAN				PP		PP	06 04 05.5	-0.8
XAN				SKS			06 10 07.8	
XAN				S		S	06 10 21.8	-1.1
XAN				pmax		pmax		
	comp=Z,13nm,1.1s,mb4.5							
XAN				pmax		pmax		
	comp=Z,15nm,4.6s							
MSO	Missoula	86.32	38	eP		P	06 00 33.3	-1.1
	comp=Z,1.7nm,0.5s,mb3.9							
BSMT	Bassoo Peak	86.35	37	eP		P	06 00 34.1	-0.4
	comp=Z,11nm,0.9s,mb4.5							
G15A	Dillon	86.36	40	⇑P		P	06 00 34.8	+0.2
	baz=86,SNR=20							
G15A				⇑pP		pP	06 02 38.1	+0.6
	baz=86							
I16A	Newdale	86.36	42	⇑P		P	06 00 35.2	+0.6
	baz=86,SNR=18							
E14A	Clinton	86.37	39	⇓P		P	06 00 34.4	-0.3
	baz=86,SNR=10							
V23A	Ortiz Mt. (NFS	86.37	51	⇑P		P	06 00 35.9	+1.0
	baz=86							
V23A				⇓pP		pP	06 02 38.5	+0.7
	baz=86							
DLMT	Dillon	86.39	40	eP		P	06 00 34.3	-0.4
	comp=Z,20nm,1.3s,mb4.6							
P20A	De Beque	86.40	47	⇑P		P	06 00 35.3	+0.3
	baz=86							
P20A				⇑pP		pP	06 02 37.9	+0.1
	baz=86							
A12A	Yaak River Ran	86.43	36	⇑P		P	06 00 35.0	+0.1
	baz=87							
628A	Black Gap, Mar	86.43	58	⇑pP		pP	06 02 37.2	-1.0
	baz=86							
R21A	Cimarron	86.50	48	⇓P		P	06 00 36.1	+0.6
	baz=87,SNR=6.2							
R21A				⇓pP		pP	06 02 38.5	+0.2
	baz=87							
TPAW	Teton Pass	86.52	42	eP		P	06 00 35.1	-0.3
	comp=Z,13nm,1.3s,mb4.4							
TPAW				epP		pP	06 02 39.0	+0.7
REDW	Red Top Meadow	86.52	42	eP		P	06 00 35.1	-0.3
	comp=Z,16nm,1.1s,mb4.6							
427A	Hayter Ranch,	86.54	56	⇑P		P	06 00 35.4	-0.4
	baz=87							
427A				⇓pP		pP	06 02 38.6	-0.1
	baz=87							
USHA	Ushuaia	86.58	147	P		P	06 00 35.8	+0.2
	comp=Z,7.0nm,0.9s,mb4.3,baz=214,slow=11,SNR=7.3							
U23A	El Rito	86.61	50	⇑pP		pP	06 02 40.2	+1.3
	baz=87,SNR=7.5							
J17A	Brown Place, J	86.61	42	⇓P		P	06 00 36.0	+0.2
	baz=87,SNR=14							
J17A				⇓pP		pP	06 02 39.8	+1.0
	baz=87							
SNOW	Snow King Moun	86.63	42	eP		P	06 00 36.0	0.0
	comp=Z,14nm,0.9s,mb4.6							
F15A	Butte	86.69	40	⇑P		P	06 00 36.4	+0.3
	baz=87,SNR=5.1							
LRM	Limekiln Ridge	86.71	40	eP		P	06 00 37.0	+0.7
	comp=Z,26nm,0.8s,mb4.9							
K18A	Toltan Ranch,	86.71	43	⇑P		P	06 00 36.6	+0.3
	baz=87,SNR=10.0							
K18A				⇓pP		pP	06 02 39.6	+0.3
	baz=87							
IMW	Indian Meadow	86.72	42	eP		P	06 00 36.6	+0.3
	comp=Z,15nm,0.9s,mb4.6							
IMW				epP		pP	06 02 41.0	+1.7
S22A	4UR Ranch, Cre	86.75	49	⇑P		P	06 00 37.2	+0.5
	baz=87,SNR=5.9							
S22A				⇑pP		pP	06 02 40.6	+1.0
	baz=87							
Y25A	Mesa, Roswell	86.75	53	⇑pP		pP	06 02 40.9	+1.2
	baz=87							
MOOW	Moose Ponds	86.77	42	eP		P	06 00 36.4	-0.2
	comp=Z,4.8nm,1.0s,mb4.1							
G16A	Moss Hill, Enn	86.81	40	⇓P		P	06 00 36.9	+0.2
	baz=87,SNR=5.8							
DAWY	Dawson	86.84	16	eP		P	06 00 35.7	-0.8
QLMT	Earthquake Lak	86.86	41	eP		P	06 00 38.1	+1.2
	comp=Z,3.6nm,0.9s,mb4.0							
H16A	Russell Place,	86.91	41	P		P	06 00 38.2	+1.0
	baz=87,SNR=22							
H16A				⇓pP		pP	06 02 40.8	+0.5
	baz=87							
L19A	Farson	86.91	44	⇓P		P	06 00 37.3	0.0
	baz=87,SNR=6.5							
FLWY	Flagg Ranch	86.96	42	eP		P	06 00 37.9	+0.4
	comp=Z,14nm,1.0s,mb4.6							
I17A	Pilgrim Ck.	86.96	42	⇑P		P	06 00 37.9	+0.4
	baz=87,SNR=5.3							
EGAK	Eagle	86.97	15	eP		P	06 00 35.9	-1.1
	comp=Z,21nm,1.1s,mb4.7							
EGAK				epP		pP	06 02 44.6	+4.5
J18A	Kendall Valley	86.99	43	⇑P		P	06 00 38.0	+0.3
	baz=87,SNR=30							
J18A				⇓pP		pP	06 02 41.0	+0.3
	baz=87							
R22A	Saguache, Gunn	87.00	48	⇑P		P	06 00 38.0	+0.1
	baz=87							
R22A				⇑pP		pP	06 02 42.2	+1.3
	baz=87							
Z26A	Caprock	87.03	54	⇓P		P	06 00 37.9	-0.2
	baz=87							
Z26A				⇑pP		pP	06 02 41.9	+0.7
	baz=87							
V24A	Rampart Ranch,	87.04	51	⇓pP		pP	06 02 42.7	+1.5
	baz=87							
P21A	Newcastle	87.07	47	⇑pP		pP	06 02 41.5	+0.3
	baz=87							
YMR	Madison River	87.07	41	eP		P	06 00 38.5	+0.5
	comp=Z,15nm,0.9s,mb4.6							
N20A	Spence Gulch,	87.08	46	⇓pP		pP	06 02 41.8	+0.6
	baz=87							
BW06	Boulder Array	87.08	43	⇓P		P	06 00 38.1	0.0
	baz=87,SNR=8.0							
BW06				⇑pP		pP	06 02 41.7	+0.5
	baz=87							
PDAR	Pinedale Array	87.09	43	P		P	06 00 37.6	-0.5
	comp=Z,4.1nm,0.6s,mb4.2,baz=220,slow=3.1,SNR=43							
PDAR				pP		pP	06 02 42.1	+0.9
	comp=Z,1.3nm,0.8s,baz=242,slow=3.2,SNR=6.6							
PDAR				PKKPbc		PKKPbc	06 18 24.9	-3.1
	comp=Z,0.5nm,0.6s,baz=86,slow=4.9,SNR=5.7							
BOZ	Bozeman (W)	87.12	40	⇓P		P	06 00 38.5	+0.2
	baz=87,SNR=8.3							
Q22A	Crested Butte,	87.16	48	⇑pP		pP	06 02 42.1	+0.4
	baz=87							
COLD	Coldfoot	87.18	11	eP		P	06 00 37.2	-0.8
	comp=Z,17nm,0.8s,mb4.7							
H17A	Grant Village	87.19	42	⇓P		P	06 00 40.0	+1.4
	baz=87,SNR=11							
F16A	Kennard Place,	87.19	40	P		P	06 00 39.0	+0.5
	baz=87,SNR=7.5							
HHC	Hu-ho-hao-te	87.25	314	eP		P	06 00 40.0	+1.1
HHC				pP		pP	06 02 38.8	-3.2
HHC				sP		sP	06 03 32.8	-6.3
HHC				PP		PP	06 04 15.5	+1.6
HHC				SKS			06 10 14.8	
HHC				S		S	06 10 32.0	+0.3
HHC				sS		sS	06 14 02.5	-8.7
HHC				SS		SS	06 16 34.0	+0.2
HHC				pmax		pmax		
	comp=Z,33nm,1.1s,mb4.9							
HHC				pmax		pmax		
	comp=Z,110nm,5.1s							
SMCO	Snowmass	87.25	47	eP		P	06 00 39.2	+0.2
	comp=Z,2.1nm,0.6s,mb3.9							
SMCO				epP		pP	06 02 44.3	+2.1
D15A	Lincoln	87.27	39	P		P	06 00 38.7	-0.2
	baz=87,SNR=5.9							
WALA	Waterton Lakes	87.47	36	eP		P	06 00 39.1	-0.6
	comp=Z,0.2nm,0.8s							
B14A	Marquette Ranc	87.48	37	⇓P		P	06 00 39.4	-0.4
	baz=88,SNR=16							
L20A	Wamsutter	87.55	44	⇑P		P	06 00 40.5	+0.2
	baz=88,SNR=6.4							
V25A	Rancho No Teng	87.57	51	⇓pP		pP	06 02 44.3	+0.5
	baz=88							
K19A	Absolon Red Bu	87.58	44	⇓P		P	06 00 40.0	-0.4
	baz=88,SNR=5.2							
J19A	Crowheart	87.64	43	⇓P		P	06 00 40.8	+0.1
	baz=88,SNR=8.1							
A14A	Double T Ranch	87.70	37	P		P	06 00 40.8	0.0
	baz=88,SNR=10							
K20A	Yellowstone Ra	87.84	44	⇑P		P	06 00 41.3	-0.3
	baz=88,SNR=7.3							
F17A	Fitzpatrick Pl	87.84	40	⇓P		P	06 00 41.5	-0.1
	baz=88							
KMI	Kunming	87.88	297	P		P	06 00 43.5	+1.2
KMI				pmax		pmax		
	comp=Z,22nm,1.3s,mb4.7							
Y27A	Causey	87.90	54	⇑P		P	06 00 41.9	-0.2
	baz=88							
O22A	Kremmling	87.97	47	⇑P		P	06 00 42.7	+0.4
	baz=88							
I19A	Meeteetse	88.03	42	⇓P		P	06 00 42.6	+0.1
	baz=88,SNR=5.1							
M21A	Separation Pea	88.03	45	⇓P		P	06 00 42.5	0.0
	baz=88							
C16A	Fuhringer Ranc	88.10	38	P		P	06 00 42.4	-0.3
	baz=88,SNR=6.4							
A15A	Johnson Ranch,	88.10	37	⇑P		P	06 00 42.2	-0.5
	baz=88,SNR=6.2							
P23A	Jefferson	88.13	48	⇓pP		pP	06 02 47.1	+0.6
	baz=88							
N22A	Wattenberg Ran	88.31	46	⇓P		P	06 00 44.4	+0.6
	baz=88,SNR=5.7							
N22A				⇓pP		pP	06 02 47.8	+0.5
	baz=88							
J20A	Shoshoni	88.31	43	⇓P		P	06 00 44.3	+0.5
	baz=88,SNR=16							
J20A				⇓pP		pP	06 02 48.2	+0.8
	baz=88							
H19A	Powell	88.32	42	⇓P		P	06 00 44.6	+0.8
	baz=88							
RLMT	Red Lodge	88.35	41	⇓P		P	06 00 44.6	+0.7
	baz=88,SNR=6.1							
RLMT				⇓pP		pP	06 02 48.9	+1.4
	baz=88							
D17A	Six Diamond Ra	88.42	39	⇓P		P	06 00 44.4	+0.2
	baz=88,SNR=7.1							
F18A	Big Timber	88.43	41	⇓P		P	06 00 44.6	+0.3
	baz=89							
I20A	Worland	88.55	43	P		P	06 00 45.1	+0.2
	baz=89,SNR=5.8							
K21A	Alcova	88.55	44	P		P	06 00 44.8	-0.1
	baz=89,SNR=8.2							
C17A	Wharram Farm,	88.60	39	P		P	06 00 45.1	0.0
	baz=89,SNR=9.4							
N23A	Red Feather La	88.69	46	⇑P		P	06 00 45.6	-0.1
	baz=89							
J21A	Lysite	88.73	44	⇓P		P	06 00 45.8	0.0
	baz=89,SNR=17							
A16A	West Butte Ran	88.74	37	P		P	06 00 45.3	-0.4
	baz=89,SNR=15							
L22A	Ellis Ranch, M	88.84	45	⇓P		P	06 00 46.7	+0.4
	baz=89							
CMAR	Chiang Mai Arr	88.97	290	P		P	06 00 48.6	+1.2
	comp=Z,18nm,1.0s,mb4.9,baz=106,slow=2.8,SNR=59							
I21A	Big Trails, Te	89.03	43	⇓P		P	06 00 47.1	0.0
	baz=89,SNR=9.5							
CHTO	Chiang Mai	89.08	290	eP		P	06 00 48.6	+0.6
	comp=Z,76nm,1.7s,mb5.2							
CHTO	Chiang Mai	89.08	290	P		P	06 00 48.6	+0.6
	comp=Z,32nm,1.0s,mb5.1							
CD2	Chengdu	89.09	303	⇑iP		P	06 00 48.5	+0.7
CD2				pP		pP	06 02 53.5	+2.0
CD2				sP		sP	06 03 46.5	-1.9
CD2				PP		PP	06 04 31.3	+2.6
CD2				SKS			06 10 23.5	
CD2				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.6							
E19A	Rath Farm, Rou	89.25	40	⇓P		P	06 00 48.4	+0.3
	baz=89							
A17A	Triple J Farms	89.26	38	⇓P		P	06 00 48.0	0.0
	baz=89,SNR=8.0							
L23A	Garrett	89.37	45	⇑P		P	06 00 48.7	0.0
	baz=90,SNR=7.4							
J22A	Midwest	89.39	44	⇓P		P	06 00 48.8	0.0
	baz=90,SNR=7.2							
SYO	Syowa Base	89.40	193	⇑iP		P	06 00 46.0	-2.5
SYO	Syowa Base	89.40	193	⇓iPP		pP	06 02 50.0	-2.2
D19A	Cripps Ranch,	89.52	40	⇑P		P	06 00 49.5	+0.2
	baz=90,SNR=5.5							
B18A	Beardsley Farm	89.54	38	⇓P		P	06 00 49.3	-0.1
	baz=90							
C19A	Slack Wire Ran	89.67	39	⇑P		P	06 00 50.1	0.0
	baz=90,SNR=6.7							
C19A				⇓pP		pP	06 02 54.4	+0.5
	baz=90							
A18A	Metzger Ranch,	89.74	38	⇓P		P	06 00 50.0	-0.3
	baz=90,SNR=6.5							
D20A	Manuel Ranch,	89.94	40	⇓P		P	06 00 51.8	+0.5
	baz=90,SNR=7.9							
B19A	Brinkman Farms	90.06	39	P		P	06 00 52.1	+0.3
	baz=90,SNR=7.2							
C20A	Veseth Ranch,	90.29	39	P		P	06 00 53.2	+0.3
	baz=90,SNR=17							
A19A	Klindworth Far	90.39	38	⇓P		P	06 00 53.3	0.0
	baz=90,SNR=5.2							
D21A	La Casta Ranch	90.63	40	⇓P		P	06 00 54.7	+0.2
	baz=91,SNR=11							
D21A				⇓pP		pP	06 02 59.2	+0.8
	baz=91							
SNAA	Sanae	90.80	179	P		P	06 00 54.1	-0.8
	comp=Z,6.4nm,0.6s,mb4.7,baz=200,slow=5.6,SNR=34							
A20A	Cobblestone Ra	90.86	38	⇓P		P	06 00 55.5	0.0
	baz=91,SNR=8.7							
C21A	Desert Coulee	90.89	40	⇓P		P	06 00 55.7	0.0
	baz=91,SNR=5.3							
LZH	Lanzhou	90.89	308	eP		P	06 00 57.0	+1.0
LZH				pP		pP	06 02 59.0	-1.0
LZH				sP		sP	06 03 58.5	+1.7
LZH				pmax		pmax		
	comp=Z,27nm,1.0s,mb5.1							
LZH				pmax		pmax		
	comp=Z,160nm,5.0s							
LAO	LASA Array	90.94	41	eP		P	06 00 55.2	-0.7
	comp=Z,14nm,0.8s,mb5.0							
D22A	Cohagen	91.17	41	⇓P		P	06 00 57.5	+0.5
	baz=91							
RSSD	Black Hills	91.30	44	eP		P	06 00 56.9	-0.7
	comp=Z,4.2nm,0.9s,mb4.4							
PLCA	Paso Flores	91.36	134	P		P	06 00 57.2	-0.9
	comp=Z,2.7nm,0.9s,mb4.2,baz=224,slow=4.5,SNR=4.7							
PLCA	Paso Flores	91.36	134	P		P	06 00 57.2	-0.9
MAIT	Maitri	91.48	183	eP		P	06 00 57.0	-1.1
MAIT				e			06 01 15.9	
A21A	Bergtoll Ranch	91.50	39	⇓P		P	06 00 58.4	0.0
	baz=92,SNR=6.3							
C22A	Vida	91.60	40	⇑P		P	06 00 58.9	0.0
	baz=92							
INK	Inuvik	91.64	15	eP		P	06 00 57.2	-1.4
	comp=Z,20nm,1.0s,mb5.1							
B22A	Reddig Ranch S	91.76	40	⇑P		P	06 00 59.8	+0.2
	baz=92,SNR=6.6							
C23A	Lambert	92.05	40	⇓P		P	06 01 01.2	+0.2
	baz=92							
D24A	Glendive	92.31	41	⇓P		P	06 01 02.5	+0.3
	baz=92							
C24A	Savage	92.41	41	⇑P		P	06 01 03.0	+0.4
	baz=92							
B23A	Brockton	92.44	40	⇓P		P	06 01 03.2	+0.5
	baz=93							
DGMT	Dagmar	92.93	40	⇑P		P	06 01 05.1	+0.1
	baz=93							
DGMT	Dagmar	92.93	40	eP		P	06 01 04.9	-0.1
	comp=Z,41nm,1.0s,mb5.4							
ULN	Ulaanbaatar	93.10	319	eP		P	06 01 05.7	-0.2
	comp=Z,17nm,1.3s,mb4.9							
ULN	Ulaanbaatar	93.10	319	P		P	06 01 05.8	0.0
SONM	Songino Array	93.50	319	P		P	06 01 07.2	-0.4
	comp=Z,2.4nm,0.8s,mb4.4,baz=138,slow=5.6,SNR=14							
YKA	Yellowknife Ar	94.07	25	P		P	06 01 08.6	-1.3
	comp=Z,4.8nm,0.7s,mb4.7,baz=250,slow=4.1,SNR=8.1							
GTA	Gaotai	95.03	310	P		P	06 01 15.0	+0.2
GTA				pP		pP	06 03 13.0	-6.2
GTA				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.7							
CFAA	Coronel Fontan	96.92	126	P		P	06 01 23.1	-0.6
	comp=Z,0.2nm,0.6s,baz=238,slow=6.7,SNR=3.6							
LPAZ	La Paz	103.32	112	Pdiff		Pdif	06 01 56.5	+4.8
	comp=Z,1.0nm,0.7s,baz=175,slow=6.5,SNR=4.8							
LPAZ				PKKPbc		PKKPbc	06 17 41.1	-3.1
	comp=Z,0.8nm,0.6s,baz=116,slow=6.5,SNR=5.0							
ZALV	Zalesovo Beam	108.17	322	PKiKP		PKiKP	06 06 14.1	-1.8
	comp=Z,1.9nm,0.7s,baz=138,slow=0.7,SNR=8.8							
ZALV	Zalesovo Beam	108.17	322	PKPdf		PKiKP	06 06 14.1	-1.8
MK31	Makanchi Array	109.11	314	ePKPdf		PKiKP	06 06 15.9	-1.9
MKAR	Makanchi Array	109.11	314	Pdiff		Pdif	06 02 18.9	+1.5
	comp=Z,0.4nm,0.6s,baz=74,slow=7.5,SNR=3.6							
MKAR				PKiKP		PKiKP	06 06 16.1	-1.8
	comp=Z,2.2nm,0.5s,baz=184,slow=0.5,SNR=24							
MKAR				PKKPbc		PKKPbc	06 17 25.4	-1.9
	comp=Z,0.3nm,0.4s,baz=290,slow=3.6,SNR=4.6							
MKAR	Makanchi Array	109.11	314	Pdif		Pdif	06 02 18.9	+1.5
MKAR				PKPdf		PKiKP	06 06 16.1	-1.8
MKAR				PKKPbc		PKKPbc	06 17 25.4	-1.9
KSH	Kashi	113.09	306	ePKP		PKiKP	06 06 25.8	+0.1
KSH				esPKP			06 09 24.5	
KSH				ePKS			06 10 01.3	
KSH				eSKS		SKSdf	06 12 47.3	+3.0
KKAR	Karatay Array	117.31	310	ePKPdf		PKPdf	06 06 32.1	-1.6
KBL	Kabul	118.33	300	ePKPdf		PKPdf	06 06 35.2	-0.7
SUMG	Summit	120.49	13	i P		PKPdf	06 06 38.6	-0.3
	comp=Z,5.0nm,0.9s							
BDFB	Brasilia	120.80	121	PKKPbc		PKKPbc	06 16 47.3	-0.1
	comp=Z,2.7nm,0.5s,baz=43,slow=18,SNR=5.2							
ARU	Arti	122.77	326	ePKPdf		PKPdf	06 06 42.7	-1.0
ABKAR	Akbulak array	123.89	318	ePKPdf		PKPdf	06 06 44.5	-1.6
ARCES	ARCESS Array B	126.14	350	PKP		PKPdf	06 06 48.7	-1.1
	comp=Z,20nm,0.8s,baz=38,slow=1.4,SNR=45							
ARCES				PKKPbc			06 16 25.5	
	comp=Z,4.4nm,0.8s,baz=197,slow=2.8,SNR=8.4							
ARCES	ARCESS Array B	126.14	350	PKP		PKPdf	06 06 48.7	-1.1
ARCES				PKKPbc			06 16 25.5	
ARE0	ARCESS Array S	126.14	350	ePKPdf		PKPdf	06 06 48.2	-1.6
BOSA	Boshof	128.66	207	PKP		PKPdf	06 06 53.7	-2.3
	comp=Z,6.7nm,0.8s,baz=301,slow=2.7,SNR=8.5							
BOSA	Boshof	128.66	207	PKP		PKPdf	06 06 53.7	-2.3
FINES	FINESS Array B	133.03	344	PKhKP		PKPpre	06 06 56.4	
	comp=Z,1.5nm,0.5s,baz=28,slow=4.5,SNR=4.9							
FINES				PKP		PKPdf	06 07 01.6	-1.5
	comp=Z,5.2nm,0.6s,baz=31,slow=3.2,SNR=11							
FINES				SKPbc		SKPbc	06 09 38.7	+0.4
	comp=Z,1.4nm,0.5s,baz=55,slow=3.1,SNR=6.8							
FINES	FINESS Array B	133.03	344	PKP		PKPdf	06 07 01.6	-1.5
FINES				SKPbc		SKPbc	06 09 38.7	+0.4
NOA	NORSAR Array B	136.19	353	PKhKP		PKPpre	06 07 00.4	
	comp=Z,2.0nm,0.8s,baz=16,slow=5.0,SNR=7.3							
NOA				PKP		PKPdf	06 07 08.1	-0.9
	comp=Z,4.2nm,0.6s,baz=14,slow=4.0,SNR=14							
NOA				SKP			06 09 48.9	
	comp=Z,1.8nm,0.8s,baz=13,slow=4.5,SNR=4.3							
NOA	NORSAR Array B	136.19	353	PKP		PKPdf	06 07 08.1	-0.9
NOA				SKP			06 09 48.9	
KAC	Achnashellach	139.91	6	eP		PKPpre	06 07 08.5	
AKASG	Malin Array Be	140.45	333	PKhKP		PKPpre	06 07 09.

DPC	Dobruska-Polom	145.40	344	ePKP	PKPdf	06 07 27.1	+1.3
BRG	Berggiesshubel	145.50	346	ePKPbc	PKPbc	06 07 27.0	-0.4
BRG	Berggiesshubel	145.50	346	i PKP	PKPdf	06 07 26.8	+0.8
	comp=Z,65nm,1.2s						
MORC	Moravsky Berou	145.57	342	ePKPdf	PKPdf	06 07 25.8	-0.3
MORC				ePKPbc	PKPbc	06 07 27.4	-0.2
MORC	Moravsky Berou	145.57	342	⇓i P	PKPdf	06 07 27.9	+1.8
MCH1	Michaelchurch	145.57	5	eP	PKPdf	06 07 26.9	+0.8
WTSB	Winterswijk	145.58	354	ePKP	PKPdf	06 07 26.7	+0.7
	comp=Z,88nm,0.9s						
FBE	Freiberg	145.59	347	ePKPbc	PKPbc	06 07 27.6	0.0
NEUB	Neuenburg	145.63	349	ePKPbc	PKPbc	06 07 27.3	-0.4
DOPR	Dopca	145.66	330	⇓i P	PKPbc	06 07 28.6	+0.6
PVCC	Panska Ves	145.68	345	ePKP	PKPbc	06 07 27.8	-0.1
KECS	Kecovo	145.72	338	ePKP	PKPbc	06 07 28.1	+0.1
KECS	Kecovo	145.72	338	ePKP	PKPbc	06 07 28.1	+0.1
HGH	Gray Hill	145.94	5	eP	PKPdf	06 07 26.9	+0.2
MMAI	Mount Meron Ar	146.17	303	PKPbc	PKPbc	06 07 29.1	-0.7
	baz=70,slow=5.6						
MMAI				pPKPbc		06 09 40.2	
	comp=Z,5.4nm,0.7s,baz=36,slow=7.3,SNR=4.0						
PRU	Pruhonice	146.19	345	ePKP	PKPbc	06 07 29.5	+0.2
MOX	Moxa	146.20	349	ePKP	PKPdf	06 07 27.3	+0.2
	comp=Z,46nm,1.3s						
MOX	Moxa	146.20	349	ePKPbc	PKPbc	06 07 28.8	-0.5
VOIR		146.21	330	⇑i P	PKPbc	06 07 28.7	-0.8
DRGR		146.23	334	⇓i P	PKPbc	06 07 29.3	-0.2
TANN	Tannenbergstha	146.25	348	ePKPbc	PKPbc	06 07 29.2	-0.3
WERD	Werda	146.25	348	ePKPbc	PKPbc	06 07 29.2	-0.3
VYHS	Vyhne	146.28	339	ePKP	PKPbc	06 07 29.4	-0.2
VYHS	Vyhne	146.28	339	ePKP	PKPbc	06 07 29.4	-0.2
GUNZ	Gunzen	146.33	348	ePKPbc	PKPbc	06 07 29.5	-0.2
KOLL	Kolacno	146.35	340	ePKP	PKPbc	06 07 29.9	+0.1
KOLL	Kolacno	146.35	340	ePKP	PKPbc	06 07 29.9	+0.1
WOL	Wolverton	146.38	3	eP	PKPdf	06 07 28.6	+1.1
WERN	Wernitzgruen	146.39	348	ePKPbc	PKPbc	06 07 29.7	-0.2
PSZ	Piszkesteto	146.41	338	ePKPbc	PKPbc	06 07 29.3	-0.7
HTL	Hartland	146.41	7	eP	PKPdf	06 07 28.8	+1.3
TREC	Trest	146.58	344	ePKP	PKPbc	06 07 30.0	-0.4
ELSH	Elham, Standar	146.62	1	eP	PKPbc	06 07 30.1	-0.4
ESKT	Eskisehir	146.71	317	i P	PKPdf	06 07 28.5	+0.1
BORA	Eskisehir	146.77	318	i P	PKPbc	06 07 30.6	-0.7
BEBN	Eben Emael	146.83	355	PKPbc	PKPbc	06 07 29.7	-1.3
HGN	Heimansgroeve	146.84	355	ePKP	PKPdf	06 07 30.1	+1.9
	comp=Z,32nm,0.9s						
ROTZ	Rotzenmuhle	146.92	348	ePKPbc	PKPbc	06 07 31.2	-0.1
MEM	Membach	146.99	355	PKPbc	PKPbc	06 07 30.8	-0.7
BOLV	Bolvadin	147.06	315	i P	PKPbc	06 07 31.7	-0.4
CSS	Prodhromos	147.08	308	ePKPbc	PKPbc	06 07 31.4	-0.8
BUD	Budapest	147.09	338	⇓ePKP	PKPbc	06 07 31.1	-0.7
ZST	Bratislava	147.10	341	ePKP	PKPbc	06 07 31.9	+0.1
ZST	Bratislava	147.10	341	ePKP	PKPbc	06 07 31.9	+0.1
TNS	Taunus Mts	147.11	352	ePKPbc	PKPbc	06 07 31.5	-0.3
GRF	Grafenberg Arr	147.19	349	ePKPbc	PKPbc	06 07 31.8	-0.2
GRF				ePKPab	PKPab	06 07 35.3	-0.3
GRF				ePKPbc	pPKPbc	06 09 47.8	+5.4
GRFO	Grafenberg	147.19	349	ePKPbc	PKPbc	06 07 31.6	-0.5
SNF	Seneffe	147.21	357	PKPbc	PKPbc	06 07 31.4	-0.6
SNF				PKPab	PKPab	06 07 34.8	-0.8
KHC	Kasperske Hory	147.22	346	ePKPdf	PKPdf	06 07 28.2	-0.6
KHC				ePKPbc	PKPbc	06 07 31.7	-0.4
KHC	Kasperske Hory	147.22	346	ePKP	PKPdf	06 07 28.1	-0.8
KHC				ex	x	06 07 31.9	
BCLA	Clavier	147.23	356	PKPbc	PKPbc	06 07 31.3	-0.8
WET	Wettzell	147.37	346	ePKPbc	PKPbc	06 07 32.2	-0.3
GEC2	GERESS Array S	147.45	345	ePKPbc	PKPbc	06 07 32.4	-0.3
GERES	GERESS Array B	147.45	345	PKPbc	PKPbc	06 07 31.9	-0.9
	comp=Z,33nm,0.7s,baz=29,slow=3.0,SNR=88						
GERES				pPKPbc	pPKPbc	06 09 43.3	+0.1
	comp=Z,0.5nm,0.2s,baz=59,slow=6.4,SNR=1.4						
EIL	Elat	147.47	298	PKP	PKPdf	06 07 29.5	-0.5
	comp=Z,28nm,0.9s,baz=27,slow=4.5						
EIL				PKPbc	PKPbc	06 07 33.0	-0.4
	baz=338,slow=3.9						
EIL	Elat	147.47	298	PKP	PKPdf	06 07 29.5	-0.4
EIL				PKPbc	PKPbc	06 07 33.0	-0.4
DOU	Dourbes	147.60	357	PKPbc	PKPbc	06 07 32.5	-0.5
BZS	Buzias	147.62	334	⇑i P	PKPbc	06 07 32.6	-0.7
CONA	Conrad Observa	147.72	342	⇓i PKiKP	PKiKP	06 07 33.2	-1.7
	comp=Z,42nm,0.7s,SNR=17						
SOP	Sopron	147.73	341	⇓ePKP	PKPbc	06 07 33.3	-0.2
RUP	Ruppelstein	147.79	354	PKP	PKPbc	06 07 33.5	-0.1
WLF	Walferdange	147.92	355	ePKPbc	PKPbc	06 07 34.1	+0.2
WLF	Walferdange	147.92	355	ePKPbc	PKPbc	06 07 33.7	-0.1
MOA	Molln	148.23	344	i PKiKP	PKiKP	06 07 34.3	-1.7
	comp=Z,23nm,1.0s,SNR=8.0						
PKSM	Moragy	148.31	337	⇓i P	PKPbc	06 07 34.4	-0.6
KORT	Korkueli	148.34	313	i P	PKPbc	06 07 34.3	-1.0
LANF	Langenberg	148.41	352	PKP	PKPbc	06 07 34.9	-0.2
JSA	Saint Aubin	148.43	5	eP	PKPdf	06 07 32.3	+1.5
BALY	Balya	148.63	320	i P	PKPbc	06 07 35.2	-0.8
FUR	Furstenfeldbru	148.63	348	ePKPbc	PKPbc	06 07 35.4	-0.3
FUR				ePKPab	PKPab	06 07 41.3	-0.2
RJOB	Jochberg	148.71	346	ePKPbc	PKPbc	06 07 35.3	-0.6
RJOB				ePKPab	PKPab	06 07 42.1	+0.2
ALN	Alexandroupoli	148.84	323	eP	PKPbc	06 07 35.1	-1.4
FLN	La Foiniiere	148.96	3	ePKIKP	PKPdf	06 07 30.6	-1.1
	comp=Z,17nm,0.8s						
RDO	Rodhopi	148.97	324	eP	PKPdf	06 07 30.3	-1.7
BFO	Black Forest	148.98	351	ePKPbc	PKPbc	06 07 36.0	-0.6
BFO				ePKPab	PKPab	06 07 42.1	-0.9
CDF	Champ du Feu	149.04	353	ePKIKP	PKPdf	06 07 31.7	-0.2
SOKA	Soboth	149.09	342	⇑i PKPbc	PKPbc	06 07 35.7	-1.2
	comp=Z,33nm,1.1s						
PERS	Pernice	149.10	342	i PKPbc	PKPbc	06 07 35.7	-1.2
PERS				i PKPab	PKPab	06 07 42.9	-0.6
SPAK	Spaichingen-Ko	149.14	351	PKP	PKPbc	06 07 36.3	-0.6
LDF	La Druitiere	149.15	2	ePKIKP	PKPdf	06 07 30.7	-1.3
KBA	Koelnbreinsper	149.19	344	i PKPbc	PKPbc	06 07 36.0	-1.1
	comp=Z,26nm,0.5s,SNR=15						
VTS	Vitosha	149.20	328	eP	PKPbc	06 07 37.0	-0.3
VTS	Vitosha	149.20	328	⇓i P	PKPbc	06 07 36.8	-0.5
ECH	Echery	149.25	353	PKP	PKPbc	06 07 36.4	-0.8
ECH	Echery	149.25	353	ePKPbc	PKPbc	06 07 36.4	-0.8
ECH				ePKPab	PKPab	06 07 42.9	-1.2
GRR	Gorron	149.32	3	ePKIKP	PKPdf	06 07 31.3	-1.0
	comp=Z,32nm,1.2s						
SGMF	Saint Gilles	149.32	6	ePKIKP	PKPdf	06 07 31.8	-0.5
THEF	They Montfort	149.36	354	PKP	PKPbc	06 07 37.1	-0.4
WATA	Walderalm	149.36	347	⇓i PKPbc	PKPbc	06 07 36.8	-0.8
	comp=Z,22nm,0.5s,SNR=8.3						
RETA	Reutte	149.38	348	⇓i PKiKP	PKiKP	06 07 37.0	-1.3
	comp=Z,15nm,0.5s						
WTTA	Wattenberg	149.42	347	⇑i PKiKP	PKiKP	06 07 37.1	-1.4
	comp=Z,69nm,0.6s,SNR=22						
MOTA	Moosalm	149.45	347	⇓i PKPbc	PKPbc	06 07 37.0	-0.7
	comp=Z,55nm,1.1s						
FELD	Feldberg im Sc	149.47	352	PKP	PKPbc	06 07 37.2	-0.6
BOZC	Bozcaada	149.52	321	i P	PKPbc	06 07 36.9	-1.2
MYKA	Terra Mystica	149.52	344	⇓i PKPbc	PKPbc	06 07 36.6	-1.3
	comp=Z,26nm,0.5s						
HAU	Haudompre	149.54	354	ePKIKP	PKPdf	06 07 31.7	-1.0
QUIF	Quistinic	149.59	7	ePKIKP	PKPdf	06 07 31.7	-1.0
MOF	Molkenrain	149.61	353	PKP	PKPbc	06 07 37.4	-0.7
HINF	Hinterlafeld	149.67	353	ePKIKP	PKPdf	06 07 31.6	-1.3
ABTA	Abfaltersbach	149.70	345	i PKPbc	PKPbc	06 07 37.2	-1.1
	comp=Z,88nm,1.0s,SNR=15						
DAVA	Damuels	149.75	349	⇑i PKiKP	PKiKP	06 07 38.3	-0.8
	comp=Z,50nm,0.8s,SNR=12						
NVR	Nevrokopi	149.75	326	eP	PKPbc	06 07 37.3	-1.3
FETA	Feichten	149.84	348	i PKiKP	PKiKP	06 07 38.2	-1.0
	comp=Z,44nm,0.9s,SNR=8.7						
FETA	Feichten	149.84	348	P	PKPdf	06 07 32.8	-0.4
VISS	Visnje	149.94	342	i PKPbc	PKPbc	06 07 38.1	-0.9
LIA	Limnos Island	150.00	322	eP	PKPbc	06 07 38.1	-1.2
VOY	Vojsko	150.00	343	ePKPdf	PKPdf	06 07 34.5	+1.1
VOY				ePKPbc	PKPbc	06 07 37.8	-1.3
VOY				ePKPab	PKPab	06 07 48.6	+1.3
BOJS	Bojanci	150.08	341	i PKPdf	PKPdf	06 07 33.6	+0.1
BOJS				i PKPbc	PKPbc	06 07 38.8	-0.4
BOJS				i PKPab	PKPab	06 07 47.0	-0.6
JAVS	Javornik	150.08	343	i PKPbc	PKPbc	06 07 38.1	-1.1
JAVS				i PKPab	PKPab	06 07 46.3	-1.3
LOMF	Lomont	150.14	353	PKP	PKPbc	06 07 38.9	-0.4
DAVOX	Davos/Dischmat	150.23	349	PKPbc	PKPbc	06 07 39.3	-0.3
	comp=Z,40nm,0.8s,baz=312,slow=12,SNR=19						
ARG	Arkhangelos	150.28	314	eP	PKPbc	06 07 39.4	-0.6
SMG	Samos	150.32	317	eP	PKPbc	06 07 38.9	-1.2
CHOS	Chios island	150.42	319	eP	PKPbc	06 07 39.7	-0.6
VAY	Valandovo	150.45	327	ePKP	PKPbc	06 07 38.2	-2.1
LOR	Lormes	150.46	357	ePKIKP	PKPdf	06 07 33.5	-0.6
PLG	Polygyros	150.66	325	eP	PKPbc	06 07 39.0	-1.8
SSF	Saint Saulge	150.68	358	ePKIKP	PKPdf	06 07 33.9	-0.6
	comp=Z,6.0nm,0.6s						
NISR	Nisiros	150.75	315	eP	PKPbc	06 07 40.2	-0.9
AVF	Avril sur Loir	150.96	358	ePKIKP	PKPdf	06 07 34.0	-0.9
KRUS	Krusevo	151.09	329	i PKP	PKPbc	06 07 40.1	-1.6
MFF	Saint Martin d	151.13	3	ePKIKP	PKPdf	06 07 34.2	-1.0
	comp=Z,18nm,0.8s						
KARP	Karpathos	151.30	313	eP	PKPbc	06 07 41.2	-1.2
BIA	Bitola	151.31	328	ePKP	PKPbc	06 07 40.2	-2.0
LIT	Litokhoron	151.37	325	eP	PKPbc	06 07 40.3	-2.1
TCF	Toulx Ste Croi	151.49	359	ePKIKP	PKPdf	06 07 34.7	-1.0
	comp=Z,2.8nm,0.5s						
AGO	Saint Agoulin	151.71	358	PKP	PKPbc	06 07 42.6	-0.3
PLDF	La Plantade	151.77	357	PKP	PKPbc	06 07 42.8	-0.3
LPL	La Plagne	151.96	353	ePKIKP	PKPdf	06 07 36.1	-0.3
LPG	La Plagne	151.97	353	ePKIKP	PKPdf	06 07 36.0	-0.4
THL	Klokotos Trika	152.01	325	eP	PKPbc	06 07 42.0	-1.8
PYM	Petit Puy Mans	152.01	358	PKP	PKPbc	06 07 43.3	-0.3
LKR	Lokris	152.09	323	eP	PKPbc	06 07 42.2	-1.9
VLY	Voula,Athens	152.15	321	eP	PKPbc	06 07 42.0	-2.2
AGG	Agios Georgios	152.22	324	eP	PKPbc	06 07 43.1	-1.2
RJF	Les Rejaudoux	152.47	0	ePKIKP	PKPdf	06 07 36.3	-0.9
	comp=Z,14nm,0.8s						
LBL	Lubilhac	152.52	358	PKP	PKPbc	06 07 45.0	+0.2
ORIF	Oris-en-Rattie	152.64	354	ePKIKP	PKPdf	06 07 36.5	-0.9
	comp=Z,4.6nm,0.6s						
LAST	Lasithi	152.66	314	eP	PKPbc	06 07 44.5	-0.9
DID	Didima	152.71	321	eP	PKPbc	06 07 43.2	-2.2
MBDF	Montbardon	152.73	352	ePKIKP	PKPdf	06 07 36.9	-0.7
LFF	La Frestale	152.83	2	ePKIKP	PKPdf	06 07 36.9	-0.8
EFP	Efpalio	152.87	324	eP	PKPbc	06 07 45.8	0.0
GUR	Goura	152.95	322	eP	PKPbc	06 07 45.1	-0.9
KEK	Kerkira	153.06	328	eP	PKPbc	06 07 42.8	-3.3
VLX	Vlachokerasia	153.31	321	eP	PKPbc	06 07 45.1	-1.6
RLS	Riolos of Patr	153.37	324	eP	PKPbc	06 08 02.0	+0.1
VLI	Veliai	153.40	320	eP	PKPbc	06 07 47.4	+0.5
KARN	Karanos	153.58	316	eP	PKPbc	06 07 47.1	-0.3
LASF	Ste Croix	153.65	357	ePKIKP	PKPdf	06 07 37.9	-1.0
PYL	PYLOS	154.01	321	eP	PKPab	06 08 03.6	-1.0
PGF	Pioggiola	154.47	348	ePKIKP	PKPdf	06 07 39.4	-0.7
	comp=Z,8.0nm,0.7s						
PBRG	Braganca	154.89	15	ePKPdf	PKPdf	06 07 39.6	-1.1
PBRG	Braganca	154.89	15	ePKPab	PKPab	06 08 07.7	-0.5
MVO	Moncorvo	155.42	16	ePKPdf	PKPdf	06 07 40.8	-0.6
MVO	Moncorvo	155.42	16	ePKPab	PKPab	06 08 10.1	-0.4
MTE	Manteigas	155.99	18	ePKPdf	PKPdf	06 07 41.6	-0.6
MTE	Manteigas	155.99	18	ePKPab	PKPab	06 08 12.1	-0.9
PMAFR	Mafra	156.73	22	ePKPab	PKPab	06 08 15.1	-1.1
PMRV	Marv??o	156.93	18	ePKPdf	PKPdf	06 07 43.0	-0.4
PMRV	Marv??o	156.93	18	ePKPab	PKPab	06 08 16.4	-0.7
PMTG	Montargil	157.00	20	ePKPab	PKPab	06 08 16.2	-1.2
MSKU	Masuku	157.50	212	PKP	PKPdf	06 07 44.1	-0.8
	comp=Z,8.7nm,0.9s,baz=308,slow=23,SNR=5.8						
MSKU				PKPab	PKPab	06 08 19.8	-0.5
	comp=Z,15nm,0.6s,baz=128,slow=7.6,SNR=9.9						
EVOP	Sao Brissos	157.52	21	ePKPdf	PKPdf	06 07 43.7	-0.5
ESDC	Sonseca Array	157.54	12	PKP	PKPdf	06 07 42.2	-1.9
	comp=Z,0.3nm,0.3s,baz=42,slow=2.1,SNR=3.9						
ESDC				PKPab	PKPab	06 08 18.8	-0.9
	comp=Z,2.1nm,0.6s,baz=346,slow=4.0,SNR=10						
ESDC	Sonseca Array	157.54	12	PKP	PKPdf	06 07 42.2	-1.9
ESDC				PKPab	PKPab	06 08 18.8	-0.9
EVO	Evora	157.55	20	ePKIKP	PKPdf	06 07 43.7	-0.5
	comp=Z,5.9nm,0.8s						
PTEO	Sao Teotonio	158.18	23	ePKPab	PKPab	06 08 22.2	-0.4
PBAR	Barrancos	158.19	19	ePKPab	PKPab	06 08 21.3	-1.3
MORF	Marmelete	158.42	23	ePKPdf	PKPdf	06 07 45.0	-0.3
PVAQ	Vaqueiros	158.67	21	ePKPab	PKPab	06 08 24.2	-0.5
PBDV	Barranco-do-Ve	158.74	22	ePKPab	PKPab	06 08 24.8	-0.2
KEST	Kesra	160.82	341	PKP	PKPdf	06 07 48.9	+0.8
	comp=Z,2.0nm,1.1s,baz=304,slow=7.3,SNR=4.0						
KEST				PKPab	PKPab	06 08 33.8	-0.4
	comp=Z,4.4nm,0.8s,baz=12,slow=5.2,SNR=10						
MDT	Midelt	163.89	20	PKP	PKPdf	06 07 51.7	+0.6
	comp=Z,4.8nm,0.8s,baz=44,slow=1.4,SNR=15						
MDT				PKPab	PKPab	06 08 47.9	+0.2
	comp=Z,5.3nm,0.8s,baz=322,slow=4.4,SNR=14						
LIC	Lamto	166.81	149	ePKP2	PKPdf	06 07 51.3	-2.8
	comp=Z,33nm,0.9s						
LIC	Lamto	166.81	149	ePKIKP	PKPdf	06 07 51.9	-2.2
	comp=Z,18nm,0.8s						
DBIC	Dimbokro	167.28	149	PKP	PKPdf	06 07 52.6	-1.8
	comp=Z,7.3nm,0.8s,baz=140,slow=1.2,SNR=7.2						
DBIC				PKPab	PKPab	06 09 02.7	-0.4
	comp=Z,1.9nm,0.6s,baz=195,slow=15,SNR=3.7						
TAM	Tamanrasset	173.83	326	ePKPdf	PKPdf	06 07 57.6	0.0
TORD	Torodi Ar. Bea	175.47	179	PKP	PKPdf	06 07 56.4	-1.9
	comp=Z,6.8nm,0.9s,baz=325,slow=1.3,SNR=7.1						
TORD				PKPab	PKPab	06 09 38.5	-0.8
	comp=Z,2.8nm,0.6s,baz=187,slow=3.3,SNR=4.6						

ISCJB ***26*** *05:55:25.5±0.7,24°.19S±0°.05×68°.20W±0°.09, h123km±11km, Error ellipse: s-maj=14.0km s-min=8.5km az=15.1*

IDC ***26*** *05:55:25.8±2.1,24°.18S×68°.03W,h94km±22km,mb3.4/1, mb1 3.3/3,mb1mx3.2/16,mbtmp3.1/3,Error ellipse: s-maj=44.2km s-min=15.5km az=94.0*

NEIC ***26*** *05:55:28.5,23°.80S×68°.40W,h134km,MG3.6(GUC), After GUC.*

GUC ***26*** *05:55:28.5±0.8,23°.80S×68°.40W,h134km±26km,ML3.6*

ISC 26 05:55:26.6±0.7,24°.20S±0°.05×68°.20W±0°.09, h116km±11km,n12,σ0°.83/17,2C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.29	0	⇓i P	Pn	05 55 52.0	+0.7
SPCH				i S	Sn	05 56 09.8	-0.3
SPCH	San Pedro de A	1.29	0	⇓i P	Pn	05 55 52.0	+0.7
SPCH				i S	Sn	05 56 09.8	-0.3
SPCH				AML	AML	05 56 10.5	
	comp=N,3μm,0.5s						
CEN1	Los Morros	2.00	293	⇓i P	Pn	05 56 01.3	+1.5
CEN1				i S	Sn	05 56 25.8	+0.6
CEN1				AML	AML	05 56 30.6	
	comp=E,369nm,0.5s						
ANCH	Antofagasta	2.08	284	⇑i P	Pn	05 56 01.1	+0.2
ANCH				i S	Sn	05 56 26.1	-1.0
ANCH	Antofagasta	2.08	284	⇑i P	Pn	05 56 01.1	+0.2
ANCH				i S	Sn	05 56 26.1	-1.0
ANCH				AML	AML	05 56 29.5	
	comp=N,393nm,0.2s						
MECH	Mejillones	2.33	297	eP	Pn	05 56 03.3	-0.7
MECH				AML	AML	05 56 42.3	
	comp=E,370nm,0.6s						
CFAA	Coronel Fontan	7.38	180	P	Pn	05 57 12.8	+1.2
	comp=E,0.2nm,0.3s,baz=0.6,slow=14,SNR=36						
CFAA				S	Sn	05 58 32.2	-1.4
	comp=E,0.2nm,0.3s,baz=246,slow=17,SNR=9.4						
LPAZ	La Paz	7.87	1	P	Pn	05 57 18.4	+0.1
	comp=E,0.2nm,0.3s,baz=189,slow=8.9,SNR=14						
LPAZ				S	Sn	05 58 44.9	-1.0
	baz=279,slow=19,SNR=2.2						
BDFB	Brasilia	20.78	70	P	P	05 59 58.5	0.0
	comp=E,2.5nm,0.6s,baz=245,slow=16,SNR=6.7						
TORD	Torodi Ar. Bea	77.67	69	P	P	06 07 10.9	+0.2
	comp=E,0.4nm,0.4s,baz=251,slow=5.3,SNR=1.5						
WRA	Warramunga Arr	130.94	209	PKP	PKPdf	06 14 27.1	+2.1
	comp=E,0.1nm,0.3s,baz=154,slow=1.9,SNR=3.4						
MKAR	Makanchi Array	147.37	39	PKPbc	PKPbc	06 14 58.2	+1.7
	comp=E,0.8nm,0.6s,baz=315,slow=3.7,SNR=4.4						

KRSC 26 06:07:13.2±0.2,55°.02N×162°.82E,h5km±5km,ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.78	234	eP	Pg	06 07 29.5	+1.3
MKZ				i S	Sg	06 07 41.3	+2.9
KBTR	Krutoberegovo	1.19	360	eP	Pg	06 07 35.7	-0.3
KBTR				i S	Sg	06 07 52.6	+1.2
BZGR	Bezymyannyi-Gr	1.52	308	eP	Pn	06 07 41.2	+0.2
BZGR				i S	Sn	06 08 02.2	+1.1
ZLN	Zelenaya	1.52	312	eP	Pn	06 07 42.6	+1.6
ZLN				i S	Sn	06 08 03.3	+2.2
TUMR	Tumrok	1.56	281	eP	Pn	06 07 42.7	+1.2
TUMR				i S	Sn	06 08 03.6	+1.6
BZMR	Bezymyannaya	1.61	306	eP	Pn	06 07 42.8	+0.5
BZMR				i S	Sn	06 08 05.2	+1.8
BZWR	Bezymyannyi-We	1.63	307	eP	Pn	06 07 43.6	+1.2
BZWR				i S	Sn	06 08 05.5	+1.8
KMNR	Kamenistaya	1.65	298	eP	Pn	06 07 43.8	+1.1
KMNR				i S	Sn	06 08 05.4	+1.1
KIRR	Kirishev	1.69	305	eP	Pn	06 07 45.0	+1.6
KIRR				i S	Sn	06 08 08.7	+3.3
SMKR	Semkarok	1.74	335	eP	Pn	06 07 44.9	+0.9
SMKR				i S	Sn	06 08 07.9	+1.3
KRSR	Krestovskiy	1.75	314	eP	Pn	06 07 45.5	+1.3
KRSR				i S	Sn	06 08 08.3	+1.4
KPT	Kopyto	1.76	304	eP	Pn	06 07 45.5	+1.3
KPT				i S	Sn	06 08 08.2	+1.3
KLY	Klyuchi	1.79	317	eP	Pn	06 07 44.6	0.0
KLY				i S	Sn	06 08 08.0	+0.3
SRKR	Sorokina	1.88	331	eP	Pn	06 07 47.6	+1.6
SRKR				i S	Sn	06 08 13.1	+3.0
KOZ	Kozyrevsk	1.97	303	eP	Pn	06 07 48.2	+1.0
KOZ				i S	Sn	06 08 13.9	+1.6
SRDR	Sredinnyy	2.19	308	eP	Pn	06 07 50.9	+0.8
SRDR				i S	Sn	06 08 18.0	+0.5
KII	Karymskiy	2.20	245	eP	Pn	06 07 51.3	+1.0
KII				i S	Sn	06 08 18.6	+0.8
SPN	Mys Shipunski	2.54	222	eP	Pn	06 07 54.7	-0.2
SPN				i S	Sn	06 08 24.8	-1.3
NLC	Nalytchevo	2.76	229	eP	Pn	06 08 00.1	+2.1
NLC				i S	Sn	06 08 34.2	+2.5
AVH	Avacha	2.98	235	eP	Pn	06 08 02.7	+1.7
AVH				i S	Sn	06 08 39.4	+2.4
GNL	Ganaly	3.15	247	eP	Pn	06 08 05.5	+2.1
GNL				i S	Sn	06 08 43.5	+2.3
PET	Petropavlovsk	3.17	233	eP	Pn	06 08 05.2	+1.6
PET				i S	Sn	06 08 43.3	+1.5

ISCJB ***26*** *06:24:05.1±1.4,21°.0S±0°.2×178°.6W±0°.2,h519km±19km, mb3.6/7,Error ellipse: s-maj=33.4km s-min=13.5km az=139.0*

IDC ***26*** *06:24:05.3±2.0,21°.07S×178°.44W,h516km±23km,mb3.1/7, mb1 3.5/9,mb1mx3.3/19,mbtmp3.2/9,Error ellipse: s-maj=33.8km s-min=13.2km az=150.0*

NEIC ***26*** *06:24:06.5±1.4,21°.09S×178°.48W,h533km±17km,mb4.5/1, Error ellipse: s-maj=30.0km s-min=14.1km az=143.0*

ISC 26 06:24:05.8±1.4,21°.1S±0°.2×178°.5W±0°.2,h517km±19km, n14,σ0°.48/14,mb3.6/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.60	43	P	P	06 26 19.2	0.0
	2.5nm,0.3s,baz=102,slow=18,SNR=3.5						
AFI				S	S	06 28 04.4	-4.4
	0.8nm,0.3s,baz=180,slow=20,SNR=1.8						
AFI	Afiamalu	9.60	43	ePn	P	06 26 19.6	+0.4
AFI				eSn	S	06 28 08.4	-0.4
URZ	Urewera	17.51	192

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.26**	**338**	*i* P	Pg	06 36 33.6	-0.1
PNIG				*i* S	Sg	06 36 36.8	-0.5
PNIG	**Pinotepa**	**0.26**	**338**	*i* P	Pg	06 36 33.6	-0.1
PNIG				*i* S	Sg	06 36 36.8	-0.5
VHO	**Vista Hermosa**	**1.54**	**53**	*eP*	Pn	06 36 53.1	-3.1
VHO				*i* S	Sn	06 37 11.8	-4.6
VHO	**Vista Hermosa**	**1.54**	**53**	*eP*	Pn	06 36 53.1	-3.1
VHO				*i* S	Sn	06 37 11.8	-4.6
UTMO	**Huajuapan**	**1.69**	**7**	*eP*	Pn	06 36 55.0	-3.2
UTMO				*i* S	Sn	06 37 15.7	-4.3
HUIG	**Huatulco**	**1.88**	**101**	*i* P	Pn	06 36 58.1	-2.8
HUIG				*i* S	Sn	06 37 19.4	-5.4
HUIG	**Huatulco**	**1.88**	**101**	*i* P	Pn	06 36 58.1	-2.8
HUIG				*i* S	Sn	06 37 19.4	-5.4
ACX	**Acapulco**	**1.90**	**292**	*i* P	Pn	06 36 57.6	-3.6
ACX				*i* S	Sn	06 37 22.4	-2.9
ACX	**Acapulco**	**1.90**	**292**	*i* P	Pn	06 36 57.6	-3.6
ACX				*i* S	Sn	06 37 22.4	-2.9
CAIG	**El Cayaco**	**2.33**	**293**	*i* P	Pn	06 37 04.3	-2.8
CAIG				*i* S	Sn	06 37 31.4	-4.5
CAIG	**El Cayaco**	**2.33**	**293**	*i* P	Pn	06 37 04.3	-2.8
CAIG				*i* S	Sn	06 37 31.4	-4.5
MEIG	**Mezcala**	**2.34**	**319**	*i* P	Pn	06 37 04.7	-2.4
MEIG				*i* S	Sn	06 37 32.0	-4.0
TPIG	**Tehuac#an**	**2.34**	**16**	*i* P	Pn	06 37 04.4	-2.9
TPIG				*i* S	Sn	06 37 33.1	-3.2
CMIG	**Matias Romero**	**3.15**	**72**	*i* P	Pn	06 37 14.6	-3.9
CMIG				*i* S	Sn	06 37 52.6	-3.6
CMIG	**Matias Romero**	**3.15**	**72**	*i* P	Pn	06 37 14.6	-3.9
CMIG				*i* S	Sn	06 37 52.6	-3.6

CSEM ***26*** *06:40:06.5±0.2, 36.°02N×27.°89E, h10km, ML3.2, Error ellipse: s-maj=5.1km s-min=2.9km az=85.0*
DDA ***26*** *06:40:08.8, 36.°13N×28.°00E, h28km, Md3.2*
ISCJB ***26*** *06:40:08.2±0.3, 36.°06N±0.°03×28.°00E±0.°03, h83km±6km, Error ellipse: s-maj=4.8km s-min=3.6km az=146.3*
HLW ***26*** *06:40:08.0, 36.°06N×28.°01E, h33km±39km*
ISK ***26*** *06:40:09.1, 36.°22N×27.°98E, h16km, ML3.2*
ATH ***26*** *06:40:12.4, 36.°16N×27.°72E, h43km±5km, MD3.5/9*
ISC 26 06:40:09.5±0.3, 36.°09N±0.°02×27.°98E±0.°03, h74km±7km, n77, σ1°20/105, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.17**	**45**	↑*i*P	Pn	06 40 21.7	+1.2
ARG				*e*S	Sn	06 40 28.8	+0.2
KARP	**Karpathos**	**0.86**	**231**	↓*i*P	Pn	06 40 27.8	+1.3
KARP				*e*S	Sn	06 40 39.2	+0.1
FETY	**Fethiye**	**1.04**	**59**	*e*PG	Pn	06 40 28.2	-0.5
FETY				*e*SG	Sn	06 40 42.2	-1.0
FETY	**Fethiye**	**1.04**	**59**	*e*Pg	Pn	06 40 28.3	-0.5
FETY				*e*Sg	Sn	06 40 42.2	-0.9
YER	**Yerkesik**	**1.07**	**13**	*e*PG	Pn	06 40 28.3	-0.8
YER				*e*SG	Sn	06 40 41.9	-1.7
YER	**Yerkesik**	**1.07**	**13**	*e*Pg	Pn	06 40 28.3	-0.8
YER				*e*Sg	Sn	06 40 41.9	-1.7
BODT	**Bodrum**	**1.10**	**331**	*e*PG	Pn	06 40 29.1	-0.4
BODT				*e*SG	Sn	06 40 42.9	-1.6
BODT	**Bodrum**	**1.10**	**331**	*e*Pg	Pn	06 40 29.1	-0.4
BODT				*e*Sg	Sn	06 40 42.9	-1.6
MLSB	**Milas**	**1.21**	**352**	*e*PN	Pn	06 40 30.6	-0.3
MLSB	**Milas**	**1.21**	**352**	*e*Pn	Pn	06 40 30.6	-0.2
AKAS	**Kas**	**1.33**	**83**	*i* P	Pn	06 40 31.9	-0.4
AKAS				*i* S	Sn	06 40 46.3	-3.2
AKAS	**Kas**	**1.33**	**83**	*i* P	Pn	06 40 31.9	-0.4
AKAS				*i* S	Sn	06 40 46.3	-3.2
AYDN	**Tasoluk**	**1.57**	**357**	*i* P	Pn	06 40 36.2	+0.7
AYDN				*i* S	Sn	06 40 54.4	-0.6
AYDN	**Tasoluk**	**1.57**	**357**	*i* P	Pn	06 40 36.2	+0.7
AYDN				*i* S	Sn	06 40 54.4	-0.7
GLHS	**Glhisar (BURDU**	**1.62**	**49**	*e*PN	Pn	06 40 36.7	+0.6
GLHS	**Glhisar (BURDU**	**1.62**	**49**	*e*Pn	Pn	06 40 36.7	+0.5
ELL	**Elmali**	**1.69**	**67**	*e*PN	Pn	06 40 38.8	+1.7
ELL	**Elmali**	**1.69**	**67**	*e*Pn	Pn	06 40 38.8	+1.7
GCAM	**G?zelcaml?**	**1.71**	**340**	*i* P	Pn	06 40 38.0	+0.6
GCAM				*i* S	Sn	06 40 55.8	-2.7
GCAM	**G?zelcaml?**	**1.71**	**340**	*i* P	Pn	06 40 38.0	+0.6
GCAM				*i* S	Sn	06 40 55.8	-2.7
GOLH	**Golhisar**	**1.71**	**48**	*i* P	Pn	06 40 38.0	+0.6
GOLH				*i* S	Sn	06 40 58.9	+0.4
GOLH	**Golhisar**	**1.71**	**48**	*i* P	Pn	06 40 38.0	+0.6
GOLH				*i* S	Sn	06 40 58.9	+0.4
ZKR	**Zakros**	**1.73**	**236**	*e*P	Pn	06 40 39.7	+2.0
ZKR				*e*S	Sn	06 41 00.2	+1.1
DENT	**Denizli**	**1.86**	**27**	*e*PN	Pn	06 40 39.8	+0.4
DENT	**Denizli**	**1.86**	**27**	*e*Pn	Pn	06 40 39.8	+0.4
NPS	**Neapolis**	**2.10**	**247**	*e*P	Pn	06 40 43.5	+1.0
NPS				*e*S	Sn	06 41 06.7	-1.0
KORT	**Korkueli**	**2.12**	**64**	*i* P	Pn	06 40 44.1	+1.3
KORT				*i* S	Sn	06 41 10.5	+2.4
KORT	**Korkueli**	**2.12**	**64**	*i* P	Pn	06 40 44.1	+1.3
KORT				*i* S	Sn	06 41 10.5	+2.3
APE	**Apeiranthos**	**2.19**	**297**	*e*P	Pn	06 40 44.9	+1.1
APE				*e*S	Sn	06 41 09.0	-1.1
LAST	**Lasithi**	**2.24**	**246**	*e*P	Pn	06 40 45.7	+1.3
LAST				*e*S	Sn	06 41 10.6	-0.5
IZM	**Izmir**	**2.37**	**346**	*e*PN	Pn	06 40 46.0	-0.2
IZM	**Izmir**	**2.37**	**346**	*e*Pn	Pn	06 40 46.0	-0.2
BLCB	**Balcova**	**2.41**	**342**	*e*PN	Pn	06 40 46.6	-0.1
BLCB	**Balcova**	**2.41**	**342**	*e*Pn	Pn	06 40 46.6	-0.1
KULA	**Kula-Manisa**	**2.48**	**13**	*e*PN	Pn	06 40 47.8	+0.1
KULA	**Kula-Manisa**	**2.48**	**13**	*e*Pn	Pn	06 40 47.8	+0.2
BCK	**Bucak**	**2.50**	**56**	*e*PN	Pn	06 40 49.5	+1.5
BCK	**Bucak**	**2.50**	**56**	*e*Pn	Pn	06 40 49.5	+1.5
URLA	**Izmir**	**2.52**	**334**	*i* P	Pn	06 40 46.8	-1.4
URLA				*i* S	Sn	06 41 16.1	-1.7
URLA	**Izmir**	**2.52**	**334**	*i* P	Pn	06 40 46.8	-1.4
URLA				*i* S	Sn	06 41 16.1	-1.7
KHL	**Karahalli**	**2.54**	**29**	*e*PN	Pn	06 40 49.0	+0.5
KHL	**Karahalli**	**2.54**	**29**	*e*Pn	Pn	06 40 49.0	+0.4
KHAL	**Karahalli**	**2.57**	**28**	*i* P	Pn	06 40 49.3	+0.4
KHAL				*i* S	Sn	06 41 13.0	-6.3
KHAL	**Karahalli**	**2.57**	**28**	*i* P	Pn	06 40 49.3	+0.3
SUTC	**Sutluce-Ispart**	**2.79**	**59**	*e*PN	Pn	06 40 53.1	+1.2
SUTC	**Sutluce-Ispart**	**2.79**	**59**	*e*Pn	Pn	06 40 53.1	+1.2
SIVA	**Sivas**	**2.79**	**248**	*e*P	Pn	06 40 54.4	+2.4
SIVA				*e*S	Sn	06 41 24.5	-0.1
VAM	**Vamos**	**3.15**	**259**	*e*P	Pn	06 40 59.2	+2.5
KARN	**Karanos**	**3.37**	**259**	*e*P	Pn	06 41 01.4	+1.6
HDMB	**Hadim**	**3.73**	**75**	*e*PN	Pn	06 41 07.7	+3.0
HDMB	**Hadim**	**3.73**	**75**	*e*Pn	Pn	06 41 07.7	+3.0
LEF	**Lefka**	**4.12**	**102**	*e*PN	Pn	06 41 13.5	+3.5
HMAT	**Matruh**	**5.04**	**189**	P	Pn	06 41 21.2	-1.4
	baz=189						
HMAT				S	Sn	06 42 13.2	-6.3
	baz=189						
HMAT	**Matruh**	**5.04**	**189**	P	Pn	06 41 21.2	-1.4
SLUM	**Sluma**	**5.13**	**207**	P	Pn	06 41 22.8	-1.0
	baz=208						
SLUM		**5.13**	**207**	P	Pn	06 41 22.8	-1.1
HBRG	**Burj al 'Arab**	**5.72**	**164**	P	Pn	06 41 30.5	-1.4
	baz=163						
HBRG	**Burj al 'Arab**	**5.72**	**164**	P	Pn	06 41 30.5	-1.4
HNAT	**Natroun**	**6.81**	**160**	P	Pn	06 41 46.1	-0.8
	baz=160						
HNAT	**Natroun**	**6.81**	**160**	P	Pn	06 41 46.1	-0.7
KOT	**Kottamia**	**6.95**	**151**	S	Sn	06 42 58.1	-8.1
	baz=151						
AMAG	**Maghara**	**6.98**	**140**	P	Pn	06 41 47.6	-1.5
	baz=139						
AMAG	**Maghara**	**6.98**	**140**	P	Pn	06 41 47.6	-1.5
HSAF	**As Saff**	**7.12**	**154**	P	Pn	06 41 50.2	-0.9
	baz=154						
HSAF	**As Saff**	**7.12**	**154**	P	Pn	06 41 50.2	-0.8
GLL	**Jalalah**	**7.22**	**153**	P	Pn	06 41 51.8	-0.6
	baz=153						
GLL	**Jalalah**	**7.22**	**153**	P	Pn	06 41 51.8	-0.5
SUZ	**Suez**	**7.45**	**145**	P	Pn	06 41 54.8	-0.7
	baz=145						
SUZ		**7.45**	**145**	P	Pn	06 41 54.8	-0.7
HNKL	**Nakhl**	**7.95**	**139**	P	Pn	06 42 01.2	-1.1
	baz=139						
HNKL				S	Sn	06 43 22.0	-8.7
	baz=139						
HNKL	**Nakhl**	**7.95**	**139**	P	Pn	06 42 01.2	-1.1
GRB	**Gharib**	**8.80**	**151**	P	Pn	06 42 13.6	-0.4
	baz=151						
GRB	**Gharib**	**8.80**	**151**	P	Pn	06 42 13.6	-0.3
HFRF	**Wahat Farafira**	**8.92**	**178**	P	Pn	06 42 13.6	-2.0
	baz=178						
HFRF	**Wahat Farafira**	**8.92**	**178**	P	Pn	06 42 13.6	-2.0
HKAT	**Jabal Katrina**	**9.10**	**144**	P	Pn	06 42 17.6	-0.4
	baz=144						
HKAT	**Jabal Katrina**	**9.10**	**144**	P	Pn	06 42 17.6	-0.5

IDC ***26*** *06:42:57.5±1.0, 5.°16S×153.°04E, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.0/17, mbtmp4.0/7, MS3.2/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=34.4km s-min=26.7km az=123.0*
ISCJB ***26*** *06:43:01.7±1.4, 5.°1S±0.°2×152.°9E±0.°2, h33km, mb4.1/9, MS3.0/2, Error ellipse: s-maj=32.3km s-min=23.5km az=177.9*
NEIC ***26*** *06:43:02.8±0.6, 5.°09S×152.°94E, h35km, mb4.2/5, Error ellipse: s-maj=19.5km s-min=15.5km az=140.0*
ISC 26 06:43:03.5±1.4, 5.°2S±0.°2×152.°9E±0.°2, h35km, n18, σ0°66/12, mb4.1/9, MS3.0/2, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**20.27**	**337**	LR	LR	06 54 25.6	
	comp=Z,28nm,20.5s,MS2.6,baz=130,slow=34						
KAKA	**Kakadu**	**21.55**	**248**	*eP*	P	06 47 49.9	-0.1
	41nm,0.6s,mb5.0						
WRA	**Warramunga Arr**	**23.29**	**229**	P	P	06 48 08.7	+0.3
	2.9nm,0.7s,mb3.8,baz=54,slow=9.7,SNR=19						
WRA				PcP	PcP	06 51 57.1	+1.9
	0.4nm,0.4s,baz=56,slow=2.7,SNR=8.4						
ASAR	**Alice Springs**	**25.95**	**223**	P	P	06 48 33.1	+0.3
	0.9nm,0.5s,mb3.6,baz=58,slow=8.9,SNR=13						
STKA	**Stephens Creek**	**28.61**	**200**	P	P	06 48 55.2	-1.3
	2.2nm,1.0s,mb3.8,baz=32,slow=12,SNR=4.4						
STKA				LR	LR	07 00 57.0	
	comp=Z,92nm,18.2s,MS3.4,baz=27,slow=38						
STKA	**Stephens Creek**	**28.61**	**200**	*eP*	P	06 48 57.8	+1.2
	3.2nm,1.6s,mb3.8						
FITZ	**Fitzroy Crossi**	**29.58**	**242**	P	P	06 49 04.9	-0.5
	4.1nm,0.7s,mb4.2,baz=66,slow=7.3,SNR=12						
FITZ	**Fitzroy Crossi**	**29.58**	**242**	*eP*	P	06 49 04.4	-1.0
	3.4nm,0.7s,mb4.2						
CMAR	**Chiang Mai Arr**	**58.13**	**295**	P	P	06 52 55.1	+1.0
	0.8nm,0.3s,mb4.2,baz=118,slow=7.3,SNR=4.4						
MKAR	**Makanchi Array**	**80.67**	**319**	P	P	06 55 12.3	-0.6
	0.3nm,0.6s,mb3.4,baz=92,slow=7.2,SNR=3.0						
QSPA	**South Pole Qui**	**84.79**	**180**	*eP*	P	06 55 34.1	+0.3
	6.0nm,1.1s,mb4.6						
MAW	**Mawson**	**85.27**	**203**	P	P	06 55 36.0	-0.4
	1.4nm,0.5s,mb4.3,baz=92,slow=8.8,SNR=10						
MAW	**Mawson**	**85.27**	**203**	*eP*	P	06 55 36.1	-0.2
	0.3nm,0.6s,mb3.6						
CFAA	**Coronel Fontan**	**126.39**	**136**	PKP	PKPdf	07 02 02.5	-0.9
	0.2nm,0.6s,baz=207,slow=4.5,SNR=5.5						
LPAZ	**La Paz**	**134.15**	**119**	PKP	PKPdf	07 02 18.7	+0.3
	0.6nm,0.5s,baz=334,slow=3.0,SNR=5.9						
LPAZ	**La Paz**	**134.15**	**119**	*e*PKPdf	PKPdf	07 02 18.7	+0.3
TORD	**Torodi Ar. Bea**	**150.53**	**288**	PKPbc	PKPbc	07 02 51.1	-1.6
	5.2nm,0.9s,baz=83,slow=2.6,SNR=7.3						
BDFB	**Brasilia**	**150.73**	**135**	PKPbc	PKPbc	07 02 52.7	-0.4
	4.7nm,0.7s,baz=267,slow=6.5,SNR=7.0						

IDC ***26*** *07:22:60.0±0.5, 42.°07S×173.°80E, h0km, mb4.8/12, mb1 4.9/14, mb1mx4.8/18, mbtmp4.8/14, ML4.6/2, MS4.3/15, Ms1 4.3/15, ms1mx4.1/23, Error ellipse: s-maj=20.1km s-min=15.8km az=33.0*
BJI ***26*** *07:23:00.2, 42.°01S×174.°07E, h11km, mB5.4/9, mb5.3/10, Ms5.0/5, Ms7 4.5/8*
ISCJB ***26*** *07:23:01.6±0.5, 42.°35S±0.°03×173.°95E±0.°04, h27km±3km, mb5.1/39, MS4.3/20, Error ellipse: s-maj=6.2km s-min=2.8km az=136.3*
WEL ***26*** *07:23:02.8±0.1, 42.°31S×173.°92E, h24km±1km, ML5.2/63, Error ellipse: s-maj=1.7km s-min=1.4km az=90.0, reported intensity MM 6.*
WEL Felt from Nelson to Canterbury, and from West Coast to Wellington, maximum.
NEIC ***26*** *07:23:03.5±1.1, 42.°21S×173.°80E, h24km±7km, mb4.9/17, MS4.6/1, ML5.2(WEL), Error ellipse: s-maj=8.4km s-min=7.3km az=115.0*
NEIC Felt [IV] at Blenheim, Kaikoura, Richmond, Stoke and Westport. Also felt at Wellington.
GCMT ***26*** *07:23:05.9±0.3, 42.°25S×173.°95E, h22km±1km, MW5.1, Moment Tensor Solution. s29,c35; s56,c78; Moment tensor: Scale 10^16Nm; Mrr3.35±.24; Mθθ-0.35±.15; Mφφ-3.00±.15; Mrθ-1.52±.27; Mrφ-2.01±.11; Mθφ2.63±.24; Best double couple: M0 4.80000×10^16 NP1:φ233.00000°, δ40.00000°, λ137.00000°. NP2:φ359.00000°, δ64.00000°, λ59.00000°. Principal axes: T 5.1400, Plg59.0000°, Azm225.0000°; N -0.6700, Plg28.0000°, Azm14.0000°; P -4.4700, Plg14.0000°, Azm111.0000°; Data Used: II IC G IU CN.*
DJA ***26*** *07:23:14, 42.°25S×173.°12E, h87km, mb5.4/17*
ISC 26 07:23:01.8±0.7, 42.°35S±0.°03×173.°97E±0.°04, h17km±4km, n222, σ0°97/151, mb5.1/39, MS4.3/20, 2C-1D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.33**	**257**	P*	Pg	07 23 09.0	+0.2
KHZ				*e*S*	Sg	07 23 14.0	+0.6
KHZ	**Kahutara**	**0.33**	**257**	*e*Pg	Pg	07 23 09.9	+1.1
KHZ				*e*Sg	Sg	07 23 14.5	+1.0
CMWZ	**Cape Campbell**	**0.62**	**17**	P*	Pb	07 23 15.4	+1.1
BSWZ	**Blackbirch Sta**	**0.63**	**353**	P*	Pb	07 23 13.7	-0.8
TUWZ	**Tuamarina**	**0.91**	**359**	P*	Pb	07 23 19.2	0.0
THZ	**Tophouse**	**0.98**	**306**	P*	Pb	07 23 18.9	-1.5
THZ				S*	Sb	07 23 32.7	-0.5
BHW	**Baring Head**	**1.15**	**36**	P*	Pb	07 23 23.0	-0.2
TCW	**Tory Channel**	**1.15**	**11**	P*	Pb	07 23 22.7	-0.6
SNZO	**South Karori**	**1.17**	**28**	P*	Pb	07 23 23.4	-0.2
SNZO	**South Karori**	**1.17**	**28**	*e*Pn	Pn	07 23 23.2	-0.2
NNZ	**Nelson**	**1.21**	**338**	PN	Pn	07 23 22.7	-1.3
WEL	**Wellington**	**1.21**	**30**	P*	Pb	07 23 24.3	0.0
PLWZ	**Palliser**	**1.23**	**51**	P*	Pb	07 23 24.2	-0.4
MSWZ	**Moikau Station**	**1.33**	**46**	P*	Pb	07 23 25.4	-0.9
LTZ	**Lake Taylor**	**1.33**	**250**	PN	Pn	07 23 25.3	-0.3
CAW	**Cannon Point**	**1.48**	**34**	PN	Pn	07 23 27.5	-0.2
DUWZ	**D'Urville Isla**	**1.54**	**359**	PN	Pn	07 23 28.2	-0.3
CRLZ	**Canterbury Las**	**1.58**	**218**	PN	Pn	07 23 29.1	0.0
TRWZ	**Traveller**	**1.59**	**54**	PN	Pn	07 23 28.7	-0.5
KIW	**Kapiti Island**	**1.64**	**26**	PN	Pn	07 23 30.1	+0.2
MTW	**Mount Morrison**	**1.65**	**45**	PN	Pn	07 23 29.5	-0.5
MQZ	**McQueen's Vall**	**1.67**	**215**	PN	Pn	07 23 29.7	-0.6
DSZ	**Denniston Nort**	**1.72**	**290**	PN	Pn	07 23 31.0	0.0
OGWZ	**Otaki Gorge**	**1.77**	**31**	PN	Pn	07 23 31.4	-0.3
HOWZ	**Holdsworth Sta**	**1.85**	**39**	PN	Pn	07 23 32.3	-0.5
TMWZ	**Te Maipa**	**1.89**	**50**	PN	Pn	07 23 32.7	-0.7
BFZ	**Birch Farm**	**2.38**	**47**	PN	Pn	07 23 39.1	-1.0
WVZ	**Waitaha Valley**	**2.50**	**252**	PN	Pn	07 23 41.7	+0.1
RPZ	**Rata Peaks**	**2.54**	**236**	PN	Pn	07 23 41.8	-0.5
RPZ	**Rata Peaks**	**2.54**	**236**	Pn	Pn	07 23 41.8	-0.5
	756nm,0.3s,baz=63,slow=4.8,SNR=1421						
RPZ				Sn	Sn	07 24 12.7	-0.2
	197nm,0.3s,baz=319,slow=4.5,SNR=9.8						
RPZ	**Rata Peaks**	**2.54**	**236**	*e*Pn	Pn	07 23 41.9	-0.4
DVHZ	**Dannevirke**	**2.63**	**40**	PN	Pn	07 23 42.3	-1.2
WAZ	**Wanganui**	**2.70**	**17**	PN	Pn	07 23 46.4	+2.0
TSZ	**Takapari Road**	**2.73**	**34**	PN	Pn	07 23 44.2	-0.6
PRHZ	**Porangahau**	**2.88**	**45**	PN	Pn	07 23 46.0	-1.1
WPHZ	**Waipukurau**	**2.94**	**40**	*e*PN	Pn	07 23 47.1	-0.7
PNHZ	**Pukenui**	**2.95**	**35**	PN	Pn	07 23 47.0	-0.9
DREZ	**Durham Road**	**3.15**	**3**	PN	Pn	07 23 52.6	+1.8
MTVZ	**Mangateitei**	**3.17**	**22**	*e*PN	Pn	07 23 52.5	+1.7
PXZ	**Pawanui**	**3.18**	**44**	PN	Pn	07 23 49.6	-1.4
PKVZ	**Pokaka**	**3.22**	**19**	*e*PN	Pn	07 23 52.6	+0.9
MOVZ	**Moawhango**	**3.23**	**25**	PN	Pn	07 23 51.9	+0.2
WNVZ	**Wahianoa**	**3.25**	**23**	PN	Pn	07 23 53.2	+1.1
BHHZ	**Black Hill Sta**	**3.26**	**30**	PN	Pn	07 23 52.0	-0.2
VRZ	**Vera Road**	**3.27**	**11**	PN	Pn	07 23 53.6	+1.3
FWVZ	**Far West T-bar**	**3.31**	**22**	*e*PN	Pn	07 23 53.8	+1.0
TUVZ	**Tukino**	**3.33**	**23**	PN	Pn	07 23 53.9	+0.8
WPVZ	**Whakapapa**	**3.35**	**21**	PN	Pn	07 23 54.4	+0.9
OTVZ	**Oturere**	**3.43**	**23**	PN	Pn	07 23 55.3	+0.8
LBZ	**Lake Benmore**	**3.44**	**232**	PN	Pn	07 23 54.6	0.0
WTVZ	**West Tongariro**	**3.45**	**21**	PN	Pn	07 23 55.8	+1.0
TWVZ	**Taurewa**	**3.45**	**19**	PN	Pn	07 23 55.6	+0.8
KRVZ	**Karewarewa**	**3.48**	**22**	PN	Pn	07 23 56.2	+1.0
MCHZ	**McNeill Hill**	**3.56**	**36**	PN	Pn	07 23 55.9	-0.4
ODZ	**Otahua Downs**	**3.62**	**221**	PN	Pn	07 23 56.6	-0.6
ODZ	**Otahua Downs**	**3.62**	**221**	*e*Pn	Pn	07 23 57.0	-0.1
BKZ	**Black Stump Fm**	**3.71**	**32**	PN	Pn	07 23 57.0	-1.3
HIZ	**Hauiti**	**3.88**	**10**	PN	Pn	07 24 02.1	+1.3
JCZ	**Jackson Bay**	**4.19**	**244**	PN	Pn	07 24 04.7	-0.2
WKZ	**Wanaka**	**4.37**	**234**	PN	Pn	07 24 06.9	-0.6
PRGZ	**Paritu Road**	**4.53**	**42**	*e*PN	Pn	07 24 08.2	-1.4
URZ	**Urewera**	**4.73**	**31**	Pn	Pn	07 24 10.8	-1.6
	3.4nm,0.3s,baz=225,slow=7.3,SNR=21						
URZ				Sn	Sn	07 25 02.1	-4.7
	29nm,0.3s,baz=247,slow=6.6,SNR=4.5						
URZ	**Urewera**	**4.73**	**31**	*e*Pn	Pn	07 24 11.0	-1.4
TOZ	**Tahuroa Road**	**4.75**	**15**	PN	Pn	07 24 13.2	+0.5
TUZ	**Tuapeka**	**4.77**	**219**	PN	Pn	07 24 12.9	0.0
MWZ	**Matawai**	**4.84**	**35**	PN	Pn	07 24 12.3	-1.6
MSZ	**Milford Sound**	**4.97**	**240**	PN	Pn	07 24 14.5	-1.2
MLZ	**Mavora Lakes**	**5.16**	**232**	PN	Pn	07 24 18.1	-0.2
MKAZ	**Moumakai**	**5.31**	**10**	PN	Pn	07 24 20.6	+0.3
SYZ	**Scrubby Hill**	**5.44**	**218**	PN	Pn	07 24 22.5	+0.5
KUZ	**Kuaotunu**	**5.75**	**14**	PN	Pn	07 24 26.0	-0.4
APZ	**The Paps**	**6.20**	**222**	PN	Pn	07 24 32.2	-0.3
WCZ	**Waipu Caves**	**6.40**	**3**	*e*PN	Pn	07 24 36.0	+0.6
OUZ	**Omahuta**	**7.12**	**358**	PN	Pn	07 24 46.2	+1.0
OUZ	**Omahuta**	**7.12**	**358**	*e*Pn	Pn	07 24 46.4	+1.2
OUZ				*e*Sn	Sn	07 26 08.2	+2.5
CNB	**Canberra Magne**	**20.38**	**282**	*eP*	P	07 27 37.6	0.0
CAN	**Canberra**	**20.64**	**282**	*eP*	P	07 27 40.1	-0.3
	39nm,1.0s						
DZM	**Mont Dzumac**	**21.18**	**340**	*e*LR	LR	07 32 49.4	
	577nm,20.5s						
ARMA	**Armidale**	**21.50**	**296**	*eP*	P	07 27 51.2	+1.4
ARMA	**Armidale**	**21.50**	**296**	*eP*	P	07 27 50.7	+0.9
	31nm,1.0s,mb4.7						
TOO	**Toolangi**	**22.30**	**273**	*eP*	P	07 27 58.7	+0.4
EIDS	**Eidsvold**	**25.33**	**305**	*eP*	P	07 28 27.1	-0.7
	6.2nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**27.70**	**281**	P	P	07 28 49.7	+0.5
	13nm,1.0s,mb4.5,baz=123,slow=10,SNR=17						
STKA				LR	LR	07 38 51.1	
	comp=Z,672nm,18.4s,MS4.3,baz=314,slow=35						
STKA	**Stephens Creek**	**27.70**	**281**	*eP*	P	07 28 49.7	+0.6
	12nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**27.70**	**281**	*eP*	P	07 28 50.3	+1.1
	4.7nm,1.0s,mb4.1						
CTA	**Charters Tower**	**32.22**	**305**	P	P	07 29 28.2	-1.0
	22nm,1.0s,mb5.0,baz=144,slow=9.8,SNR=6.7						
CTA				LR	LR	07 41 35.9	
	comp=Z,451nm,18.0s,MS4.2,baz=118,slow=35						
CTAO	**Charters Tower**	**32.22**	**305**	*eP*	P	07 29 28.9	-0.3
	23nm,1.0s,mb5.0						
HNR	**Honiara**	**35.02**	**335**	LR	LR	07 41 03.6	
	comp=Z,221nm,20.2s,MS3.9,baz=12,slow=31						
TBI	**Tubuai**	**35.73**	**70**	*e*LR	LR	07 39 41.6	
	514nm,24.0s,baz=231						
SBA	**Scott Base**	**35.74**	**183**	*eP*	P	07 30 03.0	+3.9
	12nm,1.4s,mb4.6						
ASAR	**Alice Springs**	**38.00**	**287**	P	P	07 30 17.9	-1.1
	15nm,0.9s,mb4.7,baz=124,slow=6.6,SNR=74						
ASAR				PcP	PcP	07 32 34.5	0.0
	3.8nm,0.9s,baz=137,slow=4.0,SN

KULM	Kulim	81.35 285	*e*P	P	07 35 16.9	-0.9
	57nm,1.4s,mb5.3					
TPTI		82.46 281	P	P	07 35 23.6	0.0
	26nm,1.0s,mb5.1					
MJAR	Matsushiro Arr	85.03 332	LR	LR	08 10 32.7	
	comp=Z,43nm,19.1s,MS3.9,baz=130,slow=34					
TRQA	Tornquist	85.16 139	*e*P	P	07 35 39.8	+2.7
	18nm,1.3s,mb5.0					
CFAA	Coronel Fontan	86.84 131	P	P	07 35 47.8	+2.3
	1.0nm,1.2s,baz=231,slow=3.2,SNR=9.3					
NJ2	Nanjing	89.68 316	*e*P	P	07 35 58.8	+0.1
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.4					
KSRS	Korea Array	89.82 325	P	P	07 35 59.0	-0.2
	comp=Z,4.5nm,0.9s,mb4.8,baz=154,slow=6.5,SNR=6.1					
CMAR	Chiang Mai Arr	91.69 293	P	P	07 36 09.2	+0.8
	comp=Z,10nm,1.0s,mb5.1,baz=155,slow=3.3,SNR=29					
CMAR			PP	PP	07 39 42.9	-4.5
	comp=Z,0.9nm,0.5s,baz=132,slow=6.6,SNR=3.5					
CMAR			LR	LR	08 21 31.5	
	comp=Z,92nm,18.3s,MS4.3,baz=171,slow=38					
CHTO	Chiang Mai	91.93 294	P	P	07 36 10.8	+1.3
GYA	Guiyang	92.35 304	P	P	07 36 12.5	+1.2
GYA			PP	PP	07 39 55.8	+3.3
GYA			SKS		07 46 42.5	
GYA			S	S	07 47 12.5	-1.4
GYA			SS	SS	07 53 26.0	+0.5
GYA			pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4					
GYA			pmax	pmax		
	comp=Z,120nm,5.4s					
GYA			LR	LR		
	comp=N,460nm,20.4s,MS5.0					
GYA			LR	LR		
	comp=E,380nm,22.7s,MS5.0					
GYA			LR	LR		
	comp=Z,430nm,21.0s,MS4.9					
KMI	Kunming	93.85 301	P	P	07 36 19.8	+1.6
KMI			pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.3					
PETK	Petropavlovsk-	96.11 350	LR	LR	08 14 48.8	
	comp=Z,85nm,19.6s,MS4.2,baz=73,slow=32					
CPUP	Villa Florida	96.89 135	P	P	07 36 34.9	+2.6
	comp=Z,0.2nm,0.3s,mb4.0,baz=202,slow=5.1,SNR=2.9					
CPUP			LR	LR	08 17 02.7	
	comp=Z,101nm,18.6s,MS4.3,baz=274,slow=33					
BJI	Beijing	97.28 319	P	P	07 36 32.5	-1.0
BJI			PP	PP	07 40 27.0	-3.7
BJI			S	S	07 47 57.5	+1.2
BJI			pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1					
BJI			LR	LR		
	comp=Z,52nm,24.4s,MS3.9					
CD2	Chengdu	97.32 305	*e*P	P	07 36 35.3	+1.4
CD2			pP	pP	07 36 43.3	+3.8
CD2			sP	sP	07 36 48.0	+6.6
CD2			pmax	pmax		
	comp=Z,30nm,5.2s					
LPAZ	La Paz	98.40 121	LR	LR	08 14 57.9	
	comp=Z,46nm,18.2s,MS4.0,baz=110,slow=32					
HHC	Hu-ho-hao-te	100.18 317	*e*P	Pdif	07 36 49.5	+2.6
HHC			pP		07 36 57.5	
HHC			PP	PP	07 40 58.8	+5.9
HHC			SKS		07 47 26.5	
HHC			S	Sdif	07 48 21.3	-0.3
HHC			sS		07 48 34.8	
HHC			pmax	pmax		
	comp=Z,11nm,1.0s					
HHC			pmax	pmax		
	comp=Z,81nm,5.6s					
HHC			LR	LR		
	comp=N,200nm,18.9s,MS4.8					
HHC			LR	LR		
	comp=E,190nm,17.8s,MS4.8					
HHC			LR	LR		
	comp=Z,140nm,18.0s,MS4.5					
LZH	Lanzhou	100.92 309	*e*P	Pdif	07 36 48.0	-2.2
LZH			pP		07 36 55.5	
LZH			sP		07 36 59.0	
ILAR	Eielson Array	111.09 17	PKiKP	PKiKP	07 41 34.5	+1.3
	comp=Z,1.0nm,0.9s,baz=238,slow=2.8,SNR=8.5					
WMQ	Urumqi	115.35 307	*e*PKP	PKPdf	07 41 41.0	-1.0
WMQ			PP	PP	07 42 47.0	+3.2
WMQ			SKS	SKSdf	07 48 48.0	-5.1
WMQ			SKKS	SKKSac	07 49 38.0	-5.6
WMQ			SS	SS	07 58 38.0	-3.4
WMQ			AMB	AMB		
	comp=Z,18nm,10.0s					
WMQ			LR	LR		
	comp=N,54nm,24.0s,MS4.3					
WMQ			LR	LR		
	comp=E,74nm,24.0s,MS4.3					
WMQ			LR	LR		
	comp=Z,62nm,24.0s,MS4.1					
INK	Inuvik	117.08 19	*e*PKPdf	PKPdf	07 41 44.2	-0.4
YKA	Yellowknife Ar	118.99 30	PKP	PKPdf	07 41 48.7	+0.3
	comp=Z,8.2nm,0.8s,baz=240,slow=1.7,SNR=11					
YKA	Yellowknife Ar	118.99 30	PKP	PKPdf	07 41 48.7	+0.3
MK31	Makanchi Array	120.17 307	*e*PKPdf	PKPdf	07 41 50.6	-0.6
MKAR	Makanchi Array	120.17 307	PKP	PKPdf	07 41 50.4	-0.7
	comp=Z,2.0nm,0.8s,baz=90,slow=1.2,SNR=15					
MKAR	Makanchi Array	120.17 307	PKP	PKPdf	07 41 50.4	-0.7
ULM	Lac du Bonnet	121.05 49	PKP	PKPdf	07 41 53.7	+0.9
	comp=Z,7.5nm,1.0s,baz=191,slow=1.6,SNR=5.7					
ULM	Lac du Bonnet	121.05 49	PKP	PKPdf	07 41 53.7	+0.9
KBL	Kabul	122.44 289	*e*PKPdf	PKPdf	07 41 56.7	+0.8
AAK	Ala-Archa	122.89 300	PKP	PKPdf	07 41 57.1	+0.6
	comp=Z,2.4nm,0.9s,baz=180,slow=14,SNR=4.1					
KURK	Kurchatov	124.19 310	*e*PKPdf	PKPdf	07 41 57.8	-0.9
KKAR	Karatay Array	125.69 299	*e*PKPdf	PKPdf	07 42 01.7	-0.2
ABKAR	Akbulak array	134.81 302	*e*PKPdf	PKPdf	07 42 16.9	-2.1
LIC	Lamto	144.02 182	*e*PKIKP	PKPdf	07 42 36.1	-0.8
	comp=Z,58nm,1.1s					
LIC	Lamto	144.02 182	*e*PKIKP	PKPdf	07 42 36.8	-0.1
	comp=Z,24nm,0.8s					
LIC			*e*MLR	MLR		
	comp=Z,232nm,21.8s,MS4.6					
LIC	Lamto	144.02 182	*e*PKPdf	PKPdf	07 42 36.8	-0.1
LIC			LR	LR		
	comp=Z,120nm,21.8s,MS4.6					
KIC	Kosan Boka	144.15 182	*e*PKIKP	PKPdf	07 42 36.6	-0.5
	comp=Z,46nm,0.9s					
TIC	Toumodi	144.44 182	*e*PKIKP	PKPdf	07 42 36.8	-0.8
	comp=Z,47nm,1.0s					
DBIC	Dimbokro	144.46 182	PKP	PKPdf	07 42 37.3	-0.4
	comp=Z,16nm,0.9s,baz=123,slow=2.1,SNR=7.4					
DBIC	Dimbokro	144.46 182	*e*PKPdf	PKPdf	07 42 37.1	-0.5
SFJD	Kangerlussuaq	145.55 29	*e*PKPdf	PKPdf	07 42 37.6	-0.2
SFJD	Kangerlussuaq	145.55 29	*i* P	PKPdf	07 42 38.3	+0.5
SUMG	Summit	145.94 17	*e*PKPdf	PKPdf	07 42 39.1	+0.8
SUMG	Summit	145.94 17	*i* P	PKPdf	07 42 39.1	+0.7
	comp=Z,12nm,0.9s					
MALT	Malatya	146.16 278	*e*PKPdf	PKPdf	07 42 40.5	+0.7
ARCES	ARCESS Array B	148.26 340	PKPbc	PKPbc	07 42 45.0	-0.7
	comp=Z,8.0nm,0.9s,baz=46,slow=1.7,SNR=16					
CSS	Prodhromos	148.61 270	*e*PKPbc	PKPbc	07 42 48.2	+0.5
JOF	Joensuu	150.05 326	*ep*	PKPbc	07 42 47.7	-2.7
	comp=Z,2.5nm,0.6s					
TORD	Torodi Ar. Bea	150.15 195	PKP	PKPdf	07 42 48.4	+1.3
	comp=Z,8.7nm,0.9s,baz=297,slow=0.3,SNR=5.9					
TORD			PKPbc	PKPbc	07 42 52.9	+0.9
	comp=Z,22nm,1.0s,baz=158,slow=1.4,SNR=23					
TORD	Torodi Ar. Bea	150.15 195	PKP	PKPdf	07 42 48.4	+1.3
TORD			PKPbc	PKPbc	07 42 52.9	+0.8
BRTR	Keskin Array B	150.15 278	PKP	PKPdf	07 42 47.2	+0.9
	comp=Z,18nm,1.0s,baz=149,slow=5.0,SNR=24					
BRTR			PKPbc	PKPbc	07 42 51.2	-0.2
	comp=Z,17nm,1.0s,baz=143,slow=6.2,SNR=37					
KAF	Kangasniemi	152.48 327	*ep*	PKPbc	07 42 55.1	-0.9
	comp=Z,4.3nm,0.8s					
FINES	FINESS Array B	152.91 326	PKPbc	PKPbc	07 42 56.5	-0.5
	comp=Z,5.0nm,0.9s,baz=116,slow=8.7,SNR=7.1					
AKASG	Malin Array Be	154.55 301	PKPbc	PKPbc	07 43 00.5	-0.4
	comp=Z,1.8nm,0.6s,baz=65,slow=3.0,SNR=7.8					
AKASG			PKPab	PKPab	07 43 14.4	-1.2
	comp=Z,7.1nm,1.0s,baz=73,slow=3.7,SNR=12					
GERES	GERESS Array B	164.76 302	PKPab	PKPab	07 43 59.5	-0.5
	comp=Z,0.2nm,0.3s,baz=79,slow=6.9,SNR=5.6					
TANN	Tannenbergstha	164.93 309	*e*PKPab	PKPab	07 44 00.5	-0.2
WERD	Werda	165.01 309	*e*PKPab	PKPab	07 44 00.9	-0.1
GUNZ	Gunzen	165.03 309	*e*PKPab	PKPab	07 44 01.0	-0.1
WERN	Wernitzgruen	165.03 308	*e*PKPab	PKPab	07 44 01.2	0.0
ROTZ	Rotzenmuhle	165.35 307	*e*PKPab	PKPab	07 44 02.9	+0.3
GRF	Grafenberg Arr	165.96 307	*e*PKPab	PKPab	07 44 05.3	0.0
KEST	Kesra	166.36 246	PKPab	PKPab	07 44 08.7	+1.2
	comp=Z,2.7nm,0.9s,baz=54,slow=3.8,SNR=5.8					
KEST	Kesra	166.36 246	*e*PKPdf	PKPdf	07 43 07.3	+1.5
KEST			*e*PKPab	PKPab	07 44 08.5	+1.1
WTTA	Wattenberg	166.53 297	⇑ *i* PKPab	PKPab	07 44 08.0	+0.1
	comp=Z,15nm,1.0s					
FETA	Feichten	167.20 297	⇑ *i* PKPab	PKPab	07 44 10.6	-0.2
	comp=Z,9.3nm,1.3s					
CDF	Champ du Feu	168.86 308	*e*PKP2	PKPab	07 44 17.4	-0.7
	comp=Z,21nm,1.0s					
HINF	Hinteralfeld	169.38 305	*e*PKP2	PKPab	07 44 19.4	-1.1
HAU	Haudompre	169.59 307	*e*PKP2	PKPab	07 44 20.3	-1.1
HAU			*e*MLR	MLR		
	comp=Z,126nm,17.0s					
LPG	La Plagne	170.26 293	*e*PKP2	PKPab	07 44 24.3	-0.2
LPL	La Plagne	170.26 293	*e*PKP2	PKPab	07 44 24.3	-0.2
	comp=Z,35nm,1.3s					
MBDF	Montbardon	170.40 289	*e*PKP2	PKPab	07 44 24.9	-0.3
ORIF	Oris-en-Rattie	170.99 291	*e*PKP2	PKPab	07 44 27.2	-0.6
	comp=Z,14nm,1.0s					
ORIF			*e*MLR	MLR		
	comp=Z,144nm,22.8s					
SMRF	Simiane la Rot	171.36 285	*e*PKP2	PKPab	07 44 29.1	-0.4
LOR	Lormes	171.42 308	*e*PKP2	PKPab	07 44 28.6	-0.9
LOR			*e*MLR	MLR		
	comp=Z,176nm,18.0s					
SSF	Saint Saulge	171.74 308	*e*PKP2	PKPab	07 44 30.2	-0.7
	comp=Z,4.3nm,0.6s					
SMF	Signal de Mont	171.74 305	*e*PKP2	PKPab	07 44 29.9	-1.1
VIVF	Saint-Julien-l	171.84 292	*e*PKP2	PKPab	07 44 30.9	-0.6
AVF	Avril sur Loir	171.96 307	*e*PKP2	PKPab	07 44 31.0	-1.0
LASF	Ste Croix	172.57 287	*e*PKP2	PKPab	07 44 34.2	-0.6
	comp=Z,20nm,1.2s					
TCF	Toulx Ste Croi	172.90 307	*e*PKP2	PKPab	07 44 35.6	-0.5
CAF	Calviac	173.59 296	*e*PKP2	PKPab	07 44 38.9	-0.4
RJF	Les Rejaudoux	173.79 301	*e*PKP2	PKPab	07 44 40.0	-0.2
	comp=Z,61nm,1.5s					
RJF			*e*MLR	MLR		
	comp=Z,153nm,19.2s					
MTLF	Montolieu	173.86 282	*e*PKP2	PKPab	07 44 39.8	-0.8
	comp=Z,12nm,0.9s					
MFF	Saint Martin d	174.02 317	*e*PKP2	PKPab	07 44 39.5	-1.5
	comp=Z,23nm,1.2s					

WEL 26 07:25:15.9±0.2, 42°.28S×173°.89E, h20km±1km, ML3.7/13, Error ellipse: s-maj=2.8km s-min=1.6km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	Kahutara	0.29	242	P*	Pb	07 25 22.6	0.0
KHZ				S*	Sb	07 25 27.2	+0.2
BSWZ	Blackbirch Sta	0.56	359	P*	Pb	07 25 26.6	-0.5
CMWZ	Cape Campbell	0.58	25	*e*P*	Pb	07 25 27.8	+0.3
TUWZ	Tuamarina	0.85	3	P*	Pb	07 25 32.1	+0.1
THZ	Tophouse	0.90	305	P*	Pb	07 25 32.4	-0.3
TCW	Tory Channel	1.10	15	P*	Pb	07 25 35.6	-0.7
NNZ	Nelson	1.12	340	*e*PN	Pn	07 25 36.3	-0.2
BHW	Baring Head	1.14	41	*e*P*	Pb	07 25 36.3	-0.6
SNZO	South Karori	1.15	33	P*	Pb	07 25 36.9	-0.1
LTZ	Lake Taylor	1.30	247	PN	Pn	07 25 38.7	-0.1
CAW	Cannon Point	1.47	37	*e*PN	Pn	07 25 40.6	-0.5
CRLZ	Canterbury Las	1.60	215	PN	Pn	07 25 42.1	-0.8
DSZ	Denniston Nort	1.64	288	*e*PN	Pn	07 25 44.4	+0.9
MQZ	McQueen's Vall	1.69	212	PN	Pn	07 25 43.0	-1.3

*ISCJB **26** 07:39:46.5±2.2, 4°.8S±0°.2×150°.9E±0°.2, h270km±20km, mb4.2/9, Error ellipse: s-maj=36.8km s-min=19.1km az=35.0*
*NEIC **26** 07:39:46.9±2.0, 4°.75S×150°.84E, h258km±19km, mb4.6/3, Error ellipse: s-maj=29.6km s-min=16.1km az=124.0*
*IDC **26** 07:39:47.5±3.1, 4°.85S×150°.98E, h267km±32km, mb3.8/7, mb1 4.0/8, mb1mx3.6/17, mbtmp3.8/8, Error ellipse: s-maj=40.8km s-min=11.7km az=124.0*

ISC 26 07:39:46.5±1.7, 4°.8S±0°.2×150°.9E±0°.2, h254km±16km, n20, σ0°75/21, mb4.3/9, 3D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.90	219	*e*Pn	Pn	07 41 12.8	-0.8
	68nm,0.6s						
COEN	Coen	11.88	219	*e*Pn	Pn	07 42 30.4	+1.9
CTA	Charters Tower	15.86	196	P	Pn	07 43 16.9	+0.1
	0.4nm,0.3s,baz=9.1,slow=13,SNR=4.6						
KAKA	Kakadu	19.87	246	⇓ *i* P	P	07 43 58.8	-0.2
	64nm,0.2s						
KAKA	Kakadu	19.87	246	*e*P	P	07 43 58.8	-0.2
	59nm,0.3s						
WRA	Warramunga Arr	22.07	226	P	P	07 44 21.2	+0.4
	13nm,0.3s,mb4.9,baz=52,slow=10,SNR=387						
WRA				S	S	07 48 06.2	+0.6
	0.8nm,0.8s,baz=43,slow=16,SNR=5.6						
ASAR	Alice Springs	24.92	220	P	P	07 44 46.9	+0.2
	4.5nm,0.4s,mb4.4,baz=52,slow=8.6,SNR=177						
FITZ	Fitzroy Crossi	28.02	240	P	P	07 45 14.1	-0.4
	4.7nm,0.3s,mb4.5,baz=66,slow=8.5,SNR=47						
FITZ	Fitzroy Crossi	28.02	240	⇓ *i* P	P	07 45 14.0	-0.5
	8.1nm,0.3s,mb4.8						
FITZ	Fitzroy Crossi	28.02	240	*e*P	P	07 45 13.9	-0.6
	4.8nm,0.5s,mb4.4						
STKA	Stephens Creek	28.32	197	P	P	07 45 16.2	-0.7
	1.8nm,0.6s,mb3.9,baz=350,slow=10,SNR=7.9						
STKA	Stephens Creek	28.32	197	*e*P	P	07 45 16.3	-0.6
	0.5nm,0.8s,mb3.2						
FORT	Forrest	33.63	217	*e*P	P	07 46 02.9	-0.5
	13nm,0.5s,mb4.7						
MBWA	Marble Bar	34.35	239	*e*P	P	07 46 09.3	-0.4
MBWA	Marble Bar	34.35	239	*e*P	P	07 46 09.3	-0.4
	8.0nm,0.5s,mb4.5						
MEEK	Meekatharra	37.72	231	⇓ *i* P	P	07 46 38.0	-0.1
PETK	Petropavlovsk-	57.98	5	P	P	07 49 13.3	+0.9
	3.8nm,0.5s,mb4.3,baz=155,slow=6.5,SNR=9.0						
ILAR	Eielson Array	82.87	22	P	P	07 51 41.0	-1.3
	1.2nm,0.7s,mb3.7,baz=260,slow=5.0,SNR=17						
NVAR	Mina Array Bea	93.56	52	P	P	07 52 34.7	+0.8
	0.5nm,0.6s,mb3.7,baz=278,slow=5.5,SNR=5.6						
NVAR	Mina Array Bea	93.56	52	P	P	07 52 34.7	+0.8

IDC 26 07:49:11.9±2.3, 8°.18N×91°.86E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/23, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=77.7km s-min=22.3km az=69.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.32	33	Pn	Pn	07 52 08.6	0.0
	0.1nm,0.3s,baz=225,slow=15,SNR=4.7						
MKAR	Makanchi Array	39.33	350	P	P	07 56 42.6	-0.1
	0.9nm,0.6s,baz=167,slow=8.6,SNR=11						
SONM	Songino Array	41.40	15	P	P	07 57 00.1	+0.3
	0.7nm,0.7s,baz=189,slow=8.8,SNR=4.2						
WRA	Warramunga Arr	50.29	124	P	P	07 58 10.1	-0.4
	0.6nm,0.7s,baz=305,slow=8.6,SNR=8.1						
ASAR	Alice Springs	51.86	129	P	P	07 58 22.6	+0.3
	0.3nm,0.5s,baz=306,slow=7.9,SNR=4.5						
STKA	Stephens Creek	61.97	133	P	P	07 59 34.0	+0.1
	2.3nm,0.9s,baz=315,slow=8.6,SNR=3.3						

*DDA **26** 08:09:52.1, 38°.50N×43°.58E, h6km±2km, Md2.9*
*ISCJB **26** 08:09:53.4±0.9, 38°.43N±0°.05×43°.47E±0°.09, h15km±5km, Error ellipse: s-maj=11.8km s-min=7.9km az=10.1*
*CSEM **26** 08:09:53.4±0.5, 38°.44N×43°.47E, h18km±3km, MD2.8, Error ellipse: s-maj=16.4km s-min=10.0km az=92.0*
*ISK **26** 08:09:54.6, 38°.51N×43°.43E, h14km, MD2.8*

ISC 26 08:09:53.5±0.9, 38°.43N±0°.05×43°.44E±0°.09, h17km±5km, n13, σ0°85/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANT	Van	0.14	267	*e*PG	Pg	08 09 58.9	+1.4
VANT	Van	0.14	267	*e*Pg	Pg	08 09 58.9	+1.4
VANB	Van	0.17	346	PG	Pg	08 09 57.3	-0.6
VANB				*e*SG	Sg	08 10 00.4	-0.5
VANB	Van	0.17	346	*i* Pg	Pg	08 09 57.3	-0.6
VANB				*e*Sg	Sg	08 10 00.4	-0.6
CLDR	Caldiran	0.81	27	*e*PG	Pg	08 10 09.2	0.0
CLDR				*e*SG	Sg	08 10 20.2	+0.3
CLDR	Caldiran	0.81	27	*e*Pg	Pg	08 10 09.2	0.0
CLDR				*e*Sg	Sg	08 10 20.2	+0.3
HAKT	HAKKARI	0.90	166	*i* P	Pb	08 10 10.5	0.0
HAKT				*i* S	Sb	08 10 31.7	+10
HAKT	HAKKARI	0.90	166	*i* P	Pb	08 10 10.5	-0.1
HAKT				*i* S	Sb	08 10 31.7	+10
TUTA	Tutak	1.09	333	*i* P	Pb	08 10 12.3	-1.6
TUTA				*i* S	Sb	08 10 28.5	+0.8
TUTA	Tutak	1.09	333	*i* P	Pb	08 10 12.3	-1.6
TUTA				*i* S	Sb	08 10 28.5	+0.7
AGRB	Hanur-Agry	1.20	343	*e*PN	Pn	08 10 16.5	+1.0
AGRB	Hanur-Agry	1.20	343	*e*Pn	Pn	08 10 16.5	+1.0
BEST	Besiri	1.79	253	*i* P	Pn	08 10 22.9	-0.7
BEST				*i* S	Sn	08 10 54.8	+8.9

*HLW **26** 08:26:45.0, 35°.43N×29°.56E, h33km±29km, Ml3.2*
*ISCJB **26** 08:26:45.9±0.9, 35°.17N±0°.08×29°.42E±0°.08, h33km, Error ellipse: s-maj=13.6km s-min=6.3km az=38.1*
*ATH **26** 08:26:59.0, 36°.25N×28°.07E, h59km±1km, MD3.4/4*

ISC 26 08:26:47.3±1.0, 35°.26N±0°.09×29°.44E±0°.09, h35km, n18, σ1°02/22, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	1.43	312	*e*P	Pn	08 27 08.4	-2.4
ARG				*e*S	Sn	08 27 15.2	-13
KARP	Karpathos	1.88	279	*e*P	Pn	08 27 17.9	+0.9
KARP				*e*S	Sn	08 27 32.3	-7.2
NPS	Neapolis	3.13	271	*e*P	Pn	08 27 34.5	+0.3
LAST	Lasithi	3.25	269	*e*P	Pn	08 27 37.3	+1.6
LAST				*e*S	Sn	08 28 04.8	-8.3
APE	Apeiranthos	3.64	301	*e*P	Pn	08 27 34.7	-6.5
SIVA	Sivas	3.80	268	*e*P	Pn	08 27 44.4	+1.0
VAM	Vamos	4.29	273	*e*P	Pn	08 27 49.8	-0.2
KARN	Karanos	4.52	273	*e*P	Pn	08 27 52.8	-0.4
SLUM		5.16	224	S	Sn	08 28 58.1	-2.3
	baz=224						
SLUM				AMP		08 28 00.0	
	comp=N,30μm,0.3s,logA/T=5.0,baz=224						
AMAG	Maghara	5.59	144	P	Pn	08 28 07.3	-0.7
	baz=146						
KOT	Kottamia	5.69	159	P	Pn	08 28 09.6	+0.3
	baz=160						
HNAT	Natroun	5.70	170	P	Pn	08 28 10.5	+1.0
	baz=170						
HHAG	Hagoal	5.75	156	P	Pn	08 28 10.2	0.0
	baz=157						
GLL	Jalalah	5.98	161	P	Pn	08 28 13.3	-0.1
	baz=162						
HNKL	Nakhl	6.55	143	P	Pn	08 28 20.2	-0.9
	baz=144						
HNKL				S	Sn	08 29 28.6	-6.1
	baz=144						
SWA2		6.88	210	AMP		08 29 00.0	
	comp=N,10μm,0.2s,logA/T=4.6,baz=211						
AWBH		6.94	184	P	Pn	08 28 27.0	+0.6
	baz=185						
HFRF	Wahat Farafira	8.15	187	P	Pn	08 28 43.8	+0.7
	baz=188						
HFRF				S	Sn	08 30 08.7	-5.2
	baz=188						

*ISCJB **26** 08:28:10.6±0.6, 23°.89S±0°.03×66°.41W±0°.06, h199km±6km, mb3.9/19, Error ellipse: s-maj=9.7km s-min=5.5km az=170.0*
*IDC **26** 08:28:12.2±1.3, 23°.80S×66°.41W, h200km±11km, mb3.6/6, mb1 4.0/10, mb1mx3.8/17, mbtmp3.7/10, Error ellipse: s-maj=19.3km s-min=12.8km az=72.0*
*NEIC **26** 08:28:12.1±0.7, 23°.86S×66°.36W, h199km±6km, mb4.1/14, Error ellipse: s-maj=9.6km s-min=7.0km az=73.0*
*GUC **26** 08:28:14.7±0.7, 23°.57S×66°.94W, h240km, ML4.6*

ISC 26 08:28:11.5±0.6, 23°.88S±0°.04×66°.40W±0°.06, h191km±6km, n50, σ1°05/51, mb4.0/19, 6C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	Los Morros	3.52	277	⇓ *i* P	Pn	08 29 08.2	+1.3
CEN1				*i* S	Sn	08 29 50.8	+0.6
CEN1				AML	AML	08 29 54.0	
	comp=N,385nm,0.4s						
ANCH	Antofagasta	3.68	272	⇑ *i* P	Pn	08 29 10.6	+1.7
ANCH				*i* S	Sn	08 29 53.1	-0.6
ANCH	Antofagasta	3.68	272	⇑ *i* P	Pn	08 29 10.6	+1.7
ANCH				*i* S	Sn	08 29 53.1	-0.6
ANCH				AML	AML	08 29 56.1	
	comp=E,908nm,0.3s						
MECH	Mejillones	3.79	281	⇑ *i* P	Pn	08 29 12.1	+1.7
MECH				*i* S	Sn	08 29 56.0	-0.4
HMBC	Humberston	4.83	317	⇑ *i* P	Pn	08 29 23.0	-0.4
HMBC				*i* S	Sn	08 30 16.1	-3.9
PSGC	Pisagua	5.49	320	⇑ *i* P	Pn	08 29 30.6	-1.3
PSGC				*i* S	Sn	08 30 30.2	-5.2
MNMC	Miæe Miæ	5.58	327	⇑ *i* P	Pn	08 29 33.8	+0.6
MNMC				*i* S	Sn	08 30 34.8	-2.8
LCO	Las Campanas	6.40	216	*e*Pn	Pn	08 29 44.1	+0.3
LCO				*e*Sn	Sn	08 30 55.6	-1.2
LPAZ	La Paz	7.72	348	P	Pn	08 30 02.8	+1.6
	comp=E,24nm,0.3s,baz=153,slow=11,SNR=878						
LPAZ				S	Sn	08 31 27.6	-0.6
	baz=246,slow=20,SNR=2.4						
LPAZ	La Paz	7.72	348	*e*Pn	Pn	08 30 02.9	+1.7
CFAA	Coronel Fontan	7.87	192	P	Pn	08 30 03.2	+0.3
	comp=E,2.0nm,0.3s,baz=9.9,slow=13,SNR=218						
CFAA				S	Sn	08 31 28.4	-3.1
	comp=E,0.9nm,0.3s,baz=115,slow=19,SNR=4.2						
CPUP	Villa Florida	8.58	108	P	Pn	08 30 12.9	+0.7
	comp=E,0.2nm,0.3s,baz=276,slow=15,SNR=4.7						
CPUP	Villa Florida	8.58	108	*e*Pn	Pn	08 30 13.0	+0.8
TRQA	Tornquist	14.63	166	*e*Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA				SKPbc	SKPbc	08 50 08.9	-2.3
	comp=E,0.6nm,0.6s,baz=152,slow=3.5,SNR=8.9						
PETK	**Petropavlovsk-**	**135.84**	**323**	PKP	PKPdf	08 47 09.2	+0.2
	comp=E,1.4nm,0.6s,baz=75,slow=2.7,SNR=4.0						
FITZ	**Fitzroy Crossi**	**136.66**	**197**	PKP	PKPdf	08 47 11.1	-0.6
	comp=E,1.1nm,0.5s,baz=315,slow=4.3,SNR=2.9						
ZALV	**Zalesovo Beam**	**143.03**	**28**	PKP	PKPdf	08 47 19.2	-2.9
	comp=E,1.4nm,0.5s,baz=270,slow=2.9,SNR=3.8						
ZALV				SKPbc	SKPbc	08 50 40.2	-2.1
	comp=E,1.0nm,0.5s,baz=338,slow=1.6,SNR=4.4						
ZALV	**Zalesovo Beam**	**143.03**	**28**	PKP	PKPdf	08 47 19.2	-2.9
ZALV				SKPbc	SKPbc	08 50 40.2	-2.1
MK31	**Makanchi Array**	**146.08**	**40**	*e*PKPdf	PKPdf	08 47 27.8	+0.2
MKAR	**Makanchi Array**	**146.08**	**40**	PKPbc	PKPbc	08 47 27.6	-1.3
	comp=E,2.4nm,0.5s,baz=301,slow=3.2,SNR=16						
SONM	**Songino Array**	**155.41**	**12**	PKP	PKPdf	08 47 42.2	+0.3
	comp=E,0.2nm,0.3s,baz=343,slow=4.5,SNR=3.4						

ISCJB ***26*** *08:34:55.0±0.4, 6°.08S±0°.05×128°.58E±0°.06, h338km±6km, mb3.8/9, Error ellipse: s-maj=11.1km s-min=5.9km az=151.8*
NEIC ***26*** *08:34:56.1±1.0, 6°.08S×128°.52E, h335km±12km, mb4.4/6, Error ellipse: s-maj=16.3km s-min=7.6km az=52.0*
DJA ***26*** *08:34:56, 6°.09S×128°.60E, h315km, mb4.7/7*
IDC ***26*** *08:34:58.1±3.0, 6°.11S×128°.45E, h356km±30km, mb3.4/6, mb1 3.6/10, mb1mx3.5/17, mbtmp3.5/10, Error ellipse: s-maj=41.6km s-min=9.6km az=67.0*
ISC 26 08:34:55.9±0.4, 6°.09S±0°.04×128°.61E±0°.06, h331km±6km, n40, σ0s97/45, mb3.8/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.02**	**40**	P	**Pn**	**08 35 44.8**	**-0.9**
NLAI	**Namlea**	**3.20**	**332**	P	**Pn**	**08 35 56.2**	**+0.4**
TLE	**Tual**	**4.13**	**84**	P	**Pn**	**08 36 05.3**	**0.0**
LBMI	**Labuha**	**5.52**	**348**	P	**Pn**	**08 36 20.4**	**-0.3**
	3μm262nm,0.8s						
KAKA	**Kakadu**	**7.59**	**150**	*e*P	**Pn**	**08 36 45.1**	**+0.2**
	17nm,0.4s						
KAKA				*e*S	**S**	**08 38 10.7**	**-2.9**
KAKA	**Kakadu**	**7.59**	**150**	*e*Pn	**Pn**	**08 36 44.9**	**0.0**
	63nm,0.5s						
KAKA				*e*Sn	**S**	**08 38 11.2**	**-2.3**
KAKA	**Kakadu**	**7.59**	**150**	P	**Pn**	**08 36 45.2**	**+0.3**
BKSI	**Bulukumba**	**8.48**	**275**	P	**Pn**	**08 36 54.9**	**-0.7**
	35nm,1.1s						
KAPI	**Kappang**	**8.88**	**276**	P	**Pn**	**08 36 59.8**	**-0.6**
	0.4nm,0.3s,baz=105,slow=16,SNR=3.4						
BAKI	**Biak**	**8.92**	**57**	P	**Pn**	**08 37 01.7**	**+0.7**
	95nm,0.8s						
TTSI	**Tana Toraja**	**9.26**	**289**	P	**Pn**	**08 37 06.3**	**+1.2**
	1μm24nm,0.9s						
KNA	**Kununurra**	**9.61**	**179**	*e*P	**Pn**	**08 37 09.7**	**+0.6**
	47nm,0.7s						
KNA	**Kununurra**	**9.61**	**179**	P	**Pn**	**08 37 10.1**	**+1.0**
	2μm220nm,1.1s						
FITZ	**Fitzroy Crossi**	**12.29**	**193**	P	**Pn**	**08 37 41.0**	**-0.4**
	2.1nm,0.3s,baz=28,slow=12,SNR=43						
FITZ				S	**S**	**08 39 58.1**	**+0.2**
	1.1nm,0.3s,baz=120,slow=20,SNR=3.7						
FITZ	**Fitzroy Crossi**	**12.29**	**193**	*e*P	**Pn**	**08 37 39.9**	**-1.5**
	28nm,0.6s						
FITZ				*e*S	**S**	**08 39 59.8**	**+2.0**
FITZ	**Fitzroy Crossi**	**12.29**	**193**	*e*Pn	**Pn**	**08 37 40.4**	**-0.9**
FITZ				*e*Sn	**S**	**08 39 59.2**	**+1.4**
FITZ	**Fitzroy Crossi**	**12.29**	**193**	P	**Pn**	**08 37 40.8**	**-0.6**
	69nm,0.9s						
WRA	**Warramunga Arr**	**14.86**	**159**	P	**P**	**08 38 11.2**	**+1.4**
	2.4nm,0.3s,baz=339,slow=12,SNR=56						
WRA				S	**S**	**08 40 49.0**	**-1.8**
	0.8nm,0.3s,baz=337,slow=21,SNR=12						
WB2	**Warramunga Arr**	**14.86**	**158**	*e*Pn	**Pn**	**08 38 10.8**	**-0.9**
WB2				*e*S	**S**	**08 40 49.4**	**-1.5**
COEN	**Coen**	**16.33**	**120**	*e*P	**P**	**08 38 27.7**	**+1.7**
COEN	**Coen**	**16.33**	**120**	*e*P	**P**	**08 38 27.4**	**+1.4**
	266nm,0.8s						
COEN	**Coen**	**16.33**	**120**	P	**P**	**08 38 27.8**	**+1.8**
KKM	**Kota Kinabalu**	**17.27**	**314**	*e*P	**P**	**08 38 36.1**	**0.0**
	15nm,0.5s						
MBWA	**Marble Bar**	**17.28**	**209**	*e*P	**P**	**08 38 36.1**	**-0.1**
	5.5nm,0.5s						
ASAR	**Alice Springs**	**18.21**	**164**	P	**P**	**08 38 48.0**	**+1.9**
	5.2nm,0.3s,baz=345,slow=12,SNR=266						
ASAR				S	**S**	**08 41 57.5**	**+0.5**
	0.7nm,0.3s,baz=344,slow=20,SNR=43						
STKA	**Stephens Creek**	**28.39**	**156**	P	**P**	**08 40 22.2**	**+1.5**
	1.7nm,0.5s,mb3.5,baz=332,slow=10,SNR=5.7						
STKA	**Stephens Creek**	**28.39**	**156**	*e*P	**P**	**08 40 22.1**	**+1.4**
	2.8nm,1.6s,mb3.2						
STKA	**Stephens Creek**	**28.39**	**156**	P	**P**	**08 40 22.2**	**+1.5**
CMAR	**Chiang Mai Arr**	**38.09**	**310**	P	**P**	**08 41 43.7**	**-0.3**
	1.8nm,0.6s,mb3.5,baz=139,slow=6.9,SNR=5.6						
SONM	**Songino Array**	**57.15**	**342**	P	**P**	**08 44 08.2**	**-0.5**
	0.8nm,0.6s,mb3.2,baz=168,slow=8.2,SNR=4.1						
MKAR	**Makanchi Array**	**66.71**	**327**	P	**P**	**08 45 11.8**	**-0.2**
	3.5nm,0.5s,mb4.4,baz=126,slow=7.8,SNR=41						
MKAR	**Makanchi Array**	**66.71**	**327**	P	**P**	**08 45 11.8**	**-0.2**
ZALV	**Zalesovo Beam**	**70.16**	**334**	P	**P**	**08 45 32.0**	**-0.9**
	1.8nm,0.6s,mb4.0,baz=126,slow=7.3,SNR=6.4						
KURK	**Kurchatov**	**71.02**	**329**	*e*P	**P**	**08 45 37.8**	**-0.4**
	7.7nm,1.1s,mb4.3						
MAW	**Mawson**	**75.29**	**201**	P	**P**	**08 46 02.9**	**+0.1**
	0.2nm,0.3s,mb3.3,baz=72,slow=6.4,SNR=4.5						
ABKAR	**Akbulak array**	**80.94**	**322**	*e*P	**P**	**08 46 33.6**	**-0.3**
	1.2nm,0.6s,mb3.8						
PMR	**Palmer**	**91.63**	**28**	*e*P	**P**	**08 47 25.8**	**+0.2**
	6.7nm,1.2s,mb4.5						
CPUP	**Villa Florida**	**147.27**	**170**	PKPbc	PKPbc	08 53 59.2	-2.1
	0.5nm,0.6s,baz=225,slow=1.4,SNR=3.9						
CPUP	**Villa Florida**	**147.27**	**170**	PKPbc	PKPbc	08 53 59.2	-2.1
LPAZ	**La Paz**	**152.28**	**144**	*e*PKPbc	PKPbc	08 54 14.3	+0.7

IDC ***26*** *08:39:50.6±2.1, 1°.40N×126°.94E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=178.8km s-min=25.3km az=66.0*
DJA ***26*** *08:39:53, 1°.78N×127°.36E, h56km, MLv4.0/4*
ISC 26 08:39:52.0±5.6, 1°.81N±0°.09×127°.4E±0°.2, h19km±37km, n8, σ1s21/9, mb3.8/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.04**	**183**	P	**Pb**	**08 40 11.9**	**+0.6**
TNTI				S	**Sb**	**08 40 25.3**	**+0.8**
LBMI	**Labuha**	**2.44**	**178**	P	**Pn**	**08 40 31.5**	**+0.7**
MNI	**Manado**	**2.61**	**262**	P	**Pn**	**08 40 33.6**	**+0.5**
SGSI	**Sangihe**	**2.65**	**315**	P	**Pn**	**08 40 33.2**	**-0.5**
KDI	**Kendari**	**7.48**	**220**	P	**Pn**	**08 41 38.0**	**-2.1**
WRA	**Warramunga Arr**	**22.66**	**163**	P	**P**	**08 44 50.5**	**-1.7**
	1.7nm,0.6s,mb3.7,baz=340,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**26.10**	**166**	P	**P**	**08 45 24.2**	**-0.5**
	0.4nm,0.3s,mb3.4,baz=343,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**59.52**	**326**	P	**P**	**08 49 56.2**	**+2.2**
	1.0nm,0.4s,mb4.2,baz=126,slow=8.7,SNR=11						

JMA ***26*** *08:42:16.4±0.1, 24°.91N×122°.35E, h0km, M2.6*
TAP 26 08:42:16.0, 24°.85N×122°.19E, h17km, ML3.6, 2D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.23**	**269**	*i* P	Pg	08 42 21.8	+0.4
	baz=262						
EGS				*e*S	Sg	08 42 25.1	+0.1
	baz=262						
TWB1	**Santiao Chiao**	**0.24**	**311**	||*i* P	Pg	08 42 21.8	+0.3
	baz=311						
TWB1				*i* S	Sg	08 42 25.4	+0.2
	baz=311						
TWC	**Suao**	**0.39**	**232**	||*i* P	Pg	08 42 23.9	-0.1
	baz=239						
TWC				S	Sg	08 42 28.7	-0.8
	baz=239						
ILA	**Ilan**	**0.41**	**258**	*e*P	Pg	08 42 24.2	-0.2
	baz=258						
ILA				*e*S	Sg	08 42 32.4	+2.4
	baz=258						
NWF	**Wu-fen Shan**	**0.43**	**301**	*e*P	Pg	08 42 25.9	+1.1
	baz=294						
NWF				*e*S	Sg	08 42 31.8	+1.2
	baz=294						
TWE	**Neicheng**	**0.49**	**255**	*i* P	Pg	08 42 26.1	+0.2
	baz=254						
TWE				*e*S	Sg	08 42 33.2	+0.7
	baz=254						
TWA	**Mucha**	**0.57**	**283**	P	Pg	08 42 28.8	+1.6
	baz=283						
TWA				S	Sg	08 42 36.5	+1.7
	baz=283						
ENA	**Nanau**	**0.58**	**224**	P	Pg	08 42 27.3	-0.3
	baz=216						
ENA				*e*S	Sg	08 42 35.0	-0.4
	baz=216						
ENTT	**Nioudou**	**0.60**	**250**	P	Pg	08 42 28.2	+0.3
	baz=249						
ENTT				*e*S	Sg	08 42 35.5	-0.5
	baz=249						
TWY	**Chenhua**	**0.68**	**309**	P	Pg	08 42 30.7	+1.3
	baz=308						
TWY				*i* S	Sg	08 42 40.7	+2.2
	baz=308						
NSK	**Sanguang**	**0.78**	**257**	*i* P	Pb	08 42 31.1	0.0
	baz=257						
NSK				S	Sb	08 42 41.2	0.0
	baz=257						
YOJ	**Yonaguni jima**	**0.84**	**117**	P	Pb	08 42 31.2	-0.9
YOJ				S	Sb	08 42 41.6	-1.6
TWD	**Chiawan**	**0.94**	**215**	*i* P	Pb	08 42 33.7	-0.1
	baz=216						
TWD				S	Sb	08 42 45.8	-0.1
	baz=216						
HWA	**Hwalien**	**1.02**	**212**	*e*P	Pb	08 42 37.6	+2.4
	baz=220						
WHF	**Hehuan Shan**	**1.10**	**230**	*e*P	Pb	08 42 37.1	+0.6
	baz=231						
WHF				S	Sb	08 42 51.8	+1.2
	baz=231						
TWT	**Tachien**	**1.10**	**238**	P	Pb	08 42 38.1	+1.6
	baz=238						
TWT				*e*S	Sb	08 42 51.0	+0.4
	baz=238						
NSTT	**Nanjuang**	**1.10**	**259**	P	Pb	08 42 38.6	+2.0
	baz=253						
NSTT				S	Sb	08 42 53.8	+3.1
	baz=253						
ESL	**Shilin**	**1.24**	**214**	*i* P	Pn	08 42 38.8	+0.3
	baz=221						
ESL				*e*S	Sb	08 42 56.5	+1.8
	baz=221						
NSY	**Sanyi**	**1.37**	**252**	*e*P	Pn	08 42 43.9	+3.6
	baz=269						
TWQ1	**Liyutan**	**1.38**	**249**	*e*P	Pn	08 42 44.2	+3.6
	baz=266						
TWQ1				*e*S	Sn	08 43 02.8	+4.4
	baz=266						
IRIF	**Iriomote-Funau**	**1.49**	**110**	P	Pn	08 42 42.5	+0.5
IRIF				*e*S	Sn	08 43 00.6	-0.5
SMLT	**Sun Moon Lake**	**1.52**	**231**	P	Pn	08 42 45.4	+3.0
	baz=225						
SMLT				*e*S	Sn	08 43 04.6	+2.8
	baz=225						
TYC	**Yuchr**	**1.54**	**233**	P	Pn	08 42 45.6	+2.9
	baz=227						
TYC				*e*S	Sn	08 43 05.5	+3.3
	baz=227						
TCU	**Taichung**	**1.55**	**243**	*e*P	Pn	08 42 47.2	+4.5
	baz=238						
EHY	**Hungye**	**1.55**	**211**	*i* P	Pn	08 42 43.6	+0.7
	baz=212						
EHY				*e*S	Sn	08 43 03.3	+0.7
	baz=212						
HATJ	**Hateruma jima**	**1.67**	**118**	S	Sn	08 43 06.5	+1.0
TWF1	**Yuli**	**1.70**	**209**	*i* P	Pn	08 42 45.9	+1.0
	baz=210						
TWF1				*e*S	Sn	08 43 07.0	+0.7
	baz=210						
YUS	**Yu-Shan**	**1.76**	**220**	*e*P	Pn	08 42 49.1	+3.3
	baz=211						
JKRS	**Kuro-shima**	**1.77**	**110**	P	Pn	08 42 46.8	+1.0
ALS	**Alishan**	**1.84**	**224**	*e*P	Pn	08 42 50.6	+3.8
	baz=213						
JIJ	**Ishigaki jima**	**1.84**	**105**	P	Pn	08 42 48.2	+1.4
JIJ				*e*S	Sn	08 43 10.6	+0.8
ELDTW	**Lidau**	**1.97**	**213**	*e*P	Pn	08 42 51.5	+2.9
	baz=200						
ELDTW				*e*S	Sn	08 43 13.6	+0.7
	baz=200						
STYT	**Tauyuan**	**2.13**	**218**	*e*P	Pn	08 42 54.5	+3.7
	baz=220						
WTP	**Ta-pu**	**2.15**	**222**	*e*P	Pn	08 42 54.6	+3.5
	baz=206						
WTP				*e*S	Sn	08 43 23.7	+6.3
	baz=206						
CHN1	**Nanshi**	**2.25**	**223**	*e*P	Pn	08 42 56.3	+3.8
	baz=205						
CHN1				*e*S	Sn	08 43 25.5	+5.7
	baz=205						
SGST	**Jiashian**	**2.29**	**220**	*e*P	Pn	08 42 58.6	+5.6
	baz=222						

IDC 26 08:42:51.6±0.9, 19°.42N×145°.85E, h0km, mb3.8/7, mb1 4.1/7, mb1mx3.9/22, mbtmp3.8/7, Error ellipse: s-maj=38.1km s-min=21°.3km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.71**	**197**	P	P	08 50 34.2	+0.1
	1.1nm,0.5s,baz=16,slow=8.4,SNR=18						
SONM	**Songino Array**	**42.67**	**321**	P	P	08 50 50.9	+0.9
	0.4nm,0.4s,baz=125,slow=7.2,SNR=3.1						
ASAR	**Alice Springs**	**44.38**	**196**	P	P	08 51 03.8	-0.2
	0.3nm,0.4s,baz=17,slow=7.7,SNR=5.0						
MKAR	**Makanchi Array**	**58.07**	**314**	P	P	08 52 46.2	-0.4
	0.4nm,0.2s,baz=83,slow=8.2,SNR=3.5						
ILAR	**Eielson Array**	**62.94**	**26**	P	P	08 53 19.4	-0.1
	0.4nm,0.7s,baz=248,slow=5.3,SNR=7.6						
ARCES	**ARCESS Array B**	**81.86**	**342**	P	P	08 55 11.8	-0.6
	5.2nm,1.0s,baz=63,slow=6.5,SNR=3.5						
NVAR	**Mina Array Bea**	**82.58**	**52**	P	P	08 55 17.6	+0.8
	0.5nm,0.7s,baz=270,slow=6.8,SNR=5.8						

ISCJB ***26*** *08:43:19.5±1.1, 24°.79N±0°.06×122°.09E±0°.04, h74km±9km, Error ellipse: s-maj=10.6km s-min=6.5km az=172.0*
TAP ***26*** *08:43:20.0, 24°.78N×121°.96E, h75km, ML2.8, C*
JMA ***26*** *08:43:37.5±0.2, 24°.76N×122°.92E, h33km±2km, M2.0*
ISC 26 08:43:19.7±1.2, 24°.80N±0°.07×122°.09E±0°.04, h74km±10km, n17, σ0s65/27, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.23**	**336**	*i* P	**Pn**	**08 43 31.5**	**+0.6**
	baz=15						
TWB1				S	**Sn**	**08 43 39.5**	**+0.3**
	baz=15						
TWC	**Suao**	**0.29**	**229**	P	**Pn**	**08 43 31.6**	**+0.3**
	baz=207						
TWC				S	**Sn**	**08 43 39.4**	**-0.4**
	baz=207						
NWF	**Wu-fen Shan**	**0.39**	**314**	*e*P	**Pn**	**08 43 32.1**	**+0.1**
	baz=323						
TWE	**Neicheng**	**0.39**	**258**	*e*P	**Pn**	**08 43 33.1**	**+1.1**
	baz=261						
ENA	**Nanau**	**0.49**	**221**	P	**Pn**	**08 43 33.4**	**+0.6**
	baz=208						
ENA				*e*S	**Sn**	**08 43 43.1**	**+0.7**
	baz=208						
TWA	**Mucha**	**0.49**	**291**	*e*P	**Pn**	**08 43 33.1**	**+0.3**
	baz=300						
TWA				*e*S	**Sn**	**08 43 41.6**	**-0.9**
	baz=300						
ENTT	**Nioudou**	**0.50**	**252**	P	**Pn**	**08 43 33.2**	**+0.3**
	baz=247						
ENTT				*e*S	**Sn**	**08 43 43.2**	**+0.6**
	baz=247						
NSK	**Sanguang**	**0.68**	**260**	P	**Pn**	**08 43 34.5**	**-0.2**
	baz=267						
NSK				S	**Sn**	**08 43 44.2**	**-1.5**
	baz=267						
TWD	**Chiawan**	**0.85**	**212**	*e*S	**Sn**	**08 43 48.7**	**-0.3**
	baz=214						
YOJ	**Yonaguni jima**	**0.90**	**112**	P	**Pn**	**08 43 45.1**	**+7.9**
TWT	**Tachien**	**0.99**	**237**	*e*S	**Sn**	**08 43 52.4**	**+0.2**
	baz=226						
WHF	**Hehuan Shan**	**0.99**	**229**	*e*P	**Pn**	**08 43 39.3**	**+0.9**
	baz=219						
WHF				*e*S	**Sn**	**08 43 52.2**	**-0.1**
	baz=219						
NSTT	**Nanjuang**	**1.00**	**261**	*e*P	**Pn**	**08 43 38.0**	**-0.4**
	baz=260						
NSTT				S	**Sn**	**08 43 51.2**	**-1.2**
	baz=260						
IRIF	**Iriomote-Funau**	**1.56**	**107**	S	**Sn**	**08 44 04.5**	**-0.7**
HATJ	**Hateruma jima**	**1.73**	**115**	P	**Pn**	**08 43 56.5**	**+8.7**
JKRS	**Kuro-shima**	**1.84**	**107**	P	**Pn**	**08 43 57.2**	**+8.0**
JKRS				S	**Sn**	**08 44 11.7**	**0.0**
JIJ	**Ishigaki jima**	**1.92**	**103**	P	**Pn**	**08 43 58.4**	**+8.1**
JIJ				S	**Sn**	**08 44 13.1**	**-0.6**

IDC ***26*** *08:49:18.8±0.6, 6°.60S×153°.89E, h0km, mb4.7/19, mb1 4.7/20, mb1mx4.7/22, mbtmp4.6/20, ML4.1/1, MS3.7/16, Ms1 3.7/16, ms1mx3.6/22, Error ellipse: s-maj=24.4km s-min=13.7km az=110.0*
BJI ***26*** *08:49:21.7, 6°.18S×153°.59E, h10km, mB4.9/6, mb4.7/17*
ISCJB ***26*** *08:49:22.4±0.4, 6°.63S±0°.05×153°.87E±0°.07, h33km, mb4.7/40, MS3.7/15, Error ellipse: s-maj=11.3km s-min=6.4km az=28.0*
NEIC ***26*** *08:49:24.4±0.3, 6°.62S×153°.83E, h35km, mb4.9/22, Error ellipse: s-maj=10.4km s-min=6.0km az=112.0*
GCMT ***26*** *08:49:24.6±0.3, 6°.70S×153°.65E, h20km±1km, MW4.9, Moment Tensor Solution. s23,c25; s60,c83; Moment tensor: Scale 10^16^Nm; Mrr=2.83±.19; Mθθ2.25±.13; Mφφ0.59±.12; Mre-0.77±.21; Mrθ-1.09±.07; Mrφ0.74±.23; Best double couple: M0=3.00000×10^16^ NP1:φs291.00000°, δ35.00000°, λ-100.00000°. NP2:φs122.00000°, δ55.00000°, λ-83.00000°. Principal axes: T 2.9700, Plg10.0000°, Azm207.0000°; N 0.0800, Plg6.0000°, Azm298.0000°; P -3.0400, Plg78.0000°, Azm57.0000°; Data Used: IU IC II CN G.*
ISC 26 08:49:24.2±0.4, 6°.65S±0°.05×153°.91E±0°.08, h35km, (h15km±7.5km:pP-P), n72, σ0s95/63, mb4.7/40, MS3.7/15, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.22**	**247**	*e*Pn	**Pn**	**08 51 07.8**	**+0.3**
	272nm,0.6s						
PMG				*e*Sn	**Sn**	**08 52 31.1**	**+2.8**
COEN	**Coen**	**12.81**	**235**	*e*Pn	**Pn**	**08 52 22.5**	**-1.5**
CTA	**Charters Tower**	**15.29**	**208**	Pn	**Pn**	**08 52 56.0**	**-1.5**
	0.5nm,0.3s,baz=40,slow=12,SNR=2.8						
CTA				LR	LR	08 58 08.6	
	comp=Z,459nm,18.1s,baz=40,slow=35						
CTA	**Charters Tower**	**15.29**	**208**	*e*P	**Pn**	**08 53 03.7**	**+6.2**
	14nm,0.6s						
CTAO	**Charters Tower**	**15.29**	**208**	*e*P	**Pn**	**08 53 03.3**	**+5.8**
	13nm,0.6s						
EIDS	**Eidsvold**	**18.81**	**188**	*e*P	**Pn**	**08 53 42.8**	**+1.2**
	26nm,1.2s						
KAKA	**Kakadu**	**22.00**	**252**	*e*P	**P**	**08 54 14.1**	**-1.5**
	39nm,0.5s,mb5.1						
KAKA	**Kakadu**	**22.00**	**252**	*e*P	**P**	**08 54 14.8**	**-0.8**
	131nm,0.6s,mb5.5						
GUMO	**Guam**	**22.02**	**336**	LR	LR	09 01 20.7	
	comp=Z,85nm,19.9s,MS3.2,baz=104,slow=33						
WB2	**Warramunga Arr**	**23.13**	**233**	*e*P	**P**	**08 54 26.5**	**-1.0**
WRA	**Warramunga Arr**	**23.14**	**233**	P	**P**	**08 54 27.0**	**-0.7**
	12nm,0.7s,mb4.4,baz=61,slow=9.3,SNR=71						
WRA				PcP	PcP	08 58 15.9	+0.2
	2.5nm,0.7s,baz=59,slow=2.6,SNR=9.4						
WRA				LR	LR	09 03 18.9	
	comp=Z,240nm,19.1s,MS3.7,baz=55,slow=36						
ARMA	**Armidale**	**23.74**	**185**	*e*P	**P**	**08 54 33.7**	**+0.4**
ARMA	**Armidale**	**23.74**	**185**	*e*P	**P**	**08 54 33.9**	**+0.5**
	7.0nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**25.61**	**227**	P	**P**	**08 54 50.4**	**-0.1**
	9.7nm,0.7s,mb4.5,baz=56,slow=9.4,SNR=133						
ASAR				PcP	PcP	08 58 21.1	+0.1
	0.6nm,0.7s,baz=50,slow=2.7,SNR=2.8						
STKA	**Stephens Creek**	**27.61**	**203**	P	**P**	**08 55 08.1**	**-0.3**
	7.0nm,0.6s,mb4.5,baz=32,slow=13,SNR=14						
STKA				LR	LR	09 05 59.2	
	comp=Z,337nm,20.1s,MS3.9,baz=25,slow=36						
STKA	**Stephens Creek**	**27.61**	**203**	*e*P	**P**	**08 55 08.2**	**-0.2**
	5.8nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**27.61**	**203**	*e*P	**P**	**08 55 08.2**	**-0.2**
	1.6nm,0.6s,mb3.8						
STKA				LR	LR	09 05 59.2	
FITZ	**Fitzroy Crossi**	**29.82**	**245**	P	**P**	**08 55 26.9**	**-1.3**
	15nm,0.6s,mb4.9,baz=72,slow=9.4,SNR=44						
FITZ				LR	LR	09 07 06.6	
	comp=Z,188nm,20.1s,MS3.7,baz=72,slow=36						
FITZ	**Fitzroy Crossi**	**29.82**	**245**	*e*P	**P**	**08 55 27.2**	**-1.0**
	24nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**29.82**	**245**	*e*P	**P**	**08 55 27.3**	**-0.9**
	12nm,0.6s,mb4.8						
FITZ				LR	LR	09 07 06.6	
FORT	**Forrest**	**34.11**	**222**	*e*P	**P**	**08 56 05.7**	**-0.1**
	13nm,0.7s,mb5.0						
FORT	**Forrest**	**34.11**	**222**	*e*P	**P**	**08 56 05.7**	**-0.1**
	15nm,0.7s,mb5.0						
MBWA	**Marble Bar**	**36.07**	**243**	*e*P	**P**	**08 56 22.5**	**-0.3**
	5.2nm,0.9s,mb4.5						
JOW	**Kunigami**	**41.53**	**324**	*e*P	**P**	**08 57 08.6**	**+0.2**
	10.0nm,1.1s,mb4.4						
KLBR	**Kellerberrin**	**41.89**	**229**	*e*P	**P**	**08 57 10.8**	**-0.6**
	55nm,1.9s,mb4.9						
NWAO	**Narrogin (SRO)**	**42.92**	**228**	P	**P**	**08 57 19.5**	**-0.3**
	14nm,1.1s,mb4.6,baz=47,slow=9.0,SNR=4.2						
NWAO				LR	LR	09 14 43.2	
	comp=Z,300nm,21.2s,MS4.2,baz=223,slow=36						
MJAR	**Matsushiro Arr**	**45.42**	**342**	P	**P**	**08 57 37.7**	**-1.9**
	1.0nm,0.5s,mb3.9,baz=161,slow=6.7,SNR=4.7						
MJAR				LR	LR	09 13 48.5	
	comp=Z,52nm,21.8s,MS3.4,baz=180,slow=32						
KSRS	**Korea Array**	**50.14**	**333**	P	**P**	**08 58 16.0**	**-0.2**
	6.8nm,0.9s,mb4.7,baz=150,slow=8.1,SNR=8.9						
KSRS				LR	LR	09 16 26.9	
	comp=Z,27nm,20.8s,MS3.2,baz=155,slow=32						
ASAJ	**Asahikawa**	**51.56**	**350**	P

comp=Z,82nm,19.5s,MS4.1,baz=268,slow=32
MAW Mawson 84.30 203 P **P 09 01 52.8 +0.6**
comp=Z,4.3nm,0.9s,mb4.6,baz=89,slow=7.0,SNR=8.1
MAW LR LR 09 33 03.7
comp=Z,59nm,20.6s,MS4.0,baz=282,slow=31
MAW Mawson 84.30 203 *e*P **P 09 01 53.1 +0.9**
comp=Z,0.9nm,0.9s,mb3.9
MAW LR LR 09 33 03.7
EGAK Eagle 85.62 23 *e*P **P 09 01 58.5 -0.3**
comp=Z,52nm,2.2s,mb5.4
KURK Kurchatov 85.90 322 *e*P **P 09 01 60.0 -0.5**
comp=Z,4.1nm,0.6s,mb4.8
TKM2 Tokmak 2 86.00 314 *e*P **P 09 02 01.7 +0.5**
comp=Z,12nm,1.2s,mb5.0
KZA Kyzart 86.07 313 *e*P **P 09 02 03.6 +2.0**
comp=Z,62nm,1.3s,mb5.7
AAK Ala-Archa 86.73 313 P **P 09 02 05.4 +0.6**
comp=Z,1.3nm,0.5s,mb4.4,baz=110,slow=5.3,SNR=8.1
AAK Ala-Archa 86.73 313 *e*P **P 09 02 05.1 +0.3**
comp=Z,8.7nm,1.2s,mb4.9
AML Almayashu 87.21 313 *e*P **P 09 02 07.8 +0.7**
comp=Z,9.9nm,0.4s,mb5.4
EKS2 Erkin-Say 87.26 313 *e*P **P 09 02 08.0 +0.6**
comp=Z,5.1nm,0.9s,mb4.8
BVAR Borovoye Array 91.38 323 P **P 09 02 25.3 -1.2**
comp=Z,3.9nm,0.6s,mb4.9,baz=104,slow=6.1,SNR=18
BRVK Borovoye 91.44 323 *e*P **P 09 02 25.6 -1.2**
comp=Z,4.4nm,0.9s,mb4.8
NVAR Mina Array Bea 92.35 52 P **P 09 02 32.2 +0.9**
comp=Z,1.5nm,0.8s,mb4.4,baz=258,slow=6.1,SNR=10
NVAR LR LR 09 40 55.3
comp=Z,67nm,18.4s,MS4.1,baz=307,slow=34
NVAR Mina Array Bea 92.35 52 P **P 09 02 32.2 +0.9**
NVAR LR LR 09 40 55.3
YKA Yellowknife Ar 96.54 28 LR LR 09 42 36.2
comp=Z,7.1nm,19.2s,MS3.2,baz=30,slow=33
PDAR Pinedale Array 99.27 48 P **P 09 03 01.7 -1.0**
comp=Z,0.5nm,0.6s,mb4.2,baz=263,slow=2.4,SNR=5.5
PDAR LR LR 09 40 08.6
comp=Z,98nm,20.4s,MS4.3,baz=92,slow=31
GERES GERESS Array B 126.20 328 PKP PKPdf 09 08 23.7 +0.5
comp=Z,0.4nm,0.3s,baz=57,slow=3.6,SNR=5.5
EKA Eskdalemuir Ar 128.11 344 PKP PKPdf 09 08 27.9 +1.4
comp=Z,1.4nm,0.8s,baz=14,slow=3.6,SNR=3.4
LPAZ La Paz 132.56 119 PKP PKPdf 09 08 38.7 +2.5
comp=Z,2.0nm,0.6s,baz=276,slow=1.2,SNR=16
LPAZ La Paz 132.56 119 PKP PKPdf 09 08 38.7 +2.5
SDV Santo Domingo 135.83 84 *e*PKPdf PKPdf 09 08 43.5 +1.1
TAM Tamanrasset 145.59 301 *e*PKPdf PKPdf 09 09 00.2 +0.5
BDFB Brasilia 148.98 136 PKPbc PKPbc 09 09 10.3 +0.7
comp=Z,4.9nm,0.5s,baz=234,slow=1.5,SNR=8.0
TORD Torodi Ar. Bea 151.90 285 PKPbc PKPbc 09 09 16.2 -0.4
comp=Z,16nm,0.7s,baz=63,slow=2.5,SNR=25

NEIC ***26*** *08:55:06.5,32°.59S×70°.19W,h108km,MD3.5(GUC),After GUC.*

GUC 26 08:55:06.5±0.9,32°.59S×70°.19W,h108km±5km,MD3.5, ML3.3,16C-15D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.35**	**254**	⇑*i*P	Pn	08 55 22.8	+0.6
JACH	**Jahuel**	**0.35**	**254**	⇑*i*P	Pn	08 55 22.8	+0.6
PEL	**Peldehue**	**0.69**	**217**	⇓*i*P	Pn	08 55 24.8	+0.2
PEL				*i* S	Sn	08 55 38.7	+0.5
PEL				AML	AML	08 55 41.1	
	comp=E,2μm,0.3s						
FCH	**Farellones**	**0.74**	**186**	⇓*i*P	Pn	08 55 25.7	+0.7
FCH				*i* S	Sn	08 55 40.0	+1.1
FCH	**Farellones**	**0.74**	**186**	⇓*i*P	Pn	08 55 25.7	+0.7
FCH				AML	AML	08 55 38.3	
	comp=E,1μm,0.3s						
FCH				*i* S	Sn	08 55 40.0	+1.1
ROCH	**El Roble**	**0.79**	**241**	⇑*i*P	Pn	08 55 26.5	+1.1
ROCH				*i* S	Sn	08 55 41.3	+1.6
ROCH	**El Roble**	**0.79**	**241**	⇓*i*P	Pn	08 55 26.4	+0.9
ROCH				⇑*i*P		08 55 26.5	
ROCH				*i* S	Sn	08 55 41.2	+1.6
ROCH				*i* S	Sn	08 55 41.3	+1.6
ROCH				AML	AML	08 55 44.0	
	comp=N,2μm,0.3s						
CLCH	**Cerro Calan**	**0.86**	**200**	⇑*i*P	Pn	08 55 26.5	+0.4
CLCH				*i* S	Sn	08 55 41.8	+1.0
CLCH				AML	AML	08 55 43.9	
	comp=E,2μm,0.6s						
CLCH				AML	AML	08 55 44.5	
	comp=E,2μm,0.5s						
LACH	**Col Las Americ**	**0.91**	**198**	⇓*i*P	Pn	08 55 26.9	+0.3
LACH				*i* S	Sn	08 55 42.5	+0.8
LACH				AML	AML	08 55 46.7	
	comp=E,511nm,0.3s						
FSR	**Penalolen**	**0.93**	**198**	⇓*i*P	Pn	08 55 27.5	+0.7
FSR				*i* S	Sn	08 55 43.3	+1.1
FSR	**Penalolen**	**0.93**	**198**	⇓*i*P	Pn	08 55 27.5	+0.7
FSR				*i* S	Sn	08 55 43.3	+1.1
FSR				AML	AML	08 55 45.1	
	comp=N,298nm,0.2s						
SAN	**Santiago**	**0.95**	**204**	⇓*i*P	Pn	08 55 27.4	+0.5
SAN				*i* S	Sn	08 55 43.2	+0.8
SAN	**Santiago**	**0.95**	**204**	⇓*i*P	Pn	08 55 27.4	+0.5
SAN				*i* S	Sn	08 55 43.2	+0.8
SJCH	**San Jose de Ma**	**1.06**	**187**	*e*P	Pn	08 55 28.6	+0.5
SJCH				*e*S	Sn	08 55 45.6	+1.1
SJCH	**San Jose de Ma**	**1.06**	**187**	*e*P	Pn	08 55 28.6	+0.5
SJCH				*e*S	Sn	08 55 45.6	+1.1
SJCH				AML	AML	08 55 51.1	
	comp=N,343nm,0.2s						
PCH	**Pirque**	**1.07**	**195**	⇑*i*P	Pn	08 55 28.8	+0.6
PCH				*i* S	Sn	08 55 45.7	+1.1
PCH	**Pirque**	**1.07**	**195**	⇑*i*P	Pn	08 55 28.8	+0.6
PCH				*i* S	Sn	08 55 45.7	+1.1
TACH	**Talagante**	**1.23**	**210**	⇓*i*P	Pn	08 55 30.5	+0.4
TACH				*i* S	Sn	08 55 48.7	+0.9
TACH	**Talagante**	**1.23**	**210**	⇓*i*P	Pn	08 55 30.5	+0.4
TACH				*i* S	Sn	08 55 48.7	+0.9
LMEL	**Las Melosas**	**1.26**	**180**	⇑*i*P	Pn	08 55 31.1	+0.8
LMEL				*i* S	Sn	08 55 49.5	+1.2
LMEL	**Las Melosas**	**1.26**	**180**	⇑*i*P	Pn	08 55 31.1	+0.8
LMEL				*i* S	Sn	08 55 49.5	+1.2
LMEL				AML	AML	08 55 54.1	
	comp=N,839nm,0.2s						
IHA	**Instituto Hidr**	**1.30**	**250**	⇓*i*P	Pn	08 55 31.4	+0.6
IHA	**Instituto Hidr**	**1.30**	**250**	⇓*i*P	Pn	08 55 31.4	+0.6
CHNG	**Los Chungos**	**1.31**	**302**	⇑*i*P	Pn	08 55 27.0	-3.9
CHNG				*i* S	Sn	08 55 46.3	-3.1
CHNG				AML	AML	08 55 51.6	
	comp=N,357nm,0.5s						
CHCH	**Chadas Angostu**	**1.40**	**196**	⇓*i*P	Pn	08 55 32.5	+0.5
CHCH				*i* S	Sn	08 55 52.0	+0.7
CHCH	**Chadas Angostu**	**1.40**	**196**	⇓*i*P	Pn	08 55 32.5	+0.5
CHCH				*i* S	Sn	08 55 52.0	+0.7
CACH	**El Canelo**	**1.56**	**193**	⇑*i*P	Pn	08 55 35.1	+1.2
CACH				*i* S	Sn	08 55 56.5	+1.7
CACH	**El Canelo**	**1.56**	**193**	⇑*i*P	Pn	08 55 35.1	+1.2
CACH				*i* S	Sn	08 55 56.5	+1.7
LNV	**Longovilo**	**1.71**	**216**	⇑*i*P	Pn	08 55 35.7	+0.1
LNV				*i* S	Sn	08 55 57.4	-0.4
LNV	**Longovilo**	**1.71**	**216**	⇑*i*P	Pn	08 55 35.7	+0.1
LNV				*i* S	Sn	08 55 57.4	-0.4
TLL	**Tololo Astrono**	**2.47**	**348**	⇑*i*P	Pn	08 55 47.5	+2.1
TLL				*i* S	Sn	08 56 18.1	+2.8
TLL	**Tololo Astrono**	**2.47**	**348**	⇑*i*P	Pn	08 55 47.5	+2.1
TLL				*i* S	Sn	08 56 18.1	+2.8
TLL				AML	AML	08 56 39.9	
	comp=N,113nm,0.5s						
LCO	**Las Campanas**	**3.59**	**353**	*i* S	Sn	08 56 43.0	+1.0
LCO				AML	AML	08 56 47.7	
	comp=E,60nm,0.4s						

ISCJB ***26*** *08:59:37.3±0.7,64°.74N±0°.03×30°.1E±0°.1,h0km,Error ellipse: s-maj=6.8km s-min=3.6km az=16.6*
IDC ***26*** *08:59:40.0±2.0,64°.72N×30°.71E,h0km,mb1 3.2/4, mb1mx3.1/26,mbtmp3.1/4,ML2.6/4,Error ellipse: s-maj=28.0km s-min=8.5km az=103.0*
HEL ***26*** *08:59:39.0±0.4,64°.77N×30°.77E,h0km,ML1.9,Explosion*
NAO ***26*** *08:59:40.3±1.3,64°.77N×30°.26E,ML2.1*
CSEM ***26*** *08:59:40.9±0.2,64°.90N×30°.29E,h2km,ML1.9,Error ellipse: s-maj=5.7km s-min=2.6km az=104.0,Mining explosion.*

ISC 26 08:59:38.9±0.7,64°.77N±0°.02×30°.3E±0°.1,h0km,n34, σ1ϑ52/56,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSF	**Maaselka**	**1.27**	**335**	PG	**Pg**	**09 00 03.0**	**-0.3**
MSF				SG	**Sg**	**09 00 20.9**	**+1.1**
MSF				MSG		09 00 20.9	
	comp=Z,5.9nm,0.4s						
MSF	**Maaselka**	**1.27**	**335**	Pg	**Pg**	**09 00 03.0**	**-0.3**
KU6	**Riekki**	**1.28**	**352**	PG	**Pg**	**09 00 02.3**	**-1.1**
	baz=171						
KU6				SG	**Sg**	**09 00 20.2**	**+0.2**
KU6				MSG		09 00 20.2	
	comp=Z,4.3nm,0.4s						
KU6				RG		09 00 30.1	
KU6	**Riekki**	**1.28**	**352**	Pg	**Pg**	**09 00 02.2**	**-1.2**
JOF	**Joensuu**	**1.91**	**166**	PN	**Pn**	**09 00 11.0**	**-1.6**
	baz=345						
JOF				SG	**Sg**	**09 00 35.6**	**-4.4**
JOF				MSG		09 00 35.6	
	comp=Z,7.1nm,0.4s						
OUL	**Oulu**	**1.92**	**282**	PN	**Pn**	**09 00 15.1**	**+2.3**
	baz=95						
OUL				SG	**Sg**	**09 00 41.3**	**+0.8**
OUL				MSG		09 00 41.3	
	comp=Z,7.3nm,0.4s						
OUL	**Oulu**	**1.92**	**282**	Pn	**Pn**	**09 00 15.1**	**+2.3**
				Sg	**Sg**	**09 00 41.3**	**+0.8**
RNF	**Rovaniemi**	**2.57**	**318**	PN	**Pn**	**09 00 26.1**	**+4.3**
RNF				SG	**Sg**	**09 01 00.1**	**-1.4**
RNF				MSG		09 01 00.1	
	comp=Z,2.7nm,0.2s						
SUF	**Sumiainen**	**2.77**	**224**	PN	**Pn**	**09 00 27.5**	**+3.0**
SUF				SG	**Sg**	**09 01 05.2**	**-2.6**
SUF				MSG		09 01 05.2	
	comp=Z,4.1nm,0.2s						
SUF	**Sumiainen**	**2.77**	**224**	Pn	**Pn**	**09 00 27.4**	**+2.9**
VRF	**Varrio**	**3.01**	**355**	PN	**Pn**	**09 00 28.9**	**+1.1**
	baz=175						
VRF				SG	**Sg**	**09 01 11.0**	**-4.5**
VRF				MSG		09 01 11.0	
	comp=Z,4.2nm,0.4s						
VRF	**Varrio**	**3.01**	**355**	Pn	**Pn**	**09 00 28.9**	**+1.1**
VRF				Sg	**Sg**	**09 01 11.0**	**-4.5**
APA0	**Apatity Array**	**3.05**	**20**	Pn	**Pn**	**09 00 28.4**	**+0.1**
	baz=193,slow=12						
APA0				Lg		09 01 13.0	
	baz=193,slow=28						
APA0	**Apatity Array**	**3.05**	**20**	Pn	**Pn**	**09 00 28.4**	**+0.1**
	baz=193,slow=11,SNR=8.1						
APA0				Lg		09 01 13.0	
	baz=193,slow=26,SNR=5.2						
SGF	**Sodankyl**	**3.10**	**332**	SG	**Sg**	**09 01 13.7**	**-4.8**
SGF				MSG		09 01 13.7	
	comp=Z,2.5nm,0.4s						
KAF	**Kangasniemi**	**3.22**	**216**	PN	**Pn**	**09 00 33.7**	**+3.1**
KAF				SG	**Sg**	**09 01 27.6**	**+5.4**
KAF				MSG		09 01 27.6	
	comp=Z,2.8nm,0.4s						
KAF	**Kangasniemi**	**3.22**	**216**	Pn	**Pn**	**09 00 33.7**	**+3.1**
KAF				Sg	**Sg**	**09 01 27.6**	**+5.4**
KEF	**Keuruu**	**3.58**	**226**	PN	**Pn**	**09 00 38.9**	**+3.4**
KEF	**Keuruu**	**3.58**	**226**	Pn	**Pn**	**09 00 38.9**	**+3.3**
VAF	**Ylistaro**	**3.80**	**246**	PN	**Pn**	**09 00 40.6**	**+2.0**
	baz=55						
VAF				SG	**Sg**	**09 01 40.0**	**-0.9**
VAF				MSG		09 01 40.0	
	comp=Z,4.7nm,0.4s						
VAF	**Ylistaro**	**3.80**	**246**	Pn	**Pn**	**09 00 40.6**	**+2.0**
FIA0	**FINESS Array S**	**3.85**	**212**	Pn	**Pn**	**09 00 40.4**	**+1.0**
	baz=23,slow=12						
FIA0				Pg	**Pg**	**09 00 47.0**	**-5.7**
	baz=34,slow=16						
FIA0				Sn	**Sn**	**09 01 24.5**	**-0.7**
	baz=30,slow=22						
FIA0				Lg		09 01 39.9	
	baz=33,slow=37						
FIA0	**FINESS Array S**	**3.85**	**212**	PN	**Pn**	**09 00 42.3**	**+2.9**
	baz=33						
FIA0				SG	**Sg**	**09 01 40.1**	**-2.5**
FIA0				MSG		09 01 40.1	
	comp=Z,12nm,0.7s						
FIA0	**FINESS Array S**	**3.85**	**212**	Pn	**Pn**	**09 00 42.3**	**+2.9**
FINES	**FINESS Array B**	**3.85**	**212**	Pn	**Pn**	**09 00 40.3**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=31,slow=14,SNR=3.8						
FINES				Pg	**Pg**	**09 00 48.8**	**-4.0**
	comp=Z,0.5nm,0.3s,baz=34,slow=16,SNR=8.8						
FINES				Lg		09 01 40.0	
	comp=Z,1.4nm,0.3s,baz=35,slow=28,SNR=17						
ARA0	**ARCESS Array S**	**5.15**	**341**	Pn	**Pn**	**09 00 57.0**	**0.0**
	baz=154,slow=16						
ARA0				Sn	**Sn**	**09 01 55.0**	**-2.0**
	baz=155,slow=28						
ARA0				Lg		09 02 17.4	
	baz=157,slow=37						
ARA0	**ARCESS Array S**	**5.15**	**341**	Pn	**Pn**	**09 00 57.0**	**-0.1**
	baz=154,slow=14,SNR=4.4						
ARA0				Sn	**Sn**	**09 01 55.0**	**-2.0**
	baz=155,slow=23,SNR=4.0						
ARA0				Lg		09 02 17.5	
	baz=157,slow=29,SNR=3.7						
ARCES	**ARCESS Array B**	**5.15**	**341**	Pn	**Pn**	**09 00 57.1**	**0.0**
	comp=Z,0.4nm,0.3s,baz=154,slow=12,SNR=30						
ARCES				Sn	**Sn**	**09 01 54.9**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=157,slow=25,SNR=7.3						
ARCES				Lg		09 02 15.9	
	comp=Z,1.4nm,0.3s,baz=159,slow=30,SNR=14						
HFS	**Hagfors**	**8.99**	**247**	Pn	**Pn**	**09 01 49.4**	**-0.3**
	baz=49,slow=18						
HFS				Sn	**Sn**	**09 03 25.3**	**-6.2**
	baz=58,slow=18						
HFS				Lg		09 04 15.5	
	baz=38,slow=28						
HFS	**Hagfors**	**8.99**	**247**	Pn	**Pn**	**09 01 49.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=55,slow=12,SNR=5.6						
HFS				Sn	**Sn**	**09 03 27.2**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=53,slow=24,SNR=3.0						
HFS				Lg		09 04 19.6	
	comp=Z,0.6nm,0.3s,baz=66,slow=29,SNR=6.6						
NB2	**NORSAR Subarra**	**9.47**	**256**	Pn	**Pn**	**09 01 58.6**	**+2.2**
	baz=57,slow=16						
NB2				Sn	**Sn**	**09 03 44.5**	**+1.1**
NB2				Lg		09 04 29.2	
NB2	**NORSAR Subarra**	**9.47**	**256**	Pn	**Pn**	**09 01 58.6**	**+2.2**
	baz=57,slow=14,SNR=5.6						
NB2				Sn	**Sn**	**09 03 44.5**	**+1.1**
NOA	**NORSAR Array B**	**9.47**	**256**	Pn	**Pn**	**09 01 56.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=56,slow=14,SNR=3.8						
NOA				Lg		09 04 32.7	
	comp=Z,0.3nm,0.3s,baz=315,slow=27,SNR=4.9						
NOA	**NORSAR Array B**	**9.47**	**256**	Lg		09 04 32.7	

WEL 26 09:39:26.8±0.2,42°.29S×173°.89E,h22km±1km,ML3.8/31, Error ellipse: s-maj=1.6km s-min=1.0km az=90.0,4., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.29**	**243**	P*	Pb	09 39 33.0	-0.5
KHZ				*e*S*	Sb	09 39 38.6	+0.7
BSWZ	**Blackbirch Sta**	**0.57**	**359**	P*	Pb	09 39 37.6	-0.5
BSWZ				S*	Sb	09 39 45.8	0.0
CMWZ	**Cape Campbell**	**0.59**	**24**	P*	Pb	09 39 39.3	+0.9
CMWZ				*e*S*	Sb	09 39 48.7	+2.4
TUWZ	**Tuamarina**	**0.85**	**3**	P*	Pb	09 39 43.1	+0.2
TUWZ				S*	Sb	09 39 54.7	+0.8
THZ	**Tophouse**	**0.90**	**305**	P*	Pb	09 39 43.4	-0.3
THZ				S*	Sb	09 39 55.0	-0.3
TCW	**Tory Channel**	**1.11**	**15**	P*	Pb	09 39 46.7	-0.6
TCW				S*	Sb	09 40 01.2	-0.1
NNZ	**Nelson**	**1.13**	**340**	PN	Pn	09 39 47.2	-0.1
NNZ				*e*SN	Sn	09 40 01.7	-0.5
BHW	**Baring Head**	**1.14**	**40**	P*	Pb	09 39 47.0	-0.8
SNZO	**South Karori**	**1.15**	**32**	P*	Pb	09 39 47.3	-0.7
SNZO				*e*S*	Sb	09 40 02.6	+0.1
PLWZ	**Palliser**	**1.25**	**55**	P*	Pb	09 39 48.1	-1.4
LTZ	**Lake Taylor**	**1.30**	**247**	PN	Pn	09 39 49.8	+0.2
MSWZ	**Moikau Station**	**1.34**	**50**	*e*P*	Pb	09 39 49.4	-1.8
CAW	**Cannon Point**	**1.47**	**37**	PN	Pn	09 39 51.5	-0.4
DUWZ	**D'Urville Isla**	**1.48**	**1**	PN	Pn	09 39 52.5	+0.4
CRLZ	**Canterbury Las**	**1.59**	**215**	PN	Pn	09 39 53.0	-0.7
DSZ	**Denniston Nort**	**1.65**	**288**	PN	Pn	09 39 54.9	+0.5
MTW	**Mount Morrison**	**1.65**	**48**	PN	Pn	09 39 53.4	-1.1
MQZ	**McQueen's Vall**	**1.69**	**212**	PN	Pn	09 39 54.1	-0.9
OGWZ	**Otaki Gorge**	**1.75**	**34**	PN	Pn	09 39 55.4	-0.5
HOWZ	**Holdsworth Sta**	**1.85**	**42**	PN	Pn	09 39 56.9	-0.2
WVZ	**Waitaha Valley**	**2.46**	**250**	PN	Pn	09 40 05.7	+0.2
RPZ	**Rata Peaks**	**2.52**	**235**	PN	Pn	09 40 05.8	-0.6
WAZ	**Wanganui**	**2.66**	**19**	*e*PN	Pn	09 40 09.7	+1.4
FOZ	**Fox Glacier**	**3.34**	**246**	PN	Pn	09 40 16.4	-1.2
LBZ	**Lake Benmore**	**3.42**	**231**	PN	Pn	09 40 18.5	-0.3

ISCJB ***26*** *09:41:45.3±0.5,35°.19S±0°.07×107°.0W±0°.1,h10km, mb4.2/20,MS3.9/13,Error ellipse: s-maj=17.1km s-min=10.4km az=169.4*
IDC ***26*** *09:41:45.3±0.7,35°.07S×107°.14W,h0km,mb4.1/10, mb1 4.3/10,mb1mx4.2/17,mbtmp4.1/10,MS3.9/14, Ms1 3.9/14,ms1mx3.7/24,Error ellipse: s-maj=22.5km s-min=20.1km az=78.0*
NEIC ***26*** *09:41:47.2±0.4,35°.12S×107°.05W,h10km,mb4.7/10, Error ellipse: s-maj=13.4km s-min=9.2km az=74.0*
GCMT ***26*** *09:41:51.0±0.3,35°.18S×107°.10W,h22km±1km,MW4.9, Moment Tensor Solution. s24,c26; s71,c97; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.81±.18; $M_{\theta\theta}$-0.47±.13; $M_{\phi\phi}$1.28±.15; $M_{r\theta}$-0.02±.21; $M_{\theta\phi}$-2.80±.11; $M_{\phi r}$-1.06±.24; Best double couple: $M_0$3.10000×10^{16} NP1:ϕ_s99.00000°, δ68.00000°,λ-174.00000°. NP2:ϕ_s7.00000°,δ84.00000°, λ-22.00000°. Principal axes: T 3.5100, Plg11.0000°, Azm55.0000°; N -0.7500, Plg67.0000°, Azm173.0000°; P -2.7500, Plg19.0000°, Azm321.0000°; Data Used: II IU G CN IC.*

ISC 26 09:41:47.3±0.5,35°.19S±0°.07×107°.0W±0°.1,h10km,n44, σ0ϑ98/26,mb4.2/20,MS3.9/13,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.28**	**345**	LR	LR	09 46 06.2	
	comp=Z,925nm,19.5s,baz=297,slow=32						
RPN				T		09 51 59.2	
	26nm,0.3s,baz=66,slow=21,SNR=6.6						
RKT	**Rikitea**	**27.13**	**289**	*e*LQ		09 53 07.3	
	278nm,29.2s						
RKT				*e*LR	LR	09 54 13.0	
	248nm,27.5s						
RKT				*e*T		10 15 20.2	
	1.3nm,0.3s						
PLCA	**Paso Flores**	**29.12**	**112**	P	**P**	**09 47 49.6**	**+1.4**
	4.0nm,0.8s,mb4.2,baz=269,slow=10,SNR=8.8						
PLCA				LR	LR	09 56 19.6	
	comp=Z,132nm,21.1s,MS3.5,baz=290,slow=30						
CFAA	**Coronel Fontan**	**32.42**	**95**	P	**P**	**09 48 17.6**	**+0.1**
	0.3nm,0.8s,mb3.2,baz=255,slow=10,SNR=3.7						
CFAA				LR	LR	09 58 28.0	
	comp=Z,28nm,18.7s,MS3.0,baz=254,slow=31						
USHA	**Ushuaia**	**33.02**	**139**	LR	LR	09 58 32.5	
	comp=Z,498nm,19.5s,MS4.2,baz=260,slow=30						
ATAH	**Atahualpa**	**38.34**	**50**	P	**P**	**09 49 08.2**	**-0.2**
	5.9nm,0.8s,mb4.4,baz=233,slow=12,SNR=3.4						
TBI	**Tubuai**	**38.61**	**276**	*e*LQ		09 58 05.1	
	316nm,35.0s						
TBI				*e*LR	LR	09 59 32.6	
	297nm,25.5s						
TBI				*e*T		10 29 38.5	
	5.8nm,0.3s						
PMSA	**Palmer Station**	**39.17**	**152**	*e*P	**P**	**09 49 14.5**	**-0.4**
	222nm,1.8s						
LPAZ	**La Paz**	**39.44**	**72**	P	**P**	**09 49 18.7**	**+1.0**
	2.0nm,0.8s,mb3.9,baz=236,slow=9.7,SNR=6.2						
LPAZ				LR	LR	10 02 00.3	
	comp=Z,102nm,21.3s,MS3.6,baz=247,slow=31						
LPAZ	**La Paz**	**39.44**	**72**	P	**P**	**09 49 18.7**	**+1.0**
LPAZ				LR	LR	10 02 00.3	
MEH	**Mehetia**	**40.26**	**285**	*e*T		10 31 45.8	
	56nm,0.2s						
TIAR	**Tiarei**	**41.45**	**284**	*e*T		10 33 14.9	
	13nm,0.3s						
PPT	**Papeete**	**41.63**	**284**	*e*LQ		09 59 07.2	
	1μm,29.5s						
PPT				*e*LR	LR	10 00 57.8	
	152nm,23.5s						
PPT	**Papeete**	**41.63**	**284**	LR	LR	10 01 38.4	
	comp=Z,226nm,20.7s,MS4.0,baz=120,slow=29						
CPUP	**Villa Florida**	**43.22**	**92**	P	**P**	**09 49 48.1**	**-0.5**
	0.2nm,0.3s,mb3.4,baz=270,slow=3.0,SNR=1.9						
CPUP				LR	LR	10 04 50.1	
	comp=Z,131nm,18.2s,MS3.9,baz=236,slow=32						
RAR	**Rarotonga**	**48.03**	**272**	LR	LR	10 03 54.7	
	comp=Z,119nm,20.0s,MS3.9,baz=269,slow=28						
ROSC	**El Rosal**	**50.30**	**44**	P	**P**	**09 50 44.6**	**+0.4**
	6.5nm,0.4s,mb5.0,baz=100,slow=20,SNR=6.2						
ROSC				LR	LR	10 08 54.1	
	comp=Z,130nm,19.2s,MS4.0,baz=18,slow=32						
QSPA	**South Pole Qui**	**55.01**	**180**	P	**P**	**09 51 19.5**	**+1.2**
	2.1nm,0.8s,mb4.2,baz=213,slow=2.4,SNR=8.6						
SBA	**Scott Base**	**55.11**	**195**	*e*P	**P**	**09 51 20.1**	**+1.1**
	11nm,1.8s,mb4.6						
BDFB	**Brasilia**	**55.92**	**85**	LR	LR	10 13 34.7	
	comp=Z,99nm,18.5s,MS3.9,baz=194,slow=34						
URZ	**Urewera**	**59.27**	**243**	LR	LR	10 10 32.8	
	comp=Z,211nm,18.4s,MS4.3,baz=123,slow=29						
VNA3	**Neumayer Olymp**	**59.40**	**158**	*e*	**P**	**09 51 46.9**	**-2.5**
VNA1	**Neumayer--Stat**	**60.04**	**158**	*e*	**P**	**09 51 51.9**	**-1.9**
VNA2	**Neumayer--Watz**	**60.21**	**158**	*e*	**P**	**09 51 52.7**	**-2.2**
	baz=263,slow=6.0						
TXAR	**Lajitas Array**	**64.26**	**3**	P	**P**	**09 52 21.9**	**-0.6**
	0.6nm,0.9s,mb3.6,baz=182,slow=11,SNR=6.2						
TXAR				LR	LR	10 14 11.4	
	comp=Z,43nm,21.3s,MS3.6,baz=105,slow=30						
JCT	**Junction City**	**65.67**	**7**	*e*P	**P**	**09 52 31.1**	**-0.6**
	5.7nm,0.8s,mb4.7						
MAIT	**Maitri**	**65.74**	**161**	*e*P	**P**	**09 52 32.3**	**+0.6**
SHPR	**Sheep Range**	**71.73**	**353**	*e*P	**P**	**09 53 09.8**	**+0.4**
	4.2nm,1.2s,mb4.2

KOZT	**Kozan**	**0.62**	**97**	*e*PG	**Pg**	**09 53 58.3**	**-0.7**
KOZT				*e*SG	**Sg**	**09 54 07.8**	**+0.6**
KOZT	**Kozan**	**0.62**	**97**	*e*Pg	**Pg**	**09 53 58.3**	**-0.6**
KOZT				*e*Sg	**Sg**	**09 54 07.8**	**+0.6**
CEYT	**Ceyhan**	**0.78**	**135**	*e*PG	**Pg**	**09 54 01.3**	**-0.7**
CEYT				*e*SG	**Sg**	**09 54 12.6**	**+0.3**
CEYT	**Ceyhan**	**0.78**	**135**	*e*Pg	**Pg**	**09 54 01.3**	**-0.7**
CEYT				*e*Sg	**Sg**	**09 54 12.6**	**+0.3**
YURE	**YUREGIR**	**0.87**	**148**	*i* P	**Pb**	**09 54 00.3**	**-3.3**
YURE				*i* S	**Sb**	**09 54 17.9**	**+2.8**
YURE	**YUREGIR**	**0.87**	**148**	*i* P	**Pb**	**09 54 00.3**	**-3.3**
YURE				*i* S	**Sb**	**09 54 17.9**	**+2.8**
AVNT	**Avonos**	**1.23**	**353**	*i* P	**Pn**	**09 54 10.6**	**+1.1**
AVNT				*i* S	**Sb**	**09 54 25.0**	**-0.4**
AVNT	**Avonos**	**1.23**	**353**	*i* P	**Pn**	**09 54 10.6**	**+1.1**
AVNT				*i* S	**Sb**	**09 54 25.0**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.71**	**49**	*e*PN	**Pn**	**09 54 10.5**	**-5.6**
SARI	**SarD1z-Kayseri**	**1.71**	**49**	*e*Pn	**Pn**	**09 54 10.5**	**-5.6**
ERMK	**Ermenek**	**1.94**	**242**	*i* P	**Pn**	**09 54 14.9**	**-4.4**
ERMK				*i* S	**Sn**	**09 54 42.6**	**-0.8**
ERMK	**Ermenek**	**1.94**	**242**	*i* P	**Pn**	**09 54 14.9**	**-4.4**
ERMK				*i* S	**Sn**	**09 54 42.7**	**-0.8**
HDMB	**Hadim**	**2.13**	**255**	*e*PN	**Pn**	**09 54 22.9**	**+1.0**
HDMB	**Hadim**	**2.13**	**255**	*e*Pn	**Pn**	**09 54 22.9**	**+1.0**

INMG ***26*** *10:19:53.9±1.3, 35.°21N×6.°13W, h31km±11km, ML2.6, Error ellipse: s-maj=5.4km s-min=2.9km az=61.0*
IGIL ***26*** *10:19:53.9, 35.°21N×6.°12W, h24km, ML2.8*
CSEM ***26*** *10:19:54.6±0.2, 35.°35N×6.°05W, h60km, ML3.5/12, Error ellipse: s-maj=4.2km s-min=3.4km az=42.0*
MDD ***26*** *10:19:55.2±0.4, 35.°28N×6.°09W, h47km±10km, mb3.8/16, Error ellipse: s-maj=4.5km s-min=3.7km az=78.0, PRXIMO*
NEIC ***26*** *10:19:55.3, 35.°55N×5.°99W, h2km, MN2.5(MDD), After MDD.*
CNRM ***26*** *10:19:57.5, 35.°17N×6.°04W, h32km, MD2.8*

ISC 26 10:19:54.9±0.4, 35.°39N±0.°02×6.°04W±0.°02, h44km±20km, n131, σ1°18/240, 4D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RSA	**Sarsar**	**0.54**	**161**	P			**Pn**	**10 20 04.0**	**-2.3**
RSA				S			**Sn**	**10 20 12.0**	**-2.4**
RSA	**Sarsar**	**0.54**	**161**	*i* P			**Pn**	**10 20 04.0**	**-2.3**
RSA				*i* S			**Sn**	**10 20 12.0**	**-2.4**
DKH	**Dar Kharkhour**	**0.56**	**80**	P			**Pn**	**10 20 08.0**	**+1.4**
DKH				S			**Sn**	**10 20 19.0**	**+4.1**
DKH	**Dar Kharkhour**	**0.56**	**80**	*i* P			**Pn**	**10 20 08.0**	**+1.4**
DKH				*i* S			**Sn**	**10 20 19.0**	**+4.1**
ECEU	**Ceuta**	**0.74**	**46**	P			**Pn**	**10 20 11.2**	**+2.3**
	27nm,0.3s,SNR=6.8								
ECEU				S			**Sn**	**10 20 22.9**	**+3.8**
	21nm,0.5s,SNR=4.5								
ECEU	**Ceuta**	**0.74**	**46**	P			**Pn**	**10 20 11.2**	**+2.3**
	27nm,0.3s,SNR=6.8								
ECEU				S			**Sn**	**10 20 22.9**	**+3.8**
	21nm,0.5s,SNR=4.5								
EJIF	**Jimena Fronter**	**1.16**	**23**	P			**Pn**	**10 20 13.1**	**-1.5**
EJIF				S			**Sn**	**10 20 27.1**	**-2.2**
EJIF	**Jimena Fronter**	**1.16**	**23**	P			**Pn**	**10 20 17.5**	**+2.9**
	0.3nm,0.1s,SNR=7.9								
EJIF				S			**Sn**	**10 20 32.0**	**+2.8**
	14nm,0.3s,SNR=7.9								
EJIF	**Jimena Fronter**	**1.16**	**23**	P			**Pn**	**10 20 13.1**	**-1.5**
EJIF				S			**Sn**	**10 20 32.0**	**+2.8**
	14nm,0.3s,SNR=7.9								
ESPR	**Espera**	**1.48**	**6**	P			**Pn**	**10 20 18.7**	**-0.4**
ESPR				S			**Sn**	**10 20 37.5**	**+0.2**
ESPR	**Espera**	**1.48**	**6**	P			**Pn**	**10 20 21.1**	**+2.0**
	0.2nm,0.1s,SNR=7.9								
ESPR				S			**Sn**	**10 20 39.3**	**+2.0**
	21nm,0.2s,SNR=4.6								
ESPR	**Espera**	**1.48**	**6**	P			**Pn**	**10 20 18.7**	**-0.4**
ESPR				S			**Sn**	**10 20 39.3**	**+2.0**
	21nm,0.2s,SNR=4.6								
TGT	**Taghat**	**1.54**	**148**	P			**Pn**	**10 20 19.0**	**-0.9**
TGT				S			**Sn**	**10 20 36.0**	**-2.7**
TGT	**Taghat**	**1.54**	**148**	*e*P			**Pn**	**10 20 19.0**	**-0.9**
TGT				*e*S			**Sn**	**10 20 36.0**	**-2.7**
RTC	**Rabat Centre**	**1.55**	**206**	P			**Pn**	**10 20 21.5**	**+1.5**
RTC				S			**Sn**	**10 20 34.0**	**-4.9**
RTC	**Rabat Centre**	**1.55**	**206**	*i* P			**Pn**	**10 20 21.5**	**+1.5**
EMIJ	**Mijas**	**1.56**	**41**	P			**Pn**	**10 20 20.1**	**0.0**
EMIJ				S			**Sn**	**10 20 40.4**	**+1.3**
EMIJ	**Mijas**	**1.56**	**41**	P			**Pn**	**10 20 21.4**	**+1.3**
	3.2nm,0.3s,SNR=5.8								
EMIJ				S			**Sn**	**10 20 40.4**	**+1.3**
	8.2nm,0.3s,SNR=7.8								
EMIJ	**Mijas**	**1.56**	**41**	P			**Pn**	**10 20 20.1**	**0.0**
EMIJ				S			**Sn**	**10 20 40.4**	**+1.3**
	8.2nm,0.3s,SNR=7.8								
TZK	**Tazeka**	**2.00**	**130**	P			**Pn**	**10 20 26.0**	**-0.2**
TZK				S			**Sn**	**10 20 49.0**	**-1.0**
TZK	**Tazeka**	**2.00**	**130**	*e*P			**Pn**	**10 20 26.0**	**-0.2**
TZK				*i* S			**Sn**	**10 20 49.0**	**-1.0**
ELOJ	**Sierra Loja**	**2.33**	**40**	P			**Pn**	**10 20 31.6**	**+1.0**
ELOJ				S			**Sn**	**10 20 57.6**	**-0.3**
ELOJ	**Sierra Loja**	**2.33**	**40**	P			**Pn**	**10 20 31.4**	**+0.8**
	0.6nm,0.1s,SNR=7.9								
ELOJ				S			**Sn**	**10 20 57.6**	**-0.3**
	4.1nm,0.3s,SNR=7.9								
ELOJ	**Sierra Loja**	**2.33**	**40**	P			**Pn**	**10 20 31.6**	**+1.0**
ELOJ				S			**Sn**	**10 20 57.6**	**-0.3**
PBDV	**Barranco-do-Ve**	**2.40**	**321**	*e*Pn			**Pn**	**10 20 31.9**	**+0.3**
PBDV				*e*Sn			**Sn**	**10 20 59.6**	**-0.2**
PBDV				A				10 21 02.7	
	10nm,0.2s								
PBDV	**Barranco-do-Ve**	**2.40**	**321**	P			**Pn**	**10 20 31.9**	**+0.3**
PBDV				S			**Sn**	**10 20 59.6**	**-0.2**
	10nm,0.2s								
PBDV	**Barranco-do-Ve**	**2.40**	**321**	*e*Pn			**Pn**	**10 20 31.9**	**+0.3**
PBDV				*e*Sn			**Sn**	**10 20 59.6**	**-0.2**
	10nm,0.2s								
PVAQ	**Vaqueiros**	**2.42**	**327**	*e*Pn			**Pn**	**10 20 32.5**	**+0.5**
PVAQ				*e*Sn			**Sn**	**10 21 00.0**	**-0.4**
PVAQ				A				10 21 01.5	
	23nm,0.1s								
PVAQ	**Vaqueiros**	**2.42**	**327**	⇓P			**Pn**	**10 20 32.5**	**+0.5**
PVAQ				S			**Sn**	**10 21 00.0**	**-0.4**
	23nm,0.1s								
EMIN	**Mina Concepcio**	**2.43**	**348**	P			**Pn**	**10 20 32.8**	**+0.8**
EMIN				S			**Sn**	**10 21 00.3**	**-0.2**
EMIN	**Mina Concepcio**	**2.43**	**348**	⇓P			**Pn**	**10 20 32.8**	**+0.8**
	2.7nm,0.2s,SNR=18								
EMIN				S			**Sn**	**10 21 00.3**	**-0.2**
	4.9nm,0.3s,SNR=10								
EMIN	**Mina Concepcio**	**2.43**	**348**	P			**Pn**	**10 20 32.8**	**+0.8**
	2.7nm,0.2s,SNR=18								
EMIN				S			**Sn**	**10 21 00.3**	**-0.2**
	4.9nm,0.3s,SNR=10								
ERON	**Agron**	**2.43**	**47**	P			**Pn**	**10 20 33.8**	**+1.7**
ERON				S			**Sn**	**10 21 00.9**	**+0.4**
ERON	**Agron**	**2.43**	**47**	P			**Pn**	**10 20 33.1**	**+1.0**
	5.5nm,0.4s,SNR=7.9								
ERON				S			**Sn**	**10 21 00.9**	**+0.4**
	2.7nm,0.3s,SNR=7.9								
ERON	**Agron**	**2.43**	**47**	P			**Pn**	**10 20 33.8**	**+1.8**
ERON				S			**Sn**	**10 21 00.9**	**+0.4**
EGRO	**El Granado**	**2.44**	**332**	P			**Pn**	**10 20 32.9**	**+0.7**
EGRO				S			**Sn**	**10 21 01.0**	**+0.3**
EGRO	**El Granado**	**2.44**	**332**	⇓P			**Pn**	**10 20 32.8**	**+0.7**
	8.7nm,0.3s,SNR=18								
EGRO				S			**Sn**	**10 21 00.5**	**-0.2**
	8.1nm,0.2s,SNR=9.8								
EGRO	**El Granado**	**2.44**	**332**	P			**Pn**	**10 20 32.8**	**+0.6**
	8.7nm,0.3s,SNR=18								
EGRO				S			**Sn**	**10 21 01.0**	**+0.3**
EGUA	**Guajares**	**2.47**	**54**	P			**Pn**	**10 20 33.4**	**+0.9**
EGUA				S			**Sn**	**10 21 00.3**	**-1.2**
EGUA	**Guajares**	**2.47**	**54**	P			**Pn**	**10 20 32.2**	**-0.3**
	3.0nm,0.1s,SNR=7.9								
EGUA				S			**Sn**	**10 20 59.2**	**-2.2**
	40nm,0.8s,SNR=7.9								
EGUA	**Guajares**	**2.47**	**54**	P			**Pn**	**10 20 33.4**	**+0.8**
EGUA				S			**Sn**	**10 21 00.3**	**-1.2**
CZD	**Col de Zad**	**2.49**	**160**	P			**Pn**	**10 20 32.0**	**-0.9**
CZD				S			**Sn**	**10 20 57.0**	**-5.0**
CZD	**Col de Zad**	**2.49**	**160**	*i* P			**Pn**	**10 20 32.0**	**-0.9**
EALB	**Alboran**	**2.51**	**76**	S			**Sn**	**10 21 01.4**	**-1.0**
	6.3nm,0.2s,SNR=7.9								
EALB	**Alboran**	**2.51**	**76**	S			**Sn**	**10 21 01.4**	**-1.0**
	6.3nm,0.2s,SNR=7.9								
ELUQ	**Luque**	**2.60**	**33**	S			**Sn**	**10 21 04.6**	**0.0**
	17nm,0.2s,SNR=7.9								
ELUQ	**Luque**	**2.60**	**33**	S			**Sn**	**10 21 04.6**	**0.0**
	17nm,0.2s,SNR=7.9								
ECAB	**El Cabril**	**2.73**	**10**	P			**Pn**	**10 20 37.1**	**+1.0**
ECAB				S			**Sn**	**10 21 07.3**	**-0.5**
ECAB	**El Cabril**	**2.73**	**10**	P			**Pn**	**10 20 38.2**	**+2.1**
	1.6nm,0.1s,SNR=7.9								
ECAB				S			**Sn**	**10 21 07.1**	**-0.8**
	80nm,0.3s,SNR=7.9								
ECAB	**El Cabril**	**2.73**	**10**	P			**Pn**	**10 20 37.1**	**+1.0**
ECAB				S			**Sn**	**10 21 07.3**	**-0.6**
ECOG	**Cogollos-Vega**	**2.75**	**46**	S			**Sn**	**10 21 09.2**	**+0.9**
	7.5nm,0.4s,SNR=7.9								
ECOG	**Cogollos-Vega**	**2.75**	**46**	S			**Sn**	**10 21 09.2**	**+0.9**
	7.5nm,0.4s,SNR=7.9								
PCVE	**Castro Verde**	**2.76**	**325**	*e*Pn			**Pn**	**10 20 37.1**	**+0.5**
PCVE				*e*Sn			**Sn**	**10 21 08.5**	**-0.1**
PCVE				A				10 21 10.9	
	11nm,0.2s								
PCVE	**Castro Verde**	**2.76**	**325**	P			**Pn**	**10 20 37.1**	**+0.5**
PCVE				S			**Sn**	**10 21 08.5**	**-0.1**
	11nm,0.2s								
PCVE	**Castro Verde**	**2.76**	**325**	*e*Pn			**Pn**	**10 20 37.1**	**+0.5**
PCVE				*e*Sn			**Sn**	**10 21 08.5**	**-0.1**
	11nm,0.2s								
EQUE	**Quentar**	**2.77**	**48**	P			**Pn**	**10 20 40.1**	**+3.4**
	0.3nm,0.1s,SNR=7.9								
EQUE				S			**Sn**	**10 21 09.8**	**+0.8**
	4.5nm,0.4s,SNR=7.9								
EQUE	**Quentar**	**2.77**	**48**	P			**Pn**	**10 20 40.1**	**+3.3**
	0.3nm,0.1s,SNR=7.9								
EQUE				S			**Sn**	**10 21 09.8**	**+0.8**
	4.5nm,0.4s,SNR=7.9								
MORF	**Marmelete**	**2.85**	**313**	*e*Pn			**Pn**	**10 20 37.3**	**-0.5**
MORF				*e*Sn			**Sn**	**10 21 10.1**	**-0.7**
MORF				A				10 21 11.3	
	25nm,0.2s								
MORF	**Marmelete**	**2.85**	**313**	P			**Pn**	**10 20 37.3**	**-0.5**
MORF				S			**Sn**	**10 21 10.1**	**-0.7**
	25nm,0.2s								
MORF	**Marmelete**	**2.85**	**313**	*e*Pn			**Pn**	**10 20 37.3**	**-0.5**
MORF				*e*Sn			**Sn**	**10 21 10.1**	**-0.7**
	25nm,0.2s								
PFVI	**Vila Bisbo**	**2.85**	**309**	*e*Pn			**Pn**	**10 20 37.2**	**-0.6**
PFVI				*e*Sn			**Sn**	**10 21 10.8**	**0.0**
PFVI				A				10 21 14.0	
	13nm,0.1s								
PFVI	**Vila Bisbo**	**2.85**	**309**	⇓P			**Pn**	**10 20 37.2**	**-0.6**
	SNR=18								
PFVI				S			**Sn**	**10 21 10.7**	**-0.1**
	20nm,0.3s,SNR=7.9								
PFVI	**Vila Bisbo**	**2.85**	**309**	P			**Pn**	**10 20 37.2**	**-0.6**
	SNR=18								
PFVI				*e*Sn			**Sn**	**10 21 10.8**	**0.0**
	13nm,0.1s								
PBAR	**Barrancos**	**2.90**	**344**	*e*Pn			**Pn**	**10 20 39.2**	**+0.8**
PBAR				*e*Sn			**Sn**	**10 21 11.6**	**-0.4**
PBAR				A				10 21 16.3	
	6.8nm,0.1s								
PBAR	**Barrancos**	**2.90**	**344**	P			**Pn**	**10 20 39.2**	**+0.8**
PBAR				S			**Sn**	**10 21 11.6**	**-0.4**
	6.8nm,0.1s								
PBAR	**Barrancos**	**2.90**	**344**	*e*Pn			**Pn**	**10 20 39.2**	**+0.8**
PBAR				*e*Sn			**Sn**	**10 21 11.6**	**-0.4**
	6.8nm,0.1s								
EBER	**Berja**	**2.96**	**58**	P			**Pn**	**10 20 39.7**	**+0.4**
EBER				S			**Sn**	**10 21 14.2**	**+0.7**
EBER	**Berja**	**2.96**	**58**	P			**Pn**	**10 20 39.2**	**-0.1**
	1.9nm,0.2s,SNR=9.5								
EBER				S			**Sn**	**10 21 13.2**	**-0.3**
	3.6nm,0.4s								
EBER	**Berja**	**2.96**	**58**	P			**Pn**	**10 20 39.7**	**+0.4**
EBER				S			**Sn**	**10 21 14.2**	**+0.6**
EADA	**Adamuz**	**3.01**	**22**	P			**Pn**	**10 20 40.6**	**+0.6**
EADA				S			**Sn**	**10 21 14.0**	**-0.9**
EADA	**Adamuz**	**3.01**	**22**	P			**Pn**	**10 20 41.5**	**+1.5**
	0.3nm,0.1s,SNR=7.9								
EADA				S			**Sn**	**10 21 14.0**	**-0.9**
	13nm,0.4s,SNR=7.9								
EADA	**Adamuz**	**3.01**	**22**	P			**Pn**	**10 20 40.6**	**+0.6**
EADA				S			**Sn**	**10 21 14.0**	**-0.8**
	13nm,0.4s,SNR=7.9								
MESJ	**Messejana**	**3.01**	**325**	*e*P			**Pn**	**10 20 40.5**	**+0.5**
MESJ				*e*S			**Sn**	**10 21 14.2**	**-0.6**
PBEJ	**Beja**	**3.02**	**331**	*e*Sn			**Sn**	**10 21 15.6**	**+0.7**
PBEJ				A				10 21 18.5	
	6.4nm,0.2s								
PBEJ	**Beja**	**3.02**	**331**	S			**Sn**	**10 21 15.6**	**+0.7**
	3.2nm,0.2s								
PBEJ	**Beja**	**3.02**	**331**	*e*Sn			**Sn**	**10 21 15.6**	**+0.7**
	6.4nm,0.2s								
PTEO	**Sao Teotonio**	**3.05**	**316**	*e*Pn			**Pn**	**10 20 40.7**	**+0.1**
PTEO				*e*Sn			**Sn**	**10 21 15.0**	**-0.9**
PTEO				A				10 21 17.3	
	9.1nm,0.2s								
PTEO	**Sao Teotonio**	**3.05**	**316**	P			**Pn**	**10 20 40.7**	**+0.1**
PTEO				S			**Sn**	**10 21 15.0**	**-0.9**
	4.6nm,0.2s								
PTEO	**Sao Teotonio**	**3.05**	**316**	*e*Pn			**Pn**	**10 20 40.7**	**+0.1**
PTEO				*e*Sn			**Sn**	**10 21 15.0**	**-0.9**
	9.1nm,0.2s								
EBAN	**Banos Encina**	**3.31**	**32**	P			**Pn**	**10 20 44.8**	**+0.7**
EBAN				S			**Sn**	**10 21 20.7**	**-1.5**
EBAN	**Banos Encina**	**3.31**	**32**	P			**Pn**	**10 20 45.7**	**+1.6**
	1.2nm,0.1s,SNR=4.0								
EBAN				S			**Sn**	**10 21 20.7**	**-1.5**
	14nm,0.2s,SNR=15								
EBAN	**Banos Encina**	**3.31**	**32**	P			**Pn**	**10 20 44.8**	**+0.7**
EBAN				S			**Sn**	**10 21 20.7**	**-1.5**
	14nm,0.2s,SNR=15								
EQES	**Quesada**	**3.39**	**44**	P			**Pn**	**10 20 46.6**	**+1.3**
EQES				S			**Sn**	**10 21 24.0**	**-0.2**
EQES	**Quesada**	**3.39**	**44**	P			**Pn**	**10 20 46.6**	**+1.3**
	0.5nm,0.1s,SNR=7.9								
EQES				S			**Sn**	**10 21 24.0**	**-0.2**
	11nm,0.3s,SNR=7.9								
EQES	**Quesada**	**3.39**	**44**	P			**Pn**	**10 20 46.6**	**+1.4**
	0.5nm,0.1s,SNR=7.9								
EQES				S			**Sn**	**10 21 24.0**	**-0.2**
	11nm,0.3s,SNR=7.9								
EBAD	**Badajoz**	**3.45**	**347**	P			**Pn**	**10 20 47.0**	**+0.9**
EBAD				S			**Sn**	**10 21 24.8**	**-0.9**
EBAD	**Badajoz**	**3.45**	**347**	P			**Pn**	**10 20 47.0**	**+0.9**
	3.7nm,0.2s,SNR=22								
EBAD				S			**Sn**	**10 21 24.5**	**-1.1**
	4.7nm,0.4s,SNR=6.4								
EBAD	**Badajoz**	**3.45**	**347**	P			**Pn**	**10 20 47.0**	**+1.0**
	3.7nm,0.2s,SNR=22								
EBAD				S			**Sn**	**10 21 24.8**	**-0.9**
EVO	**Evora**	**3.51**	**334**	*e*Pn			**Pn**	**10 20 47.8**	**+0.9**
EVO				*e*Sn			**Sn**	**10 21 27.1**	**-0.1**
EVO				A				10 21 27.4	
	21nm,0.1s								
EVO	**Evora**	**3.51**	**334**	P			**Pn**	**10 20 47.8**	**+0.9**
EVO				S			**Sn**	**10 21 27.1**	**-0.1**
	21nm,0.1s								
EVO	**Evora**	**3.51**	**334**	*e*Pn			**Pn**	**10 20 47.8**	**+0.9**
EVO				*e*Sn			**Sn**	**10 21 27.1**	**-0.1**
	21nm,0.1s								
MOE	**Montemor**	**3.64**	**330**	*e*Sn			**Sn**	**10 21 30.3**	**+0.1**
MOE	**Montemor**	**3.64**	**330**	S			**Sn**	**10 21 30.3**	**+0.1**
MOE	**Montemor**	**3.64**	**330**	*e*Sn			**Sn**	**10 21 30.3**	**+0.1**
EHUE	**Huescar**	**3.68**	**48**	P			**Pn**	**10 20 49.9**	**+0.7**
EHUE				S			**Sn**	**10 21 30.9**	**-0.4**
EHUE	**Huescar**	**3.68**	**48**	P			**Pn**	**10 20 51.7**	**+2.5**
	0.5nm,0.1s,SNR=7.9								
EHUE				S			**Sn**	**10 21 30.9**	**-0.4**
	2.2nm,0.2s,SNR=7.9								
EHUE	**Huescar**	**3.68**	**48**	P			**Pn**	**10 20 49.9**	**+0.7**
EHUE				S			**Sn**	**10 21 30.9**	**-0.4**
	2.2nm,0.2s,SNR=7.9								
PESTR	**Estremoz**	**3.69**	**341**	*e*Pn			**Pn**	**10 20 50.1**	**+0.8**
PESTR				*e*Sn			**Sn**	**10 21 30.0**	**-1.5**
PESTR				A				10 21 32.2	
	4.6nm,0.2s								
PESTR	**Estremoz**	**3.69**	**341**	P			**Pn**	**10 20 50.1**	**+0.8**
PESTR				S			**Sn**	**10 21 30.0**	**-1.5**
	2.3nm,0.2s								
PESTR	**Estremoz**	**3.69**	**341**	*e*Pn			**Pn**	**10 20 50.1**	**+0.8**
PESTR				*e*Sn			**Sn**	**10 21 30.0**	**-1.5**
	4.6nm,0.2s								
PMTG	**Montargil**	**4.07**	**335**	*e*Pn			**Pn**	**10 20 55.1**	**+0.6**
PMTG				*e*Sn			**Sn**	**10 21 39.8**	**-1.0**
PMTG				A				10 21 43.7	
	5.0nm,0.3s								
PMTG	**Montargil**	**4.07**	**335**	*e*Pn			**Pn**	**10 20 55.1**	**+0.6**
PMTG				*e*Sn			**Sn**	**10 21 39.8**	**-1.0**
	5.0nm,0.3s								
PMRV	**Marv??o**	**4.17**	**345**	*e*Pn			**Pn**	**10 20 57.0**	**+1.0**
PMRV				*e*Sn			**Sn**	**10 21 42.7**	**-0.8**
PMRV				A				10 21 44.5	
	11nm,0.3s								
PMRV	**Marv??o**	**4.17**	**345**	P			**Pn**	**10 20 57.0**	**+1.0**
PMRV				S			**Sn**	**10 21 42.7**	**-0.8**
	11nm,0.3s								
PMRV	**Marv??o**	**4.17**	**345**	*e*Pn			**Pn**	**10 20 57.0**	**+1.0**
PMRV				*e*Sn			**Sn**	**10 21 42.7**	**-0.8**
	11nm,0.3s								
EVIA	**Vianos**	**4.30**	**40**	P			**Pn**	**10 20 59.0**	**+1.2**
EVIA				S			**Sn**	**10 21 45.0**	**-1.7**
EVIA	**Vianos**	**4.30**	**40**	P			**Pn**	**10 20 59.0**	**+1.2**
	2.1nm,0.1s,SNR=7.9								
EVIA				S			**Sn**	**10 21 40.3**	**-6.4**
	15nm,0.7s,SNR=7.9								
EVIA	**Vianos**	**4.30**	**40**	P			**Pn**	**10 20 59.0**	**+1.2**
	2.1nm,0.1s,SNR=7.9								
EVIA				S			**Sn**	**10 21 45.0**	**-1.7**
PMAFR	**Mafra**	**4.40**	**325**	*e*Pn			**Pn**	**10 20 59.9**	**+0.8**
PMAFR	**Mafra**	**4.40**	**325**	P			**Pn**	**10 21 00.4**	**+1.3**
	7.9nm,0.2s,SNR=7.9								
PMAFR				S			**Sn**	**10 21 48.5**	**-0.7**
	15nm,0.4s,SNR=7.9								
PMAFR	**Mafra**	**4.40**	**325**	*e*Pn			**Pn**	**10 20 59.9**	**+0.8**
ESDC	**Sonseca Array**	**4.59**	**20**	P			**Pn**	**10 21 01.7**	**+0.1**
ESDC				S			**Sn**	**10 21 51.2**	**-2.4**
ESDC	**Sonseca Array**	**4.59**	**20**	P			**Pn**	**10 21 01.7**	**+0.1**
ESDC				S			**Sn**	**10 21 51.2**	**-2.4**
EPLA	**Plasencia**	**4.67**	**360**	P			**Pn**	**10 21 03.5**	**+0.7**
EPLA				S			**Sn**	**10 21 52.9**	**-2.7**
EPLA	**Plasencia**	**4.67**	**360**	P			**Pn**	**10 21 03.5**	**+0.7**
	2.4nm,0.6s,SNR=7.5								
EPLA				S			**Sn**	**10 21 52.9**	**-2.7**
	6.7nm,0.2s,SNR=7.4								
EPLA	**Plasencia**	**4.67**	**360**	P			**Pn**	**10 21 03.5**	**+0.7**
	2.4nm,0.6s,SNR=7.5								
EPLA				S			**Sn**	**10 21 52.9**	**-2.7**
	6.7nm,0.2s,SNR=7.4								
ETOB	**Tobarra**	**4.84**	**47**	P			**Pn**	**10 21 06.2**	**+1.0**
ETOB				S			**Sn**	**10 21 58.1**	**-1.9**
ETOB	**Tobarra**	**4.84**	**47**	P			**Pn**	**10 21 06.2**	**+1.0**
	6.5nm,1.0s,SNR=6.3								
ETOB				S			**Sn**	**10 21 58.1**	**-1.9**
	3.4nm,0.7s								
ETOB	**Tobarra**	**4.84**	**47**	P			**Pn**	**10 21 06.2**	**+1.0**
	6.5nm,1.0s,SNR=6.3								
ETOB				S			**Sn**	**10 21 58.1**	**-1.9**
	3.4nm,0.7s								
GUD	**Guadarrama**	**5.45**	**15**	S			**Sn**	**10 22 11.6**	**-3.3**
	2.2nm,0.6s,SNR=7.9								
MVO	**Moncorvo**	**5.82**	**353**	P			**Pn**	**10 21 19.8**	**+1.2**
MVO				S			**Sn**	**10 22 21.5**	**-2.4**
MVO	**Moncorvo**	**5.82**	**353**	P			**Pn**	**10 21 19.8**	**+1.2**
	3.1nm,0.3s,SNR=5.9								
MVO				S			**Sn**	**10 22 21.5**	**-2.4**
	4.6nm,0.7s								
MVO	**Moncorvo**	**5.82**	**353**	P			**Pn**	**10 21 19.8**	**+1.2**
	3.1nm,0.3s,SNR=5.9								
ECAL	**Calabor**	**6.57**	**355**	P			**Pn**	**10 21 30.2**	**+1.4**
ECAL				S			**Sn**	**10 22 39

PMR	Palmer	17.30	45	ePn	Pn	10 27 40.7	-0.6	
	comp=Z,34nm,1.4s							
PMR	Palmer	17.30	45	eP	Pn	10 27 40.7	-0.6	
PMR				pmax	pmax			
	comp=Z,34nm,1.4s							
TRF	Thorofare Moun	17.64	39	ePn	Pn	10 27 46.8	+1.3	
	comp=Z,30nm,0.8s							
BPAW	Bear Paw Mtn.	17.72	37	eP	Pn	10 27 47.0	+0.7	
	comp=Z,43nm,1.0s							
SML	Sawmill	17.73	45	ePn	Pn	10 27 41.1	-5.6	
	comp=Z,10nm,1.3s							
SML	Sawmill	17.73	45	eP	Pn	10 27 41.1	-5.5	
SML				pmax	pmax			
	comp=Z,10.0nm,1.3s							
MCK	McKinley	18.31	39	eP	Pn	10 27 52.9	-0.7	
	comp=Z,32nm,0.8s							
MCK	McKinley	18.31	39	eP	Pn	10 27 52.9	-0.7	
MCK				pmax	pmax			
	comp=Z,32nm,0.8s							
BILL	Bilibino	18.59	338	eP	Pn	10 27 58.6	+1.7	
	comp=Z,65nm,1.0s							
BILL	Bilibino	18.59	338	d iP	Pn	10 27 58.2	+1.3	
BILL				pmax	pmax			
	comp=Z,62nm,1.0s							
BILL				MLR	MLR			
	comp=Z,600nm,20.0s							
COLA	College	19.28	37	eP	Pn	10 28 02.1	-3.0	
	comp=Z,39nm,1.1s							
COLA	College	19.28	37	eP	Pn	10 28 02.2	-3.0	
COLA				pmax	pmax			
	comp=Z,39nm,1.1s							
PAX	Paxson	19.41	43	ePn	Pn	10 28 05.2	-1.4	
	comp=Z,14nm,0.8s							
PAX	Paxson	19.41	43	eP	Pn	10 28 05.3	-1.4	
PAX				pmax	pmax			
	comp=Z,14nm,0.8s							
ILAR	Eielson Array	19.59	38	P	Pn	10 28 04.8	-4.1	
	comp=Z,0.9nm,0.3s,baz=232,slow=8.4,SNR=52							
ILAR	Eielson Array	19.59	38	P	Pn	10 28 04.8	-4.1	
COLD	Coldfoot	19.82	29	ePn	Pn	10 28 11.6	0.0	
	comp=Z,69nm,1.0s							
MENT	Mentasta	20.14	44	eP	P	10 28 14.8	+1.8	
DOT	Dot Lake	20.24	42	eP	P	10 28 13.1	-1.0	
	comp=Z,170nm,1.0s							
SEY	Seymchan	20.43	316	d iP	P	10 28 18.2	+2.1	
PNL	Peninsula	21.49	54	ePn	P	10 28 28.2	+0.7	
	comp=Z,29nm,0.8s,mb4.7							
EGAK	Eagle	21.83	40	eP	P	10 28 30.4	-0.8	
	comp=Z,51nm,0.9s,mb5.0							
DAWY	Dawson	22.34	43	eP	P	10 28 35.3	-1.2	
SKAG	Skagway	23.55	55	eP	P	10 28 48.9	+0.2	
	comp=Z,11nm,0.7s,mb4.4							
WRAK	Wrangell Islan	25.31	62	eP	P	10 29 06.0	+1.3	
	comp=Z,17nm,0.8s,mb4.6							
INK	Inuvik	25.89	35	P	P	10 29 09.4	-0.5	
	comp=Z,4.0nm,0.5s,mb4.2,baz=222,slow=7.1,SNR=38							
INK				PcP	PcP	10 32 37.4	+0.4	
	comp=Z,1.8nm,0.5s,baz=302,slow=0.6,SNR=5.8							
INK	Inuvik	25.89	35	eP	P	10 29 09.6	-0.4	
	comp=Z,8.9nm,0.8s,mb4.3							
INK	Inuvik	25.89	35	eP	P	10 29 09.6	-0.3	
INK				pmax	pmax			
	comp=Z,9.0nm,0.8s							
DLBC	Dease Lake	26.33	57	P	P	10 29 13.3	-0.6	
	comp=Z,3.0nm,0.7s,mb3.9,baz=276,slow=6.5,SNR=8.5							
DLBC				LR	LR	10 40 31.2		
	comp=Z,224nm,19.1s,baz=324,slow=38							
DLBC	Dease Lake	26.33	57	eP	P	10 29 15.9	+2.0	
YUK	Yuzh-Kuril'sk	26.88	269	eP	P	10 29 22.5	+3.5	
YUK				MLR	MLR			
	comp=Z,160nm,21.0s							
YSS	Yuzh-Sakhalins	27.43	277	eP	P	10 29 25.1	+1.1	
	comp=Z,40nm,1.0s,mb4.9							
YSS	Yuzh-Sakhalins	27.43	277	⇑eP	P	10 29 24.0	+0.1	
BBB	Bella Bella	28.69	70	P	P	10 29 33.1	-2.0	
	comp=Z,8.7nm,0.8s,mb4.5,baz=99,slow=9.4,SNR=8.7							
BBB				LR	LR	10 38 41.7		
	comp=Z,185nm,20.1s,baz=184,slow=32							
ASAJ	Asahikawa	28.86	271	P	P	10 29 37.0	+0.2	
	comp=Z,12nm,0.8s,mb4.7,baz=42,slow=8.2,SNR=5.0							
ASAJ				LR	LR	10 41 43.8		
	comp=Z,89nm,19.3s,baz=352,slow=38							
ASAJ	Asahikawa	28.86	271	P	P	10 29 37.0	+0.3	
ASAJ				pmax	pmax			
	comp=Z,12nm,0.8s							
ASAJ				MLR	MLR			
	comp=Z,89nm,19.3s							
NLWA	Neilton Lookou	33.08	77	P	P	10 30 12.1	-1.7	
	comp=Z,29nm,1.3s,mb5.0							
KLR	Kul'dur	33.14	287	eP	P	10 30 07.1	-7.2	
YKA	Yellowknife Ar	33.38	47	P	P	10 30 15.0	-1.2	
	comp=Z,0.5nm,0.3s,mb3.9,baz=326,slow=18,SNR=12							
YKA				PcP	PcP	10 32 57.1	+0.8	
	comp=Z,1.1nm,0.4s,baz=281,slow=2.9,SNR=7.6							
YKA				LR	LR	10 45 05.2		
	comp=Z,31nm,21.6s,baz=130,slow=39							
YKA	Yellowknife Ar	33.38	47	P	P	10 30 15.0	-1.2	
YKA				PcP	PcP	10 32 57.1	+0.8	
YKA				LR	LR	10 45 05.2		
YKA	Yellowknife Ar	33.38	47	P	P	10 30 15.0	-1.2	
YKA						10 32 57.1		
A05A	Maple Falls	33.44	73	⇑P	P	10 30 17.3	+0.3	
	baz=33,SNR=5.4							
GNW	Green Mountain	33.63	76	eP	P	10 30 19.7	+1.1	
	comp=Z,5.2nm,0.9s,mb4.5							
JCW	Jim Creek	33.88	74	eP	P	10 30 21.9	+1.1	
D05A	Enumclaw	34.31	76	⇑P	P	10 30 25.2	+0.7	
	baz=34							
LON	Longmire	34.62	77	eP	P	10 30 28.5	+1.3	
	comp=Z,5.7nm,0.8s,mb4.5							
LON	Longmire	34.62	77	eP	P	10 30 28.5	+1.3	
LON				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.6							
F04A	Amboy	34.65	78	⇑P	P	10 30 27.3	-0.1	
	baz=34							
ETW	Entiat	35.11	75	eP	P	10 30 32.1	+0.7	
B08A	Colville Reser	35.36	73	⇓P	P	10 30 34.0	+0.5	
	baz=35,SNR=17							
H04A	Detroit Lake	35.42	80	⇑P	P	10 30 34.3	+0.2	
	baz=35							
MAT	Matsushiro	35.98	264	P	P	10 30 40.1	+1.1	
MJAR	Matsushiro Arr	35.98	263	P	P	10 30 36.5	-2.4	
	comp=Z,4.4nm,0.9s,mb4.4,baz=49,slow=8.9,SNR=7.8							
MJAR				LR	LR	10 43 28.5		
	comp=Z,149nm,21.6s,baz=70,slow=33							
MJAR	Matsushiro Arr	35.98	263	P	P	10 30 36.5	-2.5	
VLA	Vladivostok	36.01	277	⇑eP	P	10 30 39.1	0.0	
VLA				pmax	pmax			
	comp=Z,57nm,1.1s,mb5.4							
G06A	Carlson Farm,	36.08	78	⇓P	P	10 30 40.2	+0.4	
	baz=36							
RSW	Rattlesnake Hi	36.14	76	eP	P	10 30 41.3	+1.1	
HAWA	Hanford	36.17	76	eP	P	10 30 41.1	+0.6	
	comp=Z,17nm,0.6s,mb5.2							
F07A	Phinny Hill Vi	36.18	77	⇑P	P	10 30 41.6	+1.0	
	baz=36							
OD2	Odessa Site #2	36.18	74	eP	P	10 30 41.0	+0.4	
D08A	Wollman Farm,	36.22	75	⇑P	P	10 30 40.2	-0.6	
	baz=36,SNR=6.4							
C09A	Chrisman Ranch	36.25	73	⇑P	P	10 30 41.3	+0.2	
	baz=36,SNR=5.9							
MDJ	Mudanjiang	36.63	281	P	P	10 30 43.5	-0.9	
MDJ				pP	pP	10 30 56.8	-3.1	
MDJ				sP	sP	10 31 02.8	-4.3	
MDJ				S	S	10 36 22.3	-0.3	
MDJ				sS	sS	10 36 45.0	-4.0	
MDJ				ScP	ScP	10 36 48.8	+1.7	
MDJ				PcS	PcS	10 36 54.5	+0.6	
MDJ				pmax	pmax			
	comp=Z,9.0nm,1.1s,mb4.5							
MDJ				pmax	pmax			
	comp=Z,55nm,2.9s,mb4.9							
MDJ				LR	LR			
	comp=N,220nm,19.6s							
MDJ				LR	LR			
	comp=E,250nm,27.2s							
MDJ				LR	LR			
	comp=Z,340nm,25.0s							
NEW	Newport	36.71	72	⇓P	P	10 30 45.2	+0.2	
	baz=37,SNR=18							
NEW	Newport	36.71	72	eP	P	10 30 45.3	+0.2	
	comp=Z,27nm,1.2s,mb5.0							
NEW	Newport	36.71	72	eP	P	10 30 45.3	+0.2	
NEW				pmax	pmax			
	comp=Z,27nm,1.2s							
E09A	Wood Farm, Sta	36.95	75	⇑P	P	10 30 47.3	+0.2	
	baz=37							
G08A	Pilot Rock	37.07	77	⇑P	P	10 30 48.0	-0.2	
	baz=37,SNR=5.1							
LNOR	Lincton Mounta	37.18	76	eP	P	10 30 49.4	+0.3	
LNOR	Lincton Mounta	37.18	76	eP	P	10 30 49.4	+0.3	
K05A	Summer Lake	37.26	82	⇓P	P	10 30 50.7	+1.0	
	baz=37							
I07A	Izee	37.37	79	⇓P	P	10 30 51.4	+0.7	
	baz=37,SNR=10.0							
C11A	Tepee Creek (N	37.42	72	⇓P	P	10 30 51.3	+0.1	
	baz=37							
F10A	Beach Ranch, E	37.77	75	⇑P	P	10 30 53.7	-0.3	
	baz=38,SNR=5.9							
C12B	Naegeli Ranch,	37.95	72	⇓P	P	10 30 55.7	+0.2	
	baz=38							
A13A	Flathead Natio	37.98	69	⇑P	P	10 30 56.1	+0.3	
	baz=38							
MOD	Modoc	38.08	83	eP	P	10 30 57.6	+0.9	
	comp=Z,3.6nm,0.6s,mb4.3							
WALA	Waterton Lakes	38.22	69	eP	P	10 30 58.2	+0.4	
	comp=Z,0.9nm,1.1s							
B13A	Whitefish	38.22	70	⇑P	P	10 30 57.4	-0.4	
	baz=38,SNR=6.5							
BSMT	Bassoo Peak	38.28	71	eP	P	10 30 58.8	+0.5	
BMO	Blue Mountains	38.30	77	eP	P	10 30 59.0	+0.4	
	comp=Z,88nm,3.0s							
D12A	Red Ives Fores	38.34	73	⇑P	P	10 30 58.5	-0.4	
	baz=38							
J08A	Circle Bar Ran	38.39	80	⇑P	P	10 30 59.5	+0.2	
	baz=38,SNR=9.3							
BLMT	Blacktail Moun	38.46	71	eP	P	10 31 00.4	+0.6	
C13A	Hot Springs	38.49	71	⇓P	P	10 31 00.2	+0.1	
	baz=38,SNR=8.9							
E12A	Beaver Dam Sad	38.54	74	⇑P	P	10 31 00.2	-0.3	
	baz=38							
A14A	Double T Ranch	38.54	69	⇓P	P	10 31 00.5	0.0	
	baz=38,SNR=24							
JTMT	Jette	38.63	71	eP	P	10 31 01.5	+0.2	
YBMT	Yellow Bay	38.73	71	eP	P	10 31 02.6	+0.5	
WVOR	Wild Horse Val	38.80	81	eP	P	10 31 03.1	+0.3	
	comp=Z,11nm,0.8s,mb4.6							
WVOR	Wild Horse Val	38.80	81	eP	P	10 31 03.1	+0.3	
WVOR				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.6							
D13A	Huson	38.85	72	⇓P	P	10 31 02.5	-0.6	
	baz=39,SNR=8.4							
SWMT	Swartz Lake	38.92	71	eP	P	10 31 03.9	+0.2	
B14A	Marquette Ranc	38.92	70	⇑P	P	10 31 03.2	-0.5	
	baz=39,SNR=9.7							
C14A	Swan Lake	38.94	71	⇓P	P	10 31 03.7	-0.1	
	baz=39							
A15A	Johnson Ranch,	38.94	69	⇓P	P	10 31 03.3	-0.5	
	baz=39,SNR=14							
F12A	Elk City	39.06	74	⇓P	P	10 31 04.7	-0.2	
	baz=39,SNR=19							
MSO	Missoula	39.29	72	⇑P	P	10 31 06.5	-0.3	
	baz=39,SNR=9.7							
MSO	Missoula	39.29	72	eP	P	10 31 06.8	0.0	
	comp=Z,20nm,1.3s,mb4.7							
E13A	Victor	39.34	73	⇓P	P	10 31 07.5	+0.2	
	baz=39,SNR=7.6							
SLMT	Seeley Lake	39.35	71	eP	P	10 31 07.2	0.0	
G12A	Big Creek, Yel	39.35	75	⇑P	P	10 31 07.1	-0.2	
	baz=39							
B15A	Bradely Ranch,	39.36	69	⇑P	P	10 31 07.4	+0.1	
	baz=39							
D14A	Greenough	39.42	72	P	P	10 31 07.8	-0.1	
	baz=39,SNR=18							
BOD	Bodaibo	39.46	307	eP	P	10 31 06.0	-2.0	
BOD				e	pP	10 31 18.0	-5.6	
BOD				pmax	pmax			
	comp=Z,5.0nm,1.5s,mb4.0							
CN2	Changchun	39.58	283	eP	P	10 31 09.3	+0.1	
CN2				eS	S	10 37 06.3	-1.0	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.5s,mb4.8							
CN2				LR	LR			
	comp=N,300nm,18.0s							
CN2				LR	LR			
	comp=E,400nm,18.0s							
CN2				LR	LR			
	comp=Z,400nm,21.0s							
F13A	Darby	39.60	74	⇑P	P	10 31 09.3	-0.1	
	baz=40,SNR=16							
C15A	Salmond Ranch,	39.60	70	⇓P	P	10 31 09.9	+0.5	
	baz=40,SNR=20							
A16A	West Butte Ran	39.61	68	⇑P	P	10 31 09.0	-0.4	
	baz=40,SNR=17							
CHMT	Chamberlain Mo	39.66	72	eP	P	10 31 09.6	-0.3	
E14A	Clinton	39.77	72	⇑P	P	10 31 11.0	+0.2	
	baz=40,SNR=14							
B16A	M & M Farms, S	39.81	69	⇓P	P	10 31 10.3	-0.7	
	baz=40,SNR=16							
PAHR	Pah Rah Range	39.92	85	eP	P	10 31 14.8	+2.7	
	comp=Z,17nm,1.3s,mb4.6							
WCN	Washoe City	39.93	86	eP	P	10 31 17.6	+5.4	
	comp=Z,5.3nm,0.9s,mb4.3							
WCN	Washoe City	39.93	86	eP	P	10 31 17.6	+5.4	
WCN				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.2							
H12A	Diamond D Ranc	39.94	76	⇓P	P	10 31 12.1	-0.1	
	baz=40,SNR=7.8							
MFID	Camas Ranch	39.97	78	⇓P	P	10 31 12.2	-0.3	
	baz=40							
D15A	Lincoln	40.02	71	⇑P	P	10 31 12.6	-0.3	
	baz=40,SNR=13							
G13A	Cobalt	40.02	75	⇑P	P	10 31 13.0	+0.1	
	baz=40,SNR=9.2							
C16A	Fuhringer Ranc	40.09	70	⇓P	P	10 31 13.4	0.0	
	baz=40,SNR=20							
A17A	Triple J Farms	40.12	68	⇓P	P	10 31 13.1	-0.6	
	baz=40,SNR=34							
F14A	Wisdom	40.16	73	⇓P	P	10 31 14.4	+0.4	
	baz=40,SNR=9.3							
I12A	Atlanta	40.19	77	⇓P	P	10 31 14.4	+0.2	
	baz=40,SNR=16							
CBIJ	Chichi jima	40.23	249	P	P	10 31 13.4	-1.3	
	comp=Z,70nm,0.6s,mb5.5,baz=268,slow=21,SNR=3.5							
E15A	Deer Lodge	40.27	72	⇓P	P	10 31 14.4	-0.5	
	baz=40,SNR=11							
H13A	Challis	40.30	75	⇓P	P	10 31 14.9	-0.2	
	baz=40,SNR=7.2							
CMB	Columbia Colle	40.31	88	eP	P	10 31 23.5	+8.1	
	comp=Z,28nm,2.1s,mb4.6							
CMB	Columbia Colle	40.31	88	eP	P	10 31 23.5	+8.1	
CMB				pmax	pmax			
	comp=Z,28nm,2.1s,mb4.6							
B17A	L&G Farms, Che	40.39	69	⇑P	P	10 31 15.7	-0.2	
	baz=40,SNR=24							
D16A	Dana Ranch, Ca	40.60	71	⇑P	P	10 31 17.0	-0.7	
	baz=40							
HRY	Holter Researc	40.60	71	eP	P	10 31 17.9	+0.3	
WAKR	Walker	40.61	86	eP	P	10 31 18.8	+0.9	
A18A	Metzger Ranch,	40.63	67	⇑P	P	10 31 17.1	-0.7	
	baz=40,SNR=7.7							
LRM	Limekiln Ridge	40.70	73	eP	P	10 31 18.6	+0.2	
I13A	Wildhorse Cree	40.73	76	P	P	10 31 19.1	+0.4	
	baz=41,SNR=18							
C17A	Wharram Farm,	40.75	69	⇓P	P	10 31 17.7	-1.1	
	baz=41,SNR=9.2							
HLID	Hailey	40.75	77	⇑P	P	10 31 18.8	-0.1	
	baz=41,SNR=11							
HLID	Hailey	40.75	77	eP	P	10 31 19.3	+0.4	
	comp=Z,10nm,1.0s,mb4.4							
H14A	Leadore	40.80	75	⇓P	P	10 31 19.5	+0.2	
	baz=41,SNR=10							
DLMT	Dillon	40.86	73	eP	P	10 31 19.9	+0.1	
	comp=Z,19nm,1.7s,mb4.5							
DLMT				ePcP	PcP	10 33 20.9	+1.6	
B18A	Beardsley Farm	40.93	68	⇑P	P	10 31 19.9	-0.4	
	baz=41,SNR=15							
J13A	Cove Ranch, Pi	40.98	77	⇓P	P	10 31 21.3	+0.5	
	baz=41,SNR=20							
MCMT	McKenzie Canyo	40.99	74	eP	P	10 31 21.0	+0.1	
	comp=Z,11nm,0.5s,mb4.8							
G15A	Dillon	41.03	74	P	P	10 31 21.0	-0.1	
	baz=41,SNR=7.6							
D17A	Six Diamond Ra	41.04	70	⇓P	P	10 31 21.4	+0.2	
	baz=41							
I14A	Mackay	41.13	76	⇑P	P	10 31 22.4	+0.4	
	baz=41,SNR=23							
EGMT	Eagleton	41.13	68	⇑P	P	10 31 21.8	-0.1	
	baz=41							
EGMT	Eagleton	41.13	68	eP	P	10 31 22.2	+0.2	
	comp=Z,14nm,0.8s,mb4.6							
F16A	Kennard Place,	41.21	72	⇑P	P	10 31 22.4	-0.2	
	baz=41,SNR=7.3							
H15A	Lima	41.23	74	⇑P	P	10 31 22.7	-0.2	
	baz=41,SNR=7.5							
A19A	Klindworth Far	41.25	67	⇑P	P	10 31 22.6	-0.4	
	baz=41,SNR=8.4							
BOZ	Bozeman (W)	41.28	72	⇓P	P	10 31 23.6	+0.3	
	baz=41,SNR=23							
BOZ	Bozeman (W)	41.28	72	eP	P	10 31 23.4	+0.2	
	comp=Z,9.0nm,0.6s,mb4.6							
BOZ	Bozeman (W)	41.28	72	eP	P	10 31 23.4	+0.2	
BOZ				pmax	pmax			
	comp=Z,9.0nm,0.6s,mb4.6							
E17A	Martinsdale	41.30	71	⇑P	P	10 31 23.7	+0.3	
	baz=41							
NVAR	Mina Array Bea	41.36	86	P	P	10 31 24.1	+0.1	
	comp=Z,3.7nm,0.7s,mb4.1,baz=299,slow=7.7,SNR=11							
NVAR				PcP	PcP	10 33 21.9	+0.8	
	comp=Z,1.4nm,0.8s,baz=284,slow=2.3,SNR=3.8							
NVAR				ScP	ScP	10 37 09.1	+3.6	
	comp=Z,0.8nm,0.8s,baz=281,slow=5.1,SNR=5.3							
NVAR				LR	LR	10 47 37.1		
	comp=Z,84nm,18.5s,baz=79,slow=35							
NVAR	Mina Array Bea	41.36	86	P	P	10 31 24.1	+0.1	
NVAR				PcP	PcP	10 33 21.9	+0.8	
NVAR				ScP	ScP	10 37 09.1	+3.6	
NVAR				LR	LR	10 47 37.1		
B19A	Brinkman Farms	41.38	67	⇑P	P	10 31 24.1	+0.1	
	baz=41,SNR=6.5							
G16A	Moss Hill, Enn	41.40	73	⇓P	P	10 31 24.1	-0.2	
	baz=41,SNR=15							
J14A	Carey	41.42	76	⇓P	P	10 31 24.9	+0.4	
	baz=41,SNR=12							
D18A	Linhart Farms,	41.53	69	⇓P	P	10 31 26.0	+0.7	
	baz=41,SNR=13							
C19A	Slack Wire Ran	41.69	68	⇑P	P	10 31 27.0	+0.5	
	baz=42,SNR=28							
F17A	Fitzpatrick Pl	41.71	72	⇓P	P	10 31 26.7	-0.1	
	baz=42,SNR=9.7							
A20A	Cobblestone Ra	41.74	66	⇓P	P	10 31 26.8	-0.2	
	baz=42,SNR=20							
KSRS	Korea Array	41.78	273	P	P	10 31 28.0	+0.5	
	comp=Z,11nm,0.9s,mb4.5,baz=56,slow=7.7,SNR=14							
KSRS				LR	LR	10 48 33.1		
	comp=Z,54nm,18.6s,baz=73,slow=36							
KSRS	Korea Array	41.78	273	P	P	10 31 28.0	+0.5	
KSRS				pmax	pmax			
	comp=Z,11nm,0.9s,mb4.5							
KSRS				MLR	MLR			
	comp=Z,54nm,18.6s							
E18A	Harlowton	41.80	70	⇑P	P	10 31 28.0	+0.6	
	baz=42,SNR=8.7							
QLMT	Earthquake Lak	41.84	73	eP	P	10 31 28.3	+0.5	
MTUM	Tungsten Hills	41.87	87	eP	P	10 31 32.1	+4.0	
H16A	Russell Place,	42.02	73	⇓P	P	10 31 29.1	-0.2	
	baz=42,SNR=8.5							
J15A	Blackfoot	42.03	76	⇓P	P	10 31 29.4	0.0	
	baz=42,SNR=6.1							
D19A	Cripps Ranch,	42.08	69	⇓P	P	10 31 29.5	-0.2	
	baz=42,SNR=14							
YMR	Madison River	42.20	73	eP	P	10 31 31.1	+0.3	
	comp=Z,17nm,0.7s,mb4.8							
A21A	Bergtoll Ranch	42.25	66	⇓P	P	10 31 30.8	-0.3	
	baz=42,SNR=12							
F18A	Big Timber	42.27	71	⇓P	P	10 31 31.3	0.0	
	baz=42,SNR=5.7							
C20A	Veseth Ranch,	42.30	68	⇑P	P	10 31 31.8	+0.2	
	baz=42,SNR=13							
L14A	Malta	42.33	78	⇑P	P	10 31 31.9	+0.1	
	baz=42,SNR=11							
I16A	Newdale	42.34	75	⇓P	P	10 31 32.2	+0.3	
	baz=42,SNR=7.3							
YNR	Norris Junctio	42.35	73	eP	P	10 31 33.3	+1.3	
	comp=Z,97nm,2.0s,mb5.1							
GCMT	Greycliff	42.36	71	eP	P	10 31 32.2	+0.2	
	comp=Z,12nm,1.2s,mb4.4							
K15A	Arbon	42.38	77	⇑P	P	10 31 33.3	+1.1	
	baz=42,SNR=8.4							
YFT	Old Faithful	42.40	73	eP	P	10 31 33.8	+1.4	
	comp=Z,10nm,0.8s,mb4.5							
B21A	Ellsworth Farm	42.49	66	⇓P	P	10 31 32.9	-0.2	
	baz=42,SNR=15							
E19A	Rath Farm, Rou	42.51	70	⇓P	P	10 31 33.4	+0.1	
	baz=42,SNR=8.9							
D20A	Manuel Ranch,	42.55	69	⇑P	P	10 31 33.3	-0.3	
	baz=42							
H17A	Grant Village	42.59	73	⇓P	P	10 31 35.7	+1.8	
	baz=42,SNR=9.7							
LKWY	Lake	42.60	73	eP	P	10 31 34.4	+0.4	
	comp=Z,18nm,0.8s,mb4.8							
LKWY	Lake	42.60	73	eP	P	10 31 34.4	+0.4	
LKWY				pmax	pmax			
	comp=Z,17nm,0.8s,mb4.8							
J16A	Bone	42.60	75	⇓P	P	10 31 34.8	+0.7	
	baz=42,SNR=8.3							
IMW	Indian Meadow	42.65	74	eP	P	10 31 35.5	+1.0	
	comp=Z,6.9nm,0.8s,mb4.4							
G18A	Lazy EL Ranch,	42.68	72	⇑P	P	10 31 34.3	-0.3	
	baz=42							
FLWY	Flagg Ranch	42.69	74	eP	P	10 31 35.6	+0.9	
	comp=Z,16nm,1.2s,mb4.6							
RRI2	Red Ridge	42.73	75	eP	P	10 31 35.9	+0.8	
	comp=Z,12nm,0.9s,mb4.6							
F19A	Roth Farm, Mol	42.75	71	⇑P	P	10 31 34.8	-0.4	
	baz=43							
HVU	Hansel Valley	42.76	78	eP	P	10 31 36.0	+0.7	
	comp=Z,10nm,0.7s,mb4.7							
HVU	Hansel Valley	42.76	78	eP	P	10 31 36.0	+0.7	
HVU				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.7							
C21A	Desert Coulee	42.76	67	⇓P	P	10 31 35.1	-0.2	
	baz=43,SNR=9.8							
A22A	Carney Farms,	42.82	65

baz=43,SNR=16
HWUT **Hardware Ranch** 43.59 77 eP P 10 31 42.6 +0.6
comp=Z,6.2nm,0.8s,mb4.4
B23A **Brockton** 43.62 65 ⇑P P 10 31 41.9 -0.3
baz=44
D22A **Cohagen** 43.65 68 ⇑P P 10 31 42.9 +0.4
baz=44
DUG **Dugway** 43.67 80 ⇓P P 10 31 42.2 -0.5
baz=44,SNR=15
DUG **Dugway** 43.67 80 eP P 10 31 43.0 +0.3
comp=Z,11nm,0.8s,mb4.7
DUG **Dugway** 43.67 80 eP P 10 31 43.0 +0.3
DUG pmax pmax
comp=Z,11nm,0.8s,mb4.6
L17A **Cokeville** 43.72 76 ⇑P P 10 31 43.0 -0.1
baz=44
M16A **Huntsville** 43.73 78 ⇑P P 10 31 43.3 +0.2
baz=44,SNR=15
C23A **Lambert** 43.87 66 ⇓P P 10 31 43.9 -0.2
baz=44
LAO **LASA Array** 43.88 68 eP P 10 31 42.1 -2.2
comp=Z,8.9nm,0.5s,mb4.8
P14A **Drum Mountains** 43.88 81 ⇑P P 10 31 43.6 -0.8
baz=44
K18A **Toltan Ranch,** 43.91 75 ⇓P P 10 31 44.4 -0.1
baz=44,SNR=15
A24A **Westby** 43.93 64 ⇑P P 10 31 44.3 -0.4
baz=44
DGMT **Dagmar** 44.07 65 ⇓P P 10 31 45.5 -0.2
baz=44,SNR=6.8
DGMT **Dagmar** 44.07 65 eP P 10 31 45.6 -0.2
comp=Z,35nm,1.2s,mb5.0
G21A **Lodge Grass** 44.11 70 ⇓P P 10 31 46.0 -0.2
baz=44
Q14A **Sevier Lake (B** 44.12 81 ⇓P P 10 31 46.5 +0.2
baz=44,SNR=8.5
BW06 **Boulder Array** 44.12 75 ⇑P P 10 31 46.4 +0.1
baz=44,SNR=30
BW06 **Boulder Array** 44.12 75 eP P 10 31 46.4 +0.1
comp=Z,22nm,0.6s,mb5.0
PDAR **Pinedale Array** 44.12 75 P P 10 31 46.3 0.0
comp=Z,23nm,0.7s,mb5.0,baz=305,slow=3.9,SNR=196
PDAR LR LR 10 46 55.5
comp=Z,125nm,20.3s,baz=301,slow=32
J19A **Crowheart** 44.14 74 ⇑P P 10 31 46.6 +0.2
baz=44,SNR=6.1
D23A **Lindsay** 44.19 67 ⇑P P 10 31 46.5 -0.3
baz=44
M17A **Scullys Gap (B** 44.22 77 ⇓P P 10 31 46.7 -0.3
baz=44,SNR=5.1
JLU **Jordanelle** 44.26 78 eP P 10 31 48.0 +0.6
comp=Z,6.8nm,0.8s,mb4.4
NLU **North Lily Min** 44.27 80 eP P 10 31 48.0 +0.5
comp=Z,8.2nm,0.9s,mb4.5
GSC **Goldstone** 44.27 88 ⇓P P 10 31 47.5 -0.1
baz=44
GSC **Goldstone** 44.27 88 eP P 10 31 47.2 -0.3
comp=Z,8.8nm,0.7s,mb4.6
GSC **Goldstone** 44.27 88 eP P 10 31 47.3 -0.3
GSC pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
I20A **Worland** 44.29 72 ⇑P P 10 31 47.4 -0.3
baz=44
L18A **Fontenelle, Gr** 44.33 76 ⇑P P 10 31 47.9 -0.1
baz=44,SNR=7.6
N17A **Moffit Pass** 44.43 78 ⇑P P 10 31 48.5 -0.3
baz=44
C24A **Savage** 44.45 66 ⇑P P 10 31 49.0 +0.3
baz=44
O16A **Springville** 44.47 79 ⇑P P 10 31 49.7 +0.6
baz=44,SNR=6.0
DAU **Daniels Canyon** 44.49 79 eP P 10 31 50.4 +1.1
DAU **Daniels Canyon** 44.49 79 eP P 10 31 50.4 +1.1
K19A **Absolon Red Bu** 44.52 74 ⇑P P 10 31 48.9 -0.5
baz=44,SNR=32
H21A **Big Horn, Sher** 44.55 71 ⇓P P 10 31 49.8 +0.1
baz=44
M18A **Lyman** 44.60 77 ⇓P P 10 31 50.0 -0.2
baz=44
L19A **Farson** 44.63 75 ⇓P P 10 31 50.2 -0.2
baz=44,SNR=6.2
S13A **Holt Ranch, En** 44.64 83 ⇓P P 10 31 50.4 -0.1
baz=44
J20A **Shoshoni** 44.66 73 ⇑P P 10 31 50.4 -0.2
baz=44,SNR=5.9
Q15A **Fillmore** 44.67 81 ⇑P P 10 31 50.7 +0.1
baz=44
D24A **Glendive** 44.73 67 ⇑P P 10 31 51.8 +0.7
baz=45
P16A **Fountain Green** 44.73 80 ⇑P P 10 31 51.5 +0.3
baz=45
ARUT **Antelope Range** 44.77 83 eP P 10 31 51.9 +0.4
comp=Z,4.9nm,0.8s,mb4.4
ARUT **Antelope Range** 44.77 83 eP P 10 31 51.9 +0.4
ARUT pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
I21A **Big Trails, Te** 44.87 72 ⇓P P 10 31 51.7 -0.5
baz=45,SNR=10
K20A **Yellowstone Ra** 44.91 74 ⇓P P 10 31 51.9 -0.7
baz=45,SNR=15
O17A **Robinson Place** 44.94 78 ⇓P P 10 31 53.0 +0.2
baz=45
CCUT **Cedar City** 44.96 83 eP P 10 31 54.3 +1.2
comp=Z,3.6nm,0.9s,mb4.2
T13A **Saint George** 44.96 84 ⇓P P 10 31 53.4 +0.4
baz=45
J21A **Lysite** 45.05 73 ⇓P P 10 31 53.6 0.0
baz=45,SNR=6.1
MSU **Marysvale** 45.09 81 eP P 10 31 54.9 +0.8
MSU **Marysvale** 45.09 81 eP P 10 31 54.9 +0.8
N18A **Larsen Ranch,** 45.11 77 ⇓P P 10 31 53.7 -0.5
baz=45
TMUT **Trail Mountain** 45.20 80 eP P 10 31 55.9 +1.0
comp=Z,14nm,0.7s,mb4.9
V12A **Nelson** 45.21 86 ⇓P P 10 31 54.9 -0.1
baz=45
L20A **Wamsutter** 45.30 75 ⇓P P 10 31 55.2 -0.4
baz=45
U13A **Pakoon Wash** 45.31 85 ⇑P P 10 31 55.5 -0.3
baz=45
GMRC **Granite Mounta** 45.32 88 ⇓P P 10 31 56.0 +0.1
baz=45
O18A **Roosevelt** 45.34 78 ⇓P P 10 31 56.0 0.0
baz=45
T14A **Hurricane** 45.44 83 ⇑P P 10 31 57.4 +0.5
baz=45
N19A **John Jarvie Ra** 45.46 77 ⇑P P 10 31 56.6 -0.3
baz=45,SNR=7.0
J22A **Midwest** 45.58 72 ⇓P P 10 31 57.9 +0.1
baz=45,SNR=12
K21A **Alcova** 45.58 73 ⇓P P 10 31 57.3 -0.5
baz=45,SNR=9.3
P18A **Preston Nutter** 45.58 79 ⇓P P 10 31 58.6 +0.6
baz=45,SNR=6.9
R16A **Teasdale** 45.66 81 ⇓P P 10 31 59.3 +0.8
baz=46,SNR=12
V13A **Grand Canyon W** 45.66 85 ⇑P P 10 31 59.1 +0.5
baz=46
M20A **Sweetwater, Wa** 45.70 75 ⇑P P 10 31 59.0 +0.2
baz=46
SRU **San Rafael** 45.73 79 ⇑P P 10 31 59.3 +0.2
baz=46,SNR=12
SRU **San Rafael** 45.73 79 eP P 10 31 59.9 +0.8
comp=Z,14nm,0.7s,mb5.0
SRU **San Rafael** 45.73 79 eP P 10 31 59.9 +0.8
SRU pmax pmax
comp=Z,14nm,0.7s,mb5.0
O19A **Miners Draw (B** 45.85 77 P P 10 32 00.3 +0.2
baz=46,SNR=20
T15A **Red Dirt Ranch** 45.91 83 ⇑P P 10 32 00.3 -0.2
baz=46
L21A **Rawlins** 45.91 74 ⇑P P 10 32 00.6 +0.1
baz=46,SNR=5.9
S16A **Weppner Ranch,** 45.94 82 ⇓P P 10 32 01.4 +0.6
baz=46,SNR=7.9
Q18A **Rafter H Ranch** 45.98 79 ⇑P P 10 32 00.9 -0.2
baz=46,SNR=8.4
K22A **Casper** 46.00 73 ⇑P P 10 32 00.9 -0.3
baz=46,SNR=6.4
R17A **Hanksville Air** 46.05 80 ⇓P P 10 32 01.6 0.0
baz=46,SNR=7.9
N20A **Spence Gulch,** 46.05 76 ⇓P P 10 32 01.9 +0.3
baz=46,SNR=7.0
RWWY **Rawlins** 46.17 74 eP P 10 32 02.4 -0.1
comp=Z,12nm,0.8s,mb4.9
U15A **North Rim** 46.34 84 ⇑P P 10 32 03.8 -0.1
baz=46,SNR=11
P19A **Cripple Cowboy** 46.35 78 ⇓P P 10 32 04.2 +0.2
baz=46,SNR=9.2
L22A **Ellis Ranch, M** 46.42 74 ⇑P P 10 32 04.8 +0.3
baz=46
S17A **Black Ridge (B** 46.49 81 ⇓P P 10 32 04.9 -0.2
baz=46,SNR=22
O20A **White River Ci** 46.49 77 ⇓P P 10 32 04.8 -0.2
baz=46,SNR=19
N21A **Black Mountain** 46.54 76 ⇑P P 10 32 04.6 -0.9
baz=46,SNR=11
R18A **Canyonlands Na** 46.57 80 ⇓P P 10 32 05.5 -0.2
baz=46
Q19A **Hogan Spring (** 46.60 79 ⇑P P 10 32 05.5 -0.4
baz=46
RSSD **Black Hills** 46.60 70 eP P 10 32 05.4 -0.4
comp=Z,5.8nm,0.9s,mb4.5
RSSD **Black Hills** 46.60 70 eP P 10 32 05.4 -0.5
RSSD pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
M22A **Cedar Creek Ra** 46.71 74 ⇓P P 10 32 06.3 -0.4
baz=47,SNR=8.2
P20A **De Beque** 46.79 78 ⇓P P 10 32 07.3 -0.1
baz=47
V15A **Kaibab Nationa** 46.80 84 ⇓P P 10 32 07.2 -0.4
baz=47
L23A **Garrett** 46.81 73 ⇓P P 10 32 07.3 -0.2
baz=47,SNR=16
T17A **Navajo Res., N** 46.89 82 ⇓P P 10 32 08.3 +0.1
baz=47
O21A **Pagoda** 46.91 76 ⇓P P 10 32 08.2 -0.1
baz=47,SNR=8.8
S18A **Hurst Farm, Bl** 46.95 81 ⇓P P 10 32 08.5 -0.1
baz=47,SNR=14
R19A **Curley Farm, L** 47.02 80 ⇑P P 10 32 08.3 -0.9
baz=47,SNR=7.3
N22A **Wattenberg Ran** 47.16 75 ⇑P P 10 32 10.1 -0.1
baz=47,SNR=13
PV04 **Paradox Valley** 47.17 79 eP P 10 32 10.4 0.0
Q20A **Ridgley Place,** 47.19 78 ⇓P P 10 32 09.9 -0.6
baz=47
M23A **Laramie** 47.19 74 ⇓P P 10 32 09.9 -0.5
baz=47
P21A **Newcastle** 47.35 77 ⇓P P 10 32 11.5 -0.3
baz=47
T18A **Mexican Hat** 47.37 81 ⇑P P 10 32 11.2 -0.7
baz=47,SNR=9.4
BJI **Beijing** 47.39 284 P P 10 32 12.3 +0.2
BJI pmax pmax
comp=Z,13nm,0.8s,mb4.9
BJI LR LR
comp=N,660nm,6.8s
BJI LR LR
comp=E,490nm,8.0s
BJI LR LR
comp=Z,54nm,18.2s
BJI **Beijing** 47.39 284 P P 10 32 12.8 +0.7
BJI S S 10 38 57.8 -3.5
BJI pmax pmax
comp=Z,13nm,0.6s,mb5.0
BJI LR LR
comp=N,280nm,19.5s
BJI LR LR
comp=E,280nm,21.4s
BJI LR LR
comp=Z,280nm,23.8s
N23A **Red Feather La** 47.41 75 ⇑P P 10 32 12.1 -0.1
baz=47,SNR=5.9
S19A **Harvey Farm, M** 47.44 80 ⇓P P 10 32 11.6 -0.9
baz=47,SNR=12
PHWY **Pilot Hill** 47.45 74 eP P 10 32 12.1 -0.4
comp=Z,60nm,2.5s,mb5.1
O22A **Kremmling** 47.49 76 ⇑P P 10 32 12.2 -0.7
baz=47
PV01 **Paradox Valley** 47.54 79 eP P 10 32 12.8 -0.5
comp=Z,1μm,0.7s
R20A **Redvale** 47.62 79 ⇑P P 10 32 13.3 -0.6
baz=48
ULM **Lac du Bonnet** 47.64 59 P P 10 32 13.2 -0.6
comp=Z,4.2nm,0.5s,mb4.7,baz=297,slow=6.3,SNR=9.6
ULM LR LR 10 52 36.6
comp=Z,115nm,18.5s,baz=19,slow=36
ULM **Lac du Bonnet** 47.64 59 P P 10 32 13.2 -0.6
ULM LR LR 10 52 36.6
P22A **Eagle** 47.72 76 ⇑P P 10 32 14.5 -0.2
baz=48
M24A **Cheyenne** 47.72 73 ⇑P P 10 32 14.3 -0.4
baz=48
V17A **Tonalea, Kykot** 47.78 83 ⇑P P 10 32 15.0 -0.2
baz=48
O23A **Lake Granby, G** 47.84 75 ⇓P P 10 32 16.3 +0.8
baz=48,SNR=19
SMCO **Snowmass** 47.85 77 eP P 10 32 15.6 -0.1
comp=Z,93nm,3.0s
S20A **Disappointment** 47.86 79 ⇓P P 10 32 15.4 -0.4
baz=48,SNR=9.5
Q22A **Crested Butte,** 48.09 77 ⇓P P 10 32 17.6 +0.1
baz=48,SNR=8.8
T19A **Beclabito** 48.09 81 ⇓P P 10 32 17.2 -0.4
baz=48,SNR=16
X16A **Lo Mia Camp, P** 48.17 85 ⇓P P 10 32 18.0 -0.2
baz=48
V18A **Ganado** 48.26 83 ⇑P P 10 32 19.1 +0.2
baz=48
ISCO **Idaho Springs** 48.28 76 ⇑P P 10 32 19.4 +0.4
baz=48
S21A **Coal Bank Pass** 48.31 79 ⇓P P 10 32 19.4 +0.2
baz=48,SNR=6.0
U19A **Dine' College,** 48.33 82 ⇑P P 10 32 19.3 -0.1
baz=48
SONM **Songino Array** 48.38 298 P P 10 32 19.3 -0.3
comp=Z,1.2nm,0.9s,mb3.9,baz=51,slow=8.3,SNR=5.3
SONM PcP PcP 10 33 45.5 +0.4
comp=Z,5.8nm,1.0s,baz=71,slow=2.7,SNR=12
SONM LR LR 10 52 59.6
comp=Z,186nm,20.5s,baz=48,slow=36
SONM **Songino Array** 48.38 298 P P 10 32 19.3 -0.3
SONM 10 33 45.5
R22A **Saguache, Gunn** 48.58 78 ⇑P P 10 32 22.0 +0.7
baz=48,SNR=6.4
Q23A **Hartsel** 48.71 77 ⇑P P 10 32 22.3 0.0
baz=49,SNR=18
AGMN **Agassiz Nation** 48.77 61 eP P 10 32 21.5 -1.0
comp=Z,32nm,1.0s,mb5.3
S22A **4UR Ranch, Cre** 48.84 78 ⇓P P 10 32 23.1 -0.2
baz=49,SNR=7.4
U21A **Nageezi** 49.19 80 ⇓P P 10 32 26.2 +0.2
baz=49,SNR=10
T22A **Edith** 49.27 79 ⇓P P 10 32 26.9 +0.3
baz=49,SNR=7.9
P25A **Willow Gulch B** 49.33 75 ⇓P P 10 32 27.6 +0.6
baz=49,SNR=23
R24A **Sanders Place,** 49.58 77 ⇑P P 10 32 28.9 0.0
baz=49,SNR=6.4
HHC **Hu-ho-hao-te** 49.64 288 eP P 10 32 30.5 +1.2
HHC pP pP 10 32 46.3 +0.9
HHC sP sP 10 32 53.3 +0.7
HHC PcP PcP 10 33 51.5 +1.6
HHC PP PP 10 34 25.5 +1.5
HHC ScP ScP 10 37 40.0 +0.4
HHC S S 10 39 33.5 +0.5
HHC sS sS 10 40 00.3 +0.1
HHC ScS ScS 10 42 13.0 -1.8
HHC pmax pmax
comp=Z,27nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,59nm,5.6s
HHC LR LR
comp=N,210nm,15.7s
HHC LR LR
comp=E,200nm,13.7s
HHC LR LR
comp=Z,170nm,15.1s
SDCO **Great Sand Dun** 49.65 78 ⇓P P 10 32 30.1 +0.6
baz=50,SNR=7.2
SDCO **Great Sand Dun** 49.65 78 eP P 10 32 29.9 +0.4
comp=Z,7.3nm,0.9s,mb4.7
U22A **Llaves** 49.71 80 ⇑P P 10 32 29.9 -0.1
baz=50
T23A **Casias Ranch,** 49.78 79 ⇑P P 10 32 30.7 +0.3
baz=50
Y19A **Nutrioso** 49.83 84 ⇑P P 10 32 30.9 0.0
baz=50
117A **Oracle** 49.84 86 ⇓P P 10 32 31.2 +0.1
baz=50
S24A **Houchin Ranch,** 49.89 77 ⇓P P 10 32 32.1 +0.8
baz=50
X20A **Quemado** 49.91 83 ⇓P P 10 32 32.1 +0.6
baz=50
V22A **San Miguel Ran** 49.98 80 ⇓P P 10 32 32.2 +0.2
baz=50
TUC **Tucson** 49.99 87 eP P 10 32 32.0 -0.1
comp=Z,5.0nm,0.9s,mb4.5
TUC **Tucson** 49.99 87 eP P 10 32 32.1 0.0
TUC pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
R25A **Fountain Ranch** 50.13 76 ⇑P P 10 32 33.4 +0.3
baz=50,SNR=20
U23A **El Rito** 50.15 79 ⇓P P 10 32 33.9 +0.7
baz=50,SNR=12
S25A **Robets Cordova** 50.35 77 ⇓P P 10 32 35.1 +0.3
baz=50,SNR=8.1
T24A **Torres, Weston** 50.36 78 ⇓P P 10 32 35.8 +0.9
baz=50,SNR=7.7
Y20A **Horse Springs,** 50.41 83 ⇑P P 10 32 35.6 +0.3
baz=50
X21A **Alamocita Cree** 50.41 82 ⇓P P 10 32 36.1 +0.8
baz=50,SNR=8.2
V23A **Ortiz Mt. (NFS** 50.54 80 ⇓P P 10 32 36.8 +0.6
baz=50
U24A **Moreno Valley** 50.65 79 ⇓P P 10 32 37.4 +0.4
baz=50
T25A **Trinidad** 50.70 77 ⇑P P 10 32 37.7 +0.2
baz=51,SNR=17
LAZ **Ladron** 50.84 82 eP P 10 32 38.6 +0.1
comp=Z,2.9nm,0.9s,mb4.2
ANMO **Albuquerque** 50.89 81 eP P 10 32 39.6 +0.7
comp=Z,5.0nm,1.2s,mb4.3
ANMO **Albuquerque** 50.89 81 eP P 10 32 39.6 +0.7
ANMO pmax pmax
comp=Z,5.0nm,1.2s
NJ2 **Nanjing** 50.95 274 eP P 10 32 41.8 +2.5
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
318A **Bisbee** 51.08 87 ⇑P P 10 32 40.2 -0.2
baz=51
ECSD **EROS Data Cent** 51.11 66 eP P 10 32 39.1 -1.3
comp=Z,15nm,0.9s,mb4.9
V24A **Rampart Ranch,** 51.11 79 ⇓P P 10 32 41.1 +0.6
baz=51,SNR=7.1
U25A **Circle Dot Ran** 51.19 78 ⇓P P 10 32 41.2 +0.1
baz=51,SNR=9.3
Y22A **Socorro** 51.26 82 ⇓P P 10 32 41.8 +0.2
baz=51
BNM **Barren Site** 51.32 82 eP P 10 32 42.0 -0.1
comp=Z,2.5nm,0.6s,mb4.3
EYMN **Ely** 51.33 59 eP P 10 32 41.4 -0.6
comp=Z,18nm,1.0s,mb4.9
W24A **Lazy 6 Ranch,** 51.36 80 ⇑P P 10 32 43.0 +0.6
baz=51,SNR=6.6
V25A **Rancho No Teng** 51.43 79 ⇑P P 10 32 43.5 +0.6
baz=51,SNR=5.9
U26A **Atchley Ranch,** 51.60 78 ⇓P P 10 32 44.2 +0.1
baz=52,SNR=9.4
220A **Playas Peak, P** 51.67 85 ⇓P P 10 32 44.7 -0.1
baz=52
Z22A **Elephant Butte** 51.72 83 ⇑P P 10 32 45.0 -0.1
baz=52
Y23A **Lovelace Mesa,** 51.82 82 ⇓P P 10 32 46.4 +0.5
baz=52,SNR=7.2
W25A **X Bar L Ranch,** 51.94 79 ⇓P P 10 32 46.5 -0.2
baz=52,SNR=9.0
V26A **Tequesquite Ra** 51.97 78 ⇓P P 10 32 47.0 +0.1
baz=52,SNR=11
320A **Kipp Ranch, An** 52.06 86 ⇓P P 10 32 47.5 -0.1
baz=52
Y24A **Capitan** 52.20 81 ⇑P P 10 32 48.5 -0.1
baz=52,SNR=12
CBKS **Cedar Bluff** 52.42 73 ⇑P P 10 32 50.0 -0.3
baz=52,SNR=8.4
CBKS **Cedar Bluff** 52.42 73 eP P 10 32 50.2 -0.1
comp=Z,37nm,0.6s,mb5.5
CBKS **Cedar Bluff** 52.42 73 eP P 10 32 50.2 0.0
CBKS pmax pmax
comp=Z,37nm,0.6s,mb5.5
W26A **Owens Ranch, T** 52.45 79 ⇓P P 10 32 50.1 -0.4
baz=52
Z24A **Sheeppen Canyo** 52.65 82 ⇓P P 10 32 52.2 +0.2
baz=52
Y25A **Mesa, Roswell** 52.66 81 ⇑P P 10 32 51.9 -0.2
baz=52
X26A **CR and CF Fran** 52.78 79 ⇓P P 10 32 52.3 -0.7
baz=53
124A **Stringfield Ra** 53.02 82 ⇑P P 10 32 55.1 +0.3
baz=53
Z25A **Roswell** 53.08 81 ⇑P P 10 32 55.0 -0.1
baz=53
224A **Cornudas Mount** 53.41 83 ⇑P P 10 32 57.6 0.0
baz=53
Z26A **Caprock** 53.54 81 ⇓P P 10 32 58.5 -0.1
baz=53
125A **Gardner Draw,** 53.54 82 ⇑P P 10 32 58.6 +0.1
baz=53
Y27A **Causey** 53.63 80 ⇓P P 10 32 59.0 -0.2
baz=54,SNR=12
COWI **Conover** 53.74 59 eP P 10 32 59.1 -0.7
comp=Z,5.8nm,0.5s,mb4.8
MSTX **Muleshoe** 53.81 79 ⇑P P 10 33 00.2 -0.3
baz=54,SNR=8.4
225A **Deer Hill, Car** 53.82 82 ⇑P P 10 33 00.9 +0.4
baz=54
AMTX **Amarillo** 53.85 78 eP P 10 33 00.4 -0.4
comp=Z,10nm,0.8s,mb4.8
324A **Moseley Ranch,** 53.87 83 ⇓P P 10 33 00.1 -0.8
baz=54
Z27A **Tatum** 53.98 80 ⇓P P 10 33 00.6 -1.2
baz=54
KSU1 **Kansas State U** 54.08 70 eP P 10 33 01.2 -1.1
comp=Z,15nm,0.8s,mb5.0
SCIA **State Center** 54.20 66 eP P 10 33 02.9 -0.3
comp=Z,23nm,0.7s,mb5.2
325A **Bean Ranch, Si** 54.23 83 ⇓P P 10 33 03.1 -0.6
baz=54,SNR=6.5
226A **Malaga, Loving** 54.29 82 ⇑P P 10 33 03.4 -0.7
baz=54
425A **Indio Mountain** 54.63 84 ⇑P P 10 33 06.7 +0.2
baz=54
WHN **Wuhan** 54.77 276 ⇑P P 10 33 07.0 -0.5
WHN pP pP 10 33 20.3 -3.6
326A **Caldwell Ranch** 54.88 82 ⇓P P 10 33 08.2 -0.1
baz=55
JFWS **Jewell Farm** 55.20 63 eP P 10 33 09.0 -1.4
comp=Z,29nm,0.8s,mb5.4
JFWS **Jewell Farm** 55.20 63 eP P 10 33 09.0 -1.4
JFWS pmax pmax
comp=Z,29nm,0.8s,mb5.4
ZALV **Zalesovo Beam** 55.30 315 P P 10 33 11.2 +0.3
comp=Z,0.5nm,0.3s,mb4.0,baz=38,slow=9.9,SNR=2.3
ZALV PcP PcP 10 34 11.3 +0.3
comp=Z,3.6nm,0.8s,baz=58,slow=3.7,SNR=8.6
ZALV LR LR 10 58 43.6
comp=Z,146nm,18.6s,baz=247,slow=38
ZALV **Zalesovo Beam** 55.30 315 P P 10 33 11.2 +0.2
ZALV 10 34 11.3
426A **McDonald Obser** 55.30 83 ⇑P P 10 33 10.6 -0.7
baz=55
SSLB **Suanglung** 55.50 265 eP P 10 33 13.0 +0.1
comp=Z,344nm,2.3s
328A **Wristen Ranch,** 55.56 82 ⇓P P 10 33 12.2 -1.0
baz=55,SNR=6.3
526A **Mary Lane Ranc** 55.69 84 ⇓P P 10 33 13.9 -0.2
baz=56
WMOK **Wichita Mounta** 55.71 76 eP P 10 33 13.8 -0.4
comp=Z,12nm,0.9s,mb4.9
WMOK **Wichita Mounta** 55.71 76 eP P 10 33 13.8 -0.4
WMOK pmax pmax
comp=Z,12nm,0.9s,mb4.9
626A **Big Bend Ranch** 56.02 84 ⇑P P 10 33 16.1 -0.4
baz=56
428A **Kincaid Ranch,** 56.09 82 P P 10 33 16.9 -0.1
baz=56,SNR=5.9
528A **Cox Ranch, San** 56.42 83 ⇓P P 10 33 19.2 -0.2
baz=56
TXAR **Lajitas Array** 56.46 84 P P 10 33 18.8 -0.8
comp=Z,1.5nm,0.6s,mb4.2,baz=300,slow=5.1,SNR=24
TXAR LR LR 10 53 23.2
comp=Z,51nm,21.5s,baz=0.0,slow=32
TXAR **Lajitas Array** 56.46 84 P P 10 33 18.8 -0.8
627A **Terlingua Ranc** 56.55 84 ⇑P P 10 33 19.8 -0.5
baz=56
628A **Black Gap, Mar** 56.83 83 ⇓P P 10 33 21.8 -0.5
baz=57
GLMI **Grayling** 56.98 58 eP P 10 33 22.9 -0.2
comp=Z,76nm,0.9s,mb5.7
GTA **Gaotai** 57.40 294 eP P 10 33 25.8 -0.4
GTA pmax pmax
comp=Z,3.0nm,1.0s,mb4.3

GTA LR LR
comp=N,960nm,8.1s
GTA LR LR
comp=E,920nm,10.0s
GTA LR LR
comp=Z,440nm,9.0s
JCT Junction City 58.03 80 *e*P **P 10 33 29.6 -1.1**
comp=Z,7.3nm,0.7s,mb4.8
JCT Junction City 58.03 80 *e*P **P 10 33 29.6 -1.1**
JCT pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
ARCES ARCESS Array B 58.03 352 P **P 10 33 30.0 -0.1**
comp=Z,2.6nm,0.8s,mb4.3,baz=18,slow=6.4,SNR=7.2
ARCES PcP PcP 10 34 20.8 -0.6
comp=Z,2.9nm,0.8s,baz=23,slow=6.6,SNR=3.6
ARCES LR LR 10 57 23.9
comp=Z,122nm,20.3s,baz=223,slow=35
ARCES ARCESS Array B 58.03 352 P **P 10 33 30.0 -0.2**
ARCES 10 34 20.8
SCHQ Schefferville 58.33 40 P **P 10 33 32.0 -0.4**
comp=Z,7.8nm,0.8s,mb4.8,baz=342,slow=8.1,SNR=5.4
SCHQ LR LR 10 59 57.4
comp=Z,123nm,18.4s,baz=272,slow=37
FVM French Village 58.41 68 *e*P **P 10 33 32.2 -1.1**
comp=Z,39nm,1.5s,mb5.2
FVM French Village 58.41 68 *e*P **P 10 33 32.2 -1.1**
FVM pmax pmax
comp=Z,39nm,1.5s,mb5.2
LVZ Lovozero 58.55 347⇓ *e*P **P 10 33 34.0 +0.2**
LVZ pmax pmax
comp=Z,108nm,2.5s,mb5.4
MIAR Mount Ida 58.95 72 *e*P **P 10 33 36.7 -0.3**
comp=Z,77nm,1.8s,mb5.4
MIAR Mount Ida 58.95 72 *e*P **P 10 33 36.7 -0.3**
MIAR pmax pmax
comp=Z,77nm,1.8s,mb5.4
OLIL Olney 59.22 65 *e*P **P 10 33 38.4 -0.5**
comp=Z,49nm,1.0s,mb5.5
PARMO Parma 59.71 68 *e*P **P 10 33 41.9 -0.4**
USIN University of 60.00 66 *e*P **P 10 33 43.7 -0.5**
comp=Z,39nm,1.1s,mb5.3
FUNA Funafuti 60.25 186 *e*P **P 10 33 41.7 -4.4**
comp=Z,320nm,1.6s
KURK Kurchatov 60.28 315 *e*P **P 10 33 46.5 +0.6**
comp=Z,13nm,1.3s,mb4.8
KURK Kurchatov 60.28 315 *e*P **P 10 33 46.5 +0.6**
KURK pmax pmax
comp=Z,13nm,1.3s,mb4.8
WCI Wyandotte Cave 60.59 65 *e*P **P 10 33 47.5 -0.8**
comp=Z,20nm,0.9s,mb5.3
WCI Wyandotte Cave 60.59 65 *e*P **P 10 33 47.5 -0.7**
WCI pmax pmax
comp=Z,20nm,0.9s,mb5.2
WMQ Urumqi 60.91 305 P **P 10 33 53.0 +2.7**
WMQ pP pP 10 34 09.0 +2.1
WMQ sP sP 10 34 16.0 +2.1
WMQ PP PP 10 36 10.0 +5.3
WMQ S **S 10 42 03.0 -0.4**
WMQ ScS ScS 10 43 35.0 -0.5
WMQ pmax pmax
comp=Z,16nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,52nm,5.0s
WMQ LR LR
comp=N,200nm,20.0s
WMQ LR LR
comp=E,180nm,20.0s
WMQ LR LR
comp=Z,170nm,20.0s
CD2 Chengdu 60.99 284 *e*P **P 10 33 52.0 +0.9**
CD2 pP pP 10 34 08.0 +0.4
CD2 sP sP 10 34 15.0 +0.3
CD2 PP PP 10 36 08.5 +2.8
CD2 S **S 10 42 03.0 -1.7**
CD2 sS sS 10 42 30.5 -2.2
CD2 SS SS 10 46 04.0 -0.5
CD2 LR LR
comp=N,240nm,15.6s
CD2 LR LR
comp=E,240nm,16.8s
CD2 LR LR
comp=Z,230nm,19.2s
ACSO Alum Creek Sta 61.01 61 *e*P **P 10 33 50.8 -0.3**
comp=Z,24nm,0.8s,mb5.4
WVT Waverly 61.19 67 *e*P **P 10 33 51.8 -0.6**
comp=Z,282nm,3.0s
WVT Waverly 61.19 67 *e*P **P 10 33 51.8 -0.6**
WVT pmax pmax
comp=Z,282nm,3.0s
ERPA Erie 61.28 58 *e*P **P 10 33 53.2 +0.3**
comp=Z,67nm,1.0s,mb5.7
OXF Oxford 61.42 70 *e*P **P 10 33 52.7 -1.2**
comp=Z,30nm,0.8s,mb5.5
OXF Oxford 61.42 70 *e*P **P 10 33 52.7 -1.2**
OXF pmax pmax
comp=Z,30nm,0.8s,mb5.5
MK31 Makanchi Array 61.45 310 *e*P **P 10 33 53.1 -0.8**
MK31 Makanchi Array 61.45 310 *e*P **P 10 33 53.1 -0.8**
MKAR Makanchi Array 61.45 310 P **P 10 33 52.7 -1.2**
comp=Z,1.0nm,0.4s,mb4.3,baz=60,slow=7.2,SNR=9.1
MKAR LR LR 11 01 07.0
comp=Z,139nm,20.3s,baz=13,slow=37
MKAR Makanchi Array 61.45 310 *c*e*P* **P 10 34 00.2 +6.3**
ALLY Alegheny Colle 61.53 58 *e*P **P 10 33 54.8 +0.2**
comp=Z,110nm,0.8s
BVAR Borovoye Array 61.95 321 P **P 10 33 56.7 -0.5**
comp=Z,3.1nm,0.3s,mb4.9,baz=59,slow=7.4,SNR=17
BVAR Borovoye Array 61.95 321 P **P 10 33 56.7 -0.5**
BRVK Borovoye 61.96 321 *e*P **P 10 33 57.7 +0.4**
comp=Z,10nm,1.2s,mb4.8
BRVK Borovoye 61.96 321 *e*P **P 10 33 57.7 +0.4**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
GYA Guiyang 62.41 278 P **P 10 34 02.0 +1.3**
GYA pP pP 10 34 18.0 +0.7
GYA sP sP 10 34 24.5 +0.2
GYA PcP PcP 10 34 41.0 +1.3
GYA PP PP 10 36 21.3 +3.0
GYA ScP ScP 10 38 36.0 0.0
GYA PcS PcS 10 38 45.5 +2.4
GYA S **S 10 42 21.3 -1.5**
GYA sS sS 10 42 50.0 -0.9
GYA SS SS 10 46 27.3 +0.3
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,110nm,5.0s
GYA LR LR
comp=N,480nm,19.4s
GYA LR LR
comp=E,420nm,20.7s
GYA LR LR
comp=Z,460nm,19.0s
MCWV Mont Chateau 63.11 59 *e*P **P 10 34 05.4 +0.3**
comp=Z,64nm,0.9s,mb5.8
BINY Binghamton 63.29 55 *e*P **P 10 34 06.9 +0.6**
comp=Z,58nm,1.0s,mb5.7
ARU Arti 63.37 330 *c i*P **P 10 34 07.3 +0.7**
ARU *e* 10 36 25.2
ARU S **S 10 42 38.1 +4.2**
ARU SS SS 10 46 39.2 -1.2
ARU pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
SSPA Standing Stone 63.44 58 *e*P **P 10 34 07.1 -0.2**
comp=Z,39nm,0.8s,mb5.6
BLA Blacksburg 64.57 62 *e*P **P 10 34 15.0 +0.2**
comp=Z,47nm,1.0s,mb5.5
BLA Blacksburg 64.57 62 *e*P **P 10 34 15.0 +0.2**
BLA pmax pmax
comp=Z,47nm,1.0s,mb5.5
SDMD Soldier's Deli 64.89 58 *e*P **P 10 34 16.7 -0.1**
comp=Z,39nm,0.9s,mb5.4
KMI Kunming 65.80 280 P **P 10 34 23.5 +0.6**
KMI pP pP 10 34 40.0 +0.4
KMI sP sP 10 34 47.0 +0.4
KMI PP PP 10 36 51.0 +3.0
KMI S S 10 43 03.0 -1.7
KMI sS sS 10 43 31.3 -1.7
KMI SS SS 10 47 18.8 -0.9
KMI pmax pmax
comp=Z,26nm,0.8s,mb5.3
KMI pmax pmax
comp=Z,130nm,3.4s
KMI LR LR
comp=N,130nm,26.3s

KMI LR LR
comp=E,120nm,28.7s
KMI LR LR
comp=Z,140nm,27.9s
FINES FINESS Array B 65.83 349 P **P 10 34 21.9 -0.6**
comp=Z,5.1nm,1.0s,mb4.5,baz=13,slow=10,SNR=5.7
FINES LR LR 11 04 48.1
comp=Z,116nm,19.2s,baz=142,slow=38
FINES FINESS Array B 65.83 349 P **P 10 34 21.9 -0.7**
JSC Jenkinsville 66.25 64 *e*P **P 10 34 25.4 -0.2**
JSC Jenkinsville 66.25 64 *e*P **P 10 34 25.4 -0.3**
NB2 NORSAR Subarra 67.41 357 P **P 10 34 32.2 -0.4**
comp=Z,3.1nm,1.0s,mb4.3,baz=4.2,slow=6.5
NOA NORSAR Array B 67.41 357 P **P 10 34 32.3 -0.3**
comp=Z,3.8nm,0.9s,mb4.4,baz=3.0,slow=6.4,SNR=8.6
NOA LR LR 11 00 07.5
comp=Z,92nm,21.7s,baz=0.0,slow=32
NOA NORSAR Array B 67.41 357 P **P 10 34 32.3 -0.3**
TAOE Nuku Hiva Isla 67.55 142 *e*T 11 48 23.0
comp=Z,32nm,0.2s
AAK Ala-Archa 68.24 312⇑ *e*P **P 10 34 40.9 +2.8**
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
EKS2 Erkin-Say 68.55 312 *e*P **P 10 34 40.2 +0.1**
comp=Z,4.4nm,0.8s,mb4.4
AKTK Aktyubinsk 68.57 327 P **P 10 34 40.8 +0.8**
AKTO Aktyubinsk 68.57 327 P **P 10 34 40.8 +0.8**
comp=Z,3.8nm,0.5s,mb4.6,baz=49,slow=5.8,SNR=13
AKTO Aktyubinsk 68.57 327 P **P 10 34 40.8 +0.7**
ABKAR Akbulak array 68.89 325 *e*P **P 10 34 43.0 +1.0**
KSH Kashi 69.96 309 *e*P **P 10 34 51.8 +3.0**
KSH *ep*P pP 10 34 57.3 -8.4
KSH *es*P sP 10 35 02.8 -10
KSH *eP*P sP 10 35 17.5 +4.8
KSH pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KSH pmax pmax
comp=Z,110nm,2.8s,mb5.3
KSH Kashi 69.96 309 *e*P **P 10 34 52.0 +3.2**
KSH *ep*P pP 10 35 08.5 +2.8
KSH *e*PcP PcP 10 35 14.5 +3.7
KSH *es*P sP 10 35 15.5 +2.8
KSH *eP*P PP 10 37 29.0 +5.3
KSH *e*S S 10 43 55.5 +1.5
KSH *es*S sS 10 44 23.5 +0.9
KSH *e*ScS ScS 10 44 45.0 -0.4
KSH *e*SS SS 10 48 26.5 +3.3
KSH pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KSH pmax pmax
comp=Z,120nm,4.2s
KSH LR LR
comp=N,860nm,16.3s
KSH LR LR
comp=E,320nm,5.9s
KSH LR LR
comp=Z,330nm,5.2s
OBN Obninsk 70.22 341 *e*P **P 10 34 50.4 +0.3**
OBN pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
PMOR Pomariorio Ree 70.66 152 *e*T 11 52 09.2
comp=Z,12nm,0.2s
PPT Papeete 72.63 154 *e*S S 10 44 38.7 +14
comp=Z,82nm,27.2s
PPT *e*LR LR 10 57 33.7
comp=Z,206nm,21.8s,baz=348
PPT *e*T 11 54 34.9
comp=Z,32nm,0.2s
PPT Papeete 72.63 154 LR LR 11 00 28.8
comp=Z,228nm,20.6s,baz=85,slow=30
TIAR Tiarei 72.68 154 *e*T 11 54 38.8
comp=Z,15nm,0.2s
PAE Paea 72.72 154 *e*T 11 54 41.2
comp=Z,4.7nm,0.3s
CHTO Chiang Mai 72.83 279 *e*P **P 10 35 06.5 +0.1**
comp=Z,15nm,1.2s,mb4.8
CHTO Chiang Mai 72.83 279 *e*P **P 10 35 06.5 +0.1**
CHTO pmax pmax
comp=Z,15nm,1.2s,mb4.8
ESK Eskdalemuir 73.07 5 *i*P **P 10 35 12.3 +5.1**
CMAR Chiang Mai Arr 73.11 278 P **P 10 35 08.5 +0.5**
comp=Z,7.9nm,0.9s,mb4.6,baz=26,slow=7.1,SNR=33
CMAR LR LR 11 07 58.8
comp=Z,48nm,19.7s,baz=85,slow=36
CMAR Chiang Mai Arr 73.11 278 P **P 10 35 08.5 +0.5**
DZM Mont Dzumac 75.25 197 *e*LR LR 10 58 45.6
comp=Z,136nm,27.1s
AKASG Malin Array Be 75.79 344 P **P 10 35 22.2 -1.0**
comp=Z,0.5nm,0.3s,mb4.0,baz=17,slow=6.4,SNR=4.1
AKASG LR LR 11 14 16.7
comp=Z,126nm,18.4s,baz=325,slow=40
AKASG Malin Array Be 75.79 344 P **P 10 35 22.2 -0.9**
CLL Collm 77.04 355 *e*P **P 10 35 29.0 -1.2**
CLL Collm 77.04 355 *e*P **P 10 35 29.0 -1.2**
CLL Collm 77.04 355 *e*P **P 10 35 29.0 -1.2**
DPC Dobruska-Polom 77.76 352 *e*P **P 10 35 34.0 -0.2**
DPC Dobruska-Polom 77.76 352 *e*P **P 10 35 34.0 -0.2**
TBI Tubuai 78.18 156 *e*LR LR 11 00 15.0
comp=Z,254nm,25.8s,baz=337
TBI *e*T 12 01 29.6
comp=Z,8.2nm,0.3s
KAKA Kakadu 78.46 232 *e*P **P 10 35 37.6 -0.9**
comp=Z,22nm,0.8s,mb5.1
KAKA Kakadu 78.46 232 *e*P **P 10 35 37.5 -1.0**
comp=Z,70nm,0.9s,mb5.6
BAIF Baives 78.53 0 *e*P **P 10 35 37.6 -0.9**
comp=Z,16nm,1.0s,mb4.6
BAIF Baives 78.53 0 *e*P **P 10 35 37.6 -0.9**
comp=Z,8.1nm,1.0s,mb4.6
BAIF Baives 78.53 0 *e*P **P 10 35 37.6 -0.9**
BAIF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
CTA Charters Tower 79.05 216 P **P 10 35 40.4 -1.2**
comp=Z,13nm,1.1s,mb4.8,baz=337,slow=7.7,SNR=3.3
CTA Charters Tower 79.05 216 P **P 10 35 40.4 -1.2**
KIV Kislovodsk 79.13 333 *e*P **P 10 35 43.8 +1.9**
KIV pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KHC Kasperske Hory 79.18 354 *e*P **P 10 35 40.1 -1.9**
KHC Kasperske Hory 79.18 354 *e*P **P 10 35 40.1 -1.9**
BUR08 Bucovina Ar. S 79.40 346 *e*P **P 10 35 43.2 -0.1**
GERES GERESS Array B 79.45 354 P **P 10 35 43.7 +0.2**
comp=Z,0.7nm,0.5s,mb3.8,baz=356,slow=4.0,SNR=6.4
GERES GERESS Array B 79.45 354 P **P 10 35 43.7 +0.1**
SFTF Sexfontaines 80.39 360 *e*P **P 10 35 48.5 -0.1**
comp=Z,27nm,0.9s,mb4.8
SFTF Sexfontaines 80.39 360 *e*P **P 10 35 48.5 -0.1**
comp=Z,27nm,0.9s,mb5.2
LOR Lormes 81.33 1 *e*P **P 10 35 53.3 -0.3**
LOR Lormes 81.33 1 *e*P **P 10 35 53.3 -0.3**
SSF Saint Saulge 81.53 1 *e*P **P 10 35 54.4 -0.3**
SSF Saint Saulge 81.53 1 *e*P **P 10 35 54.4 -0.3**
AVF Avril sur Loir 81.80 1 *e*P **P 10 35 55.8 -0.3**
comp=Z,9.2nm,1.0s,mb4.4
AVF Avril sur Loir 81.80 1 *e*P **P 10 35 55.8 -0.3**
comp=Z,4.6nm,1.0s,mb4.4
AVF Avril sur Loir 81.80 1 *e*P **P 10 35 55.8 -0.3**
AVF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MFF Saint Martin d 81.91 3 *e*P **P 10 35 56.6 -0.1**
MFF Saint Martin d 81.91 3 *e*P **P 10 35 56.6 -0.1**
SMF Signal de Mont 81.95 1 *e*P **P 10 35 56.8 -0.1**
comp=Z,16nm,0.9s,mb4.6
SMF Signal de Mont 81.95 1 *e*P **P 10 35 56.8 -0.1**
comp=Z,8.0nm,0.9s,mb4.7
SMF Signal de Mont 81.95 1 *e*P **P 10 35 56.8 -0.1**
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CABF La Chapelle 81.98 359 *e*P **P 10 35 56.5 -0.6**
comp=Z,11nm,0.9s,mb4.5
CABF La Chapelle 81.98 359 *e*P **P 10 35 56.5 -0.6**
comp=Z,5.7nm,0.9s,mb4.5
CABF La Chapelle 81.98 359 *e*P **P 10 35 56.5 -0.6**
CABF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BGF Bois d'Agland 82.03 1 *e*P **P 10 35 57.1 -0.2**
BGF Bois d'Agland 82.03 1 *e*P **P 10 35 57.1 -0.2**
TCF Toulx Ste Croi 82.29 2 *e*P **P 10 35 58.4 -0.3**
comp=Z,10nm,1.0s,mb4.4
TCF Toulx Ste Croi 82.29 2 *e*P **P 10 35 58.4 -0.3**
comp=Z,5.2nm,1.0s,mb4.4
TCF Toulx Ste Croi 82.29 2 *e*P **P 10 35 58.4 -0.3**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
RKT Rikitea 82.54 143 *e*LR LR 11 02 04.0
comp=Z,190nm,24.2s,baz=337

RKT *e*T 12 06 57.7
comp=Z,4.6nm,0.3s
WRA Warramunga Arr 83.83 227 P **P 10 36 05.6 -1.3**
comp=Z,12nm,1.1s,mb4.9,baz=34,slow=5.9,SNR=44
WRA Warramunga Arr 83.83 227 P **P 10 36 05.6 -1.3**
PSI Prapat 85.17 268 P **P 10 36 14.2 +0.3**
comp=Z,10.0nm,0.5s,mb5.2,baz=51,slow=6.8,SNR=5.0
PSI Prapat 85.17 268 P **P 10 36 14.2 +0.3**
BRTR Keskin Array B 85.43 338 P **P 10 36 15.7 +0.8**
comp=Z,1.5nm,0.8s,mb4.2,baz=15,slow=5.4,SNR=4.5
BRTR LR LR 11 17 14.2
comp=Z,73nm,19.7s,baz=95,slow=38
BRTR Keskin Array B 85.43 338 *c e*P **P 10 36 17.0 +2.2**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
HYB Hyderabad 86.07 293 *i*P **P 10 36 18.0 -0.3**
FITZ Fitzroy Crossi 86.44 235 P **P 10 36 19.8 -0.1**
comp=Z,12nm,0.8s,mb5.2,baz=53,slow=3.3,SNR=24
FITZ Fitzroy Crossi 86.44 235⇑ *i*P **P 10 36 19.5 -0.4**
comp=Z,23nm,0.9s,mb5.4
ASAR Alice Springs 87.28 225 P **P 10 36 23.4 -0.4**
comp=Z,8.0nm,0.8s,mb5.0,baz=31,slow=4.7,SNR=69
ASAR Alice Springs 87.28 225 P **P 10 36 23.5 -0.4**
POO Poona 87.82 297⇓ *i*P **P 10 36 24.0 -2.8**
comp=Z,40nm,1.0s,mb5.6
POO *e*x x 10 38 52.0
ESDC Sonseca Array 88.61 7 P **P 10 36 28.8 -1.5**
comp=Z,0.6nm,0.3s,mb4.3,baz=350,slow=6.5,SNR=4.2
ESDC Sonseca Array 88.61 7 P **P 10 36 28.8 -1.5**
STKA Stephens Creek 91.47 216 P **P 10 36 42.8 -0.7**
comp=Z,8.2nm,0.8s,mb5.1,baz=343,slow=4.6,SNR=17
STKA LR LR 11 14 09.4
comp=Z,107nm,21.5s,baz=23,slow=33
STKA Stephens Creek 91.47 216⇑ *i*P **P 10 36 42.7 -0.7**
comp=Z,6.0nm,0.7s,mb5.0
MDT Midelt 95.37 8 LR LR 11 19 14.1
comp=Z,34nm,19.6s,baz=345,slow=35
DBIC Dimbokro 121.21 11 PKP PKPdf 10 42 29.7 -0.6
comp=Z,0.9nm,0.3s,baz=320,slow=2.6,SNR=7.0
DBIC Dimbokro 121.21 11 PKIKP PKPdf 10 42 29.7 -0.6
DBIC Dimbokro 121.21 11 PKIKP PKPdf 10 42 29.7 -0.6
CPUP Villa Florida 127.41 86 PKP PKPdf 10 42 41.1 -0.6
comp=Z,0.6nm,0.4s,baz=32,slow=0.2,SNR=4.5
CPUP Villa Florida 127.41 86 PKIKP PKPdf 10 42 41.2 -0.5
QSPA South Pole Qui 141.54 180 *e*PKPdf PKPdf 10 43 00.5 -6.0
TSUM Tsumeb 145.94 338 *e*PKPbc PKPbc 10 43 17.3 +0.6
MAW Mawson 148.13 218 PKPbc PKPbc 10 43 21.1 -0.3
comp=Z,16nm,0.8s,baz=87,slow=2.4,SNR=46
LBTB Lobatse 148.86 321 *e*PKPbc PKPbc 10 43 25.3 +0.6
BOSA Boshof 152.20 318 PKPbc PKPbc 10 43 32.8 +0.2
comp=Z,11nm,0.5s,baz=50,slow=2.8,SNR=36

ISCJB ***26*** *10:31:58.7±1.0, 32°.70N±0°.03×105°.79E±0°.04, h8km±6km, mb3.9/14, Error ellipse: s-maj=5.5km s-min=4.9km az=162.5*
IDC ***26*** *10:31:59.1±0.8, 32°.70N×105°.60E, h0km, mb3.9/11, mb1 4.0/14, mb1mx3.9/28, mbtmp3.9/14, ML3.6/3, Error ellipse: s-maj=25.5km s-min=16.2km az=57.0*
BJI ***26*** *10:32:00.4, 32°.78N×105°.71E, h14km, mB4.8/4, mb4.5/4, ML4.3/21, Ms4.1/8, Ms7 3.8/8*
NEIC ***26*** *10:32:01.4±0.5, 32°.77N×105°.68E, h10km, mb4.1/5, Error ellipse: s-maj=10.7km s-min=8.5km az=48.0*
ISC 26 10:32:00.0±0.9, 32°.73N±0°.03×105°.73E±0°.03, h3km±6km, n30, σ1s22/43, mb3.9/14, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.47**	**223**	Pn	**Pn**	**10 32 41.0**	**-0.2**
CD2				Pg	**Pg**	**10 32 46.0**	**-1.4**
CD2				Sn	**Sn**	**10 33 13.3**	**+1.4**
CD2				Sg	**Sg**	**10 33 17.8**	**-1.6**
CD2				smax			
	comp=N,11μm,0.8s						
CD2				smax			
	comp=E,6μm,0.7s						
XAN	**Xi'an**	**2.97**	**63**	Pn	**Pn**	**10 32 49.8**	**+1.7**
XAN				Pg	**Pg**	**10 32 58.0**	**+1.0**
XAN				Sn	**Sn**	**10 33 22.5**	**-1.8**
XAN				Sg	**Sg**	**10 33 33.0**	**-2.6**
XAN				smax			
	comp=N,2μm,0.7s						
XAN				smax			
	comp=E,860nm,0.9s						
LZH	**Lanzhou**	**3.69**	**336**	*e*Pn	**Pn**	**10 32 58.8**	**+0.8**
LZH				Pg	**Pb**	**10 33 05.3**	**-0.6**
LZH				Sn	**Sn**	**10 33 41.3**	**-0.7**
LZH				Sg	**Sb**	**10 33 51.5**	**+0.4**
LZH				smax			
	comp=N,1μm,0.9s						
LZH				smax			
	comp=E,3μm,0.9s						
LZH				LR	LR		
	comp=N,2μm,4.7s						
LZH				LR	LR		
	comp=E,1μm,5.3s						
LZH				LR	LR		
	comp=Z,2μm,6.0s						
ENH	**Enshi**	**4.04**	**126**	*e*Pn	**Pn**	**10 33 06.0**	**+3.2**
ENH				*e*Sg	**Sg**	**10 34 11.5**	**+1.7**
GYA	**Guiyang**	**6.30**	**172**⇓	*i*Pn	**Pn**	**10 33 34.5**	**+0.6**
GYA				Sn	**Sn**	**10 34 44.5**	**-2.0**
GYA				Sg	**Sg**	**10 35 17.8**	**-4.7**
GYA				smax			
	comp=N,460nm,0.8s						
GYA				smax			
	comp=E,280nm,0.7s						
GYA				LR	LR		
	comp=N,490nm,4.0s						
GYA				LR	LR		
	comp=E,960nm,3.4s						
GYA				LR	LR		
	comp=Z,500nm,4.0s						
WHN	**Wuhan**	**7.67**	**104**	P	**Pb**	**10 34 07.8**	**-5.9**
WHN				S	**Sn**	**10 35 17.0**	**-3.1**
WHN				LR	LR		
	comp=N,2μm,3.2s						
WHN				LR	LR		
	comp=E,2μm,3.5s						
WHN				LR	LR		
	comp=Z,1μm,4.1s						
KMI	**Kunming**	**8.02**	**200**	P	**Pn**	**10 34 00.8**	**+3.3**
KMI				smax			
	comp=N,43nm,1.0s						
KMI				smax			
	comp=E,37nm,0.8s						
LSA	**Lhasa**	**12.84**	**260**	P	**Pn**	**10 35 03.3**	**-0.2**
LSA	**Lhasa**	**12.84**	**260**	Pn	**Pn**	**10 35 03.6**	**+0.1**
SONM	**Songino Array**	**15.10**	**2**	Pn	**Pn**	**10 35 33.3**	**-0.9**
	comp=E,0.2nm,0.3s,baz=196,slow=9.0,SNR=2.8						
SONM				Lg		10 39 55.4	
	comp=E,0.1nm,0.3s,baz=177,slow=29,SNR=4.0						
ULN	**Ulaanbaatar**	**15.15**	**3**	*e*Pn	**Pn**	**10 35 35.1**	**+0.2**
	comp=E,3.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**15.47**	**205**	Pn	**Pn**	**10 35 39.5**	**+0.3**
	comp=E,0.1nm,0.3s,baz=18,slow=10,SNR=6.4						
KSRS	**Korea Array**	**18.75**	**69**	P	**Pn**	**10 36 21.5**	**+1.0**
	comp=E,0.2nm,0.3s,baz=259,slow=10,SNR=3.2						
JOW	**Kunigami**	**20.42**	**101**	P	**P**	**10 36 39.7**	**+1.3**
	comp=E,4.2nm,0.5s,baz=291,slow=9.7,SNR=3.8						
JOW	**Kunigami**	**20.42**	**101**	P	**P**	**10 36 39.7**	**+1.3**
MK31	**Makanchi Array**	**22.73**	**315**	*e*P	**P**	**10 37 02.7**	**-0.3**
MKAR	**Makanchi Array**	**22.73**	**315**	P	**P**	**10 37 02.8**	**-0.3**
	comp=E,1.7nm,0.7s,mb3.6,baz=117,slow=12,SNR=6.6						
TKM2	**Tokmak 2**	**25.76**	**302**	*e*P	**P**	**10 37 32.5**	**+0.6**
	comp=E,2.5nm,0.6s,mb3.9						
ZALV	**Zalesovo Beam**	**25.91**	**331**	P	**P**	**10 37 33.6**	**+0.5**
	comp=E,0.7nm,0.4s,mb3.5,baz=134,slow=10,SNR=2.7						
UCH	**Uchtor**	**26.40**	**300**	*e*P	**P**	**10 37 39.0**	**+1.3**
	comp=E,3.6nm,0.8s,mb4.0						
KURK	**Kurchatov**	**26.83**	**320**	*e*P	**P**	**10 37 44.2**	**+2.7**
	comp=E,3.7nm,0.7s,mb4.0						
KBL	**Kabul**	**30.49**	**284**	P	**P**	**10 38 15.4**	**+1.1**
	comp=E,2.4nm,0.7s,mb4.0						
PETK	**Petropavlovsk-**	**42.06**	**45**	P	**P**	**10 39 54.4**	**+1.5**
	comp=E,3.5nm,0.8s,mb4.0,baz=232,slow=16,SNR=3.5						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**10 41 45.9**	**-0.8**
	comp=E,1.0nm,0.6s,mb4.0,baz=64,slow=11,SNR=3.0						
AKASG	**Malin Array Be**	**57.29**	**313**	P	**P**	**10 41 48.1**	**-0.8**
	comp=E,0.4nm,0.3s,mb3.9,baz=65,slow=7.3,SNR=2.9						
WRA	**Warramunga Arr**	**59.09**	**148**	P	**P**	**10 42 01.2**	**-0.6**
	comp=E,1.8nm,0.6s,mb4.3,baz=342,slow=7.3,SNR=31						
ASAR	**Alice Springs**	**62.20**	**151**	P	**P**	**10 42 22.5**	**-0.5**
	comp=E,1.2nm,0.3s,mb4.4,baz=334,slow=6.5,SNR=32						
NOA	**NORSAR Array B**	**64.04**	**327**	P	**P**	**10 42 33.5**	**-1.2**

comp=E,0.4nm,0.4s,mb3.8,baz=73,slow=6.7,SNR=2.7
ILAR Eielson Array 67.77 26 P **P 10 42 57.9 -0.8**
comp=E,0.3nm,0.6s,mb3.5,baz=301,slow=6.5,SNR=4.2
INK Inuvik 70.17 20 P **P 10 43 12.7 -0.8**
comp=E,1.5nm,0.7s,mb4.0,baz=356,slow=7.7,SNR=8.9

IDC 26 10:54:45.6±1.3,15°.37N×146°.11E,h0km,mb3.5/4, mb1 3.7/4,mb1mx3.5/22,mbtmp3.5/4,Error ellipse: s-maj=49.9km s-min=24.2km az=96.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.95**	**199**	P	P		11 01 55.1	-1.5
	0.9nm,0.9s,baz=33,slow=9.3,SNR=4.7							
ASAR	**Alice Springs**	**40.59**	**197**	P	P		11 02 28.9	+1.7
	0.3nm,0.9s,baz=17,slow=13,SNR=3.1							
MKAR	**Makanchi Array**	**61.07**	**315**	P	P		11 05 01.9	+0.5
	0.6nm,0.3s,baz=92,slow=9.0,SNR=5.3							
KURK	**Kurchatov**	**64.02**	**319**	P	P		11 05 21.0	0.0
	1.0nm,0.4s,baz=93,slow=6.5,SNR=10							
ILAR	**Eielson Array**	**66.46**	**25**	P	P		11 05 36.6	+0.1
	0.4nm,0.9s,baz=248,slow=6.2,SNR=8.6							

SGS ***26*** *11:00:03.9,35°.80N×49°.25E,h17km*
IDC ***26*** *11:00:04.2±1.0,35°.49N×48°.92E,h0km,mb4.0/14, mb1 4.1/19,mb1mx4.0/30,mbtmp4.0/19,ML3.4/5,MS3.4/6, Ms1 3.4/6,ms1mx3.0/29,Error ellipse: s-maj=20.4km s-min=13.6km az=163.0*
ISCJB ***26*** *11:00:04.6±0.5,35°.78N±0°.02×49°.00E±0°.02,h4km±4km, mb4.2/30,MS3.4/8,Error ellipse: s-maj=4.2km s-min=2.9km az=10.5*
THR ***26*** *11:00:05.9±0.7,35°.64N×48°.98E,h15km±5km,ML4.3*
CSEM ***26*** *11:00:06.8±0.1,35°.71N×48°.99E,h10km,mb4.3/19,Ms3.3, Error ellipse: s-maj=5.6km s-min=3.7km az=15.0*
NEIC ***26*** *11:00:06.0±0.5,35°.56N×48°.91E,h10km,mb4.3/15, ML4.4(THR),Error ellipse: s-maj=10.5km s-min=5.2km az=163.0*
MOS ***26*** *11:00:08.1±1.0,35°.67N×48°.81E,h33km,mb4.3/20,Error ellipse: s-maj=10.5km s-min=6.1km az=123.1*
TEH ***26*** *11:00:08.5,35°.77N×49°.05E,h6km*
ISC 26 11:00:06.1±0.5,35°.76N±0°.02×49°.01E±0°.02,h3km±3km, n258,σ1°32/282,mb4.2/30,MS3.4/8,9C-1D,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IRAZ	**Razeghan**	**0.83**	**115**	*e*Pg	**Pg**		**11 00 21.1**	**-0.9**
IRAZ				*e*			11 00 21.6	
	comp=Z,7μm,0.2s							
IRAZ				*e*Sg	**Sg**		**11 00 32.3**	**-0.5**
IRAZ	**Razeghan**	**0.83**	**115**	*e*Pg	**Pg**		**11 00 21.1**	**-0.9**
IRAZ				*e*Sg	**Sg**		**11 00 32.3**	**-0.5**
ZNJK	**Zanjan**	**0.95**	**344**	*e*Pg	**Pg**		**11 00 26.1**	**+1.8**
ZNJK	**Zanjan**	**0.95**	**344**	*e*Pg	**Pg**		**11 00 26.1**	**+1.8**
IMHD	**Mahdasht**	**1.35**	**93**	*e*Pg	**Pg**		**11 00 30.8**	**-1.3**
IMHD				*e*			11 00 34.0	
	comp=Z,30μm,0.1s							
IMHD				*e*Sg	**Sg**		**11 00 49.1**	**-0.5**
IMHD	**Mahdasht**	**1.35**	**93**	*e*Pg	**Pg**		**11 00 30.8**	**-1.3**
IMHD				*e*Sg	**Sg**		**11 00 49.1**	**-0.5**
ASAO	**Ashtian**	**1.47**	**145**	*e*Pg	**Pn**		**11 00 31.9**	**-1.6**
ASAO	**Ashtian**	**1.47**	**145**	*e*Pg	**Pn**		**11 00 31.9**	**-1.6**
SNGE	**Sanandaj**	**1.51**	**244**	*e*Pg	**Pn**		**11 00 32.5**	**-1.5**
SNGE	**Sanandaj**	**1.51**	**244**	*e*Pg	**Pn**		**11 00 32.5**	**-1.5**
THKV	**Tehran--Karaj**	**1.53**	**84**	*e*Pg	**Pg**		**11 00 34.6**	**-0.8**
THKV				AML	AML		11 01 02.9	
	comp=E,3μm,0.5s							
THKV				AML	AML		11 01 06.3	
	comp=N,3μm,0.7s							
THKV	**Tehran--Karaj**	**1.53**	**84**	*e*Pg	**Pg**		**11 00 34.6**	**-0.8**
ILIN	**Lien**	**1.87**	**244**	*e*Pn	**Pn**		**11 00 39.2**	**+0.2**
ILIN				*e*			11 01 07.4	
	comp=Z,43μm,0.2s							
ILIN	**Lien**	**1.87**	**244**	*e*Pn	**Pn**		**11 00 39.2**	**+0.2**
IKOM	**Komasi**	**2.00**	**218**	*e*Pn	**Pn**		**11 00 41.1**	**+0.3**
IKOM				*e*			11 01 15.0	
	comp=Z,57μm,0.4s							
IKOM	**Komasi**	**2.00**	**218**	*e*Pn	**Pn**		**11 00 41.1**	**+0.3**
IVIS	**Veis**	**2.15**	**236**	*e*Pn	**Pn**		**11 00 43.7**	**+0.8**
IVIS				*e*Sg	**Sg**		**11 01 16.4**	**+1.2**
IVIS				*e*			11 01 17.3	
	comp=Z,34μm,0.4s							
IVIS	**Veis**	**2.15**	**236**	*e*Pn	**Pn**		**11 00 43.7**	**+0.8**
IVIS				*e*Sg	**Sg**		**11 01 16.4**	**+1.2**
IAFJ	**Afjeh**	**2.20**	**87**	*e*Sg	**Sg**		**11 01 16.0**	**-0.9**
IAFJ	**Afjeh**	**2.20**	**87**	*e*Sg	**Sg**		**11 01 16.0**	**-0.9**
GHVR	**GHOM**	**2.27**	**124**	*e*Pg	**Pn**		**11 00 45.3**	**+0.8**
GHVR				AML	AML		11 01 27.0	
	comp=E,1μm,0.7s							
ISRB	**Sarab**	**2.33**	**333**	*e*Pn	**Pn**		**11 00 47.1**	**+1.8**
ISRB				*e*			11 00 51.0	
	comp=Z,28μm,0.2s							
ISRB				*e*Sg	**Sg**		**11 01 21.5**	**+0.7**
ISRB	**Sarab**	**2.33**	**333**	*e*Pn	**Pn**		**11 00 47.1**	**+1.8**
IVRN	**Varamin**	**2.35**	**108**	*e*Pn	**Pn**		**11 00 46.0**	**+0.4**
IVRN				*e*Pn	**Pn**		**11 00 46.2**	**+0.6**
IVRN				*e*			11 00 56.0	
	comp=Z,13μm,0.2s							
IVRN				*e*Sg	**Sg**		**11 01 21.3**	**-0.3**
IVRN				*e*Sg	**Sg**		**11 01 21.4**	**-0.2**
IVRN	**Varamin**	**2.35**	**108**	*e*Pn	**Pn**		**11 00 46.2**	**+0.6**
IVRN				*e*Sg	**Sg**		**11 01 21.3**	**-0.3**
IDHR	**Dehrash**	**2.39**	**245**	*e*Pn	**Pn**		**11 00 48.3**	**+2.1**
IDHR				*e*			11 00 56.8	
	comp=Z,27μm,0.2s							
IDHR	**Dehrash**	**2.39**	**245**	*e*Pn	**Pn**		**11 00 48.3**	**+2.1**
DAMV	**Damavand**	**2.42**	**92**	*e*Pn	**Pn**		**11 00 47.4**	**+0.8**
DAMV				*e*Sg	**Sg**		**11 01 22.7**	**-1.1**
DAMV				AML	AML		11 01 30.4	
	comp=N,2μm,0.7s							
DAMV				AML	AML		11 01 34.1	
	comp=E,2μm,0.7s							
DAMV	**Damavand**	**2.42**	**92**	*e*Pn	**Pn**		**11 00 47.3**	**+0.8**
DAMV				*e*Sg	**Sg**		**11 01 22.7**	**-1.0**
IGHG	**Ghaleghazi**	**2.46**	**235**	*e*Pn	**Pn**		**11 00 49.8**	**+2.7**
IGHG				*e*Sg	**Sg**		**11 01 26.6**	**+1.6**
IGHG				*e*			11 01 39.1	
	comp=Z,63μm,0.5s							
IGHG	**Ghaleghazi**	**2.46**	**235**	*e*Pn	**Pn**		**11 00 49.8**	**+2.7**
IGHG				*e*Sg	**Sg**		**11 01 26.6**	**+1.6**
IDMV	**Damavand**	**2.47**	**93**	*e*Pn	**Pn**		**11 00 48.1**	**+0.8**
IDMV				*e*Sg	**Sg**		**11 01 24.9**	**-0.6**
IDMV				*e*			11 01 28.2	
	comp=Z,20μm,0.2s							
IDMV	**Damavand**	**2.47**	**93**	*e*Pn	**Pn**		**11 00 48.1**	**+0.8**
IDMV				*e*Sg	**Sg**		**11 01 24.9**	**-0.6**
IPRN	**Peran**	**2.75**	**79**	*e*Pn	**Pn**		**11 00 52.7**	**+1.7**
IPRN				*e*			11 01 43.4	
	comp=Z,18μm,0.4s							
IPRN	**Peran**	**2.75**	**79**	*e*Pn	**Pn**		**11 00 52.7**	**+1.7**
ISFB	**Sefidab**	**3.00**	**117**	*e*Pn	**Pn**		**11 00 55.9**	**+1.3**
ISFB				*e*			11 01 54.2	
	comp=Z,9μm,0.3s							
ISFB	**Sefidab**	**3.00**	**117**	*e*Pn	**Pn**		**11 00 55.9**	**+1.3**
IFIR	**Firoozkooh**	**3.05**	**91**	*e*Pn	**Pn**		**11 00 56.6**	**+1.3**
IFIR				*e*			11 01 51.9	
	comp=Z,6μm,0.2s							
IFIR	**Firoozkooh**	**3.05**	**91**	*e*Pn	**Pn**		**11 00 56.6**	**+1.3**
IFTB	**Fath-abad**	**3.08**	**318**	*e*Pn	**Pn**		**11 00 57.7**	**+2.1**
IAZR	**Azarshahr**	**3.10**	**309**	*e*Pn	**Pn**		**11 00 58.1**	**+2.2**
IAZR				*e*			11 01 06.5	
	comp=Z,23μm,0.2s							
IAZR	**Azarshahr**	**3.10**	**309**	*e*Pn	**Pn**		**11 00 58.1**	**+2.2**
GRMI	**Germi**	**3.17**	**344**	*e*Pn	**Pn**		**11 00 59.0**	**+2.1**
GRMI	**Germi**	**3.17**	**344**	*e*Pn	**Pn**		**11 00 59.0**	**+2.1**
IKLH	**Kolahrood**	**3.23**	**138**	*e*Pn	**Pn**		**11 00 59.5**	**+1.8**
IKLH				*e*Pn	**Pn**		**11 00 59.8**	**+2.1**
IKLH				*e*			11 01 53.0	
	comp=N,14μm,0.6s							
IKLH				*e*			11 01 53.4	
	comp=Z,10μm,0.4s							
IKLH	**Kolahrood**	**3.23**	**138**	*e*Pn	**Pn**		**11 00 59.5**	**+1.8**
ILAS	**Lasjerd**	**3.24**	**95**	*e*Pn	**Pb**		**11 01 03.4**	**-0.9**
ILAS				*e*			11 01 58.8	
	comp=Z,11μm,0.5s							
ITBZ	**Tabriz**	**3.37**	**318**	*e*Pn	**Pn**		**11 01 01.7**	**+2.1**
ITBZ				*e*			11 01 19.0	
	comp=Z,4μm,0.3s							
ITBZ	**Tabriz**	**3.37**	**318**	*e*Pn	**Pn**		**11 01 01.7**	**+2.1**
ISHM	**Shahmirzad**	**3.48**	**88**	*e*	**Pg**		**11 01 19.2**	**+6.3**
	comp=Z,10μm,0.3s							
ISHM				*e*Pn	**Pn**		**11 01 02.8**	**+1.6**
ISHB	**Shabestar**	**3.70**	**314**	*e*	**Pg**		**11 01 20.8**	**+3.7**
	comp=Z,5μm,0.2s							
ISHB				*e*Pn	**Pn**		**11 01 06.0**	**+1.8**
IMRD	**Marand**	**3.96**	**319**	*e*	**Pg**		**11 01 29.8**	**+7.9**
	comp=Z,9μm,0.2s							
IMRD				*e*Pn	**Pn**		**11 01 09.8**	**+2.1**
IZEF	**Zefreh**	**3.96**	**135**	*e*Pn	**Pn**		**11 01 09.6**	**+1.8**
IZEF				*e*			11 02 28.2	
	comp=Z,2μm,0.3s							
IZEF	**Zefreh**	**3.96**	**135**	*e*Pn	**Pn**		**11 01 09.6**	**+1.8**
IANJ	**Anjilo**	**4.01**	**93**	*e*	**Pg**		**11 01 28.2**	**+5.3**
	comp=Z,3μm,0.4s							
IANJ				*e*Pn	**Pn**		**11 01 09.5**	**+1.1**
IGAR	**Gharneh**	**4.19**	**142**	*e*Pn	**Pn**		**11 01 12.4**	**+1.5**
IGAR				*e*			11 01 35.8	
	comp=Z,1μm,0.3s							
ALIB	**Äli-Bayra**	**4.19**	**0**	P	**Pg**		**11 01 32.8**	**+6.4**
	SNR=3.9							
NAX	**Nakhchivan**	**4.41**	**322**	P	**Pg**		**11 01 27.5**	**-3.0**
	SNR=44							
BHD	**Baghdad**	**4.55**	**238**	*ex*	x		11 01 14.0	
BHD				*i* x	x		11 01 26.0	
BHD				*i* x	x		11 01 34.0	
BHD				*ex*	x		11 02 08.0	
BHD				*i* x	x		11 02 31.0	
BRDA	**Brd**	**4.72**	**343**	P	**Pg**		**11 01 34.8**	**-1.8**
	SNR=26							
PQL	**Pirkuli**	**5.03**	**356**	P	**Pg**		**11 01 41.8**	**-0.7**
	SNR=3.2							
IML	**Ismayilli**	**5.07**	**353**	P	**Pg**		**11 01 42.1**	**-1.1**
	SNR=8.2							
GNI	**Garni**	**5.53**	**324**	Pn	**Pn**		**11 01 34.1**	**+4.8**
	comp=Z,0.6nm,0.3s,baz=249,slow=2.1,SNR=3.4							
GNI				Pg	**Pg**		**11 01 43.5**	**-8.5**
	comp=Z,2.5nm,0.3s,baz=337,slow=3.6,SNR=8.9							
GNI				Lg			11 03 06.5	
	baz=92,slow=23,SNR=1.0							
GNI	**Garni**	**5.53**	**324⇑**	*e*P	**Pn**		**11 01 26.4**	**-2.9**
GNI	**Garni**	**5.53**	**324**	Pn	**Pn**		**11 01 34.1**	**+4.8**
SEKA	**Sheki**	**5.62**	**346**	P	**Pg**		**11 01 46.8**	**-7.0**
	SNR=4.6							
ICHK	**Chekchek**	**5.69**	**126**	*e*Pn	**Pn**		**11 01 32.5**	**+0.9**
ICHK	**Chekchek**	**5.69**	**126**	*e*Pn	**Pn**		**11 01 32.5**	**+0.9**
MRVT	**Maraveh tapeh**	**6.00**	**69**	*e*Pn	**Pn**		**11 01 37.0**	**+1.2**
MRVT	**Maraveh tapeh**	**6.00**	**69**	*e*Pn	**Pn**		**11 01 37.0**	**+1.3**
MIB	**Mutribah**	**6.10**	**194**	*e*P	**Pn**		**11 01 37.1**	**-0.1**
MIB				AML	AML		11 02 45.6	
	comp=Z,89nm,0.6s							
MIB	**Mutribah**	**6.10**	**194**	*e*P	**Pn**		**11 01 37.1**	**-0.1**
DGRG	**David-gareji**	**6.36**	**335**	P	**Pg**		**11 02 07.4**	**-0.5**
NAY	**Al-Naaiem**	**6.66**	**193**	*e*P	**Pn**		**11 01 44.2**	**-0.6**
NAY	**Al-Naaiem**	**6.66**	**193**	*e*P	**Pn**		**11 01 44.2**	**-0.6**
TBLG	**Delisi**	**6.83**	**332**	P	**Pb**		**11 02 08.0**	**+2.6**
IBAF	**Bafgh**	**6.87**	**125**	*e*Pn	**Pn**		**11 01 48.3**	**+0.6**
IBAF	**Bafgh**	**6.87**	**125**	*e*Pn	**Pn**		**11 01 48.3**	**+0.6**
RDF	**Al-Radifah**	**6.92**	**191**	*e*P	**Pn**		**11 01 48.5**	**0.0**
RDF				AML	AML		11 03 09.4	
	comp=Z,66nm,0.5s							
RDF	**Al-Radifah**	**6.92**	**191**	*e*P	**Pn**		**11 01 48.5**	**0.0**
TABS	**Tabas**	**7.00**	**105**	*e*Pn	**Pn**		**11 01 50.6**	**+1.0**
TABS	**Tabas**	**7.00**	**105**	*e*Pn	**Pn**		**11 01 50.6**	**+1.0**
ZEI	**Tsey**	**8.04**	**332**	*e*P	**Pn**		**11 02 06.7**	**+2.9**
ZEI				pmax	pmax			
	comp=Z,19nm,1.6s							
ZEI	**Tsey**	**8.04**	**332**	*e*P	**Pn**		**11 02 06.7**	**+2.9**
	comp=Z,19nm,1.6s							
ASYS		**9.14**	**207**	P	**Pn**		**11 02 15.7**	**-3.1**
ASYS		**9.14**	**207**	P	**Pn**		**11 02 15.7**	**-3.2**
KIV	**Kislovodsk**	**9.52**	**331**	*e*P	**Pn**		**11 02 24.2**	**+0.2**
KIV				pmax	pmax			
	comp=Z,2.0nm,0.4s							
KIV	**Kislovodsk**	**9.52**	**331**	*e*P	**Pn**		**11 02 24.2**	**+0.2**
	comp=Z,2.0nm,0.4s							
BOQSS		**9.86**	**178**	P	**Pn**		**11 02 24.1**	**-4.7**
ASF	**Jabal al Asfar**	**10.67**	**254**	Pn	**Pn**		**11 02 37.5**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=7.1,slow=8.1,SNR=2.9							
ASF				Lg			11 05 34.6	
	comp=Z,0.2nm,0.3s,baz=340,slow=22,SNR=2.1							
ASF				LR	LR		11 07 39.5	
	comp=Z,95nm,20.2s,baz=36,slow=43							
ASF	**Jabal al Asfar**	**10.67**	**254**	P	**Pn**		**11 02 37.5**	**-2.4**
MMAI	**Mount Meron Ar**	**11.57**	**260**	Pn	**Pn**		**11 02 50.8**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=86,slow=19,SNR=2.7							
BTHS		**11.78**	**172**	P	**Pn**		**11 02 50.8**	**-4.3**
BTHS		**11.78**	**172**	P	**Pn**		**11 02 50.8**	**-4.3**
BTHS				S	**Sn**		**11 04 55.5**	**-12**
BRTR	**Keskin Array B**	**12.79**	**293**	Pn	**Pn**		**11 03 08.2**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=116,slow=12,SNR=3.0							
BRTR	**Keskin Array B**	**12.79**	**293**	*i* P	**Pn**		**11 03 12.8**	**+4.0**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
BRTR	**Keskin Array B**	**12.79**	**293**	Pn	**Pn**		**11 03 08.1**	**-0.7**
BRTR	**Keskin Array B**	**12.79**	**293**	*i* P	**Pn**		**11 03 12.8**	**+4.0**
	comp=Z,1.0nm,0.9s							
HRDDS		**12.79**	**178**	S	**Sn**		**11 05 20.4**	**-11**
HRDDS		**12.79**	**178**	P	**Pn**		**11 03 04.6**	**-4.3**
EIL	**Elat**	**13.29**	**247**	Pn	**Pn**		**11 03 13.4**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=341,slow=15,SNR=2.4							
EIL				Lg			11 06 51.4	
	comp=Z,0.2nm,0.3s,baz=329,slow=22,SNR=2.9							
EIL				LR	LR		11 08 13.1	
	comp=Z,96nm,20.4s,baz=99,slow=37							
EIL	**Elat**	**13.29**	**247**	Pn	**Pn**		**11 03 13.4**	**-2.4**
ABKAR	**Akbulak array**	**15.69**	**27**	Pn	**Pn**		**11 03 47.1**	**-0.9**
	comp=Z,3.6nm,0.7s							
ABKAR	**Akbulak array**	**15.69**	**27**	Pn	**Pn**		**11 03 47.1**	**-0.9**
	comp=Z,3.6nm,0.7s							
AKTK	**Aktyubinsk**	**16.06**	**21**	Pn	**Pn**		**11 03 50.1**	**-2.6**
AKTO	**Aktyubinsk**	**16.06**	**21**	Pn	**Pn**		**11 03 50.1**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=210,slow=20,SNR=5.0							
AKTO	**Aktyubinsk**	**16.06**	**21**	P	**Pn**		**11 03 50.2**	**-2.6**
VRHR	**Novokhopersk**	**16.23**	**343**	*e*P	**Pn**		**11 03 59.1**	**+4.2**
VRHR				pmax	pmax			
	comp=N,30nm,0.7s							
VRHR				pmax	pmax			
	comp=E,10.0nm,0.7s							
VRHR				pmax	pmax			
	comp=Z,40nm,0.7s							
VRHR	**Novokhopersk**	**16.23**	**343**	*e*P	**Pn**		**11 03 59.1**	**+4.2**
VSR	**Storozhevoye**	**17.00**	**338**	*e*P	**Pn**		**11 04 03.7**	**-1.0**
VSR				pmax	pmax			
	comp=Z,10.0nm,1.3s							
VSR				pmax	pmax			
	comp=N,10.0nm,0.8s							
VSR				pmax	pmax			
	comp=E,10.0nm,0.6s							
MLR	**Muntele Rosu**	**19.96**	**306⇑**	*i*P	**Pn**		**11 04 42.4**	**+1.4**
MLR	**Muntele Rosu**	**19.96**	**306⇑**	*i*P	**Pn**		**11 04 42.4**	**+1.4**
EKS2	**Erkin-Say**	**20.35**	**63**	*e*P	**P**		**11 04 48.3**	**+4.7**
	comp=E,2.1nm,0.7s							
VOIR		**20.53**	**305⇑**	*i*P	**P**		**11 04 47.9**	**+2.4**
VOIR		**20.53**	**305⇑**	*i*P	**P**		**11 04 47.9**	**+2.4**
AKASG	**Malin Array Be**	**20.66**	**322**	P	**P**		**11 04 46.6**	**-0.2**
	comp=E,6.7nm,0.6s,baz=135,slow=9.4,SNR=23							
AKASG	**Malin Array Be**	**20.66**	**322**	P	**P**		**11 04 46.6**	**-0.2**
AKASG				pmax	pmax			
	comp=Z,7.0nm,0.6s							
AKASG	**Malin Array Be**	**20.66**	**322**	P	**P**		**11 04 46.6**	**-0.2**
KIEV	**Kiev**	**20.66**	**322**	*e*P	**P**		**11 04 46.6**	**-0.3**
	comp=Z,11nm,0.7s							
KIEV	**Kiev**	**20.66**	**322**	*e*P	**P**		**11 04 46.6**	**-0.3**
KIEV				pmax	pmax			
	comp=Z,11nm,0.7s							
KIEV	**Kiev**	**20.66**	**322**	*e*P	**P**		**11 04 46.6**	**-0.3**
	comp=Z,11nm,0.7s							
OBN	**Obninsk**	**21.17**	**340⇑**	*e*P	**P**		**11 04 52.4**	**+0.1**
OBN				pmax	pmax			
	comp=Z,13nm,0.9s,mb4.3							
OBN	**Obninsk**	**21.17**	**340**	*e*P	**P**		**11 04 52.4**	**+0.1**
	comp=Z,13nm,0.9s,mb4.3							
BUR08	**Bucovina Ar. S**	**21.28**	**311**	*e*P	**P**		**11 04 49.9**	**-3.7**
MOS	**Moscow**	**21.45**	**342**	*e*P	**P**		**11 04 55.6**	**+0.3**
MOS				pmax	pmax			
	comp=Z,55nm,0.8s,mb4.9							
MOS	**Moscow**	**21.45**	**342**	*e*P	**P**		**11 04 55.6**	**+0.3**
	comp=Z,55nm,0.8s,mb4.9							
ARU	**Arti**	**21.67**	**14**	*e*P	**P**		**11 04 59.4**	**+1.7**
	comp=Z,18nm,1.1s,mb4.4							
ARU	**Arti**	**21.67**	**14**	*c i*P	**P**		**11 04 58.3**	**+0.6**
ARU				*e*			11 05 18.3	
ARU				S	**S**		**11 08 58.1**	**+0.1**
ARU				pmax	pmax			
	comp=Z,11nm,1.7s,mb4.0							
ARU	**Arti**	**21.67**	**14**	*i* P	**P**		**11 04 58.3**	**+0.6**
	comp=Z,11nm,1.7s,mb4.0							
ARU				S	**S**		**11 08 58.1**	**+0.1**
TKM2	**Tokmak 2**	**21.72**	**63**	*e*P	**P**		**11 05 00.8**	**+2.4**
	comp=Z,5.3nm,1.0s,mb3.9							
TKM2	**Tokmak 2**	**21.72**	**63**	*e*P	**P**		**11 05 00.8**	**+2.5**
TKM2				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb3.9							
TKM2	**Tokmak 2**	**21.72**	**63**	*e*P	**P**		**11 05 00.8**	**+2.5**
	comp=Z,5.3nm,1.0s,mb3.9							
BVAR	**Borovoye Array**	**22.91**	**34**	P	**P**		**11 05 12.8**	**+1.9**
	comp=Z,2.5nm,0.7s,mb3.8,baz=226,slow=9.9,SNR=9.3							
BVAR	**Borovoye Array**	**22.91**	**34**	P	**P**		**11 05 12.8**	**+1.9**
BVAR				pmax	pmax			
	comp=Z,3.0nm,0.7s							
BVAR	**Borovoye Array**	**22.91**	**34**	P	**P**		**11 05 12.8**	**+1.9**
KOLS	**Kolonicke sedl**	**23.60**	**312**	*e*P	**P**		**11 05 19.4**	**+1.2**
KOLS	**Kolonicke sedl**	**23.60**	**312**	*e*P	**P**		**11 05 19.4**	**+1.2**
KOLS	**Kolonicke sedl**	**23.60**	**312**	*e*P	**P**		**11 05 19.4**	**+1.2**
KOLS	**Kolonicke sedl**	**23.60**	**312**	*e*P	**P**		**11 05 19.4**	**+1.2**
KLMR	**Klimovskoe**	**25.84**	**349**	*e*P	**P**		**11 05 37.6**	**-0.9**
KLMR				pmax	pmax			
	comp=Z,30nm,1.5s,mb4.6							
KLMR	**Klimovskoe**	**25.84**	**349**	*e*P	**P**		**11 05 37.6**	**-0.9**
	comp=Z,30nm,1.5s,mb4.6							
KURK	**Kurchatov**	**26.02**	**46**	P	**P**		**11 05 41.0**	**+0.8**
	comp=Z,0.9nm,0.2s,mb3.9,baz=251,slow=9.9,SNR=3.0							
KURK				LR	LR		11 17 53.4	
	comp=Z,74nm,19.7s,MS3.2,baz=20,slow=41							
KURK	**Kurchatov**	**26.02**	**46**	P	**P**		**11 05 41.0**	**+0.7**
KURK				pmax	pmax			
	comp=Z,1.0nm,0.2s,mb4.0							
KURK				MLR	MLR			
	comp=Z,74nm,19.7s,MS3.2							
KURK	**Kurchatov**	**26.02**	**46**	P	**P**		**11 05 41.0**	**+0.7**
MKAR	**Makanchi Array**	**27.14**	**56**	P	**P**		**11 05 51.9**	**+1.4**
	comp=Z,1.2nm,0.6s,mb3.6,baz=256,slow=7.6,SNR=7.3							
MKAR	**Makanchi Array**	**27.14**	**56**	P	**P**		**11 05 51.9**	**+1.5**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**27.14**	**56**	P	**P**		**11 05 51.9**	**+1.5**
	comp=Z,1.0nm,0.6s,mb3.5							
VRAC	**Vranov**	**27.22**	**310**	LR	LR		11 19 05.9	
	comp=Z,123nm,18.3s,MS3.5,baz=267,slow=42							
GERES	**GERESS Array B**	**28.93**	**308**	P	**P**		**11 06 07.3**	**+1.0**
	comp=Z,0.4nm,0.4s,mb3.5,baz=74,slow=7.5,SNR=2.5							
GERES	**GERESS Array B**	**28.93**	**308**	P	**P**		**11 06 07.3**	**+1.0**
GERES	**GERESS Array B**	**28.93**	**308**	P	**P**		**11 06 07.3**	**+1.0**
FINES	**FINESS Array B**	**29.52**	**338**	P	**P**		**11 06 11.1**	**-0.3**
	comp=Z,2.7nm,0.9s,mb4.0,baz=156,slow=10,SNR=3.3							
FINES	**FINESS Array B**	**29.52**	**338**	P	**P**		**11 06 11.1**	**-0.3**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**29.52**	**338**	P	**P**		**11 06 11.1**	**-0.3**
ZALV	**Zalesovo Beam**	**30.78**	**43**	P	**P**		**11 06 23.9**	**+1.2**
	comp=Z,0.9nm,0.3s,mb4.1,baz=224,slow=7.6,SNR=3.1							
ZALV	**Zalesovo Beam**	**30.78**	**43**	P	**P**		**11 06 23.9**	**+1.2**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.1							
KEST	**Kesra**	**32.04**	**282**	P	**P**		**11 06 33.0**	**-1.0**
	comp=Z,2.1nm,0.8s,mb4.0,baz=52,slow=19,SNR=5.0							
KEST	**Kesra**	**32.04**	**282**	P	**P**		**11 06 33.0**	**-1.0**
SBF	**Sospel**	**32.66**	**297**	*e*P	**P**		**11 06 39.1**	**-0.

RJF			MLR	MLR			
	comp=Z,130nm,22.0s,MS3.7						
RJF	**Les Rejaudoux**	**36.87 300**	*e*P	**P**	**11 07 15.3**	**-0.3**	
LFF	**La Frestale**	**37.43 299**	*e*P	**P**	**11 07 19.6**	**-0.8**	
LFF	**La Frestale**	**37.43 299**	*e*P	**P**	**11 07 19.6**	**-0.8**	
LFF	**La Frestale**	**37.43 299**	*e*P	**P**	**11 07 19.6**	**-0.8**	
LDF	**La Druitiere**	**37.96 305**	*e*P	**P**	**11 07 23.7**	**-1.2**	
	comp=Z,3.7nm,0.5s,mb4.1						
LDF	**La Druitiere**	**37.96 305**	*e*P	**P**	**11 07 23.7**	**-1.2**	
	comp=Z,1.9nm,0.5s,mb4.1						
LDF	**La Druitiere**	**37.96 305**	*e*P	**P**	**11 07 23.7**	**-1.2**	
LDF			pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.1						
LDF	**La Druitiere**	**37.96 305**	*e*P	**P**	**11 07 23.7**	**-1.2**	
	comp=Z,1.9nm,0.5s,mb4.1						
FLN	**La Foliniere**	**38.20 306**	*e*P	**P**	**11 07 26.1**	**-0.8**	
FLN			*e*MLR	MLR			
	comp=Z,78nm,22.0s,MS3.2						
FLN	**La Foliniere**	**38.20 306**	*e*P	**P**	**11 07 26.1**	**-0.8**	
FLN			LR	LR			
	comp=Z,80nm,22.0s,MS3.5						
FLN	**La Foliniere**	**38.20 306**	*e*P	**P**	**11 07 26.1**	**-0.8**	
FLN			MLR	MLR			
	comp=Z,80nm,22.0s,MS3.5						
FLN	**La Foliniere**	**38.20 306**	*e*P	**P**	**11 07 26.1**	**-0.8**	
GRR	**Gorron**	**38.45 305**	*e*P	**P**	**11 07 28.3**	**-0.7**	
	comp=Z,13nm,0.5s,mb4.6						
GRR	**Gorron**	**38.45 305**	*e*P	**P**	**11 07 28.3**	**-0.7**	
	comp=Z,6.3nm,0.5s,mb4.6						
GRR	**Gorron**	**38.45 305**	*e*P	**P**	**11 07 28.3**	**-0.7**	
GRR			pmax	pmax			
	comp=Z,6.0nm,0.5s,mb4.6						
GRR	**Gorron**	**38.45 305**	*e*P	**P**	**11 07 28.3**	**-0.7**	
	comp=Z,6.3nm,0.5s,mb4.6						
SGMF	**Saint Gilles**	**39.59 305**	*e*P	**P**	**11 07 37.3**	**-1.2**	
SGMF	**Saint Gilles**	**39.59 305**	*e*P	**P**	**11 07 37.3**	**-1.2**	
SGMF	**Saint Gilles**	**39.59 305**	*e*P	**P**	**11 07 37.3**	**-1.2**	
QUIF	**Quistinic**	**40.00 304**	*e*P	**P**	**11 07 41.0**	**-1.0**	
	comp=Z,6.8nm,0.5s,mb4.4						
QUIF	**Quistinic**	**40.00 304**	*e*P	**P**	**11 07 41.0**	**-1.0**	
	comp=Z,3.4nm,0.5s,mb4.3						
QUIF	**Quistinic**	**40.00 304**	*e*P	**P**	**11 07 41.0**	**-1.0**	
QUIF			pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.3						
QUIF	**Quistinic**	**40.00 304**	*e*P	**P**	**11 07 41.0**	**-1.0**	
	comp=Z,3.4nm,0.5s,mb4.4						
ROSF	**Rostrenen**	**40.06 305**	*e*P	**P**	**11 07 41.6**	**-0.9**	
ROSF	**Rostrenen**	**40.06 305**	*e*P	**P**	**11 07 41.6**	**-0.9**	
ROSF	**Rostrenen**	**40.06 305**	*e*P	**P**	**11 07 41.6**	**-0.9**	
TLY	**Talaya**	**41.55 50** ⇑	*e*P	**P**	**11 07 54.4**	**-0.3**	
TLY	**Talaya**	**41.55 50**	*e*P	**P**	**11 07 54.4**	**-0.3**	
ESDC	**Sonseca Array**	**41.58 292**	P	**P**	**11 07 53.2**	**-1.9**	
	comp=Z,2.1nm,0.6s,mb3.9,baz=58,slow=9.4,SNR=7.5						
ESDC	**Sonseca Array**	**41.58 292**	P	**P**	**11 07 53.2**	**-2.0**	
ULN	**Ulaanbaatar**	**43.95 55** ⇑	*e*P	**P**	**11 08 10.8**	**-3.4**	
CMAR	**Chiang Mai Arr**	**47.16 98**	P	**P**	**11 08 38.1**	**-1.9**	
	comp=Z,0.6nm,0.3s,mb4.0,baz=322,slow=10,SNR=2.9						
CMAR			LR	LR	11 32 29.4		
	comp=Z,76nm,19.8s,MS3.7,baz=224,slow=41						
CMAR	**Chiang Mai Arr**	**47.16 98**	P	**P**	**11 08 38.1**	**-1.9**	
CMAR			pmax	pmax			
	comp=Z,1.0nm,0.3s						
CMAR			MLR	MLR			
	comp=Z,76nm,19.8s						
CMAR	**Chiang Mai Arr**	**47.16 98**	P	**P**	**11 08 38.1**	**-1.9**	
	comp=Z,76nm,19.8s						
TORD	**Torodi Ar. Bea**	**48.03 254**	P	**P**	**11 08 44.0**	**-2.8**	
	comp=Z,9.3nm,0.9s,mb4.8,baz=44,slow=8.4,SNR=5.9						
WHN	**Wuhan**	**54.06 76**	*e*P	**P**	**11 09 28.3**	**-3.8**	
YAK	**Yakutsk**	**54.89 35** ⇓	*e*P	**P**	**11 09 35.3**	**-2.3**	
YAK	**Yakutsk**	**54.89 35**	*e*P	**P**	**11 09 35.3**	**-2.3**	
DBIC	**Dimbokro**	**57.07 253**	P	**P**	**11 09 50.4**	**-3.5**	
	comp=Z,3.2nm,0.7s,mb4.5,baz=26,slow=5.2,SNR=6.1						
DBIC	**Dimbokro**	**57.07 253**	P	**P**	**11 09 50.4**	**-3.5**	
DBIC	**Dimbokro**	**57.07 253**	P	**P**	**11 09 50.4**	**-3.5**	
DBIC			pmax	pmax			
	comp=Z,3.0nm,0.7s						
ILAR	**Eielson Array**	**79.03 7**	P	**P**	**11 12 10.7**	**-0.4**	
	comp=Z,0.7nm,0.9s,mb3.6,baz=322,slow=4.7,SNR=4.1						
ILAR	**Eielson Array**	**79.03 7**	P	**P**	**11 12 10.7**	**-0.4**	
ILAR			pmax	pmax			
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	**79.03 7**	P	**P**	**11 12 10.7**	**-0.4**	
	comp=Z,1.0nm,1.0s,mb3.7						

WEL 26 11:12:11.6±0.3, 37°.36S×177°.72E, h54km±3km, ML4.0/15, 1C-3D, Error ellipse: s-maj=1.7km s-min=1.7km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.45**	**248**	P*	Pn	11 12 21.9	-0.7
WIZ				S*	Sn	11 12 31.2	+0.8
MXZ	**Matakaoa Point**	**0.51**	**114**	P*	Pn	11 12 21.3	-1.9
MXZ				S*	Sn	11 12 32.3	+0.8
PUZ	**Puketiti**	**0.83**	**149**	PN	Pn	11 12 27.0	-0.1
PUZ				*e*SN	Sn	11 12 39.2	+0.6
MWZ	**Matawai**	**0.99**	**189**	⇑P*	Pn	11 12 28.7	-0.5
MWZ				S*	Sn	11 12 41.6	-0.6
MWZ				S*	Sn	11 12 42.0	-0.3
URZ	**Urewera**	**1.02**	**208**	P*	Pn	11 12 29.3	-0.3
URZ				S*	Sn	11 12 43.1	+0.1
MARZ	**Manawahe**	**1.04**	**232**	P*	Pn	11 12 29.7	-0.2
OPRZ	**Ohinepanea**	**1.04**	**242**	⇓P*	Pn	11 12 29.6	-0.4
EDRZ	**Edgecumbe**	**1.08**	**226**	P*	Pn	11 12 30.4	0.0
MYRZ	**Mayor Island**	**1.18**	**273**	P*	Pn	11 12 31.4	-0.4
CNGZ	**Carnagh Statio**	**1.19**	**161**	PN	Pn	11 12 32.1	+0.1
TGRZ	**Tauranga**	**1.22**	**252**	P*	Pn	11 12 32.1	-0.2
LIRZ	**Lichensteins R**	**1.24**	**238**	P*	Pn	11 12 32.8	+0.2
TARZ	**Mount Tarawera**	**1.30**	**227**	P*	Pn	11 12 34.0	+0.6
OMRZ	**Omania**	**1.30**	**235**	P*	Pn	11 12 33.7	+0.2
KARZ	**Kaharoa**	**1.34**	**240**	P*	Pn	11 12 34.1	+0.1
RRRZ	**Republican Roa**	**1.37**	**224**	P*	Pn	11 12 34.4	+0.1
HRRZ	**Handcock Road**	**1.53**	**227**	P*	Pn	11 12 37.0	+0.4
PRRZ	**Plateau Road**	**1.55**	**222**	P*	Pn	11 12 36.8	+0.1
PRGZ	**Paritu Road**	**1.57**	**175**	PN	Pn	11 12 36.4	-0.7
ALRZ	**Allen Road**	**1.62**	**222**	P*	Pn	11 12 38.0	+0.2
RAHZ	**Arahi**	**1.64**	**198**	PN	Pn	11 12 38.5	+0.6
KNZ	**Kokohu**	**1.66**	**181**	PN	Pn	11 12 37.6	-0.7
KUZ	**Kuaotunu**	**1.71**	**290**	⇓PN	Pn	11 12 38.1	-0.9
TOZ	**Tahuroa Road**	**1.80**	**257**	P*	Pn	11 12 40.0	-0.2
MHGZ	**Mahia Peninsul**	**1.80**	**175**	PN	Pn	11 12 39.6	-0.6
NMHZ	**Naumai**	**1.88**	**202**	PN	Pn	11 12 41.9	+0.6
BKZ	**Black Stump Fm**	**2.05**	**208**	P*	Pn	11 12 43.4	-0.1
MKAZ	**Moumakai**	**2.05**	**276**	⇓PN	Pn	11 12 43.6	0.0
RITZ	**Rihia Road**	**2.18**	**222**	P*	Pn	11 12 46.8	+1.4
MCHZ	**McNeill Hill**	**2.23**	**201**	PN	Pn	11 12 46.3	+0.2
OTAZ	**Otara**	**2.27**	**279**	PN	Pn	11 12 46.9	+0.3
MTAZ	**Motutapu**	**2.31**	**283**	PN	Pn	11 12 46.2	-1.1
CKHZ	**Cape Kidnapper**	**2.35**	**192**	PN	Pn	11 12 46.9	-0.9
KRVZ	**Karewarewa**	**2.38**	**223**	P*	Pn	11 12 49.3	+1.2
WTVZ	**West Tongariro**	**2.43**	**223**	P*	Pn	11 12 50.4	+1.7
NGZ	**Ngauruhoe**	**2.46**	**222**	P*	Pn	11 12 50.4	+1.1
KAAZ	**Kauri Point**	**2.47**	**282**	PN	Pn	11 12 49.9	+0.6
TWVZ	**Taurewa**	**2.48**	**226**	P*	Pn	11 12 50.4	+0.9
BHHZ	**Black Hill Sta**	**2.49**	**211**	P*	Pn	11 12 49.8	+0.2
TUVZ	**Tukino**	**2.50**	**220**	P*	Pn	11 12 50.9	+1.1
WPVZ	**Whakapapa**	**2.51**	**222**	P*	Pn	11 12 51.0	+1.1
KAHZ	**Kahuranaki**	**2.52**	**195**	PN	Pn	11 12 49.2	-0.9
HIZ	**Hauiti**	**2.54**	**242**	PN	Pn	11 12 51.0	+0.7
WTAZ	**Waiatarua**	**2.55**	**279**	PN	Pn	11 12 50.9	+0.5
FWVZ	**Far West T-bar**	**2.55**	**221**	P*	Pn	11 12 51.7	+1.3
MOVZ	**Moawhango**	**2.56**	**216**	P*	Pn	11 12 50.8	+0.2
RVAZ	**Riverhead Bore**	**2.58**	**282**	PN	Pn	11 12 51.1	+0.3
WNVZ	**Wahianoa**	**2.58**	**220**	P*	Pn	11 12 51.6	+0.8
PKVZ	**Pokaka**	**2.68**	**223**	P*	Pn	11 12 53.5	+1.2
PXZ	**Pawanui**	**2.75**	**194**	PN	Pn	11 12 51.2	-2.0
PNHZ	**Pukenui**	**2.82**	**204**	PN	Pn	11 12 52.8	-1.3
WPHZ	**Waipukurau**	**2.88**	**200**	PN	Pn	11 12 53.4	-1.6
VRZ	**Vera Road**	**2.92**	**232**	P*	Pn	11 12 57.0	+1.5
PRHZ	**Porangahau**	**3.03**	**196**	PN	Pn	11 12 55.0	-2.0
WCZ	**Waipu Caves**	**3.06**	**297**	PN	Pn	11 12 56.7	-0.7
DVHZ	**Dannevirke**	**3.18**	**202**	PN	Pn	11 12 56.7	-2.4
WAZ	**Wanganui**	**3.21**	**221**	PN	Pn	11 13 00.5	+1.0
RAEZ	**Rainy Point**	**3.25**	**233**	PN	Pn	11 13 03.0	+3.0
NEZ	**North Egmont**	**3.43**	**235**	PN	Pn	11 13 05.3	+2.8
MRZ	**Mangatainoka R**	**3.70**	**206**	PN	Pn	11 13 03.7	-2.4
HOWZ	**Holdsworth Sta**	**3.93**	**205**	PN	Pn	11 13 06.0	-3.3
OUZ	**Omahuta**	**3.95**	**301**	PN	Pn	11 13 09.6	-0.1
OGWZ	**Otaki Gorge**	**3.98**	**209**	PN	Pn	11 13 07.8	-2.3
KIW	**Kapiti Island**	**4.12**	**211**	PN	Pn	11 13 09.4	-2.6
CAW	**Cannon Point**	**4.27**	**208**	PN	Pn	11 13 11.0	-3.0
TRWZ	**Traveller**	**4.33**	**201**	PN	Pn	11 13 11.4	-3.4
MSWZ	**Moikau Station**	**4.48**	**204**	PN	Pn	11 13 14.0	-2.9
DUWZ	**D'Urville Isla**	**4.53**	**219**	PN	Pn	11 13 15.4	-2.2
WEL	**Wellington**	**4.54**	**209**	PN	Pn	11 13 14.7	-3.0
SNZO	**South Karori**	**4.58**	**210**	PN	Pn	11 13 14.6	-3.7
BHW	**Baring Head**	**4.61**	**208**	PN	Pn	11 13 15.0	-3.6
TCW	**Tory Channel**	**4.68**	**214**	PN	Pn	11 13 16.3	-3.3
NNZ	**Nelson**	**5.12**	**220**	PN	Pn	11 13 22.3	-3.3
BSWZ	**Blackbirch Sta**	**5.27**	**213**	PN	Pn	11 13 23.7	-4.0
THZ	**Tophouse**	**5.76**	**219**	PN	Pn	11 13 31.0	-3.4
KHZ	**Kahutara**	**5.99**	**211**	PN	Pn	11 13 33.0	-4.5
DSZ	**Denniston Nort**	**6.33**	**224**	PN	Pn	11 13 38.1	-4.1
MQZ	**McQueen's Vall**	**7.42**	**210**	PN	Pn	11 13 50.6	-6.6
ODZ	**Otahua Downs**	**9.34**	**213**	*e*PN	Pn	11 14 17.3	-6.2

*ATH **26** 11:31:23.7, 40°.58N±21°.78E, h4km, MD3.2/3*
*ISCJB **26** 11:31:25.1±1.1, 40°.52N±0°.05×21°.86E±0°.08, h4km, Error ellipse: s-maj=9.0km s-min=7.6km az=3.1*
ISC 26 11:31:25.1±1.2, 40°.54N±0°.05×21°.86E±0°.09, h4km, n5, σ0°.96/8, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.24**	**195**	*e*PG	**Pg**	**11 31 29.2**	**-0.7**
KZN				*e*SG	**Sg**	**11 31 32.7**	**-0.4**
LIT	**Litokhoron**	**0.66**	**132**	*e*PG	**Pg**	**11 31 37.5**	**-0.2**
LIT				*e*SG	**Sg**	**11 31 47.4**	**+1.2**
KRUS	**Krusevo**	**0.94**	**331**	*e*Pn	**Pn**	**11 31 46.4**	**+1.3**
THL	**Klokotos Trika**	**0.98**	**173**	*e*PG	**Pg**	**11 31 43.3**	**-0.7**
THL				*e*SG	**Sg**	**11 31 57.8**	**+1.0**
PLG	**Polygyros**	**1.23**	**97**	*e*PB	**Pb**	**11 31 47.3**	**-1.5**

*THR **26** 12:03:12.3±0.9, 35°.65N×49°.00E, h14km±9km, ML3.5*
*ISCJB **26** 12:03:14.4±0.6, 35°.80N±0°.05×49°.19E±0°.06, h10km, Error ellipse: s-maj=9.3km s-min=4.6km az=135.9*
*CSEM **26** 12:03:14.7±0.5, 35°.79N×49°.19E, h2km, ML3.5, Error ellipse: s-maj=17.0km s-min=8.6km az=35.0*
*TEH **26** 12:03:16.1, 35°.62N×49°.11E, h10km*
ISC 26 12:03:15.1±0.6, 35°.78N±0°.05×49°.18E±0°.06, h10km, n33, σ1°.36/38, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRAZ	**Razeghan**	**0.71**	**121**	*e*Pg	**Pg**	**12 03 27.5**	**-1.4**
IRAZ				*e*		12 03 27.9	
	comp=Z,24μm,0.2s						
IRAZ				*e*Sg	**Sg**	**12 03 38.4**	**+0.2**
IRAZ	**Razeghan**	**0.71**	**121**	*e*Pg	**Pg**	**12 03 27.5**	**-1.4**
IRAZ				*e*Sg	**Sg**	**12 03 38.4**	**+0.2**
ZNJK	**Zanjan**	**0.98**	**336**	*e*Pg	**Pg**	**12 03 32.4**	**-1.6**
ZNJK				*e*Sg	**Sg**	**12 03 46.7**	**-0.1**
ZNJK	**Zanjan**	**0.98**	**336**	*e*Pg	**Pg**	**12 03 32.4**	**-1.6**
ZNJK				*e*Sg	**Sg**	**12 03 46.7**	**0.0**
IMHD	**Mahdasht**	**1.21**	**94**	*e*Pg	**Pg**	**12 03 37.3**	**-1.2**
IMHD				*e*		12 03 58.2	
	comp=Z,9μm,0.1s						
IMHD	**Mahdasht**	**1.21**	**94**	*e*Pg	**Pg**	**12 03 37.3**	**-1.2**
THKV	**Tehran--Karaj**	**1.39**	**84**	*e*Pg	**Pg**	**12 03 41.0**	**-0.8**
THKV				AML	AML	12 04 10.5	
	comp=E,485nm,0.4s						
ASAO	**Ashtian**	**1.41**	**150**	*e*Pg	**Pn**	**12 03 38.2**	**-2.6**
ASAO	**Ashtian**	**1.41**	**150**	*e*Pg	**Pn**	**12 03 38.2**	**-2.6**
CHTH	**Charan**	**1.59**	**85**	*e*Pg	**Pg**	**12 03 44.0**	**-1.6**
CHTH	**Charan**	**1.59**	**85**	*e*Pg	**Pg**	**12 03 44.0**	**-1.6**
SNGE	**Sanandaj**	**1.65**	**246**	*e*Pg	**Pn**	**12 03 39.0**	**-5.0**
SNGE				*e*Pg	**Pn**	**12 03 39.1**	**-5.0**
SNGE				AML	AML	12 04 00.9	
	comp=E,992nm,1.2s						
SNGE	**Sanandaj**	**1.65**	**246**	*e*Pg	**Pn**	**12 03 39.1**	**-5.0**
GHVR	**GHOM**	**2.16**	**126**	*e*Pg	**Pn**	**12 03 52.2**	**+1.0**
GHVR	**GHOM**	**2.16**	**126**	*e*Pg	**Pn**	**12 03 52.2**	**+1.0**
IVRN	**Varamin**	**2.22**	**110**	*e*Pn	**Pn**	**12 03 52.5**	**+0.5**
IVRN				*e*		12 04 04.9	
	comp=Z,2μm,0.2s						
IVRN	**Varamin**	**2.22**	**110**	*e*Pn	**Pn**	**12 03 52.5**	**+0.5**
DAMV	**Damavand**	**2.28**	**93**	*e*Pn	**Pn**	**12 03 53.7**	**+0.9**
DAMV				AML	AML	12 04 30.3	
	comp=E,207nm,0.7s						
DAMV				AML	AML	12 04 32.3	
	comp=N,160nm,0.0s						
DAMV	**Damavand**	**2.28**	**93**	*e*Pn	**Pn**	**12 03 53.7**	**+0.9**
IDMV	**Damavand**	**2.33**	**94**	*e*Pn	**Pn**	**12 03 55.9**	**+2.4**
IDMV				*e*		12 04 33.4	
	comp=Z,3μm,0.2s						
IDMV	**Damavand**	**2.33**	**94**	*e*Pn	**Pn**	**12 03 55.9**	**+2.4**
ISRB	**Sarab**	**2.38**	**330**	*e*Pn	**Pn**	**12 03 56.6**	**+2.4**
ISRB				*e*		12 04 02.1	
	comp=Z,1μm,0.1s						
ISRB	**Sarab**	**2.38**	**330**	*e*Pn	**Pn**	**12 03 56.6**	**+2.4**
IDHR	**Dehrash**	**2.53**	**246**	*e*Pn	**Pn**	**12 03 55.6**	**-0.6**
IDHR				*e*		12 04 36.5	
	comp=Z,3μm,0.3s						
IDHR	**Dehrash**	**2.53**	**246**	*e*Pn	**Pn**	**12 03 55.6**	**-0.6**
ISFB	**Sefidab**	**2.88**	**119**	*e*Pn	**Pn**	**12 04 01.8**	**+0.7**
ISFB				*e*		12 04 54.0	
	comp=Z,2μm,0.4s						
ISFB	**Sefidab**	**2.88**	**119**	*e*Pn	**Pn**	**12 04 01.8**	**+0.7**
IKLH	**Kolahrood**	**3.15**	**140**	*e*Pn	**Pn**	**12 04 07.3**	**+2.5**
IKLH				*e*		12 05 04.6	
	comp=E,1μm,0.2s						
IKLH	**Kolahrood**	**3.15**	**140**	*e*Pn	**Pn**	**12 04 07.3**	**+2.5**
IPIR	**Pirpir**	**3.39**	**155**	*e*Pn	**Pb**	**12 04 14.7**	**-0.7**
IPIR				*e*		12 05 04.3	
	comp=E,878nm,0.3s						
IPIR	**Pirpir**	**3.39**	**155**	*e*Pn	**Pb**	**12 04 14.7**	**-0.7**
IANJ	**Anjilo**	**3.87**	**93**	*e*Pn	**Pn**	**12 04 15.9**	**+1.2**
IANJ	**Anjilo**	**3.87**	**93**	*e*Pn	**Pn**	**12 04 15.9**	**+1.2**

NNC 26 12:27:06.2±2.6, 54°.10N×86°.62E, h0km, mb3.9, mpv3.6, 10C-7D, Error ellipse: s-maj=20.9km s-min=12.4km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.95**	**239**	⇑Pn	Pn	12 28 36.1	+0.6
	8.8nm,0.8s						
KURK				⇑Sn	Sn	12 29 45.4	+1.2
	3.7nm,0.8s						
KURK				⇑Lg		12 30 15.5	
	15nm,0.7s						
KURBB	**Kurchatov Arra**	**6.05**	**238**	⇑Pn	Pn	12 28 36.4	-0.4
	2.4nm,0.7s						
KURBB				⇓Sn	Sn	12 29 48.2	+1.4
	2.5nm,0.8s						
KURBB				⇓Lg		12 30 18.7	
	9.0nm,0.8s						
MK31	**Makanchi Array**	**7.82**	**202**	⇑Pn	Pn	12 29 04.2	+3.2
	2.1nm,0.7s,baz=20,slow=12,SNR=17						
MK31				⇑Sn	Sn	12 30 36.1	+5.9
	2.8nm,0.8s,baz=26,slow=28,SNR=7.4						
MK31				⇑Lg		12 31 11.0	
	12nm,0.8s,baz=28,slow=31,SNR=6.7						
VOSK	**Vostochnaya**	**9.44**	**268**	⇑Pn	Pn	12 29 23.6	+0.4
	3.2nm,0.7s						
VOSK				⇓Sn	Sn	12 31 11.9	+1.8
	8.5nm,0.7s						
BVA0	**Borovoye Array**	**9.72**	**270**	⇓Pn	Pn	12 29 27.1	0.0
	0.4nm,0.8s,baz=68,slow=15,SNR=6.3						
BVA0				⇓Sn	Sn	12 31 18.3	+1.5
	0.4nm,0.7s,baz=72,slow=25						
BRVK	**Borovoye**	**9.77**	**270**	⇑Pn	Pn	12 29 28.0	+0.1
	3.4nm,0.7s						
BRVK				⇓Sn	Sn	12 31 19.3	+1.1
	8.0nm,1.0s						
ZRNK	**Zerenda**	**10.55**	**271**	⇑Pn	Pn	12 29 38.2	-0.2
	2.3nm,0.6s						
ZRNK				⇓Sn	Sn	12 31 38.9	+1.7
	9.3nm,0.9s						

*ISCJB **26** 12:29:20.2±1.2, 25°.8N±0°.2×95°.59E±0°.07, h10km, mb3.5/3, Error ellipse: s-maj=27.3km s-min=9.5km az=3.3*
*IDC **26** 12:29:20.7±3.6, 26°.01N×95°.86E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/24, mbtmp3.4/3, Error ellipse: s-maj=370.3km s-min=29.7km az=59.0*
ISC 26 12:29:22.0±1.2, 25°.9N±0°.2×95°.65E±0°.07, h10km, n5, σ0°.42/6, mb3.5/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.42**	**265**	*e*PN	**Pg**	**12 30 28.0**	**+0.5**
SHL				*e*SN	**Sg**	**12 31 11.5**	**-0.3**
LSA	**Lhasa**	**5.49**	**314**	P	**Pn**	**12 30 51.0**	**+7.1**
MKAR	**Makanchi Array**	**23.39**	**336**	P	**P**	**12 34 31.0**	**-0.1**
	0.5nm,0.4s,mb3.3,baz=154,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**59.07**	**137**	P	**P**	**12 39 22.8**	**+0.2**
	0.3nm,0.4s,mb3.6,baz=326,slow=7.5,SNR=10						
ASAR	**Alice Springs**	**61.64**	**140**	P	**P**	**12 39 39.9**	**-0.3**
	0.2nm,0.6s,mb3.4,baz=322,slow=7.1,SNR=4.4						

*ISCJB **26** 12:55:22.8±0.5, 34°.94N±0°.07×137°.20E±0°.07, h309km±4km, mb3.4/5, Error ellipse: s-maj=11.9km s-min=8.6km az=168.5*
*JMA **26** 12:55:22.9±0.1, 34°.96N×137°.17E, h312km±2km, M3.2*
*NEIC **26** 12:55:22.9, 34°.96N×137°.17E, h312km, MG3.2(JMA), After JMA.*
*IDC **26** 12:55:23.0±0.8, 34°.84N×137°.13E, h296km±13km, mb3.3/5, mb1 3.4/7, mb1mx3.1/26, mbtmp3.2/7, Error ellipse: s-maj=30.6km s-min=15.8km az=59.0*
ISC 26 12:55:23.7±0.5, 34°.93N±0°.07×137°.21E±0°.07, h304km±4km, n28, σ0°.63/37, mb3.4/5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAO	**Obara**	**0.34**	**7**	P	**Pn**	**12 56 02.7**	**+0.4**
JAO				S	**S**	**12 56 33.6**	**+0.6**
HMMJ	**Hamamatsu 2**	**0.43**	**100**	P	**Pn**	**12 56 02.9**	**+0.4**
HMMJ				S	**S**	**12 56 33.4**	**0.0**
JIE	**Ise**	**0.68**	**218**	P	**Pn**	**12 56 03.5**	**+0.2**
JNY	**Yasuok**	**0.68**	**51**	P	**Pn**	**12 56 03.5**	**+0.3**
JNY				S	**S**	**12 56 35.1**	**+0.6**
JEG	**Eigenji**	**0.70**	**287**	P	**Pn**	**12 56 03.5**	**+0.3**
JGM	**Miyama**	**0.86**	**333**	P	**Pn**	**12 56 03.9**	**+0.1**
JGM				S	**S**	**12 56 35.6**	**-0.1**
JKN2	**Miekihoku**	**1.04**	**228**	P	**Pn**	**12 56 04.7**	**0.0**
JYN	**Shimob**	**1.23**	**62**	P	**Pn**	**12 56 06.1**	**+0.6**
JWY	**Kouya**	**1.51**	**242**	P	**Pn**	**12 56 07.3**	**0.0**
JKG	**Kaga**	**1.52**	**332**	P	**Pn**	**12 56 06.9**	**-0.3**
JWT	**Wachi**	**1.52**	**284**	P	**Pn**	**12 56 07.1**	**-0.2**
JOD2	**Odawara 2**	**1.58**	**77**	P	**Pn**	**12 56 08.2**	**+0.5**
JRY	**Ryogami san**	**1.75**	**51**	P	**Pn**	**12 56 09.6**	**+0.7**
JRY				S	**S**	**12 56 44.7**	**-0.1**
MAJO	**Matsushiro**	**1.80**	**27**	*e*Pn	**Pn**	**12 56 09.4**	**+0.2**
MAT	**Matsushiro**	**1.80**	**27**	P	**Pn**	**12 56 09.7**	**+0.5**
MAT				S	**S**	**12 56 45.0**	**-0.4**
MJAR	**Matsushiro Arr**	**1.80**	**27**	P	**Pn**	**12 56 09.6**	**+0.4**
	1.3nm,0.3s,baz=242,slow=13,SNR=15						
MJAR				S	**S**	**12 56 44.5**	**-0.9**
	0.5nm,0.3s,baz=189,slow=15,SNR=4.3						
JWZ	**Kozaga**	**1.87**	**222**	P	**Pn**	**12 56 09.5**	**-0.3**
JAG	**Ashikaga**	**2.36**	**50**	P	**Pn**	**12 56 13.3**	**-0.4**
JAG				*e*S	**S**	**12 56 51.4**	**-2.1**
JAI	**Aioi**	**2.55**	**244**	P	**Pn**	**12 56 14.8**	**-0.6**
JHJ	**Hachijo jima 2**	**2.80**	**129**	P	**Pn**	**12 56 18.5**	**+0.7**
	10nm,0.3s,baz=238,slow=12,SNR=6.6						
BSO1	**Boso 1**	**3.12**	**94**	P	**Pn**	**12 56 19.8**	**-1.0**
BSO1				S	**S**	**12 57 06.6**	**+0.1**
JHS	**Saijyo**	**3.36**	**272**	P	**Pn**	**12 56 22.8**	**-0.5**
KSRS	**Korea Array**	**7.92**	**291**	P	**Pn**	**12 57 16.1**	**-0.1**
	0.1nm,0.3s,baz=110,slow=15,SNR=4.5						
SONM	**Songino Array**	**26

LBMI	Labuha	2.32 118	P		Pn	14 05 45.1	-0.8
LUWI	Luwuk	3.06 241	P		Pn	14 05 58.3	+2.4
SGSI	Sangihe	3.21 1	P		Pn	14 05 58.2	+0.2
MRSI	Marisa	3.51 270	P		Pn	14 06 01.9	-0.1
NLAI	Namlea	4.02 156	P		Pn	14 06 07.7	-1.3
KDI	Kendari	5.21 213	P		Pn	14 06 25.0	-0.3
	0.1nm17nm,0.9s						
MSSI	Masamba	5.93 240	P		Pn	14 06 36.2	+1.1
	0.7nm84nm,0.5s						
SWI	Sorong	5.96 103	P		Pn	14 06 35.3	-0.1
	0.1nm947nm15nm,1.2s						
TTSI	Tana Toraja	6.61 238	P		Pn	14 06 44.6	+0.2
SPSI	Sidrap Palu	7.17 232	P		Pn	14 06 53.5	+1.4
KAPI	Kappang	7.87 226	P		Pn	14 07 04.9	+3.3
KKM	Kota Kinabalu	10.76 301	ePn		Pn	14 07 45.0	+4.0
KSM	Kuching	15.17 274	eP		Pn	14 08 44.4	+4.4
	7.0nm,0.4s						
FITZ	Fitzroy Crossi	18.44 179	P		Pn	14 09 17.2	-3.2
	0.1nm,0.3s,baz=4.2,slow=11,SNR=3.2						
WRA	Warramunga Arr	22.06 157	P		P	14 09 57.4	-1.2
	4.7nm,0.5s,mb4.1,baz=338,slow=10,SNR=54						
WRA	Warramunga Arr	22.06 157	P		P	14 09 57.4	-1.2
ASAR	Alice Springs	25.34 162	P		P	14 10 30.7	+0.8
	3.8nm,0.8s,mb3.9,baz=342,slow=8.8,SNR=26						
ASAR			PcP		PcP	14 14 02.5	+1.4
	0.4nm,0.5s,baz=347,slow=2.6,SNR=5.7						
JOW	Kunigami	26.37 6	P		P	14 10 40.0	+0.8
	10.0nm,0.7s,mb4.4,baz=207,slow=10,SNR=5.6						
JOW	Kunigami	26.37 6	P		P	14 10 40.0	+0.8
CBIJ	Chichi jima	30.99 30	LR		LR	14 23 41.4	
	comp=Z,65nm,19.9s,baz=115,slow=36						
CMAR	Chiang Mai Arr	31.58 306	P		P	14 11 23.4	-2.2
	0.4nm,0.5s,mb3.4,baz=118,slow=8.6,SNR=3.9						
STKA	Stephens Creek	35.60 156	P		P	14 12 00.9	+0.5
	1.0nm,0.4s,mb4.1,baz=8.9,slow=15,SNR=6.5						
STKA	Stephens Creek	35.60 156	P		P	14 12 01.1	+0.8
	0.4nm,0.8s,mb3.4						
KSRS	Korea Array	36.89 3	P		P	14 12 12.1	+0.8
	1.1nm,0.7s,mb3.9,baz=173,slow=9.4,SNR=4.3						
LZH	Lanzhou	40.74 333	eP		P	14 12 37.8	-5.7
LZH			pP		pP	14 12 59.3	-2.3
LZH			sP		sP	14 13 04.0	-6.1
LZH			pmax		pmax		
	comp=Z,18nm,1.1s,mb4.8						
SONM	Songino Array	50.01 343	P		P	14 13 56.0	-0.6
	comp=Z,0.3nm,0.6s,mb3.4,baz=150,slow=6.0,SNR=4.0						
PETK	Petropavlovsk-	58.93 22	P		P	14 15 02.6	+1.5
	comp=Z,2.3nm,0.9s,mb4.2,baz=201,slow=11,SNR=3.5						
MK31	Makanchi Array	59.54 327	eP		P	14 15 05.0	-0.5
MKAR	Makanchi Array	59.54 327	P		P	14 15 05.1	-0.4
	comp=Z,1.8nm,0.4s,mb4.5,baz=122,slow=8.3,SNR=29						
MKAR			PcP		PcP	14 15 52.6	+0.4
	comp=Z,0.6nm,0.6s,baz=128,slow=4.8,SNR=3.8						
ZALV	Zalesovo Beam	62.94 334	P		P	14 15 28.4	+0.1
	comp=Z,1.5nm,0.8s,mb4.0,baz=130,slow=8.0,SNR=6.8						
KURK	Kurchatov	63.83 329	eP		P	14 15 33.7	-0.6
	comp=Z,1.9nm,0.5s,mb4.2						
AKTK	Aktyubinsk	75.44 322	P		P	14 16 45.6	-0.1
AKTO	Aktyubinsk	75.44 322	P		P	14 16 45.6	-0.1
	comp=Z,1.0nm,0.4s,mb3.9,baz=88,slow=10.0,SNR=5.6						
ILAR	Eielson Array	88.59 25	P		P	14 17 54.2	0.0
	comp=Z,0.2nm,0.5s,mb3.4,baz=256,slow=3.6,SNR=4.3						

*IDC **26** 14:28:59.8±3.3, 30°.73N×83°.49E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.4/26, mbtmp3.4/5, ML3.6/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/24, Error ellipse: s-maj=94.2km s-min=25.0km az=73.0*
*NEIC **26** 14:29:00.6±0.9, 30°.74N×83°.44E, h10km, mb3.8/2, Error ellipse: s-maj=20.5km s-min=12.5km az=50.0*
*ISCJB **26** 14:29:08.3±0.7, 31°.30N±0°.08×83°.86E±0°.06, h33km, mb3.4/4, MS3.4/2, Error ellipse: s-maj=11.1km s-min=7.0km az=173.3*

ISC 26 14:29:10.2±0.7, 31°.36N±0°.08×83°.82E±0°.06, h35km, n15, σ1§28/15, mb3.4/4, MS3.4/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	Pithoragarh	3.60	241	ePKP	Pn	14 30 02.2	-1.3
PTH				eS	Sn	14 30 45.2	+0.5
LSA	Lhasa	6.53	103	P	Pn	14 30 45.5	+1.7
LSA				S	Sn	14 31 56.0	-1.1
LSA				LR	LR		
	comp=N,250nm,9.7s						
LSA				LR	LR		
	comp=E,270nm,8.5s						
LSA				LR	LR		
	comp=Z,320nm,9.7s						
LSA	Lhasa	6.53	103	Pn	Pn	14 30 44.8	+1.0
KBL	Kabul	12.81	288	ePn	Pn	14 32 01.7	-8.1
MKAR	Makanchi Array	15.46	356	Pn	Pn	14 32 45.2	-0.3
	comp=Z,0.1nm,0.3s,baz=182,slow=11,SNR=2.3						
CMAR	Chiang Mai Arr	18.76	130	P	Pn	14 33 17.4	-10
	comp=Z,0.2nm,0.3s,baz=301,slow=12,SNR=2.8						
CMAR	Chiang Mai Arr	18.76	130	P	Pn	14 33 17.4	-10
KURK	Kurchatov	19.73	350	P	Pn	14 33 36.4	-1.9
	comp=Z,17nm,1.8s						
ZALV	Zalesovo Beam	22.59	2	P	P	14 34 07.7	+0.3
	comp=Z,0.5nm,0.4s,mb3.3,baz=170,slow=8.8,SNR=2.8						
ZALV	Zalesovo Beam	22.59	2	P	P	14 34 07.7	+0.3
SONM	Songino Array	23.81	40	P	P	14 34 21.1	+1.3
	comp=Z,0.5nm,0.6s,mb3.2,baz=233,slow=11,SNR=3.4						
ABKAR	Akbulak array	25.35	322	eP	P	14 34 36.8	+3.0
	comp=Z,0.7nm,0.7s,mb3.3						
NOA	NORSAR Array B	54.78	325	LR	LR	15 04 02.7	
	comp=Z,18nm,20.1s,MS3.1,baz=0,0,slow=38						
GUMO	Guam	58.43	93	LR	LR	15 04 39.5	
	comp=Z,62nm,20.9s,MS3.7,baz=107,slow=36						
WRA	Warramunga Arr	70.35	130	P	P	14 40 14.9	-5.7
	comp=Z,1.1nm,0.8s,mb3.8,baz=323,slow=6.4,SNR=9.4						

*IDC **26** 14:44:33.0±1.8, 11°.24S×164°.63E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.8/18, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=48.2km s-min=28.7km az=144.0*
*ISCJB **26** 14:44:37.7±1.1, 11°.1S±0°.2×164°.3E±0°.2, h33km, mb3.8/6, Error ellipse: s-maj=24.3km s-min=22.1km az=155.4*
*NEIC **26** 14:44:39.4±0.8, 11°.09S×164°.40E, h35km, mb4.1/2, Error ellipse: s-maj=18.8km s-min=16.8km az=148.0*

ISC 26 14:44:39.6±1.1, 11°.1S±0°.2×164°.4E±0°.2, h35km, n8, σ0§52/9, mb3.8/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.66	290	Pn	Pn	14 45 47.7	+0.1
	4.3nm,0.3s,baz=111,slow=8.6,SNR=3.7						
HNR				Sn	Sn	14 46 48.9	+8.3
	4.4nm,0.3s,baz=255,slow=20,SNR=3.2						
WB2	Warramunga Arr	30.20	249	eP	P	14 50 46.9	-0.2
WRA	Warramunga Arr	30.21	249	P	P	14 50 46.7	-0.4
	2.3nm,0.9s,mb3.9,baz=79,slow=9.3,SNR=9.3						
ASAR	Alice Springs	31.58	243	P	P	14 50 59.1	-0.1
	0.9nm,0.8s,mb3.7,baz=69,slow=10.0,SNR=11						
ULN	Ulaanbaatar	77.55	325	P	P	14 56 32.0	+0.1
	1.1nm,0.8s,mb3.8						
SONM	Songino Array	77.91	324	P	P	14 56 34.8	+0.9
	0.3nm,0.4s,mb3.6,baz=130,slow=4.5,SNR=2.8						
QSPA	South Pole Qui	78.92	180	eP	P	14 56 39.5	+0.5
	3.5nm,1.1s,mb4.2						
ILAR	Eielson Array	83.98	19	P	P	14 57 05.0	-0.9
	0.5nm,0.9s,mb3.6,baz=229,slow=6.9,SNR=6.7						

*IDC **26** 14:47:17.2±1.7, 11°.17S×164°.56E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.8/18, mbtmp3.9/6, ML4.1/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/29, Error ellipse: s-maj=47.1km s-min=27.8km az=144.0*
*ISCJB **26** 14:47:18.2±6.9, 11°.2S±0°.2×164°.5E±0°.1, h15km±47km, mb3.9/7, Error ellipse: s-maj=30.3km s-min=18.6km az=28.8*
*NEIC **26** 14:47:22.9±0.8, 11°.14S×164°.47E, h35km, mb4.2/2, Error ellipse: s-maj=18.5km s-min=17.3km az=159.0*

ISC 26 14:47:18.2±7.0, 11°.2S±0°.2×164°.6E±0°.1, h5km±43km, n8, σ0§56/9, mb3.9/7, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.88	290	Pn	Pn	14 48 32.6	+0.3
	7.5nm,0.3s,baz=98,slow=14,SNR=4.7						
HNR				LR	LR	14 49 28.3	
	comp=Z,112nm,21.5s,baz=114,slow=27						
HNR				Sn	Sn	14 49 29.3	+0.3
	10nm,0.3s,baz=198,slow=20,SNR=3.8						
WRA	Warramunga Arr	30.37	250	P	P	14 53 30.7	-0.7
	1.7nm,0.8s,mb3.9,baz=79,slow=9.3,SNR=8.7						
ASAR	Alice Springs	31.72	243	P	P	14 53 43.0	-0.3
	1.2nm,1.0s,mb3.7,baz=64,slow=10,SNR=13						
ULN	Ulaanbaatar	77.73	324	P	P	14 59 15.8	-0.3
	0.9nm,0.6s,mb3.9						
SONM	Songino Array	78.09	324	P	P	14 59 18.6	+0.5
	0.3nm,0.5s,mb3.5,baz=123,slow=5.3,SNR=2.7						
QSPA	South Pole Qui	78.84	180	eP	P	14 59 22.8	+1.0
	5.7nm,1.2s,mb4.4						
ILAR	Eielson Array	83.98	19	P	P	14 59 49.2	+0.1
	0.7nm,0.9s,mb3.8,baz=230,slow=6.7,SNR=7.4						
MKAR	Makanchi Array	92.83	317	P	P	15 00 31.0	-0.9
	0.3nm,0.6s,mb3.9,baz=99,slow=4.7,SNR=2.9						

*ISCJB **26** 14:59:20.4±0.4, 10°.62S±0°.06×161°.50E±0°.07, h81km, mb4.2/22, Error ellipse: s-maj=10.7km s-min=7.9km az=151.2*
*NEIC **26** 14:59:21.9±0.4, 10°.56S×161°.49E, mb4.7/8, Error ellipse: s-maj=13.8km s-min=8.8km az=146.0*
*IDC **26** 14:59:22.4±0.7, 10°.52S×161°.53E, h84km±5km, mb4.0/14, mb1 4.1/14, mb1mx4.1/18, mbtmp4.0/14, MS3.2/2, Ms1 3.2/2, ms1mx2.7/31, Error ellipse: s-maj=15.0km s-min=10.0km az=33.0*

ISC 26 14:59:22.3±0.4, 10°.58S±0°.06×161°.52E±0°.07, h83km, h83km±1.0km:pP-P, n36, σ0§93/34, mb4.2/22, 2C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.92	306	P	Pn	14 59 53.5	+0.2
	721nm,0.3s,baz=150,slow=5.3,SNR=151						
HNR				S	Sn	15 00 16.9	0.0
	746nm,0.3s,baz=141,slow=12,SNR=11						
HNR	Honiara	1.92	306	⇑P	Pn	14 59 53.4	+0.1
HNR				eS	Sn	15 00 18.7	+1.9
DZM	Mont Dzumac	12.36	158	eP	Pn	15 02 19.1	+3.9
DZM				eS	Sn	15 04 30.7	-0.5
CTA	Charters Tower	17.49	235	LR	LR	15 08 39.3	
	comp=Z,73nm,19.2s,baz=235,slow=32						
EIDS	Eidsvold	17.73	213	P	Pn	15 03 27.6	+3.9
	16nm,1.2s						
WRA	Warramunga Arr	27.79	247	P	P	15 05 04.4	+0.8
	0.9nm,0.4s,mb3.7,baz=77,slow=9.0,SNR=24						
STKA	Stephens Creek	28.08	218	P	P	15 05 07.0	+0.9
	1.6nm,0.9s,mb3.5,baz=41,slow=14,SNR=3.8						
STKA	Stephens Creek	28.08	218	eP	P	15 05 04.4	-1.7
KAKA	Kakadu	28.56	263	eP	P	15 05 09.3	-1.2
	15nm,0.7s,mb4.7						
GUMO	Guam	29.15	325	LR	LR	15 15 12.1	
	comp=Z,54nm,20.0s,baz=124,slow=33						
ASAR	Alice Springs	29.36	240	P	P	15 05 17.6	0.0
	0.4nm,0.4s,mb3.4,baz=64,slow=10,SNR=20						
FITZ	Fitzroy Crossi	35.51	254	eP	P	15 06 11.5	+0.2
	5.2nm,1.0s,mb4.4						
FITZ				epP	pP	15 06 30.3	-0.6
MBWA	Marble Bar	41.44	250	eP	P	15 07 02.1	+1.1
KKM	Kota Kinabalu	48.04	288	eP	P	15 07 53.4	-0.2
	24nm,1.0s,mb5.0						
MJAR	Matsushiro Arr	51.75	336	P	P	15 08 19.9	-1.4
	1.1nm,0.5s,mb4.2,baz=150,slow=3.1,SNR=4.1						
KSM	Kuching	52.34	280	P	P	15 08 25.6	-0.5
CMAR	Chiang Mai Arr	68.14	295	P	P	15 10 14.4	+0.5
	1.0nm,0.6s,mb3.9,baz=124,slow=5.1,SNR=9.5						
CMAR				pP	pP	15 10 35.7	+0.2
	0.8nm,0.8s,baz=133,slow=4.1,SNR=3.8						
ULN	Ulaanbaatar	75.53	326	eP	P	15 10 57.2	-0.4
	3.4nm,0.6s,mb4.2						
ULN				epP	pP	15 11 19.5	+0.1
GTA	Gaotai	75.78	315	eP	P	15 11 00.0	+0.8
GTA				pP	pP	15 11 21.0	-0.1
GTA				sP	sP	15 11 35.0	+4.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
SONM	Songino Array	75.88	325	P	P	15 11 00.2	+0.6
	comp=Z,2.9nm,0.5s,mb4.2,baz=144,slow=6.0,SNR=26						
SONM				pP	pP	15 11 21.2	-0.3
	comp=Z,6.2nm,0.7s,baz=137,slow=5.8,SNR=20						
YAK	Yakutsk	76.53	345	eP	P	15 11 02.3	-0.6
	comp=Z,9.3nm,0.6s,mb4.7						
YAK				epP	pP	15 11 23.7	-1.2
KDAK	Kodiak Island	77.72	23	P	P	15 11 10.2	+0.5
	comp=Z,6.9nm,0.8s,mb4.4,baz=218,slow=9.4,SNR=3.8						
MCK	McKinley	83.07	20	eP	P	15 11 38.2	-0.1
	comp=Z,14nm,1.0s,mb4.7						
MAW	Mawson	83.58	202	P	P	15 11 40.8	-0.2
	comp=Z,2.0nm,0.8s,mb4.0,baz=81,slow=9.1,SNR=4.2						
MAW				pP	pP	15 12 04.0	+0.8
	comp=Z,3.1nm,0.7s,baz=104,slow=7.7,SNR=5.9						
MENT	Mentasta	84.41	22	eP	P	15 11 45.3	+0.2
ILAR	Eielson Array	84.43	20	P	P	15 11 44.7	-0.5
	comp=Z,2.1nm,1.0s,mb3.9,baz=253,slow=5.2,SNR=19						
ILAR				pP	pP	15 12 07.2	-0.2
	comp=Z,0.9nm,0.7s,baz=235,slow=4.4,SNR=4.7						
NVAR	Mina Array Bea	88.92	51	P	P	15 12 08.7	+1.0
	comp=Z,2.0nm,0.7s,mb4.2,baz=231,slow=6.5,SNR=15						
WVOR	Wild Horse Val	89.67	47	eP	P	15 12 13.0	+1.9
	comp=Z,4.4nm,1.0s,mb4.5						
MK31	Makanchi Array	90.36	318	⇑eP	P	15 12 13.1	-1.1
MK31				epP	pP	15 12 35.3	-1.4
MKAR	Makanchi Array	90.36	318	P	P	15 12 13.3	-0.9
	comp=Z,2.8nm,0.5s,mb4.7,baz=91,slow=6.4,SNR=30						
ZALV	Zalesovo Beam	90.77	325	P	P	15 12 14.3	-1.6
	comp=Z,0.6nm,0.4s,mb4.1,baz=110,slow=9.3,SNR=4.3						
PDAR	Pinedale Array	96.30	48	P	P	15 12 43.0	+1.3
	comp=Z,0.4nm,0.7s,mb4.0,baz=202,slow=4.4,SNR=3.4						
YKA	Yellowknife Ar	96.48	28	P	P	15 12 40.9	-1.0
	comp=Z,1.0nm,0.5s,mb4.5,baz=260,slow=4.9,SNR=4.6						
SDCO	Great Sand Dun	98.72	53	pP	pP	15 13 15.0	-0.2
ARCES	ARCESS Array B	114.81	344	PKP	PKiKP	15 17 52.1	-0.5
	comp=Z,3.1nm,0.9s,baz=84,slow=1.6,SNR=12						
LBTB	Lobatse	124.35	230	ePKPdf	PKPdf	15 18 12.4	+0.1

*ISK **26** 15:05:54.0, 39°.35N×37°.28E, h5km, MD2.9*
*DDA **26** 15:05:55.2, 39°.34N×37°.29E, h7km±4km, Md3.0*
*ISCJB **26** 15:05:56.9±0.6, 39°.43N±0°.04×37°.27E±0°.05, h21km±8km, Error ellipse: s-maj=6.6km s-min=6.4km az=135.5*
*CSEM **26** 15:05:56.0±0.3, 39°.42N×37°.28E, h10km, MD3.0, Error ellipse: s-maj=8.0km s-min=7.1km az=46.0*

ISC 26 15:05:56.3±0.6, 39°.38N±0°.03×37°.26E±0°.04, h9km±7km, n24, σ1§15/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCER	sogukcermik	0.49	348	iP	Pg	15 06 04.7	-1.2
SCER				iS	Sg	15 06 13.8	+1.5
SCER	sogukcermik	0.49	348	iP	Pg	15 06 04.7	-1.1
SCER				iS	Sg	15 06 13.8	+1.5
DARE	Darende-Malaty	0.60	135	ePG	Pg	15 06 09.7	+1.7
DARE				eSG	Sg	15 06 22.2	+6.4
DARE	Darende-Malaty	0.60	135	ePg	Pg	15 06 09.7	+1.7
DARE				eSg	Sg	15 06 22.3	+6.4
SARI	SarD1z-Kayseri	0.83	212	ePN	Pg	15 06 16.4	+4.2
SARI				eSN	Sg	15 06 34.6	+12
SARI	SarD1z-Kayseri	0.83	212	ePn	Pg	15 06 16.4	+4.1
SARI				eSn	Sg	15 06 34.6	+12
KEMA	Kemaliye	0.96	96	iP	Pg	15 06 13.1	-1.7
KEMA				iS	Sg	15 06 26.2	-1.1
KEMA	Kemaliye	0.96	96	iP	Pg	15 06 13.1	-1.7
KEMA				iS	Sg	15 06 26.2	-1.2
PINB	Pinarbasi	0.97	224	iP	Pg	15 06 13.8	-1.2
PINB				iS	Sg	15 06 27.6	0.0
PINB	Pinarbasi	0.97	224	iP	Pg	15 06 13.8	-1.2
PINB				iS	Sg	15 06 27.6	0.0
SUSE	Susehri	1.10	41	iP	Pg	15 06 16.5	-0.9
SUSE				iS	Sg	15 06 33.5	+1.8
SUSE	Susehri	1.10	41	iP	Pg	15 06 16.5	-0.9
SUSE				iS	Sg	15 06 33.5	+1.8
AKCD	Akcadag	1.20	154	eP	Pg	15 06 18.9	-0.5
AKCD				iS	Sg	15 06 37.2	+2.2
AKCD	Akcadag	1.20	154	eP	Pg	15 06 18.9	-0.5
AKCD				iS	Sg	15 06 37.2	+2.2
MYA	Malataya	1.39	139	ePN	Pn	15 06 21.7	-0.1
MYA	Malataya	1.39	139	ePn	Pn	15 06 21.7	-0.2
YOZ	Yozgat	1.52	280	ePN	Pn	15 06 23.9	+0.2
YOZ	Yozgat	1.52	280	ePn	Pn	15 06 23.9	+0.2
ELZG	Elazig	1.61	123	eP	Pn	15 06 25.1	+0.2
ELZG				iS	Sn	15 06 46.2	+0.5
ELZG	Elazig	1.61	123	eP	Pn	15 06 25.1	+0.2
ELZG				iS	Sn	15 06 46.2	+0.5
PTK	Pertek	1.73	106	ePN	Pn	15 06 25.3	-1.2
PTK	Pertek	1.73	106	ePn	Pn	15 06 25.3	-1.2
SVRC	Sivrice-ELAZID	1.89	121	ePN	Pn	15 06 29.1	+0.5
SVRC	Sivrice-ELAZID	1.89	121	ePn	Pn	15 06 29.1	+0.4

*ISCJB **26** 15:17:15.9±0.4, 34°.05N±0°.06×137°.22E±0°.08, h380km±5km, mb3.4/12, Error ellipse: s-maj=12.0km s-min=8.5km az=147.6*
*JMA **26** 15:17:16.2±0.3, 33°.98N×137°.08E, h374km±3km, M3.4*
*NEIC **26** 15:17:16.8±0.5, 33°.94N×137°.12E, h368km±6km, mb3.7/4, Error ellipse: s-maj=9.7km s-min=6.8km az=68.0*
*IDC **26** 15:17:17.1±0.6, 34°.00N×137°.12E, h369km±11km, mb3.2/8, mb1 3.3/12, mb1mx3.1/28, mbtmp3.2/12, Error ellipse: s-maj=25.8km s-min=10.0km az=65.0*

ISC 26 15:17:17.0±0.4, 34°.02N±0°.06×137°.18E±0°.09, h371km±5km, n38, σ0§90/50, mb3.4/12, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKN2	Miekihoku	0.78	286	P	Pn	15 18 03.7	-0.5
JNY	Yasuok	1.45	23	P	Pn	15 18 07.2	+0.3
JNY				eS	S	15 18 47.1	+0.1
JYN	Shimob	1.85	37	P	Pn	15 18 09.9	+0.7
JYN				eS	S	15 18 52.5	+1.3
JOD2	Odawara 2	2.00	51	P	Pn	15 18 11.3	+1.1
JOD2				eS	S	15 18 54.8	+1.8
JHJ	Hachijo jima 2	2.35	112	P	Pn	15 18 12.2	-0.5
	13nm,0.3s,baz=300,slow=17,SNR=14						
JHJ				S	S	15 19 00.6	+3.0
	15nm,0.3s,baz=263,slow=14,SNR=3.7						
JHJ2	Mitsune	2.38	112	P	Pn	15 18 13.6	+0.7
JHJ2				eS	S	15 18 59.3	+1.3
JHU	Hanno	2.51	43	P	Pn	15 18 14.1	+0.3
JHU				S	S	15 18 57.3	-2.4
MJAR	Matsushiro Arr	2.65	18	P	Pn	15 18 15.2	+0.3
	9.8nm,0.3s,baz=200,slow=9.9,SNR=137						
MJAR				S	S	15 19 00.8	-0.8
	baz=198,slow=16,SNR=4.7						
MAJO	Matsushiro	2.65	18	iPn	Pn	15 18 15.2	+0.3
MAT	Matsushiro	2.65	18	P	Pn	15 18 15.1	+0.2
MAT				S	S	15 19 00.2	-1.4
BSO4	Boso 4	2.78	69	P	Pn	15 18 15.9	-0.1
BSO4				eS	S	15 19 02.9	-0.7
BSO1	Boso 1	3.21	78	P	Pn	15 18 19.2	-0.5
BSO1				eS	S	15 19 08.6	-1.7
JYT	Yasato	3.31	47	P	Pn	15 18 19.8	-0.8
JYT				S	S	15 19 07.5	-4.4
JHO	Hitachi	3.79	46	P	Pn	15 18 24.8	-0.3
JHO				eS	S	15 19 16.5	-3.6
CBIJ	Chichi jima	8.14	147	P	Pn	15 19 08.0	-5.2
	3.1nm,0.3s,baz=0.0,slow=13,SNR=4.1						
CBIJ				S	S	15 20 37.2	-11
	24nm,0.3s,baz=249,slow=21,SNR=16						
KSRS	Korea Array	8.27	297	P	Pn	15 19 13.7	-0.8
	0.9nm,0.3s,baz=114,slow=12,SNR=33						
INCN	Inchon	9.24	295	ePn	Pn	15 19 25.4	-0.5
ASAJ	Asahikawa	10.92	21	P	Pn	15 19 46.2	+0.7
	0.8nm,0.3s,baz=344,slow=7.2,SNR=5.5						
ASAJ	Asahikawa	10.92	21	ePn	Pn	15 19 46.8	+1.2
MDJ	Mudanjiang	12.09	333	eP	P	15 19 58.5	0.0
YSS	Yuzh-Sakhalins	13.59	16	P	P	15 20 16.2	+1.2
ENH	Enshi	23.71	269	P	P	15 21 56.5	-0.7
	2.6nm,0.4s,mb3.8						
ULN	Ulaanbaatar	26.43	311	P	P	15 22 22.3	+1.1
	2.6nm,0.4s,mb3.8						
SONM	Songino Array	26.84	310	P	P	15 22 26.1	+1.3
	0.8nm,0.4s,mb3.3,baz=110,slow=8.8,SNR=8.2						
CMAR	Chiang Mai Arr	37.39	255	P	P	15 23 56.0	-0.1
	0.3nm,0.5s,mb2.8,baz=48,slow=6.9,SNR=4.3						
ZALV	Zalesovo Beam	41.49	315	P	P	15 24 29.0	0.0
	0.3nm,0.4s,mb2.9,baz=108,slow=4.7,SNR=2.2						
MKAR	Makanchi Array	42.87	304	P	P	15 24 40.4	+0.3
	1.2nm,0.6s,mb3.2,baz=90,slow=10,SNR=10						
MKAR	Makanchi Array	42.87	304	P	P	15 24 40.4	+0.3
KURK	Kurchatov	45.14	310	P	P	15 24 58.0	0.0
	1.3nm,0.5s,mb3.3						
BRVK	Borovoye	50.15	314	eP	P	15 25 35.4	-0.5
FITZ	Fitzroy Crossi	52.99	194	eP	P	15 25 57.0	0.0
	0.9nm,0.7s,mb3.2						
WB2	Warramunga Arr	53.73	183	eP	P	15 26 01.8	-0.5
WRA	Warramunga Arr	53.73	183	P	P	15 26 01.8	-0.5
	2.5nm,0.3s,mb4.0,baz=0.1,slow=7.6,SNR=123						
ASAR	Alice Springs	57.45	184	P	P	15 26 28.3	-0.2
	0.5nm,0.3s,mb3.3,baz=360,slow=6.1,SNR=52						
STKA	Stephens Creek	65.68	176	P	P	15 27 22.1	-0.6
	1.4nm,0.8s,mb3.8,baz=0.0,slow=6.1,SNR=3.5						
STKA	Stephens Creek	65.68	176	P	P	15 27 21.8	-0.9
FINES	FINESS Array B	69.83	331	P	P	15 27 48.4	+0.3
	0.8nm,0.5s,mb3.8,baz=57,slow

HATD ml 15 54 03.8
SNR=1096
ASHO Ashiyiah 2.87 192 P **Pn 15 53 09.1 +2.6**
SNR=175
ASHO Ashiyiah 2.87 192 ⇑P **Pn 15 53 09.1 +2.6**
SNR=175
ASHO ml 15 53 19.1
SNR=453
ASHO ml 15 54 03.5
SNR=1271
ASUD Al Ashush, Dub 3.12 204 P **Pn 15 53 12.6 +2.6**
SNR=175
ASUD Al Ashush, Dub 3.12 204 P **Pn 15 53 12.6 +2.7**
SNR=175
ASUD ml 15 53 27.1
SNR=103
ASUD ml 15 54 19.9
SNR=552
ISRV Sarvestan 3.67 301 Pn **Pn 15 53 19.5 +2.0**
ISRV Sarvestan 3.67 301 *e*Pn **Pn 15 53 18.8 +1.3**
ISRV *e* 15 55 06.5
comp=Z,30µm,0.6s
ISRV Sarvestan 3.67 301 Pn **Pn 15 53 19.5 +2.0**
HOQ Hoqain 3.95 172 P **Pn 15 53 22.0 +0.7**
SNR=163
HOQ Hoqain 3.95 172 ⇑P **Pn 15 53 22.0 +0.7**
SNR=163
HOQ ml 15 54 22.3
SNR=84
IPAR Pars 3.96 307 *e*Pn **Pn 15 53 22.6 +1.0**
IPAR *e* 15 55 15.1
comp=Z,10µm,0.5s
IPAR Pars 3.96 307 *e*Pn **Pn 15 53 22.6 +1.0**
ZHSF Zahedan 4.15 59 *e*Pn **Pn 15 53 29.0 +4.9**
ZHSF Zahedan 4.15 59 *e*Pn **Pn 15 53 29.9 +5.8**
ZHSF Zahedan 4.15 59 *e*Pn **Pn 15 53 29.9 +5.8**
ARQ Araqi 4.16 182 P **Pn 15 53 26.7 +2.5**
SNR=64
ARQ Araqi 4.16 182 P **Pn 15 53 26.7 +2.5**
SNR=64
IBAF Bafgh 4.19 347 Pn **Pn 15 53 25.3 +0.7**
IBAF Bafgh 4.19 347 *e*Pn **Pn 15 53 25.6 +1.0**
IBAF *e* 15 55 05.7
comp=Z,10µm,0.6s
IBAF Bafgh 4.19 347 *e*Pn **Pn 15 53 25.6 +1.0**
IMEH Mehriz 4.28 335 Pn **Pn 15 53 26.6 +0.8**
IMEH Mehriz 4.28 335 *e*Pn **Pn 15 53 26.9 +1.1**
IMEH *e* 15 54 58.0
comp=Z,20µm,0.9s
IMEH Mehriz 4.28 335 *e*Pn **Pn 15 53 26.9 +1.1**
SMDO Samad 4.59 164 P **Pn 15 53 31.6 +1.4**
SNR=77
SMDO Samad 4.59 164 P **Pn 15 53 31.6 +1.4**
SNR=77
BSY Bisya 4.76 174 P **Pn 15 53 35.0 +2.4**
SNR=161
ISAD Sadrabad 5.12 330 Pn **Pn 15 53 39.2 +1.8**
ISAD Sadrabad 5.12 330 *e*Pn **Pn 15 53 38.9 +1.5**
ISAD *e* 15 55 29.1
comp=Z,6µm,0.5s
ISAD Sadrabad 5.12 330 Pn **Pn 15 53 39.2 +1.8**
ICHK Chekchek 5.12 338 Pn **Pn 15 53 38.4 +0.9**
ICHK Chekchek 5.12 338 *e*Pn **Pn 15 53 38.5 +1.0**
ICHK *e* 15 55 26.6
comp=Z,5µm,0.4s
ICHK Chekchek 5.12 338 *e*Pn **Pn 15 53 38.5 +1.0**
JMDO Jabal Madar 5.27 166 P **Pn 15 53 41.3 +1.7**
SNR=123
WBK Wadi Bani Khal 5.29 157 P **Pn 15 53 40.8 +1.0**
SNR=89
WBK P 15 53 40.8
SNR=36
IKOO Kooshah 5.29 22 *e*Pn **Pn 15 53 40.5 +0.7**
IKOO *e* 15 55 35.5
comp=Z,13µm,0.7s
IKOO Kooshah 5.29 22 *e*Pn **Pn 15 53 40.5 +0.7**
IDAH Dahanechah 5.89 27 *e*Pn **Pn 15 53 48.3 +0.3**
IDAH *e* 15 56 03.7
comp=Z,7µm,0.5s
IDAH Dahanechah 5.89 27 *e*Pn **Pn 15 53 48.3 +0.3**
SLWS 6.08 245 P **Pn 15 53 50.7 +0.1**
SLWS 6.08 245 P **Pn 15 53 50.7 +0.1**
TABS Tabas 6.13 3 *e*Pn **Pn 15 53 53.6 +2.3**
TABS Tabas 6.13 3 *e*Pn **Pn 15 53 53.6 +2.3**
IMON Monand 6.22 24 *e*Pn **Pn 15 53 53.3 +0.8**
IMON *e* 15 55 57.5
comp=Z,2µm,0.3s
IMON Monand 6.22 24 *e*Pn **Pn 15 53 53.3 +0.8**
NASN Na'in 6.26 328 *e*Pn **Pn 15 53 54.0 +0.9**
NASN Na'in 6.26 328 *e*Pn **Pn 15 53 54.1 +1.0**
NASN Na'in 6.26 328 *e*Pn **Pn 15 53 54.1 +1.0**
BTHS 6.30 238 P **Pn 15 53 52.7 -1.0**
BTHS 6.30 238 P **Pn 15 53 52.7 -1.0**
IGAR Gharneh 6.34 321 *e*Pn **Pn 15 53 55.0 +0.8**
IGAR *e* 15 53 56.4
comp=Z,3µm,0.2s
IZEF Zefreh 6.57 326 Pn **Pn 15 53 57.3 0.0**
IZEF Sn **Sn 15 55 11.4 -0.1**
IZEF Zefreh 6.57 326 *e*Pn **Pn 15 53 57.6 +0.3**
IZEF *e* 15 53 59.2
comp=Z,2µm,0.3s
IZEF *e*Sn **Sn 15 55 12.4 +0.9**
IZEF Zefreh 6.57 326 *e*Pn **Pn 15 53 57.6 +0.3**
IZEF Sn **Sn 15 55 11.4 -0.1**
BOQSS 6.75 258 P **Pn 15 54 00.4 +0.5**
IPIR Pirpir 7.21 317 *e* **Pn 15 54 10.2 +4.0**
comp=Z,3µm,0.3s
IPIR *e*Pn **Pn 15 54 06.9 +0.8**
IKLH Kolahrood 7.29 324 Pn **Pn 15 54 07.7 +0.5**
IKLH Kolahrood 7.29 324 *e* **Pn 15 54 10.3 +3.1**
comp=Z,2µm,0.2s
IKLH *e*Pn **Pn 15 54 07.7 +0.5**
KFJS 7.79 277 P **Pn 15 54 13.1 -1.0**
KFJS S **Sn 15 55 38.2 -3.3**
ISFB Sefidab 7.82 332 *e*Pn **Pn 15 54 15.5 +0.9**
ISFB *e* 15 54 20.3
comp=Z,601nm,0.2s
ISFB Sefidab 7.82 332 *e*Pn **Pn 15 54 15.5 +0.9**
QRN Al-Qurain 7.85 281 *e*P **Pn 15 54 14.2 -0.8**
QRN AML AML 15 55 44.2
comp=Z,177nm,0.4s
KBD Kabd 8.11 284 *e*P **Pn 15 54 17.9 -0.6**
KBD Kabd 8.11 284 *e*P **Pn 15 54 17.9 -0.6**
UMR Umm Al-Rimmam 8.16 287 *e*P **Pn 15 54 18.9 -0.3**
UMR AML AML 15 55 53.5
comp=Z,121nm,0.4s
UMR Umm Al-Rimmam 8.16 287 *e*P **Pn 15 54 18.9 -0.3**
RDF Al-Radifah 8.20 282 *e*P **Pn 15 54 19.6 -0.1**
RDF AML AML 15 55 50.7
comp=Z,86nm,0.5s
RDF Al-Radifah 8.20 282 *e*P **Pn 15 54 19.6 -0.1**
GHVR GHOM 8.36 328 *e*Pn **Pn 15 54 22.0 +0.1**
GHVR GHOM 8.36 328 *e*Pn **Pn 15 54 23.0 +1.1**
GHVR GHOM 8.36 328 *e*Pn **Pn 15 54 23.0 +1.1**
NAY Al-Naaiem 8.51 284 *e*P **Pn 15 54 23.6 -0.4**
NAY AML AML 15 56 02.7
comp=Z,119nm,0.6s
NAY Al-Naaiem 8.51 284 *e*P **Pn 15 54 23.6 -0.4**
MIB Mutribah 8.54 288 *e*P **Pn 15 54 24.0 -0.4**
MIB AML AML 15 55 59.9
comp=Z,89nm,0.7s
MIB Mutribah 8.54 288 *e*P **Pn 15 54 24.0 -0.4**
IVRN Varamin 8.59 332 *e*Pn **Pn 15 54 25.7 +0.6**
IVRN *e*Pn **Pn 15 54 25.8 +0.7**
IVRN *e* 15 54 41.4
comp=Z,783nm,0.3s
IVRN Varamin 8.59 332 *e*Pn **Pn 15 54 25.8 +0.7**
IFIR Firoozkooh 8.78 338 Pn **Pn 15 54 29.1 +1.4**
IFIR Firoozkooh 8.78 338 *e*Pn **Pn 15 54 28.4 +0.7**
IFIR *e* 15 54 44.2
comp=Z,170nm,0.2s
IFIR Firoozkooh 8.78 338 *e*Pn **Pn 15 54 28.4 +0.7**
IDMV Damavand 8.98 335 Pn **Pn 15 54 31.4 +1.0**
IDMV Damavand 8.98 335 *e*Pn **Pn 15 54 31.2 +0.8**
IDMV *e* 15 55 39.1
comp=Z,852nm,0.5s
IDMV Damavand 8.98 335 *e*Pn **Pn 15 54 31.2 +0.8**
DAMV Damavand 9.05 335 *e*Pn **Pn 15 54 32.0 +0.7**
DAMV Damavand 9.05 335 *e*Pn **Pn 15 54 32.7 +1.4**
DAMV Damavand 9.05 335 *e*Pn **Pn 15 54 32.7 +1.4**
ASAO Ashtian 9.06 322 *e*Pn **Pn 15 54 32.0 +0.5**
ASAO Ashtian 9.06 322 *e*Pn **Pn 15 54 32.2 +0.7**
ASAO Ashtian 9.06 322 *e*Pn **Pn 15 54 32.2 +0.7**
IR3 Iran Long-Peri 9.30 330 *e*Pn **Pn 15 54 35.5 +0.6**
IR3 Iran Long-Peri 9.30 330 *e*Pn **Pn 15 54 35.5 +0.6**
IAFJ Afjeh 9.34 334 *e*Pn **Pn 15 54 36.4 +1.0**
IAFJ Afjeh 9.34 334 *e*Pn **Pn 15 54 36.4 +1.0**
CHTH Charan 9.62 332 *e*Pn **Pn 15 54 40.0 +0.7**
CHTH Charan 9.62 332 *e*Pn **Pn 15 54 40.8 +1.5**
CHTH Charan 9.62 332 *e*Pn **Pn 15 54 40.8 +1.5**
IMHD Mahdasht 9.64 329 *e*Pn **Pn 15 54 40.0 +0.6**
IMHD *e* 15 54 42.2
comp=Z,556nm,0.2s
IMHD Mahdasht 9.64 329 *e*Pn **Pn 15 54 40.0 +0.6**
IRAZ Razeghan 9.77 325 *e*Pn **Pn 15 54 41.4 +0.2**
IRAZ Razeghan 9.77 325 *e*Pn **Pn 15 54 41.4 +0.2**
MRVT Maraveh tapeh 10.14 357 *e*Pn **Pn 15 54 48.0 +1.7**
MRVT Maraveh tapeh 10.14 357 *e*Pn **Pn 15 54 48.9 +2.6**
MRVT Maraveh tapeh 10.14 357 *e*Pn **Pn 15 54 48.0 +1.7**
RBK Rabkut 10.22 194 P **Pn 15 54 47.8 +0.3**
SNR=13
VAN Vannovskaya 10.48 6 *c*e*P **Pn 15 54 52.6 +1.7**
VAN Vannovskaya 10.48 6 *e*P **Pn 15 54 52.6 +1.7**
ABTO Aybut 10.58 198 P **Pn 15 54 52.2 -0.3**
SNR=8.6
ASYS 10.97 273 S **Sn 15 56 51.0 -8.9**
ASYS 10.97 273 P **Pn 15 54 54.5 -3.3**
ASYS 10.97 273 P **Pn 15 54 54.5 -3.3**
ASYS S **Sn 15 56 51.0 -8.9**
ZNJK Zanjan 11.38 325 *e*Pn **Pn 15 55 04.0 +0.7**
ZNJK Zanjan 11.38 325 *e*Pn **Pn 15 55 04.7 +1.4**
ZNJK Zanjan 11.38 325 *e*Pn **Pn 15 55 04.7 +1.4**
KBL Kabul 12.69 53 Pn **Pn 15 55 23.5 +2.3**
KBL Kabul 12.69 53 P **Pn 15 55 23.5 +2.3**
KBL Kabul 12.69 53 Pn **Pn 15 55 23.5 +2.3**
GRMI Germi 13.46 329 *e*Pn **Pn 15 55 33.0 +1.3**
GRMI Germi 13.46 329 *e*Pn **Pn 15 55 33.6 +1.9**
GRMI Germi 13.46 329 *e*Pn **Pn 15 55 33.0 +1.3**
MUKL Al Mukalla 14.80 210 *e*P **Pn 15 55 47.4 -2.8**
MAKU Maku 15.48 323 *e*Pn **Pn 15 56 01.0 +2.0**
MAKU Maku 15.48 323 *e*Pn **Pn 15 56 01.3 +2.3**
MAKU Maku 15.48 323 *e*Pn **Pn 15 56 01.0 +2.0**
GNI Garni 16.03 325 Pn **Pn 15 56 06.8 +0.7**
comp=Z,5.6nm,0.3s,baz=144,slow=14,SNR=42
GNI LR LR 16 02 55.6
comp=Z,769nm,18.9s,baz=86,slow=40
GNI Garni 16.03 325 *e*Pn **Pn 15 56 07.5 +1.3**
comp=Z,51nm,0.6s
GNI Garni 16.03 325 *c i*P **Pn 15 56 08.9 +2.8**
GNI pmax pmax
comp=Z,143nm,1.6s
GNI Garni 16.03 325 *e*Pn **Pn 15 56 07.5 +1.4**
comp=Z,51nm,0.6s
GNI Garni 16.03 325 *i* P **Pn 15 56 08.9 +2.8**
comp=Z,143nm,1.6s
GNI Garni 16.03 325 P **Pn 15 56 11.7 +5.6**
SNR=13
MAK Makhachkala 17.13 337 *e*P **Pn 15 56 22.6 +2.6**
MAK *e*S **Sn 15 59 33.5 +3.6**
MAK MLR MLR
comp=Z,771nm,18.0s
MAK Makhachkala 17.13 337 *e*P **Pn 15 56 22.6 +2.6**
comp=Z,771nm,18.0s
MAK *e*S **Sn 15 59 33.5 +3.6**
TBLG Delisi 17.25 328 *e*P **Pn 15 56 23.9 +2.5**
TBLG Delisi 17.25 328 *e*P **Pn 15 56 23.9 +2.5**
LBOS 17.27 221⇑ *e*P **Pn 15 56 19.9 -2.0**
BHK Bhakra 17.60 72 *e*PKP **Pn 15 56 25.0 -1.0**
ASF Jabal al Asfar 17.80 290 P **Pn 15 56 25.6 -2.8**
comp=Z,1.9nm,0.3s,baz=107,slow=11,SNR=14
ASF LR LR 16 04 55.4
comp=Z,227nm,18.1s,baz=155,slow=43
ASF Jabal al Asfar 17.80 290 P **Pn 15 56 25.6 -2.7**
ASF pmax pmax
comp=Z,2.0nm,0.3s
SDNR Sundarnagar 18.08 72 *e*PKP **Pn 15 56 29.5 -2.4**
POO Poona 18.12 116 *e*PKP **Pn 15 56 29.7 -2.7**
NDI New Delhi 18.14 81 *ex* x 15 56 25.3
NDI AMb AMB 15 56 29.7
comp=Z,52nm,0.8s
SMLA Simla 18.20 74 *i* P **Pn 15 56 32.3 -1.1**
ELZG Elazig 18.43 311 *i* P **Pn 15 56 35.3 -0.8**
TRBA At Turbah 18.44 222 *e*P **Pn 15 56 34.4 -1.9**
TRBA AMb AMB 15 56 39.0
comp=Z,212nm,1.4s
ZEI Tsey 18.45 329 *e*P **Pn 15 56 36.8 +0.6**
ZEI pmax pmax
comp=Z,81nm,0.7s
ZEI Tsey 18.45 329 *e*P **Pn 15 56 36.8 +0.6**
comp=Z,81nm,0.7s
MALT Malatya 18.72 310 *e*P **Pn 15 56 39.4 -0.2**
comp=Z,60nm,0.9s
MALT Malatya 18.72 310 *e*P **Pn 15 56 39.4 -0.1**
MALT pmax pmax
comp=Z,60nm,0.9s
MALT Malatya 18.72 310 P **Pn 15 56 39.7 +0.2**
comp=Z,535nmcomp=Z,71nm,0.9s
MALT Malatya 18.72 310 *e*P **Pn 15 56 39.4 -0.1**
comp=Z,60nm,0.9s
GZT Gaziantep 18.87 306 *i* P **Pn 15 56 40.9 -0.5**
DDI Dehra Dun 18.90 76 *e*PKP **Pn 15 56 42.0 +0.1**
DDI *ex* x 16 00 18.8
AKCD Akcadag 19.05 309‖ *i*P **Pn 15 56 43.9 +0.3**
KAD Karad 19.06 119 *e*PKP **Pn 15 56 40.9 -3.0**
KEMA Kemaliye 19.16 312 *i* P **Pn 15 56 46.0 +1.1**
KK31 Karatay Array 19.17 32 *c*e*P **Pn 15 56 46.0 +1.0**
KK31 pmax pmax
comp=Z,13nm,0.5s
KK31 Karatay Array 19.17 32 *e*P **Pn 15 56 46.0 +1.0**
comp=Z,13nm,0.5s
KKAR Karatay Array 19.17 32 *e*P **Pn 15 56 43.6 -1.4**
comp=Z,20nm,0.7s
KKAR Karatay Array 19.17 32 *e*P **Pn 15 56 43.6 -1.4**
KKAR pmax pmax
comp=Z,19nm,0.7s
KKAR Karatay Array 19.17 32 *e*P **Pn 15 56 43.6 -1.4**
comp=Z,20nm,0.7s
BHPL Bhopal 19.20 98 *e*PKP **Pn 15 56 41.5 -4.0**
COBT Iskenderun 19.50 303 *i* P **Pn 15 56 48.2 -0.8**
AKL Akola 19.73 106 *e*PKP **Pn 15 56 47.6 -4.2**
AKL AMb AMB 15 56 54.0
comp=Z,63nm,1.3s
ANDN Andirin 19.85 306‖ *i*P **Pn 15 56 55.0 +1.8**
SUSE Susehri 19.86 314 *i* P **Pn 15 56 53.1 -0.2**
KIV Kislovodsk 19.92 329 *e*P **Pn 15 56 53.1 -0.8**
comp=Z,73nm,0.7s
KIV Kislovodsk 19.92 329 *c i*P **Pn 15 56 53.6 -0.4**
KIV *e*S **Sn 16 00 36.9 -0.4**
KIV pmax pmax
comp=Z,65nm,0.6s
KIV Kislovodsk 19.92 329 P **Pn 15 56 53.5 -0.5**
comp=Z,623nm,0.8s,SNR=14
KIV Kislovodsk 19.92 329 *e*P **Pn 15 56 53.1 -0.9**
comp=Z,73nm,0.7s
KIV Kislovodsk 19.92 329 P **Pn 15 56 54.0 0.0**
SNR=18
KSH Kashi 19.99 48 P **P 15 56 46.0 -7.0**
KSH pP 15 56 54.0
KSH sP sP 15 56 58.5 -3.8
KSH PP 15 57 02.5
KSH S S 16 00 12.0 -25
KSH pmax pmax
comp=Z,25nm,0.5s
KSH LR LR
comp=N,2µm,7.7s
KSH LR LR
comp=E,2µm,9.9s
KSH LR LR
comp=Z,1µm,10.2s
AML Almayashu 20.13 39 P **P 15 56 54.5 -0.1**
SNR=14
AML Almayashu 20.13 39 *e*P **P 15 56 54.2 -0.3**
comp=Z,53nm,0.7s
AML Almayashu 20.13 39 *e*P **P 15 56 54.2 -0.3**
comp=Z,53nm,0.7s
GRSN GIRESUNGRSN 20.23 316 *i* P **P 15 56 54.9 -0.7**
PINB Pinarbasi 20.29 308 *i* P **P 15 56 58.6 +2.4**
SCER sogukcermik 20.37 312 *i* P **P 15 56 59.4 +2.3**
EKS2 Erkin-Say 20.53 38 P **P 15 56 59.5 +0.7**
SNR=6.5
EKS2 Erkin-Say 20.53 38⇑ *e*P **P 15 56 58.7 -0.1**
comp=Z,107nm,1.0s
EKS2 Erkin-Say 20.53 38⇑ *e*P **P 15 56 58.7 -0.1**
comp=Z,107nm,1.0s
UCH Uchtor 20.66 40 P **P 15 57 00.1 -0.1**
SNR=23
UCH Uchtor 20.66 40⇑ *e*P **P 15 57 00.0 -0.2**
comp=Z,32nm,0.9s
UCH Uchtor 20.66 40⇑ *e*P **P 15 57 00.0 -0.2**
comp=Z,32nm,0.9s
GULE Gulek 20.88 303 *i* P **P 15 57 04.7 +2.0**
AAK Ala-Archa 20.91 39 P **P 15 57 03.0 0.0**
SNR=28
AAK Ala-Archa 20.91 39 P **P 15 57 03.2 +0.3**
comp=Z,17nm,0.6s,baz=212,slow=6.8,SNR=50
AAK LR LR 16 06 11.1
comp=Z,390nm,18.2s,MS3.8,baz=212,slow=40
AAK Ala-Archa 20.91 39 *e*P **P 15 57 02.6 -0.3**
comp=Z,38nm,1.0s
AAK Ala-Archa 20.91 39 *c i*P **P 15 57 03.0 +0.1**
AAK pmax pmax
comp=Z,15nm,0.9s
AAK Ala-Archa 20.91 39 P **P 15 57 03.6 +0.7**
comp=Z,210nm,1.0s,SNR=23
AAK Ala-Archa 20.91 39 P **P 15 57 02.9 0.0**
comp=Z,130nmcomp=Z,8.9nm,1.0s
AAK Ala-Archa 20.91 39 *i* P **P 15 57 03.0 +0.1**
comp=Z,15nm,0.9s
AAK Ala-Archa 20.91 39 P **P 15 57 03.2 +0.3**
SNR=38
KZA Kyzart 20.99 41 P **P 15 57 03.1 -0.7**
SNR=7.8
KZA Kyzart 20.99 41 *e*P **P 15 57 04.9 +1.1**
comp=Z,61nm,0.8s
KZA Kyzart 20.99 41 *e*P **P 15 57 04.9 +1.1**
comp=Z,61nm,0.8s
ERBA Erbaa 21.05 314 *i* P **P 15 57 05.4 +1.0**
SOC Sochi 21.11 324 *c i*P **P 15 57 05.3 +0.2**
SOC *e**SP sP 15 57 18.1 +3.7
SOC *e*S **S 16 00 58.4 -0.4**
SOC *e*SS 16 01 28.8
SOC pmax pmax
comp=Z,111nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,648nm,16.0s,MS4.1
SOC Sochi 21.11 324 *i* P **P 15 57 05.3 +0.2**
comp=Z,111nm,0.9s,mb5.2
KBK Karagaybulak 21.18 40 P **P 15 57 06.3 +0.4**
SNR=28
KBK Karagaybulak 21.18 40 *e*P **P 15 57 06.7 +0.8**
comp=Z,30nm,0.9s,mb4.6
KBK Karagaybulak 21.18 40 *e*P **P 15 57 06.7 +0.9**
comp=Z,30nm,0.9s,mb4.6
CSS Prodhromos 21.29 296 *e*P **P 15 57 08.0 +0.9**
comp=Z,62nm,0.7s,mb5.0
CSS Prodhromos 21.29 296 *e*P **P 15 57 08.0 +0.9**
comp=Z,62nm,0.7s,mb5.0
NGP Nagpur 21.31 102 *e*PKP **P 15 57 07.0 -0.5**
AVNT Avonos 21.42 307 *i* P **P 15 57 10.2 +1.7**
TKM2 Tokmak 2 21.72 40 P **P 15 57 11.2 -0.4**
SNR=40
TKM2 Tokmak 2 21.72 40 *e*P **P 15 57 10.7 -0.9**
comp=Z,26nm,0.9s,mb4.7
TKM2 Tokmak 2 21.72 40 *e*P **P 15 57 10.7 -0.9**
TKM2 pmax pmax
comp=Z,26nm,0.9s,mb4.7
TKM2 Tokmak 2 21.72 40 *e*P **P 15 57 10.7 -0.9**
comp=Z,26nm,0.9s,mb4.7
AB31 Akbulak array 21.86 6 *c*e*P **P 15 57 12.3 -0.8**
AB31 pmax pmax
comp=Z,61nm,0.8s,mb5.1
AB31 Akbulak array 21.86 6 *e*P **P 15 57 12.3 -0.8**
comp=Z,61nm,0.8s,mb5.1
ABKAR Akbulak array 21.86 6 *e*P **P 15 57 12.4 -0.7**
comp=Z,41nm,0.7s,mb5.0
ABKAR Akbulak array 21.86 6 *e*P **P 15 57 12.4 -0.7**
comp=Z,41nm,0.7s,mb5.0
ERMK Ermenek 22.07 300 *i* P **P 15 57 11.2 -4.3**
CDAG Cicekdag 22.12 309 *i* P **P 15 57 16.9 +0.9**
CTKT Corum 22.30 312 *i* P **P 15 57 17.1 -0.8**
HYB Hyderabad 22.52 112 *i* P **P 15 57 21.0 +0.6**
BRTR Keskin Array B 22.67 308 P **P 15 57 22.1 +0.3**
comp=Z,22nm,0.7s,mb4.7,baz=134,slow=12,SNR=77
BRTR LR LR 16 07 49.3
comp=Z,1µm,18.4s,MS4.3,baz=118,slow=41
BRTR Keskin Array B 22.67 308 P **P 15 57 22.2 +0.3**
BRTR pmax pmax
comp=Z,22nm,0.7s
BRTR MLR MLR
comp=Z,1µm,18.4s
BRTR Keskin Array B 22.67 308 P **P 15 57 22.1 +0.2**
AKTK Aktyubinsk 22.92 2 P **P 15 57 23.6 -0.7**
AKTK LR LR 16 08 02.8
AKTK Aktyubinsk 22.92 2 *i* P **P 15 57 23.0 -1.3**
comp=Z,14nm,0.8s,mb4.4
AKTO Aktyubinsk 22.92 2 P **P 15 57 23.6 -0.7**
comp=Z,67nm,0.7s,mb5.2,baz=188,slow=9.7,SNR=166
AKTO LR LR 16 08 02.8
comp=Z,673nm,18.8s,MS4.1,baz=171,slow=41
AKTO Aktyubinsk 22.92 2 *i* P **P 15 57 23.0 -1.3**
AKTO pmax pmax
comp=Z,14nm,0.8s,mb4.4
ANN Anapa 23.14 323 *e*P **P 15 57 26.5 -0.2**
ANN *e*S **S 16 01 37.8 +1.1**
ANN pmax pmax
comp=Z,79nm,0.9s,mb5.1
ANN MLR MLR
comp=N,293nm,15.0s
ANN MLR MLR
comp=Z,348nm,15.0s,MS3.9
ANN Anapa 23.14 323 *e*P **P 15 57 26.5 -0.2**
comp=Z,79nm,0.9s,mb5.1
KDHN Kadinhani 23.29 304 *i* P **P 15 57 29.2 +0.8**
KOLN Koldanda 23.82 83 *e*P **P 15 57 34.5 +0.9**
comp=Z,74nm,1.1s,mb5.0
KOLN Koldanda 23.82 83 *e*P **P 15 57 34.5 +0.9**
comp=Z,74nm,1.1s,mb5.0
DANN Dangsing 23.91 82 *e*P **P 15 57 35.4 +1.0**
comp=Z,328nm,1.0s,mb5.7
DANN Dangsing 23.91 82 *e*P **P 15 57 35.4 +1.0**
comp=Z,328nm,1.0s,mb5.7
SGKT Sivrigoynuk 24.13 309 *i* P **P 15 57 36.4 +0.1**
BOLV Bolvadin 24.21 304 *i* P **P 15 57 38.3 +1.2**
ESKT Eskisehir 24.57 306 *i* P **P 15 57 40.2 -0.1**
GKN Gorkha 24.71 82 *e*P **P 15 57 42.5 +0.8**
comp=Z,187nm,1.1s,mb5.5
GKN Gorkha 24.71 82 *e*P **P 15 57 42.5 +0.8**
comp=Z,187nm,1.1s,mb5.5
BORA Eskisehir 24.99 306 *i* P **P 15 57 44.3 +0.2**
AAE Adis Abeba 24.99 226 *e*P **P 15 57 47.8 +3.4**
AAE *e*S tx 16 06 11.9
SIM Simferopol' 25.07 320 *e*P **P 15 57 48.0 +3.3**
SIM *e*S **S 16 02 12.0 +4.2**
SIM MLR MLR
comp=Z,360nm,22.2s,MS3.8
SIM Simferopol' 25.07 320 *e*P **P 15 57 48.0 +3.3**
DMN Daman 25.16 83 *e*P **P 15 57 46.8 +1.0**
comp=Z,104nm,1.1s,mb5.3
DMN Daman 25.16 83 *e*P **P 15 57 46.8 +1.0**
comp=Z,104nm,1.1s,mb5.3
KHAL Karahalli 25.19 302 *i* P **P 15 57 46.5 +0.6**
KKN Kakani 25.30 83 *e*P **P 15 57 48.2 +1.2**
comp=Z,160nm,0.9s,mb5.5
KKN Kakani 25.30 83 *e*P **P 15 57 48.2 +1.2**
KKN Kakani 25.30 83 *e*P **P 15 57 48.2 +1.2**
comp=Z,160nm,0.9s,mb5.5
PKIN Phulchoki 25.42 83 *e*P **P 15 57 49.7 +1.5**
comp=Z,174nm,0.8s,mb5.7
PKI Pulchoki 25.43 83 *e*P **P 15 57 49.4 +1.1**
comp=Z,301nm,0.9s,mb5.8
PKI Pulchoki 25.43 83 *e*P **P 15 57 49.7 +1.4**
comp=Z,174nm,0.8s,mb5.6
PKI Pulchoki 25.43 83 *e*P **P 15 57 49.7 +1.4**
PKI Pulchoki 25.43 83 *e*P **P 15 57 49.7 +1.4**
comp=Z,174nm,0.8s,mb5.6
TURN Turunc 25.47 299 *i* P **P 15 57 51.7 +3.2**
GUN Gumba 25.81 82 *e*P **P 15 57 53.0 +1.3**
comp=Z,252nm,1.0s,mb5.7
GUN Gumba 25.81 82 *e*P **P 15 57 53.0 +1.3**
comp=Z,252nm,1.0s,mb5.7
VRHR Novokhopersk 26.18 338 *e*P **P 15 57 54.8 0.0**
VRHR pmax pmax
comp=N,60nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,90nm,0.7s,mb5.4
VRHR Novokhopersk 26.18 338 *e*P **P 15 57 54.8 0.0**
VORD Divnogorie 26.90 335 *e*P **P 15 58 00.5 -0.7**
VORD pmax pmax
comp=Z,10.0nm,0.4s,mb4.7
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax

comp=E,200nm,1.6s
VORD Divnogorie 26.90 335 *eP* **P 15 58 00.5 -0.7**
comp=E,30nm,0.6s,mb5.0
ZRNK Zerenda 27.02 16 *i* P **P 15 58 01.3 -1.0**
ZRNK pmax pmax
comp=Z,17nm,0.8s,mb4.6
ZRNK Zerenda 27.02 16 *i* P **P 15 58 01.3 -1.0**
comp=Z,17nm,0.8s,mb4.6
SMG Samos 27.04 300 *eP* **P 15 58 03.5 +0.8**
VSR Storozhevoye 27.14 335 *eP* **P 15 58 02.4 -1.1**
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s,mb4.7
VSR pmax pmax
comp=E,20nm,1.0s
VSR Storozhevoye 27.14 335 *eP* **P 15 58 02.4 -1.1**
BVAR Borovoye Array 27.45 18 P **P 15 58 06.0 -0.2**
comp=E,40nm,0.8s,mb5.0,baz=201,slow=7.9,SNR=111
BVAR PcP PcP 16 01 24.5 +0.2
comp=E,2.8nm,0.6s,baz=209,slow=2.3,SNR=6.3
BVAR Borovoye Array 27.45 18 P **P 15 58 06.0 -0.2**
BVAR 16 01 24.5
BVAR pmax pmax
comp=Z,41nm,0.8s
BVAR Borovoye Array 27.45 18 P **P 15 58 06.0 -0.2**
comp=Z,41nm,0.8s,mb5.0
BVAR Borovoye Array 27.45 18 PcP PcP 16 01 24.5 +0.2
BRVK Borovoye 27.45 18 *eP* **P 15 58 05.9 -0.2**
comp=Z,25nm,0.9s,mb4.7
BRVK Borovoye 27.45 18 *ceP* **P 15 58 05.1 -1.1**
BRVK pmax pmax
comp=Z,47nm,1.0s,mb5.0
BRVK Borovoye 27.45 18 P **P 15 58 06.1 -0.1**
comp=Z,176nm,1.0s,mb5.5,SNR=9.7
BRVK Borovoye 27.45 18 *eP* **P 15 58 05.9 -0.3**
comp=Z,25nm,0.9s,mb4.7
BRVK Borovoye 27.45 18 P **P 15 58 06.2 +0.1**
SNR=14
CHOS Chios island 27.79 301 *eP* **P 15 58 10.8 +1.3**
MKAR Makanchi Array 27.84 39 P **P 15 58 09.5 -0.3**
comp=Z,5.7nm,0.6s,mb4.4,baz=226,slow=8.2,SNR=38
MKAR Makanchi Array 27.84 39 P **P 15 58 09.5 -0.3**
MKAR pmax pmax
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 27.84 39 P **P 15 58 09.5 -0.3**
MK31 Makanchi Array 27.84 39 *eP* **P 15 58 09.4 -0.4**
MK31 Makanchi Array 27.84 39 *ceP* **P 15 58 09.5 -0.3**
MK31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
MK31 Makanchi Array 27.84 39 *eP* **P 15 58 09.5 -0.3**
comp=Z,6.0nm,0.5s,mb4.5
ALN Alexandroupoli 28.50 306 *eP* **P 15 58 14.1 -1.6**
KURK Kurchatov 28.54 30 *eP* **P 15 58 16.2 +0.2**
comp=Z,15nm,0.9s,mb4.7
KURK Kurchatov 28.54 30 *ceP* **P 15 58 15.8 -0.2**
KURK pmax pmax
comp=Z,17nm,1.0s,mb4.7
KURK Kurchatov 28.54 30 P **P 15 58 16.9 +0.9**
comp=Z,105nm,1.0s,mb5.5,SNR=16
KURK Kurchatov 28.54 30 *eP* **P 15 58 16.2 +0.2**
comp=Z,15nm,0.9s,mb4.7
KURK Kurchatov 28.54 30 P **P 15 58 16.3 +0.3**
SNR=23
ARU Arti 28.93 2 *eP* **P 15 58 19.7 +0.3**
comp=Z,13nm,1.1s,mb4.6
ARU Arti 28.93 2 *d iP* **P 15 58 19.4 0.0**
ARU *e* 15 59 11.9
ARU S **S 16 03 08.8 +0.2**
ARU SS SS 16 04 37.5 -34
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.3
ARU Arti 28.93 2 *i* P **P 15 58 19.4 0.0**
comp=Z,12nm,1.7s,mb4.3
SVE Sverdlovsk 29.44 4 *eP* **P 15 58 23.5 -0.3**
SVE pmax pmax
comp=Z,14nm,1.2s,mb4.6
SVE MLR MLR
comp=Z,445nm,14.0s,MS4.2
SVE Sverdlovsk 29.44 4 *eP* **P 15 58 23.5 -0.3**
comp=Z,445nm,14.0s
WMQ Urumqi 29.76 49 P **P 15 58 27.0 +0.1**
WMQ pP pP 15 58 37.0 +3.3
WMQ sP sP 15 58 41.0 +4.4
WMQ PP PP 15 59 24.0 -10
WMQ S **S 16 03 19.0 -2.9**
WMQ sS sS 16 03 33.0 -0.2
WMQ SS SS 16 04 51.0 -38
WMQ pmax pmax
comp=Z,31nm,0.8s,mb5.1
WMQ pmax pmax
comp=Z,120nm,3.0s
WMQ LR LR
comp=N,250nm,12.0s,MS4.2
WMQ LR LR
comp=E,280nm,12.0s,MS4.2
WMQ LR LR
comp=Z,270nm,12.0s,MS4.1
PLG Polygyros 30.25 304 *eP* **P 15 58 32.6 +1.4**
LSA Lhasa 30.26 78 P **P 15 58 33.5 +2.0**
LSA S **S 16 03 34.0 +4.0**
LSA pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
LSA LR LR
comp=E,420nm,18.8s
LSA LR LR
comp=Z,580nm,19.4s,MS4.2
LSA Lhasa 30.26 78 *eP* **P 15 58 33.3 +1.8**
comp=Z,18nm,1.1s,mb4.7
LSA Lhasa 30.26 78 *eP* **P 15 58 33.3 +1.8**
LSA pmax pmax
comp=Z,18nm,1.1s,mb4.7
LSA Lhasa 30.26 78 *eP* **P 15 58 33.3 +1.8**
comp=Z,18nm,1.1s,mb4.7
MLR Muntele Rosu 30.29 315 ⇑P **P 15 58 34.5 +2.9**
MLR Muntele Rosu 30.29 315 ⇑*iP* **P 15 58 34.5 +2.9**
MLR Muntele Rosu 30.29 315 P **P 15 58 34.5 +2.9**
TESR 30.32 317 ⇑*iP* **P 15 58 31.5 -0.3**
SOH Sokhos 30.43 305 *eP* **P 15 58 33.7 +0.9**
AGG Agios Georgios 30.78 301 *eP* **P 15 58 35.3 -0.6**
VOIR 30.84 314 ⇓P **P 15 58 36.7 +0.3**
VOIR 30.84 314 ⇓*iP* **P 15 58 36.7 +0.3**
VOIR 30.84 314 P **P 15 58 36.7 +0.3**
THL Klokotos Trika 31.13 302 *eP* **P 15 58 37.2 -1.8**
AKASG Malin Array Be 31.17 325 P **P 15 58 38.4 -0.8**
comp=Z,19nm,0.5s,mb5.2,baz=132,slow=8.4,SNR=83
AKASG PcP PcP 16 01 33.7 -0.1
comp=Z,1.7nm,0.5s,baz=103,slow=2.4,SNR=6.5
AKASG Malin Array Be 31.17 325 P **P 15 58 38.4 -0.8**
AKASG PcP PcP 16 01 33.7 -0.1
AKASG Malin Array Be 31.17 325 P **P 15 58 38.4 -0.8**
AKASG 16 01 33.7
AKASG pmax pmax
comp=Z,19nm,0.5s
AKASG Malin Array Be 31.17 325 P **P 15 58 38.4 -0.8**
comp=Z,19nm,0.5s,mb5.2
AKASG Malin Array Be 31.17 325 PcP PcP 16 01 33.7 -0.1
KIEV Kiev 31.17 325 *eP* **P 15 58 38.4 -0.8**
comp=Z,51nm,0.8s,mb5.4
KIEV Kiev 31.17 325 *eP* **P 15 58 38.4 -0.8**
KIEV pmax pmax
comp=Z,51nm,0.8s,mb5.4
KIEV Kiev 31.17 325 *eP* **P 15 58 38.4 -0.8**
comp=Z,51nm,0.8s,mb5.4
OBN Obninsk 31.22 338 *eP* **P 15 58 38.4 -1.2**
comp=Z,74nm,1.2s,mb5.4
OBN Obninsk 31.22 338 *c iP* **P 15 58 39.8 +0.2**
OBN *i* 15 59 43.1
OBN *e* 16 01 33.9
OBN *eS* **S 16 03 46.5 +2.0**
OBN pmax pmax
comp=Z,54nm,1.1s,mb5.3
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.6
OBN Obninsk 31.22 338 *i* P **P 15 58 39.8 +0.2**
comp=Z,54nm,1.1s,mb5.3
SHL Shillong 31.47 85 *e*PKP **P 15 58 41.5 -0.7**
BURAR Bucovina Array 31.70 318 ⇑P **P 15 58 47.4 +3.4**
BURAR Bucovina Array 31.70 318 ⇑*iP* **P 15 58 47.4 +3.4**
BUR08 Bucovina Ar. S 31.73 318 *eP* **P 15 58 44.0 -0.2**
BUR08 Bucovina Ar. S 31.73 318 *eP* **P 15 58 44.0 -0.2**
SOKR Solikamsk 32.05 0 *eP* **P 15 58 47.6 +0.7**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
SOKR MLR MLR
comp=Z,430nm,18.0s,MS4.2
SOKR Solikamsk 32.05 0 *eP* **P 15 58 47.6 +0.7**
comp=Z,430nm,18.0s
KRUS Krusevo 32.11 305 ⇑*iP* **P 15 58 48.4 +0.8**
DRGR 32.88 315 ⇑P **P 15 58 54.8 +0.5**
DRGR 32.88 315 ⇑*iP* **P 15 58 54.8 +0.5**
DRGR 32.88 315 P **P 15 58 54.8 +0.5**
BZS Buzias 33.14 312 ⇑P **P 15 58 56.7 +0.1**
BZS Buzias 33.14 312 ⇑*iP* **P 15 58 56.7 +0.1**
BZS Buzias 33.14 312 P **P 15 58 56.7 +0.1**
NVS Novosibirsk 33.44 28 ⇑*iP* **P 15 58 58.4 -0.7**
NVS *eS* **S 16 04 17.1 -2.0**
NVS pmax pmax
comp=Z,56nm,1.0s,mb5.5
NVS pmax pmax
comp=N,28nm,1.0s
NVS pmax pmax
comp=E,13nm,1.0s
NVS smax
comp=N,8.0nm,1.8s
NVS smax
comp=E,13nm,1.8s
NVS Novosibirsk 33.44 28 *i* P **P 15 58 58.4 -0.7**
comp=E,56nm,1.0s,mb5.5
ZAA0 Zalesovo Array 33.53 30 *eP* **P 15 58 59.0 -0.9**
ZAA0 Zalesovo Array 33.53 30 *eP* **P 15 58 59.0 -0.8**
ZALV Zalesovo Beam 33.53 30 P **P 15 58 59.3 -0.5**
comp=E,33nm,0.6s,mb5.4,baz=240,slow=9.1,SNR=131
ZALV PcP PcP 16 01 39.5 -0.7
comp=E,1.9nm,0.4s,baz=235,slow=4.2,SNR=4.7
ZALV LR LR 16 12 21.1
comp=E,94nm,18.3s,MS3.5,baz=258,slow=36
ZALV Zalesovo Beam 33.53 30 P **P 15 58 59.3 -0.5**
ZALV 16 01 39.5
ZALV pmax pmax
comp=Z,33nm,0.6s,mb5.4
ZALV MLR MLR
comp=Z,94nm,18.3s,MS3.5
UZH Uzhgorod 33.91 318 *eP* **P 15 59 03.3 0.0**
UZH Uzhgorod 33.91 318 *eP* **P 15 59 03.3 0.0**
KOLS Kolonicke sedl 34.05 318 *eP* **P 15 59 05.1 +0.6**
comp=Z,16nm,0.8s,mb5.0
KOLS Kolonicke sedl 34.05 318 *eP* **P 15 59 05.1 +0.6**
KOLS pmax pmax
comp=Z,16nm,0.8s,mb5.0
KOLS Kolonicke sedl 34.05 318 *eP* **P 15 59 05.1 +0.6**
KOLS Kolonicke sedl 34.05 318 *eP* **P 15 59 05.1 +0.6**
comp=Z,16nm,0.8s,mb5.0
MICGM Minsk 34.20 330 ⇓*eP* **P 15 59 03.0 -2.7**
MNK Minsk 34.22 330 ⇓*eP* **P 15 59 03.0 -2.9**
MNK pmax pmax
comp=Z,140nm,1.0s,mb5.8
CRVS Cervenica-Dubn 34.52 318 *eP* **P 15 59 10.5 +1.9**
comp=Z,53nm,2.8s,mb5.0
CRVS Cervenica-Dubn 34.52 318 *eP* **P 15 59 10.5 +1.9**
CRVS pmax pmax
comp=Z,53nm,2.8s,mb5.0
CRVS Cervenica-Dubn 34.52 318 *eP* **P 15 59 10.5 +1.9**
CRVS Cervenica-Dubn 34.52 318 *eP* **P 15 59 10.5 +1.9**
comp=Z,53nm,2.8s,mb5.0
KECS Kecovo 34.94 317 *eP* **P 15 59 12.1 -0.1**
comp=Z,4.6nm,1.4s,mb4.2
KECS Kecovo 34.94 317 *eP* **P 15 59 12.1 -0.1**
KECS Kecovo 34.94 317 *eP* **P 15 59 12.1 -0.1**
PSZ Piszkesteto 35.08 315 *eP* **P 15 59 11.8 -1.6**
PKSM Moragy 35.29 312 ⇑P **P 15 59 15.6 +0.4**
PKSM Moragy 35.29 312 ⇑*iP* **P 15 59 15.6 +0.4**
PKSM Moragy 35.29 312 P **P 15 59 15.6 +0.4**
KLMR Klimovskoe 35.31 346 *eP* **P 15 59 13.0 -2.2**
KLMR SS SS 16 06 56.7 -25
KLMR pmax pmax
comp=Z,46nm,1.5s,mb5.2
KLMR Klimovskoe 35.31 346 *eP* **P 15 59 13.0 -2.2**
comp=Z,46nm,1.5s,mb5.2
BUD Budapest 35.47 314 *eP* **P 15 59 16.8 0.0**
IIGN Ignalina 35.48 330 *eP* **P 15 59 17.3 +0.6**
IIGN AMB AMB 15 59 18.7
comp=Z,41nm,1.0s,mb5.3
IIGN Ignalina 35.48 330 *eP* **P 15 59 17.3 +0.6**
comp=Z,41nm,1.0s,mb5.3,SNR=27
ISAL Salakas 35.66 330 *eP* **P 15 59 18.8 +0.5**
ISAL AMB AMB 15 59 20.2
comp=Z,32nm,1.0s,mb5.2
ISAL Salakas 35.66 330 *eP* **P 15 59 18.8 +0.5**
comp=Z,32nm,1.0s,mb5.2,SNR=27
IZAR Zarasai 35.72 331 *eP* **P 15 59 19.2 +0.4**
IZAR AMB AMB 15 59 20.7
comp=Z,30nm,0.9s,mb5.2
IZAR Zarasai 35.72 331 *eP* **P 15 59 19.2 +0.4**
comp=Z,30nm,0.9s,mb5.2,SNR=27
CUC Castrocucco 35.91 301 P **P 15 59 21.5 +0.9**
CUC Castrocucco 35.91 301 P **P 15 59 21.5 +0.9**
VYHS Vyhne 35.96 316 *eP* **P 15 59 20.4 -0.5**
comp=Z,1.7nm,0.9s,mb4.0
VYHS Vyhne 35.96 316 *eP* **P 15 59 20.4 -0.5**
VYHS Vyhne 35.96 316 *eP* **P 15 59 20.4 -0.5**
VYHS Vyhne 35.96 316 *eP* **P 15 59 20.4 -0.5**
comp=Z,1.7nm,0.9s,mb4.0
OJC Ojcow 36.06 319 *eP* **P 15 59 22.0 +0.2**
OJC Ojcow 36.06 319 *eP* **P 15 59 20.8 -1.0**
comp=Z,17nm,0.7s,mb5.1
OJC Ojcow 36.06 319 *eP* **P 15 59 22.0 +0.2**
OJC Ojcow 36.06 319 *eP* **P 15 59 22.0 +0.2**
SUW Suwalki 36.11 326 *eP* **P 15 59 21.4 -0.7**
comp=Z,142nm,0.9s,mb5.9
SUW Suwalki 36.11 326 *eP* **P 15 59 21.4 -0.7**
SUW Suwalki 36.11 326 *eP* **P 15 59 21.4 -0.7**
comp=Z,142nm,0.9s,mb5.9
MRLC Muro Lucano 36.26 302 P **P 15 59 24.5 +0.9**
MRLC Muro Lucano 36.26 302 P **P 15 59 24.5 +0.9**
SOP Sopron 37.11 314 ⇑*eP* **P 15 59 30.9 +0.1**
MORC Moravsky Berou 37.22 317 *eP* **P 15 59 30.2 -1.5**
comp=Z,4.9nm,0.6s,mb4.5
MORC Moravsky Berou 37.22 317 ⇓P **P 15 59 31.1 -0.6**
MORC Moravsky Berou 37.22 317 ⇓*iP* **P 15 59 31.1 -0.6**
MORC Moravsky Berou 37.22 317 P **P 15 59 31.1 -0.6**
BOJS Bojanci 37.36 310 *i* P **P 15 59 33.0 0.0**
GTA Gaotai 37.55 60 ⇓P **P 15 59 35.5 +0.9**
GTA pP pP 15 59 45.5 +3.9
GTA sP sP 15 59 49.5 +5.1
GTA PcP PcP 16 01 53.5 +1.1
GTA S **S 16 05 21.8 -0.7**
GTA sS sS 16 05 39.8 +5.8
GTA pmax pmax
comp=Z,40nm,0.8s,mb5.2
GTA pmax pmax
comp=Z,98nm,5.7s
GTA LR LR
comp=N,270nm,20.4s,MS4.2
GTA LR LR
comp=E,200nm,15.7s,MS4.2
GTA LR LR
comp=Z,300nm,15.2s,MS4.2
CONA Conrad Observa 37.63 314 *i* P **P 15 59 35.2 0.0**
comp=Z,6.1nm,0.6s,mb4.5,SNR=7.9
ARSA Arzberg 37.65 313 ⇑*iP* **P 15 59 35.6 +0.2**
comp=Z,8.8nm,0.8s,mb4.5
LJU Ljubljana 37.99 311 *i* P **P 15 59 39.8 +1.6**
DPC Dobruska-Polom 38.17 318 *eP* **P 15 59 39.6 0.0**
comp=Z,15nm,1.3s,mb4.6
DPC Dobruska-Polom 38.17 318 *eP* **P 15 59 39.6 -0.1**
DPC pmax pmax
comp=Z,15nm,1.3s,mb4.6
DPC Dobruska-Polom 38.17 318 *eP* **P 15 59 39.0 -0.7**
DPC Dobruska-Polom 38.17 318 *eP* **P 15 59 39.6 -0.1**
comp=Z,15nm,1.3s,mb4.6
JAVS Javornik 38.27 310 *i* P **P 15 59 40.6 0.0**
TREC Trest 38.31 316 *eP* **P 15 59 41.0 +0.1**
TREC Trest 38.31 316 *eP* **P 15 59 41.0 +0.1**
TREC Trest 38.31 316 *eP* **P 15 59 41.0 +0.1**
NRCA Norcia 38.33 305 P **P 15 59 42.1 +1.0**
NRCA Norcia 38.33 305 P **P 15 59 42.1 +1.0**
MOA Molln 38.64 313 ⇓*iP* **P 15 59 43.7 0.0**
comp=Z,13nm,0.6s,mb4.9,SNR=20
FSSB Fossombrone 38.71 306 P **P 15 59 45.2 +0.8**
FSSB Fossombrone 38.71 306 P **P 15 59 45.2 +0.8**
KBA Koelnbreinsper 39.04 312 ⇓*iP* **P 15 59 47.2 +0.1**
comp=Z,16nm,0.8s,mb4.8,SNR=6.8
PRU Pruhonice 39.12 317 *eP* **P 15 59 45.0 -2.6**
PRU MLR MLR
comp=Z,200nm,15.0s,MS4.1
PRU Pruhonice 39.12 317 *eP* **P 15 59 45.0 -2.6**
PRU AMS AMS 16 19 00.0
comp=Z,200nm,15.0s
PRU Pruhonice 39.12 317 *eP* **P 15 59 45.0 -2.6**
comp=Z,200nm,15.0s
JOF Joensuu 39.13 342 *eP* **P 15 59 46.1 -1.5**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
JOF Joensuu 39.13 342 *ep* **P 15 59 46.1 -1.5**
comp=Z,4.1nm,0.4s,mb4.5
JOF Joensuu 39.13 342 *eP* **P 15 59 46.1 -1.5**
comp=Z,4.0nm,0.4s,mb4.5
GEC2 GERESS Array S 39.28 315 *eP* **P 15 59 48.9 -0.2**
comp=Z,12nm,0.9s,mb4.6
GEC2 GERESS Array S 39.28 315 *eP* **P 15 59 48.9 -0.2**
GEC2 pmax pmax
comp=Z,12nm,0.9s,mb4.6
GEC2 GERESS Array S 39.28 315 *eP* **P 15 59 48.9 -0.2**
comp=Z,12nm,0.9s,mb4.6
GERES GERESS Array B 39.28 315 P **P 15 59 48.6 -0.4**
comp=Z,6.1nm,0.6s,mb4.5,baz=115,slow=8.1,SNR=34
GERES PcP PcP 16 01 58.1 +0.5
comp=Z,3.5nm,0.9s,baz=126,slow=2.3,SNR=6.9
GERES GERESS Array B 39.28 315 P **P 15 59 48.7 -0.4**
GERES 16 01 58.1
GERES pmax pmax
comp=Z,6.0nm,0.6s
GERES GERESS Array B 39.28 315 P **P 15 59 48.7 -0.4**
GERES GERESS Array B 39.28 315 PcP PcP 16 01 58.1 +0.5
KHC Kasperske Hory 39.45 315 *eP* **P 15 59 50.3 -0.1**
comp=Z,14nm,0.7s,mb4.8
KHC Kasperske Hory 39.45 315 *eP* **P 15 59 50.3 -0.1**
KHC pmax pmax
comp=Z,14nm,0.7s,mb4.8
KHC Kasperske Hory 39.45 315 *eP* **P 15 59 50.0 -0.4**
KHC AMS AMS 16 18 40.0
comp=Z,200nm,16.2s
KHC Kasperske Hory 39.45 315 *eP* **P 15 59 50.3 -0.1**
comp=Z,14nm,0.7s,mb4.8
ABTA Abfaltersbach 39.51 311 *i* P **P 15 59 51.0 +0.1**
comp=Z,17nm,0.7s,mb4.9,SNR=8.5
RJOB Jochberg 39.56 313 *eP* **P 15 59 51.2 -0.2**
comp=Z,25nm,0.6s,mb5.1
FINES FINESS Array B 39.63 337 P **P 15 59 51.4 -0.4**
comp=Z,24nm,0.5s,mb5.2,baz=139,slow=9.8,SNR=189
FINES LR LR 16 17 20.6
comp=Z,156nm,18.6s,MS3.9,baz=141,slow=38
FINES FINESS Array B 39.63 337 P **P 15 59 51.4 -0.4**
FINES pmax pmax
comp=Z,24nm,0.5s
FINES MLR MLR
comp=Z,157nm,18.6s
FINES FINESS Array B 39.63 337 P **P 15 59 51.4 -0.4**
CHTO Chiang Mai 39.63 93 *eP* **P 15 59 53.1 +0.7**
comp=Z,7.1nm,1.0s,mb4.3
CHTO Chiang Mai 39.63 93 *eP* **P 15 59 53.1 +0.7**
CHTO pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
CHTO Chiang Mai 39.63 93 P **P 15 59 53.4 +1.0**
comp=Z,11nm,2.2s,mb4.2
CHTO Chiang Mai 39.63 93 *eP* **P 15 59 53.1 +0.7**
comp=Z,7.1nm,1.0s,mb4.3
CMAR Chiang Mai Arr 39.76 94 P **P 15 59 54.5 +1.1**
comp=Z,1.5nm,0.8s,baz=302,slow=8.1,SNR=8.2
CMAR PcP PcP 16 02 00.8 +1.2
comp=Z,4.0nm,0.8s,baz=284,slow=5.1,SNR=12
CMAR LR LR 16 19 16.1
comp=Z,173nm,19.4s,baz=156,slow=41
CMAR Chiang Mai Arr 39.76 94 P **P 15 59 54.5 +1.1**
CMAR 16 02 00.8
CMAR MLR MLR
comp=Z,173nm,19.4s
CMAR Chiang Mai Arr 39.76 94 P **P 15 59 54.5 +1.1**
CMAR Chiang Mai Arr 39.76 94 PcP PcP 16 02 00.8 +1.2
BRG Berggiesshubel 39.77 318 *eP* **P 15 59 52.8 -0.3**
comp=Z,5.0nm,1.1s,mb4.2
BRG Berggiesshubel 39.77 318 *eP* **P 15 59 52.6 -0.5**
comp=Z,5.2nm,1.1s,mb4.2
BRG *e* 16 00 06.2
comp=Z,6.3nm,1.2s
BRG
comp=N,230nm,16.9s
BRG
comp=E,195nm,19.8s
BRG
comp=Z,271nm,17.7s
BRG Berggiesshubel 39.77 318 *eP* **P 15 59 52.6 -0.5**
BRG *e* 16 00 06.2
BRG MLR MLR
comp=N,138nm,16.9s,MS4.0
BRG MLR MLR
comp=E,117nm,19.8s,MS4.0
BRG MLR MLR
comp=Z,162nm,17.7s,MS3.9
BRG Berggiesshubel 39.77 318 *eP* **P 15 59 52.6 -0.5**
WET Wettzell 39.89 315 *eP* **P 15 59 53.6 -0.5**
comp=Z,8.0nm,0.8s,mb4.5
WET Wettzell 39.89 315 *eP* **P 15 59 53.6 -0.5**
WET pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
WET Wettzell 39.89 315 *eP* **P 15 59 53.6 -0.5**
comp=Z,8.0nm,0.8s,mb4.5
KAF Kangasniemi 40.03 338 *eP* **P 15 59 53.2 -1.9**
KAF pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
KAF Kangasniemi 40.03 338 *ep* **P 15 59 53.2 -1.9**
comp=Z,9.6nm,0.6s,mb4.7
KAF Kangasniemi 40.03 338 *eP* **P 15 59 53.2 -1.9**
comp=Z,10.0nm,0.6s,mb4.7
WTTA Wattenberg 40.21 312 ⇑*iP* **P 15 59 56.1 -0.7**
comp=Z,31nm,0.6s,mb5.2,SNR=21
WATA Walderalm 40.27 312 ⇑*iP* **P 15 59 56.6 -0.7**
comp=Z,16nm,0.5s,mb5.0,SNR=11
APPI Appiano 40.32 310 P **P 16 00 03.3 +5.6**
CLL Collm 40.47 318 *eP* **P 15 59 58.0 -0.9**
comp=Z,8.0nm,0.8s,mb4.5
CLL *eS* **S 16 06 04.0 -2.2**
CLL Collm 40.47 318 *eP* **P 15 59 58.0 -0.9**
CLL *eS* **S 16 06 04.0 -2.2**
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
CLL Collm 40.47 318 *eP* **P 15 59 58.0 -0.9**
comp=Z,8.0nm,0.8s,mb4.5
CLL *e*PcP PcP 16 02 02.0 +0.7
CLL *eS* **S 16 06 08.0 +1.8**
CLL LmH 16 19 00.0
comp=N,200nm,19.5s
CLL LmH 16 19 00.0
comp=E,200nm,19.5s
CLL LmV 16 20 00.0
comp=Z,200nm,19.2s
CLL Collm 40.47 318 *eP* **P 15 59 58.0 -0.9**
comp=Z,8.0nm,0.8s,mb4.5
NKC Novy Kostel 40.47 316 *eP* **P 15 59 59.2 +0.3**
NKC Novy Kostel 40.47 316 *eP* **P 15 59 59.2 +0.3**
NKC Novy Kostel 40.47 316 *eP* **P 15 59 59.2 +0.3**
ROTZ Rotzenmuhle 40.48 316 *eP* **P 15 59 59.2 +0.2**
comp=Z,15nm,1.4s,mb4.5
MOTA Moosalm 40.58 312 ⇓*iP* **P 15 59 58.8 -1.1**
comp=Z,21nm,0.5s,mb5.0,SNR=21
LZH Lanzhou 40.64 66 *eP* **P 16 00 00.3 -0.2**
LZH pP pP 16 00 09.0 +1.5
LZH sP sP 16 00 14.5 +4.2
LZH PP PP 16 01 38.0 +3.7
LZH PcP PcP 16 02 02.8 +0.6
LZH *eS* **S 16 06 08.0 -1.2**
LZH sS sS 16 06 25.0 +4.3
LZH SS SS 16 09 02.0 -7.7
LZH pmax pmax
comp=Z,20nm,1.1s,mb4.7
LZH pmax pmax
comp=Z,180nm,5.0s
LZH LR LR
comp=N,100nm,10.0s,MS4.3
LZH LR LR
comp=E,250nm,12.4s,MS4.3
LZH LR LR
comp=Z,380nm,16.2s,MS4.3
MABI Malga Bissina 40.72 310 P **P 16 00 01.3 +0.3**
MABI Malga Bissina 40.72 310 P **P 16 00 01.3 +0.3**
FETA Feichten 40.76 311 ⇑*iP* **P 16 00 01.1 -0.3**
comp=Z,29nm,0.5s,mb5.1,SNR=45
KEST Kesra 40.83 294 P **P 16 00 03.0 +0.9**
comp=Z,8.0nm,0.8s,mb4.4,baz=16,slow=2.2,SNR=23
KEST LR LR 16 20 46.1
comp=Z,61nm,19.6s,MS3.5,baz=245,slow=42
KEST Kesra 40.83 294 *eP* **P 16 00 03.7 +1.6**
KEST Kesra 40.83 294 *eP* **P 16 00 03.7 +1.6**
BSD Bornholm Skovb 40.84 324 *i* P **P 16 00 00.5 -1.4**
BSD Bornholm Skovb 40.84 324 *i* P **P 16 00 00.5 -1.4**

comp=Z,63nm,0.7s,mb5.4
BSD Bornholm Skovb 40.84 324 *i* P **P 16 00 00.5 -1.4**
RETA Reutte 40.84 312⇑ *i*P **P 16 00 01.0 -1.0**
comp=Z,16nm,0.7s,mb4.8
MOY Mondy 40.94 42 *e*P **P 16 00 03.7 +0.9**
MOY Mondy 40.94 42 *e*P **P 16 00 03.7 +0.9**
CD2 Chengdu 40.98 74 *e*P **P 16 00 03.8 +0.4**
CD2 pP pP 16 00 13.5 +3.1
CD2 sP sP 16 00 17.5 +4.3
CD2 PP PP 16 01 42.0 +4.0
CD2 S **S 16 06 13.5 -0.8**
CD2 sS sS 16 06 29.8 +4.0
CD2 SS SS 16 09 12.0 -4.5
CD2 pmax pmax
comp=Z,30nm,0.8s,mb5.0
CD2 pmax pmax
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,560nm,19.2s,MS4.6
CD2 LR LR
comp=E,480nm,16.8s,MS4.6
CD2 LR LR
comp=Z,410nm,16.8s,MS4.4
FUORN Ofenpass-Fuorn 41.00 310 *e*P **P 16 00 03.9 +0.6**
comp=Z,14nm,0.6s,mb4.8
FUORN Ofenpass-Fuorn 41.00 310 *e*P **P 16 00 03.9 +0.6**
comp=Z,14nm,0.6s,mb4.8
GRA1 Grafenberg Arr 41.08 315 *e*P **P 16 00 04.2 +0.3**
comp=Z,22nm,0.7s,mb4.9
GRA1 LR LR
comp=Z,200nm,18.1s,MS4.0
GRA1 Grafenberg Arr 41.08 315 *e*P **P 16 00 04.2 +0.3**
comp=Z,22nm,0.7s,mb4.9
GRF Grafenberg Arr 41.08 315 *e*P **P 16 00 04.2 +0.3**
comp=Z,22nm,0.7s,mb4.9
GRF *e*L 16 20 10.6
comp=Z,209nm,18.1s
GRF Grafenberg Arr 41.08 315 *e*P **P 16 00 04.2 +0.3**
GRF pmax pmax
comp=Z,22nm,0.7s,mb4.9
GRF MLR MLR
comp=Z,200nm,18.1s,MS4.0
GRF Grafenberg Arr 41.08 315 *e*P **P 16 00 04.2 +0.3**
GRF pmax pmax
comp=Z,22nm,0.7s,mb4.9
GRF MLR MLR
comp=Z,200nm,18.1s,MS4.0
GRF Grafenberg Arr 41.08 315 *e*P **P 16 00 04.2 +0.3**
comp=Z,22nm,0.7s,mb4.9
GRFO Grafenberg 41.08 315 *e*P **P 16 00 03.4 -0.6**
comp=Z,19nm,0.9s,mb4.7
GRFO Grafenberg 41.08 315 *e*P **P 16 00 03.4 -0.5**
GRFO pmax pmax
comp=Z,19nm,0.9s,mb4.7
GRFO Grafenberg 41.08 315 *e*P **P 16 00 03.4 -0.5**
comp=Z,19nm,0.9s,mb4.7
MOX Moxa 41.10 317 *e*P **P 16 00 05.3 +1.2**
comp=Z,9.0nm,1.1s,mb4.3
MOX Moxa 41.10 317 *e*P **P 16 00 05.3 +1.2**
MOX pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
MOX Moxa 41.10 317 *e*P **P 16 00 05.3 +1.2**
comp=Z,9.0nm,1.1s,mb4.3
KMI Kunming 41.16 82 P **P 16 00 06.0 +1.1**
KMI pP pP 16 00 17.3 +5.4
KMI pmax pmax
comp=Z,38nm,1.0s,mb5.0
PGF Pioggiola 41.30 304 *e*P **P 16 00 04.9 -1.0**
comp=Z,15nm,0.7s,mb4.5
PGF Pioggiola 41.30 304 *e*P **P 16 00 04.9 -1.0**
comp=Z,7.6nm,0.6s,mb4.5
PGF Pioggiola 41.30 304 *e*P **P 16 00 04.9 -1.0**
PGF pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
PGF Pioggiola 41.30 304 *e*P **P 16 00 04.9 -1.0**
comp=Z,7.6nm,0.7s,mb4.5
DAVA Damuels 41.38 311⇑ *i*P **P 16 00 05.4 -1.0**
comp=Z,62nm,0.5s,mb5.5,SNR=28
ZAK Zakamensk 41.95 44 *e*P **P 16 00 08.5 -2.5**
ZAK *e* 16 02 06.3
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
ZAK Zakamensk 41.95 44 *e*P **P 16 00 08.5 -2.5**
comp=Z,4.0nm,1.0s,mb4.0
ZAK Zakamensk 41.95 44 *e*PcP PcP 16 02 06.3 +0.2
CLZ Clausthal 42.20 318 *e*P **P 16 00 13.7 +0.6**
comp=Z,20nm,0.9s,mb4.8
CLZ Clausthal 42.20 318 *e*P **P 16 00 13.7 +0.6**
CLZ pmax pmax
comp=Z,20nm,0.9s,mb4.8
CLZ Clausthal 42.20 318 *e*P **P 16 00 13.7 +0.6**
comp=Z,20nm,0.9s,mb4.8
COP Copenhagen 42.37 324 *e*P **P 16 00 14.7 +0.3**
COP pmax pmax
comp=Z,16nm,0.7s,mb4.8
COP Copenhagen 42.37 324 *i* P **P 16 00 14.7 +0.3**
comp=Z,16nm,0.7s,mb4.8
COP Copenhagen 42.37 324 *e*P **P 16 00 14.7 +0.3**
comp=Z,16nm,0.7s,mb4.8
APA Apatity 42.50 347⇑ *i*P **P 16 00 15.8 +0.5**
APA pmax pmax
comp=Z,26nm,1.0s,mb4.8
APA MLR MLR
comp=Z,800nm,17.0s,MS4.7
APA Apatity 42.50 347 *i* P **P 16 00 15.8 +0.5**
comp=Z,800nm,17.0s
NRDL Niedersach Rie 42.55 319 *e*P **P 16 00 16.7 +0.8**
comp=Z,18nm,0.9s,mb4.8
SBF Sospel 42.57 306 *e*P **P 16 00 15.5 -0.7**
comp=Z,50nm,0.8s,mb5.0
SBF Sospel 42.57 306 *e*P **P 16 00 15.5 -0.7**
comp=Z,25nm,0.8s,mb5.0
SBF Sospel 42.57 306 *e*P **P 16 00 15.5 -0.7**
SBF pmax pmax
comp=Z,25nm,0.8s,mb5.0
SBF Sospel 42.57 306 *e*P **P 16 00 15.5 -0.7**
comp=Z,25nm,0.8s,mb5.0
TNS Taunus Mts 42.95 315 *e*P **P 16 00 19.5 +0.3**
comp=Z,28nm,1.1s,mb4.9
TNS Taunus Mts 42.95 315 *e*P **P 16 00 19.5 +0.3**
TNS pmax pmax
comp=Z,28nm,1.1s,mb4.9
TNS Taunus Mts 42.95 315 *e*P **P 16 00 19.5 +0.3**
comp=Z,28nm,1.1s,mb4.9
SENIN Lac Senin/Sane 42.97 310 *e*P **P 16 00 18.4 -1.0**
comp=Z,8.1nm,0.6s,mb4.6
SENIN Lac Senin/Sane 42.97 310 *e*P **P 16 00 18.5 -0.9**
comp=Z,8.1nm,0.6s,mb4.6
MBDF Montbardon 43.13 307 *e*P **P 16 00 20.5 -0.3**
comp=Z,21nm,0.6s,mb4.8
MBDF Montbardon 43.13 307 *e*P **P 16 00 20.5 -0.3**
comp=Z,10nm,0.6s,mb4.7
MBDF Montbardon 43.13 307 *e*P **P 16 00 20.5 -0.3**
MBDF pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
MBDF Montbardon 43.13 307 *e*P **P 16 00 20.5 -0.3**
comp=Z,10nm,0.6s,mb4.8
LMR La Mourre 43.19 305 *e*P **P 16 00 20.0 -1.3**
comp=Z,20nm,1.0s,mb4.5
LMR La Mourre 43.19 305 *e*P **P 16 00 20.0 -1.3**
comp=Z,10nm,1.0s,mb4.5
LMR La Mourre 43.19 305 *e*P **P 16 00 20.0 -1.3**
LMR pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
LMR La Mourre 43.19 305 *e*P **P 16 00 20.0 -1.3**
comp=Z,10nm,1.0s,mb4.5
LPG La Plagne 43.23 308 *e*P **P 16 00 20.6 -1.0**
comp=Z,27nm,0.7s,mb4.8
LPG La Plagne 43.23 308 *e*P **P 16 00 20.6 -1.0**
comp=Z,13nm,0.7s,mb4.8
LPG La Plagne 43.23 308 *e*P **P 16 00 20.6 -1.0**
LPG pmax pmax
comp=Z,13nm,0.7s,mb4.8
LPG La Plagne 43.23 308 *e*P **P 16 00 20.6 -1.0**
comp=Z,13nm,0.7s,mb4.8
LPL La Plagne 43.25 308 *e*P **P 16 00 20.8 -0.9**
comp=Z,27nm,0.6s,mb4.9
LPL La Plagne 43.25 308 *e*P **P 16 00 20.8 -0.9**
comp=Z,14nm,0.6s,mb4.9
LPL La Plagne 43.25 308 *e*P **P 16 00 20.8 -0.9**
LPL pmax pmax
comp=Z,14nm,0.6s,mb4.9
LPL La Plagne 43.25 308 *e*P **P 16 00 20.8 -0.9**
comp=Z,14nm,0.6s,mb4.9
CDF Champ du Feu 43.32 312 *e*P **P 16 00 20.6 -1.6**
comp=Z,8.7nm,0.7s,mb4.3
CDF Champ du Feu 43.32 312 *e*P **P 16 00 20.6 -1.6**
comp=Z,4.3nm,0.7s,mb4.3
CDF Champ du Feu 43.32 312 *e*P **P 16 00 20.6 -1.6**
CDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
CDF Champ du Feu 43.32 312 *e*P **P 16 00 20.6 -1.6**
comp=Z,4.3nm,0.7s,mb4.3
RSL Roselend 43.35 308 *e*P **P 16 00 21.7 -0.8**
RSL Roselend 43.35 308 *e*P **P 16 00 21.7 -0.8**
RSL Roselend 43.35 308 *e*P **P 16 00 21.7 -0.8**
ECH Echery 43.36 312 *e*P **P 16 00 22.0 -0.6**
ECH Echery 43.36 312 *e*P **P 16 00 20.8 -1.8**
comp=Z,13nm,0.9s,mb4.7
ECH Echery 43.36 312 *e*P **P 16 00 20.8 -1.8**
ECH pmax pmax
comp=Z,13nm,0.9s,mb4.7
ECH Echery 43.36 312 *e*P **P 16 00 22.0 -0.6**
SONM Songino Array 43.40 48 P **P 16 00 23.2 +0.4**
comp=Z,16nm,0.8s,mb4.8,baz=256,slow=8.3,SNR=100
SONM LR LR 16 20 32.9
comp=Z,347nm,18.1s,MS4.3,baz=262,slow=39
SONM Songino Array 43.40 48 P **P 16 00 23.2 +0.3**
SONM pmax pmax
comp=Z,16nm,0.8s
SONM MLR MLR
comp=Z,347nm,18.1s
SONM Songino Array 43.40 48 P **P 16 00 23.2 +0.3**
LOMF Lomont 43.44 311 *e*P **P 16 00 23.1 -0.1**
LOMF Lomont 43.44 311 *e*P **P 16 00 23.1 -0.1**
LOMF Lomont 43.44 311 *e*P **P 16 00 23.1 -0.1**
HINF Hinteralfeld 43.50 312 *e*P **P 16 00 22.5 -1.2**
comp=Z,22nm,1.0s,mb4.5
HINF Hinteralfeld 43.50 312 *e*P **P 16 00 22.5 -1.2**
comp=Z,11nm,1.0s,mb4.5
HINF Hinteralfeld 43.50 312 *e*P **P 16 00 22.5 -1.2**
HINF pmax pmax
comp=Z,11nm,1.0s,mb4.5
HINF Hinteralfeld 43.50 312 *e*P **P 16 00 22.5 -1.2**
comp=Z,11nm,1.0s,mb4.5
HFS Hagfors 43.71 330 P **P 16 00 24.3 -0.9**
comp=Z,18nm,0.5s,mb5.1,baz=139,slow=7.9,SNR=127
HFS Hagfors 43.71 330 P **P 16 00 24.3 -0.9**
HFS pmax pmax
comp=Z,19nm,0.5s
HFS Hagfors 43.71 330 P **P 16 00 24.3 -0.9**
CABF La Chapelle 43.84 310 *e*P **P 16 00 25.9 -0.5**
comp=Z,23nm,0.6s,mb4.8
CABF La Chapelle 43.84 310 *e*P **P 16 00 25.9 -0.5**
comp=Z,11nm,0.6s,mb4.8
CABF La Chapelle 43.84 310 *e*P **P 16 00 25.9 -0.5**
CABF pmax pmax
comp=Z,11nm,0.6s,mb4.8
CABF La Chapelle 43.84 310 *e*P **P 16 00 25.9 -0.5**
comp=Z,11nm,0.6s,mb4.8
ULN Ulaanbaatar 43.84 48 *e*P **P 16 00 26.4 0.0**
comp=Z,19nm,0.7s,mb4.9
ULN Ulaanbaatar 43.84 48 *e*P **P 16 00 26.4 0.0**
ULN pmax pmax
comp=Z,19nm,0.7s,mb4.9
ULN Ulaanbaatar 43.84 48 P **P 16 00 26.6 +0.2**
ULN Ulaanbaatar 43.84 48 *e*P **P 16 00 26.4 0.0**
comp=Z,19nm,0.7s,mb4.9
ULN Ulaanbaatar 43.84 48 P **P 16 00 26.8 +0.4**
SNR=18
HAU Haudompre 43.86 312 *e*P **P 16 00 25.2 -1.4**
comp=Z,14nm,0.6s,mb4.5
HAU *e*MLR MLR
comp=Z,220nm,19.0s,MS3.8
HAU Haudompre 43.86 312 *e*P **P 16 00 25.2 -1.4**
comp=Z,6.8nm,0.6s,mb4.5
HAU LR LR
comp=Z,220nm,19.0s,MS4.1
HAU Haudompre 43.86 312 *e*P **P 16 00 25.2 -1.4**
HAU pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
HAU MLR MLR
comp=Z,220nm,19.0s,MS4.1
HAU Haudompre 43.86 312 *e*P **P 16 00 25.2 -1.4**
comp=Z,6.8nm,0.6s,mb4.5
IBBN Ibbenburen 43.88 318 *e*P **P 16 00 27.3 +0.6**
comp=Z,24nm,0.9s,mb4.9
SMRF Simiane la Rot 43.92 306 *e*P **P 16 00 26.5 -0.6**
SMRF Simiane la Rot 43.92 306 *e*P **P 16 00 26.5 -0.6**
WLF Walferdange 44.28 314 P **P 16 00 29.9 -0.1**
comp=Z,8.4nm,1.5s,mb4.2
WLF Walferdange 44.28 314 *e*P **P 16 00 30.1 +0.2**
comp=Z,15nm,1.1s,mb4.6
WLF Walferdange 44.28 314 *e*P **P 16 00 30.1 +0.2**
WLF pmax pmax
comp=Z,15nm,1.1s,mb4.6
WLF Walferdange 44.28 314 *e*P **P 16 00 30.1 +0.2**
comp=Z,15nm,1.1s,mb4.6
GYA Guiyang 44.29 79⇑ *i*P **P 16 00 30.8 +0.5**
GYA pP pP 16 00 41.8 +4.4
GYA sP sP 16 00 45.3 +5.1
GYA PcP PcP 16 02 16.5 +2.0
GYA ScP ScP 16 06 04.3 -0.9
GYA S **S 16 07 02.5 -0.6**
GYA sS sS 16 07 20.8 +6.1
GYA SS SS 16 10 13.0 -8.8
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,120nm,5.2s
GYA LR LR
comp=N,680nm,16.4s,MS4.7
GYA LR LR
comp=E,520nm,17.7s,MS4.7
GYA LR LR
comp=Z,760nm,15.0s,MS4.7
MUD Monsted U'grnd 44.35 324 *e*P **P 16 00 29.0 -1.4**
MUD pmax pmax
comp=Z,12nm,0.7s,mb4.7
MUD Monsted U'grnd 44.35 324 *i* P **P 16 00 29.0 -1.4**
comp=Z,12nm,0.7s,mb4.7
MUD Monsted U'grnd 44.35 324 *e*P **P 16 00 29.0 -1.4**
comp=Z,12nm,0.7s,mb4.7
MEM Membach 44.55 315 P **P 16 00 32.8 +0.7**
comp=Z,6.4nm,1.0s,mb4.4
VIVF Saint-Julien-l 44.63 307 *e*P **P 16 00 31.6 -1.2**
comp=Z,16nm,0.9s,mb4.5
VIVF Saint-Julien-l 44.63 307 *e*P **P 16 00 31.6 -1.2**
comp=Z,8.1nm,0.9s,mb4.5
VIVF Saint-Julien-l 44.63 307 *e*P **P 16 00 31.6 -1.2**
VIVF pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
VIVF Saint-Julien-l 44.63 307 *e*P **P 16 00 31.6 -1.2**
comp=Z,8.1nm,0.9s,mb4.5
SFTF Sexfontaines 44.76 312 *e*P **P 16 00 33.2 -0.6**
comp=Z,42nm,0.8s,mb5.0
SFTF Sexfontaines 44.76 312 *e*P **P 16 00 33.2 -0.6**
comp=Z,42nm,0.8s,mb5.3
SFTF Sexfontaines 44.76 312 *e*P **P 16 00 33.2 -0.6**
comp=Z,21nm,0.8s,mb5.0
MEZF Maizieres J'vi 44.80 312 *e*P **P 16 00 33.4 -0.7**
comp=Z,27nm,0.6s,mb5.0
MEZF Maizieres J'vi 44.80 312 *e*P **P 16 00 33.4 -0.7**
comp=Z,27nm,0.6s,mb5.2
MEZF Maizieres J'vi 44.80 312 *e*P **P 16 00 33.4 -0.7**
comp=Z,14nm,0.6s,mb5.0
OSL Oslo 44.95 329 *e*P **P 16 00 34.4 -0.7**
OSL Oslo 44.95 329 *e*P **P 16 00 34.4 -0.7**
SNR=26
BCLA Clavier 44.96 315 P **P 16 00 36.1 +0.7**
comp=Z,11nm,1.3s,mb4.5
LASF Ste Croix 45.16 306 *e*P **P 16 00 36.1 -0.9**
comp=Z,28nm,1.0s,mb4.8
LASF Ste Croix 45.16 306 *e*P **P 16 00 36.1 -0.9**
comp=Z,14nm,1.0s,mb4.8
GIVF Givet 45.20 314 *e*P **P 16 00 37.5 +0.2**
comp=Z,26nm,0.8s,mb4.8
GIVF Givet 45.20 314 *e*P **P 16 00 37.5 +0.2**
comp=Z,13nm,0.8s,mb4.8
GIVF Givet 45.20 314 *e*P **P 16 00 37.5 +0.2**
GIVF pmax pmax
comp=Z,13nm,0.8s,mb4.8
GIVF Givet 45.20 314 *e*P **P 16 00 37.5 +0.2**
comp=Z,13nm,0.8s,mb4.8
NB2 NORSAR Subarra 45.22 331 P **P 16 00 36.2 -1.0**
comp=Z,20nm,0.7s,mb5.1,baz=114,slow=7.9
NB2 NORSAR Subarra 45.22 331 P **P 16 00 36.2 -1.0**
SNR=26
NOA NORSAR Array B 45.22 331 P **P 16 00 36.3 -0.9**
comp=Z,20nm,0.8s,mb5.0,baz=116,slow=7.8,SNR=83
NOA LR LR 16 21 51.8
comp=Z,243nm,21.9s,MS4.1,baz=120,slow=39
NOA NORSAR Array B 45.22 331 P **P 16 00 36.3 -0.9**
NOA pmax pmax
comp=Z,21nm,0.8s
NOA MLR MLR
comp=Z,243nm,21.9s
NOA NORSAR Array B 45.22 331 P **P 16 00 36.3 -0.9**
NAO01 NORSAR Array S 45.27 330 *e*P **P 16 00 36.5 -1.1**
comp=Z,23nm,0.8s,mb5.0
NAO01 NORSAR Array S 45.27 330 *e*P **P 16 00 36.5 -1.2**
comp=Z,23nm,0.8s,mb5.0
DOU Dourbes 45.35 314 P **P 16 00 39.0 +0.6**
comp=Z,14nm,1.4s,mb4.6
KONO Kongsberg 45.35 328 *e*P **P 16 00 37.0 -1.2**
comp=Z,27nm,0.9s,mb5.1
KONO Kongsberg 45.35 328 *e*P **P 16 00 37.0 -1.3**
KONO pmax pmax
comp=Z,27nm,0.9s,mb5.1
KONO Kongsberg 45.35 328 *e*P **P 16 00 37.0 -1.3**
comp=Z,27nm,0.9s,mb5.1
SMF Signal de Mont 45.38 309 *e*P **P 16 00 37.8 -0.9**
comp=Z,53nm,0.8s,mb5.1
SMF Signal de Mont 45.38 309 *e*P **P 16 00 37.8 -0.9**
comp=Z,26nm,0.8s,mb5.1
SMF Signal de Mont 45.38 309 *e*P **P 16 00 37.8 -0.9**
SMF pmax pmax
comp=Z,27nm,0.8s,mb5.1
SMF Signal de Mont 45.38 309 *e*P **P 16 00 37.8 -0.9**
comp=Z,26nm,0.8s,mb5.1
LOR Lormes 45.43 310 *e*P **P 16 00 38.1 -1.0**
comp=Z,21nm,0.7s,mb4.8
LOR *e*MLR MLR
comp=Z,252nm,19.0s,MS3.9
LOR Lormes 45.43 310 *e*P **P 16 00 38.1 -1.0**
comp=Z,10nm,0.7s,mb4.8
LOR LR LR
comp=Z,250nm,19.0s,MS4.2
LOR Lormes 45.43 310 *e*P **P 16 00 38.1 -1.0**
LOR pmax pmax
comp=Z,11nm,0.7s,mb4.8
LOR MLR MLR
comp=Z,250nm,19.0s,MS4.2
LOR Lormes 45.43 310 *e*P **P 16 00 38.1 -1.0**
comp=Z,10nm,0.7s,mb4.8
PLDF La Plantade 45.46 309 *e*P **P 16 00 39.0 -0.4**
PLDF La Plantade 45.46 309 *e*P **P 16 00 39.0 -0.4**
PLDF La Plantade 45.46 309 *e*P **P 16 00 39.0 -0.4**
BAIF Baives 45.59 314 *e*P **P 16 00 40.8 +0.5**
comp=Z,61nm,1.0s,mb5.2
BAIF Baives 45.59 314 *e*P **P 16 00 40.8 +0.5**
comp=Z,30nm,1.0s,mb5.2
BAIF Baives 45.59 314 *e*P **P 16 00 40.8 +0.5**
BAIF pmax pmax
comp=Z,30nm,1.0s,mb5.2
BAIF Baives 45.59 314 *e*P **P 16 00 40.8 +0.5**
comp=Z,30nm,1.0s,mb5.2
SNF Seneffe 45.62 315 P **P 16 00 41.6 +1.1**
KEV Kevo 45.63 346 *e*P **P 16 00 39.5 -0.9**
comp=Z,32nm,1.0s,mb5.2
KEV Kevo 45.63 346 *e*P **P 16 00 39.6 -0.8**
KEV pmax pmax
comp=Z,14nm,0.6s,mb5.1
KEV Kevo 45.63 346 *e*p **P 16 00 39.6 -0.8**
comp=Z,14nm,0.6s,mb5.1
KEV Kevo 45.63 346 *e*P **P 16 00 39.6 -0.8**
comp=Z,14nm,0.6s,mb5.1
SSF Saint Saulge 45.65 310 *e*P **P 16 00 40.1 -0.7**
comp=Z,49nm,0.8s,mb5.2
SSF Saint Saulge 45.65 310 *e*P **P 16 00 40.1 -0.7**
comp=Z,25nm,0.8s,mb5.2
SSF Saint Saulge 45.65 310 *e*P **P 16 00 40.1 -0.7**
SSF pmax pmax
comp=Z,25nm,0.8s,mb5.2
SSF Saint Saulge 45.65 310 *e*P **P 16 00 40.1 -0.7**
comp=Z,25nm,0.8s,mb5.2
LBL Lubilhac 45.67 307 *e*P **P 16 00 41.1 +0.1**
LBL Lubilhac 45.67 307 *e*P **P 16 00 41.1 +0.1**
LBL Lubilhac 45.67 307 *e*P **P 16 00 41.1 +0.1**
AVF Avril sur Loir 45.73 310 *e*P **P 16 00 40.4 -1.1**
comp=Z,16nm,0.7s,mb4.7
AVF Avril sur Loir 45.73 310 *e*P **P 16 00 40.4 -1.1**
comp=Z,8.2nm,0.7s,mb4.8
AVF Avril sur Loir 45.73 310 *e*P **P 16 00 40.4 -1.1**
AVF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
AVF Avril sur Loir 45.73 310 *e*P **P 16 00 40.4 -1.1**
comp=Z,8.2nm,0.7s,mb4.7
ARCES ARCESS Array B 45.79 345 P **P 16 00 41.4 -0.2**
comp=Z,11nm,0.7s,mb4.9,baz=134,slow=7.8,SNR=28
ARCES PcP PcP 16 02 18.5 -0.4
comp=Z,4.8nm,0.8s,baz=155,slow=2.3,SNR=7.9
ARCES LR LR 16 24 56.1
comp=Z,95nm,21.6s,MS3.7,baz=340,slow=43
ARCES ARCESS Array B 45.79 345 P **P 16 00 41.4 -0.2**
ARCES 16 02 18.5
ARCES pmax pmax
comp=Z,11nm,0.7s
ARCES MLR MLR
comp=Z,95nm,21.6s
ARCES ARCESS Array B 45.79 345 P **P 16 00 41.4 -0.2**
ARCES ARCESS Array B 45.79 345 PcP PcP 16 02 18.5 -0.3
PYM Petit Puy Mans 45.87 308 *e*P **P 16 00 42.2 -0.5**
PYM Petit Puy Mans 45.87 308 *e*P **P 16 00 42.2 -0.5**
PYM Petit Puy Mans 45.87 308 *e*P **P 16 00 42.2 -0.5**
ETOS Mallorca 45.88 300 P **P 16 00 43.3 +0.6**
comp=Z,40nm,1.1s,mb5.3
ETOS Mallorca 45.88 300 P **P 16 00 43.3 +0.5**
comp=Z,40nm,1.1s,mb5.3
KTK1 Kautokeino 45.93 344 *e*P **P 16 00 42.2 -0.6**
KTK1 Kautokeino 45.93 344 *e*P **P 16 00 42.2 -0.6**
SNR=26
ENH Enshi 45.96 73 P **P 16 00 45.9 +2.4**
comp=Z,6.6nm,0.6s,mb4.7
ENH Enshi 45.96 73 P **P 16 00 45.9 +2.3**
comp=Z,6.6nm,0.6s,mb4.7
BGF Bois d'Agland 46.05 309 *e*P **P 16 00 43.2 -0.8**
comp=Z,39nm,0.7s,mb5.1
BGF Bois d'Agland 46.05 309 *e*P **P 16 00 43.2 -0.8**
comp=Z,20nm,0.7s,mb5.2
BGF Bois d'Agland 46.05 309 *e*P **P 16 00 43.2 -0.8**
BGF pmax pmax
comp=Z,20nm,0.7s,mb5.2
BGF Bois d'Agland 46.05 309 *e*P **P 16 00 43.2 -0.8**
comp=Z,20nm,0.7s,mb5.1
TAM Tamanrasset 46.30 276 *e*P **P 16 00 47.5 +1.1**
comp=Z,32nm,0.9s,mb5.3
TAM Tamanrasset 46.30 276 *e*P **P 16 00 47.5 +1.1**
TAM pmax pmax
comp=Z,32nm,0.9s,mb5.2
TAM Tamanrasset 46.30 276 *e*P **P 16 00 47.5 +1.1**
comp=Z,32nm,0.9s,mb5.3
MTLF Montolieu 46.32 305 *e*P **P 16 00 46.0 -0.2**
comp=Z,24nm,0.9s,mb4.8
MTLF Montolieu 46.32 305 *e*P **P 16 00 46.0 -0.2**
comp=Z,12nm,0.9s,mb4.8
MTLF Montolieu 46.32 305 *e*P **P 16 00 46.0 -0.2**
MTLF pmax pmax
comp=Z,12nm,0.9s,mb4.8
MTLF Montolieu 46.32 305 *e*P **P 16 00 46.0 -0.2**
comp=Z,12nm,0.9s,mb4.8
TCF Toulx Ste Croi 46.47 309 *e*P **P 16 00 46.7 -0.6**
comp=Z,23nm,0.7s,mb4.9
TCF Toulx Ste Croi 46.47 309 *e*P **P 16 00 46.7 -0.6**
comp=Z,12nm,0.7s,mb4.9
TCF Toulx Ste Croi 46.47 309 *e*P **P 16 00 46.7 -0.6**
TCF pmax pmax
comp=Z,12nm,0.7s,mb4.9
TCF Toulx Ste Croi 46.47 309 *e*P **P 16 00 46.7 -0.6**
comp=Z,12nm,0.7s,mb4.9
CLLI Llivia 46.48 304 P **P 16 00 46.8 -0.7**
CLLI Llivia 46.48 304 P **P 16 00 46.8 -0.7**
CAF Calviac 46.49 307 *e*P **P 16 00 47.0 -0.5**
comp=Z,20nm,0.7s,mb4.8
CAF Calviac 46.49 307 *e*P **P 16 00 47.0 -0.5**
comp=Z,10nm,0.7s,mb4.9
CAF Calviac 46.49 307 *e*P **P 16 00 47.0 -0.5**
CAF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CAF Calviac 46.49 307 *e*P **P 16 00 47.0 -0.5**
comp=Z,10nm,0.7s,mb4.8
HHC Hu-ho-hao-te 46.60 59 *e*P **P 16 00 49.0 +0.6**
HHC pP pP 16 00 59.0 +3.5
HHC sP sP 16 01 03.0 +4.7
HHC PcP PcP 16 02 23.8 +1.6
HHC PP PP 16 02 39.0 +1.1
HHC ScP ScP 16 06 12.3 -2.2
HHC S **S 16 07 33.8 -2.3**
HHC sS sS 16 07 51.8 +4.1

HHC ScS ScS 16 10 38.8 -3.2
HHC SS SS 16 10 53.0 -9.1
HHC pmax pmax
comp=Z,27nm,1.1s,mb5.1
HHC pmax pmax
comp=Z,85nm,5.3s
HHC LR LR
comp=N,200nm,15.7s,MS4.3
HHC LR LR
comp=E,200nm,14.2s,MS4.3
HHC LR LR
comp=Z,250nm,15.6s,MS4.3
NSS Namsos 46.60 335 *e*P **P 16 00 46.8 -1.2**
NSS Namsos 46.60 335 *e*P **P 16 00 46.8 -1.3**
SNR=26
MOR8 Moi Rana 46.62 338 *e*P **P 16 00 47.7 -0.5**
MOR8 AMb AMB 16 00 57.6
comp=Z,77nm,2.2s,mb5.2
MOR8 Moi Rana 46.62 338 *e*P **P 16 00 47.7 -0.5**
comp=Z,77nm,2.2s,mb5.2
MOR8 Moi Rana 46.62 338 *e*P **P 16 00 47.7 -0.5**
comp=Z,77nm,2.2s,mb5.2,SNR=26
EMIR Miracle 46.82 303 P **P 16 00 51.4 +1.3**
comp=Z,46nm,0.9s,mb5.4
EMIR Miracle 46.82 303 P **P 16 00 51.4 +1.3**
comp=Z,46nm,0.9s,mb5.4
ODD1 Odda 46.84 328 *e*P **P 16 00 50.9 +0.9**
ODD1 AMB AMB 16 00 52.5
comp=Z,42nm,0.8s,mb5.4
ODD1 Odda 46.84 328 *e*P **P 16 00 50.9 +0.9**
comp=Z,42nm,0.8s,mb5.4,SNR=26
RJF Les Rejaudoux 46.89 307 *e*P **P 16 00 50.4 -0.3**
comp=Z,42nm,1.0s,mb5.0
RJF *e*MLR MLR
comp=Z,208nm,21.0s,MS3.8
RJF Les Rejaudoux 46.89 307 *e*P **P 16 00 50.4 -0.3**
comp=Z,21nm,1.0s,mb5.0
RJF LR LR
comp=Z,210nm,21.0s,MS4.1
RJF Les Rejaudoux 46.89 307 *e*P **P 16 00 50.4 -0.3**
RJF pmax pmax
comp=Z,21nm,1.0s,mb5.0
RJF MLR MLR
comp=Z,210nm,21.0s,MS4.1
RJF Les Rejaudoux 46.89 307 *e*P **P 16 00 50.4 -0.3**
comp=Z,21nm,1.0s,mb5.0
EIBI Ibiza 47.05 299 P **P 16 00 52.5 +0.5**
comp=Z,41nm,0.9s,mb5.4
EIBI Ibiza 47.05 299 P **P 16 00 52.5 +0.5**
comp=Z,41nm,0.9s,mb5.4
CSOR Sort 47.11 303 P **P 16 00 53.0 +0.6**
comp=Z,68nm,1.4s,mb5.4
CSOR Sort 47.11 303 P **P 16 00 53.0 +0.6**
comp=Z,68nm,1.4s,mb5.4
EPOB Poblet 47.16 302 P **P 16 00 53.5 +0.7**
comp=Z,34nm,0.9s,mb5.3
EPOB Poblet 47.16 302 P **P 16 00 53.5 +0.7**
comp=Z,34nm,0.9s,mb5.3
STOK Stokkvaagen 47.19 338 *e*P **P 16 00 51.9 -0.7**
STOK Stokkvaagen 47.19 338 *e*P **P 16 00 51.9 -0.7**
PSI Prapat 47.21 114 LR LR 16 21 24.5
comp=Z,262nm,18.6s,MS4.2,baz=281,slow=37
LFF La Frestale 47.43 307 *e*P **P 16 00 54.5 -0.3**
comp=Z,30nm,0.8s,mb5.0
LFF La Frestale 47.43 307 *e*P **P 16 00 54.5 -0.3**
comp=Z,15nm,0.8s,mb5.0
LFF La Frestale 47.43 307 *e*P **P 16 00 54.5 -0.3**
LFF pmax pmax
comp=Z,15nm,0.8s,mb5.0
LFF La Frestale 47.43 307 *e*P **P 16 00 54.5 -0.3**
comp=Z,15nm,0.8s,mb5.0
TRO Tromso 47.46 343 *e*P **P 16 00 54.1 -0.6**
TRO Tromso 47.46 343 *e*P **P 16 00 54.1 -0.6**
TRO Tromso 47.46 343 *e*P **P 16 00 54.1 -0.6**
SNR=26
EPF Esparros 47.69 304 *e*P **P 16 00 55.3 -1.6**
EPF Esparros 47.69 304 *e*P **P 16 00 55.3 -1.6**
EPF Esparros 47.69 304 *e*P **P 16 00 55.3 -1.6**
ERTA Horta de San J 47.73 302 P **P 16 00 59.8 +2.5**
comp=Z,29nm,1.2s,mb5.2
ERTA Horta de San J 47.73 302 P **P 16 00 59.8 +2.5**
comp=Z,29nm,1.2s,mb5.2
EBIE Bielsa 47.84 304 P **P 16 00 58.1 +0.1**
comp=Z,5.6nm,0.8s,mb4.7
EBIE Bielsa 47.84 304 P **P 16 00 58.1 +0.1**
comp=Z,5.6nm,0.8s,mb4.7
LDF La Druitiere 48.22 312 *e*P **P 16 00 59.7 -1.2**
comp=Z,18nm,0.4s,mb5.1
LDF La Druitiere 48.22 312 *e*P **P 16 00 59.7 -1.2**
comp=Z,9.1nm,0.4s,mb5.2
LDF La Druitiere 48.22 312 *e*P **P 16 00 59.7 -1.2**
LDF pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
LDF La Druitiere 48.22 312 *e*P **P 16 00 59.7 -1.2**
comp=Z,9.1nm,0.4s,mb5.1
ESAC San Caprasio 48.31 303 P **P 16 01 02.0 +0.3**
comp=Z,63nm,0.9s,mb5.6
ESAC San Caprasio 48.31 303 P **P 16 01 02.0 +0.3**
comp=Z,63nm,0.9s,mb5.6
ETSF Etsaut 48.35 304 *e*P **P 16 01 01.1 -0.9**
comp=Z,34nm,0.8s,mb5.1
ETSF Etsaut 48.35 304 *e*P **P 16 01 01.1 -0.9**
comp=Z,17nm,0.8s,mb5.1
ETSF Etsaut 48.35 304 *e*P **P 16 01 01.1 -0.9**
ETSF pmax pmax
comp=Z,17nm,0.8s,mb5.1
ETSF Etsaut 48.35 304 *e*P **P 16 01 01.1 -0.9**
comp=Z,17nm,0.8s,mb5.1
EMOS Mosqueruela 48.37 301 P **P 16 01 03.8 +1.6**
comp=Z,32nm,1.1s,mb5.3
EMOS Mosqueruela 48.37 301 P **P 16 01 03.8 +1.6**
comp=Z,32nm,1.1s,mb5.3
FLN La Foliniere 48.47 312 *e*P **P 16 01 01.8 -1.1**
comp=Z,52nm,0.9s,mb5.3
FLN *e*MLR MLR
comp=Z,169nm,20.0s,MS3.7
FLN La Foliniere 48.47 312 *e*P **P 16 01 01.8 -1.1**
comp=Z,26nm,0.9s,mb5.3
FLN LR LR
comp=Z,170nm,20.0s,MS4.0
FLN La Foliniere 48.47 312 *e*P **P 16 01 01.8 -1.1**
FLN pmax pmax
comp=Z,26nm,0.9s,mb5.3
FLN MLR MLR
comp=Z,170nm,20.0s,MS4.0
FLN La Foliniere 48.47 312 *e*P **P 16 01 01.8 -1.1**
comp=Z,26nm,0.9s,mb5.3
GRR Gorron 48.70 312 *e*P **P 16 01 03.7 -0.9**
GRR Gorron 48.70 312 *e*P **P 16 01 03.7 -0.9**
GRR Gorron 48.70 312 *e*P **P 16 01 03.7 -0.9**
ECHE Chera 48.80 300 P **P 16 01 06.7 +1.2**
comp=Z,8.6nm,0.5s,mb5.0
ECHE Chera 48.80 300 P **P 16 01 06.7 +1.2**
ECHE pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
ECHE Chera 48.80 300 P **P 16 01 06.7 +1.2**
comp=Z,8.6nm,0.5s,mb5.0
SJPF Ste Jean 48.83 304 *e*P **P 16 01 05.7 0.0**
comp=Z,17nm,0.6s,mb5.0
SJPF Ste Jean 48.83 304 *e*P **P 16 01 05.7 0.0**
comp=Z,8.4nm,0.6s,mb5.0
SJPF Ste Jean 48.83 304 *e*P **P 16 01 05.7 0.0**
SJPF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
SJPF Ste Jean 48.83 304 *e*P **P 16 01 05.7 0.0**
comp=Z,8.4nm,0.6s,mb5.0
QIZ Qiongzhong 49.24 88 P **P 16 01 10.3 +1.1**
QIZ S **S 16 08 13.0 -1.0**
QIZ pmax pmax
comp=Z,24nm,1.5s,mb5.0
QIZ pmax pmax
comp=Z,56nm,3.3s
QIZ LR LR
comp=N,330nm,26.1s
QIZ LR LR
comp=Z,220nm,18.5s
ETOB Tobarra 49.33 299 P **P 16 01 10.4 +0.8**
comp=Z,20nm,0.9s,mb5.2
ETOB Tobarra 49.33 299 P **P 16 01 10.4 +0.8**
comp=Z,20nm,0.9s,mb5.2
SGMF Saint Gilles 49.82 311 *e*P **P 16 01 12.6 -0.6**
comp=Z,30nm,0.8s,mb5.1
SGMF Saint Gilles 49.82 311 *e*P **P 16 01 12.6 -0.6**
comp=Z,15nm,0.8s,mb5.1
SGMF Saint Gilles 49.82 311 *e*P **P 16 01 12.6 -0.6**
SGMF pmax pmax
comp=Z,15nm,0.8s,mb5.1
SGMF Saint Gilles 49.82 311 *e*P **P 16 01 12.6 -0.6**
comp=Z,15nm,0.8s,mb5.1
BOD Bodaibo 49.84 36⇑ *i*P **P 16 01 12.5 -0.7**
BOD pmax pmax
comp=Z,34nm,1.2s,mb5.2
BOD Bodaibo 49.84 36 *i*P **P 16 01 12.5 -0.7**
comp=Z,34nm,1.2s,mb5.2
WHN Wuhan 50.03 72 *e*P sP 16 01 35.8 +11
EVIA Vianos 50.07 299 P **P 16 01 15.4 +0.1**
comp=Z,24nm,0.6s,mb5.4
EVIA Vianos 50.07 299 P **P 16 01 15.4 +0.1**
EVIA pmax pmax
comp=Z,25nm,0.6s,mb5.4
EVIA Vianos 50.07 299 P **P 16 01 15.4 +0.1**
comp=Z,24nm,0.6s,mb5.4
BJI Beijing 50.15 59 P **P 16 01 16.0 +0.1**
BJI pmax pmax
comp=Z,19nm,0.9s,mb5.1
BJI LR LR
comp=N,280nm,20.5s,MS4.3
BJI LR LR
comp=E,190nm,21.4s,MS4.3
BJI LR LR
comp=Z,130nm,23.1s,MS3.9
HGH Gray Hill 50.20 316 P **P 16 01 15.1 -0.9**
HGH Gray Hill 50.20 316⇑ *e*P **P 16 01 15.1 -0.9**
HGH Gray Hill 50.20 316⇑ *e*P **P 16 01 15.1 -0.9**
XAL Allendale 50.21 320 P **P 16 01 15.7 -0.3**
XAL Allendale 50.21 320⇑ *e*P **P 16 01 15.7 -0.3**
XAL Allendale 50.21 320⇑ *e*P **P 16 01 15.7 -0.3**
QUIF Quistinic 50.22 311 *e*P **P 16 01 15.2 -1.0**
comp=Z,42nm,1.1s,mb5.1
QUIF Quistinic 50.22 311 *e*P **P 16 01 15.2 -1.0**
comp=Z,21nm,1.1s,mb5.1
QUIF Quistinic 50.22 311 *e*P **P 16 01 15.2 -1.0**
QUIF pmax pmax
comp=Z,21nm,1.1s,mb5.1
QUIF Quistinic 50.22 311 *e*P **P 16 01 15.2 -1.0**
comp=Z,21nm,1.1s,mb5.1
EHUE Huescar 50.23 298 P **P 16 01 16.9 +0.4**
comp=Z,13nm,0.7s,mb5.1
EHUE Huescar 50.23 298 P **P 16 01 16.9 +0.4**
EHUE pmax pmax
comp=Z,13nm,0.7s,mb5.1
EHUE Huescar 50.23 298 P **P 16 01 16.9 +0.4**
comp=Z,13nm,0.7s,mb5.1
MCH1 Michaelchurch 50.35 316 P **P 16 01 15.6 -1.5**
MCH1 AMB AMB 16 01 16.8
comp=Z,29nm,2.7s,mb4.8
MCH1 Michaelchurch 50.35 316⇑ *e*P **P 16 01 15.6 -1.5**
MCH1 AMB AMB 16 01 16.8
comp=Z,29nm,2.7s,mb4.8
MCH1 Michaelchurch 50.35 316⇑ *e*P **P 16 01 15.6 -1.5**
ELAN Lanestosa 50.45 305 P **P 16 01 18.1 +0.1**
comp=Z,42nm,1.2s,mb5.3
ELAN Lanestosa 50.45 305 P **P 16 01 18.1 +0.1**
comp=Z,42nm,1.2s,mb5.3
EBER Berja 50.58 296 P **P 16 01 19.7 +0.6**
comp=Z,15nm,0.5s,mb5.2
EBER Berja 50.58 296 P **P 16 01 19.7 +0.6**
comp=Z,15nm,0.5s,mb5.2
ESY Stoneypath 50.59 321 P **P 16 01 18.3 -0.6**
ESY Stoneypath 50.59 321⇑ *e*P **P 16 01 18.3 -0.6**
ESY Stoneypath 50.59 321⇑ *e*P **P 16 01 18.3 -0.6**
EQES Quesada 50.61 298 P **P 16 01 19.3 0.0**
comp=Z,21nm,0.6s,mb5.2
EQES Quesada 50.61 298 P **P 16 01 19.3 0.0**
comp=Z,21nm,0.6s,mb5.2
KESW Keswick, Cumbr 50.69 319 P **P 16 01 19.0 -0.6**
KESW AMB AMB 16 01 22.2
comp=Z,49nm,1.8s,mb5.1
KESW Keswick, Cumbr 50.69 319⇑ *e*P **P 16 01 19.0 -0.6**
KESW AMB AMB 16 01 22.2
comp=Z,49nm,1.8s,mb5.1
KESW Keswick, Cumbr 50.69 319⇑ *e*P **P 16 01 19.0 -0.6**
LSZ Lusaka 50.73 217 *e*P **P 16 01 22.1 +1.7**
comp=Z,7.0nm,1.0s,mb4.5
LSZ Lusaka 50.73 217 *e*P **P 16 01 22.1 +1.7**
LSZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LSZ Lusaka 50.73 217 *e*P **P 16 01 22.1 +1.7**
comp=Z,6.9nm,1.0s,mb4.5
ECK Cauldkaine Hil 50.77 320 P **P 16 01 19.5 -0.8**
ECK Cauldkaine Hil 50.77 320⇑ *e*P **P 16 01 19.5 -0.8**
ECK Cauldkaine Hil 50.77 320⇑ *e*P **P 16 01 19.5 -0.8**
EBL Broad Law 50.81 321 P **P 16 01 20.0 -0.5**
EBL Broad Law 50.81 321⇑ *e*P **P 16 01 20.0 -0.5**
EBL Broad Law 50.81 321⇑ *e*P **P 16 01 20.0 -0.5**
EALB Alboran 50.82 295 P **P 16 01 20.7 -0.3**
comp=Z,38nm,1.1s,mb5.2
EALB Alboran 50.82 295 P **P 16 01 20.7 -0.3**
comp=Z,38nm,1.1s,mb5.2
ESK Eskdalemuir 50.84 320 P **P 16 01 19.5 -1.2**
ESK AMB AMB 16 01 20.4
comp=Z,23nm,2.1s,mb4.7
ESK Eskdalemuir 50.84 320 *e*P **P 16 01 19.5 -1.2**
ESK AMB AMB 16 01 20.4
comp=Z,23nm,2.1s,mb4.7
ESK Eskdalemuir 50.84 320 P **P 16 01 20.6 -0.2**
comp=Z,91nm,0.6s,mb5.9,SNR=5.1
ESK Eskdalemuir 50.84 320 *e*P **P 16 01 19.5 -1.3**
EDI Edinburgh 50.91 321 P **P 16 01 20.1 -1.2**
EDI AMB AMB 16 01 21.9
comp=Z,20nm,1.3s,mb4.9
EDI Edinburgh 50.91 321 *e*P **P 16 01 20.1 -1.2**
EDI AMB AMB 16 01 21.9
comp=Z,20nm,1.3s,mb4.9
EDI Edinburgh 50.91 321 *e*P **P 16 01 20.1 -1.2**
MME1 Meikle Cairn 51.00 323 P **P 16 01 21.4 -0.6**
MME1 Meikle Cairn 51.00 323⇑ *e*P **P 16 01 21.4 -0.6**
MME1 Meikle Cairn 51.00 323⇑ *e*P **P 16 01 21.4 -0.6**
ECOG Cogollos-Vega 51.06 297 P **P 16 01 22.1 -0.7**
ECOG Cogollos-Vega 51.06 297 P **P 16 01 22.1 -0.7**
ECOG Cogollos-Vega 51.06 297 P **P 16 01 22.1 -0.7**
ESDC Sonseca Array 51.10 300 P **P 16 01 22.7 -0.3**
comp=Z,3.8nm,0.5s,mb4.6,baz=63,slow=7.6,SNR=16
ESDC PcP PcP 16 02 39.1 +0.6
comp=Z,0.7nm,0.4s,baz=67,slow=4.0,SNR=5.2
ESDC Sonseca Array 51.10 300 P **P 16 01 22.9 -0.1**
comp=Z,9.9nm,0.6s,mb4.9
ESDC Sonseca Array 51.10 300 P **P 16 01 22.9 -0.1**
comp=Z,9.9nm,0.6s,mb4.9
ESLA Sonseca Array 51.10 300 *e*P **P 16 01 22.6 -0.4**
comp=Z,1.2nm,0.7s,mb3.9
ESLA Sonseca Array 51.10 300 *e*P **P 16 01 22.6 -0.4**
comp=Z,1.1nm,0.7s,mb3.9
EGUA Guajares 51.12 297 P **P 16 01 23.0 -0.2**
comp=Z,110nm,0.8s,mb5.8
EGUA Guajares 51.12 297 P **P 16 01 23.0 -0.2**
EGUA Guajares 51.12 297 P **P 16 01 23.0 -0.2**
comp=Z,110nm,0.8s,mb5.8
EBAN Banos Encina 51.13 298 P **P 16 01 23.4 +0.1**
comp=Z,18nm,0.6s,mb5.2
EBAN Banos Encina 51.13 298 P **P 16 01 23.4 +0.2**
EBAN pmax pmax
comp=Z,18nm,0.6s,mb5.2
EBAN Banos Encina 51.13 298 P **P 16 01 23.4 +0.2**
comp=Z,18nm,0.6s,mb5.2
EBH Black Hill 51.13 322 P **P 16 01 22.2 -0.8**
EBH Black Hill 51.13 322⇑ *e*P **P 16 01 22.2 -0.8**
EBH Black Hill 51.13 322⇑ *e*P **P 16 01 22.2 -0.8**
GUD Guadarrama 51.15 301 P **P 16 01 23.6 +0.2**
comp=Z,11nm,0.8s,mb4.8
GUD Guadarrama 51.15 301 P **P 16 01 23.6 +0.2**
GUD pmax pmax
comp=Z,11nm,0.8s,mb4.8
GUD Guadarrama 51.15 301 P **P 16 01 23.6 +0.2**
comp=Z,11nm,0.8s,mb4.8
MCD Coleburn Disti 51.20 323 P **P 16 01 23.0 -0.5**
MCD Coleburn Disti 51.20 323⇑ *e*P **P 16 01 23.0 -0.5**
MCD Coleburn Disti 51.20 323⇑ *e*P **P 16 01 23.0 -0.5**
ERON Agron 51.29 297 P **P 16 01 24.0 -0.4**
comp=Z,9.2nm,0.5s,mb5.0
ERON Agron 51.29 297 P **P 16 01 24.0 -0.5**
comp=Z,9.2nm,0.5s,mb5.0
PAB San Pablo 51.41 300 *e*P **P 16 01 25.2 -0.2**
comp=Z,21nm,1.1s,mb5.0
PAB San Pablo 51.41 300 *e*P **P 16 01 25.2 -0.1**
PAB pmax pmax
comp=Z,21nm,1.1s,mb5.0
PAB San Pablo 51.41 300 *e*P **P 16 01 25.2 -0.1**
comp=Z,21nm,1.1s,mb5.0
ELOJ Sierra Loja 51.55 297 P **P 16 01 25.4 -1.0**
comp=Z,15nm,0.8s,mb5.0
ELOJ Sierra Loja 51.55 297 P **P 16 01 25.4 -1.0**
ELOJ pmax pmax
comp=Z,15nm,0.8s,mb5.0
ELOJ Sierra Loja 51.55 297 P **P 16 01 25.4 -1.0**
comp=Z,15nm,0.8s,mb5.0
EAB Aberfoyle 51.59 321 P **P 16 01 25.6 -0.8**
EAB Aberfoyle 51.59 321⇑ *e*P **P 16 01 25.6 -0.8**
EAB Aberfoyle 51.59 321⇑ *e*P **P 16 01 25.6 -0.8**
GAL1 Galloway 51.64 320 P **P 16 01 25.9 -1.0**
GAL1 AMB AMB 16 01 32.5
comp=Z,30nm,3.7s
GAL1 Galloway 51.64 320 *e*P **P 16 01 25.9 -1.0**
GAL1 AMB AMB 16 01 32.5
comp=Z,30nm,3.7s
GAL1 Galloway 51.64 320 *e*P **P 16 01 25.9 -0.9**
EARI Arriondas 51.74 305 P **P 16 01 27.7 0.0**
comp=Z,44nm,1.0s,mb5.3
EARI Arriondas 51.74 305 P **P 16 01 27.7 0.0**
comp=Z,44nm,1.0s,mb5.3
EADA Adamuz 51.75 298 P **P 16 01 27.4 -0.4**
comp=Z,21nm,0.8s,mb5.1
EADA Adamuz 51.75 298 P **P 16 01 27.5 -0.4**
comp=Z,21nm,0.8s,mb5.1
MDO Dochfour 51.77 323 P **P 16 01 26.9 -0.8**
MDO Dochfour 51.77 323 *e*P **P 16 01 26.9 -0.8**
MDO Dochfour 51.77 323 *e*P **P 16 01 26.9 -0.8**
EMIJ Mijas 52.12 296 P **P 16 01 29.9 -0.7**
comp=Z,19nm,0.7s,mb5.1
EMIJ Mijas 52.12 296 P **P 16 01 30.0 -0.7**
comp=Z,19nm,0.7s,mb5.1
KAC Achnashellach 52.28 323 P **P 16 01 30.9 -0.6**
KAC Achnashellach 52.28 323⇑ *e*P **P 16 01 30.9 -0.6**
KAC Achnashellach 52.28 323⇑ *e*P **P 16 01 30.9 -0.6**
HIA Hailar 52.34 48 *e*P **P 16 01 32.3 +0.2**
comp=Z,27nm,0.7s,mb5.3
HIA Hailar 52.34 48 *e*P **P 16 01 32.3 +0.2**
HIA pmax pmax
comp=Z,27nm,0.7s
HIA Hailar 52.34 48 *e*P **P 16 01 32.3 +0.2**
comp=Z,27nm,0.7s,mb5.3
ECAB El Cabril 52.42 298 P **P 16 01 33.0 +0.1**
comp=Z,31nm,0.7s,mb5.3
ECAB El Cabril 52.42 298 P **P 16 01 33.0 +0.1**
comp=Z,31nm,0.7s,mb5.3
KPL Plockton 52.45 323 P **P 16 01 32.7 -0.1**
KPL AMB AMB 16 01 39.1
comp=Z,40nm,3.0s,mb4.8
KPL Plockton 52.45 323 *e*P **P 16 01 32.7 -0.1**
KPL AMB AMB 16 01 39.1
comp=Z,40nm,3.0s,mb4.8
KPL Plockton 52.45 323 *e*P **P 16 01 32.7 -0.1**
KAR1 Arisaig 52.49 322 P **P 16 01 32.5 -0.6**
KAR1 Arisaig 52.49 322⇑ *e*P **P 16 01 32.5 -0.6**
KAR1 Arisaig 52.49 322⇑ *e*P **P 16 01 32.5 -0.6**
EPLA Plasencia 52.68 301 P **P 16 01 33.4 -1.4**
comp=Z,13nm,0.8s,mb4.9
EPLA Plasencia 52.68 301 P **P 16 01 33.4 -1.4**
EPLA pmax pmax
comp=Z,13nm,0.8s,mb4.9
EPLA Plasencia 52.68 301 P **P 16 01 33.4 -1.4**
comp=Z,13nm,0.8s,mb4.9
ESPR Espera 52.94 297 P **P 16 01 35.9 -0.9**
comp=Z,21nm,0.7s,mb5.2
ESPR Espera 52.94 297 P **P 16 01 35.8 -0.9**
comp=Z,21nm,0.7s,mb5.2
ECAL Calabor 52.97 303 P **P 16 01 37.5 +0.6**
comp=Z,28nm,0.9s,mb5.2
ECAL Calabor 52.97 303 P **P 16 01 37.5 +0.6**
comp=Z,28nm,0.9s,mb5.2
PBRG Braganca 52.99 303 *e*P **P 16 01 37.3 +0.3**
comp=Z,17nm,1.0s,mb4.9
PBRG Braganca 52.99 303 *e*P **P 16 01 37.3 +0.3**
comp=Z,17nm,1.0s,mb4.9
TORD Torodi Ar. Bea 53.13 266 P **P 16 01 37.6 -0.8**
comp=Z,136nm,0.4s,baz=62,slow=8.9,SNR=4.2
TORD LR LR 16 27 11.8
comp=Z,243nm,19.5s,MS4.3,baz=90,slow=39
EPON Pontenova 53.15 305 P **P 16 01 38.3 +0.1**
comp=Z,78nm,1.2s,mb5.5
EPON Pontenova 53.15 305 P **P 16 01 38.3 +0.1**
comp=Z,78nm,1.2s,mb5.5
MVO Moncorvo 53.27 302 *e*P **P 16 01 39.6 +0.5**
comp=Z,34nm,1.1s,mb5.2
MVO Moncorvo 53.27 302 P **P 16 01 39.3 +0.2**
MVO Moncorvo 53.27 302 P **P 16 01 39.3 +0.2**
EMIN Mina Concepcio 53.44 298 P **P 16 01 39.8 -0.6**
comp=Z,25nm,1.5s,mb4.9
EMIN Mina Concepcio 53.44 298 P **P 16 01 39.8 -0.6**
comp=Z,25nm,1.5s,mb4.9
NJ2 Nanjing 53.49 69 *e*P **P 16 01 44.5 +3.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
EBAD Badajoz 53.56 299 P **P 16 01 41.0 -0.4**
comp=Z,8.1nm,0.7s,mb4.8
EBAD Badajoz 53.56 299 P **P 16 01 41.0 -0.3**
comp=Z,8.1nm,0.7s,mb4.8
PBAR Barrancos 53.67 299 *e*P **P 16 01 42.0 -0.1**
comp=Z,32nm,1.1s,mb5.2
PBAR Barrancos 53.67 299 *e*P **P 16 01 42.0 -0.1**
comp=Z,32nm,1.1s,mb5.2
PMRV Marv??o 53.76 300 *e*P **P 16 01 42.6 -0.1**
comp=Z,20nm,1.0s,mb5.0
PMRV Marv??o 53.76 300 *e*P **P 16 01 42.6 -0.1**
comp=Z,20nm,1.0s,mb5.0
PCBR Castelo Branco 53.77 301 *e*P **P 16 01 43.8 +1.0**
comp=Z,26nm,0.9s,mb5.2
PCBR Castelo Branco 53.77 301 *e*P **P 16 01 43.8 +1.0**
comp=Z,26nm,0.9s,mb5.2
PVRL Vila Real 53.77 303 *e*P **P 16 01 43.4 +0.6**
comp=Z,30nm,1.1s,mb5.1
PVRL Vila Real 53.77 303 *e*P **P 16 01 43.4 +0.6**
comp=Z,30nm,1.1s,mb5.1
ELOB Lobios 53.96 303 P **P 16 01 45.2 +1.0**
comp=Z,21nm,1.3s,mb4.9
ELOB Lobios 53.96 303 P **P 16 01 45.2 +1.0**
comp=Z,21nm,1.3s,mb4.9
PVIS Viseu 53.97 302 *e*P **P 16 01 45.3 +1.0**
comp=Z,20nm,1.0s,mb5.0
PVIS Viseu 53.97 302 *e*P **P 16 01 45.3 +1.0**
comp=Z,20nm,1.0s,mb5.0
PESTR Estremoz 53.99 300 *e*P **P 16 01 44.1 -0.3**
comp=Z,15nm,1.1s,mb4.8
PESTR Estremoz 53.99 300 *e*P **P 16 01 44.1 -0.3**
comp=Z,15nm,1.1s,mb4.8
STS Santiago 54.21 305 P **P 16 01 47.0 +1.0**
comp=Z,35nm,0.9s,mb5.3
STS Santiago 54.21 305 P **P 16 01 47.0 +1.0**
STS pmax pmax
comp=Z,35nm,0.9s,mb5.3
STS Santiago 54.21 305 P **P 16 01 47.0 +1.0**
comp=Z,35nm,0.9s,mb5.3
PVAQ Vaqueiros 54.32 298 *e*P **P 16 01 46.4 -0.5**
comp=Z,14nm,1.7s,mb4.6
PVAQ Vaqueiros 54.32 298 *e*P **P 16 01 46.4 -0.5**
comp=Z,14nm,1.7s,mb4.6
PBEJ Beja 54.33 299 *e*P **P 16 01 47.0 0.0**
comp=Z,11nm,1.1s,mb4.7
PBEJ Beja 54.33 299 *e*P **P 16 01 47.0 0.0**
comp=Z,11nm,1.1s,mb4.7
EVO Evora 54.37 299 *e*P **P 16 01 47.5 +0.3**
comp=Z,21nm,0.7s,mb4.9
EVO *e*MLR MLR
comp=Z,128nm,21.8s,MS3.6
EVO Evora 54.37 299 *e*P **P 16 01 47.4 +0.2**
comp=Z,24nm,1.0s,mb5.1
EVO Evora 54.37 299 *e*P **P 16 01 47.4 +0.2**
comp=Z,24nm,1.0s,mb5.1
PMTG Montargil 54.45 300 *e*P **P 16 01 47.5 -0.3**
comp=Z,22nm,1.6s,mb4.8
PMTG Montargil 54.45 300 *e*P **P 16 01 47.5 -0.3**
comp=Z,22nm,1.6s,mb4.8
EVOP Sao Brissos 54.46 299 *e*P **P 16 01 47.5 -0.3**
comp=Z,21nm,0.7s,mb5.2
EVOP LR LR
comp=Z,128μm,21.8s
EVOP Sao Brissos 54.46 299 *e*P **P 16 01 47.5 -0.3**
EVOP pmax pmax
comp=Z,21nm,0.7s,mb5.2
EVOP Sao Brissos 54.46 299 *e*P **P 16 01 47.5 -0.3**
comp=Z,11nm,0.7s,mb4.9
PBDV Barranco-do-Ve 54.51 298 *e*P **P 16 01 48.0 -0.3**
PBDV Barranco-do-Ve 54.51 298 *e*P **P 16 01 48.0 -0.3**
PTOM Tomar 54.51 301 *e*P **P 16 01 48.9 +0.7**
comp=Z,41nm,0.8s,mb5.5
PTOM Tomar 54.51 301 *e*P **P 16 01 48.9 +0.7**
comp=Z,41nm,0.8s,mb5.5
EMAZ Mazaricos 54.52 305 P **P 16 01 48.0 -0.2**
comp=Z,27nm,0.8s,mb5.3

EMAZ	Mazaricos	54.52	305	P	P	16 01 48.0	-0.2
	comp=Z,27nm,0.8s,mb5.3						
PFVI	Vila Bisbo	55.24	298	eP	P	16 01 53.5	0.0
	comp=Z,32nm,1.8s,mb5.0						
PFVI	Vila Bisbo	55.24	298	P	P	16 01 53.3	-0.2
PFVI	Vila Bisbo	55.24	298	P	P	16 01 53.3	-0.2
CN2	Changchun	56.63	54	⇓P	P	16 02 03.3	-0.1
CN2				epP	pP	16 02 13.3	+2.7
CN2				eS	S	16 09 50.3	-4.0
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.6						
YAK	Yakutsk	58.15	32	eP	P	16 02 12.3	-1.5
	comp=E,46nm,1.2s,mb5.4						
YAK	Yakutsk	58.15	32	eP	P	16 02 11.8	-2.0
YAK				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
YAK	Yakutsk	58.15	32	eP	P	16 02 12.3	-1.5
	comp=Z,46nm,1.2s,mb5.4						
TIXI	Tiksi	58.54	21	eP	P	16 02 15.3	-1.1
	comp=Z,13nm,0.8s,mb5.0						
TIXI				ePcP	PcP	16 03 05.8	-0.7
TIXI	Tiksi	58.54	21	eP	P	16 02 15.2	-1.2
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,350nm,16.0s,MS4.6						
TIXI	Tiksi	58.54	21	eP	P	16 02 15.2	-1.2
	comp=Z,350nm,16.0s						
MDJ	Mudanjiang	59.46	52	P	P	16 02 23.5	+0.3
MDJ				pP	pP	16 02 32.5	+2.1
MDJ				sP	sP	16 02 36.3	+3.2
MDJ				ScP	ScP	16 07 09.5	-0.7
MDJ				PcS	PcS	16 07 13.5	+0.9
MDJ				S	S	16 10 29.3	-1.8
MDJ				sS	sS	16 10 45.5	+2.5
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,78nm,3.4s						
MDJ				LR	LR		
	comp=N,120nm,27.2s,MS3.9						
MDJ				LR	LR		
	comp=E,54nm,25.8s,MS3.9						
MDJ				LR	LR		
	comp=Z,88nm,18.8s						
KSRS	Korea Array	59.62	61	P	P	16 02 23.6	-0.8
	comp=Z,12nm,0.8s,mb5.0,baz=275,slow=7.3,SNR=26						
KSRS				PcP	PcP	16 03 11.3	-0.1
	comp=Z,3.3nm,0.9s,baz=275,slow=3.7,SNR=4.9						
KSRS				LR	LR	16 31 44.7	
	comp=Z,119nm,18.9s,MS4.0,baz=290,slow=40						
KSRS	Korea Array	59.62	61	P	P	16 02 23.7	-0.7
KSRS						16 03 11.4	
KSRS				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
KSRS				MLR	MLR		
	comp=Z,119nm,18.9s,MS4.0						
KSRS	Korea Array	59.62	61	P	P	16 02 23.7	-0.7
	comp=Z,13nm,0.9s,mb5.0						
KSRS	Korea Array	59.62	61	PcP	PcP	16 03 11.4	-0.1
	comp=Z,119nm,18.9s						
TSUM	Tsumeb	59.93	224	eP	P	16 02 28.1	+1.5
	comp=Z,16nm,0.9s,mb5.0						
TSUM	Tsumeb	59.93	224	eP	P	16 02 28.1	+1.4
	comp=Z,16nm,0.9s,mb5.0						
KLR	Kul'dur	60.19	47	eP	P	16 02 23.7	-4.4
KLR				pmax	pmax		
	comp=E,24nm,0.9s						
KLR				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.3						
LBTB	Lobatse	60.21	213	P	P	16 02 29.5	+1.0
	comp=Z,26nm,0.9s,mb5.2,baz=34,slow=6.8,SNR=18						
LBTB	Lobatse	60.21	213	P	P	16 02 29.5	+1.0
LBTB				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.3						
LBTB	Lobatse	60.21	213	P	P	16 02 29.5	+1.0
VLA	Vladivostok	61.37	54	ceP	P	16 02 35.4	-0.9
VLA				pmax	pmax		
	comp=Z,84nm,1.7s,mb5.6						
VLA	Vladivostok	61.37	54	eP	P	16 02 35.4	-0.9
	comp=Z,84nm,1.7s,mb5.6						
DBIC	Dimbokro	61.76	263	P	P	16 02 38.9	-0.5
	comp=Z,16nm,0.9s,mb5.1,baz=48,slow=6.8,SNR=12						
DBIC				LR	LR	16 30 33.9	
	comp=Z,105nm,19.4s,MS4.0,baz=279,slow=37						
DBIC	Dimbokro	61.76	263	P	P	16 02 38.9	-0.4
DBIC				pmax	pmax		
	comp=Z,16nm,0.9s						
DBIC				MLR	MLR		
	comp=Z,105nm,19.4s						
DBIC	Dimbokro	61.76	263	P	P	16 02 38.8	-0.5
KIC	Kosan Boka	61.80	262	eP	P	16 02 39.0	-0.6
	comp=Z,38nm,0.9s,mb5.5						
KIC	Kosan Boka	61.80	262	eP	P	16 02 39.0	-0.6
	comp=Z,38nm,0.9s,mb5.5						
TIC	Toumodi	61.91	263	eP	P	16 02 40.1	-0.3
	comp=Z,25nm,0.2s,mb6.0						
TIC	Toumodi	61.91	263	eP	P	16 02 40.1	-0.3
TIC	Toumodi	61.91	263	eP	P	16 02 40.1	-0.3
	comp=Z,25nm,0.2s,mb6.0						
LIC	Lamto	62.11	262	eP	P	16 02 41.4	-0.3
	comp=Z,54nm,1.0s,mb5.6						
LIC	Lamto	62.11	262	eP	P	16 02 41.7	0.0
	comp=Z,41nm,1.0s,mb5.2						
LIC				eMLR	MLR		
	comp=Z,230nm,20.0s,MS4.0						
LIC	Lamto	62.11	262	eP	P	16 02 41.7	0.0
	comp=Z,20nm,1.0s,mb5.2						
LIC				LR	LR		
	comp=Z,120nm,20.0s,MS4.0						
BOSA	Boshof	63.42	211	P	P	16 02 50.5	+0.5
	comp=Z,26nm,0.9s,mb5.3,baz=35,slow=6.2,SNR=32						
BOSA				LR	LR	16 32 07.0	
	comp=Z,117nm,19.9s,MS4.1,baz=7.2,slow=38						
BOSA	Boshof	63.42	211	eP	P	16 02 50.7	+0.7
	comp=Z,31nm,1.0s,mb5.4						
BOSA	Boshof	63.42	211	P	P	16 02 50.6	+0.6
BOSA				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.4						
BOSA				MLR	MLR		
	comp=Z,117nm,19.9s,MS4.1						
BOSA	Boshof	63.42	211	P	P	16 02 50.6	+0.6
	comp=Z,117nm,19.9s						
SUMG	Summit	65.54	341	iP	P	16 03 04.1	+0.7
	comp=Z,7.3nm,0.9s,mb4.7						
MJAR	Matsushiro Arr	67.79	59	P	P	16 03 18.3	-0.1
	comp=Z,2.2nm,0.8s,mb4.2,baz=277,slow=7.1,SNR=6.4						
MJAR				PcP	PcP	16 03 44.5	-0.5
	comp=Z,3.6nm,0.9s,baz=275,slow=5.4,SNR=5.0						
MJAR	Matsushiro Arr	67.79	59	P	P	16 03 18.3	-0.1
MJAR						16 03 44.5	
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	Matsushiro Arr	67.79	59	P	P	16 03 18.3	-0.1
MJAR	Matsushiro Arr	67.79	59	PcP	PcP	16 03 44.5	-0.5
YSS	Yuzh-Sakhalins	67.88	48	eP	P	16 03 17.3	-1.4
	comp=Z,68nm,0.6s,mb5.8						
YSS	Yuzh-Sakhalins	67.88	48	eP	P	16 03 17.0	-1.7
YSS				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.8						
YSS	Yuzh-Sakhalins	67.88	48	eP	P	16 03 17.3	-1.4
	comp=Z,68nm,0.6s,mb5.8						
DAV	Davao City (W)	68.05	93	LR	LR	16 36 43.7	
	comp=Z,68nm,20.1s,MS3.9,baz=198,slow=39						
BILL	Bilibino	71.71	22	eP	P	16 03 41.3	-0.7
	comp=Z,9.5nm,0.9s,mb4.7						
BILL	Bilibino	71.71	22	⇑iP	P	16 03 41.7	-0.2
BILL				e		16 03 57.8	
BILL				e		16 06 21.6	
BILL				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
BILL	Bilibino	71.71	22	iP	P	16 03 41.7	-0.2
	comp=Z,12nm,1.0s,mb4.8						
PETK	Petropavlovsk-	74.67	38	P	P	16 03 58.2	-1.5
	comp=Z,13nm,0.9s,mb4.8,baz=234,slow=3.3,SNR=8.2						
PETK	Petropavlovsk-	74.67	38	P	P	16 03 58.2	-1.5
PETK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
PETK	Petropavlovsk-	74.67	38	P	P	16 03 58.2	-1.5
PET	Petropavlovsk	75.23	38	eP	P	16 04 02.2	-0.7
PET	Petropavlovsk	75.23	38	eP	P	16 04 02.2	-0.7
FITZ	Fitzroy Crossi	80.69	116	P	P	16 04 34.2	+0.4
	comp=Z,15nm,0.9s,mb4.9,baz=295,slow=4.0,SNR=24						
FITZ	Fitzroy Crossi	80.69	116	eP	P	16 04 34.3	+0.5
	comp=Z,16nm,0.9s,mb4.9						
FITZ	Fitzroy Crossi	80.69	116	eP	P	16 04 34.3	+0.6
	comp=Z,16nm,0.9s,mb4.9						
NWAO	Narrogin (SRO)	83.17	132	P	P	16 04 46.1	-0.4
	comp=Z,14nm,0.8s,mb5.0,baz=278,slow=2.3,SNR=10						
NWAO	Narrogin (SRO)	83.17	132	P	P	16 04 46.1	-0.4
NWAO				pmax	pmax		
	comp=Z,14nm,0.8s						
NWAO	Narrogin (SRO)	83.17	132	P	P	16 04 46.1	-0.4
COLD	Coldfoot	83.41	10	eP	P	16 04 47.3	+0.1
	comp=Z,9.4nm,0.9s,mb4.8						
COLD	Coldfoot	83.41	10	eP	P	16 04 47.3	+0.1
	comp=Z,9.4nm,0.9s,mb4.8						
KAKA	Kakadu	83.51	108	⇓iP	P	16 04 49.6	+1.0
	comp=Z,25nm,0.6s,mb5.5						
KAKA	Kakadu	83.51	108	eP	P	16 04 49.0	+0.4
	comp=Z,73nm,0.8s,mb5.9						
INK	Inuvik	84.18	4	P	P	16 04 50.3	-0.9
	baz=4.0,slow=7.6						
INK	Inuvik	84.18	4	eP	P	16 04 50.7	-0.4
	comp=Z,13nm,1.1s,mb5.0						
INK	Inuvik	84.18	4	eP	P	16 04 50.7	-0.4
INK				pmax	pmax		
	comp=Z,13nm,1.1s						
INK	Inuvik	84.18	4	eP	P	16 04 50.7	-0.4
	comp=Z,13nm,1.1s,mb5.0						
SCHQ	Schefferville	84.79	331	P	P	16 04 54.1	-0.4
	comp=Z,5.1nm,0.6s,mb4.8,baz=41,slow=3.2,SNR=5.8						
SCHQ				LR	LR	16 47 07.1	
	comp=Z,61nm,18.5s,MS4.0,baz=305,slow=39						
SCHQ	Schefferville	84.79	331	P	P	16 04 54.1	-0.4
SCHQ				LR	LR	16 47 07.1	
SCHQ	Schefferville	84.79	331	P	P	16 04 54.1	-0.4
BPAW	Bear Paw Mtn.	86.14	12	eP	P	16 05 01.1	+0.1
	comp=Z,43nm,1.0s,mb5.6						
BPAW	Bear Paw Mtn.	86.14	12	eP	P	16 05 01.1	0.0
	comp=Z,43nm,1.0s,mb5.6						
TTA	Tatalina	86.18	14	eP	P	16 05 02.0	+0.7
TTA	Tatalina	86.18	14	eP	P	16 05 02.0	+0.7
TTA	Tatalina	86.18	14	eP	P	16 05 02.0	+0.7
ILAR	Eielson Array	86.20	10	P	P	16 05 00.4	-1.0
	comp=Z,4.2nm,0.8s,mb4.7,baz=330,slow=4.0,SNR=43						
ILAR				PP	PP	16 08 20.8	-0.5
	comp=Z,0.7nm,0.8s,baz=313,slow=5.8,SNR=4.6						
ILAR				LR	LR	16 45 32.0	
	comp=Z,98nm,19.3s,MS4.2,baz=305,slow=37						
ILAR	Eielson Array	86.20	10	P	P	16 05 00.4	-1.0
ILAR						16 08 20.8	
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR				MLR	MLR		
	comp=Z,98nm,19.3s						
ILAR	Eielson Array	86.20	10	P	P	16 05 00.4	-1.0
ILAR	Eielson Array	86.20	10	PP	PP	16 08 20.8	-0.5
MCK	McKinley	86.84	11	eP	P	16 05 03.8	-0.7
	comp=Z,27nm,1.0s,mb5.4						
MCK	McKinley	86.84	11	eP	P	16 05 03.8	-0.7
MCK				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.4						
MCK	McKinley	86.84	11	eP	P	16 05 03.8	-0.7
	comp=Z,27nm,1.0s,mb5.4						
TRF	Thorofare Moun	86.86	12	eP	P	16 05 04.2	-0.4
	comp=Z,15nm,1.0s,mb5.2						
TRF	Thorofare Moun	86.86	12	eP	P	16 05 04.2	-0.4
	comp=Z,15nm,1.0s,mb5.2						
EGAK	Eagle	86.97	8	eP	P	16 05 04.7	-0.4
	comp=Z,32nm,1.0s,mb5.5						
EGAK	Eagle	86.97	8	eP	P	16 05 04.7	-0.4
	comp=Z,32nm,1.0s,mb5.5						
PPLA	Purkeypile	87.01	13	eP	P	16 05 06.9	+1.6
	comp=Z,20nm,1.2s,mb5.2						
PPLA	Purkeypile	87.01	13	eP	P	16 05 06.9	+1.6
	comp=Z,20nm,1.2s,mb5.2						
DOT	Dot Lake	87.68	9	eP	P	16 05 08.5	0.0
	comp=Z,39nm,0.8s,mb5.7						
DOT	Dot Lake	87.68	9	eP	P	16 05 08.5	-0.1
	comp=Z,39nm,0.8s,mb5.7						
DAWY	Dawson	87.86	7	eP	P	16 05 09.3	-0.1
DAWY	Dawson	87.86	7	eP	P	16 05 09.3	-0.1
PAX	Paxson	88.12	10	eP	P	16 05 10.2	-0.4
	comp=Z,4.0nm,0.8s,mb4.7						
PAX	Paxson	88.12	10	eP	P	16 05 10.2	-0.5
PAX				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
PAX	Paxson	88.12	10	eP	P	16 05 10.2	-0.5
	comp=Z,4.0nm,0.8s,mb4.7						
MENT	Mentasta	88.41	9	eP	P	16 05 12.4	+0.4
MENT	Mentasta	88.41	9	eP	P	16 05 12.4	+0.4
WRA	Warramunga Arr	88.67	113	P	P	16 05 14.3	+0.3
	comp=Z,21nm,0.9s,mb5.5,baz=316,slow=4.1,SNR=127						
WRA				PKKPbc	PKKPbc	16 22 54.5	+0.1
	comp=Z,0.7nm,0.8s,baz=113,slow=2.6,SNR=7.2						
WRA	Warramunga Arr	88.67	113	P	P	16 05 14.3	+0.3
WRA				pmax	pmax		
	comp=Z,21nm,0.9s						
WRA	Warramunga Arr	88.67	113	P	P	16 05 14.3	+0.3
SML	Sawmill	88.73	12	eP	P	16 05 12.8	-0.7
	comp=Z,4.5nm,0.9s,mb4.8						
SML	Sawmill	88.73	12	eP	P	16 05 12.9	-0.7
SML				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
SML	Sawmill	88.73	12	eP	P	16 05 12.9	-0.7
	comp=Z,4.5nm,0.9s,mb4.8						
PMR	Palmer	88.79	12	eP	P	16 05 14.0	+0.2
	comp=Z,16nm,1.0s,mb5.3						
PMR	Palmer	88.79	12	eP	P	16 05 14.0	+0.2
PMR				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.3						
PMR	Palmer	88.79	12	eP	P	16 05 14.0	+0.2
	comp=Z,16nm,1.0s,mb5.3						
FORT	Forrest	89.40	125	eP	P	16 05 17.9	+0.7
	comp=Z,26nm,0.9s,mb5.6						
YKA	Yellowknife Ar	90.05	356	P	P	16 05 19.8	+0.1
	comp=Z,11nm,0.9s,mb5.2,baz=0.5,slow=4.8,SNR=24						
YKA				LR	LR	16 49 41.9	
	comp=Z,16nm,21.7s,MS3.4,baz=170,slow=38						
YKA	Yellowknife Ar	90.05	356	P	P	16 05 19.8	+0.1
YKA				pmax	pmax		
	comp=Z,11nm,0.9s						
YKA				MLR	MLR		
	comp=Z,16nm,21.7s						
YKA	Yellowknife Ar	90.05	356	P	P	16 05 19.8	+0.1
ASAR	Alice Springs	90.17	117	P	P	16 05 21.4	+0.5
	comp=Z,4.4nm,0.8s,mb4.9,baz=303,slow=4.7,SNR=107						
ASAR	Alice Springs	90.17	117	P	P	16 05 21.4	+0.5
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAR	Alice Springs	90.17	117	P	P	16 05 21.4	+0.5
CHGN	Chignik	91.35	19	eP	P	16 05 24.4	-1.5
CHGN	Chignik	91.35	19	eP	P	16 05 24.4	-1.5
KDAK	Kodiak Island	91.55	15	P	P	16 05 26.6	-0.3
	comp=Z,18nm,0.9s,mb5.4,baz=20,slow=14,SNR=6.2						
KDAK	Kodiak Island	91.55	15	iP	P	16 05 27.4	+0.6
KDAK	Kodiak Island	91.55	15	P	P	16 05 26.5	-0.3
DLBC	Dease Lake	94.20	4	eP	P	16 05 39.9	+0.9
DLBC	Dease Lake	94.20	4	eP	P	16 05 39.9	+0.9
MAW	Mawson	94.93	178	LR	LR	16 44 56.5	
	comp=Z,74nm,19.1s,MS4.2,baz=181,slow=33						
ULM	Lac du Bonnet	98.85	343	LR	LR	16 54 07.0	
	comp=Z,90nm,18.2s,MS4.3,baz=350,slow=38						
PDAR	Pinedale Array	108.94	349	PKiKP	PKiKP	16 10 49.5	-0.3
	comp=Z,0.4nm,0.6s,baz=69,slow=2.1,SNR=4.0						
NVAR	Mina Array Bea	114.24	356	PKP	PKiKP	16 11 00.5	+0.4
	comp=Z,0.9nm,0.6s,baz=340,slow=1.3,SNR=10.0						
TXAR	Lajitas Array	120.44	340	PKP	PKPdf	16 11 12.4	+0.2
	comp=Z,0.7nm,0.6s,baz=5.7,slow=0.9,SNR=9.8						
TXAR	Lajitas Array	120.44	340	PKIKP	PKPdf	16 11 12.4	+0.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	120.44	340	PKIKP	PKPdf	16 11 12.4	+0.2
CPUP	Villa Florida	121.82	255	PKP	PKPdf	16 11 14.8	0.0
	comp=Z,1.2nm,0.6s,baz=20,slow=5.4,SNR=4.5						
CPUP	Villa Florida	121.82	255	PKIKP	PKPdf	16 11 14.8	0.0
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CPUP	Villa Florida	121.82	255	PKIKP	PKPdf	16 11 14.8	0.0
TRQA	Tornquist	128.21	242	ePKPdf	PKPdf	16 11 27.0	+0.3
TRQA	Tornquist	128.21	242	ePKIKP	PKPdf	16 11 27.0	+0.3

IDC 26 15:54:42.2±37.0, 12°06'S×166°14'E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/18, mbtmp3.8/4, Error ellipse: s-maj=641.1km s-min=97.2km az=65.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.99	225	P	P	16 00 52.1	-0.5
	1.0nm,0.8s,baz=72,slow=14,SNR=3.9						
WRA	Warramunga Arr	31.52	252	P	P	16 01 06.3	+0.1
	0.6nm,0.7s,baz=82,slow=9.2,SNR=8.0						
ASAR	Alice Springs	32.70	245	P	P	16 01 16.4	-0.2
	1.0nm,0.4s,baz=69,slow=9.8,SNR=48						
FITZ	Fitzroy Crossi	39.51	256	P	P	16 02 15.5	+0.6
	0.8nm,0.7s,baz=98,slow=19,SNR=3.4						

CASC 26 15:55:08.9±1.1, 12°08'N×88°23'W, h28km±11km, MD4.0, ML3.4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	1.25	18	eP	Pn	15 55 30.6	0.0
VSM	San Miguel	1.34	358	eP	Pn	15 55 32.6	+0.8
BLLM	Bellamira	1.36	360	eP	Pn	15 55 32.2	+0.1
BLLM				eS	Sn	15 55 50.4	+1.3
COPN	Copaltepe	1.60	86	eP	Pn	15 55 35.3	-0.1
COPN				eS	Sn	15 55 56.7	+1.5
COPN				AML	AML	15 56 05.2	
	comp=Z,553nm,0.5s						
CAHU	Cacacuatique	1.68	1	eP	Pn	15 55 37.4	+0.9
MOMN	Momotombo	1.68	79	eP	Pn	15 55 36.5	0.0
LFRS	El Faro	1.74	332	eP	Pn	15 55 37.3	0.0
LFRS				eS	Sn	15 55 59.6	+1.1
CSAN		1.77	86	eP	Pn	15 55 37.6	-0.1
CRUN	El Crucero	1.89	93	eP	Pn	15 55 39.1	-0.2
BOQS	Boqueron	1.94	328	eP	Pn	15 55 40.5	+0.4
BOQS				eS	Sn	15 56 04.8	+1.2
TICN	Ticuantepe	1.95	91	eP	Pn	15 55 40.7	+0.4
HUEN		2.03	82	eP	Pn	15 55 41.4	+0.2
TGUH	Tegucigalpa,Un	2.18	25	eP	Pn	15 55 43.3	-0.1
TGUH				eS	Sn	15 56 09.5	+0.1
SNJE	San Jose	2.23	323	eP	Pn	15 55 44.5	+0.5
RTR	El Retiro	2.28	323	eP	Pn	15 55 44.7	0.0
RBDL	Robledal	2.47	325	eP	Pn	15 55 48.1	+0.7
RBDL				eS	Sn	15 56 17.6	+1.0

ISCJB ***26*** *16:16:44.4±0.5, 40°77N±0°03×23°69E±0°04, h10km±7km, Error ellipse: s-maj=4.8km s-min=4.5km az=175.5*
ATH ***26*** *16:16:44.8, 40°78N×23°67E, h13km±3km, MD2.8/4*
CSEM ***26*** *16:16:44.8, 40°77N×23°69E, h9km, ML1.6/4, After THE* ***26*** *16:16:44.8, 40°77N×23°69E, h9km±4km, ML1.6/4, Error ellipse: s-maj=4.0km s-min=0.4km az=271.0*

ISC 26 16:16:44.7±0.7, 40.77N±0°03×23°69E±0°04, h14km±12km, n18, σ0°39/33, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOH	Sokhos	0.26	282	ePG	Pg	16 16 49.9	-0.3
SOH				eSG	Sg	16 16 53.5	-0.4
SOH	Sokhos	0.26	282	P	Pg	16 16 49.9	-0.3
SOH				S	Sg	16 16 53.8	-0.1
SOH	Sokhos	0.26	282	P	Pg	16 16 49.9	-0.3
SOH				S	Sg	16 16 53.8	-0.1
SRS	Serrai	0.35	348	P	Pg	16 16 51.7	-0.3
SRS				S	Sg	16 16 57.0	+0.2
SRS	Serrai	0.35	348	P	Pg	16 16 51.7	-0.3
SRS				S	Sg	16 16 57.0	+0.2
PLG	Polygyros	0.44	205	ePB	Pg	16 16 53.5	+0.1
PLG				eSB	Sg	16 16 59.2	-0.1
PLG	Polygyros	0.44	205	P	Pg	16 16 53.4	0.0
PLG				S	Sg	16 16 59.5	+0.2
PLG	Polygyros	0.44	205	P	Pg	16 16 53.4	0.0
PLG				S	Sg	16 16 59.5	+0.2
OUR	Ouranopolis	0.49	153	P	Pg	16 16 54.2	-0.2
OUR				S	Sg	16 17 01.6	+0.6
OUR	Ouranopolis	0.49	153	P	Pg	16 16 54.2	-0.2
OUR				S	Sg	16 17 01.6	+0.6
NVR	Nevrokopi	0.59	13	ePB	Pg	16 16 56.9	+0.5
NVR				eSB	Sg	16 17 04.4	+0.1
KAVA	Kavala	0.67	70	P	Pg	16 16 57.2	-0.6
KAVA				S	Sg	16 17 06.9	+0.3
KAVA	Kavala	0.67	70	P	Pg	16 16 57.2	-0.6
KAVA				S	Sg	16 17 06.9	+0.3
KNT	Kendrikon	0.71	304	P	Pg	16 16 58.3	-0.3
KNT				S	Sg	16 17 08.7	+0.7
KNT	Kendrikon	0.71	304	P	Pg	16 16 58.3	-0.3
KNT				S	Sg	16 17 08.7	+0.7
LIT	Litokhoron	1.13	234	ePB	Pg	16 17 06.4	-0.1
RDO	Rodhopi	1.45	74	ePG	Pg	16 17 11.9	-0.7
ALN	Alexandroupoli	1.79	85	ePN	Pb	16 17 17.6	+0.2

MAN 26 16:40:50, 18°00N×120°48E, h42km, mb3.9, ML2.7, MS2.3, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.35	23	⇓iP	Pn	16 41 01.3	+2.4
ABRA	Dolores	0.42	147	eP	Pn	16 41 02.0	+2.2
ABRA				eS	Sn	16 41 06.3	-0.4
APYP	Conner	0.74	101	eP	Pn	16 41 06.2	+2.1
APYP				eS	Sn	16 41 12.9	-1.3
PALP	Palanan	2.08	116	⇓iP	Pn	16 41 24.9	+2.4

NIED ***26*** *16:53:00, 40°50N×142°90E, h29km, Mw5.0 Best double couple: M0 3.18000×10^16 NP1:φ0 31.00000°, δ72.00000°, λ100.00000°. NP2:φ0 181.00000°, δ20.00000°, λ61.00000°.*
JMA ***26*** *16:53:23.6±0.1, 40°49N×142°92E, h17km±2km, M5.0*
JMA Felt II J1.
BJI ***26*** *16:53:23.3, 40°44N×142°79E, h30km, mB5.1/21, mb5.3/53, Ms4.8/34, Ms7 4.7/31*
MOS ***26*** *16:53:25.5±0.9, 40°67N×142°71E, h33km, mb5.4/113, MS4.7/36, Error ellipse: s-maj=6.5km s-min=3.8km az=105.5*
ISCJB ***26*** *16:53:25.5±0.1, 40°50N±0°02×142°87E

10μm,1.0s,SNR=92
JEM Erimo 1.50 9 ⇑P Pn 16 53 50.6 -1.3
JEM eS Sn 16 54 10.7 +0.4
JOM Ohasama 1.58 229 ⇓P Pn 16 53 51.9 -1.1
JOM eS Sn 16 54 12.5 +0.2
JOT Ohata 1.59 303 ⇓P Pn 16 53 52.6 -0.6
JOT S Sn 16 54 13.6 +1.1
JAH Hinai 1.71 259 ⇓P Pn 16 53 54.5 -0.3
JNBK Urakawa-nobuka 1.75 358 ⇑P Pn 16 53 54.5 -0.8
JSI2 Shiura 2 1.91 287 ⇓P Pn 16 53 57.6 +0.1
JKB Kayabe 1.92 316 ⇓P Pn 16 53 57.3 -0.3
JKB eS Sn 16 54 21.5 +1.0
JMK Ichinoseki 2.01 219 ⇓P Pn 16 53 58.2 -0.6
JSR Shiriuchi 2.08 299 ⇓P Pn 16 54 00.1 +0.3
JCH Churui 2.12 11 ⇑P Pn 16 53 59.0 -1.4
JCH eS Sn 16 54 24.2 -1.3
JOU Okura 2.74 218 ⇑P Pn 16 54 08.6 -0.3
JYS Shirataka 3.15 224 ⇑P Pn 16 54 15.0 +0.5
ASAJ Asahikawa 3.59 357 P **Pn 16 54 19.8 -0.8**
51nm,0.3s,baz=213,slow=12,SNR=348
ASAJ Asahikawa 3.59 357 ePn **Pn 16 54 20.5 0.0**
ASAJ eSn Sn 16 55 02.2 +0.7
ASAJ Asahikawa 3.59 357 P **Pn 16 54 19.8 -0.7**
ASAJ pmax pmax
comp=Z,51nm,0.3s
YUK Yuzh-Kuril'sk 4.16 32 ⇓iP Pn 16 54 25.8 -2.6
YUK i S Sn 16 55 09.8 -5.9
YUK pmax pmax
comp=N,550nm,0.5s
YUK pmax pmax
comp=Z,930nm,0.5s
YUK pmax pmax
comp=E,490nm,0.3s
YUK smax
comp=N,2μm,0.6s
YUK smax
comp=E,5μm,0.6s
YUK smax
comp=N,2μm,0.6s
YUK smax
comp=E,6μm,0.6s
YUK MLR MLR
comp=Z,2μm,16.0s
YUK MLR MLR
comp=N,2μm,15.0s
YUK MLR MLR
comp=E,3μm,17.0s
JSD Sado 4.33 236 P **Pn 16 54 31.8 +1.0**
JIZZ Izumozaki 4.39 228 P **Pn 16 54 33.5 +2.0**
JHK Hiroka 4.43 223 P **Pn 16 54 32.9 +0.8**
JKT Katashina 4.69 218 P **Pn 16 54 36.8 +1.1**
JAG Ashikaga 4.88 214 ⇑P Pn 16 54 38.2 -0.1
JJN Nakama 5.00 228 P **Pn 16 54 41.6 +1.7**
JGK Kuni 5.15 221 P **Pn 16 54 43.4 +1.5**
MJAR Matsushiro Arr 5.38 224 P **Pn 16 54 45.5 +0.3**
comp=E,17nm,0.3s,baz=35,slow=11,SNR=254
MJAR LR LR 16 57 13.4
comp=E,3μm,19.2s,baz=40,slow=42
MJAR Matsushiro Arr 5.38 224 P **Pn 16 54 45.5 +0.3**
MJAR pmax pmax
comp=Z,17nm,0.3s
MAJO Matsushiro 5.38 224 ePn **Pn 16 54 45.9 +0.7**
comp=Z,439nm,0.7s
MAJO Matsushiro 5.38 224 eP **Pn 16 54 45.9 +0.7**
MAJO pmax pmax
comp=Z,439nm,0.7s
MAT Matsushiro 5.38 224 P **Pn 16 54 46.1 +0.9**
MAT S Sn 16 55 49.5 +3.6
MAT Matsushiro 5.38 224 P **Pn 16 54 46.2 +1.0**
JNG Nsakai 5.54 224 P **Pn 16 54 48.7 +1.3**
JTT Ttatey 5.82 229 P **Pn 16 54 52.7 +1.5**
KUR Kuril'sk 5.98 37 eP **Pn 16 54 51.6 -1.7**
KUR eS Sn 16 55 54.0 -6.5
KUR pmax pmax
comp=Z,2μm,1.2s
KUR pmax pmax
comp=N,220nm,0.8s
KUR pmax pmax
comp=E,220nm,0.8s
KUR pmax pmax
comp=Z,730nm,0.8s
KUR smax
comp=N,12μm,1.6s
KUR smax
comp=E,10μm,1.6s
KUR smax
comp=N,5μm,1.0s
KUR smax
comp=E,4μm,1.0s
JGN Niukaw 6.10 227 P **Pn 16 54 56.7 +1.6**
YSS Yuzh-Sakhalins 6.42 360 eP **Pn 16 54 59.3 0.0**
comp=E,221nm,0.9s
YSS Yuzh-Sakhalins 6.42 360 ⇑iP Pn 16 54 59.0 -0.4
YSS eS Sn 16 56 06.2 -5.1
YSS smax
comp=N,160nm,1.0s
YSS MLR MLR
comp=Z,3μm,16.0s
YSS MLR MLR
comp=N,2μm,15.0s
JNY Yasuok 6.49 219 P **Pn 16 55 01.1 +0.8**
SHZ3 Shizuoka 3 6.57 215 P **Pn 16 55 01.3 -0.2**
JHJ Hachijo jima 2 7.79 199 P **Pn 16 55 15.1 -3.2**
comp=N,40nm,0.3s,baz=73,slow=17,SNR=12
JHJ S Sn 16 56 37.0 -8.1
comp=N,63nm,0.3s,baz=76,slow=23,SNR=7.3
VLA Vladivostok 8.56 291 ⇑eP Pn 16 55 26.1 -2.7
MDJ Mudanjiang 10.58 297 eP **Pn 16 55 58.4 +2.1**
comp=N,141nm,0.9s
KLR Kul'dur 11.71 322 eP **Pn 16 56 08.0 -3.8**
KLR e 16 58 13.5
KLR pmax pmax
comp=E,38nm,1.2s
KLR pmax pmax
comp=Z,47nm,1.2s
KLR MLR MLR
comp=Z,2μm,13.0s
KSRS Korea Array 12.00 260 P **Pn 16 56 17.1 +1.3**
comp=Z,1.0nm,0.3s,baz=72,slow=13,SNR=14
KSRS LR LR 17 00 37.1
comp=Z,3μm,18.8s,baz=70,slow=36
KSRS Korea Array 12.00 260 P **Pn 16 56 17.1 +1.3**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,3μm,18.8s
CBIJ Chichi jima 13.41 182 P **Pn 16 56 33.5 -1.7**
comp=Z,10nm,0.3s,baz=280,slow=22,SNR=5.1
CBIJ S Sn 16 58 48.8 -14
comp=Z,12nm,0.3s,baz=352,slow=18,SNR=5.2
SKR Severo-Kuril's 13.75 38 eP **Pn 16 56 40.5 +1.0**
SKR eS Sn 16 59 01.9 -8.7
SKR pmax pmax
comp=N,50nm,0.9s
SKR pmax pmax
comp=Z,80nm,0.9s
SKR smax
comp=N,80nm,0.8s
SKR smax
comp=E,220nm,1.0s
SKR MLR MLR
comp=N,3μm,18.0s
SKR MLR MLR
comp=E,3μm,18.0s
SKR MLR MLR
comp=Z,3μm,18.0s
SNY Shenyang 14.56 281 ⇓P Pn 16 56 52.3 +1.7
SNY pmax pmax
comp=Z,41nm,0.8s
SNY pmax pmax
comp=Z,660nm,7.1s
SNY LR LR
comp=E,2μm,15.9s
SNY LR LR
comp=Z,3μm,15.9s
PETK Petropavlovsk- 16.14 34 P **Pn 16 57 06.5 -4.5**
comp=Z,0.4nm,0.3s,baz=197,slow=12,SNR=6.0
PETK LR LR 17 04 24.3
comp=Z,521nm,18.3s,baz=62,slow=41
PETK Petropavlovsk- 16.14 34 P **Pn 16 57 06.5 -4.5**
PET Petropavlovsk 16.49 35 eP **Pn 16 57 17.4 +2.0**
PET eS S 17 00 20.1 -7.5
PET pmax pmax
comp=Z,21nm,1.4s
PET MLR MLR
comp=Z,1μm,14.0s
JOW Kunigami 18.22 226 P **Pn 16 57 34.2 -2.9**
comp=Z,1.2nm,0.3s,baz=39,slow=11,SNR=5.6
HIA Hailar 18.48 306 ePn **Pn 16 57 37.0 -3.1**
comp=Z,102nm,0.9s
HIA Hailar 18.48 306 eP **Pn 16 57 37.0 -3.0**
HIA pmax pmax
comp=Z,102nm,0.9s
SSE Sheshan 19.88 249 P **Pn 16 57 53.0 -3.8**
SSE pP pP 16 58 01.0 -4.5
SSE sP sP 16 58 04.5 -6.5
SSE S **S 17 01 35.3 -1.0**
SSE pmax pmax
comp=Z,40nm,0.8s
SSE pmax pmax
comp=Z,290nm,4.5s
SSE LR LR
comp=N,680nm,14.0s
SSE LR LR
comp=E,520nm,14.1s
SSE LR LR
comp=Z,760nm,17.8s
CLNS Chul'man 20.06 330 c iP **P 16 57 55.3 -1.4**
CLNS e 17 01 42.4
CLNS pmax pmax
comp=Z,40nm,0.9s
CLNS pmax pmax
comp=N,36nm,1.1s
CLNS pmax pmax
comp=E,13nm,0.8s
CLNS smax
comp=E,14nm,1.9s
CLNS smax
comp=N,38nm,1.6s
CLNS MLR MLR
comp=Z,1μm,14.0s,MS4.4
CLNS MLR MLR
comp=N,870nm,13.0s,MS4.4
CLNS MLR MLR
comp=E,629nm,14.0s,MS4.4
BJI Beijing 20.32 277 P **P 16 57 57.5 -2.2**
BJI S **S 17 01 36.8 -8.2**
BJI pmax pmax
comp=Z,93nm,1.0s
BJI pmax pmax
comp=Z,300nm,3.7s
BJI LR LR
comp=N,820nm,16.6s
BJI LR LR
comp=E,1μm,21.9s
BJI LR LR
comp=Z,660nm,28.6s
BJT Baijiatuau 20.33 277 i Pn **P 16 57 57.7 -2.1**
comp=Z,117nm,0.8s
BJT Baijiatuau 20.33 277 i P **P 16 57 57.7 -2.1**
BJT pmax pmax
comp=Z,117nm,0.8s
TIA Tai'an 20.58 266 eP **P 16 58 00.8 -1.8**
TIA pmax pmax
comp=Z,60nm,1.0s
NJ2 Nanjing 21.05 254 eP **P 16 58 06.0 -1.6**
NJ2 pmax pmax
comp=Z,120nm,0.8s,mb5.3
YAK Yakutsk 22.96 344 ⇓iPn P 16 58 24.3 -3.4
comp=Z,106nm,0.8s,mb5.3
YAK eS **S 17 02 26.6 -7.9**
YAK Yakutsk 22.96 344 c iP **P 16 58 23.7 -4.0**
YAK eS **S 17 02 29.4 -5.0**
YAK e*SS sS 17 03 09.4 +16
YAK pmax pmax
comp=Z,109nm,1.2s,mb5.2
YAK pmax pmax
comp=N,44nm,1.0s
YAK pmax pmax
comp=E,12nm,1.3s
YAK smax
comp=N,200nm,2.2s
YAK smax
comp=E,211nm,2.3s
CIT Chita 23.11 310 eP **P 16 58 25.6 -3.7**
CIT e 16 58 40.8
CIT e 17 02 39.5
CIT pmax pmax
comp=Z,313nm,1.4s,mb5.5
SEY Seymchan 23.15 11 ⇑iP P 16 58 27.5 -2.2
HHC Hu-ho-hao-te 23.65 281 ⇓P P 16 58 32.8 -1.9
HHC pP 16 58 40.0
HHC sP sP 16 58 43.0 -8.4
HHC PP 16 59 05.5
HHC PcP PcP 17 02 19.5 +1.4
HHC S **S 17 02 42.3 -3.8**
HHC sS sS 17 02 52.8 -13
HHC SS 17 03 31.5
HHC ScP ScP 17 05 54.0 +1.3
HHC pmax pmax
comp=Z,27nm,1.0s,mb4.6
HHC pmax pmax
comp=Z,240nm,5.2s
HHC LR LR
comp=N,310nm,12.2s,MS4.7
HHC LR LR
comp=E,2μm,13.2s,MS4.7
HHC LR LR
comp=Z,2μm,14.5s,MS4.7
YHNB Yeheng 23.92 235 eP **P 16 58 33.9 -3.5**
comp=Z,52nm,1.0s,mb4.9
SSLB Suanglung 24.83 234 P **P 16 58 43.2 -2.4**
comp=Z,29nm,0.8s,mb4.9
BTO Baotou 24.85 281 eP **P 16 58 43.3 -2.3**
YULB Yu-li 24.91 233 eP **P 16 58 43.9 -2.4**
comp=Z,20nm,0.7s,mb4.7
WHN Wuhan 25.13 256 ⇑P P 16 58 46.8 -1.5
WHN pP pP 16 58 53.3 -6.6
WHN S **S 17 03 12.0 +1.9**
WHN pmax pmax
comp=Z,87nm,0.5s,mb5.5
WHN LR LR
comp=N,3μm,13.2s,MS5.2
WHN LR LR
comp=E,4μm,16.4s,MS5.2
WHN LR LR
comp=Z,6μm,15.9s,MS5.2
BOD Bodaibo 25.28 323 ⇑iP P 16 58 47.9 -1.5
BOD pmax pmax
comp=Z,60nm,1.1s,mb5.0
TPUB Ta-pu 25.39 234 eP **P 16 58 48.4 -2.2**
comp=Z,50nm,0.7s,mb5.2
TWG Pinlang 25.47 233 eP **P 16 58 51.2 -0.2**
comp=Z,70nm,0.9s,mb5.2
ULN Ulaanbaatar 26.49 298 i P **P 16 59 00.1 -0.3**
comp=Z,45nm,0.9s,mb5.0
ULN Ulaanbaatar 26.49 298 i P **P 16 59 00.1 -0.4**
ULN pmax pmax
comp=Z,45nm,0.9s,mb5.0
ULN Ulaanbaatar 26.49 298 P **P 16 59 00.3 -0.2**
comp=Z,609nmcomp=Z,54nm,0.9s,mb5.1
ULN Ulaanbaatar 26.49 298 P **P 16 59 00.6 +0.1**
SNR=18
ULN mb 16 59 02.0
SNR=29
GUMO Guam 26.90 176 LR LR 17 08 41.8
comp=Z,601nm,21.4s,MS4.1,baz=14,slow=34
SONM Songino Array 26.94 298 P **P 16 59 04.4 -0.1**
comp=Z,40nm,0.9s,mb4.9,baz=88,slow=7.8,SNR=120
SONM LR LR 17 10 29.8
comp=Z,3μm,18.0s,MS4.8,baz=96,slow=38
SONM Songino Array 26.94 298 P **P 16 59 04.4 0.0**
SONM pmax pmax
comp=Z,40nm,1.0s
SONM MLR MLR
comp=Z,3μm,18.0s
XAN Xi'an 27.63 267 P **P 16 59 09.5 -1.3**
XAN pmax pmax
comp=Z,7.0nm,1.2s
XAN LR LR
comp=N,180nm,14.2s
XAN LR LR
comp=E,310nm,18.1s
XAN LR LR
comp=Z,280nm,19.5s
IRK Irkutsk 28.72 307 eP **P 16 59 20.4 +0.1**
IRK pmax pmax
comp=Z,59nm,2.0s,mb5.0
ENH Enshi 28.89 260 eP **P 16 59 20.9 -1.2**
comp=Z,48nm,0.9s,mb5.2
TLY Talaya 29.03 306 eP **P 16 59 23.1 +0.1**
comp=Z,16nm,0.9s,mb4.8
TLY Talaya 29.03 306 eP **P 16 59 23.1 0.0**
TLY pmax pmax
comp=Z,16nm,0.9s,mb4.8
ZAK Zakamensk 29.13 303 eP **P 16 59 23.9 0.0**
ZAK pmax pmax
comp=Z,13nm,1.1s,mb4.6
BILL Biiibino 30.36 17 ⇓iPn P 16 59 34.7 0.0
comp=Z,41nm,1.0s,mb5.1
BILL Biiibino 30.36 17 ⇓iP P 16 59 34.7 0.0
BILL i 16 59 42.4
BILL pmax pmax
comp=Z,37nm,1.0s,mb5.1
BILL MLR MLR
comp=Z,500nm,16.0s,MS4.3
MOY Mondy 30.67 305 eP **P 16 59 38.0 +0.4**
MOY pmax pmax
comp=Z,77nm,2.5s,mb5.1
LZH Lanzhou 30.74 274 eP **P 16 59 39.0 +0.6**
LZH pP pP 16 59 42.0 -8.1
LZH PP PP 17 00 36.5 -12
LZH eS **S 17 04 32.5 -5.8**
LZH pmax pmax
comp=Z,36nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,160nm,5.6s
LZH LR LR
comp=N,940nm,15.6s
LZH LR LR
comp=E,350nm,8.3s
LZH LR LR
comp=Z,910nm,16.3s,MS4.5
TIXI Tiksi 31.97 352 eP **P 16 59 47.8 -1.0**
comp=Z,21nm,0.8s,mb5.0
TIXI Tiksi 31.97 352 eP **P 16 59 47.1 -1.7**
TIXI pmax pmax
comp=Z,29nm,1.0s,mb5.1
TIXI MLR MLR
comp=Z,488nm,16.0s,MS4.3
GTA Gaotai 32.75 282 ⇑P P 16 59 56.3 +0.3
GTA pP pP 17 00 07.0 -0.7
GTA sP sP 17 00 11.0 -2.0
GTA PcP PcP 17 02 41.3 +0.8
GTA S **S 17 05 09.5 -0.1**
GTA sS sS 17 05 26.0 -3.3
GTA PcS PcS 17 06 26.5 +0.8
GTA pmax pmax
comp=Z,32nm,1.1s,mb5.2
GTA pmax pmax
comp=Z,170nm,7.6s
GTA LR LR
comp=N,870nm,19.0s,MS4.8
GTA LR LR
comp=E,2μm,17.5s,MS4.8
GTA LR LR
comp=Z,2μm,17.1s,MS4.9
GYA Guiyang 33.02 256 ⇑iP P 16 59 56.5 -2.0
GYA S **S 17 05 13.8 -0.2**
GYA pmax pmax
comp=Z,50nm,0.8s,mb5.5
GYA pmax pmax
comp=Z,150nm,4.8s
GYA LR LR
comp=N,1μm,18.3s,MS4.8
GYA LR LR
comp=E,1μm,15.8s,MS4.8
GYA LR LR
comp=Z,2μm,15.8s,MS4.8
KMI Kunming 36.69 258 ⇑P P 17 00 30.3 +0.2
KMI S **S 17 06 04.3 -6.2**
KMI sS sS 17 06 28.8 -1.6
KMI pmax pmax
comp=Z,60nm,1.1s,mb5.3
KMI pmax pmax
comp=Z,170nm,4.9s
KMI LR LR
comp=N,1μm,14.4s,MS4.8
KMI LR LR
comp=E,800nm,16.8s,MS4.8
KMI LR LR
comp=Z,1μm,17.5s,MS4.8
DAV Davao City (W) 36.72 209 LR LR 17 13 37.1
comp=Z,383nm,19.2s,MS4.2,baz=162,slow=33
WMQ Urumqi 40.36 293 eP **P 17 01 02.0 +1.3**
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.7
ZAA0 Zalesovo Array 40.46 309 eP **P 17 01 01.0 -0.5**
ZALV Zalesovo Beam 40.46 309 P **P 17 01 01.1 -0.3**
comp=Z,35nm,0.7s,mb5.2,baz=90,slow=7.9,SNR=147
ZALV PcP PcP 17 03 03.1 -0.3
comp=Z,24nm,0.9s,baz=88,slow=3.5,SNR=7.1
ZALV ScP ScP 17 06 51.0 +1.8
comp=Z,2.8nm,0.9s,baz=82,slow=3.1,SNR=4.0
ZALV LR LR 17 18 40.9
comp=Z,1μm,18.7s,MS4.7,baz=78,slow=37
ZALV Zalesovo Beam 40.46 309 P **P 17 01 01.2 -0.3**
ZALV 17 03 03.1
ZALV pmax pmax
comp=Z,35nm,0.7s,mb5.2
ZALV MLR MLR
comp=Z,1μm,18.7s,MS4.7
NVS Novosibirsk 41.31 311 eP **P 17 01 07.8 -0.6**
NVS ePPP 17 03 05.0
NVS pmax pmax
comp=Z,34nm,1.0s,mb4.9
NVS pmax pmax
comp=N,9.0nm,0.7s
NVS pmax pmax
comp=E,18nm,1.1s
UBT Ubonrachathani 41.37 244 ⇓P P 17 01 10.0 +0.6
TTA Tatalina 41.94 37 eP **P 17 01 14.7 +1.2**
TTA Tatalina 41.94 37 eP **P 17 01 14.7 +1.2**
TNTI Ternate 41.99 203 P **P 17 01 16.2 +1.8**
comp=E,90nm,0.9s,mb5.4
CHRT Chiangrai 42.01 254 ⇓P P 17 01 14.0 -0.6
comp=E,342nm,0.8s,mb6.0
SWI Sorong 42.53 197 P **P 17 01 20.1 +1.3**
comp=E,30nm,0.9s,mb5.0
LSA Lhasa 43.09 272 P **P 17 01 24.5 +1.3**
LSA pP pP 17 01 33.0 -2.3
LSA sP sP 17 01 37.8 -2.7
LSA S **S 17 07 50.8 +4.6**
LSA LR LR
comp=N,260nm,18.9s,MS4.6
LSA LR LR
comp=E,710nm,17.8s,MS4.6
LSA LR LR
comp=Z,1μm,19.5s,MS4.7
LSA Lhasa 43.09 272 i Pn **P 17 01 24.8 +1.5**
comp=Z,35nm,0.8s,mb5.1
LSA Lhasa 43.09 272 i P **P 17 01 24.8 +1.6**
LSA pmax pmax
comp=Z,35nm,0.8s,mb5.1
MK31 Makanchi Array 43.29 299 i P **P 17 01 24.6 0.0**
MK31 Makanchi Array 43.29 299 i P **P 17 01 24.6 0.0**
MK31 pmax pmax
comp=Z,53nm,0.7s,mb5.4
MKAR Makanchi Array 43.29 299 P **P 17 01 24.6 -0.1**
comp=Z,30nm,0.7s,mb5.1,baz=83,slow=9.6,SNR=301
MKAR LR LR 17 20 37.0
comp=Z,1μm,18.7s,MS4.8,baz=81,slow=38
MKAR Makanchi Array 43.29 299 P **P 17 01 24.6 0.0**
MKAR pmax pmax
comp=Z,30nm,0.7s
MKAR MLR MLR
comp=Z,1μm,18.7s
CHG Chiang Mai 43.29 253 ⇑P P 17 01 25.2 +0.2
comp=Z,28nm,0.7s,mb5.1
CHTO Chiang Mai 43.29 253 eP **P 17 01 24.7 -0.2**
comp=Z,19nm,0.8s,mb4.9
CHTO Chiang Mai 43.29 253 eP **P 17 01 24.7 -0.3**
CHTO pmax pmax
comp=Z,19nm,0.8s,mb4.9
CHTO Chiang Mai 43.29 253 P **P 17 01 24.8 -0.2**
comp=Z,32nm,0.9s,mb5.0
CHTO Chiang Mai 43.29 253 P **P 17 01 25.5 +0.5**
SNR=5.7
KMSI Cibinong 43.30 208 P **P 17 01 26.1 +1.1**
CMAR Chiang Mai Arr 43.52 253 P **P 17 01 27.1 +0.2**
comp=Z,5.9nm,0.7s,mb4.4,baz=45,slow=6.6,SNR=16
CMAR LR LR 17 20 23.7
comp=Z,310nm,18.3s,MS4.2,baz=52,slow=37
CMAR Chiang Mai Arr 43.52 253 P **P 17 01 27.1 +0.3**
CMAR pmax pmax
comp=Z,6.0nm,0.7s
CMAR MLR MLR

comp=Z,310nm,18.3s
PPLA Purkeypile 43.69 37 *e*P **P 17 01 29.2 +1.6**
comp=Z,56nm,1.2s,mb5.2
KDAK Kodiak Island 43.79 44 P **P 17 01 27.9 -0.7**
comp=Z,12nm,0.8s,mb4.7,baz=312,slow=10,SNR=5.7
KDAK Kodiak Island 43.79 44 *i* P **P 17 01 28.5 0.0**
MRSI Marisa 44.16 211 P **P 17 01 32.3 +0.4**
comp=Z,91nm,1.3s,mb5.3
BPAW Bear Paw Mtn. 44.22 35 *e*P **P 17 01 32.1 +0.3**
comp=Z,11nm,0.7s,mb4.7
BDT Bhumibol Dam 44.26 251 P **P 17 01 34.0 +1.3**
NST Nakhon Sawan 44.49 249 P **P 17 01 35.0 +0.4**
TRF Thorofare Moun 44.54 36 *e*P **P 17 01 35.1 +0.7**
comp=Z,9.6nm,0.7s,mb4.7
COLD Coldfoot 44.57 31 *e*P **P 17 01 35.8 +1.1**
comp=Z,15nm,0.9s,mb4.8
SHL Shillong 44.64 267 *e*PKP **P 17 01 35.2 -0.5**
KURK Kurchatov 44.72 306⇓*i*Pn **P 17 01 36.1 +0.1**
comp=Z,58nm,0.8s,mb5.5
KURK Kurchatov 44.72 306*c i*P **P 17 01 35.5 -0.6**
KURK pmax pmax
comp=Z,85nm,1.2s,mb5.5
KURK Kurchatov 44.72 306 P **P 17 01 35.0 -1.1**
comp=Z,456nm,0.9s,mb6.3,SNR=73
KURK Kurchatov 44.72 306 P **P 17 01 36.1 0.0**
SNR=36
MCK McKinley 45.13 36 *e*P **P 17 01 39.0 -0.1**
comp=Z,27nm,0.9s,mb5.1
MCK McKinley 45.13 36 *e*P **P 17 01 39.0 -0.1**
MCK pmax pmax
comp=Z,27nm,0.9s,mb5.1
PMR Palmer 45.19 39 *e*P **P 17 01 39.3 -0.3**
comp=Z,12nm,0.6s,mb4.9
PMR Palmer 45.19 39 *e*P **P 17 01 39.3 -0.3**
PMR pmax pmax
comp=Z,12nm,0.6s,mb4.9
SML Sawmill 45.55 38 *e*P **P 17 01 42.8 +0.4**
comp=Z,18nm,1.3s,mb4.8
SML Sawmill 45.55 38 *e*P **P 17 01 42.8 +0.4**
SML pmax pmax
comp=Z,18nm,1.3s,mb4.8
COLA College 45.55 34 *e*P **P 17 01 42.9 +0.5**
comp=Z,21nm,0.9s,mb5.1
COLA College 45.55 34 *e*P **P 17 01 42.9 +0.5**
COLA pmax pmax
comp=Z,21nm,0.9s,mb5.1
NLAI Namlea 45.88 202 P sP 17 02 02.0 -0.8
ILAR Eielson Array 45.97 34 P **P 17 01 45.3 -0.4**
comp=Z,8.3nm,0.7s,mb4.8,baz=266,slow=6.2,SNR=87
ILAR pP pP 17 01 58.2 +0.3
comp=Z,14nm,0.7s,baz=263,slow=6.0,SNR=15
ILAR LR LR 17 23 28.8
comp=Z,172nm,19.7s,MS4.0,baz=95,slow=39
ILAR Eielson Array 45.97 34 P **P 17 01 45.3 -0.4**
ILAR *PP pP 17 01 58.2 +0.3
ILAR pmax pmax
comp=Z,8.0nm,0.7s
ILAR MLR MLR
comp=Z,172nm,19.7s
PCI Palu 46.26 213 P **P 17 01 54.2 +5.6**
comp=Z,1μcomp=Z,109nm,0.9s,mb5.8
PAX Paxson 46.75 37 P **P 17 01 50.7 -1.2**
comp=Z,5.6nm,0.6s,mb4.7
PAX Paxson 46.75 37 P **P 17 01 50.7 -1.2**
PAX pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
TAPN Taplejung 46.88 271 *e*P **P 17 01 54.2 +0.8**
comp=Z,9.1nm,0.7s,mb5.8
DOT Dot Lake 47.30 36 *e*P **P 17 01 56.7 +0.5**
comp=Z,39nm,0.6s,mb5.5
ODAN Odare 47.38 271 *e*P **P 17 01 57.9 +0.6**
comp=Z,201nm,1.0s,mb6.0
GUN Gumba 47.99 273 *e*P **P 17 02 02.7 +0.7**
comp=Z,363nm,0.7s
KDI Kendari 47.99 208 P **P 17 02 02.9 +0.8**
comp=Z,18nm,1.5s,mb4.9
EGAK Eagle 48.41 34 *e*P **P 17 02 04.3 -0.4**
comp=Z,11nm,0.8s,mb4.9
KKN Kakani 48.51 274 *e*P **P 17 02 06.6 +0.6**
comp=Z,226nm,0.8s,mb6.3
KKN Kakani 48.51 274 *e*P **P 17 02 06.6 +0.6**
PKI Pulchoki 48.52 273 *e*P **P 17 02 06.4 +0.3**
comp=Z,70nm,0.7s,mb5.8
PKI Pulchoki 48.52 273 *e*P **P 17 02 06.6 +0.5**
comp=Z,101nm,0.7s,mb6.0
PKI Pulchoki 48.52 273 *e*P **P 17 02 06.6 +0.5**
PKIN Phulchoki 48.52 273 *e*P **P 17 02 06.6 +0.5**
comp=Z,101nm,0.7s,mb6.0
DMN Daman 48.73 273 *e*P **P 17 02 08.3 +0.6**
comp=Z,158nm,0.8s,mb6.1
KSM Kuching 48.77 226 *e*P **P 17 02 08.7 +0.6**
comp=Z,15nm,0.9s,mb5.0
GKN Gorkha 48.88 274 *e*P **P 17 02 09.2 +0.3**
comp=Z,172nm,0.8s,mb6.1
TKM2 Tokmak 2 49.01 296 P **P 17 02 10.4 +0.8**
SNR=5.7
TKM2 Tokmak 2 49.01 296 *i* P **P 17 02 10.4 +0.7**
comp=Z,73nm,0.8s,mb5.8
TKM2 Tokmak 2 49.01 296 *i* P **P 17 02 10.4 +0.7**
TKM2 pmax pmax
comp=Z,73nm,0.8s,mb5.8
SPSI Sidrap Palu 49.07 211 P **P 17 02 09.9 -0.4**
BRVK Borovoye 49.15 310 *i* P **P 17 02 10.8 +0.2**
comp=Z,27nm,0.9s,mb5.3
BRVK Borovoye 49.15 310 *i* P **P 17 02 09.8 -0.8**
BRVK pmax pmax
comp=Z,46nm,1.1s,mb5.4
BRVK Borovoye 49.15 310 P **P 17 02 10.3 -0.3**
comp=Z,115nm,1.1s,mb5.8,SNR=13
BRVK Borovoye 49.15 310 P **P 17 02 11.1 +0.5**
SNR=12
DAWY Dawson 49.28 35 *e*P **P 17 02 10.8 -0.6**
STKI Sintang 49.33 223 P **P 17 02 12.9 +0.5**
comp=Z,5μcomp=Z,34nm,1.4s,mb5.2
DANN Dangsing 49.38 275 *e*P **P 17 02 13.7 +1.0**
comp=Z,589nm,0.7s
BBSI Bau Bau 49.43 207 P **P 17 02 15.4 +2.3**
comp=Z,55nm,1.1s,mb5.5
KBK Karagaybulak 49.55 296 P **P 17 02 14.5 +0.7**
SNR=82
CHMS Chumysh 49.56 297 P **P 17 02 13.9 +0.1**
SNR=8.4
KZA Kyzart 49.56 295 P **P 17 02 15.8 +1.9**
comp=Z,37nm,0.8s,mb5.5
USP Ospenovka 49.63 297 P **P 17 02 14.3 -0.1**
SNR=16
FRU Bishkek 49.71 296 *e*P **P 17 02 15.0 0.0**
FRU *e* pP 17 02 28.0 +0.7
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.4
KOLN Koldanda 49.79 274 *e*P **P 17 02 16.4 +0.6**
comp=Z,98nm,0.7s,mb5.9
AAK Ala-Archa 49.87 296 *i* P **P 17 02 16.4 +0.1**
comp=Z,16nm,0.7s,mb5.2
AAK Ala-Archa 49.87 296*c i*P **P 17 02 16.3 +0.1**
AAK pmax pmax
comp=Z,15nm,1.1s,mb4.9
AAK Ala-Archa 49.87 296 P **P 17 02 16.6 +0.4**
comp=Z,161nm,0.9s,mb6.0,SNR=15
AAK Ala-Archa 49.87 296 P **P 17 02 16.6 +0.4**
comp=Z,77nmcomp=Z,6.9nm,1.1s,mb4.6
AAK Ala-Archa 49.87 296 P **P 17 02 16.8 +0.5**
SNR=9.1
ZRNK Zerenda 49.92 311 *i* P **P 17 02 15.5 -0.9**
ZRNK pmax pmax
comp=Z,106nm,1.4s,mb5.7
UCH Uchtor 50.01 296 P **P 17 02 18.1 +0.8**
SNR=19
UCH Uchtor 50.01 296 *i* P **P 17 02 17.9 +0.6**
comp=Z,10nm,0.9s,mb4.9
KAPI Kappang 50.03 211 *e*P **P 17 02 16.5 -1.2**
comp=Z,89nm,1.4s,mb5.6
KAPI Kappang 50.03 211 P **P 17 02 17.2 -0.5**
comp=Z,278nmcomp=Z,23nm,1.3s,mb5.1
BKSI Bulukumba 50.17 210 P **P 17 02 18.0 -0.7**
comp=Z,34nm,0.8s,mb5.4
EKS2 Erkin-Say 50.35 297 P **P 17 02 20.2 +0.3**
SNR=20
EKS2 Erkin-Say 50.35 297 *i* P **P 17 02 20.1 +0.2**
comp=Z,27nm,0.8s,mb5.3
AML Almayashu 50.61 296 P **P 17 02 23.1 +1.2**
SNR=12
AML Almayashu 50.61 296 *e*P **P 17 02 23.1 +1.2**
comp=Z,52nm,1.0s,mb5.4
BBKI Banjar Baru 50.73 217 P **P 17 02 23.4 +0.4**
comp=Z,70nm,0.9s,mb5.6
INK Inuvik 50.78 28 *e*P **P 17 02 23.2 +0.5**
comp=Z,28nm,1.0s,mb5.1
INK Inuvik 50.78 28 *e*P **P 17 02 23.2 +0.5**
INK pmax pmax
comp=Z,27nm,1.0s
PTH Pithoragarh 51.45 278 *e*PKP **P 17 02 28.2 -0.1**
KULM Kulim 51.56 239 *e*P **P 17 02 29.5 +0.3**
comp=Z,30nm,0.9s,mb5.2
HNR Honiara 52.17 158 LR LR 17 21 20.4
comp=Z,261nm,19.2s,MS4.3,baz=240,slow=32
KK31 Karatay Array 52.39 298 *i* P **P 17 02 34.6 -0.5**
KK31 pmax pmax
comp=Z,29nm,0.8s,mb5.3
KKAR Karatay Array 52.39 298 *e*P **P 17 02 34.8 -0.3**
comp=Z,24nm,0.8s,mb5.2
KKAR Karatay Array 52.39 298 *e*P **P 17 02 34.8 -0.3**
KKAR pmax pmax
comp=Z,24nm,0.8s,mb5.2
MMRI Maumere 52.48 206 P **P 17 02 35.9 -0.1**
comp=Z,962nmcomp=Z,98nm,1.0s,mb5.7
DDI Dehra Dun 52.69 280 *ex* **P 17 02 31.5 -6.1**
SDNR Sundarnagar 52.92 282 *e*PKP **P 17 02 38.5 -0.7**
SMLA Simla 52.96 282 *i* P **P 17 02 38.2 -1.3**
SMLA *i* P 17 02 38.3
SVE Sverdlovsk 53.30 317⇓*e*P **P 17 02 42.2 +0.6**
SVE pmax pmax
comp=Z,100nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,2μm,16.0s,MS5.3
KAKA Kakadu 53.84 193 *e*P **P 17 02 45.0 -1.0**
comp=Z,12nm,0.6s,mb5.0
KAKA *e* pP 17 02 57.6 -0.8
KAKA Kakadu 53.84 193 *e*P **P 17 02 45.6 -0.4**
comp=Z,122nm,0.8s,mb5.9
KAKA Kakadu 53.84 193 P **P 17 02 46.0 0.0**
comp=Z,89nm,0.8s,mb5.8
PPBI Pangkal Pinang 54.09 227 P **P 17 02 49.2 +1.3**
comp=Z,38nm,0.9s,mb5.3
NDI New Delhi 54.15 279 *ex* **P 17 02 46.0 -2.3**
COEN Coen 54.21 180 *e*P **P 17 02 49.0 +0.3**
comp=Z,174nm,1.0s,mb5.9
COEN Coen 54.21 180 P pP 17 03 00.7 -0.3
SOKR Solikamsk 54.27 321*c i*P **P 17 02 47.2 -1.4**
SOKR pmax pmax
comp=Z,60nm,0.9s,mb5.5
SOKR MLR MLR
comp=Z,430nm,15.0s,MS4.6
ARU Arti 54.51 317 *e*P **P 17 02 50.5 +0.1**
comp=Z,72nm,0.9s,mb5.7
ARU Arti 54.51 317*d i*P **P 17 02 50.3 -0.2**
ARU *e* 17 03 53.1
ARU *e* 17 04 50.8
ARU *e*PPP 17 06 01.9
ARU S **S 17 10 27.4 +1.3**
ARU SS SS 17 14 09.6 +1.2
ARU pmax pmax
comp=Z,83nm,1.0s,mb5.7
ARU MLR MLR
comp=Z,2μm,17.0s,MS5.3
ARU Arti 54.51 317 P **P 17 02 50.7 +0.2**
comp=Z,442nm,0.9s,SNR=26
GRJI Gresik 54.86 218 P **P 17 02 47.5 -5.9**
BKNI Bangkinang 55.11 234 P **P 17 02 55.5 +0.1**
comp=Z,2μcomp=Z,124nm,1.1s,mb5.8
DLBC Dease Lake 55.21 40 *e*P **P 17 02 57.2 +1.7**
VIS Vishakhapatnam 55.63 264 *e*PKP **P 17 02 59.0 0.0**
SJI Sawahan 55.91 218 P **P 17 03 00.3 -0.7**
comp=Z,52nm,1.0s,mb5.5
PWJI Pagerwojo 56.14 218 P **P 17 03 01.3 -1.4**
comp=Z,76nm,0.8s,mb5.8
ALE Alert 56.55 4 P **P 17 03 05.3 +0.5**
comp=Z,176nm,0.9s,mb6.1,SNR=7.6
AB31 Akbulak array 56.57 309 *i* P **P 17 03 05.0 -0.4**
AB31 pmax pmax
comp=Z,53nm,0.7s,mb5.7
ABKAR Akbulak array 56.57 309 *i* P **P 17 03 05.4 +0.1**
comp=Z,42nm,0.6s,mb5.7
NGP Nagpur 56.87 270 *ex* **P 17 03 04.0 -3.9**
NGP AMb AMB 17 03 05.0
comp=Z,66nm,1.1s,mb5.6
BHPL Bhopal 56.92 274 *e*PKP **P 17 03 06.9 -1.4**
KLSI 56.96 227 P **P 17 03 08.7 +0.2**
comp=Z,81nm,1.2s,mb5.6
MDSI Maura Dua 57.10 228 P **P 17 03 08.0 -1.5**
comp=Z,29nm,1.4s,mb5.1
LEM Lembang 57.18 223 P **P 17 03 09.7 -0.4**
comp=Z,63nm,1.2s,mb5.5
AKTO Aktyubinsk 57.20 311 *i* P **P 17 03 08.8 -1.0**
AKTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KBL Kabul 57.24 290 *e*P **P 17 03 09.9 -0.5**
comp=Z,80nm,1.0s,mb5.7
KBL Kabul 57.24 290 *e*P **P 17 03 09.9 -0.5**
KBL pmax pmax
comp=Z,81nm,1.0s,mb5.7
KNA Kununurra 57.50 196 P **P 17 03 11.6 -0.6**
comp=Z,800nmcomp=Z,95nm,0.9s,mb5.8
AKL Akola 58.68 271 *e*PKP **P 17 03 20.8 +0.2**
HYB Hyderabad 59.44 267 *i* P **P 17 03 26.0 +0.1**
APA Apatity 59.97 335⇑*i*P **P 17 03 29.6 +0.8**
APA pmax pmax
comp=Z,110nm,1.8s,mb5.6
YKA Yellowknife Ar 60.24 31 P **P 17 03 30.4 -0.3**
comp=Z,3.6nm,0.8s,mb4.4,baz=299,slow=6.7,SNR=7.8
YKA pP pP 17 03 42.6 -0.6
comp=Z,7.3nm,0.8s,baz=303,slow=6.3,SNR=11
YKA LR LR 17 34 08.7
comp=Z,14nm,18.1s,baz=320,slow=40
YKA Yellowknife Ar 60.24 31 P **P 17 03 30.4 -0.3**
YKA *PP pP 17 03 42.6 -0.7
LATR Latur 60.36 269 *e*PKP **P 17 03 32.3 +0.1**
CTA Charters Tower 60.39 176 LR LR 17 29 04.8
comp=Z,147nm,18.6s,MS4.2,baz=150,slow=35
FITZ Fitzroy Crossi 60.48 199 LR LR 17 29 21.7
comp=Z,82nm,20.2s,MS3.9,baz=1.8,slow=36
FITZ Fitzroy Crossi 60.48 199 *e*P **P 17 03 32.3 -0.5**
comp=Z,11nm,0.8s,mb5.0
FITZ *e* pP 17 03 45.0 -0.4
FITZ Fitzroy Crossi 60.48 199 *e*P **P 17 03 32.4 -0.4**
comp=Z,44nm,1.1s,mb5.4
KEV Kevo 60.58 339 *e*P **P 17 03 30.2 -2.7**
KEV pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
KEV Kevo 60.58 339 *e*p **P 17 03 30.2 -2.7**
comp=Z,8.8nm,0.7s,mb5.0
WRA Warramunga Arr 60.68 189 P **P 17 03 32.8 -1.3**
comp=Z,14nm,1.0s,mb5.1,baz=7.7,slow=6.9,SNR=106
WRA pP pP 17 03 44.6 -2.1
comp=Z,42nm,1.0s,baz=7.5,slow=7.2,SNR=26
WRA PKP2bc 17 33 02.5
comp=Z,1.8nm,0.9s,baz=203,slow=1.9,SNR=7.7
WRA Warramunga Arr 60.68 189 P **P 17 03 32.8 -1.3**
WRA pP pP 17 03 44.6 -2.1
WRA ⇑*e* 17 33 02.5
WRA Warramunga Arr 60.68 189 P **P 17 03 32.8 -1.3**
WRA *PP pP 17 03 44.6 -2.1
WRA pmax pmax
comp=Z,14nm,1.0s
WRA pmax pmax
comp=Z,2.0nm,1.0s
ARCES ARCESS Array B 61.12 339 P **P 17 03 36.3 -0.3**
comp=Z,9.1nm,0.9s,mb4.9,baz=44,slow=8.8,SNR=10
ARCES pP pP 17 03 48.1 -1.1
comp=Z,3.5nm,0.6s,baz=54,slow=6.4,SNR=3.7
ARCES LR LR 17 32 53.6
comp=Z,381nm,19.2s,MS4.6,baz=252,slow=39
ARCES ARCESS Array B 61.12 339 P **P 17 03 36.3 -0.3**
ARCES *PP pP 17 03 48.2 -1.0
ARCES pmax pmax
comp=Z,9.0nm,0.9s
ARCES MLR MLR
comp=Z,381nm,19.2s
KLMR Klimovskoe 61.41 327 *e*P **P 17 03 37.6 -1.1**
KLMR pmax pmax
comp=Z,87nm,1.5s,mb5.7
KLMR pmax pmax
comp=Z,193nm,5.1s
KLMR MLR MLR
comp=Z,897nm,16.0s,MS5.0
POO Poona 62.36 271 *e*PKP **P 17 03 45.3 -0.4**
POO AMb AMB 17 03 47.5
comp=Z,53nm,1.3s,mb5.5
DAG Danmarks Havn 62.39 355 *i* P **P 17 03 44.5 -0.6**
DAG pmax pmax
comp=Z,30nm,0.9s,mb5.4
DAG Danmarks Havn 62.39 355 *i* P **P 17 03 44.5 -0.6**
comp=Z,303nm,0.9s
TRO Tromso 62.77 341 *e*P **P 17 03 47.7 0.0**
TRO *e*pP pP 17 04 00.9 +0.6
TRO Tromso 62.77 341 *e*P **P 17 03 47.7 0.0**
KAD Karad 62.84 270 *e*PKP **P 17 03 48.9 0.0**
KAD AMb AMB 17 03 50.5
comp=Z,110nm,1.3s,mb5.8
ABKT Ailbek 63.14 298 P **P 17 03 50.3 -0.4**
comp=Z,288nm,0.9s,SNR=25
JOF Joensuu 63.41 332 *e*P **P 17 03 51.1 -0.9**
JOF pmax pmax
comp=Z,26nm,0.7s,mb5.5
JOF Joensuu 63.41 332 *e*p **P 17 03 51.1 -0.9**
comp=Z,26nm,0.7s,mb5.5
JCW Jim Creek 64.25 48 *e*P **P 17 03 58.2 +0.5**
comp=Z,20nm,0.8s,mb5.2
ASAR Alice Springs 64.40 189 P **P 17 03 58.3 -0.6**
comp=Z,6.8nm,0.8s,mb4.7,baz=1.3,slow=4.9,SNR=69
ASAR pP pP 17 04 10.3 -1.3
comp=Z,22nm,0.9s,baz=8.7,slow=5.6,SNR=30
ASAR PKP2bc 17 32 51.7
comp=Z,1.4nm,1.0s,baz=160,slow=1.7,SNR=7.5
ASAR Alice Springs 64.40 189 P **P 17 03 58.3 -0.6**
ASAR pP pP 17 04 10.3 -1.3
ASAR ⇑*e* 17 32 51.7
ASAR Alice Springs 64.40 189 P **P 17 03 58.3 -0.6**
ASAR *PP pP 17 04 10.3 -1.3
ASAR pmax pmax
comp=Z,7.0nm,0.8s
ASAR pmax pmax
comp=Z,22nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,1.0s
MBWA Marble Bar 65.03 204 *e*P **P 17 04 02.4 -0.6**
comp=Z,22nm,0.8s,mb5.2
MOS Moscow 65.11 323 *e*P **P 17 04 03.4 +0.1**
MOS *e* 17 04 42.8
MOS pmax pmax
comp=Z,80nm,1.0s,mb5.7
MOS MLR MLR
comp=Z,1μm,17.0s,MS5.1
ETW Entiat 65.47 48 *e*P **P 17 04 06.2 +0.5**
comp=Z,31nm,1.2s,mb5.2
KAF Kangasniemi 65.72 333 *e*P **P 17 04 05.3 -1.8**
KAF pmax pmax
comp=Z,17nm,0.8s,mb5.1
KAF Kangasniemi 65.72 333 *e*p **P 17 04 05.3 -1.8**
comp=Z,17nm,0.8s,mb5.1
VRHR Novokhopersk 65.86 317 *e*P **P 17 04 06.9 -1.3**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,70nm,0.8s,mb5.7
OBN Obninsk 65.97 323 *e*P **P 17 04 08.6 -0.3**
comp=Z,17nm,0.8s,mb5.1
OBN Obninsk 65.97 323*c i*P **P 17 04 08.5 -0.3**
OBN *i* 17 04 14.2
OBN *i* 17 04 24.9
OBN *i* 17 04 38.5
OBN *e* 17 06 34.7
OBN pmax pmax
comp=Z,51nm,1.1s,mb5.5
OBN MLR MLR
comp=Z,1μm,17.0s,MS5.1
EIDS Eidsvold 66.01 172 *e*P **P 17 04 07.9 -1.4**
comp=Z,20nm,0.8s,mb5.2
H04A Detroit Lake 66.02 51⇑P **P 17 04 08.7 -0.6**
baz=66
DZM Mont Dzumac 66.05 156 *e*S S 17 12 52.7 -1.7
comp=Z,420nm,32.4s
DZM *e*LR LR 17 24 27.2
comp=Z,542nm,22.4s
FINES FINESS Array B 66.24 332 P **P 17 04 10.1 -0.3**
comp=Z,34nm,0.7s,mb5.5,baz=46,slow=8.2,SNR=73
FINES LR LR 17 35 29.0
comp=Z,883nm,19.2s,MS5.0,baz=235,slow=38
FINES FINESS Array B 66.24 332 P **P 17 04 10.1 -0.4**
FINES pmax pmax
comp=Z,34nm,0.7s
FINES MLR MLR
comp=Z,883nm,19.2s
MOR8 Moi Rana 66.47 340 *e*P **P 17 04 10.3 -1.5**
MOR8 *e*pP pP 17 04 23.0 -1.6
OD2 Odessa Site #2 66.50 47 *e*P **P 17 04 12.1 -0.3**
comp=Z,9.9nm,0.7s,mb5.0
C09A Chrisman Ranch 66.51 47⇑P **P 17 04 12.5 +0.1**
baz=66
G06A Carlson Farm, 66.62 50⇓P **P 17 04 12.8 -0.4**
baz=66
NEW Newport 66.88 46⇑P **P 17 04 14.0 -0.7**
baz=67
NEW Newport 66.88 46 P **P 17 04 15.1 +0.4**
comp=Z,11nm,1.2s,mb4.8
NEW Newport 66.88 46 P **P 17 04 15.1 +0.4**
NEW pmax pmax
comp=Z,11nm,1.2s
VSR Storozhevoye 67.04 318 *e*P **P 17 04 15.8 0.0**
VSR pmax pmax
comp=Z,40nm,0.6s,mb5.6
VSR pmax pmax
comp=N,60nm,1.0s
VSR pmax pmax
comp=E,50nm,0.9s
VORD Divnogorie 67.13 318 *e*P **P 17 04 16.4 +0.1**
VORD pmax pmax
comp=Z,30nm,0.8s,mb5.4
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
SUMG Summit 67.19 0 *e*P **P 17 04 17.8 +1.5**
comp=E,7.3nm,0.6s,mb4.9
SUMG Summit 67.19 0 *i* P **P 17 04 17.2 +0.8**
comp=E,32nm,0.9s,mb5.3
E09A Wood Farm, Sta 67.32 48⇓P **P 17 04 17.2 -0.4**
baz=67
G08A Pilot Rock 67.56 49⇑P **P 17 04 18.5 -0.6**
baz=67
C11A Tepee Creek (N 67.59 46⇑P **P 17 04 19.5 +0.2**
baz=67
K05A Summer Lake 67.90 52⇓P **P 17 04 22.1 +0.7**
baz=68
A13A Flathead Natio 67.94 44⇑P **P 17 04 21.6 +0.1**
baz=68
I07A Izee 67.95 50⇑P **P 17 04 21.8 +0.3**
baz=68
B13A Whitefish 68.24 44⇑P **P 17 04 23.7 +0.3**
baz=68
A14A Double T Ranch 68.44 43⇓P **P 17 04 24.1 -0.5**
baz=68
D12A Red Ives Fores 68.56 46⇓P **P 17 04 24.6 -0.7**
baz=68
C13A Hot Springs 68.60 45⇓P **P 17 04 24.8 -0.8**
baz=68
JTMT Jette 68.72 45 *e*P **P 17 04 27.3 +0.9**
comp=E,4.5nm,0.9s,mb4.4
BMO Blue Mountains 68.77 49 *e*P **P 17 04 28.0 +1.3**
comp=E,8.0nm,1.1s,mb4.6
BMO Blue Mountains 68.77 49 *e*P **P 17 04 28.0 +1.3**
BMO pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
A15A Johnson Ranch, 68.79 43⇑P **P 17 04 25.6 -1.2**
baz=69
E12A Beaver Dam Sad 68.82 47⇑P **P 17 04 27.3 +0.4**
baz=69,SNR=7.8
B14A Marquette Ranc 68.89 44⇑P **P 17 04 28.3 +0.9**
baz=69
C14A Swan Lake 68.99 45⇓P **P 17 04 27.7 -0.3**
baz=69
SWMT Swartz Lake 69.02 45 *e*P **P 17 04 28.7 +0.5**
comp=Z,11nm,1.0s,mb4.7
D13A Huson 69.02 46⇓P **P 17 04 27.7 -0.5**
baz=69
B15A Bradely Ranch, 69.29 44⇓P **P 17 04 29.6 -0.3**
baz=69
DGRG David-gareji 69.36 307 P **P 17 04 38.9 +8.4**
F12A Elk City 69.39 47⇓P **P 17 04 30.2 -0.4**
baz=69,SNR=5.9
WVOR Wild Horse Val 69.42 51 *e*P **P 17 04 31.6 +0.8**
comp=Z,16nm,1.1s,mb4.8
WVOR Wild Horse Val 69.42 51 *e*P **P 17 04 31.6 +0.8**
WVOR pmax pmax
comp=Z,16nm,1.1s,mb4.9
SLMT Seeley Lake 69.45 45 *e*P **P 17 04 31.4 +0.5**
comp=Z,12nm,0.7s,mb4.9
ZEI Tsey 69.46 309 *e*P **P 17 04 28.6 -2.4**

ZEI pmax pmax
comp=Z,39nm,1.0s,mb5.3
KIV Kislovodsk 69.46 311 *eP* **P 17 04 32.0 +1.0**
comp=Z,180nm,1.0s,mb6.0
KIV Kislovodsk 69.46 311 *c iP* **P 17 04 31.7 +0.7**
KIV *i* pP 17 04 46.5 +2.7
KIV *e* 17 07 05.0
KIV pmax pmax
comp=Z,199nm,1.1s,mb6.0
KIV Kislovodsk 69.46 311 P **P 17 04 32.6 +1.6**
comp=Z,918nm,1.0s,SNR=34
KIV Kislovodsk 69.46 311 P **P 17 04 32.2 +1.1**
SNR=34
D14A Greenough 69.54 45 ⇓P **P 17 04 31.4 0.0**
baz=69
MTA Mtatsminda 69.56 308 P **P 17 04 31.9 +0.2**
TBLG Delisi 69.58 308 *eP* **P 17 04 32.3 +0.5**
TBLG Delisi 69.58 308 P **P 17 04 32.3 +0.6**
C15A Salmond Ranch, 69.60 44 ⇓P **P 17 04 32.0 +0.2**
baz=69,SNR=7.0
G12A Big Creek, Yel 69.73 48 ⇓P **P 17 04 32.6 0.0**
baz=70
GOR Gori 69.80 308 P **P 17 04 34.1 +1.0**
ONI Oni 69.83 309 P **P 17 04 34.5 +1.2**
A17A Triple J Farms 69.86 42 ⇓P **P 17 04 33.2 -0.2**
baz=70,SNR=5.8
F13A Darby 69.88 47 ⇓P **P 17 04 33.3 -0.2**
baz=70
C16A Fuhringer Ranc 70.04 44 ⇓P **P 17 04 33.5 -1.0**
baz=70
IZAR Zarasai 70.06 327 *eP* **P 17 04 34.8 +0.3**
IZAR AMB AMB 17 04 35.4
comp=Z,15nm,0.8s,mb5.0
FFC Flin Flon 70.18 34 *eP* **P 17 04 35.0 -0.3**
comp=Z,16nm,0.9s,mb4.9
FFC Flin Flon 70.18 34 *i* P **P 17 04 35.5 +0.3**
B17A L&G Farms, Che 70.22 43 ⇓P **P 17 04 35.6 0.0**
baz=70
MICGM Minsk 70.23 326 ⇓*eP* **P 17 04 33.0 -2.5**
ISAL Salakas 70.23 327 *eP* **P 17 04 35.8 +0.3**
ISAL AMB AMB 17 04 37.5
comp=Z,33nm,0.8s,mb5.3
MNK Minsk 70.25 326 ⇓*eP* **P 17 04 33.0 -2.7**
MNK pmax pmax
comp=Z,140nm,1.0s,mb5.8
A18A Metzger Ranch, 70.32 42 ⇑P **P 17 04 35.6 -0.6**
baz=70
IIGN Ignalina 70.34 327 *eP* **P 17 04 36.5 +0.2**
IIGN AMB AMB 17 04 38.2
comp=Z,31nm,0.9s,mb5.2
H12A Diamond D Ranc 70.35 48 ⇑P **P 17 04 36.2 -0.2**
baz=70
G13A Cobalt 70.36 47 ⇑P **P 17 04 35.4 -1.1**
baz=70
E15A Deer Lodge 70.42 45 ⇓P **P 17 04 36.4 -0.4**
baz=70
NACGM Naroch 70.42 327 *eP* **P 17 04 34.0 -2.7**
MFID Camas Ranch 70.48 49 ⇓P **P 17 04 38.0 +0.7**
baz=70
GNI Garni 70.52 306 *eP* **P 17 04 38.6 +1.0**
comp=Z,63nm,1.3s,mb5.4
GNI Garni 70.52 306 *c iP* **P 17 04 38.9 +1.3**
GNI pmax pmax
comp=Z,32nm,1.0s
PAHR Pah Rah Range 70.60 54 *eP* **P 17 04 39.5 +1.4**
comp=Z,20nm,1.2s,mb4.9
D16A Dana Ranch, Ca 70.62 44 ⇑P **P 17 04 38.2 +0.2**
baz=70
I12A Atlanta 70.65 49 ⇑P **P 17 04 38.7 +0.4**
baz=70
H13A Challis 70.68 48 ⇓P **P 17 04 37.9 -0.6**
baz=70,SNR=5.4
B18A Beardsley Farm 70.69 42 ⇑P **P 17 04 37.4 -1.0**
baz=70,SNR=5.5
F15A Butte 70.86 46 ⇑P **P 17 04 39.4 -0.2**
baz=71,SNR=9.5
E16A East Helena 70.87 45 ⇓P **P 17 04 39.6 0.0**
baz=71
A19A Klindworth Far 70.87 41 ⇑P **P 17 04 39.1 -0.5**
baz=71,SNR=5.5
LRM Limekiln Ridge 70.89 46 *eP* **P 17 04 40.4 +0.6**
comp=Z,73nm,0.7s,mb5.7
EGMT Eagleton 70.94 43 ⇑P **P 17 04 39.6 -0.4**
baz=71
EGMT Eagleton 70.94 43 *eP* **P 17 04 40.6 +0.6**
comp=Z,9.9nm,0.8s,mb4.8
CMB Columbia Colle 70.97 56 *eP* **P 17 04 41.1 +0.7**
comp=Z,12nm,1.1s,mb4.7
CMB Columbia Colle 70.97 56 *eP* **P 17 04 41.1 +0.7**
CMB pmax pmax
comp=Z,12nm,1.1s,mb4.7
D17A Six Diamond Ra 71.00 44 ⇓P **P 17 04 39.4 -1.0**
baz=71
ARMA Armidale 71.06 172 *eP* **P 17 04 40.8 +0.1**
ARMA *e* pP 17 04 52.8 -0.8
B19A Brinkman Farms 71.07 42 ⇑P **P 17 04 39.8 -1.0**
baz=71,SNR=6.4
DLMT Dillon 71.10 46 *eP* **P 17 04 41.9 +0.8**
comp=Z,21nm,1.1s,mb5.0
H14A Leadore 71.14 47 ⇑P **P 17 04 40.2 -1.1**
baz=71
I13A Wildhorse Cree 71.16 48 ⇑P **P 17 04 41.6 +0.2**
baz=71,SNR=5.1
WBK Wadi Bani Khal 71.17 284 P **P 17 04 43.2 +1.5**
SNR=5.7
HLID Hailey 71.21 48 ⇓P **P 17 04 41.5 -0.2**
baz=71
HLID Hailey 71.21 48 *eP* **P 17 04 42.9 +1.2**
comp=Z,9.5nm,1.1s,mb4.6
G15A Dillon 71.29 46 ⇓P **P 17 04 42.0 -0.1**
baz=71,SNR=11
E17A Martinsdale 71.35 44 ⇓P **P 17 04 41.3 -1.2**
baz=71
NB2 NORSAR Subarra 71.39 337 P **P 17 04 42.0 -0.5**
comp=Z,33nm,0.8s,mb5.3,baz=37,slow=6.2
NOA NORSAR Array B 71.39 337 P **P 17 04 42.3 -0.2**
comp=Z,25nm,0.8s,mb5.2,baz=38,slow=6.0,SNR=79
NOA LR LR 17 40 17.7
comp=Z,319nm,18.4s,MS4.6,baz=20,slow=39
NOA NORSAR Array B 71.39 337 P **P 17 04 42.3 -0.2**
NOA pmax pmax
comp=Z,25nm,0.8s
NOA MLR MLR
comp=Z,319nm,18.4s
SOC Sochi 71.39 312 *eP* **P 17 04 41.8 -1.0**
SOC *eS* S 17 14 06.0 +8.3
SOC pmax pmax
comp=Z,39nm,0.9s,mb5.3
BOZ Bozeman (W) 71.45 45 ⇓P **P 17 04 43.9 +0.7**
baz=71,SNR=10
BOZ Bozeman (W) 71.45 45 *eP* **P 17 04 44.0 +0.8**
comp=Z,10.0nm,0.6s,mb4.9
BOZ Bozeman (W) 71.45 45 *eP* **P 17 04 44.0 +0.9**
BOZ pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
C19A Slack Wire Ran 71.49 43 ⇓P **P 17 04 42.8 -0.5**
baz=71,SNR=9.6
ARTV Artvin 71.59 309 ⇑*iP* **P 17 04 44.1 0.0**
NAO01 NORSAR Array S 71.64 337 *eP* **P 17 04 43.8 -0.2**
comp=Z,11nm,0.9s,mb4.8
HOQ Hoqain 71.81 286 P **P 17 04 46.3 +0.6**
SNR=7.9
F17A Fitzpatrick Pl 71.81 45 ⇑P **P 17 04 44.9 -0.4**
baz=72
ANN Anapa 71.91 314 *eP* **P 17 04 44.7 -1.2**
ANN *eS* S 17 14 04.8 +1.3
ANN pmax pmax
comp=Z,70nm,1.3s,mb5.4
ANN MLR MLR
comp=N,537nm,18.0s,MS5.0
ANN MLR MLR
comp=E,588nm,18.0s,MS5.0
ANN MLR MLR
comp=Z,737nm,18.0s,MS5.0
HATD Hatta, Dubai 71.93 287 P **P 17 04 46.9 +0.6**
SNR=8.9
D19A Cripps Ranch, 71.94 43 ⇑P **P 17 04 46.3 +0.2**
baz=72
JMDO Jabal Madar 71.95 284 P **P 17 04 47.2 +0.7**
SNR=5.2
C20A Veseth Ranch, 72.04 42 ⇓P **P 17 04 46.4 -0.2**
baz=72,SNR=6.9
NVAR Mina Array Bea 72.04 55 P **P 17 04 47.4 +0.6**
comp=Z,1.3nm,0.7s,baz=289,slow=6.3,SNR=13
NVAR LR LR 17 31 57.7
comp=Z,106nm,20.1s,baz=14,slow=32
STKA Stephens Creek 72.05 181 P **P 17 04 46.5 -0.2**
comp=Z,2.3nm,0.7s,mb4.2,baz=5.1,slow=8.6,SNR=8.4
STKA LR LR 17 32 38.9
comp=Z,244nm,21.7s,MS4.4,baz=23,slow=33
STKA Stephens Creek 72.05 181 *eP* **P 17 04 46.0 -0.7**
comp=Z,2.0nm,0.9s
STKA *e* pP 17 04 58.2 -1.3
STKA Stephens Creek 72.05 181 *eP* **P 17 04 46.7 +0.1**
B21A Ellsworth Farm 72.07 41 ⇑P **P 17 04 47.1 +0.3**
baz=72,SNR=5.8
G17A Pierce Place, 72.14 45 ⇓P **P 17 04 47.3 0.0**
baz=72
AKASG Malin Array Be 72.21 322 P **P 17 04 47.3 -0.3**
comp=Z,26nm,0.9s,mb5.2,baz=43,slow=6.1,SNR=58
AKASG LR LR 17 40 07.9
comp=Z,725nm,18.6s,MS5.0,baz=45,slow=39
AKASG Malin Array Be 72.21 322 P **P 17 04 47.3 -0.3**
AKASG pmax pmax
comp=Z,26nm,0.9s
AKASG MLR MLR
comp=Z,725nm,18.6s
KIEV Kiev 72.22 322 *eP* **P 17 04 47.3 -0.3**
comp=Z,38nm,1.0s,mb5.3
KIEV Kiev 72.22 322 *eP* **P 17 04 47.3 -0.4**
KIEV pmax pmax
comp=Z,38nm,1.0s,mb5.3
A22A Carney Farms, 72.24 40 ⇑*iP* **P 17 04 47.7 -0.1**
baz=72,SNR=8.0
SFJD Kangerlussuaq 72.31 6 *i P* **P 17 04 48.0 +0.1**
SFJD Kangerlussuaq 72.31 6 *i P* **P 17 04 48.0 +0.1**
F18A Big Timber 72.32 44 ⇑P **P 17 04 48.9 +0.6**
baz=72,SNR=6.5
D20A Manuel Ranch, 72.38 43 ⇓P **P 17 04 49.5 +0.9**
baz=72
BSY Bisya 72.39 285 P **P 17 04 50.0 +0.8**
SNR=6.3
GCMT Greycliff 72.42 44 *eP* **P 17 04 50.0 +1.1**
comp=Z,22nm,1.3s,mb4.9
E19A Rath Farm, Rou 72.45 43 ⇓P **P 17 04 50.0 +0.9**
baz=72,SNR=6.1
ARQ Araqi 72.54 286 P **P 17 04 50.8 +0.8**
SNR=13
SUW Suwalki 72.54 327 *eP* **P 17 04 49.5 0.0**
SUW LMZ 17 39 01.7
comp=Z,600nm,19.3s
SUW Suwalki 72.54 327 *eP* **P 17 04 48.2 -1.3**
comp=Z,43nm,0.8s,mb5.4
SUW *e*sP sP 17 05 05.4 -1.9
SUW Suwalki 72.54 327 *eP* **P 17 04 49.5 0.0**
SUW MLR MLR
comp=Z,600nm,19.3s,MS4.9
YNR Norris Junctio 72.56 46 *eP* **P 17 04 52.0 +2.2**
comp=Z,25nm,1.4s,mb5.0
F19A Roth Farm, Mol 72.76 44 ⇑P **P 17 04 51.4 +0.5**
baz=72,SNR=5.5
E20A Meyer Farm, Mu 72.76 43 ⇑P **P 17 04 50.9 0.0**
baz=72
H17A Grant Village 72.83 46 ⇑P **P 17 04 53.8 +2.4**
baz=73,SNR=6.3
IMW Indian Meadow 72.95 47 *eP* **P 17 04 53.7 +1.6**
comp=Z,13nm,0.9s,mb4.8
D21A La Casta Ranch 72.98 42 ⇑P **P 17 04 51.5 -0.7**
baz=73
DCID1 Drake Creek 73.01 47 *eP* **P 17 04 52.0 -0.5**
B23A Brockton 73.05 40 ⇑P **P 17 04 52.5 -0.1**
baz=73
RLMT Red Lodge 73.07 45 ⇑P **P 17 04 52.9 +0.1**
baz=73
RLMT Red Lodge 73.07 45 *eP* **P 17 04 53.0 +0.2**
comp=Z,4.9nm,0.7s,mb4.5
C22A Vida 73.09 41 ⇓P **P 17 04 53.1 +0.3**
baz=73
RRI2 Red Ridge 73.09 47 *eP* **P 17 04 53.9 +0.9**
comp=Z,12nm,0.9s,mb4.8
MOOW Moose Ponds 73.15 47 *eP* **P 17 04 54.1 +0.8**
comp=Z,16nm,1.3s,mb4.8
TPAW Teton Pass 73.20 47 *eP* **P 17 04 54.8 +1.2**
comp=Z,24nm,1.3s,mb5.0
A24A Westby 73.22 39 ⇑P **P 17 04 53.6 0.0**
baz=73
K16A Soda Springs 73.27 48 ⇓P **P 17 04 54.4 +0.4**
baz=73
D22A Cohagen 73.34 42 ⇓P **P 17 04 53.5 -0.9**
baz=73
REDW Red Top Meadow 73.34 47 *eP* **P 17 04 55.6 +1.1**
comp=Z,7.7nm,1.0s,mb4.6
REDW *e*pP pP 17 05 05.8 -1.5
C23A Lambert 73.40 41 ⇑P **P 17 04 54.2 -0.5**
baz=73
GRAC Grapevine Rang 73.50 55 ⇓P **P 17 04 55.6 +0.1**
baz=73
G20A Bridger 73.56 44 ⇑P **P 17 04 55.6 -0.1**
baz=73
SIM Simferopol' 73.61 315 *eP* **P 17 04 57.0 +1.0**
SIM pmax pmax
comp=Z,39nm,0.8s,mb5.4
SIM MLR MLR
comp=Z,540nm,17.8s,MS4.9
ISA Isabella 73.63 57 *eP* **P 17 04 56.2 0.0**
comp=Z,10nm,1.3s,mb4.6
ISA Isabella 73.63 57 *eP* **P 17 04 56.3 0.0**
ISA pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
M15A Larsen Ranch, 73.66 49 ⇓P **P 17 04 55.7 -0.6**
baz=74
R11A Troy Canyon, C 73.76 53 ⇑P **P 17 04 56.9 -0.1**
baz=74
MPMC Manual Prospec 74.01 56 ⇑P **P 17 04 58.2 -0.2**
baz=74
HWUT Hardware Ranch 74.07 49 *eP* **P 17 04 59.6 +0.8**
comp=Z,16nm,1.2s,mb4.8
DUG Dugway 74.25 50 ⇑P **P 17 04 59.5 -0.3**
baz=74
DUG Dugway 74.25 50 *eP* **P 17 05 00.3 +0.4**
comp=Z,13nm,1.0s,mb4.8
DUG Dugway 74.25 50 *eP* **P 17 05 00.3 +0.4**
DUG pmax pmax
comp=Z,13nm,1.0s,mb4.8
D24A Glendive 74.29 41 ⇓P **P 17 04 59.8 -0.2**
baz=74
J19A Crowheart 74.40 46 ⇑P **P 17 05 01.0 +0.4**
baz=74
BW06 Boulder Array 74.45 47 ⇓P **P 17 05 00.2 -0.7**
baz=74
PDAR Pinedale Array 74.45 47 P **P 17 05 01.2 +0.3**
comp=Z,1.4nm,0.6s,baz=295,slow=2.2,SNR=13
I20A Worland 74.45 45 ⇓P **P 17 05 01.2 +0.3**
baz=74
P14A Drum Mountains 74.49 51 ⇓P **P 17 05 00.8 -0.4**
baz=74
H21A Big Horn, Sher 74.58 44 ⇓P **P 17 05 01.5 -0.1**
baz=74
Q14A Sevier Lake (B 74.75 52 ⇓P **P 17 05 03.0 +0.2**
baz=75
KEMA Kemaliye 74.84 309 ⇑*iP* **P 17 05 04.1 +0.9**
J20A Shoshoni 74.87 46 ⇑P **P 17 05 02.7 -0.7**
baz=75
BSD Bornholm Skovb 74.89 332 *i P* **P 17 05 02.7 -0.5**
BSD pmax pmax
comp=Z,27nm,1.0s,mb5.1
BSD Bornholm Skovb 74.89 332 *i P* **P 17 05 02.7 -0.5**
comp=Z,27nm,1.0s,mb5.1
KIS Kishinev 74.95 320 *eP* **P 17 05 01.0 -2.8**
KIS *e*LR LR 17 37 32.0
comp=Z,900nm,18.0s
KIS Kishinev 74.95 320 *eP* **P 17 05 01.0 -2.8**
KIS *e* 17 05 18.0
KIS MLR MLR
comp=Z,900nm,18.0s,MS5.1
I21A Big Trails, Te 74.99 45 ⇓P **P 17 05 04.7 +0.7**
baz=75
UMR Umm Al-Rimmam 75.02 296 *eP* **P 17 05 03.6 -0.9**
MIB Mutribah 75.12 296 *eP* **P 17 05 04.2 -0.8**
MIB AMb AMB 17 05 05.5
comp=Z,102nm,0.9s,mb5.7
LVV L'vov 75.21 324 *eP* **P 17 05 05.1 -0.1**
LVV MLR MLR
comp=E,400nm,16.0s,MS4.9
LVV MLR MLR
comp=Z,500nm,16.0s,MS4.9
LVV MLR MLR
comp=N,300nm,15.0s,MS4.9
COP Copenhagen 75.30 334 *i P* **P 17 05 05.5 -0.1**
COP pmax pmax
comp=Z,35nm,0.9s,mb5.3
COP Copenhagen 75.30 334 *i P* **P 17 05 05.5 -0.1**
comp=Z,35nm,0.9s,mb5.3
S13A Holt Ranch, En 75.30 53 ⇓P **P 17 05 05.2 -0.7**
baz=75
QRN Al-Qurain 75.38 295 *eP* **P 17 05 06.1 -0.5**
QRN AMb AMB 17 05 06.8
comp=Z,103nm,0.8s,mb5.8
TUQ Turquoise Moun 75.39 56 ⇑P **P 17 05 07.0 +0.5**
baz=75
O17A Robinson Place 75.47 49 ⇑P **P 17 05 07.3 +0.5**
baz=75
MALT Malatya 75.49 308 *i* P **P 17 05 08.6 +1.6**
comp=Z,56nm,1.1s,mb5.4
MALT Malatya 75.49 308 ⇑P **P 17 05 08.6 +1.6**
MALT Malatya 75.49 308 ⇑*iP* **P 17 05 08.6 +1.6**
MALT Malatya 75.49 308 P **P 17 05 08.7 +1.7**
NAY Al-Naaiem 75.53 296 *eP* **P 17 05 06.5 -0.9**
NAY AMb AMB 17 05 07.8
comp=Z,41nm,1.3s,mb5.2
CCUT Cedar City 75.62 53 *eP* **P 17 05 08.1 +0.3**
comp=Z,18nm,1.5s,mb4.8
J22A Midwest 75.70 45 ⇑P **P 17 05 06.9 -1.2**
baz=76
MSU Marysvale 75.72 51 *eP* **P 17 05 09.2 +0.9**
comp=Z,5.9nm,1.0s,mb4.5
MSU Marysvale 75.72 51 *eP* **P 17 05 09.3 +1.0**
MSU pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MUD Monsted U'grnd 75.74 336 *i P* **P 17 05 08.3 +0.2**
MUD pmax pmax
comp=Z,15nm,0.9s,mb4.9
MUD Monsted U'grnd 75.74 336 *i P* **P 17 05 08.3 +0.2**
comp=Z,15nm,0.9s,mb4.9
AKCD Akcadag 75.81 308 ⇑*iP* **P 17 05 10.1 +1.3**
K21A Alcova 75.81 46 ⇓P **P 17 05 07.5 -1.2**
baz=76
RGN Rugen 75.90 332 *eP* **P 17 05 09.6 +0.5**
comp=Z,59nm,0.9s,mb5.5
KWP Kalwaria Pacla 75.93 325 *eP* **P 17 05 10.5 +1.2**
KWP LMZ 17 41 57.2
comp=Z,1μm,17.1s
KWP Kalwaria Pacla 75.93 325 *eP* **P 17 05 09.5 +0.1**
comp=Z,86nm,1.1s,mb5.6
KWP Kalwaria Pacla 75.93 325 *eP* **P 17 05 10.5 +1.2**
KWP MLR MLR
comp=Z,1μm,17.1s,MS5.2
U13A Pakoon Wash 75.99 54 ⇑P **P 17 05 10.5 +0.6**
baz=76
ULM Lac du Bonnet 75.99 34 P **P 17 05 09.0 -0.6**
comp=Z,2.5nm,0.7s,mb4.3,baz=352,slow=6.3,SNR=3.1
CTKT Corum 76.10 312 ⇑*iP* **P 17 05 10.6 +0.1**
LDFC Landfair 76.13 56 P **P 17 05 09.1 -1.6**
comp=Z,9.5nm,0.8s,mb4.8
K22A Casper 76.19 45 ⇑P **P 17 05 08.8 -2.1**
baz=76
BUR08 Bucovina Ar. S 76.24 322 *eP* **P 17 05 11.5 +0.4**
BURAR Bucovina Array 76.25 322 ⇑P **P 17 05 11.4 +0.2**
BURAR Bucovina Array 76.25 322 ⇑*iP* **P 17 05 11.4 +0.2**
BALT Daday 76.28 313 ⇑*iP* **P 17 05 11.6 +0.1**
SRU San Rafael 76.30 50 ⇑P **P 17 05 12.0 +0.3**
baz=76
SRU San Rafael 76.30 50 *eP* **P 17 05 12.4 +0.8**
comp=Z,12nm,0.8s,mb4.9
SRU San Rafael 76.30 50 *eP* **P 17 05 12.4 +0.8**
SRU pmax pmax
comp=Z,12nm,0.8s,mb4.9
V13A Grand Canyon W 76.34 54 ⇓P **P 17 05 12.1 +0.2**
baz=76
TESR 76.36 320 ⇑*iP* **P 17 05 11.8 0.0**
N20A Spence Gulch, 76.45 48 ⇓P **P 17 05 12.7 +0.3**
baz=76
U14A Mt Trumbull 76.47 54 ⇓P **P 17 05 12.9 +0.3**
baz=76
RSSD Black Hills 76.50 43 P **P 17 05 12.5 -0.1**
comp=Z,3.4nm,0.6s,mb4.5
RSSD Black Hills 76.50 43 P **P 17 05 12.5 -0.2**
RSSD pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
S16A Weppner Ranch, 76.58 52 ⇑P **P 17 05 14.4 +1.2**
baz=76
GZT Gaziantep 76.63 308 ⇑*iP* **P 17 05 14.0 +0.5**
KOLS Kolonicke sedl 76.64 324 *eP* **P 17 05 13.9 +0.6**
comp=Z,14nm,1.0s,mb4.8
KOLS Kolonicke sedl 76.64 324 *eP* **P 17 05 13.9 +0.6**
KOLS pmax pmax
comp=Z,14nm,1.0s,mb4.8
KOLS Kolonicke sedl 76.64 324 *eP* **P 17 05 13.9 +0.6**
IRM Iron Mountain 76.69 56 ⇑P **P 17 05 14.0 +0.1**
baz=76
VRI Vrincioaia 76.78 320 ⇓P **P 17 05 16.0 +1.8**
VRI Vrincioaia 76.78 320 ⇓*iP* **P 17 05 16.0 +1.8**
BC3 Big Chuckawall 76.82 57 ⇓P **P 17 05 14.8 +0.2**
baz=77
P19A Cripple Cowboy 76.85 49 ⇓P **P 17 05 14.4 -0.4**
baz=77
UZH Uzhgorod 76.85 324 *eP* **P 17 05 11.7 -2.9**
UZH *e* 17 05 32.7
UZH *eS* S 17 14 54.0 -4.7
UZH *e*PS 17 15 33.0
UZH MLR MLR
comp=N,600nm,16.0s,MS5.2
UZH MLR MLR
comp=E,600nm,16.0s,MS5.2
L23A Garrett 77.00 45 ⇑P **P 17 05 14.9 -0.6**
baz=77
U15A North Rim 77.00 53 ⇑P **P 17 05 15.5 -0.2**
baz=77
CRVS Cervenica-Dubn 77.02 325 *eP* **P 17 05 16.0 +0.5**
comp=E,9.7nm,0.9s,mb4.7
CRVS Cervenica-Dubn 77.02 325 *eP* **P 17 05 16.0 +0.5**
CRVS pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CRVS Cervenica-Dubn 77.02 325 *eP* **P 17 05 16.0 +0.5**
V14A Boquillas Ranc 77.02 54 ⇓P **P 17 05 16.8 +1.0**
baz=77
TRPA Tarpa 77.11 324 ⇑*iP* **P 17 05 16.6 +0.6**
NIE Niedzica 77.13 326 *eP* **P 17 05 17.3 +1.2**
NIE Niedzica 77.13 326 *eP* **P 17 05 17.3 +1.2**
Q19A Hogan Spring (77.14 50 ⇑P **P 17 05 15.1 -1.3**
baz=77
R18A Canyonlands Na 77.15 50 ⇑P **P 17 05 15.6 -0.8**
baz=77
ANDN Andirin 77.22 309 ⇑*iP* **P 17 05 19.8 +2.9**
AVNT Avonos 77.29 310 ⇑*iP* **P 17 05 17.7 +0.5**
W14A Seligman 77.31 54 ⇓P **P 17 05 17.9 +0.5**
baz=77
BRTR Keskin Array B 77.36 312 P **P 17 05 18.1 +0.5**
comp=Z,7.1nm,0.7s,mb4.7,baz=84,slow=3.6,SNR=26
BRTR pP pP 17 05 30.2 -0.3
comp=Z,5.5nm,0.7s,baz=93,slow=2.9,SNR=8.2
BRTR LR LR 17 44 16.4
comp=Z,226nm,18.7s,MS4.5,baz=199,slow=39
BRTR Keskin Array B 77.36 312 P **P 17 05 18.1 +0.5**
BRTR *PP pP 17 05 30.3 -0.2
BRTR pmax pmax
comp=Z,7.0nm,0.7s
BRTR MLR MLR
comp=Z,227nm,18.7s
RUE Ruedersdorf 77.38 331 *eP* **P 17 05 17.9 +0.4**
comp=Z,45nm,1.1s,mb5.3
V15A Kaibab Nationa 77.48 54 ⇑P **P 17 05 18.1 -0.2**
baz=77
S18A Hurst Farm, Bl 77.55 51 ⇑P **P 17 05 17.0 -1.7**
baz=77
N23A Red Feather La 77.70 46 ⇑P **P 17 05 18.6 -0.9**
baz=78
KSP Ksiaz 77.71 329 *eP* **P 17 05 20.3 +1.0**
KSP LMZ 17 42 52.6
comp=Z,900nm,17.9s
PV04 Paradox Valley 77.72 50 P **P 17 05 20.5 +0.9**
OKC Ostrava-Krasne 77.73 327 *i P* **P 17 05 20.3 +0.8**
OKC MLR MLR
comp=Z,700nm,17.8s,MS5.0
OKC Ostrava-Krasne 77.73 327 ⇑*iP* **P 17 05 20.3 +0.8**
OKC AMS AMS 17 42 30.0
comp=Z,700nm,17.8s
KECS Kecovo 77.76 325 *eP* **P 17 05 20.2 +0.5**
comp=Z,4.8nm,0.9s,mb4.4
KECS Kecovo 77.76 325 *eP* **P 17 05 20.2 +0.5**
KECS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KECS Kecovo 77.76 325 *eP* **P 17 05 20.2 +0.5**
TOO Toolangi 77.76 178 *eP* **P 17 05 32.3 +13**
O22A Kremmling 77.87 47 ⇑P **P 17 05 20.7 +0.3**
baz=78
U16A Tuba City 77.90 53 ⇑P **P 17 05 21.3 +0.6**
baz=78
VOIR 77.90 320 ⇑P **P 17 05 21.7 +1.2**
VOIR 77.90 320 ⇑*iP* **P 17 05 21.7 +1.2**

X14A **Yava** 77.92 55 ⇑P P 17 05 19.8 -1.0
baz=78
COBT **Iskenderun** 77.97 308⇑iP P 17 05 21.3 +0.3
T18A **Mexican Hat** 77.99 51 ⇓P P 17 05 20.2 -1.0
baz=78
S19A **Harvey Farm, M** 78.02 50 ⇑P P 17 05 21.4 +0.1
baz=78
MORC **Moravsky Berou** 78.03 327 eP P 17 05 21.8 +0.6
comp=Z,30nm,0.9s,mb5.2
MORC **Moravsky Berou** 78.03 327 eP P 17 05 21.8 +0.7
MORC pmax pmax
comp=Z,30nm,0.9s,mb5.2
MORC **Moravsky Berou** 78.03 327⇑iP P 17 05 21.6 +0.5
DPC **Dobruska-Polom** 78.08 328⇑iP P 17 05 22.3 +0.9
DPC MLR MLR
comp=Z,400nm,19.3s,MS4.8
DPC **Dobruska-Polom** 78.08 328⇑iP P 17 05 22.3 +0.9
DPC AMS AMS 17 42 40.0
comp=Z,400nm,19.3s
UPC **Upice** 78.08 329 iP P 17 05 22.0 +0.6
UPC e pP 17 05 36.1 +1.8
UPC **Upice** 78.08 329⇑iP P 17 05 22.0 +0.6
UPC epP pP 17 05 36.1 +1.8
PV01 **Paradox Valley** 78.09 50 P P 17 05 21.5 -0.2
comp=Z,1μm,0.8s
YURE **YUREGIR** 78.14 308⇑iP P 17 05 23.1 +1.1
Z13A **Yuma Proving G** 78.26 56 ⇑P P 17 05 21.6 -1.1
baz=78
V17A **Tonalea, Kykot** 78.45 53 ⇑P P 17 05 24.2 +0.5
baz=78
PSZ **Piszkesteto** 78.45 325 eP P 17 05 24.4 +0.9
comp=Z,45nm,1.3s,mb5.2
PSZ **Piszkesteto** 78.45 325 eP P 17 05 24.4 +0.9
PSZ pmax pmax
comp=Z,45nm,1.3s,mb5.2
PSZ **Piszkesteto** 78.45 325⇓iP P 17 05 24.3 +0.8
PSZ **Piszkesteto** 78.45 325⇑eP P 17 05 24.3 +0.8
VYHS **Vyhne** 78.47 326 eP P 17 05 24.4 +0.8
comp=Z,11nm,1.1s,mb4.7
VYHS **Vyhne** 78.47 326 eP P 17 05 24.4 +0.8
VYHS pmax pmax
comp=Z,11nm,1.1s,mb4.7
VYHS **Vyhne** 78.47 326 eP P 17 05 24.4 +0.8
BRG **Berggiesshubel** 78.60 330 eP P 17 05 24.5 +0.2
comp=Z,16nm,1.1s,mb4.9
BRG **Berggiesshubel** 78.60 330 eP P 17 05 24.4 +0.1
comp=Z,16nm,1.1s,mb4.9
BRG e 17 05 33.1
comp=Z,9.9nm,1.4s
BRG
comp=N,259nm,16.9s
BRG
comp=E,262nm,17.6s
BRG
comp=Z,506nm,14.5s
BRG **Berggiesshubel** 78.60 330 eP P 17 05 24.4 +0.1
BRG e 17 05 33.2
BRG pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BRG MLR MLR
comp=N,155nm,16.9s,MS4.5
BRG MLR MLR
comp=E,157nm,17.6s,MS4.5
BRG MLR MLR
comp=Z,303nm,14.5s,MS4.8
Y15A **Casa Rosa Ranc** 78.60 55 ⇓P P 17 05 24.5 0.0
baz=78
CLL **Collm** 78.61 331 eP P 17 05 24.2 -0.1
comp=Z,37nm,1.0s,mb5.3
CLL **Collm** 78.61 331⇑iP P 17 05 24.1 -0.2
comp=Z,38nm,1.1s,mb5.2
CLL i pP 17 05 36.6 -0.7
CLL **Collm** 78.61 331⇑iP P 17 05 24.1 -0.2
CLL i pP 17 05 36.6 -0.7
CLL pmax pmax
comp=Z,38nm,1.1s,mb5.2
CLL **Collm** 78.61 331⇑iP P 17 05 24.1 -0.2
comp=Z,38nm,1.1s,mb5.2
CLL i pP pP 17 05 36.6 -0.7
CLL ePP PP 17 08 20.0 -1.8
CLL eS S 17 15 24.0 +6.4
CLL Lm 17 42 00.0
comp=Z,400nm,22.0s
PVCC **Panska Ves** 78.63 329⇑iP P 17 05 25.2 +0.8
PVCC MLR MLR
comp=Z,600nm,17.5s,MS5.0
PVCC **Panska Ves** 78.63 329⇑iP P 17 05 25.2 +0.8
PVCC AMS AMS 17 43 10.0
comp=Z,600nm,17.5s
NRDL **Niedersach Rie** 78.69 333 eP P 17 05 24.9 +0.2
comp=Z,17nm,1.1s,mb4.9
T19A **Beclabito** 78.70 51 ⇓P P 17 05 24.7 -0.3
baz=78
VRAC **Vranov** 78.78 327 ⇓P P 17 05 26.0 +0.7
VRAC **Vranov** 78.78 327⇓iP P 17 05 26.0 +0.7
FBE **Freiberg** 78.79 330 eP P 17 05 25.9 +0.6
comp=Z,26nm,0.9s,mb5.2
V18A **Ganado** 78.91 52 ⇑P P 17 05 26.8 +0.6
baz=79
PRU **Pruhonice** 79.07 329⇑iP P 17 05 27.9 +1.0
PRU e pP 17 05 40.4 +0.6
PRU MLR MLR
comp=Z,500nm,15.7s,MS5.0
PRU **Pruhonice** 79.07 329⇑iP P 17 05 27.9 +1.0
PRU epP pP 17 05 40.4 +0.6
PRU AMS AMS 17 43 50.0
comp=Z,500nm,15.7s
CLZ **Clausthal** 79.14 332 eP P 17 05 27.8 +0.6
comp=Z,55nm,1.3s,mb5.3
CLZ **Clausthal** 79.14 332 eP P 17 05 27.8 +0.6
CLZ pmax pmax
comp=Z,55nm,1.3s,mb5.3
NEUB **Neuenburg** 79.15 331 eP P 17 05 27.5 +0.3
comp=Z,43nm,1.0s,mb5.3
BUD **Budapest** 79.16 325⇑eP P 17 05 28.4 +1.0
TREC **Trest** 79.24 328 iP P 17 05 28.8 +1.0
TREC MLR MLR
comp=Z,400nm,17.6s,MS4.8
TREC **Trest** 79.24 328⇑iP P 17 05 28.8 +1.0
TREC AMS AMS 17 43 30.0
comp=Z,400nm,17.6s
S22A **4UR Ranch, Cre** 79.36 49 ⇓P P 17 05 28.9 +0.2
baz=79
BZS **Buzias** 79.40 322 ⇑P P 17 05 28.5 -0.3
BZS **Buzias** 79.40 322⇑iP P 17 05 28.5 -0.3
ZST **Bratislava** 79.44 326 eP P 17 05 30.2 +1.3
comp=Z,16nm,1.1s,mb4.9
ZST **Bratislava** 79.44 326 eP P 17 05 30.2 +1.3
ZST pmax pmax
comp=Z,16nm,1.1s,mb4.9
ZST **Bratislava** 79.44 326 eP P 17 05 30.2 +1.3
TANN **Tannenbergstha** 79.53 330 eP P 17 05 29.6 +0.2
comp=Z,31nm,1.9s,mb4.9
WERD **Werda** 79.56 330 eP P 17 05 29.9 +0.4
comp=Z,10.0nm,1.0s,mb4.7
BOLV **Bolvadin** 79.57 312⇑iP P 17 05 30.2 +0.4
GUNZ **Gunzen** 79.62 330 eP P 17 05 30.3 +0.5
comp=Z,16nm,1.0s,mb4.9
IBBN **Ibbenburen** 79.65 334 eP P 17 05 30.2 +0.2
comp=Z,41nm,1.0s,mb5.3
MOX **Moxa** 79.66 331 eP P 17 05 30.1 0.0
comp=Z,29nm,1.4s,mb5.0
MOX
comp=Z,300nm,19.0s
MOX **Moxa** 79.66 331 eP P 17 05 30.3 +0.2
comp=Z,17nm,1.0s,mb4.9
MOX **Moxa** 79.66 331 eP P 17 05 30.1 0.0
MOX pmax pmax
comp=Z,29nm,1.4s,mb5.0
MOX MLR MLR
comp=Z,300nm,19.0s,MS4.7
WERN **Wernitzgruen** 79.67 330 eP P 17 05 30.7 +0.6
comp=Z,18nm,0.9s,mb5.0
NKC **Novy Kostel** 79.68 330 iP P 17 05 30.6 +0.4
NKC e pP 17 05 42.7 -0.5
NKC **Novy Kostel** 79.68 330⇑iP P 17 05 30.6 +0.4
NKC epP pP 17 05 42.7 -0.5
MPEP **Malo Peshtene** 80.06 320 P P 17 05 33.0 +0.6
SOP **Sopron** 80.07 326⇑eP P 17 05 33.4 +1.1
UBBA **Unterbreizbach** 80.11 332 eP P 17 05 32.3 -0.2
comp=Z,16nm,1.5s,mb4.7
SDCO **Great Sand Dun** 80.13 48 ⇑P P 17 05 32.6 -0.3
baz=80
KHC **Kasperske Hory** 80.14 329 iP P 17 05 33.3 +0.7
comp=Z,28nm,1.0s,mb5.2
KHC **Kasperske Hory** 80.14 329 iP P 17 05 33.3 +0.7
KHC pmax pmax
comp=Z,29nm,1.0s,mb5.2
KHC **Kasperske Hory** 80.14 329⇑iP P 17 05 33.1 +0.5
KHC epP pP 17 05 45.2 -0.4
KHC AMS AMS 17 44 20.0
comp=Z,500nm,16.6s
ROTZ **Rotzenmuhle** 80.15 330 eP P 17 05 33.5 +0.8
comp=Z,23nm,1.1s,mb5.0
X19A **St. Johns** 80.16 53 ⇓P P 17 05 33.2 +0.1
baz=80
CONA **Conrad Observa** 80.17 327⇑iP P 17 05 34.1 +1.3
comp=Z,31nm,1.1s,mb5.2,SNR=14
WTSB **Winterswijk** 80.26 334⇑eP P 17 05 33.2 -0.1
comp=Z,31nm,0.9s,mb5.2
PKSM **Moragy** 80.31 324 ⇓P P 17 05 33.2 -0.4
PKSM **Moragy** 80.31 324⇓iP P 17 05 33.2 -0.4
GEC2 **GERESS Array S** 80.31 329 eP P 17 05 33.9 +0.3
comp=Z,14nm,1.0s,mb4.8
GEC2 **GERESS Array S** 80.31 329 eP P 17 05 33.9 +0.3
GEC2 pmax pmax
comp=Z,14nm,1.0s,mb4.8
GERES **GERESS Array B** 80.31 329 P P 17 05 33.6 0.0
comp=Z,9.2nm,0.9s,mb4.7,baz=36,slow=5.0,SNR=46
GERES **GERESS Array B** 80.31 329 P P 17 05 33.6 0.0
GERES pmax pmax
comp=Z,9.0nm,0.9s
WET **Wettzell** 80.40 329 eP P 17 05 34.8 +0.7
comp=Z,31nm,1.0s,mb5.2
WET **Wettzell** 80.40 329 eP P 17 05 34.8 +0.7
WET pmax pmax
comp=Z,31nm,1.0s,mb5.2
ECSD **EROS Data Cent** 80.50 39 eP P 17 05 34.3 -0.4
comp=Z,10nm,0.9s,mb4.8
BUG **Bochum--Univer** 80.55 334 eP P 17 05 34.9 +0.1
comp=Z,46nm,1.3s,mb5.2
X20A **Quemado** 80.57 52 ⇑P P 17 05 35.1 -0.2
baz=80
GRA1 **Grafenberg Arr** 80.59 331 eP P 17 05 35.9 +0.8
comp=Z,75nm,1.1s,mb5.5
GRA1 LR LR
comp=Z,300nm,19.2s,MS4.7
GRF **Grafenberg Arr** 80.59 331 eP P 17 05 35.9 +0.8
comp=Z,75nm,1.1s,mb5.5
GRF eL 17 43 40.6
comp=Z,333nm,19.2s
GRF **Grafenberg Arr** 80.59 331 eP P 17 05 35.9 +0.8
GRF pmax pmax
comp=Z,75nm,1.1s,mb5.5
GRF MLR MLR
comp=Z,300nm,19.2s,MS4.7
GRF **Grafenberg Arr** 80.59 331 eP P 17 05 35.9 +0.8
GRF pmax pmax
comp=Z,75nm,1.1s,mb5.5
GRF MLR MLR
comp=Z,300nm,19.2s,MS4.7
GRFO **Grafenberg** 80.59 331 eP P 17 05 36.3 +1.2
comp=Z,40nm,1.0s,mb5.3
GRFO **Grafenberg** 80.59 331 eP P 17 05 36.3 +1.2
GRFO pmax pmax
comp=Z,40nm,1.0s,mb5.3
TUC **Tucson** 80.66 55 P P 17 05 35.2 -0.6
comp=Z,2.4nm,0.8s,mb4.2
TUC e pP 17 05 48.1 -0.7
TUC **Tucson** 80.66 55 P P 17 05 35.2 -0.6
TUC e pP 17 05 48.1 -0.7
ALN **Alexandroupoli** 80.69 317 eP P 17 05 49.1 +13
RDO **Rodhopi** 80.77 317 eP P 17 05 36.3 +0.1
CSS **Prodhromos** 80.78 308 eP P 17 05 36.4 0.0
ARSA **Arzberg** 80.84 327 iP P 17 05 37.1 +0.7
comp=Z,14nm,0.8s,mb4.9,SNR=7.1
MOA **Molln** 80.88 328⇑iP P 17 05 37.0 +0.3
comp=Z,11nm,1.1s,mb4.7
VTS **Vitosha** 80.89 319 eP P 17 05 37.0 +0.2
VTS **Vitosha** 80.89 319 ⇓P P 17 05 37.5 +0.7
VTS **Vitosha** 80.89 319⇓iP P 17 05 37.5 +0.7
VTS **Vitosha** 80.89 319 P P 17 05 37.5 +0.7
118A **Homack Ranch,** 80.95 55 ⇓P P 17 05 36.5 -0.9
baz=81
217A **Green Valley** 81.00 56 ⇓P P 17 05 37.1 -0.5
baz=81
X21A **Alamocita Cree** 81.06 52 ⇑P P 17 05 38.1 +0.2
baz=81
Y20A **Horse Springs,** 81.07 53 ⇑P P 17 05 37.8 -0.1
baz=81
TNS **Taunus Mts** 81.16 332 eP P 17 05 38.4 +0.3
comp=Z,37nm,1.1s,mb5.2
TNS **Taunus Mts** 81.16 332 eP P 17 05 38.4 +0.3
TNS pmax pmax
comp=Z,37nm,1.1s,mb5.2
MMB **Musomiste** 81.37 318 P P 17 05 40.4 +1.0
Z20A **Nine Sixteen R** 81.48 54 ⇓P P 17 05 40.9 +0.8
baz=81
NVR **Nevrokopi** 81.48 318 eP P 17 05 40.6 +0.6
PERS **Pernice** 81.50 327 iP P 17 05 40.3 +0.3
SOKA **Soboth** 81.50 327⇑iP P 17 05 40.5 +0.5
comp=Z,36nm,0.8s,mb5.4
TOD **Tromm** 81.55 332 eP P 17 05 40.4 +0.2
TOD **Tromm** 81.55 332 eP P 17 05 40.4 +0.2
RJOB **Jochberg** 81.57 329 eP P 17 05 41.1 +0.8
comp=Z,28nm,0.9s,mb5.2
HGN **Heimansgroeve** 81.57 334⇑eP P 17 05 40.1 -0.1
comp=Z,21nm,1.1s,mb5.0
BEBN **Eben Emael** 81.63 334 P P 17 05 40.9 +0.3
comp=Z,7.1nm,1.1s,mb4.5
SCHQ **Schefferville** 81.67 17 P P 17 05 40.6 -0.2
comp=Z,10nm,0.8s,mb4.8,baz=342,slow=7.8,SNR=7.0
SCHQ LR LR 17 47 19.0
comp=Z,209nm,18.2s,MS4.5,baz=283,slow=40
MEM **Membach** 81.68 334 P P 17 05 41.0 +0.2
comp=Z,12nm,1.1s,mb4.8
ABH **Alteburg** 81.76 333 eP P 17 05 41.0 -0.3
FUR **Furstenfeldbru** 81.81 330 eP P 17 05 42.3 +0.7
comp=Z,69nm,1.1s,mb5.5
FUR **Furstenfeldbru** 81.81 330 eP P 17 05 42.3 +0.7
FUR pmax pmax
comp=Z,69nm,1.1s,mb5.5
OBKA **Obir** 81.84 327⇓iP P 17 05 42.0 +0.2
comp=Z,20nm,0.8s,mb5.1,SNR=11
KBA **Koelnbreinsper** 81.88 328 iP P 17 05 42.5 +0.5
comp=Z,48nm,1.4s,mb5.2,SNR=9.4
BNM **Barren Site** 81.96 52 P P 17 05 43.8 +1.2
comp=Z,4.9nm,1.1s,mb4.3
BCLA **Clavier** 82.07 334 P P 17 05 42.8 -0.2
comp=Z,10.0nm,1.5s,mb4.5
RUP **Ruppelstein** 82.08 333 eP P 17 05 43.0 0.0
RUP **Ruppelstein** 82.08 333 eP P 17 05 43.0 0.0
MYKA **Terra Mystica** 82.12 327⇑iP P 17 05 43.1 -0.1
comp=Z,34nm,1.6s,mb5.0
VAY **Valandovo** 82.16 319 ePKP P 17 05 41.6 -1.9
LJU **Ljubljana** 82.22 327 iP P 17 05 39.0 -4.8
LJU i 17 05 44.0
VISS **Visnje** 82.28 326 iP P 17 05 43.8 -0.3
SNF **Seneffe** 82.33 335 P P 17 05 44.3 0.0
comp=Z,15nm,1.5s,mb4.7
BOJS **Bojanci** 82.34 326 iP P 17 05 44.3 -0.1
WATA **Walderalm** 82.38 329⇓iP P 17 05 45.0 +0.4
comp=Z,16nm,0.9s,mb5.0
WTTA **Wattenberg** 82.41 329⇑iP P 17 05 45.4 +0.7
comp=Z,20nm,0.7s,mb5.1
PTCC **Patocco-Chiusa** 82.42 327 P P 17 05 43.8 -1.0
PLG **Polygyros** 82.42 318 eP P 17 05 44.9 0.0
LANF **Langenberg** 82.43 332 eP P 17 05 44.7 -0.1
LANF **Langenberg** 82.43 332 eP P 17 05 44.7 -0.1
WLF **Walferdange** 82.43 333 P P 17 05 44.4 -0.4
comp=Z,10nm,1.5s,mb4.5
ABTA **Abfaltersbach** 82.48 328⇓iP P 17 05 44.3 -0.9
comp=Z,17nm,1.2s,mb4.8
GIVF **Givet** 82.50 334 eP P 17 05 44.7 -0.5
GIVF **Givet** 82.50 334 eP P 17 05 44.7 -0.5
JAVS **Javornik** 82.53 327 iP P 17 05 44.6 -0.8
JAVS i pP 17 05 57.6 -0.8
MOTA **Moosalm** 82.55 329⇑iP P 17 05 45.8 +0.3
comp=Z,32nm,0.8s,mb5.4,SNR=17
RETA **Reutte** 82.57 329 iP P 17 05 46.3 +0.7
comp=Z,34nm,0.9s,mb5.4,SNR=14
DOU **Dourbes** 82.58 334 P P 17 05 45.2 -0.4
comp=Z,8.7nm,1.5s,mb4.6
BAIF **Baives** 82.74 335⇑iP P 17 05 46.1 -0.3
comp=Z,20nm,1.0s,mb4.8
BAIF **Baives** 82.74 335⇑iP P 17 05 46.1 -0.3
comp=Z,9.9nm,1.0s,mb4.8
BAIF **Baives** 82.74 335⇑iP P 17 05 46.1 -0.3
BAIF pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KRUS **Krusevo** 82.78 320 iPKP P 17 05 46.7 -0.1
BFO **Black Forest** 82.78 331 eP P 17 05 46.9 +0.2
comp=Z,23nm,1.0s,mb5.2
BFO **Black Forest** 82.78 331 eP P 17 05 46.9 +0.2
BFO pmax pmax
comp=Z,23nm,1.0s,mb5.2
BFO **Black Forest** 82.78 331 P P 17 05 46.3 -0.4
comp=Z,104nm,0.8s,mb5.9,SNR=5.4
SPAK **Spaichingen-Ko** 82.81 331 eP P 17 05 46.9 +0.1
FETA **Feichten** 82.96 329 iP P 17 05 48.1 +0.4
comp=Z,16nm,0.8s,mb5.1,SNR=12
DAVA **Damuels** 83.07 330⇑iP P 17 05 48.6 +0.5
comp=Z,28nm,0.8s,mb5.3,SNR=9.9
CDF **Champ du Feu** 83.10 332⇑iP P 17 05 48.2 -0.1
comp=Z,44nm,1.0s,mb5.1
CDF **Champ du Feu** 83.10 332⇑iP P 17 05 48.2 -0.1
comp=Z,22nm,1.0s,mb5.1
CDF **Champ du Feu** 83.10 332⇑iP P 17 05 48.2 -0.1
CDF pmax pmax
comp=Z,22nm,1.0s,mb5.1
LIT **Litokhoron** 83.11 318 eP P 17 05 47.5 -1.0
LIBD **Limburg** 83.20 332 eP P 17 05 49.0 +0.2
LIBD **Limburg** 83.20 332 eP P 17 05 49.0 +0.2
ECH **Echery** 83.31 332 eP P 17 05 49.5 +0.1
ECH **Echery** 83.31 332 eP P 17 05 49.5 +0.1
NEO **Neokhori** 83.32 317 eP P 17 05 49.0 -0.6
MOF **Molkenrain** 83.62 332 eP P 17 05 51.0 0.0
MOF **Molkenrain** 83.62 332 eP P 17 05 51.0 0.0
HINF **Hinteralfeld** 83.75 332⇑iP P 17 05 51.1 -0.6
comp=Z,12nm,0.8s,mb4.8
HINF **Hinteralfeld** 83.75 332⇑iP P 17 05 51.1 -0.6
comp=Z,6.1nm,0.8s,mb4.8
HINF **Hinteralfeld** 83.75 332⇑iP P 17 05 51.1 -0.6
HINF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
HAU **Haudompre** 83.77 332⇑iP P 17 05 51.4 -0.4
comp=Z,33nm,0.9s,mb5.2
HAU eMLR MLR
comp=Z,295nm,20.8s,MS4.3
HAU **Haudompre** 83.77 332⇑iP P 17 05 51.4 -0.4
comp=Z,16nm,0.9s,mb5.2
HAU LR LR
comp=Z,290nm,20.8s,MS4.6
HAU **Haudompre** 83.77 332⇑iP P 17 05 51.4 -0.4
HAU pmax pmax
comp=Z,16nm,0.9s,mb5.2
HAU MLR MLR
comp=Z,290nm,20.8s,MS4.6
MEZF **Maizieres J'vi** 83.80 333⇑iP P 17 05 52.0 +0.1
comp=Z,51nm,1.0s,mb5.3
MEZF **Maizieres J'vi** 83.80 333⇑iP P 17 05 52.0 +0.1
comp=Z,51nm,1.0s,mb5.6
BBS **Basel-Blauen** 83.81 331 eP P 17 05 52.1 +0.1
BBS **Basel-Blauen** 83.81 331 eP P 17 05 52.1 +0.1
LKR **Lokris** 83.93 317 eP P 17 05 51.7 -1.1
KARP **Karpathos** 83.95 312 eP P 17 05 52.0 -0.9
AGG **Agios Georgios** 84.00 318 eP P 17 05 50.9 -2.2
SFTF **Sexfontaines** 84.06 333⇑iP P 17 05 53.1 -0.1
comp=Z,62nm,1.0s,mb5.4
SFTF **Sexfontaines** 84.06 333⇑iP P 17 05 53.1 -0.1
comp=Z,62nm,1.0s,mb5.7
VLY **Voula,Athens** 84.10 316 eP P 17 05 52.3 -1.4
Z26A **Caprock** 84.15 51 ⇑P P 17 05 54.1 +0.1
baz=84
LOMF **Lomont** 84.16 332 eP P 17 05 54.0 +0.3
LOMF **Lomont** 84.16 332 eP P 17 05 54.0 +0.3
Y27A **Causey** 84.19 50 ⇑P P 17 05 54.7 +0.6
baz=84
JAN **Janina** 84.27 319 eP P 17 05 55.2 +0.7
MNTX **Cornudas Mount** 84.42 53 P P 17 05 55.1 -0.3
baz=84
Z27A **Tatum** 84.56 50 ⇓P P 17 05 55.6 -0.5
baz=84
PMOR **Pomariorio Ree** 84.60 115 eT 18 38 45.4
comp=Z,14nm,0.3s
DID **Didima** 84.66 316 eP P 17 05 54.0 -2.5
EFP **Efpalio** 84.66 317 eP P 17 05 56.7 +0.2
ZKR **Zakros** 84.79 313 eP P 17 05 56.9 -0.3
GUR **Goura** 84.81 317 eP P 17 05 55.5 -1.7
325A **Bean Ranch, Si** 84.89 53 ⇑P P 17 05 56.6 -1.2
baz=85
NPS **Neapolis** 85.02 313 eP P 17 05 57.8 -0.5
CABF **La Chapelle** 85.05 332⇑iP P 17 05 58.4 +0.1
comp=Z,56nm,1.2s,mb5.3
CABF **La Chapelle** 85.05 332⇑iP P 17 05 58.4 +0.1
comp=Z,28nm,1.2s,mb5.3
CABF **La Chapelle** 85.05 332⇑iP P 17 05 58.4 +0.1
CABF pmax pmax
comp=Z,28nm,1.2s,mb5.3
RLS **Riolos of Patr** 85.17 317 eP P 17 05 58.5 -0.5
LAST **Lasithi** 85.17 313 eP P 17 05 59.7 +0.6
ORO **Oropa** 85.18 330 P P 17 05 58.5 -0.4
ORO **Oropa** 85.18 330 P P 17 05 58.5 -0.4
PPT **Papeete** 85.24 118 eLR LR 17 32 38.7
comp=Z,748nm,22.5s,baz=318
PPT **Papeete** 85.24 118 LR LR 17 37 44.3
comp=Z,406nm,20.9s,MS4.8,baz=326,slow=31
LOR **Lormes** 85.27 333⇑iP P 17 05 59.2 -0.2
comp=Z,100nm,1.0s,mb5.6
LOR eMLR MLR
comp=Z,628nm,22.2s,MS4.7
LOR **Lormes** 85.27 333⇑iP P 17 05 59.2 -0.2
comp=Z,50nm,1.0s,mb5.6
LOR LR LR
comp=Z,630nm,22.3s,MS5.0
LOR **Lormes** 85.27 333⇑iP P 17 05 59.2 -0.2
LOR pmax pmax
comp=Z,50nm,1.0s,mb5.6
LOR MLR MLR
comp=Z,630nm,22.3s,MS5.0
425A **Indio Mountain** 85.30 53 ⇓P P 17 06 00.1 +0.3
baz=85
FLN **La Foliniere** 85.36 337⇑iP P 17 05 59.5 -0.3
comp=Z,53nm,1.2s,mb5.2
FLN eMLR MLR
comp=Z,268nm,20.8s,MS4.3
FLN **La Foliniere** 85.36 337⇑iP P 17 05 59.5 -0.3
comp=Z,26nm,1.2s,mb5.2
FLN LR LR
comp=Z,270nm,20.8s,MS4.6
FLN **La Foliniere** 85.36 337⇑iP P 17 05 59.5 -0.3
FLN pmax pmax
comp=Z,26nm,1.2s,mb5.2
FLN MLR MLR
comp=Z,270nm,20.8s,MS4.6
TRAV **Traversella** 85.37 330 P P 17 05 59.5 -0.4
LDF **La Druitiere** 85.40 336 eP P 17 05 59.5 -0.5
comp=Z,14nm,0.7s,mb4.9
LDF **La Druitiere** 85.40 336 eP P 17 05 59.5 -0.5
comp=Z,7.1nm,0.7s,mb4.9
LDF **La Druitiere** 85.40 336 eP P 17 05 59.5 -0.5
LDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
VLS **Valsamata** 85.53 318 eP P 17 06 00.6 -0.2
326A **Caldwell Ranch** 85.53 52 ⇑P P 17 06 00.8 -0.2
baz=85
SSF **Saint Saulge** 85.57 333⇑iP P 17 06 00.7 -0.2
comp=Z,53nm,1.0s,mb5.4
SSF **Saint Saulge** 85.57 333⇑iP P 17 06 00.7 -0.2
comp=Z,26nm,1.0s,mb5.4
SSF **Saint Saulge** 85.57 333⇑iP P 17 06 00.7 -0.2
SSF pmax pmax
comp=Z,26nm,1.0s,mb5.4
ITM **Ithomi** 85.59 317 eP P 17 05 59.8 -1.4
RSL **Roselend** 85.64 331 eP P 17 06 01.2 0.0
RSL **Roselend** 85.64 331 eP P 17 06 01.2 0.0
LSD **Lago del Serru** 85.64 330 P P 17 06 02.1 +0.9
LSD **Lago del Serru** 85.64 330 P P 17 06 02.1 +0.9
HYF **Humbligny** 85.68 334 eP P 17 06 01.7 +0.3
VAM **Vamos** 85.70 314 eP P 17 06 15.9 +14
LPL **La Plagne** 85.75 331⇑iP P 17 06 02.2 +0.4
comp=Z,69nm,0.8s,mb5.6
LPL **La Plagne** 85.75 331⇑iP P 17 06 02.2 +0.4
comp=Z,35nm,0.8s,mb5.6
LPL **La Plagne** 85.75 331⇑iP P 17 06 02.2 +0.4
LPL pmax pmax
comp=Z,35nm,0.8s,mb5.6
LPG **La Plagne** 85.75 331⇑iP P 17 06 02.3 +0.5
comp=Z,80nm,0.8s,mb5.7
LPG **La Plagne** 85.75 331⇑iP P 17 06 02.3 +0.5
comp=Z,40nm,0.8s,mb5.7
LPG **La Plagne** 85.75 331⇑iP P 17 06 02.3 +0.5
LPG pmax pmax
comp=Z,40nm,0.8s,mb5.7
GRR **Gorron** 85.81 337 eP P 17 06 02.0 0.0
comp=Z,106nm,1.1s,mb5.7
GRR **Gorron** 85.81 337 eP P 17 06 02.0 0.0
comp=Z,53nm,1.1s,mb5.7

GRR	Gorron	85.81	337	eP	P	17 06 02.0	0.0
GRR				pmax	pmax		
comp=Z,53nm,1.1s,mb5.7							
SMF	Signal de Mont	85.82	333⇑	iP	P	17 06 02.0	-0.1
comp=Z,105nm,1.1s,mb5.7							
SMF	Signal de Mont	85.82	333⇑	iP	P	17 06 02.0	-0.1
comp=Z,53nm,1.1s,mb5.7							
SMF	Signal de Mont	85.82	333⇑	iP	P	17 06 02.0	-0.1
SMF				pmax	pmax		
comp=Z,53nm,1.1s,mb5.7							
KARN	Karanos	85.86	314	eP	P	17 06 11.6	+9.1
AVF	Avril sur Loir	85.86	333⇑	iP	P	17 06 02.3	0.0
comp=Z,145nm,0.9s,mb5.9							
AVF	Avril sur Loir	85.86	333⇑	iP	P	17 06 02.3	0.0
comp=Z,72nm,0.9s,mb5.9							
AVF	Avril sur Loir	85.86	333⇑	iP	P	17 06 02.3	0.0
AVF				pmax	pmax		
comp=Z,72nm,0.9s,mb5.9							
PYL	PYLOS	85.90	317	eP	P	17 06 01.9	-0.8
426A	McDonald Obser	85.96	53	⇓P	P	17 06 02.4	-0.7
baz=86							
TAOE	Nuku Hiva Isla	85.98	105	eLR	LR	17 32 43.5	
comp=Z,490nm,21.9s							
BGF	Bois d'Agland	86.23	334⇑	iP	P	17 06 04.1	0.0
comp=Z,26nm,0.8s,mb5.2							
BGF	Bois d'Agland	86.23	334⇑	iP	P	17 06 04.1	0.0
comp=Z,13nm,0.8s,mb5.2							
BGF	Bois d'Agland	86.23	334⇑	iP	P	17 06 04.1	0.0
BGF				pmax	pmax		
comp=Z,13nm,0.8s,mb5.2							
MBDF	Montbardon	86.40	330⇑	iP	P	17 06 04.6	-0.4
comp=Z,20nm,0.7s,mb5.2							
MBDF	Montbardon	86.40	330⇑	iP	P	17 06 04.6	-0.4
comp=Z,10nm,0.7s,mb5.2							
MBDF	Montbardon	86.40	330⇑	iP	P	17 06 04.6	-0.4
MBDF				pmax	pmax		
comp=Z,10.0nm,0.7s,mb5.2							
SGMF	Saint Gilles	86.43	338⇑	iP	P	17 06 05.3	+0.2
comp=Z,74nm,1.0s,mb5.5							
SGMF	Saint Gilles	86.43	338⇑	iP	P	17 06 05.3	+0.2
comp=Z,37nm,1.0s,mb5.6							
SGMF	Saint Gilles	86.43	338⇑	iP	P	17 06 05.3	+0.2
SGMF				pmax	pmax		
comp=Z,37nm,1.0s,mb5.6							
PLDF	La Plantade	86.48	333	eP	P	17 06 05.7	+0.3
PLDF	La Plantade	86.48	333	eP	P	17 06 05.7	+0.3
MEH	Mehetia	86.48	117	eT		18 41 13.9	
comp=Z,115nm,0.3s							
ROSF	Rostrenen	86.56	338⇑	iP	P	17 06 06.0	+0.3
comp=Z,104nm,1.1s,mb5.7							
ROSF	Rostrenen	86.56	338⇑	iP	P	17 06 06.0	+0.3
comp=Z,52nm,1.1s,mb5.7							
ROSF	Rostrenen	86.56	338⇑	iP	P	17 06 06.0	+0.3
ROSF				pmax	pmax		
comp=Z,52nm,1.1s,mb5.7							
ORIF	Oris-en-Rattie	86.57	331	eP	P	17 06 06.0	+0.2
comp=Z,29nm,0.8s,mb5.2							
ORIF				eMLR	MLR		
comp=Z,368nm,17.8s,MS4.5							
ORIF	Oris-en-Rattie	86.57	331	eP	P	17 06 06.0	+0.2
comp=Z,14nm,0.8s,mb5.2							
ORIF	Oris-en-Rattie	86.57	331	eP	P	17 06 06.0	+0.2
ORIF				pmax	pmax		
comp=Z,14nm,0.8s,mb5.2							
AGO	Saint Agoulin	86.58	333	eP	P	17 06 06.3	+0.5
TCF	Toulx Ste Croi	86.68	334⇑	iP	P	17 06 06.6	+0.2
comp=Z,67nm,1.1s,mb5.5							
TCF	Toulx Ste Croi	86.68	334⇑	iP	P	17 06 06.6	+0.2
comp=Z,34nm,1.1s,mb5.5							
TCF	Toulx Ste Croi	86.68	334⇑	iP	P	17 06 06.6	+0.2
TCF				pmax	pmax		
comp=Z,33nm,1.1s,mb5.5							
COLF	Collangettes	86.84	333	eP	P	17 06 07.7	+0.5
PYM	Petit Puy Mans	86.88	333	eP	P	17 06 07.8	+0.5
PYM	Petit Puy Mans	86.88	333	eP	P	17 06 07.8	+0.5
QUIF	Quistinic	86.91	338⇑	iP	P	17 06 07.4	0.0
comp=Z,16nm,0.8s,mb5.0							
QUIF	Quistinic	86.91	338⇑	iP	P	17 06 07.4	0.0
comp=Z,8.0nm,0.8s,mb5.0							
QUIF	Quistinic	86.91	338⇑	iP	P	17 06 07.4	0.0
QUIF				pmax	pmax		
comp=Z,8.0nm,0.8s,mb5.0							
VIVF	Saint-Julien-l	87.07	332⇑	iP	P	17 06 08.4	+0.1
comp=Z,60nm,1.0s,mb5.5							
VIVF	Saint-Julien-l	87.07	332⇑	iP	P	17 06 08.4	+0.1
comp=Z,30nm,1.0s,mb5.5							
VIVF	Saint-Julien-l	87.07	332⇑	iP	P	17 06 08.4	+0.1
VIVF				pmax	pmax		
comp=Z,30nm,1.0s,mb5.5							
TXAR	Lajitas Array	87.13	53	P	P	17 06 09.0	+0.2
comp=Z,1.9nm,0.9s,mb4.3,baz=301,slow=3.4,SNR=7.8							
TXAR				pP	pP	17 06 20.4	-1.6
comp=Z,2.6nm,0.8s,baz=292,slow=3.0,SNR=10.0							
TXAR				PP	PP	17 09 32.8	+0.5
comp=Z,0.1nm,0.4s,baz=334,slow=6.0,SNR=2.1							
TXAR				LR	LR	17 48 21.8	
comp=Z,82nm,18.5s,MS4.2,baz=190,slow=38							
TXAR	Lajitas Array	87.13	53	P	P	17 06 09.0	+0.2
TXAR				pP	pP	17 06 20.4	-1.6
TXAR				PP	PP	17 09 32.8	+0.5
TXAR				LR	LR	17 48 21.8	
TXAR	Lajitas Array	87.13	53	P	P	17 06 09.0	+0.1
TXAR				*PP	pP	17 06 20.4	-1.6
TXAR						17 09 32.8	
TXAR				MLR	MLR		
comp=Z,82nm,18.5s							
MFF	Saint Martin d	87.18	335⇑	iP	P	17 06 09.1	+0.4
comp=Z,96nm,1.0s,mb5.7							
MFF	Saint Martin d	87.18	335⇑	iP	P	17 06 09.1	+0.4
comp=Z,48nm,1.0s,mb5.7							
MFF	Saint Martin d	87.18	335⇑	iP	P	17 06 09.1	+0.4
MFF				pmax	pmax		
comp=Z,48nm,1.0s,mb5.7							
LBL	Lubilhac	87.25	333	eP	P	17 06 09.6	+0.5
LBL	Lubilhac	87.25	333	eP	P	17 06 09.6	+0.5
RJF	Les Rejaudoux	87.78	334⇑	iP	P	17 06 12.1	+0.4
comp=Z,56nm,1.0s,mb5.5							
RJF				eMLR	MLR		
comp=Z,548nm,22.0s,MS4.6							
RJF	Les Rejaudoux	87.78	334⇑	iP	P	17 06 12.1	+0.4
comp=Z,28nm,1.0s,mb5.5							
RJF				LR	LR		
comp=Z,550nm,22.0s,MS4.9							
RJF	Les Rejaudoux	87.78	334⇑	iP	P	17 06 12.1	+0.4
RJF				pmax	pmax		
comp=Z,28nm,1.0s,mb5.5							
RJF				MLR	MLR		
comp=Z,550nm,22.0s,MS4.9							
CAF	Calviac	87.93	333⇑	iP	P	17 06 13.2	+0.8
comp=Z,76nm,1.0s,mb5.6							
CAF	Calviac	87.93	333⇑	iP	P	17 06 13.2	+0.8
comp=Z,38nm,1.0s,mb5.6							
CAF	Calviac	87.93	333⇑	iP	P	17 06 13.2	+0.8
CAF				pmax	pmax		
comp=Z,38nm,1.0s,mb5.6							
LASF	Ste Croix	88.03	332	eP	P	17 06 13.3	+0.4
comp=Z,20nm,1.0s,mb5.0							
LFF	La Frestale	88.36	334⇑	iP	P	17 06 15.1	+0.7
comp=Z,69nm,0.9s,mb5.6							
LFF	La Frestale	88.36	334⇑	iP	P	17 06 15.1	+0.7
comp=Z,34nm,0.9s,mb5.6							
LFF	La Frestale	88.36	334⇑	iP	P	17 06 15.1	+0.7
LFF				pmax	pmax		
comp=Z,35nm,0.9s,mb5.6							
MIAR	Mount Ida	89.01	43	eP	P	17 06 17.9	+0.2
comp=Z,17nm,1.5s,mb5.2							
MIAR	Mount Ida	89.01	43	eP	P	17 06 17.9	+0.2
MIAR				pmax	pmax		
comp=Z,17nm,1.5s,mb5.2							
MTLF	Montolieu	89.26	332⇑	iP	P	17 06 19.0	+0.3
comp=Z,13nm,0.8s,mb5.0							
MTLF	Montolieu	89.26	332⇑	iP	P	17 06 19.0	+0.3
comp=Z,6.3nm,0.8s,mb5.0							
MTLF	Montolieu	89.26	332⇑	iP	P	17 06 19.0	+0.3
MTLF				pmax	pmax		
comp=Z,6.0nm,0.8s,mb5.0							
TBI	Tubuai	89.39	122	eLR	LR	17 34 34.0	
comp=Z,352nm,26.8s,baz=316							
TBI				eT		18 45 08.7	
comp=Z,19nm,0.3s							
EPF	Esparros	90.18	333⇑	iP	P	17 06 22.9	-0.1
comp=Z,11nm,0.9s,mb4.9							
EPF	Esparros	90.18	333⇑	iP	P	17 06 22.9	-0.1
comp=Z,5.5nm,0.9s,mb4.9							
EPF	Esparros	90.18	333⇑	iP	P	17 06 22.9	-0.1
EPF				pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.9							
ETSF	Etsaut	90.60	334⇑	iP	P	17 06 25.7	+0.7
comp=Z,24nm,0.9s,mb5.2							
ETSF	Etsaut	90.60	334⇑	iP	P	17 06 25.7	+0.7
comp=Z,12nm,0.9s,mb5.2							
ETSF	Etsaut	90.60	334⇑	iP	P	17 06 25.7	+0.7
ETSF				pmax	pmax		
comp=Z,12nm,0.9s,mb5.2							
SJPF	Ste Jean	90.63	335	eP	P	17 06 25.8	+0.7
comp=Z,14nm,0.9s,mb5.0							
SJPF	Ste Jean	90.63	335	eP	P	17 06 25.8	+0.7
comp=Z,7.2nm,0.9s,mb5.0							
SJPF	Ste Jean	90.63	335	eP	P	17 06 25.8	+0.7
SJPF				pmax	pmax		
comp=Z,7.0nm,0.9s,mb5.0							
KEST	Kesra	92.89	324	P	P	17 06 35.8	+0.1
comp=Z,1.3nm,0.8s,mb4.4,baz=325,slow=9.1,SNR=4.0							
KEST				LR	LR	17 53 05.3	
comp=Z,170nm,18.9s,MS4.5,baz=248,slow=38							
ESDC	Sonseca Array	94.62	335	P	P	17 06 43.4	-0.2
comp=Z,2.4nm,0.6s,mb4.8,baz=13,slow=4.4,SNR=11							
ESDC				pP	pP	17 06 57.1	+0.4
comp=Z,2.3nm,0.8s,baz=8.5,slow=4.1,SNR=3.5							
ESDC				PP	PP	17 10 30.4	-0.5
comp=Z,0.8nm,0.6s,baz=18,slow=7.3,SNR=4.6							
ESDC				LR	LR	17 55 07.4	
comp=Z,189nm,18.3s,MS4.6,baz=65,slow=39							
ESDC	Sonseca Array	94.62	335	P	P	17 06 43.4	-0.2
ESDC				pP	pP	17 06 57.1	+0.4
ESDC				PP	PP	17 10 30.4	-0.5
ESDC				LR	LR	17 55 07.4	
EVO	Evora	96.92	337	eP	P	17 06 52.8	-1.3
EVO				eMLR	MLR		
comp=Z,300nm,20.2s,MS4.5							
EVOP	Sao Brissos	96.95	337	eP	P	17 06 52.8	-1.4
EVOP				LR	LR		
comp=Z,300µm,20.3s							
EVOP	Sao Brissos	96.95	337	eP	P	17 06 52.8	-1.4
RKT	Rikitea	99.06	113	eLR	LR	17 38 50.3	
comp=Z,341nm,24.0s,baz=302							
TORD	Torodi Ar. Bea	115.58	317	PKP	PKPdf	17 12 04.1	-1.0
comp=Z,378nm,0.3s,baz=14,slow=1.8,SNR=2.3							
TORD				PP	PP	17 13 04.5	-2.3
comp=Z,5.6nm,1.0s,baz=22,slow=8.5,SNR=6.4							
SDV	Santo Domingo	121.94	40	PKPdf	PKPdf	17 12 17.6	+0.2
MAW	Mawson	123.16	207	PKP	PKPdf	17 12 17.6	-0.4
comp=Z,1.8nm,1.0s,baz=343,slow=2.7,SNR=4.0							
MAW	Mawson	123.16	207	PKIKP	PKPdf	17 12 17.6	-0.4
MAW				pmax	pmax		
comp=Z,2.0nm,1.0s							
DBIC	Dimbokro	124.41	320	PKP	PKPdf	17 12 21.2	-1.0
comp=Z,2.8nm,0.9s,baz=26,slow=6.1,SNR=4.9							
DBIC	Dimbokro	124.41	320	PKIKP	PKPdf	17 12 21.2	-1.0
DBIC				pmax	pmax		
comp=Z,3.0nm,0.9s							
QSPA	South Pole Qui	130.27	180	ePKPdf	PKPdf	17 12 31.4	+0.1
LPAZ	La Paz	143.91	57	PKhKP	PKPpre	17 12 56.2	
comp=Z,1.8nm,0.9s,baz=354,slow=0.8,SNR=5.5							
VNA2	Neumayer--Watz	145.98	197	ePKPdf	PKPdf	17 12 57.3	-2.9
baz=100,slow=1.7							
VNA2				e		17 13 09.1	
VNA3	Neumayer Olymp	146.23	196	ePKPdf	PKPdf	17 12 57.8	-2.8
VNA3				e		17 13 09.3	
VNA3				e		17 16 33.4	
VNA1	Neumayer--Stat	146.38	197	ePKPdf	PKPdf	17 12 58.6	-2.3
VNA1				e		17 13 09.0	
BDFB	Brasilia	153.47	24	PKPbc	PKPbc	17 13 19.5	-1.9
comp=Z,3.8nm,0.7s,baz=187,slow=6.4,SNR=4.5							
PLCA	Paso Flores	154.75	101	PKPbc	PKPbc	17 13 23.8	+0.3
comp=Z,1.7nm,0.9s,baz=283,slow=13,SNR=2.8							

WEL 26 16:55:08.2±0.2, 37°.00S×177°.11E, h177km±1km, ML3.6/11, Error ellipse: s-maj=2.3km s-min=2.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.11	121	PN	Pn	16 55 36.4	+0.1
MXZ				SN	Sn	16 55 58.2	+0.2
URZ	Urewera	1.25	180	PN	Pn	16 55 37.7	+0.2
URZ				SN	Sn	16 56 00.3	0.0
MWZ	Matawai	1.37	166	PN	Pn	16 55 38.8	+0.2
MWZ				SN	Sn	16 56 02.4	+0.2
PUZ	Puketiti	1.41	140	PN	Pn	16 55 38.9	0.0
PUZ				SN	Sn	16 56 01.8	-0.9
CNGZ	Carnagh Statio	1.72	150	PN	Pn	16 55 42.2	+0.3
RAHZ	Arahi	1.91	180	PN	Pn	16 55 44.1	+0.2
KNZ	Kokohu	2.06	168	PN	Pn	16 55 45.1	-0.5
BKZ	Black Stump Fm	2.21	192	PN	Pn	16 55 46.7	-0.6
BKZ				SN	Sn	16 56 16.3	-1.5
KAHZ	Kahuranaki	2.79	184	PN	Pn	16 55 52.7	-1.4
PXZ	Pawanui	3.03	184	PN	Pn	16 55 55.1	-1.8
TSZ	Takapari Road	3.18	196	PN	Pn	16 55 57.0	-1.8
TCW	Tory Channel	4.74	207	PN	Pn	16 56 14.9	-3.7
TUWZ	Tuamarina	5.06	208	PN	Pn	16 56 18.6	-4.1
KHZ	Kahutara	6.07	206	PN	Pn	16 56 31.4	-4.4

*ISK **26** 17:18:58.2, 40°.41N×33°.20E, h5km, MD2.7*
*ISCJB **26** 17:18:59.4±0.7, 40°.44N±0°.03×33°.19E±0°.05, h9km±5km, Error ellipse: s-maj=6.4km s-min=4.9km az=38.3*
*CSEM **26** 17:18:59.4±0.2, 40°.42N×33°.22E, h8km, MD2.8, Error ellipse: s-maj=4.6km s-min=4.1km az=119.0*
*DDA **26** 17:19:01.0, 40°.47N×33°.36E, h16km±1km, Md2.8*
ISC 26 17:18:59.8±0.6, 40°.44N±0°.03×33°.20E±0°.05, h12km±5km, n25, σ0°82/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	Eldivan	0.18	74	iP	Pg	17 19 03.1	-0.8
ELDT				iS	Sg	17 19 06.9	+0.2
ELDT	Eldivan	0.18	74	iP	Pg	17 19 03.1	-0.7
ELDT				iS	Sg	17 19 06.9	+0.3
CANT	Cankiri	0.36	62	ePG	Pg	17 19 06.6	-0.4
CANT				eSG	Sg	17 19 13.3	+1.4
ILGA	Ilgaz	0.72	32	iP	Pg	17 19 13.5	-0.4
ILGA				iS	Sg	17 19 23.5	+0.1
ILGA	Ilgaz	0.72	32	iP	Pg	17 19 13.5	-0.4
ILGA				iS	Sg	17 19 23.5	+0.1
SGKT	Sivrigoynuk	0.89	279	iP	Pg	17 19 17.1	+0.2
SGKT				iS	Sg	17 19 34.4	+5.9
SGKT	Sivrigoynuk	0.89	279	iP	Pg	17 19 17.1	+0.2
SAFT	Safranbolu	0.89	334	ePG	Pg	17 19 17.2	+0.2
SAFT	Safranbolu	0.89	334	ePg	Pg	17 19 17.2	+0.2
BBAL	Bala	0.90	184	iP	Pg	17 19 16.9	-0.3
BBAL				iS	Sg	17 19 32.9	+4.0
BBAL	Bala	0.90	184	iP	Pg	17 19 16.9	-0.3
AFSR	Af ar-Bala (A	1.00	186	ePG	Pg	17 19 17.6	-1.4
AFSR				eSG	Sg	17 19 32.4	+0.4
AFSR	Af ar-Bala (A	1.00	186	ePg	Pg	17 19 17.6	-1.4
AFSR				eSg	Sg	17 19 32.4	+0.4
CORM	Corum	1.12	103	ePN	Pn	17 19 20.7	-0.6
CORM	Corum	1.12	103	ePn	Pn	17 19 20.7	-0.6
KAMT	Kaman	1.14	160	ePN	Pn	17 19 20.9	-0.6
KAMT	Kaman	1.14	160	ePn	Pn	17 19 20.9	-0.6
CDAG	Cicekdag	1.21	132	iP	Pn	17 19 22.1	-0.4
CDAG				iS	Sb	17 19 39.5	+1.2
CDAG	Cicekdag	1.21	132	iP	Pn	17 19 22.1	-0.4
CDAG				iS	Sb	17 19 39.5	+1.3
CTKT	Corum	1.22	81	iP	Pn	17 19 22.5	-0.2
CTKT				iS	Sb	17 19 37.3	-1.2
CTKT	Corum	1.22	81	iP	Pn	17 19 22.5	-0.2
CTKT				iS	Sb	17 19 37.3	-1.2
MDU	Mudurnu	1.52	272	ePN	Pn	17 19 27.5	+0.8
MDU	Mudurnu	1.52	272	ePn	Pn	17 19 27.5	+0.8
YOZ	Yozgat	1.81	116	ePN	Pn	17 19 32.3	+1.5
YOZ	Yozgat	1.81	116	ePn	Pn	17 19 32.3	+1.6

*IDC **26** 18:33:53.0±0.6, 16°.07S×74°.71W, h0km, mb4.2/14, mb1 4.3/17, mb1mx4.2/25, mbtmp4.1/17, ML3.9/3, MS3.5/5, Ms1 3.5/5, ms1mx3.3/29, Error ellipse: s-maj=23.7km s-min=12.6km az=53.0*
*ISCJB **26** 18:33:53.2±3.0, 16°.05S±0°.08×74°.72W±0°.10, h15km±21km, mb4.5/34, MS4.1/3, Error ellipse: s-maj=18.3km s-min=8.5km az=142.3*
*NEIC **26** 18:34:03.8±1.4, 15°.33S×74°.33W, h58km±11km, mb4.6/23, Error ellipse: s-maj=19.0km s-min=7.9km az=220.0*
ISC 26 18:33:59.4±1.7, 16°.12S±0°.08×74°.72W±0°.09, h45km±15km, n70, σ1s13/56, mb4.5/34, MS4.1/3, 1C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	4.59	333	Pn	Pn	18 35 04.6	-1.8
3.1nm,0.3s,baz=150,slow=18,SNR=4.6							
NNA				Lg		18 36 13.7	
37nm,0.3s,baz=295,slow=17,SNR=5.7							
NNA				LR	LR	18 36 35.4	
comp=Z,199nm,20.6s,baz=338,slow=36							
NNA	Nana	4.59	333	ePn	Pn	18 35 02.5	-3.9
NNA				eSn	Sn	18 36 06.3	+7.8
LPAZ	La Paz	6.33	92	Pn	Pn	18 35 32.6	+2.4
11nm,0.3s,baz=276,slow=8.6,SNR=175							
LPAZ				Sn	Sn	18 36 55.5	+14
baz=52,slow=19,SNR=1.3							
LPAZ	La Paz	6.33	92	ePn	Pn	18 35 32.4	+2.1
79nm,0.6s							
ATAH	Atahualpa	9.62	338	Pn	Pn	18 36 22.5	+7.1
2.8nm,0.3s,baz=158,slow=7.3,SNR=12							
ATAH				Sn	Sn	18 38 21.3	+19
1.2nm,0.3s,baz=304,slow=13,SNR=3.9							
ATAH				LR	LR	18 40 19.0	
comp=Z,268nm,18.0s,baz=188,slow=40							
CFAA	Coronel Fontan	16.51	160	Pn	Pn	18 37 47.9	0.0
0.1nm,0.3s,baz=336,slow=11,SNR=11							
OTAV	Otavalo	16.66	347	Pn	Pn	18 37 47.2	-2.6
13nm,1.0s							
CPUP	Villa Florida	19.11	125	P	Pn	18 38 17.6	-2.2
0.4nm,0.3s,baz=290,slow=11,SNR=6.0							
CPUP				LR	LR	18 47 21.5	
comp=Z,124nm,19.9s,baz=207,slow=42							
CPUP	Villa Florida	19.11	125	eP	Pn	18 38 16.9	-3.0
18nm,0.9s							
TRQA	Tornquist	24.57	155	P	P	18 39 23.3	+8.2
PLCA	Paso Flores	24.79	172	P	P	18 39 17.2	+0.1
3.4nm,0.9s,mb3.9,baz=348,slow=12,SNR=1.6							
PLCA	Paso Flores	24.79	172	eP	P	18 39 17.2	+0.1
8.6nm,0.8s,mb4.3							
SDV	Santo Domingo	25.17	10	eP	P	18 39 14.1	-6.7
13nm,1.0s,mb4.4							
BDFB	Brasilia	25.69	93	P	P	18 39 25.1	-0.4
14nm,0.9s,mb4.5,baz=280,slow=16,SNR=8.0							
MTDJ	Mount Denham	34.24	355	eP	P	18 40 38.8	-2.3
14nm,0.8s,mb4.9							
TEIG	Tepich	38.49	339	P	P	18 41 17.3	-0.2
17nm,0.9s,mb4.8,baz=141,slow=17,SNR=6.3							
TEIG				LR	LR	18 56 40.8	
comp=Z,192nm,20.8s,MS3.9,baz=322,slow=36							
TEIG	Tepich	38.49	339	eP	P	18 41 14.7	-2.7
33nm,1.0s,mb5.0							
CMIG	Matias Romero	38.52	328	LR	LR	18 55 31.0	
comp=Z,106nm,21.3s,MS3.6,baz=165,slow=34							
RCBR	Riachuelo	39.38	79	P	P	18 41 24.7	-0.4
15nm,1.0s,mb4.7,baz=14,slow=3.1,SNR=3.8							
RCBR	Riachuelo	39.38	79	P	P	18 41 24.1	-1.0
23nm,1.0s,mb4.9							
TXAR	Lajitas Array	53.13	328	P	P	18 43 12.5	-0.3
1.6nm,1.0s,mb3.9,baz=149,slow=7.8,SNR=7.7							
MIAR	Mount Ida	53.48	341	eP	P	18 43 13.7	-1.5
13nm,1.2s,mb4.8							
WCI	Wyandotte Cave	55.14	349	eP	P	18 43 25.3	-1.9
16nm,1.0s,mb5.0							
LAZ	Ladron	58.95	329	P	P	18 43 54.7	+0.4
4.3nm,1.3s,mb4.3							
ANMO	Albuquerque	59.06	330	P	P	18 43 54.3	-0.7
0.7nm,0.2s,mb4.3,baz=131,slow=9.3,SNR=4.3							
SDCO	Great Sand Dun	60.89	332	eP	P	18 44 07.3	-0.2
4.5nm,0.9s,mb4.6							
MSU	Marysvale	64.69	328	eP	P	18 44 33.8	+1.0
2.9nm,1.0s,mb4.3							
ARUT	Antelope Range	64.80	327	eP	P	18 44 34.2	+0.6
20nm,1.4s,mb5.0							
DUG	Dugway	66.29	329	eP	P	18 44 44.1	+0.9
6.6nm,1.0s,mb4.6							
PDAR	Pinedale Array	66.78	333	P	P	18 44 46.3	+0.2
0.6nm,0.9s,mb3.6,baz=145,slow=3.3,SNR=3.5							
PDAR	Pinedale Array	66.78	333	P	P	18 44 46.3	+0.2
VNA3	Neumayer Olymp	66.91	161	eP	P	18 44 44.7	-2.0
VNA3				e		18 44 50.7	
NVAR	Mina Array Bea	67.91	324	P	P	18 44 55.3	+1.9
0.6nm,0.7s,mb3.8,baz=145,slow=5.7,SNR=6.3							
RRI2	Red Ridge	68.02	332	eP	P	18 44 54.4	+0.4
RLMT	Red Lodge	68.55	334	P	P	18 44 56.9	-0.4
SNAA	Sanae	69.13	161	P	P	18 45 00.7	+0.1
0.5nm,0.6s,mb3.6,baz=321,slow=7.3,SNR=9.7							
HLID	Hailey	69.62	330	eP	P	18 45 04.6	+0.6
3.1nm,1.1s,mb4.2							
MCMT	McKenzie Canyo	69.87	332	eP	P	18 45 06.9	+1.4
1.5nm,0.9s,mb3.9							
BOZ	Bozeman (W)	69.97	333	eP	P	18 45 06.4	+0.3
1.5nm,0.8s,mb4.0							
PPT	Papeete	71.20	257	eLR	LR	19 07 16.7	
90nm,23.8s							
LIC	Lamto	72.43	78	eP	P	18 45 20.8	-0.9
71nm,2.0s,mb5.2							
TIC	Toumodi	72.57	78	eP	P	18 45 23.7	+1.2
4.0nm,0.2s,mb5.0							
YBH	Yreka Blue Hor	72.63	324	P	P	18 45 21.6	-0.6
1.9nm,0.7s,mb4.1,baz=173,slow=17,SNR=4.0							
DBIC	Dimbokro	72.73	78	P	P	18 45 22.7	-0.8
3.3nm,0.5s,mb4.5,baz=210,slow=8.5,SNR=8.0							
DBIC	Dimbokro	72.73	78	P	P	18 45 22.7	-0.8
KIC

CMAR Chiang Mai Arr 36.23 62 P P 18 51 42.0 +0.3
0.6nm,1.0s,baz=248,slow=4.0,SNR=3.1
MKAR Makanchi Array 46.04 16 P P 18 53 01.8 -0.4
0.2nm,0.6s,baz=206,slow=7.6,SNR=2.7
BRTR Keskin Array B 46.59 326 P P 18 53 06.4 -0.1
0.6nm,0.7s,baz=130,slow=12,SNR=3.3
WRA Warramunga Arr 71.28 112 P P 18 55 58.5 -0.1
1.2nm,0.8s,baz=287,slow=5.7,SNR=9.6
ASAR Alice Springs 71.60 116 P P 18 56 00.6 +0.1
0.7nm,0.8s,baz=295,slow=5.4,SNR=9.0
TXAR Lajitas Array 146.23 343 PKPbc PKPbc 19 04 19.7 -0.2
0.6nm,0.7s,baz=20,slow=2.9,SNR=7.1

BJI ***26*** *18:46:09.5,2°.28N×64°.75E,h10km,mB5.7/51,mb5.0/51, Ms5.6/63,Ms7 5.4/61*
MOS ***26*** *18:46:16.8±1.0,3°.12N×65°.29E,h10km,mb5.5/100, MS5.1/64,Error ellipse: s-maj=6.7km s-min=3.5km az=118.8*
SZGRF ***26*** *18:46:16.5,2°.21N×65°.49E,h33km,mb5.7,MS4.9, Carlsberg Ridge*
ISCJB ***26*** *18:46:16.7±0.2,2°.97N±0°.03×65°.33E±0°.02,h10km, mb5.3/271,MS5.3/234,Error ellipse: s-maj=4.1km s-min=2.7km az=15.2*
IDC ***26*** *18:46:17.8±0.4,3°.12N×65°.49E,h0km,mb4.9/29, mb1 5.0/29,mb1mx5.0/30,mbtmp4.9/29,MS5.1/26, Ms1 5.1/26,ms1mx5.1/30,Error ellipse: s-maj=13.5km s-min=10.7km az=46.0*
NEIC ***26*** *18:46:18.6±0.2,3°.07N×65°.32E,h10km,mb5.5/137, MS5.3/172,MW5.6,MW5.6,Error ellipse: s-maj=6.1km s-min=4.4km az=194.0,Moment Tensor Solution. s104 Moment tensor: Scale 10^17^Nm; Mrr-1.67; Mθθ1.45; Mφφ0.22; Mrθ2.14; Mθφ-0.70; Mφr0.84; Best double couple: M0=2.90000×10^17^ NP1:φs=262.00000°,δ73.00000°, λ-110.00000°. NP2:φs=133.00000°,δ26.00000°, λ-42.00000°. Principal axes: T 2.5700, Plg25.0000°, Azm7.0000°; N 0.5400, Plg19.0000°, Azm267.0000°; P -3.1000, Plg57.0000°, Azm145.0000°;*
GCMT ***26*** *18:46:21.3±0.1,2°.99N×65°.41E,h12km,MW5.7,Moment Tensor Solution. s87,c149; s60,c70; Moment tensor: Scale 10^17^Nm; Mrr-3.54±.03; Mθθ3.24±.03; Mφφ0.31±.03; Mrθ0.80±.10; Mθφ-1.57±.03; Mφr0.10±.10; Best double couple: M0=3.80000×10^17^ NP1:φs=121.00000°,δ40.00000°, λ-79.00000°. NP2:φs=287.00000°,δ51.00000°, λ-99.00000°. Principal axes: T 3.9900, Plg5.0000°, Azm23.0000°; N -0.3300, Plg7.0000°, Azm292.0000°; P -3.6500, Plg81.0000°, Azm150.0000°; Data Used: II IU CN IC G. Surface waves: sta=116, comp=248, per= 50.*
DJA ***26*** *18:46:21,3°.00N×65°.48E,h17km,mb5.4/32*
TEH ***26*** *18:46:23.0,3°.12N×65°.46E,h33km*
ISC 26 18:46:18.7±0.1,2°.97N±0°.03×65°.35E±0°.02,h10km, (h17kmx1.9kmx:pP-P),n982,σ1§22/804,mb5.3/271, MS5.3/234,67C-93D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMDM	**Hanimaadhoo**	**8.67**	**64**	P	**Pn**	**18 48 20.3**	**-4.0**
MSEY	**Mahe Island**	**12.45**	**232**	*e*Pn	**Pn**	**18 49 17.0**	**+0.9**
	76nm,0.7s						
MSEY				*e*Sn	**Sn**	**18 51 28.7**	**-6.2**
MSEY	**Mahe Island**	**12.45**	**232**	*e*P	**Pn**	**18 49 17.0**	**+0.9**
MSEY				*e*		18 51 28.7	
MSEY				pmax	pmax		
	comp=Z,76nm,0.7s						
MSEY	**Mahe Island**	**12.45**	**232**	Pn	**Pn**	**18 49 17.9**	**+1.8**
	comp=Z,685nm,0.7s,SNR=8.2						
TRD	**Trivandrum**	**12.79**	**64**	*e*PKP	**Pn**	**18 49 19.6**	**-1.2**
MNGI	**Mangalore**	**13.64**	**43**	*i* x	x	18 50 01.6	
MNGI				*ex*	x	18 50 22.0	
	comp=Z,156nm,1.4s						
MNGI				*i* x	x	18 53 10.5	
PALK	**Pallekele**	**15.88**	**74⇑**	*e*Pn	**Pn**	**18 50 00.7**	**-1.8**
	comp=Z,62nm,1.2s						
PALK	**Pallekele**	**15.88**	**74⇑**	*e*P	**Pn**	**18 50 00.7**	**-1.8**
PALK				pmax	pmax		
	comp=Z,62nm,1.2s						
PALK	**Pallekele**	**15.88**	**74**	P	**Pn**	**18 50 02.3**	**-0.2**
	comp=Z,1μmcomp=Z,28nm,1.8s						
KAD	**Karad**	**16.68**	**31**	*e*PKP	**Pn**	**18 50 14.1**	**+1.3**
KAD				AMb	AMB	18 50 21.1	
	comp=Z,205nm,1.5s						
POO	**Poona**	**17.56**	**28**	*e*PKP	**Pn**	**18 50 23.5**	**-0.2**
POO				AMb	AMB	18 50 41.5	
	comp=Z,196nm,1.4s						
MDRS	**Chennai**	**17.82**	**55⇑**	*i*P	**Pn**	**18 50 36.9**	**+10**
MDRS				*e*S	**Sn**	**18 53 59.9**	**+14**
MDRS				*ex*	x	18 54 26.9	
RBK	**Rabkut**	**18.11**	**324**	P	**Pn**	**18 50 35.0**	**+4.3**
	SNR=12						
ABTO	**Aybut**	**18.55**	**321**	P	**Pn**	**18 50 41.1**	**+5.1**
	SNR=11						
LATR	**Latur**	**18.87**	**35**	*e*PKP	**Pn**	**18 50 38.2**	**-1.7**
HYB	**Hyderabad**	**19.34**	**41**	*i* P	**Pn**	**18 50 42.0**	**-3.5**
HYB				*e*S	**Sn**	**18 54 24.0**	**+1.4**
WBK	**Wadi Bani Khal**	**20.48**	**343**	⇑P	**P**	**18 50 59.4**	**+2.6**
	SNR=15						
JMDO	**Jabal Madar**	**20.52**	**341**	P	**P**	**18 51 00.4**	**+3.0**
	SNR=15						
BHJ	**Bhuj**	**20.59**	**11**	*e*PKP	**P**	**18 50 56.1**	**-1.9**
BHJ				AMb	AMB	18 51 06.7	
	comp=Z,195nm,1.5s						
AKL	**Akola**	**20.97**	**32**	⇓*i*P	**P**	**18 51 01.9**	**-0.3**
AKL				*e*PKP		18 51 02.7	
AKL				*i* x	x	18 56 37.2	
SMDO	**Samad**	**21.18**	**341**	P	**P**	**18 51 07.4**	**+3.0**
	SNR=18						
BSY	**Bisya**	**21.18**	**339**	P	**P**	**18 51 07.6**	**+3.1**
	SNR=54						
HOQ	**Hoqain**	**21.91**	**340**	P	**P**	**18 51 16.8**	**+4.5**
	SNR=32						
ARQ	**Araqi**	**21.97**	**338**	P	**P**	**18 51 15.8**	**+2.9**
	SNR=37						
ARQ				mb		18 51 24.0	
	SNR=35						
NGP	**Nagpur**	**22.46**	**35**	*ex*	**P**	**18 51 14.9**	**-3.3**
NGP				AMb	AMB	18 51 22.2	
	comp=Z,206nm,1.4s,mb5.4						
VIS	**Vishakhapatnam**	**22.93**	**49**	*e*PKP	**P**	**18 51 23.9**	**+0.6**
VIS				AMb	AMB	18 51 31.6	
	comp=Z,190nm,1.5s,mb5.3						
VIS				*i* x	x	18 55 37.7	
BHPL	**Bhopal**	**23.30**	**29**	*e*PKP	**P**	**18 51 25.8**	**-1.2**
BHPL				AMb	AMB	18 51 37.6	
	comp=Z,224nm,1.3s,mb5.5						
ASHO	**Ashiyiah**	**23.37**	**338**	P	**P**	**18 51 30.8**	**+3.0**
	SNR=14						
ASHO				mb		18 51 47.5	
	SNR=22						
HATD	**Hatta, Dubai**	**23.47**	**339**	P	**P**	**18 51 30.9**	**+2.0**
	SNR=20						
HATD				mb		18 51 44.8	
	SNR=25						
BANOM	**Banah**	**24.42**	**340**	⇑P	**P**	**18 51 37.9**	**+0.3**
	SNR=6.0						
BANOM				mb		18 51 49.9	
	SNR=9.1						
JBP	**Jabalpur**	**24.57**	**34**	*e*PKP	**P**	**18 51 38.6**	**-0.4**
JBP				*ex*	x	18 56 07.3	
RER	**Riviere de l'E**	**25.76**	**201**	PFAKE		18 52 00.0	+10
RER				LR	LR		
	comp=Z,9μm,20.0s,MS5.3						
AAE	**Adis Abeba**	**27.10**	**284**	*e*P	**P**	**18 52 06.3**	**+4.3**
AAE				*e*S	**S**	**18 56 43.4**	**+2.9**
NDI	**New Delhi**	**27.96**	**23**	*e*PKP	**P**	**18 52 10.0**	**+0.5**
ABPO	**Ambohimpanom**	**28.20**	**219**	PFAKE		18 52 20.0	+8.2
ABPO				LR	LR		
	comp=Z,12μm,20.0s,MS5.5						
ISRV	**Sarvestan**	**28.72**	**337**	*e*P	**P**	**18 52 18.1**	**+1.7**
CAL	**Calcutta**	**29.58**	**47**	*ex*	**P**	**18 52 29.6**	**+5.5**
CAL				*e*S	**S**	**18 57 19.7**	**+0.3**
DDI	**Dehra Dun**	**29.74**	**23**	*ex*	**P**	**18 52 27.0**	**+1.6**
IKOO	**Kooshah**	**29.90**	**349**	*e*P	**P**	**18 52 30.1**	**+3.4**
IBAF	**Bafgh**	**29.92**	**343**	*e*P	**P**	**18 52 28.8**	**+1.8**
IMEH	**Mehriz**	**30.02**	**341**	*e*P	**P**	**18 52 28.9**	**+1.0**
IDAH	**Dahanechah**	**30.05**	**351**	*e*P	**P**	**18 52 30.4**	**+2.3**
KOLN	**Koldanda**	**30.20**	**33**	*e*P	**P**	**18 52 29.7**	**+0.2**
	comp=Z,227nm,1.5s,mb5.7						
DANN	**Dangsing**	**30.74**	**33**	*e*P	**P**	**18 52 35.0**	**+0.7**
	comp=Z,76nm,1.1s,mb5.4						
ISAD	**Sadrabad**	**30.81**	**340**	*e*P	**P**	**18 52 38.0**	**+3.2**
RDF	**Al-Radifah**	**30.87**	**329**	*e*P	**P**	**18 52 36.7**	**+1.3**
DMN	**Daman**	**30.93**	**36**	*e*P	**P**	**18 52 37.0**	**+1.1**
	comp=Z,166nm,1.3s,mb5.7						
GKN	**Gorkha**	**30.96**	**35**	*e*P	**P**	**18 52 36.7**	**+0.5**
	comp=Z,138nm,1.1s,mb5.7						
KBD	**Kabd**	**31.00**	**329**	*e*P	**P**	**18 52 37.6**	**+1.1**
KBD				AMb	AMB	18 52 40.1	
	comp=Z,60nm,1.4s,mb5.2						
PKI	**Pulchoki**	**31.08**	**36**	*e*P	**P**	**18 52 38.1**	**+0.8**
	comp=Z,115nm,1.2s,mb5.6						
PKI	**Pulchoki**	**31.08**	**36**	*e*P	**P**	**18 52 38.1**	**+0.8**
PKI				pmax	pmax		
	comp=Z,115nm,1.2s,mb5.6						
KKN	**Kakani**	**31.17**	**36**	*e*P	**P**	**18 52 38.7**	**+0.7**
	comp=Z,112nm,1.3s,mb5.5						
KKN	**Kakani**	**31.17**	**36**	*e*P	**P**	**18 52 38.7**	**+0.7**
KKN				pmax	pmax		
	comp=Z,112nm,1.3s,mb5.5						
NAY	**Al-Naaiem**	**31.29**	**328**	*e*P	**P**	**18 52 40.1**	**+1.0**
NAY				AMb	AMB	18 52 42.4	
	comp=Z,34nm,1.9s,mb4.9						
NIL	**Nilore**	**31.40**	**13**	PFAKE		18 52 50.0	+10
NIL				LR	LR		
	comp=Z,222nm,21.0s,MS3.8						
KBL	**Kabul**	**31.60**	**6**	*e*P	**P**	**18 52 44.1**	**+2.4**
	comp=Z,74nm,1.6s,mb5.3						
KBL	**Kabul**	**31.60**	**6**	*e*P	**P**	**18 52 44.1**	**+2.4**
KBL				pmax	pmax		
	comp=Z,74nm,1.6s,mb5.3						
GUN	**Gumba**	**31.61**	**36**	*e*P	**P**	**18 52 43.1**	**+1.2**
	comp=Z,233nm,1.2s,mb5.9						
MIB	**Mutribah**	**31.68**	**329**	*e*P	**P**	**18 52 43.2**	**+0.7**
MIB				AMb	AMB	18 52 46.8	
	comp=Z,121nm,1.1s,mb5.6						
ODAN	**Odare**	**31.78**	**40**	*e*P	**P**	**18 52 44.6**	**+1.2**
	comp=Z,70nm,0.9s,mb5.5						
IZEF	**Zefreh**	**32.17**	**339**	*e*P	**P**	**18 52 48.2**	**+1.4**
TAPN	**Taplejung**	**32.33**	**39**	*e*P	**P**	**18 52 49.3**	**+1.1**
	comp=Z,44nm,1.0s,mb5.3						
IPIR	**Pirpir**	**32.52**	**337**	*e*P	**P**	**18 52 52.2**	**+2.3**
IKLH	**Kolahrood**	**32.83**	**338**	*e*P	**P**	**18 52 54.6**	**+2.1**
ISFB	**Sefidab**	**33.52**	**340**	*e*P	**P**	**18 53 00.2**	**+1.6**
PSI	**Prapat**	**33.53**	**89**	P	**P**	**18 53 00.2**	**+1.2**
	comp=Z,19nm,1.2s,mb4.9,baz=255,slow=5.8,SNR=5.9						
PSI				LR	LR	19 04 19.8	
	comp=Z,3μm,21.1s,MS5.0,baz=257,slow=32						
PSI	**Prapat**	**33.53**	**89**	P	**P**	**18 53 00.3**	**+1.3**
IMYA	**Miami**	**33.56**	**352**	*e*P	**P**	**18 52 59.9**	**+1.0**
ISRO	**Mashad**	**33.61**	**351**	*e*P	**P**	**18 53 01.5**	**+2.1**
IPAY	**Payeh**	**33.83**	**351**	*e*P	**P**	**18 53 03.2**	**+2.0**
SHL	**Shillong**	**33.99**	**46**	*e*PKP	**P**	**18 53 02.0**	**-0.9**
SISI	**Saibi**	**34.00**	**97**	P	**P**	**18 53 06.2**	**+3.1**
	comp=Z,96nm,1.3s,mb5.6						
IANJ	**Anjilo**	**34.03**	**343**	*e*P	**P**	**18 53 05.0**	**+2.0**
IKRD	**Kardeh**	**34.22**	**350**	*e*P	**P**	**18 53 05.7**	**+1.0**
ILAS	**Lasjerd**	**34.23**	**342**	*e*P	**P**	**18 53 06.5**	**+1.7**
ISHM	**Shahmirzad**	**34.52**	**343**	*e*P	**P**	**18 53 09.7**	**+2.4**
IDMV	**Damavand**	**34.71**	**341**	*e*P	**P**	**18 53 10.9**	**+2.0**
COCO	**West Island**	**34.73**	**116**	PFAKE		18 53 20.0	+11
COCO				LR	LR		
	comp=Z,1μm,20.0s,MS4.7						
IR3	**Iran Long-Peri**	**34.96**	**339**	*e*P	**P**	**18 53 13.7**	**+2.6**
IGLO	**Ghaloghah**	**35.02**	**344**	*e*P	**P**	**18 53 14.1**	**+2.5**
PPI	**Padang Panjang**	**35.20**	**95**	P	**P**	**18 53 16.0**	**+2.5**
	comp=Z,53nm,1.9s,mb5.2						
IKOM	**Komasi**	**35.22**	**334**	*e*P	**P**	**18 53 14.9**	**+1.6**
IPRN	**Peran**	**35.22**	**342**	*e*P	**P**	**18 53 16.0**	**+2.7**
KULM	**Kulim**	**35.28**	**85**	*e*P	**P**	**18 53 14.0**	**-0.2**
	comp=Z,167nm,2.1s,mb5.6						
KULM				LR	LR		
	comp=Z,2μm,21.0s,MS4.9						
PDSI	**Padang**	**35.31**	**96**	P	**P**	**18 53 16.6**	**+2.1**
	comp=Z,2μmcomp=Z,70nm,1.4s,mb5.4						
ABKT	**Ailbek**	**35.42**	**350**	P	**P**	**18 53 16.4**	**+1.4**
	comp=Z,151nm,1.3s,mb5.8,SNR=8.3						
IPM	**Ipoh**	**35.63**	**86**	*e*P	**P**	**18 53 17.3**	**+0.2**
	comp=Z,7.4nm,0.9s,mb4.6						
IGHG	**Ghaleghazi**	**35.77**	**333**	*e*P	**P**	**18 53 19.6**	**+1.5**
BKNI	**Bangkinang**	**35.77**	**94**	P	**P**	**18 53 18.7**	**+0.3**
ILIN	**Lien**	**36.09**	**334**	*e*P	**P**	**18 53 22.3**	**+1.5**
LSA	**Lhasa**	**36.13**	**40**	P	**P**	**18 53 23.0**	**+1.8**
LSA				pP	pP	18 53 32.8	+8.5
LSA				PP	PP	18 54 48.3	+4.8
LSA				S	**S**	**18 59 04.5**	**+3.5**
LSA				LR	LR		
	comp=N,4μm,18.3s,MS5.4						
LSA				LR	LR		
	comp=E,5μm,19.4s,MS5.4						
LSA				LR	LR		
	comp=Z,11μm,18.3s,MS5.7						
LSA	**Lhasa**	**36.13**	**40**	*e*P	**P**	**18 53 22.5**	**+1.2**
	comp=Z,44nm,1.0s,mb5.3						
LSA				*e*PcP	PcP	18 55 47.0	-0.1
LSA				LR	LR		
	comp=Z,10μm,19.0s,MS5.6						
LSA	**Lhasa**	**36.13**	**40**	*e*P	**P**	**18 53 22.5**	**+1.3**
LSA				*e*		18 55 47.0	
LSA				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
LSA				MLR	MLR		
	comp=Z,10μm,19.0s,MS5.6						
IDHR	**Dehrash**	**36.16**	**333**	*e*P	**P**	**18 53 22.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**36.31**	**62**	P	**P**	**18 53 23.4**	**+0.5**
	comp=Z,15nm,1.0s,mb4.9,baz=252,slow=9.9,SNR=52						
CMAR				PcP	PcP	18 55 48.6	+0.7
	comp=Z,3.0nm,0.9s,baz=243,slow=4.1,SNR=5.7						
CMAR				LR	LR	19 07 40.7	
	comp=Z,4μm,18.3s,MS5.2,baz=251,slow=36						
CMAR	**Chiang Mai Arr**	**36.31**	**62**	P	**P**	**18 53 23.5**	**+0.6**
CMAR						18 55 48.6	
CHG	**Chiang Mai**	**36.44**	**62**	⇓P	**P**	**18 53 25.0**	**+1.0**
	comp=Z,68nm,1.5s,mb5.4						
CHTO	**Chiang Mai**	**36.44**	**62**	*e*P	**P**	**18 53 24.8**	**+0.7**
	comp=Z,52nm,1.1s,mb5.4						
CHTO				LR	LR		
	comp=Z,5μm,20.0s,MS5.3						
CHTO	**Chiang Mai**	**36.44**	**62**	*e*P	**P**	**18 53 24.8**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.4						
CHTO				MLR	MLR		
	comp=Z,5μm,20.0s,MS5.3						
CHTO	**Chiang Mai**	**36.44**	**62**	P	**P**	**18 53 25.1**	**+1.1**
	comp=Z,2μmcomp=Z,76nm,2.3s,mb5.2						
CHTO	**Chiang Mai**	**36.44**	**62**	P	**P**	**18 53 25.4**	**+1.3**
	SNR=26						
NST	**Nakhon Sawan**	**36.49**	**68**	P	**P**	**18 53 25.5**	**+1.0**
CHRT	**Chiangrai**	**37.57**	**61**	⇑P	**P**	**18 53 33.5**	**-0.1**
	comp=Z,105nm,1.0s,mb5.5						
KSH	**Kashi**	**37.64**	**14**	P	**P**	**18 53 30.8**	**-3.1**
KSH				pP	pP	18 53 35.0	-2.0
KSH				*e*sP	sP	18 53 37.8	-0.4
KSH				PP	PP	18 54 57.0	-2.9
KSH				S	**S**	**18 59 15.5**	**-8.2**
KSH				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.0						
KSH				pmax	pmax		
	comp=Z,830nm,3.1s						
KSH				LR	LR		
	comp=N,9μm,15.3s,MS5.8						
KSH				LR	LR		
	comp=E,6μm,16.4s,MS5.8						
KSH				LR	LR		
	comp=Z,10μm,16.1s,MS5.7						
KSI	**Kapahiang**	**37.80**	**100**	P	**P**	**18 53 38.8**	**+3.1**
ISRB	**Sarab**	**38.29**	**337**	*e*P	**P**	**18 53 40.8**	**+1.4**
ITBZ	**Tabriz**	**39.24**	**336**	*e*P	**P**	**18 53 49.3**	**+1.9**
ASF	**Jabal al Asfar**	**39.47**	**321**	P	**P**	**18 53 51.8**	**+2.3**
	comp=Z,16nm,1.0s,mb4.7,baz=9.6,slow=5.6,SNR=11						
ASF				LR	LR	19 09 03.5	
	comp=Z,2μm,18.8s,MS4.9,baz=233,slow=35						
ASF	**Jabal al Asfar**	**39.47**	**321**	P	**P**	**18 53 51.8**	**+2.3**
MDSI	**Maura Dua**	**39.50**	**101**	P	**P**	**18 53 51.6**	**+1.6**
	comp=Z,1μmcomp=Z,79nm,1.4s,mb5.3						
ISHB	**Shabestar**	**39.51**	**335**	*e*P	**P**	**18 53 50.7**	**+1.1**
AML	**Almayashu**	**39.70**	**10**	PFAKE		18 54 00.0	+8.8
AML				LR	LR		
	comp=Z,4μm,20.0s,MS5.2						
HAKT	**HAKKARI**	**39.74**	**333**	⇓*i*P	**P**	**18 53 50.5**	**-1.1**
IMRD	**Marand**	**39.83**	**336**	*e*P	**P**	**18 53 54.2**	**+1.8**
UCH	**Uchtor**	**39.94**	**11**	P	**P**	**18 53 54.9**	**+1.7**
	SNR=7.9						
KLSI		**40.08**	**101**	P	**P**	**18 53 56.5**	**+1.7**
	comp=Z,3μmcomp=Z,142nm,1.2s,mb5.5						
KK31	**Karatay Array**	**40.22**	**6**	*i* P	**P**	**18 53 55.7**	**+0.2**
KK31				pmax	pmax		
	comp=Z,160nm,2.2s,mb5.4						
KKAR	**Karatay Array**	**40.22**	**6**	*e*P	**P**	**18 53 56.1**	**+0.6**
	comp=Z,23nm,1.3s,mb4.7						
KKAR				*e*PcP	PcP	18 55 59.7	+0.2
KKAR	**Karatay Array**	**40.22**	**6**	*e*P	**P**	**18 53 56.1**	**+0.6**
KKAR				*e*		18 55 59.7	
KKAR				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.8						
EKS2	**Erkin-Say**	**40.23**	**10**	P	**P**	**18 53 56.9**	**+1.3**
	SNR=17						
EKS2	**Erkin-Say**	**40.23**	**10**	*e*P	**P**	**18 53 56.5**	**+0.9**
	comp=Z,86nm,1.4s,mb5.3						
EKS2				LR	LR		
	comp=Z,4μm,20.0s,MS5.3						
AAK	**Ala-Archa**	**40.33**	**10**	P	**P**	**18 53 57.7**	**+1.3**
	SNR=9.7						
KBK	**Karagaybulak**	**40.43**	**11**	P	**P**	**18 53 59.2**	**+1.9**
	SNR=11						
FRU	**Bishkek**	**40.54**	**11**	*i* P	**P**	**18 53 59.0**	**+0.8**
FRU				pmax	pmax		
	comp=Z,160nm,2.0s,mb5.3						
TKM2	**Tokmak 2**	**40.81**	**12**	P	**P**	**18 54 01.2**	**+0.8**
	SNR=8.5						
TKM2	**Tokmak 2**	**40.81**	**12**	PFAKE		18 54 10.0	+10
TKM2				LR	LR		
	comp=Z,4μm,21.0s,MS5.2						
MARD	**Mardin**	**40.95**	**330**	⇓*i*P	**P**	**18 54 02.7**	**+1.0**
LSZ	**Lusaka**	**41.01**	**243**	⇑*i*P	**P**	**18 54 05.9**	**+3.5**
	comp=Z,48nm,1.1s,mb5.0						
LSZ				*e*PcP	PcP	18 56 04.2	+1.7
LSZ				LR	LR		
	comp=Z,4μm,22.0s,MS5.2						
LSZ	**Lusaka**	**41.01**	**243**	⇑*i*P	**P**	**18 54 05.9**	**+3.5**
LSZ				*e*		18 56 04.2	
LSZ				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.0						
LSZ				MLR	MLR		
	comp=Z,4μm,22.0s,MS5.2						
LSZ	**Lusaka**	**41.01**	**243**	P	**P**	**18 54 06.4**	**+4.0**
	SNR=9.0						
PPBI	**Pangkal Pinang**	**41.09**	**97**	P	**P**	**18 54 04.2**	**+1.0**
	comp=Z,1μmcomp=Z,35nm,2.2s,mb4.6						
GNI	**Garni**	**41.45**	**336**	P	**P**	**18 54 07.6**	**+1.9**
	comp=Z,80nm,1.0s,mb5.3,baz=266,slow=1.0,SNR=20						
GNI				LR	LR	19 11 22.7	
	comp=Z,3μm,21.3s,MS5.2,baz=141,slow=36						
GNI	**Garni**	**41.45**	**336**	⇓*i*P	**P**	**18 54 07.8**	**+2.2**
	comp=Z,648nm,1.8s,mb6.0						
GNI				*e*PP	PP	18 55 40.2	-1.3
GNI				LR	LR		
	comp=Z,3μm,21.0s,MS5.1						
GNI	**Garni**	**41.45**	**336**	*d*iP	**P**	**18 54 06.9**	**+1.2**
GNI				pmax	pmax		
	comp=Z,318nm,2.0s						
GNI	**Garni**	**41.45**	**336**	P	**P**	**18 54 08.6**	**+2.9**
	SNR=19						
BNGL	**BINGOL**	**42.05**	**332**	⇓*i*P	**P**	**18 54 12.2**	**+1.5**
KMI	**Kunming**	**42.18**	**55**	P	**P**	**18 54 12.8**	**+0.8**
KMI				pP	pP	18 54 21.5	+6.4
KMI				PP	PP	18 55 51.0	+1.3
KMI				S	**S**	**19 00 34.0**	**+1.7**
KMI				sS	sS	19 00 50.0	+13
KMI				SS	SS	19 03 39.3	-1.0
KMI				pmax	pmax		
	comp=Z,27nm,2.0s,mb4.5						
KMI				pmax	pmax		
	comp=Z,700nm,5.8s						
KMI				LR	LR		
	comp=N,2μm,17.0s,MS5.1						
KMI				LR	LR		
	comp=E,2μm,18.2s,MS5.1						
KMI				LR	LR		
	comp=Z,3μm,19.4s,MS5.1						
DGRG	**David-gareji**	**42.31**	**338**	P	**P**	**18 54 13.4**	**+0.7**
DBJI	**Dramaga**	**42.40**	**103**	P	**P**	**18 54 15.3**	**+1.4**
	comp=Z,2μmcomp=Z,83nm,1.2s,mb5.2						
YAYL	**Yayladag**	**42.57**	**324**	⇓*i*P	**P**	**18 54 17.2**	**+2.3**
HOMI	**Horasan**	**42.58**	**333**	⇓*i*P	**P**	**18 54 16.8**	**+1.9**
MTA	**Mtatsminda**	**42.74**	**337**	P	**P**	**18 54 17.1**	**+0.9**
TBLG	**Delisi**	**42.79**	**337**	*e*P	**P**	**18 54 18.0**	**+1.4**
TBLG	**Delisi**	**42.79**	**337**	P	**P**	**18 54 18.0**	**+1.4**
MAK	**Makhachkala**	**42.88**	**341**	*e*P	**P**	**18 54 19.9**	**+2.6**
MAK				*e*		18 56 01.8	
MAK				*e*PPP		18 56 29.4	
MAK				*e*S	**S**	**19 00 48.2**	**+6.3**
MAK				pmax	pmax		
	comp=Z,156nm,1.4s,mb5.5						
MAK				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.0						
MALT	**Malatya**	**42.92**	**328**	⇓*i*P	**P**	**18 54 19.7**	**+1.9**
	comp=Z,32nm,1.3s,mb4.9						
MALT				*e*PP	PP	18 56 01.7	+4.2
MALT				LR	LR		
	comp=Z,3μm,19.0s,MS5.2						
MALT	**Malatya**	**42.92**	**328**	⇓*i*P	**P**	**18 54 19.7**	**+1.9**
MALT				*e*		18 56 01.7	
MALT				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.9						
MALT				MLR	MLR		
	comp=Z,3μm,19.0s,MS5.2						
MALT	**Malatya**	**42.92**	**328**	P	**P**	**18 54 20.6**	**+2.8**
AKCD	**Akcadag**	**43.17**	**328**	⇓*i*P	**P**	**18 54 22.0**	**+2.2**
GOR	**Gori**	**43.26**	**337**	P	**P**	**18 54 23.4**	**+3.0**
DDEM	**Demirkent**	**43.33**	**334**	⇓*i*P	**P**	**18 54 22.5**	**+1.5**
YURE	**YUREGIR**	**43.39**	**325**	⇓*i*P	**P**	**18 54 24.2**	**+2.6**
DAGI	**Agillar**	**43.41**	**334**	⇓*i*P	**P**	**18 54 23.4**	**+1.7**
ARTV	**Artvin**	**43.49**	**334**	⇓*i*P	**P**	**18 54 23.0**	**+0.7**
ANDN	**Andirin**	**43.51**	**326**

comp=Z,630nm,7.2s
CD2 LR LR
comp=N,3μm,19.2s,MS5.4
CD2 LR LR
comp=E,3μm,21.6s,MS5.4
CD2 LR LR
comp=Z,4μm,20.4s,MS5.3
GYA Guiyang 45.95 55⇓*i*P P 18 54 41.5 -0.7
GYA PP PP 18 56 30.8 +0.8
GYA ScP ScP 19 00 12.0 -0.6
GYA S **S 19 01 25.5 -1.7**
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,160nm,5.0s
GYA LR LR
comp=N,980nm,16.6s,MS4.9
GYA LR LR
comp=E,720nm,17.5s,MS4.9
GYA LR LR
comp=Z,860nm,15.7s,MS4.8
MK31 Makanchi Array 46.07 16⇓*i*P P 18 54 41.6 -1.1
MK31 *e*PcP PcP 18 56 18.0 -1.0
MK31 *e*PP PP 18 56 26.3 -4.5
MK31 Makanchi Array 46.07 16 *i* P P 18 54 39.5 -3.3
MKAR Makanchi Array 46.07 16 P P 18 54 41.8 -1.0
comp=Z,3.3nm,0.8s,mb4.3,baz=205,slow=7.5,SNR=17
MKAR PcP PcP 18 56 19.0 -0.1
comp=Z,7.4nm,1.1s,baz=230,slow=5.5,SNR=5.8
MKAR LR LR 19 14 57.7
comp=Z,3μm,21.2s,MS5.2,baz=205,slow=38
MKAR Makanchi Array 46.07 16 P P 18 54 41.8 -1.0
MKAR 18 56 19.0
SMRI Semarang 46.09 103 P P 18 54 44.0 +0.5
comp=Z,3μmcomp=Z,174nm,1.1s,mb5.9
STKI Sintang 46.20 93 P P 18 54 45.1 +0.7
comp=Z,26nm,2.5s,mb4.7
QIZ Qiongzhong 46.32 66 P P 18 54 43.8 -1.4
QIZ pP pP 18 54 46.8 -1.6
QIZ sP sP 18 54 48.8 -0.8
QIZ S **S 19 01 30.8 -1.9**
QIZ pmax pmax
comp=Z,32nm,2.2s,mb4.9
QIZ pmax pmax
comp=Z,420nm,5.0s
QIZ LR LR
comp=N,1μm,23.1s,MS4.9
QIZ LR LR
comp=E,1μm,24.6s,MS4.9
QIZ LR LR
comp=Z,4μm,19.6s,MS5.4
QIZ Qiongzhong 46.32 66 PFAKE 18 55 00.0 +15
QIZ LR LR
comp=Z,4μm,20.0s,MS5.4
AB31 Akbulak array 46.34 355 *i* P **P 18 54 44.8 -0.1**
AB31 pmax pmax
comp=Z,56nm,1.2s,mb5.4
ABKAR Akbulak array 46.34 355 *e*P **P 18 54 44.4 -0.5**
comp=Z,15nm,0.8s,mb5.0
ABKAR *e*PP PP 18 56 35.1 +1.4
SOC Sochi 46.39 334*d i*P **P 18 54 45.3 -0.1**
SOC *e**PP pP 18 54 51.7 +3.2
SOC *e* 18 56 29.5
SOC *e*PPP 18 57 10.8
SOC *e*S **S 19 01 31.0 -2.0**
SOC *e**SS sS 19 01 41.1 +2.9
SOC *e*SS SS 19 04 50.2 -8.7
SOC *e*SSS 19 05 45.3
SOC pmax pmax
comp=Z,27nm,1.0s,mb5.1
SOC MLR MLR
comp=Z,3μm,15.0s,MS5.3
BRTR Keskin Array B 46.53 326 P P 18 54 47.7 +1.2
comp=Z,17nm,0.8s,mb5.0,baz=145,slow=7.9,SNR=50
BRTR LR LR 19 14 45.4
comp=Z,3μm,19.1s,MS5.2,baz=121,slow=37
BRTR Keskin Array B 46.53 326 P P 18 54 47.7 +1.2
SJI Sawahan 47.52 103 P P 18 54 54.1 -0.5
comp=Z,2μmcomp=Z,60nm,2.0s,mb5.3
LBTB Lobatse 47.55 232 LR LR 19 12 21.5
comp=Z,6μm,20.5s,MS5.6,baz=75,slow=33
LBTB Lobatse 47.55 232⇑*i*P P 18 54 57.3 +2.6
comp=Z,90nm,0.9s,mb5.8
LBTB LR LR
comp=Z,6μm,20.0s,MS5.6
LBTB Lobatse 47.55 232⇑*i*P P 18 54 57.3 +2.6
LBTB pmax pmax
comp=Z,90nm,0.9s,mb5.8
LBTB MLR MLR
comp=Z,6μm,20.0s,MS5.6
PWJI Pagerwojo 47.61 104 P P 18 54 54.4 -1.0
comp=Z,107nm,1.0s,mb5.8
AKTK Aktyubinsk 47.70 354 P P 18 54 55.4 -0.1
AKTO Aktyubinsk 47.70 354 P P 18 54 55.4 -0.1
comp=Z,16nm,0.6s,mb5.2,baz=164,slow=8.2,SNR=40
AKTO Aktyubinsk 47.70 354 *i* P **P 18 54 54.5 -0.9**
AKTO pmax pmax
comp=Z,12nm,1.4s,mb4.7
GTA Gaotai 47.90 36 ⇓P P 18 54 57.0 -0.2
GTA pP pP 18 55 01.3 +0.9
GTA sP sP 18 55 03.8 +2.2
GTA PcP PcP 18 56 27.0 +1.3
GTA PP PP 18 56 48.8 -0.4
GTA S **S 19 01 49.5 -5.1**
GTA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GTA pmax pmax
comp=Z,470nm,5.2s
GTA LR LR
comp=N,3μm,19.4s,MS5.5
GTA LR LR
comp=E,4μm,16.1s,MS5.5
GTA LR LR
comp=Z,6μm,23.2s
ANN Anapa 48.36 334 *e*P **P 18 54 59.7 -1.0**
ANN *e* 18 56 54.7
ANN *e*S **S 19 02 00.4 -0.6**
ANN pmax pmax
comp=Z,39nm,0.9s,mb5.4
ANN pmax pmax
comp=Z,254nm,5.8s
ANN MLR MLR
comp=N,893nm,18.0s,MS5.0
ANN MLR MLR
comp=E,1μm,18.0s,MS5.0
ANN MLR MLR
comp=Z,1μm,18.0s,MS5.0
LZH Lanzhou 48.45 42 *e*P **P 18 55 01.5 0.0**
LZH pP pP 18 55 04.5 -0.2
LZH sP sP 18 55 07.0 +1.1
LZH PcP PcP 18 56 28.8 +1.0
LZH PP PP 18 56 56.0 +1.7
LZH *e*S **S 19 02 00.5 -2.0**
LZH pmax pmax
comp=Z,25nm,1.1s,mb5.2
LZH pmax pmax
comp=Z,200nm,5.8s
LZH LR LR
comp=E,2μm,15.8s
LZH LR LR
comp=Z,4μm,17.8s,MS5.4
KURK Kurchatov 48.88 11⇓*i*P P 18 55 03.8 -0.8
comp=Z,49nm,1.3s,mb5.4
KURK LR LR
comp=Z,3μm,20.0s,MS5.3
KURK Kurchatov 48.88 11*d i*P **P 18 55 03.7 -0.8**
KURK pmax pmax
comp=Z,89nm,2.5s,mb5.3
KURK Kurchatov 48.88 11 P P 18 55 04.2 -0.3
comp=Z,143nm,1.3s,mb5.8,SNR=14
KURK Kurchatov 48.88 11 P P 18 55 04.5 -0.1
SNR=20
BOSA Boshof 49.67 228 P P 18 55 14.2 +3.2
comp=Z,66nm,0.9s,mb5.7,baz=60,slow=8.4,SNR=47
BOSA LR LR 19 14 38.4
comp=Z,5μm,18.0s,MS5.6,baz=66,slow=34
BOSA Boshof 49.67 228⇑*i*P P 18 55 13.6 +2.6
comp=Z,61nm,0.9s,mb5.6
BOSA LR LR
comp=Z,5μm,19.0s,MS5.5
BOSA Boshof 49.67 228⇑*i*P P 18 55 13.6 +2.6
BOSA pmax pmax
comp=Z,61nm,0.9s,mb5.6
BOSA MLR MLR
comp=Z,5μm,19.0s,MS5.5
ENH Enshi 49.77 52 *e*P **P 18 55 10.8 -1.0**
comp=Z,86nm,1.7s,mb5.5
ENH LR LR
comp=Z,3μm,19.0s,MS5.3
BBKI Banjar Baru 49.88 97 P P 18 55 13.8 +0.9
comp=Z,3μmcomp=Z,115nm,1.8s,mb5.6
ZRNK Zerenda 49.91 3 *i* P **P 18 55 11.1 -1.3**
ZRNK pmax pmax
comp=Z,507nm,3.8s
JAGI Jajag, Banyuwa 49.97 104 P P 18 55 12.4 -1.2
comp=Z,102nm,0.9s,mb5.8
SIM Simferopol' 50.01 331*c i*P **P 18 55 14.0 +0.7**
SIM *e* 18 57 13.0
SIM *e*S **S 19 02 28.0 +3.8**
SIM *e*SS SS 19 05 53.0 -4.3
SIM pmax pmax
comp=Z,170nm,1.8s,mb5.8
SIM pmax pmax
comp=Z,18nm,1.0s,mb5.1
SIM MLR MLR
comp=Z,890nm,19.4s,MS4.8
BVAR Borovoye Array 50.06 4 P P 18 55 13.2 -0.3
comp=Z,6.0nm,0.9s,mb4.6,baz=165,slow=7.5,SNR=18
BVAR Borovoye Array 50.06 4 P P 18 55 13.2 -0.3
BRVK Borovoye 50.09 4⇓*e*P P 18 55 13.2 -0.6
comp=Z,50nm,1.4s,mb5.4
BRVK *e*PP PP 18 57 05.2 -3.8
BRVK LR LR
comp=Z,4μm,20.0s,MS5.5
BRVK Borovoye 50.09 4 *i* P **P 18 55 11.6 -2.1**
BRVK pmax pmax
comp=Z,186nm,2.8s,mb5.6
BRVK Borovoye 50.09 4 P P 18 55 13.6 -0.1
comp=Z,102nm,1.5s,mb5.6,SNR=13
BRVK Borovoye 50.09 4 P P 18 55 13.8 0.0
SNR=18
KKM Kota Kinabalu 50.79 85 PFAKE 18 55 30.0 +10
KKM LR LR
comp=Z,1μm,19.0s,MS5.0
SRBI Singaraja 50.93 103 P P 18 55 20.7 -0.1
comp=Z,2μmcomp=Z,124nm,1.3s,mb5.7
XAN Xi'an 50.99 47 P P 18 55 20.0 -0.9
XAN PP PP 18 57 17.5 0.0
XAN S **S 19 02 34.3 -3.8**
XAN pmax pmax
comp=Z,12nm,1.1s,mb4.7
XAN pmax pmax
comp=Z,170nm,5.9s
XAN LR LR
comp=N,890nm,21.9s
XAN LR LR
comp=E,310nm,36.6s
XAN LR LR
comp=Z,540nm,28.2s
TSUM Tsumeb 51.86 243 *e*P **P 18 55 30.4 +2.7**
comp=Z,26nm,1.0s,mb5.1
TSUM LR LR
comp=Z,6μm,21.0s,MS5.6
VRHR Novokhopersk 51.94 341 *e*P **P 18 55 27.9 +0.2**
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VRHR pmax pmax
comp=E,8.0nm,0.4s
PAF Port-aux-Franc 52.28 176 PFAKE 18 55 40.0 +10
PAF LR LR
comp=Z,6μm,19.0s,MS5.7
TIRR Tirgusor 52.58 327 ⇓P P 18 55 32.7 +0.1
TIRR Tirgusor 52.58 327⇓*i*P P 18 55 32.7 +0.1
VORD Divnogorie 52.61 340 *e*P **P 18 55 31.8 -0.9**
VORD pmax pmax
comp=Z,20nm,1.3s,mb4.9
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.8s
CVD Cernavoda 52.70 327⇑*i*P P 18 55 26.4 -7.1
VSR Storozhevoye 52.86 340 *e*P **P 18 55 33.5 -1.1**
VSR pmax pmax
comp=Z,40nm,1.6s,mb5.1
VSR pmax pmax
comp=N,30nm,1.1s
VSR pmax pmax
comp=E,20nm,1.1s
CFR Carcaliu 53.20 328 ⇓P P 18 55 39.2 +2.0
CFR Carcaliu 53.20 328⇓*i*P P 18 55 39.2 +2.0
PLD Plovdiv 53.25 323 P P 18 55 38.2 +0.6
ZAA0 Zalesovo Array 53.27 14⇓*e*P P 18 55 36.0 -1.5
ZALV Zalesovo Beam 53.27 14 P P 18 55 36.3 -1.2
comp=E,28nm,1.1s,mb5.1,baz=212,slow=7.0,SNR=31
ZALV LR LR 19 17 57.5
comp=E,2μm,21.4s,MS5.2,baz=216,slow=36
ZALV Zalesovo Beam 53.27 14 P P 18 55 36.3 -1.2
MMB Musomiste 53.55 322 P P 18 55 38.7 -1.1
ARU Arti 53.58 355 *e*P **P 18 55 38.7 -1.0**
comp=E,97nm,1.5s,mb5.5
ARU LR LR
comp=Z,2μm,21.0s,MS5.1
ARU Arti 53.58 355*c i*P **P 18 55 38.3 -1.4**
ARU *e* 18 56 46.0
ARU *e* 18 57 35.7
ARU *e*PPP 18 58 43.3
ARU S **S 19 03 09.9 -3.0**
ARU SS SS 19 06 44.5 -8.9
ARU SSS 19 08 41.3
ARU pmax pmax
comp=Z,76nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,1μm,16.0s,MS5.1
ARU Arti 53.58 355 P P 18 55 39.9 +0.2
comp=Z,196nm,1.5s,mb5.8,SNR=11
NVS Novosibirsk 53.72 13⇓*i*P P 18 55 39.2 -1.6
NVS *e* 18 56 41.1
NVS *e*S **S 19 03 10.3 -4.5**
NVS pmax pmax
comp=N,33nm,1.4s
NVS pmax pmax
comp=Z,64nm,1.4s,mb5.4
NVS pmax pmax
comp=E,7.0nm,0.7s
NVS smax
comp=N,11nm,2.1s
NVS smax
comp=E,19nm,2.4s
WHN Wuhan 53.75 54⇑*i*P P 18 55 41.8 +0.3
WHN S **S 19 03 16.5 +0.3**
WHN pmax pmax
comp=Z,220nm,1.6s,mb5.8
WHN LR LR
comp=N,3μm,13.5s,MS5.7
WHN LR LR
comp=E,5μm,16.3s,MS5.7
WHN LR LR
comp=Z,6μm,18.3s,MS5.7
SVE Sverdlovsk 53.83 357⇓*e*P P 18 55 41.3 -0.3
SVE *e* 18 57 50.2
SVE *e*PPP 18 58 57.8
SVE *e*S **S 19 03 12.9 -3.4**
SVE *e* 19 05 27.9
SVE pmax pmax
comp=Z,65nm,1.4s,mb5.4
SVE MLR MLR
comp=Z,3μm,18.0s,MS5.5
KIS Kishinev 54.07 330 *e*P **P 18 55 40.0 -3.5**
KIS *e*S **S 19 03 20.0 +0.1**
KIS *e*SS SS 19 07 04.0 +2.5
KIS LRM 19 19 25.0
comp=Z,2μm,20.0s
KIS Kishinev 54.07 330 *e*P **P 18 55 40.0 -3.5**
KIS *e* 18 59 00.0
KIS *e*S **S 19 03 20.0 +0.1**
KIS *e*SS SS 19 07 04.0 +2.5
KIS MLR MLR
comp=Z,1μm,20.0s,MS5.0
KIS MLR MLR
comp=E,700nm,22.0s
KKB Krupnik 54.11 322 P P 18 55 42.9 -1.0
VRI Vrincioaia 54.41 328 ⇑P P 18 55 47.0 +1.0
VRI Vrincioaia 54.41 328⇑*i*P P 18 55 47.0 +1.0
PLOR Plostina 54.44 328 ⇓P P 18 55 47.8 +1.6
PLOR Plostina 54.44 328⇓*i*P P 18 55 47.8 +1.6
VTS Vitosha 54.44 322 ⇑P P 18 55 46.7 +0.4
VTS Vitosha 54.44 322⇑*i*P P 18 55 46.7 +0.4
VTS Vitosha 54.44 322 P P 18 55 47.4 +1.1
MPEP Malo Peshtene 54.56 324 P P 18 55 47.8 +0.6
MLR Muntele Rosu 54.59 327 ⇓P P 18 55 49.2 +1.9
MLR Muntele Rosu 54.59 327⇓*i*P P 18 55 49.2 +1.9
TESR 54.86 328⇑*i*P P 18 55 49.9 +0.6
SUR Sutherland 54.91 226⇑*e*P P 18 55 53.4 +3.5
comp=E,92nm,0.8s,mb5.9
SUR LR LR
comp=Z,9μm,19.0s,MS5.8
SUR Sutherland 54.91 226 P P 18 55 53.7 +3.8
comp=Z,658nm,0.9s,mb6.7,SNR=9.8
KAPI Kappang 54.93 98 P P 18 55 49.3 -1.0
comp=Z,22nm,0.8s,mb5.2,baz=283,slow=6.9,SNR=7.9
KAPI Kappang 54.93 98 *e*P **P 18 55 49.0 -1.4**
comp=Z,86nm,1.4s,mb5.6
KAPI Kappang 54.93 98 P P 18 55 49.2 -1.2
comp=Z,735nmcomp=Z,30nm,1.9s,mb5.0
KAPI Kappang 54.93 98 P P 18 55 49.5 -0.9
SNR=5.7
BTO Baotou 54.96 41 *e*P **P 18 55 49.3 -0.9**
VOIR 55.05 326 P P 18 55 51.7 +1.0
VOIR 55.05 326⇑*i*P P 18 55 51.0 +0.3
TIY Taiyuan 55.20 45 *e*P **P 18 55 50.5 -1.5**
TIY S **S 19 03 34.3 -1.2**
TIY pmax pmax
comp=Z,520nm,5.2s
TIY LR LR
comp=N,2μm,17.4s,MS5.2
TIY LR LR
comp=E,1μm,16.7s,MS5.2
TIY LR LR
comp=Z,1μm,15.1s,MS5.2
QZH Quanzhou 55.66 62⇑*i*P P 18 55 56.3 +0.8
QZH S **S 19 03 40.0 -2.0**
QZH LR LR
comp=Z,4μm,15.6s,MS5.6
HHC Hu-ho-hao-te 56.10 41 *e*P **P 18 55 57.0 -1.3**
HHC pP pP 18 56 01.5 0.0
HHC sP sP 18 56 04.0 +1.3
HHC PcP PcP 18 56 55.5 -0.9
HHC PP PP 18 58 03.8 +0.4
HHC ScP ScP 19 00 52.3 -3.6
HHC S **S 19 03 43.3 -4.0**
HHC ScS ScS 19 05 42.8 -5.1
HHC pmax pmax
comp=Z,29nm,1.2s,mb5.2
HHC pmax pmax
comp=Z,450nm,6.3s
HHC LR LR
comp=N,2μm,18.4s,MS5.5
HHC LR LR
comp=E,2μm,18.2s,MS5.5
HHC LR LR
comp=Z,4μm,18.6s,MS5.5
GZR Gura Zlata 56.30 325 ⇓P P 18 56 01.3 +1.6
GZR Gura Zlata 56.30 325⇓*i*P P 18 56 01.3 +1.6
BURAR Bucovina Array 56.32 328 ⇓P P 18 56 00.9 +1.1
BURAR Bucovina Array 56.32 328⇓*i*P P 18 56 00.9 +1.1
BUR08 Bucovina Ar. S 56.35 328 *e*P **P 18 56 00.5 +0.6**
AKASG Malin Array Be 56.45 333 P P 18 55 59.3 -1.3
comp=Z,9.0nm,0.9s,mb4.8,baz=126,slow=6.1,SNR=19
AKASG PcP PcP 18 56 57.4 -0.1
comp=Z,6.8nm,0.9s,baz=115,slow=3.0,SNR=10.0
AKASG PP PP 18 58 06.1 -0.2
comp=Z,0.5nm,0.3s,baz=114,slow=8.8,SNR=5.1
AKASG LR LR 19 21 54.3
comp=Z,2μm,20.9s,MS5.1,baz=115,slow=38
AKASG Malin Array Be 56.45 333 P P 18 55 59.3 -1.3
AKASG 18 56 57.4
AKASG 18 58 06.1
AKBB Malin Array Si 56.45 333 *e*P **P 18 56 00.2 -0.4**
AKBB Malin Array Si 56.45 333 *e*P **P 18 56 00.2 -0.4**
KIEV Kiev 56.45 333 *e*P **P 18 55 59.4 -1.3**
comp=Z,9.0nm,0.8s,mb4.8
KIEV LR LR
comp=Z,2μm,21.0s,MS5.1
KIEV Kiev 56.45 333 *e*P **P 18 55 59.4 -1.2**
KIEV pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KIEV MLR MLR
comp=Z,2μm,21.0s,MS5.1
MRSI Marisa 56.62 91 P P 18 56 01.1 -1.4
comp=Z,1μmcomp=Z,55nm,1.4s,mb5.4
SOKR Solikamsk 56.84 355*d i*P **P 18 56 02.9 -0.3**
SOKR S **S 19 03 56.7 +0.3**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.3
SOKR MLR MLR
comp=Z,2μm,18.0s,MS5.3
MOY Mondy 56.92 26 *e*P **P 18 56 04.4 +0.4**
MOY pmax pmax
comp=Z,97nm,2.6s,mb5.4
SONM Songino Array 56.94 32 P P 18 56 04.8 +0.6
comp=Z,9.6nm,1.0s,mb4.8,baz=230,slow=6.7,SNR=19
SONM LR LR 19 20 31.9
comp=Z,5μm,19.4s,MS5.6,baz=230,slow=36
SONM Songino Array 56.94 32 P P 18 56 04.8 +0.6
OBN Obninsk 56.97 341 *e*P **P 18 56 04.1 -0.1**
comp=Z,13nm,0.4s,mb5.3
OBN LR LR
comp=Z,1μm,19.0s,MS5.0
OBN Obninsk 56.97 341⇑*i*P P 18 56 03.8 -0.4
OBN *e* 18 57 01.3
OBN *e* 18 58 08.9
OBN *i* S **S 19 04 05.0 +6.6**
OBN *i* SS SS 19 07 49.7 +2.7
OBN pmax pmax
comp=Z,123nm,2.3s,mb5.5
OBN MLR MLR
comp=Z,1μm,18.0s,MS5.0
PIPA Pietrapaola 57.02 316 P P 18 56 07.1 +2.2
BZS Buzias 57.10 325 ⇑P P 18 56 06.4 +1.0
BZS Buzias 57.10 325⇑*i*P P 18 56 06.4 +1.0
MOS Moscow 57.15 342 *e*P **P 18 56 03.5 -2.0**
MOS *e*S **S 19 04 00.2 -0.5**
MOS pmax pmax
comp=Z,183nm,1.8s,mb5.8
WDD Wield Dalam 57.15 311 PFAKE 18 56 20.0 +14
WDD LR LR
comp=Z,640nm,20.0s,MS4.7
DRGR 57.16 326 P P 18 56 07.1 +1.3
DRGR 57.16 326⇓*i*P P 18 56 06.8 +1.0
BMR Baia Mare 57.27 328 P P 18 56 07.2 +0.7
ULN Ulaanbaatar 57.31 32 *e*P **P 18 56 06.6 -0.2**
comp=Z,64nm,1.8s,mb5.3
ULN LR LR
comp=Z,1μm,20.0s,MS5.0
ULN Ulaanbaatar 57.31 32 *e*P **P 18 56 06.6 -0.2**
ULN pmax pmax
comp=Z,64nm,1.8s,mb5.3
ULN MLR MLR
comp=Z,1μm,20.0s,MS5.0
ULN Ulaanbaatar 57.31 32 P P 18 56 07.4 +0.6
comp=Z,874nmcomp=Z,18nm,2.5s,mb4.7
ULN Ulaanbaatar 57.31 32 P P 18 56 07.6 +0.8
SNR=12
HVZN Vizzini 57.52 313 P P 18 56 10.0 +1.5
KDI Kendari 57.65 97 P P 18 56 10.1 +0.3
comp=Z,1μmcomp=Z,27nm,2.7s,mb4.8
NJ2 Nanjing 57.89 54 *e*P **P 18 56 10.8 -0.4**
NJ2 pP pP 18 56 15.3 +0.9
NJ2 sP sP 18 56 17.8 +2.2
NJ2 PP PP 18 58 20.3 +0.7
NJ2 S **S 19 04 11.0 -0.3**
NJ2 sS sS 19 04 20.0 +3.4
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.3
NJ2 pmax pmax
comp=Z,680nm,5.6s
NJ2 LR LR
comp=N,3μm,24.9s,MS5.5
NJ2 LR LR
comp=E,3μm,21.2s,MS5.5
NJ2 LR LR
comp=Z,3μm,38.2s
CUC Castrocucco 57.93 316 P P 18 56 12.2 +0.9
PTRP Pietrapertosa 58.00 317 P P 18 56 14.1 +2.3
YHNB Yeheng 58.06 63 PFAKE 18 56 20.0 +7.5
YHNB LR LR
comp=Z,3μm,19.0s,MS5.4
TRPA Tarpa 58.06 328⇑*i*P P 18 56 11.8 -0.3
TLY Talaya 58.11 27 PFAKE 18 56 20.0 +7.7
TLY LR LR
comp=Z,3μm,20.0s,MS5.4
ACER Acerenza 58.20 317 P P 18 56 14.4 +1.2
TATO Taipei 58.22 62 PFAKE 18 56 30.0 +16
TATO LR LR

comp=Z,2µm,19.0s,MS5.2
LVV L'vov 58.33 330 *e*P **P 18 56 12.1 -1.8**
LVV *e* 18 58 16.3
LVV MLR MLR
comp=Z,800nm,18.0s,MS4.9
LVV MLR MLR
comp=N,300nm,17.0s,MS4.7
LVV MLR MLR
comp=E,400nm,18.0s,MS4.7
MBWA Marble Bar 58.37 117 *e*P **P 18 56 15.3 +0.5**
comp=E,29nm,1.0s,mb5.3
MBWA LR LR
comp=Z,1µm,19.0s,MS5.0
MBWA Marble Bar 58.37 117 P **P 18 56 15.9 +1.1**
comp=Z,46nm,1.1s,mb5.4
UZH Uzhgorod 58.49 328 *e*P **P 18 56 16.0 +0.9**
UZH *e*S **S 19 04 16.0 -2.5**
KOLS Kolonicke sedl 58.68 328 *e*P **P 18 56 16.8 +0.4**
comp=Z,68nm,1.8s,mb5.4
KOLS Kolonicke sedl 58.68 328 *e*P **P 18 56 16.8 +0.4**
KOLS pmax pmax
comp=Z,68nm,1.8s,mb5.4
KOLS Kolonicke sedl 58.68 328 *e*P **P 18 56 16.8 +0.4**
IRK Irkutsk 58.78 27 *e*P **P 18 56 17.8 +0.8**
IRK pmax pmax
comp=Z,69nm,2.7s,mb5.2
BJT Baijiatuau 58.83 44 PFAKE 18 56 30.0 +12
BJT LR LR
comp=Z,3µm,21.0s,MS5.4
BJI Beijing 58.85 44 P **P 18 56 17.5 -0.2**
BJI S **S 19 04 22.0 -1.5**
BJI pmax pmax
comp=Z,650nm,5.2s
BJI LR LR
comp=N,2µm,18.4s,MS5.4
BJI LR LR
comp=E,1µm,17.9s,MS5.4
BJI LR LR
comp=Z,2µm,21.1s,MS5.3
KWP Kalwaria Pacla 58.88 329 *e*P **P 18 56 17.2 -0.5**
KWP LMZ 19 25 04.5
comp=Z,1µm,19.9s
KWP Kalwaria Pacla 58.88 329 PFAKE 18 56 30.0 +12
KWP LR LR
comp=Z,1µm,19.0s,MS5.1
KWP Kalwaria Pacla 58.88 329 *e*P **P 18 56 17.3 -0.5**
KWP MLR MLR
comp=Z,1µm,19.9s,MS5.0
MRB1 Monte Rocchett 59.01 317 P **P 18 56 19.9 +1.1**
CRVS Cervenica-Dubn 59.09 328 *e*P **P 18 56 19.3 0.0**
comp=Z,14nm,1.2s,mb4.9
CRVS Cervenica-Dubn 59.09 328 *e*P **P 18 56 19.3 0.0**
CRVS pmax pmax
comp=Z,14nm,1.2s,mb4.9
CRVS Cervenica-Dubn 59.09 328 *e*P **P 18 56 19.3 0.0**
PKSM Moragy 59.16 324 ⇓P **P 18 56 19.7 -0.1**
PKSM Moragy 59.16 324 ⇓*i*P **P 18 56 19.7 -0.1**
KECS Kecovo 59.38 327 *e*P **P 18 56 22.1 +0.9**
comp=Z,10nm,1.8s,mb4.6
KECS Kecovo 59.38 327 *e*P **P 18 56 22.1 +0.9**
KECS pmax pmax
comp=Z,10.0nm,1.8s,mb4.5
KECS Kecovo 59.38 327 *e*P **P 18 56 22.1 +0.9**
PSZ Piszkesteto 59.38 326 PFAKE 18 56 30.0 +8.7
PSZ LR LR
comp=Z,1µm,19.0s,MS5.0
PSZ Piszkesteto 59.38 326 ⇓*e*P **P 18 56 19.3 -2.0**
SSE Sheshan 59.50 55 P **P 18 56 20.0 -2.4**
SSE S **S 19 04 31.3 -1.0**
SSE pmax pmax
comp=Z,22nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,350nm,5.1s
SSE LR LR
comp=N,910nm,18.3s,MS5.2
SSE LR LR
comp=E,1µm,18.3s,MS5.2
SSE LR LR
comp=Z,2µm,17.5s,MS5.2
SGG Gregorio Mates 59.53 317 P **P 18 56 22.8 +0.4**
BUD Budapest 59.63 325 ⇓*e*P **P 18 56 22.0 -1.0**
MICGM Minsk 59.72 336 ⇓*e*P **P 18 56 21.0 -2.5**
MNK Minsk 59.74 336 ⇓*e*P **P 18 56 21.0 -2.6**
MNK pmax pmax
comp=Z,60nm,1.0s,mb5.6
MNK MLR MLR
comp=Z,5µm,20.0s,MS5.6
DAV Davao City (W) 60.10 84 ⇑*e*P **P 18 56 27.3 +0.4**
VVLD Villa Vallelon 60.25 318 P **P 18 56 27.8 +0.4**
VYHS Vyhne 60.29 326 *e*P **P 18 56 26.9 -0.6**
comp=Z,33nm,1.8s,mb5.1
VYHS Vyhne 60.29 326 *e*P **P 18 56 26.9 -0.6**
VYHS pmax pmax
comp=Z,33nm,1.8s,mb5.1
VYHS Vyhne 60.29 326 *e*P **P 18 56 26.8 -0.7**
KLBR Kellerberrin 60.46 129 *e*P **P 18 56 28.8 -0.2**
comp=Z,32nm,0.9s,mb5.3
PTQR Pietraquaria 60.46 318 P **P 18 56 29.9 +1.1**
NWAO Narrogin (SRO) 60.62 131 *e*P **P 18 56 30.0 -0.1**
comp=Z,38nm,0.9s,mb5.5
NWAO LR LR
comp=Z,1µm,19.0s,MS5.0
NWAO Narrogin (SRO) 60.62 131 *e*P **P 18 56 30.0 -0.1**
NWAO pmax pmax
comp=Z,38nm,0.9s
NWAO MLR MLR
comp=Z,1µm,19.0s
BOJS Bojanci 60.85 322 *i*P **P 18 56 31.5 +0.1**
KLMR Klimovskoe 60.99 346 *e*P **P 18 56 29.2 -2.8**
KLMR S **S 19 04 47.4 -2.9**
KLMR pmax pmax
comp=Z,203nm,4.5s
KLMR pmax pmax
comp=Z,127nm,1.4s,mb5.9
KLMR MLR MLR
comp=Z,3µm,17.0s,MS5.5
KEST Kesra 61.03 310 P **P 18 56 34.1 +1.3**
comp=Z,2.2nm,0.9s,mb4.3,baz=21,slow=7.2,SNR=6.6
KEST PcP PcP 18 57 18.0 +2.0
comp=Z,3.9nm,0.9s,baz=267,slow=6.7,SNR=5.8
KEST LR LR 19 23 47.4
comp=Z,416nm,18.0s,MS4.6,baz=29,slow=37
KEST Kesra 61.03 310 *e*P **P 18 56 34.6 +1.8**
KEST *e*PcP PcP 18 57 17.1 +1.1
TAM Tamanrasset 61.11 294 *e*P **P 18 56 35.3 +1.6**
comp=Z,38nm,1.4s,mb5.3
TAM LR LR
comp=Z,537nm,20.0s,MS4.7
TAM Tamanrasset 61.11 294 *e*P **P 18 56 35.3 +1.7**
TAM pmax pmax
comp=Z,38nm,1.4s,mb5.3
TAM MLR MLR
comp=Z,537nm,20.0s,MS4.7
SOP Sopron 61.15 325 ⇓*e*P **P 18 56 32.6 -0.8**
CESX Cesi 61.26 318 P **P 18 56 34.4 +0.1**
SNTG Esanatoglia 61.30 319 P **P 18 56 35.0 +0.5**
OKC Ostrava-Krasne 61.41 327 *e*P **P 18 56 34.4 -0.7**
OKC *e*S **S 19 04 54.3 -1.7**
OKC MLR MLR
comp=Z,900nm,15.8s,MS5.0
OKC Ostrava-Krasne 61.41 327 *e*P **P 18 56 34.4 -0.7**
OKC *e*S **S 19 04 54.3 -1.7**
OKC AMS AMS 19 23 40.0
comp=Z,900nm,15.8s
SUW Suwalki 61.42 333 *e*P **P 18 56 33.6 -1.4**
SUW LMZ 19 22 14.2
comp=Z,1µm,27.1s
SUW Suwalki 61.42 333 *e*P **P 18 56 33.6 -1.5**
PERS Pernice 61.48 323 *i*P **P 18 56 35.6 -0.1**
ARSA Arzberg 61.53 324 ⇑*i*P **P 18 56 36.3 +0.3**
comp=Z,18nm,1.5s,mb5.0
SOKA Soboth 61.55 323 ⇑*i*P **P 18 56 35.8 -0.3**
comp=Z,17nm,1.2s,mb5.0
CONA Conrad Observa 61.68 324 *i*P **P 18 56 36.3 -0.6**
comp=Z,36nm,1.6s,mb5.2,SNR=19
MORC Moravsky Berou 61.70 327 *e*P **P 18 56 35.6 -1.5**
comp=Z,151nm,2.3s,mb5.7
MORC *e*PP PP 18 58 49.3 -3.6
MORC Moravsky Berou 61.70 327 ⇑P **P 18 56 36.4 -0.7**
MORC Moravsky Berou 61.70 327 ⇑*i*P **P 18 56 36.4 -0.7**
JAVS Javornik 61.76 322 *i*P **P 18 56 38.2 +0.7**
TRI Trieste 61.86 321 PFAKE 18 56 50.0 +12
TRI LR LR
comp=Z,813nm,22.0s,MS4.8
VRAC Vranov 61.97 326 ⇓P **P 18 56 38.1 -0.8**

VRAC Vranov 61.97 326 ⇓*i*P **P 18 56 38.1 -0.8**
TNTI Ternate 62.02 91 P **P 18 56 39.0 -0.9**
comp=Z,3µmcomp=Z,168nm,1.8s,mb5.9
NLAI Namlea 62.03 95 P **P 18 56 40.2 +0.2**
comp=Z,1µmcomp=Z,75nm,1.0s,mb5.8
MOA Molln 62.57 324 ⇓*i*P **P 18 56 42.1 -0.9**
comp=Z,33nm,1.0s,mb5.4,SNR=19
TREC Trest 62.59 326 *e*P **P 18 56 42.4 -0.6**
TREC MLR MLR
comp=Z,1µm,19.6s,MS5.0
TREC Trest 62.59 326 *e*P **P 18 56 42.4 -0.6**
TREC AMS AMS 19 25 00.0
comp=Z,1µm,19.6s
DPC Dobruska-Polom 62.67 327 *e*P **P 18 56 42.9 -0.7**
DPC *e* 18 59 01.7
DPC *e*S **S 19 05 17.4 +5.4**
DPC MLR MLR
comp=Z,1µm,20.5s,MS5.0
DPC Dobruska-Polom 62.67 327 *e*P **P 18 56 42.9 -0.7**
DPC *e*PP PP 18 59 01.7 +0.2
DPC *e*S **S 19 05 17.4 +5.4**
DPC AMS AMS 19 24 10.0
comp=Z,1µm,20.5s
KBA Koelnbreinsper 62.76 323 ⇓*i*P **P 18 56 43.4 -0.8**
comp=Z,16nm,1.4s,mb5.0
UPC Upice 62.92 327 *e*P **P 18 56 44.5 -0.8**
UPC *e* 18 59 03.8
UPC Upice 62.92 327 *e*P **P 18 56 44.5 -0.8**
UPC *e*PP PP 18 59 03.8 +0.1
KSP Ksiaz 62.95 327 *e*P **P 18 56 44.5 -1.0**
KSP LMZ 19 23 09.3
comp=Z,3µm,24.5s
CIT Chita 63.14 31 *e*P **P 18 56 47.3 +0.6**
CIT *e* 18 57 21.3
CIT pmax pmax
comp=Z,227nm,2.4s,mb5.9
BDI Bagni Di Lucca 63.18 319 P **P 18 56 45.9 -1.2**
BDI Bagni Di Lucca 63.18 319 P **P 18 56 45.9 -1.2**
GEC2 GERESS Array S 63.38 325 *e*P **P 18 56 46.1 -2.2**
comp=Z,44nm,2.1s,mb5.2
GEC2 GERESS Array S 63.38 325 *e*P **P 18 56 46.1 -2.2**
GEC2 pmax pmax
comp=Z,44nm,2.1s,mb5.2
GERES GERESS Array B 63.38 325 P **P 18 56 48.2 -0.2**
comp=Z,1.2nm,0.8s,mb4.1,baz=120,slow=5.8,SNR=7.1
GERES PcP PcP 18 57 25.6 +0.3
comp=Z,1.4nm,0.8s,baz=142,slow=5.0,SNR=5.9
GERES GERESS Array B 63.38 325 P **P 18 56 48.2 -0.2**
GERES PcP PcP 18 57 25.6 +0.3
GERES GERESS Array B 63.38 325 P **P 18 56 48.2 -0.1**
GERES 18 57 25.6
RJOB Jochberg 63.39 323 *e*P **P 18 56 47.0 -1.4**
comp=Z,26nm,1.4s,mb5.2
RJOB *e*PP PP 18 59 09.8 +1.9
ERBM Eremo 63.45 319 P **P 18 56 48.4 -0.4**
PRU Pruhonice 63.47 326 *e*P **P 18 56 48.5 -0.4**
PRU *e* 18 59 07.8
PRU *e*S **S 19 05 21.1 -0.9**
PRU MLR MLR
comp=Z,800nm,19.9s,MS4.9
PRU Pruhonice 63.47 326 *e*P **P 18 56 48.5 -0.4**
PRU *e*PP PP 18 59 07.8 -0.7
PRU *e*S **S 19 05 21.1 -0.9**
PRU AMS AMS 19 23 00.0
comp=Z,800nm,19.9s
PRA Prague 63.57 326 P **P 18 56 49.0 -0.5**
PRA PP PP 18 59 09.0 -0.4
PRA S **S 19 05 23.0 -0.2**
PRA AMS AMS 19 23 30.0
KHC Kasperske Hory 63.59 325 *e*P **P 18 56 46.5 -3.2**
comp=Z,34nm,1.6s,mb5.1
KHC Kasperske Hory 63.59 325 *e*P **P 18 56 47.8 -1.9**
KHC *e*S **S 19 05 21.0 -2.6**
KHC MLR MLR
comp=Z,1µm,18.1s,MS5.0
KHC Kasperske Hory 63.59 325 *e*P **P 18 56 47.8 -1.9**
KHC *e*PP PP 18 59 02.6 -7.0
KHC *e*S **S 19 05 21.0 -2.6**
KHC AMS AMS 19 28 40.0
comp=Z,1µm,18.1s
PGF Pioggiola 63.66 317 *e*P **P 18 56 49.4 -0.9**
comp=Z,37nm,0.8s,mb5.1
PGF Pioggiola 63.66 317 *e*P **P 18 56 49.4 -0.9**
comp=Z,18nm,0.8s,mb5.2
PGF Pioggiola 63.66 317 *e*P **P 18 56 49.4 -0.9**
PGF pmax pmax
comp=Z,19nm,0.8s,mb5.2
TORD Torodi Ar. Bea 63.68 283 P **P 18 56 52.8 +1.8**
comp=Z,9.1nm,0.9s,mb4.8,baz=97,slow=6.6,SNR=10
PVCC Panska Ves 63.73 327 *e*P **P 18 56 49.8 -0.8**
PVCC *e*S **S 19 05 29.0 +3.8**
PVCC MLR MLR
comp=Z,1µm,21.2s,MS5.0
PVCC Panska Ves 63.73 327 *e*P **P 18 56 49.8 -0.8**
PVCC *e*S **S 19 05 29.0 +3.8**
PVCC AMS AMS 19 24 10.0
comp=Z,1µm,21.2s
BOB Bobbio (Coli) 64.22 319 P **P 18 56 54.1 +0.2**
BOB Bobbio (Coli) 64.22 319 P **P 18 56 54.1 +0.2**
BRG Berggiesshubel 64.24 327 *e*P **P 18 56 53.0 -0.9**
comp=Z,63nm,1.9s,mb5.3
BRG *e*PCP PcP 18 57 31.6 +2.8
comp=Z,5.2nm,1.0s
BRG *e*PP PP 18 59 10.9 -4.4
comp=Z,76nm,2.4s
BRG S **S 19 05 30.0 -1.6**
BRG SS SS 19 09 32.0 -9.1
BRG *e*PKPPKP 19 25 51.6
comp=Z,16nm,1.8s
BRG
comp=N,967nm,23.3s
BRG
comp=E,1µm,25.5s
BRG
comp=Z,1µm,23.2s
BRG Berggiesshubel 64.24 327 *e*P **P 18 56 53.0 -1.0**
BRG *e* 18 57 31.6
BRG *e* 18 59 10.9
BRG S **S 19 05 30.0 -1.6**
BRG SS SS 19 09 32.0 -9.1
BRG pmax pmax
comp=Z,38nm,1.9s,mb5.1
BRG MLR MLR
comp=N,579nm,23.3s,MS4.8
BRG MLR MLR
comp=E,653nm,25.5s,MS4.8
BRG MLR MLR
comp=Z,759nm,23.2s,MS4.8
FETA Feichten 64.33 322 ⇑*i*P **P 18 56 54.0 -0.6**
comp=Z,15nm,1.1s,mb4.9
FUR Furstenfeldbru 64.50 323 *e*P **P 18 56 54.4 -1.3**
comp=Z,99nm,1.6s,mb5.6
FUR *e*PP PP 18 59 19.8 +2.2
FUR Furstenfeldbru 64.50 323 *e*P **P 18 56 54.4 -1.3**
FUR *e* 18 59 19.8
FUR pmax pmax
comp=Z,99nm,1.6s,mb5.6
RETA Reutte 64.51 322 ⇑*i*P **P 18 56 53.6 -2.2**
comp=Z,13nm,1.2s,mb4.8
FBE Freiberg 64.59 326 *e*P **P 18 56 55.6 -0.6**
comp=Z,111nm,2.0s,mb5.5
ROTZ Rotzenmuhle 64.68 325 *e*P **P 18 56 55.7 -1.2**
comp=Z,68nm,2.3s,mb5.3
ROTZ *e*PP PP 18 59 20.7 +1.5
NKC Novy Kostel 64.76 326 *e*P **P 18 56 56.5 -0.9**
NKC *e*S **S 19 05 37.4 -0.6**
NKC MLR MLR
comp=Z,900nm,25.7s,MS4.8
NKC Novy Kostel 64.76 326 *e*P **P 18 56 56.5 -0.9**
NKC *e*S **S 19 05 37.4 -0.6**
NKC AMS AMS 19 24 00.0
comp=Z,900nm,25.7s
QLNO Quiliano 64.77 318 P **P 18 56 57.2 -0.4**
WERN Wernitzgruen 64.83 326 *e*P **P 18 56 57.3 -0.5**
comp=Z,161nm,2.0s,mb5.7
TANN Tannenbergstha 64.84 326 *e*P **P 18 56 56.9 -1.0**
comp=Z,152nm,2.7s,mb5.5
TANN *e*PP PP 18 59 22.0 +1.4
JOF Joensuu 64.88 344 *e*P **P 18 56 53.5 -4.4**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
JOF Joensuu 64.88 344 *e*p **P 18 56 53.5 -4.4**
comp=Z,3.3nm,0.5s,mb4.6
GUNZ Gunzen 64.89 326 *e*P **P 18 56 57.8 -0.4**
comp=Z,80nm,1.8s,mb5.5

GUNZ *e*PP PP 18 59 22.6 +1.6
WERD Werda 64.94 326 *e*P **P 18 56 57.7 -0.9**
comp=Z,244nm,3.1s
TUE Stuetta 64.96 321 P **P 18 56 58.3 -0.5**
DAVA Damuels 64.97 322 *i*P **P 18 56 58.4 -0.4**
comp=Z,28nm,0.9s,mb5.3,SNR=7.2
CLL Collm 64.97 327 *e*P **P 18 56 58.0 -0.7**
comp=Z,95nm,1.7s,mb5.5
CLL Collm 64.97 327 ⇑*i*P **P 18 56 58.7 0.0**
comp=Z,95nm,1.7s,mb5.5
CLL *e*S **S 19 05 41.0 +0.4**
CLL LR LR
comp=Z,900nm,20.6s,MS5.0
CLL Collm 64.97 327 ⇑*i*P **P 18 56 58.7 0.0**
CLL *e*S **S 19 05 41.0 +0.4**
CLL pmax pmax
comp=Z,95nm,1.7s,mb5.5
CLL MLR MLR
comp=Z,900nm,20.6s,MS5.0
CLL Collm 64.97 327 ⇑*i*P **P 18 56 58.7 0.0**
comp=Z,95nm,1.7s,mb5.5
CLL *e*(sP) sP 18 57 05.0 +1.8
CLL *e*PcP PcP 18 57 32.0 +0.3
CLL *e*PP PP 18 59 26.0 +4.3
CLL *e*PPP 19 01 10.0
CLL *e*S **S 19 05 41.0 +0.4**
CLL *e*PS 19 05 57.0
CLL *e*PPS 19 06 05.0
CLL *e*SS SS 19 09 57.0 +4.5
CLL *e*SSS 19 13 15.0
CLL *e*PKPPKPbc 19 25 52.0
CLL L 19 28 00.0
comp=Z,900nm,20.6s
RUE Ruedersdorf 65.14 328 *e*P **P 18 56 59.3 -0.5**
comp=Z,52nm,1.3s,mb5.4
SAOF Saorge 65.17 318 *e*P **P 18 57 00.0 -0.2**
SAOF Saorge 65.17 318 *e*P **P 18 57 00.0 -0.2**
HIA Hailar 65.18 36 *e*P **P 18 57 00.0 -0.1**
comp=Z,33nm,1.1s,mb5.3
HIA LR LR
comp=Z,6µm,19.0s,MS5.8
HIA Hailar 65.18 36 *e*P **P 18 57 00.0 -0.1**
HIA pmax pmax
comp=Z,33nm,1.1s
HIA MLR MLR
comp=Z,6µm,19.0s
GRA1 Grafenberg Arr 65.21 325 *e*P **P 18 56 59.1 -1.2**
comp=Z,46nm,1.2s,mb5.4
GRA1 *e*PP PP 18 59 24.4 +0.5
GRA1 LR LR
comp=Z,800nm,21.7s,MS4.9
GRF Grafenberg Arr 65.21 325 *e*P **P 18 56 59.1 -1.2**
comp=Z,46nm,1.2s,mb5.4
GRF *e*PP PP 18 59 24.4 +0.5
GRF *e*L 19 26 09.4
comp=Z,836nm,21.7s
GRF Grafenberg Arr 65.21 325 *e*P **P 18 56 59.1 -1.2**
GRF *e* 18 59 24.4
GRF pmax pmax
comp=Z,46nm,1.2s,mb5.4
GRF MLR MLR
comp=Z,800nm,21.7s,MS4.9
GRF Grafenberg Arr 65.21 325 *e*P **P 18 56 59.1 -1.2**
GRF *e* 18 59 24.4
GRF pmax pmax
comp=Z,46nm,1.2s,mb5.4
GRF MLR MLR
comp=Z,800nm,21.7s,MS4.9
AUTN L'Aution 65.26 318 *e*P **P 18 57 00.6 -0.2**
AUTN L'Aution 65.26 318 *e*P **P 18 57 00.6 -0.2**
FINES FINESS Array B 65.38 340 P **P 18 57 00.7 -0.4**
comp=Z,7.9nm,1.0s,mb4.7,baz=92,slow=5.7,SNR=7.7
FINES LR LR 19 28 01.8
comp=Z,1µm,21.3s,MS5.2,baz=122,slow=38
FINES FINESS Array B 65.38 340 P **P 18 57 00.7 -0.4**
KNA Kununurra 65.39 109 P **P 18 57 02.2 +0.1**
comp=Z,1µmcomp=Z,141nm,1.0s,mb6.0
TOUF Mont Tournerai 65.39 318 *e*P **P 18 57 01.6 0.0**
TOUF Mont Tournerai 65.39 318 *e*P **P 18 57 01.6 0.0**
MVIF Mont Vial 65.41 317 *e*P **P 18 57 01.9 +0.1**
MVIF Mont Vial 65.41 317 *e*P **P 18 57 01.9 +0.1**
MOX Moxa 65.43 326 *e*P **P 18 57 01.3 -0.4**
comp=Z,92nm,2.3s,mb5.4
MOX *e*S S 19 05 49.0 +2.8
MOX
comp=Z,600nm,21.0s
MOX Moxa 65.43 326 *e*P **P 18 57 01.0 -0.7**
comp=Z,45nm,1.7s,mb5.2
MOX *e*PP PP 18 59 27.7 +2.0
MOX Moxa 65.43 326 *e*P **P 18 57 01.3 -0.4**
MOX *e*S S 19 05 49.0 +2.8
MOX pmax pmax
comp=Z,92nm,2.3s,mb5.4
MOX MLR MLR
comp=Z,600nm,21.0s,MS4.8
CALN Calern 65.54 317 *e*P **P 18 57 01.9 -0.7**
CALN Calern 65.54 317 *e*P **P 18 57 01.9 -0.7**
NEUB Neuenburg 65.60 326 *e*P **P 18 57 02.4 -0.4**
comp=Z,84nm,1.5s,mb5.5
INCN Inchon 65.61 50 PFAKE 18 57 10.0 +6.8
INCN LR LR
comp=Z,3µm,22.0s,MS5.4
FRF La Foret Royal 65.64 317 *e*P **P 18 57 02.4 -0.8**
comp=Z,66nm,1.0s,mb5.3
FRF La Foret Royal 65.64 317 *e*P **P 18 57 02.4 -0.8**
comp=Z,33nm,1.0s,mb5.3
FRF La Foret Royal 65.64 317 *e*P **P 18 57 02.4 -0.8**
FRF pmax pmax
comp=Z,33nm,1.0s,mb5.3
LMR La Mourre 65.65 317 *e*P **P 18 57 02.5 -0.8**
LMR La Mourre 65.65 317 *e*P **P 18 57 02.5 -0.8**
KAF Kangasniemi 65.78 341 *e*P **P 18 57 01.7 -2.1**
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KAF Kangasniemi 65.78 341 *e*p **P 18 57 01.7 -2.1**
comp=Z,7.0nm,0.8s,mb4.7
RSP Reno Superiore 65.79 319 P **P 18 57 03.3 -0.9**
RSP Reno Superiore 65.79 319 P **P 18 57 03.3 -0.9**
SURF Saint Ours 65.85 318 *e*P **P 18 57 05.3 +0.7**
MBDF Montbardon 65.97 318 *e*P **P 18 57 04.9 -0.4**
comp=Z,27nm,0.8s,mb5.0
MBDF Montbardon 65.97 318 *e*P **P 18 57 04.9 -0.4**
comp=Z,14nm,0.8s,mb5.0
MBDF Montbardon 65.97 318 *e*P **P 18 57 04.9 -0.4**
MBDF pmax pmax
comp=Z,14nm,0.8s,mb5.0
SPAK Spaichingen-Ko 65.98 322 *e*P **P 18 57 04.4 -0.9**
SWI Sorong 66.00 92 P **P 18 57 05.4 -0.7**
comp=Z,812nmcomp=Z,37nm,2.2s,mb5.0
LPG La Plagne 66.26 319 *e*P **P 18 57 05.8 -1.4**
comp=Z,64nm,1.1s,mb5.3
LPG La Plagne 66.26 319 *e*P **P 18 57 05.8 -1.4**
comp=Z,32nm,1.1s,mb5.3
LPG La Plagne 66.26 319 *e*P **P 18 57 05.8 -1.4**
LPG pmax pmax
comp=Z,32nm,1.1s,mb5.3
LPL La Plagne 66.28 319 *e*P **P 18 57 05.8 -1.5**
comp=Z,171nm,1.5s,mb5.5
LPL La Plagne 66.28 319 *e*P **P 18 57 05.8 -1.5**
comp=Z,86nm,1.5s,mb5.6
LPL La Plagne 66.28 319 *e*P **P 18 57 05.8 -1.5**
LPL pmax pmax
comp=Z,86nm,1.5s,mb5.6
BFO Black Forest 66.35 322 *e*P **P 18 57 06.9 -0.8**
comp=Z,111nm,1.6s,mb5.6
BFO Black Forest 66.35 322 *e*P **P 18 57 06.9 -0.8**
BFO pmax pmax
comp=Z,111nm,1.6s,mb5.6
BFO Black Forest 66.35 322 P **P 18 57 07.3 -0.4**
comp=Z,114nm,1.3s,mb5.7,SNR=8.4
FELD Feldberg im Sc 66.37 322 *e*P **P 18 57 06.8 -1.0**
RSL Roselend 66.41 319 *e*P **P 18 57 07.3 -0.8**
RSL Roselend 66.41 319 *e*P **P 18 57 07.3 -0.8**
UBBA Unterbreizbach 66.42 325 *e*P **P 18 57 07.5 -0.6**
comp=Z,79nm,1.8s,mb5.4
UBBA *e*PP PP 18 59 35.8 +1.4
SMRF Simiane la Rot 66.51 317 *e*P **P 18 57 08.3 -0.5**
comp=Z,26nm,0.9s,mb4.9
SMRF Simiane la Rot 66.51 317 *e*P **P 18 57 08.3 -0.5**
comp=Z,26nm,0.9s,mb5.3
BBS Basel-Blauen 66.51 321 *e*P **P 18 57 07.9 -0.9**
BBS Basel-Blauen 66.51 321 *e*P **P 18 57 07.9 -0.9**
TOD Tromm 66.59 324 *e*P **P 18 57 07.6 -1.6**
TOD Tromm 66.59 324 *e*P **P 18 57 07.6 -1.6**
KSRS Korea Array 66.59 50 P **P 18 57 08.7 -0.8**

comp=Z,3.5nm,0.8s,mb4.4,baz=256,slow=7.9,SNR=7.7
KSRS LR LR 19 27 07.0
comp=Z,2μm,21.4s,MS5.4,baz=256,slow=37
ORIF Oris-en-Rattie 66.63 318 *e*P **P 18 57 08.6 -0.9**
comp=Z,32nm,1.0s,mb5.0
ORIF *e*MLR MLR
comp=Z,671nm,21.0s,MS4.5
ORIF Oris-en-Rattie 66.63 318 *e*P **P 18 57 08.6 -0.9**
comp=Z,16nm,1.0s,mb5.0
ORIF Oris-en-Rattie 66.63 318 *e*P **P 18 57 08.6 -0.9**
ORIF pmax pmax
comp=Z,16nm,1.0s,mb5.0
BOD Bodaibo 66.64 26 *e*P **P 18 57 06.1 -3.2**
BOD pmax pmax
comp=Z,18nm,1.8s,mb4.8
CLZ Clausthal 66.67 326 *e*P **P 18 57 09.4 -0.3**
comp=Z,141nm,2.0s,mb5.7
CLZ *e*PP PP 18 59 35.8 -0.8
CLZ Clausthal 66.67 326 *e*P **P 18 57 09.4 -0.3**
CLZ *e* 18 59 35.8
CLZ pmax pmax
comp=Z,141nm,2.0s,mb5.7
CN2 Changchun 66.67 43 *e*P **P 18 57 09.5 -0.4**
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,20.0s,MS5.3
CN2 LR LR
comp=E,1μm,20.0s,MS5.3
CN2 LR LR
comp=Z,2μm,21.0s,MS5.3
LIBD Limburg 66.72 322 *e*P **P 18 57 09.4 -0.7**
LIBD Limburg 66.72 322 *e*P **P 18 57 09.4 -0.7**
LOMF Lomont 66.90 321 *e*P **P 18 57 10.7 -0.5**
LOMF Lomont 66.90 321 *e*P **P 18 57 10.7 -0.5**
MOF Molkenrain 66.90 322 *e*P **P 18 57 10.5 -0.7**
MOF Molkenrain 66.90 322 *e*P **P 18 57 10.5 -0.7**
LANF Langenberg 66.93 323 *e*P **P 18 57 10.5 -0.9**
LANF Langenberg 66.93 323 *e*P **P 18 57 10.5 -0.9**
ECH Echery 67.02 322 *e*P **P 18 57 11.1 -0.9**
ECH Echery 67.02 322 *e*P **P 18 57 09.9 -2.0**
comp=Z,19nm,1.1s,mb5.0
ECH *e*PP PP 18 59 40.6 +0.9
ECH LR LR
comp=Z,580nm,21.0s,MS4.8
ECH Echery 67.02 322 *e*P **P 18 57 10.0 -2.0**
ECH *e* 18 59 40.6
ECH pmax pmax
comp=Z,19nm,1.1s,mb5.0
ECH MLR MLR
comp=Z,580nm,21.0s,MS4.8
CDF Champ du Feu 67.03 322 *e*P **P 18 57 10.7 -1.3**
CDF Champ du Feu 67.03 322 *e*P **P 18 57 10.7 -1.3**
HINF Hinteralfeld 67.06 321 *e*P **P 18 57 10.6 -1.6**
HINF Hinteralfeld 67.06 321 *e*P **P 18 57 10.6 -1.6**
TNS Taunus Mts 67.06 324 *e*P **P 18 57 11.6 -0.6**
comp=Z,202nm,1.9s,mb5.8
TNS *e*PP PP 18 59 41.2 +1.2
TNS Taunus Mts 67.06 324 *e*P **P 18 57 11.6 -0.6**
TNS *e* 18 59 41.2
CABF La Chapelle 67.09 320 *e*P **P 18 57 11.8 -0.7**
comp=Z,114nm,0.9s,mb5.6
CABF La Chapelle 67.09 320 *e*P **P 18 57 11.8 -0.7**
comp=Z,57nm,0.9s,mb5.6
CABF La Chapelle 67.09 320 *e*P **P 18 57 11.8 -0.7**
CABF pmax pmax
comp=Z,57nm,0.9s,mb5.6
NRDL Niedersach Rie 67.11 327 *e*P **P 18 57 12.1 -0.4**
comp=Z,154nm,2.0s,mb5.7
VIVF Saint-Julien-l 67.41 318 *e*P **P 18 57 13.3 -1.2**
comp=Z,8.8nm,0.7s,mb4.6
VIVF Saint-Julien-l 67.41 318 *e*P **P 18 57 13.3 -1.2**
comp=Z,4.4nm,0.7s,mb4.6
VIVF Saint-Julien-l 67.41 318 *e*P **P 18 57 13.3 -1.2**
VIVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
HAU Haudompre 67.44 321 *e*P **P 18 57 12.6 -2.1**
HAU *e*MLR MLR
comp=Z,692nm,22.0s,MS4.5
HAU Haudompre 67.44 321 *e*P **P 18 57 12.6 -2.1**
HAU LR LR
comp=Z,690nm,22.0s,MS4.8
HAU Haudompre 67.44 321 *e*P **P 18 57 12.6 -2.1**
HAU MLR MLR
comp=Z,690nm,22.0s,MS4.8
RUP Ruppelstein 67.67 323 *e*P **P 18 57 14.8 -1.2**
RUP Ruppelstein 67.67 323 *e*P **P 18 57 14.8 -1.2**
LASF Ste Croix 67.71 317 *e*P **P 18 57 15.9 -0.6**
comp=Z,120nm,1.2s,mb5.5
THEF They Montfort 67.75 322 *e*P **P 18 57 15.2 -1.4**
THEF They Montfort 67.75 322 *e*P **P 18 57 15.2 -1.4**
EJON La Jonquera 67.89 315 P **P 18 57 15.5 -2.1**
comp=Z,243nm,1.8s,mb5.9
CFON Fontmartina 68.01 314 P **P 18 57 19.4 +1.0**
comp=Z,174nm,2.3s,mb5.7
APA Apatity 68.11 347⇑ *i*P **P 18 57 18.6 +0.1**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,2μm,17.0s,MS5.4
FILF Fillols 68.15 315 *e*P **P 18 57 19.7 +0.4**
WLF Walferdange 68.19 323 P **P 18 57 19.2 -0.1**
WLF Walferdange 68.19 323 *e*P **P 18 57 18.8 -0.6**
comp=Z,47nm,1.5s,mb5.3
WLF *e*PP PP 18 59 48.0 -1.8
WLF Walferdange 68.19 323 *e*P **P 18 57 17.8 -1.6**
comp=Z,11nm,0.8s,mb5.0
WLF LR LR
comp=Z,671nm,20.0s,MS4.9
WLF Walferdange 68.19 323 *e*P **P 18 57 17.8 -1.6**
WLF pmax pmax
comp=Z,11nm,0.8s,mb4.9
WLF MLR MLR
comp=Z,671nm,20.0s,MS4.9
BUG Bochum--Univer 68.24 325 *e*P **P 18 57 19.2 -0.4**
comp=Z,39nm,1.5s,mb5.2
LRDF Laroque-de-Fa 68.28 315 *e*P **P 18 57 19.3 -0.7**
COLF Collangettes 68.28 318 *e*P **P 18 57 19.4 -0.6**
IBBN Ibbenburen 68.33 326 *e*P **P 18 57 19.9 -0.2**
comp=Z,140nm,2.3s,mb5.6
SFTF Sexfontaines 68.33 321 *e*P **P 18 57 18.9 -1.4**
comp=Z,102nm,1.2s,mb5.4
SFTF Sexfontaines 68.33 321 *e*P **P 18 57 18.9 -1.4**
comp=Z,102nm,1.2s,mb5.7
KAKA Kakadu 68.40 105 *e*P **P 18 57 20.1 -1.2**
comp=Z,49nm,1.0s,mb5.5
KAKA Kakadu 68.40 105 *e*P **P 18 57 20.5 -0.8**
comp=Z,143nm,1.0s,mb6.0
KAKA Kakadu 68.40 105 P **P 18 57 21.4 +0.1**
comp=Z,480nmcomp=Z,56nm,1.1s,mb5.5
MEZF Maizieres J'vi 68.43 322 *e*P **P 18 57 19.6 -1.3**
PLDF La Plantade 68.48 319 *e*P **P 18 57 20.5 -0.7**
PLDF La Plantade 68.48 319 *e*P **P 18 57 20.5 -0.7**
LBL Lubilhac 68.49 318 *e*P **P 18 57 21.1 -0.2**
LBL Lubilhac 68.49 318 *e*P **P 18 57 21.1 -0.2**
VALF Valcebollere 68.49 315 *e*P **P 18 57 21.9 +0.5**
CLLI Llivia 68.55 315 P **P 18 57 23.1 +1.4**
SMF Signal de Mont 68.56 319 *e*P **P 18 57 20.0 -1.7**
comp=Z,42nm,1.0s,mb5.0
SMF Signal de Mont 68.56 319 *e*P **P 18 57 20.0 -1.7**
comp=Z,21nm,1.0s,mb5.0
SMF Signal de Mont 68.56 319 *e*P **P 18 57 20.0 -1.7**
SMF pmax pmax
comp=Z,21nm,1.0s,mb5.0
MTLF Montolieu 68.62 316 *e*P **P 18 57 21.5 -0.7**
comp=Z,82nm,1.4s,mb5.2
MTLF Montolieu 68.62 316 *e*P **P 18 57 21.5 -0.7**
comp=Z,41nm,1.4s,mb5.2
MTLF Montolieu 68.62 316 *e*P **P 18 57 21.5 -0.7**
MTLF pmax pmax
comp=Z,41nm,1.4s,mb5.2
MEM Membach 68.64 324 P **P 18 57 22.2 +0.1**
EMIR Miracle 68.71 314 P **P 18 57 23.3 +0.5**
comp=Z,169nm,2.3s,mb5.6
WTSB Winterswijk 68.72 326 *e*P **P 18 57 22.1 -0.6**
comp=Z,58nm,2.1s,mb5.2
HGN Heimansgroeve 68.75 324 *e*P **P 18 57 21.8 -1.0**
comp=Z,42nm,2.1s,mb5.0
HGN Heimansgroeve 68.75 324 *e*S S 19 06 25.0 -1.2
LOR Lormes 68.75 320 *e*P **P 18 57 21.5 -1.4**
comp=Z,74nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,689nm,20.2s,MS4.6
LOR Lormes 68.75 320 *e*P **P 18 57 21.5 -1.4**
comp=Z,37nm,1.3s,mb5.2
LOR LR LR
comp=Z,690nm,20.3s,MS4.9
LOR Lormes 68.75 320 *e*P **P 18 57 21.5 -1.4**
LOR pmax pmax
comp=Z,37nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,690nm,20.3s,MS4.9
PYM Petit Puy Mans 68.81 318 *e*P **P 18 57 20.9 -2.4**
PYM Petit Puy Mans 68.81 318 *e*P **P 18 57 20.9 -2.4**
AGO Saint Agoulin 68.83 319 *e*P **P 18 57 22.3 -1.1**
BEBN Eben Emael 68.91 324 P **P 18 57 23.0 -0.8**
SSF Saint Saulge 68.91 320 *e*P **P 18 57 22.4 -1.5**
comp=Z,28nm,0.7s,mb5.0
SSF Saint Saulge 68.91 320 *e*P **P 18 57 22.4 -1.5**
comp=Z,14nm,0.7s,mb5.0
SSF Saint Saulge 68.91 320 *e*P **P 18 57 22.4 -1.5**
SSF pmax pmax
comp=Z,14nm,0.7s,mb5.0
AVF Avril sur Loir 68.92 319 *e*P **P 18 57 22.1 -1.9**
AVF Avril sur Loir 68.92 319 *e*P **P 18 57 22.1 -1.9**
BCLA Clavier 68.99 324 P **P 18 57 23.9 -0.4**
comp=Z,21nm,1.8s,mb4.8
CSOR Sort 69.11 314 P **P 18 57 24.4 -0.9**
comp=Z,371nm,2.3s,mb5.9
GIVF Givet 69.16 323 *e*P **P 18 57 24.3 -1.1**
comp=Z,30nm,0.9s,mb4.9
GIVF Givet 69.16 323 *e*P **P 18 57 24.3 -1.1**
comp=Z,15nm,0.9s,mb4.9
GIVF Givet 69.16 323 *e*P **P 18 57 24.3 -1.1**
GIVF pmax pmax
comp=Z,15nm,0.9s,mb4.9
BGF Bois d'Agland 69.18 319 *e*P **P 18 57 24.5 -1.1**
comp=Z,127nm,1.2s,mb5.4
BGF Bois d'Agland 69.18 319 *e*P **P 18 57 24.5 -1.1**
comp=Z,64nm,1.2s,mb5.4
BGF Bois d'Agland 69.18 319 *e*P **P 18 57 24.5 -1.1**
BGF pmax pmax
comp=Z,63nm,1.2s,mb5.4
CAF Calviac 69.19 317 *e*P **P 18 57 24.9 -0.8**
comp=Z,68nm,1.3s,mb5.1
CAF Calviac 69.19 317 *e*P **P 18 57 24.9 -0.8**
comp=Z,34nm,1.3s,mb5.1
CAF Calviac 69.19 317 *e*P **P 18 57 24.9 -0.8**
CAF pmax pmax
comp=Z,34nm,1.3s,mb5.1
EBEN Beniarda 69.19 310 P **P 18 57 24.7 -1.1**
comp=Z,134nm,2.0s,mb5.5
DOU Dourbes 69.29 323 P **P 18 57 26.1 -0.1**
comp=Z,23nm,2.5s,mb4.7
ERTA Horta de San J 69.32 313 P **P 18 57 26.1 -0.5**
comp=Z,353nm,2.3s,mb5.9
BAIF Baives 69.51 323 *e*P **P 18 57 26.5 -1.0**
comp=Z,39nm,1.0s,mb5.0
BAIF Baives 69.51 323 *e*P **P 18 57 26.5 -1.0**
comp=Z,20nm,1.0s,mb5.0
BAIF Baives 69.51 323 *e*P **P 18 57 26.5 -1.0**
BAIF pmax pmax
comp=Z,20nm,1.0s,mb5.0
TCF Toulx Ste Croi 69.51 319 *e*P **P 18 57 26.5 -1.1**
TCF Toulx Ste Croi 69.51 319 *e*P **P 18 57 26.5 -1.1**
HYF Humbligny 69.54 320 *e*P **P 18 57 26.9 -0.9**
SNF Seneffe 69.63 323 P **P 18 57 27.7 -0.5**
RJF Les Rejaudoux 69.68 318 *e*P **P 18 57 28.1 -0.6**
comp=Z,49nm,1.0s,mb5.1
RJF *e*MLR MLR
comp=Z,581nm,20.5s,MS4.5
RJF Les Rejaudoux 69.68 318 *e*P **P 18 57 28.1 -0.6**
comp=Z,24nm,1.0s,mb5.1
RJF LR LR
comp=Z,580nm,20.5s,MS4.8
RJF Les Rejaudoux 69.68 318 *e*P **P 18 57 28.1 -0.6**
RJF pmax pmax
comp=Z,24nm,1.0s,mb5.1
RJF MLR MLR
comp=Z,580nm,20.5s,MS4.8
MDJ Mudanjiang 69.76 43 P **P 18 57 28.3 -0.9**
MDJ pP pP 18 57 31.5 -1.0
MDJ sP sP 18 57 32.8 -0.9
MDJ S S 19 06 37.0 -1.4
MDJ ScS ScS 19 07 29.8 -1.5
MDJ pmax pmax
comp=Z,26nm,2.1s,mb4.8
MDJ LR LR
comp=N,1μm,21.7s
MDJ LR LR
comp=E,620nm,27.6s
MDJ LR LR
comp=Z,780nm,33.9s
MDJ Mudanjiang 69.76 43 *e*P **P 18 57 26.8 -2.4**
comp=Z,327nm,2.5s,mb5.8
MDJ LR LR
comp=Z,1μm,20.0s,MS5.1
EMOS Mosqueruela 69.77 312 P **P 18 57 28.3 -1.1**
comp=Z,226nm,1.8s,mb5.8
RESF Ens 69.80 315 *e*P **P 18 57 29.7 +0.2**
EPF Esparros 69.85 315 *e*P **P 18 57 29.3 -0.5**
EPF Esparros 69.85 315 *e*P **P 18 57 29.3 -0.5**
KIC Kosan Boka 69.90 276 *e*P **P 18 57 33.1 +2.4**
comp=Z,124nm,1.1s,mb5.8
EBIE Bielsa 69.90 315 P **P 18 57 29.2 -1.0**
comp=Z,220nm,2.2s,mb5.7
ECHE Chera 69.96 311 P **P 18 57 30.3 -0.3**
comp=Z,62nm,1.3s,mb5.4
ECHE Chera 69.96 311 P **P 18 57 30.3 -0.3**
ECHE pmax pmax
comp=Z,62nm,1.3s,mb5.4
DBIC Dimbokro 70.01 276 P **P 18 57 32.7 +1.4**
comp=Z,18nm,0.9s,mb5.0,baz=82,slow=8.0,SNR=13
DBIC LR LR 19 26 11.1
comp=Z,918nm,21.3s,MS5.0,baz=73,slow=34
DBIC Dimbokro 70.01 276 *e*P **P 18 57 32.3 +1.0**
comp=Z,55nm,1.3s,mb5.3
DBIC LR LR
comp=Z,915nm,21.0s,MS5.0
DBIC Dimbokro 70.01 276 *e*P **P 18 57 32.3 +1.0**
DBIC pmax pmax
comp=Z,55nm,1.3s
DBIC MLR MLR
comp=Z,915nm,21.0s
VIEF Viey 70.04 315 *e*P **P 18 57 31.4 +0.4**
LABF Labassere 70.05 315 *e*P **P 18 57 31.0 0.0**
LFF La Frestale 70.10 317 *e*P **P 18 57 30.8 -0.5**
comp=Z,135nm,1.2s,mb5.4
LFF La Frestale 70.10 317 *e*P **P 18 57 30.8 -0.5**
comp=Z,68nm,1.2s,mb5.5
LFF La Frestale 70.10 317 *e*P **P 18 57 30.8 -0.5**
LFF pmax pmax
comp=Z,68nm,1.2s,mb5.5
ESAC San Caprasio 70.10 313 P **P 18 57 31.5 +0.1**
comp=Z,211nm,1.4s,mb5.9
TIC Toumodi 70.17 276 *e*P **P 18 57 34.7 +2.4**
comp=Z,26nm,0.2s,mb5.8
TIC Toumodi 70.17 276 *e*P **P 18 57 34.7 +2.4**
LIC Lamto 70.18 276 *e*P **P 18 57 34.9 +2.5**
comp=Z,150nm,1.2s,mb5.8
LIC Lamto 70.18 276⇑ *i*P **P 18 57 34.1 +1.7**
comp=Z,137nm,1.2s,mb5.5
LIC *e*MLR MLR
comp=Z,1μm,22.8s,MS4.9
ETOB Tobarra 70.19 310 P **P 18 57 31.4 -0.5**
comp=Z,262nm,2.2s,mb5.8
REYF Montagne du Re 70.38 315 *e*P **P 18 57 32.9 -0.2**
MAW Mawson 70.44 181 P **P 18 57 34.7 +1.8**
comp=Z,11nm,0.9s,mb4.8,baz=344,slow=7.3,SNR=27
MAW LR LR 19 20 45.4
comp=Z,2μm,21.1s,MS5.4,baz=357,slow=29
MAW Mawson 70.44 181 *e*P **P 18 57 34.7 +1.8**
comp=Z,8.1nm,0.8s,mb4.7
MAW Mawson 70.44 181 *e*P **P 18 57 34.6 +1.7**
comp=Z,3.0nm,0.9s
MAW LR LR
comp=Z,3μm,21.0s
MAW Mawson 70.44 181 *e*P **P 18 57 34.6 +1.7**
MAW MLR MLR
comp=Z,3μm,21.0s
ETSF Etsaut 70.46 315 *e*P **P 18 57 33.6 +0.1**
comp=Z,106nm,1.3s,mb5.3
ETSF Etsaut 70.46 315 *e*P **P 18 57 33.6 +0.1**
comp=Z,53nm,1.3s,mb5.3
ETSF Etsaut 70.46 315 *e*P **P 18 57 33.6 +0.1**
ETSF pmax pmax
comp=Z,53nm,1.3s,mb5.3
ATE Arette 70.61 315 *e*P **P 18 57 34.3 -0.1**
KONO Kongsberg 70.74 334 *e*P **P 18 57 33.3 -1.6**
comp=Z,58nm,1.4s,mb5.3
KONO LR LR
comp=Z,1μm,20.0s,MS5.2
KONO Kongsberg 70.74 334 *e*P **P 18 57 33.3 -1.6**
KONO pmax pmax
comp=Z,58nm,1.4s,mb5.3
KONO MLR MLR
comp=Z,1μm,20.0s,MS5.2
NB2 NORSAR Subarra 70.75 335 P **P 18 57 33.5 -1.4**
comp=Z,45nm,1.2s,mb5.3,baz=114,slow=6.9
NOA NORSAR Array B 70.75 335 P **P 18 57 34.0 -0.9**
comp=Z,18nm,0.9s,mb5.0,baz=114,slow=6.6,SNR=21
NOA LR LR 19 31 48.6
comp=Z,716nm,19.4s,MS4.9,baz=120,slow=39
NOA NORSAR Array B 70.75 335 P **P 18 57 34.0 -0.9**
NAO01 NORSAR Array S 70.78 335 *e*P **P 18 57 33.6 -1.5**
comp=Z,24nm,1.0s,mb5.1
LARF Larrau 70.80 315 *e*P **P 18 57 36.0 +0.4**
EALB Alboran 70.81 307 P **P 18 57 35.6 -0.3**
comp=Z,540nm,2.2s,mb6.1
EHUE Huescar 70.82 309 P **P 18 57 35.0 -0.8**
comp=Z,74nm,2.1s,mb5.2
EHUE Huescar 70.82 309 P **P 18 57 35.0 -0.9**
EHUE pmax pmax
comp=Z,74nm,2.1s,mb5.2
EBER Berja 70.88 308 P **P 18 57 36.6 +0.4**
comp=Z,205nm,2.2s,mb5.7
EVIA Vianos 70.92 310 P **P 18 57 35.4 -1.0**
comp=Z,7.9nm,1.5s,mb4.4
EVIA Vianos 70.92 310 P **P 18 57 35.4 -1.0**
EVIA pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
SJPF Ste Jean 70.98 315 *e*P **P 18 57 36.7 0.0**
comp=Z,64nm,1.0s,mb5.2
SJPF Ste Jean 70.98 315 *e*P **P 18 57 36.7 0.0**
comp=Z,32nm,1.0s,mb5.2
SJPF Ste Jean 70.98 315 *e*P **P 18 57 36.7 0.0**
SJPF pmax pmax
comp=Z,32nm,1.0s,mb5.2
MFF Saint Martin d 71.16 318 *e*P **P 18 57 36.6 -1.1**
comp=Z,84nm,1.2s,mb5.2
MFF Saint Martin d 71.16 318 *e*P **P 18 57 36.6 -1.1**
comp=Z,42nm,1.2s,mb5.2
MFF Saint Martin d 71.16 318 *e*P **P 18 57 36.6 -1.1**
MFF pmax pmax
comp=Z,42nm,1.2s,mb5.2
EQES Quesada 71.19 309 P **P 18 57 36.0 -2.2**
comp=Z,88nm,1.8s,mb5.4
EALK Alkurruntz 71.21 315 P **P 18 57 39.1 +1.0**
comp=Z,324nm,2.1s,mb5.9
ELIZ Elizondo 71.21 315 P **P 18 57 37.2 -0.9**
comp=Z,75nm,1.4s,mb5.4
ELIZ Elizondo 71.21 315 P **P 18 57 37.2 -0.9**
ELIZ pmax pmax
comp=Z,75nm,1.4s,mb5.4
CLNS Chul'man 71.26 30 *e*P **P 18 57 38.4 +0.3**
CLNS *e* 18 57 53.8
CLNS *e*PPP 19 02 01.8
CLNS *e**SS sS 19 07 23.8 +23
CLNS pmax pmax
comp=Z,35nm,1.5s,mb5.1
CLNS pmax pmax
comp=N,8.0nm,1.1s
CLNS pmax pmax
comp=E,18nm,1.4s
CLNS MLR MLR
comp=N,652nm,15.0s,MS5.3
CLNS MLR MLR
comp=Z,2μm,17.0s,MS5.5
CLNS MLR MLR
comp=E,1μm,14.0s,MS5.3
KEV Kevo 71.28 347 PFAKE 18 57 50.0 +12
KEV LR LR
comp=Z,2μm,21.0s,MS5.3
KEV Kevo 71.28 347 *e*P **P 18 57 35.6 -2.4**
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
KEV Kevo 71.28 347 *e*p **P 18 57 35.6 -2.4**
comp=Z,8.8nm,0.6s,mb4.9
WRA Warramunga Arr 71.38 112 P **P 18 57 39.6 +0.1**
comp=Z,62nm,0.9s,mb5.5,baz=287,slow=5.7,SNR=134
WRA LR LR 19 27 37.8
comp=Z,520nm,18.3s,MS4.8,baz=295,slow=35
WRA Warramunga Arr 71.38 112 P **P 18 57 39.7 +0.2**
EGUA Guajares 71.40 308 P **P 18 57 36.4 -3.0**
comp=Z,136nm,0.8s,mb5.9
EGUA Guajares 71.40 308 P **P 18 57 36.4 -3.0**
ARCES ARCESS Array B 71.46 346 P **P 18 57 38.1 -1.0**
comp=Z,12nm,0.8s,mb4.9,baz=117,slow=4.2,SNR=16
ARCES LR LR 19 32 19.7
comp=Z,2μm,19.4s,MS5.3,baz=125,slow=39
ARCES ARCESS Array B 71.46 346 P **P 18 57 38.1 -1.0**
ECOG Cogollos-Vega 71.48 308 P **P 18 57 39.0 -0.9**
comp=Z,10nm,0.6s,mb4.9
ECOG Cogollos-Vega 71.48 308 P **P 18 57 39.0 -0.9**
ECOG pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
ERON Agron 71.62 308 P **P 18 57 39.2 -1.5**
ASAR Alice Springs 71.69 116 P **P 18 57 41.4 0.0**
comp=Z,32nm,0.9s,mb5.2,baz=285,slow=6.0,SNR=122
ASAR Alice Springs 71.69 116 P **P 18 57 41.4 0.0**
LDF La Druitiere 71.71 320 *e*P **P 18 57 39.4 -1.6**
comp=Z,13nm,0.7s,mb4.7
LDF La Druitiere 71.71 320 *e*P **P 18 57 39.4 -1.6**
comp=Z,6.6nm,0.7s,mb4.7
LDF La Druitiere 71.71 320 *e*P **P 18 57 39.4 -1.6**
LDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
EBAN Banos Encina 71.81 309 P **P 18 57 42.5 +0.7**
comp=Z,17nm,1.1s,mb4.9
EBAN Banos Encina 71.81 309 P **P 18 57 42.5 +0.6**
EBAN pmax pmax
comp=Z,17nm,1.1s,mb4.9
ELOJ Sierra Loja 71.92 308 P **P 18 57 41.9 -0.6**
comp=Z,23nm,1.3s,mb5.0
ELOJ Sierra Loja 71.92 308 P **P 18 57 41.9 -0.6**
ELOJ pmax pmax
comp=Z,23nm,1.3s,mb5.0
FLN La Foliniere 71.99 321 *e*P **P 18 57 41.3 -1.4**
comp=Z,114nm,1.3s,mb5.3
FLN *e*MLR MLR
comp=Z,788nm,21.5s,MS4.7
FLN La Foliniere 71.99 321 *e*P **P 18 57 41.3 -1.4**
comp=Z,57nm,1.3s,mb5.3
FLN LR LR
comp=Z,790nm,21.5s,MS5.0
FLN La Foliniere 71.99 321 *e*P **P 18 57 41.3 -1.4**
FLN pmax pmax
comp=Z,57nm,1.3s,mb5.3
FLN MLR MLR
comp=Z,790nm,21.5s,MS5.0
ELUQ Luque 72.08 308 P **P 18 57 42.1 -1.4**
comp=Z,23nm,1.2s,mb5.0
ELUQ Luque 72.08 308 P **P 18 57 42.1 -1.4**
ELUQ pmax pmax
comp=Z,23nm,1.2s,mb5.0
GRR Gorron 72.12 320 *e*P **P 18 57 42.0 -1.5**
GRR Gorron 72.12 320 *e*P **P 18 57 42.0 -1.5**
MIR Mirnyy 72.14 169 *e*P **P 18 57 45.0 +1.8**
MIR pmax pmax
comp=Z,51nm,1.6s,mb5.2
MIR pmax pmax
comp=Z,404nm,4.0s
MIR MLR MLR
comp=N,1μm,18.0s,MS5.3
MIR MLR MLR
comp=E,1μm,18.0s,MS5.3
MIR MLR MLR
comp=Z,3μm,18.0s,MS5.5
ESDC Sonseca Array 72.24 311 P **P 18 57 44.5 +0.2**
comp=Z,18nm,0.9s,mb5.0,baz=87,slow=5.2,SNR=35
ESDC LR LR 19 28 49.6
comp=Z,187nm,20.2s,MS4.3,baz=130,slow=35
ESDC Sonseca Array 72.24 311 P **P 18 57 42.7 -1.7**
comp=Z,11nm,0.8s,mb4.8
ESLA Sonseca Array 72.24 311⇓ *e*P **P 18 57 43.8 -0.6**
comp=Z,46nm,1.7s,mb5.1
ESLA LR LR
comp=Z,3μm,22.0s,MS5.5
EMIJ Mijas 72.31 307 P **P 18 57 44.3 -0.5**
comp=Z,146nm,1.7s,mb5.6
EADA Adamuz 72.43 309 P **P 18 57 44.9 -0.6**
comp=Z,162nm,1.9s,mb5.6
KLR Kul'dur 72.48 39 *e*P **P 18 57 40.0 -5.6**
KLR *e*S S 19 07 06.5 -3.4
KLR *e*SS SS 19 11 50.0 +1.4
KLR pmax pmax
comp=Z,170nm,2.6s,mb5.5
KLR smax

comp=N,500nm,10.0s
KLR smax
comp=E,2μm,10.0s
KLR MLR MLR
comp=E,1μm,17.0s
KLR MLR MLR
comp=Z,2μm,17.0s,MS5.4
PAB San Pablo 72.51 311 *e*P **P 18 57 46.1 +0.1**
comp=Z,14nm,0.9s,mb4.9
PAB *e*PP PP 19 00 27.0 -0.2
PAB LR LR
comp=Z,459nm,21.0s,MS4.7
PAB San Pablo 72.51 311 *e*P **P 18 57 46.1 +0.1**
PAB *e* 19 00 27.0
PAB pmax pmax
comp=Z,14nm,0.9s,mb4.9
PAB MLR MLR
comp=Z,459nm,21.0s,MS4.7
GUD Guadarrama 72.57 312 P **P 18 57 45.8 -0.5**
comp=Z,52nm,1.4s,mb5.3
GUD Guadarrama 72.57 312 P **P 18 57 45.8 -0.5**
GUD pmax pmax
comp=Z,52nm,1.4s,mb5.3
SHEL Horse Pasture 72.71 252 PFAKE 18 58 00.0 +12
SHEL LR LR
comp=Z,1μm,20.0s,MS5.2
EJIF Jimena Fronter 72.84 307 P **P 18 57 46.7 -1.3**
comp=Z,58nm,1.5s,mb5.3
EJIF Jimena Fronter 72.84 307 P **P 18 57 46.7 -1.3**
EJIF pmax pmax
comp=Z,58nm,1.5s,mb5.3
ECAB El Cabril 73.07 309 P **P 18 57 46.9 -2.5**
comp=Z,289nm,2.1s,mb5.8
SGMF Saint Gilles 73.18 320 *e*P **P 18 57 48.3 -1.5**
comp=Z,75nm,1.1s,mb5.2
SGMF Saint Gilles 73.18 320 *e*P **P 18 57 48.3 -1.5**
comp=Z,38nm,1.1s,mb5.2
SGMF Saint Gilles 73.18 320 *e*P **P 18 57 48.3 -1.5**
SGMF pmax pmax
comp=Z,38nm,1.1s,mb5.2
ESPR Espera 73.21 308 P **P 18 57 48.5 -1.7**
comp=Z,145nm,1.9s,mb5.6
SFS San Fernando 73.43 307 PFAKE 18 58 00.0 +8.5
SFS LR LR
comp=Z,979nm,19.0s,MS5.1
QUIF Quistinic 73.49 319 *e*P **P 18 57 50.0 -1.6**
QUIF Quistinic 73.49 319 *e*P **P 18 57 50.0 -1.6**
ROSF Rostrenen 73.66 320 *e*P **P 18 57 50.9 -1.7**
comp=Z,58nm,1.1s,mb5.1
ROSF Rostrenen 73.66 320 *e*P **P 18 57 50.9 -1.7**
comp=Z,29nm,1.1s,mb5.1
ROSF Rostrenen 73.66 320 *e*P **P 18 57 50.9 -1.7**
ROSF pmax pmax
comp=Z,29nm,1.1s,mb5.1
EPLA Plasencia 73.91 311 P **P 18 57 52.5 -1.8**
comp=Z,171nm,2.0s,mb5.6
EPLA Plasencia 73.91 311 P **P 18 57 52.5 -1.8**
EPLA pmax pmax
comp=Z,171nm,2.0s,mb5.6
SYO Syowa Base 73.97 189‖ *e*P **P 18 57 54.5 +0.5**
EMIN Mina Concepcio 74.00 308 P **P 18 57 54.8 -0.1**
comp=Z,115nm,2.0s,mb5.5
PBAR Barrancos 74.34 309 *e*LQ 19 18 01.4
PBAR *e*LR LR 19 22 58.7
comp=Z,255nm,20.0s
EBAD Badajoz 74.41 309 P **P 18 57 54.8 -2.4**
comp=Z,142nm,1.8s,mb5.6
MAJO Matsushiro 74.48 53 PFAKE 18 58 10.0 +12
MAJO LR LR
comp=Z,2μm,21.0s,MS5.4
MAT Matsushiro 74.48 53 P **P 18 57 57.5 -0.2**
MAT S S 19 07 33.0 0.0
MJAR Matsushiro Arr 74.48 53 P **P 18 57 57.7 0.0**
comp=Z,2.8nm,0.9s,baz=264,slow=4.3,SNR=4.5
MJAR LR LR 19 32 47.0
comp=Z,2μm,20.1s,baz=270,slow=38
MJAR Matsushiro Arr 74.48 53 P **P 18 57 57.7 0.0**
PBRG Braganca 74.70 312 *e*P **P 18 57 58.9 0.0**
comp=Z,44nm,1.7s,mb5.1
PBRG *e*LR LR 19 23 04.9
comp=Z,310nm,20.0s
ECAL Calabor 74.72 313 P **P 18 58 00.1 +1.1**
comp=Z,210nm,2.0s,mb5.7
PVAQ Vaqueiros 74.76 308 *e*P **P 18 57 58.5 -0.8**
comp=Z,30nm,1.7s,mb4.9
PVAQ *e*LQ 19 18 01.6
PVAQ *e*LR LR 19 23 12.7
comp=Z,289nm,20.0s
PMRV Marv??o 74.81 310 *e*P **P 18 57 59.4 -0.1**
comp=Z,46nm,2.1s,mb5.0
PMRV *e*LQ 19 19 14.7
PMRV *e*LR LR 19 23 14.8
comp=Z,348nm,18.0s
MVO Moncorvo 74.81 312 *e*P **P 18 58 00.6 +1.1**
comp=Z,32nm,1.7s,mb5.0
MVO *e*LQ 19 18 03.3
MVO *e*LR LR 19 23 14.3
comp=Z,312nm,20.0s
MVO Moncorvo 74.81 312 P **P 18 58 00.8 +1.3**
PESTR Estremoz 74.88 309 *e*P **P 18 57 59.8 -0.1**
comp=Z,29nm,2.2s,mb4.8
PESTR *e*LQ 19 18 07.6
PESTR *e*LR LR 19 23 01.5
comp=Z,345nm,20.0s
PBDV Barranco-do-Ve 74.91 308 *e*P **P 18 58 01.8 +1.6**
comp=Z,25nm,2.6s,mb4.7
PBDV *e*LR LR 19 23 20.7
comp=Z,391nm,20.0s
PCBR Castelo Branco 74.94 310 *e*P **P 18 58 01.2 +1.0**
comp=Z,38nm,2.1s,mb5.0
PBEJ Beja 74.97 308 *e*P **P 18 58 01.4 +0.9**
comp=Z,29nm,2.1s,mb4.8
MTE Manteigas 75.07 311 *e*P **P 18 58 01.3 +0.3**
comp=Z,43nm,1.3s,mb5.2
MTE *e*LQ 19 17 00.4
MTE *e*LR LR 19 23 23.6
comp=Z,356nm,18.0s
MTE Manteigas 75.07 311 PFAKE 18 58 10.0 +9.0
MTE LR LR
comp=Z,490nm,22.0s,MS4.8
EVO Evora 75.15 309 *e*P **P 18 58 01.0 -0.5**
comp=Z,50nm,1.4s,mb5.0
EVO *e*MLR MLR
comp=Z,625nm,20.2s,MS4.6
EVO Evora 75.15 309 *e*P **P 18 58 01.6 +0.1**
comp=Z,37nm,1.9s,mb5.0
EVOP Sao Brissos 75.24 309 *e*P **P 18 58 01.0 -1.0**
comp=Z,50nm,1.4s,mb5.2
EVOP LR LR
comp=Z,625μm,20.3s
EVOP Sao Brissos 75.24 309 *e*P **P 18 58 01.0 -1.0**
EVOP pmax pmax
comp=Z,50nm,1.4s,mb5.2
PVRL Vila Real 75.34 312 *e*P **P 18 58 04.0 +1.5**
comp=Z,35nm,2.1s,mb4.9
JHJ Hachijo jima 2 75.35 57 LR LR 19 34 13.4
comp=Z,1μm,19.8s,MS5.2,baz=290,slow=38
PVIS Viseu 75.38 311 *e*P **P 18 58 04.2 +1.4**
comp=Z,55nm,1.6s,mb5.2
PMTG Montargil 75.39 310 *e*P **P 18 58 01.9 -1.0**
comp=Z,43nm,1.9s,mb5.0
ESK Eskdalemuir 75.46 327 PFAKE 18 58 10.0 +7.1
ESK LR LR
comp=Z,760nm,21.0s,MS5.0
ESK Eskdalemuir 75.46 327 *i* P **P 18 58 04.3 +1.4**
MORF Marmelete 75.49 308 *e*LR LR 19 24 15.4
comp=Z,323nm,20.0s
BBOO Buckleboo 75.52 125 *e*P **P 18 58 03.4 -0.4**
comp=Z,72nm,1.1s,mb5.5
YAK Yakutsk 75.56 26 *e*P **P 18 58 01.4 -1.9**
comp=Z,48nm,1.3s,mb5.3
YAK LR LR
comp=Z,4μm,22.0s,MS5.6
YAK Yakutsk 75.56 26 *d i*P **P 18 58 02.1 -1.3**
YAK *e* 18 58 14.2
YAK *e* 19 00 52.9
YAK *e*PPP 19 02 37.5
YAK *e*S S 19 07 35.7 -8.3
YAK *e* 19 08 03.9
YAK *e**SS sS 19 08 24.5 +35
YAK *e*SS SS 19 12 33.2 -1.7
YAK *e*SSS 19 15 52.8
YAK pmax pmax
comp=Z,13nm,1.0s,mb4.8
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,12nm,1.2s
YAK pmax pmax
comp=Z,279nm,5.2s
YAK pmax pmax
comp=N,297nm,4.3s
YAK pmax pmax
comp=E,196nm,5.4s
YAK smax
comp=N,116nm,11.6s
YAK smax
comp=E,388nm,11.6s
PTEO Sao Teotonio 75.58 308 *e*P **P 18 58 06.3 +2.3**
comp=E,37nm,1.7s,mb5.0
PFVI Vila Bisbo 75.61 307 *e*P **P 18 58 04.6 +0.4**
comp=E,49nm,1.4s,mb5.2
PFVI *e*LR LR 19 23 46.3
comp=E,320nm,22.0s
PTOM Tomar 75.61 310 *e*P **P 18 58 05.0 +0.8**
comp=E,37nm,1.3s,mb5.2
PCAB Cabril 75.64 312 *e*P **P 18 58 05.2 +1.0**
comp=E,66nm,1.5s,mb5.3
ELOB Lobios 75.69 312 P **P 18 58 05.7 +1.2**
comp=E,137nm,1.6s,mb5.6
PMAFR Mafra 76.19 309 *e*P **P 18 58 08.7 +1.2**
comp=E,83nm,1.5s,mb5.4
PMAFR *e*LR LR 19 23 54.1
comp=E,234nm,20.0s
CASY Casey 76.25 163 *e*P **P 18 58 07.6 +0.4**
comp=E,33nm,1.5s,mb5.0
CASY LR LR
comp=Z,1μm,22.0s,MS5.2
CBIJ Chichi jima 76.93 63 LR LR 19 31 21.3
comp=Z,440nm,21.6s,MS4.7,baz=290,slow=35
ASAJ Asahikawa 78.78 46 LR LR 19 34 36.4
comp=Z,1μm,20.0s,MS5.3,baz=287,slow=37
ERM Erimo 78.96 48 PFAKE 18 58 30.0 +7.1
ERM LR LR
comp=Z,1μm,20.0s,MS5.3
TIXI Tiksi 79.05 17 *e*P **P 18 58 21.9 -0.9**
comp=Z,44nm,1.4s,mb5.2
TIXI LR LR
comp=Z,3μm,20.0s,MS5.6
TIXI Tiksi 79.05 17 *e*P **P 18 58 21.8 -1.0**
TIXI *e* 18 58 28.2
TIXI *e* 19 01 21.8
TIXI *e*S S 19 08 19.5 -2.2
TIXI *e*SS SS 19 13 26.5 -0.7
TIXI pmax pmax
comp=Z,74nm,2.0s,mb5.3
TIXI MLR MLR
comp=Z,3μm,19.0s,MS5.6
YSS Yuzh-Sakhalins 79.24 43 *e*P **P 18 58 23.2 -1.1**
YSS *e* 19 01 28.0
YSS *e* 19 08 26.0
YSS MLR MLR
comp=E,700nm,15.0s,MS5.2
YSS MLR MLR
comp=Z,1μm,15.0s,MS5.4
YSS MLR MLR
comp=N,600nm,16.0s,MS5.2
STKA Stephens Creek 79.93 123 P **P 18 58 28.5 +0.2**
comp=N,17nm,0.9s,mb5.0,baz=296,slow=7.0,SNR=22
STKA LR LR 19 32 47.0
comp=N,2μm,18.5s,MS5.4,baz=257,slow=35
STKA Stephens Creek 79.93 123 *e*P **P 18 58 28.0 -0.4**
comp=N,13nm,0.9s,mb4.9
STKA Stephens Creek 79.93 123 *e*P **P 18 58 28.1 -0.2**
comp=N,4.0nm,1.0s,mb4.3
KBS Kingsbay 80.47 351 PFAKE 18 58 40.0 +10
KBS LR LR
comp=Z,1μm,21.0s,MS5.2
YUK Yuzh-Kuril'sk 81.12 46⇑ *i*P **P 18 58 29.7 -4.8**
YUK pmax pmax
comp=N,1μm,2.0s
YUK pmax pmax
comp=E,2μm,2.0s
YUK pmax pmax
comp=Z,2μm,2.0s
YUK MLR MLR
comp=Z,1μm,19.0s
NVL N'lazarevskaya 81.48 196 *e*P **P 18 58 39.2 +3.4**
NVL *e**PP pP 18 58 45.1 +6.0
NVL *e*SS 19 09 34.3
NVL pmax pmax
comp=Z,31nm,0.8s,mb5.3
MAIT Maitri 81.51 196 *e*P **P 18 58 39.4 +3.4**
PMG Port Moresby 82.42 100 PFAKE 18 58 50.0 +8.0
PMG LR LR
comp=Z,622nm,22.0s,MS4.9
CTA Charters Tower 82.48 111 P **P 18 58 41.6 -0.6**
comp=Z,30nm,1.0s,mb5.2,baz=259,slow=4.6,SNR=8.7
CTA Charters Tower 82.48 111 *e*P **P 18 58 41.4 -0.8**
comp=Z,18nm,1.0s,mb5.0
CTA Charters Tower 82.48 111 P **P 18 58 41.6 -0.6**
CTAO Charters Tower 82.48 111 *e*P **P 18 58 41.3 -0.9**
comp=Z,29nm,1.0s,mb5.2
CTAO LR LR
comp=Z,1μm,20.0s,MS5.2
CTAO Charters Tower 82.48 111 *e*P **P 18 58 41.3 -0.9**
CTAO pmax pmax
comp=Z,29nm,1.0s,mb5.2
CTAO MLR MLR
comp=Z,1μm,20.0s,MS5.2
TOO Toolangi 84.00 128 *e*P **P 18 58 50.6 +0.9**
DAG Danmarks Havn 85.75 347 *e*P **P 18 58 54.3 -3.4**
DAG Danmarks Havn 85.75 347 *i* P **P 18 58 54.3 -3.4**
MOO Moorlands 85.97 133 *e*P **P 18 58 58.6 -0.9**
SEY Seymchan 86.02 27‖ *e*P **P 18 58 59.5 +0.2**
SNAA Sanae 86.07 197 P **P 18 59 02.0 +2.7**
comp=Z,3.3nm,0.9s,mb4.6,baz=67,slow=5.8,SNR=34
SNAA Sanae 86.07 197 P **P 18 59 02.0 +2.7**
TAU Tasmania Unive 86.13 133 *e*P **P 18 59 01.1 +0.9**
comp=Z,92nm,1.0s,mb6.0
TAU Tasmania Unive 86.13 133 *e*P **P 18 59 01.1 +0.9**
TAU pmax pmax
comp=Z,92nm,1.0s,mb6.0
CAN Canberra 86.52 125 PFAKE 18 59 10.0 +7.7
CAN LR LR
comp=Z,755nm,19.0s,MS5.1
VNA2 Neumayer--Watz 87.20 198 *e*P **P 18 59 04.3 -0.6**
VNA1 Neumayer--Stat 87.40 199 *e*P **P 18 59 06.1 +0.3**
VNA3 Neumayer Olymp 88.01 198 *e*P **P 18 59 07.7 -1.0**
ARMA Armidale 88.28 120 *e*P **P 18 59 11.2 +0.3**
ARMA Armidale 88.28 120 P **P 18 59 11.9 +0.9**
comp=Z,30nm,1.3s,mb5.4
PETK Petropavlovsk- 89.06 37 LR LR 19 41 51.5
comp=Z,2μm,18.8s,MS5.6,baz=278,slow=38
PET Petropavlovsk 89.64 37 PFAKE 18 59 30.0 +13
PET LR LR
comp=Z,2μm,19.0s,MS5.7
PET Petropavlovsk 89.64 37 *e*P **P 18 59 16.0 -0.8**
PET *e* 19 02 53.2
PET *e*S S 19 10 05.4 -2.8
PET *e*PS PS 19 11 13.1 -1.4
PET *e*SS SS 19 16 04.3 +0.2
PET pmax pmax
comp=Z,20nm,0.9s,mb5.5
PET pmax pmax
comp=Z,300nm,19.1s
PET MLR MLR
comp=Z,3μm,18.0s,MS5.7
PET MLR MLR
comp=Z,3μm,18.0s
SUMG Summit 91.30 343 *i* P **P 18 59 27.4 +3.2**
BILL Bilibino 91.34 22 *e*P **P 18 59 25.1 +0.7**
comp=Z,360nm,2.3s,mb6.3
BILL LR LR
comp=Z,2μm,19.0s,MS5.6
BILL Bilibino 91.34 22⇑ *i*P **P 18 59 24.9 +0.4**
BILL *i* 18 59 31.9
BILL *i* S SKSac 19 09 49.9 -6.8
BILL *e*SS SS 19 16 29.8 +1.8
BILL pmax pmax
comp=Z,79nm,2.1s,mb5.7
BILL MLR MLR
comp=Z,3μm,21.0s,MS5.7
QSPA South Pole Qui 92.94 180 P **P 18 59 32.9 +1.3**
comp=Z,7.5nm,1.0s,mb5.1,baz=288,slow=2.8,SNR=14
QSPA PP PP 19 03 13.4 -0.6
comp=Z,4.8nm,1.0s,baz=286,slow=2.9,SNR=3.7
QSPA South Pole Qui 92.94 180 *e*P **P 18 59 32.6 +1.0**
comp=Z,18nm,1.2s,mb5.4
QSPA LR LR
comp=Z,2μm,19.0s,MS5.6
HNR Honiara 95.01 99 PFAKE 18 59 50.0 +7.5
HNR LR LR
comp=Z,424nm,19.0s,MS4.9
SBA Scott Base 95.29 168 PFAKE 18 59 50.0 +7.5
SBA LR LR
comp=Z,2μm,19.0s,MS5.7
SFJD Kangerlussuaq 97.15 339 PFAKE 19 00 00.0 +8.9
SFJD LR LR
comp=Z,1μm,19.0s,MS5.4
DZM Mont Dzumac 101.39 112 *e*PS PS 19 13 24.2 -0.3
comp=Z,109nm,23.9s
DZM *e*SS SS 19 18 49.5 -3.3
comp=Z,234nm,26.3s
DZM *e*LR LR 19 33 11.2
comp=Z,1μm,24.2s
RCBR Riachuelo 101.48 265 PFAKE 19 00 20.0 +9.3
RCBR LR LR
comp=Z,662nm,19.0s,MS5.2
COLA College 108.07 14 PFAKE 19 05 00.0 +13
COLA LR LR
comp=Z,1μm,22.0s,MS5.3
ILAR Eielson Array 108.39 14 PP PP 19 05 09.0 -1.9
comp=Z,2.4nm,1.1s,baz=315,slow=5.1,SNR=8.3
ILAR PKKPbc PKKPbc 19 16 00.2 +0.1
comp=Z,0.7nm,0.9s,baz=169,slow=3.4,SNR=6.2
EGAK Eagle 109.66 12 PFAKE 19 05 00.0 +10
EGAK LR LR
comp=Z,1μm,19.0s,MS5.5
SPB Sao Paulo 112.04 246 PFAKE 19 05 10.0 +15
SPB LR LR
comp=Z,2μm,19.0s,MS5.6
KDAK Kodiak Island 112.24 21 PFAKE 19 05 10.0 +15
KDAK LR LR
comp=Z,3μm,21.0s,MS5.9
EFI East Falkland 112.50 214 PFAKE 19 05 10.0 +15
EFI LR LR
comp=Z,2μm,21.0s,MS5.6
MSVF Nonsavu 112.52 108 PFAKE 19 05 10.0 +14
MSVF LR LR
comp=Z,518nm,20.0s,MS5.1
YKA Yellowknife Ar 114.71 360 PKP PKiKP 19 04 57.7 -1.5
comp=Z,1.7nm,0.9s,baz=357,slow=2.2,SNR=4.8
YKA PKKPbc PKKPbc 19 15 43.1 +3.9
comp=Z,1.2nm,0.8s,baz=173,slow=5.1,SNR=6.2
YKA Yellowknife Ar 114.71 360 PKP PKiKP 19 04 57.7 -1.5
YKA PKKPbc PKKPbc 19 15 43.1 +3.9
YKA Yellowknife Ar 114.71 360 PKIKP PKiKP 19 04 57.7 -1.5
PKME Peaks-Kenny Pk 117.33 326 PFAKE 19 05 20.0 +15
PKME LR LR
comp=Z,728nm,21.0s,MS5.3
WRAK Wrangell Islan 119.07 11 PFAKE 19 05 20.0 +12
WRAK LR LR
comp=Z,863nm,22.0s,MS5.3
LBNH Lisbon 119.44 326 PFAKE 19 05 20.0 +11
LBNH LR LR
comp=Z,810nm,22.0s,MS5.3
CPUP Villa Florida 120.44 241 PKP PKPdf 19 05 09.9 -1.4
comp=Z,0.3nm,0.3s,baz=135,slow=5.7,SNR=3.3
CPUP Villa Florida 120.44 241 PKP PKPdf 19 05 09.9 -1.4
CPUP LR LR
comp=Z,387nm,19.0s,MS5.1
CPUP Villa Florida 120.44 241 PKIKP PKPdf 19 05 09.9 -1.4
CPUP MLR MLR
comp=Z,387nm,19.0s
TRQA Tornquist 120.64 227 PFAKE 19 05 20.0 +8.6
TRQA LR LR
comp=Z,2μm,22.0s,MS5.7
LONY Lake Ozonia 120.65 328 PFAKE 19 05 20.0 +8.8
LONY LR LR
comp=Z,785nm,22.0s,MS5.3
NCB Newcomb 120.88 327 PFAKE 19 05 20.0 +8.3
NCB LR LR
comp=Z,1μm,22.0s,MS5.4
FFC Flin Flon 121.55 351 PFAKE 19 05 20.0 +7.4
FFC LR LR
comp=Z,820nm,20.0s,MS5.4
FFC Flin Flon 121.55 351 *i* PKIKP PKPdf 19 05 15.8 +3.2
BINY Binghamton 123.02 326 PFAKE 19 05 30.0 +14
BINY LR LR
comp=Z,610nm,20.0s,MS5.2
BBGH Gun Hill 123.03 288 PFAKE 19 05 30.0 +13
BBGH LR LR
comp=Z,741nm,20.0s,MS5.3
ANWB Willy Bob 124.00 294 PFAKE 19 05 30.0 +12
ANWB LR LR
comp=Z,450nm,20.0s,MS5.1
ULM Lac du Bonnet 124.58 345 PFAKE 19 05 30.0 +11
ULM LR LR
comp=Z,1μm,21.0s,MS5.6
ERPA Erie 125.22 329 PFAKE 19 05 30.0 +10
ERPA LR LR
comp=Z,761nm,20.0s,MS5.4
GRGR Grenville 125.24 287 PFAKE 19 05 30.0 +9.2
GRGR LR LR
comp=Z,214nm,20.0s,MS4.8
PLCA Paso Flores 125.34 220 PKP PKPdf 19 05 22.9 +2.7
comp=Z,2.1nm,0.9s,baz=72,slow=3.6,SNR=2.9
PLCA Paso Flores 125.34 220 PKP PKPdf 19 05 22.9 +2.7
PLCA LR LR
comp=Z,1μm,20.0s,MS5.5
PLCA Paso Flores 125.34 220 PKIKP PKPdf 19 05 23.0 +2.7
PLCA MLR MLR
comp=Z,1μm,20.0s
EYMN Ely 125.39 341 PFAKE 19 05 30.0 +10
EYMN LR LR
comp=Z,924nm,21.0s,MS5.4
ALLY Alegheny Colle 125.64 329 *e*PKPdf PKPdf 19 05 19.0 -1.9
COWI Conover 126.17 338 PFAKE 19 05 30.0 +8.3
COWI LR LR
comp=Z,880nm,20.0s,MS5.4
AGMN Agassiz Nation 126.37 345 PFAKE 19 05 30.0 +8.0
AGMN LR LR
comp=Z,1μm,22.0s,MS5.5
CBN Corbin 126.46 324 PFAKE 19 05 30.0 +7.5
CBN LR LR
comp=Z,729nm,20.0s,MS5.3
MCWV Mont Chateau 126.89 327 PFAKE 19 05 30.0 +6.7
MCWV LR LR
comp=Z,976nm,22.0s,MS5.4
AAM Ann Arbor 126.91 331 PFAKE 19 05 30.0 +6.7
AAM LR LR
comp=Z,668nm,20.0s,MS5.3
SJG San Juan 127.84 296 PFAKE 19 05 40.0 +14
SJG LR LR
comp=Z,502nm,20.0s,MS5.2
DGMT Dagmar 127.96 351 PFAKE 19 05 40.0 +15
DGMT LR LR
comp=Z,882nm,21.0s,MS5.4
ACSO Alum Creek Sta 128.14 329 PFAKE 19 05 40.0 +14
ACSO LR LR
comp=Z,841nm,22.0s,MS5.4
CNNC Cliffs of the 128.71 321 PFAKE 19 05 40.0 +13
CNNC LR LR
comp=Z,885nm,20.0s,MS5.5
BLA Blacksburg 128.92 325 PFAKE 19 05 40.0 +13
BLA LR LR
comp=Z,1μm,20.0s,MS5.5
NEW Newport 128.93 2 PFAKE 19 05 40.0 +13
NEW LR LR
comp=Z,976nm,19.0s,MS5.5
EGMT Eagleton 129.03 356 PFAKE 19 05 40.0 +13
EGMT LR LR
comp=Z,731nm,19.0s,MS5.4
NLWA Neilton Lookou 129.20 8 PFAKE 19 05 40.0 +13
NLWA LR LR
comp=Z,956nm,21.0s,MS5.5
JFWS Jewell Farm 129.29 337 PFAKE 19 05 40.0 +12
JFWS LR LR
comp=Z,1μm,20.0s,MS5.6
SWMT Swartz Lake 129.73 359 *e*PKPdf PKPdf 19 05 28.3 -0.2
SLMT Seeley Lake 129.99 359 *e*PKPdf PKPdf 19 05 29.0 0.0
SLMT *e*PP PP 19 07 41.6 +1.9
LAO LASA Array 130.00 352 PFAKE 19 05 40.0 +11
LAO LR LR
comp=Z,1μm,21.0s,MS5.5
CHMT Chamberlain Mo 130.31 359 *e*PKPdf PKPdf 19 05 28.6 -1.0
MSO Missoula 130.41 359 PFAKE 19 05 40.0 +10
MSO LR LR
comp=Z,452nm,20.0s,MS5.2
HAWA Hanford 130.66 4 PFAKE 19 05 40.0 +10
HAWA LR LR
comp=Z,1μm,21.0s,MS5.5
ECSD EROS Data Cent 130.76 343 PFAKE 19 05 40.0 +9.4
ECSD LR LR
comp=Z,1μm,21.0s,MS5.6
HDIL Hopedale 130.86 334 PFAKE 19 05 40.0 +9.1

HDIL LR LR
comp=Z,1μm,20.0s,MS5.6
LCO Las Campanas 130.89 234 PFAKE 19 05 40.0 +8.8
LCO LR LR
comp=Z,2μm,20.0s,MS5.7
SCIA State Center 131.27 339 PFAKE 19 05 40.0 +8.4
SCIA LR LR
comp=Z,1μm,21.0s,MS5.5
BOZ Bozeman (W) 131.52 357 PFAKE 19 05 40.0 +8.1
BOZ LR LR
comp=Z,828nm,22.0s,MS5.4
NHSC New Hope 131.53 321 PFAKE 19 05 40.0 +7.7
NHSC LR LR
comp=Z,820nm,21.0s,MS5.4
DLMT Dillon 131.84 358 *e*PKPdf PKPdf 19 05 33.5 +0.9
RLMT Red Lodge 131.88 355 *e*PKPdf PKPdf 19 05 34.1 +1.5
RLMT LR LR
comp=Z,909nm,19.0s,MS5.5
SDDR Presa de Saban 132.10 299 PFAKE 19 05 50.0 +16
SDDR LR LR
comp=Z,497nm,20.0s,MS5.2
BMO Blue Mountains 132.33 3 PFAKE 19 05 40.0 +6.5
BMO LR LR
comp=Z,822nm,22.0s,MS5.4
LPAZ La Paz 132.40 251 PKP PKPdf 19 05 36.2 +1.9
comp=Z,1.6nm,0.9s,baz=57,slow=8.5,SNR=4.7
LPAZ La Paz 132.40 251 PKP PKPdf 19 05 36.2 +1.9
LPAZ LR LR
comp=Z,2μm,19.0s,MS5.8
LPAZ La Paz 132.40 251 PKIKP PKPdf 19 05 36.3 +1.9
LPAZ MLR MLR
comp=Z,2μm,19.0s
LKWY Lake 132.52 356 PFAKE 19 05 50.0 +16
LKWY LR LR
comp=Z,1μm,19.0s,MS5.7
GOGA Godfrey 133.35 323 PFAKE 19 05 50.0 +14
GOGA LR LR
comp=Z,659nm,21.0s,MS5.3
LOHW Long Hollow 133.49 356 *e*PKPdf PKPdf 19 05 37.0 +1.3
TPAW Teton Pass 133.63 356 *e*PKPdf PKPdf 19 05 35.7 -0.3
HLID Hailey 133.68 360 *e*PKPdf PKPdf 19 05 37.2 +1.1
HLID LR LR
comp=Z,673nm,19.0s,MS5.4
REDW Red Top Meadow 133.75 356 *e*PKPdf PKPdf 19 05 37.9 +1.6
RRI2 Red Ridge 133.80 357 *e*PKPdf PKPdf 19 05 31.6 -4.7
HUMO Hull Mountain 134.01 9 PFAKE 19 05 50.0 +13
HUMO LR LR
comp=Z,771nm,22.0s,MS5.4
BW06 Boulder Array 134.24 355 PFAKE 19 05 50.0 +13
BW06 LR LR
comp=Z,735nm,20.0s,MS5.4
PDAR Pinedale Array 134.24 355 PKP PKPdf 19 05 35.8 -1.4
comp=Z,2.4nm,0.8s,baz=80,slow=1.7,SNR=12
AHID Auburn Hatcher 134.36 356 PFAKE 19 05 50.0 +13
AHID LR LR
comp=Z,538nm,21.0s,MS5.2
SDV Santo Domingo 134.57 285 PFAKE 19 05 50.0 +11
SDV LR LR
comp=Z,261nm,19.0s,MS5.0
WVOR Wild Horse Val 134.66 4 PFAKE 19 05 50.0 +12
WVOR LR LR
comp=Z,606nm,19.0s,MS5.3
OGNE Ogallala 134.80 347 PFAKE 19 05 50.0 +12
OGNE LR LR
comp=Z,706nm,19.0s,MS5.4
YBH Yreka Blue Hor 134.91 9 PFAKE 19 05 50.0 +12
YBH LR LR
comp=Z,447nm,20.0s,MS5.2
KSU1 Kansas State U 134.95 340 PFAKE 19 05 50.0 +11
KSU1 LR LR
comp=Z,1μm,22.0s,MS5.5
MOD Modoc 135.04 6 PFAKE 19 05 50.0 +11
MOD LR LR
comp=Z,319nm,20.0s,MS5.0
HWUT Hardware Ranch 135.54 357 *e*PKPdf PKPdf 19 05 37.7 -2.0
HWUT LR LR
comp=Z,410nm,19.0s,MS5.2
LRAL Lakeview Retre 135.65 326 PFAKE 19 05 50.0 +10
LRAL LR LR
comp=Z,471nm,21.0s,MS5.2
OXF Oxford 135.80 330 PFAKE 19 05 50.0 +10
OXF LR LR
comp=Z,733nm,19.0s,MS5.4
WDC Whiskeytown Da 136.06 9 PFAKE 19 05 50.0 +9.4
WDC LR LR
comp=Z,634nm,22.0s,MS5.3
CBKS Cedar Bluff 136.20 343 PFAKE 19 05 50.0 +9.1
CBKS LR LR
comp=Z,921nm,22.0s,MS5.5
ISCO Idaho Springs 136.63 350 PFAKE 19 05 50.0 +8.3
ISCO LR LR
comp=Z,951nm,21.0s,MS5.5
DUG Dugway 137.01 358 *e*PKPpre PKPpre 19 05 37.1
DUG LR LR
comp=Z,511nm,20.0s,MS5.2
DUG Dugway 137.01 358 *e*PKIKP PKPpre 19 05 37.1
DUG MLR MLR
comp=Z,511nm,20.0s,MS5.2
BRAL Brewton 137.18 324 PFAKE 19 05 50.0 +7.0
BRAL LR LR
comp=Z,942nm,19.0s,MS5.5
HOPS Hopland 137.53 10 PFAKE 19 05 50.0 +6.6
HOPS LR LR
comp=Z,761nm,20.0s,MS5.4
MIAR Mount Ida 137.74 334 PFAKE 19 06 00.0 +16
MIAR LR LR
comp=Z,754nm,21.0s,MS5.4
MTDJ Mount Denham 137.81 301 PFAKE 19 06 00.0 +16
MTDJ LR LR
comp=Z,452nm,20.0s,MS5.2
VBMS Vicksburg 138.18 329 PFAKE 19 06 00.0 +15
VBMS LR LR
comp=Z,1μm,20.0s,MS5.6
MCCM Marconi Confer 138.39 10 PFAKE 19 06 00.0 +15
MCCM LR LR
comp=Z,755nm,19.0s,MS5.5
SDCO Great Sand Dun 138.61 349 PFAKE 19 06 00.0 +15
SDCO LR LR
comp=Z,769nm,20.0s,MS5.4
MSU Marysvale 138.66 357 *e*PKPdf PKPdf 19 05 42.3 -3.2
MSU Marysvale 138.66 357 *e*PKIKP PKPdf 19 05 42.3 -3.2
NVAR Mina Array Bea 138.67 4 PKP PKPdf 19 05 46.2 +0.7
comp=Z,3.7nm,0.8s,baz=321,slow=0.2,SNR=10.0
MVU Marysvale 138.67 357 PFAKE 19 06 00.0 +14
MVU LR LR
comp=Z,677nm,20.0s,MS5.4
CMB Columbia Colle 138.86 7 PFAKE 19 06 00.0 +14
CMB LR LR
comp=Z,510nm,21.0s,MS5.2
WMOK Wichita Mounta 139.63 340 *e*PKPdf PKPdf 19 05 48.5 +1.1
WMOK LR LR
comp=Z,1μm,22.0s,MS5.6
WMOK Wichita Mounta 139.63 340 *e*PKIKP PKPdf 19 05 48.5 +1.1
WMOK MLR MLR
comp=Z,1μm,22.0s,MS5.6
SAO San Andreas Ge 139.96 8 PFAKE 19 06 00.0 +12
SAO LR LR
comp=Z,929nm,21.0s,MS5.5
AMTX Amarillo 140.42 343 PFAKE 19 06 00.0 +11
AMTX LR LR
comp=Z,692nm,19.0s,MS5.4
NATX Nacogdoches 140.58 333 PFAKE 19 06 00.0 +11
NATX LR LR
comp=Z,696nm,19.0s,MS5.4
DAC Darwin (Calif) 140.86 4 PFAKE 19 06 00.0 +10
DAC LR LR
comp=Z,666nm,21.0s,MS5.4
ANMO Albuquerque 141.50 349 PFAKE 19 06 00.0 +9.2
ANMO LR LR
comp=Z,887nm,22.0s,MS5.5
NNA Nana 141.50 255 PFAKE 19 06 00.0 +8.7
NNA LR LR
comp=Z,715nm,19.0s,MS5.5
GSC Goldstone 141.88 3 *e*PKPdf PKPdf 19 05 47.1 -4.3
GSC Goldstone 141.88 3 *e*PKIKP PKPdf 19 05 47.1 -4.3
W14A Seligman 141.99 358 ⇑P PKPdf 19 05 49.2 -2.4
baz=142
Y25A Mesa, Roswell 142.12 346 ⇓P PKPdf 19 05 49.9 -2.0
baz=142
LAZ Ladron 142.16 350 *e*PKPpre PKPpre 19 05 47.5
EDW2 Edwards Air Fo 142.22 4 ⇑P PKPdf 19 05 50.2 -1.8
baz=142
X20A Quemado 142.24 352 ⇓P PKPdf 19 05 49.8 -2.3
baz=142
Z27A Tatum 142.32 344 ⇓P PKPdf 19 05 50.0 -2.3
baz=142
X18A Snowflake 142.44 354 ⇑P PKPdf 19 05 50.2 -2.2
baz=142
X15A Humboldt 142.67 357 ⇓P PKPdf 19 05 50.2 -2.7
baz=142
CPRX Cap Rock 142.77 345 *e*PKPdf PKPdf 19 05 50.0 -3.1
PPT Papeete 142.80 115 *e*LR LR 19 52 28.5
comp=Z,1μm,29.8s
Y20A Horse Springs, 142.84 351 ⇓P PKPdf 19 05 51.0 -2.2
baz=142
Z24A Sheeppen Canyo 142.84 347 ⇑P PKPdf 19 05 51.0 -2.2
baz=142
Y19A Nutrioso 142.92 353 ⇓P PKPdf 19 05 51.3 -2.0
baz=143
IRM Iron Mountain 143.06 1 P PKPdf 19 05 51.6 -1.9
baz=143,SNR=6.9
Z23A Rita Site, Whi 143.09 348 ⇑P PKPdf 19 05 51.5 -2.1
baz=143
Y18A Canyon Day Jun 143.19 354 ⇑P PKPdf 19 05 51.5 -2.3
baz=143
Y15A Casa Rosa Ranc 143.21 357 ⇓P PKPdf 19 05 51.3 -2.5
baz=143
Z22A Elephant Butte 143.24 349 ⇑P PKPdf 19 05 51.8 -2.1
baz=143
BCIP Isla Barro Col 143.27 290 PFAKE 19 06 10.0 +16
BCIP LR LR
comp=Z,664nm,22.0s,MS5.4
Y17A Roosevelt 143.35 355 ⇑P PKPdf 19 05 52.1 -2.0
baz=143
Y12C Blythe 143.48 360 ⇑P PKPdf 19 05 52.4 -1.9
baz=143
BC3 Big Chuckawall 143.56 1 ⇓P PKPdf 19 05 52.4 -2.0
baz=143,SNR=6.2
PFO Pinyon Flat Ob 143.58 3 ⇓P PKPdf 19 05 52.5 -2.0
baz=143
Z20A Nine Sixteen R 143.66 351 ⇓P PKPdf 19 05 52.6 -2.1
baz=143
OTAV Otavalo 143.67 274 PFAKE 19 06 10.0 +15
OTAV LR LR
comp=Z,835nm,22.0s,MS5.5
GDL2 Guadalupe Mount 143.68 345 *e*PKPdf PKPdf 19 05 51.3 -3.4
226A Malaga, Loving 143.75 345 ⇓P PKPdf 19 05 52.0 -2.8
baz=144,SNR=6.1
JCT Junction City 143.84 338 ⇓P PKPdf 19 05 53.0 -2.0
baz=144
JCT Junction City 143.84 338 *e*PKPdf PKPdf 19 05 52.5 -2.5
JCT LR LR
comp=Z,1μm,22.0s,MS5.6
JCT Junction City 143.84 338 *e*PKIKP PKPdf 19 05 52.5 -2.5
JCT MLR MLR
comp=Z,1μm,22.0s,MS5.6
328A Wristen Ranch, 144.03 343 ⇓P PKPdf 19 05 53.5 -1.8
baz=144,SNR=7.1
SCI San Clemente I 144.05 6 ⇑P PKPdf 19 05 53.8 -1.5
baz=144
224A Cornudas Mount 144.08 347 ⇓P PKPdf 19 05 53.4 -2.0
baz=144
121A Cookes Peak, D 144.09 350 ⇑P PKPdf 19 05 54.5 -0.9
baz=144,SNR=13
119A Ashpeak Ranch, 144.10 352 ⇑P PKPdf 19 05 53.7 -1.7
baz=144
GLA Glamis 144.17 0 ⇓P PKPdf 19 05 54.7 -0.9
baz=144
GLA Glamis 144.17 0 *e*PKPdf PKPdf 19 05 54.5 -1.0
GLA Glamis 144.17 0 *e*PKIKP PKPdf 19 05 54.6 -0.9
120A U Bar Ranch, L 144.22 351 ⇓P PKPdf 19 05 54.9 -0.7
baz=144
MONP Monument Peak 144.29 3 ⇑P PKPdf 19 05 55.0 -0.8
baz=144
118A Homack Ranch, 144.31 353 ⇓P PKPdf 19 05 55.0 -0.8
baz=144,SNR=9.5
222A Williams Famil 144.39 349 ⇑P PKPdf 19 05 55.3 -0.7
baz=144
113A Mohawk Valley, 144.44 359 ⇓P PKPdf 19 05 56.1 0.0
baz=144
115A Sonoran Desert 144.45 356 ⇓P PKPdf 19 05 55.6 -0.4
baz=144
117A Oracle 144.46 354 ⇓P PKPdf 19 05 55.7 -0.3
baz=144,SNR=9.5
BAR Barrett 144.49 3 *e*PKPdf PKPdf 19 05 55.3 -0.8
428A Kincaid Ranch, 144.60 342 ⇓P PKPdf 19 05 55.6 -0.8
baz=144,SNR=18
221A Mesquite Ranch 144.60 350 ⇑P PKPdf 19 05 56.0 -0.4
baz=144
325A Bean Ranch, Si 144.63 346 ⇑P PKPdf 19 05 55.3 -1.1
baz=144,SNR=26
324A Moseley Ranch, 144.68 346 ⇓P PKPdf 19 05 55.5 -1.0
baz=144,SNR=14
427A Hayter Ranch, 144.70 343 ⇓P PKPdf 19 05 55.9 -0.7
baz=144,SNR=17
TUC Tucson 144.72 354 *e*PKPdf PKPdf 19 05 55.8 -0.8
TUC LR LR
comp=Z,663nm,21.0s,MS5.4
TUC Tucson 144.72 354 *e*PKIKP PKPdf 19 05 55.8 -0.7
TUC MLR MLR
comp=Z,663nm,21.0s,MS5.4
220A Playas Peak, P 144.83 351 ⇑P PKPdf 19 05 56.5 -0.2
baz=144,SNR=12
219A White Tail Can 144.85 352 ⇑P PKPdf 19 05 56.9 +0.1
baz=145,SNR=16
218A Dragoon 144.97 353 ⇓P PKPdf 19 05 56.7 -0.2
baz=145,SNR=16
426A McDonald Obser 145.04 344 ⇑P PKPab 19 05 56.4 0.0
baz=145,SNR=27
216A Three Points, 145.09 355 ⇓P PKPbc 19 05 57.3 +0.8
baz=145,SNR=5.5
528A Cox Ranch, San 145.16 342 ⇓P PKPbc 19 05 57.0 +0.2
baz=145,SNR=24
425A Indio Mountain 145.19 345 ⇓P PKPbc 19 05 57.1 +0.2
baz=145,SNR=14
214A Organ Pipe Nat 145.22 357 ⇑P PKPbc 19 05 57.4 +0.4
baz=145,SNR=9.6
217A Green Valley 145.25 354 ⇑P PKPbc 19 05 58.0 +1.0
baz=145,SNR=32
TEIG Tepich 145.34 313 *e*PKPdf PKPdf 19 05 55.6 -2.3
TEIG LR LR
comp=Z,649nm,19.0s,MS5.4
320A Kipp Ranch, An 145.39 351 ⇓P PKPbc 19 05 58.9 +1.4
baz=145,SNR=12
527A Woodward Ranch 145.42 343 ⇓P PKPbc 19 05 57.8 +0.1
baz=145,SNR=41
319A Douglas 145.46 352 ⇓P PKPbc 19 05 58.8 +1.0
baz=145
318A Bisbee 145.49 353 ⇑P PKPbc 19 05 58.7 +0.9
baz=145
KVTX Kingsville 145.63 333 PFAKE 19 06 10.0 +12
KVTX LR LR
comp=Z,1μm,19.0s,MS5.7
526A Mary Lane Ranc 145.64 344 ⇓P PKPdf 19 05 59.4 +1.3
baz=145
628A Black Gap, Mar 145.81 342 P PKPdf 19 05 59.0 +0.5
baz=146,SNR=59
627A Terlingua Ranc 146.00 342 P PKPdf 19 05 59.8 +0.9
baz=146,SNR=58
626A Big Bend Ranch 146.13 343 ⇑P PKPdf 19 06 00.1 +1.1
baz=146,SNR=19
TXAR Lajitas Array 146.20 343 PKPbc PKPbc 19 06 00.7 +0.6
comp=Z,29nm,0.9s,baz=54,slow=2.9,SNR=72
TXAR Lajitas Array 146.20 343 PKP2 PKPab 19 06 00.7 0.0
JTS JuntasAbangare 147.63 294 PFAKE 19 06 10.0 +8.1
JTS LR LR
comp=Z,780nm,22.0s,MS5.5
TGUH Tegucigalpa,Un 148.01 303 *e*PKPbc PKPbc 19 06 06.7 +1.1
TGUH LR LR
comp=Z,786nm,22.0s,MS5.5
PAYG Puerto Ayora 155.54 275 PFAKE 19 06 20.0 +6.1
PAYG LR LR
comp=Z,841nm,21.0s,MS5.5

IDC 26 19:00:38.0±3.0, 3°.21N×65°.66E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.4/22, mbtmp3.7/3, 1C, Error ellipse: s-maj=119.1km s-min=38.0km az=58.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**52.96**	**14**	P	P	19 09 55.9	-0.1
	0.2nm,0.4s,baz=202,slow=5.9,SNR=2.6						
WRA	**Warramunga Arr**	**71.18**	**112**	P	P	19 11 59.5	+0.3
	1.5nm,0.8s,baz=287,slow=5.6,SNR=9.4						
ASAR	**Alice Springs**	**71.52**	**116**	P	P	19 12 01.1	-0.1
	0.6nm,0.8s,baz=280,slow=7.2,SNR=5.1						
SYO	**Syowa Base**	**74.26**	**189**	*e*P	P	19 12 13.4	-3.2
TXAR	**Lajitas Array**	**146.06**	**343**	PKPbc	PKPbc	19 20 19.9	-0.7
	0.5nm,0.8s,baz=60,slow=3.0,SNR=4.6						

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*NEIC **26** 19:08:56.2, 15°.96N×96°.80W, h30km, MD3.8(MEX), After MEX.*

MEX 26 19:08:55.6±0.7, 15°.94N×96°.81W, h34km±32km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.69**	**104**	*i* P	Pn	19 09 07.4	-1.6
HUIG				*i* S	Sn	19 09 17.1	-1.5
HUIG	**Huatulco**	**0.69**	**104**	*i* P	Pn	19 09 07.4	-1.6
HUIG				*e*S	Sn	19 09 15.5	-3.2
VHO	**Vista Hermosa**	**1.13**	**4**	*i* P	Pn	19 09 12.8	-2.2
VHO				*i* S	Sn	19 09 27.6	-1.8
VHO	**Vista Hermosa**	**1.13**	**4**	*i* P	Pn	19 09 12.8	-2.2
VHO				*i* S	Sn	19 09 27.6	-1.8
OXX	**Oaxaca**	**1.14**	**4**	*i* P	Pn	19 09 13.5	-1.7
OXX				*i* S	Sn	19 09 28.4	-1.3
OXX	**Oaxaca**	**1.14**	**4**	*i* P	Pn	19 09 13.5	-1.7
OXX				*i* S	Sn	19 09 27.0	-2.6
PNIG	**Pinotepa**	**1.35**	**290**	*i* P	Pn	19 09 17.1	-0.9
PNIG				*i* S	Sn	19 09 33.8	-1.0
PNIG	**Pinotepa**	**1.35**	**290**	*i* P	Pn	19 09 16.3	-1.7
PNIG				*i* S	Sn	19 09 32.4	-2.4
UTMO	**Huajuapan**	**2.11**	**333**	*i* P	Pn	19 09 26.5	-2.0
UTMO				*i* S	Sn	19 09 52.3	-1.3
CCIG	**Comitan**	**4.50**	**85**	*e*P	Pn	19 09 57.1	-4.4
CCIG				*i* S	Sn	19 10 49.8	-2.9
CCIG	**Comitan**	**4.50**	**85**	*i* P	Pn	19 10 01.7	+0.2

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*NEIC **26** 19:10:01.5, 18°.70N×103°.35W, h16km, MD4.0(MEX), After MEX.*

MEX 26 19:10:01.5±1.4, 18°.70N×103°.35W, h16km±18km, MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.41**	**179**	*i* P	Pg	19 10 08.0	-1.8
MMIG				*i* S	Sg	19 10 14.4	-1.0
SFJM	**Santa Fe**	**1.80**	**9**	*e*P	Pn	19 10 29.1	-2.8
SFJM				*i* S	Sn	19 10 49.2	-5.3
SFJM	**Santa Fe**	**1.80**	**9**	*e*P	Pn	19 10 29.1	-2.8
SFJM				*i* S	Sn	19 10 49.2	-5.3
ZIIG	**Zihuatanejo**	**2.10**	**121**	*i* P	Pn	19 10 33.3	-2.6
ZIIG				*i* S	Sn	19 10 56.4	-5.4
ZIIG	**Zihuatanejo**	**2.10**	**121**	*i* P	Pn	19 10 33.3	-2.6
ZIIG				*i* S	Sn	19 10 56.4	-5.4
MOIG	**Morelia**	**2.27**	**64**	*e*P	Pn	19 10 35.2	-3.1
MOIG				*i* S	Sn	19 11 02.0	-3.9
MOIG	**Morelia**	**2.27**	**64**	*e*P	Pn	19 10 35.2	-3.1
MOIG				*i* S	Sn	19 11 02.0	-3.9
ANIG	**Ahuacatlan**	**2.59**	**335**	*e*P	Pn	19 10 41.9	-0.9
ANIG				*i* S	Sn	19 11 12.6	-1.3
CAIG	**El Cayaco**	**3.36**	**119**	*i* P	Pn	19 10 50.9	-2.5
CAIG				*i* S	Sn	19 11 29.5	-3.6
CAIG	**El Cayaco**	**3.36**	**119**	*i* P	Pn	19 10 50.9	-2.5
CAIG				*i* S	Sn	19 11 29.5	-3.6
MEIG	**Mezcala**	**3.63**	**102**	*i* S	Sn	19 11 37.6	-2.0
PLIG	**Platanillo**	**3.67**	**94**	*e*P	Pn	19 10 53.4	-4.1
PLIG				*i* S	Sn	19 11 39.4	-1.0
PLIG	**Platanillo**	**3.67**	**94**	*e*P	Pn	19 10 53.4	-4.1
PLIG				*i* S	Sn	19 11 39.4	-1.0
ACX	**Acapulco**	**3.79**	**118**	*e*P	Pn	19 11 01.8	+2.5
ACX				*i* S	Sn	19 11 42.8	-0.8
ACX	**Acapulco**	**3.79**	**118**	*e*P	Pn	19 11 01.8	+2.5
ACX				*i* S	Sn	19 11 42.8	-0.8
MZVM		**3.93**	**82**	*e*P	Pn	19 10 56.3	-5.0
MZVM				*i* S	Sn	19 11 49.3	+2.2
UTMO	**Huajuapan**	**5.34**	**98**	*e*P	Pn	19 11 18.6	-2.1
UTMO				*i* S	Sn	19 12 18.9	-3.0
LNIG	**Linares**	**7.15**	**30**	*e*P	Pn	19 11 44.7	-0.7
LNIG				*i* S	Sn	19 13 04.3	-2.0
LPIG	**La Paz**	**8.42**	**311**	*e*P	Pn	19 12 03.4	+0.5
LPIG				*i* S	Sn	19 13 39.1	+1.5
LPIG	**La Paz**	**8.42**	**311**	*e*P	Pn	19 12 03.4	+0.5
LPIG				*i* S	Sn	19 13 39.1	+1.5

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*ISCJB **26** 19:17:19.9±0.7, 34°.37N±0°.07×14°.31W±0°.08, h10km, Error ellipse: s-maj=13.5km s-min=4.0km az=135.2*
*MDD **26** 19:17:25.8±1.9, 34°.18N×14°.72W, h148km±65km, mb2.9/11, Error ellipse: s-maj=32.4km s-min=15.3km az=115.0, PRXIMO*
*IGIL **26** 19:17:27.6, 34°.30N×14°.68W, h24km, ML2.8*
*NEIC **26** 19:17:28.6, 34°.68N×14°.44W, h0km, MG4.4(MDD), After MDD.*
*INMG **26** 19:17:30.3±2.4, 34°.38N×14°.73W, h10km, ML2.7, Error ellipse: s-maj=18.5km s-min=3.9km az=134.0*
*CSEM **26** 19:17:34.1±0.7, 34°.94N×14°.08W, h10km, ML3.6/16, Error ellipse: s-maj=16.4km s-min=11.2km az=139.0*

ISC 26 19:17:20.9±0.7, 34°.47N±0°.07×14°.52W±0°.08, h10km, n100, σ1§10/173, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAR	**Madeira**	**2.65**	**230**	*e*Pn	**Pn**	**19 18 04.3**	**+0.7**
PMAR				*e*Sn	**Sn**	**19 18 30.8**	**-5.0**
PMAR				A		19 18 33.8	
	50nm,0.3s						
PMAR	**Madeira**	**2.65**	**230**	P	**Pn**	**19 18 04.3**	**+0.7**
PMAR				S	**Sn**	**19 18 30.8**	**-5.0**
	25nm,0.3s						
PMAR	**Madeira**	**2.65**	**230**	*e*Pn	**Pn**	**19 18 04.3**	**+0.7**
PMAR				*e*Sn	**Sn**	**19 18 30.8**	**-5.0**
	50nm,0.3s						
FUL	**Funchal**	**2.71**	**228**	*e*Pn	**Pn**	**19 18 04.9**	**+0.5**
FUL				*e*Sn	**Sn**	**19 18 31.3**	**-5.8**
FUL				A		19 18 33.4	
	60nm,0.1s						
FUL	**Funchal**	**2.71**	**228**	P	**Pn**	**19 18 04.9**	**+0.5**
FUL				S	**Sn**	**19 18 31.3**	**-5.8**
	30nm,0.1s						
FUL	**Funchal**	**2.71**	**228**	*e*Pn	**Pn**	**19 18 04.9**	**+0.5**
FUL				*e*Sn	**Sn**	**19 18 31.3**	**-5.8**
	60nm,0.1s						
PFVI	**Vila Bisbo**	**5.33**	**58**	*e*Pn	**Pn**	**19 18 46.3**	**+5.8**
PFVI				*e*Sn	**Sn**	**19 19 42.2**	**+0.2**
PFVI				A		19 19 49.6	
	8.2nm,0.3s						
PFVI	**Vila Bisbo**	**5.33**	**58**	P	**Pn**	**19 18 46.4**	**+5.9**
PFVI				S	**Sn**	**19 19 41.2**	**-0.8**
PFVI	**Vila Bisbo**	**5.33**	**58**	P	**Pn**	**19 18 46.4**	**+5.9**
	3.2nm,0.1s,SNR=29						
PFVI				S	**Sn**	**19 19 41.2**	**-0.8**
	4.1nm,0.2s,SNR=6.0						
PFVI	**Vila Bisbo**	**5.33**	**58**	P	**Pn**	**19 18 46.3**	**+5.8**
	3.2nm,0.1s,SNR=29						
PFVI				S	**Sn**	**19 19 41.2**	**-0.8**
	4.1nm,0.2s,SNR=6.0						
PFVI				*e*Sn	**Sn**	**19 19 42.2**	**+0.2**
	8.2nm,0.3s						
MORF	**Marmelete**	**5.54**	**58**	*e*Pn	**Pn**	**19 18 49.4**	**+6.1**
MORF				*e*Sn	**Sn**	**19 19 48.9**	**+1.9**
MORF				A		19 19 54.1	
	8.5nm,0.4s						
MORF	**Marmelete**	**5.54**	**58**	P	**Pn**	**19 18 49.4**	**+6.1**
MORF				S	**Sn**	**19 19 48.9**	**+1.9**
	8.5nm,0.4s						
MORF	**Marmelete**	**5.54**	**58**	*e*Pn	**Pn**	**19 18 49.4**	**+6.1**
MORF				*e*Sn	**Sn**	**19 19 48.9**	**+1.9**
	8.5nm,0.4s						
PTEO	**Sao Teotonio**	**5.61**	**55**	*e*Sn	**Sn**	**19 19 50.2**	**+1.4**
PTEO				A		19 19 53.7	
	4.7nm,0.3s						
PTEO	**Sao Teotonio**	**5.61**	**55**	S	**Sn**	**19 19 50.2**	**+1.4**
	2.3nm,0.3s						
PTEO	**Sao Teotonio**	**5.61**	**55**	*e*Sn	**Sn**	**19 19 50.2**	**+1.4**
	4.7nm,0.3s						
CFUE	**Fuerteventura**	**5.83**	**175**	P	**Pn**	**19 18 46.7**	**-0.6**
	3.1nm,0.2s,SNR=7.9						
CFUE				S	**Sn**	**19 19 43.6**	**-11**
	5.4nm,0.2s,SNR=7.9						
CFUE	**Fuerteventura**	**5.83**	**175**	P	**Pn**	**19 18 46.7**	**-0.6**
	3.1nm,0.2s,SNR=7.9						
CFUE				S	**Sn**	**19 19 43.6**	**-11**
	5.4nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**6.02**	**61**	*e*Pn	**Pn**	**19 18 56.3**	**+6.4**
PBDV				*e*Sn	**Sn**	**19 19 59.5**	**+0.6**
PBDV				A		19 20 11.2	
	3.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**6.02**	**61**	P	**Pn**	**19 18 56.3**	**+6.4**
PBDV				S	**Sn**	**19 19 59.5**	**+0.6**

3.2nm,0.2s
PBDV Barranco-do-Ve 6.02 61 *e*Pn **Pn 19 18 56.3 +6.4**
PBDV *e*Sn **Sn 19 19 59.5 +0.6**
3.2nm,0.2s
CFTV Fuerteventura 6.05 176 P **Pn 19 18 49.0 -1.3**
0.3nm,0.2s,SNR=7.9
CFTV S **Sn 19 19 47.5 -12**
1.3nm,0.2s,SNR=6.0
CFTV Fuerteventura 6.05 176 P **Pn 19 18 49.0 -1.4**
0.3nm,0.2s,SNR=7.9
CFTV S **Sn 19 19 47.5 -12**
1.3nm,0.2s,SNR=6.0
MESJ Messejana 6.10 55 *e*P **Pn 19 18 57.3 +6.2**
MESJ *e*S **Sn 19 20 02.1 +1.2**
MESJ *e*S **Sn 19 20 02.2 +1.2**
EBAJ Bajamar 6.11 195 S **Sn 19 19 50.0 -11**
1.3nm,0.2s,SNR=7.9
EBAJ Bajamar 6.11 195 S **Sn 19 19 50.0 -11**
1.3nm,0.2s,SNR=7.9
PCVE Castro Verde 6.12 57 *e*Pn **Pn 19 18 57.7 +6.4**
PCVE *e*Sn **Sn 19 20 01.8 +0.4**
PCVE A 19 20 10.6
3.8nm,0.2s
PCVE Castro Verde 6.12 57 P **Pn 19 18 57.7 +6.4**
PCVE S **Sn 19 20 01.8 +0.4**
3.8nm,0.2s
PCVE Castro Verde 6.12 57 *e*Pn **Pn 19 18 57.7 +6.4**
PCVE *e*Sn **Sn 19 20 01.8 +0.4**
3.8nm,0.2s
PMAFR Mafra 6.14 42 *e*Pn **Pn 19 18 57.6 +6.0**
PMAFR *e*Sn **Sn 19 20 02.4 +0.5**
PMAFR A 19 20 04.9
24nm,0.2s
PMAFR Mafra 6.14 42 P **Pn 19 18 57.3 +5.7**
SNR=7.9
PMAFR S **Sn 19 20 02.3 +0.5**
22nm,0.3s,SNR=13
PMAFR Mafra 6.14 42 *e*Pn **Pn 19 18 57.6 +6.0**
PMAFR *e*Sn **Sn 19 20 02.4 +0.5**
24nm,0.2s
PVAQ Vaqueiros 6.24 60 *e*Pn **Pn 19 18 59.0 +6.0**
PVAQ *e*Sn **Sn 19 20 04.3 -0.1**
PVAQ A 19 20 09.8
4.0nm,0.1s
PVAQ Vaqueiros 6.24 60 P **Pn 19 18 59.0 +6.0**
PVAQ S **Sn 19 20 04.3 -0.1**
4.0nm,0.1s
PVAQ Vaqueiros 6.24 60 *e*Pn **Pn 19 18 59.0 +6.0**
PVAQ *e*Sn **Sn 19 20 04.3 -0.1**
4.0nm,0.1s
MOE Montemor 6.40 49 *e*Sn **Sn 19 20 09.6 +1.2**
MOE Montemor 6.40 49 S **Sn 19 20 09.6 +1.2**
MOE Montemor 6.40 49 *e*Sn **Sn 19 20 09.6 +1.2**
EOSO Osorio 6.44 188 S **Sn 19 19 56.6 -13**
5.4nm,0.3s,SNR=7.9
EOSO Osorio 6.44 188 S **Sn 19 19 56.6 -13**
5.4nm,0.3s,SNR=7.9
PBEJ Beja 6.44 55 *e*Sn **Sn 19 20 09.7 +0.5**
PBEJ A 19 20 14.7
2.5nm,0.3s
PBEJ Beja 6.44 55 S **Sn 19 20 09.7 +0.5**
1.2nm,0.3s
PBEJ Beja 6.44 55 *e*Sn **Sn 19 20 09.7 +0.5**
2.5nm,0.3s
EGRO El Granado 6.47 60 P **Pn 19 19 02.8 +6.7**
EGRO S **Sn 19 20 09.5 -0.5**
EGRO El Granado 6.47 60 P **Pn 19 19 02.8 +6.7**
1.5nm,0.2s,SNR=11
EGRO S **Sn 19 20 09.5 -0.5**
0.8nm,0.1s,SNR=5.4
EGRO El Granado 6.47 60 P **Pn 19 19 02.8 +6.7**
1.5nm,0.2s,SNR=11
EGRO S **Sn 19 20 09.5 -0.5**
0.8nm,0.1s,SNR=5.4
EVO Evora 6.62 50 *e*Sn **Sn 19 20 13.7 0.0**
EVO A 19 20 13.9
8.1nm,0.1s
EVO Evora 6.62 50 S **Sn 19 20 13.7 0.0**
8.1nm,0.1s
EVO Evora 6.62 50 *e*Sn **Sn 19 20 13.7 0.0**
8.1nm,0.1s
PMTG Montargil 6.82 46 *e*Pn **Pn 19 19 07.9 +7.0**
PMTG *e*Sn **Sn 19 20 19.3 +0.6**
PMTG A 19 20 24.4
1.9nm,0.2s
PMTG Montargil 6.82 46 *e*Pn **Pn 19 19 07.9 +7.0**
PMTG *e*Sn **Sn 19 20 19.3 +0.6**
1.9nm,0.2s
PBAR Barrancos 7.08 56 *e*Pn **Pn 19 19 10.7 +6.2**
PBAR *e*Sn **Sn 19 20 24.5 -0.4**
PBAR A 19 20 30.6
3.4nm,0.4s
PBAR Barrancos 7.08 56 P **Pn 19 19 10.7 +6.2**
PBAR S **Sn 19 20 24.5 -0.4**
3.4nm,0.4s
PBAR Barrancos 7.08 56 *e*Pn **Pn 19 19 10.7 +6.2**
PBAR *e*Sn **Sn 19 20 24.5 -0.4**
3.4nm,0.4s
PESTR Estremoz 7.09 50 *e*Sn **Sn 19 20 25.8 +0.6**
PESTR A 19 20 32.6
2.6nm,0.5s
PESTR Estremoz 7.09 50 S **Sn 19 20 25.8 +0.6**
2.6nm,0.5s
PESTR Estremoz 7.09 50 *e*Sn **Sn 19 20 25.8 +0.6**
2.6nm,0.5s
EMIN Mina Concepcio 7.15 60 P **Pn 19 19 11.8 +6.4**
EMIN S **Sn 19 20 26.4 -0.3**
EMIN Mina Concepcio 7.15 60 P **Pn 19 19 11.7 +6.3**
0.3nm,0.1s,SNR=8.8
EMIN S **Sn 19 20 26.4 -0.3**
0.4nm,0.2s,SNR=5.7
EMIN Mina Concepcio 7.15 60 P **Pn 19 19 11.8 +6.4**
0.3nm,0.1s,SNR=8.8
EMIN S **Sn 19 20 26.4 -0.3**
0.4nm,0.2s,SNR=5.7
EBAD Badajoz 7.39 52 P **Pn 19 19 15.2 +6.4**
EBAD S **Sn 19 20 31.1 -1.7**
EBAD Badajoz 7.39 52 P **Pn 19 19 15.2 +6.4**
0.9nm,0.1s,SNR=9.1
EBAD S **Sn 19 20 31.1 -1.7**
1.1nm,0.2s,SNR=4.6
EBAD Badajoz 7.39 52 P **Pn 19 19 15.2 +6.4**
0.9nm,0.1s,SNR=9.1
EBAD S **Sn 19 20 31.0 -1.7**
1.1nm,0.2s,SNR=4.6
ESPR Espera 7.44 69 P **Pn 19 19 13.4 +4.0**
ESPR S **Sn 19 20 34.8 +0.9**
ESPR Espera 7.44 69 P **Pn 19 19 13.4 +4.0**
0.9nm,0.1s,SNR=10
ESPR S **Sn 19 20 33.3 -0.7**
5.5nm,0.3s,SNR=4.5
ESPR Espera 7.44 69 P **Pn 19 19 13.4 +3.9**
0.9nm,0.1s,SNR=10
ESPR S **Sn 19 20 34.8 +0.8**
5.5nm,0.3s,SNR=4.5
PMRV Marv??o 7.55 47 *e*Pn **Pn 19 19 16.5 +5.6**
PMRV *e*Sn **Sn 19 20 35.6 -1.0**
PMRV A 19 20 38.3
2.9nm,0.2s
PMRV Marv??o 7.55 47 P **Pn 19 19 16.5 +5.6**
PMRV S **Sn 19 20 35.6 -1.0**
2.9nm,0.2s
PMRV Marv??o 7.55 47 *e*Pn **Pn 19 19 16.5 +5.6**
PMRV *e*Sn **Sn 19 20 35.6 -1.0**
2.9nm,0.2s
PCBR Castelo Branco 7.76 44 *e*Pn **Pn 19 19 21.9 +8.0**
PCBR *e*Sn **Sn 19 20 41.8 0.0**
PCBR A 19 20 49.8
1.5nm,0.3s
PCBR Castelo Branco 7.76 44 P **Pn 19 19 21.9 +8.0**
PCBR S **Sn 19 20 41.8 0.0**
0.8nm,0.3s
PVIS Viseu 8.15 38 *e*Sn **Sn 19 20 50.5 -0.9**
PVIS A 19 20 51.9
3.0nm,0.1s
PVIS Viseu 8.15 38 S **Sn 19 20 50.5 -0.9**
1.5nm,0.1s
PVIS Viseu 8.15 38 *e*Sn **Sn 19 20 50.5 -0.9**
3.0nm,0.1s
ECAB El Cabril 8.18 61 P **Pn 19 19 25.4 +5.9**
ECAB S **Sn 19 20 45.6 -6.5**
ECAB El Cabril 8.18 61 P **Pn 19 19 25.4 +5.9**
0.9nm,0.2s,SNR=7.9
ECAB S **Sn 19 20 51.7 -0.3**
12nm,0.2s,SNR=7.9
ECAB El Cabril 8.18 61 P **Pn 19 19 25.5 +5.9**
0.9nm,0.2s,SNR=7.9
ECAB S **Sn 19 20 45.6 -6.5**
12nm,0.2s,SNR=7.9
EPLA Plasencia 8.74 48 P **Pn 19 19 31.5 +4.3**
EPLA S **Sn 19 21 03.8 -2.0**
EPLA Plasencia 8.74 48 P **Pn 19 19 31.5 +4.3**
0.2nm,0.2s,SNR=7.9
EPLA S **Sn 19 21 03.8 -2.0**
1.1nm,0.1s,SNR=7.9
EPLA Plasencia 8.74 48 P **Pn 19 19 31.5 +4.3**
0.2nm,0.2s,SNR=7.9
EPLA S **Sn 19 21 03.8 -2.0**
1.1nm,0.1s,SNR=7.9
EADA Adamuz 8.83 62 P **Pn 19 19 32.4 +3.9**
EADA S **Sn 19 21 07.1 -0.9**
EADA Adamuz 8.83 62 P **Pn 19 19 32.4 +3.9**
0.6nm,0.2s,SNR=7.9
EADA S **Sn 19 21 07.1 -0.9**
0.6nm,0.2s,SNR=7.9
EADA Adamuz 8.83 62 P **Pn 19 19 32.4 +3.9**
0.6nm,0.2s,SNR=7.9
EADA S **Sn 19 21 07.1 -0.9**
0.6nm,0.2s,SNR=7.9
MVO Moncorvo 8.93 39 *e*Sn **Sn 19 21 08.2 -2.2**
MVO A 19 21 19.0
2.2nm,0.5s
MVO Moncorvo 8.93 39 P **Pn 19 19 36.2 +6.4**
MVO S **Sn 19 21 07.9 -2.6**
MVO Moncorvo 8.93 39 P **Pn 19 19 36.2 +6.4**
0.4nm,0.1s,SNR=7.9
MVO S **Sn 19 21 07.9 -2.6**
0.5nm,0.1s,SNR=7.9
MVO Moncorvo 8.93 39 P **Pn 19 19 36.2 +6.4**
0.4nm,0.1s,SNR=7.9
MVO S **Sn 19 21 07.9 -2.5**
0.5nm,0.1s,SNR=7.9
MVO *e*Sn **Sn 19 21 08.2 -2.2**
2.2nm,0.5s
ELOB Lobios 8.96 33 P **Pn 19 19 37.0 +6.7**
ELOB S **Sn 19 21 07.3 -3.9**
ELOB Lobios 8.96 33 P **Pn 19 19 37.0 +6.7**
1.2nm,0.2s,SNR=7.9
ELOB S **Sn 19 21 07.3 -3.9**
0.9nm,0.1s,SNR=7.9
ELOB Lobios 8.96 33 P **Pn 19 19 37.0 +6.7**
1.2nm,0.2s,SNR=7.9
ELOB S **Sn 19 21 07.3 -4.0**
0.9nm,0.1s,SNR=7.9
EMAZ Mazaricos 9.51 25 S **Sn 19 21 18.9 -5.7**
1.3nm,0.1s,SNR=7.9
EMAZ Mazaricos 9.51 25 S **Sn 19 21 18.9 -5.7**
1.3nm,0.1s,SNR=7.9
ECAL Calabor 9.65 37 P **Pn 19 19 43.7 +4.0**
ECAL S **Sn 19 21 25.2 -2.8**
ECAL Calabor 9.65 37 P **Pn 19 19 44.5 +4.8**
0.5nm,0.3s,SNR=7.9
ECAL S **Sn 19 21 25.2 -2.8**
0.4nm,0.1s,SNR=7.9
ECAL Calabor 9.65 37 P **Pn 19 19 43.7 +4.0**
0.5nm,0.3s,SNR=7.9
ECAL S **Sn 19 21 25.2 -2.8**
0.4nm,0.1s,SNR=7.9
EQES Quesada 9.84 67 S **Sn 19 21 32.7 -0.1**
0.5nm,0.2s,SNR=7.9
EQES Quesada 9.84 67 S **Sn 19 21 32.7 -0.1**
0.5nm,0.2s,SNR=7.9
ESDC Sonseca Array 9.90 55 P **Pn 19 19 47.3 +4.1**
ESDC Sonseca Array 9.90 55 P **Pn 19 19 45.0 +1.9**
0.5nm,0.2s,baz=348,slow=25,SNR=9.6
ESDC Sonseca Array 9.90 55 P **Pn 19 19 47.3 +4.1**
0.5nm,0.2s,SNR=9.6

*MOS **26** 19:21:44.2±1.0, 47°.05N×152°.80E, h58km, mb4.3/13, Error ellipse: s-maj=14.6km s-min=11.1km az=71.9*
*ISCJB **26** 19:21:45.3±1.1, 47°.05N±0°.08×152°.8E±0°.1, h66km±9km, mb4.0/20, Error ellipse: s-maj=16.8km s-min=6.9km az=139.1*
*IDC **26** 19:21:45.2±0.6, 47°.00N×152°.87E, h51km±6km, mb3.7/17, mb1 4.0/19, mb1mx3.9/26, mbtmp3.7/19, MS3.8/1, Ms1 3.8/1, ms1mx2.9/34, Error ellipse: s-maj=18.3km s-min=11.9km az=139.0*
*NEIC **26** 19:21:46.6±0.9, 47°.00N×152°.81E, h65km±8km, mb4.4/4, Error ellipse: s-maj=11.4km s-min=6.3km az=143.0*
ISC 26 19:21:47.5±0.9, 47°.09N±0°.08×152°.8E±0°.1, h68km±8km, h53km±1.5km:pP-P, n67, σ1.92/67, mb4.0/20, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.22**	**30**	*e*PN	**Pn**	**19 22 51.5**	**+2.3**
SKR				*e*S	**Sn**	**19 23 37.5**	**+0.3**
SKR				pmax	pmax		
	comp=E,70nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,140nm,0.2s						
SKR				smax			
	comp=E,150nm,0.5s						
PEA0B	**Petropavlovsk-**	**6.81**	**26**	*e*Pn	**Pn**	**19 23 25.2**	**+0.6**
PETK	**Petropavlovsk-**	**6.81**	**26**	P	**Pn**	**19 23 24.4**	**-0.2**
	comp=E,0.8nm,0.3s,baz=179,slow=11,SNR=8.2						
PETK	**Petropavlovsk-**	**6.81**	**26**	PN	**Pn**	**19 23 24.4**	**-0.2**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**6.85**	**273**	*e*PN	**Pn**	**19 23 23.3**	**-1.8**
YSS	**Yuzh-Sakhalins**	**6.85**	**273**	*e*PN	**Pn**	**19 23 23.3**	**-1.8**
PET	**Petropavlovsk**	**7.04**	**30**	Pn	**Pn**	**19 23 24.1**	**-3.6**
PET				*e*Sn	**Sn**	**19 24 44.1**	**-2.2**
PET	**Petropavlovsk**	**7.04**	**30**	*e*PN	**Pn**	**19 23 34.3**	**+6.5**
ASAJ	**Asahikawa**	**7.73**	**251**	P	**Pn**	**19 23 39.6**	**+2.5**
	comp=Z,1.4nm,0.3s,baz=101,slow=10,SNR=8.2						
ASAJ	**Asahikawa**	**7.73**	**251**	PN	**Pn**	**19 23 39.7**	**+2.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**8.53**	**237**	*e*Pn	**Pn**	**19 23 47.0**	**-1.1**
ERM	**Erimo**	**8.53**	**237**	*e*PN	**Pn**	**19 23 47.1**	**-1.0**
MJAR	**Matsushiro Arr**	**15.10**	**231**	P	**Pn**	**19 25 16.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=36,slow=8.5,SNR=3.0						
MJAR	**Matsushiro Arr**	**15.10**	**231**	P	**Pn**	**19 25 16.4**	**-0.3**
YAK	**Yakutsk**	**19.91**	**327**	P	**Pn**	**19 26 15.3**	**-0.1**
YAK	**Yakutsk**	**19.91**	**327**	P	**Pn**	**19 26 15.3**	**0.0**
KSRS	**Korea Array**	**20.68**	**251**	P	**P**	**19 26 23.0**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=60,slow=9.6,SNR=4.3						
KSRS	**Korea Array**	**20.68**	**251**	P	**P**	**19 26 23.0**	**+1.3**
SONM	**Songino Array**	**31.00**	**289**	P	**P**	**19 27 59.5**	**+1.4**
	comp=Z,0.3nm,0.5s,mb3.2,baz=74,slow=11,SNR=3.2						
SONM	**Songino Array**	**31.00**	**289**		**P**	**19 27 59.5**	**+1.4**
ILAR	**Eielson Array**	**36.43**	**39**	P	**P**	**19 28 44.8**	**-0.3**
	comp=Z,1.2nm,0.9s,mb3.8,baz=263,slow=8.0,SNR=8.2						
ILAR				pP	pP	19 28 58.4	-3.3
	comp=Z,0.8nm,0.6s,baz=258,slow=6.8,SNR=5.0						
ILAR	**Eielson Array**	**36.43**	**39**	P	**P**	**19 28 44.8**	**-0.3**
ILAR				*PP	pP	19 28 58.4	-3.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
INK	**Inuvik**	**41.49**	**33**	P	**P**	**19 29 27.3**	**0.0**
	comp=Z,0.6nm,0.3s,mb3.9,baz=293,slow=7.6,SNR=6.9						
INK	**Inuvik**	**41.49**	**33**	P	**P**	**19 29 27.3**	**0.0**
INK	**Inuvik**	**41.49**	**33**	P	**P**	**19 29 27.3**	**0.0**
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**42.22**	**305**	PcP	PcP	19 31 25.1	-1.0
	comp=Z,1.1nm,0.7s,baz=69,slow=4.9,SNR=4.2						
MK31	**Makanchi Array**	**46.58**	**297**	*e*P	**P**	**19 30 06.8**	**-1.4**
MK31	**Makanchi Array**	**46.58**	**297**	*e*P	**P**	**19 30 06.8**	**-1.4**
MKAR	**Makanchi Array**	**46.58**	**297**	P	**P**	**19 30 08.1**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.4,baz=66,slow=5.3,SNR=6.6						
MKAR				PcP	PcP	19 31 40.9	-0.4
	comp=Z,0.5nm,0.6s,baz=71,slow=3.8,SNR=5.7						
MKAR				LR	LR	19 50 52.0	
	comp=Z,102nm,18.6s,baz=194,slow=37						
MKAR	**Makanchi Array**	**46.58**	**297**	P	**P**	**19 30 08.1**	**-0.1**
MKAR						19 31 40.9	
MKAR				MLR	MLR		
	comp=Z,102nm,18.6s						
KURK	**Kurchatov**	**46.98**	**303**	*e*P	**P**	**19 30 10.4**	**-0.9**
	comp=Z,2.0nm,0.7s,mb4.0						
KURK	**Kurchatov**	**46.98**	**303**	*e*P	**P**	**19 30 10.4**	**-0.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
LSA	**Lhasa**	**50.02**	**273**	P	**P**	**19 30 32.0**	**-2.9**
LSA	**Lhasa**	**50.02**	**273**	*e*P	**P**	**19 30 35.0**	**+0.1**
	comp=Z,3.6nm,0.6s,mb4.5						
LSA	**Lhasa**	**50.02**	**273**	*e*P	**P**	**19 30 35.0**	**+0.1**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BRVK	**Borovoye**	**50.50**	**309**	*e*P	**P**	**19 30 38.9**	**+0.7**
	comp=Z,2.5nm,0.8s,mb4.3						
BRVK	**Borovoye**	**50.50**	**309**	*e*P	**P**	**19 30 38.9**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
YKA	**Yellowknife Ar**	**50.80**	**37**	P	**P**	**19 30 40.5**	**+0.2**
	comp=Z,1.8nm,0.8s,mb4.2,baz=294,slow=7.0,SNR=4.8						
YKA	**Yellowknife Ar**	**50.80**	**37**	P	**P**	**19 30 40.5**	**+0.2**
YKA	**Yellowknife Ar**	**50.80**	**37**	P	**P**	**19 30 40.5**	**+0.2**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**52.22**	**256**	P	**P**	**19 30 52.9**	**+1.4**
	comp=Z,1.7nm,0.8s,mb4.2,baz=35,slow=7.2,SNR=9.3						
CMAR	**Chiang Mai Arr**	**52.22**	**256**	P	**P**	**19 30 52.9**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	**62.49**	**62**	P	**P**	**19 32 03.7**	**+0.2**
	comp=Z,1.0nm,0.7s,mb4.0,baz=295,slow=6.5,SNR=7.4						
NVAR	**Mina Array Bea**	**62.49**	**62**	P	**P**	**19 32 03.7**	**+0.2**
RRI2	**Red Ridge**	**63.38**	**54**	*e*P	**P**	**19 32 10.3**	**+0.9**
	comp=Z,3.1nm,0.7s,mb4.3						
FINES	**FINESS Array B**	**63.63**	**335**	P	**P**	**19 32 10.3**	**-0.5**
	comp=Z,3.5nm,0.6s,mb4.4,baz=33,slow=7.6,SNR=18						
FINES	**FINESS Array B**	**63.63**	**335**	P	**P**	**19 32 10.3**	**-0.5**
FINES	**FINESS Array B**	**63.63**	**335**	P	**P**	**19 32 10.3**	**-0.5**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PDAR	**Pinedale Array**	**64.74**	**54**	P	**P**	**19 32 18.4**	**+0.1**
	comp=Z,1.4nm,0.7s,mb3.9,baz=324,slow=2.6,SNR=11						
NB2	**NORSAR Subarra**	**67.83**	**341**	P	**P**	**19 32 37.7**	**-0.1**
	comp=Z,2.2nm,0.6s,mb4.2,baz=27,slow=6.2						
NOA	**NORSAR Array B**	**67.83**	**341**	P	**P**	**19 32 37.9**	**+0.1**
	comp=Z,4.2nm,0.8s,mb4.3,baz=27,slow=6.3,SNR=14						
NOA	**NORSAR Array B**	**67.83**	**341**	P	**P**	**19 32 37.9**	**+0.1**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**68.75**	**199**	P	**P**	**19 32 42.2**	**-1.8**
	comp=Z,0.4nm,0.6s,mb3.4,baz=18,slow=6.5,SNR=4.8						
WRA				pP	pP	19 32 56.8	-5.3
	comp=Z,0.3nm,0.5s,baz=22,slow=7.0,SNR=2.4						
WRA	**Warramunga Arr**	**68.75**	**199**	P	**P**	**19 32 42.2**	**-1.8**
WRA				pP	pP	19 32 56.8	-5.3
WRA	**Warramunga Arr**	**68.75**	**199**	P	**P**	**19 32 42.2**	**-1.7**
WRA				*PP	pP	19 32 56.8	-5.3
AKASG	**Malin Array Be**	**71.13**	**326**	P	**P**	**19 32 58.0**	**-0.2**
	comp=Z,4.2nm,0.4s,mb4.6,baz=34,slow=6.3,SNR=16						
AKASG	**Malin Array Be**	**71.13**	**326**	P	**P**	**19 32 58.1**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ASAR	**Alice Springs**	**72.45**	**198**	P	**P**	**19 33 06.0**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.6,baz=11,slow=5.6,SNR=13						
ASAR				pP	pP	19 33 19.9	-4.8
	comp=Z,0.6nm,0.5s,baz=14,slow=5.7,SNR=5.3						
ASAR	**Alice Springs**	**72.45**	**198**	P	**P**	**19 33 06.1**	**-0.3**
ASAR				*PP	pP	19 33 19.9	-4.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**77.53**	**60**	P	**P**	**19 33 35.4**	**-0.4**
	comp=Z,1.3nm,0.5s,mb3.9,baz=302,slow=4.6,SNR=26						
TXAR				pP	pP	19 33 50.5	-3.8
	comp=Z,1.0nm,0.6s,baz=298,slow=4.1,SNR=6.5						
TXAR	**Lajitas Array**	**77.53**	**60**	P	**P**	**19 33 35.4**	**-0.4**
TXAR				*PP	pP	19 33 50.5	-3.8
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**77.98**	**316**	P	**P**	**19 33 38.9**	**+0.7**
	comp=Z,0.9nm,0.7s,mb3.6,baz=34,slow=4.2,SNR=3.8						
BRTR	**Keskin Array B**	**77.98**	**316**	P	**P**	**19 33 38.9**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**78.05**	**334**	P	**P**	**19 33 38.4**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.7,baz=34,slow=5.6,SNR=7.9						
GERES	**GERESS Array B**	**78.05**	**334**	P	**P**	**19 33 38.4**	**+0.1**
GERES	**GERESS Array B**	**78.05**	**334**	P	**P**	**19 33 38.4**	**+0.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	**Paso Flores**	**148.47**	**94**	PKPbc	PKPbc	19 41 24.4	-1.3
	comp=Z,2.0nm,0.9s,baz=225,slow=5.7,SNR=3.8						

*NEIC **26** 19:25:07.4±2.7, 4°.21N×93°.05E, h12km±18km, mb4.0/5, Error ellipse: s-maj=7.9km s-min=5.8km az=47.0*
*ISCJB **26** 19:25:09.6±0.6, 4°.24N±0°.07×93°.20E±0°.07, h40km, mb3.9/10, Error ellipse: s-maj=12.3km s-min=7.4km az=40.7*
*IDC **26** 19:25:11.5±0.8, 4°.20N×93°.12E, h38km±5km, mb3.6/7, mb1 3.8/9, mb1mx3.6/24, mbtmp3.7/9, ML3.8/2, Error ellipse: s-maj=34.2km s-min=14.3km az=48.0*
ISC 26 19:25:11.6±0.6, 4°.24N±0°.07×93°.19E±0°.06, h42km, h42km±.5km:pP-P, n27, σ0.84/27, mb3.9/10, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.90**	**104**	Pn	**Pn**	**19 26 37.0**	**+0.5**
	3.6nm,0.3s,baz=298,slow=8.8,SNR=17						
PSI				Sn	**Sn**	**19 27 41.4**	**-1.6**
	5.2nm,0.3s,baz=89,slow=20,SNR=6.6						
KULM	**Kulim**	**7.51**	**82**	*e*Pn	**Pn**	**19 26 58.9**	**+0.3**
	20nm,0.5s						
KULM				*e*Sn	**Sn**	**19 28 18.8**	**-3.8**
IPM	**Ipoh**	**7.82**	**88**	*e*Pn	**Pn**	**19 27 02.6**	**-0.3**
	22nm,0.8s						
PALK	**Pallekele**	**12.78**	**284**	*e*Pn	**Pn**	**19 28 07.3**	**-3.6**
PALK				*e*Sn	**Sn**	**19 30 17.2**	**-15**
CM31	**Chiang Mai Arr**	**15.21**	**21**	*e*Pn	**Pn**	**19 28 43.1**	**-0.6**
	2.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.21**	**21**	Pn	**Pn**	**19 28 43.0**	**-0.6**
	0.1nm,0.3s,baz=217,slow=14,SNR=28						
CHTO	**Chiang Mai**	**15.54**	**21**	*e*Pn	**Pn**	**19 28 46.8**	**-1.1**
	10nm,0.9s						
COCO	**West Island**	**16.72**	**168**	P	**Pn**	**19 29 01.9**	**-1.0**
	164nm,0.7s						
KSM	**Kuching**	**17.32**	**99**	*e*P	**Pn**	**19 29 12.4**	**+2.0**
	7.8nm,0.9s						
QIZ	**Qiongzhong**	**21.93**	**47**	P	**P**	**19 30 02.1**	**+0.5**
KKM	**Kota Kinabalu**	**23.00**	**85**	P	**P**	**19 30 14.1**	**+1.0**
GTA	**Gaotai**	**35.53**	**9**	*e*P	pP	19 32 18.0	+2.0
GTA				pP	sP	19 32 22.5	+1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
EKS2	**Erkin-Say**	**41.98**	**339**	*e*P	**P**	**19 33 02.8**	**+4.2**
	comp=Z,9.2nm,1.5s,mb4.2						
MK31	**Makanchi Array**	**43.43**	**349**	*e*P	**P**	**19 33 10.3**	**0.0**
MKAR	**Makanchi Array**	**43.43**	**349**	P	**P**	**19 33 10.9**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.6,baz=165,slow=8.2,SNR=7.2						
MKAR				pP	pP	19 33 21.6	-0.4
	comp=Z,1.0nm,0.7s,baz=171,slow=9.5,SNR=5.7						
SONM	**Songino Array**	**44.90**	**13**	P	**P**	**19 33 21.8**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=187,slow=9.1,SNR=3.8						
WRA	**Warramunga Arr**	**47.03**	**122**	P	**P**	**19 33 39.7**	**+0.4**
	comp=Z,0.9nm,0.9s,mb3.7,baz=299,slow=9.0,SNR=3.9						
WRA				pP	pP	19 33 51.0	-0.1
	comp=Z,1.9nm,0.7s,baz=300,slow=9.0,SNR=9.2						
KURK	**Kurchatov**	**47.91**	**348**	P	**P**	**19 33 45.2**	**-0.5**
ASAR	**Alice Springs**	**48.41**	**127**	P	**P**	**19 33 50.0**	**0.0**
	comp=Z,0.3nm,0.8s,mb3.4,baz=300,slow=7.7,SNR=3.0						
ASAR				pP	pP	19 34 01.5	-0.2
	comp=Z,0.6nm,0.8s,baz=298,slow=7.9,SNR=3.3						
ASAR				PcP	PcP	19 35 17.0	+1.0
	comp=Z,0.8nm,0.9s,baz=292,slow=2.9,SNR=4.5						
ZAA0	**Zalesovo Array**	**50.03**	**354**	*e*P	**P**	**19 34 02.3**	**+0.5**
ZAA0				*e*	pP	19 34 14.2	+0.5
ZALV	**Zalesovo Beam**	**50.03**	**354**	P	**P**	**19 34 02.8**	**+1.0**
	comp=Z,2.1nm,0.4s,mb4.5,baz=176,slow=6.6,SNR=14						
ZALV				pP	pP	19 34 14.1	+0.4
	comp=Z,1.5nm,0.4s,baz=178,slow=8.0,SNR=5.7						
ZALV	**Zalesovo Beam**	**50.03**	**354**	P	**P**	**19 34 02.8**	**+1.0**
ZALV				pP	pP	19 34 14.1	+0.4
ABKAR	**Akbulak array**	**52.99**	**333**	*e*P	**P**

CPUP	Villa Florida	144.24	229	PKP	PKPdf	19 44 43.0	-0.9

*ISCJB **26** 19:25:23.0±0.7, 2°.9N±0°.1×65°.1E±0°.1, h10km, mb4.1/13, Error ellipse: s-maj=19.7km s-min=17.1km az=13.7.*
*IDC **26** 19:25:23.4±0.9, 2°.83N×65°.11E, h0km, mb4.1/9, mb1 4.2/9, mb1mx3.9/23, mbtmp4.1/9, Error ellipse: s-maj=26.6km s-min=23.9km az=93.0*
*NEIC **26** 19:25:24.7±0.6, 2°.83N×65°.12E, h10km, mb4.2/5, Error ellipse: s-maj=16.8km s-min=14.7km az=118.0*
ISC 26 19:25:25.2±0.8, 2°.9N±0°.1×65°.2E±0°.1, h10km, n15, σ0°83/14, mb4.1/13, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	36.51	62	P	P	19 32 30.8	-0.3
	1.5nm,0.6s,mb4.0						
CMAR	Chiang Mai Arr	36.51	62	P	P	19 32 30.3	-0.7
	0.2nm,0.3s,mb3.5,baz=247,slow=8.4,SNR=4.3						
CHTO	Chiang Mai	36.64	62	P	P	19 32 31.8	-0.3
	10nm,1.4s,mb4.5						
ABKAR	Akbulak array	46.43	355	eP	P	19 33 52.0	0.0
	1.1nm,0.7s,mb3.9						
BRTR	Keskin Array B	46.52	326	P	P	19 33 53.9	+1.0
	1.2nm,0.8s,mb3.9,baz=133,slow=6.3,SNR=3.6						
LBTB	Lobatse	47.35	232	P	P	19 33 57.0	-2.6
	6.7nm,1.1s,mb4.5,baz=59,slow=5.9,SNR=3.9						
LBTB	Lobatse	47.35	232	eP	P	19 33 56.7	-2.9
	12nm,1.1s,mb4.8						
KURK	Kurchatov	49.01	11	P	P	19 34 11.9	-0.1
	3.1nm,1.0s,mb4.3						
ZALV	Zalesovo Beam	53.41	14	P	P	19 34 43.9	-1.1
	1.5nm,0.6s,mb4.1,baz=208,slow=6.4,SNR=4.0						
SONM	Songino Array	57.12	32	P	P	19 35 12.4	+0.5
	0.6nm,0.7s,mb3.8,baz=229,slow=6.1,SNR=3.7						
MAW	Mawson	70.34	181	P	P	19 36 39.2	+0.5
	0.7nm,0.5s,mb3.9,baz=0.0,slow=12,SNR=3.1						
WRA	Warramunga Arr	71.49	112	P	P	19 36 47.1	+0.4
	4.7nm,0.9s,mb4.4,baz=288,slow=5.8,SNR=16						
ASAR	Alice Springs	71.79	116	P	P	19 36 48.9	+0.4
	2.0nm,0.9s,mb4.1,baz=288,slow=6.3,SNR=12						
PETK	Petropavlovsk-	89.24	37	P	P	19 38 22.2	+0.8
	5.4nm,1.0s,mb4.8,baz=227,slow=5.7,SNR=3.5						
TXAR	Lajitas Array	146.24	342	PKPbc	PKPbc	19 45 06.5	-0.1
	0.7nm,0.7s,baz=38,slow=3.3,SNR=7.8						

*DDA **26** 19:41:26.8, 35°.91N×28°.55E, h22km±2km, Md3.0*
*ATH **26** 19:41:26.6, 36°.63N×28°.40E, h35km±4km, MD3.2/5*
*ISCJB **26** 19:41:27.5±0.9, 36°.01N±0°.04×28°.61E±0°.04, h4km±6km, Error ellipse: s-maj=6.9km s-min=4.5km az=152.2*
*CSEM **26** 19:41:28.1±0.5, 36°.02N×28°.65E, h10km, MD3.2, Error ellipse: s-maj=10.7km s-min=5.4km az=8.0*
*ISK **26** 19:41:29.4, 36°.13N×28°.63E, h16km, MD3.2*
ISC 26 19:41:28.4±0.9, 36°.01N±0°.04×28°.65E±0°.04, h11km±5km, n33, σ0°94/51, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.47	296	ePB	Pg	19 41 36.8	-0.8
ARG				eSB	Sg	19 41 45.3	+1.5
FETY	Fethiye	0.72	29	ePG	Pg	19 41 41.2	-1.0
FETY				eSG	Sg	19 41 51.8	+0.2
FETY	Fethiye	0.72	29	ePg	Pg	19 41 41.2	-1.0
FETY				eSg	Sg	19 41 51.8	+0.2
AKAS	Kas	0.81	74	iP	Pg	19 41 44.3	+0.3
AKAS				iS	Sg	19 41 58.0	+3.5
AKAS	Kas	0.81	74	iP	Pg	19 41 44.3	+0.4
AKAS				iS	Sg	19 41 58.0	+3.5
TURN	Turunc	0.86	358	iP	Pg	19 41 44.2	-0.8
TURN				iS	Sg	19 41 56.9	+0.6
TURN	Turunc	0.86	358	iP	Pg	19 41 44.2	-0.8
TURN				iS	Sg	19 41 56.9	+0.7
DAT	Datca	1.12	310	ePG	Pg	19 41 50.6	+0.6
DAT				eSG	Sg	19 42 04.3	-0.2
DAT	Datca	1.12	310	ePg	Pg	19 41 50.6	+0.7
DAT				eSg	Sg	19 42 04.3	-0.2
YER	Yerkesik	1.16	345	ePG	Pg	19 41 50.0	-0.7
YER	Yerkesik	1.16	345	ePg	Pg	19 41 50.0	-0.7
ELL	Elmali	1.26	54	ePN	Pn	19 41 52.4	+0.5
ELL	Elmali	1.26	54	ePn	Pn	19 41 52.4	+0.5
KARP	Karpathos	1.29	249	ePN	Pn	19 41 52.5	+0.1
KARP				eSN	Sn	19 42 11.7	+2.0
GLHS	Glhisar (BURDU	1.33	31	ePN	Pn	19 41 52.4	-0.5
GLHS	Glhisar (BURDU	1.33	31	ePn	Pn	19 41 52.4	-0.5
GOLH	Golhisar	1.43	31	iP	Pn	19 41 54.1	-0.1
GOLH				iS	Sn	19 42 13.9	+0.8
GOLH	Golhisar	1.43	31	iP	Pn	19 41 54.1	-0.1
GOLH				iS	Sn	19 42 13.9	+0.9
MLSB	Milas	1.46	332	ePN	Pn	19 41 53.8	-0.9
MLSB	Milas	1.46	332	ePn	Pn	19 41 53.8	-0.9
BODT	Bodrum	1.50	315	ePN	Pn	19 41 54.8	-0.5
BODT	Bodrum	1.50	315	ePn	Pn	19 41 54.8	-0.5
DNZL	Cakiroluk	1.71	11	iP	Pn	19 41 58.6	+0.5
DNZL				iS	Sn	19 42 24.0	+4.1
DNZL	Cakiroluk	1.71	11	iP	Pn	19 41 58.6	+0.5
DNZL				iS	Sn	19 42 24.0	+4.1
AYDN	Tasoluk	1.76	340	iP	Pn	19 41 60.0	+1.2
AYDN				iS	Sn	19 42 21.3	+0.1
AYDN	Tasoluk	1.76	340	iP	Pn	19 42 00.0	+1.2
AYDN				iS	Sn	19 42 21.3	+0.1
DENT	Denizli	1.77	10	ePN	Pn	19 41 57.9	-1.0
DENT	Denizli	1.77	10	ePn	Pn	19 41 57.9	-1.0
ZKR	Zakros	2.17	246	ePN	Pn	19 42 05.0	+0.5
ZKR				eSN	Sn	19 42 32.3	+0.9
KULA	Kula-Manisa	2.50	0	ePN	Pn	19 42 08.0	-0.9
KULA	Kula-Manisa	2.50	0	ePn	Pn	19 42 08.0	-1.0
NPS	Neapolis	2.58	254	ePN	Pn	19 42 09.2	-0.9
NPS				eSN	Sn	19 42 38.9	-2.6
LAST	Lasithi	2.72	253	ePN	Pn	19 42 11.4	-0.6

IDC 26 19:44:21.6±1.6, 0°.79N×126°.41E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/17, mbtmp3.7/4, Error ellipse: s-maj=141.4km s-min=17.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.02	160	P	P	19 49 17.2	-0.5
	2.5nm,0.8s,baz=340,slow=11,SNR=28						
WRA				S	S	19 53 23.8	+2.1
	0.2nm,0.8s,baz=332,slow=24,SNR=2.6						
ASAR	Alice Springs	25.38	164	P	P	19 49 50.4	-0.3
	0.8nm,0.3s,baz=346,slow=12,SNR=34						
STKA	Stephens Creek	35.53	157	P	P	19 51 20.2	-0.2
	1.8nm,0.8s,baz=327,slow=7.5,SNR=3.5						
MKAR	Makanchi Array	59.79	326	P	P	19 54 28.9	+0.3
	0.3nm,0.5s,baz=126,slow=7.3,SNR=8.2						

*NEIC **26** 19:48:06.4, 16°.06N×99°.25W, h16km, MD3.7(MEX), After MEX.*
MEX 26 19:48:06.4±0.5, 16°.06N×99°.25W, h16km±10km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.99	324	iP	Pb	19 48 22.8	-2.5
ACX				iS	Sb	19 48 34.4	-3.8
ACX	Acapulco	0.99	324	iP	Pb	19 48 22.8	-2.5
ACX				iS	Sb	19 48 34.4	-3.8
PNIG	Pinotepa	1.12	73	iP	Pb	19 48 23.8	-3.8
PNIG				iS	Sb	19 48 37.7	-4.3
PNIG	Pinotepa	1.12	73	iP	Pb	19 48 23.8	-3.8
PNIG				iS	Sb	19 48 37.7	-4.3
CAIG	El Cayaco	1.38	315	eP	Pn	19 48 27.4	-3.8
CAIG				iS	Sn	19 48 44.9	-4.2
CAIG	El Cayaco	1.38	315	eP	Pn	19 48 27.4	-3.8
CAIG				iS	Sn	19 48 44.9	-4.2
MEIG	Mezcala	1.89	349	eP	Pn	19 48 34.8	-3.3
MEIG				iS	Sn	19 48 57.6	-3.9
UTMO	Huajuapan	2.24	38	eP	Pn	19 48 40.1	-2.7
UTMO				iS	Sn	19 49 05.8	-4.3
PLIG	Platanillo	2.33	354	eP	Pn	19 48 41.1	-3.1
PLIG				iS	Sn	19 49 08.6	-3.9
PLIG	Platanillo	2.33	354	eP	Pn	19 48 41.1	-3.1
PLIG				iS	Sn	19 49 08.6	-3.9
VHO	Vista Hermosa	2.61	67	eP	Pn	19 48 45.7	-2.3
VHO				iS	Sn	19 49 16.5	-3.0
VHO	Vista Hermosa	2.61	67	eP	Pn	19 48 45.7	-2.3
VHO				iS	Sn	19 49 16.5	-3.0
MZVM		3.11	0	eP	Pn	19 48 50.9	-4.0
MZVM				iS	Sn	19 49 28.3	-3.4
PTVM	Pico Tres Padr	3.51	2	eP	Pn	19 49 00.5	+0.1
PTVM				iS	Sn	19 49 38.3	-3.4
PTVM	Pico Tres Padr	3.51	2	eP	Pn	19 49 00.5	+0.1
PTVM				iS	Sn	19 49 38.3	-3.4
IIO	Organos	3.54	8	eP	Pn	19 48 59.0	-1.9
IIO				iS	Sn	19 49 39.4	-3.1
IIO	Organos	3.54	8	eP	Pn	19 48 59.0	-1.9
IIO				iS	Sn	19 49 39.4	-3.1

*DDA **26** 19:48:06.8, 40°.45N×34°.62E, h7km±3km, Md3.2*
*ISK **26** 19:48:06.5, 40°.44N×34°.63E, h16km, MD2.9*
*CSEM **26** 19:48:06.9±0.1, 40°.46N×34°.65E, h8km, MD3.2, Error ellipse: s-maj=3.1km s-min=2.3km az=48.0*
*ISCJB **26** 19:48:07.1±0.5, 40°.47N±0°.03×34°.62E±0°.04, h10km±4km, Error ellipse: s-maj=4.9km s-min=4.5km az=157.7*
ISC 26 19:48:07.4±0.5, 40°.47N±0°.03×34°.62E±0°.04, h9km±4km, n27, σ0°80/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	Corum	0.20	40	iP	Pg	19 48 11.4	-0.1
CTKT				iS	Sg	19 48 15.4	+1.0
CTKT	Corum	0.20	40	iP	Pg	19 48 11.4	-0.2
CTKT				iS	Sg	19 48 15.4	+1.0
CORM	Corum	0.29	178	PG	Pg	19 48 12.3	-0.7
CORM				eSG	Sg	19 48 17.4	+0.5
CORM	Corum	0.29	178	iPg	Pg	19 48 12.3	-0.7
CORM				eSg	Sg	19 48 17.4	+0.5
CANT	Cankiri	0.77	281	ePG	Pg	19 48 22.3	+0.1
CANT				eSG	Sg	19 48 33.5	+1.1
CDAG	Cicekdag	0.86	193	iP	Pg	19 48 23.5	-0.4
CDAG				iS	Sg	19 48 35.2	+0.1
CDAG	Cicekdag	0.86	193	iP	Pg	19 48 23.5	-0.4
CDAG				iS	Sg	19 48 35.2	+0.1
ILGA	Ilgaz	0.90	311	iP	Pg	19 48 24.9	+0.3
ILGA				iS	Sg	19 48 34.9	-1.5
ILGA	Ilgaz	0.90	311	iP	Pg	19 48 24.9	+0.2
ILGA				iS	Sg	19 48 34.9	-1.5
ELDT	Eldivan	0.91	272	iP	Pg	19 48 24.9	+0.1
ELDT				iS	Sg	19 48 36.5	-0.1
ELDT	Eldivan	0.91	272	iP	Pg	19 48 24.9	+0.1
ELDT				iS	Sg	19 48 36.5	-0.1
YOZ	Yozgat	0.98	147	ePG	Pg	19 48 25.4	-0.8
YOZ	Yozgat	0.98	147	ePg	Pg	19 48 25.4	-0.9
BYBT	Boyabat	1.01	6	ePG	Pg	19 48 27.3	+0.5
BYBT	Boyabat	1.01	6	ePg	Pg	19 48 27.3	+0.6
KVT	Kavak	1.25	60	ePN	Pn	19 48 29.4	-1.6
KVT	Kavak	1.25	60	ePn	Pn	19 48 29.4	-1.6
BBAL	Bala	1.47	232	iP	Pn	19 48 34.5	+0.4
BBAL				iS	Sn	19 48 54.9	+1.5
BBAL	Bala	1.47	232	iP	Pn	19 48 34.5	+0.4
BBAL				iS	Sn	19 48 54.9	+1.5
LOD	Lodumlu	1.53	249	ePN	Pn	19 48 34.0	-0.9
LOD	Lodumlu	1.53	249	ePn	Pn	19 48 34.0	-0.9
AFSR	Afar-Bala (A	1.56	230	ePN	Pn	19 48 34.3	-1.1
AFSR	Afar-Bala (A	1.56	230	ePn	Pn	19 48 34.3	-1.0
ERBA	Erbaa	1.64	82	iP	Pn	19 48 37.2	+0.8
ERBA				iS	Sn	19 48 57.8	+0.2
ERBA	Erbaa	1.64	82	iP	Pn	19 48 37.2	+0.8
ERBA				iS	Sn	19 48 57.8	+0.1
SARI	SarD1z-Kayseri	2.40	137	ePN	Pn	19 48 47.4	+0.5
SARI	SarD1z-Kayseri	2.40	137	ePn	Pn	19 48 47.4	+0.6

*ISCJB **26** 19:48:48.6±1.5, 3°.2N±0°.2×65°.6E±0°.2, h10km, mb3.7/9, Error ellipse: s-maj=36.4km s-min=21.8km az=45.0*
*IDC **26** 19:48:48.8±1.5, 3°.12N×65°.56E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/22, mbtmp3.6/7, Error ellipse: s-maj=46.2km s-min=25.2km az=54.0*
*NEIC **26** 19:48:50.5±1.2, 3°.18N×65°.63E, h10km, mb4.0/2, Error ellipse: s-maj=30.5km s-min=20.0km az=217.0*
ISC 26 19:48:50.6±1.5, 3°.2N±0°.2×65°.6E±0°.2, h10km, n12, σ0°89/11, mb3.7/9, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	35.97	63	eP	P	19 55 52.1	+0.3
	1.9nm,0.8s,mb4.1						
CMAR	Chiang Mai Arr	35.97	63	P	P	19 55 52.1	+0.4
	1.1nm,1.0s,mb3.8,baz=249,slow=10,SNR=5.0						
CHTO	Chiang Mai	36.09	62	P	P	19 55 50.4	-2.5
	2.7nm,1.0s,mb4.1						
MKAR	Makanchi Array	45.79	16	P	P	19 57 12.8	+0.4
	0.2nm,0.7s,mb3.1,baz=185,slow=9.7,SNR=2.8						
MKAR				PcP	PcP	19 58 50.2	+0.3
	0.3nm,0.8s,baz=192,slow=4.0,SNR=2.7						
MKAR	Makanchi Array	45.79	16	P	P	19 57 12.8	+0.4
MKAR				PcP	PcP	19 58 50.2	+0.3
BRTR	Keskin Array B	46.52	326	P	P	19 57 17.9	-0.4
	0.9nm,0.9s,mb3.7,baz=153,slow=11,SNR=3.5						
ZALV	Zalesovo Beam	53.00	14	P	P	19 58 06.8	-0.5
	0.9nm,0.6s,mb3.9,baz=198,slow=9.2,SNR=4.6						
SONM	Songino Array	56.62	32	P	P	19 58 35.1	+1.4
	0.4nm,0.7s,mb3.5,baz=235,slow=5.2,SNR=4.7						
WRA	Warramunga Arr	71.19	112	P	P	20 00 10.5	+0.3
	1.1nm,0.7s,mb3.9,baz=290,slow=5.8,SNR=9.7						
WRA	Warramunga Arr	71.19	112	P	P	20 00 10.5	+0.3
ASAR	Alice Springs	71.52	116	P	P	20 00 12.2	0.0
	0.5nm,0.7s,mb3.5,baz=281,slow=5.5,SNR=7.5						
TXAR	Lajitas Array	146.09	343	PKPbc	PKPbc	20 08 31.3	-0.2
	0.8nm,0.8s,baz=61,slow=2.6,SNR=7.8						

*ISCJB **26** 19:58:55.6±1.0, 10°.60N±0°.07×61°.64W±0°.03, h42km±22km, Error ellipse: s-maj=12.4km s-min=5.2km az=170.2*
*FUNV **26** 19:58:55.2, 10°.86N×61°.62W, h16km, MW3.1*
*TRN **26** 19:58:56.4, 10°.59N×61°.59W, h39km, MD2.7*
ISC 26 19:58:55.9±0.6, 10°.60N±0°.08×61°.65W±0°.03, h33km±6km, n10, σ0°93/19, 1C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.24	79	iP	Pb	19 59 03.7	+0.7
GUIV	Guiria	0.57	275	eP	Pb	19 59 07.3	-0.3
GUIV				eS	Sb	19 59 15.2	-0.3
TBH	Brigand Hill	0.58	101	eP	Pb	19 59 08.3	+0.6
TBH				eS	Sb	19 59 14.9	-1.0
TPR	Prospect	1.03	56	eP	Pn	19 59 14.8	+0.7
TPR				eS	Sn	19 59 27.8	+0.4
TOSP	Speyside	1.29	57	eP	Pn	19 59 16.8	-0.9
TOSP				eS	Sn	19 59 33.0	-0.8
GUNV	Guanoco	1.35	251	eP	Pn	19 59 21.2	+2.8
GUNV				eS	Sn	19 59 40.2	+5.0
GRW	Mount Saint Ca	1.55	359	eP	Pn	19 59 22.0	+0.8
GRW				eS	Sn	19 59 40.2	+0.1
CRUV	Carupano	1.56	273	eP	Pn	19 59 21.4	0.0
CRUV				eS	Sn	19 59 41.6	+1.1
ITEV	Isla Los Testi	1.64	297	eP	Pn	19 59 22.2	-0.2
ITEV				eS	Sn	19 59 42.1	-0.2
BIRV	Birongo	4.55	269	eP	Pn	20 00 01.6	-0.9
BIRV				eS	Sn	20 00 51.9	-2.3

*ISCJB **26** 19:59:48.4±0.8, 3°.0N±0°.1×65°.6E±0°.1, h10km, mb3.9/12, Error ellipse: s-maj=20.5km s-min=18.0km az=171.4*
*IDC **26** 19:59:48.6±0.9, 3°.01N×65°.57E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.8/24, mbtmp3.8/10, Error ellipse: s-maj=24.1km s-min=21.3km az=66.0*
*NEIC **26** 19:59:50.1±0.6, 3°.00N×65°.55E, h10km, mb4.8/4, Error ellipse: s-maj=16.7km s-min=15.1km az=96.0*
ISC 26 19:59:50.3±0.8, 3°.0N±0°.1×65°.6E±0°.1, h10km, n18, σ0°86/17, mb3.9/12, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	36.10	62	P	P	20 06 53.8	+1.0
	0.4nm,0.8s,mb3.4,baz=253,slow=9.2,SNR=3.1						
UCH	Uchtor	39.88	10	eP	P	20 07 25.6	+1.3
	2.0nm,0.6s,mb4.0						
MKAR	Makanchi Array	45.99	16	P	P	20 08 12.8	-0.9
	0.4nm,0.9s,mb3.4,baz=197,slow=4.4,SNR=2.5						
BRTR	Keskin Array B	46.65	326	P	P	20 08 18.6	-0.4
	0.5nm,0.8s,mb3.5,baz=151,slow=3.3,SNR=3.0						
AKTK	Aktyubinsk	47.71	353	P	P	20 08 27.7	+0.6
AKTO	Aktyubinsk	47.71	353	P	P	20 08 27.7	+0.6
	0.7nm,0.6s,mb3.9,baz=169,slow=8.3,SNR=3.5						
LBTB	Lobatse	47.74	232	P	P	20 08 28.0	+0.2
	6.0nm,1.0s,mb4.6,baz=73,slow=11,SNR=3.4						
LBTB	Lobatse	47.74	232	eP	P	20 08 28.0	+0.2
	7.0nm,0.9s,mb4.7						
ZALV	Zalesovo Beam	53.20	14	P	P	20 09 07.2	-1.3
	0.5nm,0.5s,mb3.7,baz=214,slow=9.9,SNR=3.6						
ZALV	Zalesovo Beam	53.20	14	P	P	20 09 07.2	-1.3
SONM	Songino Array	56.81	32	P	P	20 09 35.7	+0.9
	0.4nm,0.9s,mb3.5,baz=188,slow=4.1,SNR=3.0						
YHNB	Yeheng	57.84	63	P	P	20 09 38.9	-3.7
	45nm,1.1s						
TLY	Talaya	57.99	27	P	P	20 09 42.4	-0.7
	12nm,1.0s,mb4.9						
WRA	Warramunga Arr	71.16	112	P	P	20 11 10.1	+0.2
	0.9nm,0.7s,mb3.8,baz=288,slow=5.7,SNR=61						
WRA	Warramunga Arr	71.16	112	P	P	20 11 10.1	+0.2
ASAR	Alice Springs	71.48	116	P	P	20 11 11.6	-0.1
	1.5nm,0.8s,mb4.0,baz=288,slow=6.1,SNR=13						
MJAR	Matsushiro Arr	74.29	53	P	P	20 11 27.3	-0.8
	2.5nm,1.0s,mb4.1,baz=224,slow=3.5,SNR=2.8						
TXAR	Lajitas Array	146.25	343	PKPbc	PKPbc	20 19 31.4	-0.4
	1.4nm,1.0s,baz=18,slow=4.4,SNR=5.3						

*NOU **26** 20:00:47.0±1.3, 21°.25S×171°.02E, h83km±999km, MD3.2, ML2.8*
*ISCJB **26** 20:00:49.4±3.1, 23°.4S±0°.1×170°.67E±0°.08, h32km±22km, mb4.0/9, Error ellipse: s-maj=19.4km s-min=8.4km az=30.1*
*IDC **26** 20:00:51.1±1.1, 23°.19S×170°.72E, h28km±6km, mb3.8/7, mb1 4.1/7, mb1mx3.9/15, mbtmp3.8/7, Error ellipse: s-maj=35.7km s-min=22.2km az=148.0*
*NEIC **26** 20:00:51.8±0.7, 23°.36S×170°.75E, mb4.5/2, Error ellipse: s-maj=22.3km s-min=15.0km az=72.0*
ISC 26 20:00:50.9±3.1, 23°.3S±0°.1×170°.71E±0°.08, h29km±23km, h34km±.3km:pP-P,n24, σ0°99/18, mb4.0/9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLUM	Mont Dore	3.89	285	eP	Pn	20 01 48.5	-0.3
PLUM				eS	Sn	20 02 33.1	-0.4
NORM	Noumea	4.04	285	eP	Pn	20 01 50.5	-0.3
MVNO	Noumea	4.07	284	eS	Sn	20 02 37.5	-0.3
NOUC	Port Laguerre	4.24	286	eP	Pn	20 01 52.4	-1.2
NOUC				eS	Sn	20 02 42.8	+0.7
NOUC				AMP		20 02 50.1	
	comp=Z,33nm,0.8s						
OUZ	Omahuta	12.13	169	ePn	Pn	20 03 42.1	+0.4
	comp=Z,7.5nm,0.7s						
HNR	Honiara	17.22	322	P	Pn	20 04 51.3	+1.9
	comp=Z,3.3nm,0.3s,baz=175,slow=9.3,SNR=3.9						
RPZ	Rata Peaks	20.35	179	pP	pP	20 05 34.0	+1.4
	comp=Z,11nm,0.7s,baz=356,slow=8.7,SNR=2.5						
STKA	Stephens Creek	27.11	245	P	P	20 06 32.8	+1.4
	comp=Z,3.1nm,1.0s,mb3.8,baz=97,slow=14,SNR=4.2						
ASAR	Alice Springs	33.69	262	P	P	20 07 29.9	+0.2
	comp=Z,3.9nm,0.9s,mb4.4,baz=97,slow=10,SNR=46						
WRA	Warramunga Arr	33.92	269	P	P	20 07 30.4	-1.2
	comp=Z,0.6nm,0.7s,mb3.6,baz=101,slow=8.1,SNR=8.8						
WRA				pP	pP	20 07 40.2	+0.2
	comp=Z,0.8nm,0.6s,baz=97,slow=8.5,SNR=3.8						
CASY	Casey	56.98	205	eP	P	20 10 32.9	-0.6
	comp=Z,7.2nm,1.2s,mb4.6						
QSPA	South Pole Qui	66.76	180	ePn	P	20 11 38.7	-0.3
	comp=Z,3.8nm,1.0s,mb4.4						
MAW	Mawson	75.19	202	P	P	20 12 30.8	+0.5
	comp=Z,2.7nm,0.9s,mb4.2,baz=124,slow=8.5,SNR=6.8						
MAW				pP	pP	20 12 40.8	+1.4
	comp=Z,1.7nm,0.9s,baz=82,slow=11,SNR=3.3						
CMAR	Chiang Mai Arr	81.42	294	P	P	20 13 07.5	+2.0
	comp=Z,0.2nm,0.3s,mb3.5,baz=131,slow=4.9,SNR=4.9						
VNA3	Neumayer Olymp	85.70	180	e	P	20 13 22.8	-3.9
NVAR	Mina Array Bea	90.48	48	P	P	20 13 49.8	-0.2
	comp=Z,0.5nm,0.9s,mb3.9,baz=224,slow=2.5,SNR=3.4						
ILAR	Eielson Array	93.71	17	P	P	20 14 02.6	-1.7
	comp=Z,0.6nm,0.8s,mb4.1,baz=238,slow=5.1,SNR=4.1						
ILAR				pP	pP	20 14 12.9	-0.6
	comp=Z,0.4nm,0.6s,baz=237,slow=6.3,SNR=2.6						
CRVS	Cervenica-Dubn	144.78	324	eP	PKPdf	20 20 28.0	+3.2
CRVS	Cervenica-Dubn	144.78	324	ePKP	PKPdf	20 20 28.0	+3.2
VYHS	Vyhne	146.42	325	eP	PKPdf	20 20 29.8	+2.2
VYHS	Vyhne	146.42	325	ePKP	PKPdf	20 20 29.8	+2.2
MSKU	Masuku	146.63	225	PKPbc	PKPbc	20 20 30.9	+0.2
	comp=Z,3.7nm,0.7s,baz=102,slow=6.1,SNR=5.1						
CLL	Collm	147.17	334	epPKPdf	pPKPdf	20 20 40.0	+1.7
CLL				epPKiKP		20 20 44.0	
GERES	GERESS Array B	148.70	330	PKPbc	PKPbc	20 20 35.6	+0.5
	comp=Z,1.2nm,0.8s,baz=318,slow=2.6,SNR=8.3						

IDC 26 20:11:30.9±6.8, 28°.08S×178°.12W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/15, mbtmp3.6/2, Error ellipse: s-maj=311.6km s-min=103.1km az=163.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.18	265	P	P	20 19 33.2	-0.5
	0.6nm,0.8s,baz=101,slow=7.8,SNR=7.2						
WRA	Warramunga Arr	43.95	270	P	P	20 19 40.5	+0.5
	0.9nm,1.0s,baz=110,slow=7.7,SNR=5.2						
FINES	FINESS Array B	142.93	341	PKP

*TIF **26** 20:18:02.1, 42.°73N×44.°50E, h10km*
*DDA **26** 20:18:04.8, 42.°70N×42.°72E, h6km, Ml3.6*
ISC 26 20:18:03.1±0.7, **42.°51N**±0.°08×**43.°50E**±0.°05, **h12**km±7km, **n17**, σ0s**74**/32, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.09**	**338**	P	**Pg**	**20 18 05.6**	**-0.2**
ONI				S	**Sg**	**20 18 07.9**	**+0.1**
ONI	**Oni**	**0.09**	**338**	P	**Pg**	**20 18 05.6**	**-0.2**
ONI				S	**Sg**	**20 18 07.9**	**+0.1**
GOR	**Gori**	**0.69**	**139**	P	**Pg**	**20 18 08.3**	**-8.2**
GOR				S	**Sg**	**20 18 25.8**	**+0.2**
TBLG	**Delisi**	**1.21**	**130**	P	**Pn**	**20 18 25.7**	**-0.1**
TBLG				S	**Sb**	**20 18 41.4**	**+0.1**
TBLG	**Delisi**	**1.21**	**130**	P	**Pn**	**20 18 25.7**	**-0.1**
TBLG				S	**Sb**	**20 18 41.4**	**0.0**
MTA	**Mtatsminda**	**1.26**	**130**	P	**Pn**	**20 18 25.9**	**-0.6**
MTA				S	**Sb**	**20 18 42.0**	**-1.0**
DGRG	**David-gareji**	**1.75**	**126**	P	**Pn**	**20 18 34.5**	**+1.2**
DGRG				S	**Sn**	**20 18 59.3**	**+3.8**
DGRG	**David-gareji**	**1.75**	**126**	P	**Pn**	**20 18 34.5**	**+1.2**
DGRG				S	**Sn**	**20 18 59.3**	**+3.8**
ARTV	**Artvin**	**1.77**	**222**	*i* P	**Pn**	**20 18 32.3**	**-1.2**
ARTV				*i* S	**Sn**	**20 18 55.0**	**-0.8**
ARTV	**Artvin**	**1.77**	**222**	*i* P	**Pn**	**20 18 32.3**	**-1.2**
ARTV				*i* S	**Sn**	**20 18 55.0**	**-0.9**
DBOC	**Borcka**	**1.79**	**230**	*i* P	**Pn**	**20 18 33.5**	**-0.4**
DBOC				*i* S	**Sn**	**20 18 56.1**	**-0.4**
DBOC	**Borcka**	**1.79**	**230**	*i* P	**Pn**	**20 18 33.5**	**-0.3**
DBOC				*i* S	**Sn**	**20 18 56.1**	**-0.4**
DAGI	**Agillar**	**1.85**	**220**	*i* P	**Pn**	**20 18 34.4**	**-0.3**
DAGI				*i* S	**Sn**	**20 18 58.2**	**+0.1**
DBAD	**Bademkaya**	**2.01**	**223**	*i* P	**Pn**	**20 18 37.5**	**+0.7**
DBAD	**Bademkaya**	**2.01**	**223**	*i* P	**Pn**	**20 18 37.5**	**+0.7**
DDEM	**Demirkent**	**2.08**	**220**	*i* P	**Pn**	**20 18 38.7**	**+0.9**
DDEM				*i* S	**Sn**	**20 19 04.8**	**+1.3**
DDEM	**Demirkent**	**2.08**	**220**	*i* P	**Pn**	**20 18 38.7**	**+0.9**
DDEM				*i* S	**Sn**	**20 19 04.8**	**+1.3**

IDC 26 20:21:40.3±4.0, **5.°56S×145.°91E, h94**km±39km, **mb3.4**/3, **mb1 3.8**/5, **mb1mx3.4**/16, **mbtmp3.6**/5, **Error ellipse: s-maj=49.0km s-min=17.1km az=113.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**14.45**	**179**	P	Pn	20 24 59.3	-1.0
	0.5nm,0.3s,baz=9.4,slow=13,SNR=4.1						
WRA	**Warramunga Arr**	**18.20**	**217**	P	Pn	20 25 46.9	0.0
	1.7nm,0.3s,baz=44,slow=10.0,SNR=110						
WRA				S	S	20 29 10.3	+0.9
	0.0nm,0.3s,baz=40,slow=21,SNR=3.7						
ASAR	**Alice Springs**	**21.40**	**212**	P	P	20 26 19.7	-0.8
	5.0nm,0.6s,baz=49,slow=8.1,SNR=105						
ASAR				S	S	20 30 13.6	+0.8
	2.1nm,1.1s,baz=29,slow=21,SNR=8.1						
STKA	**Stephens Creek**	**26.49**	**188**	P	P	20 27 09.8	+0.9
	1.0nm,0.6s,baz=352,slow=9.7,SNR=4.4						
MKAR	**Makanchi Array**	**76.47**	**321**	P	P	20 33 19.9	0.0
	0.8nm,1.1s,baz=111,slow=6.5,SNR=4.1						

IDC 26 20:33:17.2±1.7, **24.°06S×66.°73W, h179**km±23km, **mb1 3.2**/3, **mb1mx3.0**/17, **mbtmp3.1**/3, **Error ellipse: s-maj=31.1km s-min=16.1km az=89.0, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.63**	**190**	P	Pn	20 35 07.4	+1.8
	0.0nm,0.3s,baz=20,slow=12,SNR=3.1						
CFAA				S	Sn	20 36 29.5	-1.9
	0.1nm,0.3s,baz=120,slow=20,SNR=4.7						
LPAZ	**La Paz**	**7.84**	**350**	P	Pn	20 35 10.8	+2.2
	0.5nm,0.3s,baz=169,slow=5.2,SNR=4.4						
LPAZ				S	Sn	20 36 35.8	-0.8
	0.1nm,0.3s,baz=135,slow=17,SNR=2.9						
CPUP	**Villa Florida**	**8.81**	**107**	P	Pn	20 35 21.6	+0.5
	0.3nm,0.3s,baz=281,slow=10,SNR=4.4						
BDFB	**Brasilia**	**19.48**	**68**	P	P	20 37 30.1	-0.5
	0.2nm,0.3s,baz=256,slow=12,SNR=3.7						
MKAR	**Makanchi Array**	**146.41**	**40**	PKPbc	PKPbc	20 52 36.2	-0.7
	0.4nm,0.6s,baz=305,slow=4.0,SNR=5.1						

TRN 26 20:41:39.1, 16.°10N×60.°04W, h53km, **MD3.6, M3.3**(FDF), **2C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGG	**Marie-Galante**	**1.24**	**262**	*e*P	Pn	20 42 01.5	+1.3
DWS	**Wesley**	**1.33**	**247**	*e*P	Pn	20 42 03.7	+2.2
DWS				*e*S	Sn	20 42 20.1	+2.0
DLPL	**La Plaine**	**1.39**	**237**	*e*P	Pn	20 42 03.8	+1.6
DLPL				*e*S	Sn	20 42 21.2	+1.7
BCG	**Bois Riant Cap**	**1.52**	**270**	*e*P	Pn	20 42 06.9	+2.9
PHG	**Guadaloupe-2**	**1.55**	**267**	*e*P	Pn	20 42 06.5	+2.1
TBG	**Guadaloupe-3**	**1.57**	**261**	*e*P	Pn	20 42 06.1	+1.5
SCG	**Saint Claude**	**1.58**	**268**	*e*P	Pn	20 42 07.2	+2.4
HMG	**Houelmont**	**1.60**	**266**	*e*P	Pn	20 42 07.0	+1.9
HMG				*e*S	Sn	20 42 30.1	+5.4
LZG	**Guadaloupe-1**	**1.67**	**272**	*e*P	Pn	20 42 07.7	+1.7
FDF	**Fort de France**	**1.73**	**219⇑**	*e*P	Pn	20 42 07.7	+0.9
FDF			**⇑**	*e*S	Sn	20 42 30.9	+3.1
MVM	**Montagne Vaucl**	**1.74**	**209**	*e*P	Pn	20 42 07.7	+0.7
MVM				*e*S	Sn	20 42 30.8	+2.7
BIM	**Bigot**	**1.86**	**213**	*e*P	Pn	20 42 09.5	+0.9
BIM				*e*S	Sn	20 42 33.9	+2.9
SLW	**Petit Monier**	**2.24**	**203**	*e*P	Pn	20 42 14.4	+0.6
SLW				*e*S	Sn	20 42 41.4	+1.1
SLB	**Belfond**	**2.46**	**203**	*e*P	Pn	20 42 18.8	+2.1
SLB				*e*S	Sn	20 42 46.5	+1.0
MCLT	**Moule a Chique**	**2.53**	**200**	*e*P	Pn	20 42 20.3	+2.5
MCLT				*e*S	Sn	20 42 49.7	+2.4
SKI	**Saint Kitts**	**2.87**	**296**	*e*P	Pn	20 42 23.3	+0.9
SKI				*e*S	Sn	20 42 56.7	+1.0
SSV	**Crater Summit**	**2.97**	**202**	*e*P	Pn	20 42 25.5	+1.7
SSV				*e*S	Sn	20 42 59.3	+1.0
BHS	**Barnard House**	**2.98**	**201**	*e*P	Pn	20 42 25.8	+1.9
BHS				*e*S	Sn	20 43 00.8	+2.3
SVV	**Soufriere Volc**	**2.99**	**203**	*e*P	Pn	20 42 26.0	+1.9
SVV				*e*S	Sn	20 43 00.4	+1.7
SVB	**Belmont**	**3.04**	**203**	*e*P	Pn	20 42 26.6	+1.8
SVB				*e*S	Sn	20 43 01.7	+1.7

*DHMR **26** 20:54:09.5±0.8, 12.°16N×40.°80E, h8km±78km, ML4.3*
*ISCJB **26** 20:54:16.7±1.2, 12.°3N±0.°1×40.°9E±0.°1, h10km, Error ellipse: s-maj=21.9km s-min=5.4km az=138.0*
ISC 26 20:54:19.3±1.2, **12.°3N**±0.°1×**40.°9E**±0.°1, **h10**km, **n7**, σ0s**64**/13, **Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**3.25**	**73**	*i* P	**Pn**	**20 55 05.8**	**-4.7**
TRBA				*i* S	**Sn**	**20 55 49.4**	**+0.1**
TRBA				AML	AML	20 55 56.4	
	comp=N,2μm,0.5s						
UDYN	**Al 'Udayn**	**3.41**	**60**	*i* P	**Pn**	**20 55 07.5**	**-5.1**
UDYN				*i* S	**Sn**	**20 55 53.9**	**+0.9**
UDYN				AML	AML	20 56 13.9	
	comp=E,1μm,0.7s						
AAE	**Adis Abeba**	**3.87**	**213**	*e*PN	**Pn**	**20 55 18.1**	**-0.9**
AAE				*e*S	**Sn**	**20 56 05.2**	**+0.7**
DHBB	**Dhamar BB**	**4.07**	**56**	*i* P	**Pn**	**20 55 17.4**	**-4.3**
DHBB				*i* S	**Sn**	**20 56 09.7**	**+0.4**
HAJJ	**Hajjah**	**4.27**	**37**	*i* S	**Sn**	**20 56 14.4**	**-0.1**
LBOS		**4.50**	**69**	*i* P	**Pn**	**20 55 22.6**	**-5.0**
LBOS				*i* S	**Sn**	**20 56 19.8**	**-0.3**
BDHA	**Al Bayda'**	**4.83**	**69**	*i* P	**Pn**	**20 55 27.2**	**-4.9**
BDHA				*i* S	**Sn**	**20 56 27.4**	**-0.7**

IDC 26 21:01:39.8±2.4, **2.°13N×126.°99E, h0**km, **mb3.3**/3, **mb1 3.6**/3, **mb1mx3.4**/17, **mbtmp3.4**/3, **Error ellipse: s-maj=191.6km s-min=27.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.09**	**162**	P	P	21 06 47.5	+0.1
	0.4nm,0.3s,baz=341,slow=10,SNR=23						
ASAR	**Alice Springs**	**26.51**	**166**	P	P	21 07 18.9	-0.3
	0.2nm,0.3s,baz=344,slow=7.8,SNR=5.5						
MKAR	**Makanchi Array**	**59.01**	**326**	P	P	21 11 41.7	+0.3
	0.3nm,0.6s,baz=122,slow=8.5,SNR=3.5						

*SGS **26** 21:16:22.2, 32.°60N×49.°00E, h7km*
*KISR **26** 21:16:22.2±1.1, 32.°40N×48.°84E, h34km±999km, ML2.5*
*CSEM **26** 21:16:23.5±0.4, 32.°73N×48.°97E, h20km, ML2.5, Error ellipse: s-maj=18.3km s-min=8.0km az=118.0*
*TEH **26** 21:16:24.0, 32.°70N×48.°98E, h25km*
ISC 26 21:16:22.8±0.9, **32.°71N**±0.°03×**49.°01E**±0.°03, **h13**km±7km, **n35**, σ0s**82**/49, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**1.59**	**90**	*e*Pn	**Pn**	**21 16 51.1**	**+0.5**
IPIR				*e*Sg	**Sg**	**21 17 14.9**	**+1.0**
IPIR				*e*		21 17 16.6	
	comp=Z,5μm,0.2s						
IKOM	**Komasi**	**1.93**	**320**	*e*Pn	**Pn**	**21 16 55.3**	**+0.1**
IKOM				*e*		21 16 58.2	
	comp=Z,2μm,0.1s						
ASAO	**Ashtian**	**2.02**	**25**	*e*Pn	**Pn**	**21 16 57.0**	**+0.4**
IKLH	**Kolahrood**	**2.25**	**74**	*e*Pn	**Pn**	**21 17 00.2**	**+0.6**
IKLH				*e*Sn	**Sn**	**21 17 27.4**	**+0.2**
IKLH				*e*		21 17 36.2	
	comp=Z,1μm,0.2s						
IVIS	**Veis**	**2.56**	**316**	*e*	**Pg**	**21 17 11.2**	**-0.6**
	comp=Z,603nm,0.1s						
IVIS				*e*Pn	**Pn**	**21 17 03.8**	**-0.1**
IGAR	**Gharneh**	**2.58**	**96**	*e*Pn	**Pn**	**21 17 04.4**	**+0.2**
IGAR				*e*		21 17 49.9	
	comp=Z,505nm,0.3s						
IGHG	**Ghaleghazi**	**2.60**	**309**	*e*Pn	**Pn**	**21 17 04.9**	**+0.4**
IGHG				*e*		21 18 02.4	
	comp=Z,765nm,0.3s						
GHVR	**GHOM**	**2.60**	**47**	*e*Pn	**Pn**	**21 17 04.8**	**+0.3**
SNGE	**Sanandaj**	**2.75**	**330**	*e*Pn	**Pn**	**21 17 06.8**	**+0.2**
ILIN	**Lien**	**2.79**	**323**	*e*	**Pb**	**21 17 12.9**	**+0.5**
	comp=Z,454nm,0.1s						
ILIN				*e*Pn	**Pn**	**21 17 07.0**	**0.0**
IRAZ	**Razeghan**	**2.80**	**16**	*e*	**Pg**	**21 17 17.2**	**+0.8**
	comp=Z,489nm,0.2s						
IRAZ				*e*Pn	**Pn**	**21 17 08.1**	**+0.9**
IRAZ				*e*Sn	**Sn**	**21 17 39.2**	**-1.6**
IZEF	**Zefreh**	**2.80**	**85**	*e*	**Sg**	**21 17 51.3**	**-1.6**
	comp=Z,406nm,0.2s						
IZEF				*e*Pn	**Pn**	**21 17 07.9**	**+0.6**
IDHR	**Dehrash**	**2.95**	**313**	*e*	**Pg**	**21 17 24.4**	**+5.1**
	comp=Z,690nm,0.2s						
IDHR				*e*Pn	**Pn**	**21 17 08.7**	**-0.6**
ISFB	**Sefidab**	**3.16**	**58**	*e*Pn	**Pn**	**21 17 12.1**	**-0.1**
ISFB				*e*		21 17 19.2	
	comp=Z,174nm,0.2s						
NASN	**Na'in**	**3.20**	**87**	*e*Pn	**Pn**	**21 17 13.1**	**+0.3**
MIB	**Mutribah**	**3.23**	**207**	*e*P	**Pn**	**21 17 13.6**	**+0.5**
MIB				*e*S	**Sn**	**21 17 52.2**	**+0.7**
MIB				AML	AML	21 17 57.1	
	comp=Z,19nm,0.6s						
MIB	**Mutribah**	**3.23**	**207**	*e*P	**Pn**	**21 17 13.6**	**+0.5**
MIB				*e*S	**Sn**	**21 17 52.2**	**+0.8**
UMR	**Umm Al-Rimmam**	**3.33**	**200**	*e*P	**Pn**	**21 17 15.0**	**+0.4**
UMR				*e*S	**Sn**	**21 17 54.4**	**+0.4**
UMR				AML	AML	21 18 07.8	
	comp=Z,21nm,0.6s						
UMR	**Umm Al-Rimmam**	**3.33**	**200**	*e*P	**Pn**	**21 17 15.0**	**+0.4**
UMR				*e*S	**Sn**	**21 17 54.4**	**+0.4**
NAY	**Al-Naaiem**	**3.77**	**204**	*e*P	**Pn**	**21 17 20.4**	**-0.1**
NAY				*e*S	**Sn**	**21 18 04.8**	**+0.1**
NAY				AML	AML	21 18 08.5	
	comp=Z,7.7nm,0.7s						
NAY	**Al-Naaiem**	**3.77**	**204**	*e*P	**Pn**	**21 17 20.4**	**-0.1**
NAY				*e*S	**Sn**	**21 18 04.8**	**+0.1**
IDMV	**Damavand**	**3.81**	**40**	*e*Pn	**Pn**	**21 17 21.1**	**0.0**
IDMV				*e*		21 18 31.1	
	comp=Z,212nm,0.3s						
RDF	**Al-Radifah**	**3.97**	**199**	*e*P	**Pn**	**21 17 24.3**	**+0.9**
RDF	**Al-Radifah**	**3.97**	**199**	*e*P	**Pn**	**21 17 24.3**	**+0.9**
ILAS	**Lasjerd**	**4.23**	**50**	*e*Pn	**Pn**	**21 17 26.2**	**-0.7**
ILAS				*e*		21 18 53.5	
	comp=Z,140nm,0.2s						
IFIR	**Firoozkooh**	**4.27**	**46**	*e*Pn	**Pn**	**21 17 27.3**	**-0.1**
IFIR				*e*		21 17 28.7	
	comp=Z,137nm,0.1s						
ISHM	**Shahmirzad**	**4.71**	**48**	*e*Pn	**Pn**	**21 17 33.5**	**+0.1**
ISHM				*e*		21 17 49.4	
	comp=Z,190nm,0.2s						
ISRV	**Sarvestan**	**4.84**	**132**	*e*Pn	**Pn**	**21 17 34.7**	**-0.6**
ISRV				*e*		21 18 34.8	
	comp=Z,123nm,0.1s						
ASYS		**6.57**	**219**	S	**Sn**	**21 19 07.5**	**-6.4**
ASYS		**6.57**	**219**	P	**Pn**	**21 17 56.3**	**-2.8**
ASYS		**6.57**	**219**	P	**Pn**	**21 17 56.3**	**-2.8**
BTHS		**8.78**	**169**	S	**Sn**	**21 19 59.9**	**-8.3**
BTHS		**8.78**	**169**	P	**Pn**	**21 18 26.2**	**-3.2**
BTHS		**8.78**	**169**	P	**Pn**	**21 18 26.2**	**-3.2**
HRDDS		**9.75**	**178**	P	**Pn**	**21 18 40.4**	**-2.3**

*IDC **26** 21:24:52.3±0.8, 7.°21S×155.°90E, h46km±7km, mb3.8/10, mb1 4.0/11, mb1mx3.9/18, mbtmp3.8/11, ML4.1/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/26, Error ellipse: s-maj=18.5km s-min=14.3km az=30.0*
*ISCJB **26** 21:24:56.0±1.7, 7.°3S±0.°1×156.°10E±0.°08, h105km±18km, mb3.9/10, Error ellipse: s-maj=19.8km s-min=13.4km az=176.6*
*NEIC **26** 21:24:57.0±1.1, 7.°30S×156.°15E, h101km±10km, Error ellipse: s-maj=12.8km s-min=10.4km az=171.0*
ISC 26 21:24:57.6±1.4, **7.°3S**±0.°1×**156.°11E**±0.°08, **h105**km±15km, **h47**km±1.9km: **pP-P, n18**, σ0s**71**/17, **mb3.9**/10, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.35**	**119**	P	**Pn**	**21 26 00.1**	**-1.5**
	9.4nm,0.3s,baz=202,slow=11,SNR=5.2						
HNR				S	**Sn**	**21 26 52.3**	**+1.0**
	27nm,0.3s,baz=128,slow=19,SNR=3.1						
HNR				LR	LR	21 27 42.3	
	comp=Z,158nm,20.4s,baz=289,slow=37						
PMG	**Port Moresby**	**9.10**	**256**	*e*Pn	**Pn**	**21 27 06.9**	**+0.8**
CTA	**Charters Tower**	**15.91**	**216**	LR	LR	21 33 35.9	
	comp=Z,126nm,20.5s,baz=85,slow=33						
WB2	**Warramunga Arr**	**24.56**	**237**	*e*P	**P**	**21 30 07.5**	**-0.3**
WRA	**Warramunga Arr**	**24.57**	**237**	P	**P**	**21 30 08.0**	**+0.1**
	11nm,0.6s,mb4.5,baz=61,slow=9.8,SNR=110						
ASAR	**Alice Springs**	**26.82**	**230**	P	**P**	**21 30 27.6**	**-0.5**
	1.1nm,0.5s,mb3.7,baz=58,slow=10,SNR=42						
ASAR				pP	pP	21 30 39.0	-12
	0.5nm,0.4s,baz=60,slow=10.0,SNR=4.4						
STKA	**Stephens Creek**	**27.95**	**207**	P	**P**	**21 30 38.1**	**-0.1**
	3.3nm,1.1s,mb3.8,baz=41,slow=14,SNR=2.8						
STKA				pP	pP	21 30 50.8	-11
	1.6nm,0.8s,baz=67,slow=19,SNR=2.1						
STKA				LR	LR	21 41 45.6	
	comp=Z,144nm,19.9s,baz=25,slow=36						
FITZ	**Fitzroy Crossi**	**31.55**	**247**	P	**P**	**21 31 09.3**	**-0.9**
	4.4nm,0.6s,mb4.4,baz=94,slow=7.1,SNR=19						
FITZ				LR	LR	21 44 10.9	
	comp=Z,76nm,19.4s,baz=67,slow=37						
MJAR	**Matsushiro Arr**	**46.73**	**340**	P	**P**	**21 33 15.3**	**-0.8**
	1.1nm,0.8s,mb3.7,baz=136,slow=8.2,SNR=3.0						
MJAR	**Matsushiro Arr**	**46.73**	**340**	P	**P**	**21 33 15.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**61.91**	**295**	P	**P**	**21 35 07.2**	**+0.6**
	0.8nm,0.7s,mb3.9,baz=134,slow=5.8,SNR=6.9						
SONM	**Songino Array**	**70.19**	**327**	P	**P**	**21 35 59.8**	**+0.9**
	0.4nm,0.5s,mb3.5,baz=145,slow=5.3,SNR=6.0						
MK31	**Makanchi Array**	**84.36**	**318**	*e*P	**P**	**21 37 18.2**	**+0.1**
MKAR	**Makanchi Array**	**84.36**	**318**	P	**P**	**21 37 18.4**	**+0.3**
	0.5nm,0.5s,mb3.6,baz=95,slow=8.4,SNR=11						
MKAR				pP	pP	21 37 32.7	-13
	0.8nm,0.7s,baz=106,slow=6.1,SNR=4.9						
MKAR	**Makanchi Array**	**84.36**	**318**	P	**P**	**21 37 18.4**	**+0.3**
MKAR				pP	pP	21 37 32.7	-13
MAW	**Mawson**	**84.55**	**203**	P	**P**	**21 37 19.4**	**+0.7**
	0.4nm,0.3s,mb3.8,baz=90,slow=5.1,SNR=2.8						
MAW				pP	pP	21 37 33.0	-13
	1.8nm,0.9s,baz=26,slow=2.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**85.05**	**326**	P	**P**	**21 37 20.9**	**-0.5**
	0.7nm,0.5s,mb3.8,baz=97,slow=4.6,SNR=4.0						
BDFB	**Brasilia**	**146.98**	**134**	PKPbc	PKPbc	21 44 29.8	+0.8
	4.2nm,0.6s,baz=270,slow=2.0,SNR=5.9						

*IDC **26** 21:40:35.0±6.6, 15.°05S×167.°44E, h111km±50km, mb3.8/10, mb1 4.0/11, mb1mx3.8/19, mbtmp3.9/11, MS3.2/1, Ms1 3.2/1, ms1mx2.4/28, Error ellipse: s-maj=44.7km s-min=21.3km az=108.0*
*ISCJB **26** 21:40:36.3±2.0, 15.°04S±0.°07×167.°3E±0.°1, h132km±14km, mb4.0/16, Error ellipse: s-maj=23.8km s-min=8.1km az=159.2*
*NEIC **26** 21:40:36.4±2.4, 15.°04S×167.°37E, h121km±18km, mb4.3/6, Error ellipse: s-maj=19.1km s-min=9.0km az=104.0*
*LDG **26** 21:40:41.1±0.3, 15.°14S×167.°90E, h160km, Error ellipse: s-maj=75.8km s-min=3.1km az=97.0*
ISC 26 21:40:36.8±1.8, **15.°00S**±0.°07×**167.°4E**±0.°1, **h125**km±12km, **n50**, σ0s**74**/22, **mb4.1**/16, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.09**	**187**	*e*P	**Pn**	**21 42 17.5**	**-0.6**
DZM				*e*S	**Sn**	**21 43 37.5**	**+0.3**
NOUC	**Port Laguerre**	**7.14**	**188**	*e*S	**Sn**	**21 43 38.7**	**+0.4**
HNR	**Honiara**	**9.12**	**306**	P	**Pn**	**21 42 45.3**	**-0.2**
	8.2nm,0.3s,baz=164,slow=7.8,SNR=6.6						
HNR				S	**Sn**	**21 44 26.1**	**-0.2**
	18nm,0.3s,baz=226,slow=10,SNR=3.4						
ARMA	**Armidale**	**21.09**	**221**	*e*P	**P**	**21 45 12.9**	**+1.7**
	8.6nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**28.89**	**230**	P	**P**	**21 46 24.6**	**+0.7**
	9.4nm,0.6s,mb4.6,baz=40,slow=7.1,SNR=37						
STKA				PcP	PcP	21 49 29.5	-0.7
	3.1nm,0.8s,baz=32,slow=2.6,SNR=5.3						
WRA	**Warramunga Arr**	**31.85**	**256**	P	**P**	**21 46 49.3**	**-0.8**
	0.7nm,0.6s,mb3.5,baz=86,slow=8.7,SNR=9.0						
WRA				PcP	PcP	21 49 37.4	-0.8
	0.3nm,0.3s,baz=86,slow=4.3,SNR=5.5						
ASAR	**Alice Springs**	**32.67**	**249**	P	**P**	**21 46 56.8**	**-0.5**
	4.9nm,0.8s,mb4.4,baz=81,slow=9.1,SNR=45						
GUMO	**Guam**	**36.09**	**321**	LR	LR	21 59 17.9	
	comp=Z,34nm,20.6s,baz=123,slow=31						
FORT	**Forrest**	**39.24**	**240**	*e*P	**P**	**21 47 52.6**	**-0.6**
	22nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**40.06**	**260**	P	**P**	**21 47 59.9**	**-0.2**
	1.7nm,0.6s,mb4.0,baz=0.0,slow=0.0						
MBWA	**Marble Bar**	**45.57**	**255**	*e*P	**P**	**21 48 44.2**	**-0.3**
	5.7nm,0.8s,mb4.3						
CASY	**Casey**	**63.32**	**202**	*e*P	**P**	**21 50 50.9**	**-1.2**
	2.2nm,0.6s,mb4.3						
QSPA	**South Pole Qui**	**75.03**	**180**	*e*P	**P**	**21 52 03.4**	**-0.8**
	12nm,1.2s,mb4.5						
CMAR	**Chiang Mai Arr**	**75.14**	**294**	P	**P**	**21 52 07.2**	**+1.3**
	1.1nm,0.7s,mb3.7,baz=128,slow=4.9,SNR=7.9						
MAW	**Mawson**	**81.67**	**202**	P	**P**	**21 52 40.2**	**-0.7**
	0.8nm,0.5s,mb3.8,baz=98,slow=13,SNR=3.7						
SONM	**Songino Array**	**82.76**	**324**	P	**P**	**21 52 47.1**	**+0.4**
	0.5nm,0.5s,mb3.6,baz=158,slow=7.3,SNR=5.3						
LSA	**Lhasa**	**85.78**	**302**	*e*P	**P**	**21 53 03.3**	**+0.8**
	1.5nm,0.5s,mb4.2						
ILAR	**Eielson Array**	**86.75**	**18**	P	**P**	**21 53 06.5**	**+0.1**
	0.2nm,0.5s,mb3.3,baz=226,slow=6.2,SNR=3.5						
MK31	**Makanchi Array**	**97.46**	**316**	*e*P	**P**	**21 53 56.7**	**+0.3**
MKAR	**Makanchi Array**	**97.46**	**316**	P	**P**	**21 53 57.4**	**+1.0**
	0.7nm,0.7s,mb4.2,baz=93,slow=6.2,SNR=8.6						
ZALV	**Zalesovo Beam**	**97.66**	**324**	P	**P**	**21 53 56.2**	**-0.9**
	0.6nm,0.6s,mb4.3,baz=79,slow=7.5,SNR=3.2						
ARCES	**ARCESS Array B**	**120.53**	**345**	PKP	PKPdf	21 59 12.1	-0.9
	1.5nm,0.6s,baz=17,slow=1.6,SNR=8.1						
CDF	**Champ du Feu**	**142.86**	**338**	*e*PKP1	PKPdf	21 59 56.4	+0.9
CABF	**La Chapelle**	**144.81**	**337**	*e*PKP1	PKPdf	21 59 59.0	0.0
	37nm,1.0s						
FLN	**La Foliniere**	**144.88**	**346**	*e*PKP1	PKPdf	21 59 58.2	-0.8
LDF	**La Druitiere**	**144.95**	**345**	*e*PKP1	PKPdf	21 59 58.2	-1.0
	3.6nm,0.5s						
LOR	**Lormes**	**145.02**	**340**	*e*PKP1	PKPbc	21 59 59.2	+0.3
	10nm,0.7s						
GRR	**Gorron**	**145.31**	**346**	*e*PKP1	PKPbc	21 59 59.8	0.0
	41nm,1.0s						
SSF	**Saint Saulge**	**145.31**	**340**	*e*PKP1	PKPbc	22 00 00.3	+0.4
	25nm,0.8s						
HYF	**Humbligny**	**145.40**	**342**	*e*PKP1	PKPbc	22 00 00.8	+0.7
LPL	**La Plagne**	**145.47**	**336**	*e*PKP1	PKPbc	22 00 01.2	+0.8
	17nm,0.9s						
LPG	**La Plagne**	**145.48**	**336**	*e*PKP1	PKPbc	22 00 01.4	+1.0
	13nm,1.0s						
SMF	**Signal de Mont**	**145.57**	**340**	*e*PKP1	PKPbc	22 00 00.

mb1 4.2/18, mb1mx4.1/27, mbtmp4.0/18, ML3.6/3, Error ellipse: s-maj=24.7km s-min=14.8km az=61.0
*BJI **26** 21:55:17.6, 30°.86N×110°.84E, h11km, mB4.3/1, mb4.0/4, ML4.0/16, Ms4.0/3, Ms7 3.6/2*
*NEIC **26** 21:55:19.0±0.4, 30°.92N×110°.88E, h10km, mb4.1/5, Error ellipse: s-maj=8.4km s-min=7.4km az=149.0*
ISC 26 21:55:17.9±1.1, 30°.88N±0°.03×110°.85E±0°.03, h2km±7km, n43, σ1s 06/55, mb4.2/25, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**1.33**	**243**	*e*Pn	**Pn**	**21 55 43.0**	**-0.4**
ENH				*e*Sn	**Sn**	**21 56 00.7**	**-0.9**
WHN	**Wuhan**	**3.03**	**96**	Pn	**Pn**	**21 56 07.5**	**+0.6**
WHN				Pg	**Pg**	**21 56 16.0**	**0.0**
WHN				Sn	**Sn**	**21 56 45.5**	**+1.8**
WHN				Sg	**Sb**	**21 56 48.0**	**-2.0**
WHN				smax			
	comp=N,1μm,0.7s						
WHN				smax			
	comp=E,710nm,0.4s						
XAN	**Xi'an**	**3.55**	**333**	Pn	**Pn**	**21 56 14.8**	**+0.9**
XAN				Pg	**Pg**	**21 56 24.0**	**-1.8**
XAN				Sg	**Sb**	**21 57 05.0**	**+0.2**
XAN				smax			
	comp=N,470nm,0.9s						
XAN				smax			
	comp=E,250nm,0.6s						
GYA	**Guiyang**	**5.74**	**221**	Pn	**Pn**	**21 56 47.0**	**+2.8**
GYA				Sn	**Sn**	**21 57 49.3**	**-1.3**
GYA				Sg	**Sg**	**21 58 22.0**	**-0.3**
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,130nm,0.8s						
LZH	**Lanzhou**	**7.82**	**313**	*e*Pn	**Pn**	**21 57 13.5**	**+0.8**
LZH				Pg	**Pb**	**21 57 38.0**	**+3.8**
LZH				Sn	**Sn**	**21 58 38.3**	**-3.5**
LZH				Sg	**Sb**	**21 59 17.0**	**+9.2**
LZH				smax			
	comp=N,220nm,1.0s						
LZH				smax			
	comp=E,190nm,1.0s						
LZH				LR	LR		
	comp=N,320nm,4.3s						
LZH				LR	LR		
	comp=E,320nm,4.6s						
LZH				LR	LR		
	comp=Z,420nm,5.1s						
KMI	**Kunming**	**9.18**	**233**	P	**Pn**	**21 57 34.3**	**+2.9**
KMI				S	**Sn**	**21 59 12.8**	**-2.5**
KMI				smax			
	comp=N,19nm,0.7s						
KMI				smax			
	comp=E,25nm,0.9s						
GTA	**Gaotai**	**12.40**	**316**	*e*P	**Pn**	**21 58 15.3**	**-0.1**
GTA				pP		21 58 20.0	
GTA				sP		21 58 22.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSRS	**Korea Array**	**15.57**	**61**	Pn	**Pn**	**21 58 57.2**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=244,slow=11,SNR=3.2						
CMAR	**Chiang Mai Arr**	**16.42**	**224**	Pn	**Pn**	**21 59 13.6**	**+4.1**
	comp=Z,0.2nm,0.3s,baz=29,slow=10.0,SNR=8.0						
SONM	**Songino Array**	**17.27**	**350**	P	**Pn**	**21 59 20.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=5.5						
TAPN	**Taplejung**	**20.52**	**266**	*e*P	**P**	**21 59 59.5**	**+2.1**
	comp=Z,33nm,1.0s						
ODAN	**Odare**	**20.93**	**265**	*e*P	**P**	**22 00 02.1**	**+0.2**
	comp=Z,7.8nm,0.4s						
GUN	**Gumba**	**21.95**	**269**	*e*P	**P**	**22 00 14.2**	**+1.3**
	comp=Z,17nm,0.5s,mb4.7						
KKN	**Kakani**	**22.49**	**269**	*e*P	**P**	**22 00 18.5**	**-0.2**
	comp=Z,15nm,0.6s,mb4.6						
DMN	**Daman**	**22.69**	**268**	*e*P	**P**	**22 00 20.5**	**-0.2**
	comp=Z,13nm,0.7s,mb4.4						
GKN	**Gorkha**	**22.99**	**269**	*e*P	**P**	**22 00 23.6**	**-0.4**
	comp=Z,12nm,0.5s,mb4.6						
DANN	**Dangsing**	**23.67**	**271**	*e*P	**P**	**22 00 30.5**	**-0.5**
	comp=Z,12nm,0.4s,mb4.7						
MK31	**Makanchi Array**	**27.14**	**314**	*e*P	**P**	**22 01 02.1**	**-0.2**
MKAR	**Makanchi Array**	**27.14**	**314**	P	**P**	**22 01 02.9**	**+0.5**
	comp=Z,1.9nm,0.6s,mb3.8,baz=111,slow=11,SNR=27						
ZAA0	**Zalesovo Array**	**29.70**	**328**	*e*P	**P**	**22 01 24.4**	**-0.7**
ZALV	**Zalesovo Beam**	**29.70**	**328**	P	**P**	**22 01 25.3**	**+0.2**
	comp=Z,2.5nm,0.6s,mb4.1,baz=122,slow=8.7,SNR=15						
TKM2	**Tokmak 2**	**30.43**	**303**	*e*P	**P**	**22 01 32.6**	**+1.0**
	comp=Z,1.7nm,0.8s,mb3.8						
KURK	**Kurchatov**	**31.07**	**319**	*e*P	**P**	**22 01 37.2**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.8						
EKS2	**Erkin-Say**	**31.70**	**302**	*e*P	**P**	**22 01 43.7**	**+0.9**
	comp=Z,1.7nm,0.7s,mb4.0						
KBL	**Kabul**	**35.19**	**287**	*e*P	**P**	**22 02 15.1**	**+1.7**
	comp=Z,3.9nm,0.9s,mb4.3						
ABKAR	**Akbulak array**	**42.18**	**311**	*e*P	**P**	**22 03 12.0**	**+0.2**
	comp=Z,3.0nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**55.34**	**153**	P	**P**	**22 04 54.0**	**+0.7**
	comp=Z,1.6nm,0.8s,mb4.1,baz=347,slow=8.1,SNR=13						
WRA	**Warramunga Arr**	**55.34**	**153**	P	**P**	**22 04 54.0**	**+0.7**
ASAR	**Alice Springs**	**58.57**	**155**	P	**P**	**22 05 17.0**	**+0.9**
	comp=Z,1.1nm,0.7s,mb4.0,baz=337,slow=6.7,SNR=13						
ARCES	**ARCESS Array B**	**59.83**	**336**	P	**P**	**22 05 24.3**	**0.0**
	comp=Z,0.9nm,0.4s,mb4.2,baz=75,slow=7.8,SNR=14						
FINES	**FINESS Array B**	**60.95**	**327**	P	**P**	**22 05 32.4**	**+0.3**
	comp=Z,2.8nm,1.0s,mb4.3,baz=110,slow=10,SNR=8.9						
FINES	**FINESS Array B**	**60.95**	**327**	P	**P**	**22 05 32.4**	**+0.3**
AKASG	**Malin Array Be**	**61.72**	**314**	P	**P**	**22 05 36.6**	**-0.9**
	comp=Z,2.2nm,0.5s,mb4.6,baz=66,slow=7.1,SNR=8.8						
BRTR	**Keskin Array B**	**61.85**	**301**	P	**P**	**22 05 38.9**	**+0.3**
	comp=Z,1.7nm,0.8s,mb4.2,baz=96,slow=7.6,SNR=6.9						
BUR08	**Bucovina Ar. S**	**65.14**	**312**	*e*P	**P**	**22 06 00.3**	**+0.1**
ILAR	**Eielson Array**	**67.47**	**27**	P	**P**	**22 06 13.6**	**-1.3**
	comp=Z,1.2nm,0.9s,mb3.9,baz=284,slow=5.7,SNR=8.1						
NB2	**NORSAR Subarra**	**67.91**	**329**	P	**P**	**22 06 17.2**	**-0.5**
	comp=Z,1.2nm,0.6s,mb4.1,baz=67,slow=6.2						
NOA	**NORSAR Array B**	**67.91**	**329**	P	**P**	**22 06 16.8**	**-0.8**
	comp=Z,1.1nm,0.6s,mb4.1,baz=67,slow=6.2,SNR=6.1						
STKA	**Stephens Creek**	**68.88**	**152**	P	**P**	**22 06 24.6**	**+0.6**
	comp=Z,1.7nm,0.9s,mb4.0,baz=342,slow=3.2,SNR=2.2						
INK	**Inuvik**	**70.37**	**21**	P	**P**	**22 06 31.7**	**-1.2**
	comp=Z,2.8nm,0.6s,mb4.3,baz=318,slow=10,SNR=7.8						
GERES	**GERESS Array B**	**71.78**	**316**	P	**P**	**22 06 41.6**	**-0.1**
	comp=Z,0.2nm,0.5s,mb3.3,baz=142,slow=6.6,SNR=4.0						
DLBC	**Dease Lake**	**77.62**	**28**	P	**P**	**22 07 13.6**	**-1.9**
	comp=Z,0.9nm,0.4s,mb4.0,baz=185,slow=26,SNR=2.9						
YKA	**Yellowknife Ar**	**80.08**	**20**	P	**P**	**22 07 28.5**	**-0.3**
	comp=Z,1.1nm,0.6s,mb4.0,baz=327,slow=4.9,SNR=5.2						

DJA 26 21:55:50, 1°.61N×99°.99E, h10km, MLv3.5/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.91**	**207**	P	Pg	21 56 15.0	+7.5
BKNI	**Bangkinang**	**1.65**	**141**	S	Sn	21 56 40.2	-0.2
TSI	**Tuntungan**	**2.36**	**323**	P	Pn	21 56 30.3	+1.5
TPTI		**3.25**	**300**	P	Pn	21 56 40.6	-0.5

*IDC **26** 22:23:17.5±0.6, 40°.40N×73°.21E, h0km, mb4.0/14, mb1 4.2/18, mb1mx4.0/29, mbtmp4.0/18, ML3.5/5, MS3.3/7, Ms1 3.3/7, ms1mx2.9/43, Error ellipse: s-maj=12.9km s-min=10.3km az=136.0*
*ISCJB **26** 22:23:18.2±1.2, 40°.32N±0°.03×72°.88E±0°.04, h15km±9km, mb4.0/23, MS3.5/4, Error ellipse: s-maj=5.4km s-min=5.1km az=161.9*
*NEIC **26** 22:23:21.0±2.1, 40°.32N×73°.05E, h26km±16km, mb4.1/6, Error ellipse: s-maj=9.2km s-min=5.5km az=59.0*
*MOS **26** 22:23:22.5±1.5, 40°.62N×72°.94E, h33km, mb4.2/15, Error ellipse: s-maj=10.6km s-min=6.6km az=84.0*
*BJI **26** 22:23:23.0, 40°.52N×72°.98E, h26km, mb3.8/3, ML4.1/6*
*NNC **26** 22:23:27.0±1.1, 40°.99N×72°.74E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=11.4km s-min=4.5km az=175.0*
ISC 26 22:23:18.9±1.0, 40°.36N±0°.03×72°.93E±0°.04, h7km±6km, n124, σ1s 35/141, mb4.0/23, MS3.5/4, 15C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.86**	**18**	P	**Pn**	**22 23 51.2**	**0.0**
	SNR=1129						
AML	**Almayashu**	**1.86**	**18**	*e*Pn	**Pn**	**22 23 51.2**	**0.0**
AML				*e*Sn	**Sn**	**22 24 12.8**	**-2.1**
UCH	**Uchtor**	**2.21**	**32**	P	**Pn**	**22 23 57.0**	**+1.0**
	SNR=272						
UCH	**Uchtor**	**2.21**	**32**	*e*Pn	**Pn**	**22 23 56.8**	**+0.7**
UCH				*e*Sn	**Sn**	**22 24 22.6**	**-1.1**
EKS2	**Erkin-Say**	**2.38**	**15**	P	**Pn**	**22 23 59.7**	**+1.2**
	SNR=449						
EKS2	**Erkin-Say**	**2.38**	**15**	*e*Pn	**Pn**	**22 23 59.7**	**+1.3**
EKS2				*e*Sn	**Sn**	**22 24 26.5**	**-1.4**
KZA	**Kyzart**	**2.45**	**45**	P	**Pn**	**22 24 00.9**	**+1.6**
	SNR=16						
KZA	**Kyzart**	**2.45**	**45**	*e*Pn	**Pn**	**22 24 01.0**	**+1.7**
KZA				*e*Pg	**Pg**	**22 24 05.9**	**+0.1**
KSH	**Kashi**	**2.48**	**109**	⇓*i*Pn	**Pn**	**22 24 03.3**	**+3.5**
KSH				Sn	**Sn**	**22 24 33.8**	**+3.5**
KSH				smax			
	comp=N,1μm,0.7s						
KSH				smax			
	comp=E,1μm,0.7s						
AAK	**Ala-Archa**	**2.56**	**27**	P	**Pn**	**22 24 02.3**	**+1.5**
	SNR=220						
AAK	**Ala-Archa**	**2.56**	**27**	Pn	**Pn**	**22 24 02.3**	**+1.5**
	comp=E,1.0nm,0.3s,baz=162,slow=5.5,SNR=203						
AAK				Sn	**Sn**	**22 24 32.3**	**+0.2**
	comp=E,6.9nm,0.3s,baz=34,slow=19,SNR=35						
AAK				LR	LR	22 25 07.7	
	comp=E,348nm,20.0s,baz=78,slow=45						
AAK	**Ala-Archa**	**2.56**	**27**	*e*Pn	**Pn**	**22 24 01.9**	**+1.2**
AAK				*e*Sn	**Sn**	**22 24 33.3**	**+1.2**
AAK	**Ala-Archa**	**2.56**	**27**	PN	**Pn**	**22 24 02.3**	**+1.5**
AAK						22 24 32.3	
AAK				pmax	pmax		
	comp=Z,48nm,0.3s						
AAK				smax			
	comp=N,345nm,0.3s						
KBK	**Karagaybulak**	**2.75**	**33**	P	**Pn**	**22 24 05.1**	**+1.7**
	SNR=46						
KBK	**Karagaybulak**	**2.75**	**33**	*e*Pb	**Pb**	**22 24 05.0**	**-3.3**
FRU	**Bishkek**	**2.77**	**27**	*e*PN	**Pn**	**22 24 06.0**	**+2.2**
FRU				*i* S	**Sn**	**22 24 39.0**	**+1.5**
FRU				pmax	pmax		
	comp=Z,530nm,1.4s						
FRU				smax			
	comp=N,2μm,1.4s						
CHMS	**Chumysh**	**2.97**	**27**	P	**Pn**	**22 24 07.7**	**+1.3**
	SNR=74						
ULHL	**Ulahol**	**3.12**	**52**	P	**Pn**	**22 24 09.5**	**+1.0**
	SNR=13						
USP	**Ospenovka**	**3.13**	**21**	P	**Pn**	**22 24 09.8**	**+1.1**
	SNR=31						
CHM	**Chimkent**	**3.18**	**309**	*e*Pn	**Pn**	**22 24 07.7**	**-1.7**
CHM				*e*Sg	**Sn**	**22 24 45.8**	**-1.8**
CHM	**Chimkent**	**3.18**	**309**	*e*PN	**Pn**	**22 24 07.7**	**-1.6**
CHM				*e*		22 24 45.8	
TKM2	**Tokmak 2**	**3.25**	**37**	⇓Pn	**Pn**	**22 24 14.3**	**+4.1**
	comp=N,28nm,0.6s						
TKM2				⇑Pg	**Pg**	**22 24 19.4**	**-1.6**
	comp=N,144nm,0.5s						
TKM2				⇓Sn	**Sn**	**22 24 51.5**	**+2.4**
	comp=N,171nm,0.5s						
TKM2				⇓Lg		22 24 59.5	
	comp=N,176nm,0.5s						
TKM2	**Tokmak 2**	**3.25**	**37**	P	**Pn**	**22 24 11.2**	**+1.0**
	SNR=30						
TKM2	**Tokmak 2**	**3.25**	**37**	*e*Pn	**Pn**	**22 24 10.9**	**+0.7**
TKM2				*e*Pg	**Pg**	**22 24 17.9**	**-3.2**
TKM2				*e*Sg	**Sb**	**22 24 55.8**	**-0.7**
TKM2	**Tokmak 2**	**3.25**	**37**	*e*PN	**Pn**	**22 24 10.9**	**+0.7**
TKM2				*e*		22 24 17.9	
TKM2				*e*		22 24 55.8	
KK31	**Karatay Array**	**3.29**	**327**	Pn	**Pn**	**22 24 13.9**	**+3.1**
	comp=N,4.8nm,0.3s,baz=135,slow=13,SNR=2195						
KK31				⇑Pg	**Pg**	**22 24 16.5**	**-5.4**
	comp=N,118nm,0.5s,baz=143,slow=16						
KK31				⇑Lg		22 24 52.5	
	comp=N,192nm,0.5s,baz=138,slow=31,SNR=5.3						
KKAR	**Karatay Array**	**3.29**	**327**	*e*Pn	**Pn**	**22 24 12.7**	**+1.9**
KKAR				*e*Pg	**Pg**	**22 24 19.3**	**-2.6**
KKAR				*e*Sg	**Sn**	**22 24 50.4**	**+0.3**
KKAR	**Karatay Array**	**3.29**	**327**	*e*PN	**Pn**	**22 24 12.7**	**+1.9**
KKAR				*e*		22 24 19.3	
KKAR				*e*		22 24 50.4	
KNDC	**Almaty**	**4.15**	**45**	⇑Pn	**Pn**	**22 24 27.9**	**+5.2**
	comp=N,107nm,0.8s						
KNDC				⇓Pg	**Pg**	**22 24 36.7**	**-1.7**
	comp=N,226nm,0.8s						
KNDC				⇑Lg		22 25 29.7	
	comp=N,694nm,0.9s						
CEP	**Cherat**	**6.58**	**187**	P	**Pn**	**22 25 04.6**	**+8.6**
CEP				S	**Sn**	**22 26 24.0**	**+13**
KBL	**Kabul**	**6.58**	**209**	*e*Pn	**Pn**	**22 25 04.5**	**+8.4**
KBL				*e*Sn	**Sn**	**22 26 21.7**	**+10**
KBL	**Kabul**	**6.58**	**209**	*e*PN	**Pn**	**22 25 04.5**	**+8.4**
KBL				*e*		22 26 21.7	
CHCP	**Chirah Chowk**	**6.69**	**178**	P	**Pn**	**22 25 06.0**	**+8.4**
THW	**Thamme Wali**	**7.61**	**188**	P	**Pn**	**22 25 17.2**	**+7.0**
MK31	**Makanchi Array**	**9.35**	**43**	⇑Pn	**Pn**	**22 25 40.1**	**+6.1**
	comp=N,2.4nm,0.7s,baz=226,slow=11,SNR=7.4						
MK31				⇑Lg		22 28 09.9	
	comp=N,5.6nm,0.6s,baz=221,slow=27,SNR=5.6						
MK31	**Makanchi Array**	**9.35**	**43**	*e*Pn	**Pn**	**22 25 33.1**	**-0.9**
MK31	**Makanchi Array**	**9.35**	**43**	*e*P	**Pn**	**22 25 33.1**	**-0.9**
MKAR	**Makanchi Array**	**9.35**	**43**	Pn	**Pn**	**22 25 33.2**	**-0.8**
	comp=N,0.2nm,0.3s,baz=227,slow=15,SNR=12						
MKAR				Lg		22 28 06.5	
	comp=N,1.1nm,0.3s,baz=231,slow=27,SNR=4.2						
MKAR				LR	LR	22 29 20.0	
	comp=N,90nm,21.2s,baz=168,slow=40						
MKAR	**Makanchi Array**	**9.35**	**43**	Pn	**Pn**	**22 25 33.2**	**-0.8**
MKAR				Lg		22 28 06.5	
MKAR				LR	LR	22 29 20.0	
MKAR	**Makanchi Array**	**9.35**	**43**	P	**Pn**	**22 25 33.2**	**-0.8**
KURBB	**Kurchatov Arra**	**10.98**	**19**	⇑Pn	**Pn**	**22 25 57.6**	**+1.2**
	comp=N,0.4nm,0.4s						
KURBB				⇓Lg		22 28 59.2	
	comp=N,14nm,0.6s						
KURK	**Kurchatov**	**11.09**	**19**	⇓Pn	**Pn**	**22 25 59.5**	**+1.6**
	comp=N,3.9nm,1.0s						
KURK				⇓Lg		22 29 02.7	
	comp=N,58nm,0.9s						
KURK	**Kurchatov**	**11.09**	**19**	*e*Pn	**Pn**	**22 25 56.5**	**-1.3**
KURK	**Kurchatov**	**11.09**	**19**	*e*P	**Pn**	**22 25 56.5**	**-1.4**
VOSK	**Vostochnaya**	**12.44**	**354**	⇑Pn	**Pn**	**22 26 15.5**	**-0.8**
	comp=N,4.1nm,0.7s						
VOSK				⇓Lg		22 29 42.7	
	comp=N,68nm,0.9s						
BVA0	**Borovoye Array**	**12.79**	**353**	⇑Pn	**Pn**	**22 26 21.1**	**+0.1**
	comp=N,0.6nm,0.6s						
BVA0				⇑Lg		22 29 53.1	
	comp=N,3.2nm,0.7s						
BVAR	**Borovoye Array**	**12.79**	**353**	Pn	**Pn**	**22 26 19.0**	**-2.0**
	comp=N,0.4nm,0.3s,baz=150,slow=12,SNR=4.8						
BVAR				Lg		22 30 02.5	
	comp=N,1.1nm,0.3s,baz=154,slow=30,SNR=4.4						
BVAR	**Borovoye Array**	**12.79**	**353**	P	**Pn**	**22 26 19.0**	**-2.0**
AB31	**Akbulak array**	**12.80**	**318**	⇑Pn	**Pn**	**22 26 21.8**	**+0.7**
	comp=N,3.1nm,0.5s,baz=108,slow=15,SNR=61						
AB31				⇑Sn	**Sn**	**22 28 40.1**	**-3.7**
	comp=N,1.6nm,0.3s						
ABKAR	**Akbulak array**	**12.80**	**318**	*e*Pn	**Pn**	**22 26 20.1**	**-1.0**
BRVK	**Borovoye**	**12.83**	**353**	⇓Pn	**Pn**	**22 26 21.8**	**+0.2**
	comp=N,6.0nm,0.6s						
BRVK				⇑Lg		22 29 54.7	
	comp=N,73nm,1.0s						
BRVK	**Borovoye**	**12.83**	**353**	*e*Pn	**Pn**	**22 26 23.1**	**+1.5**
	comp=N,4.5nm,0.6s						
BRVK	**Borovoye**	**12.83**	**353**	*e*P	**Pn**	**22 26 23.1**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZRNK	**Zerenda**	**12.88**	**349**	⇑Pn	**Pn**	**22 26 21.3**	**-0.9**
	comp=Z,3.0nm,1.0s						
ZRNK				⇓Lg		22 29 56.5	
	comp=Z,30nm,1.1s						
AKTK	**Aktyubinsk**	**14.51**	**319**	Pn	**Pn**	**22 26 44.3**	**-0.2**
AKTO	**Aktyubinsk**	**14.51**	**319**	⇓Pn	**Pn**	**22 26 44.8**	**+0.3**
	comp=Z,0.9nm,0.8s						
AKTO				⇓Sn	**Sn**	**22 29 21.9**	**-3.6**
	comp=Z,1.1nm,0.8s						
AKTO	**Aktyubinsk**	**14.51**	**319**	Pn	**Pn**	**22 26 44.3**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=136,slow=12,SNR=5.8						
AKTO	**Aktyubinsk**	**14.51**	**319**	P	**Pn**	**22 26 44.3**	**-0.2**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DANN	**Dangsing**	**14.93**	**140**	*e*P	**Pn**	**22 26 49.8**	**-0.6**
	comp=Z,13nm,0.3s						
GKN	**Gorkha**	**15.66**	**138**	*e*P	**Pn**	**22 26 59.1**	**-0.9**
	comp=Z,13nm,0.3s						
ZAA0	**Zalesovo Array**	**15.78**	**27**	*e*Pn	**Pn**	**22 27 00.2**	**-1.2**
ZALV	**Zalesovo Beam**	**15.78**	**27**	Pn	**Pn**	**22 26 59.8**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=8.5						
ZALV				LR	LR	22 33 22.9	
	comp=Z,53nm,20.7s,baz=225,slow=39						
ZALV	**Zalesovo Beam**	**15.78**	**27**	P	**Pn**	**22 26 59.8**	**-1.7**
NVS	**Novosibirsk**	**16.04**	**22**	*e*P	**Pn**	**22 27 11.6**	**+6.8**
NVS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.6s						
KKN	**Kakani**	**16.16**	**137**	*e*P	**Pn**	**22 27 05.5**	**-1.0**
	comp=E,14nm,0.6s						
KKN	**Kakani**	**16.16**	**137**	*e*P	**Pn**	**22 27 05.5**	**-1.0**
KKN				pmax	pmax		
	comp=Z,14nm,0.6s						
DMN	**Daman**	**16.22**	**138**	*e*P	**Pn**	**22 27 06.3**	**-0.9**
	comp=Z,30nm,1.1s						
TAPN	**Taplejung**	**17.83**	**132**	*e*P	**Pn**	**22 27 26.1**	**-1.4**
	comp=Z,21nm,0.7s						
ODAN	**Odare**	**18.03**	**134**	*e*P	**Pn**	**22 27 27.1**	**-2.9**
	comp=Z,23nm,0.6s						
LSA	**Lhasa**	**18.29**	**120**	P	**Pn**	**22 27 41.3**	**+8.2**
LSA	**Lhasa**	**18.29**	**120**	*e*P	**Pn**	**22 27 41.4**	**+8.3**
LSA	**Lhasa**	**18.29**	**120**	*e*P	**Pn**	**22 27 41.4**	**+8.3**
ARU	**Arti**	**18.63**	**334**	*e*P	**Pn**	**22 27 35.4**	**-1.8**
	comp=Z,5.4nm,1.0s						
ARU	**Arti**	**18.63**	**334**	*e*P	**Pn**	**22 27 45.5**	**+8.3**
GTA	**Gaotai**	**20.63**	**84**	*e*P	**P**	**22 27 58.8**	**0.0**
GTA				pP		22 28 06.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GNI	**Garni**	**21.49**	**279**	P	**P**	**22 28 11.3**	**+3.3**
	comp=Z,4.6nm,0.7s,mb3.9,baz=49,slow=11,SNR=3.1						
GNI	**Garni**	**21.49**	**279**	*e*P	**P**	**22 28 08.8**	**+0.7**
	comp=Z,13nm,0.8s,mb4.3						
GNI	**Garni**	**21.49**	**279**	*e*P	**P**	**22 28 08.8**	**+0.7**
GNI				pmax	pmax		
	comp=Z,13nm,0.8s						
ZEI	**Tsey**	**21.81**	**286**	*e*P	**P**	**22 28 13.3**	**+1.7**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
MOY	**Mondy**	**22.39**	**50**	*e*P	**P**	**22 28 24.7**	**+7.1**
ZAK	**Zakamensk**	**23.41**	**55**	*e*P	**P**	**22 28 33.4**	**+5.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.6						
SONM	**Songino Array**	**25.02**	**61**	P	**P**	**22 28 42.4**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.0,baz=279,slow=12,SNR=2.5						
SONM	**Songino Array**	**25.02**	**61**	P	**P**	**22 28 42.4**	**-0.9**
ULN	**Ulaanbaatar**	**25.46**	**61**	*e*P	**P**	**22 28 49.2**	**+1.9**
	comp=Z,1.6nm,0.7s,mb3.7						
ULN	**Ulaanbaatar**	**25.46**	**61**	*e*P	**P**	**22 28 49.2**	**+1.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
BRTR	**Keskin Array B**	**29.92**	**282**	P	**P**	**22 29 30.2**	**+2.8**
	comp=Z,0.7nm,0.6s,mb3.6,baz=71,slow=7.5,SNR=3.6						
BRTR	**Keskin Array B**	**29.92**	**282**	P	**P**	**22 29 30.2**	**+2.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CHTO	**Chiang Mai**	**30.99**	**126**	*e*P	**P**	**22 29 42.7**	**+5.7**
	comp=Z,0.9nm,0.6s,mb3.8						
CHTO	**Chiang Mai**	**30.99**	**126**	*e*P	**P**	**22 29 42.7**	**+5.7**
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
BOD	**Bodaibo**	**31.44**	**42**	*e*P	**P**	**22 29 39.4**	**-1.2**
BOD				*e*		22 29 45.6	
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
AKASG	**Malin Array Be**	**31.89**	**304**	P	**P**	**22 29 44.9**	**+0.3**
	comp=Z,0.4nm,0.4s,mb3.6,baz=81,slow=7.7,SNR=4.7						
AKASG	**Malin Array Be**	**31.89**	**304**	P	**P**	**22 29 44.9**	**+0.3**
AKASG	**Malin Array Be**	**31.89**	**304**	P	**P**	**22 29 44.9**	**+0.3**
FINES	**FINESS Array B**	**35.23**	**323**	P	**P**	**22 30 13.7**	**0.0**
	comp=Z,1.6nm,0.5s,mb4.2,baz=102,slow=8.9,SNR=12						
FINES	**FINESS Array B**	**35.23**	**323**	P	**P**	**22 30 13.7**	**+0.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**38.22**	**335**	P	**P**	**22 30 39.0**	**0.0**
	comp=Z,1.6nm,0.5s,mb4.0,baz=110,slow=10,SNR=20						
ARCES	**ARCESS Array B**	**38.22**	**335**	P	**P**	**22 30 39.0**	**0.0**
ARCES	**ARCESS Array B**	**38.22**	**335**	P	**P**	**22 30 39.0**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YAK	**Yakutsk**	**39.97**	**38**	*e*P	**P**	**22 30 58.7**	**+5.0**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb

0.2nm,0.3s,baz=111,slow=8.1,SNR=16
FITZ Fitzroy Crossi 52.77 270 P P 22 39 55.1 +0.1
1.3nm,0.9s,baz=135,slow=1.4,SNR=3.3
FINES FINESS Array B 146.32 340 PKPbc PKPbc 22 50 18.9 -0.9
3.1nm,1.0s,baz=51,slow=4.4,SNR=4.1

ISCJB ***26*** *22:40:04.2±0.3, 16°.17N±0°.07×48°.68W±0°.05, h10km, mb4.5/64, MS3.4/9, Error ellipse: s-maj=9.7km s-min=6.2km az=7.5*
IDC ***26*** *22:40:04.0±0.5, 16°.14N×48°.70W, h0km, mb4.2/21, mb1 4.4/21, mb1mx4.3/27, mbtmp4.2/21, MS3.4/9, Ms1 3.4/9, ms1mx3.1/30, Error ellipse: s-maj=15.6km s-min=15.1km az=115.0*
NEIC ***26*** *22:40:05.7±0.2, 16°.14N×48°.66W, h10km, mb4.6/43, Error ellipse: s-maj=6.8km s-min=4.9km az=189.0*
ISC 26 22:40:06.1±0.3, 16°.17N±0°.07×48°.63W±0°.05, h10km, n242, σ0=69/234, mb4.5/64, MS3.4/9, 78C-73D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRGR	Grenville	13.25	254	ePn	Pn	22 43 14.9	+0.5
SDDR	Presa de Saban	21.78	281	eP	P	22 44 58.4	+0.2
22nm,0.8s,mb4.6							
RCBR	Riachuelo	25.22	149	LR	LR	22 53 04.6	
comp=Z,48nm,21.7s,MS3.0,baz=328,slow=31							
BDFB	Brasilia	31.61	179	P	P	22 46 28.6	-0.7
5.4nm,0.7s,mb4.5,baz=252,slow=20,SNR=6.0							
BDFB				LR	LR	22 57 46.8	
comp=Z,92nm,21.4s,MS3.4,baz=267,slow=34							
TKL	Tuckaleechee C	36.83	309	P	P	22 47 13.9	-0.5
3.4nm,0.8s,mb4.2,baz=114,slow=5.9,SNR=3.6							
LPAZ	La Paz	37.55	212	P	P	22 47 20.3	-0.4
3.4nm,0.9s,mb4.1,baz=22,slow=6.8,SNR=7.8							
LPAZ				LR	LR	23 02 54.0	
comp=Z,66nm,19.9s,MS3.4,baz=62,slow=36							
LPAZ	La Paz	37.55	212	eP	P	22 47 20.5	-0.2
4.5nm,0.9s,mb4.2							
MDT	Midelt	43.01	59	P	P	22 48 06.3	+0.4
0.9nm,0.7s,mb3.6,baz=270,slow=6.5,SNR=3.1							
CPUP	Villa Florida	43.08	191	P	P	22 48 05.4	-1.0
0.8nm,0.2s,mb4.0,baz=2.8,slow=7.1,SNR=9.4							
CPUP				LR	LR	23 06 39.4	
comp=Z,42nm,19.3s,MS3.4,baz=1.7,slow=37							
DBIC	Dimbokro	43.84	97	P	P	22 48 14.1	+1.2
6.0nm,1.2s,mb4.2,baz=284,slow=8.3,SNR=3.2							
DBIC	Dimbokro	43.84	97	P	P	22 48 14.1	+1.2
ESDC	Sonseca Array	45.30	50	PcP	PcP	22 50 04.0	+0.1
0.3nm,0.5s,baz=266,slow=3.4,SNR=4.1							
KSU1	Kansas State U	47.60	308	eP	P	22 48 41.0	-1.2
7.7nm,0.4s,mb5.1							
WMOK	Wichita Mounta	48.39	302	eP	P	22 48 47.3	-1.1
4.5nm,0.8s,mb4.5							
TORD	Torodi Ar. Bea	48.68	87	P	P	22 48 49.7	-1.2
21nm,0.4s,mb5.5,baz=291,slow=6.3,SNR=0.1							
JCT	Junction City	48.72	296	eP	P	22 48 49.7	-1.4
CBKS	Cedar Bluff	49.91	307	⇑P	P	22 49 00.0	+0.1
baz=50							
CBKS	Cedar Bluff	49.91	307	eP	P	22 48 59.7	-0.3
27nm,0.7s,mb5.4							
AMTX	Amarillo	50.77	302	⇓P	P	22 49 06.2	-0.4
baz=51,SNR=5.0							
AMTX	Amarillo	50.77	302	eP	P	22 49 05.7	-0.9
6.4nm,0.7s,mb4.7							
ULM	Lac du Bonnet	50.88	323	P	P	22 49 06.4	-0.8
2.1nm,0.6s,mb4.2,baz=90,slow=5.1,SNR=2.6							
428A	Kincaid Ranch,	51.22	297	⇑P	P	22 49 09.4	-0.6
baz=51							
528A	Cox Ranch, San	51.27	296	⇓P	P	22 49 10.2	-0.3
baz=51							
628A	Black Gap, Mar	51.33	295	⇑P	P	22 49 10.9	+0.1
baz=51,SNR=7.3							
MSTX	Muleshoe	51.56	301	⇑P	P	22 49 12.4	-0.2
baz=52,SNR=7.3							
627A	Terlingua Ranc	51.76	295	⇓P	P	22 49 13.6	-0.5
baz=52							
427A	Hayter Ranch,	51.84	297	⇑P	P	22 49 13.7	-1.0
baz=52,SNR=5.6							
Y27A	Causey	51.88	301	⇓P	P	22 49 14.9	0.0
baz=52,SNR=11							
527A	Woodward Ranch	51.98	296	⇓P	P	22 49 15.0	-0.7
baz=52,SNR=6.7							
TXAR	Lajitas Array	52.00	295	P	P	22 49 15.5	-0.4
2.0nm,0.9s,mb4.0,baz=108,slow=7.1,SNR=14							
TXAR				PcP	PcP	22 50 27.9	-0.4
0.5nm,0.7s,baz=128,slow=5.8,SNR=2.9							
TXAR				LR	LR	23 12 13.1	
comp=Z,42nm,20.8s,MS3.5,baz=0.0,slow=37							
OGNE	Ogallala	52.08	310	⇑P	P	22 49 16.0	-0.3
baz=52							
ESK	Eskdalemuir	52.22	31	eP	P	22 49 17.2	+0.1
21nm,1.2s,mb4.9							
426A	McDonald Obser	52.37	296	P	P	22 49 18.4	-0.2
baz=52,SNR=12							
526A	Mary Lane Ranc	52.40	296	⇓P	P	22 49 17.7	-1.1
baz=52							
626A	Big Bend Ranch	52.41	295	⇑P	P	22 49 18.2	-0.8
baz=52							
Z26A	Caprock	52.50	300	⇓P	P	22 49 18.7	-0.8
baz=52,SNR=9.3							
U26A	Atchley Ranch,	52.64	304	⇑P	P	22 49 20.5	0.0
baz=53,SNR=7.0							
125A	Gardner Draw,	53.02	299	⇑P	P	22 49 22.8	-0.6
baz=53							
225A	Deer Hill, Car	53.13	298	⇑P	P	22 49 24.2	0.0
baz=53							
Y25A	Mesa, Roswell	53.15	300	⇑P	P	22 49 24.8	+0.4
baz=53,SNR=8.7							
U25A	Circle Dot Ran	53.17	304	⇑P	P	22 49 24.6	+0.1
baz=53							
425A	Indio Mountain	53.20	297	⇓P	P	22 49 25.3	+0.6
baz=53,SNR=13							
325A	Bean Ranch, Si	53.21	297	⇓P	P	22 49 24.7	-0.1
baz=53,SNR=6.9							
V25A	Rancho No Teng	53.27	303	⇑P	P	22 49 25.4	+0.2
baz=53							
S25A	Robets Cordova	53.35	305	⇓P	P	22 49 26.5	+0.8
baz=53,SNR=5.3							
MNTX	Cornudas Mount	53.58	298	⇑P	P	22 49 27.2	-0.3
baz=54,SNR=8.4							
MNTX	Cornudas Mount	53.58	298	eP	P	22 49 26.8	-0.7
4.6nm,0.9s,mb4.4							
324A	Moseley Ranch,	53.65	297	⇓P	P	22 49 27.6	-0.5
baz=54,SNR=9.1							
124A	Stringfield Ra	53.70	299	⇑P	P	22 49 28.1	-0.3
baz=54							
224A	Cornudas Mount	53.72	298	⇑P	P	22 49 28.1	-0.4
baz=54,SNR=11							
Y24A	Capitan	53.76	300	⇓P	P	22 49 28.3	-0.6
baz=54,SNR=5.9							
V24A	Rampart Ranch,	53.79	303	⇑P	P	22 49 29.0	0.0
baz=54							
W24A	Lazy 6 Ranch,	53.85	302	⇓P	P	22 49 30.1	+0.6
baz=54,SNR=7.3							
R24A	Sanders Place,	53.95	306	⇓P	P	22 49 30.7	+0.5
baz=54							
S24A	Houchin Ranch,	53.96	305	⇑P	P	22 49 31.1	+0.8
baz=54							
SDCO	Great Sand Dun	54.20	305	P	P	22 49 32.7	+0.7
baz=54,SNR=9.6							
SDCO	Great Sand Dun	54.20	305	eP	P	22 49 31.9	-0.1
2.6nm,0.6s,mb4.3							
M24A	Cheyenne	54.25	310	⇑P	P	22 49 33.4	+1.1
baz=54,SNR=5.5							
Y23A	Lovelace Mesa,	54.28	300	⇑P	P	22 49 32.9	+0.3
baz=54,SNR=5.4							
ISCO	Idaho Springs	54.57	308	⇓P	P	22 49 34.8	+0.2
baz=54,SNR=6.3							
ISCO	Idaho Springs	54.57	308	eP	P	22 49 35.0	+0.4
3.6nm,0.8s,mb4.5							
U23A	El Rito	54.59	303	⇑P	P	22 49 35.1	+0.3
baz=54,SNR=8.1							
ANMO	Albuquerque	54.69	302	eP	P	22 49 35.8	+0.2
2.1nm,0.9s,mb4.2							
BNM	Barren Site	54.77	301	eP	P	22 49 36.3	+0.2
5.7nm,0.8s,mb4.7							
KEST	Kesra	54.87	58	P	P	22 49 37.7	+0.9
1.4nm,0.8s,mb4.0,baz=314,slow=12,SNR=6.3							
KEST	Kesra	54.87	58	eP	P	22 49 37.6	+0.8
N23A	Red Feather La	54.98	309	⇑P	P	22 49 37.9	+0.3
baz=55							
Z22A	Elephant Butte	54.99	299	⇓P	P	22 49 37.8	0.0
baz=55							
Y22A	Socorro	55.03	300	⇑P	P	22 49 37.8	-0.3
baz=55,SNR=6.5							
V22A	San Miguel Ran	55.13	303	⇓P	P	22 49 39.7	+0.9
baz=55,SNR=6.1							
T22A	Edith	55.23	304	⇑P	P	22 49 40.7	+1.2
baz=55,SNR=11							
R22A	Saguache, Gunn	55.24	306	⇑P	P	22 49 41.0	+1.4
baz=55							
S22A	4UR Ranch, Cre	55.25	305	⇑P	P	22 49 40.5	+0.9
baz=55,SNR=7.3							
O22A	Kremmling	55.33	308	⇓P	P	22 49 41.0	+0.9
baz=55							
N22A	Wattenberg Ran	55.35	309	⇑P	P	22 49 41.7	+1.4
baz=55							
SMCO	Snowmass	55.53	307	eP	P	22 49 41.8	+0.2
2.9nm,0.6s,mb4.5							
L22A	Ellis Ranch, M	55.53	310	⇑P	P	22 49 42.7	+1.1
baz=56							
Z21A	St. Cloud Mine	55.59	299	⇑P	P	22 49 42.8	+0.7
baz=56,SNR=7.7							
121A	Cooks Peak, D	55.65	299	⇑P	P	22 49 43.7	+1.1
baz=56							
V21A	Milan	55.71	302	⇑P	P	22 49 44.2	+1.2
baz=56							
X21A	Alamocita Cree	55.74	301	⇑P	P	22 49 44.3	+1.1
baz=56,SNR=9.1							
U21A	Nageezi	55.78	303	⇓P	P	22 49 44.9	+1.4
baz=56,SNR=8.5							
R21A	Cimarron	55.88	306	P	P	22 49 45.5	+1.4
baz=56,SNR=6.5							
B23A	Brockton	55.89	318	⇓P	P	22 49 44.3	+0.3
baz=56							
P21A	Newcastle	55.93	307	⇑P	P	22 49 45.9	+1.4
baz=56							
S21A	Coal Bank Pass	56.00	305	⇑P	P	22 49 46.0	+1.0
baz=56,SNR=5.5							
FFC	Flin Flon	56.08	326	eP	P	22 49 46.2	+1.0
5.0nm,0.8s,mb4.6							
M21A	Separation Pea	56.15	309	⇓P	P	22 49 47.5	+1.5
baz=56							
Y20A	Horse Springs,	56.20	300	⇑P	P	22 49 47.1	+0.5
baz=56							
L21A	Rawlins	56.21	310	P	P	22 49 47.0	+0.7
baz=56,SNR=9.3							
220A	Playas Peak, P	56.26	298	⇑P	P	22 49 47.6	+0.6
baz=56,SNR=5.5							
LAO	LASA Array	56.28	316	⇓P	P	22 49 47.2	+0.3
baz=56							
LAO	LASA Array	56.28	316	eP	P	22 49 47.2	+0.4
7.4nm,0.9s,mb4.7							
C22A	Vida	56.29	317	⇓P	P	22 49 47.0	+0.1
baz=56							
X20A	Quemado	56.34	301	⇑P	P	22 49 48.3	+0.8
baz=56							
D22A	Cohagen	56.35	316	⇓P	P	22 49 47.6	+0.2
baz=56							
Z20A	Nine Sixteen R	56.35	299	⇓P	P	22 49 48.3	+0.7
baz=56,SNR=5.5							
120A	U Bar Ranch, L	56.37	299	⇑P	P	22 49 49.2	+1.5
baz=56,SNR=6.1							
H21A	Big Horn, Sher	56.42	313	⇓P	P	22 49 47.7	-0.2
baz=56							
I21A	Big Trails, Te	56.45	312	⇓P	P	22 49 47.3	-0.8
baz=56,SNR=7.1							
J21A	Lysite	56.48	312	⇓P	P	22 49 47.4	-0.9
baz=56							
R20A	Redvale	56.51	305	⇑P	P	22 49 49.8	+1.2
baz=56,SNR=5.2							
Q20A	Ridgley Place,	56.52	306	⇑P	P	22 49 48.8	+0.1
baz=56							
PV01	Paradox Valley	56.66	305	eP	P	22 49 50.5	+0.8
234nm,0.8s							
219A	White Tail Can	56.89	298	⇓P	P	22 49 52.0	+0.6
baz=57,SNR=11							
J20A	Shoshoni	56.94	311	⇓P	P	22 49 51.1	-0.5
baz=57,SNR=6.0							
U19A	Dine' College,	57.02	303	⇓P	P	22 49 51.8	-0.5
baz=57							
H20A	Greybull	57.07	313	⇓P	P	22 49 51.8	-0.7
baz=57							
I20A	Worland	57.07	312	⇓P	P	22 49 52.2	-0.3
baz=57							
P19A	Cripple Cowboy	57.12	307	⇑P	P	22 49 52.9	-0.1
baz=57,SNR=8.9							
R19A	Curley Farm, L	57.21	305	⇓P	P	22 49 54.0	+0.4
baz=57,SNR=6.1							
Q19A	Hogan Spring (	57.27	306	⇑P	P	22 49 52.8	-1.2
baz=57							
O19A	Miners Draw (B	57.30	308	⇑P	P	22 49 53.6	-0.6
baz=57							
G20A	Bridger	57.35	314	P	P	22 49 54.3	-0.1
baz=57,SNR=7.5							
F20A	Billings	57.41	314	P	P	22 49 55.1	+0.3
baz=57,SNR=6.3							
118A	Homack Ranch,	57.50	299	⇑P	P	22 49 55.9	+0.2
baz=57							
318A	Bisbee	57.50	297	⇓P	P	22 49 55.7	-0.1
baz=57							
E20A	Meyer Farm, Mu	57.53	315	⇓P	P	22 49 55.6	-0.1
baz=58							
T18A	Mexican Hat	57.61	304	⇑P	P	22 49 56.8	+0.4
baz=58,SNR=8.7							
J19A	Crowheart	57.63	311	⇓P	P	22 49 56.0	-0.4
baz=58,SNR=5.2							
D20A	Manuel Ranch,	57.64	316	⇑P	P	22 49 57.0	+0.6
baz=58,SNR=6.1							
I19A	Meeteetse	57.70	312	⇓P	P	22 49 56.1	-0.8
baz=58							
R18A	Canyonlands Na	57.72	305	⇓P	P	22 49 57.8	+0.6
baz=58,SNR=12							
S18A	Hurst Farm, Bl	57.74	305	⇓P	P	22 49 57.9	+0.6
baz=58,SNR=6.8							
H19A	Powell	57.80	313	⇓P	P	22 49 57.4	-0.2
baz=58							
B20A	Solberg Farm,	57.84	317	⇓P	P	22 49 57.2	-0.7
baz=58							
BW06	Boulder Array	57.93	311	⇑P	P	22 49 57.7	-0.9
baz=58							
BW06	Boulder Array	57.93	311	eP	P	22 49 58.2	-0.3
3.5nm,0.9s,mb4.4							
PDAR	Pinedale Array	57.93	311	P	P	22 49 58.0	-0.5
1.8nm,0.7s,mb4.2,baz=105,slow=7.8,SNR=12							
Q18A	Rafter H Ranch	57.96	306	⇓P	P	22 49 59.3	+0.5
baz=58,SNR=7.7							
E19A	Rath Farm, Rou	57.96	315	⇑P	P	22 49 59.0	+0.2
baz=58							
F19A	Roth Farm, Mol	57.96	314	⇓P	P	22 49 58.5	-0.2
baz=58							
TUC	Tucson	58.18	298	eP	P	22 50 00.7	+0.1
5.9nm,0.8s,mb4.7							
217A	Green Valley	58.21	298	⇑P	P	22 50 00.3	-0.4
baz=58							
I18A	Diamond G Ranc	58.24	312	⇑P	P	22 50 00.3	-0.5
baz=58							
Y17A	Roosevelt	58.25	300	⇑P	P	22 50 01.8	+0.8
baz=58,SNR=5.5							
V17A	Tonalea, Kykot	58.27	302	P	P	22 50 01.9	+0.9
baz=58,SNR=10							
H18A	Shoshone NF, C	58.27	313	⇑P	P	22 50 00.5	-0.4
baz=58							
G18A	Lazy EL Ranch,	58.30	314	⇑P	P	22 50 00.3	-0.9
baz=58							
J18A	Kendall Valley	58.32	311	⇓P	P	22 50 00.7	-0.7
baz=58							
T17A	Navajo Res., N	58.34	304	⇑P	P	22 50 01.1	-0.5
baz=58,SNR=9.6							
C19A	Slack Wire Ran	58.38	316	⇓P	P	22 50 00.8	-0.8
baz=58							
A19A	Klindworth Far	58.42	318	⇓P	P	22 50 01.1	-0.8
baz=58							
B19A	Brinkman Farms	58.45	317	⇑P	P	22 50 01.4	-0.7
baz=58							
F18A	Big Timber	58.50	314	⇓P	P	22 50 02.0	-0.6
baz=58							
O17A	Robinson Place	58.52	307	⇑P	P	22 50 03.4	+0.6
baz=58,SNR=5.9							
M17A	Scullys Gap (B	58.59	309	⇓P	P	22 50 02.6	-0.7
baz=58							
E18A	Harlowton	58.75	315	⇑P	P	22 50 04.1	-0.1
baz=59							
Q16A	Castle Valley	58.75	306	⇑P	P	22 50 04.0	-0.4
baz=59							
Y16A	Circle Bar Ran	58.78	300	⇑P	P	22 50 04.4	-0.3
baz=59							
LOHW	Long Hollow	58.80	311	eP	P	22 50 04.3	-0.4
3.7nm,0.8s,mb4.5							
SNOW	Snow King Moun	58.88	311	eP	P	22 50 05.1	-0.2
4.8nm,0.6s,mb4.7							
MOOW	Moose Ponds	58.91	312	eP	P	22 50 05.0	-0.4
2.6nm,1.0s,mb4.2							
R16A	Teasdale	58.95	305	⇑P	P	22 50 07.0	+1.1
baz=59,SNR=6.2							
S16A	Weppner Ranch,	59.01	305	⇓P	P	22 50 06.8	+0.6
baz=59							
TPAW	Teton Pass	59.03	311	eP	P	22 50 06.2	0.0
3.5nm,0.8s,mb4.4							
IMW	Indian Meadow	59.07	312	eP	P	22 50 06.6	+0.1
5.6nm,0.8s,mb4.7							
O16A	Springville	59.11	307	⇓P	P	22 50 07.8	+1.0
baz=59							
F17A	Fitzpatrick Pl	59.15	314	⇑P	P	22 50 07.3	+0.3
baz=59							
L16A	Fish Haven	59.22	310	⇑P	P	22 50 06.6	-1.0
baz=59,SNR=5.5							
HWUT	Hardware Ranch	59.28	309	eP	P	22 50 07.3	-0.6
7.3nm,1.0s,mb4.7							
RRI2	Red Ridge	59.28	311	eP	P	22 50 08.3	+0.3
7.8nm,0.6s,mb4.9							
H16A	Russell Place,	59.40	313	P	P	22 50 09.5	+0.8
baz=59,SNR=5.5							
115A	Sonoran Desert	59.40	299	⇓P	P	22 50 08.4	-0.7
baz=59							
X15A	Humboldt	59.42	301	⇑P	P	22 50 09.3	+0.1
baz=59							
J16A	Bone	59.48	311	⇑P	P	22 50 09.5	+0.1
baz=59							
U15A	North Rim	59.51	303	⇓P	P	22 50 10.5	+0.8
baz=59,SNR=8.1							
BOZ	Bozeman (W)	59.79	314	⇓P	P	22 50 10.3	-1.1
baz=60							
BOZ	Bozeman (W)	59.79	314	eP	P	22 50 10.9	-0.6
2.3nm,0.8s,mb4.3							
F16A	Kennard Place,	59.80	314	⇓P	P	22 50 10.7	-0.9
baz=60							
M15A	Larsen Ranch,	59.92	309	⇓P	P	22 50 11.6	-0.9
baz=60,SNR=16							
L15A	Malad City	59.92	309	⇓P	P	22 50 11.4	-1.1
baz=60,SNR=6.1							
E16A	East Helena	59.95	315	⇓P	P	22 50 12.2	-0.3
baz=60,SNR=6.3							
J15A	Blackfoot	60.09	311	⇓P	P	22 50 13.8	+0.2
baz=60							
K15A	Arbon	60.09	310	⇑P	P	22 50 13.2	-0.4
baz=60							
DUG	Dugway	60.11	307	eP	P	22 50 14.0	+0.2
9.2nm,1.4s,mb4.6							
PLCA	Paso Flores	60.16	199	P	P	22 50 14.3	+0.4
0.7nm,0.6s,mb3.9,baz=359,slow=6.6,SNR=3.2							
PLCA	Paso Flores	60.16	199	P	P	22 50 14.3	+0.4
P14A	Drum Mountains	60.27	307	⇓P	P	22 50 15.4	+0.6
baz=60,SNR=6.4							
A16A	West Butte Ran	60.27	317	⇓P	P	22 50 13.8	-0.9
baz=60							
BGU	Big Grassy Mou	60.32	308	eP	P	22 50 15.1	-0.1
9.2nm,1.1s,mb4.7							
G15A	Dillon	60.33	313	⇓P	P	22 50 15.5	+0.3
baz=60,SNR=5.5							
Q14A	Sevier Lake (B	60.40	306	⇓P	P	22 50 16.7	+0.9
baz=60,SNR=13							
ARUT	Antelope Range	60.47	305	eP	P	22 50 17.1	+0.8
3.7nm,0.8s,mb4.5							
D15A	Lincoln	60.59	315	⇑P	P	22 50 16.7	-0.2
baz=60,SNR=5.2							
Z13A	Yuma Proving G	60.60	299	⇓P	P	22 50 16.8	-0.4
baz=60,SNR=5.1							
C15A	Salmond Ranch,	60.75	316	P	P	22 50 17.9	-0.1
baz=61,SNR=5.5							
S13A	Holt Ranch, En	60.80	304	⇑P	P	22 50 19.5	+1.0
baz=61,SNR=12							
D14A	Greenough	61.26	315	⇑P	P	22 50 20.7	-0.8
baz=61,SNR=6.0							
SLMT	Seeley Lake	61.27	315	eP	P	22 50 21.1	-0.5
8.1nm,1.0s,mb4.8							
I13A	Wildhorse Cree	61.36	311	⇓P	P	22 50 21.6	-0.6
baz=61							
C14A	Swan Lake	61.51	316	⇓P	P	22 50 22.7	-0.4
baz=62							
NOA	NORSAR Array B	61.53	29	LR	LR	23 10 21.9	
comp=Z,41nm,22.0s,MS3.5,baz=270,slow=30							
HLID	Hailey	61.54	311	⇑P	P	22 50 23.4	-0.1
baz=62,SNR=6.0							
HLID	Hailey	61.54	311	eP	P	22 50 23.4	-0.1
7.1nm,1.3s,mb4.6							
G13A	Cobalt	61.55	313	⇑P	P	22 50 23.5	0.0
baz=62							
C13A	Hot Springs	62.05	316	⇓P	P	22 50 26.5	-0.3
baz=62							
I12A	Atlanta	62.08	311	⇓P	P	22 50 26.5	-0.6
baz=62							
BC3	Big Chuckawall	62.09	300	⇓P	P	22 50 27.7	+0.3
baz=62							
R11A	Troy Canyon, C	62.18	305	⇓P	P	22 50 27.9	0.0
baz=62,SNR=7.0							
BSMT	Bassoo Peak	62.22	316	eP	P	22 50 27.3	-0.6
2.5nm,1.0s,mb4.3							
F12A	Elk City	62.33	313	⇑P	P	22 50 28.5	-0.1
baz=62							
HFS	Hagfors	62.42	30	P	P	22 50 29.3	+0.3
4.3nm,1.0s,mb4.5,baz=283,slow=7.2,SNR=5.6							
HFS				LR	LR	23 14 06.1	
comp=Z,54nm,18.7s,MS3.7,baz=80,slow=33							
MFID	Camas Ranch	62.56	311	⇓P	P	22 50 30.2	-0.1
baz=62							
MPMC	Manual Prospec	63.71	303	⇑P	P	22 50 38.4	+0.3
baz=64							
F10A	Beach Ranch, E	63.72	314	⇑P	P	22 50 36.3	-1.6
baz=64							
NEW	Newport	63.82	316	⇑P	P	22 50 37.3	-1.2
baz=64							
NEW	Newport	63.82	316	eP	P	22 50 37.4	-1.2
2.2nm,0.8s,mb4.2							
NVAR	Mina Array Bea	64.32	305	P	P	22 50 42.3	+0.2
0.9nm,0.8s,mb3.9,baz=80,slow=5.8,SNR=6.8							
E09A	Wood Farm, Sta	64.39	314	⇓P	P	22 50 41.3	-1.0
baz=64							
J08A	Circle Bar Ran	64.48	311	⇑P	P	22 50 42.7	-0.3
baz=64							
ISA	Isabella	64.52	302	⇑P	P	22 50 44.6	+1.2
baz=64,SNR=5.3							
ISA	Isabella	64.52	302	eP	P	22 50 44.4	+1.0
6.8nm,1.1s,mb4.6							
YKA	Yellowknife Ar	64.74	332	P	P	22 50 42.3	-2.0
0.9nm,0.6s,mb4.0,baz=100,slow=6.9,SNR=4.6							
YKA				LR	LR	23 15 20.6	
comp=Z,3.8nm,20.5s,MS2.6,baz=300,slow=33							
G08A	Pilot Rock	64.89	313	⇓P	P	22 50 45.0	-0.7
baz=65,SNR

BVAR	**Borovoye Array**	**93.50**	**32**	P	**P**	**22 53 22.4**	**+0.3**
HHC	**Hu-ho-hao-te**	**120.37**	**17**	*e*PKP	PKPdf	22 58 57.0	-1.0
HHC				PP	PP	23 00 26.3	+3.5
HHC				PKS		23 02 32.8	
HHC				SKS	SKSdf	23 06 07.0	-3.3
HHC				SKKS	SKKSac	23 07 19.3	-4.9
HHC				SS	SS	23 16 53.0	+2.6
HHC				LR	LR		
	comp=N,130nm,20.5s						
HHC				LR	LR		
	comp=E,160nm,19.7s						
HHC				LR	LR		
	comp=Z,120nm,20.0s						
KMI	**Kunming**	**130.37**	**35**	PKP	PKPdf	22 59 17.3	-0.3
NJ2	**Nanjing**	**130.58**	**14**	*e*PKP	PKPdf	22 59 13.8	-4.0
ASAR	**Alice Springs**	**172.17 197**		PKP	PKPdf	23 00 14.2	-1.7
	comp=Z,1.3nm,0.9s,baz=91,slow=0.4,SNR=11						
WRA	**Warramunga Arr**	**175.30 216**		PKP	PKPdf	23 00 15.2	-2.0
	comp=Z,2.3nm,0.9s,baz=298,slow=0.6,SNR=14						

IDC 26 23:01:42.7±6.1, 39°.43N×110°.76E, $h0^{km}$, mb3.4/2, mb1 3.6/3, mb1mx3.3/24, mbtmp3.4/3, ML2.9/1, Error ellipse: s-maj=126.9km s-min=32.0km az=84.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**8.97**	**341**	Pn	Pn	23 03 53.9	+0.4
	0.1nm,0.3s,baz=157,slow=13,SNR=6.8						
MKAR	**Makanchi Array**	**21.96**	**299**	P	P	23 06 38.0	0.0
	1.0nm,0.8s,baz=96,slow=13,SNR=9.8						
CMAR	**Chiang Mai Arr**	**23.28**	**209**	P	P	23 06 52.0	0.0
	0.8nm,0.6s,baz=11,slow=9.3,SNR=5.8						

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*BJI **26** 23:10:01.5, 5°.84S×131°.07E, h118km, mB5.3/23, mb5.5/49*
*GCMT **26** 23:10:02.3±0.3, 5°.58S×130°.60E, h81km±2km, MW5.1, Moment Tensor Solution. s34,c45; s75,c127; Moment tensor: Scale 10^{16}Nm; M_{rr}1.30±.16; $M_{\theta\theta}$-3.41±.14; $M_{\phi\phi}$2.11±.17; $M_{r\theta}$1.11±.11; $M_{\theta\phi}$3.65±.15; $M_{\phi r}$1.38±.12; Best double couple: $M_0$5.00000×10^{16} NP1:ϕ_s338.00000°, δ69.00000°, λ163.00000°. NP2:ϕ_s75.00000°, δ74.00000°, λ22.00000°. Principal axes: T 4.7900, Plg26.0000°, Azm298.0000°; N 0.4600, Plg63.0000°, Azm109.0000°; P -5.2500, Plg3.0000°, Azm206.0000°; Data Used: IU II IC CN G.*
*ISCJB **26** 23:10:02.8±0.2, 5°.62S±0°.03×130°.88E±0°.03, h109km, mb5.4/108 Error ellipse: s-maj=4.4km s-min=3.7km az=26.2*
*MOS **26** 23:10:03.1±1.0, 5°.50S×130°.81E, h99km, mb5.5/34, Error ellipse: s-maj=12.9km s-min=6.3km az=116.6*
*IDC **26** 23:10:04.3±0.5, 5°.66S×130°.85E, h104km±4km, mb5.0/19, mb1 4.9/19, mb1mx4.9/20, mbtmp5.0/19, MS3.8/12, Ms1 3.8/12, ms1mx3.6/20, Error ellipse: s-maj=18.0km s-min=9.3km az=79.0*
*NEIC **26** 23:10:04.7±0.1, 5°.69S×130°.72E, mb5.4/49, Error ellipse: s-maj=5.8km s-min=3.6km az=53.0*
*DJA **26** 23:10:05, 5°.34S×130°.97E, h110km, mb5.5/43*
ISC 26 23:10:04.7±0.2, 5°.63S±0°.03×130°.88E±0°.03, h111km, h111km±2.1km:pP-P, n625, σ1°.18/288, mb5.4/108, 143C-98D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.47**	**319**	P	**Pn**	**23 10 28.0**	**-3.2**
BNDI				S	**Sn**	**23 10 49.4**	**-1.9**
TLE	**Tual**	**1.85**	**90**	P	**Pn**	**23 10 33.9**	**-2.0**
TLE				S	**Sn**	**23 10 57.4**	**-2.3**
NLAI	**Namlea**	**4.45**	**302**	P	**Pn**	**23 11 09.6**	**-0.6**
SWI	**Sorong**	**4.75**	**5**	P	**Pn**	**23 11 12.5**	**-1.7**
LBMI	**Labuha**	**6.00**	**326**	P	**Pn**	**23 11 29.0**	**-2.0**
	5.6nm832nm,0.8s						
LBMI				S	**Sn**	**23 12 33.4**	**-5.0**
	5.6nm832nm,0.8s						
BAKI	**Biak**	**6.83**	**50**	P	**Pn**	**23 11 40.8**	**-1.6**
	15nm4μm,0.9s						
BAKI				S	**Sn**	**23 12 53.6**	**-5.2**
	15nm4μm,0.9s						
KAKA	**Kakadu**	**7.20**	**168**	⇓*i*P	**Pn**	**23 11 41.4**	**-6.0**
	1μm,0.6s						
KAKA				*e*S	**Sn**	**23 12 55.9**	**-12**
KAKA	**Kakadu**	**7.20**	**168**	*e*Pn	**Pn**	**23 11 41.5**	**-6.0**
	2μm,0.4s						
KAKA				*e*Sn	**Sn**	**23 12 56.6**	**-11**
KAKA	**Kakadu**	**7.20**	**168**	P	**Pn**	**23 11 41.6**	**-5.8**
TNTI	**Ternate**	**7.26**	**331**	P	**Pn**	**23 11 46.7**	**-1.5**
	1.0nm3μm286nm,0.9s						
BBSI	**Bau Bau**	**8.27**	**271**	P	**Pn**	**23 12 04.4**	**+2.5**
	8μm953nm,1.0s						
KDI	**Kendari**	**8.39**	**281**	P	**Pn**	**23 12 04.6**	**+1.0**
	4μm341nm,1.0s						
MMRI	**Maumere**	**9.08**	**250**	P	**Pn**	**23 12 12.8**	**-0.1**
	4μm516nm,1.0s						
MNI	**Manado**	**9.26**	**319**	P	**Pn**	**23 12 13.1**	**-2.2**
	6μm429nm,0.6s						
LUWI	**Luwuk**	**9.28**	**299**	P	**Pn**	**23 12 14.2**	**-1.5**
	3μm267nm,1.4s						
SGSI	**Sangihe**	**10.68**	**330**	P	**Pn**	**23 12 33.2**	**-1.4**
	261nm,0.6s						
BKSI	**Bulukumba**	**10.71**	**271**	P	**Pn**	**23 12 37.4**	**+2.4**
	2μm173nm,0.7s						
MRSI	**Marisa**	**10.79**	**304**	P	**Pn**	**23 12 34.0**	**-2.0**
	3μm363nm,1.2s						
MSSI	**Masamba**	**10.96**	**286**	P	**Pn**	**23 12 41.1**	**+2.8**
	7μm367nm,1.1s						
SPSI	**Sidrap Palu**	**11.19**	**278**	P	**Pn**	**23 12 42.3**	**+0.9**
	3μm238nm,0.7s						
WSI	**Waingapu**	**11.22**	**248**	P	**Pn**	**23 12 43.5**	**+1.7**
	741nm,0.6s						
TTSI	**Tana Toraja**	**11.32**	**283**	P	**Pn**	**23 12 44.8**	**+1.7**
	4μm242nm,1.2s						
FITZ	**Fitzroy Crossi**	**13.41**	**202**	P	**Pn**	**23 13 02.4**	**-8.2**
	63nm,0.3s,baz=30,slow=11,SNR=247						
FITZ				S	**Sn**	**23 15 22.4**	**-16**
	25nm,0.3s,baz=217,slow=22,SNR=3.6						
FITZ				LR	LR	23 18 24.0	
	comp=Z,366nm,20.7s,baz=27,slow=37						
FITZ	**Fitzroy Crossi**	**13.41**	**202**	⇓*i*P	**Pn**	**23 13 01.7**	**-8.9**
	645nm,0.9s						
FITZ				*e*S	**Sn**	**23 15 21.0**	**-17**
WRA	**Warramunga Arr**	**14.62**	**167**	P	**Pn**	**23 13 17.2**	**-8.9**
	10.0nm,0.3s,baz=350,slow=13,SNR=331						
WRA				S	Sn	23 15 44.4	-23
	25nm,0.3s,baz=352,slow=17,SNR=8.9						
WRA	**Warramunga Arr**	**14.62**	**167**	P	**Pn**	**23 13 17.2**	**-8.9**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
COEN	**Coen**	**14.67**	**125**	*e*Pn	**Pn**	**23 13 22.0**	**-4.8**
COEN				*e*Sn	**Sn**	**23 15 48.9**	**-20**
KBKI	**Kotabaru**	**14.85**	**278**	P	**Pn**	**23 13 29.4**	**+0.3**
	comp=Z,5μmcomp=Z,337nm,1.2s						
MTNI	**Mataram**	**14.89**	**258**	P	**Pn**	**23 13 28.3**	**-1.4**
	comp=Z,90nm,1.1s						
KHKI	**Kahang-Kahang**	**15.39**	**259**	P	**Pn**	**23 13 38.2**	**+2.2**
	comp=Z,93nm,0.8s						
BBKI	**Banjar Baru**	**16.13**	**277**	P	**Pn**	**23 13 45.9**	**+0.8**
	comp=Z,7μmcomp=Z,701nm,1.2s						
TSM	**Tawau**	**16.30**	**307**	P	**Pn**	**23 13 46.0**	**-1.2**
MYLDM	**Lahad Datu**	**16.37**	**311**	P	**Pn**	**23 13 48.4**	**+0.3**
PMG	**Port Moresby**	**16.57**	**104**	*e*Pn	**Pn**	**23 13 49.8**	**-0.7**
	comp=Z,72nm,0.9s						
PMG	**Port Moresby**	**16.57**	**104**	⇑*i*P	**Pn**	**23 13 49.7**	**-0.9**
PMG	**Port Moresby**	**16.57**	**104**	P	**Pn**	**23 13 54.5**	**+3.9**
JAGI	**Jajag, Banyuwa**	**16.83**	**259**	P	**Pn**	**23 13 53.7**	**-0.1**
	comp=Z,113nm,1.1s						
KMMI	**Kalianget**	**16.86**	**264**	P	**Pn**	**23 13 56.8**	**+2.6**
	comp=Z,6μmcomp=Z,550nm,1.4s						
SDKM	**Sandakan**	**17.66**	**309**	P	**Pn**	**23 14 03.4**	**-0.4**
ASAR	**Alice Springs**	**18.17**	**171**	P	**P**	**23 14 04.2**	**-4.4**
	comp=Z,30nm,0.3s,baz=358,slow=15,SNR=568						
ASAR				S	S	23 17 07.3	-24
	comp=Z,2.2nm,0.3s,baz=342,slow=17,SNR=4.2						
ASAR	**Alice Springs**	**18.17**	**171**	P	**P**	**23 14 04.3**	**-4.3**
ASAR				pmax	pmax		
	comp=Z,30nm,0.3s						
KRKI	**Karangkates**	**18.46**	**261**	P	**P**	**23 14 15.3**	**+3.4**
	comp=Z,206nm,0.8s						
KKM	**Kota Kinabalu**	**18.67**	**308**	P	**P**	**23 14 14.5**	**+0.2**
KKM	**Kota Kinabalu**	**18.67**	**308**	*e*P	**P**	**23 14 14.2**	**-0.1**
	comp=Z,374nm,0.8s						
KDM	**Kudat**	**18.75**	**311**	P	**P**	**23 14 15.7**	**+0.5**
MBWA	**Marble Bar**	**18.84**	**214**	*e*P	**P**	**23 14 13.6**	**-2.4**
	comp=Z,91nm,0.5s						
PWJI	**Pagerwojo**	**19.08**	**262**	P	**P**	**23 14 23.8**	**+5.0**
	comp=Z,70nm,1.0s						
SJI	**Sawahan**	**19.09**	**263**	P	**P**	**23 14 22.5**	**+3.6**
	comp=Z,73nm,1.6s						
NGJI	**Ngawi**	**19.37**	**264**	P	pP	23 14 38.6	-3.8
BTM	**Bintulu**	**19.82**	**296**	P	**P**	**23 14 26.1**	**-0.7**
STKI	**Sintang**	**20.18**	**286**	P	**P**	**23 14 29.2**	**-1.4**
	comp=Z,7μmcomp=Z,59nm,0.7s						
SBUM	**Sibu**	**20.29**	**293**	P	**P**	**23 14 30.9**	**-0.9**
SMRI	**Semarang**	**20.36**	**265**	P	**P**	**23 14 33.4**	**+0.8**
	comp=Z,160nm,0.9s						
CTA	**Charters Tower**	**20.74**	**135**	P	**P**	**23 14 37.5**	**+1.0**
	comp=Z,19nm,0.8s,baz=305,slow=13,SNR=11						
CTA				S	**S**	**23 18 17.3**	**-4.8**
	comp=Z,17nm,0.9s,baz=252,slow=20,SNR=2.9						
CTA	**Charters Tower**	**20.74**	**135**	*e*P	**P**	**23 14 38.3**	**+1.7**
	comp=Z,25nm,0.7s						
CTA	**Charters Tower**	**20.74**	**135**	P	**P**	**23 14 37.5**	**+1.0**
CTA				S	**S**	**23 18 17.3**	**-4.8**
CTA	**Charters Tower**	**20.74**	**135**	P	**P**	**23 14 37.6**	**+1.0**
CTA				S	**S**	**23 18 17.3**	**-4.7**
CTA				smax			
	comp=N,17nm,0.9s						
CTAO	**Charters Tower**	**20.74**	**135**	*e*P	**P**	**23 14 38.0**	**+1.4**
	comp=N,57nm,0.8s						
CTAO	**Charters Tower**	**20.74**	**135**	*e*P	**P**	**23 14 38.0**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,57nm,0.8s						
CTAO	**Charters Tower**	**20.74**	**135**	P	**P**	**23 14 41.4**	**+4.8**
	comp=Z,90nm,0.9s						
BJII	**Banjamegara**	**21.10**	**264**	P	**P**	**23 14 47.4**	**+6.9**
KSM	**Kuching**	**21.72**	**288**	P	**P**	**23 14 45.8**	**-1.3**
KSM	**Kuching**	**21.72**	**288**	*e*P	**P**	**23 14 44.5**	**-2.6**
	comp=Z,42nm,0.8s,mb4.8						
TGY	**Tagaytay City**	**21.95**	**333**	P	**P**	**23 14 50.0**	**+0.5**
	comp=Z,155nm,0.3s,mb5.8,baz=250,slow=6.4,SNR=9.2						
TGY	**Tagaytay City**	**21.95**	**333**	P	**P**	**23 14 50.0**	**+0.6**
JCJI	**Jatiwangi**	**22.50**	**267**	P	**P**	**23 14 54.4**	**-0.9**
	comp=Z,193nm,0.9s,mb5.4						
CISI	**Cisompet, Garu**	**22.99**	**264**	P	**P**	**23 14 58.4**	**-1.6**
	comp=Z,3μmcomp=Z,212nm,0.8s,mb5.5						
TPI	**Tanjungpandan**	**23.33**	**276**	P	**P**	**23 15 00.9**	**-2.3**
	comp=Z,49nm,0.9s,mb4.8						
CBJI	**Citeko**	**23.91**	**267**	P	**P**	**23 15 07.1**	**-1.3**
	comp=Z,348nm,0.9s,mb5.7						
DBJI	**Dramaga**	**24.01**	**267**	P	pP	23 15 26.0	-6.8
PPBI	**Pangkal Pinang**	**24.92**	**277**	P	**P**	**23 15 17.3**	**-0.4**
	comp=Z,74nm,0.7s,mb5.2						
FORT	**Forrest**	**25.16**	**186**	*e*P	**P**	**23 15 18.5**	**-1.1**
	comp=Z,119nm,0.7s,mb5.4						
FORT				*e*		23 15 30.6	
FORT				*e*S	S	23 19 56.9	+20
FORT	**Forrest**	**25.16**	**186**	*e*P	**P**	**23 15 18.8**	**-0.8**
	comp=Z,322nm,0.8s,mb5.8						
KLSI	**Cisarua**	**26.06**	**271**	P	**P**	**23 15 29.2**	**+1.2**
	comp=Z,72nm,0.8s,mb5.2						
MDSI	**Maura Dua**	**26.62**	**271**	P	**P**	**23 15 34.2**	**+1.2**
	comp=Z,36nm,1.0s,mb4.8						
BBOO	**Buckleboo**	**27.47**	**171**	*e*P	**P**	**23 15 39.5**	**-0.9**
	comp=Z,468nm,1.4s,mb5.8						
EIDS	**Eidsvold**	**27.57**	**138**	*e*P	**P**	**23 15 43.0**	**+1.6**
STKA	**Stephens Creek**	**27.97**	**160**	P	**P**	**23 15 44.5**	**-0.3**
	comp=Z,26nm,0.4s,mb5.1,baz=339,slow=7.9,SNR=88						
STKA				LR	LR	23 28 18.3	
	comp=Z,274nm,18.9s,baz=344,slow=39						
STKA	**Stephens Creek**	**27.97**	**160**	*e*P	**P**	**23 15 44.2**	**-0.7**
	comp=Z,19nm,0.3s,mb5.1						
STKA	**Stephens Creek**	**27.97**	**160**	*e*P	**P**	**23 15 44.5**	**-0.3**
	comp=Z,12nm,0.9s,mb4.4						
MYKOM	**Kota Tinggi**	**27.98**	**285**	P	**P**	**23 15 43.8**	**-1.4**
KLBR	**Kellerberrin**	**28.61**	**204**	⇓*i*P	**P**	**23 15 49.3**	**-1.2**
	comp=Z,80nm,0.4s,mb5.7						
NWAO	**Narrogin (SRO)**	**29.99**	**203**	P	**P**	**23 16 01.9**	**-0.8**
	comp=Z,34nm,0.4s,mb5.3,baz=37,slow=7.8,SNR=94						
NWAO				LR	LR	23 29 46.9	
	comp=Z,207nm,20.0s,baz=237,slow=40						
NWAO	**Narrogin (SRO)**	**29.99**	**203**	*e*P	**P**	**23 16 02.0**	**-0.7**
	comp=Z,29nm,0.5s,mb5.2						
NWAO	**Narrogin (SRO)**	**29.99**	**203**	*e*P	**P**	**23 16 02.0**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,29nm,0.5s						
BKNI	**Bangkinang**	**30.37**	**280**	P	**P**	**23 16 06.9**	**+0.5**
	comp=Z,60nm,0.9s,mb5.2						
PDSI	**Padang**	**30.71**	**278**	P	**P**	**23 16 06.6**	**-2.8**
	comp=Z,4μmcomp=Z,96nm,0.7s,mb5.7						
SSLB	**Suanglung**	**30.80**	**342**	*e*P	**P**	**23 16 08.2**	**-1.7**
	comp=Z,33nm,0.7s,mb5.2						
PPI	**Padang Panjang**	**30.86**	**279**	P	**P**	**23 16 08.8**	**-1.9**
	comp=Z,4μmcomp=Z,109nm,0.8s,mb5.6						
IPM	**Ipoh**	**31.46**	**288**	*e*P	**P**	**23 16 13.8**	**-2.2**
	comp=Z,16nm,0.6s,mb4.9						
ARMA	**Armidale**	**31.46**	**144**	*e*P	**P**	**23 16 17.6**	**+1.9**
ARMA	**Armidale**	**31.46**	**144**	*e*P	**P**	**23 16 18.1**	**+2.3**
	comp=Z,5.1nm,0.6s,mb4.4						
MNSI	**Mandailing Nat**	**31.90**	**281**	P	**P**	**23 16 16.8**	**-3.0**
	comp=Z,5μmcomp=Z,111nm,0.7s,mb5.7						
KULM	**Kulim**	**32.07**	**289**	⇑*i*P	**P**	**23 16 19.1**	**-2.2**
	comp=Z,47nm,0.9s,mb5.2						
QIZ	**Qiongzhong**	**32.09**	**320**	P	**P**	**23 16 21.3**	**-0.1**
JOW	**Kunigami**	**32.37**	**356**	P	**P**	**23 16 24.9**	**+1.2**
	comp=Z,107nm,0.8s,mb5.6,baz=185,slow=7.0						
PSI	**Prapat**	**32.99**	**284**	P	**P**	**23 16 26.4**	**-3.0**
	comp=Z,29nm,0.9s,mb5.1,baz=165,slow=4.1,SNR=18						
PSI				LR	LR	23 29 48.3	
	comp=Z,369nm,19.7s,baz=15,slow=36						
PSI	**Prapat**	**32.99**	**284**	P	**P**	**23 16 26.4**	**-3.0**
PSI				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.1						
PSI				MLR	MLR		
	comp=Z,369nm,19.7s						
CAN	**Canberra**	**33.94**	**153**	*e*P	**P**	**23 16 37.9**	**+0.6**
	comp=Z,10nm,0.6s,mb4.8						
CAN				*e*	pP	23 17 04.4	+2.3
CAN	**Canberra**	**33.94**	**153**	*e*P	**P**	**23 16 37.9**	**+0.6**
CAN				*e*	pP	23 17 04.4	+2.3
CAN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CBIJ	**Chichi jima**	**34.32**	**18**	P	**P**	**23 16 39.4**	**-1.3**
	comp=Z,30nm,0.6s,mb5.3,baz=102,slow=20,SNR=4.4						
CBIJ				LR	LR	23 28 58.1	
	comp=Z,103nm,21.4s,baz=112,slow=33						
TOO	**Toolangi**	**34.48**	**159**	⇓*i*P	**P**	**23 16 43.2**	**+1.3**
TPTI		**34.79**	**284**	P	**P**	**23 16 44.5**	**-0.5**
	comp=Z,20nm,1.1s,mb4.9						
JNU	**Nakatsue**	**38.54**	**0**	*e*P	**P**	**23 17 16.8**	**+0.3**
	comp=Z,28nm,1.1s,mb5.0						
NJ2	**Nanjing**	**39.18**	**344**	*e*P	**P**	**23 17 23.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,70nm,0.7s,mb5.6						
WHN	**Wuhan**	**39.30**	**337**	⇑*i*P	**P**	**23 17 23.8**	**+1.0**
WHN				pmax	pmax		
	comp=Z,200nm,0.8s,mb6.0						
CM31	**Chiang Mai Arr**	**39.55**	**308**	*e*P	**P**	**23 17 24.9**	**-0.3**
	comp=Z,36nm,0.4s,mb5.5						
CMAR	**Chiang Mai Arr**	**39.55**	**308**	P	**P**	**23 17 24.7**	**-0.4**
	comp=Z,50nm,0.5s,mb5.6,baz=136,slow=7.2,SNR=289						
CMAR				PcP	PcP	23 19 31.1	+0.6
	comp=Z,3.8nm,0.7s,baz=161,slow=2.9,SNR=4.3						
CMAR				ScP	ScP	23 23 12.7	+3.4
	comp=Z,4.2nm,0.8s,baz=125,slow=4.5,SNR=13						
CMAR				LR	LR	23 33 58.5	
	comp=Z,84nm,20.7s,baz=157,slow=36						
CMAR	**Chiang Mai Arr**	**39.55**	**308**	P	**P**	**23 17 24.7**	**-0.4**
CMAR				PcP	PcP	23 19 31.1	+0.6
CMAR				ScP	ScP	23 23 12.7	+3.4
CMAR				LR	LR	23 33 58.5	
CMAR	**Chiang Mai Arr**	**39.55**	**308**	P	**P**	**23 17 24.7**	**-0.4**
CMAR						23 19 31.2	
CMAR						23 23 12.7	
CMAR				pmax	pmax		
	comp=Z,50nm,0.5s						
CMAR				MLR	MLR		
	comp=Z,85nm,20.7s						
GYA	**Guiyang**	**39.60**	**325**	⇑*i*P	**P**	**23 17 25.5**	**+0.1**
GYA				pP	pP	23 17 52.5	+1.8
GYA				sP	sP	23 18 06.3	+2.9
GYA				PP	PP	23 19 04.8	+6.2
GYA				PcP	PcP	23 19 33.0	+2.4
GYA				ScP	ScP	23 23 10.5	+1.2
GYA				PcS	PcS	23 23 22.0	+1.2
GYA				S	**S**	**23 23 24.0**	**+3.8**
GYA				sS	sS	23 24 07.3	+3.3
GYA				SS	SS	23 26 15.0	-4.9
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,160nm,5.5s						
GYA				LR	LR		
	comp=N,580nm,16.6s						
GYA				LR	LR		
	comp=E,420nm,17.5s						
GYA				LR	LR		
	comp=Z,560nm,15.7s						
CHTO	**Chiang Mai**	**39.75**	**308**	⇑*i*P	**P**	**23 17 26.5**	**-0.2**
	comp=Z,91nm,0.8s,mb5.7						
CHTO	**Chiang Mai**	**39.75**	**308**	⇑*i*P	**P**	**23 17 26.5**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,91nm,0.8s,mb5.7						
CHTO	**Chiang Mai**	**39.75**	**308**	P	**P**	**23 17 26.2**	**-0.6**
	comp=Z,1μmcomp=Z,156nm,1.1s,mb5.7						
CHTO	**Chiang Mai**	**39.75**	**308**	P	**P**	**23 17 27.0**	**+0.2**
	SNR=18						
CHTO				mb		23 17 27.3	
	SNR=62						
KMI	**Kunming**	**41.02**	**319**	⇑P	**P**	**23 17 38.0**	**+0.8**
KMI				pP	pP	23 18 06.3	+3.7
KMI				pmax	pmax		
	comp=Z,75nm,1.2s,mb5.4						
ENH	**Enshi**	**41.16**	**331**	*e*P	**P**	**23 17 37.3**	**-1.0**
	comp=Z,75nm,0.6s,mb5.7						
MJAR	**Matsushiro Arr**	**42.51**	**9**	P	**P**	**23 17 48.6**	**-0.5**
	comp=Z,28nm,0.8s,mb5.0,baz=191,slow=10,SNR=49						
MJAR				LR	LR	23 32 57.1	
	comp=Z,114nm,20.5s,baz=215,slow=32						
MJAR	**Matsushiro Arr**	**42.51**	**9**	P	**P**	**23 17 48.6**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,28nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,114nm,20.5s						
MAJO	**Matsushiro**	**42.51**	**9**	*e*P	**P**	**23 17 48.2**	**-0.9**
	comp=Z,52nm,0.8s,mb5.3						
MAJO	**Matsushiro**	**42.51**	**9**	*e*P	**P**	**23 17 48.2**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.3						
MAT	**Matsushiro**	**42.51**	**9**	P	**P**	**23 17 48.4**	**-0.7**
KSRS	**Korea Array**	**42.95**	**357**	P	**P**	**23 17 53.3**	**+0.7**
	comp=Z,7.2nm,0.6s,mb4.6,baz=177,slow=7.9,SNR=18						
KSRS				PcP	PcP	23 19 42.0	+0.7
	comp=Z,7.0nm,0.8s,baz=182,slow=3.0,SNR=9.5						
KSRS				LR	LR	23 36 26.3	
	comp=Z,85nm,19.0s,baz=311,slow=37						
KSRS	**Korea Array**	**42.95**	**357**	P	**P**	**23 17 53.3**	**+0.7**
KSRS						23 19 42.0	
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
KSRS				MLR	MLR		
	comp=Z,85nm,19.0s						
CD2	**Chengdu**	**44.64**	**326**	⇑*i*P	**P**	**23 18 05.8**	**-0.5**
CD2				pP	pP	23 18 31.5	-0.5
CD2				sP	sP	23 18 44.5	-0.1
CD2				PP	PP	23 19 53.0	+0.3
CD2				S	**S**	**23 24 34.0**	**-0.2**
CD2				sS	sS	23 25 19.0	+0.3
CD2				SS	SS	23 27 49.0	-9.2
CD2				pmax	pmax		
	comp=Z,120nm,0.9s,mb5.6						
CD2				pmax	pmax		
	comp=Z,160nm,5.6s						
BJT	**Baijiatuau**	**47.40**	**345**	⇑*i*P	**P**	**23 18 27.9**	**+0.2**
	comp=Z,207nm,0.6s,mb6.0						
BJT	**Baijiatuau**	**47.40**	**345**	⇑*i*P	**P**	**23 18 27.9**	**+0.1**
BJI	**Beijing**	**47.42**	**345**	P	**P**	**23 18 28.0**	**+0.1**
BJI				pP	pP	23 18 54.5	+0.5
BJI				PcP	PcP	23 19 57.8	+1.1
BJI				PcS	PcS	23 23 54.3	+2.2
BJI				S	**S**	**23 25 20.3**	**+6.5**
BJI				pmax	pmax		
	comp=Z,240nm,0.6s,mb6.1						
BJI				LR	LR		
	comp=Z,64nm,38.8s						
VLA	**Vladivostok**	**48.53**	**1**	⇑*e*P	**P**	**23 18 37.0**	**+0.6**
VLA				pmax	pmax		
	comp=Z,109nm,1.7s,mb5.5						
LZH	**Lanzhou**	**48.63**	**331**	*e*P	**P**	**23 18 38.3**	**+1.0**
LZH				pP	pP	23 19 04.5	+1.0
LZH				sP	sP	23 19 17.3	+1.4
LZH				PcP	PcP	23 20 03.3	+2.1
LZH				PP	PP	23 20 37.3	+5.9
LZH				*e*S	**S**	**23 25 31.0**	**0.0**
LZH				sS	sS	23 26 16.8	+0.8
LZH				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.4						
LZH				pmax	pmax		
	comp=Z,340nm,7.4s						
SHL	**Shillong**	**48.94**	**311**	⇑*i*P	**P**	**23 18 39.0**	**-0.9**
HHC	**Hu-ho-hao-te**	**49.53**	**341**	⇑P	**P**	**23 18 45.0**	**+0.9**
HHC				pP	pP	23 19 11.3	+1.0
HHC				sP	sP	23 19 23.8	+1.0
HHC				PcP	PcP	23 20 04.8	+0.5
HHC				PP	PP	23 20 42.8	+3.3
HHC				ScP	ScP	23 23 48.5	-1.2
HHC				S	**S**	**23 25 45.0**	**+1.5**
HHC				sS	sS	23 26 30.5	+1.9
HHC				ScS	ScS	23 28 22.5	-2.2
HHC				SS	SS	23 29 15.5	-1.7
HHC				pmax	pmax		

GTA LR LR
comp=E,110nm,15.7s
GTA LR LR
comp=Z,130nm,19.0s
YSS Yuzh-Sakhalins 53.40 10 *eP* **P 23 19 12.6 -0.3**
comp=Z,40nm,0.6s,mb5.6
YSS Yuzh-Sakhalins 53.40 10 *eP* **P 23 19 12.6 -0.2**
YSS pmax pmax
comp=Z,40nm,0.6s,mb5.6
MDRS Chennai 53.61 291 *ex* x 23 19 28.4
MDRS AMb AMB 23 19 29.5
comp=Z,186nm,0.5s,mb6.3
GUN Gumba 54.73 310 *eP* **P 23 19 23.0 +0.2**
comp=Z,545nm,0.7s
PKI Pulchoki 54.92 309 *eP* **P 23 19 23.9 -0.3**
comp=Z,79nm,0.5s,mb6.0
PKI Pulchoki 54.92 309 *eP* **P 23 19 23.9 -0.3**
PKIN Phulchoki 54.93 309 *eP* **P 23 19 23.8 -0.5**
comp=Z,148nm,0.6s,mb6.2
KKN Kakani 55.13 310 *eP* **P 23 19 25.6 -0.1**
comp=Z,220nm,0.7s,mb6.3
KKN Kakani 55.13 310 *eP* **P 23 19 25.6 -0.1**
DMN Daman 55.17 309 *eP* **P 23 19 26.1 +0.1**
comp=Z,193nm,0.6s,mb6.3
GKN Gorkha 55.73 309 *eP* **P 23 19 29.9 -0.1**
comp=Z,392nm,0.5s
KOLN Koldanda 56.41 309 *eP* **P 23 19 35.1 +0.2**
comp=Z,234nm,0.4s
HYB Hyderabad 56.51 295⇑ *iP* **P 23 19 34.0 -1.8**
DANN Dangsing 56.57 309 *eP* **P 23 19 36.0 0.0**
comp=Z,162nm,0.5s,mb6.3
ULN Ulaanbaatar 57.25 341 *eP* **P 23 19 41.6 +1.2**
comp=Z,64nm,0.6s,mb5.8
ULN Ulaanbaatar 57.25 341 *eP* **P 23 19 41.6 +1.2**
ULN pmax pmax
comp=Z,64nm,0.6s,mb5.8
ULN Ulaanbaatar 57.25 341 P **P 23 19 41.3 +0.9**
ULN Ulaanbaatar 57.25 341 P **P 23 19 42.1 +1.8**
SNR=14
SONM Songino Array 57.44 341 P **P 23 19 42.9 +1.2**
comp=Z,32nm,0.6s,mb5.5,baz=160,slow=6.8,SNR=215
SONM LR LR 23 44 48.6
comp=Z,56nm,21.7s,baz=21,slow=36
SONM Songino Array 57.44 341 P **P 23 19 42.9 +1.2**
SONM pmax pmax
comp=Z,32nm,0.6s
SONM MLR MLR
comp=Z,56nm,21.7s
BHPL Bhopal 59.54 301 *e*PKP **P 23 19 55.2 -1.6**
BHPL AMb AMB 23 19 57.7
comp=Z,46nm,1.4s,mb5.3
KAD Karad 60.44 293 *e*PKP **P 23 20 01.7 -1.3**
KAD AMb AMB 23 20 02.1
comp=Z,33nm,1.1s,mb5.3
ZAK Zakamensk 60.67 340 *eP* **P 23 20 04.4 +0.4**
ZAK *e* 23 20 47.9
ZAK pmax pmax
comp=Z,11nm,1.1s,mb4.8
POO Poona 61.11 295 *e*PKP **P 23 20 06.4 -1.2**
POO AMb AMB 23 20 07.7
comp=Z,34nm,1.0s,mb5.3
NDI New Delhi 61.86 307 *ex* **P 23 20 09.0 -3.4**
DDI Dehra Dun 61.89 309 *ex* **P 23 20 12.5 -0.2**
CASY Casey 62.18 189 *eP* **P 23 20 13.7 -0.2**
comp=Z,4.5nm,0.8s,mb4.5
MOY Mondy 62.54 340 *eP* **P 23 20 18.4 +1.9**
MOY pmax pmax
comp=Z,83nm,1.7s,mb5.4
WMQ Urumqi 62.74 326⇑ *iP* **P 23 20 19.0 +1.0**
WMQ pP pP 23 20 46.0 +0.7
WMQ sP sP 23 20 59.0 +1.5
WMQ PP PP 23 22 40.0 +2.6
WMQ S **S 23 28 37.0 -1.1**
WMQ sS sS 23 29 25.0 0.0
WMQ ScS ScS 23 29 58.0 -2.0
WMQ SS SS 23 32 46.0 +1.0
WMQ pmax pmax
comp=Z,230nm,1.0s,mb6.1
WMQ pmax pmax
comp=Z,470nm,6.0s
WMQ LR LR
comp=N,110nm,18.0s
WMQ LR LR
comp=E,92nm,18.0s
WMQ LR LR
comp=Z,83nm,18.0s
PETK Petropavlovsk- 62.76 18 P **P 23 20 19.2 +1.2**
comp=Z,27nm,0.8s,mb5.2,baz=190,slow=5.8,SNR=20
PETK LR LR 23 44 07.9
comp=Z,70nm,21.9s,baz=218,slow=32
PETK Petropavlovsk- 62.76 18 P **P 23 20 19.2 +1.2**
PETK LR LR 23 44 07.9
PETK Petropavlovsk- 62.76 18 P **P 23 20 19.2 +1.3**
PETK pmax pmax
comp=Z,27nm,0.8s,mb5.2
PETK MLR MLR
comp=Z,71nm,22.0s
SMLA Simla 62.93 309 *i* P **P 23 20 18.8 -0.8**
PET Petropavlovsk 62.98 18⇓ *eP* **P 23 20 20.6 +1.2**
YAK Yakutsk 67.47 359 *eP* **P 23 20 48.6 +0.4**
comp=Z,145nm,0.8s,mb5.9
YAK Yakutsk 67.47 359 *c iP* **P 23 20 48.8 +0.6**
YAK *e* pP 23 21 11.9 -4.0
YAK *e**PP pP 23 21 14.9 -1.0
YAK *e*PPP 23 25 02.6
YAK *e*S S 23 29 44.8 +10
YAK *e* 23 30 39.2
YAK pmax pmax
comp=Z,98nm,0.9s,mb5.6
YAK pmax pmax
comp=N,17nm,0.9s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK smax
comp=N,354nm,5.1s
YAK smax
comp=E,380nm,5.4s
MK31 Makanchi Array 67.57 326⇑ *eP* **P 23 20 50.0 +0.8**
MK31 *e*PcP PcP 23 21 16.1 +0.5
MK31 Makanchi Array 67.57 326⇑ *eP* **P 23 20 50.0 +0.8**
MK31 *e* pP 23 21 16.1 -0.7
MKAR Makanchi Array 67.57 326 P **P 23 20 50.1 +1.0**
comp=E,118nm,0.4s,mb6.0,baz=113,slow=8.2,SNR=2379
MKAR Makanchi Array 67.57 326 P **P 23 20 50.2 +1.0**
KSH Kashi 67.61 317 *eP* **P 23 20 51.0 +1.4**
KSH *e*PcP PcP 23 21 17.5 +1.6
KSH *e*pP pP 23 21 18.5 +1.2
KSH *e*sP sP 23 21 31.0 +1.6
KSH *e*PP PP 23 23 21.5 +1.3
KSH *e*ScP 23 25 10.0
KSH *e*S S 23 29 34.3 -3.6
KSH *e*ScS ScS 23 30 34.0 -3.8
KSH pmax pmax
comp=Z,100nm,0.6s,mb5.8
KSH LR LR
comp=N,290nm,6.0s
KSH LR LR
comp=E,270nm,5.2s
KSH LR LR
comp=Z,310nm,6.6s
ULHL Ulahol 68.75 319 P **P 23 20 58.0 +1.3**
SNR=11
KZA Kyzart 69.31 319 P **P 23 21 02.2 +2.1**
SNR=9.8
KZA Kyzart 69.31 319 *eP* **P 23 21 01.9 +1.8**
comp=Z,99nm,0.8s,mb5.7
TKM2 Tokmak 2 69.50 320 P **P 23 21 02.5 +1.3**
SNR=136
TKM2 Tokmak 2 69.50 320⇑ *iP* **P 23 21 02.3 +1.1**
comp=Z,87nm,0.6s,mb5.8
TKM2 Tokmak 2 69.50 320⇑ *iP* **P 23 21 02.3 +1.1**
TKM2 pmax pmax
comp=Z,87nm,0.6s,mb5.8
KBK Karagaybulak 69.79 319 P **P 23 21 04.5 +1.5**
SNR=60
UCH Uchtor 69.87 319 P **P 23 21 05.5 +1.9**
SNR=127
AAK Ala-Archa 70.07 319 P **P 23 21 06.3 +1.5**
SNR=27
AAK Ala-Archa 70.07 319 P **P 23 21 06.2 +1.5**
comp=Z,23nm,0.4s,mb5.3,baz=107,slow=4.9,SNR=118
AAK Ala-Archa 70.07 319⇑ *iP* **P 23 21 05.9 +1.2**
comp=Z,109nm,1.1s,mb5.6
AAK Ala-Archa 70.07 319 *c iP* **P 23 21 06.0 +1.2**
AAK pmax pmax
comp=Z,59nm,1.2s,mb5.3
AAK Ala-Archa 70.07 319 P **P 23 21 06.2 +1.4**
comp=Z,457nm,0.5s,mb6.6,SNR=47
AAK Ala-Archa 70.07 319 P **P 23 21 06.5 +1.7**
SNR=33
CHMS Chumysh 70.08 320 P **P 23 21 05.6 +0.8**
SNR=22
FRU Bishkek 70.08 319 *eP* **P 23 21 05.0 +0.1**
FRU *e* pP 23 21 29.0 -3.7
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.2
SEY Seymchan 70.31 10⇑ *iP* **P 23 21 07.1 +1.3**
AML Almayashu 70.36 318 P **P 23 21 08.5 +1.9**
SNR=148
AML Almayashu 70.36 318⇑ *eP* **P 23 21 08.2 +1.7**
comp=Z,149nm,0.8s,mb5.9
USP Ospenovka 70.37 320 P **P 23 21 07.5 +0.9**
SNR=104
EKS2 Erkin-Say 70.55 319 P **P 23 21 09.2 +1.5**
SNR=111
EKS2 Erkin-Say 70.55 319⇑ *iP* **P 23 21 09.1 +1.4**
comp=Z,101nm,0.8s,mb5.7
KBL Kabul 70.56 309⇑ *iP* **P 23 21 08.1 +0.2**
comp=Z,39nm,0.9s,mb5.2
KBL Kabul 70.56 309⇑ *iP* **P 23 21 08.1 +0.2**
KBL pmax pmax
comp=Z,39nm,0.9s,mb5.2
ZAA0 Zalesovo Array 70.75 333⇑ *eP* **P 23 21 08.4 -0.2**
ZALV Zalesovo Beam 70.75 333 P **P 23 21 08.5 -0.2**
comp=Z,36nm,0.5s,mb5.5,baz=118,slow=5.1,SNR=189
ZALV Zalesovo Beam 70.75 333 P **P 23 21 08.5 -0.2**
ZALV pmax pmax
comp=Z,36nm,0.5s,mb5.5
KURK Kurchatov 71.81 328⇑ *iP* **P 23 21 15.6 +0.5**
comp=Z,87nm,0.9s,mb5.6
KURK *e*pP pP 23 21 42.5 -0.6
KURK Kurchatov 71.81 328 *c iP* **P 23 21 15.4 +0.3**
KURK *i* *PP pP 23 21 44.8 +1.7
KURK pmax pmax
comp=Z,113nm,1.2s,mb5.6
KURK Kurchatov 71.81 328 P **P 23 21 15.5 +0.4**
comp=Z,408nm,0.5s,SNR=80
KURK Kurchatov 71.81 328 P **P 23 21 15.9 +0.8**
SNR=30
NVS Novosibirsk 72.04 333⇑ *iP* **P 23 21 16.0 -0.4**
NVS *e* pP 23 21 43.8 -0.5
NVS *e*S S 23 30 28.3 -0.7
NVS pmax pmax
comp=N,19nm,0.7s
NVS pmax pmax
comp=E,22nm,0.7s
NVS pmax pmax
comp=Z,40nm,0.7s,mb5.4
NVS smax
comp=N,4.0nm,1.2s
NVS smax
comp=E,8.0nm,1.4s
KKAR Karatay Array 72.90 318 *eP* **P 23 21 22.1 +0.3**
comp=E,70nm,0.8s,mb5.5
KKAR Karatay Array 72.90 318 *eP* **P 23 21 22.1 +0.4**
KKAR pmax pmax
comp=Z,70nm,0.8s,mb5.5
WBK Wadi Bani Khal 75.62 295 P **P 23 21 39.1 +1.1**
SNR=6.1
MAW Mawson 76.53 201 P **P 23 21 42.2 -0.1**
comp=Z,7.3nm,0.7s,mb4.5,baz=74,slow=6.7,SNR=18
MAW LR LR 23 53 27.2
comp=Z,59nm,21.7s,baz=235,slow=34
MAW Mawson 76.53 201 *eP* **P 23 21 42.9 +0.6**
comp=Z,5.4nm,0.6s,mb4.5
MAW Mawson 76.53 201 *eP* **P 23 21 41.8 -0.5**
comp=Z,2.0nm,0.8s
MAW Mawson 76.53 201 *eP* **P 23 21 41.8 -0.5**
MAW Mawson 76.53 201 P **P 23 21 42.2 -0.1**
MAW pmax pmax
comp=Z,7.0nm,0.7s
MAW MLR MLR
comp=Z,59nm,21.7s
SMDO Samad 76.54 295 P **P 23 21 43.8 +0.6**
SNR=13
TIXI Tiksi 77.14 359 *eP* **P 23 21 45.6 +0.1**
TIXI pmax pmax
comp=Z,37nm,1.0s,mb5.1
BSY Bisya 77.25 295 P **P 23 21 47.6 +0.4**
SNR=7.0
HOQ Hoqain 77.32 296 P **P 23 21 48.2 +0.7**
SNR=16
BRVK Borovoye 77.45 327⇑ *iP* **P 23 21 47.9 +0.2**
comp=Z,51nm,0.8s,mb5.3
BRVK *e*pP pP 23 22 17.0 +1.0
BRVK Borovoye 77.45 327⇑ *iP* **P 23 21 47.9 +0.3**
BRVK *e**PP pP 23 22 17.0 +1.0
BRVK pmax pmax
comp=Z,51nm,0.8s,mb5.3
BRVK Borovoye 77.45 327 P **P 23 21 48.5 +0.9**
comp=Z,430nm,0.8s,mb6.2,SNR=22
BRVK Borovoye 77.45 327 P **P 23 21 48.4 +0.8**
SNR=16
BILL Bilibino 77.59 13⇓ *eP* **P 23 21 48.5 +0.4**
BILL pmax pmax
comp=Z,4.0nm,0.9s
ARQ Araqi 77.97 295 P **P 23 21 51.6 +0.4**
SNR=6.4
PPT Papeete 78.38 107 LR LR 23 52 43.1
comp=Z,64nm,20.9s,baz=31,slow=33
HATD Hatta, Dubai 78.62 297 P **P 23 21 55.4 +0.6**
SNR=5.5
ASHO Ashiyiah 78.66 296 P **P 23 21 55.5 +0.6**
SNR=5.3
BANOM Banah 78.70 298 P **P 23 21 56.7 +1.6**
SNR=6.2
ABKT Ailbek 80.00 310 P **P 23 22 02.9 +0.9**
comp=Z,314nm,1.0s,mb6.1,SNR=20
ABKAR Akbulak array 81.99 321 *eP* **P 23 22 11.8 -0.4**
comp=Z,14nm,0.7s,mb4.9
MUKL Al Mukalla 83.53 285⇑ *eP* **P 23 22 22.0 +1.0**
SVE Sverdlovsk 84.05 329⇑ *eP* **P 23 22 23.5 +0.8**
SVE pmax pmax
comp=Z,99nm,0.9s,mb5.6
QSPA South Pole Qui 84.34 180 P **P 23 22 24.1 +0.3**
comp=Z,8.8nm,0.6s,mb4.8,baz=324,slow=1.7,SNR=72
QSPA pP pP 23 22 52.0 -0.5
comp=Z,14nm,0.6s,baz=335,slow=0.9,SNR=5.6
QSPA South Pole Qui 84.34 180 *eP* **P 23 22 23.8 0.0**
comp=Z,14nm,0.6s,mb5.0
QSPA *e*pP pP 23 22 52.7 +0.2
ARU Arti 85.01 328 *eP* **P 23 22 26.8 -0.7**
comp=Z,51nm,0.8s,mb5.5
ARU *e*PP PP 23 25 42.5 -3.6
ARU Arti 85.01 328 *c iP* **P 23 22 26.8 -0.7**
ARU *e**PP pP 23 22 50.8 -5.5
ARU *e* 23 25 43.5
ARU S S 23 32 40.4 -6.9
ARU SS SS 23 38 21.6 -1.4
ARU pmax pmax
comp=Z,56nm,1.0s,mb5.5
ARU Arti 85.01 328 P **P 23 22 27.1 -0.4**
comp=Z,340nm,0.5s,SNR=19
SYO Syowa Base 85.25 201⇓ *eP* **P 23 22 27.4 -1.1**
SYO Syowa Base 85.25 201⇑ *e*PcP PcP 23 22 30.4 -1.1
UMR Umm Al-Rimmam 86.82 300 *eP* **P 23 22 37.0 -0.2**
UMR AMb AMB 23 22 38.1
comp=Z,96nm,0.7s,mb5.8
SOKR Solikamsk 86.84 331 *d iP* **P 23 22 35.9 -0.6**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.0
RDF Al-Radifah 86.88 299 *eP* **P 23 22 37.5 +0.1**
RDF AMb AMB 23 22 38.5
comp=Z,94nm,0.7s,mb5.8
OHAK Old Harbor 87.09 32⇑ *iP* **P 23 22 38.5 +0.8**
comp=Z,47nm,1.2s,mb5.3
MIB Mutribah 87.18 300 *eP* **P 23 22 38.5 -0.3**
MIB AMb AMB 23 22 40.2
comp=Z,102nm,0.9s,mb5.8
NAY Al-Naaiem 87.19 300 *eP* **P 23 22 38.4 -0.5**
NAY AMb AMB 23 22 39.2
comp=Z,76nm,0.8s,mb5.7
TTA Tatalina 87.39 26 *eP* **P 23 22 40.5 +1.5**
TTA Tatalina 87.39 26 *eP* **P 23 22 40.5 +1.5**
PPLA Purkeypile 89.06 27 *eP* **P 23 22 47.8 +0.9**
comp=Z,2.3nm,0.5s,mb4.5
GNI Garni 90.64 310 *eP* **P 23 22 55.4 +0.6**
comp=Z,9.1nm,0.9s,mb4.9
GNI Garni 90.64 310 *eP* **P 23 22 55.4 +0.5**
GNI pmax pmax
comp=Z,9.0nm,0.9s
COLD Coldfoot 90.88 22 *eP* **P 23 22 55.9 +0.6**
comp=Z,3.0nm,0.8s,mb4.5
ZEI Tsey 91.56 313 *eP* **P 23 22 57.7 -1.4**
ZEI pmax pmax
comp=Z,16nm,1.4s,mb5.1
ILAR Eielson Array 91.74 25 P **P 23 22 58.1 -1.3**
comp=Z,2.6nm,0.7s,mb4.6,baz=263,slow=4.3,SNR=36
ILAR pP pP 23 23 27.1 -1.3
comp=Z,2.2nm,0.7s,baz=269,slow=4.1,SNR=5.5
ILAR Eielson Array 91.74 25 P **P 23 22 58.2 -1.2**
ILAR *PP pP 23 23 27.1 -1.3
ILAR pmax pmax
comp=Z,3.0nm,0.7s
MALT Malatya 95.37 308 *eP* **P 23 23 17.3 +0.6**
comp=Z,1.5nm,0.6s,mb4.6
MALT Malatya 95.37 308 *eP* **P 23 23 17.3 +0.6**
MALT pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
KLMR Klimovskoe 95.54 331 *eP* **P 23 23 14.2 -2.7**
KLMR pmax pmax
comp=Z,41nm,1.5s,mb5.6
ANN Anapa 96.37 314 *eP* **P 23 23 33.0 +12**
OBN Obninsk 97.05 325⇓ *iP* **P 23 23 22.2 -1.7**
OBN pmax pmax
comp=Z,14nm,0.8s,mb5.4
INK Inuvik 97.27 22 *eP* **P 23 23 23.8 -0.8**
comp=Z,8.8nm,1.3s,mb5.0
INK Inuvik 97.27 22 *eP* **P 23 23 23.8 -0.8**
INK pmax pmax
comp=Z,9.0nm,1.3s
APA Apatity 98.03 337⇓ *eP* **P 23 23 21.0 -7.0**
APA pmax pmax
comp=Z,25nm,1.8s,mb5.4
APA MLR MLR
comp=Z,900nm,20.0s
JOF Joensuu 99.34 333 *eP* Pdif 23 23 32.0 -2.2
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb5.3
JOF Joensuu 99.34 333 *ep* Pdif 23 23 32.0 -2.2
comp=Z,5.5nm,0.6s
ARCES ARCESS Array B 100.60 340 P Pdif 23 23 38.7 -1.2
comp=Z,5.4nm,0.7s,baz=61,slow=3.8,SNR=11
ARCES ARCESS Array B 100.60 340 P Pdif 23 23 38.7 -1.2
ARCES pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 101.71 321 P Pdif 23 23 43.5 -1.3
comp=Z,0.4nm,0.3s,baz=70,slow=5.3,SNR=2.7
AKASG PKiKP PKiKP 23 28 07.5 -0.2
comp=Z,0.6nm,0.4s,baz=70,slow=2.3,SNR=4.4
AKASG Malin Array Be 101.71 321 P Pdif 23 23 43.5 -1.3
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KAF Kangasniemi 101.75 332 *eP* Pdif 23 23 42.2 -2.8
KAF pmax pmax
comp=Z,5.0nm,0.7s
KAF Kangasniemi 101.75 332 *ep* Pdif 23 23 42.2 -2.8
comp=Z,5.2nm,0.7s
FINES FINESS Array B 101.98 332 P Pdif 23 23 44.7 -1.3
comp=Z,6.4nm,0.8s,baz=36,slow=6.0,SNR=20
FINES PP PP 23 27 57.6 -0.6
comp=Z,2.7nm,0.8s,baz=90,slow=8.9,SNR=4.3
FINES PKiKP PKiKP 23 28 07.9 0.0
comp=Z,2.0nm,0.8s,baz=0.0,slow=0.7,SNR=3.9
FINES FINESS Array B 101.98 332 P Pdif 23 23 44.7 -1.3
FINES PP PP 23 27 57.6 -0.6
FINES FINESS Array B 101.98 332 P Pdif 23 23 44.7 -1.3
FINES 23 27 57.7
FINES pmax pmax
comp=Z,6.0nm,0.8s
FINES pmax pmax
comp=Z,3.0nm,0.8s
BUR08 Bucovina Ar. S 104.69 318 *e*Pdif Pdif 23 23 58.1 0.0
YKA Yellowknife Ar 106.15 26 PKiKP PKiKP 23 28 15.5 0.0
comp=Z,2.4nm,0.6s,baz=295,slow=1.9,SNR=14
YKA Yellowknife Ar 106.15 26 PKPdf PKiKP 23 28 15.5 0.0
NB2 NORSAR Subarra108.96 333 P Pdif 23 24 15.8 -1.2
comp=Z,1.9nm,0.8s,baz=70,slow=4.6
NOA NORSAR Array B 108.96 333 Pdiff Pdif 23 24 15.9 -1.0
comp=Z,1.5nm,0.7s,baz=69,slow=4.6,SNR=5.0
NOA PKiKP PKiKP 23 28 21.1 +0.3
comp=Z,1.6nm,0.9s,baz=75,slow=1.9,SNR=3.5
NOA NORSAR Array B 108.96 333 P Pdif 23 24 16.0 -1.0
NOA pmax pmax
comp=Z,2.0nm,0.7s
MORC Moravsky Berou 109.25 321 *e*PKP PKiKP 23 28 21.4 -0.3
NVAR Mina Array Bea 109.77 51 Pdiff Pdif 23 24 23.3 +2.7
comp=Z,0.6nm,0.8s,baz=268,slow=4.5,SNR=3.8
NVAR PKiKP PKiKP 23 28 25.1 +2.1
comp=Z,0.8nm,0.7s,baz=232,slow=0.9,SNR=6.3
NVAR PKKPbc PKKPbc 23 39 28.6 +0.7
comp=Z,0.3nm,0.7s,baz=116,slow=3.4,SNR=4.0
NVAR PKKPab PKKPab 23 39 38.9 +0.3
comp=Z,0.6nm,0.7s,baz=107,slow=5.5,SNR=5.9
A13A Flathead Natio 110.34 40⇓ PKiKP PKiKP 23 28 25.1 +1.3
baz=110
MPMC Manual Prospec 110.76 54⇑ PKiKP PKiKP 23 28 26.3 +1.3
baz=111
I12A Atlanta 111.11 45⇑ PKiKP PKiKP 23 28 27.0 +1.6
baz=111
H12A Diamond D Ranc 111.14 44⇑ PKiKP PKiKP 23 28 26.8 +1.4
baz=111
H13A Challis 111.55 44⇓ PKiKP PKiKP 23 28 27.7 +1.5
baz=112
U10A Ash Meadows, A 111.63 53⇑ PKiKP PKiKP 23 28 28.3 +1.7
baz=112
HLID Hailey 111.68 45⇑ PKiKP PKiKP 23 28 28.2 +1.8
baz=112
HLID Hailey 111.68 45 *e*PKP PKiKP 23 28 28.4 +2.0
I13A Wildhorse Cree 111.80 45⇓ PKiKP PKiKP 23 28 28.5 +1.8
baz=112
C15A Salmond Ranch, 111.82 41⇓ PKiKP PKiKP 23 28 27.3 +0.7
baz=112
GERES GERESS Array B 111.93 321 PKiKP PKiKP 23 28 27.2 +0.4
comp=Z,2.7nm,0.6s,baz=65,slow=1.5,SNR=23
GERES GERESS Array B 111.93 321 *i* PKIKP PKiKP 23 28 27.2 +0.4
GERES pmax pmax
comp=Z,3.0nm,0.6s
BELC Belle Mtn. Jos 112.27 56⇓ PKiKP PKiKP 23 28 29.1 +1.2
baz=112
A17A Triple J Farms 112.68 39⇓ PKiKP PKiKP 23 28 29.1 +0.9
baz=113,SNR=8.9
V12A Nelson 112.93 54⇓ PKiKP PKiKP 23 28 30.5 +1.4
baz=113
IRM Iron Mountain 112.94 55⇓ PKiKP PKiKP 23 28 30.6 +1.4
baz=113
F16A Kennard Place, 113.03 42⇓ PKiKP PKiKP 23 28 30.3 +1.4
baz=113
A18A Metzger Ranch, 113.22 39⇓ PKiKP PKiKP 23 28 29.6 +0.4
baz=113
ABTA Abfaltersbach 113.32 319⇑ *i*PKiKP PKiKP 23 28 28.7 -0.8
comp=Z,14nm,1.1s
P14A Drum Mountains 113.56 49⇑ PKiKP PKiKP 23 28 31.5 +1.3
baz=114
EGMT Eagleton 113.57 40⇓ PKiKP PKiKP 23 28 31.0 +1.1
baz=114
DUG Dugway 113.61 49⇑ PKiKP PKiKP 23 28 31.3 +1.0
baz=114
DUG Dugway 113.61 49 *e*PKP PKiKP 23 28 31.5 +1.2
DUG Dugway 113.61 49 *e*PKiKP PKiKP 23 28 31.5 +1.2
F17A Fitzpatrick Pl 113.64 42⇑ PKiKP PKiKP 23 28 31.3 +1.2
baz=114
N15A Stansbury Isla 113.67 48⇑ PKiKP PKiKP 23 28 31.7 +1.4
baz=114
WTTA Wattenberg 113.73 320⇑ *i*PKiKP PKiKP 23 28 30.6 +0.3
comp=Z,15nm,0.5s
A19A Klindworth Far 113.91 38⇓ PKiKP PKiKP 23 28 31.0 +0.5
baz=114
E18A Harlowton 113.93 41⇓ PKiKP PKiKP 23 28 31.0 +0.4
baz=114
B19A Brinkman Farms 113.94 39⇑ PKiKP PKiKP 23 28 31.0 +0.4
baz=114
X13A Yucca 113.95 55⇓ PKiKP PKiKP 23 28 31.2 +0.1
baz=114
MOTA Moosalm 114.05 320⇑ *i*PKiKP PKiKP 23 28 30.9 0.0
comp=Z,6.5nm,0.7s
C19A Slack Wire Ran 114.12 40⇓ PKiKP PKiKP 23 28 31.1 +0.1
baz=114
TPAW Teton Pass 114.13 45 *e*PKP PKiKP 23 28 32.6 +1.5
HWUT Hardware Ranch 114.19 47 *e*PKP PKiKP 23 28 32.4 +1.1
MOOW Moose Ponds 114.20 44 *e*PKP PKiKP 23 28 32.4 +1.1
F18A Big Timber 114.27 42⇑ PKiKP PKiKP 23 28 32.5 +1.1
baz=114
SNOW Snow King Moun 114.28 45 *e*PKP PKiKP 23 28 33.1 +1.7
Z13A Yuma Proving G 114.33 56⇓ PKiKP PKiKP 23 28 33.2 +1.3
baz=114
LOHW Long Hollow 114.34 44 *e*PKP PKiKP 23 28 33.1 +1.6
V14A Boquillas Ranc 114.34 53⇓ PKiKP PKiKP 23 28 33.8 +2.0
baz=114

FETA	Feichten	114.40	319	⇑	iPKiKP	PKiKP	23 28 31.6	+0.1
	comp=Z,9.8nm,1.1s							
W14A	Seligman	114.44	54	⇑	PKiKP	PKiKP	23 28 34.2	+2.2
	baz=114							
MSU	Marysvale	114.47	50		ePKP	PKiKP	23 28 34.2	+2.3
MSU	Marysvale	114.47	50		ePKIKP	PKiKP	23 28 34.3	+2.3
B20A	Solberg Farm,	114.52	39	⇓	PKiKP	PKiKP	23 28 32.7	+0.9
	baz=115							
E19A	Rath Farm, Rou	114.70	41	⇓	PKiKP	PKiKP	23 28 32.6	+0.5
	baz=115							
C20A	Veseth Ranch,	114.79	40	⇑	PKiKP	PKiKP	23 28 32.6	+0.4
	baz=115							
U15A	North Rim	114.83	52	⇑	PKiKP	PKiKP	23 28 34.5	+1.8
	baz=115							
DAVA	Damuels	114.85	320	⇑	iPKPdf	PKiKP	23 28 31.5	-0.9
	comp=Z,14nm,1.1s							
K18A	Toltan Ranch,	115.01	45	⇑	PKiKP	PKiKP	23 28 35.0	+2.1
	baz=115							
TMUT	Trail Mountain	115.03	49		ePKP	PKiKP	23 28 34.5	+1.5
V15A	Kaibab Nationa	115.05	53	⇓	PKiKP	PKiKP	23 28 35.5	+2.4
	baz=115							
R16A	Teasdale	115.06	50	⇓	PKiKP	PKiKP	23 28 34.4	+1.3
	baz=115							
S16A	Weppner Ranch,	115.10	51	⇓	PKiKP	PKiKP	23 28 35.1	+1.9
	baz=115							
O17A	Robinson Place	115.16	48	⇓	PKiKP	PKiKP	23 28 35.1	+1.9
	baz=115							
BW06	Boulder Array	115.31	45	⇓	PKiKP	PKiKP	23 28 34.2	+0.8
	baz=115							
BW06	Boulder Array	115.31	45		ePKPdf	PKPdf	23 28 34.3	+0.8
PDAR	Pinedale Array	115.31	45		PKP	PKPdf	23 28 34.6	+1.2
	comp=Z,2.1nm,0.7s,baz=265,slow=0.7,SNR=16							
PDAR					PKKPbc	PKKPbc	23 39 08.3	-1.2
	comp=Z,0.8nm,0.8s,baz=114,slow=3.7,SNR=5.0							
G20A	Bridger	115.48	42	⇑	PKiKP	PKiKP	23 28 35.1	+1.4
	baz=116,SNR=7.1							
J19A	Crowheart	115.52	44	⇓	PKiKP	PKiKP	23 28 34.5	+0.6
	baz=116							
SRU	San Rafael	115.59	49	⇑	PKiKP	PKiKP	23 28 35.1	+1.0
	baz=116							
SRU	San Rafael	115.59	49		ePKPdf	PKPdf	23 28 35.1	+1.0
SRU	San Rafael	115.59	49		ePKIKP	PKPdf	23 28 35.1	+1.0
R17A	Hanksville Air	115.61	50	⇓	PKiKP	PKiKP	23 28 35.3	+1.2
	baz=116							
L19A	Farson	115.65	46	⇑	PKiKP	PKiKP	23 28 35.4	+1.3
	baz=116							
D21A	La Casta Ranch	115.66	40	⇓	PKiKP	PKiKP	23 28 35.2	+1.2
	baz=116							
P18A	Preston Nutter	115.67	49	⇓	PKiKP	PKiKP	23 28 35.5	+1.3
	baz=116							
S17A	Black Ridge (B	115.73	51	⇓	PKiKP	PKiKP	23 28 35.5	+1.0
	baz=116							
E21A	Keefer Ranch,	115.79	41	⇓	PKiKP	PKiKP	23 28 35.4	+1.2
	baz=116							
K19A	Absolon Red Bu	115.80	45	⇓	PKiKP	PKiKP	23 28 35.6	+1.2
	baz=116							
U16A	Tuba City	115.81	53	⇑	PKiKP	PKiKP	23 28 35.4	+0.7
	baz=116							
B22A	Reddig Ranch S	115.83	38	⇑	PKiKP	PKiKP	23 28 35.6	+1.4
	baz=116							
H20A	Greybull	115.87	43	⇓	PKiKP	PKiKP	23 28 35.4	+0.9
	baz=116							
T17A	Navajo Res., N	115.87	52	⇓	PKiKP	PKiKP	23 28 35.6	+0.9
	baz=116							
Q18A	Rafter H Ranch	115.88	49	⇓	PKiKP	PKiKP	23 28 35.3	+0.7
	baz=116							
X16A	Lo Mia Camp, P	115.92	54	⇑	PKiKP	PKiKP	23 28 36.0	+1.1
	baz=116							
I20A	Worland	115.95	44	⇓	PKiKP	PKiKP	23 28 35.6	+1.0
	baz=116,SNR=5.4							
CDF	Champ du Feu	116.08	322		ePKIKP	PKPdf	23 28 35.0	+0.3
CDF	Champ du Feu	116.08	322		ePKIKP	PKPdf	23 28 35.0	+0.3
C22A	Vida	116.11	39	⇑	PKiKP	PKiKP	23 28 35.9	+1.1
	baz=116							
D22A	Cohagen	116.14	40	⇓	PKiKP	PKiKP	23 28 36.1	+1.2
	baz=116							
J20A	Shoshoni	116.17	44	⇑	PKiKP	PKiKP	23 28 36.2	+1.1
	baz=116							
K20A	Yellowstone Ra	116.20	45	⇓	PKiKP	PKiKP	23 28 36.0	+0.8
	baz=116							
R18A	Canyonlands Na	116.24	50	⇓	PKiKP	PKiKP	23 28 36.2	+0.8
	baz=116							
LAO	LASA Array	116.29	40	⇓	PKiKP	PKiKP	23 28 36.1	+0.9
	baz=116							
LAO	LASA Array	116.29	40		ePKPdf	PKPdf	23 28 36.4	+1.2
S18A	Hurst Farm, Bl	116.34	51	⇓	PKiKP	PKiKP	23 28 36.5	+0.9
	baz=116							
B23A	Brockton	116.39	38	⇑	PKiKP	PKiKP	23 28 36.3	+1.0
	baz=116							
L20A	Wamsutter	116.40	46	⇑	PKiKP	PKiKP	23 28 36.8	+1.3
	baz=116							
C23A	Lambert	116.53	39	⇑	PKiKP	PKiKP	23 28 36.2	+0.6
	baz=117							
Y17A	Roosevelt	116.55	55	⇑	PKiKP	PKiKP	23 28 36.6	+0.5
	baz=117							
T18A	Mexican Hat	116.56	51	⇓	PKiKP	PKiKP	23 28 37.3	+1.3
	baz=117							
I21A	Big Trails, Te	116.57	43	⇓	PKiKP	PKiKP	23 28 36.6	+0.7
	baz=117							
HINF	Hinteralfeld	116.57	321	⇑	iPKIKP	PKPdf	23 28 35.3	-0.4
	comp=Z,12nm,0.8s							
HINF	Hinteralfeld	116.57	321	⇑	iPKIKP	PKPdf	23 28 35.3	-0.4
Q19A	Hogan Spring (	116.58	49	⇑	PKiKP	PKiKP	23 28 37.4	+1.4
	baz=117							
U18A	Rough Rock, Ch	116.74	52	⇓	PKiKP	PKiKP	23 28 37.8	+1.4
	baz=117							
N20A	Spence Gulch,	116.80	47	⇓	PKiKP	PKiKP	23 28 37.7	+1.3
	baz=117							
HAU	Haudompre	116.81	322		ePKIKP	PKPdf	23 28 36.1	-0.1
	comp=Z,9.2nm,0.8s							
HAU					eMLR	MLR		
	comp=Z,52nm,18.0s							
HAU	Haudompre	116.81	322		ePKPdf	PKPdf	23 28 36.1	-0.1
HAU					LR	LR		
	comp=Z,50nm,18.0s							
HAU	Haudompre	116.81	322		ePKIKP	PKPdf	23 28 36.1	-0.1
HAU					MLR	MLR		
	comp=Z,50nm,18.0s							
V18A	Ganado	116.85	53	⇓	PKiKP	PKiKP	23 28 37.6	+0.9
	baz=117							
117A	Oracle	116.85	56	⇓	PKiKP	PKiKP	23 28 38.3	+1.6
	baz=117							
GIVF	Givet	116.86	324		ePKIKP	PKPdf	23 28 36.5	+0.3
	comp=Z,16nm,0.8s							
GIVF	Givet	116.86	324		ePKIKP	PKPdf	23 28 36.5	+0.3
TUC	Tucson	116.86	57		ePKPdf	PKPdf	23 28 37.9	+1.1
TUC	Tucson	116.86	57		ePKIKP	PKPdf	23 28 37.9	+1.1
K21A	Alcova	116.97	45	⇑	PKiKP	PKiKP	23 28 37.5	+0.8
	baz=117,SNR=6.0							
S19A	Harvey Farm, M	116.98	50	⇓	PKiKP	PKiKP	23 28 38.3	+1.4
	baz=117							
PGF	Pioggiola	117.00	315		ePKIKP	PKPdf	23 28 36.6	-0.1
PGF	Pioggiola	117.00	315		ePKIKP	PKPdf	23 28 36.6	-0.1
O20A	White River Ci	117.01	48	⇑	PKiKP	PKiKP	23 28 38.8	+2.0
	baz=117							
P20A	De Beque	117.08	48	⇓	PKiKP	PKiKP	23 28 37.9	+0.9
	baz=117							
C24A	Savage	117.10	39	⇑	PKiKP	PKiKP	23 28 38.0	+1.3
	baz=117							
M21A	Separation Pea	117.22	46	⇓	PKiKP	PKiKP	23 28 38.3	+1.1
	baz=117							
BAIF	Baives	117.23	324	⇑	iPKIKP	PKPdf	23 28 37.2	+0.3
	comp=Z,12nm,0.8s							
BAIF	Baives	117.23	324	⇑	iPKIKP	PKPdf	23 28 37.2	+0.3
J22A	Midwest	117.26	44	⇓	PKiKP	PKiKP	23 28 37.7	+0.5
	baz=117,SNR=14							
T19A	Beclabito	117.30	51	⇑	PKiKP	PKiKP	23 28 39.2	+1.8
	baz=117							
Q20A	Ridgley Place,	117.30	49	⇓	PKiKP	PKiKP	23 28 38.8	+1.4
	baz=117							
W19A	Sanders	117.42	53	⇓	PKiKP	PKiKP	23 28 38.7	+0.9
	baz=118							
R20A	Redvale	117.45	50	⇑	PKiKP	PKiKP	23 28 38.8	+1.0
	baz=118							
118A	Homack Ranch,	117.48	56	⇑	PKiKP	PKiKP	23 28 39.4	+1.4
	baz=118							
LPG	La Plagne	117.51	319	⇑	iPKIKP	PKPdf	23 28 38.0	+0.4
	comp=Z,14nm,0.6s							
LPG	La Plagne	117.51	319	⇑	iPKIKP	PKPdf	23 28 38.0	+0.4
CABF	La Chapelle	117.52	320	⇑	iPKIKP	PKPdf	23 28 37.9	+0.3
	comp=Z,23nm,0.7s							
CABF	La Chapelle	117.52	320	⇑	iPKIKP	PKPdf	23 28 37.9	+0.3
LPL	La Plagne	117.52	319	⇑	iPKIKP	PKPdf	23 28 37.9	+0.3
	comp=Z,18nm,0.6s							
LPL	La Plagne	117.52	319	⇑	iPKIKP	PKPdf	23 28 37.9	+0.3
318A	Bisbee	117.69	57	⇑	PKiKP	PKiKP	23 28 39.2	+0.8
	baz=118							
L22A	Ellis Ranch, M	117.74	45	⇑	PKiKP	PKiKP	23 28 39.2	+1.1
	baz=118							
P21A	Newcastle	117.77	48	⇓	PKiKP	PKiKP	23 28 39.3	+1.0
	baz=118							
MBDF	Montbardon	117.78	318		ePKIKP	PKPdf	23 28 38.5	+0.4
	comp=Z,12nm,0.6s							
MBDF	Montbardon	117.78	318		ePKIKP	PKPdf	23 28 38.5	+0.4
Y19A	Nutrioso	117.79	55	⇑	PKiKP	PKiKP	23 28 39.0	+0.4
	baz=118							
Q21A	Lamborn Mesa,	117.88	49	⇓	PKiKP	PKiKP	23 28 39.2	+0.7
	baz=118							
V20A	Brimhall	117.99	52	⇑	PKiKP	PKiKP	23 28 39.7	+0.8
	baz=118							
S21A	Coal Bank Pass	118.03	50	⇑	PKiKP	PKiKP	23 28 40.2	+1.3
	baz=118							
W20A	Ramah	118.12	53	⇓	PKiKP	PKiKP	23 28 40.1	+1.0
	baz=118							
219A	White Tail Can	118.19	57	⇑	PKiKP	PKiKP	23 28 40.6	+1.2
	baz=118							
L23A	Garrett	118.23	45	⇓	PKiKP	PKiKP	23 28 39.9	+0.7
	baz=118							
X20A	Quemado	118.26	54	⇓	PKiKP	PKiKP	23 28 41.4	+1.9
	baz=118							
FRF	La Foret Royal	118.29	317		ePKIKP	PKPdf	23 28 39.0	-0.1
	comp=Z,37nm,1.0s							
FRF	La Foret Royal	118.29	317		ePKIKP	PKPdf	23 28 39.0	-0.1
319A	Douglas	118.30	57	⇓	PKiKP	PKiKP	23 28 41.2	+1.6
	baz=118							
ORIF	Oris-en-Rattie	118.30	319		ePKIKP	PKPdf	23 28 39.1	0.0
	comp=Z,18nm,0.7s							
ORIF					eMLR	MLR		
	comp=Z,72nm,22.5s							
ORIF	Oris-en-Rattie	118.30	319		ePKIKP	PKPdf	23 28 39.1	0.0
T21A	Navajo Lake	118.41	51	⇓	PKiKP	PKiKP	23 28 42.1	+2.5
	baz=118							
LMR	La Mourre	118.46	317		ePKIKP	PKPdf	23 28 39.3	-0.2
	comp=Z,4.6nm,0.7s							
LMR	La Mourre	118.46	317		ePKIKP	PKPdf	23 28 39.3	-0.2
U21A	Nageezi	118.46	51	⇓	PKiKP	PKiKP	23 28 41.2	+1.4
	baz=119							
Y20A	Horse Springs,	118.51	54	⇑	PKiKP	PKiKP	23 28 40.8	+0.8
	baz=119							
Z20A	Nine Sixteen R	118.51	55	⇓	PKiKP	PKiKP	23 28 39.9	0.0
	baz=119							
120A	U Bar Ranch, L	118.60	56	⇓	PKiKP	PKiKP	23 28 41.7	+1.6
	baz=119							
V21A	Milan	118.64	52	⇑	PKiKP	PKiKP	23 28 41.6	+1.5
	baz=119							
LOR	Lormes	118.65	322		ePKIKP	PKPdf	23 28 39.8	+0.1
LOR					eMLR	MLR		
	comp=Z,61nm,17.2s							
LOR	Lormes	118.65	322		ePKPdf	PKPdf	23 28 39.8	+0.1
LOR					LR	LR		
	comp=Z,60nm,17.3s							
LOR	Lormes	118.65	322		ePKIKP	PKPdf	23 28 39.8	+0.1
LOR					MLR	MLR		
	comp=Z,60nm,17.3s							
RSSD	Black Hills	118.66	42		ePKPdf	PKPdf	23 28 40.0	+0.1
RSSD	Black Hills	118.66	42		ePKIKP	PKPdf	23 28 40.0	+0.1
R22A	Saguache, Gunn	118.66	49	⇑	PKiKP	PKiKP	23 28 42.3	+2.2
	baz=119							
KEST	Kesra	118.69	308		PKP	PKPdf	23 28 41.2	+1.0
	comp=Z,1.7nm,0.9s,baz=268,slow=11,SNR=5.3							
KEST					PP	PP	23 29 56.0	-3.4
	comp=Z,2.0nm,0.8s,baz=298,slow=8.6,SNR=5.8							
KEST	Kesra	118.69	308		PKP	PKPdf	23 28 41.2	+1.0
KEST					PP	PP	23 29 56.0	-3.4
S22A	4UR Ranch, Cre	118.75	50	⇑	PKiKP	PKiKP	23 28 42.2	+2.0
	baz=119							
220A	Playas Peak, P	118.82	57	⇑	PKiKP	PKiKP	23 28 42.1	+1.5
	baz=119							
SMRF	Simiane la Rot	118.86	318		ePKIKP	PKPdf	23 28 40.7	+0.5
	comp=Z,18nm,0.8s							
X21A	Alamocita Cree	118.86	54	⇑	PKiKP	PKiKP	23 28 42.9	+2.3
	baz=119							
T22A	Edith	118.89	51	⇓	PKiKP	PKiKP	23 28 43.2	+2.6
	baz=119							
SMF	Signal de Mont	118.92	321		ePKIKP	PKPdf	23 28 40.0	-0.3
SMF	Signal de Mont	118.92	321		ePKIKP	PKPdf	23 28 40.0	-0.3
SSF	Saint Saulge	118.95	322	⇑	iPKIKP	PKPdf	23 28 40.5	+0.2
	comp=Z,17nm,0.8s							
SSF	Saint Saulge	118.95	322	⇑	iPKIKP	PKPdf	23 28 40.5	+0.2
VIVF	Saint-Julien-l	119.12	319		ePKIKP	PKPdf	23 28 40.7	0.0
	comp=Z,15nm,0.8s							
VIVF	Saint-Julien-l	119.12	319		ePKIKP	PKPdf	23 28 40.7	0.0
Q23A	Hartsel	119.16	48	⇑	PKiKP	PKiKP	23 28 42.1	+1.1
	baz=119,SNR=5.2							
AVF	Avril sur Loir	119.17	321	⇑	iPKIKP	PKPdf	23 28 40.5	-0.2
	comp=Z,10nm,0.9s							
AVF	Avril sur Loir	119.17	321	⇑	iPKIKP	PKPdf	23 28 40.5	-0.2
V22A	San Miguel Ran	119.18	52	⇑	PKiKP	PKiKP	23 28 43.0	+1.8
	baz=119							
T23A	Casias Ranch,	119.55	50	⇑	PKiKP	PKiKP	23 28 44.5	+2.6
	baz=120							
BGF	Bois d'Agland	119.58	321	⇑	iPKIKP	PKPdf	23 28 41.8	+0.3
	comp=Z,27nm,0.8s							
BGF	Bois d'Agland	119.58	321	⇑	iPKIKP	PKPdf	23 28 41.8	+0.3
U23A	El Rito	119.63	51	⇑	PKiKP	PKiKP	23 28 44.5	+2.5
	baz=120							
Y22A	Socorro	119.64	54	⇑	PKiKP	PKiKP	23 28 43.0	+0.8
	baz=120							
SDCO	Great Sand Dun	119.75	49	⇑	PKiKP	PKiKP	23 28 43.6	+1.4
	baz=120,SNR=9.4							
SDCO	Great Sand Dun	119.75	49		ePKPdf	PKPdf	23 28 44.1	+1.9
ANMO	Albuquerque	119.79	53		ePKPdf	PKPdf	23 28 43.7	+1.4
ANMO	Albuquerque	119.79	53		ePKIKP	PKPdf	23 28 43.7	+1.4
V23A	Ortiz Mt. (NFS	119.80	52	⇑	PKiKP	PKiKP	23 28 44.5	+2.2
	baz=120,SNR=6.7							
BNM	Barren Site	119.86	54		ePKPdf	PKPdf	23 28 44.2	+1.8
R24A	Sanders Place,	119.90	49	⇑	PKiKP	PKiKP	23 28 43.4	+0.9
	baz=120							
LASF	Ste Croix	119.96	318		ePKIKP	PKPdf	23 28 41.9	-0.5
	comp=Z,8.2nm,0.8s							
W23A	Werner Place,	119.98	53	⇓	PKiKP	PKiKP	23 28 43.2	+0.4
	baz=120							
TCF	Toulx Ste Croi	120.09	321	⇑	iPKIKP	PKPdf	23 28 42.8	+0.3
	comp=Z,20nm,0.8s							
TCF	Toulx Ste Croi	120.09	321	⇑	iPKIKP	PKPdf	23 28 42.8	+0.3
X23A	Hourglass Bar	120.10	53	⇓	PKiKP	PKiKP	23 28 44.0	+1.0
	baz=120							
T24A	Torres, Weston	120.30	50	⇓	PKiKP	PKiKP	23 28 44.5	+1.2
	baz=120							
Y23A	Lovelace Mesa,	120.38	54	⇓	PKiKP	PKiKP	23 28 44.4	+0.9
	baz=120,SNR=5.6							
Z23A	Rita Site, Whi	120.40	55	⇑	PKiKP	PKiKP	23 28 45.5	+1.9
	baz=120							
LDF	La Druitiere	120.42	324		ePKIKP	PKPdf	23 28 43.1	0.0
LDF	La Druitiere	120.42	324		ePKIKP	PKPdf	23 28 43.1	0.0
V24A	Rampart Ranch,	120.52	52	⇑	PKiKP	PKiKP	23 28 45.9	+2.1
	baz=121,SNR=8.4							
FLN	La Foliniere	120.54	325		ePKIKP	PKPdf	23 28 43.3	0.0
FLN					eMLR	MLR		
	comp=Z,71nm,18.2s							
FLN	La Foliniere	120.54	325		ePKPdf	PKPdf	23 28 43.3	0.0
FLN					LR	LR		
	comp=Z,70nm,18.3s							
FLN	La Foliniere	120.54	325		ePKIKP	PKPdf	23 28 43.3	0.0
FLN					MLR	MLR		
	comp=Z,70nm,18.3s							
R25A	Fountain Ranch	120.55	49	⇑	PKiKP	PKiKP	23 28 44.4	+0.6
	baz=121,SNR=6.0							
W24A	Lazy 6 Ranch,	120.55	52	⇑	PKiKP	PKiKP	23 28 45.8	+2.0
	baz=121,SNR=10							
S25A	Robets Cordova	120.58	49	⇓	PKiKP	PKiKP	23 28 45.4	+1.5
	baz=121,SNR=5.8							
T25A	Trinidad	120.76	50	⇓	PKiKP	PKiKP	23 28 45.4	+1.2
	baz=121,SNR=5.9							
CAF	Calviac	120.78	320	⇑	iPKIKP	PKPdf	23 28 44.4	+0.5
	comp=Z,12nm,0.8s							
CAF	Calviac	120.78	320	⇑	iPKIKP	PKPdf	23 28 44.4	+0.5
ULM	Lac du Bonnet	120.83	33		PKP	PKPdf	23 28 42.7	-1.1
	comp=Z,5.7nm,0.6s,baz=317,slow=1.7,SNR=10							
ULM	Lac du Bonnet	120.83	33		ePKPdf	PKPdf	23 28 43.1	-0.7
Y24A	Capitan	120.87	54		PKiKP	PKiKP	23 28 46.3	+1.8
	baz=121,SNR=21							
GRR	Gorron	120.95	325		ePKIKP	PKPdf	23 28 44.2	+0.1
	comp=Z,16nm,0.9s							
GRR	Gorron	120.95	325		ePKIKP	PKPdf	23 28 44.2	+0.1
RJF	Les Rejaudoux	120.96	320		ePKIKP	PKPdf	23 28 44.5	+0.3
RJF					eMLR	MLR		
	comp=Z,60nm,17.8s							
RJF	Les Rejaudoux	120.96	320		ePKPdf	PKPdf	23 28 44.5	+0.3
RJF					LR	LR		
	comp=Z,60nm,17.8s							
RJF	Les Rejaudoux	120.96	320		ePKIKP	PKPdf	23 28 44.5	+0.3
RJF					MLR	MLR		
	comp=Z,60nm,17.8s							
V25A	Rancho No Teng	120.99	51	⇑	PKiKP	PKiKP	23 28 46.6	+1.9
	baz=121,SNR=7.4							
Z24A	Sheeppen Canyo	121.09	54	⇓	PKiKP	PKiKP	23 28 46.7	+1.8
	baz=121,SNR=10							
124A	Stringfield Ra	121.17	55	⇓	PKiKP	PKiKP	23 28 46.9	+1.7
	baz=121,SNR=9.1							
224A	Cornudas Mount	121.27	56	⇑	PKiKP	PKiKP	23 28 47.2	+1.8
	baz=121,SNR=5.5							
W25A	X Bar L Ranch,	121.29	52	⇑	PKiKP	PKiKP	23 28 47.0	+1.7
	baz=121							
MTLF	Montolieu	121.35	318	⇑	iPKIKP	PKPdf	23 28 45.0	0.0
	comp=Z,16nm,0.9s							
MTLF	Montolieu	121.35	318	⇑	iPKIKP	PKPdf	23 28 45.0	0.0
MFF	Saint Martin d	121.40	322	⇑	iPKIKP	PKPdf	23 28 45.0	0.0
	comp=Z,23nm,0.7s							
MFF	Saint Martin d	121.40	322	⇑	iPKIKP	PKPdf	23 28 45.0	0.0
324A	Moseley Ranch,	121.46	57	⇓	PKiKP	PKiKP	23 28 46.5	+0.7
	baz=122,SNR=6.7							
Y25A	Mesa, Roswell	121.47	54	⇓	PKiKP	PKiKP	23 28 46.6	+0.9
	baz=122,SNR=9.8							
MNTX	Cornudas Mount	121.48	56		ePKPdf	PKPdf	23 28 46.9	+1.2
MNTX					epPKPdf	pPKPdf	23 29 16.5	+0.6
U26A	Atchley Ranch,	121.50	50	⇓	PKiKP	PKiKP	23 28 46.7	+1.0
	baz=122							
LFF	La Frestale	121.62	320	⇑	iPKIKP	PKPdf	23 28 46.0	+0.5
	comp=Z,16nm,0.7s							
LFF	La Frestale	121.62	320	⇑	iPKIKP	PKPdf	23 28 46.0	+0.5
Z25A	Roswell	121.62	54	⇓	PKiKP	PKiKP	23 28 47.1	+1.0
	baz=122							
V26A	Tequesquite Ra	121.65	51	⇓	PKiKP	PKiKP	23 28 47.1	+1.1
	baz=122							
125A	Gardner Draw,	121.83	55	⇓	PKiKP	PKiKP	23 28 47.7	+1.3
	baz=122,SNR=5.1							
225A	Deer Hill, Car	121.84	56	⇑	PKiKP	PKiKP	23 28 47.3	+0.8
	baz=122							
W26A	Owens Ranch, T	121.88	52	⇓	PKiKP	PKiKP	23 28 47.5	+1.0
	baz=122							
325A	Bean Ranch, Si	121.90	56	⇓	PKiKP	PKiKP	23 28 47.6	+1.0
	baz=122							
SGMF	Saint Gilles	121.99	325		ePKIKP	PKPdf	23 28 45.9	-0.2
SGMF	Saint Gilles	121.99	325		ePKIKP	PKPdf	23 28 45.9	-0.2
X26A	CR and CF Fran	122.00	53	⇓	PKiKP	PKiKP	23 28 47.4	+0.7
	baz=122							
425A	Indio Mountain	122.03	57	⇑	PKiKP	PKiKP	23 28 47.7	+0.8
	baz=122,SNR=6.5							
ROSF	Rostrenen	122.35	325		ePKIKP	PKPdf	23 28 46.7	-0.1
ROSF	Rostrenen	122.35	325		ePKIKP	PKPdf	23 28 46.7	-0.1
W27A	Bowe Ranch, En	122.43	52	⇑	PKiKP	PKiKP	23 28 48.2	+0.6
	baz=122							
226A	Malaga, Loving	122.44	55	⇓	PKiKP	PKiKP	23 28 48.7	+1.0
	baz=122							
QUIF	Quistinic	122.52	325		ePKIKP	PKPdf	23 28 47.0	-0.1
QUIF	Quistinic	122.52	325		ePKIKP	PKPdf	23 28 47.0	-0.1
Y27A	Causey	122.70	53	⇓	PKiKP	PKiKP	23 28 48.6	+0.5
	baz=123							
EPF	Esparros	122.72	319	⇑	iPKIKP	PKPdf	23 28 47.9	+0.2
	comp=Z,7.1nm,0.6s							
EPF	Esparros	122.72	319	⇑	iPKIKP	PKPdf	23 28 47.9	+0.2
Z27A	Tatum	122.82	54	⇓	PKiKP	PKiKP	23 28 49.3	+0.9
	baz=123							
426A	McDonald Obser	122.85	57	⇓	PKiKP	PKiKP	23 28 49.4	+0.9
	baz=123							
526A	Mary Lane Ranc	122.95	58	⇑	PKiKP	PKiKP	23 28 49.7	+1.0
	baz=123						

LIC	Lamto	136.14	273	*e*P	PKPpre	23 29 06.1	
	comp=Z,53nm,1.4s						
TIC	Toumodi	136.15	274	*e*P	PKPpre	23 29 04.5	
	comp=Z,23nm,0.9s						
TIC	Toumodi	136.15	274	*e*PKHKP	PKPpre	23 29 04.5	
JTS	JuntasAbangare	144.23	80	*e*PKPdf	PKPdf	23 29 28.6	-0.1
JTS	JuntasAbangare	144.23	80	*e*PKIKP	PKPdf	23 29 28.6	0.0
CPUP	Villa Florida	147.25	166	PKPbc	PKPbc	23 29 34.7	-1.2
	comp=Z,11nm,0.7s,baz=184,slow=2.1,SNR=29						
CPUP				pPKPbc	pPKPbc	23 30 04.5	-1.3
	comp=Z,15nm,0.7s,baz=131,slow=1.9,SNR=7.9						
CPUP	Villa Florida	147.25	166	*e*PKPdf	PKPdf	23 29 33.5	+0.1
CPUP				*e*PKPbc	PKPbc	23 29 36.1	+0.3
CPUP	Villa Florida	147.25	166	PKIKP	PKPdf	23 29 34.7	+1.2
CPUP						23 30 04.5	
CPUP				pmax	pmax		
	comp=Z,11nm,0.7s						
NNA	Nana	147.35	122	*e*PKPbc	PKPbc	23 29 35.5	-0.9
BCIP	Isla Barro Col	149.35	82	*e*PKPdf	PKPdf	23 29 37.0	-0.3
BCIP				*e*PKPbc	PKPbc	23 29 42.1	+0.4
BCIP				*e*PKPab	PKPab	23 29 48.5	+1.8
MTDJ	Mount Denham	149.58	63	*e*PKPbc	PKPbc	23 29 42.2	+0.1
OTAV	Otavalo	150.24	99	*e*PKPdf	PKPdf	23 29 40.7	+2.1
OTAV				*e*PKPbc	PKPbc	23 29 46.7	+2.8
LPAZ	La Paz	151.23	139	PKP	PKPdf	23 29 41.8	+1.7
	comp=Z,1.1nm,0.8s,baz=102,slow=6.7,SNR=5.3						
LPAZ				PKPbc	PKPbc	23 29 48.4	+2.3
	comp=Z,19nm,0.8s,baz=258,slow=0.7,SNR=69						
LPAZ				pPKPbc	pPKPbc	23 30 15.5	-0.7
	comp=Z,32nm,1.0s,baz=131,slow=1.1,SNR=10						
LPAZ	La Paz	151.23	139	*e*PKPdf	PKPdf	23 29 42.3	+2.3
LPAZ				*e*PKPbc	PKPbc	23 29 48.4	+2.3
LPAZ	La Paz	151.23	139	PKIKP	PKPdf	23 29 41.8	+1.7
LPAZ						23 30 15.5	
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SDDR	Presa de Saban	154.65	56	*e*PKPab	PKPab	23 30 09.7	+1.1
ROSC	El Rosal	154.89	91	PKP	PKPdf	23 29 46.2	+0.8
	comp=Z,3.3nm,0.3s,baz=70,slow=20,SNR=3.8						
ROSC				PKPbc	PKPbc	23 29 53.8	-0.4
	comp=Z,6.3nm,0.4s,baz=252,slow=20,SNR=3.3						
ROSC				PKPab	PKPab	23 30 13.1	+3.2
	comp=Z,5.1nm,0.5s,baz=196,slow=17,SNR=3.8						
RCBR	Riachuelo	162.57	229	*e*PKPdf	PKPdf	23 29 54.2	-0.4

DJA 26 23:16:57,7°.53S×106°.74E, h37km, MLv3.6/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.55	341	P	Pn	23 17 10.0	+1.6
SKJI				S	Sn	23 17 18.6	+2.2
DBJI	Dramaga	0.97	1	P	Pn	23 17 15.1	+1.0
DBJI				S	Sn	23 17 28.1	+1.4
CISI	Cisompet, Garu	1.07	91	P	Pn	23 17 16.2	+0.8
CISI				S	Sn	23 17 29.6	+0.5
CGJI	Cibinong	1.38	311	P	Pn	23 17 19.9	+0.1
SBJI	Serang	1.53	337	P	Pn	23 17 22.0	+0.2
UGM	Wanagama	3.77	96	P	Pn	23 17 50.8	-1.8

*DDA **26** 23:28:00.1, 37°.49N×32°.93E, h7km±7km, Md2.8*
*CSEM **26** 23:28:01.9±0.3, 37°.57N×33°.02E, h2km, ML2.0, Error ellipse: s-maj=5.7km s-min=5.2km az=87.0*
*ISK **26** 23:28:01.7, 37°.58N×33°.02E, h6km, ML2.0*
*ISCJB **26** 23:28:02.4±0.7, 37°.58N±0°.04×33°.00E±0°.04, h10km, Error ellipse: s-maj=5.2km s-min=5.0km az=147.0*
ISC 26 23:28:02.5±0.6, 37°.57N±0°.03×33°.00E±0°.05, h10km, n12, σ0.91/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONT	Konya--Tatoy	0.63	307	*e*PG	Pg	23 28 14.5	-0.2
KONT				*e*SG	Sg	23 28 23.8	+0.8
KONT	Konya--Tatoy	0.63	307	*e*Pg	Pg	23 28 14.5	-0.2
KONT				*e*Sg	Sg	23 28 23.8	+0.8
HDMB	Hadim	0.73	214	*e*PG	Pg	23 28 16.6	+0.1
HDMB				*e*SG	Sg	23 28 27.4	+1.3
HDMB	Hadim	0.73	214	*e*Pg	Pg	23 28 16.6	+0.1
HDMB				*e*Sg	Sg	23 28 27.4	+1.3
SULT	Sultanhani-AKS	0.75	33	*e*PG	Pg	23 28 16.2	-0.8
SULT				*e*SG	Sg	23 28 26.9	+0.1
SULT	Sultanhani-AKS	0.75	33	*e*Pg	Pg	23 28 16.2	-0.7
SULT				*e*Sg	Sg	23 28 26.9	+0.2
ERMK	Ermenek	0.93	184	*i* P	Pg	23 28 15.3	-5.0
ERMK				*i* S	Sg	23 28 29.4	-2.9
ERMK	Ermenek	0.93	184	*i* P	Pg	23 28 15.3	-5.0
ERMK				*i* S	Sg	23 28 29.4	-3.0
KDHN	Kadinhani	1.18	324	*i* P	Pb	23 28 24.3	-0.6
KDHN				*i* S	Sb	23 28 39.8	-0.4
KDHN	Kadinhani	1.18	324	*i* P	Pb	23 28 24.3	-0.6
KDHN				*i* S	Sb	23 28 39.8	-0.4
GULE	Gulek	1.44	101	*i* P	Pn	23 28 28.8	+0.2
GULE				*i* S	Sn	23 28 48.7	+1.1
GULE	Gulek	1.44	101	*i* P	Pn	23 28 28.8	+0.2
GULE				*i* S	Sn	23 28 48.7	+1.1

*CSEM **26** 23:28:50.4, 38°.37N×13°.57E, h8km, MD2.5/13, After ROM*
ROM 26 23:28:50.4±0.4, 38°.37N×13°.57E, h8km±5km, Md2.5/13, Ml2.7/6, Error ellipse: s-maj=4.1km s-min=2.9km az=53.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPG	Monte Pellegri	0.26	219	Pg	Pg	23 28 56.7	+1.1
MPG				Sg	Sg	23 29 00.2	+1.0
	1.0nm,0.1s						
MPG	Monte Pellegri	0.26	219	Pg	Pg	23 28 56.7	+1.1
MPG				Sg	Sg	23 29 00.2	+1.0
	1.0nm,0.1s						
USI	Ustica	0.46	318	Pg	Pg	23 28 59.8	+0.5
USI				Sg	Sg	23 29 06.8	+1.5
	948nm,0.5s						
USI	Ustica	0.46	318	Pg	Pg	23 28 59.8	+0.5
USI				Sg	Sg	23 29 06.8	+1.5
	948nm,0.5s						
CORL	Corleone	0.52	204	Pg	Pg	23 29 00.9	+0.5
CORL				Sg	Sg	23 29 09.4	+2.2
	414nm,0.3s						
CORL	Corleone	0.52	204	Pg	Pg	23 29 00.9	+0.5
CORL				Sg	Sg	23 29 09.4	+2.2
	414nm,0.3s						
GIB	Gibilmanna	0.52	136	Pg	Pg	23 29 00.9	+0.4
GIB				Sg	Sg	23 29 09.4	+2.1
	782nm,0.4s						
GIB	Gibilmanna	0.52	136	Pg	Pg	23 29 00.9	+0.4
GIB				Sg	Sg	23 29 09.4	+2.1
	782nm,0.4s						
CSLB	Castelbuono	0.58	138	Pg	Pg	23 29 01.9	+0.4
CSLB				Sg	Sg	23 29 10.2	+1.1
	128nm,0.3s						
CSLB	Castelbuono	0.58	138	Pg	Pg	23 29 01.9	+0.4
CSLB				Sg	Sg	23 29 10.2	+1.1
	128nm,0.3s						
IACL	Alicudi	0.64	75	Pg	Pg	23 29 03.4	+0.7
	196nm,0.4s						
IACL	Alicudi	0.64	75	Pg	Pg	23 29 03.4	+0.7
	196nm,0.4s						
IFIL	Filicudi I Eol	0.81	76	Pg	Pg	23 29 05.3	-0.6
	210nm,0.6s						
IFIL	Filicudi I Eol	0.81	76	Pg	Pg	23 29 05.3	-0.6
	210nm,0.6s						
RESU	Resuttano	0.81	152	Pg	Pg	23 29 07.4	+1.3
	92nm,0.4s						
RESU	Resuttano	0.81	152	Pg	Pg	23 29 07.4	+1.3
	92nm,0.4s						
ERC	Erice	0.84	247	Pg	Pg	23 29 07.3	+0.7
	386nm,1.0s						
ERC	Erice	0.84	247	Pg	Pg	23 29 07.3	+0.7
	386nm,1.0s						
MNO	Monte Soro	0.99	116	Pg	Pg	23 29 10.3	+0.9
MNO	Monte Soro	0.99	116	Pg	Pg	23 29 10.3	+0.9
SLNA	Salina	1.01	78	Pg	Pg	23 29 10.9	+1.1
SLNA	Salina	1.01	78	Pg	Pg	23 29 10.9	+1.1
GALF	Gagliano Caste	1.02	129	Pg	Pg	23 29 12.2	+2.1
GALF	Gagliano Caste	1.02	129	Pg	Pg	23 29 12.2	+2.1
ECNV	Catenanuova	1.19	130	Pg	Pg	23 29 14.8	+1.6
ECNV	Catenanuova	1.19	130	Pg	Pg	23 29 14.8	+1.6
RAFF	Raffo Rosso	1.30	151	Pg	Pg	23 29 15.1	-0.3
RAFF	Raffo Rosso	1.30	151	Pg	Pg	23 29 15.1	-0.3
HVZN	Vizzini	1.49	142	Pg	Pg	23 29 16.9	-2.1
HVZN	Vizzini	1.49	142	Pg	Pg	23 29 16.9	-2.1
HCRL	Carlentini	1.58	133	Pg	Pg	23 29 18.3	-2.5
HCRL				Sg	Sg	23 29 38.9	-2.4
HCRL	Carlentini	1.58	133	Pg	Pg	23 29 18.3	-2.5
HCRL				Sg	Sg	23 29 38.9	-2.4
SSY	Sortino	1.70	135	Pg	Pg	23 29 20.0	-3.0
SSY	Sortino	1.70	135	Pg	Pg	23 29 20.0	-3.0

IDC 26 23:29:28.4±2.2, 7°.51S×127°.18E, h0km, mb3.2/1, mb1 3.8/3, mb1mx3.6/13, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=216.7km s-min=33.0km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.17	151	Pn	Pn	23 32 50.0	-0.6
	0.2nm,0.3s,baz=324,slow=13,SNR=17						
WRA				Sn	Sn	23 35 13.4	-15
	0.5nm,0.3s,baz=330,slow=21,SNR=12						
ASAR	Alice Springs	17.31	159	P	Pn	23 33 32.0	+0.5
	0.4nm,0.3s,baz=341,slow=11,SNR=41						
ASAR				S	Sn	23 36 34.6	-10
	0.2nm,0.3s,baz=316,slow=20,SNR=4.9						
MKAR	Makanchi Array	67.15	328	P	P	23 40 24.2	+0.1
	0.1nm,0.4s,baz=125,slow=7.9,SNR=2.4						

*PRU **26** 23:30:06.3, 42°.65N×19°.41E, h0km*
*BEO **26** 23:30:09.5±0.6, 42°.63N×18°.72E, h8km±2km, ML2.6/5*
*CSEM **26** 23:30:09.9±0.2, 42°.67N×18°.78E, h10km, ML2.6/5, Error ellipse: s-maj=3.1km s-min=3.0km az=51.0*
*ISCJB **26** 23:30:09.6±0.3, 42°.68N±0°.02×18°.77E±0°.03, h11km±2km, Error ellipse: s-maj=3.2km s-min=3.1km az=27.5*
*PDG **26** 23:30:10.0±0.2, 42°.68N×18°.81E, h14km, MD2.7/7, ML2.6/5, Error ellipse: s-maj=0.2km s-min=0.4km az=0.0*
*NEIC **26** 23:30:10.0, 42°.68N×18°.81E, h14km, ML2.6(PDG), After PDG.*
ISC 26 23:30:10.3±0.3, 42°.67N±0°.02×18°.77E±0°.03, h8km±3km, n55, σ0.97/93, 12C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKY	Niksic	0.22	49	⇓*i*Pg	Pg	23 30 14.6	-0.2
NKY				*e*Sg	Sg	23 30 18.0	+0.2
NKY	Niksic	0.22	49	⇓*i*Pg	Pg	23 30 14.6	-0.2
NKY				*e*Sg	Sg	23 30 18.0	+0.2
BRY	Bratogost	0.29	324	⇑*i*Pg	Pg	23 30 15.9	-0.1
BRY				*e*Sg	Sg	23 30 20.8	+0.9
BRY	Bratogost	0.29	324	⇑*i*Pg	Pg	23 30 15.9	-0.1
BRY				*e*Sg	Sg	23 30 20.8	+0.9
HCY	Herceg Novi	0.30	223	⇓*i*Pg	Pg	23 30 16.2	-0.1
HCY				*e*Sg	Sg	23 30 21.7	+1.4
HCY	Herceg Novi	0.30	223	⇓*i*Pg	Pg	23 30 16.2	-0.1
HCY				*e*Sg	Sg	23 30 21.7	+1.4
BUM	Brajici-Budva	0.38	166	⇓*i*Pg	Pg	23 30 17.5	-0.3
BUM				*e*Sg	Sg	23 30 23.9	+1.1
BUM	Brajici-Budva	0.38	166	⇓*i*Pg	Pg	23 30 17.5	-0.3
BUM				*e*Sg	Sg	23 30 23.9	+1.1
PDG	Podgorica	0.43	123	⇓*i*Pg	Pg	23 30 17.8	-1.0
PDG				*e*Sg	Sg	23 30 24.7	+0.2
PDG	Podgorica	0.43	123	⇓*i*Pg	Pg	23 30 17.8	-1.0
PDG				*e*Sg	Sg	23 30 24.7	+0.2
PDG	Podgorica	0.43	123	⇓*i*Pg	Pg	23 30 17.8	-1.0
TTG				*e*Sg	Sg	23 30 24.9	+0.4
UPM	Unac-Piva	0.54	11	⇓*i*Pg	Pg	23 30 19.7	-1.2
UPM				*e*Sg	Sg	23 30 28.5	+0.5
UPM	Unac-Piva	0.54	11	⇓*i*Pg	Pg	23 30 19.7	-1.2
UPM				*e*Sg	Sg	23 30 28.5	+0.5
ULC	Ulcinj	0.79	153	⇑*i*Pg	Pg	23 30 24.5	-1.0
ULC				*e*Sg	Sg	23 30 37.0	+1.2
ULC	Ulcinj	0.79	153	⇑*i*Pg	Pg	23 30 24.5	-1.0
ULC				*e*Sg	Sg	23 30 37.0	+1.2
PLE	Pljevlja	0.80	34	⇑*i*Pg	Pg	23 30 24.8	-1.0
PLE				*e*Sg	Sg	23 30 37.2	+1.0
PLE	Pljevlja	0.80	34	⇑*i*Pg	Pg	23 30 24.8	-1.0
PLE				*e*Sg	Sg	23 30 37.2	+1.0
STON	Ston	0.82	285	*i* Pg	Pg	23 30 23.9	-2.1
STON				Sg	Sg	23 30 37.2	+0.6
STON	Ston	0.82	285	*i* Pg	Pg	23 30 23.9	-2.1
STON				Sg	Sg	23 30 37.2	+0.6
BEY	Berane	0.85	76	⇑*i*Pg	Pg	23 30 25.5	-1.2
BEY				*e*Sg	Sg	23 30 38.5	+0.7
IVA	Berane	0.85	76	⇑*i*Pg	Pg	23 30 25.5	-1.2
IVA				*e*Sg	Sg	23 30 38.5	+0.7
PVY	Plav	0.89	94	⇑*i*Pg	Pg	23 30 26.2	-1.2
PVY				*e*Sg	Sg	23 30 39.8	+0.8
PVY	Plav	0.89	94	⇑*i*Pg	Pg	23 30 26.2	-1.2
PVY				*e*Sg	Sg	23 30 39.8	+0.8
SJES	Sjenica	1.06	56	*e*Pg	Pg	23 30 29.7	-1.0
SJES				*e*Sg	Sg	23 30 44.4	-0.1
BBLS	Lazići	1.28	21	*e*Pg	Pg	23 30 34.2	-0.7
BBLS				*e*Sg	Sg	23 30 52.9	+1.3
BBLS	Lazići	1.28	21	*e*Pg	Pg	23 30 34.2	-0.7
BBLS				*e*Sg	Sg	23 30 52.9	+1.3
DIVS	Divibare	1.68	31	*e*Pn	Pn	23 30 39.2	-0.8
DIVS				*e*Sg	Sg	23 31 04.3	-0.1
DIVS	Divibare	1.68	31	*e*Pn	Pn	23 30 39.2	-0.8
DIVS				*e*Sg	Sg	23 31 04.3	-0.1
SELS	Selova	1.81	72	*e*Pn	Pn	23 30 40.7	-1.0
SELS	Selova	1.81	72	*e*Pn	Pn	23 30 40.7	-1.0
TRUS	Trudelj	1.96	37	*e*Pn	Pn	23 30 42.5	-1.2
TRUS				*e*Sn	Sn	23 31 08.2	-0.2
TRUS	Trudelj	1.96	37	*e*Pn	Pn	23 30 42.5	-1.2
TRUS				*e*Sn	Sn	23 31 08.2	-0.2
BARS	Barje	2.25	85	*e*Pn	Pn	23 30 48.0	+0.3
BARS				*e*Sn	Sn	23 31 16.8	+1.2
KRUS	Krusevo	2.26	124	*i* Pn	Pn	23 30 48.4	+0.5
BLY	Banja Luka	2.38	332	*e*Pn	Pn	23 30 50.2	+0.7
BLY				*e*Sn	Sn	23 31 20.1	+1.3
BLY	Banja Luka	2.38	332	*e*Pn	Pn	23 30 50.2	+0.7
BLY				*e*Sn	Sn	23 31 20.1	+1.3
SG1	Sgolgore (BA)	2.41	221	*e*Sn	Sn	23 31 17.7	-1.9
FRGS	Fruska Gora	2.60	16	*e*Pn	Pn	23 30 52.2	-0.4
ZAPS	Zavoj	2.90	77	*e*Pn	Pn	23 30 57.5	+0.8
ZAPS				*e*Sn	Sn	23 31 32.5	+0.9
NVLJ	Novalja	3.41	305	*e*Pn	Pn	23 31 03.9	+0.3
NVLJ				Sn	Sn	23 31 44.3	+0.1
NVLJ	Novalja	3.41	305	*e*Pn	Pn	23 31 03.9	+0.2
NVLJ				Sn	Sn	23 31 44.2	0.0
PKSM	Moragy	3.54	359	*e*Pn	Pn	23 31 04.5	-1.0
PKSM	Moragy	3.54	359	⇓*i*P	Pn	23 31 04.4	-1.1
PKSM	Moragy	3.54	359	*e*Pn	Pn	23 31 04.5	-1.0
BZS	Buzias	3.59	34	*e*Pn	Pn	23 31 05.2	-1.0
BZS	Buzias	3.59	34	⇑*i*P	Pn	23 31 05.2	-1.0
BZS	Buzias	3.59	34	*e*Pn	Pn	23 31 05.2	-1.0
GZR	Gura Zlata	3.97	45	⇓*i*P	Pn	23 31 11.5	+0.1
DRGR		4.99	33	⇑*i*P	Pn	23 31 25.7	+0.3
CONA	Conrad Observa	5.64	340	*e*PN	Pn	23 31 36.9	+2.5
VYHS	Vyhne	5.83	0	*e*Pn	Pn	23 31 35.8	-1.1
VYHS				*e*Sn	Sn	23 32 39.8	-4.0
VYHS	Vyhne	5.83	0	*e*PN	Pn	23 31 35.8	-1.1
VYHS				*e*SN	Sn	23 32 39.8	-4.0
VYHS	Vyhne	5.83	0	*e*Pn	Pn	23 31 35.8	-1.1
KHC	Kasperske Hory	7.41	333	*e*PN	Pn	23 32 00.1	+1.5
KHC	Kasperske Hory	7.41	333	Pn	Pn	23 32 00.1	+1.5

*NEIC **26** 23:53:53.8, 33°.14S×68°.64W, h5km, MD3.5(SJA), ML3.1(GUC), After GUC.*
NEIC Felt [III] at Junin, Rivadavia and San Martin.
GUC 26 23:53:53.8±0.6, 33°.14S×68°.64W, h5km, MD3.7, ML3.1, 6C-12D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	Farellones	1.40	262	⇑*i*P	Pn	23 54 19.9	0.0
FCH				*i* S	Sb	23 54 39.7	+1.2
FCH	Farellones	1.40	262	⇑*i*P	Pn	23 54 19.9	0.0
FCH				*i* S	Sb	23 54 39.7	+1.2
FCH				AML	AML	23 54 43.9	
	comp=N,178nm,0.4s						
LMEL	Las Melosas	1.49	241	⇓*i*P	Pn	23 54 21.0	-0.2
LMEL				*i* S	Sn	23 54 42.5	+1.5
LMEL	Las Melosas	1.49	241	⇓*i*P	Pn	23 54 21.0	-0.2
LMEL				*i* S	Sn	23 54 42.5	+1.5
LMEL				AML	AML	23 54 45.3	
	comp=N,277nm,0.1s						
CLCH	Cerro Calan	1.61	260	*e*P	Pn	23 54 23.6	+0.7
CLCH				*i* S	Sn	23 54 45.9	+1.8
CLCH				AML	AML	23 54 59.6	
	comp=E,320nm,0.4s						
PCH	Pirque	1.64	252	⇑*i*P	Pn	23 54 24.0	+0.7
PCH				S	Sn	23 54 48.0	+3.2
PCH	Pirque	1.64	252	⇑*i*P	Pn	23 54 24.0	+0.7
PCH				*i* S	Sn	23 54 48.0	+3.2
JACH	Jahuel	1.71	285	⇓*i*P	Pn	23 54 25.4	+1.2
JACH				*i* S	Sn	23 54 49.2	+2.8
JACH	Jahuel	1.71	285	⇓*i*P	Pn	23 54 25.4	+1.2
JACH				*i* S	Sn	23 54 49.2	+2.8
PEL	Peldehue	1.72	269	⇑*i*P	Pn	23 54 25.1	+0.8
PEL				*i* S	Sn	23 54 49.3	+2.7
PEL				AML	AML	23 54 54.6	
	comp=N,391nm,0.6s						
CHCH	Chadas Angostu	1.86	244	⇓*i*P	Pn	23 54 27.9	+1.6
CHCH				*i* S	Sn	23 54 53.2	+3.0
CHCH	Chadas Angostu	1.86	244	⇓*i*P	Pn	23 54 27.9	+1.6
CHCH				*i* S	Sn	23 54 53.2	+3.0
CACH	El Canelo	1.91	239	⇓*i*P	Pn	23 54 28.6	+1.7
CACH				*i* S	Sn	23 54 55.5	+4.2
CACH	El Canelo	1.91	239	⇓*i*P	Pn	23 54 28.6	+1.7
CACH				*i* S	Sn	23 54 55.5	+4.2
TACH	Talagante	1.99	254	⇓*i*P	Pn	23 54 30.2	+2.1
TACH				*i* S	Sn	23 54 57.6	+4.2
TACH	Talagante	1.99	254	⇓*i*P	Pn	23 54 30.2	+2.1
TACH				*i* S	Sn	23 54 57.6	+4.2
LNV	Longovilo	2.46	250	⇓*i*P	Pn	23 54 37.5	+3.0
LNV				*i* S	Sn	23 55 10.8	+6.0
LNV	Longovilo	2.46	250	⇓*i*P	Pn	23 54 37.5	+3.0
LNV				*i* S	Sn	23 55 10.8	+6.0
CHNG	Los Chungos	2.72	297	⇑*i*P	Pn	23 54 37.8	-0.4
CHNG				*i* S	Sn	23 55 14.5	+3.0
CHNG				AML	AML	23 55 22.5	
	comp=E,142nm,0.7s						
TLL	Tololo Astrono	3.49	327	*e*P	Pn	23 54 58.1	+9.4
TLL				*i* S	Sn	23 55 45.0	+15
TLL				AML	AML	23 55 58.1	
	comp=N,181nm,0.4s						
TRQA	Tornquist	7.31	134	*e*Pn	Pn	23 55 39.1	-2.1
	comp=N,4.7nm,0.6s						
TRQA				*e*Sg	Sg	23 57 41.3	-7.3

IDC 27 00:08:28.2±3.3, 4°.23S×152°.94E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.5/18, mbtmp3.5/4, Error ellipse: s-maj=123.5km s-min=33.0km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.93	228	P	P	00 13 43.5	-0.6
	0.4nm,0.5s,baz=53,slow=9.9,SNR=5.5						
ASAR	Alice Springs	26.66	222	P	P	00 14 09.5	+0.5
	0.1nm,0.4s,baz=55,slow=9.8,SNR=4.0						
FITZ	Fitzroy Crossi	30.06	241	P	P	00 14 39.7	+0.3
	0.7nm,0.6s,baz=66,slow=6.3,SNR=3.6						
BVAR	Borovoye Array	88.87	323	P	P	00 21 24.3	0.0
	0.5nm,0.6s,baz=108,slow=4.7,SNR=4.2						
TORD	Torodi Ar. Bea	150.26	289	PKPbc	PKPbc	00 28 21.9	-0.5
	1.1nm,0.8s,baz=100,slow=3.0,SNR=3.1						

IDC 27 00:15:00.0±1.4, 22°.19N×143°.86E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/23, mbtmp3.9/6, Error ellipse: s-maj=64.3km s-min=28.3km az=74.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.89	193	P	P	00 23 00.2	-0.2
	0.2nm,0.5s,baz=16,slow=9.2,SNR=5.3						
ZALV	Zalesovo Beam	54.22	321	P	P	00 24 27.9	+0.5
	0.9nm,0.5s,baz=108,slow=8.5,SNR=4.4						
MKAR	Makanchi Array	54.83	312	P	P	00 24 32.0	+0.1
	0.3nm,0.4s,baz=93,slow=8.3,SNR=5.4						
BVAR	Borovoye Array	62.71	319	P	P	00 25 26.8	+0.2
	1.5nm,0.4s,baz=92,slow=7.2,SNR=14						
ARCES	ARCESS Array B	78.66	342	P	P	00 27 03.8	+0.2
	5.6nm,1.1s,baz=66,slow=9.0,SNR=2.7						
FINES	FINESS Array B	83.01	335	P	P	00 27 25.9	-1.1
	2.5nm,1.0s,baz=76,slow=5.9,SNR=6.9						
LPAZ	La Paz	149.27	85	PKPbc	PKPbc	00 34 52.4	+0.9
	0.6nm,0.5s,baz=252,slow=6.4,SNR=3.1						

IDC 27 00:26:55.6±1.1, 52°.35S×26°.20E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/15, mbtmp3.9/6, MS3.3/4, Ms1 3.2/4, ms1mx3.0/21, Error ellipse: s-maj=32.7km s-min=26.5km az=82.0, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	20.34	347	LR	LR	00 38 04.6	
	comp=Z,81nm,18.9s,baz=268,slow=33						
SNAA	Sanae	23.24	203	P	P	00 32 04.0	-0.1
	0.2nm,0.7s,baz=56,slow=16,SNR=3.4						
MAW	Mawson	23.36	145	P	P	00 32 05.8	+0.4
	2.1nm,0.7s,baz=315,slow=12,SNR=4.8						
MAW				LR	LR	00 38 21.9	
	comp=Z,47nm,20.4s,baz=334,slow=29						
BOSA	Boshof	23.72	358	P	P	00 32 08.8	-0.4
	2.9nm,0.9s,baz=187,slow=8.1,SNR=3.2						
BOSA				LR	LR	00 40 03.3	
	com

556nm,1.0s
CRAC Craco 1.31 332 Pg **Pn 00 46 22.3 0.0**
556nm,1.0s
SCHR S. Chirico Rap 1.34 318 Pg **Pn 00 46 22.8 +0.2**
50nm,0.7s
SCHR S. Chirico Rap 1.34 318 Pg **Pn 00 46 22.8 +0.2**
50nm,0.7s
CUC Castrocucco 1.36 306 Pg **Pn 00 46 23.3 +0.4**
111nm,0.8s
CUC Castrocucco 1.36 306 Pg **Pn 00 46 23.3 +0.4**
111nm,0.8s
SIRI Monte Sirino - 1.44 313 Pg **Pn 00 46 24.4 +0.4**
SIRI Monte Sirino - 1.44 313 Pg **Pn 00 46 24.4 +0.4**
SOI Samo 1.47 220 Pg **Pn 00 46 23.8 -0.6**
65nm,1.3s
SOI Samo 1.47 220 Pg **Pn 00 46 23.8 -0.6**
65nm,1.3s
MATE Matera 1.50 344 Pg **Pn 00 46 23.9 -0.9**
186nm,0.6s
MATE Matera 1.50 344 Pg **Pn 00 46 23.9 -0.9**
186nm,0.6s
MIGL Miglionico 1.53 336 Pg **Pn 00 46 25.0 -0.2**
MIGL Miglionico 1.53 336 Pg **Pn 00 46 25.0 -0.2**
MTSN Montesano sull 1.57 313 Pg **Pn 00 46 26.3 +0.6**
85nm,0.8s
MTSN Montesano sull 1.57 313 Pg **Pn 00 46 26.3 +0.6**
85nm,0.8s
MCEL Monticello 1.58 315 Pg **Pn 00 46 25.7 -0.2**
61nm,0.6s
MCEL Monticello 1.58 315 Pg **Pn 00 46 25.7 -0.2**
61nm,0.6s
NOCI Noci 1.58 355 Pg **Pn 00 46 24.8 -1.2**
136nm,0.4s
NOCI Noci 1.58 355 Pg **Pn 00 46 24.8 -1.2**
136nm,0.4s
MPAZ Palizzi 1.59 218 Pg **Pn 00 46 25.0 -1.0**
109nm,1.6s
MPAZ Palizzi 1.59 218 Pg **Pn 00 46 25.0 -1.0**
109nm,1.6s
PTRP Pietrapertosa 1.60 325 Pg **Pn 00 46 28.1 +1.9**
5µm,4.8s
PTRP Pietrapertosa 1.60 325 Pg **Pn 00 46 28.1 +1.9**
5µm,4.8s
MTTG Motta San Giov 1.72 226 Pg **Pn 00 46 27.3 -0.5**
17nm,0.6s
MTTG Motta San Giov 1.72 226 Pg **Pn 00 46 27.3 -0.5**
17nm,0.6s
ACER Acerenza 1.87 328 Pg **Pn 00 46 31.5 +1.6**
ACER Acerenza 1.87 328 Pg **Pn 00 46 31.5 +1.6**
VLS Valsamata 2.81 111 *eP* **Pn 00 46 41.6 -1.2**
EVR Evrytania 3.56 93 *eP* **Pn 00 46 53.8 +0.7**
STON Ston 3.67 5 *e*Pn **Pn 00 46 52.0 -2.7**
STON Sn **Sn 00 47 33.1 -4.6**
THL Klokotos Trika 3.71 83 *eP* **Pn 00 46 57.0 +1.9**
EFP Efpalio 3.72 101 *eP* **Pn 00 46 55.0 -0.3**
KRUS Krusevo 3.74 54 *e*Pn **Pn 00 46 55.7 +0.1**
AGG Agios Georgios 3.95 91 *eP* **Pn 00 46 59.8 +1.2**
LIT Litokhoron 4.14 76 *eP* **Pn 00 47 02.7 +1.6**
GUR Goura 4.19 106 *eP* **Pn 00 47 01.9 +0.1**
LKR Lokris 4.52 95 *eP* **Pn 00 47 06.8 +0.5**
DID Didima 5.00 108 *eP* **Pn 00 47 12.8 -0.1**
VLI Veliai 5.13 117 *eP* **Pn 00 47 14.3 -0.5**
VLY Voula,Athens 5.31 103 *eP* **Pn 00 47 17.7 +0.6**

IDC 27 01:03:16.6±2.2, 6°93S×129°21E, h0km, mb3.7/1, mb1 3.8/4, mb1mx3.6/15, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=93.9km s-min=28.1km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.64**	**197**	Pn	Pn	01 06 03.0	-1.1
	0.5nm,0.3s,baz=22,slow=11,SNR=18						
FITZ				Sn	Sn	01 08 01.2	-14
	0.8nm,0.3s,baz=297,slow=18,SNR=7.5						
WRA	**Warramunga Arr**	**13.86**	**159**	Pn	Pn	01 06 35.0	+0.5
	0.3nm,0.3s,baz=344,slow=13,SNR=18						
WRA				Sn	Sn	01 08 57.5	-12
	0.5nm,0.3s,baz=334,slow=24,SNR=2.0						
ASAR	**Alice Springs**	**17.25**	**165**	P	Pn	01 07 19.6	+0.6
	0.2nm,0.3s,baz=342,slow=11,SNR=15						
ASAR				S	Sn	01 10 20.3	-11
	0.1nm,0.3s,baz=349,slow=27,SNR=4.4						
MKAR	**Makanchi Array**	**67.74**	**327**	P	P	01 14 16.1	+0.2
	0.4nm,0.5s,baz=120,slow=8.5,SNR=5.7						

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*ISCJB **27** 01:08:04.7±0.4, 62°25N±0°02×150°95W±0°08, h96km±5km, mb3.9/2, Error ellipse: s-maj=5.9km s-min=4.1km az=177.7*
*IDC **27** 01:08:04.3±2.4, 62°28N×151°06W, h70km±29km, mb3.5/2, mb1 3.5/5, mb1mx3.3/24, mbtmp3.4/5, Error ellipse: s-maj=31.7km s-min=17.4km az=110.0*
*NEIC **27** 01:08:07.1, 62°24N×150°93W, h78km, MG3.4(AEIC), After AEIC.*
ISC 27 01:08:05.9±0.4, 62°25N±0°02×150°96W±0°08, h88km±5km, n39, σ0°75/51, mb3.9/2, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.38**	**225**	P	Pn	01 08 19.0	-0.5
SKT				S	Sn	01 08 28.7	-0.9
SUA	**Susitna One**	**0.80**	**172**	P	Pn	01 08 22.9	-0.2
SUA				S	Sn	01 08 35.6	-0.3
PPLA	**Purkeypile**	**0.86**	**319**	P	Pn	01 08 24.2	+0.4
PPLA				S	Sn	01 08 37.1	-0.2
PMR	**Palmer**	**1.09**	**126**	P	Pn	01 08 25.7	-0.6
PMR				S	Sn	01 08 41.6	-0.2
FIB	**Fire Island**	**1.15**	**161**	P	Pn	01 08 27.8	+0.7
FIB				S	Sn	01 08 44.4	+1.3
TRF	**Thorofare Moun**	**1.25**	**14**	P	Pn	01 08 28.9	+0.6
TRF				S	Sn	01 08 45.7	+0.6
RC01	**Rabbit Creek A**	**1.30**	**153**	P	Pn	01 08 28.2	-0.7
SML	**Sawmill**	**1.31**	**108**	P	Pn	01 08 29.2	0.0
SML				S	Sn	01 08 46.8	+0.2
RND	**Reindeer**	**1.51**	**39**	P	Pn	01 08 31.8	+0.2
CHUM	**Lake Minchumin**	**1.75**	**340**	P	Pn	01 08 35.4	+0.7
CHUM				S	Sn	01 08 56.5	-0.1
MCK	**McKinley**	**1.75**	**31**	P	Pn	01 08 35.3	+0.7
SCM	**Sheep Creek Mo**	**1.76**	**102**	P	Pn	01 08 34.5	-0.2
SLKM	**Skilak Lake**	**1.78**	**168**	P	Pn	01 08 34.9	-0.2
DHY	**Denali Highway**	**1.85**	**62**	P	Pn	01 08 36.4	+0.4
BPAW	**Bear Paw Mtn.**	**1.86**	**360**	P	Pn	01 08 36.4	+0.3
BPAW				S	Sn	01 08 58.1	-1.0
RSO	**Redoubt South**	**1.99**	**207**	*e*Pn	Pn	01 08 38.5	+0.7
SEW	**Seward**	**2.27**	**161**	P	Pn	01 08 40.9	-0.7
TTA	**Tatalina**	**2.44**	**289**	P	Pn	01 08 44.2	+0.5
SVW2	**Sparrevohn**	**2.49**	**244**	*eP*	Pn	01 08 44.3	-0.1
BRLK	**Bradley Lake**	**2.49**	**179**	P	Pn	01 08 45.1	+0.6
PAX	**Paxson**	**2.64**	**72**	P	Pn	01 08 47.0	+0.6
CNPM	**China Poot**	**2.74**	**183**	P	Pn	01 08 48.9	+1.2
HDA	**Harding Lake**	**2.82**	**38**	P	Pn	01 08 49.5	+0.7
COLA	**College**	**2.98**	**26**	P	Pn	01 08 51.5	+0.5
MDM	**Murphy Dome**	**2.98**	**23**	P	Pn	01 08 51.5	+0.5
ILAR	**Eielson Array**	**3.12**	**34**	P	Pn	01 08 53.0	+0.1
	14nm,0.3s,baz=220,slow=14,SNR=873						
ILAR				S	Sn	01 09 27.1	-2.0
	15nm,0.3s,baz=220,slow=23,SNR=25						
MENT	**Mentasta**	**3.42**	**75**	*eP*	Pn	01 08 56.6	-0.3
DOT	**Dot Lake**	**3.45**	**63**	P	Pn	01 08 57.6	+0.3
KDAK	**Kodiak Island**	**4.55**	**191**	P	Pn	01 09 10.4	-1.8
	0.5nm,0.3s,baz=18,slow=13,SNR=6.7						
KDAK				S	Sn	01 09 58.3	-5.6
	1.5nm,0.3s,baz=39,slow=13,SNR=3.2						
COLD	**Coldfoot**	**5.01**	**3**	*e*Pn	Pn	01 09 19.9	+1.5
	17nm,0.7s						
COLD				*e*Sn	Sn	01 10 12.8	-2.2
EGAK	**Eagle**	**5.07**	**56**	P	Pn	01 09 19.5	+0.3
OHAK	**Old Harbor**	**5.18**	**194**	*eP*	Pn	01 09 19.8	-1.0
DAWY	**Dawson**	**5.55**	**66**	P	Pn	01 09 25.8	0.0
INK	**Inuvik**	**9.47**	**43**	P	Pn	01 10 18.6	-0.6
	0.5nm,0.3s,baz=228,slow=16,SNR=11						
INK	**Inuvik**	**9.47**	**43**	*e*Pn	Pn	01 10 19.3	+0.2
YKA	**Yellowknife Ar**	**16.73**	**73**	P	Pn	01 11 53.3	-1.0
	0.1nm,0.3s,baz=277,slow=10,SNR=3.9						
YKA	**Yellowknife Ar**	**16.73**	**73**	P	Pn	01 11 53.3	-1.0
ZALV	**Zalesovo Beam**	**56.14**	**324**	P	P	01 17 35.9	+0.2
	1.0nm,0.5s,mb4.1,baz=23,slow=5.8,SNR=4.1						
MKAR	**Makanchi Array**	**63.28**	**322**	P	P	01 18 24.4	-0.3
	0.9nm,1.1s,mb3.6,baz=38,slow=6.7,SNR=4.9						

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*ISCJB **27** 01:33:19.4±0.6, 10°99N±0°04×62°08W±0°03, h76km±7km, Error ellipse: s-maj=6.1km s-min=4.1km az=172.4*
*FUNV **27** 01:33:21.9, 11°01N×62°07W, h58km, MW2.8*
*TRN **27** 01:33:21.7, 11°06N×62°02W, h56km, MD2.9*
ISC 27 01:33:20.4±0.6, 11°01N±0°04×62°07W±0°03, h68km±9km, n18, σ0°80/32, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.39**	**202**	*eP*	Pn	01 33 32.5	+0.5
GUIV				*e*S	Sn	01 33 40.8	+0.4
TRN	**Trinidad (W)**	**0.75**	**118**	*eP*	Pn	01 33 36.4	+0.6
TRN				*e*S	Sn	01 33 46.9	-0.1
ITEV	**Isla Los Testi**	**1.09**	**289**	*eP*	Pn	01 33 40.5	+0.5
ITEV				*e*S	Sn	01 33 54.5	-0.2
TBH	**Brigand Hill**	**1.12**	**118**	*eP*	Pn	01 33 40.9	+0.6
TBH				*e*S	Sn	01 33 55.1	0.0
CRUV	**Carupano**	**1.19**	**254**	*eP*	Pn	01 33 41.6	+0.4
CRUV				*e*S	Sn	01 33 56.3	-0.5
GUNV	**Guanoco**	**1.20**	**226**	*eP*	Pn	01 33 42.4	+1.1
GUNV				*e*S	Sn	01 33 57.5	+0.5
GRW	**Mount Saint Ca**	**1.22**	**19**	*eP*	Pn	01 33 41.7	+0.2
GRW				*e*S	Sn	01 33 56.3	-1.1
TPR	**Prospect**	**1.28**	**82**	*eP*	Pn	01 33 43.4	+0.9
TPR				*e*S	Sn	01 33 58.9	0.0
BOT	**Bacolet**	**1.34**	**83**	*eP*	Pn	01 33 43.3	+0.2
BOT				*e*S	Sn	01 33 59.6	-0.7
TOSP	**Speyside**	**1.54**	**79**	*eP*	Pn	01 33 46.2	+0.5
TOSP				*e*S	Sn	01 34 03.5	-1.4
IBAV	**Isla La Blanqu**	**2.59**	**289**	*eP*	Pn	01 34 00.2	+0.3
IBAV				*e*S	Sn	01 34 29.3	-1.0
PCRV	**Puerto La Cruz**	**2.65**	**252**	*eP*	Pn	01 34 01.4	+0.6
PCRV				*e*S	Sn	01 34 30.3	-1.6
RIOV	**Rio Grande**	**2.93**	**175**	*eP*	Pn	01 34 05.4	+0.7
RIOV				*e*S	Sn	01 34 37.1	-1.6
GURV	**El Guri**	**3.38**	**197**	*eP*	Pn	01 34 10.4	-0.3
GURV				*e*S	Sn	01 34 47.4	-2.3
BIRV	**Birongo**	**4.16**	**263**	*eP*	Pn	01 34 22.0	+0.6
LUEV	**Luepa**	**5.17**	**173**	*eP*	Pn	01 34 36.0	+0.8
CAOV	**Caicara del Or**	**5.56**	**229**	*eP*	Pn	01 34 41.0	+0.3
BAUV	**El Baul**	**6.23**	**251**	*eP*	Pn	01 34 50.2	+0.5

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*NEIC **27** 02:04:13.5, 19°02N×68°67W, h165km, MD3.6(RSPR), After RSPR.*
RSPR 27 02:04:13.5, 19°02N×68°67W, h165km±6km, MD3.6/5, 4C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.58**	**110⇑**	*e*P	Pn	02 04 45.2	+0.1
AGPR				*e*S	Sn	02 05 09.2	-0.1
CRPR	**Cabo Rojo, PR**	**1.79**	**124⇑**	*e*P	Pn	02 04 46.7	-0.6
CRPR				*e*S	Sn	02 05 13.9	+0.6
AOPR	**Arecibo Observ**	**1.94**	**110⇑**	*e*P	Pn	02 04 49.4	+0.5
AOPR				*e*S	Sn	02 05 17.3	+1.2
CELP	**Cerrillos**	**2.20**	**115⇑**	*e*P	Pn	02 04 52.7	+0.9
HUMP	**Col San Antoni**	**2.81**	**108⇓**	*e*P	Pn	02 04 59.1	-0.2
HUMP				*e*S	Sn	02 05 35.4	+0.8

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*NAO **27** 02:20:09.8±1.1, 65°97N×29°87E, ML2.6*
*ISCJB **27** 02:20:11.0±0.5, 65°99N±0°02×29°94E±0°09, h28km±3km, Error ellipse: s-maj=5.9km s-min=2.8km az=4.1*
*IDC **27** 02:20:11.5±1.5, 65°99N×29°77E, h0km, mb1 3.2/4, mb1mx3.1/25, mbtmp3.1/4, ML2.6/4, Error ellipse: s-maj=19.6km s-min=7.2km az=97.0*
*HEL **27** 02:20:11.9±0.1, 65°99N×29°96E, h18km, ML2.4, MD3.4(BER), ML2.4(BER)*
*BER **27** 02:20:11.4±3.8, 65°98N×30°08E, h0km±14km, MD3.4, ML2.4, ML2.6(NAO)*
*CSEM **27** 02:20:12.0±0.2, 65°99N×29°79E, h15km, ML2.3, Error ellipse: s-maj=5.5km s-min=2.7km az=95.0*
ISC 27 02:20:11.8±0.5, 65°99N±0°02×29°91E±0°08, h17km±2km, n71, σ1°05/136, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**0.04**	**348**	*i* P	Pg	02 20 15.0	+0.2
KU6				*i* S	Sg	02 20 17.4	+0.6
KU6	**Riekki**	**0.04**	**348**	P	Pg	02 20 15.0	+0.2
KU6				S	Sg	02 20 17.3	+0.5
MSF	**Maaselka**	**0.36**	**258**	*i* P	Pg	02 20 19.3	0.0
MSF				*i* S	Sg	02 20 24.9	+0.5
MSF	**Maaselka**	**0.36**	**258**	P	Pg	02 20 19.3	-0.1
MSF				S	Sg	02 20 24.8	+0.4
KU4	**Liikasenvaara**	**0.40**	**341**	*i* P	Pg	02 20 19.5	-0.5
KU4				*i* S	Sg	02 20 25.2	-0.2
KU4	**Liikasenvaara**	**0.40**	**341**	P	Pg	02 20 19.4	-0.6
KU4				S	Sg	02 20 25.1	-0.3
KU1	**Kurvinen**	**0.45**	**199**	*i* P	Pg	02 20 20.4	-0.5
KU1				*i* S	Sg	02 20 26.5	-0.5
KU1	**Kurvinen**	**0.45**	**199**	P	Pg	02 20 20.4	-0.5
KU1				S	Sg	02 20 26.5	-0.5
KU7	**Kasma**	**0.48**	**241**	*i* P	Pg	02 20 21.1	-0.3
KU7				*i* S	Sg	02 20 27.6	-0.2
KU2	**Taivalkoski**	**0.75**	**249**	*i* P	Pb	02 20 25.5	-0.8
KU2				*i* S	Sb	02 20 35.5	-0.7
KU2	**Taivalkoski**	**0.75**	**249**	P	Pb	02 20 25.5	-0.8
KU2				S	Sb	02 20 35.5	-0.7
RNF	**Rovaniemi**	**1.69**	**293**	*eP*	Pn	02 20 41.6	+1.1
RNF				*e*S	Sn	02 21 03.5	+1.7
RNF	**Rovaniemi**	**1.69**	**293**	P	Pn	02 20 41.6	+1.1
RNF				S	Sn	02 21 03.4	+1.6
VRF	**Varrio**	**1.77**	**356**	*eP*	Pn	02 20 42.2	+0.6
VRF				*e*S	Sn	02 21 04.8	+1.1
VRF				MSG		02 21 07.3	
	comp=Z,18nm,0.1s						
VRF	**Varrio**	**1.77**	**356**	P	Pn	02 20 42.2	+0.6
VRF				S	Sn	02 21 04.7	+1.0
OUL	**Oulu**	**1.90**	**243**	*eP*	Pn	02 20 44.9	+1.4
OUL				*e*S	Sn	02 21 08.7	+1.8
OUL	**Oulu**	**1.90**	**243**	P	Pn	02 20 44.8	+1.4
OUL				S	Sn	02 21 08.7	+1.8
SGF	**Sodankyl**	**1.98**	**319**	*eP*	Pn	02 20 45.4	+0.9
SGF				*e*S	Sn	02 21 10.8	+1.8
SGF	**Sodankyl**	**1.98**	**319**	P	Pn	02 20 45.3	+0.8
SGF				S	Sn	02 21 10.7	+1.8
APA0	**Apatity Array**	**2.03**	**36**	Pn	Pn	02 20 46.3	+1.1
	baz=217,slow=16						
APA0				Lg		02 21 11.7	
	baz=215,slow=37						
APA0	**Apatity Array**	**2.03**	**36**	*e*PB	Pn	02 20 46.3	+1.1
APA0				*e*SB	Sb	02 21 11.7	-1.4
APA0	**Apatity Array**	**2.03**	**36**	Pn	Pn	02 20 46.3	+1.1
	baz=217,slow=16,SNR=50						
KJN	**Kajaani**	**2.13**	**207**	*eP*	Pn	02 20 47.2	+0.7
KJN				*e*S	Sn	02 21 13.7	+1.1
KJN				MSG		02 21 19.2	
	comp=Z,15nm,0.1s						
KJN	**Kajaani**	**2.13**	**207**	P	Pn	02 20 47.2	+0.7
KJN				S	Sn	02 21 13.6	+1.1
JOF	**Joensuu**	**3.15**	**168**	*eP*	Pn	02 20 58.6	-1.9
JOF				*e*S	Sn	02 21 34.8	-2.8
JOF				MSG		02 21 49.4	
	comp=Z,8.2nm,0.2s						
HEF	**Hetta**	**3.44**	**318**	*eP*	Pn	02 21 04.4	-0.1
HEF				*e*S	Sn	02 21 44.1	-0.7
HEF				MSG		02 21 59.9	
	comp=Z,11nm,0.3s						
HEF	**Hetta**	**3.44**	**318**	P	Pn	02 21 04.4	-0.1
HEF				S	Sn	02 21 44.0	-0.7
SUF	**Sumiainen**	**3.67**	**208**	*eP*	Pn	02 21 08.6	+0.9
SUF				*e*S	Sn	02 21 51.4	+0.9
SUF				*e*		02 22 04.1	
SUF				MSG		02 22 07.7	
	comp=Z,9.8nm,0.2s						
SUF	**Sumiainen**	**3.67**	**208**	P	Pn	02 21 08.5	+0.8
SUF				S	Sn	02 21 51.4	+0.9
LANU	**Lannavaara**	**3.73**	**307**	*eP*	Pn	02 21 08.1	-0.4
LANU				*e*S	Sn	02 21 50.7	-1.3
LANU				*e*		02 22 07.0	
LANU	**Lannavaara**	**3.73**	**307**	P	Pn	02 21 08.1	-0.4
LANU				S	Sn	02 21 50.6	-1.4
ARA0	**ARCESS Array S**	**3.93**	**337**	Pn	Pn	02 21 11.7	+0.4
	baz=151,slow=14						
ARA0				Pg	Pb	02 21 19.9	-0.7
	baz=153,slow=18						
ARA0				Sn	Sn	02 21 56.6	-0.4
	baz=157,slow=22						
ARA0				Lg		02 22 08.4	
	baz=142,slow=37						
ARA0	**ARCESS Array S**	**3.93**	**337**	*eP*	Pn	02 21 11.7	+0.4
ARA0				*e*PB	Pb	02 21 19.9	-0.7
ARA0				*e*S	Sn	02 21 56.6	-0.4
ARA0				*e*SB	Sb	02 22 08.4	+0.6
ARA0	**ARCESS Array S**	**3.93**	**337**	P	Pn	02 21 11.7	+0.4
ARA0				Sn	Sn	02 21 56.6	-0.4
	baz=157,slow=22,SNR=50						
ARCES	**ARCESS Array B**	**3.93**	**337**	Pn	Pn	02 21 12.7	+1.4
	comp=Z,0.8nm,0.3s,baz=153,slow=14,SNR=104						
ARCES				Pg	Pg	02 21 19.7	-7.4
	comp=Z,2.6nm,0.3s,baz=153,slow=16,SNR=36						
ARCES				Sn	Sn	02 21 57.0	0.0
	comp=Z,1.5nm,0.3s,baz=156,slow=22,SNR=5.6						
ARCES				Lg		02 22 11.8	
	comp=Z,5.8nm,0.3s,baz=145,slow=31,SNR=6.2						
KEV	**Kevo**	**3.94**	**345**	*eP*	Pn	02 21 12.0	+0.7
KEV				*e*S	Sn	02 21 55.6	-1.5
KEV				MSG		02 22 13.0	
	comp=Z,10nm,0.2s						
KEV	**Kevo**	**3.94**	**345**	P	Pn	02 21 12.0	+0.6
KEV				S	Sn	02 21 55.5	-1.6
KTK1	**Kautokeino**	**3.97**	**323**	*eP*	Pn	02 21 12.9	+1.1
KTK1	**Kautokeino**	**3.97**	**323**	*eP*	Pn	02 21 13.0	+1.2
KTK1				*e*S	Sn	02 21 58.9	+1.0
KTK1				AML	AML	02 22 16.5	
	comp=Z,45nm,0.1s						
KTK1	**Kautokeino**	**3.97**	**323**	*eP*	Pn	02 21 13.0	+1.2
KTK1				*e*S	Sn	02 21 58.9	+1.0
KTK1				AML	AML	02 22 16.5	
	comp=Z,45nm,0.1s						
KTK1	**Kautokeino**	**3.97**	**323**	P	Pn	02 21 13.0	+1.2
KTK1				S	Sn	02 21 58.8	+0.9
	comp=Z,45nm,0.1s						
KAF	**Kangasniemi**	**4.20**	**204**	*eP*	Pn	02 21 15.5	+0.5
KAF				*e*S	Sn	02 22 01.8	-1.8
KAF				*e*SB	Sb	02 22 17.2	+1.7
KAF				MSG		02 22 20.4	
	comp=Z,5.2nm,0.2s						
KAF	**Kangasniemi**	**4.20**	**204**	P	Pn	02 21 15.4	+0.4
KAF				S	Sn	02 22 01.8	-1.8
KEF	**Keuruu**	**4.43**	**212**	*eP*	Pn	02 21 18.6	+0.5
KEF				*e*S	Sn	02 22 09.4	+0.2
KEF				MSG		02 22 26.8	
	comp=Z,6.8nm,0.2s						
KEF	**Keuruu**	**4.43**	**212**	P	Pn	02 21 18.6	+0.5
KEF				S	Sn	02 22 09.3	+0.1
KIF	**Kilpisjarvi**	**4.62**	**315**	*eP*	Pn	02 21 21.7	+0.9
KIF				*e*S	Sn	02 22 13.4	-0.5
KIF	**Kilpisjarvi**	**4.62**	**315**	P	Pn	02 21 21.6	+0.8
KIF				S	Sn	02 22 13.4	-0.6
FIA0	**FINESS Array S**	**4.87**	**202**	Pn	Pn	02 21 24.3	+0.1
	baz=21,slow=14						
FIA0				Sn	Sn	02 22 20.1	0.0
	baz=25,slow=22						
FIA0				Lg		02 22 35.4	
	baz=31,slow=28						
FIA0	**FINESS Array S**	**4.87**	**202**	*eP*	Pn	02 21 24.2	0.0
FIA0	**FINESS Array S**	**4.87**	**202**	Pn	Pn	02 21 24.3	+0.1
	baz=21,slow=13,SNR=50						
FIA0				Sn	Sn	02 22 20.1	0.0
	baz=25,slow=20,SNR=50						
FINES	**FINESS Array B**	**4.87**	**202**	Pn	Pn	02 21 24.3	+0.1
	comp=Z,0.2nm,0.3s,baz=32,slow=12,SNR=11						
FINES				Sn	Sn	02 22 20.7	+0.6
	comp=Z,0.6nm,0.3s,baz=22,slow=22,SNR=4.2						
FINES				Lg		02 22 36.9	
	comp=Z,1.4nm,0.3s,baz=30,slow=25,SNR=10						
TRO	**Tromso**	**5.53**	**316**	*eP*	Pn	02 21 33.5	+0.2
TRO				*e*S	Sn	02 22 34.3	-2.1
TRO				AML	AML	02 22 43.8	
	comp=Z,4.3nm,0.3s						
TRO	**Tromso**	**5.53**	**316**	*eP*	Pn	02 21 33.5	+0.2
TRO				*e*S	Sn	02 22 34.3	-2.1
TRO				AML	AML	02 22 43.8	
	comp=Z,4.3nm,0.3s						
TRO	**Tromso**	**5.53**	**316**	P	Pn	02 21 33.4	+0.1
TRO				*e*S	Sn	02 22 34.3	-2.1
	comp=Z,4.3nm,0.3s,SNR=49						
MOR8	**Moi Rana**	**6.29**	**279**	*eP*	Pn	02 21 42.0	-1.7
MOR8				*e*S	Sn	02 22 49.0	-6.1
MOR8				AML	AML	02 22 58.8	
	comp=Z,3.9nm,0.5s						
MOR8	**Moi Rana**	**6.29**	**279**	*eP*	Pn	02 21 42.0	-1.7
MOR8				*e*S	Sn	02 22 49.0	-6.1
MOR8				AML	AML	02 22 58.8	
	comp=Z,3.9nm,0.5s						
MOR8	**Moi Rana**	**6.29**	**279**	P	Pn	02 21 42.0	-1.7
STOK	**Stokkvaagen**	**6.85**	**281**	*eP*	Pn	02 21 51.1	-0.2
STOK				*e*S	Sn	02 23 05.6	-3.2
STOK				AML	AML	02 23 27.1	
	comp=Z,9.2nm,0.8s						
STOK	**Stokkvaagen**	**6.85**	**281**	*eP*	Pn	02 21 51.1	-0.2
STOK				*e*S	Sn	02 23 05.6	-3.2
STOK				AML	AML	02 23 27.1	
	comp=Z,9.2nm,0.8s						
STOK	**Stokkvaagen**	**6.85**	**281**	P	Pn	02 21 51.1	-0.3
NSS	**Namsos**	**7.66**	**267**	*eP*	Pn	02 22 01.4	-1.0
NSS				*e*S	Sn	02 23 24.7	-4.0
NSS	**Namsos**	**7.66**	**267**	*eP*	Pn	02 22 01.4	-1.0
NSS				*e*S	Sn	02 23 24.7	-4.0
NSS	**Namsos**	**7.66**	**267**	P	Pn	02 22 01.4	-1.1
HFS	**Hagfors**	**9.39**	**239**	Pn	Pn	02 22 24.4	-1.7
	baz=40,slow=11						
HFS				Sn	Sn	02 24 05.0	-6.3
	baz=48,slow=28						
HFS				Lg		02 24 56.3	
	baz=47,slow=28						
HFS	**Hagfors**	**9.39**	**239**	Pn	Pn	02 22 24.7	-1.5
	comp=Z,0.1nm,0.3s,baz=49,slow=14,SNR=5.5						
HFS				Sn	Sn	02 24 06.9	-4.3
	comp=Z,0.3nm,0.3s,baz=50,slow=23,SNR=6.0						
HFS				Lg		02 24 58.3	
	comp=Z,0.6nm,0.3s,baz=56,slow=27,SNR=3.5						
HFS	**Hagfors**	**9.39**	**239**	*eP*	Pn	02 22 24.4	-1.7
HFS				*e*S	Sn	02 24 05.0	-6.3
HFS				*e*		02 24 56.3	
HFS	**Hagfors**	**9.39**	**239**	P	Pn	02 22 24.4	-1.8

2.1nm,0.8s,mb4.2
ZALV Zalesovo Beam 49.23 333 P P 02 48 28.5 -0.1
0.7nm,0.3s,mb4.1,baz=134,slow=8.3,SNR=3.4
AML Almayashu 49.50 315 *e*P **P 02 48 31.9 +1.1**
1.7nm,0.6s,mb4.2
EKS2 Erkin-Say 49.64 315 *e*P **P 02 48 32.3 +0.4**
1.4nm,0.9s,mb4.0
KURK Kurchatov 50.33 327 *e*P **P 02 48 37.0 0.0**
3.8nm,0.8s,mb4.5
BVAR Borovoye Array 55.91 326 P **P 02 49 17.7 -0.3**
0.9nm,0.5s,mb4.0,baz=118,slow=8.6,SNR=5.3
BRVK Borovoye 55.98 326 *e*P **P 02 49 18.0 -0.5**
3.4nm,0.8s,mb4.4
ABKAR Abkulak array 60.83 319 *e*P **P 02 49 52.0 -0.5**
0.7nm,0.6s,mb4.0

ISK ***27*** *02:58:37.8, 39°.26N×39°.83E, h16km, MD2.7*
ISCJB ***27*** *02:58:38.3±0.7, 39°.25N±0°.03×39°.83E±0°.04, h3km±7km, Error ellipse: s-maj=6.1km s-min=5.3km az=140.2*
CSEM ***27*** *02:58:38.3±0.3, 39°.27N×39°.86E, h5km, MD2.7, Error ellipse: s-maj=5.7km s-min=4.8km az=69.0*
DDA ***27*** *02:58:41.8, 39°.23N×39°.55E, h7km±7km, Md2.9*
ISC 27 02:58:38.9±0.7, 39°.26N±0°.03×39°.84E±0°.05, h5km±6km, n18, σ0°82/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.51**	**224**	*e*PG	**Pg**	**02 58 48.1**	**-0.6**
PTK				*e*SG	**Sg**	**02 58 55.7**	**+0.5**
PTK	**Pertek**	**0.51**	**224**	*e*Pg	**Pg**	**02 58 48.1**	**-0.5**
PTK				*e*Sg	**Sg**	**02 58 55.7**	**+0.4**
EZC	**Erzincan**	**0.62**	**322**	*e*PG	**Pg**	**02 58 50.4**	**-0.4**
EZC				*e*SG	**Sg**	**02 58 59.4**	**+0.6**
EZC	**Erzincan**	**0.62**	**322**	*e*Pg	**Pg**	**02 58 50.4**	**-0.4**
EZC				*e*Sg	**Sg**	**02 58 59.4**	**+0.6**
BINT	**Bingol**	**0.63**	**127**	*e*PG	**Pg**	**02 58 50.8**	**-0.2**
BINT				*e*SG	**Sg**	**02 59 00.3**	**+1.0**
BINT	**Bingol**	**0.63**	**127**	*e*Pg	**Pg**	**02 58 50.8**	**-0.2**
BINT				*e*Sg	**Sg**	**02 59 00.3**	**+1.1**
SVRC	**Sivrice-ELAZID**	**0.98**	**206**	*e*PG	**Pg**	**02 58 56.9**	**-0.6**
SVRC	**Sivrice-ELAZID**	**0.98**	**206**	*e*Pg	**Pg**	**02 58 56.9**	**-0.7**
ELZG	**Elazig**	**1.01**	**222**	*i* P	**Pg**	**02 58 58.0**	**-0.3**
ELZG				*i* S	**Sg**	**02 59 11.9**	**+0.5**
ELZG	**Elazig**	**1.01**	**222**	*i* P	**Pg**	**02 58 58.0**	**-0.3**
ELZG				*i* S	**Sg**	**02 59 11.9**	**+0.4**
KEMA	**Kemaliye**	**1.05**	**271**	*i* P	**Pg**	**02 58 58.5**	**-0.5**
KEMA				*i* S	**Sg**	**02 59 12.5**	**0.0**
KEMA	**Kemaliye**	**1.05**	**271**	*i* P	**Pg**	**02 58 58.5**	**-0.5**
KEMA				*i* S	**Sg**	**02 59 12.5**	**0.0**
BAYT	**Ayd¯–ntepe-Bay**	**1.15**	**11**	*e*PN	**Pn**	**02 58 60.0**	**-1.7**
BAYT	**Ayd¯–ntepe-Bay**	**1.15**	**11**	*e*Pn	**Pn**	**02 59 00.0**	**-1.7**
SUSE	**Susehri**	**1.58**	**307**	*i* P	**Pn**	**02 59 07.7**	**+0.2**
SUSE				*i* S	**Sn**	**02 59 29.7**	**+1.4**
SUSE	**Susehri**	**1.58**	**307**	*i* P	**Pn**	**02 59 07.7**	**+0.2**
SUSE				*i* S	**Sn**	**02 59 29.7**	**+1.4**
AKCD	**Akcadag**	**1.78**	**238**	*e*P	**Pn**	**02 59 11.6**	**+1.3**
AKCD				*e*S	**Sn**	**02 59 32.1**	**-1.2**
AKCD	**Akcadag**	**1.78**	**238**	*e*P	**Pn**	**02 59 11.6**	**+1.3**
AKCD				*e*S	**Sn**	**02 59 32.1**	**-1.2**

SZGRF ***27*** *03:04:50.3, 12°.51N×121°.51E, h33km, mb5.9, Mindoro, Philippine Islands*
NEIC ***27*** *03:04:51.7±0.1, 13°.47N×120°.58E, h10km, mb5.6/126, Error ellipse: s-maj=4.3km s-min=3.3km az=50.0*
NEIC Felt [V PIVS] at Calapan and Naujan. Felt [IV PIVS] at Apalit, Las Pinas and Manila; [III PIVS] at Batangas and Quezon City; [II PIVS] at Makati, Luzon.
MOS ***27*** *03:04:53.9±0.8, 13°.49N×120°.58E, h33km, mb5.8/104, MS5.7/21, Error ellipse: s-maj=7.5km s-min=3.8km az=120.8*
MAN ***27*** *03:04:54, 13°.33N×120°.32E, h73km, MS5.3*
MAN INTENSITY V - CALAPAN CITY; NAUJAN; INTENSITY IV - APALIT; MANILA; LAS PINAS; INTENSITY III - QUEZON CITY; BATANGAS CITY; INTENSITY II - MAKATI CITY.
IDC ***27*** *03:04:55.4±1.7, 13°.48N×120°.51E, h34km±13km, mb5.1/32, mb1 5.1/34, mb1mx5.1/35, mbtmp5.1/34, ML5.3/1, Error ellipse: s-maj=13.9km s-min=8.6km az=72.0*
GCMT ***27*** *03:04:56.7±0.1, 13°.50N×120°.40E, h17km, MW5.7, Moment Tensor Solution. s88,c173; s23,c23; Moment tensor: Scale 10^{17}Nm; M_{rr}=4.49±.08; $M_{\theta\theta}$2.32±.07; $M_{\phi\phi}$2.17±.08; $M_{r\theta}$0.59±.19; $M_{\theta\phi}$2.21±.06; $M_{r\phi}$1.68±.20; Best double couple: M_0=4.80000×10^{17} NP1:ϕ_s=55.00000°, δ36.00000°, λ-75.00000°. NP2:ϕ_s=217.00000°, δ55.00000°, λ-101.00000°. Principal axes: T 4.7300, Plg10.0000°, Azm314.0000°; N 0.1600, Plg9.0000°, Azm223.0000°; P -4.8900, Plg77.0000°, Azm92.0000°; Data Used: II IU IC G CN. Surface waves: sta=104, comp=212, per= 50.*
ISCJB ***27*** *03:04:57.6±0.3, 13°.46N±0°.01×120°.54E±0°.02, h65km±3km, mb5.5/266 Error ellipse: s-maj=3.7km s-min=2.5km az=178.7*
BJI ***27*** *03:04:58.1, 13°.44N×120°.62E, h78km, mB5.6/57, mb5.3/67, Ms5.9/73, Ms7 5.6/63*
TEH ***27*** *03:05:01.0, 13°.39N×120°.49E, h82km*
DJA ***27*** *03:05:07, 13°.43N×120°.52E, h149km, Mw5.7/50*
ISC 27 03:04:59.6±0.3, 13°.45N±0°.01×120°.55E±0°.02, h70km±2km, h75km±3.4km; pP-P, n964, σ0°98/910, mb5.5/266, 57C-63D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.75**	**30**	Pg	**Pn**	**03 05 10.1**	**-5.0**
	17μm,0.3s,baz=211,slow=2.4,SNR=592						
TGY				Lg		03 05 24.8	
	35μm,0.3s,baz=243,slow=14,SNR=12						
TGY	**Tagaytay City**	**0.75**	**30**	P	**Pn**	**03 05 10.1**	**-5.0**
TGY						03 05 24.8	
TGY				smax			
	comp=N,35nm,0.3s						
BOAC	**Boac**	**1.26**	**89**	*e*P	**Pn**	**03 05 20.5**	**-0.9**
BUSP	**Coron**	**1.48**	**193**	*e*P	**Pn**	**03 05 18.4**	**-5.9**
OTRP	**Odiongan**	**1.80**	**127**	*e*P	**Pn**	**03 05 27.5**	**-1.1**
POLP	**Polilio Island**	**1.85**	**47**	*e*P	**Pn**	**03 05 28.6**	**-0.7**
AUQP	**San Andres**	**2.07**	**93**	*e*P	**Pn**	**03 05 35.5**	**+3.2**
SCZP	**Santa Cruz**	**2.39**	**345**	*e*P	**Pn**	**03 05 33.8**	**-2.7**
BALP	**Baler**	**2.48**	**23**	*e*P	**Pn**	**03 05 37.2**	**-0.6**
ENPP	**El Nido**	**2.49**	**206**	*e*P	**Pn**	**03 05 31.4**	**-6.4**
CUYO	**Cuyo Island**	**2.62**	**170**	*e*P	**Pn**	**03 05 34.4**	**-5.3**
RCP	**Roxas**	**2.85**	**131⇑**	*e*P	**Pn**	**03 05 47.4**	**+4.6**
BCPH	**Baguio City Da**	**2.91**	**1⇑**	*i*P	**Pn**	**03 05 43.0**	**-0.6**
BOLP	**Bolinao**	**2.98**	**348**	*e*P	**Pn**	**03 05 42.9**	**-1.6**
GUIM	**Jordan**	**3.44**	**144**	*e*P	**Pn**	**03 05 49.2**	**-1.7**
PALP	**Palanan**	**4.02**	**27**	*e*P	**Pn**	**03 05 59.2**	**+0.4**
CNP	**Catarman**	**4.12**	**103**	*e*P	**Pn**	**03 06 05.5**	**+5.4**
ABRA	**Dolores**	**4.18**	**2**	*e*P	**Pn**	**03 06 01.5**	**+0.6**
CVP	**Callao Caves**	**4.40**	**16**	*e*P	**Pn**	**03 06 03.1**	**-0.9**
APYP	**Conner**	**4.44**	**9**	*e*P	**Pn**	**03 06 05.2**	**+0.8**
SIPP	**Brgy, Tapao**	**4.45**	**359⇓**	*e*P	**Pn**	**03 06 06.1**	**+1.5**
SIPP				*i* S	**Sn**	**03 07 12.4**	**+17**
LLP	**Lapu-Lapu**	**4.57**	**133**	*e*P	**Pn**	**03 06 09.9**	**+3.7**
LLP				*e*S	**Sn**	**03 06 57.7**	**-0.4**
PIP	**Pasuquin**	**4.85**	**1⇓**	*e*P	**Pn**	**03 06 08.3**	**-1.7**
TBP	**Tagbilaran**	**4.95**	**139**	*e*P	**Pn**	**03 06 11.7**	**+0.2**
BATP	**Bataraza**	**5.35**	**211**	*e*P	**Pn**	**03 06 18.4**	**+1.4**
MSLP	**Maasin**	**5.36**	**128**	*e*P	**Pn**	**03 06 19.4**	**+2.4**
IPIL	**Ipil**	**5.97**	**160**	*e*P	**Pn**	**03 06 22.9**	**-2.6**
SCPH	**Surigao**	**6.06**	**126⇑**	*e*P	**Pn**	**03 06 29.9**	**+3.2**
PAGZ	**Pagadian**	**6.22**	**153**	*e*P	**Pn**	**03 06 28.4**	**-0.5**
ZMPH	**Zamboanga City**	**6.63**	**167⇑**	*e*P	**Pn**	**03 06 30.5**	**-3.9**
ZMPH				*e*S	**Sn**	**03 07 42.9**	**-5.7**
BUKP	**Musuan**	**7.09**	**141**	*e*P	**Pn**	**03 06 45.0**	**+4.2**
DMPH	**Davao City--Mi**	**7.99**	**142**	*e*P	Px	03 07 05.9	
DAV	**Davao City (W)**	**8.04**	**142**	Pn	**Pn**	**03 06 51.8**	**-2.0**
	comp=N,43nm,0.3s,baz=258,slow=2.7,SNR=1.5						
DAV	**Davao City (W)**	**8.04**	**142⇑**	*e*P	**Pn**	**03 06 60.0**	**+6.2**
KKM	**Kota Kinabalu**	**8.51**	**211**	*e*Pn	**Pn**	**03 07 01.4**	**+1.3**
KKM				*e*Sn	**Sn**	**03 08 23.3**	**-11**
TWG	**Pinlang**	**9.33**	**3**	*e*Pn	**Pn**	**03 07 12.3**	**+1.0**
TPUB	**Ta-pu**	**9.80**	**0**	*e*Pn	**Pn**	**03 07 20.9**	**+3.2**
YULB	**Yu-li**	**9.91**	**4**	*e*Pn	**Pn**	**03 07 21.8**	**+2.5**
SSLB	**Suanglung**	**10.29**	**2**	*e*Pn	**Pn**	**03 07 27.1**	**+2.6**
HKC	**Hong Kong Obse**	**10.69**	**326⇓**	*i*P	**Pn**	**03 07 32.0**	**+2.1**
NACB	**Ninganchiao**	**10.71**	**5**	*e*Pn	**Pn**	**03 07 32.9**	**+2.6**
YHNB	**Yeheng**	**11.19**	**4**	*e*Pn	**Pn**	**03 07 37.8**	**+1.1**
QZH	**Quanzhou**	**11.58**	**351⇑**	*i*P	**Pn**	**03 07 42.0**	**0.0**
QZH				S	**Sn**	**03 09 55.0**	**+5.3**
QZH				LR	LR		
	comp=N,10μm,10.9s						
QZH				LR	LR		
	comp=E,23μm,13.2s						
QZH				LR	LR		
	comp=Z,37μm,18.2s						
QIZ	**Qiongzhong**	**11.68**	**300**	P	**Pn**	**03 07 40.3**	**-3.1**
QIZ				pmax	pmax		
	comp=Z,140nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,2μm,7.5s						
QIZ				LR	LR		
	comp=N,24μm,17.3s						
QIZ				LR	LR		
	comp=E,12μm,21.0s						
QIZ				LR	LR		
	comp=Z,42μm,15.4s						
QIZ	**Qiongzhong**	**11.68**	**300**	*e*Pn	**Pn**	**03 07 41.2**	**-2.2**
	comp=Z,224nm,1.2s						
QIZ				*e*Sn	**Sn**	**03 09 46.5**	**-5.6**
MNI	**Manado**	**12.66**	**160**	P	**Pn**	**03 08 02.5**	**+5.6**
	comp=Z,629nm,1.8s						
MRSI	**Marisa**	**12.96**	**174**	P	**Pn**	**03 08 00.4**	**-0.6**
TNTI	**Ternate**	**14.29**	**151**	P	**Pn**	**03 08 18.0**	**-0.6**
LUWI	**Luwuk**	**14.57**	**171**	P	**Pn**	**03 08 25.3**	**+3.2**
	comp=Z,9μmcomp=Z,457nm,1.6s						
JOW	**Kunigami**	**15.15**	**27**	Pn	**Pn**	**03 08 28.4**	**-1.3**
	baz=197,slow=10						
JOW	**Kunigami**	**15.15**	**27**	*e*P	**Pn**	**03 08 30.8**	**+1.2**
	comp=Z,242nm,1.2s						
LBMI	**Labuha**	**15.60**	**153**	P	**Pn**	**03 08 39.1**	**+3.6**
	comp=Z,7μmcomp=Z,420nm,1.1s						
KSM	**Kuching**	**15.63**	**221**	*e*P	**Pn**	**03 08 33.1**	**-2.7**
	comp=Z,62nm,0.8s						
MSSI	**Masamba**	**15.90**	**181**	P	**Pn**	**03 08 46.6**	**+7.3**
STKI	**Sintang**	**16.05**	**215**	P	**Pn**	**03 08 42.2**	**+1.1**
	comp=Z,160nm,1.3s						
TTSI	**Tana Toraja**	**16.40**	**183**	P	**Pn**	**03 08 46.3**	**+0.8**
	comp=Z,4μmcomp=Z,127nm,1.4s						
KBKI	**Kotabaru**	**17.20**	**195**	P	**Pn**	**03 08 54.5**	**-0.9**
SPSI	**Sidrap Palu**	**17.32**	**183**	P	**Pn**	**03 08 54.0**	**-2.9**
KDI	**Kendari**	**17.42**	**173**	P	**Pn**	**03 08 59.7**	**+1.6**
	comp=Z,5μmcomp=Z,132nm,2.0s						
SSE	**Sheshan**	**17.57**	**2**	P	**Pn**	**03 08 59.8**	**0.0**
SSE				pP	pP	03 09 13.3	-1.0
SSE				S	**S**	**03 12 10.8**	**-8.1**
SSE				sS	sS	03 12 31.3	-11
SSE				pmax	pmax		
	comp=Z,27nm,0.7s						
SSE				pmax	pmax		
	comp=Z,3μm,8.0s						
SSE				LR	LR		
	comp=N,6μm,28.1s						
SSE				LR	LR		
	comp=E,21μm,28.1s						
SSE				LR	LR		
	comp=Z,10μm,13.5s						
BBKI	**Banjar Baru**	**17.73**	**199**	P	**Pn**	**03 09 02.0**	**+0.1**
	comp=Z,357nm,2.0s						
SWI	**Sorong**	**17.75**	**142**	P	**Pn**	**03 09 02.7**	**+0.6**
	comp=Z,9μmcomp=Z,185nm,2.3s						
NLAI	**Namlea**	**17.81**	**158**	P	**Pn**	**03 09 06.6**	**+3.7**
WHN	**Wuhan**	**17.95**	**342**	⇑P	**Pn**	**03 09 06.3**	**+1.9**
WHN				S	**S**	**03 12 27.5**	**+2.4**
WHN				LR	LR		
	comp=N,35μm,8.1s						
WHN				LR	LR		
	comp=E,15μm,6.7s						
WHN				LR	LR		
	comp=Z,64μm,14.3s						
GYA	**Guiyang**	**18.36**	**317**	P	**Pn**	**03 09 09.3**	**-0.1**
GYA				pP	pP	03 09 24.3	+1.3
GYA				sP	sP	03 09 33.0	+1.1
GYA				S	**S**	**03 12 26.0**	**-8.6**
GYA				SS		03 12 53.0	
GYA				PcP	PcP	03 13 39.5	+2.0
GYA				pmax	pmax		
	comp=Z,80nm,1.0s						
GYA				pmax	pmax		
	comp=Z,890nm,7.5s						
GYA				LR	LR		
	comp=N,15μm,11.8s						
GYA				LR	LR		
	comp=E,20μm,12.7s						
GYA				LR	LR		
	comp=Z,23μm,15.8s						
NJ2	**Nanjing**	**18.58**	**355**	*e*P	**Pn**	**03 09 13.8**	**+1.8**
NJ2				pP	pP	03 09 27.3	+1.9
NJ2				PP		03 09 32.0	
NJ2				sP	sP	03 09 37.0	+2.7
NJ2				S	**S**	**03 12 36.5**	**-2.8**
NJ2				sS	sS	03 12 56.0	-6.7
NJ2				pmax	pmax		
	comp=Z,60nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,8μm,7.6s						
NJ2				LR	LR		
	comp=N,16μm,14.3s						
NJ2				LR	LR		
	comp=E,12μm,14.4s						
NJ2				LR	LR		
	comp=Z,20μm,13.9s						
BKSI	**Bulukumba**	**18.65**	**181**	P	**Pn**	**03 09 12.7**	**-0.4**
	comp=Z,3μmcomp=Z,100nm,1.5s						
ENH	**Enshi**	**19.61**	**330**	*e*P	**Pn**	**03 09 22.4**	**-2.0**
	comp=Z,104nm,0.9s						
NST	**Nakhon Sawan**	**19.88**	**279**	P	**Pn**	**03 09 25.0**	**-2.6**
BNDI	**Bandanaira**	**20.13**	**152**	P	**P**	**03 09 29.3**	**+1.2**
	comp=Z,2μm,1.1s						
KMI	**Kunming**	**20.40**	**307**	P	**P**	**03 09 34.3**	**+3.3**
KMI				pP		03 09 46.0	
KMI				S	**S**	**03 13 14.5**	**-1.2**
KMI				SS		03 13 46.0	
KMI				pmax	pmax		
	comp=Z,79nm,1.9s						
KMI				pmax	pmax		
	comp=Z,3μm,9.3s						
KMI				LR	LR		
	comp=N,23μm,15.7s						
KMI				LR	LR		
	comp=E,18μm,16.8s						
KMI				LR	LR		
	comp=Z,21μm,15.7s						
TPI	**Tanjungpandan**	**20.57**	**219**	P	**P**	**03 09 32.0**	**-0.8**
SNG	**Songkhla**	**20.57**	**254**	P	**P**	**03 09 32.0**	**-0.9**
	comp=Z,340nm,0.9s						
CHRT	**Chiangrai**	**20.88**	**291**	⇓P	**P**	**03 09 35.0**	**-1.2**
	comp=Z,921nm,1.0s						
PPBI	**Pangkal Pinang**	**21.09**	**224**	P	**P**	**03 09 38.0**	**-0.5**
	comp=Z,3μmcomp=Z,178nm,1.1s,mb5.3						
BDT	**Bhumibol Dam**	**21.11**	**283**	⇑P	**P**	**03 09 39.0**	**+0.3**
	comp=Z,73nm,1.2s,mb4.9						
BAKI	**Biak**	**21.20**	**132**	P	**P**	**03 09 41.7**	**+2.0**
	comp=Z,727nm,1.6s,mb5.8						
KULM	**Kulim**	**21.23**	**249**	*e*P	**P**	**03 09 39.5**	**-0.4**
	comp=Z,222nm,1.2s,mb5.4						
IPM	**Ipoh**	**21.23**	**247**	*e*P	**P**	**03 09 38.8**	**-1.2**
	comp=Z,94nm,0.8s,mb5.2						
CM31	**Chiang Mai Arr**	**21.35**	**286**	*e*P	**P**	**03 09 41.3**	**0.0**
	comp=Z,671nm,1.3s,mb5.8						
CMAR	**Chiang Mai Arr**	**21.35**	**286**	P	**P**	**03 09 39.8**	**-1.5**
	comp=Z,188nm,1.0s,mb5.4,baz=96,slow=9.6,SNR=215						
CMAR	**Chiang Mai Arr**	**21.35**	**286**	P	**P**	**03 09 39.8**	**-1.5**
CMAR				pmax	pmax		
	comp=Z,188nm,1.0s						
KMMI	**Kalianget**	**21.39**	**198**	P	**P**	**03 09 42.2**	**+0.5**
	comp=Z,6μmcomp=Z,320nm,1.4s,mb5.5						
CHG	**Chiang Mai**	**21.42**	**287**	⇓P	**P**	**03 09 41.3**	**-0.7**
	comp=Z,135nm,0.9s,mb5.3						
CHTO	**Chiang Mai**	**21.42**	**287**	*e*P	**P**	**03 09 41.5**	**-0.5**
	comp=Z,183nm,1.2s,mb5.3						
CHTO	**Chiang Mai**	**21.42**	**287**	*e*P	**P**	**03 09 41.5**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,183nm,1.2s,mb5.3						
CHTO	**Chiang Mai**	**21.42**	**287**	P	**P**	**03 09 41.5**	**-0.5**
	comp=Z,3μmcomp=Z,171nm,1.2s,mb5.3						
CHTO	**Chiang Mai**	**21.42**	**287**	P	**P**	**03 09 41.7**	**-0.3**
	SNR=39						
CHTO				mb		03 09 47.5	
	SNR=47						
JNU	**Nakatsue**	**21.73**	**24**	*e*P	**P**	**03 09 46.4**	**+1.2**
	comp=Z,43nm,0.9s,mb4.8						
BMNI	**Bima**	**21.92**	**185**	P	**P**	**03 09 47.0**	**-0.3**
	comp=Z,3μmcomp=Z,197nm,1.4s,mb5.2						
MMRI	**Maumere**	**22.01**	**176**	P	**P**	**03 09 49.5**	**+1.3**
	comp=Z,7μmcomp=Z,476nm,1.2s,mb5.7						
SRBI	**Singaraja**	**22.04**	**194**	P	**P**	**03 09 51.1**	**+2.5**
KHKI	**Kahang-Kahang**	**22.22**	**193**	P	**P**	**03 09 50.5**	**0.0**
	comp=Z,4μmcomp=Z,290nm,1.3s,mb5.5						
NBBI	**Negara**	**22.46**	**196**	P	**P**	**03 09 53.4**	**+0.3**
	comp=Z,496nm,1.5s,mb5.6						
NGJI	**Ngawi**	**22.57**	**204**	P	**P**	**03 09 56.1**	**+1.9**
JAGI	**Jajag, Banyuwa**	**22.68**	**197**	P	**P**	**03 09 55.5**	**+0.1**
	comp=Z,520nm,1.8s,mb5.6						
GMJI	**Gumukmas**	**22.70**	**198**	P	**P**	**03 09 55.9**	**+0.3**
	comp=Z,8μmcomp=Z,284nm,1.3s,mb5.5						
SMRI	**Semarang**	**22.70**	**207**	P	**P**	**03 09 57.6**	**+2.0**
IGBI	**Denpasar**	**22.76**	**194**	P	**P**	**03 09 56.8**	**+0.6**
	comp=Z,667nm,1.8s,mb5.7						
SJI	**Sawahan**	**22.78**	**203**	P	**P**	**03 09 56.8**	**+0.4**
	comp=Z,6μmcomp=Z,274nm,1.2s,mb5.5						
TIA	**Tai'an**	**22.87**	**353**	*e*P	**P**	**03 09 55.5**	**-1.7**
TIA				PP		03 10 26.0	
TIA				sS	sS	03 14 21.0	-7.3
TIA				pmax	pmax		
	comp=Z,120nm,0.9s,mb5.2						
TIA				pmax	pmax		
	comp=Z,3μm,6.9s						
TIA				LR	LR		
	comp=N,22μm,15.7s						
TIA				LR	LR		
	comp=E,13μm,15.7s						
TIA				LR	LR		
	comp=Z,13μm,17.0s						
KRKI	**Karangkates**	**22.92**	**201**	P	**P**	**03 09 58.3**	**+0.4**
	comp=Z,492nm,1.8s,mb5.5						
PWJI	**Pagerwojo**	**23.03**	**203**	P	**P**	**03 09 59.0**	**-0.1**
	comp=Z,8μmcomp=Z,459nm,1.4s,mb5.6						
XAN	**Xi'an**	**23.06**	**335**	P	**P**	**03 09 57.8**	**-1.4**
XAN				pP		03 10 15.5	
XAN				sP	sP	03 10 25.3	+2.4
XAN				PP		03 10 30.0	
XAN				S	**S**	**03 13 57.3**	**-7.3**
XAN				SS		03 14 45.3	
XAN				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.7						
XAN				pmax	pmax		
	comp=Z,720nm,9.4s						
XAN				LR	LR		
	comp=N,12μm,16.6s						
XAN				LR	LR		
	comp=E,5μm,16.2s						
XAN				LR	LR		
	comp=Z,6μm,15.3s						
CD2	**Chengdu**	**23.26**	**321⇓**	*i*P	**P**	**03 10 01.0**	**-0.1**
CD2				pP		03 10 20.0	
CD2				sP	sP	03 10 30.5	+5.5
CD2				PP		03 10 36.0	
CD2				S	**S**	**03 14 06.0**	**-2.0**
CD2				pmax	pmax		
	comp=Z,400nm,1.3s,mb5.6						
CD2				pmax	pmax		
	comp=Z,4μm,6.0s						
BJII	**Banjamegara**	**23.28**	**208**	P	**P**	**03 10 02.1**	**+0.7**
	comp=Z,5μmcomp=Z,184nm,1.5s,mb5.2						
BKNI	**Bangkinang**	**23.31**	**238**	P	**P**	**03 10 00.7**	**-1.0**
	comp=Z,4μmcomp=Z,223nm,1.1s,mb5.4						
PCJI	**Pacitan**	**23.43**	**204**	P	**P**	**03 10 03.8**	**+1.0**
	comp=Z,8μmcomp=Z,407nm,1.6s,mb5.5						
UGM	**Wanagama**	**23.44**	**206**	P	**P**	**03 10 03.3**	**+0.4**
	comp=Z,10μmcomp=Z,394nm,1.4s,mb5.6						
YOGI	**Yogyakarta**	**23.45**	**206**	P	**P**	**03 10 03.0**	**0.0**
	comp=Z,1μm,1.3s,mb6.0						
GUMO	**Guam**	**23.65**	**87**	P	**P**	**03 10 05.0**	**+0.3**
	comp=Z,101nm,0.8s,mb5.2,baz=270,slow=9.1,SNR=2.0						
GUMO	**Guam**	**23.65**	**87**	P	**P**	**03 10 05.1**	**+0.3**
PSI	**Prapat**	**23.85**	**246**	P	**P**	**03 10 05.0**	**-1.7**
	comp=Z,44nm,0.8s,mb4.8,baz=48,slow=6.3,SNR=33						
PSI	**Prapat**	**23.85**	**246**	P	**P**	**03 10 05.0**	**-1.7**
PSI	**Prapat**	**23.85**	**246**	P	**P**	**03 10 05.0**	**-1.7**
				pmax	pmax		
	comp=Z,44nm,0.8s,mb4.8						
TSI	**Tuntungan**	**23.86**	**247**	P	**P**	**03 10 07.7**	**+1.0**
	comp=Z,9μmcomp=Z,455nm,1.0s,mb5.8						
LEM	**Lembang**	**23.89**	**213**	P	**P**	**03 10 07.2**	**+0.2**
	comp=Z,5μmcomp=Z,104nm,1.0s,mb5.1						
KLSI		**23.91**	**222**	P	**P**	**03 10 07.1**	**0.0**
	comp=Z,8μmcomp=Z,444nm,1.0s,mb5.8						
KLI	**Kotabumi**	**23.95**	**222**	P	**P**	**03 10 09.4**	**+1.8**
CBJI	**Citeko**	**23.97**	**215**	P	**P**	**03 10 12.4**	**+4.7**
BLSI	**Bandar Lampung**	**24.09**	**220**	P	**P**	**03 10 10.1**	**+1.3**
	comp=Z,5μmcomp=Z,253nm,1.0s,mb5.5						
MDSI	**Maura Dua**	**24.12**	**223**	P	**P**	**03 10 08.2**	**-0.9**
	comp=Z,3μmcomp=Z,98nm,1.6s,mb4.9						
DBJI	**Dramaga**	**24.14**	**215**	P	**P**	**03 10 09.3**	**0.0**
	comp=Z,7μmcomp=Z,118nm,1.4s,mb5.0						
RBSI	**Rajabasa**	**24.16**	**218**	P	**P**	**03 10 10.0**	**+0.6**
	comp=Z,4μmcomp=Z,167nm,1.1s,mb5.3						
MNSI	**Mandailing Nat**	**24.27**	**241**	P	**P**	**03 10 09.0**	**-1.5**
	comp=Z,3μmcomp=Z,91nm,0.9s,mb5.1						
PPI	**Padang Panjang**	**24.29**	**237**	P	**P**	**03 10 10.3**	**-0.3**
	comp=Z,6μmcomp=Z,82nm,1.3s,mb4.9						
CBIJ	**Chichi jima**	**24.36**	**53**	P	**P**	**03 10 10.4**	**-0.8**
	comp=Z,49nm,0.6s,mb5.0,baz=172,slow=14,SNR=5.6						
CISI	**Cisompet, Garu**	**24.40**	**212**	P	**P**	**03 10 10.7**	**-0.9**
	comp=Z,5μmcomp=Z,232nm,1.7s,mb5.2						
PDSI	**Padang**	**24.50**	**236**	P	**P**	**03 10 12.8**	**+0.3**
	comp=Z,4μmcomp=Z,125nm,1.7s,mb5.0						
LWLI	**Liwa**	**24.59**	**223**	P	**P**	**03 10 12.4

LZH				sS	sS	03 15 37.3	-0.1
LZH				SS		03 16 28.0	
LZH				pmax	pmax		
	comp=Z,130nm,1.1s,mb5.4						
LZH				pmax	pmax		
	comp=Z,370nm,4.8s						
LZH				LR	LR		
	comp=N,12μm,10.9s						
LZH				LR	LR		
	comp=E,16μm,11.7s						
LZH				LR	LR		
	comp=Z,25μm,16.1s						
MAJO	**Matsushiro**	**27.92**	**31**	*e*P	**P**	**03 10 42.5**	**-0.7**
	comp=Z,18nm,0.8s,mb4.6						
MAJO	**Matsushiro**	**27.92**	**31**	*e*P	**P**	**03 10 42.5**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
MAT	**Matsushiro**	**27.92**	**31**	P	**P**	**03 10 41.4**	**-1.8**
MAT				S	**S**	**03 15 28.0**	**+6.1**
MJAR	**Matsushiro Arr**	**27.92**	**31**	P	**P**	**03 10 41.6**	**-1.5**
	comp=Z,7.1nm,1.0s,baz=228,slow=8.6,SNR=11						
MJAR	**Matsushiro Arr**	**27.92**	**31**	P	**P**	**03 10 41.7**	**-1.5**
SNY	**Shenyang**	**28.39**	**5**	⇑P	**P**	**03 10 47.3**	**0.0**
SNY				S	**S**	**03 15 21.0**	**-8.3**
SNY				pmax	pmax		
	comp=Z,37nm,1.3s,mb4.8						
SNY				pmax	pmax		
	comp=Z,780nm,6.9s						
SNY				LR	LR		
	comp=E,13μm,22.6s						
SNY				LR	LR		
	comp=Z,8μm,17.7s						
HHC	**Hu-ho-hao-te**	**28.41**	**346**	⇑P	**P**	**03 10 49.3**	**+1.9**
HHC				PP	PP	03 11 42.3	-10
HHC				PcP	PcP	03 13 58.8	+0.5
HHC				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.2						
HHC				pmax	pmax		
	comp=Z,1μm,5.2s						
HHC				LR	LR		
	comp=N,14μm,17.1s						
HHC				LR	LR		
	comp=E,14μm,16.7s						
HHC				LR	LR		
	comp=Z,14μm,16.5s						
KAKA	**Kakadu**	**28.54**	**155**	*e*P	**P**	**03 10 46.8**	**-2.1**
	comp=Z,67nm,0.7s,mb5.4						
KAKA	**Kakadu**	**28.54**	**155**	*e*P	**P**	**03 10 46.8**	**-2.0**
	comp=Z,225nm,0.8s,mb5.8						
KAKA	**Kakadu**	**28.54**	**155**	P	**P**	**03 10 47.5**	**-1.4**
	comp=Z,1μmcomp=Z,166nm,0.8s,mb5.7						
BTO	**Baotou**	**28.58**	**343**	*e*P	**P**	**03 10 48.5**	**-0.5**
SHL	**Shillong**	**29.51**	**298**	*e*PKP	**P**	**03 10 56.0**	**-1.5**
SHL				*ex*	**S**	**03 15 50.0**	**+2.7**
KNA	**Kununurra**	**30.13**	**164**	P	**P**	**03 11 02.2**	**-0.7**
	comp=Z,1μmcomp=Z,184nm,0.9s,mb5.7						
CN2	**Changchun**	**30.54**	**7**	*e*P	**P**	**03 11 08.0**	**+1.7**
CN2				*e*pP	pP	03 11 30.0	+7.0
CN2				*e*S	**S**	**03 16 02.3**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,5μm,25.0s						
CN2				LR	LR		
	comp=E,8μm,25.0s						
CN2				LR	LR		
	comp=Z,5μm,21.0s						
VLA	**Vladivostok**	**31.14**	**16**	⇓*i*P	**P**	**03 11 09.8**	**-1.8**
VLA				*e*		03 12 13.8	
VLA				S	**S**	**03 16 11.0**	**-1.4**
VLA				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.0						
LSA	**Lhasa**	**31.63**	**305**	P	**P**	**03 11 17.3**	**+1.2**
LSA				S	**S**	**03 16 22.0**	**+1.6**
LSA				LR	LR		
	comp=E,8μm,27.4s						
LSA				LR	LR		
	comp=Z,9μm,33.4s						
LSA	**Lhasa**	**31.63**	**305**	*e*P	**P**	**03 11 16.4**	**+0.2**
	comp=Z,90nm,1.3s,mb5.3						
LSA	**Lhasa**	**31.63**	**305**	*e*P	**P**	**03 11 16.4**	**+0.3**
LSA				pmax	pmax		
	comp=Z,90nm,1.3s,mb5.3						
GTA	**Gaotai**	**31.67**	**329**	*e*P	**P**	**03 11 17.0**	**+0.7**
GTA				pP	pP	03 11 36.3	+3.2
GTA				sP	sP	03 11 45.5	+4.2
GTA				PcP	PcP	03 14 09.0	+2.2
GTA				S	**S**	**03 16 20.8**	**+0.1**
GTA				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.2						
GTA				pmax	pmax		
	comp=Z,920nm,8.5s						
GTA				LR	LR		
	comp=N,16μm,16.6s						
GTA				LR	LR		
	comp=E,19μm,16.6s						
GTA				LR	LR		
	comp=Z,29μm,16.1s						
FITZ	**Fitzroy Crossi**	**31.75**	**171**	P	**P**	**03 11 15.8**	**-1.4**
	comp=Z,60nm,1.0s,mb5.3,baz=3.8,slow=8.0,SNR=47						
FITZ	**Fitzroy Crossi**	**31.75**	**171**	*e*P	**P**	**03 11 16.3**	**-0.9**
	comp=Z,109nm,1.1s,mb5.5						
FITZ	**Fitzroy Crossi**	**31.75**	**171**	*e*P	**P**	**03 11 16.4**	**-0.8**
	comp=Z,97nm,1.1s,mb5.5						
FITZ	**Fitzroy Crossi**	**31.75**	**171**	P	**P**	**03 11 16.5**	**-0.7**
	comp=Z,3μmcomp=Z,162nm,1.2s,mb5.6						
CAL	**Calcutta**	**31.89**	**291**	*e*PKP	**P**	**03 11 17.9**	**-0.5**
CAL				*ex*	x	03 15 41.8	
MDJ	**Mudanjiang**	**32.01**	**12**	P	**P**	**03 11 18.8**	**-0.4**
MDJ				pP	pP	03 11 37.3	+1.3
MDJ				sP	sP	03 11 47.0	+2.8
MDJ				PP	PP	03 12 32.0	-0.7
MDJ				S	**S**	**03 16 24.5**	**-1.3**
MDJ				sS	sS	03 16 57.5	+2.9
MDJ				ScP	ScP	03 17 43.3	-1.9
MDJ				PcS	PcS	03 17 52.0	-0.2
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,160nm,4.1s						
MDJ				LR	LR		
	comp=N,7μm,18.6s						
MDJ				LR	LR		
	comp=E,6μm,33.8s						
MDJ				LR	LR		
	comp=Z,7μm,20.4s						
TAPN	**Taplejung**	**33.62**	**299**	*e*P	**P**	**03 11 33.3**	**-0.3**
	comp=Z,515nm,1.5s,mb6.1						
ODAN	**Odare**	**33.75**	**298**	*e*P	**P**	**03 11 34.5**	**-0.2**
	comp=Z,251nm,1.0s,mb6.0						
MBWA	**Marble Bar**	**34.40**	**181**	*e*P	**P**	**03 11 39.7**	**-0.6**
	comp=Z,25nm,0.6s,mb5.2						
MBWA	**Marble Bar**	**34.40**	**181**	P	**P**	**03 11 39.6**	**-0.7**
	comp=Z,59nm,1.6s,mb5.2						
MBWA	**Marble Bar**	**34.40**	**181**	P	**P**	**03 11 40.4**	**+0.1**
	SNR=5.3						
PMG	**Port Moresby**	**34.84**	**129**	*e*P	**P**	**03 11 44.2**	**0.0**
PMG	**Port Moresby**	**34.84**	**129**	⇑*e*P	**P**	**03 11 43.2**	**-1.0**
PMG				pmax	pmax		
	comp=Z,46nm,1.2s						
COEN	**Coen**	**35.27**	**140**	*e*P	**P**	**03 11 46.2**	**-1.6**
	comp=Z,155nm,0.7s,mb5.9						
COEN	**Coen**	**35.27**	**140**	P	**P**	**03 11 44.7**	**-3.1**
GUN	**Gumba**	**35.34**	**299**	*e*P	**P**	**03 11 48.4**	**0.0**
	comp=Z,243nm,0.6s,mb6.2						
PKI	**Pulchoki**	**35.64**	**299**	*e*P	**P**	**03 11 50.4**	**-0.6**
	comp=Z,727nm,1.5s,mb6.4						
PKI	**Pulchoki**	**35.64**	**299**	*e*P	**P**	**03 11 51.1**	**+0.1**
	comp=Z,213nm,0.7s,mb6.2						
PKI	**Pulchoki**	**35.64**	**299**	*e*P	**P**	**03 11 51.1**	**+0.1**
PKI				pmax	pmax		
	comp=Z,213nm,0.7s,mb6.2						
PKIN	**Phulchoki**	**35.65**	**299**	*e*P	**P**	**03 11 51.1**	**0.0**
	comp=Z,213nm,0.7s,mb6.2						
HIA	**Hailar**	**35.72**	**359**	*e*P	**P**	**03 11 51.2**	**-0.1**
	comp=Z,11nm,0.5s,mb5.0						
HIA	**Hailar**	**35.72**	**359**	*e*P	**P**	**03 11 51.2**	**-0.1**
HIA				pmax	pmax		
	comp=Z,11nm,0.5s						
KKN	**Kakani**	**35.81**	**299**	*e*P	**P**	**03 11 51.9**	**-0.6**
	comp=Z,489nm,1.3s,mb6.3						
KKN	**Kakani**	**35.81**	**299**	*e*P	**P**	**03 11 51.9**	**-0.6**
KKN				pmax	pmax		
	comp=Z,489nm,1.3s,mb6.3						
WRA	**Warramunga Arr**	**35.85**	**157**	P	**P**	**03 11 51.4**	**-1.3**
	comp=Z,136nm,0.7s,mb6.0,baz=337,slow=9.3,SNR=169						
WRA	**Warramunga Arr**	**35.85**	**157**	P	**P**	**03 11 51.4**	**-1.4**
WRA				pmax	pmax		
	comp=Z,136nm,0.7s						
DMN	**Daman**	**35.91**	**299**	*e*P	**P**	**03 11 52.8**	**-0.5**
	comp=Z,380nm,1.0s,mb6.3						
ASAJ	**Asahikawa**	**35.92**	**27**	P	**P**	**03 11 52.9**	**-0.2**
	comp=Z,18nm,0.7s,mb5.1,baz=180,slow=6.1,SNR=6.6						
ASAJ	**Asahikawa**	**35.92**	**27**	P	**P**	**03 11 52.9**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,18nm,0.7s						
VIS	**Vishakhapatnam**	**36.06**	**282**	*e*PKP	**P**	**03 11 54.1**	**-0.6**
VIS				AMb	AMB	03 11 59.8	
	comp=Z,179nm,1.4s,mb5.8						
ULN	**Ulaanbaatar**	**36.11**	**345**	*e*P	**P**	**03 11 54.8**	**+0.1**
	comp=Z,113nm,0.9s,mb5.8						
ULN	**Ulaanbaatar**	**36.11**	**345**	*e*P	**P**	**03 11 54.8**	**+0.1**
ULN				pmax	pmax		
	comp=Z,113nm,0.9s,mb5.8						
ULN	**Ulaanbaatar**	**36.11**	**345**	P	**P**	**03 11 54.0**	**-0.7**
	comp=Z,2μmcomp=Z,174nm,1.7s,mb5.7						
ULN	**Ulaanbaatar**	**36.11**	**345**	P	**P**	**03 11 54.7**	**0.0**
	SNR=89						
SONM	**Songino Array**	**36.25**	**344**	P	**P**	**03 11 56.0**	**+0.1**
	comp=Z,160nm,0.7s,mb6.0,baz=160,slow=9.4,SNR=391						
SONM	**Songino Array**	**36.25**	**344**	P	**P**	**03 11 56.0**	**+0.1**
SONM				pmax	pmax		
	comp=Z,160nm,0.7s						
GKN	**Gorkha**	**36.42**	**299**	*e*P	**P**	**03 11 56.8**	**-0.8**
	comp=Z,677nm,1.5s,mb6.4						
KLR	**Kul'dur**	**36.85**	**12**	*e*P	**P**	**03 11 56.7**	**-4.3**
KLR				*e*		03 13 24.5	
KLR				*e*S	**S**	**03 17 42.0**	**+1.6**
KLR				pmax	pmax		
	comp=Z,1μm,11.0s						
KOLN	**Koldanda**	**37.24**	**298**	*e*P	**P**	**03 12 04.1**	**-0.5**
	comp=Z,119nm,0.7s,mb6.0						
DANN	**Dangsing**	**37.26**	**299**	*e*P	**P**	**03 12 03.9**	**-0.8**
	comp=Z,51nm,1.2s,mb6.3						
YUK	**Yuzh-Kuril'sk**	**37.40**	**31**	⇓*i*P	**P**	**03 12 00.1**	**-5.6**
YUK				*i*		03 13 32.7	
YUK				pmax	pmax		
	comp=N,640nm,1.6s						
YUK				pmax	pmax		
	comp=E,2μm,1.6s						
YUK				pmax	pmax		
	comp=Z,1μm,1.6s,mb6.5						
YUK				MLR	MLR		
	comp=N,1μm,22.0s						
YUK				MLR	MLR		
	comp=E,2μm,22.0s						
YUK				MLR	MLR		
	comp=Z,2μm,22.0s						
YSS	**Yuzh-Sakhalins**	**38.24**	**25**	*e*P	**P**	**03 12 13.8**	**+1.1**
	comp=Z,33nm,0.8s,mb5.2						
YSS	**Yuzh-Sakhalins**	**38.24**	**25**	⇑*e*P	**P**	**03 12 13.0**	**+0.2**
YSS				*e*S	**S**	**03 18 00.0**	**-1.5**
YSS				*e*SSS		03 21 14.0	
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1						
YSS				MLR	MLR		
	comp=Z,3μm,18.0s						
CIT	**Chita**	**38.88**	**353**	*e*P	**P**	**03 12 18.1**	**+0.1**
CIT				*e*		03 12 28.8	
CIT				*e*		03 13 53.4	
CIT				pmax	pmax		
	comp=Z,251nm,2.6s,mb5.6						
ASAR	**Alice Springs**	**39.13**	**160**	P	**P**	**03 12 20.2**	**-0.2**
	comp=Z,131nm,0.7s,mb5.9,baz=340,slow=6.9,SNR=711						
ASAR	**Alice Springs**	**39.13**	**160**	P	**P**	**03 12 20.2**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,131nm,0.7s						
MDRS	**Chennai**	**39.20**	**274**	*ex*	pP	03 12 34.2	-4.2
MDRS				*ex*	x	03 18 55.2	
ZAK	**Zakamensk**	**39.43**	**343**	*e*P	**P**	**03 12 22.6**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.7						
PALK	**Pallekele**	**39.63**	**265**	*e*P	**P**	**03 12 23.7**	**-1.2**
	comp=Z,73nm,1.3s,mb5.3						
PALK	**Pallekele**	**39.63**	**265**	*e*P	**P**	**03 12 23.7**	**-1.2**
PALK				pmax	pmax		
	comp=Z,73nm,1.3s,mb5.3						
TLY	**Talaya**	**40.50**	**344**	*e*P	**P**	**03 12 31.5**	**+0.1**
	comp=Z,45nm,0.8s,mb5.3						
TLY	**Talaya**	**40.50**	**344**	*e*P	**P**	**03 12 31.5**	**0.0**
TLY				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.3						
TLY	**Talaya**	**40.50**	**344**	P	**P**	**03 12 31.9**	**+0.4**
	comp=Z,328nm,0.9s,mb6.2,SNR=16						
TLY	**Talaya**	**40.50**	**344**	P	**P**	**03 12 32.2**	**+0.7**
	SNR=23						
PTH	**Pithoragarh**	**40.57**	**300**	*e*PKP	**P**	**03 12 31.2**	**-1.2**
HYB	**Hyderabad**	**40.62**	**281**	*i* P	**P**	**03 12 34.0**	**+1.0**
IRK	**Irkutsk**	**40.84**	**345**	*e*P	**P**	**03 12 34.1**	**-0.2**
IRK				*e*S	**S**	**03 18 36.3**	**-4.0**
IRK				pmax	pmax		
	comp=Z,130nm,1.6s,mb5.5						
MOY	**Mondy**	**41.25**	**342**	*e*P	**P**	**03 12 38.7**	**+1.0**
MOY				pmax	pmax		
	comp=Z,174nm,2.0s,mb5.5						
WMQ	**Urumqi**	**41.32**	**324**	P	**P**	**03 12 40.0**	**+1.7**
WMQ				pP	pP	03 12 58.0	+2.4
WMQ				sP	sP	03 13 08.0	+4.3
WMQ				PP	PP	03 14 20.0	+5.1
WMQ				S	**S**	**03 18 49.0**	**+1.4**
WMQ				sS	sS	03 19 20.0	+3.0
WMQ				SS	SS	03 21 50.0	-3.6
WMQ				pmax	pmax		
	comp=Z,84nm,1.0s,mb5.5						
WMQ				pmax	pmax		
	comp=Z,1μm,4.0s						
WMQ				LR	LR		
	comp=N,11μm,16.0s						
WMQ				LR	LR		
	comp=E,9μm,16.0s						
WMQ				LR	LR		
	comp=Z,7μm,16.0s						
CTA	**Charters Tower**	**41.84**	**142**	P	**P**	**03 12 43.4**	**+0.5**
	comp=Z,24nm,0.7s,mb5.0,baz=318,slow=11,SNR=10						
CTA	**Charters Tower**	**41.84**	**142**	*e*P	**P**	**03 12 43.6**	**+0.7**
	comp=Z,33nm,1.5s,mb4.8						
CTA	**Charters Tower**	**41.84**	**142**	P	**P**	**03 12 43.4**	**+0.5**
CTA				pmax	pmax		
	comp=Z,25nm,0.7s						
CTAO	**Charters Tower**	**41.84**	**142**	*e*P	**P**	**03 12 43.4**	**+0.6**
	comp=Z,261nm,1.8s,mb5.7						
CTAO	**Charters Tower**	**41.84**	**142**	*e*P	**P**	**03 12 43.4**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,261nm,1.8s,mb5.7						
CTAO	**Charters Tower**	**41.84**	**142**	P	**P**	**03 12 43.3**	**+0.4**
	comp=Z,2μmcomp=Z,79nm,2.0s,mb5.1						
BHPL	**Bhopal**	**41.94**	**290**	*e*PKP	**P**	**03 12 41.8**	**-2.0**
BHPL				AMb	AMB	03 12 49.5	
	comp=Z,138nm,1.1s,mb5.6						
AKL	**Akola**	**42.13**	**286**	⇑*i*P	**P**	**03 12 45.5**	**+0.2**
AKL				AMP		03 12 52.7	
	comp=Z,202nm,1.8s						
AKL				*i* x	x	03 17 01.0	
DDI	**Dehra Dun**	**42.57**	**300**	*e*PKP	**P**	**03 12 47.0**	**-1.8**
DDI				*ex*	x	03 17 02.0	
KLP	**Kalpa**	**42.71**	**302**	*e*PKP	**P**	**03 12 50.0**	**+0.1**
KLP				AMb	AMB	03 12 57.5	
	comp=Z,280nm,1.5s,mb5.8						
SONA	**Sohna**	**42.96**	**297**	*e*PKP	**P**	**03 12 50.6**	**-1.4**
SONA				AMb	AMB	03 12 56.2	
	comp=Z,193nm,0.8s,mb5.9						
AYAN	**Aya Nagar**	**42.97**	**297**	*e*PKP	**P**	**03 12 50.3**	**-1.7**
AYAN				AMb	AMB	03 12 55.7	
	comp=Z,109nm,1.5s,mb5.4						
TRD	**Trivandrum**	**43.03**	**268**	*e*PKP	**P**	**03 12 49.9**	**-2.8**
TRD				AMb	AMB	03 13 00.3	
	comp=Z,76nm,2.0s,mb5.1						
KUDL	**Kundal**	**43.46**	**297**	*e*PKP	**P**	**03 12 54.3**	**-1.7**
KUDL				AMb	AMB	03 13 00.1	
	comp=Z,123nm,0.8s,mb5.7						
SMLA	**Simla**	**43.51**	**301**	*i* P	**P**	**03 12 55.0**	**-1.4**
SMLA				*i* x	x	03 17 08.5	
SDNR	**Sundarnagar**	**43.76**	**302**	*e*PKP	**P**	**03 12 57.5**	**-0.9**
SDNR				*ex*	x	03 17 10.5	
BHK	**Bhakra**	**44.20**	**301**	*e*PKP	**P**	**03 13 01.4**	**-0.5**
BOD	**Bodaibo**	**44.56**	**355**	*e*P	**P**	**03 13 03.6**	**-0.7**
FORT	**Forrest**	**44.56**	**171**	*e*P	**P**	**03 13 04.4**	**-0.3**
	comp=Z,123nm,0.9s,mb5.6						
FORT	**Forrest**	**44.56**	**171**	*e*P	**P**	**03 13 04.3**	**-0.4**
	comp=Z,158nm,0.9s,mb5.7						
KAD	**Karad**	**44.79**	**281**	*e*PKP	**P**	**03 13 06.5**	**-0.2**
KAD				AMb	AMB	03 13 14.3	
	comp=Z,137nm,1.9s,mb5.4						
KLBR	**Kellerberrin**	**44.86**	**183**	*e*P	**P**	**03 13 06.5**	**-0.5**
	comp=Z,52nm,0.7s,mb5.4						
POO	**Poona**	**45.08**	**283**	*e*PKP	**P**	**03 13 09.4**	**+0.3**
POO				AMb	AMB	03 13 16.6	
	comp=Z,138nm,1.1s,mb5.6						
GOA	**Goa**	**45.22**	**279**	⇑*i*P	**P**	**03 13 08.9**	**-1.3**
HNR	**Honiara**	**45.24**	**118**	P	**P**	**03 13 10.5**	**+0.2**
	comp=Z,35nm,0.4s,mb5.5,baz=260,slow=12,SNR=1.8						
HNR	**Honiara**	**45.24**	**118**	P	**P**	**03 13 10.5**	**+0.2**
HNR				pmax	pmax		
	comp=Z,35nm,0.4s,mb5.4						
MK31	**Makanchi Array**	**46.15**	**324**	*e*P	**P**	**03 13 17.1**	**+0.1**
MK31	**Makanchi Array**	**46.15**	**324**	*e*P	**P**	**03 13 17.1**	**0.0**
MKAR	**Makanchi Array**	**46.15**	**324**	P	**P**	**03 13 17.1**	**+0.1**
	comp=Z,27nm,0.6s,mb5.1,baz=131,slow=8.9,SNR=183						
MKAR				PcP	PcP	03 14 53.5	+1.4
	comp=Z,15nm,0.8s,baz=117,slow=1.5,SNR=5.3						
MKAR	**Makanchi Array**	**46.15**	**324**	P	**P**	**03 13 17.1**	**0.0**
MKAR						03 14 53.5	
MKAR				pmax	pmax		
	comp=Z,27nm,0.6s						
NWAO	**Narrogin (SRO)**	**46.22**	**184**	P	**P**	**03 13 17.4**	**-0.4**
	comp=Z,39nm,0.6s,mb5.3,baz=8.6,slow=7.0,SNR=24						
NWAO				PcP	PcP	03 14 53.3	+0.9
	comp=Z,16nm,0.7s,baz=1.4,slow=4.8,SNR=3.3						
NWAO	**Narrogin (SRO)**	**46.22**	**184**	*e*P	**P**	**03 13 17.5**	**-0.3**
	comp=Z,51nm,0.8s,mb5.3						
NWAO	**Narrogin (SRO)**	**46.22**	**184**	*e*P	**P**	**03 13 17.5**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,51nm,0.8s						
NWAO	**Narrogin (SRO)**	**46.22**	**184**	P	**P**	**03 13 18.6**	**+0.9**
	SNR=5.1						
KSH	**Kashi**	**46.95**	**312**	*e*P	**P**	**03 13 25.5**	**+2.0**
KSH				*e*pP	pP	03 13 44.3	+3.2
KSH				*e*sP	sP	03 13 53.0	+3.9
KSH				*e*PcP	PcP	03 14 57.3	+2.2
KSH				*e*PP	PP	03 15 17.0	+2.3
KSH				*e*ScP	ScP	03 18 42.8	-0.1
KSH				*e*PcS	PcS	03 18 51.0	+0.9
KSH				*e*S	**S**	**03 20 10.0**	**+0.3**
KSH				*e*sS	sS	03 20 42.8	+3.2
KSH				*e*ScS	ScS	03 23 09.8	-1.7
KSH				*e*SS	SS	03 23 31.3	-6.0
KSH				pmax	pmax		
	comp=Z,210nm,2.3s,mb5.5						
KSH				LR	LR		
	comp=N,4μm,10.6s						
KSH				LR	LR		
	comp=E,5μm,12.5s						
KSH				LR	LR		
	comp=Z,10μm,18.2s						
SKR	**Severo-Kuril's**	**47.02**	**30**	*e*P	**P**	**03 13 26.0**	**+2.2**
AAA	**Alma-Ata**	**47.74**	**317**	*e*P	**P**	**03 13 34.5**	**+4.9**
AAA				*e*S	**S**	**03 20 30.3**	**+10**
AAA				pmax	pmax		
	comp=Z,2μm,4.6s						
AAA				smax			
	comp=N,3μm,9.0s						
AAA				MLR	MLR		
	comp=Z,4μm,15.0s						
ULHL	**Ulahol**	**47.80**	**316**	P	**P**	**03 13 31.4**	**+1.4**
	SNR=16						
KZA	**Kyzart**	**48.41**	**315**	P	**P**	**03 13 36.8**	**+2.1**
	SNR=16						
KZA	**Kyzart**	**48.41**	**315**	*e*P	**P**	**03 13 36.4**	**+1.7**
	comp=Z,68nm,0.8s,mb5.5						
TKM2	**Tokmak 2**	**48.50**	**316**	P	**P**	**03 13 36.4**	**+1.0**
	SNR=49						
TKM2	**Tokmak 2**	**48.50**	**316**	*e*P	**P**	**03 13 36.0**	**+0.6**
	comp=Z,43nm,0.7s,mb5.5						
TKM2	**Tokmak 2**	**48.50**	**316**	P	**P**	**03 13 36.2**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4						
EIDS	**Eidsvold**	**48.73**	**142**	*e*P	**P**	**03 13 36.5**	**-0.8**
	comp=Z,88nm,1.1s,mb5.6						
KBK	**Karagaybulak**	**48.84**	**316**	P	**P**	**03 13 39.4**	**+1.3**
	SNR=41						
YAK	**Yakutsk**	**48.95**	**6**	*e*P	**P**	**03 13 37.4**	**-1.2**
	comp=Z,80nm,0.9s,mb5.7						
YAK	**Yakutsk**	**48.95**	**6**	*e*P	**P**	**03 13 37.1**	**-1.4**
YAK				*e**PP	pP	03 13 45.4	-11
YAK				*e*		03 15 01.5	
YAK				*e*		03 15 31.2	
YAK				*e*S	**S**	**03 20 30.7**	**-6.5**
YAK				*e**SS	sS	03 20 51.9	-15
YAK				*e*		03 23 25.5	
YAK				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,15nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,294nm,3.2s						
YAK				pmax	pmax		
	comp=N,183nm,3.3s						
YAK				pmax	pmax		
	comp=E,147nm,2.8s						
YAK				smax			
	comp=E,324nm,3.3s						
YAK				smax			
	comp=N,329nm,3.1s						
YAK				MLR	MLR		
	comp=Z,5μm,19.0s						
YAK				MLR	MLR		
	comp=N,3μm,17.0s						
YAK				MLR	MLR		
	comp=E,5μm,20.0s						
UCH	**Uchtor**	**48.97**	**315**	P	**P**	**03 13 40.5**	**+1.4**
	SNR=90						
UCH	**Uchtor**	**48.97**	**315**	*e*P	**P**	**03 13 40.6**	**+1.5**
	comp=E,112nm,1.0s,mb5.8						
CHMS	**Chumysh**	**49.10**	**316**	P	**P**	**03 13 40.5**	**+0.5**
	SNR=23						
FRU	**Bishkek**	**49.13**	**316**	⇓*i*P	**P**	**03 13 42.0**	**+1.7**
AAK	**Ala-Archa**	**49.14**	**315**	P	**P**	**03 13 41.1**	**+0.8**
	SNR=28						
AAK	**Ala-Archa**	**49.14**	**315**	P	**P**	**03 13 41.0**	**+0.6**
	comp=E,19nm,0.7s,mb5.2,baz=127,slow=6.6,SNR=46						
AAK	**Ala-Archa**	**49.14**	**315**	*e*P	**P**	**03 13 40.8**	**+0.5**
	comp=E,60nm,1.0s,mb5.5						
AAK	**Ala-Archa**	**49.14**	**315**	*d i*P	**P**	**03 13 40.2**	**-0.1**
AAK				pmax	pmax		
	comp=Z,78nm,2.5s,mb5.2						
AAK	**Ala-Archa**	**49.14**	**315**	P	**P**	**03 13 41.9**	**+1.6**
	comp=Z,259nm,1.2s,mb6.0,SNR=20						
AAK	**Ala-Archa**	**49.14**	**315**	P	**P**	**03 13 41.0**	**+0.7**
	comp=Z,314nmcomp=Z,17nm,1.0s,mb4.9						
AAK	**Ala-Archa**	**49.14**	**315**	P	**P**	**03 13 41.8**	**+1.5**
	SNR=40

PET eS S 03 20 47.8 -0.3
PET pmax pmax
comp=Z,600nm,13.5s
PET pmax pmax
comp=Z,400nm,11.6s
PET MLR MLR
comp=Z,3μm,16.0s
KURK Kurchatov 50.31 326 eP P 03 13 49.2 +0.1
comp=Z,189nm,0.8s,mb6.1
KURK Kurchatov 50.31 326 d iP P 03 13 49.5 +0.4
KURK pmax pmax
comp=Z,571nm,1.7s,mb6.2
KURK Kurchatov 50.31 326 P P 03 13 49.4 +0.3
comp=Z,2μm,0.8s
KURK Kurchatov 50.31 326 P P 03 13 49.0 -0.1
SNR=151
NVS Novosibirsk 50.50 333 eP P 03 13 49.4 -1.0
NVS pmax pmax
comp=Z,171nm,1.9s,mb5.7
NVS pmax pmax
comp=N,83nm,1.7s
NVS pmax pmax
comp=E,83nm,1.6s
KBL Kabul 50.92 304 eP P 03 13 53.4 -0.5
comp=E,58nm,1.1s,mb5.5
KBL Kabul 50.92 304 eP P 03 13 53.4 -0.6
KBL pmax pmax
comp=Z,58nm,1.1s,mb5.5
KK31 Karatay Array 52.04 315 i P P 03 14 02.4 +0.2
KK31 pmax pmax
comp=Z,53nm,0.8s,mb5.6
KKAR Karatay Array 52.04 315 eP P 03 14 02.2 0.0
comp=Z,27nm,0.6s,mb5.5
KKAR Karatay Array 52.04 315 eP P 03 14 02.2 0.0
KKAR pmax pmax
comp=Z,27nm,0.6s,mb5.5
ARMA Armidale 52.89 146 eP P 03 14 09.6 +1.0
ARMA Armidale 52.89 146 eP P 03 14 09.2 +0.6
comp=Z,160nm,1.6s,mb5.8
SEY Seymchan 54.29 17⇑ eP P 03 14 18.2 -0.2
CAN Canberra 55.49 152 eP P 03 14 27.8 +0.4
comp=Z,169nm,1.6s,mb5.8
CAN Canberra 55.49 152 eP P 03 14 27.8 +0.4
CAN pmax pmax
comp=Z,169nm,1.6s,mb5.8
CNB Canberra Magne 55.66 151 eP P 03 14 28.6 0.0
BVAR Borovoye Array 55.90 326 P P 03 14 30.3 +0.3
comp=Z,71nm,0.7s,mb5.8,baz=122,slow=9.6,SNR=85
BVAR Borovoye Array 55.90 326 P P 03 14 30.3 +0.2
BVAR pmax pmax
comp=Z,71nm,0.7s
TOO Toolangi 55.90 156 eP P 03 14 30.5 +0.2
BRVK Borovoye 55.97 326 eP P 03 14 30.4 -0.2
comp=Z,177nm,0.9s,mb6.1
BRVK Borovoye 55.97 326 eP P 03 14 30.4 -0.2
BRVK pmax pmax
comp=Z,177nm,0.9s,mb6.1
BRVK Borovoye 55.97 326 P P 03 14 30.8 +0.2
SNR=148
TIXI Tiksi 58.39 3 eP P 03 14 45.9 -1.4
comp=Z,53nm,1.3s,mb5.4
TIXI Tiksi 58.39 3 eP P 03 14 45.6 -1.8
TIXI e 03 16 52.9
TIXI ePPP 03 18 22.6
TIXI eS S 03 22 46.3 +1.7
TIXI eSS SS 03 26 36.3 -1.2
TIXI pmax pmax
comp=Z,61nm,1.5s,mb5.4
IMON Monand 58.47 301 eP P 03 14 49.2 +0.6
WBK Wadi Bani Khal 58.92 288 P P 03 14 52.7 +0.8
SNR=6.3
IAKL Akhelmad 59.52 305 eP P 03 14 56.4 +0.6
IEMG Emamgholi 59.69 306 eP P 03 14 58.1 +1.1
JMDO Jabal Madar 59.73 288 P P 03 15 00.8 +3.3
SNR=7.9
ABKT Ailbek 60.16 306 P P 03 15 01.9 +1.7
comp=Z,702nm,1.4s,mb6.5,SNR=24
ISFR Sfrayin 60.16 305 eP P 03 15 00.9 +0.6
AMKA Amchitka 60.24 38 eP P 03 15 01.1 +0.6
comp=Z,30nm,0.4s,mb5.7
HOQ Hoqain 60.40 290 P P 03 15 02.7 +0.6
SNR=14
ISHV Shirvan 60.45 306 eP P 03 15 03.5 +1.3
BSY Bisya 60.55 289 P P 03 15 02.9 -0.2
SNR=7.8
AB31 Akbulak array 60.82 319 P P 03 15 04.5 0.0
AB31 pmax pmax
comp=Z,49nm,0.7s,mb5.7
ABKAR Akbulak array 60.82 319 eP P 03 15 03.9 -0.6
comp=Z,0.5nm,2.3s
ABKAR ePcP PcP 03 15 47.3 -0.3
ARQ Araqi 61.14 289 P P 03 15 06.9 -0.2
SNR=9.6
HATD Hatta, Dubai 61.43 291 P P 03 15 10.1 +1.1
SNR=8.1
ASHO Ashiyiah 61.50 291 P P 03 15 10.6 +1.0
SNR=7.0
IBAF Bafgh 61.86 299 eP P 03 15 12.4 +0.6
BILL Bilibino 61.99 18 eP P 03 15 11.7 -0.4
comp=Z,40nm,0.8s,mb5.5
BILL Bilibino 61.99 18 d iP P 03 15 11.7 -0.3
BILL e pP 03 15 30.3 0.0
BILL 03 15 56.0
BILL 03 17 27.0
BILL S S 03 23 26.5 -4.3
BILL i 03 24 04.2
BILL pmax pmax
comp=Z,44nm,0.7s,mb5.6
BILL MLR MLR
comp=Z,4μm,18.0s
SVE Sverdlovsk 62.53 328⇑ eP P 03 15 16.2 +0.3
SVE eS S 03 23 43.1 +5.1
SVE pmax pmax
comp=Z,246nm,1.6s,mb5.9
IMEH Mehriz 62.67 298 eP P 03 15 16.9 -0.4
ICHK Chekchek 62.86 299 eP P 03 15 18.9 +0.4
IANJ Anjilo 63.35 303 eP P 03 15 22.1 +0.4
IGLO Ghaloghah 63.47 304 eP P 03 15 23.0 +0.6
ARU Arti 63.51 327 eP P 03 15 21.6 -0.8
comp=Z,160nm,1.4s,mb5.7
ARU Arti 63.51 327 d iP P 03 15 21.8 -0.5
ARU e 03 15 57.7
ARU e 03 17 42.7
ARU ePPP 03 19 15.1
ARU S S 03 23 51.9 +1.7
ARU pmax pmax
comp=Z,143nm,1.7s,mb5.5
ARU Arti 63.51 327 P P 03 15 21.9 -0.4
comp=Z,364nm,0.8s,mb6.3,SNR=9.1
IKIA Kiasar 63.57 304 eP P 03 15 24.4 +1.3
RBK Rabkut 63.79 283 P P 03 15 25.9 +1.0
SNR=9.2
ISHM Shahmirzad 63.87 303 eP P 03 15 25.9 +0.8
ISRV Sarvestan 63.98 296 eP P 03 15 26.7 +0.7
IPAR Pars 64.03 297 eP P 03 15 27.3 +1.0
ILAS Lasjerd 64.13 303 eP P 03 15 27.0 +0.2
IFIR Firoozkooh 64.31 303 eP P 03 15 28.4 +0.4
ABTO Aybut 64.67 283 P P 03 15 31.6 +1.0
SNR=8.8
ISFB Sefidab 64.70 302 eP P 03 15 30.7 +0.1
IKLH Kolahrood 65.25 301 eP P 03 15 35.0 +0.9
IR3 Iran Long-Peri 65.71 303 eP P 03 15 37.8 +0.7
IPIR Pirpir 65.83 300 eP P 03 15 39.1 +1.2
IRAZ Razeghan 66.61 303 eP P 03 15 43.2 +0.4
GAMB Gambell 68.24 26 eP P 03 15 53.4 +0.9
comp=Z,40nm,0.9s,mb5.2
ISRB Sarab 68.41 306 eP P 03 15 54.2 0.0
MAK Makhachkala 68.58 311 eP P 03 15 54.6 -0.5
MAK e*PP pP 03 16 11.1 -2.6
MAK i *SP sP 03 16 19.8 -1.7
MAK eS S 03 24 52.6 +0.3
MAK e*SS sS 03 25 23.7 -0.1
MAK e 03 25 44.1
MAK pmax pmax
comp=Z,227nm,1.8s,mb5.7
MAK MLR MLR
comp=Z,3μm,14.0s
IKOM Komasi 68.62 302 eP P 03 15 54.7 -0.9
KBD Kabd 68.72 296 eP P 03 15 55.8 -0.5
KBD AMb AMB 03 16 02.3
comp=Z,167nm,1.1s,mb5.8
MIB Mutribah 68.99 297 eP P 03 15 57.1 -0.8
MIB AMb AMB 03 16 03.6
comp=Z,176nm,1.3s,mb5.7
ILIN Lien 69.05 302 eP P 03 15 58.0 -0.2

NAY Al-Naaiem 69.11 296 eP P 03 15 57.9 -0.8
NAY AMb AMB 03 16 04.4
comp=Z,174nm,1.2s,mb5.8
IVIS Veis 69.15 302 eP P 03 15 58.2 -0.7
IGHG Ghaleghazi 69.39 302 eP P 03 15 59.9 -0.4
IDHR Dehrash 69.53 302 eP P 03 16 00.1 -1.1
IAZR Azarshahr 69.75 305 eP P 03 16 03.3 +0.8
IMRD Marand 69.94 306 eP P 03 16 04.2 +0.6
ISHB Shabestar 70.02 306 eP P 03 16 05.3 +1.2
DGRG David-gareji 70.15 309 P P 03 16 04.9 +0.1
MTA Mtatsminda 70.58 310 P P 03 16 07.0 -0.5
TBLG Delisi 70.62 310 eP P 03 16 07.8 +0.1
TBLG Delisi 70.62 310 P P 03 16 07.9 +0.2
GNI Garni 70.65 308 P P 03 16 08.6 +0.7
comp=Z,31nm,0.7s,mb5.3,baz=24,slow=2.7,SNR=29
GNI Garni 70.65 308 eP P 03 16 09.7 +1.8
comp=Z,77nm,0.9s,mb5.5
GNI Garni 70.65 308 d iP P 03 16 08.3 +0.4
GNI pmax pmax
comp=Z,131nm,1.4s
GNI Garni 70.65 308 P P 03 16 10.3 +2.4
SNR=24
GOR Gori 71.09 310 P P 03 16 11.5 +0.9
ONI Oni 71.56 311 P P 03 16 15.0 +1.7
GOF Gofitskoye 71.81 313 eP P 03 16 01.9 -13
KIV Kislovodsk 72.08 312 eP P 03 16 16.7 +0.2
comp=Z,85nm,0.8s,mb5.6
KIV Kislovodsk 72.08 312 k iP P 03 16 17.1 +0.6
KIV e pP 03 16 32.5 -2.7
KIV *PP pP 03 16 38.0 +2.8
KIV i S S 03 25 39.3 +6.2
KIV e 03 26 15.0
KIV pmax pmax
comp=Z,70nm,0.6s,mb5.7
KIV MLR MLR
comp=Z,3μm,16.0s
KIV Kislovodsk 72.08 312 P P 03 16 17.5 +1.0
comp=Z,714nm,0.7s,mb6.6,SNR=14
KIV Kislovodsk 72.08 312 P P 03 16 17.8 +1.3
SNR=17
VRHR Novokhopersk 72.71 320 eP P 03 16 20.8 +0.7
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR pmax pmax
comp=Z,90nm,0.8s,mb5.7
VRHR pmax pmax
comp=N,8.0nm,0.4s
RPZ Rata Peaks 73.17 144 P P 03 16 22.8 0.0
comp=N,22nm,0.9s,mb5.0,baz=285,slow=5.1,SNR=5.2
URZ Urewera 73.77 137 P P 03 16 26.5 0.0
comp=N,5.1nm,0.7s,mb4.4,baz=350,slow=12,SNR=2.2
KLMR Klimovskoe 73.99 330 d iP P 03 16 26.9 -0.5
KLMR pmax pmax
comp=Z,153nm,0.8s,mb5.8
VORD Divnogorie 74.18 319 eP P 03 16 29.3 +0.6
VORD pmax pmax
comp=N,7.0nm,0.7s
VORD pmax pmax
comp=Z,30nm,0.7s,mb5.1
VORD pmax pmax
comp=E,20nm,0.8s
SOC Sochi 74.25 312 eP P 03 16 28.2 -1.1
SOC eS S 03 25 55.3 -2.4
SOC e 03 26 36.1
SOC eSSS 03 34 03.6
SOC pmax pmax
comp=Z,48nm,0.7s,mb5.3
VSR Storozhevoye 74.25 320 eP P 03 16 29.6 +0.5
VSR pmax pmax
comp=Z,100nm,1.1s,mb5.5
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,40nm,0.7s
MOS Moscow 75.03 324 eP P 03 16 32.0 -1.5
MOS e pP 03 16 45.8 -6.5
MOS e 03 19 19.9
MOS eS S 03 26 06.5 +0.6
MOS eSS SS 03 30 56.3 +0.8
MOS pmax pmax
comp=Z,300nm,1.0s,mb6.0
MOS pmax pmax
comp=Z,196nm,0.8s,mb5.9
MOS MLR MLR
comp=Z,5μm,18.0s
MOS MLR MLR
comp=E,4μm,17.0s
TTA Tatalina 75.15 28 eP P 03 16 34.3 +0.2
comp=E,20nm,0.8s,mb4.9
TTA Tatalina 75.15 28 eP P 03 16 34.3 +0.3
TTA pmax pmax
comp=Z,20nm,0.8s,mb4.9
OBN Obninsk 75.65 324 eP P 03 16 36.3 -0.8
comp=Z,93nm,0.8s,mb5.6
OBN Obninsk 75.65 324 k iP P 03 16 36.5 -0.6
OBN i 03 16 42.0
OBN eS S 03 26 13.5 +0.7
OBN ePS 03 26 50.7
OBN pmax pmax
comp=Z,243nm,1.7s,mb5.7
OBN MLR MLR
comp=Z,5μm,17.0s
OBN Obninsk 75.65 324 P P 03 16 36.0 -1.1
comp=Z,758nm,0.6s,mb6.6,SNR=9.3
MALT Malatya 75.66 306 eP P 03 16 38.9 +1.4
comp=Z,40nm,1.0s,mb5.1
MALT Malatya 75.66 306 eP P 03 16 38.8 +1.3
MALT Malatya 75.66 306 ⇑P P 03 16 38.3 +0.8
MALT Malatya 75.66 306 ⇑iP P 03 16 38.3 +0.8
ANN Anapa 75.80 313 eP P 03 16 37.0 -1.2
ANN e*PP pP 03 16 55.3 -1.7
ANN eS S 03 26 16.2 +1.4
ANN pmax pmax
comp=Z,100nm,1.6s,mb5.3
LVZ Lovozero 76.10 337 eP P 03 16 40.7 +1.3
comp=Z,38nm,1.0s,mb5.1
LVZ Lovozero 76.10 337⇓ eP P 03 16 40.2 +0.8
LVZ pmax pmax
comp=Z,62nm,1.7s,mb5.1
APA Apatity 76.58 337⇑ iP P 03 16 41.0 -1.2
APA eS S 03 26 19.0 -3.6
APA pmax pmax
comp=Z,70nm,0.9s,mb5.4
APA MLR MLR
comp=Z,14μm,16.0s
OHAK Old Harbor 76.74 34 eP P 03 16 43.2 -0.1
comp=Z,28nm,1.0s,mb5.0
RSO Redoubt South 76.79 31 eP P 03 16 44.9 +1.4
comp=Z,63nm,0.9s,mb5.3
PPLA Purkeypile 76.90 28 eP P 03 16 44.2 +0.2
comp=Z,17nm,1.0s,mb4.7
BPAW Bear Paw Mtn. 77.35 27 eP P 03 16 46.7 +0.2
comp=Z,45nm,0.9s,mb5.2
KIP Kipapa 77.36 71⇑ eP P 03 16 46.8 -0.6
COLD Coldfoot 77.42 24 eP P 03 16 47.1 +0.3
comp=Z,14nm,0.8s,mb4.7
TRF Thorofare Moun 77.71 27 eP P 03 16 48.8 +0.3
comp=Z,84nm,1.6s,mb5.2
JOF Joensuu 77.79 332 eP P 03 16 48.9 -0.1
JOF pmax pmax
comp=Z,79nm,0.6s,mb5.6
JOF Joensuu 77.79 332 ep P 03 16 48.9 -0.1
comp=Z,79nm,0.6s,mb5.6
SIM Simferopol' 78.13 314 c iP P 03 16 53.0 +1.7
SIM i S S 03 26 49.0 +8.8
SIM pmax pmax
comp=Z,59nm,0.9s,mb5.3
RC01 Rabbit Creek A 78.21 30 eP P 03 16 50.8 -0.5
comp=Z,12nm,0.8s,mb4.7
MCK McKinley 78.28 27 eP P 03 16 51.2 -0.5
comp=Z,31nm,0.7s,mb5.2
MCK McKinley 78.28 27 eP P 03 16 51.3 -0.4
MCK pmax pmax
comp=Z,31nm,0.7s,mb5.2
PMR Palmer 78.44 29 eP P 03 16 51.5 -1.1
comp=Z,19nm,0.8s,mb4.9
PMR Palmer 78.44 29 eP P 03 16 51.5 -1.1
PMR pmax pmax
comp=Z,19nm,0.8s,mb4.9
SEW Seward 78.46 31 eP P 03 16 51.9 -0.9
comp=Z,25nm,0.9s,mb4.9
COLA College 78.62 26 eP P 03 16 53.2 -0.4
comp=Z,17nm,0.9s,mb4.9
COLA College 78.62 26 eP P 03 16 53.2 -0.3
COLA pmax pmax
comp=Z,17nm,0.9s,mb4.9
KEV Kevo 78.71 339 eP P 03 16 53.6 -0.3
comp=Z,24nm,0.9s,mb5.0
KEV Kevo 78.71 339 eP P 03 16 53.0 -1.0
KEV pmax pmax
comp=Z,11nm,0.5s,mb4.9
KEV Kevo 78.71 339 ep P 03 16 53.0 -1.0
comp=Z,11nm,0.5s,mb5.0
SML Sawmill 78.79 29 eP P 03 16 54.2 -0.4
comp=Z,7.7nm,1.0s,mb4.5
SML Sawmill 78.79 29 eP P 03 16 54.2 -0.4
SML pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
ILAR Eielson Array 79.04 26 P P 03 16 54.1 -1.7
comp=Z,1.2nm,0.4s,baz=268,slow=3.7,SNR=25
ILAR Eielson Array 79.04 26 P P 03 16 54.2 -1.6
ABPO Ambohimpanom 79.09 247 eP P 03 16 58.1 +1.1
comp=Z,40nm,1.0s,mb5.2
ABPO Ambohimpanom 79.09 247 eP P 03 16 58.1 +1.2
ABPO pmax pmax
comp=Z,40nm,1.0s,mb5.2
ARCES ARCESS Array B 79.26 339 P P 03 16 56.5 -0.5
comp=Z,17nm,0.5s,mb5.1,baz=87,slow=7.3,SNR=132
ARCES ARCESS Array B 79.26 339 P P 03 16 56.6 -0.4
ARCES pmax pmax
comp=Z,17nm,0.5s
ARE0 ARCESS Array S 79.26 339 eP P 03 16 56.9 -0.1
EIL Elat 79.70 298 eP P 03 17 01.2 +1.0
CASY Casey 79.85 184 eP P 03 16 59.6 -0.4
CASY Casey 79.85 184 eP P 03 16 59.9 -0.1
comp=Z,186nm,1.4s,mb5.7
POHA Pohakuloa 79.94 72 eP P 03 17 03.4 +1.8
comp=Z,181nm,1.2s,mb5.8
PAX Paxson 79.94 28 eP P 03 17 01.0 +0.2
comp=Z,14nm,0.9s,mb4.8
PAX Paxson 79.94 28 eP P 03 17 01.0 +0.2
PAX pmax pmax
comp=Z,14nm,0.9s,mb4.8
AAE Adis Abeba 80.02 277 eP P 03 17 01.4 -0.8
AAE PKP 03 21 21.2
KTK1 Kautokeino 80.15 339 eP P 03 17 01.8 0.0
CSS Prodhromos 80.17 304 eP P 03 17 02.7 +0.1
comp=Z,56nm,0.8s,mb5.4
CSS Prodhromos 80.17 304 eP P 03 17 03.2 +0.6
CSS Prodhromos 80.17 304 P P 03 17 03.4 +0.8
KAF Kangasniemi 80.20 332 eP P 03 17 01.4 -0.8
KAF pmax pmax
comp=Z,57nm,0.7s,mb5.5
KAF Kangasniemi 80.20 332 ep P 03 17 01.4 -0.8
comp=Z,57nm,0.7s,mb5.5
KBS Kingsbay 80.40 349 eP P 03 17 08.8 +5.8
KBS AMS AMS 04 02 44.8
comp=Z,4μm,14.4s
KBS Kingsbay 80.40 349 eP P 03 17 08.8 +5.8
KBS MLR MLR
comp=Z,4μm,14.4s
FINES FINESS Array B 80.43 331 P P 03 17 02.1 -1.3
comp=Z,36nm,0.7s,mb5.3,baz=60,slow=5.1,SNR=135
FINES FINESS Array B 80.43 331 P P 03 17 02.1 -1.3
FINES pmax pmax
comp=Z,36nm,0.7s
AKASG Malin Array Be 80.56 320 P P 03 17 03.1 -1.2
comp=Z,27nm,0.8s,mb5.1,baz=70,slow=5.1,SNR=57
AKASG PP PP 03 20 10.5 +2.2
comp=Z,1.0nm,0.5s,baz=67,slow=7.7,SNR=4.5
AKASG Malin Array Be 80.56 320 P P 03 17 03.2 -1.1
AKASG 03 20 10.5
AKBB Malin Array Si 80.56 320 eP P 03 17 03.0 -1.4
AKBB Malin Array Si 80.56 320 eP P 03 17 03.0 -1.3
KIEV Kiev 80.57 320 eP P 03 17 03.5 -0.9
comp=Z,34nm,0.8s,mb5.2
KIEV Kiev 80.57 320 eP P 03 17 03.5 -0.9
KIEV pmax pmax
comp=Z,34nm,0.8s,mb5.2
MICGM Minsk 80.72 324⇑ eP P 03 17 04.0 -1.1
MNK Minsk 80.74 324⇑ eP P 03 17 04.0 -1.3
MNK pmax pmax
comp=Z,220nm,1.0s,mb5.9
MNK MLR MLR
comp=Z,730nm,16.0s
IDID Didziasalis 81.22 325 eP P 03 17 07.7 -0.1
IDID AMB AMB 03 17 09.6
comp=Z,42nm,0.8s,mb5.3
IZAR Zarasai 81.41 325 eP P 03 17 08.7 -0.1
IZAR AMB AMB 03 17 10.5
comp=Z,41nm,0.9s,mb5.2
EGAK Eagle 81.45 25 eP P 03 17 08.5 -0.3
comp=Z,12nm,0.8s,mb4.8
KIS Kishinev 81.47 316 eP P 03 17 20.0 +11
TRO Tromso 81.50 340 eP P 03 17 08.9 -0.1
TRO eS S 03 27 19.3 +4.5
TRO AMS AMS 03 58 00.7
comp=Z,4μm,13.3s
TRO Tromso 81.50 340 eP P 03 17 06.9 -2.1
TRO LR LR
comp=Z,4μm,13.3s
TRO Tromso 81.50 340 eP P 03 17 06.9 -2.1
TRO MLR MLR
comp=Z,4μm,13.3s
IIGN Ignalina 81.50 325 eP P 03 17 09.2 0.0
IIGN AMB AMB 03 17 11.1
comp=Z,33nm,0.9s,mb5.2
ISAL Salakas 81.51 325 eP P 03 17 09.2 -0.1
ISAL AMB AMB 03 17 11.0
comp=Z,27nm,0.9s,mb5.1
TLCR 81.80 314 ⇑P P 03 17 10.9 -0.2
TLCR 81.80 314⇑ iP P 03 17 10.9 -0.2
TIRR Tirgusor 82.22 314 ⇑P P 03 17 12.9 -0.4
TIRR Tirgusor 82.22 314⇑ iP P 03 17 12.9 -0.4
CFR Carcaliu 82.27 315 ⇑P P 03 17 13.7 +0.1
CFR Carcaliu 82.27 315⇑ iP P 03 17 13.7 +0.1
MIR Mirnyy 82.33 191⇑ iP P 03 17 14.0 +0.8
MIR e 03 27 26.0
MIR eS 03 28 44.0
MIR pmax pmax
comp=Z,251nm,1.6s,mb5.8
MIR pmax pmax
comp=Z,891nm,8.0s
MIR pmax pmax
comp=N,202nm,2.0s
DAWY Dawson 82.37 26 eP P 03 17 13.8 +0.2
PSN Preselentsi 82.53 313 eP P 03 17 20.1 +5.2
GHRR 82.60 315⇑ iP P 03 17 16.4 +1.2
PETR 82.79 315⇑ iP P 03 17 17.8 +1.6
TESR 83.02 316⇓ iP P 03 17 17.3 -0.1
VRI Vrincioaia 83.11 315 ⇓P P 03 17 19.0 +1.1
VRI Vrincioaia 83.11 315⇓ iP P 03 17 19.0 +1.1
PLOR Plostina 83.16 315 ⇓P P 03 17 18.4 +0.3
PLOR Plostina 83.16 315⇓ iP P 03 17 18.4 +0.3
STEI Steigen 83.28 338 eP P 03 17 17.2 -1.2
INK Inuvik 83.38 21 eP P 03 17 18.0 -0.8
comp=N,18nm,1.0s,mb4.8
INK Inuvik 83.38 21 eP P 03 17 18.0 -0.8
INK pmax pmax
comp=Z,17nm,1.0s
SUW Suwalki 83.52 324 eP P 03 17 19.2 -0.5
SUW ePcP PcP 03 17 24.5 +0.5
SUW eS S 03 27 39.4 +3.4
SUW LMZ 03 59 47.3
comp=Z,5μm,23.5s
SUW Suwalki 83.52 324 eP P 03 17 18.9 -0.8
comp=Z,121nm,0.8s,mb5.8
SUW Suwalki 83.52 324 eP P 03 17 18.9 -0.9
SUW pmax pmax
comp=Z,121nm,0.8s,mb5.8
MLR Muntele Rosu 83.72 315 ⇑P P 03 17 22.1 +1.1
MLR Muntele Rosu 83.72 315⇑ iP P 03 17 22.1 +1.1
BURAR Bucovina Array 83.74 317 ⇑P P 03 17 21.4 +0.3
BURAR Bucovina Array 83.74 317⇑ iP P 03 17 21.4 +0.3
BUR08 Bucovina Ar. S 83.75 317 eP P 03 17 21.2 +0.1
JMB Yambol 83.93 312 eP P 03 17 23.4 +1.2
DOPR Dopca 84.00 316⇓ iP P 03 17 23.0 +0.6
LVV L'vov 84.00 320 eP P 03 17 22.8 +0.5
LVV e 03 20 41.8
LVV i S S 03 27 42.4 +1.5
LVV MLR MLR
comp=N,1μm,19.0s
LVV MLR MLR
comp=Z,1μm,19.0s
LVV MLR MLR
comp=E,800nm,20.0s
ARG Arkhangelos 84.11 306 eP P 03 17 23.6 +0.4
MOR8 Moi Rana 84.17 337 eP P 03 17 21.5 -1.3
VOIR 84.35 315 ⇑P P 03 17 24.4 +0.2

VOIR		84.35 315	⇑ *i* P	P	03 17 24.4	+0.2
STOK	Stokkvaagen	84.66 337	*e* P	P	03 17 24.5	-0.9
PVL	Pavlikeni	84.66 313	*e* P	P	03 17 27.1	+1.3
ALN	Alexandroupoli	84.67 311	*e* P	P	03 17 25.5	-0.5
DIM	Dimitrovgrad	84.78 312	*e* P	P	03 17 27.0	+0.5
SMG	Samos	84.79 307	*e* P	P	03 17 27.0	+0.4
BMR	Baia Mare	84.86 318	P	P	03 17 27.8	+1.1
BMR	Baia Mare	84.86 318	⇑ *i* P	P	03 17 27.6	+0.9
KWP	Kalwaria Pacla	84.88 320	*e* P	P	03 17 27.3	+0.5
KWP			*e* PcP	PcP	03 17 28.9	-1.1
KWP			*e* S	S	03 27 52.7	+3.0
KWP			LMZ		04 00 33.2	
	comp=E,5µm,22.0s					
KWP	Kalwaria Pacla	84.88 320	*e* P	P	03 17 26.8	0.0
	comp=E,195nm,1.0s,mb6.0					
KWP	Kalwaria Pacla	84.88 320	*e* P	P	03 17 27.3	+0.5
KWP	Kalwaria Pacla	84.88 320	⇑ *i* P	P	03 17 27.0	+0.2
PRK	Paraskevi	84.88 309	*e* P	P	03 17 28.3	+1.3
RDO	Rodhopi	84.99 311	*e* P	P	03 17 27.8	+0.3
KARP	Karpathos	85.02 305	*e* P	P	03 17 28.4	+0.6
WAR	Warsaw	85.22 323	*e* P	P	03 17 27.2	-1.3
WAR			LMZ		04 01 59.7	
	comp=E,7µm,18.9s					
WAR	Warsaw	85.22 323	*e* P	P	03 17 27.2	-1.3
KOLS	Kolonicke sedl	85.33 319	*e* P	P	03 17 29.3	+0.2
	comp=E,41nm,1.6s,mb5.1					
KOLS	Kolonicke sedl	85.33 319	*e* P	P	03 17 29.3	+0.2
KOLS			pmax	pmax		
	comp=Z,41nm,1.6s,mb5.1					
KOLS	Kolonicke sedl	85.33 319	*e* P	P	03 17 29.3	+0.2
TRPA	Tarpa	85.37 318	⇓ *i* P	P	03 17 29.4	+0.1
UZH	Uzhgorod	85.40 319	*e* P	P	03 17 30.5	+1.1
UZH			*e*	pP	03 17 44.5	-4.1
UZH			*e*		03 20 56.0	
UZH			*e*		03 22 44.5	
UZH			*i* S	S	03 27 54.0	-0.9
RZN	Rozhen	85.46 312	*e* P	P	03 17 31.6	+1.7
CRAR	CRAIOVA	85.48 314	P	P	03 17 31.2	+1.3
SKAG	Skagway	85.56 30	*e* P	P	03 17 30.6	+0.7
	comp=Z,24nm,0.9s,mb5.1					
DRGR		85.60 317	⇓ P	P	03 17 30.7	+0.3
DRGR		85.60 317	⇓ *i* P	P	03 17 30.7	+0.3
PGB	Panagyurishte	85.65 313	*e* P	P	03 17 31.9	+1.1
NSS	Namsos	85.74 336	*e* P	P	03 17 28.5	-2.2
NSS			AMS	AMS	03 59 08.3	
	comp=Z,6µm,17.3s					
KAVA	Kavala	85.78 311	P	P	03 17 30.3	-1.2
CRVS	Cervenica-Dubn	85.86 319	*e* P	P	03 17 32.6	+0.9
	comp=Z,686nm,2.1s,mb6.2					
CRVS	Cervenica-Dubn	85.86 319	*e* P	P	03 17 32.6	+0.9
CRVS			pmax	pmax		
	comp=Z,686nm,2.1s,mb6.2					
CRVS	Cervenica-Dubn	85.86 319	*e* P	P	03 17 32.6	+0.9
ZKR	Zakros	85.86 305	*e* P	P	03 17 32.7	+0.7
ZKR	Zakros	85.86 305	P	P	03 17 32.5	+0.5
GZR	Gura Zlata	85.91 316	⇑ P	P	03 17 32.9	+0.9
GZR	Gura Zlata	85.91 316	⇑ *i* P	P	03 17 32.9	+0.9
NVR	Nevrokopi	86.17 311	*e* P	P	03 17 32.6	-0.8
MMB	Musomiste	86.21 312	*e* P	P	03 17 33.9	+0.3
THR5	Thira Island,	86.25 306	P	P	03 17 33.6	-0.3
NPS	Neapolis	86.31 305	*e* P	P	03 17 33.5	-0.7
VTS	Vitosha	86.33 313	*e* P	P	03 17 34.2	+0.1
VTS	Vitosha	86.33 313	⇑ P	P	03 17 34.3	+0.2
VTS	Vitosha	86.33 313	P	P	03 17 34.2	+0.1
VTS	Vitosha	86.33 313	⇑ *i* P	P	03 17 34.3	+0.2
VTS	Vitosha	86.33 313	*e* P	P	03 17 35.4	+1.3
NIE	Niedzica	86.44 320	*e* P	P	03 17 35.4	+0.9
NIE	Niedzica	86.44 320	*e* P	P	03 17 35.4	+0.9
LAST	Lasithi	86.44 305	*e* P	P	03 17 34.5	-0.4
OJC	Ojcow	86.53 321	*e* P	P	03 17 35.2	+0.2
OJC			*e* PcP	PcP	03 17 36.5	-0.8
OJC			*e* S	S	03 28 08.4	+2.5
OJC			L		04 03 37.7	
	comp=Z,3.0nm,18.4s					
OJC	Ojcow	86.53 321	*e* P	P	03 17 35.2	+0.2
OJC			*e* S	S	03 28 08.4	+2.5
KECS	Kecovo	86.59 319	*e* P	P	03 17 35.4	+0.1
	comp=Z,41nm,0.8s,mb5.4					
KECS	Kecovo	86.59 319	*e* P	P	03 17 35.4	+0.1
KECS			pmax	pmax		
	comp=Z,41nm,0.8s,mb5.4					
KECS	Kecovo	86.59 319	*e* P	P	03 17 35.4	+0.1
KKB	Krupnik	86.60 312	*e* P	P	03 17 35.5	0.0
BZS	Buzias	86.64 316	⇑ P	P	03 17 34.8	-0.8
BZS	Buzias	86.64 316	⇑ *i* P	P	03 17 34.8	-0.8
SOH	Sokhos	86.67 311	*e* P	P	03 17 34.3	-1.6
PLG	Polygyros	86.72 311	*e* P	P	03 17 35.5	-0.6
DAG	Danmarks Havn	86.83 351	*e* P	P	03 17 32.3	-3.7
DAG			MLR	MLR		
	comp=Z,3µm,21.0s					
DAG	Danmarks Havn	86.83 351	*i* P	P	03 17 32.3	-3.7
DAG			*i* PP	PP	03 21 53.0	+54
DAG						
	comp=Z,3µm,21.0s					
HORT	Hortiatis	86.92 311	P	P	03 17 36.1	-1.0
KNT	Kendrikon	86.92 311	P	P	03 17 36.3	-0.8
SIVA	Sivas	87.01 305	*e* P	P	03 17 38.4	+0.8
VLY	Voula,Athens	87.10 308	*e* P	P	03 17 35.8	-2.2
VAY	Valandovo	87.12 312	P	P	03 17 36.8	-1.2
VAY	Valandovo	87.12 312	⇑ *i* P	P	03 17 37.6	-0.5
VAY			*i* PP	PP	03 21 49.3	+47
GKP	Gorka Klasztor	87.12 324	*e* P	P	03 17 37.9	+0.1
GKP			*e* PcP	PcP	03 17 39.2	-0.7
GKP			*e* SKS		03 28 04.0	
GKP			*e* S	S	03 28 13.2	+1.8
GKP			LMZ		04 03 21.6	
	comp=Z,12µm,18.6s					
GKP	Gorka Klasztor	87.12 324	*e* P	P	03 17 37.9	+0.1
PSZ	Piszkesteto	87.13 319	*e* P	P	03 17 37.9	0.0
	comp=Z,77nm,1.4s,mb5.4					
PSZ	Piszkesteto	87.13 319	*e* P	P	03 17 37.9	-0.1
PSZ			pmax	pmax		
	comp=Z,77nm,1.4s,mb5.4					
PSZ	Piszkesteto	87.13 319	⇑ *i* P	P	03 17 39.1	+1.1
PSZ	Piszkesteto	87.13 319	⇑ *e* PcP	PcP	03 17 39.2	-0.8
PSZ			*e*		03 21 52.5	
GRG	Griva	87.33 311	P	P	03 17 37.5	-1.6
NB2	NORSAR Subarra	87.41 333	P	P	03 17 38.0	-1.0
	comp=Z,55nm,0.8s,mb5.5,baz=69,slow=4.6					
NOA	NORSAR Array B	87.41 333	P	P	03 17 37.4	-1.6
	comp=Z,34nm,0.8s,mb5.3,baz=69,slow=4.7,SNR=98					
NOA			PP	PP	03 20 58.0	-5.8
	comp=Z,3.3nm,0.8s,baz=70,slow=8.2,SNR=4.3					
NOA	NORSAR Array B	87.41 333	P	P	03 17 37.4	-1.6
NOA			PP	PP	03 20 58.0	-5.8
NOA	NORSAR Array B	87.41 333	P	P	03 17 37.4	-1.6
NOA			pmax	pmax		
	comp=Z,34nm,0.8s					
LKR	Lokris	87.50 309	*e* P	P	03 17 36.4	-3.5
DID	Didima	87.61 308	*e* P	P	03 17 38.5	-2.0
DID	Didima	87.61 308	P	P	03 17 38.6	-1.9
KARN	Karanos	87.62 306	*e* P	P	03 17 39.8	-0.8
KARN	Karanos	87.62 306	P	P	03 17 41.2	+0.6
VYHS	Vyhne	87.64 319	*e* P	P	03 17 40.8	+0.4
	comp=Z,103nm,2.1s,mb5.5					
VYHS	Vyhne	87.64 319	*e* P	P	03 17 40.8	+0.4
VYHS			pmax	pmax		
	comp=Z,103nm,2.1s,mb5.5					
VYHS	Vyhne	87.64 319	*e* P	P	03 17 40.8	+0.4
OKC	Ostrava-Krasne	87.66 321	*e* P	P	03 17 40.7	+0.3
OKC			MLR	MLR		
	comp=Z,4µm,16.5s					
OKC	Ostrava-Krasne	87.66 321	*e* P	P	03 17 40.7	+0.3
SKO	Skopje	87.76 313	⇑ *i* P	P	03 17 42.0	+0.9
SKO			⇑ *i* PP	PP	03 21 54.5	+47
BSD	Bornholm Skovb	87.79 326	*i* P	P	03 17 41.0	+0.1
BSD			MLR	MLR		
	comp=Z,4µm,16.0s					
BSD	Bornholm Skovb	87.79 326	*i* P	P	03 17 41.0	+0.1
BSD			*i*		03 21 56.2	
BSD						
	comp=Z,4µm,16.0s					
BUD	Budapest	87.82 318	⇓ *e* PcP	PcP	03 17 40.8	-2.3
BUD			*e*		03 21 54.2	
AGG	Agios Georgios	87.90 310	*e* P	P	03 17 39.8	-2.0
DSF	Desfina	87.92 309	P	P	03 17 39.7	-2.2
VLI	Veliai	88.05 307	*e* P	P	03 17 41.0	-1.6
MORC	Moravsky Berou	88.05 321	*e* P	P	03 17 42.1	-0.2
	comp=Z,27nm,0.9s,mb5.3					
MORC	Moravsky Berou	88.05 321	*e* P	P	03 17 42.1	-0.2
MORC			pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3					
MORC	Moravsky Berou	88.05 321	⇑ *i* P	P	03 17 42.6	+0.3
KRUS	Krusevo	88.06 312	*i* P	P	03 17 41.9	-0.7
KRUS			⇑ *i* PP	PP	03 21 53.8	+44
OSL	Oslo	88.08 332	*e* P	P	03 17 41.3	-0.9
BIA	Bitola	88.10 312	*i* P	P	03 17 41.3	-1.4
BIA			*e* PP	PP	03 21 54.0	+44
FNA	Florina	88.13 311	P	P	03 17 41.4	-1.5
GUR	Goura	88.18 308	*e* P	P	03 17 41.6	-1.6
GUR	Goura	88.18 308	P	P	03 17 41.7	-1.5
KALE	Kalithea	88.22 309	P	P	03 17 42.3	-1.0
VLX	Vlachokerasia	88.31 308	*e* P	P	03 17 42.9	-0.9
MOL	Molde	88.35 335	AMS	AMS	04 04 45.7	
	comp=Z,8µm,13.1s					
LAKA	Lakka	88.38 309	P	P	03 17 43.2	-0.9
EFP	Efpalio	88.38 309	*e* P	P	03 17 43.3	-0.8
EFP	Efpalio	88.38 309	P	P	03 17 43.0	-1.1
PKSM	Moragy	88.46 317	P	P	03 17 45.2	+0.9
PKSM	Moragy	88.46 317	⇓ *i* P	P	03 17 43.8	-0.5
KSP	Ksiaz	88.46 322	*e* P	P	03 17 44.8	+0.6
KSP			*e* PcP	PcP	03 17 46.2	+0.4
KSP			*e* SKS		03 28 03.2	
KSP			*e* S	S	03 28 24.1	-0.3
KSP			LMZ		04 04 23.2	
	comp=Z,11µm,18.4s					
IVA	Berane	88.60 314	⇓ *i* P	P	03 17 44.4	-0.6
IVA	Berane	88.60 314	⇓ *i* P	P	03 17 44.5	-0.6
KBN	Korca	88.61 311	*i* P	P	03 17 39.2	-6.0
DPC	Dobruska-Polom	88.61 322	*e* P	P	03 17 45.5	+0.6
DPC			MLR	MLR		
	comp=Z,4µm,15.9s					
DPC	Dobruska-Polom	88.61 322	*e* P	P	03 17 45.5	+0.6
BCI	Bajram Curri	88.62 313	*i* P	P	03 17 35.5	-10
PVY	Plav	88.62 313	⇓ *i* P	P	03 17 44.2	-1.0
PVY	Plav	88.62 313	⇓ *i* P	P	03 17 44.2	-0.9
ITM	Ithomi	88.71 308	*e* P	P	03 17 44.7	-1.0
ITM	Ithomi	88.71 308	P	P	03 17 44.9	-0.8
UPC	Upice	88.74 322	*e* P	P	03 17 45.9	+0.4
UPC	Upice	88.74 322	*e* P	P	03 17 45.9	+0.4
VRAC	Vranov	88.79 321	⇓ P	P	03 17 46.8	+1.0
VRAC	Vranov	88.79 321	⇓ *i* P	P	03 17 46.8	+1.0
PLE	Pljevlja	88.81 314	⇓ *i* P	P	03 17 46.7	+0.7
PLE	Pljevlja	88.81 314	⇓ *i* P	P	03 17 46.7	+0.7
PLE	Pljevlja	88.81 314	⇓ *i* P	P	03 17 46.7	+0.7
RLS	Riolos of Patr	88.82 309	*e* P	P	03 17 45.9	-0.3
JAN	Janina	88.83 310	*e* P	P	03 17 46.2	0.0
ZST	Bratislava	88.83 319	*e* P	P	03 17 46.9	+0.9
	comp=Z,10.0nm,0.8s,mb4.9					
ZST	Bratislava	88.83 319	*e* P	P	03 17 46.9	+0.9
ZST			pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9					
ZST	Bratislava	88.83 319	*e* P	P	03 17 46.9	+0.9
PUK	Puka	88.84 313	*i* P	P	03 17 47.3	+1.1
COP	Copenhagen	88.90 327	*e* P	P	03 17 50.6	+4.4
COP			MLR	MLR		
	comp=Z,2µm,22.0s					
COP	Copenhagen	88.90 327	*i* P	P	03 17 50.6	+4.4
COP			*i*		03 22 02.6	
COP						
	comp=Z,2µm,22.0s					
PYL	PYLOS	88.92 308	*e* P	P	03 17 44.6	-2.1
TTG	Podgorica	89.18 313	⇓ *i* P	P	03 17 47.1	-0.7
TTG	Podgorica	89.18 313	⇓ *i* P	P	03 17 47.2	-0.6
TTG	Podgorica	89.18 313	⇓ *i* P	P	03 17 47.2	-0.6
UPM	Unac-Piva	89.19 314	⇓ *i* P	P	03 17 47.8	0.0
NKY	Niksic	89.25 314	⇓ *i* P	P	03 17 47.9	-0.2
NKY	Niksic	89.25 314	⇓ *i* P	P	03 17 48.0	-0.1
NKY	Niksic	89.25 314	⇓ *i* P	P	03 17 48.0	-0.1
ULC	Ulcinj	89.32 313	⇓ *i* P	P	03 17 48.4	-0.1
ULC	Ulcinj	89.32 313	⇓ *i* P	P	03 17 48.4	-0.1
ULC	Ulcinj	89.32 313	⇓ *i* P	P	03 17 48.4	-0.1
SOP	Sopron	89.34 319	⇓ *e* PcP	PcP	03 17 49.0	-0.8
SOP			*e*		03 22 03.1	
RUE	Ruedersdorf	89.36 324	*e* P	P	03 17 49.0	+0.6
	comp=Z,103nm,0.9s,mb5.9					
RUE	Ruedersdorf	89.36 324	*e* P	P	03 17 48.6	+0.2
	comp=Z,81nm,0.8s,mb5.8					
SRN	Sarande	89.39 311	*i* P	P	03 17 48.2	-0.6
VLS	Valsamata	89.45 309	*e* P	P	03 17 47.9	-1.2
VLS	Valsamata	89.45 309	P	P	03 17 48.2	-0.9
BUM	Brajici-Budva	89.47 313	⇓ *i* P	P	03 17 48.3	-0.9
BUM	Brajici-Budva	89.47 313	⇓ *i* P	P	03 17 48.3	-0.8
TREC	Trest	89.47 321	*e* P	P	03 17 49.4	+0.4
TREC			MLR	MLR		
	comp=Z,3µm,15.8s					
TREC	Trest	89.47 321	*e* P	P	03 17 49.4	+0.4
BRY	Bratogost	89.54 314	⇓ *i* P	P	03 17 49.1	-0.4
BRY	Bratogost	89.54 314	⇓ *i* P	P	03 17 49.1	-0.3
BRY	Bratogost	89.54 314	⇓ *i* P	P	03 17 49.1	-0.4
KEK	Kerkira	89.59 311	*e* P	P	03 17 48.8	-1.0
PVCC	Panska Ves	89.60 322	*e* P	P	03 17 50.1	+0.5
PVCC			MLR	MLR		
	comp=Z,5µm,18.6s					
PVCC	Panska Ves	89.60 322	*e* P	P	03 17 50.1	+0.5
CONA	Conrad Observa	89.70 319	*i* PcP	P	03 17 50.6	+0.5
	comp=Z,19nm,1.1s,mb5.1,SNR=11					
HCY	Herceg Novi	89.71 314	⇓ *i* P	P	03 17 49.5	-0.8
HCY	Herceg Novi	89.71 314	⇓ *i* P	P	03 17 49.5	-0.8
PRU	Pruhonice	89.81 322	*e* P	P	03 17 51.6	+1.1
PRU			MLR	MLR		
	comp=Z,4µm,16.9s					
PRU	Pruhonice	89.81 322	*e* P	P	03 17 51.6	+1.1
PRA	Prague	89.84 322	P	P	03 17 52.0	+1.3
FOO	Floro	89.85 334	AMS	AMS	04 00 35.7	
	comp=Z,12µm,15.7s					
BRG	Berggiesshubel	89.85 323	*e* P	P	03 17 51.1	+0.4
	comp=Z,57nm,1.0s,mb5.7					
BRG			*e* PP	PP	03 21 24.2	+0.6
	comp=Z,14nm,1.3s					
BRG			S	S	03 28 42.0	+4.7
BRG			*e*		03 29 38.0	
BRG			SS	SS	03 34 40.0	+4.7
BRG			*e* PKPPKP		03 47 41.3	
	comp=Z,20nm,2.0s					
BRG						
	comp=N,4µm,19.3s					
BRG						
	comp=E,3µm,21.9s					
BRG						
	comp=Z,4µm,18.5s					
BRG	Berggiesshubel	89.85 323	*e* P	P	03 17 51.1	+0.4
BRG			*e*		03 21 24.2	
BRG			S	S	03 28 42.0	+4.7
BRG			SS	SS	03 34 40.0	+4.7
BRG			pmax	pmax		
	comp=Z,34nm,1.0s,mb5.4					
BRG			pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.7					
BRG			MLR	MLR		
	comp=N,3µm,19.3s					
BRG			MLR	MLR		
	comp=E,2µm,21.9s					
BRG			MLR	MLR		
	comp=Z,2µm,18.5s					
ARSA	Arzberg	90.15 319	⇑ *i* P	P	03 17 51.9	-0.3
	comp=Z,23nm,1.2s,mb5.2,SNR=7.3					
FBE	Freiberg	90.18 323	*e* P	P	03 17 52.9	+0.6
	comp=Z,69nm,1.0s,mb5.7					
CLL	Collm	90.24 323	*e* P	P	03 17 52.6	+0.1
	comp=Z,45nm,1.1s,mb5.5					
CLL	Collm	90.24 323	*i* P	P	03 17 52.6	+0.1
	comp=Z,46nm,1.1s,mb5.5					
CLL			*i* pP	pP	03 18 17.5	+5.6
CLL			*e* S	S	03 28 42.0	+1.1
CLL	Collm	90.24 323	*i* P	P	03 17 52.6	+0.1
CLL			*e* S	S	03 28 42.0	+1.1
CLL			pmax	pmax		
	comp=Z,46nm,1.1s,mb5.5					
CLL	Collm	90.24 323	*i* P	P	03 17 52.6	+0.1
	comp=Z,46nm,1.1s,mb5.5					
CLL			*e* Plp		03 17 54.0	
	comp=Z,300nm,15.6s					
CLL			*i*		03 18 17.5	
CLL			*e* PP	PP	03 21 28.0	+1.3
	comp=Z,11nm,1.1s					
CLL			*e* PPlp		03 21 36.0	
	comp=Z,200nm,13.1s					
CLL			*e* SKSac	SKSac	03 28 22.0	+4.4
CLL			*e* S	S	03 28 42.0	+1.1
CLL			*e* SP	SP	03 29 46.0	-0.9
CLL			*e* PS	PS	03 29 54.0	-2.2
CLL			*e* SS	SS	03 35 12.0	+31
CLL			LmV		04 01 00.0	
	comp=Z,4µm,21.9s					
MUD	Monsted U'grnd	90.27 329	*i* P	P	03 17 51.9	-0.6
MUD			MLR	MLR		
	comp=Z,6µm,16.0s					
MUD	Monsted U'grnd	90.27 329	*i* P	P	03 17 51.9	-0.6
MUD			*i*		03 22 08.1	
MUD						
	comp=Z,6µm,16.0s					
PERS	Pernice	90.62 318	*i* P	P	03 17 54.4	-0.1
SOKA	Soboth	90.66 318	⇑ *i* PcP	P	03 17 54.4	-0.2
	comp=Z,26nm,1.0s,mb5.3					
KHC	Kasperske Hory	90.70 321	*e* P	P	03 17 54.8	0.0
	comp=Z,16nm,0.8s,mb5.2					
KHC	Kasperske Hory	90.70 321	*e* P	P	03 17 55.0	+0.3
KHC	Kasperske Hory	90.70 321	*e* P	P	03 17 55.0	+0.3
GEC2	GERESS Array S	90.73 321	*e* P	P	03 17 55.3	+0.4
	comp=Z,46nm,1.1s,mb5.5					
GEC2	GERESS Array S	90.73 321	*e* P	P	03 17 55.3	+0.4
GEC2			pmax	pmax		
	comp=Z,46nm,1.1s,mb5.5					
GERES	GERESS Array B	90.73 321	P	P	03 17 54.9	0.0
	comp=Z,18nm,0.8s,mb5.3,baz=68,slow=4.3,SNR=106					
GERES			PP	PP	03 21 29.4	-1.3
	comp=Z,0.9nm,0.7s,baz=67,slow=8.7,SNR=3.0					
GERES	GERESS Array B	90.73 321	P	P	03 17 54.9	0.0
GERES					03 21 29.4	
GERES			pmax	pmax		
	comp=Z,18nm,0.8s					
GERES			pmax	pmax		
	comp=Z,1.0nm,0.7s					
MOA	Molln	90.74 320	*i* PcP	P	03 17 55.3	+0.4
	comp=Z,68nm,0.8s,mb5.8,SNR=33					
MAW	Mawson	90.81 199	P	P	03 17 55.1	+0.4
	comp=Z,20nm,1.1s,mb5.2,baz=50,slow=6.0,SNR=31					
MAW	Mawson	90.81 199	*e* P	P	03 17 55.2	+0.5
	comp=Z,18nm,1.3s,mb5.0					
MAW	Mawson	90.81 199	*e* P	P	03 17 55.2	+0.5
MAW			pmax	pmax		
	comp=Z,14nm,1.4s					
TANN	Tannenbergstha	90.89 323	*e* P	P	03 17 56.0	+0.4
	comp=Z,33nm,1.1s,mb5.4					
BOJS	Bojanci	90.93 317	*i* P	P	03 17 56.2	+0.4
NKC	Novy Kostel	90.97 322	*e* P	P	03 17 56.6	+0.6
NKC			MLR	MLR		
	comp=Z,5µm,17.0s					
NKC	Novy Kostel	90.97 322	*e* P	P	03 17 56.6	+0.6
WERD	Werda	90.97 323	*e* P	P	03 17 56.4	+0.4
	comp=Z,41nm,1.1s,mb5.5					
GUNZ	Gunzen	90.99 323	*e* P	P	03 17 56.6	+0.6
	comp=Z,56nm,1.0s,mb5.7					
NEUB	Neuenburg	90.99 323	*e* P	P	03 17 56.4	+0.4
	comp=Z,58nm,1.0s,mb5.7					
WET	Wettzell	91.12 321	*e* P	P	03 17 57.2	+0.5
	comp=Z,84nm,1.7s,mb5.6					
WET	Wettzell	91.12 321	*e* P	P	03 17 57.2	+0.5
WET			pmax	pmax		
	comp=Z,84nm,1.7s,mb5.6					
ROTZ	Rotzenmuhle	91.29 322	*e* P	P	03 17 58.3	+0.8
	comp=Z,48nm,1.0s,mb5.6					
MOX	Moxa	91.30 323	*e* P	P	03 17 57.9	+0.4
	comp=Z,100nm,1.8s,mb5.6					
MOX	Moxa	91.30 323	*e* P	P	03 17 57.8	+0.3
	comp=Z,149nm,2.1s,mb5.8					
MOX	Moxa	91.30 323	*e* P	P	03 17 57.9	+0.4
MOX			pmax	pmax		
	comp=Z,100nm,1.8s,mb5.6					
NRDL	Niedersach Rie	91.42 325	*e* P	P	03 17 58.7	+0.7
	comp=Z,100nm,1.8s,mb5.6					
CLZ	Clausthal	91.54 324	*e* P	P	03 17 59.1	+0.5
	comp=Z,122nm,1.8s,mb5.8					
CLZ	Clausthal	91.54 324	*e* P	P	03 17 59.1	+0.5
CLZ			pmax	pmax		
	comp=Z,122nm,1.8s,mb5.8					
JAVS	Javornik	91.57 318	*e* P	P	03 17 58.5	-0.3
KBA	Koelnbreinsper	91.60 319	⇓ *i* P	P	03 17 58.4	-0.5
	comp=Z,46nm,1.0s,mb5.7,SNR=12					
VOY	Vojsko	91.63 318	*e* P	P	03 17 58.6	-0.5
VOY			*e*		03 18 03.2	
VOY			*e*		03 18 24.0	
RJOB	Jochberg	91.70 320	*e* P	P	03 17 59.6	+0.2
	comp=Z,45nm,1.0s,mb5.7					
PTCC	Patocco-Chiusa	91.84 319	P	P	03 17 59.7	-0.4
GRA1	Grafenberg Arr	91.91 322	*e* P	P	03 18 01.1	+0.8
	comp=Z,52nm,1.1s,mb5.7					
GRF	Grafenberg Arr	91.91 322	*e* P	P	03 18 01.1	+0.8
	comp=Z,52nm,1.1s,mb5.7					
GRF	Grafenberg Arr	91.91 322	*e* P	P	03 18 01.1	+0.8
GRF			pmax	pmax		
	comp=Z,52nm,1.1s,mb5.7					
GRF	Grafenberg Arr	91.91 322	*e* P	P	03 18 01.1	+0.8
GRF			pmax	pmax		
	comp=Z,52nm,1.1s,mb5.7					
RGNG	Rignano Grg	92.01 314	P	P	03 18 00.8	-0.2
ACER	Acerenza	92.06 313	P	P	03 18 02.3	+1.1
PTRP	Pietrapertosa	92.06 312	P	P	03 18 02.8	+1.6
ABTA	Abfaltersbach	92.25 319	⇑ *i* P	P	03 18 00.7	-1.2
	comp=Z,36nm,0.8s,mb5.6,SNR=8.9					
GRI	Girifalco	92.36 311	P	P	03 18 03.5	+0.8
GRI	Girifalco	92.36 311	P	P	03 18 03.5	+0.8
FUR	Furstenfeldbru	92.48 321	*e* P	P	03 18 03.6	+0.6
	comp=Z,79nm,1.0s,mb5.9					
FUR	Furstenfeldbru	92.48 321	*e* P	P	03 18 03.6	+0.6
FUR			pmax	pmax		
	comp=Z,79nm,1.0s,mb5.9					
WTTA	Wattenberg	92.61 320	*i* PcP	P	03 18 03.6	-0.1
	comp=Z,90nm,0.7s,mb6.2,SNR=23					
WATA	Walderalm	92.62 320	⇑ *i* P	P	03 18 03.1	-0.5
	comp=Z,48nm,0.8s,mb5.8					
IBBN	Ibbenburen	92.81 325	*e* P	P	03 18 04.7	+0.3
	comp=Z,39nm,1.1s,mb5.7					
MOTA	Moosalm	92.91 320	⇓ *i* P	P	03 18 04.4	-0.6
	comp=Z,67nm,0.8s,mb6.0,SNR=57					
SUMG	Summit	93.05 354	*i* P	P	03 18 17.6	+12
SUMG			*e*		03 21 53.0	
SUMG						
	comp=Z,3µm,22.0s					
YKA	Yellowknife Ar	93.06 22	P	P	03 18 04.5	-0.9
	comp=Z,2.8nm,0.6s,mb

comp=Z,32nm,2.2s,mb5.4
MEM Membach 94.55 324 P **P 03 18 12.6 +0.2**
comp=Z,14nm,1.6s,mb5.1
FELD Feldberg im Sc 94.60 321 *eP* **P 03 18 13.7 +0.9**
LIBD Limburg 94.72 322 *eP* **P 03 18 14.1 +0.8**
LIBD Limburg 94.72 322 *eP* **P 03 18 14.1 +0.8**
CDF Champ du Feu 94.81 322 *eP* **P 03 18 13.4 -0.3**
comp=Z,87nm,1.1s,mb5.8
CDF Champ du Feu 94.81 322 *eP* **P 03 18 13.4 -0.3**
comp=Z,43nm,1.1s,mb5.8
CDF Champ du Feu 94.81 322 *eP* **P 03 18 13.4 -0.3**
CDF pmax pmax
comp=Z,43nm,1.1s,mb5.8
WLF Walferdange 94.90 324 P **P 03 18 16.0 +1.9**
WLF Walferdange 94.90 324 *eP* **P 03 18 15.3 +1.2**
comp=Z,37nm,1.1s,mb5.7
WLF Walferdange 94.90 324 *eP* **P 03 18 15.3 +1.2**
WLF pmax pmax
comp=Z,37nm,1.1s,mb5.7
ECH Echery 94.96 322 *eP* **P 03 18 15.0 +0.6**
ECH Echery 94.96 322 *eP* **P 03 18 14.1 -0.3**
comp=Z,27nm,1.4s,mb5.5
ECH Echery 94.96 322 *eP* **P 03 18 14.1 -0.3**
ECH pmax pmax
comp=Z,27nm,1.4s,mb5.5
BOB Bobbio (Coli) 95.01 318 P **P 03 18 15.2 +0.5**
BOB Bobbio (Coli) 95.01 318 P **P 03 18 15.2 +0.5**
BCLA Clavier 95.04 324 P **P 03 18 16.2 +1.6**
comp=Z,27nm,2.1s,mb5.3
BBS Basel-Blauen 95.08 321 *eP* **P 03 18 15.2 +0.2**
BBS Basel-Blauen 95.08 321 *eP* **P 03 18 15.2 +0.2**
MOF Molkenrain 95.14 322 *eP* **P 03 18 15.9 +0.7**
MOF Molkenrain 95.14 322 *eP* **P 03 18 15.9 +0.7**
HINF Hinteralfeld 95.32 322 *eP* **P 03 18 15.3 -0.8**
comp=Z,37nm,1.1s,mb5.4
HINF Hinteralfeld 95.32 322 *eP* **P 03 18 15.3 -0.8**
comp=Z,18nm,1.1s,mb5.4
HINF Hinteralfeld 95.32 322 *eP* **P 03 18 15.3 -0.8**
HINF pmax pmax
comp=Z,18nm,1.1s,mb5.4
UCC Uccle 95.39 325 P **P 03 18 16.3 0.0**
GIVF Givet 95.46 324 *eP* **P 03 18 16.4 -0.2**
comp=Z,82nm,1.2s,mb5.7
GIVF Givet 95.46 324 *eP* **P 03 18 16.4 -0.2**
comp=Z,41nm,1.2s,mb5.7
GIVF Givet 95.46 324 *eP* **P 03 18 16.4 -0.2**
GIVF pmax pmax
comp=Z,41nm,1.2s,mb5.7
HAU Haudompre 95.54 322 *eP* **P 03 18 16.3 -0.8**
comp=Z,21nm,1.0s,mb5.2
HAU Haudompre 95.54 322 *eP* **P 03 18 16.3 -0.8**
comp=Z,10nm,1.0s,mb5.2
HAU Haudompre 95.54 322 *eP* **P 03 18 16.3 -0.8**
HAU pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
LOMF Lomont 95.55 321 *eP* **P 03 18 17.6 +0.5**
LOMF Lomont 95.55 321 *eP* **P 03 18 17.6 +0.5**
SNF Seneffe 95.57 325 P **P 03 18 17.8 +0.7**
comp=Z,9.4nm,1.6s,mb5.0
ORO Oropa 95.59 319 P **P 03 18 16.7 -0.6**
ORO Oropa 95.59 319 P **P 03 18 16.7 -0.6**
DOU Dourbes 95.59 324 P **P 03 18 17.6 +0.4**
comp=Z,18nm,2.0s,mb5.2
LSZ Lusaka 95.69 256 *eP* **P 03 18 19.1 +0.7**
comp=Z,46nm,1.5s,mb5.7
LSZ Lusaka 95.69 256 *eP* **P 03 18 19.1 +0.8**
LSZ pmax pmax
comp=Z,46nm,1.5s,mb5.7
BAIF Baives 95.83 325 *eP* **P 03 18 18.1 -0.2**
comp=Z,73nm,1.5s,mb5.6
BAIF Baives 95.83 325 *eP* **P 03 18 18.1 -0.2**
comp=Z,37nm,1.5s,mb5.6
BAIF Baives 95.83 325 *eP* **P 03 18 18.1 -0.2**
BAIF pmax pmax
comp=Z,37nm,1.5s,mb5.6
MEZF Maizieres J'vi 96.08 323 *eP* **P 03 18 19.1 -0.4**
PGF Pioggiola 96.22 316 *eP* **P 03 18 19.8 -0.5**
comp=Z,104nm,0.8s,mb6.0
PGF Pioggiola 96.22 316 *eP* **P 03 18 19.8 -0.5**
comp=Z,52nm,0.8s,mb6.0
PGF Pioggiola 96.22 316 *eP* **P 03 18 19.8 -0.5**
PGF pmax pmax
comp=Z,52nm,0.8s,mb6.0
SFTF Sexfontaines 96.23 323 *eP* **P 03 18 19.6 -0.6**
CABF La Chapelle 96.33 321 *eP* **P 03 18 20.1 -0.6**
CABF La Chapelle 96.33 321 *eP* **P 03 18 20.1 -0.6**
RSL Roselend 96.41 320 *eP* **P 03 18 21.2 +0.1**
RSL Roselend 96.41 320 *eP* **P 03 18 21.2 +0.1**
LPG La Plagne 96.42 320 *eP* **P 03 18 21.2 +0.1**
comp=Z,66nm,0.8s,mb5.8
LPG La Plagne 96.42 320 *eP* **P 03 18 21.2 +0.1**
comp=Z,33nm,0.8s,mb5.8
LPG La Plagne 96.42 320 *eP* **P 03 18 21.2 +0.1**
LPG pmax pmax
comp=Z,33nm,0.8s,mb5.8
LPL La Plagne 96.42 320 *eP* **P 03 18 21.1 0.0**
comp=Z,62nm,0.8s,mb5.8
LPL La Plagne 96.42 320 *eP* **P 03 18 21.1 0.0**
comp=Z,31nm,0.8s,mb5.8
LPL La Plagne 96.42 320 *eP* **P 03 18 21.1 0.0**
LPL pmax pmax
comp=Z,31nm,0.8s,mb5.8
SAOF Saorge 96.57 318 *eP* **P 03 18 22.4 +0.6**
SAOF Saorge 96.57 318 *eP* **P 03 18 22.4 +0.6**
LUCF Luceram 96.74 318 *eP* **P 03 18 23.2 +0.6**
MBDF Montbardon 96.75 319 *eP* **P 03 18 21.8 -0.8**
MBDF Montbardon 96.75 319 *eP* **P 03 18 21.8 -0.8**
TOUF Mont Tournerai 96.75 318 *eP* **P 03 18 23.2 +0.5**
TOUF Mont Tournerai 96.75 318 *eP* **P 03 18 23.2 +0.5**
ESK Eskdalemuir 96.86 331 *eP* **P 03 18 21.5 -1.4**
comp=Z,8.8nm,0.9s,mb5.2
ESK Eskdalemuir 96.86 331 *eP* **P 03 18 21.5 -1.3**
ESK pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
MVIF Mont Vial 96.87 318 *eP* **P 03 18 23.7 +0.5**
MVIF Mont Vial 96.87 318 *eP* **P 03 18 23.7 +0.5**
ORIF Oris-en-Rattie 97.23 319 *eP* **P 03 18 24.4 -0.4**
comp=Z,44nm,0.8s,mb5.7
ORIF Oris-en-Rattie 97.23 319 *eP* **P 03 18 24.4 -0.4**
comp=Z,22nm,0.8s,mb5.7
ORIF Oris-en-Rattie 97.23 319 *eP* **P 03 18 24.4 -0.4**
ORIF pmax pmax
comp=Z,22nm,0.8s,mb5.6
FRF La Foret Royal 97.35 318 *eP* **P 03 18 24.5 -0.8**
comp=Z,36nm,0.8s,mb5.5
FRF La Foret Royal 97.35 318 *eP* **P 03 18 24.5 -0.8**
comp=Z,18nm,0.8s,mb5.5
FRF La Foret Royal 97.35 318 *eP* **P 03 18 24.5 -0.8**
FRF pmax pmax
comp=Z,18nm,0.8s,mb5.5
LOR Lormes 97.38 322 *eP* **P 03 18 24.6 -0.8**
comp=Z,24nm,1.1s,mb5.2
LOR Lormes 97.38 322 *eP* **P 03 18 24.6 -0.8**
comp=Z,12nm,1.1s,mb5.2
LOR Lormes 97.38 322 *eP* **P 03 18 24.6 -0.8**
LOR pmax pmax
comp=Z,12nm,1.1s,mb5.2
LMR La Mourre 97.54 318 *eP* **P 03 18 25.5 -0.7**
comp=Z,36nm,1.0s,mb5.5
LMR La Mourre 97.54 318 *eP* **P 03 18 25.5 -0.7**
comp=Z,18nm,1.0s,mb5.6
LMR La Mourre 97.54 318 *eP* **P 03 18 25.5 -0.7**
LMR pmax pmax
comp=Z,18nm,1.0s,mb5.6
SMF Signal de Mont 97.69 322 *eP* **P 03 18 25.9 -0.9**
comp=Z,12nm,0.8s,mb5.2
SMF Signal de Mont 97.69 322 *eP* **P 03 18 25.9 -0.9**
comp=Z,5.9nm,0.8s,mb5.2
SMF Signal de Mont 97.69 322 *eP* **P 03 18 25.9 -0.9**
SMF pmax pmax
comp=Z,6.0nm,0.8s,mb5.2
SSF Saint Saulge 97.69 322 *eP* **P 03 18 26.0 -0.8**
SSF Saint Saulge 97.69 322 *eP* **P 03 18 26.0 -0.8**
SMRF Simiane la Rot 97.85 319 *eP* **P 03 18 27.1 -0.5**
comp=Z,36nm,1.2s,mb5.5
SMRF Simiane la Rot 97.85 319 *eP* **P 03 18 27.1 -0.5**
comp=Z,36nm,1.2s,mb5.8
AVF Avril sur Loir 97.91 322 *eP* **P 03 18 27.0 -0.8**
comp=Z,18nm,0.9s,mb5.3
AVF Avril sur Loir 97.91 322 *eP* **P 03 18 27.0 -0.8**
comp=Z,8.8nm,0.9s,mb5.3
AVF Avril sur Loir 97.91 322 *eP* **P 03 18 27.0 -0.8**
AVF pmax pmax
comp=Z,9.0nm,0.9s,mb5.3
VIVF Saint-Julien-l 98.02 320 *eP* **P 03 18 27.7 -0.6**
comp=Z,40nm,0.9s,mb5.6
VIVF Saint-Julien-l 98.02 320 *eP* **P 03 18 27.7 -0.6**
comp=Z,20nm,0.9s,mb5.6
VIVF Saint-Julien-l 98.02 320 *eP* **P 03 18 27.7 -0.6**
VIVF pmax pmax
comp=Z,20nm,0.9s,mb5.7
PLDF La Plantade 98.14 321 *eP* **P 03 18 29.1 +0.2**
PLDF La Plantade 98.14 321 *eP* **P 03 18 29.1 +0.2**
COLF Collangettes 98.32 321 *eP* **P 03 18 30.7 +1.0**
BGF Bois d'Agland 98.33 322 *eP* **P 03 18 29.0 -0.7**
BGF Bois d'Agland 98.33 322 *eP* **P 03 18 29.0 -0.7**
LBL Lubilhac 98.73 321 *eP* **P 03 18 32.9 +1.4**
LBL Lubilhac 98.73 321 *eP* **P 03 18 32.9 +1.4**
KEST Kesra 98.74 310 P **P 03 18 30.9 -0.9**
comp=Z,1.7nm,0.9s,mb4.5,baz=299,slow=5.8,SNR=3.6
KEST Kesra 98.74 310 *eP* **P 03 18 30.8 -0.9**
TCF Toulx Ste Croi 98.84 322 *eP* **P 03 18 31.6 -0.4**
comp=Z,10nm,0.7s,mb5.1
TCF Toulx Ste Croi 98.84 322 *eP* **P 03 18 31.6 -0.4**
comp=Z,5.1nm,0.7s,mb5.2
TCF Toulx Ste Croi 98.84 322 *eP* **P 03 18 31.6 -0.4**
TCF pmax pmax
comp=Z,5.0nm,0.7s,mb5.2
LASF Ste Croix 98.90 319 *eP* **P 03 18 32.0 -0.3**
comp=Z,26nm,1.1s,mb5.4
LDF La Druitiere 99.01 325 *eP* **P 03 18 32.0 -0.7**
LDF La Druitiere 99.01 325 *eP* **P 03 18 32.0 -0.7**
FLN La Foliniere 99.12 325 *eP* **P 03 18 32.4 -0.8**
FLN La Foliniere 99.12 325 *eP* **P 03 18 32.4 -0.8**
SYO Syowa Base 99.23 201‖ *eP* **P 03 18 32.8 -0.3**
GRR Gorron 99.54 325 *eP* Pdif 03 18 35.1 +0.2
GRR Gorron 99.54 325 *eP* Pdif 03 18 35.1 +0.2
CAF Calviac 99.61 321 *eP* Pdif 03 18 35.5 +0.3
comp=Z,14nm,1.0s
CAF Calviac 99.61 321 *eP* Pdif 03 18 35.5 +0.3
comp=Z,6.8nm,1.0s
CAF Calviac 99.61 321 *eP* Pdif 03 18 35.5 +0.3
CAF pmax pmax
comp=Z,7.0nm,1.0s,mb5.2
RJF Les Rejaudoux 99.76 321 *eP* Pdif 03 18 36.3 +0.4
comp=Z,66nm,1.5s
RJF Les Rejaudoux 99.76 321 *eP* Pdif 03 18 36.3 +0.4
comp=Z,33nm,1.5s
RJF Les Rejaudoux 99.76 321 *eP* Pdif 03 18 36.3 +0.4
RJF pmax pmax
comp=Z,33nm,1.5s,mb5.7
MFF Saint Martin d 100.08 323 *eP* Pdif 03 18 37.1 -0.2
MFF Saint Martin d 100.08 323 *eP* Pdif 03 18 37.1 -0.2
MTLF Montolieu 100.30 319 *eP* Pdif 03 18 38.0 -0.3
comp=Z,24nm,1.2s
MTLF Montolieu 100.30 319 *eP* Pdif 03 18 38.0 -0.3
comp=Z,12nm,1.2s
MTLF Montolieu 100.30 319 *eP* Pdif 03 18 38.0 -0.3
MTLF pmax pmax
comp=Z,12nm,1.2s
LFF La Frestale 100.42 321 *eP* Pdif 03 18 38.3 -0.5
LFF La Frestale 100.42 321 *eP* Pdif 03 18 38.3 -0.5
EPF Esparros 101.64 320 *eP* Pdif 03 18 44.1 -0.1
EPF Esparros 101.64 320 *eP* Pdif 03 18 44.1 -0.1
ETSF Etsaut 102.28 320 *eP* Pdif 03 18 47.1 0.0
ETSF Etsaut 102.28 320 *eP* Pdif 03 18 47.1 0.0
QSPA South Pole Qui 103.30 180 Pdiff Pdif 03 18 51.4 -0.2
comp=Z,0.6nm,0.7s,baz=266,slow=3.5,SNR=4.6
QSPA South Pole Qui 103.30 180 Pdif Pdif 03 18 51.4 -0.2
NVAR Mina Array Bea 104.61 44 Pdiff Pdif 03 18 57.8 +0.3
comp=Z,0.7nm,0.9s,baz=338,slow=3.9,SNR=2.9
NVAR PP PP 03 23 10.5 -6.8
comp=Z,0.9nm,0.8s,baz=291,slow=5.7,SNR=4.0
NVAR PKKPbc PKKPbc 03 34 43.6 +0.1
comp=Z,0.6nm,0.8s,baz=123,slow=3.3,SNR=4.4
ESDC Sonseca Array 106.17 319 PP PP 03 23 24.3 -4.4
comp=Z,1.0nm,0.8s,baz=44,slow=7.6,SNR=3.1
MVO Moncorvo 107.24 321 *e*PP PP 03 23 41.9 +5.4
PDAR Pinedale Array 107.65 36 PP PP 03 23 39.5 +0.1
comp=Z,0.8nm,0.8s,baz=347,slow=6.1,SNR=4.7
PDAR PKKPbc PKKPbc 03 34 33.4 -0.9
comp=Z,0.8nm,0.6s,baz=136,slow=3.8,SNR=5.5
MTE Manteigas 108.01 321 *e*PP PP 03 23 43.5 +1.3
PVIS Viseu 108.04 321 *e*PP PP 03 23 49.2 +6.9
PMRV Marv??o 108.49 320 *e*PP PP 03 23 50.6 +4.9
PESTR Estremoz 108.94 320 *e*PP PP 03 23 49.5 +0.5
PTOM Tomar 109.01 321 *e*PP PP 03 23 48.5 -1.0
PMTG Montargil 109.22 320 *e*PP PP 03 23 51.8 +0.8
EVO Evora 109.41 319 *e*PP PP 03 23 56.9 +4.5
PBEJ Beja 109.61 319 *e*PP PP 03 24 00.5 +6.6
PVAQ Vaqueiros 109.88 318 *e*PP PP 03 24 00.2 +4.4
PCVE Castro Verde 109.95 319 *e*PP PP 03 23 57.4 +1.0
PBDV Barranco-do-Ve 110.11 318 *e*PP PP 03 24 03.3 +5.8
PTEO Sao Teotonio 110.44 319 *e*PP PP 03 24 00.2 +0.3
MORF Marmelete 110.54 319 *e*PP PP 03 24 03.9 +3.3
PFVI Vila Bisbo 110.75 319 *e*PP PP 03 24 08.3 +6.2
TORD Torodi Ar. Bea 113.90 291 PP PP 03 24 15.2 -10
comp=Z,4.7nm,1.0s,baz=70,slow=6.7,SNR=4.1
WMOK Wichita Mounta 119.25 37 *e*PKPdf PKPdf 03 23 41.9 +0.6
WMOK Wichita Mounta 119.25 37 *e*PKIKP PKPdf 03 23 41.9 +0.6
TXAR Lajitas Array 119.75 45 PKP PKPdf 03 23 42.3 -0.1
comp=Z,2.0nm,0.8s,baz=140,slow=0.3,SNR=16
TXAR PP PP 03 25 09.1 +3.5
comp=Z,1.2nm,0.9s,baz=298,slow=2.7,SNR=4.7
TXAR PKKPbc PKKPbc 03 33 52.8 -0.2
comp=Z,0.7nm,0.9s,baz=101,slow=4.7,SNR=4.7
TXAR Lajitas Array 119.75 45 PKIKP PKPdf 03 23 42.3 -0.1
TXAR 03 25 09.1
JCT Junction City 121.56 41 *e*PKPdf PKPdf 03 23 46.9 +1.1
JCT Junction City 121.56 41 *e*PKIKP PKPdf 03 23 46.9 +1.1
DBIC Dimbokro 122.22 287 PKP PKPdf 03 23 47.3 -0.2
comp=Z,4.6nm,0.8s,baz=91,slow=3.7,SNR=6.2
DBIC PP PP 03 25 22.1 -1.3
comp=Z,4.6nm,0.8s,baz=44,slow=10,SNR=3.0
DBIC Dimbokro 122.22 287 *e*PKPdf PKPdf 03 23 47.9 +0.3
DBIC Dimbokro 122.22 287 PKIKP PKPdf 03 23 47.3 -0.2
DBIC 03 25 22.2
DBIC pmax pmax
comp=Z,5.0nm,0.8s
DBIC pmax pmax
comp=Z,5.0nm,0.8s
KIC Kosan Boka 122.22 286 *eP* PKPdf 03 23 49.6 +2.1
comp=Z,53nm,1.3s
TIC Toumodi 122.39 287 *eP* PKPdf 03 23 47.6 -0.2
comp=Z,72nm,1.5s
TIC Toumodi 122.39 287 *e*PKIKP PKPdf 03 23 47.6 -0.2
LIC Lamto 122.54 286 *eP* PKPdf 03 23 48.8 +0.7
comp=Z,95nm,1.5s
LIC Lamto 122.54 286 *e*PKIKP PKPdf 03 23 48.9 +0.8
comp=Z,112nm,1.5s
WCI Wyandotte Cave 122.77 25 *e*PKPdf PKPdf 03 23 48.4 +0.4
WCI Wyandotte Cave 122.77 25 *e*PKIKP PKPdf 03 23 48.4 +0.5
WVT Waverly 123.87 28 *e*PKPdf PKPdf 03 23 49.5 -0.6
WVT Waverly 123.87 28 *e*PKIKP PKPdf 03 23 49.5 -0.6
JTS JuntasAbangare 145.41 48 *e*PKPdf PKPdf 03 24 30.0 -0.6
JTS JuntasAbangare 145.41 48 *e*PKIKP PKPdf 03 24 30.0 -0.6
SDDR Presa de Saban 145.73 20 *e*PKPbc PKPbc 03 24 31.5 0.0
BCIP Isla Barro Col 149.76 43 *e*PKPdf PKPdf 03 24 37.6 -0.2
BCIP *e*PKPbc PKPbc 03 24 43.0 +0.4
PLCA Paso Flores 151.13 162 PKPbc PKPbc 03 24 45.8 +0.7
comp=Z,6.3nm,0.8s,baz=228,slow=4.8,SNR=3.4
PLCA Paso Flores 151.13 162 *e*PKPbc PKPbc 03 24 46.4 +1.3
PLCA *e*PKPab PKPab 03 24 54.1 +1.2
PLCA Paso Flores 151.13 162 PKIKP PKPbc 03 24 45.8 +0.7
PLCA pmax pmax
comp=Z,6.0nm,0.8s
FDF Fort de France 151.95 3 *e*PKPbc PKPbc 03 24 48.2 +0.5
FDF Fort de France 151.95 3 *e*PKIKP PKPbc 03 24 48.2 +0.6
SDV Santo Domingo 155.19 27 *e*PKPdf PKPdf 03 24 47.0 +1.2
TRQA Tornquist 155.39 175 *e*PKPab PKPab 03 25 09.8 -1.1
RCBR Riachuelo 155.59 286 PKPbc PKPdf 03 24 54.9 +8.5
comp=Z,11nm,1.0s,baz=27,slow=2.3,SNR=3.1
ROSC El Rosal 156.57 40 PKP PKPdf 03 24 48.7 +1.0
comp=Z,1.8nm,0.3s,baz=341,slow=11,SNR=3.0
OTAV Otavalo 156.78 56 *e*PKPdf PKPdf 03 24 48.6 +0.6
CFAA Coronel Fontan 160.21 157 PKP PKPdf 03 24 52.2 +0.6
comp=Z,0.6nm,0.9s,baz=230,slow=5.3,SNR=7.4
CFAA PKPab PKPab 03 25 31.1 -0.8
comp=Z,0.7nm,1.0s,baz=230,slow=3.1,SNR=7.5
CFAA Coronel Fontan 160.21 157 PKP PKPdf 03 24 52.2 +0.6
CFAA PKPab PKPab 03 25 31.1 -0.8
CPUP Villa Florida 167.03 189 PKP PKPdf 03 24 58.2 +0.1
comp=Z,0.6nm,0.5s,baz=256,slow=6.6,SNR=3.6
CPUP PKPab PKPab 03 26 01.9 -0.1
comp=Z,4.5nm,0.7s,baz=154,slow=4.8,SNR=11
CPUP Villa Florida 167.03 189 PKP PKPdf 03 24 58.2 +0.1
CPUP PKPab PKPab 03 26 01.9 -0.1
CPUP Villa Florida 167.03 189 PKIKP PKPdf 03 24 58.2 +0.2
CPUP 03 26 01.9
CPUP pmax pmax
comp=Z,1.0nm,0.5s
CPUP pmax pmax
comp=Z,5.0nm,0.7s
BDFB Brasilia 168.71 257 PKP PKPdf 03 24 59.5 +0.1
comp=Z,2.7nm,0.8s,baz=137,slow=5.0,SNR=3.8
BDFB PKPab PKPab 03 26 10.1 +0.1
comp=Z,7.2nm,0.8s,baz=141,slow=5.8,SNR=6.8
BDFB Brasilia 168.71 257 PKIKP PKPdf 03 24 59.6 +0.2
BDFB 03 26 10.1
BDFB pmax pmax
comp=Z,3.0nm,0.8s
BDFB pmax pmax
comp=Z,7.0nm,0.8s
LPAZ La Paz 171.15 110 PKP PKPdf 03 25 02.4 +1.5
comp=Z,2.7nm,0.9s,baz=6.3,slow=1.9,SNR=8.8
LPAZ PKPab PKPab 03 26 21.7 +1.0
comp=Z,1.3nm,0.9s,baz=321,slow=1.5,SNR=2.0
LPAZ La Paz 171.15 110 PKIKP PKPdf 03 25 02.4 +1.6
LPAZ 03 26 21.7
LPAZ pmax pmax
comp=Z,3.0nm,0.9s
LPAZ pmax pmax
comp=Z,1.0nm,0.9s

NEIC ***27*** *03:08:45.8±0.4, 13°.34N×120°.38E, h10km, mb4.7/11, Error ellipse: s-maj=8.6km s-min=7.4km az=82.0*
ISCJB ***27*** *03:08:46.5±4.3, 13°.33N±0°.08×120°.4E±0°.1, h27km±31km, mb4.5/23, Error ellipse: s-maj=18.3km s-min=12.9km az=153.1*
IDC ***27*** *03:08:48.6±3.8, 13°.41N×120°.45E, h31km±30km, mb4.3/13, mb1 4.5/13, mb1mx4.2/22, mbtmp4.3/13, Error ellipse: s-maj=46.5km s-min=15.3km az=65.0*
ISC 27 03:08:47.9±2.2, 13°.37N±0°.09×120°.4E±0°.1, h24km±16km, n31, σ0°69/31, mb4.5/23, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	2μm,0.3s,baz=222,slow=12,SNR=11						
TGY	**Tagaytay City**	**0.88**	**34**	Pg	**Pb**	**03 09 04.7**	**+0.1**
	63nm,1.4s						
ENH	**Enshi**	**19.62**	**331**	*e*P	**Pn**	**03 13 15.2**	**-1.0**
	21nm,1.2s,mb4.3						
KULM	**Kulim**	**21.08**	**249**	*e*P	**P**	**03 13 31.1**	**+0.3**
	15nm,0.9s,mb4.3,baz=96,slow=9.4,SNR=4.1						
CMAR	**Chiang Mai Arr**	**21.26**	**287**	P	**P**	**03 13 32.1**	**-0.5**
	6.4nm,0.7s,mb4.1						
CHTO	**Chiang Mai**	**21.33**	**288**	*e*P	**P**	**03 13 32.2**	**-1.1**
	10.0nm,0.6s,mb4.9,baz=337,slow=9.6,SNR=8.4						
WRA	**Warramunga Arr**	**35.83**	**157**	P	**P**	**03 15 45.4**	**-0.4**
	8.5nm,0.7s,mb4.8,baz=160,slow=9.4,SNR=5.3						
SONM	**Songino Array**	**36.30**	**344**	P	**P**	**03 15 49.2**	**-0.3**
	16nm,0.6s,mb5.0,baz=341,slow=7.1,SNR=7.1						
ASAR	**Alice Springs**	**39.10**	**160**	P	**P**	**03 16 14.1**	**+0.6**
	2.7nm,0.7s,mb4.3,baz=128,slow=9.5,SNR=2.9						
MKAR	**Makanchi Array**	**46.14**	**324**	P	**P**	**03 17 10.4**	**0.0**
	5.4nm,0.7s,mb4.7						
TKM2	**Tokmak 2**	**48.47**	**316**	*e*P	**P**	**03 17 29.4**	**+0.8**
	7.4nm,0.8s,mb4.8						
UCH	**Uchtor**	**48.94**	**315**	*e*P	**P**	**03 17 33.5**	**+1.2**
	6.4nm,0.8s,mb4.7						
AAK	**Ala-Archa**	**49.11**	**315**	*e*P	**P**	**03 17 34.4**	**+0.8**
	6.1nm,0.8s,mb4.7						
ZALV	**Zalesovo Beam**	**49.23**	**333**	P	**P**	**03 17 33.8**	**-0.4**
	3.1nm,0.7s,mb4.5,baz=119,slow=5.1,SNR=3.8						
STKA	**Stephens Creek**	**49.36**	**156**	P	**P**	**03 17 35.4**	**-0.1**
	4.1nm,0.7s,mb4.6,baz=333,slow=4.5,SNR=3.0						
AML	**Almayashu**	**49.47**	**315**	*e*P	**P**	**03 17 37.6**	**+1.3**
	6.5nm,0.9s,mb4.7						
EKS2	**Erkin-Say**	**49.61**	**315**	*e*P	**P**	**03 17 38.7**	**+1.3**
	23nm,0.9s,mb5.2						
KURK	**Kurchatov**	**50.31**	**327**	*e*P	**P**	**03 17 42.9**	**+0.3**
	4.3nm,0.7s,mb4.5						
KKAR	**Karatay Array**	**52.01**	**315**	*e*P	**P**	**03 17 55.4**	**-0.1**
	4.5nm,0.6s,mb4.7,baz=110,slow=8.3,SNR=4.0						
BVAR	**Borovoye Array**	**55.89**	**326**	P	**P**	**03 18 24.0**	**+0.3**
	2.3nm,0.7s,mb4.2,baz=89,slow=7.4,SNR=4.5						
BRVK	**Borovoye**	**55.96**	**326**	*e*P	**P**	**03 18 24.7**	**+0.5**
ABKAR	**Akbulak array**	**60.80**	**319**	*e*P	**P**	**03 18 57.8**	**-0.3**
	2.2nm,0.7s,mb4.8,baz=89,slow=7.4,SNR=4.5						
AKTK	**Aktyubinsk**	**62.29**	**320**	P	**P**	**03 19 08.4**	**+0.4**
AKTO	**Aktyubinsk**	**62.29**	**320**	P	**P**	**03 19 08.4**	**+0.4**
	3.2nm,0.8s,mb4.5,baz=104,slow=10,SNR=2.7						
ARCES	**ARCESS Array B**	**79.29**	**339**	P	**P**	**03 20 50.3**	**-0.8**
	2.3nm,0.7s,mb4.2,baz=89,slow=7.4,SNR=4.5						
FINES	**FINESS Array B**	**80.44**	**331**	P	**P**	**03 20 56.9**	**-0.5**
	2.2nm,0.8s,mb4.1,baz=53,slow=5.4,SNR=3.4						
AKASG	**Malin Array Be**	**80.54**	**320**	P	**P**	**03 20 57.1**	**-1.1**
	1.1nm,0.5s,mb4.0,baz=64,slow=7.3,SNR=3.0						
BUR08	**Bucovina Ar. S**	**83.72**	**317**	*e*P	**P**	**03 21 15.0**	**0.0**
NOA	**NORSAR Array B**	**87.43**	**333**	P	**P**	**03 21 32.3**	**-0.8**
	2.5nm,0.8s,mb4.5,baz=70,slow=4.6,SNR=3.3						
KBN	**Korca**	**88.56**	**311**	*i* P	**P**	**03 21 37.9**	**-1.1**
SRN	**Sarande**	**89.35**	**311**	*i* P	**P**	**03 21 37.3**	**-5.4**
CLL	**Collm**	**90.23**	**323**	*e*P	**P**	**03 21 47.0**	**+0.4**

SZGRF ***27*** *03:09:00.6, 12°.11N×121°.82E, h33km, mb5.8, MS6.0, Mindoro, Philippine Islands*
NEIC ***27*** *03:09:04.8±0.1, 13°.48N×120°.55E, h11km, mb5.7/150, ME5.6, MS5.6/192, MW5.8, MW5.9(GCMT), Error ellipse: s-maj=4.8km s-min=3.7km az=50.0, Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [V PIVS] at Calapan, Naujan, Sablayan and on Lubang Island; [IV PIVS] at Puerto Galera; [II PIVS] at Navotas. Also felt at Taytay. Felt [IV PIVS] at Apalit and [III PIVS] at Manila, Molino and Quezon City, Luzon. Felt [IV] at Batangas. Also felt at Bacoor, Binan, Bocaue, Malolos, Olongapo, San Fernando and Tagaytay.
MOS ***27*** *03:09:06.7±1.1, 13°.51N×120°.61E, h33km, mb5.9/90, MS5.5/64, Error ellipse: s-maj=11.5km s-min=7.3km az=112.3*
MAN ***27*** *03:09:08, 13°.32N×120°.08E, h86km, mb6.4, ML5.5, MS6.5*
MAN INTENSITY V - CALAPAN CITY; NAUJAN; LOOC; SABLAYAN.
IDC ***27*** *03:09:08.1±1.6, 13°.50N×120°.55E, h33km±11km, mb5.1/37, mb1 5.1/38, mb1mx5.1/39, mbtmp5.1/38, ML2.8/1, Error ellipse: s-maj=12.6km s-min=7.7km az=63.0*
GCMT ***27*** *03:09:09.6±0.1, 13°.56N×120°.46E, h12km, MW5.9, Moment Tensor Solution. s95,c196; s85,c118; Moment tensor: Scale 10^{17}Nm; M_{rr}=8.21±.08; $M_{\theta\theta}$3.34±.07; $M_{\phi\phi}$4.87±.07; $M_{r\theta}$2.94±.20; $M_{r\phi}$4.10±.05; $M_{\theta\phi}$1.63±.19; Best double couple: $M_0$8.90000×10^{17} NP1:ϕ_s32.00000°, δ35.00000°, λ-103.00000°. NP2:ϕ_s228.00000°, δ56.00000°, λ-81.00000°. Principal axes: T 8.8600, Plg10.0000°, Azm311.0000°; N 0.0900, Plg7.0000°, Azm43.0000°; P -8.9500, Plg77.0000°, Azm167.0000°; Data Used: II IU G CN IC. Surface waves: sta=118, comp=266, per= 50.*
BJI ***27*** *03:09:09.7, 13°.22N×120°.70E, h80km, mB6.2/47, mb5.2/57, Ms5.8/57, Ms7 5.7/54*
ISCJB ***27*** *03:09:11.2±0.3, 13°.45N±0°.02×120°.50E±0°.02, h70km±3km, mb5.5/264, Error ellipse: s-maj=3.7km s-min=2.6km az=173.2*
TEH ***27*** *03:09:14.0, 13°.40N×120°.48E, h77km*
DJA ***27*** *03:09:15, 13°.69N×120°.51E, h96km, mb5.6/32*
ISC 27 03:09:13.5±0.3, 13°.46N±0°.02×120°.51E±0°.02, h78km±2km, h75km±2.1km: pP-P, n1043, σ1°06/838, mb5.5/264, 67C-45D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.76**	**33**	Pg	**Pn**	**03 09 23.5**	**-6.2**
	23μm,0.3s,baz=215,slow=5.0,SNR=26						
TGY				Lg		03 09 38.3	
	25μm,0.3s,baz=203,slow=15,SNR=14						
TGY	**Tagaytay City**	**0.76**	**33**	P	**Pn**	**03 09 23.5**	**-6.1**
TGY						03 09 38.3	
BOAC	**Boac**	**1.30**	**90**	*e*P	**Pn**	**03 09 33.1**	**-3.0**
BUSP	**Coron**	**1.48**	**192**	*e*P	**Pn**	**03 09 33.6**	**-4.9**
OTRP	**Odiongan**	**1.83**	**126**	*e*P	**Pn**	**03 09 43.2**	**+0.1**
POLP	**Polilio Island**	**1.87**	**48**	*e*P	**Pn**	**03 09 41.9**	**-1.7**
AUQP

CAUP	**Cauayan**	**3.69**	**20**	*e*P	**Pn**	**03 10 07.5**	**-0.7**
PALP	**Palanan**	**4.03**	**27**	*e*P	**Pn**	**03 10 11.8**	**-1.0**
CNP	**Catarman**	**4.16**	**103**	*e*P	**Pn**	**03 10 17.5**	**+2.9**
ABRA	**Dolores**	**4.17**	**3**	*e*P	**Pn**	**03 10 14.1**	**-0.6**
CVP	**Callao Caves**	**4.40**	**17⇓**	*e*P	**Pn**	**03 10 14.0**	**-3.9**
APYP	**Conner**	**4.43**	**9**	*e*P	**Pn**	**03 10 20.4**	**+2.2**
SIPP	**Brgy, Tapao**	**4.44**	**359⇓**	*e*P	**Pn**	**03 10 19.2**	**+0.9**
SIPP				*i* S	**Sn**	**03 11 21.2**	**+12**
LLP	**Lapu-Lapu**	**4.61**	**132**	*e*P	**Pn**	**03 10 23.0**	**+2.4**
LLP				*e*S	**Sn**	**03 11 11.4**	**-1.5**
OCLP	**Ormoc**	**4.67**	**120**	*e*P	**Pn**	**03 10 26.1**	**+4.6**
PIP	**Pasuquin**	**4.84**	**1⇑**	*e*P	**Pn**	**03 10 24.3**	**+0.5**
TBP	**Tagbilaran**	**4.98**	**138**	*e*P	**Pn**	**03 10 25.3**	**-0.5**
BATP	**Bataraza**	**5.34**	**210**	*e*P	**Pn**	**03 10 31.0**	**+0.2**
MSLP	**Maasin**	**5.39**	**127**	*e*P	**Pn**	**03 10 31.9**	**+0.5**
IPIL	**Ipil**	**5.99**	**160**	*e*P	**Pn**	**03 10 35.2**	**-4.4**
SCPH	**Surigao**	**6.10**	**126⇓**	*e*P	**Pn**	**03 10 40.7**	**-0.3**
PAGZ	**Pagadian**	**6.25**	**153**	*e*P	**Pn**	**03 10 42.7**	**-0.5**
ZMPH	**Zamboanga City**	**6.64**	**167⇓**	*e*P	**Pn**	**03 10 44.2**	**-4.3**
BUKP	**Musuan**	**7.13**	**141**	*e*P	**Pn**	**03 10 56.7**	**+1.6**
KDM	**Kudat**	**7.44**	**209**	P	**Pn**	**03 10 57.6**	**-1.8**
SDKM	**Sandakan**	**8.43**	**203**	P	**Pn**	**03 11 09.4**	**-3.5**
MYLDM	**Lahad Datu**	**8.46**	**194**	P	**Pn**	**03 11 11.0**	**-2.4**
KKM	**Kota Kinabalu**	**8.50**	**210**	P	**Pn**	**03 11 16.3**	**+2.5**
KKM	**Kota Kinabalu**	**8.50**	**210**	*e*Pn	**Pn**	**03 11 13.8**	**-0.1**
TWG	**Pinlang**	**9.32**	**3**	*e*Pn	**Pn**	**03 11 24.9**	**-0.2**
TSM	**Tawau**	**9.47**	**196**	P	**Pn**	**03 11 24.7**	**-2.5**
TPUB	**Ta-pu**	**9.79**	**1**	*e*Pn	**Pn**	**03 11 31.8**	**+0.4**
YULB	**Yu-li**	**9.91**	**4**	*e*Pn	**Pn**	**03 11 35.5**	**+2.5**
SSLB	**Suanglung**	**10.28**	**2**	*e*Pn	**Pn**	**03 11 39.6**	**+1.5**
NACB	**Ninganchiao**	**10.71**	**5**	*e*Pn	**Pn**	**03 11 44.8**	**+0.9**
SGSI	**Sangihe**	**10.90**	**153**	P	**Pn**	**03 11 53.6**	**+6.9**
YHNB	**Yeheng**	**11.18**	**4**	*e*Pn	**Pn**	**03 11 53.5**	**+3.1**
QZH	**Quanzhou**	**11.56**	**351⇑**	*i*P	**Pn**	**03 11 55.5**	**-0.1**
QZH				S	**Sn**	**03 14 04.5**	**+1.6**
QZH	comp=Z,620nm,1.6s			pmax	pmax		
QZH	comp=N,50μm,13.1s			LR	LR		
QZH	comp=E,21μm,11.5s			LR	LR		
QZH	comp=Z,63μm,14.0s			LR	LR		
QIZ	**Qiongzhong**	**11.64**	**300**	P	**Pn**	**03 11 56.0**	**-0.7**
QIZ				S	**Sn**	**03 14 01.5**	**-3.4**
QIZ	comp=Z,370nm,1.3s			pmax	pmax		
QIZ	comp=N,25μm,15.6s			LR	LR		
QIZ	comp=Z,42μm,14.7s			LR	LR		
QIZ	**Qiongzhong**	**11.64**	**300**	*e*Pn	**Pn**	**03 11 56.5**	**-0.2**
BTM	**Bintulu**	**12.56**	**216**	P	**Pn**	**03 12 07.2**	**-2.1**
MNI	**Manado**	**12.69**	**160**	P	Px	03 12 22.1	
MRSI	**Marisa**	**12.98**	**174**	P	**Pn**	**03 12 13.7**	**-1.2**
KMSI	**Cibinong**	**13.26**	**165**	P	Px	03 12 32.0	
SBUM	**Sibu**	**13.67**	**218**	P	**Pn**	**03 12 22.4**	**-1.6**
TNTI	**Ternate**	**14.32**	**151**	P	**Pn**	**03 12 33.4**	**+0.9**
	comp=Z,520nm,2.2s						
LUWI	**Luwuk**	**14.58**	**171**	P	**Pn**	**03 12 39.0**	**+3.1**
	comp=Z,957nm,1.0s						
JOW	**Kunigami**	**15.16**	**27**	Pn	**Pn**	**03 12 40.6**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=197,slow=19,SNR=2.2						
JOW	**Kunigami**	**15.16**	**27**	*e*Pn	**Pn**	**03 12 42.8**	**-0.5**
	comp=Z,219nm,1.1s						
KSM	**Kuching**	**15.62**	**221**	P	**Pn**	**03 12 48.4**	**-0.7**
KSM	**Kuching**	**15.62**	**221**	*e*Pn	**Pn**	**03 12 47.5**	**-1.6**
	comp=Z,215nm,1.3s						
LBMI	**Labuha**	**15.63**	**153**	P	**Pn**	**03 12 50.3**	**+1.0**
	comp=Z,825nm,1.2s						
MSSI	**Masamba**	**15.91**	**181**	P	**Pn**	**03 12 58.4**	**+5.5**
STKI	**Sintang**	**16.04**	**215**	P	**Pn**	**03 12 57.5**	**+3.0**
	comp=Z,364nm,1.5s						
TTSI	**Tana Toraja**	**16.41**	**182**	P	**Pn**	**03 13 00.3**	**+1.2**
	comp=Z,9μmcomp=Z,331nm,1.8s						
PLKI	**Palangkaraya**	**16.89**	**203**	P	**Pn**	**03 13 06.4**	**+1.3**
	comp=Z,473nm,1.6s						
MJSI	**Majene**	**16.97**	**185**	P	**Pn**	**03 13 09.0**	**+3.0**
	comp=Z,603nm,1.2s						
KBKI	**Kotabaru**	**17.20**	**195**	P	**Pn**	**03 13 10.0**	**+1.1**
	comp=Z,8μmcomp=Z,243nm,1.3s						
SPSI	**Sidrap Palu**	**17.33**	**182**	P	**Pn**	**03 13 12.4**	**+2.0**
	comp=Z,211nm,1.6s						
KKTK	**Khon Kaen**	**17.33**	**282**	P	**Pn**	**03 13 10.5**	**+0.1**
KDI	**Kendari**	**17.43**	**173**	P	**Pn**	**03 13 13.6**	**+1.9**
	comp=Z,174nm,2.0s						
SSE	**Sheshan**	**17.56**	**2**	P	**Pn**	**03 13 15.5**	**+2.4**
SSE				pmax	pmax		
SSE	comp=Z,60nm,0.7s			pmax	pmax		
	comp=Z,8μm,6.5s						
BBKI	**Banjar Baru**	**17.73**	**199**	P	**Pn**	**03 13 14.7**	**-0.6**
	comp=Z,676nm,1.5s						
SWI	**Sorong**	**17.78**	**142**	P	**Pn**	**03 13 16.5**	**+0.6**
	comp=Z,266nm,3.5s						
NLAI	**Namlea**	**17.83**	**158**	P	**Pn**	**03 13 16.5**	**-0.1**
	comp=Z,10μmcomp=Z,270nm,1.4s						
WHN	**Wuhan**	**17.93**	**342**	P	**Pn**	**03 13 18.3**	**+0.7**
WHN				*e*S	**S**	**03 16 38.0**	**+0.1**
WHN	comp=Z,46μm,12.4s			LR	LR		
GYA	**Guiyang**	**18.32**	**317⇑**	*i*P	**Pn**	**03 13 25.0**	**+2.6**
GYA				pP	pP	03 13 38.5	+1.4
GYA				PP		03 13 43.5	
GYA				sP	sP	03 13 49.0	+2.1
GYA				S	**S**	**03 16 48.0**	**+0.9**
GYA				sS	sS	03 17 07.3	-5.1
GYA				SS		03 17 14.0	
GYA				PcP	PcP	03 17 51.5	+1.1
GYA	comp=Z,280nm,1.0s			pmax	pmax		
GYA	comp=Z,3μm,7.7s			pmax	pmax		
GYA	comp=N,19μm,15.2s			LR	LR		
GYA	comp=E,22μm,13.3s			LR	LR		
GYA	comp=Z,32μm,15.5s			LR	LR		
NJ2	**Nanjing**	**18.57**	**356**	*e*P	**Pn**	**03 13 27.0**	**+1.7**
NJ2				pP	pP	03 13 40.5	+0.8
NJ2				PP		03 13 45.5	
NJ2				sP	sP	03 13 51.0	+1.4
NJ2				S	**S**	**03 16 56.5**	**+4.7**
NJ2				sS	sS	03 17 18.5	+1.3
NJ2	comp=Z,190nm,1.2s			pmax	pmax		
NJ2	comp=Z,26μm,7.6s			pmax	pmax		
NJ2	comp=N,18μm,14.3s			LR	LR		
NJ2	comp=E,17μm,14.4s			LR	LR		
NJ2	comp=Z,22μm,13.9s			LR	LR		
BKSI	**Bulukumba**	**18.66**	**181**	P	**Pn**	**03 13 28.0**	**+1.4**
	comp=Z,204nm,1.2s						
BBSI	**Bau Bau**	**18.94**	**174**	P	**Pn**	**03 13 28.6**	**-1.2**
	comp=Z,317nm,2.0s						
KTGM	**Kuala Trenggan**	**18.94**	**246**	P	**Pn**	**03 13 30.6**	**+0.7**
ENH	**Enshi**	**19.59**	**330**	*e*P	**Pn**	**03 13 36.0**	**-1.3**
	comp=Z,550nm,1.4s						
MYKOM	**Kota Tinggi**	**20.15**	**236**	P	**P**	**03 13 42.5**	**+0.8**
BNDI	**Bandanaira**	**20.16**	**152**	P	**P**	**03 13 44.3**	**+2.7**
	comp=Z,3μm,1.5s						
KMI	**Kunming**	**20.36**	**307**	P	**P**	**03 13 47.5**	**+3.7**
KMI				pP		03 14 05.3	
KMI				S	**S**	**03 17 29.0**	**+1.1**
KMI	comp=Z,130nm,2.0s			pmax	pmax		
KGM	**Kluang**	**20.46**	**238**	P	**P**	**03 13 46.1**	**+1.1**
SNG	**Songkhla**	**20.53**	**254**	P	**P**	**03 13 45.0**	**-0.8**
TPI	**Tanjungpandan**	**20.55**	**219**	P	**P**	**03 13 44.8**	**-1.1**
	comp=Z,6μmcomp=Z,264nm,1.7s						
CHRT	**Chiangrai**	**20.84**	**291**	⇓P	**P**	**03 13 48.0**	**-1.1**
	comp=Z,882nm,1.0s						
BDT	**Bhumibol Dam**	**21.07**	**283**	P	**P**	**03 13 51.0**	**-0.6**
	comp=Z,91nm,1.2s,mb5.0						
PPBI	**Pangkal Pinang**	**21.08**	**224**	P	**P**	**03 13 50.8**	**-0.8**
	comp=Z,257nm,1.8s,mb5.3						
KULM	**Kulim**	**21.20**	**249**	P	**P**	**03 13 53.2**	**+0.3**
KULM	**Kulim**	**21.20**	**249**	*e*P	**P**	**03 13 52.5**	**-0.3**
	comp=Z,625nm,1.3s,mb5.8						
KULM				LR	LR		
	comp=Z,13μm,19.0s						
IPM	**Ipoh**	**21.20**	**247**	P	**P**	**03 13 52.6**	**-0.3**
IPM	**Ipoh**	**21.20**	**247**	*e*P	**P**	**03 13 51.9**	**-1.1**
BAKI	**Biak**	**21.24**	**132**	P	**P**	**03 13 54.9**	**+1.6**
	comp=Z,1μm,1.5s,mb6.1						
FRIM	**Kepong**	**21.25**	**243**	P	**P**	**03 13 54.1**	**+0.7**
CM31	**Chiang Mai Arr**	**21.32**	**286**	*e*P	**P**	**03 13 54.2**	**+0.1**
	comp=Z,977nm,1.4s,mb5.9						
CM31				LR	LR		
	comp=Z,11μm,20.0s						
CMAR	**Chiang Mai Arr**	**21.32**	**286**	P	**P**	**03 13 53.1**	**-1.0**
	comp=Z,158nm,0.9s,mb5.3,baz=97,slow=8.6,SNR=25						
CMAR	**Chiang Mai Arr**	**21.32**	**286**	P	**P**	**03 13 53.2**	**-0.9**
CHTO	**Chiang Mai**	**21.38**	**287**	*e*P	**P**	**03 13 54.7**	**-0.2**
CHTO				LR	LR		
	comp=Z,8μm,19.0s						
CHTO	**Chiang Mai**	**21.38**	**287**	*e*P	**P**	**03 13 54.7**	**-0.1**
CHTO				MLR	MLR		
	comp=Z,8μm,19.0s						
CHTO	**Chiang Mai**	**21.38**	**287**	P	**P**	**03 13 55.2**	**+0.3**
	SNR=18						
KMMI	**Kalianget**	**21.39**	**198**	P	**P**	**03 13 56.7**	**+1.8**
	comp=Z,998nm,1.4s,mb6.0						
JNU	**Nakatsue**	**21.74**	**24**	*e*P	**P**	**03 13 59.9**	**+1.4**
	comp=Z,103nm,1.1s,mb5.1						
BMNI	**Bima**	**21.93**	**185**	P	**P**	**03 14 00.8**	**+0.1**
	comp=Z,522nm,1.5s,mb5.7						
MMRI	**Maumere**	**22.02**	**175**	P	**P**	**03 14 03.7**	**+2.1**
	comp=Z,1μm,1.9s,mb5.9						
SRBI	**Singaraja**	**22.04**	**194**	P	**P**	**03 14 02.7**	**+0.8**
	comp=Z,668nm,1.3s,mb5.8						
KHKI	**Kahang-Kahang**	**22.22**	**193**	P	**P**	**03 14 03.4**	**-0.4**
	comp=Z,7μmcomp=Z,426nm,1.6s,mb5.5						
NBBI	**Negara**	**22.46**	**195**	P	**P**	**03 14 09.9**	**+3.6**
	comp=Z,1μm,1.4s,mb6.0						
NGJI	**Ngawi**	**22.56**	**204**	P	**P**	**03 14 10.8**	**+3.4**
	comp=Z,959nm,1.4s,mb5.9						
RGRI	**Rengat**	**22.64**	**234**	P	**P**	**03 14 10.0**	**+1.7**
	comp=Z,424nm,1.5s,mb5.5						
JAGI	**Jajag, Banyuwa**	**22.68**	**197**	P	**P**	**03 14 09.4**	**+0.7**
	comp=Z,1μm,1.8s,mb5.9						
SMRI	**Semarang**	**22.70**	**207**	P	**P**	**03 14 09.2**	**+0.4**
	comp=Z,398nm,1.6s,mb5.5						
GMJI	**Gumukmas**	**22.70**	**198**	P	**P**	**03 14 10.0**	**+1.1**
	comp=Z,504nm,2.1s,mb5.5						
SJI	**Sawahan**	**22.78**	**203**	P	**P**	**03 14 10.7**	**+1.1**
XAN	**Xi'an**	**23.03**	**335**	P	**P**	**03 14 09.8**	**-2.3**
XAN				pP		03 14 26.5	
XAN				sP	sP	03 14 36.0	-2.0
XAN				PP		03 14 40.8	
XAN				S	**S**	**03 18 05.0**	**-12**
XAN	comp=Z,15nm,1.1s,mb4.2			pmax	pmax		
XAN	comp=Z,3μm,12.5s			pmax	pmax		
XAN	comp=N,18μm,15.8s			LR	LR		
XAN	comp=E,5μm,15.9s			LR	LR		
XAN	comp=Z,9μm,16.5s			LR	LR		
CD2	**Chengdu**	**23.23**	**321⇓**	*i*P	**P**	**03 14 13.8**	**-0.1**
CD2				pP		03 14 31.3	
CD2				sP	sP	03 14 40.5	+0.4
CD2				PP		03 14 49.0	
CD2				PcP	PcP	03 18 00.5	+0.9
CD2				S	**S**	**03 18 18.3**	**-1.7**
CD2				sS	sS	03 18 47.3	-3.0
CD2				SS		03 19 10.5	
CD2				PcS	PcS	03 21 38.5	-0.4
CD2	comp=Z,1μm,1.0s,mb6.1			pmax	pmax		
CD2	comp=Z,17μm,6.0s			pmax	pmax		
CD2	comp=N,26μm,14.4s			LR	LR		
CD2	comp=E,23μm,16.8s			LR	LR		
CD2	comp=Z,32μm,12.0s			LR	LR		
UGM	**Wanagama**	**23.44**	**206**	*e*P	**P**	**03 14 19.6**	**+3.6**
	comp=Z,2μm,1.5s,mb6.3						
GUMO	**Guam**	**23.68**	**87**	P	**P**	**03 14 18.2**	**-0.1**
	comp=Z,209nm,1.0s,mb5.4,baz=194,slow=4.4,SNR=6.3						
GUMO	**Guam**	**23.68**	**87**	*e*P	**P**	**03 14 21.4**	**+3.1**
	comp=Z,673nm,1.4s,mb5.8						
GUMO				LR	LR		
	comp=Z,20μm,19.0s						
GUMO	**Guam**	**23.68**	**87**	*e*P	**P**	**03 14 21.4**	**+3.1**
GUMO				pmax	pmax		
	comp=Z,673nm,1.4s,mb5.8						
GUMO				MLR	MLR		
	comp=Z,20μm,19.0s						
PSI	**Prapat**	**23.82**	**245**	P	**P**	**03 14 18.8**	**-0.8**
	comp=Z,106nm,0.9s,mb5.2,baz=34,slow=2.9,SNR=15						
PSI	**Prapat**	**23.82**	**245**	P	**P**	**03 14 18.8**	**-0.7**
CBIJ	**Chichi jima**	**24.39**	**53**	P	**P**	**03 14 21.8**	**-2.8**
	comp=Z,63nm,0.8s,mb5.0,baz=283,slow=17,SNR=2.6						
INCN	**Inchon**	**24.54**	**12**	*e*P	**P**	**03 14 26.8**	**+0.9**
	comp=Z,372nm,1.6s,mb5.6						
INCN				LR	LR		
	comp=Z,10μm,19.0s						
KSRS	**Korea Array**	**24.79**	**14**	P	**P**	**03 14 25.7**	**-2.4**
	comp=Z,3.5nm,1.0s,baz=268,slow=15,SNR=7.7						
TIY	**Taiyuan**	**25.20**	**345**	*e*P	**P**	**03 14 32.5**	**+0.7**
TIY				sP	sP	03 14 57.0	-2.0
TIY				PP		03 15 11.8	
TIY				S	**S**	**03 18 53.3**	**+1.8**
TIY	comp=Z,54nm,0.9s,mb5.0			pmax	pmax		
TIY	comp=Z,4μm,5.8s			pmax	pmax		
TIY	comp=N,11μm,12.3s			LR	LR		
TIY	comp=E,14μm,13.2s			LR	LR		
TIY	comp=Z,14μm,19.6s			LR	LR		
DL2	**Dalian**	**25.36**	**2**	P	**P**	**03 14 36.0**	**+2.7**
DL2				S	**S**	**03 18 59.3**	**+5.3**
DL2	comp=Z,80nm,1.2s,mb5.0			pmax	pmax		
DL2	comp=Z,2μm,6.5s			pmax	pmax		
DL2	comp=N,6μm,13.8s			LR	LR		
DL2	comp=E,6μm,14.4s			LR	LR		
DL2	comp=Z,7μm,13.9s			LR	LR		
BJT	**Baijiatuau**	**26.73**	**353**	*e*P	**P**	**03 14 45.1**	**-0.5**
	comp=Z,100nm,0.8s,mb5.4						
BJT				LR	LR		
	comp=Z,13μm,21.0s						
BJT	**Baijiatuau**	**26.73**	**353**	*e*P	**P**	**03 14 45.1**	**-0.5**
BJT				pmax	pmax		
BJT	comp=Z,100nm,0.8s			MLR	MLR		
BJT	comp=Z,13μm,21.0s						
BJI	**Beijing**	**26.75**	**353**	P	**P**	**03 14 45.0**	**-0.8**
BJI				S	**S**	**03 19 20.8**	**+4.9**
BJI				sS	sS	03 19 50.0	+2.8
BJI	comp=Z,92nm,1.6s,mb5.1			pmax	pmax		
BJI	comp=Z,3μm,10.1s			pmax	pmax		
BJI	comp=N,8μm,21.2s			LR	LR		
BJI	comp=E,19μm,22.1s			LR	LR		
BJI	comp=Z,10μm,28.9s			LR	LR		
LZH	**Lanzhou**	**27.05**	**329**	*e*P	**P**	**03 14 49.0**	**+0.4**
LZH				pP	pP	03 15 07.0	+0.4
LZH				sP	sP	03 15 16.0	+0.2
LZH				PP		03 15 42.0	
LZH				PcP	PcP	03 18 06.3	-1.8
LZH				*e*S	**S**	**03 19 20.5**	**-0.3**
LZH				sS	sS	03 19 53.0	+0.9
LZH				SS		03 20 44.5	
LZH	comp=Z,65nm,1.1s,mb5.1			pmax	pmax		
LZH	comp=Z,370nm,4.7s			pmax	pmax		
LZH	comp=N,25μm,13.8s			LR	LR		
LZH	comp=E,13μm,10.9s			LR	LR		
LZH	comp=Z,25μm,16.2s			LR	LR		
MAJO	**Matsushiro**	**27.93**	**32**	*e*P	**P**	**03 14 55.7**	**-0.7**
	comp=Z,37nm,1.1s,mb4.8						
MAJO	comp=Z,9μm,20.0s			LR	LR		
MAJO	**Matsushiro**	**27.93**	**32**	*e*P	**P**	**03 14 55.7**	**-0.7**
MAJO	comp=Z,37nm,1.1s,mb4.8			pmax	pmax		
MAJO	comp=Z,9μm,20.0s			MLR	MLR		
MAT	**Matsushiro**	**27.93**	**32**	P	**P**	**03 14 54.1**	**-2.3**
MAT				*e*S	**S**	**03 19 38.0**	**+3.4**
MJAR	**Matsushiro Arr**	**27.93**	**32**	P	**P**	**03 14 54.2**	**-2.2**
	comp=Z,7.1nm,0.8s,mb4.3,baz=216,slow=9.3,SNR=9.3						
MJAR	**Matsushiro Arr**	**27.93**	**32**	P	**P**	**03 14 54.2**	**-2.2**
MJAR	**Matsushiro Arr**	**27.93**	**32**	P	**P**	**03 14 54.2**	**-2.2**
HHC	**Hu-ho-hao-te**	**28.39**	**346**	*e*P	**P**	**03 15 00.3**	**-0.1**
HHC				PP	PP	03 15 53.3	-13
HHC				PcP	PcP	03 18 09.8	-1.4
HHC				S	**S**	**03 19 48.0**	**+6.3**
HHC				SS	SS	03 21 15.5	-29
HHC	comp=Z,62nm,1.1s,mb5.0			pmax	pmax		
HHC	comp=Z,3μm,5.4s			pmax	pmax		
HHC	comp=N,16μm,15.9s			LR	LR		
HHC	comp=E,11μm,16.3s			LR	LR		
HHC	comp=Z,16μm,16.5s			LR	LR		
SNY	**Shenyang**	**28.39**	**5**	⇓P	**P**	**03 15 00.5**	**+0.1**
SNY				S	**S**	**03 19 36.5**	**-5.2**
SNY	comp=Z,66nm,2.1s,mb4.8			pmax	pmax		
SNY	comp=Z,3μm,5.3s			pmax	pmax		
SNY	comp=N,7μm,20.0s			LR	LR		
SNY	comp=E,9μm,18.4s			LR	LR		
SNY	comp=Z,7μm,17.6s			LR	LR		
KAKA	**Kakadu**	**28.57**	**155**	*e*P	**P**	**03 15 01.2**	**-1.0**
	comp=Z,145nm,0.9s,mb5.6						
KAKA	**Kakadu**	**28.57**	**155**	*e*P	**P**	**03 15 00.6**	**-1.6**
	comp=Z,258nm,0.5s,mb6.1						
SHL	**Shillong**	**29.47**	**298**	*e*PKP	**P**	**03 15 10.0**	**-0.3**
CN2	**Changchun**	**30.53**	**7**	*e*P	**P**	**03 15 23.0**	**+3.7**
CN2				*e*pP	pP	03 15 40.8	+3.2
CN2				*e*sP	sP	03 15 50.0	+3.3
CN2				*e*S	**S**	**03 20 18.3**	**+3.0**
CN2	comp=Z,10.0nm,1.0s,mb4.5			pmax	pmax		
CN2	comp=Z,200nm,5.0s			pmax	pmax		
CN2	comp=N,8μm,19.0s			LR	LR		
CN2	comp=E,5μm,19.0s			LR	LR		
CN2	comp=Z,7μm,18.0s			LR	LR		
VLA	**Vladivostok**	**31.14**	**16⇓**	*e*P	**P**	**03 15 21.7**	**-3.0**
VLA				*e*		03 16 25.0	
VLA						03 18 15.4	
VLA				S	**S**	**03 20 21.9**	**-3.0**
VLA	comp=Z,42nm,1.1s,mb5.1			pmax	pmax		
LSA	**Lhasa**	**31.60**	**305**	P	**P**	**03 15 30.5**	**+1.6**
LSA	**Lhasa**	**31.60**	**305**	*e*P	**P**	**03 15 30.5**	**+1.6**
	comp=Z,88nm,1.1s,mb5.4						
LSA	comp=Z,7μm,19.0s			LR	LR		
LSA	**Lhasa**	**31.60**	**305**	*e*P	**P**	**03 15 30.5**	**+1.6**
LSA	comp=Z,88nm,1.1s,mb5.4			pmax	pmax		
LSA	comp=Z,7μm,19.0s			MLR	MLR		
GTA	**Gaotai**	**31.64**	**329**	P	**P**	**03 15 29.3**	**+0.1**
GTA				pP	pP	03 15 47.8	+0.3
GTA				sP	sP	03 15 56.0	-0.6
GTA				PcP	PcP	03 18 22.0	+2.3
GTA				S	**S**	**03 20 29.5**	**-3.3**
GTA	comp=Z,22nm,1.7s,mb4.6			pmax	pmax		
GTA	comp=Z,3μm,7.1s			pmax	pmax		
GTA	comp=N,15μm,16.1s			LR	LR		
GTA	comp=E,23μm,16.1s			LR	LR		
GTA	comp=Z,29μm,15.7s			LR	LR		
FITZ	**Fitzroy Crossi**	**31.77**	**171**	P	**P**	**03 15 29.1**	**-1.4**
	comp=Z,122nm,1.0s,mb5.6,baz=358,slow=7.5,SNR=23						
FITZ	**Fitzroy Crossi**	**31.77**	**171**	*e*P	**P**	**03 15 29.3**	**-1.2**
	comp=Z,168nm,0.9s,mb5.8						
FITZ	**Fitzroy Crossi**	**31.77**	**171**	*e*P	**P**	**03 15 29.6**	**-0.9**
	comp=Z,137nm,1.0s,mb5.6						
MDJ	**Mudanjiang**	**32.00**	**12**	P	**P**	**03 15 31.0**	**-1.3**
MDJ				pP	pP	03 15 48.0	-2.6
MDJ				sP	sP	03 15 56.3	-3.3
MDJ				PP	PP	03 16 43.5	-2.4
MDJ				S	**S**	**03 20 36.5**	**-1.8**
MDJ				ScP	ScP	03 21 57.8	+0.5
MDJ				PcS	PcS	03 22 05.5	+0.3
MDJ	comp=Z,12nm,1.1s,mb4.5			pmax	pmax		
MDJ	comp=Z,430nm,5.8s			pmax	pmax		
MDJ	comp=N,7μm,21.2s			LR	LR		
MDJ	comp=E,7μm,19.2s			LR	LR		
MDJ	comp=Z,11μm,18.5s			LR	LR		
MDJ	**Mudanjiang**	**32.00**	**12**	*e*P	**P**	**03 15 31.4**	**-0.9**
	comp=Z,30nm,0.9s,mb5.0						
MDJ	comp=Z,10μm,19.0s			LR	LR		
TAPN	**Taplejung**	**33.58**	**299**	*e*P	**P**	**03 15 46.3**	**0.0**
	comp=Z,438nm,1.3s,mb6.1						
ODAN	**Odare**	**33.71**	**298**	*e*P	**P**	**03 15 47.0**	**-0.5**
	comp=Z,370nm,1.0s,mb6.2						
MBWA	**Marble Bar**	**34.41**	**181**	*e*P	**P**	**03 15 53.1**	**-0.4**
	comp=Z,85nm,0.8s,mb5.6						
MBWA	comp=Z,6μm,22.0s			LR	LR		
MBWA	**Marble Bar**	**34.41**	**181**	P	**P**	**03 15 53.9**	**+0.4**
	SNR=11						
ERM	**Erimo**	**34.58**	**30**	PFAKE		03 16 00.0	+5.2
ERM				LR	LR		
	comp=Z,5μm,19.0s						
ERM	**Erimo**	**34.58**	**30**	P	pP	03 16 10.0	-3.2
ERM				MLR	MLR		
	comp=Z,5μm,19.0s						
COCO	**West Island**	**34.65**	**224**	PFAKE		03 16 00.0	+4.3
COCO				LR	LR		
	comp=Z,4μm,19.0s						
COCO	**West Island**	**34.65**	**224**	P	pP	03 16 10.0	-4.1
COCO				MLR	MLR		
	comp=Z,4μm,19.0s						
PMG	**Port Moresby**	**34.87**	**129**	*e*P	**P**	**03 15 57.1**	**-0.5**
	comp=Z,92nm,1.0s,mb5.6						
PMG	comp=Z,9μm,22.0s			LR	LR		
PMG	**Port Moresby**	**34.87**	**129**	*d i*P	**P**	**03 15 56.5**	**-1.1**
PMG				pmax	pmax		
	comp=Z,75nm,1.0s						
COEN	**Coen**	**35.30**	**140**	*e*P	**P**	**03 16 00.5**	**-0.7**
	comp=Z,351nm,0.8s,mb6.2						
GUN	**Gumba**	**35.30**	**300**	*e*P	**P**	**03 16 01.2**	**0.0**
	comp=Z,408nm,0.8s,mb6.3						
PKI	**Pulchoki**	**35.60**	**299**	*e*P	**P**	**03 16 03.2**	**-0.6**
	comp=Z,645nm,1.2s,mb6.4						
PKI	**Pulchoki**	**35.60**	**299**	*e*P	**P**	**03 16 03.2**	**-0.6**
PKI				pmax	pmax		
	comp=Z,645nm,1.2s,mb6.4						
PKIN	**Phulchoki**	**35.62**	**299**	*e*P	**P**	**03 16 03.0**	**-0.9**
	comp=Z,160nm,0.6s,mb6.1						
HIA	**Hailar**	**35.71**	**359**	*e*P	**P**	**03 16 03.1**	**-1.2**
	comp=Z,18nm,0.8s,mb5.0						
HIA				LR	LR		

comp=Z,5μm,19.0s
HIA Hailar 35.71 359 *e*P **P 03 16 03.2 -1.1**
HIA pmax pmax
comp=Z,18nm,0.8s
HIA MLR MLR
comp=Z,5μm,19.0s
KKN Kakani 35.77 299 *e*P **P 03 16 04.8 -0.4**
comp=Z,516nm,1.2s,mb6.3
KKN Kakani 35.77 299 *e*P **P 03 16 04.8 -0.4**
KKN pmax pmax
comp=Z,516nm,1.2s,mb6.3
DMN Daman 35.87 299 *e*P **P 03 16 05.7 -0.4**
comp=Z,589nm,1.1s,mb6.4
WRA Warramunga Arr 35.88 157 P **P 03 16 04.6 -1.5**
comp=Z,385nm,0.8s,mb6.4,baz=336,slow=9.5,SNR=47
WRA S **S 03 21 38.1 -0.4**
comp=Z,14nm,1.0s,baz=332,slow=18,SNR=5.8
WRA Warramunga Arr 35.88 157 P **P 03 16 04.6 -1.5**
WRA S **S 03 21 38.1 -0.4**
ASAJ Asahikawa 35.93 27 P **P 03 16 05.1 -1.2**
comp=Z,20nm,0.8s,mb5.1,baz=231,slow=5.8,SNR=4.3
ASAJ Asahikawa 35.93 27 *e*P **P 03 16 08.5 +2.2**
comp=Z,36nm,1.1s,mb5.2
VIS Vishakhapatnam 36.02 282 *e*PKP **P 03 16 07.2 -0.3**
VIS AMb AMB 03 16 15.4
comp=Z,336nm,1.2s,mb6.1
ULN Ulaanbaatar 36.09 345 *e*P **P 03 16 07.8 +0.2**
comp=Z,300nm,1.2s,mb6.1
ULN LR LR
comp=Z,9μm,19.0s
ULN Ulaanbaatar 36.09 345 *e*P **P 03 16 07.8 +0.2**
ULN pmax pmax
comp=Z,300nm,1.2s,mb6.1
ULN MLR MLR
comp=Z,9μm,19.0s
ULN Ulaanbaatar 36.09 345 P **P 03 16 08.2 +0.6**
SNR=29
SONM Songino Array 36.23 344 P **P 03 16 07.6 -1.3**
comp=Z,88nm,0.7s,mb5.8,baz=159,slow=9.2,SNR=33
SONM Songino Array 36.23 344 P **P 03 16 07.6 -1.3**
GKN Gorkha 36.38 299 *e*P **P 03 16 09.4 -1.0**
comp=Z,423nm,1.2s,mb6.2
KLR Kul'dur 36.85 12 *e*P **P 03 16 08.8 -5.3**
KLR pmax pmax
comp=N,2μm,10.0s
KLR pmax pmax
comp=E,800nm,10.0s
KLR pmax pmax
comp=Z,3μm,10.0s
KOLN Koldanda 37.20 298 *e*P **P 03 16 16.8 -0.6**
comp=Z,263nm,1.0s,mb6.1
DANN Dangsing 37.22 299 *e*P **P 03 16 17.1 -0.4**
comp=Z,668nm,1.1s,mb6.5
YUK Yuzh-Kuril'sk 37.41 31⇑ *i*P **P 03 16 18.3 -0.6**
YUK pmax pmax
comp=N,2μm,2.8s
YUK pmax pmax
comp=Z,3μm,2.8s,mb6.7
YUK pmax pmax
comp=E,5μm,2.4s
YUK MLR MLR
comp=N,1μm,20.0s
YUK MLR MLR
comp=E,3μm,20.0s
YUK MLR MLR
comp=Z,2μm,20.0s
YSS Yuzh-Sakhalins 38.24 25 *e*P **P 03 16 25.2 -0.7**
comp=Z,101nm,1.1s,mb5.6
YSS LR LR
comp=Z,2μm,21.0s
YSS Yuzh-Sakhalins 38.24 25⇓ *e*P **P 03 16 28.0 +2.1**
YSS *e* 03 16 40.3
YSS *e*S **S 03 22 16.0 +2.0**
YSS *e* 03 22 30.0
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.1
YSS MLR MLR
comp=N,4μm,17.0s
YSS MLR MLR
comp=E,6μm,17.0s
YSS MLR MLR
comp=Z,5μm,17.0s
CIT Chita 38.87 353 *e*P **P 03 16 29.3 -1.7**
CIT pmax pmax
comp=Z,483nm,1.5s,mb6.1
ASAR Alice Springs 39.16 160 P **P 03 16 33.5 -0.2**
comp=Z,193nm,0.5s,mb6.2,baz=339,slow=6.7,SNR=110
ASAR S **S 03 22 32.2 +4.0**
comp=Z,3.8nm,0.9s,baz=350,slow=21,SNR=2.6
ASAR Alice Springs 39.16 160 P **P 03 16 33.6 -0.2**
ASAR S **S 03 22 32.2 +4.0**
MDRS Chennai 39.16 274⇓ *i*P pP 03 16 49.2 -3.5
MDRS *i* PP PP 03 18 17.2 +12
MDRS *e*S **S 03 22 45.2 +17**
MDRS *e*x x 03 24 33.2
MDRS *e*x x 03 27 33.2
MDRS *e*x x 03 32 01.2
MDRS *e*x x 03 34 03.2
MDRS *e*x x 03 35 19.2
MDRS *e*x x 03 36 31.2
MDRS *e*x x 03 40 25.2
MDRS *e*x x 03 42 41.2
ZAK Zakamensk 39.41 343 *e*P **P 03 16 35.3 -0.3**
ZAK pmax pmax
comp=Z,40nm,1.1s,mb5.2
PALK Pallekele 39.60 265 *e*P **P 03 16 37.4 -0.3**
comp=Z,129nm,1.4s,mb5.6
PALK Pallekele 39.60 265 *e*P **P 03 16 37.4 -0.3**
PALK pmax pmax
comp=Z,129nm,1.4s,mb5.6
PALK Pallekele 39.60 265 P **P 03 16 40.8 +3.1**
SNR=5.5
PALK mb 03 16 44.1
SNR=7.4
TLY Talaya 40.48 344 *e*P **P 03 16 44.5 +0.1**
TLY LR LR
comp=Z,8μm,20.0s
TLY Talaya 40.48 344 *e*P **P 03 16 44.5 +0.1**
TLY MLR MLR
comp=Z,8μm,20.0s
TLY Talaya 40.48 344 P **P 03 16 44.2 -0.2**
comp=Z,350nm,0.8s,mb6.2,SNR=12
TLY Talaya 40.48 344 P **P 03 16 44.9 +0.6**
SNR=15
TLY mb 03 16 50.6
SNR=23
PTH Pithoragarh 40.53 300 *e*PKP **P 03 16 44.0 -1.2**
PTH *e*x PcP 03 18 48.8 +2.4
HYB Hyderabad 40.58 281 *i* P **P 03 16 46.0 +0.3**
HYB *e*S **S 03 22 56.0 +6.2**
IRK Irkutsk 40.82 345 *e*P **P 03 16 47.0 -0.2**
IRK *e*S **S 03 23 01.1 +8.6**
IRK pmax pmax
comp=Z,300nm,1.4s,mb5.9
WMQ Urumqi 41.29 324 P **P 03 16 52.0 +0.8**
WMQ pP pP 03 17 10.0 0.0
WMQ sP sP 03 17 20.0 +1.1
WMQ PP PP 03 18 32.0 +4.1
WMQ S **S 03 23 02.0 +2.4**
WMQ sS sS 03 23 32.0 +0.2
WMQ SS SS 03 26 02.0 -3.8
WMQ pmax pmax
comp=Z,98nm,1.0s,mb5.6
WMQ pmax pmax
comp=Z,2μm,4.0s
WMQ LR LR
comp=N,17μm,16.0s
WMQ LR LR
comp=E,14μm,16.0s
WMQ LR LR
comp=Z,13μm,16.0s
CTA Charters Tower 41.87 142 P **P 03 16 56.4 +0.1**
comp=Z,83nm,0.9s,mb5.5,baz=326,slow=12,SNR=17
CTA Charters Tower 41.87 142 *e*P **P 03 16 56.7 +0.5**
comp=Z,51nm,0.8s,mb5.3
CTA Charters Tower 41.87 142 P **P 03 16 56.4 +0.2**
CTAO Charters Tower 41.87 142 *e*P **P 03 16 56.0 -0.2**
comp=Z,74nm,1.2s,mb5.3
CTAO LR LR
comp=Z,7μm,22.0s
CTAO Charters Tower 41.87 142 *e*P **P 03 16 56.0 -0.2**
CTAO pmax pmax
comp=Z,74nm,1.2s,mb5.3
CTAO MLR MLR
comp=Z,7μm,22.0s
BHPL Bhopal 41.90 290 *e*PKP **P 03 16 55.7 -0.8**
BHPL AMb AMB 03 17 07.3
comp=Z,124nm,1.8s,mb5.3
TRD Trivandrum 42.99 268 *e*PKP **P 03 17 04.5 -1.0**
TRD AMb AMB 03 17 11.7
comp=Z,121nm,1.2s,mb5.5
CLNS Chul'man 43.42 4 *e*P **P 03 17 09.6 +1.3**
CLNS *e**PP pP 03 17 21.7 -5.5
CLNS *e* 03 18 47.0
CLNS *e* 03 18 59.4
CLNS *e*S **S 03 23 36.6 +6.0**
CLNS *e*SS SS 03 26 34.5 -13
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
CLNS pmax pmax
comp=E,12nm,1.0s
CLNS pmax pmax
comp=N,13nm,1.3s
CLNS pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
CLNS smax
comp=N,501nm,11.0s
CLNS smax
comp=E,865nm,12.6s
CLNS MLR MLR
comp=N,4μm,16.0s
CLNS MLR MLR
comp=E,3μm,13.0s
CLNS MLR MLR
comp=Z,2μm,13.0s
BHK Bhakra 44.16 301 *e*PKP **P 03 17 13.2 -1.5**
WAKE Wake Island 44.55 76 PFAKE 03 17 30.0 +12
WAKE LR LR
comp=Z,4μm,20.0s
FORT Forrest 44.58 171 *e*P **P 03 17 16.8 -1.1**
comp=Z,112nm,1.1s,mb5.5
FORT Forrest 44.58 171 *e*P **P 03 17 16.7 -1.1**
comp=Z,294nm,1.0s,mb6.0
KAD Karad 44.75 281 *e*PKP **P 03 17 18.6 -0.9**
KAD AMb AMB 03 17 28.6
comp=Z,126nm,1.1s,mb5.5
KLBR Kellerberrin 44.87 183 *e*P **P 03 17 20.7 +0.5**
comp=Z,354nm,1.4s,mb5.9
POO Poona 45.04 283 *e*PKP **P 03 17 19.9 -1.9**
POO AMb AMB 03 17 31.0
comp=Z,163nm,2.2s,mb5.4
HNR Honiara 45.28 118 P **P 03 17 23.2 -0.5**
comp=Z,37nm,0.3s,mb5.6,baz=202,slow=5.4,SNR=3.2
HNR Honiara 45.28 118 P **P 03 17 23.2 -0.5**
HNR LR LR
comp=Z,5μm,20.0s
HNR Honiara 45.28 118 P **P 03 17 23.3 -0.4**
HNR MLR MLR
comp=Z,5μm,20.0s
MK31 Makanchi Array 46.11 324 *e*P **P 03 17 30.3 +0.4**
MK31 Makanchi Array 46.11 324 *e*P **P 03 17 30.3 +0.4**
MKAR Makanchi Array 46.11 324 P **P 03 17 30.3 +0.4**
comp=Z,33nm,0.7s,mb5.2,baz=124,slow=7.2,SNR=17
MKAR PcP PcP 03 19 07.6 +2.7
comp=Z,17nm,1.0s,baz=115,slow=4.2,SNR=3.9
MKAR Makanchi Array 46.11 324 P **P 03 17 30.3 +0.4**
MKAR 03 19 07.6
NWAO Narrogin (SRO) 46.23 184 P **P 03 17 31.6 +0.7**
comp=Z,78nm,0.6s,mb5.6,baz=12,slow=7.8,SNR=36
NWAO Narrogin (SRO) 46.23 184 *e*P **P 03 17 31.5 +0.6**
comp=Z,391nm,1.2s,mb6.0
NWAO LR LR
comp=Z,3μm,22.0s
NWAO Narrogin (SRO) 46.23 184 *e*P **P 03 17 31.5 +0.6**
NWAO pmax pmax
comp=Z,391nm,1.2s
NWAO MLR MLR
comp=Z,3μm,22.0s
NWAO Narrogin (SRO) 46.23 184 P **P 03 17 34.5 +3.6**
SNR=15
NWAO mb 03 17 40.6
SNR=25
KSH Kashi 46.92 312 *e*P **P 03 17 38.5 +2.2**
KSH *e*pP pP 03 17 57.0 +1.5
KSH *e*sP sP 03 18 06.0 +1.7
KSH *e*PcP PcP 03 19 11.0 +3.1
KSH *e*PP PP 03 19 29.3 +1.8
KSH *e*ScP ScP 03 22 56.5 +1.6
KSH *e*PcS PcS 03 23 04.5 +1.6
KSH *e*S **S 03 24 22.0 +0.3**
KSH *e*ScS ScS 03 27 23.0 -0.5
KSH *e*SS SS 03 27 42.5 -6.8
KSH pmax pmax
comp=Z,57nm,1.1s,mb5.2
KSH LR LR
comp=N,13μm,15.2s
KSH LR LR
comp=E,10μm,14.8s
KSH LR LR
comp=Z,18μm,17.6s
SKR Severo-Kuril's 47.03 30 *e*P **P 03 17 41.3 +4.4**
SKR *e* 03 19 22.0
SKR *e*PPP 03 20 08.0
SKR *e* 03 27 22.0
SKR pmax pmax
comp=Z,360nm,1.3s,mb5.9
SKR pmax pmax
comp=Z,2μm,4.0s
SKR pmax pmax
comp=E,3μm,8.0s
SKR MLR MLR
comp=Z,6μm,20.0s
SKR MLR MLR
comp=N,3μm,16.0s
SKR MLR MLR
comp=E,4μm,16.0s
AAA Alma-Ata 47.71 317 *e*P **P 03 17 46.1 +3.7**
AAA *e*S **S 03 24 32.9 +0.1**
AAA pmax pmax
comp=Z,5μm,7.6s
AAA smax
comp=E,5μm,8.7s
AAA MLR MLR
comp=Z,9μm,20.0s
ULHL Ulahol 47.76 316 P **P 03 17 44.2 +1.4**
SNR=22
KZA Kyzart 48.38 315 P **P 03 17 49.9 +2.3**
SNR=11
KZA Kyzart 48.38 315 *e*P **P 03 17 49.5 +1.9**
comp=Z,95nm,0.8s,mb5.7
TKM2 Tokmak 2 48.47 316 P **P 03 17 49.1 +0.9**
SNR=14
TKM2 Tokmak 2 48.47 316 *e*P **P 03 17 48.7 +0.5**
comp=Z,46nm,0.8s,mb5.4
TKM2 LR LR
comp=Z,11μm,22.0s
TKM2 Tokmak 2 48.47 316 *e*P **P 03 17 48.7 +0.5**
TKM2 pmax pmax
comp=Z,46nm,0.8s,mb5.4
TKM2 MLR MLR
comp=Z,11μm,22.0s
EIDS Eidsvold 48.76 142 *e*P **P 03 17 50.0 -0.6**
comp=Z,156nm,1.0s,mb5.9
KBK Karagaybulak 48.80 316 P **P 03 17 52.3 +1.5**
SNR=8.6
UCH Uchtor 48.94 315 P **P 03 17 53.2 +1.3**
SNR=24
UCH Uchtor 48.94 315 *e*P **P 03 17 53.1 +1.3**
comp=Z,134nm,0.9s,mb5.9
YAK Yakutsk 48.94 6 *e*P **P 03 17 49.9 -1.6**
comp=Z,54nm,0.8s,mb5.5
YAK LR LR
comp=Z,5μm,21.0s
YAK Yakutsk 48.94 6 *e*P **P 03 17 49.0 -2.5**
YAK *e**PP pP 03 17 57.7 -13
YAK *e* 03 19 10.6
YAK *e* 03 19 44.4
YAK *e*S **S 03 24 48.0 -1.6**
YAK *e**SS sS 03 25 05.2 -17
YAK *e*SS SS 03 28 23.4 +2.2
YAK *e*SSS 03 29 41.0
YAK pmax pmax
comp=Z,42nm,0.9s,mb5.4
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=N,9.0nm,0.9s
YAK pmax pmax
comp=Z,1μm,5.4s
YAK pmax pmax
comp=E,304nm,4.3s
YAK pmax pmax
comp=N,514nm,4.7s
YAK smax
comp=N,508nm,5.3s
YAK smax
comp=E,154nm,4.4s
YAK MLR MLR
comp=Z,7μm,22.0s
YAK MLR MLR
comp=N,4μm,21.0s
YAK MLR MLR
comp=E,4μm,23.0s
BHJ Bhuj 49.03 289 *e*PKP **P 03 17 51.6 -1.3**
BHJ AMb AMB 03 17 51.8
comp=Z,58nm,1.0s,mb5.5
CHMS Chumysh 49.07 316 P **P 03 17 53.5 +0.7**
SNR=13
FRU Bishkek 49.10 316 *i* P **P 03 17 55.0 +1.9**
FRU MLR MLR
comp=Z,10μm,21.0s
AAK Ala-Archa 49.10 315 P **P 03 17 54.2 +1.1**
SNR=11
AAK Ala-Archa 49.10 315 P **P 03 17 52.3 -0.8**
comp=Z,20nm,0.8s,mb5.1,baz=109,slow=6.2,SNR=10
AAK Ala-Archa 49.10 315 *e*P **P 03 17 53.2 +0.1**
comp=Z,89nm,1.0s,mb5.7
AAK *e*PcP PcP 03 19 16.2 +0.6
AAK LR LR
comp=Z,13μm,21.0s
AAK Ala-Archa 49.10 315 *d i*P **P 03 17 53.8 +0.7**
AAK pmax pmax
comp=Z,34nm,1.2s,mb5.2
AAK Ala-Archa 49.10 315 P **P 03 17 54.2 +1.1**
comp=Z,413nm,0.8s,mb6.4,SNR=9.2
AAK Ala-Archa 49.10 315 P **P 03 17 54.0 +0.9**
SNR=12
ZAA0 Zalesovo Array 49.18 333 *e*P **P 03 17 53.1 -0.4**
ZALV Zalesovo Beam 49.18 333 P **P 03 17 52.0 -1.5**
comp=Z,33nm,0.6s,mb5.4,baz=122,slow=6.3,SNR=25
ZALV Zalesovo Beam 49.18 333 P **P 03 17 52.1 -1.4**
PETK Petropavlovsk- 49.32 29 P **P 03 17 52.4 -2.1**
comp=Z,23nm,0.9s,mb5.1,baz=206,slow=5.5,SNR=7.5
PETK Petropavlovsk- 49.32 29 P **P 03 17 52.4 -2.1**
PETK Petropavlovsk- 49.32 29 P **P 03 17 52.4 -2.2**
USP Ospenovka 49.34 316 P **P 03 17 55.5 +0.6**
SNR=18
STKA Stephens Creek 49.40 156 P **P 03 17 54.9 -0.6**
comp=Z,48nm,1.0s,mb5.4,baz=325,slow=6.8,SNR=13
STKA Stephens Creek 49.40 156⇓ *i*P **P 03 17 54.8 -0.7**
comp=Z,156nm,3.0s
STKA Stephens Creek 49.40 156 *e*P **P 03 17 54.2 -1.3**
AML Almayashu 49.47 314 P **P 03 17 57.6 +1.7**
SNR=22
AML Almayashu 49.47 314 *e*P **P 03 17 57.1 +1.2**
comp=Z,105nm,0.9s,mb5.8
AML LR LR
comp=Z,9μm,20.0s
EKS2 Erkin-Say 49.60 315 P **P 03 17 58.1 +1.2**
SNR=19
EKS2 Erkin-Say 49.60 315 *e*P **P 03 17 57.5 +0.5**
comp=Z,83nm,0.9s,mb5.7
EKS2 LR LR
comp=Z,12μm,22.0s
PET Petropavlovsk 49.72 29 PFAKE 03 18 10.0 +12
PET LR LR
comp=Z,3μm,19.0s
PET Petropavlovsk 49.72 29 *d i*P **P 03 17 59.1 +1.5**
PET *e**PP pP 03 18 16.6 -0.3
PET *e* 03 19 55.5
PET *e*S **S 03 25 02.5 +1.8**
PET pmax pmax
comp=Z,900nm,12.2s
PET pmax pmax
comp=Z,900nm,11.6s
PET MLR MLR
comp=Z,3μm,17.0s
KURK Kurchatov 50.28 327 *e*P **P 03 18 02.2 +0.3**
comp=Z,245nm,0.8s,mb6.2
KURK LR LR
comp=Z,6μm,19.0s
KURK Kurchatov 50.28 327 *d i*P **P 03 18 02.1 +0.2**
KURK pmax pmax
comp=Z,372nm,1.2s,mb6.2
KURK Kurchatov 50.28 327 P **P 03 18 02.1 +0.2**
comp=Z,2μm,0.8s,mb7.0,SNR=18
KURK Kurchatov 50.28 327 P **P 03 18 02.9 +1.0**
SNR=28
NVS Novosibirsk 50.47 333 *e*P **P 03 18 02.4 -0.9**
NVS *e*S **S 03 25 14.4 +3.3**
NVS pmax pmax
comp=N,64nm,1.6s
NVS pmax pmax
comp=E,75nm,1.6s
NVS pmax pmax
comp=Z,149nm,1.6s,mb5.7
NVS smax
comp=N,24nm,1.6s
NVS smax
comp=E,29nm,1.2s
KBL Kabul 50.89 304 *e*P **P 03 18 07.0 +0.3**
comp=E,43nm,0.8s,mb5.5
KBL Kabul 50.89 304 *e*P **P 03 18 07.1 +0.3**
KBL pmax pmax
comp=Z,43nm,0.8s,mb5.5
KK31 Karatay Array 52.01 315 *i* P **P 03 18 14.9 -0.1**
KK31 pmax pmax
comp=Z,81nm,1.0s,mb5.7
KKAR Karatay Array 52.01 315 *e*P **P 03 18 15.3 +0.3**
comp=Z,49nm,0.8s,mb5.6
KKAR *e*PcP PcP 03 19 26.8 +0.4
KKAR Karatay Array 52.01 315 *e*P **P 03 18 15.3 +0.3**
KKAR *e* 03 19 26.8
KKAR pmax pmax
comp=Z,49nm,0.8s,mb5.6
DGAR Diego Garcia 52.03 249 PFAKE 03 18 30.0 +14
DGAR LR LR
comp=Z,4μm,19.0s
ARMA Armidale 52.92 146 *e*P **P 03 18 22.5 +0.7**
ARMA Armidale 52.92 146 *e*P **P 03 18 22.1 +0.3**
comp=Z,60nm,0.9s,mb5.6
SEY Seymchan 54.29 17⇑ *e*P **P 03 18 31.8 +0.4**
CAN Canberra 55.52 152 *e*P **P 03 18 39.9 -0.7**
comp=Z,102nm,1.1s,mb5.8
CAN LR LR
comp=Z,3μm,20.0s
CAN Canberra 55.52 152 *e*P **P 03 18 39.9 -0.7**
CAN pmax pmax
comp=Z,102nm,1.1s,mb5.8
CAN MLR MLR
comp=Z,3μm,20.0s
CNB Canberra Magne 55.68 151 *e*P **P 03 18 42.2 +0.4**
BVAR Borovoye Array 55.87 326 P **P 03 18 43.0 +0.1**
comp=Z,38nm,0.6s,mb5.6,baz=120,slow=8.9,SNR=25
BVAR Borovoye Array 55.87 326 P **P 03 18 43.0 +0.1**
TOO Toolangi 55.93 156 *e*P **P 03 18 43.3 -0.2**
BRVK Borovoye 55.94 326 *e*P **P 03 18 43.9 +0.4**
comp=Z,235nm,0.8s,mb6.3
BRVK LR LR
comp=Z,5μm,21.0s
BRVK Borovoye 55.94 326 *e*P **P 03 18 43.9 +0.5**
BRVK pmax pmax
comp=Z,235nm,0.8s,mb6.3
BRVK MLR MLR
comp=Z,5μm,21.0s
BRVK Borovoye 55.94 326 P **P 03 18 44.4 +1.0**
SNR=27
DZM Mont Dzumac 57.23 128 *e*P **P 03 18 53.3 +0.2**
comp=Z,129nm,1.1s,mb5.8
DZM *e*S **S 03 26 52.7 +9.4**
comp=Z,6μm,29.1s
DZM *e*LR LR 03 35 46.5
comp=Z,9μm,27.8s
DZM Mont Dzumac 57.23 128 *e*P **P 03 18 52.3 -0.8**
TIXI Tiksi 58.38 3 PFAKE 03 19 10.0 +10
TIXI LR LR
comp=Z,4μm,20.0s
TIXI Tiksi 58.38 3 *e*P **P 03 18 56.6 -3.7**
TIXI *e*S **S 03 27 00.5 +3.6**
TIXI *e*SS SS 03 30 56.0 +6.1
TIXI pmax pmax
comp=Z,45nm,1.6s,mb5.2
IMON Monand 58.43 301 *e*P **P 03 19 02.0 +0.6**
WBK Wadi Bani Khal 58.88 288 P **P 03 19 04.6 -0.1**

SNR=6.0
IKOO Kooshah 58.94 300 *e*P **P 03 19 06.2 +1.3**
MIDW Midway 59.32 65 PFAKE 03 19 20.0 +12
MIDW LR LR
comp=Z,6μm,20.0s
IAKL Akhelmad 59.48 305 *e*P **P 03 19 10.0 +1.4**
IEMG Emamgholi 59.65 306 *e*P **P 03 19 10.9 +1.2**
JMDO Jabal Madar 59.69 288 P **P 03 19 09.6 -0.7**
SNR=7.4
ABKT Ailbek 60.12 306 P **P 03 19 14.0 +1.0**
comp=Z,981nm,0.9s,mb6.8,SNR=16
ISFR Sfrayin 60.13 305 *e*P **P 03 19 14.2 +1.2**
AMKA Amchitka 60.25 38 *e*P **P 03 19 14.8 +1.2**
comp=Z,24nm,0.6s,mb5.4
HOQ Hoqain 60.37 290 P **P 03 19 14.6 -0.3**
SNR=15
ISHV Shirvan 60.41 306 *e*P **P 03 19 15.3 +0.3**
BSY Bisya 60.51 289 P **P 03 19 15.9 +0.1**
SNR=7.5
AB31 Akbulak array 60.79 319 P **P 03 19 17.1 -0.2**
AB31 pmax pmax
comp=Z,54nm,0.8s,mb5.6
ABKAR Akbulak array 60.79 319 *e*P **P 03 19 17.5 +0.2**
comp=Z,30nm,0.6s,mb5.5
ARQ Araqi 61.10 289 P **P 03 19 19.6 -0.3**
SNR=7.5
TAU Tasmania Unive 61.25 158 *e*P **P 03 19 20.3 -0.1**
comp=Z,90nm,1.1s,mb5.7
TAU LR LR
comp=Z,7μm,19.0s
TAU Tasmania Unive 61.25 158 *e*P **P 03 19 20.3 -0.1**
TAU pmax pmax
comp=Z,207nm,1.1s,mb6.1
TAU MLR MLR
comp=Z,4μm,19.0s
HATD Hatta, Dubai 61.39 291 P **P 03 19 22.2 +0.4**
SNR=6.8
ASHO Ashiyiah 61.46 291 P **P 03 19 26.7 +4.4**
SNR=7.2
IBAF Bafgh 61.82 299 *e*P **P 03 19 25.0 +0.4**
BILL Bilibino 61.99 18 *e*P **P 03 19 24.7 -0.4**
comp=Z,40nm,0.8s,mb5.5
BILL LR LR
comp=Z,4μm,20.0s
BILL Bilibino 61.99 18 *d i*P **P 03 19 24.5 -0.5**
BILL *i* 03 19 31.3
BILL *e**PP pP 03 19 43.4 -1.6
BILL 03 20 08.0
BILL *i* 03 27 58.7
BILL pmax pmax
comp=Z,45nm,1.0s,mb5.5
BILL MLR MLR
comp=Z,4μm,20.0s
FUNA Funafuti 62.22 107 PFAKE 03 19 40.0 +12
FUNA LR LR
comp=Z,7μm,20.0s
AKTK Aktyubinsk 62.28 320 P **P 03 19 26.2 -1.1**
AKTO Aktyubinsk 62.28 320 P **P 03 19 26.2 -1.1**
comp=Z,33nm,0.9s,mb5.4,baz=112,slow=8.4,SNR=17
AKTO Aktyubinsk 62.28 320 P **P 03 19 26.9 -0.4**
AKTO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SVE Sverdlovsk 62.51 328⇓ *e*P **P 03 19 29.3 +0.6**
SVE *e*S **S 03 27 51.6 +1.6**
SVE pmax pmax
comp=Z,267nm,1.2s,mb6.0
IMEH Mehriz 62.63 298 *e*P **P 03 19 29.3 -0.7**
ADK Adak 62.80 38 PFAKE 03 19 40.0 +9.3
ADK LR LR
comp=Z,2μm,20.0s
ICHK Chekchek 62.82 299 *e*P **P 03 19 31.3 0.0**
IANJ Anjilo 63.32 303 *e*P **P 03 19 35.0 +0.5**
IGLO Ghaloghah 63.43 304 *e*P **P 03 19 36.8 +1.6**
ARU Arti 63.48 327 *e*P **P 03 19 34.3 -0.8**
comp=Z,134nm,1.1s,mb5.8
ARU LR LR
comp=Z,4μm,20.0s
ARU Arti 63.48 327 *d i*P **P 03 19 34.5 -0.7**
ARU *e* 03 20 10.3
ARU *e* 03 21 57.1
ARU *e*PPP 03 23 22.8
ARU S **S 03 28 04.0 +1.8**
ARU SSS 03 34 59.4
ARU pmax pmax
comp=Z,147nm,1.7s,mb5.6
ARU Arti 63.48 327 P **P 03 19 34.3 -0.9**
comp=Z,523nm,1.0s,mb6.4,SNR=8.7
IKIA Kiasar 63.53 304 *e*P **P 03 19 35.9 0.0**
RBK Rabkut 63.75 283 P **P 03 19 37.9 +0.3**
SNR=9.4
ISHM Shahmirzad 63.84 303 *e*P **P 03 19 39.1 +1.2**
ISRV Sarvestan 63.94 296 *e*P **P 03 19 39.5 +0.8**
IPAR Pars 63.99 297 *e*P **P 03 19 39.5 +0.5**
ILAS Lasjerd 64.09 303 *e*P **P 03 19 39.9 +0.3**
IFIR Firoozkooh 64.27 303 *e*P **P 03 19 41.5 +0.8**
ABTO Aybut 64.63 283 P **P 03 19 43.6 +0.2**
SNR=7.7
ISFB Sefidab 64.66 302 *e*P **P 03 19 43.7 +0.3**
MSVF Nonsavu 64.68 117 *e*P **P 03 19 44.8 +1.2**
comp=Z,88nm,1.4s,mb5.4
MSVF LR LR
comp=Z,3μm,20.0s
MSVF Nonsavu 64.68 117 P **P 03 19 45.8 +2.1**
comp=Z,141nm,0.6s,mb6.0,SNR=7.4
IR3 Iran Long-Peri 65.67 303 *e*P **P 03 19 49.8 -0.1**
IMHD Mahdasht 65.97 303 *e*P **P 03 19 52.4 +0.6**
IRAZ Razeghan 66.57 303 *e*P **P 03 19 55.9 +0.3**
MSEY Mahe Island 67.01 259 *e*P **P 03 19 58.9 +0.2**
comp=Z,138nm,1.5s,mb5.6
MSEY LR LR
comp=Z,3μm,19.0s
MSEY Mahe Island 67.01 259 *e*P **P 03 19 58.9 +0.2**
MSEY pmax pmax
comp=Z,138nm,1.5s,mb5.6
MSEY MLR MLR
comp=Z,3μm,19.0s
JOHN Johnston Islan 67.32 77 PFAKE 03 20 10.0 +9.3
JOHN LR LR
comp=Z,3μm,20.0s
GAMB Gambell 68.25 26 *e*P **P 03 20 06.3 +0.6**
comp=Z,76nm,1.1s,mb5.4
MAK Makhachkala 68.54 311 *e*P **P 03 20 07.0 -0.9**
MAK *i* *PP pP 03 20 23.4 -4.8
MAK *e**SP sP 03 20 32.1 -4.7
MAK *e* 03 22 42.8
MAK *e*PPP 03 24 20.5
MAK *e*S S 03 29 08.3 +4.1
MAK *e**SS sS 03 29 35.3 -3.5
MAK *e* 03 30 00.7
MAK pmax pmax
comp=Z,165nm,1.3s,mb5.7
KBD Kabd 68.68 296 *e*P **P 03 20 08.3 -0.8**
KBD AMb AMB 03 20 14.9
comp=Z,133nm,0.9s,mb5.8
MIB Mutribah 68.95 297 *e*P **P 03 20 10.1 -0.5**
MIB AMb AMB 03 20 16.3
comp=Z,202nm,0.9s,mb6.0
NAY Al-Naaiem 69.07 296 *e*P **P 03 20 10.5 -0.9**
NAY AMb AMB 03 20 20.2
comp=Z,121nm,1.5s,mb5.5
MUKL Al Mukalla 69.09 281 *e*P **P 03 20 12.6 +0.8**
MUKL AMb AMB 03 20 13.1
comp=Z,95nm,0.7s,mb5.7
AKUT Akutan 69.66 37 *e*P **P 03 20 17.2 +2.6**
comp=Z,56nm,1.0s,mb5.3
AKUT LR LR
comp=Z,1μm,19.0s
IAZR Azarshahr 69.72 305 *e*P **P 03 20 16.7 +1.4**
IMRD Marand 69.91 306 *e*P **P 03 20 16.7 +0.3**
ISHB Shabestar 69.99 306 *e*P **P 03 20 17.6 +0.7**
DGRG David-gareji 70.11 309 P **P 03 20 17.2 -0.4**
MTA Mtatsminda 70.55 310 P **P 03 20 20.3 +0.1**
TBLG Delisi 70.59 310 *e*P **P 03 20 20.7 +0.2**
TBLG Delisi 70.59 310 P **P 03 20 20.7 +0.2**
GNI Garni 70.62 308 P **P 03 20 22.0 +1.3**
comp=Z,34nm,1.0s,mb5.1,baz=149,slow=8.8,SNR=7.3
GNI Garni 70.62 308 *e*P **P 03 20 22.1 +1.4**
comp=Z,188nm,1.2s,mb5.8
GNI LR LR
comp=Z,3μm,20.0s
GNI Garni 70.62 308 *d i*P **P 03 20 21.5 +0.8**
GNI pmax pmax
comp=Z,190nm,2.5s
GNI Garni 70.62 308 mb 03 16 22.3
SNR=39
GNI P 03 20 23.2
SNR=9.1
GOR Gori 71.05 310 P **P 03 20 24.1 +0.8**
BHD Baghdad 71.23 301 *ex* x 03 20 24.0
BHD *ex* x 03 23 03.0
BHD *ex* x 03 29 36.0
BHD *ex* x 03 30 19.0
ONI Oni 71.53 311 P **P 03 20 26.8 +0.6**
GOF Gofitskoye 71.78 313 *e*P **P 03 20 27.0 -0.6**
KIV Kislovodsk 72.05 312 *e*P **P 03 20 29.7 +0.4**
comp=Z,86nm,0.8s,mb5.6
KIV LR LR
comp=Z,3μm,19.0s
KIV Kislovodsk 72.05 312κ *i*P **P 03 20 29.4 +0.1**
KIV *e* 03 20 35.4
KIV *e* pP 03 20 47.3 -2.4
KIV *e*PPP 03 24 50.5
KIV *e*S S 03 29 55.5 +10
KIV *e*SSS 03 37 39.7
KIV pmax pmax
comp=Z,105nm,1.0s,mb5.6
KIV MLR MLR
comp=Z,4μm,16.0s
KIV Kislovodsk 72.05 312 P **P 03 20 29.7 +0.4**
comp=Z,594nm,0.8s,mb6.5,SNR=8.8
KIV Kislovodsk 72.05 312 mb 03 16 21.7
SNR=24
KIV P 03 20 30.0
SNR=12
RER Riviere de l'E 72.29 242 PFAKE 03 20 40.0 +8.9
RER LR LR
comp=Z,1μm,21.0s
AFI Afiamalu 72.36 109 PFAKE 03 20 40.0 +8.4
AFI LR LR
comp=Z,2μm,20.0s
VRHR Novokhopersk 72.67 320 *e*P **P 03 20 32.1 -0.8**
VRHR pmax pmax
comp=N,80nm,1.0s
VRHR pmax pmax
comp=Z,130nm,1.0s,mb5.7
VRHR pmax pmax
comp=E,40nm,0.5s
SDPT Sand Point 72.80 36 *e*P **P 03 20 35.1 +1.6**
comp=E,112nm,1.4s,mb5.5
SDPT LR LR
comp=Z,1μm,18.0s
LBOS 72.81 281 *e*P **P 03 20 35.6 +1.3**
LBOS AMb AMB 03 20 36.8
comp=Z,473nm,1.4s,mb6.1
RPZ Rata Peaks 73.20 144 P **P 03 20 35.7 -0.3**
comp=Z,30nm,0.6s,mb5.3,baz=36,slow=3.0,SNR=9.8
URZ Urewera 73.80 137 P **P 03 20 40.1 +0.4**
comp=Z,11nm,0.7s,mb4.7,baz=45,slow=6.4,SNR=5.1
SNZO South Karori 73.94 141 PFAKE 03 20 50.0 +10
SNZO LR LR
comp=Z,4μm,21.0s
KLMR Klimovskoe 73.96 330 *d i*P **P 03 20 39.6 -0.6**
KLMR *e* 03 23 25.1
KLMR S S 03 30 12.0 +5.9
KLMR pmax pmax
comp=Z,176nm,1.1s,mb5.7
KLMR pmax pmax
comp=Z,797nm,7.8s
TRBA At Turbah 74.01 280 *e*P **P 03 20 42.6 +1.2**
VORD Divnogorie 74.15 319 *e*P **P 03 20 40.7 -0.8**
VORD *e* 03 23 31.5
VORD *e*S S 03 30 05.3 -3.3
VORD pmax pmax
comp=E,50nm,1.1s
VORD pmax pmax
comp=Z,60nm,1.1s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,260nm,2.7s
VORD pmax pmax
comp=Z,330nm,2.7s,mb5.6
VORD pmax pmax
comp=N,320nm,3.9s
VORD smax
comp=N,490nm,5.3s
VORD smax
comp=E,280nm,3.5s
VORD smax
comp=Z,240nm,3.5s
VORD MLR MLR
comp=E,3μm,16.0s
VORD MLR MLR
comp=Z,4μm,16.0s
VORD MLR MLR
comp=N,2μm,17.0s
VOR Voronezh 74.18 320 P **P 03 20 41.0 -0.7**
VOR pmax pmax
comp=Z,240nm,1.0s,mb5.9
SOC Sochi 74.22 312 *d i*P **P 03 20 40.8 -1.3**
SOC *e* 03 23 24.0
SOC *e*PPP 03 25 09.3
SOC *e*S S 03 30 11.3 +1.7
SOC *e**SS sS 03 30 42.5 -2.1
SOC *e*SS SS 03 34 53.2 -3.1
SOC pmax pmax
comp=Z,1μm,4.4s
SOC pmax pmax
comp=Z,74nm,1.1s,mb5.3
VSR Storozhevoye 74.22 320 *e*P **P 03 20 41.1 -0.8**
VSR *e* 03 23 32.3
VSR *e*S S 03 30 09.5 +0.1
VSR pmax pmax
comp=E,90nm,1.2s
VSR pmax pmax
comp=Z,100nm,1.2s,mb5.4
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=Z,450nm,3.4s
VSR pmax pmax
comp=N,230nm,3.5s
VSR pmax pmax
comp=E,640nm,5.3s
VSR smax
comp=E,330nm,3.9s
VSR smax
comp=Z,440nm,4.2s
VSR smax
comp=N,230nm,2.7s
VSR MLR MLR
comp=E,2μm,16.0s
VSR MLR MLR
comp=Z,3μm,16.0s
VSR MLR MLR
comp=N,1μm,19.0s
MOS Moscow 74.99 324 *e*P **P 03 20 45.0 -1.3**
MOS *e* pP 03 21 06.4 -0.5
MOS *e* 03 23 34.3
MOS *e*S S 03 30 20.3 +2.5
MOS pmax pmax
comp=Z,147nm,0.7s,mb5.8
MOS MLR MLR
comp=Z,6μm,18.0s
MOS MLR MLR
comp=E,7μm,18.0s
TTA Tatalina 75.15 28 *e*P **P 03 20 47.4 +0.3**
TTA Tatalina 75.15 28 *e*P **P 03 20 47.4 +0.3**
SVW2 Sparrevohn 75.39 30 *e*P **P 03 20 48.8 +0.4**
comp=E,42nm,1.1s,mb5.1
SVW2 LR LR
comp=Z,1μm,18.0s
OBN Obninsk 75.62 324 *e*P **P 03 20 49.1 -0.9**
comp=Z,130nm,0.8s,mb5.7
OBN LR LR
comp=Z,6μm,21.0s
OBN Obninsk 75.62 324 *d i*P **P 03 20 48.5 -1.4**
OBN *e* 03 20 56.1
OBN *e* 03 21 00.0
OBN PPP 03 25 35.0
OBN *e*S S 03 30 23.8 -1.0
OBN pmax pmax
comp=Z,223nm,1.2s,mb5.8
OBN MLR MLR
comp=Z,6μm,17.0s
OBN Obninsk 75.62 324 P **P 03 20 49.0 -0.9**
comp=Z,1μm,0.7s,mb6.7,SNR=10
MALT Malatya 75.63 306 *e*P **P 03 20 51.1 +0.8**
comp=Z,37nm,0.9s,mb5.1
MALT LR LR
comp=Z,3μm,22.0s
MALT Malatya 75.63 306 ⇓P **P 03 20 51.4 +1.1**
MALT Malatya 75.63 306 ⇓ *i*P **P 03 20 51.4 +1.1**
ANN Anapa 75.76 313 *e*P **P 03 20 49.3 -1.7**
ANN *e**PP pP 03 21 11.1 -0.5
ANN *e*S S 03 30 27.9 +1.1
ANN pmax pmax
comp=Z,103nm,1.2s,mb5.4
LVZ Lovozero 76.07 337 *e*P **P 03 20 51.4 -0.9**
comp=Z,65nm,1.0s,mb5.3
LVZ LR LR
comp=Z,9μm,19.0s
LVZ Lovozero 76.07 337⇓ *i*P **P 03 20 51.5 -0.7**
LVZ pmax pmax
comp=Z,66nm,1.0s,mb5.3
APA Apatity 76.56 337 *i*P **P 03 20 55.0 0.0**
APA *e*S S 03 30 34.0 -0.7
APA *i* 03 30 54.0
APA *i* SS SS 03 35 34.0 +3.3
APA pmax pmax
comp=Z,39nm,1.0s,mb5.1
APA MLR MLR
comp=Z,14μm,16.0s
PAF Port-aux-Franc 76.62 211 PFAKE 03 21 10.0 +14
PAF LR LR
comp=Z,3μm,22.0s
OHAK Old Harbor 76.75 34 *e*P **P 03 20 57.4 +1.1**
comp=Z,29nm,0.9s,mb5.0
OHAK LR LR
comp=Z,2μm,19.0s
RSO Redoubt South 76.80 31 *e*P **P 03 20 56.8 +0.3**
comp=Z,78nm,0.9s,mb5.4
PPLA Purkeypile 76.90 28 *e*P **P 03 20 57.1 0.0**
comp=Z,94nm,1.4s,mb5.3
KDAK Kodiak Island 77.09 33 P **P 03 20 57.9 -0.3**
comp=Z,12nm,0.8s,mb4.7,baz=276,slow=10,SNR=4.9
KDAK Kodiak Island 77.09 33 P **P 03 20 57.9 -0.3**
KDAK LR LR
comp=Z,3μm,19.0s
KDAK Kodiak Island 77.09 33 P **P 03 20 57.9 -0.3**
KDAK MLR MLR
comp=Z,3μm,19.0s
BPAW Bear Paw Mtn. 77.35 27 *e*P **P 03 20 59.2 -0.3**
comp=Z,77nm,0.9s,mb5.4
KIP Kipapa 77.39 71 PFAKE 03 21 10.0 +9.4
KIP LR LR
comp=Z,3μm,19.0s
COLD Coldfoot 77.42 24 *e*P **P 03 20 59.6 -0.2**
comp=Z,17nm,0.9s,mb4.8
ASF Jabal al Asfar 77.62 300 P **P 03 21 02.8 +1.1**
comp=Z,51nm,1.0s,mb5.2,baz=334,slow=1.1,SNR=22
ASF Jabal al Asfar 77.62 300 P **P 03 21 02.8 +1.1**
TRF Thorofare Moun 77.72 27 *e*P **P 03 21 01.8 +0.2**
JOF Joensuu 77.77 332 *e*P **P 03 21 01.6 -0.3**
JOF pmax pmax
comp=Z,39nm,0.5s,mb5.4
JOF Joensuu 77.77 332 *e*p **P 03 21 01.6 -0.3**
comp=Z,39nm,0.5s,mb5.4
SLKM Skilak Lake 78.05 30 *e*P **P 03 21 04.8 +1.3**
SLKM Skilak Lake 78.05 30 *e*P **P 03 21 04.8 +1.4**
SIM Simferopol' 78.09 314 *c i*P **P 03 21 05.8 +1.8**
SIM *e*S S 03 30 59.4 +7.3
SIM pmax pmax
comp=Z,84nm,0.9s,mb5.5
HWQ Hawqa 78.11 303 *e*P **P 03 21 07.3 +2.9**
RC01 Rabbit Creek A 78.22 30 *e*P **P 03 21 03.8 -0.6**
comp=Z,26nm,0.9s,mb5.0
MCK McKinley 78.29 27 *e*P **P 03 21 04.0 -0.8**
comp=Z,111nm,1.0s,mb5.5
MCK McKinley 78.29 27 *e*P **P 03 21 04.0 -0.7**
MCK pmax pmax
comp=Z,111nm,1.0s,mb5.5
RCY Rachaya 78.33 302 *e*P **P 03 21 07.0 +1.3**
BHL Bhannes 78.41 302 *e*P **P 03 21 09.1 +3.1**
PMR Palmer 78.45 29 *e*P **P 03 21 04.6 -1.1**
comp=Z,17nm,0.7s,mb4.9
PMR LR LR
comp=Z,1μm,18.0s
PMR Palmer 78.45 29 *e*P **P 03 21 04.6 -1.1**
PMR pmax pmax
comp=Z,17nm,0.7s,mb4.9
PMR MLR MLR
comp=Z,1μm,18.0s
SEW Seward 78.47 31 *e*P **P 03 21 06.4 +0.6**
comp=Z,97nm,1.4s,mb5.3
COLA College 78.62 26 *e*P **P 03 21 06.2 -0.4**
comp=Z,49nm,1.1s,mb5.2
COLA LR LR
comp=Z,2μm,19.0s
COLA College 78.62 26 *e*P **P 03 21 06.2 -0.3**
COLA pmax pmax
comp=Z,49nm,1.1s,mb5.2
COLA MLR MLR
comp=Z,2μm,19.0s
KEV Kevo 78.69 339 PFAKE 03 21 20.0 +13
KEV LR LR
comp=Z,5μm,21.0s
KEV Kevo 78.69 339 *e*P **P 03 21 06.2 -0.6**
KEV pmax pmax
comp=Z,9.0nm,0.5s,mb4.9
KEV Kevo 78.69 339 *e*p **P 03 21 06.2 -0.6**
comp=Z,8.6nm,0.5s,mb4.8
SML Sawmill 78.80 29 *e*P **P 03 21 07.0 -0.6**
comp=Z,22nm,1.0s,mb4.9
SML Sawmill 78.80 29 *e*P **P 03 21 07.0 -0.6**
SML pmax pmax
comp=Z,22nm,1.0s,mb4.9
ILAR Eielson Array 79.04 26 P **P 03 21 08.1 -0.8**
comp=Z,7.8nm,0.8s,mb4.6,baz=309,slow=5.3,SNR=20
ILAR PKKPbc PKKPbc 03 40 03.8 +1.0
comp=Z,0.4nm,0.7s,baz=135,slow=2.7,SNR=4.9
ILAR Eielson Array 79.04 26 P **P 03 21 08.1 -0.8**
ABPO Ambohimpanom 79.06 247 *e*P **P 03 21 10.4 +0.7**
comp=Z,45nm,0.9s,mb5.3
ABPO LR LR
comp=Z,2μm,20.0s
ABPO Ambohimpanom 79.06 247 *e*P **P 03 21 10.4 +0.6**
ABPO pmax pmax
comp=Z,45nm,0.9s,mb5.3
ABPO MLR MLR
comp=Z,2μm,20.0s
ARCES ARCESS Array B 79.24 339 P **P 03 21 09.5 -0.4**
comp=Z,11nm,0.5s,mb5.0,baz=86,slow=6.7,SNR=19
ARCES ARCESS Array B 79.24 339 P **P 03 21 09.5 -0.4**
CASY Casey 79.86 184 *e*P **P 03 21 12.7 -0.4**
CASY Casey 79.86 184 *e*P **P 03 21 12.6 -0.4**
comp=Z,101nm,0.9s,mb5.7
CASY LR LR
comp=Z,2μm,22.0s
PAX Paxson 79.94 28 *e*P **P 03 21 13.7 -0.1**
comp=Z,16nm,0.7s,mb5.0
PAX Paxson 79.94 28 *e*P **P 03 21 13.7 -0.1**
PAX pmax pmax
comp=Z,16nm,0.7s,mb5.0
POHA Pohakuloa 79.97 72 PFAKE 03 21 20.0 +5.2
POHA LR LR
comp=Z,3μm,20.0s
CSS Prodhromos 80.14 304 *e*P **P 03 21 15.7 +0.3**
comp=Z,115nm,0.9s,mb5.7
CSS LR LR
comp=Z,2μm,20.0s
CSS Prodhromos 80.14 304 P **P 03 21 15.5 +0.1**
KAF Kangasniemi 80.18 332 *e*P **P 03 21 13.5 -1.5**
KAF pmax pmax
comp=Z,38nm,0.8s,mb5.3
KAF Kangasniemi 80.18 332 *e*p **P 03 21 13.5 -1.5**
comp=Z,38nm,0.8s,mb5.3
KBS Kingsbay 80.38 349 PFAKE 03 21 30.0 +14
KBS LR LR
comp=Z,5μm,22.0s
FINES FINESS Array B 80.40 331 P **P 03 21 15.3 -0.9**
comp=Z,61nm,0.9s,mb5.4,baz=59,slow=5.5,SNR=23
FINES FINESS Array B 80.40 331 P **P 03 21 15.4 -0.9**
DOT Dot Lake 80.45 27 *e*P **P 03 21 16.3 -0.2**
comp=Z,143nm,1.2s,mb5.7
AKASG Malin Array Be 80.52 320 P **P 03 21 16.3 -0.8**
comp=Z,70nm,1.0s,mb5.4,baz=70,slow=4.6,SNR=30
AKASG PP PP 03 24 20.4 -0.8
comp=Z,2.4nm,0.7s,baz=67,slow=9.5,SNR=2.9
AKASG Malin Array Be 80.52 320 P **P 03 21 16.3 -0.8**
AKASG 03 24 20.4
AKBB Malin Array Si 80.52 320 *e*P **P 03 21 16.2 -0.9**
AKBB Malin Array Si 80.52 320 *e*P **P 03 21 16.3 -0.8**
KIEV Kiev 80.53 320 *e*P **P 03 21 16.1 -1.1**
comp=Z,114nm,1.2s,mb5.6
KIEV LR LR
comp=Z,3μm,19.0s

KIEV **Kiev** 80.53 320 *e*P P 03 21 16.1 -1.1
KIEV pmax pmax
comp=Z,114nm,1.2s,mb5.6
KIEV MLR MLR
comp=Z,3µm,19.0s
MICGM **Minsk** 80.69 324⇑*e*P P 03 21 16.0 -1.9
MNK **Minsk** 80.71 324⇑*e*P P 03 21 16.0 -2.1
MNK pmax pmax
comp=Z,220nm,1.0s,mb5.9
MNK MLR MLR
comp=Z,11µm,16.0s
MENT **Mentasta** 80.74 27 *e*P P 03 21 20.6 +2.6
IDID **Didziasalis** 81.19 325 *e*P P 03 21 20.6 0.0
IDID AMB AMB 03 21 25.0
comp=Z,71nm,0.9s,mb5.5
DRV **Dumont d'Urvil** 81.19 172 P P 03 21 25.0 +4.8
DRV SS SS 03 36 40.0 -0.9
DRV R 03 48 00.0
NACGM **Naroch** 81.24 324 *e*P P 03 21 18.0 -2.9
IZAR **Zarasai** 81.38 325 *e*P P 03 21 21.7 +0.1
IZAR AMB AMB 03 21 26.0
comp=Z,57nm,0.8s,mb5.4
KIS **Kishinev** 81.43 316⇑*i*P P 03 21 24.0 +1.9
comp=Z,1µm,5.0s
EGAK **Eagle** 81.45 25 *e*P P 03 21 21.6 -0.2
comp=Z,38nm,0.9s,mb5.2
EGAK LR LR
comp=Z,1µm,19.0s
IIGN **Ignalina** 81.47 325 *e*P P 03 21 22.1 0.0
IIGN AMB AMB 03 21 27.6
comp=Z,33nm,1.1s,mb5.1
ISAL **Salakas** 81.48 325 *e*P P 03 21 22.0 -0.1
ISAL AMB AMB 03 21 27.5
comp=Z,34nm,1.1s,mb5.1
TLCR 81.77 314 ⇑P P 03 21 24.5 +0.6
TLCR 81.77 314⇑*i*P P 03 21 24.5 +0.6
XMAS **Kiritimati** 81.79 90 PFAKE 03 21 30.0 +5.4
XMAS LR LR
comp=Z,3µm,21.0s
TIRR **Tirgusor** 82.19 314 ⇑P P 03 21 26.1 0.0
TIRR **Tirgusor** 82.19 314⇑*i*P P 03 21 26.1 0.0
IAS **Iasi** 82.24 317 P P 03 21 26.6 +0.3
CFR **Carcaliu** 82.24 315 ⇓P P 03 21 27.1 +0.8
CFR **Carcaliu** 82.24 315⇓*i*P P 03 21 27.1 +0.8
DAWY **Dawson** 82.37 26 *e*P P 03 21 26.6 -0.1
PETR 82.76 315⇓*i*P P 03 21 30.2 +1.2
TESR 82.99 316⇑*i*P P 03 21 30.7 +0.5
VRI **Vrincioaia** 83.07 315 ⇑P P 03 21 31.7 +1.1
VRI **Vrincioaia** 83.07 315⇑*i*P P 03 21 31.7 +1.1
PLOR **Plostina** 83.13 315 ⇑P P 03 21 31.7 +0.8
PLOR **Plostina** 83.13 315⇑*i*P P 03 21 31.6 +0.7
STEI **Steigen** 83.26 338 *e*P P 03 21 31.2 0.0
STEI *ep*P PcP 03 21 34.6 -0.9
INK **Inuvik** 83.38 21 P P 03 21 29.9 -1.9
comp=Z,26nm,0.9s,mb5.1,baz=276,slow=7.2,SNR=16
INK PKKP PKKPbc 03 39 43.8 -9.4
comp=Z,2.2nm,1.0s,baz=110,slow=4.8,SNR=3.6
INK **Inuvik** 83.38 21 *e*P P 03 21 31.1 -0.7
comp=Z,48nm,1.0s,mb5.3
INK **Inuvik** 83.38 21 *e*P P 03 21 31.1 -0.7
INK pmax pmax
comp=Z,48nm,1.0s
SUW **Suwalki** 83.48 324 *e*P P 03 21 32.5 -0.1
SUW **Suwalki** 83.48 324 *e*P P 03 21 31.7 -0.9
comp=Z,290nm,1.0s,mb6.1
SUW **Suwalki** 83.48 324 *e*P P 03 21 31.7 -0.9
SULR 83.65 314⇑*i*P P 03 21 33.8 +0.1
MLR **Muntele Rosu** 83.69 315 ⇓P P 03 21 33.1 -0.7
MLR **Muntele Rosu** 83.69 315⇓*i*P P 03 21 33.1 -0.7
BURAR **Bucovina Array** 83.71 317 ⇓P P 03 21 34.1 +0.2
BURAR **Bucovina Array** 83.71 317⇓*i*P P 03 21 34.1 +0.2
BUR08 **Bucovina Ar. S** 83.71 317 *e*P P 03 21 34.2 +0.3
DOPR **Dopca** 83.96 316⇓*i*P P 03 21 36.3 +1.1
LVV **L'vov** 83.97 320 *e*P P 03 21 34.8 -0.3
LVV *e*S S 03 31 48.4 -4.5
LVV MLR MLR
comp=N,800nm,21.0s
LVV MLR MLR
comp=E,1µm,21.0s
LVV MLR MLR
comp=Z,2µm,21.0s
ARG **Arkhangelos** 84.07 306 *e*P P 03 21 36.6 +0.6
MOR8 **Moi Rana** 84.15 337 *e*P P 03 21 34.2 -1.5
MOR8 AMb AMB 03 21 40.6
comp=Z,78nm,2.4s,mb5.1
MOR8 **Moi Rana** 84.15 337 *e*P P 03 21 34.2 -1.5
comp=Z,78nm,2.4s,mb5.1
VOIR 84.31 315 ⇑P P 03 21 37.2 +0.2
VOIR 84.31 315⇑*i*P P 03 21 37.2 +0.2
PVL **Pavlikeni** 84.63 313 *e*P P 03 21 41.1 +2.5
ALN **Alexandroupoli** 84.64 311 *e*P P 03 21 38.7 0.0
DIM **Dimitrovgrad** 84.75 312 *e*P P 03 21 39.8 +0.5
SMG **Samos** 84.75 307 *e*P P 03 21 39.5 +0.1
BMR **Baia Mare** 84.83 318 ⇓P P 03 21 40.6 +1.1
BMR **Baia Mare** 84.83 318⇓*i*P P 03 21 40.6 +1.1
KWP **Kalwaria Pacla** 84.84 320 *e*P P 03 21 40.2 +0.6
KWP **Kalwaria Pacla** 84.84 320 *e*P P 03 21 39.9 +0.3
comp=Z,181nm,0.8s,mb6.1
KWP LR LR
comp=Z,4µm,22.0s
KWP **Kalwaria Pacla** 84.84 320 *e*P P 03 21 39.9 +0.3
KWP pmax pmax
comp=Z,181nm,0.8s,mb6.0
KWP MLR MLR
comp=Z,4µm,22.0s
KWP **Kalwaria Pacla** 84.84 320⇑*i*P P 03 21 40.2 +0.6
RDO **Rodhopi** 84.96 311 *e*P P 03 21 40.1 -0.2
RDO **Rodhopi** 84.96 311 P P 03 21 39.9 -0.4
KARP **Karpathos** 84.98 305 *e*P P 03 21 40.8 +0.2
CHOS **Chios island** 85.20 308 *e*P P 03 21 41.7 +0.1
KOLS **Kolonicke sedl** 85.30 319 *e*P P 03 21 42.1 +0.2
comp=Z,35nm,1.3s,mb5.1
KOLS **Kolonicke sedl** 85.30 319 *e*P P 03 21 42.1 +0.2
KOLS pmax pmax
comp=Z,35nm,1.3s,mb5.1
KOLS **Kolonicke sedl** 85.30 319 *e*P P 03 21 42.1 +0.2
TRPA **Tarpa** 85.33 318⇑*i*P P 03 21 42.4 +0.3
UZH **Uzhgorod** 85.36 319 *e*P P 03 21 43.7 +1.5
UZH *e*S S 03 32 09.5 +2.7
UZH MLR MLR
comp=N,2µm,18.0s
UZH MLR MLR
comp=E,2µm,18.0s
RZN **Rozhen** 85.43 312 *e*P P 03 21 43.2 +0.5
CRAR **CRAIOVA** 85.44 314 P P 03 21 43.9 +1.2
DRGR 85.56 317 ⇓P P 03 21 43.6 +0.4
DRGR 85.56 317⇓*i*P P 03 21 43.5 +0.3
SKAG **Skagway** 85.56 30 *e*P P 03 21 44.6 +1.6
comp=E,55nm,1.5s,mb5.3
SKAG LR LR
comp=Z,1µm,19.0s
PGB **Panagyurishte** 85.62 313 *e*P P 03 21 42.7 -0.9
DEV **Deva** 85.67 316 ⇑P P 03 21 44.5 +0.7
DEV **Deva** 85.67 316⇑*i*P P 03 21 44.5 +0.7
KAVA **Kavala** 85.74 311 P P 03 21 42.9 -1.4
CRVS **Cervenica-Dubn** 85.82 319 *e*P P 03 21 45.3 +0.8
comp=Z,150nm,1.2s,mb5.8
CRVS *e* 03 44 58.8
CRVS **Cervenica-Dubn** 85.82 319 *e*P P 03 21 45.3 +0.8
CRVS pmax pmax
comp=Z,151nm,1.2s,mb5.8
CRVS **Cervenica-Dubn** 85.82 319 *e*P P 03 21 45.3 +0.8
ZKR **Zakros** 85.83 305 P P 03 21 45.3 +0.5
GZR **Gura Zlata** 85.88 316 ⇑P P 03 21 45.0 +0.2
GZR **Gura Zlata** 85.88 316⇑*i*P P 03 21 45.0 +0.2
APE **Apeiranthos** 85.91 307 *e*P P 03 21 44.5 -0.7
NVR **Nevrokopi** 86.13 311 *e*P P 03 21 45.6 -0.6
THR1 **Thera Island** 86.13 306 P P 03 21 45.9 -0.4
MMB **Musomiste** 86.17 312 *e*P P 03 21 45.7 -0.7
NPS **Neapolis** 86.28 305 *e*P P 03 21 48.9 +1.9
VTS **Vitosha** 86.29 313 ⇑P P 03 21 46.8 -0.1
VTS **Vitosha** 86.29 313 P P 03 21 46.7 -0.2
VTS **Vitosha** 86.29 313⇑*i*P P 03 21 46.8 -0.1
VTS **Vitosha** 86.29 313 *e*P P 03 21 47.5 +0.6
NIE **Niedzica** 86.41 320 *e*P P 03 21 48.1 +0.8
NIE **Niedzica** 86.41 320 *e*P P 03 21 48.1 +0.8
LAST **Lasithi** 86.41 305 P P 03 21 48.2 +0.5
OJC **Ojcow** 86.50 321 *e*P P 03 21 47.9 +0.1
OJC *e*PcP PcP 03 21 51.1 +1.0
OJC *ep*P pP 03 22 10.9 +2.1
OJC *e*PP PP 03 25 08.7 -1.2
OJC *e*S S 03 32 21.2 +3.4
OJC *e*SS SS 03 37 57.4 -1.8
OJC L 04 06 57.5
comp=Z,2.5nm,19.4s
OJC **Ojcow** 86.50 321 *e*P P 03 21 47.9 +0.1
OJC *e* 03 25 08.7
OJC *e*S S 03 32 21.2 +3.4
OJC *e*SS SS 03 37 57.4 -1.8
KECS **Kecovo** 86.56 319 *e*P P 03 21 48.4 +0.3
comp=Z,41nm,1.1s,mb5.3
KECS **Kecovo** 86.56 319 *e*P P 03 21 48.4 +0.3
KECS pmax pmax
comp=Z,41nm,1.1s,mb5.3
KECS **Kecovo** 86.56 319 *e*P P 03 21 48.4 +0.3
KKB **Krupnik** 86.57 312 *e*P P 03 21 48.0 -0.3
HFS **Hagfors** 86.59 331 P P 03 21 46.0 -2.0
comp=Z,60nm,1.0s,mb5.5,baz=64,slow=3.4,SNR=17
HFS **Hagfors** 86.59 331 P P 03 21 46.0 -2.0
BZS **Buzias** 86.61 316 ⇑P P 03 21 48.2 -0.2
BZS **Buzias** 86.61 316⇑*i*P P 03 21 48.2 -0.2
PAIG **Paliouri** 86.62 310 P P 03 21 47.8 -0.8
SOH **Sokhos** 86.64 311 *e*P P 03 21 45.2 -3.5
PLG **Polygyros** 86.68 311 *e*P P 03 21 48.1 -0.8
KNT **Kendrikon** 86.88 311 P P 03 21 48.8 -1.1
VLY **Voula,Athens** 87.06 308 *e*P P 03 21 48.1 -2.7
VAY **Valandovo** 87.08 312 P P 03 21 49.1 -1.7
ATH **Athens Observa** 87.09 308 *e*P P 03 21 49.8 -1.1
GKP **Gorka Klasztor** 87.09 324 *e*P P 03 21 54.2 +3.7
GKP **Gorka Klasztor** 87.09 324 *e*P P 03 21 54.2 +3.6
GKP MLR MLR
comp=Z,12µm,18.6s
PSZ **Piszkesteto** 87.10 319 *e*P P 03 21 50.7 0.0
comp=Z,59nm,1.0s,mb5.5
PSZ LR LR
comp=Z,3µm,20.0s
PSZ **Piszkesteto** 87.10 319 ⇓P P 03 21 50.8 0.0
PSZ **Piszkesteto** 87.10 319⇓*i*P P 03 21 50.8 0.0
GRG **Griva** 87.30 311 P P 03 21 50.5 -1.4
NB2 **NORSAR Subarra** 87.39 333 P P 03 21 50.7 -1.1
comp=Z,141nm,1.4s,mb5.7,baz=69,slow=4.6
NOA **NORSAR Array B** 87.39 333 P P 03 21 50.8 -1.1
comp=Z,38nm,0.8s,mb5.4,baz=69,slow=4.7,SNR=22
NOA PP PP 03 25 09.0 -7.8
comp=Z,4.2nm,0.9s,baz=71,slow=8.5,SNR=3.6
NOA **NORSAR Array B** 87.39 333 P P 03 21 50.8 -1.1
LKR **Lokris** 87.46 309 *e*P P 03 21 51.0 -1.7
DID **Didima** 87.58 308 *e*P P 03 21 51.8 -1.5
VYHS **Vyhne** 87.61 319 *e*P P 03 21 53.6 +0.4
comp=Z,19nm,1.2s,mb5.0
VYHS **Vyhne** 87.61 319 *e*P P 03 21 53.6 +0.4
VYHS pmax pmax
comp=Z,19nm,1.2s,mb5.0
VYHS **Vyhne** 87.61 319 *e*P P 03 21 53.6 +0.4
OKC **Ostrava-Krasne** 87.63 321 *e*P P 03 21 53.1 -0.1
OKC **Ostrava-Krasne** 87.63 321 *e*P P 03 21 53.1 -0.1
OKC *e*PP PP 03 25 17.5 -1.5
OKC AMS AMS 04 04 00.0
comp=Z,4µm,16.5s
AGG **Agios Georgios** 87.87 310 *e*P P 03 21 51.5 -3.1
KZN **Kozani** 87.94 311 *e*P P 03 21 54.7 -0.2
THL **Klokotos Trika** 87.96 310 *e*P P 03 21 52.7 -2.4
VLI **Veliai** 88.01 307 *e*P P 03 21 52.4 -3.0
VLI **Veliai** 88.01 307 *e*P P 03 21 52.4 -3.0
MORC **Moravsky Berou** 88.02 321 *e*P P 03 21 55.3 +0.2
comp=Z,52nm,1.1s,mb5.5
MORC **Moravsky Berou** 88.02 321 ⇑P P 03 21 55.8 +0.7
MORC **Moravsky Berou** 88.02 321⇑*i*P P 03 21 55.8 +0.7
OSL **Oslo** 88.05 332 *e*P P 03 21 54.3 -0.7
FNA **Florina** 88.09 311 P P 03 21 54.3 -1.4
WRAK **Wrangell Islan** 88.11 32 PFAKE 03 22 10.0 +15
WRAK LR LR
comp=Z,1µm,19.0s
DIVS **Divibare** 88.14 315 P P 03 21 55.7 -0.1
GUR **Goura** 88.15 308 *e*P P 03 21 54.6 -1.4
GUR **Goura** 88.15 308 P P 03 21 54.6 -1.4
VLX **Vlachokerasia** 88.27 308 *e*P P 03 21 54.4 -2.2
VLX **Vlachokerasia** 88.27 308 P P 03 21 55.4 -1.2
EVR **Evrytania** 88.29 310 *e*P P 03 22 02.5 +5.9
EFP **Efpalio** 88.35 309 *e*P P 03 21 55.2 -1.7
EFP **Efpalio** 88.35 309 P P 03 21 55.4 -1.5
PKSM **Moragy** 88.42 317 ⇑P P 03 21 57.0 -0.1
PKSM **Moragy** 88.42 317⇑*i*P P 03 21 57.0 -0.1
KSP **Ksiaz** 88.43 322 *e*P P 03 21 57.6 +0.6
DLBC **Dease Lake** 88.50 30 P P 03 21 55.9 -1.3
comp=Z,4.6nm,1.0s,mb4.5,baz=121,slow=11,SNR=1.9
IVA **Berane** 88.56 314⇑*i*P P 03 21 58.4 +0.6
IVA **Berane** 88.56 314⇑*i*P P 03 21 58.4 +0.6
DPC **Dobruska-Polom** 88.58 322 *e*P P 03 21 58.1 +0.4
DPC **Dobruska-Polom** 88.58 322 *e*P P 03 21 58.1 +0.4
DPC *e*PP PP 03 25 28.6 +2.0
DPC AMS AMS 04 04 10.0
comp=Z,4µm,15.9s
BCI **Bajram Curri** 88.59 313 *i*P P 03 21 58.2 +0.2
PVY **Plav** 88.59 313⇑*i*P P 03 21 57.5 -0.5
PVY **Plav** 88.59 313⇑*i*P P 03 21 57.5 -0.5
ITM **Ithomi** 88.67 308 *e*P P 03 21 57.3 -1.2
ITM **Ithomi** 88.67 308 P P 03 21 57.6 -0.9
KONO **Kongsberg** 88.69 332 PFAKE 03 22 10.0 +12
KONO LR LR
comp=Z,6µm,19.0s
UPC **Upice** 88.71 322 *e*P P 03 21 58.9 +0.5
UPC **Upice** 88.71 322 *e*P P 03 21 58.9 +0.5
VRAC **Vranov** 88.75 321 P P 03 21 59.7 +1.1
VRAC **Vranov** 88.75 321⇑*i*P P 03 21 59.4 +0.8
PLE **Pljevlja** 88.78 314⇑*i*P P 03 21 59.9 +1.1
PLE **Pljevlja** 88.78 314⇑*i*P P 03 21 59.9 +1.1
PLE **Pljevlja** 88.78 314⇑*i*P P 03 21 59.9 +1.1
RLS **Riolos of Patr** 88.78 309 *e*P P 03 21 58.8 -0.2
ZST **Bratislava** 88.80 319 *e*P P 03 21 59.2 +0.4
comp=Z,54nm,2.1s,mb5.2
ZST **Bratislava** 88.80 319 *e*P P 03 21 59.2 +0.4
ZST pmax pmax
comp=Z,54nm,2.1s,mb5.2
ZST **Bratislava** 88.80 319 *e*P P 03 21 59.2 +0.4
PUK **Puka** 88.81 313 *i*P P 03 21 53.7 -5.3
PYL **PYLOS** 88.89 308 *e*P P 03 21 58.1 -1.4
PYL **PYLOS** 88.89 308 P P 03 21 58.0 -1.5
TTG **Podgorica** 89.14 313⇑*i*P P 03 22 00.0 -0.6
TTG **Podgorica** 89.14 313⇑*i*P P 03 22 00.0 -0.5
TTG **Podgorica** 89.14 313⇑*i*P P 03 22 00.0 -0.6
UPM **Unac-Piva** 89.16 314⇑*i*P P 03 22 00.6 0.0
UPM **Unac-Piva** 89.16 314⇑*i*P P 03 22 00.7 0.0
ULC **Ulcinj** 89.29 313⇑*i*P P 03 22 00.6 -0.7
ULC **Ulcinj** 89.29 313⇑*i*P P 03 22 00.7 -0.6
ULC **Ulcinj** 89.29 313⇑*i*P P 03 22 00.7 -0.6
RUE **Ruedersdorf** 89.33 324 *e*P P 03 22 01.6 +0.4
comp=Z,145nm,1.2s,mb5.9
RUE **Ruedersdorf** 89.33 324 *e*P P 03 22 01.3 +0.1
comp=Z,93nm,0.9s,mb5.8
BUM **Brajici-Budva** 89.44 313⇑*i*P P 03 22 00.9 -1.1
BUM **Brajici-Budva** 89.44 313⇑*i*P P 03 22 01.0 -1.0
TREC **Trest** 89.44 321 *e*PP PP 03 25 37.6 +4.1
TREC AMS AMS 04 05 10.0
comp=Z,3µm,15.8s
BRY **Bratogost** 89.50 314⇑*i*P P 03 22 01.7 -0.6
BRY **Bratogost** 89.50 314⇑*i*P P 03 22 01.7 -0.5
BRY **Bratogost** 89.50 314⇑*i*P P 03 22 01.7 -0.6
PVCC **Panska Ves** 89.57 322 *e*P P 03 22 02.5 +0.1
PVCC **Panska Ves** 89.57 322 *e*P P 03 22 02.5 +0.1
PVCC AMS AMS 04 04 40.0
comp=Z,5µm,18.6s
HCY **Herceg Novi** 89.67 314⇑*i*P P 03 22 02.2 -0.9
HCY **Herceg Novi** 89.67 314⇑*i*P P 03 22 02.2 -0.8
HCY **Herceg Novi** 89.67 314⇑*i*P P 03 22 02.2 -0.9
PRU **Pruhonice** 89.78 322 *e*P P 03 22 04.4 +1.0
PRU **Pruhonice** 89.78 322 *e*P P 03 22 04.4 +1.0
PRU *e*PP PP 03 25 41.7 +5.5
PRU AMS AMS 04 04 40.0
comp=Z,4µm,16.9s
PRA **Prague** 89.81 322 P P 03 22 04.0 +0.5
PRA PP PP 03 25 42.0 +5.5
PRA AMS AMS 04 04 04.0
BRG **Berggiesshubel** 89.82 323 *e*P P 03 22 03.7 +0.2
comp=Z,86nm,1.3s,mb5.7
BRG **Berggiesshubel** 89.82 323 *i*P P 03 22 03.7 +0.2
comp=Z,51nm,1.1s,mb5.6
BRG SS SS 03 38 50.0 +2.6
BRG
comp=N,2µm,17.0s
BRG
comp=E,2µm,15.6s
BRG
comp=Z,3µm,16.7s
BRG **Berggiesshubel** 89.82 323 *i*P P 03 22 03.7 +0.2
BRG SS SS 03 38 50.0 +2.6
BRG pmax pmax
comp=Z,30nm,1.1s,mb5.3
BRG MLR MLR
comp=N,1µm,17.0s
BRG MLR MLR
comp=E,1µm,15.6s
BRG MLR MLR
comp=Z,2µm,16.7s
BRG **Berggiesshubel** 89.82 323 *i*pP pP 03 22 22.7 -1.9
comp=Z,29nm,1.1s
FBE **Freiberg** 90.15 323 *e*P P 03 22 05.6 +0.5
comp=Z,102nm,1.2s,mb5.8
CLL **Collm** 90.21 323 *e*P P 03 22 05.3 -0.1
comp=Z,53nm,1.1s,mb5.6
CLL **Collm** 90.21 323⇑*i*P P 03 22 05.5 +0.1
comp=Z,53nm,1.1s,mb5.6
CLL *e*SP SP 03 33 59.0 +0.1
CLL LR LR
comp=Z,4µm,22.7s
CLL **Collm** 90.21 323⇑*i*P P 03 22 05.5 +0.1
CLL *e*SP SP 03 33 59.0 +0.1
CLL pmax pmax
comp=Z,53nm,1.1s,mb5.6
CLL MLR MLR
comp=Z,4µm,22.7s
CLL **Collm** 90.21 323⇑*i*P P 03 22 05.5 +0.1
comp=Z,53nm,1.1s,mb5.6
CLL *e*Plp 03 22 08.0
CLL *e* pP 03 22 24.0 -2.5
CLL *e*PP PP 03 25 40.0 +0.4
CLL *e*PPlp 03 25 44.0
CLL *e*PPP 03 27 31.0
CLL *e*S S 03 32 59.0 +6.1
CLL *e*SP SP 03 33 59.0 +0.1
CLL *e*SS SS 03 39 10.0 +17
CLL *e*SSS 03 42 28.0
CLL Lm 04 05 00.0
comp=N,4µm,19.8s
CLL Lm 04 05 00.0
comp=E,3µm,21.1s
PERS **Pernice** 90.59 318 *i*P P 03 22 07.4 +0.1
KHC **Kasperske Hory** 90.67 321 *e*P P 03 22 07.6 0.0
comp=E,15nm,0.8s,mb5.2
KHC **Kasperske Hory** 90.67 321 *e*P P 03 22 07.7 +0.2
KHC **Kasperske Hory** 90.67 321 *e*P P 03 22 07.7 +0.2
KHC *e*PP PP 03 25 41.4 -1.9
GEC2 **GERESS Array S** 90.70 321 *e*P P 03 22 08.0 +0.3
comp=Z,48nm,1.2s,mb5.5
GEC2 **GERESS Array S** 90.70 321 *e*P P 03 22 08.0 +0.3
GEC2 pmax pmax
comp=Z,48nm,1.2s,mb5.5
GERES **GERESS Array B** 90.70 321 P P 03 22 07.4 -0.2
comp=Z,15nm,0.8s,mb5.2,baz=60,slow=5.4,SNR=26
GERES **GERESS Array B** 90.70 321 P P 03 22 07.4 -0.3
MOA **Molln** 90.71 320 *i*PcP PcP 03 22 08.5 -0.3
comp=Z,73nm,1.1s,SNR=24
MAW **Mawson** 90.81 199 P P 03 22 07.8 +0.2
comp=Z,28nm,0.9s,mb5.4,baz=45,slow=6.3,SNR=30
MAW **Mawson** 90.81 199 *e*P P 03 22 07.9 +0.3
comp=Z,19nm,1.1s,mb5.1
MAW **Mawson** 90.81 199 *e*P P 03 22 07.6 0.0
comp=Z,9.0nm,1.1s,mb4.8
MAW LR LR
comp=Z,3µm,22.0s
MAW **Mawson** 90.81 199 *e*P P 03 22 07.6 0.0
MAW pmax pmax
comp=Z,9.0nm,1.1s
MAW MLR MLR
comp=Z,3µm,22.0s
TANN **Tannenbergstha** 90.86 323 *e*P P 03 22 08.7 +0.3
comp=Z,35nm,1.2s,mb5.4
BOJS **Bojanci** 90.89 317 *i*P P 03 22 09.3 +0.7
NKC **Novy Kostel** 90.94 322 *e*P P 03 22 08.6 -0.2
NKC **Novy Kostel** 90.94 322 *e*P P 03 22 08.6 -0.2
NKC *e*PP PP 03 25 43.1 -2.3
NKC AMS AMS 04 05 40.0
comp=Z,5µm,17.0s
WERD **Werda** 90.94 323 *e*P P 03 22 08.9 +0.1
comp=Z,38nm,1.2s,mb5.4
GUNZ **Gunzen** 90.96 323 *e*P P 03 22 09.2 +0.3
comp=Z,67nm,1.3s,mb5.6
NEUB **Neuenburg** 90.96 323 *e*P P 03 22 09.0 +0.2
comp=Z,54nm,1.2s,mb5.5
WERN **Wernitzgruen** 90.96 322 *e*P P 03 22 09.3 +0.4
comp=Z,49nm,1.3s,mb5.5
OBKA **Obir** 91.00 318 *i*PcP PcP 03 22 09.4 -0.8
comp=Z,34nm,1.0s,SNR=13
WET **Wettzell** 91.09 321 *e*P P 03 22 09.9 +0.4
comp=Z,54nm,1.3s,mb5.5
WET **Wettzell** 91.09 321 *e*P P 03 22 09.9 +0.4
WET pmax pmax
comp=Z,54nm,1.3s,mb5.5
ROTZ **Rotzenmuhle** 91.26 322 *e*P P 03 22 10.9 +0.6
comp=Z,52nm,1.2s,mb5.5
MOX **Moxa** 91.27 323 *e*P P 03 22 10.6 +0.3
comp=Z,54nm,1.5s,mb5.5
MOX
comp=Z,4µm,21.0s
MOX **Moxa** 91.27 323 *e*P P 03 22 10.5 +0.2
comp=Z,42nm,1.3s,mb5.4
MOX **Moxa** 91.27 323 *e*P P 03 22 10.6 +0.3
MOX pmax pmax
comp=Z,54nm,1.5s,mb5.5
MOX MLR MLR
comp=Z,4µm,21.0s
NRDL **Niedersach Rie** 91.39 325 *e*P P 03 22 10.9 +0.1
comp=Z,72nm,1.5s,mb5.6
CLZ **Clausthal** 91.51 324 *e*P P 03 22 11.9 +0.5
comp=Z,63nm,1.5s,mb5.6
CLZ **Clausthal** 91.51 324 *e*P P 03 22 11.9 +0.5
CLZ pmax pmax
comp=Z,63nm,1.5s,mb5.6
JAVS **Javornik** 91.54 318 *i*P P 03 22 11.3 -0.4
MYKA **Terra Mystica** 91.54 319⇑*i*PcP PcP 03 22 11.4 -1.1
comp=Z,24nm,1.0s
RJOB **Jochberg** 91.67 320 *e*P P 03 22 12.1 -0.1
comp=Z,75nm,1.0s,mb5.9
TRI **Trieste** 91.80 318 *e*P P 03 22 11.7 -1.1
comp=Z,40nm,0.8s,mb5.7
TRI LR LR
comp=Z,3µm,21.0s
TRI **Trieste** 91.80 318 *e*P P 03 22 11.7 -1.2
TRI pmax pmax
comp=Z,39nm,0.8s,mb5.7
TRI MLR MLR
comp=Z,3µm,21.0s
PTCC **Patocco-Chiusa** 91.81 319 P P 03 22 12.6 -0.3
comp=Z,251nm,2.7s,mb6.0
PIPA **Pietrapaola** 91.82 311 P P 03 22 14.0 +0.9
GRA1 **Grafenberg Arr** 91.88 322 *e*P P 03 22 13.7 +0.6
comp=Z,77nm,1.5s,mb5.7
GRA1 LR LR
comp=Z,5µm,18.5s
GRF **Grafenberg Arr** 91.88 322 *e*P P 03 22 13.7 +0.6
comp=Z,77nm,1.5s,mb5.7
GRF *e*L 04 05 38.6
comp=Z,5µm,18.5s
GRF **Grafenberg Arr** 91.88 322 *e*P P 03 22 13.7 +0.6
GRF pmax pmax
comp=Z,77nm,1.5s,mb5.7
GRF MLR MLR
comp=Z,5µm,18.5s
GRF **Grafenberg Arr** 91.88 322 *e*P P 03 22 13.7 +0.6
GRF pmax pmax
comp=Z,77nm,1.5s,mb5.7
GRF MLR MLR
comp=Z,5µm,18.5s
RGNG **Rignano Grg** 91.98 314 P P 03 22 14.6 +0.8
ACER **Acerenza** 92.02 313 P P 03 22 14.6 +0.6
PTRP **Pietrapertosa** 92.03 312 P P 03 22 14.4 +0.4
UBBA **Unterbreizbach** 92.14 324 *e*P P 03 22 14.7 +0.4
comp=Z,80nm,1.8s,mb5.7
ABTA **Abfaltersbach** 92.22 319⇑*i*P P 03 22 14.3 -0.5
comp=Z,51nm,1.1s,mb5.7,SNR=7.2
GRI **Girifalco** 92.33 311 P P 03 22 16.4 +0.9
GRI **Girifalco** 92.33 311 P P 03 22 16.4 +0.9
FG5 **Orsara di Pugl** 92.33 313 P P 03 22 16.1 +0.7
comp=Z,60nm,0.8s,mb5.9
FG5 **Orsara di Pugl** 92.33 313 P P 03 22 16.1 +0.7
FUR **Furstenfeldbru** 92.45 321 *e*P P 03 22 16.1 +0.3
comp=Z,82nm,1.1s,mb5.9
FUR **Furstenfeldbru** 92.45 321 *e*P P 03 22 16.1 +0.3
FUR pmax pmax
comp=Z,82nm,1.1s,mb5.9
WTTA **Wattenberg** 92.58 320 *i*PcP PcP 03 22 16.6 -0.5

comp=Z,101nm,1.0s,SNR=21
WATA Walderalm 92.59 320 ⇓ *i*PcP PcP 03 22 16.4 -0.7
comp=Z,63nm,1.0s,SNR=15
IBBN Ibbenburen 92.78 325 *e*P **P** **03 22 17.4 +0.2**
comp=Z,62nm,1.5s,mb5.7
MOTA Moosalm 92.88 320 ⇑ *i*P **P** **03 22 17.2 -0.7**
comp=Z,74nm,0.9s,mb6.0,SNR=40
SCLL Scilla 93.04 310 P **P** **03 22 19.2 +0.5**
comp=Z,32nm,0.9s,mb5.7
YKA Yellowknife Ar 93.07 22 P **P** **03 22 18.0 -0.3**
comp=Z,6.7nm,0.8s,mb5.0,baz=310,slow=4.4,SNR=9.4
YKA PKKP PKKPbc 03 39 26.6 -2.7
comp=Z,0.8nm,0.5s,baz=140,slow=3.2,SNR=3.9
YKA Yellowknife Ar 93.07 22 P **P** **03 22 18.0 -0.3**
YKA PKKP PKKPbc 03 39 26.6 -2.8
YKA Yellowknife Ar 93.07 22 P **P** **03 22 18.0 -0.3**
MTTG Motta San Giov 93.14 310 P **P** **03 22 19.6 +0.4**
FETA Feichten 93.24 320 *i* PcP PcP 03 22 19.8 -0.2
comp=Z,73nm,1.0s,SNR=24
SNTG Esanatoglia 93.25 316 P **P** **03 22 20.4 +0.8**
comp=Z,54nm,0.7s,mb6.0
AQU L'Aquila 93.26 315 P **P** **03 22 20.5 +0.8**
AQU L'Aquila 93.26 315 P **P** **03 22 20.5 +0.8**
NRCA Norcia 93.28 315 P **P** **03 22 20.3 +0.5**
comp=Z,51nm,1.1s,mb5.8
TNS Taunus Mts 93.29 323 *e*P **P** **03 22 19.8 +0.1**
comp=Z,43nm,1.3s,mb5.6
TNS *e*PP PP 03 26 07.9 +4.0
TNS Taunus Mts 93.29 323 *e*P **P** **03 22 19.8 +0.1**
TNS *e* 03 26 07.9
TNS pmax pmax
comp=Z,43nm,1.3s,mb5.6
BUG Bochum--Univer 93.43 325 *e*P **P** **03 22 20.3 0.0**
comp=Z,42nm,1.2s,mb5.6
WTSB Winterswijk 93.46 325 *e*P **P** **03 22 24.9 +4.5**
comp=Z,37nm,1.9s,mb5.4
BADI Badiali 93.62 316 P **P** **03 22 22.3 +1.0**
CDCA Citt' di Caste 93.65 316 P **P** **03 22 22.1 +0.7**
DAVA Damuels 93.67 320 ⇑ *i*PcP PcP 03 22 21.6 -0.3
comp=Z,38nm,1.1s
DAVOX Davos/Dischmat 93.87 320 P **P** **03 22 22.5 +0.1**
comp=Z,36nm,0.9s,mb5.7,baz=84,slow=8.7,SNR=19
DAVOX PP PP 03 26 07.5 -1.0
comp=Z,7.1nm,1.0s,baz=78,slow=12,SNR=2.8
DAVOX Davos/Dischmat 93.87 320 P **P** **03 22 22.5 +0.1**
DAVOX 03 26 07.5
PPT Papeete 93.90 107 *e*LQ 03 49 08.0
comp=Z,5μm,31.0s
PPT *e*LR LR 03 52 41.7
comp=Z,8μm,29.0s
BFO Black Forest 94.18 322 *e*P **P** **03 22 23.6 -0.2**
comp=Z,29nm,1.3s,mb5.5
BFO Black Forest 94.18 322 *e*P **P** **03 22 23.6 -0.2**
BFO pmax pmax
comp=Z,29nm,1.3s,mb5.5
GSCL Gusciola 94.40 317 P **P** **03 22 26.3 +1.4**
comp=Z,51nm,0.8s,mb5.9
HGN Heimansgroeve 94.49 325 *e*P **P** **03 22 25.4 +0.3**
comp=Z,30nm,2.1s,mb5.3
MEM Membach 94.52 324 P **P** **03 22 25.6 +0.4**
comp=Z,22nm,1.3s,mb5.4
BEBN Eben Emael 94.62 325 P **P** **03 22 28.2 +2.5**
WDD Wield Dalam 94.75 308 PFAKE 03 22 40.0 +13
WDD LR LR
comp=Z,850nm,19.0s
CDF Champ du Feu 94.77 322 *e*P **P** **03 22 25.7 -0.8**
comp=Z,110nm,1.2s,mb5.8
CDF Champ du Feu 94.77 322 *e*P **P** **03 22 25.7 -0.8**
comp=Z,55nm,1.2s,mb5.9
CDF Champ du Feu 94.77 322 *e*P **P** **03 22 25.7 -0.8**
CDF pmax pmax
comp=Z,55nm,1.2s,mb5.9
SBA Scott Base 94.79 171 PFAKE 03 22 40.0 +14
SBA LR LR
comp=Z,2μm,21.0s
WLF Walferdange 94.87 324 P **P** **03 22 27.8 +0.9**
comp=Z,37nm,1.3s,mb5.7
WLF Walferdange 94.87 324 *e*PP PP 03 26 18.5 +2.3
WLF Walferdange 94.87 324 *e*P **P** **03 22 27.4 +0.5**
comp=Z,54nm,1.1s,mb5.9
WLF LR LR
comp=Z,4μm,19.0s
WLF Walferdange 94.87 324 *e*P **P** **03 22 27.4 +0.5**
WLF pmax pmax
comp=Z,53nm,1.1s,mb5.9
WLF MLR MLR
comp=Z,4μm,19.0s
ECH Echery 94.93 322 *e*P **P** **03 22 26.9 -0.3**
comp=Z,20nm,1.0s,mb5.5
ECH LR LR
comp=Z,3μm,22.0s
ECH Echery 94.93 322 *e*P **P** **03 22 26.9 -0.3**
ECH pmax pmax
comp=Z,20nm,1.0s,mb5.5
ECH MLR MLR
comp=Z,3μm,22.0s
BCLA Clavier 95.01 324 P **P** **03 22 27.8 +0.2**
comp=Z,19nm,1.9s,mb5.2
TBI Tubuai 95.26 113 *e*LQ 03 49 39.9
comp=Z,3μm,33.2s
TBI *e*LR LR 03 53 25.9
comp=Z,5μm,31.8s
HINF Hinteralfeld 95.29 322 *e*P **P** **03 22 27.7 -1.2**
comp=Z,72nm,1.2s,mb5.7
HINF Hinteralfeld 95.29 322 *e*P **P** **03 22 27.7 -1.2**
comp=Z,36nm,1.2s,mb5.7
HINF Hinteralfeld 95.29 322 *e*P **P** **03 22 27.7 -1.2**
HINF pmax pmax
comp=Z,36nm,1.2s,mb5.7
UCC Uccle 95.36 325 P **P** **03 22 31.1 +2.0**
GIVF Givet 95.43 324 *e*P **P** **03 22 28.8 -0.6**
comp=Z,78nm,1.1s,mb5.7
GIVF Givet 95.43 324 *e*P **P** **03 22 28.8 -0.6**
comp=Z,39nm,1.1s,mb5.8
GIVF Givet 95.43 324 *e*P **P** **03 22 28.8 -0.6**
GIVF pmax pmax
comp=Z,39nm,1.1s,mb5.8
HAU Haudompre 95.51 322 *e*P **P** **03 22 28.8 -1.1**
comp=Z,38nm,1.2s,mb5.4
HAU *e*MLR MLR
comp=Z,5μm,18.5s
HAU Haudompre 95.51 322 *e*P **P** **03 22 28.8 -1.1**
comp=Z,19nm,1.2s,mb5.4
HAU LR LR
comp=Z,5μm,18.5s
HAU Haudompre 95.51 322 *e*P **P** **03 22 28.8 -1.1**
HAU pmax pmax
comp=Z,19nm,1.2s,mb5.4
HAU MLR MLR
comp=Z,5μm,18.5s
SNF Seneffe 95.54 325 P **P** **03 22 29.9 0.0**
comp=Z,12nm,1.4s,mb5.1
DOU Dourbes 95.56 324 P **P** **03 22 29.6 -0.4**
comp=Z,14nm,1.3s,mb5.2
LSZ Lusaka 95.66 256 *e*P **P** **03 22 31.4 +0.2**
comp=Z,82nm,1.6s,mb5.9
LSZ LR LR
comp=Z,2μm,19.0s
LSZ Lusaka 95.66 256 *e*P **P** **03 22 31.4 +0.3**
LSZ pmax pmax
comp=Z,82nm,1.6s,mb5.9
LSZ MLR MLR
comp=Z,2μm,19.0s
BAIF Baives 95.80 324 *e*P **P** **03 22 30.4 -0.7**
comp=Z,79nm,1.4s,mb5.7
BAIF Baives 95.80 324 *e*P **P** **03 22 30.4 -0.7**
comp=Z,39nm,1.4s,mb5.7
BAIF Baives 95.80 324 *e*P **P** **03 22 30.4 -0.7**
BAIF pmax pmax
comp=Z,39nm,1.4s,mb5.6
MEZF Maizieres J'vi 96.05 323 *e*P **P** **03 22 31.6 -0.7**
comp=Z,96nm,1.3s,mb5.8
MEZF Maizieres J'vi 96.05 323 *e*P **P** **03 22 31.6 -0.7**
comp=Z,96nm,1.3s,mb6.1
PGF Pioggiola 96.19 316 *e*P **P** **03 22 32.1 -1.0**
comp=Z,90nm,0.8s,mb6.0
PGF Pioggiola 96.19 316 *e*P **P** **03 22 32.1 -1.0**
comp=Z,45nm,0.8s,mb6.0
PGF Pioggiola 96.19 316 *e*P **P** **03 22 32.1 -1.0**
PGF pmax pmax
comp=Z,45nm,0.8s,mb6.0
SFTF Sexfontaines 96.20 323 *e*P **P** **03 22 31.9 -1.1**
comp=Z,61nm,1.2s,mb5.6
SFTF Sexfontaines 96.20 323 *e*P **P** **03 22 31.9 -1.1**
comp=Z,61nm,1.2s,mb5.9
CABF La Chapelle 96.30 321 *e*P **P** **03 22 32.7 -0.8**
comp=Z,89nm,1.5s,mb5.7
CABF La Chapelle 96.30 321 *e*P **P** **03 22 32.7 -0.8**
comp=Z,45nm,1.5s,mb5.7
CABF La Chapelle 96.30 321 *e*P **P** **03 22 32.7 -0.8**
CABF pmax pmax
comp=Z,45nm,1.5s,mb5.7
LPG La Plagne 96.39 320 *e*P **P** **03 22 33.5 -0.4**
comp=Z,64nm,0.9s,mb5.8
LPG La Plagne 96.39 320 *e*P **P** **03 22 33.5 -0.4**
comp=Z,32nm,0.9s,mb5.8
LPG La Plagne 96.39 320 *e*P **P** **03 22 33.5 -0.4**
LPG pmax pmax
comp=Z,32nm,0.9s,mb5.8
LPL La Plagne 96.39 320 *e*P **P** **03 22 33.4 -0.5**
comp=Z,109nm,0.9s,mb6.0
LPL La Plagne 96.39 320 *e*P **P** **03 22 33.4 -0.5**
comp=Z,54nm,0.9s,mb6.0
LPL La Plagne 96.39 320 *e*P **P** **03 22 33.4 -0.5**
LPL pmax pmax
comp=Z,54nm,0.9s,mb6.0
NLWA Neilton Lookou 96.67 38 PFAKE 03 22 50.0 +15
NLWA LR LR
comp=Z,1μm,19.0s
MBDF Montbardon 96.72 319 *e*P **P** **03 22 34.0 -1.4**
comp=Z,18nm,0.8s,mb5.3
MBDF Montbardon 96.72 319 *e*P **P** **03 22 34.0 -1.4**
comp=Z,8.9nm,0.8s,mb5.2
MBDF Montbardon 96.72 319 *e*P **P** **03 22 34.0 -1.4**
MBDF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
ESK Eskdalemuir 96.83 331 PFAKE 03 22 50.0 +14
ESK LR LR
comp=Z,4μm,20.0s
BORG Borgarnes 96.84 345 PFAKE 03 22 50.0 +14
BORG LR LR
comp=Z,4μm,19.0s
ORIF Oris-en-Rattie 97.20 319 *e*P **P** **03 22 36.8 -0.8**
comp=Z,29nm,0.6s,mb5.5
ORIF *e*MLR MLR
comp=Z,3μm,17.8s
ORIF Oris-en-Rattie 97.20 319 *e*P **P** **03 22 36.8 -0.8**
comp=Z,14nm,0.6s,mb5.6
ORIF Oris-en-Rattie 97.20 319 *e*P **P** **03 22 36.8 -0.8**
ORIF pmax pmax
comp=Z,14nm,0.6s,mb5.6
FRF La Foret Royal 97.31 318 *e*P **P** **03 22 36.9 -1.2**
comp=Z,54nm,0.9s,mb5.7
FRF La Foret Royal 97.31 318 *e*P **P** **03 22 36.9 -1.2**
comp=Z,27nm,0.9s,mb5.7
FRF La Foret Royal 97.31 318 *e*P **P** **03 22 36.9 -1.2**
FRF pmax pmax
comp=Z,27nm,0.9s,mb5.7
LOR Lormes 97.34 322 *e*P **P** **03 22 36.9 -1.3**
comp=Z,52nm,1.3s,mb5.5
LOR *e*MLR MLR
comp=Z,4μm,21.5s
LOR Lormes 97.34 322 *e*P **P** **03 22 36.9 -1.3**
comp=Z,26nm,1.3s,mb5.5
LOR LR LR
comp=Z,4μm,21.5s
LOR Lormes 97.34 322 *e*P **P** **03 22 36.9 -1.3**
LOR pmax pmax
comp=Z,26nm,1.3s,mb5.5
LOR MLR MLR
comp=Z,4μm,21.5s
JCW Jim Creek 97.43 37 *e*P **P** **03 22 39.2 +0.7**
comp=Z,22nm,1.2s,mb5.5
LMR La Mourre 97.50 318 *e*P **P** **03 22 37.8 -1.2**
comp=Z,59nm,1.1s,mb5.7
LMR La Mourre 97.50 318 *e*P **P** **03 22 37.8 -1.2**
comp=Z,30nm,1.1s,mb5.7
LMR La Mourre 97.50 318 *e*P **P** **03 22 37.8 -1.2**
LMR pmax pmax
comp=Z,30nm,1.1s,mb5.7
SMF Signal de Mont 97.65 322 *e*P **P** **03 22 38.5 -1.1**
comp=Z,16nm,0.8s,mb5.3
SMF Signal de Mont 97.65 322 *e*P **P** **03 22 38.5 -1.1**
comp=Z,8.1nm,0.8s,mb5.3
SMF Signal de Mont 97.65 322 *e*P **P** **03 22 38.5 -1.1**
SMF pmax pmax
comp=Z,8.0nm,0.8s,mb5.3
SSF Saint Saulge 97.65 322 *e*P **P** **03 22 38.0 -1.6**
comp=Z,42nm,1.4s,mb5.5
SSF Saint Saulge 97.65 322 *e*P **P** **03 22 38.0 -1.6**
comp=Z,21nm,1.4s,mb5.5
SSF Saint Saulge 97.65 322 *e*P **P** **03 22 38.0 -1.6**
SSF pmax pmax
comp=Z,21nm,1.4s,mb5.5
SMRF Simiane la Rot 97.82 319 *e*P **P** **03 22 39.6 -0.8**
comp=Z,54nm,1.1s,mb5.7
SMRF Simiane la Rot 97.82 319 *e*P **P** **03 22 39.6 -0.8**
comp=Z,54nm,1.1s,mb6.0
AVF Avril sur Loir 97.88 322 *e*P **P** **03 22 39.3 -1.3**
comp=Z,21nm,1.1s,mb5.3
AVF Avril sur Loir 97.88 322 *e*P **P** **03 22 39.3 -1.3**
comp=Z,11nm,1.1s,mb5.3
AVF Avril sur Loir 97.88 322 *e*P **P** **03 22 39.3 -1.3**
AVF pmax pmax
comp=Z,11nm,1.1s,mb5.3
VIVF Saint-Julien-l 97.99 320 *e*P **P** **03 22 40.1 -1.1**
comp=Z,43nm,0.9s,mb5.7
VIVF Saint-Julien-l 97.99 320 *e*P **P** **03 22 40.1 -1.1**
comp=Z,22nm,0.9s,mb5.7
VIVF Saint-Julien-l 97.99 320 *e*P **P** **03 22 40.1 -1.1**
VIVF pmax pmax
comp=Z,22nm,0.9s,mb5.7
BGF Bois d'Agland 98.30 322 *e*P **P** **03 22 41.4 -1.1**
BGF Bois d'Agland 98.30 322 *e*P **P** **03 22 41.4 -1.1**
ETW Entiat 98.66 37 *e*P **P** **03 22 45.3 +1.3**
comp=Z,6.9nm,0.9s,mb5.2
KEST Kesra 98.70 310 P **P** **03 22 44.4 -0.2**
comp=Z,5.7nm,1.1s,mb5.0,baz=349,slow=7.6,SNR=4.4
KEST PP PP 03 26 41.3 -4.9
comp=Z,1.3nm,0.9s,baz=290,slow=5.2,SNR=3.5
KEST Kesra 98.70 310 *e*P **P** **03 22 38.5 -6.1**
KEST PP PP 03 26 41.3 -4.9
TCF Toulx Ste Croi 98.81 322 *e*P **P** **03 22 43.8 -1.0**
comp=Z,21nm,1.1s,mb5.3
TCF Toulx Ste Croi 98.81 322 *e*P **P** **03 22 43.8 -1.0**
comp=Z,10nm,1.1s,mb5.3
TCF Toulx Ste Croi 98.81 322 *e*P **P** **03 22 43.8 -1.0**
TCF pmax pmax
comp=Z,10.0nm,1.1s,mb5.3
LASF Ste Croix 98.87 319 *e*P **P** **03 22 44.3 -0.8**
comp=Z,56nm,1.3s,mb5.7
LDF La Druitiere 98.98 325 *e*P **P** **03 22 44.4 -1.1**
comp=Z,26nm,1.3s,mb5.3
LDF La Druitiere 98.98 325 *e*P **P** **03 22 44.4 -1.1**
comp=Z,13nm,1.3s,mb5.3
LDF La Druitiere 98.98 325 *e*P **P** **03 22 44.4 -1.1**
LDF pmax pmax
comp=Z,13nm,1.3s,mb5.3
SYO Syowa Base 99.23 201 ⇓ *e*Pdiff **P** **03 22 45.4 -0.6**
SYO Syowa Base 99.23 201 ⇓ *i*pPdiff 03 22 51.5
HUMO Hull Mountain 99.49 42 PFAKE 03 23 00.0 +12
HUMO LR LR
comp=Z,2μm,21.0s
SFJD Kangerlussuaq 99.50 356 PFAKE 03 23 00.0 +12
SFJD LR LR
comp=Z,2μm,19.0s
CAF Calviac 99.58 321 *e*P Pdif 03 22 47.8 -0.2
comp=Z,30nm,1.1s
CAF Calviac 99.58 321 *e*P Pdif 03 22 47.8 -0.2
comp=Z,15nm,1.1s
CAF Calviac 99.58 321 *e*P Pdif 03 22 47.8 -0.2
CAF pmax pmax
comp=Z,15nm,1.1s,mb5.5
RJF Les Rejaudoux 99.72 321 *e*P Pdif 03 22 48.6 -0.1
comp=Z,80nm,1.3s
RJF *e*MLR MLR
comp=Z,3μm,19.2s
RJF Les Rejaudoux 99.72 321 *e*P Pdif 03 22 48.6 -0.1
comp=Z,40nm,1.3s
RJF LR LR
comp=Z,3μm,19.3s
RJF Les Rejaudoux 99.72 321 *e*P Pdif 03 22 48.6 -0.1
RJF pmax pmax
comp=Z,40nm,1.3s,mb5.9
RJF MLR MLR
comp=Z,3μm,19.3s
HAWA Hanford 99.75 37 PFAKE 03 23 00.0 +11
HAWA LR LR
comp=Z,1μm,20.0s
MFF Saint Martin d 100.05 323 *e*P Pdif 03 22 49.9 -0.2
comp=Z,62nm,1.4s
MFF Saint Martin d 100.05 323 *e*P Pdif 03 22 49.9 -0.2
comp=Z,31nm,1.4s
MFF Saint Martin d 100.05 323 *e*P Pdif 03 22 49.9 -0.2
MFF pmax pmax
comp=Z,31nm,1.4s
YBH Yreka Blue Hor 100.06 43 PFAKE 03 23 00.0 +10
YBH LR LR
comp=Z,2μm,22.0s
NEW Newport 100.13 35 *e*Pdif Pdif 03 22 52.0 +1.5
NEW LR LR
comp=Z,1μm,19.0s
NEW Newport 100.13 35 *e*P Pdif 03 22 52.0 +1.5
NEW MLR MLR
comp=Z,1μm,19.0s
MTLF Montolieu 100.27 319 *e*P Pdif 03 22 49.7 -1.4
comp=Z,17nm,0.9s
MTLF Montolieu 100.27 319 *e*P Pdif 03 22 49.7 -1.4
comp=Z,8.7nm,0.9s
MTLF Montolieu 100.27 319 *e*P Pdif 03 22 49.7 -1.4
MTLF pmax pmax
comp=Z,9.0nm,0.9s
LFF La Frestale 100.38 321 *e*P Pdif 03 22 50.6 -1.0
LFF La Frestale 100.38 321 *e*P Pdif 03 22 50.6 -1.0
WDC Whiskeytown Da 100.72 44 PFAKE 03 23 00.0 +6.9
WDC LR LR
comp=Z,4μm,22.0s
BOSA Boshof 100.87 243 P Pdif 03 22 54.0 +0.3
comp=Z,4.5nm,1.1s,baz=80,slow=3.9,SNR=2.0
BOSA Boshof 100.87 243 P Pdif 03 22 54.0 +0.3
BOSA LR LR
comp=Z,2μm,20.0s
BOSA Boshof 100.87 243 P Pdif 03 22 54.1 +0.3
BOSA MLR MLR
comp=Z,2μm,20.0s
TAOE Nuku Hiva Isla 101.04 97 *e*LR LR 03 56 08.5
comp=Z,4μm,27.4s
HOPS Hopland 101.09 45 PFAKE 03 23 10.0 +15
HOPS LR LR
comp=Z,2μm,19.0s
MOD Modoc 101.55 42 PFAKE 03 23 10.0 +13
MOD LR LR
comp=Z,877nm,19.0s
EPF Esparros 101.61 320 *e*P Pdif 03 22 56.9 -0.2
comp=Z,34nm,1.4s
EPF Esparros 101.61 320 *e*P Pdif 03 22 56.9 -0.2
comp=Z,17nm,1.4s
EPF Esparros 101.61 320 *e*P Pdif 03 22 56.9 -0.2
EPF pmax pmax
comp=Z,17nm,1.4s
MCCM Marconi Confer 101.61 46 PFAKE 03 23 10.0 +13
MCCM LR LR
comp=Z,2μm,19.0s
BMO Blue Mountains 101.89 38 *e*Pdif Pdif 03 22 58.4 +0.1
comp=Z,3.4nm,1.3s
BMO LR LR
comp=Z,1μm,20.0s
BMO Blue Mountains 101.89 38 *e*P Pdif 03 22 58.4 +0.1
BMO pmax pmax
comp=Z,3.0nm,1.3s
BMO MLR MLR
comp=Z,1μm,20.0s
ETSF Etsaut 102.24 320 *e*P Pdif 03 22 59.5 -0.4
ETSF Etsaut 102.24 320 *e*P Pdif 03 22 59.5 -0.4
WVOR Wild Horse Val 102.35 41 PFAKE 03 23 10.0 +10
WVOR LR LR
comp=Z,2μm,19.0s
MSO Missoula 102.72 35 PFAKE 03 23 10.0 +8.0
MSO LR LR
comp=Z,878nm,20.0s
FFC Flin Flon 103.17 24 PFAKE 03 23 10.0 +6.0
FFC LR LR
comp=Z,1μm,19.0s
SAO San Andreas Ge 103.27 47 PFAKE 03 23 10.0 +5.6
SAO LR LR
comp=Z,2μm,20.0s
QSPA South Pole Qui 103.31 180 Pdiff Pdif 03 23 05.3 +0.7
comp=Z,4.3nm,1.0s,baz=349,slow=4.2,SNR=2.9
QSPA PP PP 03 27 19.5 -0.7
comp=Z,9.6nm,1.1s,baz=335,slow=3.4,SNR=3.7
QSPA South Pole Qui 103.31 180 *e*Pdif Pdif 03 23 05.8 +1.2
comp=Z,20nm,1.3s
QSPA LR LR
comp=Z,2μm,21.0s
CMB Columbia Colle 103.40 45 PFAKE 03 23 20.0 +15
CMB LR LR
comp=Z,2μm,20.0s
EGMT Eagleton 104.24 32 PFAKE 03 23 20.0 +11
EGMT LR LR
comp=Z,1μm,19.0s
HLID Hailey 104.33 38 *e*Pdif Pdif 03 23 10.7 +1.6
HLID LR LR
comp=Z,1μm,22.0s
NVAR Mina Array Bea 104.62 44 PP PP 03 27 29.8 -0.7
comp=Z,1.7nm,1.1s,baz=276,slow=8.1,SNR=3.7
NVAR PKKPbc PKKPbc 03 38 56.4 +0.1
comp=Z,1.1nm,0.7s,baz=134,slow=2.6,SNR=6.9
BOZ Bozeman (W) 104.71 35 PFAKE 03 23 20.0 +9.1
BOZ LR LR
comp=Z,1μm,20.0s
SUR Sutherland 105.19 240 PFAKE 03 27 40.0 +13
SUR LR LR
comp=Z,2μm,20.0s
LKWY Lake 106.06 35 PFAKE 03 27 40.0 +11
LKWY LR LR
comp=Z,2μm,21.0s
ESDC Sonseca Array 106.14 319 PP PP 03 27 40.4 -1.1
comp=Z,3.3nm,1.0s,baz=52,slow=8.2,SNR=4.2
ESLA Sonseca Array 106.14 319 PFAKE 03 27 40.0 +11
ESLA LR LR
comp=Z,10μm,19.0s
DAC Darwin (Calif) 106.21 46 PFAKE 03 27 40.0 +11
DAC LR LR
comp=Z,2μm,20.0s
TSUM Tsumeb 106.34 254 PFAKE 03 27 40.0 +10
TSUM LR LR
comp=Z,2μm,20.0s
RLMT Red Lodge 106.35 34 PFAKE 03 27 40.0 +11
RLMT LR LR
comp=Z,1μm,20.0s
PAB San Pablo 106.45 319 PFAKE 03 27 40.0 +10
PAB LR LR
comp=Z,2μm,21.0s
PBRG Braganca 106.66 322 *e*PP PP 03 27 46.8 +1.5
DGMT Dagmar 106.71 29 PFAKE 03 27 40.0 +10
DGMT LR LR
comp=Z,1μm,20.0s
AHID Auburn Hatcher 106.76 37 PFAKE 03 27 40.0 +10
AHID LR LR
comp=Z,1μm,19.0s
TAM Tamanrasset 106.87 299 PFAKE 03 27 40.0 +9.1
TAM LR LR
comp=Z,1μm,20.0s
LAO LASA Array 106.93 32 PFAKE 03 27 40.0 +10
LAO LR LR
comp=Z,1μm,19.0s
HWUT Hardware Ranch 107.18 38 PFAKE 03 27 40.0 +9.0
HWUT LR LR
comp=Z,1μm,19.0s
MVO Moncorvo 107.21 321 *e*PP PP 03 27 52.1 +2.7
DUG Dugway 107.24 40 PFAKE 03 27 40.0 +8.9
DUG LR LR
comp=Z,2μm,19.0s
PCAB Cabril 107.49 322 *e*PP PP 03 27 58.8 +7.4
PVRL Vila Real 107.56 322 *e*PP PP 03 27 58.7 +6.8
BW06 Boulder Array 107.66 36 PFAKE 03 27 40.0 +8.2
BW06 LR LR
comp=Z,1μm,19.0s
PDAR Pinedale Array 107.66 36 Pdiff Pdif 03 23 27.9 +3.9
comp=Z,0.4nm,0.6s,baz=106,slow=3.2,SNR=3.9
PDAR PP PP 03 27 51.1 -1.5
comp=Z,0.2nm,0.7s,baz=316,slow=5.0,SNR=2.6
PDAR PKKPbc PKKPbc 03 38 46.6 -0.5
comp=Z,2.0nm,0.9s,baz=133,slow=5.0,SNR=8.1
PDAR PKKPab PKKPab 03 39 01.9 -0.5
comp=Z,3.2nm,1.0s,baz=117,slow=5.1,SNR=4.7
MTE Manteigas 107.98 321 *e*PP PP 03 27 55.9 +0.9
MTE Manteigas 107.98 321 PFAKE 03 27 40.0 +7.5
MTE LR LR
comp=Z,3μm,20.0s
PVIS Viseu 108.00 321 *e*PP PP 03 28 02.4 +7.2
PCBR Castelo Branco 108.27 320 *e*PP PP 03 28 03.5 +6.4
RKT Rikitea 108.35 110 *e*LQ 03 55 09.1
comp=Z,1μm,34.2s
RKT *e*LR LR 03 59 24.1
comp=Z,4μm,32.2s
PFO Pinyon Flat Ob 108.37 47 PFAKE 03 27 40.0 +6.6
PFO LR LR
comp=Z,2μm,20.0s
PMRV Marv??o 108.46 320 *e*PP PP 03 27 59.2 +0.7

MVU	**Marysvale**	**108.60**	**41**	PFAKE		03 27 40.0	+6.3
MVU				LR	LR		
	comp=Z,2μm,20.0s						
PESTR	**Estremoz**	**108.91**	**320**	*e*PP	PP	03 28 02.2	+0.4
PBAR	**Barrancos**	**108.96**	**319**	*e*PP	PP	03 28 05.3	+3.1
PTOM	**Tomar**	**108.98**	**321**	*e*PP	PP	03 28 08.6	+6.3
ULM	**Lac du Bonnet**	**108.99**	**24**	PFAKE		03 27 40.0	+5.9
ULM				LR	LR		
	comp=Z,2μm,19.0s						
PMTG	**Montargil**	**109.19**	**320**	*e*PP	PP	03 28 04.1	+0.3
EVO	**Evora**	**109.37**	**319**	*e*PP	PP	03 28 05.2	0.0
SFS	**San Fernando**	**109.39**	**317**	PFAKE		03 27 50.0	+15
SFS				LR	LR		
	comp=Z,4μm,20.0s						
PBEJ	**Beja**	**109.58**	**319**	*e*PP	PP	03 28 13.3	+6.6
PVAQ	**Vaqueiros**	**109.85**	**318**	*e*PP	PP	03 28 07.8	-0.9
MESJ	**Messejana**	**109.91**	**319**	*e*PP	PP	03 28 10.2	+1.0
MESJ				*e*PP	PP	03 28 10.5	+1.4
MESJ				*e*SS	SS	03 43 30.4	+2.6
MESJ				AMS	AMS	04 11 18.3	
	comp=E,2μm,18.6s						
PMAFR	**Mafra**	**109.92**	**320**	*e*PP	PP	03 28 12.4	+3.3
PCVE	**Castro Verde**	**109.92**	**319**	*e*PP	PP	03 28 08.9	-0.3
LIS	**Lisbon**	**109.98**	**320**	*e*PP	PP	03 28 10.7	+1.2
LIS				*e*SS	SS	03 43 31.6	+3.0
LIS	**Lisbon**	**109.98**	**320**	*e*PP	PP	03 28 10.7	+1.1
LIS				*e*SS	SS	03 43 31.6	+3.0
LIS				*e*SS	SS	03 43 32.2	+3.6
LIS				AMS	AMS	04 14 14.8	
	comp=N,2μm,18.9s						
PBDV	**Barranco-do-Ve**	**110.08**	**318**	*e*PP	PP	03 28 09.5	-0.8
PTEO	**Sao Teotonio**	**110.41**	**319**	*e*PP	PP	03 28 19.8	+7.1
MORF	**Marmelete**	**110.50**	**319**	*e*PP	PP	03 28 13.7	+0.3
AGMN	**Agassiz Nation**	**110.54**	**25**	PFAKE		03 27 50.0	+13
AGMN				LR	LR		
	comp=Z,2μm,20.0s						
PFVI	**Vila Bisbo**	**110.72**	**319**	*e*PP	PP	03 28 16.3	+1.3
RTC	**Rabat Centre**	**111.22**	**315**	PFAKE		03 27 50.0	+11
RTC				LR	LR		
	comp=Z,1μm,21.0s						
SCHQ	**Schefferville**	**111.69**	**5**	PP	PP	03 28 19.6	-1.3
	comp=Z,5.2nm,0.8s,baz=204,slow=18,SNR=2.7						
SCHQ	**Schefferville**	**111.69**	**5**	PFAKE		03 27 50.0	+11
SCHQ				LR	LR		
	comp=Z,3μm,20.0s						
ISCO	**Idaho Springs**	**111.84**	**37**	PFAKE		03 27 50.0	+10
ISCO				LR	LR		
	comp=Z,1μm,20.0s						
EYMN	**Ely**	**112.55**	**23**	PFAKE		03 27 50.0	+9.1
EYMN				LR	LR		
	comp=Z,2μm,20.0s						
SNAA	**Sanae**	**112.87**	**197**	Pdiff	Pdif	03 23 49.4	+2.3
	comp=Z,0.9nm,1.0s,baz=200,slow=2.0,SNR=4.3						
SNAA				PP	PP	03 28 29.7	-0.2
	comp=Z,2.0nm,1.1s,baz=158,slow=10.0,SNR=3.9						
SNAA				PKKPbc	PKKPbc	03 38 30.2	-1.0
	comp=Z,0.4nm,0.9s,baz=307,slow=4.8,SNR=4.7						
SNAA	**Sanae**	**112.87**	**197**	P	Pdif	03 23 49.4	+2.3
SNAA						03 28 29.7	
OGNE	**Ogallala**	**113.08**	**34**	PFAKE		03 27 50.0	+7.9
OGNE				LR	LR		
	comp=Z,1μm,20.0s						
TUC	**Tucson**	**113.09**	**46**	PFAKE		03 27 50.0	+7.6
TUC				LR	LR		
	comp=Z,2μm,21.0s						
SDCO	**Great Sand Dun**	**113.24**	**38**	PFAKE		03 27 50.0	+7.5
SDCO				LR	LR		
	comp=Z,1μm,20.0s						
ECSD	**EROS Data Cent**	**113.76**	**29**	PFAKE		03 27 50.0	+6.6
ECSD				LR	LR		
	comp=Z,1μm,19.0s						
TORD	**Torodi Ar. Bea**	**113.86**	**291**	PP	PP	03 28 24.7	-14
	comp=Z,6.6nm,1.1s,baz=64,slow=6.8,SNR=4.4						
ANMO	**Albuquerque**	**114.42**	**41**	PFAKE		03 28 00.0	+15
ANMO				LR	LR		
	comp=Z,1μm,21.0s						
COWI	**Conover**	**114.97**	**22**	PFAKE		03 28 00.0	+14
COWI				LR	LR		
	comp=Z,1μm,20.0s						
CBKS	**Cedar Bluff**	**115.83**	**34**	PFAKE		03 28 00.0	+13
CBKS				LR	LR		
	comp=Z,2μm,19.0s						
JFWS	**Jewell Farm**	**117.21**	**25**	PFAKE		03 28 00.0	+10
JFWS				LR	LR		
	comp=Z,2μm,20.0s						
KSU1	**Kansas State U**	**117.28**	**32**	PFAKE		03 28 00.0	+10
KSU1				LR	LR		
	comp=Z,1μm,20.0s						
AMTX	**Amarillo**	**117.45**	**38**	PFAKE		03 28 00.0	+9.3
AMTX				LR	LR		
	comp=Z,2μm,20.0s						
GLMI	**Grayling**	**117.67**	**20**	PFAKE		03 28 00.0	+9.2
GLMI				LR	LR		
	comp=Z,1μm,21.0s						
WMOK	**Wichita Mounta**	**119.27**	**37**	*e*PKPdf	PKPdf	03 27 54.3	0.0
WMOK				LR	LR		
	comp=Z,1μm,20.0s						
WMOK	**Wichita Mounta**	**119.27**	**37**	*e*PKIKP	PKPdf	03 27 54.3	+0.1
WMOK				MLR	MLR		
	comp=Z,1μm,20.0s						
HDIL	**Hopedale**	**119.56**	**26**	PFAKE		03 28 10.0	+15
HDIL				LR	LR		
	comp=Z,2μm,19.0s						
TXAR	**Lajitas Array**	**119.77**	**45**	PKP	PKPdf	03 27 55.5	+0.2
	comp=Z,1.2nm,0.6s,baz=151,slow=2.1,SNR=9.7						
TXAR				PKKPbc	PKKPbc	03 38 08.7	+2.8
	comp=Z,1.7nm,0.9s,baz=141,slow=5.8,SNR=5.0						
TXAR	**Lajitas Array**	**119.77**	**45**	PKIKP	PKPdf	03 27 55.5	+0.2
CMLA	**Cha da Macela**	**119.90**	**329**	PFAKE		03 28 10.0	+15
CMLA				LR	LR		
	comp=Z,3μm,22.0s						
AAM	**Ann Arbor**	**120.22**	**21**	PFAKE		03 28 10.0	+14
AAM				LR	LR		
	comp=Z,2μm,19.0s						
LONY	**Lake Ozonia**	**120.59**	**12**	PFAKE		03 28 10.0	+14
LONY				LR	LR		
	comp=Z,2μm,20.0s						
PKME	**Peaks-Kenny Pk**	**120.88**	**8**	PFAKE		03 28 10.0	+13
PKME				LR	LR		
	comp=Z,2μm,20.0s						
NCB	**Newcomb**	**121.29**	**12**	PFAKE		03 28 10.0	+12
NCB				LR	LR		
	comp=Z,2μm,19.0s						
LBNH	**Lisbon**	**121.47**	**10**	PFAKE		03 28 10.0	+12
LBNH				LR	LR		
	comp=Z,2μm,19.0s						
ERPA	**Erie**	**121.56**	**18**	PFAKE		03 28 10.0	+12
ERPA				LR	LR		
	comp=Z,2μm,20.0s						
JCT	**Junction City**	**121.58**	**41**	*e*PKPdf	PKPdf	03 27 59.5	+0.7
JCT				LR	LR		
	comp=Z,1μm,19.0s						
JCT	**Junction City**	**121.58**	**41**	*e*PKIKP	PKPdf	03 27 59.5	+0.7
JCT				MLR	MLR		
	comp=Z,1μm,19.0s						
KIC	**Kosan Boka**	**122.18**	**286**	*e*PKIKP	PKPdf	03 28 01.8	+1.4
	comp=Z,39nm,1.1s						
DBIC	**Dimbokro**	**122.19**	**287**	PKP	PKPdf	03 28 00.7	+0.3
	comp=Z,5.8nm,0.9s,baz=141,slow=2.7,SNR=5.5						
DBIC	**Dimbokro**	**122.19**	**287**	*e*PKPdf	PKPdf	03 28 00.8	+0.4
DBIC				LR	LR		
	comp=Z,2μm,22.0s						
DBIC	**Dimbokro**	**122.19**	**287**	*e*PKIKP	PKPdf	03 28 00.8	+0.4
DBIC				MLR	MLR		
	comp=Z,2μm,22.0s						
ACSO	**Alum Creek Sta**	**122.29**	**21**	PFAKE		03 28 10.0	+10
ACSO				LR	LR		
	comp=Z,2μm,19.0s						
MIAR	**Mount Ida**	**122.31**	**33**	PFAKE		03 28 10.0	+10
MIAR				LR	LR		
	comp=Z,2μm,21.0s						
TIC	**Toumodi**	**122.35**	**287**	*e*PKIKP	PKPdf	03 28 01.9	+1.2
	comp=Z,63nm,1.3s						
TIC	**Toumodi**	**122.35**	**287**	*e*PKIKP	PKPdf	03 28 01.9	+1.2
LIC	**Lamto**	**122.50**	**286**	*e*PKIKP	PKPdf	03 28 02.2	+1.2
	comp=Z,48nm,1.1s						
LIC	**Lamto**	**122.50**	**286**	*e*PKIKP	PKPdf	03 28 01.9	+0.9
	comp=Z,40nm,1.2s						
LIC				*e*MLR	MLR		
	comp=Z,2μm,19.8s						
LIC	**Lamto**	**122.50**	**286**	*e*PKPdf	PKPdf	03 28 01.9	+0.9
LIC				LR	LR		
	comp=Z,1μm,19.8s						
BINY	**Binghamton**	**122.57**	**14**	PFAKE		03 28 10.0	+10
BINY				LR	LR		
	comp=Z,2μm,20.0s						
NATX	**Nacogdoches**	**123.80**	**36**	PFAKE		03 28 10.0	+7.0
NATX				LR	LR		
	comp=Z,2μm,22.0s						
MCWV	**Mont Chateau**	**123.86**	**19**	PFAKE		03 28 10.0	+7.1
MCWV				LR	LR		
	comp=Z,2μm,20.0s						
WVT	**Waverly**	**123.88**	**28**	*e*PKPdf	PKPdf	03 28 02.2	-0.9
WVT	**Waverly**	**123.88**	**28**	*e*PKIKP	PKPdf	03 28 02.2	-0.8
OXF	**Oxford**	**124.46**	**30**	PFAKE		03 28 10.0	+5.8
OXF				LR	LR		
	comp=Z,1μm,19.0s						
KVTX	**Kingsville**	**124.79**	**42**	PFAKE		03 28 20.0	+15
KVTX				LR	LR		
	comp=Z,1μm,19.0s						
VBMS	**Vicksburg**	**125.73**	**33**	PFAKE		03 28 20.0	+13
VBMS				LR	LR		
	comp=Z,2μm,19.0s						
BLA	**Blacksburg**	**125.89**	**21**	PFAKE		03 28 20.0	+13
BLA				LR	LR		
	comp=Z,2μm,21.0s						
CBN	**Corbin**	**125.94**	**17**	PFAKE		03 28 20.0	+13
CBN				LR	LR		
	comp=Z,2μm,19.0s						
LRAL	**Lakeview Retre**	**126.82**	**29**	PFAKE		03 28 20.0	+11
LRAL				LR	LR		
	comp=Z,1μm,19.0s						
SHEL	**Horse Pasture**	**128.07**	**260**	PFAKE		03 28 20.0	+8.5
SHEL				LR	LR		
	comp=Z,2μm,20.0s						
GOGA	**Godfrey**	**128.08**	**26**	PFAKE		03 28 20.0	+8.8
GOGA				LR	LR		
	comp=Z,2μm,19.0s						
BRAL	**Brewton**	**128.45**	**30**	PFAKE		03 28 20.0	+8.1
BRAL				LR	LR		
	comp=Z,1μm,20.0s						
CNNC	**Cliffs of the**	**128.52**	**19**	PFAKE		03 28 20.0	+8.0
CNNC				LR	LR		
	comp=Z,2μm,21.0s						
PMSA	**Palmer Station**	**128.65**	**178**	PFAKE		03 28 20.0	+8.8
PMSA				LR	LR		
	comp=Z,3μm,19.0s						
NHSC	**New Hope**	**129.66**	**23**	PFAKE		03 28 20.0	+5.8
NHSC				LR	LR		
	comp=Z,2μm,19.0s						
BBSR	**BB Station**	**134.16**	**6**	PFAKE		03 28 30.0	+7.3
BBSR				LR	LR		
	comp=Z,1μm,20.0s						
TEIG	**Tepich**	**136.16**	**41**	PFAKE		03 28 40.0	+13
TEIG				LR	LR		
	comp=Z,1μm,19.0s						
TGUH	**Tegucigalpa,Un**	**141.21**	**46**	PFAKE		03 28 50.0	+14
TGUH				LR	LR		
	comp=Z,1μm,22.0s						
EFI	**East Falkland**	**141.87**	**181**	PFAKE		03 28 50.0	+14
EFI				LR	LR		
	comp=Z,2μm,19.0s						
GTBY	**Guantanamo Bay**	**143.43**	**25**	PFAKE		03 28 50.0	+10
GTBY				LR	LR		
	comp=Z,2μm,21.0s						
MTDJ	**Mount Denham**	**143.83**	**30**	PFAKE		03 28 50.0	+9.3
MTDJ				LR	LR		
	comp=Z,1μm,22.0s						
JTS	**JuntasAbangare**	**145.43**	**48**	*e*PKPdf	PKPdf	03 28 43.9	+0.4
JTS				LR	LR		
	comp=Z,1μm,21.0s						
JTS	**JuntasAbangare**	**145.43**	**48**	*e*PKIKP	PKPdf	03 28 43.9	+0.4
JTS				MLR	MLR		
	comp=Z,1μm,21.0s						
SDDR	**Presa de Saban**	**145.73**	**20**	*e*PKPbc	PKPbc	03 28 43.8	-0.6
SDDR				LR	LR		
	comp=Z,2μm,21.0s						
PAYG	**Puerto Ayora**	**146.97**	**70**	PFAKE		03 29 00.0	+14
PAYG				LR	LR		
	comp=Z,2μm,20.0s						
CELP	**Cerrillos**	**147.89**	**13**	*e*PKPbc	PKPbc	03 28 50.5	-0.1
STVI	**Saint Thomas**	**147.93**	**10**	*e*PKPbc	PKPbc	03 28 53.0	+2.3
SJG	**San Juan**	**147.95**	**12**	*e*PKPbc	PKPbc	03 28 54.3	+3.6
SJG				LR	LR		
	comp=Z,793nm,21.0s						
SJG	**San Juan**	**147.95**	**12**	*e*PKP2	PKPab	03 28 54.3	+0.9
SJG				MLR	MLR		
	comp=Z,793nm,21.0s						
ICM	**Isla Caja Muer**	**148.08**	**13**	*e*PKPbc	PKPbc	03 28 52.1	+1.0
ANWB	**Willy Bob**	**148.99**	**4**	PFAKE		03 29 00.0	+11
ANWB				LR	LR		
	comp=Z,842nm,19.0s						
BCIP	**Isla Barro Col**	**149.78**	**43**	*e*PKPbc	PKPbc	03 28 54.1	-1.5
BCIP				LR	LR		
	comp=Z,952nm,21.0s						
PLCA	**Paso Flores**	**151.16**	**162**	PKP	PKPdf	03 28 51.5	-0.6
	comp=Z,18nm,1.1s,baz=224,slow=1.6,SNR=11						
PLCA				PKPbc	PKPbc	03 28 59.1	+1.0
	comp=Z,16nm,1.0s,baz=220,slow=3.8,SNR=8.9						
PLCA	**Paso Flores**	**151.16**	**162**	PKP	PKPdf	03 28 51.5	-0.6
PLCA				*e*PKPbc	PKPbc	03 28 58.7	+0.7
PLCA				PKPbc	PKPbc	03 28 59.1	+1.1
PLCA				LR	LR		
	comp=Z,1μm,20.0s						
PLCA	**Paso Flores**	**151.16**	**162**	PKIKP	PKPdf	03 28 51.5	-0.6
PLCA				*e*		03 28 58.7	
PLCA						03 28 59.1	
PLCA				MLR	MLR		
	comp=Z,1μm,20.0s						
FDF	**Fort de France**	**151.94**	**3**	*e*PKPbc	PKPbc	03 29 01.8	+1.3
FDF				LR	LR		
	comp=Z,1μm,21.0s						
FDF	**Fort de France**	**151.94**	**3**	*e*PKIKP	PKPdf	03 29 01.8	+7.8
FDF				MLR	MLR		
	comp=Z,1μm,21.0s						
BBGH	**Gun Hill**	**153.57**	**0**	PFAKE		03 29 10.0	+14
BBGH				LR	LR		
	comp=Z,2μm,22.0s						
GRGR	**Grenville**	**154.48**	**5**	PFAKE		03 29 10.0	+12
GRGR				LR	LR		
	comp=Z,1μm,20.0s						
SDV	**Santo Domingo**	**155.19**	**27**	*e*PKPdf	PKPdf	03 28 58.8	+0.1
SDV				*e*PKPbc	PKPdf	03 29 05.9	+7.2
SDV				LR	LR		
	comp=Z,422nm,20.0s						
TRQA	**Tornquist**	**155.41**	**175**	*e*PKPab	PKPab	03 29 23.5	-0.4
TRQA				LR	LR		
	comp=Z,1μm,22.0s						
RCBR	**Riachuelo**	**155.56**	**286**	PKPbc	PKPdf	03 29 07.2	+8.0
	comp=Z,17nm,1.2s,baz=64,slow=1.7,SNR=2.7						
RCBR				PKPab	PKPab	03 29 23.9	-1.5
	comp=Z,16nm,1.0s,baz=63,slow=8.5,SNR=2.6						
RCBR	**Riachuelo**	**155.56**	**286**	PKPbc	PKPdf	03 29 07.2	+8.0
RCBR				PKPab	PKPab	03 29 23.9	-1.5
RCBR				LR	LR		
	comp=Z,1μm,20.0s						
ROSC	**El Rosal**	**156.58**	**40**	PKP	PKPdf	03 29 01.3	+0.7
	comp=Z,3.6nm,0.8s,baz=86,slow=23,SNR=4.0						
OTAV	**Otavalo**	**156.80**	**56**	PFAKE		03 29 10.0	+9.1
OTAV				LR	LR		
	comp=Z,1μm,20.0s						
LPA	**La Plata**	**158.60**	**184**	*ce*PKIKP	PKPdf	03 29 07.0	+4.5
LPA	**La Plata**	**158.60**	**184**	PKP	PKPab	03 29 42.0	+4.3
LPA							
	comp=Z,4μm,20.0s						
CFAA	**Coronel Fontan**	**160.24**	**157**	PKP	PKPdf	03 29 04.6	+0.1
	comp=Z,1.9nm,1.1s,baz=228,slow=3.7,SNR=8.1						
CFAA				PKPab	PKPab	03 29 46.0	+1.1
	comp=Z,0.8nm,0.9s,baz=237,slow=6.9,SNR=2.1						
LCO	**Las Campanas**	**161.35**	**148**	PFAKE		03 29 20.0	+14
LCO				LR	LR		
	comp=Z,2μm,22.0s						
NNA	**Nana**	**163.01**	**87**	PFAKE		03 29 20.0	+12
NNA				LR	LR		
	comp=Z,1μm,19.0s						
SPB	**Sao Paulo**	**164.77**	**227**	PFAKE		03 29 20.0	+11
SPB				LR	LR		
	comp=Z,1μm,21.0s						
CPUP	**Villa Florida**	**167.04**	**189**	PKP	PKPdf	03 29 11.3	+0.4
	comp=Z,3.1nm,0.8s,baz=63,slow=5.7,SNR=4.3						
CPUP				PKPab	PKPab	03 30 14.5	-0.4
	comp=Z,24nm,1.0s,baz=154,slow=5.4,SNR=14						
CPUP				PP	PP	03 34 02.4	+0.8
	comp=Z,5.3nm,0.9s,baz=168,slow=4.5,SNR=4.3						
CPUP	**Villa Florida**	**167.04**	**189**	PKP	PKPdf	03 29 11.3	+0.4
CPUP				PKPab	PKPab	03 30 14.5	-0.4
CPUP				PP	PP	03 34 02.4	+0.7
CPUP				LR	LR		
	comp=Z,228nm,21.0s						
CPUP	**Villa Florida**	**167.04**	**189**	PKIKP	PKPdf	03 29 11.3	+0.4
CPUP						03 30 14.5	
CPUP						03 34 02.4	
BDFB	**Brasilia**	**168.68**	**258**	PKP	PKPdf	03 29 12.3	0.0
	comp=Z,6.9nm,0.9s,baz=195,slow=1.1,SNR=5.6						
BDFB				PKPab	PKPab	03 30 22.9	+0.1
	comp=Z,11nm,0.7s,baz=97,slow=3.6,SNR=11						
BDFB	**Brasilia**	**168.68**	**258**	PKIKP	PKPdf	03 29 12.3	0.0
BDFB						03 30 22.9	
LPAZ	**La Paz**	**171.19**	**110**	PKP	PKPdf	03 29 15.2	+1.4
	comp=Z,7.2nm,1.2s,baz=349,slow=2.0,SNR=14						
LPAZ				PKPab	PKPab	03 30 34.8	+0.9
	comp=Z,4.1nm,0.9s,baz=243,slow=4.5,SNR=3.8						
LPAZ				PP	PP	03 34 25.1	+0.2
	comp=Z,2.1nm,1.0s,baz=219,slow=6.5,SNR=3.8						
LPAZ	**La Paz**	**171.19**	**110**	PKP	PKPdf	03 29 15.2	+1.4
LPAZ				PKPab	PKPab	03 30 34.8	+0.9
LPAZ				PP	PP	03 34 25.1	+0.2
LPAZ				LR	LR		
	comp=Z,1μm,22.0s						
LPAZ	**La Paz**	**171.19**	**110**	PKIKP	PKPdf	03 29 15.2	+1.4
LPAZ						03 34 25.1	
LPAZ				MLR	MLR		
	comp=Z,1μm,22.0s						

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*IDC **27** 03:10:44.6±0.8, 13°.32N×120°.07E, h0km, mb4.9/10, mb1 5.1/10, mb1mx4.7/26, mbtmp4.9/10, MS5.0/2, Ms1 5.0/2, ms1mx4.6/26, Error ellipse: s-maj=18.8km s-min=12.6km az=129.0*

*NEIC **27** 03:10:46.1±0.5, 13°.34N×120°.28E, h10km, mb5.1/6, Error ellipse: s-maj=12.2km s-min=10.0km az=90.0*

*ISCJB **27** 03:10:49.4±2.3, 13°.4N±0°.1×120°.3E±0°.2, h47km±21km, mb5.0/17, MS5.1/2, Error ellipse: s-maj=29.4km s-min=14.7km az=154.7*

ISC 27 03:10:50.6±2.1, 13°.4N±0°.1×120°.4E±0°.2, h43km±20km, n21, σ0°68/19, mb5.0/17, MS5.1/2, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.86**	**37**	Pg		**Pn**	**03 11 06.3**	**0.0**
	baz=236,slow=3.6,SNR=1.6							
TGY				Lg			03 11 22.7	
	3μm,0.3s,baz=115,slow=19,SNR=3.0							
CMAR	**Chiang Mai Arr**	**21.24**	**286**	P		**P**	**03 15 32.0**	**-1.1**
	10.0nm,0.8s,mb4.2,baz=93,slow=9.3,SNR=2.0							
WRA	**Warramunga Arr**	**35.87**	**157**	P		**P**	**03 17 46.2**	**-0.3**
	84nm,0.7s,mb5.8,baz=332,slow=11,SNR=6.6							
SONM	**Songino Array**	**36.26**	**344**	P		**P**	**03 17 50.3**	**+0.7**
	13nm,0.7s,mb4.9,baz=158,slow=10,SNR=2.8							
ASAR	**Alice Springs**	**39.14**	**160**	P		**P**	**03 18 14.8**	**+0.5**
	51nm,0.6s,mb5.5,baz=341,slow=7.5,SNR=7.1							
TKM2	**Tokmak 2**	**48.44**	**316**	*e*P		**P**	**03 19 28.5**	**-0.3**
	17nm,0.9s,mb5.1							
UCH	**Uchtor**	**48.91**	**315**	*e*P		**P**	**03 19 33.1**	**+0.8**
	28nm,0.9s,mb5.3							
ZALV	**Zalesovo Beam**	**49.19**	**333**	P		**P**	**03 19 33.7**	**-0.5**
	7.5nm,0.6s,mb4.9,baz=127,slow=6.6,SNR=2.5							
KURK	**Kurchatov**	**50.27**	**327**	*e*P		**P**	**03 19 43.3**	**+0.7**
	49nm,0.9s,mb5.5							
BVAR	**Borovoye Array**	**55.85**	**326**	P		**P**	**03 20 24.0**	**+0.3**
	10nm,0.7s,mb5.0,baz=120,slow=8.5,SNR=3.2							
ABKAR	**Akbulak array**	**60.77**	**319**	*e*P		**P**	**03 20 59.6**	**+1.6**
	11nm,0.7s,mb5.1							
RPZ	**Rata Peaks**	**73.22**	**144**	LR		LR	03 58 30.3	
	comp=Z,430nm,18.1s,MS4.8,baz=305,slow=39							
MCK	**McKinley**	**78.38**	**27**	*e*P		**P**	**03 22 45.5**	**-0.8**
	14nm,0.9s,mb4.9							
ARCES	**ARCESS Array B**	**79.25**	**339**	P		**P**	**03 22 50.7**	**-0.4**
	6.7nm,0.8s,mb4.6,baz=82,slow=10,SNR=2.2							
CASY	**Casey**	**79.80**	**184**	*e*P		**P**	**03 22 53.7**	**-0.2**
	9.3nm,0.8s,mb4.8							
BUR08	**Bucovina Ar. S**	**83.68**	**317**	*e*P		**P**	**03 23 15.0**	**+0.1**
HFS	**Hagfors**	**86.59**	**331**	P		**P**	**03 23 28.4**	**-0.9**
	5.0nm,0.8s,mb4.8,baz=113,slow=6.7,SNR=2.8							
NOA	**NORSAR Array B**	**87.39**	**333**	P		**P**	**03 23 32.1**	**-1.0**
	5.5nm,0.8s,mb4.8,baz=68,slow=4.7,SNR=2.9							
RES	**Resolute Bay**	**89.36**	**9**	LR		LR	04 04 24.9	
	comp=Z,2μm,19.4s,MS5.5,baz=334,slow=36							
GERES	**GERESS Array B**	**90.68**	**321**	P		**P**	**03 23 49.0**	**+0.2**
	1.8nm,0.7s,mb4.5,baz=52,slow=6.4,SNR=3.6							
MAW	**Mawson**	**90.73**	**199**	P		**P**	**03 23 49.0**	**+0.5**
	5.8nm,1.0s,mb4.9,baz=27,slow=11,SNR=2.9							

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*IDC **27** 03:14:29.2±0.7, 13°.39N×120°.29E, h0km, mb4.4/13, mb1 4.4/13, mb1mx4.2/24, mbtmp4.4/13, Error ellipse: s-maj=16.7km s-min=10.3km az=127.0*

*NEIC **27** 03:14:30.6±0.5, 13°.43N×120°.39E, h10km, mb4.6/5, Error ellipse: s-maj=13.2km s-min=10.4km az=94.0*

*ISCJB **27** 03:14:31.6±2.1, 13°.45N±0°.09×120°.4E±0°.1, h29km±16km, mb4.4/18, Error ellipse: s-maj=20.5km s-min=13.8km az=160.4*

ISC 27 03:14:31.5±2.4, 13°.44N±0°.09×120°.5E±0°.1, h15km±15km, n23, σ0°83/23, mb4.4/18, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.81**	**36**	Pg		**Pg**	**03 14 47.2**	**-0.1**
	baz=180,slow=10							
TGY				Lg			03 15 01.9	
	baz=162,slow=20							
CMAR	**Chiang Mai Arr**	**21.26**	**286**	P		**P**	**03 19 17.0**	**-0.4**
	1.5nm,0.5s,mb3.6,baz=96,slow=9.2,SNR=3.9							
PSI	**Prapat**	**23.76**	**245**	P		**P**	**03 19 43.5**	**-0.1**
	6.2nm,0.9s,mb4.0,baz=62,slow=16,SNR=3.1							
CBIJ	**Chichi jima**	**24.45**	**53**	P		**P**	**03 19 49.9**	**0.0**
	75nm,0.9s,mb5.1,baz=232,slow=19,SNR=2.6							
WRA	**Warramunga Arr**	**35.88**	**157**	P		**P**	**03 21 30.8**	**-0.2**
	3.2nm,0.3s,mb4.7,baz=341,slow=9.2,SNR=12							
SONM	**Songino Array**	**36.23**	**344**	P		**P**	**03 21 33.7**	**-0.1**
	2.8nm,0.6s,mb4.3,baz=162,slow=9.6,SNR=4.2							
ASAR	**Alice Springs**	**39.16**	**160**	P		**P**	**03 21 59.6**	**+0.8**
	6.1nm,0.5s,mb4.6,baz=338,slow=7.1,SNR=15							
MK31	**Makanchi Array**	**46.

SONM Songino Array 36.34 344 P **P 03 24 42.4 0.0**
3.0nm,0.7s,mb4.4,baz=160,slow=10,SNR=8.4
ASAR Alice Springs 39.07 160 P **P 03 25 06.8 +1.0**
2.4nm,0.6s,mb4.1,baz=340,slow=7.0,SNR=4.5
CTA Charters Tower 41.86 142 P **P 03 25 28.1 -0.8**
7.8nm,1.0s,mb4.3,baz=338,slow=5.4,SNR=2.0
MKAR Makanchi Array 46.13 324 P **P 03 26 02.5 -0.4**
0.4nm,0.2s,mb3.9,baz=120,slow=8.5,SNR=3.1
UCH Uchtor 48.92 315 *eP* **P 03 26 26.9 +2.2**
2.5nm,0.8s,mb4.3
KURK Kurchatov 50.31 327 *eP* **P 03 26 35.2 +0.1**
3.6nm,0.6s,mb4.6
FINES FINESS Array B 80.45 331 P **P 03 29 49.0 -0.9**
2.8nm,0.9s,mb4.2,baz=65,slow=6.9,SNR=3.6

IDC 27 03:18:21.6±1.2, 13°.10N×120°.22E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/20, mbtmp3.8/4, Error ellipse: s-maj=25.6km s-min=13.5km az=114.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.22**	**35**	Pg	Pg	03 18 45.7	+0.8
	201nm,0.3s,baz=344,slow=19,SNR=2.2						
TGY				Lg		03 19 00.9	
	505nm,0.3s,baz=207,slow=20,SNR=2.8						
CMAR	**Chiang Mai Arr**	**21.15**	**287**	P		03 23 09.7	+1.3
	1.7nm,0.4s,baz=100,slow=8.7,SNR=6.7						
WRA	**Warramunga Arr**	**35.65**	**157**	P		03 25 23.0	+1.5
	0.7nm,0.6s,baz=331,slow=10,SNR=4.6						
SONM	**Songino Array**	**36.50**	**344**	P		03 25 27.8	-0.7
	1.7nm,0.8s,baz=152,slow=9.4,SNR=3.3						
ASAR	**Alice Springs**	**38.91**	**160**	P		03 25 48.0	-1.3
	0.9nm,0.6s,baz=340,slow=6.9,SNR=2.6						

IDC 27 03:24:43.4±1.0, 13°.26N×120°.64E, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.8/21, mbtmp3.9/6, Error ellipse: s-maj=25.4km s-min=10.7km az=101.0
NEIC 27 03:24:44.6±0.7, 13°.28N×120°.64E, h10km, mb4.1/2, Error ellipse: s-maj=18.7km s-min=11.9km az=87.0
ISC 27 03:24:45.2±3.7, 13°.3N±0°.2×120°.7E±0°.2, h14km±25km, n9, σ0§89/9, mb3.9/8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.84**	**18**	Pg	**Pg**	**03 25 01.5**	**-0.1**
	254nm,0.3s,baz=195,slow=3.9,SNR=5.1						
TGY				Lg		03 25 11.9	
	315nm,0.3s,baz=190,slow=15,SNR=6.4						
CMAR	**Chiang Mai Arr**	**21.51**	**287**	P	**P**	**03 29 34.2**	**+0.2**
	1.0nm,0.3s,mb3.7,baz=94,slow=11,SNR=3.1						
WRA	**Warramunga Arr**	**35.66**	**158**	P	**P**	**03 31 42.9**	**-0.3**
	2.4nm,0.6s,mb4.3,baz=336,slow=9.7,SNR=20						
SONM	**Songino Array**	**36.43**	**344**	P	**P**	**03 31 50.7**	**+1.3**
	0.3nm,0.3s,mb3.6,baz=153,slow=7.9,SNR=2.7						
ASAR	**Alice Springs**	**38.95**	**160**	P	**P**	**03 32 11.3**	**+0.4**
	2.2nm,0.5s,mb4.1,baz=339,slow=6.9,SNR=29						
MKAR	**Makanchi Array**	**46.34**	**324**	P	**P**	**03 33 11.6**	**+0.8**
	0.4nm,0.7s,mb3.5,baz=133,slow=8.5,SNR=3.0						
KURK	**Kurchatov**	**50.51**	**327**	*eP*	**P**	**03 33 40.9**	**-2.0**
	2.5nm,0.9s,mb4.1						
BVAR	**Borovoye Array**	**56.09**	**326**	P	**P**	**03 34 22.9**	**-1.0**
	0.4nm,0.6s,mb3.6,baz=99,slow=9.2,SNR=3.8						
BRVK	**Borovoye**	**56.16**	**326**	*eP*	**P**	**03 34 24.9**	**+0.5**
	0.7nm,0.4s,mb4.0						

WEL 27 03:24:46.6±0.3, 39°.54S×174°.27E, h190km±3km, ML3.7/11, Error ellipse: s-maj=3.6km s-min=1.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.56**	**43**	PN	Pn	03 25 12.5	-0.4
VRZ				SN	Sn	03 25 32.7	-0.3
WAZ	**Wanganui**	**0.60**	**111**	PN	Pn	03 25 13.7	+0.8
WAZ				SN	Sn	03 25 34.0	+0.9
WAZ				SN	Sn	03 25 34.1	+1.0
MTVZ	**Mangateitei**	**0.95**	**81**	PN	Pn	03 25 15.3	+0.3
MTVZ				SN	Sn	03 25 37.1	+0.4
TRVZ	**Turoa**	**1.02**	**77**	PN	Pn	03 25 15.8	+0.4
TRVZ				SN	Sn	03 25 38.6	+1.0
TWVZ	**Taurewa**	**1.02**	**63**	PN	Pn	03 25 15.2	-0.3
FWVZ	**Far West T-bar**	**1.04**	**74**	PN	Pn	03 25 15.6	+0.1
FWVZ				SN	Sn	03 25 37.2	-0.7
WPVZ	**Whakapapa**	**1.05**	**72**	PN	Pn	03 25 15.9	+0.3
WTVZ	**West Tongariro**	**1.11**	**68**	PN	Pn	03 25 16.1	-0.1
WTVZ				SN	Sn	03 25 39.4	+0.6
HIZ	**Hauiti**	**1.12**	**24**	PN	Pn	03 25 15.4	-0.8
KRVZ	**Karewarewa**	**1.16**	**68**	PN	Pn	03 25 16.4	-0.1
MOVZ	**Moawhango**	**1.16**	**84**	PN	Pn	03 25 16.4	-0.1
MOVZ				SN	Sn	03 25 37.7	-1.8
BHHZ	**Black Hill Sta**	**1.39**	**88**	PN	Pn	03 25 18.0	-0.4
TSZ	**Takapari Road**	**1.41**	**112**	PN	Pn	03 25 18.8	+0.3
KIW	**Kapiti Island**	**1.41**	**160**	PN	Pn	03 25 18.7	+0.2
KIW				SN	Sn	03 25 41.5	-1.9
OGWZ	**Otaki Gorge**	**1.45**	**152**	PN	Pn	03 25 19.3	+0.4
OGWZ				SN	Sn	03 25 43.1	-1.0
MRZ	**Mangatainoka R**	**1.51**	**138**	PN	Pn	03 25 19.5	+0.1
MRZ				SN	Sn	03 25 43.1	-1.8
PNHZ	**Pukenui**	**1.54**	**105**	PN	Pn	03 25 19.8	+0.1
HOWZ	**Holdsworth Sta**	**1.66**	**145**	PN	Pn	03 25 20.7	-0.1
HOWZ				SN	Sn	03 25 46.0	-1.5
TCW	**Tory Channel**	**1.67**	**180**	PN	Pn	03 25 21.2	+0.3
CAW	**Cannon Point**	**1.68**	**159**	PN	Pn	03 25 21.0	-0.1
CAW				SN	Sn	03 25 46.3	-1.6
WPHZ	**Waipukurau**	**1.75**	**108**	PN	Pn	03 25 22.0	+0.2
WPHZ				SN	Sn	03 25 48.0	-1.1
BKZ	**Black Stump Fm**	**1.77**	**78**	PN	Pn	03 25 21.4	-0.6
SNZO	**South Karori**	**1.80**	**169**	PN	Pn	03 25 22.0	-0.2
NNZ	**Nelson**	**1.81**	**202**	PN	Pn	03 25 22.0	-0.3
NNZ				SN	Sn	03 25 47.3	-2.8
MCHZ	**McNeill Hill**	**1.88**	**88**	PN	Pn	03 25 23.0	-0.1
TUWZ	**Tuamarina**	**1.90**	**187**	PN	Pn	03 25 23.3	+0.1
KAHZ	**Kahuranaki**	**2.03**	**98**	PN	Pn	03 25 24.9	+0.3
PXZ	**Pawanui**	**2.06**	**105**	PN	Pn	03 25 25.0	0.0
CKHZ	**Cape Kidnapper**	**2.18**	**94**	PN	Pn	03 25 26.3	+0.1
RAHZ	**Arahi**	**2.28**	**75**	PN	Pn	03 25 26.9	-0.5
THZ	**Tophouse**	**2.45**	**205**	PN	Pn	03 25 28.8	-0.4
URZ	**Urewera**	**2.56**	**61**	PN	Pn	03 25 28.6	-2.0
KNZ	**Kokohu**	**2.70**	**80**	PN	Pn	03 25 31.2	-0.9
MWZ	**Matawai**	**2.81**	**66**	PN	Pn	03 25 31.8	-1.7
MHGZ	**Mahia Peninsul**	**2.85**	**83**	PN	Pn	03 25 33.4	-0.6
PRGZ	**Paritu Road**	**2.88**	**79**	PN	Pn	03 25 33.3	-1.0
LTZ	**Lake Taylor**	**3.57**	**204**	PN	Pn	03 25 38.6	-4.0
MXZ	**Matakaoa Point**	**3.73**	**59**	PN	Pn	03 25 42.4	-2.3

IDC 27 03:26:25.9±0.8, 13°.22N×120°.09E, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.1/21, mbtmp4.2/9, Error ellipse: s-maj=18.6km s-min=13.3km az=119.0
NEIC 27 03:26:27.8±0.5, 13°.27N×120°.35E, h10km, mb4.3/10, Error ellipse: s-maj=11.5km s-min=9.5km az=110.0
ISCJB 27 03:26:31.4±1.8, 13°.30N±0°.10×120°.4E±0°.1, h55km±17km, mb4.2/20, Error ellipse: s-maj=23.7km s-min=15.4km az=161.0
ISC 27 03:26:32.3±1.8, 13°.31N±0°.09×120°.5E±0°.1, h45km±18km, n23, σ0§64/23, mb4.2/20, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.91**	**31**	Pg	**Pn**	**03 26 48.7**	**0.0**
	697nm,0.3s,baz=231,slow=8.5,SNR=9.6						
TGY				Lg		03 27 05.7	
	1μm,0.3s,baz=120,slow=20,SNR=11						
KULM	**Kulim**	**21.09**	**250**	*eP*	**P**	**03 31 12.6**	**-0.6**
	22nm,1.3s,mb4.3						
CMAR	**Chiang Mai Arr**	**21.31**	**287**	P	**P**	**03 31 14.8**	**-0.6**
	1.6nm,0.3s,mb3.8,baz=95,slow=9.1,SNR=5.2						
WRA	**Warramunga Arr**	**35.76**	**157**	P	**P**	**03 33 27.4**	**+0.2**
	1.3nm,0.4s,mb4.2,baz=333,slow=10,SNR=15						
ULN	**Ulaanbaatar**	**36.21**	**345**	*eP*	**P**	**03 33 30.5**	**-0.2**
	3.1nm,0.5s,mb4.5						
SONM	**Songino Array**	**36.36**	**344**	P	**P**	**03 33 31.6**	**-0.4**
	4.4nm,0.7s,mb4.5,baz=160,slow=9.7,SNR=17						
ASAR	**Alice Springs**	**39.04**	**160**	P	**P**	**03 33 55.0**	**+0.2**
	1.3nm,0.5s,mb3.9,baz=341,slow=7.2,SNR=15						
MK31	**Makanchi Array**	**46.20**	**324**	*eP*	**P**	**03 34 52.9**	**+0.2**
MKAR	**Makanchi Array**	**46.20**	**324**	P	**P**	**03 34 52.8**	**0.0**
	1.8nm,0.8s,mb4.1,baz=135,slow=8.9,SNR=8.6						
TKM2	**Tokmak 2**	**48.54**	**316**	*eP*	**P**	**03 35 11.2**	**+0.2**
	1.9nm,0.6s,mb4.3						

UCH Uchtor 49.01 315 *eP* **P 03 35 16.3 +1.7**
2.9nm,0.9s,mb4.3
AAK Ala-Archa 49.17 315 *eP* **P 03 35 16.9 +1.0**
1.3nm,0.5s,mb4.2
ZALV Zalesovo Beam 49.29 333 P **P 03 35 16.6 0.0**
0.5nm,0.3s,mb4.0,baz=141,slow=7.3,SNR=3.7
AML Almayashu 49.54 315 *eP* **P 03 35 19.7 +1.1**
3.2nm,0.8s,mb4.4
EKS2 Erkin-Say 49.67 315 *eP* **P 03 35 20.3 +0.6**
3.0nm,0.9s,mb4.3
KKAR Karatay Array 52.08 315 *eP* **P 03 35 37.7 0.0**
1.2nm,0.7s,mb3.9
BVAR Borovoye Array 55.96 326 P **P 03 36 05.5 -0.4**
0.7nm,0.6s,mb3.9,baz=132,slow=8.2,SNR=4.8
BRVK Borovoye 56.03 326 *eP* **P 03 36 06.1 -0.3**
3.1nm,0.8s,mb4.4
ABKAR Akbulak array 60.87 319 *eP* **P 03 36 39.6 -0.6**
0.5nm,0.5s,mb3.9
ARCES ARCESS Array B 79.36 339 P **P 03 38 32.5 -0.5**
6.3nm,1.1s,mb4.4,baz=83,slow=7.6,SNR=4.2
SPITS Spitsbergen Ar 79.92 348 P **P 03 38 35.5 -0.5**
24nm,1.1s,mb5.0,baz=90,slow=12,SNR=2.5
FINES FINESS Array B 80.50 331 P **P 03 38 38.2 -1.2**
0.7nm,0.6s,mb3.7,baz=46,slow=9.9,SNR=4.4
FINES FINESS Array B 80.50 331 P **P 03 38 38.2 -1.2**

ISCJB 27 03:29:07.0±1.1, 21°.3N±0°.2×92°.8E±0°.2, h33km, Error ellipse: s-maj=36.9km s-min=7.9km az=39.7
NEIC 27 03:29:07.8±1.0, 20°.95N×92°.69E, h35km, mb4.1/1, Error ellipse: s-maj=26.6km s-min=8.5km az=211.0
ISC 27 03:29:09.5±1.1, 21°.2N±0°.2×92°.7E±0°.2, h35km, n15, σ1§10/24, Myanmar-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**6.33**	**110**	Pn	**Pn**	**03 30 37.3**	**-3.0**
CHTO				*eSn*	**Sn**	**03 31 45.3**	**-6.1**
ODAN	**Odare**	**7.46**	**321**	*ePn*	**Pn**	**03 30 56.7**	**+0.8**
ODAN				*eSn*	**Sn**	**03 32 19.6**	**+0.3**
	107nm,0.4s						
TAPN	**Taplejung**	**7.66**	**325**	*ePn*	**Pn**	**03 30 59.5**	**+0.9**
TAPN				*eSn*	**Sn**	**03 32 24.6**	**+0.5**
	48nm,0.6s						
LSA	**Lhasa**	**8.62**	**351**	P	**Pn**	**03 31 14.3**	**+2.5**
LSA	**Lhasa**	**8.62**	**351**	*ePn*	**Pn**	**03 31 14.0**	**+2.2**
	6.9nm,0.4s						
GUN	**Gumba**	**9.14**	**319**	*ePn*	**Pn**	**03 31 19.5**	**+0.6**
GUN				*eSn*	**Sn**	**03 33 00.2**	**-0.4**
	49nm,0.5s						
PKI	**Pulchoki**	**9.21**	**315**	*ePn*	**Pn**	**03 31 20.5**	**+0.7**
PKI				*eSn*	**Sn**	**03 33 01.4**	**-0.8**
PKIN	**Phulchoki**	**9.22**	**315**	*ePn*	**Pn**	**03 31 20.3**	**+0.3**
PKIN				*eSn*	**Sn**	**03 33 01.3**	**-1.2**
	29nm,0.3s						
DMN	**Daman**	**9.43**	**314**	*ePn*	**Pn**	**03 31 23.4**	**+0.5**
KKN	**Kakani**	**9.44**	**316**	*ePn*	**Pn**	**03 31 23.0**	**0.0**
KKN				*eSn*	**Sn**	**03 33 06.1**	**-1.8**
	15nm,0.3s						
GKN	**Gorkha**	**10.00**	**315**	*ePn*	**Pn**	**03 31 31.1**	**+0.4**
GKN				*eSn*	**Sn**	**03 33 19.2**	**-2.5**
	25nm,0.3s						
KOLN	**Koldanda**	**10.57**	**310**	*ePn*	**Pn**	**03 31 38.5**	**0.0**
KOLN				*eSn*	**Sn**	**03 33 31.8**	**-3.9**
	32nm,0.3s						
DANN	**Dangsing**	**10.82**	**313**	*ePn*	**Pn**	**03 31 42.0**	**+0.1**
KBL	**Kabul**	**24.72**	**308**	P	**P**	**03 34 29.2**	**+1.7**
	3.6nm,0.6s						
ZAA0	**Zalesovo Array**	**33.28**	**352**	P	**P**	**03 35 43.4**	**-0.2**

NOU 27 03:29:23.5±0.9, 15°.48S×168°.16E, h30km, MD3.7, MS2.3
ISCJB 27 03:29:24.2±1.1, 15°.62S±0°.05×167°.64E±0°.07, h134km±10km, mb4.8/55, Error ellipse: s-maj=11.2km s-min=7.9km az=176.7
IDC 27 03:29:25.4±1.7, 15°.61S×167°.60E, h132km±13km, mb4.5/23, mb1 4.5/24, mb1mx4.5/27, mbtmp4.5/24, MS4.0/1, Ms1 4.0/1, ms1mx3.6/34, Error ellipse: s-maj=15.5km s-min=11.4km az=129.0
LDG 27 03:29:26.6±0.3, 15°.43S×167°.13E, h130km, Mb5.1/2, Error ellipse: s-maj=53.0km s-min=13.7km az=89.0
NEIC 27 03:29:29.5±1.3, 15°.57S×167°.53E, h166km±11km, mb5.0/22, Error ellipse: s-maj=9.7km s-min=7.3km az=130.0
BJI 27 03:29:30.3, 15°.24S×168°.10E, h189km, mB5.4/11, mb5.0/38
MOS 27 03:29:37.0±1.4, 15°.16S×166°.82E, h212km, mb5.0/10, Error ellipse: s-maj=13.8km s-min=9.2km az=41.3
ISC 27 03:29:24.8±1.0, 15°.60S±0°.05×167°.71E±0°.07, h126km±9km, h199km±2.3km; pP-P, n360, σ0§99/124, mb4.9/55, 70C-7D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**6.56**	**187**	*eP*	**Pn**	**03 30 59.5**	**+0.7**
BAYA				*eS*	**Sn**	**03 32 10.7**	**-1.6**
BAYA				AMP		03 32 23.8	
	comp=Z,45nm,10.3s						
NOUC	**Port Laguerre**	**6.60**	**191**	*eP*	**Pn**	**03 30 59.9**	**+0.5**
NOUC				*eS*	**Sn**	**03 32 12.1**	**-1.1**
NOUC				AMP		03 32 17.5	
	comp=Z,124nm,7.3s						
LASL	**Noumea**	**6.68**	**189**	*eP*	**Pn**	**03 31 02.1**	**+1.5**
NORM	**Noumea**	**6.69**	**190**	*eP*	**Pn**	**03 31 01.6**	**+1.0**
PLUM	**Mont Dore**	**6.71**	**189**	*eP*	**Pn**	**03 31 01.1**	**+0.3**
PLUM				*eS*	**Sn**	**03 32 13.7**	**-2.2**
HNR	**Honiara**	**9.75**	**308**	P	**Pn**	**03 31 41.5**	**-0.4**
	comp=Z,9.2nm,0.3s,baz=280,slow=18,SNR=6.1						
HNR	**Honiara**	**9.75**	**308**	P	**Pn**	**03 31 41.5**	**-0.5**
MSVF	**Nonsavu**	**10.13**	**104**	*ePn*	Px	03 31 59.7	
FUNA	**Funafuti**	**13.25**	**59**	*ePn*	**Pn**	**03 32 35.6**	**+7.5**
EIDS	**Eidsvold**	**18.34**	**235**	*eP*	**P**	**03 33 31.5**	**+2.0**
	comp=Z,91nm,0.8s						
ARMA	**Armidale**	**20.86**	**222**	*eP*	**P**	**03 33 57.9**	**+1.2**
ARMA	**Armidale**	**20.86**	**222**	*eP*	**P**	**03 33 58.1**	**+1.4**
	comp=Z,153nm,1.8s						
CTA	**Charters Tower**	**20.90**	**255**	P	**P**	**03 33 57.3**	**0.0**
	comp=Z,15nm,0.8s,baz=76,slow=11,SNR=12						
CTA	**Charters Tower**	**20.90**	**255**	*eP*	**P**	**03 33 57.9**	**+0.6**
	comp=Z,12nm,0.8s						
CTA	**Charters Tower**	**20.90**	**255**	P	**P**	**03 33 57.3**	**0.0**
CTAO	**Charters Tower**	**20.90**	**255**	*eP*	**P**	**03 33 57.8**	**+0.5**
	comp=Z,18nm,0.9s						
CTAO	**Charters Tower**	**20.90**	**255**	*eP*	**P**	**03 33 57.8**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,18nm,0.9s						
PMG	**Port Moresby**	**20.98**	**285**	*eP*	**P**	**03 33 57.6**	**-0.6**
PMG				pmax	pmax		
	comp=Z,25nm,1.7s						
RIV	**Riverview**	**23.51**	**216**	*eP*	**P**	**03 34 25.3**	**+2.0**
COEN	**Coen**	**23.78**	**271**	*eP*	**P**	**03 34 25.8**	**-0.2**
	comp=Z,57nm,0.9s,mb4.9						
URZ	**Urewera**	**24.04**	**162**	P	**P**	**03 34 28.6**	**+0.5**
	comp=Z,4.1nm,0.7s,mb3.9,baz=325,slow=16,SNR=2.8						
CNB	**Canberra Magne**	**25.60**	**217**	*eP*	**P**	**03 34 43.5**	**+1.2**
STKA	**Stephens Creek**	**28.77**	**231**	P	**P**	**03 35 11.0**	**+0.3**
	comp=Z,13nm,0.6s,mb4.7,baz=49,slow=7.3,SNR=31						
STKA				PcP	PcP	03 38 17.5	-0.2
	comp=Z,4.5nm,0.7s,baz=115,slow=1.5,SNR=5.0						
STKA	**Stephens Creek**	**28.77**	**231**	*eP*	**P**	**03 35 11.2**	**+0.5**
	comp=Z,11nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**28.77**	**231**	P	**P**	**03 35 11.0**	**+0.3**
STKA				PcP	PcP	03 38 17.5	-0.2
TOO	**Toolangi**	**29.41**	**218**	*eP*	**P**	**03 35 17.0**	**+0.7**
RAR	**Rarotonga**	**31.31**	**105**	LR	LR	03 45 12.4	
	comp=Z,284nm,19.2s,baz=288,slow=30						
MOO	**Moorlands**	**32.03**	**209**	*eP*	**P**	**03 35 40.5**	**+1.2**
WRA	**Warramunga Arr**	**32.04**	**257**	P	**P**	**03 35 38.2**	**-1.5**
	comp=Z,2.9nm,0.3s,mb4.5,baz=79,slow=6.1,SNR=78						
WRA				PcP	PcP	03 38 26.3	-0.3
	comp=Z,3.6nm,0.8s,baz=83,slow=2.2,SNR=10						
WRA				S	**S**	**03 40 37.8**	**-4.7**
	comp=Z,2.8nm,0.9s,baz=86,slow=14,SNR=5.5						
WRA	**Warramunga Arr**	**32.04**	**257**	P	**P**	**03 35 38.2**	**-1.5**
WRA				PcP	PcP	03 38 26.3	-0.3
WRA				S	**S**	**03 40 37.8**	**-4.7**
WRA	**Warramunga Arr**	**32.04**	**257**	P	**P**	**03 35 38.2**	**-1.5**
WRA						03 38 26.3	
WRA				S	**S**	**03 40 37.8**	**-4.7**
ASAR	**Alice Springs**	**32.77**	**250**	P	**P**	**03 35 44.8**	**-1.3**
	comp=Z,7.9nm,0.3s,mb5.0,baz=79,slow=9.2,SNR=91						
ASAR				PcP	PcP	03 38 28.2	-0.3
	comp=Z,3.1nm,0.8s,baz=88,slow=3.4,SNR=8.6						
ASAR				ScP	ScP	03 42 00.8	-0.3
	comp=Z,2.3nm,0.8s,baz=85,slow=3.0,SNR=6.6						
ASAR	**Alice Springs**	**32.77**	**250**	P	**P**	**03 35 44.8**	**-1.3**
ASAR						03 38 28.3	
KAKA	**Kakadu**	**34.30**	**270**	*eP*	**P**	**03 35 58.1**	**-1.3**
	comp=Z,6.6nm,0.3s,mb4.9						
KAKA	**Kakadu**	**34.30**	**270**	*eP*	**P**	**03 35 57.6**	**-1.7**
	comp=Z,17nm,0.3s,mb5.3						
FORT	**Forrest**	**39.23**	**240**	*eP*	**P**	**03 36 41.2**	**+0.2**
	comp=Z,42nm,0.7s,mb5.4						
FORT	**Forrest**	**39.23**	**240**	*eP*	**P**	**03 36 41.3**	**+0.4**
	comp=Z,58nm,0.8s,mb5.5						
FITZ	**Fitzroy Crossi**	**40.28**	**260**	P	**P**	**03 36 49.4**	**-0.5**
	comp=Z,18nm,0.3s,mb5.3,baz=79,slow=8.4,SNR=247						
FITZ	**Fitzroy Crossi**	**40.28**	**260**	*eP*	**P**	**03 36 49.2**	**-0.6**
	comp=Z,32nm,0.3s,mb5.6						
FITZ	**Fitzroy Crossi**	**40.28**	**260**	*eP*	**P**	**03 36 49.3**	**-0.5**
	comp=Z,19nm,0.4s,mb5.3						
MBWA	**Marble Bar**	**45.74**	**256**	*eP*	**P**	**03 37 33.3**	**-0.4**
	comp=Z,6.1nm,0.5s,mb4.6						
KLBR	**Kellerberrin**	**48.06**	**241**	*eP*	**P**	**03 37 50.4**	**-1.2**
	comp=Z,59nm,1.9s,mb5.1						
NWAO	**Narrogin (SRO)**	**48.67**	**240**	P	**P**	**03 37 55.5**	**-0.8**
	comp=Z,7.9nm,0.8s,mb4.7,baz=68,slow=16,SNR=3.5						
NWAO	**Narrogin (SRO)**	**48.67**	**240**	P	**P**	**03 37 55.5**	**-0.9**
JOW	**Kunigami**	**56.98**	**317**	P	**P**	**03 38 57.5**	**+0.2**
	comp=Z,51nm,0.9s,mb5.5,baz=104,slow=16						
MJAR	**Matsushiro Arr**	**58.87**	**332**	P	**P**	**03 39 09.5**	**-0.9**
	comp=Z,15nm,0.9s,mb5.0,baz=171,slow=8.2,SNR=26						
MJAR				PcP	PcP	03 39 58.9	+0.5
	comp=Z,4.2nm,0.9s,baz=181,slow=4.8,SNR=4.2						
MJAR	**Matsushiro Arr**	**58.87**	**332**	P	**P**	**03 39 09.5**	**-0.9**
MJAR				PcP	PcP	03 39 58.9	+0.5
MJAR	**Matsushiro Arr**	**58.87**	**332**	P	**P**	**03 39 09.5**	**-0.9**
MJAR						03 39 58.9	
MAJO	**Matsushiro**	**58.88**	**332**	*eP*	**P**	**03 39 09.9**	**-0.5**
	comp=Z,23nm,0.9s,mb5.2						
MAJO	**Matsushiro**	**58.88**	**332**	*eP*	**P**	**03 39 09.9**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
SBA	**Scott Base**	**62.27**	**180**	*eP*	**P**	**03 39 35.5**	**+2.6**
	comp=Z,263nm,3.0s						
SBA	**Scott Base**	**62.27**	**180**	*eP*	**P**	**03 39 35.5**	**+2.6**
SBA				pmax	pmax		
	comp=Z,263nm,3.0s						
ASAJ	**Asahikawa**	**63.70**	**340**	P	**P**	**03 39 41.9**	**-0.8**
	comp=Z,44nm,0.9s,mb5.3,baz=207,slow=6.8,SNR=8.6						
ASAJ	**Asahikawa**	**63.70**	**340**	*eP*	**P**	**03 39 44.1**	**+1.4**
KSRS	**Korea Array**	**64.70**	**326**	P	**P**	**03 39 49.2**	**-0.1**
	comp=Z,6.0nm,0.9s,mb4.4,baz=143,slow=7.1,SNR=15						
YSS	**Yuzh-Sakhalins**	**66.19**	**342**	*eP*	**P**	**03 39 59.3**	**+0.5**
	comp=Z,36nm,1.0s,mb5.2						
YSS	**Yuzh-Sakhalins**	**66.19**	**342**	*eP*	**P**	**03 39 59.3**	**+0.5**
YSS				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.2						
NJ2	**Nanjing**	**66.60**	**316**	*eP*	**P**	**03 40 03.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.2						
WHN	**Wuhan**	**68.84**	**312**	P	**P**	**03 40 15.8**	**0.0**
WHN				pmax	pmax		
	comp=Z,45nm,0.6s,mb5.5						
PETK	**Petropavlovsk-**	**68.97**	**354**	P	**P**	**03 40 16.1**	**0.0**
	comp=Z,5.4nm,0.7s,mb4.5,baz=167,slow=9.8,SNR=3.7						
PETK	**Petropavlovsk-**	**68.97**	**354**	P	**P**	**03 40 16.2**	**+0.1**
MDJ	**Mudanjiang**	**69.25**	**332**	P	**P**	**03 40 18.8**	**+0.8**
MDJ				pP	pP	03 41 05.5	+16
MDJ				sP	sP	03 41 27.5	+25
MDJ				PP	PP	03 42 54.0	+1.1
MDJ				S	S	03 49 08.5	-5.6
MDJ				ScS	ScS	03 50 00.0	-7.2
MDJ				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.3						
MDJ				pmax	pmax		
	comp=Z,450nm,3.4s						
MDJ	**Mudanjiang**	**69.25**	**332**	*eP*	**P**	**03 40 18.4**	**+0.3**
	comp=Z,55nm,1.0s,mb5.3						
KULM	**Kulim**	**69.55**	**282**	*eP*	**P**	**03 40 19.7**	**-0.8**
	comp=Z,14nm,1.0s,mb4.8						
PSI	**Prapat**	**70.41**	**279**	P	**P**	**03 40 24.5**	**-1.4**
	comp=Z,11nm,0.9s,mb4.7,baz=173,slow=5.2,SNR=8.5						
PSI	**Prapat**	**70.41**	**279**	P	**P**	**03 40 24.5**	**-1.4**
CN2	**Changchun**	**70.61**	**329**	*eP*	**P**	**03 40 26.5**	**+0.1**
CN2				*epP*	pP	03 41 11.8	+14
CN2				*eS*	S	03 49 23.3	-6.7
CN2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.2						
CN2				pmax	pmax		
	comp=Z,200nm,5

CD2 SS SS 03 55 36.3 -4.3
CD2 pmax pmax
comp=Z,30nm,1.1s,mb4.9
CD2 pmax pmax
comp=Z,100nm,6.2s
LZH Lanzhou 79.22 312 *e*P **P 03 41 17.5 +1.4**
LZH PcP PcP 03 41 26.0 +2.0
LZH pP pP 03 42 05.8 +18
LZH sP sP 03 42 28.3 +27
LZH pmax pmax
comp=Z,58nm,1.3s,mb5.2
LZH pmax pmax
comp=Z,960nm,5.6s
MAW Mawson 81.24 202 P **P 03 41 25.7 -0.6**
comp=Z,2.5nm,0.8s,mb4.1,baz=102,slow=4.6,SNR=6.9
MAW Mawson 81.24 202 *e*P **P 03 41 26.6 +0.2**
comp=Z,1.1nm,1.1s
MAW Mawson 81.24 202 *e*P **P 03 41 26.6 +0.2**
CIT Chita 82.04 330 *e*P **P 03 41 30.8 +0.1**
CIT pmax pmax
comp=Z,177nm,1.2s,mb5.8
YAK Yakutsk 82.99 343 *e*P **P 03 41 35.5 +0.1**
comp=Z,34nm,0.7s,mb5.3
YAK Yakutsk 82.99 343 *e*P **P 03 41 34.3 -1.1**
YAK pmax pmax
comp=Z,58nm,1.1s,mb5.3
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.2s
ULN Ulaanbaatar 83.09 324 *e*P **P 03 41 37.1 +0.8**
comp=E,42nm,0.8s,mb5.3
ULN Ulaanbaatar 83.09 324 *e*P **P 03 41 37.1 +0.8**
ULN pmax pmax
comp=Z,42nm,0.8s,mb5.3
BILL Bilibino 83.42 359⇑*e*P **P 03 41 39.0 +1.5**
BILL pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
BILL MLR MLR
comp=Z,500nm,16.0s
SONM Songino Array 83.45 323 P **P 03 41 38.5 +0.4**
comp=Z,20nm,0.8s,mb5.0,baz=140,slow=5.6,SNR=35
SONM Songino Array 83.45 323 P **P 03 41 38.5 +0.4**
GTA Gaotai 83.58 314 P **P 03 41 40.5 +1.5**
GTA pP pP 03 42 29.3 +18
GTA pmax pmax
comp=Z,30nm,1.1s,mb5.0
BOD Bodaibo 85.44 334 *e*P **P 03 41 46.3 -1.6**
BOD pmax pmax
comp=Z,18nm,1.5s,mb4.8
TLY Talaya 86.95 326 *e*P **P 03 41 55.5 +0.1**
comp=Z,6.1nm,0.9s,mb4.5
TLY Talaya 86.95 326 *e*P **P 03 41 55.5 0.0**
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
COLA College 87.02 17 *e*P **P 03 41 54.3 -1.2**
comp=Z,4.4nm,0.9s,mb4.4
COLA College 87.02 17 *e*P **P 03 41 54.3 -1.2**
COLA pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ILAR Eielson Array 87.22 18 P **P 03 41 54.8 -1.7**
comp=Z,1.8nm,0.7s,mb4.1,baz=237,slow=5.0,SNR=27
ILAR Eielson Array 87.22 18 P **P 03 41 54.8 -1.7**
BBB Bella Bella 87.26 34 P **P 03 41 56.4 -0.5**
comp=Z,48nm,1.1s,mb5.3,baz=239,slow=12,SNR=3.1
BBB Bella Bella 87.26 34 P **P 03 41 56.4 -0.5**
NVAR Mina Array Bea 87.51 49 P **P 03 41 58.7 +0.2**
comp=Z,0.9nm,0.8s,baz=238,slow=8.4,SNR=4.9
NEW Newport 91.95 40 *e*P **P 03 42 18.8 -0.2**
comp=Z,2.4nm,0.9s,mb4.4
NEW Newport 91.95 40 *e*P **P 03 42 18.8 -0.2**
NEW pmax pmax
comp=Z,2.0nm,0.9s
NVL N'lazarevskaya 92.25 188 *e*P **P 03 42 18.4 -1.7**
SNAA Sanae 92.70 183 P **P 03 42 21.5 -0.7**
comp=Z,1.8nm,0.7s,mb4.5,baz=194,slow=5.0,SNR=20
SNAA Sanae 92.70 183 P **P 03 42 21.5 -0.7**
WMQ Urumqi 93.64 314 *e*P **P 03 42 26.0 -0.9**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb5.3
YKA Yellowknife Ar 98.12 27 P **P 03 42 45.7 -1.1**
comp=Z,2.1nm,0.8s,mb4.7,baz=254,slow=4.7,SNR=4.7
YKA Yellowknife Ar 98.12 27 P **P 03 42 45.7 -1.1**
YKA Yellowknife Ar 98.12 27 P **P 03 42 45.7 -1.1**
MK31 Makanchi Array 98.13 316 *e*P **P 03 42 47.1 -0.1**
MK31 Makanchi Array 98.13 316 *e*P **P 03 42 47.1 -0.1**
MKAR Makanchi Array 98.13 316 P **P 03 42 47.1 -0.1**
comp=Z,2.0nm,0.7s,mb4.8,baz=97,slow=8.0,SNR=7.7
MKAR PKiKP PKiKP 03 47 18.6 -1.0
comp=Z,0.8nm,0.7s,baz=135,slow=0.4,SNR=3.9
MKAR Makanchi Array 98.13 316 P **P 03 42 47.1 -0.1**
ZALV Zalesovo Beam 98.35 324 P **P 03 42 46.8 -1.2**
comp=Z,5.7nm,0.8s,mb5.2,baz=108,slow=4.7,SNR=14
ZALV Zalesovo Beam 98.35 324 P **P 03 42 46.8 -1.2**
BVAR Borovoye Array 106.69 321 PKiKP PKiKP 03 47 34.7 -0.3
comp=Z,0.7nm,0.4s,baz=81,slow=1.9,SNR=5.9
ABKAR Abkulak array 113.24 317 *e*PKP PKiKP 03 47 46.9 -0.5
ARU Arti 113.45 325 *e*PKP PKiKP 03 47 47.3 -0.3
ARU Arti 113.45 325 *i*PKIKP PKiKP 03 47 47.1 -0.5
ARU 03 48 40.2
ARU 03 54 12.5
ARU SP SP 03 57 57.3 -5.6
ARU SS SS 04 03 56.2 -21
AKTK Aktyubinsk 114.41 319 PKP PKiKP 03 47 48.5 -1.1
AKTO Aktyubinsk 114.41 319 PKP PKiKP 03 47 48.5 -1.1
comp=Z,4.6nm,0.6s,baz=86,slow=2.6,SNR=19
AKTO Aktyubinsk 114.41 319 PKIKP PKiKP 03 47 48.5 -1.1
KEV Kevo 120.68 345 *e*PKIKP PKPdf 03 47 59.5 -1.6
ARCES ARCESS Array B 121.20 345 PKP PKPdf 03 48 01.7 -0.5
comp=Z,5.8nm,0.6s,baz=57,slow=1.9,SNR=70
ARCES ARCESS Array B 121.20 345 PKP PKPdf 03 48 01.7 -0.5
ARCES ARCESS Array B 121.20 345 PKIKP PKPdf 03 48 01.7 -0.4
KLMR Klimovskoe 121.65 333 *e*PKIKP PKPdf 03 48 01.8 -1.4
KLMR pmax pmax
comp=Z,16nm,0.7s
BOSA Boshof 122.98 220 PKP PKPdf 03 48 06.6 -0.3
comp=Z,3.3nm,1.0s,baz=118,slow=5.3,SNR=3.4
BOSA Boshof 122.98 220 PKIKP PKPdf 03 48 06.6 -0.3
JOF Joensuu 123.85 338 *e*PKIKP PKPdf 03 48 06.2 -1.2
GNI Garni 125.01 308 PKP PKPdf 03 48 10.1 -0.2
comp=Z,8.9nm,0.7s,baz=315,slow=2.9,SNR=8.3
GNI Garni 125.01 308 *e*PKPdf PKPdf 03 48 11.1 +0.8
GNI Garni 125.01 308 *e*PKIKP PKPdf 03 48 11.1 +0.8
OBN Obninsk 125.67 328⇓*i*PKIKP PKPdf 03 48 11.0 -0.1
OBN *e* 03 54 50.8
OBN pmax pmax
comp=Z,27nm,1.1s
KIV Kislovodsk 125.76 313 *i*PKIKP PKPdf 03 48 12.0 +0.4
KIV *SP 03 49 27.0
KIV pmax pmax
comp=Z,16nm,1.2s
KAF Kangasniemi 126.16 339 *e*PKIKP PKPdf 03 48 10.0 -1.8
FINES FINESS Array B 126.69 338 PKP PKPdf 03 48 12.8 -0.1
comp=Z,5.5nm,0.7s,baz=36,slow=2.5,SNR=14
FINES FINESS Array B 126.69 338 PKIKP PKPdf 03 48 12.8 -0.1
MALT Malatya 130.17 307 *e*PKPdf PKPdf 03 48 21.2 +1.0
MALT Malatya 130.17 307 *e*PKIKP PKPdf 03 48 21.2 +1.0
NB2 NORSAR Subarra131.58 345 PKPdf PKPdf 03 48 22.8 +0.6
comp=Z,3.3nm,1.1s,baz=31,slow=1.9
NOA NORSAR Array B 131.58 345 PKP PKPdf 03 48 21.9 -0.3
comp=Z,3.1nm,0.7s,baz=34,slow=1.9,SNR=8.9
NOA SKPbc SKPbc 03 51 35.1 -1.0
comp=Z,2.1nm,0.8s,baz=34,slow=2.8,SNR=3.8
NOA NORSAR Array B 131.58 345 PKIKP PKPdf 03 48 21.9 -0.3
AKASG Malin Array Be 131.70 326 PKP PKPdf 03 48 22.5 -0.2
comp=Z,3.6nm,0.6s,baz=64,slow=2.3,SNR=14
AKASG SKPbc SKPbc 03 51 36.4 -0.5
comp=Z,2.5nm,0.6s,baz=49,slow=4.3,SNR=5.9
AKASG Malin Array Be 131.70 326 PKIKP PKPdf 03 48 22.5 -0.2
AKBB Malin Array Si 131.70 326 *e*PKPdf PKPdf 03 48 22.2 -0.5
AKBB Malin Array Si 131.70 326 *e*PKIKP PKPdf 03 48 22.3 -0.4
KIEV Kiev 131.71 326 *e*PKPdf PKPdf 03 48 21.2 -1.5
KIEV Kiev 131.71 326 *e*PKIKP PKPdf 03 48 21.2 -1.5
CSS Prodhromos 134.92 304 *e*PKPdf PKPdf 03 48 29.2 0.0
BUR08 Bucovina Ar. S 135.56 324 *e*PKPdf PKPdf 03 48 31.6 +1.5
BURAR Bucovina Array 135.57 324⇑PKIKP PKPdf 03 48 31.9 +1.8
BURAR Bucovina Array 135.57 324⇑*i*P PKPdf 03 48 31.9 +1.8
KWP Kalwaria Pacla 135.76 328 *e*PKIKP PKPdf 03 48 32.2 +1.8
KOLS Kolonicke sedl 136.41 327 *e*PKP PKPdf 03 48 32.8 +1.2
KOLS Kolonicke sedl 136.41 327 *e*PKIKP PKPdf 03 48 32.8 +1.2
VOIR 136.82 321⇓PKIKP PKPdf 03 48 33.9 +1.4
VOIR 136.82 321⇓*i*P PKPdf 03 48 33.9 +1.4
CRVS Cervenica-Dubn 136.85 328 *e*PKP PKPdf 03 48 33.3 +0.9
CRVS Cervenica-Dubn 136.85 328 *e*PKIKP PKPdf 03 48 33.3 +0.9

DRGR 137.44 324⇑PKIKP PKPdf 03 48 33.7 +0.1
DRGR 137.44 324⇑*i*P PKPdf 03 48 33.7 +0.1
OKC Ostrava-Krasne 137.88 331 *e*PKIKP PKPdf 03 48 33.8 -0.5
OKC Ostrava-Krasne 137.88 331 *e*PKPdf PKPdf 03 48 33.8 -0.5
KSP Ksiaz 138.01 333 *e*PKP PKPdf 03 48 37.8 +3.3
GZR Gura Zlata 138.20 323⇑PKIKP PKPdf 03 48 35.3 +0.3
GZR Gura Zlata 138.20 323⇑*i*P PKPdf 03 48 35.3 +0.3
MORC Moravsky Berou 138.20 331 *e*PKPdf PKPdf 03 48 35.6 +0.7
MORC Moravsky Berou 138.20 331⇓PKIKP PKPdf 03 48 35.5 +0.6
PSZ Piszkesteto 138.28 327 *e*PKPdf PKPdf 03 48 35.5 +0.4
PSZ Piszkesteto 138.28 327 *e*PKIKP PKPdf 03 48 35.5 +0.4
DPC Dobruska-Polom 138.35 333 *e*PKIKP PKPdf 03 48 36.2 +1.1
DPC Dobruska-Polom 138.35 333 *e*PKPdf PKPdf 03 48 36.2 +1.1
UPC Upice 138.37 333 *e*PKIKP PKPdf 03 48 36.7 +1.5
UPC Upice 138.37 333 *e*PKPdf PKPdf 03 48 36.7 +1.5
VYHS Vyhne 138.45 329 *e*PKP PKPdf 03 48 37.5 +2.1
VYHS Vyhne 138.45 329 *e*PKIKP PKPdf 03 48 37.5 +2.1
BZS Buzias 138.74 324⇓PKIKP PKPdf 03 48 36.1 +0.1
BZS Buzias 138.74 324⇓*i*P PKPdf 03 48 36.1 +0.1
PVCC Panska Ves 138.98 334 *e*PKIKP PKPdf 03 48 36.9 +0.6
PVCC Panska Ves 138.98 334 *e*PKPdf PKPdf 03 48 36.9 +0.6
BRG Berggiesshubel 138.98 335 *e*PKP PKPdf 03 48 36.3 0.0
comp=Z,5.7nm,1.2s
BRG *e* 03 48 39.0
comp=Z,12nm,1.1s
BRG Berggiesshubel 138.98 335 *e*PKIKP PKPdf 03 48 36.3 0.0
BRG pmax pmax
comp=Z,3.0nm,1.2s
BRG pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 139.02 336 P PKPpre 03 48 25.0
CLL Collm 139.02 336 *e*PKHKP PKPpre 03 48 25.0
CLL Collm 139.02 336 *e*PKPpre PKPpre 03 48 25.0
CLL *e*PKiKP PKiKP 03 48 38.0 -0.6
comp=Z,8.0nm,1.1s
PRU Pruhonice 139.40 333 *e*PKIKP PKPdf 03 48 38.0 +0.9
PRU Pruhonice 139.40 333 *e*PKPdf PKPdf 03 48 38.0 +0.9
VTS Vitosha 139.43 319⇑PKIKP PKPdf 03 48 37.8 +0.4
VTS Vitosha 139.43 319⇑*i*P PKPdf 03 48 37.8 +0.4
ZST Bratislava 139.50 330 *e*PKP PKPdf 03 48 40.3 +3.0
ZST Bratislava 139.50 330 *e*PKIKP PKPdf 03 48 40.3 +3.0
PKSM Moragy 140.03 326⇑PKIKP PKPdf 03 48 38.7 +0.4
NKC Novy Kostel 140.08 335 *e*PKIKP PKPdf 03 48 39.3 +1.0
NKC Novy Kostel 140.08 335 *e*PKPdf PKPdf 03 48 39.3 +1.0
KHC Kasperske Hory 140.45 333 *e*PKPdf PKPdf 03 48 39.0 -0.1
KHC Kasperske Hory 140.45 333 *e*PKIKP PKPdf 03 48 39.3 +0.3
KHC Kasperske Hory 140.45 333 *e*PKPdf PKPdf 03 48 39.3 +0.3
GERES GERESS Array B 140.61 333 PKhKP PKPpre 03 48 31.6
comp=Z,0.6nm,0.7s,baz=64,slow=3.1,SNR=5.6
GERES PKP PKPdf 03 48 39.4 +0.1
comp=Z,3.4nm,0.8s,baz=48,slow=1.5,SNR=16
GERES GERESS Array B 140.61 333 PKP PKPpre 03 48 31.6
GERES PKP PKPdf 03 48 39.4 +0.1
GERES GERESS Array B 140.61 333 PKHKP PKPpre 03 48 31.6
GERES 03 48 39.4
RUP Ruppelstein 142.53 339 PKP PKPpre 03 48 38.9
RUP Ruppelstein 142.53 339 PKHKP PKPpre 03 48 38.9
WLF Walferdange 142.86 340 *e*PKP PKPpre 03 48 41.0
WLF Walferdange 142.86 340 *e*PKPdf PKPpre 03 48 40.3
WLF Walferdange 142.86 340 *e*PKHKP PKPpre 03 48 40.3
GIVF Givet 142.90 342 *e*PKP1 PKPdf 03 48 43.2 -0.2
GIVF Givet 142.90 342 *e*PKIKP PKPdf 03 48 43.2 -0.2
BAIF Baives 143.12 342⇑*i*PKP1 PKPpre 03 48 40.8
comp=Z,14nm,1.0s
BAIF Baives 143.12 342⇑*i*PKHKP PKPpre 03 48 40.8
BFO Black Forest 143.22 337 *e*PKP PKPpre 03 48 41.3
BFO Black Forest 143.22 337 *e*PKHKP PKPpre 03 48 41.3
FETA Feichten 143.30 333⇑*i*PKPdf PKPdf 03 48 42.1 -2.1
comp=Z,22nm,0.9s,SNR=14
DAVA Damuels 143.45 334⇓*i*PKPdf PKPdf 03 48 42.4 -2.1
comp=Z,17nm,1.0s
CDF Champ du Feu 143.54 338 *e*PKP1 PKPpre 03 48 41.9
comp=Z,35nm,0.9s
CDF Champ du Feu 143.54 338 *e*PKHKP PKPpre 03 48 41.9
ECH Echery 143.75 338 PKP PKPpre 03 48 42.3
ECH Echery 143.75 338 *e*PKPdf PKPpre 03 48 42.5
ECH Echery 143.75 338 *e*PKHKP PKPpre 03 48 42.5
DAVOX Davos/Dischmat 143.85 334 PKP PKPdf 03 48 44.0 -1.1
comp=Z,17nm,0.7s,baz=243,slow=2.3,SNR=39
DAVOX Davos/Dischmat 143.85 334 PKIKP PKPdf 03 48 44.0 -1.1
MOF Molkenrain 144.07 338 PKP PKPpre 03 48 43.4
MOF Molkenrain 144.07 338 PKHKP PKPpre 03 48 43.4
THEF They Montfort 144.16 339 PKP PKPdf 03 48 44.1 -1.5
THEF They Montfort 144.16 339 PKIKP PKPdf 03 48 44.1 -1.5
HINF Hinteralfeld 144.20 338⇑*i*PKP1 PKPdf 03 48 43.8 -1.9
comp=Z,24nm,0.7s
HINF Hinteralfeld 144.20 338⇑*i*PKIKP PKPdf 03 48 43.8 -1.9
HAU Haudompre 144.22 338⇑*i*PKP1 PKPdf 03 48 44.2 -1.5
comp=Z,74nm,0.9s
HAU Haudompre 144.22 338⇑*i*PKIKP PKPdf 03 48 44.2 -1.5
MEZF Maizieres J'vi 144.23 340⇑*i*PKP1 PKPdf 03 48 44.6 -1.2
comp=Z,41nm,0.7s
BBS Basel-Blauen 144.25 337 PKP PKPdf 03 48 43.9 -1.9
BBS Basel-Blauen 144.25 337 PKIKP PKPdf 03 48 43.9 -1.9
TUE Stuetta 144.32 334 PKP PKPdf 03 48 45.1 -0.9
SFTF Sexfontaines 144.50 340⇑*i*PKP1 PKPdf 03 48 45.3 -0.9
comp=Z,144nm,0.9s
LOMF Lomont 144.60 337 PKP PKPdf 03 48 45.8 -0.6
LOMF Lomont 144.60 337 PKIKP PKPdf 03 48 45.8 -0.6
CABF La Chapelle 145.50 337 *e*PKP1 PKPbc 03 48 48.4 +0.1
CABF La Chapelle 145.50 337 *e*PKIKP PKPdf 03 48 48.4 +0.4
OG01 Vacheresse 145.51 337 PKP PKPdf 03 48 48.9 +0.9
FLN La Foliniere 145.54 346⇑*i*PKP1 PKPbc 03 48 48.3 -0.1
comp=Z,116nm,0.8s
FLN La Foliniere 145.54 346⇑*i*PKIKP PKPdf 03 48 48.3 +0.3
LDF La Druitiere 145.62 346⇑*i*PKP1 PKPbc 03 48 48.5 -0.1
comp=Z,53nm,0.8s
LDF La Druitiere 145.62 346⇑*i*PKIKP PKPdf 03 48 48.5 +0.4
LOR Lormes 145.70 340⇑*i*PKP1 PKPbc 03 48 49.3 +0.4
comp=Z,126nm,1.0s
LOR Lormes 145.70 340⇑*i*PKIKP PKPdf 03 48 49.3 +1.0
PII Pisa 145.91 330 PKP PKPdf 03 48 49.0 +0.2
PII Pisa 145.91 330 PKIKP PKPdf 03 48 49.0 +0.2
GRR Gorron 145.98 346 *e*PKP1 PKPbc 03 48 49.9 +0.2
comp=Z,131nm,0.9s
GRR Gorron 145.98 346 *e*PKIKP PKPdf 03 48 49.9 +1.1
SSF Saint Saulge 146.00 341⇑*i*PKP1 PKPbc 03 48 50.3 +0.5
comp=Z,94nm,0.7s
SSF Saint Saulge 146.00 341⇑*i*PKP2 PKPab 03 48 50.3 -0.2
LSD Lago del Serru 146.05 335 PKP PKPab 03 48 51.2 +0.4
LSD Lago del Serru 146.05 335 PKP2 PKPab 03 48 51.2 +0.4
RSL Roselend 146.06 336 PKP PKPab 03 48 50.3 -0.5
RSL Roselend 146.06 336 PKP2 PKPab 03 48 50.3 -0.5
HYF Humbligny 146.08 342⇑*i*PKP1 PKPbc 03 48 50.8 +0.8
LPL La Plagne 146.16 336⇑*i*PKP1 PKPbc 03 48 51.2 +0.9
comp=Z,40nm,0.7s
LPL La Plagne 146.16 336⇑*i*PKP2 PKPab 03 48 51.2 0.0
LPG La Plagne 146.17 336⇑*i*PKP1 PKPab 03 48 51.3 +0.1
comp=Z,55nm,0.7s
LPG La Plagne 146.17 336⇑*i*PKP2 PKPab 03 48 51.3 +0.1
SMF Signal de Mont 146.25 340⇑*i*PKP1 PKPbc 03 48 50.7 +0.1
comp=Z,94nm,0.9s
SMF Signal de Mont 146.25 340⇑*i*PKP2 PKPbc 03 48 50.7 +0.1
AVF Avril sur Loir 146.29 341⇑*i*PKP1 PKPbc 03 48 50.7 0.0
comp=Z,101nm,1.1s
AVF Avril sur Loir 146.29 341⇑*i*PKIKP PKPbc 03 48 50.7 0.0
SOI Samo 146.46 317 PKP PKPbc 03 48 51.7 +0.2
SOI Samo 146.46 317 PKP2 PKPab 03 48 51.7 -0.9
SGMF Saint Gilles 146.47 348⇑*i*PKP1 PKPbc 03 48 51.2 +0.1
comp=Z,109nm,0.9s
SGMF Saint Gilles 146.47 348⇑*i*PKIKP PKPbc 03 48 51.2 +0.1
ROSF Rostrenen 146.53 349 *e*PKP1 PKPbc 03 48 51.2 -0.1
comp=Z,53nm,1.0s
ROSF Rostrenen 146.53 349 *e*PKIKP PKPbc 03 48 51.2 -0.1
BNI Bardonecchia 146.57 335 PKP PKPab 03 48 52.4 -0.4
BNI Bardonecchia 146.57 335 PKP2 PKPab 03 48 52.4 -0.4
BGF Bois d'Agland 146.65 341⇑*i*PKP1 PKPbc 03 48 52.0 +0.3
comp=Z,90nm,0.8s
BGF Bois d'Agland 146.65 341⇑*i*PKP2 PKPbc 03 48 52.0 +0.3
BST Brest 146.70 350 PKP PKPbc 03 48 51.9 +0.1
MBDF Montbardon 146.80 335⇑*i*PKP1 PKPbc 03 48 52.4 +0.2
comp=Z,59nm,0.9s
MBDF Montbardon 146.80 335⇑*i*PKP2 PKPbc 03 48 52.4 +0.2
QUIF Quistinic 146.91 349 *e*PKP1 PKPbc 03 48 51.4 -1.0
comp=Z,50nm,1.0s
QUIF Quistinic 146.91 349 *e*PKIKP PKPbc 03 48 51.4 -1.0
PLDF La Plantade 146.92 339 PKP PKPbc 03 48 53.1 +0.6
PLDF La Plantade 146.92 339 PKP2 PKPbc 03 48 53.1 +0.6
ORIF Oris-en-Rattie 147.00 336⇑*i*PKP1 PKPbc 03 48 53.2 +0.4
comp=Z,72nm,0.9s
ORIF Oris-en-Rattie 147.00 336⇑*i*PKP2 PKPbc 03 48 53.2 +0.4
AGO Saint Agoulin 147.01 340 PKP PKPbc 03 48 53.3 +0.5
SAOF Saorge 147.06 333 PKP PKPbc 03 48 52.9 -0.1

SAOF Saorge 147.06 333 PKP2 PKPbc 03 48 52.9 -0.1
TCF Toulx Ste Croi 147.09 341⇑*i*PKP1 PKPbc 03 48 53.2 +0.2
comp=Z,85nm,1.0s
TCF Toulx Ste Croi 147.09 341⇑*i*PKP2 PKPbc 03 48 53.2 +0.2
AUTN L'Aution 147.11 333 PKP PKPbc 03 48 53.4 +0.3
AUTN L'Aution 147.11 333 PKP2 PKPbc 03 48 53.4 +0.3
TOUF Mont Tournerai 147.18 334 PKP PKPbc 03 48 53.6 +0.3
TOUF Mont Tournerai 147.18 334 PKP2 PKPbc 03 48 53.6 +0.3
LUCF Luceram 147.23 333 PKP PKPbc 03 48 54.5 +1.1
COLF Collangettes 147.29 339 PKP PKPbc 03 48 54.0 +0.4
PYM Petit Puy Mans 147.32 340 PKP PKPbc 03 48 54.2 +0.6
PYM Petit Puy Mans 147.32 340 PKP2 PKPab 03 48 54.2 -1.5
OG25 Le Caire 147.37 335 PKP PKPdf 03 48 51.7 +0.5
MFF Saint Martin d 147.48 344⇑*i*PKP1 PKPbc 03 48 54.2 +0.2
comp=Z,116nm,0.9s
MFF Saint Martin d 147.48 344⇑*i*PKP2 PKPbc 03 48 54.2 +0.2
VIVF Saint-Julien-l 147.51 337⇑*i*PKP1 PKPbc 03 48 54.5 +0.3
comp=Z,55nm,1.0s
VIVF Saint-Julien-l 147.51 337⇑*i*PKP2 PKPbc 03 48 54.5 +0.3
PGF Pioggiola 147.52 330⇑*i*PKP1 PKPbc 03 48 54.4 +0.1
comp=Z,132nm,1.0s
PGF Pioggiola 147.52 330⇑*i*PKP2 PKPbc 03 48 54.4 +0.1
CALN Calern 147.54 334 PKP PKPbc 03 48 54.5 +0.2
CALN Calern 147.54 334 PKP2 PKPbc 03 48 54.5 +0.2
LBL Lubilhac 147.69 339 PKP PKPbc 03 48 55.6 +0.9
LBL Lubilhac 147.69 339 PKP2 PKPbc 03 48 55.6 +0.9
FRF La Foret Royal 147.80 334⇑*i*PKP1 PKPbc 03 48 54.9 -0.1
comp=Z,88nm,1.0s
FRF La Foret Royal 147.80 334⇑*i*PKP2 PKPbc 03 48 54.9 -0.1
VAE Valguarnera 147.87 318 PKPab PKPab 03 48 58.8 +0.6
comp=Z,29nm,1.1s,baz=342,slow=6.4,SNR=5.1
SMRF Simiane la Rot 147.90 335⇑*i*PKP1 PKPbc 03 48 55.8 +0.5
comp=Z,68nm,1.0s
LMR La Mourre 148.04 334⇑*i*PKP1 PKPbc 03 48 55.6 0.0
comp=Z,79nm,1.0s
LMR La Mourre 148.04 334⇑*i*PKP2 PKPbc 03 48 55.6 0.0
RAFF Raffo Rosso 148.05 317 PKP PKPbc 03 48 56.8 +0.9
RJF Les Rejaudoux 148.19 341⇑*i*PKP1 PKPbc 03 48 56.3 +0.3
comp=Z,89nm,1.1s
RJF Les Rejaudoux 148.19 341⇑*i*PKP2 PKPbc 03 48 56.3 +0.3
CAF Calviac 148.36 340 *e*PKP1 PKPbc 03 48 56.9 +0.5
comp=Z,56nm,0.9s
CAF Calviac 148.36 340 *e*PKP2 PKPbc 03 48 56.9 +0.5
LASF Ste Croix 148.48 337⇑*i*PKP1 PKPbc 03 48 57.2 +0.4
comp=Z,92nm,1.0s
LFF La Frestale 148.75 342⇑*i*PKP1 PKPbc 03 48 57.7 +0.3
comp=Z,66nm,0.9s
LFF La Frestale 148.75 342⇑*i*PKP2 PKPbc 03 48 57.7 +0.3
MTLF Montolieu 149.71 339⇑*i*PKP1 PKPbc 03 49 00.2 +0.3
comp=Z,72nm,1.0s
MTLF Montolieu 149.71 339⇑*i*PKP2 PKPbc 03 49 00.2 +0.3
EPF Esparros 150.61 341 *e*PKP1 PKPbc 03 49 02.1 +0.1
comp=Z,27nm,0.8s
EPF Esparros 150.61 341 *e*PKHKP PKPbc 03 49 02.1 +0.1
RESF Ens 150.81 341 PKP PKPbc 03 49 03.7 +1.2
VIEF Viey 150.84 341 PKP PKPbc 03 49 03.6 +1.0
SJPF Ste Jean 151.00 343 *e*PKP1 PKPbc 03 49 03.4 +0.5
comp=Z,30nm,0.9s
SJPF Ste Jean 151.00 343 *e*PKIKP PKPbc 03 49 03.4 +0.5
LARF Larrau 151.00 343 PKP PKPbc 03 49 03.7 +0.8
ETSF Etsaut 151.00 342⇑*i*PKP1 PKPbc 03 49 03.7 +0.8
comp=Z,37nm,0.8s
ETSF Etsaut 151.00 342⇑*i*PKIKP PKPbc 03 49 03.7 +0.8
KEST Kesra 152.16 320 PKPbc PKPbc 03 49 06.5 +0.6
comp=Z,14nm,0.8s,baz=281,slow=2.9,SNR=44
KEST Kesra 152.16 320 *e*PKPbc PKPbc 03 49 06.0 +0.2
PBRG Braganca 153.46 351 *e*PKPab PKPab 03 49 21.6 +0.5
PVRL Vila Real 154.12 352 *e*PKPab PKPab 03 49 24.9 +1.0
MVO Moncorvo 154.13 351 *e*PKPab PKPab 03 49 24.8 +0.9
PVIS Viseu 154.69 352 *e*PKPab PKPab 03 49 27.7 +1.4
ESDC Sonseca Array 154.94 345 PKPbc PKPbc 03 49 11.6 -0.2
comp=Z,0.2nm,0.3s,baz=11,slow=2.6,SNR=4.8
ESDC PKPab PKPab 03 49 26.9 -0.6
comp=Z,3.8nm,0.8s,baz=12,slow=3.8,SNR=14
MTE Manteigas 154.95 351 *e*PKPab PKPab 03 49 28.4 +0.9
PCBR Castelo Branco 155.49 351 *e*PKPab PKPab 03 49 30.4 +0.6
PMTG Montargil 156.35 352 *e*PKPab PKPab 03 49 35.3 +1.8
PESTR Estremoz 156.46 351 *e*PKPab PKPab 03 49 34.6 +0.6
EVO Evora 156.85 351⇑*i*PKIKP PKPdf 03 49 04.5 -1.0
EVO Evora 156.85 351 *e*PKPab PKPab 03 49 37.0 +1.3
EVOP Sao Brissos 156.87 352⇑*i*PKPdf PKPdf 03 49 04.5 -1.0
EVOP Sao Brissos 156.87 352⇑*i*PKIKP PKPdf 03 49 04.5 -1.0
PBEJ Beja 157.33 351 *e*PKPab PKPab 03 49 38.7 +1.0
PCVE Castro Verde 157.74 351 *e*PKPab PKPab 03 49 40.7 +1.2
PVAQ Vaqueiros 157.91 350 *e*PKPab PKPab 03 49 41.3 +1.0
PTEO Sao Teotonio 157.92 352 *e*PKPab PKPab 03 49 41.5 +1.2
MORF Marmelete 158.15 352 *e*PKPab PKPab 03 49 41.4 +0.1
PFVI Vila Bisbo 158.34 352 *e*PKPab PKPab 03 49 43.6 +1.5
TORD Torodi Ar. Bea 166.24 262 PKP PKPdf 03 49 15.4 -0.5
comp=Z,1.9nm,0.8s,baz=70,slow=1.1,SNR=3.1
TORD PKPab PKPab 03 50 17.0 -0.6
comp=Z,1.6nm,0.8s,baz=96,slow=3.8,SNR=2.4
TORD Torodi Ar. Bea 166.24 262 PKP PKPdf 03 49 15.4 -0.5
TORD PKPab PKPab 03 50 17.0 -0.6

IDC ***27*** *03:31:20.7±1.0, 13°.28N×120°.19E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/21, mbtmp3.9/6, MS4.9/1, Ms1 4.9/1, ms1mx3.9/33, Error ellipse: s-maj=20.9km s-min=12.5km az=123.0*

NEIC ***27*** *03:31:22.3±0.6, 13°.28N×120°.25E, h10km, mb4.1/2, Error ellipse: s-maj=14.8km s-min=11.4km az=93.0*

ISCJB ***27*** *03:31:28.0±2.5, 13°.5N±0°.3×120°.7E±0°.6, h76km±27km, mb4.0/8, Error ellipse: s-maj=106.4km s-min=17.9km az=154.9*

ISC 27 03:31:29.1±2.5, 13°.5N±0°.3×120°.8E±0°.6, h70km±28km, n11, σ0§17/10, mb4.0/8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.60**	**13**	Pg	**Pn**	**03 31 42.9**	**0.0**
	779nm,0.3s,baz=225,slow=2.6,SNR=14						
TGY				Lg		03 31 55.9	
	388nm,0.3s,baz=336,slow=20,SNR=8.7						
PSI	**Prapat**	**24.10**	**246**	LR	LR	03 45 20.6	
	comp=Z,3μm,18.4s,baz=18,slow=36						
WRA	**Warramunga Arr**	**35.82**	**158**	P	**P**	**03 38 21.8**	**-0.3**
	1.1nm,0.5s,mb4.0,baz=336,slow=9.7,SNR=6.7						
SONM	**Songino Array**	**36.26**	**344**	P	**P**	**03 38 25.4**	**-0.2**
	0.7nm,0.4s,mb4.0,baz=164,slow=9.5,SNR=4.5						
ASAR	**Alice Springs**	**39.12**	**161**	P	**P**	**03 38 50.2**	**+0.3**
	1.5nm,0.5s,mb4.0,baz=342,slow=7.0,SNR=9.9						
MKAR	**Makanchi Array**	**46.23**	**324**	P	**P**	**03 39 47.5**	**+0.2**
	0.7nm,0.8s,mb3.5,baz=134,slow=8.3,SNR=3.4						
MKAR	**Makanchi Array**	**46.23**	**324**	P	**P**	**03 39 47.5**	**+0.1**
UCH	**Uchtor**	**49.10**	**315**	*e*P	**P**	**03 40 09.4**	**-0.2**
	0.6nm,0.4s,mb3.9						
KURK	**Kurchatov**	**50.39**	**326**	*e*P	**P**	**03 40 19.4**	**+0.1**
	1.2n

CUYO Cuyo Island 2.57 168 *eP* **Pn 03 33 01.3 -0.9**
BCPH Baguio City Da 2.99 2‖*eP* **Pn 03 33 06.2 -1.8**
BOLP Bolinao 3.04 350 *eP* **Pn 03 33 07.6 -1.0**
APYP Conner 4.52 9 *eP* **Pn 03 33 35.0 +6.0**
WHN Wuhan 18.00 343 *eP* **Pn 03 36 32.5 +2.4**
GYA Guiyang 18.36 317 *eP* **Pn 03 36 39.0 +4.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
NJ2 Nanjing 18.65 356 *eP* **Pn 03 36 40.8 +2.9**
NJ2 pmax pmax
comp=Z,20nm,0.8s
ENH Enshi 19.64 331 *eP* **Pn 03 36 52.2 +2.3**
KMI Kunming 20.39 308 P **P 03 36 59.8 +3.3**
KMI pP 03 37 19.5
KMI PP 03 37 25.3
KMI sP sP 03 37 34.0 +22
KMI S **S 03 40 41.0 -1.7**
KMI sS sS 03 41 12.0 +13
KMI SS 03 41 19.0
KMI pmax pmax
comp=Z,5.0nm,0.6s
KMI LR LR
comp=N,1μm,17.3s,MS4.6
KMI LR LR
comp=E,2μm,14.8s,MS4.6
KMI LR LR
comp=Z,2μm,9.9s
IPM Ipoh 21.14 247 *eP* **P 03 37 05.5 +0.9**
comp=Z,29nm,1.3s,mb4.5
KULM Kulim 21.14 250 *eP* **P 03 37 06.6 +1.9**
comp=Z,20nm,1.2s,mb4.3
CMAR Chiang Mai Arr 21.31 287 P **P 03 37 06.6 +0.2**
comp=Z,16nm,1.0s,mb4.3,baz=98,slow=8.9,SNR=21
CHTO Chiang Mai 21.38 287 *eP* **P 03 37 08.3 +1.2**
comp=Z,4.1nm,0.5s,mb4.0
CD2 Chengdu 23.28 321 *eP* **P 03 37 26.8 -0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
PSI Prapat 23.76 246 P **P 03 37 30.4 -1.5**
comp=Z,5.7nm,0.7s,mb4.1,baz=326,slow=18,SNR=3.4
HHC Hu-ho-hao-te 28.46 346 *eP* **P 03 38 17.0 +3.0**
HHC pP pP 03 38 38.8 +13
HHC sP sP 03 38 50.5 +20
HHC PP PP 03 39 13.8 -5.0
HHC PcP PcP 03 41 24.8 -0.5
HHC S **S 03 42 59.3 +0.8**
HHC sS sS 03 43 36.8 +19
HHC SS SS 03 44 32.5 -28
HHC ScP ScP 03 44 56.0 -7.2
HHC ScS ScS 03 48 48.8 -7.4
HHC pmax pmax
comp=Z,17nm,1.1s,mb4.6
HHC LR LR
comp=N,1μm,15.9s,MS4.7
HHC LR LR
comp=E,920nm,16.7s,MS4.7
HHC LR LR
comp=Z,2μm,16.3s,MS4.8
CN2 Changchun 30.62 7 *eP* **P 03 38 35.5 +2.4**
FITZ Fitzroy Crossi 31.69 171 P **P 03 38 42.7 -0.1**
comp=Z,4.2nm,0.9s,mb4.2,baz=5.2,slow=11,SNR=2.4
GTA Gaotai 31.70 329 *eP* **P 03 38 45.0 +2.3**
GTA pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
MDJ Mudanjiang 32.09 12 P **P 03 38 46.8 +0.8**
MDJ pP pP 03 39 07.3 +10
MDJ sP sP 03 39 18.0 +15
MDJ PP PP 03 40 01.0 +1.9
MDJ S **S 03 43 54.0 -1.3**
MDJ ScP ScP 03 45 08.0 -7.0
MDJ PcS PcS 03 45 18.0 -1.3
MDJ pmax pmax
comp=Z,11nm,2.2s,mb4.3
MDJ LR LR
comp=N,920nm,13.2s,MS4.8
MDJ LR LR
comp=E,1μm,17.4s,MS4.8
MDJ LR LR
comp=Z,2μm,13.0s,MS4.9
WRA Warramunga Arr 35.81 157 P **P 03 39 18.6 0.0**
comp=Z,17nm,0.6s,mb5.2,baz=336,slow=9.6,SNR=59
ULN Ulaanbaatar 36.16 345 *eP* **P 03 39 21.1 -0.2**
comp=Z,9.8nm,1.0s,mb4.7
SONM Songino Array 36.30 344 P **P 03 39 22.1 -0.4**
comp=Z,7.6nm,0.8s,mb4.7,baz=162,slow=9.6,SNR=23
ASAR Alice Springs 39.09 160 P **P 03 39 47.1 +0.8**
comp=Z,12nm,0.5s,mb4.8,baz=340,slow=7.2,SNR=60
NWAO Narrogin (SRO) 46.15 184 P **P 03 40 44.6 +1.2**
comp=Z,8.7nm,0.6s,mb4.8,baz=356,slow=5.7,SNR=6.6
MK31 Makanchi Array 46.16 324 *eP* **P 03 40 43.6 +0.1**
MKAR Makanchi Array 46.16 324 P **P 03 40 43.3 -0.2**
comp=Z,1.8nm,0.7s,mb4.1,baz=132,slow=9.3,SNR=12
TKM2 Tokmak 2 48.51 316 *eP* **P 03 41 02.8 +1.0**
comp=Z,2.8nm,0.8s,mb4.3
KBK Karagaybulak 48.84 316 *eP* **P 03 41 04.8 +0.4**
comp=Z,14nm,1.2s,mb4.9
UCH Uchtor 48.98 315 *eP* **P 03 41 07.3 +1.9**
comp=Z,7.5nm,0.8s,mb4.8
AAK Ala-Archa 49.14 315 P **P 03 41 06.5 -0.2**
comp=Z,1.4nm,0.6s,mb4.2,baz=114,slow=6.4,SNR=6.0
AAK Ala-Archa 49.14 315 *eP* **P 03 41 08.5 +1.8**
comp=Z,18nm,1.7s,mb4.8
ZALV Zalesovo Beam 49.24 333 P **P 03 41 06.3 -0.9**
comp=Z,3.2nm,0.8s,mb4.4,baz=126,slow=7.3,SNR=7.1
STKA Stephens Creek 49.34 156 P **P 03 41 07.4 -0.9**
comp=Z,1.9nm,0.6s,mb4.3,baz=0.0,slow=10,SNR=3.8
AML Almayashu 49.51 315 *eP* **P 03 41 10.8 +1.3**
comp=Z,4.6nm,0.7s,mb4.6
EKS2 Erkin-Say 49.64 315 *eP* **P 03 41 11.7 +1.2**
comp=Z,4.5nm,0.8s,mb4.5
KURK Kurchatov 50.34 327 *eP* **P 03 41 15.5 -0.1**
comp=Z,23nm,1.0s,mb5.2
KKAR Karatay Array 52.05 315 *eP* **P 03 41 28.9 +0.3**
BVAR Borovoye Array 55.92 326 P **P 03 41 56.2 -0.4**
comp=Z,3.9nm,0.7s,mb4.5,baz=115,slow=10,SNR=15
BRVK Borovoye 55.99 326 *eP* **P 03 41 56.3 -0.9**
comp=Z,21nm,1.1s,mb5.1
ABKAR Akbulak array 60.84 319 *eP* **P 03 42 30.9 -0.1**
comp=Z,2.3nm,0.7s,mb4.4
AKTK Aktyubinsk 62.32 320 P **P 03 42 39.8 -1.3**
AKTO Aktyubinsk 62.32 320 P **P 03 42 39.8 -1.3**
comp=Z,2.5nm,0.7s,mb4.5,baz=117,slow=6.8,SNR=6.6
ARU Arti 63.53 327 *eP* **P 03 42 47.7 -1.3**
comp=Z,3.5nm,0.6s,mb4.6
ILAR Eielson Array 79.13 26 P **P 03 44 23.4 +0.4**
comp=Z,0.6nm,0.9s,mb3.5,baz=295,slow=3.2,SNR=4.1
ARCES ARCESS Array B 79.31 339 P **P 03 44 22.9 -0.9**
comp=Z,3.2nm,0.9s,mb4.2,baz=97,slow=7.4,SNR=4.5
ARCES ARCESS Array B 79.31 339 P **P 03 44 22.9 -0.9**
FINES FINESS Array B 80.46 331 P **P 03 44 29.1 -1.2**
comp=Z,4.2nm,0.9s,mb4.3,baz=66,slow=6.7,SNR=6.3
AKASG Malin Array Be 80.57 320 P **P 03 44 29.6 -1.4**
comp=Z,0.3nm,0.3s,mb3.7,baz=72,slow=4.4,SNR=7.3
INK Inuvik 83.47 21 P **P 03 44 45.6 -0.3**
comp=Z,1.5nm,0.8s,mb4.1,baz=234,slow=6.7,SNR=3.7
BUR08 Bucovina Ar. S 83.75 317 *eP* **P 03 44 47.5 -0.3**
OJC Ojcow 86.54 321 *eP* **P 03 45 01.6 -0.1**
OJC Ojcow 86.54 321 *eP* **P 03 45 01.3 -0.4**
NB2 NORSAR Subarra 87.45 333 P **P 03 45 04.3 -1.6**
comp=Z,3.3nm,0.8s,mb4.6,baz=69,slow=4.6
NOA NORSAR Array B 87.45 333 P **P 03 45 04.5 -1.3**
comp=Z,1.3nm,0.7s,mb4.3,baz=68,slow=4.6,SNR=5.5
GERES GERESS Array B 90.75 321 P **P 03 45 19.9 -1.7**
comp=Z,1.0nm,0.8s,mb4.2,baz=63,slow=6.1,SNR=7.6
YKA Yellowknife Ar 93.15 22 P **P 03 45 31.2 -1.2**
comp=Z,1.8nm,0.7s,mb4.6,baz=323,slow=3.1,SNR=3.5
DAVOX Davos/Dischmat 93.92 320 P **P 03 45 36.2 -0.2**
comp=Z,2.5nm,0.8s,mb4.7,baz=45,slow=5.7,SNR=3.5

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*IDC **27** 03:33:42.8±1.1, 13°.24N×120°.18E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/20, mbtmp4.0/5, Error ellipse: s-maj=23.7km s-min=14.3km az=119.0*
*NEIC **27** 03:33:44.6±0.6, 13°.24N×120°.30E, h10km, mb4.3/6, Error ellipse: s-maj=11.9km s-min=10.4km az=88.0*
*ISCJB **27** 03:33:46.1±0.7, 13°.2N±0°.1×120°.3E±0°.1, h33km, mb4.1/12, Error ellipse: s-maj=18.7km s-min=13.8km az=151.6*
ISC 27 03:33:48.1±0.7,**13°.3N**±0°.1×**120°.4E**±0°.1,**h35**km,**n15**, σ0**51**/15,**mb4.1**/12,**Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.96**	**33**	Pg	**Pn**	**03 34 05.7**	**+0.6**
	baz=216,slow=8.7,SNR=3.4						
TGY				Lg		03 34 19.1	
	338nm,0.3s,baz=163,slow=20,SNR=3.0						
CMAR	**Chiang Mai Arr**	**21.26**	**287**	P	**P**	**03 38 32.2**	**+0.6**
	2.1nm,0.4s,mb3.8,baz=93,slow=8.7,SNR=3.9						
CMAR	**Chiang Mai Arr**	**21.26**	**287**	P	**P**	**03 38 32.2**	**+0.6**
WRA	**Warramunga Arr**	**35.76**	**157**	P	**P**	**03 40 43.8**	**-0.2**
	2.2nm,1.0s,mb4.0,baz=339,slow=9.5,SNR=6.4						
SONM	**Songino Array**	**36.36**	**344**	P	**P**	**03 40 48.1**	**-0.8**
	3.7nm,0.8s,mb4.4,baz=159,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**39.03**	**160**	P	**P**	**03 41 11.8**	**+0.1**
	1.3nm,0.7s,mb3.8,baz=340,slow=7.9,SNR=3.2						
MK31	**Makanchi Array**	**46.19**	**324**	*eP*	**P**	**03 42 09.3**	**-0.2**
MKAR	**Makanchi Array**	**46.19**	**324**	P	**P**	**03 42 08.8**	**-0.7**
	1.4nm,0.7s,mb4.0,baz=116,slow=8.8,SNR=4.3						
TKM2	**Tokmak 2**	**48.52**	**316**	*eP*	**P**	**03 42 27.8**	**+0.1**
	2.1nm,0.8s,mb4.2						
UCH	**Uchtor**	**48.98**	**315**	*eP*	**P**	**03 42 32.4**	**+1.1**
	1.9nm,0.8s,mb4.2						
AML	**Almayashu**	**49.51**	**315**	*eP*	**P**	**03 42 35.5**	**+0.2**
	2.0nm,0.6s,mb4.3						
KURK	**Kurchatov**	**50.37**	**327**	*eP*	**P**	**03 42 41.1**	**-0.6**
	6.5nm,0.9s,mb4.7						
KKAR	**Karatay Array**	**52.05**	**315**	*eP*	**P**	**03 42 54.4**	**-0.1**
	0.7nm,0.4s,mb3.9						
BVAR	**Borovoye Array**	**55.95**	**326**	P	**P**	**03 43 22.4**	**-0.3**
	0.5nm,0.5s,mb3.8,baz=97,slow=7.4,SNR=2.0						
BRVK	**Borovoye**	**56.02**	**326**	*eP*	**P**	**03 43 23.4**	**+0.2**
	4.7nm,0.9s,mb4.5						

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*IDC **27** 03:44:48.9±0.8, 13°.24N×120°.08E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.0/20, mbtmp4.1/9, Error ellipse: s-maj=17.7km s-min=13.0km az=126.0*
*NEIC **27** 03:44:50.8±0.6, 13°.23N×120°.22E, h10km, mb4.3/5, Error ellipse: s-maj=13.1km s-min=12.1km az=88.0*
*ISCJB **27** 03:44:52.5±0.7, 13°.2N±0°.1×120°.2E±0°.1, h33km, mb4.2/14, Error ellipse: s-maj=18.1km s-min=13.8km az=149.9*
ISC 27 03:44:54.4±0.7,**13°.3N**±0°.1×**120°.3E**±0°.1,**h35**km,**n17**, σ0**99**/17,**mb4.2**/14,**Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.04**	**37**	Pg	**Pn**	**03 45 12.5**	**0.0**
	654nm,0.3s,baz=246,slow=5.9,SNR=18						
TGY				Lg		03 45 27.8	
	544nm,0.3s,baz=143,slow=20,SNR=14						
CMAR	**Chiang Mai Arr**	**21.17**	**287**	P	**P**	**03 49 35.1**	**-1.8**
	3.2nm,0.7s,mb3.7,baz=96,slow=8.9,SNR=3.5						
WRA	**Warramunga Arr**	**35.78**	**157**	P	**P**	**03 51 50.1**	**-0.2**
	1.0nm,0.4s,mb4.1,baz=338,slow=9.5,SNR=20						
SONM	**Songino Array**	**36.36**	**344**	P	**P**	**03 51 55.2**	**+0.1**
	3.4nm,0.7s,mb4.4,baz=164,slow=9.6,SNR=14						
ASAR	**Alice Springs**	**39.04**	**160**	P	**P**	**03 52 18.6**	**+0.6**
	1.0nm,0.6s,mb3.7,baz=342,slow=7.4,SNR=19						
MK31	**Makanchi Array**	**46.15**	**324**	*eP*	**P**	**03 53 15.7**	**+0.2**
MKAR	**Makanchi Array**	**46.15**	**324**	P	**P**	**03 53 15.5**	**0.0**
	1.2nm,0.7s,mb3.9,baz=129,slow=9.6,SNR=5.8						
TKM2	**Tokmak 2**	**48.46**	**316**	*eP*	**P**	**03 53 33.8**	**+0.2**
	1.7nm,0.7s,mb4.2						
UCH	**Uchtor**	**48.93**	**315**	*eP*	**P**	**03 53 38.9**	**+1.8**
	2.8nm,0.9s,mb4.3						
ZALV	**Zalesovo Beam**	**49.26**	**333**	P	**P**	**03 53 38.2**	**-1.3**
	0.7nm,0.4s,mb4.0,baz=124,slow=7.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**49.26**	**333**	P	**P**	**03 53 38.2**	**-1.3**
AML	**Almayashu**	**49.46**	**315**	*eP*	**P**	**03 53 42.8**	**+1.6**
	3.8nm,0.7s,mb4.5						
EKS2	**Erkin-Say**	**49.60**	**315**	*eP*	**P**	**03 53 43.5**	**+1.2**
	2.0nm,0.8s,mb4.2						
KURK	**Kurchatov**	**50.33**	**327**	*eP*	**P**	**03 53 48.4**	**+0.7**
	5.1nm,0.7s,mb4.7						
ARCES	**ARCESS Array B**	**79.35**	**339**	P	**P**	**03 56 55.4**	**-0.9**
	7.6nm,1.2s,mb4.5,baz=72,slow=5.9,SNR=3.6						
FINES	**FINESS Array B**	**80.47**	**331**	P	**P**	**03 57 01.0**	**-1.5**
	3.7nm,1.1s,mb4.2,baz=65,slow=6.6,SNR=5.3						
NOA	**NORSAR Array B**	**87.46**	**333**	P	**P**	**03 57 37.5**	**-0.7**
	1.0nm,1.0s,mb4.0,baz=23,slow=12,SNR=3.0						

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*ISCJB **27** 03:45:01.2±0.4, 38°.78N±0°.02×27°.83E±0°.03, h8km±4km, Error ellipse: s-maj=3.8km s-min=3.2km az=45.0*
*CSEM **27** 03:45:01.6±0.1, 38°.77N×27°.82E, h10km, MD2.4, Error ellipse: s-maj=1.5km s-min=1.3km az=127.0*
*DDA **27** 03:45:01.4, 38°.77N×27°.81E, h14km±2km, Md2.4*
*ISK **27** 03:45:01.0, 38°.74N×27°.84E, h17km, MD2.7*
ISC 27 03:45:01.8±0.4,**38°.77N**±0°.02×**27°.83E**±0°.03,**h11**km±4km, **n34**, σ0**57**/60,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.11**	**355**	*i* P	**Pg**	**03 45 04.7**	**0.0**
AKHS				*i* S	**Sg**	**03 45 06.6**	**-0.1**
AKHS	**Akhisar**	**0.11**	**355**	*i* P	**Pg**	**03 45 04.7**	**+0.1**
AKHS				*i* S	**Sg**	**03 45 06.6**	**-0.1**
IZM	**Izmir**	**0.58**	**230**	*e*PG	**Pg**	**03 45 12.7**	**-0.4**
IZM				*e*SG	**Sg**	**03 45 21.5**	**+0.8**
KULA	**Kula-Manisa**	**0.70**	**111**	*e*PG	**Pg**	**03 45 15.6**	**+0.3**
KULA				*e*SG	**Sg**	**03 45 24.4**	**-0.2**
KULA	**Kula-Manisa**	**0.70**	**111**	*e*Pg	**Pg**	**03 45 15.6**	**+0.2**
KULA				*e*Sg	**Sg**	**03 45 24.4**	**-0.2**
BLCB	**Balcova**	**0.73**	**238**	*e*PG	**Pg**	**03 45 15.4**	**-0.4**
BLCB				*e*SG	**Sg**	**03 45 25.9**	**+0.6**
BLCB	**Balcova**	**0.73**	**238**	*e*Pg	**Pg**	**03 45 15.4**	**-0.4**
BLCB				*e*Sg	**Sg**	**03 45 25.9**	**+0.6**
DEMI	**Demirci**	**0.74**	**68**	*i* P	**Pg**	**03 45 16.5**	**+0.3**
DEMI				*i* S	**Sg**	**03 45 26.1**	**+0.2**
DEMI	**Demirci**	**0.74**	**68**	*i* P	**Pg**	**03 45 16.5**	**+0.3**
DEMI				*i* S	**Sg**	**03 45 26.1**	**+0.1**
BALB	**Balikesir**	**0.87**	**3**	*e*PG	**Pg**	**03 45 18.8**	**+0.3**
BALB	**Balikesir**	**0.87**	**3**	*e*Pg	**Pg**	**03 45 18.8**	**+0.3**
DURS	**Dursunbey**	**0.97**	**31**	*i* P	**Pg**	**03 45 20.3**	**-0.2**
DURS				*i* S	**Sg**	**03 45 33.7**	**+0.6**
DURS	**Dursunbey**	**0.97**	**31**	*i* P	**Pg**	**03 45 20.3**	**-0.1**
DURS				*i* S	**Sg**	**03 45 33.7**	**+0.6**
BALY	**Balya**	**0.98**	**351**	*i* P	**Pg**	**03 45 20.5**	**-0.2**
BALY				*i* S	**Sg**	**03 45 33.0**	**-0.5**
BALY	**Balya**	**0.98**	**351**	*i* P	**Pg**	**03 45 20.5**	**-0.2**
BALY				*i* S	**Sg**	**03 45 33.0**	**-0.4**
AYVA	**Ayvalik**	**1.03**	**302**	*i* P	**Pg**	**03 45 21.7**	**+0.1**
AYVA				*i* S	**Sg**	**03 45 35.3**	**+0.1**
AYVA	**Ayvalik**	**1.03**	**302**	*i* P	**Pg**	**03 45 21.7**	**0.0**
AYVA				*i* S	**Sg**	**03 45 35.3**	**+0.2**
AYDN	**Tasoluk**	**1.11**	**178**	*i* P	**Pg**	**03 45 22.9**	**-0.2**
AYDN				*i* S	**Sg**	**03 45 36.8**	**-0.8**
AYDN	**Tasoluk**	**1.11**	**178**	*i* P	**Pg**	**03 45 22.9**	**-0.2**
AYDN				*i* S	**Sg**	**03 45 36.8**	**-0.8**
GCAM	**G?zelcaml?**	**1.17**	**204**	*i* P	**Pb**	**03 45 24.4**	**+0.5**
GCAM				*i* S	**Sb**	**03 45 38.5**	**-0.5**
GCAM	**G?zelcaml?**	**1.17**	**204**	*i* P	**Pb**	**03 45 24.4**	**+0.5**
GCAM				*i* S	**Sb**	**03 45 38.5**	**-0.5**
GONE	**Gonen-Balikesi**	**1.28**	**355**	*e*PN	**Pn**	**03 45 25.4**	**-0.1**
GONE				*e*SN	**Sn**	**03 45 42.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.28**	**355**	*e*Pn	**Pn**	**03 45 25.4**	**-0.1**
GONE				*e*Sn	**Sn**	**03 45 42.8**	**+0.2**
GDZ	**Gediz**	**1.33**	**76**	*i* P	**Pn**	**03 45 26.6**	**+0.4**
GDZ				*i* S	**Sb**	**03 45 42.7**	**-0.9**
GDZ	**Gediz**	**1.33**	**76**	*i* P	**Pn**	**03 45 26.6**	**+0.4**
GDZ				*i* S	**Sb**	**03 45 42.7**	**-1.0**
KHAL	**Karahalli**	**1.37**	**107**	*i* P	**Pn**	**03 45 28.8**	**+2.1**
KHAL				*i* S	**Sb**	**03 45 44.9**	**+0.2**
KHAL	**Karahalli**	**1.37**	**107**	*i* P	**Pn**	**03 45 28.8**	**+2.1**
KHAL				*i* S	**Sb**	**03 45 44.9**	**+0.2**
EZN	**Ezine**	**1.57**	**313**	*e*PN	**Pn**	**03 45 29.1**	**-0.5**
EZN	**Ezine**	**1.57**	**313**	*e*Pn	**Pn**	**03 45 29.1**	**-0.4**
GEMT	**Gemlik**	**1.97**	**32**	*e*PN	**Pn**	**03 45 34.5**	**-0.5**
GEMT	**Gemlik**	**1.97**	**32**	*e*Pn	**Pn**	**03 45 34.5**	**-0.5**
ERIK	**Erikli-Kesan**	**2.15**	**332**	*e*PN	**Pn**	**03 45 37.2**	**-0.2**
ERIK	**Erikli-Kesan**	**2.15**	**332**	*e*Pn	**Pn**	**03 45 37.2**	**-0.3**
BORA	**Eskisehir**	**2.32**	**61**	*e*P	**Pg**	**03 45 45.0**	**-1.2**
BORA				*e*S	**Sg**	**03 46 16.8**	**+0.5**

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*ISCJB **27** 03:49:08.7±5.4, 13°.34N±0°.09×120°.3E±0°.1, h27km±39km, mb4.2/20, Error ellipse: s-maj=23.1km s-min=13.4km az=156.1*
*NEIC **27** 03:49:08.2±0.4, 13°.35N×120°.36E, h10km, mb4.3/8, Error ellipse: s-maj=10.0km s-min=8.0km az=78.0*
*IDC **27** 03:49:10.3±3.2, 13°.39N×120°.39E, h25km±21km, mb4.0/12, mb1 4.2/12, mb1mx4.0/22, mbtmp4.0/12, Error ellipse: s-maj=26.5km s-min=14.2km az=74.0*
ISC 27 03:49:10.3±2.7,**13°.38N**±0°.10×**120°.4E**±0°.1,**h24**km±19km, **n23**, σ0**75**/23,**mb4.2**/20,**Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.87**	**35**	Pg	**Pb**	**03 49 26.7**	**0.0**
	682nm,0.3s,baz=229,slow=3.3,SNR=9.0						
TGY				Lg		03 49 39.4	
	1μm,0.3s,baz=120,slow=20,SNR=16						
CMAR	**Chiang Mai Arr**	**21.26**	**287**	P	**P**	**03 53 54.1**	**-0.9**
	5.2nm,0.8s,mb3.9,baz=97,slow=9.1,SNR=9.3						
FITZ	**Fitzroy Crossi**	**31.70**	**171**	P	**P**	**03 55 32.0**	**-0.3**
	0.8nm,0.8s,mb3.6,baz=23,slow=15,SNR=2.1						
WRA	**Warramunga Arr**	**35.83**	**157**	P	**P**	**03 56 08.1**	**0.0**
	4.2nm,0.6s,mb4.6,baz=336,slow=9.6,SNR=31						
ULN	**Ulaanbaatar**	**36.14**	**345**	*eP*	**P**	**03 56 10.4**	**-0.1**
	2.7nm,0.5s,mb4.4						
SONM	**Songino Array**	**36.29**	**344**	P	**P**	**03 56 11.5**	**-0.3**
	3.8nm,0.7s,mb4.4,baz=160,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**39.11**	**160**	P	**P**	**03 56 36.4**	**+0.6**
	4.0nm,0.6s,mb4.3,baz=340,slow=7.2,SNR=34						
MKAR	**Makanchi Array**	**46.13**	**324**	P	**P**	**03 57 32.8**	**0.0**
	1.0nm,0.6s,mb3.9,baz=126,slow=7.3,SNR=6.8						
TKM2	**Tokmak 2**	**48.47**	**316**	*eP*	**P**	**03 57 50.8**	**-0.2**
	1.4nm,0.7s,mb4.1						
UCH	**Uchtor**	**48.94**	**315**	*eP*	**P**	**03 57 56.4**	**+1.8**
	2.8nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**49.10**	**315**	*eP*	**P**	**03 57 57.0**	**+1.1**
	1.8nm,0.8s,mb4.2						
ZALV	**Zalesovo Beam**	**49.22**	**333**	P	**P**	**03 57 57.1**	**+0.5**
	0.9nm,0.5s,mb4.1,baz=128,slow=8.0,SNR=3.1						
EKS2	**Erkin-Say**	**49.61**	**315**	*eP*	**P**	**03 57 59.9**	**+0.2**
	1.9nm,0.7s,mb4.2						
KURK	**Kurchatov**	**50.31**	**327**	*eP*	**P**	**03 58 04.7**	**-0.1**
	14nm,1.1s,mb4.9						
BVAR	**Borovoye Array**	**55.89**	**326**	P	**P**	**03 58 46.1**	**+0.1**
	2.4nm,0.6s,mb4.4,baz=108,slow=9.5,SNR=9.8						
BRVK	**Borovoye**	**55.96**	**326**	*eP*	**P**	**03 58 46.5**	**0.0**
	6.5nm,0.8s,mb4.7						
ABKAR	**Akbulak array**	**60.80**	**319**	*eP*	**P**	**03 59 20.0**	**-0.4**
	0.8nm,0.5s,mb4.1						
ILAR	**Eielson Array**	**79.15**	**26**	P	**P**	**04 01 11.6**	**-1.1**
	0.3nm,0.8s,mb3.3,baz=284,slow=4.5,SNR=3.9						
FINES	**FINESS Array B**	**80.43**	**331**	P	**P**	**04 01 18.5**	**-1.3**
	3.4nm,1.1s,mb4.2,baz=64,slow=6.5,SNR=3.4						
BUR08	**Bucovina Ar. S**	**83.72**	**317**	*eP*	**P**	**04 01 37.1**	**-0.1**
NB2	**NORSAR Subarra**	**87.42**	**333**	P	**P**	**04 01 53.3**	**-2.1**
	comp=Z,3.0nm,1.0s,mb4.5,baz=65,slow=4.8						
NOA	**NORSAR Array B**	**87.42**	**333**	P	**P**	**04 01 56.0**	**+0.5**
	comp=Z,2.3nm,0.9s,mb4.4,baz=67,slow=4.8,SNR=4.5						
YKA	**Yellowknife Ar**	**93.17**	**22**	P	**P**	**04 02 23.5**	**+1.2**
	comp=Z,1.7nm,0.8s,mb4.5,baz=298,slow=4.9,SNR=3.2						

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*ISCJB **27** 03:55:07.3±0.3, 55°.49N±0°.03×110°.27E±0°.04, h10km, mb3.7/7, Error ellipse: s-maj=4.2km s-min=2.1km az=144.9*
*IDC **27** 03:55:08.2±1.1, 55°.65N×110°.26E, h0km, mb3.8/5, mb1 3.9/8, mb1mx3.7/27, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=24.8km s-min=19.5km az=98.0*
*NEIC **27** 03:55:09.9±0.7, 55°.70N×110°.24E, h10km, mb3.9/3, Error ellipse: s-maj=11.5km s-min=9.9km az=116.0*
*MOS **27** 03:55:09.1±0.9, 55°.73N×110°.15E, h13km, mb4.0/6, Error ellipse: s-maj=11.3km s-min=7.2km az=67.8*
*BYKL **27** 03:55:09.9±0.3, 55°.70N×110°.13E, h1km±5km*
ISC 27 03:55:09.3±0.3,**55°.57N**±0°.02×**110°.22E**±0°.03,**h10**km,**n70**, σ1**58**/116,**mb3.7**/7,**6C-1D**,**Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.44**	**298**	*e*PG	**Pg**	**03 55 17.1**	**-0.8**
NIZ				*e*		03 55 22.6	
NIZ				pmax	pmax		
	comp=Z,2μm,0.4s						
NIZ				smax			
	comp=N,6μm,0.3s						
NIZ	**Nizh Angarsk**	**0.44**	**298**	↓*i*Pg	**Pg**	**03 55 17.1**	**-0.8**
NIZ				Pmax		03 55 18.1	
	comp=N,713nm,0.3s						
NIZ				*e*Sg	**Sg**	**03 55 21.0**	**-2.7**
NIZ				*e*		03 55 22.9	
NIZ				max		03 55 24.2	
	comp=N,6μm,0.2s						
KMO	**Kumora**	**0.64**	**60**	*e*PG	**Pg**	**03 55 21.0**	**-0.7**
KMO				*e*		03 55 28.2	
KMO				pmax	pmax		
	comp=Z,267nm,0.1s						
KMO				smax			
	comp=N,2μm,0.8s						
KMO	**Kumora**	**0.64**	**60**	⇑*i*Pg	**Pg**	**03 55 21.0**	**-0.7**
KMO				Pmax		03 55 21.2	
	comp=N,265nm,0.1s						
KMO				*i* Sg	**Sg**	**03 55 29.2**	**-0.8**
KMO				Smax		03 55 31.0	
	comp=N,2μm,1.2s						
YLYR	**Ulyunkhan**	**0.88**	**142**	⇑*i*PG	**Pg**	**03 55 28.0**	**+1.8**
YLYR				*i*		03 55 40.6	
YLYR				pmax	pmax		
	comp=Z,238nm,0.2s						
YLYR				smax			
	comp=N,1μm,0.1s						
YLYR	**Ulyunkhan**	**0.88**	**142**	⇑*i*Pg	**Pg**	**03 55 28.0**	**+1.8**
YLYR				Pmax		03 55 28.9	
	comp=N,244nm,0.2s						
YLYR				*i* Sg	**Sg**	**03 55 41.5**	**+3.9**
YLYR				Smax		03 55 42.1	
	comp=N,977nm,0.1s						
YOA	**Uoyan**	**1.02**	**56**	*e*PG	**Pg**	**03 55 27.2**	**-1.7**
YOA				*e*		03 55 40.5	
YOA				pmax	pmax		
	comp=Z,387nm,0.2s						
YOA				smax			
	comp=N,2μm,0.6s						
YOA	**Uoyan**	**1.02**	**56**	*e*Sg	**Sg**	**03 55 40.7**	**-1.4**
YOA				Smax		03 55 54.0	
	comp=N,2μm,0.8s						
SYVR	**Suvo**	**1.92**	**184**	*e*PN	**

BOD				*e*			03 56 41.3
BOD				pmax	pmax		
	comp=Z,52nm,0.5s						
BOD				smax			
	comp=N,359nm,0.6s						
BOD	**Bodaibo**	**3.07**	**41**	*e*Pn	**Pn**	**03 55 58.7**	**+0.9**
BOD				*e*Pg	**Pg**	**03 56 02.1**	**-6.0**
BOD				Pmax		03 56 06.1	
	comp=N,58nm,0.9s						
BOD				*e*Sn	**Sn**	**03 56 33.9**	**-0.7**
BOD				*e*Sg	**Sg**	**03 56 41.9**	**-6.0**
BOD				Smax		03 56 45.8	
	comp=N,356nm,0.8s						
ZRHB	**Zarechye**	**3.52**	**212**	*e*Sg	**Sg**	**03 57 01.7**	**-0.6**
ZRHB				Smax		03 57 17.7	
	comp=N,2μm,1.0s						
TRG	**Tyrgan**	**3.62**	**221**	*e*PN	**Pn**	**03 56 09.2**	**+3.8**
TRG				*e*		03 56 17.6	
TRG				*e*S	**Sn**	**03 56 51.3**	**+3.2**
TRG				*e*		03 57 03.7	
TRG				pmax	pmax		
	comp=Z,53nm,0.2s						
TRG				smax			
	comp=N,304nm,0.4s						
TRG	**Tyrgan**	**3.62**	**221**	*e*Pn	**Pn**	**03 56 09.2**	**+3.8**
TRG				*e*Pg	**Pg**	**03 56 16.7**	**-1.9**
TRG				Pmax		03 56 21.1	
	comp=N,98nm,1.0s						
TRG				*e*Sn	**Sn**	**03 56 52.6**	**+4.5**
TRG				*e*Sg	**Sg**	**03 57 03.7**	**-1.8**
TRG				Smax		03 57 09.9	
	comp=N,387nm,0.4s						
UUDB	**Ulan-Yde**	**4.01**	**203**	*e*Pg	**Pg**	**03 56 22.7**	**-3.3**
UUDB				Pmax		03 56 28.1	
	comp=N,89nm,0.6s						
UUDB				*e*Sg	**Sg**	**03 57 17.8**	**-0.1**
UUDB				Smax		03 57 28.9	
	comp=N,327nm,1.1s						
CIT	**Chita**	**4.07**	**150**	*e*PN	**Pg**	**03 56 25.0**	**-2.1**
CIT				*e*		03 57 17.8	
CIT				pmax	pmax		
	comp=Z,94nm,0.3s						
CIT				smax			
	comp=E,432nm,0.5s						
CIT	**Chita**	**4.07**	**150**	*e*Sg	**Sg**	**03 57 17.9**	**-1.8**
CIT				Smax		03 57 22.1	
	comp=E,384nm,0.4s						
STDB	**Stepnoy Dvoret**	**4.10**	**215**	*e*Sg	**Sg**	**03 57 19.4**	**-1.5**
STDB				Smax		03 57 37.9	
	comp=E,1μm,0.8s						
KAB	**Kabansk**	**4.11**	**212**	*e*Sg	**Sg**	**03 57 20.9**	**-0.3**
KAB				Smax		03 57 39.2	
	comp=E,945nm,1.0s						
HRMR	**Khuramsha**	**4.40**	**208**	*e*Pn	**Pn**	**03 56 19.5**	**+3.4**
HRMR				*e*Pg	**Pg**	**03 56 29.7**	**-3.9**
HRMR				Pmax		03 56 32.3	
	comp=E,117nm,0.5s						
HRMR				*e*Sn	**Sn**	**03 57 11.1**	**+3.7**
HRMR				*e*Sg	**Sg**	**03 57 28.6**	**-1.9**
HRMR				Smax		03 57 40.6	
	comp=E,667nm,0.4s						
CRS	**Chara**	**4.68**	**70**	*e*PN	**Pn**	**03 56 22.3**	**+2.4**
CRS				*e*		03 56 34.4	
CRS				*e*		03 57 34.4	
CRS				pmax	pmax		
	comp=Z,78nm,1.0s						
CRS				smax			
	comp=N,188nm,1.3s						
CRS	**Chara**	**4.68**	**70**	*e*Pn	**Pn**	**03 56 22.3**	**+2.4**
CRS				*e*Pg	**Pg**	**03 56 34.8**	**-4.1**
CRS				Pmax		03 56 40.3	
	comp=N,78nm,1.1s						
CRS				*e*Sn	**Sn**	**03 57 13.6**	**-0.7**
CRS				*e*Sg	**Sg**	**03 57 35.5**	**-4.0**
CRS				Smax		03 57 44.9	
	comp=N,187nm,1.5s						
IRK	**Irkutsk**	**4.85**	**229**	*e*PN	**Pn**	**03 56 25.2**	**+3.0**
IRK				*e*		03 56 38.7	
IRK				*e*		03 57 41.8	
IRK				pmax	pmax		
	comp=Z,30nm,1.5s						
IRK				smax			
	comp=N,459nm,1.2s						
IRK	**Irkutsk**	**4.85**	**229**	*e*Sn	**Sn**	**03 57 18.2**	**-0.1**
IRK				*e*Sg	**Sg**	**03 57 42.2**	**-2.6**
IRK				Smax		03 57 46.3	
	comp=N,801nm,0.4s						
LSTR	**Listvyanka**	**4.90**	**223**	*e*Pn	**Pn**	**03 56 26.0**	**+3.1**
LSTR				*e*		03 56 34.3	
LSTR				max		03 56 39.9	
	comp=N,53nm,1.9s						
LSTR				*e*Sn	**Sn**	**03 57 20.4**	**+0.8**
LSTR				*e*Sg	**Sg**	**03 57 43.6**	**-2.8**
LSTR				Smax		03 57 45.5	
	comp=N,640nm,1.7s						
TLY	**Talaya**	**5.52**	**228**	*e*Pn	**Pn**	**03 56 33.4**	**+1.9**
	comp=N,16nm,0.4s						
TLY				*e*Sn	**Sn**	**03 57 36.4**	**+1.5**
TLY				*e*Sg	**Sg**	**03 58 04.3**	**-2.1**
TLY	**Talaya**	**5.52**	**228**	*e*PN	**Pn**	**03 56 33.6**	**+2.1**
TLY				*e*		03 56 49.8	
TLY				*e*S	**Sn**	**03 57 34.2**	**-0.7**
TLY				*e*		03 58 00.6	
TLY				pmax	pmax		
	comp=Z,30nm,0.5s						
TLY				smax			
	comp=N,175nm,1.2s						
TLY	**Talaya**	**5.52**	**228**	*e*Sn	**Sn**	**03 57 33.3**	**-1.6**
TLY				*e*Sg	**Sg**	**03 58 02.5**	**-3.9**
TLY				Smax		03 58 06.4	
	comp=N,133nm,0.6s						
TUP	**Tupik**	**5.72**	**98**	*e*PN	**Pn**	**03 56 35.5**	**+1.3**
TUP				*e*		03 56 53.1	
TUP				*e*S	**Sn**	**03 57 40.2**	**+0.5**
TUP				*e*		03 58 09.3	
TUP				pmax	pmax		
	comp=Z,17nm,0.6s						
TUP				smax			
	comp=N,248nm,0.9s						
TUP	**Tupik**	**5.72**	**98**	*e*Pn	**Pn**	**03 56 36.0**	**+1.8**
TUP				*e*Pg	**Pg**	**03 56 54.6**	**-4.1**
TUP				Pmax		03 56 57.5	
	comp=N,10.0nm,0.9s						
TUP				*e*Sn	**Sn**	**03 57 43.9**	**+4.2**
TUP				*e*Sg	**Sg**	**03 58 09.3**	**-3.4**
TUP				Smax		03 58 14.3	
	comp=N,246nm,0.9s						
ARS	**Arshan**	**5.90**	**235**	*e*Pn	**Pn**	**03 56 38.7**	**+2.1**
ARS				*e*Pg	**Pg**	**03 56 56.5**	**-5.6**
ARS				Pmax		03 57 00.1	
	comp=N,65nm,0.6s						
ARS				*e*Sn	**Sn**	**03 57 43.3**	**-0.9**
ARS				*e*Sg	**Sg**	**03 58 11.5**	**-6.9**
ARS				Smax		03 58 20.8	
	comp=N,1μm,0.7s						
KPC	**Khapcheranga**	**6.02**	**167**	*e*PN	**Pn**	**03 56 41.9**	**+3.6**
KPC				*e*		03 57 01.2	
KPC				*e*		03 58 21.1	
KPC				smax			
	comp=E,166nm,1.2s						
KPC	**Khapcheranga**	**6.02**	**167**	*e*Pn	**Pn**	**03 56 40.8**	**+2.5**
KPC				*e*Pg	**Pg**	**03 57 01.1**	**-3.4**
KPC				Pmax		03 57 02.1	
	comp=E,39nm,0.6s						
KPC				*e*Sg	**Sg**	**03 58 20.1**	**-2.3**
KPC				Smax		03 58 23.1	
	comp=E,167nm,1.1s						
ZAK	**Zakamensk**	**6.67**	**222**	*e*PN	**Pn**	**03 56 51.0**	**+3.7**
ZAK				*e*		03 57 10.3	
ZAK				*e*		03 58 40.2	
ZAK				smax			
	comp=E,110nm,1.3s						
ZAK	**Zakamensk**	**6.67**	**222**	*e*Pn	**Pn**	**03 56 51.0**	**+3.7**
ZAK				*e*		03 57 17.7	
ZAK				max		03 57 19.2	
	comp=E,8.0nm,1.0s						
ZAK				*e*Sn	**Sn**	**03 58 07.5**	**+4.2**
ZAK				*e*Sg	**Sg**	**03 58 40.0**	**-3.4**
ZAK				Smax		03 58 43.0	
	comp=E,110nm,1.3s						
MOY	**Mondy**	**6.74**	**238**	*e*PN	**Pn**	**03 56 50.4**	**+2.2**
MOY				*e*		03 57 11.4	
MOY				*e*S	**Sn**	**03 58 04.3**	**-0.6**
MOY	**Mondy**	**6.74**	**238**	*e*Pn	**Pn**	**03 56 53.1**	**+4.9**
MOY				max		03 56 58.2	
	comp=E,49nm,1.0s						
MOY				*e*Sn	**Sn**	**03 58 05.6**	**+0.7**
MOY				*e*Sg	**Sg**	**03 58 36.4**	**-9.0**
MOY				Smax		03 58 50.5	
	comp=E,216nm,1.5s						
ORL	**Orlik**	**6.84**	**248**	⇑*i*Pn	**Pn**	**03 56 52.7**	**+3.1**
ORL				max		03 56 59.2	
	comp=E,20nm,1.0s						
ORL				*e*Sn	**Sn**	**03 58 07.9**	**+0.5**
ORL				*e*Sg	**Sg**	**03 58 42.1**	**-6.6**
ORL				Smax		03 58 45.8	
	comp=E,164nm,0.9s						
ULN	**Ulaanbaatar**	**7.96**	**196**	*e*Sg	Sx	03 59 21.0	
SONM	**Songino Array**	**8.10**	**199**	Pn	**Pn**	**03 57 09.8**	**+3.0**
	comp=E,0.7nm,0.3s,baz=13,slow=13,SNR=6.2						
SONM				Pg	Pn	03 57 39.1	+32
	comp=E,1.2nm,0.3s,baz=9.9,slow=16,SNR=6.8						
SONM				Lg		03 59 28.3	
	comp=E,3.6nm,0.3s,baz=14,slow=30,SNR=8.1						
SONM	**Songino Array**	**8.10**	**199**	PN	**Pn**	**03 57 09.8**	**+2.9**
SONM						03 57 39.1	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
IENR	**Iengra**	**8.25**	**79**	*e*Sg	Sx	03 59 26.5	
ZALV	**Zalesovo Beam**	**14.73**	**274**	Pn	**Pn**	**03 58 38.0**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=74,slow=10,SNR=8.4						
ZALV	**Zalesovo Beam**	**14.73**	**274**	P	**Pn**	**03 58 38.0**	**+0.5**
KURK	**Kurchatov**	**19.46**	**269**	*e*P	**Pn**	**03 59 36.4**	**-0.7**
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	**19.46**	**269**	*e*P	**Pn**	**03 59 36.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	**Makanchi Array**	**19.47**	**255**	*e*P	**Pn**	**03 59 37.2**	**0.0**
MK31	**Makanchi Array**	**19.47**	**255**	*e*P	**Pn**	**03 59 37.2**	**0.0**
MKAR	**Makanchi Array**	**19.47**	**255**	P	**Pn**	**03 59 37.0**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=61,slow=10,SNR=11						
MKAR	**Makanchi Array**	**19.47**	**255**	P	**Pn**	**03 59 37.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	**Borovoye Array**	**23.17**	**280**	P	**P**	**04 00 16.7**	**+1.0**
	comp=Z,2.6nm,0.5s,mb3.9,baz=68,slow=12,SNR=6.6						
BVAR	**Borovoye Array**	**23.17**	**280**	P	**P**	**04 00 16.7**	**+1.0**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	**Borovoye**	**23.21**	**281**	*e*P	**P**	**04 00 16.6**	**+0.5**
	comp=Z,3.7nm,0.6s,mb4.0						
BRVK	**Borovoye**	**23.21**	**281**	*e*P	**P**	**04 00 16.6**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
TKM2	**Tokmak 2**	**25.61**	**255**	*e*P	**P**	**04 00 40.5**	**+2.0**
	comp=Z,1.4nm,0.5s,mb3.8						
TKM2	**Tokmak 2**	**25.61**	**255**	*e*P	**P**	**04 00 40.5**	**+2.0**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
ARCES	**ARCESS Array B**	**37.92**	**325**	P	**P**	**04 02 25.4**	**-0.8**
	comp=Z,2.0nm,0.9s,mb3.9,baz=51,slow=8.7,SNR=3.5						
ARCES	**ARCESS Array B**	**37.92**	**325**	P	**P**	**04 02 25.5**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**41.44**	**314**	P	**P**	**04 02 55.0**	**-0.5**
	comp=Z,1.3nm,0.6s,mb3.7,baz=62,slow=9.6,SNR=8.5						
FINES	**FINESS Array B**	**41.44**	**314**	P	**P**	**04 02 55.1**	**-0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**46.43**	**35**	P	**P**	**04 03 36.4**	**+0.9**
	comp=Z,0.5nm,0.8s,mb3.5,baz=301,slow=7.5,SNR=8.4						
ILAR	**Eielson Array**	**46.43**	**35**	P	**P**	**04 03 36.4**	**+0.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**77.95**	**157**	P	**P**	**04 07 07.4**	**+0.1**
	comp=Z,0.6nm,1.0s,mb3.5,baz=351,slow=5.9,SNR=3.3						
WRA	**Warramunga Arr**	**77.95**	**157**	P	**P**	**04 07 07.5**	**+0.2**

*ISCJB **27** 03:55:35.9±0.4, 38.°77N±0.°02×27.°81E±0.°02, h9km±3km,*
Error ellipse: s-maj=3.3km s-min=2.7km az=42.0
*CSEM **27** 03:55:35.7±0.1, 38.°76N×27.°81E, h2km, MD3.1, Error*
ellipse: s-maj=2.5km s-min=2.3km az=126.0
*DDA **27** 03:55:35.3, 38.°78N×27.°82E, h12km±2km, Ml3.4*
*ISK **27** 03:55:35.5, 38.°78N×27.°80E, h8km, MD3.1*
*ATH **27** 03:55:37.0, 38.°73N×27.°70E, h16km±1km, MD3.5/6*

ISC 27 03:55:35.9±0.4, 38.°76N±0.°02×27.°82E±0.°02, h4km±3km,
n83, σ0°97/121, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.12**	**359**	*i* P	**Pg**	**03 55 38.5**	**+0.2**
AKHS				*i* S	**Sg**	**03 55 40.5**	**+0.5**
AKHS	**Akhisar**	**0.12**	**359**	*i* P	**Pg**	**03 55 38.5**	**+0.2**
AKHS				*i* S	**Sg**	**03 55 40.5**	**+0.5**
IZM	**Izmir**	**0.56**	**231**	PG	**Pg**	**03 55 46.5**	**-0.3**
IZM				*e*SG	**Sg**	**03 55 55.5**	**+1.4**
KULA	**Kula-Manisa**	**0.70**	**110**	*e*PG	**Pg**	**03 55 49.8**	**+0.4**
KULA	**Kula-Manisa**	**0.70**	**110**	*e*Pg	**Pg**	**03 55 49.8**	**+0.4**
BLCB	**Balcova**	**0.71**	**239**	PG	**Pg**	**03 55 49.5**	**-0.1**
BLCB				*e*SG	**Sg**	**03 56 00.6**	**+1.8**
BLCB	**Balcova**	**0.71**	**239**	*i* Pg	**Pg**	**03 55 49.5**	**-0.1**
BLCB				*e*Sg	**Sg**	**03 56 00.6**	**+1.8**
DEMI	**Demirci**	**0.76**	**68**	*i* P	**Pg**	**03 55 50.4**	**0.0**
DEMI				*i* S	**Sg**	**03 56 00.1**	**-0.1**
DEMI	**Demirci**	**0.76**	**68**	*i* P	**Pg**	**03 55 50.4**	**0.0**
DEMI				*i* S	**Sg**	**03 56 00.1**	**-0.1**
BALB	**Balikesir**	**0.88**	**3**	*e*PG	**Pg**	**03 55 52.6**	**-0.2**
BALB				*e*SG	**Sg**	**03 56 05.2**	**+1.0**
BALB	**Balikesir**	**0.88**	**3**	*e*Pg	**Pg**	**03 55 52.6**	**-0.2**
BALB				*e*Sg	**Sg**	**03 56 05.2**	**+0.9**
DURS	**Dursunbey**	**0.98**	**31**	*i* P	**Pg**	**03 55 54.4**	**-0.4**
DURS				*i* S	**Sg**	**03 56 06.7**	**-0.8**
DURS	**Dursunbey**	**0.98**	**31**	*i* P	**Pg**	**03 55 54.4**	**-0.4**
DURS				*i* S	**Sg**	**03 56 06.7**	**-0.8**
BALY	**Balya**	**0.99**	**351**	*i* P	**Pg**	**03 55 54.6**	**-0.3**
BALY				*i* S	**Sg**	**03 56 07.8**	**0.0**
BALY	**Balya**	**0.99**	**351**	*i* P	**Pg**	**03 55 54.6**	**-0.3**
BALY				*i* S	**Sg**	**03 56 07.8**	**0.0**
AYVA	**Ayvalik**	**1.03**	**302**	*i* P	**Pg**	**03 55 55.7**	**-0.1**
AYVA				*i* S	**Sg**	**03 56 09.3**	**+0.1**
AYVA	**Ayvalik**	**1.03**	**302**	*i* P	**Pg**	**03 55 55.7**	**-0.1**
AYVA				*i* S	**Sg**	**03 56 09.3**	**+0.1**
URLA	**Izmir**	**1.04**	**248**	*i* P	**Pg**	**03 55 54.2**	**-1.6**
URLA				*i* S	**Sg**	**03 56 07.9**	**-1.3**
URLA	**Izmir**	**1.04**	**248**	*i* P	**Pg**	**03 55 54.2**	**-1.6**
URLA				*i* S	**Sg**	**03 56 07.9**	**-1.3**
AYDN	**Tasoluk**	**1.10**	**177**	*i* P	**Pg**	**03 55 57.0**	**0.0**
AYDN				*i* S	**Sg**	**03 56 10.6**	**-0.6**
AYDN	**Tasoluk**	**1.10**	**177**	*i* P	**Pg**	**03 55 57.0**	**+0.1**
AYDN				*i* S	**Sg**	**03 56 10.6**	**-0.6**
GONE	**Gonen-Balikesi**	**1.29**	**356**	*e*PN	**Pn**	**03 55 59.5**	**-1.1**
GONE	**Gonen-Balikesi**	**1.29**	**356**	*e*Pn	**Pn**	**03 55 59.5**	**-1.2**
PRK	**Paraskevi**	**1.30**	**292**	*e*PN	**Pn**	**03 56 00.8**	**0.0**
PRK				*e*SN	**Sn**	**03 56 16.9**	**-1.7**
PRK	**Paraskevi**	**1.30**	**292**	*e*Pn	**Pn**	**03 56 00.8**	**0.0**
PRK				*e*Sn	**Sn**	**03 56 16.9**	**-1.7**
SMG	**Samos**	**1.30**	**217**	*e*PN	**Pn**	**03 56 00.3**	**-0.5**
SMG				*e*SN	**Sn**	**03 56 16.9**	**-1.7**
SMG	**Samos**	**1.30**	**217**	*e*Pn	**Pn**	**03 56 00.3**	**-0.5**
SMG				*e*Sn	**Sn**	**03 56 16.9**	**-1.7**
GDZ	**Gediz**	**1.34**	**75**	*i* P	**Pn**	**03 56 00.2**	**-1.1**
GDZ				*i* S	**Sg**	**03 56 16.8**	**-2.1**
GDZ	**Gediz**	**1.34**	**75**	*i* P	**Pn**	**03 56 00.2**	**-1.1**
GDZ				*i* S	**Sg**	**03 56 16.8**	**-2.1**
KHAL	**Karahalli**	**1.37**	**106**	*i* P	**Pn**	**03 56 01.0**	**-0.7**
KHAL				*i* S	**Sb**	**03 56 18.4**	**-1.4**
KHAL	**Karahalli**	**1.37**	**106**	*i* P	**Pn**	**03 56 01.0**	**-0.7**
KHAL				*i* S	**Sb**	**03 56 18.4**	**-1.4**
CHOS	**Chios island**	**1.43**	**255**	*e*PN	**Pn**	**03 56 02.1**	**-0.5**
CHOS				*e*SN	**Sn**	**03 56 20.3**	**-1.5**
CHOS	**Chios island**	**1.43**	**255**	*e*Pn	**Pn**	**03 56 02.1**	**-0.5**
CHOS				*e*Sn	**Sn**	**03 56 20.3**	**-1.5**
DNZL	**Cakiroluk**	**1.44**	**137**	*e*P	**Pn**	**03 56 03.5**	**+0.7**
DNZL				*e*S	**Sb**	**03 56 23.9**	**+1.9**
DNZL	**Cakiroluk**	**1.44**	**137**	*e*P	**Pn**	**03 56 03.5**	**+0.8**
DNZL				*e*S	**Sb**	**03 56 23.9**	**+2.0**
MLSB	**Milas**	**1.46**	**181**	*e*PN	**Pn**	**03 56 02.8**	**-0.2**
MLSB	**Milas**	**1.46**	**181**	*e*Pn	**Pn**	**03 56 02.8**	**-0.2**
EZN	**Ezine**	**1.57**	**313**	*e*PN	**Pn**	**03 56 04.2**	**-0.3**
EZN	**Ezine**	**1.57**	**313**	*e*Pn	**Pn**	**03 56 04.3**	**-0.2**
BNT	**Bandirma**	**1.60**	**3**	*e*PN	**Pn**	**03 56 03.6**	**-1.3**
BNT	**Bandirma**	**1.60**	**3**	*e*Pn	**Pn**	**03 56 03.6**	**-1.3**
YER	**Yerkesik**	**1.66**	**167**	*e*Pn	**Pn**	**03 56 06.4**	**+0.7**
YER	**Yerkesik**	**1.66**	**167**	*e*Pn	**Pn**	**03 56 06.4**	**+0.6**
ULDT	**Uludag**	**1.72**	**36**	*i* P	**Pn**	**03 56 06.8**	**+0.2**
ULDT				*i* S	**Sn**	**03 56 26.1**	**-2.8**
ULDT	**Uludag**	**1.72**	**36**	*i* P	**Pn**	**03 56 06.8**	**+0.3**
ULDT				*i* S	**Sn**	**03 56 26.1**	**-2.8**
BODT	**Bodrum**	**1.74**	**193**	*e*PN	**Pn**	**03 56 07.3**	**+0.5**
BODT	**Bodrum**	**1.74**	**193**	*e*Pn	**Pn**	**03 56 07.3**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.94**	**328**	*e*PN	**Pn**	**03 56 10.1**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.94**	**328**	*e*Pn	**Pn**	**03 56 10.1**	**+0.5**
ARMT	**Armutlu**	**1.98**	**24**	*e*PN	**Pn**	**03 56 10.6**	**+0.5**
ARMT	**Armutlu**	**1.98**	**24**	*e*Pn	**Pn**	**03 56 10.6**	**+0.5**
GEMT	**Gemlik**	**1.98**	**32**	*e*PN	**Pn**	**03 56 10.6**	**+0.4**
GEMT	**Gemlik**	**1.98**	**32**	*e*Pn	**Pn**	**03 56 10.6**	**+0.5**
DAT	**Datca**	**2.04**	**185**	*e*PN	**Pn**	**03 56 11.5**	**+0.6**
DAT	**Datca**	**2.04**	**185**	*e*Pn	**Pn**	**03 56 11.5**	**+0.6**
MFT	**Murefte**	**2.07**	**349**	*e*PN	**Pn**	**03 56 10.9**	**-0.4**
MFT	**Murefte**	**2.07**	**349**	*e*Pn	**Pn**	**03 56 10.9**	**-0.4**
SHUT	**Suhut-Afyon**	**2.15**	**95**	*e*PN	**Pn**	**03 56 12.9**	**+0.4**
SHUT	**Suhut-Afyon**	**2.15**	**95**	*e*Pn	**Pn**	**03 56 12.9**	**+0.4**
ERIK	**Erikli-Kesan**	**2.16**	**333**	*e*PN	**Pn**	**03 56 12.4**	**-0.2**
ERIK	**Erikli-Kesan**	**2.16**	**333**	*e*Pn	**Pn**	**03 56 12.4**	**-0.2**
ADVT	**Abdulvahap**	**2.23**	**41**	*e*PN	**Pn**	**03 56 13.8**	**+0.1**
ADVT	**Abdulvahap**	**2.23**	**41**	*e*Pn	**Pn**	**03 56 13.8**	**+0.2**
BORA	**Eskisehir**	**2.33**	**60**	*i* P	**Pn**	**03 56 18.9**	**+3.9**
BORA				*i* S	**Sn**	**03 56 50.1**	**+6.1**
BORA	**Eskisehir**	**2.33**	**60**	*i* P	**Pn**	**03 56 18.9**	**+3.9**
ENEZ	**Enez**	**2.35**	**328**	*e*PN	**Pn**	**03 56 16.1**	**+0.8**
ENEZ	**Enez**	**2.35**	**328**	*e*Pn	**Pn**	**03 56 16.1**	**+0.8**
APE	**Apeiranthos**	**2.47**	**228**	*e*PB	**Pb**	**03 56 17.4**	**-3.5**
APE				*e*SN	**Sn**	**03 56 48.1**	**+0.6**
APE	**Apeiranthos**	**2.47**	**228**	*e*Pb	**Pb**	**03 56 17.4**	**-3.5**
APE				*e*Sn	**Sn**	**03 56 48.1**	**+0.6**
HRT	**Hereke**	**2.50**	**34**	*e*PN	**Pn**	**03 56 17.9**	**+0.6**
HRT	**Hereke**	**2.50**	**34**	*e*Pn	**Pn**	**03 56 17.9**	**+0.5**
ALN	**Alexandroupoli**	**2.53**	**328**	*e*PN	**Pn**	**03 56 19.4**	**+1.6**
ALN				*e*SN	**Sn**	**03 56 50.7**	**+1.7**
ALN	**Alexandroupoli**	**2.53**	**328**	*e*Pn	**Pn**	**03 56 19.4**	**+1.6**
ALN				*e*Sn	**Sn**	**03 56 50.7**	**+1.7**
ELL	**Elmali**	**2.60**	**140**	*e*PN	**Pn**	**03 56 19.8**	**+1.1**
ELL	**Elmali**	**2.60**	**140**	*e*Pn	**Pn**	**03 56 19.8**	**+1.1**
GULT	**Gulveren**	**2.67**	**50**	*e*PN	**Pn**	**03 56 20.7**	**+1.0**
GULT	**Gulveren**	**2.67**	**50**	*e*Pn	**Pn**	**03 56 20.7**	**+1.1**
RDO	**Rodhopi**	**2.96**	**324**	*e*PN	**Pn**	**03 56 24.8**	**+1.2**
RDO	**Rodhopi**	**2.96**	**324**	*e*Pn	**Pn**	**03 56 24.8**	**+1.2**
SVRH	**Sivrihisar-ESK**	**2.96**	**75**	*e*PN	**Pn**	**03 56 24.4**	**+0.7**
SVRH	**Sivrihisar-ESK**	**2.96**	**75**	*e*Pn	**Pn**	**03 56 24.4**	**+0.7**
MDU	**Mudurnu**	**3.13**	**56**	*e*PN	**Pn**	**03 56 26.7**	**+0.7**
MDU	**Mudurnu**	**3.13**	**56**	*e*Pn	**Pn**	**03 56 26.7**	**+0.8**

IDC 27 04:00:35.5±1.4, 13.°25N×120.°40E, h0km, mb3.8/3,
mb1 4.2/3, mb1mx3.6/21, mbtmp3.9/3, Error ellipse:
s-maj=31.8km s-min=11.3km az=113.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.99**	**32**	Pg	Pg	04 00 54.9	+0.4
	276nm,0.3s,baz=273,slow=0.8,SNR=10.0						
TGY				Lg		04 01 07.9	
	212nm,0.3s,baz=168,slow=21,SNR=8.6						
CMAR	**Chiang Mai Arr**	**21.27**	**287**	P	P	04 05 23.8	+0.1
	0.6nm,0.3s,baz=104,slow=8.3,SNR=4.3						
WRA	**Warramunga Arr**	**35.73**	**157**	P	P	04 07 35.5	-0.6
	1.0nm,0.5s,baz=332,slow=10.0,SNR=13						
ASAR	**Alice Springs**	**39.00**	**160**	P	P	04 08 04.3	+0.5
	1.3nm,0.5s,baz=338,slow=7.0,SNR=18						

*ISCJB **27** 04:01:42.0±0.4, 16.°06N±0.°06×48.°62W±0.°05, h10km,*
mb4.5/60, Error ellipse: s-maj=9.1km s-min=6.7km az=2.1
*IDC **27** 04:01:42.0±0.6, 16.°12N×48.°69W, h0km, mb4.3/16,*
mb1 4.5/17, mb1mx4.3/29, mbtmp4.3/17, ML5.9/1, Error
ellipse: s-maj=17.9km s-min=15.8km az=113.0
*NEIC **27** 04:01:43.8±0.3, 16.°07N×48.°66W, h10km, mb4.7/48, Error*
ellipse: s-maj=7.7km s-min=5.4km az=177.0

ISC 27 04:01:44.1±0.4, 16.°06N±0.°07×48.°59W±0.°05, h10km, n441,
σ0°65/433, mb4.5/60, 181C-156D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**11.01**	**256**	*e*Pn	**Pn**	**04 04 21.5**	**-0.2**
GRGR	**Grenville**	**13.26**	**255**	*e*Pn	**Pn**	**04 04 50.0**	**-2.5**
GRGR				*e*Sn	**Sn**	**04 07 12.3**	**-7.8**
SJG	**San Juan**	**16.91**	**279**	Pn	**Pn**	**04 05 38.6**	**-2.4**
	0.8nm,0.3s,baz=76,slow=17,SNR=2.6

CPRX	Cap Rock 6.1nm,0.8s,mb4.6	52.47 299	eP	P	04 10 56.7	-0.6
526A	Mary Lane Ranc baz=52,SNR=8.7	52.47 296	⇓P	P	04 10 56.9	-0.5
626A	Big Bend Ranch baz=52	52.49 295	⇓P	P	04 10 56.5	-1.1
X26A	CR and CF Fran baz=52	52.56 301	⇑P	P	04 10 56.8	-1.2
Z26A	Caprock baz=52,SNR=14	52.58 300	⇓P	P	04 10 57.2	-1.0
W26A	Owens Ranch, T baz=52	52.59 302	⇑P	P	04 10 57.6	-0.6
V26A	Tequesquite Ra baz=53	52.68 303	⇓P	P	04 10 57.8	-1.0
U26A	Atchley Ranch, baz=53,SNR=12	52.72 304	⇓P	P	04 10 58.6	-0.5
GDL2	Guadalupe Moun	52.82 298	eP	P	04 10 59.6	-0.3
125A	Gardner Draw, baz=53	53.10 299	⇓P	P	04 11 00.9	-1.1
W25A	X Bar L Ranch, baz=53	53.16 302	⇓P	P	04 11 01.6	-0.8
Z25A	Roswell baz=53	53.20 300	⇑P	P	04 11 02.5	-0.3
225A	Deer Hill, Car baz=53,SNR=6.0	53.21 298	⇓P	P	04 11 02.3	-0.5
Y25A	Mesa, Roswell baz=53,SNR=11	53.23 301	⇓P	P	04 11 02.6	-0.4
U25A	Circle Dot Ran baz=53,SNR=9.3	53.26 304	⇑P	P	04 11 03.0	0.0
425A	Indio Mountain baz=53,SNR=12	53.28 297	⇓P	P	04 11 03.6	+0.3
325A	Bean Ranch, Si baz=53,SNR=11	53.29 297	⇓P	P	04 11 03.1	-0.3
T25A	Trinidad baz=53,SNR=5.5	53.35 305	⇑P	P	04 11 03.8	0.0
V25A	Rancho No Teng baz=53	53.36 303	⇑P	P	04 11 03.7	-0.2
R25A	Fountain Ranch baz=53	53.39 306	⇓P	P	04 11 03.8	-0.2
S25A	Robets Cordova baz=53,SNR=8.1	53.44 305	⇑P	P	04 11 04.4	0.0
Q25A	Bedland, Calha baz=53	53.48 307	⇑P	P	04 11 05.1	+0.4
P25A	Willow Gulch B baz=53	53.51 307	⇑P	P	04 11 05.5	+0.6
324A	Moseley Ranch, baz=54,SNR=18	53.73 297	⇑P	P	04 11 05.7	-0.9
Z24A	Sheeppen Canyo baz=54,SNR=5.6	53.74 300	⇑P	P	04 11 06.7	0.0
124A	Stringfield Ra baz=54,SNR=6.3	53.78 299	⇓P	P	04 11 06.8	-0.1
224A	Cornudas Mount baz=54,SNR=11	53.80 298	⇓P	P	04 11 06.6	-0.5
Y24A	Capitan baz=54,SNR=8.2	53.85 300	⇓P	P	04 11 07.2	-0.2
T24A	Torres, Weston baz=54	53.85 304	⇑P	P	04 11 08.0	+0.6
V24A	Rampart Ranch, baz=54	53.88 303	⇑P	P	04 11 07.9	+0.3
W24A	Lazy 6 Ranch, baz=54,SNR=11	53.94 302	⇓P	P	04 11 08.5	+0.4
U24A	Moreno Valley baz=54	53.95 304	⇑P	P	04 11 08.8	+0.6
R24A	Sanders Place, baz=54,SNR=5.1	54.05 306	⇑P	P	04 11 09.1	+0.3
S24A	Houchin Ranch, baz=54,SNR=5.2	54.05 305	⇑P	P	04 11 09.5	+0.6
Q24A	Divide baz=54	54.18 307	⇓P	P	04 11 10.1	+0.3
N24A	Carr baz=54	54.27 309	⇑P	P	04 11 11.1	+0.7
SDCO	Great Sand Dun baz=54,SNR=7.0	54.29 305	⇓P	P	04 11 10.9	+0.2
SDCO	Great Sand Dun 5.9nm,0.8s,mb4.6	54.29 305	eP	P	04 11 10.4	-0.3
O24A	Longmont baz=54	54.30 308	⇑P	P	04 11 11.6	+0.9
RSSD	Black Hills 4.2nm,0.9s,mb4.4	54.30 313	eP	P	04 11 10.4	-0.2
M24A	Cheyenne baz=54,SNR=8.4	54.34 310	⇑P	P	04 11 11.5	+0.6
Y23A	Lovelace Mesa, baz=54,SNR=9.6	54.36 300	⇑P	P	04 11 11.3	+0.1
Z23A	Rita Site, Whi baz=54	54.46 300	⇓P	P	04 11 12.5	+0.5
L24A	Wheatland baz=54	54.52 310	⇑P	P	04 11 12.6	+0.4
W23A	Werner Place, baz=54	54.54 302	⇓P	P	04 11 12.9	+0.4
223A	Chaparral, Ant baz=54	54.56 298	⇑P	P	04 11 13.4	+0.7
V23A	Ortiz Mt. (NFS baz=54	54.62 303	⇑P	P	04 11 14.0	+0.9
T23A	Casias Ranch, baz=54,SNR=5.3	54.63 304	⇑P	P	04 11 13.7	+0.6
ISCO	Idaho Springs baz=55,SNR=6.8	54.66 308	⇑P	P	04 11 13.9	+0.7
ISCO	Idaho Springs	54.66 308	eP	P	04 11 13.4	+0.2
S23A	Nye Farm, Mont baz=55	54.68 305	⇑P	P	04 11 14.6	+1.1
U23A	El Rito baz=55,SNR=14	54.68 303	⇑P	P	04 11 14.3	+0.8
Q23A	Hartsel baz=55,SNR=5.1	54.70 306	⇓P	P	04 11 14.0	+0.4
P23A	Jefferson baz=55	54.77 307	⇓P	P	04 11 14.9	+0.8
ANMO	Albuquerque	54.77 302	eP	P	04 11 14.6	+0.4
PHWY	Pilot Hill	54.78 309	eP	P	04 11 14.6	+0.5
BNM	Barren Site 6.0nm,0.8s,mb4.7	54.85 301	eP	P	04 11 14.5	-0.3
KEST	Kesra 3.5nm,1.1s,mb4.3,baz=266,slow=1.0,SNR=37	54.89 57	P	P	04 11 15.4	+0.4
KEST	Kesra	54.89 57	eP	P	04 11 15.6	+0.5
O23A	Lake Granby, G baz=55	54.95 308	⇓P	P	04 11 16.6	+1.2
M23A	Laramie baz=55	55.01 310	⇓P	P	04 11 16.4	+0.6
Z22A	Elephant Butte baz=55	55.08 300	⇑P	P	04 11 16.3	-0.1
N23A	Red Feather La baz=55	55.08 309	⇓P	P	04 11 16.7	+0.4
122A	Conniff Cattle baz=55	55.08 299	⇓P	P	04 11 17.3	+0.8
L23A	Garrett baz=55	55.10 310	⇑P	P	04 11 16.3	-0.1
Y22A	Socorro baz=55,SNR=9.5	55.12 300	⇑P	P	04 11 16.4	-0.3
222A	Williams Famil baz=55,SNR=9.6	55.14 298	⇓P	P	04 11 16.8	0.0
U22A	Llaves baz=55,SNR=6.3	55.22 303	⇓P	P	04 11 17.9	+0.6
V22A	San Miguel Ran baz=55	55.22 303	⇓P	P	04 11 17.8	+0.4
LAZ	Ladron 1.6nm,0.9s,mb4.0	55.29 301	eP	P	04 11 18.7	+0.8
T22A	Edith baz=55,SNR=24	55.32 304	⇑P	P	04 11 18.9	+0.8
R22A	Saguache, Gunn baz=55,SNR=8.0	55.33 306	⇑P	P	04 11 18.9	+0.7
S22A	4UR Ranch, Cre baz=55,SNR=9.6	55.34 305	⇓P	P	04 11 18.8	+0.6
O22A	Kremmling baz=55,SNR=5.3	55.42 308	⇑P	P	04 11 19.5	+0.7
N22A	Wattenberg Ran baz=55,SNR=7.8	55.45 309	⇑P	P	04 11 19.4	+0.4
DGMT	Dagmar baz=55	55.48 318	⇑P	P	04 11 19.3	+0.2
DGMT	Dagmar	55.48 318	eP	P	04 11 18.5	-0.6
P22A	Eagle baz=55	55.51 307	⇓P	P	04 11 19.8	+0.4
Q22A	Crested Butte, baz=55	55.53 306	⇓P	P	04 11 20.5	+0.9
SMCO	Snowmass 4.9nm,0.7s,mb4.7	55.62 307	eP	P	04 11 20.9	+0.7
L22A	Ellis Ranch, M baz=56	55.62 310	⇓P	P	04 11 21.2	+1.0
M22A	Cedar Creek Ra baz=56	55.64 309	⇑P	P	04 11 20.9	+0.6
Z21A	St. Cloud Mine baz=56,SNR=9.2	55.67 300	⇑P	P	04 11 20.9	+0.2
221A	Mesquite Ranch baz=56	55.71 298	⇓P	P	04 11 21.7	+0.7
Y21A	Point of Rocks baz=56	55.71 300	⇓P	P	04 11 21.5	+0.5
121A	Cookes Peak, D baz=56,SNR=5.8	55.73 299	⇑P	P	04 11 21.4	+0.2
K22A	Casper baz=56	55.79 311	⇓P	P	04 11 20.4	-1.0
V21A	Milan baz=56	55.80 303	⇑P	P	04 11 22.7	+1.2
D23A	Lindsay baz=56	55.81 316	⇑P	P	04 11 21.5	0.0
T21A	Navajo Lake baz=56	55.82 304	⇑P	P	04 11 22.8	+1.1
X21A	Alamocita Cree baz=56,SNR=11	55.83 301	⇑P	P	04 11 22.1	+0.3
U21A	Nageezi baz=56,SNR=17	55.87 303	⇓P	P	04 11 22.9	+0.8
R21A	Cimarron baz=56,SNR=8.3	55.97 306	⇓P	P	04 11 23.6	+0.9
B23A	Brockton baz=56	55.99 318	⇓P	P	04 11 23.1	+0.3
P21A	Newcastle baz=56	56.02 307	P	P	04 11 24.2	+1.0
Q21A	Lamborn Mesa, baz=56,SNR=6.7	56.04 306	⇑P	P	04 11 24.0	+0.7
S21A	Coal Bank Pass baz=56,SNR=8.5	56.09 305	⇓P	P	04 11 24.1	+0.5
O21A	Pagoda baz=56	56.13 308	⇓P	P	04 11 25.2	+1.3
N21A	Black Mountain baz=56	56.24 308	⇑P	P	04 11 25.7	+1.1
M21A	Separation Pea baz=56	56.24 310	⇓P	P	04 11 25.6	+1.0
Y20A	Horse Springs, baz=56,SNR=5.4	56.29 300	⇑P	P	04 11 25.7	+0.6
L21A	Rawlins baz=56,SNR=11	56.30 310	⇓P	P	04 11 25.2	+0.1
K21A	Alcova baz=56	56.32 311	⇓P	P	04 11 25.3	+0.1
320A	Kipp Ranch, An baz=56,SNR=6.5	56.33 297	⇑P	P	04 11 26.3	+0.8
220A	Playas Peak, P baz=56,SNR=11	56.34 298	⇓P	P	04 11 25.8	+0.3
LAO	LASA Array baz=56,SNR=6.9	56.38 316	⇑P	P	04 11 25.6	+0.1
LAO	LASA Array 14nm,1.0s,mb5.0	56.38 316	eP	P	04 11 25.6	0.0
C22A	Vida baz=56	56.39 317	⇑P	P	04 11 25.7	0.0
X20A	Quemado baz=56,SNR=5.9	56.42 301	⇑P	P	04 11 26.5	+0.5
Z20A	Nine Sixteen R baz=56,SNR=7.5	56.43 299	⇓P	P	04 11 26.5	+0.3
120A	U Bar Ranch, L baz=56,SNR=6.9	56.45 299	⇓P	P	04 11 26.7	+0.5
D22A	Cohagen baz=56	56.45 316	⇑P	P	04 11 26.4	+0.4
W20A	Ramah baz=56,SNR=13	56.45 302	⇑P	P	04 11 26.8	+0.5
V20A	Brimhall baz=56	56.47 302	⇑P	P	04 11 26.8	+0.4
H21A	Big Horn, Sher baz=56	56.52 313	⇓P	P	04 11 25.9	-0.7
I21A	Big Trails, Te baz=56,SNR=12	56.55 312	⇑P	P	04 11 25.6	-1.2
S20A	Disappointment baz=56,SNR=6.2	56.55 305	⇓P	P	04 11 27.6	+0.7
U20A	Newcomb baz=56	56.56 303	⇑P	P	04 11 27.4	+0.4
J21A	Lysite baz=56,SNR=5.2	56.58 312	⇑P	P	04 11 27.2	+0.1
B22A	Reddig Ranch S baz=56,SNR=5.0	56.60 318	⇓P	P	04 11 27.1	+0.1
R20A	Redvale baz=56,SNR=9.4	56.60 305	⇑P	P	04 11 27.7	+0.5
Q20A	Ridgley Place, baz=56,SNR=9.6	56.61 306	⇑P	P	04 11 27.6	+0.2
O20A	White River Ci baz=57	56.70 308	⇑P	P	04 11 29.1	+1.2
A22A	Carney Farms, baz=57	56.72 318	⇓P	P	04 11 28.0	+0.1
PV01	Paradox Valley	56.74 305	eP	P	04 11 29.1	+0.9
G21A	Lodge Grass baz=57	56.75 314	⇑P	P	04 11 28.0	-0.2
P20A	De Beque baz=57,SNR=6.9	56.75 307	⇑P	P	04 11 28.7	+0.4
N20A	Spence Gulch, baz=57	56.81 308	⇑P	P	04 11 29.0	+0.3
E21A	Keefer Ranch, baz=57	56.92 315	⇑P	P	04 11 29.2	-0.1
219A	White Tail Can baz=57,SNR=16	56.97 298	⇑P	P	04 11 30.7	+0.7
D21A	La Casta Ranch baz=57	56.98 316	⇓P	P	04 11 30.0	+0.3
319A	Douglas baz=57,SNR=5.5	56.98 297	⇓P	P	04 11 30.4	+0.3
T19A	Beclabito baz=57	56.99 304	⇑P	P	04 11 31.1	+1.1
Y19A	Nutrioso baz=57,SNR=6.2	57.02 300	⇑P	P	04 11 30.9	+0.6
119A	Ashpeak Ranch, baz=57	57.02 299	⇑P	P	04 11 30.7	+0.3
L20A	Wamsutter baz=57	57.02 310	⇓P	P	04 11 30.3	+0.1
J20A	Shoshoni baz=57,SNR=9.5	57.04 311	⇓P	P	04 11 29.7	-0.6
U19A	Dine' College, baz=57,SNR=10	57.10 303	⇓P	P	04 11 30.8	-0.1
K20A	Yellowstone Ra baz=57	57.12 311	⇓P	P	04 11 30.4	-0.5
S19A	Harvey Farm, M baz=57,SNR=6.3	57.16 305	⇓P	P	04 11 31.6	+0.3
H20A	Greybull baz=57	57.17 313	⇓P	P	04 11 30.6	-0.6
I20A	Worland baz=57,SNR=9.3	57.17 312	⇑P	P	04 11 30.6	-0.6
C21A	Desert Coulee baz=57	57.21 317	⇓P	P	04 11 31.4	0.0
P19A	Cripple Cowboy baz=57,SNR=13	57.21 307	⇓P	P	04 11 31.4	-0.2
B21A	Ellsworth Farm baz=57,SNR=5.3	57.29 318	⇑P	P	04 11 32.6	+0.7
R19A	Curley Farm, L baz=57,SNR=11	57.30 305	⇑P	P	04 11 33.1	+0.8
Q19A	Hogan Spring (baz=57	57.36 306	⇓P	P	04 11 33.2	+0.5
A21A	Bergtoll Ranch baz=57	57.36 318	⇑P	P	04 11 32.7	+0.2
O19A	Miners Draw (B baz=57	57.40 308	⇑P	P	04 11 33.3	+0.4
G20A	Bridger baz=57,SNR=13	57.45 314	⇑P	P	04 11 32.7	-0.4
N19A	John Jarvie Ra baz=57	57.50 308	⇑P	P	04 11 33.2	-0.4
F20A	Billings baz=57,SNR=8.5	57.51 314	⇓P	P	04 11 33.5	0.0
K19A	Absolon Red Bu baz=57,SNR=6.1	57.51 311	⇑P	P	04 11 32.9	-0.8
118A	Homack Ranch, baz=58	57.58 299	⇑P	P	04 11 34.9	+0.6
318A	Bisbee baz=58,SNR=11	57.58 297	⇑P	P	04 11 34.5	+0.2
X18A	Snowflake baz=58,SNR=5.2	57.62 301	⇓P	P	04 11 34.8	+0.2
E20A	Meyer Farm, Mu baz=58,SNR=8.8	57.62 315	⇓P	P	04 11 34.0	-0.4
218A	Dragoon baz=58	57.63 298	⇓P	P	04 11 35.1	+0.4
Y18A	Canyon Day Jun baz=58,SNR=5.8	57.66 300	⇓P	P	04 11 35.1	+0.2
T18A	Mexican Hat baz=58,SNR=10	57.70 304	⇓P	P	04 11 35.1	+0.1
J19A	Crowheart baz=58,SNR=7.2	57.73 311	⇑P	P	04 11 34.5	-0.6
D20A	Manuel Ranch, baz=58,SNR=10	57.74 316	⇑P	P	04 11 34.9	-0.2
C20A	Veseth Ranch, baz=58	57.78 317	⇓P	P	04 11 35.3	-0.1
L19A	Farson baz=58,SNR=5.3	57.79 310	⇓P	P	04 11 35.2	-0.4
I19A	Meeteetse baz=58,SNR=7.4	57.80 312	⇓P	P	04 11 35.0	-0.6
R18A	Canyonlands Na baz=58,SNR=21	57.80 305	⇑P	P	04 11 36.1	+0.3
S18A	Hurst Farm, Bl baz=58,SNR=9.8	57.83 305	⇓P	P	04 11 36.5	+0.6
N18A	Larsen Ranch, baz=58	57.89 309	⇓P	P	04 11 36.5	+0.2
H19A	Powell baz=58,SNR=7.1	57.89 313	⇓P	P	04 11 36.1	-0.2
B20A	Solberg Farm, baz=58,SNR=5.1	57.95 317	⇓P	P	04 11 36.4	-0.2
A20A	Cobblestone Ra baz=58	57.98 318	⇓P	P	04 11 36.5	-0.3
Z17A	San Carlos Hig	58.01 299	⇓P	P	04 11 37.8	+0.5
BW06	Boulder Array baz=58,SNR=5.4	58.02 311	⇑P	P	04 11 36.2	-1.0
BW06	Boulder Array 5.6nm,1.1s,mb4.5	58.02 311	eP	P	04 11 36.1	-1.1
PDAR	Pinedale Array 3.2nm,0.9s,mb4.3,baz=112,slow=7.3,SNR=16	58.02 311	P	P	04 11 36.6	-0.6
Q18A	Rafter H Ranch baz=58,SNR=11	58.05 306	⇓P	P	04 11 38.0	+0.5
F19A	Roth Farm, Mol baz=58,SNR=5.5	58.06 314	⇑P	P	04 11 37.1	-0.3
E19A	Rath Farm, Rou baz=58,SNR=5.4	58.06 315	⇑P	P	04 11 37.8	+0.3
O18A	Roosevelt baz=58,SNR=6.8	58.06 308	⇑P	P	04 11 37.7	+0.1
RLMT	Red Lodge baz=58	58.16 313	⇑P	P	04 11 38.2	+0.1
RLMT	Red Lodge 7.8nm,1.2s,mb4.6	58.16 313	eP	P	04 11 37.9	-0.3
P18A	Preston Nutter baz=58	58.19 307	⇓P	P	04 11 38.7	+0.3
117A	Oracle baz=58	58.23 299	⇓P	P	04 11 39.1	+0.2
M18A	Lyman baz=58	58.23 309	⇑P	P	04 11 38.7	-0.1
D19A	Cripps Ranch, baz=58	58.26 316	⇓P	P	04 11 38.7	-0.1
TUC	Tucson 8.2nm,0.8s,mb4.8	58.26 298	eP	P	04 11 39.2	+0.1
L18A	Fontenelle, Gr baz=58	58.27 310	⇓P	P	04 11 39.3	+0.3
217A	Green Valley baz=58,SNR=5.7	58.29 298	⇓P	P	04 11 39.1	-0.2
X17A	Forest Lakes baz=58,SNR=6.4	58.32 301	⇓P	P	04 11 39.8	+0.4
Y17A	Roosevelt baz=58,SNR=8.3	58.33 300	⇑P	P	04 11 39.7	+0.1
I18A	Diamond G Ranc baz=58	58.34 312	⇑P	P	04 11 39.3	-0.1
V17A	Tonalea, Kykot baz=58,SNR=13	58.35 302	⇓P	P	04 11 39.9	+0.3
SRU	San Rafael baz=58,SNR=5.9	58.35 306	⇑P	P	04 11 39.9	+0.2
SRU	San Rafael	58.35 306	eP	P	04 11 40.3	+0.7
K18A	Toltan Ranch, baz=58	58.36 310	⇓P	P	04 11 39.9	+0.3
H18A	Shoshone NF, C baz=58,SNR=6.9	58.37 313	⇓P	P	04 11 38.8	-0.8
G18A	Lazy EL Ranch, baz=58	58.40 314	⇓P	P	04 11 39.4	-0.4
J18A	Kendall Valley baz=58,SNR=5.4	58.42 311	⇑P	P	04 11 39.5	-0.5
T17A	Navajo Res., N baz=58,SNR=14	58.43 304	⇓P	P	04 11 41.0	+0.8
R17A	Hankville Air baz=58,SNR=8.3	58.45 305	⇓P	P	04 11 40.5	+0.2
S17A	Black Ridge (B baz=58,SNR=16	58.47 305	⇓P	P	04 11 41.0	+0.6
C19A	Slack Wire Ran baz=58	58.48 316	⇑P	P	04 11 39.7	-0.6
A19A	Klindworth Far baz=58,SNR=8.5	58.52 318	⇑P	P	04 11 40.5	-0.1
B19A	Brinkman Farms baz=58	58.55 317	⇑P	P	04 11 40.7	-0.1
P17A	Butcher Ranch, baz=58	58.55 307	⇑P	P	04 11 41.4	+0.4
F18A	Big Timber baz=58,SNR=7.0	58.60 314	⇑P	P	04 11 40.9	-0.3
O17A	Robinson Place baz=58,SNR=7.7	58.61 308	⇑P	P	04 11 41.7	+0.3
U16A	Tuba City baz=58	58.65 303	⇓P	P	04 11 42.5	+0.8
M17A	Scullys Gap (B baz=59,SNR=6.8	58.69 309	⇓P	P	04 11 41.6	-0.3
N17A	Moffit Pass baz=59	58.76 308	⇑P	P	04 11 42.6	+0.2
Z16A	Peralta Trail, baz=59	58.81 299	⇑P	P	04 11 43.3	+0.3
216A	Three Points, baz=59	58.83 298	⇓P	P	04 11 43.0	-0.1
Q16A	Castle Valley baz=59,SNR=6.9	58.84 306	⇑P	P	04 11 43.4	+0.4
X16A	Lo Mia Camp, P baz=59,SNR=7.9	58.84 301	⇑P	P	04 11 43.9	+0.7
E18A	Harlowton baz=59	58.85 315	⇑P	P	04 11 42.6	-0.3
D18A	Linhart Farms, baz=59,SNR=7.2	58.88 316	⇑P	P	04 11 43.1	0.0
LOHW	Long Hollow 3.2nm,0.8s,mb4.4	58.89 311	eP	P	04 11 42.7	-0.6
TMUT	Trail Mountain	58.90 306	eP	P	04 11 44.5	+1.1
L17A	Cokeville baz=59	58.91 310	⇓P	P	04 11 42.9	-0.5
W16A	Flagstaff baz=59	58.94 302	⇑P	P	04 11 44.6	+0.9
SNOW	Snow King Moun	58.98 311	eP	P	04 11 44.0	+0.1
EGMT	Eagleton baz=59	59.00 317	⇑P	P	04 11 43.7	-0.2
EGMT	Eagleton	59.00 317	eP	P	04 11 43.8	-0.2
MOOW	Moose Ponds	59.01 312	eP	P	04 11 43.5	-0.6
K17A	Gardner Place, baz=59	59.02 310	⇑P	P	04 11 44.1	0.0
DAU	Daniels Canyon 8.1nm,0.7s,mb4.9	59.03 308	eP	P	04 11 44.6	+0.3
REDW	Red Top Meadow	59.04 311	eP	P	04 11 44.1	-0.2
R16A	Teasdale baz=59,SNR=13	59.04 305	⇑P	P	04 11 45.0	+0.6
B18A	Beardsley Farm baz=59	59.08 317	⇑P	P	04 11 44.9	+0.4
S16A	Weppner Ranch, baz=59,SNR=7.7	59.10 305	⇑P	P	04 11 45.2	+0.3
TPAW	Teton Pass 20nm,1.5s,mb4.9	59.13 311	eP	P	04 11 44.5	-0.4
IMW	Indian Meadow 9.5nm,0.9s,mb4.8	59.17 312	eP	P	04 11 44.9	-0.3
JLU	Jordanelle	59.19 308	eP	P	04 11 46.0	+0.6
O16A	Springville baz=59,SNR=9.0	59.20 307	⇓P	P	04 11 45.7	+0.3
A18A	Metzger Ranch, baz=59	59.23 318	⇓P	P	04 11 44.9	-0.6
F17A	Fitzpatrick Pl baz=59	59.25 314	⇑P	P	04 11 45.9	+0.2
P16A	Fountain Green baz=59	59.27 307	⇓P	P	04 11 46.4	+0.4
MPU	Maple Canyon	59.28 307	eP	P	04 11 47.0	+1.0
L16A	Fish Haven baz=59,SNR=12	59.31 310	⇓P	P	04 11 46.0	-0.2
HWUT	Hardware Ranch 14nm,1.2s,mb4.9	59.37 309	eP	P	04 11 46.1	-0.6
RRI2	Red Ridge 20nm,1.0s,mb5.1	59.38 311	eP	P	04 11 46.2	-0.4
M16A	Huntsville baz=59,SNR=5.7	59.39 309	⇓P	P	04 11 46.2	-0.6
D17A	Six Diamond Ra baz=59	59.47 316	⇓P	P	04 11 46.9	-0.3
E17A	Martinsdale baz=59	59.47 315	⇓P	P	04 11 47.3	+0.1
V15A	Kaibab Nationa baz=59,SNR=6.4	59.48 302	⇓P	P	04 11 48.3	+0.8
115A	Sonoran Desert baz=59	59.48 299	⇑P	P	04 11 48.3	+0.7
H16A	Russell Place, baz=59,SNR=10.0	59.49 313	⇓P	P	04 11 47.8	+0.4
X15A	Humboldt baz=59,SNR=8.1	59.50 301	⇓P	P	04 11 48.4	+0.7
K16A	Soda Springs baz=59	59.51 310	⇓P	P	04 11 47.8	+0.2
I16A	Newdale baz=60,SNR=5.2	59.56 312	⇓P	P	04 11 47.8	-0.1
Y15A	Casa Rosa Ranc baz=60	59.58 300	⇑P	P	04 11 48.6	+0.4
J16A	Bone baz=60,SNR=7.9	59.58 311	⇑P	P	04 11 48.2	+0.1
U15A	North Rim baz=60,SNR=9.2	59.60 303	⇓P	P	04 11 49.5	+1.2
MSU	Marysvale	59.60 305	eP	P	04 11 49.1	+0.8
QLMT	Earthquake Lak 0.6nm,0.7s,mb3.7	59.64 313	eP	P	04 11 49.1	+0.7
R15A	Junction baz=60	59.66 305	⇑P	P	04 11 49.4	+0.7
T15A	Red Dirt Ranch baz=60,SNR=5.4	59.69 304	⇑P	P	04 11 49.6	+0.7
S15A	Panguitch baz=60	59.70 304	⇓P	P	04 11 49.8	+0.8
A17A	Triple J Farms baz=60	59.79 318	⇑P	P	04 11 48.9	-0.5
Q15A	Fillmore baz=60	59.79 306	⇑P	P	04 11 50.0	+0.5

GERES	GERESS Array B	59.88	43	P		P	04 11 50.0	0.0
	0.4nm,0.8s,mb3.5,baz=211,slow=7.5,SNR=3.8							
BOZ	Bozeman (W)	59.89	314	⇓P		P	04 11 49.5	-0.6
	baz=60,SNR=5.2							
BOZ	Bozeman (W)	59.89	314	eP		P	04 11 49.3	-0.9
	2.7nm,0.8s,mb4.3							
F16A	Kennard Place,	59.90	314	⇑P		P	04 11 49.5	-0.7
	baz=60							
CLL	Collm	59.92	40	eP		P	04 11 51.0	+0.7
G16A	Moss Hill, Enn	59.95	313	⇑P		P	04 11 50.1	-0.5
	baz=60,SNR=5.7							
214A	Organ Pipe Nat	59.98	298	⇓P		P	04 11 51.1	+0.1
	baz=60							
M15A	Larsen Ranch,	60.02	309	⇓P		P	04 11 50.5	-0.6
	baz=60,SNR=21							
L15A	Malad City	60.02	309	⇑P		P	04 11 50.3	-0.8
	baz=60,SNR=11							
D16A	Dana Ranch, Ca	60.03	315	⇑P		P	04 11 50.9	-0.2
	baz=60							
114A	Black Gap (USA	60.04	299	⇑P		P	04 11 51.6	+0.2
	baz=60							
X14A	Yava	60.04	301	⇑P		P	04 11 51.8	+0.4
	baz=60							
E16A	East Helena	60.04	315	⇑P		P	04 11 50.8	-0.4
	baz=60,SNR=9.7							
Z14A	Wintersburg	60.09	299	⇑P		P	04 11 51.9	+0.2
	baz=60							
Y14A	Wickenburg	60.13	300	⇑P		P	04 11 52.1	+0.1
	baz=60							
HRY	Holter Researc	60.17	315	eP		P	04 11 51.1	-1.0
J15A	Blackfoot	60.19	311	⇓P		P	04 11 51.8	-0.4
	baz=60,SNR=5.7							
K15A	Arbon	60.19	310	⇑P		P	04 11 51.6	-0.7
	baz=60,SNR=7.5							
DUG	Dugway	60.20	307	⇓P		P	04 11 52.1	-0.2
	baz=60,SNR=6.5							
DUG	Dugway	60.20	307	eP		P	04 11 52.5	+0.1
W14A	Seligman	60.21	302	⇑P		P	04 11 53.2	+0.6
	baz=60,SNR=6.2							
V14A	Boquillas Ranc	60.23	302	⇓P		P	04 11 53.1	+0.4
	baz=60							
C16A	Fuhringer Ranc	60.28	316	⇓P		P	04 11 51.9	-0.9
	baz=60,SNR=5.4							
U14A	Mt Trumbull	60.31	303	⇑P		P	04 11 54.0	+0.8
	baz=60,SNR=5.8							
S14A	Cedar City	60.35	305	⇓P		P	04 11 54.0	+0.6
	baz=60							
P14A	Drum Mountains	60.36	307	⇑P		P	04 11 53.7	+0.2
	baz=60,SNR=6.9							
A16A	West Butte Ran	60.37	317	⇑P		P	04 11 53.0	-0.4
	baz=60							
G15A	Dillon	60.42	313	⇑P		P	04 11 53.7	-0.1
	baz=60,SNR=9.1							
Q14A	Sevier Lake (B	60.49	306	⇑P		P	04 11 55.1	+0.7
	baz=60,SNR=18							
F15A	Butte	60.51	314	⇓P		P	04 11 54.0	-0.5
	baz=60							
DLMT	Dillon	60.52	313	eP		P	04 11 54.4	-0.1
	10.0nm,1.2s,mb4.8							
ARUT	Antelope Range	60.56	305	eP		P	04 11 55.4	+0.5
	4.6nm,0.8s,mb4.7							
K14A	Jones Ranch, D	60.65	310	⇓P		P	04 11 54.6	-0.8
	baz=60,SNR=6.9							
L14A	Malta	60.66	309	⇓P		P	04 11 55.1	-0.3
	baz=60,SNR=13							
Z13A	Yuma Proving G	60.68	299	⇑P		P	04 11 56.0	+0.2
	baz=61,SNR=7.3							
D15A	Lincoln	60.69	315	⇓P		P	04 11 55.3	-0.3
	baz=61,SNR=7.3							
E15A	Deer Lodge	60.69	314	⇓P		P	04 11 54.8	-0.8
	baz=61							
X13A	Yucca	60.82	301	⇓P		P	04 11 57.1	+0.4
	baz=61,SNR=5.3							
Y13A	Salome	60.82	300	⇑P		P	04 11 56.5	-0.3
	baz=61							
C15A	Salmond Ranch,	60.85	316	⇑P		P	04 11 56.0	-0.6
	baz=61,SNR=7.5							
W13A	Hualapai Mount	60.87	301	⇓P		P	04 11 57.7	+0.6
	baz=61							
S13A	Holt Ranch, En	60.89	304	⇑P		P	04 11 58.2	+1.1
	baz=61,SNR=19							
B15A	Bradely Ranch,	60.90	317	⇓P		P	04 11 56.4	-0.6
	baz=61							
T13A	Saint George	60.91	304	⇑P		P	04 11 57.8	+0.5
	baz=61							
U13A	Pakoon Wash	60.95	303	⇓P		P	04 11 58.8	+1.3
	baz=61,SNR=5.3							
V13A	Grand Canyon W	60.95	302	⇓P		P	04 11 57.7	+0.1
	baz=61,SNR=6.4							
J14A	Carey	60.97	311	⇑P		P	04 11 58.0	+0.5
	baz=61							
I14A	Mackay	60.98	312	⇓P		P	04 11 57.5	-0.1
	baz=61							
H14A	Leadore	60.98	312	⇑P		P	04 11 57.7	0.0
	baz=61							
R13A	O'Grain Ranch,	60.99	305	⇓P		P	04 11 58.5	+0.7
	baz=61							
PDMCI	Parker Dam,Lak	61.08	301	⇑P		P	04 11 58.8	+0.4
	baz=61							
A15A	Johnson Ranch,	61.11	317	⇑P		P	04 11 57.3	-1.1
	baz=61							
F14A	Wisdom	61.12	314	⇑P		P	04 11 57.9	-0.6
	baz=61							
E14A	Clinton	61.27	314	⇑P		P	04 11 59.2	-0.3
	baz=61							
D14A	Greenough	61.36	315	⇑P		P	04 11 59.5	-0.7
	baz=61,SNR=8.6							
SLMT	Seeley Lake	61.37	315	eP		P	04 11 59.5	-0.8
Y12C	Blythe	61.40	300	⇓P		P	04 12 01.1	+0.5
	baz=61							
U12A	Valley of Fire	61.41	303	⇑P		P	04 12 01.6	+0.9
	baz=61,SNR=5.1							
J13A	Cove Ranch, Pi	61.45	311	⇓P		P	04 12 00.3	-0.5
	baz=61							
I13A	Wildhorse Cree	61.45	312	⇑P		P	04 12 00.3	-0.5
	baz=61,SNR=5.7							
H13A	Challis	61.61	312	⇓P		P	04 12 01.3	-0.6
	baz=62							
C14A	Swan Lake	61.61	316	⇑P		P	04 12 01.2	-0.7
	baz=62,SNR=8.6							
MSO	Missoula	61.63	315	⇓P		P	04 12 01.2	-0.8
	baz=62							
HLID	Hailey	61.64	311	⇑P		P	04 12 01.8	-0.3
	baz=62							
HLID	Hailey	61.64	311	eP		P	04 12 01.6	-0.5
	2.0nm,0.6s,mb4.4							
G13A	Cobalt	61.65	313	⇑P		P	04 12 02.4	+0.3
	baz=62							
V12A	Nelson	61.66	302	⇑P		P	04 12 02.6	+0.3
	baz=62							
E13A	Victor	61.75	314	⇑P		P	04 12 02.4	-0.4
	baz=62							
F13A	Darby	61.78	314	⇓P		P	04 12 02.7	-0.3
	baz=62							
IRM	Iron Mountain	61.91	300	⇑P		P	04 12 04.7	+0.6
	baz=62							
D13A	Huson	62.01	315	⇑P		P	04 12 03.7	-0.8
	baz=62							
H12A	Diamond D Ranc	62.04	312	⇑P		P	04 12 04.4	-0.4
	baz=62							
C13A	Hot Springs	62.16	316	⇑P		P	04 12 05.1	-0.4
	baz=62							
BC3	Big Chuckawall	62.18	300	⇑P		P	04 12 05.8	-0.2
	baz=62							
I12A	Atlanta	62.18	311	⇑P		P	04 12 05.8	+0.1
	baz=62							
R11A	Troy Canyon, C	62.27	305	⇑P		P	04 12 06.8	+0.3
	baz=62,SNR=9.1							
GMRC	Granite Mounta	62.33	301	⇓P		P	04 12 06.8	-0.1
	baz=62							
G12A	Big Creek, Yel	62.42	313	⇓P		P	04 12 07.3	0.0
	baz=62							
F12A	Elk City	62.42	314	⇑P		P	04 12 07.4	0.0
	baz=62							
BELC	Belle Mtn. Jos	62.62	300	⇑P		P	04 12 09.0	+0.1
	baz=62							
MFID	Camas Ranch	62.66	311	⇑P		P	04 12 09.1	+0.2
	baz=62,SNR=6.0							
E12A	Beaver Dam Sad	62.70	314	⇑P		P	04 12 09.6	+0.4
	baz=63							
U10A	Ash Meadows, A	62.85	303	⇓P		P	04 12 11.3	+0.9
	baz=63							
B12A	Libby	62.92	317	⇑P		P	04 12 10.9	+0.3
	baz=63							
A12A	Yaak River Ran	63.01	317	⇓P		P	04 12 11.6	+0.4
	baz=63							
GSC	Goldstone	63.26	302	⇑P		P	04 12 13.5	+0.4
	baz=63							
FURC	Furnace Creek,	63.28	303	⇑P		P	04 12 13.3	0.0
	baz=63							
C11A	Tepee Creek (N	63.30	316	⇓P		P	04 12 12.2	-0.9
	baz=63							
GRAC	Grapevine Rang	63.68	304	⇑P		P	04 12 16.6	+0.8
	baz=64,SNR=5.7							
MPMC	Manual Prospec	63.80	303	⇓P		P	04 12 17.3	+0.6
	baz=64,SNR=6.1							
F10A	Beach Ranch, E	63.81	314	⇑P		P	04 12 15.8	-0.7
	baz=64							
NEW	Newport	63.92	316	⇓P		P	04 12 16.2	-1.0
	baz=64,SNR=5.6							
NEW	Newport	63.92	316	eP		P	04 12 15.7	-1.5
	8.5nm,1.1s,mb4.7							
LRMC	Laurel Mountai	63.97	302	⇓P		P	04 12 18.0	+0.2
	baz=64							
EDW2	Edwards Air Fo	64.24	301	⇓P		P	04 12 20.2	+0.6
	baz=64							
NVAR	Mina Array Bea	64.41	305	P		P	04 12 19.3	-1.3
	1.1nm,0.8s,mb4.0,baz=87,slow=5.7,SNR=8.6							
E09A	Wood Farm, Sta	64.48	314	⇓P		P	04 12 20.2	-0.7
	baz=64							
J08A	Circle Bar Ran	64.58	311	⇑P		P	04 12 21.2	-0.4
	baz=64,SNR=6.9							
ISA	Isabella	64.61	302	⇓P		P	04 12 22.9	+0.9
	baz=64,SNR=7.6							
WVOR	Wild Horse Val	64.68	310	eP		P	04 12 21.5	-0.8
	2.5nm,1.0s,mb4.2							
OD2	Odessa Site #2	64.92	315	eP		P	04 12 22.1	-1.7
	15nm,1.3s,mb4.9							
G08A	Pilot Rock	64.99	313	⇑P		P	04 12 23.4	-0.9
	baz=65,SNR=5.4							
D08A	Wollman Farm,	65.05	315	⇑P		P	04 12 23.7	-1.0
	baz=65							
RCTC	Rector, Farmer	65.20	303	⇓P		P	04 12 26.0	+0.2
	baz=65							
B08A	Colville Reser	65.40	316	⇓P		P	04 12 26.2	-0.7
	baz=65							
ETW	Entiat	66.03	315	eP		P	04 12 29.3	-1.7
	4.4nm,0.9s,mb4.5							
G06A	Carlson Farm,	66.17	313	⇓P		P	04 12 31.7	-0.3
	baz=66							
K05A	Summer Lake	66.35	310	⇑P		P	04 12 33.5	+0.4
	baz=66							
H04A	Detroit Lake	67.27	312	⇓P		P	04 12 38.5	-0.4
	baz=67							
E03A	Lebam	68.22	314	⇑P		P	04 12 44.5	-0.4
	baz=68							
F03A	Seaside	68.23	313	⇓P		P	04 12 45.2	+0.2
	baz=68							
FINES	FINESS Array B	68.70	30	P		P	04 12 47.4	-0.2
	2.7nm,0.9s,mb4.2,baz=242,slow=8.2,SNR=4.2							
ARCES	ARCESS Array B	69.51	21	P		P	04 12 51.0	-1.5
	6.2nm,1.0s,mb4.5,baz=347,slow=14,SNR=4.0							
INK	Inuvik	73.33	337	P		P	04 13 14.6	-1.0
	11nm,0.9s,mb4.8,baz=69,slow=7.1,SNR=16							
INK	Inuvik	73.33	337	eP		P	04 13 14.3	-1.3
	15nm,1.0s,mb4.9							
MALT	Malatya	77.93	53	eP		P	04 13 43.6	+1.0
	3.8nm,0.9s,mb4.3							
ILAR	Eielson Array	79.11	334	P		P	04 13 47.9	-0.6
	8.4nm,0.9s,mb4.7,baz=76,slow=4.8,SNR=79							
COLA	College	79.48	335	eP		P	04 13 50.1	-0.5
	19nm,1.0s,mb5.0							
MCK	McKinley	80.25	334	eP		P	04 13 54.4	-0.3
	6.9nm,1.1s,mb4.5							
TRF	Thorofare Moun	80.91	334	eP		P	04 13 58.2	-0.1
	16nm,0.9s,mb4.9							
BPAW	Bear Paw Mtn.	81.00	334	eP		P	04 13 57.9	-0.8
	7.0nm,0.9s,mb4.6							
PPLA	Purkeypile	81.90	333	eP		P	04 14 03.3	-0.3
	14nm,1.2s,mb4.8							
GNI	Garni	82.31	51	eP		P	04 14 08.0	+1.8
	6.5nm,0.7s,mb4.7							
RSO	Redoubt South	82.98	331	eP		P	04 14 08.3	-0.9
	24nm,1.0s,mb5.2							
ABKAR	Akbulak array	89.57	38	eP		P	04 14 42.7	+0.8
	3.5nm,1.0s,mb4.6							
VNA1	Neumayer--Stat	90.85	168	eP		P	04 14 44.7	-2.5
VNA3	Neumayer Olymp	91.04	168	eP		P	04 14 44.5	-3.6
VNA2	Neumayer--Watz	91.25	167	eP		P	04 14 46.2	-2.9
BVAR	Borovoye Array	93.57	32	P		P	04 14 59.7	-0.7
	0.4nm,0.4s,mb4.2,baz=323,slow=3.9,SNR=4.2							
CN2	Changchun	120.18	5	ePKP	PKPdf		04 20 36.3	+0.7
HHC	Hu-ho-hao-te	120.46	17	ePKP	PKPdf		04 20 35.0	-1.2
HHC				PKS			04 24 10.3	
HHC				SKS	SKSdf		04 27 46.8	-1.7
HHC				SKKS	SKKSac		04 28 53.0	-10
HHC				AMB	AMB			
	comp=Z,320nm,8.3s							
HHC				LR	LR			
	comp=N,470nm,19.4s							
HHC				LR	LR			
	comp=E,220nm,19.8s							
HHC				LR	LR			
	comp=Z,180nm,20.0s							
CD2	Chengdu	126.26	30	ePKP	PKPdf		04 20 46.5	-1.1
KMI	Kunming	130.44	35	PKP	PKPdf		04 20 55.0	-0.7
NJ2	Nanjing	130.67	14	ePKP	PKPdf		04 20 51.8	-4.2
GYA	Guiyang	131.37	30	ePdif	Pdif		04 17 47.5	-1.4
GYA				PKP	PKPdf		04 20 55.5	-1.9
GYA				PP	PP		04 23 18.0	+3.6
GYA				AMB	AMB			
	comp=Z,80nm,7.7s							
ASAR	Alice Springs	172.08	197	PKP	PKPdf		04 21 52.5	-1.4
	comp=Z,1.9nm,0.9s,baz=149,slow=1.0,SNR=13							
ASAR				PKPab	PKPab		04 23 15.2	-1.6
	comp=Z,0.2nm,0.5s,baz=123,slow=4.6,SNR=4.1							
WRA	Warramunga Arr	175.24	215	PKP	PKPdf		04 21 53.5	-1.7
	comp=Z,2.8nm,0.9s,baz=302,slow=0.7,SNR=14							
WRA	Warramunga Arr	175.24	215	PKP	PKPdf		04 21 53.5	-1.7

*ISK **27** 04:03:44.8, 36°.96N×29°.19E, h8km, MD2.8*
*ISCJB **27** 04:03:45.1±0.5, 36°.97N±0°.03×29°.18E±0°.04, h5km±6km, Error ellipse: s-maj=5.5km s-min=4.4km az=21.9*
*CSEM **27** 04:03:45.3±0.1, 36°.96N×29°.19E, h7km±1km, MD2.8, Error ellipse: s-maj=2.2km s-min=1.8km az=28.0*
*DDA **27** 04:03:45.4, 37°.01N×29°.15E, h7km±6km, Md3.1*

ISC 27 04:03:45.4±0.5, 36°.97N±0°.03×29°.18E±0°.04, h7km±5km, n35, σ0°59/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.32	54	ePG	Pg	04 03 51.3	-0.4
GLHS				eSG	Sg	04 03 56.2	+0.3
GLHS	Glhisar (BURDU	0.32	54	ePg	Pg	04 03 51.3	-0.4
GLHS				eSg	Sg	04 03 56.2	+0.3
FETY	Fethiye	0.34	193	ePG	Pg	04 03 51.0	-1.0
FETY				eSG	Sg	04 03 57.3	+0.9
FETY	Fethiye	0.34	193	ePg	Pg	04 03 51.0	-1.0
FETY				eSg	Sg	04 03 57.3	+0.8
GOLH	Golhisar	0.41	49	iP	Pg	04 03 52.2	-1.2
GOLH				iS	Sg	04 03 59.5	+0.8
GOLH	Golhisar	0.41	49	iP	Pg	04 03 52.2	-1.2
GOLH				iS	Sg	04 03 59.5	+0.7
TURN	Turunc	0.47	259	iP	Pg	04 03 60.0	+5.5
TURN				iS	Sg	04 04 10.4	+10
ELL	Elmali	0.63	110	ePG	Pg	04 03 57.5	0.0
ELL	Elmali	0.63	110	ePg	Pg	04 03 57.5	0.0
DNZL	Cakiroluk	0.73	352	iP	Pg	04 03 58.8	-0.7
DNZL				iS	Sg	04 04 09.2	+0.2
DNZL	Cakiroluk	0.73	352	iP	Pg	04 03 58.8	-0.7
DNZL				iS	Sg	04 04 09.2	+0.2
YER	Yerkesik	0.73	283	ePG	Pg	04 04 00.3	+0.8
YER	Yerkesik	0.73	283	ePg	Pg	04 04 00.3	+0.8
DENT	Denizli	0.79	352	ePG	Pg	04 04 00.8	+0.1
DENT	Denizli	0.79	352	ePg	Pg	04 04 00.8	+0.1
AKAS	Kas	0.81	155	iP	Pg	04 04 00.6	-0.3
AKAS				iS	Sg	04 04 15.3	+3.8
AKAS	Kas	0.81	155	iP	Pg	04 04 00.6	-0.4
AKAS				iS	Sg	04 04 15.3	+3.8
MLSB	Milas	1.17	287	ePN	Pn	04 04 07.2	-0.9
MLSB	Milas	1.17	287	ePn	Pn	04 04 07.2	-0.9
BCK	Bucak	1.23	66	ePN	Pn	04 04 08.6	-0.5
BCK	Bucak	1.23	66	ePn	Pn	04 04 08.6	-0.4
AYDN	Tasoluk	1.25	304	iP	Pn	04 04 09.6	+0.4
AYDN				iS	Sb	04 04 25.5	0.0
AYDN	Tasoluk	1.25	304	iP	Pn	04 04 09.6	+0.4
AYDN				iS	Sb	04 04 25.5	0.0
DAT	Datca	1.30	260	ePN	Pn	04 04 10.0	-0.1
DAT	Datca	1.30	260	ePn	Pn	04 04 10.0	0.0
KHAL	Karahalli	1.42	10	iP	Pn	04 04 12.4	+0.7
KHAL				iS	Sb	04 04 30.6	0.0
KHAL	Karahalli	1.42	10	iP	Pn	04 04 12.4	+0.7
BODT	Bodrum	1.50	274	ePN	Pn	04 04 12.7	+0.1
BODT	Bodrum	1.50	274	ePn	Pn	04 04 12.7	0.0
KULA	Kula-Manisa	1.60	345	ePN	Pn	04 04 14.2	+0.1
KULA	Kula-Manisa	1.60	345	ePn	Pn	04 04 14.2	+0.1
SHUT	Suhut-Afyon	1.92	34	ePN	Pn	04 04 18.7	+0.2
SHUT	Suhut-Afyon	1.92	34	ePn	Pn	04 04 18.7	+0.1
HDMB	Hadim	2.65	89	ePN	Pn	04 04 28.9	+0.3
HDMB	Hadim	2.65	89	ePn	Pn	04 04 28.9	+0.3

*ISCJB **27** 04:05:41.6±3.2, 18°.9S±0°.8×178°.0W±0°.4, h594km±22km, mb3.3/7, Error ellipse: s-maj=133.0km s-min=20.8km az=153.1*
*NEIC **27** 04:05:42.3±2.1, 18°.83S×177°.90W, h588km±13km, mb4.2/1, Error ellipse: s-maj=82.8km s-min=12.7km az=153.0*
*IDC **27** 04:05:43.1±6.7, 18°.92S×177°.89W, h599km±74km, mb2.8/7, mb1 3.1/7, mb1mx3.0/19, mbtmp2.8/7, Error ellipse: s-maj=100.4km s-min=28.0km az=151.0*

ISC 27 04:05:42.6±3.2, 18°.8S±0°.8×177°.9W±0°.4, h588km±21km, n14, σ0°44/10, mb3.3/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.97	285	ePn	P	04 07 06.9	0.0
CTA	Charters Tower	33.75	262	P	P	04 11 37.4	+0.5
	3.7nm,0.5s,mb4.3,baz=103,slow=6.9,SNR=3.2						
CTAO	Charters Tower	33.75	262	eP	P	04 11 37.6	+0.7
	3.0nm,0.5s,mb4.2						
WB2	Warramunga Arr	44.91	260	eP	P	04 13 06.0	-0.2
WRA	Warramunga Arr	44.92	260	P	P	04 13 05.8	-0.5
	0.4nm,0.3s,mb3.5,baz=97,slow=8.8,SNR=14						
ASAR	Alice Springs	44.99	255	P	P	04 13 06.5	-0.3
	0.8nm,0.5s,mb3.5,baz=87,slow=8.2,SNR=16						
ASAR				PcP	PcP	04 14 34.4	-0.8
	0.3nm,0.4s,baz=95,slow=4.5,SNR=5.6						
FITZ	Fitzroy Crossi	53.33	261	P	P	04 14 08.6	+0.4
	1.7nm,0.8s,mb3.4,baz=83,slow=8.1,SNR=3.1						
NVAR	Mina Array Bea	79.77	44	P	P	04 16 51.2	+0.7
	0.2nm,0.5s,mb2.7,baz=222,slow=9.4,SNR=2.4						
TXAR	Lajitas Array	86.10	57	P	P	04 17 21.9	-0.4
	0.3nm,0.7s,mb3.1,baz=208,slow=7.2,SNR=5.1						
ILAR	Eielson Array	86.67	13	P	P	04 17 23.7	-0.4
	0.2nm,0.7s,mb2.9,baz=233,slow=5.1,SNR=9.2						
ARCES	ARCESS Array B	127.29	350	PKP	PKPdf	04 23 39.9	-0.4
	2.3nm,0.8s,baz=20,slow=3.9,SNR=4.5						
ARCES	ARCESS Array B	127.29	350	PKP	PKPdf	04 23 39.9	-0.4
GERES	GERESS Array B	148.61	345	PKPbc	PKPbc	04 24 23.7	-0.3
	0.5nm,0.6s,baz=352,slow=2.7,SNR=5.3						
GERES	GERESS Array B	148.61	345	PKPbc	PKPbc	04 24 23.7	-0.3

*IDC **27** 04:10:07.6±1.0, 13°.31N×120°.40E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.8/22, mbtmp3.9/5, Error ellipse: s-maj=22.9km s-min=11.3km az=113.0*
*NEIC **27** 04:10:09.3±0.8, 13°.30N×120°.51E, h10km, mb4.0/2, Error ellipse: s-maj=20.8km s-min=12.8km az=89.0*
*ISCJB **27** 04:10:10.8±0.8, 13°.3N±0°.1×120°.5E±0°.2, h33km, mb4.0/7, Error ellipse: s-maj=26.3km s-min=14.7km az=166.7*

ISC 27 04:10:12.9±0.8, 13°.4N±0°.1×120°.7E±0°.2, h35km, n8, σ0°84/8, mb4.0/7, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.73	16	Pg	Pn	04 10 27.0	+0.3
	406nm,0.3s,baz=216,slow=3.6,SNR=9.3						
TGY				Lg		04 10 38.2	
	278nm,0.3s,baz=151,slow=17,SNR=7.3						
WRA	Warramunga Arr	35.74	158	P	P	04 17 08.0	-0.5
	1.6nm,0.5s,mb4.2,baz=336,slow=10.0,SNR=22						
SONM	Songino Array	36.35	344	P	P	04 17 12.8	-0.6
	1.8nm,0.7s,mb4.1,baz=172,slow=8.6,SNR=6.6						
ASAR	Alice Springs	39.03	161	P	P	04 17 36.8	+0.4
	2.2nm,0.5s,mb4.2,baz=337,slow=6.7,SNR=40						
MKAR	Makanchi Array	46.29	324	P	P	04 18 33.3	-1.7
	0.2nm,0.4s,mb3.4,baz=139,slow=9.6,SNR=4.0						
EKS2	Erkin-Say	49.80	315	eP	P	04 19 03.6	+1.3
	1.1nm,0.6s,mb4.1						
KURK	Kurchatov	50.45	326	eP	P	04 19 07.3	+0.2
	0.8nm,0.4s,mb4.1						
BVAR	Borovoye Array	56.03	326	P	P	04 19 48.5	+0.4
	0.4nm,0.4s,mb3.8,baz=115,slow=9.7,SNR=4.1						

*IDC **27** 04:30:43.9±0.9, 13°.27N×120°.16E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.9/21, mbtmp4.0/8, Error ellipse: s-maj=19.3km s-min=12.3km az=130.0*
*NEIC **27** 04:30:45.4±0.4, 13°.26N×120°.30E, h10km, mb4.3/7, Error ellipse: s-maj=11.0km s-min=8.6km az=72.0*
*ISCJB **27** 04:30:47.0±0.6, 13°.25N±0°.09×120°.3E±0°.1, h33km, mb4.1/15, Error ellipse: s-maj=18.1km s-min=11.5km az=151.8*

ISC 27 04:30:49.0±0.6, 13°.31N±0°.09×120°.4E±0°.1, h35km, n18, σ0°70/18, mb4.1/15, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.95	34	Pg	Pn	04 31 06.1	+0.2
	515nm,0.3s,baz=202,slow=4.1,SNR=10						
TGY				Lg		04 31 20.6	
	557nm,0.3s,baz=349,slow=23,SNR=11						
CMAR	Chiang Mai Arr	21.25	287	P	P	04 35 31.6	-0.7
	2.6nm,0.6s,mb3.7,baz=96,slow=9.0,SNR=16						
WRA	Warramunga Arr	35.78	157	P	P	04 37 44.8	-0.2
	0.4nm,0.3s,mb3.8,baz=332,slow=10,SNR=3.2						
WB2	Warramunga Arr	35.78	157	eP	P	04 37 44.6	-0.4
SONM	Songino Array	36.35	344	P	P	04 37 49.5	0

*IDC **27** 04:36:43.0±1.0, 15°.22S×168°.25E, h0km, mb4.2/8, mb1 4.4/8, mb1mx4.1/19, mbtmp4.2/8, MS3.7/2, Ms1 3.7/2, ms1mx3.2/27, Error ellipse: s-maj=34.5km s-min=22.3km az=146.0*

*ISCJB **27** 04:36:45.5±6.3, 15°.47S±0°.09×168°.2E±0°.1, h26km±44km, mb4.2/11, Error ellipse: s-maj=22.3km s-min=14.4km az=9.3*

*NEIC **27** 04:36:55.4±0.4, 15°.39S×168°.19E, h100km, mb4.6/2, Error ellipse: s-maj=16.0km s-min=11.7km az=140.0*

ISC 27 04:36:46.9±6.6, 15°.41S±0°.09×168°.3E±0°.1, h24km±46km, n27, σ0s81/14, mb4.2/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.85**	**194**	*eP*	**Pn**	**04 38 25.5**	**-0.3**
DZM				*eS*	**Sn**	**04 39 42.5**	**-0.6**
HNR	**Honiara**	**10.07**	**305**	LR	LR	04 42 19.4	
	comp=Z,224nm,20.1s,baz=31,slow=34						
URZ	**Urewera**	**24.06**	**163**	P	**P**	**04 42 01.2**	**+0.9**
	11nm,0.9s,mb4.3,baz=327,slow=14,SNR=3.6						
STKA	**Stephens Creek**	**29.31**	**231**	P	**P**	**04 42 48.1**	**+0.4**
	2.5nm,0.7s,mb4.0,baz=50,slow=9.7,SNR=4.1						
WRA	**Warramunga Arr**	**32.62**	**257**	P	**P**	**04 43 17.1**	**+0.1**
	1.3nm,1.0s,mb3.8,baz=87,slow=8.2,SNR=7.5						
ASAR	**Alice Springs**	**33.35**	**250**	P	**P**	**04 43 23.4**	**0.0**
	2.9nm,0.7s,mb4.3,baz=76,slow=9.0,SNR=30						
FITZ	**Fitzroy Crossi**	**40.85**	**260**	P	**P**	**04 44 27.2**	**+0.1**
	3.0nm,0.7s,mb4.0,baz=105,slow=7.7,SNR=9.3						
FITZ				LR	LR	04 59 53.2	
	comp=Z,186nm,21.0s,baz=220,slow=34						
QSPA	**South Pole Qui**	**74.62**	**180**	*eP*	**P**	**04 48 24.0**	**+0.5**
	13nm,1.0s,mb4.8						
SONM	**Songino Array**	**83.62**	**323**	P	**P**	**04 49 12.1**	**-1.1**
	1.6nm,0.9s,mb4.2,baz=104,slow=4.6,SNR=3.3						
GTA	**Gaotai**	**83.84**	**314**	*eP*	**P**	**04 49 16.0**	**+1.5**
GTA				pP	pP	04 49 20.5	-1.9
GTA				sP	sP	04 49 23.5	-1.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.4						
ILAR	**Eielson Array**	**86.87**	**18**	P	**P**	**04 49 27.5**	**-1.6**
	comp=Z,0.7nm,0.9s,mb3.9,baz=236,slow=6.4,SNR=5.7						
NVAR	**Mina Array Bea**	**86.97**	**49**	P	**P**	**04 49 31.0**	**+0.8**
	comp=Z,1.9nm,0.8s,mb4.4,baz=235,slow=9.1,SNR=14						
NVAR	**Mina Array Bea**	**86.97**	**49**	P	**P**	**04 49 31.0**	**+0.8**
NEW	**Newport**	**91.45**	**40**	*eP*	**P**	**04 49 50.4**	**-0.7**
	comp=Z,2.2nm,0.9s,mb4.5						
SFTF	**Sexfontaines**	**144.50**	**341**	*e*PKP1	PKPdf	04 56 19.6	-1.6
FLN	**La Foliniere**	**145.48**	**347**	*e*PKP1	PKPbc	04 56 22.3	-0.7
	comp=Z,27nm,0.9s						
CABF	**La Chapelle**	**145.52**	**338**	*e*PKP1	PKPbc	04 56 23.6	+0.4
	comp=Z,31nm,1.1s						
LDF	**La Druitiere**	**145.56**	**346**	*e*PKP1	PKPbc	04 56 22.5	-0.7
	comp=Z,8.5nm,0.9s						
LOR	**Lormes**	**145.70**	**341**	*e*PKP1	PKPbc	04 56 23.7	0.0
	comp=Z,12nm,0.8s						
GRR	**Gorron**	**145.92**	**347**	*e*PKP1	PKPbc	04 56 24.2	-0.1
	comp=Z,27nm,1.0s						
SSF	**Saint Saulge**	**145.99**	**341**	*e*PKP1	PKPbc	04 56 24.8	+0.2
	comp=Z,33nm,1.2s						
LPL	**La Plagne**	**146.21**	**336**	*e*PKP1	PKPbc	04 56 26.0	+0.7
LPG	**La Plagne**	**146.22**	**336**	*e*PKP1	PKPbc	04 56 25.9	+0.6
	comp=Z,18nm,1.2s						
AVF	**Avril sur Loir**	**146.28**	**341**	*e*PKP1	PKPbc	04 56 25.1	-0.4
	comp=Z,10.0nm,1.1s						
ORIF	**Oris-en-Rattie**	**147.04**	**337**	*e*PKP1	PKPbc	04 56 27.9	+0.2
MFF	**Saint Martin d**	**147.43**	**345**	*e*PKP1	PKPbc	04 56 28.6	-0.2
	comp=Z,37nm,1.1s						
CAF	**Calviac**	**148.35**	**341**	*e*PKP1	PKPbc	04 56 31.5	+0.2

*IDC **27** 04:39:55.8±0.8, 34°.92N×73°.64E, h0km, mb4.0/10, mb1 4.2/14, mb1mx4.0/27, mbtmp4.0/14, ML3.8/4, MS4.1/3, Ms1 4.1/3, ms1mx3.2/45, Error ellipse: s-maj=22.5km s-min=15.4km az=55.0*

*ISCJB **27** 04:39:59.6±0.4, 34°.90N±0°.02×73°.88E±0°.04, h44km±7km, mb4.0/13, MS4.5/2, Error ellipse: s-maj=5.5km s-min=3.2km az=162.7*

*BJI **27** 04:40:01.6, 34°.93N×73°.62E, h63km, mb4.5/6, ML3.4/4*

*NEIC **27** 04:40:03.4±0.9, 34°.97N×73°.66E, h56km±7km, mb4.1/5, Error ellipse: s-maj=9.0km s-min=7.4km az=160.0*

*NNC **27** 04:40:06.1±2.8, 35°.15N×73°.44E, h56km±25km, mb3.6, mpv4.2, Error ellipse: s-maj=22.1km s-min=19.3km az=114.0*

ISC 27 04:40:01.8±0.3, 34°.88N±0°.02×73°.80E±0°.04, h45km±6km, n71, σ1s32/85, mb4.0/13, MS4.5/2, 5C-8D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.30**	**200**	P	**Pn**	**04 40 22.2**	**-1.3**
CEP	**Cherat**	**1.89**	**236**	P	**Pn**	**04 40 30.6**	**-0.9**
CEP				S	**Sn**	**04 40 55.0**	**+0.9**
JMU	**Jammu**	**2.35**	**157**	*e*PKP	**Pn**	**04 40 42.5**	**+4.6**
JMU				*e*S	**Sn**	**04 41 12.0**	**+6.5**
THW	**Thamme Wali**	**2.69**	**220**	P	**Pn**	**04 40 43.6**	**+1.0**
SARP	**Sargodha**	**3.10**	**198**	P	**Pn**	**04 40 49.0**	**+0.8**
KBL	**Kabul**	**3.93**	**266**	*e*Pn	**Pn**	**04 40 60.0**	**+0.4**
KBL				*e*Sn	**Sn**	**04 41 46.8**	**+2.3**
BHK	**Bhakra**	**4.10**	**147**	*ex*	x	04 41 10.8	
SDNR	**Sundarnagar**	**4.30**	**141**	*e*PKP	**Pn**	**04 41 05.5**	**+0.9**
SDNR				*e*S	**Sn**	**04 41 54.5**	**+1.0**
SMLA	**Simla**	**4.69**	**142**	*i* P	**Pn**	**04 41 11.7**	**+1.6**
SMLA				*i* S	**Sn**	**04 42 04.5**	**+1.2**
SMLA				*i* S	**Sn**	**04 42 04.7**	**+1.4**
SMLA				⇓		04 42 08.9	
	comp=E,3μm,0.3s						
SMLA				⇓		04 42 09.0	
	comp=N,3μm,0.3s						
KSH	**Kashi**	**4.94**	**20**	P	**Pn**	**04 41 11.5**	**-1.9**
KSH				S	**Sn**	**04 42 04.0**	**-5.3**
KSH				smax			
	comp=N,58nm,0.8s						
KSH				smax			
	comp=E,91nm,1.1s						
KLP	**Kalpa**	**5.01**	**131**	*e*PKP	**Pn**	**04 41 17.1**	**+2.7**
KLP				*ex*	x	04 42 19.6	
KLP				AML	AML	04 42 41.6	
	comp=E,936nm,0.6s						
KLP				AML	AML	04 42 43.3	
	comp=N,655nm,0.9s						
DDI	**Dehra Dun**	**5.80**	**140**	*ex*	**Pn**	**04 41 28.5**	**+3.3**
NDI	**New Delhi**	**6.83**	**154**	*ex*	x	04 41 45.0	
NDI				*e*S	**Sn**	**04 42 53.5**	**-2.4**
AYAN	**Aya Nagar**	**6.98**	**155**	*e*PKP	**Pn**	**04 41 42.8**	**+1.2**
AYAN				*e*S	**Sn**	**04 42 59.0**	**-0.6**
KHET	**Khetri**	**7.00**	**165**	*e*PKP	**Pn**	**04 41 42.8**	**+1.0**
KHET				*e*S	**Sn**	**04 42 59.2**	**-0.9**
KUDL	**Kundal**	**7.10**	**160**	*e*PKP	**Pn**	**04 41 42.7**	**-0.4**
KUDL				*e*S	**Sn**	**04 43 02.3**	**-0.2**
SONA	**Sohna**	**7.18**	**156**	*e*PKP	**Pn**	**04 41 45.6**	**+1.4**
SONA				*e*S	**Sn**	**04 43 03.2**	**-1.3**
SONA				AML	AML	04 43 51.6	
	comp=E,46nm,0.4s						
SONA				AML	AML	04 43 52.4	
	comp=N,44nm,0.2s						
AML	**Almayashu**	**7.24**	**359**	*e*Pn	**Pn**	**04 41 46.0**	**+1.1**
	comp=N,15nm,0.6s						
AML				*e*Sn	**Sn**	**04 43 05.7**	**-0.1**
UCH	**Uchtor**	**7.36**	**4**	*e*Pn	**Pn**	**04 41 47.9**	**+1.4**
	comp=N,10.0nm,0.6s						
AAK	**Ala-Archa**	**7.76**	**4**	Pn	**Pn**	**04 41 52.3**	**+0.3**
	comp=N,0.0nm,0.3s,baz=160,slow=7.7,SNR=7.9						
AAK				Sn	**Sn**	**04 43 19.7**	**+1.2**
	comp=N,0.0nm,0.3s,baz=126,slow=14,SNR=2.1						
AAK				LR	LR	04 45 41.5	
	comp=N,271nm,20.6s,baz=212,slow=45						
EKS2	**Erkin-Say**	**7.77**	**360**	*e*Pn	**Pn**	**04 41 53.8**	**+1.6**
	comp=N,13nm,0.5s						
EKS2				*e*Sn	**Sn**	**04 43 19.7**	**+1.0**
TKM2	**Tokmak 2**	**8.15**	**9**	⇓P	**Pn**	**04 41 59.1**	**+1.7**
	comp=N,3.4nm,0.4s						
TKM2				⇓S	**Sn**	**04 43 27.7**	**-0.4**
	comp=N,6.5nm,0.7s						
TKM2	**Tokmak 2**	**8.15**	**9**	*e*Pn	**Pn**	**04 41 59.1**	**+1.6**
	comp=N,6.4nm,0.5s						
KK31	**Karatay Array**	**8.60**	**344**	⇑P	**Pn**	**04 42 03.2**	**-0.4**
	comp=N,6.2nm,0.3s,baz=152,slow=11,SNR=139						
KK31				⇑S	**Sn**	**04 43 36.3**	**-2.8**
	comp=N,6.7nm,0.4s,baz=154,slow=23,SNR=11						
KKAR	**Karatay Array**	**8.60**	**344**	*e*Pn	**Pn**	**04 42 03.2**	**-0.3**
	comp=N,15nm,0.3s						
KKAR				*e*Sn	**Sn**	**04 43 35.9**	**-3.3**
DANN	**Dangsing**	**10.70**	**125**	*e*P	**Pn**	**04 42 31.3**	**-1.1**
	comp=N,21nm,0.3s						
GKN	**Gorkha**	**11.52**	**124**	*e*P	**Pn**	**04 42 42.0**	**-1.6**
	comp=N,35nm,0.4s						
DMN	**Daman**	**12.09**	**124**	*e*P	**Pn**	**04 42 49.7**	**-1.7**
	comp=N,28nm,0.5s						
KKN	**Kakani**	**12.09**	**123**	*e*P	**Pn**	**04 42 49.3**	**-2.2**
	comp=N,24nm,0.5s						
PKIN	**Phulchoki**	**12.31**	**123**	*e*P	**Pn**	**04 42 52.6**	**-1.8**
	comp=N,30nm,0.4s						
PKI	**Pulchoki**	**12.32**	**123**	*e*P	**Pn**	**04 42 52.5**	**-2.0**
	comp=N,28nm,0.5s						
PKI	**Pulchoki**	**12.32**	**123**	*e*P	**Pn**	**04 42 52.6**	**-1.9**
	comp=N,30nm,0.4s						
GUN	**Gumba**	**12.44**	**121**	*e*P	**Pn**	**04 42 53.2**	**-3.0**
	comp=N,35nm,0.5s						
MK31	**Makanchi Array**	**13.51**	**26**	*e*Pn	**Pn**	**04 43 11.1**	**+0.3**
MKAR	**Makanchi Array**	**13.51**	**26**	Pn	**Pn**	**04 43 10.2**	**-0.5**
	comp=N,0.2nm,0.3s,baz=201,slow=16,SNR=3.1						
TAPN	**Taplejung**	**14.08**	**118**	*e*P	**Pn**	**04 43 14.6**	**-4.0**
	comp=N,37nm,0.5s						
ODAN	**Odare**	**14.14**	**121**	*e*P	**Pn**	**04 43 15.4**	**-4.0**
	comp=N,16nm,0.4s						
LSA	**Lhasa**	**15.55**	**105**	P	**Pn**	**04 43 43.3**	**+5.3**
KURBB	**Kurchatov Arra**	**16.11**	**11**	⇓P	**Pn**	**04 43 46.4**	**+1.6**
	comp=N,1.3nm,1.2s						
KURK	**Kurchatov**	**16.21**	**11**	⇓P	**Pn**	**04 43 47.7**	**+1.5**
	comp=N,5.2nm,1.0s						
KURK	**Kurchatov**	**16.21**	**11**	*e*Pn	**Pn**	**04 43 47.3**	**+1.2**
	comp=N,24nm,1.5s						
AB31	**Akbulak array**	**17.62**	**329**	⇓P	**Pn**	**04 44 02.1**	**-1.8**
	comp=N,0.6nm,0.4s,baz=107,slow=9.5,SNR=28						
ABKAR	**Akbulak array**	**17.62**	**329**	*e*P	**Pn**	**04 44 02.6**	**-1.2**
	comp=N,16nm,1.1s						
VOSK	**Vostochnaya**	**17.95**	**354**	⇑P	**Pn**	**04 44 09.0**	**+1.2**
	comp=N,2.3nm,0.7s						
BVA0	**Borovoye Array**	**18.30**	**353**	⇑P	**Pn**	**04 44 12.0**	**-0.1**
	comp=N,0.4nm,0.7s,baz=166,slow=11,SNR=11						
BVAR	**Borovoye Array**	**18.30**	**353**	P	**Pn**	**04 44 10.3**	**-1.8**
	comp=N,1.3nm,0.3s,baz=160,slow=10,SNR=10						
BRVK	**Borovoye**	**18.34**	**353**	*e*P	**Pn**	**04 44 12.2**	**-0.4**
	comp=N,29nm,1.5s						
ZRNK	**Zerenda**	**18.38**	**351**	⇓P	**Pn**	**04 44 13.3**	**+0.2**
	comp=N,2.9nm,0.5s						
AKTK	**Aktyubinsk**	**19.33**	**328**	P	**Pn**	**04 44 22.2**	**-2.3**
AKTO	**Aktyubinsk**	**19.33**	**328**	⇑P	**Pn**	**04 44 21.9**	**-2.6**
	comp=N,0.7nm,0.6s						
AKTO	**Aktyubinsk**	**19.33**	**328**	P	**Pn**	**04 44 22.2**	**-2.3**
	comp=N,1.2nm,0.3s,baz=128,slow=11,SNR=12						
ZAA0	**Zalesovo Array**	**20.58**	**19**	*e*P	**P**	**04 44 36.1**	**-0.5**
ZALV	**Zalesovo Beam**	**20.58**	**19**	P	**P**	**04 44 36.2**	**-0.4**
	comp=N,8.2nm,0.5s,baz=214,slow=10,SNR=35						
ZALV	**Zalesovo Beam**	**20.58**	**19**	P	**P**	**04 44 36.2**	**-0.5**
GTA	**Gaotai**	**21.20**	**70**	*e*P	**P**	**04 44 45.5**	**+2.0**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
ARU	**Arti**	**23.93**	**339**	*e*P	**P**	**04 45 11.3**	**0.0**
	comp=Z,4.3nm,0.6s,mb4.1						
SONM	**Songino Array**	**27.46**	**52**	P	**P**	**04 45 45.0**	**+1.6**
	comp=Z,1.3nm,0.6s,mb3.6,baz=251,slow=8.4,SNR=3.6						
CMAR	**Chiang Mai Arr**	**27.68**	**120**	P	**P**	**04 45 47.9**	**+2.2**
	comp=Z,0.8nm,0.4s,mb3.7,baz=303,slow=12,SNR=3.7						
BRTR	**Keskin Array B**	**32.12**	**291**	P	**P**	**04 46 24.6**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.6,baz=113,slow=6.4,SNR=3.1						
FINES	**FINESS Array B**	**40.09**	**326**	P	**P**	**04 47 32.2**	**-0.3**
	comp=Z,1.6nm,0.5s,mb4.0,baz=119,slow=5.7,SNR=10						
FINES	**FINESS Array B**	**40.09**	**326**	P	**P**	**04 47 32.2**	**-0.3**
ARCES	**ARCESS Array B**	**43.51**	**338**	P	**P**	**04 48 00.6**	**+0.3**
	comp=Z,1.6nm,0.4s,mb4.1,baz=110,slow=7.9,SNR=26						
NB2	**NORSAR Subarra**	**47.03**	**324**	P	**P**	**04 48 27.1**	**-1.3**
	comp=Z,1.3nm,0.6s,mb4.0,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**47.03**	**324**	P	**P**	**04 48 27.7**	**-0.7**
	comp=Z,1.4nm,0.7s,mb4.0,baz=96,slow=7.7,SNR=3.7						
MDT	**Midelt**	**63.50**	**293**	LR	LR	05 22 40.4	
	comp=Z,393nm,18.3s,MS4.6,baz=173,slow=40						
MSKU	**Masuku**	**66.90**	**251**	LR	LR	05 24 38.5	
	comp=Z,225nm,18.8s,MS4.4,baz=336,slow=40						
TORD	**Torodi Ar. Bea**	**67.99**	**271**	P	**P**	**04 50 55.1**	**-1.4**
	comp=Z,3.1nm,0.9s,mb4.3,baz=52,slow=5.4,SNR=4.1						
INK	**Inuvik**	**75.11**	**10**	*e*P	**P**	**04 51 39.0**	**+0.4**
	comp=Z,1.3nm,0.6s,mb4.0						
ILAR	**Eielson Array**	**75.69**	**17**	P	**P**	**04 51 42.0**	**+0.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=312,slow=4.7,SNR=12						
WRA	**Warramunga Arr**	**79.20**	**123**	P	**P**	**04 52 03.4**	**+1.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=322,slow=5.3,SNR=15						
ASAR	**Alice Springs**	**81.46**	**127**	P	**P**	**04 52 15.5**	**+1.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=309,slow=5.1,SNR=7.0						

*IDC **27** 04:41:41.5±0.7, 13°.29N×120°.34E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.1/25, mbtmp4.2/14, MS3.5/1, Ms1 3.5/1, ms1mx2.5/40, Error ellipse: s-maj=16.4km s-min=10.5km az=116.0*

*NEIC **27** 04:41:42.8±0.3, 13°.33N×120°.48E, h10km, mb4.4/10, Error ellipse: s-maj=10.2km s-min=6.2km az=73.0*

*ISCJB **27** 04:41:44.8±2.4, 13°.3N±0°.1×120°.5E±0°.2, h37km±23km, mb4.3/23, Error ellipse: s-maj=33.1km s-min=11.1km az=154.2*

ISC 27 04:41:45.7±5.5, 13°.39N±0°.09×120°.6E±0°.2, h30km±41km, n29, σ0s59/29, mb4.3/23, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.78**	**24**	Pg	**Pn**	**04 42 00.7**	**0.0**
	580nm,0.3s,baz=249,slow=0.4,SNR=20						
TGY				Lg		04 42 15.5	
	681nm,0.3s,baz=342,slow=22,SNR=20						
CMAR	**Chiang Mai Arr**	**21.43**	**286**	P	**P**	**04 46 30.7**	**-0.8**
	4.7nm,0.8s,mb3.9,baz=96,slow=9.0,SNR=19						
FITZ	**Fitzroy Crossi**	**31.68**	**171**	P	**P**	**04 48 06.8**	**+0.1**
	2.9nm,1.0s,mb4.0,baz=8.5,slow=12,SNR=3.9						
WRA	**Warramunga Arr**	**35.77**	**158**	P	**P**	**04 48 42.2**	**0.0**
	5.2nm,0.6s,mb4.6,baz=334,slow=9.8,SNR=56						
WB2	**Warramunga Arr**	**35.78**	**158**	*e*P	**P**	**04 48 41.9**	**-0.3**
SONM	**Songino Array**	**36.33**	**344**	P	**P**	**04 48 46.9**	**+0.2**
	3.7nm,0.7s,mb4.5,baz=161,slow=10,SNR=11						
ASAR	**Alice Springs**	**39.05**	**160**	P	**P**	**04 49 10.6**	**+0.6**
	6.3nm,0.5s,mb4.6,baz=338,slow=6.8,SNR=137						
MK31	**Makanchi Array**	**46.23**	**324**	*e*P	**P**	**04 50 07.9**	**-0.1**
MKAR	**Makanchi Array**	**46.23**	**324**	P	**P**	**04 50 08.5**	**+0.4**
	1.3nm,0.7s,mb4.0,baz=133,slow=8.9,SNR=8.0						
TKM2	**Tokmak 2**	**48.58**	**316**	*e*P	**P**	**04 50 26.8**	**+0.3**
	2.3nm,0.6s,mb4.4						
UCH	**Uchtor**	**49.06**	**315**	*e*P	**P**	**04 50 30.5**	**+0.4**
	2.9nm,0.8s,mb4.4						
AAK	**Ala-Archa**	**49.22**	**315**	P	**P**	**04 50 32.1**	**+0.7**
	0.7nm,0.4s,mb4.1,baz=58,slow=13,SNR=3.0						
AAK	**Ala-Archa**	**49.22**	**315**	*e*P	**P**	**04 50 32.5**	**+1.1**
	1.5nm,0.6s,mb4.2						
ZALV	**Zalesovo Beam**	**49.29**	**333**	P	**P**	**04 50 30.8**	**-0.9**
	3.3nm,1.0s,mb4.3,baz=142,slow=7.4,SNR=4.0						
AML	**Almayashu**	**49.59**	**314**	*e*P	**P**	**04 50 35.2**	**+1.1**
	1.8nm,0.6s,mb4.3						
EKS2	**Erkin-Say**	**49.72**	**315**	*e*P	**P**	**04 50 35.6**	**+0.4**
	2.4nm,0.8s,mb4.3						
KURK	**Kurchatov**	**50.40**	**326**	*e*P	**P**	**04 50 40.0**	**-0.1**
	11nm,0.6s,mb4.9						
KKAR	**Karatay Array**	**52.13**	**315**	*e*P	**P**	**04 50 53.1**	**-0.1**
	1.4nm,0.5s,mb4.2						
BVAR	**Borovoye Array**	**55.98**	**326**	P	**P**	**04 51 21.1**	**0.0**
	3.0nm,0.6s,mb4.5,baz=123,slow=8.6,SNR=8.7						
BVAR				LR	LR	05 14 41.5	
	comp=Z,44nm,21.9s,baz=284,slow=35						
BRVK	**Borovoye**	**56.05**	**326**	*e*P	**P**	**04 51 21.9**	**+0.2**
	9.6nm,1.0s,mb4.8						
ABKAR	**Akbulak array**	**60.91**	**319**	*e*P	**P**	**04 51 55.1**	**-0.6**
	2.9nm,0.7s,mb4.5						
AKTK	**Aktyubinsk**	**62.39**	**320**	P	**P**	**04 52 05.2**	**-0.5**
AKTO	**Aktyubinsk**	**62.39**	**320**	P	**P**	**04 52 05.2**	**-0.5**
	1.3nm,0.5s,mb4.3,baz=18,slow=7.0,SNR=4.4						
ARCES	**ARCESS Array B**	**79.34**	**339**	P	**P**	**04 53 47.5**	**-0.7**
	1.8nm,0.8s,mb4.1,baz=81,slow=7.9,SNR=4.5						
CASY	**Casey**	**79.79**	**184**	*e*P	**P**	**04 53 50.2**	**-0.3**
	4.8nm,1.1s,mb4.3						
FINES	**FINESS Array B**	**80.51**	**331**	P	**P**	**04 53 55.5**	**+0.8**
	4.1nm,1.1s,mb4.3,baz=102,slow=18,SNR=4.6						
BUR08	**Bucovina Ar. S**	**83.83**	**317**	*e*P	**P**	**04 54 12.0**	**-0.4**
NOA	**NORSAR Array B**	**87.49**	**333**	P	**P**	**04 54 29.1**	**-1.3**
	1.3nm,0.8s,mb4.2,baz=66,slow=7.4,SNR=3.3						
GERES	**GERESS Array B**	**90.81**	**321**	P	**P**	**04 54 47.4**	**+1.2**
	0.1nm,0.3s,mb3.6,baz=66,slow=2.5,SNR=3.5						

*NEIC **27** 04:54:31.3±0.8, 8°.87N×93°.56E, h35km, mb3.9/1, Error ellipse: s-maj=26.0km s-min=13.2km az=60.0*

*ISCJB **27** 04:54:34.0±3.2, 9°.0N±0°.1×93°.9E±0°.2, h80km±29km, mb3.7/7, Error ellipse: s-maj=43.6km s-min=15.8km az=158.5*

*IDC **27** 04:54:34.3±4.5, 8°.96N×93°.80E, h62km±41km, mb3.4/6, mb1 3.6/8, mb1mx3.4/24, mbtmp3.5/8, ML3.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/27, Error ellipse: s-maj=55.6km s-min=19.2km az=61.0*

ISC 27 04:54:35.9±2.6, 9°.0N±0°.1×93°.9E±0°.3, h80km±24km, n14, σ0s65/12, mb3.7/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.95**	**140**	P	**Pn**	**04 56 29.2**	**+0.4**
	0.4nm,0.3s,baz=320,slow=15,SNR=4.7						
PSI				LR	LR	04 59 30.5	
	comp=Z,133nm,18.5s,baz=175,slow=37						
PSI	**Prapat**	**7.95**	**140**	P	**Pn**	**04 56 29.2**	**+0.4**
PSI				LR	LR	04 59 30.5	
CMAR	**Chiang Mai Arr**	**10.63**	**27**	P	**Pn**	**04 57 04.8**	**-0.5**
	0.4nm,0.3s,baz=212,slow=15,SNR=4.2						
ZALV	**Zalesovo Beam**	**45.42**	**353**	P	**P**	**05 02 47.6**	**+1.1**
	0.6nm,0.4s,mb3.6,baz=182,slow=11,SNR=5.1						
ABKAR	**Akbulak array**	**49.13**	**331**	*e*P	**P**	**05 03 15.8**	**+0.4**
	0.6nm,0.5s,mb3.8						
WRA	**Warramunga Arr**	**49.13**	**126**	P	**P**	**05 03 15.8**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=305,slow=8.5,SNR=6.5						
ASAR	**Alice Springs**	**50.84**	**130**	P	**P**	**05 03 28.3**	**-0.5**
	0.2nm,0.6s,mb3.3,baz=307,slow=7.6,SNR=2.8						
ASAR	**Alice Springs**	**50.84**	**130**	P	**P**	**05 03 28.2**	**-0.5**
BRTR	**Keskin Array B**	**61.50**	**310**	P	**P**	**05 04 43.3**	**-1.2**
	0.8nm,0.7s,mb3.9,baz=101,slow=7.5,SNR=3.0						
BRTR	**Keskin Array B**	**61.50**	**310**	P	**P**	**05 04 43.3**	**-1.2**
FINES	**FINESS Array B**	**71.60**	**332**	P	**P**	**05 05 48.2**	**-0.3**
	5.2nm,1.1s,mb4.3,baz=76,slow=5.9,SNR=3.6						
ARCES	**ARCESS Array B**	**74.13**	**340**	P	**P**	**05 06 03.9**	**+0.6**
	1.0nm,0.7s,mb3.6,baz=97,slow=7.4,SNR=4.2						
CFAA	**Coronel Fontan**	**152.01**	**214**	PKPbc	PKPbc	05 14 24.2	+1.7
	0.4nm,0.9s,baz=103,slow=4.2,SNR=7.8						
CFAA	**Coronel Fontan**	**152.01**	**214**	PKPbc	PKPbc	05 14 24.2	+1.7

*ISCJB **27** 04:57:19.2±0.4, 54°.40N±0°.07×169°.63E±0°.05, h10km, mb3.8/12, Error ellipse: s-maj=10.5km s-min=3.9km az=8.8*

*MOS **27** 04:57:19.6±0.8, 54°.41N×169°.69E, h14km, mb4.2/7, Error ellipse: s-maj=20.6km s-min=14.2km az=18.0*

*IDC **27** 04:57:20.2±1.6, 54°.59N×169°.71E, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.7/27, mbtmp3.7/8, ML4.3/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/47, Error ellipse: s-maj=66.9km s-min=17.0km az=177.0*

*KRSC **27** 04:57:20.5±1.3, 54°.16N×169°.51E, h20km±20km, ML4.5*

*NEIC **27** 04:57:21.2±0.4, 54°.49N×169°.77E, h10km, mb4.2/5, Error ellipse: s-maj=14.2km s-min=5.8km az=180.0*

ISC 27 04:57:21.1±0.4, 54°.44N±0°.07×169°.68E±0°.05, h10km, n46, σ1s10/57, mb3.8/12, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.28**	**291**	*e*P	**Pn**	**04 57 58.0**	**-0.7**
BKI				*e*S	**Sn**	**04 58 25.1**	**-1.7**
BKI	**Bering**	**2.28**	**291**	PN	**Pn**	**04 57 58.0**	**-0.7**
BKI				S	**Sn**	**04 58 25.1**	**-1.7**
SMY	**Shemya**	**3.14**	**121**	*e*Pn	**Pn**	**04 58 09.7**	**-0.9**
SMY				*e*Sn	**Sn**	**04 58 46.8**	**-1.4**
SMY	**Shemya**	**3.14**	**121**	*e*PN	**Pn**	**04 58 09.7**	**-0.9**
SMY				*e*		04 58 46.8	
KBTR	**Krutoberegovo**	**4.30**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.12**	**228**	P	P	05 12 23.0	-0.2
	2.1nm,0.8s,baz=32,slow=9.5,SNR=2.4						
WRA	**Warramunga Arr**	**30.48**	**255**	P	P	05 12 44.6	+0.4
	0.2nm,0.5s,baz=83,slow=7.6,SNR=4.6						
ASAR	**Alice Springs**	**31.42**	**248**	P	P	05 12 52.8	+0.2
	0.5nm,0.6s,baz=71,slow=10,SNR=7.0						
FITZ	**Fitzroy Crossi**	**38.63**	**259**	P	P	05 13 54.3	-0.5
	0.9nm,0.7s,baz=84,slow=9.2,SNR=3.1						
SONM	**Songino Array**	**81.33**	**324**	P	P	05 18 48.0	+0.3
	0.5nm,0.4s,baz=132,slow=6.4,SNR=2.4						

IDC 27 05:11:43.4±1.2, 13°.23N×120°.24E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.7/21, mbtmp3.9/4, Error ellipse: s-maj=26.1km s-min=11.9km az=119.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.10**	**38**	Pg	Pg	05 12 04.9	+0.4
	434nm,0.3s,baz=227,slow=1.5,SNR=12						
TGY				Lg		05 12 19.9	
	383nm,0.3s,baz=105,slow=23,SNR=11						
CMAR	**Chiang Mai Arr**	**21.13**	**287**	P	P	05 16 31.5	+1.5
	0.7nm,0.7s,baz=102,slow=8.5,SNR=4.7						
WRA	**Warramunga Arr**	**35.76**	**157**	P	P	05 18 44.0	-0.3
	1.8nm,0.6s,baz=336,slow=9.7,SNR=22						
ASAR	**Alice Springs**	**39.03**	**160**	P	P	05 19 12.4	+0.5
	2.0nm,0.6s,baz=341,slow=7.1,SNR=34						
ARCES	**ARCESS Array B**	**79.36**	**339**	P	P	05 23 49.6	-1.2
	3.9nm,1.0s,baz=54,slow=7.9,SNR=4.1						

*ISCJB **27** 05:12:47.8±1.2, 8°.01S±0°.06×74°.41W±0°.09, h151km±14km, mb4.1/15, Error ellipse: s-maj=16.4km s-min=8.9km az=154.9*
*NEIC **27** 05:12:49.0±0.8, 8°.01S×74°.31W, h145km±8km, mb4.6/7, Error ellipse: s-maj=10.6km s-min=6.8km az=67.0*
*IDC **27** 05:12:49.5±0.6, 8°.03S×74°.47W, h152km±6km, mb3.7/9, mb1 3.8/12, mb1mx3.7/23, mbtmp3.7/12, MS3.7/1, Ms1 3.7/1, ms1mx2.7/32, Error ellipse: s-maj=11.4km s-min=10.1km az=34.0*

ISC 27 05:12:48.8±1.1, 8°.01S±0°.06×74°.39W±0°.09, h143km±13km, h157km±4.9km: pP-P, n32, σ0°.88/29, mb4.1/15, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**4.06**	**282**	P	Pn	05 13 49.8	+0.1
	16nm,0.3s,baz=96,slow=7.0,SNR=68						
ATAH				S	Sn	05 14 35.5	-1.4
	22nm,0.3s,baz=157,slow=10.0,SNR=7.8						
NNA	**Nana**	**4.63**	**211**	P	Pn	05 13 58.3	+1.1
	7.7nm,0.3s,baz=9.4,slow=8.4,SNR=16						
NNA				S	Sn	05 14 49.5	-0.9
	32nm,0.3s,baz=138,slow=23,SNR=20						
NNA	**Nana**	**4.63**	**211**	*e*Pn	Pn	05 13 57.3	+0.1
NNA				*e*Sn	Sn	05 14 50.0	-0.4
OTAV	**Otavalo**	**9.14**	**334**	*e*Pn	Pn	05 14 58.8	+1.2
	4.0nm,0.8s						
LPAZ	**La Paz**	**10.25**	**144**	P	Pn	05 15 13.2	+0.9
	0.4nm,0.3s,baz=326,slow=10.0,SNR=19						
LPAZ	**La Paz**	**10.25**	**144**	*e*Pn	Pn	05 15 12.8	+0.6
CFAA	**Coronel Fontan**	**24.16**	**167**	P	P	05 17 52.7	+1.0
	0.2nm,0.8s,baz=346,slow=9.5,SNR=5.2						
CFAA	**Coronel Fontan**	**24.16**	**167**	P	P	05 17 52.7	+1.0
CPUP	**Villa Florida**	**24.39**	**140**	P	P	05 17 53.8	-0.1
	3.6nm,0.6s,mb4.1,baz=309,slow=8.9,SNR=13						
CPUP	**Villa Florida**	**24.39**	**140**	*e*P	P	05 17 53.4	-0.5
	19nm,0.7s,mb4.7						
BDFB	**Brasilia**	**26.89**	**109**	P	P	05 18 15.3	-1.3
	1.7nm,0.5s,mb3.9,baz=122,slow=6.5,SNR=4.7						
BDFB				pP	pP	05 18 49.4	+2.7
	4.7nm,0.6s,baz=261,slow=12,SNR=5.4						
SJG	**San Juan**	**27.20**	**17**	P	P	05 18 20.1	+0.8
	6.6nm,0.4s,mb4.7,baz=330,slow=16,SNR=5.6						
SJG	**San Juan**	**27.20**	**17**	P	P	05 18 20.1	+0.8
CMIG	**Matias Romero**	**32.13**	**321**	P	P	05 19 03.5	+0.7
	2.3nm,0.7s,mb4.0,baz=121,slow=12,SNR=3.5						
PLCA	**Paso Flores**	**32.76**	**175**	P	P	05 19 09.1	+1.0
	1.9nm,0.9s,mb3.8,baz=37,slow=0.1,SNR=3.7						
PLCA	**Paso Flores**	**32.76**	**175**	P	P	05 19 09.1	+1.0
TKL	**Tuckaleechee C**	**44.33**	**349**	LR	LR	05 38 48.8	
	comp=Z,77nm,18.5s,baz=302,slow=35						
TXAR	**Lajitas Array**	**46.62**	**324**	P	P	05 21 03.3	+0.6
	0.3nm,0.5s,mb3.1,baz=150,slow=9.4,SNR=4.6						
TXAR				pP	pP	05 21 36.5	+1.3
	0.2nm,0.5s,baz=142,slow=6.6,SNR=2.7						
LIC	**Lamto**	**70.61**	**81**	*e*P	P	05 23 47.9	-1.3
	50nm,1.3s,mb5.1						
TIC	**Toumodi**	**70.69**	**80**	*e*P	P	05 23 48.3	-1.4
	59nm,1.4s,mb5.1						
DBIC	**Dimbokro**	**70.86**	**80**	P	P	05 23 50.2	-0.4
	5.5nm,0.3s,mb4.7,baz=237,slow=5.7,SNR=23						
KIC	**Kosan Boka**	**70.91**	**80**	*e*P	P	05 23 50.3	-0.7
	12nm,0.6s,mb4.8						
TORD	**Torodi Ar. Bea**	**78.42**	**75**	P	P	05 24 33.6	-0.7
	3.4nm,0.6s,mb4.2,baz=295,slow=6.9,SNR=5.1						
TORD				pP	pP	05 25 11.7	+1.8
	14nm,1.0s,baz=261,slow=5.1,SNR=6.6						
ESDC	**Sonseca Array**	**80.33**	**48**	P	P	05 24 44.6	+0.5
	0.1nm,0.3s,mb3.0,baz=260,slow=7.2,SNR=4.1						
QSPA	**South Pole Qui**	**82.10**	**180**	*e*P	P	05 24 53.6	+0.8
	2.2nm,0.7s,mb3.9						
TAM	**Tamanrasset**	**83.88**	**66**	*e*P	P	05 25 03.6	+0.6
	1.4nm,0.8s,mb3.7						
ILAR	**Eielson Array**	**89.85**	**336**	P	P	05 25 30.2	-0.7
	0.2nm,0.5s,mb3.4,baz=131,slow=4.0,SNR=5.2						
ASAR	**Alice Springs**	**138.10**	**221**	PKP	PKPdf	05 31 57.5	0.0
	0.3nm,0.7s,baz=118,slow=2.3,SNR=6.4						
WRA	**Warramunga Arr**	**140.36**	**225**	PKhKP	PKPpre	05 31 54.8	
	0.5nm,0.9s,baz=128,slow=2.7,SNR=6.4						
WRA				PKP	PKPdf	05 32 01.6	-0.1
	0.7nm,0.4s,baz=122,slow=2.1,SNR=11						
WRA				pPKP	pPKPdf	05 32 41.3	+1.4
	0.6nm,0.6s,baz=136,slow=1.5,SNR=2.6						
WRA	**Warramunga Arr**	**140.36**	**225**	PKP	PKPdf	05 32 01.6	-0.1
WRA				pPKP	pPKPdf	05 32 41.3	+1.4
FITZ	**Fitzroy Crossi**	**147.37**	**217**	PKPbc	PKPbc	05 32 16.9	+0.3
	2.2nm,0.7s,baz=171,slow=0.8,SNR=7.0						
FITZ				pPKPbc	pPKPbc	05 32 56.9	+2.5
	3.6nm,0.9s,baz=190,slow=4.3,SNR=3.9						
FITZ	**Fitzroy Crossi**	**147.37**	**217**	*e*PKPbc	PKPbc	05 32 16.8	+0.2
FITZ				pPKPbc	pPKPbc	05 32 56.9	+2.5

*ISCJB **27** 05:19:37.2±0.5, 2°.47S±0°.04×99°.25E±0°.04, h21km, mb4.2/18, Error ellipse: s-maj=7.9km s-min=4.2km az=43.4*
*IDC **27** 05:19:39.7±1.0, 2°.43S×99°.20E, h22km±3km, mb3.9/14, mb1 4.1/15, mb1mx3.9/23, mbtmp3.9/15, ML3.4/1, Error ellipse: s-maj=40.2km s-min=12.1km az=55.0*
*DJA **27** 05:19:39, 2°.42S×99°.26E, h65km, MLv4.4/13*
*NEIC **27** 05:19:41.9±0.5, 2°.33S×99°.33E, h35km, mb4.4/5, Error ellipse: s-maj=20.5km s-min=7.4km az=60.0*

ISC 27 05:19:39.6±0.5, 2°.42S±0°.05×99°.28E±0°.04, h23km, h23km±.4km: pP-P, n46, σ1°.02/48, mb4.2/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.10**	**350**	P	Pn	05 19 58.8	-0.8
PDSI	**Padang**	**1.90**	**38**	P	Pn	05 20 09.3	-1.4
PDSI				S	Sn	05 20 34.3	+0.3
KRJI	**Kerinci**	**2.20**	**82**	P	Pn	05 20 15.6	+0.8
KRJI				S	Sn	05 20 41.8	+0.4
PPI	**Padang Panjang**	**2.24**	**30**	P	Pn	05 20 14.6	-0.8
MNSI	**Mandailing Nat**	**3.20**	**5**	P	Pn	05 20 27.3	-1.3
BKNI	**Bangkinang**	**3.24**	**33**	P	Pn	05 20 31.7	+2.6
SBSI	**Sibolga**	**3.96**	**354**	P	Pn	05 20 34.9	-4.1
MNAI	**Manna**	**4.15**	**118**	P	Pn	05 20 40.4	-1.2
MNAI				S	Sn	05 21 29.8	+0.4
PSI	**Prapat**	**5.19**	**356**	Pn	Pn	05 20 52.9	-3.1
	1.4nm,0.3s,baz=190,slow=10,SNR=5.1						
MDSI	**Maura Dua**	**5.30**	**113**	P	Pn	05 20 58.2	+0.7
	0.1nm1μm32nm,0.9s						
MDSI				S	Sn	05 21 59.2	+1.2
	0.1nm1μm32nm,0.9s						
LWLI	**Liwa**	**5.42**	**119**	P	Pn	05 20 58.8	-0.3
	0.7nm164nm,0.6s						
LWLI				S	Sn	05 21 59.8	-1.1
	0.7nm164nm,0.6s						
KLSI		**5.89**	**113**	P	Pn	05 21 05.4	-0.1
	65nm,1.2s						
TPTI		**6.01**	**340**	P	Pn	05 21 04.5	-2.8
	0.1nm1μm8.5nm,1.1s						
KASI	**Kota Agung**	**6.05**	**121**	P	Pn	05 21 07.0	-0.8
	0.3nm58nm,1.6s						
CGJI	**Cibinong**	**7.63**	**123**	P	Pn	05 21 28.0	-1.5
	0.2nm49nm,0.9s						
KULM	**Kulim**	**7.78**	**10**	*e*Pn	Pn	05 21 32.1	+0.7
CISI	**Cisompet, Garu**	**9.92**	**121**	P	Pn	05 21 58.6	-2.2
CMAR	**Chiang Mai Arr**	**20.74**	**359**	P	P	05 24 18.6	-0.3
	1.8nm,0.8s,baz=187,slow=10,SNR=6.5						
MBWA	**Marble Bar**	**27.27**	**135**	*e*P	P	05 25 24.0	+1.5
	151nm,1.0s						
FITZ	**Fitzroy Crossi**	**30.18**	**123**	P	P	05 25 48.2	-0.3
	2.1nm,1.0s,mb3.8,baz=308,slow=12,SNR=2.2						
WRA	**Warramunga Arr**	**38.41**	**120**	P	P	05 26 59.6	-0.1
	2.0nm,0.4s,mb4.2,baz=299,slow=11,SNR=12						
WRA				pP	pP	05 27 06.2	-0.4
	2.9nm,0.5s,baz=302,slow=10,SNR=8.7						
WRA				PcP	PcP	05 29 13.6	+0.6
	0.4nm,0.6s,baz=313,slow=2.1,SNR=5.4						
ASAR	**Alice Springs**	**39.60**	**125**	P	P	05 27 09.9	+0.4
	2.2nm,0.8s,mb4.0,baz=298,slow=7.5,SNR=18						
ASAR				PcP	PcP	05 29 17.7	+1.0
	0.5nm,0.6s,baz=294,slow=2.6,SNR=4.2						
ASAR				pPcP		05 29 24.2	
	0.7nm,0.7s,baz=315,slow=2.7,SNR=5.2						
GTA	**Gaotai**	**41.62**	**1**	*e*P	P	05 27 26.5	+0.5
GTA				pP	pP	05 27 32.5	-0.5
GTA				sP	sP	05 27 35.8	+0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
KSRS	**Korea Array**	**47.74**	**31**	P	P	05 28 15.7	+0.7
	comp=Z,0.6nm,0.4s,mb4.0,baz=250,slow=13,SNR=3.7						
STKA	**Stephens Creek**	**49.42**	**131**	P	P	05 28 29.1	+1.1
	comp=Z,3.3nm,0.8s,mb4.4,baz=293,slow=6.8,SNR=5.2						
STKA	**Stephens Creek**	**49.42**	**131**	*e*P	P	05 28 28.8	+0.9
	comp=Z,1.1nm,0.9s,mb3.9						
TKM2	**Tokmak 2**	**49.93**	**337**	*e*P	P	05 28 32.9	+1.3
	comp=Z,3.1nm,0.7s,mb4.5						
SONM	**Songino Array**	**50.43**	**6**	P	P	05 28 36.5	+1.2
	comp=Z,1.8nm,0.7s,mb4.2,baz=181,slow=9.7,SNR=4.7						
SONM				pP	pP	05 28 42.8	+0.5
	comp=Z,2.7nm,0.8s,baz=191,slow=9.7,SNR=5.1						
EKS2	**Erkin-Say**	**50.44**	**336**	*e*P	P	05 28 36.6	+1.1
	comp=Z,3.3nm,0.8s,mb4.4						
MK31	**Makanchi Array**	**51.24**	**345**	*e*P	P	05 28 41.9	+0.5
MKAR	**Makanchi Array**	**51.24**	**345**	P	P	05 28 42.0	+0.5
	comp=Z,4.6nm,0.6s,mb4.6,baz=149,slow=8.2,SNR=26						
MKAR				pP	pP	05 28 48.7	+0.3
	comp=Z,1.4nm,0.5s,baz=149,slow=8.1,SNR=12						
MKAR	**Makanchi Array**	**51.24**	**345**	P	P	05 28 42.0	+0.5
MKAR				pP	pP	05 28 48.7	+0.3
KURK	**Kurchatov**	**55.80**	**344**	*e*P	P	05 29 14.9	+0.1
	comp=Z,2.4nm,0.9s,mb4.2						
ZAA0	**Zalesovo Array**	**57.44**	**350**	*e*P	P	05 29 26.4	0.0
ZALV	**Zalesovo Beam**	**57.44**	**350**	P	P	05 29 26.7	+0.2
	comp=Z,4.0nm,0.7s,mb4.6,baz=175,slow=5.4,SNR=19						
ZALV				pP	pP	05 29 33.1	-0.5
	comp=Z,3.4nm,0.6s,baz=176,slow=6.1,SNR=9.1						
ZALV	**Zalesovo Beam**	**57.44**	**350**	P	P	05 29 26.7	+0.2
ZALV				pP	pP	05 29 33.1	-0.5
BVAR	**Borovoye Array**	**60.33**	**340**	P	P	05 29 45.9	-0.6
	comp=Z,1.4nm,0.5s,mb4.3,baz=144,slow=9.7,SNR=8.1						
BVAR				pP	pP	05 29 52.7	-1.0
	comp=Z,1.5nm,0.5s,baz=146,slow=10.0,SNR=4.7						
ABKAR	**Akbulak array**	**61.66**	**332**	*e*P	P	05 29 55.0	-0.6
	comp=Z,3.3nm,0.8s,mb4.5						
BRTR	**Keskin Array B**	**73.07**	**313**	P	P	05 31 07.0	-1.1
	comp=Z,0.5nm,0.5s,mb3.7,baz=132,slow=7.1,SNR=3.1						
FINES	**FINESS Array B**	**84.14**	**332**	P	P	05 32 09.1	+0.5
	comp=Z,2.6nm,0.9s,mb4.3,baz=144,slow=7.1,SNR=5.4						
ARCES	**ARCESS Array B**	**86.62**	**340**	P	P	05 32 21.2	+0.4
	comp=Z,1.8nm,0.8s,mb4.4,baz=111,slow=6.3,SNR=3.7						
GERES	**GERESS Array B**	**88.89**	**319**	P	P	05 32 33.2	+1.0
	comp=Z,0.2nm,0.6s,mb3.6,baz=47,slow=15,SNR=2.6						
GERES	**GERESS Array B**	**88.89**	**319**	P	P	05 32 33.2	+1.0
TXAR	**Lajitas Array**	**145.47**	**37**	PKPbc	PKPbc	05 39 17.6	+1.0
	comp=Z,4.0nm,0.6s,baz=285,slow=1.1,SNR=48						
TXAR				pPKPbc	pPKPbc	05 39 24.7	+0.5
	comp=Z,3.9nm,0.6s,baz=251,slow=1.6,SNR=16						
WVT	**Waverly**	**145.81**	**10**	*e*PKPdf	PKPdf	05 39 17.4	+0.4
JCT	**Junction City**	**146.75**	**31**	*e*PKPdf	PKPdf	05 39 20.8	+2.0

*ISCJB **27** 05:34:58.3±0.3, 36°.35S±0°.03×71°.12W±0°.08, h133km±4km, mb4.4/9, Error ellipse: s-maj=10.8km s-min=4.1km az=14.3*
*NEIC **27** 05:34:58.9, 36°.28S×71°.38W, h140km, mb4.7/8, After GUC.*
*GUC **27** 05:34:58.9±0.7, 36°.28S×71°.38W, h140km±.3km, ML4.9*
*IDC **27** 05:35:00.5±1.6, 36°.34S×70°.75W, h125km±13km, mb3.9/7, mb1 4.0/11, mb1mx3.8/19, mbtmp3.9/11, MS3.1/1, Ms1 3.1/1, ms1mx2.4/20, Error ellipse: s-maj=34.4km s-min=9.0km az=101.0*

ISC 27 05:34:59.4±0.3, 36°.35S±0°.03×71°.11W±0°.08, h127km±4km, n61, σ0°.97/96, mb4.5/9, 13C-12D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNCH	**Linares**	**0.64**	**322**	↓*i*P	Pn	05 35 19.2	+0.1
LNCH				*i* S	Sn	05 35 34.0	+0.2
LNCH	**Linares**	**0.64**	**322**	↓*i*P	Pn	05 35 19.2	+0.1
LNCH				*i* S	Sn	05 35 34.0	+0.2
LNCH				AML	AML	05 35 35.0	
	comp=E,41μm,0.5s						
CCHI	**Chillan**	**0.82**	**252**	↑*i*P	Pn	05 35 20.2	-0.2
CCHI				*i* S	Sn	05 35 35.9	-0.4
CCHI	**Chillan**	**0.82**	**252**	↑*i*P	Pn	05 35 20.2	-0.2
CCHI				*i* S	Sn	05 35 35.9	-0.4
CCHI				AML	AML	05 35 37.1	
	comp=N,9μm,0.5s						
TALC	**Talca**	**1.04**	**336**	↓*i*P	Pn	05 35 22.1	-0.3
TALC				*i* S	Sn	05 35 39.5	-0.4
TALC	**Talca**	**1.04**	**336**	↓*i*P	Pn	05 35 22.1	-0.3
TALC				*i* S	Sn	05 35 39.5	-0.4
TALC				AML	AML	05 35 40.3	
	comp=N,41μm,0.2s						
CNCO	**Chanco**	**1.30**	**298**	↓*i*P	Pn	05 35 25.2	+0.1
CNCO				*i* S	Sn	05 35 43.7	-1.0
CNCO	**Chanco**	**1.30**	**298**	↓*i*P	Pn	05 35 25.2	+0.1
CNCO				*i* S	Sn	05 35 43.7	-1.0
CACH	**El Canelo**	**2.27**	**11**	↑*i*P	Pn	05 35 37.2	+0.6
CACH				*i* S	Sn	05 36 06.3	+1.3
CACH	**El Canelo**	**2.27**	**11**	↑*i*P	Pn	05 35 37.2	+0.6
CACH				*i* S	Sn	05 36 06.3	+1.3
LNV	**Longovilo**	**2.40**	**354**	*e*P	Pn	05 35 38.1	-0.2
LNV				*i* S	Sn	05 36 06.9	-1.2
LNV	**Longovilo**	**2.40**	**354**	*e*P	Pn	05 35 38.1	-0.2
LNV				*i* S	Sn	05 36 06.9	-1.2
CHCH	**Chadas Angostu**	**2.44**	**9**	↑*i*P	Pn	05 35 39.1	+0.3
CHCH				*i* S	Sn	05 36 09.3	+0.4
CHCH	**Chadas Angostu**	**2.44**	**9**	↑*i*P	Pn	05 35 39.1	+0.3
CHCH				*i* S	Sn	05 36 09.3	+0.4
LMEL	**Las Melosas**	**2.61**	**17**	↓*i*P	Pn	05 35 41.9	+1.0
LMEL				*e*S	Sn	05 36 14.4	+1.7
LMEL	**Las Melosas**	**2.61**	**17**	↓*i*P	Pn	05 35 41.9	+1.0
LMEL				*e*S	Sn	05 36 14.4	+1.7
LMEL				AML	AML	05 36 19.5	
	comp=N,3μm,0.2s						
TACH	**Talagante**	**2.70**	**3**	↑*i*P	Pn	05 35 41.8	-0.3
TACH	**Talagante**	**2.70**	**3**	↑*i*P	Pn	05 35 41.8	-0.3
PCH	**Pirque**	**2.77**	**10**	↑*i*P	Pn	05 35 43.2	+0.2
PCH				*i* S	Sn	05 36 17.1	+0.7
PCH	**Pirque**	**2.77**	**10**	↑*i*P	Pn	05 35 43.2	+0.2
PCH				*i* S	Sn	05 36 17.1	+0.7
SJCH	**San Jose de Ma**	**2.78**	**13**	*e*P	Pn	05 35 43.7	+0.7
SJCH				*e*S	Sn	05 36 17.5	+0.9
SJCH	**San Jose de Ma**	**2.78**	**13**	*e*P	Pn	05 35 43.7	+0.7
SJCH				*e*S	Sn	05 36 17.5	+0.9
SJCH				AML	AML	05 36 20.0	
	comp=E,3μm,0.6s						
ANTU	**Antumapu**	**2.80**	**8**	*e*P	Pn	05 35 43.4	0.0
ANTU				*e*S	Sn	05 36 17.7	+0.4
ANTU	**Antumapu**	**2.80**	**8**	*e*P	Pn	05 35 43.4	0.0
ANTU				*e*S	Sn	05 36 17.7	+0.4
ANTU				AML	AML	05 36 19.6	
	comp=E,5μm,0.4s						
FSR	**Penalolen**	**2.91**	**10**	↑*i*P	Pn	05 35 45.1	+0.4
FSR				*i* S	Sn	05 36 20.3	+0.7
FSR	**Penalolen**	**2.91**	**10**	↑*i*P	Pn	05 35 45.1	+0.4
FSR				*i* S	Sn	05 36 20.3	+0.7
FSR				AML	AML	05 36 24.0	
	comp=N,882nm,0.5s						
SAN	**Santiago**	**2.92**	**7**	*e*P	Pn	05 35 44.8	-0.1
SAN				*i* S	Sn	05 36 19.5	-0.4
SAN	**Santiago**	**2.92**	**7**	*e*P	Pn	05 35 44.8	-0.1
SAN				*i* S	Sn	05 36 19.5	-0.4
SAN				AML	AML	05 36 22.4	
	comp=N,2μm,0.7s						
LACH	**Col Las Americ**	**2.93**	**10**	*e*P	Pn	05 35 45.0	-0.1
LACH				*i* S	Sn	05 36 20.7	+0.4
LACH				AML	AML	05 36 32.1	
	comp=E,1μm,0.6s						
CLCH	**Cerro Calan**	**2.99**	**9**	↓*i*P	Pn	05 35 45.8	0.0
CLCH				*i* S	Sn	05 36 21.7	+0.2
CLCH				AML	AML	05 36 27.0	
	comp=E,5μm,0.4s						
FCH	**Farellones**	**3.09**	**13**	↓*i*P	Pn	05 35 47.7	+0.5
FCH				*i* S	Sn	05 36 21.4	-2.5
FCH				AML	AML	05 36 22.8	
	comp=N,6μm,0.4s						
PEL	**Peldehue**	**3.22**	**6**	↑*i*P	Pn	05 35 48.6	-0.2
PEL				*i* S	Sn	05 36 27.0	+0.1
IHA	**Instituto Hidr**	**3.35**	**352**	↓*i*P	Pn	05 35 49.8	-0.7
IHA				*i* S	Sn	05 36 28.6	-1.3
IHA	**Instituto Hidr**	**3.35**	**352**	↓*i*P	Pn	05 35 49.8	-0.7
IHA				*i* S	Sn	05 36 28.6	-1.3
ROCH	**El Roble**	**3.37**	**1**	*e*P	Pn	05 35 50.8	0.0
ROCH				*i* S	Sn	05 36 30.5	-0.1
ROCH				AML	AML	05 36 35.1	
	comp=N,4μm,0.5s						
PLCA	**Paso Flores**	**4.40**	**174**	P	Pn	05 36 04.3	-0.1
	comp=N,7.6nm,0.3s,baz=341,slow=12,SNR=194						
PLCA				S	Sn	05 36 56.8	+2.0
	comp=N,2.4nm,0.3s,baz=258,slow=13,SNR=5.1						
PLCA				LR	LR	05 37 44.3	
	comp=N,215nm,19.8s,baz=323,slow=37						
CFAA	**Coronel Fontan**	**5.30**	**28**	P	Pn	05 36 15.8	-0.8
	comp=N,1.8nm,0.3s,baz=203,slow=12,SNR=124						
CFAA				S	Sn	05 37 14.8	-1.8
	comp=N,6.0nm,0.3s,baz=32,slow=13,SNR=35						
CFAA	**Coronel Fontan**	**5.30**	**28**	P	Pn	05 36 15.8	-0.8
CFAA				S	Sn	05 37 14.8	-1.8
TRQA	**Tornquist**	**7.49**	**106**	*e*Pn	Pn	05 36 45.4	-0.5
	comp=N,7.1nm,0.6s						
CPUP	**Villa Florida**	**15.43**	**53**	P	Pn	05 38 29.0	-1.2
	comp=N,1.7nm,0.3s,baz=210,slow=11,SNR=16						
CPUP	**Villa Florida**	**15.43**	**53**	*e*P	Pn	05 38 29.1	-1.1
	comp=N,24nm,0.5s						
EFI	**East Falkland**	**17.92**	**153**	*e*P	Pn	05 38 58.0	-2.3
	comp=N,33nm,0.9s						
USHA	**Ushuaia**	**18.57**	**175**	P	P	05 39 07.7	+1.4
	comp=N,2.5nm,0.3s,baz=334,slow=9.2,SNR=25						
LPAZ	**La Paz**	**20.16**	**8**	P	P	05 39 26.5	+2.7
	comp=N,6.5nm,0.7s,baz=178,slow=9.6,SNR=18						
LPAZ	**La Paz**	**20.16**	**8**	*e*P	P	05 39 25.9	+2.1
	comp=N,7.5nm,0.7s						
BDFB	**Brasilia**	**29.13**	**51**	P	P	05 40 46.5	-1.9
	comp=N,3.0nm,0.5s,mb4.2,baz=219,slow=11,SNR=9.6						
VNA3	**Neumayer Olymp**	**46.90**	**157**	*e*	P	05 43 14.7	-1.8
VNA1	**Neumayer--Stat**	**47.22**	**156**	*e*	P	05 43 17.4	-1.6
VNA2	**Neumayer--Watz**	**47.56**	**156**	*e*	P	05 43 19.7	-1.9
	baz=282,slow=8.8						
SNAA	**Sanae**	**49.13**	**157**	P	P	05 43 34.3	+0.7
	comp=N,4.4nm,0.8s,mb4.4,baz=285,slow=6.2,SNR=41						
QSPA	**South Pole Qui**	**53.89**	**180**	P	P	05 44 10.4	+1.5
	comp=N,8.2nm,0.8s,mb4.8,baz=146,slow=2.4,SNR=32						
QSPA	**South Pole Qui**	**53.89**	**180**	*e*P	P	05 44 10.2	+1.3
	comp=N,12nm,1.0s,mb4.9						
MAW	**Mawson**	**70.72**	**163**	P	P	05 46 01.8	+0.8
	comp=N,3.1nm,0.8s,mb4.2,baz=224,slow=5.9,SNR=9.8						
TXAR	**Lajitas Array**	**72.15**	**330**	P	P	05 46 11.7	+1.6
	comp=N,0.3nm,0.9s,baz=157,slow=9.3,SNR=2.7						
TXAR				pP	pP	05 46 40.6	-0.9
	comp=N,0.4nm,0.8s,baz=171,slow=6.4,SNR=3.2						
TXAR				sP	sP	05 46 55.0	-0.1
	comp=N,1.0nm,1.0s,baz=153,slow=8.4,SNR=3.7						
LIC	**Lamto**	**74.82**	**70**	*e*P	P	05 46 26.2	+0.1
	comp=N,57nm,1.5s,mb5.1						
TIC	**Toumodi**	**75.10**	**70**	*e*P	P	05 46 28.6	+0.9
	comp=N,21nm,0.9s,mb4.8						
KIC	**Kosan Boka**	**75.13**	**70**	*e*P	P	05 46 28.1	+0.2
	comp=N,14nm,0.8s,mb4.8						
DBIC	**Dimbokro**	**75.24**	**70**

AAK	Ala-Archa	49.18	315	P	P	05 44 18.8	-0.2
	comp=Z,1.3nm,0.5s,mb4.3,baz=135,slow=4.3,SNR=5.8						
AAK	Ala-Archa	49.18	315	eP	P	05 44 20.8	+1.8
	comp=Z,3.1nm,0.8s,mb4.4						
ZAA0	Zalesovo Array	49.29	333	eP	P	05 44 18.8	-0.9
ZALV	Zalesovo Beam	49.29	333	P	P	05 44 18.7	-1.0
	comp=Z,3.6nm,0.5s,mb4.6,baz=133,slow=6.0,SNR=12						
ZALV	Zalesovo Beam	49.29	333	P	P	05 44 18.7	-1.0
STKA	Stephens Creek	49.29	156	P	P	05 44 20.2	+0.2
	comp=Z,2.4nm,0.7s,mb4.3,baz=341,slow=11,SNR=2.9						
STKA	Stephens Creek	49.29	156	P	P	05 44 20.2	+0.2
EKS2	Erkin-Say	49.68	315	eP	P	05 44 24.1	+1.3
	comp=Z,5.0nm,0.8s,mb4.6						
KURK	Kurchatov	50.38	327	eP	P	05 44 28.2	+0.2
	comp=Z,29nm,0.8s,mb5.4						
KKAR	Karatay Array	52.08	315	eP	P	05 44 40.9	0.0
	comp=Z,8.0nm,0.8s,mb4.7						
ARMA	Armidale	52.83	146	eP	P	05 44 47.7	+1.2
	comp=Z,3.5nm,0.8s,mb4.3						
BVAR	Borovoye Array	55.96	326	P	P	05 45 09.0	0.0
	comp=Z,5.5nm,0.6s,mb4.8,baz=123,slow=9.4,SNR=21						
BRVK	Borovoye	56.03	326	eP	P	05 45 09.5	0.0
	comp=Z,21nm,0.9s,mb5.2						
ABKAR	Akbulak array	60.87	319	eP	P	05 45 43.4	+0.1
	comp=Z,3.8nm,0.7s,mb4.6						
AKTK	Aktyubinsk	62.36	320	P	P	05 45 53.1	-0.3
AKTO	Aktyubinsk	62.36	320	P	P	05 45 53.1	-0.3
	comp=Z,3.1nm,0.6s,mb4.6,baz=100,slow=7.4,SNR=11						
ARU	Arti	63.58	327	eP	P	05 46 00.2	-1.0
	comp=Z,11nm,1.1s,mb4.8						
BPAW	Bear Paw Mtn.	77.50	27	eP	P	05 47 25.7	-0.3
	comp=Z,6.7nm,0.9s,mb4.6						
MCK	McKinley	78.43	27	eP	P	05 47 32.5	+1.3
	comp=Z,6.5nm,0.8s,mb4.6						
ILAR	Eielson Array	79.19	26	P	P	05 47 35.7	+0.4
	comp=Z,0.4nm,0.7s,mb3.5,baz=304,slow=4.8,SNR=6.3						
BRTR	Keskin Array B	79.21	308	P	P	05 47 35.9	-0.1
	comp=Z,1.2nm,0.8s,mb3.9,baz=106,slow=3.2,SNR=5.2						
ARCES	ARCESS Array B	79.36	339	P	P	05 47 35.2	-1.0
	comp=Z,4.5nm,1.0s,mb4.4,baz=83,slow=7.4,SNR=7.8						
ARCES				LR	LR	06 23 00.9	
	comp=Z,64nm,19.0s,MS4.0,baz=194,slow=36						
FINES	FINESS Array B	80.51	331	P	P	05 47 41.7	-0.8
	comp=Z,1.2nm,0.9s,mb3.8,baz=240,slow=34,SNR=2.7						
FINES	FINESS Array B	80.51	331	P	P	05 47 41.7	-0.8
AKASG	Malin Array Be	80.61	320	P	P	05 47 41.6	-1.6
	comp=Z,4.4nm,1.1s,mb4.3,baz=69,slow=4.8,SNR=5.7						
EGAK	Eagle	81.60	25	eP	P	05 47 49.2	+0.9
	comp=Z,2.4nm,0.7s,mb4.2						
BUR08	Bucovina Ar. S	83.79	317	eP	P	05 48 00.0	0.0
OJC	Ojcow	86.58	321	eP	P	05 48 13.6	-0.3
	comp=Z,10.0nm,0.9s,mb5.0						
NB2	NORSAR Subarra	87.49	333	P	P	05 48 16.6	-1.5
	comp=Z,3.8nm,0.8s,mb4.7,baz=69,slow=4.6						
NOA	NORSAR Array B	87.49	333	P	P	05 48 17.1	-1.0
	comp=Z,2.9nm,0.8s,mb4.5,baz=68,slow=4.7,SNR=6.5						
NOA				LR	LR	06 27 59.2	
	comp=Z,58nm,18.2s,MS4.0,baz=345,slow=36						
GERES	GERESS Array B	90.78	321	P	P	05 48 32.9	-0.9
	comp=Z,0.8nm,0.8s,mb4.1,baz=63,slow=6.1,SNR=5.3						
GERES	GERESS Array B	90.78	321	P	P	05 48 32.9	-0.9
TXAR	Lajitas Array	119.90	45	PKP	PKPdf	05 54 21.9	+0.4
	comp=Z,0.1nm,0.3s,baz=201,slow=3.8,SNR=2.6						

IDC 27 05:39:22.9±2.5, 11°.16S×119°.48E, h0km, mb3.7/1, mb1 3.8/4, mb1mx3.7/16, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=187.1km s-min=23.7km az=48.0, South of Sumba

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	9.12	140	Pn	Pn	05 41 34.2	-1.5
	1.1nm,0.3s,baz=331,slow=6.8,SNR=60						
FITZ				Sn	Sn	05 43 16.4	-2.8
	1.0nm,0.3s,baz=170,slow=20,SNR=7.8						
WRA	Warramunga Arr	16.76	123	Pn	Pn	05 43 19.7	+0.5
	baz=291,slow=14,SNR=2.4						
WRA				Sn	Sn	05 46 25.3	-0.7
	0.1nm,0.3s,baz=301,slow=25,SNR=3.0						
ASAR	Alice Springs	18.53	134	P	Pn	05 43 42.6	+1.4
	baz=310,slow=13,SNR=2.1						
MKAR	Makanchi Array	66.58	333	P	P	05 50 14.8	0.0
	0.3nm,0.3s,baz=147,slow=8.2,SNR=5.7						

IDC 27 05:45:56.3±1.3, 13°.29N×120°.51E, h0km, mb3.8/3, mb1 4.2/3, mb1mx3.6/21, mbtmp3.9/3, Error ellipse: s-maj=31.5km s-min=10.6km az=109.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.91	27	Pg	Pg	05 46 14.1	+0.5
	337nm,0.3s,baz=199,slow=3.3,SNR=7.4						
TGY				Lg		05 46 26.0	
	274nm,0.3s,baz=346,slow=7.7,SNR=12						
CMAR	Chiang Mai Arr	21.36	287	P	P	05 50 45.2	-0.2
	0.8nm,0.4s,baz=100,slow=9.2,SNR=5.8						
WRA	Warramunga Arr	35.72	157	P	P	05 52 56.4	-0.4
	1.8nm,0.6s,baz=336,slow=9.7,SNR=20						
ASAR	Alice Springs	39.00	160	P	P	05 53 24.9	+0.3
	1.0nm,0.5s,baz=340,slow=7.2,SNR=22						

IDC 27 05:55:02.9±2.3, 28°.60N×138°.89E, h362km±39km, mb3.1/4, mb1 3.2/5, mb1mx2.9/23, mbtmp3.1/5, Error ellipse: s-maj=77.0km s-min=19.7km az=77.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	3.28	116	P	Pn	05 56 06.8	+1.1
	8.9nm,0.3s,baz=287,slow=19,SNR=3.9						
CBIJ				S	S	05 56 56.1	-0.1
	16nm,0.3s,baz=282,slow=23,SNR=7.9						
MKAR	Makanchi Array	47.27	309	P	P	06 03 02.6	+1.6
	0.7nm,0.8s,baz=93,slow=7.8,SNR=3.2						
WRA	Warramunga Arr	48.46	186	P	P	06 03 10.4	+0.2
	0.5nm,0.3s,baz=2.1,slow=7.9,SNR=18						
ASAR	Alice Springs	52.18	186	P	P	06 03 38.0	+0.1
	0.3nm,0.3s,baz=6.4,slow=8.1,SNR=8.4						
FINES	FINESS Array B	75.30	333	P	P	06 06 04.9	-1.9
	2.0nm,0.9s,baz=72,slow=4.5,SNR=4.1						

*ISCJB **27** 05:59:23.7±1.7, 13°.26N±0°.05×120°.17E±0°.09, h7km±11km, mb4.0/7, Error ellipse: s-maj=14.1km s-min=7.8km az=172.7*

*IDC **27** 05:59:23.1±1.0, 13°.48N×120°.64E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/22, mbtmp4.0/7, MS3.6/1, Ms1 3.8/1, ms1mx2.9/34, Error ellipse: s-maj=57.2km s-min=17.0km az=62.0*

*MAN **27** 05:59:27, 13°.20N×120°.35E, h80km, mb4.3, ML3.2, MS3.0*

ISC 27 05:59:24.5±1.6, 13°.26N±0°.05×120°.24E±0°.09, h3km±11km, n17, σ1§17/17, mb4.0/7, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.47	0	eP	Pg	05 59 32.2	-1.4
TGY	Tagaytay City	1.07	39	‖eP	Pg	05 59 45.9	+0.8
BOAC	Boac	1.57	83	eP	Pn	05 59 53.1	-0.2
OTRP	Odiongan	1.95	117	eP	Pn	05 59 58.8	+0.3
ENPP	El Nido	2.19	201	eP	Pn	06 00 02.5	+0.7
CUYO	Cuyo Island	2.51	162	eP	Pn	06 00 06.4	+0.2
SCZP	Santa Cruz	2.52	353	eP	Pn	06 00 08.5	+2.1
BALP	Baler	2.78	27	eP	Pn	06 00 11.3	+1.4
BOLP	Bolinao	3.12	354	eP	Sn	06 00 53.3	+0.9
BCPH	Baguio City Da	3.12	6	‖iP	Pn	06 00 12.9	-1.7
CMAR	Chiang Mai Arr	21.12	287	P	P	06 04 12.8	+2.2
	1.6nm,0.4s,mb3.7,baz=94,slow=9.5,SNR=13						
CMAR				LR	LR	06 13 04.4	
	comp=Z,162nm,18.9s,baz=131,slow=38						
WRA	Warramunga Arr	35.79	157	P	P	06 06 24.0	-1.1
	1.5nm,0.6s,mb4.1,baz=337,slow=9.6,SNR=15						
SONM	Songino Array	36.35	344	P	P	06 06 27.7	-1.9
	3.4nm,0.7s,mb4.4,baz=158,slow=9.2,SNR=6.3						
ASAR	Alice Springs	39.06	160	P	P	06 06 53.0	+0.2
	2.8nm,0.6s,mb4.2,baz=341,slow=6.9,SNR=22						
MKAR	Makanchi Array	46.12	324	P	P	06 07 49.7	-0.4
	0.7nm,0.6s,mb3.8,baz=134,slow=8.7,SNR=7.2						
ZALV	Zalesovo Beam	49.24	333	P	P	06 08 13.5	-0.7
	0.6nm,0.4s,mb4.0,baz=102,slow=6.6,SNR=3.5						
BVAR	Borovoye Array	55.89	326	P	P	06 09 02.4	-1.0
	0.5nm,0.5s,mb3.8,baz=134,slow=10						

IDC 27 06:00:55.8±1.1, 13°.43N×120°.61E, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.8/21, mbtmp3.9/6, Error ellipse: s-maj=59.2km s-min=18.7km az=62.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	21.42	286	P	P	06 05 45.5	0.0
	2.4nm,0.6s,baz=95,slow=9.5,SNR=7.9						
WRA	Warramunga Arr	35.81	158	P	P	06 07 56.5	-0.6
	1.2nm,0.7s,baz=336,slow=9.6,SNR=5.7						
SONM	Songino Array	36.29	344	P	P	06 08 01.1	+0.2
	2.6nm,0.7s,baz=166,slow=9.3,SNR=5.2						
ASAR	Alice Springs	39.09	160	P	P	06 08 25.4	+0.5
	1.7nm,0.7s,baz=339,slow=6.9,SNR=8.9						
MKAR	Makanchi Array	46.20	324	P	P	06 09 22.4	0.0
	0.8nm,0.8s,baz=123,slow=8.8,SNR=4.3						
ZALV	Zalesovo Beam	49.26	333	P	P	06 09 45.9	-0.2
	0.4nm,0.3s,baz=133,slow=6.1,SNR=2.5						

IDC 27 06:05:04.7±1.1, 13°.26N×120°.20E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/21, mbtmp3.6/4, Error ellipse: s-maj=23.9km s-min=12.6km az=117.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	1.10	41	Pg	Pg	06 05 25.1	-0.7
TGY				Lg		06 05 41.9	
WRA	Warramunga Arr	35.81	157	P	P	06 12 05.4	-0.5
	0.6nm,0.6s,baz=334,slow=9.8,SNR=2.9						
SONM	Songino Array	36.34	344	P	P	06 12 09.6	-0.6
	0.8nm,0.6s,baz=160,slow=8.8,SNR=2.4						
ASAR	Alice Springs	39.07	160	P	P	06 12 34.1	+0.5
	0.8nm,0.6s,baz=340,slow=6.6,SNR=14						
MKAR	Makanchi Array	46.10	324	P	P	06 13 31.2	+0.7
	0.2nm,0.5s,baz=108,slow=9.3,SNR=3.0						

IDC 27 06:21:12.5±2.2, 5°.64S×152°.17E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, Error ellipse: s-maj=125.4km s-min=28.4km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.42	229	P	P	06 26 13.2	+0.3
	0.3nm,0.6s,baz=55,slow=11,SNR=5.8						
ASAR	Alice Springs	25.11	223	P	P	06 26 39.0	-0.1
	0.4nm,0.5s,baz=56,slow=9.0,SNR=7.9						
FITZ	Fitzroy Crossi	28.71	242	P	P	06 27 11.8	+0.1
	1.5nm,0.9s,baz=52,slow=9.6,SNR=4.4						
ILAR	Eielson Array	83.17	22	P	P	06 33 40.4	+0.2
	0.3nm,0.7s,baz=258,slow=4.8,SNR=4.1						
TORD	Torodi Ar. Bea	149.95	286	PKPbc	PKPbc	06 41 05.4	-0.5
	0.7nm,0.7s,baz=58,slow=2.8,SNR=0.9						

IDC 27 06:21:36.0±1.5, 5°.32N×93°.16E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.8/23, mbtmp4.0/7, Error ellipse: s-maj=78.7km s-min=27.7km az=55.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	14.22	23	Pn	Pn	06 25 05.0	+6.2
	baz=227,slow=14,SNR=4.1						
MKAR	Makanchi Array	42.37	349	P	P	06 29 32.1	+0.1
	0.9nm,0.6s,baz=175,slow=8.6,SNR=5.5						
WRA	Warramunga Arr	47.63	123	P	P	06 30 14.3	0.0
	1.3nm,0.7s,baz=302,slow=8.9,SNR=5.1						
ZALV	Zalesovo Beam	48.95	353	P	P	06 30 24.2	+0.2
	0.9nm,0.6s,baz=163,slow=5.4,SNR=3.8						
BVAR	Borovoye Array	51.10	343	P	P	06 30 39.5	-0.8
	0.6nm,0.5s,baz=139,slow=13,SNR=3.5						
FINES	FINESS Array B	74.51	333	P	P	06 33 16.2	-0.1
	3.0nm,1.0s,baz=108,slow=4.5,SNR=2.7						
ARCES	ARCESS Array B	77.33	341	P	P	06 33 32.3	+0.1
	5.7nm,1.0s,baz=102,slow=6.8,SNR=4.2						
GERES	GERESS Array B	79.08	319	P	P	06 33 43.1	+0.8
	0.2nm,0.4s,baz=99,slow=5.8,SNR=4.4						
CPUP	Villa Florida	144.92	230	PKP	PKPdf	06 41 14.9	-1.1
	1.8nm,0.8s,baz=169,slow=5.2,SNR=3.8						

IDC 27 06:23:43.6±0.8, 3°.56N×128°.70E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.8/21, mbtmp3.8/9, Error ellipse: s-maj=45.4km s-min=15.7km az=71.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.74	188	P	P	06 28 36.1	-0.6
	0.8nm,0.3s,baz=349,slow=10,SNR=8.1						
WRA	Warramunga Arr	24.00	167	P	P	06 29 00.4	+0.2
	1.9nm,0.5s,baz=347,slow=11,SNR=22						
ASAR	Alice Springs	27.53	170	P	P	06 29 32.1	0.0
	0.2nm,0.3s,baz=357,slow=8.0,SNR=8.6						
ASAR				PcP	PcP	06 32 50.6	+0.1
	0.3nm,0.4s,baz=356,slow=2.5,SNR=6.5						
CMAR	Chiang Mai Arr	32.66	299	P	P	06 30 18.3	+0.7
	0.7nm,0.3s,baz=123,slow=6.6,SNR=3.6						
STKA	Stephens Creek	37.32	162	P	P	06 30 57.8	+0.1
	1.0nm,0.4s,baz=306,slow=14,SNR=2.9						
SONM	Songino Array	48.10	340	P	P	06 32 25.2	+0.2
	0.6nm,0.4s,baz=152,slow=6.5,SNR=2.8						
MKAR	Makanchi Array	58.82	324	P	P	06 33 43.7	-0.2
	0.7nm,0.4s,baz=119,slow=7.8,SNR=6.1						
BVAR	Borovoye Array	68.54	326	P	P	06 34 47.5	-0.4
	0.4nm,0.4s,baz=113,slow=14,SNR=3.1						
ILAR	Eielson Array	84.41	25	P	P	06 36 17.9	+0.2
	0.2nm,0.7s,baz=249,slow=4.7,SNR=3.0						

*SZGRF **27** 06:40:33.9, 12°.31N×123°.58E, h33km, mb5.2, Luzon, Philippine Islands*

*NEIC **27** 06:40:42.6±0.2, 13°.53N×120°.63E, h10km, mb5.1/74, MS4.3/1, Error ellipse: s-maj=5.9km s-min=4.0km az=70.0*

NEIC Felt [III PIVS] at Calapan and [I PIVS] at Puerto Galera.

*MOS **27** 06:40:44.6±0.7, 13°.56N×120°.63E, h33km, mb5.3/50, MS4.3/5, Error ellipse: s-maj=14.3km s-min=5.0km az=122.8*

*MAN **27** 06:40:45, 13°.38N×120°.28E, h72km, mb5.4, ML4.4, MS4.6*

MAN INTENSITY III - CALAPAN; INTENSITY II - QUEZON CITY.

*IDC **27** 06:40:45.8±2.0, 13°.49N×120°.46E, h30km±14km, mb4.5/19, mb1 4.6/19, mb1mx4.6/23, mbtmp4.5/19, MS4.0/13, Ms1 4.0/13, ms1mx3.8/29, Error ellipse: s-maj=18.1km s-min=10.1km az=67.0*

*GCMT **27** 06:40:45.8±0.3, 13°.48N×120°.37E, h14km±1km, MW4.8, Moment Tensor Solution. s16,c18; s69,c98; Moment tensor: Scale 10^{16}Nm; M_{rr}=2.09±.20; M_{tt}=1.22±.12; M_{pp}=0.87±.13; M_{rt}=0.36±.30; M_{pp}=1.21±.07; M_{p}=0.58±.31; Best double couple: M_0=2.30000×10^{16} NP1:φ=66.00000°, δ=46.00000°, λ=-65.00000°. NP2:φ=212.00000°, δ=49.00000°, λ=-113.00000°. Principal axes: T 2.2700, Plg2.0000°, Azm319.0000°; N 0.0300, Plg18.0000°, Azm228.0000°; P -2.3100, Plg72.0000°, Azm54.0000°; Data Used: IU IC G II CN.*

*ISCJB **27** 06:40:47.4±0.4, 13°.44N±0°.02×120°.50E±0°.04, h58km±3km, mb5.0/137, MS4.1/28 Error ellipse: s-maj=5.7km s-min=3.5km az=177.5*

*DJA **27** 06:40:51, 13°.41N×119°.92E, h30km, mb5.0/18*

*BJI **27** 06:40:55.4, 13°.66N×120°.39E, h117km, mB5.0/27, mb4.7/39*

ISC 27 06:40:49.3±0.4, 13°.46N±0°.02×120°.50E±0°.03, h61km±3km, h114km±3.2km: pP-P, n381, σ0§90/378, mb5.0/137, 24C-15D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	0.77	33	Pg	Pn	06 41 00.5	-4.0
TGY	Tagaytay City	0.77	33	P	Pn	06 41 00.5	-4.0
TGY	Tagaytay City	0.77	33	‖eP	Pn	06 41 00.8	-3.7
BOAC	Boac	1.31	90	eP	Pn	06 41 10.2	-1.3
BUSP	Coron	1.47	192	eP	Pn	06 41 09.9	-3.7
OTRP	Odiongan	1.84	126	eP	Pn	06 41 18.0	-0.6
POLP	Polilio Island	1.88	48	eP	Pn	06 41 18.6	-0.6
AUQP	San Andres	2.12	93	eP	Pn	06 41 28.0	+5.6
SCZP	Santa Cruz	2.38	346	eP	Pn	06 41 23.6	-2.3
ENPP	El Nido	2.47	205	eP	Pn	06 41 22.7	-4.5
BALP	Baler	2.50	24	eP	Pn	06 41 27.3	-0.3
CUYO	Cuyo Island	2.64	169	eP	Pn	06 41 26.2	-3.3
RCP	Roxas	2.89	130	‖eP	Pn	06 41 36.4	+3.4
BCPH	Baguio City Da	2.91	2	‖iP	Pn	06 41 32.8	-0.4
BOLP	Bolinao	2.96	349	eP	Pn	06 41 32.4	-1.5
GUIM	Jordan	3.48	144	eP	Pn	06 41 41.5	+0.5
CAUP	Cauayan	3.69	20	eP	Pn	06 41 44.1	+0.1
PALP	Palanan	4.04	27	eP	Pn	06 41 50.1	+1.5
ABRA	Dolores	4.17	3	eP	Pn	06 41 50.8	+0.3
APYP	Conner	4.44	9	eP	Pn	06 41 54.7	+0.6
SIPP	Brgy, Tapao	4.44	359	‖eP	Pn	06 41 56.1	+2.0
SIPP				i S	Sn	06 42 52.4	+7.9
PIP	Pasuquin	4.84	1	‖eP	Pn	06 42 01.2	+1.6
TBP	Tagbilaran	4.99	138	eP	Pn	06 42 00.3	-1.3
MSLP	Maasin	5.39	127	eP	Px	06 42 19.2	
KKM	Kota Kinabalu	8.49	210	ePn	Pn	06 42 50.1	+0.4
TPUB	Ta-pu	9.79	1	ePn	Pn	06 43 02.3	-5.1
QIZ	Qiongzhong	11.64	300	P	Pn	06 43 38.3	+5.7
QIZ				S	Sn	06 45 46.5	+5.5
QIZ				pmax	pmax		
	comp=Z,18nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,250nm,5.1s						
QIZ				LR	LR		
	comp=N,830nm,10.7s						
QIZ				LR	LR		
	comp=Z,1μm,14.4s						
MRSI	Marisa	12.97	174	P	Pn	06 43 52.4	+1.5
	comp=Z,36nm,1.3s						
LUWI	Luwuk	14.58	171	P	Pn	06 44 18.7	+6.4
KSM	Kuching	15.61	221	ePn	Pn	06 44 26.1	+0.5
	comp=Z,21nm,0.8s						
STKI	Sintang	16.03	215	P	Pn	06 44 34.7	+3.7
BBKI	Banjar Baru	17.72	199	P	Pn	06 44 53.5	+1.5
	comp=Z,67nm,1.7s						
WHN	Wuhan	17.93	343	P	Pn	06 44 54.0	-0.4
WHN				LR	LR		
	comp=N,2μm,18.2s						
WHN				LR	LR		
	comp=E,2μm,15.3s						
WHN				LR	LR		
	comp=Z,3μm,16.0s						
GYA	Guiyang	18.32	317	eP	Pn	06 44 58.3	-0.9
GYA				sP	sP	06 45 31.0	+12
GYA				S	S	06 48 12.0	-12
GYA				PcP	PcP	06 49 28.5	+0.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,7.1s						
GYA				LR	LR		
	comp=N,810nm,11.2s						
GYA				LR	LR		
	comp=E,890nm,12.4s						
GYA				LR	LR		
	comp=Z,2μm,11.5s						
NJ2	Nanjing	18.57	356	eP	Pn	06 45 06.0	+3.8
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s						
BKSI	Bulukumba	18.66	181	P	Pn	06 45 01.7	-1.7
ENH	Enshi	19.59	330	eP	Pn	06 45 13.4	-0.9
	comp=Z,19nm,0.7s						
NST	Nakhon Sawan	19.84	279	P	Pn	06 45 16.0	-1.4
KMI	Kunming	20.36	307	P	P	06 45 24.5	+3.6
KMI				pP		06 45 40.0	
KMI				S	S	06 49 04.5	-1.3
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
KMI				pmax	pmax		
	comp=Z,380nm,4.8s						
KMI				LR	LR		
	comp=N,110nm,5.7s						
KMI				LR	LR		
	comp=E,450nm,7.2s						
KMI				LR	LR		
	comp=Z,560nm,13.6s						
SNG	Songkhla	20.52	254	P	P	06 45 23.0	+0.2
	comp=Z,160nm,0.8s						
TPI	Tanjungpandan	20.54	219	P	P	06 45 22.3	-0.7
	comp=Z,40nm,1.2s						
BDT	Bhumibol Dam	21.07	283	P	P	06 45 29.0	+0.4
	comp=Z,18nm,1.2s,mb4.3						
PPBI	Pangkal Pinang	21.07	224	P	P	06 45 26.4	-2.2
KULM	Kulim	21.18	249	eP	P	06 45 29.9	0.0
	comp=Z,105nm,1.3s,mb5.0						
IPM	Ipoh	21.19	247	eP	P	06 45 29.6	-0.3
	comp=Z,101nm,1.3s,mb5.0						
CMAR	Chiang Mai Arr	21.31	286	P	P	06 45 29.2	-2.0
	comp=Z,19nm,0.8s,mb4.5,baz=98,slow=9.1,SNR=85						
CMAR				LR	LR	06 53 19.1	
	comp=Z,125nm,20.1s,baz=99,slow=35						
CMAR	Chiang Mai Arr	21.31	286	P	P	06 45 29.2	-2.0
CHG	Chiang Mai	21.37	287	‖P	P	06 45 31.9	0.0
	comp=Z,31nm,0.9s,mb4.6						
CHTO	Chiang Mai	21.37	287	eP	P	06 45 32.4	+0.5
	comp=Z,29nm,1.0s,mb4.6						
CHTO	Chiang Mai	21.37	287	eP	P	06 45 32.4	+0.5
CHTO				pmax	pmax		
	comp=Z,29nm,1.0s,mb4.6						
CHTO	Chiang Mai	21.37	287	P	P	06 45 30.8	-1.1
	comp=Z,451nmcomp=Z,34nm,1.3s,mb4.5						
KMMI	Kalianget	21.38	198	P	P	06 45 29.4	-2.6
JNU	Nakatsue	21.75	24	eP	P	06 45 38.4	+2.7
	comp=Z,11nm,1.0s,mb4.2						
BMNI	Bima	21.93	185	P	P	06 45 38.3	+0.5
	comp=Z,1μmcomp=Z,61nm,0.9s,mb5.0						
MMRI	Maumere	22.02	175	P	P	06 45 45.0	+6.3
	comp=Z,164nm,1.0s,mb5.4						
KHKI	Kahang-Kahang	22.22	193	P	P	06 45 50.5	+10
NGJI	Ngawi	22.55	204	P	P	06 45 48.7	+4.3
	comp=Z,109nm,1.2s,mb5.2						
JAGI	Jajag, Banyuwa	22.68	196	P	P	06 45 50.5	+4.8
	comp=Z,139nm,1.0s,mb5.4						
SJI	Sawahan	22.77	203	P	P	06 45 55.4	+8.7
PWJI	Pagerwojo	23.02	203	P	P	06 45 50.8	+1.4
	comp=Z,130nm,1.6s,mb5.1						
XAN	Xi'an	23.03	335	P	P	06 45 48.0	-1.3
XAN				pmax	pmax		
	comp=Z,110nm

BJT Baijiatuau 26.73 353 *e*P **P 06 46 22.6 -0.5**
comp=Z,14nm,0.4s,mb4.9
BJT Baijiatuau 26.73 353 *e*P **P 06 46 22.6 -0.4**
BJT pmax pmax
comp=Z,15nm,0.4s
BJI Beijing 26.75 353 P **P 06 46 23.0 -0.2**
BJI S **S 06 50 54.5 -0.2**
BJI pmax pmax
comp=Z,24nm,1.0s,mb4.7
BJI LR LR
comp=N,290nm,20.2s
BJI LR LR
comp=E,560nm,25.9s
BJI LR LR
comp=Z,170nm,19.4s
LZH Lanzhou 27.05 329 *e*P **P 06 46 26.3 +0.3**
LZH pP pP 06 46 51.5 +11
LZH sP sP 06 47 02.3 +14
LZH pmax pmax
comp=Z,15nm,1.1s,mb4.4
LZH pmax pmax
comp=Z,64nm,5.6s
LZH LR LR
comp=N,990nm,15.0s
LZH LR LR
comp=E,190nm,12.2s
LZH LR LR
comp=Z,970nm,15.7s
MJAR Matsushiro Arr 27.94 32 P **P 06 46 32.2 -1.7**
comp=Z,2.8nm,0.9s,mb3.9,baz=205,slow=8.6,SNR=4.7
MJAR Matsushiro Arr 27.94 32 P **P 06 46 32.2 -1.7**
HHC Hu-ho-hao-te 28.39 346 *e*P **P 06 46 39.3 +1.5**
HHC pP pP 06 47 06.3 +13
HHC sP sP 06 47 21.3 +21
HHC PP PP 06 47 36.3 -6.6
HHC PcP PcP 06 49 47.3 -1.8
HHC S **S 06 51 17.5 -3.0**
HHC sS sS 06 52 05.0 +19
HHC ScP ScP 06 53 16.0 -9.1
HHC ScS ScS 06 57 07.8 -10
HHC pmax pmax
comp=Z,24nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,180nm,6.2s
HHC LR LR
comp=N,610nm,15.7s
HHC LR LR
comp=E,470nm,15.1s
HHC LR LR
comp=Z,510nm,15.9s
KAKA Kakadu 28.57 155 *e*P **P 06 46 38.6 -1.0**
comp=Z,26nm,0.8s,mb5.0
KAKA Kakadu 28.57 155 *e*P **P 06 46 38.6 -1.1**
comp=Z,76nm,0.8s,mb5.5
SHL Shillong 29.47 298 *e*PKP **P 06 46 47.0 -0.6**
CN2 Changchun 30.54 7 *e*P **P 06 47 00.5 +3.7**
CN2 *e*pP pP 06 47 25.0 +13
CN2 *e*S **S 06 51 53.3 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,16.0s
CN2 LR LR
comp=E,200nm,16.0s
CN2 LR LR
comp=Z,200nm,16.0s
GTA Gaotai 31.64 329 P **P 06 47 07.5 +0.8**
GTA S **S 06 52 08.5 -3.1**
GTA pmax pmax
comp=Z,7.0nm,1.4s,mb4.3
GTA pmax pmax
comp=Z,180nm,5.7s
GTA LR LR
comp=N,540nm,17.1s
GTA LR LR
comp=E,730nm,15.7s
GTA LR LR
comp=Z,820nm,16.1s
FITZ Fitzroy Crossi 31.76 171 P **P 06 47 07.9 0.0**
comp=Z,20nm,0.9s,mb4.9,baz=358,slow=5.4,SNR=16
FITZ LR LR 07 03 26.1
comp=Z,102nm,18.6s,baz=81,slow=43
FITZ Fitzroy Crossi 31.76 171 *e*P **P 06 47 07.8 -0.1**
comp=Z,26nm,1.0s,mb5.0
FITZ Fitzroy Crossi 31.76 171 *e*P **P 06 47 07.6 -0.3**
comp=Z,18nm,0.9s,mb4.9
MDJ Mudanjiang 32.01 12 P **P 06 47 11.8 +2.0**
MDJ pP pP 06 47 36.0 +11
MDJ sP sP 06 47 49.0 +17
MDJ S **S 06 52 16.8 -0.3**
MDJ sS sS 06 52 59.8 +17
MDJ ScP ScP 06 53 31.3 -5.6
MDJ pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
MDJ pmax pmax
comp=Z,130nm,3.4s
TAPN Taplejung 33.58 299 *e*P **P 06 47 23.9 +0.2**
comp=Z,43nm,1.0s,mb5.3
ODAN Odare 33.70 298 *e*P **P 06 47 24.8 -0.1**
comp=Z,82nm,1.0s,mb5.6
MBWA Marble Bar 34.41 181 *e*P **P 06 47 30.9 0.0**
comp=Z,22nm,0.8s,mb5.1
GUN Gumba 35.29 300 *e*P **P 06 47 38.9 +0.3**
comp=Z,62nm,0.8s,mb5.6
PKI Pulchoki 35.60 299 *e*P **P 06 47 40.9 -0.3**
comp=Z,56nm,0.9s,mb5.5
PKI Pulchoki 35.60 299 *e*P **P 06 47 41.3 +0.1**
comp=Z,26nm,0.6s,mb5.3
PKI Pulchoki 35.60 299 *e*P **P 06 47 41.3 +0.1**
PKI pmax pmax
comp=Z,26nm,0.6s,mb5.3
PKIN Phulchoki 35.61 299 *e*P **P 06 47 41.3 0.0**
comp=Z,26nm,0.6s,mb5.3
KKN Kakani 35.77 299 *e*P **P 06 47 42.5 -0.2**
comp=Z,34nm,0.7s,mb5.4
KKN Kakani 35.77 299 *e*P **P 06 47 42.5 -0.2**
KKN pmax pmax
comp=Z,34nm,0.7s,mb5.4
DMN Daman 35.87 299 *e*P **P 06 47 43.4 -0.1**
comp=Z,74nm,1.0s,mb5.6
WRA Warramunga Arr 35.87 157 P **P 06 47 43.0 -0.5**
comp=Z,55nm,0.6s,mb5.7,baz=333,slow=10,SNR=299
WRA S **S 06 53 16.4 -0.8**
comp=Z,4.6nm,1.0s,baz=338,slow=16,SNR=8.5
WRA Warramunga Arr 35.87 157 P **P 06 47 43.0 -0.5**
WRA S **S 06 53 16.5 -0.8**
WB2 Warramunga Arr 35.88 157 *e*P **P 06 47 43.0 -0.6**
ULN Ulaanbaatar 36.09 345 *e*P **P 06 47 45.5 +0.4**
comp=Z,54nm,1.3s,mb5.3
ULN Ulaanbaatar 36.09 345 *e*P **P 06 47 45.5 +0.4**
ULN pmax pmax
comp=Z,54nm,1.3s,mb5.3
SONM Songino Array 36.23 344 P **P 06 47 46.5 +0.2**
comp=Z,22nm,0.8s,mb5.2,baz=163,slow=9.5,SNR=50
SONM LR LR 07 03 26.8
comp=Z,302nm,19.1s,baz=302,slow=38
SONM Songino Array 36.23 344 P **P 06 47 46.5 +0.2**
GKN Gorkha 36.37 299 *e*P **P 06 47 47.2 -0.6**
comp=Z,46nm,1.0s,mb5.3
KOLN Koldanda 37.20 298 *e*P **P 06 47 54.6 -0.2**
comp=Z,30nm,0.7s,mb5.2
DANN Dangsing 37.21 299 *e*P **P 06 47 54.6 -0.4**
comp=Z,48nm,0.8s,mb5.4
ASAR Alice Springs 39.15 160 P **P 06 48 11.4 +0.2**
comp=Z,43nm,0.6s,mb5.3,baz=339,slow=7.1,SNR=835
ASAR S **S 06 54 09.7 +2.7**
comp=Z,2.0nm,1.1s,baz=351,slow=23,SNR=4.3
ASAR Alice Springs 39.15 160 P **P 06 48 11.5 +0.3**
ASAR S **S 06 54 09.7 +2.7**
ZAK Zakamensk 39.41 343 *e*P **P 06 48 12.4 -0.7**
ZAK pmax pmax
comp=Z,7.0nm,1.3s,mb4.2
TLY Talaya 40.48 344 *e*P **P 06 48 22.4 +0.5**
comp=Z,83nm,2.1s,mb5.1
TLY Talaya 40.48 344 *e*P **P 06 48 22.4 +0.5**
TLY pmax pmax
comp=Z,83nm,2.1s,mb5.1
HYB Hyderabad 40.57 281 *i*P **P 06 48 23.0 -0.2**
IRK Irkutsk 40.82 345 *e*P **P 06 48 25.1 +0.4**
IRK pmax pmax
comp=Z,47nm,2.1s,mb4.8
WMQ Urumqi 41.28 324 *e*P **P 06 48 30.0 +1.3**
WMQ pP pP 06 48 55.0 +11
WMQ sP sP 06 49 10.0 +19
WMQ PP PP 06 50 10.0 +5.0
WMQ S **S 06 54 36.0 -2.4**
WMQ sS sS 06 55 20.0 +15
WMQ SS SS 06 57 40.0 -3.9
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.6
WMQ pmax pmax
comp=Z,75nm,4.0s
WMQ LR LR
comp=N,330nm,15.0s
WMQ LR LR
comp=E,270nm,15.0s
WMQ LR LR
comp=Z,300nm,15.0s
CTA Charters Tower 41.87 142 P **P 06 48 34.1 +0.3**
comp=Z,7.1nm,0.8s,mb4.4,baz=348,slow=13,SNR=4.7
CTA LR LR 07 09 23.0
comp=Z,77nm,19.1s,baz=264,slow=41
CTA Charters Tower 41.87 142 P **P 06 48 34.1 +0.4**
CTAO Charters Tower 41.87 142 *e*P **P 06 48 33.9 +0.2**
comp=Z,14nm,1.0s,mb4.6
CTAO Charters Tower 41.87 142 *e*P **P 06 48 33.9 +0.2**
CTAO pmax pmax
comp=Z,14nm,1.0s,mb4.5
DDI Dehra Dun 42.53 300 *ex* **P 06 48 38.0 -1.1**
FORT Forrest 44.58 171 *e*P **P 06 48 55.7 +0.3**
comp=Z,28nm,0.8s,mb5.1
FORT Forrest 44.58 171 *e*P **P 06 48 55.5 +0.1**
comp=Z,38nm,0.9s,mb5.2
KLBR Kellerberrin 44.87 183 *e*P **P 06 48 58.1 +0.4**
comp=Z,29nm,0.7s,mb5.2
POO Poona 45.03 283 *ex* **P 06 48 57.0 -2.3**
MK31 Makanchi Array 46.11 324 *e*P **P 06 49 08.0 +0.5**
MK31 Makanchi Array 46.11 324 *e*P **P 06 49 08.0 +0.6**
MKAR Makanchi Array 46.11 324 P **P 06 49 07.9 +0.5**
comp=Z,7.6nm,0.9s,mb4.6,baz=132,slow=9.1,SNR=36
MKAR LR LR 07 09 52.9
comp=Z,311nm,18.1s,baz=132,slow=38
MKAR Makanchi Array 46.11 324 *e*P **P 06 49 08.1 +0.7**
NWAO Narrogin (SRO) 46.23 184 *e*P **P 06 49 09.0 +0.6**
comp=Z,20nm,0.7s,mb5.2
NWAO Narrogin (SRO) 46.23 184 *e*P **P 06 49 09.0 +0.6**
NWAO pmax pmax
comp=Z,20nm,0.7s
ULHL Ulahol 47.76 316 P **P 06 49 21.6 +1.2**
SNR=31
KZA Kyzart 48.37 315 *e*P **P 06 49 27.1 +2.0**
comp=Z,17nm,0.8s,mb5.1
TKM2 Tokmak 2 48.46 316 P **P 06 49 26.9 +1.2**
SNR=9.0
TKM2 Tokmak 2 48.46 316 *e*P **P 06 49 26.9 +1.2**
comp=Z,9.2nm,0.7s,mb4.9
TKM2 Tokmak 2 48.46 316 *e*P **P 06 49 26.9 +1.1**
EIDS Eidsvold 48.76 142 *e*P **P 06 49 27.7 -0.6**
comp=Z,12nm,0.9s,mb4.9
KBK Karagaybulak 48.80 316 P **P 06 49 30.0 +1.7**
SNR=9.2
KBK Karagaybulak 48.80 316 *e*P **P 06 49 29.2 +0.9**
UCH Uchtor 48.94 315 P **P 06 49 31.4 +2.0**
SNR=23
UCH Uchtor 48.94 315 *e*P **P 06 49 31.2 +1.8**
comp=Z,26nm,1.0s,mb5.2
CHMS Chumysh 49.07 316 P **P 06 49 31.5 +1.1**
SNR=6.3
AAK Ala-Archa 49.10 315 P **P 06 49 33.1 +2.5**
SNR=6.5
AAK Ala-Archa 49.10 315 *e*P **P 06 49 31.8 +1.1**
comp=Z,14nm,1.1s,mb4.9
AAK Ala-Archa 49.10 315 *e*P **P 06 49 31.8 +1.1**
AAK pmax pmax
comp=Z,14nm,1.1s,mb4.9
AAK Ala-Archa 49.10 315 P **P 06 49 32.5 +1.8**
comp=Z,65nm,1.9s,mb5.3,SNR=6.2
ZAA0 Zalesovo Array 49.18 333 *e*P **P 06 49 30.6 -0.5**
ZALV Zalesovo Beam 49.18 333 P **P 06 49 30.7 -0.4**
comp=Z,8.6nm,0.8s,mb4.8,baz=116,slow=6.8,SNR=24
ZALV LR LR 07 11 22.1
comp=Z,211nm,18.1s,baz=244,slow=37
ZALV Zalesovo Beam 49.18 333 P **P 06 49 30.7 -0.4**
PETK Petropavlovsk- 49.33 29 LR LR 07 12 18.9
comp=Z,68nm,20.0s,baz=52,slow=38
USP Ospenovka 49.34 316 P **P 06 49 33.3 +0.9**
SNR=6.2
STKA Stephens Creek 49.40 156 P **P 06 49 33.0 0.0**
comp=Z,5.4nm,0.7s,mb4.7,baz=336,slow=7.4,SNR=11
STKA Stephens Creek 49.40 156 *e*P **P 06 49 32.7 -0.3**
comp=Z,6.2nm,0.9s,mb4.6
STKA Stephens Creek 49.40 156 *e*P **P 06 49 32.8 -0.2**
comp=Z,2.1nm,0.9s,mb4.2
AML Almayashu 49.47 314 P **P 06 49 35.3 +1.9**
SNR=6.6
AML Almayashu 49.47 314 *e*P **P 06 49 35.3 +1.8**
comp=Z,22nm,0.8s,mb5.2
EKS2 Erkin-Say 49.60 315 P **P 06 49 35.7 +1.2**
SNR=8.8
EKS2 Erkin-Say 49.60 315 *e*P **P 06 49 35.9 +1.4**
comp=Z,14nm,0.8s,mb5.0
KURK Kurchatov 50.28 327 *e*P **P 06 49 40.0 +0.5**
comp=Z,85nm,1.0s,mb5.7
KURK Kurchatov 50.28 327 *c i*P **P 06 49 39.1 -0.4**
KURK pmax pmax
comp=Z,114nm,1.3s,mb5.7
NVS Novosibirsk 50.47 333 ⇓*i*P **P 06 49 39.9 -0.9**
NVS pmax pmax
comp=N,14nm,1.4s
NVS pmax pmax
comp=E,14nm,1.4s
NVS pmax pmax
comp=Z,32nm,1.4s,mb5.2
KBL Kabul 50.88 304 *e*P **P 06 49 45.0 +0.7**
comp=Z,14nm,1.0s,mb4.8
KBL Kabul 50.88 304 *e*P **P 06 49 45.0 +0.7**
KBL pmax pmax
comp=Z,14nm,1.0s,mb4.8
KK31 Karatay Array 52.01 315 P **P 06 49 52.9 +0.3**
KK31 pmax pmax
comp=Z,17nm,0.9s,mb5.0
KKAR Karatay Array 52.01 315 *e*P **P 06 49 53.3 +0.7**
comp=Z,7.7nm,0.6s,mb4.8
KKAR Karatay Array 52.01 315 *e*P **P 06 49 53.3 +0.7**
KKAR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ARMA Armidale 52.92 146 *e*P **P 06 50 00.4 +1.0**
ARMA Armidale 52.92 146 *e*P **P 06 50 00.2 +0.8**
comp=Z,71nm,2.3s,mb5.2
VOSK Vostochnaya 55.41 326 P **P 06 50 16.7 -0.6**
VOSK pmax pmax
comp=Z,44nm,1.6s,mb5.2
TOO Toolangi 55.92 156 *e*P **P 06 50 21.5 +0.4**
BRVK Borovoye 55.94 326 *e*P **P 06 50 21.5 +0.5**
comp=Z,70nm,1.0s,mb5.7
BRVK Borovoye 55.94 326 *e*P **P 06 50 21.5 +0.5**
BRVK pmax pmax
comp=Z,70nm,1.0s,mb5.7
ZRNK Zerenda 56.59 325 P **P 06 50 25.5 -0.2**
ZRNK pmax pmax
comp=Z,74nm,1.5s,mb5.5
AB31 Akbulak array 60.79 319 *i* P **P 06 50 55.0 +0.1**
AB31 pmax pmax
comp=Z,34nm,1.3s,mb5.3
ABKAR Akbulak array 60.79 319 *e*P **P 06 50 55.1 +0.2**
comp=Z,6.7nm,0.6s,mb5.0
BILL Bilibino 62.00 18⇑*e*P **P 06 51 02.4 -0.4**
BILL pmax pmax
comp=Z,20nm,1.5s,mb5.0
BILL MLR MLR
comp=Z,100nm,16.0s
SVE Sverdlovsk 62.51 328⇓*e*P **P 06 51 06.8 +0.5**
SVE *e* 06 53 25.7
SVE *e*S **S 06 59 26.9 -2.2**
SVE pmax pmax
comp=Z,58nm,1.3s,mb5.5
ARU Arti 63.48 327 *e*P **P 06 51 12.6 -0.2**
comp=Z,21nm,0.9s,mb5.3
ARU Arti 63.48 327 *d i*P **P 06 51 12.3 -0.5**
ARU *e* 06 51 46.4
ARU *e* 06 53 32.2
ARU S **S 06 59 34.7 -6.6**
ARU pmax pmax
comp=Z,29nm,1.7s,mb5.1
SOKR Solikamsk 65.27 330 *d i*P **P 06 51 24.6 +0.2**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,240nm,19.0s
GNI Garni 70.61 308 *e*P **P 06 52 00.3 +1.9**
comp=Z,31nm,1.2s,mb5.1
GNI Garni 70.61 308⇑*i*P **P 06 52 00.5 +2.1**
GNI pmax pmax
comp=Z,43nm,1.8s
KIV Kislovodsk 72.05 312 *e*P **P 06 52 07.6 +0.6**
comp=Z,14nm,0.6s,mb5.1
KIV Kislovodsk 72.05 312⇑*e*P **P 06 52 07.8 +0.8**
KIV *e* 06 52 15.3
KIV pP 06 52 26.0 +2.3
KIV *e* 06 54 44.2
KIV pmax pmax
comp=Z,20nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,100nm,13.0s
VRHR Novokhopersk 72.67 320 *e*P **P 06 52 09.7 -0.9**
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VRHR pmax pmax
comp=N,2.0nm,0.3s
KLMR Klimovskoe 73.96 330 *e*P **P 06 52 16.0 -2.0**
KLMR pmax pmax
comp=Z,52nm,1.5s,mb5.2
VORD Divnogorie 74.15 319 *e*P **P 06 52 18.1 -1.1**
VORD pmax pmax
comp=E,50nm,1.6s
VORD pmax pmax
comp=Z,30nm,1.6s,mb5.0
VORD pmax pmax
comp=N,9.0nm,0.6s
VSR Storozhevoye 74.22 320 *e*P **P 06 52 18.8 -0.8**
VSR pmax pmax
comp=Z,30nm,1.1s,mb5.1
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,40nm,1.3s
TTA Tatalina 75.16 28 *e*P **P 06 52 24.0 -0.8**
comp=E,5.0nm,0.8s,mb4.5
TTA Tatalina 75.16 28 *e*P **P 06 52 24.0 -0.9**
TTA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
OBN Obninsk 75.62 324⇑*e*P **P 06 52 27.3 -0.3**
OBN 06 55 14.0
OBN SSS 07 10 13.0
OBN pmax pmax
comp=Z,34nm,1.1s,mb5.2
OBN MLR MLR
comp=Z,200nm,16.0s
MALT Malatya 75.62 306 *e*P **P 06 52 29.4 +1.4**
comp=Z,9.5nm,1.0s,mb4.7
MALT Malatya 75.62 306 *e*P **P 06 52 29.5 +1.5**
MALT pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MALT Malatya 75.62 306 ⇓*i*P **P 06 52 29.4 +1.4**
PPLA Purkeypile 76.91 28 *e*P **P 06 52 34.7 -0.1**
comp=Z,20nm,1.3s,mb4.9
BPAW Bear Paw Mtn. 77.36 27 *e*P **P 06 52 37.0 -0.3**
comp=Z,11nm,0.9s,mb4.8
JOF Joensuu 77.77 332 *e*P **P 06 52 38.3 -1.3**
JOF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
JOF Joensuu 77.77 332 *e*p **P 06 52 38.3 -1.3**
comp=Z,9.6nm,0.7s,mb4.8
MCK McKinley 78.30 27 *e*P **P 06 52 41.7 -0.8**
comp=Z,24nm,1.2s,mb5.0
MCK McKinley 78.30 27 *e*P **P 06 52 41.7 -0.8**
MCK pmax pmax
comp=Z,24nm,1.2s,mb5.0
PMR Palmer 78.46 29 *e*P **P 06 52 42.6 -0.8**
comp=Z,3.8nm,0.6s,mb4.5
PMR Palmer 78.46 29 *e*P **P 06 52 42.6 -0.9**
PMR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
COLA College 78.63 26 *e*P **P 06 52 45.0 +0.7**
comp=Z,5.8nm,1.1s,mb4.4
COLA College 78.63 26 *e*P **P 06 52 45.0 +0.7**
COLA pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KEV Kevo 78.69 339 *e*P **P 06 52 44.7 +0.1**
KEV Kevo 78.69 339 *e*p **P 06 52 44.7 +0.1**
comp=Z,3.1nm,0.7s,mb4.3
ILAR Eielson Array 79.05 26 P **P 06 52 46.5 -0.2**
comp=Z,1.3nm,0.8s,mb3.9,baz=274,slow=5.0,SNR=12
ILAR Eielson Array 79.05 26 P **P 06 52 46.5 -0.2**
BRTR Keskin Array B 79.15 308 P **P 06 52 47.7 0.0**
comp=Z,3.4nm,0.8s,mb4.3,baz=102,slow=5.2,SNR=9.5
BRTR Keskin Array B 79.15 308 P **P 06 52 47.7 0.0**
ARCES ARCESS Array B 79.24 339 P **P 06 52 47.4 -0.2**
comp=Z,4.1nm,0.8s,mb4.4,baz=46,slow=3.5,SNR=12
ARCES LR LR 07 32 28.0
comp=Z,143nm,18.9s,baz=247,slow=39
ARCES ARCESS Array B 79.24 339 P **P 06 52 47.4 -0.2**
CASY Casey 79.85 184 *e*P **P 06 52 50.8 0.0**
CASY Casey 79.85 184 *e*P **P 06 52 50.5 -0.3**
comp=Z,33nm,1.3s,mb5.1
KAF Kangasniemi 80.18 332 *e*P **P 06 52 51.1 -1.7**
KAF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KAF Kangasniemi 80.18 332 *e*p **P 06 52 51.1 -1.7**
comp=Z,7.1nm,0.7s,mb4.7
FINES FINESS Array B 80.40 331 P **P 06 52 53.5 -0.5**
comp=Z,6.7nm,0.7s,mb4.7,baz=77,slow=5.1,SNR=14
FINES LR LR 07 31 46.6
comp=Z,263nm,18.2s,baz=315,slow=38
FINES FINESS Array B 80.40 331 P **P 06 52 53.6 -0.4**
AKASG Malin Array Be 80.52 320 P **P 06 52 54.2 -0.7**
comp=Z,8.7nm,0.8s,mb4.7,baz=67,slow=5.4,SNR=23
AKASG LR LR 07 33 15.6
comp=Z,77nm,20.6s,baz=60,slow=39
AKASG Malin Array Be 80.52 320 P **P 06 52 54.2 -0.7**
AKASG LR LR 07 33 15.6
AKASG Malin Array Be 80.52 320 P **P 06 52 54.2 -0.7**
AKBB Malin Array Si 80.52 320 *e*P **P 06 52 53.9 -1.0**
AKBB Malin Array Si 80.52 320 *e*P **P 06 52 53.9 -1.0**
KIEV Kiev 80.53 320 *e*P **P 06 52 54.1 -0.9**
comp=Z,10nm,1.0s,mb4.7
KIEV Kiev 80.53 320 *e*P **P 06 52 54.1 -0.9**
KIEV pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
EGAK Eagle 81.46 25 *e*P **P 06 52 59.0 -0.6**
comp=Z,5.4nm,0.8s,mb4.5
TLCR 81.77 314 ⇑P **P 06 53 01.9 +0.3**
TLCR 81.77 314 ⇑*i*P **P 06 53 01.9 +0.3**
DAWY Dawson 82.38 26 *e*P **P 06 53 05.2 +0.7**
TESR 82.99 316 ⇑*i*P **P 06 53 08.5 +0.5**
VRI Vrincioaia 83.07 315 ⇓P **P 06 53 09.8 +1.4**
VRI Vrincioaia 83.07 315 ⇓*i*P **P 06 53 09.8 +1.4**
PLOR Plostina 83.12 315 ⇑P **P 06 53 09.3 +0.6**
PLOR Plostina 83.12 315 ⇑*i*P **P 06 53 09.3 +0.6**
INK Inuvik 83.39 21 *e*P **P 06 53 08.7 -0.9**
comp=Z,11nm,1.2s,mb4.8
INK Inuvik 83.39 21 *e*P **P 06 53 08.7 -0.9**
INK pmax pmax
comp=Z,11nm,1.2s
SUW Suwalki 83.48 324 *e*P **P 06 53 09.7 -0.7**
SUW Suwalki 83.48 324 *e*P **P 06 53 09.4 -0.9**
comp=Z,29nm,0.7s,mb5.4
SUW Suwalki 83.48 324 *e*P **P 06 53 09.7 -0.7**
MLR Muntele Rosu 83.69 315 ⇑P **P 06 53 12.4 +0.8**
MLR Muntele Rosu 83.69 315 ⇑*i*P **P 06 53 12.4 +0.8**
BURAR Bucovina Array 83.70 317 ⇓P **P 06 53 11.9 +0.3**
BURAR Bucovina Array 83.70 317 ⇓*i*P **P 06 53 11.9 +0.3**
BUR08 Bucovina Ar. S 83.71 317 *e*P **P 06 53 11.9 +0.3**
LVV L'vov 83.96 320 *e*P **P 06 53 11.6 -1.3**
KWP Kalwaria Pacla 84.84 320 *e*P **P 06 53 17.7 +0.4**
KWP Kalwaria Pacla 84.84 320 ⇓P **P 06 53 17.8 +0.4**
KWP Kalwaria Pacla 84.84 320 ⇓*i*P **P 06 53 17.8 +0.4**
TRPA Tarpa 85.33 318 ⇑*i*P **P 06 53 20.2 +0.4**
UZH Uzhgorod 85.36 319 *e*P **P 06 53 20.0 0.0**
DRGR 85.56 317 ⇑P **P 06 53 21.3 +0.3**
DRGR 85.56 317 ⇑*i*P **P 06 53 21.3 +0.3**
CRVS Cervenica-Dubn 85.82 319 *e*P **P 06 53 23.0 +0.8**
comp=Z,34nm,1.1s,mb5.5
CRVS Cervenica-Dubn 85.82 319 *e*P **P 06 53 23.0 +0.8**
CRVS pmax pmax
comp=Z,34nm,1.1s,mb5.5
CRVS Cervenica-Dubn 85.82 319 *e*P **P 06 53 23.0 +0.8**
VTS Vitosha 86.29 313 ⇑P **P 06 53 25.2 +0.5**
VTS Vitosha 86.29 313 ⇑*i*P **P 06 53 25.2 +0.5**
NIE Niedzica 86.40 320 *e*P **P 06 53 26.2 +1.1**
NIE Niedzica 86.40 320 *e*P **P 06 53 26.2 +1.1**
OJC Ojcow 86.50 321 *e*P **P 06 53 25.8 +0.3**
OJC Ojcow 86.50 321 *e*P **P 06 53 25.8 +0.3**

KECS Kecovo 86.56 319 *eP* **P 06 53 26.3 +0.4**
comp=Z,8.0nm,0.8s,mb5.0
KECS Kecovo 86.56 319 *eP* **P 06 53 26.3 +0.4**
KECS pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
KECS Kecovo 86.56 319 *eP* **P 06 53 26.3 +0.4**
NOA NORSAR Array B 87.39 333 P **P 06 53 28.9 -0.8**
comp=Z,8.1nm,0.9s,mb5.0,baz=68,slow=4.6,SNR=11
NOA LR LR 07 34 52.7
comp=Z,114nm,19.2s,baz=80,slow=37
NOA NORSAR Array B 87.39 333 P **P 06 53 28.9 -0.7**
VYHS Vyhne 87.60 319 *eP* **P 06 53 31.1 +0.1**
comp=Z,8.7nm,1.5s,mb4.8
VYHS Vyhne 87.60 319 *eP* **P 06 53 31.1 +0.1**
VYHS pmax pmax
comp=Z,9.0nm,1.5s,mb4.8
VYHS Vyhne 87.60 319 *eP* **P 06 53 31.1 +0.1**
OKC Ostrava-Krasne 87.62 321 *eP* **P 06 53 31.4 +0.4**
OKC Ostrava-Krasne 87.62 321 *eP* **P 06 53 31.4 +0.4**
MORC Moravsky Berou 88.02 321 *eP* **P 06 53 33.4 +0.5**
comp=Z,16nm,1.5s,mb5.0
MORC Moravsky Berou 88.02 321 *eP* **P 06 53 33.4 +0.5**
MORC pmax pmax
comp=Z,16nm,1.5s,mb5.0
MORC Moravsky Berou 88.02 321 ⇑*iP* **P 06 53 33.3 +0.4**
KSP Ksiaz 88.43 322 *eP* **P 06 53 35.2 +0.3**
DPC Dobruska-Polom 88.58 322 *eP* **P 06 53 35.6 +0.1**
DPC Dobruska-Polom 88.58 322 *eP* **P 06 53 35.6 +0.1**
UPC Upice 88.71 322 *eP* **P 06 53 36.4 +0.3**
UPC Upice 88.71 322 *eP* **P 06 53 36.4 +0.3**
RUE Ruedersdorf 89.33 324 *eP* **P 06 53 38.9 -0.1**
comp=Z,22nm,0.9s,mb5.5
PRU Pruhonice 89.77 322 *eP* **P 06 53 41.9 +0.7**
PRU Pruhonice 89.77 322 *eP* **P 06 53 41.9 +0.7**
BRG Berggiesshubel 89.82 323 *eP* **P 06 53 41.2 -0.1**
comp=Z,11nm,1.0s,mb5.1
BRG Berggiesshubel 89.82 323 *eP* **P 06 53 41.5 +0.1**
BRG *e* 06 54 04.1
comp=Z,3.5nm,0.9s
BRG Berggiesshubel 89.82 323 *eP* **P 06 53 41.5 +0.2**
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
FBE Freiberg 90.14 323 *eP* **P 06 53 43.2 +0.3**
comp=Z,16nm,1.2s,mb5.2
CLL Collm 90.21 323 *eP* **P 06 53 43.0 -0.1**
CLL Collm 90.21 323 *eP* **P 06 53 43.0 -0.1**
CLL Collm 90.21 323 *eP* **P 06 53 43.0 -0.1**
CLL *e*PP PP 06 57 18.0 +0.9
PERS Pernice 90.59 318 *iP* **P 06 53 44.8 -0.2**
KHC Kasperske Hory 90.67 321 *eP* **P 06 53 45.4 +0.1**
comp=Z,16nm,1.6s,mb5.1
KHC Kasperske Hory 90.67 321 *eP* **P 06 53 45.7 +0.4**
KHC Kasperske Hory 90.67 321 *eP* **P 06 53 45.7 +0.4**
GEC2 GERESS Array S 90.70 321 *eP* **P 06 53 45.6 +0.1**
comp=Z,12nm,1.3s,mb5.1
GEC2 GERESS Array S 90.70 321 *eP* **P 06 53 45.6 +0.1**
comp=Z,12nm,1.3s,mb5.1
GEC2 GERESS Array S 90.70 321 *eP* **P 06 53 45.6 +0.1**
GEC2 pmax pmax
comp=Z,12nm,1.3s,mb5.1
GERES GERESS Array B 90.70 321 P **P 06 53 45.9 +0.4**
comp=Z,3.3nm,0.8s,mb4.7,baz=60,slow=5.3,SNR=21
GERES GERESS Array B 90.70 321 P **P 06 53 45.9 +0.4**
MOA Molln 90.70 320 ⇑*iPcP* PcP 06 53 46.2 -0.4
comp=Z,15nm,1.0s
MAW Mawson 90.80 199 P **P 06 53 46.2 +0.8**
comp=Z,4.8nm,0.9s,mb4.8,baz=56,slow=5.5,SNR=14
MAW Mawson 90.80 199 *eP* **P 06 53 46.1 +0.7**
comp=Z,5.0nm,1.4s,mb4.7
MAW Mawson 90.80 199 *eP* **P 06 53 45.9 +0.5**
comp=Z,1.6nm,1.0s,mb4.3
MAW Mawson 90.80 199 *eP* **P 06 53 45.9 +0.5**
MAW pmax pmax
comp=Z,2.0nm,1.0s
BOJS Bojanci 90.89 317 *iP* **P 06 53 47.6 +1.2**
WERD Werda 90.94 323 *eP* **P 06 53 46.7 +0.1**
comp=Z,6.0nm,1.1s,mb4.8
GUNZ Gunzen 90.96 323 *eP* **P 06 53 46.7 0.0**
comp=Z,15nm,1.2s,mb5.2
NEUB Neuenburg 90.96 323 *eP* **P 06 53 46.8 +0.2**
comp=Z,14nm,1.1s,mb5.2
WERN Wernitzgruen 90.96 322 *eP* **P 06 53 47.0 +0.3**
comp=Z,10.0nm,1.2s,mb5.0
VISS Visnje 91.06 318 *iP* **P 06 53 47.2 0.0**
WET Wettzell 91.09 321 *eP* **P 06 53 47.6 +0.3**
comp=Z,10.0nm,1.3s,mb5.0
WET Wettzell 91.09 321 *eP* **P 06 53 47.6 +0.3**
comp=Z,10.0nm,1.3s,mb5.0
WET Wettzell 91.09 321 *eP* **P 06 53 47.6 +0.3**
WET pmax pmax
comp=Z,10.0nm,1.3s,mb5.0
ROTZ Rotzenmuhle 91.26 322 *eP* **P 06 53 48.7 +0.6**
comp=Z,10.0nm,1.0s,mb5.1
MOX Moxa 91.27 323 *eP* **P 06 53 48.6 +0.5**
comp=Z,22nm,1.8s,mb5.2
MOX Moxa 91.27 323 *eP* **P 06 53 47.8 -0.3**
comp=Z,9.0nm,1.2s,mb5.0
MOX Moxa 91.27 323 *eP* **P 06 53 48.6 +0.5**
MOX pmax pmax
comp=Z,22nm,1.8s,mb5.2
CLZ Clausthal 91.51 324 *eP* **P 06 53 48.6 -0.6**
comp=Z,37nm,2.0s,mb5.4
CLZ Clausthal 91.51 324 *eP* **P 06 53 48.6 -0.6**
comp=Z,37nm,2.0s,mb5.4
CLZ Clausthal 91.51 324 *eP* **P 06 53 48.6 -0.6**
CLZ pmax pmax
comp=Z,37nm,2.0s,mb5.4
JAVS Javornik 91.53 318 *iP* **P 06 53 49.0 -0.4**
RJOB Jochberg 91.67 320 *eP* **P 06 53 49.9 -0.1**
comp=Z,9.0nm,1.0s,mb5.0
GRA1 Grafenberg Arr 91.88 322 *eP* **P 06 53 51.0 +0.1**
comp=Z,21nm,1.3s,mb5.3
GRF Grafenberg Arr 91.88 322 *eP* **P 06 53 51.0 +0.1**
comp=Z,21nm,1.3s,mb5.3
GRF Grafenberg Arr 91.88 322 *eP* **P 06 53 51.0 +0.1**
comp=Z,21nm,1.3s,mb5.3
GRF Grafenberg Arr 91.88 322 *eP* **P 06 53 51.0 +0.1**
GRF pmax pmax
comp=Z,21nm,1.3s,mb5.3
GRF Grafenberg Arr 91.88 322 *eP* **P 06 53 51.0 +0.1**
GRF pmax pmax
comp=Z,21nm,1.3s,mb5.3
WTTA Wattenberg 92.58 320 ⇑*iPcP* PcP 06 53 54.1 -0.8
comp=Z,21nm,0.9s
MOTA Moosalm 92.88 320 ⇑*iPcP* PcP 06 53 55.4 -0.9
comp=Z,16nm,0.9s,SNR=7.2
FETA Feichten 93.24 320 *iPcP* PcP 06 53 57.5 -0.4
comp=Z,16nm,1.0s,SNR=7.9
CDF Champ du Feu 94.77 322 *eP* **P 06 54 04.4 +0.1**
comp=Z,14nm,1.0s,mb5.0
CDF Champ du Feu 94.77 322 *eP* **P 06 54 04.4 +0.1**
comp=Z,6.9nm,1.0s,mb5.0
CDF Champ du Feu 94.77 322 *eP* **P 06 54 04.4 +0.1**
CDF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
GIVF Givet 95.43 324 *eP* **P 06 54 07.6 +0.4**
GIVF Givet 95.43 324 *eP* **P 06 54 07.6 +0.4**
BAIF Baives 95.80 324 *eP* **P 06 54 09.1 +0.2**
comp=Z,32nm,1.3s,mb5.3
BAIF Baives 95.80 324 *eP* **P 06 54 09.1 +0.2**
comp=Z,16nm,1.3s,mb5.3
BAIF Baives 95.80 324 *eP* **P 06 54 09.1 +0.2**
BAIF pmax pmax
comp=Z,16nm,1.3s,mb5.3
PGF Pioggiola 96.18 316 *eP* **P 06 54 10.7 -0.2**
comp=Z,42nm,1.1s,mb5.5
PGF Pioggiola 96.18 316 *eP* **P 06 54 10.7 -0.2**
comp=Z,21nm,1.1s,mb5.5
PGF Pioggiola 96.18 316 *eP* **P 06 54 10.7 -0.2**
PGF pmax pmax
comp=Z,21nm,1.1s,mb5.5
CABF La Chapelle 96.30 321 *eP* **P 06 54 10.3 -1.0**
CABF La Chapelle 96.30 321 *eP* **P 06 54 10.3 -1.0**
LPG La Plagne 96.39 320 *eP* **P 06 54 12.2 +0.5**
comp=Z,14nm,0.9s,mb5.1
LPG La Plagne 96.39 320 *eP* **P 06 54 12.2 +0.5**
comp=Z,7.3nm,0.9s,mb5.1
LPG La Plagne 96.39 320 *eP* **P 06 54 12.2 +0.5**
LPG pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
LPL La Plagne 96.39 320 *eP* **P 06 54 12.1 +0.4**
comp=Z,12nm,0.8s,mb5.1
LPL La Plagne 96.39 320 *eP* **P 06 54 12.1 +0.4**
comp=Z,5.9nm,0.8s,mb5.1
LPL La Plagne 96.39 320 *eP* **P 06 54 12.1 +0.4**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
MBDF Montbardon 96.71 319 *eP* **P 06 54 12.3 -0.9**
comp=Z,7.5nm,0.8s,mb4.8
MBDF Montbardon 96.71 319 *eP* **P 06 54 12.3 -0.9**
comp=Z,3.8nm,0.8s,mb4.9
MBDF Montbardon 96.71 319 *eP* **P 06 54 12.3 -0.9**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
ORIF Oris-en-Rattie 97.20 319 *eP* **P 06 54 14.7 -0.7**
comp=Z,6.9nm,0.7s,mb4.9
ORIF *e*MLR MLR
comp=Z,95nm,18.5s
ORIF Oris-en-Rattie 97.20 319 *eP* **P 06 54 14.7 -0.7**
comp=Z,3.5nm,0.7s,mb4.9
ORIF Oris-en-Rattie 97.20 319 *eP* **P 06 54 14.7 -0.7**
ORIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
FRF La Foret Royal 97.31 318 *eP* **P 06 54 15.5 -0.4**
comp=Z,27nm,1.1s,mb5.3
FRF La Foret Royal 97.31 318 *eP* **P 06 54 15.5 -0.4**
comp=Z,14nm,1.1s,mb5.3
FRF La Foret Royal 97.31 318 *eP* **P 06 54 15.5 -0.4**
FRF pmax pmax
comp=Z,14nm,1.1s,mb5.3
AVF Avril sur Loir 97.88 322 *eP* **P 06 54 18.1 -0.3**
AVF Avril sur Loir 97.88 322 *eP* **P 06 54 18.1 -0.3**
TCF Toulx Ste Croi 98.81 322 *eP* **P 06 54 22.5 -0.1**
comp=Z,10nm,1.1s,mb5.0
TCF Toulx Ste Croi 98.81 322 *eP* **P 06 54 22.5 -0.1**
comp=Z,5.1nm,1.1s,mb5.0
TCF Toulx Ste Croi 98.81 322 *eP* **P 06 54 22.5 -0.1**
TCF pmax pmax
comp=Z,5.0nm,1.1s,mb5.0
LASF Ste Croix 98.87 319 *eP* **P 06 54 22.1 -0.8**
RJF Les Rejaudoux 99.72 321 *eP* Pdif 06 54 27.3 +0.8
RJF *e*MLR MLR
comp=Z,104nm,20.5s
RJF Les Rejaudoux 99.72 321 *eP* Pdif 06 54 27.3 +0.8
RJF LR LR
comp=Z,100nm,20.5s
RJF Les Rejaudoux 99.72 321 *eP* Pdif 06 54 27.3 +0.8
RJF MLR MLR
comp=Z,100nm,20.5s
EPF Esparros 101.61 320 *eP* Pdif 06 54 35.4 +0.5
EPF Esparros 101.61 320 *eP* Pdif 06 54 35.4 +0.5
PDAR Pinedale Array 107.67 36 PKKPbc PKKPbc 07 10 23.0 -2.0
comp=Z,0.4nm,0.6s,baz=83,slow=2.2,SNR=3.8
TXAR Lajitas Array 119.78 45 PKP PKPdf 06 59 32.7 -0.5
comp=Z,0.4nm,0.8s,baz=270,slow=0.6,SNR=3.7
TXAR PKKPab PKKPab 07 09 50.3 +3.9
comp=Z,0.3nm,0.8s,baz=143,slow=4.4,SNR=3.6
TXAR Lajitas Array 119.78 45 PKP PKPdf 06 59 32.7 -0.5
TXAR PKKPab PKKPab 07 09 50.3 +3.9
TXAR Lajitas Array 119.78 45 PKIKP PKPdf 06 59 32.7 -0.6
PLCA Paso Flores 151.16 162 PKPbc PKPbc 07 00 36.5 +0.6
comp=Z,3.5nm,0.9s,baz=210,slow=3.3,SNR=5.3
CPUP Villa Florida 167.03 189 PKPab PKPab 07 01 53.0 +0.3
comp=Z,1.4nm,0.7s,baz=185,slow=4.1,SNR=5.0
BDFB Brasilia 168.67 258 PKPab PKPab 07 02 00.6 0.0
comp=Z,3.4nm,0.8s,baz=123,slow=11,SNR=4.4
LPAZ La Paz 171.19 110 PKPab PKPab 07 02 14.5 +2.8
comp=Z,1.1nm,0.9s,baz=294,slow=5.2,SNR=2.8

DJA 27 06:48:50,9°.41S×115°.84E,h26km,MLv3.7/6,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTNI	**Mataram**	**0.84**	**23**	P	Pb	06 49 05.1	-0.8
MTNI				S	Sb	06 49 16.5	-0.2
IGBI	**Denpasar**	**0.90**	**311**	P	Pn	06 49 06.6	-0.4
IGBI				S	Sb	06 49 18.9	+0.2
KHKI	**Kahang-Kahang**	**1.06**	**348**	P	Pn	06 49 08.8	-0.4
KHKI				S	Sn	06 49 23.4	+0.2
SRBI	**Singaraja**	**1.46**	**335**	P	Pn	06 49 15.1	+0.5
SRBI				S	Sn	06 49 33.1	+0.2
NBBI	**Negara**	**1.59**	**311**	S	Sn	06 49 38.4	+2.3
JAGI	**Jajag, Banyuwa**	**1.91**	**299**	S	Sn	06 49 43.5	-0.6
GMJI	**Gumukmas**	**2.62**	**295**	P	Pn	06 49 30.7	0.0
BMNI	**Bima**	**2.95**	**73**	P	Pn	06 49 35.7	+0.5
BMNI				S	Sn	06 50 07.9	-1.8

BJI ***27*** *06:56:29.0, 12°.78N×120°.78E, h26km, mb4.8/9*
IDC ***27*** *06:56:31.4±0.5, 13°.46N×120°.50E, h0km, mb4.5/25, mb1 4.6/25, mb1mx4.5/31, mbtmp4.5/25, MS3.4/2, Ms1 3.4/2, ms1mx2.9/27, Error ellipse: s-maj=23.3km s-min=11.0km az=66.0*
NEIC ***27*** *06:56:33.1±0.2, 13°.45N×120°.52E, h10km, mb4.9/23, Error ellipse: s-maj=9.7km s-min=5.0km az=55.0*
NEIC Felt [III PIVS] at Calapan and [I PIVS] at Puerto Galera.
MOS ***27*** *06:56:34.7±0.9, 13°.48N×120°.57E, h33km, mb4.9/18, Error ellipse: s-maj=15.8km s-min=6.4km az=126.5*
MAN ***27*** *06:56:35, 13°.32N×120°.30E, h46km, mb4.7, ML3.6, MS3.6*
MAN INTENSITY III - CALAPAN; INTENSITY I - PUERTO GALERA.
ISCJB ***27*** *06:56:36.3±0.5, 13°.35N±0°.03×120°.39E±0°.05, h46km±5km, mb4.7/58, Error ellipse: s-maj=7.6km s-min=5.4km az=169.1*
ISC 27 06:56:37.4±0.5,13°.35N±0°.03×120°.41E±0°.05,h41km±6km, n154,o0°88/149,mb4.7/58,4C-1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUSP	**Coron**	**1.35**	**189**	*eP*	**Pn**	**06 56 58.5**	**-1.3**
BUSP				*eS*	**Sn**	**06 57 15.6**	**-0.9**
BOAC	**Boac**	**1.40**	**85**	*eP*	**Pn**	**06 57 00.8**	**+0.3**
BOAC				*eS*	**Sn**	**06 57 18.4**	**+0.7**
OTRP	**Odiongan**	**1.85**	**122**	*eP*	**Pn**	**06 57 07.6**	**+1.0**
POLP	**Polilio Island**	**2.02**	**47**	*eP*	**Pn**	**06 57 09.1**	**+0.1**
AUQP	**San Andres**	**2.20**	**90**	*eP*	Px	06 57 21.7	
ENPP	**El Nido**	**2.33**	**204**	*eP*	**Pn**	**06 57 11.8**	**-1.5**
SCZP	**Santa Cruz**	**2.46**	**349**	*eP*	**Pn**	**06 57 14.9**	**-0.2**
CUYO	**Cuyo Island**	**2.55**	**166**	*eP*	**Pn**	**06 57 15.3**	**-1.0**
BALP	**Baler**	**2.64**	**25**	*eP*	**Pn**	**06 57 18.2**	**+0.8**
BCPH	**Baguio City Da**	**3.02**	**3**	⇑*iP*	**Pn**	**06 57 21.0**	**-1.8**
BOLP	**Bolinao**	**3.06**	**351**	*eP*	**Pn**	**06 57 23.5**	**+0.2**
GUIM	**Jordan**	**3.44**	**142**	*eP*	**Pn**	**06 57 30.1**	**+1.5**
APYP	**Conner**	**4.56**	**10**	*eP*	**Pn**	**06 57 50.4**	**+6.4**
DAV	**Davao City (W)**	**8.04**	**140**	LR	LR	07 02 24.4	
	comp=Z,226nm,19.1s,baz=284,slow=44						
CMAR	**Chiang Mai Arr**	**21.26**	**287**	P	**P**	**07 01 21.6**	**+1.3**
	8.3nm,0.8s,mb4.1,baz=96,slow=9.0,SNR=43						
CMAR	**Chiang Mai Arr**	**21.26**	**287**	P	**P**	**07 01 21.6**	**+1.3**
CHTO	**Chiang Mai**	**21.32**	**288**	*eP*	**P**	**07 01 22.1**	**+1.1**
	12nm,1.1s,mb4.2						
CHTO	**Chiang Mai**	**21.32**	**288**	*eP*	**P**	**07 01 22.1**	**+1.1**
PSI	**Prapat**	**23.69**	**246**	P	**P**	**07 01 47.4**	**+1.7**
	2.4nm,0.4s,mb4.0,baz=41,slow=7.9,SNR=4.0						
PSI	**Prapat**	**23.69**	**246**	P	**P**	**07 01 47.4**	**+1.7**
PSI	**Prapat**	**23.69**	**246**	P	**P**	**07 01 47.4**	**+1.7**
CBIJ	**Chichi jima**	**24.53**	**53**	LR	LR	07 09 31.4	
	comp=Z,82nm,19.2s,baz=148,slow=32						
LZH	**Lanzhou**	**27.10**	**330**	*eP*	**P**	**07 02 21.5**	**+5.0**
LZH				pP	pP	07 02 28.5	+0.9
LZH				sP	sP	07 02 30.5	-2.0
LZH				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.6						
MJAR	**Matsushiro Arr**	**28.08**	**32**	P	**P**	**07 02 24.6**	**-0.6**
	comp=Z,1.4nm,0.9s,mb3.6,baz=229,slow=11,SNR=3.7						
MJAR	**Matsushiro Arr**	**28.08**	**32**	P	**P**	**07 02 24.6**	**-0.6**
KAKA	**Kakadu**	**28.50**	**155**	*eP*	**P**	**07 02 28.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**31.67**	**170**	P	**P**	**07 02 57.1**	**0.0**
	comp=Z,5.3nm,0.9s,mb4.3,baz=15,slow=7.0,SNR=6.5						
FITZ	**Fitzroy Crossi**	**31.67**	**170**	*eP*	**P**	**07 02 57.3**	**+0.2**
	comp=Z,9.4nm,1.0s,mb4.6						
FITZ	**Fitzroy Crossi**	**31.67**	**170**	*eP*	**P**	**07 02 57.1**	**0.0**
	comp=Z,8.5nm,1.0s,mb4.5						
GTA	**Gaotai**	**31.69**	**329**	*eP*	**P**	**07 02 58.5**	**+1.4**
GTA				pP	pP	07 03 02.5	-5.8
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
TAPN	**Taplejung**	**33.56**	**300**	*eP*	**P**	**07 03 14.3**	**+0.7**
ODAN	**Odare**	**33.68**	**299**	*eP*	**P**	**07 03 14.9**	**+0.2**
GUN	**Gumba**	**35.27**	**300**	*eP*	**P**	**07 03 28.9**	**+0.4**
	comp=Z,36nm,0.5s,mb5.6						
PKI	**Pulchoki**	**35.58**	**299**	*eP*	**P**	**07 03 31.3**	**+0.2**
	comp=Z,25nm,0.6s,mb5.3						
PKI	**Pulchoki**	**35.58**	**299**	*eP*	**P**	**07 03 31.3**	**+0.2**
PKI				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.3						
PKIN	**Phulchoki**	**35.59**	**299**	*eP*	**P**	**07 03 31.2**	**0.0**
	comp=Z,25nm,0.5s,mb5.4						
KKN	**Kakani**	**35.75**	**299**	*eP*	**P**	**07 03 32.3**	**-0.3**
	comp=Z,22nm,0.8s,mb5.2						
KKN	**Kakani**	**35.75**	**299**	*eP*	**P**	**07 03 32.3**	**-0.3**
KKN				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**35.80**	**157**	P	**P**	**07 03 32.7**	**-0.4**
	comp=Z,14nm,0.6s,mb5.1,baz=336,slow=9.5,SNR=121						
WRA	**Warramunga Arr**	**35.80**	**157**	P	**P**	**07 03 32.7**	**-0.4**
WRA	**Warramunga Arr**	**35.80**	**157**	P	**P**	**07 03 32.7**	**-0.3**
WB2	**Warramunga Arr**	**35.81**	**157**	*eP*	**P**	**07 03 32.5**	**-0.5**
DMN	**Daman**	**35.84**	**299**	*eP*	**P**	**07 03 33.4**	**0.0**
	comp=Z,35nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**36.17**	**345**	*eP*	**P**	**07 03 35.6**	**-0.3**
	comp=Z,15nm,0.9s,mb4.9						
ULN	**Ulaanbaatar**	**36.17**	**345**	*eP*	**P**	**07 03 35.6**	**-0.3**
ULN				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
SONM	**Songino Array**	**36.32**	**344**	P	**P**	**07 03 36.9**	**-0.3**
	comp=Z,15nm,0.7s,mb5.0,baz=161,slow=10.0,SNR=54						
SONM	**Songino Array**	**36.32**	**344**	P	**P**	**07 03 36.9**	**-0.2**
GKN	**Gorkha**	**36.35**	**299**	*eP*	**P**	**07 03 37.5**	**-0.2**
	comp=Z,25nm,0.9s,mb5.2						
KOLN	**Koldanda**	**37.17**	**299**	*eP*	**P**	**07 03 44.7**	**0.0**
	comp=Z,26nm,0.8s,mb5.1						
DANN	**Dangsing**	**37.19**	**299**	*eP*	**P**	**07 03 44.7**	**-0.2**
	comp=Z,30nm,0.7s,mb5.2						
ASAR	**Alice Springs**	**39.08**	**160**	P	**P**	**07 04 01.1**	**+0.4**
	comp=Z,16nm,0.6s,mb5.0,baz=340,slow=7.0,SNR=343						
ASAR	**Alice Springs**	**39.08**	**160**	P	**P**	**07 04 01.2**	**+0.5**
ZAK	**Zakamensk**	**39.49**	**343**	*eP*	**P**	**07 04 03.2**	**-0.7**
ZAK				*e*		07 04 20.9	
WMQ	**Urumqi**	**41.32**	**324**	*eP*	**P**	**07 04 20.0**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
CTA	**Charters Tower**	**41.84**	**142**	P	**P**	**07 04 23.9**	**+0.4**
	comp=Z,5.8nm,0.7s,mb4.3,baz=344,slow=15,SNR=3.5						
CTA	**Charters Tower**	**41.84**	**142**	P	**P**	**07 04 24.0**	**+0.4**
NWAO	**Narrogin (SRO)**	**46.11**	**184**	P	**P**	**07 04 59.0**	**+1.3**
	comp=Z,8.3nm,0.8s,mb4.7,baz=30,slow=5.5,SNR=3.7						
NWAO	**Narrogin (SRO)**	**46.11**	**184**	P	**P**	**07 04 59.0**	**+1.3**
NWAO	**Narrogin (SRO)**	**46.11**	**184**	P	**P**	**07 04 59.0**	**+1.3**
MK31	**Makanchi Array**	**46.15**	**324**	*eP*	**P**	**07 04 58.2**	**+0.3**
MK31	**Makanchi Array**	**46.15**	**324**	*eP*	**P**	**07 04 58.2**	**+0.3**
MKAR	**Makanchi Array**	**46.15**	**324**	P	**P**	**07 04 58.3**	**+0.4**
	comp=Z,3.0nm,0.6s,mb4.4,baz=132,slow=9.0,SNR=25						
MKAR				PcP	PcP	07 06 33.6	+0.2
	comp=Z,1.4nm,0.7s,baz=104,slow=4.1,SNR=4.2						
MKAR	**Makanchi Array**	**46.15**	**324**	P	**P**	**07 04 58.3**	**+0.4**
MKAR						07 06 33.6	
KZA	**Kyzart**	**48.39**	**315**	*eP*	**P**	**07 05 17.2**	**+1.7**
	comp=Z,12nm,0.8s,mb5.0						
KZA	**Kyzart**	**48.39**	**315**	*eP*	**P**	**07 05 17.2**	**+1.8**
KZA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
TKM2	**Tokmak 2**	**48.48**	**316**	*eP*	**P**	**07 05 16.8**	**+0.7**
	comp=Z,5.9nm,0.7s,mb4.7						
TKM2	**Tokmak 2**	**48.48**	**316**	*eP*	**P**	**07 05 16.8**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
EIDS	**Eidsvold**	**48.73**	**142**	*eP*	**P**	**07 05 20.8**	**+2.6**
	comp=Z,3.9nm,0.8s,mb4.5						
UCH	**Uchtor**	**48.95**	**315**	*eP*	**P**	**07 05 21.2**	**+1.4**
	comp=Z,10.0nm,0.8s,mb4.9						
UCH	**Uchtor**	**48.95**	**315**	*eP*	**P**	**07 05 21.2**	**+1.5**
UCH				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**49.12**	**315**	P	**P**	**07 05 21.4**	**+0.4**
	comp=Z,1.7nm,0.4s,mb4.5,baz=117,slow=8.6,SNR=7.3						
AAK	**Ala-Archa**	**49.12**	**315**	*eP*	**P**	**07 05 21.9**	**+0.9**
	comp=Z,4.9nm,0.8s,mb4.6						
AAK	**Ala-Archa**	**49.12**	**315**	*eP*	**P**	**07 05 21.9**	**+0.9**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ZAA0	**Zalesovo Array**	**49.24**	**333**	*eP*	**P**	**07 05 20.9**	**-0.8**
ZALV	**Zalesovo Beam**	**49.24**	**333**	P	**P**	**07 05 20.7**	**-1.0**
	comp=Z,4.2nm,0.7s,mb4.6,baz=122,slow=7.2,SNR=12						
ZALV	**Zalesovo Beam**	**49.24**	**333**	P	**P**	**07 05 20.7**	**-1.1**
STKA	**Stephens Creek**	**49.34**	**156**	P	**P**	**07 05 22.9**	**+0.1**
	comp=Z,4.3nm,0.8s,mb4.5,baz=324,slow=6.1,SNR=7.1						
STKA	**Stephens Creek**	**49.34**	**156**	*eP*	**P**	**07 05 22.7**	**0.0**
	comp=Z,2.8nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**49.34**	**156**	P	**P**	**07 05 22.9**	**+0.2**
AML	**Almayashu**	**49.48**	**315**	*eP*	**P**	**07 05 25.5**	**+1.7**
	comp=Z,10nm,0.8s,mb4.9						
AML	**Almayashu**	**49.48**	**315**	*eP*	**P**	**07 05 25.5**	**+1.7**
AML				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
EKS2	**Erkin-Say**	**49.62**	**315**	*eP*	**P**	**07 05 25.6**	**+0.8**
	comp=Z,5.4nm,0.7s,mb4.7						
EKS2	**Erkin-Say**	**49.62**	**315**	*eP*	**P**	**07 05 25.6**	**+0.8**
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KURK	**Kurchatov**	**50.33**	**327**	*eP*	**P**	**07 05 29.9**	**-0.2**
	comp=Z,49nm,1.0s,mb5.5						
KURK	**Kurchatov**	**50.33**	**327**	*eP*	**P**	**07 05 29.9**	**-0.2**
KURK				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.5						
NVS	**Novosibirsk**	**50.53**	**333**	*eP*	**P**	**07 05 29.2**	**-2.3**
NVS				pmax	pmax		
	comp=N,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
KBL	**Kabul**	**50.87**	**304**	*eP*	**P**	**07 05 35.3**	**+0.8**
	comp=Z,4.5nm,0.7s,mb4.5						
KBL	**Kabul**	**50.87**	**304**	*eP*	**P**	**07 05 35.3**	**+0.8**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
KK31	**Karatay Array**	**52.02**	**315**	*iP*	**P**	**07 05 43.1**	**+0.2**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KKAR	**Karatay Array**	**52.02**	**315**	*eP*	**P**	**07 05 43.4**	**+0.4**
	comp=Z,5.3nm,0.6s,mb4.7						
KKAR	**Karatay Array**	**52.02**	**315**	*eP*	**P**	**07 05 43.4**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
BVAR	**Borovoye Array**	**55.91**	**326**	P	**P**	**07 06 11.2**	**+0.1**
	comp=Z,7.7nm,0.7s,mb4.9,baz=122,slow=11,SNR=24						
BVAR	**Borovoye Array**	**55.91**	**326**	P	**P**	**07 06 11.2**	**+0.1**
BRVK	**Borovoye**	**55.98**	**326**	*eP*	**P**	**07 06 11.8**	**+0.2**
	comp=Z,17nm,0.8s,mb5.1						
BRVK	**Borovoye**	**55.98**	**326**	*eP*	**

KAF	Kangasniemi	80.23	332	*e*p	P	07 08 41.2	-2.3
	comp=Z,2.4nm,0.5s,mb4.4						
FINES	FINESS Array B	80.46	331	P	P	07 08 44.1	-0.7
	comp=Z,4.5nm,0.6s,mb4.5,baz=50,slow=5.9,SNR=15						
FINES	FINESS Array B	80.46	331	P	P	07 08 44.1	-0.7
AKASG	Malin Array Be	80.55	320	P	P	07 08 44.1	-1.4
	comp=Z,3.1nm,0.7s,mb4.3,baz=68,slow=5.0,SNR=9.0						
AKASG	Malin Array Be	80.55	320	P	P	07 08 44.1	-1.4
MLR	Muntele Rosu	83.70	315	⇑*i*P	P	07 09 02.7	+0.6
BURAR	Bucovina Array	83.73	317	⇓*i*P	P	07 09 02.1	-0.1
BUR08	Bucovina Ar. S	83.73	317	*e*P	P	07 09 02.1	-0.2
KOLS	Kolonicke sedl	85.32	319	*e*P	P	07 09 12.0	+1.8
KOLS	Kolonicke sedl	85.32	319	*e*P	P	07 09 12.0	+1.8
KOLS	Kolonicke sedl	85.32	319	*e*P	P	07 09 12.0	+1.8
DRGR		85.58	317	⇑*i*P	P	07 09 11.8	+0.2
CRVS	Cervenica-Dubn	85.85	319	*e*P	P	07 09 13.3	+0.4
CRVS	Cervenica-Dubn	85.85	319	*e*P	P	07 09 13.3	+0.4
CRVS	Cervenica-Dubn	85.85	319	*e*	P	07 09 13.3	+0.4
VTS	Vitosha	86.30	313	⇑*i*P	P	07 09 15.3	+0.1
NIE	Niedzica	86.43	320	*e*PX		07 09 16.3	
NIE	Niedzica	86.43	320	*e*P	P	07 09 16.3	+0.6
OJC	Ojcow	86.53	321	*e*PX		07 09 15.9	
OJC	Ojcow	86.53	321	*e*P	P	07 09 15.9	-0.3
HFS	Hagfors	86.65	331	P	P	07 09 15.3	-1.2
	comp=Z,4.0nm,0.9s,mb4.7,baz=134,slow=4.3,SNR=9.9						
HFS	Hagfors	86.65	331	P	P	07 09 15.3	-1.3
NOA	NORSAR Array B	87.44	333	P	P	07 09 18.9	-1.5
	comp=Z,3.7nm,0.7s,mb4.7,baz=68,slow=4.6,SNR=7.6						
NOA	NORSAR Array B	87.44	333	P	P	07 09 19.0	-1.4
VYHS	Vyhne	87.63	319	*e*P	P	07 09 21.3	-0.3
VYHS	Vyhne	87.63	319	*e*P	P	07 09 21.3	-0.3
VYHS	Vyhne	87.63	319	*e*	P	07 09 21.3	-0.3
VRAC	Vranov	88.78	321	P	P	07 09 27.5	+0.5
	comp=Z,2.7nm,0.6s,mb4.8,baz=10,slow=6.1,SNR=3.5						
VRAC	Vranov	88.78	321	P	P	07 09 27.5	+0.5
BRG	Berggiesshubel	89.85	323	*e*P	P	07 09 31.7	-0.3
	comp=Z,6.5nm,1.0s,mb4.9						
BRG	Berggiesshubel	89.85	323	*e*P	P	07 09 31.7	-0.3
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.7						
CLL	Collm	90.24	323	*e*P	P	07 09 34.0	+0.2
GERES	GERESS Array B	90.73	321	P	P	07 09 36.0	-0.1
	comp=Z,1.2nm,0.6s,mb4.4,baz=60,slow=5.3,SNR=8.5						
GERES	GERESS Array B	90.73	321	P	P	07 09 36.0	-0.1
GERES	GERESS Array B	90.73	321	P	P	07 09 36.0	-0.1
DAVOX	Davos/Dischmat	93.90	320	P	P	07 09 50.6	-0.2
	comp=Z,4.1nm,0.8s,mb4.9,baz=130,slow=5.4,SNR=5.1						
DAVOX	Davos/Dischmat	93.90	320	P	P	07 09 50.6	-0.2
TXAR	Lajitas Array	119.92	44	PKP	PKPdf	07 15 25.6	+1.4
	comp=Z,0.2nm,0.7s,baz=242,slow=3.8,SNR=2.5						
TXAR	Lajitas Array	119.92	44	PKIKP	PKPdf	07 15 25.6	+1.5

IDC 27 07:10:43.3±1.0, 13°.25N×120°.21E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/21, mbtmp3.9/5, Error ellipse: s-maj=21.4km s-min=12.3km az=118.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.10	40	Pg	Pg	07 11 04.0	-0.5
	116nm,0.3s,baz=154,slow=1.0,SNR=8.5						
TGY				Lg		07 11 20.0	
	386nm,0.3s,baz=346,slow=22,SNR=15						
CMAR	Chiang Mai Arr	21.10	287	P	P	07 15 33.2	+3.7
	2.5nm,0.6s,baz=94,slow=8.6,SNR=12						
WRA	Warramunga Arr	35.79	157	P	P	07 17 43.8	-0.6
	2.0nm,0.7s,baz=332,slow=10,SNR=14						
SONM	Songino Array	36.36	344	P	P	07 17 48.5	-0.5
	2.4nm,0.6s,baz=158,slow=10,SNR=7.0						
ASAR	Alice Springs	39.05	160	P	P	07 18 12.6	+0.5
	1.8nm,0.6s,baz=340,slow=7.1,SNR=44						
MKAR	Makanchi Array	46.12	324	P	P	07 19 09.7	+0.4
	0.7nm,0.6s,baz=125,slow=9.4,SNR=6.6						
BVAR	Borovoye Array	55.88	326	P	P	07 20 22.9	+0.2
	0.4nm,0.6s,baz=111,slow=8.2,SNR=3.2						

*NEIC **27** 07:13:27.5, 16°.90N×94°.26W, h137km, MD3.9(MEX), After MEX.*

MEX 27 07:13:27.5±1.2, 16°.90N×94°.26W, h137km±12km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.62	288	*i* P	Pn	07 13 47.2	-0.9
CMIG				*i* S	Sn	07 14 01.9	-1.7
CMIG	Matias Romero	0.62	288	*i* P	Pn	07 13 47.2	-0.9
CMIG				*i* S	Sn	07 14 01.9	-1.7
TGIG		1.10	96	*i* P	Pn	07 13 51.3	-0.7
TGIG				*i* S	Sn	07 14 07.3	-3.2
PCIG		1.56	140	*e*P	Pn	07 13 55.7	-1.1
PCIG				*i* S	Sn	07 14 18.3	-0.8
HUIG	Huatulco	2.10	238	*i* P	Pn	07 14 00.8	-2.3
HUIG				*i* S	Sn	07 14 28.8	-1.6
HUIG	Huatulco	2.10	238	*i* P	Pn	07 14 00.8	-2.3
HUIG				*i* S	Sn	07 14 28.8	-1.6
CCIG	Comitan	2.13	107	*i* P	Pn	07 14 02.7	-0.8
CCIG				*i* S	Sn	07 14 28.9	-2.1
CCIG	Comitan	2.13	107	*i* P	Pn	07 14 02.7	-0.8
CCIG				*i* S	Sn	07 14 28.9	-2.1
VHO	Vista Hermosa	2.37	274	*i* P	Pn	07 14 04.8	-1.5
VHO				*i* S	Sn	07 14 34.7	-1.5
VHO	Vista Hermosa	2.37	274	*i* P	Pn	07 14 04.8	-1.5
VHO				*i* S	Sn	07 14 34.7	-1.5
UTMO	Huajuapan	3.50	286	*e*P	Pn	07 14 19.6	-1.3
UTMO				*i* S	Sn	07 15 00.2	-2.0
PNIG	Pinotepa	3.74	263	*i* P	Pn	07 14 22.2	-1.8
PNIG				*i* S	Sn	07 15 02.9	-4.9
PNIG	Pinotepa	3.74	263	*i* P	Pn	07 14 22.2	-1.8
PNIG				*i* S	Sn	07 15 02.9	-4.9

*IDC **27** 07:20:52.8±0.7, 2°.17N×126°.63E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.2/18, mbtmp4.2/12, Error ellipse: s-maj=41.9km s-min=14.7km az=70.0*
*NEIC **27** 07:20:57.9±0.4, 2°.16N×126°.66E, h35km, mb4.3/6, Error ellipse: s-maj=24.3km s-min=7.0km az=64.0*
*DJA **27** 07:20:57, 2°.35N×126°.89E, h6km, MLv4.4/6*
*ISCJB **27** 07:21:00.3±0.8, 2°.22N±0°.07×126°.75E±0°.10, h76km±8km, mb4.2/16, Error ellipse: s-maj=18.5km s-min=6.9km az=148.4*

ISC 27 07:21:01.2±0.8, 2°.20N±0°.07×126°.7E±0°.1, h67km±8km, n26, σ0=97/28, mb4.2/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.55	156	P	Pn	07 21 25.4	-1.4
TNTI				S	Sn	07 21 48.3	+2.2
SGSI	Sangihe	1.91	321	P	Pn	07 21 30.2	-1.3
SGSI				S	Sn	07 21 54.7	+0.1
MNI	Manado	2.03	248	P	Pn	07 21 34.3	+1.1
LBMI	Labuha	2.92	165	P	Pn	07 21 45.7	+0.4
KMSI	Cibinong	3.19	240	P	Pn	07 21 48.8	-0.1
MRSI	Marisa	5.08	250	P	Pn	07 22 19.2	+4.3
LUWI	Luwuk	5.10	231	P	Pn	07 22 21.0	+5.9
KAKA	Kakadu	15.86	159	*e*Pn	Pn	07 24 38.4	-2.1
	36nm,0.6s						
WRA	Warramunga Arr	23.23	162	P	P	07 26 01.7	-1.1
	6.7nm,0.5s,mb4.2,baz=341,slow=11,SNR=54						
ASAR	Alice Springs	26.64	165	P	P	07 26 34.1	+0.4
	0.7nm,0.3s,mb3.7,baz=348,slow=12,SNR=16						
ASAR				PcP	PcP	07 29 57.8	+1.4
	0.3nm,0.5s,baz=347,slow=2.1,SNR=4.2						
CMAR	Chiang Mai Arr	31.67	303	P	P	07 27 18.6	+0.1
	1.4nm,0.5s,mb4.0,baz=115,slow=6.7,SNR=11						
CHTO	Chiang Mai	31.83	303	*e*P	P	07 27 19.6	-0.4
	5.1nm,0.8s,mb4.3						
KSRS	Korea Array	35.10	2	P	P	07 27 48.6	+0.5
	1.5nm,0.4s,mb4.1,baz=175,slow=10.0,SNR=7.5						
STKA	Stephens Creek	36.71	159	P	P	07 28 00.8	-1.1
	4.1nm,0.6s,mb4.5,baz=324,slow=6.9,SNR=10.0						
STKA	Stephens Creek	36.71	159	*e*P	P	07 28 00.9	-1.0
	0.9nm,0.6s,mb3.9						
ARMA	Armidale	40.20	146	*e*P	P	07 28 31.8	+0.5
	2.7nm,0.5s,mb4.3						
SONM	Songino Array	48.74	342	P	P	07 29 39.8	+0.6
	0.7nm,0.5s,mb3.8,baz=158,slow=9.4,SNR=3.6						
PETK	Petropavlovsk-	56.84	22	P	P	07 30 39.6	+0.9
	2.8nm,0.8s,mb4.4,baz=128,slow=4.3,SNR=5.0						
MKAR	Makanchi Array	58.81	326	P	P	07 30 52.8	+0.1
	1.3nm,0.4s,mb4.3,baz=117,slow=7.5,SNR=9.2						
ZALV	Zalesovo Beam	61.95	333	P	P	07 31 13.2	-0.7
	0.9nm,0.4s,mb4.2,baz=92,slow=6.1,SNR=4.5						

KURK	Kurchatov	63.03	328	*e*P	P	07 31 21.1	-0.1
	3.4nm,0.5s,mb4.5						
BVAR	Borovoye Array	68.60	327	P	P	07 31 55.9	-1.1
	0.6nm,0.4s,mb3.8,baz=143,slow=10,SNR=3.9						
ABKAR	Abkulak array	73.33	321	*e*P	P	07 32 25.9	+0.2
	0.5nm,0.3s,mb3.8						
ARCES	ARCESS Array B	91.88	340	P	P	07 34 02.4	+0.6
	3.6nm,1.0s,mb4.5,baz=82,slow=6.5,SNR=2.6						
ARCES	ARCESS Array B	91.88	340	P	P	07 34 02.4	+0.6
FINES	FINESS Array B	93.17	332	P	P	07 34 09.6	+1.7
	3.7nm,1.0s,mb4.7,baz=70,slow=2.2,SNR=4.2						

NNC 27 07:25:21.1±2.7, 41°.87N×78°.25E, h0km, mb3.5, mpv3.2, 5C-1D, Error ellipse: s-maj=21.9km s-min=15.3km az=78.0, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	1.65	325	⇑P	Pn	07 25 51.5	+0.2
	15nm,0.3s						
KNDC				⇓S	Sn	07 26 13.4	+0.2
	176nm,0.6s						
TKM2	Tokmak 2	2.23	299	⇑P	Pn	07 25 59.1	-0.2
	7.4nm,0.3s						
TKM2				⇑S	Sn	07 26 29.5	+2.0
	46nm,0.4s						
KK31	Karatay Array	5.86	285	⇑Pg	Pg	07 27 06.1	-7.2
	0.5nm,0.5s,baz=99,slow=28,SNR=4.6						
KK31				⇑Lg		07 28 24.4	
	5.1nm,0.7s,baz=93,slow=29,SNR=15						

*IDC **27** 07:35:00.7±1.5, 13°.34N×120°.22E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/21, mbtmp4.0/3, Error ellipse: s-maj=34.7km s-min=16.9km az=106.0*
*ISCJB **27** 07:35:02.7±1.0, 13°.44N±0°.07×120°.28E±0°.08, h25km±12km, mb4.0/3, Error ellipse: s-maj=14.6km s-min=9.6km az=40.2*
*MAN **27** 07:35:02, 13°.64N×120°.22E, h33km, mb4.4, ML3.2, MS3.1*

ISC 27 07:35:02.6±1.3, 13°.40N±0°.08×120°.33E±0°.08, h13km±12km, n11, σ0=79/13, mb4.0/3, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.34	346	*e*P	Pg	07 35 08.5	-1.0
TGY	Tagaytay City	0.91	40	Pg	Pg	07 35 20.5	+0.2
TGY	Tagaytay City	0.91	40	⇓*e*P	Pg	07 35 20.4	+0.2
BUSP	Coron	1.40	185	*e*P	Pn	07 35 28.5	+0.7
BUSP				*e*S	Sn	07 35 44.7	-1.5
BOAC	Boac	1.48	88	*e*P	Pn	07 35 29.0	+0.1
BOAC				*e*S	Sn	07 35 47.3	-0.8
OTRP	Odiongan	1.95	122	*e*P	Pn	07 35 36.9	+1.5
ENPP	El Nido	2.36	202	*e*P	Pn	07 35 41.7	+0.6
CUYO	Cuyo Island	2.63	165	*e*P	Pn	07 35 44.8	0.0
WRA	Warramunga Arr	35.89	157	P	P	07 42 02.0	-0.6
	1.8nm,0.5s,mb4.2,baz=333,slow=10,SNR=11						
SONM	Songino Array	36.24	344	P	P	07 42 05.9	+0.5
	0.8nm,0.5s,mb3.9,baz=156,slow=7.6,SNR=3.8						
ASAR	Alice Springs	39.16	160	P	P	07 42 30.6	+0.3
	1.5nm,0.5s,mb4.0,baz=339,slow=7.0,SNR=30						

*IDC **27** 07:43:12.9±1.4, 13°.31N×120°.30E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/21, mbtmp3.9/3, Error ellipse: s-maj=32.7km s-min=11.6km az=114.0*
*MAN **27** 07:43:13, 13°.65N×120°.19E, h46km, mb4.3, ML3.1, MS2.9*
*ISCJB **27** 07:43:14.3±1.2, 13°.45N±0°.06×120°.31E±0°.07, h14km±9km, mb4.0/3, Error ellipse: s-maj=13.2km s-min=8.2km az=30.0*

ISC 27 07:43:14.8±1.3, 13°.42N±0°.05×120°.37E±0°.08, h10km±11km, n9, σ0=95/11, mb4.0/3, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.33	339	*e*P	Pg	07 43 21.4	0.0
TGY	Tagaytay City	0.87	39	Pg	Pg	07 43 31.5	-0.1
	181nm,0.3s,baz=186,slow=8.8,SNR=6.2						
TGY				Lg		07 43 46.4	
	286nm,0.3s,baz=146,slow=22,SNR=14						
TGY	Tagaytay City	0.87	39	*e*P	Sn	07 43 46.2	+0.4
BUSP	Coron	1.42	187	*e*P	Pn	07 43 39.7	-1.0
BUSP				*e*S	Sb	07 44 00.7	+1.1
BOAC	Boac	1.44	88	*e*P	Pn	07 43 40.0	-0.8
BOAC				*e*S	Sn	07 43 59.7	0.0
OTRP	Odiongan	1.93	123	*e*P	Pn	07 43 50.4	+2.8
WRA	Warramunga Arr	35.89	157	P	P	07 50 13.9	-1.3
	1.4nm,0.7s,mb4.0,baz=334,slow=9.9,SNR=17						
SONM	Songino Array	36.23	344	P	P	07 50 18.5	+0.7
	0.5nm,0.4s,mb3.8,baz=163,slow=10,SNR=2.5						
ASAR	Alice Springs	39.17	160	P	P	07 50 42.5	-0.5
	1.6nm,0.5s,mb4.0,baz=338,slow=6.7,SNR=35						

IDC 27 07:53:51.7±9.2, 30°.95S×179°.24W, h411km±111km, mb2.8/2, mb1 2.9/3, mb1mx2.8/16, mbtmp2.9/3, Error ellipse: s-maj=110.2km s-min=49.6km az=176.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.89	201	P	P	07 55 45.6	+0.2
	1.2nm,0.3s,baz=305,slow=22,SNR=30						
URZ				S	S	07 57 18.6	-0.1
	0.7nm,0.3s,baz=320,slow=22,SNR=7.3						
STKA	Stephens Creek	33.32	258	P	P	07 59 54.4	+1.1
	2.0nm,0.8s,baz=97,slow=8.1,SNR=3.1						
ASAR	Alice Springs	42.02	268	P	P	08 01 04.2	-1.0
	0.2nm,0.4s,baz=110,slow=7.4,SNR=4.3						
FINES	FINESS Array B	145.28	339	PKPbc	PKPbc	08 12 40.5	-0.8
	1.4nm,0.6s,baz=48,slow=4.0,SNR=4.5						

IDC 27 07:56:42.5±1.4, 1°.87S×126°.44E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.7/18, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=171.8km s-min=21.3km az=66.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.55	157	P	Pn	08 01 11.1	-2.2
	0.2nm,0.3s,baz=335,slow=11,SNR=15						
ASAR	Alice Springs	22.85	162	P	P	08 01 48.0	+0.6
	1.4nm,0.7s,baz=346,slow=12,SNR=15						
STKA	Stephens Creek	33.10	156	P	P	08 03 20.6	+0.3
	1.5nm,0.8s,baz=337,slow=7.7,SNR=3.3						
MKAR	Makanchi Array	62.02	327	P	P	08 07 04.8	+0.1
	0.3nm,0.3s,baz=128,slow=9.3,SNR=3.8						
ZALV	Zalesovo Beam	65.44	334	P	P	08 07 27.1	-0.1
	0.6nm,0.5s,baz=142,slow=7.3,SNR=2.8						

*NEIC **27** 08:00:25.9, 16°.46N×100°.19W, h13km, MD3.7(MEX), After MEX.*

MEX 27 08:00:25.9±0.7, 16°.46N×100°.19W, h13km±17km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.52	38	*i* P	Pg	08 00 34.4	-1.7
ACX				*i* S	Sg	08 00 40.9	-2.2
ACX	Acapulco	0.52	38	*i* P	Pg	08 00 34.4	-1.7
ACX				*i* S	Sg	08 00 40.9	-2.2
CAIG	El Cayaco	0.59	353	*i* P	Pg	08 00 35.6	-1.9
CAIG				*i* S	Sg	08 00 44.1	-1.3
CAIG	El Cayaco	0.59	353	*i* P	Pg	08 00 35.6	-1.9
CAIG				*i* S	Sg	08 00 44.1	-1.3
MEIG	Mezcala	1.56	20	*i* P	Pn	08 00 50.2	-3.1
MEIG				*i* S	Sn	08 01 07.8	-5.6
ZIIG	Zihuatanejo	1.67	313	*e*P	Pn	08 00 51.8	-3.0
ZIIG				*i* S	Sn	08 01 12.0	-4.2
ZIIG	Zihuatanejo	1.67	313	*e*P	Pn	08 00 51.8	-3.0
ZIIG				*i* S	Sn	08 01 12.0	-4.2
PNIG	Pinotepa	1.98	92	*i* P	Pn	08 00 55.8	-3.3
PNIG				*i* S	Sn	08 01 19.3	-4.4
PNIG	Pinotepa	1.98	92	*i* P	Pn	08 00 55.8	-3.3
PNIG				*i* S	Sn	08 01 19.3	-4.4
PLIG	Platanillo	2.03	19	*e*P	Pn	08 00 57.0	-2.9
PLIG				*i* S	Sn	08 01 21.1	-4.0
PLIG	Platanillo	2.03	19	*e*P	Pn	08 00 57.0	-2.9
PLIG				*i* S	Sn	08 01 21.1	-4.0
UTMO	Huajuapan	2.66	59	*i* P	Pn	08 01 05.9	-2.5
UTMO				*i* S	Sn	08 01 36.8	-3.7

MZVM		2.87	18	*e*P	Pn	08 01 08.8	-2.5
MZVM				*i* S	Sn	08 01 42.1	-3.6
PTVM	Pico Tres Padr	3.28	18	*e*P	Pn	08 01 14.9	-2.1
PTVM				*i* S	Sn	08 01 52.9	-3.1
PTVM	Pico Tres Padr	3.28	18	*e*P	Pn	08 01 14.9	-2.1
PTVM				*i* S	Sn	08 01 52.9	-3.1
VHO	Vista Hermosa	3.37	79	*e*P	Pn	08 01 15.7	-2.4
VHO				*i* S	Sn	08 01 54.2	-3.8
VHO	Vista Hermosa	3.37	79	*e*P	Pn	08 01 15.7	-2.4
VHO				*i* S	Sn	08 01 54.2	-3.8
IIO	Organos	3.42	24	*e*P	Pn	08 01 16.8	-2.0
IIO				*i* S	Sn	08 01 55.6	-3.6
IIO	Organos	3.42	24	*e*P	Pn	08 01 16.8	-2.0
IIO				*i* S	Sn	08 01 55.6	-3.6

*IDC **27** 08:04:17.9±0.7, 31°.81S×68°.74W, h0km, mb3.9/5, mb1 4.1/8, mb1mx4.0/16, mbtmp3.8/8, ML3.9/3, Error ellipse: s-maj=21.1km s-min=8.0km az=155.0*
*GUC **27** 08:04:21.7±0.8, 31°.71S×68°.76W, h2km±5km, ML4.1*
*ISCJB **27** 08:04:22.1±0.6, 31°.68S±0°.03×68°.37W±0°.05, h40km±6km, mb3.9/6, Error ellipse: s-maj=7.6km s-min=5.1km az=29.8*
*NEIC **27** 08:04:22.6±0.8, 31°.69S×68°.43W, h27km±7km, mb4.1/2, MD3.8(SJA), ML4.1(GUC), Error ellipse: s-maj=8.6km s-min=6.6km az=114.0*
NEIC Felt [III] at San Juan.

ISC 27 08:04:22.6±0.8, 31°.68S±0°.04×68°.40W±0°.05, h27km±7km, n51, σ1=19/68, mb3.9/6, 3C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	0.15	62	Pg	Pb	08 04 27.6	-0.4
	31nm,0.3s,baz=252,slow=14,SNR=4203						
CFAA				Lg		08 04 33.6	
	154nm,0.3s,baz=242,slow=19,SNR=100						
JACH	Jahuel	2.12	241	*e*P	Pn	08 04 54.0	-2.2
JACH	Jahuel	2.12	241	*e*P	Pn	08 04 54.0	-2.2
FCH	Farellones	2.30	224	⇑*i*P	Pn	08 05 02.3	+3.6
FCH				*i* S	Sn	08 05 30.2	+4.2
FCH				AML	AML	08 05 38.3	
	comp=E,714nm,0.5s						
PEL	Peldehue	2.43	232	⇓*i*P	Pn	08 04 59.2	-1.3
PEL				*e*S	Sn	08 05 28.2	-1.1
PEL				AML	AML	08 05 36.3	
	comp=E,3μm,0.4s						
CLCH	Cerro Calan	2.49	226	⇓*i*P	Pn	08 05 01.4	0.0
CLCH				*i* S	Sn	08 05 30.7	-0.1
CLCH				AML	AML	08 05 37.2	
	comp=E,3μm,0.6s						
LACH	Col Las Americ	2.53	225	*e*P	Pn	08 05 02.3	+0.5
LACH				*e*S	Sn	08 05 32.7	+1.0
FSR	Penalolen	2.54	224	*e*P	Pn	08 05 03.0	+0.9
FSR				*e*S	Sn	08 05 33.0	+0.9
FSR	Penalolen	2.54	224	*e*P	Pn	08 05 03.0	+0.9
FSR				*e*S	Sn	08 05 33.0	+0.9
FSR				AML	AML	08 05 34.7	
	comp=N,600nm,0.7s						
TLL	Tololo Astrono	2.56	305	*e*P	Pn	08 05 02.5	+0.2
TLL	Tololo Astrono	2.56	305	*e*P	Pn	08 05 02.5	+0.2
TLL				AML	AML	08 05 45.6	
	comp=N,2μm,0.7s						
ROCH	El Roble	2.56	239	⇑*i*P	Pn	08 05 01.8	-0.5
ROCH				AML	AML	08 05 37.3	
	comp=N,5μm,0.6s						
OVCH	Ovalle	2.63	293	*e*P	Pn	08 05 02.6	-0.6
OVCH				*e*S	Sn	08 05 33.9	-0.3
OVCH	Ovalle	2.63	293	*e*P	Pn	08 05 02.6	-0.6
OVCH				*e*S	Sn	08 05 33.9	-0.3
PCH	Pirque	2.64	222	*e*P	Pn	08 05 04.0	+0.6
PCH				*e*S	Sn	08 05 35.5	+1.0
PCH	Pirque	2.64	222	*e*P	Pn	08 05 04.0	+0.6
PCH				*e*S	Sn	08 05 35.5	+1.0
LMEL	Las Melosas	2.65	215	*e*P	Pn	08 05 04.4	+0.9
LMEL				*e*S	Sn	08 05 36.9	+2.2
LMEL	Las Melosas	2.65	215	*e*P	Pn	08 05 04.4	+0.9
LMEL				*e*S	Sn	08 05 36.9	+2.2
LMEL				AML	AML	08 05 41.4	
	comp=E,618nm,0.7s						
CHNG	Los Chungos	2.65	265	⇑*i*P	Pn	08 04 56.7	-6.8
CHNG				*i* S	Sn	08 05 28.1	-6.7
ANTU	Antumapu	2.67	224	*e*P	Pn	08 05 03.8	0.0
ANTU				*e*S	Sn	08 05 35.9	+0.6
ANTU	Antumapu	2.67	224	*e*P	Pn	08 05 03.8	0.0
ANTU				*e*S	Sn	08 05 35.9	+0.6
ANTU				AML	AML	08 05 41.4	
	comp=N,1μm,0.5s						
TACH	Talagante	2.91	227	*e*P	Pn	08 05 06.8	-0.3
TACH				*e*S	Sn	08 05 41.0	-0.3
TACH	Talagante	2.91	227	*e*P	Pn	08 05 06.8	-0.3
TACH				*e*S	Sn	08 05 41.0	-0.3
IHA	Instituto Hidr	3.06	243	*e*P	Pn	08 05 08.2	-1.0
IHA				*e*S	Sn	08 05 43.4	-1.4
IHA	Instituto Hidr	3.06	243	*e*P	Pn	08 05 08.2	-1.0
IHA				*e*S	Sn	08 05 43.4	-1.4
CACH	El Canelo	3.06	217	*e*P	Pn	08 05 10.0	+0.9
CACH	El Canelo	3.06	217	*e*P	Pn	08 05 10.0	+0.9
LCO	Las Campanas	3.32	323	*e*Pn	Pn	08 05 14.2	+1.4
LCO				*e*Sn	Sn	08 05 55.6	+4.3
LCO	Las Campanas	3.32	323	*e*P	Pn	08 05 14.4	+1.7
LCO				*e*S	Sn	08 05 53.9	+2.6
LCO				AML	AML	08 06 04.2

mb1 3.8/4, mb1mx3.6/24, mbtmp3.7/4, ML3.5/1, MS2.8/1, Ms1 2.9/1, ms1mx2.2/36, Error ellipse: s-maj=37.6km s-min=18.2km az=93.0
*THE **27** 08:28:29.1, 39.°18N×17.°21E, h31km±61km, ML3.9/4, Error ellipse: s-maj=61.5km s-min=2.5km az=0.0*
ISC 27 08:28:27.9±0.5, 39.°18N±0.°02×17.°19E±0.°02, h17km±4km, n187, σ0°89/234, 23C-12D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SERS	**Sersale**	**0.41**	**250**	⇓*i*Pg	**Pg**	**08 28 36.5**	**+0.2**
SERS				Sg	**Sg**	**08 28 42.0**	**0.0**
	2μm,0.6s						
SERS	**Sersale**	**0.41**	**250**	⇓*i*Pg	**Pg**	**08 28 36.5**	**+0.2**
SERS				Sg	**Sg**	**08 28 42.0**	**0.0**
	2μm,0.6s						
PIPA	**Pietrapaola**	**0.42**	**317**	⇑*i*Pg	**Pg**	**08 28 36.5**	**+0.1**
PIPA				Sg	**Sg**	**08 28 42.8**	**+0.6**
	21μm,0.7s						
GRI	**Girifalco**	**0.70**	**239**	Pg	**Pg**	**08 28 41.6**	**+0.1**
	2μm,1.0s						
GRI	**Girifalco**	**0.70**	**239**	Pg	**Pg**	**08 28 41.6**	**+0.1**
	2μm,1.0s						
CARO	**Carolei**	**0.76**	**276**	⇓*e*Pg	**Pg**	**08 28 42.2**	**-0.4**
	6μm,1.4s						
CARO	**Carolei**	**0.76**	**276**	⇓*e*Pg	**Pg**	**08 28 42.2**	**-0.4**
	6μm,1.4s						
PLAC	**Placanica**	**0.94**	**219**	Pg	**Pg**	**08 28 46.2**	**+0.2**
PLAC				Sg	**Sg**	**08 28 57.1**	**-1.2**
	2μm,1.1s						
PLAC	**Placanica**	**0.94**	**219**	Pg	**Pg**	**08 28 46.2**	**+0.2**
PLAC				Sg	**Sg**	**08 28 57.1**	**-1.2**
	2μm,1.1s						
ORI	**Oriolo Calabro**	**1.05**	**327**	Pg	**Pg**	**08 28 47.9**	**-0.3**
	3μm,0.4s						
ORI	**Oriolo Calabro**	**1.05**	**327**	Pg	**Pg**	**08 28 47.9**	**-0.3**
	3μm,0.4s						
JOPP	**Joppolo**	**1.17**	**241**	Pg	**Pn**	**08 28 49.8**	**+0.5**
	964nm,1.0s						
JOPP	**Joppolo**	**1.17**	**241**	Pg	**Pn**	**08 28 49.8**	**+0.5**
	964nm,1.0s						
SCHR	**S. Chirico Rap**	**1.33**	**320**	Pg	**Pn**	**08 28 52.5**	**+0.9**
	823nm,0.7s						
SCHR	**S. Chirico Rap**	**1.33**	**320**	Pg	**Pn**	**08 28 52.5**	**+0.9**
	823nm,0.7s						
SCTE	**Santa Cesarea**	**1.33**	**48**	Pg	**Pn**	**08 28 50.5**	**-1.1**
SCTE				Sg	**Sn**	**08 29 09.9**	**+1.0**
SCTE	**Santa Cesarea**	**1.33**	**48**	Pg	**Pn**	**08 28 50.5**	**-1.1**
SCTE				Sg	**Sn**	**08 29 09.9**	**+1.0**
CUC	**Castrocucco**	**1.33**	**308**	Pg	**Pn**	**08 28 52.3**	**+0.6**
	2μm,0.9s						
CUC	**Castrocucco**	**1.33**	**308**	Pg	**Pn**	**08 28 52.3**	**+0.6**
	2μm,0.9s						
TAR1	**Taranto**	**1.35**	**3**	*e*Pn	**Pn**	**08 28 50.1**	**-1.7**
TAR1				*e*Sn	**Sn**	**08 29 12.0**	**+2.7**
SOI	**Samo**	**1.42**	**219**	Pg	**Pn**	**08 28 53.6**	**+0.8**
	933nm,1.3s						
SOI	**Samo**	**1.42**	**219**	Pg	**Pn**	**08 28 53.6**	**+0.8**
	933nm,1.3s						
SIRI	**Monte Sirino -**	**1.43**	**315**	Pg	**Pn**	**08 28 53.8**	**+0.9**
	3μm,1.8s						
SIRI	**Monte Sirino -**	**1.43**	**315**	Pg	**Pn**	**08 28 53.8**	**+0.9**
	3μm,1.8s						
MATE	**Matera**	**1.51**	**346**	Pg	**Pn**	**08 28 53.6**	**-0.5**
	305nm,0.3s						
MATE	**Matera**	**1.51**	**346**	Pg	**Pn**	**08 28 53.6**	**-0.5**
	305nm,0.3s						
MIGL	**Miglionico**	**1.53**	**338**	Pg	**Pn**	**08 28 54.1**	**-0.3**
	5μm,0.7s						
MIGL	**Miglionico**	**1.53**	**338**	Pg	**Pn**	**08 28 54.1**	**-0.3**
	5μm,0.7s						
MPAZ	**Palizzi**	**1.54**	**217**	Pg	**Pn**	**08 28 55.0**	**+0.6**
	451nm,0.8s						
MPAZ	**Palizzi**	**1.54**	**217**	Pg	**Pn**	**08 28 55.0**	**+0.6**
	451nm,0.8s						
MTSN	**Montesano sull**	**1.55**	**315**	Pg	**Pn**	**08 28 55.5**	**+0.9**
	776nm,0.7s						
MTSN	**Montesano sull**	**1.55**	**315**	Pg	**Pn**	**08 28 55.5**	**+0.9**
	776nm,0.7s						
PTRP	**Pietrapertosa**	**1.59**	**327**	Pg	**Pn**	**08 28 56.4**	**+1.2**
	2μm,0.8s						
PTRP	**Pietrapertosa**	**1.59**	**327**	Pg	**Pn**	**08 28 56.4**	**+1.2**
	2μm,0.8s						
MSRU	**Castanea**	**1.60**	**236**	Pg	**Pn**	**08 28 55.1**	**-0.2**
	925nm,0.9s						
MSRU	**Castanea**	**1.60**	**236**	Pg	**Pn**	**08 28 55.1**	**-0.2**
	925nm,0.9s						
NOCI	**Noci**	**1.61**	**357**	Pg	**Pn**	**08 28 57.1**	**+1.7**
	2μm,0.7s						
NOCI	**Noci**	**1.61**	**357**	Pg	**Pn**	**08 28 57.1**	**+1.7**
	2μm,0.7s						
MTTG	**Motta San Giov**	**1.66**	**225**	Pg	**Pn**	**08 28 56.7**	**+0.6**
	500nm,0.9s						
MTTG	**Motta San Giov**	**1.66**	**225**	Pg	**Pn**	**08 28 56.7**	**+0.6**
	500nm,0.9s						
BULG	**Bulgheria - Ca**	**1.66**	**303**	Pg	**Pn**	**08 28 56.3**	**+0.2**
	700nm,0.7s						
BULG	**Bulgheria - Ca**	**1.66**	**303**	Pg	**Pn**	**08 28 56.3**	**+0.2**
	700nm,0.7s						
SG1	**Sgolgore (BA)**	**1.70**	**347**	*e*Pn	**Pn**	**08 28 57.4**	**+0.7**
SG1				*e*Sn	**Sn**	**08 29 22.1**	**+4.0**
AMUR	**Altamura**	**1.78**	**346**	Pg	**Pn**	**08 28 57.5**	**-0.3**
	1μm,0.7s						
AMUR	**Altamura**	**1.78**	**346**	Pg	**Pn**	**08 28 57.5**	**-0.3**
	1μm,0.7s						
CMPR	**Campora**	**1.84**	**309**	Pg	**Pn**	**08 28 58.5**	**-0.2**
ACER	**Acerenza**	**1.87**	**330**	Pg	**Pn**	**08 28 59.6**	**+0.6**
ACER	**Acerenza**	**1.87**	**330**	Pg	**Pn**	**08 28 59.6**	**+0.6**
LLI	**Lipari**	**1.90**	**248**	Pg	**Pn**	**08 28 59.6**	**+0.2**
	2μm,0.9s						
VPL	**Vulcano Piano**	**1.90**	**246**	Pg	**Pn**	**08 28 59.2**	**-0.2**
	1μm,1.2s						
BAI	**Bari**	**1.94**	**353**	*e*Pn	**Pn**	**08 28 59.6**	**-0.4**
CDRU	**Civita di Ruta**	**1.95**	**313**	Pg	**Pn**	**08 28 59.8**	**-0.3**
	219nm,0.6s						
MMME	**Mongiuffi-Meli**	**1.96**	**231**	Pg	**Pn**	**08 29 01.3**	**+1.0**
	508nm,1.1s						
SGO	**Sicignano**	**2.00**	**314**	Pg	**Pn**	**08 29 02.3**	**+1.5**
	284nm,0.6s						
SGO	**Sicignano**	**2.00**	**314**	Pg	**Pn**	**08 29 02.3**	**+1.5**
	284nm,0.6s						
CDT	**Castel del Mon**	**2.02**	**340**	*e*Pn	**Pn**	**08 29 00.3**	**-0.8**
MRVN	**Minervino Murg**	**2.03**	**338**	Pg	**Pn**	**08 29 00.3**	**-0.9**
	444nm,0.5s						
MRLC	**Muro Lucano**	**2.04**	**321**	Pg	**Pn**	**08 29 02.1**	**+0.7**
KEK	**Kerkira**	**2.09**	**74**	*e*P	**Pn**	**08 29 05.6**	**+3.5**
KEK	**Kerkira**	**2.09**	**74**	P	**Pn**	**08 29 01.1**	**-1.0**
KEK				S	**Sn**	**08 29 26.6**	**-1.1**
KEK	**Kerkira**	**2.09**	**74**	P	**Pn**	**08 29 01.1**	**-1.0**
KEK				S	**Sn**	**08 29 26.6**	**-1.1**
MCRV	**Calabrutti - M**	**2.23**	**317**	Pg	**Pn**	**08 29 04.5**	**+0.6**
	593nm,1.1s						
SRN	**Sarande**	**2.29**	**71**	*i* P	**Pn**	**08 29 03.9**	**-0.8**
SRN	**Sarande**	**2.29**	**71**	*i* P	**Pn**	**08 29 03.9**	**-0.8**
MNO	**Monte Soro**	**2.32**	**238**	Pg	**Pn**	**08 29 06.8**	**+1.6**
	747nm,2.2s						
IGT	**Igoumenitsa**	**2.46**	**81**	P	**Pn**	**08 29 07.2**	**0.0**
IGT	**Igoumenitsa**	**2.46**	**81**	P	**Pn**	**08 29 07.2**	**0.0**
SSY	**Sortino**	**2.62**	**220**	Pg	**Pn**	**08 29 07.6**	**-1.8**
	133nm,0.3s						
LKD2	**Lefkada island**	**2.73**	**97**	P	**Pn**	**08 29 10.5**	**-0.4**
LKD2	**Lefkada island**	**2.73**	**97**	P	**Pn**	**08 29 10.5**	**-0.4**
HAVL	**Avola**	**2.75**	**217**	Pg	**Pn**	**08 29 09.3**	**-1.8**
	115nm,0.3s						
VLS	**Valsamata**	**2.85**	**110**	*e*P	**Pn**	**08 29 11.2**	**-1.2**
VLS	**Valsamata**	**2.85**	**110**	P	**Pn**	**08 29 11.4**	**-1.0**
VLS	**Valsamata**	**2.85**	**110**	P	**Pn**	**08 29 11.4**	**-1.0**
JAN	**Janina**	**2.88**	**79**	*e*P	**Pn**	**08 29 12.9**	**0.0**
KFL	**Anninata**	**3.02**	**110**	P	**Pn**	**08 29 14.1**	**-0.7**
KFL	**Anninata**	**3.02**	**110**	P	**Pn**	**08 29 14.1**	**-0.7**
KBN	**Korca**	**3.12**	**61**	*i* P	**Pb**	**08 29 27.8**	**+4.9**
ULC	**Ulcinj**	**3.19**	**29**	⇑*i*Pn	**Pn**	**08 29 16.4**	**-0.8**
ULC				*e*Sn	**Sn**	**08 29 55.0**	**+0.2**
ULC	**Ulcinj**	**3.19**	**29**	⇑*i*Pn	**Pn**	**08 29 16.4**	**-0.8**
ULC				*e*Sn	**Sn**	**08 29 55.0**	**+0.2**
NEST	**Nestorio**	**3.22**	**66**	P	**Pn**	**08 29 18.3**	**+0.7**
NEST	**Nestorio**	**3.22**	**66**	P	**Pn**	**08 29 18.3**	**+0.7**
BUM	**Brajici-Budva**	**3.38**	**22**	⇑*i*Pn	**Pn**	**08 29 18.6**	**-1.1**
BUM				*e*Sn	**Sn**	**08 30 00.4**	**+1.0**
BUM	**Brajici-Budva**	**3.38**	**22**	⇑*i*Pn	**Pn**	**08 29 18.6**	**-1.1**
BUM				*e*Sn	**Sn**	**08 30 00.4**	**+1.0**
HCY	**Herceg Novi**	**3.41**	**17**	⇓*i*Pn	**Pn**	**08 29 19.9**	**-0.3**
HCY				*e*Sn	**Sn**	**08 30 01.5**	**+1.3**
HCY	**Herceg Novi**	**3.41**	**17**	⇓*i*Pn	**Pn**	**08 29 19.9**	**-0.3**
HCY				*e*Sn	**Sn**	**08 30 01.5**	**+1.3**
PUK	**Puka**	**3.52**	**35**	*i* P	**Pn**	**08 29 21.6**	**-0.2**
PUK	**Puka**	**3.52**	**35**	*i* P	**Pn**	**08 29 21.6**	**-0.2**
RLS	**Riolos of Patr**	**3.54**	**107**	*e*P	**Pn**	**08 29 20.5**	**-1.4**
FNA	**Florina**	**3.59**	**62**	P	**Pn**	**08 29 23.1**	**+0.4**
FNA				S	**Sn**	**08 30 04.6**	**-0.2**
FNA	**Florina**	**3.59**	**62**	P	**Pn**	**08 29 23.1**	**+0.4**
FNA				S	**Sn**	**08 30 04.6**	**-0.2**
PDG	**Podgorica**	**3.61**	**25**	⇑*i*Pn	**Pn**	**08 29 22.2**	**-0.7**
PDG				*e*Sn	**Sn**	**08 30 05.1**	**0.0**
TTG	**Podgorica**	**3.61**	**25**	⇑*i*Pn	**Pn**	**08 29 22.2**	**-0.7**
TTG				*e*Sn	**Sn**	**08 30 05.1**	**0.0**
TTG	**Podgorica**	**3.61**	**25**	⇑*i*Pn	**Pn**	**08 29 22.2**	**-0.7**
TTG				*e*Sn	**Sn**	**08 30 05.1**	**0.0**
EVR	**Evrytania**	**3.61**	**93**	*e*P	**Pn**	**08 29 25.3**	**+2.4**
BIA	**Bitola**	**3.67**	**59**	P	**Pn**	**08 29 24.2**	**+0.5**
BIA				S	**Sn**	**08 30 05.3**	**-1.2**
BIA	**Bitola**	**3.67**	**59**	P	**Pn**	**08 29 24.2**	**+0.5**
BIA				S	**Sn**	**08 30 05.3**	**-1.2**
STON	**Ston**	**3.71**	**6**	*e*Pn	**Pn**	**08 29 22.3**	**-2.0**
STON				Sn	**Sn**	**08 30 03.4**	**-4.2**
STON	**Ston**	**3.71**	**6**	*e*Pn	**Pn**	**08 29 22.3**	**-2.0**
STON				Sn	**Sn**	**08 30 03.3**	**-4.2**
KZN	**Kozani**	**3.71**	**71**	*e*P	**Pn**	**08 29 27.6**	**+3.3**
KZN	**Kozani**	**3.71**	**71**	P	**Pn**	**08 29 24.6**	**+0.3**
KZN	**Kozani**	**3.71**	**71**	P	**Pn**	**08 29 24.6**	**+0.3**
THL	**Klokotos Trika**	**3.76**	**83**	*e*P	**Pn**	**08 29 26.2**	**+1.2**
THL	**Klokotos Trika**	**3.76**	**83**	P	**Pn**	**08 29 25.6**	**+0.6**
THL				S	**Sn**	**08 30 08.2**	**-0.7**
THL	**Klokotos Trika**	**3.76**	**83**	P	**Pn**	**08 29 25.6**	**+0.6**
THL				S	**Sn**	**08 30 08.2**	**-0.7**
EFP	**Efpalio**	**3.76**	**100**	*e*P	**Pn**	**08 29 25.2**	**+0.2**
EFP	**Efpalio**	**3.76**	**100**	P	**Pn**	**08 29 25.7**	**+0.7**
EFP	**Efpalio**	**3.76**	**100**	P	**Pn**	**08 29 25.7**	**+0.7**
KRUS	**Krusevo**	**3.80**	**54**	*i* Pn	**Pn**	**08 29 25.0**	**-0.5**
BRY	**Bratogost**	**3.86**	**15**	⇓*i*Pn	**Pn**	**08 29 26.0**	**-0.3**
BRY				*e*Sn	**Sn**	**08 30 11.7**	**+0.5**
BRY	**Bratogost**	**3.86**	**15**	⇓*i*Pn	**Pn**	**08 29 26.0**	**-0.3**
BRY				*e*Sn	**Sn**	**08 30 11.7**	**+0.5**
BCI	**Bajram Curri**	**3.86**	**34**	*i* P	**Pn**	**08 29 26.5**	**+0.1**
BCI	**Bajram Curri**	**3.86**	**34**	*i* P	**Pn**	**08 29 26.5**	**+0.1**
TRIZ	**Trizonia**	**3.91**	**100**	P	**Pn**	**08 29 27.6**	**+0.6**
TRIZ	**Trizonia**	**3.91**	**100**	P	**Pn**	**08 29 27.6**	**+0.6**
KALE	**Kalithea**	**3.95**	**100**	P	**Pn**	**08 29 28.8**	**+1.2**
KALE	**Kalithea**	**3.95**	**100**	P	**Pn**	**08 29 28.8**	**+1.2**
AGG	**Agios Georgios**	**4.00**	**91**	*e*P	**Pn**	**08 29 29.6**	**+1.2**
AGG	**Agios Georgios**	**4.00**	**91**	P	**Pn**	**08 29 29.3**	**+0.9**
AGG	**Agios Georgios**	**4.00**	**91**	P	**Pn**	**08 29 29.3**	**+0.9**
PVY	**Plav**	**4.01**	**31**	⇑*i*Pn	**Pn**	**08 29 28.6**	**+0.1**
PVY				*e*Sn	**Sn**	**08 30 15.3**	**+0.3**
PVY	**Plav**	**4.01**	**31**	⇑*i*Pn	**Pn**	**08 29 28.6**	**+0.1**
PVY				*e*Sn	**Sn**	**08 30 15.3**	**+0.3**
LIT	**Litokhoron**	**4.20**	**76**	P	**Pn**	**08 29 31.6**	**+0.6**
LIT	**Litokhoron**	**4.20**	**76**	P	**Pn**	**08 29 31.6**	**+0.6**
BEY	**Berane**	**4.22**	**28**	⇑*i*Pn	**Pn**	**08 29 32.5**	**+1.2**
BEY				*e*Sn	**Sn**	**08 30 20.7**	**+0.6**
IVA	**Berane**	**4.22**	**28**	⇑*i*Pn	**Pn**	**08 29 32.5**	**+1.2**
IVA				*e*Sn	**Sn**	**08 30 20.7**	**+0.6**
IVA	**Berane**	**4.22**	**28**	⇑*i*Pn	**Pn**	**08 29 32.5**	**+1.2**
IVA				*e*Sn	**Sn**	**08 30 20.7**	**+0.6**
UPM	**Unac-Piva**	**4.22**	**17**	⇑*i*Pn	**Pn**	**08 29 32.1**	**+0.7**
UPM				*e*Sn	**Sn**	**08 30 20.6**	**+0.4**
UPM	**Unac-Piva**	**4.22**	**17**	⇑*i*Pn	**Pn**	**08 29 32.1**	**+0.7**
UPM				*e*Sn	**Sn**	**08 30 20.6**	**+0.4**
GUR	**Goura**	**4.23**	**105**	*e*P	**Pn**	**08 29 32.6**	**+1.2**
GUR	**Goura**	**4.23**	**105**	P	**Pn**	**08 29 32.4**	**+1.0**
GUR	**Goura**	**4.23**	**105**	P	**Pn**	**08 29 32.4**	**+1.0**
ITM	**Ithomi**	**4.24**	**117**	*e*P	**Pn**	**08 29 30.0**	**-1.5**
ITM	**Ithomi**	**4.24**	**117**	P	**Pn**	**08 29 31.5**	**0.0**
ITM	**Ithomi**	**4.24**	**117**	P	**Pn**	**08 29 31.5**	**0.0**
DSF	**Desfina**	**4.24**	**99**	P	**Pn**	**08 29 32.6**	**+1.0**
DSF	**Desfina**	**4.24**	**99**	P	**Pn**	**08 29 32.6**	**+1.0**
PYL	**PYLOS**	**4.26**	**121**	*e*P	**Pn**	**08 29 30.7**	**-1.2**
PYL	**PYLOS**	**4.26**	**121**	P	**Pn**	**08 29 31.0**	**-0.9**
PYL	**PYLOS**	**4.26**	**121**	P	**Pn**	**08 29 31.0**	**-0.9**
GRG	**Griva**	**4.38**	**64**	P	**Pn**	**08 29 33.3**	**-0.2**
GRG	**Griva**	**4.38**	**64**	P	**Pn**	**08 29 33.3**	**-0.2**
PLE	**Pljevlja**	**4.47**	**21**	⇓*i*Pn	**Pn**	**08 29 35.4**	**+0.7**
PLE				*e*Sn	**Sn**	**08 30 26.4**	**+0.2**
PLE	**Pljevlja**	**4.47**	**21**	⇓*i*Pn	**Pn**	**08 29 35.4**	**+0.7**
PLE				*e*Sn	**Sn**	**08 30 26.4**	**+0.2**
LKR	**Lokris**	**4.56**	**95**	*e*P	**Pn**	**08 29 36.1**	**0.0**
SJES	**Sjenica**	**4.59**	**26**	*e*Pn	**Pn**	**08 29 38.0**	**+1.6**
LTK	**Loutraki**	**4.67**	**103**	*e*P	**Pn**	**08 29 37.6**	**0.0**
PLG	**Polygyros**	**4.97**	**74**	P	**Pn**	**08 29 41.0**	**-0.6**
PLG	**Polygyros**	**4.97**	**74**	P	**Pn**	**08 29 41.0**	**-0.6**
BBLS	**Lazići**	**4.97**	**19**	⇑*i*Pn	**Pn**	**08 29 41.2**	**-0.4**
DID	**Didima**	**5.04**	**107**	*e*P	**Pn**	**08 29 42.7**	**+0.1**
DID	**Didima**	**5.04**	**107**	P	**Pn**	**08 29 42.8**	**+0.2**
DID				S	**Sn**	**08 30 39.9**	**-0.5**
DID	**Didima**	**5.04**	**107**	P	**Pn**	**08 29 42.8**	**+0.2**
DID				S	**Sn**	**08 30 39.9**	**-0.5**
BARS	**Barje**	**5.04**	**42**	⇑*i*Pn	**Pn**	**08 29 42.6**	**-0.1**
VLI	**Velíai**	**5.17**	**117**	*e*P	**Pn**	**08 29 44.9**	**+0.6**
ATH	**Athens Observa**	**5.26**	**101**	*e*P	**Pn**	**08 29 46.0**	**+0.4**
DIVS	**Divibare**	**5.34**	**22**	P	**Pn**	**08 29 45.8**	**-1.0**
DIVS	**Divibare**	**5.34**	**22**	⇑*i*Pn	**Pn**	**08 29 45.9**	**-0.9**
VLY	**Voula,Athens**	**5.35**	**102**	*e*P	**Pn**	**08 29 46.5**	**-0.3**
NVLJ	**Novalja**	**5.65**	**343**	*e*Pn	**Pn**	**08 29 50.1**	**-0.8**
NVLJ				Sn	**Sn**	**08 30 51.8**	**-3.6**
NVLJ	**Novalja**	**5.65**	**343**	*e*Pn	**Pn**	**08 29 50.1**	**-0.8**
BOLS	**Boljevac**	**5.86**	**36**	*e*Pn	**Pn**	**08 29 51.2**	**-2.7**
KARN	**Karanos**	**6.56**	**123**	P	**Pn**	**08 30 03.2**	**-0.3**
KARN	**Karanos**	**6.56**	**123**	P	**Pn**	**08 30 03.2**	**-0.3**
JAVS	**Javornik**	**7.09**	**342**	*i* Pn	**Pn**	**08 30 10.1**	**-0.8**
JAVS				*i* Sn	**Sn**	**08 31 28.2**	**-2.7**
JAVS	**Javornik**	**7.09**	**342**	Pn	**Pn**	**08 30 10.1**	**-0.7**
LJU	**Ljubljana**	**7.13**	**345**	*i* Pn	**Pn**	**08 30 11.2**	**-0.1**
LJU				*i* Sn	**Sn**	**08 31 28.5**	**-3.4**
LJU	**Ljubljana**	**7.13**	**345**	*i* Pn	**Pn**	**08 30 11.2**	**-0.1**
CRNS	**Crni Vrh**	**7.22**	**344**	*i* Pn	**Pn**	**08 30 12.0**	**-0.5**
CRNS				*i* Sn	**Sn**	**08 31 31.0**	**-3.1**
VOY	**Vojsko**	**7.26**	**342**	*e*Pn	**Pn**	**08 30 12.8**	**-0.3**
VOY				*e*Sn	**Sn**	**08 31 29.4**	**-5.7**
VOY				*e*		08 31 32.0	
VOY	**Vojsko**	**7.26**	**342**	*e*Pn	**Pn**	**08 30 12.8**	**-0.3**
OBKA	**Obir**	**7.58**	**346**	⇑*i*Pn	**Pn**	**08 30 17.1**	**-0.3**
OBKA				⇓*i*Sn	**Sn**	**08 31 38.4**	**-4.3**
OBKA	**Obir**	**7.58**	**346**	Pn	**Pn**	**08 30 17.1**	**-0.3**
SOKA	**Soboth**	**7.66**	**349**	⇑*i*Pn	**Pn**	**08 30 18.2**	**-0.3**
SOKA				⇓*i*Sn	**Sn**	**08 31 39.8**	**-5.0**
SOKA	**Soboth**	**7.66**	**349**	Pn	**Pn**	**08 30 18.2**	**-0.3**
KBA	**Koelnbreinsper**	**8.38**	**342**	⇑*i*Pn	**Pn**	**08 30 27.9**	**-0.5**
KBA	**Koelnbreinsper**	**8.38**	**342**	Pn	**Pn**	**08 30 27.9**	**-0.5**
MOA	**Molln**	**8.92**	**347**	⇑*i*Pn	**Pn**	**08 30 35.5**	**-0.3**
MOA				⇑*i*Sn	**Sn**	**08 32 10.6**	**-5.2**
MOA	**Molln**	**8.92**	**347**	Pn	**Pn**	**08 30 35.5**	**-0.3**
GDZ	**Gediz**	**9.55**	**87**	*i* S	**Sn**	**08 32 32.3**	**+0.8**
GERES	**GERESS Array B**	**9.98**	**347**	Pn	**Pn**	**08 30 50.9**	**+0.5**
	0.2nm,0.3s,baz=160,slow=14,SNR=5.0						
GERES				Sn	**Sn**	**08 32 33.6**	**-8.3**
	0.4nm,0.3s,baz=164,slow=20,SNR=3.2						
GERES	**GERESS Array B**	**9.98**	**347**	Pn	**Pn**	**08 30 50.8**	**+0.5**
ESDC	**Sonseca Array**	**16.35**	**278**	LR	LR	08 38 25.9	
	comp=Z,37nm,19.4s,baz=125,slow=40						
FINES	**FINESS Array B**	**22.96**	**11**	P	**P**	**08 33 37.0**	**+6.0**
	2.6nm,1.0s,baz=190,slow=9.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**29.33**	**212**	P	**P**	**08 34 29.4**	**-0.2**
	118nm,0.3s,baz=32,slow=8.2,SNR=1.0						
ZALV	**Zalesovo Beam**	**46.97**	**48**	P	pP	08 37 08.9	+6.0
	1.0nm,0.6s,baz=264,slow=5.2,SNR=3.6						
MKAR	**Makanchi Array**	**47.00**	**58**	P	pP	08 37 09.8	+6.6
	0.5nm,0.6s,baz=302,slow=7.0,SNR=4.4						

IDC 27 08:28:29.2±2.1, 8.°80S×127.°07E, h0km, mb3.6/1, mb1 3.8/4, mb1mx3.6/16, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=89.8km s-min=29.5km az=71.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.35**	**188**	Pn	Pn	08 30 45.5	+0.1
	1.1nm,0.3s,baz=22,slow=8.7,SNR=30						
FITZ				Sn	Sn	08 32 22.0	-9.3
	2.0nm,0.3s,baz=189,slow=22,SNR=9.1						
WRA	**Warramunga Arr**	**13.12**	**148**	Pn	Pn	08 31 37.4	+0.5
	0.3nm,0.3s,baz=322,slow=13,SNR=20						
WRA				Sn	Sn	08 33 57.8	-5.9
	1.1nm,0.3s,baz=319,slow=25,SNR=11						
ASAR	**Alice Springs**	**16.16**	**157**	Pn	Pn	08 32 17.3	-0.6
	0.3nm,0.3s,baz=334,slow=10,SNR=17						
ASAR				Sn	Sn	08 35 09.8	-8.0
	0.4nm,0.3s,baz=313,slow=17,SNR=6.9						
MKAR	**Makanchi Array**	**68.19**	**329**	P	P	08 39 31.6	+0.1
	0.2nm,0.3s,baz=134,slow=6.2,SNR=2.5						

*ISCJB **27** 08:31:37.6±0.8, 40.°95N±0.°05×75.°7E±0.°1, h10km, Error ellipse: s-maj=14.6km s-min=6.7km az=176.7*
*NNC **27** 08:31:40.9±13.0, 41.°17N×75.°61E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=134.5km s-min=62.1km az=134.0*
ISC 27 08:31:39.1±0.7, 40.°99N±0.°04×75.°6E±0.°1, h10km, n16, σ1°13/17, 4C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**1.12**	**346**	P	**Pb**	**08 31 57.5**	**-3.0**
	SNR=5.9						
ULHL	**Ulahol**	**1.33**	**20**	P	**Pn**	**08 31 58.3**	**-5.5**
	SNR=146						
UCH	**Uchtor**	**1.49**	**326**	P	**Pn**	**08 32 05.0**	**-0.9**
	SNR=5.7						
KSH	**Kashi**	**1.50**	**170**	⇓*i*Pg	**Pg**	**08 32 07.0**	**-0.8**
KSH				Sg	**Sg**	**08 32 30.8**	**+3.6**
KSH				smax			
	comp=N,290nm,0.5s						
KSH				smax			
	comp=E,190nm,0.3s						
KBK	**Karagaybulak**	**1.74**	**343**	P	**Pn**	**08 32 07.8**	**-1.5**
	SNR=47						
AML	**Almayashu**	**1.84**	**309**	P	**Pn**	**08 32 11.4**	**+0.7**
	SNR=13						
AAK	**Ala-Archa**	**1.84**	**333**	P	**Pn**	**08 32 10.9**	**+0.2**
	SNR=49						
TKM2	**Tokmak 2**	**1.93**	**359**	⇓Pn	**Pn**	**08 32 13.4**	**+1.5**
	comp=E,26nm,0.3s						
TKM2				⇑Sn	**Sn**	**08 32 35.8**	**-0.3**
	comp=E,54nm,0.7s						
TKM2	**Tokmak 2**	**1.93**	**359**	P	**Pn**	**08 32 10.9**	**-1.0**
	SNR=55						
CHMS	**Chumysh**	**2.11**	**342**	P	**Pn**	**08 32 14.9**	**+0.5**
	SNR=13						
EKS2	**Erkin-Say**	**2.16**	**321**	P	**Pn**	**08 32 16.3**	**+1.2**
	SNR=16						
USP	**Ospenovka**	**2.42**	**340**	P	**Pn**	**08 32 20.0**	**+1.3**
	SNR=42						
KNDC	**Almaty**	**2.44**	**24**	⇑Sn	**Sn**	**08 32 49.4**	**+0.7**
	comp=E,64nm,0.3s						
KK31	**Karatay Array**	**4.35**	**301**	⇓Pn	**Pn**	**08 32 51.3**	**+6.1**
	comp=E,0.7nm,0.3s,baz=128,slow=16						
KK31		

*NEIC **27** 09:31:45.1, 32°.64S×71°.63W, h11km, ML2.7(GUC), After GUC.*

GUC 27 09:31:45.1±0.7, 32°.64S×71°.63W, h11km±4km, MD3.6, ML2.7, 9C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.38**	**182**	↑*i*P	Pg	09 31 53.2	+0.5
IHA				*i* S	Sg	09 31 58.9	+1.1
IHA	**Instituto Hidr**	**0.38**	**182**	↑*i*P	Pg	09 31 53.2	+0.5
IHA				*i* S	Sg	09 31 58.9	+1.1
ROCH	**El Roble**	**0.61**	**123**	↓*i*P	Pg	09 31 57.6	+0.6
ROCH				*i* S	Sg	09 32 06.8	+1.7
CHNG	**Los Chungos**	**0.77**	**8**	↓*i*P	Pg	09 31 54.1	-5.7
CHNG				*i* S	Sg	09 32 04.8	-5.1
CHNG				AML	AML	09 32 06.9	
	comp=N,236nm,0.4s						
JACH	**Jahuel**	**0.87**	**93**	↑*i*P	Pg	09 32 01.4	-0.5
JACH				*i* S	Sg	09 32 13.9	+0.7
JACH	**Jahuel**	**0.87**	**93**	↑*i*P	Pg	09 32 01.4	-0.5
JACH				*i* S	Sg	09 32 13.9	+0.7
PEL	**Peldehue**	**0.94**	**123**	↑*i*P	Pg	09 32 02.5	-0.6
PEL				*i* S	Sg	09 32 15.8	+0.5
PEL				AML	AML	09 32 18.1	
	comp=E,1μm,0.2s						
SAN	**Santiago**	**1.14**	**135**	*e*P	Pb	09 32 05.8	-1.1
SAN				*e*S	Sb	09 32 21.1	-0.6
SAN	**Santiago**	**1.14**	**135**	*e*P	Pb	09 32 05.8	-1.1
SAN				*e*S	Sb	09 32 21.1	-0.6
SAN				AML	AML	09 32 22.2	
	comp=N,202nm,0.5s						
TACH	**Talagante**	**1.16**	**150**	*e*P	Pb	09 32 05.7	-1.5
TACH	**Talagante**	**1.16**	**150**	*e*P	Pb	09 32 05.7	-1.5
CLCH	**Cerro Calan**	**1.18**	**130**	↓*i*P	Pb	09 32 06.3	-1.2
CLCH				*i* S	Sb	09 32 22.5	-0.4
CLCH				AML	AML	09 32 25.4	
	comp=E,252nm,0.4s						
ANTU	**Antumapu**	**1.24**	**138**	↑*i*P	Pn	09 32 07.1	-1.3
ANTU				*i* S	Sb	09 32 23.9	-0.7
ANTU	**Antumapu**	**1.24**	**138**	↑*i*P	Pn	09 32 07.1	-1.3
ANTU				*i* S	Sb	09 32 23.9	-0.7
ANTU				AML	AML	09 32 27.9	
	comp=E,229nm,0.5s						
FCH	**Farellones**	**1.31**	**122**	↓*i*P	Pn	09 32 08.5	-0.9
FCH	**Farellones**	**1.31**	**122**	↓*i*P	Pn	09 32 08.5	-0.9
FCH				AML	AML	09 32 26.0	
	comp=E,305nm,0.2s						
PCH	**Pirque**	**1.35**	**137**	*e*P	Pn	09 32 08.8	-1.0
PCH				*e*S	Sb	09 32 27.4	-0.3
PCH	**Pirque**	**1.35**	**137**	*e*P	Pn	09 32 08.8	-1.0
PCH				*e*S	Sb	09 32 27.4	-0.3
CHCH	**Chadas Angostu**	**1.52**	**148**	↑*i*P	Pn	09 32 12.2	-0.1
CHCH				*i* S	Sn	09 32 31.7	-0.4
CHCH	**Chadas Angostu**	**1.52**	**148**	↑*i*P	Pn	09 32 12.2	-0.1
CHCH				*i* S	Sn	09 32 31.7	-0.4
LMEL	**Las Melosas**	**1.69**	**136**	↓*i*P	Pn	09 32 14.5	-0.1
LMEL				*i* S	Sn	09 32 36.9	+0.6
LMEL	**Las Melosas**	**1.69**	**136**	↓*i*P	Pn	09 32 14.5	-0.1
LMEL				*i* S	Sn	09 32 36.9	+0.6
LMEL				AML	AML	09 32 41.1	
	comp=N,208nm,0.1s						
CACH	**El Canelo**	**1.70**	**150**	*e*P	Pn	09 32 15.4	+0.6
CACH	**El Canelo**	**1.70**	**150**	*e*P	Pn	09 32 15.4	+0.6

IDC 27 09:46:22.2±1.4, 13°.29N×120°.07E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/21, mbtmp3.7/3, MS3.9/1, Ms1 3.8/1, ms1mx2.6/31, Error ellipse: s-maj=30.0km s-min=13.4km az=119.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.17**	**46**	Pg	Pg	09 46 45.3	+0.8
	221nm,0.3s,baz=183,slow=3.0,SNR=9.3						
TGY				Lg		09 46 59.7	
	95nm,0.3s,baz=264,slow=13,SNR=6.5						
WRA	**Warramunga Arr**	**35.89**	**157**	P	P	09 53 23.6	-0.6
	0.8nm,0.6s,baz=336,slow=9.5,SNR=11						
SONM	**Songino Array**	**36.28**	**344**	P	P	09 53 27.2	0.0
	0.4nm,0.6s,baz=157,slow=4.1,SNR=2.5						
ASAR	**Alice Springs**	**39.15**	**160**	P	P	09 53 52.1	+0.4
	0.9nm,0.6s,baz=340,slow=7.2,SNR=19						
STKA	**Stephens Creek**	**49.43**	**156**	LR	LR	10 18 47.3	
	comp=Z,109nm,19.1s,baz=205,slow=39						

IDC 27 10:05:38.1±1.5, 13°.20N×120°.32E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.5/3, Error ellipse: s-maj=35.7km s-min=12.7km az=110.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.08**	**34**	Pg	Pg	10 05 57.3	-1.5
	86nm,0.3s,baz=201,slow=5.9,SNR=3.3						
TGY				Lg		10 06 14.8	
	98nm,0.3s,baz=121,slow=17,SNR=6.7						
WRA	**Warramunga Arr**	**35.71**	**157**	P	P	10 12 38.0	-0.6
	0.5nm,0.6s,baz=334,slow=10,SNR=5.8						
SONM	**Songino Array**	**36.43**	**344**	P	P	10 12 44.8	+0.3
	0.4nm,0.5s,baz=163,slow=10,SNR=2.6						
ASAR	**Alice Springs**	**38.98**	**160**	P	P	10 13 06.8	+0.6
	0.5nm,0.5s,baz=340,slow=6.9,SNR=12						

*IDC **27** 10:18:52.6±0.9, 13°.37N×120°.34E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/22, mbtmp3.9/8, MS3.4/2, Ms1 3.4/2, ms1mx2.7/34, Error ellipse: s-maj=18.7km s-min=11.0km az=125.0*
*ISCJB **27** 10:18:54.9±1.0, 13°.43N±0°.04×120°.28E±0°.05, h23km±8km, mb4.1/9, MS3.4/2, Error ellipse: s-maj=8.2km s-min=6.6km az=0.1*
*MAN **27** 10:18:55, 13°.40N×120°.37E, h14km, mb4.6, ML3.5, MS3.4*
*NEIC **27** 10:18:56.7±1.9, 13°.45N×120°.50E, h28km±14km, mb4.3/2, Error ellipse: s-maj=19.4km s-min=10.4km az=60.0*

ISC 27 10:18:54.5±1.1, 13°.40N±0°.04×120°.34E±0°.05, h10km±7km, n25, σ0°.90/28, mb4.1/9, MS3.4/2, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.35**	**344**	*e*P	**Pg**	**10 19 00.3**	**-1.2**
TGY	**Tagaytay City**	**0.91**	**39**	Pg	**Pg**	**10 19 11.7**	**-0.4**
	668nm,0.3s,baz=233,slow=4.2,SNR=29						
TGY				Lg		10 19 23.2	
	1μm,0.3s,baz=100,slow=23,SNR=26						
TGY	**Tagaytay City**	**0.91**	**39**	↓*e*P	**Pg**	**10 19 11.9**	**-0.2**
TGY				*i* S	**Sg**	**10 19 24.1**	**+0.2**
BUSP	**Coron**	**1.39**	**186**	*e*P	**Pn**	**10 19 20.2**	**+0.2**
BUSP				*e*S	**Sb**	**10 19 39.3**	**+0.8**
BOAC	**Boac**	**1.46**	**87**	*e*P	**Pn**	**10 19 21.1**	**+0.1**
BOAC				*e*S	**Sn**	**10 19 39.1**	**-1.1**
OTRP	**Odiongan**	**1.93**	**122**	*e*P	**Pn**	**10 19 28.5**	**+1.0**
POLP	**Polilio Island**	**2.04**	**49**	*e*P	**Pn**	**10 19 28.8**	**-0.1**
AUQP	**San Andres**	**2.27**	**92**	*e*P	**Pn**	**10 19 35.2**	**+3.0**
ENPP	**El Nido**	**2.35**	**202**	*e*P	**Pn**	**10 19 33.2**	**-0.1**
SCZP	**Santa Cruz**	**2.40**	**350**	*e*P	**Pn**	**10 19 34.8**	**+0.9**
CUYO	**Cuyo Island**	**2.62**	**165**	*e*P	**Pn**	**10 19 35.3**	**-1.5**
BALP	**Baler**	**2.62**	**27**	*e*P	**Pn**	**10 19 37.5**	**+0.5**
CAUP	**Cauayan**	**3.81**	**22**	*e*P	**Pn**	**10 19 54.4**	**+1.2**
APYP	**Conner**	**4.52**	**11**	*e*P	**Pn**	**10 20 06.5**	**+3.4**
CMAR	**Chiang Mai Arr**	**21.18**	**287**	P	**P**	**10 23 41.7**	**+1.5**
	2.9nm,0.9s,mb3.6,baz=93,slow=8.6,SNR=11						
WRA	**Warramunga Arr**	**35.88**	**157**	P	**P**	**10 25 53.8**	**-1.0**
	2.7nm,0.4s,mb4.5,baz=336,slow=9.8,SNR=47						
SONM	**Songino Array**	**36.25**	**344**	P	**P**	**10 25 57.5**	**-0.3**
	2.6nm,0.7s,mb4.2,baz=156,slow=9.5,SNR=14						
ASAR	**Alice Springs**	**39.15**	**160**	P	**P**	**10 26 22.6**	**0.0**
	3.5nm,0.7s,mb4.2,baz=341,slow=7.5,SNR=35						
MKAR	**Makanchi Array**	**46.07**	**324**	P	**P**	**10 27 18.7**	**+0.1**
	0.9nm,0.7s,mb3.8,baz=116,slow=8.2,SNR=5.3						
MKAR				LR	LR	10 48 30.0	
	comp=Z,43nm,18.6s,MS3.4,baz=356,slow=39						
ZALV	**Zalesovo Beam**	**49.17**	**333**	P	**P**	**10 27 41.2**	**-1.3**
	0.7nm,0.4s,mb4.0,baz=134,slow=11,SNR=3.6						
ZALV				LR	LR	10 49 14.6	
	comp=Z,35nm,20.0s,MS3.4,baz=71,slow=37						
KURK	**Kurchatov**	**50.25**	**327**	*e*P	**P**	**10 27 50.6**	**-0.2**
	11nm,1.1s,mb4.8						
KKAR	**Karatay Array**	**51.94**	**315**	*e*P	**P**	**10 28 03.6**	**-0.1**
	0.9nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**62.22**	**320**	P	**P**	**10 29 16.0**	**-0.3**
AKTO	**Aktyubinsk**	**62.22**	**320**	P	**P**	**10 29 16.0**	**-0.3**
	0.7nm,0.3s,mb4.2,baz=104,slow=4.2,SNR=3.3						
ILAR	**Eielson Array**	**79.17**	**26**	P	**P**	**10 30 58.6**	**-0.7**
	0.1nm,0.8s,baz=299,slow=4.2,SNR=4.0						

IDC 27 10:19:12.2±7.5, 18°.50S×178°.10W, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.6/17, mbtmp3.4/3, Error ellipse: s-maj=325.4km s-min=37.7km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.82**	**260**	P	P	10 27 28.5	+0.2
	0.2nm,0.3s,baz=95,slow=7.6,SNR=13						
ASAR	**Alice Springs**	**44.92**	**255**	P	P	10 27 28.6	-0.4
	0.3nm,0.4s,baz=91,slow=8.1,SNR=4.9						
ILAR	**Eielson Array**	**86.39**	**13**	P	P	10 31 56.0	+0.1
	0.1nm,0.4s,baz=215,slow=5.0,SNR=6.0						

*IDC **27** 10:22:02.5±1.1, 13°.27N×120°.41E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/21, mbtmp3.9/5, Error ellipse: s-maj=22.6km s-min=11.4km az=113.0*
*ISCJB **27** 10:22:04.1±1.8, 13°.42N±0°.06×120°.30E±0°.06, h14km±13km, mb3.9/5, Error ellipse: s-maj=10.8km s-min=9.0km az=23.7*
*MAN **27** 10:22:06, 13°.36N×120°.39E, h14km, mb4.3, ML3.1, MS2.9*

ISC 27 10:22:04.4±1.8, 13°.36N±0°.07×120°.38E±0°.07, h9km±13km, n12, σ1°.00/14, mb3.9/5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.39**	**341**	*e*P	**Pg**	**10 22 05.0**	**-7.2**
TGY	**Tagaytay City**	**0.92**	**36**	Pg	**Pg**	**10 22 22.2**	**+0.1**
	300nm,0.3s,baz=186,slow=3.9,SNR=6.5						
TGY				Lg		10 22 34.0	
	341nm,0.3s,baz=274,slow=10,SNR=9.0						
TGY	**Tagaytay City**	**0.92**	**36**	↓*e*P	**Pg**	**10 22 23.0**	**+0.8**
BUSP	**Coron**	**1.36**	**187**	*e*P	**Pn**	**10 22 29.7**	**+0.1**
BUSP				*e*S	**Sn**	**10 22 49.2**	**+1.5**
BOAC	**Boac**	**1.43**	**86**	*e*P	**Pn**	**10 22 30.2**	**-0.4**
BOAC				*e*S	**Sn**	**10 22 50.6**	**+1.1**
OTRP	**Odiongan**	**1.89**	**122**	*e*P	**Pn**	**10 22 41.8**	**+4.9**
CUYO	**Cuyo Island**	**2.57**	**166**	*e*P	**Pn**	**10 22 45.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**21.22**	**287**	P	**P**	**10 26 52.3**	**+1.5**
	0.9nm,0.7s,mb3.2,baz=96,slow=9.6,SNR=4.4						
WRA	**Warramunga Arr**	**35.83**	**157**	P	**P**	**10 29 02.7**	**-1.8**
	2.8nm,0.4s,mb4.5,baz=334,slow=10,SNR=40						
SONM	**Songino Array**	**36.30**	**344**	P	**P**	**10 29 08.2**	**0.0**
	1.1nm,0.7s,mb3.9,baz=161,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**39.10**	**160**	P	**P**	**10 29 31.2**	**-1.1**
	2.9nm,0.6s,mb4.2,baz=339,slow=7.0,SNR=36						
MKAR	**Makanchi Array**	**46.12**	**324**	P	**P**	**10 30 28.3**	**-0.7**
	0.3nm,0.2s,mb3.8,baz=112,slow=6.5,SNR=2.5						

*ISK **27** 10:36:10.9, 39°.50N×33°.10E, h5km, MD2.7*
*DDA **27** 10:36:11.0, 39°.38N×33°.26E, h7km±7km, Md2.8*
*ISCJB **27** 10:36:12.4±0.5, 39°.45N±0°.04×33°.06E±0°.04, h3km±4km, Error ellipse: s-maj=6.1km s-min=5.6km az=176.7*
*CSEM **27** 10:36:12.1±0.2, 39°.48N×33°.06E, h5km±2km, MD2.7, Error ellipse: s-maj=6.5km s-min=5.7km az=159.0*

ISC 27 10:36:12.7±0.5, 39°.45N±0°.03×33°.07E±0°.04, h4km±4km, n21, σ0°.84/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Afˇar-Bala (A**	**0.01**	**125**	PG	**Pg**	**10 36 12.1**	**-1.3**
AFSR				*e*SG	**Sg**	**10 36 13.5**	**-0.3**
AFSR	**Afˇar-Bala (A**	**0.01**	**125**	*i* Pg	**Pg**	**10 36 12.1**	**-1.2**
AFSR				*e*Sg	**Sg**	**10 36 13.5**	**-0.3**
BBAL	**Bala**	**0.10**	**26**	*i* P	**Pg**	**10 36 15.8**	**+1.0**
BBAL				*i* S	**Sg**	**10 36 18.1**	**+1.9**
BBAL	**Bala**	**0.10**	**26**	*i* P	**Pg**	**10 36 15.8**	**+1.0**
BBAL				*i* S	**Sg**	**10 36 18.1**	**+1.9**
LOD	**Lodumlu**	**0.50**	**332**	*e*PG	**Pg**	**10 36 20.5**	**-1.7**
LOD				*e*SG	**Sg**	**10 36 28.6**	**-0.1**
LOD	**Lodumlu**	**0.50**	**332**	*e*Pg	**Pg**	**10 36 20.5**	**-1.7**
LOD				*e*Sg	**Sg**	**10 36 28.6**	**-0.1**
KAMT	**Kaman**	**0.51**	**99**	*e*PG	**Pg**	**10 36 22.0**	**-0.4**
KAMT				*e*SG	**Sg**	**10 36 29.2**	**+0.2**
KAMT	**Kaman**	**0.51**	**99**	*e*Pg	**Pg**	**10 36 22.0**	**-0.4**
KAMT				*e*Sg	**Sg**	**10 36 29.2**	**+0.2**
KIZT	**Kizilcal**	**1.08**	**239**	*e*PN	**Pg**	**10 36 34.2**	**+0.8**
KIZT	**Kizilcal**	**1.08**	**239**	*e*Pn	**Pg**	**10 36 34.2**	**+0.8**
KDHN	**Kadinhani**	**1.19**	**219**	*i* P	**Pg**	**10 36 35.8**	**+0.4**
KDHN				*i* S	**Sg**	**10 36 51.1**	**+0.3**
KDHN	**Kadinhani**	**1.19**	**219**	*i* P	**Pg**	**10 36 35.8**	**+0.4**
KDHN				*i* S	**Sg**	**10 36 51.1**	**+0.3**
SULT	**Sultanhani-AKS**	**1.30**	**164**	*e*PN	**Pn**	**10 36 38.0**	**+0.4**
SULT	**Sultanhani-AKS**	**1.30**	**164**	*e*Pn	**Pn**	**10 36 38.0**	**+0.5**
CORM	**Corum**	**1.41**	**58**	*e*PN	**Pn**	**10 36 38.0**	**-1.1**
CORM	**Corum**	**1.41**	**58**	*e*Pn	**Pn**	**10 36 38.0**	**-1.1**
AVNT	**Avonos**	**1.54**	**115**	*i* S	**Sn**	**10 37 01.5**	**0.0**
KONT	**Konya--Tatoy**	**1.60**	**200**	*e*PN	**Pn**	**10 36 41.7**	**0.0**
KONT	**Konya--Tatoy**	**1.60**	**200**	*e*Pn	**Pn**	**10 36 41.7**	**0.0**
YOZ	**Yozgat**	**1.75**	**83**	*e*PN	**Pn**	**10 36 43.6**	**-0.3**
YOZ	**Yozgat**	**1.75**	**83**	*e*Pn	**Pn**	**10 36 43.6**	**-0.2**

IDC 27 10:43:30.6±2.4, 5°.05N×93°.75E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/24, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=85.2km s-min=21.6km az=58.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.63**	**113**	Pn	Pn	10 44 58.0	+2.3
	1.7nm,0.3s,baz=356,slow=4.9,SNR=7.2						
CMAR	**Chiang Mai Arr**	**14.26**	**20**	Pn	Pn	10 46 54.5	+0.5
	0.4nm,0.3s,baz=211,slow=13,SNR=5.7						
MKAR	**Makanchi Array**	**42.75**	**348**	P	P	10 51 30.1	+0.4
	1.1nm,0.5s,baz=168,slow=7.9,SNR=6.8						
WRA	**Warramunga Arr**	**47.00**	**123**	P	P	10 52 03.4	-0.5
	0.4nm,0.5s,baz=306,slow=9.1,SNR=9.9						
ASAR	**Alice Springs**	**48.46**	**128**	P	P	10 52 15.2	-0.1
	0.3nm,0.5s,baz=298,slow=7.5,SNR=6.9						
ZALV	**Zalesovo Beam**	**49.29**	**353**	P	P	10 52 20.6	-0.5
	0.6nm,0.3s,baz=188,slow=7.3,SNR=4.4						

*ISCJB **27** 10:43:49.2±0.4, 51°.37N±0°.02×16°.11E±0°.02, h0km, Error ellipse: s-maj=3.5km s-min=1.9km az=24.0*
*NEIC **27** 10:43:49.9±0.7, 51°.52N×16°.30E, h5km, ML3.1(SZGRF), Error ellipse: s-maj=11.6km s-min=6.9km az=61.0*
*CSEM **27** 10:43:50.0±0.2, 51°.43N×16°.18E, h2km, ML3.4/8, Error ellipse: s-maj=3.7km s-min=2.2km az=27.0*
*IPEC **27** 10:43:50.7±0.3, 51°.45N×16°.20E, h1km±1km, ML2.3/4, Error ellipse: s-maj=1.7km s-min=0.6km az=26.0*
*BGR **27** 10:43:51.2±0.3, 51°.42N×16°.17E, h1km, ML3.1/19, Error ellipse: s-maj=3.3km s-min=2.2km az=20.0*
*WAR **27** 10:43:51.1, 51°.45N×16°.18E, ML2.7, Mining Induced*
*PRU **27** 10:43:51.6, 51°.39N×16°.16E, h0km*
*IDC **27** 10:43:51.0±0.8, 51°.41N×16°.14E, h0km, mb1 3.6/5, mb1mx3.4/25, mbtmp3.5/5, ML2.7/4, Error ellipse: s-maj=16.3km s-min=7.1km az=101.0*
*VIE **27** 10:43:52.2±0.5, 51°.28N×16°.21E, h0km, mb2.4/4, ML3.0/4, Error ellipse: s-maj=3.8km s-min=3.1km az=74.0 59 km WNW of Wroclaw Suspected Mining induced.*

ISC 27 10:43:49.9±0.4, 51°.44N±0°.02×16°.18E±0°.02, h0km, n101, σ0°.99/187, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.60**	**173**	*e*Pg	**Pg**	**10 44 02.3**	**+0.9**
KSP				*e*Sg	**Sg**	**10 44 10.3**	**+1.2**
KSP	**Ksiaz**	**0.60**	**173**	*e*Pg	**Pg**	**10 44 02.3**	**+0.9**
KSP				*i* Sg	**Sg**	**10 44 10.4**	**+1.2**
KSP	**Ksiaz**	**0.60**	**173**	*e*Pg	**Pg**	**10 44 02.4**	**+1.0**
	SNR=41						
KSP				*e*Sg	**Sg**	**10 44 10.4**	**+1.3**
KSP	**Ksiaz**	**0.60**	**173**	*e*Pg	**Pg**	**10 44 02.2**	**+0.8**
	baz=355						
KSP				*e*Sg	**Sg**	**10 44 10.3**	**+1.1**
	baz=355						
UPC	**Upice**	**0.94**	**186**	*e*PG	**Pg**	**10 44 08.5**	**+0.7**
UPC	**Upice**	**0.94**	**186**	Pg	**Pg**	**10 44 08.5**	**+0.7**
DPC	**Dobruska-Polom**	**1.09**	**175**	*e*Pg	**Pg**	**10 44 11.3**	**+0.5**
	SNR=53						
DPC				*e*Sg	**Sg**	**10 44 26.2**	**+1.2**
DPC	**Dobruska-Polom**	**1.09**	**175**	*e*PG	**Pg**	**10 44 11.2**	**+0.4**
DPC				*e*SG	**Sg**	**10 44 25.8**	**+0.8**
	comp=Z,60nm,0.3s						
DPC	**Dobruska-Polom**	**1.09**	**175**	*e*Pg	**Pg**	**10 44 11.1**	**+0.3**
	baz=356						
DPC				Sg	**Sg**	**10 44 25.8**	**+0.8**
	comp=Z,60nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**229**	*e*PG	**Pg**	**10 44 16.7**	**+0.7**
PVCC				*e*SG	**Sg**	**10 44 34.9**	**+1.2**
	comp=Z,189nm,0.2s						
PVCC	**Panska Ves**	**1.36**	**229**	Pg	**Pg**	**10 44 16.7**	**+0.7**
PVCC				Sg	**Sg**	**10 44 34.9**	**+1.2**
	comp=Z,189nm,0.2s						
BRG	**Berggiesshubel**	**1.52**	**249**	*e*Pg	**Pg**	**10 44 19.2**	**+0.3**
	SNR=8.4						
BRG				*e*Sg	**Sg**	**10 44 39.6**	**+1.1**
BRG	**Berggiesshubel**	**1.52**	**249**	PN	**Pn**	**10 44 18.3**	**+0.1**
BRG				PG	**Pg**	**10 44 19.1**	**+0.2**
BRG				SG	**Sg**	**10 44 39.6**	**+1.1**
	comp=Z,132nm,0.4s						
BRG	**Berggiesshubel**	**1.52**	**249**	*e*Pn	**Pn**	**10 44 18.5**	**+0.3**
	baz=67						
PRU	**Pruhonice**	**1.79**	**216**	*e*Pn	**Pn**	**10 44 21.9**	**0.0**
	SNR=0.9						
PRU				*e*Pg	**Pg**	**10 44 24.3**	**+0.3**
	SNR=9.2						
PRU				*e*Sg	**Sg**	**10 44 48.4**	**+1.2**
PRU	**Pruhonice**	**1.79**	**216**	*e*PG	**Pg**	**10 44 24.2**	**+0.1**
PRU				*e*SG	**Sg**	**10 44 47.5**	**+0.3**
	comp=Z,62nm,0.5s						
PRU	**Pruhonice**	**1.79**	**216**	Pn	**Pn**	**10 44 21.9**	**0.0**
	SNR=0.9						
PRU	**Pruhonice**	**1.79**	**216**	Pg	**Pg**	**10 44 24.3**	**+0.2**
	SNR=9.2						
PRU				*e*Sg	**Sg**	**10 44 47.6**	**+0.4**
	baz=35						
RUE	**Ruedersdorf**	**1.81**	**306**	*e*Pn	**Pn**	**10 44 21.4**	**-0.9**
	SNR=3.9						
RUE				*e*Pg	**Pg**	**10 44 25.2**	**+0.6**
	SNR=6.6						
RUE				*e*Sg	**Sg**	**10 44 48.3**	**+0.3**
RUE	**Ruedersdorf**	**1.81**	**306**	*e*Pn	**Pn**	**10 44 21.4**	**-0.9**
RUE				*e*Pg	**Pg**	**10 44 25.2**	**+0.6**
RUE				*e*Sg	**Sg**	**10 44 48.3**	**+0.3**
RUE	**Ruedersdorf**	**1.81**	**306**	Pn	**Pn**	**10 44 21.4**	**-0.9**
	SNR=3.9						
FBE	**Freiberg**	**1.85**	**255**	*e*Pg	**Pg**	**10 44 25.7**	**+0.4**
	SNR=7.2						
FBE				*e*Sg	**Sg**	**10 44 49.3**	**0.0**
FBE	**Freiberg**	**1.85**	**255**	Pg	**Pg**	**10 44 25.7**	**+0.4**
	SNR=7.2						
FBE				Sg	**Sg**	**10 44 49.3**	**+0.1**
MORC	**Moravsky Berou**	**1.88**	**152**	*e*Pn	**Pn**	**10 44 23.1**	**-0.1**
	SNR=12						
MORC				*e*Pg	**Pg**	**10 44 25.3**	**-0.5**
	SNR=23						
MORC				*e*Sg	**Sg**	**10 44 49.7**	**-0.4**
MORC	**Moravsky Berou**	**1.88**	**152**	*e*Pn	**Pn**	**10 44 23.1**	**0.0**
MORC				*e*Sn	**Sn**	**10 44 49.7**	**+2.2**
MORC	**Moravsky Berou**	**1.88**	**152**	Pn	**Pn**	**10 44 23.1**	**-0.1**
	SNR=12						
CLL	**Collm**	**1.99**	**267**	*i* Pn	**Pn**	**10 44 24.4**	**-0.3**
CLL				*e*Pg	**Pg**	**10 44 28.3**	**+0.3**
	SNR=7.8						
CLL				*e*Sg	**Sg**	**10 44 54.4**	**+0.6**
CLL	**Collm**	**1.99**	**267**	*i* Pn	**Pn**	**10 44 24.4**	**-0.3**
CLL				*i* Pg	**Pg**	**10 44 28.2**	**+0.2**
CLL				*e*Sg	**Sg**	**10 44 55.0**	**+1.2**
CLL	**Collm**	**1.99**	**267**	*i* Pn	**Pn**	**10 44 24.4**	**-0.3**
CLL				*i* Pg	**Pg**	**10 44 28.2**	**+0.2**
CLL				*e*		10 44 30.0	
CLL				*e*Sg	**Sg**	**10 44 55.0**	**+1.2**
	comp=Z,47nm,0.3s						
CLL	**Collm**	**1.99**	**267**	Pn	**Pn**	**10 44 24.4**	**-0.3**
OKC	**Ostrava-Krasne**	**2.04**	**141**	*e*Pn	**Pn**	**10 44 24.8**	**-0.6**
	SNR=1.0						
OKC				*e*Pg	**Pg**	**10 44 29.9**	**+1.0**
	SNR=7.0						
OKC				*e*Sg	**Sg**	**10 44 54.4**	**-0.9**
OKC	**Ostrava-Krasne**	**2.04**	**141**	Pn	**Pn**	**10 44 24.8**	**-0.6**
	SNR=1.0						
VRAC	**Vranov**	**2.15**	**173**	Pn	**Pn**	**10 44 27.0**	**+0.1**
	comp=Z,4.7nm,0.3s,baz=333,slow=14,SNR=25						
VRAC				Pg	**Pg**	**10 44 30.9**	**-0.1**
	comp=Z,4.7nm,0.3s,baz=339,slow=17,SNR=25						
VRAC				Lg		10 44 59.0	
	comp=Z,6.8nm,0.3s,baz=95,slow=22,SNR=11						
VRAC	**Vranov**	**2.15**	**173**	Pn	**Pn**	**10 44 27.0**	**+0.1**
VRAC	**Vranov**	**2.15**	**173**	Pg	**Pg**	**10 44 30.9**	**-0.1**
VRAC				*e*Sg	**Sg**	**10 44 58.0**	**-0.9**
	comp=Z,23nm,0.3s,baz=354						
TREC	**Trest**	**2.19**	**192**	*e*PG	**Pg**	**10 44 31.3**	**-0.5**
TREC	**Trest**	**2.19**	**192**	Pg	**Pg**	**

KHC			*e*Sn	Sn	10 45 09.5	-2.0
KHC	**Kasperske Hory**	**2.85 217**	*e*PN	Pn	10 44 37.1	+0.6
KHC			*e*PG	Pg	10 44 43.0	-1.4
KHC			*e*SG	Sg	10 45 19.6	-1.7
	comp=Z,17nm,0.3s					
KHC	**Kasperske Hory**	**2.85 217**	Pn	Pn	10 44 37.1	+0.6
KHC	**Kasperske Hory**	**2.85 217**	Pg	Pg	10 44 43.0	-1.4
KHC			Sn	Sn	10 45 10.0	-1.5
KHC			Sg	Sg	10 45 19.6	-1.7
	comp=Z,17nm,0.3s					
MOX	**Moxa**	**2.99 256**	*e*PG	Pg	10 44 47.3	+0.3
MOX			*e*SG	Sg	10 45 27.2	+1.5
MOX	**Moxa**	**2.99 256**	*e*Pg	Pg	10 44 46.5	-0.6
	SNR=4.3					
MOX			*e*Sg	Sg	10 45 25.5	-0.2
MOX	**Moxa**	**2.99 256**	Pg	Pg	10 44 46.5	-0.5
	SNR=4.3					
MOX			Sg	Sg	10 45 25.5	-0.2
ROTZ	**Rotzenmuhle**	**3.03 238**	*e*Pn	Pn	10 44 39.8	+0.8
	SNR=3.7					
ROTZ			*e*Sg	Sg	10 45 25.8	-1.4
ROTZ	**Rotzenmuhle**	**3.03 238**	Pn	Pn	10 44 39.8	+0.8
	SNR=3.7					
ROTZ			Sg	Sg	10 45 25.8	-1.4
GEC2	**GERESS Array S**	**3.05 212**	*e*Pn	Pn	10 44 40.8	+1.6
	SNR=12					
GEC2			*e*Pg	Pg	10 44 46.2	-2.0
	SNR=12					
GEC2			*e*Sg	Sg	10 45 25.8	-1.9
GEC2	**GERESS Array S**	**3.05 212**	*e*Pn	Pn	10 44 40.8	+1.6
GEC2			*e*Pg	Pg	10 44 46.2	-2.0
GEC2			*e*Sg	Sg	10 45 25.8	-1.8
GEC2	**GERESS Array S**	**3.05 212**	Pn	Pn	10 44 40.8	+1.6
	SNR=12					
GERES	**GERESS Array B**	**3.05 212**	Pn	Pn	10 44 40.7	+1.5
	comp=Z,0.5nm,0.3s,baz=27,slow=13,SNR=9.6					
GERES			Pg	Pg	10 44 46.0	-2.2
	comp=Z,5.4nm,0.3s,baz=33,slow=17,SNR=39					
GERES			Lg		10 45 25.3	
	comp=Z,6.7nm,0.3s,baz=28,slow=31,SNR=12					
GERES	**GERESS Array B**	**3.05 212**	Pn	Pn	10 44 40.7	+1.5
GERES			Pg	Pg	10 44 46.0	-2.2
GERES			Lg		10 45 25.3	
GERES	**GERESS Array B**	**3.05 212**	Pn	Pn	10 44 40.7	+1.5
GERES	**GERESS Array B**	**3.05 212**	Pg	Pg	10 44 46.0	-2.2
ZST	**Bratislava**	**3.30 169**	*e*PG	Pg	10 44 51.9	-1.2
ZST	**Bratislava**	**3.30 169**	*e*Pg	Pg	10 44 51.9	-1.2
NIE	**Niedzica**	**3.33 126**	*e*P	Pg	10 44 53.3	-0.3
NIE			*e*S	Sg	10 45 37.2	+0.4
VYHS	**Vyhne**	**3.41 149**	*e*Pn	Pn	10 44 44.1	-0.2
VYHS			*e*Pg	Pg	10 44 53.5	-1.7
VYHS	**Vyhne**	**3.41 149**	*e*PN	Pn	10 44 44.1	-0.2
VYHS			*e*PG	Pg	10 44 53.5	-1.7
VYHS	**Vyhne**	**3.41 149**	*e*Pn	Pn	10 44 44.1	-0.2
CONA	**Conrad Observa**	**3.52 183**	⇓*i*Pn	Pn	10 44 46.0	+0.3
CONA			⇓*i*Sg	Sg	10 45 42.9	0.0
	comp=Z,15nm,0.5s					
CONA	**Conrad Observa**	**3.52 183**	Pn	Pn	10 44 46.0	+0.3
CONA			Sg	Sg	10 45 42.9	0.0
	comp=Z,15nm,0.5s					
GRA1	**Grafenberg Arr**	**3.61 243**	Sg	Sg	10 45 45.8	0.0
GRF	**Grafenberg Arr**	**3.61 243**	*e*Sg	Sg	10 45 45.8	0.0
CLZ	**Clausthal**	**3.64 279**	*e*Pn	Pn	10 44 48.7	+1.3
	SNR=1.6					
CLZ			*e*Sg	Sg	10 45 47.1	+0.5
CLZ	**Clausthal**	**3.64 279**	*e*Pn	Pn	10 44 48.7	+1.4
CLZ			*e*Sg	Sg	10 45 47.1	+0.5
CLZ	**Clausthal**	**3.64 279**	Pn	Pn	10 44 48.7	+1.4
	SNR=1.6					
CLZ			Sg	Sg	10 45 47.1	+0.5
MOA	**Molln**	**3.80 200**	⇑*i*Pn	Pn	10 44 50.5	+0.8
MOA			⇑*i*Sg	Sg	10 45 53.2	+1.3
	comp=Z,10nm,0.3s					
MOA	**Molln**	**3.80 200**	Pn	Pn	10 44 50.5	+0.9
MOA			Sg	Sg	10 45 53.2	+1.3
	comp=Z,10nm,0.3s					
UBBA	**Unterbreizbach**	**3.94 263**	*e*Sg	Sg	10 45 55.2	-1.1
UBBA	**Unterbreizbach**	**3.94 263**	Sg	Sg	10 45 55.2	-1.1
TNS	**Taunus Mts**	**5.05 259**	*e*Sg	Sg	10 46 33.2	+1.3
TNS	**Taunus Mts**	**5.05 259**	Sg	Sg	10 46 33.2	+1.3
BFO	**Black Forest**	**5.95 242**	*e*Sg	Sg	10 47 01.0	+0.2
BFO	**Black Forest**	**5.95 242**	Sg	Sg	10 47 01.0	+0.2
NVLJ	**Novalja**	**6.94 188**	*e*Pg	Pb	10 45 46.4	-4.8
NVLJ			Sg	Pg	10 45 57.9	-4.7
HFS	**Hagfors**	**8.82 352**	Pn	Pn	10 45 57.4	-1.1
	comp=Z,0.1nm,0.3s,baz=149,slow=17,SNR=3.7					
HFS	**Hagfors**	**8.82 352**	Pn	Pn	10 45 57.3	-1.2
FINES	**FINESS Array B**	**11.41 25**	Pn	Pn	10 46 31.0	-2.8
	comp=Z,0.2nm,0.3s,baz=203,slow=12,SNR=4.9					
FINES			Sn	Sn	10 48 33.3	-8.6
	comp=Z,0.2nm,0.3s,baz=203,slow=18,SNR=4.3					
ARCES	**ARCESS Array B**	**18.68 10**	Pn	Pn	10 48 06.7	-2.8
	comp=Z,0.1nm,0.3s,baz=185,slow=8.9,SNR=3.9					

*ISK **27** 10:59:31.6, 36°.56N×28°.98E, h17km, MD3.1*
*ISCJB **27** 10:59:32.8±0.7, 36°.58N±0°.05×28°.99E±0°.04, h22km±6km, Error ellipse: s-maj=8.3km s-min=5.5km az=21.8*
*DDA **27** 10:59:32.5, 36°.64N×29°.04E, h7km±3km, Md3.0*
*CSEM **27** 10:59:32.3±0.3, 36°.59N×28°.99E, h17km±2km, MD3.1, Error ellipse: s-maj=6.4km s-min=4.0km az=15.0*

ISC 27 10:59:32.5±0.7, 36°.59N±0°.04×28°.98E±0°.04, h16km±5km, n34, σ0s89/47, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.10**	**65**	*e*PG	**Pg**	**10 59 36.0**	**+0.2**
FETY	**Fethiye**	**0.10**	**65**	*e*Pg	**Pg**	**10 59 36.1**	**+0.3**
TURN	**Turunc**	**0.41**	**313**	*i* P	**Pg**	**10 59 45.5**	**+4.7**
TURN				*i* S	**Sg**	**10 59 55.2**	**+8.8**
TURN	**Turunc**	**0.41**	**313**	*i* P	**Pg**	**10 59 45.5**	**+4.7**
AKAS	**Kas**	**0.62**	**125**	*i* P	**Pg**	**10 59 43.5**	**-1.2**
AKAS				*i* S	**Sg**	**10 59 54.0**	**+1.0**
AKAS	**Kas**	**0.62**	**125**	*i* P	**Pg**	**10 59 43.5**	**-1.2**
AKAS				*i* S	**Sg**	**10 59 54.0**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.70**	**37**	*e*PG	**Pg**	**10 59 45.9**	**-0.3**
GLHS				*e*SG	**Sg**	**10 59 57.2**	**+1.8**
GLHS	**Glhisar (BURDU**	**0.70**	**37**	*e*Pg	**Pg**	**10 59 45.9**	**-0.3**
GLHS				*e*Sg	**Sg**	**10 59 57.2**	**+1.7**
ELL	**Elmali**	**0.77**	**78**	*e*PG	**Pg**	**10 59 46.3**	**-1.1**
ELL				*e*SG	**Sg**	**10 59 58.6**	**+1.1**
ELL	**Elmali**	**0.77**	**78**	*e*Pg	**Pg**	**10 59 46.3**	**-1.1**
ELL				*e*Sg	**Sg**	**10 59 58.6**	**+1.1**
YER	**Yerkesik**	**0.77**	**314**	*e*PG	**Pg**	**10 59 47.9**	**+0.3**
YER				*e*SG	**Sg**	**10 59 59.5**	**+1.7**
YER	**Yerkesik**	**0.77**	**314**	*e*Pg	**Pg**	**10 59 47.9**	**+0.3**
YER				*e*Sg	**Sg**	**10 59 59.5**	**+1.7**
GOLH	**Golhisar**	**0.80**	**36**	*i* P	**Pg**	**10 59 46.6**	**-1.4**
GOLH				*i* S	**Sg**	**10 59 57.3**	**-1.2**
GOLH	**Golhisar**	**0.80**	**36**	*i* P	**Pg**	**10 59 46.6**	**-1.4**
GOLH				*i* S	**Sg**	**10 59 57.3**	**-1.2**
DNZL	**Cakiroluk**	**1.09**	**3**	*i* P	**Pg**	**10 59 52.6**	**-1.0**
DNZL				*i* S	**Sg**	**10 59 56.9**	**-11**
DNZL	**Cakiroluk**	**1.09**	**3**	*i* P	**Pg**	**10 59 52.6**	**-1.1**
DAT	**Datca**	**1.13**	**277**	*e*PN	**Pg**	**10 59 53.8**	**-0.5**
DAT	**Datca**	**1.13**	**277**	*e*Pn	**Pg**	**10 59 53.8**	**-0.5**
DENT	**Denizli**	**1.16**	**2**	*e*PN	**Pn**	**10 59 53.5**	**-0.5**
DENT	**Denizli**	**1.16**	**2**	*e*Pn	**Pn**	**10 59 53.6**	**-0.4**
KORT	**Korkueli**	**1.18**	**69**	*i* P	**Pn**	**10 59 54.3**	**0.0**
KORT				*i* S	**Sb**	**10 59 57.3**	**-12**
KORT	**Korkueli**	**1.18**	**69**	*i* P	**Pn**	**10 59 54.3**	**+0.1**
MLSB	**Milas**	**1.19**	**306**	*e*PN	**Pn**	**10 59 54.8**	**+0.3**
MLSB	**Milas**	**1.19**	**306**	*e*Pn	**Pn**	**10 59 54.8**	**+0.4**
BODT	**Bodrum**	**1.42**	**290**	*e*PN	**Pn**	**10 59 57.1**	**-0.5**
BODT	**Bodrum**	**1.42**	**290**	*e*Pn	**Pn**	**10 59 57.1**	**-0.4**
BCK	**Bucak**	**1.55**	**56**	*e*PN	**Pn**	**10 59 59.8**	**+0.4**
BCK	**Bucak**	**1.55**	**56**	*e*Pn	**Pn**	**10 59 59.8**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.84**	**61**	*e*PN	**Pn**	**11 00 03.6**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.84**	**61**	*e*Pn	**Pn**	**11 00 03.6**	**+0.2**
KULA	**Kula-Manisa**	**1.93**	**353**	*e*PN	**Pn**	**11 00 04.7**	**0.0**
KULA	**Kula-Manisa**	**1.93**	**353**	*e*Pn	**Pn**	**11 00 04.7**	**0.0**
HDMB	**Hadim**	**2.84**	**82**	*e*PN	**Pn**	**11 00 18.0**	**+0.8**
HDMB	**Hadim**	**2.84**	**82**	*e*Pn	**Pn**	**11 00 18.0**	**+0.8**

IDC 27 11:00:35.7±1.5, 13°.18N×120°.61E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=48.7km s-min=12.1km az=99.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.97**	**19**	Pg	Pg	11 00 54.3	-0.2
	70nm,0.3s,baz=341,slow=0.3,SNR=5.3						
TGY				Lg		11 01 08.1	
	54nm,0.3s,baz=75,slow=23,SNR=4.1						
WRA	**Warramunga Arr**	**35.57**	**157**	P	P	11 07 34.4	-0.6
	0.3nm,0.7s,baz=334,slow=9.9,SNR=4.5						
SONM	**Songino Array**	**36.53**	**344**	P	P	11 07 43.1	+0.2
	0.3nm,0.5s,baz=156,slow=7.8,SNR=2.5						
ASAR	**Alice Springs**	**38.85**	**160**	P	P	11 08 03.4	+0.5
	0.4nm,0.6s,baz=338,slow=7.0,SNR=6.9						

IDC 27 11:00:40.1±1.4, 6°.75S×154°.03E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/16, mbtmp3.7/7, Error ellipse: s-maj=55.3km s-min=21.5km az=125.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.17**	**234**	P	P	11 05 48.4	-0.2
	1.4nm,0.8s,baz=60,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**25.62**	**227**	P	P	11 06 12.1	+0.6
	1.6nm,0.7s,baz=60,slow=8.8,SNR=19						
PETK	**Petropavlovsk-**	**59.71**	**3**	P	P	11 10 47.6	+1.3
	3.2nm,0.8s,baz=168,slow=7.4,SNR=3.3						
SONM	**Songino Array**	**68.61**	**328**	P	P	11 11 45.6	+0.7
	0.5nm,0.6s,baz=127,slow=3.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**83.44**	**326**	P	P	11 13 08.6	-0.8
	0.5nm,0.4s,baz=104,slow=6.1,SNR=2.7						
ILAR	**Eielson Array**	**83.50**	**22**	P	P	11 13 07.8	-1.7
	0.2nm,0.6s,baz=245,slow=5.2,SNR=7.7						
NVAR	**Mina Array Bea**	**92.33**	**52**	P	P	11 13 54.0	+1.3
	0.2nm,0.6s,baz=257,slow=8.2,SNR=2.7						
TORD	**Torodi Ar. Bea**	**152.03**	**285**	PKPbc	PKPbc	11 20 37.8	-0.6
	1.7nm,0.8s,baz=66,slow=2.2,SNR=2.2						

*ISCJB **27** 11:02:54.4±0.5, 38°.11N±0°.05×21°.55E±0°.03, h10km, Error ellipse: s-maj=6.9km s-min=3.1km az=166.6*
*CSEM **27** 11:02:54.2±0.2, 38°.14N×21°.56E, h20km, MD3.0, Error ellipse: s-maj=7.1km s-min=3.6km az=163.0*
*ATH **27** 11:02:54.0, 38°.18N×21°.53E, h10km, MD3.0/6*
*THE **27** 11:02:54.5, 38°.11N×21°.57E, h27km±1km, ML1.9/5, Error ellipse: s-maj=2.4km s-min=0.8km az=353.0*

ISC 27 11:02:54.6±0.7, 38°.11N±0°.05×21°.55E±0°.03, h18km±8km, n26, σ0s97/46, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**234**	*e*PG	**Pg**	**11 02 57.8**	**-0.3**
RLS	**Riolos of Patr**	**0.09**	**234**	*e*Pg	**Pg**	**11 02 57.8**	**-0.3**
LAKA	**Lakka**	**0.36**	**68**	P	**Pg**	**11 03 01.8**	**-0.3**
LAKA				S	**Sg**	**11 03 07.6**	**+0.3**
LAKA	**Lakka**	**0.36**	**68**	P	**Pg**	**11 03 01.8**	**-0.3**
LAKA				S	**Sg**	**11 03 07.6**	**+0.3**
EFP	**Efpalio**	**0.42**	**41**	*e*PB	**Pg**	**11 03 02.0**	**-1.3**
EFP	**Efpalio**	**0.42**	**41**	P	**Pg**	**11 03 02.7**	**-0.6**
EFP				S	**Sg**	**11 03 09.9**	**+0.8**
EFP	**Efpalio**	**0.42**	**41**	*e*Pb	**Pg**	**11 03 02.0**	**-1.3**
EFP	**Efpalio**	**0.42**	**41**	P	**Pg**	**11 03 02.7**	**-0.6**
EFP				*e*Sb	**Sg**	**11 03 08.0**	**-1.1**
EFP				S	**Sg**	**11 03 09.9**	**+0.8**
TRIZ	**Trizonia**	**0.48**	**58**	P	**Pg**	**11 03 03.7**	**-0.6**
TRIZ				S	**Sg**	**11 03 12.1**	**+1.2**
TRIZ	**Trizonia**	**0.48**	**58**	P	**Pg**	**11 03 03.7**	**-0.6**
TRIZ				S	**Sg**	**11 03 12.1**	**+1.2**
KALE	**Kalithea**	**0.54**	**58**	P	**Pg**	**11 03 04.7**	**-0.7**
KALE				S	**Sg**	**11 03 13.8**	**+1.1**
KALE	**Kalithea**	**0.54**	**58**	P	**Pg**	**11 03 04.7**	**-0.7**
KALE				S	**Sg**	**11 03 13.8**	**+1.1**
KFL	**Anninata**	**0.60**	**270**	P	**Pg**	**11 03 06.3**	**-0.3**
KFL				S	**Sg**	**11 03 16.7**	**+2.0**
KFL	**Anninata**	**0.60**	**270**	P	**Pg**	**11 03 06.3**	**-0.3**
KFL				S	**Sg**	**11 03 16.7**	**+2.0**
GUR	**Goura**	**0.65**	**105**	*e*PB	**Pg**	**11 03 06.6**	**-0.7**
GUR				*e*SB	**Sg**	**11 03 16.7**	**+0.7**
GUR	**Goura**	**0.65**	**105**	P	**Pg**	**11 03 06.6**	**-0.7**
GUR				S	**Sg**	**11 03 16.8**	**+0.8**
GUR	**Goura**	**0.65**	**105**	*e*Pb	**Pg**	**11 03 06.6**	**-0.7**
GUR				*e*Sb	**Sg**	**11 03 16.7**	**+0.7**
VLS	**Valsamata**	**0.76**	**275**	*e*PG	**Pg**	**11 03 08.2**	**-1.3**
VLS				*e*SB	**Sg**	**11 03 19.0**	**-0.7**
VLS	**Valsamata**	**0.76**	**275**	P	**Pg**	**11 03 08.2**	**-1.3**
VLS				S	**Sg**	**11 03 20.6**	**+0.9**
VLS	**Valsamata**	**0.76**	**275**	*e*Pg	**Pg**	**11 03 08.2**	**-1.3**
VLS				*e*Sb	**Sg**	**11 03 19.0**	**-0.7**
VLS				S	**Sg**	**11 03 20.6**	**+0.9**
DSF	**Desfina**	**0.82**	**68**	P	**Pg**	**11 03 08.5**	**-2.2**
DSF				S	**Sg**	**11 03 21.7**	**+0.1**
DSF	**Desfina**	**0.82**	**68**	P	**Pg**	**11 03 08.5**	**-2.2**
DSF				S	**Sg**	**11 03 21.7**	**+0.1**
ITM	**Ithomi**	**0.97**	**162**	*e*PN	**Pg**	**11 03 14.2**	**+0.7**
ITM	**Ithomi**	**0.97**	**162**	*e*Pn	**Pg**	**11 03 14.2**	**+0.7**
THL	**Klokotos Trika**	**1.50**	**14**	*e*PB	**Pn**	**11 03 21.2**	**+0.7**
THL	**Klokotos Trika**	**1.50**	**14**	*e*Pb	**Pn**	**11 03 21.2**	**+0.7**

CASC 27 11:53:00.3±2.2, 13°.54N×90°.55W, h37km±173km, MD3.6, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.86**	**356**	*e*P	Pn	11 53 16.6	+0.7
PCG				*e*S	Sn	11 53 28.8	+1.6
RTR	**El Retiro**	**0.95**	**68**	*e*P	Pn	11 53 17.2	+0.1
RTR				⇑*e*S	Sn	11 53 29.4	-0.1
SBLS	**San Blas**	**0.95**	**71**	*e*P	Pn	11 53 17.4	+0.2
FUG	**Fuego 3**	**0.95**	**343**	*e*P	Pn	11 53 17.6	+0.4
SNJE	**San Jose**	**0.98**	**70**	*e*P	Pn	11 53 17.5	0.0
RBDL	**Robledal**	**1.02**	**55**	*e*P	Pn	11 53 17.5	-0.6
RBDL				*e*S	Sn	11 53 29.4	-1.7
NBG	**Las Nubes**	**1.06**	**11**	*e*P	Pn	11 53 19.4	+0.6
NBG				*e*S	Sn	11 53 36.1	+3.8
FG6		**1.07**	**342**	*e*P	Pn	11 53 19.2	+0.4
FG6				*e*S	Sn	11 53 33.7	+1.3
BOQS	**Boqueron**	**1.25**	**81**	*e*P	Pn	11 53 21.4	+0.2
JAT	**Jato**	**1.31**	**307**	*e*P	Pn	11 53 23.7	+1.6
JAT				*e*S	Sn	11 53 36.7	-1.7
TP2	**Tecpan 2**	**1.32**	**340**	*e*P	Pn	11 53 23.6	+1.3
TP2				*e*S	Sn	11 53 40.6	+1.9
LFRS	**El Faro**	**1.45**	**86**	*e*P	Pn	11 53 24.6	+0.5
SNVI	**San Vicente**	**1.67**	**87**	*e*P	Pn	11 53 27.3	+0.3
SNVI				*e*S	Sn	11 53 49.1	+1.9
MRL	**Marmol**	**1.73**	**29**	*e*P	Pn	11 53 28.0	0.0

MAN 27 12:14:16, 13°.66N×120°.21E, h35km, mb4.1, ML2.9, MS2.6, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.09**	**26**	*e*P	Pn	12 14 22.6	+0.6
TGY	**Tagaytay City**	**0.83**	**58**	⇓*i*P	Pn	12 14 34.0	+2.7
BOAC	**Boac**	**1.60**	**97**	*e*P	Pn	12 14 43.3	+1.5
BOAC				*e*S	Sn	12 15 02.3	+1.0
BUSP	**Coron**	**1.64**	**180**	*e*P	Pn	12 14 43.4	+1.0
BUSP				*e*S	Sn	12 14 59.8	-2.5

*IDC **27** 12:35:55.9±1.3, 13°.21N×120°.51E, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.5/21, mbtmp3.8/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/38, Error ellipse: s-maj=31.3km s-min=11.0km az=107.0*
*ISCJB **27** 12:35:56.0±1.4, 13°.35N±0°.06×120°.34E±0°.07, h7km±13km, mb3.7/3, Error ellipse: s-maj=11.9km s-min=8.0km az=34.9*
*MAN **27** 12:35:58, 13°.36N×120°.34E, h29km, mb4.4, ML3.3, MS3.2*

ISC 27 12:35:56.0±1.0, 13°.32N±0°.04×120°.39E±0°.06, h1km±8km, n12, σ1s04/13, mb3.7/3, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.43**	**341**	*e*P	**Pg**	**12 36 02.9**	**-1.5**
TGY	**Tagaytay City**	**0.94**	**34**	Pg	**Pg**	**12 36 15.6**	**+1.6**
	167nm,0.3s,baz=196,slow=2.4,SNR=8.2						
TGY				Lg		12 36 27.7	
	284nm,0.3s,baz=176,slow=23,SNR=12						
TGY	**Tagaytay City**	**0.94**	**34**	⇓*e*P	**Pg**	**12 36 15.2**	**+1.2**
BUSP	**Coron**	**1.32**	**188**	*e*P	**Pg**	**12 36 21.2**	**-0.3**
BUSP				*e*S	**Sg**	**12 36 39.2**	**+0.6**
BOAC	**Boac**	**1.42**	**84**	*e*P	**Pn**	**12 36 22.9**	**0.0**
BOAC				*e*S	**Sg**	**12 36 41.1**	**-0.5**
OTRP	**Odiongan**	**1.85**	**121**	*e*P	**Pn**	**12 36 30.4**	**+1.4**
CUYO	**Cuyo Island**	**2.53**	**166**	*e*P	**Pn**	**12 36 38.0**	**-0.3**
BALP	**Baler**	**2.66**	**25**	*e*P	**Pn**	**12 36 40.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**21.25**	**287**	P	**P**	**12 40 45.1**	**+1.4**
	1.3nm,0.7s,mb3.3,baz=102,slow=8.4,SNR=7.9						
WRA	**Warramunga Arr**	**35.79**	**157**	P	**P**	**12 42 54.8**	**-2.2**
	1.3nm,0.7s,mb3.9,baz=337,slow=9.6,SNR=10						
ASAR	**Alice Springs**	**39.06**	**160**	P	**P**	**12 43 24.4**	**-0.4**
	1.5nm,0.6s,mb3.8,baz=337,slow=6.8,SNR=15						
AAK	**Ala-Archa**	**49.12**	**316**	LR	LR	13 06 48.7	
	comp=Z,53nm,21.4s,baz=216,slow=38						

IDC 27 12:39:34.4±1.2, 13°.29N×120°.39E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/21, mbtmp3.6/4, Error ellipse: s-maj=26.0km s-min=11.1km az=114.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.97**	**33**	Pg	Pg	12 39 53.9	+1.0
	182nm,0.3s,baz=152,slow=1.9,SNR=8.9						
TGY				Lg		12 40 06.0	
	237nm,0.3s,baz=104,slow=24,SNR=16						
CMAR	**Chiang Mai Arr**	**21.25**	**287**	P	P	12 44 24.2	+1.9
	0.4nm,0.3s,baz=91,slow=8.6,SNR=4.8						
WRA	**Warramunga Arr**	**36.37**	**157**	P	P	12 46 34.4	-0.9
	0.8nm,0.4s,baz=332,slow=10,SNR=13						
SONM	**Songino Array**	**36.37**	**344**	P	P	12 46 38.5	-1.7
	0.8nm,0.7s,baz=159,slow=9.2,SNR=4.3						
ASAR	**Alice Springs**	**39.03**	**160**	P	P	12 47 03.7	+0.7
	1.0nm,0.6s,baz=341,slow=7.3,SNR=14						

NNC 27 12:48:08.7±1.9, 49°.58N×87°.41E, h11km±8km, mb3.9, mpv3.5, 7C-3D, Error ellipse: s-maj=15.2km s-min=8.4km az=77.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.42**	**233**	⇑Pn	Pn	12 49 18.9	+3.3
	3.8nm,0.5s,baz=55,slow=12,SNR=73						
MK31				⇓Pg	Pg	12 49 28.9	-4.3
	2.7nm,0.3s,baz=55,slow=15,SNR=10						
MK31				⇑Sn	Sn	12 50 13.1	+6.1
	3.4nm,0.4s,baz=39,slow=16,SNR=4.6						
MK31				⇓Lg		12 50 30.2	
	40nm,1.1s,baz=60,slow=26,SNR=9.2						
KURK	**Kurchatov**	**5.76**	**285**	⇑Pn	Pn	12 49 33.3	-0.8
	5.3nm,0.5s						
KURK				⇑Sn	Sn	12 50 41.8	+1.7
	7.4nm,0.9s						
KURK				⇑Lg		12 51 11.0	
	14nm,0.6s						
KURBB	**Kurchatov Arra**	**5.81**	**284**	⇓Pn	Pn	12 49 33.8	-0.9
	2.2nm,0.7s						
KURBB				⇑Sn	Sn	12 50 42.5	+1.2
	4.1nm,0.6s						
KURBB				⇑Lg		12 51 12.9	
	4.3nm,0.6s						

NEIC 27 12:49:26.5, 54°.30N×162°.20W, h29km, ML3.8(PMR), ML3.3(AEIC), After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.90**	**309**	P	Pn	12 49 42.9	-0.2
FALS				S	Sb	12 49 55.6	+0.5
SDPT	**Sand Point**	**1.45**	**43**	P	Pn	12 49 50.8	+0.2
SDPT				S	Sn	12 50 08.9	+0.3
AKUT	**Akutan**	**2.10**	**267**	P	Pn	12 50 00.7	+1.0
AKUT				S	Sn	12 50 26.8	+1.9
UNV	**Unalaska Valle**	**2.58**	**261**	P	Pn	12 50 06.8	+0.6
UNV				S	Sn	12 50 36.9	+0.5
CHGN	**Chignik**	**2.95**	**46**	*e*P	Pn	12 50 11.7	+0.5
OHAK	**Old Harbor**	**5.82**	**56**	*e*P	Pn	12 50 48.2	-2.5
TTA	**Tatalina**	**9.23**	**18**	*e*P	Pn	12 51 37.8	+0.4

IDC 27 12:49:54.9±1.1, 12°.64N×143°.78E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/22, mbtmp3.7/5, Error ellipse: s-maj=28.8km s-min=18.7km az=121.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.42**	**48**	Pn	Pn	12 50 22.9	+0.9
	8.8nm,0.3s,baz=267,slow=12,SNR=4.2						
GUMO				Sn	Sn	12 50 41.5	+0.1
	24nm,0.3s,baz=24,slow=23,SNR=7.0						
GUMO				T		12 52 22.1	
	27nm,0

BKZ	Black Stone Fm	7.73	201	PN	P	13 13 35.6	-1.5
BKZ				SN	S	13 15 08.8	0.0
CKHZ	Cape Kidnapper	8.02	197	PN	P	13 13 41.4	+1.1
FWVZ	Far West T-bar	8.12	206	PN	P	13 13 42.2	+0.8
BHHZ	Black Hill Sta	8.15	202	PN	P	13 13 41.7	-0.1
WNVZ	Wahianoa	8.17	205	PN	P	13 13 42.7	+0.7
MOVZ	Moawhango	8.19	204	PN	P	13 13 43.3	+1.2
KAHZ	Kahuranaki	8.20	198	PN	P	13 13 43.4	+1.1
MTVZ	Mangateitei	8.27	206	PN	P	13 13 44.5	+1.5
PXZ	Pawanui	8.43	197	PN	P	13 13 43.9	-0.9
PXZ				SN	S	13 15 21.4	-1.7
TSZ	Takapari Road	8.71	201	PN	P	13 13 47.5	-0.4
TSZ				SN	S	13 15 30.1	+1.3
ANWZ	Angora Road	8.93	198	SN	S	13 15 31.9	-1.4
MRZ	Mangatainoka R	9.38	201	PN	P	13 13 51.6	-3.7
MRZ				SN	S	13 15 41.9	-0.5
CAW	Cannon Point	9.94	202	PN	P	13 14 01.4	-0.2
CAW				SN	S	13 15 53.8	-0.2
THZ	Tophouse	11.31	208	PN	P	13 14 17.1	+0.4
THZ				SN	S	13 16 21.9	+0.2
KHZ	Kahutara	11.63	205	PN	P	13 14 20.5	+0.3
KHZ				SN	S	13 16 29.5	+1.3
ASAR	Alice Springs	41.41	270	P	P	13 18 53.9	+0.1
	0.3nm,0.9s,mb2.6,baz=104,slow=7.7,SNR=3.4						
WRA	Warramunga Arr	42.55	275	P	P	13 19 00.5	-2.3
	0.2nm,0.4s,mb2.8,baz=112,slow=7.8,SNR=22						
KAF	Kangasniemi	145.46	338	*e*pkp	PKPdf	13 30 32.5	-1.7
FINES	FINESS Array B	146.04	338	PKPbc	PKPbc	13 30 35.0	-1.9
	2.7nm,0.4s,baz=44,slow=4.0,SNR=43						
HFS	Hagfors	150.44	346	PKPbc	PKPbc	13 30 46.3	-1.8
	2.5nm,0.7s,baz=132,slow=2.1,SNR=6.3						

IDC 27 13:15:19.8±1.6, 13°.33N×120°.29E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=35.3km s-min=12.2km az=116.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.99	39	Pg	Pg	13 15 40.1	+1.3
	190nm,0.3s,baz=282,slow=2.8,SNR=12						
TGY				Lg		13 15 51.5	
	137nm,0.3s,baz=177,slow=20,SNR=5.9						
WRA	Warramunga Arr	35.84	157	P	P	13 22 20.9	-0.5
	0.4nm,0.5s,baz=334,slow=10,SNR=5.8						
SONM	Songino Array	36.30	344	P	P	13 22 24.8	-0.2
	0.7nm,0.7s,baz=160,slow=10,SNR=4.1						
ASAR	Alice Springs	39.11	160	P	P	13 22 49.2	+0.2
	0.4nm,0.5s,baz=340,slow=7.4,SNR=14						

GUC 27 13:26:14.5±0.6, 21°.26S×69°.04W, h147km±15km, ML3.5, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	Humberston	1.26	321	*e*P	Pn	13 26 42.5	+1.2
HMBC				*e*S	Sn	13 27 03.0	+1.1
HMBC				AML	AML	13 27 06.3	
	comp=N,656nm,0.2s						
PSGC	Pisagua	1.94	328	⇓*i*P	Pn	13 26 49.8	+1.0
PSGC				*i* S	Sn	13 27 16.5	+1.4
PSGC				AML	AML	13 27 17.3	
	comp=E,110nm,0.5s						
MNMC	Miæe Miæ	2.18	346	⇓*i*P	Pn	13 26 52.9	+1.2
MNMC				*i* S	Sn	13 27 22.1	+1.9
MNMC				AML	AML	13 27 23.6	
	comp=N,710nm,0.2s						
CEN1	Los Morros	2.37	207	⇑*i*P	Pn	13 26 57.7	+3.8
CEN1				*i* S	Sn	13 27 28.1	+3.8
ANCH	Antofagasta	2.72	208	*e*P	Pn	13 26 59.1	+0.9
ANCH				*i* S	Sn	13 27 33.3	+1.4

*IDC **27** 13:34:46.7±0.8, 13°.35N×120°.41E, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.0/21, mbtmp4.0/8, MS3.6/1, Ms1 3.6/1, ms1mx2.6/32, Error ellipse: s-maj=19.3km s-min=10.8km az=118.0*
*MAN **27** 13:34:46, 13°.35N×120°.31E, h1km, mb4.4, ML3.2, MS3.1*
*ISCJB **27** 13:34:48.0±1.6, 13°.43N±0°.04×120°.31E±0°.05, h15km±11km, mb4.2/14, Error ellipse: s-maj=8.8km s-min=6.4km az=165.6*
*NEIC **27** 13:34:50.9±2.3, 13°.44N×120°.54E, h28km±16km, mb4.5/6, Error ellipse: s-maj=21.8km s-min=10.4km az=65.0*
ISC 27 13:34:47.9±1.3, 13°.37N±0°.04×120°.36E±0°.05, h6km±9km, n30, σ1°08/31, mb4.2/14, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.38	343	*e*P	Pg	13 34 54.3	-0.9
TGY	Tagaytay City	0.92	38	Pg	Pg	13 35 05.4	-0.2
	213nm,0.3s,baz=223,slow=4.2,SNR=18						
TGY				Lg		13 35 16.8	
	692nm,0.3s,baz=97,slow=17,SNR=23						
TGY	Tagaytay City	0.92	38	⇓*e*P	Pg	13 35 05.4	-0.1
BUSP	Coron	1.37	186	*e*P	Pn	13 35 14.7	+1.1
BUSP				*e*S	Sb	13 35 31.3	-0.4
BOAC	Boac	1.45	86	*e*P	Pn	13 35 13.1	-1.6
BOAC				*e*S	Sb	13 35 33.9	-0.2
OTRP	Odiongan	1.91	122	*e*P	Pn	13 35 21.5	+0.5
POLP	Polilio Island	2.04	49	*e*P	Pn	13 35 26.2	+3.4
AUQP	San Andres	2.26	91	*e*P	Pn	13 35 27.0	+1.2
SCZP	Santa Cruz	2.43	350	*e*P	Pn	13 35 33.2	+5.0
CUYO	Cuyo Island	2.59	165	*e*P	Pn	13 35 30.3	0.0
BALP	Baler	2.63	26	*e*P	Pn	13 35 31.9	+0.9
CAUP	Cauayan	3.82	22	*e*P	Pn	13 35 50.9	+3.6
APYP	Conner	4.54	11	*e*P	Pn	13 36 01.7	+4.4
NACB	Ninganchiao	10.81	6	Pn	Pn	13 37 24.0	+0.7
CMAR	Chiang Mai Arr	21.20	287	P	P	13 39 36.5	+2.1
	2.3nm,0.9s,mb3.5,baz=95,slow=9.5,SNR=14						
WRA	Warramunga Arr	35.85	157	P	P	13 41 47.7	-1.0
	3.6nm,0.6s,mb4.5,baz=335,slow=9.8,SNR=64						
ULN	Ulaanbaatar	36.13	345	P	P	13 41 51.0	+0.2
	2.9nm,0.6s,mb4.4						
SONM	Songino Array	36.28	344	P	P	13 41 51.3	-0.7
	3.0nm,0.6s,mb4.4,baz=162,slow=10,SNR=18						
ASAR	Alice Springs	39.12	160	P	P	13 42 16.1	-0.2
	3.0nm,0.5s,mb4.3,baz=336,slow=6.7,SNR=58						
CTA	Charters Tower	41.89	142	LR	LR	14 00 08.6	
	comp=Z,70nm,18.1s,baz=231,slow=36						
MKAR	Makanchi Array	46.10	324	P	P	13 43 13.0	+0.1
	1.8nm,1.0s,mb4.0,baz=136,slow=6.7,SNR=4.9						
ZALV	Zalesovo Beam	49.20	333	P	P	13 43 35.3	-1.5
	0.6nm,0.5s,mb3.9,baz=132,slow=4.3,SNR=2.9						
STKA	Stephens Creek	49.38	156	P	P	13 43 38.8	+0.3
	1.4nm,1.2s,mb3.9						
AML	Almayashu	49.43	315	P	P	13 43 39.7	+0.9
	9.4nm,1.2s,mb4.7						
KURK	Kurchatov	50.28	327	*e*P	P	13 43 44.9	-0.2
	7.6nm,0.8s,mb4.8						
BRVK	Borovoye	55.93	326	*e*P	P	13 44 25.4	-1.3
	3.3nm,0.7s,mb4.5						
ARU	Arti	63.47	327	*e*P	P	13 45 17.0	-1.7
	2.9nm,0.7s,mb4.5						
ILAR	Eielson Array	79.19	26	P	P	13 46 52.0	-1.5
	0.3nm,0.8s,mb3.2,baz=258,slow=4.3,SNR=3.8						
ILAR	Eielson Array	79.19	26	P	P	13 46 52.0	-1.5
FINES	FINESS Array B	80.41	331	P	P	13 47 01.7	+1.5
	3.7nm,1.1s,mb4.2,baz=69,slow=7.6,SNR=4.8						

*NNC **27** 13:40:23.7±4.3, 40°.67N×74°.18E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=40.0km s-min=12.2km az=168.0*
ISC 27 13:40:18.0±2.3, 40°.5N±0°.1×73°.68E±0°.08, h10km, n12, σ1°01/14, 3C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	1.67	0	P	Pn	13 40 46.2	-1.1
	SNR=5.8						
KZA	Kyzart	2.01	36	P	Pn	13 40 48.8	-3.1
	SNR=12						
EKS2	Erkin-Say	2.20	2	P	Pn	13 40 55.3	+0.7
	SNR=12						
AAK	Ala-Archa	2.26	16	P	Pn	13 40 55.1	-0.3
	SNR=30						
KBK	Karagaybulak	2.39	23	P	Pn	13 40 56.9	-0.4
	SNR=26						
ULHL	Ulahol	2.63	46	P	Pn	13 41 00.1	-0.4
	SNR=7.3						
CHMS	Chumysh	2.66	17	P	Pn	13 41 02.4	+1.5
	SNR=16						
TKM2	Tokmak 2	2.85	30	⇓Pn	Pn	13 41 04.6	+1.1
	4.1nm,0.3s						
TKM2				⇑Sn	Sn	13 41 37.3	-0.5
	22nm,0.6s						
TKM2	Tokmak 2	2.85	30	P	Pn	13 41 04.3	+0.8
	SNR=14						
USP	Ospenovka	2.87	12	P	Pn	13 41 05.5	+1.7
	SNR=16						
KK31	Karatay Array	3.55	319	⇓Pn	Pg	13 41 24.9	-1.0
	0.9nm,0.3s,baz=134,slow=28,SNR=3.6						
KK31				⇑Sn	Sg	13 42 12.1	+0.3
	7.4nm,0.5s,baz=128,slow=29,SNR=9.4						
KNDC	Almaty	3.69	41	⇑Sn	Sn	13 41 58.6	-0.1
	32nm,0.4s						

*IDC **27** 13:45:55.1±1.1, 13°.19N×120°.47E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.6/21, mbtmp3.8/4, MS3.7/1, Ms1 3.6/1, ms1mx2.7/29, Error ellipse: s-maj=27.0km s-min=11.2km az=107.0*
*MAN **27** 13:45:55, 13°.46N×120°.23E, h15km, mb4.5, ML3.4, MS3.3*
ISC 27 13:45:57.0±1.9, 13°.32N±0°.06×120°.59E±0°.07, h14km±14km, n12, σ0°78/13, mb3.8/4, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.54	321	*e*P	Pg	13 46 02.1	-5.5
TGY	Tagaytay City	0.85	23	Pg	Pg	13 46 14.1	+0.6
	265nm,0.3s,baz=194,slow=4.6,SNR=17						
TGY				Lg		13 46 29.9	
	371nm,0.3s,baz=166,slow=19,SNR=18						
TGY	Tagaytay City	0.85	23	⇓*e*P	Pg	13 46 12.8	-0.8
BOAC	Boac	1.23	83	*e*P	Pn	13 46 21.4	+1.7
BOAC				*e*S	Sb	13 46 35.5	-0.3
BUSP	Coron	1.36	196	*e*P	Pn	13 46 20.9	-0.7
BUSP				*e*S	Sb	13 46 39.7	+0.2
OTRP	Odiongan	1.69	124	*e*P	Pn	13 46 30.4	+4.3
BALP	Baler	2.59	21	*e*P	Pn	13 46 37.8	-0.8
CMAR	Chiang Mai Arr	21.43	287	P	P	13 50 45.9	+0.9
	0.5nm,0.5s,mb3.1,baz=94,slow=8.4,SNR=4.2						
WRA	Warramunga Arr	35.71	157	P	P	13 52 54.6	-0.8
	1.1nm,0.6s,mb4.0,baz=337,slow=9.7,SNR=14						
SONM	Songino Array	36.40	344	P	P	13 53 00.7	-0.2
	1.7nm,0.7s,mb4.1,baz=164,slow=10,SNR=10.0						
ASAR	Alice Springs	38.99	160	P	P	13 53 23.2	+0.1
	1.3nm,0.6s,mb3.9,baz=339,slow=7.0,SNR=25						
STKA	Stephens Creek	49.24	156	LR	LR	14 16 12.1	
	comp=Z,85nm,20.9s,baz=23,slow=37						

MAN 27 14:22:05, 17°.01N×121°.52E, h32km, mb4.5, ML3.3, MS3.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	Cauayan	0.29	103	*e*P	Pb	14 22 14.1	+1.5
CAUP				*e*S	Sb	14 22 16.4	-1.3
PALP	Palanan	0.86	86	*e*P	Pn	14 22 22.1	+1.2
APYP	Conner	0.89	342	*e*P	Pn	14 22 22.0	+0.7
APYP				*e*S	Sn	14 22 33.2	+0.1
BALP	Baler	1.26	178	*e*P	Pn	14 22 27.0	+0.6

IDC 27 14:38:01.9±1.6, 13°.29N×120°.20E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=35.0km s-min=12.4km az=117.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.07	41	Pg	Pg	14 38 22.4	-0.1
	154nm,0.3s,baz=186,slow=1.4,SNR=22						
TGY				Lg		14 38 37.6	
	223nm,0.3s,baz=144,slow=19,SNR=9.1						
WRA	Warramunga Arr	35.84	157	P	P	14 45 03.0	-0.5
	0.6nm,0.5s,baz=336,slow=9.7,SNR=6.0						
SONM	Songino Array	36.31	344	P	P	14 45 07.3	+0.1
	0.5nm,0.7s,baz=155,slow=9.1,SNR=3.8						
ASAR	Alice Springs	39.10	160	P	P	14 45 31.4	+0.4
	0.7nm,0.5s,baz=340,slow=7.0,SNR=12						

IDC 27 14:42:43.3±1.7, 13°.24N×120°.10E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=36.6km s-min=14.4km az=118.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.18	43	Pg	Pg	14 43 06.2	+0.3
	132nm,0.3s,baz=232,slow=7.5,SNR=9.0						
TGY				Lg		14 43 21.6	
	105nm,0.3s,baz=190,slow=19,SNR=4.7						
WRA	Warramunga Arr	35.82	157	P	P	14 49 44.9	+0.2
	0.5nm,0.8s,baz=331,slow=10,SNR=3.2						
SONM	Songino Array	36.34	344	P	P	14 49 49.0	+0.2
	0.3nm,0.4s,baz=157,slow=7.8,SNR=2.7						
ASAR	Alice Springs	39.08	160	P	P	14 50 12.1	-0.2
	0.3nm,0.6s,baz=342,slow=6.9,SNR=5.8						

*IDC **27** 14:58:08.4±1.0, 49°.96N×178°.35W, h0km, mb3.8/11, mb1 4.1/13, mb1mx3.8/30, mbtmp3.9/13, ML4.1/2, Error ellipse: s-maj=28.4km s-min=20.5km az=143.0*
*ISCJB **27** 14:58:10.2±4.7, 50°.0N±0°.2×178°.3W±0°.1, h24km±33km, mb3.7/12, Error ellipse: s-maj=28.8km s-min=14.7km az=166.9*
*NEIC **27** 14:58:12.5±4.0, 49°.93N×178°.32W, h27km±27km, ML3.2(AEIC), Error ellipse: s-maj=19.3km s-min=10.5km az=166.0*
ISC 27 14:58:12.6±4.7, 49°.9N±0°.2×178°.3W±0°.1, h28km±33km, n18, σ0°74/17, mb3.7/12, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	8.29	57	*e*Pn	Pn	15 00 10.1	-0.7
PETK	Petropavlovsk-	15.26	291	Pn	Pn	15 01 45.8	+0.1
	0.4nm,0.3s,baz=103,slow=17,SNR=10						
KDAK	Kodiak Island	17.01	53	P	Pn	15 02 08.3	+0.2
	1.3nm,0.3s,baz=261,slow=7.5,SNR=10						
KDAK	Kodiak Island	17.01	53	P	Pn	15 02 08.3	+0.2
PPLA	Purkeypile	19.25	38	*e*P	Pn	15 02 36.9	+1.5
ILAR	Eielson Array	22.21	36	P	P	15 03 05.8	-0.6
	0.3nm,0.6s,mb2.9,baz=242,slow=8.0,SNR=5.6						
INK	Inuvik	28.49	33	P	P	15 04 03.4	-1.5
	1.1nm,0.6s,mb3.7,baz=236,slow=4.4,SNR=3.0						
PDAR	Pinedale Array	46.47	71	P	P	15 06 37.6	+0.8
	0.7nm,0.7s,mb3.7,baz=308,slow=4.4,SNR=5.2						
ARCES	ARCESS Array B	59.59	351	P	P	15 08 13.2	+0.2
	4.4nm,0.9s,mb4.5,baz=19,slow=7.7,SNR=4.5						
MKAR	Makanchi Array	61.20	309	P	P	15 08 23.2	-1.1
	0.5nm,0.8s,mb3.7,baz=56,slow=8.9,SNR=2.5						
BVAR	Borovoye Array	62.21	320	P	P	15 08 31.8	+0.7
	1.0nm,0.5s,mb4.0,baz=47,slow=6.3,SNR=6.7						
FINES	FINESS Array B	67.28	348	P	P	15 09 03.4	-0.6
	0.8nm,0.6s,mb4.0,baz=352,slow=5.6,SNR=3.8						
AAK	Ala-Archa	68.05	311	P	P	15 09 09.8	+0.6
	0.8nm,0.4s,mb4.1,baz=53,slow=7.7,SNR=3.9						
NOA	NORSAR Array B	69.13	355	P	P	15 09 16.2	+0.7
	0.6nm,0.8s,mb3.6,baz=351,slow=8.5,SNR=2.9						
GERES	GERESS Array B	81.08	352	P	P	15 10 24.4	-0.2
	0.3nm,0.2s,mb3.8,baz=31,slow=3.1,SNR=3.7						
WRA	Warramunga Arr	81.19	224	P	P	15 10 25.2	-0.3
	0.2nm,0.6s,mb3.2,baz=34,slow=5.8,SNR=3.4						
ASAR	Alice Springs	84.63	223	P	P	15 10 43.3	+0.1
	0.2nm,0.5s,mb3.5,baz=23,slow=6.1,SNR=4.9						
MAW	Mawson	145.51	216	PKPbc	PKPbc	15 17 47.2	+0.6
	1.0nm,0.7s,baz=146,slow=3.6,SNR=2.9						

IDC 27 14:58:33.7±1.0, 13°.29N×120°.30E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/22, mbtmp3.8/6, Error ellipse: s-maj=20.1km s-min=11.6km az=119.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.01	37	Pg	Pg	14 58 52.0	-1.1
	164nm,0.3s,baz=204,slow=18,SNR=5.2						
TGY				Lg		14 59 08.3	
	234nm,0.3s,baz=155,slow=22,SNR=10						
CMAR	Chiang Mai Arr	21.17	287	P	P	15 03 21.2	+0.5
	0.8nm,0.6s,baz=98,slow=9.6,SNR=7.6						
WRA	Warramunga Arr	35.80	157	P	P	15 05 34.4	-0.5
	1.7nm,0.7s,baz=334,slow=9.9,SNR=15						
SONM	Songino Array	36.34	344	P	P	15 05 38.3	-1.0
	1.1nm,0.6s,baz=155,slow=7.6,SNR=6.6						
ASAR	Alice Springs	39.07	160	P	P	15 06 03.1	+0.6
	1.6nm,0.5s,baz=339,slow=6.8,SNR=36						
MKAR	Makanchi Array	46.13	324	P	P	15 07 00.2	+0.4
	0.3nm,0.6s,baz=128,slow=9.3,SNR=3.6						
BVAR	Borovoye Array	55.89	326	P	P	15 08 13.6	+0.5
	0.7nm,0.6s,baz=120,slow=8.7,SNR=3.8						

IDC 27 14:59:34.2±1.2, 13°.43N×120°.13E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/22, mbtmp3.6/4, 1C, Error ellipse: s-maj=24.2km s-min=12.7km az=128.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.03	50	Pg	Pg	14 59 54.4	+0.4
	271nm,0.3s,baz=8.3,slow=18,SNR=8.5						
TGY				Lg		15 00 07.9	
	397nm,0.3s,baz=167,slow=22,SNR=6.3						
TGY	Tagaytay City	1.03	50	⇑*i*P	Pg	14 59 54.8	+0.8
WRA	Warramunga Arr	35.99	157	P	P	15 06 36.9	-0.2
	0.9nm,0.6s,baz=335,slow=9.7,SNR=9.5						
SONM	Songino Array	36.16	344	P	P	15 06 39.9	+1.6
	0.6nm,0.7s,baz=170,slow=11,SNR=3.6						
ASAR	Alice Springs	39.26	160	P	P	15 07 04.9	+0.2
	0.8nm,0.6s,baz=340,slow=7.3,SNR=9.0						
BVAR	Borovoye Array	55.68	326	P	P	15 09 10.8	-1.5
	0.7nm,0.7s,baz=108,slow=9.5,SNR=3.5						

*ISCJB **27** 15:09:13.7±0.4, 35°.40S±0°.07×90°.4E±0°.1, h10km, mb4.3/26, MS3.5/5, Error ellipse: s-maj=13.9km s-min=9.6km az=10.9*
*IDC **27** 15:09:14.2±0.8, 35°.33S×90°.46E, h0km, mb4.0/10, mb1 4.1/10, mb1mx4.0/16, mbtmp4.0/10, MS3.5/5, Ms1 3.4/5, ms1mx3.2/27, Error ellipse: s-maj=28.3km s-min=17.4km az=115.0*
*NEIC **27** 15:09:15.6±0.4, 35°.32S×90°.45E, h10km, mb4.5/13, Error ellipse: s-maj=13.0km s-min=10.0km az=98.0*
ISC 27 15:09:15.7±0.4, 35°.38S±0°.07×90°.5E±0°.1, h10km, n37, σ0°86/32, mb4.3/26, MS3.5/5, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	22.26	91	LR	LR	15 21 41.3	
	comp=Z,157nm,18.1s,MS3.5,baz=226,slow=34						
FITZ	Fitzroy Crossi	35.58	70	LR	LR	15 28 18.9	
	comp=Z,65nm,18.9s,MS3.4,baz=91,slow=32						
MAW	Mawson	35.91	198	P	P	15 16 15.3	-0.4
	3.3nm,0.7s,mb4.4,baz=29,slow=7.6,SNR=19						
MAW				LR	LR	15 28 50.7	
	comp=Z,63nm,18.4s,MS3.4,baz=223,slow=33						
MAW	Mawson	35.91	198	P	P	15 16 15.3	-0.4
MAW				*e*		15 16 24.9	
MAW				LR	LR	15 28 50.7	
ASAR	Alice Springs	39.27	85	P	P	15 16 44.5	-0.2
	0.9nm,0.9s,mb3.5,baz=242,slow=7.3,SNR=10						
ASAR				PcP	PcP	15 18 53.4	-0.1
	0.8nm,0.7s,baz=235,slow=2.1,SNR=11						
KSM	Kuching	41.09	31	*e*P	P	15 16 59.8	0.0
	8.7nm,1.1s,mb4.3						
WRA	Warramunga Arr	41.44	80	P	P	15 17 02.6	0.0
	0.6nm,0.8s,mb3.3,baz=244,slow=7.5,SNR=6.0						
WRA				PcP	PcP	15 18 59.7	-0.9
	0.5nm,1.1s,baz=236,slow=2.8,SNR=5.3						
STKA	Stephens Creek	42.33	100	P	P	15 17 09.9	+0.1
	2.6nm,0.6s,mb4.0,baz=276,slow=13,SNR=6.3						
STKA				LR	LR	15 33 02.6	
	comp=Z,20nm,19.0s,MS3.0,baz=290,slow=34						
SBA	Scott Base	52.82	165	*e*P	P	15 18 32.2	+1.5
	2.7nm,0.9s,mb4.2						
CMAR	Chiang Mai Arr	54.14	10	P	P	15 18 41.5	+0.4
	2.0nm,1.1s,mb4.0,baz=205,slow=8.6,SNR=7.2						
CHTO	Chiang Mai	54.49	10	P	P	15 18 44.1	+0.6
	3.3nm,1.1s,mb4.2						
QSPA	South Pole Qui	54.76	180	P	P	15 18 46.2	+1.4
	5.4nm,0.8s,mb4.7,baz=294,slow=1.6,SNR=18						
QSPA	South Pole Qui	54.76	180	*e*P	P	15 18 45.5	+0.7
	7.6nm,1.0s,mb4.7						
BOSA	Boshof	54.84	258	LR	LR	15 35 54.5	
	comp=Z,112nm,18.1s,MS4.0,baz=344,slow=29						
SNAA	Sanae	57.87	202	P	P	15 19 07.8	+0.7
	1.0nm,0.8s,mb3.9,baz=113,slow=5.4,SNR=19						
LSZ	Lusaka	58.82	273	*e*P	P	15 19 16.4	+1.8
	7.9nm,1.2s,mb4.6						
VNA2	Neumayer--Watz	59.49	202	*e*	P	15 19 17.2	-1.3
	baz=89,slow=5.1						
VNA2				*e*		15 19 24.4	
VNA1	Neumayer--Stat	59.86	202	*e*	P	15 19 20.2	-0.8
VNA1				*e*		15 19 27.3	
VNA3	Neumayer Olymp	60.07	202	*e*	P	15 19 21.5	-0.9
VNA3				*e*		15 19 28.8	
LSA	Lhasa	64.74	1	P	P	15 19 54.5	+0.4
	7.7nm,1.3s,mb4.6						
TSUM	Tsumeb	65.44	263	P	P	15 19 58.2	-0.8
	14nm,1.3s,mb4.8						
LZH	Lanzhou	72.19	11	*e*P	P	15 20 41.0	+0.5
LZH				pP	pP	15 20 46.0	+2.2
LZH				sP	sP	15 20 48.5	+3.5
LZH				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
KBL	Kabul	72.39	342	*e*P	P	15 20 41.5	-0.2
	comp=Z,6.0nm,0.8s,mb4.6						
RDF	Al-Radifah	75.69	322	*e*P	P	15 21 02.2	+1.1
RDF				AMb	AMB	15 21 03.4	
	comp=Z,30nm,1.0s,mb5.2						
NAY	Al-Naaiem	76.11	322	*e*P	P	15 21 04.0	+0.5
NAY				AMb	AMB	15 21 08.3	
	comp=Z,7.0nm,1.0s,mb4.5						
MIB	Mutribah	76.51	322	*e*P	P	15 21 06.5	+0.7
MIB				AMb	AMB	15 21 07.2	
	comp=Z,13nm,0.8s,mb4.9						
AAK	Ala-Archa	79.00	348	*e*P	P	15 21 19.7	+0.3
	comp=Z,2.1nm,0.7s,mb4.2						
TKM2	Tokmak 2	79.10	349	P	P	15 21 17.6	-2.4
	comp=Z,4.9nm,1.4s,mb4.2						
EKS2	Erkin-Say	79.15	348	*e*P	P	15

LZH pP pP 15 30 27.5 -0.8
LZH sP sP 15 30 31.0 -1.5
LZH pmax pmax
comp=Z,19nm,1.1s,mb4.7
KULM Kulim 43.12 264 P P 15 30 21.0 -0.7
comp=Z,11nm,1.2s,mb4.5
CMAR Chiang Mai Arr 43.41 283 P P 15 30 25.9 +1.9
comp=Z,3.7nm,1.0s,mb4.1,baz=85,slow=6.3,SNR=11
ULN Ulaanbaatar 46.46 326 *eP* **P 15 30 48.0 +0.1**
comp=Z,16nm,1.4s,mb4.8
SONM Songino Array 46.80 326 P P 15 30 51.6 +1.2
comp=Z,2.2nm,0.8s,mb4.1,baz=146,slow=7.8,SNR=9.6
GTA Gaotai 46.91 313 P **P 15 30 52.8 +1.3**
GTA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
YAK Yakutsk 50.26 351 *eP* **P 15 31 16.4 -0.4**
comp=Z,18nm,0.7s,mb5.2
MKAR Makanchi Array 61.33 317 P P 15 32 35.6 -0.9
comp=Z,1.5nm,1.0s,mb4.1,baz=94,slow=8.7,SNR=5.2
ZALV Zalesovo Beam 61.67 325 P P 15 32 38.4 -0.3
comp=Z,0.6nm,0.5s,mb4.0,baz=104,slow=6.3,SNR=4.0
KURK Kurchatov 64.52 320 *eP* **P 15 32 58.0 +0.3**
comp=Z,6.1nm,0.8s,mb4.7
TKM2 Tokmak 2 65.44 311 *eP* **P 15 33 05.0 +1.2**
comp=Z,2.1nm,0.9s,mb4.2
ILAR Eielson Array 69.83 25 P P 15 33 30.7 -0.4
comp=Z,0.4nm,0.7s,mb3.5,baz=251,slow=6.2,SNR=6.2
BRVK Borovoye 69.97 322 *eP* **P 15 33 32.2 0.0**
comp=Z,2.1nm,0.6s,mb4.2
ABKAR Akbulak array 76.43 318 *eP* **P 15 34 08.2 -2.1**
comp=Z,0.8nm,0.7s,mb3.8
NVAR Mina Array Bea 88.34 51 P P 15 35 13.8 +1.0
comp=Z,1.0nm,0.8s,mb4.1,baz=264,slow=5.8,SNR=8.4
NVAR Mina Array Bea 88.34 51 P P 15 35 13.8 +1.0
LPAZ La Paz 148.99 100 PKPbc PKPbc 15 42 08.4 -1.2
comp=Z,1.9nm,0.8s,baz=356,slow=3.1,SNR=4.0

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*ISCJB **27** 15:29:10.5±1.2, 13°.37N±0°.04×120°.30E±0°.05, h10km±8km, mb4.1/9, Error ellipse: s-maj=8.4km s-min=6.8km az=4.9*
*IDC **27** 15:29:10.0±1.0, 13°.26N×120°.36E, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/21, mbtmp3.9/5, Error ellipse: s-maj=21.9km s-min=11.1km az=116.0*
*NEIC **27** 15:29:13.5±2.8, 13°.35N×120°.53E, h25km±21km, mb4.4/4, Error ellipse: s-maj=26.6km s-min=12.6km az=67.0*
*MAN **27** 15:29:13, 13°.26N×120°.41E, h65km, mb4.8, ML3.7, MS3.7*
ISC 27 15:29:10.9±1.0, 13°.33N±0°.04×120°.35E±0°.05, h3km±7km, n20, σ1°.95/23, mb4.1/9, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.42**	**346**	*eP*	**Pg**	**15 29 17.4**	**-1.5**
TGY	**Tagaytay City**	**0.96**	**36**	Pg	**Pg**	**15 29 29.4**	**+0.2**
	329nm,0.3s,baz=201,slow=4.4,SNR=13						
TGY				Lg		15 29 44.0	
	527nm,0.3s,baz=195,slow=20,SNR=17						
TGY	**Tagaytay City**	**0.96**	**36**	↑P	**Pg**	**15 29 29.0**	**-0.2**
TGY				*i* S	**Sg**	**15 29 45.9**	**+4.2**
BUSP	**Coron**	**1.32**	**187**	*eP*	**Pg**	**15 29 36.4**	**+0.1**
BUSP				*e*S	**Sg**	**15 29 53.9**	**+0.4**
BOAC	**Boac**	**1.46**	**85**	*eP*	**Pn**	**15 29 36.7**	**-1.4**
BOAC				*e*S	**Sb**	**15 29 57.2**	**-0.4**
OTRP	**Odiongan**	**1.89**	**120**	*eP*	**Pn**	**15 29 45.1**	**+1.1**
POLP	**Polilio Island**	**2.08**	**48**	*eP*	**Pn**	**15 29 48.5**	**+1.9**
ENPP	**El Nido**	**2.29**	**203**	*eP*	**Pn**	**15 29 49.6**	**-0.1**
CUYO	**Cuyo Island**	**2.54**	**165**	*eP*	**Pn**	**15 29 52.9**	**-0.2**
BALP	**Baler**	**2.68**	**26**	*eP*	**Pn**	**15 29 56.5**	**+1.5**
NACB	**Ninganchiao**	**10.85**	**6**	Pn	**Pn**	**15 31 47.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**21.21**	**287**	P	**P**	**15 33 59.7**	**+1.7**
	2.1nm,0.9s,mb3.5,baz=97,slow=8.0,SNR=9.0						
WRA	**Warramunga Arr**	**35.81**	**157**	P	**P**	**15 36 10.4**	**-1.3**
	3.1nm,0.6s,mb4.4,baz=336,slow=9.7,SNR=31						
SONM	**Songino Array**	**36.32**	**344**	P	**P**	**15 36 14.7**	**-1.1**
	1.1nm,0.8s,mb3.9,baz=163,slow=9.1,SNR=7.2						
ASAR	**Alice Springs**	**39.08**	**160**	P	**P**	**15 36 39.0**	**-0.5**
	3.8nm,0.5s,mb4.3,baz=339,slow=7.0,SNR=52						
TLY	**Talaya**	**40.56**	**344**	P	**P**	**15 36 52.6**	**+1.1**
	5.6nm,0.9s,mb4.2						
MKAR	**Makanchi Array**	**46.13**	**324**	P	**P**	**15 37 36.2**	**-0.4**
	0.3nm,0.5s,mb3.5,baz=142,slow=6.8,SNR=3.4						
KURK	**Kurchatov**	**50.31**	**327**	*eP*	**P**	**15 38 07.7**	**-1.1**
	4.1nm,0.9s,mb4.5						
BRVK	**Borovoye**	**55.96**	**326**	*eP*	**P**	**15 38 49.2**	**-1.2**
	3.8nm,1.0s,mb4.4						
MALT	**Malatya**	**75.58**	**306**	P	**P**	**15 40 58.3**	**+1.0**
	7.3nm,1.3s,mb4.5						

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*IDC **27** 15:37:05.7±2.7, 36°.04N×141°.67E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/25, mbtmp3.4/4, ML2.7/2, Error ellipse: s-maj=55.9km s-min=26.8km az=50.0*
*ISCJB **27** 15:37:08.6±2.3, 35°.96N±0°.05×141°.4E±0°.2, h26km±12km, mb3.4/3, Error ellipse: s-maj=22.1km s-min=9.1km az=177.0*
*JMA **27** 15:37:09.8±0.1, 35°.94N×141°.30E, h29km±2km, M2.9*
ISC 27 15:37:09.3±2.1, 35°.98N±0°.05×141°.3E±0°.1, h16km±10km, n8, σ0°.77/13, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.48**	**235**	P	**Pg**	**15 37 18.9**	**+0.1**
CHOJ				S	**Sg**	**15 37 25.3**	**0.0**
JHO	**Hitachi**	**0.89**	**316**	P	**Pb**	**15 37 26.0**	**-0.3**
JHO				S	**Sb**	**15 37 38.4**	**+0.5**
JYT	**Yasato**	**0.96**	**285**	P	**Pb**	**15 37 26.6**	**-1.0**
JYT				S	**Sb**	**15 37 40.1**	**+0.1**
MJAR	**Matsushiro Arr**	**2.59**	**283**	Pn	**Pn**	**15 37 50.1**	**-0.5**
	0.6nm,0.3s,baz=112,slow=11,SNR=11						
MJAR				Sn	**Sn**	**15 38 28.5**	**+6.8**
	1.5nm,0.3s,baz=22,slow=28,SNR=4.6						
JHJ	**Hachijo jima 2**	**3.13**	**205**	Pn	**Pn**	**15 37 59.8**	**+1.9**
	3.8nm,0.3s,baz=78,slow=20,SNR=5.0						
JHJ				Sn	**Sn**	**15 38 34.6**	**-0.3**
	12nm,0.3s,baz=66,slow=22,SNR=6.2						
MKAR	**Makanchi Array**	**44.64**	**303**	P	**P**	**15 45 22.0**	**+1.1**
	0.4nm,0.7s,mb3.4,baz=99,slow=8.9,SNR=3.4						
WRA	**Warramunga Arr**	**56.01**	**188**	P	**P**	**15 46 46.8**	**-0.3**
	0.3nm,0.7s,mb3.4,baz=6.2,slow=7.6,SNR=2.7						
ASAR	**Alice Springs**	**59.73**	**188**	P	**P**	**15 47 12.2**	**-1.0**
	0.4nm,0.9s,mb3.5,baz=9.5,slow=6.8,SNR=3.1						

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*ISCJB **27** 15:40:12.8±0.3, 63°.53N±0°.03×146°.80W±0°.05, h10km, mb3.4/2, Error ellipse: s-maj=3.7km s-min=3.3km az=5.8*
*NEIC **27** 15:40:12.9, 63°.53N×146°.88W, h4km, ML3.8(PMR), ML3.3(AEIC), After AEIC.*
*IDC **27** 15:40:15.2±1.1, 63°.68N×146°.67W, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.5/26, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=13.5km s-min=9.1km az=94.0*
*PGC **27** 15:40:17.2±18.0, 63°.57N×146°.64W, h20km, ML3.6/2, 150km southeast of Fairbanks, Ak Central Alaska*
ISC 27 15:40:13.6±0.3, 63°.54N±0°.03×146°.79W±0°.05, h10km, n38, σ1°.33/53, mb3.4/2, 6D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDM	**Donnelly Dome**	**0.48**	**59**	P	**Pg**	**15 40 22.4**	**-0.6**
DHY	**Denali Highway**	**0.54**	**210**	P	**Pg**	**15 40 22.4**	**-1.6**
DHY				S	**Sg**	**15 40 29.4**	**-1.6**
PAX	**Paxson**	**0.83**	**133**	*e*Pg	**Pg**	**15 40 28.2**	**-1.3**
PAX				P		15 40 28.4	
PAX				*e*Sg	**Sg**	**15 40 38.6**	**-1.6**
PAX				S	**Sg**	**15 40 40.0**	**-0.3**
RND	**Reindeer**	**0.94**	**263**	P	**Pg**	**15 40 29.6**	**-2.0**
MCK	**McKinley**	**0.98**	**282**	P	**Pg**	**15 40 30.7**	**-1.7**
MCK				S	**Sg**	**15 40 43.3**	**-1.7**
ILAR	**Eielson Array**	**1.24**	**358**	Pg	**Pg**	**15 40 36.5**	**-0.8**
	57nm,0.3s,baz=175,slow=18,SNR=1439						
ILAR				Lg		15 40 51.9	
	272nm,0.3s,baz=178,slow=33,SNR=83						
ILAR	**Eielson Array**	**1.24**	**358**	Pg	**Pg**	**15 40 36.5**	**-0.8**
ILAR				Lg		15 40 51.9	
COLA	**College**	**1.42**	**341**	P	**Pn**	**15 40 38.9**	**-0.4**
COLA				S	**Sn**	**15 40 58.2**	**+0.2**
MENT	**Mentasta**	**1.52**	**112**	*eP*	**Pn**	**15 40 40.7**	**0.0**
MDM	**Murphy Dome**	**1.56**	**337**	P	**Pn**	**15 40 40.8**	**-0.5**
TRF	**Thorofare Moun**	**1.57**	**268**	P	**Pn**	**15 40 40.8**	**-0.7**
SCM	**Sheep Creek Mo**	**1.73**	**188**	P	**Pn**	**15 40 43.2**	**-0.4**
SML	**Sawmill**	**1.88**	**203**	P	**Pn**	**15 40 45.3**	**-0.4**
BPAW	**Bear Paw Mtn.**	**1.94**	**289**	P	**Pn**	**15 40 45.8**	**-0.7**
PMR	**Palmer**	**2.24**	**210**	*eP*	**Pn**	**15 40 50.7**	**+0.1**
PPLA	**Purkeypile**	**2.53**	**258**	*e*Pn	**Pn**	**15 40 56.0**	**+1.4**
PPLA				*e*Sn	**Sn**	**15 41 27.8**	**+2.4**
EGAK	**Eagle**	**2.76**	**61**	*e*Pn	**Pn**	**15 40 59.0**	**+1.2**
EGAK				*e*Sn	**Sn**	**15 41 31.9**	**+0.7**
DAWY	**Dawson**	**3.32**	**78**	*e*Pn	**Pn**	**15 41 05.9**	**+0.4**
DAWY				*e*Sn	**Sn**	**15 41 50.9**	**+5.9**
DAWY	**Dawson**	**3.32**	**78**	⇓Pn	**Pn**	**15 41 06.7**	**+1.2**
DAWY				⇓Sn	**Sn**	**15 41 46.6**	**+1.6**
DAWY				⇓Sg	**Sg**	**15 41 58.0**	**-2.2**
SLKM	**Skilak Lake**	**3.45**	**210**	*e*Pn	**Pn**	**15 41 10.1**	**+2.9**
SEW	**Seward**	**3.67**	**201**	*e*Pn	**Pn**	**15 41 12.6**	**+2.3**
COLD	**Coldfoot**	**3.97**	**340**	*e*Pn	**Pn**	**15 41 14.8**	**+0.5**
RSO	**Redoubt South**	**4.18**	**225**	*e*Pn	**Pn**	**15 41 19.2**	**+2.0**
TTA	**Tatalina**	**4.22**	**266**	*e*P	**Pn**	**15 41 18.8**	**+1.0**
SVW2	**Sparrevohn**	**4.78**	**245**	*e*P	**Pn**	**15 41 25.0**	**-0.5**
HYT	**Haines Junctio**	**5.13**	**118**	⇓Pn	**Pn**	**15 41 34.8**	**+4.5**
HYT				⇑Pg	**Pg**	**15 41 47.6**	**-4.2**
HYT				⇓Sg	**Sg**	**15 42 56.8**	**-1.4**
PNL	**Peninsula**	**5.25**	**134**	*e*Pn	**Pn**	**15 41 33.0**	**+1.0**
WHY	**Whitehorse**	**6.29**	**112**	⇓Pn	**Pn**	**15 41 47.1**	**+0.8**
WHY				⇑Sg	**Sg**	**15 43 29.5**	**-5.8**
KDAK	**Kodiak Island**	**6.44**	**209**	Pn	**Pn**	**15 41 49.7**	**+1.4**
	0.7nm,0.3s,baz=29,slow=9.2,SNR=8.7						
KDAK				Sn	**Sn**	**15 43 00.2**	**-1.5**
	0.7nm,0.3s,baz=57,slow=17,SNR=2.4						
KDAK	**Kodiak Island**	**6.44**	**209**	Pn	**Pn**	**15 41 49.7**	**+1.4**
KDAK				Sn	**Sn**	**15 43 00.2**	**-1.5**
OHAK	**Old Harbor**	**7.11**	**210**	*e*P	**Pn**	**15 41 58.2**	**+0.8**
INK	**Inuvik**	**7.22**	**43**	Pn	**Pn**	**15 42 00.2**	**+1.2**
	0.9nm,0.3s,baz=238,slow=16,SNR=19						
INK				Sn	**Sn**	**15 43 18.5**	**-2.4**
	0.3nm,0.3s,baz=220,slow=16,SNR=2.4						
INK				Lg		15 43 55.0	
	0.4nm,0.3s,baz=268,slow=12,SNR=4.5						
INK	**Inuvik**	**7.22**	**43**	*e*Pn	**Pn**	**15 42 00.2**	**+1.2**
	3.1nm,0.5s						
INK	**Inuvik**	**7.22**	**43**	↑Pn	**Pn**	**15 41 59.5**	**+0.5**
DLBC	**Dease Lake**	**9.60**	**115**	Lg		15 45 17.1	
	0.2nm,0.3s,baz=243,slow=4.5,SNR=3.3						
PDAR	**Pinedale Array**	**29.83**	**116**	P	**P**	**15 46 23.6**	**+3.1**
	1.3nm,1.1s,mb3.6,baz=350,slow=6.0,SNR=4.3						
TXAR	**Lajitas Array**	**43.84**	**120**	P	**P**	**15 48 22.7**	**+3.1**
	0.2nm,0.4s,mb3.2,baz=342,slow=6.6,SNR=4.8						
MDJ	**Mudanjiang**	**48.60**	**289**	P	**P**	**15 48 57.5**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.5s						

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*ISCJB **27** 15:41:37.8±3.5, 21°.66N±0°.10×143°.1E±0°.2, h290km±35km, mb3.5/12, Error ellipse: s-maj=35.0km s-min=15.5km az=174.7*
*NEIC **27** 15:41:41.2±2.5, 21°.66N×143°.08E, h310km±25km, mb3.6/3, Error ellipse: s-maj=23.7km s-min=10.6km az=85.0*
*IDC **27** 15:41:43.5±4.6, 21°.65N×143°.13E, h333km±46km, mb3.3/11, mb1 3.4/12, mb1mx3.3/26, mbtmp3.3/12, Error ellipse: s-maj=27.8km s-min=13.7km az=82.0*
ISC 27 15:41:41.4±3.3, 21°.66N±0°.10×143°.1E±0°.2, h312km±34km, n15, σ0°.68/15, mb3.5/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.43**	**345**	P	**P**	**15 45 03.3**	**+0.9**
	0.3nm,0.3s,baz=160,slow=10.0,SNR=6.1						
MAJO	**Matsushiro**	**15.43**	**345**	P	**P**	**15 45 01.1**	**-1.3**
	2.7nm,0.5s						
KSRS	**Korea Array**	**20.49**	**324**	P	**P**	**15 45 57.4**	**+0.7**
	2.0nm,0.6s,baz=148,slow=9.0,SNR=17						
WRA	**Warramunga Arr**	**42.22**	**192**	P	**P**	**15 49 04.7**	**-0.1**
	0.7nm,0.3s,mb3.3,baz=16,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**45.93**	**192**	P	**P**	**15 49 34.4**	**+0.5**
	0.2nm,0.4s,mb2.8,baz=11,slow=9.1,SNR=5.3						
STKA	**Stephens Creek**	**53.25**	**182**	P	**P**	**15 50 28.1**	**-0.6**
	1.0nm,1.1s,mb3.1						
ZALV	**Zalesovo Beam**	**54.19**	**322**	P	**P**	**15 50 35.2**	**+0.1**
	0.3nm,0.3s,mb3.1,baz=116,slow=6.6,SNR=4.3						
MKAR	**Makanchi Array**	**54.66**	**313**	P	**P**	**15 50 39.3**	**+0.6**
	0.6nm,0.5s,mb3.2,baz=86,slow=9.0,SNR=8.1						
MKAR				PcP	PcP	15 51 37.0	-0.2
	0.3nm,0.5s,baz=73,slow=4.7,SNR=4.7						
KURK	**Kurchatov**	**57.44**	**317**	*eP*	**P**	**15 50 57.4**	**-0.7**
	1.9nm,0.7s,mb3.6						
ILAR	**Eielson Array**	**62.12**	**27**	P	**P**	**15 51 29.1**	**-0.4**
	0.5nm,0.6s,mb3.3,baz=266,slow=5.4,SNR=2.5						
BVAR	**Borovoye Array**	**62.64**	**320**	P	**P**	**15 51 33.6**	**+0.4**
	3.5nm,0.4s,mb4.4,baz=99,slow=7.7,SNR=26						
ARCES	**ARCESS Array B**	**78.93**	**341**	P	**P**	**15 53 10.6**	**+0.2**
	1.4nm,0.5s,mb3.9,baz=73,slow=8.5,SNR=10						
FINES	**FINESS Array B**	**83.18**	**334**	P	**P**	**15 53 32.1**	**-0.6**
	2.0nm,0.6s,mb4.1,baz=71,slow=5.4,SNR=15						
NVAR	**Mina Array Bea**	**83.24**	**51**	P	**P**	**15 53 34.6**	**+1.0**
	0.4nm,0.7s,mb3.4,baz=285,slow=6.4,SNR=3.9						
HFS	**Hagfors**	**88.73**	**337**	P	**P**	**15 53 59.0**	**-0.8**
	3.7nm,0.9s,mb4.2,baz=55,slow=5.8,SNR=3.5						

MAN 27 16:14:10, 17°.07N×122°.42E, h19km, mb4.0, ML2.8, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.01**	**123**	*eP*	Pg	16 14 12.0	-1.3
PALP				*e*S	Sg	16 14 14.9	-0.6
CAUP	**Cauayan**	**0.58**	**258**	*eP*	Pb	16 14 22.4	+0.8
APYP	**Conner**	**1.37**	**305**	*eP*	Pn	16 14 34.0	-0.1
APYP				*e*S	Sn	16 14 52.6	+0.8

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*IDC **27** 16:20:46.5±1.0, 13°.31N×120°.41E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.6/21, mbtmp3.7/5, MS3.4/1, Ms1 3.4/1, ms1mx2.8/28, Error ellipse: s-maj=21.4km s-min=11.0km az=115.0*
*ISCJB **27** 16:20:47.0±0.5, 13°.40N±0°.04×120°.33E±0°.07, h10km, mb3.8/5, Error ellipse: s-maj=9.3km s-min=6.2km az=2.6*
*MAN **27** 16:20:47, 13°.41N×120°.32E, h7km, mb4.5, ML3.4, MS3.2*
ISC 27 16:20:48.1±0.5, 13°.40N±0°.05×120°.37E±0°.07, h10km, n21, σ1°.04/20, mb3.8/5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.35**	**340**	*eP*	**Pg**	**16 20 53.4**	**-1.7**
TGY	**Tagaytay City**	**0.89**	**38**	Pg	**Pg**	**16 21 04.5**	**-0.7**
	1μm,0.3s,baz=199,slow=5.6,SNR=33						
TGY				Lg		16 21 18.3	
	2μm,0.3s,baz=171,slow=19,SNR=22						
TGY	**Tagaytay City**	**0.89**	**38**	↓*eP*	**Pg**	**16 21 04.5**	**-0.8**
BUSP	**Coron**	**1.40**	**187**	*eP*	**Pn**	**16 21 13.3**	**-0.3**
BOAC	**Boac**	**1.44**	**87**	*eP*	**Pn**	**16 21 14.2**	**0.0**
OTRP	**Odiongan**	**1.91**	**122**	*eP*	**Pn**	**16 21 21.4**	**+0.6**
POLP	**Polilio Island**	**2.02**	**49**	*eP*	**Pn**	**16 21 21.8**	**-0.3**
AUQP	**San Andres**	**2.25**	**92**	*eP*	**Pn**	**16 21 28.6**	**+3.3**
ENPP	**El Nido**	**2.37**	**203**	*eP*	**Pn**	**16 21 26.5**	**-0.4**
SCZP	**Santa Cruz**	**2.40**	**349**	*eP*	**Pn**	**16 21 28.2**	**+0.7**
BALP	**Baler**	**2.61**	**27**	*eP*	**Pn**	**16 21 30.8**	**+0.5**
CUYO	**Cuyo Island**	**2.61**	**166**	*eP*	**Pn**	**16 21 29.7**	**-0.7**
GUIM	**Jordan**	**3.51**	**142**	*eP*	**Pn**	**16 21 43.5**	**+0.8**
CAUP	**Cauayan**	**3.79**	**22**	*eP*	**Pn**	**16 21 50.8**	**+4.2**
PALP	**Palanan**	**4.15**	**28**	*eP*	**Pn**	**16 21 47.3**	**-4.2**
CMAR	**Chiang Mai Arr**	**21.20**	**287**	P	**P**	**16 25 35.5**	**+1.4**
	1.2nm,1.0s,mb3.2,baz=96,slow=8.3,SNR=4.9						
KSRS	**Korea Array**	**24.89**	**14**	LR		16 37 47.1	
	comp=Z,82nm,18.3s,baz=190,slow=41						
WRA	**Warramunga Arr**	**35.87**	**157**	P	**P**	**16 27 47.1**	**-1.3**
	1.6nm,0.3s,mb4.4,baz=335,slow=9.5,SNR=30						
SONM	**Songino Array**	**36.25**	**344**	P	**P**	**16 27 50.4**	**-0.9**
	1.3nm,0.7s,mb4.0,baz=158,slow=8.9,SNR=9.0						
ASAR	**Alice Springs**	**39.14**	**160**	P	**P**	**16 28 15.7**	**-0.3**
	2.2nm,0.7s,mb4.0,baz=340,slow=7.3,SNR=43						
MKAR	**Makanchi Array**	**46.08**	**324**	P	**P**	**16 29 14.1**	**+1.9**
	0.2nm,0.3s,mb3.5,baz=133,slow=8.1,SNR=3.7						

IDC 27 16:33:17.2±1.6, 13°.36N×120°.31E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/21, mbtmp3.5/3, Error ellipse: s-maj=36.8km s-min=11.6km az=116.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.96**	**39**	Pg	Pg	16 33 35.9	+0.3
	212nm,0.3s,baz=215,slow=3.4,SNR=14						
TGY				Lg		16 33 48.5	
	172nm,0.3s,baz=217,slow=20,SNR=9.4						
WRA	**Warramunga Arr**	**35.86**	**157**	P	P	16 40 18.4	-0.4
	0.6nm,0.5s,baz=333,slow=10,SNR=8.1						
SONM	**Songino Array**	**36.28**	**344**	P	P	16 40 22.3	+0.2
	0.2nm,0.4s,baz=155,slow=7.8,SNR=2.2						
ASAR	**Alice Springs**	**39.13**	**160**	P	P	16 40 46.9	+0.3
	0.4nm,0.5s,baz=339,slow=8.0,SNR=12						

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*IDC **27** 16:37:25.7±3.0, 33°.79S×179°.27W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/16, mbtmp3.6/3, ML3.7/1, Error ellipse: s-maj=70.9km s-min=45.8km az=120.0*
ISC 27 16:37:38.9±1.4, 34°.6S±0°.1×179°.5W±0°.2, h115km±16km, n27, σ1°.25/33, mb3.4/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.48**	**210**	*e*PN	**Pn**	**16 38 32.4**	**+1.0**
PUZ	**Puketiti**	**3.94**	**207**	PN	**Pn**	**16 38 38.1**	**+0.6**
PUZ				SN	**Sn**	**16 39 26.8**	**+3.8**
CNGZ	**Carnagh Statio**	**4.33**	**205**	*e*PN	**Pn**	**16 38 43.7**	**+1.0**
MWZ	**Matawai**	**4.46**	**212**	PN	**Pn**	**16 38 44.7**	**+0.2**
MWZ				SN	**Sn**	**16 39 40.6**	**+5.1**
KUZ	**Kuaotunu**	**4.47**	**240**	PN	**Pn**	**16 38 45.9**	**+1.2**
OPRZ	**Ohinepanea**	**4.58**	**223**	*e*PN	**Pn**	**16 38 48.0**	**+2.0**
URZ	**Urewera**	**4.59**	**216**	Pn	**Pn**	**16 38 46.7**	**+0.4**
	2.5nm,0.3s,baz=99,slow=19,SNR=26						
URZ				Sn	**Sn**	**16 39 44.5**	**+5.9**
	1.7nm,0.3s,baz=34,slow=11,SNR=3.7						
URZ	**Urewera**	**4.59**	**216**	*e*PN	**Pn**	**16 38 46.6**	**+0.4**
URZ				SN	**Sn**	**16 39 44.0**	**+5.3**
KNZ	**Kokohu**	**4.99**	**206**	*e*PN	**Pn**	**16 38 51.8**	**+0.2**
NMHZ	**Naumai**	**5.41**	**212**	PN	**Pn**	**16 38 58.4**	**+1.2**
BKZ	**Black Stump Fm**	**5.61**	**214**	*e*PN	**Pn**	**16 38 59.8**	**-0.2**
OUZ	**Omahuta**	**5.73**	**262**	PN	**Pn**	**16 38 59.5**	**-2.2**
TSZ	**Takapari Road**	**6.57**	**212**	*e*PN	**Pn**	**16 39 13.1**	**+0.1**
MRZ	**Mangatainoka R**	**7.23**	**211**	*e*PN	**Pn**	**16 39 19.9**	**-2.1**
MRZ				SN	**Sn**	**16 40 42.4**	**0.0**
HOWZ	**Holdsworth Sta**	**7.46**	**211**	SN	**Sn**	**16 40 48.2**	**+0.4**
OGWZ	**Otaki Gorge**	**7.54**	**213**	*e*PN	**Pn**	**16 39 23.5**	**-2.6**
OGWZ				SN	**Sn**	**16 40 51.1**	**+1.2**
KIW	**Kapiti Island**	**7.69**	**214**	*e*PN	**Pn**	**16 39 26.4**	**-1.7**
CAW	**Cannon Point**	**7.82**	**212**	SN	**Sn**	**16 40 56.4**	**-0.3**
TCW	**Tory Channel**	**8.26**	**215**	SN	**Sn**	**16 41 07.1**	**-0.3**
NNZ	**Nelson**	**8.71**	**218**	*e*PN	**Pn**	**16 39 39.1**	**-2.8**
NNZ				SN	**Sn**	**16 41 18.5**	**+0.3**
KHZ	**Kahutara**	**9.55**	**213**	PN	**Pn**	**16 39 51.1**	**-2.2**
LTZ	**Lake Taylor**	**10.43**	**216**	SN	**Sn**	**16 41 56.2**	**-3.6**
MQZ	**McQueen's Vall**	**10.97**	**211**	SN	**Sn**	**16 42 07.7**	**-5.4**
ODZ	**Otahua Downs**	**12.91**	**213**	SN	**Sn**	**16 42 53.5**	**-6.6**
ASAR	**Alice Springs**	**41.83**	**272**	P	**P**	**16 45 18.6**	**+1.1**
	0.7nm,0.8s,mb3.5,baz=114,slow=7.0,SNR=9.0						
WRA	**Warramunga Arr**	**43.20**	**277**	P	**P**	**16 45 29.0**	**+0.3**
	0.2nm,0.3s,mb3.4,baz=117,slow=7.1,SNR=5.6						
FINES	**FINESS Array B**	**148.55**	**337**	PKPbc	PKPbc	16 57 11.4	0.0
	3.7nm,1.0s,baz=48,slow=2.1,SNR=5.8						

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*BJI **27** 16:56:06.9, 15°.40N×93°.30W, h88km, mB5.3/3*
*IDC **27** 16:56:07.3±3.3, 14°.70N×93°.08W, h48km±26km, mb3.9/7, mb1 4.3/10, mb1mx3.9/28, mbtmp4.0/10, ML4.3/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/39, Error ellipse: s-maj=52.3km s-min=21.9km az=48.0*
*MEX **27** 16:56:15.9±0.5, 15°.39N×93°.34W, h89km±10km, MD4.3*
*NEIC **27** 16:56:15.9, 15°.39N×93°.34W, h89km, mb4.2/23, After MEX.*
*ISCJB **27** 16:56:16.4±0.5, 15°.54N±0°.05×93°.06W±0°.05, h94km±3km, mb4.2/24, Error ellipse: s-maj=10.0km s-min=5.7km az=37.1*
ISC 27 16:56:17.2±0.5, 15°.50N±0°.05×93°.15W±0°.05, h84km±3km, n249, σ0°.77/259, mb4.2/24, 79C-109D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.21**	**343**	*i* P	**Pn**	**16 56 28.2**	**-1.3**
PCIG				*e*S	**Sn**	**16 56 38.1**	**-0.5**
THIG		**1.04**	**124**	*i* P	**Pn**	**16 56 35.9**	**-1.0**
THIG				*e*S	**Sn**	**16 56 51.7**	**0.0**
**CC

	baz=20,SNR=8.1				
WMOK	Wichita Mounta	19.82	346	eP	Pn	17 00 38.9	-4.4
	3.3nm,0.9s				
WMOK				eS	S	17 04 07.0	-13
GOGA	Godfrey	19.87	24	P	Pn	17 00 40.1	-3.9
	8.7nm,0.9s						
Z27A	Tatum	19.94	335	⇓P	Pn	17 00 42.0	-2.8
	baz=20						
224A	Cornudas Mount	19.98	328	⇓P	Pn	17 00 42.9	-2.4
	baz=20,SNR=7.1						
125A	Gardner Draw,	20.03	331	⇓P	P	17 00 43.4	+0.1
	baz=20,SNR=15						
Z26A	Caprock	20.23	333	⇓P	P	17 00 45.7	+0.1
	baz=20,SNR=13						
MSTX	Muleshoe	20.34	336	⇑P	P	17 00 45.9	-0.8
	baz=20						
Y27A	Causey	20.42	336	⇑P	P	17 00 47.2	-0.4
	baz=20						
124A	Stringfield Ra	20.45	329	⇑P	P	17 00 48.5	+0.6
	baz=20,SNR=16						
Z25A	Roswell	20.57	331	⇑P	P	17 00 49.1	-0.1
	baz=21						
Y26A	Elida	20.72	334	⇓P	P	17 00 50.6	-0.2
	baz=21						
AMTX	Amarillo	20.77	340	⇓P	P	17 00 50.5	-0.9
	baz=21,SNR=12						
AMTX	Amarillo	20.77	340	eP	P	17 00 50.3	-1.0
	19nm,0.6s						
Z24A	Sheeppen Canyo	20.91	330	⇓P	P	17 00 54.0	+1.1
	baz=21,SNR=16						
X27A	F and S Farms,	21.06	337	⇓P	P	17 00 53.7	-0.8
	baz=21,SNR=5.4						
WVT	Waverly	21.09	12	P	P	17 00 53.0	-1.8
	7.0nm,1.0s,mb4.0						
Y25A	Mesa, Roswell	21.10	332	⇑P	P	17 00 54.9	+0.1
	baz=21,SNR=11						
320A	Kipp Ranch, An	21.12	321	⇓P	P	17 00 56.5	+1.4
	baz=21,SNR=9.1						
221A	Mesquite Ranch	21.16	324	⇓P	P	17 00 56.6	+1.0
	baz=21,SNR=9.3						
X26A	CR and CF Fran	21.26	335	⇓P	P	17 00 56.2	-0.4
	baz=21						
Z23A	Rita Site, Whi	21.29	329	⇑P	P	17 00 57.4	+0.5
	baz=21,SNR=9.0						
Y24A	Capitan	21.44	331	⇓P	P	17 00 59.5	+1.0
	baz=22,SNR=18						
220A	Playas Peak, P	21.52	322	⇓P	P	17 01 00.3	+0.9
	baz=22,SNR=7.9						
121A	Cookes Peak, D	21.55	324	⇑P	P	17 01 00.3	+0.6
	baz=22,SNR=6.5						
X25A	Clemmons Ranch	21.59	333	⇑P	P	17 01 00.7	+0.5
	baz=22						
Z22A	Elephant Butte	21.66	327	⇑P	P	17 01 01.6	+0.8
	baz=22,SNR=12						
Y23A	Lovelace Mesa,	21.74	330	⇓P	P	17 01 02.4	+0.7
	baz=22,SNR=7.5						
TKL	Tuckaleechee C	21.76	21	LR	LR	17 11 26.8	
	comp=Z,46nm,19.8s,baz=84,slow=41						
219A	White Tail Can	22.02	321	⇓P	P	17 01 05.3	+0.5
	baz=22,SNR=6.1						
120A	U Bar Ranch, L	22.04	323	⇓P	P	17 01 06.2	+1.3
	baz=22						
W25A	X Bar L Ranch,	22.10	335	⇑P	P	17 01 05.6	+0.1
	baz=22						
Y22A	Socorro	22.19	328	⇑P	P	17 01 07.4	+0.8
	baz=22						
BNM	Barren Site	22.19	329	eP	P	17 01 07.4	+0.9
	5.8nm,1.0s,mb3.9						
LPM	Los Pinos Moun	22.32	329	eP	P	17 01 07.6	-0.3
	3.5nm,0.7s,mb3.6						
V26A	Tequesquite Ra	22.34	337	⇓P	P	17 01 08.3	+0.2
	baz=22						
W24A	Lazy 6 Ranch,	22.50	333	⇓P	P	17 01 10.0	+0.2
	baz=23,SNR=6.1						
Y21A	Point of Rocks	22.61	327	⇑P	P	17 01 11.9	+0.9
	baz=23						
LAZ	Ladron	22.65	329	eP	P	17 01 10.8	-0.6
	1.3nm,0.6s,mb3.4						
X22A	Bernardo	22.67	329	⇑P	P	17 01 12.7	+1.1
	baz=23						
V25A	Rancho No Teng	22.70	335	⇑P	P	17 01 11.4	-0.5
	baz=23						
ANMO	Albuquerque	22.76	331	P	P	17 01 12.2	-0.3
	2.4nm,0.6s,mb3.7,baz=148,slow=12,SNR=9.3						
ANMO	Albuquerque	22.76	331	eP	P	17 01 11.4	-1.1
	2.7nm,0.8s,mb3.6						
217A	Green Valley	22.84	318	⇑P	P	17 01 13.4	0.0
	baz=23,SNR=7.7						
U26A	Atchley Ranch,	22.85	338	⇑P	P	17 01 12.9	-0.6
	baz=23,SNR=6.5						
V24A	Rampart Ranch,	22.88	334	⇓P	P	17 01 13.5	-0.2
	baz=23						
118A	Homack Ranch,	22.90	321	⇓P	P	17 01 14.0	0.0
	baz=23						
Y20A	Horse Springs,	22.91	326	⇑P	P	17 01 13.7	-0.4
	baz=23,SNR=7.0						
X21A	Alamocita Cree	23.01	328	⇓P	P	17 01 15.1	0.0
	baz=23						
U25A	Circle Dot Ran	23.11	336	⇓P	P	17 01 15.8	-0.1
	baz=23,SNR=6.1						
V23A	Ortiz Mt. (NFS	23.29	332	⇑P	P	17 01 18.5	+0.9
	baz=23						
117A	Oracle	23.32	320	⇑P	P	17 01 16.9	-1.0
	baz=23						
216A	Three Points,	23.40	318	⇑P	P	17 01 18.9	+0.2
	baz=23						
Y19A	Nutrioso	23.43	325	⇓P	P	17 01 19.5	+0.6
	baz=24						
X20A	Quemado	23.46	327	⇑P	P	17 01 19.5	+0.4
	baz=24,SNR=7.5						
Y18A	Canyon Day Jun	23.74	323	⇑P	P	17 01 22.4	+0.7
	baz=24						
T25A	Trinidad	23.76	337	⇓P	P	17 01 22.2	+0.4
	baz=24,SNR=7.8						
V22A	San Miguel Ran	23.76	331	⇓P	P	17 01 22.5	+0.6
	baz=24						
U23A	El Rito	23.78	333	⇑P	P	17 01 22.4	+0.3
	baz=24,SNR=5.1						
W20A	Ramah	23.91	328	⇓P	P	17 01 24.1	+0.9
	baz=24						
T24A	Torres, Weston	23.95	336	⇓P	P	17 01 24.4	+0.8
	baz=24,SNR=12						
U22A	Llaves	24.11	332	⇓P	P	17 01 26.0	+0.9
	baz=24						
S25A	Robets Cordova	24.23	338	⇓P	P	17 01 26.3	+0.2
	baz=24,SNR=8.8						
X18A	Snowflake	24.24	324	⇓P	P	17 01 26.6	+0.4
	baz=24						
214A	Organ Pipe Nat	24.27	316	⇓P	P	17 01 26.9	+0.4
	baz=24						
V20A	Brimhall	24.42	329	⇑P	P	17 01 28.2	+0.3
	baz=24						
S24A	Houchin Ranch,	24.50	336	⇑P	P	17 01 28.9	+0.2
	baz=25						
U21A	Nageezi	24.53	331	⇓P	P	17 01 29.6	+0.7
	baz=25						
R25A	Fountain Ranch	24.61	339	⇓P	P	17 01 30.4	+0.8
	baz=25						
T22A	Edith	24.67	333	⇑P	P	17 01 30.8	+0.7
	baz=25,SNR=6.0						
SDCO	Great Sand Dun	24.71	336	⇓P	P	17 01 30.5	0.0
	baz=25,SNR=7.0						
SDCO	Great Sand Dun	24.71	336	eP	P	17 01 30.3	-0.2
	5.9nm,1.3s,mb3.9						
T21A	Navajo Lake	24.93	332	⇑P	P	17 01 33.3	+0.8
	baz=25						
R24A	Sanders Place,	24.98	337	⇑P	P	17 01 34.2	+1.3
	baz=25						
X16A	Lo Mia Camp, P	25.02	322	⇓P	P	17 01 33.7	+0.4
	baz=25						
U19A	Dine' College,	25.18	328	⇑P	P	17 01 34.1	-0.7
	baz=25						
S22A	4UR Ranch, Cre	25.25	334	⇓P	P	17 01 35.6	+0.2
	baz=25,SNR=9.6						
V17A	Tonalea, Kykot	25.51	325	⇓P	P	17 01 38.3	+0.5
	baz=26						
X15A	Humboldt	25.54	321	⇑P	P	17 01 38.3	+0.2
	baz=26						
S21A	Coal Bank Pass	25.60	332	⇑P	P	17 01 39.1	+0.5
	baz=26						
R22A	Saguache, Gunn	25.63	335	⇓P	P	17 01 39.4	+0.5
	baz=26						
S20A	Disappointment	25.99	332	⇓P	P	17 01 42.6	+0.5
	baz=26						
T18A	Mexican Hat	26.17	329	⇑P	P	17 01 44.4	+0.7
	baz=26						
P23A	Jefferson	26.26	337	⇑P	P	17 01 45.5	+1.0
	baz=26						
S19A	Harvey Farm, M	26.29	330	⇓P	P	17 01 45.2	+0.4
	baz=26						
PV01	Paradox Valley	26.34	332	eP	P	17 01 45.8	+0.5
	576nm,1.2s						
PV04	Paradox Valley	26.70	332	eP	P	17 01 49.0	+0.4
R19A	Curley Farm, L	26.78	331	⇑P	P	17 01 49.8	+0.6
	baz=27						
R18A	Canyonlands Na	27.16	330	⇓P	P	17 01 53.5	+0.9
	baz=27						
Q18A	Rafter H Ranch	27.84	331	⇓P	P	17 01 59.1	+0.5
	baz=28						
V12A	Nelson	27.96	320	⇑P	P	17 02 00.1	+0.2
	baz=28						
P18A	Preston Nutter	28.31	331	⇓P	P	17 02 03.4	+0.5
	baz=28						
N20A	Spence Gulch,	28.45	335	⇓P	P	17 02 04.1	0.0
	baz=29						
L23A	Garrett	28.64	340	⇑P	P	17 02 06.0	+0.2
	baz=29						
O18A	Roosevelt	28.72	332	⇓P	P	17 02 07.0	+0.5
	baz=29						
L21A	Rawlins	29.08	338	⇓P	P	17 02 09.7	0.0
	baz=29						
R13A	O'Grain Ranch,	29.11	325	⇑P	P	17 02 10.9	+0.9
	baz=29						
N18A	Larsen Ranch,	29.15	334	⇑P	P	17 02 10.8	+0.5
	baz=29						
Q14A	Sevier Lake (B	29.32	327	⇓P	P	17 02 12.1	+0.2
	baz=29						
O16A	Springville	29.36	331	⇓P	P	17 02 12.9	+0.7
	baz=29						
MPMC	Manual Prospec	29.84	318	⇓P	P	17 02 16.2	-0.3
	baz=30						
M17A	Scullys Gap (B	29.99	333	⇑P	P	17 02 17.7	0.0
	baz=30						
J21A	Lysite	30.32	339	⇑P	P	17 02 21.0	+0.4
	baz=30						
K19A	Absolon Red Bu	30.38	337	⇓P	P	17 02 20.5	-0.6
	baz=30						
HWUT	Hardware Ranch	30.50	332	eP	P	17 02 21.5	-0.7
	2.1nm,0.8s,mb3.8						
J20A	Shoshoni	30.55	338	⇑P	P	17 02 23.3	+0.6
	baz=31						
PDAR	Pinedale Array	30.60	336	P	P	17 02 22.3	-0.9
	0.7nm,0.7s,mb3.5,baz=126,slow=7.5,SNR=6.2						
K18A	Toltan Ranch,	30.69	335	⇓P	P	17 02 24.2	+0.3
	baz=31						
L16A	Fish Haven	30.76	333	⇓P	P	17 02 24.5	-0.1
	baz=31,SNR=6.7						
M15A	Larsen Ranch,	30.79	331	⇓P	P	17 02 25.0	+0.2
	baz=31						
I20A	Worland	31.09	339	⇓P	P	17 02 27.0	-0.4
	baz=31,SNR=5.1						
K17A	Gardner Place,	31.14	334	⇓P	P	17 02 27.9	0.0
	baz=31						
J18A	Kendall Valley	31.16	336	⇑P	P	17 02 28.0	0.0
	baz=31						
L15A	Malad City	31.18	332	⇓P	P	17 02 28.2	0.0
	baz=31						
H21A	Big Horn, Sher	31.33	341	⇑P	P	17 02 28.7	-0.8
	baz=32						
I19A	Meeteetse	31.47	338	⇑P	P	17 02 30.7	-0.1
	baz=32						
K16A	Soda Springs	31.49	334	⇓P	P	17 02 31.4	+0.4
	baz=32						
I18A	Diamond G Ranc	31.50	337	⇓P	P	17 02 31.1	+0.1
	baz=32						
H20A	Greybull	31.52	339	⇓P	P	17 02 30.3	-0.9
	baz=32						
J17A	Brown Place, J	31.56	335	⇓P	P	17 02 31.9	+0.3
	baz=32,SNR=8.9						
L14A	Malta	31.60	331	⇓P	P	17 02 31.9	-0.1
	baz=32,SNR=6.3						
REDW	Red Top Meadow	31.62	335	eP	P	17 02 32.0	-0.1
	16nm,1.0s,mb4.7						
SNOW	Snow King Moun	31.66	335	eP	P	17 02 29.2	-3.2
	33nm,0.8s,mb5.1						
LOHW	Long Hollow	31.73	336	eP	P	17 02 32.5	-0.5
	11nm,1.2s,mb4.5						
TPAW	Teton Pass	31.77	335	eP	P	17 02 32.9	-0.4
	8.2nm,1.0s,mb4.4						
K15A	Arbon	31.79	332	⇓P	P	17 02 33.4	-0.1
	baz=32						
RRI2	Red Ridge	31.80	334	eP	P	17 02 33.5	-0.1
	9.7nm,1.0s,mb4.5						
NVAR	Mina Array Bea	31.81	321	P	P	17 02 35.3	+1.5
	2.5nm,0.9s,mb4.0,baz=137,slow=8.9,SNR=16						
J16A	Bone	31.86	334	⇓P	P	17 02 34.1	-0.2
	baz=32						
MOOW	Moose Ponds	31.90	336	eP	P	17 02 33.7	-0.8
	4.8nm,0.9s,mb4.2						
I17A	Pigrim Ck.	31.97	336	⇑P	P	17 02 36.2	+1.1
	baz=32						
IMW	Indian Meadow	32.10	335	eP	P	17 02 35.9	-0.3
	3.3nm,0.6s,mb4.2						
G20A	Bridger	32.24	340	⇑P	P	17 02 36.6	-0.9
	baz=32						
H18A	Shoshone NF, C	32.27	338	⇓P	P	17 02 37.3	-0.5
	baz=32,SNR=12						
J14A	Carey	32.74	332	⇓P	P	17 02 42.2	+0.3
	baz=33						
G18A	Lazy EL Ranch,	32.78	338	⇑P	P	17 02 41.4	-0.8
	baz=33						
H16A	Russell Place,	32.89	336	⇓P	P	17 02 43.3	0.0
	baz=33						
F19A	Roth Farm, Mol	33.04	340	⇑P	P	17 02 44.4	0.0
	baz=33						
QLMT	Earthquake Lak	33.07	336	eP	P	17 02 46.0	+1.2
I14A	Mackay	33.18	333	⇑P	P	17 02 46.6	+0.9
	baz=33						
GCMT	Greycliff	33.23	339	eP	P	17 02 45.2	-1.0
	2.0nm,0.7s,mb4.1						
HLID	Hailey	33.33	331	⇑P	P	17 02 47.3	+0.3
	baz=33						
HLID	Hailey	33.33	331	eP	P	17 02 46.7	-0.4
	2.2nm,0.8s,mb4.0						
F18A	Big Timber	33.35	339	⇓P	P	17 02 46.3	-0.8
	baz=34						
E20A	Meyer Farm, Mu	33.35	341	⇓P	P	17 02 46.6	-0.6
	baz=34						
D22A	Cohagen	33.37	344	⇓P	P	17 02 46.4	-0.8
	baz=34						
H15A	Lima	33.39	334	⇑P	P	17 02 48.0	+0.4
	baz=34,SNR=8.0						
I13A	Wildhorse Cree	33.47	332	⇓P	P	17 02 48.7	+0.4
	baz=34,SNR=5.9						
E19A	Rath Farm, Rou	33.52	340	⇑P	P	17 02 47.9	-0.8
	baz=34						
G16A	Moss Hill, Enn	33.55	336	⇓P	P	17 02 49.6	+0.6
	baz=34						
MCMT	McKenzie Canyo	33.65	334	eP	P	17 02 50.4	+0.7
	5.7nm,0.9s,mb4.4						
F17A	Fitzpatrick Pl	33.68	338	⇑P	P	17 02 50.1	0.0
	baz=34,SNR=5.3						
H14A	Leadore	33.69	334	⇑P	P	17 02 49.3	-0.8
	baz=34,SNR=7.1						
C23A	Lambert	33.71	345	⇓P	P	17 02 49.9	-0.4
	baz=34						
G15A	Dillon	33.77	335	⇓P	P	17 02 51.3	+0.5
	baz=34,SNR=8.2						
BOZ	Bozeman (W)	33.83	336	⇓P	P	17 02 51.5	+0.2
	baz=34						
I12A	Atlanta	33.84	331	⇓P	P	17 02 52.1	+0.6
	baz=34						
D20A	Manuel Ranch,	33.88	342	⇓P	P	17 02 51.4	-0.3
	baz=34						
DLMT	Dillon	33.98	335	eP	P	17 02 52.8	+0.2
	5.9nm,1.1s,mb4.3						
E18A	Harlowton	33.99	339	⇓P	P	17 02 52.3	-0.4
	baz=34						
H13A	Challis	34.04	333	⇑P	P	17 02 53.3	+0.1
	baz=34,SNR=9.4						
D19A	Cripps Ranch,	34.17	341	⇑P	P	17 02 53.2	-1.1
	baz=34						
C21A	Desert Coulee	34.24	343	⇓P	P	17 02 54.2	-0.6
	baz=34						
B23A	Brockton	34.29	346	⇓P	P	17 02 54.5	-0.8
	baz=34						
LRM	Limekiln Ridge	34.30	336	eP	P	17 02 55.0	-0.3
	72nm,0.9s						
H12A	Diamond D Ranc	34.30	332	⇑P	P	17 02 55.8	+0.4
	baz=34,SNR=8.9						
F15A	Butte	34.33	336	⇑P	P	17 02 55.8	+0.1
	baz=34,SNR=6.6						
C20A	Veseth Ranch,	34.39	342	⇓P	P	17 02 55.6	-0.6
	baz=34						
G13A	Cobalt	34.45	333	⇓P	P	17 02 56.8	+0.1
	baz=34						
E16A	East Helena	34.59	337	⇓P	P	17 02 58.0	+0.1
	baz=35						
C19A	Slack Wire Ran	34.73	341	⇓P	P	17 02 58.6	-0.5
	baz=35						
D17A	Six Diamond Ra	34.76	339	⇑P	P	17 02 58.7	-0.7
	baz=35,SNR=6.1						
E15A	Deer Lodge	34.87	336	⇑P	P	17 03 00.2	-0.1
	baz=35						
G12A	Big Creek, Yel	34.96	332	⇑P	P	17 03 01.2	+0.2
	baz=35						
F13A	Darby	35.04	334	⇑P	P	17 03 01.1	-0.7
	baz=35,SNR=5.3						
EGMT	Eagleton	35.21	341	⇑P	P	17 03 02.9	-0.3
	baz=35						
D15A	Lincoln	35.34	337	⇓P	P	17 03 04.1	-0.2
	baz=35						
F12A	Elk City	35.41	333	⇑P	P	17 03 04.4	-0.6
	baz=36,SNR=13						
E13A	Victor	35.50	335	⇑P	P	17 03 05.2	-0.6
	baz=36,SNR=5.8						
B18A	Beardsley Farm	35.54	341	⇑P	P	17 03 05.7	-0.4
	baz=36						
C16A	Fuhringer Ranc	35.69	338	⇓P	P	17 03 06.9	-0.4
	baz=36						
A19A	Klindworth Far	35.70	342	⇓P	P	17 03 07.1	-0.3
	baz=36						
MSO	Missoula	35.71	335	⇓P	P	17 03 07.5	-0.1
	baz=36						
D14A	Greenough	35.75	336	⇓P	P	17 03 07.1	-0.8
	baz=36						
C15A	Salmond Ranch,	35.98	338	⇓P	P	17 03 10.0	+0.2
	baz=36						
A18A	Metzger Ranch,	36.03	341	⇓P	P	17 03 09.6	-0.6
	baz=36						
E12A	Beaver Dam Sad	36.06	333	⇓P	P	17 03 09.8	-0.8
	baz=36,SNR=7.4						
D13A	Huson	36.14	335	⇑P	P	17 03 10.6	-0.6
	baz=36						
A17A	Triple J Farms	36.32	340	⇓P	P	17 03 11.6	-1.1
	baz=36						
C14A	Swan Lake	36.40	336	⇑P	P	17 03 13.0	-0.4
	baz=36						
F10A	Beach Ranch, E	36.47	331	⇓P	P	17 03 13.6	-0.4
	baz=36,SNR=12						
D12A	Red Ives Fores	36.47	334	⇓P	P	17 03 13.3	-0.8
	baz=37						
C13A	Hot Springs	36.66	336	⇑P	P	17 03 15.0	-0.6
	baz=37						
B13A	Whitefish	37.18	336	⇑P	P	17 03 19.5	-0.5
	baz=37						
A14A	Double T Ranch	37.28	338	⇓P	P	17 03 20.9	0.0
	baz=37						
E09A	Wood Farm, Sta	37.30	331	⇓P	P	17 03 20.7	-0.3
	baz=37						
C11A	Tepee Creek (N	37.47	334	⇓P	P	17 03 21.7	-0.8
	baz=38,SNR=8.7						
H04A	Detroit Lake	38.05	326	⇓P	P	17 03 26.6	-0.9
	baz=38						
C09A	Chrisman Ranch	38.31	333	⇓P	P	17 03 28.9	-0.6
	baz=38						
LPAZ	La Paz	40.09	141	P	P	17 03 33.2	-12
	0.8nm,0.4s,mb3.9,baz=297,slow=2.3,SNR=3.8						
DLBC	Dease Lake	50.84	336	P	P	17 05 10.0	+0.9
	9.8nm,0.9s,mb4.8,baz=150,slow=6.0,SNR=16						
INK	Inuvik	58.69	344	P	P	17 06 04.1	-1.5
	6.9nm,0.8s,mb4.7,baz=123,slow=8.1,SNR=11						
ILAR	Eielson Array	61.03	337	P	P	17 06 20.4	-1.2
	1.9nm,0.8s,mb4.2,baz=129,slow=4.9,SNR=18						
PMSA	Palmer Station	83.05	168	LR	LR	17 36 26.6	
	comp=Z,177nm,19.9s,baz=349,slow=29						
CN2	Changchun	111.25	331	ePKP	PKiKP	17 14 32.5	-9.0
HHC	Hu-ho-hao-te	119.43	339	ePKP	PKPdf	17 14 47.0	-10
HHC				PP	PP	17 16 16.3	-2.3
HHC				PKS		17 18 22.3	
HHC				AMB	AMB		
	comp=Z,200nm,8.6s						
NJ2	Nanjing	123.64	327	ePKP	PKPdf	17 14 57.3	-8.3
WHN	Wuhan	127.12	330	PKP	PKPdf	17 14 57.3	-15
CMAR	Chiang Mai Arr	144.22	340	PKP	PKPdf	17 15 40.2	-4.0
	comp=Z,0.7nm,0.6s,baz=352,slow=3.6,SNR=5.7						

*ISCJB **27** 17:03:29.7±0.5, 39°.83N±0°.03×22°.87E±0°.04, h27km±5km, Error ellipse: s-maj=6.6km s-min=4.4km az=136.4*
*CSEM **27** 17:03:29.8±0.3, 39°.86N×22°.86E, h28km±2km, ML1.7/4, Error ellipse: s-maj=7.7km s-min=5.6km az=131.0*
*ATH **27** 17:03:29.2, 39°.86N×22°.88E, h23km±1km, MD3.1/8*
*THE **27** 17:03:30.2, 39°.87N×22°.86E, h12km±2km, ML1.7/4, Error ellipse: s-maj=2.1km s-min=0.7km az=327.0*

ISC 27 17:03:29.7±0.6, 39°.83N±0°.03×22°.87E±0°.04, h26km±6km, n24, σ1°.04/44, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIT	**Litokhoron**	**0.40**	**313**	ePB	**Pb**	**17 03 37.2**	**-1.1**
LIT				eSB	**Sb**	**17 03 43.8**	**-0.4**
LIT	**Litokhoron**	**0.40**	**313**	P	**Pb**	**17 03 37.2**	**-1.1**
LIT				S	**Sb**	**17 03 43.4**	**-0.8**
LIT	**Litokhoron**	**0.40**	**313**	ePb	**Pb**	**17 03 37.2**	**-1.1**
LIT				S	**Sb**	**17 03 43.4**	**-0.8**
LIT				eSb	**Sb**	**17 03 43.8**	**-0.4**
NEO	**Neokhori**	**0.59**	**152**	ePN	**Pn**	**17 03 41.2**	**-1.2**
NEO				eSN	**Sn**	**17 03 50.4**	**-0.7**
NEO	**Neokhori**	**0.59**	**152**	ePn	**Pn**	**17 03 41.2**	**-1.2**
NEO				eSn	**Sn**	**17 03 50.4**	**-0.7**
PAIG	**Paliouri**	**0.63**	**81**	P	**Pb**	**17 03 42.5**	**+0.4**
PAIG				S	**Sb**	**17 03 51.1**	**+0.6**
PAIG	**Paliouri**	**0.63**	**81**	P	**Pb**	**17 03 42.5**	**+0.4**
PAIG				S	**Sb**	**17 03 51.1**	**+0.6**
PLG	**Polygyros**	**0.70**	**39**	ePN	**Pn**	**17 03 42.1**	**-1.8**
PLG				eSN	**Sn**	**17 03 51.7**	**-2.1**
PLG	**Polygyros**	**0.70**	**39**	P	**Pb**	**17 03 43.5**	**+0.2**
PLG	**Polygyros**	**0.70**	**39**	ePn	**Pn**	**17 03 42.1**	**-1.8**
PLG	**Polygyros**	**0.70**	**39**	P	**Pb**	**17 03 43.5**	**+0.2**
PLG				eSn	**Sn**	**17 03 51.7**	**-2.1**
THL	**Klokotos Trika**	**0.71**	**248**	ePN	**Pn**	**17 03 43.3**	**-0.8**
THL				eSN	**Sn**	**17 03 53.9**	**-0.3**
THL	**Klokotos Trika**	**0.71**	**248**	P	**Pb**	**17 03 43.5**	**0.0**
THL				S	**Sb**	**17 03 53.5**	**+0.6**
THL	**Klokotos Trika**	**0.71**	**248**	ePn	**Pn**	**17 03 43.3**	**-0.8**
THL				S	**Sb**	**17 03 53.5**	**+0.6**
THL				eSn	**Sn**	**17 03 53.9**	**-0.3**
HORT	**Hortiatis**	**0.79**	**13**	P	**Pb**	**17 03 44.6**	**-0.2**
HORT				S	**Sb**	**17 03 55.2**	**+0.2**
HORT	**Hortiatis**	**0.79**	**13**	P	**Pb**	**17 03 44.6**	**-0.2**
HORT				S	**Sb**	**17 03 55.2**	**+0.2**
AGG	**Agios Georgios**	**0.91**	**208**	ePN	**Pn**	**17 03 47.7**	**+0.9**
AGG	**Agios Georgios**	**0.91**	**208**	ePn	**Pn**	**17 03 47.7**	**+0.9**
SOH	**Sokhos**

BESP Borongan 1.30 103 eP Pn 17 30 59.1 +0.4
RCP Roxas 1.42 256⇑iP Pn 17 30 59.0 -1.4
RCP i S Sn 17 31 17.9 -0.4
LLP Lapu-Lapu 1.58 187 eP Pn 17 31 01.8 -1.0
LLP i S Sn 17 31 22.6 +0.2
MSLP Maasin 1.89 158 eP Pn 17 31 07.8 +0.8
GUIM Jordan 1.99 231 eP Pn 17 31 08.4 +0.1
AUQP San Andres 2.02 315 eP Pn 17 31 09.5 +0.8
OTRP Odiongan 2.13 283 eP Pn 17 31 09.4 -0.9
TBP Tagbilaran 2.21 187⇑eP Pn 17 31 10.8 -0.6
TBP eS Sn 17 31 38.6 +0.6
SCPH Surigao 2.48 148⇓eP Pn 17 31 15.6 +0.5
SNPH Sibulan 2.69 200⇑eP Pn 17 31 17.6 -0.4
SNPH eS Sn 17 32 03.7 +14
BOAC Boac 2.73 305 eP Pn 17 31 17.8 -0.8
CUYO Cuyo Island 3.24 252 eP Pn 17 31 25.5 -0.1
BUTP Butuan 3.25 153 eP Pn 17 31 29.6 +3.9
POLP Polilio Island 3.54 323 eP Pn 17 31 32.8 +3.1
TGY Tagaytay City 3.82 305 Pn Pn 17 31 34.3 +0.7
26nm,0.3s,baz=189,slow=4.2,SNR=7.1
TGY Tagaytay City 3.82 305 P Pn 17 31 34.3 +0.7
BUSP Coron 3.87 272 eP Pn 17 31 33.9 -0.3
BUKP Musuan 4.09 167 eP Pn 17 31 39.4 +2.1
PAGZ Pagadian 4.09 191 eP Pn 17 31 37.7 +0.4
LUBP Lubang 4.22 296 eP Pn 17 31 39.4 +0.4
IPIL Ipil 4.37 201 eP Pn 17 31 40.8 -0.3
BALP Baler 4.56 327 eP Pn 17 31 43.0 -0.8
CTBH Cotabato--PC H 4.65 179⇑iP Pn 17 31 45.7 +0.8
CTBH i S Sn 17 32 37.6 -0.6
ENPP El Nido 4.68 262 eP Pn 17 31 45.6 +0.3
DAV Davao City (W) 5.00 164 LR LR 17 34 12.9
comp=Z,2µm,19.1s,baz=356,slow=44
MATI Mati 5.34 157 eP Pn 17 31 59.9 +5.4
CAUP Cauayan 5.50 336 eP Pn 17 31 56.2 -0.4
APYP Conner 6.56 335 eP Pn 17 32 10.6 -0.6
ABRA Dolores 6.61 330 eP Pn 17 32 08.8 -3.2
KKM Kota Kinabalu 9.76 234 ePn Pn 17 32 57.8 +2.6
YHNB Yeheng 12.97 349 eP Pn 17 33 39.4 +0.3
85nm,1.3s
MSSI Masamba 14.85 195 P sP 17 34 19.2 -0.9
65nm,1.4s
TTSI Tana Toraja 15.46 196 P Pn 17 34 18.2 +5.4
QIZ Qiongzhong 15.50 299 P Pn 17 34 12.8 -0.5
KSM Kuching 17.20 234 eP Pn 17 34 33.4 -1.6
9.7nm,0.9s
BAKI Biak 17.61 137 P Pn 17 34 42.1 +1.9
40nm,1.1s
GUMO Guam 20.28 83 LR LR 17 41 03.0
comp=Z,272nm,20.6s,MS3.6,baz=105,slow=31
NJ2 Nanjing 20.64 347 eP P 17 35 15.8 +1.7
NJ2 pmax pmax
comp=Z,20nm,0.9s
ENH Enshi 22.79 326 eP P 17 35 37.0 -0.1
comp=Z,23nm,1.1s,mb4.5
BJII Banjamegara 23.90 218 P P 17 35 57.5 +9.2
comp=Z,45nm,1.6s,mb4.7
IPM Ipoh 24.03 254 eP P 17 35 50.2 +0.7
comp=Z,25nm,1.4s,mb4.4
KULM Kulim 24.13 256 eP P 17 35 51.8 +1.3
comp=Z,17nm,1.3s,mb4.3
CMAR Chiang Mai Arr 25.17 288 P P 17 35 59.8 -0.2
comp=Z,1.8nm,0.8s,mb3.7,baz=102,slow=8.2,SNR=12
CMAR PcP PcP 17 39 38.1 +4.4
comp=Z,0.6nm,0.8s,baz=40,slow=0.7,SNR=4.5
CMAR LR LR 17 47 16.8
comp=Z,150nm,18.8s,MS3.5,baz=120,slow=40
CMAR Chiang Mai Arr 25.17 288 P P 17 35 59.8 -0.1
CMAR 17 39 38.1
KSRS Korea Array 25.67 7 P P 17 36 04.5 +0.2
comp=Z,4.1nm,0.6s,mb4.1,baz=184,slow=10.0,SNR=20
KSRS LR LR 17 46 19.1
comp=Z,155nm,20.0s,MS3.5,baz=177,slow=37
KAKA Kakadu 25.80 161 eP P 17 36 02.6 -3.0
comp=Z,20nm,0.6s,mb4.8
KAKA Kakadu 25.80 161 eP P 17 36 04.1 -1.4
comp=Z,52nm,0.6s,mb5.2
KAKA Kakadu 25.80 161 P P 17 36 04.7 -0.9
comp=Z,367nmcomp=Z,48nm,0.7s,mb5.2
PSI Prapat 26.57 252 LR LR 17 46 29.1
comp=Z,220nm,21.2s,MS3.7,baz=218,slow=36
MAJO Matsushiro 27.61 25 P P 17 36 21.6 -0.2
MAJO Matsushiro 27.61 25 P P 17 36 21.6 -0.2
MJAR Matsushiro Arr 27.61 25 P P 17 36 20.8 -0.9
comp=Z,0.6nm,0.7s,baz=184,slow=11,SNR=4.3
MJAR LR LR 17 45 51.4
comp=Z,94nm,18.2s,MS3.4,baz=175,slow=33
MJAR Matsushiro Arr 27.61 25 P P 17 36 20.8 -1.0
KNA Kununurra 27.85 170 P P 17 36 28.1 +4.1
comp=Z,50nm,1.0s,mb5.1
BJT Baijiatuau 28.88 347 P P 17 36 33.0 0.0
BJT Baijiatuau 28.88 347 P P 17 36 33.1 +0.1
FITZ Fitzroy Crossi 29.84 177 P P 17 36 41.2 -0.6
comp=Z,2.5nm,0.9s,mb3.9,baz=338,slow=7.6,SNR=3.1
FITZ LR LR 17 50 02.6
comp=Z,24nm,19.2s,MS2.8,baz=4.3,slow=39
FITZ Fitzroy Crossi 29.84 177 eP P 17 36 43.3 +1.5
comp=Z,3.8nm,0.6s,mb4.3
MDJ Mudanjiang 32.94 7 P P 17 37 07.7 -1.1
comp=Z,13nm,1.2s,mb4.8
MBWA Marble Bar 33.13 188 eP P 17 37 09.7 -1.0
comp=Z,2.1nm,0.5s,mb4.3
WRA Warramunga Arr 33.19 162 P P 17 37 10.2 -1.0
comp=Z,2.6nm,0.8s,mb4.2,baz=343,slow=9.3,SNR=11
WRA PcP PcP 17 39 52.8 -1.0
comp=Z,0.6nm,0.6s,baz=341,slow=2.9,SNR=5.9
WRA Warramunga Arr 33.19 162 P P 17 37 10.2 -1.0
WRA 17 39 52.8
GTA Gaotai 34.87 326 eP P 17 37 26.3 +0.7
GTA pP pP 17 37 30.8 -2.1
GTA sP sP 17 37 33.3 -2.5
GTA PcP PcP 17 40 03.8 +5.5
GTA pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
GTA LR LR
comp=N,650nm,21.8s,MS4.5
GTA LR LR
comp=E,520nm,18.0s,MS4.5
GTA LR LR
comp=Z,430nm,17.6s,MS4.2
LSA Lhasa 35.39 305 P P 17 37 32.8 +2.5
LSA Lhasa 35.39 305 eP P 17 37 32.4 +2.1
comp=Z,9.0nm,1.0s,mb4.7
LSA Lhasa 35.39 305 eP P 17 37 32.4 +2.1
LSA pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ASAR Alice Springs 36.61 165 P P 17 37 41.0 +0.3
comp=Z,4.1nm,0.6s,mb4.4,baz=356,slow=7.9,SNR=56
ASAR Alice Springs 36.61 165 P P 17 37 41.0 +0.3
CTAO Charters Tower 38.52 145 P P 17 37 55.7 -1.2
comp=Z,20nm,1.3s,mb4.7
CTAO Charters Tower 38.52 145 P P 17 37 55.7 -1.2
CTAO pmax pmax
comp=Z,20nm,1.3s,mb4.7
ULN Ulaanbaatar 38.61 342 eP P 17 37 57.7 +0.4
comp=Z,11nm,1.2s,mb4.5
ULN Ulaanbaatar 38.61 342 eP P 17 37 57.7 +0.3
ULN pmax pmax
comp=Z,11nm,1.2s,mb4.5
ULN Ulaanbaatar 38.61 342 P P 17 37 58.6 +1.2
comp=Z,9.0nm,1.2s,mb4.4
SONM Songino Array 38.79 341 P P 17 37 59.3 +0.4
comp=Z,2.0nm,0.8s,mb3.9,baz=162,slow=8.9,SNR=14
SONM LR LR 17 55 59.1
comp=Z,118nm,20.1s,MS3.7,baz=153,slow=39
SONM Songino Array 38.79 341 P P 17 37 59.3 +0.4
HNR Honiara 41.41 119 LR LR 17 52 24.1
comp=Z,233nm,21.4s,MS4.0,baz=245,slow=32
FORT Forrest 42.60 175 eP P 17 38 30.3 -0.1
comp=Z,18nm,0.7s,mb4.9
KLBR Kellerberrin 43.67 188 eP P 17 38 38.0 -1.1
comp=Z,22nm,1.3s,mb4.7
NWAO Narrogin (SRO) 45.06 188 P P 17 38 49.9 -0.4
comp=Z,20nm,1.0s,mb4.9,baz=32,slow=6.0,SNR=4.1
NWAO LR LR 17 57 56.6
comp=Z,158nm,18.2s,MS4.0,baz=57,slow=36
NWAO Narrogin (SRO) 45.06 188 P P 17 38 49.9 -0.3
STKA Stephens Creek 46.62 159 P P 17 39 02.9 +0.3
comp=Z,7.7nm,0.8s,mb4.7,baz=336,slow=8.1,SNR=10.0
STKA Stephens Creek 46.62 159 eP P 17 39 03.0 +0.4
comp=Z,7.8nm,0.9s,mb4.6
STKA Stephens Creek 46.62 159 eP P 17 39 01.9 -0.7
comp=Z,2.6nm,1.0s,mb4.1
STKA Stephens Creek 46.62 159 eP P 17 39 01.9 -0.7
MK31 Makanchi Array 49.48 323 eP P 17 39 25.2 +0.7
MK31 Makanchi Array 49.48 323 i P P 17 39 25.7 +1.1
MK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
MKAR Makanchi Array 49.48 323 P P 17 39 25.6 +1.1
comp=Z,2.6nm,0.8s,mb4.3,baz=120,slow=8.4,SNR=19
MKAR Makanchi Array 49.48 323 P P 17 39 25.7 +1.1
YAK Yakutsk 50.21 3 eP P 17 39 29.4 -0.5
comp=Z,9.6nm,0.8s,mb4.9
YAK Yakutsk 50.21 3 eP P 17 39 30.0 +0.1
YAK pmax pmax
comp=Z,11nm,1.1s,mb4.8
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.0s
TKM2 Tokmak 2 52.05 316 eP P 17 39 44.4 +0.4
comp=E,5.3nm,1.1s,mb4.4
TKM2 Tokmak 2 52.05 316 eP P 17 39 44.4 +0.4
TKM2 pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
ZALV Zalesovo Beam 52.21 332 P P 17 39 45.0 0.0
comp=Z,3.4nm,0.8s,mb4.3,baz=123,slow=6.6,SNR=13
ZALV Zalesovo Beam 52.21 332 P P 17 39 45.0 0.0
AAK Ala-Archa 52.71 315 eP P 17 39 50.5 +1.6
comp=Z,5.4nm,1.1s,mb4.4
AAK Ala-Archa 52.71 315⇓iP P 17 39 50.6 +1.7
AAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
AAK Ala-Archa 52.71 315 P P 17 39 50.5 +1.6
comp=Z,1.4nm,3.9s
EKS2 Erkin-Say 53.22 315 eP P 17 39 53.6 +0.9
comp=Z,13nm,1.3s,mb4.7
EKS2 Erkin-Say 53.22 315 eP P 17 39 53.6 +0.9
EKS2 pmax pmax
comp=Z,13nm,1.3s,mb4.7
NVS Novosibirsk 53.49 332 eP P 17 39 53.8 -0.6
NVS pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
NVS pmax pmax
comp=N,2.0nm,0.9s
NVS pmax pmax
comp=E,5.0nm,1.4s
KURK Kurchatov 53.56 326 eP P 17 39 55.4 +0.4
comp=E,30nm,1.2s,mb5.1
KURK Kurchatov 53.56 326 eP P 17 39 55.4 +0.4
KURK pmax pmax
comp=Z,30nm,1.2s,mb5.1
KBL Kabul 54.70 304 eP P 17 40 04.9 +1.2
comp=Z,8.6nm,1.0s,mb4.7
KBL Kabul 54.70 304 eP P 17 40 04.9 +1.2
KBL pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KK31 Karatay Array 55.63 314 i P P 17 40 10.9 +0.7
KK31 pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KKAR Karatay Array 55.63 314 eP P 17 40 10.6 +0.4
comp=Z,4.3nm,0.7s,mb4.6
KKAR Karatay Array 55.63 314 eP P 17 40 10.6 +0.4
KKAR pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
BRVK Borovoye 59.22 325 eP P 17 40 34.4 -0.9
comp=Z,8.2nm,0.8s,mb4.8
BRVK Borovoye 59.22 325⇓iP P 17 40 35.6 +0.2
BRVK pmax pmax
comp=Z,11nm,1.0s,mb4.8
BILL Bilibino 62.43 17 P P 17 40 57.5 +0.7
BILL Bilibino 62.43 17 P P 17 40 57.5 +0.6
AB31 Akbulak array 64.29 319 i P P 17 41 09.7 +0.1
AB31 pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
ABKAR Akbulak array 64.29 319 eP P 17 41 09.0 -0.6
comp=Z,8.6nm,1.0s,mb4.7
SVE Sverdlovsk 65.73 327⇑eP P 17 41 19.3 +0.5
SVE pmax pmax
comp=Z,13nm,1.0s,mb4.9
ARU Arti 66.73 327 eP P 17 41 24.0 -1.2
comp=Z,3.7nm,0.9s,mb4.4
ARU Arti 66.73 327 eP P 17 41 24.0 -1.2
ARU pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ZEI Tsey 74.89 311 eP P 17 42 14.7 -0.4
ZEI pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
KIV Kislovodsk 75.72 313 eP P 17 42 14.1 -5.8
comp=Z,14nm,0.8s,mb4.9
KIV Kislovodsk 75.72 313 P P 17 42 20.0 +0.1
KIV pmax pmax
comp=Z,25nm,1.6s,mb4.9
VRHR Novokhopersk 76.16 320 eP P 17 42 21.9 -0.3
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.1
KLMR Klimovskoe 77.09 330 eP P 17 42 26.1 -1.2
KLMR pmax pmax
comp=Z,41nm,1.4s,mb5.2
BPAW Bear Paw Mtn. 77.14 27 eP P 17 42 27.9 +0.4
comp=Z,7.8nm,1.0s,mb4.6
VORD Divnogorie 77.63 320 eP P 17 42 29.9 -0.6
VORD pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VORD pmax pmax
comp=N,8.0nm,0.7s
VORD pmax pmax
comp=E,5.0nm,0.6s
VSR Storozhevoye 77.70 320 eP P 17 42 30.7 -0.2
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
VSR pmax pmax
comp=N,6.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.2s
MCK McKinley 78.06 27 eP P 17 42 32.7 0.0
comp=E,8.8nm,0.8s,mb4.7
MCK McKinley 78.06 27 eP P 17 42 32.7 0.0
MCK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ILAR Eielson Array 78.89 26 P P 17 42 36.4 -0.9
comp=Z,0.5nm,0.6s,mb3.6,baz=242,slow=4.8,SNR=5.9
ILAR Eielson Array 78.89 26 P P 17 42 36.4 -0.8
OBN Obninsk 78.97 324 P P 17 42 36.5 -1.4
comp=Z,46nm,1.2s,mb5.3
OBN Obninsk 78.97 324⇓eP P 17 42 37.7 -0.1
OBN e pP 17 42 43.5 -2.1
OBN pmax pmax
comp=Z,20nm,1.3s,mb4.9
MALT Malatya 79.40 307 eP P 17 42 45.3 +4.7
comp=Z,3.4nm,0.9s,mb4.3
MALT Malatya 79.40 307 eP P 17 42 45.3 +4.7
MALT pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
JOF Joensuu 80.80 332 eP P 17 42 46.3 -1.3
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
JOF Joensuu 80.80 332 ep P 17 42 46.3 -1.3
comp=Z,6.6nm,0.7s,mb4.7
ARCES ARCESS Array B 81.95 339 P P 17 42 54.5 +0.9
comp=Z,5.4nm,0.9s,mb4.5,baz=69,slow=6.6,SNR=6.0
ARCES ARCESS Array B 81.95 339 P P 17 42 54.5 +0.9
FINES FINESS Array B 83.48 331 P P 17 43 02.0 +0.4
comp=Z,2.3nm,0.7s,mb4.3,baz=79,slow=6.3,SNR=12
FINES FINESS Array B 83.48 331 P P 17 43 02.1 +0.4
INK Inuvik 83.54 21 P P 17 43 01.1 -0.7
comp=Z,2.0nm,0.8s,mb4.3,baz=277,slow=2.8,SNR=3.5
INK Inuvik 83.54 21 eP P 17 43 00.7 -1.2
comp=Z,5.2nm,1.0s,mb4.6
INK Inuvik 83.54 21 eP P 17 43 00.7 -1.2
INK pmax pmax
comp=Z,5.0nm,1.0s
AKASG Malin Array Be 83.99 320 P P 17 43 03.3 -1.2
comp=Z,2.9nm,0.8s,mb4.5,baz=68,slow=4.7,SNR=5.8
AKASG Malin Array Be 83.99 320 P P 17 43 03.3 -1.2
SUW Suwalki 86.82 325 P P 17 43 22.5 +3.9
comp=Z,38nm,1.0s,mb5.6
SUW Suwalki 86.82 325 P P 17 43 22.5 +3.9
SUW pmax pmax
comp=Z,38nm,1.0s,mb5.6
NOA NORSAR Array B 90.38 333 LR LR 18 24 28.9
comp=Z,173nm,19.0s,MS4.5,baz=0.0,slow=36
FCC Fort Churchill 103.05 19 P Pdif 17 44 31.1 -1.7
comp=Z,0.6nm,0.9s
FCC Fort Churchill 103.05 19 P Pdif 17 44 31.1 -1.7
FCC pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 118.30 47 PKP PKPdf 17 49 22.3 +0.1
comp=Z,0.1nm,0.5s,baz=171,slow=1.7,SNR=2.3
TXAR Lajitas Array 118.30 47 PKIKP PKPdf 17 49 22.3 +0.1
PLCA Paso Flores 148.50 158 PKPbc PKPbc 17 50 20.6 -0.6
comp=Z,1.4nm,0.6s,baz=197,slow=11,SNR=5.9

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*IDC **27** 18:13:40.4±0.9, 13°22N×89°04W, h46km±6km, mb3.8/12, mb1 4.1/14, mb1mx3.9/27, mbtmp3.9/14, MS3.3/7, Ms1 3.3/7, ms1mx3.2/29, Error ellipse: s-maj=24.5km s-min=10.8km az=50.0*
*ISCJB **27** 18:13:41.1±0.5, 13°08N±0°05×89°51W±0°04, h66km±4km, mb4.1/21, Error ellipse: s-maj=10.2km s-min=3.8km az=31.3*
*CASC **27** 18:13:41.0±1.9, 13°07N×89°59W, h30km±6km, MD3.9, ML4.8, mb4.2(NEIC)*
*NEIC **27** 18:13:41.7±1.3, 13°10N×89°49W, h59km±10km, mb4.2/16, Error ellipse: s-maj=16.3km s-min=10.0km az=202.0*
NEIC Felt [IV] at San Salvador. Also felt at Antiguo Cuscatlan.
ISC 27 18:13:42.7±0.5**, 13°16N**±0°05×**89°47W**±0°04**, h60**km±4km**,**
n87, σ1§**34**/93**, mb4.2**/21**, 1C-14D, El Salvador**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SNET Serv Nac Est T 0.57 23⇓iP Pn 18 13 54.6 -0.9
SNET eS Sn 18 14 05.0 +0.2
SNET AML AML 18 14 07.3
comp=Z,57µm,0.3s
BOQS Boqueron 0.60 18 i P Pn 18 13 55.1 -0.7
LFRS El Faro 0.61 40⇓iP Pn 18 13 55.5 -0.4
SBLS San Blas 0.69 347⇓iP Pn 18 13 55.5 -1.4
LBRS Las Brisas 0.71 35⇓iP Pn 18 13 57.1 0.0
SNJE San Jose 0.72 349⇓iP Pn 18 13 55.8 -1.4
RTR El Retiro 0.75 347⇓iP Pn 18 13 56.4 -1.3
SNVI San Vicente 0.76 53⇓iP Pn 18 13 57.6 -0.1
RBDL Robledal 0.97 347⇓iP Pn 18 13 59.5 -0.9
VSM San Miguel 1.19 77⇓iP Pn 18 14 03.8 +0.5
BLLM Bellamira 1.23 77 eP Pn 18 14 04.1 +0.4
CAHU Cacacuatique 1.36 63⇓iP Pn 18 14 06.4 +0.8
CNCH Conchagua 1.59 86 eP Pn 18 14 09.0 +0.3
CNCH eS Sn 18 14 31.8 +3.5
PCG Pacaya 1.65 318⇑eP Pn 18 14 08.6 -0.9
NBG Las Nubes 1.66 329⇓eP Pn 18 14 09.9 +0.3
NBG eS Sn 18 14 30.9 +1.1
FUG Fuego 3 1.85 314⇓eP Pn 18 14 10.7 -1.5
MRL Marmol 1.91 353⇓eP Pn 18 14 14.3 +1.3
FG6 1.96 316 eP Pn 18 14 12.5 -1.1
FG6 eS Sn 18 14 34.3 -2.8
APG El Apazote 2.07 332 P Pn 18 14 14.6 -0.6
comp=Z,30nm,0.3s,baz=148,slow=8.2,SNR=448
APG S Sn 18 14 43.0 +3.1
comp=Z,82nm,0.3s,baz=101,slow=22,SNR=6.1
APG LR LR 18 15 26.0
comp=Z,895nm,21.8s,baz=143,slow=47
APG El Apazote 2.07 332 P Pn 18 14 14.6 -0.6
APG S Sn 18 14 43.0 +3.1
APG LR LR 18 15 26.0
TP2 Tecpan 2 2.21 317⇓eP Pn 18 14 17.3 +0.2
TGUH Tegucigalpa,Un 2.31 67 ePn Pn 18 14 18.9 +0.5
TGUH Tegucigalpa,Un 2.31 67 i P Pn 18 14 19.1 +0.7
JAT Jato 2.40 299 eP Pn 18 14 18.1 -1.6
MOMN Momotombo 2.95 104 eP Pn 18 14 26.6 -0.6
COPN Copaltepe 2.97 109 eP Pn 18 14 26.0 -1.4
COPN eS Sn 18 15 03.2 +1.4
CSAN 3.12 108 eP Pn 18 14 28.9 -0.7
XAVN Gruta Xavier 3.23 108 i P Pn 18 14 32.1 +1.2
HUEN 3.32 104 eP Pn 18 14 31.5 -0.6
TICN Ticuantepe 3.35 109 eP Pn 18 14 33.6 +1.0
CCIG Comitan 4.04 321 i P Pn 18 14 38.3 -3.8
CCIG i S Sn 18 15 29.7 +1.6
SCX San Cristobal 4.69 320 i P Pn 18 14 47.7 -3.4
SCX i S Sn 18 15 47.1 +3.0
JTS JuntasAbangare 5.26 122 ePn Pn 18 15 00.2 +1.4
comp=Z,83nm,0.6s
JTS eSn Sn 18 15 53.1 -5.0
CMIG Matias Romero 6.53 307 P Pn 18 15 17.0 +0.8
comp=Z,7.9nm,0.3s,baz=100,slow=9.3,SNR=78
CMIG S Sn 18 16 25.3 -4.0
comp=Z,7.7nm,0.3s,baz=126,slow=14,SNR=3.6
CMIG LR LR 18 18 15.0
comp=Z,338nm,21.1s,baz=17,slow=40
CMIG Matias Romero 6.53 307 P Pn 18 15 17.0 +0.8
CMIG S Sn 18 16 25.3 -4.1
CMIG LR LR 18 18 15.0
HUIG Huatulco 6.94 293 i P Pn 18 15 21.9 +0.2
HUIG i S Sn 18 16 46.7 +7.4
TEIG Tepich 7.12 9 P Pn 18 15 23.7 -0.5
comp=Z,23nm,0.3s,baz=188,slow=2.7,SNR=136
TEIG LR LR 18 18 46.4
comp=Z,335nm,18.1s,baz=201,slow=44
TEIG Tepich 7.12 9 ePn Pn 18 15 25.7 +1.5
comp=Z,58nm,0.3s
TEIG Tepich 7.12 9 i P Pn 18 15 26.2 +1.9
VHO Vista Hermosa 8.02 300 i P Pn 18 15 38.7 +2.1
VHO i S Sn 18 17 13.4 +7.4
PNIG Pinotepa 8.97 292 eP Pn 18 15 50.7 +1.1
PNIG i S Sn 18 17 37.3 +8.1
MTDJ Mount Denham 12.54 65 eP Pn 18 16 39.3 +0.9
comp=Z,26nm,0.9s
DWPF Disney 16.66 26 eP Pn 18 17 36.2 +4.0
comp=Z,11nm,0.8s
OTAV Otavalo 16.85 139 Pn Pn 18 17 37.7 +3.0
comp=Z,2.1nm,0.7s
SDV Santo Domingo 18.96 101 P Pn 18 17 57.9 -2.6
LRAL Lakeview Retre 19.91 6 eP Pn 18 18 10.7 -0.9
comp=Z,3.7nm,0.8s
TXAR Lajitas Array 20.80 323 P P 18 18 21.4 +2.4
comp=Z,4.1nm,0.6s,baz=144,slow=11,SNR=71
TXAR PcP PcP 18 22 27.0 +0.9
comp=Z,0.4nm,0.6s,baz=124,slow=4.6,SNR=5.4
TXAR pPcP 18 22 40.5
comp=Z,1.3nm,1.1s,baz=134,slow=2.6,SNR=4.0
TXAR Lajitas Array 20.80 323 P P 18 18 21.4 +2.4
TXAR PcP PcP 18 22 27.0 +0.9
TXAR pPcP 18 22 40.5
GOGA Godfrey 20.89 14 P P 18 18 21.7 +1.7
comp=Z,25nm,1.4s
OXF Oxford 21.26 0 P P 18 18 26.1 +2.2
comp=Z,21nm,0.8s,mb4.5
MIAR Mount Ida 21.61 351 eP P 18 18 29.4 +1.6
comp=Z,8.0nm,0.9s,mb4.2
SWET Sewanee 22.19 8 eP P 18 18 33.4 -0.5
WVT Waverly 22.92 3 eP P 18 18 41.3 -0.3
comp=Z,4.4nm,0.9s,mb3.9
TKL Tuckaleechee C 22.98 12 P P 18 18 40.9 -1.3
comp=Z,2.7nm,0.7s,mb3.8,baz=166,slow=13,SNR=4.4
TKL LR LR 18 27 17.0
comp=Z,159nm,21.4s,baz=291,slow=36
WMOK Wichita Mounta 23.08 340 eP P 18 18 41.5 -1.7
comp=Z,13nm,1.1s,mb4.3
WMOK e 18 18 53.1
CLNB Carlsbad 23.15 328 P P 18 18 45.4 +1.3
ANMO Albuquerque 26.59 328 P P 18 19 14.8 -0.5
comp=Z,0.7nm,0.6s,mb3.4,baz=314,slow=18,SNR=3.1
NNA Nana 27.95 153 pP pP 18 19 39.0 -3.5
comp=Z,6.5nm,0.3s,baz=345,slow=20,SNR=2.5
LDFC Landfair 31.83 318 eP P 18 20 03.6 +1.8
comp=Z,5.1nm,0.6s,mb4.5
SADO Sadowa 32.71 14 P P 18 20 07.5 -1.9
comp=Z,3.3nm,0.5s,mb4.5,baz=212,slow=8.5,SNR=8.8
SADO pP pP 18 20 20.9 -3.5
comp=Z,2.4nm,0.5s,baz=207,slow=6.8,SNR=2.2
PDAR Pinedale Array 34.24 333 P P 18 20 22.0 -0.7
comp=Z,0.2nm,0.7s,mb3.2,baz=14,slow=1.1,SNR=2.6
PDAR PcP PcP 18 22 58.1 0.0
comp=Z,0.5nm,0.4s,baz=117,slow=4.9,SNR=7.2
PDAR pPcP 18 23 11.8
comp=Z,0.9nm,0.7s,baz=129,slow=4.6,SNR=5.8
HWUT Hardware Ranch 34.26 330 P P 18 20 23.0 +0.1
comp=Z,2.0nm,0.8s,mb4.1
ISA Isabella 34.41 316 eP P 18 20 25.0 +0.7
comp=Z,2.4nm,0.8s,mb4.2
REDW Red Top Meadow 35.29 333 eP P 18 20 31.8 +0.1
comp=Z,1.7nm,0.5s,mb4.2
NVAR Mina Array Bea 35.88 320 P P 18 20 39.4 +2.4
comp=Z,2.5nm,0.7s,mb4.2,baz=134,slow=8.3,SNR=26
NVAR PcP PcP 18 23 04.5 +1.4
comp=Z,1.7nm,0.8s,baz=131,slow=3.5,SNR=10
NVAR pPcP 18 23 18.1
comp=Z,1.6nm,0.7s,baz=133,slow=3.9,SNR=9.1
NVAR LR LR 18 37 54.6
comp=Z,92nm,19.6s,baz=280,slow=40
LPAZ La Paz 36.07 144 P P 18 20 36.8 -1.9
comp=Z,0.7nm,0.3s,mb4.0,baz=317,slow=3.4,SNR=5.0

LPAZ LR LR 18 35 53.5
comp=Z,42nm,18.0s,baz=316,slow=37
LPAZ La Paz 36.07 144 *eP* **P 18 20 36.4 -2.3**
comp=Z,1.0nm,0.5s,mb4.0
HLID Hailey 37.12 329 P **P 18 20 49.5 +2.1**
MCMT McKenzie Canyo 37.33 332 *eP* **P 18 20 50.0 +0.8**
comp=Z,0.7nm,0.5s,mb3.8
ULM Lac du Bonnet 37.36 353 P **P 18 20 47.4 -1.9**
comp=Z,1.7nm,0.4s,mb4.2,baz=176,slow=9.1,SNR=3.6
ULM Lac du Bonnet 37.36 353 P **P 18 20 47.4 -1.9**
SCHQ Schefferville 45.20 18 P **P 18 21 51.5 -2.0**
comp=Z,4.5nm,0.5s,mb4.5,baz=21,slow=18,SNR=15
SCHQ Schefferville 45.20 18 *eP* **P 18 21 51.1 -2.4**
comp=Z,15nm,1.0s,mb4.8
YKA Yellowknife Ar 52.43 346 P **P 18 22 47.8 -1.0**
comp=Z,2.8nm,0.4s,mb4.5,baz=131,slow=8.0,SNR=14
YKA LR LR 18 47 49.4
comp=Z,4.6nm,19.4s,baz=70,slow=39
YKA Yellowknife Ar 52.43 346 P **P 18 22 47.8 -1.0**
YKA LR LR 18 47 49.4
DLBC Dease Lake 54.43 335 P **P 18 23 02.8 -0.7**
RCBR Riachuelo 56.44 106 *eP* **P 18 23 19.4 +0.6**
comp=Z,4.3nm,0.6s,mb4.7
ILAR Eielson Array 64.58 336 P **P 18 24 11.8 -1.6**
comp=Z,0.7nm,0.6s,mb3.9,baz=175,slow=4.6,SNR=8.4
ARCES ARCESS Array B 86.15 19 P **P 18 26 14.7 -2.2**
comp=Z,2.1nm,0.7s,mb4.5,baz=311,slow=8.2,SNR=3.7
ARCES pP pP 18 26 28.8 -5.2
comp=Z,2.2nm,0.9s,baz=267,slow=5.4,SNR=1.7
SONM Songino Array 117.66 348 PKP PKPdf 18 32 21.2 -0.9
comp=Z,0.1nm,0.5s,baz=46,slow=4.2,SNR=2.2
SONM pPKP pPKPdf 18 32 35.3 -4.6
comp=Z,0.4nm,0.6s,baz=326,slow=2.4,SNR=2.6
MKAR Makanchi Array 119.87 7 PKP PKPdf 18 32 24.8 -1.6
comp=Z,0.2nm,0.5s,baz=321,slow=2.8,SNR=5.0
HHC Hu-ho-hao-te 122.84 341 *e*PKP PKPdf 18 32 29.3 -3.0
HHC sPKP 18 33 06.8
HHC PP PP 18 34 13.5 +3.6
HHC PKS 18 36 04.8
HHC SKS SKSdf 18 39 30.0 -9.3
HHC SKKS SKKSac 18 40 56.0 -8.8
HHC SS SS 18 50 47.3 -0.4
HHC AMB AMB
comp=Z,140nm,9.8s
HHC LR LR
comp=N,190nm,19.6s
HHC LR LR
comp=E,240nm,20.3s
HHC LR LR
comp=Z,140nm,19.6s
WRA Warramunga Arr 137.57 255 PKP PKPdf 18 33 01.4 +0.8
comp=Z,1.1nm,0.5s,baz=87,slow=2.2,SNR=19
WRA Warramunga Arr 137.57 255 PKP PKPdf 18 33 01.4 +0.8
ASAR Alice Springs 137.69 249 PKHKP PKPpre 18 32 54.4
comp=Z,0.4nm,0.9s,baz=116,slow=4.8,SNR=4.8
ASAR PKP PKPdf 18 33 00.8 -0.1
comp=Z,1.2nm,1.1s,baz=95,slow=2.3,SNR=12
FITZ Fitzroy Crossi 145.87 257 PKPbc PKPbc 18 33 16.8 +0.6
comp=Z,3.6nm,0.8s,baz=31,slow=10,SNR=10
CMAR Chiang Mai Arr 147.51 345 PKPbc PKPbc 18 33 19.4 -1.6
comp=Z,3.6nm,0.6s,baz=341,slow=3.3,SNR=35
CMAR pPKPbc pPKPbc 18 33 33.8 -4.7
comp=Z,3.2nm,0.7s,baz=341,slow=3.2,SNR=11

IDC 27 18:22:25.8±2.6, 46°.20N×154°.63E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/25, mbtmp3.6/4, ML2.7/1, MS3.7/1, Ms1 3.9/1, ms1mx2.9/34, Error ellipse: s-maj=66.5km s-min=40.3km az=179.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**7.20**	**15**	Pn	Pn	18 24 11.7	-0.4
	0.1nm,0.3s,baz=177,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**48.12**	**298**	P	P	18 31 06.8	-0.4
	0.2nm,0.5s,baz=68,slow=6.8,SNR=4.0						
CMAR	**Chiang Mai Arr**	**53.27**	**258**	LR	LR	18 55 20.4	
	comp=Z,65nm,18.7s,baz=225,slow=37						
FINES	**FINESS Array B**	**64.98**	**335**	P	P	18 33 07.4	+0.5
	3.1nm,0.9s,baz=46,slow=8.0,SNR=4.7						
TXAR	**Lajitas Array**	**76.85**	**61**	P	P	18 34 19.7	+0.1
	0.2nm,0.6s,baz=312,slow=3.7,SNR=4.1						

KISR ***27*** *18:24:36.8±0.9, 32°.31N×47°.52E, h20km±999km, ML2.8*
ISCJB ***27*** *18:24:38.2±3.1, 32°.44N±0°.06×47°.38E±0°.10, h30km±35km, Error ellipse: s-maj=15.6km s-min=6.3km az=29.5*
TEH ***27*** *18:24:38.8, 32°.39N×47°.25E, h29km*
ISC 27 18:24:38.4±2.2, 32°.45N±0°.06×47°.33E±0°.09, h20km±20km, n14, σ0°.47/19, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**2.38**	**341**	*e*Pn	**Pn**	**18 25 16.3**	**0.0**
IDHR				*e*Sg	**Sg**	**18 25 54.6**	**-0.4**
IDHR				*e*		18 25 58.5	
	comp=Z,1μm,0.3s						
MIB	**Mutribah**	**2.64**	**180**	*e*P	**Pn**	**18 25 19.9**	**0.0**
MIB				*e*S	**Sn**	**18 25 51.4**	**+0.1**
MIB				AML	AML	18 26 00.3	
	comp=Z,36nm,0.5s						
IPIR	**Pirpir**	**3.02**	**85**	*e*Pn	**Pn**	**18 25 25.8**	**+0.7**
IPIR				*e*		18 26 19.1	
	comp=Z,423nm,0.3s						
NAY	**Al-Naaiem**	**3.19**	**181**	*e*P	**Pn**	**18 25 27.2**	**-0.3**
RDF	**Al-Radifah**	**3.52**	**177**	*e*P	**Pn**	**18 25 32.2**	**+0.3**
RDF				*e*S	**Sn**	**18 26 13.0**	**0.0**
RDF				AML	AML	18 26 16.0	
	comp=Z,20nm,0.3s						
IRAZ	**Razeghan**	**3.66**	**36**	*e*Pn	**Pn**	**18 25 34.6**	**+0.7**
IRAZ				*e*		18 25 47.5	
	comp=Z,294nm,0.2s						
IKLH	**Kolahrood**	**3.68**	**75**	*e*Pn	**Pn**	**18 25 34.5**	**+0.3**
IKLH				*e*Sn	**Sn**	**18 26 16.0**	**-1.0**
IKLH				*e*		18 26 25.6	
	comp=Z,252nm,0.1s						
QRN	**Al-Qurain**	**3.73**	**172**	*e*P	**Pn**	**18 25 34.2**	**-0.7**
QRN				*e*S	**Sn**	**18 26 18.2**	**0.0**
QRN				AML	AML	18 26 19.5	
	comp=Z,20nm,0.3s						
IZEF	**Zefreh**	**4.24**	**83**	*e*Pn	**Pn**	**18 25 42.0**	**+0.1**
IZEF				*e*		18 25 43.4	
	comp=Z,123nm,0.1s						
IVRN	**Varamin**	**4.46**	**54**	*e*Pn	**Pn**	**18 25 44.1**	**-0.8**
IVRN				*e*		18 26 01.4	
	comp=Z,162nm,0.3s						
ISFB	**Sefidab**	**4.53**	**64**	*e*Pn	**Pn**	**18 25 46.1**	**+0.3**
ISFB				*e*		18 26 01.4	
	comp=Z,68nm,0.2s						
IDMV	**Damavand**	**5.00**	**50**	*e*Pn	**Pn**	**18 25 52.6**	**+0.3**
IDMV				*e*		18 26 16.6	
	comp=Z,95nm,0.2s						
ISAD	**Sadrabad**	**5.42**	**94**	*e*Pn	**Pn**	**18 25 57.8**	**-0.3**
ISAD				*e*		18 27 07.1	
	comp=Z,79nm,0.2s						
IFIR	**Firoozkooh**	**5.52**	**53**	*e*Pn	**Pn**	**18 26 00.0**	**+0.6**
IFIR				*e*		18 26 21.7	
	comp=Z,70nm,0.2s						

TAP 27 18:46:11.5, 24°.11N×121°.72E, h8km, ML3.7, 7C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.12**	**258**	*i*P	Pg	18 46 14.6	+0.4
	baz=267						
TWD				*i* S	Sg	18 46 16.7	+0.6
	baz=267						
HWA	**Hwalien**	**0.17**	**220**	*e*P	Pg	18 46 16.2	+1.1
	baz=229						
EHP	**Heping Village**	**0.20**	**5**	P	Pg	18 46 16.1	+0.3
	baz=3.0						
EHP				*e*S	Sg	18 46 19.9	+1.3
	baz=3.0						
ESF	**Shoufeng Towns**	**0.30**	**220**	*e*P	Pg	18 46 18.5	+1.0
	baz=232						
ESF				*e*S	Sg	18 46 24.7	+3.1
	baz=232						
ENA	**Nanau**	**0.32**	**3**	⇑*i*P	Pg	18 46 18.4	+0.5
	baz=2.0						
ENA				*e*S	Sg	18 46 23.4	+1.2
	baz=2.0						
ESL	**Shilin**	**0.39**	**223**	⇑*i*P	Pg	18 46 19.6	+0.4
	baz=232						
ESL				*e*S	Sg	18 46 26.3	+1.9
	baz=232						
WHF	**Hehuan Shan**	**0.42**	**276**	*i*P	Pg	18 46 20.1	+0.4
	baz=276						
WHF				*e*S	Sg	18 46 27.6	+2.3
	baz=276						
TWC	**Suao**	**0.52**	**13**	*i*P	Pg	18 46 22.0	+0.5
	baz=5.0						
TWC				S	Sg	18 46 29.9	+1.6
	baz=5.0						
TWT	**Tachien**	**0.52**	**287**	P	Pg	18 46 22.6	+1.0
	baz=286						
TWT				*e*S	Sg	18 46 30.6	+2.1
	baz=286						
ENTT	**Nioudou**	**0.55**	**345**	⇑*i*P	Pg	18 46 22.8	+0.6
	baz=343						
ENTT				*e*S	Sg	18 46 31.6	+2.1
	baz=343						
TWE	**Neicheng**	**0.61**	**355**	⇑*i*P	Pg	18 46 24.1	+0.7
	baz=354						
TWE				*i* S	Sg	18 46 33.1	+1.6
	baz=354						
NSK	**Sanguang**	**0.66**	**330**	⇑*i*P	Pg	18 46 24.8	+0.5
	baz=328						
NSK				*e*S	Sg	18 46 35.5	+2.6
	baz=328						
EHY	**Hungye**	**0.70**	**212**	P	Pg	18 46 24.8	-0.3
	baz=227						
EHY				*e*S	Sg	18 46 36.4	+2.2
	baz=227						
SMLT	**Sun Moon Lake**	**0.79**	**254**	*i*P	Pg	18 46 27.2	+0.6
	baz=256						
SMLT				*e*S	Sg	18 46 37.7	+0.9
	baz=256						
TYC	**Yuchr**	**0.82**	**256**	⇑*i*P	Pg	18 46 27.6	+0.3
	baz=258						
TYC				*e*S	Sg	18 46 38.0	0.0
	baz=258						
NSTT	**Nanjuang**	**0.84**	**309**	*e*P	Pg	18 46 28.1	+0.4
	baz=308						
NSTT				*e*S	Sg	18 46 41.4	+2.7
	baz=308						
TWF1	**Yuli**	**0.84**	**208**	*e*P	Pg	18 46 27.2	-0.6
	baz=224						
TWA	**Mucha**	**0.88**	**352**	*e*P	Pg	18 46 29.1	+0.6
	baz=347						
TWQ1	**Liyutan**	**0.90**	**286**	*i*P	Pg	18 46 30.2	+1.4
	baz=286						
NSY	**Sanyi**	**0.93**	**290**	*e*P	Pg	18 46 31.1	+1.6
	baz=289						
YUS	**Yu-Shan**	**0.94**	**229**	⇓*i*P	Pg	18 46 30.3	+0.8
	baz=233						
YUS				S	Sg	18 46 43.2	+1.5
	baz=233						
TAP1	**Taipei**	**0.95**	**349**	*e*P	Pg	18 46 30.0	+0.2
	baz=343						
TCU	**Taichung**	**0.96**	**273**	*e*P	Pg	18 46 32.2	+2.2
	baz=269						
NWF	**Wu-fen Shan**	**0.96**	**3**	P	Pg	18 46 30.5	+0.4
	baz=352						
NWF				*e*S	Sg	18 46 43.5	+0.9
	baz=352						
HSN	**Hsinchu**	**0.98**	**315**	*e*P	Pg	18 46 31.8	+1.4
	baz=315						
WNT	**Mingjian**	**0.98**	**257**	P	Pg	18 46 31.6	+1.3
	baz=259						
WNT				*e*S	Sg	18 46 46.0	+2.9
	baz=259						
NCU	**National Centr**	**0.99**	**331**	*e*P	Pg	18 46 32.4	+1.8
	baz=326						
ALS	**Alishan**	**1.03**	**235**	⇑*i*P	Pg	18 46 31.8	+0.4
	baz=239						
ALS				*e*S	Sg	18 46 46.4	+1.7
	baz=239						
CHN5	**Tsauling**	**1.08**	**242**	P	Pg	18 46 33.3	+1.0
	baz=246						
CHN5				*i* S	Sg	18 46 50.1	+3.7
	baz=246						
ELDTW	**Lidau**	**1.12**	**216**	*e*P	Pg	18 46 32.0	-1.0
	baz=221						
WGK	**Gukeng**	**1.14**	**249**	*e*P	Pg	18 46 34.2	+0.7
	baz=252						
WGK				*e*S	Sg	18 46 52.2	+3.9
	baz=252						
WTP	**Ta-pu**	**1.33**	**230**	P	Pn	18 46 36.5	+0.2
	baz=235						
WTP				*e*S	Sb	18 46 56.7	+2.9
	baz=235						
WTCT	**Ta-ch'eng**	**1.34**	**260**	*e*P	Pn	18 46 37.3	+0.8
	baz=262						
WTCT				*e*S	Sb	18 46 56.7	+2.5
	baz=262						
TWG	**Pinlang**	**1.41**	**205**	*e*P	Pn	18 46 34.8	-2.6
	baz=212						
CHN1	**Nanshi**	**1.43**	**230**	*e*P	Pn	18 46 38.2	+0.5
	baz=235						
CHN1				*e*S	Sn	18 46 59.6	+3.0
	baz=235						
WSF	**Szhu**	**1.45**	**252**	*e*P	Pn	18 46 39.3	+1.3
	baz=255						
WSF				*e*S	Sn	18 47 00.4	+3.2
	baz=255						
SGST	**Jiashian**	**1.46**	**226**	*e*P	Pn	18 46 38.9	+0.8
	baz=232						
CHN3	**Shinhua**	**1.61**	**231**	*e*P	Pn	18 46 42.4	+2.1
	baz=236						
TWM1	**Shoushan**	**1.75**	**223**	*e*P	Pn	18 46 45.0	+2.9
	baz=226						
SGLT	**Jiouru**	**1.78**	**220**	*e*P	Pn	18 46 46.2	+3.6
	baz=215						
EAST	**Anshuo**	**1.89**	**205**	*e*P	Pn	18 46 44.6	+0.5
	baz=199						
SCZT	**Fangliau**	**2.00**	**211**	*e*P	Pn	18 46 46.4	+0.8
	baz=201						
PNG	**Penghu**	**2.06**	**255**	*e*P	Pn	18 46 47.0	+0.6
	baz=259						

IDC ***27*** *18:57:28.0±1.1, 13°.35N×120°.22E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/20, mbtmp3.8/5, Error ellipse: s-maj=21.7km s-min=11.7km az=121.0*
NEIC ***27*** *18:57:30.0±0.9, 13°.36N×120°.45E, h10km, mb4.4/2, Error ellipse: s-maj=20.0km s-min=15.5km az=94.0*
ISCJB ***27*** *18:57:30.8±1.0, 13°.42N±0°.05×120°.29E±0°.06, h26km±8km, mb4.0/8, Error ellipse: s-maj=9.8km s-min=7.6km az=5.4*
MAN ***27*** *18:57:30, 13°.36N×120°.31E, h10km, mb4.4, ML3.2, MS3.0*
ISC 27 18:57:30.5±1.2, 13°.38N±0°.05×120°.34E±0°.06, h13km±8km, n19, σ1°.00/21, mb4.0/8, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.36**	**346**	*e*P	**Pg**	**18 57 37.0**	**-0.8**
TGY	**Tagaytay City**	**0.92**	**39**	Pg	**Pg**	**18 57 48.3**	**-0.1**
	457nm,0.3s,baz=202,slow=2.3,SNR=75						
TGY				Lg		18 58 01.4	
	581nm,0.3s,baz=0.0,slow=20,SNR=11						
TGY	**Tagaytay City**	**0.92**	**39**	⇓*e*P	**Pg**	**18 57 48.3**	**0.0**
BUSP	**Coron**	**1.38**	**186**	*e*P	**Pn**	**18 57 55.3**	**-0.2**
BUSP				*e*S	**Sn**	**18 58 14.0**	**+0.4**
BOAC	**Boac**	**1.47**	**87**	*e*P	**Pn**	**18 57 56.8**	**+0.1**
BOAC				*e*S	**Sn**	**18 58 14.1**	**-1.7**
OTRP	**Odiongan**	**1.93**	**122**	*e*P	**Pn**	**18 58 05.6**	**+2.5**
POLP	**Polilio Island**	**2.05**	**49**	*e*P	**Pn**	**18 58 05.6**	**+0.9**
ENPP	**El Nido**	**2.34**	**203**	*e*P	**Pn**	**18 58 08.5**	**-0.2**
CUYO	**Cuyo Island**	**2.60**	**165**	*e*P	**Pn**	**18 58 12.0**	**-0.3**
BALP	**Baler**	**2.63**	**27**	*e*P	**Pn**	**18 58 14.7**	**+2.0**
CMAR	**Chiang Mai Arr**	**21.18**	**287**	P	**P**	**19 02 19.6**	**+3.8**
	2.3nm,1.0s,mb3.5,baz=92,slow=8.7,SNR=11						
WRA	**Warramunga Arr**	**35.87**	**157**	P	**P**	**19 04 29.4**	**-0.9**
	1.6nm,0.5s,mb4.2,baz=336,slow=9.6,SNR=27						
WRA	**Warramunga Arr**	**35.87**	**157**	P	**P**	**19 04 29.4**	**-0.9**
SONM	**Songino Array**	**36.26**	**344**	P	**P**	**19 04 32.9**	**-0.5**
	0.9nm,0.7s,mb3.8,baz=163,slow=11,SNR=7.5						
ASAR	**Alice Springs**	**39.14**	**160**	P	**P**	**19 04 57.9**	**-0.1**
	2.0nm,0.5s,mb4.1,baz=338,slow=6.9,SNR=70						
MKAR	**Makanchi Array**	**46.08**	**324**	P	**P**	**19 05 54.0**	**-0.2**
	0.4nm,0.7s,mb3.4,baz=134,slow=8.3,SNR=3.0						
ZALV	**Zalesovo Beam**	**49.18**	**333**	P	**P**	**19 06 16.6**	**-1.6**
	0.3nm,0.3s,mb3.8,baz=98,slow=2.9,SNR=2.4						
KURK	**Kurchatov**	**50.26**	**327**	*e*P	**P**	**19 06 26.6**	**+0.2**
	4.2nm,0.8s,mb4.5						
BRVK	**Borovoye**	**55.91**	**326**	*e*P	**P**	**19 07 09.0**	**+1.0**
	4.7nm,1.0s,mb4.5						

IDC ***27*** *19:27:53.1±0.9, 32°.15N×104°.77E, h0km, mb3.8/8, mb1 3.8/10, mb1mx3.7/26, mbtmp3.7/10, ML3.0/2, Error ellipse: s-maj=54.5km s-min=16.7km az=59.0*
NEIC ***27*** *19:27:54.9±0.4, 32°.17N×104°.78E, h10km, mb4.0/4, Error ellipse: s-maj=10.0km s-min=6.4km az=62.0*
BJI ***27*** *19:27:55.0, 32°.09N×104°.67E, h14km, ML3.4/12*
ISC 27 19:27:54.0±0.9, 32°.08N±0°.04×104°.66E±0°.05, h4km±6km, n24, σ1°.03/34, mb3.8/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.39**	**214**	Pn	**Pn**	**19 28 19.5**	**-0.7**
CD2				Pg	**Pg**	**19 28 21.3**	**+0.6**
CD2				Sg	**Sg**	**19 28 39.0**	**+0.3**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,2μm,0.7s						
LZH	**Lanzhou**	**4.06**	**351**	*e*Pn	**Pn**	**19 29 00.0**	**+3.2**
LZH				Pg	**Pg**	**19 29 10.5**	**-1.2**
LZH				Sn	**Sn**	**19 29 48.3**	**+3.5**
LZH				Sg	**Sg**	**19 29 59.5**	**-4.8**
LZH				smax			
	comp=N,130nm,0.5s						
LZH				smax			
	comp=E,220nm,0.6s						
XAN	**Xi'an**	**4.08**	**60**	Pn	**Pn**	**19 28 59.3**	**+2.1**
XAN				Pg	**Pg**	**19 29 09.0**	**-3.2**
XAN				Sg	**Sg**	**19 30 06.3**	**+1.2**
XAN				smax			
	comp=N,110nm,0.8s						
XAN				smax			
	comp=E,43nm,0.8s						
ENH	**Enshi**	**4.51**	**112**	*e*Pn	**Pn**	**19 29 02.9**	**-0.2**
ENH				*e*Sn	**Sn**	**19 29 56.0**	**-0.1**
GYA	**Guiyang**	**5.87**	**162**	Pn	**Pn**	**19 29 20.5**	**-1.2**
GYA				Pg	**Pg**	**19 29 41.5**	**-4.9**
GYA				Sn	**Sn**	**19 30 23.8**	**-5.7**
GYA				smax			
	comp=N,60nm,0.8s						
GYA				smax			
	comp=E,80nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.51**	**202**	Pn	**Pn**	**19 31 22.9**	**+2.8**
	comp=E,0.0nm,0.3s,baz=11,slow=10,SNR=3.3						
SONM	**Songino Array**	**15.79**	**4**	Pn	**Pn**	**19 31 37.0**	**-0.2**
	comp=E,0.1nm,0.3s,baz=194,slow=11,SNR=4.0						
ULN	**Ulaanbaatar**	**15.87**	**6**	*e*P	**Pn**	**19 31 36.8**	**-1.4**
MK31	**Makanchi Array**	**22.57**	**317**	*e*P	**P**	**19 32 55.6**	**+0.4**
MKAR	**Makanchi Array**	**22.57**	**317**	P	**P**	**19 32 55.7**	**+0.5**
	comp=E,1.4nm,0.7s,mb3.5,baz=115,slow=9.4,SNR=11						
MKAR	**Makanchi Array**	**22.57**	**317**	P	**P**	**19 32 55.7**	**+0.5**
TKM2	**Tokmak 2**	**25.35**	**304**	P	**P**	**19 33 22.9**	**+0.9**
	comp=E,4.8nm,1.3s,mb3.9						
ZAA0	**Zalesovo Array**	**26.06**	**333**	*e*P	**P**	**19 33 28.1**	**-0.2**
ZALV	**Zalesovo Beam**	**26.06**	**333**	P	**P**	**19 33 28.6**	**+0.2**
	comp=E,2.2nm,0.7s,mb3.8,baz=131,slow=11,SNR=11						
KBL	**Kabul**	**29.77**	**285**	P	**P**	**19 34 02.6**	**+0.9**
	comp=E,1.5nm,0.7s,mb3.8						
ABKAR	**Akbulak array**	**37.39**	**311**	*e*P	**P**	**19 35 07.5**	**-0.3**
	comp=E,0.6nm,0.5s,mb3.7						
AKTK	**Aktyubinsk**	**38.83**	**312**	P	**P**	**19 35 19.6**	**-0.3**
AKTO	**Aktyubinsk**	**38.83**	**312**	P	**P**	**19 35 19.6**	**-0.3**
	comp=E,0.6nm,0.4s,mb3.7,baz=65,slow=11,SNR=2.9						
ARU	**Arti**	**39.96**	**321**	P	**P**	**19 35 29.3**	**0.0**
	comp=E,4.6nm,1.0s,mb4.2						
ARCES	**ARCESS Array B**	**56.57**	**336**	P	**P**	**19 37 36.8**	**-0.5**
	comp=E,4.3nm,1.0s,mb4.4,baz=80,slow=5.9,SNR=3.5						
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**19 37 40.3**	**-0.8**
	comp=E,0.3nm,0.3s,mb3.8,baz=68,slow=7.5,SNR=2.8						
WRA	**Warramunga Arr**	**59.02**	**147**	P	**P**	**19 37 54.1**	**-1.0**
	comp=E,0.6nm,0.6s,mb3.8,baz=335,slow=7.5,SNR=10.0						
ASAR	**Alice Springs**	**62.08**	**150**	P	**P**	**19 38 16.6**	**+0.6**
	comp=E,0.3nm,0.7s,mb3.5,baz=330,slow=6.8,SNR=9.2						
GERES	**GERESS Array B**	**67.21**	**314**	P	**P**	**19 38 48.4**	**-0.8**
	comp=E,0.5nm,0.7s,mb3.7,baz=20,slow=4.3,SNR=4.1						

IDC 27 19:53:49.4±4.2, 12°.11S×117°.35E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.3/16, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=261.5km s-min=26.9km az=45.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.98**	**128**	Pn	Pn	19 56 13.4	-0.8
	0.3nm,0.3s,baz=307,slow=10,SNR=24						
FITZ				Sn	Sn	19 58 04.7	-2.3
	0.2nm,0.3s,baz=17,slow=19,SNR=5.3						
WRA	**Warramunga Arr**	**18.09**	**118**	P	Pn	19 58 02.1	-0.2
	0.1nm,0.3s,baz=292,slow=13,SNR=2.5						
WRA				S	Sn	20 01 15.8	-9.0
	0.1nm,0.3s,baz=307,slow=36,SNR=4.8						
ASAR	**Alice Springs**	**19.48**	**128**	P	Pn	19 58 18.9	-0.3
	0.1nm,0.3s,baz=296,slow=10,SNR=8.2						
MKAR	**Makanchi Array**	**66.50**	**335**	P	P	20 04 40.9	0.0
	0.2nm,0.5s,baz=141,slow=7.4,SNR=4.1						

IDC ***27*** *19:59:32.8±0.9, 1°.72S×121°.48E, h0km, mb4.0/9, mb1 4.1/9, mb1mx4.0/18, mbtmp4.0/9, MS3.6/2, Ms1 3.6/2, ms1mx2.9/32, Error ellipse: s-maj=45.8km s-min=15.3km az=66.0*
ISCJB ***27*** *19:59:37.8±0.6, 1°.86S±0°.04×121°.28E±0°.07, h54km±7km, mb4.2/18, Error ellipse: s-maj=10.9km s-min=7.3km az=3.5*
DJA ***27*** *19:59:38, 1°.78S×121°.21E, h20km, MLv4.5/9*
NEIC ***27*** *19:59:39.3±4.0, 1°.83S×121°.42E, h52km±39km, mb4.6/9, Error ellipse: s-maj=20.6km s-min=7.3km az=73.0*
ISC 27 19:59:38.9±0.7, 1°.86S±0°.04×121°.34E±0°.07, h46km±7km, n37, σ0°.84/36, mb4.2/18, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSSI	**Masamba**	**1.23**	**236**	P	**Pn**	**19 59 56.1**	**-3.6**
LUWI	**Luwuk**	**1.65**	**61**	P	**Pn**	**20 00 05.9**	**+0.5**
LUWI				S	**Sn**	**20 00 30.6**	**+5.2**
TTSI	**Tana Toraja**	**1.92**	**232**	P	**Pn**	**20 00 07.8**	**-1.4**
MRSI	**Marisa**	**2.40**	**15**	P	**Pn**	**20 00 14.7**	**-1.0**
KDI	**Kendari**	**2.45**	**149**	P	**Pn**	**20 00 22.7**	**+6.3**
SPSI	**Sidrap Palu**	**2.61**	**217**	P	**Pn**	**20 00 18.5**	**-0.2**
TOLI	**Toli-Toli**	**3.01**	**350**	P	**Pn**	**20 00 24.6**	**+0.5**
BKSI	**Bulukumba**	**3.65**	**199**	P	**Pn**	**20 00 34.2**	**+1.3**
BBSI	**Bau Bau**	**3.81**	**161**	P	**Pn**	**20 00 35.6**	**+0.5**
KBKI	**Kotabaru**	**5.36**	**254**	P	**Pn**	**20 00 57.4**	**+0.9**
FITZ	**Fitzroy Crossi**	**16.68**	**166**	LR	LR	20 12 22.1	
	comp=Z,49nm,18.4s,baz=161,slow=46						
WRA	**Warramunga Arr**	**22.01**	**146**	P	**P**	**20 04 28.9**	**-0.6**
	6.9nm,0.9s,mb4.1,baz=325,slow=11,SNR=25						
WRA	**Warramunga Arr**	**22.01**	**146**	P	**P**	**20 04 28.9**	**-0.6**
WB2	**Warramunga Arr**	**22.02**	**146**	*e*P	**P**	**20 04 29.0**	**-0.5**
ASAR	**Alice Springs**	**24.86**	**152**	P	**P**	**20 04 58.1**	**+0.8**
	1.9nm,0.8s,mb3.7,baz=341,slow=12,SNR=21						
ASAR				PcP	PcP	20 08 33.8	+1.2
	0.6nm,0.8s,baz=339,slow=2.0,SNR=5.6						
CMAR	**Chiang Mai Arr**	**29.

comp=Z,1.3nm,0.8s,mb4.1,baz=123,slow=5.5,SNR=4.5
KURK Kurchatov 63.77 331 *e*P **P 20 10 06.2 +0.1**
comp=Z,5.4nm,0.9s,mb4.6
YAK Yakutsk 64.03 4 P **P 20 10 07.6 0.0**
comp=Z,9.0nm,0.8s,mb4.8
CASY Casey 64.75 185 *e*P **P 20 10 12.2 0.0**
comp=Z,4.0nm,1.0s,mb4.4
MAW Mawson 76.70 200 LR LR 20 42 04.8
comp=Z,136nm,18.9s,baz=347,slow=33
MAW Mawson 76.70 200 P **P 20 11 24.1 -0.7**
QSPA South Pole Qui 88.09 180 P **P 20 12 24.3 +0.3**

IDC 27 20:19:21.3±1.4, 13°.20N×120°.51E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.4/21, mbtmp3.7/3, Error ellipse: s-maj=33.2km s-min=11.4km az=107.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.98**	**25**	Pg	Pg	20 19 40.7	+0.5
	102nm,0.3s,baz=118,slow=4.0,SNR=6.9						
TGY				Lg		20 19 53.6	
	158nm,0.3s,baz=134,slow=21,SNR=10						
CMAR	**Chiang Mai Arr**	**21.39**	**287**	P	P	20 24 10.7	-0.1
	0.5nm,0.5s,baz=99,slow=9.8,SNR=4.3						
WRA	**Warramunga Arr**	**35.64**	**157**	P	P	20 26 20.8	-0.3
	0.6nm,0.5s,baz=336,slow=9.7,SNR=4.4						
ASAR	**Alice Springs**	**38.91**	**160**	P	P	20 26 49.0	+0.1
	1.2nm,0.5s,baz=340,slow=7.1,SNR=28						

IDC 27 20:22:43.8±1.1, 13°.20N×120°.25E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/21, mbtmp3.6/4, 1C, Error ellipse: s-maj=24.2km s-min=12.1km az=116.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.12**	**36**	Pg	Pg	20 23 05.5	+0.2
	863nm,0.3s,baz=230,slow=4.2,SNR=39						
TGY				Lg		20 23 20.8	
	baz=122,slow=19						
TGY	**Tagaytay City**	**1.12**	**36**	*e*P	Pg	20 23 05.3	0.0
CMAR	**Chiang Mai Arr**	**21.15**	**287**	P	P	20 27 32.4	+1.7
	1.1nm,0.8s,baz=102,slow=9.1,SNR=6.5						
WRA	**Warramunga Arr**	**35.73**	**157**	P	P	20 29 43.9	-0.5
	0.3nm,0.3s,baz=332,slow=10,SNR=14						
SONM	**Songino Array**	**36.41**	**344**	P	P	20 29 49.0	-1.0
	1.5nm,0.6s,baz=164,slow=8.9,SNR=10						
ASAR	**Alice Springs**	**39.00**	**160**	P	P	20 30 12.7	+0.5
	0.5nm,0.5s,baz=340,slow=6.7,SNR=12						

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*IDC **27** 20:43:29.5±0.9, 13°.37N×120°.29E, h0km, mb4.0/6, mb1 4.3/6, mb1mx3.9/22, mbtmp4.1/6, Error ellipse: s-maj=18.3km s-min=11.2km az=126.0*
*NEIC **27** 20:43:31.3±2.7, 13°.42N×120°.34E, h13km±18km, mb4.5/5, Error ellipse: s-maj=20.8km s-min=10.3km az=60.0*
ISC 27 20:43:31.2±3.1, 13°.4N±0°.1×120°.3E±0°.2, h12km±20km, n14, σ0°89/14, mb4.2/11, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.89**	**40**	Pg	**Pg**	**20 43 48.3**	**-0.2**
	327nm,0.3s,baz=236,slow=1.6,SNR=24						
TGY				Lg		20 44 01.6	
	494nm,0.3s,baz=228,slow=19,SNR=19						
CMAR	**Chiang Mai Arr**	**21.17**	**286**	P	**P**	**20 48 18.2**	**+1.6**
	1.0nm,0.3s,mb3.6,baz=98,slow=8.8,SNR=12						
GUMO	**Guam**	**23.85**	**87**	*e*P	**P**	**20 48 46.4**	**+1.7**
	136nm,1.1s,mb5.3						
MBWA	**Marble Bar**	**34.37**	**181**	P	**P**	**20 50 18.1**	**-0.1**
	4.8nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**35.90**	**157**	P	**P**	**20 50 30.9**	**-0.5**
	8.9nm,0.6s,mb4.8,baz=336,slow=9.6,SNR=108						
WRA	**Warramunga Arr**	**35.90**	**157**	P	**P**	**20 50 30.9**	**-0.5**
WB2	**Warramunga Arr**	**35.90**	**157**	*e*P	**P**	**20 50 30.8**	**-0.7**
ULN	**Ulaanbaatar**	**36.09**	**345**	*e*P	**P**	**20 50 32.2**	**-0.6**
	1.3nm,0.8s,mb3.9						
SONM	**Songino Array**	**36.23**	**344**	P	**P**	**20 50 34.5**	**+0.5**
	1.5nm,0.7s,mb4.0,baz=159,slow=10,SNR=13						
ASAR	**Alice Springs**	**39.17**	**160**	P	**P**	**20 50 59.4**	**+0.2**
	1.2nm,0.6s,mb3.8,baz=339,slow=7.3,SNR=14						
MKAR	**Makanchi Array**	**46.05**	**324**	P	**P**	**20 51 55.5**	**+0.6**
	0.5nm,0.8s,mb3.5,baz=124,slow=9.0,SNR=3.2						
KURK	**Kurchatov**	**50.23**	**327**	*e*P	**P**	**20 52 27.0**	**-0.1**
	2.7nm,0.8s,mb4.3						
BVAR	**Borovoye Array**	**55.81**	**326**	P	**P**	**20 53 06.6**	**-1.6**
	0.6nm,0.7s,mb3.8,baz=131,slow=6.1,SNR=3.4						
BRVK	**Borovoye**	**55.88**	**326**	P	**P**	**20 53 07.8**	**-0.9**
	6.2nm,1.0s,mb4.6						

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*DDA **27** 20:43:42.5, 39°.48N×33°.06E, h7km±5km, Md2.9*
*ISCJB **27** 20:43:43.7±0.6, 39°.46N±0°.03×33°.03E±0°.04, h3km±4km, Error ellipse: s-maj=5.7km s-min=5.1km az=141.7*
*ISK **27** 20:43:43.4, 39°.47N×33°.06E, h5km, MD2.8*
*CSEM **27** 20:43:43.6±0.1, 39°.46N×33°.03E, h3km±1km, MD2.8, Error ellipse: s-maj=3.2km s-min=3.1km az=73.0*
ISC 27 20:43:43.9±0.6, 39°.46N±0°.03×33°.03E±0°.04, h3km±4km, n24, σ0°51/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Afʃar-Bala (A**	**0.04**	**104**	PG	**Pg**	**20 43 44.5**	**-0.3**
AFSR				*e*SG	**Sg**	**20 43 45.9**	**+0.5**
AFSR	**Afʃar-Bala (A**	**0.04**	**104**	*i* Pg	**Pg**	**20 43 44.5**	**-0.3**
AFSR				*e*Sg	**Sg**	**20 43 45.9**	**+0.4**
LOD	**Lodumlu**	**0.48**	**335**	PG	**Pg**	**20 43 53.3**	**+0.2**
LOD				*e*SG	**Sg**	**20 43 59.7**	**+0.4**
LOD	**Lodumlu**	**0.48**	**335**	*i* Pg	**Pg**	**20 43 53.3**	**+0.2**
LOD				*e*Sg	**Sg**	**20 43 59.7**	**+0.4**
KAMT	**Kaman**	**0.54**	**99**	PG	**Pg**	**20 43 54.0**	**-0.3**
KAMT				*e*SG	**Sg**	**20 44 01.2**	**0.0**
KAMT	**Kaman**	**0.54**	**99**	*i* Pg	**Pg**	**20 43 54.0**	**-0.3**
KAMT				*e*Sg	**Sg**	**20 44 01.2**	**-0.1**
ELDT	**Eldivan**	**1.08**	**17**	*i* P	**Pg**	**20 43 58.7**	**-5.9**
ELDT				*i* S	**Sg**	**20 44 18.2**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.16**	**270**	*e*PN	**Pn**	**20 44 06.5**	**-0.5**
SVRH	**Sivrihisar-ESK**	**1.16**	**270**	*e*Pn	**Pn**	**20 44 06.5**	**-0.5**
KDHN	**Kadinhani**	**1.17**	**217**	*i* P	**Pg**	**20 44 06.0**	**-0.3**
KDHN				*i* S	**Sg**	**20 44 22.0**	**+0.4**
KDHN	**Kadinhani**	**1.17**	**217**	*i* P	**Pg**	**20 44 06.0**	**-0.3**
KDHN				*i* S	**Sg**	**20 44 22.0**	**+0.5**
CANT	**Cankiri**	**1.24**	**21**	*e*PN	**Pn**	**20 44 07.4**	**-0.6**
SULT	**Sultanhani-AKS**	**1.31**	**163**	*e*PN	**Pn**	**20 44 09.3**	**+0.3**
SULT	**Sultanhani-AKS**	**1.31**	**163**	*e*Pn	**Pn**	**20 44 09.3**	**+0.3**
CORM	**Corum**	**1.43**	**59**	*e*PN	**Pn**	**20 44 09.6**	**-1.1**
CORM	**Corum**	**1.43**	**59**	*e*Pn	**Pn**	**20 44 09.6**	**-1.1**
AVNT	**Avonos**	**1.58**	**115**	*i* P	**Pn**	**20 44 13.0**	**+0.3**
AVNT				*i* S	**Sn**	**20 44 33.6**	**+0.1**
AVNT	**Avonos**	**1.58**	**115**	*i* P	**Pn**	**20 44 13.0**	**+0.3**
AVNT				*i* S	**Sn**	**20 44 33.6**	**+0.1**
YOZ	**Yozgat**	**1.78**	**83**	*e*PN	**Pn**	**20 44 15.5**	**0.0**
YOZ	**Yozgat**	**1.78**	**83**	*e*Pn	**Pn**	**20 44 15.5**	**0.0**
CTKT	**Corum**	**1.79**	**49**	*i* P	**Pn**	**20 44 15.2**	**-0.4**
CTKT				*i* S	**Sn**	**20 44 40.1**	**+1.3**
CTKT	**Corum**	**1.79**	**49**	*i* P	**Pn**	**20 44 15.2**	**-0.4**
CTKT				*i* S	**Sn**	**20 44 40.1**	**+1.4**
SAFT	**Safranbolu**	**1.80**	**352**	*e*PN	**Pn**	**20 44 16.1**	**+0.3**
SAFT	**Safranbolu**	**1.80**	**352**	*e*Pn	**Pn**	**20 44 16.1**	**+0.3**

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*JMA **27** 20:55:04.7±0.5, 32°.16N×138°.16E, h373km, M3.4*
*ISCJB **27** 20:55:05.5±0.8, 32°.41N±0°.09×138°.3E±0°.1, h390km±8km, mb3.2/7, Error ellipse: s-maj=17.9km s-min=14.6km az=162.9*
*IDC **27** 20:55:06.4±1.2, 32°.36N×138°.11E, h375km±28km, mb2.9/6, mb1 3.0/7, mb1mx2.8/24, mbtmp2.9/7, Error ellipse: s-maj=74.9km s-min=15.1km az=69.0*
*NEIC **27** 20:55:06.5±1.3, 32°.29N×137°.94E, h374km±22km, mb3.4/1, Error ellipse: s-maj=57.9km s-min=17.7km az=66.0*
ISC 27 20:55:06.8±0.8, 32°.46N±0°.10×138°.3E±0°.1, h382km±8km, n24, σ1°04/34, mb3.2/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.43**	**62**	P	**Pn**	**20 55 57.9**	**+0.1**
	11nm,0.3s,baz=288,slow=20,SNR=7.8						
JWZ	**Kozaga**	**2.40**	**297**	P	**Pn**	**20 56 01.5**	**-2.3**
JOD2	**Odawara 2**	**2.88**	**13**	P	**Pn**	**20 56 09.1**	**+1.6**
BSO3	**Boso 3**	**2.99**	**38**	P	**Pn**	**20 56 08.2**	**-0.2**
BSO3				*e*S	**S**	**20 56 57.7**	**-0.6**
JYN	**Shimob**	**3.04**	**4**	P	**Pn**	**20 56 10.4**	**+1.6**
BSO4	**Boso 4**	**3.06**	**34**	P	**Pn**	**20 56 09.7**	**+0.7**
BSO4				*e*S	**S**	**20 56 58.8**	**-0.5**
BSO1	**Boso 1**	**3.15**	**45**	P	**Pn**	**20 56 09.6**	**-0.1**
BSO1				*e*S	**S**	**20 57 00.3**	**-0.4**
JHU	**Hanno**	**3.49**	**14**	P	**Pn**	**20 56 13.3**	**+0.5**
JHU				*e*S	**S**	**20 57 06.8**	**+0.6**
JRY	**Ryogami san**	**3.59**	**8**	P	**Pn**	**20 56 15.8**	**+2.1**
JRY				*e*S	**S**	**20 57 08.4**	**+0.5**
JWT	**Wachi**	**3.69**	**320**	P	**Pn**	**20 56 13.8**	**-0.9**
MJAR	**Matsushiro Arr**	**4.07**	**359**	P	**Pn**	**20 56 19.3**	**+1.0**
	1.1nm,0.3s,baz=180,slow=11,SNR=20						
MJAR				S	**S**	**20 57 16.6**	**+0.3**
	0.3nm,0.3s,baz=172,slow=26,SNR=3.6						
MJAR	**Matsushiro Arr**	**4.07**	**359**	P	**Pn**	**20 56 19.3**	**+1.0**
MJAR				S	**S**	**20 57 16.6**	**+0.3**
JAG	**Ashikaga**	**4.08**	**14**	P	**Pn**	**20 56 19.0**	**+0.7**
JAG				*e*S	**S**	**20 57 14.6**	**-1.8**
MAJO	**Matsushiro**	**4.08**	**359**	*e*Pn	**Pn**	**20 56 19.2**	**+0.9**
JYT	**Yasato**	**4.08**	**22**	P	**Pn**	**20 56 18.5**	**+0.1**
JYT				S	**S**	**20 57 13.7**	**-2.8**
JHO	**Hitachi**	**4.55**	**24**	P	**Pn**	**20 56 23.1**	**-0.1**
JHO				S	**S**	**20 57 22.1**	**-3.0**
ULN	**Ulaanbaatar**	**28.15**	**312**	*e*P	**P**	**21 00 25.8**	**+0.4**
	1.0nm,0.6s,mb3.3						
SONM	**Songino Array**	**28.55**	**312**	P	**P**	**21 00 28.9**	**0.0**
	0.3nm,0.5s,mb2.9,baz=131,slow=7.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**43.25**	**316**	P	**P**	**21 02 31.7**	**-0.2**
	0.5nm,0.4s,mb3.2,baz=94,slow=8.7,SNR=3.3						
MK31	**Makanchi Array**	**44.52**	**306**	*e*P	**P**	**21 02 40.1**	**-1.8**
MKAR	**Makanchi Array**	**44.52**	**306**	P	**P**	**21 02 41.8**	**-0.2**
	0.7nm,0.6s,mb3.1,baz=87,slow=9.3,SNR=11						
BVAR	**Borovoye Array**	**51.84**	**315**	P	**P**	**21 03 37.3**	**+0.2**
	0.3nm,0.4s,mb2.9,baz=98,slow=10,SNR=2.5						
WRA	**Warramunga Arr**	**52.24**	**185**	P	**P**	**21 03 39.6**	**-0.7**
	0.2nm,0.3s,mb2.8,baz=360,slow=7.6,SNR=13						
FINES	**FINESS Array B**	**71.64**	**332**	P	**P**	**21 05 48.1**	**+0.6**
	3.7nm,1.0s,mb3.9,baz=55,slow=5.0,SNR=4.2						

JMA 27 21:15:49.1±0.2, 27°.67N×127°.50E, h114km±4km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.76**	**147**	P	Pn	21 16 08.7	+0.4
JIH				S	Sn	21 16 23.2	+0.4
JOW	**Kunigami**	**1.08**	**140**	P	Pn	21 16 11.5	0.0
JOW				S	Sn	21 16 28.1	-0.3
JAGN	**Aguni-jima**	**1.10**	**192**	P	Pn	21 16 11.6	-0.1
JAGN				*e*S	Sn	21 16 28.7	0.0
JTK	**Tokunoshima**	**1.29**	**85**	P	Pn	21 16 14.0	+0.3
JTK				S	Sn	21 16 32.0	-0.4
NAH1	**Naha**	**1.47**	**173**	P	Pn	21 16 16.3	+0.5
NAH1				S	Sn	21 16 35.4	-0.7
JKE	**Kume jima 2**	**1.48**	**206**	P	Pn	21 16 15.9	-0.1
JKE				*e*S	Sn	21 16 36.2	-0.1
JJT2	**Tamagusuku 2**	**1.54**	**172**	P	Pn	21 16 17.0	+0.3
JAM	**Amami Oshima**	**2.00**	**68**	P	Pn	21 16 22.5	+0.2
JAM				*e*S	Sn	21 16 47.5	-0.1

MAN 27 21:27:30, 17°.91N×120°.43E, h46km, mb4.6, ML3.5, MS3.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.03**	**69**	‖*e*P	Pn	21 27 37.9	+0.7
SIPP				*i* S	Sn	21 27 43.4	+1.2
ABRA	**Dolores**	**0.38**	**134**	*e*P	Pn	21 27 42.2	+2.6
ABRA				*e*S	Sn	21 27 47.2	+0.9
APYP	**Conner**	**0.78**	**94**	*e*P	Pn	21 27 46.2	+1.6
APYP				*e*S	Sn	21 27 58.1	+2.9

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*CSEM **27** 21:28:30.8, 35°.71N×23°.22E, h7km, MD3.5, After ATH*
ATH 27 21:28:30.8, 35°.71N×23°.22E, h7km±1km, MD3.5/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.59**	**345**	*e*PG	Pg	21 28 42.0	-0.2
KYTH	**Kithira**	**0.59**	**345**	*e*Pg	Pg	21 28 42.0	-0.2
KARN	**Karanos**	**0.65**	**118**	*e*PB	Pb	21 28 43.1	-1.3
KARN				*e*SB	Sb	21 28 52.1	-1.5
KARN	**Karanos**	**0.65**	**118**	*e*Pb	Pb	21 28 43.1	-1.3
KARN				*e*Sb	Sb	21 28 52.1	-1.5
VLI	**Veliai**	**1.03**	**347**	*e*PN	Pn	21 28 50.6	-1.1
VLI				*e*SB	Sb	21 29 04.1	-0.6
VLI	**Veliai**	**1.03**	**347**	*e*Pn	Pn	21 28 50.6	-1.1
VLI				*e*Sb	Sb	21 29 04.1	-0.6
PYL	**PYLOS**	**1.68**	**315**	*e*PB	Pb	21 29 02.8	+0.8
PYL				*e*SB	Sb	21 29 25.4	+2.0
PYL	**PYLOS**	**1.68**	**315**	*e*Pb	Pb	21 29 02.8	+0.8
PYL				*e*Sb	Sb	21 29 25.4	+2.0
DID	**Didima**	**1.79**	**0**	*e*PG	Pg	21 29 03.9	-1.3
DID				*e*SN	Sn	21 29 28.8	+3.6
DID	**Didima**	**1.79**	**0**	*e*Pg	Pg	21 29 03.9	-1.3
DID				*e*Sn	Sn	21 29 28.8	+3.6
ITM	**Ithomi**	**1.80**	**325**	*e*PN	Pn	21 29 04.4	+2.2
ITM	**Ithomi**	**1.80**	**325**	*e*Pn	Pn	21 29 04.4	+2.2
APE	**Apeiranthos**	**2.31**	**53**	*e*PN	Pn	21 29 11.5	+2.3
APE	**Apeiranthos**	**2.31**	**53**	*e*Pn	Pn	21 29 11.5	+2.3
GUR	**Goura**	**2.33**	**343**	*e*PN	Pn	21 29 11.8	+2.3
GUR	**Goura**	**2.33**	**343**	*e*Pn	Pn	21 29 11.8	+2.3

IDC 27 21:32:48.6±2.0, 6°.50S×154°.11E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.9/16, mbtmp3.8/8, Error ellipse: s-maj=65.3km s-min=22.0km az=117.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.39**	**233**	P	P	21 37 60.0	+0.6
	0.7nm,0.5s,baz=59,slow=8.7,SNR=4.9						
ASAR	**Alice Springs**	**25.86**	**227**	P	P	21 38 21.9	-0.3
	0.8nm,0.5s,baz=60,slow=9.5,SNR=15						
FITZ	**Fitzroy Crossi**	**30.06**	**245**	P	P	21 38 59.8	0.0
	1.2nm,0.4s,baz=55,slow=9.9,SNR=6.3						
KSRS	**Korea Array**	**50.09**	**333**	P	P	21 41 45.4	-0.1
	1.0nm,0.8s,baz=155,slow=6.4,SNR=4.1						
SONM	**Songino Array**	**68.44**	**328**	P	P	21 43 53.1	+0.6
	0.9nm,0.5s,baz=149,slow=4.9,SNR=9.6						
MKAR	**Makanchi Array**	**82.45**	**319**	P	P	21 45 12.9	-0.1
	0.5nm,0.8s,baz=92,slow=6.0,SNR=4.3						
ILAR	**Eielson Array**	**83.23**	**22**	P	P	21 45 16.9	+0.2
	0.4nm,0.6s,baz=242,slow=5.4,SNR=5.3						
ZALV	**Zalesovo Beam**	**83.28**	**326**	P	P	21 45 16.4	-0.7
	0.7nm,0.5s,baz=122,slow=5.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**152.05**	**286**	PKPbc	PKPbc	21 52 47.0	0.0
	15nm,0.9s,baz=82,slow=2.4,SNR=3.3						

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*ISCJB **27** 21:58:33.6±0.5, 32°.77N±0°.04×105°.39E±0°.06, h10km, mb3.5/4, Error ellipse: s-maj=8.2km s-min=5.0km az=36.8*
*BJI **27** 21:58:34.2, 32°.74N×105°.48E, h14km, ML3.4/11*
*IDC **27** 21:58:34.6±1.3, 32°.99N×105°.82E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/23, mbtmp3.3/5, ML2.9/1, Error ellipse: s-maj=98.8km s-min=23.8km az=58.0*
ISC 27 21:58:35.4±0.5, 32°.79N±0°.03×105°.44E±0°.05, h10km, n10, σ1°35/18, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.36**	**218**	Pn	**Pn**	**21 59 14.0**	**-0.1**
CD2				Pg	**Pg**	**21 59 18.8**	**-1.8**
CD2				Sg	**Sg**	**21 59 51.3**	**+0.1**
CD2				smax			
	comp=N,790nm,0.7s						
CD2				smax			
	comp=E,450nm,0.7s						
XAN	**Xi'an**	**3.17**	**66**	Pn	**Pn**	**21 59 25.0**	**-0.3**
XAN				Pg	**Pb**	**21 59 29.8**	**-1.9**
XAN				Sg	**Sb**	**22 00 11.0**	**+0.6**
XAN				smax			
	comp=N,120nm,0.7s						
XAN				smax			
	comp=E,72nm,0.7s						
LZH	**Lanzhou**	**3.54**	**339**	*e*Pn	**Pn**	**21 59 33.0**	**+2.6**
LZH				Pg	**Pg**	**21 59 41.3**	**-1.9**
LZH				Sn	**Sn**	**22 00 19.5**	**+7.2**
LZH				Sg	**Sg**	**22 00 27.0**	**-2.0**
LZH				smax			
	comp=N,190nm,0.6s						
LZH				smax			
	comp=E,130nm,0.6s						
GYA	**Guiyang**	**6.40**	**170**	*e*Pn	**Pn**	**22 00 10.8**	**+1.0**
GYA				Sn	**Sn**	**22 01 21.5**	**-1.4**
GYA				smax			
	comp=N,20nm,1.0s						
GYA				smax			
	comp=E,30nm,1.1s						
GTA	**Gaotai**	**8.02**	**327**	*e*P	**Pn**	**22 00 33.0**	**+1.1**
SONM	**Songino Array**	**15.04**	**2**	Pn	**Pn**	**22 02 07.0**	**-0.9**
	comp=E,0.1nm,0.3s,baz=183,slow=15,SNR=2.2						
MKAR	**Makanchi Array**	**22.51**	**315**	P	**P**	**22 03 37.4**	**+2.3**
	comp=E,0.3nm,0.8s,mb2.8,baz=107,slow=9.7,SNR=3.5						
FINES	**FINESS Array B**	**56.81**	**326**	P	**P**	**22 08 19.6**	**+0.1**
	comp=E,1.6nm,0.8s,mb4.1,baz=80,slow=7.5,SNR=3.8						
WRA	**Warramunga Arr**	**59.27**	**148**	P	**P**	**22 08 38.1**	**+0.9**
	comp=E,0.4nm,0.6s,mb3.6,baz=345,slow=7.2,SNR=3.4						
ASAR	**Alice Springs**	**62.37**	**150**	P	**P**	**22 08 59.4**	**+1.1**
	comp=E,0.2nm,0.5s,mb3.5,baz=332,slow=6.7,SNR=4.1						

IDC 27 22:00:14.2±10.0, 4°.86S×128°.02E, h219km±116km, mb2.8/1, mb1 3.1/4, mb1mx2.9/19, mbtmp2.9/4, Error ellipse: s-maj=107.8km s-min=29.8km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.36**	**190**	P	Pn	22 03 17.3	+1.7
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=4.9						
FITZ				S	S	22 05 42.9	-1.4
	0.0nm,0.3s,baz=197,slow=17,SNR=3.2						
WRA	**Warramunga Arr**	**16.20**	**158**	P	P	22 03 50.0	+0.8
	0.5nm,0.3s,baz=335,slow=11,SNR=38						
WRA				S	S	22 06 52.1	+4.2
	0.0nm,0.3s,baz=337,slow=21,SNR=2.7						
ASAR	**Alice Springs**	**19.54**	**164**	P	P	22 04 24.9	-0.5
	0.2nm,0.3s,baz=342,slow=11,SNR=17						
SONM	**Songino Array**	**55.81**	**343**	P	P	22 09 28.9	+0.3
	0.3nm,0.6s,baz=163,slow=6.0,SNR=2.9						

IDC 27 22:04:12.3±5.7, 24°.68S×179°.85E, h502km±64km, mb3.2/6, mb1 3.4/7, mb1mx3.2/16, mbtmp3.2/7, Error ellipse: s-maj=40.0km s-min=25.2km az=17.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.73**	**189**	P	P	22 07 08.9	-0.1
	0.7nm,0.3s,baz=333,slow=18,SNR=3.5						
URZ				S	S	22 09 33.3	-1.4
	0.3nm,0.3s,baz=148,slow=19,SNR=2.1						
STKA	**Stephens Creek**	**34.31**	**249**	P	P	22 10 16.9	+0.6
	1.1nm,0.4s,baz=94,slow=12,SNR=5.5						
ASAR	**Alice Springs**	**41.78**	**262**	P	P	22 11 17.4	0.0
	0.8nm,0.3s,baz=88,slow=6.9,SNR=39						
WRA	**Warramunga Arr**	**42.22**	**267**	P	P	22 11 20.6	-0.4
	2.3nm,0.3s,baz=98,slow=8.2,SNR=96						
FITZ	**Fitzroy Crossi**	**50.64**	**266**	P	P	22 12 25.0	+0.1
	0.6nm,0.4s,baz=100,slow=9.1,SNR=7.4						
MAW	**Mawson**	**76.97**	**201**	P	P	22 15 11.7	-0.6
	2.5nm,0.7s,baz=95,slow=11,SNR=4.3						
TXAR	**Lajitas Array**	**90.96**	**58**	P	P	22 16 23.0	+0.5
	0.3nm,0.8s,baz=224,slow=5.9,SNR=3.3						

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*ATH **27** 22:10:14.2, 38°.00N×20°.24E, h5km±3km, MD3.6/11*
*ISCJB **27** 22:10:15.8±0.9, 37°.97N±0°.03×20°.27E±0°.06, h10km, Error ellipse: s-maj=7.2km s-min=4.3km az=163.7*
*CSEM **27** 22:10:15.5±0.6, 37°.97N×20°.30E, h2km, MD3.6, Error ellipse: s-maj=11.5km s-min=6.2km az=72.0*
*THE **27** 22:10:15.0, 37°.99N×20°.24E, h0km±3km, ML2.2/2, Error ellipse: s-maj=3.4km s-min=1.5km az=188.0*
ISC 27 22:10:14.4±1.3, 37°.95N±0°.03×20°.20E±0°.07, h1km±6km, n39, σ0°78/61, 2D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.38**	**53**	‖*i*PB	**Pg**	**22 10 21.2**	**-0.5**
VLS				*e*SB	**Sg**	**22 10 26.2**	**-0.4**
VLS	**Valsamata**	**0.38**	**53**	P	**Pg**	**22 10 21.2**	**-0.5**
VLS				S	**Sg**	**22 10 26.5**	**-0.1**
VLS	**Valsamata**	**0.38**	**53**	‖*i*Pb	**Pg**	**22 10 21.2**	**-0.5**
VLS				*e*Sb	**Sg**	**22 10 26.2**	**-0.4**
VLS				S	**Sg**	**22 10 26.5**	**-0.1**
KFL	**Anninata**	**0.49**	**71**	P	**Pg**	**22 10 23.6**	**-0.1**
KFL				S	**Sg**	**22 10 30.9**	**+0.8**
KFL	**Anninata**	**0.49**	**71**	P	**Pg**	**22 10 23.6**	**-0.1**
KFL				S	**Sg**	**22 10 30.9**	**+0.8**
LKD2	**Lefkada island**	**0.91**	**23**	P	**Pg**	**22 10 31.7**	**-0.1**
LKD2				S	**Sg**	**22 10 45.1**	**+1.5**
LKD2	**Lefkada island**	**0.91**	**23**	P	**Pg**	**22 10 31.7**	**-0.1**
LKD2				S	**Sg**	**22 10 45.1**	**+1.5**
RLS	**Riolos of Patr**	**1.00**	**84**	*e*PB	**Pg**	**22 10 32.7**	**-0.9**
RLS				*e*SB	**Sg**	**22 10 46.8**	**+0.2**
RLS	**Riolos of Patr**	**1.00**	**84**	*e*Pb	**Pg**	**22 10 32.7**	**-0.9**
RLS				*e*Sb	**Sg**	**22 10 46.8

2.0nm,0.8s,mb4.1,baz=332,slow=10,SNR=15
WB2 Warramunga Arr 35.83 157 *e*P **P 22 23 52.7 -0.4**
SONM Songino Array 36.29 344 P **P 22 23 57.3 +0.5**
1.8nm,0.8s,mb4.1,baz=161,slow=9.1,SNR=14
ASAR Alice Springs 39.10 160 P **P 22 24 21.5 +0.7**
1.6nm,0.7s,mb3.9,baz=339,slow=6.9,SNR=27
MKAR Makanchi Array 46.16 324 P **P 22 25 17.8 -0.1**
0.3nm,0.7s,mb3.4,baz=120,slow=10,SNR=3.2
ZALV Zalesovo Beam 49.24 333 P **P 22 25 41.0 -0.5**
0.4nm,0.4s,mb3.9,baz=108,slow=9.3,SNR=3.0
ARCES ARCESS Array B 79.30 339 P **P 22 28 57.9 0.0**
5.1nm,1.1s,mb4.4,baz=90,slow=7.2,SNR=3.3

*NEIC **27** 22:51:12.6±2.1,24°.09N×121°.78E,h10km, Error ellipse: s-maj=26.5km s-min=8.3km az=93.0*
*TAP **27** 22:51:13.2,24°.11N×121°.71E,h8km,ML3.8,C*
ISC 27 22:51:13.5±0.5,24°.09N±0°.02×121°.77E±0°.03,h2km±5km, n50,σ0°82/79,4C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.16**	**266**	*i* P	**Pg**	**22 51 16.1**	**-0.4**
TWD	baz=264			*i* S	**Sg**	**22 51 18.0**	**-0.5**
NACB	**Ninganchiao**	**0.18**	**298**	*e*Pg	**Pg**	**22 51 16.0**	**-0.9**
NACB	baz=225			*e*S	**Sg**	**22 51 18.2**	**-1.0**
HWA	**Hwalien**	**0.19**	**233**	*e*P	**Pg**	**22 51 17.9**	**+0.8**
EHP	**Heping Village**	**0.22**	**354**	*i* P	**Pg**	**22 51 17.7**	**0.0**
EHP	baz=5.0			*i* S	**Sg**	**22 51 21.3**	**+0.7**
ESF	**Shoufeng Towns**	**0.32**	**227**	*e*P	**Pg**	**22 51 19.2**	**-0.5**
ENA	**Nanau**	**0.34**	**356**	⇑*i*P	**Pg**	**22 51 20.0**	**0.0**
ENA	baz=3.0			*e*S	**Sg**	**22 51 24.0**	**-0.3**
ESL	**Shilin**	**0.41**	**228**	*i* P	**Pg**	**22 51 21.1**	**-0.2**
ESL	baz=234			*e*S	**Sg**	**22 51 26.5**	**-0.2**
WHF	**Hehuan Shan**	**0.46**	**277**	P	**Pg**	**22 51 21.6**	**-0.7**
WHF	baz=276			S	**Sg**	**22 51 27.7**	**-0.6**
TWC	**Suao**	**0.52**	**8**	P	**Pg**	**22 51 23.8**	**+0.3**
TWC	baz=6.0			S	**Sg**	**22 51 31.6**	**+1.4**
TWT	**Tachien**	**0.56**	**287**	*i* P	**Pg**	**22 51 24.0**	**-0.2**
TWT	baz=285			*i* S	**Sg**	**22 51 31.4**	**-0.2**
ENTT	**Nioudou**	**0.58**	**342**	P	**Pg**	**22 51 24.5**	**0.0**
ENTT	baz=343			S	**Sg**	**22 51 32.1**	**+0.1**
TWE	**Neicheng**	**0.63**	**352**	*i* P	**Pg**	**22 51 25.7**	**+0.1**
TWE	baz=355			*i* S	**Sg**	**22 51 34.4**	**+0.5**
ILA	**Ilan**	**0.67**	**359**	*e*P	**Pg**	**22 51 26.6**	**+0.3**
ILA				*e*S	**Sg**	**22 51 36.6**	**+1.5**
YHNB	**Yeheng**	**0.68**	**328**	*e*Pg	**Pg**	**22 51 26.0**	**-0.4**
YHNB				*e*S	**Sg**	**22 51 34.9**	**-0.3**
NSK	**Sanguang**	**0.69**	**327**	⇑*i*P	**Pg**	**22 51 26.5**	**-0.3**
NSK	baz=328			*i* S	**Sg**	**22 51 34.9**	**-0.8**
EHY	**Hungye**	**0.71**	**215**	*e*P	**Pg**	**22 51 26.5**	**-0.6**
SSLB	**Suanglung**	**0.80**	**248**	*e*Pg	**Pg**	**22 51 28.0**	**-0.8**
SSLB	baz=216			*e*S	**Sg**	**22 51 39.7**	**+0.4**
YULB	**Yu-li**	**0.82**	**212**	*e*Pg	**Pg**	**22 51 29.3**	**+0.2**
YULB				*e*S	**Sg**	**22 51 40.9**	**+1.1**
SMLT	**Sun Moon Lake**	**0.82**	**256**	⇓*i*P	**Pg**	**22 51 28.7**	**-0.5**
SMLT	baz=255			S	**Sg**	**22 51 39.6**	**-0.2**
TWF1	**Yuli**	**0.85**	**210**	*e*P	**Pg**	**22 51 29.0**	**-0.8**
TYC	**Yuchr**	**0.85**	**258**	⇓*i*P	**Pg**	**22 51 29.1**	**-0.8**
TYC	baz=257			S	**Sg**	**22 51 39.8**	**-1.1**
NSTT	**Nanjuang**	**0.88**	**308**	*e*P	**Pg**	**22 51 30.2**	**-0.2**
NSTT	baz=307			*e*S	**Sg**	**22 51 41.3**	**-0.5**
TWA	**Mucha**	**0.90**	**349**	⇑P	**Pg**	**22 51 30.3**	**-0.4**
TWA	baz=349			*e*S	**Sg**	**22 51 42.7**	**+0.3**
TATO	**Taipei**	**0.92**	**344**	*e*Pg	**Pg**	**22 51 30.8**	**-0.2**
TWB1	**Santiao Chiao**	**0.94**	**12**	*e*P	**Pg**	**22 51 31.0**	**-0.4**
TWQ1	**Liyutan**	**0.94**	**286**	*e*P	**Pg**	**22 51 30.2**	**-1.3**
YUS	**Yu-Shan**	**0.96**	**231**	*i* P	**Pg**	**22 51 31.9**	**0.0**
YUS	baz=233			S	**Sg**	**22 51 45.6**	**+1.4**
TAP1	**Taipei**	**0.97**	**347**	*e*P	**Pg**	**22 51 32.5**	**+0.4**
TAP1	baz=336			*e*S	**Sg**	**22 51 44.6**	**0.0**
NSY	**Sanyi**	**0.97**	**290**	P	**Pg**	**22 51 32.9**	**+0.8**
NWF	**Wu-fen Shan**	**0.98**	**1**	*i* P	**Pg**	**22 51 32.3**	**+0.1**
TCU	**Taichung**	**1.00**	**273**	*e*P	**Pg**	**22 51 33.0**	**+0.4**
WNT	**Mingjian**	**1.01**	**258**	⇓P	**Pg**	**22 51 33.3**	**+0.4**
WNT	baz=258			*e*S	**Sg**	**22 51 48.3**	**+2.3**
HSN	**Hsinchu**	**1.01**	**314**	*e*P	**Pg**	**22 51 33.4**	**+0.4**
NCU	**National Centr**	**1.02**	**329**	*e*P	**Pg**	**22 51 32.9**	**-0.2**
ALS	**Alishan**	**1.05**	**237**	⇑*i*P	**Pg**	**22 51 33.8**	**+0.1**
ALS	baz=239			*e*S	**Sg**	**22 51 47.6**	**+0.3**
TWS1	**Kuangyinshan**	**1.05**	**343**	*e*P	**Pg**	**22 51 34.4**	**+0.7**
CHN5	**Tsauling**	**1.11**	**244**	*i* P	**Pg**	**22 51 35.1**	**+0.4**
CHN5	baz=246			S	**Sg**	**22 51 51.4**	**+2.2**
ELDTW	**Lidau**	**1.13**	**218**	*e*P	**Pg**	**22 51 33.5**	**-1.6**
WGK	**Gukeng**	**1.17**	**250**	*e*P	**Pg**	**22 51 36.1**	**+0.2**
WGK	baz=252			*e*S	**Sg**	**22 51 52.5**	**+1.3**
TPUB	**Ta-pu**	**1.31**	**233**	*e*Pn	**Pn**	**22 51 38.3**	**-0.3**
TPUB				*e*S	**Sg**	**22 51 52.3**	**-3.2**
WTP	**Ta-pu**	**1.35**	**232**	*e*P	**Pn**	**22 51 38.5**	**-0.8**
WTP	baz=235			*e*S	**Sg**	**22 51 57.8**	**+1.0**
TWG	**Pinlang**	**1.42**	**207**	*e*Pn	**Pn**	**22 51 36.8**	**-3.4**
TWG	**Pinlang**	**1.42**	**207**	*e*P	**Pn**	**22 51 36.6**	**-3.6**
CHN1	**Nanshi**	**1.45**	**232**	*e*P	**Pn**	**22 51 40.6**	**-0.1**
CHN1	baz=236			*e*S	**Sb**	**22 52 00.2**	**+0.1**
SGST	**Jiashian**	**1.48**	**227**	*e*P	**Pn**	**22 51 40.8**	**-0.2**
SGST	baz=232			*e*S	**Sb**	**22 52 03.2**	**+2.3**
CHN3	**Shinhua**	**1.64**	**232**	*e*P	**Pn**	**22 51 43.7**	**+0.5**
TWM1	**Shoushan**	**1.77**	**225**	*e*P	**Pn**	**22 51 45.6**	**+0.6**
SGLT	**Jiouru**	**1.79**	**221**	*e*P	**Pn**	**22 51 46.3**	**+0.9**
EAST	**Anshuo**	**1.90**	**207**	*e*P	**Pn**	**22 51 44.3**	**-2.5**
SCZT	**Fangliau**	**2.01**	**212**	*e*P	**Pn**	**22 51 47.7**	**-0.7**
	baz=203						

*NEIC **27** 23:07:26.7,34°.71S×72°.34W,h7km,ML3.0(GUC), After GUC.*
GUC 27 23:07:26.7±0.7,34°.71S×72°.34W,h7km±9km,MD3.5, ML3.0,4C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.90**	**140**	⇑*i*P	Pg	23 07 44.0	+0.1
TALC				*i* S	Sg	23 07 56.3	+0.7
TALC	**Talca**	**0.90**	**140**	⇑*i*P	Pg	23 07 44.0	+0.1
TALC				*i* S	Sg	23 07 56.3	+0.7
TALC				AML	AML	23 07 57.6	
	comp=E,3μm,0.1s						
LNV	**Longovilo**	**1.08**	**46**	*e*P	Pg	23 07 46.6	-0.7
LNV				*i* S	Sg	23 08 00.7	-0.6
LNV	**Longovilo**	**1.08**	**46**	*e*P	Pg	23 07 46.6	-0.7
LNV				*i* S	Sg	23 08 00.7	-0.6
CACH	**El Canelo**	**1.56**	**68**	⇑*i*P	Pn	23 07 54.7	0.0
CACH				*i* S	Sn	23 08 15.9	+0.8
CACH	**El Canelo**	**1.56**	**68**	⇑*i*P	Pn	23 07 54.7	0.0
CACH				*i* S	Sn	23 08 15.9	+0.8
CHCH	**Chadas Angostu**	**1.60**	**61**	*e*P	Pn	23 07 54.9	-0.4
CHCH				*i* S	Sn	23 08 16.3	+0.1
CHCH	**Chadas Angostu**	**1.60**	**61**	*e*P	Pn	23 07 54.9	-0.4
CHCH				*i* S	Sn	23 08 16.3	+0.1
ANTU	**Antumapu**	**1.82**	**52**	*i* S	Sn	23 08 22.2	+0.7
ANTU				AML	AML	23 08 25.0	
	comp=N,128nm,0.4s						
LMEL	**Las Melosas**	**1.97**	**65**	*e*P	Pn	23 08 00.7	+0.3
LMEL				*i* S	Sn	23 08 27.1	+1.8
LMEL	**Las Melosas**	**1.97**	**65**	*e*P	Pn	23 08 00.7	+0.3
LMEL				*i* S	Sn	23 08 27.1	+1.8
LMEL				AML	AML	23 08 30.7	
	comp=N,163nm,0.2s						
CLCH	**Cerro Calan**	**1.99**	**49**	*e*P	Pn	23 08 01.1	+0.4
CLCH				*i* S	Sn	23 08 27.4	+1.5
CLCH				AML	AML	23 08 35.4	
	comp=E,110nm,0.6s						
PEL	**Peldehue**	**2.08**	**42**	*e*P	Pn	23 08 02.4	+0.4
PEL				*i* S	Sn	23 08 30.1	+1.9
PEL				AML	AML	23 08 34.9	
	comp=N,142nm,0.3s						
FCH	**Farellones**	**2.19**	**51**	*e*P	Pn	23 08 04.7	+1.2
FCH				*e*S	Sn	23 08 34.2	+3.4
FCH				AML	AML	23 08 38.6	
	comp=N,89nm,0.3s						

*CSEM **27** 23:09:20.7±0.7,38°.13N×20°.23E,h2km,MD3.5, Error ellipse: s-maj=12.8km s-min=7.4km az=57.0*
*THE **27** 23:09:20.0,37°.98N×20°.24E,h0km±3km,ML2.3/1, Error ellipse: s-maj=4.1km s-min=1.9km az=205.0*
*ATH **27** 23:09:20.4,38°.12N×20°.21E,h5km±1km,MD3.5/8*
*ISCJB **27** 23:09:21.4±1.0,38°.16N±0°.04×20°.25E±0°.06,h10km, Error ellipse: s-maj=7.7km s-min=4.2km az=141.1*
ISC 27 23:09:19.9±1.3,38°.10N±0°.05×20°.16E±0°.06,h2km±7km, n27,σ0°53/50,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.34**	**77**	*e*PG	**Pg**	**23 09 26.2**	**-0.3**
VLS				*e*SB	**Sg**	**23 09 31.1**	**+0.1**
VLS	**Valsamata**	**0.34**	**77**	P	**Pg**	**23 09 26.0**	**-0.5**
VLS				S	**Sg**	**23 09 31.0**	**0.0**
VLS	**Valsamata**	**0.34**	**77**	*e*Pg	**Pg**	**23 09 26.2**	**-0.3**
VLS				S	**Sg**	**23 09 31.0**	**0.0**
KFL	**Anninata**	**0.49**	**89**	P	**Pg**	**23 09 29.0**	**-0.3**
KFL				S	**Sg**	**23 09 36.0**	**+0.3**
KFL	**Anninata**	**0.49**	**89**	P	**Pg**	**23 09 29.0**	**-0.3**
KFL				S	**Sg**	**23 09 36.0**	**+0.3**
LKD2	**Lefkada island**	**0.79**	**29**	P	**Pg**	**23 09 35.2**	**+0.2**
LKD2				S	**Sg**	**23 09 49.8**	**+4.5**
LKD2	**Lefkada island**	**0.79**	**29**	P	**Pg**	**23 09 35.2**	**+0.2**
LKD2				S	**Sg**	**23 09 49.8**	**+4.5**
RLS	**Riolos of Patr**	**1.03**	**92**	*e*PN	**Pg**	**23 09 39.4**	**-0.2**
RLS				*e*SB	**Sg**	**23 09 52.7**	**-0.2**
RLS	**Riolos of Patr**	**1.03**	**92**	*e*Pn	**Pg**	**23 09 39.4**	**-0.2**
RLS				*e*Sb	**Sg**	**23 09 52.7**	**-0.2**
EFP	**Efpalio**	**1.41**	**76**	*e*PB	**Pn**	**23 09 46.3**	**-0.2**
EFP				*e*SB	**Sn**	**23 10 05.2**	**-0.4**
EFP	**Efpalio**	**1.41**	**76**	*e*Pb	**Pn**	**23 09 46.3**	**-0.2**
EFP				*e*Sb	**Sn**	**23 10 05.2**	**-0.4**
LAKA	**Lakka**	**1.44**	**84**	P	**Pn**	**23 09 45.9**	**-1.0**
LAKA				S	**Sg**	**23 10 06.7**	**+0.6**
LAKA	**Lakka**	**1.44**	**84**	P	**Pn**	**23 09 45.9**	**-1.0**
LAKA				S	**Sg**	**23 10 06.7**	**+0.6**
EVR	**Evrytania**	**1.53**	**57**	*e*PG	**Pn**	**23 09 47.9**	**-0.2**
EVR				*e*SB	**Sg**	**23 10 08.5**	**-0.4**
EVR	**Evrytania**	**1.53**	**57**	*e*Pg	**Pn**	**23 09 47.9**	**-0.2**
EVR				*e*Sb	**Sg**	**23 10 08.5**	**-0.4**
KEK	**Kerkira**	**1.64**	**350**	P	**Pg**	**23 09 51.0**	**-0.2**
KEK				S	**Sg**	**23 10 16.1**	**+3.6**
KEK	**Kerkira**	**1.64**	**350**	P	**Pg**	**23 09 51.0**	**-0.2**
KEK				S	**Sg**	**23 10 16.1**	**+3.6**
JAN	**Janina**	**1.65**	**19**	*e*PG	**Pn**	**23 09 50.4**	**+0.7**
JAN				*e*SB	**Sg**	**23 10 12.6**	**-0.1**
JAN	**Janina**	**1.65**	**19**	*e*Pg	**Pn**	**23 09 50.4**	**+0.7**
JAN				*e*Sb	**Sg**	**23 10 12.6**	**-0.1**
ITM	**Ithomi**	**1.67**	**123**	*e*PB	**Pb**	**23 09 51.5**	**+0.1**
ITM				*e*SB	**Sb**	**23 10 13.8**	**+0.9**
ITM	**Ithomi**	**1.67**	**123**	*e*Pb	**Pb**	**23 09 51.5**	**+0.1**
ITM				*e*Sb	**Sb**	**23 10 13.8**	**+0.9**
GUR	**Goura**	**1.73**	**95**	*e*PN	**Pb**	**23 09 52.8**	**+0.5**
GUR	**Goura**	**1.73**	**95**	*e*Pn	**Pb**	**23 09 52.8**	**+0.5**
VLX	**Vlachokerasia**	**1.90**	**112**	*e*PN	**Pb**	**23 09 55.0**	**-0.2**
VLX	**Vlachokerasia**	**1.90**	**112**	*e*Pn	**Pb**	**23 09 55.0**	**-0.2**
AGG	**Agios Georgios**	**1.93**	**61**	*e*PN	**Pb**	**23 09 55.3**	**-0.5**
AGG				*e*SN	**Sb**	**23 10 20.8**	**+0.5**
AGG	**Agios Georgios**	**1.93**	**61**	*e*Pn	**Pb**	**23 09 55.3**	**-0.5**
AGG				*e*Sn	**Sb**	**23 10 20.8**	**+0.5**

*NIED **27** 23:42:00,36°.40N×141°.00E,h35km,Mw3.6 Best double couple: M0=2.67000×10^14 NP1:φ=6.00000°,δ79.00000°, λ75.00000°. NP2:φ=240.00000°,δ19.00000°,λ143.00000°.*
*ISCJB **27** 23:42:31.1±0.9,36°.41N±0°.04×141°.20E±0°.08,h45km±9km, mb3.4/5, Error ellipse: s-maj=11.3km s-min=5.5km az=24.4*
*JMA **27** 23:42:32.8±0.1,36°.40N×141°.03E,h47km±1km,M3.7*
JMA Felt I J1.
*IDC **27** 23:42:32.9±1.9,36°.39N×141°.17E,h44km±19km,mb3.3/5, mb1 3.5/9,mb1mx3.4/27,mbtmp3.5/9,ML3.4/3,Error ellipse: s-maj=17.0km s-min=11.7km az=82.0*
*NEIC **27** 23:42:33.9±1.7,36°.34N×141°.08E,h54km±14km, MG3.7(JMA),Error ellipse: s-maj=22.5km s-min=13.0km az=141.0*
ISC 27 23:42:33.0±0.8,36°.42N±0°.04×141°.10E±0°.08,h38km±9km, n20,σ0°93/30,mb3.4/5,5D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.47**	**294**	⇓P	**Pn**	**23 42 42.8**	**-0.5**
JHO				S	**Sn**	**23 42 49.8**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.73**	**340**	⇓P	**Pn**	**23 42 46.5**	**-0.2**
ONAJ				S	**Sn**	**23 42 55.8**	**-0.8**
JYT	**Yasato**	**0.76**	**256**	⇓P	**Pn**	**23 42 46.4**	**-0.7**
JYT				S	**Sn**	**23 42 55.5**	**-1.9**
JFK	**Kawauchi**	**0.96**	**349**	P	**Pn**	**23 42 49.6**	**-0.4**
JFK				S	**Sn**	**23 43 01.6**	**-0.9**
JAG	**Ashikaga**	**1.33**	**271**	⇓P	**Pn**	**23 42 54.7**	**-0.3**
JKT	**Katashina**	**1.53**	**284**	⇓P	**Pn**	**23 42 58.3**	**+0.5**
MJAR	**Matsushiro Arr**	**2.34**	**274**	P	**Pn**	**23 43 08.8**	**0.0**
	15nm,0.3s,baz=106,slow=8.6,SNR=167						
MJAR				S	**Sn**	**23 43 37.4**	**+1.1**
	7.2nm,0.3s,baz=84,slow=16,SNR=7.1						
MJAR	**Matsushiro Arr**	**2.34**	**274**	P	**Pn**	**23 43 08.8**	**0.0**
MJAR				S	**Sn**	**23 43 37.4**	**+1.1**
MAJO	**Matsushiro**	**2.34**	**274**	*e*Pn	**Pn**	**23 43 10.0**	**+1.2**
MAT	**Matsushiro**	**2.34**	**274**	P	**Pn**	**23 43 09.6**	**+0.8**
MAT				S	**Sn**	**23 43 40.8**	**+4.5**
JHJ	**Hachijo jima 2**	**3.46**	**199**	P	**Pn**	**23 43 24.9**	**+0.6**
	6.1nm,0.3s,baz=29,slow=19,SNR=4.0						
JHJ				S	**Sn**	**23 44 03.9**	**-0.3**
	19nm,0.3s,baz=50,slow=18,SNR=3.6						
ERM	**Erimo**	**5.81**	**15**	*e*Pn	**Pn**	**23 43 59.1**	**+2.5**
ERM				*e*S	**Sn**	**23 45 01.4**	**-0.6**
ASAJ	**Asahikawa**	**7.78**	**8**	P	**Pn**	**23 44 23.8**	**+0.3**
	0.7nm,0.3s,baz=205,slow=9.8,SNR=5.0						
ASAJ				S	**Sn**	**23 45 51.2**	**+1.0**
	0.5nm,0.3s,baz=151,slow=19,SNR=2.4						
KSRS	**Korea Array**	**10.60**	**280**	P	**Pn**	**23 45 04.5**	**+2.2**
	0.3nm,0.3s,baz=96,slow=14,SNR=3.8						
SONM	**Songino Array**	**27.93**	**305**	P	**P**	**23 48 19.3**	**-0.1**
	0.6nm,0.8s,mb3.2,baz=98,slow=10,SNR=2.8						
ZALV	**Zalesovo Beam**	**42.15**	**313**	P	**P**	**23 50 21.5**	**+0.2**
	0.7nm,0.4s,mb3.6,baz=84,slow=6.7,SNR=5.9						
ZALV	**Zalesovo Beam**	**42.15**	**313**	P	**P**	**23 50 21.5**	**+0.2**
MKAR	**Makanchi Array**	**44.24**	**303**	P	**P**	**23 50 38.1**	**-0.2**
	0.4nm,0.7s,mb3.3,baz=96,slow=9.6,SNR=3.8						
ILAR	**Eielson Array**	**50.15**	**32**	P	**P**	**23 51 22.9**	**-1.2**
	0.4nm,0.8s,mb3.5,baz=256,slow=7.0,SNR=3.8						
WRA	**Warramunga Arr**	**56.42**	**188**	P	**P**	**23 52 09.8**	**-0.8**
	0.2nm,0.4s,mb3.5,baz=4.5,slow=7.6,SNR=7.4						

DJA 27 23:51:05,1°.06N×98°.74E,h20km,MLv3.6/4,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.88**	**107**	P	Pb	23 51 19.4	-2.2
MNSI				S	Sb	23 51 27.9	-5.0
PPI	**Padang Panjang**	**2.24**	**132**	P	Pn	23 51 41.6	+0.6
BKNI	**Bangkinang**	**2.41**	**108**	P	Pn	23 51 44.8	+1.5
BKNI				S	Sn	23 52 14.7	+2.4
PDSI	**Padang**	**2.61**	**139**	P	Pn	23 51 48.1	+2.1
PDSI				S	Sn	23 52 18.7	+1.6

IDC 27 23:53:36.8±2.0,5°.75S×130°.41E,h0km,mb3.3/1, mb1 3.5/4,mb1mx3.4/15,mbtmp3.3/4,ML3.1/3,Error ellipse: s-maj=76.3km s-min=28.2km az=77.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.13**	**200**	Pn	Pn	23 56 43.9	-0.9
	0.0nm,0.3s,baz=20,slow=15,SNR=3.7						
FITZ				Sn	Sn	23 58 51.8	-20
	0.1nm,0.3s,baz=119,slow=19,SNR=5.5						
WRA	**Warramunga Arr**	**14.62**	**165**	Pn	Pn	23 57 06.8	+1.8
	0.2nm,0.3s,baz=346,slow=11,SNR=17						
WRA				Sn	Sn	23 59 33.7	-14
	0.1nm,0.3s,baz=343,slow=24,SNR=5.2						
ASAR	**Alice Springs**	**18.13**	**170**	P	Pn	23 57 49.6	-0.5
	0.1nm,0.3s,baz=346,slow=9.9,SNR=6.5						
MKAR	**Makanchi Array**	**67.41**	**326**	P	P	00 04 34.3	+0.1
	0.1nm,0.4s,baz=123,slow=5.3,SNR=1.8						

*ISCJB **27** 23:54:50.8±0.4,40°.22N±0°.02×23°.47E±0°.04,h10km±4km, Error ellipse: s-maj=4.6km s-min=3.3km az=169.9*
*THE **27** 23:54:51.7,40°.25N×23°.49E,h11km±1km,ML2.1/9, Error ellipse: s-maj=1.2km s-min=0.6km az=184.0*
*ATH **27** 23:54:51.1,40°.22N×23°.36E,h17km±1km,MD3.3/8*
*CSEM **27** 23:54:51.3±0.2,40°.21N×23°.44E,h15km,ML2.1/9, Error ellipse: s-maj=5.4km s-min=4.5km az=96.0*
ISC 27 23:54:51.4±0.4,40°.22N±0°.02×23°.47E±0°.04,h12km±4km, n40,σ0°68/67,2C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLG	**Polygyros**	**0.16**	**353**	⇑*i*PB	**Pg**	**23 54 55.4**	**+0.4**
PLG				*e*SB	**Sg**	**23 54 57.9**	**+0.4**
PLG	**Polygyros**	**0.16**	**353**	P	**Pg**	**23 54 55.4**	**+0.4**
PLG				S	**Sg**	**23 54 57.1**	**-0.4**
PLG	**Polygyros**	**0.16**	**353**	⇑*i*Pb	**Pg**	**23 54 55.4**	**+0.4**
PLG				S	**Sg**	**23 54 57.1**	**-0.4**
PLG				*e*Sb	**Sg**	**23 54 57.9**	**+0.4**
PAIG	**Paliouri**	**0.33**	**151**	P	**Pg**	**23 54 58.2**	**+0.2**
PAIG				S	**Sg**	**23 55 03.4**	**+1.0**
PAIG	**Paliouri**	**0.33**	**151**	P	**Pg**	**23 54 58.2**	**+0.2**
PAIG				S	**Sg**	**23 55 03.4**	**+1.0**
OUR	**Ouranopolis**	**0.41**	**73**	P	**Pg**	**23 54 59.4**	**0.0**
OUR				S	**Sg**	**23 55 04.8**	**-0.1**
OUR	**Ouranopolis**	**0.41**	**73**	P	**Pg**	**23 54 59.4**	**0.0**
OUR				S	**Sg**	**23 55 04.8**	**-0.1**
HORT	**Hortiatis**	**0.47**	**324**	P	**Pg**	**23 55 00.8**	**+0.1**
HORT				S	**Sg**	**23 55 07.1**	**+0.1**
HORT	**Hortiatis**	**0.47**	**324**	P	**Pg**	**23 55 00.8**	**+0.1**
HORT				S	**Sg**	**23 55 07.1**	**+0.1**
THE	**Thessaloniki**	**0.57**	**317**	P	**Pg**	**23 55 03.0**	**+0.6**
THE				S	**Sg**	**23 55 10.0**	**+0.1**
THE	**Thessaloniki**	**0.57**	**317**	P	**Pg**	**23 55 03.0**	**+0.6**
THE				S	**Sg**	**23 55 10.0**	**+0.1**
SOH	**Sokhos**	**0.61**	**352**	*e*PN	**Pg**	**23 55 03.0**	**-0.3**
SOH				*e*SN	**Sg**	**23 55 11.3**	**0.0**
SOH	**Sokhos**	**0.61**	**352**	P	**Pg**	**23 55 03.0**	**-0.3**
SOH				S	**Sg**	**23 55 11.4**	**+0.1**
SOH	**Sokhos**	**0.61**	**352**	*e*Pn	**Pg**	**23 55 03.0**	**-0.3**
SOH				*e*Sn	**Sg**	**23 55 11.3**	**0.0**
LIT	**Litokhoron**	**0.76**	**262**	*e*PN	**Pg**	**23 55 04.8**	**-1.3**
LIT	**Litokhoron**	**0.76**	**262**	P	**Pg**	**23 55 05.9**	**-0.2**
LIT	**Litokhoron**	**0.76**	**262**	*e*Pn	**Pg**	**23 55 04.8**	**-1.3**
LIT	**Litokhoron**	**0.76**	**262**	P	**Pg**	**23 55 05.9**	**-0.2**
SRS	**Serrai**	**0.91**	**6**	P	**Pg**	**23 55 08.2**	**-0.6**
SRS				S	**Sg**	**23 55 20.8**	**+0.2**
SRS	**Serrai**	**0.91**	**6**	P	**Pg**	**23 55 08.2**	**-0.6**
SRS				S	**Sg**	**23 55 20.8**	**+0.2**
NEO	**Neokhori**	**0.93**	**192**	*e*PN	**Pg**	**23 55 09.1**	**-0.1**
NEO				*e*SN	**Sg**	**23 55 20.8**	**-0.5**
NEO	**Neokhori**	**0.93**	**192**	*e*Pn	**Pg**	**23 55 09.1**	**-0.1**
NEO				*e*Sn	**Sg**	**23 55 20.8**	**-0.5**
KNT	**Kendrikon**	**1.04**	**335**	P	**Pg**	**23 55 10.8**	**-0.6**
KNT				S	**Sg**	**23 55 25.0**	**0.0**
KNT	**Kendrikon**	**1.04**	**335**	P	**Pg**	**23 55 10.8**	**-0.6**
KNT				S	**Sg**	**23 55 25.0**	**0.0**
GRG	**Griva**	**1.10**	**313**	P	**Pg**	**23 55 12.2**	**-0.3**
GRG				S	**Sg**	**23 55 28.5**	**+1.6**
GRG	**Griva**	**1.10**	**313**	P	**Pg**	**23 55 12.2**	**-0.3**
GRG				S	**Sg**	**23 55 28.5**	**+1.6**
KAVA	**Kavala**	**1.11**	**45**	P	**Pg**	**23 55 11.4**	**-1.4**
KAVA				S	**Sg**	**23 55 27.2**	**-0.1**
KAVA	**Kavala**	**1.11**	**45**	P	**Pg**	**23 55 11.4**	**-1.4**
KAVA				S	**Sg**	**23 55 27.2**	**-0.1**
NVR	**Nevrokopi**	**1.17**	**15**	*e*PN	**Pn**	**23 55 13.1**	**-0.5**
NVR				*e*SN	**Sn**	**23 55 29.6**	**+0.1**
NVR	**Nevrokopi**	**1.17**	**15**	*e*Pn	**Pn**	**23 55 13.1**	**-0.5**
NVR				*e*Sn	**Sn**	**23 55 29.6**	**+0.1**
THL	**Klokotos Trika**	**1.30**	**240**	*e*PN	**Pn**	**23 55 14.5**	**-0.8**
THL	**Klokotos Trika**	**1.30**	**240**	*e*Pn	**Pn**	**23 55 14.5**	**-0.8**
AGG	**Agios Georgios**	**1.48**	**217**	*e*PN	**Pn**	**23 55 17.7**	**-0.2**
AGG	**Agios Georgios**	**1.48**	**217**	*e*Pn	**Pn**	**23 55 17.7**	**-0.2**
LKR	**Lokris**	**1.60**	**193**	*e*PN	**Pn**	**23 55 20.2**	**+0.6**
LKR	**Lokris**	**1.60**	**193**	*e*Pn	**Pn**	**23 55 20

RUP				Sg	Sg	00 02 35.7	+0.6
RUP	**Ruppelstein**	**0.44**	**30**	Pg	Pg	00 02 30.3	+0.8
	SNR=47						
RUP				Sg	Sg	00 02 35.7	+0.6
WLF	**Walferdange**	**0.50**	**313**	P	Pg	00 02 33.4	+2.7
WLF	**Walferdange**	**0.50**	**313**	*e*Pg	Pg	00 02 33.2	+2.4
	SNR=23						
WLF				*e*Sg	Sg	00 02 39.3	+2.0
WLF	**Walferdange**	**0.50**	**313**	*e*Pg	Pg	00 02 33.1	+2.3
WLF	**Walferdange**	**0.50**	**313**	*e*Pg	Pg	00 02 33.1	+2.4
WLF				Sg	Sg	00 02 39.3	+2.0
ABH	**Alteburg**	**0.77**	**44**	*e*Pg	Pg	00 02 36.1	+0.1
	SNR=4.9						
ABH	**Alteburg**	**0.77**	**44**	Pg	Pg	00 02 36.1	+0.2
ABH	**Alteburg**	**0.77**	**44**	Pg	Pg	00 02 36.1	+0.2
	SNR=4.9						
LANF	**Langenberg**	**0.79**	**116**	*e*Pg	Pg	00 02 36.3	+0.1
	SNR=13						
LANF	**Langenberg**	**0.79**	**116**	Pg	Pg	00 02 36.3	+0.1
	SNR=13						
KTD	**Kalmit**	**0.89**	**90**	*e*Pg	Pg	00 02 38.1	-0.1
	SNR=2.9						
KTD	**Kalmit**	**0.89**	**90**	Pg	Pg	00 02 37.9	-0.3
KTD				Sg	Sg	00 02 50.9	+1.2
KTD	**Kalmit**	**0.89**	**90**	Pg	Pg	00 02 38.1	-0.1
	SNR=2.9						
KTD				Sg	Sg	00 02 50.9	+1.2
BGG	**Burgeitz**	**0.97**	**24**	*e*Pg	Pg	00 02 39.7	+0.1
BGG	**Burgeitz**	**0.97**	**24**	Pg	Pg	00 02 39.7	+0.1
HILG	**Hillesheim**	**0.97**	**358**	*e*Pg	Pg	00 02 40.9	+1.3
HILG	**Hillesheim**	**0.97**	**358**	Pg	Pg	00 02 40.9	+1.3
CDF	**Champ du Feu**	**0.98**	**158**	*e*Pn	Pn	00 02 41.4	-0.7
	SNR=1.0						
CDF				*e*Sg	Sg	00 02 53.4	+0.7
	112nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**0.98**	**158**	*e*Pg	Pg	00 02 40.4	+0.4
CDF				*e*Pn	Pn	00 02 41.4	-0.7
CDF				*e*Sg	Sg	00 02 53.4	+0.7
CDF	**Champ du Feu**	**0.98**	**158**	*e*Pg	Pg	00 02 40.4	+0.4
CDF	**Champ du Feu**	**0.98**	**158**	*e*Pn	Pn	00 02 41.4	-0.7
	SNR=1.0						
CDF				*e*Sg	Sg	00 02 53.4	+0.7
	56nm,0.2s,SNR=1.0						
STR	**Strasbourg**	**1.01**	**137**	*e*Sg	Sg	00 02 55.6	+2.0
ECH	**Echery**	**1.15**	**165**	*e*Pg	Pg	00 02 43.9	+0.8
	SNR=21						
ECH	**Echery**	**1.15**	**165**	Pg	Pg	00 02 44.2	+1.1
ECH				Sg	Sg	00 02 58.8	+0.9
ECH	**Echery**	**1.15**	**165**	*e*Pg	Pg	00 02 44.4	+1.3
ECH				*e*S	Sg	00 03 00.3	+2.4
ECH	**Echery**	**1.15**	**165**	Pg	Pg	00 02 43.9	+0.8
	SNR=21						
ECH				Sg	Sg	00 02 58.8	+0.9
ECH				*e*S	Sg	00 03 00.3	+2.4
THEF	**They Montfort**	**1.20**	**204**	*e*Pg	Pg	00 02 45.3	+1.2
	SNR=33						
THEF	**They Montfort**	**1.20**	**204**	Pg	Pg	00 02 45.2	+1.1
THEF				Sg	Sg	00 03 02.0	+2.3
THEF	**They Montfort**	**1.20**	**204**	Pg	Pg	00 02 45.2	+1.1
THEF				Sg	Sg	00 03 00.9	+1.2
THEF	**They Montfort**	**1.20**	**204**	Pg	Pg	00 02 45.3	+1.2
	SNR=33						
THEF				Sg	Sg	00 03 00.9	+1.2
STB	**Steinbach**	**1.27**	**3**	*e*Pg	Pg	00 02 46.1	+0.7
STB				*e*Sg	Sg	00 03 02.4	+0.4
	51nm,0.5s						
STB	**Steinbach**	**1.27**	**3**	Pg	Pg	00 02 46.1	+0.6
STB				Sg	Sg	00 03 02.4	+0.5
	51nm,0.5s						
KOE	**Koeppel**	**1.28**	**30**	*e*Pg	Pg	00 02 45.1	-0.5
KOE	**Koeppel**	**1.28**	**30**	Pg	Pg	00 02 45.1	-0.5
LIBD	**Limburg**	**1.31**	**153**	*e*Pg	Pg	00 02 47.6	+1.4
	SNR=4.7						
LIBD	**Limburg**	**1.31**	**153**	Pg	Pg	00 02 47.4	+1.2
LIBD				Sg	Sg	00 03 04.5	+1.3
LIBD	**Limburg**	**1.31**	**153**	Pg	Pg	00 02 47.4	+1.2
LIBD				Sg	Sg	00 03 04.5	+1.3
HAU	**Haudompre**	**1.34**	**191**	*e*Pg	Pg	00 02 48.0	+1.2
HAU				*e*Sn	Sn	00 03 04.4	-1.2
	SNR=1.0						
HAU				*e*Sg	Sg	00 03 05.6	+1.3
	85nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**1.34**	**191**	*e*Pn	Pn	00 02 47.0	-0.1
HAU				*e*Pg	Pg	00 02 48.0	+1.2
HAU				*e*Sn	Sn	00 03 04.4	-1.2
HAU				*e*Sg	Sg	00 03 05.6	+1.3
HAU	**Haudompre**	**1.34**	**191**	*e*Pn	Pn	00 02 47.0	-0.1
	SNR=1.0						
HAU	**Haudompre**	**1.34**	**191**	*e*Pg	Pg	00 02 48.0	+1.2
HAU				*e*Sn	Sn	00 03 04.4	-1.2
	SNR=1.0						
HAU				*e*Sg	Sg	00 03 05.6	+1.3
	43nm,0.4s,SNR=1.0						
KLL	**Kalltalsperre**	**1.35**	**349**	*e*Pg	Pg	00 02 45.9	-1.1
KLL	**Kalltalsperre**	**1.35**	**349**	Pg	Pg	00 02 45.9	-1.0
MEM	**Membach**	**1.36**	**340**	P	Pg	00 02 47.5	+0.2
MEM	**Membach**	**1.36**	**340**	*e*Pn	Pn	00 02 47.5	+0.2
	SNR=3.7						
MEM				*e*Sg	Sg	00 03 05.7	+0.7
MEM	**Membach**	**1.36**	**340**	Pn	Pn	00 02 47.5	+0.1
	SNR=3.7						
MEM				Sg	Sg	00 03 05.7	+0.8
DREG	**Dreilaegerbach**	**1.38**	**347**	*e*Pn	Pn	00 02 47.9	+0.4
	SNR=3.4						
DREG				*e*Sg	Sg	00 03 05.4	+0.1
DREG	**Dreilaegerbach**	**1.38**	**347**	Pn	Pn	00 02 47.9	+0.4
	SNR=3.4						
DREG				Sg	Sg	00 03 05.4	+0.1
MEZF	**Maizieres J'vi**	**1.38**	**234**	*e*Pg	Pg	00 02 48.8	+1.3
	baz=50,SNR=1.0						
MEZF				*e*Sn	Sn	00 03 05.5	-0.9
	SNR=1.0						
MEZF				*e*Sg	Sg	00 03 07.3	+2.0
	34nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.38**	**234**	*e*Pn	Pn	00 02 47.7	+0.2
MEZF				*e*Pg	Pg	00 02 48.8	+1.3
MEZF				*e*Sn	Sn	00 03 05.5	-0.9
MEZF				*e*Sg	Sg	00 03 07.3	+2.0
MEZF	**Maizieres J'vi**	**1.38**	**234**	*e*Pn	Pn	00 02 47.7	+0.2
	SNR=1.0						
MEZF	**Maizieres J'vi**	**1.38**	**234**	*e*Pg	Pg	00 02 48.8	+1.3
	baz=50,SNR=1.0						
MEZF				*e*Sn	Sn	00 03 05.5	-0.9
	SNR=1.0						
MEZF				*e*Sg	Sg	00 03 07.3	+2.0
	17nm,0.3s,SNR=1.0						
TOD	**Tromm**	**1.39**	**78**	*e*Pg	Pg	00 02 46.7	-1.0
	SNR=29						
TOD	**Tromm**	**1.39**	**78**	Pg	Pg	00 02 46.5	-1.2
TOD				Sg	Sg	00 03 05.0	-0.6
TOD	**Tromm**	**1.39**	**78**	Pg	Pg	00 02 46.7	-1.0
	SNR=29						
TOD				Sg	Sg	00 03 05.0	-0.6
BCLA	**Clavier**	**1.43**	**321**	P	Pn	00 02 48.9	+0.6
BCLA	**Clavier**	**1.43**	**321**	P	Pn	00 02 48.8	+0.5
TNS	**Taunus Mts**	**1.43**	**51**	*e*Pn	Pn	00 02 47.0	-1.3
	SNR=5.4						
TNS				*e*Sg	Sg	00 03 05.4	-1.7
TNS	**Taunus Mts**	**1.43**	**51**	*e*Pn	Pn	00 02 47.0	-1.3
TNS				*e*Sg	Sg	00 03 05.4	-1.8
TNS	**Taunus Mts**	**1.43**	**51**	Pn	Pn	00 02 47.0	-1.3
	SNR=5.4						
TNS				Sg	Sg	00 03 05.4	-1.8
BFO	**Black Forest**	**1.46**	**133**	*e*Pn	Pn	00 02 47.8	-0.9
	SNR=2.0						
BFO				*e*Sg	Sg	00 03 08.0	+0.2
BFO	**Black Forest**	**1.46**	**133**	*e*Pn	Pn	00 02 49.3	+0.7
BFO				*e*S	Sg	00 03 08.4	+0.5
BFO	**Black Forest**	**1.46**	**133**	Pn	Pn	00 02 47.8	-0.8
	SNR=2.0						
BFO				Sg	Sg	00 03 08.0	+0.1
BFO				*e*S	Sg	00 03 08.4	+0.5
GIVF	**Givet**	**1.46**	**303**	*e*Pn	Pn	00 02 48.6	0.0
	SNR=1.0						
GIVF	**Givet**	**1.46**	**303**	*e*Pn	Pn	00 02 48.6	0.0
	SNR=1.0						
MOF	**Molkenrain**	**1.50**	**169**	*e*Pg	Pg	00 02 51.0	+1.2
	SNR=16						
MOF	**Molkenrain**	**1.50**	**169**	Pg	Pg	00 02 50.9	+1.1
MOF				Sg	Sg	00 03 10.2	+0.9
MOF	**Molkenrain**	**1.50**	**169**	Pg	Pg	00 02 50.9	+1.1
MOF				Sg	Sg	00 03 10.2	+0.9
HINF	**Hinteralfeld**	**1.51**	**177**	*e*Pg	Pg	00 02 50.8	+0.7
HINF				*e*Sg	Sg	00 03 10.7	+1.0
	128nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**1.51**	**177**	*e*Pn	Pn	00 02 49.3	-0.1
HINF				*e*Pg	Pg	00 02 50.8	+0.7
HINF				*e*Sg	Sg	00 03 10.7	+1.0
HINF	**Hinteralfeld**	**1.51**	**177**	*e*Pn	Pn	00 02 49.3	-0.1
	SNR=1.0						
HINF	**Hinteralfeld**	**1.51**	**177**	*e*Pg	Pg	00 02 50.8	+0.7
HINF				*e*Sg	Sg	00 03 10.7	+1.0
	64nm,0.3s,SNR=1.0						
HGN	**Heimansgroeve**	**1.53**	**341**	*e*Pn	Pn	00 02 49.8	+0.2
	SNR=5.7						
HGN				*e*Pg	Pg	00 02 51.8	+1.4
	SNR=25						
HGN				*e*Sg	Sg	00 03 10.7	+0.6
HGN	**Heimansgroeve**	**1.53**	**341**	*e*Pn	Pn	00 02 49.9	+0.3
	4.4nm,0.1s,baz=150						
HGN	**Heimansgroeve**	**1.53**	**341**	*e*Pn	Pn	00 02 51.6	+2.0
	18nm,0.2s						
HGN	**Heimansgroeve**	**1.53**	**341**	*e*Sg	Sg	00 03 11.1	+0.9
HGN	**Heimansgroeve**	**1.53**	**341**	*e*Rg		00 03 36.9	
HGN	**Heimansgroeve**	**1.53**	**341**	Pn	Pn	00 02 49.8	+0.2
	SNR=5.7						
HGN	**Heimansgroeve**	**1.53**	**341**	Pg	Pg	00 02 51.8	+1.4
	SNR=25						
HGN				Sg	Sg	00 03 10.7	+0.6
DOU	**Dourbes**	**1.58**	**300**	P	Pn	00 02 51.4	+1.0
DOU	**Dourbes**	**1.58**	**300**	P	Pn	00 02 51.3	+1.0
SFTF	**Sexfontaines**	**1.58**	**225**	*e*Pn	Pn	00 02 50.8	+0.5
	baz=44						
SFTF				*e*Sn	Sn	00 03 10.6	-0.9
SFTF				*e*Sg	Sg	00 03 13.7	+1.8
	22nm,0.2s						
SFTF	**Sexfontaines**	**1.58**	**225**	*e*Pn	Pn	00 02 50.8	+0.5
	baz=44						
SFTF				*e*Sn	Sn	00 03 10.6	-0.9
SFTF				*e*Sg	Sg	00 03 13.7	+1.8
	11nm,0.2s						
FELD	**Feldberg im Sc**	**1.68**	**149**	*e*Pg	Pg	00 02 53.7	+0.4
	SNR=14						
FELD	**Feldberg im Sc**	**1.68**	**149**	Pg	Pg	00 02 53.5	+0.2
FELD	**Feldberg im Sc**	**1.68**	**149**	Pg	Pg	00 02 53.7	+0.4
	SNR=14						
BAIF	**Baives**	**1.79**	**295**	*e*Pn	Pn	00 02 53.7	+0.5
BAIF				*e*Pg	Pg	00 02 56.7	+1.3
BAIF	**Baives**	**1.79**	**295**	*e*Pn	Pn	00 02 53.7	+0.5
	SNR=1.0						
SPAK	**Spaichingen-Ko**	**1.83**	**131**	*e*Pg	Pg	00 02 56.6	+0.3
	SNR=12						
SPAK	**Spaichingen-Ko**	**1.83**	**131**	Pg	Pg	00 02 56.5	+0.3
SPAK	**Spaichingen-Ko**	**1.83**	**131**	Pg	Pg	00 02 56.6	+0.4
	SNR=12						
BBS	**Basel-Blauen**	**1.94**	**164**	*e*Pn	Pn	00 02 55.3	+0.1
	SNR=1.1						
BBS	**Basel-Blauen**	**1.94**	**164**	Pn	Pn	00 02 55.3	+0.1
	SNR=1.1						
SNF	**Seneffe**	**1.97**	**308**	P	Pn	00 02 57.2	+1.5
SNF	**Seneffe**	**1.97**	**308**	P	Pn	00 02 57.1	+1.4
LOMF	**Lomont**	**1.98**	**178**	*e*Pg	Pg	00 03 00.1	+1.2
	SNR=3.4						
LOMF	**Lomont**	**1.98**	**178**	Pg	Pg	00 03 00.0	+1.0
LOMF	**Lomont**	**1.98**	**178**	Pg	Pg	00 03 00.0	+1.0
WTSB	**Winterswijk**	**2.64**	**1**	*e*Sg	Sg	00 03 44.1	-1.9
CABF	**La Chapelle**	**2.75**	**189**	*e*Pg	Pg	00 03 14.4	+0.6
	SNR=1.0						
CABF				*e*Sn	Sn	00 03 37.6	-2.7
	SNR=1.0						
CABF				*e*Sg	Sg	00 03 49.1	-0.3
	20nm,0.5s,SNR=1.0						
CABF	**La Chapelle**	**2.75**	**189**	*e*Pn	Pn	00 03 06.4	0.0
CABF				*e*Pg	Pg	00 03 14.4	+0.6
CABF				*e*Sn	Sn	00 03 37.6	-2.7
CABF				*e*Sg	Sg	00 03 49.1	-0.3
CABF	**La Chapelle**	**2.75**	**189**	*e*Pn	Pn	00 03 06.4	0.0
	SNR=1.0						
CABF	**La Chapelle**	**2.75**	**189**	*e*Pg	Pg	00 03 14.4	+0.6
	SNR=1.0						
CABF				*e*Sn	Sn	00 03 37.6	-2.7
	SNR=1.0						
CABF				*e*Sg	Sg	00 03 49.1	-0.3
	10.0nm,0.5s,SNR=1.0						
LOR	**Lormes**	**2.81**	**224**	*e*Pn	Pn	00 03 07.2	0.0
	baz=44,SNR=1.0						
LOR				*e*Sn	Sn	00 03 39.9	-1.9
LOR				*e*Sg	Sg	00 03 51.8	+0.5
	16nm,0.3s,SNR=1.0						
LOR	**Lormes**	**2.81**	**224**	*e*Pn	Pn	00 03 07.2	0.0
	baz=44,SNR=1.0						
LOR				*e*Sn	Sn	00 03 39.9	-1.9
LOR				*e*Sg	Sg	00 03 51.8	+0.5
	8.2nm,0.3s,SNR=1.0						
DAVA	**Damuels**	**2.93**	**133**	⇑*i*Pn	Pn	00 03 10.4	+1.5
DAVA				⇑*i*Sn	Sn	00 03 44.0	-0.9
DAVA				⇓*i*Sg	Sg	00 03 56.9	+1.6
	14nm,0.5s						
DAVA	**Damuels**	**2.93**	**133**	Pn	Pn	00 03 10.4	+1.5
DAVA				Sn	Sn	00 03 44.0	-0.8
DAVA				Sg	Sg	00 03 56.9	+1.6
	14nm,0.5s						
GRFO	**Grafenberg**	**2.95**	**81**	*e*Pn	Pn	00 03 11.9	+2.7
GRFO				*e*S	Sn	00 03 52.8	+7.5
GRA1	**Grafenberg Arr**	**2.96**	**81**	*e*Pn	Pn	00 03 09.4	+0.2
GRA1				*e*Pg	Pg	00 03 17.7	0.0
GRA1				*e*Sg	Sg	00 03 54.4	-1.6
GRA1	**Grafenberg Arr**	**2.96**	**81**	Pn	Pn	00 03 09.4	+0.2
	SNR=1.2						
GRF	**Grafenberg Arr**	**2.96**	**81**	*e*Pn	Pn	00 03 09.4	+0.2
	SNR=1.2						
GRF				*e*Pg	Pg	00 03 17.7	0.0
	SNR=7.1						
GRF				*e*Sg	Sg	00 03 54.4	-1.6
GRF	**Grafenberg Arr**	**2.96**	**81**	*e*Pn	Pn	00 03 09.4	+0.2
GRF				*e*Pg	Pg	00 03 17.7	0.0
GRF				*e*Sg	Sg	00 03 54.4	-1.6
GRF	**Grafenberg Arr**	**2.96**	**81**	*e*Pn	Pn	00 03 09.4	+0.2
SSF	**Saint Saulge**	**3.12**	**225**	*e*Pn	Pn	00 03 11.3	-0.2
	SNR=1.0						
SSF				*e*Sn	Sn	00 03 47.8	-1.7
	SNR=1.0						
SSF				*e*Sg	Sg	00 04 01.6	+0.2
	13nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**3.12**	**225**	*e*Pn	Pn	00 03 11.3	-0.2
	SNR=1.0						
SSF				*e*Sn	Sn	00 03 47.8	-1.7
	SNR=1.0						
SSF				*e*Sg	Sg	00 04 01.6	+0.2
	6.4nm,0.4s,SNR=1.0						
FUR	**Furstenfeldbru**	**3.23**	**109**	*e*Sg	Sg	00 04 04.5	-0.3
FUR	**Furstenfeldbru**	**3.23**	**109**	Sg	Sg	00 04 04.5	-0.3
SMF	**Signal de Mont**	**3.31**	**217**	*e*Pn	Pn	00 03 13.6	-0.5
	SNR=1.0						
SMF				*e*Sn	Sn	00 03 51.6	-2.4
	SNR=1.0						
SMF				*e*Sg	Sg	00 04 07.4	+0.1
	9.9nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**3.31**	**217**	*e*Pn	Pn	00 03 13.6	-0.5
	SNR=1.0						
SMF				*e*Sn	Sn	00 03 51.6	-2.4
	SNR=1.0						
SMF				*e*Sg	Sg	00 04 07.4	+0.1
	4.9nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**3.40**	**223**	*e*Pn	Pn	00 03 14.7	-0.6
	SNR=1.0						
AVF				*e*Sn	Sn	00 03 53.6	-2.7
	SNR=1.0						
AVF				*e*Sg	Sg	00 04 09.4	-0.8
	8.1nm,0.6s,SNR=1.0						
AVF	**Avril sur Loir**	**3.40**	**223**	*e*Pn	Pn	00 03 14.7	-0.6
	SNR=1.0						
AVF				*e*Sn	Sn	00 03 53.6	-2.7
	SNR=1.0						
AVF				*e*Sg	Sg	00 04 09.4	-0.8
	4.1nm,0.6s,SNR=1.0						
HYF	**Humbligny**	**3.42**	**234**	*e*Pn	Pn	00 03 15.6	0.0
HYF	**Humbligny**	**3.42**	**234**	*e*Pn	Pn	00 03 15.6	0.0
MOX	**Moxa**	**3.42**	**65**	*e*PG	Pg	00 03 24.7	-2.0
MOX				*e*SN	Sn	00 03 54.6	-2.3
MOX				*e*SG	Sg	00 04 11.1	+0.1
MOX	**Moxa**	**3.42**	**65**	*e*Pg	Pg	00 03 24.2	-2.4
	SNR=3.0						
MOX				⇑*e*Sn	Sn	00 03 54.6	-2.3
MOX				*e*Sg	Sg	00 04 09.4	-1.6
MOX	**Moxa**	**3.42**	**65**	*e*Pg	Pg	00 03 24.7	-2.0
MOX				Sn	Sn	00 03 54.6	-2.3
MOX				Sg	Sg	00 04 09.4	-1.6
FETA	**Feichten**	**3.54**	**129**	⇑*i*Pn	Pn	00 03 18.7	+1.5
FETA				⇓*i*Sn	Sn	00 03 59.0	-0.7
FETA				⇓*i*Sg	Sg	00 04 15.9	+1.3
	1.4nm,0.3s						
FETA	**Feichten**	**3.54**	**129**	Pn	Pn	00 03 18.7	+1.5
FETA				Sn	Sn	00 03 59.0	-0.7
FETA				Sg	Sg	00 04 15.9	+1.2
	1.4nm,0.3s						
WERN	**Wernitzgruen**	**3.79**	**73**	*e*Sg	Sg	00 04 19.5	-3.1
BGF	**Bois d'Agland**	**3.80**	**225**	*e*Pn	Pn	00 03 20.6	-0.3
	SNR=1.0						
BGF				*e*Sn	Sn	00 04 04.1	-2.1
	22nm,0.4s,SNR=1.0						
BGF				*e*Sg	Sg	00 04 22.8	-0.4
	21nm,0.4s						
BGF	**Bois d'Agland**	**3.80**	**225**	*e*Pn	Pn	00 03 20.6	-0.3
	SNR=1.0						
BGF				*e*Sn	Sn	00 04 04.1	-2.1
	11nm,0.4s,SNR=1.0						
BGF				*e*Sg	Sg	00 04 22.8	-0.4
	11nm,0.4s						
LPL	**La Plagne**	**3.81**	**180**	*e*Pn	Pn	00 03 21.3	+0.3
	SNR=1.0						
LPL	**La Plagne**	**3.81**	**180**	*e*Pn	Pn	00 03 21.3	+0.3
	SNR=1.0						
NKC	**Novy Kostel**	**3.82**	**74**	*e*PG	Pg	00 03 31.7	-2.6
NKC				*e*SG	Sg	00 04 19.6	-4.2
	comp=Z,12nm,0.5s						
NKC	**Novy Kostel**	**3.82**	**74**	Pg	Pg	00 03 31.7	-2.6
NKC				Sg	Sg	00 04 19.6	-4.2
	comp=Z,12nm,0.5s						
LPG	**La Plagne**	**3.83**	**180**	*e*Pn	Pn	00 03 21.1	-0.2
	SNR=1.0						
LPG				*e*Sn	Sn	00 04 03.6	-3.3
	comp=Z,5.6nm,0.6s,SNR=1.0						
LPG	**La Plagne**	**3.83**	**180**	*e*Pn	Pn	00 03 21.1	-0.2
	SNR=1.0						
LPG				*e*Sn	Sn	00 04 03.6	-3.3
	comp=Z,2.8nm,0.6s,SNR=1.0						
TANN	**Tannenbergstha**	**3.87**	**71**	*e*Sg	Sg	00 04 21.7	-3.6
WET	**Wettzell**	**4.04**	**90**	*e*Pn	Pn	00 03 24.5	+0.4
	SNR=7.6						
WET				*e*Sn	Sn	00 04 08.7	-3.3
WET	**Wettzell**	**4.04**	**90**	*e*Pn	Pn	00 03 24.5	+0.4
WET				*e*Sn	Sn	00 04 08.7	-3.4
WET	**Wettzell**	**4.04**	**90**	*e*PN	Pn	00 03 24.4	+0.3
WET	**Wettzell**	**4.04**	**90**	Pn	Pn	00 03 24.5	+0.4
	SNR=7.6						
WET				Sn	Sn	00 04 08.7	-3.4
TCF	**Toulx Ste Croi**	**4.30**	**227**	*e*Pn	Pn	00 03 27.4	-0.3
TCF				*e*Sn	Sn	00 04 16.2	-2.3
	comp=Z,3.0nm,0.3s,SNR=1.0						
TCF	**Toulx Ste Croi**	**4.30**	**227**	*e*Pn	Pn	00 03 27.4	-0.3
TCF				*e*Sn	Sn	00 04 16.2	-2.3
	comp=Z,1.5nm,0.3s,SNR=1.0						
SSB	**Saint Sauveur**	**4.31**	**201**	*e*Pn	Pn	00 03 31.5	+3.6
SSB				*e*S	Sg	00 04 39.5	-0.1
SSB	**Saint Sauveur**	**4.31**	**201**	*e*Pn	Pn	00 03 31.5	+3.6
ORIF	**Oris-en-Rattie**	**4.45**	**188**	*e*Pn	Pn	00 03 29.7	0.0
	SNR=1.0						
ORIF				*e*Sn	Sn	00 04 19.1	-3.0
	SNR=1.0						
ORIF				*e*Sg	Sg	00 04 42.3	-1.6
	comp=Z,7.0nm,0.6s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**4.45**	**188**	*e*Pn	Pn	00 03 29.7	0.0
	SNR=1.0						
ORIF				*e*Sn	Sn	00 04 19.1	-3.0
	SNR=1.0						
ORIF				*e*Sg	Sg	00 04 42.3	-1.6
	comp=Z,3.5nm,0.6s,SNR=1.0						
CLL	**Collm**	**4.49**	**61**	*e*Pg	Pg	00 03 49.0	+2.0
CLL				*e*Sg	Sg	00 04 45.0	-0.1
CLL	**Collm**	**4.49**	**61**	*e*Pg	Pg	00 03 49.0	+2.0
CLL				*e*Sg	Sg	00 04 45.0	-0.1
CLL	**Collm**	**4.49**	**61**	Pg	Pg	00 03 49.0	+2.0
CLL				Sg	Sg	00 04 45.0	-0.1
KHC	**Kasperske Hory**	**4.50**	**90**	*e*PN	Pn	00 03 29.8	-0.6
KHC				*e*SN	Sn	00 04 19.2	-4.2
KHC				*e*SG	Sg	00 04 42.2	-3.3
KHC	**Kasperske Hory**	**4.50**	**90**	Pn	Pn	00 03 29.8	-0.6
KHC				Sn	Sn	00 04 19.2	-4.2
KHC				Sg	Sg	00 04 42.2	-3.3
LDF	**La Druitiere**	**4.57**	**263**	*e*Pg	Pg	00 03 47.3	-1.3
LDF				*e*Sn	Sn	00 04 22.7	-2.4
	SNR=1.0						
LDF				*e*Sg	Sg	00 04 45.3	-2.5
	comp=Z,7.0nm,0.4s,SNR=1.0						
LDF	**La Druitiere**	**4.57**	**263**	*e*Pn	Pn	00 03 31.8	+0.4
LDF				*e*Pg	Pg	00 03 47.3	-1.3
LDF				*e*Sn	Sn	00 04 22.7	-2.4
LDF				*e*Sg	Sg	00 04 45.3	-2.5
LDF	**La Druitiere**	**4.57**	**263**	*e*Pn	Pn	00 03 31.8	+0.4
	SNR=1.0						
LDF	**La Druitiere**	**4.57**	**263**	*e*Pg	Pg	00 03 47.3	-1.3
LDF				*e*Sn	Sn	00 04 22.7	-2.4
	SNR=1.0						
LDF				*e*Sg	Sg	00 04 45.3

252nm,0.3s,baz=300,slow=23,SNR=13
HNR LR LR 00 47 53.8
comp=Z,247nm,18.4s,baz=323,slow=38
HNR Honiara 2.39 104 *e*Pn **Pn 00 46 58.7 -2.0**
HNR *e*S **Sn 00 47 43.0 +14**
CTA Charters Tower 15.66 223 LR LR 00 55 09.5
comp=Z,100nm,19.9s,baz=51,slow=34
WRA Warramunga Arr 25.05 241 P **P 00 51 44.8 -0.4**
4.9nm,1.0s,mb4.0,baz=67,slow=9.6,SNR=13
WRA PcP PcP 00 55 19.8 +0.3
0.5nm,0.6s,baz=220,slow=4.4,SNR=13
WRA LR LR 01 01 12.2
comp=Z,110nm,18.2s,MS3.4,baz=70,slow=36
WRA Warramunga Arr 25.05 241 P **P 00 51 44.8 -0.3**
WRA PcP PcP 00 55 19.8 +0.3
ASAR Alice Springs 27.04 234 P **P 00 52 02.0 -1.1**
1.1nm,1.0s,mb3.3,baz=61,slow=10,SNR=5.7
ASAR PcP PcP 00 55 24.5 +0.5
0.4nm,0.6s,baz=69,slow=2.3,SNR=6.2
STKA Stephens Creek 27.32 211 P **P 00 52 06.6 +1.1**
2.4nm,0.8s,mb3.8,baz=23,slow=14,SNR=2.7
FITZ Fitzroy Crossi 32.37 250 LR LR 01 05 49.7
comp=Z,57nm,18.6s,MS3.3,baz=264,slow=36
MBWA Marble Bar 38.46 247 *e*P **P 00 53 48.7 +5.9**
KSRS Korea Array 53.78 331 LR LR 01 15 33.1
comp=Z,50nm,18.5s,MS3.6,baz=350,slow=33
BJT Baijiatuau 61.89 325 *e*P **P 00 56 40.1 +0.2**
18nm,0.3s
QSPA South Pole Qui 81.14 180 P **P 00 58 36.2 +0.8**
2.7nm,1.0s,mb4.1,baz=323,slow=5.2,SNR=5.7
ILAR Eielson Array 84.16 21 P **P 00 58 50.9 -0.2**
0.8nm,0.9s,mb3.8,baz=246,slow=5.8,SNR=3.4
MKAR Makanchi Array 86.49 318 P **P 00 59 02.2 -1.0**
0.4nm,0.8s,mb3.7,baz=95,slow=5.8,SNR=3.5
NVAR Mina Array Bea 90.84 51 P **P 00 59 26.0 +2.0**
0.9nm,0.9s,mb4.1,baz=231,slow=5.3,SNR=5.5
BDFB Brasilia 144.85 134 PKP PKPdf 01 05 57.6 -0.7
4.9nm,0.8s,baz=177,slow=7.8,SNR=6.7

*IDC **28** 00:50:38.8±2.5, 10°.71S×111°.57E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.4/18, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=122.2km s-min=24.8km az=45.0*
*ISCJB **28** 00:50:41.2±1.6, 11°.08S±0°.07×111°.29E±0°.08, h36km±19km, mb3.3/3, Error ellipse: s-maj=14.4km s-min=9.9km az=138.9*
*DJA **28** 00:50:44, 10°.88S×111°.31E, h93km, MLv4.1/6*
ISC 28 00:50:42.0±2.9, 11°.08S±0°.06×111°.27E±0°.08, h29km±25km, n10, σ0s77/17, mb3.3/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**2.87**	**358**	P	**Pn**	**00 51 24.8**	**-1.0**
PCJI				S	**Sn**	**00 51 59.1**	**-0.3**
PWJI	**Pagerwojo**	**3.08**	**10**	P	**Pn**	**00 51 28.2**	**-0.6**
PWJI				S	**Sn**	**00 52 04.7**	**0.0**
UGM	**Wanagama**	**3.23**	**347**	P	**Pn**	**00 51 30.0**	**-0.8**
UGM				S	**Sn**	**00 52 08.1**	**-0.3**
GMJI	**Gumukmas**	**3.52**	**38**	P	**Pn**	**00 51 35.6**	**+0.9**
GMJI				S	**Sn**	**00 52 15.8**	**+0.5**
JAGI	**Jajag, Banyuwa**	**3.84**	**48**	P	**Pn**	**00 51 40.1**	**+0.9**
JAGI				S	**Sn**	**00 52 22.5**	**-0.9**
SMRI	**Semarang**	**4.09**	**348**	P	**Pn**	**00 51 43.4**	**+0.8**
SMRI				S	**Sn**	**00 52 32.9**	**+3.4**
FITZ	**Fitzroy Crossi**	**15.55**	**118**	Pn	**Pn**	**00 54 19.0**	**-0.2**
0.1nm,0.3s,baz=291,slow=8.6,SNR=3.1							
FITZ				Sn	**Sn**	**00 56 56.7**	**-14**
0.1nm,0.3s,baz=190,slow=18,SNR=0.9							
WRA	**Warramunga Arr**	**23.88**	**114**	P	**P**	**00 55 52.5**	**-0.8**
0.7nm,0.7s,mb3.2,baz=287,slow=11,SNR=4.7							
ASAR	**Alice Springs**	**24.91**	**123**	P	**P**	**00 56 03.3**	**+0.7**
0.5nm,0.6s,mb3.2,baz=300,slow=9.9,SNR=8.0							
MKAR	**Makanchi Array**	**63.18**	**338**	P	**P**	**01 01 07.4**	**+0.2**
0.2nm,0.5s,mb3.5,baz=156,slow=6.3,SNR=3.0							

*IDC **28** 01:22:36.2±0.8, 53°.19N×161°.41W, h0km, mb4.1/18, mb1 4.2/21, mb1mx4.1/30, mbtmp4.1/21, ML3.8/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/28, Error ellipse: s-maj=20.4km s-min=14.6km az=155.0*
*NEIC **28** 01:22:40.5, 53°.25N×161°.51W, h10km, mb4.3/11, ML3.8(AEIC), ML3.7(PMR), After AEIC.*
ISC 28 01:22:38.4±2.2, 53°.24N±0°.06×161°.46W±0°.06, h12km±14km, n54, σ0s89/58, mb4.2/26, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**2.19**	**15**	P	**Pn**	**01 23 14.7**	**+0.2**
SDPT				S	**Sn**	**01 23 40.7**	**-0.7**
AKA	**Akutan**	**2.72**	**291**	P	**Pn**	**01 23 22.3**	**+0.6**
AKA				S	**Sn**	**01 23 53.5**	**-1.0**
AKUT	**Akutan**	**2.72**	**291**	*e*P	**Pn**	**01 23 21.9**	**+0.1**
UNV	**Unalaska Valle**	**3.07**	**283**	P	**Pn**	**01 23 26.4**	**-0.2**
UNV				S	**Sn**	**01 24 01.8**	**-1.4**
CHGN	**Chignik**	**3.54**	**29**	*e*P	**Pn**	**01 23 33.0**	**0.0**
OKFG	**Magazine Ridge**	**3.87**	**275**	P	**Pn**	**01 23 37.8**	**+0.1**
NIKO	**Nikolski**	**4.47**	**269**	P	**Pn**	**01 23 45.4**	**-0.4**
OHAK	**Old Harbor**	**6.14**	**46**	P	**Pn**	**01 24 07.1**	**-1.7**
KDAK	**Kodiak Island**	**6.79**	**44**	Pn	**Pn**	**01 24 15.9**	**-1.7**
2.7nm,0.3s,baz=178,slow=2.1,SNR=21							
KDAK				Sn	**Sn**	**01 25 26.8**	**-7.9**
1.7nm,0.3s,baz=19,slow=23,SNR=6.4							
KDAK	**Kodiak Island**	**6.79**	**44**	P	**Pn**	**01 24 16.1**	**-1.6**
RSO	**Redoubt South**	**8.66**	**30**	*e*Pn	**Pn**	**01 24 44.4**	**+1.1**
16nm,0.4s							
PPLA	**Purkeypile**	**10.84**	**23**	*e*Pn	**Pn**	**01 25 15.8**	**+2.7**
PAX	**Paxson**	**12.86**	**34**	*e*Pn	**Pn**	**01 25 39.4**	**-1.3**
4.5nm,0.8s							
ILAR	**Eielson Array**	**13.73**	**27**	Pn	**Pn**	**01 25 48.3**	**-4.3**
0.3nm,0.3s,baz=214,slow=12,SNR=11							
ILAR				Sn	**Sn**	**01 28 14.9**	**-10**
0.1nm,0.3s,baz=215,slow=24,SNR=4.5							
PNL	**Peninsula**	**13.75**	**53**	*e*Pn	**Pn**	**01 25 52.3**	**-0.5**
COLD	**Coldfoot**	**15.06**	**17**	*e*Pn	**Pn**	**01 26 06.8**	**-3.8**
DAWY	**Dawson**	**15.69**	**38**	*e*Pn	**Pn**	**01 26 18.1**	**-0.8**
SKAG	**Skagway**	**15.69**	**56**	*e*P	**Pn**	**01 26 18.8**	**-0.2**
17nm,1.1s							
DLBC	**Dease Lake**	**18.29**	**61**	Pn	**Pn**	**01 26 53.1**	**+1.5**
0.1nm,0.3s,baz=276,slow=18,SNR=4.0							
INK	**Inuvik**	**20.05**	**31**	P	**P**	**01 27 11.8**	**+0.8**
1.4nm,0.4s,baz=236,slow=13,SNR=6.1							
INK	**Inuvik**	**20.05**	**31**	*e*P	**P**	**01 27 11.4**	**+0.4**
4.4nm,0.8s							
PETK	**Petropavlovsk-**	**24.25**	**286**	P	**P**	**01 27 55.4**	**+0.6**
13nm,0.7s,mb4.5,baz=83,slow=12,SNR=11							
YBH	**Yreka Blue Hor**	**28.25**	**98**	LR	LR	01 36 34.4	
comp=Z,87nm,21.4s,baz=345,slow=30							
NVAR	**Mina Array Bea**	**32.96**	**99**	P	**P**	**01 29 13.5**	**+0.8**
0.7nm,0.9s,mb3.6,baz=287,slow=7.1,SNR=3.9							
NVAR				PcP	PcP	01 31 54.9	-1.6
0.2nm,0.6s,baz=338,slow=8.7,SNR=2.6							
DUG	**Dugway**	**35.12**	**92**	*e*P	**P**	**01 29 31.5**	**+0.2**
4.6nm,1.3s,mb4.2							
BW06	**Boulder Array**	**35.53**	**86**	*e*P	**P**	**01 29 34.6**	**-0.2**
1.5nm,0.7s,mb4.0							
PV01	**Paradox Valley**	**38.97**	**91**	*e*P	**P**	**01 30 04.0**	**-0.1**
259nm,0.7s							
ANMO	**Albuquerque**	**42.35**	**93**	*e*P	**P**	**01 30 31.5**	**-0.6**
0.7nm,0.5s,mb3.5							
WMOK	**Wichita Mounta**	**47.11**	**87**	*e*P	**P**	**01 31 09.4**	**-0.6**
3.9nm,0.9s,mb4.3							
TXAR	**Lajitas Array**	**47.99**	**96**	P	**P**	**01 31 16.7**	**-0.2**
0.7nm,0.7s,mb3.8,baz=305,slow=5.9,SNR=9.1							
JCT	**Junction City**	**49.48**	**92**	*e*P	**P**	**01 31 27.5**	**-0.9**
6.2nm,0.9s,mb4.6							
KSRS	**Korea Array**	**50.01**	**282**	P	**P**	**01 31 33.3**	**+1.0**
3.2nm,0.8s,mb4.4,baz=53,slow=7.0,SNR=11							
SONM	**Songino Array**	**54.87**	**305**	P	**P**	**01 32 08.1**	**-0.1**
0.7nm,0.7s,mb3.8,baz=64,slow=6.6,SNR=3.5							
ARCES	**ARCESS Array B**	**57.43**	**357**	P	**P**	**01 32 26.1**	**-0.1**
3.5nm,0.9s,mb4.4,baz=357,slow=8.5,SNR=3.5							
ZALV	**Zalesovo Beam**	**59.88**	**321**	P	**P**	**01 32 43.9**	**+0.4**
0.9nm,0.7s,mb3.9,baz=23,slow=8.0,SNR=3.6							
FINES	**FINESS Array B**	**65.50**	**356**	P	**P**	**01 33 20.7**	**-0.1**
4.1nm,0.8s,mb4.5,baz=346,slow=5.3,SNR=8.7							
BRVK	**Borovoye**	**65.63**	**329**	*e*P	**P**	**01 33 22.3**	**+0.5**
3.4nm,0.8s,mb4.4							
NB2	**NORSAR Subarra**	**65.92**	**4**	P	**P**	**01 33 23.7**	**+0.2**
comp=Z,3.4nm,0.8s,mb4.4,baz=358,slow=6.5							
NOA	**NORSAR Array B**	**65.92**	**4**	P	**P**	**01 33 23.9**	**+0.4**
comp=Z,1.9nm,0.8s,mb4.2,baz=357,slow=6.3,SNR=3.8							
MK31	**Makanchi Array**	**66.54**	**318**	*e*P	**P**	**01 33 27.6**	**-0.1**
MKAR	**Makanchi Array**	**66.54**	**318**	P	**P**	**01 33 28.3**	**+0.6**
comp=Z,0.4nm,0.4s,mb3.8,baz=60,slow=6.7,SNR=3.4							
HFS	**Hagfors**	**66.91**	**3**	P	**P**	**01 33 30.1**	**+0.2**
comp=Z,4.0nm,0.6s,mb4.7,baz=45,slow=6.5,SNR=13							
ABKAR	**Akbulak array**	**72.04**	**333**	*e*P	**P**	**01 34 02.6**	**+0.9**
comp=Z,6.7nm,0.7s,mb4.7							
AAK	**Ala-Archa**	**73.08**	**320**	*e*P	**P**	**01 34 09.1**	**+1.0**
comp=Z,10.0nm,1.4s,mb4.5							
EKS2	**Erkin-Say**	**73.33**	**321**	*e*P	**P**	**01 34 09.9**	**+0.4**
comp=Z,2.6nm,0.9s,mb4.2							
AKASG	**Malin Array Be**	**76.04**	**353**	P	**P**	**01 34 24.9**	**-0.2**
comp=Z,3.1nm,0.6s,mb4.4,baz=12,slow=6.3,SNR=6.6							
GERES	**GERESS Array B**	**78.20**	**3**	P	**P**	**01 34 38.6**	**+1.3**
comp=Z,0.4nm,0.6s,mb3.6,baz=4.3,slow=3.9,SNR=3.7							
BUR08	**Bucovina Ar. S**	**79.33**	**355**	*e*P	**P**	**01 34 46.7**	**+3.2**
CMAR	**Chiang Mai Arr**	**81.00**	**289**	P	**P**	**01 34 53.0**	**+0.1**
comp=Z,2.2nm,0.7s,mb4.2,baz=16,slow=5.2,SNR=10							
CMAR	**Chiang Mai Arr**	**81.00**	**289**	P	**P**	**01 34 53.0**	**+0.1**
BRTR	**Keskin Array B**	**86.49**	**348**	P	**P**	**01 35 21.7**	**+1.0**
comp=Z,1.7nm,0.8s,mb4.3,baz=30,slow=5.7,SNR=6.2							
BRTR	**Keskin Array B**	**86.49**	**348**	P	**P**	**01 35 21.7**	**+1.0**
WRA	**Warramunga Arr**	**91.43**	**238**	P	**P**	**01 35 42.5**	**-1.7**
comp=Z,0.9nm,0.7s,mb4.2,baz=37,slow=4.7,SNR=11							
ASAR	**Alice Springs**	**94.76**	**236**	P	**P**	**01 35 58.3**	**-1.2**
comp=Z,0.7nm,0.5s,mb4.4,baz=32,slow=4.6,SNR=15							

WEL 28 02:05:58.7±0.4, 44°.50S×167°.10E, h5km, ML4.1/13, Error ellipse: s-maj=3.4km s-min=2.2km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.62**	**107**	P*	Pb	02 06 11.1	-0.9
MSZ				SG	Sg	02 06 18.6	0.0
DCZ	**Deep Cove**	**0.98**	**178**	P*	Pb	02 06 16.8	-1.3
DCZ				S*	Sb	02 06 29.6	-1.8
MLZ	**Mavora Lakes**	**1.14**	**138**	P*	Pb	02 06 20.4	-0.5
MLZ				S*	Sb	02 06 35.0	-1.0
JCZ	**Jackson Bay**	**1.27**	**71**	P*	Pb	02 06 22.1	-0.8
JCZ				S*	Sb	02 06 39.6	+0.1
WKZ	**Wanaka**	**1.41**	**104**	PN	Pn	02 06 25.4	+0.4
WKZ				SN	Sn	02 06 44.5	+0.6
WHZ	**Wether Hill Ro**	**1.52**	**157**	PN	Pn	02 06 26.0	-0.5
WHZ				SN	Sn	02 06 45.4	-1.3
EAZ	**Earnscleugh**	**1.74**	**116**	PN	Pn	02 06 30.6	+1.2
FOZ	**Fox Glacier**	**2.09**	**64**	PN	Pn	02 06 33.9	-0.3
SYZ	**Scrubby Hill**	**2.50**	**146**	PN	Pn	02 06 39.9	0.0
ODZ	**Otahua Downs**	**2.58**	**103**	PN	Pn	02 06 41.4	+0.3
WVZ	**Waitaha Valley**	**2.99**	**63**	*e*PN	Pn	02 06 44.8	-1.9

*NEIC **28** 02:08:00.1, 16°.51N×99°.32W, h17km, MD3.7(MEX), After MEX.*
MEX 28 02:07:59.7±0.4, 16°.51N×99°.32W, h12km±5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.63**	**305**	*i* P	Pg	02 08 10.7	-1.3
ACX				*i* S	Sg	02 08 19.8	-0.5
ACX	**Acapulco**	**0.63**	**305**	*i* P	Pg	02 08 10.7	-1.3
ACX				*i* S	Sg	02 08 19.8	-0.5
CAIG	**El Cayaco**	**1.05**	**301**	*i* P	Pb	02 08 16.7	-3.1
CAIG				*i* S	Sb	02 08 29.5	-4.0
CAIG	**El Cayaco**	**1.05**	**301**	*i* P	Pb	02 08 16.7	-3.1
CAIG				*i* S	Sb	02 08 29.5	-4.0
PNIG	**Pinotepa**	**1.15**	**95**	*i* P	Pb	02 08 18.0	-3.5
PNIG				*i* S	Sb	02 08 31.8	-4.7
PNIG	**Pinotepa**	**1.15**	**95**	*i* P	Pb	02 08 18.0	-3.5
PNIG				*i* S	Sb	02 08 31.8	-4.7
MEIG	**Mezcala**	**1.44**	**349**	*i* P	Pn	02 08 21.8	-3.8
MEIG				*i* S	Sn	02 08 40.0	-4.4
PLIG	**Platanillo**	**1.88**	**355**	*i* P	Pn	02 08 28.5	-3.2
PLIG				*i* S	Sn	02 08 50.6	-4.7
PLIG	**Platanillo**	**1.88**	**355**	*i* P	Pn	02 08 28.5	-3.2
PLIG				*i* S	Sn	02 08 50.6	-4.7
UTMO	**Huajuapan**	**1.96**	**48**	*e*P	Pn	02 08 29.6	-3.1
UTMO				*i* S	Sn	02 08 52.7	-4.5
VHO	**Vista Hermosa**	**2.54**	**77**	*e*P	Pn	02 08 38.5	-2.3
VHO				*i* S	Sn	02 09 06.5	-5.2
VHO	**Vista Hermosa**	**2.54**	**77**	*e*P	Pn	02 08 38.5	-2.3
VHO				*i* S	Sn	02 09 08.5	-3.1
MZVM		**2.67**	**2**	*i* P	Pn	02 08 40.1	-2.3
MZVM				*i* S	Sn	02 09 10.1	-4.7
IIO	**Organos**	**3.12**	**10**	*e*P	Pn	02 08 46.8	-1.9
IIO				*i* S	Sn	02 09 21.9	-3.9
IIO	**Organos**	**3.12**	**10**	*e*P	Pn	02 08 46.8	-1.9
IIO				*i* S	Sn	02 09 21.9	-3.9

*ISCJB **28** 02:11:18.0±0.3, 33°.74N±0°.02×5°.99W±0°.02, h10km, Error ellipse: s-maj=2.9km s-min=2.6km az=156.6*
*NEIC **28** 02:11:19.7±0.5, 33°.67N×5°.89W, h10km, ML3.4(LDG), Error ellipse: s-maj=5.5km s-min=4.3km az=51.0*
*MDD **28** 02:11:20.1±0.7, 33°.61N×5°.93W, h11km±6km, mb4.5/32, Error ellipse: s-maj=3.9km s-min=3.7km az=99.0, PRXIMO*
*LDG **28** 02:11:20.5±0.1, 33°.57N×5°.94W, h10km, Ml3.4/4, Error ellipse: s-maj=3.3km s-min=2.9km az=53.0*
*CSEM **28** 02:11:20.8±0.2, 33°.78N×5°.92W, h10km, ML4.0/15, Error ellipse: s-maj=3.8km s-min=3.1km az=178.0*
*CNRM **28** 02:11:20.2, 33°.55N×5°.86W, h3km, MD4.1*
*INMG **28** 02:11:20.5±2.2, 33°.77N×5°.92W, h1km±14km, ML3.0, Error ellipse: s-maj=10.4km s-min=4.9km az=173.0*
*SFS **28** 02:11:21.0, 33°.77N×6°.05W, h0km, ML4.5*
*IGIL **28** 02:11:21.3, 33°.70N×5°.86W, h3km, ML3.0*
ISC 28 02:11:20.8±0.4, 33°.79N±0°.02×5°.93W±0°.02, h10km, n267, σ1s07/444, 1C, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGT	**Taghat**	**0.78**	**69**	*i* P	**Pg**	**02 11 36.0**	**+0.1**
TGT				*i* S	**Sg**	**02 11 46.0**	**-0.1**
TGT	**Taghat**	**0.78**	**69**	P	**Pg**	**02 11 36.0**	**+0.1**
TGT				S	**Sg**	**02 11 46.0**	**-0.1**
TGT	**Taghat**	**0.78**	**69**	*i* P	**Pg**	**02 11 36.0**	**+0.1**
RTC	**Rabat Centre**	**0.79**	**285**	*i* P	**Pg**	**02 11 37.5**	**+1.4**
RTC				*i* S	**Sg**	**02 11 48.0**	**+1.6**
RTC	**Rabat Centre**	**0.79**	**285**	P	**Pg**	**02 11 37.5**	**+1.4**
RTC				S	**Sg**	**02 11 48.0**	**+1.6**
RTC	**Rabat Centre**	**0.79**	**285**	*i* P	**Pg**	**02 11 37.5**	**+1.4**
RTC				*i* S	**Sg**	**02 11 48.0**	**+1.6**
CZD	**Col de Zad**	**1.06**	**135**	*i* P	**Pg**	**02 11 37.0**	**-4.1**
CZD				*i* S	**Sg**	**02 11 47.0**	**-7.8**
CZD	**Col de Zad**	**1.06**	**135**	P	**Pg**	**02 11 37.0**	**-4.1**
CZD				S	**Sg**	**02 11 47.0**	**-7.8**
RSA	**Sarsar**	**1.09**	**5**	*i* P	**Pb**	**02 11 45.0**	**+3.3**
RSA				*i* S	**Sb**	**02 12 01.0**	**+5.0**
RSA	**Sarsar**	**1.09**	**5**	P	**Pb**	**02 11 45.0**	**+3.3**
RSA				S	**Sb**	**02 12 01.0**	**+5.0**
KIB	**El Ksiba**	**1.21**	**184**	P	**Pb**	**02 11 38.0**	**-5.7**
KIB				S	**Sb**	**02 11 51.0**	**-8.4**
TZK	**Tazeka**	**1.49**	**78**	*i* P	**Pn**	**02 11 47.0**	**-0.5**
TZK				*i* S	**Sn**	**02 12 05.0**	**-2.0**
TZK	**Tazeka**	**1.49**	**78**	P	**Pn**	**02 11 47.0**	**-0.5**
TZK				S	**Sn**	**02 12 05.0**	**-2.0**
TZK	**Tazeka**	**1.49**	**78**	*i* P	**Pn**	**02 11 47.0**	**-0.5**
TZK				*i* S	**Sn**	**02 12 05.0**	**-2.0**
TZC	**Tazercounte**	**1.70**	**196**	P	**Pn**	**02 11 47.0**	**-3.4**
TZC				S	**Sn**	**02 12 05.0**	**-7.2**
TZC	**Tazercounte**	**1.70**	**196**	*i* P	**Pn**	**02 11 47.0**	**-3.4**
DKH	**Dar Kharkhour**	**1.76**	**15**	P	**Pn**	**02 11 53.0**	**+1.7**
DKH				S	**Sn**	**02 12 18.0**	**+4.2**
DKH	**Dar Kharkhour**	**1.76**	**15**	*i* P	**Pn**	**02 11 53.0**	**+1.7**
TOU	**Touzarine**	**2.15**	**56**	P	**Pn**	**02 11 56.5**	**-0.2**
TOU				S	**Sn**	**02 12 23.0**	**-0.4**
TOU	**Touzarine**	**2.15**	**56**	*i* P	**Pn**	**02 11 56.5**	**-0.2**
TOU				*i* S	**Sn**	**02 12 23.0**	**-0.4**
ECEU	**Ceuta**	**2.16**	**12**	P	**Pn**	**02 11 58.1**	**+1.4**
6.6nm,0.3s,SNR=5.9							
ECEU				S	**Sn**	**02 12 23.5**	**0.0**
9.8nm,0.1s,SNR=7.9							
ECEU	**Ceuta**	**2.16**	**12**	P	**Pn**	**02 11 58.1**	**+1.4**
6.6nm,0.3s,SNR=5.9							
ECEU				S	**Sn**	**02 12 23.5**	**0.0**
9.8nm,0.1s,SNR=7.9							
MPAL	**Palemas**	**2.18**	**48**	P	**Pn**	**02 11 58.0**	**+0.9**
MPAL				S	**Sn**	**02 12 25.0**	**+0.8**
MPAL	**Palemas**	**2.18**	**48**	*i* P	**Pn**	**02 11 58.0**	**+0.9**
MPAL				*i* S	**Sn**	**02 12 25.0**	**+0.8**
ZFT	**Errachidia**	**2.20**	**142**	*i* P	**Pn**	**02 11 52.5**	**-4.8**
ZFT				*i* S	**Sn**	**02 12 17.0**	**-7.5**
ZFT	**Errachidia**	**2.20**	**142**	P	**Pn**	**02 11 52.5**	**-4.8**
ZFT				S	**Sn**	**02 12 17.0**	**-7.5**
EJIF	**Jimena Fronter**	**2.69**	**8**	P	**Pn**	**02 12 05.5**	**+1.5**
EJIF				S	**Sn**	**02 12 38.4**	**+1.8**
EJIF	**Jimena Fronter**	**2.69**	**8**	P	**Pn**	**02 12 05.5**	**+1.5**
SNR=7.9							
EJIF				S	**Sn**	**02 12 36.4**	**-0.2**
3.1nm,0.2s,SNR=7.9							
EJIF	**Jimena Fronter**	**2.69**	**8**	P	**Pn**	**02 12 05.5**	**+1.5**
SNR=7.9							
EJIF				S	**Sn**	**02 12 38.4**	**+1.8**
3.1nm,0.2s,SNR=7.9							
ZAI Zaio	**2.89**	**65**	*i* P	**Pn**	**02 12 07.0**	**+0.2**
ZAI			*i* S	**Sn**	**02 12 40.0**	**-1.6**
ZAI Zaio	**2.89**	**65**	P	**Pn**	**02 12 07.0**	**+0.2**
ZAI			S	**Sn**	**02 12 40.0**	**-1.6**
ZAI Zaio	**2.89**	**65**	*e*P	**Pn**	**02 12 07.0**	**+0.2**
ZAI			*i* S	**Sn**	**02 12 40.0**	**-1.6**
EMIJ Mijas	**2.93**	**19**	P	**Pn**	**02 12 07.5**	**+0.1**
EMIJ			S	**Sn**	**02 12 43.6**	**+1.0**
EMIJ Mijas	**2.93**	**19**	P	**Pn**	**02 12 07.5**	**+0.1**
14nm,0.8s,SNR=28							
EMIJ			S	**Sn**	**02 12 43.6**	**+1.0**
14nm,0.2s,SNR=6.6							
EMIJ Mijas	**2.93**	**19**	P	**Pn**	**02 12 07.5**	**+0.1**
14nm,0.8s,SNR=28							
EMIJ			S	**Sn**	**02 12 43.6**	**+1.0**
14nm,0.2s,SNR=6.6							
ESPR Espera	**3.08**	**1**	P	**Pn**	**02 12 10.6**	**+1.2**
ESPR			S	**Sn**	**02 12 46.4**	**+0.2**
ESPR Espera	**3.08**	**1**	P	**Pn**	**02 12 10.6**	**+1.2**
5.5nm,0.3s,SNR=22							
ESPR			S	**Sn**	**02 12 46.4**	**+0.2**
7.4nm,0.2s,SNR=7.9							
ESPR Espera	**3.08**	**1**	P	**Pn**	**02 12 10.6**	**+1.2**
5.5nm,0.3s,SNR=22							
ESPR			S	**Sn**	**02 12 46.4**	**+0.2**
7.4nm,0.2s,SNR=7.9							
LIJA Lijar	**3.14**	**8**	P	**Pn**	**02 12 11.0**	**+0.7**
LIJA			S	**Sn**	**02 12 48.0**	**+0.1**
LIJA Lijar	**3.14**	**8**	*i* P	**Pn**	**02 12 11.0**	**+0.7**
LIJA			*e*S	**Sn**	**02 12 48.0**	**+0.1**
EMAL Malaga-Limoner	**3.21**	**22**	*e*S	**Sn**	**02 12 49.1**	**-0.5**
EGUA Guajares	**3.60**	**32**	P	**Pn**	**02 12 16.0**	**-0.6**
EGUA			S	**Sn**	**02 12 58.4**	**-0.8**
EGUA Guajares	**3.60**	**32**	P	**Pn**	**02 12 15.7**	**-1.0**
SNR=7.9							
EGUA			S	**Sn**	**02 12 58.4**	**-0.8**
29nm,0.2s,SNR=7.9							
EGUA Guajares	**3.60**	**32**	P	**Pn**	**02 12 16.0**	**-0.7**
SNR=7.9							
EGUA			S	**Sn**	**02 12 58.4**	**-0.9**
29nm,0.2s,SNR=7.9							
ELOJ Sierra Loja	**3.66**	**23**	P	**Pn**	**02 12 19.5**	**+2.2**
ELOJ			S	**Sn**	**02 13 01.1**	**+0.6**
ELOJ Sierra Loja	**3.66**	**23**	P	**Pn**	**02 12 19.5**	**+2.2**
SNR=7.9							
ELOJ			S	**Sn**	**02 13 01.1**	**+0.6**
2.9nm,0.2s,SNR=5.0							
ELOJ Sierra Loja	**3.66**	**23**	P	**Pn**	**02 12 19.5**	**+2.2**
SNR=7.9							
ELOJ			S	**Sn**	**02 13 01.1**	**+0.6**
2.9nm,0.2s,SNR=5.0							
ERON Agron	**3.66**	**28**	P	**Pn**	**02 12 16.8**	**-0.7**
6.4nm,0.4s,SNR=7.9							
PBDV Barranco-do-Ve	**3.81**	**335**	*e*Pn	**Pn**	**02 12 19.4**	**-0.1**
PBDV			*e*Sn	**Sn**	**02 13 04.4**	**0.0**
PBDV			A		02 13 09.3	
20nm,0.2s						
PBDV Barranco-do-Ve	**3.81**	**335**	P	**Pn**	**02 12 19.4**	**-0.1**
PBDV			S	**Sn**	**02 13 04.4**	**0.0**
20nm,0.2s						
PBDV Barranco-do-Ve	**3.81**	**335**	*e*Pn	**Pn**	**02 12 19.4**	**-0.1**
PBDV			*e*Sn	**Sn**	**02 13 04.4**	**0.0**
20nm,0.2s						
PVAQ Vaqueiros	**3.89**	**339**	*e*Pn	**Pn**	**02 12 20.5**	**-0.1**
PVAQ			*e*Sn	**Sn**	**02 13 05.4**	**-0.9**
PVAQ			A		02 13 09.8	
27nm,0.1s						
PVAQ Vaqueiros	**3.89**	**339**	P	**Pn**	**02 12 20.5**	**-0.1**
PVAQ			S	**Sn**	**02 13 05.4**	**-0.9**
27nm,0.1s

MORF				*e*Sn	**Sn**	**02 13 13.2**	**+0.4**
	62nm,0.2s						
PCVE	**Castro Verde**	**4.20**	**337**	*e*Pn	**Pn**	**02 12 25.1**	**+0.2**
PCVE				*e*Sn	**Sn**	**02 13 13.0**	**-1.0**
PCVE				A		02 13 25.7	
	24nm,0.3s						
PCVE	**Castro Verde**	**4.20**	**337**	P	**Pn**	**02 12 25.1**	**+0.2**
PCVE				S	**Sn**	**02 13 13.0**	**-1.0**
	24nm,0.3s						
PCVE	**Castro Verde**	**4.20**	**337**	*e*Pn	**Pn**	**02 12 25.1**	**+0.2**
PCVE				*e*Sn	**Sn**	**02 13 13.0**	**-1.0**
	24nm,0.3s						
ECAB	**El Cabril**	**4.30**	**5**	P	**Pn**	**02 12 26.1**	**-0.2**
ECAB				S	**Sn**	**02 13 14.8**	**-1.6**
ECAB	**El Cabril**	**4.30**	**5**	P	**Pn**	**02 12 26.1**	**-0.2**
	SNR=7.9						
ECAB				S	**Sn**	**02 13 14.8**	**-1.6**
	3.8nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**4.30**	**5**	P	**Pn**	**02 12 26.0**	**-0.2**
	SNR=7.9						
ECAB				S	**Sn**	**02 13 14.8**	**-1.6**
	3.8nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	**4.39**	**330**	*e*Pn	**Pn**	**02 12 28.4**	**+1.0**
PTEO				*e*Sn	**Sn**	**02 13 17.3**	**-1.2**
PTEO				A		02 13 21.2	
	15nm,0.1s						
PTEO	**Sao Teotonio**	**4.39**	**330**	P	**Pn**	**02 12 28.4**	**+1.0**
PTEO				S	**Sn**	**02 13 17.3**	**-1.2**
	7.7nm,0.1s						
PTEO	**Sao Teotonio**	**4.39**	**330**	*e*Pn	**Pn**	**02 12 28.4**	**+1.0**
PTEO				*e*Sn	**Sn**	**02 13 17.3**	**-1.2**
	15nm,0.1s						
MESJ	**Messejana**	**4.45**	**336**	*e*P	**Pn**	**02 12 29.6**	**+1.3**
MESJ				*e*S	**Sn**	**02 13 18.5**	**-1.6**
MESJ				*e*S	**Sn**	**02 13 18.6**	**-1.6**
PBAR	**Barrancos**	**4.47**	**349**	*e*Pn	**Pn**	**02 12 28.6**	**+0.1**
PBAR				*e*Sn	**Sn**	**02 13 18.9**	**-1.7**
PBAR				A		02 13 23.8	
	18nm,0.1s						
PBAR	**Barrancos**	**4.47**	**349**	P	**Pn**	**02 12 28.6**	**+0.1**
PBAR				S	**Sn**	**02 13 18.9**	**-1.7**
	18nm,0.1s						
PBAR	**Barrancos**	**4.47**	**349**	*e*Pn	**Pn**	**02 12 28.6**	**+0.1**
PBAR				*e*Sn	**Sn**	**02 13 18.9**	**-1.7**
	18nm,0.1s						
EADA	**Adamuz**	**4.51**	**14**	P	**Pn**	**02 12 29.3**	**+0.2**
EADA				S	**Sn**	**02 13 19.3**	**-2.2**
EADA	**Adamuz**	**4.51**	**14**	P	**Pn**	**02 12 29.3**	**+0.2**
	4.6nm,0.1s,SNR=151						
EADA				S	**Sn**	**02 13 19.3**	**-2.2**
	3.4nm,0.1s						
EADA	**Adamuz**	**4.51**	**14**	P	**Pn**	**02 12 29.3**	**+0.2**
	4.6nm,0.1s,SNR=151						
EADA				S	**Sn**	**02 13 19.3**	**-2.2**
	3.4nm,0.1s						
PBEJ	**Beja**	**4.51**	**340**	*e*Pn	**Pn**	**02 12 28.9**	**-0.2**
PBEJ				*e*Sn	**Sn**	**02 13 20.2**	**-1.4**
PBEJ				A		02 13 33.2	
	16nm,0.3s						
PBEJ	**Beja**	**4.51**	**340**	P	**Pn**	**02 12 28.9**	**-0.2**
PBEJ				S	**Sn**	**02 13 20.2**	**-1.4**
	8.0nm,0.3s						
PBEJ	**Beja**	**4.51**	**340**	*e*Pn	**Pn**	**02 12 28.9**	**-0.2**
PBEJ				*e*Sn	**Sn**	**02 13 20.2**	**-1.4**
	16nm,0.3s						
AFS	**Agadir Fac de**	**4.52**	**223**	P	**Pn**	**02 12 27.0**	**-2.2**
AFS				S	**Sn**	**02 13 16.0**	**-5.8**
AFS	**Agadir Fac de**	**4.52**	**223**	*e*P	**Pn**	**02 12 27.0**	**-2.2**
AFS				*i* S	**Sn**	**02 13 16.0**	**-5.8**
EQES	**Quesada**	**4.63**	**29**	P	**Pn**	**02 12 32.1**	**+1.3**
EQES				S	**Sn**	**02 13 25.2**	**+0.6**
EQES	**Quesada**	**4.63**	**29**	P	**Pn**	**02 12 32.1**	**+1.3**
	2.3nm,0.1s,SNR=68						
EQES				S	**Sn**	**02 13 24.4**	**-0.3**
	2.4nm,0.1s						
EQES	**Quesada**	**4.63**	**29**	P	**Pn**	**02 12 32.1**	**+1.3**
	2.3nm,0.1s,SNR=68						
EQES				S	**Sn**	**02 13 25.2**	**+0.6**
	2.4nm,0.1s						
EBAN	**Banos Encina**	**4.70**	**21**	P	**Pn**	**02 12 32.2**	**+0.5**
EBAN				S	**Sn**	**02 13 25.2**	**-1.2**
EBAN	**Banos Encina**	**4.70**	**21**	P	**Pn**	**02 12 32.2**	**+0.5**
	9.7nm,0.1s,SNR=32						
EBAN				S	**Sn**	**02 13 25.2**	**-1.2**
	4.6nm,0.1s						
EBAN	**Banos Encina**	**4.70**	**21**	P	**Pn**	**02 12 32.2**	**+0.5**
	9.7nm,0.1s,SNR=32						
EBAN				S	**Sn**	**02 13 25.2**	**-1.1**
	4.6nm,0.1s						
EHUE	**Huescar**	**4.85**	**33**	P	**Pn**	**02 12 35.2**	**+1.4**
EHUE				S	**Sn**	**02 13 31.3**	**+1.3**
EHUE	**Huescar**	**4.85**	**33**	P	**Pn**	**02 12 35.2**	**+1.4**
	1.2nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**02 13 29.9**	**-0.1**
	SNR=7.9						
EHUE	**Huescar**	**4.85**	**33**	P	**Pn**	**02 12 35.2**	**+1.4**
	1.2nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**02 13 31.3**	**+1.3**
	SNR=7.9						
YBT	**Youssef Ben Ta**	**4.96**	**219**	*i* P	**Pn**	**02 12 34.0**	**-1.3**
YBT				*i* S	**Sn**	**02 13 25.0**	**-7.8**
YBT	**Youssef Ben Ta**	**4.96**	**219**	P	**Pn**	**02 12 34.0**	**-1.3**
YBT				S	**Sn**	**02 13 25.0**	**-7.8**
YBT	**Youssef Ben Ta**	**4.96**	**219**	*e*P	**Pn**	**02 12 34.0**	**-1.3**
EVO	**Evora**	**5.03**	**341**	*e*Pn	**Pn**	**02 12 36.8**	**+0.6**
EVO				*e*Sn	**Sn**	**02 13 33.2**	**-1.1**
	48nm,0.5s						
EVO	**Evora**	**5.03**	**341**	*e*Pn	**Pn**	**02 12 36.4**	**+0.2**
EVO				*e*Sn	**Sn**	**02 13 36.0**	**+1.7**
EVO				A		02 13 45.9	
	26nm,0.3s						
EVO	**Evora**	**5.03**	**341**	P	**Pn**	**02 12 36.4**	**+0.2**
EVO				S	**Sn**	**02 13 36.0**	**+1.7**
	26nm,0.3s						
EVO	**Evora**	**5.03**	**341**	*e*Pn	**Pn**	**02 12 36.4**	**+0.2**
EVO				*e*Sn	**Sn**	**02 13 36.0**	**+1.7**
	26nm,0.3s						
EBAD	**Badajoz**	**5.04**	**350**	P	**Pn**	**02 12 36.4**	**+0.1**
EBAD				S	**Sn**	**02 13 32.9**	**-1.6**
EBAD	**Badajoz**	**5.04**	**350**	P	**Pn**	**02 12 36.4**	**0.0**
	53nm,0.2s,SNR=313						
EBAD				S	**Sn**	**02 13 32.9**	**-1.6**
	5.2nm,0.1s						
EBAD	**Badajoz**	**5.04**	**350**	P	**Pn**	**02 12 36.4**	**+0.1**
	53nm,0.2s,SNR=313						
EBAD				S	**Sn**	**02 13 32.9**	**-1.6**
	5.2nm,0.1s						
EVOP	**Sao Brissos**	**5.05**	**340**	*e*Pn	**Pn**	**02 12 36.8**	**+0.3**
EVOP				*e*Sn	**Sn**	**02 13 33.2**	**-1.8**
EVOP	**Sao Brissos**	**5.05**	**340**	*e*Pn	**Pn**	**02 12 36.8**	**+0.3**
EVOP				*e*Sn	**Sn**	**02 13 33.2**	**-1.8**
	24nm,0.5s						
PESTR	**Estremoz**	**5.24**	**346**	*e*Pn	**Pn**	**02 12 39.3**	**+0.1**
PESTR				*e*Sn	**Sn**	**02 13 38.4**	**-1.3**
PESTR				A		02 13 56.9	
	9.4nm,0.5s						
PESTR	**Estremoz**	**5.24**	**346**	P	**Pn**	**02 12 39.3**	**+0.1**
PESTR				S	**Sn**	**02 13 38.4**	**-1.3**
	9.4nm,0.5s						
PESTR	**Estremoz**	**5.24**	**346**	*e*Pn	**Pn**	**02 12 39.3**	**+0.1**
PESTR				*e*Sn	**Sn**	**02 13 38.4**	**-1.3**
	9.4nm,0.5s						
EVIA	**Vianos**	**5.58**	**29**	P	**Pn**	**02 12 44.3**	**+0.6**
EVIA				S	**Sn**	**02 13 45.8**	**-2.1**
EVIA	**Vianos**	**5.58**	**29**	P	**Pn**	**02 12 44.3**	**+0.6**
	5.5nm,0.1s,SNR=14						
EVIA				S	**Sn**	**02 13 45.8**	**-2.1**
	1.7nm,0.1s						
EVIA	**Vianos**	**5.58**	**29**	P	**Pn**	**02 12 44.3**	**+0.5**
	5.5nm,0.1s,SNR=14						
EVIA				S	**Sn**	**02 13 45.8**	**-2.2**
	1.7nm,0.1s						
PMTG	**Montargil**	**5.59**	**341**	*e*Pn	**Pn**	**02 12 44.1**	**+0.2**
PMTG				*e*Sn	**Sn**	**02 13 48.8**	**+0.7**
PMTG				A		02 14 11.6	
	11nm,0.4s						
PMTG	**Montargil**	**5.59**	**341**	*e*Pn	**Pn**	**02 12 44.1**	**+0.2**
PMTG				*e*Sn	**Sn**	**02 13 48.8**	**+0.7**
	11nm,0.4s						
PMRV	**Marv??o**	**5.75**	**349**	*e*Pn	**Pn**	**02 12 46.7**	**+0.6**
PMRV				*e*Sn	**Sn**	**02 13 49.4**	**-2.8**
PMRV				A		02 14 07.9	
	10.0nm,0.2s						
PMRV	**Marv??o**	**5.75**	**349**	P	**Pn**	**02 12 46.7**	**+0.6**
PMRV				S	**Sn**	**02 13 49.4**	**-2.8**
	10.0nm,0.2s						
PMRV	**Marv??o**	**5.75**	**349**	*e*Pn	**Pn**	**02 12 46.7**	**+0.6**
PMRV				*e*Sn	**Sn**	**02 13 49.4**	**-2.8**
	10.0nm,0.2s						
ALMR	**Almeirim**	**5.77**	**339**	*e*P	**Pn**	**02 12 46.8**	**+0.5**
ALMR				*e*S	**Sn**	**02 13 50.0**	**-2.5**
ALMR	**Almeirim**	**5.77**	**339**	*e*P	**Pn**	**02 12 46.7**	**+0.3**
ALMR				*e*S	**Sn**	**02 13 49.1**	**-3.4**
ALMR				AML	AML	02 13 54.3	
	comp=N,11nm,0.3s						
ALMR	**Almeirim**	**5.77**	**339**	P	**Pn**	**02 12 46.8**	**+0.5**
ALMR				S	**Sn**	**02 13 50.0**	**-2.5**
ALMR	**Almeirim**	**5.77**	**339**	*e*P	**Pn**	**02 12 46.8**	**+0.5**
ALMR				*e*S	**Sn**	**02 13 50.0**	**-2.5**
PMAFR	**Mafra**	**5.82**	**333**	*e*Pn	**Pn**	**02 12 47.9**	**+0.8**
PMAFR				*e*Sn	**Sn**	**02 13 52.9**	**-1.0**
PMAFR				A		02 14 04.4	
	comp=N,28nm,0.2s						
PMAFR	**Mafra**	**5.82**	**333**	P	**Pn**	**02 12 47.8**	**+0.7**
	comp=N,18nm,0.1s,SNR=54						
PMAFR				S	**Sn**	**02 13 50.9**	**-3.1**
	comp=N,1.5nm,0.1s						
PMAFR	**Mafra**	**5.82**	**333**	*e*Pn	**Pn**	**02 12 47.9**	**+0.8**
PMAFR	**Mafra**	**5.82**	**333**	P	**Pn**	**02 12 48.6**	**+1.5**
	comp=N,18nm,0.1s,SNR=54						
PMAFR				S	**Sn**	**02 13 50.9**	**-3.0**
	comp=N,1.5nm,0.1s						
PMAFR				*e*Sn	**Sn**	**02 13 52.9**	**-1.0**
	comp=N,28nm,0.2s						
PAB	**San Pablo**	**5.89**	**12**	*e*Pn	**Pn**	**02 12 47.9**	**-0.1**
	comp=N,4.5nm,0.5s						
PAB				*e*Sn	**Sn**	**02 13 52.7**	**-2.9**
PAB	**San Pablo**	**5.89**	**12**	*e*Pn	**Pn**	**02 12 47.9**	**-0.1**
	comp=N,4.5nm,0.5s						
ETOB	**Tobarra**	**6.01**	**35**	P	**Pn**	**02 12 50.2**	**+0.6**
ETOB				S	**Sn**	**02 13 57.2**	**-1.3**
ETOB	**Tobarra**	**6.01**	**35**	P	**Pn**	**02 12 50.2**	**+0.6**
	comp=N,1.4nm,0.1s,SNR=25						
ETOB				S	**Sn**	**02 13 57.2**	**-1.3**
	comp=N,0.3nm,0.1s						
ETOB	**Tobarra**	**6.01**	**35**	P	**Pn**	**02 12 50.2**	**+0.6**
	comp=N,1.4nm,0.1s,SNR=25						
ETOB				S	**Sn**	**02 13 57.2**	**-1.2**
	comp=N,0.3nm,0.1s						
ESDC	**Sonseca Array**	**6.09**	**14**	P	**Pn**	**02 12 50.5**	**-0.2**
ESDC				S	**Sn**	**02 13 55.9**	**-4.5**
ESDC	**Sonseca Array**	**6.09**	**14**	P	**Pn**	**02 12 50.5**	**-0.2**
	comp=N,2.6nm,0.2s,baz=198,slow=13,SNR=100						
ESDC				S	**Sn**	**02 13 55.9**	**-4.5**
	comp=N,3.9nm,0.2s,baz=198,slow=23,SNR=12						
ESDC	**Sonseca Array**	**6.09**	**14**	P	**Pn**	**02 12 50.5**	**-0.2**
	comp=N,2.6nm,0.2s,baz=198,slow=13,SNR=100						
ESLA	**Sonseca Array**	**6.09**	**14**	*e*Pn	**Pn**	**02 12 50.3**	**-0.4**
	comp=N,0.5nm,0.3s						
ESLA				*e*Sn	**Sn**	**02 13 55.0**	**-5.4**
ESLA	**Sonseca Array**	**6.09**	**14**	*e*Pn	**Pn**	**02 12 50.3**	**-0.4**
	comp=N,0.5nm,0.3s						
PTOM	**Tomar**	**6.15**	**342**	*e*Pn	**Pn**	**02 12 51.9**	**+0.3**
PTOM				*e*Sn	**Sn**	**02 14 02.0**	**0.0**
PTOM				A		02 14 17.3	
	comp=N,9.1nm,0.3s						
PTOM	**Tomar**	**6.15**	**342**	P	**Pn**	**02 12 51.9**	**+0.3**
PTOM				S	**Sn**	**02 14 02.0**	**0.0**
	comp=N,4.6nm,0.3s						
PTOM	**Tomar**	**6.15**	**342**	*e*Pn	**Pn**	**02 12 51.9**	**+0.3**
PTOM				*e*Sn	**Sn**	**02 14 02.0**	**0.0**
	comp=N,9.1nm,0.3s						
PCBR	**Castelo Branco**	**6.17**	**349**	*e*Pn	**Pn**	**02 12 52.2**	**+0.3**
PCBR				A		02 14 15.9	
	comp=N,9.0nm,0.2s						
PCBR	**Castelo Branco**	**6.17**	**349**	P	**Pn**	**02 12 52.2**	**+0.3**
PCBR	**Castelo Branco**	**6.17**	**349**	*e*Pn	**Pn**	**02 12 52.2**	**+0.3**
	comp=N,9.0nm,0.2s						
EPLA	**Plasencia**	**6.27**	**359**	P	**Pn**	**02 12 52.7**	**-0.5**
EPLA				S	**Sn**	**02 14 00.0**	**-4.9**
EPLA	**Plasencia**	**6.27**	**359**	⇑P	**Pn**	**02 12 52.7**	**-0.5**
	comp=N,11nm,0.1s,SNR=18						
EPLA				S	**Sn**	**02 14 01.6**	**-3.2**
	comp=N,1.1nm,0.1s,SNR=7.5						
EPLA	**Plasencia**	**6.27**	**359**	P	**Pn**	**02 12 52.7**	**-0.5**
	comp=N,11nm,0.1s,SNR=108						
EBEN	**Beniarda**	**6.73**	**42**	P	**Pn**	**02 13 00.8**	**+1.2**
EBEN	**Beniarda**	**6.73**	**42**	P	**Pn**	**02 13 00.8**	**+1.2**
	comp=N,0.2nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**6.73**	**42**	P	**Pn**	**02 13 00.8**	**+1.2**
	comp=N,0.2nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**6.99**	**11**	P	**Pn**	**02 13 03.1**	**0.0**
GUD				S	**Sn**	**02 14 17.6**	**-5.0**
GUD	**Guadarrama**	**6.99**	**11**	P	**Pn**	**02 13 03.1**	**0.0**
	comp=N,1.4nm,0.1s,SNR=7.9						
GUD				S	**Sn**	**02 14 17.6**	**-5.0**
	comp=N,0.7nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**6.99**	**11**	P	**Pn**	**02 13 03.1**	**0.0**
	comp=N,1.4nm,0.1s,SNR=7.9						
ECHE	**Chera**	**7.03**	**33**	P	**Pn**	**02 13 03.2**	**-0.6**
ECHE	**Chera**	**7.03**	**33**	P	**Pn**	**02 13 03.2**	**-0.6**
	comp=N,4.6nm,0.3s,SNR=7.9						
ECHE	**Chera**	**7.03**	**33**	P	**Pn**	**02 13 03.2**	**-0.5**
	comp=N,4.6nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**7.42**	**354**	*e*Sn	**Sn**	**02 14 31.2**	**-2.0**
MVO				A		02 14 51.8	
	comp=N,8.0nm,0.5s						
MVO	**Moncorvo**	**7.42**	**354**	P	**Pn**	**02 13 09.1**	**+0.1**
MVO				S	**Sn**	**02 14 29.8**	**-3.4**
MVO	**Moncorvo**	**7.42**	**354**	P	**Pn**	**02 13 09.1**	**+0.1**
	comp=N,6.0nm,0.2s,SNR=11						
MVO				S	**Sn**	**02 14 29.8**	**-3.4**
	comp=N,1.1nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**7.42**	**354**	P	**Pn**	**02 13 09.1**	**+0.1**
	comp=N,6.0nm,0.2s,SNR=11						
MVO				*e*Sn	**Sn**	**02 14 31.2**	**-2.0**
	comp=N,8.0nm,0.5s						
EMOS	**Mosqueruela**	**7.88**	**32**	P	**Pn**	**02 13 15.8**	**+0.4**
EMOS				S	**Sn**	**02 14 41.1**	**-3.5**
EMOS	**Mosqueruela**	**7.88**	**32**	P	**Pn**	**02 13 15.7**	**+0.4**
	comp=N,2.3nm,0.4s,SNR=7.9						
EMOS				S	**Sn**	**02 14 41.1**	**-3.5**
	comp=N,0.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**7.88**	**32**	P	**Pn**	**02 13 15.7**	**+0.3**
	comp=N,2.3nm,0.4s,SNR=7.9						
EFAM	**Famara**	**7.98**	**236**	S	**Sn**	**02 14 38.6**	**-8.5**
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**8.17**	**356**	P	**Pn**	**02 13 20.1**	**+0.8**
ECAL				S	**Sn**	**02 14 48.0**	**-3.6**
ECAL	**Calabor**	**8.17**	**356**	P	**Pn**	**02 13 20.1**	**+0.8**
	comp=N,5.6nm,0.2s,SNR=21						
ECAL				S	**Sn**	**02 14 48.0**	**-3.6**
	comp=N,0.8nm,0.2s,SNR=8.7						
ECAL	**Calabor**	**8.17**	**356**	P	**Pn**	**02 13 20.1**	**+0.8**
	comp=N,5.6nm,0.2s,SNR=21						
ELOB	**Lobios**	**8.24**	**349**	P	**Pn**	**02 13 20.8**	**+0.5**
ELOB				S	**Sn**	**02 14 49.7**	**-3.7**
ELOB	**Lobios**	**8.24**	**349**	P	**Pn**	**02 13 20.8**	**+0.5**
	comp=N,1.3nm,0.1s,SNR=20						
ELOB				S	**Sn**	**02 14 49.7**	**-3.7**
	comp=N,1.3nm,0.2s,SNR=9.4						
ELOB	**Lobios**	**8.24**	**349**	P	**Pn**	**02 13 20.8**	**+0.5**
	comp=N,1.3nm,0.1s,SNR=20						
CFUE	**Fuerteventura**	**8.55**	**235**	P	**Pn**	**02 13 21.6**	**-3.0**
	comp=N,2.1nm,0.2s,SNR=7.9						
CFUE				S	**Sn**	**02 14 51.5**	**-10**
	comp=N,0.9nm,0.1s,SNR=7.9						
CFUE	**Fuerteventura**	**8.55**	**235**	P	**Pn**	**02 13 25.6**	**+1.0**
	comp=N,2.1nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**8.63**	**346**	P	**Pn**	**02 13 27.3**	**+1.7**
EZAM	**Zamans**	**8.63**	**346**	P	**Pn**	**02 13 27.3**	**+1.7**
	comp=N,7.7nm,0.3s,SNR=4.0						
EZAM	**Zamans**	**8.63**	**346**	P	**Pn**	**02 13 27.3**	**+1.7**
	comp=N,7.7nm,0.3s,SNR=7.9						
ERUA	**La Rua**	**8.65**	**354**	P	**Pn**	**02 13 27.1**	**+1.3**
ERUA	**La Rua**	**8.65**	**354**	P	**Pn**	**02 13 27.1**	**+1.3**
	comp=N,2.4nm,0.1s,SNR=7.9						
ERUA	**La Rua**	**8.65**	**354**	P	**Pn**	**02 13 27.1**	**+1.3**
	comp=N,2.4nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**8.72**	**33**	P	**Pn**	**02 13 26.7**	**-0.2**
ERTA	**Horta de San J**	**8.72**	**33**	P	**Pn**	**02 13 26.7**	**-0.2**
	comp=N,0.5nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**8.72**	**33**	P	**Pn**	**02 13 26.7**	**-0.2**
	comp=N,0.5nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**9.02**	**27**	S	**Sn**	**02 15 09.2**	**-3.5**
	comp=N,0.6nm,0.0s,SNR=7.9						
STS	**Santiago**	**9.31**	**348**	P	**Pn**	**02 13 35.2**	**+0.2**
STS	**Santiago**	**9.31**	**348**	P	**Pn**	**02 13 35.2**	**+0.2**
	comp=N,1.3nm,0.2s,SNR=7.9						
STS	**Santiago**	**9.31**	**348**	P	**Pn**	**02 13 35.2**	**+0.2**
	comp=N,1.3nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**9.46**	**346**	P	**Pn**	**02 13 37.6**	**+0.7**
EMAZ	**Mazaricos**	**9.46**	**346**	P	**Pn**	**02 13 37.6**	**+0.7**
	comp=N,1.1nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**9.46**	**346**	P	**Pn**	**02 13 37.6**	**+0.7**
	comp=N,1.1nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**9.52**	**3**	P	**Pn**	**02 13 38.5**	**+0.7**
EARI				S	**Sn**	**02 15 19.6**	**-5.2**
EARI	**Arriondas**	**9.52**	**3**	P	**Pn**	**02 13 38.5**	**+0.7**
	comp=N,0.8nm,0.2s,SNR=11						
EARI				S	**Sn**	**02 15 19.6**	**-5.2**
	comp=N,0.1nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**9.52**	**3**	P	**Pn**	**02 13 38.5**	**+0.7**
	comp=N,0.8nm,0.2s,SNR=11						
EPON	**Pontenova**	**9.57**	**355**	P	**Pn**	**02 13 39.9**	**+1.4**
EPON	**Pontenova**	**9.57**	**355**	P	**Pn**	**02 13 39.9**	**+1.4**
	comp=N,0.9nm,0.2s,SNR=5.6						
EPON	**Pontenova**	**9.57**	**355**	P	**Pn**	**02 13 39.9**	**+1.3**
	comp=N,0.9nm,0.2s,SNR=5.6						
ELAN	**Lanestosa**	**9.63**	**11**	P	**Pn**	**02 13 40.1**	**+0.7**
ELAN				S	**Sn**	**02 15 22.5**	**-5.1**
ELAN	**Lanestosa**	**9.63**	**11**	P	**Pn**	**02 13 40.1**	**+0.7**
	comp=N,1.8nm,0.2s,SNR=14						
ELAN				S	**Sn**	**02 15 22.5**	**-5.1**
	comp=N,0.4nm,0.2s,SNR=8.1						
ELAN	**Lanestosa**	**9.63**	**11**	P	**Pn**	**02 13 40.1**	**+0.7**
	comp=N,1.8nm,0.2s,SNR=14						
IELO	**Elcoad**	**9.77**	**21**	P	**Pn**	**02 13 42.0**	**+0.9**
	comp=N,1.0nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**02 15 26.4**	**-4.5**
	SNR=7.9						
IELO	**Elcoad**	**9.77**	**21**	P	**Pn**	**02 13 42.0**	**+0.8**
	comp=N,1.0nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**9.79**	**20**	P	**Pn**	**02 13 43.6**	**+2.1**
	comp=N,0.7nm,0.2s,SNR=6.5						
EORO				S	**Sn**	**02 15 26.6**	**-4.9**
	SNR=7.9						
EORO	**Oroz-Betelu**	**9.79**	**20**	P	**Pn**	**02 13 43.6**	**+2.1**
	comp=N,0.7nm,0.2s,SNR=6.5						
ELIZ	**Elizondo**	**9.98**	**19**	P	**Pn**	**02 13 45.4**	**+1.3**
	comp=N,0.9nm,0.1s						
ELIZ				S	**Sn**	**02 15 30.0**	**-6.1**
ELIZ	**Elizondo**	**9.98**	**19**	P	**Pn**	**02 13 45.4**	**+1.3**
	comp=N,0.9nm,0.1s,SNR=7.9						
ELIZ				S	**Sn**	**02 15 30.0**	**-6.1**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**9.98**	**19**	P	**Pn**	**02 13 45.4**	**+1.3**
	comp=N,0.9nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**10.02**	**20**	*e*Pn	**Pn**	**02 13 44.8**	**+0.2**
SJPF				*e*Sn	**Sn**	**02 15 31.3**	**-5.7**
	comp=N,1.0nm,0.3s						
SJPF	**Ste Jean**	**10.02**	**20**	P	**Pn**	**02 13 44.8**	**+0.2**
SJPF				S	**Sn**	**02 15 31.3**	**-5.7**
	comp=N,0.0nm,0.3s						
SJPF	**Ste Jean**	**10.02**	**20**	*e*Pn	**Pn**	**02 13 44.8**	**+0.2**
EMIR	**Miracle**	**10.03**	**34**	P	**Pn**	**02 13 45.1**	**+0.3**
	comp=N,1.5nm,0.3s						
EMIR	**Miracle**	**10.03**	**34**	P	**Pn**	**02 13 45.1**	**+0.3**
	comp=N,1.5nm,0.3s,SNR=7.9						
EMIR	**Miracle**	**10.03**	**34**	P	**Pn**	**02 13 45.1**	**+0.3**
	comp=N,1.5nm,0.3s,SNR=7.9						
ETSF	**Etsaut**	**10.03**	**23**	*e*Pn	**Pn**	**02 13 45.5**	**+0.7**
ETSF				*e*Sn	**Sn**	**02 15 31.2**	**-6.1**
	comp=N,0.4nm,0.2s						
ETSF	**Etsaut**	**10.03**	**23**	P	**Pn**	**02 13 45.5**	**+0.7**
ETSF				S	**Sn**	**02 15 31.2**	**-6.1**
	comp=N,0.2nm,0.2s						
ETSF	**Etsaut**	**10.03**	**23**	*e*Pn	**Pn**	**02 13 45.5**	**+0.7**
EALK	**Alkurruntz**	**10.04**	**19**	P	**Pn**	**02 13 45.8**	**+0.9**
	comp=N,0.5nm,0.1s						
EALK				S	**Sn**	**02 15 31.6**	**-5.9**
EALK	**Alkurruntz**	**10.04**	**19**	P	**Pn**	**02 13 45.8**	**+0.9**
	comp=N,0.5nm,0.1s,SNR=7.9						
EALK				S	**Sn**	**02 15 31.6**	**-5.9**
	comp=N,0.2nm,0.1s,SNR=7.9						
EALK	**Alkurruntz**	**10.04**	**19**	P	**Pn**	**02 13 45.8**	**+0.9**
	comp=N,0.5nm,0.1s,SNR=7.9						
EBIE	**

MAJO	**Matsushiro**	**3.40**	**220**	*e*Pn		**Pn**	**02 21 39.9**	**+1.1**
MAT	**Matsushiro**	**3.40**	**220**	P		**Pn**	**02 21 40.6**	**+1.8**
MJAR	**Matsushiro Arr**	**3.40**	**220**	Pn		**Pn**	**02 21 39.5**	**+0.7**
	0.8nm,0.3s,baz=323,slow=17,SNR=7.2							
MJAR				Pg		**Pg**	**02 21 46.7**	**-3.1**
	1.2nm,0.3s,baz=29,slow=13,SNR=26							
ASAJ	**Asahikawa**	**5.09**	**14**	Pn		**Pn**	**02 22 03.5**	**+1.4**
	2.0nm,0.3s,baz=148,slow=25,SNR=8.3							
KSRS	**Korea Array**	**10.36**	**264**	Pn		**Pn**	**02 23 14.4**	**+0.1**
	0.4nm,0.3s,baz=76,slow=14,SNR=7.5							
ILAR	**Eielson Array**	**47.91**	**33**	P		**P**	**02 29 23.7**	**-0.3**
	0.4nm,0.9s,mb3.6,baz=281,slow=5.4,SNR=4.2							
WRA	**Warramunga Arr**	**59.13**	**187**	P		**P**	**02 30 44.9**	**-1.9**
	0.9nm,0.5s,mb4.0,baz=5.6,slow=7.2,SNR=6.7							
ASAR	**Alice Springs**	**62.86**	**187**	P		**P**	**02 31 11.2**	**-1.0**
	0.4nm,0.8s,mb3.6,baz=12,slow=6.0,SNR=4.8							
NVAR	**Mina Array Bea**	**74.02**	**53**	P		**P**	**02 32 21.7**	**-0.4**
	0.3nm,0.7s,mb3.4,baz=298,slow=5.7,SNR=2.8							

IDC 28 02:32:26.8±2.1, 9°.19N×141°.44E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.5/3, Error ellipse: s-maj=290.0km s-min=29.0km az=108.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**29.77**	**194**	P	P	02 38 35.4	+0.1
	0.5nm,0.9s,baz=16,slow=9.7,SNR=2.3						
ASAR	**Alice Springs**	**33.47**	**193**	P	P	02 39 07.9	0.0
	0.5nm,0.5s,baz=18,slow=13,SNR=7.7						
ILAR	**Eielson Array**	**73.96**	**25**	P	P	02 44 03.9	+0.1
	0.5nm,0.9s,baz=250,slow=5.6,SNR=5.1						

*CRAAG **28** 02:36:06.4, 36°.61N×2°.12E, Ml3.8*
*MDD **28** 02:36:09.6±0.5, 36°.69N×2°.06E, h0km, mb4.0/13, Error ellipse: s-maj=5.8km s-min=5.2km az=147.0, PRXIMO*
*CSEM **28** 02:36:09.4±0.3, 36°.67N×2°.06E, h10km, ML3.8, Error ellipse: s-maj=6.5km s-min=5.3km az=140.0*
*NEIC **28** 02:36:11.8, 36°.86N×2°.05E, h0km, MG4.0(MDD), After MDD.*

ISC 28 02:36:09.6±0.8, 36°.74N±0°.06×2°.05E±0°.06, h11km±10km, n83, σ1§45/130, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.61**	**223**	P	**Pg**	**02 36 19.9**	**-1.7**
EBNR	**Beni Rached**	**0.61**	**223**	P	**Pg**	**02 36 19.9**	**-1.7**
ABA	**Alger-Bouzarea**	**0.79**	**85**	P	**Pg**	**02 36 23.5**	**-1.4**
ABA	**Alger-Bouzarea**	**0.79**	**85**	P	**Pg**	**02 36 23.5**	**-1.4**
ABA	**Alger-Bouzarea**	**0.79**	**85**	P	**Pg**	**02 36 23.5**	**-1.4**
ECHA	**Ech Chlef**	**0.81**	**223**	P	**Pg**	**02 36 22.8**	**-2.4**
ECHA	**Ech Chlef**	**0.81**	**223**	P	**Pg**	**02 36 22.8**	**-2.4**
ECHF	**Ech Chlef**	**0.82**	**225**	P	**Pg**	**02 36 22.8**	**-2.6**
EANR	**'Ain N'Sour**	**1.10**	**225**	P	**Pb**	**02 36 29.4**	**-1.3**
EANR	**'Ain N'Sour**	**1.10**	**225**	P	**Pb**	**02 36 29.4**	**-1.3**
EANR	**'Ain N'Sour**	**1.10**	**225**	P	**Pb**	**02 36 29.4**	**-1.3**
ABMS	**Boumerdes**	**1.15**	**89**	P	**Pb**	**02 36 31.3**	**-0.1**
ABMS	**Boumerdes**	**1.15**	**89**	P	**Pb**	**02 36 31.3**	**-0.1**
ABMS	**Boumerdes**	**1.15**	**89**	P	**Pb**	**02 36 31.3**	**-0.1**
ETRT	**Tiaret**	**1.48**	**205**	P	**Pn**	**02 36 35.9**	**-0.3**
ETRT	**Tiaret**	**1.48**	**205**	P	**Pn**	**02 36 35.9**	**-0.3**
ETRT	**Tiaret**	**1.48**	**205**	P	**Pn**	**02 36 35.9**	**-0.3**
EIBI	**Ibiza**	**2.35**	**346**	P	**Pn**	**02 36 48.9**	**+0.7**
EIBI				S	**Sn**	**02 37 15.7**	**-1.3**
EIBI	**Ibiza**	**2.35**	**346**	P	**Pn**	**02 36 48.9**	**+0.7**
	12nm,0.2s,SNR=29						
EIBI				S	**Sn**	**02 37 15.7**	**-1.3**
	7.7nm,0.1s						
EIBI	**Ibiza**	**2.35**	**346**	P	**Pn**	**02 36 48.9**	**+0.7**
	12nm,0.2s,SNR=29						
EIBI				S	**Sn**	**02 37 15.7**	**-1.3**
	7.7nm,0.1s						
EBEN	**Beniarda**	**2.67**	**318**	P	**Pn**	**02 36 53.0**	**+0.5**
EBEN				S	**Sn**	**02 37 24.4**	**-0.4**
EBEN	**Beniarda**	**2.67**	**318**	P	**Pn**	**02 36 52.9**	**+0.5**
	1.2nm,0.2s,SNR=13						
EBEN				S	**Sn**	**02 37 24.3**	**-0.4**
	1.3nm,0.1s						
EBEN	**Beniarda**	**2.67**	**318**	P	**Pn**	**02 36 53.0**	**+0.5**
EBEN				S	**Sn**	**02 37 24.3**	**-0.5**
	1.3nm,0.1s						
ETOS	**Mallorca**	**3.08**	**11**	P	**Pn**	**02 36 58.3**	**+0.1**
ETOS				S	**Sn**	**02 37 32.6**	**-2.4**
ETOS	**Mallorca**	**3.08**	**11**	P	**Pn**	**02 36 58.3**	**+0.1**
	7.2nm,0.2s,SNR=26						
ETOS				S	**Sn**	**02 37 32.6**	**-2.4**
	2.1nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.08**	**11**	P	**Pn**	**02 36 58.3**	**+0.1**
	7.2nm,0.2s,SNR=26						
ETOS				S	**Sn**	**02 37 32.6**	**-2.4**
	2.1nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.43**	**305**	P	**Pn**	**02 37 03.8**	**+0.8**
ETOB				S	**Sn**	**02 37 43.6**	**0.0**
ETOB	**Tobarra**	**3.43**	**305**	P	**Pn**	**02 37 03.8**	**+0.8**
	1.3nm,0.2s,SNR=28						
ETOB				S	**Sn**	**02 37 43.6**	**0.0**
	3.0nm,0.3s,SNR=5.0						
ETOB	**Tobarra**	**3.43**	**305**	P	**Pn**	**02 37 03.8**	**+0.8**
	1.3nm,0.2s,SNR=28						
ETOB				S	**Sn**	**02 37 43.6**	**0.0**
	3.0nm,0.3s,SNR=5.0						
EHUE	**Huescar**	**3.86**	**288**	P	**Pn**	**02 37 10.1**	**+1.3**
EHUE				S	**Sn**	**02 37 55.4**	**+1.3**
EHUE	**Huescar**	**3.86**	**288**	P	**Pn**	**02 37 10.1**	**+1.3**
	0.5nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**02 37 55.4**	**+1.3**
	0.8nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**3.86**	**288**	P	**Pn**	**02 37 10.1**	**+1.2**
	0.5nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**02 37 55.4**	**+1.2**
	0.8nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**4.08**	**299**	P	**Pn**	**02 37 12.2**	**+0.3**
	SNR=7.9						
EVIA				S	**Sn**	**02 38 00.1**	**+0.5**
	1.0nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.12**	**332**	P	**Pn**	**02 37 14.0**	**+1.4**
EMOS				S	**Sn**	**02 37 59.2**	**-1.5**
EMOS	**Mosqueruela**	**4.12**	**332**	P	**Pn**	**02 37 14.0**	**+1.4**
	4.0nm,0.2s,SNR=40						
EMOS				S	**Sn**	**02 37 59.2**	**-1.5**
	6.8nm,0.3s						
EMOS	**Mosqueruela**	**4.12**	**332**	P	**Pn**	**02 37 14.0**	**+1.5**
	4.0nm,0.2s,SNR=40						
EMOS				S	**Sn**	**02 37 59.2**	**-1.5**
	6.8nm,0.3s						
EQES	**Quesada**	**4.22**	**286**	P	**Pn**	**02 37 15.9**	**+2.0**
EQES				S	**Sn**	**02 38 03.0**	**-0.1**
EQES	**Quesada**	**4.22**	**286**	P	**Pn**	**02 37 15.5**	**+1.6**
	1.0nm,0.2s,SNR=12						
EQES				S	**Sn**	**02 38 03.0**	**-0.1**
	1.5nm,0.2s						
EQES	**Quesada**	**4.22**	**286**	P	**Pn**	**02 37 15.9**	**+2.0**
	1.0nm,0.2s,SNR=12						
EQES				S	**Sn**	**02 38 03.0**	**-0.2**
	1.5nm,0.2s						
ERTA	**Horta de San J**	**4.42**	**343**	P	**Pn**	**02 37 17.5**	**+0.9**
ERTA				S	**Sn**	**02 38 05.3**	**-2.7**
ERTA	**Horta de San J**	**4.42**	**343**	P	**Pn**	**02 37 17.5**	**+0.9**
	1.5nm,0.3s,SNR=7.9						
ERTA				S	**Sn**	**02 38 05.3**	**-2.7**
	0.6nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**4.42**	**343**	P	**Pn**	**02 37 17.5**	**+0.9**
	1.5nm,0.3s,SNR=7.9						
ERTA				S	**Sn**	**02 38 05.3**	**-2.7**
	0.6nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**4.42**	**278**	P	**Pn**	**02 37 19.3**	**+2.7**
	0.5nm,0.2s,SNR=7.9						
EQUE				S	**Sn**	**02 38 07.3**	**-0.8**
	0.3nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.67**	**351**	P	**Pn**	**02 37 21.7**	**+1.7**
EPOB				S	**Sn**	**02 38 11.7**	**-2.5**
EPOB	**Poblet**	**4.67**	**351**	P	**Pn**	**02 37 21.7**	**+1.7**
	1.0nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**02 38 11.7**	**-2.5**
	0.2nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.67**	**351**	P	**Pn**	**02 37 21.7**	**+1.7**
	1.0nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**02 38 11.7**	**-2.4**
	0.2nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.02**	**3**	P	**Pn**	**02 37 25.2**	**+0.3**
CFON				S	**Sn**	**02 38 18.7**	**-4.3**
CFON	**Fontmartina**	**5.02**	**3**	P	**Pn**	**02 37 25.2**	**+0.3**
	0.8nm,0.2s,SNR=7.9						
CFON				S	**Sn**	**02 38 21.5**	**-1.4**
	0.5nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.02**	**3**	P	**Pn**	**02 37 25.2**	**+0.3**
	0.8nm,0.2s,SNR=7.9						
CFON				S	**Sn**	**02 38 18.7**	**-4.2**
	0.5nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**5.12**	**281**	P	**Pn**	**02 37 27.0**	**+0.9**
	SNR=7.9						
ELUQ				S	**Sn**	**02 38 23.5**	**-1.7**
	0.6nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**5.12**	**281**	S	**Sn**	**02 38 26.3**	**+1.1**
	0.6nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.18**	**356**	P	**Pn**	**02 37 28.6**	**+1.6**
EMIR				S	**Sn**	**02 38 24.8**	**-2.0**
EMIR	**Miracle**	**5.18**	**356**	P	**Pn**	**02 37 28.7**	**+1.6**
	2.8nm,0.2s,SNR=6.5						
EMIR				S	**Sn**	**02 38 24.8**	**-2.0**
	0.3nm,0.3s						
EMIR	**Miracle**	**5.18**	**356**	P	**Pn**	**02 37 28.7**	**+1.6**
	2.8nm,0.2s,SNR=6.5						
EMIR				S	**Sn**	**02 38 24.8**	**-2.0**
	0.3nm,0.3s						
ESAC	**San Caprasio**	**5.35**	**339**	P	**Pn**	**02 37 30.9**	**+1.6**
ESAC	**San Caprasio**	**5.35**	**339**	P	**Pn**	**02 37 30.9**	**+1.6**
	1.4nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**5.35**	**339**	P	**Pn**	**02 37 30.9**	**+1.6**
	1.4nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**5.46**	**287**	S	**Sn**	**02 38 31.8**	**-2.0**
	0.2nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**5.46**	**287**	S	**Sn**	**02 38 31.8**	**-2.0**
	0.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**5.57**	**304**	P	**Pn**	**02 37 32.4**	**0.0**
ESDC				S	**Sn**	**02 38 33.1**	**-3.2**
ESDC	**Sonseca Array**	**5.57**	**304**	P	**Pn**	**02 37 32.4**	**0.0**
	0.4nm,0.3s,baz=116,slow=13,SNR=8.6						
ESDC	**Sonseca Array**	**5.57**	**304**	P	**Pn**	**02 37 32.4**	**0.0**
	0.4nm,0.3s,slow=13,SNR=8.6						
ESDC				S	**Sn**	**02 38 33.1**	**-3.3**
	SNR=7.9						
CSOR	**Sort**	**5.67**	**353**	P	**Pn**	**02 37 36.0**	**+2.2**
CSOR				S	**Sn**	**02 38 37.4**	**-1.5**
CSOR	**Sort**	**5.67**	**353**	P	**Pn**	**02 37 34.9**	**+1.1**
	1.1nm,0.2s,SNR=7.7						
CSOR				S	**Sn**	**02 38 37.4**	**-1.5**
	0.3nm,0.2s						
CSOR	**Sort**	**5.67**	**353**	P	**Pn**	**02 37 36.0**	**+2.2**
	1.1nm,0.2s,SNR=7.7						
CSOR				S	**Sn**	**02 38 37.3**	**-1.6**
	0.3nm,0.2s						
CLLI	**Llivia**	**5.73**	**359**	P	**Pn**	**02 37 36.1**	**+1.5**
CLLI	**Llivia**	**5.73**	**359**	P	**Pn**	**02 37 36.1**	**+1.5**
	0.2nm,0.3s,SNR=7.9						
CLLI	**Llivia**	**5.73**	**359**	P	**Pn**	**02 37 36.1**	**+1.5**
	0.2nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**5.74**	**6**	P	**Pn**	**02 37 35.5**	**+0.8**
EJON				S	**Sn**	**02 38 37.2**	**-3.2**
EJON	**La Jonquera**	**5.74**	**6**	P	**Pn**	**02 37 35.5**	**+0.8**
	0.2nm,0.2s,SNR=7.9						
EJON				S	**Sn**	**02 38 37.2**	**-3.3**
	0.2nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**5.74**	**6**	P	**Pn**	**02 37 35.5**	**+0.8**
	0.2nm,0.2s,SNR=7.9						
EJON				S	**Sn**	**02 38 37.2**	**-3.3**
	0.2nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**6.22**	**311**	P	**Pn**	**02 37 41.9**	**+0.5**
GUD				S	**Sn**	**02 38 48.6**	**-3.9**
GUD	**Guadarrama**	**6.22**	**311**	P	**Pn**	**02 37 41.9**	**+0.5**
	0.7nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**02 38 48.6**	**-3.9**
	0.8nm,0.5s,SNR=7.9						
GUD	**Guadarrama**	**6.22**	**311**	P	**Pn**	**02 37 41.9**	**+0.5**
	0.7nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**02 38 48.6**	**-3.9**
	0.8nm,0.5s,SNR=7.9						
ELAN	**Lanestosa**	**7.73**	**329**	P	**Pn**	**02 38 04.6**	**+2.6**
ELAN	**Lanestosa**	**7.73**	**329**	P	**Pn**	**02 38 04.6**	**+2.6**
	5.6nm,0.8s,SNR=7.3						
ELAN	**Lanestosa**	**7.73**	**329**	P	**Pn**	**02 38 04.6**	**+2.6**
	5.6nm,0.8s,SNR=7.3						
ECAL	**Calabor**	**8.56**	**310**	P	**Pn**	**02 38 14.4**	**+1.0**
ECAL	**Calabor**	**8.56**	**310**	P	**Pn**	**02 38 14.4**	**+1.0**
	1.8nm,0.3s,SNR=8.1						
ECAL	**Calabor**	**8.56**	**310**	P	**Pn**	**02 38 14.4**	**+0.9**
	1.8nm,0.3s,SNR=8.1						
EARI	**Arriondas**	**8.60**	**322**	P	**Pn**	**02 38 16.0**	**+2.1**
EARI	**Arriondas**	**8.60**	**322**	P	**Pn**	**02 38 16.0**	**+2.1**
	14nm,1.2s,SNR=5.7						
EARI	**Arriondas**	**8.60**	**322**	P	**Pn**	**02 38 16.0**	**+2.0**
	14nm,1.2s,SNR=5.7						

*ISCJB **28** 02:45:21.3±2.1, 11°.54S±0°.09×166°.3E±0°.1, h132km±18km, mb4.0/12, Error ellipse: s-maj=20.7km s-min=12.4km az=156.5*
*IDC **28** 02:45:21.1±1.2, 11°.39S×166°.36E, h118km±8km, mb3.8/10, mb1 4.0/11, mb1mx3.8/20, mbtmp3.8/11, MS2.8/1, Ms1 2.8/1, ms1mx2.4/25, Error ellipse: s-maj=27.4km s-min=17.5km az=139.0*
*NEIC **28** 02:45:23.6±2.6, 11°.38S×166°.31E, h140km±21km, mb4.4/3, Error ellipse: s-maj=22.4km s-min=15.4km az=121.0*

ISC 28 02:45:21.6±1.9, 11°.51S±0°.09×166°.4E±0°.1, h121km±15km, h122km±4.9km: pP-P, n23, σ1§02/23, mb4.1/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.66**	**287**	P	**Pn**	**02 46 57.4**	**+0.3**
	12nm,0.3s,baz=159,slow=8.6,SNR=3.6						
HNR				LR	LR	02 49 22.0	
	comp=Z,71nm,19.2s,baz=58,slow=36						
DZM	**Mont Dzumac**	**10.51**	**180**	*e*P	**Pn**	**02 47 49.6**	**+0.8**
DZM				*e*S	**Sn**	**02 49 42.7**	**-2.0**
CTA	**Charters Tower**	**21.15**	**244**	P	**P**	**02 49 57.2**	**+0.1**
	8.7nm,0.8s,mb4.1,baz=83,slow=9.1,SNR=7.6						
CTAO	**Charters Tower**	**21.15**	**244**	*e*P	**P**	**02 49 59.9**	**+2.8**
	11nm,0.9s,mb4.2						
ARMA	**Armidale**	**23.28**	**214**	*e*P	**P**	**02 50 19.9**	**+1.4**
STKA	**Stephens Creek**	**30.55**	**225**	P	**P**	**02 51 24.5**	**+0.8**
	1.6nm,0.6s,mb4.0,baz=16,slow=8.4,SNR=3.8						
STKA	**Stephens Creek**	**30.55**	**225**	P	**P**	**02 51 24.5**	**+0.8**
WB2	**Warramunga Arr**	**31.91**	**251**	*e*P	**P**	**02 51 34.7**	**-1.1**
WRA	**Warramunga Arr**	**31.92**	**251**	P	**P**	**02 51 35.3**	**-0.7**
	3.0nm,0.6s,mb4.2,baz=84,slow=8.9,SNR=34						
WRA				pP	pP	02 52 03.0	+0.6
	0.5nm,0.5s,baz=81,slow=8.9,SNR=2.0						
RPZ	**Rata Peaks**	**32.34**	**174**	P	**P**	**02 51 40.8**	**+1.5**
	9.4nm,0.8s,mb4.6,baz=34,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**33.16**	**244**	P	**P**	**02 51 45.4**	**-1.2**
	3.4nm,0.7s,mb4.3,baz=73,slow=9.8,SNR=37						
ASAR				pP	pP	02 52 12.8	-0.4
	0.5nm,0.6s,baz=71,slow=9.5,SNR=2.2						
ASAR				PcP	PcP	02 54 27.0	0.0
	0.7nm,0.9s,baz=98,slow=3.8,SNR=4.3						
FITZ	**Fitzroy Crossi**	**39.87**	**256**	P	**P**	**02 52 43.3**	**-0.5**
	3.5nm,0.8s,mb4.2,baz=118,slow=6.4,SNR=7.1						
FITZ	**Fitzroy Crossi**	**39.87**	**256**	*e*P	**P**	**02 52 43.1**	**-0.7**
	6.3nm,0.9s,mb4.5						
FORT	**Forrest**	**40.30**	**236**	*e*P	**P**	**02 52 47.3**	**+0.2**
	10.0nm,0.7s,mb4.8						
FORT	**Forrest**	**40.30**	**236**	*e*P	**P**	**02 52 47.1**	**0.0**
	5.2nm,0.5s,mb4.6						
MBWA	**Marble Bar**	**45.65**	**252**	*e*P	**P**	**02 53 30.3**	**-0.1**
	8.3nm,1.0s,mb4.4						
MEEK	**Meekatharra**	**47.31**	**244**	*e*P	**P**	**02 53 43.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**72.87**	**293**	P	**P**	**02 56 38.8**	**+1.0**
	1.6nm,0.8s,mb3.9,baz=125,slow=5.1,SNR=5.0						
ILAR	**Eielson Array**	**83.75**	**18**	P	**P**	**02 57 35.4**	**-1.3**
	0.2nm,0.7s,mb3.1,baz=216,slow=6.1,SNR=5.8						
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**02 57 48.2**	**+0.4**
	0.3nm,0.6s,mb3.4,baz=215,slow=4.4,SNR=3.4						
MKAR	**Makanchi Array**	**94.29**	**317**	P	**P**	**02 58 26.3**	**-1.0**
	1.2nm,0.7s,mb4.3,baz=94,slow=6.8,SNR=13						
MKAR				pP	pP	02 58 55.9	-2.6
	1.2nm,0.8s,baz=94,slow=6.3,SNR=6.5						
MKAR	**Makanchi Array**	**94.29**	**317**	P	**P**	**02 58 26.3**	**-1.0**
MKAR				pP	pP	02 58 55.9	-2.6
MSKU	**Masuku**	**149.94**	**246**	PKPbc	PKPbc	03 04 58.3	-0.6
	baz=146,slow=3.6						

*IDC **28** 03:06:45.9±6.7, 24°.94S×179°.76E, h506km±81km, mb3.1/6, mb1 3.4/7, mb1mx3.2/17, mbtmp3.1/7, Error ellipse: s-maj=63.2km s-min=24.6km az=5.0*
*NEIC **28** 03:06:47.5±3.1, 25°.09S×179°.77E, h530km±37km, mb3.6/1, Error ellipse: s-maj=35.0km s-min=19.1km az=186.0*
*ISCJB **28** 03:06:49.0±3.2, 25°.3S±0°.2×179°.7E±0°.2, h562km±38km, mb3.6/7, Error ellipse: s-maj=32.2km s-min=23.0km az=25.9*

ISC 28 03:06:49.0±3.1, 25°.1S±0°.2×179°.8E±0°.2, h553km±36km, n13, σ1§07/12, mb3.5/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.32**	**189**	P	**P**	**03 09 39.4**	**-1.6**
	0.6nm,0.3s,baz=328,slow=15,SNR=3.4						
URZ				S	**S**	**03 12 04.1**	**+1.7**
	0.7nm,0.3s,baz=75,slow=21,SNR=9.7						
CTA	**Charters Tower**	**31.29**	**272**	P	**P**	**03 12 24.8**	**+0.3**
	1.4nm,0.3s,mb3.9,baz=90,slow=10,SNR=5.2						
ASAR	**Alice Springs**	**41.64**	**262**	P	**P**	**03 13 49.8**	**+0.2**
	0.8nm,0.3s,mb3.7,baz=88,slow=7.7,SNR=22						
WRA	**Warramunga Arr**	**42.12**	**268**	P	**P**	**03 13 52.7**	**-0.7**
	1.8nm,0.4s,mb3.9,baz=101,slow=8.2,SNR=28						
FITZ	**Fitzroy Crossi**	**50.53**	**267**	P	**P**	**03 14 57.7**	**+0.5**
	1.2nm,0.5s,mb3.5,baz=109,slow=9.2,SNR=4.8						
CASY	**Casey**	**58.95**	**206**	*e*P	**P**	**03 15 55.5**	**+0.4**
	1.8nm,0.6s,mb3.5						
VNA3	**Neumayer Olymp**	**83.70**	**177**	*e*	**P**	**03 18 18.2**	**-1.3**
VNA2	**Neumayer--Watz**	**84.11**	**178**	*e*	**P**	**03 18 20.4**	**-1.2**
	baz=187,slow=4.4						
NVAR	**Mina Array Bea**	**85.76**	**44**	P	**P**	**03 18 29.9**	**-0.1**
	0.2nm,0.6s,mb2.9,baz=222,slow=8.0,SNR=3.5						
TXAR	**Lajitas Array**	**91.24**	**58**	P	**P**	**03 18 57.8**	**+1.9**
	0.4nm,0.7s,mb3.5,baz=189,slow=7.2,SNR=5.1						
TXAR	**Lajitas Array**	**91.24**	**58**	P	**P**	**03 18 57.8**	**+1.9**
ARCES	**ARCESS Array B**	**133.01**	**348**	PKP	PKPdf	03 25 00.6	-0.4
	3.1nm,0.9s,baz=318,slow=1.2,SNR=3.9						
BRTR	**Keskin Array B**	**148.11**	**306**	PKPbc	PKPbc	03 25 34.2	+1.3
	0.4nm,0.6s,baz=129,slow=3.6,SNR=3.8						

*ISK **28** 03:26:07.0, 36°.09N×28°.00E, h7km, ML2.6*
*ATH **28** 03:26:08.9, 36°.23N×28°.09E, h26km±1km, MD3.2/4*
*ISCJB **28** 03:26:09.9±0.6, 36°.20N±0°.04×28°.00E±0°.04, h11km±5km, Error ellipse: s-maj=7.0km s-min=4.6km az=144.4*
*CSEM **28** 03:26:09.5±0.5, 36°.20N×28°.00E, h10km, MD3.2, Error ellipse: s-maj=12.0km s-min=9.0km az=163.0*
*DDA **28** 03:26:15.0, 36°.47N×28°.18E, h7km±7km, Md3.0*

ISC 28 03:26:10.6±0.6, 36°.20N±0°.04×28°.00E±0°.04, h12km±4km, n28, σ1§33/41, 2C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.10**	**82⇑**	*i*PB	**Pg**	**03 26 13.4**	**-0.1**
ARG				*e*SB	**Sg**	**03 26 16.8**	**+1.2**
ARG	**Arkhangelos**	**0.10**	**82⇑**	*i*Pb	**Pg**	**03 26 13.4**	**-0.1**
ARG				*e*Sb	**Sg**	**03 26 16.8**	**+1.2**
DAT	**Datca**	**0.63**	**327**	*e*PG	**Pg**	**03 26 21.5**	**-1.3**
DAT				*e*SG	**Sg**	**03 26 31.7**	**+0.7**
DAT	**Datca**	**0.63**	**327**	*e*Pg	**Pg**	**03 26 21.5**	**-1.3**
DAT				*e*Sg	**Sg**	**03 26 31.7**	**+0.7**
TURN	**Turunc**	**0.83**	**36**	*i* P	**Pg**	**03 26 21.7**	**-4.8**
TURN				*i* S	**Sg**	**03 26 30.9**	**-6.4**
TURN	**Turunc**	**0.83**	**36**	*i* P	**Pg**	**03 26 21.7**	**-4.9**
KARP	**Karpathos**	**0.94**	**226**	*e*PN	**Pg**	**03 26 28.8**	**0.0**
KARP				*e*SN	**Sg**	**03 26 42.5**	**+1.4**
KARP	**Karpathos**	**0.94**	**226**	*e*Pn	**Pg**	**03 26 28.8**	**0.0**
KARP				*e*Sn	**Sg**	**03 26 42.5**	**+1.4**
YER	**Yerkesik**	**0.96**	**14**	*e*PN	**Pg**	**03 26 28.5**	**-0.5**
YER	**Yerkesik**	**0.96**	**14**	*e*Pn	**Pg**	**03 26 28.5**	**-0.5**
FETY	**Fethiye**	**0.97**	**63**	*e*PG	**Pg**	**03 26 26.9**	**-2.4**
FETY				*e*SG	**Sg**	**03 26 41.8**	**-0.3**
FETY	**Fethiye**	**0.97**	**63**	*e*Pg	**Pg**	**03 26 26.9**	**-2.5**
FETY				*e*Sg	**Sg**	**03 26 41.8**	**-0.3**
BODT	**Bodrum**	**1.02**	**327**	*e*PN	**Pg**	**03 26 28.2**	**-2.1**
BODT	**Bodrum**	**1.02**	**327**	*e*Pn	**Pg**	**03 26 28.2**	**-2.1**
AYDN	**Tasoluk**	**1.46**	**356**	*i* P	**Pn**	**03 26 37.3**	**+0.6**
AYDN				*i* S	**Sn**	**03 26 56.8**	**+1.1**
AYDN	**Tasoluk**	**1.46**	**356**	*i

VLX				*e*Sn		**Sn**	03 31 55.8	-0.6
DSF	**Desfina**	**0.91**	**60**	P		**Pg**	03 31 41.4	-1.4
DSF				S		**Sg**	03 31 54.2	-0.5
DSF	**Desfina**	**0.91**	**60**	P		**Pg**	03 31 41.4	-1.4
DSF				S		**Sg**	03 31 54.2	-0.5
EVR	**Evrytania**	**0.98**	**13**	*e*PN		**Pg**	03 31 42.9	-1.3
EVR				*e*SN		**Sg**	03 31 56.1	-1.0
EVR	**Evrytania**	**0.98**	**13**	*e*Pn		**Pg**	03 31 42.9	-1.3
EVR				*e*Sn		**Sg**	03 31 56.1	-1.0
PYL	**PYLOS**	**1.07**	**171**	*e*PN		**Pg**	03 31 45.2	-0.6
PYL				*e*SN		**Sg**	03 32 00.9	+1.1
PYL	**PYLOS**	**1.07**	**171**	P		**Pg**	03 31 44.7	-1.1
PYL	**PYLOS**	**1.07**	**171**	P		**Pg**	03 31 44.7	-1.1
PYL	**PYLOS**	**1.07**	**171**	*e*Pn		**Pg**	03 31 45.2	-0.6
PYL				*e*Sn		**Sg**	03 32 00.9	+1.1
LKD2	**Lefkada island**	**1.08**	**321**	P		**Pg**	03 31 44.2	-1.7
LKD2				S		**Sg**	03 32 01.6	+1.6
LKD2	**Lefkada island**	**1.08**	**321**	P		**Pg**	03 31 44.2	-1.7
LKD2				S		**Sg**	03 32 01.6	+1.6
LTK	**Loutraki**	**1.14**	**86**	*e*PN		**Pn**	03 31 45.9	-1.1
LTK				*e*SN		**Sn**	03 32 02.5	0.0
LTK	**Loutraki**	**1.14**	**86**	P		**Pb**	03 31 45.8	-1.0
LTK				S		**Sb**	03 32 02.3	+0.7
LTK	**Loutraki**	**1.14**	**86**	*e*Pn		**Pn**	03 31 45.9	-1.1
LTK				*e*Sn		**Sn**	03 32 02.5	0.0
AGG	**Agios Georgios**	**1.24**	**30**	P		**Pn**	03 31 47.1	-1.2
AGG				S		**Sb**	03 32 05.2	+0.8
AGG	**Agios Georgios**	**1.24**	**30**	P		**Pn**	03 31 47.1	-1.2
AGG				S		**Sb**	03 32 05.2	+0.8
LKR	**Lokris**	**1.35**	**59**	P		**Pn**	03 31 49.1	-0.8
LKR				S		**Sb**	03 32 09.7	+2.0
LKR	**Lokris**	**1.35**	**59**	P		**Pn**	03 31 49.1	-0.8
LKR				S		**Sb**	03 32 09.7	+2.0
ATAL	**Atalanti**	**1.39**	**57**	P		**Pn**	03 31 50.8	+0.4
ATAL				S		**Sn**	03 32 09.6	+1.0
ATAL	**Atalanti**	**1.39**	**57**	P		**Pn**	03 31 50.8	+0.4
ATAL				S		**Sn**	03 32 09.6	+1.0
DID	**Didima**	**1.43**	**108**	*e*PN		**Pn**	03 31 50.8	-0.1
DID	**Didima**	**1.43**	**108**	P		**Pn**	03 31 50.8	-0.1
DID				S		**Sn**	03 32 12.0	+2.4
DID	**Didima**	**1.43**	**108**	P		**Pn**	03 31 50.8	-0.1
DID				S		**Sn**	03 32 12.0	+2.4
THL	**Klokotos Trika**	**1.65**	**13**	P		**Pn**	03 31 54.6	+0.6
THL	**Klokotos Trika**	**1.65**	**13**	P		**Pn**	03 31 54.6	+0.6
THL	**Klokotos Trika**	**1.65**	**13**	*e*Pn		**Pn**	03 31 54.9	+0.9
IGT	**Igoumenitsa**	**1.83**	**330**	P		**Pn**	03 31 56.9	+0.4
IGT	**Igoumenitsa**	**1.83**	**330**	P		**Pn**	03 31 56.9	+0.4
KYTH	**Kithira**	**2.06**	**144**	*e*PB		**Pb**	03 32 00.5	-2.0
KEK	**Kerkira**	**2.21**	**323**	P		**Pn**	03 32 02.4	+0.7
KEK	**Kerkira**	**2.21**	**323**	P		**Pn**	03 32 02.4	+0.7

IDC 28 03:49:54.4±5.6, 23°.95N×108°.47W, h0km, mb3.3/1, mb1 3.7/3, mb1mx3.5/23, mbtmp3.2/3, ML3.4/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/15, Error ellipse: s-maj=85.2km s-min=27.4km az=150.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.87**	**38**	Pn	Pn	03 51 38.5	+2.1
	0.2nm,0.3s,baz=206,slow=15,SNR=11						
TXAR				Sn	Sn	03 52 57.4	+2.0
	0.0nm,0.3s,baz=218,slow=20,SNR=2.4						
TXAR				Lg		03 53 29.0	
	0.1nm,0.3s,baz=284,slow=41,SNR=1.8						
CMIG	**Matias Romero**	**14.44**	**116**	LR	LR	03 59 14.1	
	comp=Z,50nm,18.5s,baz=195,slow=39						
NVAR	**Mina Array Bea**	**16.69**	**332**	Pn	Pn	03 53 53.1	+3.4
	0.1nm,0.3s,baz=156,slow=11,SNR=6.0						
APG	**El Apazote**	**19.15**	**114**	LR	LR	04 01 45.0	
	comp=Z,55nm,20.4s,baz=260,slow=37						
ILAR	**Eielson Array**	**47.78**	**339**	P	P	03 58 32.5	-0.6
	0.3nm,0.7s,baz=131,slow=7.3,SNR=3.6						

*ISCJB **28** 04:33:09.8±4.5, 1°.5N±0°.2×124°.8E±0°.5, h249km±44km, mb3.7/8, Error ellipse: s-maj=90.3km s-min=13.3km az=155.9*
*NEIC **28** 04:33:11.5±0.7, 1°.45N×124°.85E, h250km, mb3.7/2, Error ellipse: s-maj=60.5km s-min=10.0km az=68.0*
*IDC **28** 04:33:15.0±3.1, 1°.35N×124°.68E, h289km±31km, mb3.4/6, mb1 3.4/7, mb1mx3.2/21, mbtmp3.3/7, Error ellipse: s-maj=71.0km s-min=10.2km az=67.0*
ISC 28 04:33:13.9±3.8, 1°.4N±0°.2×124°.8E±0°.5, h273km±37km, n11, σ0§59/12, mb3.6/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.38**	**178**	P	**P**	**04 37 20.0**	**0.0**
	0.1nm,0.3s,baz=348,slow=9.3,SNR=5.2						
WRA	**Warramunga Arr**	**23.17**	**157**	P	**P**	**04 37 56.7**	**+0.1**
	3.8nm,0.5s,mb4.0,baz=336,slow=10.0,SNR=64						
WRA				S	**S**	04 41 47.5	-0.1
	0.8nm,0.9s,baz=338,slow=16,SNR=2.9						
ASAR	**Alice Springs**	**26.43**	**161**	P	**P**	**04 38 25.9**	**0.0**
	0.7nm,0.5s,mb3.3,baz=341,slow=7.4,SNR=14						
STKA	**Stephens Creek**	**36.71**	**156**	P	**P**	**04 39 55.2**	**0.0**
	2.7nm,0.8s,mb3.7,baz=353,slow=8.1,SNR=4.4						
STKA	**Stephens Creek**	**36.71**	**156**	P	**P**	**04 39 55.2**	**0.0**
SONM	**Songino Array**	**48.94**	**344**	P	**P**	**04 41 33.2**	**+0.5**
	1.1nm,0.7s,mb3.3,baz=158,slow=8.6,SNR=6.6						
MKAR	**Makanchi Array**	**58.42**	**327**	P	**P**	**04 42 39.6**	**-1.6**
	1.3nm,0.4s,mb3.8,baz=123,slow=8.5,SNR=19						
EKS2	**Erkin-Say**	**61.32**	**319**	*e*P	**P**	**04 43 01.6**	**+0.7**
	0.7nm,0.5s,mb3.5						
KURK	**Kurchatov**	**62.71**	**329**	*e*P	**P**	**04 43 09.4**	**-0.5**
	0.8nm,0.3s,mb3.8						
AKTK	**Aktyubinsk**	**74.31**	**322**	P	**P**	**04 44 21.9**	**+0.4**
AKTO	**Aktyubinsk**	**74.31**	**322**	P	**P**	**04 44 21.9**	**+0.4**
	0.8nm,0.4s,mb3.7,baz=97,slow=8.1,SNR=5.0						

*CSEM **28** 04:38:56.5±0.2, 42°.73N×46°.36E, h5km, mb3.9, Error ellipse: s-maj=6.8km s-min=2.8km az=17.0*
*MOS **28** 04:38:57.1±1.9, 42°.74N×46°.43E, h21km, mb3.9/1, Error ellipse: s-maj=12.5km s-min=6.7km az=24.3*
ISC 28 04:38:56.9±0.4, 42°.68N±0°.03×46°.33E±0°.03, h8km±5km, n43, σ1§08/76, 7C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNCR	**Uncukul**	**0.34**	**85**	⇑*i*PG	**Pg**	**04 39 02.3**	**-1.3**
UNCR				*e*S	**Sg**	**04 39 08.3**	**+0.1**
UNCR				pmax	pmax		
	comp=Z,115nm,0.2s						
UNCR	**Uncukul**	**0.34**	**85**	*i* Pg	**Pg**	**04 39 02.3**	**-1.3**
	comp=Z,115nm,0.2s						
UNCR				*e*Sg	**Sg**	04 39 08.3	+0.1
KRNR	**Karanay**	**0.45**	**71**	⇑*i*PG	**Pg**	04 39 04.2	-1.4
KRNR				*i* S	**Sg**	**04 39 11.8**	**+0.3**
KRNR				pmax	pmax		
	comp=Z,86nm,0.2s						
KRNR	**Karanay**	**0.45**	**71**	*i* Pg	**Pg**	**04 39 04.2**	**-1.4**
	comp=Z,86nm,0.2s						
KRNR				*i* Sg	**Sg**	**04 39 11.8**	**+0.3**
DBC	**Dubki**	**0.50**	**47**	*e*PG	**Pg**	**04 39 05.0**	**-1.6**
DBC				*e*S	**Sg**	**04 39 13.0**	**-0.1**
DBC	**Dubki**	**0.50**	**47**	*e*Pg	**Pg**	**04 39 05.0**	**-1.6**
DBC				*e*Sg	**Sg**	**04 39 13.0**	**-0.1**
GRO	**Groznyy**	**0.77**	**326**	⇓*i*PG	**Pg**	**04 39 08.5**	**-3.2**
GRO				*i* S	**Sg**	**04 39 19.2**	**-2.5**
GRO	**Groznyy**	**0.77**	**326**	*i* Pg	**Pg**	**04 39 08.5**	**-3.2**
GRO				*i* Sg	**Sg**	**04 39 19.2**	**-2.5**
KMKR	**Kumukh**	**0.79**	**134**	*e*PG	**Pg**	**04 39 11.0**	**-1.2**
KMKR				*e*S	**Sg**	**04 39 22.0**	**-0.4**
KMKR				pmax	pmax		
	comp=Z,129nm,0.3s						
KMKR	**Kumukh**	**0.79**	**134**	*e*Pg	**Pg**	**04 39 11.0**	**-1.2**
	comp=Z,129nm,0.3s						
KMKR				*e*Sg	**Sg**	**04 39 22.0**	**-0.4**
MAK	**Makhachkala**	**0.91**	**72**	*e*PG	**Pg**	**04 39 15.4**	**+1.1**
MAK				*e*		04 39 28.2	
MAK				smax			
	comp=N,610nm,0.5s						
MAK				smax			
	comp=E,740nm,0.6s						
MAK	**Makhachkala**	**0.91**	**72**	*e*Pg	**Pg**	**04 39 15.4**	**+1.1**
	comp=E,610nm,0.5s						
MNSR	**Manas**	**1.02**	**88**	PG	**Pg**	**04 39 18.8**	**+2.2**
URKR	**Urkarakh**	**1.09**	**118**	*e*PG	**Pg**	**04 39 17.5**	**-0.4**
URKR				*e*S	**Sg**	**04 39 34.0**	**+1.9**
URKR				pmax	pmax		
	comp=Z,67nm,0.2s						
URKR	**Urkarakh**	**1.09**	**118**	*e*Pg	**Pg**	**04 39 17.5**	**-0.4**
	comp=Z,67nm,0.2s						
URKR				*e*Sg	**Sg**	**04 39 34.0**	**+1.9**
SNJR	**Sundja**	**1.18**	**290**	*e*PG	**Pg**	**04 39 19.7**	**+0.1**
SNJR				*e*S	**Sg**	**04 39 37.2**	**+2.2**
SNJR	**Sundja**	**1.18**	**290**	*e*Pg	**Pg**	**04 39 19.7**	**+0.1**
SNJR				*e*Sg	**Sg**	**04 39 37.2**	**+2.2**
VLKR	**Vladikavkaz**	**1.27**	**287**	⇑*i*PG	**Pg**	**04 39 20.8**	**-0.5**
VLKR				*i* S	**Sg**	**04 39 39.3**	**+1.5**
VLKR	**Vladikavkaz**	**1.27**	**287**	*i* Pg	**Pg**	**04 39 20.8**	**-0.5**
VLKR				*i* Sg	**Sg**	**04 39 39.3**	**+1.5**
DGRG	**David-gareji**	**1.42**	**210**	P	**Pn**	**04 39 21.6**	**-1.4**
DGRG				S	**Sn**	**04 39 41.8**	**-0.1**
BTKR	**Batakoyurt**	**1.48**	**298**	*e*PG	**Pg**	**04 39 24.6**	**-0.8**
BTKR				*i* S	**Sg**	**04 39 45.5**	**+0.9**
BTKR	**Batakoyurt**	**1.48**	**298**	*e*Pg	**Pg**	**04 39 24.6**	**-0.8**
BTKR				*i* Sg	**Sg**	**04 39 45.5**	**+0.9**
MTA	**Mtatsminda**	**1.51**	**230**	P	**Pn**	**04 39 23.0**	**-1.3**
MTA				S	**Sn**	**04 39 43.7**	**-0.5**
TBLG	**Delisi**	**1.52**	**232**	*e*PG	**Pn**	**04 39 23.0**	**-1.4**
TBLG	**Delisi**	**1.52**	**232**	P	**Pn**	**04 39 23.0**	**-1.4**
TBLG				S	**Sn**	**04 39 44.2**	**-0.1**
TRKR	**Terskaya**	**1.57**	**312**	⇑*i*PG	**Pg**	**04 39 25.7**	**+0.7**
TRKR				*i* S	**Sg**	**04 39 48.0**	**+0.7**
TRKR	**Terskaya**	**1.57**	**312**	*i* Pg	**Pg**	**04 39 25.7**	**+0.7**
TRKR				*i* Sg	**Sg**	**04 39 48.0**	**+0.7**
ARNR	**Ardon**	**1.59**	**289**	⇓*e*PN	**Pn**	**04 39 26.0**	**+0.6**
ARNR				*e*S	**Sg**	**04 39 48.2**	**+0.1**
ARNR	**Ardon**	**1.59**	**289**	*e*Pn	**Pn**	**04 39 26.0**	**+0.6**
ARNR				*e*Sg	**Sg**	**04 39 48.2**	**+0.1**
KMSR	**Komsomolskaya**	**1.65**	**295**	⇓*i*PN	**Pn**	**04 39 26.9**	**+0.8**
KMSR				*e*S	**Sg**	**04 39 50.2**	**+0.3**
KMSR	**Komsomolskaya**	**1.65**	**295**	*i* Pn	**Pn**	**04 39 26.9**	**+0.8**
KMSR				*e*Sg	**Sg**	**04 39 50.2**	**+0.3**
KORR	**Kora**	**1.71**	**284**	*e*PN	**Pn**	**04 39 27.6**	**+0.6**
KORR				*i* S	**Sg**	**04 39 51.5**	**-0.5**
KORR	**Kora**	**1.71**	**284**	*e*Pn	**Pn**	**04 39 27.6**	**+0.6**
KORR				*i* Sg	**Sg**	**04 39 51.5**	**-0.5**
KSMR	**Kasumkent**	**1.72**	**128**	*e*PN	**Pn**	**04 39 27.0**	**-0.1**
KSMR				*e*S	**Sg**	**04 39 54.0**	**+1.9**
KSMR	**Kasumkent**	**1.72**	**128**	*e*Pn	**Pn**	**04 39 27.0**	**-0.1**
KSMR				*e*Sg	**Sg**	**04 39 54.0**	**+1.9**
ZEI	**Tsey**	**1.80**	**274**	⇑*i*PN	**Pn**	**04 39 28.3**	**+0.1**
ZEI	**Tsey**	**1.80**	**274**	*i* Pn	**Pn**	**04 39 28.3**	**+0.1**
PRTR	**Priterechnaya**	**1.84**	**306**	⇑*i*PN	**Pn**	**04 39 29.5**	**+0.7**
PRTR				*e*S	**Sg**	**04 39 54.9**	**-1.2**
PRTR	**Priterechnaya**	**1.84**	**306**	*i* Pn	**Pn**	**04 39 29.5**	**+0.7**
PRTR				*e*Sg	**Sg**	**04 39 54.9**	**-1.2**
LSNR	**Lesken**	**1.94**	**289**	*e*PN	**Pn**	**04 39 30.9**	**+0.7**
LSNR	**Lesken**	**1.94**	**289**	*e*Pn	**Pn**	**04 39 30.9**	**+0.7**
DIGR	**Digorskoe uzhe**	**2.04**	**277**	⇑*i*PN	**Pn**	**04 39 31.9**	**+0.4**
DIGR	**Digorskoe uzhe**	**2.04**	**277**	*i* Pn	**Pn**	**04 39 31.9**	**+0.4**

*IDC **28** 04:43:37.3±2.4, 54°.22N×86°.37E, h0km, mb1 3.4/1, mb1mx3.0/25, mbtmp3.4/1, ML3.4/1, Error ellipse: s-maj=19.5km s-min=2.0km az=74.0*
ISC 28 04:43:41.7±2.6, 54°.1N±0°.1×86°.2E±0°.2, h10km, n5, σ1§33/8, 3C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.83**	**260**	Pg	**Pg**	**04 43 55.3**	**-2.4**
	4.3nm,0.3s,baz=76,slow=17,SNR=26						
ZALV				Lg		04 44 09.3	
	14nm,0.3s,baz=77,slow=33,SNR=52						
KURK	**Kurchatov**	**5.75**	**237**	⇑Pn	**Pn**	**04 45 05.1**	**-1.8**
	2.5nm,1.0s						
KURK				⇑Sn	**Sn**	**04 46 14.5**	**+1.6**
	1.4nm,0.8s						
KURK				⇓Lg		04 46 42.7	
	6.9nm,0.8s						
MK31	**Makanchi Array**	**7.73**	**200**	⇓Pn	**Pn**	**04 45 35.1**	**+0.9**
	0.6nm,0.5s,baz=25,slow=13,SNR=14						
MK31				Sn	**Sn**	**04 47 00.8**	**-0.9**
	0.5nm,0.5s,baz=254,slow=43,SNR=2.7						
MK31				⇑Lg		04 47 35.5	
	3.6nm,0.8s,baz=28,slow=30,SNR=4.8						
MKAR	**Makanchi Array**	**7.73**	**200**	Pn	**Pn**	**04 45 34.3**	**+0.1**
	0.6nm,0.3s,baz=24,slow=13,SNR=17						
MKAR				Sn	**Sn**	**04 47 01.9**	**+0.2**
	0.2nm,0.3s,baz=22,slow=24,SNR=6.9						
MKAR				Lg		04 47 46.9	
	0.1nm,0.3s,baz=29,slow=31,SNR=8.0						
BVAR	**Borovoye Array**	**9.48**	**270**	Pn	**Pn**	**04 45 59.5**	**+1.5**
	0.2nm,0.3s,baz=76,slow=12,SNR=2.5						

*HLW **28** 05:07:50.2, 34°.92N×28°.61E, h33km±41km, Md3.3*
*ISCJB **28** 05:07:51.9±0.8, 34°.64N±0°.04×28°.9E±0°.1, h33km, Error ellipse: s-maj=13.0km s-min=5.0km az=167.7*
*CSEM **28** 05:08:06.6, 36°.07N×28°.39E, h7km, MD2.9, After DDA*
*DDA **28** 05:08:06.6, 36°.07N×28°.39E, h7km±6km, Md2.9*
ISC 28 05:07:53.4±0.8, 34°.69N±0°.04×28°.8E±0°.1, h35km, n13, σ1§11/21, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**1.67**	**22**	*i* P	**Pn**	**05 08 20.8**	**+0.7**
AKAS				*i* S	**Sn**	**05 08 40.5**	**+0.3**
AKAS	**Kas**	**1.67**	**22**	*i* P	**Pn**	**05 08 20.8**	**+0.7**
AKAS				*i* S	**Sn**	**05 08 40.5**	**+0.3**
GOLH	**Golhisar**	**2.61**	**13**	*i* P	**Pn**	**05 08 34.0**	**+0.9**
GOLH				*i* S	**Sn**	**05 09 03.9**	**+0.4**
GOLH	**Golhisar**	**2.61**	**13**	*i* P	**Pn**	**05 08 34.0**	**+0.9**
GOLH				*i* S	**Sn**	**05 09 03.9**	**+0.4**
DNZL	**Cakiroluk**	**3.00**	**3**	*i* P	**Pn**	**05 08 38.0**	**-0.4**
DNZL				*i* S	**Sn**	**05 09 10.1**	**-3.0**
DNZL	**Cakiroluk**	**3.00**	**3**	*i* P	**Pn**	**05 08 38.0**	**-0.4**
DNZL				*i* S	**Sn**	**05 09 10.1**	**-3.0**
AYDN	**Tasoluk**	**3.06**	**346**	*i* P	**Pn**	**05 08 38.3**	**-1.0**
AYDN	**Tasoluk**	**3.06**	**346**	*i* P	**Pn**	**05 08 38.3**	**-1.0**
HMAT	**Matruh**	**3.87**	**203**	P	**Pn**	**05 08 49.8**	**-0.6**
	baz=199						
AMAG	**Maghara**	**5.47**	**136**	P	**Pn**	**05 09 13.5**	**+1.2**
	baz=136						
AMAG				S	**Sn**	**05 10 12.5**	**-1.5**
	baz=136						
GLL	**Jalalah**	**5.65**	**154**	P	**Pn**	**05 09 15.9**	**+1.0**
	baz=152						
HRSH	**Kfar Ka'horesh**	**5.73**	**108**	P	**Pn**	**05 09 15.1**	**-0.9**
	baz=131						
HNKL	**Nakhl**	**6.44**	**136**	P	**Pn**	**05 09 27.8**	**+2.1**
	baz=136						
HNKL				S	**Sn**	**05 10 37.2**	**-0.8**
	baz=136						

IDC 28 05:11:47.8±2.4, 27°.65S×176°.33W, h0km, mb3.8/6, mb1 4.1/6, mb1mx4.0/14, mbtmp3.8/6, MS3.9/5, Ms1 3.9/5, ms1mx3.4/26, Error ellipse: s-maj=97.0km s-min=31.4km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**16.38**	**71**	LR	LR	05 19 28.9	
	comp=Z,215nm,21.6s,baz=266,slow=28						
HNR	**Honiara**	**28.78**	**304**	LR	LR	05 27 32.2	
	comp=Z,173nm,18.4s,baz=155,slow=33						
CTA	**Charters Tower**	**34.93**	**274**	LR	LR	05 31 00.5	
	comp=Z,212nm,20.3s,baz=49,slow=33						
STKA	**Stephens Creek**	**36.60**	**253**	LR	LR	05 33 14.7	
	comp=Z,276nm,18.5s,baz=27,slow=35						
ASAR	**Alice Springs**	**44.79**	**263**	P	P	05 20 01.9	-1.6
	0.6nm,0.7s,baz=118,slow=8.0,SNR=6.2						
WRA	**Warramunga Arr**	**45.54**	**269**	P	P	05 20 09.1	-0.5
	0.3nm,0.3s,baz=115,slow=8.1,SNR=5.4						
WRA				LR	LR	05 39 35.0	
	comp=Z,161nm,18.7s,baz=80,slow=37						
MJAR	**Matsushiro Arr**	**76.86**	**324**	P	P	05 23 41.0	-0.6
	1.4nm,0.7s,baz=167,slow=7.2,SNR=5.0						
KSRS	**Korea Array**	**83.23**	**319**	P	P	05 24 17.5	+1.4
	2.0nm,1.0s,baz=114,slow=5.6,SNR=5.4						
NVAR	**Mina Array Bea**	**85.23**	**42**	P	P	05 24 25.4	-0.8
	0.7nm,1.0s,baz=222,slow=10,SNR=4.8						
ILAR	**Eielson Array**	**94.94**	**12**	P	P	05 25 09.7	-1.7
	0.5nm,0.9s,baz=205,slow=4.0,SNR=3.7						
AKASG	**Malin Array Be**	**149.91**	**327**	PKPbc	PKPbc	05 31 41.1	+1.4
	0.4nm,0.2s,baz=35,slow=2.3,SNR=3.8						
BRTR	**Keskin Array B**	**152.44**	**304**	PKPbc	PKPbc	05 31 48.1	+2.1
	0.6nm,0.7s,baz=340,slow=10,SNR=2.6						
BRTR				PKPab	PKPab	05 31 57.1	+0.9
	1.0nm,0.7s,baz=20,slow=3.9,SNR=3.7						

*BJI **28** 05:40:18.6, 0°.58S×121°.99E, h217km, mb4.6/6*
*ISCJB **28** 05:40:23.4±0.7, 0°.25N±0°.06×121°.61E±0°.07, h194km±7km, mb4.2/26, Error ellipse: s-maj=12.5km s-min=9.0km az=159.0*
*IDC **28** 05:40:26.4±3.8, 0°.24N×121°.60E, h208km±39km, mb3.8/14, mb1 3.8/15, mb1mx3.8/21, mbtmp3.7/15, Error ellipse: s-maj=22.1km s-min=10.0km az=70.0*
*NEIC **28** 05:40:27.2±2.2, 0°.20N×121°.57E, h218km±23km, mb4.5/12, Error ellipse: s-maj=13.1km s-min=6.1km az=53.0*
*DJA **28** 05:40:35, 0°.44N×121°.87E, h38km, MLv4.6/3*
ISC 28 05:40:24.5±0.7, 0°.23N±0°.06×121°.60E±0°.08, h187km±7km, n43, σ0§72/44, mb4.3/26, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.41**	**54**	S	**Pn**	**05 40 48.0**	**-1.8**
TOLI	**Toli-Toli**	**1.20**	**317**	S	**Sn**	**05 41 12.9**	**-4.7**
LUWI	**Luwuk**	**1.72**	**137**	P	**Pn**	**05 40 59.6**	**+0.4**
KMSI	**Cibinong**	**2.40**	**82**	P	**Pn**	**05 41 07.7**	**+1.3**
KMSI				S	**Sn**	**05 41 39.8**	**+0.8**
MNI	**Manado**	**3.45**	**70**	P	**Pn**	**05 41 19.3**	**+0.3**
MNI				S	**Sn**	**05 42 00.4**	**-1.1**
KBKI	**Kotabaru**	**6.47**	**237**	P	**Pn**	**05 42 05.1**	**+7.4**
KAKA	**Kakadu**	**16.76**	**140**	*e*P	**Pn**	**05 44 08.3**	**-0.4**
	18nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.65**	**168**	P	**P**	**05 44 28.7**	**+0.4**
	0.3nm,0.3s,baz=25,slow=4.9,SNR=14						
RGRI	**Rengat**	**19.28**	**268**	P	**P**	**05 44 42.8**	**+7.6**
MBWA	**Marble Bar**	**21.34**	**185**	*e*P	**P**	**05 44 56.5**	**-0.5**
	7.8nm,1.0s,mb4.0						
WRA	**Warramunga Arr**	**23.62**	**149**	P	**P**	**05 45 18.7**	**0.0**
	1.1nm,0.6s,mb3.6,baz=330,slow=9.9,SNR=20						
WRA				PcP	PcP	05 48 57.4	-0.9
	0.2nm,0.8s,baz=12,slow=2.0,SNR=3.1						
ASAR	**Alice Springs**	**26.59**	**154**	P	**P**	**05 45 46.3**	**+0.8**
	0.6nm,0.6s,mb3.4,baz=339,slow=10,SNR=17						
ASAR				PcP	PcP	05 49 04.3	-0.6
	0.3nm,0.3s,baz=350,slow=2.5,SNR=4.7						
CMAR	**Chiang Mai Arr**	**28.70**	**310**	P	**P**	**05 46 04.7**	**+0.4**
	3.6nm,0.8s,mb4.2,baz=137,slow=6.7,SNR=20						
ENH	**Enshi**	**32.02**	**340**	*e*P	**P**	**05 46 34.3**	**+0.9**
	10nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**37.12**	**151**	P	**P**	**05 47 17.0**	**-0.1**
	2.0nm,0.9s,mb3.7,baz=333,slow=12,SNR=4.6						
KSRS	**Korea Array**	**37.49**	**8**	P	**P**	**05 47 20.2**	**+0.1**
	1.3nm,0.5s,mb3.8,baz=188,slow=9.9,SNR=5.0						
MJAR	**Matsushiro Arr**	**39.27**	**21**	P	**P**	**05 47 33.6**	**-1.4**
	2.2nm,0.6s,mb3.9,baz=197,slow=9.0,SNR=8.1						
ODAN	**Odare**	**42.22**	**312**	*e*P	**P**	**05 47 59.8**	**+0.5**
TAPN	**Taplejung**	**42.25**	**312**	*e*P	**P**	**05 47 59.9**	**+0.3**
GTA	**Gaotai**	**43.79**	**335**	*e*P	**P**	**05 48 13.0**	**+1.4**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.7						
GUN	**Gumba**	**43.92**	**312**	*e*P	**P**	**05 48 13.0**	**+0.1**
	comp=Z,30nm,0.6s,mb5.1						
PKI	**Pulchoki**	**44.09**	**311**	*e*P	**P**	**05 48 14.4**	**+0.1**
PKIN	**Phulchoki**	**44.10**	**311**	*e*P	**P**	**05 48 14.4**	**0.0**
KKN	**Kakani**	**44.30**	**311**	*e*P	**P**	**05 48 16.1**	**+0.1**
	comp=Z,7.3nm,0.6s,mb4.5						
DMN	**Daman**	**44.34**	**311**	*e*P	**P**	**05 48 16.1**	**-0.1**
KOLN	**Koldanda**	**45.56**	**310**	*e*P	**P**	**05 48 25.9**	**0.0**
	comp=Z,4.8nm,0.3s,mb4.7						
DANN	**Dangsing**	**45.74**	**311**	*e*P	**P**	**05 48 27.3**	**0.0**
	comp=Z,20nm,0.5s,mb5.0						
ASAJ	**Asahikawa**	**47.52**	**20**	P	**P**	**05 48 41.2**	**+0.4**
	comp=Z,6.8nm,0.4s,mb4.6,baz=237,slow=11,SNR=13						
ULN	**Ulaanbaatar**	**49.10**	**347**	*e*P	**P**	**05 48 53.9**	**+1.1**
	comp=Z,8.2nm,0.7s,mb4.5						
ULN	**Ulaanbaatar**	**49.10**	**347**	P	**P**	**05 48 54.0**	**+1.2**

NWEZ	Newall Road	0.49	343	PN	Pn	06 20 23.2	+0.1
PKE	Pukeiti	0.55	355	PN	Pn	06 20 23.4	-0.1
DREZ	Durham Road	0.56	12	Pn	Pn	06 20 23.5	-0.1
DREZ				SN	Sn	06 20 40.0	-0.1
MHEZ	Mangahewa	0.70	18	PN	Pn	06 20 24.5	+0.1
MHEZ				SN	Sn	06 20 41.1	-0.4
VRZ	Vera Road	0.82	42	PN	Pn	06 20 24.7	-0.5
VRZ				SN	Sn	06 20 42.2	-0.9
DUWZ	D'Urville Isla	1.06	185	PN	Pn	06 20 27.1	0.0
DUWZ				SN	Sn	06 20 45.0	-1.6
PKVZ	Pokaka	1.10	66	PN	Pn	06 20 27.2	-0.2
PKVZ				SN	Sn	06 20 46.6	-0.4
MTVZ	Mangateitei	1.15	73	PN	Pn	06 20 28.0	0.0
FWVZ	Far West T-bar	1.26	68	PN	Pn	06 20 28.8	-0.2
DRZ	Dome Shelter	1.26	69	PN	Pn	06 20 29.7	+0.7
DRZ				SN	Sn	06 20 49.7	0.0
WNVZ	Wahianoa	1.27	71	PN	Pn	06 20 29.2	+0.2
WPVZ	Whakapapa	1.27	66	PN	Pn	06 20 29.1	0.0
KIW	Kapiti Island	1.30	150	PN	Pn	06 20 29.3	0.0
NGZ	Ngauruhoe	1.33	65	PN	Pn	06 20 29.5	-0.1
TUVZ	Tukino	1.33	70	PN	Pn	06 20 29.8	+0.2
WTVZ	West Tongariro	1.34	63	PN	Pn	06 20 29.6	-0.2
MOVZ	Moawhango	1.36	76	PN	Pn	06 20 29.4	-0.5
OGWZ	Otaki Gorge	1.37	142	PN	Pn	06 20 30.2	+0.2
HIZ	Hauiti	1.38	27	PN	Pn	06 20 29.7	-0.5
OTVZ	Oturere	1.38	66	PN	Pn	06 20 30.1	0.0
KRVZ	Karewarewa	1.39	63	PN	Pn	06 20 30.1	-0.2
POWZ	Post Office Ro	1.47	117	PN	Pn	06 20 31.1	+0.1
TCW	Tory Channel	1.48	173	PN	Pn	06 20 31.5	+0.3
KATZ	Kakaramea	1.49	60	PN	Pn	06 20 31.3	+0.1
MRZ	Mangatainoka R	1.49	129	PN	Pn	06 20 31.2	0.0
TSZ	Takapari Road	1.50	103	PN	Pn	06 20 31.9	+0.5
NNZ	Nelson	1.56	199	PN	Pn	06 20 31.8	-0.2
CAW	Cannon Point	1.57	151	PN	Pn	06 20 32.3	+0.2
BHHZ	Black Hill Sta	1.57	81	PN	Pn	06 20 32.0	-0.1
HOWZ	Holdsworth Sta	1.61	136	PN	Pn	06 20 32.5	0.0
WEL	Wellington	1.64	161	PN	Pn	06 20 32.6	-0.2
SNZO	South Karori	1.64	163	PN	Pn	06 20 32.9	0.0
PNHZ	Pukenui	1.66	97	Pn	Pn	06 20 33.3	+0.2
DVHZ	Dannevirke	1.72	110	PN	Pn	06 20 33.6	-0.1
TIWZ	Tintock	1.74	127	PN	Pn	06 20 34.0	0.0
BHW	Baring Head	1.78	160	PN	Pn	06 20 34.2	-0.2
MTW	Mount Morrison	1.80	142	PN	Pn	06 20 34.4	-0.2
WPHZ	Waipukurau	1.87	101	PN	Pn	06 20 35.4	+0.1
MSWZ	Moikau Station	1.91	152	PN	Pn	06 20 35.7	-0.1
TMWZ	Te Maipa	1.96	135	PN	Pn	06 20 36.4	-0.1
BSWZ	Blackbirch Sta	1.98	184	PN	Pn	06 20 36.8	+0.2
PLWZ	Palliser	2.04	154	PN	Pn	06 20 37.1	-0.3
PRHZ	Porangahau	2.05	106	PN	Pn	06 20 37.5	0.0
TRWZ	Traveller	2.07	144	PN	Pn	06 20 37.5	-0.3
KAHZ	Kahuranaki	2.18	92	PN	Pn	06 20 39.0	0.0
PXZ	Pawanui	2.18	99	PN	Pn	06 20 38.8	-0.3
THZ	Tophouse	2.20	203	PN	Pn	06 20 38.7	-0.6
DSZ	Denniston Nort	2.63	220	PN	Pn	06 20 43.9	-0.7
KHZ	Kahutara	2.70	188	PN	Pn	06 20 44.8	-0.6
URZ	Urewera	2.81	59	PN	Pn	06 20 45.5	-1.2
KNZ	Kokohu	2.90	77	PN	Pn	06 20 46.8	-1.1
MHGZ	Mahia Peninsul	3.04	80	PN	Pn	06 20 48.8	-0.8
LTZ	Lake Taylor	3.32	203	PN	Pn	06 20 52.5	-0.7
CRLZ	Canterbury Las	3.98	195	PN	Pn	06 20 59.2	-2.5
MQZ	McQueen's Vall	4.10	194	PN	Pn	06 21 00.4	-2.9
WVZ	Waitaha Valley	4.16	216	PN	Pn	06 21 03.0	-1.1
FOZ	Fox Glacier	5.03	219	PN	Pn	06 21 13.1	-2.3
ODZ	Otahua Downs	5.87	204	PN	Pn	06 21 22.9	-3.8

IDC 28 06:40:20.5±2.6, 30°11N×82°08E, h0km, mb3.7/5, mb1 3.9/7, mb1mx3.6/26, mbtmp3.6/7, ML3.5/1, Error ellipse: s-maj=82.3km s-min=23.2km az=74.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	16.66	1	Pn	Pn	06 44 13.2	-2.1
	0.2nm,0.3s,baz=186,slow=11,SNR=12						
CMAR	Chiang Mai Arr	19.23	123	P	Pn	06 44 46.1	-1.1
	baz=312,slow=9.5,SNR=4.9						
ZALV	Zalesovo Beam	23.91	4	P	P	06 45 33.9	-2.0
	0.8nm,0.3s,baz=184,slow=13,SNR=4.3						
SONM	Songino Array	25.73	40	P	P	06 45 52.9	+0.5
	0.6nm,0.5s,baz=220,slow=8.7,SNR=3.3						
WRA	Warramunga Arr	70.75	128	P	P	06 51 38.0	-0.7
	0.8nm,0.7s,baz=327,slow=6.3,SNR=6.6						
ASAR	Alice Springs	73.03	131	P	P	06 51 53.2	+0.7
	0.3nm,0.8s,baz=306,slow=5.4,SNR=4.4						
ILAR	Eielson Array	78.05	19	P	P	06 52 21.8	+1.2
	0.8nm,0.8s,baz=301,slow=4.8,SNR=9.5						

MOS 28 06:55:38.6±0.6, 52°17N×161°94E, h17km, mb4.2/1, Error ellipse: s-maj=49.8km s-min=15.8km az=101.2

KRSC 28 06:55:42.8±0.6, 52°49N×161°69E, h16km±15km, ML4.2, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.18	302	eP	Pn	06 56 04.7	+0.1
SPN				i S	Sb	06 56 20.8	+1.0
SPN	Mys Shipunski	1.18	302	PN	Pn	06 56 04.7	+0.1
SPN				S	Sb	06 56 20.8	+1.0
PET	Petropavlovsk	1.92	287	eP	Pn	06 56 15.3	+0.5
PET				i S	Sn	06 56 39.5	+0.9
PET	Petropavlovsk	1.92	287	ePN	Pn	06 56 15.4	+0.6
PET				eS	Sn	06 56 39.5	+0.9
PET				pmax	pmax		
	comp=Z,29nm,0.4s						
PET				smax			
	comp=E,504nm,0.7s						
PET				smax			
	comp=N,257nm,0.5s						
AVH	Avacha	1.95	295	eP	Pn	06 56 16.4	+1.2
KII	Karymskiy	2.05	320	eP	Pn	06 56 18.0	+1.4
KII				i S	Sn	06 56 43.1	+1.3
MKZ	Mys Kozlova	2.07	1	eP	Pn	06 56 17.7	+0.9
MKZ				i S	Sn	06 56 43.3	+1.0
MKZ	Mys Kozlova	2.07	1	PN	Pn	06 56 17.7	+0.9
GRL	Gorelyy	2.21	273	eP	Pn	06 56 20.1	+1.3
GRL				i S	Sn	06 56 47.3	+1.6
GNL	Ganaly	2.56	300	eP	Pn	06 56 25.6	+2.0
GNL				i S	Sn	06 56 57.6	+3.2
KMNR	Kamenistaya	3.38	346	eP	Pn	06 56 37.0	+2.1
BZMR	Bezymyannaya	3.52	349	eP	Pn	06 56 39.6	+2.8
KIRR	Kirishev	3.56	348	eP	Pn	06 56 40.3	+3.0
KPT	Kopyto	3.59	347	eP	Pn	06 56 40.3	+2.6
KOZ	Kozyrevsk	3.73	344	eP	Pn	06 56 42.4	+2.8
KOZR	Kozyr	3.73	344	PN	Pn	06 56 42.4	+2.7
KBTR	Krutoberegovo	3.78	10	eP	Pn	06 56 41.8	+1.4
KBTR				i S	Sn	06 57 25.6	+1.1
KBTR	Krutoberegovo	3.78	10	PN	Pn	06 56 41.8	+1.4
KRSR	Krestovskiy	3.79	350	P	Pn	06 56 42.5	+2.0
KLY	Klyuchi	3.88	351	eP	Pn	06 56 44.3	+2.6
KLY	Klyuchi	3.88	351	PN	Pn	06 56 44.3	+2.6
SRDR	Sredinnyy	4.00	344	eP	Pn	06 56 45.4	+2.0

SKO 28 07:33:35.0, 40°71N×20°57E, h7km, M1.9, ML2.3
ISCJB 28 07:33:35.8±0.8, 40°72N±0°03×20°69E±0°05, h10km, Error ellipse: s-maj=6.4km s-min=3.6km az=33.2
CSEM 28 07:33:36.1±0.3, 40°69N×20°70E, h2km, ML2.7/3, Error ellipse: s-maj=5.6km s-min=3.5km az=120.0
THE 28 07:33:36.7, 40°68N×20°74E, h0km±3km, ML2.7/3, Error ellipse: s-maj=3.8km s-min=0.9km az=304.0

ISC 28 07:33:35.3±0.7, 40.74N±0°03×20.64E±0°04, h0km±8km, n25, σ0°98/44, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	Korca	0.16	135	ePG	Pg	07 33 38.2	-0.2
KBN				i SG	Sg	07 33 40.2	-0.3
KBN	Korca	0.16	135	ePg	Pg	07 33 38.2	-0.2
KBN				i Sg	Sg	07 33 40.2	-0.3
NEST	Nestorio	0.45	136	P	Pg	07 33 42.8	-1.1
NEST				S	Sg	07 33 49.0	-0.8
NEST	Nestorio	0.45	136	P	Pg	07 33 42.8	-1.1
NEST				S	Sg	07 33 49.0	-0.8
FNA	Florina	0.56	85	P	Pg	07 33 45.9	-0.2
FNA				S	Sg	07 33 53.9	+0.5
FNA	Florina	0.56	85	P	Pg	07 33 45.9	-0.2
FNA				S	Sg	07 33 53.9	+0.5
LSK	Leskovik	0.59	183	ePG	Pg	07 33 45.8	-0.8
LSK				i SG	Sg	07 33 54.4	+0.2
LSK	Leskovik	0.59	183	ePg	Pg	07 33 45.8	-0.8
LSK				i Sg	Sg	07 33 54.4	+0.2
BIA	Bitola	0.59	62	P	Pg	07 33 46.6	0.0
BIA				S	Sg	07 33 56.6	+2.3
BIA	Bitola	0.59	62	i Pg	Pg	07 33 46.5	-0.1
BIA				i Sg	Sg	07 33 56.9	+2.6
BIA				eLg		07 33 57.0	
	comp=N,85nm,0.2s						
BIA				eLg		07 33 57.2	
	comp=E,78nm,0.2s						
BIA	Bitola	0.59	62	P	Pg	07 33 46.6	0.0
BIA				S	Sg	07 33 56.6	+2.3
KRUS	Krusevo	0.78	36	ePg	Pg	07 33 50.7	+0.5
KZN	Kozani	0.97	116	P	Pg	07 33 52.4	-1.4
KZN				S	Sg	07 34 06.8	+0.5
KZN	Kozani	0.97	116	P	Pg	07 33 52.4	-1.4
KZN				S	Sg	07 34 06.8	+0.5
JAN	Janina	1.09	171	P	Pg	07 33 56.1	-0.2
JAN				S	Sg	07 34 10.8	+0.4
JAN	Janina	1.09	171	P	Pg	07 33 56.1	-0.2
JAN				S	Sg	07 34 10.8	+0.4
KEK	Kerkira	1.21	212	P	Pg	07 33 59.7	+1.2
KEK	Kerkira	1.21	212	P	Pg	07 33 59.7	+1.2
IGT	Igoumenitsa	1.23	191	P	Pg	07 33 59.1	+0.3
IGT				S	Sg	07 34 17.1	+2.4
IGT	Igoumenitsa	1.23	191	P	Pg	07 33 59.1	+0.3
LIT	Litokhoron	1.55	114	P	Pn	07 34 03.6	-0.5
LIT				S	Sn	07 34 24.5	-0.4
LIT	Litokhoron	1.55	114	P	Pn	07 34 03.6	-0.5
LIT				S	Sn	07 34 24.5	-0.4
VAY	Valandovo	1.57	68	ePg	Pg	07 34 04.0	-1.4
VAY				i Sg	Sg	07 34 26.4	+0.6
VAY				eLg		07 34 27.6	
	comp=E,17nm,0.5s						
VAY				eLg		07 34 29.3	
	comp=N,45nm,0.7s						
BARS	Barje	2.25	23	ePn	Pn	07 34 15.0	+1.2
STON	Ston	3.06	315	ePg	Pg	07 34 32.1	-1.8

IDC 28 07:36:49.4±0.9, 13°50N×120°70E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/22, mbtmp3.9/8, Error ellipse: s-maj=59.5km s-min=17.2km az=63.0
ISCJB 28 07:36:54.3±0.8, 13°27N±0°06×120°37E±0°09, h48km±11km, mb3.9/8, Error ellipse: s-maj=15.8km s-min=8.2km az=19.0
MAN 28 07:36:54, 13°29N×120°26E, h32km, mb4.4, ML3.3, MS3.1

ISC 28 07:36:55.2±0.9, 13°27N±0°06×120°42E±0°08, h40km±12km, n15, σ1°07/17, mb3.9/8, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.97	31	⇓eP	Pn	07 37 11.6	-0.8
BUSP	Coron	1.27	190	eP	Pn	07 37 16.1	-0.4
BUSP				eS	Sn	07 37 31.9	-0.5
BOAC	Boac	1.40	82	eP	Pn	07 37 19.1	+0.9
BOAC				eS	Sn	07 37 33.4	-2.2
OTRP	Odiongan	1.80	120	eP	Pn	07 37 27.1	+3.3
ENPP	El Nido	2.27	205	eP	Pn	07 37 29.1	-1.0
CUYO	Cuyo Island	2.47	166	eP	Pn	07 37 33.3	+0.3
BALP	Baler	2.70	24	eP	Pn	07 37 37.7	+1.5
CMAR	Chiang Mai Arr	21.29	287	P	P	07 41 39.5	+1.0
	1.1nm,0.7s,mb3.3,baz=94,slow=8.6,SNR=4.4						
WRA	Warramunga Arr	35.73	157	P	P	07 43 50.7	+0.4
	2.1nm,0.7s,mb4.2,baz=338,slow=9.5,SNR=21						
SONM	Songino Array	36.40	344	P	P	07 43 55.0	-0.7
	1.3nm,0.6s,mb4.0,baz=161,slow=11,SNR=5.6						
ASAR	Alice Springs	39.00	160	P	P	07 44 19.2	+1.3
	2.6nm,0.6s,mb4.1,baz=340,slow=7.1,SNR=44						
MKAR	Makanchi Array	46.22	324	P	P	07 45 16.6	+0.3
	0.3nm,0.6s,mb3.4,baz=142,slow=7.3,SNR=2.8						
BVAR	Borovoye Array	55.98	326	P	P	07 46 29.8	+0.3
	0.5nm,0.5s,mb3.8,baz=106,slow=11,SNR=3.0						
ARCES	ARCESS Array B	79.39	339	P	P	07 48 55.4	-1.3
	1.5nm,0.8s,mb4.0,baz=94,slow=9.1,SNR=4.0						
FINES	FINESS Array B	80.53	331	P	P	07 49 02.0	-1.1
	5.8nm,1.0s,mb4.5,baz=44,slow=8.2,SNR=4.4						

IDC 28 08:04:47.4±1.2, 14°00N×121°97E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/21, mbtmp3.7/4, 1C, Error ellipse: s-maj=25.6km s-min=12.1km az=20.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.00	276	Pg	Pg	08 05 07.0	+0.3
	224nm,0.3s,baz=262,slow=3.3,SNR=12						
TGY				Lg		08 05 20.8	
	200nm,0.3s,baz=192,slow=6.9,SNR=6.1						
TGY	Tagaytay City	1.00	276	eP	Pg	08 05 07.2	+0.5
WRA	Warramunga Arr	35.86	160	P	P	08 11 49.1	0.0
	1.1nm,0.6s,baz=338,slow=9.5,SNR=14						
SONM	Songino Array	36.14	342	P	P	08 11 52.9	+1.6
	0.8nm,0.8s,baz=159,slow=10,SNR=4.6						
ASAR	Alice Springs	39.21	163	P	P	08 12 17.6	+0.1
	1.4nm,0.6s,baz=341,slow=7.3,SNR=27						
MKAR	Makanchi Array	46.53	323	P	P	08 13 15.0	-1.7
	0.2nm,0.5s,baz=115,slow=6.5,SNR=2.4						

ISK 28 08:07:50.2, 39°14N×27°57E, h13km, MD2.7
CSEM 28 08:07:50.6±0.2, 39°11N×27°62E, h20km, MD2.7, Error ellipse: s-maj=5.6km s-min=3.3km az=87.0
ISCJB 28 08:07:51.2±0.8, 39°12N±0°04×27°7E±0°1, h27km±14km, Error ellipse: s-maj=13.6km s-min=5.8km az=10.4

ISC 28 08:07:51.3±0.7, 39°12N±0°04×27°6E±0°1, h24km±19km, n16, σ0°73/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.28	150	i P	Pb	08 07 56.9	-1.0
AKHS	Akhisar	0.28	150	i P	Pb	08 07 56.9	-1.0
AKHS				i S	Sb	08 08 03.4	+1.0
AKS	Akhisar	0.28	151	ePG	Pb	08 07 57.0	-0.9
AKS				eSG	Sb	08 08 02.3	-0.1
AKS	Akhisar	0.28	151	ePg	Pb	08 07 57.0	-0.9
AKS				eSg	Sb	08 08 02.3	-0.1
BALY	Balya	0.62	359	i P	Pb	08 08 02.8	-0.6
BALY	Balya	0.62	359	i P	Pb	08 08 02.8	-0.6
BALY				i S	Sb	08 08 12.6	+0.9
IZM	Izmir	0.78	202	ePG	Pb	08 08 05.5	-0.7
IZM				eSG	Sb	08 08 17.5	+1.1
IZM	Izmir	0.78	202	ePg	Pb	08 08 05.5	-0.7
IZM				eSg	Sb	08 08 17.5	+1.1
BLCB	Balcova	0.87	212	ePG	Pb	08 08 06.9	-0.8
BLCB				eSG	Sb	08 08 19.3	+0.4
BLCB	Balcova	0.87	212	ePg	Pb	08 08 06.9	-0.8
BLCB				eSg	Sb	08 08 19.3	+0.4
GONE	Gonen-Balikesi	0.92	2	ePG	Pb	08 08 08.7	+0.1
GONE	Gonen-Balikesi	0.92	2	ePg	Pb	08 08 08.7	+0.1
KULA	Kula-Manisa	1.00	127	ePG	Pb	08 08 10.6	+0.6
KULA	Kula-Manisa	1.00	127	ePg	Pb	08 08 10.6	+0.6
EZN	Ezine	1.23	305	ePN	Pn	08 08 13.0	0.0
EZN	Ezine	1.23	305	ePn	Pn	08 08 13.0	0.0

ISCJB 28 08:10:07.6±1.4, 13°33N±0°05×92°04W±0°03, h8km±9km, mb4.1/13, MS3.3/2, Error ellipse: s-maj=8.2km s-min=4.0km az=13.2
IDC 28 08:10:11.8±1.7, 13°84N×91°96W, h0km, mb3.8/5, mb1 4.0/9, mb1mx3.8/25, mbtmp3.8/9, ML3.8/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/25, Error ellipse: s-maj=32.5km s-min=21.3km az=18.0
NEIC 28 08:10:11.4±4.0, 13°53N×91°94W, h16km±27km, mb4.3/6, Error ellipse: s-maj=17.9km s-min=9.1km az=203.0
CASC 28 08:10:12.1±2.4, 13°35N×91°86W, h28km±31km, MD4.1, ML3.6, mb4.3(NEIC)

ISC 28 08:10:09.4±1.3, 13°36N±0°05×91°97W±0°03, h10km±8km, n91, σ0°94/105, mb4.1/13, MS3.3/2, 20C-23D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	1.00	19	eP	Pg	08 10 29.3	+0.6
FUG	Fuego 3	1.54	45	eP	Pn	08 10 36.2	-0.8
FG6		1.59	41	eP	Pn	08 10 37.2	-0.5
FG6				eS	Sn	08 10 59.2	+0.9
TP2	Tecpan 2	1.68	33	eP	Pn	08 10 38.5	-0.5
NBG	Las Nubes	1.99	52	eP	Pn	08 10 44.0	+0.8
NBG				eS	Sn	08 11 09.1	+0.9
APG	El Apazote	2.19	42	Pn	Pn	08 10 46.0	+0.1
	90nm,0.3s,baz=209,slow=10,SNR=769						
APG				Lg		08 11 15.6	
	64nm,0.3s,baz=352,slow=19,SNR=10						
RTR	El Retiro	2.32	77	eP	Pn	08 10 47.2	-0.5
SBLS	San Blas	2.33	78	eP	Pn	08 10 47.4	-0.5
SBLS				eS	Sn	08 11 13.6	-3.0
RBDL	Robledal	2.34	71	eP	Pn	08 10 47.7	-0.3
SNJE	San Jose	2.35	77	eP	Pn	08 10 47.5	-0.7
BOQS	Boqueron	2.64	82	eP	Pn	08 10 52.6	+0.4
SNET	Serv Nac Est T	2.68	83	eP	Pn	08 10 52.9	+0.2
SNET				eS	Sn	08 11 22.1	-3.2
SNET				AML	AML	08 11 39.2	
	comp=Z,411nm,0.3s						
MTO2	Montecristo 2	2.73	68	eP	Pn	08 10 52.9	-0.6
MTO2				eS	Sn	08 11 20.3	-6.3
MRL	Marmol	2.78	52	eP	Pn	08 10 55.0	+0.9
LFRS	El Faro	2.84	84	eP	Pn	08 10 55.2	+0.3
LBRS	Las Brisas	2.87	82	eP	Pn	08 10 54.7	-0.6
CCIG	Comitan	2.91	357	i P	Pn	08 10 57.0	+1.2
CCIG				i S	Sn	08 11 31.6	+0.7
SNVI	San Vicente	3.05	85	eP	Pn	08 10 58.0	+0.2
SCX	San Cristobal	3.41	349	eP	Pn	08 11 02.5	-0.3
SCX				i S	Sn	08 11 44.2	+0.8
CNCH	Conchagua	4.03	91	eP	Pn	08 11 11.6	+0.4
TGUH	Tegucigalpa,Un	4.62	81	ePn	Pn	08 11 20.1	+0.8
CMIG	Matias Romero	4.65	323	Pn	Pn	08 11 19.1	-0.8
	comp=Z,1.3nm,0.3s,baz=158,slow=9.9,SNR=18						
CMIG				Sn	Sn	08 12 10.2	-3.8
	comp=Z,4.4nm,0.3s,baz=148,slow=6.6,SNR=4.2						
CMIG				Lg		08 12 25.2	
	comp=Z,8.9nm,0.3s,baz=59,slow=23,SNR=6.3						
CMIG	Matias Romero	4.65	323	Pn	Pn	08 11 19.1	-0.8
CMIG				Sn	Sn	08 12 10.2	-3.8
CMIG				i S	Sn	08 12 17.4	+3.4
CMIG				Lg		08 12 25.2	
HUIG	Huatulco	4.67	301	eP	Pn	08 11 18.9	-1.1
HUIG				i S	Sn	08 12 08.2	-6.2
VHO	Vista Hermosa	5.89	309	i P	Pn	08 11 36.6	-0.4
VHO				i S	Sn	08 12 42.2	-2.4
PNIG	Pinotepa	6.67	298	eP	Pn	08 11 47.5	-0.1
PNIG				i S	Sn	08 13 02.8	-0.9
JTS	JuntasAbangare	7.52	113	ePn	Pn	08 12 02.8	+3.6
JTS				eSn	Sn	08 13 28.5	+3.9
TEIG	Tepich	7.69	27	Pn	Pn	08 12 00.9	-0.6
	comp=Z,8.0nm,0.3s,baz=289,slow=22,SNR=72						
TEIG				Sn	Sn	08 13 23.1	-5.6
	baz=336,slow=20,SNR=1.3						
TEIG				LR	LR	08 15 16.3	
	comp=Z,222nm,18.6s,baz=138,slow=42						
BCIP	Isla Barro Col	12.61	108	Pn	Pn	08 13 09.0	0.0
628A	Black Gap, Mar	18.97	329	⇓P	Pn	08 14 31.9	+0.2
	baz=19						
627A	Terlingua Ranc	19.20	328	⇑P	Pn	08 14 34.2	-0.2
	baz=19						
TXAR	Lajitas Array	19.24	328	P	Pn	08 14 35.5	+0.5
	comp=Z,0.1nm,0.3s,baz=150,slow=11,SNR=15						
ROSC	El Rosal	19.34	114	P	Pn	08 14 43.4	+7.0
	baz=291,slow=19,SNR=2.2						
528A	Cox Ranch, San	19.48	331	⇓P	Pn	08 14 37.0	-0.9
	baz=19						
626A	Big Bend Ranch	19.66	327	⇑P	Pn	08 14 39.5	-0.5
	baz=20,SNR=7.2						
527A	Woodward Ranch	19.87	329	⇓P	Pn	08 14 41.3	-1.2
	baz=20						
428A	Kincaid Ranch,	19.91	332	⇑P	Pn	08 14 42.6	-0.3
	baz=20						
526A	Mary Lane Ranc	20.04	328	⇓P	P	08 14 44.2	+1.4
	baz=20						
427A	Hayter Ranch,	20.34	331	⇑P	P	08 14 46.2	+0.1
	baz=20						
426A	McDonald Obser	20.50	329	⇓P	P	08 14 48.9	+1.1
	baz=20						
328A	Wristen Ranch,	20.52	333	⇓P	P	08 14 48.1	+0.1
	baz=20,SNR=9.3						
326A	Caldwell Ranch	21.01	330	⇑P	P	08 14 53.4	+0.1
	baz=21,SNR=8.5						
227A	Bennet, Jal	21.27	333	⇑P	P	08 14 56.5	+0.4
	baz=21,SNR=6.2						
325A	Bean Ranch, Si	21.55	328	⇑P	P	08 14 59.8	+0.8
	baz=22						
324A	Moseley Ranch,	21.87	328	⇓P	P	08 15 02.6	+0.1
	baz=22,SNR=5.0						
225A	Deer Hill, Car	22.07	330	⇓P	P	08 15 04.7	0.0
	baz=22,SNR=9.7						
224A	Cornudas Mount	22.39	329	⇓P	P	08 15 08.2	+0.2
	baz=22,SNR=13						
SWET	Sewanee	22.43	13	eP	P	08 15 05.8	-2.6
125A	Gardner Draw,	22.44	331	⇑P	P	08 15 08.3	-0.3
	baz=22,SNR=8.1						
Z26A	Cuprock	22.64	333	⇓P	P	08 15 10.2	-0.6
	baz=23,SNR=7.2						
MSTX	Muleshoe	22.74	336	⇑P	P	08 15 10.4	-1.4
	baz=23						
Y27A	Causey	22.82	335	⇓P	P	08 15 12.6	-0.1
	baz=23						
124A	Stringfield Ra	22.86	330	⇓P	P	08 15 13.3	+0.3
	baz=23,SNR=12						
Z25A	Roswell	22.98	332	⇑P	P	08 15 13.9	-0.4
	baz=23						
Y26A	Elida	23.13	334	⇓P	P	08 15 14.9	-1.1
	baz=23						
AMTX	Amarillo	23.16	339	⇓P	P	08 15 14.6	-1.6
	baz=23,SNR=8.1						
AMTX	Amarillo	23.16	339	eP	P	08 15 14.6	-1.6
	comp=Z,8.7

SCHQ	Schefferville	45.80	20	P	P	08 18 27.2	-4.1
	comp=Z,3.7nm,0.6s,mb4.5,baz=219,slow=3.5,SNR=8.9						
YKA	Yellowknife Ar	51.65	347	P	P	08 19 14.7	-1.4
	comp=Z,1.4nm,0.6s,mb4.1,baz=138,slow=9.1,SNR=4.9						
YKA	Yellowknife Ar	51.65	347	P	P	08 19 14.7	-1.4
ILAR	Eielson Array	63.43	337	P	P	08 20 39.0	-0.1
	comp=Z,0.6nm,0.8s,mb3.8,baz=160,slow=4.7,SNR=8.5						
CMAR	Chiang Mai Arr	146.60	341	PKPbc	PKPbc	08 29 52.6	+0.4
	comp=Z,1.2nm,0.4s,baz=348,slow=4.0,SNR=4.9						

ISC 28 08:11:26.4±3.5, 43°.9N±0°.2×74°.6E±0°.2, h4km±19km, n7, σ0°44/9, 3C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USP	Ospenovka	0.62	184	P	Pg	08 11 38.2	0.0
	SNR=55						
CHMS	Chumysh	0.90	171	P	Pg	08 11 43.5	0.0
	SNR=13						
TKM2	Tokmak 2	1.22	142	⇑P	Pg	08 11 49.8	0.0
	0.4nm,0.2s						
TKM2				⇓S	Sg	08 12 05.2	-0.4
	2.3nm,0.3s						
KBK	Karagaybulak	1.26	167	P	Pg	08 11 50.9	+0.4
	SNR=13						
EKS2	Erkin-Say	1.35	205	P	Pn	08 11 52.0	0.0
	SNR=18						
ULHL	Ulahol	2.05	142	P	Pg	08 12 05.8	+0.2
	SNR=20						
KK31	Karatay Array	3.05	257	⇑Pn	Pg	08 12 23.5	-1.3
	0.2nm,0.3s,baz=77,slow=12,SNR=4.2						
KK31				Pg	Pg	08 12 25.6	+0.9
	0.3nm,0.2s,baz=76,slow=16,SNR=18						
KK31				⇑Lg		08 13 02.3	
	0.8nm,0.3s,baz=72,slow=28,SNR=7.6						

IDC 28 08:17:10.8±3.0, 32°.88S×178°.46W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.7/15, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=71.5km s-min=45.3km az=122.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.47	213	Pn	Pn	08 18 46.6	-0.7
	1.7nm,0.3s,baz=298,slow=9.7,SNR=13						
ASAR	Alice Springs	42.65	270	P	P	08 25 09.2	+0.1
	0.6nm,0.8s,baz=110,slow=7.3,SNR=7.1						
WRA	Warramunga Arr	43.86	275	P	P	08 25 19.0	0.0
	0.7nm,0.4s,baz=115,slow=7.9,SNR=17						
FINES	FINESS Array B	147.31	338	PKPbc	PKPbc	08 36 54.7	-0.7
	5.4nm,1.0s,baz=57,slow=5.1,SNR=6.1						

WEL 28 08:19:18.2±0.3, 38°.11S×176°.35E, h160km±2km, ML4.5/21, 38C-2D, Error ellipse: s-maj=1.8km s-min=1.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OMRZ	Omania	0.02	84	⇑PN	Pn	08 19 39.5	0.0
OMRZ				SN	Sn	08 19 56.5	+0.8
KARZ	Kaharoa	0.12	318	⇑PN	Pn	08 19 39.6	0.0
KARZ				SN	Sn	08 19 56.2	+0.4
UTU	Utuhina	0.14	241	⇑PN	Pn	08 19 39.9	+0.3
TARZ	Mount Tarawera	0.18	135	PN	Pn	08 19 39.9	+0.2
RRRZ	Republican Roa	0.27	150	⇑PN	Pn	08 19 39.7	-0.1
EDRZ	Edgecumbe	0.31	90	⇑PN	Pn	08 19 39.8	-0.2
OPRZ	Ohinepanea	0.31	32	⇑PN	Pn	08 19 39.6	-0.4
TGRZ	Tauranga	0.39	350	⇑PN	Pn	08 19 40.1	-0.2
TGRZ				SN	Sn	08 19 57.2	+0.2
PRRZ	Plateau Road	0.39	175	⇑PN	Pn	08 19 40.2	0.0
ALRZ	Allen Road	0.45	180	PN	Pn	08 19 40.6	+0.1
URZ	Urewera	0.62	104	⇑PN	Pn	08 19 40.8	-0.6
URZ				SN	Sn	08 19 57.5	-1.5
WHTZ	Whakaora	0.64	209	⇑PN	Pn	08 19 41.8	+0.4
WATZ	Wairara	0.77	219	⇑PN	Pn	08 19 42.5	+0.3
HATZ	Hinemaiaia	0.81	194	PN	Pn	08 19 42.5	0.0
RATZ	Rangitukua	0.88	211	⇑PN	Pn	08 19 43.2	+0.2
RITZ	Rihia Road	0.95	204	PN	Pn	08 19 43.9	+0.4
MWZ	Matawai	0.96	104	PN	Pn	08 19 43.3	-0.3
MWZ				SN	Sn	08 20 02.0	-1.0
RAHZ	Arahi	0.99	144	⇑PN	Pn	08 19 44.3	+0.4
KATZ	Kakaramea	1.00	210	⇑PN	Pn	08 19 44.1	+0.2
NMHZ	Naumai	1.05	160	⇑PN	Pn	08 19 45.2	+0.8
BKZ	Black Stump Fm	1.06	174	⇑PN	Pn	08 19 44.4	-0.1
KRVZ	Karewarewa	1.13	209	⇑PN	Pn	08 19 45.1	+0.1
WTVZ	West Tongariro	1.17	210	⇑PN	Pn	08 19 45.4	+0.1
OTVZ	Oturere	1.18	207	⇑PN	Pn	08 19 45.7	+0.3
TWVZ	Taurewa	1.20	216	⇑PN	Pn	08 19 45.7	+0.2
NGZ	Ngauruhoe	1.21	208	PN	Pn	08 19 45.8	0.0
WPVZ	Whakapapa	1.26	210	PN	Pn	08 19 46.0	-0.1
TUVZ	Tukino	1.28	205	⇑PN	Pn	08 19 46.6	+0.2
FWVZ	Far West T-bar	1.30	208	PN	Pn	08 19 46.5	0.0
DRZ	Dome Shelter	1.31	207	PN	Pn	08 19 47.3	+0.6
WNVZ	Wahianoa	1.35	205	⇑PN	Pn	08 19 47.2	+0.1
MCHZ	McNeill Hill	1.36	168	⇑PN	Pn	08 19 47.8	+0.6
MKAZ	Moumakai	1.37	316	⇓PN	Pn	08 19 47.3	+0.1
MOVZ	Moawhango	1.38	199	⇑PN	Pn	08 19 46.9	-0.4
KNZ	Kokohu	1.38	132	PN	Pn	08 19 47.4	0.0
BHHZ	Black Hill Sta	1.40	189	⇑PN	Pn	08 19 47.3	-0.2
PKVZ	Pokaka	1.42	213	⇑PN	Pn	08 19 47.7	0.0
MTVZ	Mangateitei	1.45	208	PN	Pn	08 19 48.0	0.0
PRGZ	Paritu Road	1.46	124	PN	Pn	08 19 48.2	+0.1
PUZ	Puketiti	1.51	89	PN	Pn	08 19 48.0	-0.6
CNGZ	Carnagh Statio	1.51	105	⇓PN	Pn	08 19 49.1	+0.4
VRZ	Vera Road	1.60	230	⇑PN	Pn	08 19 50.0	+0.4
MHGZ	Mahia Peninsul	1.61	131	PN	Pn	08 19 50.0	+0.4
OTAZ	Otara	1.62	315	PN	Pn	08 19 49.9	+0.1
MXZ	Matakaoa Point	1.65	71	PN	Pn	08 19 49.8	-0.3
CKHZ	Cape Kidnapper	1.65	160	⇑PN	Pn	08 19 50.4	+0.3
KAHZ	Kahuranaki	1.73	166	PN	Pn	08 19 51.2	+0.3
PNHZ	Pukenui	1.81	184	PN	Pn	08 19 51.2	-0.6
RAEZ	Rainy Point	1.93	232	PN	Pn	08 19 53.8	+0.7
WPHZ	Waipukurau	1.96	178	PN	Pn	08 19 52.9	-0.5
PXZ	Pawanui	1.96	168	⇑PN	Pn	08 19 53.1	-0.3
TSZ	Takapari Road	1.97	189	⇑PN	Pn	08 19 52.9	-0.6
PKE	Puketi	2.14	239	⇑PN	Pn	08 19 56.0	+0.5
PRHZ	Porangahau	2.17	174	⇑PN	Pn	08 19 55.3	-0.6
DVHZ	Dannevirke	2.19	184	⇑PN	Pn	08 19 55.1	-1.0
POWZ	Post Office Ro	2.32	191	PN	Pn	08 19 56.6	-1.1
MRZ	Mangatainoka R	2.62	193	⇑PN	Pn	08 19 59.7	-1.5
TIWZ	Tintock	2.69	187	⇑PN	Pn	08 20 00.7	-1.4
OGWZ	Otaki Gorge	2.85	198	⇑PN	Pn	08 20 02.4	-1.7
HOWZ	Holdsworth Sta	2.86	193	⇑PN	Pn	08 20 02.2	-1.9
KIW	Kapiti Island	2.96	202	PN	Pn	08 20 03.3	-2.1
TMWZ	Te Maipa	3.02	187	⇑PN	Pn	08 20 04.2	-1.9
MTW	Mount Morrison	3.11	192	PN	Pn	08 20 05.0	-2.3
CAW	Cannon Point	3.15	198	PN	Pn	08 20 05.6	-2.3
DUWZ	D'Urville Isla	3.28	214	PN	Pn	08 20 07.1	-2.3
TRWZ	Traveller	3.32	189	PN	Pn	08 20 07.6	-2.4
WEL	Wellington	3.40	200	PN	Pn	08 20 08.4	-2.5
MSWZ	Moikau Station	3.41	194	PN	Pn	08 20 08.4	-2.6
SNZO	South Karori	3.44	201	PN	Pn	08 20 08.6	-2.8
BHW	Baring Head	3.48	199	PN	Pn	08 20 09.3	-2.7
TCW	Tory Channel	3.49	207	PN	Pn	08 20 09.3	-2.8
PLWZ	Palliser	3.56	193	PN	Pn	08 20 10.1	-2.8
TUWZ	Tuamarina	3.80	208	PN	Pn	08 20 13.2	-2.9
NNZ	Nelson	3.86	215	PN	Pn	08 20 13.8	-3.0
BSWZ	Blackbirch Sta	4.07	207	PN	Pn	08 20 16.8	-2.8
THZ	Tophouse	4.51	215	PN	Pn	08 20 22.0	-3.2
KHZ	Kahutara	4.81	206	PN	Pn	08 20 25.8	-3.4
DSZ	Denniston Nort	5.04	222	PN	Pn	08 20 27.8	-4.4
LTZ	Lake Taylor	5.61	212	PN	Pn	08 20 35.4	-4.3
CRLZ	Canterbury Las	6.15	206	PN	Pn	08 20 42.3	-4.6
MQZ	McQueen's Vall	6.25	205	PN	Pn	08 20 43.3	-5.0
RPZ	Rata Peaks	6.88	214	PN	Pn	08 20 53.2	-3.4
LBZ	Lake Benmore	7.80	215	PN	Pn	08 21 04.2	-4.6
ODZ	Otahua Downs	8.14	210	PN	Pn	08 21 08.9	-4.4
JCZ	Jackson Bay	8.26	221	PN	Pn	08 21 11.0	-3.9
TUZ	Tuapeka	9.29	210	PN	Pn	08 21 24.7	-3.8

IDC 28 08:36:00.1±4.2, 3°.85S×102°.46E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/21, mbtmp3.7/7, ML3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/30, Error ellipse: s-maj=229.9km s-min=18.6km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	7.49	332	Pn	Pn	08 37 50.5	-0.2
	0.7nm,0.3s,baz=179,slow=19,SNR=7.8						
FITZ	Fitzroy Crossi	26.75	124	P	P	08 41 41.8	+0.2
	3.2nm,1.2s,baz=301,slow=5.9,SNR=2.7						
FITZ				LR	LR	08 51 10.1	
	comp=Z,76nm,18.9s,baz=267,slow=34						
WRA	Warramunga Arr	34.94	120	P	P	08 42 54.0	0.0
	0.4nm,0.5s,baz=301,slow=9.2,SNR=9.2						
ASAR	Alice Springs	36.18	126	P	P	08 43 04.8	+0.2
	0.3nm,0.6s,baz=295,slow=7.9,SNR=4.5						
STKA	Stephens Creek	46.09	132	P	P	08 44 25.9	-0.2
	2.0nm,0.9s,baz=293,slow=7.7,SNR=3.4						
MKAR	Makanchi Array	53.48	343	P	P	08 45 22.0	-0.1
	0.2nm,0.5s,baz=134,slow=7.9,SNR=4.1						
ZALV	Zalesovo Beam	59.45	348	P	P	08 46 04.4	-0.2
	0.5nm,0.4s,baz=160,slow=4.6,SNR=2.2						
TXAR	Lajitas Array	144.56	42	PKP	PKPdf	08 55 38.8	-0.6
	1.2nm,0.5s,baz=274,slow=0.7,SNR=32						

MAN 28 08:49:21, 18°.84N×121°.09E, h11km, mb4.7, ML3.5, MS3.5, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.68	221	⇑iP	Pg	08 49 34.5	+0.4
APYP	Conner	0.98	171	eP	Pg	08 49 39.7	-0.1
APYP				eS	Sg	08 49 55.4	+2.7
CVP	Callao Caves	1.32	148	⇑iP	Pn	08 49 44.4	-1.0
CVP				i S	Sb	08 50 04.3	+1.4
CAUP	Cauayan	2.01	159	eP	Pn	08 49 57.8	+2.9
CAUP				eS	Sn	08 50 22.0	+2.1

*ISCJB **28** 08:55:28.8±1.0, 40°.71N±0°.05×20°.72E±0°.07, h10km, Error ellipse: s-maj=9.3km s-min=5.3km az=139.4*
*SKO **28** 08:55:28.0, 40°.66N×20°.61E, h1km*
*CSEM **28** 08:55:29.1, 40°.69N×20°.72E, h4km, ML2.7/2, After THE*
*THE **28** 08:55:29.1, 40°.69N×20°.72E, h4km±42km, ML2.7/2, Error ellipse: s-maj=42.8km s-min=1.1km az=28.0*

ISC 28 08:55:29.0±1.0, 40°.72N±0°.05×20°.70E±0°.07, h10km, n10, σ1°08/17, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	Florina	0.52	82	P	Pg	08 55 38.5	-0.7
FNA				S	Sg	08 55 46.9	+0.9
FNA	Florina	0.52	82	P	Pg	08 55 38.5	-0.7
FNA				S	Sg	08 55 46.9	+0.9
BIA	Bitola	0.56	57	ePg	Pg	08 55 39.4	-0.6
BIA				i Sg	Sg	08 55 48.5	+1.1
BIA				eLg		08 55 49.8	
BIA	comp=E,50nm,0.3s						
				eLg		08 55 50.3	
BIA	comp=N,35nm,0.2s						
KRUS	Krusevo	0.78	33	i Pg	Pg	08 55 43.7	-0.2
KZN	Kozani	0.92	116	P	Pg	08 55 45.1	-1.6
KZN				S	Sg	08 55 59.4	+0.8
KZN	Kozani	0.92	116	P	Pg	08 55 45.1	-1.6
KZN				S	Sg	08 55 59.4	+0.8
JAN	Janina	1.06	174	P	Pg	08 55 48.0	-1.5
JAN	Janina	1.06	174	P	Pg	08 55 48.0	-1.5
KEK	Kerkira	1.22	215	P	Pn	08 55 52.0	0.0
KEK				S	Sb	08 56 09.8	+2.0
KEK	Kerkira	1.22	215	P	Pn	08 55 52.0	0.0
KEK				S	Sb	08 56 09.8	+2.0

*IDC **28** 08:56:35.4±2.4, 8°.13N×82°.84W, h0km, mb3.9/5, mb1 4.2/7, mb1mx3.9/21, mbtmp4.0/7, ML3.9/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/31, Error ellipse: s-maj=85.8km s-min=30.3km az=32.0*
*ISCJB **28** 08:56:36.6±1.9, 8°.2N±0°.1×82°.87W±0°.07, h14km±12km, mb4.0/10, Error ellipse: s-maj=20.0km s-min=8.6km az=26.1*
*CASC **28** 08:56:37.7±2.1, 8°.34N×82°.85W, h2km±14km, MD4.0, ML3.0, mb4.4(NEIC)*
*NEIC **28** 08:56:38.2±7.0, 8°.20N×82°.87W, h13km±35km, mb4.4/4, Error ellipse: s-maj=65.4km s-min=13.2km az=191.0*

ISC 28 08:56:38.5±2.0, 8°.3N±0°.1×82°.84W±0°.08, h10km±10km, n36, σ1°00/37, mb4.0/10, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.49	17	eP	Pg	08 56 48.1	0.0
QCR	Quepos	1.71	310	eP	Pn	08 57 06.1	-2.3
QCR				eS	Sn	08 57 30.6	+0.3
URSC	Urasca	1.77	328	eP	Pn	08 57 06.7	-2.5
LAJ	Bijagual	1.99	321	eP	Pn	08 57 13.2	+0.9
LAJ				eS	Sn	08 57 42.8	+5.6
SJS	Escuela Geolog	2.00	323	eP	Pn	08 57 11.3	-1.2
SJS				eS	Sn	08 57 39.0	+1.3
JTS	JuntasAbangare	2.86	313	ePn	Pn	08 57 22.8	-1.5
JTS				eSn	Sn	08 57 57.1	-1.7
BCIP	Isla Barro Col	3.08	74	ePn	Pn	08 57 27.6	+0.2
BCIP	Isla Barro Col	3.08	74	eP	Pn	08 57 27.5	+0.1
NY14	Universidad de	3.52	311	i P	Pn	08 57 33.6	+0.2
LAPC	Finca la Perla	3.53	314	i P	Pn	08 57 33.1	-0.3
BUEV	Buena Vista	3.53	314	i P	Pn	08 57 34.3	+0.8
GB1A	Borinquen Arri	3.54	315	i P	Pn	08 57 34.3	+0.6
GBS2	Las Lilas	3.59	314	i P	Pn	08 57 34.7	+0.4
SSN	San Juan del S	4.19	315	eP	Pn	08 57 43.2	+0.6
CONN	Concepcion	4.23	320	eP	Pn	08 57 43.9	+0.7
CONN				AML	AML	08 57 55.8	
	comp=Z,38nm,0.5s						
BOAB	BOACO BROADBAN	4.95	326	eP	Pn	08 57 53.2	+0.1
HUEN		5.16	321	eP	Pn	08 57 56.7	+0.7
CSAN		5.21	318	eP	Pn	08 57 57.1	+0.5
LEON	Leon	5.70	316	eP	Pn	08 58 04.1	+0.8
TGUH	Tegucigalpa,Un	7.17	323	ePn	Pn	08 58 25.1	+1.6
	comp=Z,69nm,0.9s						
TGUH				eSg	Sg	09 00 28.1	-0.7
APG	El Apazote	9.99	312	Pn	Pn	08 59 03.6	+1.3
	comp=Z,1.8nm,0.3s,baz=132,slow=6.3,SNR=15						
APG				LR	LR	09 03 04.1	
	comp=Z,72nm,18.2s,baz=86,slow=38						
CMIG	Matias Romero	14.62	308	Pn	Pn	09 00 04.7	-0.9
	comp=Z,0.4nm,0.3s,baz=140,slow=7.8,SNR=6.1						
SJG	San Juan	18.92	57	LR	LR	09 07 48.4	
	comp=Z,50nm,19.6s,baz=89,slow=35						
GOGA	Godfrey	24.97	359	eP	P	09 02 03.3	+0.9
	comp=Z,5.4nm,0.8s,mb4.1						
TXAR	Lajitas Array	28.63	320	P	P	09 02 36.0	+0.5
	comp=Z,0.5nm,1.0s,mb3.2,baz=128,slow=8.1,SNR=3.8						
ULM	Lac du Bonnet	43.18	348	P	P	09 04 38.6	-0.9
	comp=Z,1.7nm,0.6s,mb4.0,baz=135,slow=7.1,SNR=2.8						
NVAR	Mina Array Bea	43.78	319	P	P	09 04 44.9	+0.4
	comp=Z,1.4nm,0.8s,mb3.7,baz=134,slow=7.2,SNR=11						
DGMT	Dagmar	43.89	340	eP	P	09 04 43.7	-1.6
	comp=Z,11nm,0.9s,mb4.6						
WAKR	Walker	44.56	318	eP	P	09 04 52.2	+1.4
	comp=Z,3.1nm,1.1s,mb4.0						
WVOR	Wild Horse Val	46.30	323	eP	P	09 05 03.8	-0.8
	comp=Z,4.8nm,1.0s,mb4.4						
YKA	Yellowknife Ar	58.80	343	P	P	09 06 36.9	+0.1
	comp=Z,1.4nm,0.7s,mb4.1,baz=141,slow=7.0,SNR=3.3						
ILAR	Eielson Array	71.61	336	P	P	09 07 58.8	-1.1
	comp=Z,0.9nm,0.8s,mb3.8,baz=115,slow=4.3,SNR=12						
TORD	Torodi Ar. Bea	82.86	78	P	P	09 09 03.7	-0.3
	comp=Z,0.8nm,0.9s,mb3.7,baz=279,slow=2.8,SNR=3.6						
ASAR	Alice Springs	141.67	242	PKP	PKPdf	09 16 06.7	-4.5
	comp=Z,0.2nm,0.7s,baz=139,slow=2.8,SNR=3.2						
WRA	Warramunga Arr	142.24	248	PKhKP	PKPpre	09 16 05.2	
	comp=Z,0.5nm,0.9s,baz=103,slow=2.5,SNR=3.2						
CMAR	Chiang Mai Arr	153.33	356	PKPbc	PKPbc	09 16 36.9	-1.2
	comp=Z,0.6nm,0.3s,baz=336,slow=2.0,SNR=5.0						

*IDC **28** 09:15:59.7±2.1, 23°.51S×179°.69W, h498km±23km, mb3.6/9, mb1 3.7/10, mb1mx3.5/19, mbtmp3.5/10, Error ellipse: s-maj=23.4km s-min=16.4km az=145.0*
*ISCJB **28** 09:16:02.5±3.4, 23°.55±0°.1×179°.9W±0°.1, h541km±42km, mb4.2/17, Error ellipse: s-maj=21.5km s-min=15.7km az=142.3*
*NEIC **28** 09:16:02.1±2.2, 23°.55S×179°.79W, h527km±26km, mb4.0/6, Error ellipse: s-maj=17.1km s-min=12.4km az=204.0*

ISC 28 09:16:02.4±3.1, 23°.6S±0°.1×179°.8W±0°.1, h528km±38km, n30, σ0°78/28, mb4.2/17, 4D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.85	190	P	P	09 19 10.4	0.0
	0.8nm,0.3s,baz=152,slow=13,SNR=6.1						
URZ				S	S	09 21 44.4	-0.9
	0.8nm,0.3s,baz=237,slow=23,SNR=9.6						
RPZ	Rata Peaks	21.43	198	P	P	09 20 11.8	-0.4
	2.5nm,0.4s,mb4.2,baz=2.4,slow=8.4,SNR=2.5						
ARMA	Armidale	26.31	249	⇓iP	P	09 20 57.4	+1.6
CTA	Charters Tower	31.66	270	P	P	09 21 43.3	+0.8
	43nm,0.4s,mb5.3,baz=95,slow=11,SNR=96						
CTA	Charters Tower	31.66	270	⇓iP	P	09 21 43.3	+0.8
	34nm,0.3s,mb5.3						
CTAO	Charters Tower	31.66	270	eP	P	09 21 43.3	+0.8
	46nm,0.4s,mb5.4						
STKA	Stephens Creek	35.01	248	P	P	09 22 11.6	+1.0
	5.6nm,0.4s,mb4.4,baz=89,slow=11,SNR=35						
STKA	Stephens Creek	35.01	248	⇓iP	P	09 22 11.5	+0.9
	4.7nm,0.4s,mb4.4						
STKA	Stephens Creek	35.01	248	eP	P	09 22 11.3	+0.7
	1.1nm,0.4s,mb3.7						
COEN	Coen	36.26	279	eP	P	09 22 21.5	+0.4
	41nm,0.8s,mb5.0						
ASAR	Alice Springs	42.27	260	P	P	09 23 09.8	+0.2
	8.9nm,0.5s,mb4.6,baz=95,slow=7.4,SNR=203						
ASAR				ScP	ScP	09 27 55.0	+3.4
	0.6nm,0.7s,baz=109,slow=4.3,SNR=5.0						
WB2	Warramunga Arr	42.60	266	eP	P	09 23 11.5	-0.8
WRA	Warramunga Arr	42.62	266	P	P	09 23 11.9	-0.4
	8.2nm,0.3s,mb4.7,baz=90,slow=5.9,SNR=394						
WRA				ScP	ScP	09 27 56.5	+3.4
	1.2nm,0.9s,baz=102,slow=3.6,SNR=5.1						
KAKA	Kakadu	46.47	275	⇓iP	P	09 23 41.3	-0.8
	6.4nm,0.4s,mb4.5						
KAKA	Kakadu	46.47	275	eP	P	09 23 41.1	-1.0
FORT	Forrest	46.59	249	eP	P	09 23 42.4	-0.4
	32nm,0.5s,mb5.1						
FITZ	Fitzroy Crossi	51.04	265	P	P	09 24 16.1	+0.1
	5.3nm,0.5s,mb4.1,baz=114,slow=6.6,SNR=22						
FITZ	Fitzroy Crossi	51.04	265	eP	P	09 24 16.0	0.0
	12nm,0.7s,mb4.3						
FITZ	Fitzroy Crossi	51.04	265	eP	P	09 24 15.9	0.0
	4.2nm,0.5s,mb4.0						
KLBR	Kellerberrin	55.28	247	eP	P	09 24 45.5	-0.4
	9.2nm,0.8s,mb4.1						
MBWA	Marble Bar	55.61	260	eP	P	09 24 47.9	-0.5
	7.0nm,0.7s,mb4.0						
CASY	Casey	60.46	206	eP	P	09 25 20.6	+0.1
	1.6nm,0.6s,mb3.5						
QSPA	South Pole Qui	66.48	180	eP	P	09 26 00.7	+1.9
	3.7nm,1.0s,mb3.9						
PETK	Petropavlovsk-	78.85	346	P	P	09 27 09.7	-0.5
	4.9nm,0.9s,mb3.8,baz=145,slow=7.9,SNR=2.8						
YBH	Yreka Blue Hor	83.73	39	P	P	09 27 35.8	+0.1
	1.5nm,1.0s,mb3.5,baz=192,slow=9.3,SNR=2.5						
NVAR	Mina Array Bea	84.41	44	P	P	09 27 39.8	+0.8
	0.6nm,0.7s,mb3.2,baz=230,slow=7.2,SNR=5.1						
ILAR	Eielson Array	91.70	13	P	P	09 28 11.3	-1.3
	0.1nm,0.4s,mb3.2,baz=227,slow=6.0,SNR=4.9						
ARCES	ARCESS Array B	131.63	348	PKP	PKPdf	09 34 13.8	-0.4
	6.7nm,1.2s,baz=42,slow=1.5,SNR=3.8						
AKASG	Malin Array Be	144.82	328	PKP	PKPdf	09 34 38.4	-0.4
	1.0nm,0.5s,baz=36,slow=4.6,SNR=4.9						
AKASG	Malin Array Be	144.82	328	PKP	PKPdf	09 34 38.4	-0.4

*CASC **28** 09:23:05.7±1.8, 17°.05N×86°.05W, h10km, MD5.1, ML4.2, mb4.7(NEIC)*
*ISCJB **28** 09:23:08.2±0.2, 16°.71N±0°.02×86°.09W±0°.02, h10km, mb4.6/67, MS3.9/9, Error ellipse: s-maj=3.3km s-min=3.0km az=170.3*
*NEIC **28** 09:23:09.5±0.3, 16°.66N×86°.15W, h10km, mb4.7/68, Error ellipse: s-maj=4.8km s-min=4.1km az=192.0*
NEIC Felt at Guanaja and Roatan.
*IDC **28** 09:23:12.6±1.1, 16°.64N×86°.10W, h35km±4km, mb4.2/13, mb1 4.4/16, mb1mx4.2/26, mbtmp4.2/16, ML5.0/1, MS3.9/14, Ms1 3.9/14, ms1mx3.7/33, Error ellipse: s-maj=27.4km s-min=14.7km az=19.0*
*GCMT **28** 09:23:15.1±0.2, 16°.86N×86°.23W, h29km±1km, MW5.0, Moment Tensor Solution. s25,c29; s61,c90; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.29±.15; $M_{\theta\theta}$=1.99±.12; $M_{\phi\phi}$=2.28±.14; $M_{r\theta}$=0.01±.16; $M_{\theta\phi}$=2.55±.08; $M_{\phi r}$=1.13±.19; Best double couple: M_0=3.50000×10^{16} NP1:ϕ_s=71.00000°, δ73.00000°, λ4.00000°. NP2:ϕ_s=340.00000°, δ87.00000°, λ163.00000°. Principal axes: T 3.7400, Plg14.0000°, Azm294.0000°; N -0.4800, Plg73.0000°, Azm149.0000°; P -3.2600, Plg9.0000°, Azm26.0000°; Data Used: II IU CN IC G.*
*JSN **28** 09:24:56.8±0.3, 17°.25N×77°.74W, h0km±999km*

**ISC 28 09:23:10.1±0.2, 16°.70N±0°.02×86°.11W±0°.02, h10km, (h3°km±1

KVTX **Kingsville** 15.34 317 eP Pn 09 26 44.1 -2.6
42nm,0.9s
VBMS **Vicksburg** 15.96 346 eP Pn 09 26 54.9 +0.2
24nm,0.7s
LRAL **Lakeview Retre** 16.29 357 eP Pn 09 26 56.7 -2.3
37nm,1.1s
LRAL eS Sn 09 29 41.5 -18
ROSC **El Rosal** 16.49 134 Pn Pn 09 27 04.1 +2.5
0.4nm,0.3s,baz=109,slow=23,SNR=6.4
ROSC LR LR 09 33 19.8
comp=Z,274nm,21.9s,baz=352,slow=37
ROSC **El Rosal** 16.49 134 eP Pn 09 27 03.5 +1.9
GOGA **Godfrey** 16.81 8 eP Pn 09 27 01.6 -4.0
21nm,0.6s
GOGA eS Sn 09 29 56.9 -16
NATX **Nacogdoches** 16.89 334 eP Pn 09 27 07.5 +0.9
34nm,0.6s
SDV **Santo Domingo** 16.96 115 eP Pn 09 27 08.3 +0.7
18nm,0.6s
NHSC **New Hope** 17.19 17 eP Pn 09 27 06.8 -3.6
332nm,1.2s
COW **Cow Castle Cre** 17.31 15 eP Pn 09 27 09.4 -2.5
OXF **Oxford** 17.98 351 eP Pn 09 27 20.3 +0.1
73nm,0.8s
OXF eS Sn 09 30 26.4 -14
OTAV **Otavalo** 18.01 154 eP Pn 09 27 22.2 +1.5
9.8nm,1.4s
JSC **Jenkinsville** 18.04 13 eP Pn 09 27 18.9 -2.0
SWET **Sewanee** 18.44 0 eP Pn 09 27 25.1 -0.8
JCT **Junction City** 18.57 320 ⇓P Pn 09 27 27.1 -0.3
baz=19,SNR=34
JCT **Junction City** 18.57 320 eP Pn 09 27 25.6 -1.8
63nm,1.0s
JCT eS Sn 09 30 39.6 -15
CPCT **Cooper Cave** 18.73 4 eP Pn 09 27 28.2 -1.1
CPCT eS Sn 09 30 43.5 -15
UALR **University of** 18.85 344 eP Pn 09 27 31.7 +0.9
13nm,0.8s
UALR eS Sn 09 30 42.8 -19
MIAR **Mount Ida** 18.99 341 eP Pn 09 27 32.7 +0.2
24nm,1.2s
MIAR eS Sn 09 30 43.8 -21
TKL **Tuckaleechee C** 19.00 6 P Pn 09 27 32.3 -0.2
4.7nm,0.3s,baz=180,slow=13,SNR=29
TKL S Sn 09 30 47.7 -18
2.7nm,0.3s,baz=113,slow=20,SNR=5.9
TKL LR LR 09 34 34.9
comp=Z,183nm,20.8s,baz=273,slow=36
TKL **Tuckaleechee C** 19.00 6 eP Pn 09 27 32.0 -0.5
TKL eS Sn 09 30 49.8 -16
SJG **San Juan** 19.09 83 P Pn 09 27 32.6 -1.3
baz=312,slow=16,SNR=2.8
SJG LR LR 09 34 13.0
comp=Z,454nm,21.6s,baz=97,slow=35
SJG **San Juan** 19.09 83 P Pn 09 27 32.6 -1.3
SJG LR LR 09 34 12.9
WVT **Waverly** 19.41 356 eP Pn 09 27 35.8 -1.8
23nm,0.6s
WVT eS Sn 09 30 55.0 -20
GNAR **Gosnell** 19.50 350 eP Pn 09 27 39.3 +0.7
283nm,0.5s
628A **Black Gap, Mar** 19.98 313 ⇑P Pn 09 27 42.1 -2.2
baz=20
528A **Cox Ranch, San** 20.31 314 ⇓P P 09 27 45.6 -0.7
baz=20,SNR=15
627A **Terlingua Ranc** 20.31 312 ⇓P P 09 27 46.3 0.0
baz=20,SNR=45
TXAR **Lajitas Array** 20.45 311 P P 09 27 48.1 +0.4
23nm,0.8s,baz=129,slow=11,SNR=243
TXAR S S 09 31 22.2 -15
1.5nm,0.7s,baz=110,slow=16,SNR=4.8
TXAR LR LR 09 35 20.3
comp=Z,137nm,21.9s,MS3.3,baz=10.0,slow=36
428A **Kincaid Ranch,** 20.59 316 ⇓P P 09 27 49.4 +0.1
baz=21,SNR=13
527A **Woodward Ranch** 20.87 313 ⇓P P 09 27 52.4 0.0
baz=21,SNR=68
626A **Big Bend Ranch** 20.91 311 ⇑P P 09 27 53.1 +0.3
baz=21,SNR=115
ELN **Prospectdale** 20.99 12 eP P 09 27 54.3 +0.7
BLA **Blacksburg** 21.04 13 eP P 09 27 54.2 +0.1
70nm,0.8s,mb5.0
328A **Wristen Ranch,** 21.09 317 ⇑P P 09 27 54.2 -0.5
baz=21,SNR=44
SIUC **Southern Illin** 21.11 353 eP P 09 27 58.1 +3.2
27nm,0.7s,mb4.7
SIUC eS S 09 31 44.4 -5.4
427A **Hayter Ranch,** 21.15 315 ⇓P P 09 27 54.9 -0.4
baz=21,SNR=25
526A **Mary Lane Ranc** 21.16 312 ⇓P P 09 27 55.5 0.0
baz=21,SNR=55
VWCC **Virginia Weste** 21.17 14 eP P 09 27 58.2 +2.7
USIN **University of** 21.23 357 eP P 09 27 56.1 0.0
52nm,0.9s,mb4.9
WMOK **Wichita Mounta** 21.25 330 eP P 09 27 55.8 -0.6
42nm,1.0s,mb4.7
WCI **Wyandotte Cave** 21.45 360 eP P 09 27 58.2 -0.3
27nm,0.6s,mb4.8
WCI eS S 09 31 47.4 -9.1
426A **McDonald Obser** 21.47 314 ⇓P P 09 27 58.1 -0.7
baz=22,SNR=41
327A **Balmorhea Ranc** 21.53 316 ⇑P P 09 27 59.3 -0.1
baz=22
FVM **French Village** 21.54 351 eP P 09 28 00.2 +0.7
10nm,0.8s,mb4.3
227A **Bennet, Jal** 21.80 317 ⇑P P 09 28 01.7 -0.7
baz=22,SNR=31
326A **Caldwell Ranch** 21.82 315 ⇑P P 09 28 02.1 -0.5
baz=22,SNR=16
OLIL **Olney** 22.02 356 eP P 09 28 04.2 -0.5
29nm,0.6s,mb4.9
425A **Indio Mountain** 22.21 313 ⇓P P 09 28 05.7 -1.0
baz=22,SNR=12
127A **Arkansas Junct** 22.28 319 ⇑P P 09 28 05.9 -1.5
baz=22,SNR=18
226A **Malaga, Loving** 22.37 316 ⇓P P 09 28 07.2 -1.2
baz=22,SNR=25
BLO **Bloomington** 22.39 359 eP P 09 28 08.1 -0.5
73nm,0.5s,mb5.4
325A **Bean Ranch, Si** 22.54 314 ⇑P P 09 28 08.7 -1.5
baz=23,SNR=39
Z27A **Tatum** 22.62 320 ⇑P P 09 28 09.6 -1.5
baz=23
126A **Clayton Basin,** 22.68 318 ⇓P P 09 28 09.7 -2.1
baz=23,SNR=6.3
MSTX **Muleshoe** 22.80 322 ⇑P P 09 28 11.6 -1.4
baz=23,SNR=21
AMTX **Amarillo** 22.85 325 ⇓P P 09 28 12.4 -1.1
baz=23,SNR=16
AMTX **Amarillo** 22.85 325 eP P 09 28 12.5 -1.0
50nm,1.0s,mb4.9
225A **Deer Hill, Car** 22.88 316 ⇓P P 09 28 12.4 -1.4
baz=23,SNR=33
324A **Moseley Ranch,** 22.93 313 ⇓P P 09 28 12.7 -1.7
baz=23,SNR=26
Y27A **Causey** 22.98 321 ⇑P P 09 28 12.9 -2.0
baz=23,SNR=40
Z26A **Caprock** 23.07 319 ⇓P P 09 28 13.9 -1.9
baz=23,SNR=22
125A **Gardner Draw,** 23.11 317 ⇑P P 09 28 14.9 -1.4
baz=23,SNR=39
224A **Cornudas Mount** 23.33 315 ⇓P P 09 28 16.8 -1.8
baz=23,SNR=24
Y26A **Elida** 23.40 320 ⇓P P 09 28 18.0 -1.4
baz=23,SNR=37
X27A **F and S Farms,** 23.47 323 ⇓P P 09 28 18.5 -1.5
baz=24,SNR=14
MCWV **Mont Chateau** 23.52 12 eP P 09 28 20.9 +0.4
20nm,1.2s,mb4.4
Z25A **Roswell** 23.54 318 ⇓P P 09 28 19.7 -1.1
baz=24,SNR=23
ACSO **Alum Creek Sta** 23.60 6 eP P 09 28 20.8 -0.5
8.5nm,0.5s,mb4.4
124A **Stringfield Ra** 23.66 316 ⇓P P 09 28 20.8 -1.1
baz=24,SNR=24
W27A **Bowe Ranch, En** 23.75 324 ⇑P P 09 28 21.4 -1.3
baz=24,SNR=7.3
X26A **CR and CF Fran** 23.82 322 ⇑P P 09 28 22.0 -1.4
baz=24,SNR=19
223A **Chaparral, Ant** 23.91 313 ⇓P P 09 28 22.9 -1.4
baz=24
HDIL **Hopedale** 23.93 354 eP P 09 28 24.0 -0.2
16nm,0.8s,mb4.5
Y25A **Mesa, Roswell** 23.94 319 ⇓P P 09 28 23.8 -0.7
baz=24,SNR=27
Z24A **Sheeppen Canyo** 23.99 317 ⇓P P 09 28 24.3 -0.6
baz=24,SNR=54

SDMD **Soldier's Deli** 24.03 18 eP P 09 28 25.9 +0.7
58nm,0.6s,mb5.2
KSU1 **Kansas State U** 24.13 340 eP P 09 28 25.0 -1.2
20nm,1.0s,mb4.5
123A **Bell Site, Whi** 24.16 315 ⇑P P 09 28 26.5 0.0
baz=24
W26A **Owens Ranch, T** 24.17 323 ⇑P P 09 28 25.8 -0.7
baz=24,SNR=8.1
X25A **Clemmons Ranch** 24.32 320 ⇑P P 09 28 27.0 -0.9
baz=24
Y24A **Capitan** 24.41 318 ⇓P P 09 28 28.4 -0.4
baz=24,SNR=95
222A **Williams Famil** 24.44 313 ⇓P P 09 28 28.4 -0.7
baz=24
Z23A **Rita Site, Whi** 24.52 316 ⇓P P 09 28 29.6 -0.2
baz=24,SNR=16
W25A **X Bar L Ranch,** 24.67 322 ⇓P P 09 28 30.4 -0.8
baz=25,SNR=18
V26A **Tequesquite Ra** 24.69 324 ⇓P P 09 28 31.3 0.0
baz=25,SNR=72
122A **Conniff Cattle** 24.71 314 ⇑P P 09 28 31.8 +0.4
baz=25,SNR=15
Y23A **Lovelace Mesa,** 24.81 317 ⇑P P 09 28 32.8 +0.3
baz=25,SNR=17
X24A **Lazy VL Ranch,** 24.82 319 ⇓P P 09 28 32.7 +0.2
baz=25
221A **Mesquite Ranch** 24.87 312 ⇑P P 09 28 33.4 +0.4
baz=25,SNR=8.2
ATAH **Atahualpa** 24.88 162 LR LR 09 37 32.6
comp=Z,411nm,18.5s,MS4.0,baz=150,slow=35
SSPA **Standing Stone** 24.89 15 eP P 09 28 33.1 +0.1
47nm,1.6s,mb4.8
Z22A **Elephant Butte** 25.01 315 ⇓P P 09 28 34.8 +0.7
baz=25,SNR=26
CBKS **Cedar Bluff** 25.06 334 ⇓P P 09 28 34.7 +0.1
baz=25
CBKS **Cedar Bluff** 25.06 334 eP P 09 28 34.2 -0.4
12nm,0.8s,mb4.5
320A **Kipp Ranch, An** 25.07 310 ⇓P P 09 28 34.9 +0.1
baz=25,SNR=20
U26A **Atchley Ranch,** 25.09 325 ⇓P P 09 28 35.3 +0.3
baz=25,SNR=20
121A **Cookes Peak, D** 25.16 313 ⇓P P 09 28 36.2 +0.6
baz=25,SNR=17
V25A **Rancho No Teng** 25.19 323 ⇓P P 09 28 36.6 +0.8
baz=25,SNR=29
W24A **Lazy 6 Ranch,** 25.23 321 ⇑P P 09 28 36.3 +0.1
baz=25,SNR=43
X23A **Hourglass Bar** 25.31 318 ⇑P P 09 28 36.9 0.0
baz=25
BNM **Barren Site** 25.32 317 eP P 09 28 36.6 -0.5
6.8nm,0.8s,mb4.2
220A **Playas Peak, P** 25.35 311 ⇑P P 09 28 37.6 +0.3
baz=25,SNR=27
Y22A **Socorro** 25.41 316 ⇓P P 09 28 38.1 +0.2
baz=25,SNR=29
LPM **Los Pinos Moun** 25.43 317 eP P 09 28 38.1 +0.1
Y22D **IRIS PASSCAL I** 25.47 317 ⇑P P 09 28 38.5 +0.1
baz=26
U25A **Circle Dot Ran** 25.47 324 ⇓P P 09 28 39.5 +1.2
baz=26,SNR=20
V24A **Rampart Ranch,** 25.50 322 ⇓P P 09 28 38.9 +0.2
baz=26,SNR=26
Z21A **St. Cloud Mine** 25.52 314 ⇓P P 09 28 39.5 +0.6
baz=26,SNR=11
AAM **Ann Arbor** 25.60 4 eP P 09 28 39.4 -0.1
8.1nm,0.6s,mb4.4
319A **Douglas** 25.64 309 ⇑P P 09 28 40.6 +0.6
baz=26,SNR=17
W23A **Werner Place,** 25.66 320 ⇑P P 09 28 40.1 0.0
baz=26
ANMO **Albuquerque** 25.72 319 P P 09 28 40.8 +0.2
14nm,0.9s,mb4.5,baz=136,slow=10,SNR=52
ANMO **Albuquerque** 25.72 319 eP P 09 28 40.9 +0.3
22nm,1.0s,mb4.6
120A **U Bar Ranch, L** 25.77 312 ⇓P P 09 28 42.3 +1.2
baz=26,SNR=14
X22A **Bernardo** 25.79 317 ⇓P P 09 28 41.8 +0.5
baz=26
LAZ **Ladron** 25.81 317 eP P 09 28 41.4 -0.1
8.8nm,1.4s,mb4.1
Y21A **Point of Rocks** 25.93 316 ⇑P P 09 28 43.2 +0.7
baz=26,SNR=19
219A **White Tail Can** 25.94 310 ⇑P P 09 28 43.5 +0.9
baz=26,SNR=32
U24A **Moreno Valley** 25.97 323 ⇓P P 09 28 43.5 +0.5
baz=26
T25A **Trinidad** 26.00 325 ⇑P P 09 28 43.8 +0.6
baz=26,SNR=5.8
Z20A **Nine Sixteen R** 26.05 313 ⇓P P 09 28 44.2 +0.6
baz=26
W22A **Albuquerque** 26.05 319 ⇓P P 09 28 44.0 +0.4
baz=26
V23A **Ortiz Mt. (NFS** 26.06 321 ⇑P P 09 28 44.3 +0.6
baz=26
318A **Bisbee** 26.20 308 ⇑P P 09 28 45.6 +0.6
baz=26
X21A **Alamocita Cree** 26.26 316 ⇓P P 09 28 46.0 +0.4
baz=26,SNR=23
T24A **Torres, Weston** 26.31 324 ⇑P P 09 28 46.7 +0.7
baz=26
Y20A **Horse Springs,** 26.34 315 ⇓P P 09 28 47.1 +0.8
baz=26,SNR=22
119A **Ashpeak Ranch,** 26.36 312 ⇑P P 09 28 46.7 +0.2
baz=26
S25A **Robets Cordova** 26.40 326 ⇑P P 09 28 46.6 -0.1
baz=26
PAL **Palisades** 26.41 21 eP P 09 28 50.1 +3.3
54nm,1.2s,mb5.0
U23A **El Rito** 26.46 322 ⇓P P 09 28 47.5 +0.2
baz=26,SNR=39
218A **Dragoon** 26.50 309 ⇓P P 09 28 48.9 +1.1
baz=26,SNR=8.0
W21A **San Fidel** 26.58 318 ⇓P P 09 28 48.9 +0.5
baz=27
Z19A **T-Link Ranch,** 26.62 313 ⇑P P 09 28 49.1 +0.3
baz=27
V22A **San Miguel Ran** 26.62 320 ⇓P P 09 28 48.8 +0.1
baz=27,SNR=5.3
R25A **Fountain Ranch** 26.68 327 ⇓P P 09 28 49.8 +0.5
baz=27
118A **Homack Ranch,** 26.78 311 ⇑P P 09 28 50.5 +0.3
baz=27
X20A **Quemado** 26.79 316 ⇓P P 09 28 50.9 +0.5
baz=27,SNR=16
S24A **Houchin Ranch,** 26.81 325 ⇓P P 09 28 51.1 +0.7
baz=27
T23A **Casias Ranch,** 26.85 323 ⇑P P 09 28 51.1 +0.3
baz=27,SNR=6.4
U22A **Llaves** 26.89 321 ⇑P P 09 28 51.9 +0.7
baz=27,SNR=16
Y19A **Nutrioso** 26.97 314 ⇓P P 09 28 52.9 +0.9
baz=27,SNR=9.8
217A **Green Valley** 26.98 308 ⇑P P 09 28 52.5 +0.4
baz=27,SNR=12
V21A **Milan** 27.00 319 ⇑P P 09 28 52.4 +0.1
baz=27,SNR=6.9
SDCO **Great Sand Dun** 27.04 325 ⇓P P 09 28 52.9 +0.3
baz=27,SNR=9.2
SDCO **Great Sand Dun** 27.04 325 eP P 09 28 52.7 +0.2
9.9nm,1.3s,mb4.2
Z18A **Geronimo** 27.06 312 ⇓P P 09 28 53.4 +0.7
baz=27
W20A **Ramah** 27.14 317 ⇑P P 09 28 53.8 +0.3
baz=27,SNR=14
R24A **Sanders Place,** 27.18 326 ⇑P P 09 28 54.0 +0.2
baz=27
TUC **Tucson** 27.21 309 eP P 09 28 54.5 +0.3
19nm,1.2s,mb4.5
Q25A **Bedland, Calha** 27.23 328 ⇑P P 09 28 54.9 +0.7
baz=27
X19A **St. Johns** 27.26 315 ⇓P P 09 28 55.1 +0.5
baz=27,SNR=9.1
S23A **Nye Farm, Mont** 27.29 324 ⇓P P 09 28 55.4 +0.5
baz=27
117A **Oracle** 27.31 310 ⇑P P 09 28 55.1 +0.1
baz=27
T22A **Edith** 27.34 322 ⇓P P 09 28 55.7 +0.5
baz=27
U21A **Nageezi** 27.41 320 ⇑P P 09 28 56.0 0.0
baz=27,SNR=8.9
Y18A **Canyon Day Jun** 27.42 313 ⇑P P 09 28 56.7 +0.7
baz=27,SNR=10
Z17A **San Carlos Hig** 27.48 312 ⇑P P 09 28 56.8 +0.3
baz=28
V20A **Brimhall** 27.52 318 ⇑P P 09 28 57.0 +0.1
baz=28
216A **Three Points,** 27.57 308 ⇑P P 09 28 57.3 -0.1
baz=28

P25A **Willow Gulch B** 27.65 329 ⇑P P 09 28 58.6 +0.6
baz=28
T21A **Navajo Lake** 27.70 321 ⇓P P 09 28 58.6 +0.1
baz=28,SNR=6.2
W19A **Sanders** 27.72 316 ⇑P P 09 28 58.7 0.0
baz=28
Q24A **Divide** 27.74 327 ⇑P P 09 28 59.0 +0.3
baz=28
X18A **Snowflake** 27.77 314 ⇑P P 09 28 59.1 0.0
baz=28
S22A **4UR Ranch, Cre** 27.79 323 ⇓P P 09 28 59.6 +0.3
baz=28,SNR=5.9
V19A **Window Rock** 27.85 317 ⇑P P 09 28 59.8 0.0
baz=28
U20A **Newcomb** 27.92 319 ⇑P P 09 29 00.3 -0.1
baz=28
Y17A **Roosevelt** 27.95 312 ⇑P P 09 29 01.5 +0.8
baz=28
W18A **Petrified Fore** 27.95 315 ⇓P P 09 29 01.7 +0.9
baz=28
116A **Eloy** 28.02 309 ⇑P P 09 29 01.2 -0.2
baz=28
Q23A **Hartsel** 28.06 326 ⇓P P 09 29 02.1 +0.5
baz=28
R22A **Saguache, Gunn** 28.08 324 ⇓P P 09 29 02.4 +0.5
baz=28
X17A **Forest Lakes** 28.26 313 ⇓P P 09 29 03.8 +0.3
baz=28
S21A **Coal Bank Pass** 28.30 322 ⇓P P 09 29 03.8 0.0
baz=28,SNR=7.0
U19A **Dine' College,** 28.30 318 ⇓P P 09 29 03.6 -0.3
baz=28,SNR=9.3
P23A **Jefferson** 28.40 327 ⇑P P 09 29 05.2 +0.5
baz=28
V18A **Ganado** 28.43 316 ⇓P P 09 29 05.2 +0.2
baz=28
115A **Sonoran Desert** 28.47 309 ⇓P P 09 29 05.5 +0.1
baz=28
Y16A **Circle Bar Ran** 28.50 312 ⇓P P 09 29 05.7 0.0
baz=28
T19A **Beclabito** 28.52 319 ⇓P P 09 29 05.4 -0.4
baz=29,SNR=8.6
214A **Organ Pipe Nat** 28.58 307 ⇑P P 09 29 06.3 -0.1
baz=29
SADO **Sadowa** 28.59 10 P P 09 29 05.4 -0.9
4.8nm,0.6s,mb4.4,baz=220,slow=11,SNR=4.4
SADO LR LR 09 40 44.1
comp=Z,300nm,19.2s,MS3.9,baz=220,slow=37
W17A **Winslow** 28.60 314 ⇓P P 09 29 06.3 -0.3
baz=29
ISCO **Idaho Springs** 28.60 327 ⇓P P 09 29 06.6 +0.2
baz=29
Q22A **Crested Butte,** 28.61 325 ⇑P P 09 29 06.9 +0.3
baz=29
X16A **Lo Mia Camp, P** 28.75 313 ⇑P P 09 29 07.9 +0.1
baz=29,SNR=6.6
S20A **Disappointment** 28.75 321 ⇑P P 09 29 08.0 +0.2
baz=29
U18A **Rough Rock, Ch** 28.80 318 ⇑P P 09 29 08.4 +0.1
baz=29
V17A **Tonalea, Kykot** 28.95 315 ⇑P P 09 29 09.6 -0.1
baz=29
Q21A **Lamborn Mesa,** 28.97 324 ⇓P P 09 29 09.7 -0.1
baz=29
114A **Black Gap (USA** 28.99 308 ⇑P P 09 29 10.2 +0.2
baz=29
R20A **Redvale** 29.00 322 ⇑P P 09 29 11.0 +1.0
baz=29
N24A **Carr** 29.01 330 ⇑P P 09 29 10.6 +0.5
baz=29
P22A **Eagle** 29.05 326 ⇑P P 09 29 10.5 0.0
baz=29
O23A **Lake Granby, G** 29.06 328 ⇑P P 09 29 11.7 +1.2
baz=29
PV01 **Paradox Valley** 29.07 322 eP P 09 29 11.3 +0.6
Y15A **Casa Rosa Ranc** 29.15 311 ⇑P P 09 29 12.1 +0.6
baz=29
S19A **Harvey Farm, M** 29.16 320 ⇑P P 09 29 11.7 +0.2
baz=29
W16A **Flagstaff** 29.17 314 ⇓P P 09 29 11.9 +0.3
baz=29
T18A **Mexican Hat** 29.24 319 ⇓P P 09 29 12.3 +0.1
baz=29
X15A **Humboldt** 29.35 312 ⇑P P 09 29 13.3 +0.2
baz=29
O22A **Kremmling** 29.35 327 ⇑P P 09 29 13.0 -0.1
baz=29
P21A **Newcastle** 29.38 325 ⇓P P 09 29 14.2 +0.8
baz=29
PV04 **Paradox Valley** 29.44 322 eP P 09 29 14.1 +0.1
U16A **Tuba City** 29.47 316 ⇑P P 09 29 14.7 +0.4
baz=30,SNR=20
PV10 **Paradox Valley** 29.51 322 eP P 09 29 14.6 0.0
77nm,1.0s,mb5.4
N23A **Red Feather La** 29.58 329 ⇑P P 09 29 15.3 +0.1
baz=30
R19A **Curley Farm, L** 29.59 321 ⇓P P 09 29 15.5 +0.2
baz=30
Y14A **Wickenburg** 29.63 310 ⇓P P 09 29 15.4 -0.3
baz=30
S18A **Hurst Farm, Bl** 29.66 320 ⇓P P 09 29 16.3 +0.4
baz=30
113A **Mohawk Valley,** 29.66 308 ⇓P P 09 29 16.1 +0.1
baz=30
W15A **Williams** 29.72 313 ⇑P P 09 29 16.8 +0.3
baz=30
T17A **Navajo Res., N** 29.75 318 ⇑P P 09 29 17.1 +0.3
baz=30,SNR=5.2
Z13A **Yuma Proving G** 29.77 309 ⇑P P 09 29 17.0 0.0
baz=30
N22A **Wattenberg Ran** 29.77 328 ⇑P P 09 29 17.8 +0.9
baz=30
X14A **Yava** 29.80 311 ⇓P P 09 29 17.6 +0.4
baz=30
O21A **Pagoda** 29.88 326 ⇓P P 09 29 18.0 +0.2
baz=30
P20A **De Beque** 29.88 324 ⇓P P 09 29 18.4 +0.5
baz=30
V15A **Kaibab Nationa** 30.00 314 ⇓P P 09 29 19.5 +0.6
baz=30,SNR=31
Q19A **Hogan Spring (** 30.02 322 ⇓P P 09 29 18.6 -0.5
baz=30,SNR=5.2
R18A **Canyonlands Na** 30.03 321 ⇑P P 09 29 19.5 +0.3
baz=30,SNR=7.9
S17A **Black Ridge (B** 30.13 319 ⇑P P 09 29 20.3 +0.2
baz=30
T16A **Glen Canyon Da** 30.20 317 ⇑P P 09 29 21.4 +0.7
baz=30,SNR=5.8
O20A **White River Ci** 30.24 325 ⇑P P 09 29 21.6 +0.6
baz=30
P19A **Cripple Cowboy** 30.31 323 ⇓P P 09 29 21.7 0.0
baz=30
W14A **Seligman** 30.31 313 ⇑P P 09 29 21.8 0.0
baz=30
L23A **Garrett** 30.39 330 ⇓P P 09 29 22.7 +0.4
baz=30
U15A **North Rim** 30.41 315 ⇑P P 09 29 23.2 +0.6
baz=30,SNR=9.5
X13A **Yucca** 30.54 311 ⇓P P 09 29 23.3 -0.5
baz=31
V14A **Boquillas Ranc** 30.55 313 ⇑P P 09 29 24.3 +0.6
baz=31,SNR=5.5
R17A **Hanksville Air** 30.55 320 ⇑P P 09 29 23.6 -0.2
baz=31,SNR=18
GLA **Glamis** 30.59 308 ⇓P P 09 29 24.4 +0.2
baz=31
PDMCI **Parker Dam,Lak** 30.63 310 ⇑P P 09 29 24.4 -0.1
baz=31
Q18A **Rafter H Ranch** 30.63 322 ⇓P P 09 29 24.8 +0.3
baz=31,SNR=6.3
Y12C **Blythe** 30.66 309 ⇑P P 09 29 24.9 0.0
baz=31
S16A **Weppner Ranch,** 30.69 318 ⇑P P 09 29 25.0 0.0
baz=31
N20A **Spene Gulch,** 30.74 326 ⇓P P 09 29 25.8 +0.3
baz=31
T15A **Red Dirt Ranch** 30.80 316 ⇓P P 09 29 26.6 +0.6
baz=31,SNR=10
W13A **Hualapai Mount** 30.83 312 ⇓P P 09 29 26.9 +0.6
baz=31
SRU **San Rafael** 30.87 321 ⇑P P 09 29 26.6 -0.1
baz=31,SNR=8.3
SRU **San Rafael** 30.87 321 eP P 09 29 26.0 -0.6
6.1nm,1.0s,mb4.4
R16A **Teasdale** 30.95 319 ⇓P P 09 29 27.7 +0.4
baz=31,SNR=13
U14A **Mt Trumbull** 31.01 315 ⇑P P 09 29 28.4 +0.6

baz=31,SNR=12
P18A **Preston Nutter** 31.04 322 ⇑P P 09 29 28.3 +0.2
baz=31,SNR=14
L21A **Rawlins** 31.09 328 ⇓P P 09 29 28.8 +0.3
baz=31
Q16A **Castle Valley** 31.14 320 ⇓P P 09 29 29.2 +0.2
baz=31
P17A **Butcher Ranch,** 31.23 322 ⇑P P 09 29 30.1 +0.3
baz=31
V13A **Grand Canyon W** 31.27 313 ⇑P P 09 29 30.8 +0.7
baz=31,SNR=5.7
T14A **Hurricane** 31.29 316 ⇓P P 09 29 31.2 +0.9
baz=31,SNR=7.8
IRM **Iron Mountain** 31.31 309 ⇑P P 09 29 30.8 +0.2
baz=31
BC3 **Big Chuckawall** 31.32 308 ⇑P P 09 29 30.6 0.0
baz=31
O18A **Roosevelt** 31.32 323 ⇑P P 09 29 31.0 +0.5
baz=31,SNR=6.0
TMUT **Trail Mountain** 31.40 321 eP P 09 29 31.6 +0.3
23nm,1.9s,mb4.7
DVTC **Desert V Tower** 31.40 306 ⇑P P 09 29 31.7 +0.3
baz=31
R15A **Junction** 31.41 318 ⇑P P 09 29 32.0 +0.6
baz=31,SNR=7.4
MSU **Marysvale** 31.52 319 eP P 09 29 33.1 +0.7
U13A **Pakoon Wash** 31.54 314 ⇓P P 09 29 33.1 +0.6
baz=32,SNR=12
N18A **Larsen Ranch,** 31.61 325 ⇓P P 09 29 33.4 +0.3
baz=32
L20A **Wamsutter** 31.62 327 ⇓P P 09 29 33.2 0.0
baz=32
W12A **Cal Nev Ari** 31.63 311 ⇓P P 09 29 33.3 0.0
baz=32,SNR=6.5
O17A **Robinson Place** 31.69 323 ⇓P P 09 29 34.1 +0.2
baz=32,SNR=6.4
LDFC **Landfair** 31.70 311 eP P 09 29 35.8 +1.8
12nm,1.0s,mb4.7
S14A **Cedar City** 31.73 317 ⇓P P 09 29 34.5 +0.3
baz=32,SNR=6.0
CCUT **Cedar City** 31.74 316 eP P 09 29 35.0 +0.7
7.6nm,1.2s,mb4.4
MONP **Monument Peak** 31.74 306 ⇓P P 09 29 34.6 +0.2
baz=32
J22A **Midwest** 31.76 331 ⇑P P 09 29 35.2 +0.9
baz=32
T13A **Saint George** 31.82 315 ⇑P P 09 29 35.7 +0.7
baz=32,SNR=28
V12A **Nelson** 31.82 312 ⇓P P 09 29 35.8 +0.7
baz=32,SNR=10
P16A **Fountain Green** 31.87 321 ⇑P P 09 29 36.4 +1.0
baz=32
BELC **Belle Mtn. Jos** 31.87 308 ⇓P P 09 29 35.8 +0.2
baz=32,SNR=6.9
ARUT **Antelope Range** 31.92 317 eP P 09 29 36.4 +0.5
9.5nm,0.8s,mb4.7
Q15A **Fillmore** 31.94 319 ⇑P P 09 29 36.6 +0.6
baz=32
U12A **Valley of Fire** 31.95 313 ⇓P P 09 29 36.8 +0.7
baz=32
GMRC **Granite Mounta** 31.96 310 ⇓P P 09 29 37.1 +0.8
baz=32
PFO **Pinyon Flat Ob** 32.06 307 ⇑P P 09 29 37.1 0.0
baz=32,SNR=5.1
PFO **Pinyon Flat Ob** 32.06 307 eP P 09 29 38.1 +1.0
7.5nm,1.1s,mb4.4
S13A **Holt Ranch, En** 32.09 316 ⇑P P 09 29 38.2 +0.9
baz=32,SNR=22
K20A **Yellowstone Ra** 32.09 328 ⇑P P 09 29 37.2 -0.1
baz=32
DAU **Daniels Canyon** 32.14 322 eP P 09 29 38.4 +0.7
8.2nm,1.3s,mb4.4
J21A **Lysite** 32.16 330 ⇓P P 09 29 38.0 +0.1
baz=32
T12A **Moapa** 32.22 314 ⇑P P 09 29 38.8 +0.3
baz=32
N17A **Moffit Pass** 32.24 324 ⇓P P 09 29 39.1 +0.5
baz=32
V11A **Goodsprings** 32.29 312 ⇓P P 09 29 39.9 +0.7
baz=32
SHPR **Sheep Range** 32.42 313 eP P 09 29 40.8 +0.5
6.7nm,1.3s,mb4.3
I21A **Big Trails, Te** 32.45 331 ⇓P P 09 29 40.9 +0.5
baz=32
TUQ **Turquoise Moun** 32.45 311 ⇑P P 09 29 41.3 +0.7
baz=32
L18A **Fontenelle, Gr** 32.46 326 ⇓P P 09 29 40.8 +0.3
baz=32
J20A **Shoshoni** 32.48 329 ⇓P P 09 29 41.2 +0.5
baz=32
HEC **Hector,Ludlow** 32.48 310 ⇓P P 09 29 41.9 +1.0
baz=32
R13A **O'Grain Ranch,** 32.49 317 ⇓P P 09 29 41.9 +1.0
baz=32,SNR=8.4
M17A **Scullys Gap (B** 32.49 324 ⇓P P 09 29 40.8 -0.1
baz=32
Q14A **Sevier Lake (B** 32.50 319 ⇓P P 09 29 41.3 +0.3
baz=32,SNR=9.1
MURC **Murrieta** 32.62 307 ⇓P P 09 29 42.7 +0.6
baz=33
BBRC **Big Bear Solar** 32.68 308 ⇓P P 09 29 43.1 +0.5
baz=33
P14A **Drum Mountains** 32.72 320 ⇑P P 09 29 43.4 +0.5
baz=33,SNR=12
O15A **The Old Anders** 32.77 321 ⇓P P 09 29 43.5 +0.1
baz=33
BW06 **Boulder Array** 32.79 327 ⇓P P 09 29 43.1 -0.4
baz=33
SHOC **Shoshone** 32.92 311 ⇓P P 09 29 45.3 +0.5
baz=33
DUG **Dugway** 32.93 321 ⇓P P 09 29 45.1 +0.4
baz=33,SNR=8.9
DUG **Dugway** 32.93 321 eP P 09 29 45.1 +0.5
8.7nm,1.1s,mb4.6
M16A **Huntsville** 32.94 323 ⇓P P 09 29 44.6 -0.2
baz=33
K18A **Toltan Ranch,** 32.95 327 ⇑P P 09 29 45.7 +0.8
baz=33,SNR=5.1
L17A **Cokeville** 33.03 325 ⇑P P 09 29 45.7 +0.1
baz=33
HWUT **Hardware Ranch** 33.09 324 eP P 09 29 46.0 -0.1
28nm,1.9s,mb4.9
N15A **Stansbury Isla** 33.18 322 ⇓P P 09 29 47.2 +0.3
baz=33
U10A **Ash Meadows, A** 33.20 312 ⇓P P 09 29 48.1 +0.9
baz=33,SNR=7.3
J18A **Kendall Valley** 33.35 327 ⇑P P 09 29 48.4 +0.1
baz=33
M15A **Larsen Ranch,** 33.50 323 ⇓P P 09 29 49.5 -0.2
baz=34,SNR=7.0
I18A **Diamond G Ranc** 33.59 328 ⇑P P 09 29 50.7 +0.2
baz=34
FURC **Furnace Creek,** 33.60 312 ⇓P P 09 29 51.0 +0.3
baz=34,SNR=14
R11A **Troy Canyon, C** 33.65 316 ⇓P P 09 29 51.0 -0.1
baz=34,SNR=11
EDW2 **Edwards Air Fo** 33.74 309 ⇓P P 09 29 51.9 +0.1
baz=34
LRMC **Laurel Mountai** 33.76 310 ⇑P P 09 29 51.9 -0.2
baz=34
J17A **Brown Place, J** 33.81 327 ⇓P P 09 29 52.3 -0.1
baz=34,SNR=6.9
L15A **Malad City** 33.81 324 ⇓P P 09 29 51.8 -0.6
baz=34,SNR=8.0
D24A **Glendive** 33.87 337 ⇑P P 09 29 53.3 +0.5
baz=34
MPMC **Manual Prospec** 33.87 311 ⇓P P 09 29 53.1 +0.1
baz=34,SNR=6.8
REDW **Red Top Meadow** 33.88 327 eP P 09 29 53.2 +0.3
10.0nm,1.0s,mb4.7
SNOW **Snow King Moun** 33.90 327 eP P 09 29 53.3 +0.2
10nm,1.0s,mb4.7
K16A **Soda Springs** 33.92 325 ⇓P P 09 29 53.4 +0.1
baz=34
G20A **Bridger** 33.95 332 ⇓P P 09 29 53.7 +0.2
baz=34
TPAW **Teton Pass** 34.03 327 eP P 09 29 54.2 0.0
6.0nm,0.8s,mb4.6
I17A **Pilgrim Ck.** 34.13 328 ⇓P P 09 29 55.8 +0.7
baz=34
GRAC **Grapevine Rang** 34.21 312 ⇓P P 09 29 56.7 +0.8
baz=34
J16A **Bone** 34.23 326 ⇑P P 09 29 56.5 +0.5
baz=34
D23A **Lindsay** 34.25 337 ⇓P P 09 29 56.3 +0.2
baz=34
LAO **LASA Array** 34.25 335 ⇓P P 09 29 56.1 0.0
baz=34

C24A **Savage** 34.26 338 ⇑P P 09 29 56.1 0.0
baz=34
IMW **Indian Meadow** 34.30 327 eP P 09 29 56.0 -0.6
5.7nm,1.3s,mb4.3
L14A **Malta** 34.32 323 ⇓P P 09 29 56.5 -0.3
baz=34
K15A **Arbon** 34.34 324 ⇓P P 09 29 56.8 -0.2
baz=34
RLMT **Red Lodge** 34.36 330 ⇓P P 09 29 56.9 -0.2
baz=34
ULM **Lac du Bonnet** 34.38 349 LR LR 09 43 43.9
comp=Z,86nm,21.2s,MS3.5,baz=328,slow=36
ISA **Isabella** 34.42 310 ⇓P P 09 29 57.1 -0.7
baz=34
ISA **Isabella** 34.42 310 eP P 09 29 58.4 +0.6
2.7nm,1.1s,mb4.1
ARVC **Arvin** 34.47 308 ⇑P P 09 29 58.0 -0.2
baz=34,SNR=6.2
E21A **Keefer Ranch,** 34.48 334 ⇑P P 09 29 58.3 +0.3
baz=34
I16A **Newdale** 34.57 327 ⇑P P 09 29 58.9 -0.1
baz=35
D22A **Cohagen** 34.60 336 ⇓P P 09 29 59.5 +0.3
baz=35
K14A **Jones Ranch, D** 34.61 324 ⇑P P 09 29 58.7 -0.6
baz=35,SNR=9.0
G18A **Lazy EL Ranch,** 34.65 330 ⇑P P 09 29 59.7 +0.1
baz=35
J15A **Blackfoot** 34.76 325 ⇑P P 09 30 00.0 -0.5
baz=35,SNR=6.4
F19A **Roth Farm, Mol** 34.76 332 ⇓P P 09 30 00.6 +0.1
baz=35
C23A **Lambert** 34.76 337 ⇓P P 09 30 00.5 0.0
baz=35
E20A **Meyer Farm, Mu** 34.90 333 ⇓P P 09 30 02.2 +0.5
baz=35
VES **Vestal, Richgr** 34.95 309 ⇑P P 09 30 03.1 +0.8
baz=35
DGMT **Dagmar** 34.97 339 eP P 09 30 01.4 -1.0
9.2nm,0.8s,mb4.8
C22A **Vida** 34.98 337 ⇓P P 09 30 02.5 +0.1
baz=35
PKM **Peak Mountain** 35.12 308 ⇑P P 09 30 04.3 +0.4
baz=35
B23A **Brockton** 35.25 338 ⇑P P 09 30 05.1 +0.3
baz=35
RCTC **Rector, Farmer** 35.26 310 ⇑P P 09 30 04.9 0.0
baz=35
A24A **Westby** 35.30 339 ⇓P P 09 30 04.4 -0.7
baz=35
J14A **Carey** 35.30 324 ⇓P P 09 30 05.6 +0.3
baz=35
D20A **Manuel Ranch,** 35.36 334 ⇑P P 09 30 05.4 -0.3
baz=35,SNR=6.2
SMMC **Sumner** 35.42 308 ⇓P P 09 30 05.3 -1.1
baz=35
B22A **Reddig Ranch S** 35.48 337 ⇑P P 09 30 06.9 +0.2
baz=36
C21A **Desert Coulee** 35.52 335 ⇑P P 09 30 07.8 +0.8
baz=36
NVAR **Mina Array Bea** 35.54 314 P P 09 30 08.5 +1.1
12nm,1.0s,mb4.8,baz=122,slow=8.3,SNR=62
NVAR PcP PcP 09 32 35.5 -1.0
0.7nm,0.8s,baz=138,slow=4.5,SNR=3.6
NVAR pPcP 09 32 47.2
0.6nm,0.7s,baz=131,slow=3.7,SNR=2.9
NVAR LR LR 09 48 29.2
comp=Z,245nm,19.3s,MS4.0,baz=250,slow=43
MLAC **Mammoth Lakes** 35.54 312 ⇓P P 09 30 07.9 +0.5
baz=36
F17A **Fitzpatrick Pl** 35.60 330 ⇓P P 09 30 08.0 +0.2
baz=36
I14A **Mackay** 35.66 325 ⇑P P 09 30 08.8 +0.5
baz=36
G16A **Moss Hill, Enn** 35.68 328 ⇓P P 09 30 08.6 +0.2
baz=36
H15A **Lima** 35.69 327 ⇓P P 09 30 08.7 +0.1
baz=36
D19A **Cripps Ranch,** 35.74 333 ⇑P P 09 30 09.0 +0.1
baz=36
C20A **Veseth Ranch,** 35.80 334 ⇑P P 09 30 09.2 -0.3
baz=36,SNR=7.4
BOZ **Bozeman (W)** 35.89 329 ⇓P P 09 30 10.3 +0.1
baz=36
MCMT **McKenzie Canyo** 35.94 327 eP P 09 30 11.6 +0.9
4.4nm,1.3s,mb4.2
HLID **Hailey** 35.96 324 ⇓P P 09 30 11.0 +0.2
baz=36
G15A **Dillon** 35.98 328 ⇑P P 09 30 11.7 +0.6
baz=36
I13A **Wildhorse Cree** 36.02 325 ⇑P P 09 30 11.4 +0.1
baz=36,SNR=5.6
A22A **Carney Farms,** 36.02 338 ⇑P P 09 30 11.2 -0.2
baz=36,SNR=5.4
H14A **Leadore** 36.07 326 ⇑P P 09 30 12.2 +0.3
baz=36
D18A **Linhart Farms,** 36.16 332 ⇓P P 09 30 12.9 +0.3
baz=36
C19A **Slack Wire Ran** 36.25 334 ⇑P P 09 30 13.4 +0.1
baz=36
WAKR **Walker** 36.36 313 eP P 09 30 15.6 +1.1
F15A **Butte** 36.45 328 ⇓P P 09 30 15.1 0.0
baz=36
I12A **Atlanta** 36.51 324 ⇓P P 09 30 15.2 -0.4
baz=36
H13A **Challis** 36.51 325 ⇑P P 09 30 15.4 -0.2
baz=37
D17A **Six Diamond Ra** 36.53 332 ⇓P P 09 30 15.4 -0.4
baz=37
MFID **Camas Ranch** 36.67 323 ⇑P P 09 30 16.7 -0.3
baz=37
A20A **Cobblestone Ra** 36.69 336 ⇓P P 09 30 17.7 +0.6
baz=37
B19A **Brinkman Farms** 36.77 334 ⇓P P 09 30 18.1 +0.3
baz=37
CMB **Columbia Colle** 36.82 312 eP P 09 30 18.5 +0.2
6.3nm,1.2s,mb4.3
H12A **Diamond D Ranc** 36.83 325 ⇑P P 09 30 18.0 -0.3
baz=37
D16A **Dana Ranch, Ca** 36.84 331 ⇓P P 09 30 18.4 0.0
baz=37
G13A **Cobalt** 36.85 326 ⇓P P 09 30 17.9 -0.5
baz=37
PAHR **Pah Rah Range** 36.89 315 eP P 09 30 19.4 +0.5
14nm,1.1s,mb4.7
C17A **Wharram Farm,** 36.92 332 ⇑P P 09 30 18.8 -0.2
baz=37
E15A **Deer Lodge** 36.93 329 ⇑P P 09 30 18.9 -0.3
baz=37
WCN **Washoe City** 36.95 314 ⇑P P 09 30 19.7 +0.3
baz=37,SNR=8.9
WCN **Washoe City** 36.95 314 eP P 09 30 20.7 +1.3
8.0nm,1.1s,mb4.5
A19A **Klindworth Far** 37.06 335 ⇓P P 09 30 20.3 +0.1
baz=37
B18A **Beardsley Farm** 37.07 334 ⇓P P 09 30 20.4 +0.1
baz=37
E14A **Hinton** 37.35 328 ⇑P P 09 30 22.4 -0.4
baz=37
F13A **Darby** 37.36 327 ⇑P P 09 30 22.4 -0.4
baz=37
G12A **Big Creek, Yel** 37.46 325 ⇑P P 09 30 23.6 -0.1
baz=38
A18A **Metzger Ranch,** 37.51 334 ⇑P P 09 30 22.9 -1.0
baz=38,SNR=5.6
WVOR **Wild Horse Val** 37.80 319 eP P 09 30 26.2 -0.4
23nm,1.4s,mb4.7
F12A **Elk City** 37.82 326 ⇑P P 09 30 26.7 -0.1
baz=38
C15A **Salmond Ranch,** 37.88 331 ⇑P P 09 30 27.4 +0.2
baz=38
A17A **Triple J Farms** 37.88 333 ⇑P P 09 30 27.0 -0.2
baz=38
OHCM **Honcut** 38.16 313 eP P 09 30 30.4 +0.7
J08A **Circle Bar Ran** 38.21 321 ⇓P P 09 30 29.4 -0.6
baz=38,SNR=8.5
B15A **Bradely Ranch,** 38.24 331 ⇑P P 09 30 30.2 0.0
baz=38
E12A **Beaver Dam Sad** 38.42 327 ⇓P P 09 30 32.7 +0.9
baz=38
D12A **Red Ives Fores** 38.73 328 ⇓P P 09 30 34.2 -0.2
baz=39
A15A **Johnson Ranch,** 38.80 332 ⇑P P 09 30 35.4 +0.5
baz=39
F10A **Beach Ranch, E** 39.03 325 ⇑P P 09 30 35.5 -1.4
baz=39,SNR=6.3
A14A **Double T Ranch** 39.11 331 ⇓P P 09 30 37.2 -0.3
baz=39

B13A **Whitefish** 39.18 330 ⇑P P 09 30 37.9 -0.2
baz=39
K05A **Summer Lake** 39.37 318 ⇓P P 09 30 39.8 0.0
baz=39
A13A **Flathead Natio** 39.55 331 ⇓P P 09 30 41.6 +0.4
baz=40
G08A **Pilot Rock** 39.59 323 ⇑P P 09 30 41.3 -0.3
baz=40
C11A **Tepee Creek (N** 39.71 328 ⇑P P 09 30 42.1 -0.4
baz=40
KCPM **Cahto Peak** 39.78 313 eP P 09 30 44.6 +1.3
18nm,1.3s,mb4.7
YBH **Yreka Blue Hor** 40.07 316 P P 09 30 43.6 -2.1
2.9nm,1.0s,mb4.0,baz=154,slow=4.7,SNR=4.7
E07A **Sunnyside** 40.84 324 ⇓P P 09 30 51.7 -0.2
baz=41
SCHQ **Schefferville** 40.86 17 P P 09 30 50.6 -1.3
5.1nm,0.5s,mb4.4,baz=217,slow=6.8,SNR=13
SCHQ LR LR 09 48 30.3
comp=Z,245nm,18.4s,MS4.1,baz=209,slow=37
SCHQ **Schefferville** 40.86 17 eP P 09 30 51.1 -0.9
7.7nm,0.7s,mb4.4
H04A **Detroit Lake** 41.18 320 ⇓P P 09 30 54.5 -0.2
baz=41
G04A **Mulino** 41.63 321 ⇑P P 09 30 58.5 +0.1
baz=42
LON **Longmire** 42.06 323 eP P 09 31 01.3 -0.6
5.2nm,0.9s,mb4.2
D05A **Enumclaw** 42.40 324 ⇑P P 09 31 04.7 0.0
baz=42
F03A **Seaside** 42.65 321 ⇑P P 09 31 06.8 0.0
baz=43
BDFB **Brasilia** 49.45 129 LR LR 09 54 53.2
comp=Z,165nm,20.0s,MS4.0,baz=344,slow=38
YKA **Yellowknife Ar** 49.91 343 P P 09 32 02.7 -0.8
2.8nm,1.0s,mb4.2,baz=132,slow=8.3,SNR=5.2
YKA pP pP 09 32 14.2 +7.5
2.4nm,0.6s,baz=137,slow=7.9,SNR=6.4
YKA **Yellowknife Ar** 49.91 343 P P 09 32 02.7 -0.9
YKA pP pP 09 32 14.2 +7.5
CPUP **Villa Florida** 51.11 146 LR LR 09 56 55.8
comp=Z,138nm,19.4s,MS4.0,baz=127,slow=40
DLBC **Dease Lake** 52.70 333 eP P 09 32 24.7 +0.1
DOT **Dot Lake** 61.15 334 eP P 09 33 24.3 -0.2
35nm,1.3s,mb5.3
PAX **Paxson** 61.50 333 eP P 09 33 25.7 -1.1
5.9nm,0.9s,mb4.7
ILAR **Eielson Array** 62.71 335 P P 09 33 34.1 -0.7
4.0nm,0.9s,mb4.5,baz=119,slow=5.0,SNR=38
ILAR pP pP 09 33 44.6 +6.5
2.4nm,0.6s,baz=121,slow=3.4,SNR=12
COLA **College** 63.13 335 eP P 09 33 36.6 -1.1
4.0nm,0.9s,mb4.5
MCK **McKinley** 63.23 334 eP P 09 33 37.5 -0.8
BPAW **Bear Paw Mtn.** 64.20 334 eP P 09 33 43.5 -1.3
9.6nm,1.0s,mb4.8
ESDC **Sonseca Array** 73.58 53 P P 09 34 43.4 -0.3
0.9nm,0.6s,mb3.9,baz=281,slow=6.0,SNR=7.3
ESDC pP pP 09 34 54.0 +7.0
0.9nm,0.5s,baz=288,slow=6.1,SNR=4.9
TIC **Toumodi** 79.61 86 eP P 09 35 16.8 -1.4
75nm,1.8s,mb5.3
LIC **Lamto** 79.72 87 eP P 09 35 17.9 -0.9
87nm,2.2s,mb5.3
DBIC **Dimbokro** 79.76 86 P P 09 35 18.5 -0.6
3.2nm,0.8s,mb4.3,baz=263,slow=7.3,SNR=4.7
KIC **Kosan Boka** 79.95 86 eP P 09 35 19.4 -0.7
15nm,0.7s,mb5.0
ARCES **ARCESS Array B** 81.77 19 P P 09 35 27.7 -1.0
2.3nm,0.8s,mb4.2,baz=238,slow=7.0,SNR=10.0
GERES **GERESS Array B** 83.88 41 P P 09 35 39.0 -1.1
0.2nm,0.7s,mb3.4,baz=332,slow=4.5,SNR=4.2
TORD **Torodi Ar. Bea** 84.24 78 P P 09 35 41.1 -1.5
1.0nm,0.8s,mb4.0,baz=294,slow=5.1,SNR=5.7
TORD pP pP 09 35 51.5 +5.6
0.9nm,0.7s,baz=295,slow=4.7,SNR=7.0
KAF **Kangasniemi** 85.40 26 ep P 09 35 46.2 -1.3
0.7nm,0.3s,mb4.3
FINES **FINESS Array B** 85.61 27 P P 09 35 47.6 -1.0
4.6nm,0.6s,mb4.9,baz=282,slow=2.7,SNR=24
FINES pP pP 09 35 58.6 +6.7
5.3nm,0.7s,baz=281,slow=1.9,SNR=3.6
CN2 **Changchun** 113.23 336 ePKP PKiKP 09 41 46.0 -2.2
CN2 PP PP 09 42 39.5 +2.4
WMQ **Urumqi** 119.51 5 ePKP PKPdf 09 42 02.0 +1.7
HHC **Hu-ho-hao-te** 120.44 345 ePKP PKPdf 09 42 01.0 -1.1
HHC PP PP 09 43 26.5 -0.8
HHC PKS 09 45 36.5
HHC SKS SKSdf 09 49 12.8 -1.7
HHC SKKS SKKSac 09 50 19.0 -10
HHC LR LR
comp=Z,110nm,20.2s,MS4.5
LZH **Lanzhou** 126.67 350 ePKP PKPdf 09 42 10.5 -3.7
LZH sPKP 09 42 19.0
KMI **Kunming** 137.55 348 PKP PKPdf 09 42 33.5 -1.5
WRA **Warramunga Arr** 141.53 259 PKhKP PKPpre 09 42 34.2
comp=Z,1.0nm,0.8s,baz=85,slow=3.3,SNR=4.7
WRA PKP PKPdf 09 42 40.9 -1.4
comp=Z,1.1nm,0.9s,baz=89,slow=2.7,SNR=6.2
ASAR **Alice Springs** 141.91 253 PKhKP PKPpre 09 42 35.2
comp=Z,0.4nm,0.7s,baz=107,slow=3.7,SNR=5.5
ASAR PKP PKPdf 09 42 41.2 -1.7
comp=Z,0.6nm,0.8s,baz=153,slow=2.0,SNR=4.9

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*IDC **28** 09:28:25.9±1.3, 13°.22N×120°.48E, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.6/21, mbtmp3.8/3, Error ellipse: s-maj=30.9km s-min=11.2km az=109.0*
*ISCJB **28** 09:28:30.0±1.1, 13°.41N±0°.08×120°.5E±0°.1, h54km±13km, mb3.8/3, Error ellipse: s-maj=22.2km s-min=12.1km az=22.4*
ISC 28 09:28:30.8±1.1, 13°.41N±0°.08×120°.5E±0°.1, h43km±16km, n8, c0§77/9, mb3.8/3, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	0.80	31	Pg	Pn	09 28 44.5	-1.1
	156nm,0.3s,baz=127,slow=3.8,SNR=2.8						
TGY				Lg		09 28 58.8	
	133nm,0.3s,baz=198,slow=20,SNR=4.4						
TGY	**Tagaytay City**	0.80	31	⇑P	Pn	09 28 45.5	-0.1
BOAC	**Boac**	1.29	88	eP	Pn	09 28 53.1	+0.8
BUSP	**Coron**	1.43	192	eP	Pn	09 28 53.4	-0.9
BUSP				eS	Sn	09 29 12.3	+0.4
OTRP	**Odiongan**	1.80	125	eP	Pn	09 29 03.4	+4.0
CMAR	**Chiang Mai Arr**	21.34	286	P	P	09 33 15.0	+0.7
	0.6nm,0.4s,mb3.3,baz=96,slow=7.3,SNR=4.3						
WRA	**Warramunga Arr**	35.83	157	P	P	09 35 25.5	-0.9
	1.6nm,0.5s,mb4.2,baz=335,slow=9.8,SNR=33						
ASAR	**Alice Springs**	39.11	160	P	P	09 35 54.4	+0.3
	1.2nm,0.5s,mb3.9,baz=337,slow=6.9,SNR=35						

IDC 28 09:36:39.1±2.3, 15°.11S×177°.64W, h373km±35km, mb3.0/6, mb1 3.3/7, mb1mx3.2/17, mbtmp3.0/7, Error ellipse: s-maj=93.2km s-min=15.3km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	5.80	79	P	Pn	09 38 09.4	+0.8
	2.7nm,0.3s,baz=39,slow=16,SNR=6.4						
AFI				S	S	09 39 21.1	-0.2
	0.6nm,0.3s,baz=72,slow=20,SNR=2.2						
STKA	**Stephens Creek**	40.66	238	P	P	09 43 44.4	-0.4
	0.7nm,0.5s,baz=95,slow=11,SNR=4.2						
WRA	**Warramunga Arr**	45.92	257	P	P	09 44 26.2	-0.3
	0.3nm,0.3s,baz=90,slow=6.4,SNR=12						
ASAR	**Alice Springs**	46.31	252	P	P	09 44 29.7	+0.3
	3.8nm,0.5s,baz=84,slow=7.9,SNR=58						
NVAR	**Mina Array Bea**	76.91	44	P	P	09 47 51.9	+0.6
	0.3nm,0.7s,baz=231,slow=5.7,SNR=3.2						
ILAR	**Eielson Array**	83.01	13	P	P	09 48 22.9	-0.1
	0.3nm,0.6s,baz=228,slow=5.1,SNR=7.3						
TXAR	**Lajitas Array**	83.88	58	P	P	09 48 29.1	+0.8
	0.1nm,0.5s,baz=220,slow=7.9,SNR=3.3						
BRTR	**Keskin Array B**	143.27	318	PKP	PKPdf	09 55 27.6	-2.0
	0.6nm,0.7s,baz=39,slow=5.5,SNR=2.5						

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*BJI **28** 09:39:51.3, 36°.83N×70°.90E, h89km, mB4.8/2, mb4.2/6, Ms4.3/1, Ms7 4.1/1*
*ISCJB **28** 09:39:54.3±0.4, 36°.68N±0°.02×71°.54E±0°.05, h106km±6km, mb3.7/11, Error ellipse: s-maj=6.6km s-min=3.6km az=174.9*

*NEIC **28** 09:39:54.8±0.7, 36°.64N×71°.50E, h97km±7km, mb4.5/3, Error ellipse: s-maj=8.9km s-min=5.3km az=65.0*
*IDC **28** 09:39:55.8±4.1, 36°.70N×71°.49E, h102km±34km, mb3.6/9, mb1 3.8/13, mb1mx3.6/27, mbtmp3.7/13, Error ellipse: s-maj=25.3km s-min=16.7km az=17.0*
*NNC **28** 09:39:59.8±5.4, 37°.20N×70°.89E, h82km±71km, mb3.7, mpv4.3, Error ellipse: s-maj=39.6km s-min=25.3km az=12.0*

ISC 28 09:39:55.7±0.4, 36°.66N±0°.02×71°.55E±0°.05, h105km±5km, n71, σ1°.14/91, mb3.7/11, 9C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.84**	**174**	⇑P	**Pn**	**09 40 42.6**	**+3.1**
CEP				S	**Sn**	**09 41 19.0**	**+5.8**
KBL	**Kabul**	**2.94**	**225**	*e*Pn	**Pn**	**09 40 41.1**	**+0.3**
KBL				*e*Sn	**Sn**	**09 41 15.3**	**-0.1**
CHCP	**Chirah Chowk**	**3.31**	**154**	P	**Pn**	**09 40 50.5**	**+4.8**
THW	**Thamme Wali**	**3.86**	**178**	P	**Pn**	**09 40 55.5**	**+2.4**
KSH	**Kashi**	**4.51**	**49**	P	**Pn**	**09 41 00.0**	**-1.8**
KSH				S	**Sn**	**09 41 46.8**	**-6.3**
KSH				smax			
	comp=N,490nm,0.3s						
KSH				smax			
	comp=E,450nm,0.6s						
AML	**Almayashu**	**5.71**	**16**	P	**Pn**	**09 41 18.6**	**+0.5**
	SNR=89						
AML	**Almayashu**	**5.71**	**16**	*e*Pn	**Pn**	**09 41 18.2**	**+0.2**
AML				*e*Sn	**Sn**	**09 42 21.7**	**-0.6**
KZA	**Kyzart**	**6.12**	**27**	*e*Pn	**Pn**	**09 41 22.6**	**-1.0**
	comp=E,20nm,0.6s						
KZA				*e*Sn	**Sn**	**09 42 33.8**	**+1.5**
EKS2	**Erkin-Say**	**6.24**	**15**	P	**Pn**	**09 41 25.6**	**+0.4**
	SNR=36						
EKS2	**Erkin-Say**	**6.24**	**15**	*e*Pn	**Pn**	**09 41 25.4**	**+0.3**
	comp=E,21nm,0.5s						
EKS2				*e*Sn	**Sn**	**09 42 35.1**	**+0.1**
AAK	**Ala-Archa**	**6.39**	**20**	P	**Pn**	**09 41 27.8**	**+0.6**
	SNR=46						
AAK	**Ala-Archa**	**6.39**	**20**	P	**Pn**	**09 41 28.0**	**+0.8**
	comp=E,0.3nm,0.3s,baz=166,slow=6.1,SNR=110						
AAK				S	**Sn**	**09 42 37.8**	**-0.8**
	comp=E,0.1nm,0.3s,baz=310,slow=22,SNR=10						
AAK	**Ala-Archa**	**6.39**	**20**	*e*Pn	**Pn**	**09 41 27.6**	**+0.4**
KK31	**Karatay Array**	**6.49**	**353**	⇑P	**Pn**	**09 41 26.0**	**-2.6**
	comp=E,4.3nm,0.3s,baz=175,slow=12,SNR=7.1						
KK31				⇑S	**Sn**	**09 42 32.7**	**-8.4**
	comp=E,8.3nm,0.3s,baz=181,slow=22,SNR=4.4						
KKAR	**Karatay Array**	**6.49**	**353**	*e*Pn	**Pn**	**09 41 26.2**	**-2.4**
	comp=E,14nm,0.3s						
KKAR				*e*Sn	**Sn**	**09 42 35.1**	**-6.0**
KBK	**Karagaybulak**	**6.54**	**23**	P	**Pn**	**09 41 30.4**	**+1.1**
	SNR=9.6						
BHK	**Bhakra**	**6.61**	**141**	*e*PKP	**Pn**	**09 41 33.3**	**+3.0**
ULHL	**Ulahol**	**6.66**	**32**	P	**Pn**	**09 41 32.5**	**+1.6**
	SNR=14						
CHMS	**Chumysh**	**6.79**	**20**	P	**Pn**	**09 41 33.2**	**+0.5**
	SNR=27						
CHMS	**Chumysh**	**6.79**	**20**	Pn	**Pn**	**09 41 33.0**	**+0.2**
CHMS				*e*Sn	**Sn**	**09 42 50.1**	**+1.5**
SDNR	**Sundarnagar**	**6.83**	**137**	*e*PKP	**Pn**	**09 41 33.5**	**+0.2**
SDNR				*ex*	x	09 42 58.1	
USP	**Ospenovka**	**6.98**	**18**	P	**Pn**	**09 41 35.4**	**+0.2**
	SNR=16						
TKM2	**Tokmak 2**	**6.99**	**25**	⇓P	**Pn**	**09 41 35.9**	**+0.5**
	comp=E,25nm,0.6s						
TKM2				⇑S	**Sn**	**09 42 51.5**	**-1.7**
	comp=E,16nm,0.8s						
TKM2	**Tokmak 2**	**6.99**	**25**	P	**Pn**	**09 41 36.2**	**+0.8**
	SNR=14						
TKM2	**Tokmak 2**	**6.99**	**25**	*e*Pn	**Pn**	**09 41 35.6**	**+0.3**
	comp=E,31nm,0.5s						
SMLA	**Simla**	**7.23**	**138**	*i* P	**Pn**	**09 41 39.4**	**+0.7**
SMLA				*i* S	**Sn**	**09 42 57.3**	**-1.9**
SMLA				⇓		09 43 00.9	
	comp=E,3μm,0.3s						
SMLA				⇓		09 43 01.9	
	comp=N,2μm,0.3s						
KLP	**Kalpa**	**7.55**	**131**	*e*PKP	**Pn**	**09 41 43.9**	**+0.8**
KLP				*e*S	**Sn**	**09 43 07.1**	**+0.1**
KLP				AML	AML	09 43 13.3	
	comp=E,385nm,0.6s						
KLP				AML	AML	09 43 14.3	
	comp=N,549nm,0.5s						
NDI	**New Delhi**	**9.27**	**147**	*e*PKP	**Pn**	**09 42 07.0**	**+0.5**
NDI				*e*S	**Sn**	**09 43 45.0**	**-4.0**
KUDL	**Kundal**	**9.46**	**152**	*e*PKP	**Pn**	**09 42 08.1**	**-1.0**
KUDL				*e*S	**Sn**	**09 43 47.8**	**-5.8**
SONA	**Sohna**	**9.60**	**149**	*e*PKP	**Pn**	**09 42 10.3**	**-0.6**
SONA				*e*S	**Sn**	**09 43 53.1**	**-3.8**
MK31	**Makanchi Array**	**12.91**	**35**	⇑P	**Pn**	**09 42 55.4**	**+0.3**
	comp=N,5.4nm,0.7s,baz=218,slow=14,SNR=41						
MK31	**Makanchi Array**	**12.91**	**35**	*e*Pn	**Pn**	**09 42 55.4**	**+0.4**
MKAR	**Makanchi Array**	**12.91**	**35**	P	**Pn**	**09 42 55.3**	**+0.2**
	comp=N,0.3nm,0.3s,baz=224,slow=13,SNR=43						
DANN	**Dangsing**	**13.21**	**125**	*e*P	**Pn**	**09 42 58.3**	**-0.9**
	comp=N,22nm,0.3s						
KOLN	**Koldanda**	**13.50**	**128**	*e*P	**Pn**	**09 43 03.2**	**+0.2**
	comp=N,18nm,0.3s						
GKN	**Gorkha**	**14.02**	**124**	*e*P	**Pn**	**09 43 09.3**	**-0.4**
	comp=N,37nm,0.4s						
KKN	**Kakani**	**14.59**	**123**	*e*P	**Pn**	**09 43 16.2**	**-0.8**
DMN	**Daman**	**14.59**	**124**	*e*P	**Pn**	**09 43 16.6**	**-0.4**
	comp=N,22nm,0.5s						
PKIN	**Phulchoki**	**14.81**	**124**	*e*P	**Pn**	**09 43 19.7**	**-0.1**
PKI	**Pulchoki**	**14.82**	**124**	*e*P	**Pn**	**09 43 19.9**	**0.0**
	comp=N,14nm,0.3s						
KURBB	**Kurchatov Arra**	**14.84**	**18**	⇑P	**Pn**	**09 43 22.1**	**+2.1**
	comp=N,1.8nm,0.8s						
GUN	**Gumba**	**14.92**	**122**	*e*P	**Pn**	**09 43 20.2**	**-1.0**
	comp=N,18nm,0.3s						
KURK	**Kurchatov**	**14.94**	**18**	⇑P	**Pn**	**09 43 24.3**	**+3.0**
	comp=N,7.8nm,0.7s						
KURK	**Kurchatov**	**14.94**	**18**	*e*P	**Pn**	**09 43 22.8**	**+1.5**
	comp=N,10nm,0.8s						
AB31	**Akbulak array**	**15.16**	**330**	P	**Pn**	**09 43 18.6**	**-5.5**
	comp=N,1.9nm,0.4s,baz=142,slow=14,SNR=76						
AB31				⇓S	S	09 45 55.3	-26
	comp=N,1.9nm,0.7s,baz=162,slow=22,SNR=4.2						
ABKAR	**Akbulak array**	**15.16**	**330**	*e*P	**Pn**	**09 43 18.5**	**-5.6**
	comp=N,3.7nm,0.4s						
VOSK	**Vostochnaya**	**16.07**	**359**	⇓P	**Pn**	**09 43 31.7**	**-3.7**
	comp=N,6.2nm,1.2s						
BVA0	**Borovoye Array**	**16.39**	**358**	⇑P	**Pn**	**09 43 40.2**	**+0.9**
	comp=N,0.2nm,0.5s						
BVAR	**Borovoye Array**	**16.39**	**358**	P	**Pn**	**09 43 37.4**	**-1.9**
	comp=N,0.6nm,0.3s,baz=167,slow=11,SNR=8.3						
BVAR				S	**S**	**09 46 40.3**	**-5.9**
	comp=N,0.1nm,0.3s,baz=165,slow=24,SNR=3.2						
ZRNK	**Zerenda**	**16.39**	**355**	⇓P	**Pn**	**09 43 39.6**	**+0.3**
	comp=N,4.1nm,1.0s						
TAPN	**Taplejung**	**16.54**	**120**	*e*P	**Pn**	**09 43 40.6**	**-0.7**
	comp=N,17nm,0.3s						
ODAN	**Odare**	**16.62**	**122**	*e*P	**Pn**	**09 43 42.1**	**-0.3**
	comp=N,19nm,0.5s						
AKTK	**Aktyubinsk**	**16.87**	**329**	P	**Pn**	**09 43 41.9**	**-3.3**
AKTK				S	**S**	**09 46 36.8**	**-17**
AKTO	**Aktyubinsk**	**16.87**	**329**	⇓P	**Pn**	**09 43 41.9**	**-3.3**
	comp=N,0.8nm,0.8s						
AKTO				⇑S	**S**	**09 46 39.1**	**-14**
	comp=N,1.8nm,1.2s						
AKTO	**Aktyubinsk**	**16.87**	**329**	P	**Pn**	**09 43 41.9**	**-3.3**
	comp=N,0.7nm,0.3s,baz=153,slow=12,SNR=5.5						
AKTO				S	**S**	**09 46 36.8**	**-17**
	comp=N,0.2nm,0.3s,baz=280,slow=19,SNR=2.7						
ZAA0	**Zalesovo Array**	**19.59**	**24**	*e*P	**P**	**09 44 15.4**	**+0.1**
ZALV	**Zalesovo Beam**	**19.59**	**24**	P	**P**	**09 44 15.2**	**-0.1**
	comp=N,4.8nm,0.3s,baz=212,slow=9.8,SNR=39						
GTA	**Gaotai**	**22.40**	**74**	P	**P**	**09 44 49.8**	**+4.3**
GTA				pP		09 45 05.0	
GTA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.2						
SONM	**Songino Array**	**27.88**	**55**	P	**P**	**09 45 38.1**	**+2.6**
	comp=Z,1.0nm,0.6s,mb3.5,baz=265,slow=12,SNR=6.4						
BRTR	**Keskin Array B**	**29.81**	**288**	P	**P**	**09 45 53.8**	**+1.1**
	comp=Z,0.8nm,0.8s,mb3.4,baz=114,slow=6.1,SNR=3.4						
BRTR	**Keskin Array B**	**29.81**	**288**	P	**P**	**09 45 53.8**	**+1.1**
FINES	**FINESS Array B**	**37.60**	**326**	P	**P**	**09 46 60.0**	**+0.2**
	comp=Z,12nm,1.2s,mb4.6,baz=134,slow=8.0,SNR=3.1						
FINES	**FINESS Array B**	**37.60**	**326**	P	**P**	**09 46 60.0**	**+0.2**
ARCES	**ARCESS Array B**	**41.17**	**337**	P	**P**	**09 47 29.7**	**+0.4**
	comp=Z,2.5nm,1.0s,mb4.0,baz=101,slow=9.3,SNR=4.8						
ARCES	**ARCESS Array B**	**41.17**	**337**	P	**P**	**09 47 29.7**	**+0.4**
NOA	**NORSAR Array B**	**44.52**	**323**	P	**P**	**09 47 56.4**	**0.0**
	comp=Z,3.0nm,1.0s,mb4.3						
ABKAR	**Akbulak array**	**50.01**	**354**	*e*P	**P**	**10 25 28.5**	**-1.6**
	comp=Z,6.1nm,1.0s,mb4.6						
BRTR	**Keskin Array B**	**50.55**	**326**	P	**P**	**10 25 33.7**	**-0.6**
	comp=Z,1.5nm,0.8s,mb4.0,baz=129,slow=9.7,SNR=6.5						
KURK	**Kurchatov**	**51.96**	**9**	*e*P	**P**	**10 25 43.8**	**-0.9**
	comp=Z,9.0nm,1.1s,mb4.6						
ZALV	**Zalesovo Beam**	**56.20**	**12**	P	**P**	**10 26 14.3**	**-1.2**
	comp=Z,2.4nm,0.3s,mb4.7,baz=193,slow=5.9,SNR=2.5						
ZALV				LR	LR	10 51 08.8	
	comp=Z,84nm,18.3s,MS3.9,baz=36,slow=37						
SONM	**Songino Array**	**58.90**	**30**	P	**P**	**10 26 35.3**	**+0.6**
	comp=Z,6.2nm,1.0s,mb4.6,baz=224,slow=6.8,SNR=28						
SONM				LR	LR	10 52 03.7	
	comp=Z,220nm,20.5s,MS4.3,baz=15,slow=36						
FITZ	**Fitzroy Crossi**	**59.79**	**111**	*e*P	**P**	**10 26 45.7**	**+4.2**
	comp=Z,2.4nm,0.5s,mb4.5						
TORD	**Torodi Ar. Bea**	**66.48**	**285**	LR	LR	10 55 51.2	
	comp=Z,35nm,19.5s,MS3.6,baz=350,slow=35						
MAW	**Mawson**	**67.00**	**182**	LR	LR	10 51 01.7	
	comp=Z,47nm,19.0s,MS3.7,baz=117,slow=31						
KSRS	**Korea Array**	**67.32**	**49**	P	**P**	**10 27 29.3**	**-1.6**
	comp=Z,1.2nm,0.8s,mb4.0,baz=223,slow=8.3,SNR=5.7						
KSRS				LR	LR	10 59 18.7	
	comp=Z,74nm,19.8s,MS3.9,baz=188,slow=38						
WRA	**Warramunga Arr**	**68.21**	**111**	P	**P**	**10 27 36.6**	**-0.3**
	comp=Z,1.5nm,0.8s,mb4.1,baz=290,slow=5.7,SNR=9.3						
ASAR	**Alice Springs**	**68.36**	**115**	P	**P**	**10 27 37.4**	**-0.4**
	comp=Z,0.9nm,0.7s,mb3.9,baz=286,slow=5.6,SNR=7.6						
DBIC	**Dimbokro**	**72.42**	**277**	LR	LR	10 57 54.6	
	comp=Z,49nm,18.5s,MS3.8,baz=138,slow=34						
MJAR	**Matsushiro Arr**	**75.00**	**52**	LR	LR	11 01 48.3	
	comp=Z,44nm,19.5s,MS3.8,baz=350,slow=36						
ARCES	**ARCESS Array B**	**75.34**	**346**	LR	LR	11 04 22.7	
	comp=Z,281nm,19.7s,MS4.6,baz=359,slow=38						
ESDC	**Sonseca Array**	**76.05**	**311**	P	**P**	**10 28 24.7**	**+1.2**
	comp=Z,0.2nm,0.4s,mb3.4,baz=88,slow=3.8,SNR=3.1						
SNAA	**Sanae**	**83.34**	**197**	P	**P**	**10 29 02.7**	**+0.4**
	comp=Z,0.7nm,1.0s,mb3.6,baz=76,slow=2.8,SNR=3.2						
NVAR	**Mina Array Bea**	**141.94**	**7**	PKP	PKPdf	10 36 10.0	+1.7
	comp=Z,0.4nm,0.8s,baz=57,slow=3.3,SNR=2.6						
JCT	**Junction City**	**147.83**	**339**	*e*PKPbc	PKPbc	10 36 21.2	-0.3
TXAR	**Lajitas Array**	**150.12**	**344**	PKPbc	PKPbc	10 36 27.1	-0.3
	comp=Z,0.7nm,0.7s,baz=41,slow=1.9,SNR=8.7						
TXAR				PKPab	PKPab	10 36 33.4	+0.3
	comp=Z,2.7nm,0.9s,baz=42,slow=3.1,SNR=12						

IDC 28 10:40:59.1±3.9, 19°.18S×175°.32W, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.3/16, mbtmp3.2/2, Error ellipse: s-maj=229.8km s-min=49.3km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**47.29**	**255**	P	P	10 49 35.5	+0.9
	0.2nm,0.5s,baz=90,slow=7.6,SNR=8.5						
ASAR				PcP	PcP	10 51 04.3	-1.6
	0.3nm,0.9s,baz=109,slow=5.0,SNR=4.5						
WRA	**Warramunga Arr**	**47.30**	**260**	P	P	10 49 34.1	-0.7
	0.1nm,0.3s,baz=95,slow=6.9,SNR=5.7						
GERES	**GERESS Array B**	**149.52**	**348**	PKPbc	PKPbc	11 00 50.6	+0.3
	0.2nm,0.5s,baz=23,slow=5.3,SNR=2.8						

NNC 28 10:47:06.7±7.2, 53°.85N×86°.24E, h0km, mb3.7, mpv3.2, 8C-5D, Error ellipse: s-maj=56.0km s-min=37.3km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.63**	**239**	⇑Pn	Pn	10 48 30.6	-0.9
	6.0nm,1.0s						
KURK				⇑Sn	Sn	10 49 41.3	+4.5
	3.2nm,0.7s						
KURK				⇓Lg		10 50 09.7	
	12nm,0.9s						
KURBB	**Kurchatov Arra**	**5.73**	**239**	⇑Pn	Pn	10 48 31.7	-1.2
	0.8nm,0.8s						
KURBB				⇓Sn	Sn	10 49 43.3	+4.0
	1.6nm,0.7s						
KURBB				⇑Lg		10 50 12.4	
	5.2nm,0.8s						
MK31	**Makanchi Array**	**7.50**	**201**	⇑Pn	Pn	10 49 04.1	+6.9
	1.8nm,1.0s,baz=28,slow=11,SNR=4.9						
MK31				⇑Sn	Sn	10 50 25.3	+2.5
	1.7nm,0.8s,baz=255,slow=44,SNR=3.0						
MK31				⇑Lg		10 51 06.2	
	6.9nm,0.9s,baz=39,slow=32,SNR=3.6						
VOSK	**Vostochnaya**	**9.21**	**269**	⇓Pn	Pn	10 49 18.1	-2.5
	3.1nm,1.2s						
VOSK				⇓Sn	Sn	10 51 02.6	-2.3
	11nm,1.1s						
ZRNK	**Zerenda**	**10.33**	**272**	⇑Pn	Pn	10 49 31.7	-4.3
	3.7nm,1.0s						
ZRNK				⇓Sn	Sn	10 51 31.9	-0.5
	3.4nm,0.8s						

*ISCJB **28** 11:28:33.8±0.3, 42°.72N±0°.02×46°.39E±0°.02, h7km±3km, mb3.7/7, Error ellipse: s-maj=3.6km s-min=2.2km az=21.2*
*IDC **28** 11:28:33.4±0.9, 42°.74N×46°.22E, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.5/23, mbtmp3.8/5, ML4.0/2, Error ellipse: s-maj=26.8km s-min=9.3km az=119.0*
*CSEM **28** 11:28:34.2±0.1, 42°.75N×46°.44E, h5km, mb3.9/5, Error ellipse: s-maj=4.0km s-min=2.6km az=23.0*
*MOS **28** 11:28:34.1±1.1, 42°.73N×46°.45E, h14km, mb4.4/6, Error ellipse: s-maj=6.8km s-min=5.0km az=34.6*
*NEIC **28** 11:28:35.1±0.7, 42°.83N×46°.27E, h10km, mb3.8/3, Error ellipse: s-maj=13.7km s-min=8.5km az=162.0*

ISC 28 11:28:34.8±0.3, 42°.71N±0°.02×46°.40E±0°.02, h8km±3km, n111, σ1°.24/154, mb3.7/7, 15C-5D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.14**	**253**	⇑*i*PG	**Pg**	**11 28 34.4**	**-3.4**
BTLR	**Botlikh**	**0.14**	**253**	*i* Pg	**Pg**	**11 28 34.4**	**-3.4**
XNZR	**Khunzakh**	**0.28**	**126**	⇑*i*PG	**Pg**	**11 28 39.3**	**-1.0**
XNZR				*e*S	**Sg**	**11 28 44.7**	**+0.7**
XNZR	**Khunzakh**	**0.28**	**126**	*i* Pg	**Pg**	**11 28 39.3**	**-1.0**
XNZR				*e*Sg	**Sg**	**11 28 44.7**	**+0.7**
UNCR	**Uncukul**	**0.29**	**88**	*e*PG	**Pg**	**11 28 40.0**	**-0.5**
UNCR	**Uncukul**	**0.29**	**88**	*e*Pg	**Pg**	**11 28 40.0**	**-0.5**
KRNR	**Karanay**	**0.39**	**72**	⇑*i*PG	**Pg**	**11 28 42.2**	**-0.2**
KRNR				*i* S	**Sg**	**11 28 49.8**	**+2.2**
KRNR				pmax	pmax		
	comp=Z,418nm,0.2s						
KRNR	**Karanay**	**0.39**	**72**	*i* Pg	**Pg**	**11 28 42.2**	**-0.2**
	comp=Z,418nm,0.2s						
DLMR	**Dylym**	**0.40**	**25**	⇓*i*PG	**Pg**	**11 28 41.5**	**-1.1**
DLMR				*e*S	**Sg**	**11 28 50.5**	**+2.5**
DLMR	**Dylym**	**0.40**	**25**	*i* Pg	**Pg**	**11 28 41.5**	**-1.1**
DBC	**Dubki**	**0.45**	**45**	⇑*i*PG	**Pg**	**11 28 42.5**	**-1.0**
DBC				*e*S	**Sg**	**11 28 51.0**	**+1.7**
DBC	**Dubki**	**0.45**	**45**	*i* Pg	**Pg**	**11 28 42.5**	**-1.0**
BUJR	**Buynaksk**	**0.53**	**77**	⇑*i*PG	**Pg**	**11 28 44.2**	**-0.9**
BUJR				S	**Sg**	**11 28 54.0**	**+1.9**
BUJR				pmax	pmax		
	comp=Z,334nm,0.2s						
BUJR	**Buynaksk**	**0.53**	**77**	*i* Pg	**Pg**	**11 28 44.2**	**-0.9**
	comp=Z,334nm,0.2s						
KMKR	**Kumukh**	**0.77**	**138**	*e*PG	**Pg**	**11 28 49.0**	**-0.6**
KMKR	**Kumukh**	**0.77**	**138**	*e*Pg	**Pg**	**11 28 49.0**	**-0.6**
GRO	**Groznyy**	**0.78**	**322**	⇑*i*PG	**Pg**	**11 28 47.2**	**-2.6**
GRO				*i* S	**Sg**	**11 28 58.6**	**-1.3**
GRO	**Groznyy**	**0.78**	**322**	*i* Pg	**Pg**	**11 28 47.2**	**-2.6**
GRO				*i* Sg	**Sg**	**11 28 58.6**	**-1.3**
MAK	**Makhachkala**	**0.85**	**72**	*e*PG	**Pg**	**11 28 52.9**	**+1.7**
MAK				*e*		11 29 07.4	
MAK				smax			
	comp=E,107nm,0.4s						
MAK				smax			
	comp=N,144nm,0.5s						
SGKR	**Sergokala**	**0.96**	**104**	PG	**Pg**	**11 28 51.0**	**-2.2**
SGKR				*e*S	**Sg**	**11 29 04.0**	**-1.7**
SGKR				pmax	pmax		
	comp=Z,555nm,0.3s						
SGKR	**Sergokala**	**0.96**	**104**	Pg	**Pg**	**11 28 51.0**	**-2.2**
	comp=Z,555nm,0.3s						
SGKR				*e*Sg	**Sg**	**11 29 04.0**	**-1.7**
MNSR	**Manas**	**0.97**	**90**	*e*PG	**Pg**	**11 28 57.5**	**+4.0**
MNSR				pmax	pmax		
	comp=Z,309nm,0.3s						
URKR	**Urkarakh**	**1.06**	**120**	*e*PG	**Pg**	**11 28 54.0**	**-1.1**
URKR				*i* S	**Sg**	**11 29 11.0**	**+2.1**
URKR				pmax	pmax		
	comp=Z,1.6nm,0.8s,mb3.8,baz=96,slow=7.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**66.16**	**269**	P	**P**	**09 50 31.0**	**-1.3**
	comp=Z,0.2nm,0.5s,mb3.2,baz=57,slow=5.6,SNR=4.6						
INK	**Inuvik**	**73.68**	**9**	P	**P**	**09 51 17.7**	**+0.3**
	comp=Z,2.2nm,0.9s,mb3.9,baz=343,slow=3.2,SNR=4.2						
ILAR	**Eielson Array**	**74.51**	**16**	P	**P**	**09 51 21.8**	**-0.5**
	comp=Z,0.4nm,1.0s,mb3.1,baz=354,slow=6.4,SNR=4.0						
WRA	**Warramunga Arr**	**81.70**	**122**	P	**P**	**09 52 03.1**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.6,baz=324,slow=5.0,SNR=18						
ASAR	**Alice Springs**	**83.98**	**125**	P	**P**	**09 52 15.2**	**+0.8**
	comp=Z,0.6nm,0.7s,mb3.5,baz=310,slow=4.8,SNR=9.1						

IDC 28 09:40:09.9±1.4, 3°.63N×128°.82E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/21, mbtmp3.9/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/29, Error ellipse: s-maj=66.3km s-min=22.8km az=67.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**4.70**	**317**	LR	LR	09 43 36.4	
	comp=Z,95nm,19.0s,baz=193,slow=44						
FITZ	**Fitzroy Crossi**	**21.82**	**188**	P	P	09 45 02.9	-1.0
	0.7nm,0.3s,baz=14,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**24.04**	**167**	P	P	09 45 27.8	+0.9
	1.6nm,0.5s,baz=346,slow=11,SNR=17						
ASAR	**Alice Springs**	**27.58**	**170**	P	P	09 45 59.8	+0.9
	0.2nm,0.4s,baz=353,slow=7.3,SNR=5.5						
ASAR				PcP	PcP	09 49 17.1	+0.2
	0.3nm,0.5s,baz=350,slow=3.0,SNR=5.1						
CTA	**Charters Tower**	**29.13**	**145**	P	P	09 46 11.2	-1.6
	1.2nm,0.3s,baz=320,slow=7.2,SNR=3.4						
STKA	**Stephens Creek**	**37.34**	**162**	P	P	09 47 24.9	+0.6
	4.7nm,1.2s,baz=343,slow=8.8,SNR=6.1						
MKAR	**Makanchi Array**	**58.84**	**324**	P	P	09 50 10.1	-0.2
	0.5nm,0.4s,baz=111,slow=7.9,SNR=5.6						

*ISK **28** 09:50:20.0, 38°.89N×27°.94E, h5km, MD2.9*
*ISCJB **28** 09:50:21.2±0.5, 38°.90N±0°.03×27°.91E±0°.04, h4km±6km, Error ellipse: s-maj=5.8km s-min=4.5km az=155.8*
*CSEM **28** 09:50:21.3±0.1, 38°.90N×27°.89E, h2km, MD2.9, Error ellipse: s-maj=2.9km s-min=2.6km az=122.0*

ISC 28 09:50:21.7±0.5, 38°.90N±0°.03×27°.90E±0°.04, h5km±6km, n28, σ0°.67/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.07**	**251**	*i* P	**Pg**	**09 50 22.9**	**-0.4**
AKHS				*i* S	**Sg**	**09 50 24.3**	**0.0**
AKHS	**Akhisar**	**0.07**	**251**	*i* P	**Pg**	**09 50 22.9**	**-0.4**
AKHS				*i* S	**Sg**	**09 50 24.3**	**-0.1**
DEMI	**Demirci**	**0.65**	**77**	*i* P	**Pg**	**09 50 34.2**	**-0.1**
DEMI	**Demirci**	**0.65**	**77**	*i* P	**Pg**	**09 50 34.2**	**0.0**
DEMI				*i* S	**Sg**	**09 50 43.5**	**+0.8**
IZM	**Izmir**	**0.71**	**225**	*e*PG	**Pg**	**09 50 34.9**	**-0.4**
IZM				*e*SG	**Sg**	**09 50 46.7**	**+2.2**
IZM	**Izmir**	**0.71**	**225**	*e*Pg	**Pg**	**09 50 34.9**	**-0.4**
KULA	**Kula-Manisa**	**0.71**	**123**	*e*PG	**Pg**	**09 50 34.7**	**-0.7**
KULA				*e*SG	**Sg**	**09 50 44.4**	**-0.1**
KULA	**Kula-Manisa**	**0.71**	**123**	*e*Pg	**Pg**	**09 50 34.7**	**-0.6**
KULA				*e*Sg	**Sg**	**09 50 44.4**	**-0.1**
BALB	**Balikesir**	**0.74**	**359**	*e*PG	**Pg**	**09 50 35.8**	**-0.1**
BALB	**Balikesir**	**0.74**	**359**	*e*Pg	**Pg**	**09 50 35.8**	**-0.1**
DURS	**Dursunbey**	**0.83**	**32**	*i* P	**Pg**	**09 50 37.2**	**-0.5**
DURS	**Dursunbey**	**0.83**	**32**	*i* P	**Pg**	**09 50 37.2**	**-0.4**
DURS				*i* S	**Sg**	**09 50 49.0**	**+0.6**
BLCB	**Balcova**	**0.85**	**233**	*e*PG	**Pg**	**09 50 37.3**	**-0.6**
BLCB	**Balcova**	**0.85**	**233**	*e*Pg	**Pg**	**09 50 37.3**	**-0.6**
BALY	**Balya**	**0.87**	**346**	*i* P	**Pg**	**09 50 37.5**	**-0.8**
BALY	**Balya**	**0.87**	**346**	*i* P	**Pg**	**09 50 37.5**	**-0.8**
BALY				*

comp=Z,267nm,0.2s
URKR Urkarakh 1.06 120 *e*Pg **Pg 11 28 54.0 -1.1**
comp=Z,267nm,0.2s
SNJR Sundja 1.22 288 ⇑*i*PG **Pg 11 28 58.2 -0.1**
SNJR *e*S **Sb 11 29 16.4 +2.3**
SNJR Sundja 1.22 288 *i*Pg **Pg 11 28 58.2 -0.1**
VLKR Vladikavkaz 1.31 286 ⇓*i*PG **Pg 11 28 59.4 -0.6**
VLKR *i*S **Sg 11 29 19.0 +2.0**
VLKR Vladikavkaz 1.31 286 *i*Pg **Pg 11 28 59.4 -0.6**
VLKR *i*Sg **Sg 11 29 19.0 +2.0**
DGRG David-gareji 1.47 212 P **Pn 11 28 59.8 -1.7**
DGRG S **Sn 11 29 21.6 +0.7**
BTKR Batakoyurt 1.52 297 *e*PG **Pg 11 29 03.1 -0.8**
BTKR *e*S **Sg 11 29 25.0 +1.4**
BTKR Batakoyurt 1.52 297 *e*Pg **Pg 11 29 03.1 -0.8**
BTKR *e*Sg **Sg 11 29 25.0 +1.4**
MTA Mtatsminda 1.56 230 P **Pn 11 29 01.3 -1.5**
MTA S **Sn 11 29 21.6 -1.6**
AKT Akhty 1.57 141 *e*PG **Pn 11 29 02.0 -0.9**
AKT *e*S **Sn 11 29 29.0 +5.6**
AKT pmax pmax
comp=Z,369nm,0.5s
TBLG Delisi 1.57 232 *e*PG **Pn 11 29 01.5 -1.4**
TBLG Delisi 1.57 232 P **Pn 11 29 01.6 -1.4**
TBLG S **Sn 11 29 22.5 -1.0**
DRN Derbent 1.58 115 *e*PG **Pg 11 29 04.5 -0.6**
DRN *i*S **Sn 11 29 28.0 +4.4**
DRN pmax pmax
comp=Z,228nm,0.3s
DRN Derbent 1.58 115 *e*Pg **Pg 11 29 04.5 -0.6**
comp=Z,228nm,0.3s
TRKR Terskaya 1.59 310 ⇑*i*PG **Pn 11 29 04.0 +0.8**
TRKR *i*S **Sg 11 29 27.3 +1.4**
TRKR Terskaya 1.59 310 *i*Pg **Pn 11 29 04.0 +0.8**
TRKR *i*Sg **Sg 11 29 27.3 +1.4**
SEKA Sheki 1.61 158 P **Pn 11 29 03.3 -0.1**
SNR=63
SEKA S **Sn 11 29 25.0 +0.7**
ARNR Ardon 1.63 288 ⇑*i*PN **Pn 11 29 04.7 +0.9**
ARNR *i*S **Sg 11 29 28.1 +0.9**
ARNR Ardon 1.63 288 *i*Pn **Pn 11 29 04.7 +0.9**
ARNR *i*Sg **Sg 11 29 28.1 +0.9**
KMSR Komsomolskaya 1.68 294 ⇑*i*PN **Pn 11 29 05.5 +1.0**
KMSR *i*S **Sg 11 29 29.5 +0.6**
KMSR Komsomolskaya 1.68 294 *i*Pn **Pn 11 29 05.5 +1.0**
KMSR *i*Sg **Sg 11 29 29.5 +0.6**
KSMR Kasumkent 1.69 130 *e*PN **Pn 11 29 05.0 +0.4**
KSMR *e*S **Sg 11 29 30.0 +0.9**
KSMR pmax pmax
comp=Z,321nm,0.2s
KSMR Kasumkent 1.69 130 *e*Pn **Pn 11 29 05.0 +0.4**
comp=Z,321nm,0.2s
KSMR *e*Sg **Sg 11 29 30.0 +0.9**
KORR Kora 1.76 283 ⇑*i*PN **Pn 11 29 06.3 +0.8**
KORR *i*S **Sg 11 29 30.9 -0.4**
KORR Kora 1.76 283 *i*Pn **Pn 11 29 06.3 +0.8**
KORR *i*Sg **Sg 11 29 30.9 -0.4**
ZEI Tsey 1.84 273 ⇑*i*PN **Pn 11 29 06.6 -0.1**
ZEI Tsey 1.84 273 *i*Pn **Pn 11 29 06.6 -0.1**
PRTR Priterechnaya 1.87 305 *e*PN **Pn 11 29 08.2 +1.2**
PRTR *e*S **Sg 11 29 34.2 -0.7**
PRTR Priterechnaya 1.87 305 *e*Pn **Pn 11 29 08.2 +1.2**
PRTR *e*Sg **Sg 11 29 34.2 -0.7**
LSNR Lesken 1.98 288 *e*PN **Pn 11 29 09.4 +0.9**
LSNR Lesken 1.98 288 *e*Pn **Pn 11 29 09.4 +0.9**
GANJ Ganja 2.06 182 P **Pn 11 29 09.3 -0.3**
SNR=10
DIGR Digorskoe uzhe 2.08 276 *e*PN **Pn 11 29 10.3 +0.3**
DIGR *i*S **Sn 11 29 38.0 +1.9**
DIGR Digorskoe uzhe 2.08 276 *e*Pn **Pn 11 29 10.3 +0.3**
BRDA Brd 2.51 166 P **Pn 11 29 17.7 +1.9**
SNR=7.0
BRDA S **Sn 11 29 48.4 +1.9**
PYA Pyatigorsk 2.78 300 *i*PN **Pn 11 29 18.5 -1.0**
PYA Pyatigorsk 2.78 300 *i*Pn **Pn 11 29 18.5 -1.0**
GNI Garni 2.84 207 Pn **Pn 11 29 21.6 +1.3**
GNI Pg **Pg 11 29 29.2 0.0**
GNI Lg 11 30 02.9
GNI Garni 2.84 207 *c i*PN **Pn 11 29 21.3 +0.9**
GNI pmax pmax
comp=Z,99nm,0.6s
GNI Garni 2.84 207 *i*Pn **Pn 11 29 21.3 +0.9**
comp=Z,99nm,0.6s
KIV Kislovodsk 2.98 296 *e*Pn **Pn 11 29 20.4 -2.0**
KIV Kislovodsk 2.98 296 *e*PN **Pn 11 29 20.4 -2.0**
KIV Kislovodsk 2.98 296 *e*Pn **Pn 11 29 20.4 -2.0**
ALIB Äli-Bayra 3.37 144 P **Pn 11 29 31.8 +4.1**
GOF Gofitskoye 3.38 315 *e*PN **Pn 11 29 20.6 -7.3**
GOF pmax pmax
comp=Z,30nm,0.8s
GLBA Cilabad 3.77 156 P **Pn 11 29 34.3 +1.1**
SNR=5.5
AKTK Aktyubinsk 11.11 42 Pn **Pn 11 31 13.2 -0.6**
AKTK Sn **Sn 11 33 11.0 -7.1**
AKTK Aktyubinsk 11.11 42 Pn **Pn 11 31 13.2 -0.6**
AKTO Aktyubinsk 11.11 42 ⇓Pn **Pn 11 31 12.5 -1.3**
comp=Z,1.4nm,1.0s
AKTO ⇑Sn **Sn 11 33 11.9 -6.2**
comp=Z,1.6nm,1.1s
AKTO Aktyubinsk 11.11 42 Pn **Pn 11 31 13.2 -0.6**
comp=Z,0.5nm,0.3s,baz=224,slow=14,SNR=13
AKTO Sn **Sn 11 33 11.0 -7.1**
comp=Z,0.9nm,0.3s,baz=88,slow=21,SNR=6.3
AKTO Aktyubinsk 11.11 42 Pn **Pn 11 31 12.5 -1.3**
comp=Z,1.4nm,1.0s
AB31 Akbulak array 11.47 51 ⇑Pn **Pn 11 31 17.1 -1.6**
comp=Z,1.9nm,0.5s,baz=233,slow=7.7,SNR=48
AB31 ⇓Sn **Sn 11 33 21.5 -5.3**
comp=Z,4.5nm,0.7s,baz=236,slow=15,SNR=6.2
AB31 Akbulak array 11.47 51 Pn **Pn 11 31 17.1 -1.6**
comp=Z,1.9nm,0.5s,baz=233,SNR=48
ABKAR Akbulak array 11.47 51 *e*Pn **Pn 11 31 17.0 -1.6**
comp=Z,3.0nm,0.4s
ABKAR Akbulak array 11.47 51 *e*Pn **Pn 11 31 17.0 -1.7**
comp=Z,3.0nm,0.4s
ARU Arti 15.80 25 *d i*P **Pn 11 32 21.2 +3.8**
ARU S **Sn 11 35 21.2 +8.6**
ARU pmax pmax
comp=Z,7.0nm,0.8s
ARU Arti 15.80 25 *i*P **Pn 11 32 21.2 +3.8**
comp=Z,7.0nm,0.8s
SVE Sverdlovsk 16.81 28 *e*P **Pn 11 32 30.5 +0.2**
SVE *e*S **Sn 11 35 28.5 -8.4**
SVE pmax pmax
comp=Z,13nm,0.9s
SVE Sverdlovsk 16.81 28 *e*P **Pn 11 32 30.5 +0.2**
comp=Z,13nm,0.9s
KKAR Karatay Array 17.66 80 *e*P **Pn 11 32 41.3 +0.3**
comp=Z,5.4nm,0.8s
KKAR Karatay Array 17.66 80 *e*P **Pn 11 32 41.3 +0.3**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
BRVK Borovoye 18.98 49 *e*P **Pn 11 32 57.8 +0.7**
comp=Z,4.6nm,0.8s
BRVK Borovoye 18.98 49 *e*P **Pn 11 32 57.8 +0.7**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
BRVK Borovoye 18.98 49 *e*P **Pn 11 32 57.8 +0.7**
comp=Z,4.6nm,0.8s
BVAR Borovoye Array 19.03 49 P **Pn 11 32 57.9 +0.3**
comp=Z,1.0nm,0.3s,baz=240,slow=11,SNR=12
BVAR Borovoye Array 19.03 49 P **Pn 11 32 57.9 +0.2**
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR Borovoye Array 19.03 49 P **Pn 11 32 57.9 +0.2**
comp=Z,1.0nm,0.3s
JOF Joensuu 22.09 342 *e*P **P 11 33 28.9 -1.1**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb3.7
JOF Joensuu 22.09 342 *ep* **P 11 33 28.9 -1.1**
comp=Z,1.1nm,0.3s,mb3.8
JOF Joensuu 22.09 342 *e*P **P 11 33 28.9 -1.1**
comp=Z,1.0nm,0.3s,mb3.7
FINES FINESS Array B 22.37 334 P **P 11 33 31.4 -1.5**
comp=Z,2.8nm,0.6s,mb3.9,baz=142,slow=9.6,SNR=9.1
FINES FINESS Array B 22.37 334 P **P 11 33 31.4 -1.5**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 22.37 334 P **P 11 33 31.4 -1.5**
comp=Z,3.0nm,0.6s,mb3.9
KAF Kangasniemi 22.80 335 *e*P **P 11 33 36.4 -1.1**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.6
KAF Kangasniemi 22.80 335 *ep* **P 11 33 36.4 -1.1**
comp=Z,1.2nm,0.4s,mb3.7
KAF Kangasniemi 22.80 335 *e*P **P 11 33 36.4 -1.1**
comp=Z,1.0nm,0.4s,mb3.6
KURK Kurchatov 23.35 59 *e*P **P 11 33 44.8 +1.3**
comp=Z,8.4nm,1.3s,mb4.0
KURK Kurchatov 23.35 59 *e*P **P 11 33 44.8 +1.3**
KURK pmax pmax
comp=Z,8.0nm,1.3s,mb4.0
KURK Kurchatov 23.35 59 *e*P **P 11 33 44.8 +1.3**
comp=Z,8.4nm,1.3s,mb4.0
GERES GERESS Array B 23.50 296 P **P 11 33 43.9 -1.1**
comp=Z,0.2nm,0.5s,mb2.8,baz=96,slow=10.0,SNR=2.2
GERES GERESS Array B 23.50 296 P **P 11 33 43.9 -1.1**
GERES GERESS Array B 23.50 296 P **P 11 33 43.9 -1.1**
MKAR Makanchi Array 25.67 68 P **P 11 34 05.5 +0.6**
comp=Z,1.2nm,0.7s,mb3.5,baz=265,slow=9.6,SNR=7.1
MKAR Makanchi Array 25.67 68 P **P 11 34 05.5 +0.6**
MKAR Makanchi Array 25.67 68 *i*P **P 11 34 08.1 +3.2**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 25.67 68 P **P 11 34 05.5 +0.6**
BOD Bodaibo 43.85 46 *e*P **P 11 36 40.4 -0.7**
BOD pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
BOD Bodaibo 43.85 46 *e*P **P 11 36 40.4 -0.7**
comp=Z,4.0nm,0.9s,mb4.2

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*HLW **28** 11:32:11.8, 36°.68N×30°.13E, h32km±25km, Md3.8, Ml3.9*
*DDA **28** 11:32:11.8, 36°.55N×30°.25E, h51km±5km, Ml4.0*
*NEIC **28** 11:32:12.0, 36°.66N×30°.07E, h64km, MG4.0(ISK), After ISK.*
*ISK **28** 11:32:12.5, 36°.66N×30°.07E, h63km, ML4.2*
*ISCJB **28** 11:32:12.6±0.2, 36°.60N±0°.02×30°.09E±0°.02, h63km±3km, mb3.9/8, Error ellipse: s-maj=2.6km s-min=2.1km az=7.8*
*NIC **28** 11:32:12.7±0.2, 36°.47N×29°.93E, h40km, mb4.3, ML3.9, MW3.5*
*CSEM **28** 11:32:13.9±0.1, 36°.61N×30°.09E, h50km±2km, Mw3.5, Error ellipse: s-maj=2.3km s-min=1.8km az=31.0*
*THE **28** 11:32:14.9, 36°.51N×30°.10E, h25km±6km, Error ellipse: s-maj=6.3km s-min=1.2km az=115.0*
*IDC **28** 11:32:15.6±2.2, 36°.55N×30°.21E, h71km±21km, mb3.6/7, mb1 3.7/10, mb1mx3.6/24, mbtmp3.6/10, MS3.7/1, Ms1 3.7/1, ms1mx2.6/33, Error ellipse: s-maj=16.5km s-min=14.7km az=130.0*

ISC 28 11:32:14.2±0.2, 36°.61N±0°.02×30°.09E±0°.02, h54km±4km, n260, σ0⁶91/337, mb3.9/8, 4C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ELL	**Elmali**	**0.20**	**313**	PG		**Pn**	**11 32 21.7**	**-1.2**
ELL				*e*SG		**Sn**	**11 32 29.7**	**+0.5**
ELL	**Elmali**	**0.20**	**313**	*i*Pg		**Pn**	**11 32 21.7**	**-1.2**
ELL				*e*Sg		**Sn**	**11 32 29.7**	**+0.5**
ANTB	**Antalya**	**0.54**	**58**	PG		**Pn**	**11 32 25.4**	**-0.7**
ANTB				*e*SG		**Sn**	**11 32 34.8**	**+0.1**
ANTB	**Antalya**	**0.54**	**58**	*i*Pg		**Pn**	**11 32 25.4**	**-0.7**
ANTB				*e*Sg		**Sn**	**11 32 34.8**	**+0.1**
AKAS	**Kas**	**0.54**	**226**	⇑*i*P		**Pn**	**11 32 24.5**	**-1.7**
AKAS				*i*S		**Sn**	**11 32 35.6**	**+0.8**
AKAS	**Kas**	**0.54**	**226**	*i*P		**Pn**	**11 32 24.5**	**-1.7**
AKAS				*i*S		**Sn**	**11 32 35.6**	**+0.8**
GLHS	**Gihisar (BURDU**	**0.72**	**319**	PG		**Pn**	**11 32 27.3**	**-1.0**
GLHS	**Gihisar (BURDU**	**0.72**	**319**	*i*Pg		**Pn**	**11 32 27.3**	**-1.0**
GOLH	**Golhisar**	**0.75**	**326**	⇓*i*P		**Pn**	**11 32 28.1**	**-0.6**
GOLH				*i*S		**Sn**	**11 32 39.0**	**-0.3**
GOLH	**Golhisar**	**0.75**	**326**	*i*P		**Pn**	**11 32 28.1**	**-0.6**
GOLH				*i*S		**Sn**	**11 32 39.0**	**-0.3**
FETY	**Fethiye**	**0.81**	**272**	*e*PG		**Pn**	**11 32 28.6**	**-0.9**
FETY				*e*SG		**Sn**	**11 32 40.6**	**0.0**
FETY	**Fethiye**	**0.81**	**272**	*e*Pg		**Pn**	**11 32 28.6**	**-0.8**
FETY				*e*Sg		**Sn**	**11 32 40.6**	**0.0**
BCK	**Bucak**	**0.94**	**25**	*e*PG		**Pn**	**11 32 30.1**	**-1.1**
BCK	**Bucak**	**0.94**	**25**	*e*Pg		**Pn**	**11 32 30.1**	**-1.1**
SUTC	**Sutluce-Ispart**	**1.13**	**40**	*e*PN		**Pn**	**11 32 33.0**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.13**	**40**	*e*Pn		**Pn**	**11 32 33.1**	**-0.6**
TURN	**Turunc**	**1.22**	**283**	⇓*i*P		**Pn**	**11 32 38.9**	**+4.0**
TURN				*i*S		**Sn**	**11 32 56.4**	**+6.0**
TURN	**Turunc**	**1.22**	**283**	*i*P		**Pn**	**11 32 38.9**	**+4.0**
ISP				*e*Sn		**Sn**	**11 32 56.6**	**+5.3**
ISP	**Isparta**	**1.25**	**16**	*e*Pn		**Pn**	**11 32 36.1**	**+0.7**
ISP				*e*Sn		**Sn**	**11 32 56.6**	**+5.3**
ISP	**Isparta**	**1.25**	**16**	P		**Pn**	**11 32 36.1**	**+0.7**
ISP				S		**Sn**	**11 32 55.0**	**+3.7**
ISP	**Isparta**	**1.25**	**16**	P		**Pn**	**11 32 36.1**	**+0.7**
ISP				S		**Sn**	**11 32 55.0**	**+3.7**
ISP				*e*Sn		**Sn**	**11 32 56.6**	**+5.3**
DNZL	**Cakiroluk**	**1.36**	**323**	⇓*i*P		**Pn**	**11 32 37.4**	**+0.6**
DNZL				*i*S		**Sn**	**11 32 53.9**	**+0.2**
DNZL	**Cakiroluk**	**1.36**	**323**	*i*P		**Pn**	**11 32 37.4**	**+0.6**
DNZL				*i*S		**Sn**	**11 32 53.9**	**+0.2**
DENT	**Denizli**	**1.41**	**324**	*e*PN		**Pn**	**11 32 36.8**	**-0.8**
DENT	**Denizli**	**1.41**	**324**	*e*Pn		**Pn**	**11 32 36.8**	**-0.8**
YER	**Yerkesik**	**1.54**	**290**	*e*PN		**Pn**	**11 32 39.0**	**-0.3**
YER	**Yerkesik**	**1.54**	**290**	*e*Pn		**Pn**	**11 32 39.0**	**-0.2**
ARG	**Arkhangelos**	**1.63**	**256**	*e*P		**Pn**	**11 32 41.0**	**+0.5**
ARG	**Arkhangelos**	**1.63**	**256**	P		**Pn**	**11 32 40.2**	**-0.3**
ARG				S		**Sn**	**11 33 00.6**	**+0.3**
ARG	**Arkhangelos**	**1.63**	**256**	P		**Pn**	**11 32 40.2**	**-0.3**
ARG				S		**Sn**	**11 33 00.6**	**+0.3**
KHAL	**Karahalli**	**1.81**	**345**	⇓*i*P		**Pn**	**11 32 42.8**	**-0.2**
KHAL				*i*S		**Sn**	**11 33 05.1**	**+0.3**
KHAL	**Karahalli**	**1.81**	**345**	*i*P		**Pn**	**11 32 42.8**	**-0.2**
KHAL				*i*S		**Sn**	**11 33 05.1**	**+0.2**
HDMB	**Hadim**	**1.96**	**79**	*e*PN		**Pn**	**11 32 45.1**	**+0.2**
HDMB	**Hadim**	**1.96**	**79**	*e*Pn		**Pn**	**11 32 45.1**	**+0.1**
SHUT	**Suhut-Afyon**	**1.97**	**11**	*e*PN		**Pn**	**11 32 44.2**	**-1.0**
SHUT	**Suhut-Afyon**	**1.97**	**11**	*e*Pn		**Pn**	**11 32 44.2**	**-0.9**
MLSB	**Milas**	**1.97**	**291**	*e*PN		**Pn**	**11 32 44.2**	**-1.0**
MLSB	**Milas**	**1.97**	**291**	*e*Pn		**Pn**	**11 32 44.2**	**-0.9**
DAT	**Datca**	**2.02**	**274**	*e*PN		**Pn**	**11 32 45.7**	**-0.1**
DAT	**Datca**	**2.02**	**274**	*e*Pn		**Pn**	**11 32 45.7**	**-0.1**
AYDN	**Tasoluk**	**2.05**	**301**	⇓*i*P		**Pn**	**11 32 46.5**	**+0.3**
AYDN				*i*S		**Sn**	**11 33 09.7**	**-0.9**
AYDN	**Tasoluk**	**2.05**	**301**	*i*P		**Pn**	**11 32 46.5**	**+0.3**
AYDN				*i*S		**Sn**	**11 33 09.7**	**-0.9**
KULA	**Kula-Manisa**	**2.21**	**330**	*e*PN		**Pn**	**11 32 48.1**	**-0.3**
KULA	**Kula-Manisa**	**2.21**	**330**	*e*Pn		**Pn**	**11 32 48.1**	**-0.3**
BOLV	**Bolvadin**	**2.21**	**18**	⇑*i*P		**Pn**	**11 32 49.2**	**+0.8**
BOLV				*i*S		**Sn**	**11 33 10.9**	**-3.6**
BOLV	**Bolvadin**	**2.21**	**18**	*i*P		**Pn**	**11 32 49.2**	**+0.8**
BOLV				*i*S		**Sn**	**11 33 10.9**	**-3.6**
KONT	**Konya--Tatoy**	**2.25**	**53**	*e*PN		**Pn**	**11 32 49.2**	**+0.3**
KONT	**Konya--Tatoy**	**2.25**	**53**	*e*Pn		**Pn**	**11 32 49.2**	**+0.3**
BODT	**Bodrum**	**2.27**	**282**	*e*PN		**Pn**	**11 32 48.8**	**-0.4**
BODT	**Bodrum**	**2.27**	**282**	*e*Pn		**Pn**	**11 32 48.8**	**-0.4**
ERMK	**Ermenek**	**2.27**	**88**	*i*P		**Pn**	**11 32 45.2**	**-4.1**
ERMK				*i*S		**Sn**	**11 33 13.1**	**-3.0**
ERMK	**Ermenek**	**2.27**	**88**	*i*P		**Pn**	**11 32 45.2**	**-4.1**
ERMK				*i*S		**Sn**	**11 33 13.1**	**-3.0**
NIS1	**Nisyros Isl.**	**2.34**	**271**	P		**Pn**	**11 32 49.7**	**-0.5**
NIS1				S		**Sn**	**11 33 18.2**	**+0.5**
NIS1	**Nisyros Isl.**	**2.34**	**271**	P		**Pn**	**11 32 49.7**	**-0.5**
NIS1				S		**Sn**	**11 33 18.2**	**+0.5**
KDHN	**Kadinhani**	**2.50**	**40**	⇑*i*P		**Pn**	**11 32 53.0**	**+0.7**
KDHN				*i*S		**Sn**	**11 33 22.5**	**+1.0**
KDHN	**Kadinhani**	**2.50**	**40**	*i*P		**Pn**	**11 32 53.0**	**+0.7**
KDHN				*i*S		**Sn**	**11 33 22.5**	**+1.0**
ALFC	**Alevga**	**2.51**	**125**	P		**Pn**	**11 32 52.1**	**-0.4**
37nm,0.2s								
ALFC				S		**Sn**	**11 33 22.4**	**+0.6**
ALFC	**Alevga**	**2.51**	**125**	P		**Pn**	**11 32 52.1**	**-0.4**
37nm,0.2s								
ALFC				S		**Sn**	**11 33 22.4**	**+0.6**
GDZ	**Gediz**	**2.52**	**349**	⇓*i*P		**Pn**	**11 32 51.5**	**-1.1**
GDZ				*i*S		**Sn**	**11 33 21.2**	**-0.8**
GDZ	**Gediz**	**2.52**	**349**	*i*P		**Pn**	**11 32 51.5**	**-1.1**
GDZ				*i*S		**Sn**	**11 33 21.2**	**-0.8**
PPCY	**Paphos**	**2.52**	**133**	P		**Pn**	**11 32 51.8**	**-0.9**
PPCY	**Paphos**	**2.52**	**133**	P		**Pn**	**11 32 51.8**	**-0.9**
GCAM	**G?zelcaml?**	**2.52**	**296**	⇓*i*P		**Pn**	**11 32 52.6**	**0.0**
GCAM				*i*S		**Sn**	**11 33 20.7**	**-1.5**
GCAM	**G?zelcaml?**	**2.52**	**296**	*i*P		**Pn**	**11 32 52.6**	**-0.1**
GCAM				*i*S		**Sn**	**11 33 20.7**	**-1.5**
KARP	**Karpathos**	**2.60**	**247**	*e*P		**Pn**	**11 32 53.9**	**+0.2**
KARP	**Karpathos**	**2.60**	**247**	P		**Pn**	**11 32 53.9**	**+0.2**
KARP	**Karpathos**	**2.60**	**247**	P		**Pn**	**11 32 53.9**	**+0.2**
DEMI	**Demirci**	**2.66**	**336**	*i*P		**Pn**	**11 32 55.3**	**+0.8**
DEMI				*i*S		**Sn**	**11 33 26.6**	**+1.2**
DEMI	**Demirci**	**2.66**	**336**	*i*P		**Pn**	**11 32 55.3**	**+0.8**
DEMI				*i*S		**Sn**	**11 33 26.6**	**+1.1**
KIZT	**Kizilcal**	**2.67**	**32**	*e*PN		**Pn**	**11 32 54.8**	**+0.1**
KIZT	**Kizilcal**	**2.67**	**32**	*e*Pn		**Pn**	**11 32 54.8**	**+0.1**
SMG	**Samos**	**2.82**	**294**	*e*P		**Pn**	**11 32 56.4**	**-0.3**
IZM	**Izmir**	**2.87**	**309**	*e*PN		**Pn**	**11 32 57.3**	**-0.1**
AKHS	**Akhisar**	**2.89**	**322**	⇓*i*P		**Pn**	**11 32 56.8**	**-0.9**
AKHS				*i*S		**Sn**	**11 33 30.1**	**-1.1**
AKHS	**Akhisar**	**2.89**	**322**	*i*P		**Pn**	**11 32 56.8**	**-0.9**
AKHS				*i*S		**Sn**	**11 33 30.1**	**-1.1**
AKS	**Akhisar**	**2.89**	**322**	*e*PN		**Pn**	**11 32 56.6**	**-1.1**
AKS	**Akhisar**	**2.89**	**322**	*e*Pn		**Pn**	**11 32 56.6**	**-1.1**
MAMC	**Mammari**	**2.92**	**119**	P		**Pn**	**11 32 58.1**	**-0.1**
MAMC	**Mammari**	**2.92**	**119**	P		**Pn**	**11 32 58.1**	**-0.1**
IKL	**Isikli**	**2.93**	**96**	*e*PN		**Pn**	**11 32 58.9**	**+0.7**
IKL	**Isikli**	**2.93**	**96**	*e*Pn		**Pn**	**11 32 58.9**	**+0.7**
ESKT	**Eskisehir**	**2.96**	**12**	⇑*i*P		**Pn**	**11 32 58.3**	**-0.4**
ESKT				*i*S		**Sn**	**11 33 32.5**	**-0.5**
SEYT	**Eskypehyr**	**2.96**	**12**	*i*P		**Pn**	**11 32 58.3**	**-0.4**
SEYT				*i*S		**Sn**	**11 33 32.5**	**-0.5**
BLCB	**Balcova**	**3.00**	**307**	*e*PN		**Pn**	**11 32 59.4**	**+0.3**
BLCB	**Balcova**	**3.00**	**307**	*e*Pn		**Pn**	**11 32 59.4**	**+0.2**
SVRH	**Sivrihisar-ESK**	**3.05**	**21**	*e*PN		**Pn**	**11 32 59.4**	**-0.5**
SVRH	**Sivrihisar-ESK**	**3.05**	**21**	*e*Pn		**Pn**	**11 32 59.4**	**-0.5**
CSS	**Prodhromos**	**3.11**	**121**	P		**Pn**	**11 33 00.1**	**-0.6**
4.9nm,0.5s								
CSS				S		**Sn**	**11 33 37.8**	**+1.1**
CSS	**Prodhromos**	**3.11**	**121**	P		**Pn**	**11 32 59.7**	**-1.0**
CSS	**Prodhromos**	**3.11**	**121**	P		**Pn**	**11 32 59.7**	**-1.0**
CSS				S		**Sn**	**11 33 37.8**	**+1.1**
SULT	**Sultanhani-AKS**	**3.16**	**59**	*e*PN		**Pn**	**11 33 00.8**	**-0.6**
SULT	**Sultanhani-AKS**	**3.16**	**59**	*e*Pn		**Pn**	**11 33 00.8**	**-0.5**
DURS	**Dursunbey**	**3.24**	**337**	*i*P		**Pn**	**11 33 03.5**	**+1.0**
DURS				*i*S		**Sn**	**11 33 40.6**	**+0.7**
DURS	**Dursunbey**	**3.24**	**337**	*i*P		**Pn**	**11 33 03.5**	**+1.0**
DURS				*i*S		**Sn**	**11 33 40.6**	**+0.8**
BORA	**Eskisehir**	**3.27**	**5**	*i*P		**Pn**	**11 33 03.6**	**+0.7**
BORA				*i*S		**Sn**	**11 33 37.2**	**-3.4**
BORA	**Eskisehir**	**3.27**	**5**	*i*P		**Pn**	**11 33 03.7**	**+0.7**
BORA				*i*S		**Sn**	**11 33 37.2**	**-3.4**
URLA	**Izmir**	**3.28**	**303**	*i*P		**Pn**	**11 33 02.0**	**-1.0**
URLA	**Izmir**	**3.28**	**303**	*i*P		**Pn**	**11 33 02.0**	**-1.0**
ZKR	**Zakros**	**3.48**	**246**	*e*P		**Pn**	**11 33 06.3**	**+0.5**
ZKR	**Zakros**	**3.48**	**246**	P		**Pn**	**11 33 06.2**	**+0.4**
ZKR				S		**Sn**	**11 33 46.0**	**+0.3**
ZKR	**Zakros**	**3.48**	**246**	P		**Pn**	**11 33 06.2**	**+0.4**
ZKR				S		**Sn**	**11 33 46.0**	**+0.3**
BALB	**Balikesir**	**3.48**	**331**	*e*PN		**Pn**	**11 33 06.3**	**+0.4**
BALB	**Balikesir**	**3.48**	**331**	*e*Pn		**Pn**	**11 33 06.3**	**+0.4**
CAVI	**Cavuskoy**	**3.59**	**357**	*e*PN		**Pn**	**11 33 06.3**	**-1.0**
CAVI	**Cavuskoy**	**3.59**	**357**	*e*Pn		**Pn**	**11 33 06.3**	**-1.0**
PHNC	**Paralimni**	**3.59**	**115**	P		**Pn**	**11 33 09.1**	**+1.8**
6.9nm,0.6s								
PHNC				S		**Sn**	**11 33 50.1**	**+1.7**
PHNC	**Paralimni**	**3.59**	**115**	S		**Sn**	**11 33 50.1**	**+1.7**
PHNC	**Paralimni**	**3.59**	**115**	P		**Pn**	**11 33 09.1**	**+1.8**
6.9nm,0.6s								
CHOS	**Chios island**	**3.66**	**300**	*e*P		**Pn**	**11 33 08.6**	**+0.3**
CHOS	**Chios island**	**3.66**	**300**	P		**Pn**	**11 33 08.6**	**+0.3**
CHOS	**Chios island**	**3.66**	**300**	P		**Pn**	**11 33 08.6**	**+0.3**
GPA	**Golpazari**	**3.67**	**3**	*e*PN		**Pn**	**11 33 08.1**	**-0.3**
GPA	**Golpazari**	**3.67**	**3**	*e*Pn		**Pn**	**11 33 08.1**	**-0.3**
BALY	**Balya**	**3.68**	**329**	*i*P		**Pn**	**11 33 08.1**	**-0.4**
BALY				*i*S		**Sn**	**11 33 48.9**	**-1.7**
BALY	**Balya**	**3.68**	**329**	*i*P		**Pn**	**11 33 08.1**	**-0.4**
BALY				*i*S		**Sn**	**11 33 48.8**	**-1.7**
AFSR	**Af¨ar-Bala (A**	**3.68**	**39**	*e*PN		**Pn**	**11 33 09.1**	**+0.5**
AFSR	**Af¨ar-Bala (A**	**3.68**	**39**	*e*Pn		**Pn**	**11 33 09.1**	**+0.6**
APE	**Apeiranthos**	**3.68**	**278**	*e*P		**Pn**	**11 33 09.1**	**+0.5**
APE	**Apeiranthos**	**3.68**	**278**	P		**Pn**	**11 33 08.9**	**+0.3**
APE				S		**Sn**	**11 33 50.7**	**0.0**
APE	**Apeiranthos**	**3.68**	**278**	P		**Pn**	**11 33 08.9**	**+0.3**
APE				S		**Sn**	**11 33 50.7**	**0.0**
GULE	**Gulek**	**3.82**	**79**	*i*P		**Pn**	**11 33 12.4**	**+2.0**
GULE				*i*S		**Sn**	**11 33 56.7**	**+2.7**
GULE	**Gulek**	**3.82**	**79**	*i*P		**Pn**	**11 33 12.4**	**+2.0**
GULE				*i*S		**Sn**	**11 33 56.7**	**+2.7**
THR5	**Thira Island,**	**3.82**	**268**	P		**Pn**	**11 33 11.6**	**+1.1**
THR5	**Thira Island,**	**3.82**	**268**	P		**Pn**	**11 33 11.6**	**+1.1**
ADVT	**Abdulvahap**	**3.82**	**356**	*e*PN		**Pn**	**11 33 09.5**	**-1.0**
ADVT	**Abdulvahap**	**3.82**	**356**	*e*Pn		**Pn**	**11 33 09.5**	**-1.0**
GULT	**Gulveren**	**3.83**	**5**	*e*PN		**Pn**	**11 33 10.4**

PTL	**Penteli**	**5.16 288**	*e*P	**Pn**	**11 33 29.8**	**+1.0**
PTL	**Penteli**	**5.16 288**	P	**Pn**	**11 33 29.9**	**+1.1**
PTL	**Penteli**	**5.16 288**	P	**Pn**	**11 33 29.9**	**+1.1**
VLY	**Voula,Athens**	**5.17 286**	P	**Pn**	**11 33 30.2**	**+1.2**
VLY	**Voula,Athens**	**5.17 286**	P	**Pn**	**11 33 30.2**	**+1.2**
ATH	**Athens Observa**	**5.26 287**	*e*P	**Pn**	**11 33 31.3**	**+1.2**
CTKT	**Corum**	**5.44 41**	*i* P	**Pn**	**11 33 33.1**	**+0.5**
CTKT	**Corum**	**5.44 41**	*i* P	**Pn**	**11 33 33.1**	**+0.5**
KMRS	**Kahramanmaras**	**5.52 79**	*e*PN	**Pn**	**11 33 34.2**	**+0.5**
KMRS	**Kahramanmaras**	**5.52 79**	*e*Pn	**Pn**	**11 33 34.3**	**+0.5**
DID	**Didima**	**5.55 281**	P	**Pn**	**11 33 35.2**	**+1.0**
DID	**Didima**	**5.55 281**	P	**Pn**	**11 33 35.2**	**+1.0**
SARI	**SarD1z-Kayseri**	**5.64 67**	*e*PN	**Pn**	**11 33 32.1**	**-3.2**
GAZ	**Gaziantep**	**5.74 82**	*e*PN	**Pn**	**11 33 37.2**	**+0.4**
GAZ	**Gaziantep**	**5.74 82**	*e*Pn	**Pn**	**11 33 37.2**	**+0.5**
VLI	**Veliai**	**5.75 273**	*e*P	**Pn**	**11 33 38.3**	**+1.4**
LTK	**Loutraki**	**5.84 286**	P	**Pn**	**11 33 39.7**	**+1.5**
LTK	**Loutraki**	**5.84 286**	P	**Pn**	**11 33 39.7**	**+1.5**
HBRG	**Burj al ʻArab**	**6.03 182**	P	**Pn**	**11 33 40.5**	**-0.3**
	baz=183					
HBRG			AMP		11 34 00.0	
	comp=E,300μm,0.4s,logA/T=5.9,baz=183					
HBRG	**Burj al ʻArab**	**6.03 182**	P	**Pn**	**11 33 40.5**	**-0.2**
HMAT	**Matruh**	**6.04 205**	P	**Pn**	**11 33 40.5**	**-0.4**
	baz=206					
HMAT			AMP		11 34 00.0	
	comp=E,60μm,0.4s,logA/T=5.2,baz=206					
HMAT			S	**Sn**	**11 34 43.1**	**-5.6**
	baz=206					
HMAT	**Matruh**	**6.04 205**	P	**Pn**	**11 33 40.5**	**-0.4**
DSF	**Desfina**	**6.27 289**	P	**Pn**	**11 33 45.9**	**+1.9**
DSF	**Desfina**	**6.27 289**	P	**Pn**	**11 33 45.9**	**+1.9**
GUR	**Goura**	**6.31 284**	P	**Pn**	**11 33 46.6**	**+2.0**
GUR	**Goura**	**6.31 284**	P	**Pn**	**11 33 46.6**	**+2.0**
RSH		**6.40 151**	P	**Pn**	**11 33 45.1**	**-0.8**
AMAG	**Maghara**	**6.50 155**	P	**Pn**	**11 33 45.9**	**-1.3**
	baz=156					
AMAG	**Maghara**	**6.50 155**	P	**Pn**	**11 33 45.9**	**-1.3**
SLUM		**6.51 220**	P	**Pn**	**11 33 47.0**	**-0.4**
	baz=220					
SLUM			S	**Sn**	**11 34 54.3**	**-6.1**
	baz=220					
SLUM		**6.51 220**	P	**Pn**	**11 33 47.0**	**-0.4**
ITM	**Ithomi**	**6.56 277**	*e*P	**Pn**	**11 33 49.8**	**+1.8**
EFP	**Efpalio**	**6.75 288**	P	**Pn**	**11 33 52.8**	**+2.2**
EFP	**Efpalio**	**6.75 288**	P	**Pn**	**11 33 52.8**	**+2.2**
KOT	**Kottamia**	**6.83 167**	P	**Pn**	**11 33 51.1**	**-0.5**
	baz=167					
KOT			AMP		11 35 00.0	
	comp=N,110μm,0.5s,logA/T=5.4,baz=167					
KOT			S	**Sn**	**11 35 01.1**	**-6.9**
	baz=167					
KOT	**Kottamia**	**6.83 167**	P	**Pn**	**11 33 51.2**	**-0.5**
HHAG	**Hagoal**	**6.85 165**	P	**Pn**	**11 33 51.6**	**-0.5**
	baz=165					
HHAG			AMP		11 35 00.0	
	comp=E,80μm,0.3s,logA/T=5.4,baz=165					
HHAG			S	**Sn**	**11 35 01.9**	**-6.8**
	baz=165					
HHAG	**Hagoal**	**6.85 165**	P	**Pn**	**11 33 51.6**	**-0.5**
AYT	**Al ʻAyyat**	**6.95 172**	P	**Pn**	**11 33 53.1**	**-0.3**
	baz=172					
AYT	**Al ʻAyyat**	**6.95 172**	P	**Pn**	**11 33 53.1**	**-0.3**
FYM	**Al Fayyum**	**6.95 173**	S	**Sn**	**11 35 04.9**	**-6.1**
	baz=173					
HNAT	**Natroun**	**6.98 176**	P	**Pn**	**11 33 52.9**	**-0.9**
	baz=176					
HNAT	**Natroun**	**6.98 176**	P	**Pn**	**11 33 52.9**	**-0.9**
THL	**Klokotos Trika**	**7.01 297**	P	**Pn**	**11 33 56.1**	**+1.9**
THL	**Klokotos Trika**	**7.01 297**	P	**Pn**	**11 33 56.1**	**+1.9**
HSAF	**As Saff**	**7.08 170**	P	**Pn**	**11 33 54.2**	**-1.0**
	baz=169					
HSAF	**As Saff**	**7.08 170**	P	**Pn**	**11 33 54.2**	**-1.0**
SUZ		**7.14 160**	P	**Pn**	**11 33 55.2**	**-0.8**
	baz=160					
SUZ		**7.14 160**	P	**Pn**	**11 33 55.2**	**-0.7**
GLL	**Jalalah**	**7.15 169**	P	**Pn**	**11 33 55.3**	**-0.8**
	baz=168					
GLL	**Jalalah**	**7.15 169**	P	**Pn**	**11 33 55.3**	**-0.8**
ASF	**Jabal al Asfar**	**7.16 126**	P	**Pn**	**11 33 56.4**	**+0.1**
	comp=E,1.1nm,0.3s,baz=181,slow=6.7,SNR=6.1					
ASF			S	**Sn**	**11 35 16.1**	**-0.2**
	comp=E,0.8nm,0.3s,baz=15,slow=20,SNR=2.9					
HKAT	**Jabal Katrina**	**8.71 157**	P	**Pn**	**11 34 17.3**	**-0.2**
	baz=157					
HKAT	**Jabal Katrina**	**8.71 157**	P	**Pn**	**11 34 17.3**	**-0.3**
HFRF	**Wahat Farafira**	**9.56 190**	AMP		11 36 00.0	
	comp=E,20μm,0.4s,logA/T=4.7,baz=190					
GERES	**GERESS Array B**	**17.11 321**	P	**Pn**	**11 36 11.3**	**+1.9**
	comp=E,0.1nm,0.3s,baz=134,slow=9.5,SNR=5.0					
GERES	**GERESS Array B**	**17.11 321**	P	**Pn**	**11 36 11.3**	**+1.9**
GERES	**GERESS Array B**	**17.11 321**	P	**Pn**	**11 36 11.3**	**+1.9**
AKTK	**Aktyubinsk**	**24.34 47**	P	**P**	**11 37 25.5**	**-1.2**
AKTK	**Aktyubinsk**	**24.34 47**	P	**P**	**11 37 25.5**	**-1.2**
AKTO	**Aktyubinsk**	**24.34 47**	P	**P**	**11 37 25.5**	**-1.2**
	comp=E,2.2nm,0.5s,mb3.9,baz=251,slow=7.9,SNR=5.1					
ESDC	**Sonseca Array**	**26.86 287**	P	**P**	**11 37 50.1**	**+0.5**
	comp=E,0.3nm,0.5s,mb3.1,baz=80,slow=9.5,SNR=3.6					
ESDC	**Sonseca Array**	**26.86 287**	P	**P**	**11 37 50.1**	**+0.4**
ARCES	**ARCESS Array B**	**33.07 357**	P	**P**	**11 38 45.9**	**+1.6**
	comp=E,2.2nm,0.9s,mb4.1,baz=156,slow=9.6,SNR=3.9					
ARCES	**ARCESS Array B**	**33.07 357**	P	**P**	**11 38 45.9**	**+1.6**
TORD	**Torodi Ar. Bea**	**34.54 235**	P	**P**	**11 38 57.7**	**+0.1**
	comp=E,2.0nm,0.7s,mb4.2,baz=30,slow=8.8,SNR=2.2					
MKAR	**Makanchi Array**	**39.62 58**	P	**P**	**11 39 39.5**	**-0.9**
	comp=E,2.0nm,0.7s,mb3.9,baz=284,slow=6.1,SNR=12					
MKAR			LR	LR	11 59 44.0	
	comp=E,103nm,20.0s,baz=160,slow=42					
ZALV	**Zalesovo Beam**	**41.10 47**	P	**P**	**11 39 51.3**	**-1.2**
	comp=E,1.1nm,0.3s,mb3.9,baz=270,slow=8.2,SNR=2.3					
SONM	**Songino Array**	**55.45 53**	P	**P**	**11 41 42.7**	**-0.4**
	comp=E,1.5nm,0.7s,mb4.2,baz=290,slow=7.8,SNR=7.1					
SONM	**Songino Array**	**55.45 53**	P	**P**	**11 41 42.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**62.46 87**	P	**P**	**11 42 30.9**	**-1.2**
	comp=E,0.3nm,0.4s,mb3.8,baz=290,slow=10,SNR=4.4					

*ISK **28** 11:46:06.4, 40.°45N×34.°62E, h5km, MD3.6*
*ISCJB **28** 11:46:07.9±0.3, 40.°50N±0.°02×34.°60E±0.°03, h10km, Error ellipse: s-maj=3.8km s-min=3.0km az=137.3*
*CSEM **28** 11:46:07.8±0.1, 40.°49N×34.°61E, h2km, MD3.4, Error ellipse: s-maj=3.7km s-min=3.0km az=47.0*
*DDA **28** 11:46:07.2, 40.°52N×34.°64E, h20km±4km, Md3.4*

ISC 28 11:46:08.5±0.3, 40.°51N±0.°02×34.°61E±0.°03, h10km, n64, σ1°03/79, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.18**	**52**	*i* P	**Pg**	**11 46 11.9**	**-0.4**
CTKT	**Corum**	**0.18**	**52**	*i* P	**Pg**	**11 46 11.9**	**-0.4**
CORM	**Corum**	**0.33**	**177**	PG	**Pg**	**11 46 13.0**	**-2.1**
CORM				*e*SG	**Sg**	**11 46 17.9**	**-1.7**
CORM	**Corum**	**0.33**	**177**	*i* Pg	**Pg**	**11 46 13.0**	**-2.1**
CORM				*e*Sg	**Sg**	**11 46 17.9**	**-1.7**
TOS	**Tosya**	**0.69**	**320**	PG	**Pg**	**11 46 22.1**	**+0.3**
TOS	**Tosya**	**0.69**	**320**	*i* Pg	**Pg**	**11 46 22.1**	**+0.4**
CANT	**Cankiri**	**0.76**	**277**	PG	**Pg**	**11 46 22.4**	**-0.7**
CANT				*e*SG	**Sg**	**11 46 34.2**	**+1.3**
ILGA	**Ilgaz**	**0.86**	**309**	*i* P	**Pg**	**11 46 25.3**	**+0.2**
ILGA				*i* S	**Sg**	**11 46 34.0**	**-2.4**
ILGA	**Ilgaz**	**0.86**	**309**	*i* P	**Pg**	**11 46 25.3**	**+0.2**
ELDT	**Eldivan**	**0.90**	**269**	*i* P	**Pg**	**11 46 25.2**	**-0.6**
ELDT				*i* S	**Sg**	**11 46 37.3**	**-0.2**
ELDT	**Eldivan**	**0.90**	**269**	*i* P	**Pg**	**11 46 25.2**	**-0.6**
ELDT				*i* S	**Sg**	**11 46 37.3**	**-0.2**
BOYT	**Boyabat**	**0.94**	**14**	*i* P	**Pg**	**11 46 25.6**	**-0.9**
BOYT				*i* S	**Sg**	**11 46 37.3**	**-1.4**
BOYT	**Boyabat**	**0.94**	**14**	*i* P	**Pg**	**11 46 25.5**	**-1.0**
BOYT				*i* S	**Sg**	**11 46 37.3**	**-1.4**
BYBT	**Boyabat**	**0.96**	**7**	*e*PG	**Pg**	**11 46 27.3**	**+0.3**
BYBT	**Boyabat**	**0.96**	**7**	*e*Pg	**Pg**	**11 46 27.3**	**+0.3**
YOZ	**Yozgat**	**1.03**	**148**	*e*PG	**Pg**	**11 46 26.0**	**-2.3**
YOZ				*e*SG	**Sg**	**11 46 40.5**	**-1.2**
YOZ	**Yozgat**	**1.03**	**148**	*e*Pg	**Pg**	**11 46 26.0**	**-2.3**
YOZ				*e*Sg	**Sg**	**11 46 40.5**	**-1.1**
KVT	**Kavak**	**1.23**	**62**	*e*PN	**Pn**	**11 46 30.7**	**-1.1**
KVT	**Kavak**	**1.23**	**62**	*e*Pn	**Pn**	**11 46 30.7**	**-1.0**
BALT	**Daday**	**1.38**	**318**	*i* P	**Pn**	**11 46 33.6**	**-0.1**
BALT	**Daday**	**1.38**	**318**	*i* P	**Pn**	**11 46 33.6**	**-0.1**
TOKT	**Tokat**	**1.49**	**97**	*e*PN	**Pn**	**11 46 35.4**	**+0.1**
TOKT	**Tokat**	**1.49**	**97**	*e*Pn	**Pn**	**11 46 35.4**	**+0.1**
BZK	**Bozkurt**	**1.52**	**343**	*e*PN	**Pn**	**11 46 36.3**	**+0.7**
BZK	**Bozkurt**	**1.52**	**343**	*e*Pn	**Pn**	**11 46 36.3**	**+0.7**
LOD	**Lodumlu**	**1.54**	**247**	*e*PN	**Pn**	**11 46 35.1**	**-0.9**
LOD	**Lodumlu**	**1.54**	**247**	*e*Pn	**Pn**	**11 46 35.1**	**-0.9**
AFSR	**Afʻar-Bala (A**	**1.59**	**228**	*e*PN	**Pn**	**11 46 35.4**	**-1.3**
AFSR	**Afʻar-Bala (A**	**1.59**	**228**	*e*Pn	**Pn**	**11 46 35.4**	**-1.2**
SAFT	**Safranbolu**	**1.63**	**297**	*e*PN	**Pn**	**11 46 38.1**	**+1.0**
SAFT	**Safranbolu**	**1.63**	**297**	*e*Pn	**Pn**	**11 46 38.2**	**+1.0**
AVNT	**Avonos**	**1.74**	**174**	*i* P	**Pn**	**11 46 38.4**	**-0.3**
AVNT				*i* S	**Sn**	**11 47 00.5**	**-0.5**
AVNT	**Avonos**	**1.74**	**174**	*i* P	**Pn**	**11 46 38.4**	**-0.3**
AVNT				*i* S	**Sn**	**11 47 00.5**	**-0.5**
SCER	**sogukcermik**	**2.04**	**108**	*i* P	**Pn**	**11 46 44.6**	**+1.8**
SCER				*i* S	**Sn**	**11 47 11.9**	**+3.6**
SCER	**sogukcermik**	**2.04**	**108**	*i* P	**Pn**	**11 46 44.6**	**+1.8**
SCER				*i* S	**Sn**	**11 47 11.9**	**+3.6**
RSDY	**Resadiye-TOKAT**	**2.08**	**92**	*e*PN	**Pn**	**11 46 44.1**	**+0.7**
RSDY	**Resadiye-TOKAT**	**2.08**	**92**	*e*Pn	**Pn**	**11 46 44.1**	**+0.7**
PINB	**Pinarbasi**	**2.30**	**142**	*i* P	**Pn**	**11 46 47.4**	**+1.0**
PINB				*i* S	**Sn**	**11 47 18.6**	**+3.9**
PINB	**Pinarbasi**	**2.30**	**142**	*i* P	**Pn**	**11 46 47.4**	**+1.0**
SARI	**SarD1z-Kayseri**	**2.44**	**138**	*e*PN	**Pn**	**11 46 49.9**	**+1.5**
SARI	**SarD1z-Kayseri**	**2.44**	**138**	*e*Pn	**Pn**	**11 46 49.9**	**+1.5**
SULT	**Sultanhani-AKS**	**2.46**	**200**	*e*PN	**Pn**	**11 46 49.2**	**+0.6**
SULT	**Sultanhani-AKS**	**2.46**	**200**	*e*Pn	**Pn**	**11 46 49.2**	**+0.6**
MDU	**Mudurnu**	**2.59**	**270**	*e*PN	**Pn**	**11 46 51.0**	**+0.7**
MDU	**Mudurnu**	**2.59**	**270**	*e*Pn	**Pn**	**11 46 51.0**	**+0.6**
SVRH	**Sivrihisar-ESK**	**2.60**	**247**	*e*PN	**Pn**	**11 46 51.0**	**+0.5**
SVRH	**Sivrihisar-ESK**	**2.60**	**247**	*e*Pn	**Pn**	**11 46 51.0**	**+0.5**
KIZT	**Kizilcal**	**2.66**	**233**	*e*PN	**Pn**	**11 46 51.5**	**+0.1**
KIZT	**Kizilcal**	**2.66**	**233**	*e*Pn	**Pn**	**11 46 51.5**	**+0.1**
DARE	**Darende-Malaty**	**2.92**	**121**	*e*PN	**Pn**	**11 46 55.6**	**+0.7**
DARE	**Darende-Malaty**	**2.92**	**121**	*e*Pn	**Pn**	**11 46 55.6**	**+0.7**
KONT	**Konya--Tatoy**	**3.10**	**215**	*e*PN	**Pn**	**11 46 58.4**	**+0.9**
KONT	**Konya--Tatoy**	**3.10**	**215**	*e*Pn	**Pn**	**11 46 58.4**	**+1.0**
GULT	**Gulveren**	**3.12**	**270**	*e*PN	**Pn**	**11 46 58.8**	**+1.1**
GULT	**Gulveren**	**3.12**	**270**	*e*Pn	**Pn**	**11 46 58.8**	**+1.1**
KOZT	**Kozan**	**3.17**	**162**	*e*PN	**Pn**	**11 46 58.8**	**+0.4**
KARA	**Karaisali**	**3.27**	**174**	*e*PN	**Pn**	**11 46 59.8**	**+0.1**
KARA	**Karaisali**	**3.27**	**174**	*e*Pn	**Pn**	**11 46 59.8**	**+0.1**
KMRS	**Kahramanmaras**	**3.49**	**149**	*e*PN	**Pn**	**11 47 03.4**	**+0.6**
KMRS	**Kahramanmaras**	**3.49**	**149**	*e*Pn	**Pn**	**11 47 03.4**	**+0.6**
HDMB	**Hadim**	**3.91**	**206**	*e*PN	**Pn**	**11 47 09.9**	**+1.3**
HDMB	**Hadim**	**3.91**	**206**	*e*Pn	**Pn**	**11 47 09.9**	**+1.3**
SUTC	**Sutluce-Ispart**	**4.13**	**224**	*e*PN	**Pn**	**11 47 11.6**	**0.0**
SUTC	**Sutluce-Ispart**	**4.13**	**224**	*e*Pn	**Pn**	**11 47 11.6**	**0.0**

*ISCJB **28** 11:51:37.1±0.5, 37.°51N±0.°08×94.°49E±0.°06, h10km, mb3.7/7, Error ellipse: s-maj=11.6km s-min=6.6km az=16.9*
*BJI **28** 11:51:37.3, 37.°73N×94.°33E, h12km, mb4.3/2, ML4.2/6, Ms4.0/3, Ms7 3.6/1*
*IDC **28** 11:51:37.7±0.8, 37.°43N×94.°42E, h0km, mb3.7/7, mb1 3.9/11, mb1mx3.7/26, mbtmp3.8/11, ML3.9/2, Error ellipse: s-maj=25.4km s-min=14.8km az=53.0*
*NEIC **28** 11:51:39.1±0.7, 37.°55N×94.°45E, h10km, mb3.9/4, Error ellipse: s-maj=15.8km s-min=10.5km az=53.0*

ISC 28 11:51:39.0±0.5, 37.°54N±0.°08×94.°46E±0.°06, h10km, n20, σ1°21/26, mb3.7/7, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**4.60**	**64**	Pg	**Pb**	**11 52 57.5**	**-2.3**
GTA				smax			
	comp=N,50nm,0.6s						
GTA				smax			
	comp=E,42nm,0.7s						
GTA				LR	LR		
	comp=N,1μm,5.7s						
GTA				LR	LR		
	comp=E,430nm,4.3s						
GTA				LR	LR		
	comp=Z,360nm,5.7s						
LZH	**Lanzhou**	**7.67**	**98**	Pg	**Pg**	**11 54 00.0**	**-5.8**
LZH				Sn	**Sn**	**11 54 58.3**	**+0.7**
LZH				Sg	**Sg**	**11 55 38.5**	**-6.5**
LZH				smax			
	comp=N,74nm,0.9s						
LZH				smax			
	comp=E,100nm,1.0s						
MK31	**Makanchi Array**	**12.91**	**320**	*e*Pn	**Pn**	**11 54 40.6**	**-1.8**
MK31				*e*Sn	**Sn**	**11 56 60.0**	**-6.1**
MKAR	**Makanchi Array**	**12.91**	**320**	*e*Pn	**Pn**	**11 54 40.6**	**-1.8**
	comp=E,1.2nm,0.3s,baz=124,slow=14,SNR=36						
MKAR				Sn	**Sn**	**11 56 59.6**	**-6.5**
	comp=E,0.4nm,0.3s,baz=128,slow=21,SNR=3.9						
MKAR				Lg		11 58 30.9	
	baz=126,slow=29,SNR=2.5						
SONM	**Songino Array**	**13.51**	**37**	Pn	**Pn**	**11 54 51.1**	**+0.5**
	comp=E,0.4nm,0.3s,baz=220,slow=15,SNR=6.4						
SONM				Sn	**Sn**	**11 57 27.9**	**+7.3**
	comp=E,0.1nm,0.3s,baz=234,slow=17,SNR=1.9						
SONM				Lg		11 58 51.4	
	comp=E,0.1nm,0.3s,baz=217,slow=29,SNR=5.8						
TKM2	**Tokmak 2**	**15.37**	**296**	*e*P	**Pn**	**11 55 14.7**	**-1.1**
	comp=E,9.4nm,0.6s						
KURK	**Kurchatov**	**17.35**	**324**	*e*P	**Pn**	**11 55 41.0**	**-0.1**
	comp=E,2.2nm,0.6s						
KURK				*e*S	**Sn**	**11 59 07.5**	**+13**
ZALV	**Zalesovo Beam**	**17.71**	**341**	P	**Pn**	**11 55 47.2**	**+1.7**
	baz=142,slow=14,SNR=1.4						
KKAR	**Karatay Array**	**19.06**	**294**	*e*P	**Pn**	**11 56 02.1**	**-0.1**
	comp=E,1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**19.41**	**167**	P	**Pn**	**11 56 05.2**	**-1.3**
	baz=346,slow=9.5,SNR=6.1						
KBL	**Kabul**	**20.75**	**269**	*e*P	**P**	**11 56 22.1**	**+2.2**
	comp=E,16nm,0.8s						
BVAR	**Borovoye Array**	**22.79**	**320**	P	**P**	**11 56 43.6**	**+2.1**
	comp=E,0.9nm,0.5s,mb3.4,baz=125,slow=9.1,SNR=4.6						
KSRS	**Korea Array**	**26.47**	**80**	P	**P**	**11 57 17.1**	**+0.8**
	comp=E,0.9nm,0.8s,mb3.4,baz=281,slow=9.3,SNR=3.0						
BRTR	**Keskin Array B**	**46.76**	**292**	P	**P**	**12 00 09.6**	**+1.2**
	comp=E,0.5nm,0.6s,mb3.7,baz=85,slow=5.9,SNR=2.8						
FINES	**FINESS Array B**	**47.72**	**323**	P	**P**	**12 00 15.4**	**-0.1**
	comp=E,1.4nm,0.6s,mb4.1,baz=99,slow=8.6,SNR=3.2						
ARCES	**ARCESS Array B**	**48.06**	**334**	P	**P**	**12 00 17.9**	**-0.2**
	comp=E,1.8nm,0.8s,mb4.2,baz=69,slow=6.0,SNR=5.7						
ARCES	**ARCESS Array B**	**48.06**	**334**	P	**P**	**12 00 17.9**	**-0.2**
WRA	**Warramunga Arr**	**68.40**	**140**	P	**P**	**12 02 40.2**	**-0.7**
	comp=E,0.6nm,1.1s,mb3.5,baz=332,slow=6.2,SNR=5.8						
ASAR	**Alice Springs**	**71.30**	**142**	P	**P**	**12 02 59.2**	**+0.5**
	comp=E,0.8nm,0.6s,mb3.8,baz=330,slow=6.2,SNR=21						
TORD	**Torodi Ar. Bea**	**84.27**	**282**	P	**P**	**12 04 11.1**	**-0.3**
	comp=E,34nm,0.9s,baz=47,slow=4.3,SNR=3.9						

MEX 28 12:18:01.4±0.3, 19.°53N×104.°94W, h20km±17km, MD3.9, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANIG	**Ahuacatlan**	**1.56**	**14**	*i* P	Pn	12 18 25.2	-2.9
ANIG				*i* S	Sn	12 18 44.1	-3.7
MMIG	**Aquila**	**1.95**	**129**	*i* P	Pn	12 18 30.7	-2.6
MMIG				*i* S	Sn	12 18 53.1	-4.1
SFJM	**Santa Fe**	**2.02**	**62**	*i* P	Pn	12 18 31.8	-2.6
SFJM				*i* S	Sn	12 18 55.6	-3.5
ZIIG	**Zihuatanejo**	**3.81**	**120**	*i* P	Pn	12 18 56.9	-2.1
ZIIG				*i* S	Sn	12 19 39.6	-3.6
CAIG	**El Cayaco**	**5.08**	**118**	*e*P	Pn	12 19 14.6	-1.9
CAIG				*i* S	Sn	12 20 12.1	-2.5
UTMO	**Huajuapan**	**6.97**	**103**	*e*P	Pn	12 19 44.0	+1.5
UTMO				*i* S	Sn	12 20 59.6	-1.6
HPIG		**7.40**	**355**	*e*P	Pn	12 19 47.5	-0.9
HPIG				*i* S	Sn	12 21 10.2	-1.6

*CSEM **28** 12:18:44.6±1.1, 26.°89N×56.°11E, h2km, ML3.5, Error ellipse: s-maj=25.0km s-min=8.4km az=146.0*
*THR **28** 12:18:44.0±0.6, 26.°92N×56.°13E, h15km±4km, ML3.6*
*TEH **28** 12:18:45.4, 26.°84N×56.°12E, h3km*

ISC 28 12:18:45.9±1.5, 26.°92N±0.°09×56.°11E±0.°08, h10km, n26, σ0°88/32, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.48**	**6**	*e*Pg	**Pg**	**12 18 53.4**	**-1.9**
BNDS				*e*Sg	**Sg**	**12 19 00.8**	**-0.8**
BNDS				AML	AML	12 19 03.3	
	comp=E,4μm,0.4s						
BNDS				AML	AML	12 19 04.4	
	comp=N,4μm,0.2s						
BNDS	**Bandar-Abbas**	**0.48**	**6**	*e*Pg	**Pg**	**12 18 53.4**	**-1.9**
BNDS				*e*Sg	**Sg**	**12 19 00.8**	**-0.8**
IBND	**Bandar-abas**	**0.65**	**36**	*e*Pg	**Pg**	**12 18 57.9**	**-0.6**
IBND				*e*Sg	**Sg**	**12 19 07.9**	**+0.9**
IBND				*e*		12 19 19.2	
	comp=Z,51μm,0.1s						
IBND	**Bandar-abas**	**0.65**	**36**	*e*Pg	**Pg**	**12 18 57.9**	**-0.6**
KRBR	**Kerman**	**3.10**	**10**	*e*Pn	**Pn**	**12 19 35.0**	**+0.1**
KRBR				Sn	**Sn**	**12 20 11.6**	**-0.5**
KRBR				AML	AML	12 20 26.5	
	comp=E,161nm,0.6s						
KRBR	**Kerman**	**3.10**	**10**	*e*Pn	**Pn**	**12 19 35.0**	**+0.1**
ISRV	**Sarvestan**	**3.61**	**313**	*e*Pn	**Pn**	**12 19 43.4**	**+1.5**
ISRV				*e*Sn	**Sn**	**12 20 25.0**	**+0.5**
ISRV				*e*		12 21 09.6	
	comp=Z,1μm,0.4s						
ISRV	**Sarvestan**	**3.61**	**313**	*e*Pn	**Pn**	**12 19 43.4**	**+1.5**
IPAR	**Pars**	**3.97**	**318**	*e*Pn	**Pn**	**12 19 47.0**	**+0.2**
IPAR				*e*		12 21 26.9	
	comp=Z,567nm,0.4s						
IPAR	**Pars**	**3.97**	**318**	*e*Pn	**Pn**	**12 19 47.0**	**+0.2**
IMEH	**Mehriz**	**4.64**	**344**	*e*Pn	**Pn**	**12 19 56.9**	**+0.8**
IMEH				*e*		12 20 07.5	
	comp=Z,226nm,0.1s						
IMEH	**Mehriz**	**4.64**	**344**	*e*Pn	**Pn**	**12 19 56.9**	**+0.8**
IBAF	**Bafgh**	**4.68**	**354**	*e*Pn	**Pn**	**12 19 57.2**	**+0.7**
IBAF				*e*		12 21 15.2	
	comp=Z,229nm,0.3s						
IBAF	**Bafgh**	**4.68**	**354**	*e*Pn	**Pn**	**12 19 57.2**	**+0.7**
ICHK	**Chekchek**	**5.51**	**345**	*e*	**Pn**	**12 20 13.1**	**+5.1**
	comp=Z,229nm,0.2s						
ICHK				*e*Pn	**Pn**	**12 20 09.3**	**+1.3**
NASN	**Na'in**	**6.52**	**335**	*e*Pn	**Pn**	**12 20 22.1**	**+0.2**
NASN	**Na'in**	**6.52**	**335**	*e*Pn	**Pn**	**12 20 22.1**	**+0.2**
IZEF	**Zefreh**	**6.80**	**332**	*e*Pn	**Pn**	**12 20 25.8**	**+0.1**
IZEF				*e*		12 20 30.4	
	comp=Z,93nm,0.2s						
IZEF	**Zefreh**	**6.80**	**332**	*e*Pn	**Pn**	**12 20 25.8**	**+0.1**
IPIR	**Pirpir**	**7.32**	**323**	*e*Pn	**Pn**	**12 20 33.7**	**+0.9**
IPIR	**Pirpir**	**7.32**	**323**	*e*Pn	**Pn**	**12 20 33.7**	**+0.9**
RDF	**Al-Radifah**	**7.83**	**287**	*e*P	**Pn**	**12 20 38.9**	**-1.0**
RDF	**Al-Radifah**	**7.83**	**287**	*e*P	**Pn**	**12 20 38.9**	**-1.0**
NAY	**Al-Naaiem**	**8.17**	**289**	*e*P	**Pn**	**12 20 43.5**	**-1.0**
NAY				AML	AML	12 22 17.0	
	comp=Z,3.5nm,0.5s						
NAY	**Al-Naaiem**	**8.17**	**289**	*e*P	**Pn**	**12 20 43.5**	**-1.0**
MIB	**Mutribah**	**8.25**	**292**	*e*P	**Pn**	**12 20 44.7**	**-0.9**
MIB				AML	AML	12 22 17.2	
	comp=Z,14nm,0.7s						

DJA 28 12:50:02, 9.°15S×118.°01E, h7km, MLv4.1/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.91**	**48**	P	Pg	12 50 19.6	+0.2
BMNI				S	Sg	12 50 31.1	-0.1
MTNI	**Mataram**	**1.89**	**286**	P	Pn	12 50 36.2	+1.5
MTNI				S	Sn	12 51 00.5	+1.7
WSI	**Waingapu**	**2.31**	**103**	P	Pn	12 50

NEIC **28** 13:42:58.0±0.7, 6°.33S×130°.17E, h149km±6km, mb5.2/41, Error ellipse: s-maj=5.5km s-min=3.6km az=56.0
ISCJB **28** 13:42:58.2±0.4, 6°.43S±0°.03×130°.26E±0°.02, h170km±3km, mb5.2/109, Error ellipse: s-maj=4.1km s-min=3.7km az=0.3
IDC **28** 13:42:58.6±2.3, 6°.34S×130°.20E, h151km±20km, mb4.8/19, mb1 4.7/20, mb1mx4.7/22, mbtmp4.8/20, MS3.8/7, Ms1 3.8/7, ms1mx3.5/24, Error ellipse: s-maj=15.0km s-min=9.2km az=72.0
GCMT **28** 13:42:59.1±0.3, 6°.29S×130°.24E, h162km±3km, MW5.1, Moment Tensor Solution. s22,c23; s70,c102; Moment tensor: Scale 10^{16}Nm; M_{rr}2.72±.17; $M_{\theta\theta}$1.78±.21; $M_{\phi\phi}$-4.51±.24; $M_{r\theta}$1.35±.13; $M_{\theta\phi}$3.25±.19; $M_{\phi r}$2.71±.17; Best double couple: $M_0$5.90000×10^{16} NP1:ϕ_s119.00000°, δ49.00000°, λ26.00000°. NP2:ϕ_s12.00000°, δ71.00000°, λ136.00000°. Principal axes: T 5.4100, Plg44.0000°, Azm327.0000°; N 0.9200, Plg43.0000°, Azm173.0000°; P -6.3400, Plg13.0000°, Azm70.0000°; Data Used: II IU G IC CN.
DJA **28** 13:43:00, 6°.41S×130°.21E, h161km, Mw5.5/33
ISC 28 13:42:59.3±0.4, **6°.43S**±0°.03×**130°.26E**±0°.02, **h164**km±3km, **h147**km±2.1km; **pP-P, n664,** σ1**9.06**/315, **mb5.2**/108, **178C-148D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.93**	**349**	P	**Pn**	**13 43 33.9**	**-0.6**
BNDI				S	**Sn**	**13 44 02.7**	**+1.1**
NLAI	**Namlea**	**4.47**	**315**	P	**Pn**	**13 44 06.5**	**+0.5**
LBMI	**Labuha**	**6.38**	**334**	P	**Pn**	**13 44 29.8**	**-1.4**
6.5nm1μm,0.9s							
LBMI				S	**Sn**	**13 45 36.7**	**-6.6**
6.5nm1μm,0.9s							
KAKA	**Kakadu**	**6.60**	**161**	*e*P	**Pn**	**13 44 33.0**	**-1.1**
545nm,0.2s							
KAKA				*e*S	**Sn**	**13 45 42.2**	**-6.4**
KAKA	**Kakadu**	**6.60**	**161**	*e*P	**Pn**	**13 44 33.0**	**-1.1**
1μm,0.3s							
BBSI	**Bau Bau**	**7.71**	**277**	P	**Pn**	**13 44 50.1**	**+1.3**
0.8nm2μm268nm,1.2s							
BBSI				S	**Sn**	**13 46 17.1**	**+2.0**
0.8nm2μm268nm,1.2s							
TNTI	**Ternate**	**7.71**	**338**	P	**Pn**	**13 44 47.0**	**-1.9**
1.1nm3μm371nm,0.9s							
BAKI	**Biak**	**7.81**	**48**	P	**Pn**	**13 44 50.6**	**+0.4**
BAKI				S	**Sn**	**13 46 13.2**	**-4.4**
KDI	**Kendari**	**8.00**	**287**	P	**Pn**	**13 44 55.1**	**+2.4**
0.5nm2μm146nm,1.3s							
MMRI	**Maumere**	**8.26**	**254**	P	**Pn**	**13 44 56.4**	**+0.4**
6μm333nm,1.0s							
MMRI				S	**Sn**	**13 46 26.9**	**-1.3**
6μm333nm,1.0s							
LUWI	**Luwuk**	**9.19**	**305**	P	**Pn**	**13 45 09.0**	**+0.5**
7μm591nm,1.4s							
KNA	**Kununurra**	**9.38**	**189**	P	**Pn**	**13 45 09.3**	**-1.6**
2μm,0.6s							
MNI	**Manado**	**9.51**	**325**	P	**Pn**	**13 45 11.4**	**-1.3**
8μm998nm,0.9s							
BKSI	**Bulukumba**	**10.15**	**276**	P	**Pn**	**13 45 20.9**	**-0.2**
914nm118nm,0.8s							
MMPI	**Merauke**	**10.24**	**102**	P	**Pn**	**13 45 22.3**	**+0.1**
9μm783nm,0.8s							
MMPI				S	**Sn**	**13 47 10.1**	**-5.8**
9μm783nm,0.8s							
WSI	**Waingapu**	**10.38**	**251**	P	**Pn**	**13 45 23.4**	**-0.7**
2μm,0.7s							
MSSI	**Masamba**	**10.63**	**291**	P	**Pn**	**13 45 23.8**	**-3.6**
132nm,0.8s							
SPSI	**Sidrap Palu**	**10.73**	**283**	P	**Pn**	**13 45 30.4**	**+1.6**
1μm135nm,0.7s							
MRSI	**Marisa**	**10.77**	**309**	P	**Pn**	**13 45 29.6**	**+0.3**
2μm,0.9s							
TTSI	**Tana Toraja**	**10.94**	**287**	P	**Pn**	**13 45 34.0**	**+2.6**
1μm158nm,0.8s							
SGSI	**Sangihe**	**11.10**	**335**	P	**Pn**	**13 45 30.6**	**-3.0**
4μm435nm,0.8s							
JAY	**Jayapura**	**11.11**	**70**	P	**Pn**	**13 45 33.5**	**-0.2**
4μm106nm,1.0s							
JAY				S	**Sn**	**13 47 37.3**	**+0.4**
4μm106nm,1.0s							
BMNI	**Bima**	**11.66**	**259**	P	**Pn**	**13 45 39.8**	**-1.1**
3μm125nm,0.6s							
BMNI				S	**Sn**	**13 47 45.8**	**-4.4**
3μm125nm,0.6s							
FITZ	**Fitzroy Crossi**	**12.45**	**201**	P	**Pn**	**13 45 47.7**	**-3.3**
20nm,0.3s,baz=30,slow=12,SNR=299							
FITZ				S	**Sn**	**13 47 57.3**	**-12**
42nm,0.3s,baz=58,slow=17,SNR=8.9							
FITZ				LR	LR	13 50 43.5	
comp=Z,309nm,20.0s,baz=22,slow=37							
FITZ	**Fitzroy Crossi**	**12.45**	**201**	*e*P	**Pn**	**13 45 47.3**	**-3.7**
242nm,0.6s							
FITZ				*e*S	**Sn**	**13 47 57.6**	**-11**
FITZ	**Fitzroy Crossi**	**12.45**	**201**	*e*P	**Pn**	**13 45 47.4**	**-3.6**
98nm,0.6s							
FITZ				*e*S	**Sn**	**13 47 57.0**	**-12**
FITZ	**Fitzroy Crossi**	**12.45**	**201**	P	**Pn**	**13 45 48.3**	**-2.7**
4μm284nm,0.7s							
WRA	**Warramunga Arr**	**14.01**	**164**	P	**Pn**	**13 46 07.7**	**-3.0**
13nm,0.3s,baz=351,slow=13,SNR=124							
WRA				S	**Sn**	**13 48 36.9**	**-9.4**
79nm,0.3s,baz=348,slow=22,SNR=18							
WRA	**Warramunga Arr**	**14.01**	**164**	P	**Pn**	**13 46 07.7**	**-3.0**
WRA				S	**Sn**	**13 48 36.9**	**-9.4**
WRA	**Warramunga Arr**	**14.01**	**164**	P	**Pn**	**13 46 07.7**	**-3.0**
MTNI	**Mataram**	**14.14**	**260**	P	**Pn**	**13 46 11.4**	**-1.1**
9μm85nm,0.9s							
MTNI				S	**Sn**	**13 48 43.3**	**-6.5**
9μm85nm,0.9s							
DAV	**Davao City (W)**	**14.20**	**341**	P	**Pn**	**13 46 09.2**	**-4.1**
56nm,0.3s,baz=11,slow=10,SNR=1.9							
KBKI	**Kotabaru**	**14.38**	**282**	P	**Pn**	**13 46 17.5**	**+1.9**
3μm290nm,1.0s							
KHKI	**Kahang-Kahang**	**14.66**	**262**	P	**Pn**	**13 46 18.2**	**-0.8**
75nm,1.0s							
KHKI				S	**Sn**	**13 48 51.3**	**-11**
75nm,1.0s							
COEN	**Coen**	**14.74**	**122**	*e*P	**Pn**	**13 46 20.2**	**+0.3**
1μm,0.9s							
COEN				S	**Sn**	**13 48 51.5**	**-13**
COEN	**Coen**	**14.74**	**122**	P	**Pn**	**13 46 21.8**	**+1.9**
9μm805nm,1.0s							
SRBI	**Singaraja**	**15.02**	**263**	P	**Pn**	**13 46 23.9**	**+0.4**
85nm,0.9s							
SRBI				S	**S**	**13 49 01.7**	**-9.3**
85nm,0.9s							
BBKI	**Banjar Baru**	**15.64**	**280**	P	**Pn**	**13 46 33.6**	**+2.5**
2μm,1.1s							
JAGI	**Jajag, Banyuwa**	**16.11**	**262**	P	**Pn**	**13 46 33.6**	**-3.2**
91nm,1.0s							
JAGI				S	**S**	**13 49 22.8**	**-13**
91nm,1.0s							
KMMI	**Kalianget**	**16.20**	**267**	P	**Pn**	**13 46 41.6**	**+3.7**
4μm329nm,1.0s							
TSM	**Tawau**	**16.32**	**310**	P	**Pn**	**13 46 39.0**	**-0.4**
MYLDM	**Lahad Datu**	**16.46**	**314**	P	**Pn**	**13 46 42.6**	**+1.6**
GMJI	**Gumukmas**	**16.78**	**263**	P	**Pn**	**13 46 45.5**	**+0.5**
77nm,1.8s							
SCPH	**Surigao**	**16.79**	**343⇑**	*e*P	**Pn**	**13 46 44.1**	**-0.9**
PLKI	**Palangkaraya**	**16.80**	**284**	P	**Pn**	**13 46 45.0**	**-0.1**
4μm424nm,1.0s							
PMG	**Port Moresby**	**16.99**	**101**	*e*P	**Pn**	**13 46 49.2**	**+1.7**
408nm,1.1s							
PMG				*e*S	**S**	**13 49 47.6**	**-8.0**
PMG	**Port Moresby**	**16.99**	**101**	*e*P	**Pn**	**13 46 49.2**	**+1.7**
PMG				*e*S	**S**	**13 49 47.6**	**-8.0**
PMG				pmax	pmax		
comp=Z,408nm,1.1s							
PMG	**Port Moresby**	**16.99**	**101**	P	**Pn**	**13 46 50.0**	**+2.5**
comp=Z,4μmcomp=Z,369nm,1.1s							
ASAR	**Alice Springs**	**17.49**	**169**	P	**Pn**	**13 46 54.1**	**+0.8**
comp=Z,8.3nm,0.3s,baz=345,slow=10.0,SNR=534							
ASAR				S	**S**	**13 49 59.1**	**-6.4**
comp=Z,3.8nm,0.3s,baz=344,slow=14,SNR=4.3							
ASAR	**Alice Springs**	**17.49**	**169**	P	**Pn**	**13 46 54.2**	**+0.8**
ASAR				S	**S**	**13 49 59.1**	**-6.4**
SDKM	**Sandakan**	**17.72**	**312**	P	**Pn**	**13 46 56.3**	**+0.2**
KRKI	**Karangkates**	**17.75**	**263**	P	**Pn**	**13 46 56.4**	**-0.1**
comp=Z,291nm,0.8s							
MBWA	**Marble Bar**	**17.85**	**214**	*e*P	**Pn**	**13 46 56.8**	**-0.8**
comp=Z,67nm,0.9s							
MBWA				*e*S	**S**	**13 50 03.2**	**-9.4**
MBWA	**Marble Bar**	**17.85**	**214**	P	**Pn**	**13 46 56.7**	**-0.9**
comp=Z,212nm,0.9s							
MBWA	**Marble Bar**	**17.85**	**214**	P	**Pn**	**13 46 57.3**	**-0.3**
SNR=16							
PWJI	**Pagerwojo**	**18.38**	**264**	P	**P**	**13 47 04.6**	**+2.7**
comp=Z,75nm,0.9s							
SJI	**Sawahan**	**18.40**	**265**	P	**P**	**13 47 03.6**	**+1.5**
comp=Z,7μmcomp=Z,102nm,0.7s							
KKM	**Kota Kinabalu**	**18.71**	**311**	P	**P**	**13 47 06.0**	**+0.6**
KKM	**Kota Kinabalu**	**18.71**	**311**	*e*P	**P**	**13 47 05.0**	**-0.5**
comp=Z,163nm,0.8s							
KDM	**Kudat**	**18.85**	**314**	P	**P**	**13 47 07.6**	**+0.6**
BTM	**Bintulu**	**19.64**	**299**	P	**P**	**13 47 16.2**	**+0.6**
STKI	**Sintang**	**19.83**	**288**	P	**P**	**13 47 18.4**	**+0.8**
comp=Z,125nm,1.1s							
SBUM	**Sibu**	**20.06**	**296**	P	**P**	**13 47 20.0**	**0.0**
BJII	**Banjamegara**	**20.43**	**266**	P	**P**	**13 47 26.2**	**+2.2**
comp=Z,73nm,1.4s							
CTA	**Charters Tower**	**20.62**	**133**	P	**P**	**13 47 27.7**	**+1.7**
comp=Z,15nm,0.7s,baz=315,slow=14,SNR=20							
CTA	**Charters Tower**	**20.62**	**133**	*e*P	**P**	**13 47 28.5**	**+2.5**
comp=Z,20nm,1.0s							
CTA				*e*S	**S**	**13 51 17.7**	**+10**
CTA	**Charters Tower**	**20.62**	**133**	P	**P**	**13 47 27.7**	**+1.7**
CTAO	**Charters Tower**	**20.62**	**133**	*e*P	**P**	**13 47 28.5**	**+2.5**
comp=Z,76nm,0.8s							
CTAO	**Charters Tower**	**20.62**	**133**	*e*P	**P**	**13 47 28.5**	**+2.5**
CTAO				pmax	pmax		
comp=Z,76nm,0.8s							
CTAO	**Charters Tower**	**20.62**	**133**	P	**P**	**13 47 28.8**	**+2.8**
comp=Z,39nm,0.8s							
KSM	**Kuching**	**21.41**	**291**	P	**P**	**13 47 33.9**	**-0.5**
KSM	**Kuching**	**21.41**	**291**	*e*P	**P**	**13 47 32.8**	**-1.7**
comp=Z,21nm,0.6s,mb4.6							
JCJI	**Jatiwangi**	**21.86**	**269**	P	**P**	**13 47 39.9**	**+0.8**
comp=Z,222nm,1.7s,mb5.3							
CISI	**Cisompet, Garu**	**22.31**	**266**	P	**P**	**13 47 43.3**	**-0.4**
comp=Z,4μmcomp=Z,528nm,0.8s,mb6.0							
TGY	**Tagaytay City**	**22.40**	**336**	P	**P**	**13 47 44.8**	**+0.4**
comp=Z,471nm,0.7s,mb6.0,baz=246,slow=2.4,SNR=17							
TGY	**Tagaytay City**	**22.40**	**336**	P	**P**	**13 47 44.8**	**+0.4**
LEM	**Lembang**	**22.50**	**268**	P	**P**	**13 47 44.6**	**-0.8**
comp=Z,163nm,0.9s,mb5.4							
TPI	**Tanjungpandan**	**22.83**	**278**	P	**P**	**13 47 48.4**	**-0.1**
comp=Z,1μmcomp=Z,82nm,1.0s,mb5.1							
CBJI	**Citeko**	**23.27**	**269**	P	**P**	**13 47 51.8**	**-0.7**
comp=Z,632nm,0.9s,mb6.0							
DBJI	**Dramaga**	**23.36**	**268**	P	**P**	**13 47 53.4**	**+0.1**
comp=Z,2μmcomp=Z,106nm,1.5s,mb5.0							
SKJI	**Sukabumi**	**23.55**	**267**	P	**P**	**13 47 55.3**	**+0.2**
comp=Z,239nm,0.7s,mb5.8							
FORT	**Forrest**	**24.31**	**185**	*e*P	**P**	**13 48 03.0**	**+1.2**
comp=Z,67nm,0.5s,mb5.4							
FORT				*e*S	S	13 52 34.0	+25
FORT	**Forrest**	**24.31**	**185**	*e*P	**P**	**13 48 03.0**	**+1.2**
comp=Z,98nm,0.6s,mb5.5							
FORT				*e*		13 48 15.7	
PPBI	**Pangkal Pinang**	**24.43**	**279**	P	**P**	**13 48 04.0**	**+1.0**
comp=Z,4μmcomp=Z,89nm,0.9s,mb5.3							
KLSI		**25.47**	**273**	P	**P**	**13 48 14.9**	**+2.4**
comp=Z,88nm,1.2s,mb5.2							
STKA	**Stephens Creek**	**27.44**	**159**	P	**P**	**13 48 30.6**	**+0.7**
comp=Z,3.8nm,0.5s,mb4.3,baz=330,slow=8.3,SNR=16							
STKA				LR	LR	14 00 43.8	
comp=Z,223nm,18.6s,baz=201,slow=39							
STKA	**Stephens Creek**	**27.44**	**159**	*e*P	**P**	**13 48 31.2**	**+1.3**
comp=Z,3.1nm,0.3s,mb4.4							
STKA				*e*pP	pP	13 49 02.5	-1.4
STKA	**Stephens Creek**	**27.44**	**159**	*e*P	**P**	**13 48 31.2**	**+1.3**
MYKOM	**Kota Tinggi**	**27.60**	**286**	P	**P**	**13 48 31.2**	**-0.4**
KLBR	**Kellerberrin**	**27.64**	**203**	*e*P	**P**	**13 48 32.9**	**+1.3**
comp=Z,8.9nm,0.5s,mb4.8							
KLBR				*e*pP	pP	13 49 04.8	-0.8
KLBR				*e*S	S	13 53 47.4	+46
KGM	**Kluang**	**28.18**	**286**	P	**P**	**13 48 36.5**	**-0.2**
NWAO	**Narrogin (SRO)**	**29.02**	**203**	P	**P**	**13 48 44.2**	**+0.3**
comp=Z,5.9nm,0.5s,mb4.6,baz=28,slow=6.0,SNR=8.9							
NWAO				LR	LR	14 01 16.9	
comp=Z,228nm,18.8s,baz=356,slow=38							
NWAO	**Narrogin (SRO)**	**29.02**	**203**	P	**P**	**13 48 44.2**	**+0.3**
NWAO				LR	LR	14 01 16.9	
NWAO	**Narrogin (SRO)**	**29.02**	**203**	P	**P**	**13 48 44.2**	**+0.3**
KTGM	**Kuala Trenggan**	**29.49**	**293**	P	**P**	**13 48 47.8**	**-0.5**
HNR	**Honiara**	**29.54**	**98**	P	**P**	**13 48 49.3**	**+0.6**
comp=Z,49nm,0.8s,mb5.3,baz=211,slow=2.0,SNR=6.1							
HNR	**Honiara**	**29.54**	**98**	*e*P	**P**	**13 48 49.1**	**+0.3**
comp=Z,29nm,0.6s,mb5.2							
HNR	**Honiara**	**29.54**	**98**	*e*P	**P**	**13 48 49.1**	**+0.3**
HNR				pmax	pmax		
comp=Z,29nm,0.6s,mb5.2							
BKNI	**Bangkinang**	**29.93**	**282**	P	**P**	**13 48 51.2**	**-1.0**
comp=Z,73nm,1.1s,mb5.3							
FRIM	**Kepong**	**30.16**	**288**	P	**P**	**13 48 53.3**	**-1.0**
PDSI	**Padang**	**30.23**	**279**	P	**P**	**13 48 53.5**	**-1.4**
comp=Z,78nm,1.2s,mb5.3							
IPM	**Ipoh**	**31.14**	**290**	P	**P**	**13 49 02.2**	**-0.7**
IPM	**Ipoh**	**31.14**	**290**	*e*P	**P**	**13 49 01.1**	**-1.7**
comp=Z,17nm,0.8s,mb4.8							
ARMA	**Armidale**	**31.18**	**143**	*e*P	**P**	**13 49 03.7**	**+0.7**
ARMA				*e*pP	pP	13 49 40.6	+3.2
MNSI	**Mandailing Nat**	**31.46**	**282**	P	**P**	**13 49 03.5**	**-2.1**
comp=Z,59nm,0.9s,mb5.3							
SISI	**Saibi**	**31.50**	**278**	P	**P**	**13 49 05.9**	**-0.2**
comp=Z,55nm,0.7s,mb5.4							
KULM	**Kulim**	**31.77**	**291**	P	**P**	**13 49 07.0**	**-1.4**
KULM	**Kulim**	**31.77**	**291**	*e*P	**P**	**13 49 06.6**	**-1.8**
comp=Z,40nm,0.9s,mb5.2							
QIZ	**Qiongzhong**	**32.33**	**322**	P	**P**	**13 49 13.5**	**+0.4**
PSI	**Prapat**	**32.61**	**285**	P	**P**	**13 49 13.6**	**-2.1**
comp=Z,72nm,1.0s,mb5.3,baz=104,slow=5.7,SNR=24							
PSI	**Prapat**	**32.61**	**285**	P	**P**	**13 49 13.6**	**-2.1**
JOW	**Kunigami**	**33.12**	**357**	P	**P**	**13 49 19.8**	**-0.1**
comp=Z,89nm,0.6s,mb5.6,baz=192,slow=9.7,SNR=12							
TPTI		**34.41**	**285**	P	**P**	**13 49 27.6**	**-3.7**
BDT	**Bhumibol Dam**	**38.83**	**308**	P	**P**	**13 50 08.5**	**-0.1**
comp=Z,49nm,1.0s,mb5.1							
JNU	**Nakatsue**	**39.33**	**1**	*e*P	**P**	**13 50 12.0**	**-0.5**
comp=Z,22nm,1.1s,mb4.7							
CMAR	**Chiang Mai Arr**	**39.57**	**309**	P	**P**	**13 50 14.5**	**-0.3**
comp=Z,23nm,0.7s,mb4.9,baz=137,slow=7.3,SNR=204							
CMAR				PcP	PcP	13 52 20.4	+1.4
comp=Z,6.5nm,0.8s,baz=162,slow=2.6,SNR=10							
CMAR				LR	LR	14 08 34.4	
comp=Z,118nm,18.6s,baz=143,slow=39							
CMAR	**Chiang Mai Arr**	**39.57**	**309**	P	**P**	**13 50 14.5**	**-0.3**
CMAR						13 52 20.4	
CHG	**Chiang Mai**	**39.78**	**310**	⇑P	**P**	**13 50 16.0**	**-0.5**
comp=Z,17nm,0.8s,mb4.7							
CHRT	**Chiangrai**	**39.78**	**312**	⇑P	**P**	**13 50 15.0**	**-1.5**
comp=Z,355nm,1.1s,mb5.9							
WHN	**Wuhan**	**39.80**	**338**	⇓P	**P**	**13 50 17.0**	**+0.5**
GYA	**Guiyang**	**39.91**	**326**	P	**P**	**13 50 18.0**	**+0.6**
GYA				pP	pP	13 50 50.3	-2.6
GYA				sP	sP	13 51 07.5	-4.0
GYA				PP	PP	13 51 56.5	+3.8
GYA				PcP	PcP	13 52 22.0	+2.2
GYA				ScP	ScP	13 55 55.8	+2.2
GYA				S	**S**	**13 56 12.3**	**+2.1**
GYA				sS	sS	13 57 08.5	-3.8
GYA				pmax	pmax		
comp=Z,20nm,0.8s,mb4.8							
GYA				pmax	pmax		
comp=Z,130nm,4.8s							
KMI	**Kunming**	**41.24**	**321**	P	**P**	**13 50 29.0**	**+0.6**
KMI				pP	pP	13 51 03.0	-1.1
KMI				sP	sP	13 51 19.5	-3.1
KMI				PP	PP	13 52 10.3	+3.1
KMI				S	**S**	**13 56 32.3**	**+2.2**
KMI				sS	sS	13 57 29.8	-2.6
KMI				SS	SS	13 59 35.0	-5.3
KMI				pmax	pmax		
comp=Z,42nm,1.3s,mb4.9							
KMI				pmax	pmax		
comp=Z,380nm,3.1s							
KMI				LR	LR		
comp=N,660nm,11.0s							
KMI				LR	LR		
comp=E,460nm,12.0s							
KMI				LR	LR		
comp=Z,300nm,12.4s							
ENH	**Enshi**	**41.58**	**332**	*e*P	**P**	**13 50 29.7**	**-1.3**
comp=Z,16nm,0.6s,mb4.8							
MJAR	**Matsushiro Arr**	**43.39**	**9**	P	**P**	**13 50 44.1**	**-1.4**
comp=Z,19nm,0.8s,mb4.8,baz=192,slow=11,SNR=64							
MJAR	**Matsushiro Arr**	**43.39**	**9**	P	**P**	**13 50 44.1**	**-1.4**
MAJO	**Matsushiro**	**43.39**	**9**	*e*P	**P**	**13 50 44.2**	**-1.4**
comp=Z,45nm,1.0s,mb5.0							
MAJO	**Matsushiro**	**43.39**	**9**	*e*P	**P**	**13 50 44.2**	**-1.3**
MAJO				pmax	pmax		
comp=Z,45nm,1.0s,mb5.0							
MAT	**Matsushiro**	**43.39**	**9**	P	**P**	**13 50 44.2**	**-1.3**
MAT				S	**S**	**13 56 58.2**	**-3.0**
KSRS	**Korea Array**	**43.71**	**357**	P	**P**	**13 50 48.4**	**+0.3**
comp=Z,10nm,0.6s,mb4.6,baz=176,slow=9.0,SNR=54							
KSRS				PcP	PcP	13 52 33.0	+0.9
comp=Z,4.6nm,0.7s,baz=181,slow=3.6,SNR=7.8							
KSRS				ScP	ScP	13 56 08.2	-0.3
comp=Z,2.0nm,0.8s,baz=191,slow=5.4,SNR=6.2							
KSRS				LR	LR	14 07 49.1	
comp=Z,53nm,19.2s,baz=170,slow=34							
INCN	**Inchon**	**43.81**	**356**	*e*P	**P**	**13 50 49.6**	**+0.7**
comp=Z,38nm,0.8s,mb5.1							
CD2	**Chengdu**	**44.97**	**327**	⇓*i*P	**P**	**13 50 57.5**	**-0.7**
CD2				pP	pP	13 51 29.0	-5.4
CD2				sP	sP	13 51 45.3	-7.5
CD2				pmax	pmax		
comp=Z,30nm,1.0s,mb4.9							
CD2				pmax	pmax		
comp=Z,150nm,5.8s							
XAN	**Xi'an**	**45.03**	**335**	P	**P**	**13 50 57.5**	**-1.2**
XAN				pmax	pmax		
comp=Z,14nm,1.2s,mb4.5							
XAN				pmax	pmax		
comp=Z,98nm,5.4s							
BJT	**Baijiatuau**	**48.01**	**345**	*e*P	**P**	**13 51 21.0**	**-0.7**
comp=Z,89nm,0.6s,mb5.6							
BJT	**Baijiatuau**	**48.01**	**345**	*e*P	**P**	**13 51 21.0**	**-0.7**
BJT				pmax	pmax		
comp=Z,89nm,0.6s							
BJI	**Beijing**	**48.03**	**345**	P	**P**	**13 51 21.5**	**-0.4**
BJI				pP	pP	13 51 52.8	-5.8
BJI				sP	sP	13 52 09.0	-7.8
BJI				S	**S**	**13 58 07.8**	**+0.3**
BJI				pmax	pmax		
comp=Z,140nm,0.7s,mb5.7							
BJI				pmax	pmax		
comp=Z,350nm,2.8s,mb5.5							
LZH	**Lanzhou**	**49.03**	**331**	*e*P	**P**	**13 51 30.3**	**+0.7**
LZH				pP	pP	13 52 04.0	-2.4
LZH				pmax	pmax		
comp=Z,75nm,1.1s,mb5.2							
LZH				pmax	pmax		
comp=Z,330nm,5.2s							
VLA	**Vladivostok**	**49.33**	**2***c*	*i*P	**P**	**13 51 31.4**	**-0.4**
VLA				pmax	pmax		
comp=Z,64nm,1.2s,mb5.1							
HHC	**Hu-ho-hao-te**	**50.09**	**342**	⇑P	**P**	**13 51 38.0**	**+0.5**
HHC				pP	pP	13 52 10.3	-4.2
HHC				sP	sP	13 52 26.3	-6.3
HHC				PcP	PcP	13 52 56.0	+1.3
HHC				PP	PP	13 53 36.8	+2.4
HHC				ScP	ScP	13 56 36.5	+1.3
HHC				S	**S**	**13 58 37.5**	**+1.3**
HHC				sS	sS	13 59 34.8	-5.7
HHC				ScS	ScS	14 01 12.0	+0.1
HHC				SS	SS	14 02 10.3	-1.5
HHC				pmax	pmax		
comp=Z,46nm,1.2s,mb5.0							
HHC				pmax	pmax		
comp=Z,400nm,5.9s							
HHC				LR	LR		
comp=N,320nm,18.2s							
HHC				LR	LR		
comp=E,260nm,18.6s							
HHC				LR	LR		
comp=Z,180nm,17.6s							
CN2	**Changchun**	**50.18**	**355**	*e*P	**P**	**13 51 37.8**	**-0.4**
CN2				*e*sP	sP	13 52 25.8	-7.5
CN2				PcP	PcP	13 52 55.3	+0.3
CN2				*e*S	**S**	**13 58 38.0**	**+0.5**
CN2				pmax	pmax		
comp=Z,40nm,0.7s,mb5.2							
CN2				pmax	pmax		
comp=Z,200nm,3.0s							
MDJ	**Mudanjiang**	**50.81**	**359**	*e*P	**P**	**13 51 43.1**	**+0.2**
comp=Z,16nm,0.6s,mb4.8							
ASAJ	**Asahikawa**	**51.53**	**11**	*e*P	**P**	**13 51 48.0**	**-0.2**
comp=Z,18nm,1.3s,mb4.5							
LSA	**Lhasa**	**51.97**	**316**	P	**P**	**13 51 52.8**	**+1.0**
LSA				pmax	pmax		
comp=Z,60nm,0.8s,mb5.3							
LSA	**Lhasa**	**51.97**	**316**	*e*P	**P**	**13 51 52.2**	**+0.4**
comp=Z,90nm,1.1s,mb5.3							
LSA	**Lhasa**	**51.97**	**316**	*e*P	**P**	**13 51 52.3**	**+0.5**
LSA				pmax	pmax		
comp=Z,90nm,1.1s,mb5.3							
YUK	**Yuzh-Kuril'sk**	**52.17**	**14⇑**	*i*P	**P**	**13 51 49.5**	**-3.5**
YUK				*e*		13 52 56.3	
YUK				*i*		13 53 53.0	
YUK				*i* PPP		13 55 05.9	
YUK				*e*S	**S**	**13 59 16.4**	**+12**
YUK				pmax	pmax		
comp=Z,440nm,1.1s,mb6.0							
YUK				pmax	pmax		
comp=N,186nm,1.1s							
YUK				pmax	pmax		
comp=E,256nm,1.1s							
YUK				pmax	pmax		
comp=Z,478nm,1.1s,mb6.0							
YUK				smax			
comp=N,450nm,1.4s							
YUK				smax			
comp=

BHPL AMb AMB 13 52 46.6
comp=Z,46nm,0.9s,mb5.3
KAD Karad 60.21 294 *e*PKP **P 13 52 49.3 -1.2**
KAD AMb AMB 13 52 50.4
comp=Z,51nm,0.6s,mb5.5
ZAK Zakamensk 61.21 341 *e*P **P 13 52 56.8 +0.2**
CASY Casey 61.30 189 *e*P **P 13 52 58.2 +1.2**
NDI New Delhi 61.85 307 *e*PKP **P 13 52 59.0 -2.4**
TLY Talaya 62.22 342 *e*P **P 13 53 04.2 +0.8**
comp=Z,11nm,0.7s,mb4.8
TLY Talaya 62.22 342 *e*P **P 13 53 04.2 +0.9**
TLY pmax pmax
comp=Z,11nm,0.7s,mb4.8
TLY Talaya 62.22 342 P **P 13 53 04.6 +1.3**
SNR=6.7
IRK Irkutsk 62.51 342⇑ *i*P **P 13 53 05.5 +0.2**
IRK pmax pmax
comp=Z,85nm,2.3s,mb5.2
WMQ Urumqi 63.06 327⇓ *i*P **P 13 53 10.0 +0.9**
WMQ pP pP 13 53 44.0 -3.7
WMQ sP sP 13 54 00.0 -5.4
WMQ PP PP 13 55 32.0 +2.0
WMQ S **S 14 01 27.0 +0.2**
WMQ sS sS 14 02 26.0 -7.6
WMQ SS SS 14 05 37.0 +1.2
WMQ pmax pmax
comp=Z,85nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,150nm,5.0s
WMQ LR LR
comp=N,110nm,16.0s
WMQ LR LR
comp=E,91nm,17.0s
WMQ LR LR
comp=Z,71nm,16.0s
MOY Mondy 63.07 340 *e*P **P 13 53 10.2 +1.2**
MOY pmax pmax
comp=Z,75nm,1.6s,mb5.3
CLNS Chul'man 63.20 357 *e*P **P 13 53 10.4 +0.7**
CLNS pmax pmax
comp=Z,26nm,0.8s,mb5.1
CLNS pmax pmax
comp=N,14nm,0.8s
CLNS pmax pmax
comp=E,10.0nm,0.8s
SDNR Sundarnagar 63.28 310 *e*PKP **P 13 53 10.0 -0.8**
PEA0B Petropavlovsk- 63.70 18 *e*P **P 13 53 14.2 +1.1**
PETK Petropavlovsk- 63.70 18 P **P 13 53 14.2 +1.1**
comp=E,30nm,0.6s,mb5.3,baz=163,slow=3.5,SNR=26
PETK Petropavlovsk- 63.70 18 P **P 13 53 14.2 +1.1**
BOD Bodaibo 65.38 351 *e*P **P 13 53 23.7 -0.2**
BOD pmax pmax
comp=Z,33nm,1.1s,mb5.1
BHJ Bhuj 66.11 299 *e*PKP **P 13 53 26.4 -3.0**
BHJ AMb AMB 13 53 49.8
comp=Z,80nm,1.3s,mb5.4
KSH Kashi 67.78 317 *e*P **P 13 53 40.5 +1.0**
KSH *e*PcP PcP 13 54 08.3 +3.3
KSH *e*pP pP 13 54 14.5 -4.1
KSH *e*sP sP 13 54 30.0 -6.2
KSH *e*PP PP 13 56 11.3 0.0
KSH *e*ScP 13 57 56.3
KSH *e*PcS 13 58 11.5
KSH *e*S S 14 02 20.3 -4.0
KSH *e*ScS ScS 14 03 20.5 -2.2
KSH pmax pmax
comp=Z,38nm,0.8s,mb5.2
KSH LR LR
comp=N,830nm,8.9s
KSH LR LR
comp=E,670nm,7.8s
KSH LR LR
comp=Z,850nm,6.9s
MK31 Makanchi Array 67.89 327 *e*P **P 13 53 40.5 +0.5**
MK31 Makanchi Array 67.89 327 *e*P **P 13 53 40.5 +0.4**
MKAR Makanchi Array 67.89 327 P **P 13 53 40.6 +0.5**
comp=Z,91nm,0.7s,mb5.6,baz=121,slow=8.0,SNR=911
MKAR Makanchi Array 67.89 327 P **P 13 53 40.6 +0.5**
YAK Yakutsk 68.26 360 *e*P **P 13 53 41.9 -0.1**
comp=Z,153nm,0.8s,mb5.8
YAK Yakutsk 68.26 360*c i*P **P 13 53 42.1 +0.1**
YAK *e* 13 54 01.1
YAK *e*S S 14 02 27.8 -1.3
YAK *e* 14 03 15.0
YAK *e*SS SS 14 06 53.9 -1.8
YAK pmax pmax
comp=Z,117nm,0.8s,mb5.7
YAK pmax pmax
comp=N,101nm,1.7s
YAK pmax pmax
comp=E,4.0nm,0.8s
YAK smax
comp=E,142nm,2.2s
YAK smax
comp=N,173nm,2.7s
KZA Kyzart 69.52 319 P **P 13 53 52.1 +1.8**
SNR=14
TKM2 Tokmak 2 69.71 320 P **P 13 53 52.4 +1.0**
SNR=43
KBK Karagaybulak 70.00 320 P **P 13 53 54.4 +1.2**
SNR=24
AAK Ala-Archa 70.28 320 P **P 13 53 56.1 +1.2**
comp=N,16nm,0.5s,mb5.0,baz=127,slow=5.1,SNR=63
AAK Ala-Archa 70.28 320*c i*P **P 13 53 55.9 +1.1**
AAK pmax pmax
comp=Z,54nm,1.9s,mb5.0
AAK Ala-Archa 70.28 320 P **P 13 53 56.1 +1.3**
comp=Z,306nm,0.8s,mb6.1,SNR=20
AAK Ala-Archa 70.28 320 P **P 13 53 56.2 +1.4**
SNR=20
CHMS Chumysh 70.29 320 P **P 13 53 55.4 +0.5**
SNR=15
AML Almayashu 70.55 319 P **P 13 53 58.2 +1.6**
SNR=40
AML Almayashu 70.55 319 *e*P **P 13 53 57.9 +1.3**
comp=Z,119nm,0.6s,mb5.8
USP Ospenovka 70.58 320 P **P 13 53 57.5 +0.8**
SNR=62
KBL Kabul 70.60 310 *e*P **P 13 53 56.9 -0.1**
comp=Z,40nm,0.9s,mb5.2
KBL Kabul 70.60 310 *e*P **P 13 53 56.9 -0.1**
KBL pmax pmax
comp=Z,40nm,0.9s,mb5.2
EKS2 Erkin-Say 70.75 319 P **P 13 53 59.1 +1.3**
SNR=60
ZAA0 Zalesovo Array 71.19 334 *e*P **P 13 53 59.2 -0.9**
ZALV Zalesovo Beam 71.19 334 P **P 13 53 59.5 -0.6**
comp=Z,24nm,0.6s,mb5.1,baz=121,slow=5.3,SNR=92
ZALV Zalesovo Beam 71.19 334 P **P 13 53 59.5 -0.6**
ZALV Zalesovo Beam 71.19 334 P **P 13 53 59.5 -0.6**
SEY Seymchan 71.20 10⇑ *e*P **P 13 54 00.9 +0.9**
KURK Kurchatov 72.17 328 *e*P **P 13 54 06.0 -0.1**
comp=Z,67nm,1.2s,mb5.2
KURK Kurchatov 72.17 328*d i*P **P 13 54 05.7 -0.3**
KURK pmax pmax
comp=Z,62nm,1.2s,mb5.2
KURK Kurchatov 72.17 328 P **P 13 54 06.6 +0.6**
comp=Z,241nm,0.7s,mb6.0,SNR=32
KURK Kurchatov 72.17 328 P **P 13 54 06.4 +0.4**
SNR=17
NVS Novosibirsk 72.47 334⇑ *i*P **P 13 54 06.5 -1.3**
NVS pmax pmax
comp=Z,64nm,1.3s,mb5.2
NVS pmax pmax
comp=N,38nm,1.4s
NVS pmax pmax
comp=E,23nm,1.0s
KK31 Karatay Array 73.09 319 P **P 13 54 11.7 +0.1**
KK31 pmax pmax
comp=Z,48nm,1.1s,mb5.1
KKAR Karatay Array 73.09 319 *e*P **P 13 54 11.8 +0.2**
comp=Z,50nm,1.1s,mb5.2
KKAR Karatay Array 73.09 319 *e*P **P 13 54 11.8 +0.2**
KKAR pmax pmax
comp=Z,50nm,1.1s,mb5.2
WBK Wadi Bani Khal 75.40 295 P **P 13 54 26.5 +1.0**
SNR=11
MAW Mawson 75.58 201 P **P 13 54 27.2 +1.6**
comp=Z,15nm,0.7s,mb4.7,baz=78,slow=6.1,SNR=45
MAW LR LR 14 21 51.4
comp=Z,49nm,21.9s,baz=294,slow=31
MAW Mawson 75.58 201 *e*P **P 13 54 27.1 +1.5**
comp=Z,12nm,0.7s,mb4.6
MAW Mawson 75.58 201 *e*P **P 13 54 27.0 +1.4**
comp=Z,2.0nm,0.7s
MAW Mawson 75.58 201 *e*P **P 13 54 27.0 +1.4**

JMDO Jabal Madar 76.13 295 P **P 13 54 30.3 +0.7**
SNR=6.3
SMDO Samad 76.33 296 P **P 13 54 31.7 +0.9**
SNR=8.3
BSY Bisya 77.03 295 P **P 13 54 35.1 +0.5**
SNR=5.5
HOQ Hoqain 77.11 296 P **P 13 54 35.8 +0.7**
SNR=10
BVA0 Borovoye Array 77.72 328 P **P 13 54 37.5 -0.3**
ARQ Araqi 77.77 295 P **P 13 54 39.6 +0.8**
SNR=5.4
BRVK Borovoye 77.79 328 *e*P **P 13 54 37.9 -0.3**
comp=Z,31nm,0.9s,mb4.9
BRVK Borovoye 77.79 328 *e*P **P 13 54 37.9 -0.3**
BRVK pmax pmax
comp=Z,31nm,0.9s,mb4.9
BRVK Borovoye 77.79 328 P **P 13 54 38.4 +0.2**
comp=Z,190nm,0.7s,mb5.8,SNR=15
TIXI Tiksi 77.92 360 *e*P **P 13 54 37.9 -0.7**
comp=Z,13nm,0.7s,mb4.7
TIXI Tiksi 77.92 360 *e*P **P 13 54 38.4 -0.2**
TIXI pmax pmax
comp=Z,17nm,0.7s,mb4.8
BILL Bilibino 78.50 13⇑ *e*P **P 13 54 41.2 -0.6**
BILL *e* 13 54 47.8
BILL *e*SS SS 14 09 36.3 +5.0
BILL pmax pmax
comp=Z,11nm,1.1s,mb4.4
BANOM Banah 78.53 298 P **P 13 54 44.4 +1.5**
SNR=5.2
RBK Rabkut 78.74 289 P **P 13 54 44.7 +0.5**
SNR=6.7
ABTO Aybut 79.57 289 P **P 13 54 49.2 +0.5**
SNR=7.3
UNV Unalaska Valle 79.89 33 *e*P **P 13 54 50.2 +0.6**
ABKT Ailbek 80.05 310 P **P 13 54 51.9 +1.0**
comp=Z,149nm,0.8s,mb5.7,SNR=8.7
AB31 Akbulak array 82.23 321 *i*P **P 13 55 01.5 -0.6**
AB31 pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
ABKAR Akbulak array 82.23 321 *e*P **P 13 55 01.6 -0.5**
comp=Z,22nm,1.0s,mb4.8
AKTK Aktyubinsk 83.78 322 P **P 13 55 10.2 +0.1**
AKTK LR LR 14 36 58.2
AKTO Aktyubinsk 83.78 322 P **P 13 55 10.2 +0.1**
comp=Z,16nm,0.9s,mb4.7,baz=116,slow=7.6,SNR=28
AKTO LR LR 14 36 58.2
comp=Z,92nm,19.0s,baz=12,slow=39
AKTO Aktyubinsk 83.78 322 P **P 13 55 10.2 +0.1**
SYO Syowa Base 84.29 201⇓ *e*P **P 13 55 12.0 -0.3**
SYO Syowa Base 84.29 201⇑ *e*PcP PcP 13 55 17.3 +1.6
SYO Syowa Base 84.29 201⇑ *e*pP pP 13 55 49.3 -3.7
SVE Sverdlovsk 84.42 329⇑ *e*P **P 13 55 13.4 +0.3**
SVE pmax pmax
comp=Z,68nm,1.1s,mb5.3
ARU Arti 85.36 328 *e*P **P 13 55 16.9 -0.9**
comp=Z,33nm,0.8s,mb5.1
ARU Arti 85.36 328*c i*P **P 13 55 17.4 -0.5**
ARU S S 14 05 26.9 -7.8
ARU SS SS 14 11 13.6 +0.1
ARU pmax pmax
comp=Z,38nm,1.0s,mb5.1
ARU Arti 85.36 328 P **P 13 55 17.8 -0.1**
comp=Z,225nm,0.8s,mb6.0,SNR=7.5
UMR Umm Al-Rimmam 86.69 300 *e*P **P 13 55 24.9 -0.2**
UMR AMb AMB 13 55 25.5
comp=Z,55nm,0.7s,mb5.5
RDF Al-Radifah 86.73 299 *e*P **P 13 55 25.2 0.0**
RDF AMb AMB 13 55 26.6
comp=Z,73nm,1.3s,mb5.3
NAY Al-Naaiem 87.05 300 *e*P **P 13 55 26.1 -0.7**
NAY AMb AMB 13 55 27.4
comp=Z,45nm,1.2s,mb5.2
MIB Mutribah 87.05 300 *e*P **P 13 55 26.3 -0.5**
MIB AMb AMB 13 55 28.5
comp=Z,63nm,0.9s,mb5.5
SOKR Solikamsk 87.24 331*c i*P **P 13 55 25.3 -1.6**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.9
TTA Tatalina 88.36 26 *e*P **P 13 55 33.0 +0.8**
comp=Z,13nm,0.8s,mb4.8
TTA Tatalina 88.36 26 *e*P **P 13 55 33.0 +0.8**
TTA pmax pmax
comp=Z,13nm,0.8s,mb4.8
SLKM Skilak Lake 90.41 29 *e*P **P 13 55 41.1 -0.7**
SLKM Skilak Lake 90.41 29 *e*P **P 13 55 41.1 -0.7**
PMR Palmer 91.15 28 P **P 13 55 44.7 -0.6**
comp=Z,4.8nm,0.7s,mb4.6
PMR Palmer 91.15 28 P **P 13 55 44.7 -0.5**
PMR pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
SML Sawmill 91.56 28 *e*P **P 13 55 46.8 -0.3**
comp=Z,2.6nm,0.8s,mb4.3
SML Sawmill 91.56 28 *e*P **P 13 55 46.8 -0.4**
SML pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
COLD Coldfoot 91.84 23 *e*P **P 13 55 48.6 +0.3**
comp=Z,8.6nm,0.9s,mb4.8
COLA College 92.33 25 *e*P **P 13 55 49.4 -1.2**
comp=Z,3.7nm,0.8s,mb4.5
COLA College 92.33 25 *e*P **P 13 55 49.4 -1.2**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ILAR Eielson Array 92.72 25 P **P 13 55 51.4 -1.1**
comp=Z,4.4nm,0.7s,mb4.7,baz=261,slow=4.4,SNR=65
ILAR Eielson Array 92.72 25 P **P 13 55 51.4 -1.0**
NVL N'lazarevskaya 92.97 197 *e*P **P 13 55 55.9 +2.3**
NVL pmax pmax
comp=Z,12nm,0.6s,mb5.2
MENT Mentasta 93.86 27 *e*P **P 13 55 58.1 +0.4**
EGAK Eagle 95.16 25 *e*P **P 13 56 03.6 0.0**
comp=Z,8.1nm,1.0s,mb4.9
VORD Divnogorie 95.56 321 *e*P **P 13 56 04.2 -1.5**
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=Z,7.0nm,0.6s,mb5.2
VORD pmax pmax
comp=E,20nm,0.8s
VSR Storozhevoye 95.65 321 *e*P **P 13 56 03.8 -2.4**
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
VSR pmax pmax
comp=N,10.0nm,0.9s
DAWY Dawson 95.88 26 *e*P **P 13 56 07.3 +0.3**
ASF Jabal al Asfar 96.22 302 P **P 13 56 09.4 +0.2**
baz=117,slow=2.3
ASF Jabal al Asfar 96.22 302 P **P 13 56 09.4 +0.1**
OBN Obninsk 97.34 325 *i*P **P 13 56 12.4 -1.3**
OBN *e*PS PS 14 09 05.8 -1.4
OBN pmax pmax
comp=Z,12nm,0.6s,mb5.4
VNA2 Neumayer--Watz 97.84 193 *e*P **P 13 56 14.4 -1.3**
baz=125,slow=3.0
VNA3 Neumayer Olymp 98.09 192 *e*P **P 13 56 14.9 -2.0**
VNA1 Neumayer--Stat 98.24 193 *e*P **P 13 56 16.2 -1.3**
BRTR Keskin Array B 99.16 309 P Pdif 13 56 20.7 -1.2
comp=Z,1.0nm,0.7s,baz=123,slow=4.6,SNR=5.0
BRTR Keskin Array B 99.16 309 P Pdif 13 56 20.7 -1.2
ARCES ARCESS Array B 101.14 340 P Pdif 13 56 29.4 -1.3
comp=Z,3.2nm,0.7s,baz=90,slow=6.1,SNR=8.5
ARCES ARCESS Array B 101.14 340 P Pdif 13 56 29.4 -1.3
ARCES ARCESS Array B 101.14 340 P Pdif 13 56 29.4 -1.3
FINES FINESS Array B 102.39 332 P Pdif 13 56 34.4 -1.9
comp=Z,4.3nm,0.9s,baz=52,slow=9.0,SNR=4.0
FINES PP PP 14 00 55.0 +4.5
comp=Z,3.9nm,1.0s,baz=48,slow=8.9,SNR=3.8
FINES FINESS Array B 102.39 332 P Pdif 13 56 34.4 -1.9
FINES 14 00 55.0
VRI Vrincioaia 104.01 316⇓ *i*P PKiKP 14 00 58.5 -1.8
PLOR Plostina 104.07 316⇓ *i*P PKiKP 14 00 56.3 -4.1
MLR Muntele Rosu 104.59 315⇓ *i*P PKiKP 14 01 04.0 +2.7
BURAR Bucovina Array 104.86 317⇓ *i*P PKiKP 14 01 04.9 +3.1
KWP Kalwaria Pacla 106.22 320⇑ *i*P PP 14 01 23.2 +3.9
DRGR 106.66 317⇑ *i*P PP 14 01 14.6 -8.1
VTS Vitosha 106.87 312⇑ *i*P PP 14 01 18.1 -6.3
MORC Moravsky Berou 109.48 321⇑ *i*P PKiKP 14 01 06.8 -3.5
PKSM Moragy 109.53 317⇓ *i*P PKiKP 14 00 59.3 -11
C11A Tepee Creek (N 110.42 41⇓P PKiKP 14 01 13.3 +1.1
baz=110
D12A Red Ives Fores 111.20 42⇑P PKiKP 14 01 14.0 +0.3
baz=111
CIS Catalina Islan 111.31 57⇓P PKiKP 14 01 14.5 +0.2
baz=111
A13A Flathead Natio 111.34 40⇑P PKiKP 14 01 14.8 +1.0
baz=111
FMP Fort Macarthur 111.36 56⇓P PKiKP 14 01 15.6 +1.3
baz=111
B13A Whitefish 111.45 40⇑P PKiKP 14 01 15.1 +1.0
baz=111
EDW2 Edwards Air Fo 111.47 55⇑P PKiKP 14 01 14.7 +0.2
baz=112
C13A Hot Springs 111.56 41⇓P PKiKP 14 01 15.3 +1.0
baz=112
F12A Elk City 111.58 43⇑P PKiKP 14 01 15.2 +0.8
baz=112
LRMC Laurel Mountai 111.64 54⇑P PKiKP 14 01 16.3 +1.4
baz=112
G12A Big Creek, Yel 111.67 44⇑P PKiKP 14 01 15.5 +0.9
baz=112
MPMC Manual Prospec 111.72 54⇑P PKiKP 14 01 15.0 +0.1
baz=112
D13A Huson 111.79 42⇑P PKiKP 14 01 15.3 +0.6
baz=112
C14A Swan Lake 112.08 41⇑P PKiKP 14 01 17.1 +1.8
baz=112
I12A Atlanta 112.11 45⇓P PKiKP 14 01 16.8 +1.4
baz=112
H12A Diamond D Ranc 112.13 44⇓P PKiKP 14 01 17.2 +1.8
baz=112
E13A Victor 112.13 42⇓P PKiKP 14 01 17.0 +1.6
baz=112
GSC Goldstone 112.38 55⇑P PKiKP 14 01 17.9 +1.7
baz=112
D14A Greenough 112.42 42⇓P PKiKP 14 01 16.5 +0.6
baz=112
H13A Challis 112.54 44⇑P PKiKP 14 01 17.7 +1.4
baz=112,SNR=5.4
U10A Ash Meadows, A 112.59 53⇑P PKiKP 14 01 17.2 +0.6
baz=113
HLID Hailey 112.67 45⇓P PKiKP 14 01 18.3 +1.7
baz=113,SNR=5.2
HLID Hailey 112.67 45 *e*PKPdf PKiKP 14 01 18.3 +1.8
B15A Bradely Ranch, 112.69 40⇓P PKiKP 14 01 17.2 +0.7
baz=113
I13A Wildhorse Cree 112.79 45⇑P PKiKP 14 01 18.8 +2.0
baz=113,SNR=6.1
C15A Salmond Ranch, 112.82 41⇓P PKiKP 14 01 17.5 +0.8
baz=113
BELC Belle Mtn. Jos 113.22 56⇓P PKiKP 14 01 19.3 +1.4
baz=113
I14A Mackay 113.26 45⇓P PKiKP 14 01 19.6 +2.0
baz=113
C16A Fuhringer Ranc 113.36 40⇓P PKiKP 14 01 18.4 +0.7
baz=113
GMRC Granite Mounta 113.38 55⇓P PKiKP 14 01 20.1 +1.9
baz=113
V11A Goodsprings 113.40 54⇑P PKiKP 14 01 20.4 +2.2
baz=113
G15A Dillon 113.61 43⇑P PKiKP 14 01 19.4 +1.2
baz=114
H15A Lima 113.64 44⇑P PKiKP 14 01 19.9 +1.5
baz=114
A17A Triple J Farms 113.68 39⇑P PKiKP 14 01 19.4 +1.1
baz=114
D16A Dana Ranch, Ca 113.72 41⇑P PKiKP 14 01 19.5 +1.1
baz=114
BC3 Big Chuckawall 113.72 56⇑P PKiKP 14 01 20.2 +1.4
baz=114
E16A East Helena 113.78 42⇓P PKiKP 14 01 19.6 +1.1
baz=114
K14A Jones Ranch, D 113.78 46⇑P PKiKP 14 01 20.8 +2.1
baz=114
B17A L&G Farms, Che 113.82 40⇑P PKiKP 14 01 19.6 +1.0
baz=114
L14A Malta 113.86 47⇑P PKiKP 14 01 20.4 +1.6
baz=114
V12A Nelson 113.89 54⇓P PKiKP 14 01 20.5 +1.4
baz=114
IRM Iron Mountain 113.89 56⇑P PKiKP 14 01 20.9 +1.8
baz=114
WTTA Wattenberg 113.94 319⇑ *i*PKiKP PKiKP 14 01 19.1 +0.2
comp=Z,11nm,0.4s
U12A Valley of Fire 114.01 53⇓P PKiKP 14 01 20.7 +1.3
baz=114
F16A Kennard Place, 114.02 43⇑P PKiKP 14 01 20.2 +1.2
baz=114
C17A Wharram Farm, 114.05 40⇓P PKiKP 14 01 19.9 +0.8
baz=114
BOZ Bozeman (W) 114.06 43⇑P PKiKP 14 01 20.7 +1.5
baz=114
J15A Blackfoot 114.10 45⇓P PKiKP 14 01 21.0 +1.7
baz=114
K15A Arbon 114.21 46⇓P PKiKP 14 01 21.7 +2.2
baz=114
A18A Metzger Ranch, 114.22 39⇑P PKiKP 14 01 20.3 +1.0
baz=114
D17A Six Diamond Ra 114.24 41⇑P PKiKP 14 01 20.1 +0.7
baz=114
MOTA Moosalm 114.26 319⇑ *i*PKPdf PKiKP 14 01 19.3 -0.1
comp=Z,2.7nm,0.4s
S13A Holt Ranch, En 114.34 52⇓P PKiKP 14 01 21.4 +1.5
baz=114
E17A Martinsdale 114.34 42⇓P PKiKP 14 01 20.3 +0.7
baz=114
T13A Saint George 114.41 52⇓P PKiKP 14 01 21.4 +1.3
baz=114
B18A Beardsley Farm 114.44 39⇓P PKiKP 14 01 20.2 +0.5
baz=114
Y12C Blythe 114.47 56⇓P PKiKP 14 01 21.7 +1.4
baz=114
U13A Pakoon Wash 114.47 53⇑P PKiKP 14 01 21.9 +1.7
baz=114
L15A Malad City 114.48 47⇓P PKiKP 14 01 21.3 +1.2
baz=114
Q14A Sevier Lake (B 114.50 50⇑P PKiKP 14 01 21.7 +1.5
baz=114
P14A Drum Mountains 114.53 49⇓P PKiKP 14 01 21.7 +1.5
baz=114
V13A Grand Canyon W 114.56 54⇑P PKiKP 14 01 21.9 +1.5
baz=115
EGMT Eagleton 114.57 40⇑P PKiKP 14 01 21.1 +1.1
baz=114
DUG Dugway 114.59 49⇑P PKiKP 14 01 22.0 +1.6
baz=115
FETA Feichten 114.60 319⇑ *i*PKiKP PKiKP 14 01 20.4 +0.2
comp=Z,1.8nm,0.5s
112A Yuma 114.61 57⇓P PKiKP 14 01 22.2 +1.6
baz=115
F17A Fitzpatrick Pl 114.64 42⇑P PKiKP 14 01 22.3 +2.0
baz=115
I16A Newdale 114.64 44⇓P PKiKP 14 01 21.9 +1.6
baz=115
G17A Pierce Place, 114.75 43⇑P PKiKP 14 01 22.1 +1.6
baz=115
W13A Hualapai Mount 114.77 54⇓P PKiKP 14 01 22.2 +1.4
baz=115
K16A Soda Springs 114.85 46⇓P PKiKP 14 01 22.4 +1.7
baz=115
X13A Yucca 114.90 55⇓P PKiKP 14 01 22.2 +1.1
baz=115
A19A Klindworth Far 114.90 39⇓P PKiKP 14 01 22.4 +1.7
baz=115
Y13A Salome 115.03 56⇑P PKiKP 14 01 22.5 +1.1
baz=115
T14A Hurricane 115.05 52⇓P PKiKP 14 01 22.7 +1.4
baz=115
DAVA Damuels 115.07 320⇑ *i*PKiKP PKiKP 14 01 21.2 +0.2
comp=Z,5.8nm,0.4s
C19A Slack Wire Ran 115.11 40⇑P PKiKP 14 01 22.3 +1.2
baz=115
REDW Red Top Meadow 115.23 45 *e*PKPdf PKPdf 14 01 23.0 +1.6
DAVOX Davos/Dischmat 115.23 319 PKP PKPdf 14 01 21.7 +0.3
comp=Z,3.4nm,0.4s,baz=90,slow=1.0,SNR=9.3
DAVOX Davos/Dischmat 115.23 319 PKIKP PKPdf 14 01 21.7 +0.4
F18A Big Timber 115.26 42⇓P PKiKP 14 01 23.1 +1.6
baz=115
I17A Pilgrim Ck. 115.26 44⇑P PKiKP 14 01 23.2 +1.7
baz=115
Z13A Yuma Proving G 115.27 56⇑P PKiKP 14 01 23.3 +1.5
baz=115
V14A Boquillas Ranc 115.30 54⇓P PKiKP 14 01 23.4 +1.5
baz=115
J17A Brown Place, J 115.32 45⇓P PKiKP 14 01 23.3 +1.7
baz=115
LOHW Long Hollow 115.33 45 *e*PKPdf PKPdf 14 01 22.9 +1.3
W14A Seligman 115.40 54⇓P PKPdf 14 01 23.4 +1.4
baz=115
D19A Cripps Ranch, 115.41 40⇑P PKiKP 14 01 22.9 +1.2
baz=115
MSU Marysvale 115.45 50 *e*PKPdf PKPdf 14 01 22.4 +0.4

MSU	Marysvale	115.45	50	ePKIKP	PKPdf	14 01 22.4 +0.4
B20A	Solberg Farm, baz=116	115.52	39	⇓P	PKiKP	14 01 22.9 +1.1
L17A	Cokeville baz=116	115.55	46	⇑P	PKPdf	14 01 23.2 +1.1
X14A	Yava baz=116	115.69	55	⇓P	PKPdf	14 01 23.9 +1.2
Y14A	Wickenburg baz=116	115.69	55	⇓P	PKPdf	14 01 23.9 +1.2
E19A	Rath Farm, Rou baz=116	115.70	41	⇓P	PKPdf	14 01 23.2 +0.9
C20A	Veseth Ranch, baz=116	115.78	40	⇑P	PKPdf	14 01 22.9 +0.6
F19A	Roth Farm, Mol baz=116	115.79	42	⇑P	PKPdf	14 01 23.1 +0.6
U15A	North Rim baz=116	115.80	53	⇓P	PKPdf	14 01 24.4 +1.7
RLMT	Red Lodge baz=116	115.81	43	⇑P	PKPdf	14 01 22.8 +0.2
J18A	Kendall Valley baz=116	115.85	45	⇑P	PKPdf	14 01 24.2 +1.6
M17A	Scullys Gap (B baz=116	115.86	47	⇓P	PKPdf	14 01 23.8 +1.0
N17A	Moffit Pass baz=116	115.88	47	⇓P	PKPdf	14 01 24.3 +1.5
114A	Black Gap (USA baz=116	115.99	57	⇑P	PKPdf	14 01 24.7 +1.5
K18A	Toltan Ranch, baz=116	116.00	45	⇓P	PKPdf	14 01 24.4 +1.4
A21A	Bergtoll Ranch baz=116	116.00	38	⇓P	PKPdf	14 01 23.6 +0.8
V15A	Kaibab Nationa baz=116	116.01	53	⇑P	PKPdf	14 01 25.5 +2.3
R16A	Teasdale baz=116	116.03	50	⇓P	PKPdf	14 01 24.6 +1.5
S16A	Weppner Ranch, baz=116	116.07	51	⇓P	PKPdf	14 01 24.9 +1.7
Q16A	Castle Valley baz=116	116.12	50	⇑P	PKPdf	14 01 24.8 +1.5
H19A	Powell baz=116	116.13	43	⇑P	PKPdf	14 01 24.5 +1.3
O17A	Robinson Place baz=116	116.14	48	⇑P	PKPdf	14 01 24.9 +1.6
B21A	Ellsworth Farm baz=116	116.15	39	⇑P	PKPdf	14 01 24.1 +1.1
214A	Organ Pipe Nat baz=116	116.17	58	⇓P	PKPdf	14 01 24.2 +0.6
L18A	Fontenelle, Gr baz=116	116.20	46	⇑P	PKPdf	14 01 24.4 +1.0
X15A	Humboldt baz=116	116.21	55	⇓P	PKPdf	14 01 24.5 +0.9
Y15A	Casa Rosa Ranc baz=116	116.23	55	⇑P	PKPdf	14 01 24.3 +0.6
MSKU	Masuku comp=Z,6.0nm,0.6s,baz=123,slow=3.5,SNR=8.8	116.26	265	PKP	PKPdf	14 01 24.2 -0.1
BW06	Boulder Array baz=116	116.30	45	⇑P	PKPdf	14 01 24.7 +1.2
P17A	Butcher Ranch, baz=116	116.31	49	⇓P	PKPdf	14 01 25.1 +1.5
C21A	Desert Coulee baz=116	116.32	39	⇑P	PKPdf	14 01 24.5 +1.0
CDF	Champ du Feu	116.32	321	ePKIKP	PKPdf	14 01 23.7 +0.3
CDF	Champ du Feu	116.32	321	ePKIKP	PKPdf	14 01 23.7 +0.3
F20A	Billings baz=116	116.33	42	⇓P	PKPdf	14 01 24.8 +1.2
G20A	Bridger baz=116	116.48	42	⇑P	PKPdf	14 01 25.0 +1.2
J19A	Crowheart baz=116	116.51	45	⇑P	PKPdf	14 01 25.2 +1.3
115A	Sonoran Desert baz=116	116.54	57	⇓P	PKPdf	14 01 25.8 +1.4
R17A	Hanksville Air baz=117	116.59	50	⇑P	PKPdf	14 01 25.2 +0.9
A22A	Carney Farms, baz=116	116.62	38	⇑P	PKPdf	14 01 24.6 +0.7
L19A	Farson baz=117	116.63	46	⇓P	PKPdf	14 01 25.5 +1.3
D21A	La Casta Ranch baz=117	116.65	40	⇓P	PKPdf	14 01 25.2 +1.1
O18A	Roosevelt baz=117	116.66	48	⇓P	PKPdf	14 01 26.2 +1.9
S17A	Black Ridge (B baz=117	116.70	51	⇑P	PKPdf	14 01 25.8 +1.3
BCLA	Clavier	116.73	324	PKP	PKPdf	14 01 24.6 +0.5
U16A	Tuba City baz=117	116.77	53	⇑P	PKPdf	14 01 26.9 +2.3
K19A	Absolon Red Bu baz=117	116.79	45	⇓P	PKPdf	14 01 25.4 +0.9
HINF	Hinteralfeld comp=Z,5.1nm,0.5s	116.81	321	⇑/PKIKP	PKPdf	14 01 23.9 -0.4
HINF	Hinteralfeld	116.81	321	⇑/PKIKP	PKPdf	14 01 23.9 -0.4
B22A	Reddig Ranch S baz=117	116.83	38	⇓P	PKPdf	14 01 25.5 +1.2
T17A	Navajo Res., N baz=117	116.84	52	⇑P	PKPdf	14 01 26.7 +1.9
H20A	Greybull baz=117	116.86	43	⇑P	PKPdf	14 01 25.6 +1.1
Q18A	Rafter H Ranch baz=117	116.86	49	⇑P	PKPdf	14 01 25.6 +0.8
X16A	Lo Mia Camp, P baz=117	116.87	55	⇑P	PKPdf	14 01 26.8 +1.9
I20A	Worland baz=117	116.94	44	⇓P	PKPdf	14 01 26.1 +1.3
Y16A	Circle Bar Ran baz=117	116.94	55	⇓P	PKPdf	14 01 26.3 +1.2
116A	Eloy baz=117	117.00	57	⇓P	PKPdf	14 01 26.4 +1.2
HAU	Haudompre	117.05	321	ePKIKP	PKPdf	14 01 24.6 -0.2
HAU	Haudompre	117.05	321	ePKIKP	PKPdf	14 01 24.6 -0.2
C22A	Vida baz=117	117.11	39	⇓P	PKPdf	14 01 26.2 +1.3
PGF	Pioggiola	117.13	315	ePKIKP	PKPdf	14 01 25.4 +0.2
PGF	Pioggiola	117.13	315	ePKIKP	PKPdf	14 01 25.4 +0.2
D22A	Cohagen baz=117	117.14	40	⇓P	PKPdf	14 01 26.2 +1.1
V17A	Tonalea, Kykot baz=117	117.15	53	⇓P	PKPdf	14 01 26.6 +1.2
J20A	Shoshoni baz=117	117.16	44	⇓P	PKPdf	14 01 26.6 +1.4
K20A	Yellowstone Ra baz=117	117.19	45	⇓P	PKPdf	14 01 26.3 +1.0
R18A	Canyonlands Na baz=117	117.22	50	⇑P	PKPdf	14 01 26.4 +0.9
LAO	LASA Array baz=117	117.28	40	⇑P	PKPdf	14 01 27.2 +1.9
SNF	Seneffe	117.28	324	PKP	PKPdf	14 01 25.9 +0.7
O19A	Miners Draw (B baz=117	117.30	48	⇓P	PKPdf	14 01 26.3 +0.7
S18A	Hurst Farm, Bl baz=117	117.31	51	⇓P	PKPdf	14 01 26.7 +1.0
B23A	Brockton baz=117	117.39	38	⇑P	PKPdf	14 01 26.5 +1.0
L20A	Wamsutter baz=117	117.39	46	⇑P	PKPdf	14 01 26.8 +1.1
H21A	Big Horn, Sher baz=117	117.46	43	⇑P	PKPdf	14 01 26.4 +0.7
Y17A	Roosevelt baz=118	117.50	55	⇑P	PKPdf	14 01 27.5 +1.3
BAIF	Baives comp=Z,2.8nm,0.5s	117.52	324	ePKIKP	PKPdf	14 01 25.4 -0.2
BAIF	Baives	117.52	324	ePKIKP	PKPdf	14 01 25.4 -0.2
C23A	Lambert baz=118	117.52	39	⇑P	PKPdf	14 01 27.0 +1.3
T18A	Mexican Hat baz=118	117.53	51	⇓P	PKPdf	14 01 27.9 +1.8
Q19A	Hogan Spring (baz=118	117.55	49	⇑P	PKPdf	14 01 27.5 +1.4
I21A	Big Trails, Te baz=118	117.56	44	⇑P	PKPdf	14 01 27.0 +1.1
J21A	Lysite baz=118	117.60	44	⇓P	PKPdf	14 01 27.4 +1.4
U18A	Rough Rock, Ch baz=118	117.70	52	⇓P	PKPdf	14 01 28.2 +1.8
LPG	La Plagne comp=Z,12nm,0.8s	117.71	319	⇑/PKIKP	PKPdf	14 01 26.6 +0.4
LPG	La Plagne	117.71	319	⇑/PKIKP	PKPdf	14 01 26.6 +0.4
LPL	La Plagne comp=Z,8.5nm,0.5s	117.71	319	⇑/PKIKP	PKPdf	14 01 26.5 +0.3
LPL	La Plagne	117.71	319	⇑/PKIKP	PKPdf	14 01 26.5 +0.3
CABF	La Chapelle comp=Z,15nm,0.5s	117.74	320	⇑/PKIKP	PKPdf	14 01 26.5 +0.3
CABF	La Chapelle	117.74	320	⇑/PKIKP	PKPdf	14 01 26.5 +0.3
D23A	Lindsay baz=118	117.75	39	⇑P	PKPdf	14 01 27.6 +1.4
N20A	Spence Gulch, baz=118	117.78	47	⇓P	PKPdf	14 01 28.1 +1.6
117A	Oracle baz=118	117.80	57	⇓P	PKPdf	14 01 28.0 +1.3
A24A	Westby baz=118	117.80	37	⇑P	PKPdf	14 01 27.1 +0.9
DGMT	Dagmar baz=118	117.87	38	⇓P	PKPdf	14 01 28.1 +1.8
217A	Green Valley baz=118	117.88	57	⇓P	PKPdf	14 01 28.4 +1.5
Z17A	San Carlos Hig baz=118	117.88	56	⇓P	PKPdf	14 01 28.4 +1.6
S19A	Harvey Farm, M baz=118	117.96	51	⇑P	PKPdf	14 01 28.0 +1.2
MBDF	Montbardon comp=Z,7.9nm,0.8s	117.96	318	ePKIKP	PKPdf	14 01 27.0 +0.3
MBDF	Montbardon	117.96	318	ePKIKP	PKPdf	14 01 27.0 +0.3
K21A	Alcova baz=118	117.97	45	⇑P	PKPdf	14 01 27.9 +1.1
O20A	White River Ci baz=118	118.00	48	⇓P	PKPdf	14 01 28.2 +1.3
L21A	Rawlins baz=118	118.09	46	⇓P	PKPdf	14 01 28.4 +1.4
C24A	Savage baz=118	118.10	39	⇓P	PKPdf	14 01 28.2 +1.4
Y18A	Canyon Day Jun baz=118	118.14	55	⇑P	PKPdf	14 01 27.8 +0.4
M21A	Separation Pea baz=118	118.20	46	⇓P	PKPdf	14 01 27.9 +0.6
J22A	Midwest baz=118	118.25	44	⇓P	PKPdf	14 01 27.9 +0.7
T19A	Beclabito baz=118	118.27	52	⇓P	PKPdf	14 01 29.4 +1.9
Q20A	Ridgley Place, baz=118	118.28	49	⇑P	PKPdf	14 01 28.9 +1.4
N21A	Black Mountain baz=118	118.34	47	⇑P	PKPdf	14 01 29.3 +1.7
118A	Homack Ranch, baz=118	118.42	56	⇓P	PKPdf	14 01 29.4 +1.4
R20A	Redvale baz=118	118.42	50	⇑P	PKPdf	14 01 29.4 +1.7
K22A	Casper baz=118	118.47	45	⇓P	PKPdf	14 01 28.2 +0.5
218A	Dragoon baz=118	118.49	57	⇑P	PKPdf	14 01 29.9 +1.8
ORIF	Oris-en-Rattie comp=Z,4.8nm,0.5s	118.49	318	⇑/PKIKP	PKPdf	14 01 27.7 0.0
ORIF	Oris-en-Rattie	118.49	318	⇑/PKIKP	PKPdf	14 01 27.7 0.0
S20A	Disappointment baz=118	118.53	50	⇓P	PKPdf	14 01 29.8 +1.8
X19A	St. Johns baz=119	118.61	54	⇑P	PKPdf	14 01 30.1 +1.8
318A	Bisbee baz=119	118.63	58	⇑P	PKPdf	14 01 29.8 +1.4
KEST	Kesra comp=Z,2.2nm,1.0s,baz=296,slow=2.2,SNR=4.7	118.69	307	PKP	PKPdf	14 01 28.2 -0.2
KEST	comp=Z,2.4nm,0.9s,baz=58,slow=4.3,SNR=5.9			PP	PP	14 02 43.2 -5.3
KEST	Kesra	118.69	307	PKP	PKPdf	14 01 28.2 -0.2
KEST				PP	PP	14 02 43.2 -5.3
L22A	Ellis Ranch, M baz=119	118.73	45	⇑P	PKPdf	14 01 29.7 +1.5
Y19A	Nutrioso baz=119	118.74	55	⇓P	PKPdf	14 01 30.3 +1.8
EKA	Eskdalemuir Ar comp=Z,1.5nm,0.5s,baz=42,slow=2.5,SNR=11	118.79	332	PKP	PKPdf	14 01 28.1 +0.1
EKA	Eskdalemuir Ar	118.79	332	PKIKP	PKPdf	14 01 28.1 +0.2
LOR	Lormes comp=Z,5.7nm,0.6s	118.89	321	⇑/PKIKP	PKPdf	14 01 28.4 0.0
LOR	Lormes	118.89	321	⇑/PKIKP	PKPdf	14 01 28.4 0.0
119A	Ashpeak Ranch, baz=119	118.95	56	⇓P	PKPdf	14 01 30.6 +1.7
V20A	Brimhall baz=119	118.95	53	⇓P	PKPdf	14 01 30.1 +1.2
S21A	Coal Bank Pass baz=119,SNR=11	119.01	50	⇓P	PKPdf	14 01 30.9 +2.0
SMRF	Simiane la Rot	119.03	317	ePKIKP	PKPdf	14 01 29.2 +0.4
W20A	Ramah baz=119	119.09	53	⇓P	PKPdf	14 01 31.1 +1.9
N22A	Wattenberg Ran baz=119	119.10	47	⇓P	PKPdf	14 01 30.8 +1.8
219A	White Tail Can baz=119	119.14	57	⇑P	PKPdf	14 01 31.1 +1.8
SMF	Signal de Mont comp=Z,6.6nm,0.7s	119.15	321	ePKIKP	PKPdf	14 01 28.7 -0.2
SMF	Signal de Mont	119.15	321	ePKIKP	PKPdf	14 01 28.7 -0.2
SSF	Saint Saulge comp=Z,7.8nm,0.6s	119.19	321	⇑/PKIKP	PKPdf	14 01 29.1 +0.1
SSF	Saint Saulge	119.19	321	⇑/PKIKP	PKPdf	14 01 29.1 +0.1
X20A	Quemado baz=119	119.22	54	⇓P	PKPdf	14 01 31.1 +1.7
319A	Douglas baz=119	119.24	58	⇑P	PKPdf	14 01 31.2 +1.6
P22A	Eagle baz=119	119.25	48	⇑P	PKPdf	14 01 30.7 +1.4
VIVF	Saint-Julien-l	119.31	318	ePKIKP	PKPdf	14 01 29.2 -0.1
VIVF	Saint-Julien-l	119.31	318	ePKIKP	PKPdf	14 01 29.2 -0.1
Q22A	Crested Butte, baz=119,SNR=5.6	119.35	49	⇓P	PKPdf	14 01 31.7 +2.1
T21A	Navajo Lake baz=119	119.38	51	⇑P	PKPdf	14 01 31.8 +2.1
AVF	Avril sur Loir comp=Z,3.7nm,0.5s	119.40	321	⇑/PKIKP	PKPdf	14 01 29.1 -0.3
AVF	Avril sur Loir	119.40	321	⇑/PKIKP	PKPdf	14 01 29.1 -0.3
U21A	Nageezi baz=119	119.43	52	⇑P	PKPdf	14 01 31.5 +1.7
Z20A	Nine Sixteen R baz=120	119.46	56	⇓P	PKPdf	14 01 31.6 +1.7
Y20A	Horse Springs, baz=120	119.46	55	⇓P	PKPdf	14 01 31.8 +1.9
120A	U Bar Ranch, L baz=120	119.55	56	⇑P	PKPdf	14 01 31.9 +1.8
V21A	Milan baz=120	119.61	52	⇓P	PKPdf	14 01 31.6 +1.5
R22A	Saguache, Gunn baz=120	119.64	49	⇓P	PKPdf	14 01 32.6 +2.5
O23A	Lake Granby, G baz=120	119.67	47	⇓P	PKPdf	14 01 32.0 +1.9
S22A	4UR Ranch, Cre baz=120,SNR=5.9	119.72	50	⇑P	PKPdf	14 01 32.4 +2.1
220A	Playas Peak, P baz=120	119.77	57	⇓P	PKPdf	14 01 32.0 +1.5
BGF	Bois d'Agland comp=Z,18nm,0.6s	119.81	321	ePKIKP	PKPdf	14 01 30.4 +0.2
BGF	Bois d'Agland	119.81	321	ePKIKP	PKPdf	14 01 30.4 +0.2
X21A	Alamocita Cree baz=120	119.82	54	⇓P	PKPdf	14 01 33.0 +2.4
T22A	Edith baz=120	119.86	51	⇑P	PKPdf	14 01 33.1 +2.5
320A	Kipp Ranch, An baz=120	119.88	58	⇑P	PKPdf	14 01 32.4 +1.6
P23A	Jefferson baz=120	119.99	48	⇓P	PKPdf	14 01 32.6 +1.9
Y21A	Point of Rocks baz=120	120.01	54	⇑P	PKPdf	14 01 32.2 +1.3
M24A	Cheyenne baz=120	120.05	45	⇑P	PKPdf	14 01 31.8 +0.9
U22A	Naves baz=120	120.07	52	⇓P	PKPdf	14 01 33.2 +2.2
Q23A	Hartsel baz=120	120.14	48	⇓P	PKPdf	14 01 33.3 +2.3
LASF	Ste Croix	120.15	318	ePKIKP	PKPdf	14 01 31.0 +0.1
V22A	San Miguel Ran baz=120	120.15	52	⇓P	PKPdf	14 01 33.7 +2.6
Z21A	St. Cloud Mine baz=120	120.17	55	⇓P	PKPdf	14 01 33.3 +2.0
121A	Cookes Peak, D baz=120	120.25	56	⇓P	PKPdf	14 01 33.1 +1.6
TCF	Toulx Ste Croi comp=Z,6.9nm,0.6s	120.33	321	ePKIKP	PKPdf	14 01 31.4 +0.2
TCF	Toulx Ste Croi	120.33	321	ePKIKP	PKPdf	14 01 31.4 +0.2
T23A	Casias Ranch, baz=120	120.53	51	⇑P	PKPdf	14 01 33.9 +2.1
Y22A	Socorro baz=121	120.60	54	⇓P	PKPdf	14 01 33.6 +1.5
U23A	El Rito baz=121	120.60	51	⇓P	PKPdf	14 01 34.1 +2.1
LDF	La Druitiere	120.71	324	ePKIKP	PKPdf	14 01 32.0 +0.2
LDF	La Druitiere	120.71	324	ePKIKP	PKPdf	14 01 32.0 +0.2
SDCO	Great Sand Dun	120.73	50	ePKPdf	PKPdf	14 01 33.9 +1.6
Z22A	Elephant Butte baz=121	120.76	55	⇓P	PKPdf	14 01 34.1 +1.6
V23A	Ortiz Mt. (NFS baz=121	120.76	52	⇑P	PKPdf	14 01 34.4 +2.1
FLN	La Foliniere comp=Z,7.5nm,0.7s	120.84	324	ePKIKP	PKPdf	14 01 32.0 -0.1
FLN	La Foliniere	120.84	324	ePKIKP	PKPdf	14 01 32.0 -0.1
122A	Conniff Cattle baz=121	120.86	56	⇓P	PKPdf	14 01 34.2 +1.6
R24A	Sanders Place, baz=121	120.88	49	⇓P	PKPdf	14 01 34.0 +1.5
W23A	Werner Place, baz=121	120.94	53	⇑P	PKPdf	14 01 34.9 +2.2
S24A	Houchin Ranch, baz=121	120.98	50	⇓P	PKPdf	14 01 34.9 +2.2
CAF	Calviac	120.99	319	ePKIKP	PKPdf	14 01 33.0 +0.5
CAF	Calviac	120.99	319	ePKIKP	PKPdf	14 01 33.0 +0.5
T24A	Torres, Weston baz=121	121.27	50	⇓P	PKPdf	14 01 34.9 +1.6
Q25A	Bedland, Calha baz=121	121.31	48	⇑P	PKPdf	14 01 35.0 +1.7
Y23A	Lovelace Mesa, baz=121	121.33	54	⇓P	PKPdf	14 01 35.1 +1.6
Z23A	Rita Site, Whi baz=121	121.35	55	⇓P	PKPdf	14 01 34.9 +1.4
V24A	Rampart Ranch, baz=122,SNR=6.4	121.48	52	⇓P	PKPdf	14 01 35.5 +1.8
W24A	Lazy 6 Ranch, baz=122	121.52	52	⇑P	PKPdf	14 01 35.1 +1.3
R25A	Fountain Ranch baz=122	121.53	49	⇓P	PKPdf	14 01 35.0 +1.2
MTLF	Montolieu comp=Z,3.1nm,0.5s	121.53	318	ePKIKP	PKPdf	14 01 33.6 0.0
MTLF	Montolieu	121.53	318	ePKIKP	PKPdf	14 01 33.6 0.0
S25A	Robets Cordova baz=122	121.56	49	⇑P	PKPdf	14 01 35.4 +1.6
MFF	Saint Martin d comp=Z,12nm,0.5s	121.65	322	ePKIKP	PKPdf	14 01 33.8 +0.1
MFF	Saint Martin d	121.65	322	ePKIKP	PKPdf	14 01 33.8 +0.1
T25A	Trinidad baz=122	121.74	50	⇓P	PKPdf	14 01 35.5 +1.3
ULM	Lac du Bonnet comp=Z,3.1nm,0.6s,baz=303,slow=2.0,SNR=3.8	121.83	33	PKP	PKPdf	14 01 33.1 -0.8
Y24A	Capitan baz=122,SNR=14	121.83	54	⇓P	PKPdf	14 01 35.7 +1.3
U25A	Circle Dot Ran baz=122	121.96	51	⇓P	PKPdf	14 01 35.7 +1.1
V25A	Rancho No Teng baz=122,SNR=6.5	121.96	52	⇑P	PKPdf	14 01 36.2 +1.5
Z24A	Sheeeppen Canyo baz=122,SNR=7.2	122.04	55	⇑P	PKPdf	14 01 36.2 +1.4
124A	Stringfield Ra baz=122,SNR=5.1	122.12	55	⇓P	PKPdf	14 01 36.7 +1.6
224A	Cornudas Mount baz=122	122.22	56	⇓P	PKPdf	14 01 36.8 +1.6
W25A	X Bar L Ranch, baz=122	122.26	52	⇓P	PKPdf	14 01 37.0 +1.8
SGMF	Saint Gilles comp=Z,5.1nm,0.5s	122.29	325	⇑/PKIKP	PKPdf	14 01 34.7 -0.2
SGMF	Saint Gilles	122.29	325	⇑/PKIKP	PKPdf	14 01 34.7 -0.2
324A	Moseley Ranch, baz=122,SNR=5.6	122.40	57	⇓P	PKPdf	14 01 36.9 +1.3
Y25A	Mesa, Roswell baz=122,SNR=6.9	122.43	54	⇓P	PKPdf	14 01 36.5 +0.9
Z25A	Roswell baz=123	122.58	55	⇑P	PKPdf	14 01 37.4 +1.5
V26A	Tequesquite Ra baz=123	122.62	51	⇓P	PKPdf	14 01 36.8 +0.9
125A	Gardner Draw, baz=123	122.79	55	⇑P	PKPdf	14 01 37.5 +1.2
225A	Deer Hill, Car baz=123	122.79	56	⇑P	PKPdf	14 01 37.9 +1.6
325A	Bean Ranch, Si baz=123	122.84	57	⇓P	PKPdf	14 01 37.8 +1.3
EPF	Esparros	122.91	318	ePKIKP	PKPdf	14 01 36.6 +0.4
EPF	Esparros	122.91	318	ePKIKP	PKPdf	14 01 36.6 +0.4
X26A	CR and CF Fran baz=123	122.96	53	⇓P	PKPdf	14 01 37.6 +1.0
425A	Indio Mountain baz=123,SNR=5.6	122.97	57	⇓P	PKPdf	14 01 37.4 +0.7
Y26A	Elida baz=123	123.12	54	⇓P	PKPdf	14 01 37.3 +0.4
Z26A	Caprock baz=123	123.18	54	⇑P	PKPdf	14 01 37.9 +0.8
226A	Malaga, Loving baz=123	123.39	56	⇑P	PKPdf	14 01 38.5 +0.9
W27A	Bowe Ranch, En baz=123	123.40	52	⇑P	PKPdf	14 01 38.2 +0.7
ETSF	Etsaut comp=Z,5.9nm,0.8s	123.56	318	ePKIKP	PKPdf	14 01 38.5 +1.0
ETSF	Etsaut	123.56	318	ePKIKP	PKPdf	14 01 38.5 +1.0
Y27A	Causey baz=124	123.66	53	⇑P	PKPdf	14 01 39.3 +1.3
326A	Caldwell Ranch baz=124	123.68	57	⇓P	PKPdf	14 01 38.8 +0.7
Z27A	Tatum baz=124	123.78	54	⇑P	PKPdf	14 01 39.2 +1.0
426A	McDonald Obser baz=124	123.79	57	⇑P	PKPdf	14 01 39.5 +1.2
526A	Mary Lane Ranc baz=124,SNR=6.8	123.89	58	⇓P	PKPdf	14 01 39.2 +0.6
SJPF	Ste Jean	123.91	319	ePKIKP	PKPdf	14 01 39.1 +0.9
SJPF	Ste Jean	123.91	319	ePKIKP	PKPdf	14 01 39.1 +0.9
MSTX	Muleshoe baz=124	123.95	53	⇑P	PKPdf	14 01 39.7 +1.2
626A	Big Bend Ranch baz=124	123.96	59	⇑P	PKPdf	14 01 39.7 +1.0
527A	Woodward Ranch baz=124,SNR=9.1	124.27	58	⇓P	PKPdf	14 01 40.0 +0.8
427A	Hayter Ranch, baz=124,SNR=6.1	124.27	57	⇑P	PKPdf	14 01 40.0 +0.8
TXAR	Lajitas Array comp=Z,1.3nm,0.8s,baz=203,slow=0.9,SNR=14	124.41	59	PKP	PKPdf	14 01 40.8 +1.3
TXAR	Lajitas Array	124.41	59	PKIKP	PKPdf	14 01 40.8 +1.3
AMTX	Amarillo baz=124	124.54	52	⇓P	PKPdf	14 01 41.0 +1.3
627A	Terlingua Ranc baz=125,SNR=5.6	124.62	59	⇓P	PKPdf	14 01 40.9 +1.0
328A	Wristen Ranch, baz=125	124.63	56	⇑P	PKPdf	14 01 40.9 +1.0
CBKS	Cedar Bluff baz=125	124.64	47	⇑P	PKPdf	14 01 41.0 +1.3
428A	Kincaid Ranch, baz=125	124.90	57	⇑P	PKPdf	14 01 42.0 +1.5
628A	Black Gap, Mar baz=125	125.03	58	⇑P	PKPdf	14 01 42.0 +1.2
ESDC	Sonseca Array comp=Z,1.7nm,0.9s,baz=68,slow=7.2,SNR=5.7	127.28	316	PP	PP	14 03 45.9 -0.1
JCT	Junction City baz=127	127.36	56	⇓P	PKPdf	14 01 46.7 +1.6
JCT	Junction City	127.36	56	ePKPdf	PKPdf	14 01 46.1 +1.0
JCT	Junction City	127.36	56	ePKIKP	PKPdf	14 01 46.2 +1.0
TORD	Torodi Ar. Bea comp=Z,18nm,1.1s,baz=72,slow=1.8,SNR=3.7	128.95	282	PKP	PKPdf	14 01 49.3 +0.7
PLCA	Paso Flores comp=Z,2.5nm,0.9s,baz=253,slow=0.6,SNR=5.7	129.32	160	PKP	PKPdf	14 01 49.9 +1.2
PLCA	Paso Flores	129.32	160	PKIKP	PKPdf	14 01 49.9 +1.3
MDT	Midelt comp=Z,2.2nm,0.7s,baz=0.9,slow=7.3,SNR=4.1	130.58	308	PKP	PKPdf	14 01 53.2 +2.0
KIC	Kosan Boka comp=Z,19nm,1.0s	135.30	273	ePKIKP	PKPdf	14 02 02.2 +1.6
DBIC	Dimbokro comp=Z,4.9nm,0.5s,baz=98,slow=2.1,SNR=10.0	135.42	273	PKP	PKPdf	14 02 01.3 +0.5
DBIC	Dimbokro	135.42	273	PKIKP	PKPdf	14 02 01.3 +0.4
LIC	Lamto comp=Z,29nm,1.0s	135.57	272	ePKIKP	PKPdf	14 02 02.8 +1.7
LIC	Lamto comp=Z,12nm,0.5s	135.57	272	ePKIKP	PKPdf	14 02 01.1 0.0
TIC	Toumodi comp=Z,14nm,0.7s	135.59	273	ePKIKP	PKPdf	14 02 02.8 +1.6
TIC	Toumodi	135.59	273	ePKIKP	PKPdf	14 02 02.8 +1.6
LRAL	Lakeview Retre	136.45	48	ePKPdf	PKPdf	14 02 02.5 +0.3
TKL	Tuckaleechee C	137.32	42	ePKPdf	PKPdf	14 02 04.1 +0.3
TKL	Tuckaleechee C	137.32	42	ePKIKP	PKPdf	14 02 04.1 +0.3
JTS	JuntasAbangare	144.96	81	ePKP	PKPdf	14 02 19.3 +1.3
JTS	JuntasAbangare	144.96	81	ePKIKP	PKPdf	14 02 19.3 +1.3
BBTS	Babate comp=Z,31nm,0.6s,baz=60,slow=0.7,SNR=18	146.39	287	PKPbc	PKPbc	14 02 22.4 +0.4
CPUP	Villa Florida comp=Z,12nm,0.7s,baz=187,slow=2.2,SNR=31	146.62	168	PKPbc	PKPbc	14 02 23.3 +0.9
CPUP				PP	PP	14 05 46.2 +0.9
CPUP	Villa Florida comp=Z,4.2nm,0.9s,baz=122,slow=0.5,SNR=3.7	146.62	168	PKPbc	PKPbc	14 02 23.3 +0.9
CPUP				PP	PP	14 05 46.2 +0.9
CPUP	Villa Florida	146.62	168	PKP2	PKPab	14 02 23.3 -0.4
CPUP						14 05 46.2
BCIP	Isla Barro Col	150.06	83	ePKPdf	PKPdf	14 02 27.0 +0.5
BCIP				ePKPbc	PKPbc	14 02 32.0 +0.4
OTA

*ISCJB **28** 14:35:29.8±1.8, 21°.90N±0°.09×143°.2E±0°.2, h223km±15km, mb3.5/12, Error ellipse: s-maj=27.6km s-min=14.9km az=174.8*
*IDC **28** 14:35:31.6±2.7, 21°.91N×143°.23E, h225km±25km, mb3.3/12, mb1 3.4/14, mb1mx3.4/24, mbtmp3.3/14, Error ellipse: s-maj=21.3km s-min=14.9km az=87.0*
*NEIC **28** 14:35:32.4±3.1, 21°.92N×143°.18E, h233km±29km, mb3.9/1, Error ellipse: s-maj=17.9km s-min=9.3km az=85.0*

ISC 28 14:35:30.8±1.8, 21°.91N±0°.09×143°.3E±0°.2, h218km±16km, n21, σ0s71/19, mb3.5/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.25**	**350**	P	**Pn**	**14 36 48.2**	**-0.6**
	11nm,0.3s,baz=29,slow=13,SNR=3.5						
MJAR	**Matsushiro Arr**	**15.22**	**344**	P	**Pn**	**14 38 55.0**	**+0.1**
	0.2nm,0.3s,baz=122,slow=6.0,SNR=3.8						
KSRS	**Korea Array**	**20.38**	**323**	P	**P**	**14 39 52.5**	**+1.6**
	1.9nm,0.8s,baz=149,slow=9.5,SNR=7.5						
SONM	**Songino Array**	**39.22**	**320**	P	**P**	**14 42 38.7**	**+0.8**
	0.5nm,0.4s,mb3.4,baz=119,slow=6.2,SNR=6.7						
WB2	**Warramunga Arr**	**42.49**	**192**	*e*P	**P**	**14 43 05.0**	**+0.1**
WRA	**Warramunga Arr**	**42.50**	**192**	P	**P**	**14 43 04.8**	**-0.1**
	0.3nm,0.3s,mb3.2,baz=16,slow=9.3,SNR=5.6						
ASAR	**Alice Springs**	**46.20**	**192**	P	**P**	**14 43 34.4**	**+0.2**
	0.1nm,0.3s,mb2.6,baz=13,slow=6.6,SNR=5.3						
ZALV	**Zalesovo Beam**	**54.08**	**322**	P	**P**	**14 44 32.3**	**-0.6**
	1.4nm,0.5s,mb3.8,baz=106,slow=5.7,SNR=6.0						
MK31	**Makanchi Array**	**54.60**	**313**	*e*P	**P**	**14 44 37.4**	**+0.6**
MKAR	**Makanchi Array**	**54.60**	**313**	P	**P**	**14 44 36.2**	**-0.6**
	0.5nm,0.5s,mb3.3,baz=100,slow=6.2,SNR=7.2						
MKAR				PcP	PcP	14 45 37.0	0.0
	0.3nm,0.7s,baz=145,slow=3.5,SNR=3.8						
MKAR	**Makanchi Array**	**54.60**	**313**	P	**P**	**14 44 36.2**	**-0.6**
MKAR				PcP	PcP	14 45 37.0	0.0
KURK	**Kurchatov**	**57.36**	**317**	*e*P	**P**	**14 44 56.5**	**+0.2**
	1.4nm,0.5s,mb3.9						
ILAR	**Eielson Array**	**61.82**	**27**	P	**P**	**14 45 26.4**	**-0.1**
	1.0nm,0.7s,mb3.6,baz=262,slow=5.3,SNR=17						
VIB	**Van Inlet**	**69.34**	**40**	T		16 02 24.9	
	SNR=9.9						
YKA	**Yellowknife Ar**	**76.24**	**28**	P	**P**	**14 46 55.5**	**+0.5**
	1.0nm,0.6s,mb3.6,baz=292,slow=5.9,SNR=5.4						
YKA	**Yellowknife Ar**	**76.24**	**28**	P	**P**	**14 46 55.5**	**+0.5**
ARCES	**ARCESS Array B**	**78.74**	**341**	P	**P**	**14 47 08.2**	**-0.5**
	3.9nm,1.1s,mb4.0,baz=66,slow=9.4,SNR=5.3						
NVAR	**Mina Array Bea**	**82.96**	**52**	P	**P**	**14 47 32.5**	**+0.8**
	0.5nm,0.7s,mb3.4,baz=274,slow=5.3,SNR=6.5						
FINES	**FINESS Array B**	**83.02**	**334**	P	**P**	**14 47 30.6**	**-0.9**
	2.5nm,0.8s,mb4.0,baz=100,slow=7.9,SNR=5.8						
AKASG	**Malin Array Be**	**87.37**	**324**	P	**P**	**14 47 51.8**	**-1.4**
	0.2nm,0.3s,mb3.4,baz=345,slow=10.0,SNR=4.3						
LPAZ	**La Paz**	**149.86**	**85**	PKPbc	PKPbc	14 54 57.0	+1.1
	0.5nm,0.5s,baz=296,slow=0.7,SNR=4.0						

*IDC **28** 14:38:42.8±1.8, 0°.83N×97°.14E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, ML3.4/2, Error ellipse: s-maj=54.4km s-min=20.4km az=61.0*
*ISCJB **28** 14:38:46.3±1.1, 0°.9N±0°.1×97°.3E±0°.1, h33km, mb3.7/5, Error ellipse: s-maj=18.1km s-min=14.5km az=147.9*
*NEIC **28** 14:38:48.6±0.8, 0°.93N×97°.28E, h35km, Error ellipse: s-maj=14.2km s-min=11.2km az=57.0*

ISC 28 14:38:48.7±1.1, 0°.9N±0°.1×97°.3E±0°.1, h35km, n14, σ0s46/14, mb3.7/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.46**	**41**	Pn	**Pn**	**14 39 25.8**	**-0.5**
	2.0nm,0.3s,baz=321,slow=6.8,SNR=4.1						
PSI	**Prapat**	**2.46**	**41**	Pn	**Pn**	**14 39 25.8**	**-0.6**
IPM	**Ipoh**	**5.12**	**46**	*e*Pn	**Pn**	**14 40 03.4**	**+0.5**
KULM	**Kulim**	**5.47**	**37**	*e*P	**Pn**	**14 40 07.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**17.50**	**5**	P	**Pn**	**14 42 50.9**	**+0.9**
	0.1nm,0.3s,baz=197,slow=11,SNR=11						
KKM	**Kota Kinabalu**	**19.53**	**74**	*e*P	**Pn**	**14 43 15.0**	**+0.2**
WRA	**Warramunga Arr**	**41.79**	**122**	P	**P**	**14 46 35.5**	**+0.3**
	0.5nm,0.6s,mb3.4,baz=302,slow=9.0,SNR=9.5						
ASAR	**Alice Springs**	**43.14**	**127**	P	**P**	**14 46 45.9**	**-0.2**
	0.2nm,0.3s,mb3.3,baz=298,slow=7.2,SNR=9.6						
SONM	**Songino Array**	**47.38**	**8**	P	**P**	**14 47 19.4**	**0.0**
	0.3nm,0.6s,mb3.4,baz=189,slow=12,SNR=3.9						
MK31	**Makanchi Array**	**47.53**	**346**	*e*P	**P**	**14 47 20.4**	**-0.1**
MKAR	**Makanchi Array**	**47.53**	**346**	P	**P**	**14 47 20.9**	**+0.4**
	1.0nm,0.5s,mb4.1,baz=156,slow=8.3,SNR=16						
MKAR	**Makanchi Array**	**47.53**	**346**	P	**P**	**14 47 20.9**	**+0.4**
ZAA0	**Zalesovo Array**	**53.84**	**351**	*e*P	**P**	**14 48 07.9**	**0.0**
ZALV	**Zalesovo Beam**	**53.84**	**351**	P	**P**	**14 48 07.1**	**-0.9**
	2.0nm,0.4s,mb4.4,baz=180,slow=7.7,SNR=10						

NEIC 28 15:07:14.8, 62°.92N×148°.62W, h67km, ML3.5(PMR), ML3.1(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RND	**Reindeer**	**0.50**	**348**	P	Pn	15 07 27.4	+0.1
RND				S	Sn	15 07 37.3	+0.8
DHY	**Denali Highway**	**0.59**	**74**	P	Pn	15 07 28.3	+0.1
DHY				S	Sn	15 07 38.6	+0.5
MCK	**McKinley**	**0.83**	**350**	*e*Pn	Pn	15 07 31.6	+0.6
MCK				*e*Sn	Sn	15 07 43.5	+0.5
TRF	**Thorofare Moun**	**0.93**	**306**	P	Pn	15 07 32.7	+0.6
TRF				S	Sn	15 07 46.6	+1.6
SML	**Sawmill**	**1.12**	**173**	P	Pn	15 07 34.4	-0.2
SML				S	Sn	15 07 52.2	+2.8
GHO	**Glory Hole Cre**	**1.16**	**187**	P	Pn	15 07 35.1	0.0
SCM	**Sheep Creek Mo**	**1.24**	**150**	P	Pn	15 07 36.0	-0.1
PMR	**Palmer**	**1.35**	**190**	P	Pn	15 07 37.6	0.0
PMR				S	Sn	15 07 56.4	+1.7
PAX	**Paxson**	**1.44**	**86**	P	Pn	15 07 39.6	+0.8
PAX				S	Sn	15 07 58.4	+1.5
DDM	**Donnelly Dome**	**1.52**	**54**	P	Pn	15 07 41.7	+1.9
BPAW	**Bear Paw Mtn.**	**1.59**	**319**	P	Pn	15 07 40.8	0.0
PPLA	**Purkeypile**	**1.63**	**271**	P	Pn	15 07 42.0	+0.6
SKT	**Skwentna**	**1.65**	**237**	P	Pn	15 07 42.7	+1.2
HDA	**Harding Lake**	**1.67**	**26**	P	Pn	15 07 42.1	+0.3
RC01	**Rabbit Creek A**	**1.91**	**197**	*e*P	Pn	15 07 46.2	+1.2
RC01				Sn	Sn	15 08 08.0	0.0
CHUM	**Lake Minchumin**	**1.93**	**302**	P	Pn	15 07 45.5	+0.3
COLA	**College**	**2.00**	**9**	P	Pn	15 07 46.5	+0.3
MDM	**Murphy Dome**	**2.06**	**5**	P	Pn	15 07 47.3	+0.3
DOT	**Dot Lake**	**2.19**	**68**	*e*Pn	Pn	15 07 49.5	+0.8
DOT				*e*Sn	Sn	15 08 11.0	-3.8
MENT	**Mentasta**	**2.24**	**87**	*e*P	Pn	15 07 50.2	+0.7
SLKM	**Skilak Lake**	**2.53**	**198**	*e*Pn	Pn	15 07 54.5	+1.0
SEW	**Seward**	**2.85**	**188**	P	Pn	15 07 59.0	+1.2
RSO	**Redoubt South**	**3.15**	**220**	*e*Pn	Pn	15 08 05.6	+3.6
BRLK	**Bradley Lake**	**3.35**	**200**	P	Pn	15 08 05.5	+1.0
TTA	**Tatalina**	**3.38**	**274**	*e*P	Pn	15 08 04.7	-0.3
CNPM	**China Poot**	**3.63**	**202**	P	Pn	15 08 09.5	+1.1
MID	**Middleton Isla**	**3.67**	**161**	*e*P	Pn	15 08 14.3	+5.3
SVW2	**Sparrevohn**	**3.75**	**244**	*e*P	Pn	15 08 10.5	+0.4
EGAK	**Eagle**	**3.80**	**57**	*e*Pn	Pn	15 08 11.3	+0.7
GCSA	**Galena City Sc**	**4.09**	**300**	P	Pn	15 08 15.9	+1.2
DAWY	**Dawson**	**4.30**	**70**	P	Pn	15 08 18.1	+0.7
COLD	**Coldfoot**	**4.38**	**352**	P	Pn	15 08 20.1	+1.4
OHAK	**Old Harbor**	**6.17**	**204**	*e*P	Pn	15 08 42.9	-0.2

*ISCJB **28** 15:12:15.4±0.2, 24°.70N±0°.02×122°.65E±0°.02, h110km±1km, mb4.2/30, Error ellipse: s-maj=3.7km s-min=2.2km az=164.7*
*BJI **28** 15:12:15.7, 24°.83N×122°.63E, h105km, mB4.7/18, mb4.2/28*
*JMA **28** 15:12:16.9±0.2, 24°.80N×122°.66E, h96km±2km, M4.3*
*TAP **28** 15:12:17.0, 24°.69N×122°.63E, h97km, ML4.9, B*
*NEIC **28** 15:12:17.1±0.3, 24°.70N×122°.55E, mb4.5/10, Error ellipse: s-maj=9.5km s-min=6.5km az=135.0*
*IDC **28** 15:12:17.3±0.7, 24°.80N×122°.64E, h119km±6km, mb3.7/18, mb1 3.9/22, mb1mx3.8/30, mbtmp3.9/22, Error ellipse: s-maj=13.1km s-min=10.4km az=78.0*

ISC 28 15:12:16.3±0.2, 24°.72N±0°.02×122°.64E±0°.02, h105km±1km, h120km±2.8km; pP-P, n131, σ1s29/195, mb4.2/30, 1C-21D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.43**	**127**	*i* P	**Pn**	**15 12 32.2**	**0.0**
	baz=129						
YOJ	**Yonaguni jima**	**0.43**	**127**	P	**Pn**	**15 12 32.1**	**-0.1**
YOJ				*e*S	**Sn**	**15 12 43.4**	**-0.6**
TWB1	**Santiao Chiao**	**0.66**	**296**	⇓P	**Pn**	**15 12 34.0**	**+0.2**
	baz=297						
TWB1				*e*S	**Sn**	**15 12 46.6**	**-0.4**
	baz=297						
ILA	**Ilan**	**0.81**	**273**	*e*P	**Pn**	**15 12 35.4**	**+0.2**
	baz=272						
ILA				S	**Sn**	**15 12 49.5**	**+0.1**
	baz=272						
NWF	**Wu-fen Shan**	**0.85**	**294**	*i* P	**Pn**	**15 12 36.3**	**+0.7**
	baz=290						
NWF				*i* S	**Sn**	**15 12 50.3**	**+0.1**
	baz=290						
ENA	**Nanau**	**0.87**	**251**	P	**Pn**	**15 12 35.9**	**+0.2**
	baz=248						
ENA				*e*S	**Sn**	**15 12 50.1**	**-0.3**
	baz=248						
TWE	**Neicheng**	**0.88**	**270**	⇓*i*P	**Pn**	**15 12 36.4**	**+0.5**
	baz=270						
TWE				*e*S	**Sn**	**15 12 49.6**	**-1.0**
	baz=270						
EHP	**Heping Village**	**0.91**	**244**	*e*P	**Pn**	**15 12 36.1**	**-0.1**
	baz=240						
EHP				*e*S	**Sn**	**15 12 50.9**	**+4.7**
	baz=240						
ENTT	**Nioudou**	**0.98**	**266**	⇓*i*P	**Pn**	**15 12 37.5**	**+0.7**
	baz=267						
ENTT				*e*S	**Sn**	**15 12 51.8**	**+4.1**
	baz=267						
TWA	**Mucha**	**0.99**	**285**	⇓*i*P	**Pn**	**15 12 37.6**	**+0.6**
	baz=279						
TWA				*e*S	**Sn**	**15 12 52.3**	**+4.2**
	baz=279						
TAP1	**Taipei**	**1.06**	**288**	⇓*i*P	**Pn**	**15 12 38.1**	**+0.4**
	baz=280						
TAP1				*e*S	**Sn**	**15 12 53.5**	**+3.7**
	baz=280						
IRIF	**Iriomote-Funau**	**1.07**	**111**	P	**Pn**	**15 12 37.8**	**0.0**
IRIF				*e*S	**Sn**	**15 12 54.1**	**+4.2**
TATO	**Taipei**	**1.07**	**284**	*e*P	**Pn**	**15 12 37.9**	**0.0**
TWY	**Chenhua**	**1.09**	**301**	⇓*i*P	**Pn**	**15 12 38.9**	**+0.8**
	baz=302						
TWY				*i* S	**Sn**	**15 12 54.7**	**+4.2**
	baz=302						
NACB	**Ninganchiao**	**1.09**	**240**	*e*P	**Pn**	**15 12 37.3**	**-0.9**
TWD	**Chiawan**	**1.14**	**236**	⇓*i*P	**Pn**	**15 12 38.3**	**-0.4**
	baz=231						
TWD				S	**Sn**	**15 12 54.2**	**+2.4**
	baz=231						
NSK	**Sanguang**	**1.17**	**268**	⇓*i*P	**Pn**	**15 12 39.7**	**+0.8**
	baz=275						
NSK				S	**Sn**	**15 12 55.7**	**+3.4**
	baz=275						
TWS1	**Kuangyinshan**	**1.17**	**289**	⇓*i*P	**Pn**	**15 12 39.8**	**+0.8**
	baz=291						
TWS1				*i* S	**Sn**	**15 12 56.3**	**+3.8**
	baz=291						
HWA	**Hwalien**	**1.20**	**232**	P	**Pn**	**15 12 39.1**	**-0.2**
	baz=227						
HWA				*e*S	**Sn**	**15 12 55.3**	**+2.2**
	baz=227						
HATJ	**Hateruma jima**	**1.25**	**122**	P	**Pn**	**15 12 40.6**	**+0.7**
HATJ				*e*S	**Sn**	**15 12 58.7**	**+4.3**
ESF	**Shoufeng Towns**	**1.33**	**231**	*e*P	**Pn**	**15 12 40.5**	**-0.4**
	baz=226						
ESF				*e*S	**Sn**	**15 12 58.8**	**+2.4**
	baz=226						
JKRS	**Kuro-shima**	**1.34**	**111**	P	**Pn**	**15 12 41.5**	**+0.6**
JKRS				*e*S	**Sn**	**15 12 59.7**	**+3.2**
NCU	**National Centr**	**1.34**	**281**	*e*P	**Pn**	**15 12 41.3**	**+0.4**
	baz=282						
NCU				*e*S	**Sn**	**15 12 59.9**	**+3.3**
	baz=282						
WHF	**Hehuan Shan**	**1.38**	**246**	⇓*i*P	**Pn**	**15 12 42.0**	**+0.6**
	baz=247						
WHF				S	**Sn**	**15 12 60.0**	**+2.6**
	baz=247						
TWT	**Tachien**	**1.41**	**251**	*e*P	**Pn**	**15 12 42.9**	**+1.1**
	baz=246						
TWT				*e*S	**Sn**	**15 13 01.2**	**+2.9**
	baz=246						
JIJ	**Ishigaki jima**	**1.42**	**104**	P	**Pn**	**15 12 41.8**	**0.0**
JIJ				*e*S	**Sn**	**15 13 01.0**	**+2.6**
TEGC	**Jichi Village**	**1.42**	**225**	P	**Pn**	**15 12 41.7**	**-0.1**
	baz=233						
TEGC				*e*S	**Sn**	**15 13 00.3**	**+1.8**
	baz=233						
ESL	**Shilin**	**1.42**	**231**	⇓*i*P	**Pn**	**15 12 41.5**	**-0.4**
	baz=227						
ESL				*e*S	**Sn**	**15 12 59.2**	**+0.6**
	baz=227						
NSTT	**Nanjuang**	**1.49**	**267**	⇓*i*P	**Pn**	**15 12 43.3**	**+0.6**
	baz=268						
NSTT				S	**Sn**	**15 13 02.1**	**+1.9**
	baz=268						
HSN	**Hsinchu**	**1.52**	**273**	P	**Pn**	**15 12 43.4**	**+0.3**
	baz=276						
HSN				*e*S	**Sn**	**15 13 02.5**	**+1.6**
	baz=276						
EHY	**Hungye**	**1.70**	**225**	⇓*i*P	**Pn**	**15 12 44.7**	**-0.7**
	baz=226						
EHY				*e*S	**Sn**	**15 13 04.1**	**-1.3**
	baz=226						
NSY	**Sanyi**	**1.73**	**260**	⇓*i*P	**Pn**	**15 12 46.9**	**+1.2**
	baz=261						
NSY				S	**Sn**	**15 13 08.8**	**+2.6**
	baz=261						
TWQ1	**Liyutan**	**1.74**	**258**	⇓*i*P	**Pn**	**15 12 46.7**	**+0.9**
	baz=259						
TWQ1				*e*S	**Sn**	**15 13 07.7**	**+1.4**
	baz=259						
SMLT	**Sun Moon Lake**	**1.79**	**243**	⇓*i*P	**Pn**	**15 12 47.3**	**+0.9**
	baz=237						
SMLT				*e*S	**Sn**	**15 13 10.8**	**+3.3**
	baz=237						
SSLB	**Suanglung**	**1.79**	**239**	*e*P	**Pn**	**15 12 46.5**	**+0.1**
YULB	**Yu-li**	**1.80**	**223**	*e*P	**Pn**	**15 12 45.8**	**-0.8**
TYC	**Yuchr**	**1.82**	**244**	⇓*i*P	**Pn**	**15 12 47.7**	**+1.0**
	baz=239						
TYC				*e*S	**Sn**	**15 13 10.3**	**+2.1**
	baz=239						
TWF1	**Yuli**	**1.83**	**222**	⇓*i*P	**Pn**	**15 12 46.5**	**-0.5**
	baz=231						
TWF1				*i* S	**Sn**	**15 13 08.3**	**-0.3**
	baz=231						
TCU	**Taichung**	**1.88**	**253**	⇓*i*P	**Pn**	**15 12 48.5**	**+1.0**
	baz=254						
TCU				*e*S	**Sn**	**15 13 10.9**	**+1.2**
	baz=254						
JTJ	**Tarama**	**1.88**	**92**	P	**Pn**	**15 12 48.2**	**+0.7**
JTJ				*e*S	**Sn**	**15 13 11.3**	**+1.6**
WNT	**Mingjian**	**1.97**	**245**	⇓*i*P	**Pn**	**15 12 50.0**	**+1.3**
	baz=246						
WNT				*e*S	**Sn**	**15 13 14.2**	**+2.3**
	baz=246						
CHKT	**Chengkung**	**1.99**	**216**	*e*P	**Pn**	**15 12 48.0**	**-1.0**
	baz=211						
CHKT				*e*S	**Sn**	**15 13 11.4**	**-1.0**
	baz=211						
CHN5	**Tsauling**	**2.11**	**238**	P	**Pn**	**15 12 51.8**	**+1.3**
	baz=250						
CHN5				*e*S	**Sn**	**15 13 18.3**	**+3.0**
	baz=250						
ELDTW	**Lidau**	**2.13**	**225**	*i* P	**Pn**	**15 12 50.5**	**-0.2**
	baz=223						
ELDTW				*e*S	**Sn**	**15 13 14.7**	**-1.0**
	baz=223						
WGK	**Gukeng**	**2.16**	**242**	*e*P	**Pn**	**15 12 52.4**	**+1.3**
	baz=243						
WGK				*e*S	**Sn**	**15 13 19.7**	**+3.3**
	baz=243						
WTCT	**Ta-ch'eng**	**2.31**	**249**	*e*P	**Pn**	**15 12 53.4**	**+0.2**
	baz=258						
WTCT				*e*S	**Sn**	**15 13 20.8**	**+0.6**
	baz=258						
STYT	**Tauyuan**	**2.31**	**228**	⇓*i*P	**Pn**	**15 12 54.3**	**+1.1**
	baz=229						
STYT				*e*S	**Sn**	**15 13 21.6**	**+1.3**
	baz=229						
TPUB	**Ta-pu**	**2.32**	**233**	*e*P	**Pn**	**15 12 53.5**	**+0.4**
WTP	**Ta-pu**	**2.36**	**232**	P	**Pn**	**15 12 54.9**	**+1.1**
	baz=233						
WTP				*e*S	**Sn**	**15 13 23.7**	**+2.3**
	baz=233						
TWG	**Pinlang**	**2.37**	**218**	*e*P	**Pn**	**15 12 53.2**	**-0.8**
TWG	**Pinlang**	**2.37**	**218**	*e*P	**Pn**	**15 12 52.9**	**-1.0**
	baz=224						
TWG				*e*S	**Sn**	**15 13 20.3**	**-1.4**
	baz=224						
TTN	**Taitung**	**2.39**	**215**	*e*P	**Pn**	**15 12 54.2**	**+0.1**
	baz=223						
JMJ	**Miyako jima 2**	**2.42**	**87**	*e*P	**Pn**	**15 12 55.2**	**+0.8**
	baz=93						
JMJ				*e*S	**Sn**	**15 13 23.9**	**+1.2**
	baz=93						
JMJ	**Miyako jima 2**	**2.42**	**87**	P	**Pn**	**15 12 55.7**	**+1.2**
JMJ				*e*S	**Sn**	**15 13 24.0**	**+1.2**
WSF	**Szhu**	**2.46**	**244**	*e*P	**Pn**	**15 12 55.4**	**+0.5**
	baz=245						
WSF				*e*S	**Sn**	**15 13 24.8**	**+1.1**
	baz=245						
CHN1	**Nanshi**	**2.46**	**232**	P	**Pn**	**15 12 56.2**	**+1.1**
	baz=233						
CHN1				*e*S	**Sn**	**15 13 25.1**	**+1.3**
	baz=233						
JOGS	**Gusukube**	**2.52**	**89**	P	**Pn**	**15 12 57.1**	**+1.3**
JOGS				*e*S	**Sn**	**15 13 26.9**	**+1.7**
ECL	**Taimali**	**2.62**	**216**	*e*P	**Pn**	**15 12 55.9**	**-1.2**
	baz=217						
CHN3	**Shinhua**	**2.65**	**232**	*e*P	**Pn**	**15 12 58.7**	**+1.2**
	baz=233						
CHN3				*e*S	**Sn**	**15 13 31.9**	**+3.5**
	baz=233						
SCLT	**Jiali**	**2.71**	**236**	*e*S	**Sn**	**15 13 32.1**	**+2.2**
	baz=229						
TAI1	**Yung-k'ang**	**2.77**	**233**	*e*P	**Pn**	**15 13 00.8**	**+1.7**
	baz=234						
TWM1	**Shoushan**	**2.77**	**228**	*e*P	**Pn**	**15 13 00.6**	**+1.4**
	baz=227						
SGLT	**Jiouru**	**2.79**	**225**	*e*P	**Pn**	**15 13 00.0**	**+0.6**
	baz=236						
TAW	**Tawu**	**2.84**	**215**	*e*P	**Pn**	**15 12 58.5**	**-1.6**
	baz=215						
TAW				*e*S	**Sn**	**15 13 31.3**	**-1.9**
	baz=215						
EAST	**Anshuo**	**2.85**	**216**	*e*P	**Pn**	**15 12 58.8**	**-1.4**
	baz=216						
SCZT	**Fangliau**	**2.98**	**219**	*e*P	**Pn**	**15 13 02.5**	**+0.6**
	baz=231						
PNG	**Penghu**	**3.04**	**248**	*e*P	**Pn**	**15 13 02.2**	**-0.5**
	baz=249						
PNG				*e*S	**Sn**	**15 13 35.1**	**-2.9**
	baz=249						
HEN	**Hengchun**	**3.22**	**213**	*e*P	**Pn**	**15 13 08.2**	**+3.1**
	baz=209						
TSEB	**Hengchuen, Pin**	**3.23**	**210**	*e*P	**Pn**	**15 13 06.0**	**+0.8**
	baz=212						
TSEB				*e*S	**Sn**	**15 13 43.2**	**+0.7**
	baz=212						
TWK1	**Hengchun**	**3.24**	**212**	*e*P	**Pn**	**15 13 04.6**	**-0.8**
	baz=212						
TWK1				*e*S	**Sn**	**15 13 42.2**	**-0.5**
	baz=212						
QZH	**Quanzhou**	**3.68**	**274**	⇑*i*P	**Pn**	**15 13 09.8**	**-1.5**
QZH				S	**Sn**	**15 13 49.0**	**-4.6**
QZH				smax			
	comp=N,980nm,0.9s						
QZH				smax			
	comp=E,500nm,0.8s						
JKE	**Kume jima 2**	**4.08**	**66**	P	**Pn**	**15 13 17.2**	**+0.6**
JKE				*e*S	**Sn**	**15 14 03.9**	**+0.8**
JAGN	**Aguni-jima**	**4.55**	**65**	P	**Pn**	**15 13 23.4**	**+0.4**
JAGN				*e*S	**Sn**	**15 14 15.6**	**+0.9**
JIH	**Iheya**	**5.33**	**63**	P	**Pn**	**15 13 33.1**	**-0.4**
JIH				*e*S	**Sn**	**15 14 31.7**	**-1.8**
JOW	**Kunigami**	**5.50**	**66**	*e*P	**Pn**	**15 13 35.0**	**-0.8**
	comp=E,30nm,0.3s,baz=248,slow=10,SNR=57						
JOW	**Kunigami**	**5.50**	**66**	*e*P	**Pn**	**15 13 35.0**	**-0.9**
	comp=E,30nm,0.3s						
JOW	**Kunigami**	**5.50**	**66**	*e*P	**Pn**	**15 13 35.0**	**-0.9**
	baz=67						
JOW	**Kunigami**	**5.50**	**66**	P	**Pn**	**15 13 35.1**	**-0.7**
JOW				*e*S	**Sn**	**15 14 35.7**	**-2.1**
JTK	**Tokunoshima**	**6.44**	**60**	P	**Pn**	**15 13 46.9**	**-1.6**
JTK				*e*S	**Sn**	**15 14 58.2**	**-2.4**
JAM	**Amami Oshima**	**7.24**	**58**	P	**Pn**	**15 13 57.6**	**-1.9**
KSRS	**Korea Array**	**13.47**	**18**	P	**Pn**	**15 15 24.9**	**+1.7**
	comp=E,1.3nm,0.3s,baz=197,slow=12,SNR=51						
GYA	**Guiyang**	**14.52**	**280**	*e*P	**Pn**	**15 15 36.5**	**-0.2**
GYA				pP		15 15 50.5	
GYA				sP		15 16 05.8	
GYA				S	**Sn**	**15 18 15.3**	**-1.5**
GYA				sS		15 18 32.0	
GYA				PcP	PcP	15 20 45.5	+1.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JHJ	**Hachijo jima 2**	**17.17**	**57**	P	**Pn**	**15 16 10.6**	**+1.0**
	comp=Z,14nm,0.3s,baz=232,slow=19,SNR=2.9						
CBIJ	**Chichi jima**	**17.75**	**78**	P	**Pn**	**15 16 17.1**	**+0.4**
	comp=Z,8.9nm,0.3s,baz=282,slow=20,SNR=3.0						
CD2	**Chengdu**	**17.79**	**294**	*e*P	**Pn**	**15 16 17.5**	**+0.3**
CD2				pP	pP	15 16 33.0	-3.0
CD2				sP	sP	15 16 46.5	-2.8
CD2				pmax	pmax		
	comp=Z,40nm,1.2s						
CD2				pmax	pmax		
	comp=Z,230nm,5.2s						
MJAR	**Matsushiro Arr**	**17.82**	**45**	P	**Pn**	**15 16 17.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=229,slow=9.8,SNR=9.0						
KMI	**Kunming**	**18.05**	**275**	P	**P**	**15 16 22.8**	**+3.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**18.56**	**333**	*e*P	**P**	**15 16 27.0**	**+2.2**
HHC				pP		15 16 43.5	
HHC				PP		15 16 47.0	
HHC				sP	sP	15 16 56.8	-0.9
HHC				S	**S**	**15 19 48.0**	**-2.8**
HHC

MKAR ScP ScP 15 25 17.1 -1.8
comp=Z,0.3nm,0.7s,baz=112,slow=5.3,SNR=4.3
ZALV Zalesovo Beam 40.53 326 P **P 15 19 43.6 -1.3**
comp=Z,0.6nm,0.4s,mb3.8,baz=104,slow=6.1,SNR=3.3
ZALV pP pP 15 20 10.5 +1.5
comp=Z,0.9nm,0.5s,baz=116,slow=10,SNR=2.5
ZALV Zalesovo Beam 40.53 326 P **P 15 19 43.6 -1.3**
ZALV pP pP 15 20 10.5 +1.5
KURK Kurchatov 42.54 319 *eP* **P 15 20 00.5 -0.8**
FITZ Fitzroy Crossi 42.66 176 *eP* **P 15 20 02.2 -0.4**
WRA Warramunga Arr 45.83 165 P **P 15 20 28.1 +0.2**
comp=Z,3.3nm,0.6s,mb4.2,baz=347,slow=8.4,SNR=33
WRA pP pP 15 20 54.5 +2.0
comp=Z,1.3nm,0.7s,baz=347,slow=8.6,SNR=3.8
WRA PcP PcP 15 22 03.0 -0.6
comp=Z,0.6nm,0.6s,baz=346,slow=3.7,SNR=5.2
WRA Warramunga Arr 45.83 165 P **P 15 20 28.1 +0.2**
WRA pP pP 15 20 54.5 +2.0
WRA PcP PcP 15 22 03.0 -0.6
BVAR Borovoye Array 48.11 320 P **P 15 20 43.4 -1.8**
comp=Z,0.4nm,0.4s,mb3.6,baz=320,slow=6.4,SNR=3.4
ASAR Alice Springs 49.32 166 P **P 15 20 55.6 +0.8**
comp=Z,0.6nm,0.3s,mb4.0,baz=354,slow=7.1,SNR=20
ASAR pP pP 15 21 22.9 +3.2
comp=Z,0.6nm,0.7s,baz=344,slow=7.2,SNR=3.0
ASAR PcP PcP 15 22 14.8 -1.2
comp=Z,0.8nm,0.9s,baz=338,slow=3.5,SNR=3.4
STKA Stephens Creek 59.12 161 P **P 15 22 05.4 -0.4**
comp=Z,2.1nm,0.9s,mb4.2,baz=306,slow=18,SNR=3.5
KDAK Kodiak Island 66.70 36 P **P 15 22 54.7 -1.0**
comp=Z,3.3nm,0.6s,mb4.4,baz=285,slow=12,SNR=5.6
KDAK Kodiak Island 66.70 36 P **P 15 22 54.7 -1.0**
ILAR Eielson Array 68.13 28 P **P 15 23 03.5 -1.1**
comp=Z,0.3nm,0.5s,mb3.4,baz=261,slow=5.2,SNR=10
ILAR PcP PcP 15 23 27.4 -2.5
comp=Z,0.3nm,0.7s,baz=292,slow=4.8,SNR=4.4
ARCES ARCESS Array B 69.54 338 P **P 15 23 12.6 -0.7**
comp=Z,2.6nm,0.9s,mb4.0,baz=52,slow=5.8,SNR=3.6
FINES FINESS Array B 71.65 330 P **P 15 23 25.1 -1.2**
comp=Z,5.6nm,1.0s,mb4.3,baz=73,slow=6.3,SNR=12
INK Inuvik 72.23 22 P **P 15 23 28.0 -1.6**
comp=Z,3.0nm,1.0s,mb4.1,baz=304,slow=18,SNR=3.7
NB2 NORSAR Subarra 78.37 332 P **P 15 24 03.7 -1.1**
comp=Z,2.3nm,0.8s,mb4.0,baz=52,slow=5.6
NOA NORSAR Array B 78.37 332 P **P 15 24 03.2 -1.6**
comp=Z,1.0nm,0.9s,mb3.6,baz=56,slow=5.5,SNR=3.2
YKA Yellowknife Ar 81.96 23 P **P 15 24 23.4 -0.7**
comp=Z,0.5nm,0.4s,mb3.7,baz=308,slow=5.3,SNR=5.1
YKA Yellowknife Ar 81.96 23 P **P 15 24 23.4 -0.7**
JCW Jim Creek 87.27 37 *eP* **P 15 24 51.5 +0.4**
comp=Z,5.9nm,0.7s,mb4.6
ETW Entiat 88.48 37 *eP* **P 15 24 57.4 +0.6**
comp=Z,10nm,0.7s,mb5.0
KEBM Edson Butte 88.83 43 *eP* **P 15 24 59.2 +0.6**
NEW Newport 89.81 35 *eP* **P 15 25 02.9 -0.2**
comp=Z,3.0nm,1.1s,mb4.3
YBH Yreka Blue Hor 90.47 43 P **P 15 25 06.5 +0.3**
comp=Z,2.6nm,1.0s,mb4.3,baz=311,slow=8.5,SNR=4.3
BSMT Bassoo Peak 91.28 35 *eP* **P 15 25 10.4 +0.5**
comp=Z,1.4nm,0.7s,mb4.2
BMO Blue Mountains 91.82 38 *eP* **P 15 25 12.8 +0.4**
comp=Z,2.1nm,0.8s,mb4.4
WVOR Wild Horse Val 92.52 41 *eP* **P 15 25 16.7 +0.9**
comp=Z,2.1nm,0.8s,mb4.5
CMB Columbia Colle 94.05 45 *eP* **P 15 25 22.5 -0.4**
comp=Z,4.1nm,1.1s,mb4.7
DLMT Dillon 94.05 35 *eP* **P 15 25 23.7 +0.9**
HLID Hailey 94.24 38 *eP* **P 15 25 24.4 +0.8**
comp=Z,1.7nm,0.8s,mb4.4
NVAR Mina Array Bea 95.14 44 P **P 15 25 28.4 +0.6**
comp=Z,1.7nm,0.7s,mb4.6,baz=298,slow=5.4,SNR=21

IDC 28 15:20:40.2±5.6, 9°56′N×92°67′E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.3/23, mbtmp3.4/3, ML3.7/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/22, Error ellipse: s-maj=123.6km s-min=43.9km az=92.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.73**	**34**	Pn	Pn	15 23 15.7	+0.5
	0.2nm,0.3s,baz=226,slow=15,SNR=8.4						
MJAR	**Matsushiro Arr**	**49.14**	**49**	LR	LR	15 49 37.2	
	comp=Z,80nm,19.1s,baz=260,slow=35						
WRA	**Warramunga Arr**	**50.42**	**126**	P	P	15 29 39.0	-0.8
	0.5nm,0.4s,baz=306,slow=8.3,SNR=19						
ASAR	**Alice Springs**	**52.10**	**130**	P	P	15 29 53.2	+0.8
	0.2nm,0.7s,baz=310,slow=7.6,SNR=7.9						

*IDC **28** 15:33:19.6±1.7, 16°.59N×85°.98W, h0km, mb4.3/9, mb1 4.5/11, mb1mx4.2/25, mbtmp4.3/11, ML4.6/3, MS3.2/7, Ms1 3.2/7, ms1mx3.0/31, Error ellipse: s-maj=36.4km s-min=25.3km az=165.0*

*ISCJB **28** 15:33:20.8±0.3, 16°.71N±0°.03×86°.02W±0°.04, h10km, mb4.4/22, MS4.1/2, Error ellipse: s-maj=5.3km s-min=3.3km az=27.6*

*CASC **28** 15:33:21.9±2.0, 16°.75N×86°.07W, h10km, MD4.6, ML3.9, mb4.5(NEIC)*

*NEIC **28** 15:33:21.7±0.4, 16°.67N×86°.13W, h10km, mb4.5/23, Error ellipse: s-maj=7.1km s-min=6.2km az=124.0*

NEIC Felt at Jose Santos Guardiola, Roatan and Sandy Bay.

*BJI **28** 15:33:22.6, 16°.70N×86°.10W, h10km, mB5.2/2, Ms5.0/2, Ms7 4.8/2*

ISC 28 15:33:22.6±0.3, 16°.71N±0°.03×86°.02W±0°.03, h10km, n165, σ1§09/169, mb4.4/22, MS4.1/2, 41C-46D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**2.90**	**205**	*i* Pn	**Pn**	**15 34 08.2**	**-0.6**
TGUH	**Tegucigalpa,Un**	**2.90**	**205**	‖ *i*P	**Pn**	**15 34 08.1**	**-0.7**
CAHU	**Cacacuatique**	**3.60**	**216**	*eP*	**Pn**	**15 34 17.7**	**-0.8**
CNCH	**Conchagua**	**3.83**	**207**	*eP*	**Pn**	**15 34 20.6**	**-1.0**
BLLM	**Bellamira**	**3.89**	**214**	*eP*	**Pn**	**15 34 21.5**	**-0.9**
MRL	**Marmol**	**3.89**	**246**	*eP*	**Pn**	**15 34 20.3**	**-2.1**
MRL				*eS*	**Sn**	**15 35 09.6**	**+1.4**
TEIG	**Tepich**	**4.10**	**329**	Pn	**Pn**	**15 34 24.2**	**-1.2**
	192nm,0.3s,baz=72,slow=0.7,SNR=1004						
TEIG				Sn	**Sn**	**15 35 06.5**	**-7.0**
	363nm,0.3s,baz=270,slow=20,SNR=83						
TEIG				LR	LR	15 35 48.1	
	comp=Z,160nm,19.8s,baz=251,slow=35						
TEIG	**Tepich**	**4.10**	**329**	*eP*	**Pn**	**15 34 24.1**	**-1.3**
TEIG				*eS*	**Sn**	**15 35 06.0**	**-7.5**
TEIG	**Tepich**	**4.10**	**329**	*eP*	**Pn**	**15 34 24.2**	**-1.2**
SNVI	**San Vicente**	**4.11**	**222**	*eP*	**Pn**	**15 34 24.0**	**-1.4**
LFRS	**El Faro**	**4.24**	**224**	*eP*	**Pn**	**15 34 26.4**	**-0.9**
HUEN		**4.34**	**182**	*eP*	**Pn**	**15 34 29.4**	**+0.7**
COPN	**Copaltepe**	**4.53**	**187**	*eP*	**Pn**	**15 34 32.7**	**+1.4**
APG	**El Apazote**	**4.60**	**249**	Pn	**Pn**	**15 34 29.8**	**-2.5**
	3.1nm,0.3s,baz=79,slow=15,SNR=20						
APG				Sn	**Sn**	**15 35 18.5**	**-7.2**
	19nm,0.3s,baz=74,slow=22,SNR=9.9						
APG				LR	LR	15 36 29.9	
	comp=Z,242nm,18.0s,baz=255,slow=41						
NBG	**Las Nubes**	**4.67**	**244**	*eP*	**Pn**	**15 34 34.1**	**+0.9**
NBG				*eS*	**Sn**	**15 35 28.9**	**+1.5**
IXG	**Ixpaco**	**4.96**	**240**	*eP*	**Pn**	**15 34 39.0**	**+1.9**
IXG				*eS*	**Sn**	**15 35 38.9**	**+4.2**
FG6		**5.15**	**246**	*eP*	**Pn**	**15 34 39.5**	**-0.2**
FG6				*eS*	**Sn**	**15 35 38.7**	**-0.5**
TP2	**Tecpan 2**	**5.18**	**249**	*eP*	**Pn**	**15 34 39.3**	**-0.9**
TP2				*eS*	**Sn**	**15 35 38.0**	**-2.0**
CCIG	**Comitan**	**5.88**	**267**	*i* P	**Pn**	**15 34 46.8**	**-3.1**
CCIG				*i* S	**Sn**	**15 35 45.6**	**-12**
JTS	**JuntasAbangare**	**6.46**	**171**	*e*Pn	**Pn**	**15 34 56.5**	**-1.3**
	47nm,0.9s						
JTS	**JuntasAbangare**	**6.46**	**171**	*eP*	**Pn**	**15 34 58.5**	**+0.7**
MTDJ	**Mount Denham**	**8.24**	**78**	*e*Pn	**Pn**	**15 35 23.0**	**+0.8**
CMIG	**Matias Romero**	**8.49**	**274**	Pn	**Pn**	**15 35 20.9**	**-4.8**
	1.9nm,0.3s,baz=72,slow=12,SNR=21						
CMIG				LR	LR	15 38 57.4	
	comp=Z,383nm,19.0s,baz=244,slow=40						
BCIP	**Isla Barro Col**	**9.61**	**140**	*e*Pn	**Pn**	**15 35 39.8**	**-1.4**
HUIG	**Huatulco**	**9.73**	**266**	*i* P	**Pn**	**15 35 40.5**	**-2.3**
VHO	**Vista Hermosa**	**10.26**	**274**	*i* P	**Pn**	**15 35 48.3**	**-1.7**
VHO				*i* S	**Sn**	**15 37 34.8**	**-10**
PNIG	**Pinotepa**	**11.61**	**270**	*i* P	**Pn**	**15 36 03.9**	**-4.6**
PNIG				*i* S	**Sn**	**15 38 07.7**	**-11**
DWPF	**Disney**	**12.12**	**20**	*eP*	**Pn**	**15 36 13.2**	**-2.1**
	68nm,0.6s						
BRAL	**Brewton**	**14.27**	**356**	*eP*	**Pn**	**15 36 45.0**	**+0.2**
	62nm,0.5s						
LRAL	**Lakeview Retre**	**16.28**	**357**	*eP*	**Pn**	**15 37 08.9**	**-2.5**
	16nm,0.4s						
LRAL				*e*S	**Sn**	**15 39 54.5**	**-18**
ROSC	**El Rosal**	**16.43**	**134**	Pn	**Pn**	**15 37 18.2**	**+4.7**
	1.1nm,0.3s,baz=96,slow=22,SNR=8.5						
ROSC				LR	LR	15 43 39.0	
	comp=Z,34nm,18.9s,baz=20,slow=38						
GOGA	**Godfrey**	**16.79**	**7**	*eP*	**Pn**	**15 37 15.3**	**-2.6**
	14nm,0.3s						
SDV	**Santo Domingo**	**16.89**	**116**	P	**Pn**	**15 37 20.1**	**+0.9**
	9.8nm,0.5s						
NHSC	**New Hope**	**17.16**	**17**	*eP*	**Pn**	**15 37 19.0**	**-3.5**
	107nm,1.0s						
OXF	**Oxford**	**17.99**	**351**	*eP*	**Pn**	**15 37 31.2**	**-1.6**
	42nm,0.9s						
JSC	**Jenkinsville**	**18.02**	**13**	*eP*	**Pn**	**15 37 31.6**	**-1.5**
SWET	**Sewanee**	**18.43**	**0**	*eP*	**Pn**	**15 37 36.9**	**-1.4**
JCT	**Junction City**	**18.61**	**320**	⇑P	**Pn**	**15 37 38.2**	**-2.3**
	baz=19,SNR=15						
JCT	**Junction City**	**18.61**	**320**	*eP*	**Pn**	**15 37 38.2**	**-2.3**
	24nm,0.5s						
CPCT	**Cooper Cave**	**18.72**	**4**	*eP*	**Pn**	**15 37 40.6**	**-1.0**
TKL	**Tuckaleechee C**	**18.98**	**6**	P	**Pn**	**15 37 44.9**	**0.0**
	3.5nm,0.3s,baz=174,slow=9.7,SNR=26						
TKL				LR	LR	15 44 59.1	
	comp=Z,59nm,20.8s,baz=296,slow=37						
TKL	**Tuckaleechee C**	**18.98**	**6**	*eP*	**Pn**	**15 37 45.1**	**+0.2**
MIAR	**Mount Ida**	**19.01**	**341**	*eP*	**Pn**	**15 37 43.7**	**-1.5**
	9.0nm,0.8s						
SJG	**San Juan**	**19.01**	**83**	P	**Pn**	**15 37 51.9**	**+6.5**
	1.3nm,0.3s,baz=257,slow=14,SNR=4.4						
SJG				LR	LR	15 44 02.3	
	comp=Z,154nm,21.9s,baz=276,slow=34						
SJG	**San Juan**	**19.01**	**83**	P	**Pn**	**15 37 51.9**	**+6.5**
SJG				LR	LR	15 44 02.3	
WVT	**Waverly**	**19.41**	**356**	*eP*	**Pn**	**15 37 46.3**	**-3.8**
	15nm,0.6s						
628A	**Black Gap, Mar**	**20.03**	**312**	⇑P	**P**	**15 37 55.8**	**+0.1**
	baz=20,SNR=33						
528A	**Cox Ranch, San**	**20.36**	**314**	⇓P	**P**	**15 37 58.8**	**-0.6**
	baz=20,SNR=9.9						
627A	**Terlingua Ranc**	**20.37**	**312**	⇓P	**P**	**15 37 59.1**	**-0.3**
	baz=20,SNR=19						
TXAR	**Lajitas Array**	**20.50**	**311**	P	**P**	**15 38 01.1**	**+0.2**
	12nm,0.7s,baz=129,slow=11,SNR=103						
TXAR				S	**S**	**15 41 40.8**	**-10**
	1.2nm,0.5s,baz=125,slow=23,SNR=7.5						
428A	**Kincaid Ranch,**	**20.64**	**316**	⇓P	**P**	**15 38 02.0**	**-0.3**
	baz=21,SNR=8.0						
527A	**Woodward Ranch**	**20.93**	**313**	⇑P	**P**	**15 38 05.1**	**-0.4**
	baz=21,SNR=20						
626A	**Big Bend Ranch**	**20.96**	**311**	⇓P	**P**	**15 38 05.9**	**0.0**
	baz=21,SNR=40						
ELN	**Prospectdale**	**20.97**	**12**	*eP*	**P**	**15 38 06.9**	**+1.1**
BLA	**Blacksburg**	**21.02**	**13**	P	**P**	**15 38 07.3**	**+1.0**
	49nm,0.9s,mb4.8						
SIUC	**Southern Illin**	**21.12**	**353**	P	**P**	**15 38 06.5**	**-0.9**
	12nm,0.4s,mb4.6						
328A	**Wristen Ranch,**	**21.14**	**317**	⇓P	**P**	**15 38 06.9**	**-0.8**
	baz=21,SNR=12						
427A	**Hayter Ranch,**	**21.20**	**315**	⇑P	**P**	**15 38 07.5**	**-1.0**
	baz=21,SNR=6.0						
526A	**Mary Lane Ranc**	**21.21**	**312**	⇑P	**P**	**15 38 08.2**	**-0.4**
	baz=21,SNR=16						
WMOK	**Wichita Mounta**	**21.28**	**330**	*eP*	**P**	**15 38 08.8**	**-0.5**
	14nm,1.0s,mb4.2						
WCI	**Wyandotte Cave**	**21.44**	**359**	*eP*	**P**	**15 38 10.9**	**0.0**
	16nm,0.6s,mb4.5						
426A	**McDonald Obser**	**21.52**	**313**	⇑P	**P**	**15 38 11.3**	**-0.7**
	baz=22,SNR=17						
227A	**Bennet, Jal**	**21.86**	**317**	⇑P	**P**	**15 38 14.8**	**-0.6**
	baz=22						
326A	**Caldwell Ranch**	**21.88**	**315**	⇓P	**P**	**15 38 15.0**	**-0.7**
	baz=22						
OLIL	**Olney**	**22.02**	**356**	*eP*	**P**	**15 38 17.2**	**0.0**
	33nm,1.1s,mb4.7						
OLIL				*e*		15 38 29.8	
425A	**Indio Mountain**	**22.26**	**312**	⇑P	**P**	**15 38 19.4**	**-0.5**
	baz=22,SNR=11						
BLO	**Bloomington**	**22.39**	**359**	*eP*	**P**	**15 38 21.0**	**0.0**
	8.6nm,0.8s,mb4.2						
BLO				*e*		15 38 34.1	
226A	**Malaga, Loving**	**22.42**	**316**	⇑P	**P**	**15 38 21.1**	**-0.4**
	baz=22						
325A	**Bean Ranch, Si**	**22.59**	**314**	⇑P	**P**	**15 38 22.6**	**-0.7**
	baz=23,SNR=17						
Z27A	**Tatum**	**22.67**	**320**	⇓P	**P**	**15 38 22.6**	**-1.5**
	baz=23						
CBN	**Corbin**	**22.73**	**18**	P	**P**	**15 38 25.4**	**+0.8**
	29nm,0.6s,mb4.9						
126A	**Clayton Basin,**	**22.73**	**318**	⇓P	**P**	**15 38 23.4**	**-1.4**
	baz=23						
MSTX	**Muleshoe**	**22.85**	**322**	⇑P	**P**	**15 38 24.9**	**-1.1**
	baz=23						
AMTX	**Amarillo**	**22.89**	**325**	⇓P	**P**	**15 38 25.2**	**-1.2**
	baz=23,SNR=5.7						
AMTX	**Amarillo**	**22.89**	**325**	*eP*	**P**	**15 38 25.4**	**-1.1**
	10nm,0.5s,mb4.5						
225A	**Deer Hill, Car**	**22.93**	**315**	⇑P	**P**	**15 38 26.2**	**-0.7**
	baz=23,SNR=11						
324A	**Moseley Ranch,**	**22.99**	**313**	⇓P	**P**	**15 38 26.7**	**-0.8**
	baz=23,SNR=15						
Y27A	**Causey**	**23.02**	**321**	⇑P	**P**	**15 38 26.3**	**-1.6**
	baz=23,SNR=5.8						
Z26A	**Caprock**	**23.11**	**319**	⇓P	**P**	**15 38 27.6**	**-1.2**
	baz=23						
125A	**Gardner Draw,**	**23.16**	**317**	⇑P	**P**	**15 38 28.1**	**-1.2**
	baz=23,SNR=9.4						
224A	**Cornudas Mount**	**23.38**	**314**	⇓P	**P**	**15 38 30.9**	**-0.8**
	baz=23,SNR=7.0						
Y26A	**Elida**	**23.45**	**320**	⇑P	**P**	**15 38 30.9**	**-1.4**
	baz=24,SNR=14						
Z25A	**Roswell**	**23.59**	**318**	⇓P	**P**	**15 38 32.7**	**-1.0**
	baz=24,SNR=8.8						
124A	**Stringfield Ra**	**23.71**	**316**	⇓P	**P**	**15 38 34.6**	**-0.3**
	baz=24,SNR=12						
W27A	**Bowe Ranch, En**	**23.79**	**323**	⇓P	**P**	**15 38 35.0**	**-0.6**
	baz=24						
X26A	**CR and CF Fran**	**23.87**	**321**	⇓P	**P**	**15 38 35.3**	**-1.0**
	baz=24,SNR=7.0						
Y25A	**Mesa, Roswell**	**23.99**	**319**	⇓P	**P**	**15 38 36.9**	**-0.5**
	baz=24,SNR=11						
SDMD	**Soldier's Deli**	**24.00**	**18**	P	**P**	**15 38 38.3**	**+0.9**
	14nm,0.9s,mb4.4						
SDMD				*e*		15 38 55.4	
Z24A	**Sheeppen Canyo**	**24.04**	**317**	⇑P	**P**	**15 38 37.8**	**-0.1**
	baz=24,SNR=13						
Y24A	**Capitan**	**24.46**	**318**	⇑P	**P**	**15 38 42.2**	**+0.5**
	baz=24,SNR=37						
Z23A	**Rita Site, Whi**	**24.57**	**316**	⇑P	**P**	**15 38 43.2**	**+0.4**
	baz=25,SNR=6.7						
W25A	**X Bar L Ranch,**	**24.72**	**322**	⇓P	**P**	**15 38 44.8**	**+0.8**
	baz=25,SNR=6.9						
V26A	**Tequesquite Ra**	**24.73**	**324**	⇑P	**P**	**15 38 44.5**	**+0.3**
	baz=25						
122A	**Conniff Cattle**	**24.76**	**314**	⇑P	**P**	**15 38 45.7**	**+1.3**
	baz=25						
Y23A	**Lovelace Mesa,**	**24.86**	**317**	⇑P	**P**	**15 38 45.5**	**+0.1**
	baz=25						
Z22A	**Elephant Butte**	**25.06**	**315**	⇑P	**P**	**15 38 48.4**	**+1.2**
	baz=25,SNR=8.6						
U26A	**Atchley Ranch,**	**25.14**	**325**	⇑P	**P**	**15 38 48.3**	**+0.4**
	baz=25,SNR=6.7						
121A	**Cookes Peak, D**	**25.22**	**313**	⇓P	**P**	**15 38 50.1**	**+1.5**
	baz=25						
V25A	**Rancho No Teng**	**25.24**	**323**	⇓P	**P**	**15 38 49.6**	**+0.8**
	baz=25,SNR=8.9						
W24A	**Lazy 6 Ranch,**	**25.28**	**320**	⇓P	**P**	**15 38 49.7**	**+0.5**
	baz=25,SNR=8.6						
220A	**Playas Peak, P**	**25.41**	**311**	⇓P	**P**	**15 38 51.9**	**+1.5**
	baz=25,SNR=6.7						
Y22A	**Socorro**	**25.46**	**316**	⇓P	**P**	**15 38 51.8**	**+1.0**
	baz=26						
U25A	**Circle Dot Ran**	**25.51**	**324**	⇑P	**P**	**15 38 52.1**	**+0.9**
	baz=26						
V24A	**Rampart Ranch,**	**25.55**	**322**	⇑P	**P**	**15 38 51.9**	**+0.4**
	baz=26,SNR=7.0						
Z21A	**St. Cloud Mine**	**25.57**	**314**	⇑P	**P**	**15 38 52.8**	**+1.0**
	baz=26						
W23A	**Werner Place,**	**25.71**	**319**	⇓P	**P**	**15 38 53.5**	**+0.5**
	baz=26						
ANMO	**Albuquerque**	**25.77**	**319**	P	**P**	**15 38 53.5**	**-0.1**
	4.8nm,0.8s,mb4.1,baz=140,slow=10,SNR=16						
ANMO	**Albuquerque**	**25.77**	**319**	*eP*	**P**	**15 38 52.2**	**-1.4**
	6.8nm,1.0s,mb4.1						
120A	**U Bar Ranch, L**	**25.82**	**312**	⇓P	**P**	**15 38 55.4**	**+1.2**
	baz=26						
Y21A	**Point of Rocks**	**25.98**	**316**	⇑P	**P**	**15 38 56.7**	**+1.2**
	baz=26						
219A	**White Tail Can**	**25.99**	**310**	⇑P	**P**	**15 38 56.7**	**+1.1**
	baz=26,SNR=12						
T25A	**Trinidad**	**26.04**	**325**	⇑P	**P**	**15 38 56.4**	**+0.4**
	baz=26						
318A	**Bisbee**	**26.26**	**308**	⇓P	**P**	**15 39 00.3**	**+2.1**
	baz=26						
X21A	**Alamocita Cree**	**26.31**	**316**	⇑P	**P**	**15 38 59.2**	**+0.6**
	baz=26,SNR=8.8						
Y20A	**Horse Springs,**	**26.40**	**315**	⇓P	**P**	**15 39 00.5**	**+1.1**
	baz=26,SNR=6.3						
119A	**Ashpeak Ranch,**	**26.42**	**312**	⇓P	**P**	**15 39 01.1**	**+1.5**
	baz=26						
S25A	**Robets Cordova**	**26.44**	**326**	⇑P	**P**	**15 39 00.2**	**+0.6**
	baz=26						
U23A	**El Rito**	**26.50**	**321**	⇓P	**P**	**15 39 00.9**	**+0.7**
	baz=26,SNR=8.5						
218A	**Dragoon**	**26.56**	**309**	⇓P	**P**	**15 39 01.5**	**+0.7**
	baz=26,SNR=6.7						
V22A	**San Miguel Ran**	**26.67**	**320**	⇓P	**P**	**15 39 02.2**	**+0.5**
	baz=27						
X20A	**Quemado**	**26.84**	**316**	⇓P	**P**	**15 39 04.0**	**+0.7**
	baz=27						
U22A	**Llaves**	**26.93**	**321**	⇓P	**P**	**15 39 04.5**	**+0.4**
	baz=27						
217A	**Green Valley**	**27.04**	**308**	⇑P	**P**	**15 39 07.6**	**+2.4**
	baz=27,SNR=8.9						
SDCO	**Great Sand Dun**	**27.08**	**325**	⇑P	**P**	**15 39 05.9**	**+0.4**
	baz=27						
W20A	**Ramah**	**27.19**	**317**	⇓P	**P**	**15 39 07.3**	**+0.9**
	baz=27						
TUC	**Tucson**	**27.27**	**309**	P	**P**	**15 39 08.0**	**+0.8**
	4.4nm,1.0s,mb3.9						
X19A	**St. Johns**	**27.32**	**315**	⇓P	**P**	**15 39 09.0**	**+1.4**
	baz=27						
Y18A	**Canyon Day Jun**	**27.47**	**313**	⇓P	**P**	**15 39 10.8**	**+1.7**
	baz=27						
T21A	**Navajo Lake**	**27.75**	**321**	⇓P	**P**	**15 39 12.3**	**+0.9**
	baz=28						
W19A	**Sanders**	**27.77**	**316**	⇑P	**P**	**15 39 12.5**	**+0.9**
	baz=28						
SADO	**Sadowa**	**28.57**	**10**	P	**P**	**15 39 18.0**	**-0.7**
	4.5nm,0.9s,mb4.2,baz=222,slow=7.0,SNR=4.1						
SADO				LR	LR	15 51 16.4	
	comp=Z,103nm,18.9s,MS3.5,baz=61,slow=38						
U16A	**Tuba City**	**29.52**	**316**	⇑P	**P**	**15 39 28.4**	**+1.1**
	baz=30,SNR=7.2						
V15A	**Kaibab Nationa**	**30.05**	**314**	⇓P	**P**	**15 39 33.2**	**+1.2**
	baz=30,SNR=10						
U15A	**North Rim**	**30.46**	**315**	⇑P	**P**	**15 39 37.0**	**+1.4**
	baz=30						
V14A	**Boquillas Ranc**	**30.60**	**313**	⇓P	**P**	**15 39 38.5**	**+1.7**
	baz=31						
U14A	**Mt Trumbull**	**31.06**	**314**	⇑P	**P**	**15 39 42.2**	**+1.4**
	baz=31						
MSU	**Marysvale**	**31.57**	**319**	*eP*	**P**	**15 39 45.9**	**+0.6**
	4.0nm,1.6s,mb4.0						
T13A	**Saint George**	**31.87**	**315**	⇓P	**P**	**15 39 48.9**	**+0.9**
	baz=32						
V12A	**Nelson**	**31.88**	**312**	⇓P	**P**	**15 39 49.0**	**+1.0**
	baz=32						
BELC	**Belle Mtn. Jos**	**31.93**	**308**	⇑P	**P**	**15 39 49.4**	**+0.9**
	baz=32						
ARUT	**Antelope Range**	**31.98**	**316**	*eP*	**P**	**15 39 49.2**	**+0.3**
	26nm,1.0s,mb5.0						
S13A	**Holt Ranch, En**	**32.14**	**316**	⇓P	**P**	**15 39 51.5**	**+1.2**
	baz=32,SNR=5.7						
P14A	**Drum Mountains**	**32.77**	**320**	⇓P	**P**	**15 39 56.6**	**+0.8**
	baz=33						
U10A	**Ash Meadows, A**	**33.26**	**312**	⇑P	**P**	**15 40 01.5**	**+1.4**
	baz=33						
FURC	**Furnace Creek,**	**33.66**	**312**	⇓P	**P**	**15 40 05.2**	**+1.5**
	baz=34						
R11A	**Troy Canyon, C**	**33.70**	**316**	⇑P	**P**	**15 40 05.0**	**+1.0**
	baz=34						
B23A	**Brockton**	**35.27**	**338**	⇑P	**P**	**15 40 17.3**	**-0.1**
	baz=35						
A24A	**Westby**	**35.32**	**339**	⇓P	**P**	**15 40 17.9**	**0.0**
	baz=35						
NVAR	**Mina Array Bea**	**35.59**	**314**	P	**P**	**15 40 21.0**	**+0.6**
	3.3nm,0.9s,mb4.3,baz=124,slow=8.3,SNR=24						
WAKR	**Walker**	**36.42**	**313**	*eP*	**P**	**15 40 28.3**	**+0.9**
	3.7nm,1.0s,mb4.3						
WVOR	**Wild Horse Val**	**37.85**	**319**	*eP*	**P**	**15 40 40.2**	**+0.7**
	7.5nm,1.2s,mb4.3						
SCHQ	**Schefferville**	**40.83**	**17**	P	**P**	**15 41 03.0**	**-1.1**
	3.9nm,0.6s,mb4.2,baz=209,slow=7.8,SNR=6.1						
YKA	**Yellowknife Ar**	**49.93**	**343**	P	**P**	**15 42 14.4**	**-1.8**
	1.3nm,0.5s,mb4.2,baz=135,slow=8.0,SNR=8.4						
ILAR	**Eielson Array**	**62.74**	**335**	P	**P**	**15 43 46.8**	**-0.8**
	0.7nm,0.7s,mb3.9

LPAZ LR LR 15 52 32.1
comp=Z,172nm,21.3s,MS3.8,baz=70,slow=31
LPAZ La Paz 34.94 65 *e*P **P 15 41 08.8 +0.9**
28nm,1.5s,mb5.0
ATAH Atahualpa 35.05 41 P **P 15 41 09.5 +0.6**
4.9nm,0.7s,mb4.5,baz=184,slow=3.2,SNR=4.2
ATAH LR LR 15 52 05.6
comp=Z,612nm,20.7s,MS4.3,baz=138,slow=30
OTAV Otavalo 41.34 35 *e*P **P 15 42 02.6 +0.7**
6.9nm,1.2s,mb4.2
ROSC El Rosal 47.34 37 LR LR 15 59 38.3
comp=Z,256nm,19.2s,MS4.2,baz=201,slow=32
BDFB Brasilia 51.00 81 P **P 15 43 15.7 -2.3**
3.2nm,0.9s,mb4.3,baz=259,slow=12,SNR=3.0
APG El Apazote 51.30 13 LR LR 15 59 53.4
comp=Z,162nm,21.9s,MS4.0,slow=30
VNA1 Neumayer--Stat 57.71 157 *e*P **P 15 43 58.1 -8.0**
VNA2 Neumayer--Watz 57.91 157 *e*P **P 15 43 59.5 -8.0**
baz=257,slow=6.3
TXAR Lajitas Array 64.66 357 P **P 15 44 52.3 -1.3**
1.1nm,0.9s,mb3.9,baz=123,slow=7.6,SNR=3.4
TXAR LR LR 16 07 58.8
comp=Z,101nm,19.0s,MS4.0,baz=0,0,slow=31
320A Kipp Ranch, An 66.99 353 ⇑P **P 15 45 08.2 -0.4**
baz=68
319A Douglas 67.11 352 ⇑P **P 15 45 09.6 +0.3**
baz=68
318A Bisbee 67.25 352 ⇑P **P 15 45 10.0 -0.2**
baz=68
219A White Tail Can 67.72 352 ⇓P **P 15 45 13.0 -0.2**
baz=68
218A Dragoon 67.78 352 ⇑P **P 15 45 12.9 -0.7**
baz=68
127A Arkansas Junct 67.97 358 ⇓P **P 15 45 14.3 -0.5**
baz=69
125A Gardner Draw, 68.01 357 ⇑P **P 15 45 14.3 -0.8**
baz=69
120A U Bar Ranch, L 68.19 353 ⇑P **P 15 45 15.8 -0.4**
baz=69
TUC Tucson 68.21 351 P **P 15 45 14.8 -1.5**
6.1nm,1.0s,mb4.6
118A Homack Ranch, 68.43 352 ⇑P **P 15 45 17.7 0.0**
baz=69
117A Oracle 68.46 351 ⇓P **P 15 45 17.7 -0.1**
baz=69
119A Ashpeak Ranch, 68.48 352 ⇓P **P 15 45 17.9 -0.1**
baz=69
116A Eloy 68.58 350 ⇑P **P 15 45 18.4 -0.2**
baz=69
Z25A Roswell 68.63 357 ⇓P **P 15 45 19.4 +0.5**
baz=69
Y20A Horse Springs, 69.52 353 ⇑P **P 15 45 24.8 +0.3**
baz=70
Y21A Point of Rocks 69.56 354 ⇓P **P 15 45 25.1 +0.5**
baz=70
Y18A Canyon Day Jun 69.56 352 ⇑P **P 15 45 24.6 -0.1**
baz=70
Y17A Roosevelt 69.58 351 ⇑P **P 15 45 25.7 +0.9**
baz=70
Y19A Nutrioso 69.66 353 ⇑P **P 15 45 24.8 -0.4**
baz=70
Y16A Circle Bar Ran 69.84 351 ⇓P **P 15 45 26.1 -0.3**
baz=70
X26A CR and CF Fran 69.86 357 ⇓P **P 15 45 26.5 0.0**
baz=70
X21A Alamocita Cree 70.00 354 ⇓P **P 15 45 27.8 +0.5**
baz=71
Y14A Wickenburg 70.12 349 ⇑P **P 15 45 28.5 +0.4**
baz=71
X19A St. Johns 70.12 353 ⇑P **P 15 45 28.7 +0.6**
baz=71
Y13A Salome 70.12 349 ⇑P **P 15 45 28.5 +0.4**
baz=71
X20A Quemado 70.16 353 ⇑P **P 15 45 29.2 +0.8**
baz=71
X17A Forest Lakes 70.21 351 ⇓P **P 15 45 28.6 0.0**
baz=71
BC3 Big Chuckawall 70.25 347 ⇓P **P 15 45 28.8 -0.1**
baz=71
X18A Snowflake 70.30 352 ⇑P **P 15 45 29.0 -0.2**
baz=71
X16A Lo Mia Camp, P 70.37 351 ⇓P **P 15 45 29.1 -0.5**
baz=71
X15A Humboldt 70.54 350 ⇓P **P 15 45 29.8 -0.9**
baz=71
X14A Yava 70.62 349 ⇓P **P 15 45 30.7 -0.5**
baz=71
W21A San Fidel 70.65 354 ⇑P **P 15 45 31.3 0.0**
baz=71
IRM Iron Mountain 70.69 347 ⇑P **P 15 45 31.4 -0.2**
baz=71
W20A Ramah 70.74 353 ⇑P **P 15 45 32.0 +0.1**
baz=71
W19A Sanders 70.81 353 ⇑P **P 15 45 32.2 -0.1**
baz=72
X13A Yucca 70.89 349 ⇓P **P 15 45 32.1 -0.7**
baz=72
W16A Flagstaff 71.05 351 ⇑P **P 15 45 33.7 0.0**
baz=72
W14A Seligman 71.38 349 ⇑P **P 15 45 35.6 -0.2**
baz=72
GMRC Granite Mounta 71.38 347 ⇑P **P 15 45 35.2 -0.5**
baz=72
W13A Hualapai Mount 71.39 349 ⇑P **P 15 45 34.8 -1.0**
baz=72
V20A Brimhall 71.40 353 ⇓P **P 15 45 35.5 -0.4**
baz=72
V18A Ganado 71.46 352 ⇑P **P 15 45 35.3 -0.9**
baz=72
V17A Tonalea, Kykot 71.47 351 ⇑P **P 15 45 35.6 -0.7**
baz=72
LDFC Landfair 71.58 348 *e*P **P 15 45 35.4 -1.6**
27nm,0.8s,mb5.2
SYO Syowa Base 71.68 166⇓*e*pP pP 15 45 36.4 -4.1
V14A Boquillas Ranc 71.80 350 ⇓P **P 15 45 37.4 -0.8**
baz=72
V15A Kaibab Nationa 71.85 350 ⇑P **P 15 45 37.9 -0.7**
baz=72
EDW2 Edwards Air Fo 71.93 345 ⇑P **P 15 45 38.4 -0.7**
baz=72
U21A Nageezi 71.95 354 ⇑P **P 15 45 38.7 -0.5**
baz=73
U16A Tuba City 72.03 351 ⇓P **P 15 45 38.9 -0.7**
baz=73
TUQ Turquoise Moun 72.07 347 ⇓P **P 15 45 38.7 -1.2**
baz=73
GSC Goldstone 72.10 346 ⇓P **P 15 45 39.5 -0.6**
baz=73
V13A Grand Canyon W 72.14 349 ⇓P **P 15 45 39.7 -0.6**
baz=73
U18A Rough Rock, Ch 72.16 352 ⇓P **P 15 45 40.0 -0.4**
baz=73
V12A Nelson 72.16 348 ⇓P **P 15 45 39.8 -0.7**
baz=73
PKM Peak Mountain 72.34 344 ⇓P **P 15 45 40.9 -0.7**
baz=73
LRMC Laurel Mountai 72.45 346 ⇑P **P 15 45 41.8 -0.4**
baz=73
U15A North Rim 72.46 350 ⇓P **P 15 45 42.2 0.0**
baz=73
T19A Beclabito 72.48 353 ⇓P **P 15 45 42.1 -0.2**
baz=73
T21A Navajo Lake 72.50 354 ⇓P **P 15 45 42.6 +0.1**
baz=73
U14A Mt Trumbull 72.58 350 ⇑P **P 15 45 43.2 +0.3**
baz=73
SHOC Shoshone 72.58 347 ⇓P **P 15 45 43.4 +0.4**
baz=73
U13A Pakoon Wash 72.69 349 ⇓P **P 15 45 43.2 -0.4**
baz=73
SMMC Simmler 72.78 344 ⇓P **P 15 45 43.5 -0.6**
baz=73
ISA Isabella 72.79 345 ⇓P **P 15 45 44.2 +0.1**
baz=73
ISA Isabella 72.79 345 *e*P **P 15 45 41.8 -2.4**
5.0nm,1.0s,mb4.4
U12A Valley of Fire 72.80 348 ⇑P **P 15 45 44.6 +0.4**
baz=73
T17A Navajo Res., N 72.83 352 ⇓P **P 15 45 44.7 +0.3**
baz=74
T18A Mexican Hat 72.87 352 ⇑P **P 15 45 45.0 +0.4**
baz=74
MPMC Manual Prospec 72.97 346 ⇑P **P 15 45 45.0 -0.3**
baz=74
SHPR Sheep Range 72.98 348 *e*P **P 15 45 43.5 -1.8**
11nm,1.1s,mb4.7
T15A Red Dirt Ranch 73.05 350 ⇓P **P 15 45 45.4 -0.3**
baz=74
U10A Ash Meadows, A 73.10 347 ⇑P **P 15 45 45.4 -0.6**
baz=74
S21A Coal Bank Pass 73.19 354 ⇓P **P 15 45 46.4 -0.1**
baz=74
S22A 4UR Ranch, Cre 73.20 355 ⇑P **P 15 45 46.4 -0.2**
baz=74
T13A Saint George 73.28 349 ⇑P **P 15 45 46.6 -0.5**
baz=74
S19A Harvey Farm, M 73.39 353 ⇑P **P 15 45 47.7 -0.1**
baz=74
S20A Disappointment 73.41 354 ⇑P **P 15 45 48.1 +0.3**
baz=74
S18A Hurst Farm, Bl 73.43 352 ⇓P **P 15 45 48.0 0.0**
baz=74
CWC Cottonwood Cre 73.46 346 ⇓P **P 15 45 48.0 -0.2**
baz=74
S17A Black Ridge (B 73.46 352 ⇑P **P 15 45 47.9 -0.2**
baz=74
R22A Saguache, Gunn 73.68 355 ⇑P **P 15 45 49.6 +0.3**
baz=74
CCUT Cedar City 73.72 350 *e*P **P 15 45 47.9 -1.8**
12nm,0.9s,mb4.8
PV01 Paradox Valley 73.73 354 P **P 15 45 48.6 -1.1**
695nm,1.0s
R20A Redvale 73.76 354 ⇑P **P 15 45 50.0 +0.1**
baz=74
S13A Holt Ranch, En 73.82 349 ⇓P **P 15 45 50.1 -0.1**
baz=74
GRAC Grapevine Rang 73.86 346 ⇑P **P 15 45 49.9 -0.5**
baz=74
R21A Cimarron 73.87 355 ⇑P **P 15 45 50.3 -0.2**
baz=74
S14A Cedar City 73.89 350 ⇓P **P 15 45 50.5 -0.2**
baz=74
R19A Curley Farm, L 73.95 353 ⇓P **P 15 45 50.9 -0.1**
baz=75
PV04 Paradox Valley 74.01 353 *e*P **P 15 45 49.5 -1.8**
R18A Canyonlands Na 74.11 353 ⇑P **P 15 45 51.9 0.0**
baz=75
R16A Teasdale 74.18 351 ⇓P **P 15 45 52.2 -0.1**
baz=75
R17A Hanksville Air 74.23 352 ⇓P **P 15 45 52.6 0.0**
baz=75
R13A O'Grain Ranch, 74.42 349 ⇓P **P 15 45 53.8 0.0**
baz=75
MSU Marysvale 74.50 351 *e*P **P 15 45 53.5 -0.7**
2.9nm,0.9s,mb4.2
Q19A Hogan Spring (74.61 353 ⇓P **P 15 45 55.1 +0.3**
baz=75
Q16A Castle Valley 74.77 352 ⇓P **P 15 45 55.6 -0.1**
baz=75
Q18A Rafter H Ranch 74.84 353 ⇑P **P 15 45 56.8 +0.7**
baz=76
R11A Troy Canyon, C 74.85 348 ⇓P **P 15 45 55.9 -0.3**
baz=76
SRU San Rafael 74.89 352 ⇑P **P 15 45 57.1 +0.6**
baz=76
P22A Eagle 75.04 355 ⇑P **P 15 45 58.0 +0.8**
baz=76
Q14A Sevier Lake (B 75.11 350 ⇑P **P 15 45 58.4 +0.7**
baz=76
TMUT Trail Mountain 75.15 352 P **P 15 45 56.5 -1.4**
284nm,1.2s
NVAR Mina Array Bea 75.42 346 P **P 15 45 58.0 -1.6**
3.5nm,0.9s,mb4.3,baz=179,slow=5.9,SNR=14
NVAR LR LR 16 11 34.7
comp=Z,116nm,20.3s,MS4.2,baz=291,slow=30
CMB Columbia Colle 75.48 344 *e*P **P 15 45 57.6 -2.2**
7.1nm,0.9s,mb4.6
P14A Drum Mountains 75.68 350 ⇓P **P 15 46 01.2 +0.3**
baz=76
WAKR Walker 75.73 345 *e*P **P 15 45 59.2 -2.1**
23nm,1.8s,mb4.8
O18A Roosevelt 75.98 353 ⇓P **P 15 46 02.7 0.0**
baz=77
DUG Dugway 76.24 351 ⇑P **P 15 46 04.1 -0.1**
baz=77
DUG Dugway 76.24 351 *e*P **P 15 46 02.0 -2.2**
6.6nm,1.1s,mb4.5
DAU Daniels Canyon 76.26 352 *e*P **P 15 46 02.6 -1.6**
24nm,1.0s,mb5.1
MAW Mawson 76.36 174 LR LR 16 16 57.0
comp=Z,137nm,18.9s,MS4.3,baz=5.7,slow=34
N20A Spence Gulch, 76.38 354 ⇓P **P 15 46 04.9 0.0**
baz=77
N19A John Jarvie Ra 76.52 354 ⇑P **P 15 46 05.3 -0.4**
baz=77
M18A Lyman 77.13 353 ⇓P **P 15 46 09.4 +0.3**
baz=78
L19A Farson 77.73 354 ⇓P **P 15 46 12.8 +0.3**
baz=78
L16A Fish Haven 77.86 352 ⇑P **P 15 46 13.3 +0.1**
baz=78
K21A Alcova 78.09 355 ⇑P **P 15 46 15.1 +0.6**
baz=79
K20A Yellowstone Ra 78.20 354 ⇓P **P 15 46 15.8 +0.7**
baz=79
K18A Toltan Ranch, 78.33 353 ⇓P **P 15 46 16.3 +0.5**
baz=79
WDC Whiskeytown Da 78.40 343 *e*P **P 15 46 12.8 -3.4**
7.9nm,0.9s,mb4.6
K19A Absolon Red Bu 78.41 354 ⇑P **P 15 46 16.4 +0.2**
baz=79
BW06 Boulder Array 78.41 353 ⇑P **P 15 46 16.9 +0.6**
baz=79
K16A Soda Springs 78.69 352 ⇓P **P 15 46 18.3 +0.6**
baz=79
J21A Lysite 78.81 355 ⇓P **P 15 46 19.4 +0.9**
baz=80
J19A Crowheart 78.86 354 ⇓P **P 15 46 19.7 +1.0**
baz=80
J20A Shoshoni 78.87 355 ⇑P **P 15 46 18.4 -0.3**
baz=80
J18A Kendall Valley 78.89 353 ⇑P **P 15 46 19.0 +0.1**
baz=80
J17A Brown Place, J 79.11 353 ⇑P **P 15 46 20.2 +0.1**
baz=80
J16A Bone 79.12 352 ⇓P **P 15 46 20.4 +0.2**
baz=80
REDW Red Top Meadow 79.13 353 *e*P **P 15 46 16.2 -4.0**
30nm,1.8s,mb4.9
TPAW Teton Pass 79.27 353 *e*P **P 15 46 18.0 -2.9**
9.1nm,1.0s,mb4.7
I21A Big Trails, Te 79.27 355 ⇑P **P 15 46 21.3 +0.3**
baz=80
J15A Blackfoot 79.34 351 ⇑P **P 15 46 21.9 +0.5**
baz=80
LOHW Long Hollow 79.35 353 *e*P **P 15 46 19.9 -1.5**
5.5nm,1.1s,mb4.4
WVOR Wild Horse Val 79.36 347 *e*P **P 15 46 20.0 -1.4**
4.3nm,0.9s,mb4.4
I18A Diamond G Ranc 79.36 353 ⇓P **P 15 46 21.8 +0.4**
baz=80
J14A Carey 79.41 351 ⇓P **P 15 46 21.7 0.0**
baz=80
I20A Worland 79.47 355 ⇑P **P 15 46 21.8 -0.2**
baz=80,SNR=5.5
MOOW Moose Ponds 79.50 353 *e*P **P 15 46 24.1 +1.9**
2.3nm,1.0s,mb4.1
J13A Cove Ranch, Pi 79.57 350 ⇓P **P 15 46 22.2 -0.4**
baz=80
I19A Meeteetse 79.62 354 ⇓P **P 15 46 23.0 +0.1**
baz=80
IMW Indian Meadow 79.67 353 P **P 15 46 20.3 -2.8**
5.5nm,1.0s,mb4.4
HLID Hailey 79.76 350 ⇓P **P 15 46 22.9 -0.7**
baz=80,SNR=14
HLID Hailey 79.76 350 *e*P **P 15 46 21.8 -1.8**
12nm,0.9s,mb4.8
FLWY Flagg Ranch 79.83 353 *e*P **P 15 46 23.4 -0.5**
8.2nm,1.0s,mb4.6
I14A Mackay 79.99 351 ⇑P **P 15 46 25.0 +0.2**
baz=81,SNR=6.0
I13A Wildhorse Cree 80.07 350 ⇑P **P 15 46 25.5 +0.2**
baz=81
K05A Sumner Lake 80.08 345 ⇑P **P 15 46 25.4 0.0**
baz=81
I12A Atlanta 80.09 350 ⇑P **P 15 46 25.9 +0.4**
baz=81
J08A Circle Bar Ran 80.22 347 ⇑P **P 15 46 26.2 +0.1**
baz=81
H18A Shoshone NF, C 80.31 354 ⇑P **P 15 46 26.6 0.0**
baz=81
H16A Russell Place, 80.50 353 ⇑P **P 15 46 27.8 +0.2**
baz=81
RLMT Red Lodge 80.72 354 ⇓P **P 15 46 29.7 +1.0**
baz=81,SNR=6.2
RLMT Red Lodge 80.72 354 P **P 15 46 28.2 -0.5**
10nm,1.0s,mb4.7
H13A Challis 80.72 350 ⇑P **P 15 46 28.8 0.0**
baz=81
G20A Bridger 80.73 355 ⇓P **P 15 46 29.5 +0.7**
baz=81,SNR=5.4
H12A Diamond D Ranc 80.79 350 ⇑P **P 15 46 29.1 -0.1**
baz=81
MCMT McKenzie Canyo 80.80 351 *e*P **P 15 46 28.6 -0.6**
2.8nm,1.4s,mb4.0
MCMT *e* 15 46 35.1
G18A Lazy EL Ranch, 80.94 354 ⇓P **P 15 46 30.0 +0.1**
baz=82
G16A Moss Hill, Enn 81.08 352 ⇓P **P 15 46 30.8 +0.2**
baz=82
I07A Izee 81.11 347 ⇑P **P 15 46 30.7 -0.2**
baz=82
G13A Cobalt 81.24 350 ⇓P **P 15 46 31.1 -0.4**
baz=82
G12A Big Creek, Yel 81.43 350 ⇑P **P 15 46 32.2 -0.3**
baz=82
BOZ Bozeman (W) 81.47 352 ⇓P **P 15 46 33.0 +0.3**
baz=82
BOZ Bozeman (W) 81.47 352 *e*P **P 15 46 33.0 +0.3**
5.9nm,1.1s,mb4.4
F16A Kennard Place, 81.61 352 ⇑P **P 15 46 34.1 +0.6**
baz=82
F17A Fitzpatrick Pl 81.63 353 ⇓P **P 15 46 34.6 +1.0**
baz=82,SNR=6.3
F13A Darby 81.94 351 ⇑P **P 15 46 35.5 +0.3**
baz=83
E20A Meyer Farm, Mu 82.01 355 ⇓P **P 15 46 36.0 +0.5**
baz=83
F12A Elk City 82.03 350 ⇓P **P 15 46 36.1 +0.4**
baz=83
G08A Pilot Rock 82.18 347 ⇓P **P 15 46 36.5 0.0**
baz=83
E17A Martinsdale 82.20 353 ⇑P **P 15 46 36.8 +0.3**
baz=83
E18A Harlowton 82.21 354 ⇑P **P 15 46 37.7 +1.0**
baz=83
E16A East Helena 82.35 352 ⇓P **P 15 46 39.0 +1.6**
baz=83,SNR=5.6
D24A Glendive 82.42 358 ⇑P **P 15 46 38.1 +0.4**
baz=83
D21A La Casta Ranch 82.49 356 ⇓P **P 15 46 38.4 +0.4**
baz=83
D22A Cohagen 82.53 356 ⇑P **P 15 46 39.1 +0.9**
baz=83
F10A Beach Ranch, E 82.55 349 ⇑P **P 15 46 38.3 0.0**
baz=83
E13A Victor 82.56 351 ⇓P **P 15 46 39.2 +0.8**
baz=83
E12A Beaver Dam Sad 82.72 350 ⇓P **P 15 46 40.2 +0.9**
baz=83
D17A Six Diamond Ra 82.86 353 ⇓P **P 15 46 42.9 +2.9**
baz=84,SNR=5.4
MSO Missoula 82.91 351 ⇑P **P 15 46 41.4 +1.2**
baz=84
D15A Lincoln 82.95 352 ⇑P **P 15 46 41.5 +1.1**
baz=84
D14A Greenough 83.10 351 ⇑P **P 15 46 42.2 +0.9**
baz=84
C22A Vida 83.11 357 ⇑P **P 15 46 42.1 +0.9**
baz=84
C23A Lambert 83.13 357 ⇓P **P 15 46 42.3 +0.9**
baz=84
C20A Veseth Ranch, 83.20 355 ⇑P **P 15 46 42.3 +0.6**
baz=84
SLMT Seeley Lake 83.26 351 *e*P **P 15 46 42.6 +0.5**
9.0nm,0.9s,mb4.8
C19A Slack Wire Ran 83.30 354 ⇓P **P 15 46 42.4 +0.2**
baz=84
D12A Red Ives Fores 83.32 350 ⇑P **P 15 46 43.2 +0.9**
baz=84
C17A Wharram Farm, 83.35 353 ⇓P **P 15 46 43.4 +0.9**
baz=84
F04A Amboy 83.47 345 ⇓P **P 15 46 43.8 +0.6**
baz=84
E07A Sunnyside 83.57 347 ⇑P **P 15 46 44.4 +0.7**
baz=84
EGMT Eagleton 83.64 354 ⇑P **P 15 46 45.1 +1.1**
baz=84
C15A Salmond Ranch, 83.68 352 ⇑P **P 15 46 45.4 +1.2**
baz=84
C14A Swan Lake 83.81 351 ⇓P **P 15 46 45.4 +0.5**
baz=84
C13A Hot Springs 83.83 351 ⇑P **P 15 46 45.5 +0.5**
baz=84
D08A Wollman Farm, 83.88 348 ⇓P **P 15 46 46.0 +0.8**
baz=84
B19A Brinkman Farms 84.01 355 ⇑P **P 15 46 46.6 +0.8**
baz=85
B18A Beardsley Farm 84.01 354 ⇓P **P 15 46 46.6 +0.7**
baz=85
B15A Bradely Ranch, 84.20 352 ⇓P **P 15 46 48.3 +1.4**
baz=85
B14A Marquette Ranc 84.33 352 ⇑P **P 15 46 48.3 +0.8**
baz=85
A22A Carney Farms, 84.36 357 ⇑P **P 15 46 49.3 +1.7**
baz=85
A20A Cobblestone Ra 84.36 355 ⇑P **P 15 46 48.8 +1.2**
baz=85
A16A West Butte Ran 84.73 353 ⇓P **P 15 46 50.8 +1.3**
baz=85
NEW Newport 84.76 349 ⇓P **P 15 46 50.6 +0.9**
baz=85
NEW Newport 84.76 349 *e*P **P 15 46 48.7 -1.0**
6.3nm,1.0s,mb4.7
A14A Double T Ranch 84.95 352 ⇓P **P 15 46 52.1 +1.5**
baz=86
A13A Flathead Natio 85.03 351 ⇑P **P 15 46 52.4 +1.3**
baz=86
A12A Yaak River Ran 85.20 350 ⇑P **P 15 46 53.2 +1.3**
baz=86
STKA Stephens Creek 90.90 229 LR LR 16 19 34.2
comp=Z,201nm,19.8s,MS4.6,baz=205,slow=30
SCHQ Schefferville 94.72 19 LR LR 16 26 36.6
comp=Z,186nm,19.0s,MS4.6,baz=54,slow=33
BOSA Boshof 98.40 134 LR LR 16 24 30.1
comp=Z,65nm,19.1s,MS4.1,baz=165,slow=31
DBIC Dimbokro 98.73 88 LR LR 16 28 33.8
comp=Z,67nm,19.1s,MS4.2,baz=214,slow=33
GERES GERESS Array B 131.23 53 PKP PKPdf 15 53 25.4 -2.1
0.5nm,0.8s,baz=28,slow=3.2,SNR=3.9
GERES GERESS Array B 131.23 53 PKP PKPdf 15 53 25.4 -2.1
KSRS Korea Array 141.10 288 PKhKP PKPpre 15 53 38.0
0.3nm,0.3s,baz=218,slow=24,SNR=4.1
CN2 Changchun 143.84 297 *e*PKP PKPdf 15 53 45.0 -5.9
CN2 PP PP 15 57 02.0 -2.8
BRTR Keskin Array B 144.06 70 PKP PKPdf 15 53 46.9 -4.6
2.4nm,0.9s,baz=211,slow=2.5,SNR=10
HHC Hu-ho-hao-te 154.08 291 *e*PKPbc PKPdf 15 54 00.3 -7.1
HHC PKS 15 57 34.0
HHC SKS SKSdf 16 01 06.5 -7.7
HHC AMB AMB
comp=Z,170nm,7.9s
HHC LR LR
comp=N,130nm,21.2s,MS4.9
HHC LR LR
comp=E,160nm,21.1s,MS4.9
HHC LR LR
comp=Z,140nm,21.4s,MS4.8
GYA Guiyang 154.77 256 *e*PKPbc PKPdf 15 54 04.8 -4.1
GYA PKPab PKPab 15 54 29.0 -3.5
GYA PKS 15 57 36.5
GYA PP PP 15 58 05.0 -3.5
GYA AMB AMB
comp=Z,90nm,8.0s
CMAR Chiang Mai Arr 155.51 231 PKP PKPdf 15 54 06.2 -3.8
comp=Z,0.2nm,0.5s,baz=83,slow=7.7,SNR=2.6
CMAR PKPab PKPab 15 54 27.7 -8.1
comp=Z,1.8nm,1.0s,baz=171,slow=3.2,SNR=6.2
SONM Songino Array 156.40 310 PKP PKPdf 15 54 06.9 -3.4
comp=Z,0.4nm,0.7s,baz=90,slow=3.0,SNR=3.8
KMI Kunming 157.15 249 PKP PKPdf 15 54 10.5 -1.6
CD2 Chengdu 158.90 264 *e*PKP PKPdf 15 54 09.0 -5.0
LZH Lanzhou 159.97 279 *e*PKP PKPdf 15 54 08.5 -6.6
LZH pPKP pPKPdf 15 54 15.5 -3.0
LZH sPKP 15 54 19.0
ZALV Zalesovo Beam 161.24 349 PKP PKPdf 15 54 13.2 -2.7
comp=Z,0.4nm,0.5s,baz=212,slow=1.4,SNR=2.9

*IDC **28** 15:35:58.0± 1.6, 8.°82S× 124.°29E, h0km, mb3.5/2, mb1 3.9/5, mb1mx3.7/17, mbtmp3.7/5, ML3.8/3, MS4.3/1, Ms1 4.3/1, ms1mx2.8/19, Error ellipse: s-maj=103.8km s-min=23.4km az=61.0*

*ISCJB **28** 15:35:59.7±0.9, 9°.09S±0°.09×124°.4E±0°.1, h33km, mb3.6/2, Error ellipse: s-maj=21.6km s-min=8.0km az=150.8*
*NEIC **28** 15:35:59.7±0.8, 8°.78S×124°.41E, h10km, Error ellipse: s-maj=30.9km s-min=11.1km az=54.0*

ISC 28 15:36:02.2±0.9, 9°.06S±0°.09×124°.4E±0°.1, h35km±3, n9, σ1§35/12, mb3.6/2, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.66**	**115**	P	**Pn**	**15 38 05.9**	**+0.9**
FITZ	**Fitzroy Crossi**	**9.06**	**173**	Pn	**Pn**	**15 38 13.0**	**+2.5**
	1.3nm,0.3s,baz=159,slow=6.4,SNR=18						
FITZ				Sn	**Sn**	**15 39 50.8**	**-0.6**
	5.2nm,0.3s,baz=142,slow=12,SNR=11						
FITZ	**Fitzroy Crossi**	**9.06**	**173**	*e*P	**Pn**	**15 38 13.4**	**+2.9**
FITZ				Sn	**Sn**	**15 39 50.8**	**-0.6**
WRA	**Warramunga Arr**	**14.45**	**140**	Pn	**Pn**	**15 39 27.6**	**+3.4**
	0.4nm,0.3s,baz=312,slow=14,SNR=10						
WRA				Sn	**Sn**	**15 42 01.6**	**-1.6**
	1.5nm,0.3s,baz=310,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.12**	**149**	P	**Pn**	**15 40 03.9**	**+5.2**
	0.2nm,0.3s,baz=321,slow=12,SNR=19						
ASAR				S	**S**	**15 43 06.6**	**-10**
	0.4nm,0.3s,baz=317,slow=22,SNR=6.3						
CMAR	**Chiang Mai Arr**	**37.16**	**317**	P	**P**	**15 43 09.9**	**0.0**
	0.3nm,0.4s,mb3.4,baz=146,slow=5.9,SNR=5.3						
JHJ	**Hachijo jima 2**	**44.42**	**19**	LR	LR	15 59 09.0	
	comp=Z,355nm,20.5s,slow=31						
MK31	**Makanchi Array**	**67.08**	**330**	*e*P	**P**	**15 46 52.2**	**+0.3**
MKAR	**Makanchi Array**	**67.08**	**330**	P	**P**	**15 46 50.5**	**-1.5**
	0.4nm,0.5s,mb3.7,baz=134,slow=7.5,SNR=8.6						

DJA 28 15:44:48, 1°.42N×123°.31E, h20km, MLv3.7/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.53**	**89**	P	Pn	15 45 15.7	+1.5
MNI				S	Sn	15 45 33.7	+0.2
MRSI	**Marisa**	**1.66**	**236**	P	Pn	15 45 16.7	+0.7
LUWI	**Luwuk**	**2.50**	**192**	P	Pn	15 45 27.1	-0.5
LUWI				S	Sn	15 45 57.6	0.0
TTSI	**Tana Toraja**	**5.64**	**218**	P	Pn	15 46 11.0	+0.2

*NDI **28** 15:49:20.6±2.2, 30°.91N×83°.46E, h10km, ML3.3, mb3.6(NEIC)*
*IDC **28** 15:49:22.8±3.0, 30°.71N×83°.15E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.3/27, mbtmp3.4/5, ML3.2/2, MS3.2/4, Ms1 3.2/4, ms1mx3.0/22, Error ellipse: s-maj=118.6km s-min=23.5km az=63.0*
*ISCJB **28** 15:49:23.1±0.6, 30°.73N±0°.06×83°.11E±0°.05, h10km, mb3.4/4, MS3.0/3, Error ellipse: s-maj=8.8km s-min=5.5km az=159.1*
*NEIC **28** 15:49:27.1±7.1, 30°.75N×83°.14E, h27km±53km, mb3.6/3, Error ellipse: s-maj=39.3km s-min=11.0km az=48.0*

ISC 28 15:49:25.3±0.6, 30°.79N±0°.05×83°.11E±0°.05, h10km, n23, σ1§40/24, mb3.4/4, MS3.0/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**2.79**	**245**	*e*PKP	**Pg**	**15 50 21.2**	**+2.3**
PTH				*e*S	**Sg**	**15 50 58.3**	**+3.2**
KLP	**Kalpa**	**4.23**	**281**	*e*x	**Pn**	**15 50 25.9**	**-3.9**
KLP				*e*S	**Sn**	**15 51 19.2**	**-0.2**
KLP				AML	AML	15 51 51.7	
	comp=E,80nm,0.8s						
KLP				AML	AML	15 51 55.1	
	comp=N,81nm,0.8s						
DDI	**Dehra Dun**	**4.39**	**265**	*e*x	**Pb**	**15 50 38.0**	**-4.5**
SONA	**Sohna**	**5.83**	**246**	*e*PKP	**Pn**	**15 50 52.1**	**+0.3**
SONA				*e*S	**Sn**	**15 51 56.8**	**-2.0**
KHET	**Khetri**	**6.92**	**249**	*e*PKP	**Pn**	**15 51 06.5**	**-0.3**
KHET				*e*x	x	15 52 31.0	
LSA	**Lhasa**	**7.04**	**97**	P	**Pn**	**15 51 08.8**	**+0.4**
LSA	**Lhasa**	**7.04**	**97**	*e*P	**Pn**	**15 51 09.1**	**+0.7**
	comp=N,21nm,1.2s						
KSH	**Kashi**	**10.48**	**328**	*e*P	**Pn**	**15 51 56.8**	**+1.2**
KSH				*e*pP		15 52 04.0	
KSH				*e*PP		15 52 05.5	
KSH				*e*sP		15 52 08.8	
KSH				*e*S	**Sn**	**15 53 51.0**	**-2.1**
KSH				*e*sS		15 54 02.3	
KSH				*e*SS		15 54 04.5	
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,380nm,4.1s						
KSH				smax			
	comp=N,33nm,1.2s						
KSH				smax			
	comp=E,23nm,1.2s						
KSH				LR	LR		
	comp=N,820nm,5.9s						
KSH				LR	LR		
	comp=E,870nm,8.2s						
KSH				LR	LR		
	comp=Z,660nm,6.4s						
WMQ	**Urumqi**	**13.51**	**14**	*e*P	**Pn**	**15 52 32.0**	**-4.9**
AAK	**Ala-Archa**	**13.68**	**332**	LR	LR	15 58 10.9	
	comp=Z,143nm,18.4s,baz=108,slow=38						
KKAR	**Karatay Array**	**15.87**	**324**	P	**Pn**	**15 53 08.2**	**-0.5**
	comp=Z,0.7nm,0.6s						
MK31	**Makanchi Array**	**16.00**	**358**	P	**Pn**	**15 53 12.3**	**+2.1**
MKAR	**Makanchi Array**	**16.00**	**358**	Pn	**Pn**	**15 53 09.8**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=179,slow=12,SNR=5.4						
MKAR	**Makanchi Array**	**16.00**	**358**	Pn	**Pn**	**15 53 09.8**	**-0.5**
GTA	**Gaotai**	**16.13**	**53**	*e*P	**Pn**	**15 53 14.0**	**+1.9**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**18.89**	**127**	P	**Pn**	**15 53 44.8**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=301,slow=11,SNR=5.2						
KURK	**Kurchatov**	**20.19**	**352**	*e*P	**P**	**15 53 59.2**	**-0.8**
	comp=Z,17nm,1.4s						
ZALV	**Zalesovo Beam**	**23.18**	**3**	P	**P**	**15 54 30.9**	**-1.0**
	comp=Z,1.1nm,0.6s,mb3.5,baz=189,slow=8.7,SNR=5.4						
ZALV				LR	LR	16 04 50.7	
	comp=Z,38nm,21.4s,MS2.8,baz=347,slow=40						
BVAR	**Borovoye Array**	**24.08**	**341**	P	**P**	**15 54 41.1**	**+0.4**
	comp=Z,1.1nm,0.7s,mb3.4,baz=140,slow=7.5,SNR=4.3						
SONM	**Songino Array**	**24.64**	**40**	LR	LR	16 05 09.7	
	comp=Z,69nm,20.3s,MS3.1,baz=240,slow=38						
ABKAR	**Akbulak array**	**25.43**	**323**	*e*P	**P**	**15 54 54.6**	**+1.7**
	comp=Z,1.2nm,0.7s,mb3.5						
KSRS	**Korea Array**	**37.41**	**67**	LR	LR	16 12 46.8	
	comp=Z,36nm,19.0s,MS3.2,baz=300,slow=38						
WRA	**Warramunga Arr**	**70.47**	**129**	P	**P**	**16 00 38.6**	**-1.5**
	comp=Z,0.3nm,0.6s,mb3.4,baz=325,slow=6.2,SNR=6.9						

TRN 28 16:08:23.1, 13°.98N×60°.52W, h25km, MD3.5, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCLT	**Moule a Chique**	**0.50**	**237**	*e*P	Pb	16 08 36.0	+2.7
MCLT				*e*S	Sb	16 08 44.3	+4.1
SLB	**Belfond**	**0.53**	**253**	||*i*P	Pb	16 08 37.9	+4.0
SLB				*e*S	Sb	16 08 45.6	+4.3
SSV	**Crater Summit**	**0.93**	**225**	*e*P	Pb	16 08 42.0	+1.5
SSV				*e*S	Sb	16 08 55.0	+2.5
SVV	**Soufriere Volc**	**0.95**	**226**	*e*P	Pn	16 08 42.2	+1.3
SVV				*e*S	Sb	16 08 55.6	+2.5
SVB	**Belmont**	**1.01**	**225**	*e*P	Pn	16 08 43.2	+1.5
SVB				*e*S	Sb	16 08 57.2	+2.4
FCV	**Fort Charlotte**	**1.09**	**221**	*e*S	Sn	16 08 59.3	+2.2

*NEIC **28** 16:11:07.7, 14°.32N×93°.30W, h12km, MD4.2(MEX), After MEX.*

MEX 28 16:11:07.6±1.9, 14°.32N×93°.31W, h12km±48km, MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.17**	**60**	*i*P	Pb	16 11 25.8	-3.9
THIG				*i*S	Sb	16 11 40.1	-4.7
PCIG		**1.38**	**3**	*i*P	Pn	16 11 27.7	-5.0
PCIG				*i*S	Sn	16 11 46.5	-4.5
CCIG	**Comitan**	**2.25**	**30**	*i*P	Pn	16 11 42.6	-2.2
CCIG				*i*S	Sn	16 12 08.8	-3.8
CCIG	**Comitan**	**2.25**	**30**	*i*P	Pn	16 11 42.6	-2.2
CCIG				*i*S	Sn	16 12 08.8	-3.8
TGIG		**2.45**	**4**	*i*P	Pn	16 11 45.4	-2.1
TGIG				*i*S	Sn	16 12 12.7	-4.7
SCX	**San Cristobal**	**2.49**	**15**	*i*P	Pn	16 11 46.2	-1.8
SCX				*i*S	Sn	16 12 15.8	-2.5
SCX	**San Cristobal**	**2.49**	**15**	*i*P	Pn	16 11 46.2	-1.8
SCX				*i*S	Sn	16 12 15.8	-2.5
HUIG	**Huatulco**	**3.07**	**298**	*e*P	Pn	16 11 55.2	-0.7
HUIG				*i*S	Sn	16 12 31.6	-1.0
HUIG	**Huatulco**	**3.07**	**298**	*e*P	Pn	16 11 55.2	-0.7
HUIG				*i*S	Sn	16 12 31.6	-1.0
VHO	**Vista Hermosa**	**4.29**	**310**	*i*P	Pn	16 12 11.3	-1.5
VHO				*i*S	Sn	16 13 00.2	-2.6
VHO	**Vista Hermosa**	**4.29**	**310**	*i*P	Pn	16 12 11.3	-1.5
VHO				*i*S	Sn	16 13 00.2	-2.6
PNIG	**Pinotepa**	**5.09**	**295**	*e*P	Pn	16 12 23.5	-0.2
PNIG				*i*S	Sn	16 13 22.0	-0.5
PNIG	**Pinotepa**	**5.09**	**295**	*e*P	Pn	16 12 23.5	-0.2
PNIG				*i*S	Sn	16 13 22.0	-0.5
UTMO	**Huajuapan**	**5.56**	**310**	*e*P	Pn	16 12 28.9	-1.3
UTMO				*i*S	Sn	16 13 28.4	-5.7
TPIG	**Tehuac#an**	**5.64**	**317**	*i*P	Pn	16 12 29.8	-1.5
TPIG				*i*S	Sn	16 13 34.0	-2.1
TEIG	**Tepich**	**7.59**	**39**	*e*P	Pn	16 12 55.1	-3.0
	25nm,0.6s						

OTT 28 16:23:59.9±0.2, 65°.20N×86°.92W, h18km, MN3.8/20, Wager Bay region, Nu 152km south from Repulse Bay, Nu Boothia Ungava Seismic Zone., Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAGN	**Wager Bay**	**1.25**	**304**	PG	Pg	16 24 22.3	-1.8
WAGN				SG	Sg	16 24 37.9	-2.6
WAGN				Trac		16 24 40.5	
	comp=Z,290nm,0.1s						
QILN	**Qililugaq Expl**	**1.48**	**8**	PN	Pn	16 24 25.4	-0.1
QILN				PG	Pg	16 24 26.5	-1.8
QILN				SN	Sn	16 24 43.9	-0.5
QILN				SG	Sg	16 24 45.4	-2.2
QILN				Trac		16 24 46.8	
	comp=Z,339nm,0.1s						
NUNN	**Nunuq Camp, NU**	**1.75**	**272**	PN	Pn	16 24 28.7	-0.6
NUNN				PG	Pg	16 24 30.7	-2.9
NUNN				SN	Sn	16 24 49.6	-1.5
NUNN				SG	Sg	16 24 52.7	-3.6
NUNN				Trac		16 24 57.0	
	comp=Z,169nm,0.1s						
SEDN	**First Sedna Si**	**2.71**	**226**	PN	Pn	16 24 41.9	-0.6
SEDN				SN	Sn	16 25 12.6	-2.2
SEDN				LG		16 25 22.2	
SEDN				Trac		16 25 23.2	
	comp=Z,105nm,0.1s						
BULN	**Bullion Camp,**	**2.83**	**298**	PN	Pn	16 24 44.5	+0.5
BULN				SN	Sn	16 25 16.5	-1.1
BULN				SG	Sg	16 25 25.9	-4.7
BULN				Trac		16 25 29.5	
	comp=Z,44nm,0.1s						
JOSN	**Second Sedna S**	**2.88**	**227**	PN	Pn	16 24 44.3	-0.4
JOSN				SN	Sn	16 25 16.8	-2.0
JOSN				LG		16 25 26.8	
JOSN				Trac		16 25 28.6	
	comp=Z,135nm,0.1s						
KUGN	**Kugaaruk Camp,**	**3.16**	**338**	PN	Pn	16 24 48.4	-0.3
KUGN				SN	Sn	16 25 22.6	-3.2
KUGN				SG	Sg	16 25 36.3	-5.1
KUGN				Trac		16 25 40.2	
	comp=Z,76nm,0.2s						
STLN	**Stellar Camp,**	**3.25**	**314**	PN	Pn	16 24 49.3	-0.5
STLN				SN	Sn	16 25 25.3	-2.6
STLN				LG		16 25 35.9	
STLN				Trac		16 25 39.5	
	comp=Z,34nm,0.1s						
YBKN	**Baker Lake, Hu**	**3.99**	**261**	PN	Pn	16 24 59.0	-1.1
YBKN				SN	Sn	16 25 42.9	-3.4
YBKN				LG		16 26 01.1	
YBKN				Trac		16 26 05.7	
	comp=Z,70nm,0.2s						
IVKQ	**Ivujivik**	**4.87**	**121**	PN	Pn	16 25 10.0	-2.1
IVKQ				SN	Sn	16 26 02.5	-5.3
IVKQ				LG		16 26 28.6	
IVKQ				Trac		16 26 35.5	
	comp=Z,41nm,0.3s						
ARVN	**Arviat, NU**	**5.24**	**221**	PN	Pn	16 25 16.3	-0.9
ARVN				SN	Sn	16 26 14.1	-3.0
ARVN				LG		16 26 40.1	
ARVN				Trac		16 26 43.6	
	comp=Z,62nm,0.3s						
FCC	**Fort Churchill**	**7.28**	**211**	PN	Pn	16 25 44.2	-1.0
FCC				SN	Sn	16 27 01.1	-6.2
FCC				LG		16 27 41.0	
FCC				Trac		16 27 44.7	
	comp=Z,16nm,0.2s						
INUQ	**Inukjuak**	**7.94**	**144**	PN	Pn	16 25 52.7	-1.5
INUQ				SN	Sn	16 27 17.4	-6.0
INUQ				Trac		16 28 02.9	
	comp=Z,26nm,0.4s						
INUQ				LG		16 28 05.3	
GDLN	**Gardenia Lake,**	**9.06**	**258**	PN	Pn	16 26 08.3	-1.2
GDLN				SN	Sn	16 27 41.8	-9.1
WHFN	**White Fish Lak**	**9.27**	**263**	PN	Pn	16 26 14.8	+2.4
WHFN				SN	Sn	16 27 45.9	-10
SNLN	**Sandy Lake, NW**	**9.38**	**265**	PN	Pn	16 26 11.6	-2.3
SNLN				SN	Sn	16 27 49.1	-10
SNLN				LG		16 28 42.0	
COKN	**Cook Lake**	**9.69**	**269**	PN	Pn	16 26 13.9	-4.3
COKN				SN	Sn	16 27 59.3	-7.0
COKN				LG		16 28 55.0	
COKN				Trac		16 29 06.4	
	comp=Z,38nm,0.7s						
RES	**Resolute Bay**	**9.90**	**348**	PN	Pn	16 26 21.9	+0.8
RES				SN	Sn	16 28 02.7	-8.9
RES				LG		16 29 01.3	
RES				Trac		16 29 06.0	
	comp=Z,162nm,0.9s						
JERN	**Jeri Cho Mine,**	**10.16**	**286**	PN	Pn	16 26 21.8	-2.8
JERN				SN	Sn	16 28 11.3	-6.6
JERN				LG		16 29 07.2	
JERN				Trac		16 29 10.3	
	comp=Z,21nm,0.6s						
SILO	**Sutton Inlier**	**10.80**	**174**	PN	Pn	16 26 30.7	-2.7
SILO				SN	Sn	16 28 23.4	-10
SILO				LG		16 29 33.2	
SILO				Trac		16 29 43.5	
	comp=Z,95nm,1.1s						
ILKN	**Indian Lake**	**12.06**	**278**	PN	Pn	16 26 47.5	-3.0
ILKN				SN	Sn	16 28 51.3	-13
CTLN	**Castor Lake**	**12.37**	**280**	PN	Pn	16 26 50.3	-4.4
CTLN				SN	Sn	16 28 58.3	-13
CTLN				LG		16 30 15.2	
CTLN				Trac		16 30 23.7	
	comp=Z,52nm,1.0s						
YKW3	**Yellowknife Ar**	**12.44**	**271**	PN	Pn	16 26 51.4	-4.3
YKW3				SN	Sn	16 28 57.0	-16
YKW3				SN	Sn	16 28 58.8	-15
YKW3				LG		16 30 20.1	
YKW3				Trac		16 30 24.6	
	comp=Z,11nm,0.5s						
VIMO	**Victor Mine**	**12.52**	**171**	PN	Pn	16 26 51.7	-5.2
VIMO				SN	Sn	16 29 01.2	-15
FFC	**Flin Flon**	**12.88**	**223**	PN	Pn	16 26 55.2	-6.6
FFC				PN	Pn	16 27 03.6	+1.8
FFC				SN	Sn	16 29 12.2	-12
FFC				SN	Sn	16 29 12.8	-12
FFC				LG		16 30 31.2	
FFC				Trac		16 30 53.0	
	comp=Z,14nm,0.7s						
WEMQ	**Wemindji, Queb**	**13.00**	**155**	PN	Pn	16 26 58.2	-5.1
WEMQ				SN	Sn	16 29 15.2	-12
WEMQ				LG		16 30 43.0	
GALN	**Gameti Lake**	**13.00**	**279**	PN	Pn	16 26 58.4	-5.0
GALN				SN	Sn	16 29 10.7	-17
EUNU	**Eureka**	**14.94**	**0**	PN	Pn	16 27 26.0	-3.7

*NIED **28** 16:24:00, 41°.90N×144°.00E, h14km, Mw3.7 Best double couple: M0=3.89000×10^14 NP1:φs=33.00000°, δ51.00000°, λ111.00000°. NP2:φs=181.00000°, δ44.00000°, λ66.00000°.*
*IDC **28** 16:24:38.0±1.1, 41°.84N×144°.13E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.6/24, mbtmp3.6/9, ML3.3/2, Error ellipse: s-maj=30.7km s-min=19.0km az=82.0*
*ISCJB **28** 16:24:42.0±1.2, 41°.88N±0°.06×144°.0E±0°.1, h42km±10km, mb3.7/8, Error ellipse: s-maj=16.6km s-min=9.6km az=21.5*
*JMA **28** 16:24:42.1±0.1, 41°.89N×144°.05E, h36km±3km, M3.9*
*NEIC **28** 16:24:42.1, 41°.89N×144°.05E, h36km, MG3.9(JMA), After JMA.*

ISC 28 16:24:42.4±1.5, 41°.92N±0°.05×144°.0E±0°.1, h27km±10km, n20, σ0§74/22, mb3.7/8, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.64**	**279**	*e*P	**Pb**	**16 24 54.8**	**-0.3**
JEM	**Erimo**	**0.64**	**279**	P	**Pb**	**16 24 54.9**	**-0.2**
JCH	**Churui**	**0.85**	**326**	P	**Pb**	**16 24 58.3**	**-0.2**
JOB	**Onbets**	**1.00**	**353**	P	**Pn**	**16 25 00.8**	**+0.2**
JNBK	**Urakawa-nobuka**	**1.00**	**292**	P	**Pn**	**16 25 01.2**	**+0.5**
JAK	**Akkeshi**	**1.20**	**25**	P	**Pn**	**16 25 02.9**	**-0.5**
JAR	**Ashorobuto**	**1.39**	**353**	P	**Pn**	**16 25 06.0**	**-0.1**
JAR				*e*S	**Sn**	**16 25 23.7**	**+0.1**
JBT2	**Biratori 2**	**1.49**	**306**	P	**Pn**	**16 25 07.0**	**-0.5**
ASAJ	**Asahikawa**	**2.43**	**335**	Pn	**Pn**	**16 25 21.8**	**+1.4**
	6.9nm,0.3s,baz=208,slow=15,SNR=32						
ASAJ				Sn	**Sn**	**16 25 47.7**	**-1.5**
	15nm,0.3s,baz=167,slow=26,SNR=8.1						
ASAJ	**Asahikawa**	**2.43**	**335**	*e*P	**Pn**	**16 25 21.8**	**+1.4**
YSS	**Yuzh-Sakhalins**	**5.12**	**350**	P	**Pn**	**16 25 58.2**	**+0.9**
MJAR	**Matsushiro Arr**	**7.00**	**222**	Pn	**Pn**	**16 26 23.3**	**+0.2**
	0.2nm,0.3s,baz=32,slow=13,SNR=5.0						
YAK	**Yakutsk**	**21.90**	**342**	*e*P	**P**	**16 29 29.1**	**-3.9**
	5.0nm,0.3s,mb4.4						
SONM	**Songino Array**	**27.11**	**296**	P	**P**	**16 30 24.7**	**+1.8**
	0.3nm,0.5s,mb3.1,baz=94,slow=8.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**40.29**	**308**	P	**P**	**16 32 16.7**	**-0.3**
	0.6nm,0.5s,mb3.6,baz=86,slow=10,SNR=3.5						
MKAR	**Makanchi Array**	**43.40**	**298**	P	**P**	**16 32 42.7**	**+0.2**
	0.4nm,0.2s,mb3.7,baz=74,slow=11,SNR=3.5						
ILAR	**Eielson Array**	**44.33**	**35**	P	**P**	**16 32 50.0**	**+0.3**
	0.5nm,0.6s,mb3.4,baz=266,slow=6.9,SNR=6.6						
WRA	**Warramunga Arr**	**62.19**	**190**	P	**P**	**16 35 00.5**	**-0.9**
	0.7nm,1.1s,mb3.7,baz=8.6,slow=6.8,SNR=2.8						
FINES	**FINESS Array B**	**65.44**	**332**	P	**P**	**16 35 21.7**	**-0.6**
	2.5nm,0.9s,mb4.2,baz=34,slow=4.8,SNR=5.3						
ASAR	**Alice Springs**	**65.92**	**190**	P	**P**	**16 35 25.4**	**-0.4**
	0.4nm,1.1s,mb3.4,baz=0.7,slow=7.6,SNR=3.0						

MEX 28 16:30:27.8±0.4, 28°.06N×112°.47W, h20km±26km, MD4.3, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.76**	**165**	*i*P	Pb	16 30 40.5	-1.9
SRIG				*e*S	Sb	16 30 49.3	-3.0
HSIG		**1.65**	**54**	*i*P	Pn	16 30 52.5	-3.0
HSIG				*e*S	Sn	16 31 12.2	-4.0
SPIG	**San Pedro Mart**	**3.96**	**319**	*i*P	Pn	16 31 25.1	-2.3
LPIG	**La Paz**	**4.39**	**153**	*i*P	Pn	16 31 31.2	-2.2
LPIG				*e*S	Sn	16 32 20.9	-3.0
MBIG	**Mexicali**	**4.94**	**332**	*i*P	Pn	16 31 38.6	-2.2
MBIG				*e*S	Sn	16 32 34.9	-2.5
HPIG		**6.14**	**99**	*i*P	Pn	16 31 60.0	+2.6
HPIG				*i*S	Sn	16 33 05.1	-2.1

*NIED **28** 16:36:00, 36°.70N×142°.40E, h23km, Mw3.8 Best double couple: M0=5.98000×10^14 NP1:φs=18.00000°, δ62.00000°, λ92.00000°. NP2:φs=193.00000°, δ28.00000°, λ86.00000°.*
*ISCJB **28** 16:36:53.3±1.6, 36°.66N±0°.03×142°.52E±0°.06, h20km±14km, mb3.7/8, Error ellipse: s-maj=7.9km s-min=4.9km az=16.3*
*JMA **28** 16:36:53.3±0.3, 36°.69N×142°.42E, h13km, M3.8*
*IDC **28** 16:36:53.2±1.1, 36°.61N×142°.45E, h0km, mb3.6/6, mb1 3.7/10, mb1mx3.6/26, mbtmp3.7/10, ML3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/32, Error ellipse: s-maj=26.6km s-min=19.4km az=86.0*
*NEIC **28** 16:36:57.0±4.8, 36°.71N×142°.34E, h28km±34km, mb4.1/2, Error ellipse: s-maj=22.2km s-min=13.4km az=129.0*

ISC 28 16:36:53.7±1.7, 36°.67N±0°.03×142°.44E±0°.06, h7km±12km, n30, σ0§97/43, mb3.7/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.38**	**289**	P	**Pn**	**16 37 17.6**	**-1.7**
JHO	**Hitachi**	**1.50**	**268**	P	**Pn**	**16 37 19.8**	**-1.2**
CHOJ	**Chosi**	**1.60**	**233**	P	**Pn**	**16 37 22.5**	**+0.2**
JMM	**Marumori**	**1.77**	**313**	P	**Pn**	**16 37 23.7**	**-1.0**
JFT	**Otama**	**1.88**	**297**	P	**Pn**	**16 37 25.8**	**-0.4**
JFT				S	**Sn**	**16 37 50.8**	**+0.7**
JIO	**Ouri**	**1.98**	**334**	P	**Pn**	**16 37 27.2**	**-0.3**
JIO				S	**Sn**	**16 37 51.3**	**-1.2**
BSO1	**Boso 1**	**2.34**	**211**	P	**Pn**	**16 37 32.7**	**+0.2**
BSO1				S	**Sn**	**16 38 00.3**	**-1.1**
JAG	**Ashikaga**	**2.41**	**265**	P	**Pn**	**16 37 33.3**	**-0.2**
JAG				S	**Sn**	**16 38 03.4**	**+0.1**
JMK	**Ichinoseki**	**2.47**	**337**	P	**Pn**	**16 37 34.7**	**+0.4**
JMK				S	**Sn**	**16 38 03.7**	**-1.0**
JYK	**Kaneyama**	**2.78**	**324**	P	**Pn**	**16 37 38.9**	**+0.3**
JYK				S	**Sn**	**16 38 13.5**	**+1.2**
JRY	**Ryogami san**	**2.93**	**258**	P	**Pn**	**16 37 40.2**	**-0.4**
JRY				S	**Sn**	**16 38 16.1**	**+0.1**
JOM	**Ohasama**	**2.94**	**342**	P	**Pn**	**16 37 41.2**	**+0.5**
JOM				S	**Sn**	**16 38 16.5**	**+0.3**
JOD2	**Odawara 2**	**3.06**	**244**	P	**Pn**	**16 37 42.6**	**+0.2**
MJAR	**Matsushiro Arr**	**3.40**	**269**	Pn	**Pn**	**16 37 47.8**	**+0.7**
	9.0nm,0.3s,baz=98,slow=12,SNR=117						
MJAR				Sn	**Sn**	**16 38 26.7**	**-1.0**
	baz=120,slow=9.2,SNR=3.5						
MJAR	**Matsushiro Arr**	**3.40**	**269**	Pn	**Pn**	**16 37 47.8**	**+0.7**
MJAR				Sn	**Sn**	**16 38 26.7**	**-1.0**
MAJO	**Matsushiro**	**3.41**	**269**	*e*P	**Pn**	**16 37 47.4**	**+0.3**
MAT	**Matsushiro**	**3.41**	**269**	P	**Pn**	**16 37 48.0**	**+0.9**
MAT				S	**Sn**	**16 38 30.0**	**+2.3**
JHJ	**Hachijo jima 2**	**4.16**	**212**	Pn	**Pn**	**16 37 56.8**	**-0.8**
	9.5nm,0.3s,baz=64,slow=24,SNR=5.9						
JHJ				Sn	**Sn**	**16 38 41.7**	**-4.7**
	39nm,0.3s,baz=85,slow=23,SNR=7.1						
ERM	**Erimo**	**5.37**	**6**	*e*P	**Pn**	**16 38 14.4**	**+0.4**
**ASAJ

VNA3	Neumayer Olymp	12.10	155	*e*P		Pn	16 49 55.9 -1.3
VNA3				*e*S		Sn	16 51 59.5 -12
VNA2	Neumayer--Watz	12.36	152	*e*P		Pn	16 49 59.3 -1.5
baz=306,slow=16							
VNA2				*e*S		Sn	16 52 08.8 -10
SNAA	Sanae	13.96	150	Pn		Pn	16 50 24.0 +1.5
1.2nm,0.3s,baz=309,slow=13,SNR=105							
SNAA				Sn		Sn	16 52 49.9 -7.3
0.2nm,0.3s,baz=357,slow=18,SNR=5.9							
SNAA				LR		LR	16 54 33.2
comp=Z,90nm,21.9s,baz=23,slow=31							
MAIT	Maitri	17.77	139	*e*P		Pn	16 51 14.0 +1.8
EFI	East Falkland	20.11	283	P		P	16 51 40.2 +1.6
QSPA	South Pole Qui	29.28	180	P		P	16 53 13.2 +6.3
1.4nm,0.5s,mb3.9,baz=188,slow=1.7,SNR=9.7							
QSPA	South Pole Qui	29.28	180	*e*P		P	16 53 12.6 +5.8
9.3nm,1.4s,mb4.3							
TRQA	Tornquist	32.27	298	*e*P		P	16 53 33.2 -0.3
PLCA	Paso Flores	33.97	286	P		P	16 53 49.4 +1.0
1.4nm,0.7s,mb4.0,baz=150,slow=7.9,SNR=5.5							
PLCA				LR		LR	17 07 32.8
comp=Z,97nm,20.7s,MS3.5,baz=116,slow=36							
PLCA	Paso Flores	33.97	286	P		P	16 53 47.1 -1.3
PLCA				LR		LR	17 07 32.8
MAW	Mawson	35.75	139	LR		LR	17 07 23.6
comp=Z,94nm,19.6s,MS3.6,baz=60,slow=34							
CFAA	Coronel Fontan	40.45	297	P		P	16 54 40.9 -2.5
0.2nm,0.3s,mb3.4,baz=175,slow=10,SNR=16							
CFAA				PcP		PcP	16 56 47.8 +1.8
0.1nm,0.4s,baz=136,slow=3.7,SNR=3.6							
CFAA	Coronel Fontan	40.45	297	P		P	16 54 40.9 -2.5
CFAA				PcP		PcP	16 56 47.8 +1.8
CPUP	Villa Florida	40.79	314	P		P	16 54 44.4 -1.8
0.5nm,0.3s,mb3.6,baz=137,slow=9.6,SNR=4.2							
CPUP				LR		LR	17 08 18.2
comp=Z,64nm,21.6s,MS3.5,baz=136,slow=32							
CPUP	Villa Florida	40.79	314	P		P	16 54 44.4 -1.8
CPUP				LR		LR	17 08 18.2
SUR	Sutherland	41.37	68	P		P	16 54 51.4 +0.4
7.4nm,1.0s,mb4.3,baz=164,slow=7.4,SNR=2.5							
BOSA	Boshof	46.58	70	P		P	16 55 32.8 -0.1
3.6nm,0.8s,mb4.3,baz=230,slow=12,SNR=4.4							
BOSA				LR		LR	17 10 06.5
comp=Z,47nm,20.8s,MS3.4,baz=346,slow=30							
BOSA	Boshof	46.58	70	*e*P		P	16 55 33.0 +0.2
17nm,1.4s,mb4.8							
BOSA				LR		LR	17 10 06.5
BDFB	Brasilia	48.07	330	LR		LR	17 13 34.8
comp=Z,63nm,19.1s,MS3.6,baz=170,slow=33							
LPAZ	La Paz	53.98	306	P		P	16 56 29.1 +0.1
2.1nm,0.6s,mb4.2,baz=154,slow=4.2,SNR=14							
LPAZ				LR		LR	17 15 41.6
comp=Z,40nm,20.5s,MS3.5,baz=131,slow=32							
RPN	Rapa Nui	63.74	261	*e*P		P	16 57 37.6 +0.9
ATAH	Atahualpa	66.43	300	LR		LR	17 25 34.8
comp=Z,65nm,21.2s,MS3.8,baz=200,slow=35							
LIC	Lamto	68.86	22	*e*P		P	16 58 09.4 -0.2
41nm,1.6s,mb5.1							
KIC	Kosan Boka	69.05	22	*e*P		P	16 58 10.5 -0.2
8.5nm,0.8s,mb4.7							
TIC	Toumodi	69.28	22	*e*P		P	16 58 12.2 0.0
6.5nm,0.2s							
DBIC	Dimbokro	69.33	22	P		P	16 58 12.4 0.0
5.8nm,0.8s,mb4.5,baz=181,slow=6.8,SNR=6.8							
ROSC	El Rosal	75.72	309	LR		LR	17 29 35.2
comp=Z,41nm,19.0s,MS3.8,baz=46,slow=34							
STKA	Stephens Creek	86.91	169	LR		LR	17 38 20.2
comp=Z,93nm,18.0s,MS4.2,baz=204,slow=35							
ASAR	Alice Springs	94.04	161	P		P	17 00 25.6 +2.3
0.7nm,0.8s,mb4.1,baz=178,slow=3.7,SNR=9.9							
WRA	Warramunga Arr	97.76	161	P		P	17 00 42.4 +2.2
0.4nm,0.8s,mb4.0,baz=200,slow=4.5,SNR=2.7							
YKA	Yellowknife Ar	140.31	313	PKP		PKPdf	17 06 33.4 +1.0
1.4nm,0.7s,baz=112,slow=2.2,SNR=4.8							
YKA	Yellowknife Ar	140.31	313	PKP		PKPdf	17 06 33.4 +1.0
SONM	Songino Array	149.83	94	PKPbc		PKPbc	17 06 55.7 +1.6
1.8nm,0.9s,baz=221,slow=1.5,SNR=11							
INK	Inuvik	150.04	315	PKPbc		PKPbc	17 06 55.0 +1.0
2.8nm,0.6s,baz=87,slow=3.8,SNR=7.5							
INK	Inuvik	150.04	315	PKPbc		PKPbc	17 06 55.0 +1.0
KSRS	Korea Array	151.15	132	PKPbc		PKPbc	17 06 59.9 +2.3
0.7nm,0.7s,baz=166,slow=3.0,SNR=3.9							
ILAR	Eielson Array	153.84	304	PKPbc		PKPbc	17 07 04.7 +2.0
1.1nm,0.7s,baz=117,slow=0.8,SNR=10							

*ISCJB **28** 17:07:22.5±1.3, 39.°90N±0.°08×37.°76E±0.°06, h25km±8km, Error ellipse: s-maj=14.6km s-min=6.7km az=16.7*
*CSEM **28** 17:07:22.5±0.5, 39.°87N×37.°75E, h20km, MD2.9, Error ellipse: s-maj=11.0km s-min=5.1km az=18.0*
*ISK **28** 17:07:22.6, 39.°46N×37.°50E, h11km, MD2.8*
*DDA **28** 17:07:23.4, 39.°61N×37.°62E, h7km±2km, Md2.9*
ISC 28 17:07:22.7±1.2, 39.°86N±0.°08×37.°76E±0.°06, h17km±5km, n14, σ0.°78/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCER	sogukcermik	0.49	270	*i* P		Pg	17 07 32.1 -0.4
SCER				*i* S		Sg	17 07 39.5 +0.5
SCER	sogukcermik	0.49	270	*i* P		Pg	17 07 32.1 -0.3
SCER				*i* S		Sg	17 07 39.5 +0.5
KEMA	Kemaliye	0.82	136	*i* P		Pg	17 07 38.0 -0.6
KEMA				*i* S		Sg	17 07 49.2 -0.2
KEMA	Kemaliye	0.82	136	*i* P		Pg	17 07 38.0 -0.6
KEMA				*i* S		Sg	17 07 49.2 -0.3
DARE	Darende-Malaty	0.91	178	*e*PG		Pg	17 07 40.6 +0.3
DARE				*e*SG		Sg	17 07 52.9 +0.6
DARE	Darende-Malaty	0.91	178	*e*Pg		Pg	17 07 40.6 +0.2
DARE				*e*Sg		Sg	17 07 52.9 +0.6
SARI	SarD1z-Kayseri	1.44	215	*e*PN		Pn	17 07 48.4 +0.5
SARI				*e*SN		Sn	17 08 06.2 -0.3
SARI	SarD1z-Kayseri	1.44	215	*e*Pn		Pn	17 07 48.4 +0.4
SARI				*e*Sn		Sn	17 08 06.2 -0.3
AKCD	Akcadag	1.57	175	*i* P		Pn	17 07 48.7 -1.0
AKCD				*i* S		Sn	17 08 05.2 -4.4
AKCD	Akcadag	1.57	175	*i* P		Pn	17 07 48.7 -1.0
AKCD				*i* S		Sn	17 08 05.2 -4.4
PTK	Pertek	1.59	127	*e*PN		Pn	17 07 50.7 +0.7
PTK				*e*SN		Sn	17 08 12.2 +2.0
PTK	Pertek	1.59	127	*e*Pn		Pn	17 07 50.7 +0.7
PTK				*e*Sn		Sn	17 08 12.2 +2.0
SVRC	Sivrice-ELAZID	1.91	140	*e*PN		Pn	17 07 53.7 -0.7
SVRC				*e*SN		Sn	17 08 17.1 -0.8
SVRC	Sivrice-ELAZID	1.91	140	*e*Pn		Pn	17 07 53.7 -0.7
SVRC				*e*Sn		Sn	17 08 17.1 -0.9

*ISCJB **28** 17:24:24.7±0.9, 36.°80N±0.°06×69.°8E±0.°2, h33km, Error ellipse: s-maj=21.4km s-min=5.9km az=160.1*
*NNC **28** 17:24:35.4±9.8, 37.°57N×69.°74E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=93.8km s-min=78.1km az=74.0*
ISC 28 17:24:26.9±0.9, 36.°74N±0.°07×69.°8E±0.°2, h35km, n6, σ0.°58/9, 6C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.41	148	⇑P		Pn	17 25 18.8 +1.3
CEP				S		Sn	17 25 56.0 -0.6
CHCP	Chirah Chowk	4.21	136	⇑P		Pn	17 25 28.2 -0.4
THW	Thamme Wali	4.27	157	⇑P		Pn	17 25 29.4 +0.1
KK31	Karatay Array	6.38	5	⇑Pn		Pn	17 26 03.4 +5.1
0.6nm,0.3s,baz=183,slow=13,SNR=19							
KK31				⇑Sn		Sn	17 27 10.2 +0.3
2.3nm,0.3s,baz=191,slow=25,SNR=9.1							
TKM2	Tokmak 2	7.63	34	⇓Pn		Pn	17 26 15.3 -0.2
4.2nm,0.5s							
AB31	Akbulak array	14.40	333	⇑P		Pn	17 27 47.5 -0.5
0.4nm,0.6s,baz=118,slow=15,SNR=7.9							
AB31				⇑Sn		Sn	17 30 26.4 0.0
0.4nm,0.6s							

*CSEM **28** 17:40:33.8±1.4, 39.°78N×44.°03E, h10km, MD3.0, Error ellipse: s-maj=28.2km s-min=12.7km az=22.0*
*DDA **28** 17:40:34.3, 39.°60N×44.°08E, h10km±3km, Md3.0*
ISC 28 17:40:34.7±2.5, 39.°8N±0.°1×43.°98E±0.°10, h10km, n9, σ0.°95/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	Diyadin	0.33	222	*i* P		Pg	17 40 41.4 +0.2
DYDN				*i* S		Sg	17 40 45.2 -0.5
DYDN	Diyadin	0.33	222	*i* P		Pg	17 40 41.4 +0.2
DYDN				*i* S		Sg	17 40 45.2 -0.4
CLDR	Caldiran	0.65	184	*e*PG		Pg	17 40 41.2 -6.0
AGRB	Hanur-Agry	0.79	255	*e*PG		Pg	17 40 50.6 +0.7
AGRB				*e*SG		Sg	17 41 01.5 +1.4
AGRB	Hanur-Agry	0.79	255	*e*Pg		Pg	17 40 50.6 +0.7
AGRB				*e*Sg		Sg	17 41 01.5 +1.3
TUTA	Tutak	0.98	247	*i* P		Pg	17 40 53.0 -0.5
TUTA				*i* S		Sg	17 41 04.8 -1.3
TUTA	Tutak	0.98	247	*i* P		Pg	17 40 53.0 -0.5
TUTA				*i* S		Sg	17 41 04.8 -1.4
HAKT	HAKKARI	2.24	185	*i* P		Pn	17 41 10.6 -1.1
HAKT				*i* S		Sn	17 41 40.6 +1.2
HAKT	HAKKARI	2.24	185	*i* P		Pn	17 41 10.6 -1.2
HAKT				*i* S		Sn	17 41 40.6 +1.2

IDC 28 17:59:44.2±1.6, 14.°41S×174.°47W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.9/15, mbtmp3.9/5, MS3.7/3, Ms1 3.7/3, ms1mx3.2/29, Error ellipse: s-maj=99.1km s-min=24.1km az=145.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	24.13	101	*e*LR	LR	18 09 57.0	
170nm,25.8s							
URZ	Urewera	24.90	196	LR	LR	18 12 52.1	
comp=Z,140nm,18.1s,baz=190,slow=32							
TBI	Tubuai	25.25	114	*e*LR	LR	18 10 30.0	
151nm,27.0s							
STKA	Stephens Creek	43.65	239	P	P	18 07 49.7	-1.0
2.7nm,0.8s,baz=97,slow=7.2,SNR=4.4							
STKA				LR	LR	18 22 07.5	
comp=Z,71nm,19.3s,baz=295,slow=31							
WRA	Warramunga Arr	49.07	256	P	P	18 08 34.4	+0.9
0.4nm,0.3s,baz=88,slow=7.1,SNR=2.8							
ASAR	Alice Springs	49.44	251	P	P	18 08 36.4	+0.1
3.3nm,0.8s,baz=85,slow=8.3,SNR=6.7							
NVAR	Mina Array Bea	74.30	43	P	P	18 11 32.8	+9.3
0.7nm,0.9s,baz=231,slow=9.4,SNR=4.5							
TXAR	Lajitas Array	80.93	57	P	P	18 12 01.9	+1.1
0.8nm,1.0s,baz=235,slow=5.9,SNR=6.6							
ILAR	Eielson Array	81.68	12	P	P	18 12 03.7	-0.3
0.4nm,0.7s,baz=209,slow=7.2,SNR=3.4							
TKL	Tuckaleechee C	98.81	55	LR	LR	18 51 17.6	
comp=Z,47nm,18.3s,baz=312,slow=31							
BRTR	Keskin Array B	144.74	321	PKP	PKPdf	18 19 22.7	-0.6
5.6nm,1.0s,baz=318,slow=1.7,SNR=7.8							
GERES	GERESS Array B	145.01	351	PKPbc	PKPbc	18 19 21.2	-1.5
0.3nm,0.7s,baz=27,slow=6.6,SNR=2.5							

*ISCJB **28** 18:03:41.8±4.7, 6.°1S±0.°2×130.°4E±0.°2, h49km±47km, mb4.7/13, Error ellipse: s-maj=38.6km s-min=19.3km az=139.9*
*IDC **28** 18:03:43.6±4.2, 6.°06S×130.°49E, h45km±38km, mb3.8/6, mb1 4.2/9, mb1mx4.0/15, mbtmp4.0/9, ML4.5/3, Error ellipse: s-maj=49.2km s-min=19.3km az=69.0*
*NEIC **28** 18:03:49.0±1.8, 6.°10S×130.°29E, h94km±17km, mb5.2/7, Error ellipse: s-maj=27.3km s-min=10.5km az=58.0*
ISC 28 18:03:43.4±3.5, 6.°0S±0.°2×130.°5E±0.°2, h45km±36km, n24, σ0.°66/20, mb4.7/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.91	164	*e*Pn		Pn	18 05 27.7 +5.5
113nm,0.3s							
KAKA				*e*Sn		Sn	18 06 39.8 +0.3
FITZ	Fitzroy Crossi	12.89	201	P		Pn	18 06 43.8 -0.3
1.8nm,0.3s,baz=30,slow=11,SNR=36							
FITZ				S		Sx	18 08 55.9
1.2nm,0.3s,baz=59,slow=18,SNR=6.2							
WRA	Warramunga Arr	14.32	165	P		Pn	18 07 02.6 -1.1
2.6nm,0.3s,baz=340,slow=14,SNR=54							
WRA				S		Sx	18 09 27.9
0.5nm,0.3s,baz=344,slow=17,SNR=4.2							
WB2	Warramunga Arr	14.33	165	*e*P		Pn	18 07 03.5 -0.1
ASAR	Alice Springs	17.84	170	P		Pn	18 07 49.9 +1.5
1.7nm,0.3s,baz=350,slow=8.4,SNR=164							
ASAR				S		Sx	18 10 59.8
0.6nm,0.3s,baz=358,slow=27,SNR=6.1							
CMAR	Chiang Mai Arr	39.49	309	P		P	18 11 10.2 +0.3
1.1nm,0.4s,mb4.0,baz=136,slow=7.1,SNR=13							
ODAN	Odare	52.99	310	*e*P		P	18 12 55.7 -0.2
9.2nm,0.5s,mb5.0							
TAPN	Taplejung	53.01	311	*e*P		P	18 12 56.0 0.0
14nm,0.3s,mb5.3							
GUN	Gumba	54.69	310	*e*P		P	18 13 08.3 0.0
22nm,0.4s,mb5.5							
KKN	Kakani	55.08	310	*e*P		P	18 13 10.8 -0.3
7.7nm,0.4s,mb5.1							
DMN	Daman	55.12	310	*e*P		P	18 13 11.3 -0.1
5.5nm,0.4s,mb5.0							
GKN	Gorkha	55.68	310	*e*P		P	18 13 15.0 -0.4
17nm,0.3s,mb5.5							
KOLN	Koldanda	56.36	309	*e*P		P	18 13 20.0 -0.3
8.0nm,0.5s,mb5.0							
SONM	Songino Array	57.69	341	P		P	18 13 30.7 +1.5
0.7nm,0.6s,mb3.9,baz=168,slow=5.6,SNR=5.6							
MK31	Makanchi Array	67.69	326	*e*P		P	18 14 36.5 +0.5
MKAR	Makanchi Array	67.69	326	P		P	18 14 36.5 +0.6
2.8nm,0.5s,mb4.5,baz=124,slow=7.7,SNR=49							
ZALV	Zalesovo Beam	70.94	333	P		P	18 14 55.6 -0.3
1.0nm,0.4s,mb4.1,baz=128,slow=6.1,SNR=5.5							
MAW	Mawson	76.02	201	P		P	18 15 25.3 -0.3
1.0nm,0.5s,mb4.0,baz=65,slow=17,SNR=2.4							
ILAR	Eielson Array	92.27	25	P		P	18 16 47.2 -1.2
0.4nm,0.8s,mb3.8,baz=271,slow=4.5,SNR=4.1							
ULM	Lac du Bonnet	121.38	33	PKP	PKPdf	18 22 33.8	+2.0
5.4nm,1.0s,baz=303,slow=7.4,SNR=3.1							
CPUP	Villa Florida	146.95	167	PKPbc	PKPbc	18 23 21.7	-0.1
0.3nm,0.4s,baz=180,slow=16,SNR=2.5							
CPUP	Villa Florida	146.95	167	PKPbc	PKPbc	18 23 21.7	-0.2
LPAZ	La Paz	151.17	141	PKPbc	PKPbc	18 23 33.0	+0.2
0.5nm,0.4s,baz=198,slow=2.1,SNR=4.0							
LPAZ	La Paz	151.17	141	PKPbc	PKPbc	18 23 33.0	+0.2

*NEIC **28** 18:10:46.5±1.3, 51.°69N×16.°30E, h5km, ML2.9(SZGRF), Error ellipse: s-maj=18.1km s-min=7.3km az=214.0*
*ISCJB **28** 18:10:47.0±0.5, 51.°53N±0.°02×16.°02E±0.°03, h0km, Error ellipse: s-maj=3.7km s-min=2.5km az=30.7*
*IPEC **28** 18:10:47.8±0.3, 51.°65N×16.°16E, h0km±1km, ML2.6/3, Error ellipse: s-maj=2.1km s-min=1.6km az=32.0*
*CSEM **28** 18:10:47.9±0.2, 51.°58N×16.°05E, h2km, ML3.5/11, Error ellipse: s-maj=4.1km s-min=2.7km az=36.0*
*PRU **28** 18:10:48.8, 51.°57N×16.°05E, h0km, Felt In Harrachov*
*WAR **28** 18:10:49.6, 51.°58N×15.°99E, ML2.8, Mining Induced*
*VIE **28** 18:10:51.3±0.5, 51.°33N×16.°06E, h0km, mb2.2/4, ML3.0/4, Error ellipse: s-maj=3.3km s-min=3.1km az=170.0 71 km WNW of Wroclaw Suspected Mining induced.*
ISC 28 18:10:47.9±0.5, 51.°58N±0.°02×16.°05E±0.°03, h0km, n60, σ0.°86/114, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.75	168	*e*Pg		Pg	18 11 03.6 +1.3
KSP				*e*Sg		Sg	18 11 13.9 +1.8
KSP	Ksiaz	0.75	168	*e*Pg		Pg	18 11 03.6 +1.3
KSP				*i* Sg		Sg	18 11 13.8 +1.7
KSP	Ksiaz	0.75	168	*e*Pg		Pg	18 11 03.4 +1.1
baz=354							
KSP				*e*Sg		Sg	18 11 13.4 +1.3
baz=354							
UPC	Upice	1.07	181	*e*PG		Pg	18 11 09.2 +0.7
UPC	Upice	1.07	181	Pg		Pg	18 11 09.2 +0.7
DPC	Dobruska-Polom	1.24	172	*e*PG		Pg	18 11 12.3 +0.6
DPC				*e*SG		Sg	18 11 28.6 +0.8
comp=Z,51nm,0.4s							
DPC	Dobruska-Polom	1.24	172	Pg		Pg	18 11 12.3 +0.6
DPC				Sg		Sg	18 11 28.6 +0.8
comp=Z,51nm,0.4s							
PVCC	Panska Ves	1.41	222	*e*PG		Pg	18 11 14.8 0.0
PVCC				*e*SG		Sg	18 11 33.6 +0.6
comp=Z,136nm,0.2s							
PVCC	Panska Ves	1.41	222	*e*Pg		Pg	18 11 15.3 +0.5
baz=41							
PVCC				Sg		Sg	18 11 33.6 +0.6
comp=Z,136nm,0.2s							
BRG	Berggiesshubel	1.50	243	PN		Pn	18 11 16.0 0.0
BRG				PG		Pg	18 11 16.8 +0.2
BRG				SG		Sg	18 11 36.6 +0.5
comp=Z,103nm,0.3s							
RUE	Ruedersdorf	1.67	304	*e*Pn		Pn	18 11 17.6 -0.7
RUE				*e*Sg		Sg	18 11 42.1 +0.7
RUE	Ruedersdorf	1.67	304	*e*Pn		Pn	18 11 17.6 -0.7
RUE				*e*Sg		Sg	18 11 42.1 +0.7
PRU	Pruhonice	1.86	212	*e*PN		Pn	18 11 21.7 +0.8
PRU				*e*PG		Pg	18 11 23.6 +0.1
PRU				*e*SG		Sg	18 11 47.5 0.0
comp=Z,41nm,0.5s							
PRU	Pruhonice	1.86	212	Pn		Pn	18 11 21.7 +0.8
PRU	Pruhonice	1.86	212	Pg		Pg	18 11 23.6 +0.1
PRU				Sg		Sg	18 11 47.5 0.0
comp=Z,41nm,0.5s							
CLL	Collm	1.92	263	*i* Pn		Pn	18 11 21.3 -0.6
CLL				*e*Pg		Pg	18 11 24.0 -0.8
CLL				*e*Sg		Sg	18 11 50.0 +0.3
CLL	Collm	1.92	263	*i* Pn		Pn	18 11 21.3 -0.6
comp=Z,12nm,0.5s							
CLL				*e*Pg		Pg	18 11 24.0 -0.8
CLL				*i*			18 11 28.3
CLL				*e*Sg		Sg	18 11 50.0 +0.3
comp=Z,22nm,0.4s							
CLL	Collm	1.92	263	*i* Pn		Pn	18 11 21.3 -0.6
MORC	Moravsky Berou	2.04	152	*e*Pn		Pn	18 11 23.6 +0.1
MORC	Moravsky Berou	2.04	152	*e*Pn		Pn	18 11 23.8 +0.3
baz=335							
MORC				*e*Sg		Sg	18 11 52.7 -0.7
comp=Z,26nm,0.3s,baz=335							
OKC	Ostrava-Krasne	2.20	142	*e*PG		Pg	18 11 29.4 -0.6
OKC				*e*SG		Sg	18 11 59.4 +1.0
comp=Z,40nm,0.4s							
OKC	Ostrava-Krasne	2.20	142	Pg		Pg	18 11 29.4 -0.6
OKC				Sg		Sg	18 11 59.4 +1.0
comp=Z,40nm,0.4s							
VRAC	Vranov	2.30	171	*e*Pn		Pn	18 11 27.8 +0.8
baz=353							
VRAC				*e*Sg		Sg	18 12 01.7 -0.1
comp=Z,18nm,0.3s,baz=353							
TREC	Trest	2.31	189	*e*SG		Sg	18 12 02.3 +0.1
TREC	Trest	2.31	189	Sg		Sg	18 12 02.3 +0.1
KRUC	Moravsky	2.53	175	*e*Pn		Pn	18 11 31.2 +1.0
baz=357							
KRUC				*e*Sg		Sg	18 12 09.2 0.0
comp=Z,39nm,0.9s,baz=357							
NKC	Novy Kostel	2.65	241	*e*PN		Pn	18 11 32.2 +0.4
NKC				*e*PG		Pg	18 11 38.1 -0.5
NKC				*e*SG		Sg	18 12 13.1 +0.2
comp=Z,42nm,0.3s							
NKC	Novy Kostel	2.65	241	Pn		Pn	18 11 32.2 +0.4
OJC	Ojcow	2.74	118	*e*Pg		Pg	18 11 39.9 -0.5
OJC				*e*Sg		Sg	18 12 15.6 -0.2
OJC	Ojcow	2.74	118	*e*Pg		Pg	18 11 39.9 -0.5
OJC				*e*Sg		Sg	18 12 15.6 -0.2
KHC	Kasperske Hory	2.92	214	*e*Pn		Pn	18 11 36.0 +0.5
KHC	Kasperske Hory	2.92	214	*e*PN		Pn	18 11 35.6 +0.1
KHC				*e*PG		Pg	18 11 41.8 -2.0
KHC				*e*SN		Sn	18 12 10.0 -1.2
KHC				*e*SG		Sg	18 12 20.1 -1.5
comp=Z,12nm,0.4s							
KHC	Kasperske Hory	2.92	214	*e*Pn		Pn	18 11 36.0 +0.5
KHC	Kasperske Hory	2.92	214	Pg		Pg	18 11 41.8 -2.0
KHC				Sg		Sg	18 12 20.1 -1.5
comp=Z,12nm,0.4s							
MOX	Moxa	2.94	253	*e*PN		Pn	18 11 36.1 +0.2
MOX				*e*PG		Pg	18 11 44.0 -0.3
MOX				*e*SG		Sg	18 12 23.3 +0.8
MOX	Moxa	2.94	253	*e*Pn		Pn	18 11 36.1 +0.2
GEC2	GERESS Array S	3.12	210	*e*Pn		Pn	18 11 39.6 +1.2
GEC2				*e*Pg		Pg	18 11 46.6 -1.2
GEC2				*e*Sg		Sg	18 12 26.4 -1.8
GEC2	GERESS Array S	3.12	210	*e*Pn		Pn	18 11 39.6 +1.2
WET	Wettzell	3.17	221	*e*Pn		Pn	18 11 39.4 +0.4
WET				*e*Sg		Sg	18 12 30.1 +0.4
WET	Wettzell	3.17	221	*e*Pn		Pn	18 11 39.4 +0.4
WET				*e*Sg		Sg	18 12 30.1 +0.4
KOLL	Kolacno	3.37	152	*e*Pn		Pn	18 11 39.7 -2.0
KOLL				*e*Sg		Sg	18 12 37.1 +1.1
KOLL	Kolacno	3.37	152	*e*PN		Pn	18 11 39.7 -2.0
KOLL				*e*SG		Sg	18 12 37.1 +1.1
KOLL	Kolacno	3.37	152	*e*Pn		Pn	18 11 39.7 -2.0
KOLL				*e*Sg		Sg	18 12 37.1 +1.1
CLZ	Clausthal	3.54	276	*e*Pn		Pn	18 11 44.6 +0.5
CLZ				*e*Sg		Sg	18 12 40.7 -0.8
CLZ	Clausthal	3.54	276	*e*Pn		Pn	18 11 44.6 +0.5
CLZ				*e*Sg		Sg	18 12 40.7 -0.8
VYHS	Vyhne	3.57	149	*e*Pn		Pn	18 11 41.4 -3.1
VYHS				*e*Sg		Sg	18 12 41.6 -1.1
VYHS	Vyhne	3.57	149	*e*PN		Pn	18 11 41.3 -3.2
VYHS				*e*SG		Sg	18 12 41.6 -1.1
VYHS	Vyhne	3.57	149	*e*Pn		Pn	18 11 41.4 -3.1
VYHS				*e*Sg		Sg	18 12 41.6 -1.1
BSD	Bornholm Skovb	3.61	350	*i* P		Pn	18 11 43.9 -1.1
BSD				*i* S		Sn	18 12 23.1 -5.1
BSD				*i* LG			18 12 26.5
BSD	Bornholm Skovb	3.61	350	*i* P		Pn	18 11 43.9 -1.1

MOY Mondy 1.20 16 *e*Pg **Pg 18 40 41.1 -0.1**
MOY Pmax 18 40 43.8
comp=N,802nm,0.4s
MOY *e*Sg **Sg 18 40 58.7 +1.9**
MOY *e* 18 41 03.7
MOY max 18 41 05.0
comp=N,8µm,1.0s
ZAK Zakamensk 1.81 93 *e*PN **Pn 18 40 41.0 -8.4**
ZAK *e* 18 40 51.0
ZAK *e* 18 41 16.7
ZAK pmax pmax
comp=Z,591nm,0.5s
ZAK smax
comp=N,4µm,0.4s
ZAK Zakamensk 1.81 93 ⇊*i*Pg **Pn 18 40 50.9 +1.5**
ZAK Pmax 18 40 52.5
comp=N,451nm,0.4s
ZAK *i* Sg **Sg 18 41 16.6 +0.2**
ZAK Smax 18 41 20.9
comp=N,4µm,0.4s
ARS Arshan 1.87 41 *e*PN **Pg 18 40 54.7 +0.6**
ARS Arshan 1.87 41 *e* **Pn 18 40 50.7 +0.4**
ARS *e*Pg **Pg 18 40 53.8 -0.3**
ARS *e* 18 40 59.9
ARS max 18 41 01.6
comp=N,2µm,0.4s
ARS *e*Sg **Sg 18 41 21.1 +2.8**
ARS Smax 18 41 27.6
comp=N,8µm,0.8s
ORL Orlik 2.06 349 *e*PN **Pb 18 40 56.4 +0.7**
ORL *e* 18 41 24.1
ORL pmax pmax
comp=Z,1µm,0.3s
ORL smax
comp=N,8µm,0.7s
ORL Orlik 2.06 349 Pn **Pn 18 40 52.6 -0.3**
ORL *e*Pg **Pg 18 40 55.7 -2.1**
ORL *e* 18 40 56.7
ORL max 18 40 57.1
comp=N,907nm,0.4s
ORL *e*Sg **Sg 18 41 24.1 -0.4**
ORL *e*SgSg 18 41 26.6
ORL max 18 41 27.7
comp=N,8µm,0.9s
TLY Talaya 2.32 59 *e*Pn **Pn 18 40 51.1 -5.3**
TLY *e*Pg **Pg 18 41 01.1 -1.6**
TLY *e*Sg **Sg 18 41 33.4 +0.6**
TLY Talaya 2.32 59 *e*PN **Pn 18 40 51.1 -5.4**
TLY *e* 18 41 01.1
TLY *e* 18 41 33.4
TLY Talaya 2.32 59 *e*Pn **Pn 18 40 58.8 +2.3**
TLY ⇊*i*Pg **Pg 18 41 01.0 -1.7**
TLY Pmax 18 41 01.7
comp=N,1µm,0.9s
TLY *i* Sg **Sg 18 41 33.8 +1.1**
TLY Smax 18 41 38.1
comp=N,2µm,1.4s
IRK Irkutsk 2.95 53 *e*PN **Pn 18 41 08.1 +3.0**
IRK *e* 18 41 51.8
IRK pmax pmax
comp=Z,1µm,0.5s
IRK smax
comp=N,4µm,0.6s
IRK Irkutsk 2.95 53 *e*Pn **Pn 18 41 08.0 +2.9**
IRK *e*Pg **Pg 18 41 12.1 -2.6**
IRK Pmax 18 41 15.2
comp=N,1µm,0.9s
IRK *e*Sg **Sg 18 41 53.0 +0.2**
IRK Smax 18 41 57.9
comp=N,4µm,0.5s
LSTR Listvyanka 3.06 62 *e*Pn **Pn 18 41 07.4 +0.7**
LSTR ⇑*i*Pg **Pg 18 41 14.3 -2.6**
LSTR Pmax 18 41 14.7
comp=N,367nm,1.1s
LSTR *e*Sn **Sn 18 41 42.1 -1.2**
LSTR *e*Sg **Sg 18 41 56.1 -0.5**
LSTR Smax 18 42 09.6
comp=N,1µm,1.6s
STDB Stepnoy Dvoret 4.05 64 *e*Pn **Pn 18 41 22.8 +2.5**
STDB ⇑*i*Pg **Pg 18 41 33.3 -2.6**
STDB Pmax 18 41 38.3
comp=N,591nm,0.9s
STDB *i* Sg **Sg 18 42 28.8 +0.4**
STDB Smax 18 42 44.9
comp=N,4µm,1.2s
KAB Kabansk 4.18 66 *e*PN **Pg 18 41 34.7 -3.6**
KAB *e* 18 42 31.6
KAB pmax pmax
comp=Z,386nm,0.9s
KAB smax
comp=N,2µm,1.6s
KAB Kabansk 4.18 66 *e*Pn **Pn 18 41 22.5 +0.5**
KAB ⇊*i*Pg **Pg 18 41 34.7 -3.6**
KAB Pmax 18 41 51.2
comp=N,531nm,1.2s
KAB *i* Sg **Sg 18 42 31.8 -0.6**
KAB Smax 18 42 54.1
comp=N,2µm,1.4s
HRMR Khuramsha 4.24 72 *e*Pn **Pn 18 41 25.0 +2.1**
HRMR *e*Pg **Pg 18 41 35.0 -4.5**
HRMR Pmax 18 41 36.8
comp=N,805nm,0.5s
HRMR *e*Sg **Sg 18 42 32.9 -1.5**
HRMR Smax 18 42 38.3
comp=N,6µm,0.9s
TRG Tyrgan 4.30 56 *e*PN **Pn 18 41 23.5 -0.1**
TRG *e* 18 41 35.2
TRG *e*S **Sn 18 42 14.7 +0.9**
TRG *e* 18 42 31.5
TRG pmax pmax
comp=Z,163nm,0.4s
TRG smax
comp=N,658nm,0.6s
TRG Tyrgan 4.30 56 *e*Pn **Pn 18 41 25.0 +1.4**
TRG *e*Pg **Pg 18 41 35.4 -5.2**
TRG Pmax 18 41 37.6
comp=N,175nm,1.1s
TRG *e*Sg **Sg 18 42 31.8 -4.4**
TRG Smax 18 42 39.3
comp=N,689nm,1.2s
ZRHB Zarechye 4.65 61 *e*Pn **Pn 18 41 31.4 +3.0**
ZRHB *e*Pg **Pg 18 41 42.5 -4.7**
ZRHB Pmax 18 41 53.3
comp=N,665nm,1.0s
ZRHB *e*Sg **Sg 18 42 45.5 -1.9**
ZRHB Smax 18 42 56.9
comp=N,3µm,1.1s
UUDB Ulan-Yde 4.73 71 Pn **Pn 18 41 31.9 +2.4**
UUDB *e*Pg **Pg 18 41 42.9 -5.8**
UUDB Pmax 18 41 45.3
comp=N,442nm,0.6s
UUDB *e*Sg **Sg 18 42 47.4 -2.5**
UUDB Smax 18 42 55.5
comp=N,1µm,1.2s
SONM Songino Array 4.73 122 Pn **Pn 18 41 29.4 -0.2**
comp=N,0.9nm,0.3s,baz=302,slow=15,SNR=17
SONM Pg **Pg 18 41 41.8 -7.1**
comp=N,22nm,0.3s,baz=302,slow=18,SNR=51
SONM Lg 18 42 46.8
comp=N,57nm,0.3s,baz=303,slow=30,SNR=18
SONM Songino Array 4.73 122 PN **Pn 18 41 29.4 -0.2**
SONM 18 41 41.8
SONM 18 42 46.8
SONM pmax pmax
comp=Z,1.0nm,0.3s
SONM pmax pmax
comp=Z,22nm,0.3s
ULN Ulaanbaatar 5.08 119 *e*P **Pn 18 41 34.7 +0.4**
comp=Z,53nm,0.4s
ULN Ulaanbaatar 5.08 119 *e*PN **Pn 18 41 34.7 +0.4**
ULN pmax pmax
comp=Z,53nm,0.4s
ULN Ulaanbaatar 5.08 119 *e*Pn **Pn 18 41 34.6 +0.3**
ULN *e*Pg **Pg 18 41 48.2 -7.2**
ULN *e*Sg **Sg 18 42 55.3 -5.8**
OGRR Ongureny 5.40 52 *e*PN **Pn 18 41 39.2 +0.5**
OGRR *e* 18 41 55.0
OGRR Ongureny 5.40 52 *e*Pn **Pn 18 41 42.1 +3.4**
OGRR *e*Pg **Pg 18 41 55.0 -6.6**
OGRR Pmax 18 41 59.9
comp=Z,281nm,0.7s
OGRR *e*Sn **Sn 18 42 40.3 -0.5**
OGRR *e*Sg **Sg 18 43 07.6 -3.8**
OGRR Smax 18 43 19.1
comp=Z,689nm,0.9s
ORY Orie 5.54 326 ⇊*i*PN **Pb 18 41 54.6 -0.4**
SYVR Suvo 6.67 58 *e*PG **Pg 18 42 19.2 -6.6**
SYVR *e* 18 43 48.3
SYVR pmax pmax
comp=Z,50nm,1.4s
SYVR smax
comp=E,183nm,1.1s
SYVR Suvo 6.67 58 *e*Pn **Pn 18 41 59.1 +3.0**
SYVR *e*Pg **Pg 18 42 19.7 -6.1**
SYVR Pmax 18 42 37.0
comp=E,50nm,1.4s
SYVR *e*Sg **Sg 18 43 47.8 -4.2**
SYVR Smax 18 44 06.2
comp=E,150nm,2.1s
NIZ Nizh Angarsk 7.58 43 *e*PN **Pn 18 42 10.8 +2.1**
NIZ *e* 18 42 36.5
NIZ *e* 18 44 18.0
NIZ pmax pmax
comp=Z,53nm,0.9s
NIZ smax
comp=N,899nm,1.5s
NIZ Nizh Angarsk 7.58 43 *e*Pn **Pn 18 42 10.4 +1.7**
NIZ *e* 18 42 17.6
NIZ *e*Pg **Pg 18 42 36.1 -7.2**
NIZ Pmax 18 42 39.3
comp=N,53nm,0.9s
NIZ *e*Sn **Sn 18 43 45.5 +11**
NIZ *e*Sg **Sg 18 44 16.2 -5.1**
NIZ Smax 18 44 19.7
comp=N,897nm,1.7s
KPC Khapcheranga 7.71 91 *e*PG Px 18 42 37.0
KPC pmax pmax
comp=Z,28nm,1.0s
KPC Khapcheranga 7.71 91 *e*Pn **Pn 18 42 09.7 -0.8**
KPC *e*Pg **Pg 18 42 37.3 -8.5**
KPC Pmax 18 42 42.9
comp=Z,28nm,0.9s
KPC *e*Sg **Sg 18 44 19.8 -5.7**
KPC Smax 18 44 36.0
comp=Z,728nm,1.3s
YLYR Ulyunkhan 7.83 52 *e*PN **Pn 18 42 16.9 +4.9**
YLYR *e* 18 42 40.9
YLYR Ulyunkhan 7.83 52 *e*Pn **Pn 18 42 16.7 +4.7**
YLYR *e*Pg Pn 18 42 40.9 +29
YLYR Pmax 18 42 44.5
comp=Z,36nm,0.8s
YLYR *e*Sg Sn 18 44 25.5 +45
YLYR Smax 18 44 32.4
comp=Z,423nm,1.5s
CIT Chita 8.35 75 *e*PN **Pn 18 42 21.4 +2.2**
CIT *e* 18 42 50.1
CIT *e* 18 44 40.0
CIT pmax pmax
comp=Z,76nm,0.4s
CIT smax
comp=N,436nm,1.6s
CIT Chita 8.35 75 *e*Sg Sx 18 44 40.3
CIT Smax 18 44 49.5
comp=N,435nm,1.6s
KMO Kumora 8.39 46 *e*Pn **Pn 18 42 22.1 +2.3**
KMO *e*Pg Pn 18 42 51.7 +32
KMO Pmax 18 42 57.4
comp=N,83nm,1.3s
KMO *e*Sn **Sn 18 44 06.3 +12**
KMO *e*Sg Sn 18 44 41.4 +47
KMO Smax 18 44 55.8
comp=N,584nm,1.5s
YOA Uoyan 8.77 46 *e*PG Px 18 43 00.2
YOA Uoyan 8.77 46 *e*Pg Px 18 42 59.5
YOA Pmax 18 43 12.7
comp=N,99nm,1.2s
YOA *e*Sg Sx 18 44 54.0
YOA Smax 18 45 12.8
comp=N,2µm,1.5s
UKT Uakit 9.36 53 *e*Pn **Pn 18 42 37.6 +4.5**
UKT *e*Pg Pn 18 43 07.9 +35
UKT Pmax 18 43 11.1
comp=N,9.0nm,1.2s
UKT *e* 18 44 36.2
UKT *e*Sg Sn 18 45 09.1 +51
UKT Smax 18 45 31.2
comp=N,201nm,1.4s
ZALV Zalesovo Beam 10.19 296 Pn **Pn 18 42 48.7 +4.3**
comp=N,0.1nm,0.3s,baz=110,slow=12,SNR=2.5
ZALV Pg Pn 18 43 23.6 +39
comp=N,0.5nm,0.3s,baz=101,slow=14,SNR=7.6
ZALV Lg 18 45 31.5
comp=N,2.3nm,0.3s,baz=108,slow=24,SNR=12
ZALV Zalesovo Beam 10.19 296 P **Pn 18 42 48.7 +4.3**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
BOD Bodaibo 10.78 42 *e* Px 18 45 05.0
BOD *e*Sg Sx 18 45 56.3
BOD Smax 18 46 08.8
comp=Z,350nm,1.4s
GTA Gaotai 11.12 183 *e*P **Pn 18 42 57.3 +0.1**
GTA pP 18 43 00.5
GTA sP 18 43 03.5
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA LR LR
comp=N,230nm,8.1s
GTA LR LR
comp=E,940nm,8.5s
GTA LR LR
comp=Z,200nm,10.4s
CRS Chara 12.31 52 *e*Sg Sx 18 46 45.5
CRS Smax 18 47 18.2
comp=Z,170nm,1.4s
HIA Hailar 12.50 88 *e*Sg Sx 18 46 46.5
TUP Tupik 12.50 64 *e*Sg Sx 18 46 48.0
TUP Smax 18 47 04.4
comp=Z,178nm,1.7s
MK31 Makanchi Array 12.57 260 *e*P **Pn 18 43 18.1 +1.0**
MK31 Makanchi Array 12.57 260 *e*P **Pn 18 43 18.1 +1.0**
MKAR Makanchi Array 12.57 260 Pn **Pn 18 43 17.4 +0.3**
comp=Z,0.1nm,0.3s,baz=75,slow=15,SNR=7.8
MKAR Pg Pn 18 44 02.8 +46
comp=Z,0.2nm,0.3s,baz=66,slow=13,SNR=5.4
MKAR Lg 18 46 43.8
comp=Z,0.3nm,0.3s,baz=74,slow=18,SNR=5.3
MKAR Makanchi Array 12.57 260 P **Pn 18 43 17.4 +0.3**
KURK Kurchatov 13.86 279 *i* P **Pn 18 43 36.0 +1.4**
KURK pmax pmax
comp=Z,2.0nm,1.2s
KURK MLR MLR
comp=Z,61nm,17.0s
LZH Lanzhou 14.63 169 *e*P **Pn 18 43 46.3 +1.1**
LZH pP pP 18 43 50.0 -4.4
LZH sP sP 18 43 52.5 -3.2
LZH pmax pmax
comp=Z,14nm,1.0s
BVAR Borovoye Array 18.71 289 P **Pn 18 44 35.2 -1.8**
comp=Z,0.3nm,0.3s,baz=82,slow=12,SNR=10
BVAR Borovoye Array 18.71 289 P **Pn 18 44 35.2 -1.8**
BRVK Borovoye 18.77 289 *e*P **Pn 18 44 35.8 -1.9**
BRVK Borovoye 18.77 289 *e*P **Pn 18 44 35.8 -1.9**
YAK Yakutsk 19.70 43 *e*P **Pn 18 44 47.2 -1.5**
comp=Z,11nm,0.8s
YAK Yakutsk 19.70 43 *e*P **Pn 18 44 51.0 +2.2**
YAK pmax pmax
comp=Z,9.0nm,1.0s
KKAR Karatay Array 21.69 262 P **P 18 45 07.0 -2.1**
comp=Z,1.2nm,0.6s,mb3.5
KKAR Karatay Array 21.69 262 P **P 18 45 07.0 -2.0**
KKAR pmax pmax
comp=Z,1.0nm,0.6s,mb3.4
LSA Lhasa 21.95 202 *e*P **P 18 45 12.7 +0.8**
comp=Z,5.0nm,0.8s,mb4.0
LSA Lhasa 21.95 202 *e*P **P 18 45 12.7 +0.8**
LSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
KSRS Korea Array 23.53 113 P **P 18 45 29.6 +1.1**
comp=Z,4.3nm,0.6s,mb4.0,baz=316,slow=7.4,SNR=24
KSRS Korea Array 23.53 113 P **P 18 45 29.7 +1.1**
KSRS pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
SVE Sverdlovsk 24.14 301 *e*P **P 18 45 35.7 +1.6**
TIXI Tiksi 24.77 21 *e*P **P 18 45 40.5 +0.9**
comp=Z,4.8nm,0.8s,mb4.1
TIXI Tiksi 24.77 21 *e*P **P 18 45 40.9 +1.2**
TIXI pmax pmax
comp=Z,6.0nm,1.0s,mb4.1
ARU Arti 25.31 300 *e*P **P 18 45 43.8 -0.9**
comp=Z,4.5nm,0.6s,mb4.2
ARU Arti 25.31 300 *e*P **P 18 45 44.1 -0.6**
ARU 18 46 18.8
ARU S **S 18 50 11.3 +0.9**
ABKAR Akbulak array 25.91 283 *e*P **P 18 45 49.4 -0.8**
comp=Z,1.3nm,0.6s,mb3.6
CMAR Chiang Mai Arr 32.01 183 P **P 18 46 44.0 -0.7**
comp=Z,0.8nm,0.9s,mb3.5,baz=2.1,slow=8.7,SNR=5.4
CMAR Chiang Mai Arr 32.01 183 P **P 18 46 44.0 -0.7**
CMAR pmax pmax
comp=Z,1.0nm,0.9s
OBN Obninsk 37.68 302 P **P 18 47 34.3 +1.0**
OBN *e* 18 48 58.6
OBN *e*S **S 18 53 21.8 -1.2**
OBN pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
ARCES ARCESS Array B 38.84 327 P **P 18 47 42.6 -0.4**
comp=Z,2.5nm,0.8s,mb4.0,baz=61,slow=7.6,SNR=5.8
ARCES ARCESS Array B 38.84 327 P **P 18 47 42.6 -0.3**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 40.74 315 P **P 18 47 59.1 +0.3**
comp=Z,6.3nm,0.7s,mb4.3,baz=79,slow=8.7,SNR=15
FINES FINESS Array B 40.74 315 P **P 18 47 59.2 +0.4**
FINES pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 43.56 299 P **P 18 48 20.6 -1.3**
comp=Z,1.0nm,0.4s,mb3.9,baz=54,slow=8.7,SNR=4.2
AKASG Malin Array Be 43.56 299 P **P 18 48 20.6 -1.3**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
BRTR Keskin Array B 46.86 284 P **P 18 48 48.9 +0.6**
comp=Z,2.1nm,0.7s,mb4.2,baz=71,slow=7.1,SNR=12
BRTR Keskin Array B 46.86 284 *i* P **P 18 48 48.9 +0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
NB2 NORSAR Subarra 47.43 319 P **P 18 48 52.3 -0.1**
comp=Z,2.0nm,0.7s,mb4.2,baz=60,slow=7.9
NOA NORSAR Array B 47.43 319 P **P 18 48 52.4 0.0**
comp=Z,3.8nm,0.8s,mb4.3,baz=61,slow=7.6,SNR=6.1
NOA NORSAR Array B 47.43 319 P **P 18 48 52.4 0.0**
NOA NORSAR Array B 47.43 319 P **P 18 48 52.4 0.0**
NOA pmax pmax
comp=Z,4.0nm,0.9s
ASF Jabal al Asfar 49.54 274 P **P 18 49 09.9 +0.8**
comp=Z,2.7nm,0.7s,mb4.4,baz=194,slow=4.2,SNR=4.8
ASF Jabal al Asfar 49.54 274 P **P 18 49 09.9 +0.8**
ASF pmax pmax
comp=Z,3.0nm,0.7s
CLL Collm 51.90 307 *e*P **P 18 49 27.0 +0.4**
comp=Z,4.0nm,0.6s,mb4.5
CLL Collm 51.90 307 *e*P **P 18 49 27.0 +0.4**
CLL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
GERES GERESS Array B 53.01 304 P **P 18 49 34.7 -0.2**
comp=Z,0.1nm,0.3s,mb3.2,baz=57,slow=18,SNR=3.5
GERES GERESS Array B 53.01 304 P **P 18 49 34.7 -0.2**
GERES GERESS Array B 53.01 304 P **P 18 49 34.7 -0.1**
ILAR Eielson Array 53.84 29 P **P 18 49 41.9 +1.2**
comp=Z,1.4nm,0.9s,mb3.9,baz=321,slow=4.3,SNR=9.6
ILAR Eielson Array 53.84 29 P **P 18 49 41.9 +1.2**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
CDF Champ du Feu 56.61 307 *e*P **P 18 50 01.1 +0.2**
comp=Z,5.9nm,0.9s,mb4.3
CDF Champ du Feu 56.61 307 *e*P **P 18 50 01.1 +0.2**
comp=Z,3.0nm,0.9s,mb4.3
CDF Champ du Feu 56.61 307 *e*P **P 18 50 01.1 +0.2**
CDF pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
EKA Eskdalemuir Ar 56.92 318 P **P 18 50 03.0 -0.1**
comp=Z,1.0nm,0.7s,mb4.0,baz=58,slow=7.9,SNR=5.1
EKA Eskdalemuir Ar 56.92 318 P **P 18 50 03.0 0.0**
EKA pmax pmax
comp=Z,1.0nm,0.7s
BAIF Baives 57.06 310 *e*P **P 18 50 04.2 +0.1**
BAIF Baives 57.06 310 *e*P **P 18 50 04.2 +0.1**
HINF Hinteralfeld 57.21 307 *e*P **P 18 50 04.3 -0.9**
HINF Hinteralfeld 57.21 307 *e*P **P 18 50 04.3 -0.9**
HAU Haudompre 57.34 307 *e*P **P 18 50 06.3 +0.2**
HAU Haudompre 57.34 307 *e*P **P 18 50 06.3 +0.2**
LOR Lormes 59.09 308 *e*P **P 18 50 17.9 -0.5**
LOR Lormes 59.09 308 *e*P **P 18 50 17.9 -0.5**
SSF Saint Saulge 59.41 308 *e*P **P 18 50 20.4 -0.2**
SSF Saint Saulge 59.41 308 *e*P **P 18 50 20.4 -0.2**
SMF Signal de Mont 59.52 307 *e*P **P 18 50 20.9 -0.5**
SMF Signal de Mont 59.52 307 *e*P **P 18 50 20.9 -0.5**
SBF Sospel 59.52 303 *e*P **P 18 50 21.3 -0.1**
comp=Z,18nm,0.9s,mb4.8
SBF Sospel 59.52 303 *e*P **P 18 50 21.3 -0.1**
comp=Z,8.9nm,0.9s,mb4.8
SBF Sospel 59.52 303 *e*P **P 18 50 21.3 -0.1**
SBF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
ORIF Oris-en-Rattie 59.64 305 *e*P **P 18 50 22.4 +0.2**
comp=Z,7.9nm,0.9s,mb4.4
ORIF Oris-en-Rattie 59.64 305 *e*P **P 18 50 22.4 +0.2**
comp=Z,4.0nm,0.9s,mb4.5
ORIF Oris-en-Rattie 59.64 305 *e*P **P 18 50 22.4 +0.2**
ORIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
AVF Avril sur Loir 59.67 308 *e*P **P 18 50 22.0 -0.4**
comp=Z,3.0nm,0.7s,mb4.2
AVF Avril sur Loir 59.67 308 *e*P **P 18 50 22.0 -0.4**
comp=Z,1.5nm,0.6s,mb4.2
AVF Avril sur Loir 59.67 308 *e*P **P 18 50 22.0 -0.4**
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
BGF Bois d'Agland 60.08 308 *e*P **P 18 50 24.9 -0.3**
comp=Z,15nm,1.1s,mb4.6
BGF Bois d'Agland 60.08 308 *e*P **P 18 50 24.9 -0.3**
comp=Z,7.3nm,1.1s,mb4.6
BGF Bois d'Agland 60.08 308 *e*P **P 18 50 24.9 -0.3**
BGF pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
LDF La Druitiere 60.15 311 *e*P **P 18 50 25.1 -0.5**
comp=Z,3.2nm,0.7s,mb4.2
LDF La Druitiere 60.15 311 *e*P **P 18 50 25.1 -0.5**
comp=Z,1.6nm,0.7s,mb4.2
LDF La Druitiere 60.15 311 *e*P **P 18 50 25.1 -0.5**
LDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
FLN La Foliniere 60.20 312 *e*P **P 18 50 25.7 -0.3**
FLN La Foliniere 60.20 312 *e*P **P 18 50 25.7 -0.3**
VIVF Saint-Julien-l 60.31 305 *e*P **P 18 50 26.8 0.0**
VIVF Saint-Julien-l 60.31 305 *e*P **P 18 50 26.8 0.0**
SMRF Simiane la Rot 60.44 304 *e*P **P 18 50 27.1 -0.6**
TCF Toulx Ste Croi 60.59 308 *e*P **P 18 50 28.8 +0.1**
TCF Toulx Ste Croi 60.59 308 *e*P **P 18 50 28.8 +0.1**
LASF Ste Croix 61.27 305 *e*P **P 18 50 33.5 +0.1**
SGMF Saint Gilles 61.54 312 *e*P **P 18 50 34.8 -0.3**
SGMF Saint Gilles 61.54 312 *e*P **P 18 50 34.8 -0.3**
CAF Calviac 61.60 307 *e*P **P 18 50 35.4 -0.2**
CAF Calviac 61.60 307 *e*P **P 18 50 35.4 -0.2**
QUIF Quistinic 62.07 312 *e*P **P 18 50 38.4 -0.3**
comp=Z,7.5nm,0.9s,mb4.5
QUIF Quistinic 62.07 312 *e*P **P 18 50 38.4 -0.3**
comp=Z,3.8nm,0.9s,mb4.5
QUIF Quistinic 62.07 312 *e*P **P 18 50 38.4 -0.3**
QUIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MTLF Montolieu 62.63 306 *e*P **P 18 50 41.8 -0.7**
MTLF Montolieu 62.63 306 *e*P **P 18 50 41.8 -0.7**
EPF Esparros 63.82 306 *e*P **P 18 50 50.2 -0.2**
EPF Esparros 63.82 306 *e*P **P 18 50 50.2 -0.2**
YKA Yellowknife Ar 63.95 17 P **P 18 50 51.0 +0.1**
comp=Z,0.5nm,0.7s,mb3.6,baz=67,slow=12,SNR=3.6
YKA Yellowknife Ar 63.95 17 P **P 18 50 51.0 +0.1**
YKA Yellowknife Ar 63.95 17 P **P 18 50 51.0 +0.1**
YKA pmax pmax
comp=Z,1.0nm,0.7s
ESDC Sonseca Array 68.48 307 P **P 18 51 20.2 -0.2**
comp=Z,0.2nm,0.3s,mb3.6,baz=39,slow=7.0,SNR=5.8
WRA Warramunga Arr 76.26 147 P **P 18 52 05.9 -0.9**
comp=Z,1.8nm,0.8s,mb4.1,baz=344,slow=6.4,SNR=26
WRA Warramunga Arr 76.26 147 P **P 18 52 05.9 -0.9**
WRA pmax pmax
comp=Z,2.0nm,0.8s
WB2 Warramunga Arr 76.26 147 *e*P **P 18 52 05.4 -1.5**
ASAR Alice Springs 79.56 149 P **P 18 52 24.6 -0.6**
comp=Z,2.1nm,0.8s,mb4.1,baz=346,slow=5.5,SNR=28
ASAR Alice Springs 79.56 149 P **P 18 52 24.6 -0.6**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
NVAR Mina Array Bea 85.09 30 P **P 18 52 55.9 +1.8**

comp=Z,0.2nm,0.6s,mb3.4,baz=336,slow=3.3,SNR=3.9
NVAR Mina Array Bea 85.09 30 P P 18 52 55.9 +1.8
STKA Stephens Creek 89.74 146 P P 18 53 15.2 -1.1
comp=Z,2.9nm,0.9s,mb4.6,baz=295,slow=17,SNR=3.2
LPAZ La Paz 144.63 341 PKP PKPdf 18 59 57.8 +2.7
comp=Z,0.7nm,0.5s,baz=346,slow=7.0,SNR=4.0
LPAZ La Paz 144.63 341 PKIKP PKPdf 18 59 57.8 +2.7
LPAZ pmax pmax
comp=Z,1.0nm,0.5s

WEL 28 18:57:27.3±0.9, 35°.77S×178°.33E, h171km±12km, ML3.6/8, Error ellipse: s-maj=23.3km s-min=13.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.79**	**181**	PN	Pn	18 58 01.9	+0.4
MXZ				SN	Sn	18 58 27.7	-0.3
PUZ	**Puketiti**	**2.30**	**181**	PN	Pn	18 58 05.0	-2.2
PUZ				SN	Sn	18 58 36.4	-1.7
MWZ	**Matawai**	**2.64**	**194**	PN	Pn	18 58 11.0	-0.1
MWZ				SN	Sn	18 58 47.0	+1.7
URZ	**Urewera**	**2.67**	**201**	PN	Pn	18 58 11.6	+0.1
CNGZ	**Carnagh Statio**	**2.71**	**182**	PN	Pn	18 58 12.3	+0.3
BHHZ	**Black Hill Sta**	**4.13**	**205**	PN	Pn	18 58 28.5	-1.2
KAHZ	**Kahuranaki**	**4.18**	**196**	PN	Pn	18 58 29.1	-1.3
PNHZ	**Pukenui**	**4.47**	**201**	PN	Pn	18 58 32.0	-2.1
TSZ	**Takapari Road**	**4.68**	**203**	PN	Pn	18 58 34.4	-2.4
PRHZ	**Porangahau**	**4.69**	**196**	PN	Pn	18 58 34.3	-2.6
MRZ	**Mangatainoka R**	**5.34**	**203**	PN	Pn	18 58 42.1	-3.4
OGWZ	**Otaki Gorge**	**5.62**	**205**	PN	Pn	18 58 45.5	-3.6
KIW	**Kapiti Island**	**5.75**	**207**	PN	Pn	18 58 47.4	-3.5
TCW	**Tory Channel**	**6.30**	**209**	PN	Pn	18 58 53.8	-4.2
THZ	**Tophouse**	**7.33**	**214**	PN	Pn	18 59 07.2	-4.5

*CSEM **28** 19:31:17.6±0.2, 42°.68N×46°.34E, h2km, mb4.2, Error ellipse: s-maj=5.5km s-min=2.9km az=9.0*
*MOS **28** 19:31:17.4±1.8, 42°.73N×46°.40E, h12km, mb4.2/1, Error ellipse: s-maj=8.9km s-min=5.8km az=26.2*
ISC 28 19:31:17.9±0.4, 42°.66N±0°.03×46°.33E±0°.02, h2km±5km, n55, σ1°.05/92, 7C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.08**	**276**	*e*PG	**Pg**	**19 31 17.8**	**-1.6**
BTLR	**Botlikh**	**0.08**	**276**	*e*Pg	**Pg**	**19 31 17.8**	**-1.6**
XNZR	**Khunzakh**	**0.30**	**112**	*e*PG	**Pg**	**19 31 24.0**	**+0.4**
XNZR	**Khunzakh**	**0.30**	**112**	*e*Pg	**Pg**	**19 31 24.0**	**+0.4**
UNCR	**Uncukul**	**0.35**	**80**	*e*PG	**Pg**	**19 31 23.7**	**-0.8**
UNCR				*e*S	**Sg**	**19 31 29.0**	**0.0**
UNCR				pmax	pmax		
comp=Z,193nm,0.3s							
UNCR	**Uncukul**	**0.35**	**80**	*e*Pg	**Pg**	**19 31 23.7**	**-0.8**
comp=Z,193nm,0.3s							
UNCR				*e*Sg	**Sg**	**19 31 29.0**	**0.0**
KRNR	**Karanay**	**0.46**	**68**	⇓*i*PG	**Pg**	**19 31 26.0**	**-0.7**
KRNR				*i* S	**Sg**	**19 31 33.0**	**+0.4**
KRNR				pmax	pmax		
comp=Z,86nm,0.2s							
KRNR	**Karanay**	**0.46**	**68**	*i* Pg	**Pg**	**19 31 26.0**	**-0.7**
comp=Z,86nm,0.2s							
KRNR				*i* Sg	**Sg**	**19 31 33.0**	**+0.4**
DLMR	**Dylym**	**0.47**	**28**	⇑*i*PG	**Pg**	**19 31 26.0**	**-0.9**
DLMR				*i* S	**Sg**	**19 31 34.0**	**+1.0**
DLMR				pmax	pmax		
comp=Z,232nm,0.4s							
DLMR	**Dylym**	**0.47**	**28**	*i* Pg	**Pg**	**19 31 26.0**	**-0.9**
comp=Z,232nm,0.4s							
DLMR				*i* Sg	**Sg**	**19 31 34.0**	**+1.0**
DBC	**Dubki**	**0.52**	**45**	⇑*i*PG	**Pg**	**19 31 27.0**	**-0.8**
DBC				*i* S	**Sg**	**19 31 35.0**	**+0.5**
DBC	**Dubki**	**0.52**	**45**	*i* Pg	**Pg**	**19 31 27.0**	**-0.8**
DBC				*i* Sg	**Sg**	**19 31 35.0**	**+0.5**
BUJR	**Buynaksk**	**0.60**	**73**	PG	**Pg**	**19 31 29.0**	**-0.3**
BUJR				*i* S	**Sg**	**19 31 38.8**	**+1.7**
BUJR				pmax	pmax		
comp=Z,147nm,0.2s							
BUJR	**Buynaksk**	**0.60**	**73**	*e*PG	**Pg**	**19 31 31.0**	**+1.7**
BUJR	**Buynaksk**	**0.60**	**73**	Pg	**Pg**	**19 31 29.0**	**-0.3**
comp=Z,147nm,0.2s							
BUJR				*i* Sg	**Sg**	**19 31 38.8**	**+1.7**
KMKR	**Kumukh**	**0.77**	**132**	*e*PG	**Pg**	**19 31 32.5**	**-0.2**
KMKR				*e*S	**Sg**	**19 31 44.0**	**+1.3**
KMKR				pmax	pmax		
comp=Z,84nm,0.2s							
KMKR	**Kumukh**	**0.77**	**132**	*e*Pg	**Pg**	**19 31 32.5**	**-0.2**
comp=Z,84nm,0.2s							
KMKR				*e*Sg	**Sg**	**19 31 44.0**	**+1.3**
GRO	**Groznyy**	**0.79**	**328**	*e*PG	**Pg**	**19 31 30.4**	**-2.6**
GRO				*i* S	**Sg**	**19 31 41.9**	**-1.4**
GRO	**Groznyy**	**0.79**	**328**	*e*Pg	**Pg**	**19 31 30.4**	**-2.6**
GRO				*i* Sg	**Sg**	**19 31 41.9**	**-1.4**
URKR	**Urkarakh**	**1.08**	**116**	*e*PG	**Pg**	**19 31 38.0**	**-0.6**
URKR	**Urkarakh**	**1.08**	**116**	*e*Pg	**Pg**	**19 31 38.0**	**-0.6**
SNJR	**Sundja**	**1.19**	**291**	⇑*i*PG	**Pg**	**19 31 41.3**	**+0.6**
SNJR				*i* S	**Sg**	**19 32 00.2**	**+4.1**
SNJR	**Sundja**	**1.19**	**291**	*i* Pg	**Pg**	**19 31 41.3**	**+0.6**
VLKR	**Vladikavkaz**	**1.28**	**288**	*e*PG	**Pg**	**19 31 42.7**	**+0.3**
VLKR				*e*S	**Sg**	**19 32 02.6**	**+3.7**
VLKR	**Vladikavkaz**	**1.28**	**288**	*e*Pg	**Pg**	**19 31 42.7**	**+0.3**
DGRG	**David-gareji**	**1.40**	**211**	P	**Pn**	**19 31 43.7**	**-0.8**
MTA	**Mtatsminda**	**1.49**	**230**	P	**Pn**	**19 31 45.0**	**-0.7**
BTKR	**Batakoyurt**	**1.50**	**299**	*e*PG	**Pg**	**19 31 45.9**	**-0.6**
BTKR				*e*S	**Sg**	**19 32 08.4**	**+2.5**
BTKR	**Batakoyurt**	**1.50**	**299**	*e*Pg	**Pg**	**19 31 45.9**	**-0.6**
BTKR				*e*Sg	**Sg**	**19 32 08.4**	**+2.5**
TBLG	**Delisi**	**1.50**	**233**	*e*PG	**Pg**	**19 31 45.6**	**-1.0**
TBLG	**Delisi**	**1.50**	**233**	P	**Pn**	**19 31 45.7**	**-0.2**
TBLG	**Delisi**	**1.50**	**233**	*e*Pg	**Pg**	**19 31 45.6**	**-1.0**
TRKR	**Terskaya**	**1.58**	**313**	⇑*i*PG	**Pg**	**19 31 46.6**	**-1.6**
TRKR				*i* S	**Sg**	**19 32 09.9**	**+1.2**
TRKR	**Terskaya**	**1.58**	**313**	*i* Pg	**Pg**	**19 31 46.6**	**-1.6**
TRKR				*i* Sg	**Sg**	**19 32 09.9**	**+1.2**
ARNR	**Ardon**	**1.60**	**290**	*e*PN	**Pn**	**19 31 47.4**	**+0.2**
ARNR				*e*S	**Sg**	**19 32 11.0**	**+1.8**
ARNR	**Ardon**	**1.60**	**290**	*e*Pn	**Pn**	**19 31 47.4**	**+0.2**
ARNR				*e*Sg	**Sg**	**19 32 11.0**	**+1.8**
KMSR	**Komsomolskaya**	**1.66**	**296**	⇑*i*PN	**Pn**	**19 31 48.1**	**+0.1**
KMSR				*i* S	**Sg**	**19 32 12.4**	**+1.3**
KMSR	**Komsomolskaya**	**1.66**	**296**	*i* Pn	**Pn**	**19 31 48.1**	**+0.1**
KMSR				*i* Sg	**Sg**	**19 32 12.4**	**+1.3**
KSMR	**Kasumkent**	**1.70**	**128**	*e*PN	**Pn**	**19 31 51.0**	**+2.4**
KSMR				*e*S	**Sn**	**19 32 17.0**	**+6.1**
KSMR				pmax	pmax		
comp=Z,54nm,0.2s							
KSMR	**Kasumkent**	**1.70**	**128**	*e*Pn	**Pn**	**19 31 51.0**	**+2.4**
comp=Z,54nm,0.2s							
KORR	**Kora**	**1.72**	**285**	*e*PN	**Pn**	**19 31 49.0**	**+0.2**
KORR				*i* S	**Sg**	**19 32 13.8**	**+0.7**
KORR	**Kora**	**1.72**	**285**	*e*Pn	**Pn**	**19 31 49.0**	**+0.2**
KORR				*i* Sg	**Sg**	**19 32 13.8**	**+0.7**
GOR	**Gori**	**1.78**	**249**	P	**Pn**	**19 31 49.7**	**+0.1**
ZEI	**Tsey**	**1.80**	**274**	*e*PN	**Pn**	**19 31 50.2**	**+0.3**
ZEI				*i* S	**Sg**	**19 32 15.3**	**-0.3**
ZEI	**Tsey**	**1.80**	**274**	*e*Pn	**Pn**	**19 31 50.2**	**+0.3**
ZEI				*i* Sg	**Sg**	**19 32 15.3**	**-0.3**
PRTR	**Priterechnaya**	**1.86**	**307**	*e*PN	**Pn**	**19 31 50.8**	**+0.1**
PRTR				*e*S	**Sg**	**19 32 17.0**	**-0.5**
PRTR	**Priterechnaya**	**1.86**	**307**	*e*Pn	**Pn**	**19 31 50.8**	**+0.1**
PRTR				*e*Sg	**Sg**	**19 32 17.0**	**-0.5**
LSNR	**Lesken**	**1.95**	**289**	*e*PN	**Pn**	**19 31 52.0**	**0.0**
LSNR				*e*S	**Sg**	**19 32 19.7**	**-0.7**
LSNR	**Lesken**	**1.95**	**289**	*e*Pn	**Pn**	**19 31 52.0**	**0.0**
LSNR				*e*Sg	**Sg**	**19 32 19.7**	**-0.7**
DIGR	**Digorskoe uzhe**	**2.04**	**278**	*e*PN	**Pn**	**19 31 53.5**	**+0.3**
DIGR				*i* S	**Sb**	**19 32 21.6**	**+0.1**
DIGR	**Digorskoe uzhe**	**2.04**	**278**	*e*Pn	**Pn**	**19 31 53.5**	**+0.3**
DIGR				*i* Sb	**Sb**	**19 32 21.6**	**+0.1**
ONI	**Oni**	**2.12**	**269**	P	**Pn**	**19 31 54.9**	**+0.5**
GOF	**Gofitskoye**	**3.38**	**316**	*e*PN	**Pn**	**19 32 08.2**	**-3.5**
GOF				pmax	pmax		
comp=Z,10.0nm,0.7s							
AB31	**Akbulak array**	**11.54**	**50**	⇑Pn	**Pn**	**19 34 01.1**	**-2.4**
baz=243,slow=11,SNR=5.3							
AB31				⇑Sn	**Sn**	**19 36 06.3**	**-6.6**
comp=Z,0.9nm,0.7s,baz=242,slow=19,SNR=3.0							
AB31	**Akbulak array**	**11.54**	**50**	Pn	**Pn**	**19 34 01.1**	**-2.4**
baz=243,SNR=5.3							
AB31				Sn	**Sn**	**19 36 06.3**	**-6.6**
comp=Z,0.9nm,0.7s,SNR=3.0							

*NIED **28** 19:33:00, 40°.70N×145°.40E, h50km, Mw3.9 Best double couple: M₀8.44000×10¹⁴ NP1:φ₀=182.00000°, δ84.00000°, λ118.00000°. NP2:φ₀=283.00000°, δ29.00000°, λ13.00000°.*
*IDC **28** 19:33:37.3±0.9, 40°.72N×145°.32E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/24, mbtmp3.7/10, ML3.5/2, Error ellipse: s-maj=26.3km s-min=20.4km az=161.0*
*JMA **28** 19:33:41.3±0.2, 40°.66N×145°.39E, h51km, M4.7*
*MOS **28** 19:33:41.1±0.6, 40°.62N×145°.33E, h42km, mb4.3/5, Error ellipse: s-maj=16.4km s-min=12.8km az=92.6*
*ISCJB **28** 19:33:42.2±0.7, 40°.67N±0°.03×145°.19E±0°.05, h48km±7km, mb3.8/9, Error ellipse: s-maj=6.9km s-min=3.5km az=23.8*
*NEIC **28** 19:33:43.8±1.4, 40°.71N×145°.29E, h46km±12km, mb4.3/1, Error ellipse: s-maj=16.5km s-min=10.2km az=106.0*
ISC 28 19:33:43.5±0.7, 40°.68N±0°.03×145°.22E±0°.05, h42km±7km, n55, σ1°.05/83, mb3.8/9, 1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**2.05**	**311**	*e*P	**Pn**	**19 34 16.4**	**+1.0**
ERM				*e*S	**Sn**	**19 34 40.3**	**+0.6**
ERM	**Erimo**	**2.05**	**311**	*e*P	**Pn**	**19 34 16.4**	**+1.0**
ERM				*e*S	**Sn**	**19 34 40.3**	**+0.5**
JEM	**Erimo**	**2.05**	**311**	P	**Pn**	**19 34 16.5**	**+1.1**
JAK	**Akkeshi**	**2.35**	**351**	P	**Pn**	**19 34 18.7**	**-0.9**
JAK				*e*S	**Sn**	**19 34 45.3**	**-1.8**
JCH	**Churui**	**2.39**	**325**	P	**Pn**	**19 34 20.5**	**+0.5**
JCH				*e*S	**Sn**	**19 34 47.5**	**-0.5**
JNBK	**Urakawa-nobuka**	**2.45**	**312**	P	**Pn**	**19 34 22.3**	**+1.4**
JNBK				*e*S	**Sn**	**19 34 51.2**	**+1.6**
JOB	**Onbets**	**2.46**	**335**	P	**Pn**	**19 34 21.3**	**+0.3**
JOB				*e*S	**Sn**	**19 34 49.9**	**+0.2**
JTH	**Tanohata**	**2.67**	**255**	P	**Pn**	**19 34 23.8**	**-0.2**
JTH				*e*S	**Sn**	**19 34 52.9**	**-2.2**
NEM2	**Nemuro 2**	**2.71**	**8**	P	**Pn**	**19 34 23.2**	**-1.3**
NEM2				*e*S	**Sn**	**19 34 52.0**	**-4.1**
MIYJ	**Miyakonagasawa**	**2.83**	**248**	P	**Pn**	**19 34 26.3**	**+0.1**
MIYJ				*e*S	**Sn**	**19 34 57.9**	**-1.1**
JAR	**Ashorobuto**	**2.83**	**338**	P	**Pn**	**19 34 25.8**	**-0.4**
JAR				*e*S	**Sn**	**19 34 57.4**	**-1.6**
JANG	**Nango**	**2.84**	**265**	P	**Pn**	**19 34 26.3**	**0.0**
JANG				*e*S	**Sn**	**19 34 57.6**	**-1.7**
JKZ	**Kuzumaki**	**3.06**	**258**	P	**Pn**	**19 34 29.5**	**+0.3**
JKZ				*e*S	**Sn**	**19 35 03.5**	**-1.0**
JTM	**Tenmabayashi**	**3.16**	**273**	P	**Pn**	**19 34 31.4**	**+0.7**
JTM				*e*S	**Sn**	**19 35 06.5**	**-0.6**
JFR	**Furan**	**3.17**	**323**	P	**Pn**	**19 34 30.6**	**-0.1**
JFR				*e*S	**Sn**	**19 35 05.6**	**-1.6**
OFUJ	**Ofunato**	**3.17**	**241**	P	**Pn**	**19 34 30.8**	**0.0**
OFUJ				*e*S	**Sn**	**19 35 06.0**	**-1.3**
JOT	**Ohata**	**3.24**	**284**	P	**Pn**	**19 34 32.4**	**+0.7**
JOT				*e*S	**Sn**	**19 35 08.1**	**-0.9**
JOM	**Ohasama**	**3.25**	**250**	P	**Pn**	**19 34 32.4**	**+0.5**
JOM				*e*S	**Sn**	**19 35 09.0**	**-0.3**
JRA	**Rausu**	**3.26**	**359**	P	**Pn**	**19 34 30.8**	**-1.2**
JRA				*e*S	**Sn**	**19 35 06.0**	**-3.5**
JKB	**Kayabe**	**3.38**	**292**	P	**Pn**	**19 34 34.3**	**+0.6**
JKB				*e*S	**Sn**	**19 35 12.6**	**0.0**
YUK	**Yuzh-Kuril'sk**	**3.39**	**8**	⇓*i*P	**Pn**	**19 34 32.7**	**-1.1**
YUK				pmax	pmax		
comp=Z,143nm,0.2s							
YUK				pmax	pmax		
comp=E,344nm,0.5s							
YUK				pmax	pmax		
comp=N,21nm,0.1s							
YUK				pmax	pmax		
comp=Z,50nm,0.3s							
YUK				pmax	pmax		
comp=N,250nm,0.4s							
YUK				pmax	pmax		
comp=E,190nm,0.4s							
JTKR	**Abashiri--Toko**	**3.43**	**344**	P	**Pn**	**19 34 34.7**	**+0.3**
JTKR				*e*S	**Sn**	**19 35 12.9**	**-0.9**
JMK	**Ichinoseki**	**3.53**	**242**	P	**Pn**	**19 34 36.0**	**+0.2**
JMK				*e*S	**Sn**	**19 35 14.9**	**-1.4**
JEW	**Eniwo**	**3.56**	**309**	P	**Pn**	**19 34 38.0**	**+1.9**
JEW				*e*S	**Sn**	**19 35 17.8**	**+1.0**
JKK2	**Kamakawa 2**	**3.68**	**331**	P	**Pn**	**19 34 38.5**	**+0.6**
JKK2				*e*S	**Sn**	**19 35 21.7**	**+1.7**
JIO	**Ouri**	**3.73**	**235**	P	**Pn**	**19 34 38.1**	**-0.4**
JIO				*e*S	**Sn**	**19 35 18.2**	**-2.9**
ASAJ	**Asahikawa**	**3.95**	**331**	Pn	**Pn**	**19 34 42.0**	**+0.6**
comp=E,8.7nm,0.3s,baz=194,slow=11,SNR=60							
ASAJ				Sn	**Sn**	**19 35 27.4**	**+0.9**
comp=E,4.6nm,0.3s,baz=155,slow=12,SNR=4.5							
ASAJ	**Asahikawa**	**3.95**	**331**	*e*P	**Pn**	**19 34 42.0**	**+0.5**
ASAJ	**Asahikawa**	**3.95**	**331**	P	**Pn**	**19 34 42.1**	**+0.6**
ASAJ						19 35 27.5	
ASAJ				pmax	pmax		
comp=Z,9.0nm,0.3s							
ASAJ				smax			
comp=N,5.0nm,0.3s							
JHR	**Hokuryu**	**4.02**	**321**	P	**Pn**	**19 34 44.2**	**+1.8**
JHR				*e*S	**Sn**	**19 35 29.3**	**+1.1**
MAJO	**Matsushiro**	**6.87**	**235**	*e*P	**Pn**	**19 35 22.7**	**+1.0**
comp=N,15nm,0.6s							
MAJO	**Matsushiro**	**6.87**	**235**	*e*P	**Pn**	**19 35 22.7**	**+1.1**
MAJO				pmax	pmax		
comp=Z,15nm,0.6s							
MAT	**Matsushiro**	**6.87**	**235**	P	**Pn**	**19 35 22.2**	**+0.6**
MAT				*e*S	**Sn**	**19 36 39.6**	**+1.1**
MJAR	**Matsushiro Arr**	**6.87**	**235**	Pn	**Pn**	**19 35 22.3**	**+0.6**
comp=Z,1.5nm,0.3s,baz=35,slow=15,SNR=24							
MJAR				Sn	**Sn**	**19 36 41.4**	**+2.9**
comp=Z,0.6nm,0.3s,baz=130,slow=30,SNR=4.2							
MJAR	**Matsushiro Arr**	**6.87**	**235**	P	**Pn**	**19 35 22.3**	**+0.7**
MJAR						19 36 41.4	
MJAR				pmax	pmax		
comp=Z,2.0nm,0.3s							
MJAR				smax			
comp=N,1.0nm,0.3s							
KSRS	**Korea Array**	**13.82**	**262**	Pn	**Pn**	**19 36 57.0**	**+0.3**
comp=N,0.1nm,0.3s,baz=69,slow=14,SNR=3.2							
KSRS	**Korea Array**	**13.82**	**262**	P	**Pn**	**19 36 57.0**	**+0.3**
TWG	**Pinlang**	**27.04**	**236**	*e*P	**P**	**19 39 24.1**	**+2.2**
SONM	**Songino Array**	**28.48**	**298**	P	**P**	**19 39 35.1**	**+0.7**
comp=N,1.2nm,1.1s,mb3.4,baz=81,slow=9.4,SNR=4.1							
SONM	**Songino Array**	**28.48**	**298**	P	**P**	**19 39 35.1**	**+0.6**
SONM				pmax	pmax		
comp=Z,1.0nm,1.1s							
ZALV	**Zalesovo Beam**	**41.78**	**310**	P	**P**	**19 41 28.1**	**-0.4**
comp=Z,0.5nm,0.4s,mb3.5,baz=116,slow=6.8,SNR=4.6							
ZALV	**Zalesovo Beam**	**41.78**	**310**	P	**P**	**19 41 28.1**	**-0.4**
ZALV				pmax	pmax		
comp=Z,1.0nm,0.4s,mb3.8							
MKAR	**Makanchi Array**	**44.80**	**300**	P	**P**	**19 41 51.6**	**-1.4**
comp=Z,0.4nm,0.2s,mb3.8,baz=90,slow=10,SNR=2.3							
MKAR	**Makanchi Array**	**44.80**	**300**	P	**P**	**19 41 51.6**	**-1.4**
ILAR	**Eielson Array**	**44.82**	**34**	P	**P**	**19 41 51.6**	**-1.3**
comp=Z,0.2nm,0.8s,mb3.0,baz=214,slow=7.7,SNR=4.6							
ILAR	**Eielson Array**	**44.82**	**34**	P	**P**	**19 41 51.6**	**-1.3**
KURK	**Kurchatov**	**46.12**	**306**	*e*P	**P**	**19 42 03.6**	**+0.3**
comp=Z,3.3nm,0.8s,mb4.3							
KURK	**Kurchatov**	**46.12**	**306**	*e*P	**P**	**19 42 03.7**	**+0.4**
KURK				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.3							
WRA	**Warramunga Arr**	**61.15**	**192**	P	**P**	**19 43 53.2**	**-0.4**
comp=Z,1.3nm,1.3s,mb3.9,baz=11,slow=7.1,SNR=4.0							
WRA	**Warramunga Arr**	**61.15**	**192**	P	**P**	**19 43 53.2**	**-0.4**
WRA				pmax	pmax		
comp=Z,1.0nm,1.3s							
FINES	**FINESS Array B**	**66.96**	**333**	P	**P**	**19 44 31.4**	**+0.1**
comp=Z,6.7nm,1.1s,mb4.6,baz=352,slow=8.7,SNR=3.3							
FINES	**FINESS Array B**	**66.96**	**333**	P	**P**	**19 44 31.4**	**+0.1**
FINES				pmax	pmax		
comp=Z,7.0nm,1.1s							
NVAR	**Mina Array Bea**	**70.45**	**56**	P	**P**	**19 44 53.7**	**+0.2**
comp=Z,0.3nm,0.8s,mb3.3,baz=327,slow=6.5,SNR=3.2							
TXAR	**Lajitas Array**	**85.57**	**55**	P	**P**	**19 46 17.4**	**0.0**
comp=Z,0.5nm,0.6s,mb3.9,baz=303,slow=3.9,SNR=9.1							
TXAR	**Lajitas Array**	**85.57**	**55**	P	**P**	**19 46 17.5**	**+0.1**
TXAR				pmax	pmax		
comp=Z,1.0nm,0.6s							

*ISCJB **28** 19:36:16.1±0.8, 31°.33N±0°.04×103°.97E±0°.06, h3km±6km, mb3.9/9, Error ellipse: s-maj=8.6km s-min=5.1km az=25.7*
*IDC **28** 19:36:17.1±0.8, 31°.34N×103°.95E, h0km, mb3.9/8, mb1 3.9/10, mb1mx3.8/24, mbtmp3.8/10, ML3.4/2, Error ellipse: s-maj=44.5km s-min=16.5km az=64.0*
*BJI **28** 19:36:19.0, 31°.27N×103°.97E, h12km, mB4.6/2, mb4.3/4, ML3.6/14, Ms7 3.7/2*
*NEIC **28** 19:36:19.1±0.5, 31°.35N×103°.94E, h10km, mb3.7/1, Error ellipse: s-maj=12.7km s-min=8.2km az=59.0*
ISC 28 19:36:18.8±0.8, 31°.26N±0°.04×103°.92E±0°.06, h10km±5km, n21, σ0°.91/25, mb3.9/9, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.38**	**201**	⇓*i*Pg	**Pg**	**19 36 25.5**	**-0.7**
CD2				Sg	**Sg**	**19 36 31.0**	**-0.2**
CD2				smax			
comp=N,9μm,0.9s							
CD2				smax			
comp=E,12μm,0.6s							
LZH	**Lanzhou**	**4.81**	**359**	Pg	**Pg**	**19 37 52.5**	**+1.6**
LZH				Sg	**Sg**	**19 38 53.3**	**0.0**
LZH				smax			
comp=N,72nm,1.0s							
LZH				smax			
comp=E,69nm,0.8s							
LZH				LR	LR		
comp=N,230nm,5.1s							
LZH				LR	LR		
comp=E,220nm,4.4s							
LZH				LR	LR		
comp=Z,210nm,5.7s							
ENH	**Enshi**	**4.89**	**100**	*e*P	**Pn**	**19 37 33.2**	**+0.8**
XAN	**Xi'an**	**5.05**	**55**	Pn	**Pn**	**19 37 32.5**	**-2.0**
XAN				Sn	**Sn**	**19 38 33.8**	**+0.9**
XAN				Sg	**Sg**	**19 39 00.3**	**-0.5**
XAN				smax			
comp=N,130nm,0.7s							
XAN				smax			
comp=E,59nm,0.8s							
KMI	**Kunming**	**6.20**	**190**	Pn	**Pn**	**19 37 55.5**	**+5.0**
CMAR	**Chiang Mai Arr**	**13.52**	**201**	Pn	**Pn**	**19 39 33.2**	**+2.4**
comp=E,0.1nm,0.3s,baz=9.1,slow=9.3,SNR=2.9							
CMAR	**Chiang Mai Arr**	**13.52**	**201**	Pn	**Pn**	**19 39 33.2**	**+2.4**
SONM	**Songino Array**	**16.66**	**6**	Pn	**Pn**	**19 40 12.3**	**+0.1**
comp=E,0.1nm,0.3s,baz=94,slow=9.4,SNR=3.5							
MK31	**Makanchi Array**	**22.75**	**319**	*e*P	**P**	**19 41 22.1**	**+1.0**
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**19 41 21.7**	**+0.6**
comp=E,1.4nm,0.8s,mb3.5,baz=116,slow=11,SNR=9.3							
ZAA0	**Zalesovo Array**	**26.51**	**334**	*e*P	**P**	**19 41 56.2**	**0.0**
ZALV	**Zalesovo Beam**	**26.51**	**334**	P	**P**	**19 41 56.1**	**-0.1**
comp=E,2.1nm,0.6s,mb3.8,baz=136,slow=8.8,SNR=10							
KKAR	**Karatay Array**	**28.93**	**304**	*e*P	**P**	**19 42 18.1**	**0.0**
ABKAR	**Akbulak array**	**37.45**	**312**	*e*P	**P**	**19 43 31.5**	**-0.6**
comp=E,0.7nm,0.5s,mb3.8							
ARCES	**ARCESS Array B**	**57.05**	**336**	P	**P**	**19 46 03.9**	**-0.7**
comp=E,1.6nm,0.7s,mb4.2,baz=90,slow=7.1,SNR=11							
ARCES				PcP	PcP	19 46 58.8	-0.6
comp=E,2.2nm,0.8s,baz=73,slow=4.2,SNR=4.5							
FINES	**FINESS Array B**	**57.35**	**326**	P	**P**	**19 46 05.6**	**-1.1**
comp=E,3.1nm,0.9s,mb4.3,baz=112,slow=8.5,SNR=6.2							
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**19 46 17.1**	**+0.4**
comp=E,1.9nm,0.5s,mb4.4,baz=338,slow=8.0,SNR=30							
ASAR	**Alice Springs**	**61.71**	**149**	P	**P**	**19 46 37.4**	**+0.1**
comp=E,0.5nm,0.8s,mb3.7,baz=335,slow=6.8,SNR=8.0							
NB2	**NORSAR Subarra**	**64.44**	**327**	P	**P**	**19 46 53.9**	**-1.1**
comp=Z,0.9nm,0.6s,mb4.0,baz=76,slow=6.5							
NOA	**NORSAR Array B**	**64.44**	**327**	P	**P**	**19 46 53.4**	**-1.6**
comp=Z,0.7nm,0.5s,mb3.9,baz=61,slow=5.6,SNR=4.2							
ILAR	**Eielson Array**	**69.76**	**26**	P	**P**	**19 47 28.6**	**-0.1**
comp=Z,0.2nm,0.5s,mb3.3,baz=291,slow=4.2,SNR=4.4							

*NIED **28** 19:38:00, 25°.70N×126°.20E, h26km, Mw4.3 Best double couple: M₀2.94000×10¹⁵ NP1:φ₀=56.00000°, δ65.00000°, λ72.00000°. NP2:φ₀=273.00000°, δ30.00000°, λ123.00000°.*
*BJI **28** 19:38:00.7, 25°.48N×126°.75E, h12km, mB4.6/4, mb4.3/10, Ms4.4/2, Ms7 4.2/2*
*IDC **28** 19:38:01.8±0.8, 25°.57N×126°.27E, h0km, mb4.3/17, mb1 4.4/18, mb1mx4.3/26, mbtmp4.3/18, MS3.5/14, Ms1 3.6/14, ms1mx3.4/40, Error ell

comp=Z,18nm,1.5s,mb4.3
ASAJ Asahikawa 22.70 32 P **P 19 43 07.5 +0.4**
comp=Z,7.1nm,0.6s,mb4.2,baz=272,slow=20,SNR=5.9
ASAJ Asahikawa 22.70 32 P **P 19 43 07.5 +0.5**
ASAJ pmax pmax
comp=Z,7.0nm,0.6s
YSS Yuzh-Sakhalins 24.96 28 *e*P **P 19 43 28.8 +0.1**
GTA Gaotai 26.01 308 *e*P **P 19 43 39.0 +0.6**
GTA pP pP 19 43 47.0 +0.4
GTA sP sP 19 43 50.3 +0.2
GTA pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
CMAR Chiang Mai Arr 26.24 260 P **P 19 43 40.8 +0.1**
comp=Z,0.7nm,0.7s,baz=55,slow=6.8,SNR=6.7
CMAR LR LR 19 54 07.8
comp=Z,86nm,18.6s,MS3.3,baz=75,slow=37
CMAR Chiang Mai Arr 26.24 260 P **P 19 43 40.8 +0.2**
ULN Ulaanbaatar 26.80 331 *e*P **P 19 43 45.8 +0.5**
comp=Z,3.9nm,0.8s,mb4.0
ULN Ulaanbaatar 26.80 331 *e*P **P 19 43 45.8 +0.5**
ULN pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
SONM Songino Array 27.07 330 P **P 19 43 48.0 +0.2**
comp=Z,5.9nm,0.5s,mb4.3,baz=151,slow=11,SNR=40
SONM PcP PcP 19 47 08.1 -0.2
comp=Z,0.4nm,0.6s,baz=154,slow=3.5,SNR=4.2
SONM LR LR 19 56 23.1
comp=Z,283nm,18.8s,MS3.9,baz=119,slow=40
SONM Songino Array 27.07 330 P **P 19 43 48.0 +0.2**
SONM 19 47 08.1
SONM pmax pmax
comp=Z,6.0nm,0.5s
SONM MLR MLR
comp=Z,283nm,18.8s
LSA Lhasa 31.23 285 P **P 19 44 25.0 0.0**
LSA Lhasa 31.23 285 *e*P **P 19 44 26.3 +1.3**
comp=Z,5.2nm,0.6s,mb4.5
LSA Lhasa 31.23 285 *e*P **P 19 44 26.3 +1.3**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
MOY Mondy 32.26 330 *e*P **P 19 44 34.1 +0.4**
TAPN Taplejung 34.41 281 *e*P **P 19 44 54.6 +1.8**
PSI Prapat 34.73 234 LR LR 19 57 59.5
comp=Z,87nm,18.2s,MS3.5,baz=120,slow=34
ODAN Odare 34.75 281 *e*P **P 19 44 56.5 +0.8**
comp=Z,22nm,0.7s,mb5.2
GUN Gumba 35.96 283 *e*P **P 19 45 08.3 +2.1**
comp=Z,7.8nm,0.3s,mb5.1
YAK Yakutsk 36.41 3⇑*e*P **P 19 45 09.1 -0.4**
PKI Pulchoki 36.41 282 *e*P **P 19 45 10.8 +0.8**
comp=Z,11nm,0.5s,mb5.1
PKI Pulchoki 36.41 282 *e*P **P 19 45 10.8 +0.8**
PKI pmax pmax
comp=Z,11nm,0.5s,mb5.0
PKIN Phulchoki 36.42 282 *e*P **P 19 45 10.7 +0.6**
KKN Kakani 36.50 283 *e*P **P 19 45 11.5 +0.7**
comp=Z,7.8nm,0.4s,mb4.8
KKN Kakani 36.50 283 *e*P **P 19 45 11.5 +0.7**
KKN pmax pmax
comp=Z,8.0nm,0.4s,mb4.9
DMN Daman 36.68 282 *e*P **P 19 45 12.9 +0.6**
GKN Gorkha 37.05 283 *e*P **P 19 45 16.3 +0.9**
comp=Z,7.1nm,0.4s,mb4.9
DANN Dangsing 37.78 284 *e*P **P 19 45 23.4 +1.8**
comp=Z,13nm,0.4s,mb5.0
KOLN Koldanda 37.98 283 *e*P **P 19 45 23.7 +0.3**
comp=Z,4.1nm,0.4s,mb4.5
PMG Port Moresby 40.40 147⇓*e*P **P 19 45 52.5 +8.9**
PMG pmax pmax
comp=Z,9.0nm,1.0s
MK31 Makanchi Array 40.56 313 *e*P **P 19 45 44.4 -0.3**
MK31 Makanchi Array 40.56 313 *e*P **P 19 45 44.4 -0.2**
MKAR Makanchi Array 40.56 313 P **P 19 45 43.9 -0.7**
comp=Z,6.0nm,0.4s,mb4.6,baz=98,slow=10,SNR=77
MKAR LR LR 20 04 16.5
comp=Z,65nm,18.5s,MS3.5,baz=355,slow=39
MKAR Makanchi Array 40.56 313 P **P 19 45 43.9 -0.7**
MKAR LR LR 20 04 16.5
MKAR Makanchi Array 40.56 313 *i* P **P 19 45 44.7 +0.1**
MKAR pmax pmax
comp=Z,6.0nm,0.4s
SEY Seymchan 41.08 18 *i* P **P 19 45 48.7 0.0**
ZAA0 Zalesovo Array 41.60 324 *e*P **P 19 45 51.7 -1.4**
ZALV Zalesovo Beam 41.60 324 P **P 19 45 52.3 -0.8**
comp=Z,3.6nm,0.5s,mb4.3,baz=114,slow=8.7,SNR=21
ZALV Zalesovo Beam 41.60 324 P **P 19 45 52.3 -0.8**
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
KURK Kurchatov 43.98 317*c i*P **P 19 46 12.3 -0.1**
KURK pmax pmax
comp=Z,13nm,1.6s,mb4.4
KURK MLR MLR
comp=Z,117nm,18.0s,MS3.8
HNR Honiara 47.91 132 LR LR 20 02 53.7
comp=Z,54nm,19.4s,MS3.5,baz=80,slow=31
KKAR Karatay Array 48.25 306 *e*P **P 19 46 46.2 0.0**
comp=Z,2.3nm,0.6s,mb4.4
KKAR Karatay Array 48.25 306 *e*P **P 19 46 46.2 0.0**
KKAR pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
BILL Bilibino 48.76 19 *e*P **P 19 46 47.7 -2.0**
BILL *e*SS SS 19 57 12.2 -8.5
BILL pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.2
CTA Charters Tower 49.49 155 LR LR 20 06 17.9
comp=Z,114nm,20.1s,MS3.9,baz=43,slow=34
BRVK Borovoye 49.55 319 *e*P **P 19 46 55.9 -0.1**
comp=Z,2.8nm,0.4s,mb4.7
BRVK Borovoye 49.55 319*c i*P **P 19 46 55.9 -0.1**
BRVK pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
BRVK MLR MLR
comp=Z,124nm,17.0s,MS4.0
ASAR Alice Springs 49.62 171 P **P 19 46 54.5 -2.2**
comp=Z,0.4nm,0.5s,mb3.7,baz=358,slow=9.3,SNR=6.2
ASAR PcP PcP 19 48 14.6 -3.4
comp=Z,0.4nm,0.6s,baz=356,slow=3.5,SNR=4.6
ASAR Alice Springs 49.62 171 P **P 19 46 54.5 -2.2**
ASAR 19 48 14.6
KBL Kabul 49.68 295 *e*P **P 19 46 57.4 +0.2**
comp=Z,7.7nm,0.7s,mb4.8
KBL Kabul 49.68 295 *e*P **P 19 46 57.4 +0.2**
KBL pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
SVE Sverdlovsk 55.59 323⇑*e*P **P 19 47 40.4 -0.2**
SVE pmax pmax
comp=Z,15nm,1.0s,mb5.0
ABKAR Akbulak array 55.70 313 *e*P **P 19 47 41.6 +0.1**
comp=Z,9.3nm,0.6s,mb5.0
ARU Arti 56.70 322 *e*P **P 19 47 47.4 -1.2**
comp=Z,2.8nm,0.6s,mb4.5
ARU Arti 56.70 322 *e*P **P 19 47 47.4 -1.1**
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
AKTK Aktyubinsk 56.93 315 P **P 19 47 48.0 -2.3**
AKTO Aktyubinsk 56.93 315 P **P 19 47 48.0 -2.3**
comp=Z,6.0nm,0.7s,mb4.7,baz=98,slow=12,SNR=16
AKTO Aktyubinsk 56.93 315 P **P 19 47 48.0 -2.3**
AKTO pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ILAR Eielson Array 65.77 28 P **P 19 48 47.9 -2.0**
comp=Z,0.6nm,0.8s,mb3.7,baz=282,slow=8.1,SNR=7.9
ILAR Eielson Array 65.77 28 P **P 19 48 47.9 -1.9**
GNI Garni 67.71 305*ce*P **P 19 49 04.9 +2.3**
GNI pmax pmax
comp=Z,12nm,1.2s
KIV Kislovodsk 68.19 309 *e*P **P 19 49 06.7 +1.1**
KIV pmax pmax
comp=Z,20nm,0.9s,mb5.2
MIB Mutribah 68.63 294 *e*P **P 19 49 07.9 -0.7**
MIB AMb AMB 19 49 08.8
comp=Z,20nm,0.6s,mb5.2
RDF Al-Radifah 68.72 293 *e*P **P 19 49 09.2 0.0**
RDF AMb AMB 19 49 10.3
comp=Z,29nm,0.9s,mb5.2
NAY Al-Naaiem 68.88 293 *e*P **P 19 49 09.6 -0.6**
NAY AMb AMB 19 49 09.8
comp=Z,12nm,0.9s,mb4.8
SPITS Spitsbergen Ar 68.98 348 P **P 19 49 09.0 -1.0**
comp=Z,1.2nm,0.4s,mb4.2,baz=53,slow=7.5,SNR=4.2
SPITS Spitsbergen Ar 68.98 348 P **P 19 49 09.0 -1.0**
SPITS pmax pmax
comp=Z,1.0nm,0.4s
OBN Obninsk 69.15 322⇓*e*P **P 19 49 10.1 -1.2**
OBN pmax pmax
comp=Z,26nm,2.5s,mb4.7
OBN MLR MLR
comp=Z,100nm,14.0s,MS4.2
JOF Joensuu 69.64 331 *e*P **P 19 49 14.5 +0.3**
JOF pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
JOF Joensuu 69.64 331 *e*p **P 19 49 14.5 +0.3**
comp=Z,1.3nm,0.6s,mb4.0
ARCES ARCESS Array B 69.85 338 P **P 19 49 14.6 -0.8**
comp=Z,1.3nm,0.6s,mb4.0,baz=66,slow=7.1,SNR=5.2
ARCES ARCESS Array B 69.85 338 P **P 19 49 14.6 -0.8**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
KAF Kangasniemi 72.10 331 *e*P **P 19 49 28.5 -0.7**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KAF Kangasniemi 72.10 331 *e*p **P 19 49 28.5 -0.7**
comp=Z,1.3nm,0.3s
FINES FINESS Array B 72.44 330 P **P 19 49 30.8 -0.4**
comp=Z,4.4nm,0.5s,mb4.7,baz=53,slow=5.4,SNR=45
FINES FINESS Array B 72.44 330 P **P 19 49 30.8 -0.5**
FINES pmax pmax
comp=Z,4.0nm,0.5s
MALT Malatya 72.93 305 *e*P **P 19 49 35.6 +1.0**
comp=Z,4.4nm,0.7s,mb4.5
MALT Malatya 72.93 305 *e*P **P 19 49 35.6 +1.0**
MALT pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
MALT Malatya 72.93 305⇑*i*P **P 19 49 36.2 +1.6**
AKASG Malin Array Be 74.76 319 P **P 19 49 44.5 -0.6**
comp=Z,6.6nm,0.6s,mb4.8,baz=59,slow=6.4,SNR=22
AKASG Malin Array Be 74.76 319 P **P 19 49 44.5 -0.6**
AKASG Malin Array Be 74.76 319*ce*P **P 19 49 44.5 -0.6**
AKASG pmax pmax
comp=Z,7.0nm,0.6s
KIEV Kiev 74.78 319 *e*P **P 19 49 44.4 -0.8**
comp=Z,6.9nm,0.6s,mb4.8
KIEV Kiev 74.78 319 *e*P **P 19 49 44.4 -0.8**
KIEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
BRTR Keskin Array B 75.93 307 P **P 19 49 51.9 -0.2**
comp=Z,4.8nm,0.8s,mb4.5,baz=95,slow=5.3,SNR=24
BRTR Keskin Array B 75.93 307*ce*P **P 19 49 51.9 -0.1**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
SUW Suwalki 76.83 324 *e*P **P 19 49 56.6 -0.2**
SUW Suwalki 76.83 324 *e*P **P 19 49 54.9 -2.0**
comp=Z,45nm,1.1s,mb5.3
SUW Suwalki 76.83 324 *e*P **P 19 49 56.6 -0.2**
VRI Vrincioaia 78.20 315⇓*i*P **P 19 50 05.4 +0.7**
BUR08 Bucovina Ar. S 78.41 317 *e*P **P 19 50 05.3 -0.5**
BURAR Bucovina Array 78.41 317⇑P **P 19 50 06.3 +0.5**
BURAR Bucovina Array 78.41 317⇑*i*P **P 19 50 06.3 +0.5**
HFS Hagfors 78.45 332 P **P 19 50 05.0 -0.8**
comp=Z,4.0nm,0.6s,mb4.6,baz=26,slow=8.0,SNR=7.2
HFS Hagfors 78.45 332 P **P 19 50 05.0 -0.8**
HFS pmax pmax
comp=Z,4.0nm,0.6s
MLR Muntele Rosu 78.86 315⇓P **P 19 50 09.2 +0.9**
MLR Muntele Rosu 78.86 315⇓*i*P **P 19 50 09.1 +0.8**
NB2 NORSAR Subarra 78.99 333 P **P 19 50 07.7 -1.0**
comp=Z,3.4nm,0.5s,mb4.5,baz=54,slow=6.2
NOA NORSAR Array B 78.99 333 P **P 19 50 07.6 -1.2**
comp=Z,4.9nm,0.7s,mb4.6,baz=54,slow=5.6,SNR=18
NOA LR LR 20 28 35.1
comp=Z,89nm,18.4s,MS4.1,baz=10.0,slow=38
NOA NORSAR Array B 78.99 333 P **P 19 50 07.6 -1.2**
NOA LR LR 20 28 35.1
NOA NORSAR Array B 78.99 333 P **P 19 50 07.6 -1.1**
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA MLR MLR
comp=Z,89nm,18.4s
KWP Kalwaria Pacla 79.02 320 *e*P **P 19 50 09.6 +0.4**
KWP Kalwaria Pacla 79.02 320 *e*P **P 19 50 09.3 +0.1**
comp=Z,7.4nm,0.8s,mb4.7
KWP Kalwaria Pacla 79.02 320⇑P **P 19 50 09.7 +0.6**
KWP Kalwaria Pacla 79.02 320⇑*i*P **P 19 50 09.6 +0.5**
YKA Yellowknife Ar 79.78 24 P **P 19 50 11.7 -1.3**
comp=Z,3.5nm,0.7s,mb4.4,baz=303,slow=5.2,SNR=9.8
YKA Yellowknife Ar 79.78 24 P **P 19 50 11.7 -1.3**
YKA pmax pmax
comp=Z,4.0nm,0.7s
TRPA Tarpa 79.80 319⇑*i*P **P 19 50 13.9 +0.5**
DRGR 80.31 317⇑P **P 19 50 16.9 +0.7**
DRGR 80.31 317⇑*i*P **P 19 50 16.9 +0.7**
GZR Gura Zlata 80.91 316⇓P **P 19 50 20.5 +1.1**
GZR Gura Zlata 80.91 316⇓*i*P **P 19 50 20.5 +1.1**
SUMG Summit 81.44 355 *i* P **P 19 50 21.9 +0.2**
comp=Z,8.1nm,0.8s,mb4.7
BZS Buzias 81.52 317⇑P **P 19 50 22.6 -0.1**
BZS Buzias 81.52 317⇑*i*P **P 19 50 22.6 -0.1**
VYHS Vyhne 81.81 320 *e*P **P 19 50 24.8 +0.7**
comp=Z,12nm,1.7s,mb4.6
VYHS Vyhne 81.81 320 *e*P **P 19 50 24.8 +0.7**
VYHS pmax pmax
comp=Z,12nm,1.7s,mb4.5
VYHS Vyhne 81.81 320 *e*P **P 19 50 24.8 +0.7**
MORC Moravsky Berou 81.90 322⇓P **P 19 50 25.2 +0.6**
MORC Moravsky Berou 81.90 322⇓*i*P **P 19 50 25.2 +0.6**
VTS Vitosha 81.91 313⇓P **P 19 50 25.5 +0.7**
VTS Vitosha 81.91 313⇓*i*P **P 19 50 25.5 +0.7**
PKSM Moragy 83.05 318⇓P **P 19 50 30.9 +0.2**
PKSM Moragy 83.05 318⇓*i*P **P 19 50 30.9 +0.2**
CLL Collm 83.55 325 *e*P **P 19 50 33.0 -0.1**
comp=Z,7.0nm,0.9s,mb4.8
CLL Collm 83.55 325 *e*P **P 19 50 33.0 -0.1**
CLL pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
CLL Collm 83.55 325 *e*P **P 19 50 33.0 -0.1**
comp=Z,7.0nm,0.9s,mb4.8
CLL *e*sP sP 19 50 43.0 -2.6
CLL LmV 20 31 00.0
comp=Z,100nm,19.4s
GERES GERESS Array B 84.53 322 P **P 19 50 37.6 -0.6**
comp=Z,0.4nm,0.6s,mb3.7,baz=49,slow=4.1,SNR=6.4
GERES GERESS Array B 84.53 322 P **P 19 50 37.6 -0.6**
LPL La Plagne 90.33 322 *e*P **P 19 51 05.9 -0.3**
comp=Z,6.4nm,1.0s,mb4.6
LPL La Plagne 90.33 322 *e*P **P 19 51 05.9 -0.3**
comp=Z,3.2nm,1.0s,mb4.6
LPL La Plagne 90.33 322 *e*P **P 19 51 05.9 -0.3**
LPL pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
LPG La Plagne 90.33 322 *e*P **P 19 51 06.0 -0.2**
comp=Z,5.7nm,0.8s,mb4.6
LPG La Plagne 90.33 322 *e*P **P 19 51 06.0 -0.2**
comp=Z,2.8nm,0.8s,mb4.6
LPG La Plagne 90.33 322 *e*P **P 19 51 06.0 -0.2**
LPG pmax pmax
comp=Z,3.0nm,0.8s,mb4.7

TIR ***28*** *19:44:36.9±2.2, 41°.47N×20°.00E, h0km±20km, ML3.1*
ISCJB ***28*** *19:44:39.8±0.7, 41°.52N±0°.03×19°.66E±0°.06, h9km±5km, Error ellipse: s-maj=7.9km s-min=4.4km az=157.6*
CSEM ***28*** *19:44:40.1±0.5, 41°.47N×19°.60E, h10km, ML2.1, Error ellipse: s-maj=12.2km s-min=6.9km az=67.0*
BEO ***28*** *19:44:41.8±0.4, 41°.49N×19°.82E, h6km±3km, ML2.1/5*
ISC 28 19:44:40.3±0.8, 41°.50N±0°.03×19°.64E±0°.06, h7km±5km, n24, σ1°48/46, Albania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**132**	*e*Pg	**Pg**		**19 44 44.4**	**-0.5**
TIR				*e*Sg	**Sg**		**19 44 48.1**	**+0.1**
TIR	**Tirane**	**0.23**	**132**	*e*Pg	**Pg**		**19 44 44.4**	**-0.5**
TIR				*e*Sg	**Sg**		**19 44 48.1**	**+0.1**
PUK	**Puka**	**0.57**	**19**	*e*PG	**Pg**		**19 44 51.3**	**-0.1**
PUK				*i* SG	**Sg**		**19 45 02.3**	**+3.4**
PUK	**Puka**	**0.57**	**19**	*e*Pg	**Pg**		**19 44 51.3**	**0.0**
SNR=98								
PUK				*i* Sg	**Sg**		**19 45 02.3**	**+3.5**
SNR=98								
BCI	**Bajram Curri**	**0.92**	**20**	*e*PG	**Pg**		**19 44 57.5**	**-0.4**
BCI				*i* SG	**Sg**		**19 45 14.8**	**+4.9**
BCI	**Bajram Curri**	**0.92**	**20**	*e*Pg	**Pg**		**19 44 57.5**	**-0.5**
SNR=95								
BCI				*i* Sg	**Sg**		**19 45 14.8**	**+4.8**
SNR=95								
PDG	**Podgorica**	**0.97**	**343**	*e*Pg	**Pg**		**19 45 00.4**	**+1.5**
PDG				*e*Sg	**Sg**		**19 45 14.4**	**+3.0**
PDG	**Podgorica**	**0.97**	**343**	*e*Pg	**Pg**		**19 45 00.4**	**+1.5**
PDG				*e*Sg	**Sg**		**19 45 14.4**	**+3.0**
KRUS	**Krusevo**	**1.22**	**96**	*e*Pg	**Pg**		**19 45 01.1**	**-2.6**
KRUS				*e*Sg	**Sg**		**19 45 20.4**	**+0.9**
KBN	**Korca**	**1.24**	**135**	*i* PG	**Pg**		**19 45 02.8**	**-1.2**
KBN				*i* SN	**Sn**		**19 45 23.8**	**+3.0**
KBN	**Korca**	**1.24**	**135**	*i* Pg	**Pg**		**19 45 02.8**	**-1.2**
SNR=94								
KBN				*i* Sn	**Sn**		**19 45 23.8**	**+3.0**
SRN	**Sarande**	**1.64**	**170**	*i* PN	**Pn**		**19 45 10.0**	**+0.5**
SRN				*i* SN	**Sn**		**19 45 31.8**	**+1.0**
SRN	**Sarande**	**1.64**	**170**	*i* Pn	**Pn**		**19 45 10.0**	**+0.5**
SNR=47								
SRN				*i* Sn	**Sn**		**19 45 31.8**	**+0.9**
SNR=47								
SJES	**Sjenica**	**1.78**	**8**	*e*Pn	**Pn**		**19 45 13.2**	**+1.9**
SJES				*e*Sg	**Sg**		**19 45 37.3**	**0.0**
SJES	**Sjenica**	**1.78**	**8**	*e*Pn	**Pn**		**19 45 13.2**	**+1.9**
SJES				*e*Sg	**Sg**		**19 45 37.3**	**0.0**
STON	**Ston**	**1.99**	**314**	*e*Pn	**Pn**		**19 45 12.3**	**-1.9**
STON				Sn	**Sn**		**19 45 36.5**	**-2.8**
STON	**Ston**	**1.99**	**314**	*e*Pn	**Pn**		**19 45 12.2**	**-2.0**
STON				Sn	**Sn**		**19 45 36.5**	**-2.8**
BARS	**Barje**	**2.09**	**50**	*e*Pn	**Pn**		**19 45 16.3**	**+0.7**
BARS				*e*Sg	**Sg**		**19 45 45.3**	**-2.0**
DIVS	**Divibare**	**2.61**	**6**	*e*Pn	**Pn**		**19 45 24.7**	**+1.9**
DIVS	**Divibare**	**2.61**	**6**	*e*Pn	**Pn**		**19 45 24.7**	**+1.9**
ZAPS	**Zavoj**	**2.84**	**50**	*e*Pn	**Pn**		**19 45 25.6**	**-0.4**
ZAPS				*e*Sn	**Sn**		**19 45 59.5**	**-0.9**
ZAPS	**Zavoj**	**2.84**	**50**	*e*Pn	**Pn**		**19 45 25.6**	**-0.4**
ZAPS				*e*Sn	**Sn**		**19 45 59.5**	**-0.9**
NVLJ	**Novalja**	**4.64**	**313**	*i* Pn	**Pn**		**19 45 49.1**	**-1.6**
NVLJ				Sn	**Sn**		**19 46 41.2**	**-3.6**
NVLJ	**Novalja**	**4.64**	**313**	*i* Pn	**Pn**		**19 45 49.0**	**-1.7**
NVLJ				Sn	**Sn**		**19 46 41.2**	**-3.6**

KRSC 28 19:48:52.5±0.2, 54°.44N×160°.57E, h110km±30km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.69**	**80**	*e*P		Pn	**19 49 11.4**	**+0.7**
MKZ				*e*S		Sn	**19 49 24.7**	**+0.3**
KII	**Karymskiy**	**0.77**	**239**	*e*P		Pn	**19 49 12.3**	**+0.9**
KII				*e*S		Sn	**19 49 26.6**	**+0.9**
TUMR	**Tumrok**	**0.88**	**344**	*e*P		Pn	**19 49 13.2**	**+0.8**
TUMR				*e*S		Sn	**19 49 28.2**	**+0.7**
KMNR	**Kamenistaya**	**1.33**	**352**	*e*P		Pn	**19 49 18.4**	**+1.1**
KMNR				*e*S		Sn	**19 49 37.9**	**+1.8**
SPN	**Mys Shipunski**	**1.38**	**194**	*e*P		Pn	**19 49 18.7**	**+0.8**
SPN				*e*S		Sn	**19 49 36.9**	**-0.2**
NLC	**Nalytchevo**	**1.46**	**210**	*e*P		Pn	**19 49 20.2**	**+1.4**
NLC				*e*S		Sn	**19 49 39.8**	**+1.0**
KIRR	**Kirishev**	**1.52**	**355**	*e*P		Pn	**19 49 20.7**	**+1.2**
KIRR				*e*S		Sn	**19 49 41.8**	**+1.8**
KPT	**Kopyto**	**1.54**	**353**	*e*P		Pn	**19 49 20.9**	**+1.2**
AVH	**Avacha**	**1.60**	**223**	*e*P		Pn	**19 49 22.2**	**+1.7**
AVH				*e*S		Sn	**19 49 44.4**	**+2.7**
KOZ	**Kozyrevsk**	**1.67**	**346**	*e*P		Pn	**19 49 22.0**	**+0.7**
GNL	**Ganaly**	**1.72**	**245**	*e*P		Pn	**19 49 23.1**	**+1.2**
GNL				*e*S		Sn	**19 49 46.3**	**+2.0**
KRSR	**Krestovskiy**	**1.78**	**360**	*e*P		Pn	**19 49 24.2**	**+1.5**
PET	**Petropavlovsk**	**1.82**	**220**	*e*P		Pn	**19 49 24.8**	**+1.6**
PET				*e*S		Sn	**19 49 48.1**	**+1.6**
KLY	**Klyuchi**	**1.88**	**1**	*e*S		Sn	**19 49 50.5**	**+2.7**
SRDR	**Sredinnyy**	**1.94**	**346**	*e*P		Pn	**19 49 25.0**	**+0.3**
KBTR	**Krutoberegovo**	**2.19**	**35**	*e*P		Pn	**19 49 29.1**	**+1.3**

NAO ***28*** *19:52:22.2±1.4, 71°.24N×4°.55W, ML3.6*
BJI ***28*** *19:52:22.8, 71°.62N×4°.96W, h11km, mB5.3/24, mb4.9/35, Ms5.1/19, MS7 4.8/19*
ISCJB ***28*** *19:52:24.2±0.1, 71°.44N±0°.02×4°.25W±0°.06, h10km, mb4.8/179, MS4.1/55, Error ellipse: s-maj=3.1km s-min=1.6km az=139.3*
CSEM ***28*** *19:52:24.1±0.1, 71°.40N×4°.38W, h2km, mb4.9/99, Ms3.7, Mw4.8, Error ellipse: s-maj=4.2km s-min=3.3km az=65.0*
IDC ***28*** *19:52:24.3±0.5, 71°.41N×4°.30W, h0km, mb4.2/21, mb1 4.4/25, mb1mx4.4/30, mbtmp4.3/25, ML4.1/4, MS4.1/37, Ms1 4.1/37, ms1mx4.1/43, Error ellipse: s-maj=13.8km s-min=11.0km az=42.0*
GCMT ***28*** *19:52:24.6±0.3, 71°.44N×4°.03W, h12km, MW4.8, Moment Tensor Solution. s17,c19; s66,c104; Moment tensor: Scale 10^16^Nm; M_{rr}-1.93±.06; $M_{\theta\theta}$0.74±.06; $M_{\phi\phi}$1.19±.06; $M_{r\theta}$0.29±.26; $M_{\theta\phi}$0.87±.05; $M_{r\phi}$-0.85±.22; Best double couple: M_0=2.10000×10^16^ NP1:ϕ_s=234.00000°, δ40.00000°, λ-63.00000°. NP2:ϕ_s=20.00000°, δ55.00000°, λ-111.00000°. Principal axes: T 1.9300, Plg8.0000°, Azm125.0000°; N 0.3000, Plg17.0000°, Azm32.0000°; P -2.2300, Plg71.0000°, Azm238.0000°; Data Used: IU G CN IC II.*
MOS ***28*** *19:52:24.3±1.2, 71°.46N×3°.98W, h10km, mb5.1/83, MS4.0/30 Error ellipse: s-maj=14.6km s-min=3.1km az=96.2*
NEIC ***28*** *19:52:25.8±0.2, 71°.41N×4°.44W, h10km, mb5.0/116, Error ellipse: s-maj=4.0km s-min=3.0km az=62.0*
BER ***28*** *19:52:25.4±3.1, 71°.54N×4°.72W, h10km, MD2.8, ML3.4*
SZGRF ***28*** *19:52:33.0, 71°.16N×3°.15W, h33km, mb5.0, MS3.4, Jan Mayen Island region*
BGS ***28*** *19:52:34.5±1.7, 70°.65N×3°.84W, h10km, mb5.0*
ISC 28 19:52:26.1±0.1, 71°.41N±0°.02×4°.14W±0°.05, h10km, (h15km±.6km:pP-P), n1010, σ0°88/1009, mb4.8/179, MS4.1/55, 140C-128D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.41**	**255**	*e*P		**Pn**	**19 52 47.9**	**-3.9**
JNE				AML		AML	19 53 06.2	
comp=Z,1μm,0.7s								
JNE	**Jan Mayen East**	**1.41**	**255**	*e*P		**Pn**	**19 52 47.9**	**-3.9**
SNR=50								
JNW	**Jan Mayen West**	**1.44**	**257**	*e*P		**Pn**	**19 52 48.2**	**-4.0**
JNW				AML		AML	19 53 10.3	
comp=Z,610nm,0.4s								
JNW	**Jan Mayen West**	**1.44**	**257**	*e*P		**Pn**	**19 52 48.2**	**-4.0**
SNR=50								
JMIC	**Jan Mayen**	**1.48**	**255**	Pg		**Pg**	**19 52 48.1**	**-6.4**
JMIC				Lg			19 53 03.4	
JMIC	**Jan Mayen**	**1.48**	**255**	*e*P		**Pn**	**19 52 48.1**	**-4.6**
JMIC				*e*S		**Sn**	**19 53 04.0**	**-8.1**
JMIC	**Jan Mayen**	**1.48**	**255**	Pn		**Pn**	**19 52 48.2**	**-4.5**
comp=Z,15nm,0.3s,baz=44,slow=5.0,SNR=7.9								
JMIC				Sn		**Sn**	**19 53 03.9**	**-8.2**
comp=Z,45nm,0.3s,baz=354,slow=23,SNR=5.9								
JMIC	**Jan Mayen**	**1.48**	**255**	*e*P		**Pn**	**19 52 48.1**	**-4.6**
SNR=50								
JMIC				*e*S		**Sn**	**19 53 04.0**	**-8.1**
SNR=50								
JMI	**Jan Mayen**	**1.57**	**254**	*e*P		**Pn**	**19 52 49.9**	**-4.0**
JMI				*e*S		**Sn**	**19 53 06.9**	**-7.3**
JMI				AML		AML	19 53 10.0	
comp=Z,758nm,0.6s								
JMI	**Jan Mayen**	**1.57**	**254**	*e*P		**Pn**	**19 52 49.9**	**-4.0**
JMI				*e*S		**Sn**	**19 53 06.9**	**-7.3**
JMI	**Jan Mayen**	**1.57**	**254**	*e*P		**Pn**	**19 52 49.9**	**-4.0**
SNR=50								
JMI				*e*S		**Sn**	**19 53 06.9**	**-7.3**
comp=Z,758nm,0.6s,SNR=50								
SCO	**Scoresbysund**	**5.90**	**269**	*i* P		**Pn**	**19 53 55.8**	**+2.4**
SCO				pmax		pmax		
comp=Z,22nm,1.0s								
SCO	**Scoresbysund**	**5.90**	**269**	*i* P		**Pn**	**19 53 55.8**	**+2.4**
comp=Z,22nm,1.0s								
DAG	**Danmarks Havn**	**6.68**	**330**	*i* P		**Pn**	**19 54 01.0**	**-3.0**
DAG				pmax		pmax		
comp=Z,17nm,0.8s								
DAG	**Danmarks Havn**	**6.68**	**330**	*i* P		**Pn**	**19 54 01.0**	**-3.0**
comp=Z,169nm,0.8s								
DAG				*i* S		**Sn**	**19 55 07.4**	**-13**
DAG				*i*			19 55 11.6	
DAG	**Danmarks Havn**	**6.68**	**330**	*i* S		**Sn**	**19 55 07.4**	**-13**
comp=Z,30nm,0.5s,SNR=102								
STEI	**Steigen**	**7.58**	**108**	*e*P		**Pn**	**19 54 14.9**	**-1.5**
TRO	**Tromso**	**7.89**	**92**	*e*P		**Pn**	**19 54 17.8**	**-2.9**
TRO	**Tromso**	**7.89**	**92**	*e*P		**Pn**	**19 54 17.8**	**-2.9**
KONS	**Konsvik**	**7.90**	**120**	*e*P		**Pn**	**19 54 19.4**	**-1.4**
KONS				AML		AML	19 55 45.8	
comp=Z,26nm,

STOK *e*S **Sn** **19 55 43.1 -9.4**
STOK AML AML 19 55 50.4
comp=Z,45nm,0.5s
STOK Stokkvaagen 8.00 121 *e*P **Pn** **19 54 20.8 -1.4**
STOK *e*S **Sn** **19 55 43.1 -9.4**
STOK Stokkvaagen 8.00 121 *e*P **Pn** **19 54 20.8 -1.4**
STOK *e*S **Sn** **19 55 43.1 -9.4**
FLOS Flostrand 8.09 120 *e*P **Pn** **19 54 22.2 -1.3**
MOR8 Moi Rana 8.51 119 *e*P **Pn** **19 54 28.8 -0.4**
MOR8 *e*S **Sn** **19 55 59.0 -6.1**
MOR8 AML AML 19 56 01.3
comp=Z,26nm,0.4s
MOR8 Moi Rana 8.51 119 *e*P **Pn** **19 54 28.8 -0.4**
MOR8 *e*S **Sn** **19 55 59.0 -6.1**
MOR8 Moi Rana 8.51 119 *e*P **Pn** **19 54 28.8 -0.4**
SNR=47
KBS Kingsbay 8.55 21 Pn **Pn** **19 54 29.1 -0.6**
KBS Kingsbay 8.55 21 *e*P **Pn** **19 54 29.4 -0.3**
KBS Kingsbay 8.55 21 *e*P **Pn** **19 54 29.4 -0.3**
KBS Kingsbay 8.55 21 *i* P **Pn** **19 54 30.7 +1.0**
comp=Z,27nm,0.8s,SNR=78
SPB4 Spitsbergen Ar 8.60 29 *e*Pn **Pn** **19 54 30.3 0.0**
SPB4 Spitsbergen Ar 8.60 29 *e*Pn **Pn** **19 54 30.3 0.0**
SPA0 Spitsbergen Ar 8.60 29 Pn **Pn** **19 54 30.7 +0.3**
baz=225,slow=16
SPITS Spitsbergen Ar 8.60 29 Pn **Pn** **19 54 30.4 0.0**
baz=215,slow=14,SNR=27
SPITS LR LR 19 57 03.9
comp=Z,809nm,18.3s,baz=235,slow=32
SPITS Spitsbergen Ar 8.60 29 Pn **Pn** **19 54 30.4 0.0**
SPITS LR LR 19 57 03.9
SPITS Spitsbergen Ar 8.60 29 P **Pn** **19 54 30.4 0.0**
SPITS Spitsbergen Ar 8.60 29 P **Pn** **19 54 30.4 0.0**
NSS Namsos 9.15 131 *e*P **Pn** **19 54 35.5 -2.4**
NSS *e*S **Sn** **19 56 12.1 -8.6**
NSS AML AML 19 56 16.3
comp=Z,37nm,0.4s
NSS Namsos 9.15 131 *e*P **Pn** **19 54 35.5 -2.4**
NSS *e*S **Sn** **19 56 12.1 -8.6**
NSS Namsos 9.15 131 *e*P **Pn** **19 54 35.5 -2.4**
SNR=47
SOFL Sornfelli, Far 9.45 188 P **Pn** **19 54 40.3 -1.7**
SOFL AMB AMB 19 54 53.9
comp=Z,297nm,3.9s
SOFL Sornfelli, Far 9.45 188 *e*P **Pn** **19 54 40.3 -1.7**
SOFL AMB AMB 19 54 53.9
comp=Z,297nm,3.9s
SOFL Sornfelli, Far 9.45 188 *e*P **Pn** **19 54 40.3 -1.7**
KTK1 Kautokeino 9.54 91 *e*P **Pn** **19 54 41.9 -1.4**
KTK1 Kautokeino 9.54 91 *e*P **Pn** **19 54 41.8 -1.5**
SNR=47
ARA0 ARCESS Array S 10.04 86 Pn **Pn** **19 54 48.3 -1.8**
baz=292,slow=11
ARCES ARCESS Array B 10.04 86 Pn **Pn** **19 54 48.4 -1.7**
comp=Z,1.4nm,0.3s,baz=296,slow=11,SNR=40
ARCES LR LR 19 58 03.7
comp=Z,1μm,20.1s,baz=295,slow=34
ARCES ARCESS Array B 10.04 86 P **Pn** **19 54 48.4 -1.7**
ARCES pmax pmax
comp=Z,1.0nm,0.3s
ARE0 ARCESS Array S 10.04 86 *e*P **Pn** **19 54 48.4 -1.7**
KEV Kevo 10.43 84 *e*P **Pn** **19 54 53.5 -1.9**
comp=Z,74nm,1.3s
KEV Kevo 10.43 84 *e*P **Pn** **19 54 53.6 -1.8**
KEV pmax pmax
comp=Z,6.0nm,0.3s
KEV Kevo 10.43 84 *e*P **Pn** **19 54 53.6 -1.8**
comp=Z,6.0nm,0.3s
FOO Floro 10.49 155 *e*P **Pn** **19 54 53.5 -2.9**
FOO *e*S **Sn** **19 56 43.0 -11**
FOO Floro 10.49 155 *e*P **Pn** **19 54 53.5 -2.8**
SNR=47
SUMG Summit 10.59 292 *e*P **Pn** **19 54 56.3 -1.3**
comp=Z,18nm,0.9s
SUMG Summit 10.59 292 *i* P **Pn** **19 54 55.8 -1.8**
comp=Z,12nm,0.9s
SUMG *e*S **Sn** **19 56 46.9 -9.1**
SUMG Summit 10.59 292 *e*P **Pn** **19 54 56.3 -1.3**
comp=Z,18nm,0.9s
HYA Hoyanger 11.07 153 *e*P **Pn** **19 55 03.7 -0.5**
HYA AML AML 19 57 11.8
comp=Z,22nm,0.7s
HYA Hoyanger 11.07 153 *e*P **Pn** **19 55 03.7 -0.5**
HYA *e*S **Sn** **19 57 00.2 -7.6**
HYA Hoyanger 11.07 153 *e*P **Pn** **19 55 03.7 -0.5**
SNR=47
WAL1 Walls 11.25 174 P **Pn** **19 55 04.2 -2.5**
WAL1 Walls 11.25 174 *e*P **Pn** **19 55 04.2 -2.5**
WAL1 Walls 11.25 174 *e*P **Pn** **19 55 04.2 -2.5**
LRW Lerwick 11.39 172 P **Pn** **19 55 06.5 -2.0**
LRW AMB AMB 19 55 12.7
comp=Z,140nm,3.8s
LRW Lerwick 11.39 172 *e*P **Pn** **19 55 06.5 -2.0**
LRW AMB AMB 19 55 12.7
comp=Z,140nm,3.8s
LRW Lerwick 11.39 172 *e*P **Pn** **19 55 06.5 -2.0**
ASK Askoy 11.59 156 *e*P **Pn** **19 55 08.5 -2.8**
RUND Rundenannen 11.68 156 *e*P **Pn** **19 55 09.0 -3.6**
NB2 NORSAR Subarra 12.06 142 Pn **Pn** **19 55 16.1 -1.6**
baz=323,slow=14
NB2 NORSAR Subarra 12.06 142 Pn **Pn** **19 55 16.1 -1.6**
comp=Z,7.2nm,0.8s,baz=335,slow=14
NB2 NORSAR Subarra 12.06 142 Pn **Pn** **19 55 16.1 -1.6**
comp=Z,7.2nm,0.8s,baz=335,slow=14,SNR=1.5
NOA NORSAR Array B 12.06 142 Pn **Pn** **19 55 15.1 -2.5**
comp=Z,0.9nm,0.3s,baz=331,slow=12,SNR=8.8
NOA Sn **Sn** **19 57 18.8 -13**
comp=Z,1.3nm,0.3s,baz=81,slow=19,SNR=5.6
NOA LR LR 19 59 42.2
comp=Z,1μm,20.7s,baz=335,slow=36
NOA NORSAR Array B 12.06 142 Pn **Pn** **19 55 15.1 -2.5**
NOA Sn **Sn** **19 57 18.8 -13**
NOA LR LR 19 59 42.2
NOA NORSAR Array B 12.06 142 P **Pn** **19 55 15.1 -2.6**
NOA pmax pmax
comp=Z,1.0nm,0.3s
NOA MLR MLR
comp=Z,1μm,20.7s
NOA NORSAR Array B 12.06 142 Pn **Pn** **19 55 15.1 -2.6**
KONO Kongsberg 13.05 148 *e*P **Pn** **19 55 30.0 -1.3**
comp=Z,25nm,0.9s
KONO Kongsberg 13.05 148 *e*P **Pn** **19 55 30.0 -1.3**
KONO pmax pmax
comp=Z,25nm,0.9s
KONO Kongsberg 13.05 148 *e*P **Pn** **19 55 30.0 -1.3**
comp=Z,25nm,0.9s
HFS Hagfors 13.39 139 Pn **Pn** **19 55 34.7 -1.2**
baz=333,slow=12
HFS Sn **Sn** **19 57 54.4 -10**
baz=337,slow=28
HFS Hagfors 13.39 139 Pn **Pn** **19 55 35.1 -0.9**
comp=Z,3.1nm,0.3s,baz=337,slow=10.0,SNR=71
HFS Sn **Sn** **19 57 53.9 -11**
comp=Z,2.0nm,0.3s,baz=339,slow=24,SNR=9.0
HFS LR LR 20 00 23.7
comp=Z,2μm,21.8s,baz=271,slow=36
HFS Hagfors 13.39 139 P **Pn** **19 55 35.1 -0.8**
HFS pmax pmax
comp=Z,3.0nm,0.3s
HFS MLR MLR
comp=Z,2μm,21.8s
HFS Hagfors 13.39 139 P **Pn** **19 55 35.1 -0.8**
comp=Z,2μm,21.8s
MVH1 Achvaich 13.54 180 *e*P **Pn** **19 55 36.4 -1.6**
MVH1 Achvaich 13.54 180 *e*P **Pn** **19 55 36.4 -1.6**
MCD Coleburn Disti 13.89 178 *e*P **Pn** **19 55 40.8 -1.9**
MCD Coleburn Disti 13.89 178 *e*P **Pn** **19 55 40.8 -1.9**
KAC Achnashellach 13.98 183 *e*P **Pn** **19 55 42.1 -1.8**
KAC Achnashellach 13.98 183 *e*P **Pn** **19 55 42.1 -1.8**
MDO Dochfour 14.03 180 *e*P **Pn** **19 55 43.4 -1.2**
MDO Dochfour 14.03 180 *e*P **Pn** **19 55 43.4 -1.2**
KPL Plockton 14.14 183 *e*P **Pn** **19 55 44.3 -1.9**
KPL AMB AMB 19 55 51.0
comp=Z,84nm,3.7s
KAF Kangasniemi 15.00 113 *e*P **Pn** **19 55 55.7 -2.0**
KAF pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 15.00 113 *e*p **Pn** **19 55 55.7 -2.0**
comp=Z,2.8nm,0.5s
EBH Black Hill 15.23 179 *e*P **Pn** **19 55 59.5 -1.3**
EAB Aberfoyle 15.28 180 *e*P **Pn** **19 56 01.1 -0.4**
FIA0 FINESS Array S 15.46 115 P **Pn** **19 56 02.2 -1.6**
baz=335,slow=14
FINES FINESS Array B 15.46 115 Pn **Pn** **19 56 02.0 -1.8**
comp=Z,0.5nm,0.3s,baz=333,slow=12,SNR=13
FINES LR LR 20 01 24.2
comp=Z,1μm,19.2s,baz=329,slow=35
FINES FINESS Array B 15.46 115 P **Pn** **19 56 02.0 -1.8**
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES MLR MLR
comp=Z,1μm,19.2s
EDI Edinburgh 15.55 178 P **Pn** **19 56 03.1 -2.0**
EDI AMB AMB 19 56 08.2
comp=Z,68nm,3.3s
EDI Edinburgh 15.55 178 *e*P **Pn** **19 56 03.1 -2.0**
EDI AMB AMB 19 56 08.2
comp=Z,68nm,3.3s
EAU Auchinoon 15.63 179 P **Pn** **19 56 05.0 -1.1**
EAU Auchinoon 15.63 179 *e*P **Pn** **19 56 05.0 -1.1**
EBL Broad Law 15.71 178 P **Pn** **19 56 06.1 -1.0**
EBL Broad Law 15.71 178 *e*P **Pn** **19 56 06.1 -1.0**
JOF Joensuu 15.90 104 *e*P **Pn** **19 56 06.8 -2.8**
JOF pmax pmax
comp=Z,4.0nm,0.4s
JOF Joensuu 15.90 104 *e*p **Pn** **19 56 06.8 -2.8**
comp=Z,4.3nm,0.4s
EKA Eskdalemuir Ar 16.15 178 Pn **Pn** **19 56 11.9 -0.9**
comp=Z,1.3nm,0.3s,baz=355,slow=12,SNR=32
EKA Sn **Sn** **19 58 57.4 -14**
comp=Z,0.5nm,0.3s,baz=2.6,slow=24,SNR=7.6
EKA Eskdalemuir Ar 16.15 178 P **Pn** **19 56 11.9 -0.9**
EKA pmax pmax
comp=Z,1.0nm,0.3s
ESK Eskdalemuir 16.16 178 P **Pn** **19 56 11.0 -2.0**
ESK AMB AMB 19 56 21.1
comp=Z,80nm,1.6s
ESK Eskdalemuir 16.16 178 *e*P **Pn** **19 56 11.0 -2.0**
ESK AMB AMB 19 56 21.1
comp=Z,80nm,1.6s
ESK Eskdalemuir 16.16 178 *e*P **Pn** **19 56 12.0 -1.0**
comp=Z,47nm,0.9s
ESK Eskdalemuir 16.16 178 *i* P **Pn** **19 56 17.3 +4.3**
ESK Eskdalemuir 16.16 178 *i* P **Pn** **19 56 17.3 +4.3**
ECK Cauldkaine Hil 16.30 178 P **Pn** **19 56 14.4 -0.3**
ECK Cauldkaine Hil 16.30 178 *e*P **Pn** **19 56 14.4 -0.3**
ECK Cauldkaine Hil 16.30 178 *e*P **Pn** **19 56 14.4 -0.3**
GAL1 Galloway 16.61 181 P **Pn** **19 56 17.6 -1.1**
GAL1 Galloway 16.61 181 *e*P **Pn** **19 56 17.6 -1.1**
KESW Keswick, Cumbr 16.89 178 P **Pn** **19 56 21.5 -0.8**
KESW AMB AMB 19 56 30.7
comp=Z,125nm,1.1s
KESW Keswick, Cumbr 16.89 178 *e*P **Pn** **19 56 21.5 -0.8**
KESW AMB AMB 19 56 30.7
comp=Z,125nm,1.1s
KESW Keswick, Cumbr 16.89 178 *e*P **Pn** **19 56 21.5 -0.8**
XDE Dent Fell 16.97 179 P **Pn** **19 56 22.1 -1.2**
XDE Dent Fell 16.97 179 *e*P **Pn** **19 56 22.1 -1.2**
XDE Dent Fell 16.97 179 *e*P **Pn** **19 56 22.1 -1.2**
GMM Mts of Mourne 17.26 184 P **Pn** **19 56 25.8 -1.0**
GMM Mts of Mourne 17.26 184 *e*P **Pn** **19 56 25.8 -1.0**
GMM Mts of Mourne 17.26 184 *e*P **Pn** **19 56 25.8 -1.0**
PUL Pulkovo 18.05 112 *i* P **Pn** **19 56 38.8 +2.1**
PUL pmax pmax
comp=Z,100nm,1.5s
PUL MLR MLR
comp=Z,905nm,15.0s
PUL Pulkovo 18.05 112 *i* P **Pn** **19 56 38.8 +2.1**
comp=Z,905nm,15.0s
DLF Lyons Farm 18.21 185 *e*P **Pn** **19 56 42.1 +3.5**
MCH1 Michaelchurch 19.49 178 P **Pn** **19 56 53.1 -1.0**
MCH1 AMB AMB 19 57 10.2
comp=Z,40nm,1.5s
MCH1 Michaelchurch 19.49 178 *e*P **Pn** **19 56 53.1 -1.0**
MCH1 AMB AMB 19 57 10.2
comp=Z,40nm,1.5s
MCH1 Michaelchurch 19.49 178 *e*P **Pn** **19 56 53.1 -1.0**
HGH Gray Hill 19.85 178 P **Pn** **19 56 56.9 -1.5**
HGH Gray Hill 19.85 178 *e*P **Pn** **19 56 56.9 -1.5**
HGH Gray Hill 19.85 178 *e*P **Pn** **19 56 56.9 -1.5**
KLMR Klimovskoe 20.03 99 *e*P **P** **19 56 58.1 -0.6**
KLMR pmax pmax
comp=Z,236nm,1.5s
KLMR MLR MLR
comp=Z,1μm,13.0s,MS4.4
KLMR Klimovskoe 20.03 99 *e*P **P** **19 56 58.1 -0.6**
comp=Z,1μm,13.0s
WTSB Winterswijk 20.12 160 *e*P **P** **19 56 59.9 +0.2**
comp=Z,28nm,1.1s
IZAR Zarasai 20.34 125 *e*P **P** **19 57 02.0 -0.1**
IZAR AMB AMB 19 57 08.2
comp=Z,30nm,1.6s
HEX Exmoor 20.42 179 P **P** **19 57 02.8 -0.2**
HEX Exmoor 20.42 179 *e*P **P** **19 57 02.8 -0.2**
HEX Exmoor 20.42 179 *e*P **P** **19 57 02.8 -0.1**
ISAL Salakas 20.46 125 *e*P **P** **19 57 03.2 -0.2**
ISAL AMB AMB 19 57 09.4
comp=Z,39nm,1.6s
GKP Gorka Klasztor 20.50 141 *e*P **P** **19 57 04.4 +0.6**
GKP LMZ 20 05 07.3
comp=Z,2μm,18.3s
GKP Gorka Klasztor 20.50 141 *e*P **P** **19 57 04.4 +0.6**
GKP MLR MLR
comp=Z,2μm,18.3s,MS4.4
GKP Gorka Klasztor 20.50 141 *e*P **P** **19 57 04.4 +0.6**
comp=Z,2μm,18.3s
RUE Ruedersdorf 20.61 148 *e*P **P** **19 57 05.7 +0.7**
comp=Z,132nm,1.6s
RUE Ruedersdorf 20.61 148 *e*P **P** **19 57 05.2 +0.1**
comp=Z,27nm,0.8s
RUE Ruedersdorf 20.61 148 *e*P **P** **19 57 05.2 +0.2**
comp=Z,27nm,0.8s
IIGN Ignalina 20.68 125 *e*P **P** **19 57 05.5 -0.3**
IIGN AMB AMB 19 57 12.0
comp=Z,39nm,2.3s
BUG Bochum--Univer 20.69 159 *e*P **P** **19 57 06.4 +0.4**
comp=Z,36nm,1.0s
CLZ Clausthal 20.70 154 *e*P **P** **19 57 06.3 +0.3**
comp=Z,51nm,1.2s
CLZ Clausthal 20.70 154 *e*P **P** **19 57 06.3 +0.3**
CLZ pmax pmax
comp=Z,51nm,1.2s
CLZ Clausthal 20.70 154 *e*P **P** **19 57 06.3 +0.3**
comp=Z,51nm,1.2s
SUW Suwalki 21.13 131 *e*P **P** **19 57 09.7 -0.9**
SUW *e*pP 19 57 14.3
SUW LMZ 20 04 08.9
comp=Z,700nm,23.9s
SUW Suwalki 21.13 131 *e*P **P** **19 57 08.5 -2.1**
comp=Z,177nm,1.0s,mb5.3
SUW Suwalki 21.13 131 *e*P **P** **19 57 09.7 -0.9**
SUW *e**PP 19 57 14.3
SUW MLR MLR
comp=Z,700nm,23.9s,MS4.0
SUW Suwalki 21.13 131 *e*P **P** **19 57 09.7 -0.9**
comp=Z,700nm,23.9s
BEBN Eben Emael 21.16 163 P **P** **19 57 11.6 +0.6**
comp=Z,21nm,1.3s,mb4.3
HGN Heimansgroeve 21.22 162 *e*P **P** **19 57 11.9 +0.3**
comp=Z,66nm,0.9s,mb5.0
NACGM Naroch 21.23 125 *e* **P** **19 57 09.0 -2.7**
SNF Seneffe 21.32 165 P **P** **19 57 12.9 +0.1**
comp=Z,21nm,1.4s,mb4.3
MEM Membach 21.38 162 P **P** **19 57 14.0 +0.6**
comp=Z,35nm,1.1s,mb4.6
BCLA Clavier 21.50 163 P **P** **19 57 14.9 +0.2**
comp=Z,46nm,1.6s,mb4.7
NEUB Neuenburg 21.52 152 *e*P **P** **19 57 15.2 +0.4**
comp=Z,84nm,1.2s,mb5.0
CLL Collm 21.61 150 *e*P **P** **19 57 15.9 +0.1**
comp=Z,58nm,1.3s,mb4.8
CLL Collm 21.61 150 *e*P **P** **19 57 16.0 +0.2**
comp=Z,17nm,1.0s,mb4.4
CLL *e*S **S** **20 01 17.0 +2.2**
CLL Collm 21.61 150 *e*P **P** **19 57 16.0 +0.2**
CLL *e*S **S** **20 01 17.0 +2.2**
CLL pmax pmax
comp=Z,17nm,1.0s,mb4.4
CLL Collm 21.61 150 *e*P **P** **19 57 16.0 +0.2**
comp=Z,17nm,1.0s,mb4.4
CLL *e*Pmax 19 57 20.0
comp=Z,58nm,1.3s
CLL *e*S **S** **20 01 17.0 +2.2**
CLL *e*ScP ScP 20 04 56.0 +2.4
CLL L 20 05 00.0
comp=Z,500nm,20.5s
CLL Collm 21.61 150 *e*P **P** **19 57 16.0 +0.2**
comp=Z,17nm,1.0s,mb4.4
DOU Dourbes 21.76 165 P **P** **19 57 17.6 +0.2**
comp=Z,19nm,1.6s,mb4.3
BAIF Baives 21.77 165 *e*P **P** **19 57 16.8 -0.7**
comp=Z,126nm,1.3s,mb4.9
BAIF Baives 21.77 165 *e*P **P** **19 57 16.8 -0.7**
comp=Z,63nm,1.3s,mb4.9
BAIF Baives 21.77 165 *e*P **P** **19 57 16.8 -0.7**
BAIF pmax pmax
comp=Z,63nm,1.3s,mb4.9
BAIF Baives 21.77 165 *e*P **P** **19 57 16.8 -0.7**
comp=Z,63nm,1.3s,mb4.9
GIVF Givet 21.77 164 *e*P **P** **19 57 17.6 0.0**
comp=Z,88nm,1.1s,mb4.8
GIVF Givet 21.77 164 *e*P **P** **19 57 17.6 0.0**
comp=Z,44nm,1.1s,mb4.8
GIVF Givet 21.77 164 *e*P **P** **19 57 17.6 0.0**
GIVF pmax pmax
comp=Z,44nm,1.1s,mb4.8
GIVF Givet 21.77 164 *e*P **P** **19 57 17.6 0.0**
comp=Z,44nm,1.1s,mb4.8
MNK Minsk 21.87 124 *e*P **P** **19 57 17.0 -1.6**
MNK Minsk 21.87 124 *e*P **P** **19 57 17.0 -1.6**
MICGM Minsk 21.88 124 *e*P **P** **19 57 17.0 -1.7**
MOX Moxa 22.04 153 *e*P **P** **19 57 20.6 +0.2**
comp=Z,132nm,1.6s,mb5.1
MOX Moxa 22.04 153 *e*P **P** **19 57 20.8 +0.4**
comp=Z,101nm,1.4s,mb5.1
MOX Moxa 22.04 153 *e*P **P** **19 57 20.6 +0.2**
MOX pmax pmax
comp=Z,132nm,1.6s,mb5.1
MOX Moxa 22.04 153 *e*P **P** **19 57 20.6 +0.2**
comp=Z,132nm,1.6s,mb5.1
FBE Freiberg 22.04 150 *e*P **P** **19 57 20.7 +0.2**
comp=Z,98nm,1.2s,mb5.1
BRG Berggiesshubel 22.19 149 *e*P **P** **19 57 21.6 -0.4**
comp=Z,50nm,1.2s,mb4.8
BRG Berggiesshubel 22.19 149 *e*P **P** **19 57 21.8 -0.1**
comp=Z,24nm,1.0s,mb4.6
BRG *i* 19 57 28.2
comp=Z,56nm,1.2s
BRG Berggiesshubel 22.19 149 *e*P **P** **19 57 21.8 -0.2**
BRG *i* 19 57 28.2
BRG pmax pmax
comp=Z,14nm,1.0s,mb4.3
BRG Berggiesshubel 22.19 149 *e*P **P** **19 57 21.8 -0.2**
comp=Z,14nm,1.0s,mb4.3
ABH Alteburg 22.26 160 *e*P **P** **19 57 23.5 +0.7**
ABH Alteburg 22.26 160 *e*P **P** **19 57 23.5 +0.7**
WAR Warsaw 22.27 136 *e*P pP 19 57 28.4 +2.7
WAR LMZ 20 05 20.9
comp=Z,1μm,24.6s
WAR Warsaw 22.27 136 *e*P **P** **19 57 28.4 +5.6**
WLF Walferdange 22.33 162 P **P** **19 57 24.0 +0.5**
comp=Z,26nm,1.7s,mb4.4
WLF Walferdange 22.33 162 *e*P **P** **19 57 24.8 +1.3**
comp=Z,44nm,1.3s,mb4.7
WLF Walferdange 22.33 162 *e*P **P** **19 57 24.8 +1.3**
WLF pmax pmax
comp=Z,44nm,1.3s,mb4.7
WLF Walferdange 22.33 162 *e*P **P** **19 57 24.8 +1.3**
comp=Z,44nm,1.3s,mb4.7
WERD Werda 22.34 152 *e*P **P** **19 57 24.0 +0.4**
comp=Z,54nm,1.2s,mb4.8
TANN Tannenbergstha 22.39 151 *e*P **P** **19 57 24.5 +0.3**
comp=Z,53nm,1.2s,mb4.8
GUNZ Gunzen 22.42 152 *e*P **P** **19 57 24.7 +0.2**
comp=Z,138nm,1.9s,mb5.1
WERN Wernitzgruen 22.50 152 *e*P **P** **19 57 25.8 +0.4**
comp=Z,118nm,1.4s,mb5.1
NKC Novy Kostel 22.57 151 *e*P **P** **19 57 26.2 +0.2**
NKC MLR MLR
comp=Z,500nm,19.3s,MS4.0
NKC Novy Kostel 22.57 151 *e*P **P** **19 57 26.2 +0.2**
NKC AMS AMS 20 07 50.0
comp=Z,500nm,19.3s
NKC Novy Kostel 22.57 151 *e*P **P** **19 57 26.2 +0.2**
comp=Z,500nm,19.3s
PVCC Panska Ves 22.62 148 *e*P **P** **19 57 26.2 -0.4**
PVCC Panska Ves 22.62 148 *e*P **P** **19 57 26.2 -0.4**
PVCC Panska Ves 22.62 148 *e*P **P** **19 57 26.2 -0.4**
FLN La Foliniere 22.79 174 *e*P **P** **19 57 26.4 -2.0**
comp=Z,156nm,1.3s,mb5.0
FLN *e*MLR MLR
comp=Z,494nm,21.8s,MS3.6
FLN La Foliniere 22.79 174 *e*P **P** **19 57 26.4 -2.0**
comp=Z,78nm,1.3s,mb5.0
FLN LR LR
comp=Z,490nm,21.8s,MS3.9
FLN La Foliniere 22.79 174 *e*P **P** **19 57 26.4 -2.0**
FLN pmax pmax
comp=Z,78nm,1.3s,mb5.0
FLN MLR MLR
comp=Z,490nm,21.8s,MS3.9
FLN La Foliniere 22.79 174 *e*P **P** **19 57 26.4 -2.0**
comp=Z,78nm,1.3s,mb5.0
UPC Upice 22.90 146 *e*P **P** **19 57 29.7 +0.2**
UPC Upice 22.90 146 *e*P **P** **19 57 29.7 +0.2**
UPC Upice 22.90 146 *e*P **P** **19 57 29.7 +0.2**
GRA1 Grafenberg Arr 22.91 154 *e*P **P** **19 57 29.9 +0.2**
comp=Z,83nm,1.1s,mb5.1
GRA1 LR LR
comp=Z,100nm,18.0s,MS3.3
GRA1 Grafenberg Arr 22.91 154 *e*P **P** **19 57 29.9 +0.2**
comp=Z,100nm,18.0s
GRF Grafenberg Arr 22.91 154 *e*P **P** **19 57 29.9 +0.2**
comp=Z,83nm,1.1s,mb5.1
GRF *e*L 20 08 00.9
comp=Z,141nm,18.0s
GRF Grafenberg Arr 22.91 154 *e*P **P** **19 57 29.9 +0.2**
GRF pmax pmax
comp=Z,83nm,1.1s,mb5.1
GRF MLR MLR
comp=Z,100nm,18.0s,MS3.3
GRF Grafenberg Arr 22.91 154 *e*P **P** **19 57 29.9 +0.2**
GRF pmax pmax
comp=Z,83nm,1.1s,mb5.1
GRF MLR MLR
comp=Z,100nm,18.0s,MS3.3
GRF Grafenberg Arr 22.91 154 *e*P **P** **19 57 29.9 +0.2**
comp=Z,100nm,18.0s
GRFO Grafenberg 22.91 154 *e*P **P** **19 57 30.4 +0.6**
comp=Z,69nm,1.1s,mb5.0
GRFO Grafenberg 22.91 154 *e*P **P** **19 57 30.4 +0.7**
GRFO pmax pmax
comp=Z,69nm,1.1s,mb5.0
GRFO Grafenberg 22.91 154 *e*P **P** **19 57 30.4 +0.7**
comp=Z,69nm,1.1s,mb5.0
LDF La Druitiere 22.97 173 *e*P **P** **19 57 28.4 -1.9**
comp=Z,68nm,1.1s,mb4.7
LDF La Druitiere 22.97 173 *e*P **P** **19 57 28.4 -1.9**
comp=Z,34nm,1.1s,mb4.7
LDF La Druitiere 22.97 173 *e*P **P** **19 57 28.4 -1.9**
LDF pmax pmax
comp=Z,34nm,1.1s,mb4.7
LDF La Druitiere 22.97 173 *e*P **P** **19 57 28.4 -1.9**
comp=Z,34nm,1.1s,mb4.7
ROTZ Rotzenmuhle 22.98 152 *e*P **P** **19 57 30.8 +0.3**
comp=Z,32nm,1.1s,mb4.7
DPC Dobruska-Polom 23.11 145 *e*P **P** **19 57 32.0 +0.3**
DPC MLR MLR
comp=Z,700nm,16.9s,MS4.2
DPC Dobruska-Polom 23.11 145 *e*P **P** **19 57 32.0 +0.3**
DPC AMS AMS 20 08 00.0
comp=Z,700nm,16.9s
DPC Dobruska-Polom 23.11 145 *e*P **P** **19 57 32.0 +0.3**
comp=Z,700nm,16.9s
PRU Pruhonice 23.14 148 *e*P **P** **19 57 33.2 +1.1**
PRU Pruhonice 23.14 148 *e*P **P** **19 57 33.2 +1.1**
PRU Pruhonice 23.14 148 *e*P **P** **19 57 33.2 +1.1**
GRR Gorron 23.15 174 *e*P **P** **19 57 31.3 -0.9**
comp=Z,210nm,1.3s,mb5.1
GRR Gorron 23.15 174 *e*P **P** **19 57 31.3 -0.9**
comp=Z,105nm,1.3s,mb5.1
GRR Gorron 23.15 174 *e*P **P** **19 57 31.3 -0.9**
GRR pmax pmax
comp=Z,105nm,1.3s,mb5.1
GRR Gorron 23.15 174 *e*P **P** **19 57 31.3 -0.9**
comp=Z,105nm,1.3s,mb5.1
ROSF Rostrenen 23.15 179 *e*P **P** **19 57 31.4 -0.8**
comp=Z,191nm,1.2s,mb5.1
ROSF Rostrenen 23.15 179 *e*P **P** **19 57 31.4 -0.8**
comp=Z,96nm,1.2s,mb5.1
ROSF Rostrenen 23.15 179 *e*P **P** **19 57 31.4 -0.8**
ROSF pmax pmax
comp=Z,96nm,1.2s,mb5.1
ROSF Rostrenen 23.15 179 *e*P **P** **19 57 31.4 -0.8**
comp=Z,96nm,1.2s,mb5.1
LANF Langenberg 23.18 160 *e*P **P** **19 57 34.3 +1.8**

LANF Langenberg 23.18 160 *eP* **P 19 57 34.3 +1.8**
LANF Langenberg 23.18 160 *eP* **P 19 57 34.3 +1.8**
BST Brest 23.18 180 *eP* **P 19 57 31.5 -1.1**
BST Brest 23.18 180 *eP* **P 19 57 31.5 -1.1**
SGMF Saint Gilles 23.24 177 *eP* **P 19 57 31.4 -1.8**
comp=Z,99nm,1.2s,mb4.8
SGMF Saint Gilles 23.24 177 *eP* **P 19 57 31.4 -1.8**
comp=Z,50nm,1.2s,mb4.8
SGMF Saint Gilles 23.24 177 *eP* **P 19 57 31.4 -1.8**
SGMF pmax pmax
comp=Z,50nm,1.2s,mb4.8
SGMF Saint Gilles 23.24 177 *eP* **P 19 57 31.4 -1.8**
comp=Z,50nm,1.2s,mb4.8
MEZF Maizieres J'vi 23.38 164 *eP* **P 19 57 34.9 +0.3**
comp=Z,179nm,1.4s,mb5.0
MEZF Maizieres J'vi 23.38 164 *eP* **P 19 57 34.9 +0.3**
comp=Z,179nm,1.4s,mb5.3
MEZF Maizieres J'vi 23.38 164 *eP* **P 19 57 34.9 +0.3**
comp=Z,89nm,1.4s,mb5.0
QUIF Quistinic 23.57 178 *eP* **P 19 57 35.3 -1.3**
comp=Z,183nm,1.4s,mb5.0
QUIF Quistinic 23.57 178 *eP* **P 19 57 35.3 -1.3**
comp=Z,92nm,1.4s,mb5.0
QUIF Quistinic 23.57 178 *eP* **P 19 57 35.3 -1.3**
QUIF pmax pmax
comp=Z,92nm,1.4s,mb5.0
QUIF Quistinic 23.57 178 *eP* **P 19 57 35.3 -1.3**
comp=Z,92nm,1.4s,mb5.0
MOS Moscow 23.59 110 *eP* **P 19 57 40.8 +4.1**
MOS *e* 19 57 45.0
MOS *e* 19 58 10.1
MOS pmax pmax
comp=Z,94nm,1.4s,mb5.0
SFTF Sexfontaines 23.68 165 *eP* **P 19 57 37.4 -0.1**
comp=Z,224nm,1.5s,mb5.1
SFTF Sexfontaines 23.68 165 *eP* **P 19 57 37.4 -0.1**
comp=Z,224nm,1.5s,mb5.4
SFTF Sexfontaines 23.68 165 *eP* **P 19 57 37.4 -0.1**
comp=Z,112nm,1.5s,mb5.1
CDF Champ du Feu 23.68 161 *eP* **P 19 57 37.8 +0.2**
comp=Z,190nm,1.6s,mb5.0
CDF Champ du Feu 23.68 161 *eP* **P 19 57 37.8 +0.2**
comp=Z,95nm,1.6s,mb5.0
CDF Champ du Feu 23.68 161 *eP* **P 19 57 37.8 +0.2**
CDF pmax pmax
comp=Z,95nm,1.6s,mb5.0
CDF Champ du Feu 23.68 161 *eP* **P 19 57 37.8 +0.2**
comp=Z,95nm,1.6s,mb5.0
WET Wettzell 23.69 151 *eP* **P 19 57 38.4 +0.7**
comp=Z,68nm,1.4s,mb4.9
WET Wettzell 23.69 151 *eP* **P 19 57 38.4 +0.7**
WET pmax pmax
comp=Z,68nm,1.4s,mb4.9
WET Wettzell 23.69 151 *eP* **P 19 57 38.4 +0.7**
comp=Z,68nm,1.4s,mb4.9
THEF They Montfort 23.74 163 *eP* **P 19 57 39.1 +1.0**
THEF They Montfort 23.74 163 *eP* **P 19 57 39.1 +1.0**
THEF They Montfort 23.74 163 *eP* **P 19 57 39.1 +1.0**
OBN Obninsk 23.81 112 *eP* **P 19 57 37.3 -1.4**
comp=Z,143nm,1.4s,mb5.2
OBN Obninsk 23.81 112⇓ *eP* **P 19 57 38.6 -0.1**
OBN *e* 20 01 27.0
OBN pmax pmax
comp=Z,50nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,800nm,15.0s,MS4.3
OBN Obninsk 23.81 112 *eP* **P 19 57 38.6 -0.1**
comp=Z,800nm,15.0s
KHC Kasperske Hory 23.81 150 *eP* **P 19 57 39.1 +0.3**
comp=Z,61nm,1.5s,mb4.8
KHC Kasperske Hory 23.81 150 *eP* **P 19 57 39.7 +0.9**
KHC Kasperske Hory 23.81 150 *eP* **P 19 57 39.7 +0.9**
KHC *ep*P 19 57 43.5
KHC Kasperske Hory 23.81 150 *eP* **P 19 57 39.1 +0.3**
comp=Z,61nm,1.5s,mb4.8
ECH Echery 23.86 161 *eP* **P 19 57 40.6 +1.3**
ECH Echery 23.86 161 *eP* **P 19 57 39.6 +0.3**
comp=Z,87nm,1.6s,mb4.9
ECH Echery 23.86 161 *eP* **P 19 57 39.6 +0.3**
ECH pmax pmax
comp=Z,87nm,1.6s,mb4.9
ECH Echery 23.86 161 *eP* **P 19 57 39.6 +0.3**
comp=Z,87nm,1.6s,mb4.9
BFO Black Forest 23.88 159 *eP* **P 19 57 40.5 +1.1**
comp=Z,83nm,1.2s,mb5.0
BFO Black Forest 23.88 159 *eP* **P 19 57 40.5 +1.1**
BFO pmax pmax
comp=Z,83nm,1.2s,mb5.0
BFO Black Forest 23.88 159 *eP* **P 19 57 40.5 +1.1**
comp=Z,83nm,1.2s,mb5.0
OJC Ojcow 23.91 140 *eP* **P 19 57 38.7 -1.0**
OJC *ep*P 19 57 41.0
OJC *eS* **S 20 01 56.6 +1.1**
OJC L 20 07 23.5
comp=Z,1.2nm,19.5s
OJC Ojcow 23.91 140 *eP* **P 19 57 38.7 -1.0**
OJC *e**PP 19 57 41.0
OJC *eS* **S 20 01 56.6 +1.1**
OJC MLR MLR
comp=Z,1μm,19.5s,MS4.4
OJC Ojcow 23.91 140 *eP* **P 19 57 38.7 -1.0**
OKC Ostrava-Krasne 23.94 143 AMS AMS 20 08 20.0
comp=Z,1μm,15.5s
HAU Haudompre 23.99 163 *eP* **P 19 57 40.4 0.0**
comp=Z,59nm,1.2s,mb4.6
HAU *e*MLR MLR
comp=Z,607nm,21.5s,MS3.7
HAU Haudompre 23.99 163 *eP* **P 19 57 40.4 0.0**
comp=Z,30nm,1.2s,mb4.6
HAU LR LR
comp=Z,610nm,21.5s,MS4.0
HAU Haudompre 23.99 163 *eP* **P 19 57 40.4 0.0**
HAU pmax pmax
comp=Z,30nm,1.2s,mb4.6
HAU MLR MLR
comp=Z,610nm,21.5s,MS4.0
HAU Haudompre 23.99 163 *eP* **P 19 57 40.4 0.0**
comp=Z,30nm,1.2s,mb4.6
GEC2 GERESS Array S 24.11 150 *eP* **P 19 57 42.8 +1.3**
comp=Z,62nm,1.4s,mb4.8
GEC2 GERESS Array S 24.11 150 *eP* **P 19 57 42.8 +1.3**
GEC2 pmax pmax
comp=Z,62nm,1.4s,mb4.8
GEC2 GERESS Array S 24.11 150 *eP* **P 19 57 42.8 +1.3**
comp=Z,62nm,1.4s,mb4.8
GERES GERESS Array B 24.11 150 P **P 19 57 42.7 +1.2**
comp=Z,11nm,0.9s,mb4.3,baz=358,slow=9.3,SNR=33
GERES GERESS Array B 24.11 150 P **P 19 57 42.7 +1.2**
GERES GERESS Array B 24.11 150 P **P 19 57 42.7 +1.2**
GERES pmax pmax
comp=Z,11nm,0.9s
GERES GERESS Array B 24.11 150 P **P 19 57 42.7 +1.2**
comp=Z,11nm,0.9s,mb4.3
VRAC Vranov 24.16 146 LR LR 20 07 03.5
comp=Z,349nm,20.7s,MS3.8,baz=344,slow=36
SPAK Spaichingen-Ko 24.16 159 *eP* **P 19 57 43.0 +1.1**
SPAK Spaichingen-Ko 24.16 159 *eP* **P 19 57 43.0 +1.1**
RES Resolute Bay 24.22 320 LR LR 20 06 45.3
comp=Z,848nm,19.7s,MS4.2,baz=194,slow=36
MOF Molkenrain 24.22 161 *eP* **P 19 57 44.1 +1.6**
MOF Molkenrain 24.22 161 *eP* **P 19 57 44.1 +1.6**
MOF Molkenrain 24.22 161 *eP* **P 19 57 44.1 +1.6**
HINF Hinteralfeld 24.23 162 *eP* **P 19 57 42.5 -0.1**
comp=Z,53nm,1.3s,mb4.5
HINF Hinteralfeld 24.23 162 *eP* **P 19 57 42.5 -0.1**
comp=Z,26nm,1.3s,mb4.5
HINF Hinteralfeld 24.23 162 *eP* **P 19 57 42.5 -0.1**
HINF pmax pmax
comp=Z,26nm,1.3s,mb4.5
HINF Hinteralfeld 24.23 162 *eP* **P 19 57 42.5 -0.1**
comp=Z,26nm,1.3s,mb4.5
FELD Feldberg im Sc 24.29 160 *eP* **P 19 57 41.9 -1.3**
FELD Feldberg im Sc 24.29 160 *eP* **P 19 57 41.9 -1.3**
FUR Furstenfeldbru 24.41 154 *eP* **P 19 57 45.4 +1.1**
comp=Z,293nm,2.0s,mb5.4
FUR Furstenfeldbru 24.41 154 *eP* **P 19 57 45.4 +1.1**
FUR pmax pmax
comp=Z,293nm,2.0s,mb5.4
FUR Furstenfeldbru 24.41 154 *eP* **P 19 57 45.4 +1.1**
comp=Z,293nm,2.0s,mb5.4
HYF Humbligny 24.43 169 *eP* **P 19 57 44.0 -0.4**
HYF Humbligny 24.43 169 *eP* **P 19 57 44.0 -0.4**
LOR Lormes 24.51 167 *eP* **P 19 57 44.7 -0.5**
comp=Z,118nm,1.1s,mb5.0
LOR *e*MLR MLR
comp=Z,311nm,22.8s,MS3.4
LOR Lormes 24.51 167 *eP* **P 19 57 44.7 -0.5**
comp=Z,59nm,1.1s,mb5.0
LOR LR LR
comp=Z,310nm,22.8s,MS3.7
LOR Lormes 24.51 167 *eP* **P 19 57 44.7 -0.5**
LOR pmax pmax
comp=Z,59nm,1.1s,mb5.0
LOR MLR MLR
comp=Z,310nm,22.8s,MS3.7
LOR Lormes 24.51 167 *eP* **P 19 57 44.7 -0.5**
comp=Z,59nm,1.1s,mb5.0
BBS Basel-Blauen 24.64 161 *eP* **P 19 57 46.9 +0.5**
BBS Basel-Blauen 24.64 161 *eP* **P 19 57 46.9 +0.5**
BBS Basel-Blauen 24.64 161 *eP* **P 19 57 46.9 +0.5**
SSF Saint Saulge 24.69 167 *eP* **P 19 57 46.2 -0.6**
comp=Z,116nm,1.2s,mb5.0
SSF Saint Saulge 24.69 167 *eP* **P 19 57 46.2 -0.6**
comp=Z,58nm,1.2s,mb5.0
SSF Saint Saulge 24.69 167 *eP* **P 19 57 46.2 -0.6**
SSF pmax pmax
comp=Z,58nm,1.2s,mb5.0
SSF Saint Saulge 24.69 167 *eP* **P 19 57 46.2 -0.6**
comp=Z,58nm,1.2s,mb5.0
AVF Avril sur Loir 24.95 168 *eP* **P 19 57 48.7 -0.5**
comp=Z,107nm,1.1s,mb5.0
AVF Avril sur Loir 24.95 168 *eP* **P 19 57 48.7 -0.5**
comp=Z,53nm,1.1s,mb5.0
AVF Avril sur Loir 24.95 168 *eP* **P 19 57 48.7 -0.5**
AVF pmax pmax
comp=Z,53nm,1.1s,mb5.0
AVF Avril sur Loir 24.95 168 *eP* **P 19 57 48.7 -0.5**
comp=Z,53nm,1.1s,mb5.0
MFF Saint Martin d 24.96 173 *eP* **P 19 57 48.5 -0.7**
comp=Z,66nm,0.9s,mb4.9
MFF Saint Martin d 24.96 173 *eP* **P 19 57 48.5 -0.7**
comp=Z,33nm,0.9s,mb4.9
MFF Saint Martin d 24.96 173 *eP* **P 19 57 48.5 -0.7**
MFF pmax pmax
comp=Z,33nm,0.9s,mb4.9
MFF Saint Martin d 24.96 173 *eP* **P 19 57 48.5 -0.7**
comp=Z,33nm,0.9s,mb4.9
RJOB Jochberg 25.05 152 *eP* **P 19 57 51.5 +1.4**
comp=Z,35nm,1.1s,mb4.8
KWP Kalwaria Pacla 25.09 136 *eP* **P 19 57 51.5 +1.1**
KWP LMZ 20 06 34.5
comp=Z,600nm,26.5s
KWP Kalwaria Pacla 25.09 136 *eP* **P 19 57 50.4 0.0**
comp=Z,89nm,1.4s,mb5.1
KWP Kalwaria Pacla 25.09 136 ⇑*P* **P 19 57 51.6 +1.2**
KWP Kalwaria Pacla 25.09 136⇑ *iP* **P 19 57 51.6 +1.2**
KWP Kalwaria Pacla 25.09 136 *eP* **P 19 57 50.4 0.0**
comp=Z,89nm,1.4s,mb5.1
DAVA Damuels 25.09 157⇑ *iP* **P 19 57 51.8 +1.4**
comp=Z,50nm,1.1s,mb5.0,SNR=21
SMF Signal de Mont 25.13 167 *eP* **P 19 57 50.1 -0.7**
comp=Z,131nm,1.1s,mb5.1
SMF Signal de Mont 25.13 167 *eP* **P 19 57 50.1 -0.7**
comp=Z,65nm,1.1s,mb5.1
SMF Signal de Mont 25.13 167 *eP* **P 19 57 50.1 -0.7**
SMF pmax pmax
comp=Z,65nm,1.1s,mb5.1
SMF Signal de Mont 25.13 167 *eP* **P 19 57 50.1 -0.7**
comp=Z,65nm,1.1s,mb5.1
BGF Bois d'Agland 25.15 169 *eP* **P 19 57 50.4 -0.6**
comp=Z,84nm,0.8s,mb5.0
BGF Bois d'Agland 25.15 169 *eP* **P 19 57 50.4 -0.6**
comp=Z,42nm,0.8s,mb5.0
BGF Bois d'Agland 25.15 169 *eP* **P 19 57 50.4 -0.6**
BGF pmax pmax
comp=Z,42nm,0.8s,mb5.0
BGF Bois d'Agland 25.15 169 *eP* **P 19 57 50.4 -0.6**
comp=Z,42nm,0.8s,mb5.0
MOA Molln 25.17 150⇑ *iP* **P 19 57 51.5 +0.4**
comp=Z,44nm,1.6s,mb4.7
MOTA Moosalm 25.20 155⇑ *iP* **P 19 57 51.9 +0.5**
comp=Z,42nm,1.1s,mb4.9,SNR=8.1
LVV L'vov 25.21 134 *eP* **P 19 57 57.0 +5.5**
WATA Walderalm 25.27 154⇑ *iP* **P 19 57 51.8 -0.3**
comp=Z,49nm,1.1s,mb4.9
WTTA Wattenberg 25.35 154⇑ *iP* **P 19 57 53.6 +0.8**
comp=Z,90nm,1.3s,mb5.2,SNR=29
CABF La Chapelle 25.35 163 *eP* **P 19 57 52.6 -0.2**
comp=Z,143nm,1.3s,mb5.0
CABF La Chapelle 25.35 163 *eP* **P 19 57 52.6 -0.2**
comp=Z,71nm,1.3s,mb5.0
CABF La Chapelle 25.35 163 *eP* **P 19 57 52.6 -0.2**
CABF pmax pmax
comp=Z,71nm,1.3s,mb5.0
CABF La Chapelle 25.35 163 *eP* **P 19 57 52.6 -0.2**
comp=Z,71nm,1.3s,mb5.0
CONA Conrad Observa 25.36 148⇑ *iP* **P 19 57 53.8 +0.9**
comp=Z,97nm,1.1s,mb5.2,SNR=16
TCF Toulx Ste Croi 25.38 170 *eP* **P 19 57 52.4 -0.7**
comp=Z,104nm,0.9s,mb5.0
TCF Toulx Ste Croi 25.38 170 *eP* **P 19 57 52.4 -0.7**
comp=Z,52nm,0.9s,mb5.1
TCF Toulx Ste Croi 25.38 170 *eP* **P 19 57 52.4 -0.7**
TCF pmax pmax
comp=Z,52nm,0.9s,mb5.1
TCF Toulx Ste Croi 25.38 170 *eP* **P 19 57 52.4 -0.7**
comp=Z,52nm,0.9s,mb5.0
FETA Feichten 25.46 156⇑ *iP* **P 19 57 55.2 +1.4**
comp=Z,30nm,1.3s,mb4.7,SNR=7.8
DAVOX Davos/Dischmat 25.59 157 P **P 19 57 55.9 +0.9**
comp=Z,7.3nm,1.0s,mb4.2,baz=330,slow=9.8,SNR=3.8
DAVOX LR LR 20 09 10.7
comp=Z,247nm,18.2s,MS3.8,baz=162,slow=39
DAVOX Davos/Dischmat 25.59 157 P **P 19 57 55.9 +0.9**
DAVOX LR LR 20 09 10.7
DAVOX Davos/Dischmat 25.59 157 P **P 19 57 55.9 +0.9**
DAVOX Davos/Dischmat 25.59 157 P **P 19 57 55.9 +0.9**
AKASG Malin Array Be 25.67 126 P **P 19 57 55.0 -0.6**
comp=Z,18nm,0.8s,mb4.7,baz=336,slow=9.3,SNR=27
AKASG LR LR 20 07 42.9
comp=Z,829nm,18.6s,MS4.3,baz=325,slow=36
AKASG Malin Array Be 25.67 126 P **P 19 57 55.0 -0.6**
AKASG pmax pmax
comp=Z,18nm,0.8s
AKASG MLR MLR
comp=Z,829nm,18.6s
AKASG Malin Array Be 25.67 126 P **P 19 57 55.0 -0.6**
comp=Z,829nm,18.6s
AKBB Malin Array Si 25.67 126 *eP* **P 19 57 54.8 -0.9**
AKBB Malin Array Si 25.67 126 *eP* **P 19 57 54.8 -0.8**
AKBB Malin Array Si 25.67 126 *eP* **P 19 57 54.8 -0.8**
KIEV Kiev 25.67 126 *eP* **P 19 57 54.7 -0.9**
comp=Z,15nm,0.8s,mb4.6
KIEV Kiev 25.67 126 *eP* **P 19 57 54.7 -1.0**
KIEV pmax pmax
comp=Z,15nm,0.8s,mb4.6
KIEV Kiev 25.67 126 *eP* **P 19 57 54.7 -1.0**
comp=Z,15nm,0.8s,mb4.6
AGO Saint Agoulin 25.67 168 *eP* **P 19 57 56.1 +0.4**
AGO Saint Agoulin 25.67 168 *eP* **P 19 57 56.1 +0.4**
SOP Sopron 25.72 147⇓ *epP* pP 19 58 03.7 +4.6
KBA Koelnbreinsper 25.78 152⇑ *iP* **P 19 57 58.4 +1.7**
comp=Z,37nm,1.1s,mb4.8
PLDF La Plantade 25.79 167 *eP* **P 19 57 57.1 +0.3**
PLDF La Plantade 25.79 167 *eP* **P 19 57 57.1 +0.3**
PLDF La Plantade 25.79 167 *eP* **P 19 57 57.1 +0.3**
TUE Stuetta 25.83 158 *eP* **P 19 57 58.7 +1.5**
comp=Z,38nm,1.2s,mb4.8
TUE Stuetta 25.83 158 *eP* **P 19 57 58.7 +1.5**
comp=Z,38nm,1.2s,mb4.8
UZH Uzhgorod 25.94 138 *eP* **P 19 57 54.2 -3.9**
UZH *e* *p*P 19 57 58.4 -2.8
UZH *eP*PP 19 58 32.8
UZH *eS* **S 20 02 19.6 -8.4**
ARSA Arzberg 25.96 148⇑ *iP* **P 19 57 59.3 +1.0**
comp=Z,32nm,1.3s,mb4.7
PYM Petit Puy Mans 25.96 169 *eP* **P 19 57 59.1 +0.7**
PYM Petit Puy Mans 25.96 169 *eP* **P 19 57 59.1 +0.7**
PYM Petit Puy Mans 25.96 169 *eP* **P 19 57 59.1 +0.7**
PSZ Piszkesteto 26.12 142 *eP* **P 19 58 00.9 +1.1**
comp=Z,80nm,1.7s,mb5.0
PSZ Piszkesteto 26.12 142 ⇓*P* **P 19 58 01.2 +1.4**
PSZ Piszkesteto 26.12 142⇓ *iP* **P 19 58 01.1 +1.3**
PSZ Piszkesteto 26.12 142⇓ *eP* **P 19 58 01.9 +2.1**
PSZ Piszkesteto 26.12 142 *eP* **P 19 58 00.9 +1.1**
comp=Z,80nm,1.7s,mb5.0
RSL Roselend 26.31 163 *eP* **P 19 58 01.9 +0.4**
RSL Roselend 26.31 163 *eP* **P 19 58 01.9 +0.4**
RSL Roselend 26.31 163 *eP* **P 19 58 01.9 +0.4**
RJF Les Rejaudoux 26.32 171 *eP* **P 19 58 01.0 -0.6**
comp=Z,283nm,1.3s,mb5.3
RJF *e*MLR MLR
comp=Z,374nm,20.0s,MS3.6
RJF Les Rejaudoux 26.32 171 *eP* **P 19 58 01.0 -0.6**
comp=Z,142nm,1.3s,mb5.3
RJF LR LR
comp=Z,370nm,20.0s,MS3.9
RJF Les Rejaudoux 26.32 171 *eP* **P 19 58 01.0 -0.6**
RJF pmax pmax
comp=Z,142nm,1.3s,mb5.3
RJF MLR MLR
comp=Z,370nm,20.0s,MS3.9
RJF Les Rejaudoux 26.32 171 *eP* **P 19 58 01.0 -0.6**
comp=Z,142nm,1.3s,mb5.3
BUD Budapest 26.36 143⇓ *epP* pP 19 58 06.0 +1.0
TRPA Tarpa 26.47 138⇓ *iP* **P 19 58 04.2 +1.3**
LPL La Plagne 26.50 163 *eP* **P 19 58 03.7 +0.5**
comp=Z,39nm,1.0s,mb4.6
LPL La Plagne 26.50 163 *eP* **P 19 58 03.7 +0.5**
comp=Z,20nm,1.0s,mb4.6
LPL La Plagne 26.50 163 *eP* **P 19 58 03.7 +0.5**
LPL pmax pmax
comp=Z,20nm,1.0s,mb4.6
LPL La Plagne 26.50 163 *eP* **P 19 58 03.7 +0.5**
comp=Z,20nm,1.0s,mb4.6
LBL Lubilhac 26.50 168 *eP* **P 19 58 04.1 +0.9**
LBL Lubilhac 26.50 168 *eP* **P 19 58 04.1 +0.9**
LBL Lubilhac 26.50 168 *eP* **P 19 58 04.1 +0.9**
LPG La Plagne 26.52 163 *eP* **P 19 58 04.1 +0.7**
comp=Z,77nm,1.3s,mb4.8
LPG La Plagne 26.52 163 *eP* **P 19 58 04.1 +0.7**
comp=Z,38nm,1.3s,mb4.8
LPG La Plagne 26.52 163 *eP* **P 19 58 04.1 +0.7**
LPG pmax pmax
comp=Z,38nm,1.3s,mb4.8
LPG La Plagne 26.52 163 *eP* **P 19 58 04.1 +0.7**
comp=Z,38nm,1.3s,mb4.8
LFF La Frestale 26.65 172 *eP* **P 19 58 04.1 -0.5**
comp=Z,83nm,1.2s,mb4.9
LFF La Frestale 26.65 172 *eP* **P 19 58 04.1 -0.5**
comp=Z,42nm,1.2s,mb4.8
LFF La Frestale 26.65 172 *eP* **P 19 58 04.1 -0.5**
LFF pmax pmax
comp=Z,42nm,1.2s,mb4.8
LFF La Frestale 26.65 172 *eP* **P 19 58 04.1 -0.5**
comp=Z,42nm,1.2s,mb4.9
CAF Calviac 26.73 170 *eP* **P 19 58 04.8 -0.5**
comp=Z,103nm,1.1s,mb5.0
CAF Calviac 26.73 170 *eP* **P 19 58 04.8 -0.5**
comp=Z,52nm,1.1s,mb5.0
CAF Calviac 26.73 170 *eP* **P 19 58 04.8 -0.5**
CAF pmax pmax
comp=Z,52nm,1.1s,mb5.0
CAF Calviac 26.73 170 *eP* **P 19 58 04.8 -0.5**
comp=Z,52nm,1.1s,mb5.0
BNI Bardonecchia 26.95 163 *eP* **P 19 58 08.5 +1.2**
comp=Z,55nm,1.5s,mb4.9
BNI Bardonecchia 26.95 163 *eP* **P 19 58 08.5 +1.2**
BNI pmax pmax
comp=Z,55nm,1.5s,mb4.9
BNI Bardonecchia 26.95 163 *eP* **P 19 58 08.5 +1.2**
comp=Z,55nm,1.5s,mb4.9
VIVF Saint-Julien-I 26.97 166 *eP* **P 19 58 07.5 0.0**
comp=Z,74nm,1.2s,mb4.8
VIVF Saint-Julien-I 26.97 166 *eP* **P 19 58 07.5 0.0**
comp=Z,37nm,1.2s,mb4.8
VIVF Saint-Julien-I 26.97 166 *eP* **P 19 58 07.5 0.0**
VIVF pmax pmax
comp=Z,37nm,1.2s,mb4.8
VIVF Saint-Julien-I 26.97 166 *eP* **P 19 58 07.5 0.0**
comp=Z,37nm,1.2s,mb4.8
ORIF Oris-en-Rattie 27.01 164 *eP* **P 19 58 08.0 +0.2**
comp=Z,81nm,1.3s,mb4.8
ORIF *e*MLR MLR
comp=Z,591nm,21.8s,MS3.8
ORIF Oris-en-Rattie 27.01 164 *eP* **P 19 58 08.0 +0.2**
comp=Z,40nm,1.3s,mb4.8
ORIF Oris-en-Rattie 27.01 164 *eP* **P 19 58 08.0 +0.2**
ORIF pmax pmax
comp=Z,40nm,1.3s,mb4.8
ORIF Oris-en-Rattie 27.01 164 *eP* **P 19 58 08.0 +0.2**
comp=Z,40nm,1.3s,mb4.8
MBDF Montbardon 27.28 163 *eP* **P 19 58 11.1 +0.8**
comp=Z,116nm,1.2s,mb5.0
MBDF Montbardon 27.28 163 *eP* **P 19 58 11.1 +0.8**
comp=Z,58nm,1.2s,mb5.0
MBDF Montbardon 27.28 163 *eP* **P 19 58 11.1 +0.8**
MBDF pmax pmax
comp=Z,58nm,1.2s,mb5.0
MBDF Montbardon 27.28 163 *eP* **P 19 58 11.1 +0.8**
comp=Z,58nm,1.2s,mb5.0
PKSM Moragy 27.51 144 ⇑*P* **P 19 58 12.5 +0.2**
PKSM Moragy 27.51 144⇑ *iP* **P 19 58 12.5 +0.2**
PKSM Moragy 27.51 144 P **P 19 58 12.5 +0.2**
BUR08 Bucovina Ar. S 27.52 134 *eP* **P 19 58 12.9 +0.5**
BUR08 Bucovina Ar. S 27.52 134 *eP* **P 19 58 12.9 +0.5**
BURAR Bucovina Array 27.55 134 ⇑*P* **P 19 58 13.2 +0.5**
BURAR Bucovina Array 27.55 134⇑ *iP* **P 19 58 13.2 +0.5**
LASF Ste Croix 27.69 168 *eP* **P 19 58 14.5 +0.6**
comp=Z,104nm,1.4s,mb5.0
LASF Ste Croix 27.69 168 *eP* **P 19 58 14.5 +0.6**
comp=Z,52nm,1.4s,mb5.0
DRGR 27.77 138 ⇑*P* **P 19 58 15.7 +1.0**
DRGR 27.77 138⇑ *iP* **P 19 58 15.7 +1.0**
DRGR 27.77 138 P **P 19 58 15.7 +1.0**
SMRF Simiane la Rot 27.92 165 *eP* **P 19 58 16.1 +0.1**
comp=Z,56nm,1.4s,mb4.7
SMRF Simiane la Rot 27.92 165 *eP* **P 19 58 16.1 +0.1**
comp=Z,56nm,1.4s,mb5.0
SMRF Simiane la Rot 27.92 165 *eP* **P 19 58 16.1 +0.1**
comp=Z,28nm,1.4s,mb4.7
VSR Storozhevoye 27.97 113 *eP* **P 19 58 15.8 -0.6**
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,6.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
VSR MLR MLR
comp=N,510nm,13.0s
VSR MLR MLR
comp=Z,870nm,13.0s,MS4.5
VSR MLR MLR
comp=E,100nm,5.0s
VSR Storozhevoye 27.97 113 *eP* **P 19 58 15.8 -0.6**
TOUF Mont Tournerai 28.03 162 *eP* **P 19 58 18.0 +1.0**
TOUF Mont Tournerai 28.03 162 *eP* **P 19 58 18.0 +1.0**
TOUF Mont Tournerai 28.03 162 *eP* **P 19 58 18.0 +1.0**
EARI Arriondas 28.19 182 P **P 19 58 19.8 +1.4**
comp=E,19nm,1.1s,mb4.6
EARI Arriondas 28.19 182 P **P 19 58 19.8 +1.4**
comp=E,19nm,1.1s,mb4.6
SBF Sospel 28.20 162 *eP* **P 19 58 18.8 +0.3**
SBF Sospel 28.20 162 *eP* **P 19 58 18.8 +0.3**
SBF Sospel 28.20 162 *eP* **P 19 58 18.8 +0.3**
VLC Villacollemand 28.23 158 *eP* **P 19 58 19.7 +0.9**
comp=E,55nm,1.1s,mb5.1
VLC Villacollemand 28.23 158 *eP* **P 19 58 19.7 +0.9**
comp=E,55nm,1.1s,mb5.1
ELAN Lanestosa 28.26 179 P **P 19 58 19.6 +0.6**
comp=E,40nm,2.7s,mb4.6
ELAN Lanestosa 28.26 179 P **P 19 58 19.6 +0.6**
comp=E,40nm,2.7s,mb4.6
OSSF Osses 28.27 176 *eP* **P 19 58 19.0 -0.1**
OSSF Osses 28.27 176 *eP* **P 19 58 19.0 -0.1**
EALK Alkurruntz 28.30 176 P **P 19 58 19.8 +0.4**
comp=E,20nm,1.0s,mb4.7
EALK Alkurruntz 28.30 176 P **P 19 58 19.8 +0.5**
comp=E,20nm,1.0s,mb4.7
MTLF Montolieu 28.32 170 *eP* **P 19 58 19.6 +0.1**
comp=E,62nm,1.3s,mb4.8
MTLF Montolieu 28.32 170 *eP* **P 19 58 19.6 +0.1**
comp=E,31nm,1.3s,mb4.8
MTLF Montolieu 28.32 170 *eP* **P 19 58 19.6 +0.1**
MTLF pmax pmax
comp=Z,31nm,1.3s,mb4.8
MTLF Montolieu 28.32 170 *eP* **P 19 58 19.6 +0.1**
comp=Z,31nm,1.3s,mb4.8
ELIZ Elizondo 28.35 176 P **P 19 58 20.5 +0.7**
comp=Z,34nm,1.2s,mb4.9
ELIZ Elizondo 28.35 176 P **P 19 58 20.5 +0.7**
ELIZ pmax pmax
comp=Z,34nm,1.2s,mb4.8
ELIZ Elizondo 28.35 176 P **P 19 58 20.5 +0.7**
comp=Z,34nm,1.2s,mb4.8
SJPF Ste Jean 28.41 176 *eP* **P 19 58 19.8 -0.5**
comp=Z,30nm,1.0s,mb4.6
SJPF Ste Jean 28.41 176 *eP* **P 19 58 19.8 -0.5**

comp=Z,15nm,1.0s,mb4.6
SJPF Ste Jean 28.41 176 *e*P **P 19 58 19.8 -0.5**
SJPF pmax pmax
comp=Z,15nm,1.0s,mb4.6
SJPF Ste Jean 28.41 176 *e*P **P 19 58 19.8 -0.5**
comp=Z,15nm,1.0s,mb4.6
FRF La Foret Royal 28.43 163 *e*P **P 19 58 19.8 -0.7**
comp=Z,86nm,1.5s,mb4.9
FRF La Foret Royal 28.43 163 *e*P **P 19 58 19.8 -0.7**
comp=Z,43nm,1.5s,mb4.9
FRF La Foret Royal 28.43 163 *e*P **P 19 58 19.8 -0.7**
FRF pmax pmax
comp=Z,43nm,1.5s,mb4.9
FRF La Foret Royal 28.43 163 *e*P **P 19 58 19.8 -0.7**
comp=Z,43nm,1.5s,mb4.9
LABF Labassere 28.52 174 *e*P **P 19 58 21.1 -0.2**
LABF Labassere 28.52 174 *e*P **P 19 58 21.1 -0.2**
EPF Esparros 28.54 173 *e*P **P 19 58 20.9 -0.6**
comp=Z,108nm,1.0s,mb5.2
EPF Esparros 28.54 173 *e*P **P 19 58 20.9 -0.6**
comp=Z,54nm,1.0s,mb5.2
EPF Esparros 28.54 173 *e*P **P 19 58 20.9 -0.6**
EPF pmax pmax
comp=Z,54nm,1.0s,mb5.2
EPF Esparros 28.54 173 *e*P **P 19 58 20.9 -0.6**
comp=Z,54nm,1.0s,mb5.2
LMR La Mourre 28.64 164 *e*P **P 19 58 21.9 -0.5**
comp=Z,30nm,1.3s,mb4.6
LMR La Mourre 28.64 164 *e*P **P 19 58 21.9 -0.5**
comp=Z,15nm,1.3s,mb4.6
LMR La Mourre 28.64 164 *e*P **P 19 58 21.9 -0.5**
LMR pmax pmax
comp=Z,15nm,1.3s,mb4.6
LMR La Mourre 28.64 164 *e*P **P 19 58 21.9 -0.5**
comp=Z,15nm,1.3s,mb4.6
ETSF Etsaut 28.64 175 *e*P **P 19 58 21.9 -0.5**
comp=Z,102nm,1.4s,mb5.1
ETSF Etsaut 28.64 175 *e*P **P 19 58 21.9 -0.5**
comp=Z,51nm,1.4s,mb5.1
ETSF Etsaut 28.64 175 *e*P **P 19 58 21.9 -0.5**
ETSF pmax pmax
comp=Z,51nm,1.4s,mb5.1
ETSF Etsaut 28.64 175 *e*P **P 19 58 21.9 -0.5**
comp=Z,51nm,1.4s,mb5.1
BZS Buzias 28.67 141 ⇑P **P 19 58 23.9 +1.3**
BZS Buzias 28.67 141 ⇑*i*P **P 19 58 23.9 +1.3**
BZS Buzias 28.67 141 P **P 19 58 23.9 +1.3**
VIEF Viey 28.68 174 *e*P **P 19 58 24.0 +1.3**
VIEF Viey 28.68 174 *e*P **P 19 58 24.0 +1.3**
RESF Ens 28.76 173 *e*P **P 19 58 25.2 +1.7**
RESF Ens 28.76 173 *e*P **P 19 58 25.2 +1.7**
VRHR Novokhopersk 28.81 110 *e*P **P 19 58 23.0 -0.9**
VRHR pmax pmax
comp=N,9.0nm,0.6s
VRHR pmax pmax
comp=E,6.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VRHR Novokhopersk 28.81 110 *e*P **P 19 58 23.0 -0.9**
SALF Salau 28.85 172 *e*P **P 19 58 29.4 +5.2**
EBIE Bielsa 28.88 173 P **P 19 58 26.1 +1.6**
comp=Z,22nm,0.9s,mb4.9
EBIE Bielsa 28.88 173 P **P 19 58 26.1 +1.6**
comp=Z,22nm,0.9s,mb4.9
GZR Gura Zlata 29.12 139 ⇓P **P 19 58 29.0 +2.4**
GZR Gura Zlata 29.12 139 ⇓*i*P **P 19 58 29.0 +2.4**
GZR Gura Zlata 29.12 139 P **P 19 58 29.0 +2.4**
CLLI Llivia 29.16 171 P **P 19 58 29.0 +2.0**
CLLI Llivia 29.16 171 P **P 19 58 29.0 +1.9**
CSOR Sort 29.23 172 P **P 19 58 29.1 +1.5**
comp=Z,25nm,1.1s,mb4.9
CSOR Sort 29.23 172 P **P 19 58 29.1 +1.5**
comp=Z,25nm,1.1s,mb4.9
EJON La Jonquera 29.25 169 P **P 19 58 29.3 +1.5**
comp=Z,37nm,1.1s,mb5.0
EJON La Jonquera 29.25 169 P **P 19 58 29.3 +1.5**
comp=Z,37nm,1.1s,mb5.0
VRI Vrincioaia 29.55 133 ⇓P **P 19 58 29.3 -1.1**
VRI Vrincioaia 29.55 133 ⇓*i*P **P 19 58 29.3 -1.1**
VRI Vrincioaia 29.55 133 P **P 19 58 29.3 -1.1**
ECAL Calabor 29.57 184 P **P 19 58 33.1 +2.4**
comp=Z,12nm,0.9s,mb4.6
ARU Arti 29.63 87 *e*P **P 19 58 31.1 +0.1**
comp=Z,22nm,1.0s,mb4.8
ARU Arti 29.63 87 *d i*P **P 19 58 31.2 +0.2**
ARU *e* 19 59 21.2
ARU S **S 20 03 28.0 +2.1**
ARU SS 20 04 53.2
ARU pmax pmax
comp=Z,26nm,1.7s,mb4.7
ARU Arti 29.63 87 *i* P **P 19 58 31.2 +0.2**
comp=Z,26nm,1.7s,mb4.7
PGF Pioggiola 29.66 160 *e*P **P 19 58 31.6 +0.1**
comp=Z,19nm,0.9s,mb4.5
PGF Pioggiola 29.66 160 *e*P **P 19 58 31.6 +0.1**
comp=Z,9.6nm,0.9s,mb4.5
PGF Pioggiola 29.66 160 *e*P **P 19 58 31.6 +0.1**
PGF pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
PGF Pioggiola 29.66 160 *e*P **P 19 58 31.6 +0.1**
comp=Z,9.6nm,0.9s,mb4.5
EMIR Miracle 29.71 171 P **P 19 58 34.9 +3.1**
comp=Z,48nm,1.2s,mb5.1
PBRG Braganca 29.71 184 *e*P **P 19 58 38.1 +6.2**
comp=Z,25nm,1.6s,mb4.7
PBRG *e*LR LR 20 07 21.4
comp=Z,286nm,18.0s
MLR Muntele Rosu 29.72 135 ⇓P **P 19 58 36.5 +4.5**
MLR Muntele Rosu 29.72 135 ⇓*i*P **P 19 58 36.5 +4.5**
MLR Muntele Rosu 29.72 135 P **P 19 58 36.5 +4.5**
CFON Fontmartina 29.91 170 P **P 19 58 36.4 +2.8**
comp=Z,83nm,2.2s,mb5.1
SVE Sverdlovsk 29.96 85 *e*P **P 19 58 39.4 +5.4**
SVE pmax pmax
comp=Z,14nm,1.4s,mb4.5
EPOB Poblet 30.25 172 P **P 19 58 37.7 +1.1**
comp=Z,17nm,1.1s,mb4.7
EPOB Poblet 30.25 172 P **P 19 58 37.7 +1.1**
comp=Z,17nm,1.1s,mb4.7
MVO Moncorvo 30.36 184 *e*P **P 19 58 44.5 +6.9**
comp=Z,36nm,1.5s,mb4.9
MVO *e*LR LR 20 06 58.8
comp=Z,243nm,18.0s
ERTA Horta de San J 30.61 173 P **P 19 58 43.1 +3.2**
comp=Z,20nm,1.0s,mb4.9
GUD Guadarrama 30.84 180 P **P 19 58 43.8 +1.9**
comp=Z,32nm,1.1s,mb5.1
GUD Guadarrama 30.84 180 P **P 19 58 43.8 +1.9**
GUD pmax pmax
comp=Z,32nm,1.1s,mb5.1
GUD Guadarrama 30.84 180 P **P 19 58 43.8 +1.9**
comp=Z,32nm,1.1s,mb5.1
SCHQ Schefferville 30.94 271 P **P 19 58 41.7 -0.9**
comp=Z,3.0nm,0.8s,mb4.2,baz=51,slow=13,SNR=2.9
SCHQ LR LR 20 10 09.7
comp=Z,479nm,19.6s,MS4.2,baz=296,slow=34
SCHQ Schefferville 30.94 271 P **P 19 58 41.7 -1.0**
SCHQ LR LR 20 10 09.7
SCHQ Schefferville 30.94 271 P **P 19 58 41.7 -1.0**
MTE Manteigas 31.13 185 *e*LR LR 20 07 24.0
comp=Z,268nm,20.0s
EMOS Mosqueruela 31.18 175 P **P 19 58 46.3 +1.5**
comp=Z,38nm,1.3s,mb5.1
EMOS Mosqueruela 31.18 175 P **P 19 58 46.3 +1.5**
comp=Z,38nm,1.3s,mb5.1
ESDC Sonseca Array 31.81 180 P **P 19 58 50.3 -0.1**
comp=Z,2.3nm,0.7s,mb4.1,baz=359,slow=8.5,SNR=14
ESDC LR LR 20 10 32.9
comp=Z,131nm,19.9s,MS3.6,baz=340,slow=34
ESDC Sonseca Array 31.81 180 P **P 19 58 52.9 +2.5**
comp=Z,1.7nm,0.6s,mb4.0
VTS Vitosha 31.89 140 ⇑P **P 19 58 50.3 -0.8**
VTS Vitosha 31.89 140 ⇑*i*P **P 19 58 50.3 -0.8**
VTS Vitosha 31.89 140 P **P 19 58 50.3 -0.8**
ETOS Mallorca 31.91 170 P **P 19 58 55.0 +3.6**
comp=Z,10nm,0.9s,mb4.7
ECHE Chera 31.93 175 P **P 19 58 54.4 +2.9**
comp=Z,28nm,1.2s,mb5.0
ECHE Chera 31.93 175 P **P 19 58 54.4 +2.9**
ECHE pmax pmax
comp=Z,28nm,1.2s,mb5.0
PAB San Pablo 31.94 180 *e*P **P 19 58 52.9 +1.4**
comp=Z,37nm,1.3s,mb5.0
PAB San Pablo 31.94 180 *e*P **P 19 58 52.9 +1.3**
PAB pmax pmax
comp=Z,37nm,1.3s,mb5.0
PAB San Pablo 31.94 180 *e*P **P 19 58 52.9 +1.3**
comp=Z,37nm,1.3s,mb5.0
PMRV Marv??o 32.10 185 *e*P **P 19 58 53.8 +0.8**
comp=Z,47nm,1.6s,mb5.1
PMRV *e*LR LR 20 08 03.4
comp=Z,236nm,18.0s
PMRV Marv??o 32.10 185 *e*P **P 19 58 53.8 +0.8**
comp=Z,47nm,1.6s,mb5.1
PMTG Montargil 32.48 186 *e*LR LR 20 09 24.3
comp=Z,354nm,18.0s
PMAFR Mafra 32.63 187 *e*LR LR 20 08 22.3
comp=Z,248nm,18.0s
PESTR Estremoz 32.66 185 *e*P **P 19 58 56.4 -1.5**
comp=Z,32nm,1.5s,mb5.0
PESTR *e*LR LR 20 08 42.4
comp=Z,315nm,18.0s
PESTR Estremoz 32.66 185 *e*P **P 19 58 56.4 -1.5**
comp=Z,32nm,1.5s,mb5.0
EVIA Vianos 32.85 178 P **P 19 59 03.0 +3.4**
comp=Z,21nm,0.9s,mb5.1
EVIA Vianos 32.85 178 P **P 19 59 03.0 +3.4**
EVIA pmax pmax
comp=Z,21nm,0.9s,mb5.1
ETOB Tobarra 32.86 176 P **P 19 59 02.8 +3.1**
comp=Z,17nm,1.0s,mb4.9
ANN Anapa 33.28 121 *e*P **P 19 59 00.6 -2.7**
ANN *e**PP pP 19 59 04.0 -2.4
ANN *e* 20 00 08.3
ANN *e* 20 01 46.1
ANN *e*S **S 20 04 19.6 -3.6**
ANN pmax pmax
comp=Z,21nm,1.0s,mb5.0
ANN MLR MLR
comp=Z,825nm,16.0s,MS4.5
ANN Anapa 33.28 121 *e*P **P 19 59 00.6 -2.7**
comp=Z,21nm,1.0s,mb5.0
EADA Adamuz 33.31 181 P **P 19 59 06.8 +3.2**
comp=Z,8.7nm,0.8s,mb4.7
EBAN Banos Encina 33.32 179 P **P 19 59 06.4 +2.8**
comp=Z,19nm,0.8s,mb5.1
EBAN Banos Encina 33.32 179 P **P 19 59 06.4 +2.8**
EBAN pmax pmax
comp=Z,19nm,0.8s,mb5.1
PBAR Barrancos 33.34 184 *e*LR LR 20 09 43.5
comp=Z,310nm,20.0s
EHUE Huescar 33.67 178 P **P 19 59 09.5 +2.7**
comp=Z,30nm,1.1s,mb5.1
EHUE Huescar 33.67 178 P **P 19 59 09.5 +2.7**
EHUE pmax pmax
comp=Z,30nm,1.1s,mb5.1
EQES Quesada 33.68 178 P **P 19 59 09.4 +2.6**
comp=Z,15nm,0.9s,mb4.9
TIXI Tiksi 33.99 24 *e*P **P 19 59 10.8 +1.6**
comp=Z,8.6nm,0.9s,mb4.7
TIXI Tiksi 33.99 24 *e*P **P 19 59 10.3 +1.1**
TIXI pmax pmax
comp=Z,24nm,1.8s,mb4.8
TIXI Tiksi 33.99 24 *e*P **P 19 59 10.3 +1.1**
comp=Z,24nm,1.8s,mb4.8
PVAQ Vaqueiros 34.13 185 *e*LR LR 20 10 12.7
comp=Z,352nm,18.0s
MORF Marmelete 34.25 186 *e*LR LR 20 09 50.8
comp=Z,362nm,18.0s
PBDV Barranco-do-Ve 34.29 185 *e*LR LR 20 10 42.5
comp=Z,304nm,18.0s
PFVI Vila Bisbo 34.43 187 *e*LR LR 20 09 06.2
comp=Z,414nm,18.0s
AKTK Aktyubinsk 34.52 94 P **P 19 59 13.8 -0.1**
AKTK Aktyubinsk 34.52 94 P **P 19 59 13.8 -0.1**
AKTO Aktyubinsk 34.52 94 P **P 19 59 13.8 -0.1**
comp=Z,7.0nm,1.2s,mb4.5,baz=299,slow=8.4,SNR=8.8
AKTO Aktyubinsk 34.52 94 P **P 19 59 13.8 -0.1**
EBER Berja 34.59 178 P **P 19 59 18.6 +3.9**
comp=Z,249nm,2.2s,mb5.8
EGUA Guajares 34.65 179 P **P 19 59 18.9 +3.7**
comp=Z,190nm,0.9s
EGUA Guajares 34.65 179 P **P 19 59 18.9 +3.7**
KIV Kislovodsk 35.55 115 *e*P **P 19 59 27.3 +4.4**
KIV *e*S **S 20 05 04.1 +5.9**
KIV pmax pmax
comp=Z,16nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,263nm,15.0s,MS4.1
ABKAR Akbulak array 36.16 93 *e*P **P 19 59 28.1 +0.1**
comp=Z,2.7nm,0.4s,mb4.5
ABKAR Akbulak array 36.16 93 *e*P **P 19 59 28.1 0.0**
comp=Z,2.7nm,0.4s,mb4.5
BRVK Borovoye 36.18 80 *e*P **P 19 59 29.1 +0.8**
comp=Z,11nm,1.1s,mb4.7
BRVK Borovoye 36.18 80 *d i*P **P 19 59 29.0 +0.8**
BRVK pmax pmax
comp=Z,28nm,2.5s,mb4.8
BRVK MLR MLR
comp=Z,139nm,15.0s,MS3.9
BRVK Borovoye 36.18 80 *i* P **P 19 59 29.0 +0.8**
comp=Z,139nm,15.0s
BVAR Borovoye Array 36.24 80 P **P 19 59 29.9 +1.1**
comp=Z,7.0nm,0.8s,mb4.6,baz=315,slow=7.3,SNR=36
BVAR PP PP 20 00 52.1 +1.2
comp=Z,2.5nm,0.8s,baz=325,slow=7.2,SNR=4.0
BVAR Borovoye Array 36.24 80 P **P 19 59 29.9 +1.1**
BVAR 20 00 52.1
BVAR pmax pmax
comp=Z,7.0nm,0.8s
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BVAR Borovoye Array 36.24 80 P **P 19 59 29.9 +1.1**
comp=Z,7.0nm,0.8s,mb4.6
BVAR Borovoye Array 36.24 80 PP PP 20 00 52.1 +1.2
KEST Kesra 36.44 161 P **P 19 59 31.2 +0.6**
comp=Z,3.4nm,0.8s,mb4.3,baz=311,slow=2.4,SNR=15
KEST LR LR 20 13 47.2
comp=Z,110nm,21.4s,MS3.6,baz=290,slow=35
KEST Kesra 36.44 161 P **P 19 59 31.2 +0.6**
INK Inuvik 36.52 331 LR LR 20 15 24.5
comp=Z,293nm,20.4s,MS4.0,baz=352,slow=38
BRTR Keskin Array B 37.02 128 P **P 19 59 36.4 +0.9**
comp=Z,4.2nm,0.8s,mb4.3,baz=342,slow=5.9,SNR=20
BRTR PP PP 20 01 04.0 +4.3
comp=Z,2.8nm,1.1s,baz=340,slow=9.3,SNR=4.5
BRTR LR LR 20 16 43.3
comp=Z,261nm,18.7s,MS4.0,baz=314,slow=39
BRTR Keskin Array B 37.02 128 *ce*P **P 19 59 37.0 +1.5**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 37.02 128 P **P 19 59 36.4 +0.9**
ISP Isparta 38.07 133 *e*P **P 19 59 44.6 +0.2**
comp=Z,14nm,1.0s,mb4.6
ISP Isparta 38.07 133 *e*P **P 19 59 44.6 +0.2**
ISP pmax pmax
comp=Z,14nm,1.0s,mb4.7
ISP Isparta 38.07 133 *e*P **P 19 59 44.6 +0.2**
comp=Z,14nm,1.0s,mb4.7
YKA Yellowknife Ar 38.11 315 P **P 19 59 44.0 -0.5**
comp=Z,1.3nm,0.9s,mb3.7,baz=37,slow=9.3,SNR=3.4
YKA PcP PcP 20 01 58.3 -0.7
comp=Z,1.9nm,0.9s,baz=26,slow=2.9,SNR=4.8
YKA LR LR 20 15 17.9
comp=Z,46nm,18.0s,MS3.3,baz=70,slow=36
YKA Yellowknife Ar 38.11 315 P **P 19 59 44.0 -0.5**
YKA 20 01 58.3
YKA Yellowknife Ar 38.11 315 P **P 19 59 44.0 -0.5**
YKA Yellowknife Ar 38.11 315 PcP PcP 20 01 58.3 -0.7
MALT Malatya 39.59 123 *e*P **P 19 59 58.8 +1.6**
comp=Z,22nm,1.2s,mb4.8
MALT Malatya 39.59 123 *e*P **P 19 59 58.8 +1.6**
MALT pmax pmax
comp=Z,22nm,1.2s,mb4.8
MALT Malatya 39.59 123 *e*P **P 19 59 58.8 +1.6**
comp=Z,22nm,1.2s,mb4.8
GNI Garni 39.65 115 *i* P **P 19 59 59.4 +1.8**
GNI pmax pmax
comp=Z,18nm,1.4s
GNI MLR MLR
comp=Z,276nm,16.0s
GNI Garni 39.65 115 *i* P **P 19 59 59.4 +1.8**
comp=Z,276nm,16.0s
ZALV Zalesovo Beam 39.88 67 P **P 19 59 59.5 +0.1**
comp=Z,2.0nm,0.9s,mb3.8,baz=331,slow=12,SNR=7.3
ZALV PcP PcP 20 02 04.0 -0.7
comp=Z,0.3nm,0.3s,baz=339,slow=7.9,SNR=4.1
ZALV LR LR 20 19 18.6
comp=Z,115nm,19.2s,MS3.7,baz=30,slow=40
ZALV Zalesovo Beam 39.88 67 P **P 19 59 59.5 +0.1**
ZALV 20 02 04.1
KURK Kurchatov 40.81 75 *e*P **P 20 00 07.2 +0.1**
comp=Z,12nm,0.9s,mb4.5
KURK Kurchatov 40.81 75 *d i*P **P 20 00 07.4 +0.2**
KURK pmax pmax
comp=Z,14nm,0.9s,mb4.6
KURK MLR MLR
comp=Z,180nm,20.0s,MS3.9
KURK Kurchatov 40.81 75 *i* P **P 20 00 07.4 +0.2**
comp=Z,180nm,20.0s
ILAR Eielson Array 41.72 337 P **P 20 00 14.9 +0.5**
comp=Z,1.5nm,1.0s,baz=13,slow=5.4,SNR=15
ILAR PcP PcP 20 02 09.6 -1.0
comp=Z,1.4nm,1.0s,baz=339,slow=4.3,SNR=5.8
ILAR LR LR 20 19 22.2
comp=Z,217nm,18.3s,baz=18,slow=39
ILAR Eielson Array 41.72 337 P **P 20 00 15.0 +0.5**
ILAR 20 02 09.6
ILAR MLR MLR
comp=Z,217nm,18.3s
ILAR Eielson Array 41.72 337 P **P 20 00 14.9 +0.4**
ILAR Eielson Array 41.72 337 PcP PcP 20 02 09.6 -1.0
comp=Z,217nm,18.3s
FFC Flin Flon 41.74 300 *e*P **P 20 00 15.0 +0.3**
comp=Z,16nm,1.0s,mb4.6
FFC Flin Flon 41.74 300 *i* P **P 20 00 16.3 +1.6**
FFC Flin Flon 41.74 300 *e*P **P 20 00 15.0 +0.3**
comp=Z,16nm,1.0s,mb4.6
YAK Yakutsk 43.06 30 P **P 20 00 24.6 -0.8**
comp=Z,8.2nm,0.4s,mb4.8
YAK Yakutsk 43.06 30 *e*P **P 20 00 24.0 -1.4**
YAK pmax pmax
comp=Z,17nm,1.3s,mb4.6
YAK pmax pmax
comp=N,15nm,1.8s
YAK Yakutsk 43.06 30 P **P 20 00 24.6 -0.8**
comp=N,8.2nm,0.4s,mb4.8
SADO Sadowa 43.62 274 LR LR 20 17 45.5
comp=N,448nm,18.2s,MS4.4,baz=8.7,slow=35
ULM Lac du Bonnet 43.95 292 P **P 20 00 32.5 -0.2**
comp=N,5.3nm,0.9s,mb4.3,baz=40,slow=8.9,SNR=3.9
ULM LR LR 20 18 34.9
comp=N,258nm,18.4s,MS4.2,baz=88,slow=36
ULM Lac du Bonnet 43.95 292 P **P 20 00 32.5 -0.2**
ULM LR LR 20 18 34.9
ULM Lac du Bonnet 43.95 292 P **P 20 00 32.5 -0.1**
BOD Bodaibo 44.02 43 *e*P **P 20 00 31.9 -1.2**
BOD pmax pmax
comp=Z,22nm,1.7s,mb4.6
BOD Bodaibo 44.02 43 *e*P **P 20 00 31.9 -1.2**
comp=Z,22nm,1.7s,mb4.6
KKAR Karatay Array 45.00 87 *e*P **P 20 00 42.1 +0.9**
KKAR Karatay Array 45.00 87 *e*P **P 20 00 42.1 +0.9**
KKAR Karatay Array 45.00 87 *e*P **P 20 00 42.1 +0.9**
MK31 Makanchi Array 45.42 74 *e*P **P 20 00 44.4 0.0**
MK31 Makanchi Array 45.42 74 *e*P **P 20 00 44.4 0.0**
MK31 Makanchi Array 45.42 74 *e*P **P 20 00 44.4 0.0**
MKAR Makanchi Array 45.42 74 P **P 20 00 44.4 -0.1**
comp=Z,1.5nm,0.7s,mb3.9,baz=342,slow=6.4,SNR=20
MKAR PcP PcP 20 02 23.1 -0.2
comp=Z,0.9nm,0.8s,baz=34,slow=4.5,SNR=3.7
MKAR LR LR 20 21 40.1
comp=Z,140nm,19.4s,MS3.9,baz=344,slow=39
MKAR Makanchi Array 45.42 74 P **P 20 00 44.4 0.0**
MKAR 20 02 23.1
MKAR MLR MLR
comp=Z,141nm,19.4s
EKS2 Erkin-Say 46.45 84 *e*P **P 20 00 54.0 +1.4**
comp=Z,23nm,0.6s,mb5.3
EKS2 Erkin-Say 46.45 84 *e*P **P 20 00 54.0 +1.4**
comp=Z,23nm,0.6s,mb5.3
MOY Mondy 46.46 56 *e*P **P 20 00 54.6 +2.0**
MOY pmax pmax
comp=Z,42nm,2.5s,mb4.9
MOY Mondy 46.46 56 *e*P **P 20 00 54.6 +2.0**
comp=Z,42nm,2.5s,mb4.9
TKM2 Tokmak 2 46.79 83 *e*P **P 20 00 56.5 +1.3**
comp=Z,8.2nm,0.8s,mb4.7
TKM2 Tokmak 2 46.79 83 *e*P **P 20 00 56.5 +1.2**
TKM2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
TKM2 Tokmak 2 46.79 83 *e*P **P 20 00 56.5 +1.2**
comp=Z,8.0nm,0.8s,mb4.7
AML Almayashu 46.90 85 *e*P **P 20 00 58.5 +2.3**
AML Almayashu 46.90 85 *e*P **P 20 00 58.5 +2.4**
CLNS Chul'man 47.13 36 *e*P **P 20 00 58.8 +1.0**
CLNS pmax pmax
comp=Z,31nm,1.0s,mb5.2
CLNS pmax pmax
comp=N,18nm,1.0s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS Chul'man 47.13 36 *e*P **P 20 00 58.8 +1.0**
comp=E,18nm,1.0s,mb5.0
A22A Carney Farms, 47.97 300 ⇑P **P 20 01 04.7 +0.4**
baz=48
B23A Brockton 48.19 299 ⇑P **P 20 01 06.6 +0.5**
baz=48
A21A Bergtoll Ranch 48.25 301 ⇓P **P 20 01 06.8 +0.3**
baz=48
A19A Klindworth Far 48.80 302 ⇓P **P 20 01 11.1 +0.3**
baz=48
C23A Lambert 48.84 298 ⇓P **P 20 01 11.6 +0.5**
baz=48
TAM Tamanrasset 48.96 168 *e*P **P 20 01 13.6 +1.3**
comp=E,11nm,1.1s,mb4.8
TAM Tamanrasset 48.96 168 *e*P **P 20 01 13.6 +1.3**
TAM pmax pmax
comp=Z,11nm,1.1s,mb4.8
TAM Tamanrasset 48.96 168 *e*P **P 20 01 13.6 +1.3**
comp=Z,11nm,1.1s,mb4.8
C22A Vida 49.09 299 ⇓P **P 20 01 13.3 +0.3**
baz=49
A18A Metzger Ranch, 49.11 303 ⇓P **P 20 01 13.4 +0.3**
baz=49
KDAK Kodiak Island 49.20 338 LR LR 20 21 27.1
comp=Z,199nm,19.6s,MS4.1,baz=37,slow=35
A17A Triple J Farms 49.31 304 ⇓P **P 20 01 14.7 0.0**
baz=49
C21A Desert Coulee 49.35 300 ⇓P **P 20 01 15.4 +0.4**
baz=49
B18A Beardsley Farm 49.57 303 ⇓P **P 20 01 16.7 0.0**
baz=49
C20A Veseth Ranch, 49.71 301 ⇓P **P 20 01 18.0 +0.3**
baz=49
D22A Cohagen 49.72 299 ⇓P **P 20 01 18.2 +0.4**
baz=49
WMQ Urumqi 49.75 71 P **P 20 01 19.0 +0.9**
WMQ sP sP 20 01 26.0 +3.5
WMQ PP PP 20 03 15.0 +2.7
WMQ S **S 20 08 27.0 +0.2**
WMQ ScS ScS 20 11 07.0 -2.1
WMQ SS SS 20 11 56.0 -2.5
WMQ pmax pmax
comp=Z,15nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,54nm,4.0s
WMQ LR LR
comp=N,110nm,15.0s,MS4.2
WMQ LR LR
comp=E,120nm,15.0s,MS4.2
WMQ LR LR
comp=Z,150nm,15.0s,MS4.1
A15A Johnson Ranch, 49.82 305 ⇑P **P 20 01 18.7 +0.2**
baz=50
EGMT Eagleton 49.90 302 ⇓P **P 20 01 19.0 -0.2**
baz=50,SNR=5.1
EGMT Eagleton 49.90 302 *e*P **P 20 01 19.7 +0.5**
comp=Z,20nm,1.3s,mb5.0
EGMT Eagleton 49.90 302 *e*P **P 20 01 19.7 +0.5**
comp=Z,20nm,1.3s,mb5.0
C19A Slack Wire Ran 49.98 302 ⇑P **P 20 01 19.6 -0.2**
baz=50
KSH Kashi 49.99 84 P **P 20 01 23.5 +3.5**
KSH *e*pP pP 20 01 28.0 +4.8
KSH *e*sP sP 20 01 30.5 +6.1
KSH *e*PcP PcP 20 02 42.8 +3.0
KSH *e*PP PP 20 03 19.8 +5.2
KSH *e*ScP ScP 20 06 36.8 +1.8
KSH *e*PcS PcS 20 06 38.5 +1.8
KSH *e*S **S 20 08 33.5 +3.2**
KSH *e*sS sS 20 08 41.5 +6.0
KSH *e*ScS ScS 20 11 11.3 +0.4
KSH *e*SS SS 20 12 04.0 +1.4
KSH pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KSH pmax pmax
comp=Z,360nm,3.1s
KSH LR LR

comp=N,490nm,7.0s
KSH LR LR
comp=E,310nm,5.7s
KSH LR LR
comp=Z,340nm,7.3s
A14A Double T Ranch 50.01 306 ⇑P **P 20 01 20.1 +0.2**
baz=50
D21A La Casta Ranch 50.02 300 ⇓P **P 20 01 20.3 +0.2**
baz=50
A13A Flathead Natio 50.30 306 ⇓P **P 20 01 22.5 +0.3**
baz=50
D20A Manuel Ranch, 50.31 301 ⇓P **P 20 01 22.5 +0.2**
baz=50
B15A Bradely Ranch, 50.39 305 ⇑P **P 20 01 22.7 -0.2**
baz=50
D19A Cripps Ranch, 50.45 301 ⇑P **P 20 01 23.1 -0.3**
baz=50,SNR=5.7
B14A Marquette Ranc 50.53 305 ⇑P **P 20 01 23.9 -0.1**
baz=50
C16A Fuhringer Ranc 50.64 304 ⇑P **P 20 01 25.0 +0.2**
baz=50
E20A Meyer Farm, Mu 50.85 300 ⇑P **P 20 01 25.9 -0.4**
baz=50,SNR=6.0
C15A Salmond Ranch, 50.90 304 ⇓P **P 20 01 26.3 -0.5**
baz=51
D17A Six Diamond Ra 50.96 303 ⇑P **P 20 01 27.3 +0.2**
baz=51
E19A Rath Farm, Rou 51.07 301 ⇑P **P 20 01 28.1 +0.1**
baz=51
C14A Swan Lake 51.20 305 ⇑P **P 20 01 28.7 -0.3**
baz=51
E18A Harlowton 51.28 302 ⇓P **P 20 01 30.2 +0.6**
baz=51
SONM Songino Array 51.38 54 P **P 20 01 30.8 +0.4**
comp=Z,2.0nm,0.9s,mb4.0,baz=335,slow=4.1,SNR=12
SONM PcP PcP 20 02 45.1 +0.3
comp=Z,1.3nm,0.9s,baz=342,slow=5.6,SNR=4.7
SONM LR LR 20 25 36.4
comp=Z,104nm,18.6s,MS3.9,baz=344,slow=39
SONM Songino Array 51.38 54 P **P 20 01 30.8 +0.4**
SONM 20 02 45.1
SONM MLR MLR
comp=Z,104nm,18.7s
SONM Songino Array 51.38 54 P **P 20 01 30.8 +0.4**
SONM Songino Array 51.38 54 PcP PcP 20 02 45.1 +0.3
comp=Z,104nm,18.7s
BSMT Bassoo Peak 51.40 306 *e*P **P 20 01 30.7 +0.2**
comp=Z,5.8nm,1.2s,mb4.4
BSMT Bassoo Peak 51.40 306 *e*P **P 20 01 30.7 +0.2**
comp=Z,5.8nm,1.2s,mb4.4
C13A Hot Springs 51.50 306 ⇓P **P 20 01 31.0 -0.2**
baz=51
SWMT Swartz Lake 51.51 305 *e*P **P 20 01 30.9 -0.4**
comp=Z,8.1nm,1.3s,mb4.5
SWMT Swartz Lake 51.51 305 *e*P **P 20 01 30.9 -0.4**
comp=Z,8.1nm,1.3s,mb4.5
ULN Ulaanbaatar 51.52 53 *e*P **P 20 01 32.3 +0.9**
comp=Z,29nm,1.8s,mb4.9
ULN Ulaanbaatar 51.52 53 *e*P **P 20 01 32.3 +0.9**
ULN pmax pmax
comp=Z,29nm,1.8s,mb4.9
ULN Ulaanbaatar 51.52 53 *e*P **P 20 01 32.3 +0.9**
comp=Z,29nm,1.8s,mb4.9
D15A Lincoln 51.55 304 ⇑P **P 20 01 31.7 +0.1**
baz=51
NEW Newport 51.61 308 ⇑P **P 20 01 31.9 -0.2**
baz=51
SLMT Seeley Lake 51.62 305 P **P 20 01 30.6 -1.5**
comp=Z,11nm,1.2s,mb4.7
SLMT Seeley Lake 51.62 305 P **P 20 01 30.6 -1.6**
comp=Z,11nm,1.2s,mb4.7
E17A Martinsdale 51.64 302 ⇑P **P 20 01 32.2 -0.1**
baz=51
F19A Roth Farm, Mol 51.67 301 ⇑P **P 20 01 32.0 -0.5**
baz=51
D14A Greenough 51.77 305 ⇑P **P 20 01 32.1 -1.2**
baz=52,SNR=5.4
C11A Tepee Creek (N 51.78 307 ⇓P **P 20 01 33.0 -0.3**
baz=52
E16A East Helena 51.79 303 ⇓P **P 20 01 33.4 -0.1**
baz=52
F18A Big Timber 51.84 301 ⇑P **P 20 01 34.0 +0.2**
baz=52
CHMT Chamberlain Mo 51.86 305 *e*P **P 20 01 32.8 -1.2**
comp=Z,5.6nm,1.2s,mb4.4
CHMT Chamberlain Mo 51.86 305 *e*P **P 20 01 32.8 -1.1**
comp=Z,5.6nm,1.2s,mb4.4
RSSD Black Hills 51.87 296 *e*P **P 20 01 34.3 +0.2**
RSSD Black Hills 51.87 296 *e*P **P 20 01 34.3 +0.2**
RSSD Black Hills 51.87 296 *e*P **P 20 01 34.3 +0.2**
D13A Huson 52.01 306 ⇓P **P 20 01 34.7 -0.3**
baz=52
G20A Bridger 52.05 300 ⇑P **P 20 01 35.1 -0.3**
baz=52
B08A Colville Reser 52.07 310 ⇓P **P 20 01 35.4 -0.1**
baz=52
F17A Fitzpatrick Pl 52.09 302 ⇓P **P 20 01 35.7 -0.1**
baz=52
MSO Missoula 52.12 305 ⇓P **P 20 01 35.6 -0.3**
baz=52
E15A Deer Lodge 52.15 304 ⇓P **P 20 01 36.0 -0.1**
baz=52
H21A Big Horn, Sher 52.27 298 ⇑P **P 20 01 36.6 -0.4**
baz=52
D12A Red Ives Fores 52.28 306 ⇑P **P 20 01 36.8 -0.3**
baz=52
KBL Kabul 52.33 93 *e*P **P 20 01 38.1 +0.6**
KBL Kabul 52.33 93 *e*P **P 20 01 38.1 +0.5**
KBL Kabul 52.33 93 *e*P **P 20 01 38.1 +0.5**
G18A Lazy EL Ranch, 52.34 301 ⇑P **P 20 01 37.2 -0.3**
baz=52
BOZ Bozeman (W) 52.60 303 ⇓P **P 20 01 39.6 +0.2**
baz=52
F15A Butte 52.65 303 ⇑P **P 20 01 39.6 -0.2**
baz=52
LRM Limekiln Ridge 52.66 303 *e*P **P 20 01 38.3 -1.5**
comp=Z,30nm,1.2s,mb5.1
LRM Limekiln Ridge 52.66 303 *e*P **P 20 01 38.3 -1.6**
comp=Z,30nm,1.2s,mb5.1
H20A Greybull 52.67 299 ⇑P **P 20 01 39.8 -0.1**
baz=52,SNR=6.7
E12A Beaver Dam Sad 52.93 306 ⇑P **P 20 01 41.4 -0.4**
baz=53
H18A Shoshone NF, C 52.95 301 ⇑P **P 20 01 41.9 -0.2**
baz=53
G16A Moss Hill, Enn 53.03 303 ⇓P **P 20 01 42.6 0.0**
baz=53
I21A Big Trails, Te 53.09 298 ⇓P **P 20 01 42.1 -1.0**
baz=53,SNR=6.2
F13A Darby 53.19 305 ⇓P **P 20 01 43.5 -0.3**
baz=53
I20A Worland 53.20 299 ⇑P **P 20 01 43.6 -0.3**
baz=53
J22A Midwest 53.22 297 ⇑P **P 20 01 43.0 -1.1**
baz=53,SNR=5.3
G15A Dillon 53.27 303 ⇓P **P 20 01 44.3 -0.2**
baz=53
I19A Meeteetse 53.36 300 ⇓P **P 20 01 45.3 +0.2**
baz=53
H16A Russell Place, 53.36 302 ⇓P **P 20 01 45.1 0.0**
baz=53
TKL Tuckaleechee C 53.37 273 LR LR 20 23 29.2
comp=Z,243nm,18.1s,MS4.3,baz=269,slow=35
F12A Elk City 53.46 306 ⇑P **P 20 01 45.5 -0.3**
baz=53
H17A Grant Village 53.47 301 ⇓P **P 20 01 46.3 +0.5**
baz=53
E09A Wood Farm, Sta 53.49 308 ⇓P **P 20 01 46.1 +0.1**
baz=53
J21A Lysite 53.56 298 ⇑P **P 20 01 46.4 -0.1**
baz=53
MCMT McKenzie Canyo 53.68 303 *e*P **P 20 01 47.6 +0.2**
comp=Z,1.6nm,1.0s,mb3.9
MCMT McKenzie Canyo 53.68 303 *e*P **P 20 01 47.6 +0.2**
comp=Z,1.6nm,1.0s,mb3.9
J20A Shoshoni 53.73 299 ⇑P **P 20 01 47.7 -0.1**
baz=53
F10A Beach Ranch, E 53.77 307 ⇓P **P 20 01 48.0 0.0**
baz=53
G13A Cobalt 53.80 304 ⇓P **P 20 01 47.8 -0.5**
baz=54,SNR=8.6
H15A Lima 53.82 303 ⇓P **P 20 01 48.4 0.0**
baz=54
E07A Sunnyside 53.88 310 ⇑P **P 20 01 48.7 -0.2**
baz=54
K22A Casper 53.94 297 ⇓P **P 20 01 48.5 -0.9**
baz=54,SNR=6.0
H14A Leadore 54.02 304 ⇑P **P 20 01 49.7 -0.1**
baz=54
G12A Big Creek, Yel 54.06 305 ⇓P **P 20 01 50.0 -0.2**
baz=54,SNR=14
J19A Crowheart 54.09 299 ⇑P **P 20 01 50.3 -0.1**
baz=54
I16A Newdale 54.20 302 ⇓P **P 20 01 51.9 +0.7**
baz=54,SNR=5.5
OGNE Ogallala 54.20 292 ⇑P **P 20 01 51.4 +0.2**
baz=54
H13A Challis 54.30 304 ⇓P **P 20 01 52.2 +0.2**
baz=54
J18A Kendall Valley 54.41 300 ⇑P **P 20 01 52.6 -0.1**
baz=54
K19A Absolon Red Bu 54.44 299 ⇓P **P 20 01 52.6 -0.4**
baz=54
K20A Yellowstone Ra 54.45 298 ⇑P **P 20 01 52.7 -0.4**
baz=54
H12A Diamond D Ranc 54.47 305 ⇑P **P 20 01 52.9 -0.3**
baz=54,SNR=5.3
L22A Ellis Ranch, M 54.48 297 ⇑P **P 20 01 53.2 -0.1**
baz=54
I14A Mackay 54.68 303 ⇑P **P 20 01 54.6 -0.1**
baz=54
BW06 Boulder Array 54.69 300 ⇓P **P 20 01 54.3 -0.5**
baz=54,SNR=6.2
L21A Rawlins 54.81 297 ⇓P **P 20 01 55.5 -0.2**
baz=54
BMO Blue Mountains 54.83 307 *e*P **P 20 01 54.7 -1.1**
comp=Z,7.4nm,1.5s,mb4.5
BMO Blue Mountains 54.83 307 *e*P **P 20 01 54.7 -1.1**
comp=Z,7.4nm,1.5s,mb4.5
G08A Pilot Rock 54.84 308 ⇓P **P 20 01 55.6 -0.3**
baz=54
I13A Wildhorse Cree 54.87 304 ⇓P **P 20 01 55.9 -0.1**
baz=54,SNR=5.7
J15A Blackfoot 54.89 302 ⇓P **P 20 01 56.3 0.0**
baz=55
K18A Toltan Ranch, 54.94 300 ⇓P **P 20 01 56.7 0.0**
baz=55
PETK Petropavlovsk- 55.11 13 LR LR 20 25 39.7
comp=Z,68nm,20.4s,MS3.7,baz=210,slow=36
K16A Soda Springs 55.19 301 ⇓P **P 20 01 58.4 0.0**
baz=55
L19A Farson 55.25 299 ⇑P **P 20 01 58.8 -0.1**
baz=55
I12A Atlanta 55.25 305 ⇓P **P 20 01 58.6 -0.3**
baz=55
HLID Hailey 55.27 304 ⇑P **P 20 01 58.8 -0.2**
baz=55,SNR=5.1
HLID Hailey 55.27 304 *e*P **P 20 01 58.7 -0.3**
comp=Z,15nm,1.8s,mb4.7
HLID Hailey 55.27 304 *e*P **P 20 01 58.7 -0.3**
comp=Z,15nm,1.8s,mb4.7
G06A Carlson Farm, 55.31 310 ⇑P **P 20 01 59.0 -0.3**
baz=55
J13A Cove Ranch, Pi 55.36 304 ⇑P **P 20 01 59.8 +0.1**
baz=55
N23A Red Feather La 55.39 296 ⇓P **P 20 01 59.7 -0.2**
baz=55,SNR=5.4
L18A Fontenelle, Gr 55.60 300 ⇓P **P 20 02 01.8 +0.4**
baz=55
N22A Wattenberg Ran 55.62 296 ⇓P **P 20 02 01.6 +0.1**
baz=55
K14A Jones Ranch, D 55.89 302 ⇑P **P 20 02 03.6 +0.1**
baz=56
L16A Fish Haven 55.91 301 ⇑P **P 20 02 03.7 +0.2**
baz=56
N21A Black Mountain 55.97 297 ⇓P **P 20 02 04.1 +0.1**
baz=56
O23A Lake Granby, G 56.02 295 ⇑P **P 20 02 04.3 -0.1**
baz=56
I07A Izee 56.11 308 ⇓P **P 20 02 04.6 -0.4**
baz=56
N20A Spence Gulch, 56.11 298 ⇓P **P 20 02 04.9 -0.2**
baz=56,SNR=9.1
P25A Willow Gulch B 56.15 293 ⇑P **P 20 02 05.0 -0.4**
baz=56
L15A Malad City 56.18 302 ⇑P **P 20 02 05.4 -0.1**
baz=56
M17A Scullys Gap (B 56.20 300 ⇑P **P 20 02 05.1 -0.6**
baz=56
H04A Detroit Lake 56.21 311 ⇓P **P 20 02 05.4 -0.3**
baz=56
O22A Kremmling 56.24 296 ⇑P **P 20 02 05.8 -0.2**
baz=56,SNR=5.3
ISCO Idaho Springs 56.31 295 ⇓P **P 20 02 06.3 -0.2**
baz=56
N19A John Jarvie Ra 56.32 298 ⇑P **P 20 02 06.2 -0.3**
baz=56
L14A Malta 56.38 302 ⇑P **P 20 02 07.0 0.0**
baz=56
M16A Huntsville 56.61 301 ⇑P **P 20 02 08.8 +0.2**
baz=56
M15A Larsen Ranch, 56.70 301 ⇓P **P 20 02 09.3 0.0**
baz=56
N17A Moffit Pass 56.74 300 ⇓P **P 20 02 09.7 +0.2**
baz=56
O20A White River Ci 56.76 297 ⇑P **P 20 02 09.7 +0.1**
baz=56,SNR=6.8
P23A Jefferson 56.77 295 ⇓P **P 20 02 09.8 +0.1**
baz=56
O19A Miners Draw (B 56.85 298 ⇓P **P 20 02 10.3 -0.1**
baz=56
Q24A Divide 56.95 294 ⇑P **P 20 02 10.6 -0.4**
baz=57
GTA Gaotai 57.38 63 P **P 20 02 06.8 -7.3**
GTA pP pP 20 02 11.3 -6.0
GTA sP sP 20 02 14.5 -4.0
GTA S **S 20 09 56.5 -14**
GTA sS sS 20 10 04.0 -12
GTA pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
GTA pmax pmax
comp=Z,200nm,6.2s
GTA LR LR
comp=N,160nm,18.5s,MS4.4
GTA LR LR
comp=E,220nm,17.1s,MS4.4
GTA LR LR
comp=Z,180nm,19.0s,MS4.2
O17A Robinson Place 57.40 299 ⇓P **P 20 02 14.3 +0.1**
baz=57
R25A Fountain Ranch 57.45 293 ⇓P **P 20 02 14.7 +0.1**
baz=57
MIAR Mount Ida 57.50 282 *e*P **P 20 02 13.9 -1.1**
comp=Z,11nm,1.0s,mb4.8
MIAR Mount Ida 57.50 282 *e*P **P 20 02 13.9 -1.1**
MIAR pmax pmax
comp=Z,11nm,1.0s,mb4.8
MIAR Mount Ida 57.50 282 *e*P **P 20 02 13.9 -1.1**
comp=Z,11nm,1.0s,mb4.8
Q22A Crested Butte, 57.55 296 ⇑P **P 20 02 15.2 -0.1**
baz=57
K05A Summer Lake 57.73 309 ⇑P **P 20 02 17.0 +0.5**
baz=57
P18A Preston Nutter 57.79 299 ⇑P **P 20 02 16.8 -0.2**
baz=58
Q20A Ridgley Place, 57.87 297 ⇑P **P 20 02 17.4 -0.1**
baz=58
S25A Robets Cordova 57.94 293 ⇑P **P 20 02 18.0 -0.1**
baz=58
DUG Dugway 57.98 301 ⇑P **P 20 02 18.6 +0.3**
baz=58,SNR=6.0
DUG Dugway 57.98 301 *e*P **P 20 02 18.1 -0.2**
comp=Z,10.0nm,1.2s,mb4.7
DUG Dugway 57.98 301 *e*P **P 20 02 18.1 -0.2**
comp=Z,9.9nm,1.2s,mb4.7
R22A Saguache, Gunn 58.09 295 ⇓P **P 20 02 19.0 -0.1**
baz=58
Q19A Hogan Spring (58.14 298 ⇑P **P 20 02 19.4 0.0**
baz=58
SDCO Great Sand Dun 58.18 294 ⇓P **P 20 02 19.6 -0.1**
baz=58
R21A Cimarron 58.20 296 ⇑P **P 20 02 20.5 +0.6**
baz=58,SNR=6.1
Q18A Rafter H Ranch 58.25 298 ⇑P **P 20 02 20.4 +0.2**
baz=58
TORD Torodi Ar. Bea 58.34 173 LR LR 20 27 23.0
comp=Z,156nm,18.8s,MS4.2,baz=340,slow=36
SRU San Rafael 58.35 299 ⇑P **P 20 02 21.0 +0.1**
baz=58
T25A Trinidad 58.42 293 ⇑P **P 20 02 21.6 +0.2**
baz=58
S22A 4UR Ranch, Cre 58.56 295 ⇑P **P 20 02 22.6 +0.1**
baz=58
R20A Redvale 58.60 297 ⇑P **P 20 02 22.3 -0.4**
baz=58
P14A Drum Mountains 58.61 301 ⇓P **P 20 02 23.4 +0.7**
baz=58,SNR=6.7
T24A Torres, Weston 58.67 293 ⇑P **P 20 02 22.6 -0.6**
baz=58
PV01 Paradox Valley 58.71 297 *e*P **P 20 02 23.1 -0.3**
comp=Z,680nm,1.1s
PV01 Paradox Valley 58.71 297 *e*P **P 20 02 23.1 -0.3**
comp=Z,680nm,1.1s
Q16A Castle Valley 58.71 299 ⇑P **P 20 02 23.7 +0.2**
baz=58
R19A Curley Farm, L 58.76 297 ⇑P **P 20 02 23.6 -0.1**
baz=58
R18A Canyonlands Na 58.85 298 ⇑P **P 20 02 24.5 +0.1**
baz=58,SNR=9.8
U26A Atchley Ranch, 58.91 292 ⇓P **P 20 02 25.0 +0.2**
baz=59
S21A Coal Bank Pass 58.92 296 ⇑P **P 20 02 25.3 +0.4**
baz=59
S20A Disappointment 58.93 296 ⇓P **P 20 02 25.5 +0.5**
baz=59
WMOK Wichita Mounta 58.94 287 *e*P **P 20 02 24.1 -1.0**
comp=Z,11nm,1.3s,mb4.7
WMOK Wichita Mounta 58.94 287 *e*P **P 20 02 24.1 -1.0**
WMOK pmax pmax
comp=Z,11nm,1.3s,mb4.7
WMOK Wichita Mounta 58.94 287 *e*P **P 20 02 24.1 -1.0**
comp=Z,11nm,1.3s,mb4.7
R17A Hanksville Air 59.05 299 ⇓P **P 20 02 25.5 -0.2**
baz=59
U25A Circle Dot Ran 59.10 292 ⇑P **P 20 02 26.4 +0.2**
baz=59
YBH Yreka Blue Hor 59.12 310 LR LR 20 27 59.5
comp=Z,324nm,18.3s,MS4.5,baz=7.8,slow=36
HHC Hu-ho-hao-te 59.23 53 *e*P **P 20 02 27.0 0.0**
HHC pP pP 20 02 31.5 +1.3
HHC sP sP 20 02 34.0 +2.6
HHC PcP PcP 20 03 15.8 +0.6
HHC PP PP 20 04 39.3 +2.0
HHC ScP ScP 20 07 14.3 -1.1
HHC **S S 20 10 32.0 -2.4**
HHC ScS ScS 20 12 12.5 -4.1
HHC SS SS 20 14 26.3 -1.7
HHC pmax pmax
comp=Z,17nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,200nm,5.0s
HHC LR LR
comp=N,270nm,16.4s,MS4.7
HHC LR LR
comp=E,410nm,16.1s,MS4.7
HHC LR LR
comp=Z,290nm,15.3s,MS4.5
S19A Harvey Farm, M 59.23 297 ⇓P **P 20 02 27.4 +0.4**
baz=59
Q14A Sevier Lake (B 59.23 301 ⇓P **P 20 02 28.3 +1.2**
baz=59,SNR=9.2
T22A Edith 59.27 295 ⇑P **P 20 02 27.5 +0.2**
baz=59
MSU Marysvale 59.37 300 *e*P **P 20 02 29.2 +1.2**
comp=Z,9.2nm,1.3s,mb4.7
MSU Marysvale 59.37 300 *e*P **P 20 02 29.2 +1.2**
MSU pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
MSU Marysvale 59.37 300 *e*P **P 20 02 29.2 +1.2**
comp=Z,9.0nm,1.3s,mb4.6
R16A Teasdale 59.39 299 ⇓P **P 20 02 28.3 +0.1**
baz=59
V26A Tequesquite Ra 59.48 292 ⇓P **P 20 02 29.2 +0.5**
baz=59
S18A Hurst Farm, Bl 59.53 298 ⇑P **P 20 02 29.2 +0.1**
baz=59
CN2 Changchun 59.65 40 *e*P **P 20 02 30.3 +0.5**
CN2 *es*P sP 20 02 37.3 +3.0
CN2 *e*S **S 20 10 37.8 -1.9**
CN2 pmax pmax
comp=Z,30nm,0.7s,mb5.4
CN2 pmax pmax
comp=Z,200nm,4.0s
V25A Rancho No Teng 59.69 292 ⇑P **P 20 02 30.4 +0.2**
baz=59
MDJ Mudanjiang 59.69 37 P **P 20 02 30.0 -0.1**
MDJ pmax pmax
comp=Z,13nm,1.1s,mb4.9
MDJ pmax pmax
comp=Z,180nm,4.5s
W27A Bowe Ranch, En 59.94 291 ⇓P **P 20 02 32.3 +0.4**
baz=60
S16A Weppner Ranch, 59.95 299 ⇓P **P 20 02 32.6 +0.6**
baz=60
T18A Mexican Hat 60.01 297 ⇓P **P 20 02 32.3 -0.1**
baz=60,SNR=5.2
U21A Nageezi 60.03 295 ⇓P **P 20 02 32.6 +0.1**
baz=60
V22A San Miguel Ran 60.29 294 ⇓P **P 20 02 34.4 +0.1**
baz=60
R11A Troy Canyon, C 60.46 303 ⇓P **P 20 02 35.6 +0.1**
baz=60,SNR=5.1
X26A CR and CF Fran 60.64 291 ⇓P **P 20 02 37.0 +0.3**
baz=60
U18A Rough Rock, Ch 60.68 297 ⇓P **P 20 02 37.3 +0.3**
baz=60
T15A Red Dirt Ranch 60.83 299 ⇓P **P 20 02 37.9 -0.1**
baz=60
V20A Brimhall 60.85 296 ⇑P **P 20 02 38.5 +0.3**
baz=60
MSTX Muleshoe 60.87 290 ⇑P **P 20 02 38.9 +0.5**
baz=61
T14A Hurricane 60.98 300 ⇑P **P 20 02 39.2 +0.2**
baz=61
ANMO Albuquerque 61.06 293 LR LR 20 28 06.7
comp=Z,143nm,21.2s,MS4.1,baz=32,slow=35
Y27A Causey 61.07 290 ⇓P **P 20 02 39.7 0.0**
baz=61,SNR=5.3
NVAR Mina Array Bea 61.11 305 P **P 20 02 40.1 +0.2**
comp=Z,0.7nm,0.8s,mb3.8,baz=25,slow=6.3,SNR=6.4
NVAR Mina Array Bea 61.11 305 P **P 20 02 40.1 +0.2**
BJI Beijing 61.14 49 P **P 20 02 40.5 +0.4**
BJI S **S 20 10 58.8 -0.2**
BJI pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
Y26A Elida 61.23 291 ⇓P **P 20 02 40.8 0.0**
baz=61
T13A Saint George 61.25 301 ⇑P **P 20 02 41.0 +0.2**
baz=61
U16A Tuba City 61.29 298 ⇑P **P 20 02 40.8 -0.4**
baz=61
U15A North Rim 61.35 299 ⇑P **P 20 02 40.4 -1.2**
baz=61
Y25A Mesa, Roswell 61.49 292 ⇑P **P 20 02 42.2 -0.3**
baz=61
U14A Mt Trumbull 61.61 300 ⇓P **P 20 02 42.9 -0.4**
baz=61
Z27A Tatum 61.61 290 ⇑P **P 20 02 42.9 -0.4**
baz=61
LZH Lanzhou 61.63 61 *e*P **P 20 02 44.5 +1.1**
LZH pP pP 20 02 48.0 +1.4
LZH sP sP 20 02 50.5 +2.6
LZH pmax pmax
comp=Z,28nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,120nm,6.4s
Y24A Capitan 61.71 292 ⇓P **P 20 02 43.9 -0.1**
baz=61
U13A Pakoon Wash 61.83 301 ⇓P **P 20 02 45.5 +0.7**
baz=62,SNR=5.3
Z26A Caprock 61.88 291 ⇓P **P 20 02 45.1 -0.1**
baz=62
Y23A Lovelace Mesa, 61.89 293 ⇑P **P 20 02 45.1 -0.1**
baz=62
V15A Kaibab Nationa 61.89 299 ⇑P **P 20 02 44.9 -0.3**
baz=62
X21A Alamocita Cree 61.92 294 ⇓P **P 20 02 45.7 +0.3**
baz=62
X20A Quemado 62.03 295 ⇓P **P 20 02 46.3 +0.1**
baz=62
Z25A Roswell 62.10 291 ⇑P **P 20 02 46.4 -0.2**
baz=62
Y22A Socorro 62.15 294 ⇑P **P 20 02 46.8 -0.2**
baz=62
Y21A Point of Rocks 62.29 294 ⇓P **P 20 02 48.3 +0.4**
baz=62
V14A Boquillas Ranc 62.33 300 ⇑P **P 20 02 48.4 +0.2**
baz=62
V13A Grand Canyon W 62.36 300 ⇓P **P 20 02 48.7 +0.3**
baz=62
X19A St. Johns 62.37 296 ⇓P **P 20 02 48.0 -0.5**
baz=62
Z23A Rita Site, Whi 62.56 293 ⇑P **P 20 02 49.7 -0.1**

	baz=62						
125A	**Gardner Draw,**	**62.66**	**291**	⇑P	**P**	**20 02 50.3**	**0.0**
	baz=62						
W14A	**Seligman**	**62.71**	**299**	⇑P	**P**	**20 02 50.6**	**-0.1**
	baz=62						
Z22A	**Elephant Butte**	**62.79**	**293**	⇓P	**P**	**20 02 51.5**	**+0.3**
	baz=62						
Y19A	**Nutrioso**	**62.80**	**296**	⇓P	**P**	**20 02 51.5**	**+0.2**
	baz=62						
227A	**Bennet, Jal**	**62.85**	**290**	⇓P	**P**	**20 02 51.7**	**0.0**
	baz=63						
124A	**Stringfield Ra**	**62.86**	**292**	⇓P	**P**	**20 02 51.3**	**-0.4**
	baz=63						
YUK	**Yuzh-Kuril'sk**	**62.89**	**24**	⇑*iP*	**P**	**20 02 47.8**	**-4.0**
YUK				*e*S	**S**	**20 11 20.1**	**-0.8**
YUK				SS	SS	20 15 31.3	+6.3
YUK				smax			
	comp=N,632nm,1.8s						
YUK				smax			
	comp=E,442nm,1.8s						
Z21A	**St. Cloud Mine**	**62.95**	**294**	⇓P	**P**	**20 02 53.1**	**+0.8**
	baz=63,SNR=6.2						
226A	**Malaga, Loving**	**63.05**	**290**	⇓P	**P**	**20 02 53.1**	**+0.1**
	baz=63,SNR=6.7						
MPMC	**Manual Prospec**	**63.12**	**303**	⇑P	**P**	**20 02 53.8**	**+0.4**
	baz=63,SNR=5.5						
JCT	**Junction City**	**63.21**	**286**	⇑P	**P**	**20 02 53.1**	**-1.0**
	baz=63						
328A	**Wristen Ranch,**	**63.29**	**289**	⇑P	**P**	**20 02 53.7**	**-0.9**
	baz=63						
X14A	**Yava**	**63.36**	**299**	⇓P	**P**	**20 02 55.0**	**0.0**
	baz=63						
Z20A	**Nine Sixteen R**	**63.40**	**295**	⇓P	**P**	**20 02 54.9**	**-0.4**
	baz=63						
121A	**Cookes Peak, D**	**63.70**	**294**	⇓P	**P**	**20 02 57.0**	**-0.3**
	baz=63						
326A	**Caldwell Ranch**	**63.70**	**290**	⇓P	**P**	**20 02 57.5**	**+0.1**
	baz=63,SNR=7.5						
ISA	**Isabella**	**63.76**	**304**	⇑P	**P**	**20 02 57.5**	**-0.1**
	baz=63						
ISA	**Isabella**	**63.76**	**304**	*e*P	**P**	**20 02 57.8**	**+0.2**
	comp=E,5.1nm,1.0s,mb4.5						
ISA	**Isabella**	**63.76**	**304**	*e*P	**P**	**20 02 57.8**	**+0.1**
ISA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
ISA	**Isabella**	**63.76**	**304**	*e*P	**P**	**20 02 57.8**	**+0.1**
	comp=Z,5.0nm,1.0s,mb4.5						
LSA	**Lhasa**	**63.82**	**75**	P	**P**	**20 03 00.0**	**+1.9**
GMRC	**Granite Mounta**	**63.83**	**301**	⇑P	**P**	**20 02 58.1**	**0.0**
	baz=64						
428A	**Kincaid Ranch,**	**63.86**	**288**	⇓P	**P**	**20 02 58.2**	**-0.2**
	baz=64						
120A	**U Bar Ranch, L**	**63.94**	**294**	⇑P	**P**	**20 02 59.2**	**+0.3**
	baz=64						
427A	**Hayter Ranch,**	**63.97**	**289**	⇑P	**P**	**20 02 59.0**	**-0.1**
	baz=64,SNR=6.9						
324A	**Moseley Ranch,**	**64.04**	**291**	⇓P	**P**	**20 02 59.3**	**-0.2**
	baz=64						
426A	**McDonald Obser**	**64.33**	**290**	⇓P	**P**	**20 03 02.0**	**+0.5**
	baz=64,SNR=13						
528A	**Cox Ranch, San**	**64.42**	**288**	⇑P	**P**	**20 03 01.8**	**-0.3**
	baz=64						
425A	**Indio Mountain**	**64.50**	**291**	⇑P	**P**	**20 03 01.9**	**-0.7**
	baz=64,SNR=10						
220A	**Playas Peak, P**	**64.51**	**294**	⇑P	**P**	**20 03 03.1**	**+0.5**
	baz=64						
117A	**Oracle**	**64.53**	**296**	⇓P	**P**	**20 03 02.8**	**+0.1**
	baz=64,SNR=6.1						
219A	**White Tail Can**	**64.63**	**295**	⇓P	**P**	**20 03 03.9**	**+0.5**
	baz=64						
BELC	**Belle Mtn. Jos**	**64.66**	**301**	⇑P	**P**	**20 03 04.1**	**+0.5**
	baz=64						
DBIC	**Dimbokro**	**64.67**	**181**	P	**P**	**20 03 03.0**	**-0.8**
	comp=Z,3.0nm,0.7s,mb4.4,baz=312,slow=12,SNR=6.1						
DBIC				LR	LR	20 33 52.1	
	comp=Z,104nm,18.8s,MS4.0,baz=341,slow=38						
DBIC	**Dimbokro**	**64.67**	**181**	*e*P	**P**	**20 03 02.7**	**-1.1**
	comp=Z,26nm,1.5s,mb5.0						
DBIC	**Dimbokro**	**64.67**	**181**	P	**P**	**20 03 03.0**	**-0.8**
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC				MLR	MLR		
	comp=Z,104nm,18.8s						
DBIC	**Dimbokro**	**64.67**	**181**	P	**P**	**20 03 03.0**	**-0.8**
	comp=Z,104nm,18.8s						
527A	**Woodward Ranch**	**64.69**	**289**	⇑P	**P**	**20 03 03.5**	**-0.3**
	baz=64,SNR=6.2						
TIC	**Toumodi**	**64.69**	**181**	*e*P	**P**	**20 03 02.6**	**-1.4**
	comp=Z,5.0nm,0.2s,mb5.2						
TIC	**Toumodi**	**64.69**	**181**	*e*P	**P**	**20 03 02.6**	**-1.4**
TIC				pmax	pmax		
	comp=Z,5.0nm,0.2s,mb5.2						
TIC	**Toumodi**	**64.69**	**181**	*e*P	**P**	**20 03 02.6**	**-1.4**
	comp=Z,5.0nm,0.2s,mb5.2						
Z13A	**Yuma Proving G**	**64.76**	**299**	⇓P	**P**	**20 03 04.5**	**+0.2**
	baz=64						
BC3	**Big Chuckawall**	**64.83**	**301**	⇑P	**P**	**20 03 05.0**	**+0.3**
	baz=64						
BFSC	**Mount Baldy Ra**	**64.89**	**303**	⇑P	**P**	**20 03 05.3**	**+0.3**
	baz=65						
218A	**Dragoon**	**64.89**	**295**	⇓P	**P**	**20 03 05.4**	**+0.4**
	baz=65						
526A	**Mary Lane Ranc**	**64.91**	**289**	⇑P	**P**	**20 03 05.6**	**+0.3**
	baz=65						
KIC	**Kosan Boka**	**64.98**	**181**	*e*P	**P**	**20 03 04.9**	**-0.9**
	comp=Z,26nm,0.9s,mb5.2						
KIC	**Kosan Boka**	**64.98**	**181**	*e*P	**P**	**20 03 04.9**	**-0.9**
	comp=Z,26nm,0.9s,mb5.3						
320A	**Kipp Ranch, An**	**65.04**	**294**	⇑P	**P**	**20 03 06.6**	**+0.5**
	baz=65						
628A	**Black Gap, Mar**	**65.08**	**288**	⇑P	**P**	**20 03 06.0**	**-0.4**
	baz=65,SNR=6.3						
LIC	**Lamto**	**65.11**	**181**	*e*P	**P**	**20 03 05.6**	**-1.1**
	comp=Z,51nm,1.4s,mb5.4						
LIC	**Lamto**	**65.11**	**181**	⇑*iP*	**P**	**20 03 06.1**	**-0.6**
	comp=Z,28nm,1.0s,mb4.9						
LIC				*e*MLR	MLR		
	comp=Z,150nm,20.2s,MS3.9						
LIC	**Lamto**	**65.11**	**181**	⇑*iP*	**P**	**20 03 06.1**	**-0.6**
	comp=Z,14nm,1.0s,mb4.9						
LIC				LR	LR		
	comp=Z,80nm,20.3s,MS3.9						
LIC	**Lamto**	**65.11**	**181**	⇑*iP*	**P**	**20 03 06.1**	**-0.6**
	comp=Z,14nm,1.0s,mb4.9						
113A	**Mohawk Valley,**	**65.20**	**299**	⇑P	**P**	**20 03 07.4**	**+0.3**
	baz=65						
627A	**Terlingua Ranc**	**65.27**	**289**	⇓P	**P**	**20 03 06.9**	**-0.7**
	baz=65,SNR=5.5						
217A	**Green Valley**	**65.30**	**296**	⇓P	**P**	**20 03 08.1**	**+0.4**
	baz=65,SNR=8.1						
626A	**Big Bend Ranch**	**65.40**	**289**	⇑P	**P**	**20 03 08.1**	**-0.3**
	baz=65,SNR=8.9						
TXAR	**Lajitas Array**	**65.46**	**289**	P	**P**	**20 03 08.4**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.2,baz=47,slow=4.9,SNR=23						
TXAR				LR	LR	20 31 33.8	
	comp=Z,204nm,19.6s,MS4.3,baz=350,slow=36						
TXAR	**Lajitas Array**	**65.46**	**289**	P	**P**	**20 03 08.4**	**-0.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR				MLR	MLR		
	comp=Z,204nm,19.6s						
TXAR	**Lajitas Array**	**65.46**	**289**	P	**P**	**20 03 08.4**	**-0.5**
	comp=Z,204nm,19.6s						
KSRS	**Korea Array**	**66.26**	**40**	P	**P**	**20 03 13.2**	**-0.7**
	comp=Z,1.6nm,0.6s,mb4.2,baz=344,slow=5.9,SNR=8.8						
KSRS				LR	LR	20 32 14.6	
	comp=Z,85nm,18.6s,MS4.0,baz=193,slow=36						
KSRS	**Korea Array**	**66.26**	**40**	P	**P**	**20 03 13.2**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,85nm,18.6s,MS4.0						
KSRS	**Korea Array**	**66.26**	**40**	P	**P**	**20 03 13.2**	**-0.7**
	comp=Z,85nm,18.6s						
CD2	**Chengdu**	**66.46**	**63**	*e*P	**P**	**20 03 15.0**	**-0.2**
CD2				pP	pP	20 03 20.0	+1.5
CD2				sP	sP	20 03 23.0	+3.3
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
CD2				pmax	pmax		
	comp=Z,120nm,5.8s						
MAT	**Matsushiro**	**69.08**	**32**	P	**P**	**20 03 31.2**	**-0.5**
MJAR	**Matsushiro Arr**	**69.08**	**32**	P	**P**	**20 03 31.3**	**-0.4**
	comp=Z,6.2nm,1.0s,mb4.5,baz=340,slow=5.5,SNR=13						
MJAR				LR	LR	20 36 01.9	
	comp=Z,75nm,18.0s,MS4.0,baz=85,slow=38						
MJAR	**Matsushiro Arr**	**69.08**	**32**	P	**P**	**20 03 31.3**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR				MLR	MLR		
	comp=Z,75nm,18.0s						
MJAR	**Matsushiro Arr**	**69.08**	**32**	P	**P**	**20 03 31.3**	**-0.4**
	comp=Z,75nm,18.0s						
TEIG	**Tepich**	**69.13**	**271**	LR	LR	20 32 38.7	
	comp=Z,204nm,19.3s,MS4.4,baz=25,slow=35						
GYA	**Guiyang**	**71.48**	**62**	P	**P**	**20 03 46.8**	**+0.3**
GYA				PP	PP	20 06 26.8	+2.2
GYA				S	S	20 13 03.3	-1.5
GYA				SKS		20 13 45.5	
GYA				SS	SS	20 17 40.0	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,110nm,5.3s						
GYA				LR	LR		
	comp=N,450nm,19.2s,MS4.8						
GYA				LR	LR		
	comp=E,360nm,20.0s,MS4.8						
GYA				LR	LR		
	comp=Z,460nm,18.9s,MS4.8						
KMI	**Kunming**	**71.61**	**66**	P	**P**	**20 03 47.3**	**0.0**
KMI				pP	pP	20 03 51.5	+0.9
KMI				sP	sP	20 03 52.8	+1.0
KMI				PP	PP	20 06 29.3	+3.5
KMI				S	S	20 13 05.5	-0.8
KMI				SKS		20 13 46.5	
KMI				SS	SS	20 17 42.0	+1.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
KMI				pmax	pmax		
	comp=Z,200nm,3.9s						
KMI				LR	LR		
	comp=N,630nm,15.2s,MS5.2						
KMI				LR	LR		
	comp=E,670nm,14.0s,MS5.2						
KMI				LR	LR		
	comp=Z,310nm,13.2s,MS4.8						
APG	**El Apazote**	**74.72**	**271**	LR	LR	20 35 32.9	
	comp=Z,212nm,21.7s,MS4.4,baz=221,slow=35						
CMAR	**Chiang Mai Arr**	**76.75**	**72**	P	**P**	**20 04 17.8**	**+0.4**
	comp=Z,4.6nm,0.9s,mb4.4,baz=321,slow=6.7,SNR=28						
CMAR				LR	LR	20 44 23.0	
	comp=Z,85nm,18.1s,MS4.1,baz=347,slow=41						
CMAR	**Chiang Mai Arr**	**76.75**	**72**	P	**P**	**20 04 17.8**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,85nm,18.1s						
CMAR	**Chiang Mai Arr**	**76.75**	**72**	P	**P**	**20 04 17.8**	**+0.4**
	comp=Z,85nm,18.1s						
ROSC	**El Rosal**	**79.17**	**253**	LR	LR	20 33 48.7	
	comp=Z,67nm,21.6s,MS3.9,baz=186,slow=31						
OTAV	**Otavalo**	**84.80**	**255**	*e*P	**P**	**20 05 01.7**	**+1.3**
	comp=Z,14nm,1.4s,mb4.9						
OTAV	**Otavalo**	**84.80**	**255**	*e*P	**P**	**20 05 01.7**	**+1.3**
	comp=Z,14nm,1.4s,mb4.9						
BDFB	**Brasilia**	**91.78**	**222**	LR	LR	20 37 46.7	
	comp=Z,116nm,19.5s,MS4.3,baz=303,slow=30						
LPAZ	**La Paz**	**97.41**	**241**	LR	LR	20 44 36.1	
	comp=Z,62nm,20.5s,MS4.1,baz=125,slow=32						
WRA	**Warramunga Arr**	**123.17**	**48**	PKP	PKPdf	20 11 20.8	-1.6
	comp=Z,1.4nm,0.9s,baz=338,slow=2.4,SNR=10						
WRA	**Warramunga Arr**	**123.17**	**48**	PKIKP	PKPdf	20 11 20.8	-1.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**126.64**	**50**	PKP	PKPdf	20 11 27.2	-1.6
	comp=Z,1.4nm,0.8s,baz=350,slow=1.7,SNR=15						
ASAR	**Alice Springs**	**126.64**	**50**	PKIKP	PKPdf	20 11 27.3	-1.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**126.64**	**50**	PKIKP	PKPdf	20 11 27.2	-1.7
SNAA	**Sanae**	**142.85**	**179**	PKhKP	PKPpre	20 11 51.6	
	comp=Z,0.2nm,0.8s,baz=80,slow=2.9,SNR=5.1						
SNAA	**Sanae**	**142.85**	**179**	PKHKP	PKPpre	20 11 51.6	
MAW	**Mawson**	**145.78**	**141**	PKPbc	PKPbc	20 12 03.0	-0.4
	comp=Z,3.3nm,0.8s,baz=321,slow=4.8,SNR=4.9						

IDC 28 20:02:11.9±10.0, 13°.41N×120°.08E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.2/21, mbtmp3.5/3, Error ellipse: s-maj=215.6km s-min=13.2km az=125.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.08**	**50**	Pg	Pg	20 02 32.9	+0.3
	63nm,0.3s,baz=219,slow=6.3,SNR=5.4						
TGY				Lg		20 02 47.1	
	57nm,0.3s,baz=124,slow=22,SNR=3.5						
WRA	**Warramunga Arr**	**35.99**	**157**	P	P	20 09 14.4	-0.3
	0.5nm,1.0s,baz=332,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**39.25**	**160**	P	P	20 09 42.3	0.0
	0.3nm,0.6s,baz=344,slow=6.5,SNR=6.1						
STKA	**Stephens Creek**	**49.52**	**156**	P	P	20 11 04.8	+0.3
	1.1nm,0.6s,baz=306,slow=8.7,SNR=3.2						

*IDC **28** 20:04:51.9±0.9, 13°.26N×120°.51E, h0km, mb4.1/7, mb1 4.3/7, mb1mx3.9/22, mbtmp4.1/7, Error ellipse: s-maj=22.2km s-min=9.8km az=105.0*
*NEIC **28** 20:04:53.1±0.6, 13°.29N×120°.52E, h10km, mb4.7/2, Error ellipse: s-maj=16.7km s-min=10.0km az=84.0*
NEIC Felt [III PIVS] at Paluan.
*MAN **28** 20:04:54, 13°.35N×120°.43E, h71km, mb4.7, ML3.5, MS3.5*
MAN INTENSITY III - PALUAN OCCIDENTAL MINDORO.
*ISCJB **28** 20:04:55.8±2.5, 13°.20N±0°.10×120°.4E±0°.1, h43km±25km, mb4.3/9, Error ellipse: s-maj=21.1km s-min=13.8km az=144.3*

ISC 28 20:04:56.4±1.9, 13°.21N±0°.09×120°.37E±0°.08, h31km±14km, n16, σ0s77/17, mb4.3/9, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.64**	**62**	⇑*e*P	**Pb**	**20 05 09.1**	**0.0**
TGY	**Tagaytay City**	**1.05**	**32**	Pg	**Pn**	**20 05 09.8**	**-5.2**
	704nm,0.3s,baz=200,slow=2.6,SNR=26						
TGY				Lg		20 05 22.5	
	484nm,0.3s,baz=198,slow=20,SNR=21						
TGY	**Tagaytay City**	**1.05**	**32**	⇓*e*P	**Pn**	**20 05 10.3**	**-4.6**
GQP	**Guinayangan**	**2.13**	**71**	⇓*e*P	**Pn**	**20 05 25.4**	**-4.5**
GQP				*e*S	**Sn**	**20 05 55.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**21.26**	**287**	P	**P**	**20 09 40.4**	**0.0**
	1.6nm,0.9s,mb3.4,baz=97,slow=9.0,SNR=10						
WRA	**Warramunga Arr**	**35.69**	**157**	P	**P**	**20 11 51.7**	**-0.5**
	7.9nm,0.6s,mb4.8,baz=336,slow=9.8,SNR=112						
WRA	**Warramunga Arr**	**35.69**	**157**	P	**P**	**20 11 51.7**	**-0.5**
ULN	**Ulaanbaatar**	**36.30**	**345**	*e*P	**P**	**20 11 58.0**	**+1.0**
	17nm,0.8s,mb5.0						
SONM	**Songino Array**	**36.44**	**344**	P	**P**	**20 11 59.9**	**+1.6**
	1.7nm,0.8s,mb4.1,baz=157,slow=7.9,SNR=5.9						
ASAR	**Alice Springs**	**38.96**	**160**	P	**P**	**20 12 20.4**	**+0.5**
	7.8nm,0.5s,mb4.7,baz=338,slow=7.0,SNR=173						
NWAO	**Narrogin (SRO)**	**45.97**	**184**	P	**P**	**20 13 17.4**	**+0.7**
	4.4nm,0.9s,mb4.4,baz=358,slow=5.5,SNR=5.5						
MK31	**Makanchi Array**	**46.24**	**324**	*e*P	**P**	**20 13 18.0**	**-0.8**
MKAR	**Makanchi Array**	**46.24**	**324**	P	**P**	**20 13 18.4**	**-0.4**
	0.4nm,0.5s,mb3.6,baz=127,slow=7.7,SNR=7.3						
STKA	**Stephens Creek**	**49.23**	**156**	P	**P**	**20 13 41.8**	**-0.3**
	0.9nm,0.4s,mb4.1,baz=340,slow=19,SNR=3.8						
STKA	**Stephens Creek**	**49.23**	**156**	*e*P	**P**	**20 13 41.6**	**-0.5**
KURK	**Kurchatov**	**50.42**	**327**	*e*P	**P**	**20 13 49.6**	**-1.4**
	3.4nm,0.8s,mb4.4						

*IDC **28** 20:07:09.1±3.7, 43°.33N×104°.98W, h0km, mb3.9/4, mb1 3.9/6, mb1mx3.6/27, mbtmp3.8/6, ML2.8/2, Error ellipse: s-maj=138.3km s-min=14.8km az=142.0*
*ISCJB **28** 20:07:10.5±0.4, 43°.72N±0°.04×105°.25W±0°.05, h0km, mb4.1/4, Error ellipse: s-maj=5.2km s-min=5.1km az=135.5*
*NEIC **28** 20:07:12.0±0.3, 43°.74N×105°.21W, h0km, ML3.4, Error ellipse: s-maj=4.5km s-min=4.0km az=148.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 28 20:07:12.0±0.4, 43°.74N±0°.04×105°.21W±0°.05, h0km, n53, σ0s85/53, mb4.1/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.93**	**66**	*e*Pg	**Pg**	**20 07 31.2**	**+1.3**
PHWY	**Pilot Hill**	**2.45**	**184**	*e*Pn	**Pn**	**20 07 53.8**	**+0.6**
RWWY	**Rawlins**	**2.53**	**216**	*e*P	**Pn**	**20 07 54.5**	**+0.2**
LAO	**LASA Array**	**3.03**	**347**	*e*Pn	**Pn**	**20 08 01.5**	**+0.3**
RLMT	**Red Lodge**	**3.22**	**297**	*e*Pn	**Pn**	**20 08 03.3**	**-0.5**
BW06	**Boulder Array**	**3.32**	**254**	*e*Pn	**Pn**	**20 08 05.5**	**+0.3**
OGNE	**Ogallala**	**3.66**	**139**	Pn	**Pn**	**20 08 08.6**	**-1.3**
GCMT	**Greycliff**	**3.78**	**304**	*e*Pn	**Pn**	**20 08 12.0**	**+0.5**
LKWY	**Lake**	**3.82**	**284**	*e*P	**Pn**	**20 08 14.6**	**+2.5**
LOHW	**Long Hollow**	**3.92**	**270**	*e*Pn	**Pn**	**20 08 15.1**	**+1.8**
ISCO	**Idaho Springs**	**3.95**	**185**	*e*P	**Pn**	**20 08 14.5**	**+0.6**
FLWY	**Flagg Ranch**	**3.98**	**277**	*e*P	**Pn**	**20 08 14.2**	**-0.1**
MOOW	**Moose Ponds**	**4.01**	**272**	*e*P	**Pn**	**20 08 14.5**	**-0.2**
SNOW	**Snow King Moun**	**4.04**	**268**	*e*Pg	**Pg**	**20 08 28.6**	**-0.8**
YFT	**Old Faithful**	**4.11**	**282**	*e*P	**Pn**	**20 08 16.3**	**+0.2**
REDW	**Red Top Meadow**	**4.12**	**267**	*e*Pn	**Pn**	**20 08 16.3**	**+0.1**
IMW	**Indian Meadow**	**4.15**	**274**	*e*Pn	**Pn**	**20 08 18.0**	**+1.4**
TPAW	**Teton Pass**	**4.18**	**268**	*e*P	**Pn**	**20 08 17.5**	**+0.6**
DCID1	**Drake Creek**	**4.34**	**270**	*e*P	**Pn**	**20 08 19.9**	**+0.7**
RRI2	**Red Ridge**	**4.46**	**267**	*e*P	**Pn**	**20 08 20.6**	**-0.3**
QLMT	**Earthquake Lak**	**4.60**	**286**	*e*P	**Pn**	**20 08 22.1**	**-0.6**
DGMT	**Dagmar**	**4.78**	**8**	Pn	**Pn**	**20 08 26.1**	**+0.9**
BOZ	**Bozeman (W)**	**4.96**	**295**	*e*P	**Pn**	**20 08 27.1**	**-0.6**
HWUT	**Hardware Ranch**	**5.15**	**248**	*e*P	**Pn**	**20 08 29.8**	**-0.5**
	16nm,0.4s						
EGMT	**Eagleton**	**5.33**	**325**	*e*Pn	**Pn**	**20 08 33.0**	**+0.2**
DLMT	**Dillon**	**5.52**	**290**	P	**Pn**	**20 08 36.1**	**+0.7**
	9.1nm,0.9s						
LRM	**Limekiln Ridge**	**5.56**	**294**	*e*P	**Pn**	**20 08 36.3**	**+0.4**
	28nm,0.4s						
MCMT	**McKenzie Canyo**	**5.59**	**284**	*e*P	**Pn**	**20 08 35.6**	**-0.8**
	2.4nm,0.5s						
DAU	**Daniels Canyon**	**5.60**	**236**	*e*P	**Pn**	**20 08 36.8**	**+0.3**
	16nm,0.5s						
JLU	**Jordanelle**	**5.60**	**238**	P	**Pn**	**20 08 35.8**	**-0.7**
	9.5nm,0.5s						
SPUT	**South Promonto**	**5.88**	**248**	*e*P	**Pn**	**20 08 40.4**	**+0.1**
	6.3nm,0.3s						
HVU	**Hansel Valley**	**5.90**	**253**	*e*P	**Pn**	**20 08 37.9**	**-2.8**
	6.1nm,0.4s						
SDCO	**Great Sand Dun**	**6.00**	**182**	*e*P	**Pn**	**20 08 42.6**	**+0.6**
	3.3nm,0.8s						
PV04	**Paradox Valley**	**6.03**	**209**	*e*P	**Pn**	**20 08 42.8**	**+0.4**
SRU	**San Rafael**	**6.11**	**223**	*e*P	**Pn**	**20 08 42.8**	**-0.8**
	16nm,0.5s						
PV01	**Paradox Valley**	**6.15**	**206**	*e*P	**Pn**	**20 08 44.2**	**+0.1**
	405nm,0.4s						
ECSD	**EROS Data Cent**	**6.23**	**87**	*e*P	**Pn**	**20 08 46.5**	**+1.3**
	9.5nm,0.5s						
TMUT	**Trail Mountain**	**6.32**	**227**	*e*P	**Pn**	**20 08 46.1**	**-0.3**
	14nm,0.5s						
NLU	**North Lily Min**	**6.37**	**236**	*e*P	**Pn**	**20 08 46.8**	**-0.4**
	2.8nm,0.4s						
BGU	**Big Grassy Mou**	**6.44**	**247**	*e*P	**Pn**	**20 08 47.8**	**-0.4**
	3.0nm,0.4s						
CHMT	**Chamberlain Mo**	**6.49**	**302**	*e*P	**Pn**	**20 08 48.7**	**-0.1**
	3.2nm,0.5s						
HLID	**Hailey**	**6.68**	**272**	*e*P	**Pn**	**20 08 52.5**	**+1.1**
	2.4nm,0.4s						
DUG	**Dugway**	**6.68**	**241**	*e*P	**Pn**	**20 08 50.8**	**-0.6**
	6.1nm,0.4s						
SWMT	**Swartz Lake**	**7.22**	**304**	*e*P	**Pn**	**20 08 57.9**	**-0.8**
	2.3nm,0.4s						
MSU	**Marysvale**	**7.41**	**228**	*e*P	**Pn**	**20 09 01.8**	**+0.4**
	7.1nm,0.8s						
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn	**Pn**	**20 09 22.2**	**-2.4**
	1.0nm,0.3s,baz=222,slow=12,SNR=8.6						
ULM				Lg		20 11 57.5	
	0.2nm,0.3s,baz=331,slow=19,SNR=3.0						
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn	**Pn**	**20 09 22.2**	**-2.5**
ULM				Lg		20 11 57.5	
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**20 09 53.4**	**-0.1**
	0.2nm,0.3s,baz=54,slow=12,SNR=3.6						
ARCES	**ARCESS Array B**	**61.40**	**18**	P	**P**	**20 17 28.4**	**-1.0**
	1.4nm,0.5s,mb4.3,baz=331,slow=6.1,SNR=12						
AKASG	**Malin Array Be**	**77.93**	**28**	P	**P**	**20 19 10.3**	**-1.2**
	0.5nm,0.4s,mb4.0,baz=323,slow=4.9,SNR=4.0						
AKASG	**Malin Array Be**	**77.93**	**28**	P	**P**	**20 19 10.3**	**-1.2**
ZALV	**Zalesovo Beam**	**82.31**	**354**	P	**P**	**20 19 34.2**	**-0.9**
	0.6nm,0.4s,mb4.1,baz=25,slow=5.5,SNR=3.3						
SONM	**Songino Array**	**84.65**	**339**	P	**P**	**20 19 47.1**	**-0.2**
	0.3nm,0.4s,mb3.8,baz=6.3,slow=3.6,SNR=4.7						

*BYKL **28** 20:07:50.1±0.3, 54°.94N×113°.02E*

MOS 28 20:07:50.4±1.1, 54°.88N×113°.02E, h7km, mb4.4/1, 2C-2D, Error ellipse: s-maj=19.2km s-min=11.8km az=92.9, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UKT	**Uakit**	**0.70**	**29**	⇓*i*Pg	Pg	20 08 01.7	-2.2
UKT				*e*Sg	Sg	20 08 10.2	-2.8
UKT				Pmax			
	113nm,0.9s						
UKT				Smax			
	1μm,1.4s						
YLYR	**Ulyunkhan**	**1.07**	**271**	*e*PG	Pg	20 08 09.8	-1.2
YLYR				*

CIT smax
comp=E,1μm,1.1s
CIT Chita 2.88 173 *e*Pg Pg 20 08 41.5 -4.1
CIT *e*Sg Sg 20 09 21.1 -1.8
CIT Pmax
comp=E,47nm,0.2s
CIT Smax
comp=E,1μm,1.4s
BOD Bodaibo 3.00 10 *e*PN Pn 20 08 38.6 +0.4
BOD *e* 20 08 43.3
BOD *e*S Sn 20 09 12.5 -1.9
BOD *e* 20 09 20.0
BOD pmax pmax
comp=Z,23nm,0.7s
BOD smax
comp=E,517nm,1.5s
BOD Bodaibo 3.00 10 *e*Pn Pn 20 08 37.3 -0.9
BOD *e*Pg Pg 20 08 42.7 -5.1
BOD *e*Sg Sg 20 09 20.1 -6.5
BOD Pmax
comp=E,22nm,0.7s
BOD Smax
comp=E,516nm,1.7s
OGRR Ongureny 3.41 251 *e*PN Pn 20 08 44.4 +0.4
OGRR *e* 20 08 51.7
OGRR *e* 20 09 34.8
OGRR pmax pmax
comp=Z,32nm,1.8s
OGRR smax
comp=N,115nm,1.1s
OGRR Ongureny 3.41 251 *e*Pn Pn 20 08 43.9 -0.1
OGRR *e*Pg Pg 20 08 50.0 -5.8
OGRR *e* 20 08 53.6
OGRR *e*Sn Sn 20 09 27.6 +3.0
OGRR *e*Sg Sg 20 09 34.8 -5.2
OGRR max
comp=N,32nm,1.3s
OGRR Smax
comp=N,113nm,1.4s
CRS Chara 3.58 53 *e*PN Pn 20 08 45.5 -0.8
CRS *e* 20 08 52.9
CRS *e* 20 09 40.2
CRS pmax pmax
comp=Z,74nm,1.4s
CRS smax
comp=E,236nm,1.0s
CRS Chara 3.58 53 *e*Pn Pn 20 08 47.8 +1.5
CRS *e*Pg Pg 20 08 53.5 -5.5
CRS *i* Sg Sg 20 09 40.6 -4.7
CRS Pmax
comp=E,73nm,1.5s
CRS Smax
comp=E,234nm,1.4s
TUP Tupik 4.05 94 *e*PN Pg 20 09 02.4 -5.6
TUP *e* 20 09 54.8
TUP pmax pmax
comp=Z,14nm,0.2s
TUP smax
comp=N,416nm,0.6s
TUP Tupik 4.05 94 *e*Pn Pn 20 08 52.7 0.0
TUP *e*Pg Pg 20 09 01.4 -6.6
TUP *e*Sg Sg 20 09 55.6 -4.9
TUP *e* 20 10 11.4
TUP Pmax
comp=N,17nm,0.4s
TUP Smax
comp=N,412nm,0.6s
ZRHB Zarechye 4.19 239 *e*Pn Pn 20 08 54.9 +0.2
ZRHB *e* 20 09 04.0
ZRHB *e*Sg Sg 20 10 03.4 -1.5
ZRHB max
comp=N,77nm,0.7s
ZRHB Smax
comp=N,505nm,1.3s
UUDB Ulan-Yde 4.40 229 *e*Pg Pg 20 09 09.9 -4.8
UUDB *i* Sg Sg 20 10 08.3 -3.4
UUDB Pmax
comp=N,89nm,0.7s
UUDB Smax
comp=N,128nm,1.4s
KHNR Khani 4.42 60 *e*Pg Pg 20 09 07.2 -7.8
KHNR *e*Sg Sg 20 10 06.8 -5.4
TRG Tyrgan 4.49 244 *e*Pn Pn 20 08 59.1 +0.4
TRG *e*Pg Pg 20 09 10.2 -6.1
TRG *e*Sn Sn 20 09 52.9 +1.8
TRG *e*Sg Sg 20 10 08.7 -5.7
TRG Pmax
comp=N,6.0nm,0.9s
TRG Smax
comp=N,62nm,1.3s
HRMR Khuramsha 4.88 231 *e*Pn Pn 20 09 04.9 +0.7
HRMR *e*Pg Pg 20 09 17.6 -6.3
HRMR *e*Sg Sg 20 10 24.6 -2.5
HRMR Pmax
comp=N,56nm,0.8s
HRMR Smax
comp=N,487nm,1.2s
KPC Khapcheranga 5.20 185 *e*PN Pg 20 09 25.4 -4.5
KPC *e* 20 10 33.2
KPC pmax pmax
comp=Z,8.0nm,0.6s
KPC smax
comp=E,161nm,1.9s
KPC Khapcheranga 5.20 185 *e*Pn Pn 20 09 07.8 -0.7
KPC *e*Pg Pg 20 09 24.8 -5.1
KPC *e*Sg Sg 20 10 33.2 -4.0
KPC Pmax
comp=E,7.0nm,0.6s
KPC Smax
comp=E,160nm,1.4s
LSTR Listvyanka 5.75 242 *e*Sg Sg 20 10 45.8 -9.2
LSTR Smax
comp=E,87nm,1.9s
IRK Irkutsk 5.84 247 *e*Sg Sg 20 10 52.4 -5.5
IRK Smax
comp=E,131nm,1.1s
TLY Talaya 6.47 244 *e*Sg Sg 20 11 12.1 -5.9
TLY Smax
comp=E,50nm,1.7s
IENR Ienga 6.85 74 *e*Sg Sg 20 11 21.1 -9.0
ARS Arshan 7.00 249 *e*Sg Sg 20 11 25.4 -9.3
ARS Smax
comp=E,90nm,0.9s
ZAK Zakamensk 7.44 237 *e*Sg Sg 20 11 43.2 -5.9
ZAK Smax
comp=E,16nm,1.4s
MOY Mondy 7.89 251 *e*Sn Sb 20 11 32.5 -9.1
MOY *e*Sg Sg 20 11 55.1 -8.5
MOY Smax
comp=E,45nm,1.3s
ORL Orlik 8.18 259 *e* Pn 20 09 59.5 +10
ORL *e* 20 11 36.6
ORL *e*Sg Sg 20 12 01.3 -11
ORL Smax
comp=E,64nm,1.5s

IDC 28 20:16:15.2±3.1, 32°.70S×178°.33W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/16, mbtmp4.0/4, ML3.8/1, Error ellipse: s-maj=64.2km s-min=36.1km az=111.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.68**	**213**	Pn	Pn	20 17 54.5	-0.2
	1.8nm,0.3s,baz=262,slow=7.5,SNR=22						
URZ				Sn	Sn	20 19 09.8	-1.7
	6.3nm,0.3s,baz=123,slow=24,SNR=10						
CTA	**Charters Tower**	**33.96**	**283**	P	P	20 23 01.1	+0.7
	1.0nm,0.3s,baz=127,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**42.76**	**270**	P	P	20 24 14.4	-0.1
	0.4nm,0.5s,baz=109,slow=7.6,SNR=10.0						
WRA	**Warramunga Arr**	**43.95**	**275**	P	P	20 24 24.0	-0.2
	1.3nm,0.4s,baz=112,slow=8.0,SNR=48						
VNA3	**Neumayer Olymp**	**76.04**	**176**	*e*	P	20 28 11.4	+7.5
VNA2	**Neumayer--Watz**	**76.47**	**177**	*e*	P	20 28 14.0	+7.6
	baz=178,slow=6.5						
FINES	**FINESS Array B**	**147.18**	**339**	PKPbc	PKPbc	20 35 58.6	-0.9
	3.0nm,0.8s,baz=29,slow=4.4,SNR=4.4						

*IDC **28** 20:21:33.8±0.9, 13°.33N×120°.38E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/22, mbtmp3.9/7, Error ellipse: s-maj=18.8km s-min=10.5km az=114.0*

*NEIC **28** 20:21:36.0±3.3, 13°.40N×120°.50E, h16km±23km, Error ellipse: s-maj=30.8km s-min=12.2km az=58.0*
*ISCJB **28** 20:21:36.7±0.7, 13°.34N±0°.10×120°.31E±0°.07, h33km, mb3.9/7, Error ellipse: s-maj=13.7km s-min=9.6km az=171.5*
ISC 28 20:21:38.9±0.7, 13°.3N±0°.1×120°.36E±0°.07, h35km, n10, σ0s85/11, mb3.9/7, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.95**	**36**	Pg	**Pn**	**20 21 52.0**	**-3.7**
	394nm,0.3s,baz=186,slow=5.8,SNR=17						
TGY				Lg		20 22 05.0	
	406nm,0.3s,baz=217,slow=20,SNR=17						
TGY	**Tagaytay City**	**0.95**	**36**	‖*e*P	**Pn**	**20 21 52.3**	**-3.4**
GQP	**Guinayangan**	**2.10**	**74**	‖*e*P	**Pn**	**20 22 11.0**	**-0.6**
GQP				*e*S	**Sn**	**20 22 37.6**	**+0.9**
CMAR	**Chiang Mai Arr**	**21.21**	**287**	P	**P**	**20 26 22.6**	**+0.8**
	1.1nm,0.9s,mb3.2,baz=92,slow=8.3,SNR=6.6						
WRA	**Warramunga Arr**	**35.81**	**157**	P	**P**	**20 28 34.8**	**-0.4**
	4.4nm,0.6s,mb4.6,baz=335,slow=9.7,SNR=75						
SONM	**Songino Array**	**36.32**	**344**	P	**P**	**20 28 39.2**	**+0.1**
	0.8nm,0.7s,mb3.8,baz=165,slow=9.0,SNR=7.2						
ASAR	**Alice Springs**	**39.08**	**160**	P	**P**	**20 29 03.4**	**+0.6**
	4.2nm,0.5s,mb4.4,baz=339,slow=7.0,SNR=87						
MKAR	**Makanchi Array**	**46.13**	**324**	P	**P**	**20 29 58.7**	**-1.1**
	0.2nm,0.3s,mb3.5,baz=139,slow=9.4,SNR=3.4						
STKA	**Stephens Creek**	**49.34**	**156**	P	**P**	**20 30 24.3**	**-0.5**
	2.2nm,1.0s,mb4.2,baz=31,slow=5.9,SNR=2.4						
BVAR	**Borovoye Array**	**55.89**	**326**	P	**P**	**20 31 14.0**	**+0.9**
	0.5nm,0.5s,mb3.8,baz=44,slow=4.9,SNR=4.3						

*IDC **28** 20:27:50.0±0.8, 13°.33N×120°.30E, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.1/21, mbtmp4.2/10, MS3.1/1, Ms1 3.1/1, ms1mx2.7/30, Error ellipse: s-maj=18.3km s-min=11.4km az=121.0*
*BJI **28** 20:27:49.7, 13°.37N×121°.10E, h28km, mB5.2/2, mb4.9/4*
*NEIC **28** 20:27:51.6±0.5, 13°.38N×120°.47E, h10km, mb4.4/6, Error ellipse: s-maj=12.0km s-min=8.6km az=81.0*
NEIC Felt [III PIVS] at Paluan.
*MAN **28** 20:27:51, 13°.31N×120°.37E, h2km, mb5.3, ML4.3, MS4.5*
MAN INTENSITY III - PALUAN OCCIDENTAL MINDORO.
ISC 28 20:27:52.1±1.5, 13°.35N±0°.03×120°.30E±0°.04, h10km±10km, n40, σ1s08/42, mb4.3/17, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.97**	**39**	Pg	**Pg**	**20 28 09.0**	**-1.9**
	960nm,0.3s,baz=251,slow=3.2,SNR=40						
TGY				Lg		20 28 23.0	
	2μm,0.3s,baz=209,slow=19,SNR=13						
BUSP	**Coron**	**1.34**	**184**	*e*P	**Pn**	**20 28 16.9**	**0.0**
BUSP				*e*S	**Sb**	**20 28 35.0**	**+0.4**
BOAC	**Boac**	**1.50**	**86**	*e*P	**Pn**	**20 28 17.2**	**-1.9**
BOAC				*e*S	**Sn**	**20 28 41.0**	**+2.2**
OTRP	**Odiongan**	**1.94**	**120**	*e*P	**Pn**	**20 28 25.0**	**-0.1**
POLP	**Polilio Island**	**2.10**	**49**	*e*P	**Pn**	**20 28 26.8**	**-0.5**
GQP	**Guinayangan**	**2.16**	**75**	‖*e*P	**Pn**	**20 28 28.1**	**0.0**
GQP				*e*S	**Sn**	**20 28 53.2**	**-1.8**
ENPP	**El Nido**	**2.29**	**202**	*e*P	**Pn**	**20 28 30.1**	**+0.1**
AUQP	**San Andres**	**2.31**	**90**	*e*P	**Pn**	**20 28 32.2**	**+2.0**
SCZP	**Santa Cruz**	**2.44**	**351**	*e*P	**Pn**	**20 28 32.9**	**+0.8**
CUYO	**Cuyo Island**	**2.58**	**164**	*e*P	**Pn**	**20 28 33.2**	**-0.7**
BALP	**Baler**	**2.68**	**27**	*e*P	**Pn**	**20 28 36.8**	**+1.4**
GUIM	**Jordan**	**3.51**	**140**	*e*P	**Pn**	**20 28 47.3**	**+0.6**
CAUP	**Cauayan**	**3.87**	**22**	*e*P	**Pn**	**20 28 53.1**	**+1.5**
PALP	**Palanan**	**4.22**	**29**	*e*P	**Pn**	**20 28 55.8**	**-0.8**
ABRA	**Dolores**	**4.30**	**5**	*e*P	**Pn**	**20 28 59.6**	**+2.0**
APYP	**Conner**	**4.58**	**11**	*e*P	**Pn**	**20 29 05.0**	**+3.5**
MSLP	**Maasin**	**5.49**	**125**	*e*P	**Pn**	**20 29 15.7**	**+1.8**
DAV	**Davao City (W)**	**8.11**	**140**	LR	LR	20 33 49.8	
	comp=Z,134nm,19.1s,baz=22,slow=44						
CMAR	**Chiang Mai Arr**	**21.16**	**287**	P	**P**	**20 32 41.0**	**+3.4**
	7.4nm,0.9s,mb4.0,baz=99,slow=8.9,SNR=33						
FITZ	**Fitzroy Crossi**	**31.69**	**170**	*e*P	**P**	**20 34 16.1**	**+0.1**
WRA	**Warramunga Arr**	**35.85**	**157**	P	**P**	**20 34 51.1**	**-1.1**
	7.7nm,0.8s,mb4.7,baz=336,slow=9.7,SNR=41						
ULN	**Ulaanbaatar**	**36.14**	**345**	*e*P	**P**	**20 34 54.1**	**-0.4**
	2.4nm,0.6s,mb4.3						
SONM	**Songino Array**	**36.29**	**344**	P	**P**	**20 34 54.9**	**-0.8**
	4.5nm,0.7s,mb4.5,baz=163,slow=9.9,SNR=25						
ASAR	**Alice Springs**	**39.12**	**160**	P	**P**	**20 35 19.4**	**-0.4**
	8.1nm,0.7s,mb4.6,baz=337,slow=6.4,SNR=102						
MK31	**Makanchi Array**	**46.09**	**324**	*e*P	**P**	**20 36 16.7**	**+0.4**
MKAR	**Makanchi Array**	**46.09**	**324**	P	**P**	**20 36 17.0**	**+0.7**
	0.8nm,0.6s,mb3.9,baz=115,slow=10,SNR=16						
MKAR				PcP	PcP	20 37 52.9	+0.4
	0.3nm,0.6s,baz=146,slow=2.8,SNR=2.5						
ZAA0	**Zalesovo Array**	**49.19**	**333**	*e*P	**P**	**20 36 39.4**	**-0.9**
ZALV	**Zalesovo Beam**	**49.19**	**333**	P	**P**	**20 36 39.5**	**-0.8**
	1.4nm,0.3s,mb4.4,baz=125,slow=6.5,SNR=7.3						
AML	**Almayashu**	**49.41**	**315**	*e*P	**P**	**20 36 43.4**	**+1.2**
	3.8nm,0.9s,mb4.4						
KURK	**Kurchatov**	**50.27**	**327**	*e*P	**P**	**20 36 48.7**	**+0.1**
	21nm,1.0s,mb5.1						
KKAR	**Karatay Array**	**51.95**	**315**	*e*P	**P**	**20 37 01.4**	**+0.1**
	1.1nm,0.5s,mb4.0						
BVAR	**Borovoye Array**	**55.85**	**326**	P	**P**	**20 37 29.6**	**-0.1**
	2.8nm,0.7s,mb4.4,baz=116,slow=6.8,SNR=14						
BRVK	**Borovoye**	**55.92**	**326**	*e*P	**P**	**20 37 30.3**	**+0.1**
	12nm,1.0s,mb4.9						
ABKAR	**Akbulak array**	**60.75**	**319**	*e*P	**P**	**20 38 03.4**	**-0.6**
	1.9nm,0.6s,mb4.4						
ILAR	**Eielson Array**	**79.23**	**26**	P	**P**	**20 39 57.2**	**0.0**
	0.4nm,1.0s,mb3.3,baz=300,slow=4.1,SNR=4.1						
ARCES	**ARCESS Array B**	**79.28**	**339**	P	**P**	**20 39 56.2**	**-1.2**
	2.3nm,0.7s,mb4.2,baz=65,slow=5.8,SNR=6.4						
ARCES	**ARCESS Array B**	**79.28**	**339**	P	**P**	**20 39 56.2**	**-1.3**
FINES	**FINESS Array B**	**80.41**	**331**	P	**P**	**20 40 02.4**	**-1.3**
	2.0nm,0.8s,mb4.1,baz=90,slow=4.2,SNR=3.8						
FINES	**FINESS Array B**	**80.41**	**331**	P	**P**	**20 40 02.4**	**-1.3**
GERES	**GERESS Array B**	**90.66**	**321**	P	**P**	**20 40 54.1**	**-1.0**
	0.4nm,0.7s,mb3.8,baz=50,slow=2.1,SNR=3.8						

*ISCJB **28** 20:52:41.8±0.5, 30°.54N±0°.07×83°.46E±0°.05, h10km, mb3.6/8, Error ellipse: s-maj=9.8km s-min=5.9km az=175.0*
*IDC **28** 20:52:41.5±1.4, 30°.50N×83°.64E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/25, mbtmp3.6/7, ML3.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/36, Error ellipse: s-maj=52.4km s-min=21.4km az=68.0*
*NEIC **28** 20:52:42.8±0.9, 30°.52N×83°.36E, h10km, mb3.7/3, Error ellipse: s-maj=20.7km s-min=11.4km az=48.0*
ISC 28 20:52:43.3±0.6, 30°.57N±0°.07×83°.39E±0°.06, h10km, n19, σ1s32/20, mb3.6/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**2.93**	**251**	*e*PKP	**Pg**	**20 53 40.9**	**+1.4**
PTH				*e*S	**Sg**	**20 54 23.1**	**+5.7**
LSA	**Lhasa**	**6.78**	**95**	P	**Pn**	**20 54 24.5**	**+1.6**
LSA				S	**Sn**	**20 55 41.5**	**+1.3**
LSA				LR	LR		
	comp=N,250nm,11.9s						
LSA				LR	LR		
	comp=E,270nm,3.9s						
LSA				LR	LR		
	comp=Z,260nm,4.4s						
LSA	**Lhasa**	**6.78**	**95**	*e*P	**Pn**	**20 54 24.5**	**+1.6**
	comp=Z,8.7nm,0.8s						
KBL	**Kabul**	**12.73**	**292**	*e*P	**Pn**	**20 55 43.8**	**-0.6**
MK31	**Makanchi Array**	**16.22**	**357**	*e*P	**Pn**	**20 56 33.6**	**+2.4**
MKAR	**Makanchi Array**	**16.22**	**357**	Pn	**Pn**	**20 56 32.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=177,slow=12,SNR=9.2						
CMAR	**Chiang Mai Arr**	**18.57**	**127**	P	**Pn**	**20 57 01.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=309,slow=10,SNR=9.0						
KURK	**Kurchatov**	**20.44**	**351**	*e*P	**P**	**20 57 17.9**	**-2.8**
	comp=Z,4.5nm,1.1s						
ZALV	**Zalesovo Beam**	**23.39**	**2**	P	**P**	**20 57 51.4**	**-0.8**
	comp=Z,0.3nm,0.3s,mb3.3,baz=178,slow=8.2,SNR=4.3						
BRVK	**Borovoye**	**24.43**	**341**	*e*P	**P**	**20 58 03.0**	**+1.1**
	comp=Z,1.3nm,0.6s,mb3.5						
SONM	**Songino Array**	**24.66**	**39**	P	**P**	**20 58 02.8**	**-1.3**
	comp=Z,0.5nm,0.7s,mb3.1,baz=225,slow=9.8,SNR=3.4						
ULN	**Ulaanbaatar**	**25.04**	**40**	*e*P	**P**	**20 58 05.9**	**-1.6**
	comp=Z,2.1nm,1.1s,mb3.6						
KSRS	**Korea Array**	**37.28**	**67**	LR	LR	21 15 27.7	
	comp=Z,27nm,18.0s,baz=185,slow=37						
FINES	**FINESS Array B**	**48.12**	**327**	P	**P**	**21 01 23.7**	**+0.7**
	comp=Z,12nm,1.2s,mb4.8,baz=139,slow=22,SNR=3.0						
WRA	**Warramunga Arr**	**70.15**	**129**	P	**P**	**21 03 55.0**	**-1.3**
	comp=Z,1.2nm,0.8s,mb3.9,baz=323,slow=6.5,SNR=14						
WB2	**Warramunga Arr**	**70.16**	**129**	*e*P	**P**	**21 03 55.0**	**-1.3**
ASAR	**Alice Springs**	**72.49**	**132**	P	**P**	**21 04 08.9**	**-1.5**
	comp=Z,0.4nm,0.8s,mb3.4,baz=321,slow=5.5,SNR=3.5						
ASAR	**Alice Springs**	**72.49**	**132**	P	**P**	**21 04 08.9**	**-1.5**
ILAR	**Eielson Array**	**77.24**	**20**	P	**P**	**21 04 38.1**	**+0.8**
	comp=Z,0.5nm,0.9s,mb3.4,baz=284,slow=4.5,SNR=3.4						

*ISCJB **28** 21:16:30.9±0.9, 36°.44N±0°.04×29°.09E±0°.04, h12km±5km, Error ellipse: s-maj=7.7km s-min=5.6km az=24.9*
*DDA **28** 21:16:30.9, 36°.49N×29°.10E, h10km±2km, Md3.0*
*ISK **28** 21:16:30.4, 36°.43N×29°.10E, h13km, MD3.0*
*CSEM **28** 21:16:31.3±0.2, 36°.47N×29°.10E, h15km, MD3.0, Error ellipse: s-maj=4.5km s-min=3.1km az=16.0*
ISC 28 21:16:31.7±0.7, 36°.46N±0°.04×29°.10E±0°.05, h17km±4km, n32, σ0s75/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.17**	**356**	PG	**Pg**	**21 16 35.3**	**-0.7**
FETY				*e*SG	**Sg**	**21 16 39.4**	**+0.4**
FETY	**Fethiye**	**0.17**	**356**	*i* Pg	**Pg**	**21 16 35.3**	**-0.7**
FETY				*e*Sg	**Sg**	**21 16 39.4**	**+0.4**
AKAS	**Kas**	**0.47**	**119**	*i* P	**Pg**	**21 16 40.4**	**-0.7**
AKAS				*i* S	**Sg**	**21 16 47.8**	**+0.4**
AKAS	**Kas**	**0.47**	**119**	*i* P	**Pg**	**21 16 40.4**	**-0.7**
AKAS				*i* S	**Sg**	**21 16 47.8**	**+0.4**
TURN	**Turunc**	**0.57**	**316**	*i* P	**Pg**	**21 16 45.8**	**+2.8**
TURN				*i* S	**Sg**	**21 16 55.9**	**+5.2**
TURN	**Turunc**	**0.57**	**316**	*i* P	**Pg**	**21 16 45.8**	**+2.8**
ELL	**Elmali**	**0.71**	**66**	*e*PG	**Pg**	**21 16 44.6**	**-1.0**
ELL				*e*SG	**Sg**	**21 16 56.3**	**+1.3**
ELL	**Elmali**	**0.71**	**66**	*e*Pg	**Pg**	**21 16 44.6**	**-1.0**
ELL				*e*Sg	**Sg**	**21 16 56.3**	**+1.3**
GLHS	**Glhisar (BURDU**	**0.76**	**25**	*e*PG	**Pg**	**21 16 45.6**	**-1.0**
GLHS				*e*SG	**Sg**	**21 16 56.9**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.76**	**25**	*e*Pg	**Pg**	**21 16 45.6**	**-1.0**
GLHS				*e*Sg	**Sg**	**21 16 56.9**	**+0.2**
GOLH	**Golhisar**	**0.86**	**26**	*i* P	**Pb**	**21 16 47.1**	**-1.0**
GOLH				*i* S	**Sb**	**21 16 58.9**	**-0.4**
GOLH	**Golhisar**	**0.86**	**26**	*i* P	**Pb**	**21 16 47.1**	**-1.0**
GOLH				*i* S	**Sb**	**21 16 58.9**	**-0.4**
YER	**Yerkesik**	**0.94**	**316**	*e*PG	**Pg**	**21 16 49.3**	**-0.5**
YER	**Yerkesik**	**0.94**	**316**	*e*Pg	**Pg**	**21 16 49.3**	**-0.5**
DNZL	**Cakiroluk**	**1.23**	**358**	*i* P	**Pn**	**21 16 53.9**	**-0.2**
DNZL				*i* S	**Sb**	**21 17 10.4**	**+0.5**
DNZL	**Cakiroluk**	**1.23**	**358**	*i* P	**Pn**	**21 16 53.8**	**-0.2**
DNZL				*i* S	**Sb**	**21 17 10.4**	**+0.5**
DAT	**Datca**	**1.25**	**283**	*e*PN	**Pn**	**21 16 54.9**	**+0.5**
DAT	**Datca**	**1.25**	**283**	*e*Pn	**Pn**	**21 16 54.9**	**+0.5**
DENT	**Denizli**	**1.29**	**358**	*e*PN	**Pn**	**21 16 54.9**	**0.0**
DENT	**Denizli**	**1.29**	**358**	*e*Pn	**Pn**	**21 16 54.9**	**0.0**
ANTB	**Antalya**	**1.32**	**70**	*e*PN	**Pn**	**21 16 55.1**	**-0.3**
ANTB	**Antalya**	**1.32**	**70**	*e*Pn	**Pn**	**21 16 55.1**	**-0.3**
MLSB	**Milas**	**1.35**	**308**	*e*PN	**Pn**	**21 16 55.6**	**-0.1**
MLSB	**Milas**	**1.35**	**308**	*e*Pn	**Pn**	**21 16 55.6**	**-0.1**
BCK	**Bucak**	**1.56**	**50**	*e*PN	**Pn**	**21 16 58.8**	**+0.2**
BCK	**Bucak**	**1.56**	**50**	*e*Pn	**Pn**	**21 16 58.8**	**+0.2**
BODT	**Bodrum**	**1.56**	**293**	*e*PN	**Pn**	**21 16 58.3**	**-0.2**
BODT	**Bodrum**	**1.56**	**293**	*e*Pn	**Pn**	**21 16 58.3**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.83**	**56**	*e*PN	**Pn**	**21 17 02.4**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.83**	**56**	*e*Pn	**Pn**	**21 17 02.4**	**+0.1**
HDMB	**Hadim**	**2.77**	**79**	*e*PN	**Pn**	**21 17 16.2**	**+1.0**
HDMB	**Hadim**	**2.77**	**79**	*e*Pn	**Pn**	**21 17 16.3**	**+1.1**

*IDC **28** 21:43:45.9±0.7, 36°.86N×22°.97E, h0km, mb4.1/12, mb1 4.0/17, mb1mx3.9/29, mbtmp3.9/17, ML3.2/5, Error ellipse: s-maj=16.1km s-min=14.4km az=127.0*
*ISCJB **28** 21:43:47.7±0.4, 36°.73N±0°.02×22°.75E±0°.02, h13km±2km, mb4.1/17, Error ellipse: s-maj=2.9km s-min=2.3km az=27.9*
*ATH **28** 21:43:47.6, 36°.79N×22°.79E, h18km, MD3.6/13, ML3.7*
*NEIC **28** 21:43:47.6, 36°.79N×22°.79E, h18km, mb3.9/12, ML4.0(ATH), After ATH.*
*THE **28** 21:43:48.6, 36°.80N×22°.84E, h2km±1km, ML3.7/8, Error ellipse: s-maj=2.0km s-min=0.9km az=240.0*
*CSEM **28** 21:43:49.2±0.1, 36°.76N×22°.81E, h15km, mb4.7/5, Ms2.8, Error ellipse: s-maj=4.0km s-min=2.8km az=42.0*
*HLW **28** 21:43:55.2, 36°.50N×23°.61E, h14km±31km, Md3.8, Ml3.7*
ISC 28 21:43:48.7±0.4, 36°.77N±0°.02×22°.80E±0°.02, h9km±3km, n330, σ1s22/386, mb4.1/17, 4C-4D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.12**	**115**	P	**Pg**	**21 43 51.6**	**+0.2**
VLI	**Veliai**	**0.12**	**115**	*e*PB	**Pg**	**21 43 52.2**	**+0.8**
VLI				*e*SB	**Sg**	**21 43 54.9**	**+1.6**
VLI	**Veliai**	**0.12**	**115**	P	**Pg**	**21 43 52.2**	**+0.8**
VLI	**Veliai**	**0.12**	**115**	P	**Pg**	**21 43 52.2**	**+0.8**
VLI				*e*Sb	**Sg**	**21 43 54.9**	**+1.6**
KYTH	**Kithira**	**0.52**	**159**	P	**Pg**	**21 43 59.3**	**+0.5**
KYTH	**Kithira**	**0.52**	**159**	P	**Pg**	**21 43 59.3**	**+0.5**
VLX	**Vlachokerasia**	**0.69**	**331**	*e*PN	**Pg**	**21 44 00.8**	**-1.2**
VLX				*e*SN	**Sg**	**21 44 09.2**	**-1.8**
VLX	**Vlachokerasia**	**0.69**	**331**	P	**Pg**	**21 44 00.8**	**-1.2**
VLX				S	**Sg**	**21 44 09.5**	**-1.5**
VLX	**Vlachokerasia**	**0.69**	**331**	*e*Pn	**Pg**	**21 44 00.8**	**-1.2**
DID	**Didima**	**0.81**	**25**	*e*PN	**Pg**	**21 44 03.5**	**-0.9**
DID				*e*SN	**Sg**	**21 44 14.6**	**-0.4**
DID	**Didima**	**0.81**	**25**	P	**Pg**	**21 44 03.6**	**-0.8**
DID				S	**Sg**	**21 44 15.9**	**+0.9**
DID	**Didima**	**0.81**	**25**	P	**Pg**	**21 44 03.6**	**-0.8**
DID				*e*Sn	**Sg**	**21 44 14.6**	**-0.4**
DID				S	**Sg**	**21 44 15.9**	**+0.9**
ITM	**Ithomi**	**0.81**	**301**	P	**Pg**	**21 44 02.5**	**-1.8**
ITM	**Ithomi**	**0.81**	**301**	*e*PN	**Pg**	**21 44 02.9**	**-1.4**
ITM	**Ithomi**	**0.81**	**301**	P	**Pg**	**21 44 02.9**	**-1.4**
ITM	**Ithomi**	**0.81**	**301**	P	**Pg**	**21 44 02.9**	**-1.4**
PYL	**PYLOS**	**0.86**	**279**	*e*PN	**Pg**	**21 44 03.7**	**-1.5**
PYL				*e*SN	**Sg**	**21 44 15.6**	**-0.8**
PYL	**PYLOS**	**0.86**	**279**	P	**Pg**	**21 44 03.5**	**-1.7**
PYL	**PYLOS**	**0.86**	**279**	*e*Pn	**Pg**	**21 44 03.7**	**-1.5**
PYL				*e*Sn	**Sg**	**21 44 15.6**	**-0.8**
GUR	**Goura**	**1.22**	**343**	*e*PN	**Pn**	**21 44 10.4**	**-1.6**
GUR				*e*SN	**Sn**	**21 44 26.5**	**-2.1**
GUR	**Goura**	**1.22**	**343**	P	**Pn**	**21 44 10.0**	**-2.0**
GUR				S	**Sb**	**21 44 27.4**	**-0.5**
GUR	**Goura**	**1.22**	**343**	P	**Pn**	**21 44 10.0**	**-2.0**
GUR	**Goura**	**1.22**	**343**	*e*Pn	**Pn**	**21 44 10.4**	**-1.6**
GUR				*e*Sn	**Sn**	**21 44 26.5**	**-2.1**
GUR				S	**Sb**	**21 44 27.4**	**-0.5**
LTK	**Loutraki**	**1.26**	**6**	*e*PN	**Pn**	**21 44 11.7**	**-0.8**
LTK				*e*SN	**Sn**	**21 44 28.6**	**-0.9**
LTK	**Loutraki**	**1.26**	**6**	P	**Pn**	**21 44 11.7**	**-0.8**
LTK				S	**Sb**	**21 44 29.0**	**+0.1**
LTK	**Loutraki**	**1.26**	**6**	P	**Pn**	**21 44 11.7**	**-0.8**
LTK				*e*Sn	**Sn**	**21 44 28.6**	**-0.9**
LTK				S	**

KARN	Karanos	1.64	146	P	Pn	21 44 17.5	-0.2
DSF	Desfina	1.65	352	P	Pn	21 44 17.1	-0.8
DSF				S	Sn	21 44 40.4	+1.1
DSF	Desfina	1.65	352	P	Pn	21 44 17.1	-0.8
DSF				S	Sn	21 44 40.4	+1.1
RLS	Riolos of Patr	1.67	321	P	Pn	21 44 18.0	-0.1
RLS	Riolos of Patr	1.67	321	*e*PN	Pn	21 44 18.3	+0.2
RLS	Riolos of Patr	1.67	321	P	Pn	21 44 18.3	+0.2
RLS				S	Sn	21 44 41.1	+1.4
RLS	Riolos of Patr	1.67	321	P	Pn	21 44 18.0	-0.1
RLS	Riolos of Patr	1.67	321	*e*Pn	Pn	21 44 18.3	+0.2
RLS				S	Sn	21 44 41.1	+1.4
KALE	Kalithea	1.70	342	P	Pn	21 44 19.7	+1.1
KALE	Kalithea	1.70	342	P	Pn	21 44 19.7	+1.1
UPR	University Cam	1.71	332	*e*PN	Pn	21 44 19.0	+0.3
UPR				*e*SN	Sn	21 44 41.1	+0.3
UPR	University Cam	1.71	332	P	Pn	21 44 19.3	+0.6
UPR	University Cam	1.71	332	*e*Pn	Pn	21 44 19.0	+0.3
UPR	University Cam	1.71	332	P	Pn	21 44 19.3	+0.6
UPR				*e*Sn	Sn	21 44 41.1	+0.3
EFP	Efpalio	1.80	337	*e*PN	Pn	21 44 20.5	+0.6
EFP	Efpalio	1.80	337	P	Pn	21 44 20.1	+0.2
EFP				S	Sn	21 44 43.8	+0.9
EFP	Efpalio	1.80	337	P	Pn	21 44 20.1	+0.2
EFP	Efpalio	1.80	337	*e*Pn	Pn	21 44 20.5	+0.6
EFP				S	Sn	21 44 43.8	+0.9
LKR	Lokris	1.88	5	P	Pn	21 44 20.5	-0.6
LKR	Lokris	1.88	5	*e*PB	Pn	21 44 20.2	-0.9
LKR	Lokris	1.88	5	P	Pn	21 44 20.2	-0.9
LKR	Lokris	1.88	5	*e*Pb	Pn	21 44 20.2	-0.9
LKR	Lokris	1.88	5	P	Pn	21 44 20.5	-0.6
ATAL	Atalanti	1.93	5	P	Pn	21 44 20.8	-0.9
ATAL				S	Sn	21 44 46.6	+0.5
ATAL	Atalanti	1.93	5	P	Pn	21 44 20.8	-0.9
ATAL				S	Sn	21 44 46.6	+0.5
THR5	Thira Island,	2.08	99	P	Pn	21 44 23.6	-0.1
THR5	Thira Island,	2.08	99	P	Pn	21 44 23.6	-0.1
KFL	Anninata	2.09	310	P	Pn	21 44 23.3	-0.6
KFL	Anninata	2.09	310	P	Pn	21 44 23.3	-0.6
THR3	Thira Island,	2.12	99	P	Pn	21 44 24.4	+0.1
THR3	Thira Island,	2.12	99	P	Pn	21 44 24.4	+0.1
THR1	Thera Island	2.17	100	P	Pn	21 44 24.8	-0.3
THR1	Thera Island	2.17	100	P	Pn	21 44 24.8	-0.3
APE	Apeiranthos	2.21	81	P	Pn	21 44 24.5	-1.0
APE	Apeiranthos	2.21	81	*e*PB	Pn	21 44 24.9	-0.6
APE	Apeiranthos	2.21	81	P	Pn	21 44 24.9	-0.6
APE				S	Sn	21 44 52.3	-0.6
APE	Apeiranthos	2.21	81	*e*Pb	Pn	21 44 24.9	-0.6
APE				S	Sn	21 44 52.3	-0.6
VLS	Valsamata	2.25	309	*e*PN	Pn	21 44 27.0	+0.8
VLS	Valsamata	2.25	309	P	Pn	21 44 27.0	+0.8
VLS	Valsamata	2.25	309	P	Pn	21 44 27.0	+0.8
AGG	Agios Georgios	2.28	351	P	Pn	21 44 26.4	-0.1
AGG	Agios Georgios	2.28	351	*e*PN	Pn	21 44 26.3	-0.2
AGG	Agios Georgios	2.28	351	P	Pn	21 44 26.5	0.0
AGG				S	Sn	21 44 55.9	+1.2
AGG	Agios Georgios	2.28	351	P	Pn	21 44 26.4	-0.1
AGG				S	Sn	21 44 55.9	+1.2
EVR	Evrytania	2.28	340	P	Pn	21 44 27.7	+1.1
EVR	Evrytania	2.28	340	*e*PN	Pn	21 44 27.5	+0.9
EVR	Evrytania	2.28	340	P	Pn	21 44 27.5	+0.9
EVR	Evrytania	2.28	340	P	Pn	21 44 27.5	+0.9
SIVA	Sivas	2.39	136	P	Pn	21 44 27.5	-0.5
SIVA	Sivas	2.39	136	P	Pn	21 44 27.5	-0.5
NEO	Neokhori	2.56	7	P	Pn	21 44 29.8	-0.5
NEO	Neokhori	2.56	7	*e*PN	Pn	21 44 29.8	-0.5
NEO	Neokhori	2.56	7	*e*Pn	Pn	21 44 29.8	-0.5
LKD2	Lefkada island	2.64	321	P	Pn	21 44 32.7	+1.3
LKD2	Lefkada island	2.64	321	P	Pn	21 44 32.7	+1.3
LAST	Lasithi	2.70	126	*e*PN	Pn	21 44 32.6	+0.3
LAST	Lasithi	2.70	126	P	Pn	21 44 32.4	+0.1
LAST				S	Sn	21 45 05.0	-0.1
LAST	Lasithi	2.70	126	P	Pn	21 44 32.4	+0.1
LAST				S	Sn	21 45 05.0	-0.1
NPS	Neapolis	2.73	123	P	Pn	21 44 32.8	+0.1
NPS	Neapolis	2.73	123	*e*PN	Pn	21 44 33.0	+0.3
NPS	Neapolis	2.73	123	P	Pn	21 44 32.2	-0.5
NPS	Neapolis	2.73	123	P	Pn	21 44 32.8	+0.1
THL	Klokotos Trika	2.86	348	*e*PN	Pn	21 44 34.4	-0.1
THL	Klokotos Trika	2.86	348	P	Pn	21 44 33.8	-0.7
THL	Klokotos Trika	2.86	348	P	Pn	21 44 33.8	-0.7
THL	Klokotos Trika	2.86	348	*e*Pn	Pn	21 44 34.4	-0.1
CHOS	Chios island	3.05	57	*e*PN	Pn	21 44 36.5	-0.6
CHOS	Chios island	3.05	57	P	Pn	21 44 36.5	-0.6
CHOS	Chios island	3.05	57	P	Pn	21 44 36.5	-0.6
ZKR	Zakros	3.23	120	*e*PN	Pn	21 44 40.3	+0.8
ZKR	Zakros	3.23	120	P	Pn	21 44 40.0	+0.5
ZKR	Zakros	3.23	120	P	Pn	21 44 40.0	+0.5
ZKR	Zakros	3.23	120	*e*Pn	Pn	21 44 40.3	+0.8
PAIG	Paliouri	3.23	12	P	Pn	21 44 40.2	+0.7
PAIG	Paliouri	3.23	12	P	Pn	21 44 40.2	+0.7
LIT	Litokhoron	3.33	356	P	Pn	21 44 41.1	+0.1
LIT	Litokhoron	3.33	356	*e*PN	Pn	21 44 40.8	-0.2
LIT	Litokhoron	3.33	356	P	Pn	21 44 40.4	-0.6
LIT	Litokhoron	3.33	356	*e*Pn	Pn	21 44 40.8	-0.2
LIT	Litokhoron	3.33	356	P	Pn	21 44 41.1	+0.1
SMG	Samos	3.35	73	*e*PN	Pn	21 44 40.8	-0.5
SMG	Samos	3.35	73	*e*Pn	Pn	21 44 40.8	-0.5
SIGR	SIGRI	3.43	44	P	Pn	21 44 43.6	+1.3
SIGR	SIGRI	3.43	44	P	Pn	21 44 43.6	+1.3
KZN	Kozani	3.62	347	*e*PN	Pn	21 44 46.3	+1.3
KZN	Kozani	3.62	347	*e*Pn	Pn	21 44 46.3	+1.3
PLG	Polygyros	3.63	8	P	Pn	21 44 46.4	+1.3
PLG	Polygyros	3.63	8	P	Pn	21 44 46.4	+1.3
OUR	Ouranopolis	3.68	14	P	Pn	21 44 48.5	+2.8
OUR	Ouranopolis	3.68	14	P	Pn	21 44 48.5	+2.8
PRK	Paraskevi	3.69	47	P	Pn	21 44 48.3	+2.4
PRK	Paraskevi	3.69	47	*e*PN	Pn	21 44 45.7	-0.2
PRK	Paraskevi	3.69	47	*e*Pn	Pn	21 44 45.7	-0.2
PRK	Paraskevi	3.69	47	P	Pn	21 44 48.3	+2.4
KARP	Karpathos	3.73	108	P	Pn	21 44 47.0	+0.5
KARP	Karpathos	3.73	108	*e*PN	Pn	21 44 47.1	+0.6
KARP	Karpathos	3.73	108	P	Pn	21 44 47.0	+0.5
KARP				S	Sn	21 45 30.9	+0.3
KARP	Karpathos	3.73	108	P	Pn	21 44 47.0	+0.5
KARP				S	Sn	21 45 30.9	+0.3
HORT	Hortiatis	3.83	3	P	Pn	21 44 48.2	+0.4
HORT	Hortiatis	3.83	3	P	Pn	21 44 48.2	+0.4
SOH	Sokhos	4.07	6	P	Pn	21 44 52.4	+1.3
SOH	Sokhos	4.07	6	*e*PN	Pn	21 44 52.3	+1.2
SOH	Sokhos	4.07	6	*e*Pn	Pn	21 44 52.3	+1.2
GRG	Griva	4.19	356	P	Pn	21 44 53.8	+1.0
GRG	Griva	4.19	356	P	Pn	21 44 53.8	+1.0
ARG	Arkhangelos	4.32	96	P	Pn	21 44 56.2	+1.6
ARG	Arkhangelos	4.32	96	*e*PN	Pn	21 44 56.2	+1.6
ARG	Arkhangelos	4.32	96	P	Pn	21 44 55.8	+1.2
ARG				S	Sn	21 45 47.0	+1.8
ARG	Arkhangelos	4.32	96	P	Pn	21 44 55.8	+1.2
ARG	Arkhangelos	4.32	96	*e*Pn	Pn	21 44 56.2	+1.6
SRS	Serrai	4.38	8	P	Pn	21 44 57.2	+1.7
SRS	Serrai	4.38	8	P	Pn	21 44 57.2	+1.7
VAY	Valandovo	4.55	358	*e*Pn	Pn	21 44 56.9	-0.8
NVR	Nevrokopi	4.65	10	P	Pn	21 45 01.7	+2.6
NVR	Nevrokopi	4.65	10	P	Pn	21 45 01.7	+2.6
KRUS	Krusevo	4.75	346	*i* Pn	Pn	21 45 00.3	-0.1
LTBQ	Tobruq	4.79	169	*i* P	Pn	21 45 05.5	+4.4
LTBQ	SNR=121						
				*e*S	Sn	21 45 58.9	+2.2
	53nm,0.5s,SNR=121						
PIPA	Pietrapaola	5.44	302	Pn	Pn	21 45 10.1	+0.1
	134nm,0.6s						
PIPA	Pietrapaola	5.44	302	Pn	Pn	21 45 10.1	+0.1
	134nm,0.6s						
SOI	Samo	5.53	286	Pn	Pn	21 45 10.6	-0.5
	30nm,0.6s						
SOI	Samo	5.53	286	Pn	Pn	21 45 10.6	-0.5
	30nm,0.6s						
TAR1	Taranto	5.72	313	*e*Pn	Pn	21 45 12.8	-1.0
MTTG	Motta San Giov	5.79	284	Pn	Pn	21 45 13.8	-1.0
	80nm,0.5s						
MTTG	Motta San Giov	5.79	284	Pn	Pn	21 45 13.8	-1.0
	80nm,0.5s						
VTS	Vitosha	5.82	3	⇓*i*P	Pn	21 45 17.5	+2.3
VTS	Vitosha	5.82	3	⇓*i*P	Pn	21 45 17.5	+2.3
HAVL	Avola	6.16	274	Pn	Pn	21 45 17.9	-1.9
	77nm,0.4s						
HAVL	Avola	6.16	274	Pn	Pn	21 45 17.9	-1.9
	77nm,0.4s						
ISP	Isparta	6.24	78	*e*Pn	Pn	21 45 22.2	+1.2
ISP				Sn	Sn	21 46 33.9	+1.4
ISP	Isparta	6.24	78	⇑*i*P	Pn	21 45 16.6	-4.4
ISP	Isparta	6.24	78	*e*Pn	Pn	21 45 22.2	+1.2
ISP				Sn	Sn	21 46 33.9	+1.4
SG1	Sgolgore (BA)	6.28	312	*e*Pn	Pn	21 45 21.8	+0.4
SG1				*e*Sn	Sn	21 46 31.5	-1.7
CUC	Castrocucco	6.36	303	*e*Pn	Pn	21 45 23.6	+0.9
	54nm,0.6s						
CUC				*e*Sn	Sn	21 46 34.3	-1.1
CUC	Castrocucco	6.36	303	*e*Pn	Pn	21 45 23.5	+0.9
	54nm,0.6s						
CUC				*e*Sn	Sn	21 46 34.3	-1.1
CDT	Castel del Mon	6.67	312	*e*Pn	Pn	21 45 26.9	+0.1
CDT				*e*Sn	Sn	21 46 41.7	-1.2
VAE	Valguarnera	6.74	279	Pn	Pn	21 45 29.6	+1.8
	1.6nm,0.3s,baz=270,slow=1.0,SNR=4.7						
VAE				Sn	Sn	21 46 44.4	-0.3
	1.4nm,0.3s,baz=315,slow=2.9,SNR=2.1						
VAE	Valguarnera	6.74	279	Pn	Pn	21 45 29.6	+1.8
VAE				Sn	Sn	21 46 44.5	-0.2
STON	Ston	7.25	329	*e*Pn	Pn	21 45 33.7	-1.1
STON				Sn	Sn	21 46 51.1	-6.1
STON	Ston	7.25	329	*e*Pn	Pn	21 45 33.6	-1.2
MRB1	Monte Rocchett	7.49	308	Pn	Pn	21 45 39.6	+1.5
MRB1	Monte Rocchett	7.49	308	Pn	Pn	21 45 39.6	+1.5
SWA2		7.83	163	P	Pn	21 45 43.1	+0.3
	baz=167						
SWA2				S	Sn	21 46 59.7	-12
	baz=167						
SWA2				AMP		21 47 00.0	
	comp=N,80μm,0.5s,logA/T=5.2,baz=167						
SWA2		7.83	163	P	Pn	21 45 43.1	+0.3
VOIR		8.82	10	⇓*i*P	Pn	21 45 58.9	+2.5
BRTR	Keskin Array B	9.02	68	Pn	Pn	21 46 01.4	+2.3
	comp=N,0.1nm,0.3s,baz=256,slow=13,SNR=5.0						
BRTR	Keskin Array B	9.02	68	Pn	Pn	21 46 01.4	+2.3
MLR	Muntele Rosu	9.03	14	⇓*i*P	Pn	21 46 02.4	+3.2
PLOR	Plostina	9.52	16	⇑*i*P	Pn	21 46 11.1	+5.2
VRI	Vrincioaia	9.55	17	⇑*i*P	Pn	21 46 07.8	+1.4
VRI	Vrincioaia	9.55	17	⇑*i*P	Pn	21 46 07.8	+1.4
NRCA	Norcia	9.60	312	Pn	Pn	21 46 09.3	+2.3
	comp=N,9.1nm,0.6s						
NRCA	Norcia	9.60	312	Pn	Pn	21 46 09.3	+2.3
	comp=N,9.1nm,0.6s						
NVLJ	Novalja	9.84	325	*e*Pn	Pn	21 46 10.5	+0.2
NVLJ				Sn	Sn	21 47 54.6	-6.2
NVLJ	Novalja	9.84	325	*e*Pn	Pn	21 46 10.4	+0.1
AWBH		9.87	147	P	Pn	21 46 08.7	-2.1
	baz=149						
AWBH		9.87	147	P	Pn	21 46 08.7	-2.1
GLL	Jalalah	10.35	131	P	Pn	21 46 15.6	-1.7
	baz=133						
GLL	Jalalah	10.35	131	P	Pn	21 46 15.6	-1.7
AMAG	Maghara	10.60	122	P	Pn	21 46 18.0	-2.8
	baz=123						
HFRF	Wahat Farafira	10.67	152	P	Pn	21 46 21.7	0.0
	baz=155						
HFRF				AMP		21 48 00.0	
	comp=N,10μm,1.0s,logA/T=4.0,baz=155						
HFRF				S	Sn	21 48 04.9	-16
	baz=155						
HFRF	Wahat Farafira	10.67	152	P	Pn	21 46 21.7	0.0
RSH		10.77	119	P	Pn	21 46 21.1	-1.9
SUZ		10.87	127	P	Pn	21 46 22.2	-2.2
	baz=128						
SUZ		10.87	127	P	Pn	21 46 22.2	-2.2
KEST	Kesra	10.92	269	Pn	Pn	21 46 25.3	+0.2
	comp=N,0.0nm,0.3s,baz=55,slow=18,SNR=4.1						
KEST	Kesra	10.92	269	Pn	Pn	21 46 25.3	+0.2
KEST	Kesra	10.92	269	Pn	Pn	21 46 25.3	+0.2
JAVS	Javornik	11.23	327	*i* Pn	Pn	21 46 29.9	+0.6
PERS	Pernice	11.40	332	*i* Pn	Pn	21 46 30.2	-1.5
HNKL	Nakhl	11.56	123	P	Pn	21 46 31.7	-2.3
	baz=124						
HNKL	Nakhl	11.56	123	P	Pn	21 46 31.7	-2.3
PGF	Pioggiola	12.10	303	*e*P	Pn	21 46 43.7	+2.5
	comp=N,31nm,1.2s						
PGF	Pioggiola	12.10	303	*e*P	Pn	21 46 43.7	+2.5
	comp=N,16nm,1.2s						
PGF	Pioggiola	12.10	303	*e*P	Pn	21 46 43.7	+2.5
	comp=N,16nm,1.2s						
ASF	Jabal al Asfar	12.50	107	Pn	Pn	21 46 44.9	-1.8
	comp=N,0.1nm,0.3s,baz=267,slow=18,SNR=2.0						
SBF	Sospel	13.69	306	*e*P	Pn	21 47 04.4	+1.5
	comp=N,17nm,0.9s						
SBF	Sospel	13.69	306	*e*P	Pn	21 47 04.4	+1.5
	comp=N,8.5nm,0.9s						
SBF	Sospel	13.69	306	*e*P	Pn	21 47 04.4	+1.5
	comp=N,8.5nm,0.9s						
GERES	GERESS Array B	13.78	334	Pn	Pn	21 47 04.1	-0.1
	comp=N,0.0nm,0.3s,baz=171,slow=19,SNR=2.5						
GERES	GERESS Array B	13.78	334	Pn	Pn	21 47 04.1	-0.1
GERES	GERESS Array B	13.78	334	Pn	Pn	21 47 04.1	0.0
DAVOX	Davos/Dischmat	13.88	320	Pn	Pn	21 47 03.9	-1.6
	comp=N,0.1nm,0.3s,baz=206,slow=8.6,SNR=2.2						
DAVOX	Davos/Dischmat	13.88	320	Pn	Pn	21 47 03.9	-1.6
KHC	Kasperske Hory	14.07	334	Pn	Pn	21 47 08.3	+0.3
	comp=N,3.2nm,0.7s						
KHC	Kasperske Hory	14.07	334	*e*P	Pn	21 47 16.8	+8.8
KHC				*ex*	x	21 47 21.5	
KHC	Kasperske Hory	14.07	334	Pn	Pn	21 47 08.3	+0.3
	comp=N,3.2nm,0.7s						
KHC	Kasperske Hory	14.07	334	P	Pn	21 47 16.8	+8.8
PRU	Pruhonice	14.50	338	*e*P	Pn	21 47 21.9	+7.9
PRU	Pruhonice	14.50	338	P	Pn	21 47 21.9	+7.9
MBDF	Montbardon	14.50	308	*e*P	Pn	21 47 16.1	+2.1
	comp=N,8.8nm,1.0s						
MBDF	Montbardon	14.50	308	*e*P	Pn	21 47 16.1	+2.1
	comp=N,4.4nm,1.0s						
AKASG	Malin Array Be	14.67	16	Pn	Pn	21 47 18.8	+2.5
	comp=N,1.2nm,0.3s,baz=200,slow=8.9,SNR=6.5						
AKASG	Malin Array Be	14.67	16	Pn	Pn	21 47 18.8	+2.5
LPG	La Plagne	14.89	311	*e*P	Pn	21 47 20.6	+1.3
LPL	La Plagne	14.91	311	*e*P	Pn	21 47 20.4	+0.8
	comp=N,2.9nm,0.7s						
LPL	La Plagne	14.91	311	*e*P	Pn	21 47 20.4	+0.8
	comp=N,1.5nm,0.7s						
ORIF	Oris-en-Rattie	15.16	308	*e*P	Pn	21 47 24.7	+1.8
ORIF				*e*MLR	MLR		
	comp=Z,76nm,17.8s						
GRA1	Grafenberg Arr	15.40	331	*e*P	Pn	21 47 31.8	+5.7
	comp=Z,25nm,1.4s						
GRA1	Grafenberg Arr	15.40	331	*e*P	Pn	21 47 31.8	+5.7
	comp=Z,25nm,1.4s						
GRF	Grafenberg Arr	15.40	331	*e*P	Pn	21 47 31.8	+5.7
	comp=Z,25nm,1.4s						
GRF	Grafenberg Arr	15.40	331	*e*P	Pn	21 47 31.8	+5.7
	comp=Z,25nm,1.4s						
MOX	Moxa	16.03	333	*e*(P)	Pn	21 47 38.5	+4.3
	comp=Z,7.0nm,0.9s						
MOX	Moxa	16.03	333	P	Pn	21 47 38.5	+4.3
	comp=Z,7.0nm,0.9s						
HINF	Hinteralfeld	16.12	318	*e*P	Pn	21 47 35.8	+0.3
CLL	Collm	16.13	337	P	Pn	21 47 39.0	+3.5
CLL	Collm	16.13	337	P	Pn	21 47 39.0	+3.5
CDF	Champ du Feu	16.28	320	*e*P	Pn	21 47 36.7	-0.7
HAU	Haudompre	16.51	318	*e*P	Pn	21 47 40.8	+0.4
	comp=Z,4.9nm,0.6s						
HAU	Haudompre	16.51	318	*e*P	Pn	21 47 40.8	+0.4
	comp=Z,2.5nm,0.6s						
HAU	Haudompre	16.51	318	*e*P	Pn	21 47 40.8	+0.4
	comp=Z,2.5nm,0.6s						
MTLF	Montolieu	17.05	299	*e*P	Pn	21 47 49.1	+1.8
	comp=Z,20nm,1.3s						
MTLF	Montolieu	17.05	299	*e*P	Pn	21 47 49.1	+1.8
	comp=Z,9.9nm,1.3s						
MTLF	Montolieu	17.05	299	*e*P	Pn	21 47 49.1	+1.8
	comp=Z,9.9nm,1.3s						
SMF	Signal de Mont	17.22	311	*e*P	Pn	21 47 50.8	+1.5
	comp=Z,4.1nm,0.7s						
SMF	Signal de Mont	17.22	311	*e*P	Pn	21 47 50.8	+1.5
	comp=Z,2.0nm,0.6s						
SMF	Signal de Mont	17.22	311	*e*P	Pn	21 47 50.8	+1.5
	comp=Z,2.0nm,0.7s						
MEZF	Maizieres J'vi	17.50	318	*e*P	Pn	21 47 54.0	+1.1
	comp=Z,14nm,1.1s						
MEZF	Maizieres J'vi	17.50	318	*e*P	Pn	21 47 54.0	+1.1
	comp=Z,14nm,1.1s						
MEZF	Maizieres J'vi	17.50	318	*e*P	Pn	21 47 54.0	+1.1
	comp=Z,6.8nm,1.1s						
LOR	Lormes	17.51	313	*e*P	Pn	21 47 53.3	+0.3
LOR	Lormes	17.51	313	*e*P	Pn	21 47 53.3	+0.3
SSF	Saint Saulge	17.62	312	*e*P	Pn	21 47 54.1	-0.2
SSF	Saint Saulge	17.62	312	*e*P	Pn	21 47 54.1	-0.2
CAF	Calviac	17.65	304	*e*P	Pn	21 47 54.0	-0.7
CAF	Calviac	17.65	304	*e*P	Pn	21 47 54.0	-0.7
BGF	Bois d'Agland	17.79	310	*e*P	Pn	21 47 56.0	-0.4
BGF	Bois d'Agland	17.79	310	*e*P	Pn	21 47 56.0	-0.4
TCF	Toulx Ste Croi	18.07	308	*e*P	Pn	21 47 59.3	-0.6
	comp=Z,6.4nm,1.0s						
TCF	Toulx Ste Croi	18.07	308	*e*P	Pn	21 47 59.3	-0.6
	comp=Z,3.2nm,1.0s						
TCF	Toulx Ste Croi	18.07	308	*e*P	Pn	21 47 59.3	-0.6
	comp=Z,3.2nm,1.0s						
GIVF	Givet	18.59	321	*e*P	Pn	21 48 06.8	+0.6
GIVF	Givet	18.59	321	*e*P	Pn	21 48 06.8	+0.6
BAIF	Baives	18.88	321	*e*P	Pn	21 48 08.9	-0.8
BAIF	Baives	18.88	321	*e*P	Pn	21 48 08.9	-0.8
MFF	Saint Martin d	19.69	307	*e*P	Pn	21 48 19.5	0.0
MFF	Saint Martin d	19.69	307	*e*P	Pn	21 48 19.5	0.0
LDF	La Druitiere	20.50	312	*e*P	P	21 48 26.7	-0.1
	comp=Z,2.4nm,0.5s						
LDF	La Druitiere	20.50	312	*e*P	P	21 48 26.7	-0.1
	comp=Z,1.2nm,0.5s						
LDF	La Druitiere	20.50	312	*e*P	P	21 48 26.7	-0.1
	comp=Z,1.2nm,0.5s						
FLN	La Foliniere	20.79	313	*e*P	P	21 48 29.4	-0.6
	comp=Z,5.4nm,0.6s						
FLN				*e*MLR	MLR		
	comp=Z,92nm,18.0s						
FLN	La Foliniere	20.79	313	*e*P	P	21 48 29.4	-0.6
	comp=Z,2.7nm,0.6s						
FLN				LR	LR		
	comp=Z,90nm,18.0s						
FLN	La Foliniere	20.79	313	*e*P	P	21 48 29.4	-0.6
	comp=Z,2.7nm,0.6s						
ESDC	Sonseca Array	21.20	286	P	P	21 48 34.6	0.0
	comp=Z,1.2nm,0.6s,mb3.4,baz=83,slow=9.9,SNR=9.1						
ESDC	Sonseca Array	21.20	286	P	P	21 48 34.6	0.0
QUIF	Quistinic	22.09	308	*e*P	P	21 48 43.9	-0.1
QUIF	Quistinic	22.09	308	*e*P	P	21 48 43.9	-0.1
HFS	Hagfors	24.10	349	P	P	21 49 01.3	-3.1
	comp=Z,2.5nm,0.6s,mb3.8,baz=152,slow=9.9,SNR=14						
FINES	FINESS Array B	24.78	4	P	P	21 49 07.8	-2.8
	comp=Z,4.3nm,1.0s,mb4.0,baz=152,slow=8.6,SNR=5.4						
FINES				PcP	PcP	21 52 45.8	-1.0
	comp=Z,3.0nm,0.9s,baz=173,slow=1.5,SNR=4.9						
FINES	FINESS Array B	24.78	4	PcP	PcP	21 52 45.8	-1.0
NB2	NORSAR Subarra	25.38	347	P	P	21 49 13.8	-2.2
	comp=Z,1.1nm,0.4s,mb3.7,baz=153,slow=10						
NB2	NORSAR Subarra	25.38	347	P	P	21 49 13.8	-2.2
	comp=Z,1.1nm,0.4s,mb3.7,SNR=4.4						
NOA	NORSAR Array B	25.38	347	P	P	21 49 13.8	-2.1
	comp=Z,0.8nm,0.4s,mb3.6,baz=153,slow=8.7,SNR=8.6						
NOA	NORSAR Array B	25.38	347	P	P	21 49 13.9	-2.1
EKA	Eskdalemuir Ar	25.62	325	P	P	21 49 17.9	-0.4
	comp=Z,10nm,0.7s,mb4.5,baz=124,slow=9.5,SNR=38						
EKA	Eskdalemuir Ar	25.62	325	P	P	21 49 17.9	-0.4
ESK	Eskdalemuir	25.64	325	*e*P	P	21 49 18.1	-0.3
	comp=Z,17nm,1.0s,mb4.5						
ESK	Eskdalemuir	25.64	325	*e*P	P	21 49 18.1	-0.3
	comp=Z,17nm,1.0s,mb4.5						
TORD	Torodi Ar. Bea	30.18	224	P	P	21 49 58.8	-0.6
	comp=Z,1.3nm,0.6s,mb3.9,baz=34,slow=9.0,SNR=17						
ARCES	ARCESS Array B	32.86	2	P	P	21 50 20.0	-2.4
	comp=Z,3.0nm,1.0s,mb4.2,baz=173,slow=11,SNR=4.0						
ARCES	ARCESS Array B	32.86	2	P	P	21 50 20.0	-2.4
ARCES	ARCESS Array B	32.86	2	P	P	21 50 20.0	-2.4
DBIC	Dimbokro	39.17	227	P	P	21 51 17

CHCH	**Chadas Angostu**	**0.72**	**84**⇑	*i*P	Pn	22 19 51.3	+0.4
CHCH				*i*S	Sn	22 20 02.1	+1.3
CACH	**El Canelo**	**0.77**	**98**⇓	*i*P	Pn	22 19 52.7	+1.2
CACH				*i*S	Sn	22 20 04.2	+2.3
CACH	**El Canelo**	**0.77**	**98**⇓	*i*P	Pn	22 19 52.7	+1.2
CACH				*i*S	Sn	22 20 04.2	+2.3
ANTU	**Antumapu**	**0.86**	**59**	*e*P	Pn	22 19 53.4	+0.7
ANTU				*e*S	Sn	22 20 05.5	+1.5
ANTU	**Antumapu**	**0.86**	**59**	*e*P	Pn	22 19 53.4	+0.7
ANTU				*e*S	Sn	22 20 05.5	+1.5
ANTU				AML	AML	22 20 07.1	
	comp=N,487nm,0.6s						
SAN	**Santiago**	**0.91**	**52**⇑	*i*P	Pn	22 19 54.0	+0.6
SAN				*i*S	Sn	22 20 06.6	+1.4
SAN	**Santiago**	**0.91**	**52**⇑	*i*P	Pn	22 19 54.0	+0.6
SAN				*i*S	Sn	22 20 06.6	+1.4
SAN				AML	AML	22 20 10.6	
	comp=E,252nm,0.4s						
PCH	**Pirque**	**0.92**	**65**⇑	*i*P	Pn	22 19 54.1	+0.5
PCH				*i*S	Sn	22 20 07.6	+1.9
PCH	**Pirque**	**0.92**	**65**⇑	*i*P	Pn	22 19 54.1	+0.5
PCH				*i*S	Sn	22 20 07.6	+1.9
CLCH	**Cerro Calan**	**1.02**	**53**⇑	*i*P	Pn	22 19 55.6	+0.6
CLCH				*i*S	Sn	22 20 10.1	+2.0
CLCH				AML	AML	22 20 15.8	
	comp=E,226nm,0.3s						
SJCH	**San Jose de Ma**	**1.04**	**69**	*e*P	Pn	22 19 56.0	+0.8
SJCH				*i*S	Sn	22 20 10.4	+1.9
SJCH	**San Jose de Ma**	**1.04**	**69**	*e*P	Pn	22 19 56.0	+0.8
SJCH				*i*S	Sn	22 20 10.4	+1.9
SJCH				AML	AML	22 20 12.2	
	comp=E,210nm,0.4s						
LMEL	**Las Melosas**	**1.11**	**82**⇓	*i*P	Pn	22 19 56.9	+0.8
LMEL				*i*S	Sn	22 20 12.2	+2.1
LMEL	**Las Melosas**	**1.11**	**82**⇓	*i*P	Pn	22 19 56.9	+0.8
LMEL				*i*S	Sn	22 20 12.2	+2.1
LMEL				AML	AML	22 20 13.9	
	comp=N,435nm,0.3s						
PEL	**Peldehue**	**1.11**	**39**⇑	*i*P	Pn	22 19 57.2	+1.0
PEL				*i*S	Sn	22 20 12.0	+1.7
PEL				AML	AML	22 20 14.1	
	comp=E,328nm,0.3s						
ROCH	**El Roble**	**1.12**	**22**⇑	*i*P	Pn	22 19 57.1	+0.9
ROCH				*i*S	Sn	22 20 13.1	+2.6
ROCH				AML	AML	22 20 15.4	
	comp=N,257nm,0.4s						
FCH	**Farellones**	**1.23**	**57**⇓	*i*P	Pn	22 19 57.5	-0.3
FCH				*i*S	Sn	22 20 14.2	+0.9
FCH				AML	AML	22 20 16.1	
	comp=N,226nm,0.4s						
JACH	**Jahuel**	**1.54**	**31**	*e*P	Pn	22 20 03.5	+1.5
JACH				*i*S	Sn	22 20 23.2	+2.5
JACH	**Jahuel**	**1.54**	**31**	*e*P	Pn	22 20 03.5	+1.5
JACH				*i*S	Sn	22 20 23.2	+2.5

NAO ***28*** *22:20:15.5±1.4, 71°.21N×4°.48W, ML3.5*
IDC ***28*** *22:20:18.6±0.4, 71°.35N×3°.85W, h0km, mb4.5/25, mb1 4.7/32, mb1mx4.7/34, mbtmp4.6/32, ML4.5/7, MS4.9/26, Ms1 4.9/26, ms1mx4.9/29, Error ellipse: s-maj=11.3km s-min=9.2km az=55.0*
BER ***28*** *22:20:18.4±2.7, 71°.28N×4°.32W, h8km±19km, ML3.7*
CSEM ***28*** *22:20:18.7±0.1, 71°.31N×3°.92W, h2km, mb5.3/99, Ms4.9, Mw5.5, Error ellipse: s-maj=3.4km s-min=2.2km az=56.0*
ISCJB ***28*** *22:20:19.4±0.1, 71°.28N±0°.01×4°.22W±0°.04, h10km, mb5.2/325, MS5.1/208, Error ellipse: s-maj=2.5km s-min=1.2km az=136.9*
BGS ***28*** *22:20:19.7±1.8, 71°.19N×3°.06W, h10km, mb5.2, MS4.7*
MOS ***28*** *22:20:19.4±1.2, 71°.30N×4°.21W, h10km, mb5.4/127, MS4.9/76, Error ellipse: s-maj=12.7km s-min=2.7km az=97.0*
NEIC ***28*** *22:20:21.1±0.1, 71°.33N×3°.88W, h10km, mb5.3/247, MS5.1/151, MW5.5, Error ellipse: s-maj=3.7km s-min=2.1km az=53.0*
GCMT ***28*** *22:20:21.1±0.1, 71°.39N×4°.11W, h12km, MW5.5, Moment Tensor Solution. s62,c92; s35,c39; Moment tensor: Scale 10^17^Nm; Mrr=2.01±.03; Mθθ0.91±.03; Mφφ1.10±.03; Mrθ-0.30±.08; Mrφ1.07±.02; Mθφ-0.57±.07; Best double couple: M0=2.10000×10^17^ NP1:φs=227.00000°, δ37.00000°, λ-83.00000°. NP2:φs38.00000°, δ54.00000°, λ-95.00000°. Principal axes: T 2.1700, Plg9.0000°, Azm132.0000°; N -0.0600, Plg4.0000°, Azm41.0000°; P -2.1200, Plg80.0000°, Azm284.0000°; Data Used: II IU IC G CN. Surface waves: sta=105, comp=223, per= 50.*
BJI ***28*** *22:20:22.3, 71°.89N×3°.66W, h8km, mB5.4/35, mb5.2/42, Ms5.3/39, MS7 5.0/36*
SZGRF ***28*** *22:20:29.7, 70°.82N×2°.90W, h33km, mb5.2, MS4.4, Jan Mayen Island region*

ISC 28 22:20:21.3±0.1, 71°.26N±0°.01×4°.08W±0°.04, h10km, (h14km±1.1km; pP-P), n1841, σ1s00/1859, mb5.2/325, MS5.1/207, 261C-239D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.40**	**261**	*e*Pn	**Pn**	**22 20 42.6**	**-4.2**
JNE	**Jan Mayen East**	**1.40**	**261**	*e*Pn	**Pn**	**22 20 42.7**	**-4.1**
	SNR=50						
JNW	**Jan Mayen West**	**1.43**	**263**	*e*Pn	**Pn**	**22 20 41.9**	**-5.5**
JNW	**Jan Mayen West**	**1.43**	**263**	*e*Pn	**Pn**	**22 20 41.8**	**-5.5**
	SNR=50						
JMIC	**Jan Mayen**	**1.47**	**261**	Pg	**Pn**	**22 20 41.7**	**-6.1**
JMIC				Lg		22 20 57.4	
JMIC	**Jan Mayen**	**1.47**	**261**	*e*Pn	**Pn**	**22 20 43.5**	**-4.3**
JMIC				*e*Sn	**Sn**	**22 20 59.5**	**-7.5**
JMIC	**Jan Mayen**	**1.47**	**261**	Pn	**Pn**	**22 20 42.1**	**-5.7**
	61nm,0.3s,baz=63,slow=4.7,SNR=8.6						
JMIC				Sn	**Sn**	**22 20 57.9**	**-9.1**
	89nm,0.3s,baz=0.0,slow=20,SNR=29						
JMIC	**Jan Mayen**	**1.47**	**261**	Pg	**Pn**	**22 20 41.7**	**-6.1**
JMIC	**Jan Mayen**	**1.47**	**261**	*e*Pn	**Pn**	**22 20 43.5**	**-4.3**
	SNR=50						
JMI	**Jan Mayen**	**1.55**	**260**	*e*Pn	**Pn**	**22 20 42.3**	**-6.6**
JMI				*e*Sn	**Sn**	**22 21 00.9**	**-8.2**
JMI				AML	AML	22 21 08.0	
	comp=Z,2μm,0.6s						
JMI	**Jan Mayen**	**1.55**	**260**	*e*Pn	**Pn**	**22 20 42.3**	**-6.6**
	SNR=50						
JMI				*e*Sn	**Sn**	**22 21 00.9**	**-8.2**
	comp=Z,2μm,0.6s,SNR=50						
SCO	**Scoresbysund**	**5.92**	**271**	*e*P	**Pn**	**22 21 48.3**	**-0.6**
SCO				*e*S	**Sn**	**22 22 55.4**	**-1.3**
SCO	**Scoresbysund**	**5.92**	**271**	*i*P	**Pn**	**22 21 48.3**	**-0.6**
SCO				*e*S	**Sn**	**22 22 55.4**	**-1.3**
SCO	**Scoresbysund**	**5.92**	**271**	*e*P	**Pn**	**22 21 48.3**	**-0.6**
SCO				*e*S	**Sn**	**22 22 55.4**	**-1.3**
DAG	**Danmarks Havn**	**6.82**	**331**	⇓*i*P	**Pn**	**22 21 54.8**	**-6.4**
DAG	**Danmarks Havn**	**6.82**	**331**	⇓*i*P	**Pn**	**22 21 54.8**	**-6.4**
DAG				*i*S	**Sn**	**22 22 59.8**	**-19**
DAG	**Danmarks Havn**	**6.82**	**331**	*i*P	**Pn**	**22 21 54.8**	**-6.4**
LOF	**Lofoten**	**6.87**	**109**	*e*Pn	**Pn**	**22 21 58.5**	**-3.4**
LOF	**Lofoten**	**6.87**	**109**	*e*Pn	**Pn**	**22 21 58.5**	**-3.5**
	SNR=50						
BJO1	**Bjornoya**	**7.51**	**54**	*e*Pn	**Pn**	**22 22 07.4**	**-3.2**
BJO1	**Bjornoya**	**7.51**	**54**	*e*Pn	**Pn**	**22 22 07.4**	**-3.2**
STEI	**Steigen**	**7.51**	**107**	*e*Pn	**Pn**	**22 22 08.0**	**-2.7**
STEI				AMb	AMB	22 22 15.9	
	comp=Z,232nm,1.6s						
BJO	**Bjornoya**	**7.56**	**54**	*e*Pn	**Pn**	**22 22 07.4**	**-3.9**
KONS	**Konsvik**	**7.81**	**119**	*e*Pn	**Pn**	**22 22 11.4**	**-3.5**
TRO	**Tromso**	**7.87**	**91**	*e*Pn	**Pn**	**22 22 11.1**	**-4.5**
TRO	**Tromso**	**7.87**	**91**	P	**Pn**	**22 22 14.3**	**-1.2**
TRO	**Tromso**	**7.87**	**91**	P	**Pn**	**22 22 14.3**	**-1.2**
TRO	**Tromso**	**7.87**	**91**	*e*Pn	**Pn**	**22 22 11.1**	**-4.4**
	SNR=50						
TRO	**Tromso**	**7.87**	**91**	P	**Pn**	**22 22 14.3**	**-1.2**
STOK	**Stokkvaagen**	**7.90**	**120**	*e*Pn	**Pn**	**22 22 13.3**	**-2.8**
STOK				*e*Sn	**Sn**	**22 23 37.1**	**-8.3**
STOK				AML	AML	22 23 44.5	
	comp=Z,43nm,0.3s						
STOK	**Stokkvaagen**	**7.90**	**120**	*e*Pn	**Pn**	**22 22 13.3**	**-2.8**
STOK				*e*Sn	**Sn**	**22 23 37.1**	**-8.3**
STOK	**Stokkvaagen**	**7.90**	**120**	*e*Pn	**Pn**	**22 22 13.3**	**-2.8**
FLOS	**Flostrand**	**8.00**	**120**	*e*Pn	**Pn**	**22 22 14.2**	**-3.2**
MOR8	**Moi Rana**	**8.42**	**118**	*e*Pn	**Pn**	**22 22 21.5**	**-1.7**
MOR8				AMb	AMB	22 22 30.3	
	comp=Z,284nm,2.7s						
MOR8	**Moi Rana**	**8.42**	**118**	*e*Pn	**Pn**	**22 22 21.5**	**-1.7**
	comp=Z,284nm,2.7s						
MOR8	**Moi Rana**	**8.42**	**118**	*e*Pn	**Pn**	**22 22 21.5**	**-1.7**
	SNR=50						
KBS	**Kingsbay**	**8.68**	**21**	Pn	**Pn**	**22 22 23.3**	**-3.5**
KBS	**Kingsbay**	**8.68**	**21**	*e*Pn	**Pn**	**22 22 23.5**	**-3.3**
KBS	**Kingsbay**	**8.68**	**21**	*e*Pn	**Pn**	**22 22 22.4**	**-4.4**
KBS	**Kingsbay**	**8.68**	**21**	*e*P	**Pn**	**22 22 22.4**	**-4.3**
KBS	**Kingsbay**	**8.68**	**21**	*i*P	**Pn**	**22 22 22.6**	**-4.1**
	SNR=78						
KBS	**Kingsbay**	**8.68**	**21**	Pn	**Pn**	**22 22 23.3**	**-3.4**
SPB4	**Spitsbergen Ar**	**8.72**	**28**	*e*Pn	**Pn**	**22 22 24.3**	**-2.9**
SPB4				*e*Sn	**Sn**	**22 24 03.4**	**-2.0**
SPB4	**Spitsbergen Ar**	**8.72**	**28**	*e*Pn	**Pn**	**22 22 24.3**	**-2.9**
SPB4				*e*Sn	**Sn**	**22 24 03.3**	**-2.0**
SPA0	**Spitsbergen Ar**	**8.72**	**28**	Pn	**Pn**	**22 22 23.8**	**-3.4**
	baz=225,slow=16						
SPA0	**Spitsbergen Ar**	**8.72**	**28**	Pn	**Pn**	**22 22 23.8**	**-3.4**
	baz=225,slow=14,SNR=7.3						
SPITS	**Spitsbergen Ar**	**8.72**	**28**	Pn	**Pn**	**22 22 23.8**	**-3.4**
	baz=214,slow=15,SNR=453						
SPITS				LR	LR	22 24 49.3	
	comp=Z,5μm,19.2s,baz=225,slow=32						
SPITS	**Spitsbergen Ar**	**8.72**	**28**	P	**Pn**	**22 22 23.8**	**-3.4**
SPITS				MLR	MLR		
	comp=Z,5μm,19.2s						
SPITS	**Spitsbergen Ar**	**8.72**	**28**	P	**Pn**	**22 22 23.8**	**-3.4**
	comp=Z,5μm,19.2s						
NSS	**Namsos**	**9.03**	**130**	*e*Pn	**Pn**	**22 22 28.4**	**-3.2**
NSS				*e*Sn	**Sn**	**22 24 06.6**	**-6.5**
NSS				AML	AML	22 24 10.9	
	comp=Z,52nm,0.3s						
NSS	**Namsos**	**9.03**	**130**	*e*Pn	**Pn**	**22 22 28.4**	**-3.2**
NSS				*e*Sn	**Sn**	**22 24 06.6**	**-6.5**
NSS	**Namsos**	**9.03**	**130**	*e*Pn	**Pn**	**22 22 28.4**	**-3.2**
	SNR=50						
BORG	**Borgarnes**	**9.16**	**233**	Pn	**Pn**	**22 22 33.1**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=54,slow=18,SNR=2.0						
BORG				LR	LR	22 25 17.0	
	comp=Z,4μm,19.8s,baz=47,slow=32						
BORG	**Borgarnes**	**9.16**	**233**	*e*Pn	**Pn**	**22 22 33.7**	**+0.4**
BORG	**Borgarnes**	**9.16**	**233**	*e*P	**Pn**	**22 22 33.7**	**+0.4**
BORG	**Borgarnes**	**9.16**	**233**	*e*Pn	**Pn**	**22 22 33.7**	**+0.4**
SOFL	**Sornfelli, Far**	**9.30**	**188**	P	**Pn**	**22 22 33.5**	**-1.7**
SOFL				AMB	AMB	22 22 42.7	
	comp=Z,262nm,1.5s						
SOFL				AMS	AMS	22 25 05.0	
	comp=Z,13μm,19.0s						
SOFL	**Sornfelli, Far**	**9.30**	**188**	*e*P	**Pn**	**22 22 33.5**	**-1.7**
SOFL				AMB	AMB	22 22 42.7	
	comp=Z,262nm,1.5s						
SOFL				AMS	AMS	22 25 05.0	
	comp=Z,13μm,19.0s						
SOFL	**Sornfelli, Far**	**9.30**	**188**	*e*P	**Pn**	**22 22 33.5**	**-1.8**
KTK1	**Kautokeino**	**9.52**	**91**	*e*Pn	**Pn**	**22 22 34.2**	**-4.0**
KTK1	**Kautokeino**	**9.52**	**91**	*e*Pn	**Pn**	**22 22 34.2**	**-3.9**
	SNR=50						
MOL	**Molde**	**9.82**	**147**	*e*Pn	**Pn**	**22 22 38.4**	**-4.0**
MOL	**Molde**	**9.82**	**147**	*e*Pn	**Pn**	**22 22 38.4**	**-4.0**
	SNR=50						
ARA0	**ARCESS Array S**	**10.03**	**86**	Pn	**Pn**	**22 22 41.5**	**-3.7**
	baz=287,slow=12						
ARA0	**ARCESS Array S**	**10.03**	**86**	Pn	**Pn**	**22 22 41.5**	**-3.6**
	baz=287,slow=12,SNR=288						
ARCES	**ARCESS Array B**	**10.03**	**86**	Pn	**Pn**	**22 22 41.5**	**-3.6**
	comp=Z,4.1nm,0.3s,baz=289,slow=11,SNR=115						
ARCES				LR	LR	22 25 58.6	
	comp=Z,9μm,21.9s,baz=290,slow=34						
ARCES	**ARCESS Array B**	**10.03**	**86**	P	**Pn**	**22 22 41.6**	**-3.5**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ARCES				MLR	MLR		
	comp=Z,9μm,21.9s						
ARCES	**ARCESS Array B**	**10.03**	**86**	P	**Pn**	**22 22 41.6**	**-3.5**
	comp=Z,9μm,21.9s						
ARE0	**ARCESS Array S**	**10.03**	**86**	*e*Pn	**Pn**	**22 22 41.9**	**-3.2**
ARE0	**ARCESS Array S**	**10.03**	**86**	*e*Pn	**Pn**	**22 22 41.9**	**-3.2**
FOO	**Floro**	**10.35**	**155**	*e*Pn	**Pn**	**22 22 45.6**	**-4.0**
FOO				*e*Sn	**Sn**	**22 24 35.9**	**-10**
FOO				AML	AML	22 24 41.9	
	comp=Z,74nm,1.0s						
FOO	**Floro**	**10.35**	**155**	*e*Pn	**Pn**	**22 22 45.6**	**-4.0**
FOO				*e*Sn	**Sn**	**22 24 35.9**	**-10**
FOO	**Floro**	**10.35**	**155**	*e*Pn	**Pn**	**22 22 45.6**	**-4.0**
	SNR=50						
KEV	**Kevo**	**10.42**	**83**	*e*Pn	**Pn**	**22 22 46.2**	**-4.4**
KEV	**Kevo**	**10.42**	**83**	*e*P	**Pn**	**22 22 46.2**	**-4.4**
KEV	**Kevo**	**10.42**	**83**	*e*p	**Pn**	**22 22 45.9**	**-4.7**
	comp=Z,17nm,0.3s						
KEV	**Kevo**	**10.42**	**83**	*e*Pn	**Pn**	**22 22 46.2**	**-4.4**
SUMG	**Summit**	**10.66**	**293**	*e*Pn	**Pn**	**22 22 50.2**	**-3.7**
SUMG	**Summit**	**10.66**	**293**	*i*P	**Pn**	**22 22 50.4**	**-3.4**
	comp=Z,72nm,0.8s						
SUMG				*i*S	**Sn**	**22 24 43.9**	**-9.2**
SUMG							
	comp=Z,17μm,16.0s						
SUMG	**Summit**	**10.66**	**293**	*i*P	**Pn**	**22 22 50.4**	**-3.4**
	comp=Z,72nm,0.8s						
SUE	**Sulen**	**10.84**	**157**	*e*Pn	**Pn**	**22 22 54.4**	**-1.8**
SUE	**Sulen**	**10.84**	**157**	*e*Pn	**Pn**	**22 22 54.4**	**-1.8**
	SNR=50						
HYA	**Hoyanger**	**10.93**	**153**	*e*Pn	**Pn**	**22 22 55.9**	**-1.6**
HYA				AMb	AMB	22 23 08.3	
	comp=Z,146nm,1.2s						
HYA	**Hoyanger**	**10.93**	**153**	*e*Pn	**Pn**	**22 22 55.9**	**-1.6**
	comp=Z,146nm,1.2s						
HYA	**Hoyanger**	**10.93**	**153**	*e*Pn	**Pn**	**22 22 55.8**	**-1.7**
	SNR=50						
WAL1	**Walls**	**11.10**	**174**	P	**Pn**	**22 22 57.1**	**-2.7**
WAL1	**Walls**	**11.10**	**174**	*e*P	**Pn**	**22 22 57.1**	**-2.7**
WAL1	**Walls**	**11.10**	**174**	*e*P	**Pn**	**22 22 57.1**	**-2.7**
LRW	**Lerwick**	**11.24**	**173**	P	**Pn**	**22 22 58.6**	**-3.1**
LRW				AMB	AMB	22 23 09.0	
	comp=Z,164nm,1.6s						
LRW				AMS	AMS	22 25 59.5	
	comp=Z,9μm,23.7s						
LRW	**Lerwick**	**11.24**	**173**	*e*P	**Pn**	**22 22 58.6**	**-3.1**
LRW				AMB	AMB	22 23 09.0	
	comp=Z,164nm,1.6s						
LRW				AMS	AMS	22 25 59.5	
	comp=Z,9μm,23.7s						
LRW	**Lerwick**	**11.24**	**173**	*e*P	**Pn**	**22 22 58.6**	**-3.1**
ASK	**Askoy**	**11.45**	**156**	*e*Pn	**Pn**	**22 23 00.3**	**-4.3**
RUND	**Rundenannen**	**11.54**	**156**	*e*Pn	**Pn**	**22 23 01.9**	**-3.9**
EGD	**Espegrend**	**11.66**	**156**	*e*Pn	**Pn**	**22 23 03.1**	**-4.3**
NB2	**NORSAR Subarra**	**11.93**	**142**	Pn	**Pn**	**22 23 08.1**	**-3.0**
	baz=324,slow=14						
NB2	**NORSAR Subarra**	**11.93**	**142**	Pn	**Pn**	**22 23 08.1**	**-3.0**
	baz=324,slow=14,SNR=7.9						
NOA	**NORSAR Array B**	**11.93**	**142**	Pn	**Pn**	**22 23 08.6**	**-2.5**
	comp=Z,3.3nm,0.3s,baz=135,slow=21,SNR=21						
NOA				Sn	**Sn**	**22 25 18.9**	**-5.1**
	comp=Z,0.9nm,0.3s,baz=28,slow=5.0,SNR=3.4						
NOA	**NORSAR Array B**	**11.93**	**142**	P	**Pn**	**22 23 08.6**	**-2.5**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NOA	**NORSAR Array B**	**11.93**	**142**	Pn	**Pn**	**22 23 08.6**	**-2.5**
NAO01	**NORSAR Array S**	**12.04**	**143**	*e*Pn	**Pn**	**22 23 09.8**	**-2.8**
	comp=Z,16nm,0.5s						
NAO01				*e*Sn	**Sn**	**22 25 27.7**	**+0.9**
NAO01	**NORSAR Array S**	**12.04**	**143**	*e*Pn	**Pn**	**22 23 09.8**	**-2.9**
	comp=Z,16nm,0.5s						
NAO01				*e*Sn	**Sn**	**22 25 27.7**	**+0.9**
ODD1	**Odda**	**12.19**	**154**	*e*Pn	**Pn**	**22 23 11.9**	**-2.9**
ODD1	**Odda**	**12.19**	**154**	*e*Pn	**Pn**	**22 23 11.9**	**-2.9**
	SNR=50						
BLS5	**Blasjo**	**12.64**	**155**	*e*Pn	**Pn**	**22 23 17.2**	**-3.6**
BLS5	**Blasjo**	**12.64**	**155**	*e*Pn	**Pn**	**22 23 17.2**	**-3.7**
	SNR=50						
OSL	**Oslo**	**12.85**	**145**	*e*Pn	**Pn**	**22 23 22.4**	**-1.4**
OSL	**Oslo**	**12.85**	**145**	*e*Pn	**Pn**	**22 23 22.4**	**-1.3**
	SNR=50						
KONO	**Kongsberg**	**12.92**	**148**	*e*Pn	**Pn**	**22 23 22.5**	**-2.2**
	comp=Z,70nm,0.9s						
KONO	**Kongsberg**	**12.92**	**148**	*e*P	**Pn**	**22 23 22.5**	**-2.1**
KONO				pmax	pmax		
	comp=Z,70nm,0.9s						
KONO	**Kongsberg**	**12.92**	**148**	*e*P	**Pn**	**22 23 22.5**	**-2.1**
	comp=Z,70nm,0.9s						
VAF	**Ylistaro**	**13.13**	**115**	P	**Pn**	**22 23 29.1**	**+1.6**
VAF	**Ylistaro**	**13.13**	**115**	P	**Pn**	**22 23 29.1**	**+1.6**
HFA0	**Hagfors New Ar**	**13.26**	**138**	Pn	**Pn**	**22 23 28.0**	**-1.3**
HFA0	**Hagfors New Ar**	**13.26**	**138**	Pn	**Pn**	**22 23 28.0**	**-1.3**
HFS	**Hagfors**	**13.27**	**138**	Pn	**Pn**	**22 23 26.8**	**-2.6**
	baz=327,slow=14						
HFS				Sn	**Sn**	**22 25 51.1**	**-5.6**
	baz=333,slow=37						
HFS	**Hagfors**	**13.27**	**138**	Pn	**Pn**	**22 23 26.9**	**-2.5**
	comp=Z,5.0nm,0.3s,baz=338,slow=11,SNR=106						
HFS				Sn	**Sn**	**22 25 49.4**	**-7.3**
	comp=Z,1.3nm,0.3s,baz=339,slow=22,SNR=3.2						
HFS	**Hagfors**	**13.27**	**138**	P	**Pn**	**22 23 26.9**	**-2.5**
HFS				pmax	pmax		
	comp=Z,5.0nm,0.3s						
HFS	**Hagfors**	**13.27**	**138**	P	**Pn**	**22 23 26.9**	**-2.5**
	comp=Z,5.0nm,0.3s						
MVH1	**Achvaich**	**13.39**	**180**	P	**Pn**	**22 23 29.3**	**-1.8**
MVH1	**Achvaich**	**13.39**	**180**	*e*P	**Pn**	**22 23 29.3**	**-1.8**
MVH1	**Achvaich**	**13.39**	**180**	*e*P	**Pn**	**22 23 29.3**	**-1.8**
APA	**Apatity**	**13.52**	**87**⇑	*i*P	**Pn**	**22 23 31.7**	**-1.1**
APA				*e*		22 25 55.8	
APA				pmax	pmax		
	comp=Z,15nm,1.0s						
APA	**Apatity**	**13.52**	**87**	*i*P	**Pn**	**22 23 31.7**	**-1.1**
	comp=Z,15nm,1.0s						
MCD	**Coleburn Disti**	**13.74**	**178**	P	**Pn**	**22 23 33.3**	**-2.6**
MCD	**Coleburn Disti**	**13.74**	**178**	*e*P	**Pn**	**22 23 33.3**	**-2.6**
MCD	**Coleburn Disti**	**13.74**	**178**	*e*P	**Pn**	**22 23 33.3**	**-2.6**
SNART	**Snartemo**	**13.79**	**154**	*e*Pn	**Pn**	**22 23 33.9**	**-2.7**
KAC	**Achnashellach**	**13.83**	**183**	P	**Pn**	**22 23 34.2**	**-2.9**
KAC	**Achnashellach**	**13.83**	**183**	*e*P	**Pn**	**22 23 34.2**	**-2.9**
KAC	**Achnashellach**	**13.83**	**183**	*e*P	**Pn**	**22 23 34.2**	**-2.9**
MDO	**Dochfour**	**13.88**	**181**	P	**Pn**	**22 23 35.2**	**-2.5**
MDO	**Dochfour**	**13.88**	**181**	*e*P	**Pn**	**22 23 35.2**	**-2.5**
MDO	**Dochfour**	**13.88**	**181**	*e*P	**Pn**	**22 23 35.2**	**-2.6**
KPL	**Plockton**	**14.00**	**184**	P	**Pn**	**22 23 37.3**	**-2.0**
KPL				AMB	AMB	22 23 41.1	
	comp=Z,58nm,3.1s						
KPL				AMS	AMS	22 28 15.3	
	comp=Z,5μm,17.1s						
KPL	**Plockton**	**14.00**	**184**	*e*P	**Pn**	**22 23 37.3**	**-2.0**
KPL				AMB	AMB	22 23 41.1	
	comp=Z,58nm,3.1s						
KPL				AMS	AMS	22 28 15.3	
	comp=Z,5μm,17.1s						
KPL	**Plockton**	**14.00**	**184**	*e*P	**Pn**	**22 23 37.3**	**-2.1**
MME1	**Meikle Cairn**	**14.01**	**178**	P	**Pn**	**22 23 38.0**	**-1.6**
MME1	**Meikle Cairn**	**14.01**	**178**	*e*P	**Pn**	**22 23 38.0**	**-1.6**
MME1	**Meikle Cairn**	**14.01**	**178**	*e*P	**Pn**	**22 23 38.0**	**-1.6**
SUF	**Sumiainen**	**14.41**	**111**	P	**Pn**	**22 23 44.4**	**-0.5**
SUF	**Sumiainen**	**14.41**	**111**	P	**Pn**	**22 23 44.4**	**-0.5**
KAR1	**Arisaig**	**14.42**	**184**	P	**Pn**	**22 23 43.9**	**-1.3**
KAR1	**Arisaig**	**14.42**	**184**	*e*P	**Pn**	**22 23 43.9**	**-1.3**
KAF	**Kangasniemi**	**14.92**	**113**	*e*P	**Pn**	**22 23 47.9**	**-4.0**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KAF	**Kangasniemi**	**14.92**	**113**	*e*p	**Pn**	**22 23 47.9**	**-4.0**
	comp=Z,6.2nm,0.4s						
EBH	**Black Hill**	**15.08**	**179**	P	**Pn**	**22 23 52.2**	**-1.9**
EBH	**Black Hill**	**15.08**	**179**	*e*P	**Pn**	**22 23 52.2**	**-1.9**
EAB	**Aberfoyle**	**15.13**	**181**	P	**Pn**	**22 23 53.2**	**-1.6**
EAB	**Aberfoyle**	**15.13**	**181**	*e*P	**Pn**	**22 23 53.2**	**-1.6**
FIA0	**FINESS Array S**	**15.38**	**114**	P	**Pn**	**22 23 54.4**	**-3.6**
	baz=318,slow=14						
FINES	**FINESS Array B**	**15.38**	**114**	Pn	**Pn**	**22 23 54.3**	**-3.7**
	comp=Z,1.5nm,0.3s,baz=334,slow=13,SNR=20						
FINES				LR	LR	22 29 18.9	
	comp=Z,13μm,19.2s,baz=316,slow=35						
FINES	**FINESS Array B**	**15.38**	**114**	P	**Pn**	**22 23 54.3**	**-3.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FINES				MLR	MLR		
	comp=Z,13μm,19.2s						
FINES	**FINESS Array B**	**15.38**	**114**	Pn	**Pn**	**22 23 54.3**	**-3.7**
EDI	**Edinburgh**	**15.40**	**178**	P	**Pn**	**22 23 55.7**	**-2.6**
EDI				AMB	AMB	22 24 05.5	
	comp=Z,112nm,1.8s						
EDI				AMS	AMS	22 28 13.9	

WLF1 AMB AMB 22 24 40.4
comp=Z,264nm,2.8s
WLF1 AMS AMS 22 29 31.5
comp=Z,10μm,22.5s
WLF1 Llynfaes 18.04 181 *e*P **Pn 22 24 29.5 -2.2**
DLF Lyons Farm 18.07 185 *e*P **Pn 22 24 33.5 +1.5**
DSB Dublin 18.11 184 *e*P **Pn 22 24 36.1 +3.5**
comp=Z,55nm,1.3s
BSD Bornholm Skovb 18.17 143 P **Pn 22 24 36.2 +2.9**
BSD Bornholm Skovb 18.17 143 *i* P **Pn 22 24 33.2 -0.1**
BSD pmax pmax
comp=Z,78nm,0.8s
BSD MLR MLR
comp=Z,7μm,15.0s
BSD Bornholm Skovb 18.17 143 *i* P **Pn 22 24 33.2 -0.1**
comp=Z,78nm,0.8s
BSD
comp=Z,7μm,15.0s
BSD Bornholm Skovb 18.17 143 *i* P **Pn 22 24 33.2 -0.1**
comp=Z,7μm,15.0s
WIT Witeveen 19.13 160 *e*P **Pn 22 24 51.0 +6.0**
comp=Z,338nm,1.5s
MCH1 Michaelchurch 19.34 178 P **Pn 22 24 43.9 -3.6**
MCH1 AMB AMB 22 24 57.8
comp=Z,164nm,1.7s
MCH1 AMS AMS 22 31 18.8
comp=Z,4μm,15.9s
MCH1 Michaelchurch 19.34 178 *e*P **Pn 22 24 43.9 -3.6**
MCH1 AMB AMB 22 24 57.8
comp=Z,164nm,1.7s
MCH1 AMS AMS 22 31 18.8
comp=Z,4μm,15.9s
MCH1 Michaelchurch 19.34 178 *e*P **Pn 22 24 43.9 -3.6**
VAL Valentia 19.59 191 ‖ *i*S **Sn 22 28 29.0 -1.1**
HGH Gray Hill 19.70 178 P **Pn 22 24 48.3 -3.6**
HGH Gray Hill 19.70 178 *e*P **Pn 22 24 48.3 -3.6**
HGH Gray Hill 19.70 178 *e*P **Pn 22 24 48.3 -3.5**
IBBN Ibbenburen 19.75 158 *e*P **Pn 22 24 51.7 -0.7**
comp=Z,108nm,1.3s
NRDL Niedersach Rie 19.88 154 *e*P **Pn 22 24 53.2 -0.7**
comp=Z,107nm,1.3s
WTSB Winterswijk 19.98 160 *e*P **Pn 22 24 53.5 -1.5**
comp=Z,83nm,1.0s
WTSB Winterswijk 19.98 160 *e*P **Pn 22 24 53.5 -1.6**
comp=Z,83nm,1.0s
KLMR Klimovskoe 19.99 99 *e*P **Pn 22 24 51.7 -3.5**
KLMR pmax pmax
comp=Z,230nm,1.3s
KLMR MLR MLR
comp=Z,11μm,18.0s
KLMR Klimovskoe 19.99 99 *e*P **Pn 22 24 51.7 -3.5**
comp=Z,11μm,18.0s
IZAR Zarasai 20.23 124 *e*P **P 22 24 55.7 -0.5**
IZAR AMB AMB 22 25 03.9
comp=Z,54nm,1.2s
IZAR Zarasai 20.23 124 *e*P **P 22 24 55.7 -0.5**
comp=Z,54nm,1.2s,SNR=34
ISAL Salakas 20.36 125 *e*P **P 22 24 57.0 -0.5**
ISAL AMB AMB 22 25 05.2
comp=Z,66nm,1.3s
ISAL Salakas 20.36 125 *e*P **P 22 24 57.0 -0.5**
comp=Z,66nm,1.3s,SNR=34
GKP Gorka Klasztor 20.37 141 *e*P **P 22 24 57.3 -0.3**
GKP *ep*P 22 24 58.5
GKP *e* 22 25 05.3
GKP LMZ 22 33 13.6
comp=Z,16μm,17.6s
GKP Gorka Klasztor 20.37 141 P **P 22 24 58.0 +0.3**
GKP Gorka Klasztor 20.37 141 P **P 22 24 58.0 +0.3**
GKP Gorka Klasztor 20.37 141 P **P 22 24 58.0 +0.3**
RUE Ruedersdorf 20.47 148 *e*P **P 22 24 58.3 -0.4**
comp=Z,679nm,1.8s
RUE Ruedersdorf 20.47 148 *e*P **P 22 24 58.3 -0.5**
comp=Z,679nm,1.8s
CLZ Clausthal 20.55 154 *e*P **P 22 25 00.5 +0.9**
comp=Z,91nm,1.2s
CLZ Clausthal 20.55 154 *e*P **P 22 25 00.5 +0.9**
CLZ pmax pmax
comp=Z,91nm,1.2s
IIGN Ignalina 20.58 125 *e*P **P 22 24 59.4 -0.5**
IIGN AMB AMB 22 25 07.7
comp=Z,68nm,2.2s
IIGN Ignalina 20.58 125 *e*P **P 22 24 59.4 -0.5**
comp=Z,68nm,2.2s,SNR=33
IDID Didziasalis 20.75 124 *e*P **P 22 25 01.1 -0.6**
IDID AMB AMB 22 25 08.2
comp=Z,34nm,1.4s
IDID Didziasalis 20.75 124 *e*P **P 22 25 01.1 -0.7**
comp=Z,34nm,1.4s,SNR=33
SUW Suwalki 21.01 131 *e*P **P 22 25 04.2 -0.4**
SUW *ep*P 22 25 06.3
SUW *e* 22 25 08.8
SUW *e*S **S 22 29 03.8 +5.6**
SUW LMZ 22 32 05.0
comp=Z,7μm,24.2s
SUW Suwalki 21.01 131 *e*P **P 22 25 03.8 -0.8**
comp=Z,481nm,1.1s,mb5.7
SUW Suwalki 21.01 131 *e*P **P 22 25 04.2 -0.4**
SUW *e* 22 25 08.8
SUW *e*S **S 22 29 03.8 +5.6**
SUW MLR MLR
comp=Z,7μm,24.2s,MS5.0
SUW Suwalki 21.01 131 *e*P **P 22 25 03.8 -0.8**
comp=Z,481nm,1.1s,mb5.7
BEBN Eben Emael 21.02 163 P **P 22 25 04.5 -0.1**
comp=Z,42nm,1.4s,mb4.6
HGN Heimansgroeve 21.07 162 *e*P **P 22 25 05.1 -0.1**
comp=Z,110nm,1.0s,mb5.2
HGN Heimansgroeve 21.07 162 *e*S **S 22 29 00.1 +0.6**
HGN Heimansgroeve 21.07 162 *e*P **P 22 25 05.1 -0.2**
comp=Z,110nm,1.0s,mb5.2
NACGM Naroch 21.13 125 *e*P **P 22 25 04.0 -1.9**
NACGM Naroch 21.13 125 *e*P **P 22 25 04.0 -1.9**
SNF Seneffe 21.18 165 P **P 22 25 06.1 -0.3**
comp=Z,52nm,2.1s,mb4.5
MEM Membach 21.23 162 P **P 22 25 07.2 +0.2**
comp=Z,52nm,1.3s,mb4.7
BCLA Clavier 21.35 163 P **P 22 25 08.2 -0.1**
comp=Z,109nm,1.9s,mb4.9
NEUB Neuenburg 21.38 152 *e*P **P 22 25 09.1 +0.6**
comp=Z,216nm,1.2s,mb5.4
CLL Collm 21.47 150 *e*P **P 22 25 09.7 +0.2**
comp=Z,116nm,1.1s,mb5.1
CLL Collm 21.47 150 *i* P **P 22 25 08.8 -0.7**
comp=Z,116nm,1.1s,mb5.1
CLL *e*S **S 22 29 12.0 +4.7**
CLL LR LR
comp=Z,4μm,21.6s,MS4.8
CLL Collm 21.47 150 *i* P **P 22 25 08.8 -0.7**
CLL *e*S **S 22 29 12.0 +4.7**
CLL pmax pmax
comp=Z,116nm,1.1s,mb5.1
CLL MLR MLR
comp=Z,4μm,21.6s,MS4.8
CLL Collm 21.47 150 *i* P **P 22 25 08.8 -0.7**
comp=Z,10.0nm,1.1s,mb4.1
CLL *i* P(2) 22 25 11.5
comp=Z,47nm,1.1s
CLL *i* P(3) 22 25 16.0
comp=Z,116nm,1.1s
CLL *e*Plp 22 25 18.0
comp=N,1μm,15.2s
CLL *e*Plp 22 25 18.0
comp=E,400nm,12.2s
CLL *e*Plp 22 25 18.0
comp=Z,2μm,13.0s
CLL *e*S **S 22 29 12.0 +4.7**
CLL L 22 33 00.0
comp=Z,4μm,21.6s
CLL Collm 21.47 150 *i* P **P 22 25 08.8 -0.7**
comp=Z,116nm,1.1s,mb5.1
UBBA Unterbreizbach 21.50 155 *e*P **P 22 25 10.7 +0.9**
comp=Z,176nm,1.6s,mb5.1
DOU Dourbes 21.61 165 P **P 22 25 10.5 -0.5**
comp=Z,39nm,1.8s,mb4.5
BAIF Baives 21.62 165 *e*P **P 22 25 10.1 -1.0**
comp=Z,168nm,1.0s,mb5.1
BAIF Baives 21.62 165 *e*P **P 22 25 10.1 -1.0**
comp=Z,84nm,1.0s,mb5.1
BAIF Baives 21.62 165 *e*P **P 22 25 10.1 -1.0**
BAIF pmax pmax
comp=Z,84nm,1.0s,mb5.1
BAIF Baives 21.62 165 *e*P **P 22 25 10.1 -1.0**
comp=Z,84nm,1.0s,mb5.1
GIVF Givet 21.62 164 *e*P **P 22 25 10.1 -1.1**
comp=Z,136nm,1.0s,mb5.0
GIVF Givet 21.62 164 *e*P **P 22 25 10.1 -1.1**
comp=Z,68nm,1.0s,mb5.0
GIVF Givet 21.62 164 *e*P **P 22 25 10.1 -1.1**
GIVF pmax pmax
comp=Z,68nm,1.0s,mb5.0
GIVF Givet 21.62 164 *e*P **P 22 25 10.1 -1.1**
comp=Z,68nm,1.0s,mb5.0
MNK Minsk 21.77 124 *e*P **P 22 25 11.0 -1.7**
MNK *e*S **S 22 29 10.0 -3.0**
MNK pmax pmax
comp=Z,490nm,1.5s,mb5.7
MNK pmax pmax
comp=N,760nm,1.5s
MNK pmax pmax
comp=E,760nm,1.7s
MNK MLR MLR
comp=E,14μm,18.0s
MNK MLR MLR
comp=Z,29μm,18.0s,MS5.7
MNK Minsk 21.77 124 *e*P **P 22 25 11.0 -1.7**
comp=Z,760nm,1.5s,mb5.9
MNK *e*S **S 22 29 10.0 -3.0**
comp=Z,29μm,18.0s
MICGM Minsk 21.78 124 *e*P **P 22 25 11.0 -1.8**
MOX Moxa 21.90 153 *e*P **P 22 25 13.1 -1.0**
comp=Z,383nm,1.9s,mb5.5
MOX *e*S **S 22 29 19.0 +3.4**
MOX
comp=Z,1μm,23.0s
MOX Moxa 21.90 153 *e*P **P 22 25 14.7 +0.6**
comp=Z,217nm,1.4s,mb5.4
MOX Moxa 21.90 153 *e*P **P 22 25 13.1 -1.0**
MOX *e*S **S 22 29 19.0 +3.4**
MOX pmax pmax
comp=Z,383nm,1.9s,mb5.5
MOX MLR MLR
comp=Z,1μm,23.0s,MS4.3
MOX Moxa 21.90 153 *e*P **P 22 25 13.1 -1.0**
comp=Z,383nm,1.9s,mb5.5
FBE Freiberg 21.90 149 *e*P **P 22 25 14.4 +0.2**
comp=Z,243nm,1.2s,mb5.5
BRG Berggiesshubel 22.05 149 *e*P **P 22 25 15.6 -0.1**
comp=Z,214nm,1.8s,mb5.3
BRG Berggiesshubel 22.05 149 *i* P **P 22 25 15.9 +0.2**
comp=Z,25nm,1.1s,mb4.5
BRG *i* 22 25 22.3
comp=Z,77nm,1.2s
BRG S **S 22 29 07.0 -12**
BRG
comp=N,4μm,21.7s
BRG
comp=E,2μm,17.1s
BRG
comp=Z,4μm,21.7s
BRG Berggiesshubel 22.05 149 *i* P **P 22 25 15.9 +0.2**
BRG *i* 22 25 22.3
BRG S **S 22 29 07.0 -12**
BRG pmax pmax
comp=Z,15nm,1.1s,mb4.3
BRG Berggiesshubel 22.05 149 *i* P **P 22 25 15.9 +0.2**
comp=Z,15nm,1.1s,mb4.3
WAR Warsaw 22.14 136 *e*P **P 22 25 15.5 -1.2**
WAR *ep*P 22 25 17.6
WAR *e* 22 25 24.3
WAR LMZ 22 33 25.9
comp=Z,10μm,20.9s
WAR Warsaw 22.14 136 *e*P **P 22 25 15.5 -1.2**
WAR *e**PP 22 25 17.6
WAR *e* 22 25 24.3
WAR MLR MLR
comp=Z,10μm,20.9s,MS5.2
WAR Warsaw 22.14 136 *e*P **P 22 25 15.5 -1.2**
WLF Walferdange 22.18 162 P **P 22 25 19.4 +2.3**
comp=Z,74nm,2.0s,mb4.8
WLF Walferdange 22.18 162 *e*P **P 22 25 17.7 +0.5**
comp=Z,127nm,1.5s,mb5.1
WLF LR LR
comp=Z,4μm,20.0s,MS4.9
WLF Walferdange 22.18 162 *e*P **P 22 25 17.7 +0.5**
WLF pmax pmax
comp=Z,127nm,1.5s,mb5.1
WLF MLR MLR
comp=Z,4μm,20.0s,MS4.9
WLF Walferdange 22.18 162 *e*P **P 22 25 17.7 +0.5**
comp=Z,127nm,1.5s,mb5.1
WERD Werda 22.20 151 *e*P **P 22 25 17.6 +0.3**
comp=Z,143nm,1.4s,mb5.2
RUP Ruppelstein 22.24 161 P **P 22 25 19.3 +1.5**
RUP Ruppelstein 22.24 161 P **P 22 25 19.3 +1.5**
TANN Tannenbergstha 22.25 151 *e*P **P 22 25 18.4 +0.5**
comp=Z,108nm,1.2s,mb5.2
GUNZ Gunzen 22.28 151 *e*P **P 22 25 18.6 +0.4**
comp=Z,319nm,1.9s,mb5.4
WERN Wernitzgruen 22.36 151 *e*P **P 22 25 19.7 +0.6**
comp=Z,270nm,1.4s,mb5.5
NKC Novy Kostel 22.43 151 *e*P **P 22 25 19.8 +0.1**
NKC *e* 22 25 22.8
NKC *e*S **S 22 29 30.1 +4.2**
NKC MLR MLR
comp=Z,4μm,14.9s,MS5.0
NKC Novy Kostel 22.43 151 *e*P **P 22 25 19.8 +0.1**
NKC *ep*P 22 25 22.8
NKC *e*S **S 22 29 30.1 +4.2**
NKC AMS AMS 22 35 50.0
comp=Z,4μm,14.9s
NKC Novy Kostel 22.43 151 *e*P **P 22 25 19.8 +0.1**
PVCC Panska Ves 22.49 148 P **P 22 25 22.6 +2.2**
PVCC Panska Ves 22.49 148 P **P 22 25 22.6 +2.2**
PVCC Panska Ves 22.49 148 *e*P **P 22 25 20.1 -0.3**
PVCC *ep*P 22 25 23.0
PVCC *e*S **S 22 29 34.3 +7.3**
PVCC AMS AMS 22 34 30.0
comp=Z,3μm,15.8s
KSP Ksiaz 22.49 145 *e*P **P 22 25 20.2 -0.3**
KSP *ep*P 22 25 23.2
KSP *e* 22 25 27.3
KSP *e*S **S 22 29 36.7 +10**
KSP LMZ 22 32 26.7
comp=Z,9μm,27.5s
KSP Ksiaz 22.49 145 P **P 22 25 21.3 +0.8**
KSP Ksiaz 22.49 145 P **P 22 25 21.3 +0.8**
TOD Tromm 22.53 158 *e*P **P 22 25 22.0 +1.1**
TOD Tromm 22.53 158 *e*P **P 22 25 22.0 +1.1**
TOD Tromm 22.53 158 *e*P **P 22 25 22.0 +1.1**
FLN La Foliniere 22.64 174 *e*P **P 22 25 20.7 -1.3**
comp=Z,524nm,1.4s,mb5.5,baz=356
FLN *e*MLR MLR
comp=Z,5μm,22.0s,MS4.6
FLN La Foliniere 22.64 174 *e*P **P 22 25 20.7 -1.3**
comp=Z,262nm,1.4s,mb5.5
FLN LR LR
comp=Z,5μm,22.0s,MS4.9
FLN La Foliniere 22.64 174 *e*P **P 22 25 20.7 -1.3**
FLN pmax pmax
comp=Z,262nm,1.4s,mb5.5
FLN MLR MLR
comp=Z,5μm,22.0s,MS4.9
FLN La Foliniere 22.64 174 *e*P **P 22 25 20.7 -1.3**
comp=Z,262nm,1.4s,mb5.5
UPC Upice 22.76 145 *e*P **P 22 25 23.8 +0.5**
UPC *e* 22 25 26.1
UPC Upice 22.76 145 *e*P **P 22 25 23.8 +0.5**
UPC *ep*P 22 25 26.1
UPC Upice 22.76 145 *e*P **P 22 25 23.8 +0.5**
GRA1 Grafenberg Arr 22.77 154 *e*P **P 22 25 24.1 +0.7**
comp=Z,182nm,1.3s,mb5.3
GRA1 LR LR
comp=Z,2μm,21.2s,MS4.5
GRA1 Grafenberg Arr 22.77 154 *e*P **P 22 25 24.1 +0.7**
comp=Z,182nm,1.3s,mb5.3
GRF Grafenberg Arr 22.77 154 *e*P **P 22 25 24.1 +0.7**
comp=Z,182nm,1.3s,mb5.3
GRF *e*L 22 33 46.1
comp=Z,2μm,21.2s
GRF Grafenberg Arr 22.77 154 *e*P **P 22 25 24.1 +0.7**
GRF pmax pmax
comp=Z,182nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,2μm,21.2s,MS4.5
GRF Grafenberg Arr 22.77 154 *e*P **P 22 25 24.1 +0.7**
GRF pmax pmax
comp=Z,182nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,2μm,21.2s,MS4.5
GRF Grafenberg Arr 22.77 154 *e*P **P 22 25 24.1 +0.7**
comp=Z,182nm,1.3s,mb5.3
GRFO Grafenberg 22.77 154 *e*P **P 22 25 24.4 +1.0**
comp=Z,146nm,1.3s,mb5.2
GRFO Grafenberg 22.77 154 *e*P **P 22 25 24.5 +1.1**
GRFO pmax pmax
comp=Z,146nm,1.3s,mb5.2
LDF La Druitiere 22.82 173 *e*P **P 22 25 22.7 -1.2**
comp=Z,169nm,1.2s,mb5.0
LDF La Druitiere 22.82 173 *e*P **P 22 25 22.7 -1.2**
comp=Z,85nm,1.2s,mb5.0
LDF La Druitiere 22.82 173 *e*P **P 22 25 22.7 -1.2**
LDF pmax pmax
comp=Z,85nm,1.2s,mb5.0
LDF La Druitiere 22.82 173 *e*P **P 22 25 22.7 -1.2**
comp=Z,85nm,1.2s,mb5.0
ROTZ Rotzenmuhle 22.84 152 *e*P **P 22 25 24.6 +0.4**
comp=Z,61nm,1.1s,mb4.9
SIND Sindeldorf 22.89 157 P **P 22 25 26.8 +2.2**
DPC Dobruska-Polom 22.97 145 P **P 22 25 24.7 -0.8**
DPC Dobruska-Polom 22.97 145 P **P 22 25 24.7 -0.8**
DPC Dobruska-Polom 22.97 145 *e*P **P 22 25 24.0 -1.5**
DPC *ep*P 22 25 27.7
DPC *e*S **S 22 29 42.8 +7.3**
DPC AMS AMS 22 35 50.0
comp=Z,5μm,13.8s
DPC Dobruska-Polom 22.97 145 P **P 22 25 24.7 -0.8**
GRR Gorron 23.00 175 *e*P **P 22 25 24.2 -1.6**
comp=Z,358nm,1.2s,mb5.4
GRR Gorron 23.00 175 *e*P **P 22 25 24.2 -1.6**
comp=Z,179nm,1.2s,mb5.4
GRR Gorron 23.00 175 *e*P **P 22 25 24.2 -1.6**
GRR pmax pmax
comp=Z,179nm,1.2s,mb5.4
GRR Gorron 23.00 175 *e*P **P 22 25 24.2 -1.6**
comp=Z,179nm,1.2s,mb5.4
ROSF Rostrenen 23.00 179 *e*P **P 22 25 24.1 -1.8**
comp=Z,341nm,1.2s,mb5.4
ROSF Rostrenen 23.00 179 *e*P **P 22 25 24.1 -1.8**
comp=Z,170nm,1.2s,mb5.3
ROSF Rostrenen 23.00 179 *e*P **P 22 25 24.1 -1.8**
ROSF pmax pmax
comp=Z,170nm,1.2s,mb5.3
ROSF Rostrenen 23.00 179 *e*P **P 22 25 24.1 -1.8**
comp=Z,170nm,1.2s,mb5.4
PRU Pruhonice 23.00 148 *e*P **P 22 25 26.8 +0.9**
PRU *e* 22 25 29.4
PRU *e*S **S 22 29 38.5 +2.5**
PRU MLR MLR
comp=Z,2μm,12.5s,MS4.7
PRU Pruhonice 23.00 148 *e*P **P 22 25 26.8 +0.9**
PRU *ep*P 22 25 29.4
PRU *e*S **S 22 29 38.5 +2.5**
PRU AMS AMS 22 36 10.0
comp=Z,2μm,12.5s
LANF Langenberg 23.03 160 *e*P **P 22 25 25.9 -0.3**
LANF Langenberg 23.03 160 *e*P **P 22 25 25.9 -0.3**
LANF Langenberg 23.03 160 *e*P **P 22 25 25.9 -0.3**
BST Brest 23.03 180 *e*P **P 22 25 26.3 +0.1**
BST Brest 23.03 180 *e*P **P 22 25 26.3 +0.1**
SGMF Saint Gilles 23.09 177 *e*P **P 22 25 25.3 -1.5**
comp=Z,185nm,1.1s,mb5.1
SGMF Saint Gilles 23.09 177 *e*P **P 22 25 25.3 -1.5**
comp=Z,93nm,1.1s,mb5.1
SGMF Saint Gilles 23.09 177 *e*P **P 22 25 25.3 -1.5**
SGMF pmax pmax
comp=Z,93nm,1.1s,mb5.1
SGMF Saint Gilles 23.09 177 *e*P **P 22 25 25.3 -1.5**
comp=Z,93nm,1.1s,mb5.1
MEZF Maizieres J'vi 23.23 164 *e*P **P 22 25 28.2 -0.1**
comp=Z,687nm,1.7s,mb5.5
MEZF Maizieres J'vi 23.23 164 *e*P **P 22 25 28.2 -0.1**
comp=Z,687nm,1.7s,mb5.8
MEZF Maizieres J'vi 23.23 164 *e*P **P 22 25 28.2 -0.1**
comp=Z,344nm,1.7s,mb5.5
QUIF Quistinic 23.42 178 *e*P **P 22 25 29.3 -1.0**
comp=Z,408nm,1.3s,mb5.4
QUIF Quistinic 23.42 178 *e*P **P 22 25 29.3 -1.0**
comp=Z,204nm,1.3s,mb5.4
QUIF Quistinic 23.42 178 *e*P **P 22 25 29.3 -1.0**
QUIF pmax pmax
comp=Z,204nm,1.3s,mb5.4
QUIF Quistinic 23.42 178 *e*P **P 22 25 29.3 -1.0**
comp=Z,204nm,1.3s,mb5.4
LBG Lerchenberg 23.46 158 P **P 22 25 30.8 +0.1**
LBG Lerchenberg 23.46 158 P **P 22 25 30.8 +0.1**
MOS Moscow 23.52 109 *e*P **P 22 25 29.5 -1.8**
MOS *e* 22 25 56.6
MOS *e*S **S 22 29 41.6 -2.8**
MOS pmax pmax
comp=Z,206nm,1.8s,mb5.3
MOS MLR MLR
comp=Z,12μm,15.0s,MS5.5
MOS MLR MLR
comp=N,10μm,15.0s
MOS Moscow 23.52 109 *e*P **P 22 25 29.5 -1.8**
comp=N,206nm,1.8s,mb5.3
MOS *e*S **S 22 29 41.6 -2.8**
comp=N,10μm,15.0s
SFTF Sexfontaines 23.53 165 *e*P **P 22 25 31.5 +0.1**
comp=N,634nm,1.6s,mb5.5,baz=350
SFTF Sexfontaines 23.53 165 *e*P **P 22 25 31.5 +0.1**
comp=N,634nm,1.6s,mb5.8
SFTF Sexfontaines 23.53 165 *e*P **P 22 25 31.5 +0.1**
comp=N,317nm,1.6s,mb5.5
CDF Champ du Feu 23.54 161 *e*P **P 22 25 30.2 -1.3**
comp=N,471nm,1.8s,mb5.3
CDF Champ du Feu 23.54 161 *e*P **P 22 25 30.2 -1.3**
comp=N,236nm,1.8s,mb5.3
CDF Champ du Feu 23.54 161 *e*P **P 22 25 30.2 -1.3**
CDF pmax pmax
comp=Z,236nm,1.8s,mb5.3
CDF Champ du Feu 23.54 161 *e*P **P 22 25 30.2 -1.3**
comp=Z,236nm,1.8s,mb5.3
WET Wettzell 23.55 151 *e*P **P 22 25 32.6 +1.0**
comp=Z,153nm,1.4s,mb5.2
WET Wettzell 23.55 151 *e*P **P 22 25 32.6 +1.0**
WET pmax pmax
comp=Z,153nm,1.4s,mb5.2
THEF They Montfort 23.59 163 *e*P **P 22 25 31.7 -0.3**
THEF They Montfort 23.59 163 *e*P **P 22 25 31.7 -0.3**
THEF They Montfort 23.59 163 *e*P **P 22 25 31.7 -0.3**
KHC Kasperske Hory 23.67 150 *e*P **P 22 25 32.3 -0.5**
comp=Z,180nm,1.7s,mb5.2
KHC Kasperske Hory 23.67 150 *e*P **P 22 25 32.4 -0.3**
KHC *e* 22 25 35.8
KHC MLR MLR
comp=Z,2μm,15.9s,MS4.7
KHC Kasperske Hory 23.67 150 *e*P **P 22 25 32.4 -0.3**
KHC *ep*P 22 25 35.8
KHC *es*P *s*P 22 25 39.5 +2.5
KHC *e*S **S 22 29 56.3 +9.4**
KHC AMS AMS 22 36 10.0
comp=Z,2μm,15.9s
KHC Kasperske Hory 23.67 150 *e*P **P 22 25 32.4 -0.3**
ECH Echery 23.72 161 *e*P **P 22 25 32.4 -0.7**
ECH Echery 23.72 161 *e*P **P 22 25 33.0 -0.1**
comp=Z,218nm,1.8s,mb5.3
ECH LR LR
comp=Z,3μm,21.0s,MS4.7
ECH Echery 23.72 161 *e*P **P 22 25 33.0 -0.1**
ECH pmax pmax
comp=Z,218nm,1.8s,mb5.3
ECH MLR MLR
comp=Z,3μm,21.0s,MS4.7
ECH Echery 23.72 161 *e*P **P 22 25 32.4 -0.7**
OBN Obninsk 23.73 112 *e*P **P 22 25 32.3 -0.9**
comp=Z,108nm,1.0s,mb5.2
OBN LR LR
comp=Z,7μm,22.0s,MS5.1
OBN Obninsk 23.73 112⇑ *e*P **P 22 25 34.3 +1.1**
OBN *e*S **S 22 29 48.1 +0.3**
OBN pmax pmax
comp=Z,125nm,2.5s,mb4.9
OBN MLR MLR
comp=Z,8μm,16.0s,MS5.3
OBN Obninsk 23.73 112 *e*P **P 22 25 32.3 -0.9**
comp=Z,108nm,1.0s,mb5.2
OBN *e*S **S 22 29 48.1 +0.3**
comp=Z,8μm,16.0s
BFO Black Forest 23.73 159 *e*P **P 22 25 34.0 +0.7**
comp=Z,178nm,1.2s,mb5.4
BFO Black Forest 23.73 159 *e*P **P 22 25 34.0 +0.7**
BFO pmax pmax
comp=Z,178nm,1.2s,mb5.4
BFO Black Forest 23.73 159 *e*P **P 22 25 34.0 +0.7**
comp=Z,178nm,1.2s,mb5.4
MORC Moravsky Berou 23.75 144 *e*P **P 22 25 32.1 -1.4**

comp=Z,45nm,1.0s,mb4.8
MORC Moravsky Berou 23.75 144 ⇑P **P 22 25 32.4 -1.0**
MORC Moravsky Berou 23.75 144 ⇑*i*P **P 22 25 32.4 -1.0**
MORC Moravsky Berou 23.75 144 P **P 22 25 32.4 -1.0**
OJC Ojcow 23.78 140 *e*P **P 22 25 33.2 -0.5**
OJC *e*S **S 22 29 53.3 +4.7**
OJC L 22 35 19.0
comp=Z,14nm,18.2s
OJC Ojcow 23.78 140 *e*P **P 22 25 32.6 -1.0**
comp=Z,120nm,1.0s,mb5.3
OJC Ojcow 23.78 140 *e*P **P 22 25 33.2 -0.5**
OJC *e*S **S 22 29 53.3 +4.7**
OJC MLR MLR
comp=Z,14µm,18.2s,MS5.5
OJC Ojcow 23.78 140 *e*P **P 22 25 33.2 -0.5**
comp=Z,14µm,18.2s
OKC Ostrava-Krasne 23.81 143 P **P 22 25 35.8 +1.8**
OKC Ostrava-Krasne 23.81 143 P **P 22 25 35.8 +1.8**
OKC Ostrava-Krasne 23.81 143 *e*P **P 22 25 32.3 -1.7**
OKC *e*pP 22 25 35.6
OKC AMS AMS 22 36 10.0
comp=Z,7µm,13.9s
LIBD Limburg 23.83 160 *e*P **P 22 25 34.8 +0.6**
LIBD Limburg 23.83 160 *e*P **P 22 25 34.8 +0.6**
LIBD Limburg 23.83 160 *e*P **P 22 25 34.8 +0.6**
TREC Trest 23.84 147 *e*P **P 22 25 32.0 -2.2**
TREC *e*S **S 22 29 56.2 +6.6**
TREC MLR MLR
comp=Z,3µm,12.6s,MS5.0
TREC Trest 23.84 147 *e*P **P 22 25 32.0 -2.2**
TREC *e*S **S 22 29 56.2 +6.6**
TREC AMS AMS 22 36 50.0
comp=Z,3µm,12.6s
TREC Trest 23.84 147 *e*P **P 22 25 32.0 -2.2**
comp=Z,3µm,12.6s
HAU Haudompre 23.84 163 *e*P **P 22 25 33.8 -0.5**
HAU *e*MLR MLR
comp=Z,6µm,21.5s,MS4.7
HAU Haudompre 23.84 163 *e*P **P 22 25 33.8 -0.5**
HAU LR LR
comp=Z,6µm,21.5s,MS5.0
HAU Haudompre 23.84 163 *e*P **P 22 25 33.8 -0.5**
HAU MLR MLR
comp=Z,6µm,21.5s,MS5.0
HAU Haudompre 23.84 163 *e*P **P 22 25 33.8 -0.5**
GEC2 GERESS Array S 23.97 150 *e*P **P 22 25 36.6 +1.2**
comp=Z,102nm,1.2s,mb5.1
GEC2 GERESS Array S 23.97 150 *e*P **P 22 25 36.6 +1.2**
GEC2 pmax pmax
comp=Z,102nm,1.2s,mb5.1
GERES GERESS Array B 23.97 150 P **P 22 25 34.9 -0.5**
comp=Z,12nm,0.8s,mb4.4,baz=360,slow=12,SNR=53
GERES GERESS Array B 23.97 150 P **P 22 25 34.9 -0.5**
GERES GERESS Array B 23.97 150 P **P 22 25 34.9 -0.5**
SPAK Spaichingen-Ko 24.01 158 *e*P **P 22 25 36.1 +0.3**
SPAK Spaichingen-Ko 24.01 158 *e*P **P 22 25 36.1 +0.3**
VRAC Vranov 24.02 145 P **P 22 25 35.2 -0.7**
comp=Z,14nm,0.7s,mb4.5,baz=344,slow=8.9,SNR=19
VRAC LR LR 22 35 28.5
comp=Z,3µm,18.4s,MS4.8,baz=346,slow=38
VRAC Vranov 24.02 145 ⇓P **P 22 25 35.7 -0.2**
VRAC Vranov 24.02 145 ⇓*i*P **P 22 25 35.7 -0.2**
VRAC Vranov 24.02 145 P **P 22 25 35.7 -0.2**
KIZ Kirchzarten 24.06 160 P **P 22 25 36.3 +0.1**
KIZ Kirchzarten 24.06 160 P **P 22 25 36.3 +0.1**
KIZ Kirchzarten 24.06 160 P **P 22 25 36.3 +0.1**
MOF Molkenrain 24.07 161 *e*P **P 22 25 36.3 -0.1**
MOF Molkenrain 24.07 161 *e*P **P 22 25 36.3 -0.1**
MOF Molkenrain 24.07 161 *e*P **P 22 25 36.3 -0.1**
HINF Hinteralfeld 24.08 162 *e*P **P 22 25 35.6 -0.9**
HINF Hinteralfeld 24.08 162 *e*P **P 22 25 35.6 -0.9**
HINF Hinteralfeld 24.08 162 *e*P **P 22 25 35.6 -0.9**
FELD Feldberg im Sc 24.14 160 *e*P **P 22 25 36.9 -0.1**
FELD Feldberg im Sc 24.14 160 *e*P **P 22 25 36.9 -0.1**
FUR Furstenfeldbru 24.27 154 *e*P **P 22 25 39.6 +1.4**
comp=Z,992nm,2.3s,mb5.8
FUR Furstenfeldbru 24.27 154 *e*P **P 22 25 39.6 +1.4**
HYF Humbligny 24.28 169 *e*P **P 22 25 38.4 +0.1**
HYF Humbligny 24.28 169 *e*P **P 22 25 38.4 +0.1**
RES Resolute Bay 24.35 320 P **P 22 25 37.4 -1.3**
comp=Z,19nm,1.1s,mb4.5,baz=35,slow=5.5,SNR=3.5
RES LR LR 22 34 40.3
comp=Z,9µm,19.7s,MS5.2,baz=33,slow=35
RES Resolute Bay 24.35 320 *e*P **P 22 25 37.5 -1.2**
RES Resolute Bay 24.35 320 *e*P **P 22 25 37.5 -1.2**
RES Resolute Bay 24.35 320 *e*P **P 22 25 37.5 -1.2**
LOR Lormes 24.36 167 *e*P **P 22 25 37.9 -1.1**
comp=Z,131nm,0.9s,mb5.1
LOR *e*MLR MLR
comp=Z,3µm,22.8s,MS4.4
LOR Lormes 24.36 167 *e*P **P 22 25 37.9 -1.1**
comp=Z,66nm,0.9s,mb5.1
LOR LR LR
comp=Z,3µm,22.8s,MS4.7
LOR Lormes 24.36 167 *e*P **P 22 25 37.9 -1.1**
LOR pmax pmax
comp=Z,66nm,0.9s,mb5.1
LOR MLR MLR
comp=Z,3µm,22.8s,MS4.7
LOR Lormes 24.36 167 *e*P **P 22 25 37.9 -1.1**
comp=Z,66nm,0.9s,mb5.1
BBS Basel-Blauen 24.50 161 *e*P **P 22 25 42.3 +2.1**
BBS Basel-Blauen 24.50 161 *e*P **P 22 25 42.3 +2.1**
BBS Basel-Blauen 24.50 161 *e*P **P 22 25 42.3 +2.1**
LOMF Lomont 24.54 162 *e*P **P 22 25 40.8 +0.2**
LOMF Lomont 24.54 162 *e*P **P 22 25 40.8 +0.2**
LOMF Lomont 24.54 162 *e*P **P 22 25 40.8 +0.2**
SSF Saint Saulge 24.54 167 *e*P **P 22 25 39.5 -1.2**
comp=Z,143nm,0.9s,mb5.2
SSF Saint Saulge 24.54 167 *e*P **P 22 25 39.5 -1.2**
comp=Z,71nm,0.9s,mb5.2
SSF Saint Saulge 24.54 167 *e*P **P 22 25 39.5 -1.2**
SSF pmax pmax
comp=Z,71nm,0.9s,mb5.2
SSF Saint Saulge 24.54 167 *e*P **P 22 25 39.5 -1.2**
comp=Z,71nm,0.9s,mb5.2
NIE Niedzica 24.65 140 *e*P **P 22 25 45.2 +3.6**
NIE Niedzica 24.65 140 *e*P **P 22 25 45.2 +3.6**
AVF Avril sur Loir 24.80 168 *e*P **P 22 25 42.5 -0.5**
comp=Z,289nm,1.2s,mb5.4
AVF Avril sur Loir 24.80 168 *e*P **P 22 25 42.5 -0.5**
comp=Z,145nm,1.2s,mb5.4
AVF Avril sur Loir 24.80 168 *e*P **P 22 25 42.5 -0.5**
AVF pmax pmax
comp=Z,145nm,1.2s,mb5.4
AVF Avril sur Loir 24.80 168 *e*P **P 22 25 42.5 -0.5**
comp=Z,145nm,1.2s,mb5.4
MFF Saint Martin d 24.81 174 *e*P **P 22 25 41.9 -1.2**
comp=Z,92nm,0.8s,mb5.1
MFF Saint Martin d 24.81 174 *e*P **P 22 25 41.9 -1.2**
comp=Z,46nm,0.8s,mb5.1
MFF Saint Martin d 24.81 174 *e*P **P 22 25 41.9 -1.2**
MFF pmax pmax
comp=Z,46nm,0.8s,mb5.1
MFF Saint Martin d 24.81 174 *e*P **P 22 25 41.9 -1.2**
comp=Z,46nm,0.8s,mb5.1
RJOB Jochberg 24.91 152 *e*P **P 22 25 45.0 +1.0**
comp=Z,114nm,1.5s,mb5.2
DAVA Damuels 24.95 157 ⇑*i*P **P 22 25 45.8 +1.4**
comp=Z,70nm,1.0s,mb5.2
KWP Kalwaria Pacla 24.96 136 *e*P **P 22 25 47.6 +3.1**
KWP LMZ 22 34 30.8
comp=Z,7µm,25.7s
KWP Kalwaria Pacla 24.96 136 *e*P **P 22 25 44.5 0.0**
comp=Z,686nm,1.9s,mb5.9
KWP LR LR
comp=Z,8µm,21.0s,MS5.2
KWP Kalwaria Pacla 24.96 136 *e*P **P 22 25 47.6 +3.1**
KWP MLR MLR
comp=Z,7µm,25.7s,MS5.0
KWP Kalwaria Pacla 24.96 136 ⇓*i*P **P 22 25 45.0 +0.5**
KWP Kalwaria Pacla 24.96 136 *e*P **P 22 25 44.5 0.0**
comp=Z,686nm,1.9s,mb5.9
SMF Signal de Mont 24.98 167 *e*P **P 22 25 43.4 -1.3**
comp=Z,425nm,1.3s,mb5.5
SMF Signal de Mont 24.98 167 *e*P **P 22 25 43.4 -1.3**
comp=Z,212nm,1.3s,mb5.5
SMF Signal de Mont 24.98 167 *e*P **P 22 25 43.4 -1.3**
SMF pmax pmax
comp=Z,212nm,1.3s,mb5.5
SMF Signal de Mont 24.98 167 *e*P **P 22 25 43.4 -1.3**
comp=Z,212nm,1.3s,mb5.5
BGF Bois d'Agland 25.00 169 *e*P **P 22 25 43.7 -1.1**
comp=Z,154nm,0.8s,mb5.3
BGF Bois d'Agland 25.00 169 *e*P **P 22 25 43.7 -1.1**
comp=Z,77nm,0.8s,mb5.3
BGF Bois d'Agland 25.00 169 *e*P **P 22 25 43.7 -1.1**
BGF pmax pmax
comp=Z,77nm,0.8s,mb5.3
BGF Bois d'Agland 25.00 169 *e*P **P 22 25 43.7 -1.1**
comp=Z,77nm,0.8s,mb5.3
MOA Molln 25.03 150 ⇑*i*P **P 22 25 44.9 -0.2**
comp=Z,80nm,1.4s,mb5.0
MOA Molln 25.03 150 P **P 22 25 44.9 -0.2**
comp=Z,80nm,1.4s,mb5.0
MOTA Moosalm 25.05 155 ⇑*i*P **P 22 25 45.7 +0.4**
comp=Z,79nm,1.1s,mb5.1
MOTA Moosalm 25.05 155 P **P 22 25 45.7 +0.4**
comp=Z,79nm,1.1s,mb5.1
KOLL Kolacno 25.06 143 *e*P **P 22 25 44.7 -0.7**
KOLL Kolacno 25.06 143 *e*P **P 22 25 44.7 -0.7**
KOLL Kolacno 25.06 143 *e*P **P 22 25 44.7 -0.7**
KOLL Kolacno 25.06 143 *e*P **P 22 25 44.7 -0.7**
LVV L'vov 25.09 134 *e*P **P 22 25 49.4 +3.8**
WATA Walderalm 25.12 154 ⇑*i*P **P 22 25 45.8 -0.2**
comp=Z,68nm,1.1s,mb5.1
WATA Walderalm 25.12 154 P **P 22 25 45.8 -0.2**
comp=Z,68nm,1.1s,mb5.1
ZST Bratislava 25.18 145 *e*P **P 22 25 46.1 -0.4**
ZST Bratislava 25.18 145 *e*P **P 22 25 46.1 -0.4**
ZST Bratislava 25.18 145 *e*P **P 22 25 46.1 -0.4**
ZST Bratislava 25.18 145 *e*P **P 22 25 46.1 -0.4**
CABF La Chapelle 25.20 163 *e*P **P 22 25 45.9 -0.8**
comp=Z,212nm,1.2s,mb5.2
CABF La Chapelle 25.20 163 *e*P **P 22 25 45.9 -0.8**
comp=Z,106nm,1.2s,mb5.2
CABF La Chapelle 25.20 163 *e*P **P 22 25 45.9 -0.8**
CABF pmax pmax
comp=Z,106nm,1.2s,mb5.2
CABF La Chapelle 25.20 163 *e*P **P 22 25 45.9 -0.8**
comp=Z,106nm,1.2s,mb5.2
WTTA Wattenberg 25.20 154 ⇑*i*P **P 22 25 48.7 +2.1**
comp=Z,148nm,1.2s,mb5.4
CONA Conrad Observa 25.22 147 ⇓*i*P **P 22 25 46.7 -0.1**
comp=Z,173nm,1.2s,mb5.5
CONA Conrad Observa 25.22 147 P **P 22 25 46.7 -0.1**
comp=Z,173nm,1.2s,mb5.5
VYHS Vyhne 25.23 143 *e*P **P 22 25 44.3 -2.6**
VYHS P pP 22 25 47.8 -2.1
VYHS Vyhne 25.23 143 *e*P **P 22 25 44.3 -2.6**
VYHS Vyhne 25.23 143 *e*P **P 22 25 44.3 -2.6**
TCF Toulx Ste Croi 25.23 170 *e*P **P 22 25 45.6 -1.3**
comp=Z,200nm,1.0s,mb5.3
TCF Toulx Ste Croi 25.23 170 *e*P **P 22 25 45.6 -1.3**
comp=Z,100nm,1.0s,mb5.3
TCF Toulx Ste Croi 25.23 170 *e*P **P 22 25 45.6 -1.3**
TCF pmax pmax
comp=Z,100nm,1.0s,mb5.3
TCF Toulx Ste Croi 25.23 170 *e*P **P 22 25 45.6 -1.3**
comp=Z,100nm,1.0s,mb5.3
FETA Feichten 25.32 156 ⇓*i*P **P 22 25 49.7 +2.0**
comp=Z,46nm,1.3s,mb4.8
CRVS Cervenica-Dubn 25.38 138 *e*P **P 22 25 49.6 +1.3**
CRVS Cervenica-Dubn 25.38 138 *e*P **P 22 25 49.6 +1.3**
CRVS Cervenica-Dubn 25.38 138 *e*P **P 22 25 49.6 +1.3**
DAVOX Davos/Dischmat 25.45 157 P **P 22 25 49.5 +0.7**
comp=Z,13nm,1.0s,mb4.4,baz=337,slow=9.3,SNR=11
DAVOX LR LR 22 37 05.8
comp=Z,2µm,18.4s,MS4.8,baz=358,slow=40
DAVOX Davos/Dischmat 25.45 157 P **P 22 25 49.6 +0.7**
DAVOX Davos/Dischmat 25.45 157 P **P 22 25 49.5 +0.6**
AGO Saint Agoulin 25.52 168 *e*P **P 22 25 49.2 -0.4**
AGO Saint Agoulin 25.52 168 *e*P **P 22 25 49.2 -0.4**
KOLS Kolonicke sedl 25.53 137 *e*P **P 22 25 50.1 +0.5**
KOLS Kolonicke sedl 25.53 137 *e*P **P 22 25 50.1 +0.5**
KOLS Kolonicke sedl 25.53 137 *e*P **P 22 25 50.1 +0.5**
AKASG Malin Array Be 25.56 126 P **P 22 25 47.5 -2.4**
comp=Z,21nm,0.7s,mb4.8,baz=335,slow=9.4,SNR=23
AKASG LR LR 22 35 38.1
comp=Z,8µm,19.6s,MS5.2,baz=330,slow=36
AKASG Malin Array Be 25.56 126 P **P 22 25 47.5 -2.4**
AKASG LR LR 22 35 38.1
AKASG Malin Array Be 25.56 126 P **P 22 25 47.5 -2.4**
AKASG pmax pmax
comp=Z,21nm,0.7s
AKASG MLR MLR
comp=Z,8µm,19.6s
AKASG Malin Array Be 25.56 126 P **P 22 25 47.5 -2.4**
SENIN Lac Senin/Sane 25.56 162 *e*P **P 22 25 51.8 +1.8**
comp=Z,80nm,1.1s,mb5.2
KIEV Kiev 25.57 126 *e*P **P 22 25 51.6 +1.7**
comp=Z,42nm,0.9s,mb5.0
KIEV LR LR
comp=Z,8µm,19.0s,MS5.2
KIEV Kiev 25.57 126 *e*P **P 22 25 51.6 +1.7**
KIEV pmax pmax
comp=Z,42nm,0.9s,mb5.0
KIEV MLR MLR
comp=Z,8µm,19.0s,MS5.2
KECS Kecovo 25.57 140 *e*P **P 22 25 49.7 -0.3**
KECS Kecovo 25.57 140 *e*P **P 22 25 49.7 -0.3**
KECS Kecovo 25.57 140 *e*P **P 22 25 49.7 -0.3**
SOP Sopron 25.58 147 ⇓*e*P **P 22 25 54.5 +4.4**
PLDF La Plantade 25.64 168 *e*P **P 22 25 49.4 -1.2**
PLDF La Plantade 25.64 168 *e*P **P 22 25 49.4 -1.2**
PLDF La Plantade 25.64 168 *e*P **P 22 25 49.4 -1.2**
FUORN Ofenpass-Fuorn 25.65 157 *e*P **P 22 25 52.9 +2.2**
comp=Z,43nm,1.3s,mb4.8
TUE Stuetta 25.68 158 *e*P **P 22 25 53.5 +2.5**
comp=Z,87nm,1.2s,mb5.2
TUE LR LR
comp=Z,3µm,19.0s,MS4.8
PYM Petit Puy Mans 25.82 169 *e*P **P 22 25 51.6 -0.6**
PYM Petit Puy Mans 25.82 169 *e*P **P 22 25 51.6 -0.6**
PYM Petit Puy Mans 25.82 169 *e*P **P 22 25 51.6 -0.6**
UZH Uzhgorod 25.82 137 *e*P **P 22 25 50.7 -1.5**
UZH *e* 22 25 56.2
UZH *e* 22 26 30.0
UZH *e*PPP 22 26 40.4
UZH *e*S **S 22 30 16.8 -4.5**
UZH MLR MLR
comp=N,6µm,16.0s,MS5.3
UZH MLR MLR
comp=E,5µm,16.0s,MS5.3
UZH MLR MLR
comp=Z,3µm,16.0s,MS4.9
UZH Uzhgorod 25.82 137 *e*P **P 22 25 50.7 -1.5**
ARSA Arzberg 25.82 148 ⇑*r*pP pP 22 25 55.1 -0.2
comp=Z,53nm,1.1s
ABTA Abfaltersbach 25.83 153 ⇑*i*sP sP 22 25 56.5 -0.2
comp=Z,27nm,1.6s
PSZ Piszkesteto 25.99 141 *e*P **P 22 25 55.3 +1.5**
comp=Z,90nm,1.3s,mb5.1
PSZ LR LR
comp=Z,4µm,22.0s,MS4.9
PSZ Piszkesteto 25.99 141 ⇓P **P 22 25 57.2 +3.4**
PSZ Piszkesteto 25.99 141 ⇓*i*P **P 22 25 57.2 +3.4**
PSZ Piszkesteto 25.99 141 ⇓*e*pP pP 22 25 59.4 +2.6
RJF Les Rejaudoux 26.17 171 *e*P **P 22 25 54.3 -1.2**
comp=Z,323nm,1.1s,mb5.5
RJF *e*MLR MLR
comp=Z,4µm,21.0s,MS4.6
RJF Les Rejaudoux 26.17 171 *e*P **P 22 25 54.3 -1.2**
comp=Z,161nm,1.1s,mb5.5
RJF LR LR
comp=Z,4µm,21.0s,MS4.9
RJF Les Rejaudoux 26.17 171 *e*P **P 22 25 54.3 -1.2**
RJF pmax pmax
comp=Z,161nm,1.1s,mb5.5
RJF MLR MLR
comp=Z,4µm,21.0s,MS4.9
RJF Les Rejaudoux 26.17 171 *e*P **P 22 25 54.3 -1.2**
comp=Z,161nm,1.1s,mb5.5
BUD Budapest 26.23 143 ⇓*e*pP pP 22 26 01.7 +2.7
MABI Malga Bissina 26.24 157 P **P 22 25 59.5 +3.4**
PTCC Patocco-Chiusa 26.29 152 P **P 22 26 01.4 +4.9**
TRPA Tarpa 26.34 137 ⇑*i*P **P 22 25 59.8 +2.8**
LBL Lubilhac 26.35 168 *e*P **P 22 25 56.4 -0.6**
LBL Lubilhac 26.35 168 *e*P **P 22 25 56.4 -0.6**
LPL La Plagne 26.35 163 *e*P **P 22 25 56.9 -0.1**
comp=Z,88nm,1.1s,mb4.9
LPL La Plagne 26.35 163 *e*P **P 22 25 56.9 -0.1**
comp=Z,44nm,1.1s,mb4.9
LPL La Plagne 26.35 163 *e*P **P 22 25 56.9 -0.1**
LPL pmax pmax
comp=Z,44nm,1.1s,mb4.9
LPL La Plagne 26.35 163 *e*P **P 22 25 56.9 -0.1**
comp=Z,44nm,1.1s,mb4.9
PERS Pernice 26.35 149 *i*P **P 22 26 04.4 +7.3**
LPG La Plagne 26.37 163 *e*P **P 22 25 57.3 +0.1**
comp=Z,113nm,1.2s,mb5.0
LPG La Plagne 26.37 163 *e*P **P 22 25 57.3 +0.1**
comp=Z,57nm,1.2s,mb5.0
LPG La Plagne 26.37 163 *e*P **P 22 25 57.3 +0.1**
LPG pmax pmax
comp=Z,57nm,1.2s,mb5.0
LPG La Plagne 26.37 163 *e*P **P 22 25 57.3 +0.1**
comp=Z,57nm,1.2s,mb5.0
SSB Saint Sauveur 26.39 166 *e*P **P 22 25 56.5 -0.9**
comp=Z,163nm,1.7s,mb5.3
SSB LR LR
comp=Z,3µm,22.0s,MS4.7
SSB Saint Sauveur 26.39 166 *e*P **P 22 25 56.5 -0.9**
SSB pmax pmax
comp=Z,163nm,1.7s,mb5.3
SSB MLR MLR
comp=Z,3µm,22.0s,MS4.7
SSB Saint Sauveur 26.39 166 *e*P **P 22 25 56.5 -0.9**
comp=Z,163nm,1.7s,mb5.3
LFF La Frestale 26.50 172 *e*P **P 22 25 58.0 -0.4**
comp=Z,200nm,1.2s,mb5.2
LFF La Frestale 26.50 172 *e*P **P 22 25 58.0 -0.4**
comp=Z,100nm,1.2s,mb5.2
LFF La Frestale 26.50 172 *e*P **P 22 25 58.0 -0.4**
LFF pmax pmax
comp=Z,100nm,1.2s,mb5.2
LFF La Frestale 26.50 172 *e*P **P 22 25 58.0 -0.4**
comp=Z,100nm,1.2s,mb5.2
CAF Calviac 26.58 170 *e*P **P 22 25 58.1 -1.1**
comp=Z,194nm,1.1s,mb5.2
CAF Calviac 26.58 170 *e*P **P 22 25 58.1 -1.1**
comp=Z,97nm,1.1s,mb5.2
CAF Calviac 26.58 170 *e*P **P 22 25 58.1 -1.1**
CAF pmax pmax
comp=Z,97nm,1.1s,mb5.2
CAF Calviac 26.58 170 *e*P **P 22 25 58.1 -1.1**
comp=Z,97nm,1.1s,mb5.2
RSP Reno Superiore 26.76 162 P **P 22 26 03.9 +3.1**
RSP Reno Superiore 26.76 162 P **P 22 26 03.9 +3.1**
BNI Bardonecchia 26.80 163 *e*P **P 22 26 01.7 +0.6**
comp=Z,80nm,1.3s,mb5.1
BNI LR LR
comp=Z,5µm,20.0s,MS5.1
BNI Bardonecchia 26.80 163 *e*P **P 22 26 01.7 +0.6**
BNI pmax pmax
comp=Z,80nm,1.3s,mb5.1
BNI MLR MLR
comp=Z,5µm,20.0s,MS5.1
BNI Bardonecchia 26.80 163 *e*P **P 22 26 01.7 +0.6**
comp=Z,80nm,1.3s,mb5.1
VIVF Saint-Julien-l 26.82 166 *e*P **P 22 26 01.4 +0.1**
comp=Z,297nm,1.4s,mb5.3
VIVF Saint-Julien-l 26.82 166 *e*P **P 22 26 01.4 +0.1**
comp=Z,148nm,1.4s,mb5.3
VIVF Saint-Julien-l 26.82 166 *e*P **P 22 26 01.4 +0.1**
VIVF pmax pmax
comp=Z,149nm,1.4s,mb5.3
VIVF Saint-Julien-l 26.82 166 *e*P **P 22 26 01.4 +0.1**
comp=Z,148nm,1.4s,mb5.3
LJU Ljubljana 26.83 151 *i*P **P 22 26 08.4 +7.0**
ORIF Oris-en-Rattie 26.86 164 *e*P **P 22 26 01.8 +0.1**
comp=Z,280nm,1.5s,mb5.3
ORIF *e*MLR MLR
comp=Z,6µm,22.0s,MS4.8
ORIF Oris-en-Rattie 26.86 164 *e*P **P 22 26 01.8 +0.1**
comp=Z,140nm,1.5s,mb5.3
ORIF Oris-en-Rattie 26.86 164 *e*P **P 22 26 01.8 +0.1**
ORIF pmax pmax
comp=Z,140nm,1.5s,mb5.3
ORIF Oris-en-Rattie 26.86 164 *e*P **P 22 26 01.8 +0.1**
comp=Z,140nm,1.5s,mb5.3
BMR Baia Mare 26.99 136 ⇓P **P 22 26 05.2 +2.4**
BMR Baia Mare 26.99 136 ⇓*i*P **P 22 26 05.2 +2.4**
TRI Trieste 27.04 152 ⇑*e*P **P 22 26 03.4 +0.2**
TRI S **S 22 30 41.3 +0.8**
TRI LR LR
comp=Z,2µm,21.0s,MS4.6
TRI Trieste 27.04 152 ⇑*e*P **P 22 26 03.4 +0.2**
TRI S **S 22 30 41.3 +0.8**
TRI MLR MLR
comp=Z,2µm,21.0s,MS4.6
TRI Trieste 27.04 152 ⇑*e*P **P 22 26 03.4 +0.2**
TRI S **S 22 30 41.3 +0.8**
VISS Visnje 27.11 150 *i*P **P 22 26 10.7 +6.8**
MBDF Montbardon 27.13 163 *e*P **P 22 26 04.2 +0.1**
comp=Z,240nm,1.4s,mb5.2
MBDF Montbardon 27.13 163 *e*P **P 22 26 04.2 +0.1**
comp=Z,120nm,1.4s,mb5.2
MBDF Montbardon 27.13 163 *e*P **P 22 26 04.2 +0.1**
MBDF pmax pmax
comp=Z,120nm,1.4s,mb5.2
MBDF Montbardon 27.13 163 *e*P **P 22 26 04.2 +0.1**
comp=Z,120nm,1.4s,mb5.2
BOB Bobbio (Coli) 27.38 159 P **P 22 26 10.7 +4.4**
BOB Bobbio (Coli) 27.38 159 P **P 22 26 10.7 +4.4**
SURF Saint Ours 27.38 163 *e*P **P 22 26 09.3 +3.0**
PKSM Moragy 27.38 144 P **P 22 26 14.0 +7.7**
PKSM Moragy 27.38 144 ⇓*i*P **P 22 26 05.4 -0.9**
BUR08 Bucovina Ar. S 27.40 134 *e*P **P 22 26 05.9 -0.6**
BUR08 Bucovina Ar. S 27.40 134 *e*P **P 22 26 05.9 -0.6**
BURAR Bucovina Array 27.43 134 ⇓P **P 22 26 08.5 +1.7**
BURAR Bucovina Array 27.43 134 ⇓*i*P **P 22 26 08.5 +1.7**
LASF Ste Croix 27.54 168 *e*P **P 22 26 08.1 +0.3**
comp=Z,256nm,1.4s,mb5.4
LASF Ste Croix 27.54 168 *e*P **P 22 26 08.1 +0.3**
comp=Z,128nm,1.4s,mb5.4
DRGR 27.65 138 ⇑P **P 22 26 11.6 +2.9**
DRGR 27.65 138 ⇑*i*P **P 22 26 11.6 +2.9**
SMRF Simiane la Rot 27.77 165 *e*P **P 22 26 09.4 -0.4**
comp=Z,96nm,1.4s,mb5.0
SMRF Simiane la Rot 27.77 165 *e*P **P 22 26 09.4 -0.4**
comp=Z,96nm,1.4s,mb5.2
SMRF Simiane la Rot 27.77 165 *e*P **P 22 26 09.4 -0.4**
comp=Z,48nm,1.4s,mb5.0
ERBM Eremo 27.84 157 P **P 22 26 15.1 +4.7**
TOUF Mont Tournerai 27.89 162 *e*P **P 22 26 10.9 0.0**
TOUF Mont Tournerai 27.89 162 *e*P **P 22 26 10.9 0.0**
TOUF Mont Tournerai 27.89 162 *e*P **P 22 26 10.9 0.0**
VSR Storozhevoye 27.90 113 *e*P **P 22 26 16.1 +5.2**
VSR *e*S **S 22 30 53.4 -0.6**
VSR pmax pmax
comp=N,50nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s,mb4.8
VSR pmax pmax
comp=E,40nm,1.4s
VSR smax
comp=N,110nm,5.2s
VSR smax
comp=E,180nm,5.2s
VSR smax
comp=Z,160nm,4.6s
VSR MLR MLR
comp=N,4µm,16.0s,MS5.2
VSR MLR MLR
comp=Z,7µm,16.0s,MS5.3
VSR MLR MLR
comp=E,3µm,13.0s,MS5.2
SAOF Saorge 27.94 162 *e*P **P 22 26 13.6 +2.2**
SAOF Saorge 27.94 162 *e*P **P 22 26 13.6 +2.2**
SAOF Saorge 27.94 162 *e*P **P 22 26 13.6 +2.2**
LUCF Luceram 28.01 162 *e*P **P 22 26 12.1 +0.1**
LUCF Luceram 28.01 162 *e*P **P 22 26 12.1 +0.1**
EARI Arriondas 28.04 182 P **P 22 26 10.8 -1.5**
comp=E,152nm,1.9s,mb5.3
EARI Arriondas 28.04 182 P **P 22 26 10.8 -1.5**
comp=E,152nm,1.9s,mb5.3
EPON Pontenova 28.05 185 P **P 22 26 11.8 -0.6**
comp=E,120nm,1.3s,mb5.4
EPON Pontenova 28.05 185 P **P 22 26 11.8 -0.6**
comp=E,120nm,1.3s,mb5.4
SBF Sospel 28.05 162 *e*P **P 22 26 12.9 +0.5**
comp=E,384nm,1.7s,mb5.4
SBF Sospel 28.05 162 *e*P **P 22 26 12.9 +0.5**
comp=E,192nm,1.7s,mb5.5

SBF Sospel 28.05 162 *e*P **P** **22 26 12.9 +0.5**
SBF pmax pmax
comp=Z,192nm,1.7s,mb5.5
SBF Sospel 28.05 162 *e*P **P** **22 26 12.9 +0.5**
comp=Z,192nm,1.7s,mb5.4
VLC Villacollemand 28.09 158 *e*P **P** **22 26 14.2 +1.5**
comp=Z,73nm,0.9s,mb5.3
VLC LR LR
comp=Z,2μm,19.0s,MS4.8
ELAN Lanestosa 28.11 179 P **P** **22 26 11.9 -1.0**
comp=Z,68nm,1.4s,mb5.1
ELAN Lanestosa 28.11 179 P **P** **22 26 11.9 -1.0**
comp=Z,68nm,1.4s,mb5.1
CALN Calern 28.11 163 *e*P **P** **22 26 13.5 +0.6**
CALN Calern 28.11 163 *e*P **P** **22 26 13.5 +0.6**
CALN Calern 28.11 163 *e*P **P** **22 26 13.5 +0.6**
OSSF Osses 28.11 176 *e*P **P** **22 26 12.7 -0.2**
OSSF Osses 28.11 176 *e*P **P** **22 26 12.7 -0.2**
EALK Alkurruntz 28.15 176 P **P** **22 26 13.1 -0.1**
comp=Z,173nm,1.3s,mb5.5
EALK Alkurruntz 28.15 176 P **P** **22 26 13.1 -0.1**
comp=Z,173nm,1.3s,mb5.5
VORD Divnogorie 28.16 113 *e*P **P** **22 26 18.5 +5.3**
VORD *e*S **S** **22 30 55.9 -2.2**
VORD pmax pmax
comp=N,280nm,0.9s
VORD pmax pmax
comp=E,330nm,0.9s
VORD pmax pmax
comp=Z,30nm,0.9s,mb4.9
VORD smax
comp=N,130nm,4.9s
VORD smax
comp=Z,80nm,4.3s
VORD smax
comp=E,110nm,7.2s
VORD MLR MLR
comp=Z,7μm,16.0s,MS5.3
VORD MLR MLR
comp=N,4μm,13.0s,MS5.3
VORD MLR MLR
comp=E,3μm,14.0s,MS5.3
ORDF Ordiarp 28.17 175 *e*P **P** **22 26 13.2 -0.2**
ORDF Ordiarp 28.17 175 *e*P **P** **22 26 13.2 -0.2**
MTLF Montolieu 28.17 170 *e*P **P** **22 26 13.6 +0.2**
comp=E,172nm,1.3s,mb5.2
MTLF Montolieu 28.17 170 *e*P **P** **22 26 13.6 +0.2**
comp=E,86nm,1.3s,mb5.2
MTLF Montolieu 28.17 170 *e*P **P** **22 26 13.6 +0.2**
MTLF pmax pmax
comp=Z,86nm,1.3s,mb5.2
MTLF Montolieu 28.17 170 *e*P **P** **22 26 13.6 +0.2**
comp=Z,86nm,1.3s,mb5.2
ELIZ Elizondo 28.20 176 P **P** **22 26 13.0 -0.7**
comp=Z,53nm,0.8s,mb5.2
ELIZ Elizondo 28.20 176 P **P** **22 26 13.0 -0.7**
ELIZ pmax pmax
comp=Z,53nm,0.8s,mb5.2
ELIZ Elizondo 28.20 176 P **P** **22 26 13.0 -0.7**
comp=Z,53nm,0.8s,mb5.2
SJPF Ste Jean 28.26 176 *e*P **P** **22 26 13.8 -0.4**
comp=Z,68nm,1.0s,mb4.9
SJPF Ste Jean 28.26 176 *e*P **P** **22 26 13.8 -0.4**
comp=Z,34nm,1.0s,mb4.9
SJPF Ste Jean 28.26 176 *e*P **P** **22 26 13.8 -0.4**
SJPF pmax pmax
comp=Z,34nm,1.0s,mb4.9
SJPF Ste Jean 28.26 176 *e*P **P** **22 26 13.8 -0.4**
comp=Z,34nm,1.0s,mb4.9
FRF La Foret Royal 28.28 163 *e*P **P** **22 26 13.6 -0.8**
comp=Z,112nm,1.5s,mb5.0
FRF La Foret Royal 28.28 163 *e*P **P** **22 26 13.6 -0.8**
comp=Z,56nm,1.5s,mb5.0
FRF La Foret Royal 28.28 163 *e*P **P** **22 26 13.6 -0.8**
FRF pmax pmax
comp=Z,56nm,1.5s,mb5.0
FRF La Foret Royal 28.28 163 *e*P **P** **22 26 13.6 -0.8**
comp=Z,56nm,1.5s,mb5.0
REYF Montagne du Re 28.33 174 *e*P **P** **22 26 14.4 -0.4**
REYF Montagne du Re 28.33 174 *e*P **P** **22 26 14.4 -0.4**
LARF Larrau 28.34 175 *e*P **P** **22 26 14.2 -0.7**
LARF Larrau 28.34 175 *e*P **P** **22 26 14.2 -0.7**
LABF Labassere 28.36 174 *e*P **P** **22 26 13.5 -1.6**
LABF Labassere 28.36 174 *e*P **P** **22 26 13.5 -1.6**
EPF Esparros 28.39 173 *e*P **P** **22 26 15.1 -0.3**
comp=Z,267nm,1.0s,mb5.5
EPF Esparros 28.39 173 *e*P **P** **22 26 15.1 -0.3**
comp=Z,134nm,1.0s,mb5.5
EPF Esparros 28.39 173 *e*P **P** **22 26 15.1 -0.3**
EPF pmax pmax
comp=Z,134nm,1.0s,mb5.5
EPF Esparros 28.39 173 *e*P **P** **22 26 15.1 -0.3**
comp=Z,134nm,1.0s,mb5.5
LMR La Mourre 28.49 164 *e*P **P** **22 26 15.8 -0.5**
comp=Z,92nm,1.6s,mb4.9
LMR La Mourre 28.49 164 *e*P **P** **22 26 15.8 -0.5**
comp=Z,46nm,1.6s,mb4.9
LMR La Mourre 28.49 164 *e*P **P** **22 26 15.8 -0.5**
LMR pmax pmax
comp=Z,46nm,1.6s,mb4.9
LMR La Mourre 28.49 164 *e*P **P** **22 26 15.8 -0.5**
comp=Z,46nm,1.6s,mb4.9
ETSF Etsaut 28.49 175 *e*P **P** **22 26 16.1 -0.2**
comp=Z,177nm,1.2s,mb5.2
ETSF Etsaut 28.49 175 *e*P **P** **22 26 16.1 -0.2**
comp=Z,89nm,1.2s,mb5.3
ETSF Etsaut 28.49 175 *e*P **P** **22 26 16.1 -0.2**
ETSF pmax pmax
comp=Z,89nm,1.2s,mb5.3
ETSF Etsaut 28.49 175 *e*P **P** **22 26 16.1 -0.2**
comp=Z,89nm,1.2s,mb5.2
VIEF Viey 28.53 174 *e*P **P** **22 26 18.2 +1.6**
VIEF Viey 28.53 174 *e*P **P** **22 26 18.2 +1.6**
STS Santiago 28.54 187 P **P** **22 26 17.7 +1.0**
comp=Z,46nm,1.2s,mb5.1
STS Santiago 28.54 187 P **P** **22 26 17.7 +1.0**
STS pmax pmax
comp=Z,46nm,1.2s,mb5.1
BZS Buzias 28.54 140 ⇓P **P** **22 26 19.7 +3.0**
BZS Buzias 28.54 140 ⇓*i*P **P** **22 26 19.7 +3.0**
MELF Melles 28.57 173 *e*P **P** **22 26 18.0 +1.1**
MELF Melles 28.57 173 *e*P **P** **22 26 18.0 +1.1**
RESF Ens 28.61 173 *e*P **P** **22 26 18.9 +1.5**
RESF Ens 28.61 173 *e*P **P** **22 26 18.9 +1.5**
EBIE Bielsa 28.73 174 P **P** **22 26 19.4 +1.0**
comp=Z,124nm,1.1s,mb5.5
EBIE Bielsa 28.73 174 P **P** **22 26 19.4 +1.0**
comp=Z,124nm,1.1s,mb5.5
VRHR Novokhopersk 28.74 110 *e*P **P** **22 26 18.4 0.0**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.0
VRHR pmax pmax
comp=E,5.0nm,0.3s
VRHR Novokhopersk 28.74 110 *e*P **P** **22 26 18.4 0.0**
CARF Carcanieres 28.79 171 *e*P **P** **22 26 19.5 +0.6**
CARF Carcanieres 28.79 171 *e*P **P** **22 26 19.5 +0.6**
TESR 28.81 133 ⇓*i*P **P** **22 26 21.1 +2.1**
KIS Kishinev 28.88 130 *e*P **P** **22 26 19.0 -0.7**
KIS Kishinev 28.88 130 *e*PP PP 22 27 10.0 -15
KIS Kishinev 28.88 130 *e*PPP 22 27 29.0
KIS *e*S **S** **22 31 06.0 -3.5**
comp=E,2μm,12.0s
KIS *e*SS SS 22 32 38.0 -33
KIS *e*Lg1 22 35 38.0
KIS *e*Lg2 22 36 50.0
KIS *e*Rg 22 38 10.0
KIS LRM 22 39 09.0
comp=E,2μm,16.0s
KIS Kishinev 28.88 130 *e*P **P** **22 26 19.0 -0.7**
KIS *e* 22 27 10.0
KIS *e*PPP 22 27 24.0
KIS *e*S **S** **22 31 06.0 -3.5**
KIS *e*SS SS 22 32 38.0 -33
KIS smax
comp=N,2μm,12.0s
KIS smax
comp=E,1μm,12.0s
KIS MLR MLR
comp=N,2μm,16.0s,MS4.9
KIS MLR MLR
comp=E,2μm,16.0s,MS4.9
KIS MLR MLR
comp=Z,3μm,16.0s,MS5.0
KIS MLR MLR
comp=Z,3μm,16.0s
KIS Kishinev 28.88 130 *e*P **P** **22 26 19.0 -0.7**
FILF Fillols 28.97 170 *e*P **P** **22 26 22.3 +1.8**
FILF Fillols 28.97 170 *e*P **P** **22 26 22.3 +1.8**
GZR Gura Zlata 29.00 139 ⇑P **P** **22 26 23.0 +2.3**
GZR Gura Zlata 29.00 139 ⇑*i*P **P** **22 26 23.0 +2.3**
CLLI Lliivia 29.02 171 P **P** **22 26 21.1 +0.1**
CLLI Lliivia 29.02 171 P **P** **22 26 21.0 +0.1**
CSOR Sort 29.08 172 P **P** **22 26 22.2 +0.7**
comp=Z,172nm,1.3s,mb5.6
CSOR Sort 29.08 172 P **P** **22 26 22.2 +0.7**
comp=Z,172nm,1.3s,mb5.6
VALF Valcebollere 29.09 171 *e*P **P** **22 26 24.0 +2.4**
VALF Valcebollere 29.09 171 *e*P **P** **22 26 24.0 +2.4**
EJON La Jonquera 29.10 169 P **P** **22 26 23.8 +2.1**
comp=Z,191nm,1.5s,mb5.6
ECAL Calabor 29.43 184 P **P** **22 26 26.8 +2.2**
comp=Z,105nm,1.4s,mb5.4
VRI Vrincioaia 29.43 133 ⇑*i*P **P** **22 26 32.4 +7.8**
VOIR 29.45 136 ⇓*i*P **P** **22 26 10.7 -14**
PGF Pioggiola 29.52 160 *e*P **P** **22 26 25.7 +0.3**
comp=Z,46nm,1.0s,mb4.9
PGF Pioggiola 29.52 160 *e*P **P** **22 26 25.7 +0.3**
comp=Z,23nm,1.0s,mb4.9
PGF Pioggiola 29.52 160 *e*P **P** **22 26 25.7 +0.3**
PGF pmax pmax
comp=Z,23nm,1.0s,mb4.9
PGF Pioggiola 29.52 160 *e*P **P** **22 26 25.7 +0.3**
comp=Z,23nm,1.0s,mb4.9
EMIR Miracle 29.55 172 P **P** **22 26 26.7 +1.0**
comp=Z,73nm,1.3s,mb5.2
PBRG Braganca 29.56 184 *e*S **S** **22 31 21.9 +1.6**
PBRG *e*LR LR 22 34 26.6
comp=Z,3μm,18.0s
PBRG Braganca 29.56 184 *e*S **S** **22 31 21.9 +1.6**
MLR Muntele Rosu 29.60 135 ⇓P **P** **22 26 28.5 +2.4**
MLR Muntele Rosu 29.60 135 ⇓*i*P **P** **22 26 28.5 +2.4**
ARU Arti 29.61 87 *e*P **P** **22 26 27.6 +1.4**
comp=Z,138nm,1.8s,mb5.4
ARU LR LR
comp=Z,4μm,20.0s,MS5.1
ARU Arti 29.61 87 *d i*P **P** **22 26 28.4 +2.3**
ARU *e* 22 27 24.0
ARU *e*PPP 22 27 34.7
ARU S **S** **22 31 26.9 +6.0**
ARU SS SS 22 32 54.3 -32
ARU pmax pmax
comp=Z,45nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,4μm,19.0s,MS5.1
ESAC San Caprasio 29.67 175 P **P** **22 26 28.9 +2.1**
comp=Z,356nm,1.7s,mb5.8
CFON Fontmartina 29.75 170 P **P** **22 26 28.7 +1.2**
comp=Z,80nm,1.3s,mb5.3
SVE Sverdlovsk 29.96 85 *e*P **P** **22 26 29.7 +0.5**
SVE *e*S **S** **22 31 27.1 +0.8**
SVE pmax pmax
comp=Z,28nm,1.5s,mb4.8
SVE MLR MLR
comp=Z,3μm,14.0s,MS5.1
EPOB Poblet 30.09 172 P **P** **22 26 32.2 +1.7**
comp=Z,86nm,1.1s,mb5.4
MVO Moncorvo 30.21 184 *e*P **P** **22 26 32.8 +1.3**
comp=Z,58nm,1.8s,mb5.0
MVO *e*S **S** **22 31 33.9 +3.4**
MVO *e*LR LR 22 34 44.9
comp=Z,2μm,20.0s
MVO Moncorvo 30.21 184 P **P** **22 26 31.8 +0.3**
MVO Moncorvo 30.21 184 *e*P **P** **22 26 32.8 +1.3**
comp=Z,58nm,1.8s,mb5.0
MVO *e*S **S** **22 31 33.9 +3.4**
AQU L'Aquila 30.26 154 *e*P **P** **22 26 32.6 +0.6**
comp=Z,30nm,1.0s,mb5.0
AQU LR LR
comp=Z,1μm,20.0s,MS4.6
AQU L'Aquila 30.26 154 *e*P **P** **22 26 32.6 +0.6**
AQU pmax pmax
comp=Z,30nm,1.0s,mb5.0
AQU MLR MLR
comp=Z,1μm,20.0s,MS4.6
AQU L'Aquila 30.26 154 ⇓*i*P **P** **22 26 39.6 +7.6**
AQU L'Aquila 30.26 154 *e*P **P** **22 26 32.6 +0.6**
comp=Z,30nm,1.0s,mb5.0
CFR Carcaliu 30.41 132 ⇑*i*P **P** **22 26 34.0 +0.7**
ERTA Horta de San J 30.46 173 P **P** **22 26 36.2 +2.4**
comp=Z,226nm,1.5s,mb5.7
PVIS Viseu 30.68 186 *e*P **P** **22 26 44.0 +8.3**
comp=Z,36nm,1.5s,mb5.0
GUD Guadarrama 30.69 180 P **P** **22 26 36.9 +1.1**
comp=Z,76nm,1.1s,mb5.4
GUD Guadarrama 30.69 180 P **P** **22 26 36.9 +1.1**
GUD pmax pmax
comp=Z,76nm,1.1s,mb5.4
SCHQ Schefferville 30.97 271 P **P** **22 26 37.6 -0.5**
comp=Z,16nm,0.9s,mb4.8,baz=25,slow=8.2,SNR=9.8
SCHQ LR LR 22 37 44.8
comp=Z,6μm,21.5s,MS5.2,baz=37,slow=34
SCHQ Schefferville 30.97 271 *e*P **P** **22 26 38.5 +0.4**
comp=Z,30nm,1.0s,mb5.1
SCHQ Schefferville 30.97 271 *e*P **P** **22 26 38.5 +0.4**
comp=Z,30nm,1.0s,mb5.1
MTE Manteigas 30.98 185 *e*P **P** **22 26 39.7 +1.3**
comp=Z,56nm,2.0s,mb5.0
MTE *e*S **S** **22 31 45.0 +2.4**
MTE *e*LR LR 22 35 18.5
comp=Z,3μm,20.0s
MTE Manteigas 30.98 185 ⇑*e*P **P** **22 26 39.0 +0.6**
MTE *e*S **S** **22 31 44.5 +1.8**
MTE LR LR
comp=Z,3μm,20.0s,MS4.9
MTE Manteigas 30.98 185 *e*P **P** **22 26 39.7 +1.3**
comp=Z,56nm,2.0s,mb5.0
MTE *e*S **S** **22 31 45.0 +2.4**
EMOS Mosqueruela 31.02 175 P **P** **22 26 41.4 +2.7**
comp=Z,280nm,2.3s,mb5.7
EPLA Plasencia 31.29 183 P **P** **22 26 46.6 +5.6**
comp=Z,210nm,2.1s,mb5.6
EPLA Plasencia 31.29 183 P **P** **22 26 46.6 +5.6**
EPLA pmax pmax
comp=Z,210nm,2.1s,mb5.6
SGG Gregorio Mates 31.35 153 P **P** **22 26 46.1 +4.5**
ESDC Sonseca Array 31.66 180 P **P** **22 26 42.7 -1.6**
comp=Z,8.2nm,0.9s,mb4.5,baz=0.4,slow=8.9,SNR=19
ESDC LR LR 22 38 29.1
comp=Z,1μm,20.4s,MS4.5,baz=345,slow=34
ESDC Sonseca Array 31.66 180 P **P** **22 26 43.6 -0.7**
comp=Z,19nm,0.9s,mb4.9
ESDC Sonseca Array 31.66 180 P **P** **22 26 43.6 -0.7**
comp=Z,19nm,0.9s,mb4.9
ESLA Sonseca Array 31.66 180 *e*P **P** **22 26 44.9 +0.6**
comp=Z,26nm,1.4s,mb4.9
ESLA *e*PP PP 22 27 55.0 -0.6
ESLA LR LR
comp=Z,9μm,21.0s,MS5.4
ESLA Sonseca Array 31.66 180 *e*P **P** **22 26 44.9 +0.6**
comp=Z,26nm,1.4s,mb4.9
ETOS Mallorca 31.76 170 P **P** **22 26 47.7 +2.5**
comp=Z,106nm,1.1s,mb5.6
VTS Vitosha 31.77 140 ⇑P **P** **22 26 48.7 +3.5**
VTS Vitosha 31.77 140 ⇑*i*P **P** **22 26 48.7 +3.5**
ECHE Chera 31.78 175 P **P** **22 26 47.8 +2.4**
comp=Z,51nm,0.9s,mb5.3
ECHE Chera 31.78 175 P **P** **22 26 47.8 +2.4**
ECHE pmax pmax
comp=Z,51nm,0.9s,mb5.3
PAB San Pablo 31.79 180 *e*P **P** **22 26 45.7 +0.2**
comp=Z,77nm,1.3s,mb5.4
PAB LR LR
comp=Z,2μm,20.0s,MS4.7
PAB San Pablo 31.79 180 *e*P **P** **22 26 45.7 +0.3**
PAB pmax pmax
comp=Z,77nm,1.3s,mb5.4
PAB MLR MLR
comp=Z,2μm,20.0s,MS4.7
PAB San Pablo 31.79 180 *e*P **P** **22 26 45.7 +0.3**
comp=Z,77nm,1.3s,mb5.4
PTOM Tomar 31.79 186 *e*P **P** **22 26 45.3 -0.2**
comp=Z,83nm,2.3s,mb5.2
PTOM Tomar 31.79 186 *e*P **P** **22 26 45.3 -0.2**
comp=Z,83nm,2.3s,mb5.2
PMRV Marv??o 31.95 185 *e*P **P** **22 26 47.9 +1.0**
comp=Z,75nm,1.8s,mb5.2
PMRV *e*S **S** **22 32 04.2 +6.5**
PMRV *e*LR LR 22 35 30.9
comp=Z,2μm,20.0s
PMRV Marv??o 31.95 185 *e*P **P** **22 26 47.9 +1.0**
comp=Z,75nm,1.8s,mb5.2
SIM Simferopol' 32.15 124 P **P** **22 26 55.7 +7.1**
SIM *e*S **S** **22 32 07.0 +6.3**
SIM *e*SS SS 22 33 59.0 -19
SIM MLR MLR
comp=Z,9μm,15.2s,MS5.6
TIR Tirane 32.31 145 *e*P **P** **22 26 50.2 +0.2**
TIR *e*PP PP 22 28 03.2 +0.4
TIR *e*S **S** **22 32 03.9 +0.7**
TIR *e*ScP ScP 22 33 20.7 -0.1
TIR LR LR
comp=Z,3μm,21.0s,MS5.0
TIR Tirane 32.31 145 *e*P **P** **22 26 50.2 +0.2**
TIR *e* 22 28 03.2
TIR *e*S **S** **22 32 03.9 +0.6**
TIR MLR MLR
comp=Z,3μm,21.0s,MS5.0
TIR Tirane 32.31 145 *e*P **P** **22 26 50.2 +0.2**
PMTG Montargil 32.33 186 *e*P **P** **22 26 53.0 +2.8**
comp=Z,63nm,1.7s,mb5.2
PMTG *e*S **S** **22 32 11.1 +7.4**
PMTG *e*LR LR 22 35 59.6
comp=Z,4μm,18.0s
PMAFR Mafra 32.49 188 *e*S **S** **22 32 13.8 +7.7**
PMAFR *e*LR LR 22 36 05.1
comp=Z,2μm,20.0s
PESTR Estremoz 32.52 185 *e*P **P** **22 26 53.7 +1.9**
comp=Z,60nm,1.6s,mb5.3
PESTR *e*S **S** **22 32 17.6 +11**
PESTR *e*LR LR 22 35 47.1
comp=Z,3μm,18.0s
PESTR Estremoz 32.52 185 *e*P **P** **22 26 53.7 +1.9**
comp=Z,60nm,1.6s,mb5.3
VSL Villasalto 32.58 160 *e*P **P** **22 26 53.9 +1.5**
comp=Z,98nm,1.8s,mb5.4
VSL LR LR
comp=Z,1μm,19.0s,MS4.7
EBAD Badajoz 32.61 184 P **P** **22 26 51.9 -0.8**
comp=Z,157nm,2.2s,mb5.5
EBAD Badajoz 32.61 184 P **P** **22 26 51.9 -0.8**
comp=Z,157nm,2.2s,mb5.5
EVIA Vianos 32.70 178 P **P** **22 26 55.2 +1.7**
comp=Z,86nm,1.0s,mb5.6
EVIA Vianos 32.70 178 P **P** **22 26 55.2 +1.7**
EVIA pmax pmax
comp=Z,86nm,1.0s,mb5.6
ETOB Tobarra 32.71 176 P **P** **22 26 58.1 +4.6**
comp=Z,176nm,1.5s,mb5.8
CUC Castrocucco 32.94 151 *e*P **P** **22 26 56.1 +0.6**
CUC *e*PP PP 22 28 10.2 +0.4
CUC *e*S **S** **22 32 14.3 +1.3**
CUC LR LR
comp=Z,1μm,22.0s,MS4.6
CUC Castrocucco 32.94 151 *e*P **P** **22 26 56.1 +0.6**
FNA Florina 33.14 143 P **P** **22 26 55.9 -1.4**
EADA Adamuz 33.16 181 P **P** **22 26 58.5 +1.0**
comp=Z,181nm,1.5s,mb5.8
EBAN Banos Encina 33.17 180 P **P** **22 26 59.7 +2.1**
comp=Z,18nm,0.7s,mb5.1
EBAN Banos Encina 33.17 180 P **P** **22 26 59.7 +2.2**
EBAN pmax pmax
comp=Z,18nm,0.7s,mb5.1
GRG Griva 33.17 142 P **P** **22 26 56.8 -0.8**
ANN Anapa 33.19 120 *e*P **P** **22 26 58.9 +1.2**
ANN *e*PP pP 22 27 01.7 +0.9
ANN *e* 22 28 12.3
ANN *e* 22 29 38.0
ANN *e*S **S** **22 32 21.1 +4.1**
ANN *e*SS SS 22 34 11.7 -28
ANN pmax pmax
comp=Z,47nm,1.2s,mb5.3
ANN MLR MLR
comp=N,2μm,16.0s,MS5.2
ANN MLR MLR
comp=E,3μm,16.0s,MS5.2
ANN MLR MLR
comp=Z,8μm,16.0s,MS5.5
ANN Anapa 33.19 120 *e*PcP PcP 22 29 38.0 -2.0
PBAR Barrancos 33.19 184 *e*S **S** **22 32 25.6 +8.5**
PBAR *e*LR LR 22 36 21.2
comp=Z,3μm,20.0s
PBEJ Beja 33.36 185 *e*P **P** **22 27 02.8 +3.6**
comp=Z,70nm,1.7s,mb5.3
EHUE Huescar 33.52 178 P **P** **22 27 01.7 +1.0**
comp=Z,90nm,1.2s,mb5.6
EHUE Huescar 33.52 178 P **P** **22 27 01.7 +1.0**
EHUE pmax pmax
comp=Z,90nm,1.2s,mb5.6
EQES Quesada 33.53 179 P **P** **22 27 01.2 +0.5**
comp=Z,236nm,1.5s,mb5.9
EQES Quesada 33.53 179 P **P** **22 27 01.2 +0.5**
comp=Z,236nm,1.5s,mb5.9
PCVE Castro Verde 33.76 186 *e*P **P** **22 27 11.8 +9.1**
comp=Z,91nm,1.5s,mb5.5
PCVE *e*S **S** **22 32 30.0 +4.1**
PCVE *e*LR LR 22 37 06.2
comp=Z,3μm,18.0s
ELUQ Luque 33.77 180 P **P** **22 27 03.6 +0.8**
comp=Z,24nm,0.9s,mb5.1
ELUQ Luque 33.77 180 P **P** **22 27 03.6 +0.8**
ELUQ pmax pmax
comp=Z,24nm,0.9s,mb5.1
PVAQ Vaqueiros 33.98 185 *e*S **S** **22 32 36.6 +7.3**
PVAQ *e*LR LR 22 36 48.6
comp=Z,3μm,18.0s
ECOG Cogollos-Vega 34.05 179 P **P** **22 27 06.2 +0.9**
comp=Z,17nm,1.0s,mb4.9
ECOG Cogollos-Vega 34.05 179 P **P** **22 27 06.2 +0.9**
ECOG pmax pmax
comp=Z,17nm,1.0s,mb4.9
MORF Marmelete 34.11 187 *e*S **S** **22 32 37.5 +6.2**
MORF *e*LR LR 22 37 01.3
comp=Z,4μm,18.0s
TIXI Tiksi 34.12 24 *e*P **P** **22 27 04.9 -0.6**
comp=Z,57nm,1.4s,mb5.3
TIXI Tiksi 34.12 24 *e*P **P** **22 27 05.2 -0.3**
TIXI *e*S **S** **22 32 29.7 -1.2**
TIXI pmax pmax
comp=Z,62nm,1.9s,mb5.2
TIXI MLR MLR
comp=Z,565nm,15.0s,MS4.4
TIXI Tiksi 34.12 24 *e*P **P** **22 27 05.2 -0.3**
comp=Z,62nm,1.9s,mb5.2
TIXI *e*S **S** **22 32 29.7 -1.2**
comp=Z,565nm,15.0s
PBDV Barranco-do-Ve 34.15 185 *e*S **S** **22 32 43.2 +11**
PBDV *e*LR LR 22 37 01.9
comp=Z,3μm,18.0s
ELOJ Sierra Loja 34.18 180 P **P** **22 27 07.0 +0.6**
comp=Z,39nm,1.4s,mb5.2
ELOJ Sierra Loja 34.18 180 P **P** **22 27 07.0 +0.6**
ELOJ pmax pmax
comp=Z,39nm,1.4s,mb5.1
ELOJ Sierra Loja 34.18 180 P **P** **22 27 07.0 +0.6**
comp=Z,39nm,1.4s,mb5.2
PFVI Vila Bisbo 34.29 187 *e*LR LR 22 37 01.3
comp=Z,4μm,20.0s
ERON Agron 34.31 180 P **P** **22 27 10.0 +2.5**
ESPR Espera 34.47 183 P **P** **22 27 16.8 +7.8**
comp=Z,152nm,1.4s,mb5.7
EGUA Guajares 34.50 179 P **P** **22 27 12.2 +3.1**
comp=Z,837nm,1.2s
EGUA Guajares 34.50 179 P **P** **22 27 12.2 +3.1**
SFS San Fernando 34.88 183 PFAKE 22 27 20.0 +7.6
SFS LR LR
comp=Z,3μm,20.0s,MS5.1
SOC Sochi 34.95 119 *e*P **P** **22 27 08.0 -5.0**
SOC *e*S **S** **22 32 39.9 -4.3**
SOC MLR MLR
comp=Z,9μm,18.0s,MS5.6
AGG Agios Georgios 35.03 143 *e*P **P** **22 27 12.3 -1.4**
AGG Agios Georgios 35.03 143 *e*P **P** **22 27 12.3 -1.4**
EVR Evrytania 35.03 144 *e*P **P** **22 27 14.2 +0.5**
EVR Evrytania 35.03 144 P **P** **22 27 15.1 +1.4**
EVR Evrytania 35.03 144 *e*P **P** **22 27 14.2 +0.5**
EBNR Beni Rached 35.16 172 P **P** **22 27 22.0 +7.1**
VAE Valguarnera 35.19 154 P **P** **22 27 16.9 +1.8**
comp=Z,6.8nm,0.8s,mb4.7,baz=86,slow=19,SNR=2.0
ECHA Ech Chlef 35.30 172 P **P** **22 27 24.6 +8.6**
EMHD Djebel Mahouad 35.32 170 P **P** **22 27 18.8 +2.6**
KIV Kislovodsk 35.47 115 *e*P **P** **22 27 19.8 +2.3**
comp=Z,34nm,1.1s,mb5.2
KIV LR LR
comp=Z,3μm,19.0s,MS5.0
KIV Kislovodsk 35.47 115 *e*P **P** **22 27 17.5 +0.1**

KIV *e*S **S** **22 32 49.9 -2.2**
KIV *e*SS SS 22 35 10.2 -16
KIV pmax pmax
comp=Z,27nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,2µm,15.0s,MS5.1
KIV Kislovodsk 35.47 115 *e*P **P** **22 27 17.5 +0.1**
comp=Z,27nm,1.1s,mb5.1
EANR 'Ain N'Sour 35.48 173 P **P** **22 27 26.5 +8.9**
EFP Efpalio 35.52 144 *e*P **P** **22 27 16.4 -1.5**
EFP Efpalio 35.52 144 P **P** **22 27 17.8 -0.1**
EFP Efpalio 35.52 144 *e*P **P** **22 27 16.4 -1.5**
RLS Riolos of Patr 35.79 144 P **P** **22 27 19.7 -0.6**
ETRT Tiaret 36.05 173 P **P** **22 27 28.1 +5.6**
GUR Goura 36.08 143 *e*P **P** **22 27 21.8 -0.9**
GUR Goura 36.08 143 P **P** **22 27 22.4 -0.3**
GUR Goura 36.08 143 *e*P **P** **22 27 21.8 -0.9**
ABKAR Akbulak array 36.13 93 *e*P **P** **22 27 22.6 -0.5**
ABKAR Akbulak array 36.13 93 *e*P **P** **22 27 22.6 -0.4**
BRVK Borovoye 36.19 80 *e*P **P** **22 27 25.2 +1.7**
comp=Z,17nm,0.9s,mb5.0
BRVK LR LR
comp=Z,1µm,19.0s,MS4.6
BRVK Borovoye 36.19 80⇑ *e*P **P** **22 27 25.2 +1.7**
BRVK pmax pmax
comp=Z,30nm,2.2s,mb4.8
BRVK MLR MLR
comp=Z,1µm,16.0s,MS4.7
BRVK Borovoye 36.19 80 P **P** **22 27 25.6 +2.1**
SNR=9.4
BRVK mb 22 27 30.8
SNR=17
BVAR Borovoye Array 36.25 80 P **P** **22 27 22.1 -1.9**
comp=Z,17nm,0.7s,mb5.1,baz=317,slow=8.5,SNR=18
BVAR Borovoye Array 36.25 80 P **P** **22 27 22.1 -1.9**
BVAR pmax pmax
comp=Z,17nm,0.7s
BVAR Borovoye Array 36.25 80 P **P** **22 27 22.1 -1.9**
KEST Kesra 36.30 161 P **P** **22 27 24.6 0.0**
comp=Z,4.3nm,0.7s,mb4.5,baz=324,slow=1.2,SNR=21
KEST LR LR 22 42 26.6
comp=Z,1µm,21.4s,MS4.6,baz=116,slow=36
KEST Kesra 36.30 161 *e*P **P** **22 27 24.5 -0.1**
KEST Kesra 36.30 161 *e*P **P** **22 27 24.5 -0.1**
INK Inuvik 36.66 331 *e*P **P** **22 27 26.3 -1.1**
comp=Z,37nm,1.1s,mb5.1
INK Inuvik 36.66 331 *e*P **P** **22 27 26.3 -1.1**
INK pmax pmax
comp=Z,37nm,1.1s
INK Inuvik 36.66 331 *e*P **P** **22 27 26.3 -1.1**
comp=Z,37nm,1.1s,mb5.1
WDD Wield Dalam 36.79 154 *e*P **P** **22 27 29.2 +0.4**
WDD *e*PP PP 22 28 53.1 +0.7
WDD *e*PcP PcP 22 29 50.9 +0.2
WDD LR LR
comp=Z,590nm,20.0s,MS4.4
WDD Wield Dalam 36.79 154 *e*P **P** **22 27 29.2 +0.4**
BRTR Keskin Array B 36.91 128 P **P** **22 27 28.9 -0.8**
comp=Z,4.3nm,0.7s,mb4.4,baz=343,slow=6.1,SNR=15
BRTR PP PP 22 28 52.4 -1.3
comp=Z,2.9nm,1.0s,baz=340,slow=9.4,SNR=2.2
BRTR LR LR 22 44 38.5
comp=Z,3µm,18.5s,MS5.0,baz=156,slow=40
BRTR Keskin Array B 36.91 128 P **P** **22 27 29.0 -0.8**
BRTR 22 28 52.4
BRTR MLR MLR
comp=Z,3µm,18.5s
BRTR Keskin Array B 36.91 128 P **P** **22 27 29.0 -0.8**
BRTR Keskin Array B 36.91 128 PP PP 22 28 52.4 -1.3
ONI Oni 36.94 115 P **P** **22 27 39.1 +9.0**
GOR Gori 37.69 115 P **P** **22 27 35.1 -1.2**
ISP Isparta 37.95 133 *e*P **P** **22 27 41.4 +2.7**
comp=Z,63nm,1.5s,mb5.1
ISP LR LR
comp=Z,4µm,22.0s,MS5.2
ISP Isparta 37.95 133 ⇑P **P** **22 27 41.7 +3.1**
ISP Isparta 37.95 133 P **P** **22 27 39.8 +1.2**
ISP Isparta 37.95 133 ⇑*i*P **P** **22 27 41.7 +3.1**
YKA Yellowknife Ar 38.23 315 P **P** **22 27 40.4 -0.3**
comp=Z,14nm,1.0s,mb4.7,baz=27,slow=8.9,SNR=9.6
YKA PcP PcP 22 29 55.0 +0.4
comp=Z,3.5nm,0.9s,baz=30,slow=2.9,SNR=6.9
YKA LR LR 22 43 13.2
comp=Z,422nm,18.5s,MS4.3,baz=25,slow=36
YKA Yellowknife Ar 38.23 315 P **P** **22 27 40.4 -0.3**
YKA PcP PcP 22 29 55.0 +0.4
YKA LR LR 22 43 13.2
YKA Yellowknife Ar 38.23 315 P **P** **22 27 40.4 -0.3**
YKA 22 29 55.0
YKA pmax pmax
comp=Z,15nm,1.0s
YKA MLR MLR
comp=Z,422nm,18.5s
YKA Yellowknife Ar 38.23 315 P **P** **22 27 40.4 -0.3**
YKA Yellowknife Ar 38.23 315 PcP PcP 22 29 55.0 +0.4
MDT Midelt 38.50 181 P **P** **22 27 43.5 +0.2**
comp=Z,2.7nm,0.8s,baz=35,slow=9.2,SNR=3.2
MDT Midelt 38.50 181 P **P** **22 27 43.5 +0.2**
NVS Novosibirsk 38.67 68 *e*P **P** **22 27 46.3 +1.8**
NVS *e* 22 29 12.7
NVS pmax pmax
comp=N,12nm,1.3s
NVS pmax pmax
comp=Z,36nm,1.3s,mb4.9
NVS pmax pmax
comp=E,33nm,2.3s
MALT Malatya 39.49 123 *e*P **P** **22 27 53.3 +1.7**
MALT LR LR
comp=Z,1µm,20.0s,MS4.8
MALT Malatya 39.49 123 ⇓P **P** **22 27 55.5 +3.9**
MALT Malatya 39.49 123 ⇓*i*P **P** **22 27 55.5 +3.9**
GNI Garni 39.57 115 *e*P **P** **22 27 52.0 -0.1**
GNI *e*PP PP 22 29 22.7 0.0
GNI *e*S **S** **22 33 53.9 -0.5**
GNI LR LR
comp=Z,1µm,21.0s,MS4.6
GNI Garni 39.57 115 *e*P **P** **22 27 52.0 -0.1**
GNI *e* 22 29 22.7
GNI *e*S **S** **22 33 53.9 -0.5**
GNI MLR MLR
comp=Z,1µm,21.0s
GNI Garni 39.57 115 *e*P **P** **22 27 52.0 -0.1**
COLD Coldfoot 39.90 340 *e*P **P** **22 27 54.7 +0.1**
comp=Z,30nm,1.4s,mb4.8
COLD Coldfoot 39.90 340 *e*P **P** **22 27 54.7 +0.1**
comp=Z,30nm,1.4s,mb4.8
ZAA0 Zalesovo Array 39.92 67 *e*P **P** **22 27 54.9 0.0**
ZAA0 PP PP 22 29 27.9 +1.6
ZAA0 *e*PcP PcP 22 30 00.2 +0.2
ZAA0 Zalesovo Array 39.92 67 *e*P **P** **22 27 54.9 0.0**
ZALV Zalesovo Beam 39.92 67 P **P** **22 27 53.8 -1.1**
comp=Z,3.9nm,0.9s,mb4.2,baz=330,slow=8.7,SNR=14
ZALV PcP PcP 22 29 59.6 -0.5
comp=Z,2.6nm,0.8s,baz=316,slow=4.0,SNR=5.3
ZALV LR LR 22 47 13.6
comp=Z,1µm,19.6s,MS4.7,baz=327,slow=41
ZALV Zalesovo Beam 39.92 67 P **P** **22 27 53.8 -1.1**
ZALV 22 29 59.6
ZALV MLR MLR
comp=Z,1µm,19.6s,MS4.7
PKME Peaks-Kenny Pk 40.03 265 PFAKE 22 28 10.0 +14
PKME LR LR
comp=Z,5µm,22.0s,MS5.3
GHAR Gharyan 40.29 157 *i*P **P** **22 28 00.1 +1.9**
SNR=26
BILL Bilibino 40.80 6 *e*P **P** **22 28 00.8 -1.3**
comp=Z,24nm,1.0s,mb4.8
BILL LR LR
comp=Z,2µm,20.0s,MS4.9
BILL Bilibino 40.80 6⇑ *e*P **P** **22 28 01.3 -0.8**
BILL *e* 22 30 03.1
BILL *e*S **S** **22 34 13.6 +1.3**
BILL pmax pmax
comp=Z,45nm,1.7s,mb4.8
BILL Bilibino 40.80 6 *e*P **P** **22 28 01.3 -0.8**
comp=Z,45nm,1.7s,mb4.8
BILL Bilibino 40.80 6 *e*PcP PcP 22 30 03.1 +0.4
KURK Kurchatov 40.84 75 *e*P **P** **22 28 01.9 -0.6**
comp=Z,30nm,0.9s,mb4.9
KURK LR LR
comp=Z,2µm,19.0s,MS4.9
KURK Kurchatov 40.84 75 *i*P **P** **22 28 02.4 -0.1**
KURK pmax pmax
comp=Z,33nm,1.8s,mb4.7
KURK MLR MLR
comp=Z,1µm,17.0s,MS4.9
KURK Kurchatov 40.84 75 *i*P **P** **22 28 02.4 -0.1**
comp=Z,1µm,17.0s
KURK Kurchatov 40.84 75 P **P** **22 28 03.2 +0.7**
SNR=15
KURK mb 22 28 09.2
SNR=32
EGAK Eagle 41.09 334 *e*P **P** **22 28 03.9 -0.6**
comp=Z,29nm,1.0s,mb4.9
EGAK LR LR
comp=Z,3µm,21.0s,MS5.1
EGAK Eagle 41.09 334 *e*P **P** **22 28 03.9 -0.6**
comp=Z,29nm,1.0s,mb4.9
CSS Prodhromos 41.35 131 *e*P **P** **22 28 07.1 +0.2**
CSS *e*PP PP 22 29 42.3 +0.1
CSS *e*S **S** **22 34 21.0 0.0**
CSS LR LR
comp=Z,2µm,20.0s,MS5.0
CSS Prodhromos 41.35 131 *e*P **P** **22 28 07.1 +0.2**
DAWY Dawson 41.51 332 *e*P **P** **22 28 07.2 -0.7**
DAWY Dawson 41.51 332 *e*P **P** **22 28 07.2 -0.7**
LBNH Lisbon 41.80 267 PFAKE 22 28 20.0 +10
LBNH LR LR
comp=Z,5µm,20.0s,MS5.4
FFC Flin Flon 41.84 301 *e*P **P** **22 28 08.5 -2.2**
comp=Z,95nm,1.3s,mb5.3
FFC LR LR
comp=Z,5µm,19.0s,MS5.4
FFC Flin Flon 41.84 301 *i*P **P** **22 28 09.2 -1.5**
FFC Flin Flon 41.84 301 *i*P **P** **22 28 09.2 -1.5**
ILAR Eielson Array 41.87 337 P **P** **22 28 08.2 -2.7**
comp=Z,9.2nm,1.0s,mb4.4,baz=7.2,slow=7.4,SNR=38
ILAR PcP PcP 22 30 05.2 -1.1
comp=Z,3.5nm,1.0s,baz=340,slow=4.2,SNR=5.4
ILAR LR LR 22 47 17.9
comp=Z,2µm,19.3s,MS5.0,baz=39,slow=39
ILAR Eielson Array 41.87 337 P **P** **22 28 08.2 -2.7**
ILAR 22 30 05.2
ILAR pmax pmax
comp=Z,9.0nm,1.0s
ILAR pmax pmax
comp=Z,4.0nm,1.0s
ILAR MLR MLR
comp=Z,2µm,19.3s
ILAR Eielson Array 41.87 337 P **P** **22 28 08.2 -2.7**
comp=Z,9.0nm,1.0s,mb4.3
ILAR Eielson Array 41.87 337 PcP PcP 22 30 05.2 -1.0
COLA College 41.89 338 *e*P **P** **22 28 10.6 -0.5**
comp=Z,20nm,1.0s,mb4.7
COLA LR LR
comp=Z,2µm,21.0s,MS4.9
COLA College 41.89 338 *e*P **P** **22 28 10.6 -0.4**
COLA pmax pmax
comp=Z,20nm,1.0s,mb4.7
COLA MLR MLR
comp=Z,2µm,21.0s,MS4.9
COLA College 41.89 338 *e*P **P** **22 28 10.6 -0.4**
comp=Z,20nm,1.0s,mb4.7
LGHD Ghdames 41.96 162 *i*P **P** **22 28 11.9 -0.1**
SNR=26
LONY Lake Ozonia 42.31 270 PFAKE 22 28 30.0 +15
LONY LR LR
comp=Z,3µm,20.0s,MS5.2
DOT Dot Lake 42.57 335 *e*P **P** **22 28 16.9 +0.3**
comp=Z,86nm,1.2s,mb5.4
DOT Dot Lake 42.57 335 *e*P **P** **22 28 16.9 +0.3**
comp=Z,86nm,1.2s,mb5.4
NCB Newcomb 42.78 269 PFAKE 22 28 30.0 +11
NCB LR LR
comp=Z,3µm,20.0s,MS5.1
BPAW Bear Paw Mtn. 43.01 339 *e*P **P** **22 28 20.4 +0.3**
comp=Z,92nm,2.2s,mb5.1
BPAW Bear Paw Mtn. 43.01 339 *e*P **P** **22 28 20.4 +0.3**
comp=Z,92nm,2.2s,mb5.1
MCK McKinley 43.12 338 *e*P **P** **22 28 21.5 +0.4**
comp=Z,258nm,2.7s,mb5.5
MCK McKinley 43.12 338 *e*P **P** **22 28 21.5 +0.4**
MCK pmax pmax
comp=Z,258nm,2.7s,mb5.5
YAK Yakutsk 43.18 30 *e*P **P** **22 28 20.9 -0.7**
YAK pmax pmax
comp=Z,30nm,1.1s,mb4.9
YAK pmax pmax
comp=E,8.0nm,1.5s
YAK pmax pmax
comp=N,21nm,1.2s
YAK MLR MLR
comp=N,506nm,18.0s
YAK MLR MLR
comp=Z,628nm,18.0s,MS4.6
YAK Yakutsk 43.18 30 *e*P **P** **22 28 20.9 -0.7**
comp=Z,628nm,18.0s
MENT Mentasta 43.21 334 *e*P **P** **22 28 21.9 +0.2**
MENT Mentasta 43.21 334 *e*P **P** **22 28 21.9 +0.2**
TRF Thorofare Moun 43.56 339 *e*P **P** **22 28 25.8 +1.2**
comp=Z,134nm,2.8s,mb5.2
ULM Lac du Bonnet 44.02 293 P **P** **22 28 25.7 -2.7**
comp=Z,22nm,1.0s,mb4.9,baz=26,slow=9.1,SNR=15
ULM LR LR 22 46 29.6
comp=Z,2µm,19.0s,MS5.1,baz=34,slow=36
ULM Lac du Bonnet 44.02 293 *e*P **P** **22 28 28.9 +0.4**
comp=Z,49nm,1.3s,mb5.1
ULM LR LR 22 46 29.6
ULM Lac du Bonnet 44.02 293 *e*P **P** **22 28 28.9 +0.4**
comp=Z,49nm,1.3s,mb5.1
BOD Bodaibo 44.11 43 *e*P **P** **22 28 28.5 -0.6**
BOD pmax pmax
comp=Z,57nm,1.6s,mb5.0
BOD Bodaibo 44.11 43 *e*P **P** **22 28 28.5 -0.6**
comp=Z,57nm,1.6s,mb5.0
PPLA Purkeypile 44.31 340 *e*P **P** **22 28 30.4 -0.3**
PPLA *e*PcP PcP 22 30 14.8 +0.4
PPLA Purkeypile 44.31 340 *e*P **P** **22 28 30.4 -0.2**
EYMN Ely 44.74 287 *e*P **P** **22 28 34.9 +0.7**
comp=Z,62nm,1.1s,mb5.3
EYMN LR LR
comp=Z,2µm,21.0s,MS5.1
SML Sawmill 44.91 337 *e*P **P** **22 28 35.6 +0.2**
comp=Z,5.8nm,1.0s,mb4.4
SML Sawmill 44.91 337 *e*P **P** **22 28 35.6 +0.2**
SML Sawmill 44.91 337 *e*P **P** **22 28 35.6 +0.2**
comp=Z,5.8nm,1.0s,mb4.4
BINY Binghamton 44.94 270 *e*P **P** **22 28 38.5 +2.6**
comp=Z,634nm,2.9s,mb5.9
BINY LR LR
comp=Z,4µm,20.0s,MS5.4
KKAR Karatay Array 44.99 87 *e*P **P** **22 28 36.6 +0.3**
KKAR Karatay Array 44.99 87 *e*P **P** **22 28 36.6 +0.3**
SEY Seymchan 45.09 15⇑ *e*P **P** **22 28 36.6 -0.2**
SEY Seymchan 45.09 15 *e*P **P** **22 28 36.6 -0.2**
DLBC Dease Lake 45.17 323 P **P** **22 28 37.5 0.0**
comp=Z,2.1nm,0.9s,baz=304,slow=7.3,SNR=2.4
DLBC Dease Lake 45.17 323 P **P** **22 28 37.5 0.0**
PMR Palmer 45.22 337 *e*P **P** **22 28 37.8 -0.1**
comp=Z,184nm,2.9s,mb5.4
PMR Palmer 45.22 337 *e*P **P** **22 28 37.8 -0.1**
PMR pmax pmax
comp=Z,184nm,2.9s,mb5.4
PMR Palmer 45.22 337 *e*P **P** **22 28 37.8 -0.1**
comp=Z,184nm,2.9s,mb5.4
GLMI Grayling 45.36 279 PFAKE 22 28 50.0 +11
GLMI LR LR
comp=Z,824nm,21.0s,MS4.6
MK31 Makanchi Array 45.44 74 *e*P **P** **22 28 38.0 -1.7**
MK31 *e*PcP PcP 22 30 18.5 -0.1
MK31 *e*PP PP 22 30 24.4 -1.4
MK31 Makanchi Array 45.44 74 *e*P **P** **22 28 38.1 -1.7**
MK31 *e* 22 30 18.5
MK31 *e* 22 30 24.4
MK31 Makanchi Array 45.44 74 *e*P **P** **22 28 38.0 -1.8**
MKAR Makanchi Array 45.44 74 P **P** **22 28 37.8 -2.0**
comp=Z,4.1nm,0.9s,mb4.3,baz=337,slow=5.8,SNR=21
MKAR PcP PcP 22 30 18.7 +0.1
comp=Z,0.9nm,0.7s,baz=0.9,slow=4.5,SNR=2.1
MKAR LR LR 22 49 34.9
comp=Z,1µm,19.4s,MS4.8,baz=324,slow=39
MKAR Makanchi Array 45.44 74 P **P** **22 28 37.8 -2.0**
MKAR 22 30 18.7
MKAR MLR MLR
comp=Z,1µm,19.4s
COWI Conover 45.65 284 *e*P **P** **22 28 41.2 -0.2**
COWI *e*PP PP 22 30 28.3 +0.3
COWI *e*S **S** **22 35 24.2 +0.5**
COWI LR LR
comp=Z,2µm,22.0s,MS5.1
COWI Conover 45.65 284 *e*P **P** **22 28 41.2 -0.3**
AGMN Agassiz Nation 45.76 291 *e*P **P** **22 28 42.7 +0.4**
comp=Z,86nm,1.4s,mb5.5
AGMN LR LR
comp=Z,2µm,22.0s,MS5.1
RC01 Rabbit Creek A 45.78 338 *e*P **P** **22 28 42.6 +0.3**
comp=Z,268nm,2.6s,mb5.7
RAGM Ragged Mountai 45.79 334 *e*P **P** **22 28 43.3 +0.9**
ERPA Erie 46.30 274 *e*P **P** **22 28 46.9 +0.2**
ERPA *e*PP PP 22 30 35.3 +0.3
ERPA *e*S **S** **22 35 33.9 +0.6**
ERPA LR LR
comp=Z,4µm,19.0s,MS5.3
ERPA Erie 46.30 274 *e*P **P** **22 28 46.9 +0.2**
SLKM Skilak Lake 46.41 338 *e*P **P** **22 28 46.3 -0.9**
SLKM Skilak Lake 46.41 338 *e*P **P** **22 28 46.3 -0.9**
SLKM Skilak Lake 46.41 338 *e*P **P** **22 28 46.3 -0.9**
EKS2 Erkin-Say 46.44 84 *e*P **P** **22 28 48.4 +0.7**
comp=Z,12nm,0.8s,mb4.9
EKS2 LR LR
comp=Z,2µm,21.0s,MS5.0
MOY Mondy 46.52 56 *e*P **P** **22 28 50.8 +2.5**
MOY pmax pmax
comp=Z,100nm,2.2s,mb5.4
FRU Bishkek 46.55 83 *e*P **P** **22 28 48.0 -0.6**
FRU pmax pmax
comp=Z,50nm,2.0s,mb5.1
FRU Bishkek 46.55 83 *e*P **P** **22 28 48.0 -0.6**
comp=Z,50nm,2.0s,mb5.1
AAK Ala-Archa 46.70 84 *e*P **P** **22 28 50.5 +0.8**
comp=Z,53nm,1.5s,mb5.2
AAK LR LR
comp=Z,2µm,20.0s,MS5.0
AAK Ala-Archa 46.70 84⇑ *e*P **P** **22 28 50.5 +0.8**
AAK MLR MLR
comp=Z,805nm,19.0s,MS4.7
AAK Ala-Archa 46.70 84 P **P** **22 28 51.1 +1.4**
comp=Z,108nm,0.9s,mb5.8,SNR=5.9
AAK Ala-Archa 46.70 84 P **P** **22 28 52.8 +3.1**
SNR=13
AAK mb 22 28 58.1
SNR=18
SEW Seward 46.70 337 *e*P **P** **22 28 53.9 +4.3**
comp=Z,25nm,1.1s,mb5.1
RSO Redoubt South 46.75 339 *e*P **P** **22 28 50.2 +0.3**
RSO Redoubt South 46.75 339 *e*P **P** **22 28 50.2 +0.3**
ALLY Alegheny Colle 46.78 273 *e*P **P** **22 28 52.0 +1.6**
comp=Z,68nm,1.3s,mb5.4
TKM2 Tokmak 2 46.79 83 *e*P **P** **22 28 53.2 +2.7**
comp=Z,57nm,1.5s,mb5.3
TKM2 LR LR
comp=Z,2µm,19.0s,MS5.1
TKM2 Tokmak 2 46.79 83 *e*P **P** **22 28 53.2 +2.7**
TKM2 pmax pmax
comp=Z,57nm,1.5s,mb5.3
TKM2 MLR MLR
comp=Z,2µm,19.0s,MS5.1
KBK Karagaybulak 46.82 83 *e*P **P** **22 28 53.8 +3.0**
comp=Z,41nm,1.2s,mb5.2
IRK Irkutsk 46.87 53 *e*P **P** **22 28 50.2 -0.7**
IRK *e* 22 30 48.0
IRK pmax pmax
comp=Z,84nm,2.0s,mb5.3
IRK Irkutsk 46.87 53 *e*P **P** **22 28 50.2 -0.7**
comp=Z,84nm,2.0s,mb5.3
AML Almayashu 46.89 85 *e*P **P** **22 28 52.9 +1.6**
comp=Z,96nm,1.6s,mb5.5
AML LR LR
comp=Z,1µm,19.0s,MS5.0
SSPA Standing Stone 46.96 271 *e*P **P** **22 28 53.6 +1.8**
comp=Z,49nm,1.4s,mb5.2
SSPA Standing Stone 46.96 271 *e*P **P** **22 28 53.6 +1.8**
comp=Z,49nm,1.4s,mb5.2
TLY Talaya 47.21 54 *e*P **P** **22 28 52.7 -0.9**
TLY *e*PP PP 22 30 43.3 -0.9
TLY *e*S **S** **22 35 44.7 -1.3**
TLY LR LR
comp=Z,1µm,20.0s,MS4.8
TLY Talaya 47.21 54 *e*P **P** **22 28 52.7 -1.0**
TLY *e* 22 30 43.3
TLY *e*S **S** **22 35 44.7 -1.3**
TLY MLR MLR
comp=Z,1µm,20.0s,MS4.8
TLY Talaya 47.21 54 P **P** **22 28 55.8 +2.2**
SNR=5.0
TLY mb pP 22 28 59.5 +2.7
SNR=5.1
CLNS Chul'man 47.24 36 *e*P **P** **22 28 54.6 +0.8**
CLNS *e**PP pP 22 29 03.4 +6.4
CLNS *e* 22 30 25.3
CLNS *e* 22 30 43.7
CLNS *e*S **S** **22 35 42.4 -3.9**
CLNS *e*SS SS 22 39 10.8 -2.1
CLNS pmax pmax
comp=Z,98nm,1.3s,mb5.6
CLNS pmax pmax
comp=N,67nm,1.4s
CLNS pmax pmax
comp=E,16nm,1.1s
CLNS pmax pmax
comp=N,10.0nm,1.0s
CLNS pmax pmax
comp=Z,14nm,1.1s,mb4.8
CLNS pmax pmax
comp=E,12nm,1.2s
CLNS smax
comp=E,292nm,16.7s
CLNS smax
comp=N,303nm,12.1s
CLNS MLR MLR
comp=N,525nm,17.0s,MS4.7
CLNS MLR MLR
comp=Z,568nm,16.0s,MS4.6
CLNS MLR MLR
comp=E,287nm,13.0s,MS4.7
CLNS Chul'man 47.24 36 *e*PcP PcP 22 30 25.3 +0.5
AAM Ann Arbor 47.32 277 *e*P **P** **22 28 56.6 +2.0**
comp=E,109nm,1.7s,mb5.5
AAM LR LR
comp=Z,675nm,21.0s,MS4.6
AAM Ann Arbor 47.32 277 *e*P **P** **22 28 56.6 +2.0**
AAM pmax pmax
comp=Z,109nm,1.7s,mb5.5
AAM MLR MLR
comp=Z,675nm,21.0s,MS4.6
KZA Kyzart 47.44 83 *e*P **P** **22 28 58.1 +2.6**
comp=Z,30nm,1.4s,mb5.0
WRAK Wrangell Islan 47.51 324 *e*P **P** **22 28 55.7 -0.2**
WRAK *e*PP PP 22 30 46.4 -0.4
WRAK *e*S **S** **22 35 49.8 -0.3**
WRAK LR LR
comp=Z,3µm,19.0s,MS5.3
WRAK Wrangell Islan 47.51 324 *e*P **P** **22 28 55.7 -0.2**
A24A Westby 47.58 298 ⇑P **P** **22 28 57.0 +0.4**
baz=47
A23A Redstone 47.80 299 ⇑P **P** **22 28 58.2 0.0**
baz=48
DGMT Dagmar 48.05 298 ⇑P **P** **22 28 59.9 -0.2**
baz=48
DGMT Dagmar 48.05 298 *e*P **P** **22 29 01.6 +1.4**
comp=Z,59nm,1.3s,mb5.5
DGMT LR LR
comp=Z,5µm,19.0s,MS5.5
A22A Carney Farms, 48.06 300 ⇓P **P** **22 29 00.0 -0.2**
baz=48,SNR=6.9
B23A Brockton 48.28 299 ⇑P **P** **22 29 02.2 +0.3**
baz=48
ZAK Zakamensk 48.30 55 *e*P **P** **22 29 02.9 +0.8**
ZAK *e* 22 30 27.1
ZAK Zakamensk 48.30 55 *e*PcP PcP 22 30 27.1 -1.6
A21A Bergtoll Ranch 48.34 301 ⇓P **P** **22 29 01.9 -0.5**
baz=48,SNR=7.9
MCWV Mont Chateau 48.48 272 *e*P **P** **22 29 06.1 +2.5**
comp=Z,175nm,1.8s,mb5.8
MCWV LR LR
comp=Z,3µm,19.0s,MS5.3
B22A Reddig Ranch S 48.71 300 ⇑P **P** **22 29 05.0 -0.2**
baz=48
A20A Cobblestone Ra 48.72 301 ⇑P **P** **22 29 04.8 -0.5**
baz=48,SNR=8.0
TAM Tamanrasset 48.81 168 *e*P **P** **22 29 07.0 +0.7**
comp=Z,23nm,1.1s,mb5.1
TAM *e*PP PP 22 31 01.1 +1.7
TAM LR LR
comp=Z,805nm,19.0s,MS4.7
TAM Tamanrasset 48.81 168 *e*P **P** **22 29 07.0 +0.7**
TAM *e* 22 31 01.1

TAM pmax pmax
comp=Z,23nm,1.1s,mb5.1
TAM MLR MLR
comp=Z,805nm,19.0s,MS4.7
TAM Tamanrasset 48.81 168 *e*P **P 22 29 07.0 +0.7**
comp=Z,23nm,1.1s,mb5.1
JFWS Jewell Farm 48.86 283 *e*P **P 22 29 06.5 -0.1**
comp=Z,53nm,1.0s,mb5.5
JFWS LR LR
comp=Z,2µm,22.0s,MS5.1
JFWS Jewell Farm 48.86 283 *e*P **P 22 29 06.5 0.0**
JFWS pmax pmax
comp=Z,53nm,1.0s,mb5.5
JFWS MLR MLR
comp=Z,2µm,22.0s,MS5.1
JFWS Jewell Farm 48.86 283 *e*P **P 22 29 06.4 -0.1**
comp=Z,53nm,1.0s,mb5.5
B21A Ellsworth Farm 48.88 300 ⇓P **P 22 29 05.9 -0.7**
baz=49
A19A Klindworth Far 48.90 302 ⇓P **P 22 29 06.7 0.0**
baz=49,SNR=9.6
C23A Lambert 48.93 299 ⇑P **P 22 29 07.4 +0.4**
baz=49
C24A Savage 48.96 298 ⇑P **P 22 29 07.9 +0.7**
baz=49
ACSO Alum Creek Sta 48.97 275 *e*P **P 22 29 08.7 +1.3**
comp=Z,37nm,1.1s,mb5.3
ACSO LR LR
comp=Z,3µm,19.0s,MS5.3
CBN Corbin 49.00 269 PFAKE 22 29 20.0 +12
CBN LR LR
comp=Z,5µm,20.0s,MS5.5
B20A Solberg Farm, 49.15 301 ⇑P **P 22 29 08.4 -0.3**
baz=49,SNR=7.5
C22A Vida 49.18 299 ⇓P **P 22 29 08.8 -0.1**
baz=49
A18A Metzger Ranch, 49.21 303 ⇓P **P 22 29 08.3 -0.8**
baz=49,SNR=5.9
D24A Glendive 49.31 298 ⇑P **P 22 29 09.1 -0.8**
baz=49
KDAK Kodiak Island 49.35 338 *e*P **P 22 29 10.1 0.0**
comp=Z,36nm,1.2s,mb5.3
KDAK LR LR
comp=Z,2µm,22.0s,MS5.0
KDAK Kodiak Island 49.35 338 *e*P **P 22 29 10.1 0.0**
KDAK pmax pmax
comp=Z,35nm,1.2s,mb5.3
KDAK MLR MLR
comp=Z,2µm,22.0s,MS5.0
KDAK Kodiak Island 49.35 338 *e*P **P 22 29 10.1 0.0**
comp=Z,36nm,1.2s,mb5.3
CIT Chita 49.35 46 *e*P **P 22 29 12.0 +1.8**
CIT *e* pP 22 29 15.2 +1.9
B19A Brinkman Farms 49.39 302 ⇓P **P 22 29 10.2 -0.3**
baz=49
A17A Triple J Farms 49.41 304 ⇑P **P 22 29 09.9 -0.8**
baz=49,SNR=6.2
C21A Desert Coulee 49.45 300 ⇑P **P 22 29 10.7 -0.2**
baz=49
D23A Lindsay 49.51 298 ⇑P **P 22 29 11.6 +0.2**
baz=49
A16A West Butte Ran 49.65 304 ⇓P **P 22 29 11.3 -1.2**
baz=49
B18A Beardsley Farm 49.67 303 ⇓P **P 22 29 12.2 -0.4**
baz=49,SNR=9.8
WMQ Urumqi 49.78 71 P **P 22 29 15.5 +2.0**
WMQ sP sP 22 29 22.5 +4.6
WMQ PP PP 22 31 11.5 +3.7
WMQ S **S 22 36 24.0 +1.6**
WMQ ScS ScS 22 39 04.0 -0.5
WMQ SS SS 22 39 53.0 -1.2
WMQ pmax pmax
comp=Z,25nm,1.0s,mb5.2
WMQ pmax pmax
comp=Z,140nm,4.0s
WMQ LR LR
comp=N,680nm,16.0s,MS5.0
WMQ LR LR
comp=E,890nm,16.0s,MS5.0
WMQ LR LR
comp=Z,810nm,16.0s,MS4.8
C20A Veseth Ranch, 49.80 301 ⇓P **P 22 29 13.5 -0.1**
baz=50,SNR=15
D22A Cohagen 49.81 299 ⇓P **P 22 29 13.5 -0.2**
baz=50
A15A Johnson Ranch, 49.93 305 ⇑P **P 22 29 13.7 -0.8**
baz=50,SNR=8.4
KSH Kashi 49.99 84 *e*P **P 22 29 17.8 +2.6**
KSH *e*pP pP 22 29 22.5 +4.2
KSH *e*sP sP 22 29 24.8 +5.2
KSH *e*PcP PcP 22 30 38.0 +3.0
KSH *e*PP PP 22 31 13.8 +4.0
KSH *e*ScP ScP 22 34 31.8 +1.6
KSH PcS PcS 22 34 33.5 +1.6
KSH S **S 22 36 26.5 +1.1**
KSH ScS ScS 22 39 05.8 -0.2
KSH SS SS 22 39 56.5 -1.2
KSH pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
KSH LR LR
comp=N,2µm,12.5s
KSH LR LR
comp=E,3µm,19.2s
KSH LR LR
comp=Z,4µm,20.8s
EGMT Eagleton 50.00 302 ⇑P **P 22 29 15.2 +0.1**
baz=50,SNR=15
EGMT Eagleton 50.00 302 *e*P **P 22 29 12.5 -2.6**
comp=Z,73nm,1.1s,mb5.6
EGMT LR LR
comp=Z,4µm,19.0s,MS5.4
EGMT Eagleton 50.00 302 *e*P **P 22 29 12.5 -2.6**
comp=Z,73nm,1.1s,mb5.6
B17A L&G Farms, Che 50.04 303 ⇑P **P 22 29 14.5 -0.9**
baz=50
C19A Slack Wire Ran 50.07 302 ⇑P **P 22 29 15.4 -0.3**
baz=50,SNR=7.3
ECSD EROS Data Cent 50.09 289 *e*P **P 22 29 13.2 -2.7**
comp=Z,44nm,1.1s,mb5.4
ECSD LR LR
comp=Z,3µm,19.0s,MS5.4
ECSD EROS Data Cent 50.09 289 *e*P **P 22 29 13.2 -2.7**
comp=Z,44nm,1.1s,mb5.4
A14A Double T Ranch 50.11 306 ⇑P **P 22 29 15.4 -0.6**
baz=50,SNR=15
D21A La Casta Ranch 50.11 300 ⇑P **P 22 29 16.0 0.0**
baz=50,SNR=7.2
WALA Waterton Lakes 50.16 306 *e*P **P 22 29 16.1 -0.2**
comp=Z,1.0nm,1.3s
WALA Waterton Lakes 50.16 306 *e*P **P 22 29 16.1 -0.2**
comp=Z,1.0nm,1.3s
B16A M & M Farms, S 50.17 304 ⇑P **P 22 29 15.6 -0.8**
baz=50,SNR=6.4
LAO LASA Array 50.24 299 ⇑P **P 22 29 16.4 -0.6**
baz=50,SNR=6.8
LAO LASA Array 50.24 299 *e*P **P 22 29 17.2 +0.2**
comp=Z,80nm,1.7s,mb5.5
LAO LR LR
comp=Z,6µm,19.0s,MS5.6
LAO LASA Array 50.24 299 *e*P **P 22 29 17.2 +0.2**
comp=Z,80nm,1.7s,mb5.5
A13A Flathead Natio 50.41 307 ⇓P **P 22 29 17.3 -0.9**
baz=50
D20A Manuel Ranch, 50.41 301 ⇓P **P 22 29 17.6 -0.6**
baz=50,SNR=16
B15A Bradely Ranch, 50.49 305 ⇑P **P 22 29 17.6 -1.2**
baz=50,SNR=13
D19A Cripps Ranch, 50.55 301 ⇓P **P 22 29 18.4 -0.9**
baz=50,SNR=25
E21A Keefer Ranch, 50.62 300 ⇑P **P 22 29 19.1 -0.7**
baz=50,SNR=6.8
C17A Wharram Farm, 50.63 303 ⇑P **P 22 29 18.9 -1.0**
baz=50,SNR=8.8
B14A Marquette Ranc 50.63 305 ⇑P **P 22 29 18.8 -1.1**
baz=50,SNR=14
HDIL Hopedale 50.70 281 *e*P **P 22 29 21.8 +1.3**
comp=Z,64nm,1.1s,mb5.5
HDIL LR LR
comp=Z,2µm,19.0s,MS5.2
A12A Yaak River Ran 50.73 308 ⇓P **P 22 29 19.8 -0.8**
baz=50
C16A Fuhringer Ranc 50.74 304 ⇓P **P 22 29 19.5 -1.3**
baz=50,SNR=7.0
D18A Linhart Farms, 50.77 302 ⇑P **P 22 29 20.8 -0.2**
baz=51
BLA Blacksburg 50.89 271 *e*P **P 22 29 22.4 +0.4**
BLA *e*PP PP 22 31 18.7 +0.7
BLA *e*S **S 22 36 38.6 +0.6**
BLA LR LR
comp=Z,3µm,19.0s,MS5.3
BLA Blacksburg 50.89 271 *e*P **P 22 29 22.4 +0.4**
BLA *e* 22 31 18.7
BLA *e*S **S 22 36 38.6 +0.6**
BLA MLR MLR
comp=Z,3µm,19.0s,MS5.3
BLA Blacksburg 50.89 271 *e*P **P 22 29 22.4 +0.4**
B13A Whitefish 50.94 306 ⇑P **P 22 29 21.5 -0.7**
baz=51,SNR=7.8
E20A Meyer Farm, Mu 50.94 300 ⇑P **P 22 29 21.7 -0.6**
baz=51,SNR=12
ELN Prospectdale 50.98 272 *e*P **P 22 29 22.6 -0.1**
ELN Prospectdale 50.98 272 *e*P **P 22 29 22.6 -0.1**
C15A Salmond Ranch, 51.00 305 ⇓P **P 22 29 21.9 -0.8**
baz=51,SNR=18
D17A Six Diamond Ra 51.05 303 ⇑P **P 22 29 22.3 -0.8**
baz=51,SNR=11
B12A Libby 51.14 307 ⇓P **P 22 29 22.7 -1.0**
baz=51
E19A Rath Farm, Rou 51.16 301 ⇑P **P 22 29 23.5 -0.5**
baz=51,SNR=11
F21A Absaloka Mine, 51.28 299 ⇑P **P 22 29 24.0 -0.8**
baz=51
YBMT Yellow Bay 51.29 306 *e*P **P 22 29 24.9 +0.1**
YBMT Yellow Bay 51.29 306 *e*P **P 22 29 24.9 0.0**
C14A Swan Lake 51.30 306 ⇑P **P 22 29 24.0 -1.0**
baz=51
E18A Harlowton 51.38 302 ⇓P **P 22 29 25.2 -0.4**
baz=51,SNR=18
D16A Dana Ranch, Ca 51.40 303 ⇓P **P 22 29 25.1 -0.6**
baz=51
CHGN Chignik 51.44 342 *e*P **P 22 29 25.1 -0.8**
CHGN Chignik 51.44 342 *e*P **P 22 29 25.1 -0.8**
SONM Songino Array 51.45 54 P **P 22 29 25.6 -0.5**
comp=Z,3.9nm,0.9s,mb4.3,baz=328,slow=6.7,SNR=21
SONM PcP PcP 22 30 40.5 +0.2
comp=Z,2.4nm,1.0s,baz=321,slow=2.0,SNR=4.1
SONM LR LR 22 53 32.6
comp=Z,821nm,20.4s,MS4.8,baz=340,slow=39
SONM Songino Array 51.45 54 P **P 22 29 25.6 -0.5**
SONM 22 30 40.5
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM MLR MLR
comp=Z,821nm,20.4s
SONM Songino Array 51.45 54 P **P 22 29 25.6 -0.5**
SONM Songino Array 51.45 54 PcP PcP 22 30 40.5 +0.2
JTMT Jette 51.47 306 *e*P **P 22 29 25.9 -0.3**
JTMT Jette 51.47 306 *e*P **P 22 29 25.9 -0.3**
BSMT Bassoo Peak 51.50 306 *e*P **P 22 29 25.0 -1.5**
BSMT Bassoo Peak 51.50 306 *e*P **P 22 29 25.0 -1.5**
F20A Billings 51.59 300 ⇑P **P 22 29 26.7 -0.5**
baz=51
ULN Ulaanbaatar 51.60 53 *e*P **P 22 29 28.6 +1.4**
comp=Z,28nm,1.2s,mb5.1
ULN Ulaanbaatar 51.60 53 *e*P **P 22 29 28.6 +1.4**
ULN pmax pmax
comp=Z,28nm,1.2s,mb5.1
ULN Ulaanbaatar 51.60 53 P **P 22 29 29.2 +2.0**
SNR=20
ULN Ulaanbaatar 51.60 53 P **P 22 29 29.2 +2.1**
SNR=20
C13A Hot Springs 51.60 306 ⇓P **P 22 29 26.7 -0.5**
baz=51
SWMT Swartz Lake 51.61 306 *e*P **P 22 29 25.7 -1.6**
SWMT Swartz Lake 51.61 306 *e*P **P 22 29 25.7 -1.6**
D15A Lincoln 51.65 304 ⇓P **P 22 29 26.6 -0.9**
baz=51,SNR=13
NEW Newport 51.72 308 ⇓P **P 22 29 27.7 -0.4**
baz=52,SNR=15
NEW Newport 51.72 308 *e*P **P 22 29 26.5 -1.6**
NEW Newport 51.72 308 *e*P **P 22 29 26.5 -1.6**
NEW Newport 51.72 308 *e*P **P 22 29 26.5 -1.6**
SLMT Seeley Lake 51.72 305 *e*P **P 22 29 25.8 -2.3**
SLMT Seeley Lake 51.72 305 *e*P **P 22 29 25.8 -2.3**
E17A Martinsdale 51.73 303 ⇓P **P 22 29 28.1 -0.2**
baz=52,SNR=12
F19A Roth Farm, Mol 51.77 301 ⇑P **P 22 29 28.2 -0.2**
baz=52,SNR=14
HRY Holter Researc 51.77 303 *e*P **P 22 29 27.9 -0.6**
comp=Z,4.9nm,1.0s,mb4.4
HRY Holter Researc 51.77 303 *e*P **P 22 29 27.9 -0.6**
comp=Z,4.9nm,1.0s,mb4.4
C12B Naegeli Ranch, 51.81 307 ⇓P **P 22 29 28.0 -0.7**
baz=52,SNR=6.4
G21A Lodge Grass 51.86 299 ⇓P **P 22 29 28.4 -0.7**
baz=52
WCI Wyandotte Cave 51.86 277 *e*P **P 22 29 29.7 +0.5**
comp=Z,36nm,1.0s,mb5.2
WCI Wyandotte Cave 51.86 277 *e*P **P 22 29 29.7 +0.5**
WCI pmax pmax
comp=Z,36nm,1.0s,mb5.3
WCI Wyandotte Cave 51.86 277 *e*P **P 22 29 29.7 +0.5**
comp=Z,36nm,1.0s,mb5.2
D14A Greenough 51.88 305 ⇑P **P 22 29 28.7 -0.6**
baz=52,SNR=16
E16A East Helena 51.89 303 ⇓P **P 22 29 28.8 -0.5**
baz=52,SNR=6.7
C11A Tepee Creek (N 51.89 308 ⇓P **P 22 29 28.7 -0.6**
baz=52
F18A Big Timber 51.93 301 ⇑P **P 22 29 29.3 -0.4**
baz=52,SNR=15
RSSD Black Hills 51.96 296 *e*P **P 22 29 28.3 -1.6**
comp=Z,22nm,1.2s,mb5.0
RSSD Black Hills 51.96 296 *e*P **P 22 29 28.3 -1.6**
RSSD pmax pmax
comp=Z,22nm,1.2s,mb5.0
RSSD Black Hills 51.96 296 *e*P **P 22 29 28.3 -1.6**
comp=Z,22nm,1.2s,mb5.0
CHMT Chamberlain Mo 51.96 305 *e*P **P 22 29 26.9 -3.0**
OLIL Olney 51.97 279 *e*P **P 22 29 30.2 +0.1**
comp=Z,29nm,0.9s,mb5.2
OLIL Olney 51.97 279 *e*P **P 22 29 30.2 +0.1**
comp=Z,29nm,0.9s,mb5.2
GCMT Greycliff 52.02 301 *e*P **P 22 29 28.1 -2.3**
comp=Z,20nm,1.1s,mb5.0
GCMT Greycliff 52.02 301 *e*P **P 22 29 28.1 -2.3**
comp=Z,20nm,1.1s,mb5.0
D13A Huson 52.11 306 ⇓P **P 22 29 30.4 -0.6**
baz=52,SNR=9.0
G20A Bridger 52.14 300 ⇑P **P 22 29 30.7 -0.6**
baz=52,SNR=18
B08A Colville Reser 52.18 310 ⇑P **P 22 29 31.1 -0.4**
baz=52,SNR=13
F17A Fitzpatrick Pl 52.19 302 ⇓P **P 22 29 31.7 +0.1**
baz=52,SNR=14
MSO Missoula 52.22 305 ⇑P **P 22 29 31.5 -0.3**
baz=52,SNR=15
MSO Missoula 52.22 305 *e*P **P 22 29 30.6 -1.2**
comp=Z,27nm,1.3s,mb5.0
MSO LR LR
comp=Z,1µm,19.0s,MS4.9
MSO Missoula 52.22 305 *e*P **P 22 29 30.6 -1.2**
comp=Z,27nm,1.3s,mb5.0
E15A Deer Lodge 52.25 304 ⇓P **P 22 29 31.5 -0.6**
baz=52
A05A Maple Falls 52.26 313 ⇓P **P 22 29 30.8 -1.2**
baz=52
KBL Kabul 52.30 93 *e*P **P 22 29 34.9 +2.4**
comp=Z,10nm,1.3s,mb4.6
KBL Kabul 52.30 93 *e*P **P 22 29 34.9 +2.3**
KBL pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
H21A Big Horn, Sher 52.36 299 ⇓P **P 22 29 32.7 -0.2**
baz=52
D12A Red Ives Fores 52.39 306 ⇓P **P 22 29 32.6 -0.5**
baz=52
G18A Lazy EL Ranch, 52.43 301 ⇑P **P 22 29 32.9 -0.5**
baz=52
C09A Chrisman Ranch 52.44 309 ⇓P **P 22 29 32.4 -1.0**
baz=52
E14A Clinton 52.49 305 ⇓P **P 22 29 33.1 -0.7**
baz=52
RLMT Red Lodge 52.53 301 ⇓P **P 22 29 34.0 -0.1**
baz=52,SNR=6.5
RLMT Red Lodge 52.53 301 *e*P **P 22 29 34.3 +0.1**
comp=Z,53nm,1.8s,mb5.2
RLMT LR LR
comp=Z,3µm,19.0s,MS5.3
RLMT Red Lodge 52.53 301 *e*P **P 22 29 34.3 +0.2**
comp=Z,53nm,1.8s,mb5.2
USIN University of 52.54 278 *e*P **P 22 29 34.5 +0.2**
comp=Z,88nm,1.3s,mb5.5
USIN University of 52.54 278 *e*P **P 22 29 34.5 +0.2**
comp=Z,88nm,1.3s,mb5.5
B06A Marblemount 52.56 312 ⇑P **P 22 29 33.6 -0.7**
baz=52
F16A Kennard Place, 52.57 303 ⇑P **P 22 29 33.6 -0.8**
baz=52
RPW Rockport 52.63 312 P **P 22 29 34.8 0.0**
RPW Rockport 52.63 312 P **P 22 29 34.8 -0.1**
E13A Victor 52.65 305 ⇓P **P 22 29 34.5 -0.5**
baz=52,SNR=11
BOZ Bozeman (W) 52.70 303 ⇓P **P 22 29 35.5 +0.1**
baz=52,SNR=8.6
BOZ Bozeman (W) 52.70 303 *e*P **P 22 29 35.6 +0.2**
comp=Z,7.3nm,1.1s,mb4.5
BOZ LR LR
comp=Z,3µm,20.0s,MS5.4
BOZ Bozeman (W) 52.70 303 *e*P **P 22 29 35.6 +0.2**
BOZ pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
BOZ MLR MLR
comp=Z,3µm,20.0s,MS5.4
BOZ Bozeman (W) 52.70 303 *e*P **P 22 29 35.6 +0.2**
comp=Z,7.3nm,1.1s,mb4.5
F15A Butte 52.75 304 ⇑P **P 22 29 35.7 0.0**
baz=52,SNR=10
G17A Pierce Place, 52.75 302 ⇑P **P 22 29 35.8 0.0**
baz=52
LRM Limekiln Ridge 52.76 304 *e*P **P 22 29 35.8 0.0**
LRM Limekiln Ridge 52.76 304 *e*P **P 22 29 35.8 0.0**
H20A Greybull 52.76 299 ⇑P **P 22 29 35.5 -0.3**
baz=52,SNR=22
H19A Powell 52.87 300 ⇑P **P 22 29 36.7 0.0**
baz=53
F14A Wisdom 53.01 304 ⇓P **P 22 29 37.4 -0.3**
baz=53
E12A Beaver Dam Sad 53.03 306 ⇑P **P 22 29 37.0 -0.8**
baz=53
H18A Shoshone NF, C 53.05 301 ⇑P **P 22 29 37.5 -0.5**
baz=53,SNR=8.9
G16A Moss Hill, Enn 53.13 303 ⇑P **P 22 29 37.9 -0.6**
baz=53,SNR=7.2
ETW Entiat 53.13 311 P **P 22 29 37.6 -1.0**
ETW Entiat 53.13 311 P **P 22 29 37.6 -1.0**
I21A Big Trails, Te 53.18 298 ⇓P **P 22 29 38.6 -0.3**
baz=53,SNR=35
DLMT Dillon 53.22 303 *e*P **P 22 29 39.6 +0.4**
comp=Z,10nm,1.1s,mb4.7
DLMT Dillon 53.22 303 *e*P **P 22 29 39.6 +0.4**
comp=Z,10nm,1.1s,mb4.7
SIUC Southern Illin 53.26 280 *e*P **P 22 29 40.1 +0.4**
comp=Z,74nm,1.0s,mb5.6
I20A Worland 53.29 299 ⇑P **P 22 29 39.6 -0.2**
baz=53,SNR=14
F13A Darby 53.29 305 ⇓P **P 22 29 39.0 -0.7**
baz=53
D08A Wollman Farm, 53.29 309 ⇑P **P 22 29 38.8 -0.9**
baz=53
YNR Norris Junctio 53.29 302 *e*P **P 22 29 44.8 +5.0**
comp=Z,22nm,1.4s,mb4.9
J22A Midwest 53.31 297 ⇓P **P 22 29 39.2 -0.8**
baz=53,SNR=16
HIA Hailar 53.33 43 *e*P **P 22 29 39.9 -0.1**
comp=Z,65nm,1.2s,mb5.4
HIA Hailar 53.33 43 *e*P **P 22 29 39.9 -0.1**
HIA pmax pmax
comp=Z,65nm,1.2s
HIA Hailar 53.33 43 *e*P **P 22 29 39.9 -0.1**
comp=Z,65nm,1.2s,mb5.4
LKWY Lake 53.35 301 *e*P **P 22 29 40.2 -0.1**
LKWY *e*PP PP 22 31 41.0 +0.9
LKWY *e*S **S 22 37 12.0 +0.4**
LKWY LR LR
comp=Z,5µm,19.0s,MS5.6
LKWY Lake 53.35 301 *e*P **P 22 29 40.2 0.0**
LKWY *e* 22 31 41.0
LKWY *e*S **S 22 37 12.0 +0.4**
LKWY MLR MLR
comp=Z,5µm,19.0s,MS5.6
LKWY Lake 53.35 301 *e*P **P 22 29 40.2 0.0**
LKWY Lake 53.35 301 *e*PP PP 22 31 41.0 +0.9
LKWY *e*S **S 22 37 12.0 +0.4**
comp=Z,5µm,19.0s
G15A Dillon 53.37 303 ⇓P **P 22 29 40.2 -0.2**
baz=53,SNR=7.5
QLMT Earthquake Lak 53.39 302 *e*P **P 22 29 41.3 +0.8**
TKL Tuckaleechee C 53.40 274 LR LR 22 51 34.4
comp=Z,2µm,19.6s,MS5.2,baz=34,slow=35
TKL Tuckaleechee C 53.40 274 *e*P **P 22 29 41.8 +1.1**
TKL Tuckaleechee C 53.40 274 *e*P **P 22 29 41.8 +1.1**
FVM French Village 53.40 281 *e*P **P 22 29 40.2 -0.5**
comp=Z,28nm,0.9s,mb5.2
FVM French Village 53.40 281 *e*P **P 22 29 40.2 -0.5**
FVM pmax pmax
comp=Z,28nm,0.9s,mb5.2
FVM French Village 53.40 281 *e*P **P 22 29 40.2 -0.5**
comp=Z,28nm,0.9s,mb5.2
I19A Meeteetse 53.45 300 ⇑P **P 22 29 40.9 -0.1**
baz=53,SNR=12
H16A Russell Place, 53.46 302 ⇑P **P 22 29 41.0 0.0**
baz=53,SNR=15
F12A Elk City 53.56 306 ⇑P **P 22 29 41.4 -0.3**
baz=53,SNR=12
G14A Jackson 53.56 304 ⇓P **P 22 29 41.4 -0.3**
baz=53
H17A Grant Village 53.56 301 ⇑P **P 22 29 42.1 +0.4**
baz=53,SNR=12
YFT Old Faithful 53.58 302 *e*P **P 22 29 43.8 +1.9**
comp=Z,24nm,1.0s,mb5.1
E09A Wood Farm, Sta 53.60 308 ⇑P **P 22 29 41.5 -0.5**
baz=53
J21A Lysite 53.65 298 ⇓P **P 22 29 42.4 0.0**
baz=53,SNR=15
HDW Hoodsport 53.75 313 P **P 22 29 44.0 +0.9**
MCMT McKenzie Canyo 53.78 303 *e*P **P 22 29 41.1 -2.3**
comp=Z,10nm,1.3s,mb4.6
MCMT *e*PcP PcP 22 30 49.4 +0.3
MCMT McKenzie Canyo 53.78 303 *e*P **P 22 29 41.1 -2.3**
comp=Z,10nm,1.3s,mb4.6
J20A Shoshoni 53.82 299 ⇓P **P 22 29 43.3 -0.4**
baz=54,SNR=12
CPCT Cooper Cave 53.83 274 *e*P **P 22 29 44.6 +0.8**
JSC Jenkinsville 53.85 271 *e*P **P 22 29 44.9 +1.0**
JSC Jenkinsville 53.85 271 *e*P **P 22 29 44.9 +0.9**
E08A Dider Farm, El 53.85 309 ⇓P **P 22 29 43.4 -0.5**
baz=54,SNR=6.1
F10A Beach Ranch, E 53.87 307 ⇓P **P 22 29 43.4 -0.6**
baz=54,SNR=7.8
FLWY Flagg Ranch 53.88 301 *e*P **P 22 29 45.5 +1.3**
comp=Z,18nm,1.1s,mb4.9
G13A Cobalt 53.91 305 ⇑P **P 22 29 43.7 -0.6**
baz=54,SNR=15
H15A Lima 53.92 303 ⇓P **P 22 29 44.2 -0.1**
baz=54,SNR=15
D05A Enumclaw 53.92 312 ⇓P **P 22 29 43.8 -0.6**
baz=54
E07A Sunnyside 53.99 310 ⇑P **P 22 29 44.5 -0.4**
baz=54,SNR=12
I18A Diamond G Ranc 53.99 300 ⇓P **P 22 29 44.7 -0.2**
baz=54
I17A Pilgrim Ck. 54.00 301 ⇓P **P 22 29 45.5 +0.5**
baz=54
K22A Casper 54.02 297 ⇓P **P 22 29 44.3 -0.9**
baz=54,SNR=17
HAWA Hanford 54.06 309 *e*P **P 22 29 45.6 +0.2**
comp=Z,63nm,1.7s,mb5.3
HAWA LR LR
comp=Z,4µm,19.0s,MS5.5
HAWA Hanford 54.06 309 *e*P **P 22 29 45.6 +0.2**
comp=Z,63nm,1.7s,mb5.3
RSW Rattlesnake Hi 54.08 310 *e*P **P 22 29 46.2 +0.7**
H14A Leadore 54.12 304 ⇓P **P 22 29 45.5 -0.3**
baz=54,SNR=13
IMW Indian Meadow 54.12 301 *e*P **P 22 29 44.4 -1.4**
comp=Z,24nm,1.1s,mb5.0
IMW Indian Meadow 54.12 301 *e*P **P 22 29 44.4 -1.5**
comp=Z,24nm,1.1s,mb5.0
L24A Wheatland 54.12 295 ⇑P **P 22 29 45.5 -0.4**
baz=54
G12A Big Creek, Yel 54.16 306 ⇓P **P 22 29 45.7 -0.4**
baz=54
J19A Crowheart 54.18 300 ⇓P **P 22 29 46.3 +0.1**
baz=54
NLWA Neilton Lookou 54.18 313 *e*P **P 22 29 47.0 +0.8**
comp=Z,30nm,1.2s,mb5.1
NLWA LR LR
comp=Z,4µm,19.0s,MS5.5
MOOW Moose Ponds 54.20 301 *e*P **P 22 29 47.1 +0.7**
comp=Z,14nm,1.4s,mb4.7
MOOW Moose Ponds 54.20 301 *e*P **P 22 29 47.1 +0.6**

comp=Z,14nm,1.4s,mb4.7
LNOR Lincton Mounta 54.24 308 *e*P **P 22 29 47.0 +0.3**
LNOR Lincton Mounta 54.24 308 *e*P **P 22 29 47.0 +0.3**
LNOR Lincton Mounta 54.24 308 *e*P **P 22 29 47.0 +0.3**
K21A Alcova 54.25 298 ⇑P **P 22 29 46.2 -0.7**
baz=54,SNR=6.0
WVT Waverly 54.27 278 *e*P **P 22 29 46.5 -0.5**
comp=Z,26nm,1.4s,mb5.0
WVT Waverly 54.27 278 *e*P **P 22 29 46.5 -0.5**
WVT pmax pmax
comp=Z,26nm,1.4s,mb5.0
WVT Waverly 54.27 278 *e*P **P 22 29 46.5 -0.5**
comp=Z,26nm,1.4s,mb5.0
OGNE Ogallala 54.27 292 ⇓P **P 22 29 46.9 -0.2**
baz=54
OGNE Ogallala 54.27 292 *e*P **P 22 29 47.7 +0.6**
comp=Z,68nm,1.1s,mb5.5
OGNE LR LR
comp=Z,1μm,19.0s,MS5.1
L23A Garrett 54.28 296 ⇑P **P 22 29 45.7 -1.4**
baz=54,SNR=9.5
I16A Newdale 54.29 302 ⇑P **P 22 29 47.6 +0.5**
baz=54,SNR=15
LOHW Long Hollow 54.29 301 *e*P **P 22 29 47.7 +0.6**
comp=Z,11nm,1.2s,mb4.7
LOHW Long Hollow 54.29 301 *e*P **P 22 29 47.7 +0.6**
comp=Z,11nm,1.2s,mb4.7
LON Longmire 54.29 311 *e*P **P 22 29 47.0 -0.1**
comp=Z,28nm,1.3s,mb5.0
LON Longmire 54.29 311 *e*P **P 22 29 47.0 -0.1**
LON pmax pmax
comp=Z,28nm,1.3s,mb5.0
LON Longmire 54.29 311 *e*P **P 22 29 47.0 -0.1**
comp=Z,28nm,1.3s,mb5.0
KSU1 Kansas State U 54.32 287 *e*P **P 22 29 46.8 -0.5**
comp=Z,75nm,1.0s,mb5.6
KSU1 LR LR
comp=Z,6μm,19.0s,MS5.7
KSU1 Kansas State U 54.32 287 *e*P **P 22 29 46.8 -0.5**
comp=Z,75nm,1.0s,mb5.6
PARMO Parma 54.39 280 *e*P **P 22 29 48.3 +0.4**
PARMO Parma 54.39 280 *e*P **P 22 29 48.3 +0.4**
H13A Challis 54.40 304 ⇑P **P 22 29 47.7 -0.2**
baz=54
I15A Monteview 54.45 303 ⇓P **P 22 29 47.7 -0.5**
baz=54
DCID1 Drake Creek 54.47 301 *e*P **P 22 29 48.3 -0.1**
comp=Z,24nm,0.3s,mb5.6
DCID1 Drake Creek 54.47 301 *e*P **P 22 29 48.3 -0.1**
comp=Z,24nm,0.3s,mb5.6
SNOW Snow King Moun 54.47 301 *e*P **P 22 29 49.9 +1.4**
comp=Z,25nm,1.4s,mb5.0
COW Cow Castle Cre 54.49 270 *e*P **P 22 29 48.4 -0.3**
COW Cow Castle Cre 54.49 270 *e*P **P 22 29 48.4 -0.3**
SWET Sewanee 54.50 275 *e*P **P 22 29 48.3 -0.4**
SWET Sewanee 54.50 275 *e*P **P 22 29 48.3 -0.4**
J18A Kendall Valley 54.50 300 ⇑P **P 22 29 48.3 -0.3**
baz=54,SNR=12
TPAW Teton Pass 54.50 301 *e*P **P 22 29 50.0 +1.4**
comp=Z,21nm,1.4s,mb5.0
K19A Absolon Red Bu 54.53 299 ⇓P **P 22 29 47.9 -0.9**
baz=54,SNR=7.8
K20A Yellowstone Ra 54.54 299 ⇓P **P 22 29 48.2 -0.7**
baz=54,SNR=14
J17A Brown Place, J 54.55 301 ⇑P **P 22 29 49.0 0.0**
baz=54,SNR=7.0
L22A Ellis Ranch, M 54.57 297 ⇑P **P 22 29 49.3 +0.1**
baz=54
H12A Diamond D Ranc 54.58 305 ⇓P **P 22 29 48.9 -0.3**
baz=54,SNR=32
NHSC New Hope 54.58 269 *e*P **P 22 29 50.7 +1.4**
comp=Z,62nm,1.0s,mb5.6
NHSC LR LR
comp=Z,3μm,20.0s,MS5.4
REDW Red Top Meadow 54.59 301 *e*P **P 22 29 50.5 +1.2**
comp=Z,28nm,1.3s,mb5.1
M24A Cheyenne 54.62 295 ⇑P **P 22 29 49.8 +0.3**
baz=54,SNR=6.0
F07A Phinny Hill Vi 54.63 310 ⇑P **P 22 29 49.1 -0.4**
baz=54,SNR=5.9
RRI2 Red Ridge 54.73 301 *e*P **P 22 29 48.4 -2.0**
comp=Z,12nm,0.9s,mb4.9
I14A Mackay 54.78 303 ⇓P **P 22 29 50.5 -0.1**
baz=54,SNR=7.8
BW06 Boulder Array 54.78 300 ⇑P **P 22 29 50.2 -0.4**
baz=55,SNR=10
BW06 Boulder Array 54.78 300 *e*P **P 22 29 47.4 -3.3**
comp=Z,11nm,0.9s,mb4.9
BW06 LR LR
comp=Z,5μm,19.0s,MS5.6
J16A Bone 54.88 302 ⇑P **P 22 29 51.7 +0.3**
baz=55,SNR=7.4
M23A Laramie 54.88 296 ⇑P **P 22 29 50.3 -1.1**
baz=55
L21A Rawlins 54.90 297 ⇑P **P 22 29 51.0 -0.5**
baz=55,SNR=18
E03A Lebam 54.90 313 ⇓P **P 22 29 51.3 -0.2**
baz=55
BMO Blue Mountains 54.94 307 *e*P **P 22 29 48.2 -3.5**
comp=Z,16nm,1.0s,mb5.0
BMO LR LR
comp=Z,2μm,20.0s,MS5.2
G08A Pilot Rock 54.95 309 ⇑P **P 22 29 51.9 0.0**
baz=55,SNR=23
PHWY Pilot Hill 54.96 296 *e*P **P 22 29 51.6 -0.3**
comp=Z,29nm,1.3s,mb5.2
PHWY Pilot Hill 54.96 296 *e*P **P 22 29 51.7 -0.3**
comp=Z,29nm,1.3s,mb5.2
I13A Wildhorse Cree 54.97 304 ⇑P **P 22 29 52.0 0.0**
baz=55,SNR=13
J15A Blackfoot 54.99 302 ⇑P **P 22 29 52.8 +0.6**
baz=55,SNR=13
N25A Grover 55.01 294 ⇑P **P 22 29 52.6 +0.3**
baz=55
K18A Toltan Ranch, 55.04 300 ⇓P **P 22 29 52.3 -0.2**
baz=55,SNR=8.7
RWWY Rawlins 55.11 297 *e*P **P 22 29 52.7 -0.4**
comp=Z,28nm,1.3s,mb5.1
RWWY Rawlins 55.11 297 *e*P **P 22 29 52.7 -0.4**
comp=Z,28nm,1.3s,mb5.1
L20A Wamsutter 55.14 298 ⇑P **P 22 29 52.7 -0.5**
baz=55,SNR=6.4
K17A Gardner Place, 55.18 301 ⇓P **P 22 29 53.7 +0.2**
baz=55
M22A Cedar Creek Ra 55.20 297 ⇑P **P 22 29 53.3 -0.4**
baz=55
F04A Amboy 55.20 312 ⇓P **P 22 29 53.0 -0.7**
baz=55
AHID Auburn Hatcher 55.21 301 *e*P **P 22 29 53.9 +0.1**
AHID *e*S **S 22 37 37.3 +0.6**
AHID LR LR
comp=Z,3μm,20.0s,MS5.4
AHID Auburn Hatcher 55.21 301 *e*P **P 22 29 53.9 +0.1**
AHID *e*S **S 22 37 37.3 +0.6**
N24A Carr 55.23 295 ⇑P **P 22 29 54.5 +0.5**
baz=55
M21A Separation Pea 55.23 297 ⇓P **P 22 29 53.2 -0.8**
baz=55,SNR=7.3
PETK Petropavlovsk- 55.26 13 P **P 22 29 53.1 -0.9**
comp=Z,6.3nm,1.0s,mb4.6,baz=350,slow=5.9,SNR=4.1
PETK LR LR 22 53 07.4
comp=Z,426nm,19.6s,MS4.5,baz=353,slow=36
PETK Petropavlovsk- 55.26 13 P **P 22 29 53.1 -0.8**
PETK pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
PETK MLR MLR
comp=Z,426nm,19.6s,MS4.5
PETK Petropavlovsk- 55.26 13 P **P 22 29 53.1 -0.8**
K16A Soda Springs 55.28 301 ⇓P **P 22 29 54.1 -0.2**
baz=55,SNR=12
L19A Farson 55.34 299 ⇑P **P 22 29 54.3 -0.4**
baz=55,SNR=10
I12A Atlanta 55.35 305 ⇓P **P 22 29 54.1 -0.7**
baz=55,SNR=11
J14A Carey 55.36 303 ⇑P **P 22 29 54.7 -0.1**
baz=55,SNR=6.9
GOGA Godfrey 55.36 272 *e*P **P 22 29 54.8 -0.1**
comp=Z,38nm,1.4s,mb5.2
GOGA LR LR
comp=Z,3μm,19.0s,MS5.4
GOGA Godfrey 55.36 272 *e*P **P 22 29 54.8 -0.2**
GOGA pmax pmax
comp=Z,39nm,1.4s,mb5.2
GOGA MLR MLR
comp=Z,3μm,19.0s,MS5.4
GOGA Godfrey 55.36 272 *e*P **P 22 29 54.8 -0.2**
comp=Z,38nm,1.4s,mb5.2

HLID Hailey 55.38 304 ⇑P **P 22 29 54.7 -0.3**
baz=55,SNR=19
HLID Hailey 55.38 304 *e*P **P 22 29 52.5 -2.5**
comp=Z,23nm,1.1s,mb5.1
HLID LR LR
comp=Z,2μm,19.0s,MS5.3
HLID Hailey 55.38 304 *e*P **P 22 29 52.5 -2.5**
comp=Z,23nm,1.1s,mb5.1
PET Petropavlovsk 55.41 13 *e*P **P 22 29 58.8 +3.8**
PET *e*S **S 22 37 46.8 +7.8**
PET pmax pmax
comp=Z,100nm,7.9s
G06A Carlson Farm, 55.42 310 ⇑P **P 22 29 55.6 +0.3**
baz=55,SNR=11
J13A Cove Ranch, Pi 55.46 304 ⇑P **P 22 29 55.1 -0.5**
baz=55,SNR=9.4
N23A Red Feather La 55.48 296 ⇑P **P 22 29 55.4 -0.3**
baz=55,SNR=24
F03A Seaside 55.48 312 ⇓P **P 22 29 55.2 -0.4**
baz=55
CBKS Cedar Bluff 55.54 289 ⇓P **P 22 29 55.6 -0.6**
baz=55
CBKS Cedar Bluff 55.54 289 *e*P **P 22 29 56.5 +0.3**
comp=Z,117nm,1.4s,mb5.7
CBKS LR LR
comp=Z,3μm,20.0s,MS5.4
CBKS Cedar Bluff 55.54 289 *e*P **P 22 29 56.5 +0.3**
CBKS pmax pmax
comp=Z,117nm,1.4s,mb5.7
CBKS MLR MLR
comp=Z,3μm,20.0s,MS5.4
CBKS Cedar Bluff 55.54 289 *e*P **P 22 29 56.5 +0.3**
comp=Z,117nm,1.4s,mb5.7
VFP Flag Point 55.55 311 P **P 22 29 56.5 +0.4**
VFP Flag Point 55.55 311 P **P 22 29 56.5 +0.3**
M20A Sweetwater, Wa 55.57 298 ⇑P **P 22 29 56.2 -0.1**
baz=55
O25A Wiggins 55.66 294 ⇑P **P 22 29 56.8 -0.3**
baz=56
K15A Arbon 55.68 302 ⇓P **P 22 29 56.9 -0.2**
baz=56
L18A Fontenelle, Gr 55.69 300 ⇓P **P 22 29 56.8 -0.4**
baz=56,SNR=14
N22A Wattenberg Ran 55.71 296 ⇓P **P 22 29 56.9 -0.5**
baz=56,SNR=16
KLR Kul'dur 55.76 34 *e*P **P 22 29 53.4 -4.2**
KLR pmax pmax
comp=Z,64nm,1.8s,mb5.3
KLR MLR MLR
comp=N,900nm,15.0s,MS5.0
KLR MLR MLR
comp=E,500nm,15.0s,MS5.0
KLR MLR MLR
comp=Z,1μm,15.0s,MS5.1
KLR MLR MLR
comp=N,500nm,13.5s
KLR MLR MLR
comp=Z,1μm,13.5s
L17A Cokeville 55.77 300 ⇓P **P 22 29 56.8 -0.9**
baz=56
M19A Rock Springs 55.83 299 ⇓P **P 22 29 57.4 -0.9**
baz=56
MFID Camas Ranch 55.89 305 ⇑P **P 22 29 57.6 -1.0**
baz=56
G04A Mulino 55.90 311 ⇓P **P 22 29 57.7 -1.0**
baz=56
O24A Longmont 55.93 295 ⇑P **P 22 29 58.4 -0.6**
baz=56
K14A Jones Ranch, D 55.99 303 ⇓P **P 22 29 59.6 +0.3**
baz=56,SNR=11
L16A Fish Haven 56.00 301 ⇑P **P 22 29 59.4 -0.1**
baz=56,SNR=9.6
N21A Black Mountain 56.06 297 ⇑P **P 22 29 59.4 -0.5**
baz=56
VIPM Ingram Point 56.10 310 P **P 22 30 01.0 +0.9**
VIPM Ingram Point 56.10 310 P **P 22 30 01.0 +0.9**
VIPM Ingram Point 56.10 310 P **P 22 30 01.0 +0.9**
O23A Lake Granby, G 56.10 295 ⇓P **P 22 30 00.1 -0.1**
baz=56,SNR=10.0
M18A Lyman 56.16 300 ⇓P **P 22 30 00.2 -0.4**
baz=56
N20A Spence Gulch, 56.20 298 ⇓P **P 22 30 01.0 +0.1**
baz=56,SNR=38
I07A Izee 56.22 308 ⇓P **P 22 30 00.7 -0.2**
baz=56,SNR=13
P25A Willow Gulch B 56.23 294 ⇓P **P 22 30 01.5 +0.3**
baz=56,SNR=6.3
OXF Oxford 56.26 278 *e*P **P 22 30 00.3 -1.1**
comp=Z,82nm,1.0s,mb5.7
OXF *e*PcP PcP 22 30 58.9 +0.1
OXF LR LR
comp=Z,2μm,20.0s,MS5.1
OXF Oxford 56.26 278 *e*P **P 22 30 00.3 -1.1**
OXF *e* 22 30 58.9
OXF pmax pmax
comp=Z,82nm,1.0s,mb5.7
OXF MLR MLR
comp=Z,2μm,20.0s,MS5.1
OXF Oxford 56.26 278 *e*P **P 22 30 00.3 -1.1**
comp=Z,82nm,1.0s,mb5.7
L15A Malad City 56.27 302 ⇑P **P 22 30 01.6 +0.2**
baz=56,SNR=13
M17A Scullys Gap (B 56.29 300 ⇑P **P 22 30 01.2 -0.3**
baz=56,SNR=14
H04A Detroit Lake 56.32 311 ⇑P **P 22 30 01.3 -0.4**
baz=56,SNR=11
O22A Kremmling 56.33 296 ⇑P **P 22 30 01.9 0.0**
baz=56,SNR=20
ISCO Idaho Springs 56.39 295 ⇑P **P 22 30 02.5 +0.2**
baz=56,SNR=17
ISCO Idaho Springs 56.39 295 *e*P **P 22 30 01.4 -0.8**
comp=Z,25nm,1.3s,mb5.1
ISCO LR LR
comp=Z,5μm,19.0s,MS5.6
ISCO Idaho Springs 56.39 295 *e*P **P 22 30 01.4 -0.9**
ISCO pmax pmax
comp=Z,25nm,1.3s,mb5.1
ISCO MLR MLR
comp=Z,5μm,19.0s,MS5.6
ISCO Idaho Springs 56.39 295 *e*P **P 22 30 01.4 -0.9**
comp=Z,25nm,1.3s,mb5.1
N19A John Jarvie Ra 56.41 299 ⇑P **P 22 30 02.0 -0.4**
baz=56,SNR=9.4
HWUT Hardware Ranch 56.41 301 *e*P **P 22 30 00.1 -2.3**
comp=Z,20nm,1.0s,mb5.1
HWUT LR LR
comp=Z,4μm,20.0s,MS5.5
HWUT Hardware Ranch 56.41 301 *e*P **P 22 30 00.1 -2.3**
comp=Z,20nm,1.0s,mb5.1
P24A Kohler Place, 56.45 294 ⇑P **P 22 30 02.6 0.0**
baz=56
N18A Larsen Ranch, 56.47 299 ⇓P **P 22 30 02.8 0.0**
baz=56,SNR=5.8
L14A Malta 56.48 302 ⇓P **P 22 30 02.9 0.0**
baz=56,SNR=12
O21A Pagoda 56.55 297 ⇑P **P 22 30 03.4 0.0**
baz=56,SNR=6.8
HVU Hansel Valley 56.59 302 *e*P **P 22 30 04.5 +0.8**
comp=Z,16nm,1.4s,mb4.9
HVU Hansel Valley 56.59 302 *e*P **P 22 30 04.5 +0.8**
HVU pmax pmax
comp=Z,16nm,1.4s,mb4.9
J08A Circle Bar Ran 56.63 307 ⇓P **P 22 30 03.9 -0.1**
baz=56
M16A Huntsville 56.70 301 ⇑P **P 22 30 04.4 -0.1**
baz=56,SNR=11
M15A Larsen Ranch, 56.79 302 ⇓P **P 22 30 05.0 -0.1**
baz=57,SNR=8.3
Q25A Bedland, Calha 56.80 293 ⇓P **P 22 30 05.2 0.0**
baz=57,SNR=6.2
N17A Moffit Pass 56.83 300 ⇓P **P 22 30 05.5 +0.1**
baz=57,SNR=8.4
O20A White River Ci 56.84 297 ⇑P **P 22 30 05.9 +0.4**
baz=57,SNR=15
LRAL Lakeview Retre 56.84 275 *e*P **P 22 30 04.1 -1.5**
comp=Z,7.4nm,0.9s,mb4.7
LRAL LR LR
comp=Z,3μm,20.0s,MS5.3
LRAL Lakeview Retre 56.84 275 *e*P **P 22 30 04.1 -1.5**
comp=Z,7.4nm,0.9s,mb4.7
P23A Jefferson 56.85 295 ⇑P **P 22 30 06.0 +0.4**
baz=57,SNR=14
P22A Eagle 56.91 296 ⇑P **P 22 30 06.4 +0.4**
baz=57,SNR=7.7
SPUT South Promonto 56.94 301 *e*P **P 22 30 07.1 +1.0**
comp=Z,39nm,1.4s,mb5.2
O19A Miners Draw (B 56.94 298 ⇓P **P 22 30 06.7 +0.5**
baz=57,SNR=9.2

UALR University of 56.95 281 *e*P **P 22 30 06.1 -0.3**
comp=Z,28nm,1.0s,mb5.2
UALR University of 56.95 281 *e*P **P 22 30 06.1 -0.2**
comp=Z,28nm,1.0s,mb5.2
IRO Indian Ridge 56.97 311 P **P 22 30 07.0 +0.7**
Q24A Divide 57.02 294 ⇑P **P 22 30 06.6 -0.2**
baz=57,SNR=8.6
N16A Rees Ranch, Co 57.05 300 ⇑P **P 22 30 07.1 +0.2**
baz=57,SNR=6.9
BBTS Babate 57.08 194 P **P 22 30 08.1 +0.7**
comp=Z,13nm,0.8s,mb5.0,baz=81,slow=0.9,SNR=4.2
O18A Roosevelt 57.22 299 ⇓P **P 22 30 08.3 +0.1**
baz=57
Q23A Hartsel 57.28 295 ⇓P **P 22 30 08.8 +0.2**
baz=57
CTU Camp Tracy 57.32 301 *e*P **P 22 30 13.1 +4.3**
comp=Z,21nm,1.1s,mb5.1
N15A Stansbury Isla 57.34 301 ⇑P **P 22 30 08.7 -0.3**
baz=57
SMCO Snowmass 57.36 296 *e*P **P 22 30 07.2 -1.9**
comp=Z,24nm,1.1s,mb5.1
SMCO Snowmass 57.36 296 *e*P **P 22 30 07.2 -2.0**
comp=Z,24nm,1.1s,mb5.1
GTA Gaotai 57.43 63 P **P 22 30 11.0 +1.3**
GTA pP pP 22 30 15.5 +2.6
GTA sP sP 22 30 18.0 +3.9
GTA PP PP 22 32 22.0 +5.3
GTA S **S 22 38 08.8 +2.6**
GTA pmax pmax
comp=Z,17nm,1.8s,mb4.8
GTA pmax pmax
comp=Z,290nm,7.6s
GTA LR LR
comp=N,640nm,19.4s,MS5.0
GTA LR LR
comp=E,850nm,16.1s,MS5.0
GTA LR LR
comp=Z,1μm,22.8s
DAU Daniels Canyon 57.44 300 *e*P **P 22 30 11.1 +1.4**
DAU Daniels Canyon 57.44 300 *e*P **P 22 30 11.1 +1.4**
BGU Big Grassy Mou 57.45 302 *e*P **P 22 30 09.6 -0.2**
comp=Z,12nm,1.2s,mb4.8
BGU Big Grassy Mou 57.45 302 *e*P **P 22 30 09.6 -0.2**
comp=Z,12nm,1.2s,mb4.8
P20A De Beque 57.47 297 ⇑P **P 22 30 09.7 -0.2**
baz=57,SNR=8.3
O17A Robinson Place 57.49 300 ⇓P **P 22 30 10.3 +0.2**
baz=57,SNR=17
P19A Cripple Cowboy 57.52 298 ⇑P **P 22 30 10.4 +0.1**
baz=57,SNR=11
R25A Fountain Ranch 57.52 293 ⇑P **P 22 30 10.1 -0.2**
baz=57
WVOR Wild Horse Val 57.54 307 PFAKE 22 30 20.0 +10
WVOR LR LR
comp=Z,2μm,19.0s,MS5.3
MIAR Mount Ida 57.55 282 *e*P **P 22 30 08.1 -2.5**
comp=Z,64nm,1.2s,mb5.5
MIAR LR LR
comp=Z,673nm,19.0s,MS4.8
MIAR Mount Ida 57.55 282 *e*P **P 22 30 08.1 -2.5**
MIAR pmax pmax
comp=Z,64nm,1.2s,mb5.5
MIAR MLR MLR
comp=Z,673nm,19.0s,MS4.8
MIAR Mount Ida 57.55 282 *e*P **P 22 30 08.1 -2.5**
comp=Z,64nm,1.2s,mb5.5
Q22A Crested Butte, 57.63 296 ⇑P **P 22 30 11.5 +0.4**
baz=57,SNR=15
R24A Sanders Place, 57.69 294 ⇓P **P 22 30 11.6 +0.1**
baz=58
O16A Springville 57.70 300 ⇑P **P 22 30 11.7 +0.2**
baz=58
K05A Summer Lake 57.84 309 ⇑P **P 22 30 13.4 +0.9**
baz=58,SNR=12
Q21A Lamborn Mesa, 57.85 296 ⇓P **P 22 30 12.9 +0.3**
baz=58,SNR=21
P18A Preston Nutter 57.88 299 ⇑P **P 22 30 12.7 -0.1**
baz=58,SNR=23
O15A The Old Anders 57.90 301 ⇑P **P 22 30 13.4 +0.5**
baz=58,SNR=6.9
MPU Maple Canyon 57.91 300 *e*P **P 22 30 14.9 +1.9**
comp=Z,104nm,2.4s,mb5.4
Q20A Ridgley Place, 57.95 297 ⇑P **P 22 30 13.4 +0.1**
baz=58,SNR=12
S25A Robets Cordova 58.02 293 ⇓P **P 22 30 13.8 0.0**
baz=58,SNR=20
DUG Dugway 58.07 301 ⇓P **P 22 30 14.9 +0.7**
baz=58,SNR=15
DUG Dugway 58.07 301 *e*P **P 22 30 12.1 -2.1**
comp=Z,27nm,1.1s,mb5.2
DUG LR LR
comp=Z,4μm,19.0s,MS5.5
DUG Dugway 58.07 301 *e*P **P 22 30 12.1 -2.1**
DUG pmax pmax
comp=Z,27nm,1.1s,mb5.2
DUG MLR MLR
comp=Z,4μm,19.0s,MS5.5
DUG Dugway 58.07 301 *e*P **P 22 30 12.1 -2.1**
comp=Z,27nm,1.1s,mb5.2
NLU North Lily Min 58.09 301 *e*P **P 22 30 15.7 +1.4**
comp=Z,124nm,2.8s,mb5.5
P17A Butcher Ranch, 58.17 299 ⇑P **P 22 30 14.6 -0.2**
baz=58,SNR=9.5
R22A Saguache, Gunn 58.18 295 ⇑P **P 22 30 15.0 +0.1**
baz=58,SNR=23
TORD Torodi Ar. Bea 58.19 173 P **P 22 30 13.6 -1.6**
comp=Z,11nm,0.8s,mb4.9,baz=352,slow=7.3,SNR=6.6
TORD LR LR 22 56 08.6
comp=Z,1μm,18.9s,MS5.1,baz=340,slow=37
Q19A Hogan Spring (58.23 298 ⇓P **P 22 30 15.0 -0.2**
baz=58,SNR=7.1
SDCO Great Sand Dun 58.26 294 ⇑P **P 22 30 15.0 -0.5**
baz=58,SNR=17
SDCO Great Sand Dun 58.26 294 *e*P **P 22 30 13.6 -1.9**
comp=Z,18nm,1.3s,mb4.9
SDCO LR LR
comp=Z,2μm,20.0s,MS5.3
SDCO Great Sand Dun 58.26 294 *e*P **P 22 30 13.6 -1.9**
comp=Z,18nm,1.3s,mb4.9
S24A Houchin Ranch, 58.27 294 ⇑P **P 22 30 15.6 0.0**
baz=58,SNR=7.2
R21A Cimarron 58.28 296 ⇑P **P 22 30 16.1 +0.4**
baz=58,SNR=14
P16A Fountain Green 58.30 300 ⇑P **P 22 30 16.6 +0.9**
baz=58
Q18A Rafter H Ranch 58.34 299 ⇓P **P 22 30 15.8 -0.2**
baz=58,SNR=19
S23A Nye Farm, Mont 58.44 294 ⇑P **P 22 30 17.1 +0.4**
baz=58
SRU San Rafael 58.44 299 ⇓P **P 22 30 16.8 0.0**
baz=58,SNR=13
SRU San Rafael 58.44 299 *e*P **P 22 30 15.5 -1.3**
comp=Z,24nm,1.2s,mb5.1
SRU San Rafael 58.44 299 *e*P **P 22 30 15.5 -1.3**
SRU pmax pmax
comp=Z,24nm,1.2s,mb5.1
SRU San Rafael 58.44 299 *e*P **P 22 30 15.5 -1.3**
comp=Z,24nm,1.2s,mb5.1
HUMO Hull Mountain 58.46 311 *e*P **P 22 30 16.9 +0.1**
comp=Z,14nm,1.5s,mb4.8
HUMO LR LR
comp=Z,4μm,19.0s,MS5.6
HUMO Hull Mountain 58.46 311 *e*P **P 22 30 17.0 +0.2**
comp=Z,14nm,1.5s,mb4.8
TMUT Trail Mountain 58.46 300 *e*P **P 22 30 18.2 +1.3**
comp=Z,14nm,1.0s,mb5.0
T25A Trinidad 58.49 293 ⇑P **P 22 30 16.9 -0.2**
baz=58
P15A Leamington 58.51 301 ⇑P **P 22 30 17.5 +0.3**
baz=58
S22A 4UR Ranch, Cre 58.65 295 ⇓P **P 22 30 18.3 +0.1**
baz=58,SNR=17
PV04 Paradox Valley 58.65 297 *e*P **P 22 30 18.9 +0.7**
R20A Redvale 58.69 297 ⇓P **P 22 30 18.4 -0.1**
baz=58,SNR=13
P14A Drum Mountains 58.71 301 ⇑P **P 22 30 19.1 +0.5**
baz=58,SNR=20
BRAL Brewton 58.73 274 *e*P **P 22 30 18.3 -0.6**
comp=Z,63nm,1.1s,mb5.6
BRAL LR LR
comp=Z,3μm,21.0s,MS5.3
BRAL Brewton 58.73 274 *e*P **P 22 30 18.3 -0.6**
comp=Z,63nm,1.1s,mb5.6
T24A Torres, Weston 58.75 293 ⇓P **P 22 30 19.2 +0.3**
baz=59,SNR=8.8
PV01 Paradox Valley 58.79 297 *e*P **P 22 30 16.9 -2.3**
comp=Z,4μm,1.2s
PV01 Paradox Valley 58.79 297 *e*P **P 22 30 16.9 -2.3**

comp=Z,4μm,1.2s
Q16A Castle Valley 58.80 299 ⇑P **P 22 30 19.5 +0.3**
baz=59,SNR=11
R19A Curley Farm, L 58.84 297 ⇑P **P 22 30 19.9 +0.3**
baz=59,SNR=5.3
R18A Canyonlands Na 58.94 298 ⇓P **P 22 30 19.8 -0.5**
baz=59,SNR=47
U26A Atchley Ranch, 58.98 292 ⇑P **P 22 30 20.8 +0.2**
baz=59,SNR=14
S21A Coal Bank Pass 59.01 296 ⇓P **P 22 30 20.8 +0.1**
baz=59,SNR=6.0
WMOK Wichita Mounta 59.01 287 *e*P **P 22 30 17.9 -2.8**
comp=Z,53nm,1.3s,mb5.4
WMOK Wichita Mounta 59.01 287 *e*P **P 22 30 17.9 -2.8**
WMOK pmax pmax
comp=Z,53nm,1.3s,mb5.4
S20A Disappointment 59.01 296 ⇑P **P 22 30 20.8 +0.1**
baz=59,SNR=15
Q15A Fillmore 59.07 300 ⇓P **P 22 30 21.3 +0.2**
baz=59
T23A Casias Ranch, 59.07 294 ⇑P **P 22 30 21.1 -0.1**
baz=59
R17A Hanksville Air 59.14 299 ⇓P **P 22 30 21.8 +0.2**
baz=59,SNR=17
U25A Circle Dot Ran 59.18 292 ⇓P **P 22 30 21.8 -0.1**
baz=59,SNR=13
YBH Yreka Blue Hor 59.23 310 *e*P **P 22 30 22.1 -0.1**
comp=Z,92nm,2.9s,mb5.3
YBH LR LR
comp=Z,3μm,19.0s,MS5.4
YBH Yreka Blue Hor 59.23 310 *e*P **P 22 30 22.1 -0.1**
YBH pmax pmax
comp=Z,92nm,2.9s
YBH MLR MLR
comp=Z,3μm,19.0s
YBH Yreka Blue Hor 59.23 310 *e*P **P 22 30 22.1 -0.1**
comp=Z,92nm,2.9s,mb5.3
HHC Hu-ho-hao-te 59.30 53 *e*P **P 22 30 23.0 +0.3**
HHC pP pP 22 30 27.8 +1.9
HHC sP sP 22 30 30.0 +2.9
HHC PP PP 22 32 35.5 +2.3
HHC ScP ScP 22 35 10.5 -0.5
HHC S **S 22 38 28.0 -2.6**
HHC sS sS 22 38 35.0 -0.8
HHC ScS ScS 22 40 09.0 -3.4
HHC SS SS 22 42 22.8 -1.5
HHC pmax pmax
comp=Z,31nm,1.0s,mb5.3
HHC pmax pmax
comp=Z,260nm,6.3s
HHC LR LR
comp=N,1μm,16.1s,MS5.2
HHC LR LR
comp=E,540nm,16.9s,MS5.2
HHC LR LR
comp=Z,2μm,16.7s,MS5.2
S19A Harvey Farm, M 59.32 297 ⇑P **P 22 30 22.8 -0.1**
baz=59,SNR=8.0
Q14A Sevier Lake (B 59.33 301 ⇓P **P 22 30 23.1 +0.2**
baz=59,SNR=44
T22A Edith 59.35 295 ⇓P **P 22 30 23.4 +0.4**
baz=59,SNR=14
U24A Moreno Valley 59.43 293 ⇑P **P 22 30 24.2 +0.5**
baz=59
MSU Marysvale 59.47 300 *e*P **P 22 30 25.2 +1.4**
MSU Marysvale 59.47 300 *e*P **P 22 30 25.2 +1.3**
MVU Marysvale 59.48 300 PFAKE 22 30 40.0 +16
MVU LR LR
comp=Z,3μm,20.0s,MS5.5
R16A Teasdale 59.48 299 ⇑P **P 22 30 24.4 +0.4**
baz=59,SNR=12
BSY Bisya 59.52 110 P **P 22 30 24.4 -0.1**
SNR=10
BSYO Bisya 59.55 110 P **P 22 30 24.4 -0.2**
SNR=10
V26A Tequesquite Ra 59.55 292 ⇑P **P 22 30 24.0 -0.5**
baz=59,SNR=7.8
T21A Navajo Lake 59.55 295 ⇓P **P 22 30 25.2 +0.7**
baz=59
S18A Hurst Farm, Bl 59.61 298 ⇓P **P 22 30 25.5 +0.6**
baz=59,SNR=19
KRMB Red Mountain 59.72 311 *e*P **P 22 30 24.6 -0.9**
comp=Z,51nm,1.7s,mb5.3
KRMB Red Mountain 59.72 311 *e*P **P 22 30 24.6 -1.0**
comp=Z,51nm,1.7s,mb5.3
YSS Yuzh-Sakhalins 59.73 26 *e*P **P 22 30 25.9 +0.3**
CN2 Changchun 59.75 40 *e*P **P 22 30 26.0 +0.3**
CN2 *e*pP pP 22 30 30.8 +1.8
CN2 *e*sP sP 22 30 33.3 +3.1
CN2 PP PP 22 32 37.8 +0.8
CN2 *e*S **S 22 38 33.3 -2.9**
CN2 pmax pmax
comp=Z,50nm,0.8s,mb5.6
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,16.0s,MS5.2
CN2 LR LR
comp=E,700nm,16.0s,MS5.2
CN2 LR LR
comp=Z,700nm,17.0s,MS4.9
AMTX Amarillo 59.76 289 ⇓P **P 22 30 25.6 -0.4**
baz=60
AMTX Amarillo 59.76 289 *e*P **P 22 30 26.2 +0.3**
comp=Z,15nm,1.1s,mb4.9
AMTX LR LR
comp=Z,3μm,19.0s,MS5.4
AMTX Amarillo 59.76 289 *e*P **P 22 30 26.2 +0.3**
comp=Z,15nm,1.1s,mb4.9
V25A Rancho No Teng 59.76 292 ⇓P **P 22 30 25.5 -0.4**
baz=60,SNR=11
R15A Junction 59.77 300 ⇓P **P 22 30 26.8 +0.8**
baz=60
U23A El Rito 59.77 294 ⇓P **P 22 30 26.2 +0.2**
baz=60,SNR=10
MDJ Mudanjiang 59.80 37 P **P 22 30 25.8 -0.3**
MDJ pP pP 22 30 29.0 -0.3
MDJ sP sP 22 30 30.3 -0.2
MDJ PcP PcP 22 31 13.0 +0.4
MDJ PP PP 22 32 37.3 -0.2
MDJ S **S 22 38 36.5 -0.4**
MDJ sS sS 22 38 42.0 -0.2
MDJ pmax pmax
comp=Z,36nm,1.1s,mb5.3
MDJ pmax pmax
comp=Z,260nm,7.1s
MDJ LR LR
comp=N,320nm,18.9s,MS4.8
MDJ LR LR
comp=E,510nm,15.3s,MS4.8
MDJ LR LR
comp=Z,740nm,11.7s,MS5.0
MDJ Mudanjiang 59.80 37 *e*P **P 22 30 26.0 -0.1**
comp=Z,47nm,1.2s,mb5.4
MDJ LR LR
comp=Z,784nm,19.0s,MS4.9
MDJ Mudanjiang 59.80 37 *e*P **P 22 30 26.0 -0.1**
comp=Z,47nm,1.2s,mb5.4
S17A Black Ridge (B 59.90 298 ⇑P **P 22 30 26.9 +0.1**
baz=60,SNR=7.6
U22A Llaves 59.92 295 ⇓P **P 22 30 27.2 +0.1**
baz=60
W27A Bowe Ranch, En 60.01 291 ⇑P **P 22 30 27.8 +0.1**
baz=60,SNR=8.4
S16A Weppner Ranch, 60.04 299 ⇓P **P 22 30 28.0 +0.2**
baz=60,SNR=8.2
V24A Rampart Ranch, 60.06 293 ⇑P **P 22 30 28.1 +0.1**
baz=60,SNR=10
T18A Mexican Hat 60.10 297 ⇑P **P 22 30 28.4 +0.2**
baz=60,SNR=20
U21A Nageezi 60.11 295 ⇑P **P 22 30 28.6 +0.3**
baz=60,SNR=9.4
T19A Beclabito 60.14 297 ⇓P **P 22 30 28.6 +0.1**
baz=60,SNR=5.6
W26A Owens Ranch, T 60.20 291 ⇓P **P 22 30 28.7 -0.3**
baz=60
R13A O'Grain Ranch, 60.27 301 ⇑P **P 22 30 30.4 +1.0**
baz=60,SNR=17
WDC Whiskeytown Da 60.27 310 *e*P **P 22 30 29.7 +0.3**
comp=Z,24nm,1.4s,mb5.0
WDC LR LR
comp=Z,1μm,22.0s,MS5.1
WDC Whiskeytown Da 60.27 310 *e*P **P 22 30 29.7 +0.3**
WDC pmax pmax
comp=Z,24nm,1.4s,mb5.0
WDC MLR MLR
comp=Z,1μm,22.0s,MS5.1

KHMM Horse Mountain 60.29 311 *e*P **P 22 30 31.4 +1.9**
comp=Z,54nm,1.3s,mb5.4
PAHR Pah Rah Range 60.29 307 *e*P **P 22 30 30.4 +0.9**
comp=Z,50nm,1.7s,mb5.3
W25A X Bar L Ranch, 60.29 292 ⇓P **P 22 30 29.4 -0.2**
baz=60
S15A Panguitch 60.30 300 ⇑P **P 22 30 30.6 +1.0**
baz=60,SNR=6.3
V23A Ortiz Mt. (NFS 60.31 294 ⇑P **P 22 30 30.5 +0.8**
baz=60,SNR=6.2
V22A San Miguel Ran 60.37 294 ⇑P **P 22 30 30.7 +0.5**
baz=60,SNR=10
X27A F and S Farms, 60.41 291 ⇑P **P 22 30 30.9 +0.5**
baz=60
U20A Newcomb 60.41 296 ⇑P **P 22 30 30.4 0.0**
baz=60,SNR=6.2
S14A Cedar City 60.44 301 ⇓P **P 22 30 31.4 +0.8**
baz=60,SNR=8.2
NATX Nacogdoches 60.47 282 *e*P **P 22 30 31.8 +1.0**
comp=Z,82nm,1.1s,mb5.7
NATX LR LR
comp=Z,976nm,20.0s,MS5.0
T17A Navajo Res., N 60.49 298 ⇓P **P 22 30 31.1 +0.2**
baz=60,SNR=10
ARUT Antelope Range 60.49 301 *e*P **P 22 30 32.2 +1.3**
comp=Z,7.5nm,0.3s,mb5.2
ARUT Antelope Range 60.49 301 *e*P **P 22 30 32.2 +1.3**
ARUT pmax pmax
comp=Z,8.0nm,0.3s,mb5.2
R11A Troy Canyon, C 60.56 303 ⇑P **P 22 30 31.5 +0.1**
baz=60,SNR=35
W24A Lazy 6 Ranch, 60.58 293 ⇑P **P 22 30 31.8 +0.2**
baz=60,SNR=8.9
V21A Milan 60.69 295 ⇓P **P 22 30 32.3 0.0**
baz=60
U19A Dine' College, 60.69 297 ⇑P **P 22 30 32.2 -0.1**
baz=60,SNR=6.1
CCUT Cedar City 60.69 301 *e*P **P 22 30 33.2 +0.9**
comp=Z,34nm,1.5s,mb5.2
T16A Glen Canyon Da 60.70 299 ⇑P **P 22 30 31.6 -0.8**
baz=60
X26A CR and CF Fran 60.72 291 ⇓P **P 22 30 32.7 +0.2**
baz=60,SNR=5.8
U18A Rough Rock, Ch 60.76 297 ⇓P **P 22 30 33.0 +0.2**
baz=61,SNR=14
WCN Washoe City 60.77 307 ⇑P **P 22 30 33.4 +0.6**
baz=60
WCN Washoe City 60.77 307 *e*P **P 22 30 34.4 +1.6**
comp=Z,41nm,1.3s,mb5.4
WCN Washoe City 60.77 307 *e*P **P 22 30 34.4 +1.6**
WCN pmax pmax
comp=Z,41nm,1.3s,mb5.4
S13A Holt Ranch, En 60.80 301 ⇓P **P 22 30 33.4 +0.4**
baz=61,SNR=13
W23A Werner Place, 60.85 293 ⇓P **P 22 30 33.5 +0.1**
baz=61
T15A Red Dirt Ranch 60.92 300 ⇓P **P 22 30 33.9 +0.1**
baz=61,SNR=7.7
V20A Brimhall 60.94 296 ⇓P **P 22 30 34.1 +0.1**
baz=61,SNR=6.2
MSTX Muleshoe 60.94 290 ⇓P **P 22 30 34.1 0.0**
baz=61,SNR=5.9
X25A Clemmons Ranch 60.99 292 ⇑P **P 22 30 34.9 +0.5**
baz=61
T14A Hurricane 61.07 300 ⇑P **P 22 30 35.1 +0.2**
baz=61,SNR=6.2
ANMO Albuquerque 61.14 294 *e*P **P 22 30 35.9 +0.6**
comp=Z,12nm,1.1s,mb4.9
ANMO LR LR
comp=Z,1μm,21.0s,MS5.1
ANMO Albuquerque 61.14 294 *e*P **P 22 30 35.9 +0.6**
ANMO pmax pmax
comp=Z,12nm,1.1s
ANMO MLR MLR
comp=Z,1μm,21.0s
Y27A Causey 61.14 290 ⇓P **P 22 30 35.4 0.0**
baz=61,SNR=13
W22A Albuquerque 61.14 294 ⇑P **P 22 30 35.7 +0.3**
baz=61
OHCM Honcut 61.18 308 *e*P **P 22 30 35.9 +0.4**
V19A Window Rock 61.18 296 ⇓P **P 22 30 35.5 -0.1**
baz=61
X24A Lazy VL Ranch, 61.19 293 ⇓P **P 22 30 35.8 +0.1**
baz=61
NVAR Mina Array Bea 61.21 305 P **P 22 30 33.2 -2.6**
comp=Z,3.3nm,0.9s,mb4.5,baz=28,slow=3.6,SNR=19
NVAR LR LR 22 57 16.4
comp=Z,1μm,18.8s,MS5.1,baz=346,slow=36
NVAR Mina Array Bea 61.21 305 P **P 22 30 33.2 -2.6**
NVAR LR LR 22 57 16.4
NVAR Mina Array Bea 61.21 305 P **P 22 30 33.2 -2.6**
BJI Beijing 61.22 49 P **P 22 30 36.8 +0.9**
BJI PP PP 22 32 49.0 -1.2
BJI S **S 22 38 53.5 -1.7**
BJI SS SS 22 42 52.5 -1.9
BJI pmax pmax
comp=Z,21nm,1.5s,mb5.0
BJI pmax pmax
comp=Z,230nm,4.1s
BJI LR LR
comp=N,1μm,16.5s,MS5.1
BJI LR LR
comp=E,460nm,16.5s,MS5.1
BJI LR LR
comp=Z,630nm,29.3s
BJT Baijiatuau 61.24 49 PFAKE 22 30 50.0 +14
BJT LR LR
comp=Z,1μm,19.0s,MS5.0
Y26A Elida 61.30 291 ⇑P **P 22 30 36.7 +0.3**
baz=61,SNR=16
W21A San Fidel 61.33 295 ⇑P **P 22 30 37.1 +0.4**
baz=61
T13A Saint George 61.34 301 ⇑P **P 22 30 37.2 +0.5**
baz=61,SNR=8.7
U16A Tuba City 61.38 298 ⇓P **P 22 30 37.0 0.0**
baz=61,SNR=12
X23A Hourglass Bar 61.40 293 ⇑P **P 22 30 37.5 +0.3**
baz=61,SNR=10
WAKR Walker 61.44 306 *e*P **P 22 30 38.2 +0.9**
V18A Ganado 61.44 297 ⇑P **P 22 30 36.6 -0.7**
baz=61
U15A North Rim 61.44 299 ⇓P **P 22 30 36.9 -0.5**
baz=61,SNR=15
Y25A Mesa, Roswell 61.56 292 ⇑P **P 22 30 38.4 +0.1**
baz=61,SNR=11
W20A Ramah 61.57 295 ⇓P **P 22 30 38.0 -0.3**
baz=61,SNR=5.2
LZH Lanzhou 61.68 61 *e*P **P 22 30 41.0 +2.0**
LZH pP pP 22 30 45.0 +2.8
LZH sP sP 22 30 48.0 +4.6
LZH pmax pmax
comp=Z,77nm,1.1s,mb5.8
LZH pmax pmax
comp=Z,440nm,5.1s
LZH LR LR
comp=N,670nm,13.3s,MS5.2
LZH LR LR
comp=E,1μm,16.5s,MS5.2
LZH LR LR
comp=Z,1μm,19.2s,MS5.1
Z27A Tatum 61.68 290 ⇑P **P 22 30 39.0 -0.1**
baz=62
U14A Mt Trumbull 61.70 300 ⇑P **P 22 30 39.5 +0.3**
baz=62,SNR=7.5
X22A Bernardo 61.71 294 ⇓P **P 22 30 39.6 +0.3**
baz=62
V17A Tonalea, Kykot 61.77 298 ⇑P **P 22 30 39.9 +0.2**
baz=62,SNR=10.0
LPM Los Pinos Moun 61.78 294 *e*P **P 22 30 40.5 +0.7**
Y24A Capitan 61.78 292 ⇓P **P 22 30 40.5 +0.7**
baz=62,SNR=18
T12A Moapa 61.84 301 ⇑P **P 22 30 40.9 +0.8**
baz=62,SNR=7.4
W19A Sanders 61.84 296 ⇓P **P 22 30 39.9 -0.2**
baz=62
LAZ Ladron 61.85 294 *e*P **P 22 30 41.0 +0.9**
comp=Z,35nm,2.0s,mb5.1
HOPS Hopland 61.90 309 *e*P **P 22 30 42.4 +1.9**
comp=Z,55nm,1.5s,mb5.5
HOPS LR LR
comp=Z,2μm,19.0s,MS5.3
U13A Pakoon Wash 61.92 301 ⇓P **P 22 30 41.1 +0.4**
baz=62,SNR=20
W18A Petrified Fore 61.94 297 ⇓P **P 22 30 41.0 +0.3**
baz=62
Z26A Caprock 61.96 291 ⇑P **P 22 30 40.9 0.0**
baz=62,SNR=9.7

Y23A Lovelace Mesa, 61.96 293 ⇓P **P 22 30 40.8 -0.1**
baz=62,SNR=21
V15A Kaibab Nationa 61.98 299 ⇓P **P 22 30 41.2 +0.2**
baz=62,SNR=16
X21A Alamocita Cree 62.00 295 ⇓P **P 22 30 41.5 +0.3**
baz=62,SNR=17
LENM Lemitar 62.02 294 *e*P **P 22 30 42.6 +1.3**
U12A Valley of Fire 62.07 301 ⇑P **P 22 30 41.5 -0.1**
baz=62
Y22D IRIS PASSCAL I 62.09 294 ⇑P **P 22 30 42.9 +1.1**
baz=62
MLAC Mammoth Lakes 62.10 305 ⇑P **P 22 30 42.0 +0.2**
baz=62
X20A Quemado 62.12 295 ⇑P **P 22 30 42.1 +0.2**
baz=62,SNR=16
CMB Columbia Colle 62.13 307 *e*P **P 22 30 41.7 -0.3**
comp=Z,15nm,1.3s,mb5.0
CMB LR LR
comp=Z,1μm,19.0s,MS5.1
CMB Columbia Colle 62.13 307 *e*P **P 22 30 41.7 -0.3**
CMB pmax pmax
comp=Z,15nm,1.3s,mb5.0
CMB MLR MLR
comp=Z,1μm,19.0s,MS5.1
CMB Columbia Colle 62.13 307 *e*P **P 22 30 41.7 -0.3**
comp=Z,15nm,1.3s,mb5.0
SHPR Sheep Range 62.17 302 *e*P **P 22 30 42.3 0.0**
SHPR Sheep Range 62.17 302 *e*P **P 22 30 42.3 0.0**
Z25A Roswell 62.17 291 ⇓P **P 22 30 42.4 0.0**
baz=62
Y22A Socorro 62.23 294 ⇓P **P 22 30 42.7 0.0**
baz=62
W17A Winslow 62.26 297 ⇑P **P 22 30 42.8 -0.1**
baz=62
GRAC Grapevine Rang 62.31 304 ⇓P **P 22 30 43.2 0.0**
baz=62,SNR=7.9
U11A Corn Creek 62.31 302 ⇑P **P 22 30 44.1 +0.9**
baz=62
Z24A Sheeppen Canyo 62.32 292 ⇑P **P 22 30 43.6 +0.3**
baz=62,SNR=7.5
127A Arkansas Junct 62.32 290 ⇓P **P 22 30 42.9 -0.4**
baz=62
Y21A Point of Rocks 62.37 294 ⇓P **P 22 30 44.3 +0.6**
baz=62,SNR=13
V14A Boquillas Ranc 62.42 300 ⇑P **P 22 30 44.7 +0.7**
baz=62,SNR=12
X19A St. Johns 62.45 296 ⇓P **P 22 30 44.1 -0.1**
baz=62,SNR=6.6
V13A Grand Canyon W 62.46 301 ⇓P **P 22 30 45.0 +0.8**
baz=62,SNR=15
W16A Flagstaff 62.48 298 ⇓P **P 22 30 44.7 +0.4**
baz=62,SNR=5.4
TIN Tinemaha 62.48 305 ⇑P **P 22 30 45.2 +0.9**
baz=62
126A Clayton Basin, 62.55 291 ⇑P **P 22 30 44.9 +0.1**
baz=62
X18A Snowflake 62.55 297 ⇑P **P 22 30 44.3 -0.6**
baz=62
U10A Ash Meadows, A 62.57 303 ⇓P **P 22 30 45.4 +0.4**
baz=62
W15A Williams 62.61 299 ⇑P **P 22 30 45.6 +0.4**
baz=62
Z23A Rita Site, Whi 62.64 293 ⇑P **P 22 30 46.2 +0.8**
baz=62,SNR=13
MCCM Marconi Confer 62.66 309 PFAKE 22 31 00.0 +14
MCCM LR LR
comp=Z,701nm,20.0s,MS4.8
Y20A Horse Springs, 62.67 295 ⇑P **P 22 30 46.3 +0.6**
baz=62
125A Gardner Draw, 62.73 291 ⇑P **P 22 30 46.3 +0.2**
baz=63,SNR=8.1
DANN Dangsing 62.76 82 *e*P **P 22 30 47.7 +1.4**
W14A Seligman 62.80 299 ⇓P **P 22 30 47.3 +0.7**
baz=63,SNR=6.7
V12A Nelson 62.82 301 ⇓P **P 22 30 47.4 +0.8**
baz=63,SNR=7.0
Z22A Elephant Butte 62.86 293 ⇓P **P 22 30 47.6 +0.6**
baz=63,SNR=24
V11A Goodsprings 62.87 302 ⇑P **P 22 30 47.6 +0.7**
baz=63,SNR=5.1
Y19A Nutrioso 62.88 296 ⇑P **P 22 30 47.6 +0.6**
baz=63,SNR=12
227A Bennet, Jal 62.92 290 ⇑P **P 22 30 47.7 +0.3**
baz=63
124A Stringfield Ra 62.93 292 ⇓P **P 22 30 48.0 +0.5**
baz=63,SNR=14
X17A Forest Lakes 62.98 297 ⇑P **P 22 30 47.2 -0.5**
baz=63
YUK Yuzh-Kuril'sk 63.02 24 ⇓/P **P 22 30 42.4 -5.4**
YUK *e*SSS 22 46 04.3
YUK pmax pmax
comp=N,243nm,1.6s
YUK pmax pmax
comp=E,227nm,1.6s
YUK pmax pmax
comp=Z,220nm,1.6s,mb6.0
YUK pmax pmax
comp=Z,93nm,0.2s,mb6.6
YUK MLR MLR
comp=N,128nm,14.5s,MS4.4
YUK MLR MLR
comp=E,140nm,14.5s,MS4.4
YUK MLR MLR
comp=Z,334nm,14.5s,MS4.7
CWC Cottonwood Cre 63.02 304 ⇑P **P 22 30 48.7 +0.7**
baz=63,SNR=9.3
Z21A St. Cloud Mine 63.02 294 ⇓P **P 22 30 48.5 +0.5**
baz=63,SNR=23
SHOC Shoshone 63.05 303 P **P 22 30 48.3 +0.2**
baz=63
DAC Darwin (Calif) 63.05 304 PFAKE 22 31 00.0 +12
DAC LR LR
comp=Z,3μm,19.0s,MS5.5
X16A Lo Mia Camp, P 63.08 298 ⇓P **P 22 30 48.8 +0.4**
baz=63,SNR=12
226A Malaga, Loving 63.12 290 ⇑P **P 22 30 48.9 +0.2**
baz=63,SNR=20
W13A Hualapai Mount 63.14 300 ⇓P **P 22 30 49.1 +0.3**
baz=63
W12A Cal Nev Ari 63.22 301 ⇑P **P 22 30 49.6 +0.3**
baz=63
MPMC Manual Prospec 63.22 304 ⇓P **P 22 30 49.7 +0.4**
baz=63,SNR=18
123A Bell Site, Whi 63.23 293 ⇑P **P 22 30 49.8 +0.4**
baz=63
KOLN Koldanda 63.24 83 *e*P **P 22 30 50.2 +0.7**
comp=Z,82nm,1.5s,mb5.6
X15A Humboldt 63.25 298 ⇓P **P 22 30 49.4 -0.1**
baz=63,SNR=8.6
ANWB Willy Bob 63.25 244 PFAKE 22 31 00.0 +10
ANWB LR LR
comp=Z,857nm,21.0s,MS4.9
JCT Junction City 63.27 286 ⇑P **P 22 30 49.9 +0.2**
baz=63,SNR=11
JCT Junction City 63.27 286 *e*P **P 22 30 49.7 0.0**
comp=Z,45nm,1.1s,mb5.5
JCT LR LR
comp=Z,2μm,19.0s,MS5.4
JCT Junction City 63.27 286 *e*P **P 22 30 49.7 0.0**
JCT pmax pmax
comp=Z,45nm,1.1s,mb5.5
JCT MLR MLR
comp=Z,2μm,19.0s,MS5.4
JCT Junction City 63.27 286 *e*P **P 22 30 49.7 0.0**
comp=Z,45nm,1.1s,mb5.5
Y18A Canyon Day Jun 63.28 296 ⇓P **P 22 30 49.5 -0.2**
baz=63,SNR=6.5
225A Deer Hill, Car 63.29 291 ⇓P **P 22 30 49.4 -0.4**
baz=63,SNR=10
328A Wristen Ranch, 63.36 289 ⇑P **P 22 30 49.7 -0.6**
baz=63,SNR=16
GKN Gorkha 63.36 81 *e*P **P 22 30 51.0 +0.7**
comp=Z,162nm,1.7s,mb5.9
TUQ Turquoise Moun 63.38 302 ⇑P **P 22 30 50.3 -0.1**
baz=63
122A Conniff Cattle 63.39 293 ⇑P **P 22 30 51.0 +0.5**
baz=63
X14A Yava 63.45 299 ⇓P **P 22 30 51.3 +0.5**
baz=63
RCTC Rector, Farmer 63.45 305 ⇓P **P 22 30 51.0 +0.2**
baz=63
Z20A Nine Sixteen R 63.48 295 ⇓P **P 22 30 51.6 +0.6**
baz=63,SNR=15
LDFC Landfair 63.50 301 *e*P **P 22 30 52.2 +1.0**
comp=Z,23nm,1.1s,mb5.2
Z19A T-Link Ranch, 63.51 295 ⇓P **P 22 30 51.5 +0.2**
baz=63
224A Cornudas Mount 63.53 292 ⇑P **P 22 30 51.5 +0.1**

baz=63
327A Balmorhea Ranc 63.58 290 ⇑P **P 22 30 52.0 +0.2**
baz=63
Y17A Roosevelt 63.59 297 ⇓P **P 22 30 51.6 -0.2**
baz=63
X13A Yucca 63.59 300 ⇑P **P 22 30 51.9 +0.1**
baz=63,SNR=9.8
Y16A Circle Bar Ran 63.60 298 ⇑P **P 22 30 52.4 +0.5**
baz=63
SAO San Andreas Ge 63.60 307 *eP* **P 22 30 52.8 +1.0**
comp=Z,14nm,1.1s,mb4.9
SAO LR LR
comp=Z,1μm,22.0s,MS5.0
SAO San Andreas Ge 63.60 307 *eP* **P 22 30 52.8 +1.0**
SAO pmax pmax
comp=Z,14nm,1.1s,mb4.9
SAO MLR MLR
comp=Z,1μm,22.0s,MS5.0
NEE2 Needles Airpor 63.65 301 ⇓P **P 22 30 52.3 +0.1**
baz=63
GSC Goldstone 63.75 303 ⇑P **P 22 30 52.9 +0.1**
baz=64
GSC Goldstone 63.75 303 *eP* **P 22 30 54.2 +1.4**
comp=Z,38nm,1.8s,mb5.1
GSC Goldstone 63.75 303 *eP* **P 22 30 54.2 +1.4**
GSC pmax pmax
comp=Z,38nm,1.8s,mb5.1
KKN Kakani 63.76 81 *eP* **P 22 30 54.0 +1.0**
comp=Z,39nm,1.0s,mb5.4
KKN Kakani 63.76 81 *eP* **P 22 30 54.0 +1.0**
KKN pmax pmax
comp=Z,39nm,1.0s,mb5.4
Y15A Casa Rosa Ranc 63.77 298 ⇑P **P 22 30 52.9 -0.1**
baz=64
326A Caldwell Ranch 63.78 290 ⇓P **P 22 30 53.6 +0.6**
baz=64,SNR=18
121A Cookes Peak, D 63.78 294 ⇑P **P 22 30 53.6 +0.5**
baz=64,SNR=9.1
LRMC Laurel Mountai 63.83 304 ⇓P **P 22 30 53.6 +0.3**
baz=64,SNR=9.8
LSA Lhasa 63.84 75 *eP* **P 22 30 54.0 +0.6**
comp=Z,22nm,0.8s,mb5.2
LSA LR LR
comp=Z,806nm,21.0s,MS4.9
LSA Lhasa 63.84 75 *eP* **P 22 30 54.0 +0.5**
LSA pmax pmax
comp=Z,22nm,0.8s,mb5.2
LSA MLR MLR
comp=Z,806nm,21.0s,MS4.9
LSA Lhasa 63.84 75 *eP* **P 22 30 54.0 +0.5**
comp=Z,22nm,0.8s,mb5.2
GUN Gumba 63.84 80 *eP* **P 22 30 55.0 +1.5**
comp=Z,65nm,0.9s,mb5.7
MNTX Cornudas Mount 63.84 291 P **P 22 30 52.8 -0.7**
baz=64
Z17A San Carlos Hig 63.85 296 ⇑P **P 22 30 54.1 +0.6**
baz=64
VES Vestal, Richgr 63.85 305 ⇑P **P 22 30 53.0 -0.5**
baz=64
ISA Isabella 63.86 304 ⇓P **P 22 30 53.9 +0.4**
baz=64,SNR=12
ISA Isabella 63.86 304 *eP* **P 22 30 52.3 -1.2**
comp=Z,18nm,1.0s,mb5.0
ISA Isabella 63.86 304 *eP* **P 22 30 52.3 -1.2**
ISA pmax pmax
comp=Z,18nm,1.0s,mb5.1
ISA Isabella 63.86 304 *eP* **P 22 30 52.3 -1.2**
comp=Z,18nm,1.0s,mb5.0
223A Chaparral, Ant 63.87 292 ⇓P **P 22 30 54.4 +0.8**
baz=64
DMN Daman 63.88 81 *eP* **P 22 30 55.0 +1.3**
comp=Z,36nm,1.1s,mb5.3
Z18A Geronimo 63.92 296 ⇑P **P 22 30 54.1 +0.1**
baz=64
GMRC Granite Mounta 63.93 302 ⇑P **P 22 30 54.3 +0.3**
baz=64,SNR=9.0
428A Kincaid Ranch, 63.93 289 ⇓P **P 22 30 54.0 -0.1**
baz=64,SNR=9.7
PDMCI Parker Dam,Lak 63.96 300 ⇓P **P 22 30 54.3 +0.1**
baz=64
Y14A Wickenburg 63.98 299 ⇓P **P 22 30 54.3 0.0**
baz=64
222A Williams Famil 63.98 293 ⇑P **P 22 30 54.9 +0.5**
baz=64
119A Ashpeak Ranch, 64.01 295 ⇑P **P 22 30 54.9 +0.4**
baz=64,SNR=10.0
120A U Bar Ranch, L 64.02 295 ⇓P **P 22 30 55.0 +0.4**
baz=64,SNR=12
427A Hayter Ranch, 64.03 289 ⇑P **P 22 30 54.8 0.0**
baz=64,SNR=20
HEC Hector,Ludlow 64.06 302 ⇓P **P 22 30 55.2 +0.3**
baz=64
Z16A Peralta Trail, 64.09 297 ⇓P **P 22 30 54.9 -0.2**
baz=64
324A Moseley Ranch, 64.11 291 ⇓P **P 22 30 54.8 -0.4**
baz=64,SNR=8.3
RRX Edison Barstow 64.20 303 ⇓P **P 22 30 56.2 +0.5**
baz=64
221A Mesquite Ranch 64.27 294 ⇑P **P 22 30 56.5 +0.3**
baz=64,SNR=5.7
118A Homack Ranch, 64.32 296 ⇓P **P 22 30 56.3 -0.3**
baz=64,SNR=10.0
Y13A Salome 64.33 300 ⇓P **P 22 30 57.1 +0.5**
baz=64
Z15A Gila River Ind 64.34 298 ⇑P **P 22 30 56.8 +0.1**
baz=64
IRM Iron Mountain 64.37 301 ⇓P **P 22 30 57.0 +0.1**
baz=64,SNR=8.3
426A McDonald Obser 64.39 290 ⇓P **P 22 30 57.1 0.0**
baz=64,SNR=46
EDW2 Edwards Air Fo 64.47 304 ⇓P **P 22 30 58.0 +0.4**
baz=64
528A Cox Ranch, San 64.49 288 ⇓P **P 22 30 57.5 -0.2**
baz=64,SNR=9.8
Z14A Wintersburg 64.50 299 ⇑P **P 22 30 57.6 -0.2**
baz=64,SNR=5.5
DBIC Dimbokro 64.52 181 P **P 22 30 55.2 -2.8**
comp=Z,5.4nm,0.9s,mb4.6,baz=351,slow=8.6,SNR=6.6
DBIC LR LR 23 01 46.4
comp=Z,885nm,18.0s,MS5.0,baz=347,slow=38
DBIC Dimbokro 64.52 181 *eP* **P 22 30 58.3 +0.3**
comp=Z,13nm,1.0s,mb4.9
DBIC LR LR 23 01 46.4
DBIC Dimbokro 64.52 181 *eP* **P 22 30 58.3 +0.3**
DBIC pmax pmax
comp=Z,13nm,1.0s
DBIC Dimbokro 64.52 181 *eP* **P 22 30 58.3 +0.3**
comp=Z,13nm,1.0s,mb4.9
TIC Toumodi 64.55 181 *eP* **P 22 30 58.2 0.0**
comp=Z,48nm,1.1s,mb5.4
TIC Toumodi 64.55 181 *eP* **P 22 30 58.2 0.0**
TIC pmax pmax
comp=Z,48nm,1.1s,mb5.4
TIC Toumodi 64.55 181 *eP* **P 22 30 58.2 0.0**
comp=Z,48nm,1.1s,mb5.4
425A Indio Mountain 64.58 291 ⇑P **P 22 30 58.0 -0.3**
baz=64,SNR=26
Y12C Blythe 64.58 300 ⇑P **P 22 30 58.7 +0.4**
baz=64,SNR=8.4
220A Playas Peak, P 64.59 294 ⇓P **P 22 30 58.6 +0.3**
baz=64,SNR=9.2
SMMC Simmler 64.60 305 ⇓P **P 22 30 58.6 +0.2**
baz=64
117A Oracle 64.61 296 ⇓P **P 22 30 59.1 +0.6**
baz=64,SNR=19
ERM Erimo 64.63 27 *eP* **P 22 30 58.8 +0.3**
comp=Z,68nm,1.2s,mb5.6
ERM LR LR
comp=Z,466nm,22.0s,MS4.6
ERM Erimo 64.63 27 *eP* **P 22 30 58.8 +0.3**
ERM pmax pmax
comp=Z,69nm,1.2s,mb5.6
ERM MLR MLR
comp=Z,466nm,22.0s,MS4.6
219A White Tail Can 64.72 295 ⇓P **P 22 30 59.7 +0.5**
baz=64,SNR=18
BELC Belle Mtn. Jos 64.75 302 ⇓P **P 22 31 00.4 +1.0**
baz=64,SNR=8.5
527A Woodward Ranch 64.76 289 ⇓P **P 22 30 59.6 +0.2**
baz=65,SNR=21
BBRC Big Bear Solar 64.76 302 ⇑P **P 22 30 59.8 +0.3**
baz=64
KIC Kosan Boka 64.83 181 *eP* **P 22 30 57.8 -2.2**
comp=Z,53nm,1.0s,mb5.5
KIC Kosan Boka 64.83 181 *eP* **P 22 30 57.8 -2.2**
comp=Z,53nm,1.0s,mb5.5
Z13A Yuma Proving G 64.85 299 ⇑P **P 22 31 00.5 +0.4**
baz=65,SNR=8.5

TUC Tucson 64.87 296 *eP* **P 22 31 00.1 -0.1**
comp=Z,42nm,1.6s,mb5.2
TUC LR LR
comp=Z,4μm,19.0s,MS5.7
TUC Tucson 64.87 296 *eP* **P 22 31 00.1 -0.1**
TUC pmax pmax
comp=Z,41nm,1.6s,mb5.2
TUC MLR MLR
comp=Z,4μm,19.0s,MS5.7
TUC Tucson 64.87 296 *eP* **P 22 31 00.1 -0.1**
comp=Z,42nm,1.6s,mb5.2
SDDR Presa de Saban 64.89 254 *eP* **P 22 31 01.8 +1.4**
comp=Z,10nm,0.4s,mb5.2
SDDR LR LR
comp=Z,662nm,22.0s,MS4.8
116A Eloy 64.90 297 ⇑P **P 22 31 00.7 +0.3**
baz=65,SNR=7.3
OSI Osito Adit 64.92 304 ⇑P **P 22 31 01.1 +0.7**
baz=65
115A Sonoran Desert 64.92 298 ⇓P **P 22 31 01.3 +0.8**
baz=65
BC3 Big Chuckawall 64.93 301 ⇓P **P 22 31 00.9 +0.4**
baz=65,SNR=8.4
PKM Peak Mountain 64.94 305 ⇓P **P 22 31 01.3 +0.7**
baz=65
TAPN Taplejung 64.94 79 *eP* **P 22 31 02.0 +1.3**
comp=Z,102nm,1.4s,mb5.7
LIC Lamto 64.96 181 *eP* **P 22 30 59.7 -1.2**
comp=Z,61nm,1.2s,mb5.5
LIC Lamto 64.96 181 *eP* **P 22 30 59.9 -1.0**
comp=Z,61nm,1.2s,mb5.2
LIC *e*MLR MLR
comp=Z,1μm,20.2s,MS4.8
LIC Lamto 64.96 181 *eP* **P 22 30 59.9 -1.0**
comp=Z,31nm,1.2s,mb5.2
LIC LR LR
comp=Z,670nm,20.3s,MS4.8
LIC Lamto 64.96 181 *eP* **P 22 30 59.9 -1.0**
comp=Z,31nm,1.2s,mb5.2
218A Dragoon 64.97 296 ⇓P **P 22 31 01.1 +0.3**
baz=65,SNR=6.7
526A Mary Lane Ranc 64.98 290 ⇑P **P 22 31 01.2 +0.3**
baz=65,SNR=15
BFSC Mount Baldy Ra 64.98 303 ⇑P **P 22 31 01.6 +0.7**
baz=65
XAN Xi'an 65.01 57 P **P 22 31 00.8 -0.3**
114A Black Gap (USA 65.06 298 ⇓P **P 22 31 01.1 -0.3**
baz=65
MWC Mount Wilson 65.11 303 *eP* **P 22 31 03.0 +1.3**
comp=Z,50nm,1.4s,mb5.3
MWC Mount Wilson 65.11 303 *eP* **P 22 31 03.0 +1.3**
MWC pmax pmax
comp=Z,50nm,1.4s,mb5.3
320A Kipp Ranch, An 65.12 294 ⇑P **P 22 31 02.4 +0.5**
baz=65,SNR=9.4
628A Black Gap, Mar 65.15 288 ⇑P **P 22 31 02.0 -0.1**
baz=65,SNR=24
DECC Green Verdugo 65.15 304 ⇑P **P 22 31 02.2 +0.2**
baz=65
PFO Pinyon Flat Ob 65.25 302 ⇓P **P 22 31 03.2 +0.6**
baz=65
PFO Pinyon Flat Ob 65.25 302 PFAKE 22 31 10.0 +7.4
PFO LR LR
comp=Z,1μm,19.0s,MS5.1
113A Mohawk Valley, 65.29 299 ⇓P **P 22 31 03.2 +0.3**
baz=65
ODAN Odare 65.30 79 *eP* **P 22 31 04.3 +1.3**
comp=Z,142nm,1.2s,mb5.9
319A Douglas 65.31 295 ⇓P **P 22 31 02.9 -0.1**
baz=65
GLA Glamis 65.32 300 ⇑P **P 22 31 03.8 +0.7**
baz=65
GLA Glamis 65.32 300 *eP* **P 22 31 04.8 +1.7**
comp=Z,74nm,1.6s,mb5.5
GLA Glamis 65.32 300 *eP* **P 22 31 04.8 +1.7**
GLA pmax pmax
comp=Z,74nm,1.6s,mb5.5
627A Terlingua Ranc 65.33 289 ⇓P **P 22 31 03.2 -0.1**
baz=65,SNR=20
SBC Santa Barbara 65.34 305 ⇑P **P 22 31 03.5 +0.3**
baz=65
216A Three Points, 65.35 297 ⇑P **P 22 31 03.5 +0.2**
baz=65,SNR=8.7
217A Green Valley 65.38 296 ⇑P **P 22 31 03.6 +0.1**
baz=65,SNR=27
KVTX Kingsville 65.40 283 PFAKE 22 31 20.0 +16
KVTX LR LR
comp=Z,1μm,22.0s,MS5.1
MURC Murrieta 65.46 302 ⇑P **P 22 31 03.9 -0.2**
baz=65
626A Big Bend Ranch 65.47 289 ⇑P **P 22 31 04.1 0.0**
baz=65,SNR=31
TXAR Lajitas Array 65.53 289 P **P 22 31 01.4 -3.1**
comp=Z,13nm,1.0s,mb4.9,baz=48,slow=5.6,SNR=40
TXAR LR LR 22 59 29.3
comp=Z,2μm,20.4s,MS5.3,baz=0.0,slow=36
TXAR Lajitas Array 65.53 289 P **P 22 31 01.4 -3.1**
TXAR pmax pmax
comp=Z,13nm,1.0s
TXAR MLR MLR
comp=Z,2μm,20.4s
FMP Fort Macarthur 65.65 303 ⇓P **P 22 31 04.8 -0.4**
baz=65
SWSC Sam W. Stewart 65.70 301 ⇑P **P 22 31 05.4 -0.1**
baz=66
112A Yuma 65.74 300 ⇓P **P 22 31 06.0 +0.2**
baz=66
214A Organ Pipe Nat 65.78 298 ⇑P **P 22 31 06.2 +0.1**
baz=66,SNR=5.9
FDF Fort de France 65.85 243 PFAKE 22 31 20.0 +13
FDF LR LR
comp=Z,607nm,20.0s,MS4.8
MONP Monument Peak 65.92 302 ⇑P **P 22 31 07.0 0.0**
baz=66
DVTC Desert V Tower 66.05 301 ⇑P **P 22 31 08.6 +0.8**
baz=66,SNR=5.1
INCN Inchon 66.06 41 PFAKE 22 31 20.0 +12
INCN LR LR
comp=Z,342nm,21.0s,MS4.5
109C Camp Elliot, M 66.11 302 ⇓P **P 22 31 08.2 0.0**
baz=66
KSRS Korea Array 66.36 40 P **P 22 31 06.5 -3.2**
comp=Z,3.8nm,0.7s,mb4.6,baz=350,slow=6.6,SNR=15
KSRS PP PP 22 33 32.1 -3.1
comp=Z,5.0nm,1.1s,baz=347,slow=8.7,SNR=7.1
KSRS LR LR 23 01 60.0
comp=Z,502nm,18.2s,MS4.8,baz=348,slow=38
KSRS Korea Array 66.36 40 P **P 22 31 06.6 -3.2**
KSRS 22 33 32.2
KSRS pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KSRS pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
KSRS MLR MLR
comp=Z,502nm,18.2s,MS4.8
KSRS Korea Array 66.36 40 P **P 22 31 06.6 -3.2**
comp=Z,4.0nm,0.7s,mb4.6
SCI San Clemente I 66.41 303 ⇓P **P 22 31 10.4 +0.2**
baz=66
SNCC San Nicolas Is 66.42 304 ⇓P **P 22 31 09.6 -0.5**
baz=66
CD2 Chengdu 66.51 63 *eP* **P 22 31 11.5 +0.7**
CD2 pP pP 22 31 16.0 +2.0
CD2 sP sP 22 31 18.5 +3.3
CD2 PP PP 22 33 39.5 +2.8
CD2 S S 22 39 58.5 -2.6
CD2 sS sS 22 40 06.0 -0.4
CD2 pmax pmax
comp=Z,30nm,0.5s,mb5.6
CD2 pmax pmax
comp=Z,130nm,6.2s
CD2 LR LR
comp=E,1μm,19.0s
CD2 LR LR
comp=Z,1μm,13.2s
BBGH Gun Hill 66.91 241 PFAKE 22 31 30.0 +17
BBGH LR LR
comp=Z,1μm,21.0s,MS5.1
MTDJ Mount Denham 67.56 260 PFAKE 22 31 30.0 +12
MTDJ LR LR
comp=Z,576nm,21.0s,MS4.8
SHL Shillong 67.92 76 ⇑*iP* **P 22 31 20.0 +0.2**
GRGR Grenville 68.46 243 PFAKE 22 31 40.0 +17
GRGR LR LR
comp=Z,358nm,19.0s,MS4.6
ENH Enshi 68.72 58 *eP* **P 22 31 24.7 0.0**
comp=Z,67nm,1.3s,mb5.4

ENH LR LR
comp=Z,1μm,19.0s,MS5.1
ENH Enshi 68.72 58 *eP* **P 22 31 24.7 -0.1**
comp=Z,67nm,1.3s,mb5.4
TEIG Tepich 69.15 271 PFAKE 22 31 40.0 +12
TEIG LR LR
comp=Z,2μm,22.0s,MS5.3
MAJO Matsushiro 69.20 32 *eP* **P 22 31 27.6 -0.1**
comp=Z,38nm,1.3s,mb5.2
MAJO LR LR
comp=Z,414nm,20.0s,MS4.7
MAJO Matsushiro 69.20 32 *eP* **P 22 31 27.6 0.0**
MAJO pmax pmax
comp=Z,38nm,1.3s,mb5.2
MAJO MLR MLR
comp=Z,414nm,20.0s,MS4.7
MAJO Matsushiro 69.20 32 *eP* **P 22 31 27.6 0.0**
comp=Z,38nm,1.3s,mb5.2
MAT Matsushiro 69.20 32 P **P 22 31 26.7 -0.9**
MAT *e*S S 22 40 36.6 +3.5
MJAR Matsushiro Arr 69.20 32 P **P 22 31 24.9 -2.7**
comp=Z,11nm,0.9s,mb4.8,baz=336,slow=5.8,SNR=19
MJAR Matsushiro Arr 69.20 32 P **P 22 31 24.9 -2.7**
MJAR pmax pmax
comp=Z,11nm,1.0s
MJAR Matsushiro Arr 69.20 32 P **P 22 31 24.9 -2.7**
JNU Nakatsue 71.16 39 *eP* **P 22 31 40.7 +1.0**
comp=Z,21nm,1.2s,mb4.9
GYA Guiyang 71.53 62 P **P 22 31 43.3 +1.3**
GYA PP PP 22 34 22.0 +1.7
GYA S S 22 41 01.8 +1.2
GYA SKS 22 41 41.0
GYA SS SS 22 45 35.5 +0.7
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,130nm,5.8s
GYA LR LR
comp=N,750nm,19.0s,MS5.1
GYA LR LR
comp=E,660nm,20.4s,MS5.1
GYA LR LR
comp=Z,860nm,18.8s,MS5.0
KMI Kunming 71.65 66 P **P 22 31 43.3 +0.5**
KMI pP pP 22 31 47.5 +1.5
KMI PcP PcP 22 32 04.3 +2.4
KMI PP PP 22 34 23.8 +2.5
KMI S S 22 41 01.5 -0.5
KMI SKS 22 41 43.3
KMI ScS ScS 22 41 46.5 -1.3
KMI SS SS 22 45 38.0 +1.3
KMI pmax pmax
comp=Z,11nm,1.1s,mb4.7
KMI pmax pmax
comp=Z,170nm,3.4s
KMI LR LR
comp=N,900nm,20.8s,MS5.2
KMI LR LR
comp=E,750nm,18.0s,MS5.2
KMI LR LR
comp=Z,800nm,14.1s,MS5.1
SDV Santo Domingo 74.20 250 *eP* **P 22 31 59.2 +1.3**
comp=Z,57nm,1.7s,mb5.2
SDV LR LR
comp=Z,266nm,21.0s,MS4.5
TGUH Tegucigalpa,Un 74.60 268 PFAKE 22 32 10.0 +10
TGUH LR LR
comp=Z,995nm,22.0s,MS5.1
MBAR Mbarara 75.20 144 PFAKE 22 32 20.0 +16
MBAR LR LR
comp=Z,833nm,22.0s,MS5.0
CHG Chiang Mai 76.45 72 P **P 22 32 16.4 +5.6**
CMAR Chiang Mai Arr 76.78 72 P **P 22 32 11.1 -1.7**
comp=Z,3.8nm,0.8s,mb4.4,baz=324,slow=6.2,SNR=23
CMAR Chiang Mai Arr 76.78 72 P **P 22 32 11.1 -1.6**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CMAR Chiang Mai Arr 76.78 72 P **P 22 32 11.1 -1.6**
BCIP Isla Barro Col 76.81 259 PFAKE 22 32 20.0 +7.1
BCIP LR LR
comp=Z,348nm,20.0s,MS4.7
JTS JuntasAbangare 77.39 265 PFAKE 22 32 30.0 +14
JTS LR LR
comp=Z,812nm,20.0s,MS5.0
BDT Bhumibol Dam 77.94 72 P **P 22 32 20.0 +0.8**
ROSC El Rosal 79.14 253 P **P 22 32 27.1 +1.3**
comp=Z,3.6nm,0.3s,mb4.7,baz=90,slow=20,SNR=8.0
ROSC El Rosal 79.14 253 *eP* **P 22 32 29.1 +3.2**
QIZ Qiongzhong 79.47 62 P **P 22 32 27.8 +0.1**
QIZ S S 22 42 29.0 +0.3
QIZ pmax pmax
comp=Z,13nm,1.0s,mb4.8
QIZ pmax pmax
comp=Z,240nm,5.7s
QIZ LR LR
comp=N,1μm,5.2s
QIZ LR LR
comp=E,230nm,4.7s
QIZ LR LR
comp=Z,1μm,16.0s,MS5.3
QIZ Qiongzhong 79.47 62 PFAKE 22 32 40.0 +12
QIZ LR LR
comp=Z,445nm,20.0s,MS4.8
RCBR Riachuelo 79.76 212 PFAKE 22 32 40.0 +11
RCBR LR LR
comp=Z,587nm,21.0s,MS4.9
OTAV Otavalo 84.78 255 *eP* **P 22 32 57.8 +2.2**
OTAV LR LR
comp=Z,456nm,22.0s,MS4.8
MSEY Mahe Island 85.03 120 PFAKE 22 33 10.0 +13
MSEY LR LR
comp=Z,501nm,20.0s,MS4.9
SHEL Horse Pasture 87.01 182 PFAKE 22 33 20.0 +14
SHEL LR LR
comp=Z,595nm,22.0s,MS5.0
LSZ Lusaka 89.08 149 PFAKE 22 33 30.0 +14
LSZ LR LR
comp=Z,609nm,20.0s,MS5.0
KULM Kulim 89.72 74 PFAKE 22 33 30.0 +11
KULM LR LR
comp=Z,673nm,20.0s,MS5.1
TSUM Tsumeb 91.46 160 PFAKE 22 33 40.0 +13
TSUM LR LR
comp=Z,718nm,20.0s,MS5.1
PSI Prapat 91.53 77 LR LR 23 19 11.2
comp=Z,499nm,21.3s,MS4.9,baz=301,slow=39
JOHN Johnston Islan 91.66 346 PFAKE 22 33 40.0 +12
JOHN LR LR
comp=Z,1μm,22.0s,MS5.3
KSM Kuching 96.27 66 PFAKE 22 34 00.0 +10
KSM LR LR
comp=Z,377nm,21.0s,MS4.8
ABPO Ambohimpanom 96.62 132 PFAKE 22 34 00.0 +9.0
ABPO LR LR
comp=Z,732nm,22.0s,MS5.1
LPAZ La Paz 97.35 241 PFAKE 22 34 10.0 +16
LPAZ LR LR
comp=Z,314nm,19.0s,MS4.8
LBTB Lobatse 98.23 153 PFAKE 22 34 10.0 +12
LBTB LR LR
comp=Z,591nm,19.0s,MS5.1
SPB Sao Paulo 99.27 220 PFAKE 22 34 10.0 +7.2
SPB LR LR
comp=Z,430nm,19.0s,MS5.0
BOSA Boshof 101.72 154 PFAKE 22 34 30.0 +16
BOSA LR LR
comp=Z,749nm,22.0s,MS5.2
XMAS Kiritimati 104.78 332 PFAKE 22 34 40.0 +12
XMAS LR LR
comp=Z,884nm,20.0s,MS5.3
SUR Sutherland 104.85 158 PFAKE 22 34 40.0 +12
SUR LR LR
comp=Z,2μm,22.0s,MS5.5
TAOE Nuku Hiva Isla 112.01 312 *e*LR LR 23 12 23.2
comp=Z,821nm,23.1s
PMG Port Moresby 115.67 32 PFAKE 22 39 10.0 +6.6
PMG LR LR
comp=Z,258nm,22.0s,MS4.8
TRQA Tornquist 116.44 228 PFAKE 22 39 20.0 +16
TRQA LR LR
comp=Z,307nm,19.0s,MS4.9
FUNA Funafuti 117.29 356 PFAKE 22 39 20.0 +14
FUNA LR LR
comp=Z,5μm,19.0s,MS6.1
HNR Honiara 117.43 18 PFAKE 22 39 20.0 +13

HNR LR LR
comp=Z,471nm,19.0s,MS5.1
MBWA Marble Bar 120.49 64 PFAKE 22 39 20.0 +7.6
MBWA LR LR
comp=Z,332nm,19.0s,MS5.0
PLCA Paso Flores 121.14 234 PKP PKPdf 22 39 10.8 -2.2
comp=Z,1.5nm,0.9s,baz=90,slow=1.0,SNR=2.2
PLCA Paso Flores 121.14 234 PKP PKPdf 22 39 10.8 -2.2
PLCA Paso Flores 121.14 234 PKIKP PKPdf 22 39 10.8 -2.2
PLCA pmax pmax
comp=Z,2.0nm,0.9s
PPT Papeete 122.55 320 *e*SS SS 22 57 42.5 +8.6
comp=Z,1μm,31.8s
PPT *e*LR LR 23 17 10.8
comp=Z,710nm,22.8s
WRA Warramunga Arr 123.25 48 PKP PKPdf 22 39 15.8 -2.0
comp=Z,3.4nm,1.1s,baz=348,slow=2.6,SNR=5.7
WRA Warramunga Arr 123.25 48 PKIKP PKPdf 22 39 15.8 -1.9
WRA pmax pmax
comp=Z,3.0nm,1.1s
WRA Warramunga Arr 123.25 48 PKIKP PKPdf 22 39 15.8 -1.9
RKT Rikitea 124.35 303 *e*LR LR 23 18 08.1
comp=Z,860nm,27.8s
CTAO Charters Tower 125.95 35 PFAKE 22 39 30.0 +7.1
CTAO LR LR
comp=Z,229nm,19.0s,MS4.9
ASAR Alice Springs 126.72 50 PKP PKPdf 22 39 21.2 -3.1
comp=Z,1.7nm,0.9s,baz=360,slow=2.3,SNR=15
ASAR PP PP 22 41 26.0 +4.8
comp=Z,0.7nm,1.0s,baz=343,slow=5.2,SNR=5.0
ASAR Alice Springs 126.72 50 PKIKP PKPdf 22 39 21.2 -3.1
ASAR 22 41 26.0
TBI Tubuai 128.13 318 *e*LR LR 23 19 51.2
comp=Z,854nm,31.8s
DZM Mont Dzumac 130.48 12 *e*LR LR 23 21 02.0
comp=Z,379nm,25.2s
MAW Mawson 145.65 141 PKPbc PKPbc 22 39 58.5 +0.3
comp=Z,1.9nm,0.5s,baz=273,slow=12,SNR=7.9
MAW Mawson 145.65 141 *e*PKPdf PKPdf 22 39 57.7 0.0
MAW LR LR
comp=Z,2μm,22.0s,MS5.8
CASY Casey 156.91 110 PFAKE 22 40 30.0 +15
CASY LR LR
comp=Z,510nm,20.0s,MS5.3
QSPA South Pole Qui 161.21 180 PKPab PKPab 22 41 05.4 +1.9
comp=Z,7.4nm,1.0s,baz=231,slow=3.0,SNR=10
QSPA South Pole Qui 161.21 180 PFAKE 22 40 30.0 +10
QSPA LR LR
comp=Z,786nm,20.0s
SBA Scott Base 172.95 164 PFAKE 22 40 40.0 +12
SBA LR LR
comp=Z,881nm,19.0s

*ISCJB **28** 22:22:46.6±0.4, 71°.50N±0°.04×4°.5W±0°.1, h10km, mb4.3/32, Error ellipse: s-maj=7.0km s-min=5.4km az=22.0*
*IDC **28** 22:22:47.0±1.0, 71°.44N×4°.43W, h0km, mb3.9/7, mb1 4.1/10, mb1mx3.9/26, mbtmp4.0/10, ML4.0/2, Error ellipse: s-maj=24.2km s-min=16.3km az=178.0*
*CSEM **28** 22:22:47.1±0.1, 71°.44N×4°.33W, h2km, mb4.5/24, Error ellipse: s-maj=5.9km s-min=4.4km az=107.0*
*NEIC **28** 22:22:48.6±0.3, 71°.44N×4°.38W, h10km, mb4.5/24, Error ellipse: s-maj=5.8km s-min=4.3km az=108.0*
ISC 28 22:22:48.8±0.4, 71°.44N±0°.04×4°.4W±0°.2, h10km, n155, σ0s83/156, mb4.3/32, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.42**	**253**	Pn	**Pn**	**22 23 12.8**	**-1.8**
	12nm,0.3s,baz=74,slow=18,SNR=2.6						
JMIC				Sn	**Sn**	**22 23 27.8**	**-5.5**
	2.7nm,0.3s,baz=11,slow=19,SNR=2.8						
JMIC	**Jan Mayen**	**1.42**	**253**	Pn	**Pn**	**22 23 12.8**	**-1.8**
KBS	**Kingsbay**	**8.55**	**21**	*e*Pn	**Pn**	**22 24 52.1**	**-0.2**
KBS	**Kingsbay**	**8.55**	**21**	*e*Pn	**Pn**	**22 24 52.1**	**-0.2**
SPB4	**Spitsbergen Ar**	**8.61**	**29**	*e*Pn	**Pn**	**22 24 53.9**	**+0.9**
SPB4	**Spitsbergen Ar**	**8.61**	**29**	*e*Pn	**Pn**	**22 24 53.9**	**+0.8**
SPITS	**Spitsbergen Ar**	**8.61**	**29**	Pn	**Pn**	**22 24 53.7**	**+0.6**
	baz=211,slow=13,SNR=11						
SPITS	**Spitsbergen Ar**	**8.61**	**29**	Pn	**Pn**	**22 24 53.7**	**+0.6**
BORG	**Borgarnes**	**9.20**	**232**	Pn	**Pn**	**22 25 00.8**	**-0.5**
BORG	**Borgarnes**	**9.20**	**232**	Pn	**Pn**	**22 25 00.8**	**-0.4**
ARCES	**ARCESS Array B**	**10.10**	**86**	Pn	**Pn**	**22 25 12.0**	**-1.6**
	baz=290,slow=10,SNR=3.2						
ARCES	**ARCESS Array B**	**10.10**	**86**	Pn	**Pn**	**22 25 12.0**	**-1.6**
SUMG	**Summit**	**10.52**	**292**	*e*Pn	**Pn**	**22 25 18.9**	**-0.3**
SUMG	**Summit**	**10.52**	**292**	*e*Pn	**Pn**	**22 25 18.9**	**-0.3**
KONO	**Kongsberg**	**13.11**	**147**	*e*Pn	**Pn**	**22 25 53.3**	**-1.4**
KONO	**Kongsberg**	**13.11**	**147**	*e*Pn	**Pn**	**22 25 53.3**	**-1.4**
HFS	**Hagfors**	**13.46**	**138**	Pn	**Pn**	**22 25 57.7**	**-1.7**
	1.8nm,0.3s,baz=344,slow=14,SNR=4.8						
HFS	**Hagfors**	**13.46**	**138**	Pn	**Pn**	**22 25 57.7**	**-1.7**
EKA	**Eskdalemuir Ar**	**16.18**	**178**	Pn	**Pn**	**22 26 34.5**	**-1.3**
	0.4nm,0.3s,baz=354,slow=13,SNR=11						
EKA	**Eskdalemuir Ar**	**16.18**	**178**	Pn	**Pn**	**22 26 34.5**	**-1.3**
ESK	**Eskdalemuir**	**16.19**	**178**	*e*Pn	**Pn**	**22 26 34.4**	**-1.6**
ESK	**Eskdalemuir**	**16.19**	**178**	*e*Pn	**Pn**	**22 26 34.4**	**-1.6**
DSB	**Dublin**	**18.28**	**184**	*e*Pn	**Pn**	**22 27 01.4**	**-0.7**
DSB	**Dublin**	**18.28**	**184**	*e*Pn	**Pn**	**22 27 01.4**	**-0.7**
RGN	**Rugen**	**18.61**	**146**	P	**Pn**	**22 27 04.7**	**-1.4**
RGN	**Rugen**	**18.61**	**146**	P	**Pn**	**22 27 04.7**	**-1.4**
RUE	**Ruedersdorf**	**20.67**	**147**	*e*P	**P**	**22 27 27.8**	**-0.5**
RUE	**Ruedersdorf**	**20.67**	**147**	*e*P	**P**	**22 27 27.8**	**-0.5**
SUW	**Suwalki**	**21.20**	**131**	*e*P	**P**	**22 27 33.2**	**-0.8**
SUW	**Suwalki**	**21.20**	**131**	*e*P	**P**	**22 27 33.2**	**-0.8**
CLL	**Collm**	**21.67**	**150**	P	**P**	**22 27 42.0**	**+2.9**
CLL	**Collm**	**21.67**	**150**	*e*P	**P**	**22 27 39.0**	**-0.1**
CLL				*e*Pmax		22 27 42.0	
	comp=Z,54nm,1.9s						
BAIF	**Baives**	**21.81**	**165**	*e*P	**P**	**22 27 40.6**	**0.0**
	comp=Z,17nm,1.0s,mb4.1						
BAIF	**Baives**	**21.81**	**165**	*e*P	**P**	**22 27 40.6**	**0.0**
	comp=Z,8.3nm,1.0s,mb4.1						
BAIF	**Baives**	**21.81**	**165**	*e*P	**P**	**22 27 40.6**	**0.0**
	comp=Z,8.3nm,1.0s,mb4.1						
GIVF	**Givet**	**21.82**	**164**	*e*P	**P**	**22 27 40.7**	**0.0**
	comp=Z,40nm,1.0s,mb4.5						
GIVF	**Givet**	**21.82**	**164**	*e*P	**P**	**22 27 40.7**	**0.0**
	comp=Z,20nm,1.0s,mb4.5						
GIVF	**Givet**	**21.82**	**164**	*e*P	**P**	**22 27 40.7**	**0.0**
	comp=Z,20nm,1.0s,mb4.5						
FLN	**La Foliniere**	**22.82**	**173**	*e*P	**P**	**22 27 51.4**	**0.0**
	comp=Z,22nm,0.9s,mb4.3						
FLN	**La Foliniere**	**22.82**	**173**	*e*P	**P**	**22 27 51.4**	**0.0**
	comp=Z,11nm,0.9s,mb4.3						
FLN	**La Foliniere**	**22.82**	**173**	*e*P	**P**	**22 27 51.4**	**0.0**
	comp=Z,11nm,0.9s,mb4.3						
LDF	**La Druitiere**	**23.00**	**173**	*e*P	**P**	**22 27 53.2**	**-0.1**
	comp=Z,10nm,0.8s,mb4.0						
LDF	**La Druitiere**	**23.00**	**173**	*e*P	**P**	**22 27 53.2**	**-0.1**
	comp=Z,5.3nm,0.8s,mb4.0						
LDF	**La Druitiere**	**23.00**	**173**	*e*P	**P**	**22 27 53.2**	**-0.1**
	comp=Z,5.2nm,0.8s,mb4.0						
GRR	**Gorron**	**23.18**	**174**	*e*P	**P**	**22 27 55.0**	**-0.2**
GRR	**Gorron**	**23.18**	**174**	*e*P	**P**	**22 27 55.0**	**-0.2**
ROSF	**Rostrenen**	**23.18**	**178**	*e*P	**P**	**22 27 54.5**	**-0.7**
	comp=Z,34nm,1.1s,mb4.4						
ROSF	**Rostrenen**	**23.18**	**178**	*e*P	**P**	**22 27 54.5**	**-0.7**
	comp=Z,17nm,1.1s,mb4.4						
ROSF	**Rostrenen**	**23.18**	**178**	*e*P	**P**	**22 27 54.5**	**-0.7**
	comp=Z,17nm,1.1s,mb4.4						
SGMF	**Saint Gilles**	**23.27**	**177**	*e*P	**P**	**22 27 55.2**	**-0.9**
	comp=Z,52nm,1.3s,mb4.5						
SGMF	**Saint Gilles**	**23.27**	**177**	*e*P	**P**	**22 27 55.2**	**-0.9**
	comp=Z,26nm,1.3s,mb4.5						
SGMF	**Saint Gilles**	**23.27**	**177**	*e*P	**P**	**22 27 55.2**	**-0.9**
	comp=Z,26nm,1.3s,mb4.5						
MEZF	**Maizieres J'vi**	**23.43**	**164**	*e*P	**P**	**22 27 58.6**	**+0.9**
MEZF	**Maizieres J'vi**	**23.43**	**164**	*e*P	**P**	**22 27 58.6**	**+0.9**
QUIF	**Quistinic**	**23.60**	**178**	*e*P	**P**	**22 27 59.6**	**+0.1**
	comp=Z,61nm,1.3s,mb4.6						
QUIF	**Quistinic**	**23.60**	**178**	*e*P	**P**	**22 27 59.6**	**+0.1**
	comp=Z,30nm,1.3s,mb4.6						
QUIF	**Quistinic**	**23.60**	**178**	*e*P	**P**	**22 27 59.6**	**+0.1**
	comp=Z,30nm,1.3s,mb4.6						
CDF	**Champ du Feu**	**23.73**	**161**	*e*P	**P**	**22 28 01.4**	**+0.7**
CDF	**Champ du Feu**	**23.73**	**161**	*e*P	**P**	**22 28 01.4**	**+0.7**
OBN	**Obninsk**	**23.88**	**112**	*e*P	**P**	**22 28 01.4**	**-0.5**
OBN	**Obninsk**	**23.88**	**112**	*e*P	**P**	**22 28 01.5**	**-0.5**
MORC	**Moravsky Berou**	**23.95**	**143**	*e*P	**P**	**22 28 02.3**	**-0.3**
	comp=Z,47nm,1.8s,mb4.6						
MORC	**Moravsky Berou**	**23.95**	**143**	*e*P	**P**	**22 28 02.3**	**-0.3**
	comp=Z,47nm,1.8s,mb4.6						
GERES	**GERESS Array B**	**24.17**	**150**	P	**P**	**22 28 05.6**	**+0.9**
	comp=Z,17nm,0.8s,mb3.6,baz=349,slow=10.0,SNR=3.9						
GERES	**GERESS Array B**	**24.17**	**150**	P	**P**	**22 28 05.6**	**+0.9**
LOR	**Lormes**	**24.55**	**166**	*e*P	**P**	**22 28 08.4**	**+0.2**
	comp=Z,14nm,0.8s,mb4.2						
LOR	**Lormes**	**24.55**	**166**	*e*P	**P**	**22 28 08.4**	**+0.2**
	comp=Z,6.8nm,0.8s,mb4.2						
LOR	**Lormes**	**24.55**	**166**	*e*P	**P**	**22 28 08.4**	**+0.2**
	comp=Z,6.8nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**24.73**	**167**	*e*P	**P**	**22 28 09.9**	**+0.1**
	comp=Z,22nm,1.0s,mb4.3						
SSF	**Saint Saulge**	**24.73**	**167**	*e*P	**P**	**22 28 09.9**	**+0.1**
	comp=Z,11nm,1.0s,mb4.3						
SSF	**Saint Saulge**	**24.73**	**167**	*e*P	**P**	**22 28 09.9**	**+0.1**
	comp=Z,11nm,1.0s,mb4.3						
MFF	**Saint Martin d**	**24.99**	**173**	*e*P	**P**	**22 28 12.3**	**+0.1**
	comp=Z,25nm,0.9s,mb4.5						
MFF	**Saint Martin d**	**24.99**	**173**	*e*P	**P**	**22 28 12.3**	**+0.1**
	comp=Z,13nm,0.9s,mb4.5						
MFF	**Saint Martin d**	**24.99**	**173**	*e*P	**P**	**22 28 12.3**	**+0.1**
	comp=Z,13nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	**24.99**	**167**	*e*P	**P**	**22 28 12.2**	**0.0**
	comp=Z,23nm,1.1s,mb4.3						
AVF	**Avril sur Loir**	**24.99**	**167**	*e*P	**P**	**22 28 12.2**	**0.0**
	comp=Z,12nm,1.1s,mb4.3						
AVF	**Avril sur Loir**	**24.99**	**167**	*e*P	**P**	**22 28 12.2**	**0.0**
	comp=Z,12nm,1.1s,mb4.3						
SMF	**Signal de Mont**	**25.17**	**167**	*e*P	**P**	**22 28 14.0**	**+0.2**
	comp=Z,30nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**25.17**	**167**	*e*P	**P**	**22 28 14.0**	**+0.2**
	comp=Z,15nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**25.17**	**167**	*e*P	**P**	**22 28 14.0**	**+0.2**
	comp=Z,15nm,0.9s,mb4.5						
BGF	**Bois d'Agland**	**25.19**	**168**	*e*P	**P**	**22 28 14.1**	**+0.1**
	comp=Z,19nm,0.8s,mb4.4						
BGF	**Bois d'Agland**	**25.19**	**168**	*e*P	**P**	**22 28 14.1**	**+0.1**
	comp=Z,9.6nm,0.8s,mb4.4						
BGF	**Bois d'Agland**	**25.19**	**168**	*e*P	**P**	**22 28 14.1**	**+0.1**
	comp=Z,9.6nm,0.8s,mb4.4						
TCF	**Toulx Ste Croi**	**25.42**	**169**	*e*P	**P**	**22 28 16.1**	**0.0**
	comp=Z,30nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**25.42**	**169**	*e*P	**P**	**22 28 16.1**	**0.0**
	comp=Z,15nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**25.42**	**169**	*e*P	**P**	**22 28 16.1**	**0.0**
	comp=Z,15nm,1.0s,mb4.5						
AKASG	**Malin Array Be**	**25.74**	**126**	P	**P**	**22 28 17.9**	**-1.0**
	comp=Z,4.4nm,0.7s,mb4.1,baz=336,slow=9.4,SNR=4.7						
AKASG	**Malin Array Be**	**25.74**	**126**	P	**P**	**22 28 17.9**	**-1.0**
PSZ	**Piszkesteto**	**26.18**	**141**	P	**P**	**22 28 23.1**	**+0.1**
PSZ	**Piszkesteto**	**26.18**	**141**	P	**P**	**22 28 23.1**	**+0.1**
RJF	**Les Rejaudoux**	**26.36**	**171**	*e*P	**P**	**22 28 24.8**	**+0.2**
	comp=Z,29nm,0.8s,mb4.6						
RJF	**Les Rejaudoux**	**26.36**	**171**	*e*P	**P**	**22 28 24.8**	**+0.2**
	comp=Z,15nm,0.8s,mb4.6						
RJF	**Les Rejaudoux**	**26.36**	**171**	*e*P	**P**	**22 28 24.8**	**+0.2**
	comp=Z,15nm,0.8s,mb4.6						
LPL	**La Plagne**	**26.56**	**162**	*e*P	**P**	**22 28 27.4**	**+1.2**
LPL	**La Plagne**	**26.54**	**162**	*e*P	**P**	**22 28 27.4**	**+1.2**
LPG	**La Plagne**	**26.56**	**162**	*e*P	**P**	**22 28 27.7**	**+1.3**
LPG	**La Plagne**	**26.56**	**162**	*e*P	**P**	**22 28 27.7**	**+1.3**
LFF	**La Frestale**	**26.69**	**172**	*e*P	**P**	**22 28 28.5**	**+0.9**
	comp=Z,38nm,1.1s,mb4.5						
LFF	**La Frestale**	**26.69**	**172**	*e*P	**P**	**22 28 28.5**	**+0.9**
	comp=Z,19nm,1.1s,mb4.5						
LFF	**La Frestale**	**26.69**	**172**	*e*P	**P**	**22 28 28.5**	**+0.9**
	comp=Z,19nm,1.1s,mb4.5						
CAF	**Calviac**	**26.77**	**170**	*e*P	**P**	**22 28 28.5**	**+0.2**
	comp=Z,38nm,1.4s,mb4.4						
CAF	**Calviac**	**26.77**	**170**	*e*P	**P**	**22 28 28.5**	**+0.2**
	comp=Z,19nm,1.4s,mb4.4						
CAF	**Calviac**	**26.77**	**170**	*e*P	**P**	**22 28 28.5**	**+0.2**
	comp=Z,19nm,1.4s,mb4.4						
VIVF	**Saint-Julien-l**	**27.02**	**166**	*e*P	**P**	**22 28 31.0**	**+0.5**
VIVF	**Saint-Julien-l**	**27.02**	**166**	*e*P	**P**	**22 28 31.0**	**+0.5**
ORIF	**Oris-en-Rattie**	**27.05**	**164**	*e*P	**P**	**22 28 32.2**	**+1.4**
	comp=Z,14nm,1.0s,mb4.1						
ORIF	**Oris-en-Rattie**	**27.05**	**164**	*e*P	**P**	**22 28 32.2**	**+1.4**
	comp=Z,6.8nm,1.0s,mb4.1						
ORIF	**Oris-en-Rattie**	**27.05**	**164**	*e*P	**P**	**22 28 32.2**	**+1.4**
	comp=Z,6.8nm,1.0s,mb4.1						
MBDF	**Montbardon**	**27.33**	**163**	*e*P	**P**	**22 28 34.8**	**+1.5**
MBDF	**Montbardon**	**27.33**	**163**	*e*P	**P**	**22 28 34.8**	**+1.5**
LASF	**Ste Croix**	**27.73**	**167**	*e*P	**P**	**22 28 38.3**	**+1.4**
LASF	**Ste Croix**	**27.73**	**167**	*e*P	**P**	**22 28 38.3**	**+1.4**
MTLF	**Montolieu**	**28.36**	**170**	*e*P	**P**	**22 28 44.2**	**+1.7**
MTLF	**Montolieu**	**28.36**	**170**	*e*P	**P**	**22 28 44.2**	**+1.7**
SJPF	**Ste Jean**	**28.44**	**175**	*e*P	**P**	**22 28 44.2**	**+0.9**
	comp=Z,28nm,1.3s,mb4.5						
SJPF	**Ste Jean**	**28.44**	**175**	*e*P	**P**	**22 28 44.2**	**+0.9**
	comp=Z,14nm,1.3s,mb4.4						
SJPF	**Ste Jean**	**28.44**	**175**	*e*P	**P**	**22 28 44.2**	**+0.9**
	comp=Z,14nm,1.3s,mb4.5						
FRF	**La Foret Royal**	**28.47**	**163**	*e*P	**P**	**22 28 43.8**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.0						
FRF	**La Foret Royal**	**28.47**	**163**	*e*P	**P**	**22 28 43.8**	**+0.3**
	comp=Z,3.0nm,0.8s,mb4.0						
FRF	**La Foret Royal**	**28.47**	**163**	*e*P	**P**	**22 28 43.8**	**+0.3**
	comp=Z,3.0nm,0.8s,mb4.0						
EPF	**Esparros**	**28.58**	**173**	*e*P	**P**	**22 28 45.5**	**+1.0**
	comp=Z,27nm,1.1s,mb4.6						
EPF	**Esparros**	**28.58**	**173**	*e*P	**P**	**22 28 45.5**	**+1.0**
	comp=Z,14nm,1.1s,mb4.6						
EPF	**Esparros**	**28.58**	**173**	*e*P	**P**	**22 28 45.5**	**+1.0**
	comp=Z,14nm,1.1s,mb4.6						
ETSF	**Etsaut**	**28.68**	**174**	*e*P	**P**	**22 28 46.0**	**+0.7**
ETSF	**Etsaut**	**28.68**	**174**	*e*P	**P**	**22 28 46.0**	**+0.7**
ARU	**Arti**	**29.69**	**87**	P	**P**	**22 28 54.2**	**0.0**
ARU	**Arti**	**29.69**	**87**	P	**P**	**22 28 54.2**	**0.0**
ESDC	**Sonseca Array**	**31.84**	**179**	P	**P**	**22 29 13.8**	**+0.6**
	comp=Z,0.9nm,0.6s,mb3.8,baz=2.9,slow=8.2,SNR=4.7						
ESDC	**Sonseca Array**	**31.84**	**179**	P	**P**	**22 29 13.9**	**+0.6**
ESLA	**Sonseca Array**	**31.84**	**179**	P	**P**	**22 29 13.9**	**+0.6**
ESLA	**Sonseca Array**	**31.84**	**179**	P	**P**	**22 29 13.9**	**+0.6**
PAB	**San Pablo**	**31.96**	**180**	*e*P	**P**	**22 29 13.2**	**-1.2**
PAB	**San Pablo**	**31.96**	**180**	*e*P	**P**	**22 29 13.2**	**-1.2**
SFS	**San Fernando**	**35.05**	**183**	*e*P	**P**	**22 29 40.8**	**-0.5**
SFS	**San Fernando**	**35.05**	**183**	*e*P	**P**	**22 29 40.8**	**-0.5**
BRVK	**Borovoye**	**36.24**	**80**	*e*P	**P**	**22 29 50.5**	**-0.9**
	comp=Z,5.6nm,0.8s,mb4.5						
BRVK	**Borovoye**	**36.24**	**80**	*e*P	**P**	**22 29 50.5**	**-0.9**
	comp=Z,5.6nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**36.30**	**80**	P	**P**	**22 29 52.7**	**+0.8**
	comp=Z,2.0nm,0.7s,mb4.1,baz=301,slow=11,SNR=2.6						
BVAR	**Borovoye Array**	**36.30**	**80**	P	**P**	**22 29 52.7**	**+0.8**
BRTR	**Keskin Array B**	**37.09**	**128**	P	**P**	**22 29 59.3**	**+0.5**
	comp=Z,1.7nm,0.9s,mb3.9,baz=337,slow=8.2,SNR=3.1						
BRTR	**Keskin Array B**	**37.09**	**128**	P	**P**	**22 29 59.3**	**+0.6**
MALT	**Malatya**	**39.66**	**123**	P	**P**	**22 30 20.1**	**-0.3**
MALT	**Malatya**	**39.66**	**123**	P	**P**	**22 30 20.1**	**-0.3**
KURK	**Kurchatov**	**40.87**	**75**	*e*P	**P**	**22 30 29.3**	**-1.0**
KURK	**Kurchatov**	**40.87**	**75**	*e*P	**P**	**22 30 29.3**	**-1.0**
MCK	**McKinley**	**42.93**	**338**	P	**P**	**22 30 46.6**	**-0.3**
MCK	**McKinley**	**42.93**	**338**	P	**P**	**22 30 46.6**	**-0.3**
MKAR	**Makanchi Array**	**45.48**	**74**	P	**P**	**22 31 07.7**	**+0.2**
	comp=Z,0.8nm,0.8s,mb3.6,baz=336,slow=7.7,SNR=3.3						
AAK	**Ala-Archa**	**46.76**	**84**	*e*P	**P**	**22 31 17.5**	**-0.2**
AAK	**Ala-Archa**	**46.76**	**84**	*e*P	**P**	**22 31 17.5**	**-0.2**
KBL	**Kabul**	**52.39**	**93**	*e*P	**P**	**22 32 01.1**	**+0.5**
	comp=Z,1.4nm,0.8s,mb3.9						
KBL	**Kabul**	**52.39**	**93**	*e*P	**P**	**22 32 01.1**	**+0.4**
	comp=Z,1.4nm,0.8s,mb3.9						
TORD	**Torodi Ar. Bea**	**58.38**	**173**	P	**P**	**22 32 43.8**	**-0.1**
	comp=Z,15nm,1.0s,mb5.0,baz=353,slow=7.2,SNR=7.3						
TXAR	**Lajitas Array**	**65.39**	**289**	P	**P**	**22 33 30.7**	**-0.3**
	comp=Z,0.9nm,0.8s,mb3.8,baz=39,slow=5.8,SNR=4.1						
TXAR	**Lajitas Array**	**65.39**	**289**	P	**P**	**22 33 30.7**	**-0.3**

*ISK **28** 22:26:52.8, 38°.98N×44°.77E, h5km, MD3.3*
*CSEM **28** 22:26:54.7±1.4, 38°.87N×44°.78E, h2km, MD3.3, Error ellipse: s-maj=31.9km s-min=10.6km az=66.0*
*ISCJB **28** 22:26:55.2±1.4, 38°.86N±0°.04×44°.72E±0°.08, h0km±9km, Error ellipse: s-maj=10.3km s-min=6.1km az=171.8*
*DDA **28** 22:26:59.4, 38°.81N×44°.48E, h7km±2km, Md3.2*
ISC 28 22:26:56.0±1.5, 38°.86N±0°.04×44°.73E±0°.09, h5km±9km, n19, σ1s33/31, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.70**	**294**	*e*PG	**Pg**	**22 27 07.0**	**-2.5**
CLDR				*e*SG	**Sg**	**22 27 17.5**	**-1.0**
CLDR	**Caldiran**	**0.70**	**294**	*e*Pg	**Pg**	**22 27 07.0**	**-2.4**
CLDR				*e*Sg	**Sg**	**22 27 17.5**	**-1.0**
DYDN	**Diyadin**	**1.06**	**310**	*i* P	**Pg**	**22 27 17.4**	**+1.0**
DYDN				*i* S	**Sg**	**22 27 31.8**	**+1.7**
DYDN	**Diyadin**	**1.06**	**310**	*i* P	**Pg**	**22 27 17.4**	**+1.0**
DYDN				*i* S	**Sg**	**22 27 31.8**	**+1.6**
VANT	**Van**	**1.23**	**250**	*e*PN	**Pg**	**22 27 18.6**	**-1.0**
VANT				*e*SN	**Sg**	**22 27 38.2**	**+2.7**
VANT	**Van**	**1.23**	**250**	*e*Pn	**Pg**	**22 27 18.6**	**-1.0**
VANT				*e*Sn	**Sg**	**22 27 38.2**	**+2.7**
HKR	**Hakkari**	**1.50**	**212**	*e*PN	**Pn**	**22 27 23.0**	**-0.5**
HKR	**Hakkari**	**1.50**	**212**	*e*Pn	**Pn**	**22 27 23.0**	**-0.5**
HAKT	**HAKKARI**	**1.53**	**212**	*i* P	**Pn**	**22 27 23.6**	**-0.3**
HAKT				*i* S	**Sg**	**22 27 45.5**	**+0.3**
HAKT	**HAKKARI**	**1.53**	**212**	*i* P	**Pn**	**22 27 23.6**	**-0.3**
HAKT				*i* S	**Sg**	**22 27 45.5**	**+0.3**
AGRB	**Hanur-Agry**	**1.53**	**298**	*e*PN	**Pn**	**22 27 21.9**	**-2.1**
AGRB				*e*SN	**Sn**	**22 27 44.3**	**+0.1**
AGRB	**Hanur-Agry**	**1.53**	**298**	*e*Pn	**Pn**	**22 27 21.9**	**-2.1**
AGRB				*e*Sn	**Sn**	**22 27 44.3**	**+0.1**
TUTA	**Tutak**	**1.59**	**291**	*i* P	**Pn**	**22 27 26.0**	**+1.2**
TUTA				*i* S	**Sg**	**22 27 46.7**	**-0.4**
TUTA	**Tutak**	**1.59**	**291**	*i* P	**Pn**	**22 27 26.0**	**+1.2**
TUTA				*i* S	**Sg**	**22 27 46.7**	**-0.4**
CUKT	**Cukurca**	**1.84**	**209**	*e*PN	**Pn**	**22 27 28.9**	**+0.7**
CUKT	**Cukurca**	**1.84**	**209**	*e*Pn	**Pn**	**22 27 28.9**	**+0.7**
DGRG	**David-gareji**	**2.64**	**11**	P	**Pn**	**22 27 42.2**	**+3.0**
MTA	**Mtatsminda**	**2.83**	**1**	P	**Pn**	**22 27 40.0**	**-1.9**
TBLG	**Delisi**	**2.87**	**0**	P	**Pn**	**22 27 42.8**	**+0.4**

*CSEM **28** 22:26:59.4, 36°.40N×22°.90E, h19km, MD3.0, After ATH*
ATH 28 22:26:59.4, 36°.40N×22°.90E, h19km±7km, MD3.0/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.32**	**5**	*e*PB	Pg	22 27 06.5	+0.2
VLI				*e*SB	Sg	22 27 11.5	+0.4
VLI	**Veliai**	**0.32**	**5**	*e*Pb	Pg	22 27 06.5	+0.2
VLI				*e*Sb	Sg	22 27 11.5	+0.4
PYL	**PYLOS**	**1.05**	**298**	*e*PN	Pn	22 27 19.8	+0.7
PYL	**PYLOS**	**1.05**	**298**	P	Pb	22 27 20.1	+1.1
PYL	**PYLOS**	**1.05**	**298**	*e*Pn	Pn	22 27 19.8	+0.7
VLX	**Vlachokerasia**	**1.05**	**337**	*e*PN	Pn	22 27 19.3	+0.1
VLX				*e*SN	Sn	22 27 34.6	+1.3
VLX	**Vlachokerasia**	**1.05**	**337**	*e*Pn	Pn	22 27 19.3	+0.1
VLX				*e*Sn	Sn	22 27 34.6	+1.3
ITM	**Ithomi**	**1.10**	**315**	*e*PN	Pn	22 27 20.0	+0.2
ITM	**Ithomi**	**1.10**	**315**	P	Pn	22 27 20.5	+0.7
ITM	**Ithomi**	**1.10**	**315**	*e*Pn	Pn	22 27 20.0	+0.2
DID	**Didima**	**1.14**	**14**	*e*PN	Pn	22 27 21.3	+1.0
DID	**Didima**	**1.14**	**14**	*e*Pn	Pn	22 27 21.3	+1.0
KARN	**Karanos**	**1.29**	**140**	P	Pn	22 27 30.9	+8.5

*ISCJB **28** 22:32:26.7±0.5, 71°.27N±0°.06×3°.1W±0°.2, h10km, mb3.8/6, Error ellipse: s-maj=9.3km s-min=

	1.6nm,0.7s,mb3.6,baz=220,slow=9.9,SNR=12						
NVAR	**Mina Array Bea**	**81.15**	**43**	P	**P**	**22 48 39.0**	**+1.1**
COCO	**West Island**	**81.16**	**260**	P	**P**	**22 48 38.6**	**+0.1**
RC01	**Rabbit Creek A**	**84.47**	**13**	*e*P	**P**	**22 48 53.9**	**0.0**
	3.3nm,0.6s,mb4.0						
SML	**Sawmill**	**85.42**	**14**	*e*P	**P**	**22 48 58.3**	**-0.3**
	0.9nm,0.8s,mb3.4						
TRF	**Thorofare Moun**	**86.48**	**12**	*e*P	**P**	**22 49 02.8**	**-0.7**
	3.6nm,0.7s,mb4.1						
HVU	**Hansel Valley**	**86.53**	**43**	P	**P**	**22 49 05.5**	**+1.3**
MCK	**McKinley**	**87.00**	**13**	*e*P	**P**	**22 49 05.7**	**-0.2**
	4.4nm,0.9s,mb4.1						
TXAR	**Lajitas Array**	**87.22**	**57**	P	**P**	**22 49 08.8**	**+1.0**
	1.2nm,0.8s,mb3.6,baz=217,slow=6.5,SNR=15						
TXAR	**Lajitas Array**	**87.22**	**57**	P	**P**	**22 49 08.8**	**+1.0**
SNAA	**Sanae**	**88.03**	**179**	P	**P**	**22 49 09.9**	**-1.0**
	0.3nm,0.7s,mb3.1,baz=270,slow=12,SNR=3.4						
VNA3	**Neumayer Olymp**	**88.17**	**176**	*e*	**P**	**22 49 08.4**	**-3.1**
COLA	**College**	**88.24**	**12**	*e*P	**P**	**22 49 11.2**	**-0.5**
	4.1nm,0.5s,mb4.4						
ILAR	**Eielson Array**	**88.34**	**13**	P	**P**	**22 49 11.3**	**-0.9**
	1.6nm,0.9s,mb3.8,baz=215,slow=5.6,SNR=10						
VNA2	**Neumayer--Watz**	**88.61**	**177**	*e*	**P**	**22 49 11.0**	**-2.6**
MOOW	**Moose Ponds**	**88.82**	**42**	P	**P**	**22 49 14.8**	**-0.2**
PLCA	**Paso Flores**	**89.43**	**134**	P	**P**	**22 49 18.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**89.92**	**290**	P	**P**	**22 49 22.8**	**+2.1**
	1.1nm,0.4s,mb4.0,baz=123,slow=2.7,SNR=4.1						
TRQA	**Tornquist**	**96.52**	**135**	P	**P**	**22 49 51.4**	**+0.9**
KURK	**Kurchatov**	**113.85**	**317**	PKiKP	PKiKP	22 54 56.1	+0.4
TKM2	**Tokmak 2**	**115.35**	**309**	*e*PKPdf	PKPdf	22 54 57.4	-1.4
BRVK	**Borovoye**	**119.00**	**320**	PKPdf	PKPdf	22 55 05.4	-0.2
ARU	**Arti**	**125.08**	**325**	*e*PKPdf	PKPdf	22 55 16.6	-0.5
BOSA	**Boshof**	**126.18**	**206**	PKPdf	PKPdf	22 55 20.0	-0.2
ARCES	**ARCESS Array B**	**128.87**	**350**	PKP	PKPdf	22 55 23.0	-1.0
	2.0nm,0.7s,baz=335,slow=1.7,SNR=5.5						
HFS	**Hagfors**	**139.50**	**351**	PKhKP	PKPpre	22 55 36.8	
	0.8nm,0.4s,baz=77,slow=6.5,SNR=7.5						
AKASG	**Malin Array Be**	**142.91**	**331**	PKP	PKPdf	22 55 47.2	-3.3
	4.6nm,0.6s,baz=44,slow=4.3,SNR=15						
EKA	**Eskdalemuir Ar**	**145.01**	**5**	PKPbc	PKPbc	22 55 53.4	-1.3
	1.9nm,0.8s,baz=309,slow=3.5,SNR=5.7						
BRTR	**Keskin Array B**	**146.68**	**312**	PKPbc	PKPbc	22 55 59.8	-0.2
	1.7nm,0.6s,baz=146,slow=6.2,SNR=5.9						
KSP	**Ksiaz**	**147.62**	**343**	*e*P	PKPbc	22 56 02.5	+0.5
UPC	**Upice**	**148.00**	**343**	*e*P	PKPbc	22 56 03.3	+0.3
UPC	**Upice**	**148.00**	**343**⇑	*e*PKP	PKPbc	22 56 03.3	+0.3
CLL	**Collm**	**148.00**	**347**	*e*PKPbc	PKPbc	22 56 03.2	+0.2
CLL	**Collm**	**148.00**	**347**⇓	*i*P	PKPbc	22 56 03.1	+0.1
CLL	**Collm**	**148.00**	**347**⇓	*i*P	PKPbc	22 56 03.1	+0.1
CLL	**Collm**	**148.00**	**347**⇓	*i*PKPbc	PKPbc	22 56 03.1	+0.1
	comp=Z,9.0nm,0.9s						
DPC	**Dobruska-Polom**	**148.05**	**342**	*e*P	PKPbc	22 56 03.5	+0.3
DPC	**Dobruska-Polom**	**148.05**	**342**⇑	*e*PKP	PKPbc	22 56 03.5	+0.3
BRG	**Berggiesshubel**	**148.20**	**345**	*e*PKPbc	PKPbc	22 56 03.9	+0.4
BRG	**Berggiesshubel**	**148.20**	**345**	*i* P	PKPbc	22 56 03.7	+0.2
	comp=Z,5.5nm,0.7s						
BRG	**Berggiesshubel**	**148.20**	**345**	*i* P	PKPbc	22 56 03.7	+0.2
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FBE	**Freiberg**	**148.29**	**346**	*e*PKPbc	PKPbc	22 56 04.4	+0.7
PRU	**Pruhonice**	**148.87**	**344**	*e*P	PKPbc	22 56 06.0	+0.8
PRU	**Pruhonice**	**148.87**	**344**⇑	*e*PKP	PKPbc	22 56 06.0	+0.8
MOX	**Moxa**	**148.92**	**348**	*e*P	PKPbc	22 56 05.5	+0.2
MOX	**Moxa**	**148.92**	**348**	*e*PKPbc	PKPbc	22 56 05.5	+0.2
TANN	**Tannenbergstha**	**148.96**	**347**	*e*PKPbc	PKPbc	22 56 05.8	+0.4
WERD	**Werda**	**148.96**	**347**	*e*PKPbc	PKPbc	22 56 05.8	+0.4
GUNZ	**Gunzen**	**149.04**	**347**	*e*PKPbc	PKPbc	22 56 06.1	+0.5
NKC	**Novy Kostel**	**149.14**	**347**	*e*P	PKPbc	22 56 06.1	+0.3
NKC	**Novy Kostel**	**149.14**	**347**⇑	*e*PKP	PKPbc	22 56 06.1	+0.3
KHC	**Kasperske Hory**	**149.90**	**344**	*e*P	PKPbc	22 56 07.6	-0.1
KHC	**Kasperske Hory**	**149.90**	**344**⇑	*e*PKP	PKPbc	22 56 07.6	-0.1
KHC				*e*PKPAB	PKPab	22 56 16.0	+0.4
GERES	**GERESS Array B**	**150.13**	**344**	PKPbc	PKPbc	22 56 08.4	+0.2
	comp=Z,1.3nm,0.6s,baz=45,slow=2.1,SNR=15						

BJI ***28*** *22:43:46.2, 2.̊18N×96.̊02E, h32km, mB5.2/24, mb5.0/39, Ms4.8/26, Ms7 4.6/24*

IDC ***28*** *22:43:46.8±0.6, 2.̊59N×95.̊96E, h0km, mb4.4/18, mb1 4.5/20, mb1mx4.4/27, mbtmp4.4/20, ML4.6/2, MS3.8/2, Ms1 3.9/2, ms1mx3.2/35, Error ellipse: s-maj=23.8km s-min=11.9km az=49.0*

MOS ***28*** *22:43:50.2±0.9, 2.̊63N×96.̊03E, h33km, mb5.0/28, MS4.4/4, Error ellipse: s-maj=10.9km s-min=5.6km az=119.1*

ISCJB ***28*** *22:43:50.7±0.7, 2.̊59N±0.̊03×96.̊02E±0.̊04, h38km±6km, mb4.8/71, MS4.4/13, Error ellipse: s-maj=6.5km s-min=5.2km az=149.9*

NEIC ***28*** *22:43:53.6±0.8, 2.̊64N×96.̊07E, h49km±7km, mb4.9/38, Error ellipse: s-maj=7.1km s-min=4.0km az=49.0*

DJA ***28*** *22:43:54, 2.̊47N×96.̊14E, h30km, MLv4.7/8*

ISC 28 22:43:52.9±0.6**, 2.̊58N**±0.̊03×**96.̊00E**±0.̊04**, h41**km±6km**, h36**km±1.4km**:pP-P, n239, σ0.̊91**/245**, mb4.8**/71**, MS4.4**/13**, 18C-7D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.36**	**60**	P	**Pn**	**22 44 14.2**	**-1.1**
TPTI				S	**Sn**	**22 44 34.1**	**+2.0**
TSI	**Tuntungan**	**2.72**	**70**	P	**Pn**	**22 44 35.5**	**+1.5**
PSI	**Prapat**	**2.93**	**86**	Pn	**Pn**	**22 44 36.7**	**-0.2**
	22nm,0.3s,baz=285,slow=7.4,SNR=83						
PSI				Sn	**Sn**	**22 45 13.1**	**+2.3**
	16nm,0.3s,baz=289,slow=9.0,SNR=7.0						
PSI	**Prapat**	**2.93**	**86**	Pn	**Pn**	**22 44 36.7**	**-0.2**
PSI				Sn	**Sn**	**22 45 13.1**	**+2.3**
PSI	**Prapat**	**2.93**	**86**	P	**Pn**	**22 44 36.7**	**-0.2**
PSI						22 45 13.1	
MNSI	**Mandailing Nat**	**3.99**	**116**	P	**Pn**	**22 44 51.5**	**-0.1**
MNSI				S	**Sn**	**22 45 36.7**	**-0.4**
SISI	**Saibi**	**4.96**	**141**	P	**Pn**	**22 45 04.5**	**-0.4**
PPI	**Padang Panjang**	**5.33**	**124**	P	**Pn**	**22 45 10.3**	**+0.3**
	0.3nm2μm51nm,1.3s						
IPM	**Ipoh**	**5.36**	**69**	P	**Pn**	**22 45 10.4**	**0.0**
IPM	**Ipoh**	**5.36**	**69**	*e*Pn	**Pn**	**22 45 10.4**	**+0.1**
IPM				*e*Sn	**Sn**	**22 46 10.6**	**-0.2**
KULM	**Kulim**	**5.36**	**60**	P	**Pn**	**22 45 11.0**	**+0.6**
KULM	**Kulim**	**5.36**	**60**	*e*Pn	**Pn**	**22 45 10.1**	**-0.3**
KULM				Sn	**Sn**	**22 46 09.6**	**-1.4**
BKNI	**Bangkinang**	**5.51**	**114**	P	**Pn**	**22 45 12.1**	**-0.4**
	1.1nm2μm103nm,0.9s						
PDSI	**Padang**	**5.65**	**128**	P	**Pn**	**22 45 14.1**	**-0.3**
	0.5nm2μm84nm,0.7s						
FRIM	**Kepong**	**5.65**	**83**	P	**Pn**	**22 45 14.9**	**+0.4**
SDSI	**Sungai Dareh**	**6.45**	**123**	P	**Pn**	**22 45 25.1**	**-0.3**
SNG	**Songkhla**	**6.48**	**45**	P	**Pn**	**22 45 24.0**	**-1.7**
	180nm,0.9s						
KGM	**Kluang**	**7.33**	**94**	P	**Pn**	**22 45 37.8**	**+0.3**
KTGM	**Kuala Trenggan**	**7.62**	**69**	P	**Pn**	**22 45 41.5**	**+0.1**
MYKOM	**Kota Tinggi**	**7.88**	**96**	P	**Pn**	**22 45 46.1**	**+1.0**
KSI	**Kapahiang**	**9.04**	**133**	P	**Pn**	**22 46 00.7**	**-0.2**
	128nm,0.8s						
MDSI	**Maura Dua**	**10.77**	**131**	P	**Pn**	**22 46 22.9**	**-1.7**
	49nm,0.9s						
LWLI	**Liwa**	**11.04**	**133**	P	**Pn**	**22 46 27.9**	**-0.3**
KLSI		**11.32**	**130**	P	**Pn**	**22 46 30.9**	**-1.3**
KSM	**Kuching**	**14.34**	**94**	*e*Pn	**Pn**	**22 47 13.1**	**-0.3**
	18nm,1.0s						
UBT	**Ubonrachathani**	**15.41**	**35** ⇑	P	**Pn**	**22 47 32.0**	**+4.5**
PALK	**Pallekele**	**15.94**	**288**	*e*Pn	**Pn**	**22 47 34.6**	**+0.3**
	14nm,0.8s						
PALK	**Pallekele**	**15.94**	**288**	*e*P	**Pn**	**22 47 34.6**	**+0.3**
PALK				pmax	pmax		
	comp=Z,14nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.04**	**10**	Pn	**Pn**	**22 47 34.0**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=196,slow=11,SNR=58						
CMAR				LR	LR	22 53 36.0	
	comp=Z,328nm,20.9s,baz=194,slow=37						
CMAR	**Chiang Mai Arr**	**16.04**	**10**	P	**Pn**	**22 47 34.1**	**-1.5**
SBUM	**Sibu**	**16.20**	**90**	P	**Pn**	**22 47 38.3**	**+0.5**
KKM	**Kota Kinabalu**	**20.44**	**80**	P	**P**	**22 48 28.4**	**+1.4**
KKM	**Kota Kinabalu**	**20.44**	**80**	*e*P	**P**	**22 48 27.5**	**+0.4**
	comp=Z,32nm,0.9s						
TSM	**Tawau**	**21.90**	**85**	P	**P**	**22 48 44.5**	**+1.8**
MYLDM	**Lahad Datu**	**22.59**	**83**	P	**P**	**22 48 51.7**	**+1.6**
HYB	**Hyderabad**	**22.60**	**312**	*i* P	**P**	**22 48 51.0**	**+0.9**
SHL	**Shillong**	**23.19**	**351**⇓	*i*P	**P**	**22 48 53.0**	**-3.3**
	comp=Z,3.5nm,0.5s,mb4.0						
SHL				*e*S	**S**	**22 53 07.0**	**+1.9**
KMI	**Kunming**	**23.33**	**16** ⇓	P	**P**	**22 48 58.5**	**+0.8**
KMI				pP		22 49 09.5	
KMI				sP	sP	22 49 14.8	+1.6
KMI				PP		22 49 32.3	
KMI				S	**S**	**22 53 05.8**	**-1.5**
KMI				SS		22 53 54.0	
KMI				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.4						
KMI				pmax	pmax		
	comp=Z,250nm,4.2s						
KMI				LR	LR		
	comp=N,900nm,15.3s,MS4.4						
KMI				LR	LR		
	comp=E,750nm,19.9s,MS4.4						
KMI				LR	LR		
	comp=Z,800nm,18.4s,MS4.2						
DGAR	**Diego Garcia**	**25.51**	**247**	P	**P**	**22 49 18.6**	**+0.8**
DGAR	**Diego Garcia**	**25.51**	**247**	P	**P**	**22 49 18.6**	**+0.8**
ODAN	**Odare**	**25.51**	**342**	*e*P	**P**	**22 49 18.4**	**+0.8**
	comp=Z,59nm,0.8s,mb5.2						
GYA	**Guiyang**	**25.85**	**22**⇑	*i*P	**P**	**22 49 22.0**	**+1.3**
GYA				pP	pP	22 49 32.5	+0.7
GYA				sP	sP	22 49 38.5	+1.7
GYA				PP		22 50 04.5	
GYA				S	**S**	**22 53 47.8**	**+0.1**
GYA				sS	sS	22 54 04.3	-2.1
GYA				SS		22 54 53.0	
GYA				ScP	ScP	22 56 26.8	+0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,550nm,15.2s,MS4.3						
GYA				LR	LR		
	comp=E,460nm,16.0s,MS4.3						
GYA				LR	LR		
	comp=Z,560nm,15.9s,MS4.2						
TAPN	**Taplejung**	**25.88**	**343**	*e*P	**P**	**22 49 21.9**	**+1.0**
	comp=Z,64nm,0.9s,mb5.2						
PKI	**Pulchoki**	**26.84**	**339**	*e*P	**P**	**22 49 30.0**	**+0.4**
PKI	**Pulchoki**	**26.84**	**339**	*e*P	**P**	**22 49 30.1**	**+0.5**
PKI	**Pulchoki**	**26.84**	**339**	*e*P	**P**	**22 49 30.1**	**+0.5**
PKIN	**Phulchoki**	**26.84**	**339**	*e*P	**P**	**22 49 30.1**	**+0.5**
GUN	**Gumba**	**26.98**	**340**	*e*P	**P**	**22 49 31.7**	**+0.8**
	comp=Z,88nm,0.8s,mb5.3						
DMN	**Daman**	**26.98**	**338**	*e*P	**P**	**22 49 31.2**	**+0.3**
	comp=Z,40nm,0.8s,mb5.0						
KKN	**Kakani**	**27.08**	**339**	*e*P	**P**	**22 49 32.1**	**+0.3**
	comp=Z,79nm,0.9s,mb5.2						
KKN	**Kakani**	**27.08**	**339**	*e*P	**P**	**22 49 32.1**	**+0.3**
LSA	**Lhasa**	**27.36**	**351**	P	**P**	**22 49 34.5**	**+0.3**
LSA	**Lhasa**	**27.36**	**351**	*e*P	**P**	**22 49 35.0**	**+0.7**
	comp=Z,36nm,0.9s,mb4.9						
LSA	**Lhasa**	**27.36**	**351**	*e*P	**P**	**22 49 35.0**	**+0.8**
LSA				pmax	pmax		
	comp=Z,36nm,0.9s,mb4.9						
GKN	**Gorkha**	**27.51**	**338**	*e*P	**P**	**22 49 36.0**	**+0.4**
	comp=Z,103nm,0.9s,mb5.5						
KOLN	**Koldanda**	**27.71**	**336**	*e*P	**P**	**22 49 38.0**	**+0.6**
	comp=Z,47nm,0.7s,mb5.2						
DANN	**Dangsing**	**28.16**	**337**	*e*P	**P**	**22 49 41.8**	**+0.4**
CD2	**Chengdu**	**29.11**	**14**⇓	*i*P	**P**	**22 49 48.8**	**-1.1**
CD2				pP	pP	22 49 58.3	-2.8
CD2				sP	sP	22 50 02.3	-3.7
CD2				PP	PP	22 50 43.5	-13
CD2				S	**S**	**22 54 37.8**	**-1.3**
CD2				sS	sS	22 54 53.5	-4.3
CD2				SS	SS	22 56 09.0	-35
CD2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.2						
CD2				pmax	pmax		
	comp=Z,150nm,4.2s						
CD2				LR	LR		
	comp=N,2μm,17.8s						
CD2				LR	LR		
	comp=Z,2μm,16.6s,MS4.8						
ENH	**Enshi**	**30.36**	**24**	*e*P	**P**	**22 49 58.6**	**-2.3**
	comp=Z,27nm,1.0s,mb4.9						
MBWA	**Marble Bar**	**33.12**	**137**	*e*P	**P**	**22 50 25.4**	**+0.1**
LZH	**Lanzhou**	**34.12**	**11**	*e*P	**P**	**22 50 33.3**	**-0.5**
LZH				pP	pP	22 50 43.0	-2.1
LZH				sP	sP	22 50 46.0	-4.0
LZH				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
LZH				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH				LR	LR		
	comp=N,1μm,14.7s,MS4.9						
LZH				LR	LR		
	comp=E,560nm,12.5s,MS4.9						
LZH				LR	LR		
	comp=Z,1μm,12.8s,MS4.8						
FITZ	**Fitzroy Crossi**	**35.70**	**126**	P	**P**	**22 50 46.8**	**-0.9**
	comp=Z,4.6nm,0.8s,mb4.5,baz=269,slow=0.7,SNR=11						
FITZ				LR	LR	23 08 30.5	
	comp=Z,149nm,18.1s,MS3.8,baz=158,slow=42						
FITZ	**Fitzroy Crossi**	**35.70**	**126**	*e*P	**P**	**22 50 46.7**	**-1.0**
	comp=Z,9.6nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**35.70**	**126**	*e*P	**P**	**22 50 46.3**	**-1.4**
	comp=Z,4.5nm,0.8s,mb4.5						
GTA	**Gaotai**	**36.82**	**5** ⇑	P	**P**	**22 50 56.3**	**-0.7**
GTA				pP	pP	22 51 07.5	-0.8
GTA				sP	sP	22 51 11.0	-2.2
GTA				PcP	PcP	22 53 12.5	-5.9
GTA				S	**S**	**22 56 35.8**	**-2.7**
GTA				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.2						
GTA				LR	LR		
	comp=N,460nm,15.2s,MS4.5						
GTA				LR	LR		
	comp=E,340nm,13.8s,MS4.5						
GTA				LR	LR		
	comp=Z,510nm,14.2s,MS4.5						
KAKA	**Kakadu**	**39.24**	**114**	*e*P	**P**	**22 51 16.0**	**-1.7**
	comp=Z,3.7nm,0.5s,mb4.4						
KAKA	**Kakadu**	**39.24**	**114**	*e*P	**P**	**22 51 16.1**	**-1.6**
	comp=Z,26nm,0.6s,mb5.1						
KBL	**Kabul**	**40.51**	**325**	*e*P	**P**	**22 51 26.7**	**-1.3**
KBL	**Kabul**	**40.51**	**325**	*e*P	**P**	**22 51 26.7**	**-1.3**
HHC	**Hu-ho-hao-te**	**40.60**	**18** ⇑	P	**P**	**22 51 29.5**	**+0.8**
HHC				pP	pP	22 51 39.5	-0.6
HHC				sP	sP	22 51 43.5	-1.5
HHC				PP	PP	22 53 07.5	+4.7
HHC				PcP	PcP	22 53 31.0	+0.8
HHC				ScP	ScP	22 57 17.5	+0.9
HHC				S	**S**	**22 57 38.3**	**+2.8**
HHC				sS	sS	22 57 54.5	-0.1
HHC				SS	SS	23 00 35.5	-1.3
HHC				ScS	ScS	23 01 29.8	-1.2
HHC				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.9						
HHC				pmax	pmax		
	comp=Z,160nm,6.7s						
HHC				LR	LR		
	comp=N,520nm,15.8s,MS4.6						
HHC				LR	LR		
	comp=E,370nm,13.9s,MS4.6						
HHC				LR	LR		
	comp=Z,320nm,14.6s,MS4.3						
NWAO	**Narrogin (SRO)**	**40.63**	**152**	P	**P**	**22 51 29.0**	**+0.1**
	comp=Z,3.4nm,0.8s,mb4.0,baz=323,slow=15,SNR=2.3						
NWAO	**Narrogin (SRO)**	**40.63**	**152**	P	**P**	**22 51 29.0**	**+0.1**
NWAO	**Narrogin (SRO)**	**40.63**	**152**	P	**P**	**22 51 29.0**	**0.0**
BJT	**Baijiatuau**	**41.51**	**24**	*e*P	**P**	**22 51 35.8**	**-0.3**
	comp=Z,84nm,0.8s,mb5.4						
BJT	**Baijiatuau**	**41.51**	**24**	*e*P	**P**	**22 51 35.8**	**-0.3**
BJI	**Beijing**	**41.53**	**24**	P	**P**	**22 51 36.5**	**+0.2**
BJI				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.5						
WMQ	**Urumqi**	**41.72**	**351**	P	**P**	**22 51 38.0**	**+0.2**
WMQ				pP	pP	22 51 48.0	-1.3
WMQ				sP	sP	22 51 52.0	-2.2
WMQ				PP	PP	22 53 18.0	+3.1
WMQ				ScP	ScP	22 57 22.0	+1.0
WMQ				S	**S**	**22 57 52.0**	**0.0**
WMQ				sS	sS	22 58 09.0	-2.1
WMQ				SS	SS	23 00 52.0	-6.8
WMQ				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.7						
WMQ				pmax	pmax		
	comp=Z,1μm,4.0s						
WMQ				LR	LR		
	comp=N,460nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=E,590nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,580nm,15.0s,MS4.6						
KZA	**Kyzart**	**43.50**	**337**	*e*P	**P**	**22 51 52.8**	**+0.5**
	comp=Z,11nm,1.2s,mb4.5						
KZA	**Kyzart**	**43.50**	**337**	*e*P	**P**	**22 51 52.8**	**+0.5**
KZA				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
WRA	**Warramunga Arr**	**43.78**	**122**	P	**P**	**22 51 54.3**	**-0.6**
	comp=Z,4.7nm,0.8s,mb4.3,baz=300,slow=9.0,SNR=19						
WRA	**Warramunga Arr**	**43.78**	**122**	P	**P**	**22 51 54.3**	**-0.6**
TKM2	**Tokmak 2**	**44.10**	**338**	P	**P**	**22 51 57.8**	**+0.8**
	SNR=5.8						
TKM2	**Tokmak 2**	**44.10**	**338**	*e*P	**P**	**22 51 58.1**	**+1.1**
	comp=Z,14nm,1.3s,mb4.5						
TKM2	**Tokmak 2**	**44.10**	**338**	*e*P	**P**	**22 51 58.1**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
KBK	**Karagaybulak**	**44.11**	**338**	P	**P**	**22 51 59.0**	**+1.8**
	SNR=8.4						
KBK	**Karagaybulak**	**44.11**	**338**	*e*P	**P**	**22 51 58.9**	**+1.7**
	comp=Z,16nm,0.9s,mb4.8						
KBK	**Karagaybulak**	**44.11**	**338**	*e*P	**P**	**22 51 58.9**	**+1.7**
KBK				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
AML	**Almayashu**	**44.16**	**336**	P	**P**	**22 51 58.7**	**+1.1**
	SNR=12						
AML	**Almayashu**	**44.16**	**336**	*e*P	**P**	**22 51 58.6**	**+1.1**
	comp=Z,18nm,1.3s,mb4.7						
AML	**Almayashu**	**44.16**	**336**	*e*P	**P**	**22 51 58.7**	**+1.1**
AML				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.7						
AAK	**Ala-Archa**	**44.27**	**337**	P	**P**	**22 51 59.8**	**+1.4**
	comp=Z,2.1nm,0.6s,mb4.0,baz=108,slow=6.4,SNR=9.6						
AAK	**Ala-Archa**	**44.27**	**337**	*e*P	**P**	**22 51 58.2**	**-0.2**
	comp=Z,6.2nm,0.9s,mb4.3						
AAK	**Ala-Archa**	**44.27**	**337**⇑	*e*P	**P**	**22 51 59.8**	**+1.4**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
AAK				MLR	MLR		
	comp=Z,98nm,17.0s,MS3.8						
EKS2	**Erkin-Say**	**44.57**	**337**	P	**P**	**22 52 02.0**	**+1.2**
	SNR=6.6						
EKS2	**Erkin-Say**	**44.57**	**337**	*e*P	**P**	**22 52 02.3**	**+1.4**
	comp=Z,4.5nm,0.8s,mb4.3						
EKS2	**Erkin-Say**	**44.57**	**337**	*e*P	**P**	**22 52 02.3**	**+1.4**
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
USP	**Ospenovka**	**44.80**	**338**	P	**P**	**22 52 03.2**	**+0.5**
	SNR=12						
FORT	**Forrest**	**45.10**	**140**	*e*P	**P**	**22 52 06.3**	**+1.1**
	comp=Z,9.5nm,0.6s,mb4.8						
FORT	**Forrest**	**45.10**	**140**	*e*P	**P**	**22 52 06.4**	**+1.2**
	comp=Z,80nm,1.8s,mb5.2						
ASAR	**Alice Springs**	**45.18**	**127**	P	**P**	**22 52 05.9**	**-0.1**
	comp=Z,2.5nm,0.8s,mb4.1,baz=300,slow=7.9,SNR=24						
ASAR	**Alice Springs**	**45.18**	**127**	P	**P**	**22 52 05.9**	**-0.1**
KSRS	**Korea Array**	**45.42**	**36**	P	**P**	**22 52 06.7**	**-1.1**
	comp=Z,6.3nm,0.8s,mb4.5,baz=229,slow=9.3,SNR=20						
MK31	**Makanchi Array**	**45.63**	**347**	*e*P	**P**	**22 52 08.8**	**-0.4**
MK31	**Makanchi Array**	**45.63**	**347**	*e*P	**P**	**22 52 08.8**	**-0.4**
MKAR	**Makanchi Array**	**45.63**	**347**	P	**P**	**22 52 08.9**	**-0.3**
	comp=Z,12nm,0.6s,mb5.0,baz=161,slow=8.0,SNR=133						
MKAR	**Makanchi Array**	**45.63**	**347**	P	**P**	**22 52 08.9**	**-0.3**
SONM	**Songino Array**	**45.97**	**10**	P	**P**	**22 52 11.7**	**-0.1**
	comp=Z,13nm,0.6s,mb5.0,baz=190,slow=9.3,SNR=116						
SONM				PcP	PcP	22 53 49.0	+0.9
	comp=Z,3.1nm,0.8s,baz=199,slow=3.0,SNR=6.7						
SONM	**Songino Array**	**45.97**	**10**	P	**P**	**22 52 11.7**	**-0.1**
SONM						22 53 49.0	
ULN	**Ulaanbaatar**	**46.11**	**10**	*e*P	**P**	**22 52 12.6**	**-0.4**
	comp=Z,7.9nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**46.11**	**10**	*e*P	**P**	**22 52 12.6**	**-0.3**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
KKAR	**Karatay Array**	**46.30**	**334**	*e*P	**P**	**22 52 14.8**	**+0.2**
KKAR	**Karatay Array**	**46.30**	**334**	*e*P	**P**	**22 52 14.8**	**+0.3**
ZAK	**Zakamensk**	**48.03**	**6**	*e*P	**P**	**22 52 23.7**	**-4.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
TLY	**Talaya**	**49.35**	**6**	*e*P	**P**	**22 52 38.1**	**+0.1**
TLY	**Talaya**	**49.35**	**6**	*e*P	**P**	**22 52 38.1**	**+0.1**
KURK	**Kurchatov**	**50.16**	**346**	*e*P	**P**	**22 52 43.7**	**-0.5**
	comp=Z,8.7nm,0.7s,mb4.9						
KURK	**Kurchatov**	**50.16**	**346**⇓	*e*P	**P**	**22 52 44.4**	**+0.2**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KURK				MLR	MLR		
	comp=Z,193nm,16.0s,MS4.2						
MDJ	**Mudanjiang**	**51.27**	**30**	*e*P	**P**	**22 52 52.6**	**-0.1**
MJAR	**Matsushiro Arr**	**51.50**	**44**	PcP	PcP	22 54 07.8	-0.6
	comp=Z,1.7nm,1.0s,baz=221,slow=4.8,SNR=4.8						
ZAA0	**Zalesovo Array**	**52.02**	**352**	*e*P	**P**	**22 52 57.6**	**-0.5**
ZALV	**Zalesovo Beam**	**52.02**	**352**	P	**P**	**22 52 57.7**	**-0.4**
	comp=Z,26nm,0.7s,mb5.3,baz=181,slow=6.4,SNR=106						
ZALV	**Zalesovo Beam**	**52.02**	**352**	P	**P**	**22 52 57.7**	**-0.4**
ZALV	**Zalesovo Beam**	**52.02**	**352**	P	**P**	**22 52 57.7**	**-0.4**
NVS	**Novosibirsk**	**53.12**	**351**	*e*P	**P**	**22 53 03.4**	**-2.8**
NVS				*e*S	**S**	**23 00 25.4**	**-8.3**
NVS				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
NVS				pmax	pmax		
	comp=N,7.0nm,0.8s						
NVS				smax			
	comp=E,23nm,1.9s						
NVS				smax			
	comp=N,21nm,2.4s						
CTA	**Charters Tower**	**54.19**	**117**	*e*P	**P**	**22 53 15.0**	**+0.3**
	comp=N,7.7nm,0.9s,mb4.6						
CTAO	**Charters Tower**	**54.19**	**117**	*e*P	**P**	**22 53 15.2**	**+0.5**
	comp=N,13nm,0.9s,mb4.9						
CTAO	**Charters Tower**	**54.19**	**117**	*e*P	**P**	**22 53 15.2**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
BRVK	**Borovoye**	**54.62**	**341**	*e*P	**P**	**22 53 16.5**	**-0.8**
	comp=Z,7.5nm,0.9s,mb4.7						
BRVK	**Borovoye**	**54.62**	**341**	*e*P	**P**	**22 53 16.5**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**55.16**	**132**	P	**P**	**22 53 22.2**	**+0.6**
	comp=Z,2.3nm,0.5s,mb4.5,baz=316,slow=4.6,SNR=8.2						
STKA	**Stephens Creek**	**55.16**	**132**	*e*P	**P**	**22 53 21.7**	**+0.2**
	comp=Z,4.3nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**55.16**	**132**	*e*P	**P**	**22 53 22.0**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**55.16**	**132**	*e*P	**P**	**22 53 22.0**	**+0.5**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ABKAR	**Akbulak array**	**55.74**	**332**	*e*P	**P**	**22 53 25.1**	**-0.3**
BOD	**Bodaibo**	**56.89**	**11**	*e*P	**P**	**22 53 32.9**	**-0.5**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
YUK	**Yuzh-Kuril'sk**	**60.30**	**39**	P	**P**	**22 54 03.7**	**+6.3**
YUK				*e*S	**S**	**23 02 20.3**	**+11**
YUK				smax			
	comp=N,1μm,2.9s						
YUK				smax			
	comp=E,612nm,2.9s						
YUK				MLR	MLR		
	comp=E,130nm,17.5s						
YUK				MLR	MLR		
	comp=Z,187nm,17.5s,MS4.3						
SVE	**Sverdlovsk**	**60.97**	**339**⇑	*e*P	**P**	**22 54 01.5**	**-0.2**
SVE				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.3						
ARU	**Arti**	**61.45**	**337**	*e*P	**P**	**22 54 04.2**	**-0.9**
	comp=Z,15nm,1.0s,mb5.1						
ARU				*e*PcP	PcP	22 54 47.3	+0.6
ARU	**Arti**	**61.45**	**337**	*e*P	**P**	**22 54 04.2**	**-0.8**
ARU				*e*		22 54 47.3	
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.1						
KIV	**Kislovodsk**	**62.49**	**319**	P	**P**	**22 54 11.8**	**-0.4**
KIV	**Kislovodsk**	**62.49**	**319**	*e*P	**P**	**22 54 11.9**	**-0.3**
KIV				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0						
MALT	**Malatya**	**63.32**	**312**	*e*P	**P**	**22 54 17.9**	**0.0**
MALT	**Malatya**	**63.32**	**312**	*e*P	**P**	**22 54 17.9**	**0.0**
SOKR	**Solikamsk**	**64.37**	**339**	*e*P	**P**	**22 54 23.1**	**-1.2**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
YAK	**Yakutsk**	**64.44**	**17**	*e*P	**P**	**22 54 23.8**	**-1.0**
	comp=Z,55nm,0.7s,mb5.7						
YAK	**Yakutsk**	**64.44**	**17**	*e*P	**P**	**22 54 21.3**	**-3.5**
YAK				pmax	pmax		
	comp=Z,67nm,1.3s,mb5.5						
YAK				pmax	pmax		
	comp=E,15nm,1.4s						
YAK				pmax	pmax		

comp=N,13nm,1.1s
HNR Honiara 64.81 102 P **P 22 54 28.6 +0.5**
HNR Honiara 64.81 102 P **P 22 54 28.6 +0.5**
ANN Anapa 66.28 318 *eP* Px 22 54 54.4
VRHR Novokhopersk 66.32 326 *eP* **P 22 54 35.9 -1.2**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
BRTR Keskin Array B 67.30 312 P **P 22 54 42.9 -0.7**
comp=Z,0.9nm,0.7s,mb3.9,baz=132,slow=5.2,SNR=6.6
BRTR Keskin Array B 67.30 312 P **P 22 54 42.9 -0.7**
VORD Divnogorie 67.58 325 *eP* **P 22 54 44.2 -0.9**
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.4s
VSR Storozhevoye 67.76 325 *eP* **P 22 54 44.6 -1.7**
VSR pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
VSR pmax pmax
comp=N,9.0nm,0.8s
VSR pmax pmax
comp=E,7.0nm,0.9s
CASY Casey 69.49 174 P **P 22 54 57.6 +0.9**
OBN Obninsk 70.82 328⇑ *eP* **P 22 55 04.7 -0.4**
OBN *e* pP 22 55 14.1 -3.3
OBN *e* 22 55 26.6
OBN *e*SS SS 23 08 49.3 -0.8
OBN pmax pmax
comp=Z,18nm,1.7s,mb4.7
OBN MLR MLR
comp=Z,400nm,16.0s,MS4.8
TIXI Tiksi 72.05 10 *eP* **P 22 55 10.9 -1.3**
comp=Z,12nm,0.9s,mb4.8
TIXI Tiksi 72.05 10 *d iP* **P 22 55 11.2 -1.0**
TIXI pmax pmax
comp=Z,11nm,0.8s,mb4.8
TIRR Tirgusor 72.30 316 *eP* **P 22 55 14.5 +0.2**
TIRR Tirgusor 72.30 316 *eP* **P 22 55 14.5 +0.2**
SEY Seymchan 72.97 23⇑ *eP* **P 22 55 17.3 -0.6**
AKASG Malin Array Be 73.44 322 P **P 22 55 19.5 -1.4**
comp=Z,3.4nm,0.8s,mb4.4,baz=85,slow=5.2,SNR=9.1
AKASG Malin Array Be 73.44 322 P **P 22 55 19.5 -1.4**
VRI Vrincioaia 73.80 317 ⇑P **P 22 55 24.0 +0.9**
VRI Vrincioaia 73.80 317 ⇑*iP* **P 22 55 24.0 +0.9**
PLOR Plostina 73.85 317 ⇑P **P 22 55 24.4 +1.0**
PLOR Plostina 73.85 317 ⇑*iP* **P 22 55 24.4 +1.0**
MLR Muntele Rosu 74.25 317 ⇓P **P 22 55 25.0 -0.8**
MLR Muntele Rosu 74.25 317 ⇓*iP* **P 22 55 25.0 -0.8**
BURAR Bucovina Array 75.20 319 ⇑P **P 22 55 26.5 -4.7**
BURAR Bucovina Array 75.20 319 ⇑*iP* **P 22 55 26.5 -4.7**
BUR08 Bucovina Ar. S 75.22 319 *eP* **P 22 55 31.8 +0.5**
KWP Kalwaria Pacla 77.25 320 ⇑P **P 22 55 43.7 +0.9**
KWP Kalwaria Pacla 77.25 320 ⇑*iP* **P 22 55 43.7 +0.9**
KOLS Kolonicke sedl 77.40 320 *eP* **P 22 55 44.3 +0.6**
KOLS Kolonicke sedl 77.40 320 *eP* **P 22 55 44.3 +0.6**
KOLS Kolonicke sedl 77.40 320 *eP* **P 22 55 44.3 +0.6**
SUW Suwalki 77.86 325 *eP* **P 22 55 46.1 0.0**
SUW Suwalki 77.86 325 *eP* **P 22 55 45.9 -0.2**
SUW Suwalki 77.86 325 *eP* **P 22 55 46.1 0.0**
CRVS Cervenica-Dubn 77.92 319 *eP* **P 22 55 46.9 +0.3**
CRVS Cervenica-Dubn 77.92 319 *eP* **P 22 55 46.9 +0.3**
CRVS Cervenica-Dubn 77.92 319 *eP* **P 22 55 46.9 +0.3**
FINES FINESS Array B 78.23 333 P **P 22 55 47.9 -0.1**
comp=Z,4.1nm,0.7s,mb4.5,baz=103,slow=6.4,SNR=9.2
FINES FINESS Array B 78.23 333 P **P 22 55 47.9 -0.1**
PSZ Piszkesteto 78.79 318 *eP* **P 22 55 51.9 +0.5**
PSZ Piszkesteto 78.79 318 *eP* **P 22 55 51.9 +0.5**
SUR Sutherland 78.92 236 *eP* **P 22 55 54.2 +1.8**
PKSM Moragy 79.40 316 ⇑P **P 22 55 54.6 -0.2**
PKSM Moragy 79.40 316 ⇑*iP* **P 22 55 54.6 -0.2**
BILL Bilibino 80.31 21 *eP* **P 22 56 01.7 +2.4**
BILL *e* 22 56 07.4
BILL *e* 22 59 04.9
BILL pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BILL MLR MLR
comp=Z,200nm,20.0s,MS4.5
ARCES ARCESS Array B 80.84 340 P **P 22 56 01.9 -0.1**
comp=Z,1.3nm,0.5s,mb4.2,baz=85,slow=5.0,SNR=9.7
ARCES ARCESS Array B 80.84 340 P **P 22 56 02.0 -0.1**
GERES GERESS Array B 82.99 319 P **P 22 56 14.7 +0.9**
comp=Z,2.0nm,0.8s,mb4.2,baz=98,slow=5.5,SNR=14
GERES GERESS Array B 82.99 319 P **P 22 56 14.7 +0.9**
GERES GERESS Array B 82.99 319 P **P 22 56 14.7 +0.9**
HFS Hagfors 83.94 330 P **P 22 56 18.4 0.0**
comp=Z,2.7nm,0.8s,mb4.4,baz=172,slow=4.3,SNR=5.0
HFS Hagfors 83.94 330 P **P 22 56 18.4 0.0**
FUORN Ofenpass-Fuorn 85.21 316 *eP* **P 22 56 26.3 +1.2**
comp=Z,7.5nm,1.1s,mb4.7
KEST Kesra 85.79 305 P **P 22 56 28.7 +0.4**
comp=Z,0.9nm,0.7s,mb4.1,baz=352,slow=3.7,SNR=5.2
KEST Kesra 85.79 305 P **P 22 56 28.7 +0.4**
LPG La Plagne 87.65 315 *eP* **P 22 56 36.8 -0.4**
comp=Z,7.9nm,0.9s,mb4.7
LPG La Plagne 87.65 315 *eP* **P 22 56 36.8 -0.4**
comp=Z,4.0nm,0.9s,mb4.7
LPG La Plagne 87.65 315 *eP* **P 22 56 36.8 -0.4**
LPG pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
LPL La Plagne 87.66 315 *eP* **P 22 56 36.9 -0.3**
comp=Z,9.2nm,0.9s,mb4.7
LPL La Plagne 87.66 315 *eP* **P 22 56 36.9 -0.3**
comp=Z,4.6nm,0.9s,mb4.7
LPL La Plagne 87.66 315 *eP* **P 22 56 36.9 -0.3**
LPL pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
BNI Bardonecchia 87.71 315 *eP* **P 22 56 37.2 -0.3**
BNI Bardonecchia 87.71 315 *eP* **P 22 56 37.2 -0.3**
HAU Haudompre 87.87 318 *eP* **P 22 56 37.1 -1.0**
comp=Z,5.8nm,0.7s,mb4.6
HAU Haudompre 87.87 318 *eP* **P 22 56 37.1 -1.0**
comp=Z,2.9nm,0.7s,mb4.6
HAU Haudompre 87.87 318 *eP* **P 22 56 37.1 -1.0**
HAU pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
CABF La Chapelle 88.08 316 *eP* **P 22 56 38.8 -0.4**
CABF La Chapelle 88.08 316 *eP* **P 22 56 38.8 -0.4**
SFTF Sexfontaines 88.74 318 *eP* **P 22 56 41.5 -0.7**
comp=Z,11nm,0.8s,mb4.9
SFTF Sexfontaines 88.74 318 *eP* **P 22 56 41.5 -0.7**
comp=Z,11nm,0.8s,mb5.2
BAIF Baives 89.19 320 *eP* **P 22 56 44.2 -0.1**
comp=Z,6.7nm,0.8s,mb4.7
BAIF Baives 89.19 320 *eP* **P 22 56 44.2 -0.1**
comp=Z,3.3nm,0.8s,mb4.7
BAIF Baives 89.19 320 *eP* **P 22 56 44.2 -0.1**
BAIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
LOR Lormes 89.58 317 *eP* **P 22 56 45.6 -0.6**
LOR Lormes 89.58 317 *eP* **P 22 56 45.6 -0.6**
SMF Signal de Mont 89.63 316 *eP* **P 22 56 45.7 -0.8**
comp=Z,8.5nm,0.9s,mb4.8
SMF Signal de Mont 89.63 316 *eP* **P 22 56 45.7 -0.8**
comp=Z,4.3nm,0.9s,mb4.8
SMF Signal de Mont 89.63 316 *eP* **P 22 56 45.7 -0.8**
SMF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
LDF La Druitiere 92.14 319 *eP* **P 22 56 57.6 -0.5**
comp=Z,3.5nm,0.9s,mb4.4
LDF La Druitiere 92.14 319 *eP* **P 22 56 57.6 -0.5**
comp=Z,1.8nm,0.9s,mb4.4
LDF La Druitiere 92.14 319 *eP* **P 22 56 57.6 -0.5**
LDF pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
EKA Eskdalemuir Ar 93.11 326 P **P 22 57 02.7 +0.4**
comp=Z,1.0nm,0.7s,mb4.3,baz=81,slow=4.4,SNR=3.3
EKA Eskdalemuir Ar 93.11 326 P **P 22 57 02.7 +0.3**
BPAW Bear Paw Mtn. 97.55 24 *eP* **P 22 57 23.2 +0.7**
comp=Z,15nm,1.6s,mb5.3
PMR Palmer 99.30 26 P **P 22 57 30.2 -0.1**
PMR Palmer 99.30 26 P **P 22 57 30.2 -0.2**
NVAR Mina Array Bea 128.35 34 PKP PKPdf 23 02 56.4 +0.9
comp=Z,0.2nm,0.3s,baz=266,slow=3.5,SNR=4.2
TXAR Lajitas Array 143.09 29 PKhKP PKPpre 23 03 20.6
comp=Z,0.9nm,0.9s,baz=280,slow=1.0,SNR=8.2
TXAR Lajitas Array 143.09 29 PKIKP PKPdf 23 03 20.6 -2.5
JCT Junction City 143.83 23 *e*PKPdf PKPdf 23 03 22.1 -2.3
JCT Junction City 143.83 23 *e*PKIKP PKPdf 23 03 22.1 -2.3

CPUP Villa Florida 145.18 225 PKPbc PKPbc 23 03 27.1 +0.7
comp=Z,0.5nm,0.3s,baz=64,slow=1.4,SNR=5.0
CPUP Villa Florida 145.18 225 PKIKP PKPdf 23 03 27.1 +0.3

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*IDC **28** 22:46:02.2±0.9, 2°.50N×95°.90E, h0km, mb4.2/11, mb1 4.3/13, mb1mx4.1/24, mbtmp4.2/13, ML4.1/2, Error ellipse: s-maj=31.2km s-min=14.8km az=49.0*
*BJI **28** 22:46:04.7, 2°.68N×96°.07E, h18km, mb4.8/3, Ms4.6/1, Ms7 4.5/1*
*ISCJB **28** 22:46:06.4±1.7, 2°.52N±0°.08×95°.94E±0°.07, h45km±14km, mb4.3/18, Error ellipse: s-maj=15.4km s-min=8.7km az=37.6*
*NEIC **28** 22:46:07.1±0.3, 2°.50N×95°.93E, h35km, mb4.3/9, Error ellipse: s-maj=8.1km s-min=4.8km az=214.0*
ISC 28 22:46:07.7±1.5, 2°.51N±0°.08×95°.93E±0°.07, h39km±12km, n45, σ0=64/46, mb4.3/18, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.01**	**84**	Pn	**Pn**	**22 46 53.0**	**+0.1**
	4.0nm,0.3s,baz=275,slow=12,SNR=11						
PSI				Sn	**Sn**	**22 47 28.8**	**+1.2**
	10nm,0.3s,baz=6.0,slow=19,SNR=3.7						
PSI	**Prapat**	**3.01**	**84**	Pn	**Pn**	**22 46 53.0**	**+0.1**
PSI				Sn	**Sn**	**22 47 28.8**	**+1.2**
KULM	**Kulim**	**5.46**	**59**	*e*Pn	**Pn**	**22 47 25.9**	**-0.7**
KSM	**Kuching**	**14.41**	**94**	Pn	**Pn**	**22 49 28.9**	**-0.3**
PALK	**Pallekele**	**15.89**	**288**	*e*Pn	**Pn**	**22 49 49.0**	**+0.3**
	19nm,1.1s						
CMAR	**Chiang Mai Arr**	**16.13**	**10**	Pn	**Pn**	**22 49 51.0**	**-0.7**
	0.8nm,0.3s,baz=196,slow=11,SNR=7.2						
KKM	**Kota Kinabalu**	**20.53**	**79**	*e*P	**P**	**22 50 43.0**	**+0.1**
	7.2nm,0.6s						
QIZ	**Qiongzhong**	**21.33**	**39**	P	**P**	**22 50 51.6**	**0.0**
LSA	**Lhasa**	**27.42**	**351**	P	**P**	**22 51 51.3**	**+1.4**
LSA	**Lhasa**	**27.42**	**351**	*e*P	**P**	**22 51 50.3**	**+0.4**
ENH	**Enshi**	**30.46**	**24**	P	**P**	**22 52 16.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**35.72**	**126**	P	**P**	**22 53 02.4**	**-0.5**
	2.4nm,0.8s,mb4.2,baz=270,slow=5.1,SNR=3.8						
FITZ	**Fitzroy Crossi**	**35.72**	**126**	*e*P	**P**	**22 53 02.0**	**-0.9**
KBL	**Kabul**	**40.53**	**325**	*e*P	**P**	**22 53 41.1**	**-2.1**
BJT	**Baijiatuau**	**41.61**	**24**	*e*P	**P**	**22 53 52.4**	**+0.4**
	10nm,0.3s,mb4.9						
BJI	**Beijing**	**41.63**	**24**	P	**P**	**22 53 52.5**	**+0.3**
WRA	**Warramunga Arr**	**43.80**	**122**	P	**P**	**22 54 09.6**	**-0.5**
	3.5nm,1.1s,mb4.0,baz=299,slow=9.4,SNR=5.6						
TKM2	**Tokmak 2**	**44.14**	**338**	*e*P	**P**	**22 54 12.3**	**-0.2**
	2.5nm,0.5s,mb4.2						
AML	**Almayashu**	**44.20**	**336**	*e*P	**P**	**22 54 13.7**	**+0.8**
	4.7nm,0.9s,mb4.2						
AAK	**Ala-Archa**	**44.31**	**337**	P	**P**	**22 54 14.5**	**+0.7**
ASAR	**Alice Springs**	**45.19**	**127**	P	**P**	**22 54 21.8**	**+0.6**
	0.7nm,0.7s,mb3.6,baz=300,slow=8.5,SNR=4.6						
KSRS	**Korea Array**	**45.52**	**36**	P	**P**	**22 54 22.9**	**-0.7**
	2.6nm,0.8s,mb4.2,baz=221,slow=9.7,SNR=6.9						
MK31	**Makanchi Array**	**45.68**	**347**	*e*P	**P**	**22 54 24.6**	**0.0**
MKAR	**Makanchi Array**	**45.68**	**347**	P	**P**	**22 54 25.0**	**+0.4**
	4.4nm,0.6s,mb4.6,baz=156,slow=9.2,SNR=8.5						
MKAR	**Makanchi Array**	**45.68**	**347**	P	**P**	**22 54 25.0**	**+0.4**
SONM	**Songino Array**	**46.05**	**10**	P	**P**	**22 54 27.8**	**+0.3**
	5.0nm,0.6s,mb4.6,baz=192,slow=9.1,SNR=11						
SONM				PcP	PcP	22 56 04.9	+1.4
	1.4nm,0.7s,baz=193,slow=3.9,SNR=3.9						
ULN	**Ulaanbaatar**	**46.20**	**10**	*e*P	**P**	**22 54 28.6**	**-0.1**
	2.3nm,0.5s,mb4.4						
KKAR	**Karaty Array**	**46.33**	**334**	*e*P	**P**	**22 54 29.9**	**+0.1**
	2.2nm,0.8s,mb4.1						
TLY	**Talaya**	**49.43**	**6**	*e*P	**P**	**22 54 54.3**	**+0.7**
MDJ	**Mudanjiang**	**51.37**	**30**	P	**P**	**22 55 08.2**	**-0.3**
ZALV	**Zalesovo Beam**	**52.08**	**352**	P	**P**	**22 55 13.9**	**+0.3**
	8.3nm,0.7s,mb4.8,baz=178,slow=6.9,SNR=11						
PMG	**Port Moresby**	**52.39**	**104**	P	**P**	**22 55 16.3**	**-0.3**
BRVK	**Borovoye**	**54.67**	**341**	*e*P	**P**	**22 55 32.2**	**-0.4**
	2.2nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**55.17**	**132**	P	**P**	**22 55 37.6**	**+1.0**
	1.6nm,0.8s,mb4.2,baz=333,slow=9.0,SNR=2.8						
STKA	**Stephens Creek**	**55.17**	**132**	P	**P**	**22 55 36.4**	**-0.2**
YAK	**Yakutsk**	**64.54**	**17**	P	**P**	**22 56 39.6**	**-0.9**
HNR	**Honiara**	**64.86**	**102**	*e*P	**P**	**22 56 43.2**	**-0.3**
OBN	**Obninsk**	**70.85**	**328**	P	**P**	**22 57 20.0**	**-0.4**
TIXI	**Tiksi**	**72.14**	**10**	*e*P	**P**	**22 57 27.7**	**-0.2**
	5.1nm,0.3s,mb4.9						
AKASG	**Malin Array Be**	**73.46**	**322**	P	**P**	**22 57 35.8**	**-0.3**
	0.8nm,0.6s,mb3.8,baz=70,slow=8.0,SNR=4.0						
MCQ	**Macquarie Isla**	**76.76**	**148**	*e*P	**P**	**22 57 54.9**	**-0.1**
FINES	**FINESS Array B**	**78.26**	**333**	P	**P**	**22 58 03.6**	**+0.3**
	3.5nm,0.9s,mb4.3,baz=111,slow=7.6,SNR=3.3						
GERES	**GERESS Array B**	**83.00**	**319**	P	**P**	**22 58 30.8**	**+1.9**
	0.9nm,0.9s,mb3.8,baz=93,slow=5.3,SNR=3.6						
UNV	**Unalaska Valle**	**92.46**	**36**	P	**P**	**22 59 14.7**	**+0.1**
TXAR	**Lajitas Array**	**143.19**	**29**	PKP	PKPdf	23 05 37.1	-1.3
	0.3nm,0.7s,baz=79,slow=4.7,SNR=3.3						

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*ISCJB **28** 22:57:36.1±0.3, 71°.45N±0°.03×3°.9W±0°.1, h10km, mb4.0/29, Error ellipse: s-maj=6.8km s-min=4.4km az=17.5*
*CSEM **28** 22:57:36.4±0.1, 71°.39N×3°.95W, h2km, mb4.3/19, Error ellipse: s-maj=5.4km s-min=3.6km az=102.0*
*IDC **28** 22:57:36.4±0.9, 71°.35N×4°.10W, h0km, mb3.5/6, mb1 3.8/12, mb1mx3.6/27, mbtmp3.6/12, ML3.5/6, MS3.5/1, Ms1 3.6/1, ms1mx2.7/41, Error ellipse: s-maj=22.8km s-min=16.0km az=50.0*
*NEIC **28** 22:57:38.0±0.2, 71°.39N×3°.92W, h10km, mb4.3/22, Error ellipse: s-maj=5.1km s-min=3.5km az=101.0*
ISC 28 22:57:38.2±0.3, 71°.39N±0°.03×3°.9W±0°.1, h10km, n179, σ0=85/179, mb4.0/29, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**8.54**	**21**	*e*Pn	**Pn**	**22 59 41.6**	**-0.2**
KBS	**Kingsbay**	**8.54**	**21**	*e*Pn	**Pn**	**22 59 41.6**	**-0.1**
SPB4	**Spitsbergen Ar**	**8.58**	**29**	*e*Pn	**Pn**	**22 59 42.4**	**+0.2**
SPB4				*e*Sn	**Sn**	**23 01 19.3**	**+0.5**
SPB4	**Spitsbergen Ar**	**8.58**	**29**	*e*Pn	**Pn**	**22 59 42.4**	**+0.2**
SPB4				*e*Sn	**Sn**	**23 01 19.3**	**+0.5**
SPITS	**Spitsbergen Ar**	**8.58**	**29**	Pn	**Pn**	**22 59 42.5**	**+0.2**
	baz=216,slow=15,SNR=30						
SPITS	**Spitsbergen Ar**	**8.58**	**29**	Pn	**Pn**	**22 59 42.5**	**+0.3**
BORG	**Borgarnes**	**9.28**	**233**	*e*Pn	**Pn**	**22 59 54.8**	**+2.9**
ARCES	**ARCESS Array B**	**9.96**	**87**	Pn	**Pn**	**23 00 00.1**	**-1.0**
	0.2nm,0.3s,baz=292,slow=11,SNR=8.2						
ARCES	**ARCESS Array B**	**9.96**	**87**	Pn	**Pn**	**23 00 00.1**	**-1.0**
KEV	**Kevo**	**10.35**	**84**	*e*Pn	**Pn**	**23 00 05.6**	**-0.9**
KEV	**Kevo**	**10.35**	**84**	*e*p	**Pn**	**23 00 05.4**	**-1.1**
	0.9nm,0.5s						
KEV	**Kevo**	**10.35**	**84**	*e*Pn	**Pn**	**23 00 05.6**	**-0.9**
SUMG	**Summit**	**10.67**	**293**	*e*Pn	**Pn**	**23 00 09.5**	**-1.3**
	4.7nm,0.6s						
SUMG	**Summit**	**10.67**	**293**	*e*Pn	**Pn**	**23 00 09.5**	**-1.3**
	4.7nm,0.6s						
NOA	**NORSAR Array B**	**11.99**	**142**	Pn	**Pn**	**23 00 28.2**	**-0.7**
	0.3nm,0.3s,baz=332,slow=12,SNR=2.4						
NOA				LR	LR	23 04 43.2	
	comp=Z,213nm,18.4s,baz=140,slow=36						
NOA	**NORSAR Array B**	**11.99**	**142**	Pn	**Pn**	**23 00 28.2**	**-0.7**
NOA				LR	LR	23 04 43.2	
NOA	**NORSAR Array B**	**11.99**	**142**	Pn	**Pn**	**23 00 28.2**	**-0.7**
HFS	**Hagfors**	**13.32**	**139**	Pn	**Pn**	**23 00 46.2**	**-0.9**
	0.7nm,0.3s,baz=339,slow=11,SNR=18						
HFS	**Hagfors**	**13.32**	**139**	Pn	**Pn**	**23 00 46.2**	**-0.9**
KAF	**Kangasniemi**	**14.91**	**113**	*e*p	**Pn**	**23 01 09.4**	**+0.7**
FINES	**FINESS Array B**	**15.38**	**115**	Pn	**Pn**	**23 01 14.2**	**-0.6**
	0.1nm,0.3s,baz=334,slow=12,SNR=3.1						
FINES	**FINESS Array B**	**15.38**	**115**	Pn	**Pn**	**23 01 14.2**	**-0.7**
JOF	**Joensuu**	**15.82**	**105**	*e*p	**Pn**	**23 01 20.0**	**-0.7**
EKA	**Eskdalemuir Ar**	**16.12**	**178**	Pn	**Pn**	**23 01 24.2**	**-0.3**
	0.4nm,0.3s,baz=354,slow=12,SNR=9.6						
EKA	**Eskdalemuir Ar**	**16.12**	**178**	Pn	**Pn**	**23 01 24.2**	**-0.4**
ESK	**Eskdalemuir**	**16.14**	**179**	*e*Pn	**Pn**	**23 01 23.7**	**-1.1**
ESK	**Eskdalemuir**	**16.14**	**179**	*e*Pn	**Pn**	**23 01 23.7**	**-1.1**
DSB	**Dublin**	**18.24**	**185**	*e*Pn	**Pn**	**23 01 50.0**	**-1.1**
DSB	**Dublin**	**18.24**	**185**	*e*Pn	**Pn**	**23 01 50.0**	**-1.1**
RGN	**Rugen**	**18.49**	**147**	*e*P	**Pn**	**23 01 53.9**	**-0.2**
RGN	**Rugen**	**18.49**	**147**	*e*P	**Pn**	**23 01 53.9**	**-0.2**
RUE	**Ruedersdorf**	**20.55**	**148**	*e*Pn	**P**	**23 02 16.4**	**-0.1**
BAIF	**Baives**	**21.72**	**166**	*e*P	**P**	**23 02 28.8**	**-0.4**
BAIF	**Baives**	**21.72**	**166**	*e*P	**P**	**23 02 28.8**	**-0.4**
GIVF	**Givet**	**21.73**	**165**	*e*P	**P**	**23 02 28.6**	**-0.6**
GIVF	**Givet**	**21.73**	**165**	*e*P	**P**	**23 02 28.6**	**-0.6**
MOX	**Moxa**	**21.98**	**153**	*e*P	**P**	**23 02 36.1**	**+4.2**
	21nm,1.7s,mb4.3						
BRG	**Berggiesshubel**	**22.13**	**149**	*e*P	**P**	**23 02 36.0**	**+2.5**
	3.2nm,0.9s,mb3.7						
NKC	**Novy Kostel**	**22.51**	**152**	*e*P	**P**	**23 02 42.7**	**+5.2**
PVCC	**Panska Ves**	**22.56**	**148**	*e*P	**P**	**23 02 42.9**	**+4.8**
FLN	**La Foliniere**	**22.76**	**174**	*e*P	**P**	**23 02 39.6**	**-0.5**
	29nm,1.3s,mb4.2						
FLN	**La Foliniere**	**22.76**	**174**	*e*P	**P**	**23 02 39.6**	**-0.5**
	14nm,1.3s,mb4.2						
FLN	**La Foliniere**	**22.76**	**174**	*e*P	**P**	**23 02 39.6**	**-0.5**
	14nm,1.3s,mb4.2						
UPC	**Upice**	**22.84**	**146**	*e*P	**P**	**23 02 41.6**	**+0.6**
UPC				*e*pP		23 02 47.7	
UPC	**Upice**	**22.84**	**146**	P	**P**	**23 02 41.6**	**+0.6**
GRA1	**Grafenberg Arr**	**22.86**	**154**	*e*P	**P**	**23 02 43.8**	**+2.6**
	10.0nm,1.1s,mb4.2						
GRF	**Grafenberg Arr**	**22.86**	**154**	*e*P	**P**	**23 02 43.8**	**+2.6**
	comp=Z,10.0nm,1.1s,mb4.2						
LDF	**La Druitiere**	**22.94**	**174**	*e*P	**P**	**23 02 41.4**	**-0.7**
LDF	**La Druitiere**	**22.94**	**174**	*e*P	**P**	**23 02 41.4**	**-0.7**
DPC	**Dobruska-Polom**	**23.04**	**146**	*e*P	**P**	**23 02 45.7**	**+2.5**
PRU	**Pruhonice**	**23.08**	**149**	*e*P	**P**	**23 02 51.0**	**+7.4**
GRR	**Gorron**	**23.12**	**175**	*e*P	**P**	**23 02 42.9**	**-1.1**
	comp=Z,33nm,1.2s,mb4.3						
GRR	**Gorron**	**23.12**	**175**	*e*P	**P**	**23 02 42.9**	**-1.1**
	comp=Z,16nm,1.2s,mb4.3						
GRR	**Gorron**	**23.12**	**175**	*e*P	**P**	**23 02 42.9**	**-1.1**
	comp=Z,16nm,1.2s,mb4.3						
ROSF	**Rostrenen**	**23.13**	**179**	*e*P	**P**	**23 02 42.5**	**-1.6**
ROSF	**Rostrenen**	**23.13**	**179**	*e*P	**P**	**23 02 42.5**	**-1.6**
SGMF	**Saint Gilles**	**23.22**	**178**	*e*P	**P**	**23 02 44.1**	**-0.9**
SGMF	**Saint Gilles**	**23.22**	**178**	*e*P	**P**	**23 02 44.1**	**-0.9**
MEZF	**Maizieres J'vi**	**23.34**	**165**	*e*P	**P**	**23 02 46.9**	**+0.6**
MEZF	**Maizieres J'vi**	**23.34**	**165**	*e*P	**P**	**23 02 46.9**	**+0.6**
QUIF	**Quistinic**	**23.55**	**179**	*e*P	**P**	**23 02 46.7**	**-1.8**
QUIF	**Quistinic**	**23.55**	**179**	*e*P	**P**	**23 02 46.7**	**-1.8**
SFTF	**Sexfontaines**	**23.63**	**165**	*e*P	**P**	**23 02 50.5**	**+1.2**
SFTF	**Sexfontaines**	**23.63**	**165**	*e*P	**P**	**23 02 50.5**	**+1.2**
CDF	**Champ du Feu**	**23.64**	**161**	*e*P	**P**	**23 02 48.8**	**-0.5**
CDF	**Champ du Feu**	**23.64**	**161**	*e*P	**P**	**23 02 48.8**	**-0.5**
OBN	**Obninsk**	**23.73**	**112**	*e*P	**P**	**23 02 49.4**	**-0.7**
OBN	**Obninsk**	**23.73**	**112**	*e*P	**P**	**23 02 49.3**	**-0.8**
KHC	**Kasperske Hory**	**23.76**	**151**	*e*P	**P**	**23 02 55.9**	**+5.5**
MORC	**Moravsky Berou**	**23.82**	**144**	*e*Pn	**P**	**23 02 50.8**	**-0.1**
MORC	**Moravsky Berou**	**23.82**	**144**	*e*Pn	**P**	**23 02 50.8**	**-0.1**
GERES	**GERESS Array B**	**24.05**	**151**	P	**P**	**23 02 54.5**	**+1.4**
	comp=Z,1.1nm,0.8s,mb3.3,baz=345,slow=9.7,SNR=8.9						
GERES	**GERESS Array B**	**24.05**	**151**	P	**P**	**23 02 54.5**	**+1.4**
HINF	**Hinteralfeld**	**24.18**	**162**	*e*P	**P**	**23 02 54.1**	**-0.2**
HINF	**Hinteralfeld**	**24.18**	**162**	*e*P	**P**	**23 02 54.1**	**-0.2**
HYF	**Humbligny**	**24.39**	**169**	*e*P	**P**	**23 02 57.0**	**+0.8**
HYF	**Humbligny**	**24.39**	**169**	*e*P	**P**	**23 02 57.0**	**+0.8**
LOR	**Lormes**	**24.47**	**167**	*e*P	**P**	**23 02 56.5**	**-0.4**
	comp=Z,16nm,1.0s,mb4.1						
LOR	**Lormes**	**24.47**	**167**	*e*P	**P**	**23 02 56.5**	**-0.4**
	comp=Z,8.2nm,1.0s,mb4.1						
LOR	**Lormes**	**24.47**	**167**	*e*P	**P**	**23 02 56.5**	**-0.4**
	comp=Z,8.2nm,1.0s,mb4.1						
SSF	**Saint Saulge**	**24.65**	**168**	*e*P	**P**	**23 02 58.0**	**-0.6**
	comp=Z,11nm,1.0s,mb4.0						
SSF	**Saint Saulge**	**24.65**	**168**	*e*P	**P**	**23 02 58.0**	**-0.6**
	comp=Z,5.6nm,1.0s,mb4.0						
SSF	**Saint Saulge**	**24.65**	**168**	*e*P	**P**	**23 02 58.0**	**-0.6**
	comp=Z,5.6nm,1.0s,mb4.0						
AVF	**Avril sur Loir**	**24.91**	**168**	*e*P	**P**	**23 03 00.4**	**-0.5**
	comp=Z,13nm,1.0s,mb4.1						
AVF	**Avril sur Loir**	**24.91**	**168**	*e*P	**P**	**23 03 00.4**	**-0.5**
	comp=Z,6.7nm,1.0s,mb4.1						
AVF	**Avril sur Loir**	**24.91**	**168**	*e*P	**P**	**23 03 00.4**	**-0.5**
	comp=Z,6.7nm,1.0s,mb4.1						
MFF	**Saint Martin d**	**24.93**	**174**	*e*P	**P**	**23 03 00.5**	**-0.6**
	comp=Z,17nm,1.2s,mb4.2						
MFF	**Saint Martin d**	**24.93**	**174**	*e*P	**P**	**23 03 00.5**	**-0.6**
	comp=Z,8.6nm,1.2s,mb4.2						
MFF	**Saint Martin d**	**24.93**	**174**	*e*P	**P**	**23 03 00.5**	**-0.6**
	comp=Z,8.6nm,1.2s,mb4.2						
SMF	**Signal de Mont**	**25.09**	**167**	*e*P	**P**	**23 03 02.3**	**-0.3**
	comp=Z,32nm,1.3s,mb4.4						
SMF	**Signal de Mont**	**25.09**	**167**	*e*P	**P**	**23 03 02.3**	**-0.3**
	comp=Z,16nm,1.3s,mb4.4						
SMF	**Signal de Mont**	**25.09**	**167**	*e*P	**P**	**23 03 02.3**	**-0.3**
	comp=Z,16nm,1.3s,mb4.4						
BGF	**Bois d'Agland**	**25.11**	**169**	*e*P	**P**	**23 03 02.2**	**-0.6**
	comp=

PAB	San Pablo	31.91	181	eP	P	23 04 04.0	+0.5
PAB	San Pablo	31.91	181	eP	P	23 04 04.0	+0.5
KIV	Kislovodsk	35.47	115	P	P	23 04 33.8	-0.5
KIV	Kislovodsk	35.47	115	P	P	23 04 33.8	-0.5
BRVK	Borovoye	36.11	80	eP	P	23 04 38.9	-0.8
	comp=Z,1.9nm,0.7s,mb4.1						
BRVK	Borovoye	36.11	80	eP	P	23 04 38.9	-0.8
	comp=Z,1.9nm,0.7s,mb4.1						
BRTR	Keskin Array B	36.95	129	P	P	23 04 47.6	+0.6
	comp=Z,0.7nm,0.7s,mb3.6,baz=270,slow=4.9,SNR=3.7						
BRTR	Keskin Array B	36.95	129	P	P	23 04 47.6	+0.6
MALT	Malatya	39.52	124	eP	P	23 05 08.3	-0.4
	comp=Z,2.2nm,0.8s,mb3.9						
MALT	Malatya	39.52	124	eP	P	23 05 08.3	-0.3
	comp=Z,2.2nm,0.8s,mb3.9						
KURK	Kurchatov	40.75	75	eP	P	23 05 18.9	+0.2
	comp=Z,1.7nm,0.7s,mb3.8						
KURK	Kurchatov	40.75	75	eP	P	23 05 18.9	+0.2
	comp=Z,1.7nm,0.7s,mb3.8						
ILAR	Eielson Array	41.77	337	P	P	23 05 27.4	+0.4
	comp=Z,0.3nm,0.8s,baz=0.9,slow=11,SNR=3.4						
ILAR	Eielson Array	41.77	337	P	P	23 05 27.4	+0.4
MK31	Makanchi Array	45.35	75	eP	P	23 05 55.4	-0.6
MK31	Makanchi Array	45.35	75	eP	P	23 05 55.4	-0.6
MKAR	Makanchi Array	45.35	75	P	P	23 05 56.8	+0.8
	comp=Z,0.6nm,1.0s,mb3.4,baz=328,slow=4.4,SNR=3.5						
EKS2	Erkin-Say	46.37	85	P	P	23 06 04.1	0.0
EKS2	Erkin-Say	46.37	85	P	P	23 06 04.1	0.0
AAK	Ala-Archa	46.62	84	eP	P	23 06 05.7	-0.4
AAK	Ala-Archa	46.62	84	eP	P	23 06 05.7	-0.4
KBL	Kabul	52.25	93	eP	P	23 06 49.2	+0.1
KBL	Kabul	52.25	93	eP	P	23 06 49.2	+0.1
UNV	Unalaska Valle	54.46	347	P	P	23 07 05.9	+0.8
UNV	Unalaska Valle	54.46	347	P	P	23 07 05.9	+0.8
TORD	Torodi Ar. Bea	58.31	174	P	P	23 07 32.5	-0.4
	comp=Z,1.0nm,0.7s,mb4.0,baz=351,slow=7.3,SNR=26						
TXAR	Lajitas Array	65.54	289	P	P	23 08 20.4	-1.1
	comp=Z,0.3nm,0.7s,mb3.4,baz=31,slow=5.5,SNR=3.4						
TXAR	Lajitas Array	65.54	289	P	P	23 08 20.4	-1.1
CMAR	Chiang Mai Arr	76.69	72	P	P	23 09 32.9	+3.8
	comp=Z,0.4nm,0.3s,mb3.8,baz=335,slow=10,SNR=4.1						
ASAR	Alice Springs	126.59	50	PKP	PKPdf	23 16 39.7	-1.2
	comp=Z,0.4nm,0.7s,baz=356,slow=2.8,SNR=3.0						
ASAR	Alice Springs	126.59	50	PKIKP	PKPdf	23 16 39.7	-1.2

CSEM ***28*** *23:02:13.4±0.3, 41°.15N×24°.25E, h2km, ML1.9/2, Error ellipse: s-maj=5.6km s-min=5.2km az=104.0*
ATH ***28*** *23:02:13.1, 41°.23N×24°.20E, h27km±7km, MD3.1/4*
THE ***28*** *23:02:14.1, 41°.15N×24°.25E, h0km±3km, ML1.9/2, Error ellipse: s-maj=3.5km s-min=1.1km az=158.0*
BEO ***28*** *23:02:15.1±1.2, 41°.03N×23°.98E, h0km, ML2.1/3*
ISC 28 23:02:14.1±0.6, 41°.16N±0°.03×24°.27E±0°.04, h0km±6km, n26, σ1§04/48, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAVA	Kavala	0.24	130	P	Pg	23 02 18.7	-0.1
KAVA				S	Sg	23 02 22.6	+0.7
KAVA	Kavala	0.24	130	P	Pg	23 02 18.7	-0.1
KAVA				S	Sg	23 02 22.6	+0.7
NVR	Nevrokopi	0.36	303	ePB	Pg	23 02 20.1	-0.9
NVR				eSB	Sg	23 02 25.3	-0.4
NVR	Nevrokopi	0.36	303	P	Pg	23 02 20.0	-1.0
NVR				S	Sg	23 02 25.5	-0.2
NVR	Nevrokopi	0.36	303	ePb	Pg	23 02 20.1	-0.9
NVR				eSb	Sg	23 02 25.3	-0.4
SRS	Serrai	0.51	266	P	Pg	23 02 22.9	-0.9
SRS	Serrai	0.51	266	P	Pg	23 02 22.9	-0.9
SOH	Sokhos	0.77	245	ePN	Pg	23 02 28.3	-0.4
SOH	Sokhos	0.77	245	P	Pg	23 02 28.7	0.0
SOH				S	Sg	23 02 40.1	+1.4
SOH	Sokhos	0.77	245	ePn	Pg	23 02 28.3	-0.4
SOH	Sokhos	0.77	245	P	Pg	23 02 28.7	0.0
SOH				S	Sg	23 02 40.1	+1.4
PLG	Polygyros	1.00	219	ePN	Pg	23 02 32.7	-0.5
PLG				eSN	Sg	23 02 46.6	+0.5
PLG	Polygyros	1.00	219	P	Pg	23 02 33.5	+0.3
PLG				S	Sg	23 02 47.1	+1.0
PLG	Polygyros	1.00	219	ePn	Pg	23 02 32.7	-0.5
PLG	Polygyros	1.00	219	P	Pg	23 02 33.5	+0.3
PLG				eSn	Sg	23 02 46.6	+0.5
PLG				S	Sg	23 02 47.1	+1.0
PLD	Plovdiv	1.00	19	P	Pg	23 02 32.9	-0.4
PLD				S	Sg	23 02 49.2	+2.9
PLD	Plovdiv	1.00	19	P	Pg	23 02 32.9	-0.4
PLD				S	Sg	23 02 49.2	+2.9
ALN	Alexandroupoli	1.37	100	ePN	Pn	23 02 39.6	-0.8
ALN				eSN	Sn	23 02 58.3	-0.9
ALN	Alexandroupoli	1.37	100	ePn	Pn	23 02 39.6	-0.8
ALN				eSn	Sn	23 02 58.3	-0.9
VTS	Vitosha	1.64	332	ePg	Pg	23 02 44.4	-1.1
VTS				eSg	Sg	23 03 07.0	+0.3
VTS	Vitosha	1.64	332	P	Pn	23 02 43.5	-0.6
VTS				S	Sn	23 03 06.7	+0.9
VTS	Vitosha	1.64	332	P	Pn	23 02 43.5	-0.6
VTS	Vitosha	1.64	332	ePg	Pg	23 02 44.4	-1.1
VTS				S	Sn	23 03 06.7	+0.9
VTS				eSg	Sg	23 03 07.0	+0.3
ZAPS	Zavoj	2.44	331	ePn	Pn	23 02 57.2	+2.1
ZAPS				eSg	Sg	23 03 33.7	+1.3
BARS	Barje	2.47	313	ePn	Pn	23 02 55.1	-0.4
BARS				eSg	Sg	23 03 31.4	-2.0
BARS	Barje	2.47	313	ePn	Pn	23 02 55.1	-0.4
BARS				eSg	Sg	23 03 31.4	-2.0

NAO ***28*** *23:13:03.7±3.2, 71°.24N×4°.58W, h1km±40km, ML2.9*
ISCJB ***28*** *23:13:05.9±0.2, 71°.46N±0°.02×4°.03W±0°.10, h10km, mb4.5/121, MS3.7/26, Error ellipse: s-maj=4.4km s-min=3.5km az=165.8*
IDC ***28*** *23:13:05.9±0.5, 71°.37N×4°.27W, h0km, mb4.0/22, mb1 4.2/26, mb1mx4.1/31, mbtmp4.0/26, ML3.7/4, MS3.7/18, Ms1 3.7/18, ms1mx3.5/40, Error ellipse: s-maj=13.5km s-min=11.3km az=52.0*
BJI ***28*** *23:13:05.6, 71°.40N×3°.80W, h10km, mB5.2/6, mb4.8/15, Ms5.0/2, Ms7 4.4/3*
MOS ***28*** *23:13:06.1±1.2, 71°.42N×4°.07W, h10km, mb4.7/68, Error ellipse: s-maj=16.7km s-min=3.3km az=96.8*
CSEM ***28*** *23:13:07.3±0.1, 71°.42N×3°.90W, h10km, mb4.5/43, Ms3.4, Error ellipse: s-maj=5.8km s-min=4.6km az=62.0*
BER ***28*** *23:13:07.3±2.1, 71°.58N×4°.68W, h20km±30km, ML3.1*
NEIC ***28*** *23:13:07.7±0.2, 71°.38N×3°.77W, h10km, mb4.7/72, Error ellipse: s-maj=5.3km s-min=4.2km az=75.0*
SZGRF ***28*** *23:13:13.0, 71°.40N×3°.22W, h33km, mb4.7, Jan Mayen Island region*
ISC 28 23:13:08.0±0.2, 71°.42N±0°.02×3°.87W±0°.09, h10km, (h17km±2.8km:pP-P), n579, σ1§13/571, mb4.5/121, MS3.7/26, 28C-8D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	Jan Mayen East	1.50	256	eP	Pn	23 13 29.0	-5.9
JNE	Jan Mayen East	1.50	256	eP	Pn	23 13 29.0	-5.9
	SNR=55						
JNW	Jan Mayen West	1.52	257	eP	Pn	23 13 30.4	-4.9
JNW	Jan Mayen West	1.52	257	eP	Pn	23 13 30.4	-4.9
	SNR=55						
JMIC	Jan Mayen	1.56	256	Pg	Pg	23 13 28.8	-9.2
JMIC				Lg		23 13 45.2	
JMIC	Jan Mayen	1.56	256	Pn	Pn	23 13 28.6	-7.2
	11nm,0.3s,baz=148,slow=8.2,SNR=3.3						
JMIC				Sn	Sn	23 13 45.4	-11
	28nm,0.3s,baz=2.8,slow=21,SNR=9.0						
JMIC	Jan Mayen	1.56	256	Pn	Pn	23 13 28.6	-7.2
JMIC				eS	Sn	23 13 45.5	-11
JMIC	Jan Mayen	1.56	256	Pn	Pn	23 13 28.6	-7.2
JMIC				Lg		23 13 45.2	
JMIC				eS	Sn	23 13 45.5	-11
	SNR=55						
JMI	Jan Mayen	1.65	255	eP	Pn	23 13 31.0	-6.0
JMI				eS	Sn	23 13 48.7	-9.5
JMI	Jan Mayen	1.65	255	eP	Pn	23 13 31.0	-6.0
	SNR=55						
JMI				eS	Sn	23 13 48.7	-9.5
	SNR=55						
TRO	Tromso	7.80	92	eP	Pn	23 14 59.3	-2.1
TRO	Tromso	7.80	92	eP	Pn	23 14 59.3	-2.1
TRO	Tromso	7.80	92	eP	Pn	23 14 59.3	-2.1
	SNR=51						

KONS	Konsvik	7.83	121	eP	Pn	23 15 00.0	-1.8
STOK	Stokkvaagen	7.93	122	eP	Pn	23 15 01.5	-1.6
STOK				eS	Sn	23 16 26.5	-6.1
STOK				AML	AML	23 16 30.9	
	comp=Z,22nm,0.9s						
STOK	Stokkvaagen	7.93	122	eP	Pn	23 15 01.5	-1.6
FLOS	Flostrand	8.02	121	eP	Pn	23 15 02.6	-1.7
MOR8	Moi Rana	8.44	120	eP	Pn	23 15 09.9	-0.1
MOR8	Moi Rana	8.44	120	eP	Pn	23 15 11.1	+1.1
MOR8	Moi Rana	8.44	120	eP	Pn	23 15 09.9	-0.2
	SNR=51						
KBS	Kingsbay	8.52	21	ePn	Pn	23 15 10.5	-0.6
KBS	Kingsbay	8.52	21	eP	Pn	23 15 10.5	-0.6
KBS	Kingsbay	8.52	21	eP	Pn	23 15 10.5	-0.6
SPB4	Spitsbergen Ar	8.55	29	ePn	Pn	23 15 12.5	+0.9
SPB4	Spitsbergen Ar	8.55	29	ePn	Pn	23 15 12.5	+0.9
SPA0	Spitsbergen Ar	8.55	29	Pn	Pn	23 15 11.8	+0.1
	baz=226,slow=16						
SPA0	Spitsbergen Ar	8.55	29	Pn	Pn	23 15 11.8	+0.2
	baz=226,slow=15,SNR=1.7						
SPITS	Spitsbergen Ar	8.55	29	Pn	Pn	23 15 12.0	+0.4
	baz=217,slow=17,SNR=58						
SPITS	Spitsbergen Ar	8.55	29	P	Pn	23 15 12.0	+0.4
SPITS	Spitsbergen Ar	8.55	29	P	Pn	23 15 12.0	+0.4
NSS	Namsos	9.09	132	eP	Pn	23 15 16.3	-2.6
NSS				eS	Sn	23 16 54.2	-6.9
NSS				AML	AML	23 16 58.3	
	comp=Z,10nm,0.5s						
NSS	Namsos	9.09	132	eP	Pn	23 15 16.7	-2.3
NSS	Namsos	9.09	132	eP	Pn	23 15 16.3	-2.7
	SNR=51						
BORG	Borgarnes	9.31	233	LR	LR	23 17 50.2	
	comp=Z,131nm,21.1s,baz=334,slow=31						
KTK1	Kautokeino	9.45	92	eP	Pn	23 15 22.1	-1.9
KTK1	Kautokeino	9.45	92	eP	Pn	23 15 22.0	-2.0
	SNR=51						
ARA0	ARCESS Array S	9.95	87	Pn	Pn	23 15 29.7	-1.1
	baz=298,slow=11						
ARA0	ARCESS Array S	9.95	87	Pn	Pn	23 15 29.7	-1.1
	baz=298,slow=11,SNR=7.4						
ARCES	ARCESS Array B	9.95	87	Pn	Pn	23 15 29.7	-1.1
	comp=Z,1.3nm,0.3s,baz=297,slow=9.4,SNR=25						
ARCES				LR	LR	23 18 45.5	
	comp=Z,415nm,19.6s,baz=109,slow=34						
ARCES	ARCESS Array B	9.95	87	Pn	Pn	23 15 29.7	-1.1
ARCES				LR	LR	23 18 45.5	
ARCES	ARCESS Array B	9.95	87	P	Pn	23 15 29.7	-1.1
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES				MLR	MLR		
	comp=Z,415nm,19.6s						
ARCES	ARCESS Array B	9.95	87	P	Pn	23 15 29.7	-1.1
	comp=Z,415nm,19.6s						
KEV	Kevo	10.34	84	ePn	Pn	23 15 35.7	-0.4
KEV	Kevo	10.34	84	eP	Pn	23 15 35.7	-0.4
KEV	Kevo	10.34	84	ep	Pn	23 15 34.9	-1.2
	comp=Z,4.4nm,0.4s						
KEV	Kevo	10.34	84	eP	Pn	23 15 34.9	-1.2
	comp=Z,4.4nm,0.4s						
KEV	Kevo	10.34	84	ePn	Pn	23 15 35.7	-0.4
NB2	NORSAR Subarra	12.01	142	Pn	Pn	23 15 57.4	-1.5
	baz=319,slow=14						
NB2	NORSAR Subarra	12.01	142	Pn	Pn	23 15 57.4	-1.5
	baz=319,slow=13,SNR=8.8						
NOA	NORSAR Array B	12.01	142	Pn	Pn	23 15 55.5	-3.4
	comp=Z,0.5nm,0.3s,baz=331,slow=12,SNR=5.0						
NOA				Sn	Sn	23 18 16.3	+3.7
	comp=Z,0.3nm,0.3s,baz=332,slow=22,SNR=3.8						
NOA				LR	LR	23 20 23.2	
	comp=Z,496nm,21.2s,baz=330,slow=36						
NOA	NORSAR Array B	12.01	142	P	Pn	23 15 55.5	-3.4
NOA						23 18 16.3	
NOA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA				MLR	MLR		
	comp=Z,496nm,21.2s						
NAO01	NORSAR Array S	12.12	144	ePn	Pn	23 15 57.4	-3.1
KONO	Kongsberg	13.01	148	ePn	Pn	23 16 08.4	-4.2
KONO	Kongsberg	13.01	148	eP	Pn	23 16 08.4	-4.2
HFS	Hagfors	13.34	139	Pn	Pn	23 16 15.4	-1.6
	baz=330,slow=14						
HFS				Sn	Sn	23 18 37.3	-7.9
	baz=339,slow=22						
HFS	Hagfors	13.34	139	Pn	Pn	23 16 15.8	-1.2
	comp=Z,1.1nm,0.3s,baz=345,slow=11,SNR=37						
HFS				Sn	Sn	23 18 37.3	-7.8
	comp=Z,0.4nm,0.3s,baz=342,slow=26,SNR=4.3						
HFS				LR	LR	23 21 04.4	
	comp=Z,797nm,20.2s,baz=255,slow=36						
HFS	Hagfors	13.34	139	P	Pn	23 16 15.8	-1.3
HFS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS				MLR	MLR		
	comp=Z,797nm,20.2s						
HFS	Hagfors	13.34	139	P	Pn	23 16 15.8	-1.3
	comp=Z,797nm,20.2s						
KAF	Kangasniemi	14.92	113	eP	Pn	23 16 37.4	-1.2
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	Kangasniemi	14.92	113	ep	Pn	23 16 37.4	-1.2
	comp=Z,1.8nm,0.5s						
FIA0	FINESS Array S	15.38	115	P	Pn	23 16 44.1	-0.6
	baz=315,slow=12						
FINES	FINESS Array B	15.38	115	Pn	Pn	23 16 44.0	-0.7
	comp=Z,0.3nm,0.3s,baz=263,slow=5.0,SNR=9.4						
FINES				LR	LR	23 22 05.6	
	comp=Z,504nm,20.1s,baz=154,slow=35						
FINES	FINESS Array B	15.38	115	P	Pn	23 16 44.0	-0.7
FINES				MLR	MLR		
	comp=Z,504nm,20.1s						
FINES	FINESS Array B	15.38	115	Pn	Pn	23 16 44.0	-0.7
JOF	Joensuu	15.82	105	eP	Pn	23 16 49.2	-1.3
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JOF	Joensuu	15.82	105	ep	Pn	23 16 49.2	-1.3
	comp=Z,2.6nm,0.6s						
EKA	Eskalemuir Ar	16.15	179	Pn	Pn	23 16 51.9	-2.8
	comp=Z,0.2nm,0.3s,baz=357,slow=12,SNR=5.8						
EKA	Eskdalemuir Ar	16.15	179	P	Pn	23 16 51.9	-2.8
EKA	Eskdalemuir Ar	16.15	179	Pn	Pn	23 16 51.9	-2.8
ESK	Eskdalemuir	16.16	179	ePn	Pn	23 16 51.7	-3.2
ESK	Eskdalemuir	16.16	179	eP	Pn	23 16 51.7	-3.2
KLMR	Klimovskoe	19.95	100	eP	Pn	23 17 39.5	-1.9
KLMR				pmax	pmax		
	comp=Z,151nm,1.5s						
KLMR	Klimovskoe	19.95	100	eP	Pn	23 17 39.5	-1.9
	comp=Z,151nm,1.5s						
WTSB	Wilnerswijk	20.10	161	eP	P	23 17 43.8	+2.4
	comp=Z,26nm,1.4s						
IZAR	Zarasai	20.27	125	eP	P	23 17 43.7	+0.5
IZAR				AMB	AMB	23 17 49.3	
	comp=Z,16nm,1.4s						
IZAR	Zarasai	20.27	125	eP	P	23 17 43.7	+0.5
	comp=Z,16nm,1.4s,SNR=34						
ISAL	Salakas	20.40	125	eP	P	23 17 45.3	+0.7
ISAL				AMB	AMB	23 17 50.7	
	comp=Z,24nm,1.3s						
ISAL	Salakas	20.40	125	eP	P	23 17 45.3	+0.7
	comp=Z,24nm,1.3s,SNR=34						
GKP	Gorka Klasztor	20.45	142	eP	P	23 17 46.4	+1.2
GKP				epP		23 17 50.5	
GKP				LMZ		23 26 06.0	
	comp=Z,600nm,17.2s						
GKP	Gorka Klasztor	20.45	142	eP	P	23 17 46.4	+1.2
GKP				e*PP		23 17 50.5	
GKP				MLR	MLR		
	comp=Z,600nm,17.2s,MS4.0						
GKP	Gorka Klasztor	20.45	142	eP	P	23 17 46.4	+1.2
	comp=Z,600nm,17.2s						
RUE	Ruedersdorf	20.57	148	eP	P	23 17 48.2	+1.7
	comp=Z,38nm,0.8s						
RUE	Ruedersdorf	20.57	148	eP	P	23 17 42.3	-4.2
	comp=Z,27nm,0.6s						
IIGN	Ignalina	20.62	126	eP	P	23 17 47.7	+0.7
IIGN				AMB	AMB	23 17 53.2	
	comp=Z,23nm,2.7s						
IIGN	Ignalina	20.62	126	eP	P	23 17 47.7	+0.7
	comp=Z,23nm,2.7s,SNR=34						
SUW	Suwalki	21.07	132	eP	P	23 17 52.0	+0.2
SUW				epP		23 17 55.5	
SUW	Suwalki	21.07	132	eP	P	23 17 48.6	-3.2
	comp=Z,80nm,0.9s,mb5.0						
SUW				ePn	P	23 17 55.1	+3.3
SUW	Suwalki	21.07	132	eP	P	23 17 52.0	+0.2
SUW				e*PP		23 17 55.5	

SUW	Suwalki	21.07	132	eP	P	23 17 52.0	+0.2
BEBN	Eben Emael	21.14	163	XP	sP	23 17 57.4	+0.6
HGN	Heimansgroeve	21.20	163	eP	P	23 17 53.3	0.0
	comp=Z,25nm,0.7s,mb4.7						
SNF	Seneffe	21.31	166	P	P	23 17 54.6	+0.1
	comp=Z,16nm,2.0s,mb4.0						
MEM	Membach	21.36	163	P	P	23 17 55.3	+0.2
	comp=Z,17nm,1.0s,mb4.3						
NEUB	Neuenburg	21.48	152	eP	P	23 17 57.1	+0.8
	comp=Z,44nm,1.1s,mb4.7						
BCLA	Clavier	21.48	164	P	P	23 17 56.3	0.0
	comp=Z,16nm,1.4s,mb4.2						
CLL	Collm	21.57	150	eP	P	23 17 57.8	+0.5
	comp=Z,20nm,1.1s,mb4.5						
CLL	Collm	21.57	150	eP	P	23 17 57.0	-0.3
	comp=Z,20nm,1.1s,mb4.5						
CLL	Collm	21.57	150	eP	P	23 17 57.0	-0.3
CLL				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.5						
CLL	Collm	21.57	150	eP	P	23 17 57.0	-0.3
	comp=Z,5.0nm,1.1s,mb3.9						
CLL				i Pmax		23 18 02.1	
	comp=Z,20nm,1.1s						
CLL	Collm	21.57	150	eP	P	23 17 57.0	-0.3
	comp=Z,20nm,1.1s,mb4.5						
DOU	Dourbes	21.74	165	P	P	23 18 01.3	+2.1
BAIF	Baives	21.75	166	eP	P	23 17 58.6	-0.6
	comp=Z,26nm,0.9s,mb4.4						
BAIF	Baives	21.75	166	eP	P	23 17 58.6	-0.6
	comp=Z,13nm,0.9s,mb4.4						
BAIF	Baives	21.75	166	eP	P	23 17 58.6	-0.6
BAIF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
GIVF	Givet	21.76	165	eP	P	23 17 58.6	-0.7
	comp=Z,37nm,0.9s,mb4.5						
GIVF	Givet	21.76	165	eP	P	23 17 58.6	-0.7
	comp=Z,18nm,0.9s,mb4.5						
GIVF	Givet	21.76	165	eP	P	23 17 58.6	-0.7
GIVF				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.5						
MNK	Minsk	21.80	124	eP	P	23 18 01.0	+1.3
MNK	Minsk	21.80	124	eP	P	23 18 01.0	+1.3
MICGM	Minsk	21.81	124	e	P	23 18 01.0	+1.1
FBE	Freiberg	22.00	150	eP	P	23 18 02.5	+0.6
	comp=Z,47nm,1.1s,mb4.8						
TNS	Taunus Mts	22.00	159	eP	P	23 18 02.6	+0.7
	comp=Z,59nm,1.5s,mb4.8						
TNS	Taunus Mts	22.00	159	eP	P	23 18 02.6	+0.7
TNS				pmax	pmax		
	comp=Z,59nm,1.5s,mb4.8						
TNS	Taunus Mts	22.00	159	eP	P	23 18 02.6	+0.7
	comp=Z,59nm,1.5s,mb4.8						
MOX	Moxa	22.01	153	eP	P	23 18 02.1	+0.1
	comp=Z,38nm,1.4s,mb4.6						
MOX	Moxa	22.01	153	eP	P	23 18 02.8	+0.8
	comp=Z,39nm,1.4s,mb4.6						
MOX	Moxa	22.01	153	eP	P	23 18 02.1	+0.1
MOX				pmax	pmax		
	comp=Z,38nm,1.4s,mb4.6						
MOX	Moxa	22.01	153	eP	P	23 18 02.1	+0.1
	comp=Z,38nm,1.4s,mb4.6						
BRG	Berggiesshubel	22.14	149	eP	P	23 18 03.5	+0.1
	comp=Z,25nm,1.0s,mb4.6						
BRG	Berggiesshubel	22.14	149	i P	P	23 18 04.7	+1.3
	comp=Z,10nm,1.0s,mb4.2						
BRG				i		23 18 09.4	
	comp=Z,27nm,1.1s						
BRG	Berggiesshubel	22.14	149	i P	P	23 18 04.7	+1.3
BRG				i		23 18 09.4	
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
BRG	Berggiesshubel	22.14	149	i P	P	23 18 04.7	+1.3
	comp=Z,6.0nm,1.0s,mb4.0						
WAR	Warsaw	22.21	137	eP	P	23 18 05.2	+1.1
WAR				epP		23 18 07.2	
WAR				LMZ		23 26 14.0	
	comp=Z,400nm,22.2s						
WAR	Warsaw	22.21	137	eP	P	23 18 05.2	+1.1
WAR				e*PP		23 18 07.2	
WAR				MLR	MLR		
	comp=Z,400nm,22.2s,MS3.8						
WAR	Warsaw	22.21	137	eP	P	23 18 05.2	+1.1
	comp=Z,400nm,22.2s						
WERD	Werda	22.30	152	eP	P	23 18 05.8	+0.7
	comp=Z,21nm,0.9s,mb4.6						
WLF	Walferdange	22.31	163	P	P	23 18 04.7	-0.5
WLF	Walferdange	22.31	163	eP	P	23 18 02.5	-2.7
	comp=Z,13nm,1.1s,mb4.3						
WLF				epP		23 18 10.8	
WLF	Walferdange	22.31	163	eP	P	23 18 02.5	-2.7
WLF				e*PP		23 18 10.8	
WLF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.3						
WLF	Walferdange	22.31	163	eP	P	23 18 02.5	-2.7
	comp=Z,13nm,1.1s,mb4.3						
TANN	Tannenbergstha	22.36	152	eP	P	23 18 06.5	+0.8
	comp=Z,20nm,1.0s,mb4.5						
RUP	Ruppelstein	22.36	161	eP	P	23 18 10.7	+4.9
RUP	Ruppelstein	22.36	161	eP	P	23 18 10.7	+4.9
GUNZ	Gunzen	22.39	152	eP	P	23 18 06.9	+0.9
	comp=Z,23nm,1.0s,mb4.6						
NKC	Novy Kostel	22.53	152	eP	P	23 18 07.7	+0.2
NKC				e		23 18 11.7	
NKC	Novy Kostel	22.53	152	eP	P	23 18 07.7	+0.2
NKC				epP		23 18 11.7	
NKC	Novy Kostel	22.53	152	eP	P	23 18 07.7	+0.2
KSP	Ksiaz	22.58	145	eP	P	23 18 08.6	+0.5
KSP				epP		23 18 12.8	
KSP				LMZ		23 28 21.0	
	comp

PRU Pruhonice 23.10 149 *e*P **P 23 18 14.3 +0.7**
PRU *ep*P 23 18 19.1
PRU Pruhonice 23.10 149 *e*P **P 23 18 14.3 +0.7**
GRR Gorron 23.14 175 *e*P **P 23 18 13.4 -0.7**
comp=Z,80nm,1.1s,mb4.8
GRR Gorron 23.14 175 *e*P **P 23 18 13.4 -0.7**
comp=Z,40nm,1.1s,mb4.8
GRR Gorron 23.14 175 *e*P **P 23 18 13.4 -0.7**
GRR pmax pmax
comp=Z,40nm,1.1s,mb4.8
LANF Langenberg 23.15 160 *e*P **P 23 18 19.8 +5.7**
LANF Langenberg 23.15 160 *e*P **P 23 18 19.8 +5.7**
ROSF Rostrenen 23.16 179 *e*P **P 23 18 12.6 -1.6**
comp=Z,101nm,1.3s,mb4.8
ROSF Rostrenen 23.16 179 *e*P **P 23 18 12.6 -1.6**
comp=Z,51nm,1.3s,mb4.8
ROSF Rostrenen 23.16 179 *e*P **P 23 18 12.6 -1.6**
ROSF pmax pmax
comp=Z,51nm,1.3s,mb4.8
BST Brest 23.19 180 *e*P **P 23 18 18.6 +4.1**
BST Brest 23.19 180 *e*P **P 23 18 15.0 +0.5**
SGMF Saint Gilles 23.24 178 *e*P **P 23 18 13.9 -1.2**
comp=Z,31nm,0.9s,mb4.4
SGMF Saint Gilles 23.24 178 *e*P **P 23 18 13.9 -1.2**
comp=Z,15nm,0.9s,mb4.4
SGMF Saint Gilles 23.24 178 *e*P **P 23 18 13.9 -1.2**
SGMF pmax pmax
comp=Z,15nm,0.9s,mb4.4
MEZF Maizieres J'vi 23.36 165 *e*P **P 23 18 16.8 +0.4**
comp=Z,93nm,1.4s,mb4.7
MEZF Maizieres J'vi 23.36 165 *e*P **P 23 18 16.8 +0.4**
comp=Z,93nm,1.4s,mb5.0
MOS Moscow 23.51 110 *e*P **P 23 18 17.8 0.0**
MOS *e* 23 18 46.6
MOS Moscow 23.51 110 *e*P **P 23 18 17.8 0.0**
QUIF Quistinic 23.58 179 *e*P **P 23 18 17.8 -0.7**
comp=Z,98nm,1.4s,mb4.7
QUIF Quistinic 23.58 179 *e*P **P 23 18 17.8 -0.7**
comp=Z,49nm,1.4s,mb4.7
QUIF Quistinic 23.58 179 *e*P **P 23 18 17.8 -0.7**
QUIF pmax pmax
comp=Z,49nm,1.4s,mb4.7
WET Wettzell 23.66 152 *e*P **P 23 18 20.8 +1.5**
comp=Z,26nm,1.4s,mb4.5
WET Wettzell 23.66 152 *e*P **P 23 18 20.8 +1.5**
WET pmax pmax
comp=Z,26nm,1.4s,mb4.5
WET Wettzell 23.66 152 *e*P **P 23 18 20.8 +1.5**
comp=Z,26nm,1.4s,mb4.5
SFTF Sexfontaines 23.66 165 *e*P **P 23 18 19.2 -0.1**
comp=Z,59nm,1.2s,mb4.6
SFTF Sexfontaines 23.66 165 *e*P **P 23 18 19.2 -0.1**
comp=Z,59nm,1.2s,mb4.9
CDF Champ du Feu 23.66 161 *e*P **P 23 18 19.6 +0.3**
comp=Z,38nm,1.2s,mb4.4
CDF Champ du Feu 23.66 161 *e*P **P 23 18 19.6 +0.3**
comp=Z,19nm,1.2s,mb4.4
CDF Champ du Feu 23.66 161 *e*P **P 23 18 19.6 +0.3**
CDF pmax pmax
comp=Z,19nm,1.2s,mb4.4
THEF They Montfort 23.72 163 *e*P **P 23 18 20.2 +0.4**
THEF They Montfort 23.72 163 *e*P **P 23 18 20.2 +0.4**
THEF They Montfort 23.72 163 *e*P **P 23 18 20.2 +0.4**
OBN Obninsk 23.73 112 *ep*P pP 23 18 24.2 +1.3
OBN Obninsk 23.73 112 *i* P **P 23 18 20.1 +0.2**
OBN *e* 23 22 03.3
OBN *e*S **S 23 22 34.9 +0.5**
OBN *e*SS 23 23 16.0
OBN pmax pmax
comp=Z,15nm,0.9s,mb4.4
OBN MLR MLR
comp=Z,400nm,16.0s,MS4.0
OBN Obninsk 23.73 112 *i* P **P 23 18 20.1 +0.2**
comp=Z,15nm,0.9s,mb4.4
OBN Obninsk 23.73 112 *e*PcP PcP 23 22 03.3 +0.2
OBN *e*S **S 23 22 34.9 +0.5**
KHC Kasperske Hory 23.78 151 *e*P **P 23 18 18.4 -1.9**
KHC Kasperske Hory 23.78 151 *e*P **P 23 18 20.8 +0.4**
KHC *e* 23 18 25.1
KHC Kasperske Hory 23.78 151 *e*P **P 23 18 20.8 +0.4**
KHC *ep*P 23 18 25.1
KHC Kasperske Hory 23.78 151 *e*P **P 23 18 20.8 +0.4**
MORC Moravsky Berou 23.84 144 *e*P **P 23 18 18.6 -2.3**
comp=Z,5.3nm,0.7s,mb4.1
MORC Moravsky Berou 23.84 144 ⇑P **P 23 18 21.3 +0.4**
MORC Moravsky Berou 23.84 144 ⇑*i*P **P 23 18 21.3 +0.4**
MORC Moravsky Berou 23.84 144 ⇑*i*P **P 23 18 21.3 +0.4**
ECH Echery 23.84 162 *e*P **P 23 18 21.1 +0.1**
ECH Echery 23.84 162 *e*P **P 23 18 21.1 +0.1**
ECH Echery 23.84 162 *e*P **P 23 18 21.1 +0.1**
BFO Black Forest 23.85 160 *e*P **P 23 18 22.4 +1.3**
comp=Z,33nm,1.1s,mb4.7
BFO Black Forest 23.85 160 *e*P **P 23 18 22.4 +1.3**
BFO pmax pmax
comp=Z,33nm,1.1s,mb4.7
BFO Black Forest 23.85 160 *e*P **P 23 18 22.4 +1.3**
comp=Z,33nm,1.1s,mb4.7
OJC Ojcow 23.86 140 *e*P **P 23 18 21.7 +0.6**
OJC Ojcow 23.86 140 *e*P **P 23 18 21.7 +0.6**
OJC Ojcow 23.86 140 *e*P **P 23 18 21.7 +0.6**
OKC Ostrava-Krasne 23.89 143 *e*P **P 23 18 20.7 -0.7**
OKC MLR MLR
comp=Z,500nm,17.8s,MS4.0
OKC Ostrava-Krasne 23.89 143 *e*P **P 23 18 20.7 -0.7**
OKC AMS AMS 23 29 00.0
comp=Z,500nm,17.8s
OKC Ostrava-Krasne 23.89 143 *e*P **P 23 18 20.7 -0.7**
comp=Z,500nm,17.8s
TREC Trest 23.93 148 *e*P **P 23 18 22.1 +0.3**
TREC *e* 23 18 26.2
TREC Trest 23.93 148 *e*P **P 23 18 22.1 +0.3**
TREC *ep*P 23 18 26.2
TREC Trest 23.93 148 *e*P **P 23 18 22.1 +0.3**
HAU Haudompre 23.97 163 *e*P **P 23 18 22.4 +0.3**
HAU *e*MLR MLR
comp=Z,312nm,19.2s,MS3.5
HAU Haudompre 23.97 163 *e*P **P 23 18 22.4 +0.3**
HAU LR LR
comp=Z,310nm,19.3s,MS3.8
HAU Haudompre 23.97 163 *e*P **P 23 18 22.4 +0.3**
HAU MLR MLR
comp=Z,310nm,19.3s,MS3.8
GEC2 GERESS Array S 24.07 151 *e*P **P 23 18 24.8 +1.7**
comp=Z,20nm,1.1s,mb4.5
GEC2 GERESS Array S 24.07 151 *e*P **P 23 18 24.8 +1.7**
GEC2 pmax pmax
comp=Z,20nm,1.1s,mb4.5
GEC2 GERESS Array S 24.07 151 *e*P **P 23 18 24.8 +1.7**
comp=Z,20nm,1.1s,mb4.5
GERES GERESS Array B 24.07 151 P **P 23 18 23.6 +0.6**
comp=Z,7.9nm,0.9s,mb4.1,baz=330,slow=7.7,SNR=24
GERES GERESS Array B 24.07 151 P **P 23 18 23.6 +0.5**
GERES pmax pmax
comp=Z,8.0nm,0.9s
VRAC Vranov 24.11 146 P **P 23 18 22.9 -0.5**
comp=Z,13nm,0.6s,mb4.5,baz=352,slow=11,SNR=11
VRAC LR LR 23 26 44.0
comp=Z,188nm,21.0s,MS3.5,baz=267,slow=34
VRAC Vranov 24.11 146 ⇓P **P 23 18 24.4 +1.0**
VRAC Vranov 24.11 146 ⇓*i*P **P 23 18 24.4 +1.0**
VRAC Vranov 24.11 146 P **P 23 18 22.9 -0.5**
SPAK Spaichingen-Ko 24.13 159 *e*P **P 23 18 28.4 +4.8**
HINF Hinteralfeld 24.21 162 *e*P **P 23 18 24.3 0.0**
comp=Z,18nm,1.0s,mb4.2
HINF Hinteralfeld 24.21 162 *e*P **P 23 18 24.3 0.0**
comp=Z,8.9nm,1.0s,mb4.2
HINF Hinteralfeld 24.21 162 *e*P **P 23 18 24.3 0.0**
HINF pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
HINF Hinteralfeld 24.21 162 *e*P **P 23 18 24.3 0.0**
comp=Z,8.9nm,1.0s,mb4.2
FELD Feldberg im Sc 24.27 160 *e*P **P 23 18 25.0 +0.2**
FELD Feldberg im Sc 24.27 160 *e*P **P 23 18 25.8 +1.0**
RES Resolute Bay 24.27 320 LR LR 23 27 25.6
comp=Z,296nm,21.1s,MS3.8,baz=242,slow=36
RES Resolute Bay 24.27 320 P **P 23 18 27.1 +2.4**
RES Resolute Bay 24.27 320 P **P 23 18 27.1 +2.4**
HYF Humbligny 24.42 169 *e*P **P 23 18 26.8 +0.6**
LOR Lormes 24.50 167 *e*P **P 23 18 26.5 -0.5**
comp=Z,60nm,0.9s,mb4.7
LOR *e*MLR MLR
comp=Z,222nm,23.0s,MS3.3
LOR Lormes 24.50 167 *e*P **P 23 18 26.5 -0.5**
comp=Z,30nm,0.9s,mb4.7
LOR LR LR
comp=Z,220nm,23.0s,MS3.6
LOR Lormes 24.50 167 *e*P **P 23 18 26.5 -0.5**
LOR pmax pmax
comp=Z,30nm,0.9s,mb4.7
LOR MLR MLR
comp=Z,220nm,23.0s,MS3.6
BBS Basel-Blauen 24.62 161 *e*P **P 23 18 30.8 +2.7**
BBS Basel-Blauen 24.62 161 *e*P **P 23 18 30.8 +2.7**
SSF Saint Saulge 24.68 168 *e*P **P 23 18 28.1 -0.5**
comp=Z,48nm,1.0s,mb4.7
SSF Saint Saulge 24.68 168 *e*P **P 23 18 28.1 -0.5**
comp=Z,24nm,1.0s,mb4.7
SSF Saint Saulge 24.68 168 *e*P **P 23 18 28.1 -0.5**
SSF pmax pmax
comp=Z,24nm,1.0s,mb4.7
NIE Niedzica 24.72 140 *e*P **P 23 18 36.1 +7.1**
NIE Niedzica 24.72 140 *e*P **P 23 18 36.1 +7.1**
AVF Avril sur Loir 24.94 168 *e*P **P 23 18 30.5 -0.5**
comp=Z,47nm,1.0s,mb4.7
AVF Avril sur Loir 24.94 168 *e*P **P 23 18 30.5 -0.5**
comp=Z,24nm,1.0s,mb4.7
AVF Avril sur Loir 24.94 168 *e*P **P 23 18 30.5 -0.5**
AVF pmax pmax
comp=Z,24nm,1.0s,mb4.7
MFF Saint Martin d 24.95 174 *e*P **P 23 18 30.4 -0.7**
comp=Z,40nm,0.8s,mb4.7
MFF Saint Martin d 24.95 174 *e*P **P 23 18 30.4 -0.7**
comp=Z,20nm,0.8s,mb4.7
MFF Saint Martin d 24.95 174 *e*P **P 23 18 30.4 -0.7**
MFF pmax pmax
comp=Z,20nm,0.8s,mb4.7
RJOB Jochberg 25.02 153 *e*P **P 23 18 33.1 +1.4**
comp=Z,20nm,1.0s,mb4.6
KWP Kalwaria Pacla 25.03 137 *e*P **P 23 18 30.0 -1.8**
comp=Z,46nm,1.3s,mb4.8
KWP Kalwaria Pacla 25.03 137 ⇑P **P 23 18 33.2 +1.4**
KWP Kalwaria Pacla 25.03 137 ⇑*i*P **P 23 18 33.2 +1.4**
KWP Kalwaria Pacla 25.03 137 *e*P **P 23 18 30.0 -1.8**
comp=Z,46nm,1.3s,mb4.8
SMF Signal de Mont 25.12 167 *e*P **P 23 18 32.4 -0.2**
comp=Z,57nm,0.9s,mb4.8
SMF Signal de Mont 25.12 167 *e*P **P 23 18 32.4 -0.2**
comp=Z,28nm,0.9s,mb4.8
SMF Signal de Mont 25.12 167 *e*P **P 23 18 32.4 -0.2**
SMF pmax pmax
comp=Z,29nm,0.9s,mb4.8
BGF Bois d'Agland 25.14 169 *e*P **P 23 18 32.2 -0.6**
comp=Z,72nm,0.8s,mb5.0
BGF Bois d'Agland 25.14 169 *e*P **P 23 18 32.2 -0.6**
comp=Z,36nm,0.8s,mb5.0
BGF Bois d'Agland 25.14 169 *e*P **P 23 18 32.2 -0.6**
BGF pmax pmax
comp=Z,36nm,0.8s,mb5.0
KOLL Kolacno 25.15 144 *e*P **P 23 18 33.7 +0.9**
KOLL Kolacno 25.15 144 *e*P **P 23 18 33.7 +0.9**
KOLL Kolacno 25.15 144 *e*P **P 23 18 33.7 +0.9**
KOLL Kolacno 25.15 144 *e*P **P 23 18 33.7 +0.9**
MOTA Moosalm 25.16 156 ⇑*i*P **P 23 18 33.2 +0.2**
comp=Z,32nm,1.4s,mb4.7
MOTA Moosalm 25.16 156 P **P 23 18 33.2 +0.2**
comp=Z,32nm,1.4s,mb4.7
ZST Bratislava 25.27 146 *e*P **P 23 18 37.8 +3.8**
comp=Z,230nm,4.1s
ZST Bratislava 25.27 146 *e*P **P 23 18 37.8 +3.8**
ZST pmax pmax
comp=Z,231nm,4.1s
ZST Bratislava 25.27 146 *e*P **P 23 18 37.8 +3.8**
VYHS Vyhne 25.31 143 *e*P **P 23 18 34.3 0.0**
comp=Z,17nm,1.4s,mb4.4
VYHS Vyhne 25.31 143 *e*P **P 23 18 34.3 0.0**
VYHS pmax pmax
comp=Z,17nm,1.4s,mb4.4
VYHS Vyhne 25.31 143 *e*P **P 23 18 34.3 0.0**
VYHS Vyhne 25.31 143 *e*P **P 23 18 34.3 0.0**
comp=Z,17nm,1.4s,mb4.4
CONA Conrad Observa 25.32 148 ⇑*i*P **P 23 18 35.1 +0.7**
comp=Z,47nm,0.9s,mb5.0
CONA Conrad Observa 25.32 148 P **P 23 18 35.1 +0.7**
comp=Z,47nm,0.9s,mb5.0
CABF La Chapelle 25.33 164 *e*P **P 23 18 34.5 0.0**
comp=Z,58nm,1.2s,mb4.7
CABF La Chapelle 25.33 164 *e*P **P 23 18 34.5 0.0**
comp=Z,29nm,1.2s,mb4.7
CABF La Chapelle 25.33 164 *e*P **P 23 18 34.5 0.0**
CABF pmax pmax
comp=Z,29nm,1.2s,mb4.7
TCF Toulx Ste Croi 25.37 170 *e*P **P 23 18 34.2 -0.7**
comp=Z,64nm,0.9s,mb4.8
TCF Toulx Ste Croi 25.37 170 *e*P **P 23 18 34.2 -0.7**
comp=Z,32nm,0.9s,mb4.8
TCF Toulx Ste Croi 25.37 170 *e*P **P 23 18 34.2 -0.7**
TCF pmax pmax
comp=Z,32nm,0.9s,mb4.8
FETA Feichten 25.43 156 ⇑*i*P **P 23 18 36.3 +0.9**
comp=Z,15nm,1.5s,mb4.3
FETA Feichten 25.43 156 P **P 23 18 36.3 +0.9**
comp=Z,15nm,1.5s,mb4.3
CRVS Cervenica-Dubn 25.45 139 *e*P **P 23 18 38.5 +2.9**
CRVS Cervenica-Dubn 25.45 139 *e*P **P 23 18 38.5 +2.9**
CRVS Cervenica-Dubn 25.45 139 *e*P **P 23 18 38.5 +2.9**
DAVOX Davos/Dischmat 25.56 158 P **P 23 18 35.5 -1.1**
comp=Z,1.3nm,0.8s,mb3.5,baz=60,slow=8.1,SNR=2.5
DAVOX LR LR 23 29 09.1
comp=Z,145nm,18.2s,MS3.5,baz=272,slow=38
DAVOX Davos/Dischmat 25.56 158 P **P 23 18 35.5 -1.1**
DAVOX Davos/Dischmat 25.56 158 P **P 23 18 35.5 -1.1**
KOLS Kolonicke sedl 25.59 138 *e*P **P 23 18 38.4 +1.5**
KOLS Kolonicke sedl 25.59 138 *e*P **P 23 18 38.4 +1.5**
KOLS Kolonicke sedl 25.59 138 *e*P **P 23 18 38.4 +1.5**
KOLS Kolonicke sedl 25.59 138 *e*P **P 23 18 38.4 +1.5**
AKASG Malin Array Be 25.60 127 P **P 23 18 36.1 -0.8**
comp=Z,9.1nm,0.8s,mb4.4,baz=336,slow=9.3,SNR=14
AKASG Malin Array Be 25.60 127 *ce*P **P 23 18 36.2 -0.7**
AKASG pmax pmax
comp=Z,9.0nm,0.8s
AKASG Malin Array Be 25.60 127 P **P 23 18 36.1 -0.8**
KIEV Kiev 25.60 127 *e*P **P 23 18 34.3 -2.6**
KIEV Kiev 25.60 127 *e*P **P 23 18 34.3 -2.7**
KIEV Kiev 25.60 127 *e*P **P 23 18 34.3 -2.7**
KECS Kecovo 25.65 141 *e*P **P 23 18 35.7 -1.7**
KECS Kecovo 25.65 141 *e*P **P 23 18 35.7 -1.7**
KECS Kecovo 25.65 141 *e*P **P 23 18 35.7 -1.7**
AGO Saint Agoulin 25.66 169 *e*P **P 23 18 37.1 -0.4**
AGO Saint Agoulin 25.66 169 *e*P **P 23 18 37.1 -0.4**
SENIN Lac Senin/Sane 25.69 162 *e*P **P 23 18 40.5 +2.7**
comp=Z,12nm,0.9s,mb4.4
PLDF La Plantade 25.77 168 *e*P **P 23 18 38.5 0.0**
PLDF La Plantade 25.77 168 *e*P **P 23 18 38.5 0.0**
PLDF La Plantade 25.77 168 *e*P **P 23 18 38.5 0.0**
TUE Stuetta 25.80 159 *e*P **P 23 18 35.7 -3.1**
comp=Z,15nm,1.1s,mb4.5
TUE *ep*P pP 23 18 43.2 +1.4
TUE Stuetta 25.80 159 *e*P **P 23 18 35.7 -3.1**
comp=Z,15nm,1.1s,mb4.5
UZH Uzhgorod 25.89 138 *e*P **P 23 18 41.0 +1.5**
UZH *i* pP 23 18 44.6 +2.0
UZH *e* 23 19 39.6
UZH Uzhgorod 25.89 138 *e*P **P 23 18 41.0 +1.5**
PYM Petit Puy Mans 25.95 169 *e*P **P 23 18 40.2 0.0**
PYM Petit Puy Mans 25.95 169 *e*P **P 23 18 40.2 0.0**
PYM Petit Puy Mans 25.95 169 *e*P **P 23 18 40.2 0.0**
PSZ Piszkesteto 26.07 142 *e*P **P 23 18 37.9 -3.3**
comp=Z,9.0nm,0.9s,mb4.3
PSZ Piszkesteto 26.07 142 *e*P **P 23 18 37.9 -3.3**
PSZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
PSZ Piszkesteto 26.07 142 ⇓*es*P sP 23 18 40.7 -4.8
PSZ Piszkesteto 26.07 142 ⇓*e*P **P 23 18 40.7 -0.5**
FRNF Fournols 26.29 170 *e*P **P 23 18 45.3 +2.1**
FRNF Fournols 26.29 170 *e*P **P 23 18 44.8 +1.6**
FRNF Fournols 26.29 170 *e*P **P 23 18 45.3 +2.1**
BUD Budapest 26.32 143 ⇓*es*P sP 23 18 49.4 +1.7
RJF Les Rejaudoux 26.32 171 *e*P **P 23 18 42.8 -0.7**
comp=Z,87nm,1.0s,mb5.0
RJF *e*MLR MLR
comp=Z,176nm,20.0s,MS3.3
RJF Les Rejaudoux 26.32 171 *e*P **P 23 18 42.8 -0.7**
comp=Z,44nm,1.0s,mb4.9
RJF LR LR
comp=Z,180nm,20.0s,MS3.6
RJF Les Rejaudoux 26.32 171 *e*P **P 23 18 42.8 -0.7**
RJF pmax pmax
comp=Z,44nm,1.0s,mb4.9
RJF MLR MLR
comp=Z,180nm,20.0s,MS3.6
SOKR Solikamsk 26.46 85 *e*P **P 23 18 49.4 +4.8**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
LPL La Plagne 26.47 163 *e*P **P 23 18 45.5 +0.6**
comp=Z,20nm,0.9s,mb4.3
LPL La Plagne 26.47 163 *e*P **P 23 18 45.5 +0.6**
comp=Z,9.9nm,0.9s,mb4.3
LPL La Plagne 26.47 163 *e*P **P 23 18 45.5 +0.6**
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
LBL Lubilhac 26.48 169 *e*P **P 23 18 45.2 +0.2**
LBL Lubilhac 26.48 169 *e*P **P 23 18 45.2 +0.2**
LBL Lubilhac 26.48 169 *e*P **P 23 18 45.2 +0.2**
LPG La Plagne 26.49 163 *e*P **P 23 18 45.9 +0.8**
comp=Z,46nm,1.3s,mb4.5
LPG La Plagne 26.49 163 *e*P **P 23 18 45.9 +0.8**
comp=Z,23nm,1.3s,mb4.5
LPG La Plagne 26.49 163 *e*P **P 23 18 45.9 +0.8**
LPG pmax pmax
comp=Z,23nm,1.3s,mb4.5
SSB Saint Sauveur 26.53 167 *e*P **P 23 18 43.6 -1.8**
comp=Z,12nm,1.2s,mb4.3
SSB Saint Sauveur 26.53 167 *e*P **P 23 18 43.6 -1.8**
SSB pmax pmax
comp=Z,13nm,1.2s,mb4.3
SSB Saint Sauveur 26.53 167 *e*P **P 23 18 43.6 -1.8**
comp=Z,12nm,1.2s,mb4.3
LFF La Frestale 26.65 173 *e*P **P 23 18 46.0 -0.4**
comp=Z,31nm,0.8s,mb4.6
LFF La Frestale 26.65 173 *e*P **P 23 18 46.0 -0.4**
comp=Z,16nm,0.8s,mb4.6
LFF La Frestale 26.65 173 *e*P **P 23 18 46.0 -0.4**
LFF pmax pmax
comp=Z,16nm,0.8s,mb4.6
CAF Calviac 26.72 171 *e*P **P 23 18 46.7 -0.4**
comp=Z,42nm,1.0s,mb4.6
CAF Calviac 26.72 171 *e*P **P 23 18 46.7 -0.4**
comp=Z,21nm,1.0s,mb4.6
CAF Calviac 26.72 171 *e*P **P 23 18 46.7 -0.4**
CAF pmax pmax
comp=Z,21nm,1.0s,mb4.6
VIVF Saint-Julien-l 26.96 167 *e*P **P 23 18 48.6 -0.6**
comp=Z,22nm,0.9s,mb4.4
VIVF Saint-Julien-l 26.96 167 *e*P **P 23 18 48.6 -0.6**
comp=Z,11nm,0.9s,mb4.4
VIVF Saint-Julien-l 26.96 167 *e*P **P 23 18 48.6 -0.6**
VIVF pmax pmax
comp=Z,11nm,0.9s,mb4.4
ORIF Oris-en-Rattie 26.99 165 *e*P **P 23 18 49.7 +0.2**
comp=Z,39nm,1.2s,mb4.5
ORIF *e*MLR MLR
comp=Z,247nm,20.0s,MS3.5
ORIF Oris-en-Rattie 26.99 165 *e*P **P 23 18 49.7 +0.2**
comp=Z,20nm,1.2s,mb4.5
ORIF Oris-en-Rattie 26.99 165 *e*P **P 23 18 49.7 +0.2**
ORIF pmax pmax
comp=Z,20nm,1.2s,mb4.5
MBDF Montbardon 27.26 163 *e*P **P 23 18 52.9 +0.9**
comp=Z,55nm,1.2s,mb4.7
MBDF Montbardon 27.26 163 *e*P **P 23 18 52.9 +0.9**
comp=Z,28nm,1.2s,mb4.7
MBDF Montbardon 27.26 163 *e*P **P 23 18 52.9 +0.9**
MBDF pmax pmax
comp=Z,28nm,1.2s,mb4.7
BUR08 Bucovina Ar. S 27.46 135 *e*P **P 23 18 51.6 -2.1**
BUR08 Bucovina Ar. S 27.46 135 *e*P **P 23 18 51.6 -2.2**
PKSM Moragy 27.47 145 ⇑P **P 23 18 54.0 +0.2**
PKSM Moragy 27.47 145 ⇑*i*P **P 23 18 54.0 +0.2**
PKSM Moragy 27.47 145 ⇑*i*P **P 23 18 54.0 +0.2**
BURAR Bucovina Array 27.49 135 ⇑P **P 23 18 55.3 +1.3**
BURAR Bucovina Array 27.49 135 ⇑*i*P **P 23 18 55.3 +1.3**
LASF Ste Croix 27.68 168 *e*P **P 23 18 55.5 -0.2**
comp=Z,55nm,1.3s,mb4.7
DRGR 27.72 139 ⇑P **P 23 18 57.6 +1.5**
DRGR 27.72 139 ⇑*i*P **P 23 18 57.6 +1.5**
DRGR 27.72 139 ⇑*i*P **P 23 18 57.6 +1.5**
VSR Storozhevoye 27.90 113 *e*P **P 23 19 01.3 +3.7**
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
VSR pmax pmax
comp=E,10.0nm,0.9s
SMRF Simiane la Rot 27.90 165 *e*P **P 23 18 57.8 +0.1**
comp=E,16nm,1.1s,mb4.3
SMRF Simiane la Rot 27.90 165 *e*P **P 23 18 57.8 +0.1**
comp=E,16nm,1.1s,mb4.6
VORD Divnogorie 28.16 114 *e*P **P 23 19 03.5 +3.6**
VORD pmax pmax
comp=Z,20nm,1.5s,mb4.5
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,10.0nm,0.7s
SBF Sospel 28.18 163 *e*P **P 23 19 01.4 +1.2**
comp=E,28nm,1.1s,mb4.5
SBF Sospel 28.18 163 *e*P **P 23 19 01.4 +1.2**
comp=E,14nm,1.1s,mb4.5
SBF Sospel 28.18 163 *e*P **P 23 19 01.4 +1.2**
SBF pmax pmax
comp=Z,14nm,1.1s,mb4.5
MTLF Montolieu 28.31 171 *e*P **P 23 19 00.7 -0.7**
comp=Z,18nm,1.0s,mb4.3
MTLF Montolieu 28.31 171 *e*P **P 23 19 00.7 -0.7**
comp=Z,8.9nm,1.0s,mb4.3
MTLF Montolieu 28.31 171 *e*P **P 23 19 00.7 -0.7**
MTLF pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
FRF La Foret Royal 28.41 164 *e*P **P 23 19 02.2 0.0**
FRF La Foret Royal 28.41 164 *e*P **P 23 19 02.2 0.0**
SJPF Ste Jean 28.41 176 *e*P **P 23 19 01.6 -0.6**
comp=Z,16nm,1.0s,mb4.3
SJPF Ste Jean 28.41 176 *e*P **P 23 19 01.6 -0.6**
comp=Z,8.3nm,1.0s,mb4.3
SJPF Ste Jean 28.41 176 *e*P **P 23 19 01.6 -0.6**
SJPF pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
EPF Esparros 28.54 174 *e*P **P 23 19 02.8 -0.6**
comp=Z,61nm,0.9s,mb5.0
EPF Esparros 28.54 174 *e*P **P 23 19 02.8 -0.6**
comp=Z,30nm,0.9s,mb5.0
EPF Esparros 28.54 174 *e*P **P 23 19 02.8 -0.6**
EPF pmax pmax
comp=Z,30nm,0.9s,mb5.0
BZS Buzias 28.62 141 ⇓P **P 23 19 05.4 +1.3**
BZS Buzias 28.62 141 ⇓*i*P **P 23 19 05.3 +1.2**
BZS Buzias 28.62 141 P **P 23 19 05.4 +1.3**
LMR La Mourre 28.62 164 *e*P **P 23 19 04.2 +0.1**
LMR La Mourre 28.62 164 *e*P **P 23 19 04.2 +0.1**
ETSF Etsaut 28.64 175 *e*P **P 23 19 03.9 -0.4**
comp=Z,41nm,1.3s,mb4.7
ETSF Etsaut 28.64 175 *e*P **P 23 19 03.9 -0.4**
comp=Z,20nm,1.3s,mb4.7
ETSF Etsaut 28.64 175 *e*P **P 23 19 03.9 -0.4**
ETSF pmax pmax
comp=Z,20nm,1.3s,mb4.7
VIEF Viey 28.67 174 *e*P **P 23 19 05.9 +1.3**
VIEF Viey 28.67 174 *e*P **P 23 19 05.6 +1.0**
VIEF Viey 28.67 174 *e*P **P 23 19 05.9 +1.3**
VRHR Novokhopersk 28.73 111 *e*P **P 23 19 05.0 -0.1**
VRHR pmax pmax
comp=N,10.0nm,0.3s
VRHR pmax pmax
comp=E,8.0nm,0.3s
VRHR pmax pmax
comp=Z,6.0nm,0.3s,mb4.8
VRHR Novokhopersk 28.73 111 *e*P **P 23 19 05.0 -0.1**
RESF Ens 28.76 174 *e*P **P 23 19 07.0 +1.7**
RESF Ens 28.76 174 *e*P **P 23 19 06.7 +1.4**
RESF Ens 28.76 174 *e*P **P 23 19 07.0 +1.7**
VRI Vrincioaia 29.49 134 ⇑P **P 23 19 12.0 +0.2**
VRI Vrincioaia 29.49 134 ⇑*i*P **P 23 19 12.0 +0.2**
VRI Vrincioaia 29.49 134 ⇑*i*P **P 23 19 12.0 +0.2**
ARU Arti 29.54 87 *e*P **P 23 19 12.7 +0.5**
comp=Z,11nm,1.1s,mb4.5
ARU Arti 29.54 87 *d i*P **P 23 19 05.3 -6.9**
ARU S **S 23 23 57.8 -8.6**
ARU pmax pmax
comp=Z,43nm,5.0s
ARU Arti 29.54 87 *e*P **P 23 19 12.6 +0.4**
comp=Z,11nm,1.1s,mb4.5
PGF Pioggiola 29.64 161 *e*P **P 23 19 14.1 +0.9**
PGF Pioggiola 29.64 161 *e*P **P 23 19 14.1 +0.9**
AQU L'Aquila 30.37 154 *e*P **P 23 19 16.6 -3.1**
AQU L'Aquila 30.37 154 ⇑P **P 23 19 19.8 +0.1**

AQU L'Aquila 30.37 154⇑ *i*P P 23 19 19.8 +0.1
AQU L'Aquila 30.37 154⇑ *i*P P 23 19 19.8 +0.1
SCHQ Schefferville 31.03 271 P **P 23 19 25.4 +0.1**
comp=Z,5.4nm,1.0s,mb4.3,baz=52,slow=8.2,SNR=2.8
SCHQ LR LR 23 30 29.5
comp=Z,231nm,18.2s,MS3.9,baz=134,slow=34
SCHQ Schefferville 31.03 271 *e*P **P 23 19 25.5 +0.2**
SCHQ Schefferville 31.03 271 *e*P **P 23 19 25.5 +0.2**
ESDC Sonseca Array 31.81 180 P **P 23 19 32.1 -0.2**
comp=Z,0.5nm,0.6s,mb3.5,baz=10.0,slow=7.0,SNR=4.7
ESDC Sonseca Array 31.81 180 P **P 23 19 32.2 -0.2**
TIXI Tiksi 33.95 25 *e*P **P 23 19 51.6 +0.8**
TIXI pmax pmax
comp=Z,11nm,1.8s,mb4.5
TIXI Tiksi 33.95 25 *e*P **P 23 19 51.6 +0.8**
comp=Z,11nm,1.8s,mb4.5
AKTO Aktyubinsk 34.43 94 LR LR 23 33 47.8
comp=Z,202nm,18.0s,MS3.9,baz=274,slow=36
GOF Gofitskoye 34.57 114 *e*P **P 23 19 56.1 -0.2**
GOF pmax pmax
comp=Z,50nm,1.3s,mb5.3
GOF Gofitskoye 34.57 114 *e*P **P 23 19 56.1 -0.2**
comp=Z,50nm,1.3s,mb5.3
KIV Kislovodsk 35.47 115 *e*P **P 23 20 08.2 +4.0**
KIV pmax pmax
comp=Z,17nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,108nm,14.0s,MS3.8
ABKAR Akbulak array 36.07 93 *e*P **P 23 20 07.1 -2.2**
ABKAR Akbulak array 36.07 93 *e*P **P 23 20 07.1 -2.1**
BRVK Borovoye 36.10 80 *e*P **P 23 20 09.1 -0.3**
comp=Z,4.7nm,0.8s,mb4.5
BRVK Borovoye 36.10 80⇑ *e*P **P 23 20 10.2 +0.8**
BRVK pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BRVK MLR MLR
comp=Z,97nm,17.0s,MS3.6
BRVK Borovoye 36.10 80 *e*P **P 23 20 10.2 +0.8**
comp=Z,97nm,17.0s
BVAR Borovoye Array 36.16 80 P **P 23 20 11.2 +1.3**
comp=Z,2.0nm,0.6s,mb4.2,baz=313,slow=7.4,SNR=16
BVAR Borovoye Array 36.16 80 P **P 23 20 11.2 +1.3**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR Borovoye Array 36.16 80 P **P 23 20 11.2 +1.3**
KEST Kesra 36.42 162 P **P 23 20 12.8 +0.5**
comp=Z,3.0nm,0.8s,mb4.2,baz=301,slow=3.3,SNR=11
KEST Kesra 36.42 162 *e*P **P 23 20 10.4 -2.0**
KEST Kesra 36.42 162 *e*P **P 23 20 10.4 -1.9**
INK Inuvik 36.56 331 *e*P **P 23 20 15.5 +2.3**
INK Inuvik 36.56 331 *e*P **P 23 20 15.5 +2.3**
INK Inuvik 36.56 331 *e*P **P 23 20 15.5 +2.3**
BRTR Keskin Array B 36.96 129 P **P 23 20 18.4 +1.6**
comp=Z,2.6nm,0.8s,mb4.1,baz=332,slow=5.0,SNR=7.7
BRTR LR LR 23 38 09.7
comp=Z,108nm,18.1s,MS3.7,baz=157,slow=41
BRTR Keskin Array B 36.96 129 *c*e**P 23 20 18.5 +1.6**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ISP Isparta 38.01 133 *e*P **P 23 20 23.8 -2.0**
comp=Z,7.3nm,0.8s,mb4.5
ISP Isparta 38.01 133 *e*P **P 23 20 23.8 -2.0**
ISP pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
ISP Isparta 38.01 133 *e*P **P 23 20 23.8 -2.0**
comp=Z,7.3nm,0.8s,mb4.5
YKA Yellowknife Ar 38.17 315 LR LR 23 34 18.3
comp=Z,19nm,19.9s,MS2.9,baz=25,slow=33
MDT Midelt 38.66 181 LR LR 23 38 00.1
comp=Z,85nm,18.7s,MS3.6,baz=335,slow=39
MALT Malatya 39.52 124 *e*P **P 23 20 35.5 -3.0**
comp=Z,10nm,1.0s,mb4.5
MALT Malatya 39.52 124 *e*P **P 23 20 35.5 -3.0**
MALT pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
MALT Malatya 39.52 124 *e*P **P 23 20 35.5 -3.0**
comp=Z,10nm,1.0s,mb4.5
GNI Garni 39.57 115 LR LR 23 37 35.7
comp=Z,90nm,19.5s,MS3.6,baz=163,slow=37
GNI Garni 39.57 115 *e*P **P 23 20 37.8 -1.1**
GNI Garni 39.57 115 *i*P **P 23 20 41.1 +2.2**
GNI Garni 39.57 115 *e*P **P 23 20 37.8 -1.1**
ZALV Zalesovo Beam 39.80 67 P **P 23 20 41.3 +0.7**
comp=Z,0.3nm,0.3s,mb3.5,baz=298,slow=9.7,SNR=2.6
ZALV LR LR 23 40 42.5
comp=Z,49nm,18.6s,MS3.4,baz=68,slow=42
ZALV Zalesovo Beam 39.80 67 P **P 23 20 41.3 +0.7**
BILL Bilibino 40.64 6 *e*P **P 23 20 47.7 +0.3**
BILL *e*SS SS 23 29 54.0 -2.1
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
BILL Bilibino 40.64 6 *e*P **P 23 20 47.7 +0.3**
comp=Z,4.0nm,1.0s,mb4.0
KURK Kurchatov 40.73 75 *e*P **P 23 20 48.8 +0.4**
comp=Z,7.3nm,0.8s,mb4.4
KURK Kurchatov 40.73 75⇑ *e*P **P 23 20 49.4 +1.0**
KURK pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
KURK Kurchatov 40.73 75 *e*P **P 23 20 49.4 +1.0**
comp=Z,10.0nm,1.1s,mb4.4
ILAR Eielson Array 41.75 337 P **P 23 20 56.2 -0.4**
comp=Z,0.8nm,0.7s,mb3.4,baz=15,slow=6.5,SNR=9.0
ILAR Eielson Array 41.75 337 P **P 23 20 56.2 -0.4**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR Eielson Array 41.75 337 P **P 23 20 56.2 -0.4**
BOD Bodaibo 43.95 43 *e*P **P 23 21 13.5 -1.0**
BOD pmax pmax
comp=Z,9.0nm,1.6s,mb4.2
BOD Bodaibo 43.95 43 *e*P **P 23 21 13.5 -1.0**
comp=Z,9.0nm,1.6s,mb4.2
ULM Lac du Bonnet 44.02 293 P **P 23 21 14.0 -1.1**
comp=Z,4.5nm,0.9s,mb4.2,baz=297,slow=6.8,SNR=2.6
ULM LR LR 23 39 24.7
comp=Z,89nm,18.8s,MS3.7,baz=306,slow=36
ULM Lac du Bonnet 44.02 293 *e*P **P 23 21 14.8 -0.4**
ULM Lac du Bonnet 44.02 293 *e*P **P 23 21 14.8 -0.4**
EYMN Ely 44.76 287 P **P 23 21 22.4 +1.4**
EYMN Ely 44.76 287 P **P 23 21 22.4 +1.4**
KKAR Karatay Array 44.92 87 *e*P **P 23 21 22.7 +0.3**
KKAR Karatay Array 44.92 87 *e*P **P 23 21 22.7 +0.3**
MK31 Makanchi Array 45.34 75 *e*P **P 23 21 26.2 +0.5**
MK31 Makanchi Array 45.34 75 *e*P **P 23 21 26.2 +0.5**
MK31 Makanchi Array 45.34 75 *e*P **P 23 21 26.2 +0.5**
MKAR Makanchi Array 45.34 75 P **P 23 21 26.5 +0.8**
comp=Z,0.9nm,0.7s,mb3.7,baz=348,slow=7.0,SNR=11
MKAR LR LR 23 42 53.6
comp=Z,89nm,18.1s,MS3.7,baz=0.9,slow=39
MKAR Makanchi Array 45.34 75 *c*e**P 23 21 26.5 +0.8**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
EKS2 Erkin-Say 46.36 85 *e*P **P 23 21 32.7 -1.1**
comp=Z,82nm,2.8s,mb5.2
EKS2 Erkin-Say 46.36 85 *e*P **P 23 21 32.7 -1.1**
comp=Z,82nm,2.8s,mb5.2
AAK Ala-Archa 46.61 84 P **P 23 21 36.8 +1.0**
comp=Z,0.7nm,0.4s,mb4.0,baz=240,slow=4.1,SNR=6.8
AAK Ala-Archa 46.61 84 *e*P **P 23 21 36.3 +0.5**
comp=Z,6.6nm,1.1s,mb4.5
AAK Ala-Archa 46.61 84⇑ *e*P **P 23 21 38.0 +2.2**
AAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
AAK MLR MLR
comp=Z,65nm,20.0s,MS3.6
AAK Ala-Archa 46.61 84 *e*P **P 23 21 36.3 +0.5**
comp=Z,6.6nm,1.1s,mb4.5
TKM2 Tokmak 2 46.71 83 *e*P **P 23 21 43.9 +7.3**
comp=Z,4.5nm,0.8s,mb4.5
TKM2 Tokmak 2 46.71 83 *e*P **P 23 21 43.9 +7.4**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KBK Karagaybulak 46.74 84 *e*P **P 23 21 43.4 +6.7**
comp=Z,11nm,1.0s,mb4.7
ZAK Zakamensk 48.16 55 *e*P **P 23 21 50.9 +3.2**
ZAK pmax pmax
comp=Z,2.0nm,1.6s,mb3.9
TAM Tamanrasset 48.95 168 *e*P **P 23 21 52.8 -1.3**
comp=Z,0.9nm,0.5s,mb4.1
TAM Tamanrasset 48.95 168 *e*P **P 23 21 52.8 -1.3**
TAM pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
TAM Tamanrasset 48.95 168 *e*P **P 23 21 52.8 -1.3**
comp=Z,0.9nm,0.5s,mb4.1
ECSD EROS Data Cent 50.10 289 *e*P **P 23 22 01.5 -1.2**
comp=Z,5.7nm,0.9s,mb4.6
ECSD EROS Data Cent 50.10 289 *e*P **P 23 22 01.5 -1.2**
comp=Z,5.7nm,0.9s,mb4.6
SONM Songino Array 51.31 54 P **P 23 22 12.4 +0.7**
comp=Z,1.3nm,1.0s,mb3.8,baz=324,slow=7.3,SNR=5.6
SONM PcP PcP 23 23 26.9 +0.5
comp=Z,0.3nm,0.3s,baz=339,slow=3.6,SNR=4.3
SONM Songino Array 51.31 54 P **P 23 22 12.4 +0.7**
SONM 23 23 26.9
SONM pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 51.31 54 P **P 23 22 12.4 +0.7**
SONM Songino Array 51.31 54 PcP PcP 23 23 26.9 +0.5
ULN Ulaanbaatar 51.45 54 *e*P **P 23 22 13.2 +0.5**
ULN Ulaanbaatar 51.45 54 *e*P **P 23 22 13.2 +0.4**
ULN Ulaanbaatar 51.45 54 *e*P **P 23 22 13.2 +0.4**
SLMT Seeley Lake 51.69 305 *e*P **P 23 22 13.9 -0.7**
comp=Z,3.6nm,0.9s,mb4.3
SLMT Seeley Lake 51.69 305 *e*P **P 23 22 13.9 -0.7**
comp=Z,3.6nm,0.9s,mb4.3
RSSD Black Hills 51.95 296 *e*P **P 23 22 17.8 +1.2**
RSSD Black Hills 51.95 296 *e*P **P 23 22 17.8 +1.3**
RSSD Black Hills 51.95 296 *e*P **P 23 22 17.8 +1.3**
KBL Kabul 52.24 94 P **P 23 22 18.6 -0.3**
KBL Kabul 52.24 94 P **P 23 22 18.6 -0.2**
KBL Kabul 52.24 94 P **P 23 22 18.6 -0.2**
HWUT Hardware Ranch 56.39 301 P **P 23 22 49.5 +0.6**
comp=Z,3.1nm,1.0s,mb4.3
HWUT Hardware Ranch 56.39 301 P **P 23 22 49.5 +0.6**
comp=Z,3.1nm,1.0s,mb4.3
GTA Gaotai 57.31 63 *e*P **P 23 22 57.3 +1.8**
GTA pP pP 23 23 01.5 +2.8
GTA pmax pmax
comp=Z,7.0nm,1.6s,mb4.4
MIAR Mount Ida 57.59 282 P **P 23 22 56.2 -1.2**
comp=Z,12nm,1.2s,mb4.8
MIAR Mount Ida 57.59 282 P **P 23 22 56.3 -1.2**
MIAR pmax pmax
comp=Z,12nm,1.2s,mb4.8
MIAR Mount Ida 57.59 282 P **P 23 22 56.3 -1.2**
comp=Z,12nm,1.2s,mb4.8
DUG Dugway 58.05 301 *e*P **P 23 23 00.4 -0.3**
comp=Z,2.3nm,1.0s,mb4.2
DUG Dugway 58.05 301 *e*P **P 23 23 00.4 -0.3**
DUG pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
DUG Dugway 58.05 301 *e*P **P 23 23 00.4 -0.3**
comp=Z,2.3nm,1.0s,mb4.2
TORD Torodi Ar. Bea 58.34 174 P **P 23 23 02.0 -0.9**
comp=Z,6.1nm,0.8s,mb4.7,baz=355,slow=6.7,SNR=22
TORD LR LR 23 47 55.5
comp=Z,87nm,18.1s,MS3.9,baz=60,slow=36
PV01 Paradox Valley 58.78 297 *e*P **P 23 23 05.2 -0.6**
comp=Z,429nm,0.9s
PV01 Paradox Valley 58.78 297 *e*P **P 23 23 05.2 -0.6**
comp=Z,429nm,0.9s
WMOK Wichita Mounta 59.02 287 *e*P **P 23 23 05.8 -1.7**
comp=Z,6.9nm,1.1s,mb4.6
WMOK Wichita Mounta 59.02 287 *e*P **P 23 23 05.8 -1.7**
WMOK pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
WMOK Wichita Mounta 59.02 287 *e*P **P 23 23 05.8 -1.7**
comp=Z,6.8nm,1.1s,mb4.6
HHC Hu-ho-hao-te 59.16 53 *e*P **P 23 23 08.8 +0.4**
HHC pP pP 23 23 13.5 +1.9
HHC sP sP 23 23 15.8 +3.0
HHC PcP PcP 23 23 57.0 +0.2
HHC PP PP 23 25 21.5 +2.9
HHC ScP ScP 23 27 56.5 -0.5
HHC S **S** **23 31 13.5 -1.9**
HHC sS sS 23 31 21.0 +0.3
HHC ScS ScS 23 32 54.0 -4.0
HHC SS SS 23 35 08.5 -0.3
HHC pmax pmax
comp=Z,16nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,210nm,6.0s
HHC LR LR
comp=N,220nm,17.5s,MS4.5
HHC LR LR
comp=E,220nm,16.9s,MS4.5
HHC LR LR
comp=Z,190nm,16.5s,MS4.3
CN2 Changchun 59.59 41 *e*P **P 23 23 11.3 0.0**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
ANMO Albuquerque 61.13 294 *e*P **P 23 23 22.5 +0.5**
ANMO Albuquerque 61.13 294 *e*P **P 23 23 22.5 +0.5**
ANMO Albuquerque 61.13 294 *e*P **P 23 23 22.5 +0.5**
NVAR Mina Array Bea 61.17 305 P **P 23 23 21.4 -0.8**
comp=Z,0.5nm,0.7s,mb3.7,baz=300,slow=3.8,SNR=3.1
NVAR Mina Array Bea 61.17 305 P **P 23 23 21.4 -0.8**
NVAR Mina Array Bea 61.17 305 P **P 23 23 21.4 -0.8**
LAZ Ladron 61.84 294 *e*P **P 23 23 26.0 -0.8**
comp=Z,3.2nm,1.4s,mb4.3
LAZ Ladron 61.84 294 *e*P **P 23 23 26.0 -0.8**
comp=Z,3.2nm,1.4s,mb4.3
DBIC Dimbokro 64.67 181 P **P 23 23 44.0 -1.7**
comp=Z,3.2nm,0.8s,mb4.4,baz=45,slow=4.3,SNR=3.1
DBIC Dimbokro 64.67 181 P **P 23 23 43.9 -1.9**
DBIC Dimbokro 64.67 181 P **P 23 23 44.0 -1.7**
DBIC pmax pmax
comp=Z,3.0nm,0.8s
DBIC Dimbokro 64.67 181 P **P 23 23 43.9 -1.8**
TIC Toumodi 64.70 181 *e*P **P 23 23 49.0 +3.1**
comp=Z,4.2nm,0.2s,mb5.1
TIC Toumodi 64.70 181 *e*P **P 23 23 49.0 +3.1**
KIC Kosan Boka 64.98 181 *e*P **P 23 23 46.3 -1.4**
comp=Z,18nm,0.9s,mb5.1
KIC Kosan Boka 64.98 181 *e*P **P 23 23 46.3 -1.4**
comp=Z,18nm,0.9s,mb5.1
LIC Lamto 65.12 181 *e*P **P 23 23 47.1 -1.5**
comp=Z,30nm,1.1s,mb5.2
LIC Lamto 65.12 181 *e*P **P 23 23 48.7 +0.1**
comp=Z,26nm,1.1s,mb4.9
LIC Lamto 65.12 181 *e*P **P 23 23 48.7 +0.1**
comp=Z,13nm,1.1s,mb4.9
TXAR Lajitas Array 65.54 289 P **P 23 23 49.5 -1.7**
comp=Z,0.8nm,0.7s,mb3.9,baz=54,slow=4.2,SNR=15
TXAR Lajitas Array 65.54 289 P **P 23 23 49.6 -1.7**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 65.54 289 P **P 23 23 49.6 -1.7**
comp=Z,1.0nm,0.7s,mb4.0
KSRS Korea Array 66.20 40 P **P 23 23 54.5 -0.9**
comp=Z,0.9nm,0.5s,mb4.0,baz=355,slow=6.1,SNR=5.7
KSRS Korea Array 66.20 40 P **P 23 23 54.6 -0.8**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
KSRS Korea Array 66.20 40 P **P 23 23 54.6 -0.8**
comp=Z,1.0nm,0.5s,mb4.1
MJAR Matsushiro Arr 69.03 32 P **P 23 24 12.8 -0.5**
comp=Z,0.9nm,0.5s,mb3.9,baz=343,slow=6.5,SNR=4.4
MJAR Matsushiro Arr 69.03 32 P **P 23 24 12.8 -0.5**
MJAR Matsushiro Arr 69.03 32 P **P 23 24 12.9 -0.4**
MJAR pmax pmax
comp=Z,1.0nm,0.5s
MJAR Matsushiro Arr 69.03 32 P **P 23 24 12.9 -0.4**
comp=Z,1.0nm,0.5s,mb4.0
MSKU Masuku 73.83 162 P **P 23 24 41.2 -1.2**
comp=Z,6.3nm,0.9s,mb4.5,baz=184,slow=19,SNR=3.6
MSKU Masuku 73.83 162 P **P 23 24 41.2 -1.2**
CMAR Chiang Mai Arr 76.67 72 P **P 23 24 59.3 +0.5**
comp=Z,1.6nm,0.5s,mb4.2,baz=321,slow=5.7,SNR=11
CMAR Chiang Mai Arr 76.67 72 P **P 23 24 59.3 +0.5**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 76.67 72 P **P 23 24 59.3 +0.5**
PLCA Paso Flores 121.28 235 PKP PKPdf 23 32 00.4 +0.4
comp=Z,2.6nm,0.9s,baz=317,slow=1.0,SNR=3.8
PLCA Paso Flores 121.28 235 PKIKP PKPdf 23 32 00.4 +0.4
PLCA pmax pmax
comp=Z,3.0nm,0.9s
PLCA Paso Flores 121.28 235 PKIKP PKPdf 23 32 00.4 +0.4
WRA Warramunga Arr 123.10 48 PKP PKPdf 23 32 03.6 -0.5
comp=Z,0.3nm,0.3s,baz=347,slow=4.7,SNR=4.4
WRA Warramunga Arr 123.10 48 PKIKP PKPdf 23 32 03.6 -0.5
WRA Warramunga Arr 123.10 48 PKIKP PKPdf 23 32 03.6 -0.5
ASAR Alice Springs 126.57 50 PKP PKPdf 23 32 08.8 -1.9
comp=Z,0.4nm,0.7s,baz=5.9,slow=2.9,SNR=5.3
ASAR Alice Springs 126.57 50 PKIKP PKPdf 23 32 08.8 -1.9
ASAR Alice Springs 126.57 50 PKIKP PKPdf 23 32 08.8 -1.9
MAW Mawson 145.73 141 PKPbc PKPbc 23 32 43.0 -2.0
comp=Z,0.7nm,0.5s,baz=301,slow=5.9,SNR=2.9

*IDC **28** 23:18:18.9±1.0, 13°.30N×120°.30E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.8/20, mbtmp4.0/5, Error ellipse: s-maj=21.5km s-min=11.6km az=117.0*
*NEIC **28** 23:18:20.3±0.4, 13°.34N×120°.50E, h10km, mb4.2/5, Error ellipse: s-maj=10.1km s-min=5.8km az=82.0*
*ISCJB **28** 23:18:21.2±2.2, 13°.39N±0°.08×120°.5E±0°.1, h32km±16km, mb4.1/10, Error ellipse: s-maj=22.0km s-min=10.3km az=157.8*
ISC 28 23:18:21.2±2.4, 13°.37N±0°.07×120°.5E±0°.1, h16km±15km, n20, σ0°.74/20, mb4.1/10, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.83**	**28**	Pg	**Pg**	**23 18 37.4**	**0.0**
	362nm,0.3s,baz=167,slow=7.6,SNR=9.7						
TGY				Lg		23 18 53.2	
	420nm,0.3s,baz=358,slow=22,SNR=20						
TGY	**Tagaytay City**	**0.83**	**28⇓**	*e*P	**Pb**	**23 18 37.5**	**+0.2**
TPUB	**Ta-pu**	**9.88**	**1**	P	**Pn**	**23 20 42.7**	**+0.1**
TATO	**Taipei**	**11.59**	**4**	*e*P	**Pn**	**23 21 05.8**	**-0.2**
ENH	**Enshi**	**19.68**	**331**	*e*P	**Pn**	**23 22 48.5**	**-2.6**
	5.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**21.36**	**287**	P	**P**	**23 23 09.8**	**+1.8**
	1.2nm,0.3s,mb3.7,baz=99,slow=9.8,SNR=8.3						
MAJO	**Matsushiro**	**28.00**	**31**	P	**P**	**23 24 12.0**	**+0.6**
KAKA	**Kakadu**	**28.47**	**155**	P	**P**	**23 24 15.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**31.67**	**171**	*e*P	**P**	**23 24 42.8**	**-1.2**
	1.4nm,0.8s,mb3.8						
MBWA	**Marble Bar**	**34.32**	**181**	*e*P	**P**	**23 25 06.4**	**-0.7**
	3.8nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**35.78**	**157**	P	**P**	**23 25 19.9**	**+0.2**
	2.1nm,0.5s,mb4.3,baz=336,slow=9.5,SNR=9.5						
ULN	**Ulaanbaatar**	**36.19**	**345**	*e*P	**P**	**23 25 22.9**	**0.0**
	0.9nm,0.3s,mb4.2						
SONM	**Songino Array**	**36.33**	**344**	P	**P**	**23 25 24.6**	**+0.4**
	1.3nm,0.5s,mb4.1,baz=166,slow=8.5,SNR=9.3						
ASAR	**Alice Springs**	**39.06**	**160**	P	**P**	**23 25 48.2**	**+0.7**
	3.4nm,0.5s,mb4.4,baz=338,slow=6.9,SNR=51						
CTAO	**Charters Tower**	**41.78**	**142**	P	**P**	**23 26 10.3**	**+0.2**
WAKE	**Wake Island**	**44.55**	**76**	*e*P	**P**	**23 26 32.6**	**-0.1**
	185nm,1.1s						
MK31	**Makanchi Array**	**46.20**	**324**	*e*P	**P**	**23 26 45.6**	**+0.2**
MKAR	**Makanchi Array**	**46.20**	**324**	P	**P**	**23 26 45.5**	**+0.2**
	0.2nm,0.3s,mb3.5,baz=121,slow=8.1,SNR=8.1						
ZALV	**Zalesovo Beam**	**49.28**	**333**	P	**P**	**23 27 08.4**	**-0.7**
	0.4nm,0.3s,mb3.9,baz=122,slow=7.0,SNR=3.0						
KURK	**Kurchatov**	**50.38**	**327**	*e*P	**P**	**23 27 17.4**	**-0.1**
	2.2nm,0.5s,mb4.4						

*ISCJB **28** 23:21:02.3±0.5, 36°.99N±0°.03×29°.14E±0°.04, h4km±7km, Error ellipse: s-maj=6.1km s-min=4.7km az=24.1*
*ISK **28** 23:21:02.1, 36°.98N×29°.16E, h10km, MD2.9*
*DDA **28** 23:21:02.4, 37°.00N×29°.15E, h7km±3km, Md3.0*
*CSEM **28** 23:21:02.5±0.2, 36°.99N×29°.16E, h8km, MD2.9, Error ellipse: s-maj=3.6km s-min=3.3km az=107.0*
ISC 28 23:21:02.8±0.5, 36°.98N±0°.03×29°.15E±0°.04, h9km±6km, n30, σ0°.65/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**58**	*e*PG	**Pg**	**23 21 08.6**	**-0.7**
GLHS				*e*SG	**Sg**	**23 21 14.4**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.33**	**58**	*e*Pg	**Pg**	**23 21 08.6**	**-0.6**
GLHS				*e*Sg	**Sg**	**23 21 14.4**	**+0.8**
FETY	**Fethiye**	**0.35**	**189**	*e*PG	**Pg**	**23 21 08.9**	**-0.7**
FETY				*e*SG	**Sg**	**23 21 15.1**	**+0.8**
FETY	**Fethiye**	**0.35**	**189**	*e*Pg	**Pg**	**23 21 08.9**	**-0.7**
FETY				*e*Sg	**Sg**	**23 21 15.1**	**+0.8**
GOLH	**Golhisar**	**0.42**	**52**	*i*P	**Pg**	**23 21 09.7**	**-1.2**
GOLH				*i*S	**Sg**	**23 21 16.8**	**+0.5**
GOLH	**Golhisar**	**0.42**	**52**	*i*P	**Pg**	**23 21 09.7**	**-1.2**
GOLH				*i*S	**Sg**	**23 21 16.8**	**+0.4**
TURN	**Turunc**	**0.45**	**256**	*i*P	**Pg**	**23 21 17.2**	**+5.7**
TURN				*i*S	**Sg**	**23 21 27.8**	**+10**
TURN	**Turunc**	**0.45**	**256**	*i*P	**Pg**	**23 21 17.2**	**+5.7**
TURN				*i*S	**Sg**	**23 21 27.8**	**+10**
ELL	**Elmali**	**0.65**	**111**	*e*PG	**Pg**	**23 21 15.4**	**+0.1**
ELL	**Elmali**	**0.65**	**111**	*e*Pg	**Pg**	**23 21 15.4**	**+0.1**
YER	**Yerkesik**	**0.71**	**283**	*e*PG	**Pg**	**23 21 16.4**	**0.0**
YER	**Yerkesik**	**0.71**	**283**	*e*Pg	**Pg**	**23 21 16.4**	**0.0**
DNZL	**Cakiroluk**	**0.71**	**353**	*i*P	**Pg**	**23 21 15.6**	**-0.9**
DNZL				*i*S	**Sg**	**23 21 26.6**	**+0.9**
DNZL	**Cakiroluk**	**0.71**	**353**	*i*P	**Pg**	**23 21 15.6**	**-0.9**
DNZL				*i*S	**Sg**	**23 21 26.6**	**+0.8**
DENT	**Denizli**	**0.78**	**353**	*e*PG	**Pg**	**23 21 17.6**	**-0.1**
DENT	**Denizli**	**0.78**	**353**	*e*Pg	**Pg**	**23 21 17.6**	**-0.1**
AKAS	**Kas**	**0.83**	**154**	*i*P	**Pg**	**23 21 19.2**	**+0.4**
AKAS				*i*S	**Sg**	**23 21 34.3**	**+4.7**
AKAS	**Kas**	**0.83**	**154**	*i*P	**Pg**	**23 21 19.2**	**+0.4**
AKAS				*i*S	**Sg**	**23 21 34.3**	**+4.7**
MLSB	**Milas**	**1.14**	**286**	*e*PN	**Pg**	**23 21 24.5**	**-0.2**
MLSB	**Milas**	**1.14**	**286**	*e*Pn	**Pg**	**23 21 24.5**	**-0.2**
BCK	**Bucak**	**1.25**	**67**	*e*PN	**Pn**	**23 21 26.0**	**-0.4**
BCK	**Bucak**	**1.25**	**67**	*e*Pn	**Pn**	**23 21 26.0**	**-0.4**
DAT	**Datca**	**1.28**	**259**	*e*PN	**Pn**	**23 21 27.6**	**+0.6**
DAT	**Datca**	**1.28**	**259**	*e*Pn	**Pn**	**23 21 27.6**	**+0.7**
KHAL	**Karahalli**	**1.41**	**11**	*i*P	**Pn**	**23 21 29.1**	**+0.4**
KHAL				*i*S	**Sb**	**23 21 48.3**	**+0.9**
KHAL	**Karahalli**	**1.41**	**11**	*i*P	**Pn**	**23 21 29.1**	**+0.4**
KHAL				*i*S	**Sb**	**23 21 48.3**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.56**	**71**	*e*PN	**Pn**	**23 21 30.3**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.56**	**71**	*e*Pn	**Pn**	**23 21 30.3**	**-0.4**
KULA	**Kula-Manisa**	**1.58**	**346**	*e*PN	**Pn**	**23 21 30.1**	**-0.9**
KULA	**Kula-Manisa**	**1.58**	**346**	*e*Pn	**Pn**	**23 21 30.1**	**-0.9**

*IDC **28** 23:25:47.4±1.2, 13°.26N×120°.28E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/21, mbtmp3.5/4, Error ellipse: s-maj=25.6km s-min=12.2km az=115.0*
*NEIC **28** 23:25:48.5±0.3, 13°.36N×120°.54E, h10km, mb4.2/3, Error ellipse: s-maj=7.9km s-min=5.5km az=91.0*
*ISCJB **28** 23:25:50.9±1.4, 13°.34N±0°.05×120°.53E±0°.08, h43km±13km, mb3.8/7, Error ellipse: s-maj=12.9km s-min=9.1km az=175.9*
ISC 28 23:25:52.1±1.4, 13°.37N±0°.05×120°.58E±0°.08, h35km±14km, n32, σ0°.48/32, mb3.8/7, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.81**	**25**	Pg	**Pn**	**23 26 07.3**	**+0.3**
	106nm,0.3s,baz=148,slow=9.8,SNR=4.2						
TGY				Lg		23 26 22.4	
	218nm,0.3s,baz=320,slow=23,SNR=9.6						
KKM	**Kota Kinabalu**	**8.46**	**211**	Pn	**Pn**	**23 27 52.1**	**-0.1**
KULM	**Kulim**	**21.23**	**250**	P	**P**	**23 30 34.6**	**-0.5**
GUMO	**Guam**	**23.62**	**87**	P	**P**	**23 31 00.1**	**-0.1**
INCN	**Inchon**	**24.61**	**12**	*e*P	**P**	**23 31 09.3**	**+0.2**
BJT	**Baijiatuau**	**26.83**	**352**	P	**P**	**23 31 29.4**	**+0.3**
MAJO	**Matsushiro**	**27.97**	**31**	*e*P	**P**	**23 31 39.6**	**+0.2**
	1.4nm,0.3s,mb4.1						
FITZ	**Fitzroy Crossi**	**31.67**	**171**	*e*P	**P**	**23 32 12.3**	**0.0**
MDJ	**Mudanjiang**	**32.08**	**12**	*e*P	**P**	**23 32 14.5**	**-1.1**
PMG	**Port Moresby**	**34.76**	**129**	*e*P	**P**	**23 32 39.2**	**-0.1**
WRA	**Warramunga Arr**	**35.76**	**157**	P	**P**	**23 32 47.9**	**0.0**
	0.6nm,0.5s,mb3.8,baz=336,slow=9.7,SNR=3.5						
WB2	**Warramunga Arr**	**35.77**	**157**	*e*P	**P**	**23 32 47.9**	**-0.1**
ULN	**Ulaanbaatar**	**36.19**	**345**	*e*P	**P**	**23 32 51.6**	**+0.3**
SONM	**Songino Array**	**36.34**	**344**	P	**P**	**23 32 52.6**	**0.0**
	0.2nm,0.3s,mb3.5,baz=163,slow=11,SNR=3.7						
YSS	**Yuzh-Sakhalins**	**38.30**	**25**	P	**P**	**23 33 09.0**	**-0.2**
ASAR	**Alice Springs**	**39.05**	**160**	P	**P**	**23 33 16.5**	**+0.8**
	0.9nm,0.5s,mb3.8,baz=340,slow=7.1,SNR=16						
MKAR	**Makanchi Array**	**46.23**	**324**	P	**P**	**23 34 14.1**	**+0.3**
	0.2nm,0.6s,mb3.2,baz=140,slow=7.0,SNR=3.2						
TKM2	**Tokmak 2**	**48.

*NAO **28** 23:34:47.6±1.4, 71°.25N×4°.51W*
*IDC **28** 23:34:49.8±0.8, 71°.29N×4°.39W, h0km, mb3.7/10, mb1 3.9/15, mb1mx3.8/30, mbtmp3.8/15, ML3.7/5, MS3.6/19, Ms1 3.6/19, ms1mx3.5/39, Error ellipse: s-maj=18.3km s-min=14.6km az=31.0*
*CSEM **28** 23:34:50.3±0.2, 71°.37N×3°.76W, h2km, mb4.2/23, Ms3.4, Error ellipse: s-maj=5.8km s-min=3.9km az=105.0*
*ISCJB **28** 23:34:50.2±0.4, 71°.42N±0°.03×3°.5W±0°.1, h10km, mb4.0/34, MS3.5/19, Error ellipse: s-maj=6.6km s-min=4.4km az=19.2*
*NEIC **28** 23:34:51.6±0.3, 71°.37N×3°.81W, h10km, mb4.1/24, MS3.5/2, Error ellipse: s-maj=5.7km s-min=4.3km az=99.0*
*BER **28** 23:34:52.4±2.7, 71°.43N×4°.40W, h17km±34km, ML2.8*
ISC 28 23:34:51.9±0.3, 71°.37N±0°.03×3°.7W±0°.1, h10km, n235, σ0.97/234, mb4.0/34, MS3.5/19, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.60**	**258**	Pg	**Pg**	**23 35 14.0**	**-8.6**
JMIC				Lg		23 35 29.0	
JMIC	**Jan Mayen**	**1.60**	**258**	*e*P	**Pn**	**23 35 15.7**	**-4.5**
JMIC	**Jan Mayen**	**1.60**	**258**	Pn	**Pn**	**23 35 14.4**	**-5.9**
	6.9nm,0.3s,baz=150,slow=14,SNR=3.6						
JMIC				Sn	**Sn**	**23 35 27.3**	**-14**
	13nm,0.3s,baz=198,slow=6.4,SNR=3.0						
JMIC				LR	LR	23 35 40.1	
	comp=Z,750nm,21.1s,baz=159,slow=37						
JMIC	**Jan Mayen**	**1.60**	**258**	*e*P	**Pn**	**23 35 15.7**	**-4.5**
	SNR=55						
DAG	**Danmarks Havn**	**6.78**	**330**	*i* P	**Pn**	**23 36 25.5**	**-5.7**
	92nm,0.7s						
STEI	**Steigen**	**7.44**	**108**	*e*P	**Pn**	**23 36 40.0**	**-0.3**
TRO	**Tromso**	**7.75**	**92**	*e*P	**Pn**	**23 36 42.5**	**-2.1**
TRO				*e*S	**Sn**	**23 38 05.9**	**-6.4**
TRO	**Tromso**	**7.75**	**92**	*i* P	**Pn**	**23 36 43.0**	**-1.6**
TRO	**Tromso**	**7.75**	**92**	*i* P	**Pn**	**23 36 43.0**	**-1.6**
KONS	**Konsvik**	**7.77**	**121**	*e*P	**Pn**	**23 36 44.1**	**-0.7**
KONS				*e*S	**Sn**	**23 38 05.8**	**-6.9**
KONS				AML	AML	23 38 09.2	
	comp=Z,7.9nm,0.5s						
FLOS	**Flostrand**	**7.96**	**121**	*e*P	**Pn**	**23 36 46.8**	**-0.6**
FLOS				AML	AML	23 38 15.2	
	comp=Z,13nm,0.4s						
MOR8	**Moi Rana**	**8.38**	**120**	*e*P	**Pn**	**23 36 53.5**	**+0.3**
MOR8				*e*S	**Sn**	**23 38 22.4**	**-5.2**
MOR8				AML	AML	23 38 26.6	
	comp=Z,8.3nm,0.3s						
MOR8	**Moi Rana**	**8.38**	**120**	*e*P	**Pn**	**23 36 53.5**	**+0.4**
	SNR=51						
KBS	**Kingsbay**	**8.54**	**21**	Pn	**Pn**	**23 36 54.4**	**-0.9**
KBS	**Kingsbay**	**8.54**	**21**	*e*Pn	**Pn**	**23 36 55.1**	**-0.2**
KBS	**Kingsbay**	**8.54**	**21**	*e*Pn	**Pn**	**23 36 55.1**	**-0.3**
SPB4	**Spitsbergen Ar**	**8.57**	**28**	*e*Pn	**Pn**	**23 36 55.9**	**+0.2**
SPB4				*e*Sn	**Sn**	**23 38 33.2**	**+1.0**
SPB4	**Spitsbergen Ar**	**8.57**	**28**	*e*Pn	**Pn**	**23 36 55.9**	**+0.2**
SPB4				*e*Sn	**Sn**	**23 38 33.2**	**+1.0**
SPA0	**Spitsbergen Ar**	**8.57**	**28**	Pn	**Pn**	**23 36 55.8**	**0.0**
	baz=221,slow=16						
SPA0	**Spitsbergen Ar**	**8.57**	**28**	Pn	**Pn**	**23 36 55.8**	**0.0**
	baz=221,slow=15,SNR=9.0						
SPITS	**Spitsbergen Ar**	**8.57**	**28**	Pn	**Pn**	**23 36 56.2**	**+0.4**
	baz=213,slow=15,SNR=68						
SPITS	**Spitsbergen Ar**	**8.57**	**28**	Pn	**Pn**	**23 36 56.2**	**+0.4**
NSS	**Namsos**	**9.02**	**132**	*e*P	**Pn**	**23 37 00.2**	**-1.7**
NSS	**Namsos**	**9.02**	**132**	*e*P	**Pn**	**23 37 00.2**	**-1.8**
	SNR=51						
KTK1	**Kautokeino**	**9.40**	**92**	*e*P	**Pn**	**23 37 06.7**	**-0.5**
KTK1	**Kautokeino**	**9.40**	**92**	*i* P	**Pn**	**23 37 07.0**	**-0.2**
KTK1	**Kautokeino**	**9.40**	**92**	*i* P	**Pn**	**23 37 07.0**	**-0.2**
ARA0	**ARCESS Array S**	**9.91**	**87**	Pn	**Pn**	**23 37 13.5**	**-0.6**
	baz=281,slow=11						
ARA0	**ARCESS Array S**	**9.91**	**87**	Pn	**Pn**	**23 37 13.5**	**-0.6**
	baz=281,slow=11,SNR=4.9						
ARCES	**ARCESS Array B**	**9.91**	**87**	Pn	**Pn**	**23 37 13.4**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=294,slow=12,SNR=14						
ARCES				LR	LR	23 40 28.0	
	comp=Z,320nm,19.8s,baz=241,slow=33						
ARCES	**ARCESS Array B**	**9.91**	**87**	Pn	**Pn**	**23 37 13.4**	**-0.7**
KEV	**Kevo**	**10.30**	**84**	*e*Pn	**Pn**	**23 37 17.4**	**-2.0**
	comp=Z,33nm,1.2s						
KEV	**Kevo**	**10.30**	**84**	*e*p	**Pn**	**23 37 18.7**	**-0.7**
	comp=Z,1.7nm,0.3s						
KEV	**Kevo**	**10.30**	**84**	*e*Pn	**Pn**	**23 37 17.5**	**-1.9**
	comp=Z,33nm,1.2s						
KEV	**Kevo**	**10.30**	**84**	*e*P	**Pn**	**23 37 18.7**	**-0.7**
	comp=Z,1.7nm,0.3s						
SUMG	**Summit**	**10.73**	**293**	*e*P	**Pn**	**23 37 22.6**	**-2.7**
	comp=Z,11nm,0.9s						
SUMG	**Summit**	**10.73**	**293**	*i* P	**Pn**	**23 37 22.5**	**-2.8**
	comp=Z,8.0nm,0.8s						
HYA	**Hoyanger**	**10.98**	**154**	*e*Pn	**Pn**	**23 37 28.6**	**-0.1**
HYA	**Hoyanger**	**10.98**	**154**	*e*Pn	**Pn**	**23 37 28.6**	**-0.1**
	SNR=55						
NB2	**NORSAR Subarra**	**11.94**	**143**	Pn	**Pn**	**23 37 40.5**	**-1.4**
	baz=329,slow=14						
NB2	**NORSAR Subarra**	**11.94**	**143**	Pn	**Pn**	**23 37 40.5**	**-1.5**
	baz=329,slow=13,SNR=7.4						
NOA	**NORSAR Array B**	**11.94**	**143**	Pn	**Pn**	**23 37 40.4**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=333,slow=12,SNR=3.7						
NOA				LR	LR	23 42 06.9	
	comp=Z,426nm,19.8s,baz=335,slow=36						
NOA	**NORSAR Array B**	**11.94**	**143**	Pn	**Pn**	**23 37 40.4**	**-1.5**
NOA				LR	LR	23 42 06.9	
NOA	**NORSAR Array B**	**11.94**	**143**	Pn	**Pn**	**23 37 40.4**	**-1.6**
NAO01	**NORSAR Array S**	**12.06**	**144**	*e*Pn	**Pn**	**23 37 42.7**	**-0.9**
NAO01	**NORSAR Array S**	**12.06**	**144**	*e*Pn	**Pn**	**23 37 42.7**	**-0.9**
KONO	**Kongsberg**	**12.95**	**149**	*e*Pn	**Pn**	**23 37 55.1**	**-0.6**
KONO	**Kongsberg**	**12.95**	**149**	*e*Pn	**Pn**	**23 37 55.1**	**-0.6**
HFS	**Hagfors**	**13.28**	**139**	Pn	**Pn**	**23 37 59.5**	**-0.7**
	baz=336,slow=11						
HFS	**Hagfors**	**13.28**	**139**	Pn	**Pn**	**23 37 59.7**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=345,slow=11,SNR=24						
HFS				Sn	**Sn**	**23 40 23.0**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=357,slow=20,SNR=4.6						
HFS				LR	LR	23 42 48.5	
	comp=Z,669nm,19.6s,baz=252,slow=36						
HFS	**Hagfors**	**13.28**	**139**	Pn	**Pn**	**23 37 59.7**	**-0.4**
KAF	**Kangasniemi**	**14.86**	**113**	*e*p	**Pn**	**23 38 20.0**	**-1.7**
FIA0	**FINESS Array S**	**15.32**	**115**	P	**Pn**	**23 38 26.6**	**-1.2**
	baz=311,slow=16						
FINES	**FINESS Array B**	**15.32**	**115**	Pn	**Pn**	**23 38 25.9**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=305,slow=6.7,SNR=8.3						
FINES				LR	LR	23 43 37.6	
	comp=Z,389nm,18.6s,baz=180,slow=34						
FINES	**FINESS Array B**	**15.32**	**115**	Pn	**Pn**	**23 38 25.9**	**-1.9**
FINES				LR	LR	23 43 37.6	
FINES	**FINESS Array B**	**15.32**	**115**	Pn	**Pn**	**23 38 25.9**	**-1.9**
JOF	**Joensuu**	**15.77**	**105**	*e*p	**Pn**	**23 38 31.3**	**-2.3**
	comp=Z,0.7nm,0.3s						
EKA	**Eskdalemuir Ar**	**16.11**	**179**	Pn	**Pn**	**23 38 36.4**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=354,slow=13,SNR=8.6						
EKA	**Eskdalemuir Ar**	**16.11**	**179**	Pn	**Pn**	**23 38 36.4**	**-1.6**
ESK	**Eskdalemuir**	**16.12**	**179**	*e*Pn	**Pn**	**23 38 36.9**	**-1.4**
	comp=Z,9.9nm,0.7s						
ESK	**Eskdalemuir**	**16.12**	**179**	*e*Pn	**Pn**	**23 38 36.9**	**-1.4**
	comp=Z,9.9nm,0.7s						
GKP	**Gorka Klasztor**	**20.39**	**142**	*e*P	**P**	**23 39 29.7**	**+1.3**
GKP	**Gorka Klasztor**	**20.39**	**142**	*e*P	**P**	**23 39 29.7**	**+1.3**
RUE	**Ruedersdorf**	**20.51**	**148**	*e*P	**P**	**23 39 28.7**	**-1.0**
RUE	**Ruedersdorf**	**20.51**	**148**	*e*P	**P**	**23 39 28.7**	**-1.0**
SUW	**Suwalki**	**21.00**	**132**	*e*P	**P**	**23 39 38.5**	**+3.4**
CLL	**Collm**	**21.51**	**150**	*e*P	**P**	**23 39 41.0**	**+0.4**
	comp=Z,6.0nm,1.1s,mb3.9						
CLL	**Collm**	**21.51**	**150**	*e*P	**P**	**23 39 41.0**	**+0.4**
	comp=Z,6.0nm,1.1s,mb3.9						
CLL				LmV		23 46 00.0	
	comp=Z,200nm,18.6s						
CLL	**Collm**	**21.51**	**150**	*e*P	**P**	**23 39 41.0**	**+0.4**
	comp=Z,6.0nm,1.1s,mb3.9						
BAIF	**Baives**	**21.70**	**166**	*e*P	**P**	**23 39 42.2**	**-0.4**
	comp=Z,9.4nm,0.9s,mb3.9						
BAIF	**Baives**	**21.70**	**166**	*e*P	**P**	**23 39 42.2**	**-0.4**
	comp=Z,4.7nm,0.9s,mb3.9						
BAIF	**Baives**	**21.70**	**166**	*e*P	**P**	**23 39 42.2**	**-0.4**
	comp=Z,4.7nm,0.9s,mb3.9						
MOX	**Moxa**	**21.95**	**153**	*e*P	**P**	**23 39 46.0**	**+0.8**
	comp=Z,16nm,1.8s,mb4.2						
MOX	**Moxa**	**21.95**	**153**	*e*P	**P**	**23 39 46.0**	**+0.8**
	comp=Z,16nm,1.8s,mb4.2						
BRG	**Berggiesshubel**	**22.08**	**149**	*e*P	**P**	**23 39 49.0**	**+2.3**
	comp=Z,5.5nm,1.0s,mb3.9						
NKC	**Novy Kostel**	**22.47**	**152**	*e*P	**P**	**23 39 51.5**	**+0.7**
NKC	**Novy Kostel**	**22.47**	**152**	P	**P**	**23 39 51.5**	**+0.7**
KSP	**Ksiaz**	**22.52**	**145**	*e*P	**P**	**23 39 52.3**	**+0.9**
KSP	**Ksiaz**	**22.52**	**145**	*e*P	**P**	**23 39 51.9**	**+0.6**
FLN	**La Foliniere**	**22.73**	**174**	*e*P	**P**	**23 39 52.3**	**-1.3**
	comp=Z,12nm,0.8s,mb4.1						
FLN				*e*MLR	MLR		
	comp=Z,154nm,20.0s,MS3.1						
FLN	**La Foliniere**	**22.73**	**174**	*e*P	**P**	**23 39 52.3**	**-1.3**
	comp=Z,6.3nm,0.8s,mb4.1						
FLN				LR	LR		
	comp=Z,150nm,20.0s,MS3.4						
FLN	**La Foliniere**	**22.73**	**174**	*e*P	**P**	**23 39 52.3**	**-1.3**
	comp=Z,6.2nm,0.8s,mb4.1						
UPC	**Upice**	**22.79**	**146**	*e*P	**P**	**23 39 56.1**	**+1.9**
UPC	**Upice**	**22.79**	**146**	P	**P**	**23 39 56.1**	**+1.9**
GRA1	**Grafenberg Arr**	**22.82**	**154**	*e*P	**P**	**23 39 55.1**	**+0.6**
	comp=Z,4.0nm,0.9s,mb3.9						
GRA1	**Grafenberg Arr**	**22.82**	**154**	*e*P	**P**	**23 39 55.1**	**+0.6**
	comp=Z,4.0nm,0.9s,mb3.9						
GRF	**Grafenberg Arr**	**22.82**	**154**	*e*P	**P**	**23 39 55.1**	**+0.6**
	comp=Z,4.0nm,0.9s,mb3.9						
GRF	**Grafenberg Arr**	**22.82**	**154**	*e*P	**P**	**23 39 55.1**	**+0.6**
	comp=Z,4.0nm,0.9s,mb3.9						
LDF	**La Druitiere**	**22.91**	**174**	*e*P	**P**	**23 39 54.8**	**-0.7**
	comp=Z,3.8nm,0.6s,mb3.7						
LDF	**La Druitiere**	**22.91**	**174**	*e*P	**P**	**23 39 54.8**	**-0.7**
	comp=Z,1.9nm,0.6s,mb3.7						
LDF	**La Druitiere**	**22.91**	**174**	*e*P	**P**	**23 39 54.8**	**-0.7**
	comp=Z,1.9nm,0.6s,mb3.7						
DPC	**Dobruska-Polom**	**23.00**	**146**	*e*P	**P**	**23 39 56.9**	**+0.5**
DPC	**Dobruska-Polom**	**23.00**	**146**	P	**P**	**23 39 56.9**	**+0.5**
PRU	**Pruhonice**	**23.04**	**149**	*e*P	**P**	**23 39 58.2**	**+1.4**
PRU	**Pruhonice**	**23.04**	**149**	P	**P**	**23 39 58.2**	**+1.4**
GRR	**Gorron**	**23.10**	**175**	*e*P	**P**	**23 39 56.9**	**-0.6**
GRR	**Gorron**	**23.10**	**175**	*e*P	**P**	**23 39 56.9**	**-0.6**
MEZF	**Maizieres J'vi**	**23.31**	**165**	*e*P	**P**	**23 40 00.2**	**+0.5**
MEZF	**Maizieres J'vi**	**23.31**	**165**	*e*P	**P**	**23 40 00.2**	**+0.5**
CDF	**Champ du Feu**	**23.60**	**161**	*e*P	**P**	**23 40 02.3**	**-0.4**
CDF	**Champ du Feu**	**23.60**	**161**	*e*P	**P**	**23 40 02.3**	**-0.4**
OBN	**Obninsk**	**23.67**	**112**	*e*P	**P**	**23 40 03.0**	**-0.3**
OBN	**Obninsk**	**23.67**	**112**	*e*P	**P**	**23 40 03.0**	**-0.2**
KHC	**Kasperske Hory**	**23.71**	**151**	*e*P	**P**	**23 40 04.3**	**+0.6**
KHC	**Kasperske Hory**	**23.71**	**151**	P	**P**	**23 40 04.3**	**+0.6**
MORC	**Moravsky Berou**	**23.77**	**144**	*e*P	**P**	**23 40 03.9**	**-0.3**
	comp=Z,2.2nm,0.6s,mb3.8						
MORC	**Moravsky Berou**	**23.77**	**144**	*e*P	**P**	**23 40 03.9**	**-0.3**
	comp=Z,2.2nm,0.6s,mb3.8						
OJC	**Ojcow**	**23.79**	**141**	*e*P	**P**	**23 40 05.6**	**+1.2**
OJC	**Ojcow**	**23.79**	**141**	*e*P	**P**	**23 40 05.6**	**+1.2**
TREC	**Trest**	**23.87**	**148**	*e*P	**P**	**23 40 06.0**	**+0.9**
TREC	**Trest**	**23.87**	**148**	P	**P**	**23 40 06.0**	**+0.9**
GERES	**GERESS Array B**	**24.01**	**151**	P	**P**	**23 40 07.4**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.4,baz=357,slow=9.6,SNR=11						
GERES	**GERESS Array B**	**24.01**	**151**	P	**P**	**23 40 07.4**	**+1.0**
VRAC	**Vranov**	**24.05**	**146**	P	**P**	**23 40 07.4**	**+0.7**
	comp=Z,3.7nm,0.8s,mb3.9,baz=324,slow=10,SNR=7.3						
VRAC				LR	LR	23 49 06.9	
	comp=Z,174nm,19.4s,MS3.5,baz=293,slow=36						
VRAC	**Vranov**	**24.05**	**146**	P	**P**	**23 40 07.4**	**+0.6**
HINF	**Hinteralfeld**	**24.15**	**162**	*e*P	**P**	**23 40 07.8**	**+0.1**
HINF	**Hinteralfeld**	**24.15**	**162**	*e*P	**P**	**23 40 07.8**	**+0.1**
RES	**Resolute Bay**	**24.34**	**320**	LR	LR	23 49 10.8	
	comp=Z,249nm,19.4s,MS3.7,baz=24,slow=36						
LOR	**Lormes**	**24.45**	**167**	*e*P	**P**	**23 40 10.0**	**-0.4**
	comp=Z,8.7nm,0.7s,mb4.0						
LOR				*e*MLR	MLR		
	comp=Z,156nm,23.0s,MS3.1						
LOR	**Lormes**	**24.45**	**167**	*e*P	**P**	**23 40 10.0**	**-0.4**
	comp=Z,4.3nm,0.7s,mb4.0						
LOR				LR	LR		
	comp=Z,160nm,23.0s,MS3.5						
LOR	**Lormes**	**24.45**	**167**	*e*P	**P**	**23 40 10.0**	**-0.4**
	comp=Z,4.3nm,0.7s,mb4.0						
SSF	**Saint Saulge**	**24.63**	**168**	*e*P	**P**	**23 40 11.6**	**-0.4**
	comp=Z,6.4nm,0.7s,mb4.0						
SSF	**Saint Saulge**	**24.63**	**168**	*e*P	**P**	**23 40 11.6**	**-0.4**
	comp=Z,3.2nm,0.7s,mb4.0						
SSF	**Saint Saulge**	**24.63**	**168**	*e*P	**P**	**23 40 11.6**	**-0.4**
	comp=Z,3.2nm,0.7s,mb4.0						
NIE	**Niedzica**	**24.66**	**140**	*e*P	**P**	**23 40 15.0**	**+2.7**
AVF	**Avril sur Loir**	**24.89**	**168**	*e*P	**P**	**23 40 14.0**	**-0.4**
	comp=Z,5.8nm,0.8s,mb3.9						
AVF	**Avril sur Loir**	**24.89**	**168**	*e*P	**P**	**23 40 14.0**	**-0.4**
	comp=Z,2.9nm,0.8s,mb3.9						
AVF	**Avril sur Loir**	**24.89**	**168**	*e*P	**P**	**23 40 14.0**	**-0.4**
	comp=Z,2.9nm,0.8s,mb3.9						
MFF	**Saint Martin d**	**24.91**	**174**	*e*P	**P**	**23 40 13.9**	**-0.7**
	comp=Z,13nm,0.7s,mb4.3						
MFF	**Saint Martin d**	**24.91**	**174**	*e*P	**P**	**23 40 13.9**	**-0.7**
	comp=Z,6.4nm,0.7s,mb4.3						
MFF	**Saint Martin d**	**24.91**	**174**	*e*P	**P**	**23 40 13.9**	**-0.7**
	comp=Z,6.4nm,0.7s,mb4.3						
KWP	**Kalwaria Pacla**	**24.97**	**137**	*e*P	**P**	**23 40 16.3**	**+1.2**
KWP	**Kalwaria Pacla**	**24.97**	**137**	*e*P	**P**	**23 40 16.3**	**+1.2**
SMF	**Signal de Mont**	**25.06**	**168**	*e*P	**P**	**23 40 15.9**	**-0.1**
	comp=Z,14nm,0.8s,mb4.2						
SMF	**Signal de Mont**	**25.06**	**168**	*e*P	**P**	**23 40 15.9**	**-0.1**
	comp=Z,7.0nm,0.8s,mb4.2						
SMF	**Signal de Mont**	**25.06**	**168**	*e*P	**P**	**23 40 15.9**	**-0.1**
	comp=Z,7.0nm,0.8s,mb4.2						
BGF	**Bois d'Agland**	**25.09**	**169**	*e*P	**P**	**23 40 15.7**	**-0.5**
	comp=Z,17nm,0.8s,mb4.3						
BGF	**Bois d'Agland**	**25.09**	**169**	*e*P	**P**	**23 40 15.7**	**-0.5**
	comp=Z,8.4nm,0.8s,mb4.3						
BGF	**Bois d'Agland**	**25.09**	**169**	*e*P	**P**	**23 40 15.7**	**-0.5**
	comp=Z,8.4nm,0.8s,mb4.3						
VYHS	**Vyhne**	**25.25**	**143**	*e*P	**P**	**23 40 18.9**	**+1.2**
VYHS	**Vyhne**	**25.25**	**143**	*e*P	**P**	**23 40 18.9**	**+1.2**
VYHS	**Vyhne**	**25.25**	**143**	*e*P	**P**	**23 40 18.9**	**+1.2**
CABF	**La Chapelle**	**25.27**	**164**	*e*P	**P**	**23 40 17.8**	**-0.1**
	comp=Z,7.3nm,0.8s,mb3.9						
CABF	**La Chapelle**	**25.27**	**164**	*e*P	**P**	**23 40 17.8**	**-0.1**
	comp=Z,3.7nm,0.8s,mb4.0						
CABF	**La Chapelle**	**25.27**	**164**	*e*P	**P**	**23 40 17.8**	**-0.1**
	comp=Z,3.7nm,0.8s,mb3.9						
TCF	**Toulx Ste Croi**	**25.32**	**170**	*e*P	**P**	**23 40 17.7**	**-0.6**
	comp=Z,8.1nm,0.8s,mb4.0						
TCF	**Toulx Ste Croi**	**25.32**	**170**	*e*P	**P**	**23 40 17.7**	**-0.6**
	comp=Z,4.1nm,0.8s,mb4.0						
TCF	**Toulx Ste Croi**	**25.32**	**170**	*e*P	**P**	**23 40 17.7**	**-0.6**
	comp=Z,4.1nm,0.8s,mb4.0						
DAVOX	**Davos/Dischmat**	**25.50**	**158**	LR	LR	23 51 17.6	
	comp=Z,110nm,19.6s,MS3.4,baz=161,slow=39						
KOLS	**Kolonicke sedl**	**25.53**	**138**	*e*P	**P**	**23 40 22.6**	**+2.4**
KOLS	**Kolonicke sedl**	**25.53**	**138**	*e*P	**P**	**23 40 22.6**	**+2.4**
AKASG	**Malin Array Be**	**25.54**	**127**	P	**P**	**23 40 20.1**	**-0.1**
	comp=Z,2.9nm,0.6s,mb4.0,baz=334,slow=9.4,SNR=8.6						
AKASG	**Malin Array Be**	**25.54**	**127**	P	**P**	**23 40 20.1**	**-0.2**
KECS	**Kecovo**	**25.59**	**141**	*e*P	**P**	**23 40 22.1**	**+1.4**
KECS	**Kecovo**	**25.59**	**141**	*e*P	**P**	**23 40 22.1**	**+1.4**
PSZ	**Piszkesteto**	**26.00**	**142**	*e*P	**P**	**23 40 24.5**	**0.0**
PSZ	**Piszkesteto**	**26.00**	**142**	*e*P	**P**	**23 40 24.5**	**0.0**
RJF	**Les Rejaudoux**	**26.27**	**172**	*e*P	**P**	**23 40 26.3**	**-0.6**
	comp=Z,21nm,0.8s,mb4.4						
RJF				*e*MLR	MLR		
	comp=Z,177nm,20.0s,MS3.3						
RJF	**Les Rejaudoux**	**26.27**	**172**	*e*P	**P**	**23 40 26.3**	**-0.6**
	comp=Z,10nm,0.8s,mb4.4						
RJF				LR	LR		
	comp=Z,180nm,20.0s,MS3.6						
RJF	**Les Rejaudoux**	**26.27**	**172**	*e*P	**P**	**23 40 26.3**	**-0.6**
	comp=Z,10nm,0.8s,mb4.4						
LPL	**La Plagne**	**26.42**	**163**	*e*P	**P**	**23 40 29.0**	**+0.7**
LPL	**La Plagne**	**26.42**	**163**	*e*P	**P**	**23 40 29.0**	**+0.7**
LPG	**La Plagne**	**26.44**	**163**	*e*P	**P**	**23 40 29.4**	**+0.9**
LPG	**La Plagne**	**26.44**	**163**	*e*P	**P**	**23 40 29.4**	**+0.9**
LFF	**La Frestale**	**26.60**	**173**	*e*P	**P**	**23 40 29.5**	**-0.4**
	comp=Z,9.6nm,0.8s,mb4.1						
LFF	**La Frestale**	**26.60**	**173**	*e*P	**P**	**23 40 29.5**	**-0.4**
	comp=Z,4.8nm,0.8s,mb4.1						
LFF	**La Frestale**	**26.60**	**173**	*e*P	**P**	**23 40 29.5**	**-0.4**
	comp=Z,4.8nm,0.8s,mb4.1						
CAF	**Calviac**	**26.67**	**171**	*e*P	**P**	**23 40 30.1**	**-0.5**
	comp=Z,6.9nm,0.9s,mb3.9						
CAF	**Calviac**	**26.67**	**171**	*e*P	**P**	**23 40 30.1**	**-0.5**
	comp=Z,3.5nm,0.9s,mb3.9						
CAF	**Calviac**	**26.67**	**171**	*e*P	**P**	**23 40 30.1**	**-0.5**
	comp=Z,3.5nm,0.9s,mb3.9						
VIVF	**Saint-Julien-l**	**26.90**	**167**	*e*P	**P**	**23 40 32.9**	**+0.2**
VIVF	**Saint-Julien-l**	**26.90**	**167**	*e*P	**P**	**23 40 32.9**	**+0.2**
ORIF	**Oris-en-Rattie**	**26.94**	**165**	*e*P	**P**	**23 40 33.3**	**+0.3**
	comp=Z,10nm,1.1s,mb4.0						
ORIF				*e*MLR	MLR		
	comp=Z,194nm,20.5s,MS3.4						
ORIF	**Oris-en-Rattie**	**26.94**	**165**	*e*P	**P**	**23 40 33.3**	**+0.3**
	comp=Z,5.1nm,1.1s,mb4.0						
ORIF	**Oris-en-Rattie**	**26.94**	**165**	*e*P	**P**	**23 40 33.3**	**+0.3**
	comp=Z,5.1nm,1.1s,mb4.0						
LASF	**Ste Croix**	**27.62**	**168**	*e*P	**P**	**23 40 41.1**	**+2.0**
LASF	**Ste Croix**	**27.62**	**168**	*e*P	**P**	**23 40 41.1**	**+2.0**
SBF	**Sospel**	**28.12**	**163**	*e*P	**P**	**23 40 44.6**	**+1.0**
	comp=Z,15nm,0.9s,mb4.3						
SBF	**Sospel**	**28.12**	**163**	*e*P	**P**	**23 40 44.6**	**+1.0**
	comp=Z,7.4nm,0.9s,mb4.3						
SBF	**Sospel**	**28.12**	**163**	*e*P	**P**	**23 40 44.6**	**+1.0**
	comp=Z,7.4nm,0.9s,mb4.3						
FRF	**La Foret Royal**	**28.35**	**164**	*e*P	**P**	**23 40 45.7**	**+0.1**
FRF	**La Foret Royal**	**28.35**	**164**	*e*P	**P**	**23 40 45.7**	**+0.1**
EPF	**Esparros**	**28.49**	**174**	*e*P	**P**	**23 40 46.2**	**-0.7**
	comp=Z,9.5nm,0.8s,mb4.2						
EPF	**Esparros**	**28.49**	**174**	*e*P	**P**	**23 40 46.2**	**-0.7**
	comp=Z,4.8nm,0.8s,mb4.2						
EPF	**Esparros**	**28.49**	**174**	*e*P	**P**	**23 40 46.2**	**-0.7**
	comp=Z,4.8nm,0.8s,mb4.2						
LMR	**La Mourre**	**28.56**	**164**	*e*P	**P**	**23 40 47.6**	**+0.1**
LMR	**La Mourre**	**28.56**	**164**	*e*P	**P**	**23 40 47.6**	**+0.1**
ETSF	**Etsaut**	**28.59**	**175**	*e*P	**P**	**23 40 48.8**	**+1.0**
ETSF	**Etsaut**	**28.59**	**175**	*e*P	**P**	**23 40 48.8**	**+1.0**
ARU	**Arti**	**29.49**	**87**	*e*P	**P**	**23 40 55.5**	**-0.2**
ARU	**Arti**	**29.49**	**87**	*e*P	**P**	**23 40 55.5**	**-0.2**
PGF	**Pioggiola**	**29.58**	**161**	*e*P	**P**	**23 40 57.2**	**+0.6**
	comp=Z,23nm,1.1s,mb4.5						
PGF	**Pioggiola**	**29.58**	**161**	*e*P	**P**	**23 40 57.2**	**+0.6**
	comp=Z,12nm,1.1s,mb4.5						
PGF	**Pioggiola**	**29.58**	**161**	*e*P	**P**	**23 40 57.2**	**+0.6**
	comp=Z,12nm,1.1s,mb4.5						
SCHQ	**Schefferville**	**31.08**	**272**	LR	LR	23 52 15.8	
	comp=Z,166nm,20.0s,MS3.7,baz=332,slow=34						
SCHQ	**Schefferville**	**31.08**	**272**	*e*P	**P**	**23 41 09.9**	**+0.2**
SCHQ	**Schefferville**	**31.08**	**272**	*e*P	**P**	**23 41 09.9**	**+0.2**
ESDC	**Sonseca Array**	**31.77**	**180**	P	**P**	**23 41 15.6**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.4,baz=359,slow=8.6,SNR=5.9

KRNR				*i* S		**Sg**	**00 08 42.0**	**+1.0**
KRNR				pmax	pmax			
	comp=Z,143nm,0.2s							
KRNR	**Karanay**	**0.42**	**69**	*i* Pg		**Pg**	**00 08 34.8**	**-0.7**
	comp=Z,143nm,0.2s							
KRNR				*i* Sg		**Sg**	**00 08 42.0**	**+1.0**
DLMR	**Dylym**	**0.43**	**26**	⇓*i* PG		**Pg**	**00 08 34.2**	**-1.5**
DLMR				*i* S		**Sg**	**00 08 43.0**	**+1.6**
DLMR				pmax	pmax			
	comp=Z,442nm,0.3s							
DLMR	**Dylym**	**0.43**	**26**	*i* Pg		**Pg**	**00 08 34.2**	**-1.5**
	comp=Z,442nm,0.3s							
DLMR				*i* Sg		**Sg**	**00 08 43.0**	**+1.6**
DBC	**Dubki**	**0.48**	**45**	*e*PG		**Pg**	**00 08 35.5**	**-1.1**
DBC				*e*S		**Sg**	**00 08 44.0**	**+1.2**
DBC	**Dubki**	**0.48**	**45**	*e*Pg		**Pg**	**00 08 35.5**	**-1.1**
DBC				*e*Sg		**Sg**	**00 08 44.0**	**+1.2**
BUJR	**Buynaksk**	**0.56**	**75**	*e*PG		**Pg**	**00 08 38.0**	**-0.1**
BUJR				*i* S		**Sg**	**00 08 47.0**	**+1.6**
BUJR				pmax	pmax			
	comp=Z,201nm,0.2s							
BUJR	**Buynaksk**	**0.56**	**75**	*e*Pg		**Pg**	**00 08 38.0**	**-0.1**
	comp=Z,201nm,0.2s							
BUJR				*i* Sg		**Sg**	**00 08 47.0**	**+1.6**
KMKR	**Kumukh**	**0.77**	**135**	⇑*i* PG		**Pg**	**00 08 41.5**	**-0.5**
KMKR				*e*S		**Sg**	**00 08 52.5**	**+0.5**
KMKR				pmax	pmax			
	comp=Z,158nm,0.4s							
KMKR	**Kumukh**	**0.77**	**135**	*i* Pg		**Pg**	**00 08 41.5**	**-0.5**
	comp=Z,158nm,0.4s							
KMKR				*e*Sg		**Sg**	**00 08 52.5**	**+0.5**
GRO	**Groznyy**	**0.79**	**325**	⇓*i* PG		**Pg**	**00 08 39.7**	**-2.7**
GRO	**Groznyy**	**0.79**	**325**	*i* Pg		**Pg**	**00 08 39.7**	**-2.7**
URKR	**Urkarakh**	**1.07**	**118**	*e*PG		**Pg**	**00 08 46.5**	**-1.3**
URKR				pmax	pmax			
	comp=Z,91nm,0.3s							
URKR	**Urkarakh**	**1.07**	**118**	*e*Pg		**Pg**	**00 08 46.5**	**-1.3**
	comp=Z,91nm,0.3s							
SNJR	**Sundja**	**1.21**	**289**	⇓*i* PG		**Pg**	**00 08 50.2**	**-0.3**
SNJR				*e*S		**Sg**	**00 09 07.8**	**+1.6**
SNJR	**Sundja**	**1.21**	**289**	*i* Pg		**Pg**	**00 08 50.2**	**-0.3**
SNJR				*e*Sg		**Sg**	**00 09 07.8**	**+1.6**
VLKR	**Vladikavkaz**	**1.30**	**287**	⇓*i* PG		**Pg**	**00 08 51.7**	**-0.5**
VLKR				*e*S		**Sg**	**00 09 10.2**	**+1.2**
VLKR	**Vladikavkaz**	**1.30**	**287**	*i* Pg		**Pg**	**00 08 51.7**	**-0.5**
VLKR				*e*Sg		**Sg**	**00 09 10.2**	**+1.2**
DGRG	**David-gareji**	**1.43**	**212**	P		**Pn**	**00 08 52.6**	**-1.3**
DGRG				S		**Sb**	**00 09 14.8**	**+1.8**
BTKR	**Batakoyurt**	**1.51**	**298**	*e*PG		**Pn**	**00 08 55.1**	**+0.1**
BTKR				*e*S		**Sg**	**00 09 16.6**	**+0.8**
BTKR	**Batakoyurt**	**1.51**	**298**	*e*Pg		**Pn**	**00 08 55.1**	**+0.1**
BTKR				*e*Sg		**Sg**	**00 09 16.6**	**+0.8**
MTA	**Mtatsminda**	**1.53**	**231**	P		**Pn**	**00 08 53.9**	**-1.4**
MTA				S		**Sn**	**00 09 14.7**	**-0.8**
TBLG	**Delisi**	**1.54**	**233**	*e*PN		**Pn**	**00 08 54.0**	**-1.4**
TBLG				*e*S		**Sg**	**00 09 16.7**	**0.0**
TBLG	**Delisi**	**1.54**	**233**	P		**Pn**	**00 08 54.0**	**-1.3**
TBLG				S		**Sn**	**00 09 16.7**	**+1.0**
TBLG	**Delisi**	**1.54**	**233**	*e*Pn		**Pn**	**00 08 54.0**	**-1.4**
TBLG				*e*Sg		**Sg**	**00 09 16.7**	**0.0**
AKT	**Akhty**	**1.57**	**139**	*e*PG		**Pn**	**00 08 55.5**	**-0.3**
AKT				*e*S		**Sg**	**00 09 21.0**	**+3.3**
AKT				pmax	pmax			
	comp=Z,87nm,0.5s							
AKT	**Akhty**	**1.57**	**139**	*e*Pg		**Pn**	**00 08 55.5**	**-0.3**
	comp=Z,87nm,0.5s							
AKT				*e*Sg		**Sg**	**00 09 21.0**	**+3.3**
TRKR	**Terskaya**	**1.59**	**312**	⇑*i* PN		**Pn**	**00 08 56.4**	**+0.3**
TRKR				*i* S		**Sg**	**00 09 18.7**	**+0.3**
TRKR	**Terskaya**	**1.59**	**312**	*i* Pn		**Pn**	**00 08 56.4**	**+0.3**
TRKR				*i* Sg		**Sg**	**00 09 18.7**	**+0.3**
ARNR	**Ardon**	**1.62**	**289**	*e*PN		**Pn**	**00 08 56.6**	**+0.1**
ARNR				*e*S		**Sg**	**00 09 19.3**	**0.0**
ARNR	**Ardon**	**1.62**	**289**	*e*Pn		**Pn**	**00 08 56.6**	**+0.1**
ARNR				*e*Sg		**Sg**	**00 09 19.3**	**0.0**
KMSR	**Komsomolskaya**	**1.67**	**295**	⇓*i* PN		**Pn**	**00 08 57.6**	**+0.4**
KMSR	**Komsomolskaya**	**1.67**	**295**	*i* Pn		**Pn**	**00 08 57.6**	**+0.4**
KORR	**Kora**	**1.74**	**284**	*e*PN		**Pn**	**00 08 58.3**	**+0.2**
KORR	**Kora**	**1.74**	**284**	*e*Pn		**Pn**	**00 08 58.3**	**+0.2**
GOR	**Gori**	**1.81**	**248**	P		**Pn**	**00 08 58.2**	**-0.9**
GOR				S		**Sn**	**00 09 23.8**	**+1.3**
ZEI	**Tsey**	**1.82**	**274**	*e*PN		**Pn**	**00 08 59.3**	**0.0**
ZEI	**Tsey**	**1.82**	**274**	*e*Pn		**Pn**	**00 08 59.3**	**0.0**
PRTR	**Priterechnaya**	**1.87**	**306**	*e*PN		**Pn**	**00 09 00.0**	**+0.1**
PRTR	**Priterechnaya**	**1.87**	**306**	*e*Pn		**Pn**	**00 09 00.0**	**+0.1**
LSNR	**Lesken**	**1.97**	**288**	⇓*i* PN		**Pn**	**00 09 01.7**	**+0.4**
LSNR	**Lesken**	**1.97**	**288**	*i* Pn		**Pn**	**00 09 01.7**	**+0.4**
DIGR	**Digorskoe uzhe**	**2.06**	**277**	⇑*i* PN		**Pn**	**00 09 02.7**	**+0.1**
DIGR				*e*S		**Sn**	**00 09 29.8**	**+1.1**
DIGR	**Digorskoe uzhe**	**2.06**	**277**	*i* Pn		**Pn**	**00 09 02.7**	**+0.1**
DIGR				*e*Sn		**Sn**	**00 09 29.8**	**+1.1**
ONI	**Oni**	**2.15**	**269**	P		**Pn**	**00 09 05.0**	**+1.2**
ONI				S		**Sn**	**00 09 35.7**	**+4.8**
GOF	**Gofitskoye**	**3.39**	**316**	*e*PN		**Pb**	**00 09 27.4**	**-0.4**
GOF				*e*S		**Sb**	**00 10 07.1**	**-2.1**
GOF				pmax	pmax			
	comp=Z,10.0nm,0.8s							
GOF				smax				
	comp=N,70nm,0.8s							
GOF				smax				
	comp=E,140nm,1.1s							
GOF	**Gofitskoye**	**3.39**	**316**	*e*Pn		**Pb**	**00 09 27.4**	**-0.4**
	comp=E,10.0nm,0.8s							
GOF				*e*Sn		**Sb**	**00 10 07.1**	**-2.1**
	comp=E,70nm,0.8s							
AKTO	**Aktyubinsk**	**11.15**	**42**	⇑Pn		**Pn**	**00 11 01.2**	**-6.0**
	comp=E,0.4nm,0.9s							
AKTO				⇓Sn		**Sn**	**00 13 04.1**	**-8.0**
	comp=E,0.7nm,1.1s							
AB31	**Akbulak array**	**11.50**	**50**	⇓Pn		**Pn**	**00 11 10.7**	**-1.3**
	comp=E,0.7nm,0.5s,baz=244,slow=11,SNR=18							
AB31				⇑Sn		**Sn**	**00 13 11.9**	**-8.8**
	comp=E,0.6nm,0.5s,baz=254,slow=25,SNR=3.3							
AB31	**Akbulak array**	**11.50**	**50**	Pn		**Pn**	**00 11 10.7**	**-1.3**
	comp=E,0.7nm,0.5s,SNR=18							
AB31				Sn		**Sn**	**00 13 11.9**	**-8.9**
	comp=E,0.6nm,0.5s,SNR=3.3							

IDC 29 00:11:57.8±12.0, 11°87N×93°24E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/22, mbtmp3.3/3, Error ellipse: s-maj=680.2km s-min=27.3km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.02**	**347**	P	P	00 19 00.6	0.0
	0.2nm,0.5s,baz=162,slow=7.0,SNR=2.7						
WRA	**Warramunga Arr**	**51.34**	**128**	P	P	00 21 04.3	0.0
	0.3nm,0.3s,baz=310,slow=7.6,SNR=7.2						
ASAR	**Alice Springs**	**53.18**	**132**	P	P	00 21 18.0	0.0
	0.2nm,0.4s,baz=306,slow=7.1,SNR=4.3						

*ISK **29** 00:24:38.6, 39°31N×39°21E, h6km, MD2.5*
*ISCJB **29** 00:24:39.3±0.7, 39°32N±0°03×39°27E±0°07, h3km±11km, Error ellipse: s-maj=8.8km s-min=5.0km az=177.6*
*CSEM **29** 00:24:39.3±0.2, 39°32N×39°28E, h8km, MD2.5, Error ellipse: s-maj=5.0km s-min=3.0km az=89.0*
*DDA **29** 00:24:40.8, 39°26N×39°18E, h7km±3km, Md3.0*
ISC 29 00:24:39.8±0.8, 39°32N±0°03×39°27E±0°07, h9km±8km, n12, σ0°51/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.43**	**8**	*e*PG	**Pg**	**00 24 48.0**	**-0.2**
EZC				*e*SG	**Sg**	**00 24 54.6**	**+0.6**
EZC	**Erzincan**	**0.43**	**8**	*e*Pg	**Pg**	**00 24 48.0**	**-0.2**
EZC				*e*Sg	**Sg**	**00 24 54.6**	**+0.6**
PTK	**Pertek**	**0.44**	**168**	*e*PG	**Pg**	**00 24 48.0**	**-0.4**
PTK				*e*SG	**Sg**	**00 24 54.5**	**+0.3**
PTK	**Pertek**	**0.44**	**168**	*e*Pg	**Pg**	**00 24 48.0**	**-0.4**
PTK				*e*Sg	**Sg**	**00 24 54.5**	**+0.3**
KEMA	**Kemaliye**	**0.61**	**265**	*i* P	**Pg**	**00 24 50.7**	**-0.8**
KEMA				*i* S	**Sg**	**00 24 59.7**	**+0.2**
KEMA	**Kemaliye**	**0.61**	**265**	*i* P	**Pg**	**00 24 50.7**	**-0.8**
KEMA				*i* S	**Sg**	**00 24 59.7**	**+0.2**
ELZG	**Elazig**	**0.85**	**195**	*i* P	**Pg**	**00 24 56.2**	**0.0**
ELZG				*i* S	**Sg**	**00 25 08.3**	**+1.0**
ELZG	**Elazig**	**0.85**	**195**	*i* P	**Pg**	**00 24 56.2**	**0.0**
ELZG				*i* S	**Sg**	**00 25 08.3**	**+1.0**
SVRC	**Sivrice-ELAZID**	**0.94**	**178**	*e*PG	**Pg**	**00 24 57.1**	**-0.8**
SVRC				*e*SG	**Sg**	**00 25 10.1**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.94**	**178**	*e*Pg	**Pg**	**00 24 57.1**	**-0.8**
SVRC				*e*Sg	**Sg**	**00 25 10.1**	**-0.1**
AKCD	**Akcadag**	**1.47**	**226**	*i* P	**Pn**	**00 25 06.6**	**+0.1**
AKCD				*i* S	**Sn**	**00 25 26.0**	**+0.1**
AKCD	**Akcadag**	**1.47**	**226**	*i* P	**Pn**	**00 25 06.6**	**+0.1**
AKCD				*i* S	**Sn**	**00 25 26.0**	**+0.1**

*NAO **29** 00:35:31.3±1.5, 71°23N×4°64W, ML2.9*
*IDC **29** 00:35:33.2±0.8, 71°29N×4°17W, h0km, mb3.5/6, mb1 3.9/12, mb1mx3.7/28, mbtmp3.7/12, ML3.6/6, MS3.3/12, Ms1 3.3/12, ms1mx3.1/39, Error ellipse: s-maj=20.1km s-min=14.6km az=33.0*
*CSEM **29** 00:35:33.7±0.2, 71°36N×3°95W, h2km, mb4.2/16, Ms2.9, Error ellipse: s-maj=7.1km s-min=4.6km az=107.0*
*ISCJB **29** 00:35:33.5±0.4, 71°43N±0°04×3°5W±0°1, h10km, mb3.9/23, MS3.2/13, Error ellipse: s-maj=7.1km s-min=5.7km az=32.7*
*NEIC **29** 00:35:34.4±0.5, 71°41N×4°20W, h10km, mb4.2/16, Error ellipse: s-maj=7.3km s-min=6.4km az=142.0*
*BER **29** 00:35:34.5±2.9, 71°44N×4°62W, h10km, ML2.8*
ISC 29 00:35:35.4±0.4, 71°37N±0°04×3°8W±0°1, h10km, n167, σ0°93/176, mb3.9/24, MS3.2/13, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.50**	**257**	AML	AML	00 36 14.0	
	comp=Z,359nm,0.5s						
JNW	**Jan Mayen West**	**1.53**	**259**	*e*P	**Pn**	**00 35 57.2**	**-5.4**
JNW				AML	AML	00 36 16.2	
	comp=Z,167nm,0.3s						
JMIC	**Jan Mayen**	**1.57**	**258**	Lg		00 36 12.4	
JMIC	**Jan Mayen**	**1.57**	**258**	*e*S	**Sn**	**00 36 13.1**	**-10**
JMIC	**Jan Mayen**	**1.57**	**258**	Pn	**Pn**	**00 36 01.7**	**-1.5**
	comp=Z,14nm,0.3s,baz=17,slow=9.2,SNR=3.9						
JMIC				Sn	**Sn**	**00 36 13.0**	**-10**
	comp=Z,31nm,0.3s,baz=178,slow=24,SNR=13						
JMIC	**Jan Mayen**	**1.57**	**258**	Pn	**Pn**	**00 36 01.7**	**-1.5**
JMIC				Sn	**Sn**	**00 36 13.0**	**-10**
JMIC				*e*S	**Sn**	**00 36 13.1**	**-10**
JMI	**Jan Mayen**	**1.65**	**257**	*e*P	**Pn**	**00 35 58.9**	**-5.5**
JMI				*e*S	**Sn**	**00 36 16.1**	**-10**
JMI				AML	AML	00 36 18.5	
	comp=Z,283nm,0.5s						
JMI	**Jan Mayen**	**1.65**	**257**	*e*P	**Pn**	**00 35 58.9**	**-5.5**
JMI				*e*S	**Sn**	**00 36 16.1**	**-10**
LOF	**Lofoten**	**6.83**	**110**	*e*P	**Pn**	**00 37 16.3**	**+0.9**
LOF				*e*S	**Sn**	**00 38 27.1**	**-6.0**
LOF				AML	AML	00 38 29.8	
	comp=Z,12nm,0.7s						
LOF	**Lofoten**	**6.83**	**110**	*e*P	**Pn**	**00 37 16.3**	**+0.9**
LOF				*e*S	**Sn**	**00 38 27.1**	**-6.0**
LOF	**Lofoten**	**6.83**	**110**	*e*P	**Pn**	**00 37 16.3**	**+0.9**
	SNR=47						
STEI	**Steigen**	**7.47**	**108**	*e*P	**Pn**	**00 37 24.0**	**-0.1**
TRO	**Tromso**	**7.79**	**92**	*e*P	**Pn**	**00 37 27.2**	**-1.3**
TRO				*e*S	**Sn**	**00 38 51.0**	**-5.6**
TRO	**Tromso**	**7.79**	**92**	*e*P	**Pn**	**00 37 27.2**	**-1.3**
	SNR=47						
KONS	**Konsvik**	**7.80**	**120**	*e*P	**Pn**	**00 37 27.6**	**-1.0**
KONS				*e*S	**Sn**	**00 38 50.2**	**-6.6**
KONS				AML	AML	00 38 53.2	
	comp=Z,9.8nm,0.5s						
STOK	**Stokkvaagen**	**7.89**	**122**	*e*P	**Pn**	**00 37 29.7**	**-0.2**
STOK				*e*S	**Sn**	**00 38 53.3**	**-5.8**
STOK	**Stokkvaagen**	**7.89**	**122**	*e*P	**Pn**	**00 37 29.7**	**-0.2**
FLOS	**Flostrand**	**7.98**	**121**	*e*P	**Pn**	**00 37 30.6**	**-0.6**
FLOS				*e*S	**Sn**	**00 38 55.2**	**-6.2**
MOR8	**Moi Rana**	**8.40**	**119**	*e*P	**Pn**	**00 37 37.9**	**+0.9**
MOR8				*e*S	**Sn**	**00 39 06.8**	**-4.9**
MOR8				AML	AML	00 39 09.6	
	comp=Z,7.3nm,0.5s						
MOR8	**Moi Rana**	**8.40**	**119**	*e*P	**Pn**	**00 37 37.9**	**+0.9**
MOR8				*e*S	**Sn**	**00 39 06.8**	**-4.9**
MOR8	**Moi Rana**	**8.40**	**119**	*e*P	**Pn**	**00 37 37.9**	**+0.9**
	SNR=47						
KBS	**Kingsbay**	**8.55**	**21**	Pn	**Pn**	**00 37 38.8**	**-0.1**
KBS	**Kingsbay**	**8.55**	**21**	Pn	**Pn**	**00 37 38.8**	**-0.2**
SPB4	**Spitsbergen Ar**	**8.59**	**28**	*e*Pn	**Pn**	**00 37 38.8**	**-0.6**
SPB4	**Spitsbergen Ar**	**8.59**	**28**	*e*Pn	**Pn**	**00 37 38.8**	**-0.6**
SPA0	**Spitsbergen Ar**	**8.59**	**28**	Pn	**Pn**	**00 37 40.5**	**+1.0**
	baz=224,slow=14						
SPA0	**Spitsbergen Ar**	**8.59**	**28**	Pn	**Pn**	**00 37 40.5**	**+1.1**
	baz=224,slow=14,SNR=1.1						
SPITS	**Spitsbergen Ar**	**8.59**	**28**	Pn	**Pn**	**00 37 40.2**	**+0.8**
	baz=213,slow=15,SNR=39						
SPITS				Sn	**Sn**	**00 39 10.2**	**-5.9**
	baz=281,slow=21,SNR=8.3						
SPITS	**Spitsbergen Ar**	**8.59**	**28**	Pn	**Pn**	**00 37 40.2**	**+0.8**
NSS	**Namsos**	**9.04**	**132**	*e*P	**Pn**	**00 37 44.3**	**-1.4**
NSS				*e*S	**Sn**	**00 39 20.0**	**-7.4**
NSS				AML	AML	00 39 24.0	
	comp=Z,9.0nm,0.3s						
NSS	**Namsos**	**9.04**	**132**	*e*P	**Pn**	**00 37 44.3**	**-1.4**
NSS				*e*S	**Sn**	**00 39 20.0**	**-7.4**
NSS	**Namsos**	**9.04**	**132**	*e*P	**Pn**	**00 37 44.3**	**-1.4**
	SNR=47						
KTK1	**Kautokeino**	**9.44**	**91**	*e*Pn	**Pn**	**00 37 51.4**	**+0.3**
KTK1	**Kautokeino**	**9.44**	**91**	*e*Pn	**Pn**	**00 37 51.4**	**+0.3**
	SNR=50						
ARA0	**ARCESS Array S**	**9.94**	**87**	Pn	**Pn**	**00 37 57.8**	**-0.2**
	baz=299,slow=12						
ARA0	**ARCESS Array S**	**9.94**	**87**	Pn	**Pn**	**00 37 57.8**	**-0.2**
	baz=299,slow=11,SNR=6.1						
ARCES	**ARCESS Array B**	**9.94**	**87**	Pn	**Pn**	**00 37 57.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=296,slow=11,SNR=22						
ARCES				LR	LR	00 41 14.8	
	comp=Z,120nm,20.8s,baz=280,slow=34						
ARCES	**ARCESS Array B**	**9.94**	**87**	Pn	**Pn**	**00 37 57.8**	**-0.2**
NB2	**NORSAR Subarra**	**11.96**	**142**	Pn	**Pn**	**00 38 24.6**	**-1.1**
	baz=322,slow=14						
NB2	**NORSAR Subarra**	**11.96**	**142**	Pn	**Pn**	**00 38 24.5**	**-1.1**
	baz=322,slow=13,SNR=7.4						
NOA	**NORSAR Array B**	**11.96**	**142**	Pn	**Pn**	**00 38 24.2**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=330,slow=12,SNR=4.8						
NOA				Sn	**Sn**	**00 40 36.0**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=336,slow=21,SNR=3.1						
NOA				LR	LR	00 43 00.9	
	comp=Z,161nm,18.7s,baz=335,slow=37						
NOA	**NORSAR Array B**	**11.96**	**142**	Pn	**Pn**	**00 38 24.2**	**-1.4**
NAO01	**NORSAR Array S**	**12.08**	**144**	*e*Pn	**Pn**	**00 38 26.7**	**-0.5**
NAO01	**NORSAR Array S**	**12.08**	**144**	*e*Pn	**Pn**	**00 38 26.7**	**-0.5**
HFS	**Hagfors**	**13.30**	**139**	Pn	**Pn**	**00 38 43.5**	**-0.4**
	baz=334,slow=6.9						
HFS	**Hagfors**	**13.30**	**139**	Pn	**Pn**	**00 38 43.3**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=338,slow=11,SNR=49						
HFS				Sn	**Sn**	**00 41 04.1**	**-7.4**
	comp=Z,0.3nm,0.3s,baz=346,slow=24,SNR=4.4						
HFS				LR	LR	00 43 33.4	
	comp=Z,222nm,18.1s,baz=158,slow=36						
HFS	**Hagfors**	**13.30**	**139**	Pn	**Pn**	**00 38 43.3**	**-0.5**
HFS				Sn	**Sn**	**00 41 04.1**	**-7.4**
HFS				LR	LR	00 43 33.4	
HFS	**Hagfors**	**13.30**	**139**	Pn	**Pn**	**00 38 43.5**	**-0.3**
	baz=334,slow=6.6,SNR=5.6						
FIA0	**FINESS Array S**	**15.35**	**115**	P	**Pn**	**00 39 10.9**	**-0.7**
	baz=328,slow=14						
FINES	**FINESS Array B**	**15.35**	**115**	Pn	**Pn**	**00 39 11.1**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=329,slow=13,SNR=9.1						
FINES				LR	LR	00 43 56.3	
	comp=Z,43nm,20.8s,baz=275,slow=33						
FINES	**FINESS Array B**	**15.35**	**115**	Pn	**Pn**	**00 39 11.1**	**-0.5**
EKA	**Eskdalemuir Ar**	**16.10**	**179**	Pn	**Pn**	**00 39 19.3**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=357,slow=12,SNR=5.1						
EKA	**Eskdalemuir Ar**	**16.10**	**179**	Pn	**Pn**	**00 39 19.3**	**-2.1**
SUW	**Suwalki**	**21.02**	**132**	*e*P	**P**	**00 40 17.9**	**-0.9**
	comp=Z,24nm,0.8s,mb4.6						
SUW	**Suwalki**	**21.02**	**132**	*e*P	**P**	**00 40 17.9**	**-0.8**
	comp=Z,24nm,0.8s,mb4.6						
CLL	**Collm**	**21.53**	**150**	*e*Pmax		00 40 28.0	
	comp=Z,4.0nm,0.9s						
BAIF	**Baives**	**21.70**	**166**	*e*P	**P**	**00 40 26.0**	**0.0**
	comp=Z,10nm,0.9s,mb4.0						
BAIF	**Baives**	**21.70**	**166**	*e*P	**P**	**00 40 26.0**	**0.0**
	comp=Z,5.2nm,0.9s,mb4.0						
BAIF	**Baives**	**21.70**	**166**	*e*P	**P**	**00 40 26.0**	**0.0**
	comp=Z,5.2nm,0.9s,mb4.0						
MOX	**Moxa**	**21.96**	**153**	*e*P	**P**	**00 40 30.3**	**+1.5**
MOX	**Moxa**	**21.96**	**153**	*e*P	**P**	**00 40 30.3**	**+1.5**
BRG	**Berggiesshubel**	**22.10**	**149**	*e*P	**P**	**00 40 36.4**	**+6.1**
	comp=Z,6.8nm,1.4s,mb3.9						
FLN	**La Foliniere**	**22.73**	**174**	*e*P	**P**	**00 40 36.2**	**-0.9**
	comp=Z,7.3nm,0.7s,mb3.9						
FLN				*e*MLR	MLR		
	comp=Z,55nm,18.0s,MS2.7						
FLN	**La Foliniere**	**22.73**	**174**	*e*P	**P**	**00 40 36.2**	**-0.9**
	comp=Z,3.7nm,0.7s,mb3.9						
FLN				LR	LR		
	comp=Z,50nm,18.0s,MS3.0						
FLN	**La Foliniere**	**22.73**	**174**	*e*P	**P**	**00 40 36.2**	**-0.9**
	comp=Z,3.7nm,0.7s,mb3.9						
UPC	**Upice**	**22.81**	**146**	*e*P	**P**	**00 40 42.6**	**+4.8**
LDF	**La Druitiere**	**22.92**	**174**	*e*P	**P**	**00 40 38.5**	**-0.5**
	comp=Z,4.4nm,0.6s,mb3.8						
LDF	**La Druitiere**	**22.92**	**174**	*e*P	**P**	**00 40 38.5**	**-0.5**
	comp=Z,2.2nm,0.6s,mb3.8						
LDF	**La Druitiere**	**22.92**	**174**	*e*P	**P**	**00 40 38.5**	**-0.5**
	comp=Z,2.2nm,0.6s,mb3.8						
DPC	**Dobruska-Polom**	**23.02**	**146**	*e*P	**P**	**00 40 41.1**	**+1.1**
DPC	**Dobruska-Polom**	**23.02**	**146**	P	**P**	**00 40 41.1**	**+1.1**
PRU	**Pruhonice**	**23.05**	**149**	*e*P	**P**	**00 40 47.1**	**+6.7**
GRR	**Gorron**	**23.10**	**175**	*e*P	**P**	**00 40 40.2**	**-0.7**
	comp=Z,11nm,0.8s,mb4.0						
GRR	**Gorron**	**23.10**	**175**	*e*P	**P**	**00 40 40.2**	**-0.7**
	comp=Z,5.3nm,0.8s,mb4.0						
GRR	**Gorron**	**23.10**	**175**	*e*P	**P**	**00 40 40.2**	**-0.7**
	comp=Z,5.3nm,0.8s,mb4.0						
SGMF	**Saint Gilles**	**23.20**	**178**	*e*P	**P**	**00 40 41.1**	**-0.8**
SGMF	**Saint Gilles**	**23.20**	**178**	*e*P	**P**	**00 40 41.1**	**-0.8**
MEZF	**Maizieres J'vi**	**23.32**	**165**	*e*P	**P**	**00 40 44.1**	**+0.9**
MEZF	**Maizieres J'vi**	**23.32**	**165**	*e*P	**P**	**00 40 44.1**	**+0.9**
QUIF	**Quistinic**	**23.53**	**179**	*e*P	**P**	**00 40 44.8**	**-0.6**
QUIF	**Quistinic**	**23.53**	**179**	*e*P	**P**	**00 40 44.8**	**-0.6**
SFTF	**Sexfontaines**	**23.61**	**165**	*e*P	**P**	**00 40 46.7**	**+0.5**
SFTF	**Sexfontaines**	**23.61**	**165**	*e*P	**P**	**00 40 46.7**	**+0.5**
CDF	**Champ du Feu**	**23.61**	**161**	*e*P	**P**	**00 40 46.1**	**-0.1**
CDF	**Champ du Feu**	**23.61**	**161**	*e*P	**P**	**00 40 46.1**	**-0.1**
KHC	**Kasperske Hory**	**23.73**	**151**	*e*P	**P**	**00 40 50.4**	**+3.1**
TREC	**Trest**	**23.89**	**148**	*e*P	**P**	**00 40 50.0**	**+1.3**
TREC	**Trest**	**23.89**	**148**	P	**P**	**00 40 50.0**	**+1.3**
HAU	**Haudompre**	**23.92**	**163**	*e*P	**P**	**00 40 49.7**	**+0.7**
HAU				*e*MLR	MLR		
	comp=Z,92nm,22.0s,MS2.9						
HAU	**Haudompre**	**23.92**	**163**	*e*P	**P**	**00 40 49.7**	**+0.7**
HAU				LR	LR		
	comp=Z,90nm,22.0s,MS3.2						
HAU	**Haudompre**	**23.92**	**163**	*e*P	**P**	**00 40 49.7**	**+0.7**
GERES	**GERESS Array B**	**24.03**	**151**	P	**P**	**00 40 49.6**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.0,baz=352,slow=6.0,SNR=3.4						
GERES	**GERESS Array B**	**24.03**	**151**	P	**P**	**00 40 49.6**	**-0.4**
VRAC	**Vranov**	**24.07**	**146**	LR	LR	00 48 58.0	
	comp=Z,67nm,18.2s,MS3.2,baz=330,slow=34						
RES	**Resolute Bay**	**24.32**	**320**	LR	LR	00 50 02.0	
	comp=Z,106nm,19.0s,MS3.4,baz=351,slow=36						
LOR	**Lormes**	**24.45**	**167**	*e*P	**P**	**00 40 53.9**	**+0.1**
	comp=Z,11nm,0.8s,mb4.0						
LOR				*e*MLR	MLR		
	comp=Z,72nm,17.5s,MS2.9						
LOR	**Lormes**	**24.45**	**167**	*e*P	**P**	**00 40 53.9**	**+0.1**
	comp=Z,5.3nm,0.8s,mb4.0						
LOR				LR	LR		
	comp=Z,70nm,17.5s,MS3.2						
LOR	**Lormes**

MKAR	**Makanchi Array**	**45.33**	**75**	P	**P**	**00 43 53.9**	**+0.9**
	comp=Z,0.7nm,1.0s,mb3.5,baz=336,slow=6.5,SNR=4.6						
TORD	**Torodi Ar. Bea**	**58.29**	**174**	P	**P**	**00 45 28.5**	**-1.4**
	comp=Z,1.4nm,0.8s,mb4.0,baz=346,slow=7.4,SNR=12						
TORD	**Torodi Ar. Bea**	**58.29**	**174**	P	**P**	**00 45 28.5**	**-1.4**
TXAR	**Lajitas Array**	**65.57**	**289**	P	**P**	**00 46 17.3**	**-1.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=45,slow=5.0,SNR=8.0						
TXAR				LR	LR	01 14 32.1	
	comp=Z,75nm,19.0s,MS3.9,baz=310,slow=36						
TXAR	**Lajitas Array**	**65.57**	**289**	P	**P**	**00 46 17.3**	**-1.5**
TXAR				LR	LR	01 14 32.1	
TXAR	**Lajitas Array**	**65.57**	**289**	P	**P**	**00 46 17.3**	**-1.5**
MJAR	**Matsushiro Arr**	**69.07**	**32**	LR	LR	01 17 17.8	
	comp=Z,35nm,19.8s,MS3.6,baz=35,slow=36						

*ISCJB **29** 00:42:16.1±0.6, 11°.51N±0°.03×61°.68W±0°.03, h73km±10km, Error ellipse: s-maj=6.0km s-min=3.9km az=26.8*
*FUNV **29** 00:42:16.4, 11°.53N×61°.57W, h32km, MW3.2*
*TRN **29** 00:42:17.9, 11°.52N×61°.63W, h57km, MD3.4*
ISC 29 00:42:17.0±0.7, 11°.51N±0°.03×61°.68W±0°.03, h65km±13km, n19, σ0s51/32, 1C-1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRW	**Mount Saint Ca**	**0.65**	**1**	⇓*iP*	**Pn**	**00 42 31.6**	**+0.6**
GRW				*e*S	**Sn**	**00 42 41.2**	**0.0**
TRN	**Trinidad (W)**	**0.90**	**163**	*e*P	**Pn**	**00 42 34.4**	**+0.4**
TRN				*e*S	**Sn**	**00 42 46.6**	**0.0**
TPR	**Prospect**	**0.94**	**110**	*e*P	**Pn**	**00 42 34.5**	**0.0**
TPR				*e*S	**Sn**	**00 42 46.8**	**-0.7**
BOT	**Bacolet**	**1.00**	**110**	*e*P	**Pn**	**00 42 35.7**	**+0.4**
BOT				*e*S	**Sn**	**00 42 48.3**	**-0.5**
GUIV	**Guiria**	**1.01**	**212**	*e*P	**Pn**	**00 42 34.4**	**-1.0**
GUIV				*e*S	**Sn**	**00 42 49.5**	**+0.4**
TOSP	**Speyside**	**1.14**	**101**	*e*P	**Pn**	**00 42 37.4**	**+0.3**
TOSP				*e*S	**Sn**	**00 42 51.5**	**-0.5**
TBH	**Brigand Hill**	**1.18**	**150**	⇑*iP*	**Pn**	**00 42 39.3**	**+1.6**
TBH				*e*S	**Sn**	**00 42 53.6**	**+0.5**
ITEV	**Isla Los Testi**	**1.44**	**264**	*e*P	**Pn**	**00 42 41.1**	**+0.1**
ITEV				*e*S	**Sn**	**00 42 59.4**	**+0.4**
CRUV	**Carupano**	**1.74**	**242**	*e*P	**Pn**	**00 42 45.0**	**-0.1**
CRUV				*e*S	**Sn**	**00 43 06.3**	**-0.1**
SVB	**Belmont**	**1.80**	**13**	*e*P	**Pn**	**00 42 46.0**	**+0.1**
SVB				*e*S	**Sn**	**00 43 07.2**	**-0.5**
GUNV	**Guanoco**	**1.83**	**223**	*e*P	**Pn**	**00 42 45.9**	**-0.4**
GUNV				*e*S	**Sn**	**00 43 08.2**	**-0.2**
SVV	**Soufriere Volc**	**1.85**	**14**	*e*S	**Sn**	**00 43 08.7**	**-0.4**
BHS	**Barnard House**	**1.85**	**17**	*e*S	**Sn**	**00 43 09.4**	**+0.3**
SSV	**Crater Summit**	**1.86**	**15**	*e*S	**Sn**	**00 43 09.4**	**0.0**
MCLT	**Moule a Chique**	**2.30**	**18**	*e*P	**Pn**	**00 42 52.3**	**-0.4**
MCLT				*e*S	**Sn**	**00 43 19.8**	**-0.1**
SLB	**Belfond**	**2.38**	**15**	*e*S	**Sn**	**00 43 22.2**	**+0.2**
LZG	**Guadaloupe-1**	**4.60**	**359**	*e*P	**Pn**	**00 43 25.0**	**+0.9**
CAOV	**Caicara del Or**	**6.19**	**228**	*e*P	**Pn**	**00 43 45.5**	**-0.4**
CAOV				*e*S	**Sn**	**00 44 49.9**	**-5.3**
BAUV	**El Baul**	**6.76**	**248**	*e*P	**Pn**	**00 43 53.1**	**-0.6**

*ISCJB **29** 01:02:12.6±0.4, 71°.40N±0°.04×3°.4W±0°.2, h10km, mb4.0/29, MS3.3/10, Error ellipse: s-maj=7.4km s-min=5.6km az=31.4*
*CSEM **29** 01:02:12.6±0.1, 71°.34N×3°.84W, h2km, mb4.3/21, Ms3.1, Error ellipse: s-maj=5.3km s-min=4.3km az=104.0*
*IDC **29** 01:02:13.0±0.8, 71°.26N×3°.91W, h0km, mb3.5/7, mb1 3.9/13, mb1mx3.7/29, mbtmp3.7/13, ML3.6/6, MS3.3/9, Ms1 3.3/9, ms1mx3.1/41, Error ellipse: s-maj=19.5km s-min=14.6km az=31.0*
*BER **29** 01:02:13.9±2.1, 71°.45N×4°.38W, h10km, ML2.6*
*NAO **29** 01:02:14.5±5.4, 71°.28N×2°.95W*
*NEIC **29** 01:02:14.0±0.3, 71°.36N×3°.79W, h10km, mb4.2/21, Error ellipse: s-maj=5.8km s-min=4.8km az=107.0*
ISC 29 01:02:14.3±0.4, 71°.35N±0°.04×3°.7W±0°.1, h10km, n174, σ0s92/172, mb3.9/29, MS3.3/10, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.60**	**259**	Pn	**Pn**	**01 02 41.0**	**-1.6**
	3.2nm,0.3s,baz=68,slow=11,SNR=3.4						
JMIC				Sn	**Sn**	**01 02 52.5**	**-11**
	9.4nm,0.3s,baz=66,slow=18,SNR=3.2						
JMIC				LR	LR	01 02 56.2	
	comp=Z,1μm,19.9s,baz=19,slow=28						
JMIC	**Jan Mayen**	**1.60**	**259**	Pn	**Pn**	**01 02 41.0**	**-1.6**
JMIC				Sn	**Sn**	**01 02 52.5**	**-11**
JMIC				LR	LR	01 02 56.2	
JMIC	**Jan Mayen**	**1.60**	**259**	Pn	**Pn**	**01 02 41.0**	**-1.5**
LOF	**Lofoten**	**6.79**	**110**	*e*P	**Pn**	**01 03 54.4**	**+0.6**
LOF	**Lofoten**	**6.79**	**110**	*e*P	**Pn**	**01 03 54.3**	**+0.5**
	SNR=47						
DAG	**Danmarks Havn**	**6.80**	**330**	*i* P	**Pn**	**01 03 48.4**	**-5.4**
	129nm,0.8s						
TRO	**Tromso**	**7.75**	**92**	*e*P	**Pn**	**01 04 04.5**	**-2.5**
KONS	**Konsvik**	**7.76**	**121**	*e*P	**Pn**	**01 04 06.2**	**-0.8**
STOK	**Stokkvaagen**	**7.85**	**122**	*e*P	**Pn**	**01 04 06.8**	**-1.4**
STOK				*e*S	**Sn**	**01 05 32.3**	**-4.7**
STOK				AML	AML	01 05 33.6	
	comp=Z,8.6nm,0.7s						
STOK	**Stokkvaagen**	**7.85**	**122**	*e*P	**Pn**	**01 04 06.8**	**-1.5**
MOR8	**Moi Rana**	**8.36**	**119**	*e*P	**Pn**	**01 04 15.3**	**0.0**
MOR8				*e*S	**Sn**	**01 05 42.9**	**-6.7**
MOR8				AML	AML	01 05 44.6	
	comp=Z,3.9nm,0.6s						
MOR8	**Moi Rana**	**8.36**	**119**	*e*P	**Pn**	**01 04 15.3**	**0.0**
	SNR=47						
KBS	**Kingsbay**	**8.56**	**21**	Pn	**Pn**	**01 04 17.7**	**-0.3**
KBS	**Kingsbay**	**8.56**	**21**	*e*Pn	**Pn**	**01 04 17.9**	**0.0**
KBS	**Kingsbay**	**8.56**	**21**	*e*Pn	**Pn**	**01 04 17.9**	**0.0**
SPB4	**Spitsbergen Ar**	**8.58**	**28**	*e*Pn	**Pn**	**01 04 18.8**	**+0.5**
SPB4	**Spitsbergen Ar**	**8.58**	**28**	*e*Pn	**Pn**	**01 04 18.8**	**+0.5**
SPA0	**Spitsbergen Ar**	**8.59**	**28**	Pn	**Pn**	**01 04 18.7**	**+0.4**
	baz=222,slow=16						
SPA0	**Spitsbergen Ar**	**8.59**	**28**	Pn	**Pn**	**01 04 18.7**	**+0.4**
	baz=222,slow=14,SNR=8.0						
SPITS	**Spitsbergen Ar**	**8.59**	**28**	Pn	**Pn**	**01 04 18.5**	**+0.2**
	baz=213,slow=14,SNR=59						
SPITS	**Spitsbergen Ar**	**8.59**	**28**	Pn	**Pn**	**01 04 18.5**	**+0.2**
NSS	**Namsos**	**9.00**	**132**	*e*P	**Pn**	**01 04 22.4**	**-1.6**
NSS	**Namsos**	**9.00**	**132**	*e*P	**Pn**	**01 04 22.5**	**-1.6**
	SNR=47						
KTK1	**Kautokeino**	**9.40**	**91**	*e*P	**Pn**	**01 04 29.0**	**-0.5**
KTK1	**Kautokeino**	**9.40**	**91**	*e*P	**Pn**	**01 04 29.0**	**-0.5**
	SNR=47						
ARA0	**ARCESS Array S**	**9.90**	**86**	Pn	**Pn**	**01 04 35.3**	**-1.1**
	baz=285,slow=12						
ARA0	**ARCESS Array S**	**9.90**	**86**	Pn	**Pn**	**01 04 35.3**	**-1.1**
	baz=285,slow=11,SNR=3.0						
ARCES	**ARCESS Array B**	**9.90**	**86**	Pn	**Pn**	**01 04 36.2**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=292,slow=12,SNR=15						
ARCES				LR	LR	01 07 50.7	
	comp=Z,91nm,21.1s,baz=263,slow=34						
ARCES	**ARCESS Array B**	**9.90**	**86**	Pn	**Pn**	**01 04 36.2**	**-0.2**
KEV	**Kevo**	**10.30**	**84**	*e*Pn	**Pn**	**01 04 41.6**	**-0.2**
KEV	**Kevo**	**10.30**	**84**	*e*Pn	**Pn**	**01 04 41.6**	**-0.2**
SUMG	**Summit**	**10.74**	**293**	*e*Pn	**Pn**	**01 04 45.1**	**-2.6**
SUMG	**Summit**	**10.74**	**293**	*i* P	**Pn**	**01 04 43.8**	**-4.0**
	comp=Z,6.0nm,0.9s						
SUMG	**Summit**	**10.74**	**293**	*e*Pn	**Pn**	**01 04 45.2**	**-2.6**
NB2	**NORSAR Subarra**	**11.93**	**143**	Pn	**Pn**	**01 05 02.2**	**-1.9**
	baz=321,slow=14						
NB2	**NORSAR Subarra**	**11.93**	**143**	Pn	**Pn**	**01 05 02.2**	**-1.8**
	baz=321,slow=13,SNR=6.3						
NOA	**NORSAR Array B**	**11.93**	**143**	Pn	**Pn**	**01 05 04.0**	**0.0**
	comp=Z,0.3nm,0.3s,baz=331,slow=12,SNR=3.3						
NOA				LR	LR	01 09 18.5	
	comp=Z,180nm,18.2s,baz=335,slow=36						
NOA	**NORSAR Array B**	**11.93**	**143**	Pn	**Pn**	**01 05 04.0**	**0.0**
HFS	**Hagfors**	**13.26**	**139**	Pn	**Pn**	**01 05 21.9**	**-0.3**
	baz=333,slow=10						
HFS	**Hagfors**	**13.26**	**139**	Pn	**Pn**	**01 05 21.7**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=343,slow=8.0,SNR=38						
HFS				LR	LR	01 09 59.0	
	comp=Z,208nm,21.1s,baz=252,slow=35						
HFS	**Hagfors**	**13.26**	**139**	Pn	**Pn**	**01 05 21.9**	**-0.3**
	baz=333,slow=9.9,SNR=5.3						
FIA0	**FINESS Array S**	**15.31**	**115**	P	**Pn**	**01 05 49.1**	**-0.9**
	baz=315,slow=10						
FINES	**FINESS Array B**	**15.31**	**115**	Pn	**Pn**	**01 05 49.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=327,slow=12,SNR=9.8						
FINES	**FINESS Array B**	**15.31**	**115**	Pn	**Pn**	**01 05 49.1**	**-0.9**
EKA	**Eskdalemuir Ar**	**16.08**	**179**	Pn	**Pn**	**01 05 58.7**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=355,slow=13,SNR=4.0						
EKA	**Eskdalemuir Ar**	**16.08**	**179**	Pn	**Pn**	**01 05 58.7**	**-1.4**
CLL	**Collm**	**21.49**	**150**	*e*(P)	**P**	**01 07 06.0**	**+3.3**
BAIF	**Baives**	**21.67**	**166**	*e*P	**P**	**01 07 04.4**	**-0.3**
	comp=Z,14nm,1.0s,mb4.0						
BAIF	**Baives**	**21.67**	**166**	*e*P	**P**	**01 07 04.4**	**-0.3**
	comp=Z,6.8nm,1.0s,mb4.0						
BAIF	**Baives**	**21.67**	**166**	*e*P	**P**	**01 07 04.4**	**-0.3**
	comp=Z,6.8nm,1.0s,mb4.0						
GIVF	**Givet**	**21.68**	**165**	*e*P	**P**	**01 07 04.5**	**-0.2**
GIVF	**Givet**	**21.68**	**165**	*e*P	**P**	**01 07 04.5**	**-0.2**
MOX	**Moxa**	**21.93**	**153**	*e*P	**P**	**01 07 08.4**	**+1.1**
	comp=Z,19nm,1.9s,mb4.2						
MOX	**Moxa**	**21.93**	**153**	*e*P	**P**	**01 07 08.4**	**+1.1**
	comp=Z,19nm,1.9s,mb4.2						
BRG	**Berggiesshubel**	**22.06**	**149**	*e*P	**P**	**01 07 08.8**	**0.0**
	comp=Z,3.5nm,0.9s,mb3.8						
NKC	**Novy Kostel**	**22.45**	**152**	*e*P	**P**	**01 07 13.5**	**+0.6**
NKC	**Novy Kostel**	**22.45**	**152**	P	**P**	**01 07 13.5**	**+0.6**
KSP	**Ksiaz**	**22.50**	**145**	*e*P	**P**	**01 07 14.1**	**+0.6**
PVCC	**Panska Ves**	**22.50**	**148**	*e*P	**P**	**01 07 21.1**	**+7.6**
FLN	**La Foliniere**	**22.71**	**174**	*e*P	**P**	**01 07 15.2**	**-0.5**
	comp=Z,18nm,1.0s,mb4.2						
FLN				*e*MLR	MLR		
	comp=Z,117nm,18.2s,MS3.1						
FLN	**La Foliniere**	**22.71**	**174**	*e*P	**P**	**01 07 15.2**	**-0.5**
	comp=Z,9.1nm,1.0s,mb4.2						
FLN				LR	LR		
	comp=Z,120nm,18.3s,MS3.4						
FLN	**La Foliniere**	**22.71**	**174**	*e*P	**P**	**01 07 15.2**	**-0.5**
	comp=Z,9.1nm,1.0s,mb4.2						
LDF	**La Druitiere**	**22.89**	**174**	*e*P	**P**	**01 07 17.2**	**-0.5**
	comp=Z,4.5nm,0.7s,mb3.7						
LDF	**La Druitiere**	**22.89**	**174**	*e*P	**P**	**01 07 17.2**	**-0.5**
	comp=Z,2.3nm,0.7s,mb3.7						
LDF	**La Druitiere**	**22.89**	**174**	*e*P	**P**	**01 07 17.2**	**-0.5**
	comp=Z,2.2nm,0.7s,mb3.7						
DPC	**Dobruska-Polom**	**22.98**	**146**	*e*P	**P**	**01 07 19.2**	**+0.7**
DPC	**Dobruska-Polom**	**22.98**	**146**	P	**P**	**01 07 19.2**	**+0.7**
PRU	**Pruhonice**	**23.02**	**149**	*e*P	**P**	**01 07 20.7**	**+1.7**
PRU	**Pruhonice**	**23.02**	**149**	P	**P**	**01 07 20.7**	**+1.7**
GRR	**Gorron**	**23.08**	**175**	*e*P	**P**	**01 07 18.6**	**-1.0**
	comp=Z,17nm,0.9s,mb4.2						
GRR	**Gorron**	**23.08**	**175**	*e*P	**P**	**01 07 18.6**	**-1.0**
	comp=Z,8.4nm,0.9s,mb4.2						
GRR	**Gorron**	**23.08**	**175**	*e*P	**P**	**01 07 18.6**	**-1.0**
	comp=Z,8.4nm,0.9s,mb4.2						
ROSF	**Rostrenen**	**23.09**	**179**	*e*P	**P**	**01 07 18.4**	**-1.3**
	comp=Z,66nm,1.3s,mb4.6						
ROSF	**Rostrenen**	**23.09**	**179**	*e*P	**P**	**01 07 18.4**	**-1.3**
	comp=Z,33nm,1.3s,mb4.6						
ROSF	**Rostrenen**	**23.09**	**179**	*e*P	**P**	**01 07 18.4**	**-1.3**
	comp=Z,33nm,1.3s,mb4.6						
SGMF	**Saint Gilles**	**23.18**	**178**	*e*P	**P**	**01 07 19.8**	**-0.8**
	comp=Z,21nm,1.1s,mb4.2						
SGMF	**Saint Gilles**	**23.18**	**178**	*e*P	**P**	**01 07 19.8**	**-0.8**
	comp=Z,10nm,1.1s,mb4.2						
SGMF	**Saint Gilles**	**23.18**	**178**	*e*P	**P**	**01 07 19.8**	**-0.8**
	comp=Z,10nm,1.1s,mb4.2						
MEZF	**Maizieres J'vi**	**23.29**	**165**	*e*P	**P**	**01 07 22.6**	**+0.8**
MEZF	**Maizieres J'vi**	**23.29**	**165**	*e*P	**P**	**01 07 22.6**	**+0.8**
QUIF	**Quistinic**	**23.51**	**179**	*e*P	**P**	**01 07 23.4**	**-0.7**
QUIF	**Quistinic**	**23.51**	**179**	*e*P	**P**	**01 07 23.4**	**-0.7**
CDF	**Champ du Feu**	**23.58**	**161**	*e*P	**P**	**01 07 24.7**	**-0.1**
CDF	**Champ du Feu**	**23.58**	**161**	*e*P	**P**	**01 07 24.7**	**-0.1**
KHC	**Kasperske Hory**	**23.70**	**151**	*e*P	**P**	**01 07 30.8**	**+4.9**
GERES	**GERESS Array B**	**23.99**	**151**	P	**P**	**01 07 29.1**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.3,baz=356,slow=12,SNR=6.0						
GERES	**GERESS Array B**	**23.99**	**151**	P	**P**	**01 07 29.1**	**+0.5**
VRAC	**Vranov**	**24.03**	**146**	LR	LR	01 15 13.8	
	comp=Z,58nm,19.8s,MS3.1,baz=282,slow=33						
HINF	**Hinteralfeld**	**24.13**	**162**	*e*P	**P**	**01 07 30.0**	**+0.2**
HINF	**Hinteralfeld**	**24.13**	**162**	*e*P	**P**	**01 07 30.0**	**+0.2**
RES	**Resolute Bay**	**24.35**	**320**	LR	LR	01 16 31.6	
	comp=Z,151nm,20.3s,MS3.5,baz=80,slow=35						
LOR	**Lormes**	**24.42**	**167**	*e*P	**P**	**01 07 32.3**	**-0.2**
	comp=Z,6.5nm,0.7s,mb3.9						
LOR				*e*MLR	MLR		
	comp=Z,88nm,18.0s,MS3.0						
LOR	**Lormes**	**24.42**	**167**	*e*P	**P**	**01 07 32.3**	**-0.2**
	comp=Z,3.3nm,0.7s,mb3.9						
LOR				LR	LR		
	comp=Z,90nm,18.0s,MS3.3						
LOR	**Lormes**	**24.42**	**167**	*e*P	**P**	**01 07 32.3**	**-0.2**
	comp=Z,3.2nm,0.7s,mb3.9						
SSF	**Saint Saulge**	**24.61**	**168**	*e*P	**P**	**01 07 33.9**	**-0.3**
	comp=Z,5.2nm,0.7s,mb3.9						
SSF	**Saint Saulge**	**24.61**	**168**	*e*P	**P**	**01 07 33.9**	**-0.3**
	comp=Z,2.6nm,0.7s,mb3.9						
SSF	**Saint Saulge**	**24.61**	**168**	*e*P	**P**	**01 07 33.9**	**-0.3**
	comp=Z,2.6nm,0.7s,mb3.9						
AVF	**Avril sur Loir**	**24.87**	**168**	*e*P	**P**	**01 07 36.4**	**-0.1**
AVF	**Avril sur Loir**	**24.87**	**168**	*e*P	**P**	**01 07 36.4**	**-0.1**
MFF	**Saint Martin d**	**24.88**	**174**	*e*P	**P**	**01 07 36.3**	**-0.4**
	comp=Z,12nm,0.8s,mb4.2						
MFF	**Saint Martin d**	**24.88**	**174**	*e*P	**P**	**01 07 36.3**	**-0.4**
	comp=Z,5.9nm,0.8s,mb4.2						
MFF	**Saint Martin d**	**24.88**	**174**	*e*P	**P**	**01 07 36.3**	**-0.4**
	comp=Z,5.9nm,0.8s,mb4.1						
SMF	**Signal de Mont**	**25.04**	**168**	*e*P	**P**	**01 07 37.7**	**-0.5**
	comp=Z,21nm,1.1s,mb4.3						
SMF	**Signal de Mont**	**25.04**	**168**	*e*P	**P**	**01 07 37.7**	**-0.5**
	comp=Z,11nm,1.1s,mb4.3						
SMF	**Signal de Mont**	**25.04**	**168**	*e*P	**P**	**01 07 37.7**	**-0.5**
	comp=Z,11nm,1.1s,mb4.3						
BGF	**Bois d'Agland**	**25.07**	**169**	*e*P	**P**	**01 07 38.0**	**-0.4**
	comp=Z,11nm,0.8s,mb4.1						
BGF	**Bois d'Agland**	**25.07**	**169**	*e*P	**P**	**01 07 38.0**	**-0.4**
	comp=Z,5.4nm,0.8s,mb4.1						
BGF	**Bois d'Agland**	**25.07**	**169**	*e*P	**P**	**01 07 38.0**	**-0.4**
	comp=Z,5.4nm,0.8s,mb4.1						
CABF	**La Chapelle**	**25.25**	**164**	*e*P	**P**	**01 07 40.1**	**0.0**
CABF	**La Chapelle**	**25.25**	**164**	*e*P	**P**	**01 07 40.1**	**0.0**
TCF	**Toulx Ste Croi**	**25.30**	**170**	*e*P	**P**	**01 07 39.9**	**-0.6**
	comp=Z,18nm,1.1s,mb4.2						
TCF	**Toulx Ste Croi**	**25.30**	**170**	*e*P	**P**	**01 07 39.9**	**-0.6**
	comp=Z,9.0nm,1.1s,mb4.2						
TCF	**Toulx Ste Croi**	**25.30**	**170**	*e*P	**P**	**01 07 39.9**	**-0.6**
	comp=Z,9.0nm,1.1s,mb4.2						
AKASG	**Malin Array Be**	**25.52**	**127**	P	**P**	**01 07 42.0**	**-0.5**
	comp=Z,2.1nm,0.6s,mb3.8,baz=334,slow=9.8,SNR=5.4						
AKASG	**Malin Array Be**	**25.52**	**127**	P	**P**	**01 07 42.0**	**-0.5**
AKASG	**Malin Array Be**	**25.52**	**127**	P	**P**	**01 07 42.0**	**-0.5**
RJF	**Les Rejaudoux**	**26.25**	**172**	*e*P	**P**	**01 07 48.6**	**-0.5**
	comp=Z,19nm,0.9s,mb4.3						
RJF				*e*MLR	MLR		
	comp=Z,144nm,21.5s,MS3.2						
RJF	**Les Rejaudoux**	**26.25**	**172**	*e*P	**P**	**01 07 48.6**	**-0.5**
	comp=Z,9.4nm,0.9s,mb4.3						
RJF				LR	LR		
	comp=Z,140nm,21.5s,MS3.5						
RJF	**Les Rejaudoux**	**26.25**	**172**	*e*P	**P**	**01 07 48.6**	**-0.5**
	comp=Z,9.4nm,0.9s,mb4.3						
LPL	**La Plagne**	**26.40**	**163**	*e*P	**P**	**01 07 51.3**	**+0.9**
	comp=Z,4.9nm,0.9s,mb3.7						
LPL	**La Plagne**	**26.40**	**163**	*e*P	**P**	**01 07 51.3**	**+0.9**
	comp=Z,2.5nm,0.9s,mb3.7						
LPL	**La Plagne**	**26.40**	**163**	*e*P	**P**	**01 07 51.3**	**+0.9**
	comp=Z,2.5nm,0.9s,mb3.7						
LPG	**La Plagne**	**26.42**	**163**	*e*P	**P**	**01 07 51.7**	**+1.1**
	comp=Z,8.7nm,1.2s,mb3.9						
LPG	**La Plagne**	**26.42**	**163**	*e*P	**P**	**01 07 51.7**	**+1.1**
	comp=Z,4.3nm,1.2s,mb3.9						
LPG	**La Plagne**	**26.42**	**163**	*e*P	**P**	**01 07 51.7**	**+1.1**
	comp=Z,4.3nm,1.2s,mb3.9						
LFF	**La Frestale**	**26.58**	**173**	*e*P	**P**	**01 07 51.9**	**-0.1**
LFF	**La Frestale**	**26.58**	**173**	*e*P	**P**	**01 07 51.9**	**-0.1**
CAF	**Calviac**	**26.65**	**171**	*e*P	**P**	**01 07 52.4**	**-0.3**
	comp=Z,13nm,1.1s,mb4.0						
CAF	**Calviac**	**26.65**	**171**	*e*P	**P**	**01 07 52.4**	**-0.3**
	comp=Z,6.3nm,1.1s,mb4.1						
CAF	**Calviac**	**26.65**	**171**	*e*P	**P**	**01 07 52.4**	**-0.3**
	comp=Z,6.3nm,1.1s,mb4.0						
VIVF	**Saint-Julien-l**	**26.88**	**167**	*e*P	**P**	**01 07 55.8**	**+1.0**
VIVF	**Saint-Julien-l**	**26.88**	**167**	*e*P	**P**	**01 07 55.8**	**+1.0**
ORIF	**Oris-en-Rattie**	**26.92**	**165**	*e*P	**P**	**01 07 56.7**	**+1.6**
	comp=Z,20nm,1.4s,mb4.2						
ORIF				*e*MLR	MLR		
	comp=Z,132nm,21.0s,MS3.2						
ORIF	**Oris-en-Rattie**	**26.92**	**165**	*e*P	**P**	**01 07 56.7**	**+1.6**
	comp=Z,10nm,1.4s,mb4.2						
ORIF	**Oris-en-Rattie**	**26.92**	**165**	*e*P	**P**	**01 07 56.7**	**+1.6**
	comp=Z,10nm,1.4s,mb4.2						
MBDF	**Montbardon**	**27.18**	**164**	*e*P	**P**	**01 07 58.7**	**+1.2**
	comp=Z,7.6nm,0.9s,mb3.9						
MBDF	**Montbardon**	**27.18**	**164**	*e*P	**P**	**01 07 58.7**	**+1.2**
	comp=Z,3.8nm,0.9s,mb3.9						
MBDF	**Montbardon**	**27.18**	**164**	*e*P	**P**	**01 07 58.7**	**+1.2**
	comp=Z,3.8nm,0.9s,mb3.9						
LASF	**Ste Croix**	**27.60**	**168**	*e*P	**P**	**01 08 02.5**	**+1.2**
LASF	**Ste Croix**	**27.60**	**168**	*e*P	**P**	**01 08 02.5**	**+1.2**
SMRF	**Simiane la Rot**	**27.83**	**166**	*e*P	**P**	**01 08 03.7**	**+0.4**
SMRF	**Simiane la Rot**	**27.83**	**166**	*e*P	**P**	**01 08 03.7**	**+0.4**
SBF	**Sospel**	**28.10**	**163**	*e*P	**P**	**01 08 07.5**	**+1.8**
SBF	**Sospel**	**28.10**	**163**	*e*P	**P**	**01 08 07.5**	**+1.8**
MTLF	**Montolieu**	**28.24**	**171**	*e*P	**P**	**01 08 08.1**	**+1.1**
MTLF	**Montolieu**	**28.24**	**171**	*e*P	**P**	**01 08 08.1**	**+1.1**
FRF	**La Foret Royal**	**28.33**	**164**	*e*P	**P**	**01 08 08.1**	**+0.3**
FRF	**La Foret Royal**	**28.33**	**164**	*e*P	**P**	**01 08 08.1**	**+0.3**
SJPF	**Ste Jean**	**28.34**	**176**	*e*P	**P**	**01 08 07.8**	**-0.1**
SJPF	**Ste Jean**	**28.34**	**176**	*e*P	**P**	**01 08 07.8**	**-0.1**
EPF	**Esparros**	**28.47**	**174**	*e*P	**P**	**01 08 09.5**	**+0.5**
	comp=Z,11nm,0.9s,mb4.2						
EPF	**Esparros**	**28.47**	**174**	*e*P	**P**	**01 08 09.5**	**+0.5**
	comp=Z,5.6nm,0.9s,mb4.2						
EPF	**Esparros**	**28.47**	**174**	*e*P	**P**	**01 08 09.5**	**+0.5**
	comp=Z,5.6nm,0.9s,mb4.2						
LMR	**La Mourre**	**28.54**	**164**	*e*P	**P**	**01 08 10.4**	**+0.7**
LMR	**La Mourre**	**28.54**	**164**	*e*P	**P**	**01 08 10.4**	**+0.7**
PGF	**Pioggiola**	**29.56**	**161**	*e*P	**P**	**01 08 20.1**	**+1.4**
PGF	**Pioggiola**	**29.56**	**161**	*e*P	**P**	**01 08 20.1**	**+1.4**
ESDC	**Sonseca Array**	**31.75**	**180**	P	**P**	**01 08 37.3**	**-0.7**
	comp=Z,0.1nm,0.3s,mb3.1,baz=358,slow=8.3,SNR=2.8						
ESDC	**Sonseca Array**	**31.75**	**180**	P	**P**	**01 08 37.3**	**-0.7**
INK	**Inuvik**	**36.64**	**331**	LR	LR	01 27 33.9	
	comp=Z,80nm,18.6s,MS3.5,baz=157,slow=41						
BRTR	**Keskin Array B**	**36.88**	**129**	P	**P**	**01 09 23.9**	**+1.5**
	comp=Z,0.8nm,0.9s,mb3.6,baz=339,slow=6.9,SNR=3.1						
BRTR	**Keskin Array B**	**36.88**	**129**	P	**P**	**01 09 23.9**	**+1.5**
YKA	**Yellowknife Ar**	**38.25**	**316**	LR	LR	01 24 30.9	
	comp=Z,5.8nm,18.0s,MS2.4,baz=140,slow=35						
ILAR	**Eielson Array**	**41.83**	**337**	P	**P**	**01 10 04.8**	**+1.3**
	comp=Z,0.6nm,1.0s,mb3.2,baz=7.0,slow=8.2,SNR=3.8						
ILAR	**Eielson Array**	**41.83**	**337**	P	**P**	**01 10 04.8**	**+1.3**
MKAR	**Makanchi Array**

baz=31
426A McDonald Obser 31.20 322 ⇓P P 01 38 44.1 -0.3
baz=32,SNR=5.8
425A Indio Mountain 31.88 321 ⇓P P 01 38 50.1 -0.3
baz=32,SNR=9.8
226A Malaga, Loving 32.24 324 ⇑P P 01 38 53.1 -0.5
baz=33,SNR=5.6
325A Bean Ranch, Si 32.27 322 ⇑P P 01 38 53.2 -0.6
baz=33
324A Moseley Ranch, 32.64 321 ⇑P P 01 38 56.0 -1.0
baz=33,SNR=7.2
225A Deer Hill, Car 32.70 323 ⇓P P 01 38 57.4 -0.1
baz=33
MSTX Muleshoe 32.91 328 ⇑P P 01 38 59.1 -0.3
baz=33
125A Gardner Draw, 32.99 324 ⇓P P 01 38 59.7 -0.5
baz=33,SNR=8.1
Z26A Caprock 33.05 325 ⇓P P 01 38 59.5 -1.1
baz=33
Y27A Causey 33.05 327 ⇑P P 01 39 00.4 -0.3
baz=34
224A Cornudas Mount 33.10 322 ⇓P P 01 39 01.0 -0.1
baz=34
Z25A Roswell 33.47 325 ⇑P P 01 39 04.3 0.0
baz=34
124A Stringfield Ra 33.49 323 ⇑P P 01 39 04.4 -0.2
baz=34,SNR=5.7
Z24A Sheeppen Canyo 33.89 324 ⇑P P 01 39 08.1 +0.1
baz=34
W27A Bowe Ranch, En 33.91 329 ⇑P P 01 39 07.8 -0.2
baz=34
X26A CR and CF Fran 33.91 327 ⇓P P 01 39 07.3 -0.8
baz=34
Y25A Mesa, Roswell 33.93 325 ⇑P P 01 39 07.7 -0.6
baz=34,SNR=7.7
Z23A Rita Site, Whi 34.35 323 ⇑P P 01 39 12.5 +0.5
baz=35
Y24A Capitan 34.35 325 ⇑P P 01 39 11.8 -0.2
baz=35,SNR=9.4
X25A Clemmons Ranch 34.36 326 ⇑P P 01 39 11.9 -0.1
baz=35
221A Mesquite Ranch 34.47 320 ⇑P P 01 39 13.4 +0.4
baz=35
320A Kipp Ranch, An 34.52 318 ⇓P P 01 39 13.6 +0.1
baz=35,SNR=6.0
Y23A Lovelace Mesa, 34.72 324 ⇑P P 01 39 14.6 -0.5
baz=35,SNR=7.4
W25A X Bar L Ranch, 34.76 327 ⇑P P 01 39 15.8 +0.3
baz=35
Z22A Elephant Butte 34.79 322 ⇓P P 01 39 15.7 0.0
baz=35,SNR=6.0
121A Cookes Peak, D 34.81 320 ⇓P P 01 39 16.4 +0.5
baz=35
V26A Tequesquite Ra 34.84 329 ⇑P P 01 39 16.2 0.0
baz=35
220A Playas Peak, P 34.88 319 ⇑P P 01 39 16.3 -0.3
baz=35,SNR=11
BNM Barren Site 35.21 324 eP P 01 39 20.2 +0.8
5.4nm,1.2s,mb4.3
Z21A St. Cloud Mine 35.26 322 ⇓P P 01 39 20.5 +0.7
baz=36,SNR=6.1
Y22A Socorro 35.26 323 ⇓P P 01 39 20.2 +0.4
baz=36,SNR=18
W24A Lazy 6 Ranch, 35.27 326 ⇑P P 01 39 20.1 +0.2
baz=36,SNR=6.6
V25A Rancho No Teng 35.31 328 ⇓P P 01 39 20.4 +0.2
baz=36,SNR=8.7
120A U Bar Ranch, L 35.36 320 ⇓P P 01 39 21.0 +0.2
baz=36,SNR=5.2
219A White Tail Can 35.42 318 ⇓P P 01 39 21.0 -0.2
baz=36,SNR=7.9
318A Bisbee 35.57 317 ⇓P P 01 39 22.6 +0.1
baz=36
V24A Rampart Ranch, 35.58 327 ⇓P P 01 39 22.8 +0.2
baz=36,SNR=5.9
U25A Circle Dot Ran 35.63 329 ⇓P P 01 39 23.7 +0.7
baz=36
W23A Werner Place, 35.65 325 ⇑P P 01 39 23.5 +0.3
baz=36,SNR=5.3
ANMO Albuquerque 35.68 325 P P 01 39 22.9 -0.5
8.4nm,0.9s,mb4.7,baz=137,slow=8.4,SNR=31
ANMO LR LR 01 56 09.1
comp=Z,110nm,18.8s,MS3.6,baz=123,slow=40
ANMO Albuquerque 35.68 325 eP P 01 39 23.7 +0.3
10nm,0.9s,mb4.8
X22A Bernardo 35.68 324 ⇑P P 01 39 24.0 +0.6
baz=36
LAZ Ladron 35.69 323 eP P 01 39 24.8 +1.4
6.8nm,1.1s,mb4.5
Z20A Nine Sixteen R 35.71 320 ⇑P P 01 39 24.2 +0.6
baz=36,SNR=7.8
Y21A Point of Rocks 35.74 322 ⇓P P 01 39 24.9 +1.0
baz=36,SNR=7.8
218A Dragoon 35.93 318 ⇑P P 01 39 26.0 +0.4
baz=36
119A Ashpeak Ranch, 35.94 319 ⇑P P 01 39 26.0 +0.3
baz=36
V23A Ortiz Mt. (NFS 36.09 326 ⇑P P 01 39 27.5 +0.5
baz=36
Y20A Horse Springs, 36.10 322 ⇓P P 01 39 27.3 +0.3
baz=36
X21A Alamocita Cree 36.10 323 ⇑P P 01 39 27.8 +0.8
baz=36,SNR=22
T25A Trinidad 36.20 329 ⇑P P 01 39 28.2 +0.4
baz=37
118A Homack Ranch, 36.29 318 ⇓P P 01 39 28.8 +0.1
baz=37,SNR=5.3
217A Green Valley 36.33 317 ⇑P P 01 39 28.9 -0.2
baz=37,SNR=5.1
T24A Torres, Weston 36.48 329 ⇓P P 01 39 31.2 +1.0
baz=37
U23A El Rito 36.53 327 ⇑P P 01 39 31.2 +0.6
baz=37,SNR=18
X20A Quemado 36.60 322 ⇑P P 01 39 32.2 +0.9
baz=37
Z18A Geronimo 36.62 319 ⇑P P 01 39 31.6 +0.2
baz=37
S25A Robets Cordova 36.62 330 ⇑P P 01 39 31.7 +0.3
baz=37
V22A San Miguel Ran 36.62 325 ⇓P P 01 39 31.5 +0.1
baz=37
Y19A Nutrioso 36.67 321 ⇑P P 01 39 32.6 +0.7
baz=37
117A Oracle 36.76 318 ⇑P P 01 39 32.7 +0.1
baz=37,SNR=6.9
U22A Llaves 36.93 326 ⇓P P 01 39 34.9 +0.9
baz=37,SNR=15
V21A Milan 36.96 325 ⇑P P 01 39 35.1 +0.8
baz=37,SNR=5.7
T23A Casias Ranch, 36.97 328 ⇑P P 01 39 34.9 +0.5
baz=37,SNR=11
S24A Houchin Ranch, 36.99 329 ⇓P P 01 39 35.2 +0.6
baz=37
W20A Ramah 36.99 323 ⇑P P 01 39 35.5 +0.9
baz=37,SNR=17
Z17A San Carlos Hig 37.03 319 ⇓P P 01 39 35.1 +0.2
baz=37
Y18A Canyon Day Jun 37.05 320 ⇓P P 01 39 35.1 0.0
baz=37,SNR=5.6
SDCO Great Sand Dun 37.22 329 ⇑P P 01 39 37.1 +0.6
baz=38,SNR=13
SDCO Great Sand Dun 37.22 329 eP P 01 39 36.9 +0.4
60nm,2.3s,mb5.0
116A Eloy 37.40 317 ⇑P P 01 39 38.0 -0.2
baz=38,SNR=5.8
U21A Nageezi 37.41 325 ⇑P P 01 39 38.8 +0.7
baz=38,SNR=5.8
T22A Edith 37.42 327 ⇑P P 01 39 38.6 +0.4
baz=38
V20A Brimhall 37.44 324 ⇑P P 01 39 38.7 +0.3
baz=38
X18A Snowflake 37.48 321 ⇑P P 01 39 39.2 +0.4
baz=38,SNR=5.4
Q25A Bedland, Calha 37.51 331 ⇓P P 01 39 39.8 +0.9
baz=38
Y17A Roosevelt 37.52 319 ⇑P P 01 39 39.6 +0.4
baz=38
Z16A Peralta Trail, 37.69 318 ⇓P P 01 39 40.9 +0.3
baz=38
V19A Window Rock 37.72 323 ⇑P P 01 39 41.5 +0.7
baz=38
W18A Petrified Fore 37.74 322 ⇑P P 01 39 41.8 +0.9
baz=38
T21A Navajo Lake 37.75 326 ⇓P P 01 39 42.0 +1.0
baz=38,SNR=6.9
214A Organ Pipe Nat 37.82 315 ⇓P P 01 39 41.1 -0.6
baz=38
X17A Forest Lakes 37.90 320 ⇑P P 01 39 42.7 +0.3
baz=38,SNR=7.9

S22A 4UR Ranch, Cre 37.92 328 ⇓P P 01 39 43.0 +0.6
baz=38,SNR=10.0
P25A Willow Gulch B 37.95 332 ⇓P P 01 39 43.4 +0.8
baz=38
Q24A Divide 37.98 330 ⇑P P 01 39 43.6 +0.7
baz=38
Y16A Circle Bar Ran 38.05 319 ⇑P P 01 39 43.9 +0.2
baz=38,SNR=6.4
U19A Dine' College, 38.21 324 ⇑P P 01 39 45.3 +0.4
baz=39
R22A Saguache, Gunn 38.24 328 ⇑P P 01 39 45.8 +0.8
baz=39,SNR=8.4
V18A Ganado 38.25 322 ⇓P P 01 39 45.6 +0.3
baz=39
Q23A Hartsel 38.27 330 ⇓P P 01 39 45.9 +0.5
baz=39,SNR=8.3
X16A Lo Mia Camp, P 38.36 320 ⇓P P 01 39 46.3 +0.1
baz=39,SNR=8.7
S21A Coal Bank Pass 38.37 327 ⇑P P 01 39 46.4 +0.1
baz=39
T19A Beclabito 38.48 325 ⇓P P 01 39 47.7 +0.6
baz=39,SNR=10
P23A Jefferson 38.64 330 ⇑P P 01 39 49.5 +1.0
baz=39
Y15A Casa Rosa Ranc 38.66 318 ⇑P P 01 39 48.5 -0.2
baz=39
U18A Rough Rock, Ch 38.69 323 ⇑P P 01 39 49.3 +0.4
baz=39
V17A Tonalea, Kykot 38.72 322 ⇓P P 01 39 49.3 +0.1
baz=39,SNR=14
ECSD EROS Data Cent 38.75 343 eP P 01 39 46.8 -2.5
82nm,2.8s,mb5.0
Q22A Crested Butte, 38.79 329 ⇑P P 01 39 50.5 +0.8
baz=39,SNR=12
S20A Disappointment 38.81 326 ⇑P P 01 39 50.6 +0.7
baz=39,SNR=9.0
W16A Flagstaff 38.84 320 ⇑P P 01 39 50.7 +0.5
baz=39
ISCO Idaho Springs 38.86 331 ⇓P P 01 39 50.2 0.0
baz=39
ISCO Idaho Springs 38.86 331 eP P 01 39 52.6 +2.4
63nm,3.0s
X15A Humboldt 38.92 319 ⇑P P 01 39 51.0 +0.1
baz=39,SNR=6.8
113A Mohawk Valley, 38.94 316 ⇓P P 01 39 50.8 -0.3
baz=39
SMCO Snowmass 39.06 329 eP P 01 39 53.0 +1.0
65nm,2.5s,mb4.9
R20A Redvale 39.08 327 ⇓P P 01 39 52.6 +0.5
baz=40,SNR=11
Y14A Wickenburg 39.10 318 ⇓P P 01 39 51.8 -0.6
baz=39
Z13A Yuma Proving G 39.11 316 ⇑P P 01 39 52.0 -0.5
baz=39
Q21A Laborn Mesa, 39.11 328 ⇓P P 01 39 53.1 +0.6
baz=40,SNR=6.7
PV01 Paradox Valley 39.14 326 eP P 01 39 53.1 +0.5
994nm,1.4s
S19A Harvey Farm, M 39.18 325 ⇓P P 01 39 53.1 0.0
baz=40,SNR=9.5
T18A Mexican Hat 39.18 324 ⇑P P 01 39 53.2 +0.2
baz=40
P22A Eagle 39.27 330 ⇑P P 01 39 54.0 +0.4
baz=40,SNR=8.7
U16A Tuba City 39.27 322 ⇑P P 01 39 53.9 +0.1
baz=40,SNR=6.6
O23A Lake Granby, G 39.32 331 ⇑P P 01 39 55.1 +1.0
baz=40
X14A Yava 39.34 318 ⇓P P 01 39 54.7 +0.3
baz=40
W15A Williams 39.37 320 ⇓P P 01 39 55.2 +0.6
baz=40
PV04 Paradox Valley 39.51 326 eP P 01 39 56.6 +0.8
P21A Newcastle 39.56 329 ⇓P P 01 39 57.2 +1.0
baz=40
Q20A Ridgley Place, 39.58 328 ⇑P P 01 39 56.9 +0.6
baz=40
S18A Hurst Farm, Bl 39.63 325 ⇑P P 01 39 57.0 +0.2
baz=40,SNR=5.2
T17A Navajo Res., N 39.63 323 ⇑P P 01 39 57.4 +0.6
baz=40
R19A Curley Farm, L 39.63 326 ⇑P P 01 39 56.7 -0.1
baz=40,SNR=13
V15A Kaibab Nationa 39.71 321 ⇑P P 01 39 57.8 +0.4
baz=40,SNR=23
GLA Glamis 39.84 315 ⇑P P 01 39 58.6 0.0
baz=40
W14A Seligman 39.91 319 ⇑P P 01 39 59.8 +0.6
baz=40
Y12C Blythe 40.02 316 ⇓P P 01 40 00.2 +0.1
baz=40
P20A De Beque 40.03 328 ⇓P P 01 40 00.3 +0.2
baz=40,SNR=7.0
X13A Yucca 40.03 318 ⇑P P 01 40 00.6 +0.4
baz=40
T16A Glen Canyon Da 40.05 323 ⇓P P 01 40 00.9 +0.6
baz=40
R18A Canyonlands Na 40.05 326 ⇑P P 01 40 00.1 -0.2
baz=40,SNR=6.4
S17A Black Ridge (B 40.06 324 ⇑P P 01 40 01.2 +0.9
baz=40
PDMCI Parker Dam,Lak 40.07 317 ⇑P P 01 40 00.7 +0.2
baz=40
Q19A Hogan Spring (40.11 327 ⇓P P 01 40 00.6 -0.1
baz=40,SNR=5.8
U15A North Rim 40.17 321 ⇓P P 01 40 01.6 +0.3
baz=40,SNR=11
V14A Boquillas Ranc 40.19 320 ⇑P P 01 40 01.8 +0.4
baz=40,SNR=10.0
W13A Hualapai Mount 40.37 318 ⇓P P 01 40 03.3 +0.3
baz=41,SNR=6.4
O20A White River Ci 40.42 329 ⇓P P 01 40 03.8 +0.5
baz=41
N21A Black Mountain 40.53 330 ⇓P P 01 40 05.3 +1.1
baz=41
R17A Hanksville Air 40.54 325 ⇓P P 01 40 04.5 +0.2
baz=41,SNR=18
S16A Weppner Ranch, 40.59 323 ⇑P P 01 40 04.8 +0.1
baz=41
T15A Red Dirt Ranch 40.60 322 ⇓P P 01 40 05.0 +0.2
baz=41,SNR=6.6
BC3 Big Chuckawall 40.61 315 ⇑P P 01 40 04.6 -0.3
baz=41
BDFB Brasilia 40.67 124 LR LR 01 56 28.1
comp=Z,160nm,20.0s,MS3.9,baz=218,slow=36
IRM Iron Mountain 40.68 316 ⇑P P 01 40 04.8 -0.7
baz=41
Q18A Rafter H Ranch 40.69 326 ⇑P P 01 40 06.0 +0.4
baz=41,SNR=14
U14A Mt Trumbull 40.72 321 ⇑P P 01 40 06.0 +0.2
baz=41,SNR=6.0
L23A Garrett 40.72 333 ⇑P P 01 40 06.3 +0.6
baz=41
V13A Grand Canyon W 40.88 319 ⇓P P 01 40 07.7 +0.5
baz=41
R16A Teasdale 40.89 324 ⇓P P 01 40 07.6 +0.4
baz=41,SNR=5.1
SRU San Rafael 40.91 326 ⇑P P 01 40 07.4 0.0
baz=41,SNR=22
SRU San Rafael 40.91 326 eP P 01 40 07.4 0.0
22nm,0.9s,mb4.8
N20A Spence Gulch, 40.95 330 ⇓P P 01 40 07.9 +0.2
baz=41,SNR=5.8
CPUP Villa Florida 40.98 145 LR LR 01 58 50.2
comp=Z,168nm,19.3s,MS3.9,baz=133,slow=39
L22A Ellis Ranch, M 40.99 332 ⇑P P 01 40 08.7 +0.8
baz=41
O19A Miners Draw (B 41.00 328 ⇑P P 01 40 08.3 +0.2
baz=41
T14A Hurricane 41.06 321 ⇑P P 01 40 09.2 +0.5
baz=41
M21A Separation Pea 41.10 331 ⇓P P 01 40 09.3 +0.4
baz=42
P18A Preston Nutter 41.12 327 ⇓P P 01 40 08.9 -0.2
baz=42,SNR=10
Q16A Castle Valley 41.14 325 ⇓P P 01 40 09.7 +0.5
baz=42,SNR=6.2
BELC Belle Mtn. Jos 41.18 316 ⇑P P 01 40 09.5 -0.1
baz=42
U13A Pakoon Wash 41.21 320 ⇓P P 01 40 10.1 +0.2
baz=42,SNR=5.7
P17A Butcher Ranch, 41.28 326 ⇓P P 01 40 10.6 +0.2
baz=42,SNR=5.3
PFO Pinyon Flat Ob 41.28 315 ⇑P P 01 40 10.4 -0.1
baz=42
L21A Rawlins 41.37 331 ⇑P P 01 40 11.7 +0.6
baz=42
V12A Nelson 41.38 318 ⇓P P 01 40 11.0 -0.2

baz=42,SNR=5.7
O18A Roosevelt 41.45 327 ⇑P P 01 40 12.1 +0.4
baz=42,SNR=5.7
N19A John Jarvie Ra 41.46 329 ⇓P P 01 40 11.9 0.0
baz=42
CCUT Cedar City 41.54 322 eP P 01 40 13.8 +1.2
4.4nm,1.0s,mb4.0
T13A Saint George 41.55 321 ⇓P P 01 40 13.2 +0.6
baz=42
S14A Cedar City 41.56 322 ⇑P P 01 40 12.8 +0.1
baz=42
N18A Larsen Ranch, 41.78 328 ⇓P P 01 40 14.8 +0.3
baz=42
O17A Robinson Place 41.79 327 ⇑P P 01 40 15.1 +0.6
baz=42,SNR=11
V11A Goodsprings 41.82 318 ⇑P P 01 40 15.3 +0.4
baz=42
S13A Holt Ranch, En 41.87 321 ⇑P P 01 40 16.1 +0.9
baz=42,SNR=24
TUQ Turquoise Moun 41.92 317 ⇓P P 01 40 15.3 -0.5
baz=42
SHPR Sheep Range 42.04 319 eP P 01 40 17.3 +0.6
J22A Midwest 42.10 334 ⇑P P 01 40 17.3 +0.3
baz=43
MPU Maple Canyon 42.16 326 eP P 01 40 18.2 +0.6
12nm,1.1s,mb4.4
O16A Springville 42.22 326 ⇓P P 01 40 18.7 +0.6
baz=43
DAU Daniels Canyon 42.22 327 eP P 01 40 18.5 +0.4
R13A O'Grain Ranch, 42.31 322 ⇓P P 01 40 19.7 +0.8
baz=43,SNR=8.8
M18A Lyman 42.31 329 ⇑P P 01 40 19.3 +0.5
baz=43
N17A Moffit Pass 42.37 327 ⇓P P 01 40 19.5 +0.2
baz=43,SNR=6.6
Q14A Sevier Lake (B 42.41 323 ⇑P P 01 40 20.1 +0.4
baz=43,SNR=9.5
GSC Goldstone 42.45 317 ⇑P P 01 40 19.7 -0.3
baz=43
JLU Jordanelle 42.46 327 eP P 01 40 20.7 +0.7
20nm,1.4s,mb4.6
J21A Lysite 42.48 333 ⇑P P 01 40 20.6 +0.5
baz=43
N16A Rees Ranch, Co 42.65 327 ⇓P P 01 40 21.9 +0.3
baz=43
M17A Scullys Gap (B 42.66 328 ⇑P P 01 40 21.2 -0.5
baz=43,SNR=20
L18A Fontenelle, Gr 42.66 329 ⇑P P 01 40 21.9 +0.2
baz=43
P14A Drum Mountains 42.69 324 ⇓P P 01 40 22.0 +0.1
baz=43
K19A Absolon Red Bu 42.74 331 ⇑P P 01 40 22.2 0.0
baz=43
U10A Ash Meadows, A 42.75 318 ⇓P P 01 40 23.0 +0.5
baz=43,SNR=5.1
AGMN Agassiz Nation 42.80 347 eP P 01 40 20.8 -1.9
120nm,3.0s
DUG Dugway 42.94 325 ⇓P P 01 40 24.1 +0.2
baz=43
DUG Dugway 42.94 325 eP P 01 40 24.5 +0.6
EDW2 Edwards Air Fo 43.04 315 ⇑P P 01 40 24.4 -0.4
baz=43
BW06 Boulder Array 43.04 330 ⇓P P 01 40 24.5 -0.2
baz=44,SNR=6.7
BW06 Boulder Array 43.04 330 eP P 01 40 24.5 -0.2
7.1nm,1.3s,mb4.2
M16A Huntsville 43.06 327 ⇑P P 01 40 24.8 0.0
baz=44
FURC Furnace Creek, 43.13 318 ⇑P P 01 40 25.1 -0.4
baz=44
LRMC Laurel Mountai 43.15 316 ⇓P P 01 40 25.4 -0.2
baz=43
J19A Crowheart 43.17 331 ⇓P P 01 40 25.6 -0.1
baz=44
K18A Toltan Ranch, 43.18 330 ⇓P P 01 40 26.0 +0.2
baz=44,SNR=14
L17A Cokeville 43.21 329 ⇑P P 01 40 26.7 +0.6
baz=44
HWUT Hardware Ranch 43.23 328 eP P 01 40 26.1 -0.1
19nm,1.0s,mb4.8
N15A Stansbury Isla 43.25 326 ⇑P P 01 40 26.5 +0.1
baz=44
I20A Worland 43.26 333 ⇓P P 01 40 26.3 -0.1
baz=44
MPMC Manual Prospec 43.33 317 ⇑P P 01 40 26.6 -0.5
baz=44
R11A Troy Canyon, C 43.41 321 ⇑P P 01 40 27.6 -0.2
baz=44,SNR=8.3
L16A Fish Haven 43.45 328 ⇓P P 01 40 27.4 -0.6
baz=44,SNR=6.2
SPUT South Promonto 43.50 327 eP P 01 40 28.1 -0.3
20nm,1.2s,mb4.7
J18A Kendall Valley 43.60 330 ⇑P P 01 40 28.9 -0.3
baz=44,SNR=8.4
M15A Larsen Ranch, 43.60 327 ⇓P P 01 40 29.2 -0.1
baz=44,SNR=19
GRAC Grapevine Rang 43.77 318 ⇑P P 01 40 30.6 -0.1
baz=44
ISA Isabella 43.78 316 ⇓P P 01 40 30.5 -0.4
baz=44
L15A Malad City 43.94 327 ⇑P P 01 40 31.6 -0.4
baz=44,SNR=16
J17A Brown Place, J 44.05 330 ⇑P P 01 40 32.1 -0.7
baz=44,SNR=9.9
REDW Red Top Meadow 44.12 330 eP P 01 40 33.5 +0.2
28nm,1.4s,mb4.8
SNOW Snow King Moun 44.14 330 eP P 01 40 33.8 +0.2
34nm,1.7s,mb4.8
LOHW Long Hollow 44.18 330 eP P 01 40 32.0 -1.9
15nm,1.5s,mb4.5
TPAW Teton Pass 44.26 330 eP P 01 40 34.0 -0.6
53nm,2.3s,mb4.9
D24A Glendive 44.27 338 ⇑P P 01 40 34.5 0.0
baz=45
G20A Bridger 44.29 334 ⇓P P 01 40 34.1 -0.6
baz=45
VES Vestal, Richgr 44.30 316 ⇑P P 01 40 34.5 -0.5
baz=45
PKM Peak Mountain 44.33 314 ⇓P P 01 40 34.5 -0.7
baz=45
RRI2 Red Ridge 44.34 330 eP P 01 40 35.0 -0.1
41nm,1.9s,mb4.8
MOOW Moose Ponds 44.35 330 eP P 01 40 34.8 -0.4
7.0nm,1.3s,mb4.2
I17A Pilgrim Ck. 44.39 331 ⇑P P 01 40 35.7 +0.2
baz=45
L14A Malta 44.42 327 ⇑P P 01 40 35.4 -0.5
baz=45,SNR=7.9
J16A Bone 44.44 329 ⇑P P 01 40 35.6 -0.3
baz=45,SNR=6.7
K15A Arbon 44.49 328 ⇑P P 01 40 36.3 -0.1
baz=45
IMW Indian Meadow 44.55 330 eP P 01 40 36.9 0.0
4.3nm,1.0s,mb4.2
FLWY Flagg Ranch 44.57 331 eP P 01 40 36.9 -0.1
12nm,1.2s,mb4.6
D23A Lindsay 44.65 338 ⇑P P 01 40 37.3 -0.2
baz=45
RLMT Red Lodge 44.68 333 ⇓P P 01 40 37.3 -0.5
baz=45
K14A Jones Ranch, D 44.74 327 ⇓P P 01 40 38.3 -0.1
baz=45,SNR=24
I16A Newdale 44.81 330 ⇓P P 01 40 38.9 0.0
baz=45
D22A Cohagen 45.00 337 ⇑P P 01 40 40.0 -0.3
baz=46
NVAR Mina Array Bea 45.19 319 P P 01 40 41.6 -0.4
3.7nm,0.8s,mb4.3,baz=119,slow=7.3,SNR=24
NVAR LR LR 02 02 21.0
comp=Z,111nm,18.1s,MS3.8,baz=262,slow=40
NVAR Mina Array Bea 45.19 319 P P 01 40 41.6 -0.4
NVAR LR LR 02 02 21.0
E20A Meyer Farm, Mu 45.27 335 ⇓P P 01 40 42.7 +0.2
baz=46
H16A Russell Place, 45.30 331 ⇑P P 01 40 43.4 +0.7
baz=46
I15A Monteview 45.40 329 ⇑P P 01 40 44.0 +0.4
baz=46
J14A Carey 45.46 328 ⇑P P 01 40 44.8 +0.7
baz=46,SNR=16
QLMT Earthquake Lak 45.48 331 eP P 01 40 44.9 +0.7
F18A Big Timber 45.49 333 ⇓P P 01 40 44.2 0.0
baz=46
G17A Pierce Place, 45.51 332 ⇑P P 01 40 45.1 +0.6
baz=46,SNR=8.8
B23A Brockton 45.65 339 ⇑P P 01 40 45.2 -0.3
baz=46
A24A Westby 45.70 340 ⇓P P 01 40 46.2 +0.4

baz=46
I14A **Mackay** 45.84 329 ⇓P P 01 40 47.2 +0.1
baz=46,SNR=6.9
J13A **Cove Ranch, Pi** 45.86 328 ⇑P P 01 40 47.1 -0.1
baz=46,SNR=7.4
C21A **Desert Coulee** 45.91 337 ⇑P P 01 40 48.1 +0.6
baz=46
F17A **Fitzpatrick Pl** 45.91 332 ⇓P P 01 40 48.1 +0.5
baz=46
H15A **Lima** 45.92 330 ⇑P P 01 40 48.5 +0.8
baz=46,SNR=26
G16A **Moss Hill, Enn** 45.95 331 ⇑P P 01 40 48.1 +0.2
baz=46,SNR=15
WAKR **Walker** 45.97 319 *eP* P 01 40 48.5 +0.4
E18A **Harlowton** 46.08 334 ⇑P P 01 40 49.0 +0.1
baz=46
HLID **Hailey** 46.10 328 ⇓P P 01 40 48.8 -0.3
baz=46,SNR=6.7
HLID **Hailey** 46.10 328 *eP* P 01 40 48.8 -0.3
66nm,2.6s,mb5.1
D19A **Cripps Ranch,** 46.10 335 ⇓P P 01 40 49.0 -0.1
baz=47
MCMT **McKenzie Canyo** 46.17 330 *eP* P 01 40 50.2 +0.5
5.1nm,1.3s,mb4.3
BOZ **Bozeman (W)** 46.17 332 ⇓P P 01 40 49.6 0.0
baz=47,SNR=15
BOZ **Bozeman (W)** 46.17 332 *eP* P 01 40 49.2 -0.5
11nm,1.1s,mb4.7
I13A **Wildhorse Cree** 46.18 328 ⇓P P 01 40 49.7 0.0
baz=47,SNR=13
G15A **Dillon** 46.24 330 ⇑P P 01 40 50.3 +0.1
baz=47,SNR=9.1
F16A **Kennard Place,** 46.27 332 ⇓P P 01 40 50.4 0.0
baz=47,SNR=5.4
H14A **Leadore** 46.28 329 ⇓P P 01 40 50.7 +0.2
baz=47,SNR=10.0
A22A **Carney Farms,** 46.43 339 ⇑P P 01 40 51.7 +0.2
baz=47
E17A **Martinsdale** 46.43 333 ⇓P P 01 40 51.5 -0.1
baz=47
DLMT **Dillon** 46.43 331 *eP* P 01 40 52.5 +0.9
7.4nm,1.1s,mb4.5
C19A **Slack Wire Ran** 46.62 335 ⇓P P 01 40 53.1 0.0
baz=47
I12A **Atlanta** 46.64 327 ⇓P P 01 40 53.2 -0.1
baz=47,SNR=8.3
LRM **Limekiln Ridge** 46.70 331 *eP* P 01 40 53.0 -0.7
H13A **Challis** 46.70 329 ⇓P P 01 40 53.5 -0.3
baz=47,SNR=5.3
F15A **Butte** 46.73 331 ⇑P P 01 40 53.4 -0.6
baz=47,SNR=6.0
MFID **Camas Ranch** 46.76 326 ⇑P P 01 40 53.8 -0.6
baz=47
E16A **East Helena** 46.85 332 ⇑P P 01 40 54.7 -0.3
baz=47,SNR=5.1
D17A **Six Diamond Ra** 46.87 334 ⇓P P 01 40 54.8 -0.3
baz=47
H12A **Diamond D Ranc** 47.00 328 ⇓P P 01 40 55.9 -0.3
baz=47,SNR=8.4
G13A **Cobalt** 47.06 329 ⇓P P 01 40 55.9 -0.7
baz=48,SNR=6.8
HRY **Holter Researc** 47.06 332 *eP* P 01 40 56.0 -0.5
A20A **Cobblestone Ra** 47.09 337 ⇓P P 01 40 56.5 -0.2
baz=48
EGMT **Eagleton** 47.14 335 ⇑P P 01 40 57.1 -0.1
baz=48
D16A **Dana Ranch, Ca** 47.17 333 ⇑P P 01 40 57.1 -0.3
baz=48,SNR=6.5
E15A **Deer Lodge** 47.22 332 ⇑P P 01 40 57.3 -0.6
baz=48,SNR=8.7
C17A **Wharram Farm,** 47.27 334 ⇓P P 01 40 57.9 -0.3
baz=48,SNR=5.1
B18A **Beardsley Farm** 47.44 335 ⇑P P 01 40 59.5 -0.1
baz=48
F13A **Darby** 47.59 330 ⇑P P 01 41 00.2 -0.6
baz=48,SNR=11
D15A **Lincoln** 47.62 332 ⇑P P 01 41 00.4 -0.5
baz=48
E14A **Clinton** 47.62 331 ⇑P P 01 41 00.2 -0.7
baz=48,SNR=5.3
G12A **Big Creek, Yel** 47.64 328 ⇑P P 01 41 00.5 -0.7
baz=48
WVOR **Wild Horse Val** 47.74 324 *eP* P 01 41 01.1 -0.9
18nm,1.1s,mb5.0
C16A **Fuhringer Ranc** 47.83 333 ⇑P P 01 41 02.2 -0.3
baz=48
A18A **Metzger Ranch,** 47.88 336 ⇓P P 01 41 02.6 -0.3
baz=48
E13A **Victor** 47.98 331 ⇓P P 01 41 03.2 -0.5
baz=48,SNR=9.8
F12A **Elk City** 48.03 329 ⇓P P 01 41 03.8 -0.4
baz=48,SNR=17
D14A **Greenough** 48.11 332 ⇓P P 01 41 04.4 -0.3
baz=48
MSO **Missoula** 48.14 331 ⇓P P 01 41 04.3 -0.6
baz=49,SNR=5.7
MSO **Missoula** 48.14 331 *eP* P 01 41 04.5 -0.4
13nm,1.4s,mb4.8
C15A **Salmond Ranch,** 48.20 333 ⇑P P 01 41 05.0 -0.4
baz=49,SNR=5.8
A17A **Triple J Farms** 48.26 335 ⇓P P 01 41 05.5 -0.3
baz=49
BMO **Blue Mountains** 48.51 327 *eP* P 01 41 06.0 -1.9
2.4nm,1.2s,mb4.1
D13A **Huson** 48.57 331 ⇓P P 01 41 07.9 -0.4
baz=49
B15A **Bradely Ranch,** 48.58 333 ⇑P P 01 41 08.3 0.0
baz=49
PLCA **Paso Flores** 48.65 168 P P 01 41 04.6 -4.3
1.5nm,0.8s,mb4.1,baz=346,slow=11,SNR=3.7
E12A **Beaver Dam Sad** 48.65 330 ⇑P P 01 41 08.0 -0.9
baz=49,SNR=8.7
C14A **Swan Lake** 48.72 332 ⇓P P 01 41 09.2 -0.2
baz=49
B14A **Marquette Ranc** 48.94 333 ⇓P P 01 41 11.3 +0.2
baz=49
D12A **Red Ives Fores** 48.98 330 ⇓P P 01 41 11.0 -0.4
baz=49
C13A **Hot Springs** 49.05 331 ⇑P P 01 41 11.5 -0.4
baz=50
A15A **Johnson Ranch,** 49.15 334 ⇑P P 01 41 12.7 0.0
baz=50
F10A **Beach Ranch, E** 49.20 328 ⇓P P 01 41 12.8 -0.4
baz=50
I07A **Izee** 49.25 325 ⇑P P 01 41 12.7 -0.9
baz=50,SNR=5.2
K05A **Summer Lake** 49.26 323 ⇓P P 01 41 13.0 -0.7
baz=50
A14A **Double T Ranch** 49.45 333 ⇑P P 01 41 14.7 -0.2
baz=50
B13A **Whitefish** 49.49 332 ⇑P P 01 41 15.0 -0.3
baz=50
C12B **Naegeli Ranch,** 49.50 331 ⇑P P 01 41 15.3 0.0
baz=50
G08A **Pilot Rock** 49.69 326 ⇓P P 01 41 16.4 -0.5
baz=50
YBH **Yreka Blue Hor** 49.83 321 P P 01 41 15.2 -2.9
1.3nm,0.8s,mb4.0,baz=79,slow=6.4,SNR=4.8
A13A **Flathead Natio** 49.87 333 ⇑P P 01 41 18.5 +0.3
baz=50
C11A **Tepee Creek (N** 49.97 331 ⇓P P 01 41 18.7 -0.2
baz=50
E09A **Wood Farm, Sta** 50.04 328 ⇑P P 01 41 19.0 -0.5
baz=50,SNR=8.8
G06A **Carlson Farm,** 50.59 325 ⇑P P 01 41 23.6 -0.1
baz=51
NEW **Newport** 50.68 330 ⇑P P 01 41 23.5 -0.9
baz=51,SNR=5.1
NEW **Newport** 50.68 330 *eP* P 01 41 24.1 -0.3
7.7nm,1.3s,mb4.5
H04A **Detroit Lake** 51.15 324 ⇑P P 01 41 27.1 -0.8
baz=52
ETW **Entiat** 51.88 328 *eP* P 01 41 34.1 +0.7
NLWA **Neilton Lookou** 53.67 326 *eP* P 01 41 45.4 -1.2
12nm,1.2s,mb4.7
YKA **Yellowknife Ar** 60.28 343 P P 01 42 31.3 -1.8
3.6nm,1.0s,mb4.3,baz=137,slow=7.0,SNR=6.0
YKA LR LR 02 13 49.4
comp=Z,7.5nm,19.4s,MS2.8,baz=220,slow=41
INK **Inuvik** 69.98 342 P P 01 43 34.8 -1.1
4.2nm,1.1s,mb4.3,baz=133,slow=10,SNR=3.2
PPT **Papeete** 70.78 249 LR LR 02 07 33.8
comp=Z,124nm,19.8s,MS4.2,baz=117,slow=30
SML **Sawmill** 72.73 333 *eP* P 01 43 51.0 -1.7
3.6nm,1.2s,mb4.2
ILAR **Eielson Array** 73.09 336 P P 01 43 53.0 -1.7
3.1nm,0.9s,mb4.2,baz=120,slow=5.1,SNR=25
ILAR LR LR 02 17 52.1

comp=Z,64nm,20.3s,MS3.9,baz=100,slow=37
COLD **Coldfoot** 75.18 338 *eP* P 01 44 07.1 +0.1
5.9nm,1.0s,mb4.5
ESDC **Sonseca Array** 76.60 51 P P 01 44 16.3 +0.6
0.4nm,0.6s,mb3.5,baz=258,slow=6.3,SNR=5.1
TORD **Torodi Ar. Bea** 82.59 78 LR LR 02 21 05.6
comp=Z,44nm,18.4s,MS3.9,baz=270,slow=35
NOA **NORSAR Array B** 85.67 29 LR LR 02 21 29.0
comp=Z,43nm,18.0s,MS3.9,baz=30,slow=34
VNA3 **Neumayer Olymp** 91.00 162 *eP* P 01 45 27.8 -0.7
VNA2 **Neumayer--Watz** 91.61 161 *eP* P 01 45 26.9 -4.4
FINES **FINESS Array B** 92.57 27 LR LR 02 21 31.8
comp=Z,78nm,19.3s,MS4.2,baz=235,slow=32
QSPA **South Pole Qui** 96.94 180 *eP* P 01 45 50.3 -5.3
1.2nm,0.4s,mb4.7
CN2 **Changchun** 123.61 336 *e*PKP PKPdf 01 51 22.3 -0.2
CN2 PP PP 01 53 10.0 +6.3
WMQ **Urumqi** 128.67 9 *e*PKP PKPdf 01 51 32.0 -0.2
HHC **Hu-ho-hao-te** 130.78 346 *e*PKP PKPdf 01 51 33.8 -2.5
HHC PKS 01 55 09.3
HHC SKS SKSdf 01 58 44.0 -1.4
HHC SKKS SKKSac 02 00 42.0 -4.1
HHC AMB AMB
comp=Z,140nm,7.3s
HHC LR LR
comp=N,210nm,21.8s,MS4.9
HHC LR LR
comp=E,130nm,20.4s,MS4.9
HHC LR LR
comp=Z,120nm,20.8s,MS4.6
LZH **Lanzhou** 136.82 353 *e*PKP PKPdf 01 51 45.0 -2.8
LZH sPKP 01 51 55.3
ASAR **Alice Springs** 141.51 240 PKP PKPdf 01 51 53.9 -2.7
comp=Z,0.4nm,0.9s,baz=108,slow=3.0,SNR=3.8
CD2 **Chengdu** 141.93 352 *e*PKP PKPdf 01 51 53.5 -3.8
WRA **Warramunga Arr** 142.23 246 PKP PKPdf 01 51 54.9 -3.1
comp=Z,0.3nm,0.9s,baz=101,slow=2.0,SNR=3.5
WRA **Warramunga Arr** 142.23 246 PKP PKPdf 01 51 54.9 -3.1
GYA **Guiyang** 145.69 346 *e*PKPbc PKPbc 01 52 00.8 -3.5
GYA PP PP 01 55 25.5 +2.1
GYA AMB AMB
comp=Z,80nm,7.8s
KMI **Kunming** 147.76 351 PKPbc PKPbc 01 52 04.5 -5.8

*JMA **29** 01:47:55.9±0.1, 25°.73N×126°.14E, h75km, M3.2*
*ISCJB **29** 01:47:56.5±0.7, 25°.5N±0°.1×126°.4E±0°.1, h61km±8km, mb3.7/5, Error ellipse: s-maj=27.4km s-min=6.0km az=137.2*
*IDC **29** 01:48:28.1±9.8, 25°.82N×125°.25E, h297km±102km, mb3.1/6, mb1 3.2/6, mb1mx3.0/22, mbtmp3.1/6, Error ellipse: s-maj=112.8km s-min=20.2km az=65.0*
ISC 29 01:47:57.3±0.6, 25°.6N±0°.1×126°.3E±0°.1, h53km±10km, n15, σ0$88/17, mb3.7/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.87**	**29**	P	**Pn**	**01 48 12.7**	**-0.7**
JKE				*eS*	**Sn**	**01 48 25.8**	**+0.6**
JOGS	**Gusukube**	**1.15**	**226**	P	**Pn**	**01 48 16.9**	**-0.3**
JOGS				S	**Sn**	**01 48 32.2**	**+0.3**
JMJ	**Miyako jima 2**	**1.19**	**232**	P	**Pn**	**01 48 17.1**	**-0.6**
JMJ				S	**Sn**	**01 48 33.8**	**+0.9**
JJT2	**Tamagusuku 2**	**1.41**	**66**	P	**Pn**	**01 48 21.5**	**+0.9**
JTJ	**Tarama**	**1.73**	**238**	P	**Pn**	**01 48 24.0**	**-1.0**
JIH	**Iheya**	**2.08**	**45**	P	**Pn**	**01 48 30.4**	**+0.6**
JOW	**Kunigami**	**2.16**	**54**	P	**Pn**	**01 48 32.4**	**+1.5**
JTK	**Tokunoshima**	**3.23**	**46**	P	**Pn**	**01 48 44.3**	**-1.3**
JAM	**Amami Oshima**	**4.08**	**45**	P	**Pn**	**01 48 55.6**	**-1.6**
SONM	**Songino Array**	**27.23**	**330**	P	**P**	**01 53 39.8**	**+3.6**
0.6nm,0.5s,mb3.4,baz=132,slow=8.0,SNR=3.5							
MKAR	**Makanchi Array**	**40.72**	**313**	P	**P**	**01 55 33.0**	**+0.3**
0.7nm,0.4s,mb3.7,baz=94,slow=9.8,SNR=8.9							
ZALV	**Zalesovo Beam**	**41.76**	**324**	P	**P**	**01 55 41.5**	**+0.3**
0.6nm,0.4s,mb3.6,baz=103,slow=6.5,SNR=2.7							
WRA	**Warramunga Arr**	**45.89**	**169**	P	pP	01 56 25.1	-3.7
0.7nm,0.8s,baz=348,slow=8.6,SNR=5.1							
FINES	**FINESS Array B**	**72.60**	**330**	P	**P**	**01 59 18.8**	**+0.1**
3.6nm,1.0s,mb4.3,baz=72,slow=4.5,SNR=6.2							
BRTR	**Keskin Array B**	**76.08**	**307**	P	**P**	**01 59 39.0**	**-0.5**
1.1nm,1.1s,mb3.7,baz=74,slow=5.1,SNR=3.2							

*PDG **29** 01:53:58.2±0.5, 43°.57N×17°.60E, h2km±1km, ML2.7/10, Error ellipse: s-maj=1.4km s-min=2.4km az=0.0*
*NEIC **29** 01:53:58.2, 43°.57N×17°.60E, h2km, ML2.7(PDG), After PDG.*
*ISCJB **29** 01:53:59.4±0.4, 43°.74N±0°.03×17°.76E±0°.03, h10km, Error ellipse: s-maj=4.6km s-min=2.3km az=43.9*
*CSEM **29** 01:53:59.5±0.2, 43°.70N×17°.77E, h2km, ML2.7/10, Error ellipse: s-maj=6.0km s-min=2.9km az=45.0*
*BEO **29** 01:54:00.7±0.7, 43°.72N×17°.74E, h12km±3km, ML2.5/4*
*VIE **29** 01:54:04.5±0.4, 44°.05N×17°.78E, h10km, mb2.4/5, ML2.4/6, Error ellipse: s-maj=4.4km s-min=3.2km az=47.0 56 km WNW of Sarajevo*
ISC 29 01:53:59.5±0.6, 43°.70N±0°.02×17°.73E±0°.04, h3km±4km, n57, σ1$34/99, 7C-28D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.83**	**181**	*e*Pg	**Pg**	**01 54 11.2**	**-4.2**
STON				Sg	**Sg**	**01 54 22.6**	**-3.5**
UPM	**Unac-Piva**	**0.99**	**120**	⇓*i*Pg	**Pg**	**01 54 16.9**	**-1.7**
UPM				*e*Sg	**Sg**	**01 54 32.8**	**+1.3**
UPM	**Unac-Piva**	**0.99**	**120**	⇓*i*Pg	**Pg**	**01 54 16.9**	**-1.7**
UPM				*e*Sg	**Sg**	**01 54 32.8**	**+1.3**
BRY	**Bratogost**	**1.00**	**143**	⇓*i*Pg	**Pg**	**01 54 15.4**	**-3.2**
BRY				*e*Sg	**Sg**	**01 54 31.0**	**-0.5**
BLY	**Banja Luka**	**1.12**	**340**	*e*Pg	**Pg**	**01 54 21.6**	**+0.6**
BLY				*e*Sg	**Sg**	**01 54 36.8**	**+1.3**
BLY	**Banja Luka**	**1.12**	**340**	*e*Pg	**Pg**	**01 54 21.6**	**+0.6**
BLY				*e*Sg	**Sg**	**01 54 36.8**	**+1.3**
BBLS	**Lazići**	**1.23**	**82**	*e*Pg	**Pg**	**01 54 22.8**	**-0.2**
BBLS				*e*Sg	**Sg**	**01 54 39.4**	**+0.5**
BBLS	**Lazići**	**1.23**	**82**	*e*Pg	**Pg**	**01 54 22.8**	**-0.2**
BBLS				*e*Sg	**Sg**	**01 54 39.4**	**+0.5**
PLE	**Pljevlja**	**1.27**	**106**	⇓*i*Pg	**Pn**	**01 54 22.6**	**-1.5**
PLE				*e*Sg	**Sg**	**01 54 42.8**	**+2.6**
PLE	**Pljevlja**	**1.27**	**106**	⇓*i*Pg	**Pn**	**01 54 22.6**	**-1.5**
NKY	**Niksic**	**1.28**	**133**	⇑*i*Pg	**Pn**	**01 54 22.0**	**-2.3**
NKY				*e*Sg	**Sg**	**01 54 40.8**	**+0.1**
HCY	**Herceg Novi**	**1.37**	**155**	⇓*i*Pg	**Pn**	**01 54 22.0**	**-3.5**
HCY				*e*Sg	**Sg**	**01 54 42.4**	**-1.2**
BUM	**Brajici-Budva**	**1.64**	**148**	⇓*i*Pn	**Pn**	**01 54 27.9**	**-1.3**
BUM				*e*Sn	**Sn**	**01 54 51.8**	**+1.1**
BUM	**Brajici-Budva**	**1.64**	**148**	⇓*i*Pn	**Pn**	**01 54 27.9**	**-1.3**
BUM				*e*Sn	**Sn**	**01 54 51.8**	**+1.1**
DIVS	**Divibare**	**1.69**	**76**	*e*Pn	**Pn**	**01 54 29.6**	**-0.2**
DIVS				*e*Sg	**Sg**	**01 54 53.9**	**+0.2**
DIVS	**Divibare**	**1.69**	**76**	*e*Pn	**Pn**	**01 54 29.6**	**-0.2**
DIVS				*e*Sg	**Sg**	**01 54 53.9**	**+0.2**
SJES	**Sjenica**	**1.69**	**104**	*e*Pn	**Pn**	**01 54 29.9**	**0.0**
SJES				*e*Sg	**Sg**	**01 54 53.7**	**-0.2**
PDG	**Podgorica**	**1.69**	**138**	⇓*i*Pn	**Pn**	**01 54 28.5**	**-1.4**
PDG				*e*Sn	**Sn**	**01 54 54.0**	**+1.9**
TTG	**Podgorica**	**1.69**	**138**	⇓*i*Pn	**Pn**	**01 54 28.5**	**-1.4**
TTG				*e*Sn	**Sn**	**01 54 54.0**	**+1.9**
TTG	**Podgorica**	**1.69**	**138**	⇓*i*Pn	**Pn**	**01 54 28.5**	**-1.4**
TTG				*e*Sn	**Sn**	**01 54 54.0**	**+1.9**
BEY	**Berane**	**1.79**	**117**	⇓*i*Pn	**Pn**	**01 54 31.6**	**+0.4**
BEY				*e*Sn	**Sn**	**01 54 57.4**	**+3.0**
IVA	**Berane**	**1.79**	**117**	⇓*i*Pn	**Pn**	**01 54 31.6**	**+0.4**
IVA				*e*Sn	**Sn**	**01 54 57.4**	**+3.0**
IVA	**Berane**	**1.79**	**117**	⇓*i*Pn	**Pn**	**01 54 31.6**	**+0.4**
IVA				*e*Sn	**Sn**	**01 54 57.4**	**+3.0**
PVY	**Plav**	**1.98**	**123**	⇓*i*Pn	**Pn**	**01 54 34.5**	**+0.6**
PVY				*e*Sn	**Sn**	**01 55 02.7**	**+3.6**
PVY	**Plav**	**1.98**	**123**	⇓*i*Pn	**Pn**	**01 54 34.5**	**+0.6**
ULC	**Ulcinj**	**2.06**	**147**	⇑*i*Pn	**Pn**	**01 54 34.5**	**-0.5**
ULC				*e*Sn	**Sn**	**01 55 02.8**	**+1.6**
ULC	**Ulcinj**	**2.06**	**147**	⇑*i*Pn	**Pn**	**01 54 34.5**	**-0.5**
ULC				*e*Sn	**Sn**	**01 55 02.8**	**+1.6**
FRGS	**Fruska Gora**	**2.09**	**45**	*e*Pn	**Pn**	**01 54 35.5**	**+0.2**
FRGS				*e*Sn	**Sn**	**01 55 00.8**	**-1.0**
NVLJ	**Novalja**	**2.23**	**294**	*e*Pn	**Pn**	**01 54 38.3**	**+1.0**
NVLJ				Sn	**Sn**	**01 55 08.5**	**+3.2**
NVLJ	**Novalja**	**2.23**	**294**	*e*Pn	**Pn**	**01 54 38.3**	**+1.0**
NVLJ				Sn	**Sn**	**01 55 08.5**	**+3.2**
PKSM	**Moragy**	**2.59**	**14**	*e*Pn	**Pn**	**01 54 41.6**	**-0.7**
PKSM	**Moragy**	**2.59**	**14**	⇓*i*P	**Pn**	**01 54 41.8**	**-0.5**
PKSM	**Moragy**	**2.59**	**14**	⇓*i*P	**Pn**	**01 54 41.8**	**-0.5**
BOLS	**Boljevac**	**3.06**	**86**	*e*Sn	**Sn**	**01 55 25.0**	**-0.9**
BOLS	**Boljevac**	**3.06**	**86**	*e*Sn	**Sn**	**01 55 25.0**	**-0.9**
BARS	**Barje**	**3.11**	**105**	*e*Pn	**Pn**	**01 54 49.6**	**+0.2**
BARS	**Barje**	**3.11**	**105**	*e*Pn	**Pn**	**01 54 49.6**	**+0.2**
BZS	**Buzias**	**3.37**	**54**	*e*Pn	**Pn**	**01 54 53.7**	**+0.7**
BZS				*e*Sn	**Sn**	**01 55 31.9**	**-1.6**
BZS	**Buzias**	**3.37**	**54**	⇓*i*P	**Pn**	**01 54 58.4**	**+5.4**
BZS	**Buzias**	**3.37**	**54**	*e*Pn	**Pn**	**01 54 53.7**	**+0.7**
BZS				*e*Sn	**Sn**	**01 55 31.9**	**-1.6**
SOKA	**Soboth**	**3.54**	**328**	⇑*i*Pn	**Pn**	**01 54 55.4**	**+0.1**
SOKA				⇓*i*Sn	**Sn**	**01 55 36.0**	**-1.5**
SOKA	**Soboth**	**3.54**	**328**	Pn	**Pn**	**01 54 55.4**	**+0.2**
SOKA				Sn	**Sn**	**01 55 36.0**	**-1.5**
VOY	**Vojsko**	**3.59**	**312**	*e*Pn	**Pn**	**01 54 58.6**	**+2.7**
VOY				*e*Sn	**Sn**	**01 55 43.3**	**+4.5**
VOY				*e*		01 56 04.3	
VOY	**Vojsko**	**3.59**	**312**	*e*Pn	**Pn**	**01 54 58.6**	**+2.7**
VOY				*e*Sn	**Sn**	**01 55 43.3**	**+4.5**
OBKA	**Obir**	**3.60**	**322**	⇓*i*Pn	**Pn**	**01 54 57.4**	**+1.3**
OBKA	**Obir**	**3.60**	**322**	Pn	**Pn**	**01 54 57.4**	**+1.3**
ARSA	**Arzberg**	**3.88**	**337**	⇑*i*Pn	**Pn**	**01 55 00.2**	**+0.3**
ARSA				⇓*i*Sn	**Sn**	**01 55 43.7**	**-2.1**
ARSA	**Arzberg**	**3.88**	**337**	Pn	**Pn**	**01 55 00.2**	**+0.3**
ARSA				Sn	**Sn**	**01 55 43.7**	**-2.2**
GZR	**Gura Zlata**	**3.99**	**63**	⇓*i*P	**Pn**	**01 55 04.2**	**+2.8**
GZR	**Gura Zlata**	**3.99**	**63**	⇓*i*P	**Pn**	**01 55 04.2**	**+2.8**
CONA	**Conrad Observa**	**4.43**	**344**	⇑*i*Pn	**Pn**	**01 55 07.3**	**-0.2**
CONA				⇓*i*Sn	**Sn**	**01 55 56.2**	**-3.2**
CONA	**Conrad Observa**	**4.43**	**344**	Pn	**Pn**	**01 55 07.3**	**-0.2**
CONA				Sn	**Sn**	**01 55 56.2**	**-3.2**
MOA	**Molln**	**4.80**	**331**	⇓*i*Pn	**Pn**	**01 55 13.1**	**+0.4**
MOA				⇓*i*Sn	**Sn**	**01 56 06.6**	**-2.2**
MOA	**Molln**	**4.80**	**331**	Pn	**Pn**	**01 55 13.1**	**+0.4**
MOA				Sn	**Sn**	**01 56 06.6**	**-2.2**
WTTA	**Wattenberg**	**5.57**	**312**	⇓*i*Pn	**Pn**	**01 55 24.8**	**+1.6**
WTTA				⇑*i*Sn	**Sn**	**01 56 27.6**	**0.0**
WTTA	**Wattenberg**	**5.57**	**312**	Pn	**Pn**	**01 55 24.8**	**+1.6**
WTTA				Sn	**Sn**	**01 56 27.6**	**-0.1**

*ISCJB **29** 02:16:44.5±0.4, 63°.56N±0°.04×128°.75W±0°.06, h10km, Error ellipse: s-maj=5.5km s-min=3.9km az=172.4*
*IDC **29** 02:16:46.3±0.8, 63°.51N×128°.83W, h0km, mb3.6/1, mb1 3.9/6, mb1mx3.5/30, mbtmp3.8/6, ML3.6/5, Error ellipse: s-maj=9.6km s-min=9.0km az=23.0*
*PGC **29** 02:16:48.1±0.1, 63°.51N×129°.01W, h10km, ML4.1/7, 229km southwest of Norman Wells, Nt Northwest Territories, Canada*
*NEIC **29** 02:16:48.1, 63°.51N×129°.01W, h10km, ML4.1(PGC), After PGC.*
ISC 29 02:16:47.0±0.4, 63°.56N±0°.04×128°.78W±0°.06, h10km, n37, σ1$20/63, 7D, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHY	**Whitehorse**	**4.09**	**227**	Pg	**Pb**	**02 18 00.2**	**+1.3**
WHY				Sg	**Sb**	**02 18 49.0**	**+0.7**
WHY	**Whitehorse**	**4.09**	**227**	⇑Pn	**Pn**	**02 17 48.4**	**-1.0**
WHY				⇑Pg	**Pb**	**02 18 00.2**	**+1.3**
WHY				⇑Sg	**Sb**	**02 18 49.0**	**+0.7**
DAWY	**Dawson**	**4.73**	**281**	*e*Pn	**Pn**	**02 17 57.1**	**-1.2**
DAWY				*e*S	**Sb**	**02 19 06.7**	**-0.1**
DAWY	**Dawson**	**4.73**	**281**	⇑Pn	**Pn**	**02 17 57.1**	**-1.2**
DAWY				⇓Pg	**Pg**	**02 18 12.1**	**-5.5**
HYT	**Haines Junctio**	**4.92**	**240**	Pn	**Pn**	**02 18 00.7**	**-0.2**
HYT				Sg	**Sg**	**02 19 15.8**	**-9.0**
HYT	**Haines Junctio**	**4.92**	**240**	⇓Pn	**Pn**	**02 18 00.7**	**-0.2**
HYT				⇑Sg	**Sg**	**02 19 15.8**	**-9.0**
GALN	**Gameti Lake**	**5.10**	**79**	Pn	**Pn**	**02 18 04.6**	**+1.2**
GALN	**Gameti Lake**	**5.10**	**79**	⇓Pn	**Pn**	**02 18 04.6**	**+1.2**
INK	**Inuvik**	**5.15**	**340**	Pn	**Pn**	**02 18 04.2**	**+0.3**
2.1nm,0.3s,baz=164,slow=12,SNR=63							
INK				Pg	**Pg**	**02 18 20.6**	**-4.8**
3.3nm,0.3s,baz=152,slow=21,SNR=10.0							
INK				Sn	**Sn**	**02 19 04.6**	**+1.3**
8.2nm,0.3s,baz=232,slow=29,SNR=7.0							
INK				Lg		02 19 25.2	
5.3nm,0.3s,baz=82,slow=23,SNR=3.6							
INK	**Inuvik**	**5.15**	**340**	*e*Pn	**Pn**	**02 18 04.2**	**+0.3**
30nm,0.6s							
INK	**Inuvik**	**5.15**	**340**	⇑Pn	**Pn**	**02 18 03.7**	**-0.2**
SKAG	**Skagway**	**5.17**	**220**	*e*Pn	**Pn**	**02 18 03.2**	**-1.1**
24nm,0.4s							
SKAG				*e*S	**Sb**	**02 19 24.9**	**+5.4**
DLBC	**Dease Lake**	**5.18**	**187**	Pn	**Pn**	**02 18 04.3**	**-0.1**
1.8nm,0.3s,baz=2.8,slow=18,SNR=26							
DLBC				Pg	**Pg**	**02 18 19.5**	**-6.5**
4.4nm,0.3s,baz=18,slow=12,SNR=13							
DLBC				Sn	**Sn**	**02 19 01.8**	**-2.2**
5.0nm,0.3s,baz=192,slow=10,SNR=3.7							
DLBC				Lg		02 19 27.5	
2.3nm,0.3s,baz=213,slow=18,SNR=3.4							
DLBC	**Dease Lake**	**5.18**	**187**	*e*Pn	**Pn**	**02 18 04.1**	**-0.3**
DLBC				*e*S	**Sg**	**02 19 27.8**	**-5.2**
DLBC	**Dease Lake**	**5.18**	**187**	⇓Pn	**Pn**	**02 18 04.1**	**-0.2**
DLBC				⇑Sg	**Sg**	**02 19 26.2**	**-6.8**
FNBB	**Fort Nelson**	**5.45**	**147**	Pn	**Pn**	**02 18 08.8**	**+0.7**
FNBB	**Fort Nelson**	**5.45**	**147**	⇓Pn	**Pn**	**02 18 08.8**	**+0.7**
PLBC	**Pleasant Camp**	**5.49**	**225**	Pn	**Pn**	**02 18 08.6**	**0.0**
PLBC				Sg	**Sb**	**02 19 31.7**	**+3.1**
PLBC	**Pleasant Camp**	**5.49**	**225**	⇑Pn	**Pn**	**02 18 08.6**	**0.0**
PLBC				⇑Sg	**Sb**	**02 19 31.7**	**+3.1**
EGAK	**Eagle**	**5.55**	**288**	*e*Pn	**Pn**	**02 18 08.7**	**-0.8**
18nm,0.7s							
CTLN	**Castor Lake**	**5.68**	**75**	Pn	**Pn**	**02 18 12.7**	**+1.4**
CTLN				Sn	**Sn**	**02 19 14.8**	**-1.7**
CTLN	**Castor Lake**	**5.68**	**75**	⇑Pn	**Pn**	**02 18 12.7**	**+1.4**
CTLN				⇑Sn	**Sn**	**02 19 14.8**	**-1.7**
PNL	**Peninsula**	**6.39**	**237**	*e*Pn	**Pn**	**02 18 23.1**	**+2.0**
YKW3	**Yellowknife Ar**	**6.51**	**92**	Pn	**Pn**	**02 18 23.3**	**+0.6**
YKW3	**Yellowknife Ar**	**6.51**	**92**	⇑Pn	**Pn**	**02 18 23.3**	**+0.6**
YKA	**Yellowknife Ar**	**6.54**	**93**	Pn	**Pn**	**02 18 23.9**	**+0.9**
1.0nm,0.3s,baz=282,slow=13,SNR=17							
YKA				Pg	**Pg**	**02 18 48.2**	**-3.8**
1.2nm,0.3s,baz=282,slow=17,SNR=7.0							
YKA				Sn	**Sn**	**02 19 36.4**	**-1.1**
1.7nm,0.3s,baz=282,slow=23,SNR=5.5							
YKA				Lg		02 20 07.3	
1.0nm,0.3s,baz=278,slow=26,SNR=4.5							
YKA	**Yellowknife Ar**	**6.54**	**93**	Pn	**Pn**	**02 18 23.9**	**+0.9**
YKA				Pg	**Pg**	**02 18 48.2**	**-3.8**
YKA				Sn	**Sn**	**02 19 36.4**	**-1.1**
YKA				Lg		02 20 07.3	
**

ASAR	**Alice Springs**	**44.62 259**	P	P	02 34 41.2	-0.1
	0.4nm,0.4s,baz=89,slow=6.7,SNR=6.9					
WRA	**Warramunga Arr**	**44.94 264**	P	P	02 34 43.3	-0.6
	0.4nm,0.3s,baz=96,slow=8.5,SNR=7.6					
HFS	**Hagfors**	**142.11 351**	PKP	PKPdf	02 45 57.7	-2.9
	2.5nm,0.9s,baz=72,slow=4.8,SNR=6.4					
AKASG	**Malin Array Be**	**145.50 330**	PKPbc	PKPbc	02 46 06.6	-0.3
	0.8nm,0.3s,baz=40,slow=4.7,SNR=7.3					

*IDC **29** 02:43:56.0±2.0, 0°.99N×126°.44E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/17, mbtmp3.5/3, Error ellipse: s-maj=166.3km s-min=25.0km az=65.0*
*ISCJB **29** 02:44:01.0±0.9, 1°.0N±0°.1×126°.43E±0°.08, h55km±12km, mb3.4/3, Error ellipse: s-maj=22.3km s-min=8.2km az=28.7*
*DJA **29** 02:44:01, 0°.95N×126°.39E, h33km, MLv3.5/3*
ISC 29 02:44:01.9±0.9, 1°.0N±0°.1×126°.42E±0°.07, h43km±14km, n6, σ0§87/9, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.97**	**103**	P	**Pn**	**02 44 20.9**	**+1.8**
TNTI				S	**Sn**	**02 44 30.5**	**-1.3**
MNI	**Manado**	**1.64**	**286**	P	**Pn**	**02 44 28.1**	**-0.2**
MNI				S	**Sn**	**02 44 48.1**	**-0.1**
LBMI	**Labuha**	**1.94**	**146**	P	**Pn**	**02 44 32.1**	**-0.3**
LBMI				S	**Sn**	**02 44 56.3**	**+0.7**
WRA	**Warramunga Arr**	**22.20**	**160**	P	**P**	**02 48 53.5**	**-1.2**
	1.1nm,0.5s,mb3.5,baz=339,slow=11,SNR=7.6						
ASAR	**Alice Springs**	**25.56**	**164**	P	**P**	**02 49 27.3**	**+0.4**
	0.3nm,0.5s,mb3.1,baz=341,slow=7.6,SNR=7.2						
MKAR	**Makanchi Array**	**59.63**	**326**	P	**P**	**02 54 01.9**	**+0.4**
	0.3nm,0.4s,mb3.6,baz=125,slow=8.0,SNR=3.7						

*LDG **29** 03:05:32.3±0.2, 38°.61N×20°.67E, h10km, Mb4.5/14, Ms2.8/7, Error ellipse: s-maj=11.1km s-min=4.5km az=30.0*
*ISCJB **29** 03:05:34.0±0.4, 38°.41N±0°.01×20°.31E±0°.01, h15km±3km, mb4.3/30, MS3.8/6, Error ellipse: s-maj=2.3km s-min=1.7km az=24.3*
*HLW **29** 03:05:33.6, 38°.99N×21°.20E, h33km±54km, Md4.5, Ml4.3*
*PDG **29** 03:05:34.9±0.1, 38°.50N×19°.79E, h2km±11km, ML4.2/10, Error ellipse: s-maj=52.0km s-min=7.6km az=90.0*
*CSEM **29** 03:05:34.9±0.1, 38°.41N×20°.38E, h10km, mb4.3/19, Ms2.8, Error ellipse: s-maj=2.6km s-min=1.9km az=28.0*
*ATH **29** 03:05:34.2, 38°.35N×20°.39E, h16km±1km, ML4.1*
*NEIC **29** 03:05:34.2, 38°.35N×20°.39E, h16km, mb4.2/9, ML4.2(PDG), ML4.1(ATH), After ATH.*
*BJI **29** 03:05:34.0, 38°.85N×19°.77E, h29km, mB5.2/8, mb4.7/11, Ms4.7/4, Ms7 4.3/5*
*TIR **29** 03:05:34.9, 38°.94N×18°.65E, h0km, ML3.8*
*THE **29** 03:05:35.9, 38°.42N×20°.52E, h2km, ML4.1/8, Error ellipse: s-maj=1.3km s-min=0.6km az=236.0*
*MOS **29** 03:05:36.6±1.0, 38°.47N×20°.34E, h33km, mb4.3/15, Error ellipse: s-maj=4.9km s-min=3.1km az=93.1*
*IDC **29** 03:05:36.5±5.1, 38°.53N×20°.40E, h20km±33km, mb4.1/19, mb1 4.1/28, mb1mx4.0/37, mbtmp4.0/28, ML3.8/8, MS3.7/3, Ms1 3.7/3, ms1mx2.8/32, Error ellipse: s-maj=12.2km s-min=10.9km az=136.0*
*BEO **29** 03:05:38.7±5.5, 38°.76N×20°.25E, h0km, ML4.1/4*
ISC 29 03:05:35.0±0.3, 38°.41N±0°.01×20°.38E±0°.01, h10km±2km, n614, σ1§16/757, mb4.3/31, MS3.8/6, 39C-38D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.28**	**144**	P	**Pg**	**03 05 39.7**	**-0.9**
VLS	**Valsamata**	**0.28**	**144**	⇑iPB	**Pg**	**03 05 40.3**	**-0.3**
VLS				*e*SB	**Sg**	**03 05 43.8**	**-0.6**
VLS	**Valsamata**	**0.28**	**144**	P	**Pg**	**03 05 39.7**	**-0.9**
VLS	**Valsamata**	**0.28**	**144**	P	**Pg**	**03 05 40.2**	**-0.4**
VLS				S	**Sg**	**03 05 44.1**	**-0.3**
VLS	**Valsamata**	**0.28**	**144**	⇑*i*Pb	**Pg**	**03 05 40.3**	**-0.3**
VLS				*e*Sb	**Sg**	**03 05 43.8**	**-0.6**
VLS				S	**Sg**	**03 05 44.1**	**-0.3**
KFL	**Anninata**	**0.44**	**132**	P	**Pg**	**03 05 42.6**	**-0.9**
KFL				S	**Sg**	**03 05 48.4**	**-0.9**
KFL	**Anninata**	**0.44**	**132**	P	**Pg**	**03 05 42.6**	**-0.9**
KFL				S	**Sg**	**03 05 48.4**	**-0.9**
LKD2	**Lefkada island**	**0.44**	**30**	P	**Pg**	**03 05 43.2**	**-0.4**
LKD2				S	**Sg**	**03 05 49.6**	**+0.1**
LKD2	**Lefkada island**	**0.44**	**30**	P	**Pg**	**03 05 43.2**	**-0.4**
LKD2				S	**Sg**	**03 05 49.6**	**+0.1**
RLS	**Riolos of Patr**	**0.92**	**112**	P	**Pg**	**03 05 50.4**	**-2.4**
RLS	**Riolos of Patr**	**0.92**	**112**	*e*PN	**Pg**	**03 05 51.0**	**-1.8**
RLS				*e*SN	**Sg**	**03 06 04.0**	**-0.8**
RLS	**Riolos of Patr**	**0.92**	**112**	P	**Pg**	**03 05 50.4**	**-2.4**
UPR	**University Cam**	**1.11**	**96**	*e*PN	**Pg**	**03 05 54.9**	**-1.5**
UPR				*e*SN	**Sg**	**03 06 10.5**	**-0.3**
UPR	**University Cam**	**1.11**	**96**	P	**Pg**	**03 05 54.9**	**-1.5**
UPR				S	**Sg**	**03 06 09.6**	**-1.2**
UPR	**University Cam**	**1.11**	**96**	P	**Pg**	**03 05 54.9**	**-1.5**
UPR				S	**Sg**	**03 06 09.6**	**-1.2**
UPR				*e*Sn	**Sg**	**03 06 10.5**	**-0.3**
IGT	**Igoumenitsa**	**1.13**	**358**	P	**Pg**	**03 05 56.3**	**-0.4**
IGT	**Igoumenitsa**	**1.13**	**358**	P	**Pg**	**03 05 56.3**	**-0.4**
IGT	**Igoumenitsa**	**1.13**	**358**	P	**Pg**	**03 05 56.7**	**0.0**
IGT				S	**Sg**	**03 06 13.2**	**+1.9**
IGT	**Igoumenitsa**	**1.13**	**358**	P	**Pg**	**03 05 56.3**	**-0.4**
IGT				S	**Sg**	**03 06 13.2**	**+1.9**
EFP	**Efpalio**	**1.20**	**88**	P	**Pn**	**03 05 55.4**	**-2.4**
EFP				S	**Sb**	**03 06 12.4**	**-0.9**
EFP	**Efpalio**	**1.20**	**88**	P	**Pn**	**03 05 55.4**	**-2.4**
EFP				S	**Sb**	**03 06 12.4**	**-0.9**
EVR	**Evrytania**	**1.23**	**65**	P	**Pn**	**03 05 56.5**	**-1.7**
EVR	**Evrytania**	**1.23**	**65**	*e*PN	**Pn**	**03 05 57.1**	**-1.1**
EVR				*e*SN	**Sn**	**03 06 14.6**	**-0.3**
EVR	**Evrytania**	**1.23**	**65**	P	**Pn**	**03 05 56.5**	**-1.7**
EVR	**Evrytania**	**1.23**	**65**	*e*Pn	**Pn**	**03 05 57.1**	**-1.1**
EVR				*e*Sn	**Sn**	**03 06 14.6**	**-0.3**
LAKA	**Lakka**	**1.27**	**97**	P	**Pn**	**03 05 56.6**	**-2.1**
LAKA				S	**Sb**	**03 06 14.5**	**-0.8**
LAKA	**Lakka**	**1.27**	**97**	P	**Pn**	**03 05 56.6**	**-2.1**
LAKA				S	**Sb**	**03 06 14.5**	**-0.8**
JAN	**Janina**	**1.30**	**16**	P	**Pn**	**03 05 59.6**	**+0.4**
JAN	**Janina**	**1.30**	**16**	*e*PN	**Pn**	**03 05 59.9**	**+0.7**
JAN				*e*SN	**Sn**	**03 06 18.3**	**+1.6**
JAN	**Janina**	**1.30**	**16**	P	**Pn**	**03 05 59.6**	**+0.4**
JAN	**Janina**	**1.30**	**16**	P	**Pn**	**03 05 59.6**	**+0.4**
JAN	**Janina**	**1.30**	**16**	*e*Pn	**Pn**	**03 05 59.9**	**+0.7**
JAN				*e*Sn	**Sn**	**03 06 18.3**	**+1.6**
TRIZ	**Trizonia**	**1.33**	**91**	P	**Pn**	**03 05 58.0**	**-1.6**
TRIZ				S	**Sb**	**03 06 16.9**	**-0.2**
TRIZ	**Trizonia**	**1.33**	**91**	P	**Pn**	**03 05 58.0**	**-1.6**
TRIZ				S	**Sb**	**03 06 16.9**	**-0.2**
KALE	**Kalithea**	**1.38**	**90**	P	**Pn**	**03 05 58.5**	**-1.8**
KALE				S	**Sn**	**03 06 18.6**	**-0.1**
KALE	**Kalithea**	**1.38**	**90**	P	**Pn**	**03 05 58.5**	**-1.8**
KALE				S	**Sn**	**03 06 18.6**	**-0.1**
SRN	**Sarande**	**1.50**	**349**	*e*PN	**Pn**	**03 06 03.3**	**+1.4**
SRN				*i* SN	**Sn**	**03 06 22.9**	**+1.3**
SRN	**Sarande**	**1.50**	**349**	*e*Pn	**Pn**	**03 06 03.3**	**+1.3**
SRN				*i* Sn	**Sn**	**03 06 22.9**	**+1.3**
GUR	**Goura**	**1.62**	**106**	*e*PB	**Pn**	**03 06 02.6**	**-0.9**
GUR				*e*SN	**Sn**	**03 06 25.6**	**+1.2**
GUR	**Goura**	**1.62**	**106**	P	**Pn**	**03 06 02.6**	**-0.9**
GUR	**Goura**	**1.62**	**106**	P	**Pn**	**03 06 02.6**	**-0.9**
GUR				*e*Sn	**Sn**	**03 06 25.6**	**+1.2**
AGG	**Agios Georgios**	**1.65**	**67**	P	**Pn**	**03 06 04.7**	**+0.8**
AGG	**Agios Georgios**	**1.65**	**67**	*e*PN	**Pn**	**03 06 05.3**	**+1.4**
AGG				*e*SN	**Sn**	**03 06 27.6**	**+2.5**
AGG	**Agios Georgios**	**1.65**	**67**	P	**Pn**	**03 06 04.7**	**+0.8**
AGG	**Agios Georgios**	**1.65**	**67**	P	**Pn**	**03 06 04.0**	**+0.1**
AGG				S	**Sn**	**03 06 25.5**	**+0.4**
AGG	**Agios Georgios**	**1.65**	**67**	P	**Pn**	**03 06 04.0**	**+0.1**
AGG	**Agios Georgios**	**1.65**	**67**	*e*Pn	**Pn**	**03 06 05.3**	**+1.4**
AGG				S	**Sn**	**03 06 25.5**	**+0.4**
AGG				*e*Sn	**Sn**	**03 06 27.6**	**+2.5**
DSF	**Desfina**	**1.69**	**89**	P	**Pn**	**03 06 03.6**	**-0.9**
DSF				S	**Sn**	**03 06 26.4**	**+0.2**
DSF	**Desfina**	**1.69**	**89**	P	**Pn**	**03 06 03.6**	**-0.9**
DSF				S	**Sn**	**03 06 26.4**	**+0.2**
THL	**Klokotos Trika**	**1.72**	**47**	*e*PN	**Pn**	**03 06 06.1**	**+1.1**
THL	**Klokotos Trika**	**1.72**	**47**	P	**Pn**	**03 06 05.8**	**+0.8**
THL				S	**Sn**	**03 06 26.4**	**-0.6**
THL	**Klokotos Trika**	**1.72**	**47**	P	**Pn**	**03 06 05.8**	**+0.8**
THL	**Klokotos Trika**	**1.72**	**47**	*e*Pn	**Pn**	**03 06 06.1**	**+1.1**
THL				S	**Sn**	**03 06 26.4**	**-0.6**
ITM	**Ithomi**	**1.73**	**134**	P	**Pn**	**03 06 05.5**	**+0.4**
ITM	**Ithomi**	**1.73**	**134**	*e*PN	**Pn**	**03 06 05.9**	**+0.8**
ITM				*e*SN	**Sn**	**03 06 28.0**	**+0.8**
ITM	**Ithomi**	**1.73**	**134**	P	**Pn**	**03 06 05.3**	**+0.2**
ITM	**Ithomi**	**1.73**	**134**	P	**Pn**	**03 06 05.3**	**+0.2**
ITM	**Ithomi**	**1.73**	**134**	*e*Pn	**Pn**	**03 06 05.9**	**+0.8**
ITM				*e*Sn	**Sn**	**03 06 28.0**	**+0.8**
LSK	**Leskovik**	**1.75**	**6**	*e*PN	**Pn**	**03 06 07.3**	**+1.9**
LSK				*i* SN	**Sg**	**03 06 34.9**	**+3.6**
LSK	**Leskovik**	**1.75**	**6**	*e*Pn	**Pn**	**03 06 07.3**	**+1.9**
PYL	**PYLOS**	**1.85**	**144**	*e*PN	**Pn**	**03 06 06.5**	**-0.3**
PYL	**PYLOS**	**1.85**	**144**	P	**Pn**	**03 06 06.6**	**-0.2**
PYL	**PYLOS**	**1.85**	**144**	P	**Pn**	**03 06 06.6**	**-0.2**
VLX	**Vlachokerasia**	**1.89**	**123**	P	**Pn**	**03 06 08.8**	**+1.5**
VLX				S	**Sn**	**03 06 31.9**	**+0.8**
VLX	**Vlachokerasia**	**1.89**	**123**	P	**Pn**	**03 06 08.8**	**+1.5**
VLX	**Vlachokerasia**	**1.89**	**123**	*e*Pn	**Pn**	**03 06 09.1**	**+1.8**
VLX				S	**Sn**	**03 06 31.9**	**+0.8**
TPE	**Tepelena**	**1.91**	**352**	*e*PN	**Pg**	**03 06 10.3**	**-1.3**
TPE				*i* SN	**Sg**	**03 06 39.9**	**+3.5**
TPE	**Tepelena**	**1.91**	**352**	*e*Pn	**Pg**	**03 06 10.3**	**-1.3**
LKR	**Lokris**	**2.07**	**82**	P	**Pn**	**03 06 10.1**	**+0.3**
LKR	**Lokris**	**2.07**	**82**	*e*PN	**Pn**	**03 06 10.2**	**+0.4**
LKR	**Lokris**	**2.07**	**82**	P	**Pn**	**03 06 09.7**	**-0.1**
LKR				S	**Sn**	**03 06 35.9**	**+0.3**
LKR	**Lokris**	**2.07**	**82**	P	**Pn**	**03 06 09.7**	**-0.1**
LKR	**Lokris**	**2.07**	**82**	*e*Pn	**Pn**	**03 06 10.2**	**+0.4**
LKR				S	**Sn**	**03 06 35.9**	**+0.3**
NEST	**Nestorio**	**2.07**	**14**	P	**Pn**	**03 06 11.3**	**+1.5**
NEST				S	**Sg**	**03 06 39.6**	**-2.0**
NEST	**Nestorio**	**2.07**	**14**	P	**Pn**	**03 06 11.3**	**+1.5**
NEST				S	**Sg**	**03 06 39.6**	**-2.0**
LTK	**Loutraki**	**2.07**	**100**	*e*PN	**Pn**	**03 06 10.7**	**+0.9**
LTK	**Loutraki**	**2.07**	**100**	P	**Pn**	**03 06 10.1**	**+0.3**
LTK				S	**Sn**	**03 06 35.4**	**-0.3**
LTK	**Loutraki**	**2.07**	**100**	P	**Pn**	**03 06 10.1**	**+0.3**
LTK	**Loutraki**	**2.07**	**100**	*e*Pn	**Pn**	**03 06 10.7**	**+0.9**
LTK				S	**Sn**	**03 06 35.4**	**-0.3**
ATAL	**Atalanti**	**2.09**	**81**	P	**Pn**	**03 06 10.1**	**0.0**
ATAL				S	**Sn**	**03 06 35.8**	**-0.3**
ATAL	**Atalanti**	**2.09**	**81**	P	**Pn**	**03 06 10.1**	**0.0**
ATAL				S	**Sn**	**03 06 35.8**	**-0.3**
KZN	**Kozani**	**2.18**	**29**	P	**Pn**	**03 06 12.7**	**+1.4**
KZN	**Kozani**	**2.18**	**29**	*e*PN	**Pn**	**03 06 12.6**	**+1.3**
KZN	**Kozani**	**2.18**	**29**	P	**Pn**	**03 06 12.7**	**+1.4**
KZN	**Kozani**	**2.18**	**29**	P	**Pn**	**03 06 12.6**	**+1.3**
KZN	**Kozani**	**2.18**	**29**	P	**Pn**	**03 06 12.6**	**+1.3**
KBN	**Korca**	**2.24**	**8**	*e*PN	**Pg**	**03 06 17.5**	**-0.4**
KBN				*i* SN	**Sg**	**03 06 51.4**	**+4.5**
LIT	**Litokhoron**	**2.36**	**43**	P	**Pn**	**03 06 14.9**	**+1.2**
LIT	**Litokhoron**	**2.36**	**43**	*e*PN	**Pn**	**03 06 14.9**	**+1.2**
LIT	**Litokhoron**	**2.36**	**43**	P	**Pn**	**03 06 14.9**	**+1.2**
LIT	**Litokhoron**	**2.36**	**43**	P	**Pn**	**03 06 14.6**	**+0.9**
LIT				S	**Sn**	**03 06 43.3**	**+0.6**
LIT	**Litokhoron**	**2.36**	**43**	P	**Pn**	**03 06 14.6**	**+0.9**
LIT	**Litokhoron**	**2.36**	**43**	*e*Pn	**Pn**	**03 06 14.9**	**+1.2**
LIT				S	**Sn**	**03 06 43.3**	**+0.6**
NEO	**Neokhori**	**2.40**	**67**	P	**Pn**	**03 06 14.7**	**+0.4**
NEO	**Neokhori**	**2.40**	**67**	P	**Pn**	**03 06 14.7**	**+0.4**
DID	**Didima**	**2.43**	**111**	*e*PB	**Pn**	**03 06 15.1**	**+0.4**
DID	**Didima**	**2.43**	**111**	P	**Pn**	**03 06 14.7**	**0.0**
DID				S	**Sn**	**03 06 44.6**	**+0.1**
DID	**Didima**	**2.43**	**111**	P	**Pn**	**03 06 14.7**	**0.0**
DID				S	**Sn**	**03 06 44.6**	**+0.1**
FNA	**Florina**	**2.50**	**18**	P	**Pn**	**03 06 16.3**	**+0.7**
FNA	**Florina**	**2.50**	**18**	P	**Pn**	**03 06 16.3**	**+0.7**
FNA	**Florina**	**2.50**	**18**	P	**Pn**	**03 06 16.3**	**+0.7**
FNA				S	**Sn**	**03 06 47.4**	**+1.2**
FNA	**Florina**	**2.50**	**18**	P	**Pn**	**03 06 16.3**	**+0.7**
FNA				S	**Sn**	**03 06 47.4**	**+1.2**
VLI	**Veliai**	**2.64**	**129**	P	**Pn**	**03 06 20.9**	**+3.3**
VLI	**Veliai**	**2.64**	**129**	P	**Pn**	**03 06 20.9**	**+3.3**
ATH	**Athens Observa**	**2.67**	**98**	P	**Pn**	**03 06 18.9**	**+0.9**
ATH	**Athens Observa**	**2.67**	**98**	*e*PN	**Pn**	**03 06 18.3**	**+0.3**
ATH	**Athens Observa**	**2.67**	**98**	P	**Pn**	**03 06 18.9**	**+0.9**
ATH	**Athens Observa**	**2.67**	**98**	*e*Pn	**Pn**	**03 06 18.3**	**+0.3**
ATH	**Athens Observa**	**2.67**	**98**	P	**Pn**	**03 06 18.9**	**+0.9**
BIA	**Bitola**	**2.71**	**15**	P	**Pn**	**03 06 19.5**	**+0.9**
BIA				S	**Sn**	**03 06 53.7**	**+2.3**
BIA	**Bitola**	**2.71**	**15**	*i* Pn	**Pn**	**03 06 19.6**	**+1.0**
BIA	**Bitola**	**2.71**	**15**	P	**Pn**	**03 06 19.5**	**+0.9**
BIA				S	**Sn**	**03 06 53.7**	**+2.3**
ATHU	**Athens Univers**	**2.72**	**98**	P	**Pn**	**03 06 20.3**	**+1.6**
ATHU				S	**Sn**	**03 06 51.5**	**-0.1**
ATHU	**Athens Univers**	**2.72**	**98**	P	**Pn**	**03 06 20.3**	**+1.6**
ATHU				S	**Sn**	**03 06 51.5**	**-0.1**
VLY	**Voula,Athens**	**2.75**	**101**	P	**Pn**	**03 06 18.8**	**-0.3**
VLY	**Voula,Athens**	**2.75**	**101**	*e*PN	**Pn**	**03 06 19.1**	**0.0**
VLY	**Voula,Athens**	**2.75**	**101**	P	**Pn**	**03 06 18.8**	**-0.3**
VLY	**Voula,Athens**	**2.75**	**101**	*e*Pn	**Pn**	**03 06 19.1**	**0.0**
PTL	**Penteli**	**2.77**	**96**	P	**Pn**	**03 06 20.1**	**+0.7**
PTL	**Penteli**	**2.77**	**96**	*e*PN	**Pn**	**03 06 19.8**	**+0.4**
PTL	**Penteli**	**2.77**	**96**	*e*Pn	**Pn**	**03 06 19.8**	**+0.4**
PTL	**Penteli**	**2.77**	**96**	P	**Pn**	**03 06 20.1**	**+0.7**
AOS	**Alonnisos**	**2.84**	**73**	P	**Pn**	**03 06 22.0**	**+1.6**
AOS	**Alonnisos**	**2.84**	**73**	P	**Pn**	**03 06 20.5**	**+0.1**
AOS				S	**Sn**	**03 06 54.0**	**-0.6**
AOS	**Alonnisos**	**2.84**	**73**	P	**Pn**	**03 06 20.5**	**+0.1**
AOS				S	**Sn**	**03 06 54.0**	**-0.6**
TIR	**Tirane**	**2.97**	**352**	*e*Pn	**Pn**	**03 06 23.1**	**+1.0**
TIR	**Tirane**	**2.97**	**352**	*e*P	**Pn**	**03 06 23.1**	**+1.0**
TIR	**Tirane**	**2.97**	**352**	P	**Pn**	**03 06 22.9**	**+0.8**
TIR	**Tirane**	**2.97**	**352**	P	**Pn**	**03 06 22.9**	**+0.8**
PIPA	**Pietrapaola**	**2.98**	**292**	Pn	**Pn**	**03 06 23.6**	**+1.3**
PIPA	**Pietrapaola**	**2.98**	**292**	Pn	**Pn**	**03 06 23.6**	**+1.3**
PAIG	**Paliouri**	**2.98**	**58**	P	**Pn**	**03 06 22.3**	**0.0**
PAIG	**Paliouri**	**2.98**	**58**	P	**Pn**	**03 06 22.3**	**0.0**
PAIG	**Paliouri**	**2.98**	**58**	P	**Pn**	**03 06 21.9**	**-0.4**
PAIG				S	**Sn**	**03 06 57.6**	**-0.5**
PAIG	**Paliouri**	**2.98**	**58**	P	**Pn**	**03 06 22.3**	**0.0**
PAIG				S	**Sn**	**03 06 57.6**	**-0.5**
GRG	**Griva**	**2.99**	**31**	P	**Pn**	**03 06 23.0**	**+0.6**
GRG	**Griva**	**2.99**	**31**	P	**Pn**	**03 06 23.0**	**+0.6**
GRG	**Griva**	**2.99**	**31**	P	**Pn**	**03 06 23.1**	**+0.7**
GRG	**Griva**	**2.99**	**31**	P	**Pn**	**03 06 23.0**	**+0.6**
THE	**Thessaloniki**	**2.99**	**41**	P	**Pn**	**03 06 23.1**	**+0.7**
THE	**Thessaloniki**	**2.99**	**41**	P	**Pn**	**03 06 23.1**	**+0.7**
THE	**Thessaloniki**	**2.99**	**41**	P	**Pn**	**03 06 22.9**	**+0.5**
THE	**Thessaloniki**	**2.99**	**41**	P	**Pn**	**03 06 22.9**	**+0.5**
KRUS	**Krussero**	**3.04**	**12**	*i* Pn	**Pn**	**03 06 23.3**	**+0.3**
HORT	**Hortiatis**	**3.04**	**43**	P	**Pn**	**03 06 23.3**	**+0.2**
HORT	**Hortiatis**	**3.04**	**43**	P	**Pn**	**03 06 22.8**	**-0.3**
HORT				S	**Sn**	**03 07 00.1**	**+0.6**
HORT	**Hortiatis**	**3.04**	**43**	P	**Pn**	**03 06 23.3**	**+0.2**
HORT				S	**Sn**	**03 07 00.1**	**+0.6**
PLG	**Polygyros**	**3.08**	**49**	P	**Pn**	**03 06 23.6**	**-0.1**
PLG	**Polygyros**	**3.08**	**49**	P	**Pn**	**03 06 23.6**	**-0.1**
PLG	**Polygyros**	**3.08**	**49**	P	**Pn**	**03 06 23.4**	**-0.3**
PLG				S	**Sn**	**03 06 58.5**	**-2.1**
PLG	**Polygyros**	**3.08**	**49**	P	**Pn**	**03 06 23.6**	**-0.1**
PLG				S	**Sn**	**03 06 58.5**	**-2.1**
GRI	**Girifalco**	**3.13**	**279**	Pn	**Pn**	**03 06 25.7**	**+1.4**
GRI	**Girifalco**	**3.13**	**279**	P	**Pn**	**03 06 25.7**	**+1.4**
GRI	**Girifalco**	**3.13**	**279**	P	**Pn**	**03 06 25.7**	**+1.4**
TAR1	**Taranto**	**3.20**	**312**	*e*Pn	**Pn**	**03 06 24.7**	**-0.6**
TAR1				*e*Sn	**Sn**	**03 07 01.9**	**-1.5**
SOH	**Sokhos**	**3.33**	**43**	P	**Pn**	**03 06 27.6**	**+0.5**
SOH	**Sokhos**	**3.33**	**43**	*e*PN	**Pn**	**03 06 27.7**	**+0.6**
SOH	**Sokhos**	**3.33**	**43**	P	**Pn**	**03 06 27.6**	**+0.5**
SOH	**Sokhos**	**3.33**	**43**	P	**Pn**	**03 06 26.9**	**-0.2**
SOH				S	**Sn**	**03 07 07.6**	**+0.9**
SOH	**Sokhos**	**3.33**	**43**	P	**Pn**	**03 06 26.9**	**-0.2**
SOH	**Sokhos**	**3.33**	**43**	*e*Pn	**Pn**	**03 06 27.7**	**+0.6**
SOH				S	**Sn**	**03 07 07.6**	**+0.9**
VAY	**Valandovo**	**3.37**	**29**	P	**Pn**	**03 06 27.1**	**-0.5**
VAY	**Valandovo**	**3.37**	**29**	*e*Pn	**Pn**	**03 06 28.1**	**+0.5**
VAY	**Valandovo**	**3.37**	**29**	P	**Pn**	**03 06 27.1**	**-0.5**
KNT	**Kendrikon**	**3.37**	**34**	P	**Pn**	**03 06 27.8**	**+0.2**
KNT	**Kendrikon**	**3.37**	**34**	P	**Pn**	**03 06 27.8**	**+0.2**
OUR	**Ouranopolis**	**3.39**	**54**	P	**Pn**	**03 06 28.6**	**+0.7**
OUR	**Ouranopolis**	**3.39**	**54**	P	**Pn**	**03 06 28.6**	**+0.7**
OUR	**Ouranopolis**	**3.39**	**54**	P	**Pn**	**03 06 27.8**	**-0.1**
OUR				S	**Sn**	**03 07 08.1**	**-0.1**
OUR	**Ouranopolis**	**3.39**	**54**	P	**Pn**	**03 06 27.8**	**-0.1**
OUR				S	**Sn**	**03 07 08.1**	**-0.1**
SOI	**Samo**	**3.42**	**266**	*i* Pnr	**Pn**	**03 06 29.2**	**+0.9**
SOI	**Samo**	**3.42**	**266**	*i* P	**Pn**	**03 06 29.2**	**+0.9**
SOI	**Samo**	**3.42**	**266**	*i* P	**Pn**	**03 06 29.2**	**+0.9**
ORI	**Oriolo Calabro**	**3.47**	**300**	Pn	**Pn**	**03 06 31.0**	**+2.0**
ORI	**Oriolo Calabro**	**3.47**	**300**	P	**Pn**	**03 06 31.0**	**+2.0**
ORI	**Oriolo Calabro**	**3.47**	**300**	P	**Pn**	**03 06 31.0**	**+2.0**
PUK	**Puka**	**3.65**	**354**	*e*PN	**Pn**	**03 06 31.2**	**-0.3**
PUK				*i* SN	**Sn**	**03 07 14.7**	**+0.1**
PUK	**Puka**	**3.65**	**354**	*e*Pn	**Pn**	**03 06 31.2**	**-0.3**
PUK				*i* Sn	**Sn**	**03 07 14.7**	**+0.1**
SKO	**Skopje**	**3.65**	**13**	*e*Pn	**Pn**	**03 06 31.7**	**+0.2**
SKO	**Skopje**	**3.65**	**13**	P	**Pn**	**03 06 33.1**	**+1.6**
SKO	**Skopje**	**3.65**	**13**	*i* Pn	**Pn**	**03 06 33.7**	**+2.2**
SKO	**Skopje**	**3.65**	**13**	*e*Pn	**Pn**	**03 06 31.7**	**+0.2**
SKO	**Skopje**	**3.65**	**13**	P	**Pn**	**03 06 33.1**	**+1.6**
ULC	**Ulcinj**	**3.66**	**347**	⇓*i*Pn	**Pn**	**03 06 31.4**	**-0.2**
ULC				*e*Sn	**Sn**	**03 07 14.6**	**-0.2**
ULC	**Ulcinj**	**3.66**	**347**	*e*PN	**Pn**	**03 06 31.4**	**-0.2**
ULC				*i* SN	**Sn**	**03 07 14.6**	**-0.1**
ULC	**Ulcinj**	**3.66**	**347**	⇓*i*P	**Pn**	**03 06 31.4**	**-0.2**
ULC				*e*		03 07 14.6	
ULC	**Ulcinj**	**3.66**	**347**	*i* P	**Pn**	**03 06 31.4**	**-0.2**
ULC				*e*S	**Sn**	**03 07 14.6**	**-0.2**
SRS	**Serrai**	**3.67**	**41**	P	**Pn**	**03 06 31.6**	**-0.2**
SRS	**Serrai**	**3.67**	**41**	P	**Pn**	**03 06 31.6**	**-0.2**
SRS	**Serrai**	**3.67**	**41**	P	**Pn**	**03 06 31.7**	**-0.1**
SRS	**Serrai**	**3.67**	**41**	P	**Pn**	**03 06 31.7**	**-0.1**
MTTG	**Motta San Giov**	**3.71**	**265**	Pn	**Pn**	**03 06 32.8**	**+0.4**
MTTG				Sn	**Sn**	**03 07 14.8**	**-1.3**
MTTG	**Motta San Giov**	**3.71**	**265**	Pn	**Pn**	**03 06 32.8**	**+0.4**
MTTG				Sn	**Sn**	**03 07 14.8**	**-1.3**
SG1	**Sgolgore (BA)**	**3.75**	**312**	*e*Pn	**Pn**	**03 06 34.1**	**+1.2**
SG1				*e*Sn	**Sn**	**03 07 17.0**	**-0.1**
BAI	**Bari**	**3.81**	**316**	*e*Pn	**Pn**	**03 06 34.6**	**+0.8**
BAI				*e*Sn	**Sn**	**03 07 18.4**	**-0.3**
CUC	**Castrocucco**	**3.88**	**296**	*e*Pn	**Pn**	**03 06 37.3**	**+2.6**
CUC	**Castrocucco**	**3.88**	**296**	*e*Pn	**Pn**	**03 06 37.3**	**+2.6**
BCI	**Bajram Curri**	**3.96**	**357**	*e*PN	**Pn

SVIS Svilajnac 5.89 6 *e*Pn **Pn 03 07 03.0 +0.8**
KARP Karpathos 6.13 116 P **Pn 03 07 08.4 +2.8**
AQU L'Aquila 6.63 309 *e*Pn **Pn 03 07 12.5 +0.1**
AQU L'Aquila 6.63 309 *e*P **Pn 03 07 12.5 +0.1**
AQU L'Aquila 6.63 309⇑ *i*P **Pn 03 07 21.1 +8.7**
AQU L'Aquila 6.63 309 *e*P **Pn 03 07 12.5 +0.1**
FRGS Fruska Gora 6.76 357 *e*Pn **Pn 03 07 12.7 -1.5**
BLY Banja Luka 6.78 340 *e*Pn **Pn 03 07 13.9 -0.5**
BLY Banja Luka 6.78 340 *e*Pn **Pn 03 07 13.9 -0.5**
LTBQ Tobruq 6.96 154 *i* P **Pn 03 07 16.8 -0.3**
SNR=22
GZR Gura Zlata 7.21 14⇑ P **Pn 03 07 20.1 -0.2**
GZR Gura Zlata 7.21 14⇑ *i*P **Pn 03 07 20.1 -0.2**
GZR Gura Zlata 7.21 14 P **Pn 03 07 20.1 -0.2**
BZS Buzias 7.26 7 *e*Pn **Pn 03 07 20.3 -0.8**
BZS Buzias 7.26 7⇓ P **Pn 03 07 22.8 +1.7**
BZS Buzias 7.26 7⇓ *i*P **Pn 03 07 22.8 +1.7**
BZS Buzias 7.26 7 *e*Pn **Pn 03 07 20.3 -0.8**
BZS Buzias 7.26 7 P **Pn 03 07 22.8 +1.7**
NVLJ Novalja 7.41 328 *e*Pn **Pn 03 07 23.0 -0.2**
NVLJ Sn **Sn 03 08 42.5 -4.8**
NVLJ Novalja 7.41 328 *e*Pn **Pn 03 07 22.9 -0.2**
VOIR 7.84 25⇑ P **Pn 03 07 29.9 +0.9**
VOIR 7.84 25⇑ *i*P **Pn 03 07 29.9 +0.9**
VOIR 7.84 25 P **Pn 03 07 29.9 +0.9**
PKSM Moragy 7.91 351 *e*Pn **Pn 03 07 28.4 -1.5**
PKSM Moragy 7.91 351⇑ P **Pn 03 07 28.0 -1.9**
PKSM Moragy 7.91 351⇑ *i*P **Pn 03 07 28.0 -1.9**
PKSM Moragy 7.91 351 P **Pn 03 07 28.0 -1.9**
PKSM Moragy 7.91 351 *e*Pn **Pn 03 07 28.4 -1.5**
SLUM 7.96 149 AMP 03 09 00.0
comp=E,100µm,0.4s,logA/T=5.4,baz=155
ISP Isparta 8.02 91⇑ P **Pn 03 07 34.4 +2.9**
ISP Isparta 8.02 91⇑ *i*P **Pn 03 07 34.4 +2.9**
BOJS Bojanci 8.05 333 *i* Pn **Pn 03 07 31.9 0.0**
BOJS *i* Sn **Sn 03 08 59.5 -3.6**
BOJS
comp=Z,28nm,0.5s
BOJS Bojanci 8.05 333 Pn **Pn 03 07 31.9 -0.1**
MLR Muntele Rosu 8.20 29⇓ P **Pn 03 07 36.4 +2.4**
MLR Muntele Rosu 8.20 29⇓ *i*P **Pn 03 07 36.4 +2.4**
MLR Muntele Rosu 8.20 29 P **Pn 03 07 36.4 +2.4**
CRES Cresnjev 8.27 335 *i* Pn **Pn 03 07 34.0 -0.9**
CRES *e*Sn **Sn 03 09 01.9 -6.4**
CRES
comp=Z,51nm,0.9s
CRES Cresnjev 8.27 335 *i* Pn **Pn 03 07 34.0 -0.9**
VISS Visnje 8.46 333 *i* Pn **Pn 03 07 37.6 +0.1**
VISS Visnje 8.46 333 *i* Pn **Pn 03 07 37.7 +0.2**
TIRR Tirgusor 8.54 42⇓ P **Pn 03 07 39.1 +0.5**
TIRR Tirgusor 8.54 42⇓ *i*P **Pn 03 07 39.1 +0.5**
TIRR Tirgusor 8.54 42 P **Pn 03 07 39.1 +0.5**
SKDS Skadanscina 8.56 328 *i* Pn **Pn 03 07 38.5 -0.5**
SKDS *i* Sn **Sn 03 09 10.4 -5.2**
PDKS Podkum 8.63 334 *i* Pn **Pn 03 07 39.0 -0.7**
PLOR Plostina 8.78 30⇓ P **Pn 03 07 43.9 +2.1**
PLOR Plostina 8.78 30⇓ *i*P **Pn 03 07 43.8 +2.0**
PLOR Plostina 8.78 30 P **Pn 03 07 43.9 +2.1**
LJU Ljubljana 8.78 332 *e*Pn **Pn 03 07 42.5 +0.6**
TRI Trieste 8.80 328 *e*Pn **Pn 03 07 41.4 -0.8**
TRI *e*S **Sn 03 09 05.5 -16**
TRI Trieste 8.80 328 *e*P **Pn 03 07 41.4 -0.8**
TRI Trieste 8.80 328 *e*P **Pn 03 07 41.4 -0.8**
VRI Vrincioaia 8.82 30⇑ P **Pn 03 07 43.8 +1.4**
VRI Vrincioaia 8.82 30⇑ *i*P **Pn 03 07 43.8 +1.4**
VRI Vrincioaia 8.82 30 P **Pn 03 07 43.8 +1.4**
JAVS Javornik 8.83 330 *i* Pn **Pn 03 07 42.2 -0.3**
JAVS *i* Sn **Sn 03 09 18.5 -3.5**
JAVS Javornik 8.83 330 *i* Pn **Pn 03 07 42.2 -0.4**
VOY Vojsko 9.01 330 *e*Pn **Pn 03 07 45.2 +0.2**
VOY *e* 03 07 53.6
VOY *e*Sn **Sn 03 09 19.6 -6.9**
VOY *e* 03 09 21.6
VOY Vojsko 9.01 330 *e*Pn **Pn 03 07 45.2 +0.2**
PERS Pernice 9.09 336 *i* Pn **Pn 03 07 45.1 -1.1**
PERS *i* Sn **Sn 03 09 22.0 -6.6**
PERS Pernice 9.09 336 *i* Pn **Pn 03 07 45.1 -1.1**
HMAT Matruh 9.15 141 AMP 03 09 00.0
comp=N,60µm,0.7s,logA/T=4.9,baz=146
SOKA Soboth 9.16 336⇓ *i*Pn **Pn 03 07 45.7 -1.4**
SOKA ⇑*i*Sn **Sn 03 09 24.4 -5.7**
SOKA Soboth 9.16 336 Pn **Pn 03 07 45.7 -1.4**
OBKA Obir 9.17 334⇑ *i*Pn **Pn 03 07 46.7 -0.5**
OBKA ⇑*i*Sn **Sn 03 09 26.1 -4.4**
OBKA Obir 9.17 334 Pn **Pn 03 07 46.7 -0.5**
KEST Kesra 9.21 257 Pn **Pn 03 07 48.4 +0.5**
comp=N,0.2nm,0.3s,baz=358,slow=6.1,SNR=10
KEST Sn **Sn 03 09 33.3 +1.7**
comp=N,0.2nm,0.3s,baz=253,slow=20,SNR=6.5
KEST Kesra 9.21 257 Pn **Pn 03 07 48.4 +0.5**
KEST Sn **Sn 03 09 33.3 +1.7**
VLC Villacollemand 9.46 311 *e*Pn **Pn 03 07 53.5 +2.2**
VLC Villacollemand 9.46 311 *e*Pn **Pn 03 07 53.5 +2.2**
PSZ Piszkesteto 9.52 358 *e*Pn **Pn 03 07 51.7 -0.2**
PSZ *e*S **Sn 03 09 34.7 -4.2**
PSZ Piszkesteto 9.52 358⇑ P **Pn 03 07 52.0 0.0**
PSZ Piszkesteto 9.52 358⇑ *i*P **Pn 03 07 52.0 0.0**
PSZ Piszkesteto 9.52 358 *e* **Pn 03 07 51.8 -0.2**
PSZ Piszkesteto 9.52 358 *e*P **Pn 03 07 51.8 -0.2**
ARSA Arzberg 9.53 340⇓ *i*Pn **Pn 03 07 50.6 -1.6**
ARSA ⇓*i*Sn **Sn 03 09 34.0 -5.3**
ARSA Arzberg 9.53 340 Pn **Pn 03 07 50.6 -1.6**
MYKA Terra Mystica 9.60 331⇓ *i*Pn **Pn 03 07 52.7 -0.5**
MYKA ⇑*i*Sn **Sn 03 09 37.2 -3.9**
MYKA Terra Mystica 9.60 331 Pn **Pn 03 07 52.7 -0.5**
PGF Pioggiola 9.61 299 *e*P **Pn 03 07 55.6 +2.4**
comp=N,9.4nm,0.6s
PGF Pioggiola 9.61 299 *e*P **Pn 03 07 55.6 +2.4**
PGF Pioggiola 9.61 299 *e*P **Pn 03 07 55.6 +2.4**
comp=N,4.7nm,0.6s
LSHF Shwairf 9.81 213 *i* P **Pn 03 07 57.3 +1.2**
SNR=22
BURAR Bucovina Array 9.86 19⇓ P **Pn 03 08 00.4 +3.7**
BURAR Bucovina Array 9.86 19⇓ *i*P **Pn 03 08 00.4 +3.7**
BUR08 Bucovina Ar. S 9.88 19 *e*Pn Px 03 08 08.1
LJFR Jufra 10.03 204 *i* P **Pn 03 07 56.4 -2.6**
SNR=22
SWA2 10.06 154 P **Pn 03 08 01.6 +2.1**
baz=158
SWA2 S **Sn 03 09 45.2 -7.3**
baz=158
SWA2 AMP 03 10 00.0
comp=E,100µm,0.5s,logA/T=5.3,baz=158
SWA2 10.06 154 P **Pn 03 08 01.6 +2.0**
KECS Kecovo 10.07 0 *e*SN **Sn 03 09 45.4 -7.2**
LZLA Zalla 10.10 194 *i* P **Pn 03 07 59.0 -1.1**
SNR=22
VYHS Vyhne 10.15 354 *e*Pn **Pn 03 08 02.2 +1.6**
VYHS *e*Sn **Sn 03 09 42.8 -12**
VYHS Vyhne 10.15 354 *e*P **Pn 03 08 02.2 +1.6**
VYHS Vyhne 10.15 354 *e*PN **Pn 03 08 02.2 +1.6**
VYHS *e*SN **Sn 03 09 42.8 -12**
VYHS Vyhne 10.15 354 *e*P **Pn 03 08 02.2 +1.6**
ABTA Abfaltersbach 10.15 328⇓ *i*Pn **Pn 03 08 00.6 -0.1**
SNR=6.5
ABTA Abfaltersbach 10.15 328 Pn **Pn 03 08 00.6 -0.1**
SNR=6.5
KOLL Kolacno 10.27 353 *e*SN **Sn 03 09 50.7 -6.7**
BRTR Keskin Array B 10.40 79 Pn **Pn 03 08 05.2 +1.1**
comp=E,0.6nm,0.3s,baz=255,slow=13,SNR=30
BRTR Keskin Array B 10.40 79 P **Pn 03 08 05.2 +1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.3s
BRTR Keskin Array B 10.40 79 P **Pn 03 08 05.2 +1.1**
comp=Z,1.0nm,0.3s
MOA Molln 10.44 337⇑ *i*Pn **Pn 03 08 03.6 -1.0**
SNR=7.2
MOA ⇓*i*Sn **Sn 03 09 56.2 -5.4**
MOA Molln 10.44 337 Pn **Pn 03 08 03.6 -1.0**
SNR=7.2
CRVS Cervenica-Dubn 10.52 4 *e*Pn **Pn 03 08 05.4 -0.4**
CRVS Cervenica-Dubn 10.52 4 *e*P **Pn 03 08 05.4 -0.4**
CRVS Cervenica-Dubn 10.52 4 *e*PN **Pn 03 08 05.4 -0.4**
CRVS Cervenica-Dubn 10.52 4 *e*P **Pn 03 08 05.4 -0.4**
KOLS Kolonicke sedl 10.61 7 *e*Pn **Pn 03 08 02.6 -4.4**
KOLS Kolonicke sedl 10.61 7 *e*P **Pn 03 08 02.6 -4.4**
KOLS Kolonicke sedl 10.61 7 *e*PN **Pn 03 08 02.6 -4.4**
RJOB Jochberg 10.85 332 *e*Pn **Pn 03 08 11.2 +1.0**
WTTA Wattenberg 10.93 327⇓ *i*Pn **Pn 03 08 11.3 0.0**
SNR=6.2
WTTA ⇓*i*Sn **Sn 03 10 09.5 -4.0**
WTTA Wattenberg 10.93 327 Pn **Pn 03 08 11.3 0.0**
SNR=6.2
WATA Walderalm 11.01 327⇓ *i*Pn **Pn 03 08 12.6 +0.2**
SNR=7.4
WATA ⇓*i*Sn **Sn 03 10 11.9 -3.7**
WATA Walderalm 11.01 327 Pn **Pn 03 08 12.6 +0.2**
SNR=7.4
HBRG Burj al 'Arab 11.04 132 S **Sn 03 10 01.9 -15**
baz=137
FUORN Ofenpass-Fuorn 11.09 321 *e*Pn **Pn 03 08 14.7 +1.2**
FUORN Ofenpass-Fuorn 11.09 321 *e*Pn **Pn 03 08 14.7 +1.2**
FETA Feichten 11.15 324⇑ *i*Pn **Pn 03 08 15.0 +0.6**
FETA Feichten 11.15 324 Pn **Pn 03 08 15.0 +0.6**
SBF Sospel 11.18 303 *e*P **Pn 03 08 16.4 +1.7**
SBF Sospel 11.18 303 *e*P **Pn 03 08 16.4 +1.7**
SBF Sospel 11.18 303 *e*P **Pn 03 08 16.4 +1.7**
MOTA Moosalm 11.22 326⇓ *i*Pn **Pn 03 08 15.4 +0.1**
SNR=8.1
MOTA Moosalm 11.22 326 Pn **Pn 03 08 15.4 +0.1**
SNR=8.1
DAVOX Davos/Dischmat 11.39 321 Pn **Pn 03 08 18.9 +1.3**
comp=Z,1.0nm,0.3s,baz=136,slow=20,SNR=11
DAVOX Sn **Sn 03 10 21.4 -3.4**
comp=Z,1.4nm,0.3s,baz=346,slow=16,SNR=7.5
DAVOX Davos/Dischmat 11.39 321 P **Pn 03 08 18.9 +1.3**
DAVOX 03 10 21.4
DAVOX Davos/Dischmat 11.39 321 P **Pn 03 08 18.9 +1.3**
TUE Stuetta 11.46 318 *e*Pn **Pn 03 08 19.3 +0.8**
TUE *e*S **Sn 03 10 16.8 -10**
TUE Stuetta 11.46 318 *e*Pn **Pn 03 08 19.3 +0.8**
GEC2 GERESS Array S 11.50 337 *e*Pn **Pn 03 08 17.6 -1.5**
GEC2 GERESS Array S 11.50 337 *e*P **Pn 03 08 17.6 -1.5**
GEC2 GERESS Array S 11.50 337 *e*P **Pn 03 08 17.6 -1.5**
GERES GERESS Array B 11.50 337 Pn **Pn 03 08 17.8 -1.3**
comp=Z,0.6nm,0.3s,baz=155,slow=14,SNR=18
GERES Sn **Sn 03 10 20.6 -6.8**
comp=Z,0.5nm,0.3s,baz=149,slow=22,SNR=4.3
GERES GERESS Array B 11.50 337 P **Pn 03 08 17.8 -1.3**
GERES 03 10 20.6
GERES pmax pmax
comp=Z,1.0nm,0.3s
GERES smax
comp=N,1.0nm,0.3s
GERES GERESS Array B 11.50 337 P **Pn 03 08 17.8 -1.3**
comp=N,1.0nm,0.3s
MORC Moravsky Berou 11.55 351⇓ P **Pn 03 08 20.0 +0.2**
MORC Moravsky Berou 11.55 351⇓ *i*P **Pn 03 08 20.0 +0.2**
MORC Moravsky Berou 11.55 351 P **Pn 03 08 20.0 +0.2**
FRF La Foret Royal 11.58 301 *e*P **Pn 03 08 21.3 +1.0**
FRF La Foret Royal 11.58 301 *e*P **Pn 03 08 21.3 +1.0**
FRF La Foret Royal 11.58 301 *e*P **Pn 03 08 21.3 +1.0**
KHC Kasperske Hory 11.79 338 *e*P **Pn 03 08 20.3 -2.8**
KHC *e* 03 10 27.5
KHC Kasperske Hory 11.79 338 *e*P **Pn 03 08 20.3 -2.8**
KHC *e*x x 03 08 35.0
KHC *e*S **Sn 03 10 27.5 -7.1**
MBDF Montbardon 11.98 306 *e*P **Pn 03 08 27.7 +1.9**
comp=N,18nm,0.9s
MBDF Montbardon 11.98 306 *e*P **Pn 03 08 27.7 +1.9**
comp=N,8.9nm,0.9s
MBDF Montbardon 11.98 306 *e*P **Pn 03 08 27.7 +1.9**
MBDF pmax pmax
comp=Z,9.0nm,0.9s
MBDF Montbardon 11.98 306 *e*P **Pn 03 08 27.7 +1.9**
comp=Z,8.9nm,0.9s
LPG La Plagne 12.37 309 *e*P **Pn 03 08 31.7 +0.7**
comp=Z,9.0nm,0.6s
LPG La Plagne 12.37 309 *e*P **Pn 03 08 31.7 +0.7**
comp=Z,4.5nm,0.6s
LPG La Plagne 12.37 309 *e*P **Pn 03 08 31.7 +0.7**
LPG pmax pmax
comp=Z,5.0nm,0.6s
LPG La Plagne 12.37 309 *e*P **Pn 03 08 31.7 +0.7**
comp=Z,4.5nm,0.6s
LPL La Plagne 12.39 309 *e*P **Pn 03 08 33.0 +1.7**
comp=Z,6.8nm,0.7s
LPL La Plagne 12.39 309 *e*P **Pn 03 08 33.0 +1.7**
comp=Z,3.4nm,0.7s
LPL La Plagne 12.39 309 *e*P **Pn 03 08 33.0 +1.7**
LPL pmax pmax
comp=Z,3.0nm,0.7s
LPL La Plagne 12.39 309 *e*P **Pn 03 08 33.0 +1.7**
comp=Z,3.4nm,0.7s
SENIN Lac Senin/Sane 12.51 314 *e*Pn **Pn 03 08 34.1 +1.2**
SENIN Lac Senin/Sane 12.51 314 *e*Pn **Pn 03 08 34.1 +1.2**
ORIF Oris-en-Rattie 12.64 306 *e*P **Pn 03 08 38.7 +4.0**
ORIF *e*MLR MLR
comp=Z,88nm,20.2s
ORIF Oris-en-Rattie 12.64 306 *e*P **Pn 03 08 38.7 +4.0**
GLL Jalalah 12.87 130 P **Pn 03 08 34.3 -3.6**
baz=134
AMAG Maghara 13.10 122 P **Pn 03 08 38.2 -2.9**
baz=126
BFO Black Forest 13.22 322 *e*Pn **Pn 03 08 38.8 -3.8**
BFO Black Forest 13.22 322 *e*P **Pn 03 08 38.8 -3.8**
CABF La Chapelle 13.34 312 *e*P **Pn 03 08 43.9 -0.4**
CABF La Chapelle 13.34 312 *e*P **Pn 03 08 43.9 -0.4**
CABF La Chapelle 13.34 312 *e*P **Pn 03 08 43.9 -0.4**
SUZ 13.38 126 P **Pn 03 08 41.9 -3.0**
baz=130
HINF Hinteralfeld 13.62 318 *e*P **Pn 03 08 47.2 -0.9**
HINF Hinteralfeld 13.62 318 *e*P **Pn 03 08 47.2 -0.9**
HINF Hinteralfeld 13.62 318 *e*P **Pn 03 08 47.2 -0.9**
ECH Echery 13.72 320 *e*Pn **Pn 03 08 49.4 -0.1**
ECH *e*S **Sn 03 11 13.4 -8.5**
ECH Echery 13.72 320 *e*P **Pn 03 08 49.4 -0.1**
ECH *e*S **Sn 03 11 13.4 -8.4**
ECH Echery 13.72 320 *e*P **Pn 03 08 49.4 -0.1**
MOX Moxa 13.73 336 *e*P **Pn 03 08 49.5 0.0**
MOX Moxa 13.73 336 *e*P **Pn 03 08 49.5 0.0**
MOX Moxa 13.73 336 *e*P **Pn 03 08 49.5 0.0**
CDF Champ du Feu 13.79 321 *e*P **Pn 03 08 50.6 +0.2**
comp=Z,3.4nm,0.4s
CDF Champ du Feu 13.79 321 *e*P **Pn 03 08 50.6 +0.2**
comp=Z,1.7nm,0.4s
CDF Champ du Feu 13.79 321 *e*P **Pn 03 08 50.6 +0.2**
CDF pmax pmax
comp=Z,2.0nm,0.4s
CDF Champ du Feu 13.79 321 *e*P **Pn 03 08 50.6 +0.2**
comp=Z,1.7nm,0.4s
AKASG Malin Array Be 13.80 24 Pn **Pn 03 08 50.1 -0.5**
comp=Z,0.2nm,0.3s,baz=212,slow=11,SNR=3.2
AKASG Malin Array Be 13.80 24 P **Pn 03 08 50.1 -0.5**
AKASG Malin Array Be 13.80 24 P **Pn 03 08 50.1 -0.5**
HAU Haudompre 14.01 318 *e*P **Pn 03 08 52.1 -1.3**
comp=Z,8.0nm,0.4s
HAU *e*MLR MLR
comp=Z,109nm,18.2s
HAU Haudompre 14.01 318 *e*P **Pn 03 08 52.1 -1.3**
comp=Z,4.0nm,0.4s
HAU Haudompre 14.01 318 *e*P **Pn 03 08 52.1 -1.3**
HAU pmax pmax
comp=Z,4.0nm,0.4s
HAU Haudompre 14.01 318 *e*P **Pn 03 08 52.1 -1.3**
comp=Z,4.0nm,0.4s
MALT Malatya 14.17 85 *e*Pn **Pn 03 09 02.2 +6.6**
MALT Malatya 14.17 85⇓ P **Pn 03 09 00.6 +5.0**
MALT Malatya 14.17 85⇓ *i*P **Pn 03 09 00.6 +5.0**
MALT Malatya 14.17 85 P **Pn 03 09 00.6 +5.0**
SMF Signal de Mont 14.69 309 *e*P **Pn 03 09 03.2 +0.5**
SMF Signal de Mont 14.69 309 *e*P **Pn 03 09 03.2 +0.5**
ASF Jabal al Asfar 14.85 110 Pn **Pn 03 09 07.7 +2.8**
comp=Z,0.4nm,0.3s,baz=181,slow=7.8,SNR=5.5
ASF Jabal al Asfar 14.85 110 P **Pn 03 09 07.7 +2.8**
LOR Lormes 14.99 312 *e*P **Pn 03 09 06.5 -0.2**
LOR *e*MLR MLR
comp=Z,65nm,18.5s
LOR Lormes 14.99 312 *e*P **Pn 03 09 06.5 -0.2**
MEZF Maizieres J'vi 15.00 317 *e*P **Pn 03 09 06.6 -0.3**
AVF Avril sur Loir 15.06 309 *e*P **Pn 03 09 09.0 +1.3**
AVF Avril sur Loir 15.06 309 *e*P **Pn 03 09 09.0 +1.3**
SSF Saint Saulge 15.10 310 *e*P **Pn 03 09 06.5 -1.7**
SSF Saint Saulge 15.10 310 *e*P **Pn 03 09 06.5 -1.7**
CAF Calviac 15.14 301 *e*P **Pn 03 09 09.7 +0.8**
CAF Calviac 15.14 301 *e*P **Pn 03 09 09.7 +0.8**
BGF Bois d'Agland 15.27 308 *e*P **Pn 03 09 10.4 0.0**
BGF Bois d'Agland 15.27 308 *e*P **Pn 03 09 10.4 0.0**
SUW Suwalki 15.73 6 *e*Pn **Pn 03 09 17.7 +1.3**
SUW Suwalki 15.73 6 *e*P **Pn 03 09 17.7 +1.3**
SUW Suwalki 15.73 6 *e*Pn **Pn 03 09 17.7 +1.3**
BAIF Baives 16.39 320 *e*P **Pn 03 09 25.1 +0.1**
comp=Z,18nm,0.9s
BAIF Baives 16.39 320 *e*P **Pn 03 09 25.1 +0.1**
comp=Z,8.9nm,0.9s
BAIF Baives 16.39 320 *e*P **Pn 03 09 25.1 +0.1**
BAIF pmax pmax
comp=Z,9.0nm,0.9s
BAIF Baives 16.39 320 *e*P **Pn 03 09 25.1 +0.1**
comp=Z,8.9nm,0.9s
LDF La Druitiere 17.97 311 *e*P **Pn 03 09 44.6 -0.2**
comp=Z,2.6nm,0.5s
LDF La Druitiere 17.97 311 *e*P **Pn 03 09 44.6 -0.2**
comp=Z,1.3nm,0.5s
LDF La Druitiere 17.97 311 *e*P **Pn 03 09 44.6 -0.2**
LDF pmax pmax
comp=Z,1.0nm,0.5s
LDF La Druitiere 17.97 311 *e*P **Pn 03 09 44.6 -0.2**
comp=Z,1.3nm,0.5s
FLN La Foliniere 18.26 311 *e*P **Pn 03 09 48.8 +0.5**
FLN *e*MLR MLR
comp=Z,69nm,22.5s
FLN La Foliniere 18.26 311 *e*P **Pn 03 09 48.8 +0.5**
FLN La Foliniere 18.26 311 *e*P **Pn 03 09 48.8 +0.5**
VSR Storozhevoye 18.42 40 *e*P **Pn 03 09 48.5 -1.7**
VSR pmax pmax
comp=Z,6.0nm,0.6s
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,6.0nm,0.5s
VSR Storozhevoye 18.42 40 *e*P **Pn 03 09 48.5 -1.7**
comp=E,6.0nm,0.6s
GNI Garni 18.93 77 P **Pn 03 09 56.0 -0.5**
comp=E,0.7nm,0.3s,baz=346,slow=12,SNR=4.4
GNI Garni 18.93 77 *e*P **Pn 03 09 55.6 -0.9**
comp=E,6.1nm,0.6s
GNI Garni 18.93 77 P **Pn 03 09 56.0 -0.5**
GNI pmax pmax
comp=Z,1.0nm,0.3s
GNI Garni 18.93 77 P **Pn 03 09 56.0 -0.5**
comp=Z,1.0nm,0.3s
ESDC Sonseca Array 18.94 281 P **Pn 03 09 56.1 -0.5**
comp=Z,0.2nm,0.3s,baz=76,slow=11,SNR=11
ESDC Sonseca Array 18.94 281 P **Pn 03 09 56.2 -0.5**
OBN Obninsk 19.97 28⇑ *e*P **Pn 03 10 09.2 +0.3**
OBN *e*S **Sn 03 13 50.6 -2.7**
OBN pmax pmax
comp=Z,22nm,1.6s
OBN MLR MLR
comp=Z,100nm,17.0s
OBN Obninsk 19.97 28 *e*P **Pn 03 10 09.2 +0.3**
comp=Z,22nm,1.6s
OBN *e*S **Sn 03 13 50.6 -2.7**
comp=Z,100nm,17.0s
TAM Tamanrasset 20.10 224 *e*P **P 03 10 10.8 +2.0**
comp=Z,6.2nm,1.2s
TAM Tamanrasset 20.10 224 *e*P **P 03 10 10.8 +2.0**
TAM pmax pmax
comp=Z,6.0nm,1.2s
TAM Tamanrasset 20.10 224 *e*P **P 03 10 10.8 +2.0**
comp=Z,6.2nm,1.2s
MDT Midelt 21.04 262 P **P 03 10 20.0 +1.0**
comp=Z,6.4nm,0.9s,mb3.9,baz=72,slow=12,SNR=7.3
MDT Midelt 21.04 262 P **P 03 10 20.0 +1.0**
HFS Hagfors 22.16 351 P **P 03 10 29.9 -0.8**
comp=Z,4.8nm,0.5s,mb4.2,baz=171,slow=11,SNR=14
HFS Hagfors 22.16 351 P **P 03 10 29.9 -0.8**
HFS pmax pmax
comp=Z,5.0nm,0.5s
HFS Hagfors 22.16 351 P **P 03 10 29.9 -0.8**
comp=Z,5.0nm,0.5s,mb4.2
EKA Eskdalemuir Ar 23.18 325 P **P 03 10 41.7 +0.1**
comp=Z,7.6nm,1.0s,mb4.1,baz=127,slow=7.7,SNR=9.8
EKA Eskdalemuir Ar 23.18 325 P **P 03 10 41.7 +0.1**
EKA pmax pmax
comp=Z,8.0nm,1.0s
EKA Eskdalemuir Ar 23.18 325 P **P 03 10 41.7 +0.1**
comp=Z,8.0nm,1.0s,mb4.1
NAO01 NORSAR Array S 23.24 348 *e*P **P 03 10 41.2 -0.9**
NAO01 NORSAR Array S 23.24 348 *e*P **P 03 10 41.2 -1.0**
FINES FINESS Array B 23.34 7 P **P 03 10 40.3 -2.9**
comp=Z,2.6nm,0.5s,mb4.0,baz=171,slow=9.3,SNR=18
FINES FINESS Array B 23.34 7 P **P 03 10 40.3 -2.9**
FINES pmax pmax
comp=Z,3.0nm,0.5s
NB2 NORSAR Subarra 23.37 349 P **P 03 10 41.7 -1.9**
comp=Z,0.3nm,0.6s,baz=154,slow=10
NB2 NORSAR Subarra 23.37 349 P **P 03 10 41.7 -1.9**
comp=Z,0.3nm,0.6s,SNR=0.9
NOA NORSAR Array B 23.37 349 P **P 03 10 42.5 -1.1**
comp=Z,1.6nm,0.8s,mb3.5,baz=159,slow=9.5,SNR=12
NOA NORSAR Array B 23.37 349 P **P 03 10 42.5 -1.1**
NOA NORSAR Array B 23.37 349 P **P 03 10 42.5 -1.1**
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA NORSAR Array B 23.37 349 P **P 03 10 42.5 -1.1**
comp=Z,2.0nm,0.8s,mb3.6
KLMR Klimovskoe 25.47 22 *e*P **P 03 11 01.5 -1.4**
KLMR pmax pmax
comp=Z,15nm,0.8s,mb4.6
KLMR Klimovskoe 25.47 22 *e*P **P 03 11 01.5 -1.4**
comp=Z,15nm,0.8s,mb4.6
TORD Torodi Ar. Bea 30.14 218 P **P 03 11 44.7 -0.4**
comp=Z,18nm,0.9s,mb4.8,baz=34,slow=9.3,SNR=4.3
TORD PcP PcP 03 14 48.2 +1.7
comp=Z,0.5nm,0.6s,baz=21,slow=1.1,SNR=3.9
TORD Torodi Ar. Bea 30.14 218 P **P 03 11 44.7 -0.4**
TORD PcP PcP 03 14 48.2 +1.7
ARCES ARCESS Array B 31.31 3 P **P 03 11 53.8 -1.2**
comp=Z,1.9nm,0.7s,mb4.0,baz=172,slow=9.8,SNR=5.0
ARCES PcP PcP 03 14 47.6 -1.1
comp=Z,6.1nm,1.1s,baz=294,slow=1.2,SNR=3.7
ARCES ARCESS Array B 31.31 3 P **P 03 11 53.8 -1.1**
ARCES 03 14 47.6
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 31.31 3 P **P 03 11 53.8 -1.1**
comp=Z,2.0nm,0.7s,mb4.1
ARCES ARCESS Array B 31.31 3 PcP PcP 03 14 47.6 -1.0
BRVK Borovoye 37.00 50 *i* P **P 03 12 45.9 +1.5**
BRVK pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
BRVK Borovoye 37.00 50 *i* P **P 03 12 45.9 +1.5**
comp=Z,5.0nm,1.0s,mb4.3
BVAR Borovoye Array 37.06 50 P **P 03 12 43.5 -1.4**
comp=Z,0.6nm,0.4s,mb3.8,baz=283,slow=37,SNR=4.0
BVAR Borovoye Array 37.06 50 P **P 03 12 43.5 -1.4**
BVAR Borovoye Array 37.06 50 P **P 03 12 43.5 -1.4**
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR Borovoye Array 37.06 50 P **P 03 12 43.5 -1.4**
comp=Z,1.0nm,0.4s,mb4.0
KKAR Karatay Array 37.81 66 *e*P **P 03 12 49.8 -1.6**
comp=Z,2.4nm,0.5s,mb4.2
KKAR Karatay Array 37.81 66 *e*P **P 03 12 49.8 -1.6**
KKAR pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
DBIC Dimbokro 38.98 222 P **P 03 13 01.2 -0.3**
comp=Z,8.0nm,0.7s,mb4.6,baz=7.6,slow=9.2,SNR=16
DBIC LR LR 03 30 01.2
comp=Z,79nm,18.2s,MS3.6,baz=327,slow=38
DBIC Dimbokro 38.98 222 P **P 03 13 01.2 -0.3**
DBIC pmax pmax
comp=Z,8.0nm,0.7s
DBIC MLR MLR
comp=Z,79nm,18.2s
DBIC Dimbokro 38.98 222 P **P 03 13 01.2 -0.3**
comp=Z,79nm,18.2s
TIC Toumodi 39.09 223 *e*P **P 03 13 02.0 -0.4**
comp=Z,4.7nm,0.2s,mb4.8
TIC Toumodi 39.09 223 *e*P **P 03 13 02.0 -0.4**
TIC pmax pmax
comp=Z,5.0nm,0.2s,mb4.9
TIC Toumodi 39.09 223 *e*P **P 03 13 02.0 -0.4**
comp=Z,4.7nm,0.2s,mb4.9
KIC Kosan Boka 39.18 222 *e*P **P 03 13 02.9 -0.3**
comp=Z,25nm,0.7s,mb5.0
KIC Kosan Boka 39.18 222 *e*P **P 03 13 02.9 -0.3**
comp=Z,25nm,0.7s,mb5.0
LIC Lamto 39.45 222 *e*P **P 03 13 05.2 -0.2**
comp=Z,57nm,0.8s,mb5.4
LIC Lamto 39.45 222 *e*P **P 03 13 04.6 -0.8**
comp=Z,27nm,0.6s,mb4.8
LIC *e*MLR MLR
comp=Z,69nm,19.0s,MS3.2
LIC Lamto 39.45 222 *e*P **P 03 13 04.6 -0.8**
comp=Z,13nm,0.6s,mb4.8
LIC LR LR
comp=Z,30nm,19.0s,MS3.1
LIC Lamto 39.45 222 *e*P **P 03 13 04.6 -0.8**
comp=Z,13nm,0.6s,mb4.8
EKS2 Erkin-Say 40.25 66 *e*P **P 03 13 11.6 -0.2**

comp=Z,3.2nm,0.7s,mb4.2
EKS2 Erkin-Say 40.25 66 *e*P **P 03 13 11.6 -0.2**
comp=Z,3.2nm,0.7s,mb4.2
MSKU Masuku 40.35 190 P **P 03 13 12.2 -0.6**
comp=Z,4.8nm,0.7s,mb4.3,baz=359,slow=11,SNR=4.1
MSKU Masuku 40.35 190 P **P 03 13 12.2 -0.7**
AAK Ala-Archa 40.77 66 *i* P **P 03 13 14.8 -1.3**
AAK Ala-Archa 40.77 66 *i* P **P 03 13 14.8 -1.3**
KURK Kurchatov 42.23 54 *i* P **P 03 13 27.4 -0.6**
KURK pmax pmax
comp=Z,3.0nm,1.2s,mb3.8
KURK Kurchatov 42.23 54 *i* P **P 03 13 27.4 -0.6**
comp=Z,3.0nm,1.2s,mb3.8
MK31 Makanchi Array 45.28 59 *e*P **P 03 13 49.8 -2.8**
MK31 Makanchi Array 45.28 59 *e*P **P 03 13 49.8 -2.8**
MKAR Makanchi Array 45.28 59 P **P 03 13 50.2 -2.4**
comp=Z,1.4nm,0.4s,mb4.1,baz=278,slow=7.2,SNR=18
MKAR Makanchi Array 45.28 59 P **P 03 13 50.2 -2.4**
MKAR Makanchi Array 45.28 59 *i* P **P 03 13 50.2 -2.4**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 45.62 48 P **P 03 13 53.7 -1.5**
comp=Z,8.0nm,0.4s,mb5.0,baz=280,slow=8.9,SNR=5.9
ZALV Zalesovo Beam 45.62 48 P **P 03 13 53.7 -1.5**
ZALV Zalesovo Beam 45.62 48 P **P 03 13 53.7 -1.5**
ZALV pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
ZALV Zalesovo Beam 45.62 48 P **P 03 13 53.7 -1.5**
comp=Z,8.0nm,0.4s,mb5.0
WMQ Urumqi 49.75 61 *e*P **P 03 14 28.0 +0.6**
ZAK Zakamensk 57.49 49 *e*P **P 03 15 21.1 -3.0**
SCHQ Schefferville 58.22 317 P **P 03 15 29.1 0.0**
comp=Z,4.5nm,0.6s,mb4.7,baz=51,slow=8.1,SNR=14
SCHQ Schefferville 58.22 317 P **P 03 15 29.1 0.0**
SONM Songino Array 60.40 51 P **P 03 15 43.2 -1.1**
comp=Z,1.2nm,0.8s,mb4.0,baz=280,slow=9.6,SNR=6.2
SONM Songino Array 60.40 51 P **P 03 15 43.2 -1.1**
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 60.40 51 P **P 03 15 43.2 -1.1**
comp=Z,1.0nm,0.8s,mb3.9
PALK Pallekele 62.37 103 *i* P **P 03 15 55.9 -2.2**
PALK Pallekele 62.37 103 *i* P **P 03 15 55.9 -2.2**
LBTB Lobatse 63.27 175 P **P 03 16 04.3 +0.6**
comp=Z,1.9nm,0.7s,mb4.3,baz=339,slow=9.4,SNR=3.5
LBTB Lobatse 63.27 175 P **P 03 16 04.3 +0.6**
LBTB Lobatse 63.27 175 P **P 03 16 04.3 +0.6**
LBTB pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
LBTB Lobatse 63.27 175 P **P 03 16 04.3 +0.6**
comp=Z,2.0nm,0.7s,mb4.4
LZH Lanzhou 64.20 63 *e*P **P 03 16 11.0 +1.0**
LZH pP pP 03 16 21.5 +8.3
LZH sP sP 03 16 25.8 +11
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
BOSA Boshof 66.82 175 LR LR 03 47 44.5
comp=Z,45nm,20.6s,MS3.7,baz=168,slow=38
HHC Hu-ho-hao-te 67.00 55 *e*P **P 03 16 27.5 -0.5**
HHC pP pP 03 16 37.8 +6.6
HHC sP sP 03 16 41.8 +9.4
HHC PcP PcP 03 16 56.3 0.0
HHC PP PP 03 18 57.0 +1.8
HHC ScP 03 20 56.0
HHC S S 03 25 15.5 -5.9
HHC sS sS 03 25 33.3 +6.5
HHC ScS ScS 03 26 18.3 -7.2
HHC SS SS 03 29 36.3 -3.1
HHC pmax pmax
comp=Z,200nm,5.7s
HHC LR LR
comp=N,110nm,17.4s,MS4.3
HHC LR LR
comp=E,100nm,15.9s,MS4.3
HHC LR LR
comp=Z,140nm,15.2s,MS4.3
CMAR Chiang Mai Arr 69.97 82 P **P 03 16 47.9 +1.0**
comp=Z,1.0nm,0.3s,mb4.2,baz=309,slow=8.5,SNR=5.1
CMAR Chiang Mai Arr 69.97 82 P **P 03 16 47.9 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 69.97 82 P **P 03 16 47.8 +1.0**
BJI Beijing 70.40 54 P **P 03 16 52.0 +2.8**
BJI S S 03 26 04.8 +3.1
BJI pmax pmax
comp=Z,13nm,0.6s,mb5.0
BJI pmax pmax
comp=Z,250nm,4.2s
BJI LR LR
comp=N,240nm,14.5s,MS4.8
BJI LR LR
comp=E,290nm,15.1s,MS4.8
BJI LR LR
comp=Z,29nm,14.5s,MS3.7
WHN Wuhan 74.58 63 *e*P **P 03 17 15.5 +1.2**
ULM Lac du Bonnet 75.45 323 P **P 03 17 18.9 0.0**
comp=Z,2.7nm,0.7s,mb4.3,baz=35,slow=2.3,SNR=3.2
ULM Lac du Bonnet 75.45 323 P **P 03 17 18.9 0.0**
MDJ Mudanjiang 75.62 44 P **P 03 17 17.5 -2.5**
MDJ pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MDJ pmax pmax
comp=Z,22nm,4.1s
ILAR Eielson Array 76.67 354 P **P 03 17 25.4 -0.2**
comp=Z,0.3nm,0.6s,mb3.4,baz=347,slow=3.6,SNR=9.4
ILAR Eielson Array 76.67 354 P **P 03 17 25.5 -0.1**
ILAR Eielson Array 76.67 354 P **P 03 17 25.5 -0.1**
NJ2 Nanjing 76.80 60 *e*P **P 03 17 26.3 -0.6**
MJAR Matsushiro Arr 85.91 46 P **P 03 18 15.0 -0.2**
comp=Z,0.6nm,0.3s,mb4.2,baz=305,slow=4.8,SNR=4.5
MJAR Matsushiro Arr 85.91 46 P **P 03 18 15.0 -0.2**
MJAR pmax pmax
comp=Z,1.0nm,0.4s
MJAR Matsushiro Arr 85.91 46 P **P 03 18 15.0 -0.2**
comp=Z,1.0nm,0.4s,mb4.4
TXAR Lajitas Array 94.74 313 P **P 03 18 57.5 +0.7**
comp=Z,0.3nm,0.7s,mb3.8,baz=57,slow=4.6,SNR=3.7
TXAR Lajitas Array 94.74 313 P **P 03 18 57.5 +0.7**
TXAR Lajitas Array 94.74 313 P **P 03 18 57.5 +0.7**
TXAR Lajitas Array 94.74 313 P **P 03 18 57.5 +0.7**
CPUP Villa Florida 97.05 242 LR LR 04 03 37.5
comp=Z,63nm,19.1s,MS4.1,baz=323,slow=36

BJI ***29*** *03:13:09.3,21.'10S×179.'20W,h618km,mB4.9/12, mb4.5/18*
ISCJB ***29*** *03:13:11.2±0.6,21.'13S±0.'06×179.'20W±0.'05, h628km±7km,mb4.5/79,Error ellipse: s-maj=9.5km s-min=5.0km az=147.9*
IDC ***29*** *03:13:12.9±1.5,20.'99S×179.'20W,h633km±16km, mb4.0/18,mb1 4.1/18,mb1mx4.1/22,mbtmp4.0/18,Error ellipse: s-maj=18.8km s-min=8.3km az=154.0*
SZGRF ***29*** *03:13:12.5,21.'00S×178.'39W,h631km,Fiji Islands region*
NEIC ***29*** *03:13:12.3±0.6,21.'07S×179.'19W,h629km±7km,mb4.5/56, Error ellipse: s-maj=9.0km s-min=5.1km az=141.0*
BGS ***29*** *03:13:19.0±6.3,18.'10S×178.'72W,h631km,mb4.4(NEIC)*
ISC 29 03:13:12.0±0.6,21.'07S±0.'06×179.'18W±0.'05, h619km±7km,h623km±11.7km:pP-P,n626,σ0.954/466, mb4.5/79,217C-164D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.23**	**321**	*e*P	**P**	**03 14 40.3**	**-0.1**
MSVF				*e*S	**S**	**03 15 52.6**	**+0.1**
AFI	**Afiamalu**	**10.03**	**46**	P	**P**	**03 15 26.1**	**-5.3**
	11nm,0.3s,baz=51,slow=11,SNR=16						
AFI				S	**S**	**03 17 16.7**	**-9.2**
	11nm,0.3s,baz=155,slow=23,SNR=7.4						
AFI	**Afiamalu**	**10.03**	**46**	*e*P	**P**	**03 15 26.2**	**-5.3**
AFI				*e*S	**S**	**03 17 15.6**	**-10**
DZM	**Mont Dzumac**	**13.42**	**263**	*e*P	**P**	**03 16 03.1**	**-1.7**
NOUC	**Port Laguerre**	**13.55**	**263**	*e*P	**P**	**03 16 04.9**	**-1.1**
URZ	**Urewera**	**17.43**	**190**	P	**P**	**03 16 38.4**	**-3.0**
	2.2nm,0.3s,baz=355,slow=2.0,SNR=15						
URZ				S	**S**	**03 19 27.7**	**-3.7**
	0.7nm,0.3s,baz=43,slow=23,SNR=4.5						
URZ	**Urewera**	**17.43**	**190**	*e*P	**P**	**03 16 38.5**	**-2.8**
	221nm,2.6s						
SNZO	**South Karori**	**20.83**	**193**	*e*P	**P**	**03 17 10.8**	**-1.2**
HNR	**Honiara**	**23.20**	**297**	P	**P**	**03 17 33.1**	**-0.4**
	44nm,0.3s,mb5.5,baz=335,slow=22,SNR=6.0						
EIDS	**Eidsvold**	**27.64**	**255**	*e*P	**P**	**03 18 12.7**	**+0.4**
	24nm,0.6s,mb5.0						
ARMA	**Armidale**	**27.83**	**245**	⇓*i*P	**P**	**03 18 15.4**	**+1.4**
ARMA	**Armidale**	**27.83**	**245**	*e*P	**P**	**03 18 15.2**	**+1.2**
	29nm,0.9s,mb4.9						
CNB	**Canberra Magne**	**30.99**	**236**	*e*P	**P**	**03 18 42.2**	**+1.1**
CNB				*e*pP		03 20 20.9	
CTA	**Charters Tower**	**32.34**	**265**	P	**P**	**03 18 53.2**	**+0.5**
	66nm,0.4s,mb5.6,baz=92,slow=11,SNR=162						
CTA	**Charters Tower**	**32.34**	**265**	⇓*i*P	**P**	**03 18 53.2**	**+0.5**
	58nm,0.4s,mb5.6						
CTA				*e*S	**S**	**03 23 25.8**	**+0.9**
CTA	**Charters Tower**	**32.34**	**265**	P	**P**	**03 18 53.2**	**+0.5**
CTAO	**Charters Tower**	**32.34**	**265**	*e*P	**P**	**03 18 53.3**	**+0.6**
	71nm,0.5s,mb5.5						
PMG	**Port Moresby**	**34.41**	**285**	*e*P	**P**	**03 19 10.3**	**+0.2**
	61nm,0.8s,mb5.3						
TOO	**Toolangi**	**34.67**	**234**	*e*P	**P**	**03 19 12.8**	**+0.9**
COEN	**Coen**	**36.53**	**275**	*e*P	**P**	**03 19 28.2**	**+0.7**
	166nm,0.8s,mb5.6						
STKA	**Stephens Creek**	**36.55**	**245**	P	**P**	**03 19 28.3**	**+0.8**
	14nm,0.5s,mb4.8,baz=92,slow=9.4,SNR=69						
STKA				PcP	PcP	03 21 33.2	-0.2
	3.3nm,1.0s,baz=69,slow=6.1,SNR=3.0						
STKA	**Stephens Creek**	**36.55**	**245**	⇓*i*P	**P**	**03 19 28.2**	**+0.7**
	12nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**36.55**	**245**	*e*P	**P**	**03 19 28.2**	**+0.7**
	6.2nm,1.1s,mb4.0						
ASAR	**Alice Springs**	**43.32**	**257**	P	**P**	**03 20 21.6**	**+0.2**
	49nm,0.8s,mb5.1,baz=98,slow=7.7,SNR=486						
ASAR				PcP	PcP	03 21 55.6	-0.1
	4.4nm,0.6s,baz=100,slow=3.9,SNR=7.4						
ASAR				ScP	ScP	03 24 49.5	+0.3
	3.3nm,0.8s,baz=118,slow=4.1,SNR=9.7						
ASAR				S	**S**	**03 26 05.0**	**-0.8**
	4.3nm,0.9s,baz=95,slow=15,SNR=21						
ASAR	**Alice Springs**	**43.32**	**257**	P	**P**	**03 20 21.6**	**+0.2**
ASAR				PcP	PcP	03 21 55.6	-0.1
ASAR				ScP	ScP	03 24 49.5	+0.3
ASAR				S	**S**	**03 26 05.0**	**-0.8**
WB2	**Warramunga Arr**	**43.42**	**263**	*e*P	**P**	**03 20 21.7**	**-0.5**
WRA	**Warramunga Arr**	**43.43**	**263**	P	**P**	**03 20 21.9**	**-0.5**
	35nm,0.8s,mb5.0,baz=95,slow=8.4,SNR=76						
WRA				ScP	ScP	03 24 50.0	+0.3
	0.4nm,0.3s,baz=100,slow=6.7,SNR=4.6						
WRA				S	**S**	**03 26 06.3**	**-1.1**
	2.5nm,1.0s,baz=98,slow=14,SNR=7.1						
WRA	**Warramunga Arr**	**43.43**	**263**	P	**P**	**03 20 21.9**	**-0.5**
WRA				ScP	ScP	03 24 50.0	+0.3
WRA				S	**S**	**03 26 06.3**	**-1.2**
KAKA	**Kakadu**	**46.89**	**272**	*e*P	**P**	**03 20 48.2**	**-0.4**
	23nm,0.4s,mb5.0						
FORT	**Forrest**	**48.06**	**247**	*e*P	**P**	**03 20 56.6**	**-0.5**
	33nm,0.5s,mb5.1						
FORT				*e*S	**S**	**03 27 09.7**	**-1.8**
FORT	**Forrest**	**48.06**	**247**	*e*P	**P**	**03 20 56.8**	**-0.3**
	33nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.86**	**263**	P	**P**	**03 21 25.2**	**+0.2**
	6.0nm,0.5s,mb4.2,baz=130,slow=4.0,SNR=63						
FITZ				S	**S**	**03 28 02.9**	**-0.1**
	1.4nm,1.0s,baz=282,slow=20,SNR=4.3						
FITZ	**Fitzroy Crossi**	**51.86**	**263**	*e*P	**P**	**03 21 25.1**	**+0.1**
	13nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**51.86**	**263**	*e*P	**P**	**03 21 25.2**	**+0.2**
	10nm,1.0s,mb4.1						
MBWA	**Marble Bar**	**56.66**	**258**	*e*P	**P**	**03 21 58.0**	**-0.4**
	24nm,0.9s,mb4.4						
KLBR	**Kellerberrin**	**56.82**	**245**	*e*P	**P**	**03 21 59.3**	**-0.1**
	9.6nm,0.7s,mb4.1						
SBA	**Scott Base**	**57.23**	**184**	*e*P	**P**	**03 22 03.4**	**+2.0**
	11nm,0.9s,mb4.1						
CASY	**Casey**	**62.98**	**205**	*e*P	**P**	**03 22 39.4**	**+0.1**
CASY	**Casey**	**62.98**	**205**	*e*P	**P**	**03 22 39.4**	**+0.1**
	3.8nm,0.5s,mb4.0						
QSPA	**South Pole Qui**	**69.00**	**180**	*e*P	**P**	**03 23 17.0**	**+0.7**
	23nm,0.9s,mb4.6						
MJAR	**Matsushiro Arr**	**70.03**	**325**	P	**P**	**03 23 22.6**	**-0.4**
	2.8nm,0.5s,mb4.0,baz=165,slow=6.6,SNR=10						
PETK	**Petropavlovsk-**	**76.55**	**346**	P	**P**	**03 23 58.9**	**-0.8**
	8.4nm,0.6s,mb4.3,baz=172,slow=4.5,SNR=6.2						
KSRS	**Korea Array**	**76.59**	**319**	P	**P**	**03 24 01.1**	**+0.7**
	0.7nm,0.6s,baz=140,slow=5.7,SNR=3.5						
CHGN	**Chignik**	**79.05**	**12**	*e*P	**P**	**03 24 11.9**	**-1.1**
SAO	**San Andreas Ge**	**79.20**	**44**	*e*P	**P**	**03 24 14.8**	**+0.5**
	9.1nm,0.9s,mb4.1						
ARVC	**Arvin**	**79.98**	**46**	⇑P	**P**	**03 24 18.4**	**-0.1**
	baz=80						
VES	**Vestal, Richgr**	**80.21**	**46**	⇓P	**P**	**03 24 19.6**	**0.0**
	baz=80						
MURC	**Murrieta**	**80.25**	**48**	⇑P	**P**	**03 24 19.9**	**0.0**
	baz=80						
BFSC	**Mount Baldy Ra**	**80.28**	**48**	⇓P	**P**	**03 24 19.8**	**-0.2**
	baz=80						
KHMM	**Horse Mountain**	**80.29**	**39**	*e*P	**P**	**03 24 20.6**	**+0.7**
	24nm,1.1s,mb4.4						
MDJ	**Mudanjiang**	**80.36**	**326**	P	**P**	**03 24 21.0**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,91nm,3.8s						
RCTC	**Rector, Farmer**	**80.38**	**45**	⇑P	**P**	**03 24 20.8**	**+0.3**
	baz=81						
EDW2	**Edwards Air Fo**	**80.41**	**47**	⇓P	**P**	**03 24 20.4**	**-0.2**
	baz=81,SNR=7.5						
MONP	**Monument Peak**	**80.42**	**49**	⇓P	**P**	**03 24 20.8**	**+0.1**
	baz=81						
DVTC	**Desert V Tower**	**80.52**	**50**	⇓P	**P**	**03 24 20.9**	**-0.3**
	baz=81						
ISA	**Isabella**	**80.52**	**46**	⇑P	**P**	**03 24 21.2**	**0.0**
	baz=81,SNR=11						
ISA	**Isabella**	**80.52**	**46**	*e*P	**P**	**03 24 21.0**	**-0.2**
	comp=Z,8.4nm,0.9s,mb4.2						
CMB	**Columbia Colle**	**80.63**	**43**	*e*P	**P**	**03 24 21.5**	**-0.2**
	comp=Z,15nm,1.3s,mb4.2						
MAW	**Mawson**	**80.65**	**200**	P	**P**	**03 24 21.6**	**+0.2**
	comp=Z,4.1nm,0.8s,mb3.9,baz=103,slow=7.1,SNR=7.9						
MAW	**Mawson**	**80.65**	**200**	*e*P	**P**	**03 24 21.2**	**-0.2**
	comp=Z,3.4nm,0.8s,mb3.8						
OHCM	**Honcut**	**80.71**	**42**	*e*P	**P**	**03 24 21.8**	**-0.3**
PFO	**Pinyon Flat Ob**	**80.78**	**49**	⇓P	**P**	**03 24 22.0**	**-0.5**
	baz=81						
WDC	**Whiskeytown Da**	**80.82**	**40**	*e*P	**P**	**03 24 22.6**	**-0.1**
	comp=Z,12nm,1.0s,mb4.3						
SWSC	**Sam W. Stewart**	**80.89**	**50**	⇑P	**P**	**03 24 23.2**	**0.0**
	baz=81						
LRMC	**Laurel Mountai**	**80.95**	**47**	⇑P	**P**	**03 24 23.7**	**+0.3**
	baz=81						
CWC	**Cottonwood Cre**	**81.22**	**46**	⇑P	**P**	**03 24 24.8**	**0.0**
	baz=81,SNR=6.4						
BELC	**Belle Mtn. Jos**	**81.31**	**49**	⇑P	**P**	**03 24 25.4**	**+0.1**
	baz=82,SNR=6.1						
MPMC	**Manual Prospec**	**81.41**	**46**	⇓P	**P**	**03 24 25.7**	**0.0**
	baz=82,SNR=7.7						
YBH	**Yreka Blue Hor**	**81.42**	**39**	P	**P**	**03 24 26.2**	**+0.6**
	comp=Z,13nm,0.8s,mb4.4,baz=188,slow=1.8,SNR=47						
YBH	**Yreka Blue Hor**	**81.42**	**39**	*e*P	**P**	**03 24 26.2**	**+0.5**
	comp=Z,13nm,0.8s,mb4.4						
GSC	**Goldstone**	**81.45**	**47**	⇓P	**P**	**03 24 25.7**	**-0.2**
	baz=82,SNR=6.8						
GSC	**Goldstone**	**81.45**	**47**	*e*P	**P**	**03 24 25.7**	**-0.3**
	comp=Z,12nm,1.3s,mb4.2						
TIN	**Tinemaha**	**81.47**	**45**	⇑P	**P**	**03 24 26.0**	**0.0**
	baz=82						
BC3	**Big Chuckawall**	**81.51**	**49**	⇑P	**P**	**03 24 26.4**	**+0.1**
	baz=82,SNR=5.4						
WAKR	**Walker**	**81.51**	**43**	*e*P	**P**	**03 24 26.6**	**+0.4**
HEC	**Hector,Ludlow**	**81.52**	**48**	⇑P	**P**	**03 24 25.9**	**-0.4**
	baz=82						
112A	**Yuma**	**81.54**	**50**	⇓P	**P**	**03 24 27.2**	**+0.7**
	baz=82						
KDAK	**Kodiak Island**	**81.63**	**14**	P	**P**	**03 24 25.8**	**-0.6**
	comp=Z,4.3nm,0.6s,mb4.2,baz=174,slow=5.7,SNR=6.3						
GLA	**Glamis**	**81.63**	**50**	⇓P	**P**	**03 24 27.5**	**+0.5**
	baz=82						
LBCM	**Butte Creek Ri**	**81.69**	**40**	P	**P**	**03 24 27.2**	**+0.1**
WCN	**Washoe City**	**81.77**	**42**	⇓P	**P**	**03 24 27.8**	**+0.3**
	baz=82						
WCN	**Washoe City**	**81.77**	**42**	*e*P	**P**	**03 24 27.1**	**-0.3**
	comp=Z,9.1nm,1.0s,mb4.3						
HUMO	**Hull Mountain**	**81.82**	**38**	*e*P	**P**	**03 24 28.2**	**+0.6**
	comp=Z,19nm,1.1s,mb4.5						
WHN	**Wuhan**	**81.90**	**307**	*e*P	**P**	**03 24 31.8**	**+3.4**
GMRC	**Granite Mounta**	**81.96**	**48**	⇓P	**P**	**03 24 28.8**	**+0.2**
	baz=82						
IRM	**Iron Mountain**	**81.99**	**49**	⇓P	**P**	**03 24 28.9**	**+0.1**
	baz=82,SNR=7.5						
GRAC	**Grapevine Rang**	**82.01**	**45**	⇓P	**P**	**03 24 28.8**	**+0.1**
	baz=82,SNR=9.0						
FURC	**Furnace Creek,**	**82.06**	**46**	⇓P	**P**	**03 24 28.8**	**-0.2**
	baz=82,SNR=5.9						
CN2	**Changchun**	**82.09**	**323**	*e*P	**P**	**03 24 33.3**	**+4.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.7						
TUQ	**Turquoise Moun**	**82.13**	**47**	⇓P	**P**	**03 24 29.3**	**-0.1**
	baz=82,SNR=6.7						
SHOC	**Shoshone**	**82.14**	**47**	⇓P	**P**	**03 24 29.0**	**-0.5**
	baz=82						
NVAR	**Mina Array Bea**	**82.20**	**44**	P	**P**	**03 24 29.7**	**0.0**
	comp=Z,6.9nm,0.6s,mb4.3,baz=225,slow=7.9,SNR=68						
NVAR	**Mina Array Bea**	**82.20**	**44**	P	**P**	**03 24 29.7**	**0.0**
Y12C	**Blythe**	**82.22**	**49**	⇓P	**P**	**03 24 29.8**	**-0.1**
	baz=82						
PAHR	**Pah Rah Range**	**82.24**	**42**	*e*P	**P**	**03 24 29.8**	**-0.1**
	comp=Z,12nm,0.9s,mb4.4						
113A	**Mohawk Valley,**	**82.25**	**51**	⇓P	**P**	**03 24 30.1**	**0.0**
	baz=82,SNR=11						
U10A	**Ash Meadows, A**	**82.39**	**46**	⇑P	**P**	**03 24 30.9**	**+0.2**
	baz=83,SNR=5.7						
LDFC	**Landfair**	**82.50**	**48**	*e*P	**P**	**03 24 31.5**	**+0.2**
	comp=Z,48nm,1.2s,mb4.9						
214A	**Organ Pipe Nat**	**82.53**	**52**	⇓P	**P**	**03 24 31.6**	**0.0**
	baz=83						
Z13A	**Yuma Proving G**	**82.55**	**50**	⇑P	**P**	**03 24 31.7**	**+0.2**
	baz=83,SNR=10						
V11A	**Goodsprings**	**82.69**	**47**	⇑P	**P**	**03 24 32.1**	**-0.1**
	baz=83,SNR=5.7						
Y13A	**Salome**	**82.74**	**50**	⇑P	**P**	**03 24 32.8**	**+0.3**
	baz=83,SNR=10						
PDMCI	**Parker Dam,Lak**	**82.77**	**49**	⇑P	**P**	**03 24 32.8**	**+0.1**
	baz=83						
W12A	**Cal Nev Ari**	**82.79**	**48**	⇓P	**P**	**03 24 32.8**	**+0.1**
	baz=83						
114A	**Black Gap (USA**	**82.88**	**51**	⇓P	**P**	**03 24 33.4**	**+0.2**
	baz=83						
HEBO	**Mount Hebo**	**83.00**	**36**	*e*P	**P**	**03 24 34.2**	**+0.7**
	comp=Z,44nm,1.1s,mb4.9						
V12A	**Nelson**	**83.03**	**48**	⇑P	**P**	**03 24 33.7**	**-0.2**
	baz=83						
U11A	**Corn Creek**	**83.03**	**47**	⇑P	**P**	**03 24 34.4**	**+0.5**
	baz=83						
IRO	**Indian Ridge**	**83.09**	**38**	P	**P**	**03 24 34.0**	**0.0**
K05A	**Summer Lake**	**83.10**	**39**	⇓P	**P**	**03 24 34.6**	**+0.5**
	baz=83						
Z14A	**Wintersburg**	**83.14**	**50**	⇑P	**P**	**03 24 34.8**	**+0.3**
	baz=83,SNR=5.6						
X13A	**Yucca**	**83.14**	**49**	⇓P	**P**	**03 24 34.6**	**+0.1**
	baz=83,SNR=9.6						
SHPR	**Sheep Range**	**83.23**	**47**	*e*P	**P**	**03 24 35.3**	**+0.4**
115A	**Sonoran Desert**	**83.33**	**51**	⇓P	**P**	**03 24 35.7**	**+0.2**
	baz=84						
W13A	**Hualapai Mount**	**83.37**	**49**	⇑P	**P**	**03 24 35.7**	**+0.1**
	baz=84,SNR=7.0						
Y14A	**Wickenburg**	**83.39**	**50**	⇓P	**P**	**03 24 35.6**	**-0.2**
	baz=84,SNR=7.3						
H04A	**Detroit Lake**	**83.54**	**37**	⇑P	**P**	**03 24 35.8**	**-0.4**
	baz=84,SNR=7.4						
216A	**Three Points,**	**83.55**	**52**	⇑P	**P**	**03 24 36.8**	**+0.3**
	baz=84						
F03A	**Seaside**	**83.56**	**35**	⇓P	**P**	**03 24 36.8**	**+0.5**
	baz=84						
U12A	**Valley of Fire**	**83.61**	**47**	⇓P	**P**	**03 24 36.7**	**0.0**
	baz=84,SNR=5.4						
116A	**Eloy**	**83.64**	**52**	⇓P	**P**	**03 24 37.3**	**+0.3**
	baz=84,SNR=6.1						
T12A	**Moapa**	**83.65**	**47**	⇓P	**P**	**03 24 37.2**	**+0.2**
	baz=84						
Z15A	**Gila River Ind**	**83.68**	**51**	⇓P	**P**	**03 24 37.0**	**-0.2**
	baz=84						
V13A	**Grand Canyon W**	**83.69**	**48**	⇑P	**P**	**03 24 37.1**	**-0.1**
	baz=84,SNR=7.0						
G04A	**Mulino**	**83.70**	**36**	⇑P	**P**	**03 24 37.5**	**+0.5**
	baz=84						
X14A	**Yava**	**83.75**	**50**	⇓P	**P**	**03 24 37.7**	**+0.2**
	baz=84						
Y15A	**Casa Rosa Ranc**	**83.88**	**50**	⇓P	**P**	**03 24 38.3**	**+0.1**
	baz=84,SNR=9.5						
217A	**Green Valley**	**83.92**	**53**	⇑P	**P**	**03 24 38.8**	**+0.4**
	baz=84,SNR=10						
R11A	**Troy Canyon, C**	**83.93**	**45**	⇑P	**P**	**03 24 38.1**	**-0.2**
	baz=84						
E03A	**Lebam**	**83.95**	**35**	⇓P	**P**	**03 24 38.6**	**+0.4**
	baz=84,SNR=7.7						
W14A	**Seligman**	**83.99**	**49**	⇑P	**P**	**03 24 39.0**	**+0.4**
	baz=84,SNR=10						
U13A	**Pakoon Wash**	**84.00**	**47**	⇑P	**P**	**03 24 38.8**	**+0.2**
	baz=84,SNR=8.4						
RSO	**Redoubt South**	**84.03**	**13**	*e*P	**P**	**03 24 39.2**	**+1.0**
F04A	**Amboy**	**84.19**	**36**	⇑P	**P**	**03 24 39.2**	**-0.1**
	baz=84						
V14A	**Boquillas Ranc**	**84.19**	**48**	⇓P	**P**	**03 24 39.9**	**+0.2**
	baz=84,SNR=12						
X15A	**Humboldt**	**84.22**	**50**	⇓P	**P**	**03 24 40.1**	**+0.3**
	baz=84,SNR=7.1						
Z16A	**Peralta Trail,**	**84.23**	**51**	⇑P	**P**	**03 24 40.1**	**+0.2**
	baz=84						
WVOR	**Wild Horse Val**	**84.28**	**40**	*e*P	**P**	**03 24 39.8**	**-0.1**
	comp=Z,15nm,1.3s,mb4.4						
NLWA	**Neilton Lookou**	**84.33**	**34**	*e*P	**P**	**03 24 40.1**	**+0.2**
	comp=Z,11nm,0.9s,mb4.4						
VIPM	**Ingram Point**	**84.33**	**38**	P	**P**	**03 24 40.2**	**+0.1**
T13A	**Saint George**	**84.35**	**47**	⇑P	**P**	**03 24 40.3**	**0.0**
	baz=84						
117A	**Oracle**	**84.36**	**52**	⇓P	**P**	**03 24 40.9**	**+0.4**
	baz=84,SNR=6.2						
318A	**Bisbee**	**84.37**	**53**	⇑P	**P**	**03 24 41.3**	**+0.7**
	baz=84						
Y16A	**Circle Bar Ran**	**84.46**	**51**	⇓P	**P**	**03 24 41.3**	**+0.3**
	baz=85,SNR=7.0						
U14A	**Mt Trumbull**	**84.54**	**48**	⇑P	**P**	**03 24 41.7**	**+0.4**
	baz=85,SNR=13						
W15A	**Williams**	**84.55**	**49**	⇑P	**P**

baz=86,SNR=6.5
G08A Pilot Rock 85.74 38 ⇓P P 03 24 46.9 0.0
baz=86,SNR=19
S15A Panguitch 85.75 47 ⇑P P 03 24 48.1 +1.0
baz=86
Z19A T-Link Ranch, 85.79 52 ⇑P P 03 24 47.5 +0.1
baz=86
Q14A Sevier Lake (B 85.80 46 ⇓P P 03 24 47.4 +0.1
baz=86
V17A Tonalea, Kykot 85.81 49 ⇑P P 03 24 47.4 -0.1
baz=86
U16A Tuba City 85.83 49 ⇑P P 03 24 47.7 +0.2
baz=86,SNR=6.0
PMR Palmer 85.83 14 eP P 03 24 45.4 -1.5
comp=Z,3.9nm,0.5s,mb4.3
X18A Snowflake 85.88 51 ⇓P P 03 24 48.1 +0.2
baz=86
120A U Bar Ranch, L 85.91 53 ⇓P P 03 24 48.4 +0.4
baz=86
SYO Syowa Base 85.92 193⇑ eP P 03 24 40.0 -7.4
GYA Guiyang 85.98 300 eP P 03 24 50.0 +1.6
GYA pP pP 03 27 01.8 +1.7
GYA sP sP 03 28 04.3 +2.4
GYA PP PP 03 28 23.3 +2.5
GYA SKS 03 34 15.5
GYA S S 03 34 31.0 -1.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
E07A Sunnyside 85.98 37 ⇑P P 03 24 48.1 +0.1
baz=86,SNR=7.7
T16A Glen Canyon Da 85.99 48 ⇑P P 03 24 48.5 +0.2
baz=86
RSW Rattlesnake Hi 86.03 37 eP P 03 24 48.4 +0.2
HAWA Hanford 86.06 37 eP P 03 24 48.4 0.0
comp=Z,12nm,0.8s,mb4.6
R15A Junction 86.08 47 ⇑P P 03 24 49.3 +0.7
baz=86
Y19A Nutrioso 86.12 51 ⇑P P 03 24 49.4 +0.5
baz=86,SNR=7.6
WRW Wenatchee Ridg 86.20 35 P P 03 24 48.8 -0.2
Z20A Nine Sixteen R 86.20 52 ⇑P P 03 24 49.8 +0.4
baz=86
P14A Drum Mountains 86.25 45 ⇑P P 03 24 50.9 +1.5
baz=86
S16A Weppner Ranch, 86.29 47 ⇑P P 03 24 49.9 +0.3
baz=86
221A Mesquite Ranch 86.30 54 ⇓P P 03 24 50.9 +1.1
baz=86
X19A St. Johns 86.31 51 ⇓P P 03 24 50.8 +1.0
baz=86
ETW Entiat 86.34 35 P P 03 24 49.6 0.0
E08A Dider Farm, El 86.39 37 ⇓P P 03 24 50.2 +0.4
baz=87
BMO Blue Mountains 86.45 39 eP P 03 24 49.7 -0.5
comp=Z,1.9nm,0.6s,mb3.9
V18A Ganado 86.47 50 ⇑P P 03 24 50.6 0.0
baz=87
T17A Navajo Res., N 86.48 48 ⇓P P 03 24 51.1 +0.6
baz=87
MFID Camas Ranch 86.53 41 ⇓P P 03 24 50.6 -0.1
baz=87,SNR=9.5
W19A Sanders 86.57 50 ⇓P P 03 24 51.4 +0.4
baz=87
WTV Waterville 86.60 36 P P 03 24 50.7 -0.2
R16A Teasdale 86.65 47 ⇑P P 03 24 51.7 +0.4
baz=87
DUG Dugway 86.73 45 ⇓P P 03 24 52.2 +0.6
baz=87
Y20A Horse Springs, 86.74 52 ⇓P P 03 24 52.5 +0.7
baz=87
D08A Wollman Farm, 86.79 36 ⇓P P 03 24 51.6 -0.1
baz=87,SNR=8.3
S17A Black Ridge (B 86.80 48 ⇑P P 03 24 51.6 -0.4
baz=87
U18A Rough Rock, Ch 86.85 49 ⇑P P 03 24 52.3 -0.1
baz=87
E09A Wood Farm, Sta 86.91 37 ⇑P P 03 24 51.9 -0.5
baz=87,SNR=11
X20A Quemado 86.94 51 ⇑P P 03 24 52.9 +0.1
baz=87
Z21A St. Cloud Mine 86.98 53 ⇓P P 03 24 53.1 +0.2
baz=87
OD2 Odessa Site #2 87.10 36 P P 03 24 53.0 -0.2
F10A Beach Ranch, E 87.13 38 ⇑P P 03 24 52.8 -0.6
baz=87,SNR=28
I12A Atlanta 87.16 41 ⇑P P 03 24 53.7 +0.1
baz=87,SNR=18
Q16A Castle Valley 87.18 46 ⇓P P 03 24 54.4 +0.6
baz=87
T18A Mexican Hat 87.20 48 ⇓P P 03 24 53.7 -0.2
baz=87
W20A Ramah 87.22 51 ⇑P P 03 24 54.4 +0.4
baz=87
TRF Thorofare Moun 87.24 13 eP P 03 24 52.0 -1.5
comp=Z,27nm,0.8s,mb5.0
R17A Hanksville Air 87.25 47 ⇑P P 03 24 54.1 0.0
baz=87
U19A Dine' College, 87.26 49 ⇑P P 03 24 54.3 0.0
baz=87
N15A Stansbury Isla 87.28 44 ⇑P P 03 24 55.1 +0.9
baz=88
Y21A Point of Rocks 87.30 52 ⇑P P 03 24 54.9 +0.4
baz=88
B08A Colville Reser 87.33 35 ⇓P P 03 24 53.7 -0.6
baz=88
L14A Malta 87.41 43 ⇑P P 03 24 55.2 +0.4
baz=88
X21A Alamocita Cree 87.42 52 ⇓P P 03 24 55.5 +0.4
baz=88
HLID Hailey 87.48 41 ⇑P P 03 24 55.2 +0.1
baz=88,SNR=15
HLID Hailey 87.48 41 eP P 03 24 55.4 +0.3
comp=Z,7.7nm,0.9s,mb4.4
Z22A Elephant Butte 87.48 53 ⇓P P 03 24 55.5 +0.2
baz=88,SNR=7.2
J13A Cove Ranch, Pi 87.54 41 ⇓P P 03 24 55.6 +0.2
baz=88,SNR=18
SPUT South Promonto 87.54 44 eP P 03 24 55.6 +0.2
comp=Z,14nm,1.3s,mb4.5
HVU Hansel Valley 87.57 43 eP P 03 24 56.5 +0.9
comp=Z,7.3nm,1.0s,mb4.4
C09A Chrisman Ranch 87.58 36 ⇑P P 03 24 55.3 -0.1
baz=88
O16A Springville 87.60 45 ⇓P P 03 24 56.2 +0.4
baz=88
M15A Larsen Ranch, 87.62 44 ⇓P P 03 24 55.4 -0.4
baz=88,SNR=8.2
BPAW Bear Paw Mtn. 87.69 12 eP P 03 24 53.8 -1.8
comp=Z,2.9nm,0.8s,mb4.1
K14A Jones Ranch, D 87.71 43 ⇑P P 03 24 56.1 -0.1
baz=88,SNR=5.2
H12A Diamond D Ranc 87.74 40 ⇑P P 03 24 56.1 -0.1
baz=88,SNR=17
MCK McKinley 87.77 13 eP P 03 24 54.6 -1.4
comp=Z,12nm,0.8s,mb4.7
G12A Big Creek, Yel 87.77 39 ⇓P P 03 24 56.5 +0.2
baz=88
R18A Canyonlands Na 87.79 47 ⇓P P 03 24 56.9 +0.2
baz=88
324A Moseley Ranch, 87.79 55 ⇑P P 03 24 56.7 -0.2
baz=88,SNR=6.5
Y22A Socorro 87.79 52 ⇓P P 03 24 56.6 -0.1
baz=88,SNR=5.8
I13A Wildhorse Cree 87.85 41 ⇑P P 03 24 57.0 +0.2
baz=88,SNR=6.5
DAU Daniels Canyon 87.87 45 eP P 03 24 58.0 +1.1
LAZ Ladron 87.87 52 eP P 03 24 57.3 +0.2
comp=Z,0.5nm,0.7s,mb3.4
425A Indio Mountain 87.89 56 ⇑P P 03 24 57.3 0.0
baz=88,SNR=11
J14A Carey 87.91 42 ⇓P P 03 24 57.5 +0.5
baz=88,SNR=16
L15A Malad City 87.94 43 ⇑P P 03 24 56.8 -0.4
baz=88,SNR=7.6
N16A Rees Ranch, Co 87.99 45 ⇑P P 03 24 57.8 +0.3
baz=88
S19A Harvey Farm, M 88.00 48 ⇑P P 03 24 57.6 -0.1
baz=88
626A Big Bend Ranch 88.02 57 ⇑P P 03 24 57.9 0.0
baz=88,SNR=11
Z23A Rita Site, Whi 88.03 53 ⇑P P 03 24 58.2 +0.2
baz=88
224A Cornudas Mount 88.04 55 ⇓P P 03 24 58.2 +0.2
baz=88,SNR=7.2
M16A Huntsville 88.08 44 ⇑P P 03 24 57.6 -0.3
baz=88
MAIT Maitri 88.08 184 eP P 03 24 56.4 -1.1
O17A Robinson Place 88.10 45 ⇑P P 03 24 58.4 +0.3
baz=88,SNR=5.9
H13A Challis 88.11 40 ⇑P P 03 24 57.9 0.0
baz=88,SNR=6.6
325A Bean Ranch, Si 88.15 55 ⇓P P 03 24 58.2 -0.3
baz=88,SNR=11
F12A Elk City 88.16 39 ⇑P P 03 24 57.8 -0.4
baz=88,SNR=20
R19A Curley Farm, L 88.18 48 ⇓P P 03 24 57.9 -0.5
baz=88
K15A Arbon 88.19 43 ⇓P P 03 24 58.3 -0.1
baz=88
HWUT Hardware Ranch 88.26 44 eP P 03 24 58.2 -0.5
comp=Z,3.3nm,0.9s,mb4.1
I14A Mackay 88.26 41 ⇓P P 03 24 59.1 +0.3
baz=88,SNR=7.5
526A Mary Lane Ranc 88.27 57 ⇓P P 03 24 59.2 +0.1
baz=88,SNR=6.8
MENT Mentasta 88.28 15 eP P 03 24 58.2 -0.1
TXAR Lajitas Array 88.29 58 P P 03 24 59.7 +0.5
comp=Z,6.8nm,0.8s,mb4.4,baz=220,slow=6.0,SNR=84
TXAR pP pP 03 27 16.2 +4.5
comp=Z,0.8nm,0.9s,baz=208,slow=5.5,SNR=5.8
TXAR Lajitas Array 88.29 58 P P 03 24 59.7 +0.5
TXAR pP pP 03 27 16.2 +4.5
E12A Beaver Dam Sad 88.33 38 ⇑P P 03 24 59.1 +0.2
baz=88
124A Stringfield Ra 88.37 54 ⇓P P 03 24 59.6 +0.1
baz=88,SNR=5.2
PV10 Paradox Valley 88.37 48 eP P 03 24 59.4 0.0
G13A Cobalt 88.41 40 ⇑P P 03 24 59.1 -0.2
baz=89,SNR=8.9
N17A Moffit Pass 88.41 45 ⇑P P 03 24 59.7 +0.2
baz=89
U21A Nageezi 88.43 50 ⇓P P 03 24 59.5 -0.2
baz=89,SNR=9.7
Y23A Lovelace Mesa, 88.46 53 ⇑P P 03 24 59.7 -0.2
baz=89
NEW Newport 88.48 36 ⇑P P 03 24 59.4 -0.2
baz=89
Q19A Hogan Spring (88.50 47 ⇓P P 03 24 59.6 -0.3
baz=89,SNR=5.7
L16A Fish Haven 88.56 44 ⇓P P 03 24 59.8 -0.3
baz=89,SNR=11
627A Terlingua Ranc 88.56 58 ⇑P P 03 25 00.4 0.0
baz=89,SNR=15
426A McDonald Obser 88.58 56 ⇑P P 03 25 00.5 0.0
baz=89,SNR=13
PV01 Paradox Valley 88.58 48 eP P 03 24 59.7 -0.7
comp=Z,375nm,1.1s
S20A Disappointment 88.59 48 ⇓P P 03 25 00.3 -0.1
baz=89
225A Deer Hill, Car 88.59 55 ⇑P P 03 25 00.7 +0.2
baz=89,SNR=8.0
ANMO Albuquerque 88.62 52 P P 03 25 00.5 -0.1
comp=Z,3.2nm,0.9s,mb4.2,baz=215,slow=5.4,SNR=13
ANMO Albuquerque 88.62 52 eP P 03 25 00.3 -0.3
comp=Z,6.5nm,1.1s,mb4.4
O18A Roosevelt 88.62 46 ⇓P P 03 25 00.1 -0.4
baz=89,SNR=5.3
KMI Kunming 88.63 297 P P 03 25 03.0 +2.1
KMI pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
H14A Leadore 88.68 41 ⇓P P 03 25 00.6 -0.1
baz=89,SNR=5.1
527A Woodward Ranch 88.68 57 ⇓P P 03 25 00.6 -0.4
baz=89,SNR=10
Z24A Sheeppen Canyo 88.71 54 ⇑P P 03 25 01.1 0.0
baz=89
F13A Darby 88.72 39 ⇑P P 03 25 00.3 -0.5
baz=89,SNR=7.0
C11A Tepee Creek (N 88.73 37 ⇑P P 03 25 00.4 -0.4
baz=89
V22A San Miguel Ran 88.73 51 ⇑P P 03 25 00.7 -0.4
baz=89
R20A Redvale 88.74 48 ⇑P P 03 25 00.5 -0.6
baz=89
M17A Scullys Gap (B 88.78 44 ⇓P P 03 25 00.9 -0.3
baz=89
DOT Dot Lake 88.79 15 eP P 03 25 00.1 -0.6
comp=Z,33nm,0.8s,mb5.2
D12A Red Ives Fores 88.80 38 ⇑P P 03 25 00.7 -0.4
baz=89
K16A Soda Springs 88.87 43 ⇓P P 03 25 01.8 +0.3
baz=89,SNR=8.3
326A Caldwell Ranch 88.89 56 ⇓P P 03 25 01.6 -0.4
baz=89
S21A Coal Bank Pass 88.91 49 ⇓P P 03 25 01.8 0.0
baz=89,SNR=5.3
Y24A Capitan 88.92 53 ⇑P P 03 25 01.9 -0.1
baz=89,SNR=11
125A Gardner Draw, 88.95 54 ⇓P P 03 25 02.0 -0.2
baz=89
L17A Cokeville 88.96 44 ⇑P P 03 25 01.3 -0.7
baz=89,SNR=6.1
628A Black Gap, Mar 88.97 58 ⇓P P 03 25 02.1 -0.2
baz=89,SNR=7.6
U22A Llaves 88.98 50 ⇓P P 03 25 02.4 +0.1
baz=89
COLA College 89.00 13 eP P 03 25 00.1 -1.5
comp=Z,17nm,0.9s,mb4.9
DLBC Dease Lake 89.01 23 P P 03 25 02.0 +0.2
comp=Z,4.4nm,0.8s,mb4.3,baz=236,slow=9.3,SNR=6.6
P19A Cripple Cowboy 89.01 47 ⇑P P 03 25 02.6 +0.2
baz=89
J16A Bone 89.07 42 ⇑P P 03 25 02.8 +0.3
baz=89,SNR=15
C12B Naegeli Ranch, 89.09 37 ⇓P P 03 25 02.2 -0.3
baz=89
MCMT McKenzie Canyo 89.10 41 eP P 03 25 02.4 -0.2
comp=Z,3.5nm,1.0s,mb4.1
226A Malaga, Loving 89.12 55 ⇓P P 03 25 02.6 -0.4
baz=89,SNR=6.5
H15A Lima 89.12 41 ⇓P P 03 25 02.9 +0.3
baz=89,SNR=5.9
ILAR Eielson Array 89.12 13 P P 03 25 00.4 -1.8
comp=Z,4.3nm,0.5s,mb4.5,baz=215,slow=5.2,SNR=118
427A Hayter Ranch, 89.14 56 ⇓P P 03 25 03.2 0.0
baz=89,SNR=21
E13A Victor 89.15 39 ⇑P P 03 25 02.1 -0.7
baz=89
M18A Lyman 89.15 45 ⇓P P 03 25 02.7 -0.2
baz=89,SNR=11
Q20A Ridgley Place, 89.16 47 ⇑P P 03 25 03.6 +0.6
baz=89
Z25A Roswell 89.18 54 ⇓P P 03 25 03.2 0.0
baz=89
V23A Ortiz Mt. (NFS 89.18 51 ⇓P P 03 25 03.1 -0.1
baz=89
N18A Larsen Ranch, 89.19 45 ⇑P P 03 25 02.7 -0.4
baz=89,SNR=11
O19A Miners Draw (B 89.23 46 ⇓P P 03 25 02.8 -0.5
baz=89,SNR=9.0
T22A Edith 89.24 50 ⇓P P 03 25 03.0 -0.4
baz=89
K17A Gardner Place, 89.25 43 ⇑P P 03 25 03.3 0.0
baz=89,SNR=5.9
CMAR Chiang Mai Arr 89.27 290 P P 03 25 05.5 +1.5
comp=Z,1.3nm,0.3s,mb4.3,baz=123,slow=3.0,SNR=10
RRI2 Red Ridge 89.30 43 eP P 03 25 03.6 0.0
comp=Z,12nm,0.9s,mb4.7
F14A Wisdom 89.30 40 ⇑P P 03 25 03.9 +0.4
baz=90
528A Cox Ranch, San 89.33 57 ⇑P P 03 25 03.9 -0.2
baz=90
D13A Huson 89.34 38 ⇑P P 03 25 04.1 +0.4
baz=90
P20A De Beque 89.35 47 ⇓P P 03 25 03.7 -0.2
baz=90,SNR=5.9
R21A Cimarron 89.40 48 ⇓P P 03 25 04.1 -0.1
baz=90,SNR=6.7
L18A Fontenelle, Gr 89.41 44 ⇑P P 03 25 04.2 +0.1
baz=90
U23A El Rito 89.44 51 ⇓P P 03 25 04.2 -0.2
baz=90
I16A Newdale 89.45 42 ⇑P P 03 25 04.7 +0.5
baz=90,SNR=10
Y25A Mesa, Roswell 89.47 53 ⇑P P 03 25 04.0 -0.6
baz=90,SNR=5.9
N19A John Jarvie Ra 89.48 45 ⇓P P 03 25 04.0 -0.5
baz=90
G15A Dillon 89.50 41 ⇑P P 03 25 04.4 0.0
baz=90,SNR=6.8
W24A Lazy 6 Ranch, 89.51 52 ⇓P P 03 25 04.4 -0.3
baz=90
C13A Hot Springs 89.59 38 ⇓P P 03 25 04.1 -0.7
baz=90
REDW Red Top Meadow 89.60 43 eP P 03 25 04.9 -0.1
comp=Z,13nm,1.1s,mb4.7
TPAW Teton Pass 89.60 43 eP P 03 25 04.9 0.0
comp=Z,7.1nm,1.2s,mb4.4
S22A 4UR Ranch, Cre 89.62 49 ⇓P P 03 25 05.0 -0.1
baz=90,SNR=7.8
428A Kincaid Ranch, 89.65 57 ⇓P P 03 25 05.2 -0.3
baz=90
A12A Yaak River Ran 89.67 36 ⇓P P 03 25 05.3 +0.2
baz=90
J17A Brown Place, J 89.69 43 ⇑P P 03 25 05.3 0.0
baz=90,SNR=13
SNOW Snow King Moun 89.71 43 eP P 03 25 05.8 +0.4
comp=Z,9.6nm,0.9s,mb4.6
227A Bennet, Jal 89.72 55 ⇓P P 03 25 05.4 -0.4
baz=90
Z26A Caprock 89.73 54 ⇑P P 03 25 05.3 -0.5
baz=90,SNR=5.8
O20A White River Ci 89.75 46 ⇓P P 03 25 05.5 -0.2
baz=90,SNR=5.5
K18A Toltan Ranch, 89.76 44 ⇓P P 03 25 05.7 0.0
baz=90,SNR=19
M19A Rock Springs 89.79 45 ⇑P P 03 25 05.8 -0.1
baz=90
IMW Indian Meadow 89.81 42 eP P 03 25 06.0 +0.1
comp=Z,6.0nm,0.9s,mb4.4
328A Wristen Ranch, 89.83 56 ⇑P P 03 25 05.9 -0.4
baz=90
V24A Rampart Ranch, 89.84 51 ⇓P P 03 25 06.1 -0.1
baz=90,SNR=6.9
F15A Butte 89.84 40 ⇓P P 03 25 06.3 +0.4
baz=90
MOOW Moose Ponds 89.86 42 eP P 03 25 05.9 -0.2
comp=Z,13nm,1.8s,mb4.5
LOHW Long Hollow 89.88 43 eP P 03 25 06.1 -0.1
comp=Z,3.2nm,0.8s,mb4.2
D14A Greenough 89.89 39 ⇑P P 03 25 05.2 -1.0
baz=90
R22A Saguache, Gunn 89.89 49 ⇑P P 03 25 06.7 +0.3
baz=90
L19A Farson 89.94 44 ⇓P P 03 25 06.4 -0.2
baz=90,SNR=12
G16A Moss Hill, Enn 89.94 41 ⇓P P 03 25 06.8 +0.3
baz=90
127A Arkansas Junct 89.95 55 ⇑P P 03 25 06.6 -0.2
baz=90
P21A Newcastle 90.00 47 P P 03 25 07.4 +0.5
baz=90
H16A Russell Place, 90.02 41 ⇑P P 03 25 07.4 +0.6
baz=90,SNR=6.0
I17A Pilgrim Ck. 90.05 42 ⇓P P 03 25 07.4 +0.4
baz=90
FLWY Flagg Ranch 90.05 42 eP P 03 25 07.1 +0.1
comp=Z,7.2nm,1.1s,mb4.4
J18A Kendall Valley 90.05 43 ⇑P P 03 25 06.9 -0.2
baz=90,SNR=24
N20A Spence Gulch, 90.06 46 ⇑P P 03 25 07.0 -0.1
baz=90,SNR=11
Q22A Crested Butte, 90.07 48 ⇓P P 03 25 07.1 -0.1
baz=90,SNR=8.0
C14A Swan Lake 90.11 38 ⇓P P 03 25 07.2 0.0
baz=90
BW06 Boulder Array 90.13 44 ⇑P P 03 25 06.8 -0.6
baz=90,SNR=10
CD2 Chengdu 90.17 303 eP P 03 25 10.0 +2.1
SMCO Snowmass 90.17 48 eP P 03 25 07.5 -0.2
comp=Z,3.0nm,0.8s,mb4.2
W25A X Bar L Ranch, 90.21 52 ⇑P P 03 25 07.1 -0.9
baz=90,SNR=6.1
BOZ Bozeman (W) 90.26 40 ⇑P P 03 25 07.9 0.0
baz=90
H17A Grant Village 90.28 42 ⇓P P 03 25 09.1 +1.0
baz=90
DAWY Dawson 90.31 16 eP P 03 25 06.7 -1.0
F16A Kennard Place, 90.33 40 ⇑P P 03 25 08.6 +0.3
baz=90
V25A Rancho No Teng 90.36 52 ⇓P P 03 25 08.3 -0.3
baz=90
M20A Sweetwater, Wa 90.42 45 ⇑P P 03 25 08.5 -0.3
baz=91,SNR=6.3
D15A Lincoln 90.44 39 ⇑P P 03 25 08.7 0.0
baz=91
EGAK Eagle 90.44 15 eP P 03 25 07.4 -0.9
comp=Z,5.8nm,0.7s,mb4.5
P22A Eagle 90.51 47 ⇑P P 03 25 09.2 -0.1
baz=91
N21A Black Mountain 90.53 46 ⇓P P 03 25 09.1 -0.2
baz=91,SNR=6.9
SDCO Great Sand Dun 90.56 50 ⇑P P 03 25 09.4 -0.2
baz=91,SNR=5.2
SDCO Great Sand Dun 90.56 50 eP P 03 25 09.0 -0.5
comp=Z,2.0nm,0.9s,mb4.0
L20A Wamsutter 90.56 45 ⇓P P 03 25 09.4 0.0
baz=91,SNR=12
Y27A Causey 90.61 54 ⇑P P 03 25 09.2 -0.7
baz=91
K19A Absolon Red Bu 90.62 44 ⇑P P 03 25 08.6 -1.1
baz=91,SNR=5.3
G17A Pierce Place, 90.64 41 ⇓P P 03 25 10.2 +0.5
baz=91
COLD Coldfoot 90.64 11 eP P 03 25 08.3 -0.8
comp=Z,4.6nm,0.8s,mb4.5
E16A East Helena 90.68 40 ⇓P P 03 25 10.2 +0.3
baz=91
B14A Marquette Ranc 90.69 38 ⇑P P 03 25 09.0 -0.8
baz=91
J19A Crowheart 90.70 43 ⇓P P 03 25 10.1 +0.1
baz=91
S24A Houchin Ranch, 90.72 50 ⇑P P 03 25 10.1 -0.2
baz=91
U25A Circle Dot Ran 90.76 51 ⇑P P 03 25 09.6 -0.8
baz=91
C15A Salmond Ranch, 90.77 38 ⇓P P 03 25 09.4 -0.9
baz=91
K20A Yellowstone Ra 90.87 44 ⇑P P 03 25 09.9 -1.0
baz=91,SNR=5.8
O22A Kremmling 90.92 47 ⇓P P 03 25 10.6 -0.5
baz=91,SNR=6.9
A14A Double T Ranch 90.93 37 ⇑P P 03 25 10.6 -0.3
baz=91
MSTX Muleshoe 90.94 54 ⇑P P 03 25 10.8 -0.6
baz=91
F17A Fitzpatrick Pl 90.98 41 ⇑P P 03 25 11.5 +0.3
baz=91
D16A Dana Ranch, Ca 91.01 39 ⇑P P 03 25 11.6 +0.2
baz=91
M21A Separation Pea 91.02 45 ⇓P P 03 25 11.0 -0.6
baz=91,SNR=6.2
R24A Sanders Place, 91.06 49 ⇑P P 03 25 11.9 +0.1
baz=91
B15A Bradely Ranch, 91.07 38 ⇑P P 03 25 11.4 -0.2
baz=91
T25A Trinidad 91.08 50 ⇓P P 03 25 11.6 -0.3
baz=91
I19A Meeteetse 91.10 43 ⇑P P 03 25 11.8 0.0
baz=91
RWWY Rawlins 91.16 45 eP P 03 25 12.0 -0.2
comp=Z,11nm,1.0s,mb4.8
U26A Atchley Ranch, 91.24 51 ⇓P P 03 25 12.1 -0.6
baz=91
N22A Wattenberg Ran 91.27 46 ⇓P P 03 25 12.5 -0.2
baz=91,SNR=10
C16A Fuhringer Ranc 91.28 39 ⇓P P 03 25 11.8 -0.8
baz=92
S25A Robets Cordova 91.28 50 ⇑P P 03 25 12.4 -0.4
baz=92
A15A Johnson Ranch, 91.32 37 ⇓P P 03 25 12.1 -0.6
baz=92
Q24A Divide 91.35 49 ⇓P P 03 25 13.0 -0.1
baz=92
G18A Lazy EL Ranch, 91.36 41 ⇑P P 03 25 13.0 0.0
baz=92
ISCO Idaho Springs 91.39 48 ⇑P P 03 25 13.1 -0.2
baz=92
H19A Powell 91.41 42 ⇑P P 03 25 13.4 +0.1
baz=92
M22A Cedar Creek Ra 91.44 46 ⇓P P 03 25 13.7 +0.2
baz=92
D17A Six Diamond Ra 91.58 39 ⇓P P 03 25 13.7 -0.3
baz=92
B16A M & M Farms, S 91.61 38 ⇑P P 03 25 13.3 -0.7
baz=92
I20A Worland 91.61 43 ⇓P P 03 25 13.8 -0.4
baz=92
N23A Red Feather La 91.65 47 ⇑P P 03 25 14.8 +0.3
baz=92,SNR=5.1
E18A Harlowton 91.75 40 ⇓P P 03 25 15.7 +0.9
baz=92
C17A Wharram Farm, 91.77 39 ⇓P P 03 25 14.6 -0.3
baz=92

J21A	**Lysite**	91.77	44	⇑P		P	03 25 15.2	+0.3
	baz=92							
JCT	**Junction City**	91.82	58	⇓P		P	03 25 14.9	-0.6
	baz=92							
L22A	**Ellis Ranch, M**	91.83	45	⇓P		P	03 25 15.3	0.0
	baz=92							
A16A	**West Butte Ran**	91.95	38	⇑P		P	03 25 15.5	-0.1
	baz=92							
H20A	**Greybull**	91.95	43	⇑P		P	03 25 14.9	-0.8
	baz=92							
F19A	**Roth Farm, Mol**	92.00	41	⇑P		P	03 25 15.5	-0.5
	baz=92							
K22A	**Casper**	92.06	45	⇑P		P	03 25 16.2	-0.1
	baz=92							
M23A	**Laramie**	92.06	46	⇑P		P	03 25 16.0	-0.3
	baz=92							
B17A	**L&G Farms, Che**	92.08	38	⇑P		P	03 25 15.5	-0.8
	baz=92							
I21A	**Big Trails, Te**	92.08	44	⇑P		P	03 25 16.1	-0.3
	baz=92							
LZH	**Lanzhou**	92.25	308	*e*P		P	03 25 21.0	+3.7
LZH				pP	pP		03 27 32.5	+1.9
LZH				sP	sP		03 28 29.0	-2.8
LZH				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.9							
P25A	**Willow Gulch B**	92.27	48	⇑P		P	03 25 17.1	-0.3
	baz=92							
L23A	**Garrett**	92.36	46	⇑P		P	03 25 17.4	-0.3
	baz=92							
J22A	**Midwest**	92.43	44	⇑P		P	03 25 17.5	-0.5
	baz=93							
A17A	**Triple J Farms**	92.46	38	⇓P		P	03 25 17.8	-0.1
	baz=93							
D19A	**Cripps Ranch,**	92.66	40	⇑P		P	03 25 19.0	0.0
	baz=93							
B18A	**Beardsley Farm**	92.72	39	⇑P		P	03 25 19.0	-0.2
	baz=93							
C19A	**Slack Wire Ran**	92.83	39	⇑P		P	03 25 19.5	-0.2
	baz=93							
A18A	**Metzger Ranch,**	92.94	38	⇓P		P	03 25 19.8	-0.3
	baz=93							
B19A	**Brinkman Farms**	93.24	39	⇑P		P	03 25 21.3	-0.2
	baz=93							
C20A	**Veseth Ranch,**	93.45	40	⇑P		P	03 25 22.9	+0.4
	baz=94							
D21A	**La Casta Ranch**	93.76	41	⇑P		P	03 25 24.4	+0.5
	baz=94							
A20A	**Cobblestone Ra**	94.03	39	⇓P		P	03 25 25.0	-0.1
	baz=94							
D22A	**Cohagen**	94.29	41	⇓P		P	03 25 26.7	+0.3
	baz=94							
RSSD	**Black Hills**	94.33	44	*e*P		P	03 25 25.9	-0.7
	comp=Z,1.8nm,0.6s,mb4.4							
INK	**Inuvik**	95.11	15	P		P	03 25 27.7	-1.9
	comp=Z,2.7nm,0.9s,mb4.4,baz=297,slow=4.5,SNR=3.6							
INK	**Inuvik**	95.11	15	P		P	03 25 27.7	-1.9
C24A	**Savage**	95.53	41	⇑P		P	03 25 31.7	-0.3
	baz=96							
ZALV	**Zalesovo Beam**	110.25	321	PKiKP	PKiKP		03 30 32.1	-2.3
	comp=Z,1.6nm,0.5s,baz=151,slow=1.5,SNR=4.9							
MK31	**Makanchi Array**	110.79	313	*e*PKPdf	PKiKP		03 30 34.4	-1.3
MKAR	**Makanchi Array**	110.79	313	PKiKP	PKiKP		03 30 33.4	-2.3
	comp=Z,0.9nm,0.4s,baz=195,slow=0.6,SNR=15							
SDDR	**Presa de Saban**	112.77	78	*e*PKPdf	PKiKP		03 30 39.6	-0.6
AKTK	**Aktyubinsk**	126.76	318	PKP	PKPdf		03 31 04.2	-2.0
AKTO	**Aktyubinsk**	126.76	318	PKP	PKPdf		03 31 04.2	-2.0
	comp=Z,2.6nm,0.5s,baz=74,slow=4.1,SNR=7.4							
ARCES	**ARCESS Array B**	129.28	349	PKP	PKPdf		03 31 09.2	-1.2
	comp=Z,6.5nm,0.5s,baz=51,slow=0.9,SNR=36							
FINES	**FINESS Array B**	136.00	343	PKhKP	PKPpre		03 31 08.1	
	comp=Z,2.0nm,0.8s,baz=93,slow=4.2,SNR=5.0							
FINES				PKP	PKPdf		03 31 20.5	-2.8
	comp=Z,5.4nm,0.6s,baz=82,slow=2.7,SNR=6.7							
FINES	**FINESS Array B**	136.00	343	PKP	PKPpre		03 31 08.1	
FINES				PKP	PKPdf		03 31 20.5	-2.8
NOA	**NORSAR Array B**	139.41	352	PKhKP	PKPpre		03 31 19.7	
	comp=Z,1.8nm,0.6s,baz=15,slow=4.7,SNR=14							
NOA				PKP	PKPdf		03 31 30.8	+1.2
	comp=Z,2.4nm,0.5s,baz=14,slow=4.0,SNR=7.4							
NOA	**NORSAR Array B**	139.41	352	PKP	PKPpre		03 31 19.7	
NOA				PKP	PKPdf		03 31 30.8	+1.2
HFS	**Hagfors**	139.92	350	PKhKP	PKPpre		03 31 22.2	
	comp=Z,3.3nm,0.3s,baz=47,slow=3.2,SNR=62							
HFS				PKP	PKPdf		03 31 30.2	-0.3
	comp=Z,2.6nm,0.5s,baz=85,slow=3.1,SNR=4.9							
AKASG	**Malin Array Be**	142.97	330	PKP	PKPdf		03 31 32.9	-3.3
	comp=Z,19nm,0.4s,baz=42,slow=4.3,SNR=5.4							
SUW	**Suwalki**	142.97	338	*e*PKP	PKPdf		03 31 33.4	-2.7
SUW	**Suwalki**	142.97	338	*e*PKPdf	PKPdf		03 31 33.4	-2.7
MVH1	**Achvaich**	143.01	4	*e*P	PKPdf		03 31 32.7	-3.3
KAC	**Achnashellach**	143.34	6	*e*P	PKPdf		03 31 33.9	-2.7
MALT	**Malatya**	143.39	306	*e*PKPdf	PKPdf		03 31 36.6	-0.8
MALT	**Malatya**	143.39	306	⇑*i*P	PKPdf		03 31 36.7	-0.7
MCD	**Coleburn Disti**	143.41	4	*e*P	PKPdf		03 31 33.8	-3.0
KPL	**Plockton**	143.47	6	*e*P	PKPdf		03 31 33.3	-3.6
MUD	**Monsted U'grnd**	144.13	352	*i* P	PKPdf		03 31 36.4	-1.6
	comp=Z,27nm,0.9s							
EAB	**Aberfoyle**	144.72	5	*e*P	PKPdf		03 31 38.1	-0.9
EBH	**Black Hill**	144.73	4	*e*P	PKPdf		03 31 38.3	-0.8
EDI	**Edinburgh**	145.07	4	*e*P	PKPdf		03 31 37.6	-2.1
ESY	**Stoneypath**	145.11	3	*e*P	PKPdf		03 31 39.1	-0.6
EAU	**Auchinson**	145.13	4	*e*P	PKPdf		03 31 39.4	-0.4
EBL	**Broad Law**	145.23	4	*e*P	PKPdf		03 31 39.5	-0.4
GKP	**Gorka Klasztor**	145.48	343	*e*PKP	PKPdf		03 31 40.4	0.0
EKA	**Eskdalemuir Ar**	145.66	4	PKPbc	PKPbc		03 31 41.0	-1.4
	comp=Z,12nm,0.7s,baz=346,slow=2.8,SNR=30							
ESK	**Eskdalemuir**	145.68	4	*e*PKPdf	PKPdf		03 31 40.5	-0.3
ECK	**Cauldkaine Hil**	145.81	4	*e*P	PKPdf		03 31 41.3	+0.4
GAL1	**Galloway**	146.00	6	*e*P	PKPdf		03 31 41.8	+0.6
ASF	**Jabal al Asfar**	146.06	297	PKPbc	PKPbc		03 31 44.3	0.0
	comp=Z,3.1nm,0.7s,baz=12,slow=2.9,SNR=9.4							
XAL	**Allendale**	146.19	3	*e*P	PKPdf		03 31 42.6	+1.1
BRTR	**Keskin Array B**	146.40	311	PKPbc	PKPbc		03 31 43.8	-1.2
	comp=Z,6.2nm,0.6s,baz=136,slow=2.9,SNR=46							
XDE	**Dent Fell**	146.46	5	*e*P	PKPdf		03 31 43.5	+1.5
GIM	**North Isle of**	146.59	6	*e*P	PKPdf		03 31 43.8	+1.5
KWP	**Kalwaria Pacla**	146.62	334	*e*PKP	PKPbc		03 31 44.9	-0.4
KWP	**Kalwaria Pacla**	146.62	334	*e*PKPbc	PKPbc		03 31 44.6	-0.6
KWP	**Kalwaria Pacla**	146.62	334	⇓*i*P	PKPbc		03 31 44.6	-0.7
BUR08	**Bucovina Ar. S**	146.99	329	*e*PKPbc	PKPbc		03 31 46.2	-0.1
BURAR	**Bucovina Array**	147.00	329	⇑*i*P	PKPbc		03 31 46.2	-0.1
RUE	**Ruedersdorf**	147.09	345	*e*PKPbc	PKPbc		03 31 45.9	-0.5
CFR	**Carcaliu**	147.10	323	⇑*i*P	PKPbc		03 31 45.9	-0.8
OJC	**Ojcow**	147.28	337	*e*PKP	PKPbc		03 31 46.4	-0.6
KOLS	**Kolonicke sedl**	147.35	333	*e*PKP	PKPbc		03 31 45.9	-1.3
KOLS				*e*			03 31 46.7	
KOLS	**Kolonicke sedl**	147.35	333	*e*PKP	PKPbc		03 31 45.9	-1.3
KOLS				*e*			03 31 46.6	
TIRR	**Tirgusor**	147.38	322	⇓*i*P	PKPdf		03 31 45.6	+1.7
VRI	**Vrincioaia**	147.43	325	⇑*i*P	PKPbc		03 31 47.0	-0.5
NIE	**Niedzica**	147.74	336	*e*PKP	PKPbc		03 31 48.2	0.0
NRDL	**Niedersach Rie**	147.82	349	*e*PKPbc	PKPbc		03 31 47.6	-0.7
TRPA	**Tarpa**	147.85	332	⇓*i*P	PKPbc		03 31 48.1	-0.4
KSP	**Ksiaz**	147.90	341	*e*PKP	PKPbc		03 31 48.6	+0.1
MLR	**Muntele Rosu**	148.09	326	⇓*i*P	PKPbc		03 31 48.7	-0.5
OKC	**Ostrava-Krasne**	148.18	339	⇑*e*PKP	PKPbc		03 31 48.8	-0.4
UPC	**Upice**	148.28	341	⇑*e*PKP	PKPbc		03 31 49.5	0.0
UPC				*e*PKPAB	PKPab		03 31 55.0	0.0
CSS	**Prodhromos**	148.30	303	*e*PKPdf	PKPbc		03 31 49.6	-0.4
DPC	**Dobruska-Polom**	148.32	341	⇑*e*PKP	PKPbc		03 31 49.4	-0.2
CLL	**Collm**	148.35	345	*e*PKPbc	PKPbc		03 31 49.0	-0.6
CLL				*e*PKPab	PKPab		03 31 54.6	-0.7
CLL				*ep*PKPbc	pPKPbc		03 34 12.6	+2.2
CLL	**Collm**	148.35	345	⇑*i*P	PKPbc		03 31 49.0	-0.6
CLL	**Collm**	148.35	345	⇑*i*PKPbc	PKPbc		03 31 49.0	-0.6
	comp=Z,22nm,0.7s							
CLL				*i* PKPab	PKPab		03 31 54.4	-0.9
	comp=Z,7.0nm,0.7s							
CLL				*ep*PKPbc	pPKPbc		03 34 13.0	+2.6
	comp=Z,12nm,1.3s							
IBBN	**Ibbenburen**	148.36	352	*e*PKPbc	PKPbc		03 31 49.2	-0.4
CLZ	**Clausthal**	148.40	349	*e*PKPbc	PKPbc		03 31 49.5	-0.2
CLZ				*e*PKPab	PKPab		03 31 55.1	-0.4
KECS	**Kecovo**	148.43	335	*e*PKP	PKPbc		03 31 49.8	-0.1
KECS	**Kecovo**	148.43	335	*e*PKP	PKPbc		03 31 49.8	-0.1
MORC	**Moravsky Berou**	148.43	339	*e*PKPdf	PKPdf		03 31 44.3	-1.1
MORC				*e*PKPbc	PKPbc		03 31 49.9	0.0
MORC				*e*PKPab	PKPab		03 31 55.8	+0.1
MORC	**Moravsky Berou**	148.43	339	⇓*i*P	PKPbc		03 31 49.2	-0.7
BRG	**Berggiesshubel**	148.52	344	*e*PKPbc	PKPbc		03 31 49.7	-0.4
BRG				*e*PKPab	PKPab		03 31 55.6	-0.4
BRG	**Berggiesshubel**	148.52	344	*i* PKP	PKPbc		03 31 49.7	-0.3
	comp=Z,14nm,0.7s							
BRG				*i*			03 31 55.5	
	comp=Z,16nm,1.3s							
BRG				*ep*PKP	pPKPdf		03 34 12.4	+4.0
	comp=Z,3.3nm,1.0s							
VOIR		148.59	326	⇑*i*P	PKPbc		03 31 50.3	-0.1
FBE	**Freiberg**	148.63	345	*e*PKPbc	PKPbc		03 31 50.2	-0.1
PVCC	**Panska Ves**	148.67	343	⇑*e*PKP	PKPbc		03 31 50.5	+0.1
NEUB	**Neuenburg**	148.72	347	*e*PKPbc	PKPbc		03 31 50.0	-0.5
NEUB				*e*PKPab	PKPab		03 31 56.2	-0.6
DRGR		148.78	330	⇑*i*P	PKPbc		03 31 50.3	-0.5
WTSB	**Winterswijk**	148.82	353	*e*P	PKPbc		03 31 49.9	-0.8
	comp=Z,37nm,0.7s							
MCH1	**Michaelchurch**	148.99	5	*e*P	PKPbc		03 31 50.5	-0.7
VYHS	**Vyhne**	149.06	336	*e*PKP	PKPbc		03 31 51.0	-0.4
VYHS				*e*			03 31 58.1	
VYHS	**Vyhne**	149.06	336	*e*PKP	PKPbc		03 31 51.0	-0.4
VYHS				*e*			03 31 58.1	
PSZ	**Piszkesteto**	149.12	335	⇓*i*P	PKPbc		03 31 51.1	-0.5
KOLL	**Kolacno**	149.15	337	*e*PKP	PKPbc		03 31 51.4	-0.3
KOLL	**Kolacno**	149.15	337	*e*PKP	PKPbc		03 31 51.4	-0.3
VRAC	**Vranov**	149.15	340	PKPbc	PKPbc		03 31 50.7	-0.9
	comp=Z,6.7nm,0.7s,baz=220,slow=19,SNR=7.0							
VRAC	**Vranov**	149.15	340	⇑*i*P	PKPbc		03 31 51.2	-0.4
PRU	**Pruhonice**	149.17	343	⇑*e*PKP	PKPbc		03 31 51.9	+0.3
BUG	**Bochum--Univer**	149.28	352	*e*PKPbc	PKPbc		03 31 51.1	-0.8
MOX	**Moxa**	149.29	347	*e*PKP	PKPbc		03 31 51.2	-0.7
	comp=Z,25nm,1.4s							
MOX	**Moxa**	149.29	347	*e*PKPbc	PKPbc		03 31 51.4	-0.5
MOX				*e*PKPab	PKPab		03 31 58.5	-0.7
TANN	**Tannenbergstha**	149.31	345	*e*PKPbc	PKPbc		03 31 51.6	-0.4
WERD	**Werda**	149.32	346	*e*PKPbc	PKPbc		03 31 51.7	-0.3
WERD				*e*PKPab	PKPab		03 31 59.0	-0.3
GUNZ	**Gunzen**	149.39	345	*e*PKPbc	PKPbc		03 31 51.9	-0.3
GUNZ				*e*PKPab	PKPab		03 31 59.5	-0.1
ISP	**Isparta**	149.40	310	*e*PKPdf	PKPdf		03 31 47.6	+0.3
ISP				*e*PKPbc	PKPbc		03 31 51.4	-1.2
ISP	**Isparta**	149.40	310	⇓*i*P	PKPdf		03 31 47.8	+0.4
UBBA	**Unterbreizbach**	149.45	349	*e*PKPbc	PKPbc		03 31 51.4	-0.9
WERN	**Wernitzgruen**	149.45	345	*e*PKPbc	PKPbc		03 31 52.1	-0.2
WERN				*e*PKPab	PKPab		03 31 59.7	-0.2
NKC	**Novy Kostel**	149.48	345	⇑*e*PKP	PKPbc		03 31 52.0	-0.4
NKC				*e*PKPAB	PKPab		03 31 59.1	-0.9
TREC	**Trest**	149.51	341	⇑*e*PKP	PKPbc		03 31 51.9	-0.6
GZR	**Gura Zlata**	149.77	328	⇑*i*P	PKPbc		03 31 52.3	-0.9
WOL	**Wolverton**	149.78	3	P	PKPbc		03 31 51.7	-1.4
WOL	**Wolverton**	149.78	3	*e*P	PKPbc		03 31 51.7	-1.4
ROTZ	**Rotzenmuhle**	149.97	345	*e*PKPbc	PKPbc		03 31 53.2	-0.4
HGN	**Heimansgroeve**	150.10	353	*e*P	PKPbc		03 31 53.0	-0.8
	comp=Z,14nm,0.9s							
BZS	**Buzias**	150.16	330	⇑*i*P	PKPbc		03 31 53.3	-0.8
KHC	**Kasperske Hory**	150.21	343	*e*PKPdf	PKPdf		03 31 47.8	-0.5
KHC				*e*PKPbc	PKPbc		03 31 53.8	-0.3
KHC	**Kasperske Hory**	150.21	343	⇑*e*PKP	PKPbc		03 31 53.7	-0.4
KHC				*e*PKPAB	PKPab		03 32 02.9	-0.2
MEM	**Membach**	150.24	353	PKPbc	PKPbc		03 31 53.5	-0.7
MEM				PKPab	PKPab		03 32 02.3	-0.9
GRA1	**Grafenberg Arr**	150.27	346	*e*PKPbc	PKPbc		03 31 53.9	-0.4
GRA1				*e*PKPab	PKPab		03 32 03.3	0.0
GRF	**Grafenberg Arr**	150.27	346	*e*PKPbc	PKPbc		03 31 53.9	-0.4
GRF				*e*PKPab	PKPab		03 32 03.3	0.0
TNS	**Taunus Mts**	150.29	350	*e*PKPbc	PKPbc		03 31 53.9	-0.4
TNS				*e*PKPab	PKPab		03 32 02.8	-0.6
WET	**Wettzell**	150.38	344	*e*PKPbc	PKPbc		03 31 54.0	-0.5
GEC2	**GERESS Array S**	150.44	343	*e*PKPbc	PKPbc		03 31 54.0	-0.7
GERES	**GERESS Array B**	150.44	343	PKP	PKPdf		03 31 47.3	-1.3
	comp=Z,0.5nm,0.7s,baz=78,slow=1.9,SNR=6.2							
GERES				PKPbc	PKPbc		03 31 54.0	-0.6
	comp=Z,11nm,0.8s,baz=27,slow=2.5,SNR=63							
GERES				pPKPbc	pPKPbc		03 34 17.9	+1.9
	comp=Z,1.3nm,0.9s,baz=29,slow=3.0,SNR=4.4							
SNF	**Seneffe**	150.50	356	PKPbc	PKPbc		03 31 54.1	-0.7
SNF				PKPab	PKPab		03 32 03.4	-0.8
BCLA	**Clavier**	150.50	354	PKPab	PKPab		03 32 03.4	-0.9
CONA	**Conrad Observa**	150.59	339	⇑*i*PKiKP	PKiKP		03 31 54.8	-0.7
	comp=Z,16nm,0.6s							
GIVF	**Givet**	150.86	355	⇑*i*PKP1	PKPbc		03 31 54.9	-0.7
	comp=Z,47nm,0.7s							
DOU	**Dourbes**	150.88	355	PKPbc	PKPbc		03 31 55.0	-0.6
DOU				PKPab	PKPab		03 32 04.8	-1.1
BAIF	**Baives**	150.95	356	⇑*i*PKP1	PKPbc		03 31 55.2	-0.6
	comp=Z,26nm,0.8s							
PKSM	**Moragy**	151.00	334	⇑*i*P	PKPbc		03 31 55.2	-0.8
WLF	**Walferdange**	151.16	353	PKPbc	PKPbc		03 31 55.8	-0.4
WLF	**Walferdange**	151.16	353	*e*PKPbc	PKPbc		03 31 56.2	-0.1
MOA	**Molln**	151.17	341	⇑*i*PKPbc	PKPbc		03 31 55.5	-0.9
	comp=Z,5.7nm,0.5s							
VTS	**Vitosha**	151.49	324	⇑*i*P	PKPbc		03 31 56.6	-0.7
FUR	**Furstenfeldbru**	151.69	345	*e*PKPbc	PKPbc		03 31 56.9	-0.6
FUR				*e*PKPab	PKPab		03 32 09.3	-0.1
RJOB	**Jochberg**	151.69	343	*e*PKPbc	PKPbc		03 31 56.5	-1.0
RJOB				*e*PKPab	PKPab		03 32 09.8	+0.4
JSA	**Saint Aubin**	151.85	4	*e*P	PKPbc		03 31 55.4	-2.4
SOKA	**Soboth**	151.96	339	⇑*i*PKPbc	PKPbc		03 31 56.9	-1.2
	comp=Z,5.0nm,0.6s							
PERS	**Pernice**	151.97	339	*i* PKPdf	PKPbc		03 31 56.9	-1.3
BFO	**Black Forest**	152.14	349	*e*PKPbc	PKPbc		03 31 57.6	-0.9
BFO				*e*PKPab	PKPab		03 32 10.5	-0.8
BFO	**Black Forest**	152.14	349	*e*PKPdf	PKPdf		03 31 50.6	-0.6
BFO				*e*PKPbc	PKPbc		03 31 57.6	-0.9
BFO				*e*PKPab	PKPab		03 32 10.3	-1.0
BFO				*e*PKPab	PKPab		03 32 10.5	-0.8
CDF	**Champ du Feu**	152.24	351	*e*PKP1	PKPbc		03 31 58.0	-0.7
	comp=Z,16nm,0.7s							
FLN	**La Foiniere**	152.35	2	⇑*i*PKP1	PKPbc		03 31 57.8	-1.1
	comp=Z,14nm,0.5s							
MEZF	**Maizieres J'vi**	152.43	354	⇑*i*PKP1	PKPbc		03 31 58.6	-0.5
	comp=Z,29nm,0.9s							
WTTA	**Wattenberg**	152.44	344	⇑*i*PKPbc	PKPbc		03 31 58.5	-0.7
	comp=Z,10.0nm,0.4s							
MYKA	**Terra Mystica**	152.45	341	⇓*i*PKPbc	PKPbc		03 31 57.6	-1.6
	comp=Z,5.4nm,0.5s							
MOTA	**Moosalm**	152.50	345	⇑*i*PKPbc	PKPbc		03 31 58.3	-1.0
	comp=Z,3.4nm,0.5s							
LDF	**La Druitiere**	152.53	1	⇑*i*PKP1	PKPbc		03 31 58.0	-1.3
	comp=Z,9.0nm,0.5s							
ROSF	**Rostrenen**	152.60	6	⇑*i*PKP1	PKPbc		03 31 58.1	-1.4
ABTA	**Abfaltersbach**	152.68	342	⇑*i*PKPbc	PKPbc		03 31 58.2	-1.5
	comp=Z,12nm,0.6s							
GRR	**Gorron**	152.72	2	⇑*i*PKP1	PKPbc		03 31 58.7	-1.0
	comp=Z,11nm,0.6s							
SFTF	**Sexfontaines**	152.72	354	⇑*i*PKP1	PKPbc		03 31 59.2	-0.6
	comp=Z,49nm,0.9s							
SGMF	**Saint Gilles**	152.75	5	⇑*i*PKP1	PKPbc		03 31 58.5	-1.3
	comp=Z,18nm,0.8s							
HAU	**Haudompre**	152.76	352	⇑*i*PKP1	PKPbc		03 31 58.9	-1.0
	comp=Z,13nm,0.8s							
DAVA	**Damuels**	152.84	346	⇑*i*PKiKP	PKPbc		03 32 00.1	0.0
	comp=Z,8.2nm,1.0s							
HINF	**Hinteralfeld**	152.88	351	⇑*i*PKP1	PKPbc		03 31 59.0	-1.1
	comp=Z,6.2nm,0.6s							
FETA	**Feichten**	152.89	345	⇑*i*PKiKP	PKPbc		03 31 59.6	-0.6
	comp=Z,7.8nm,1.1s							
BOJS	**Bojanci**	152.90	337	*i* PKPdf	PKPbc		03 31 59.6	-0.7
JAVS	**Javornik**	152.97	339	*i* PKPdf	PKPbc		03 31 59.1	-1.3
QUIF	**Quistinic**	153.03	6	*e*PKP1	PKPbc		03 31 58.9	-1.5
TUE	**Stuetta**	153.73	347	*e*PKPbc	PKPbc		03 32 01.6	-0.4
LOR	**Lormes**	153.75	355	⇑*i*PKP1	PKPbc		03 32 01.2	-0.8
	comp=Z,11nm,0.8s							
SSF	**Saint Saulge**	153.98	356	⇑*i*PKP1	PKPbc		03 32 01.7	-0.8
	comp=Z,11nm,0.9s							
CABF	**La Chapelle**	154.17	352	⇑*i*PKP1	PKPbc		03 32 02.6	-0.3
	comp=Z,20nm,1.0s							
AVF	**Avril sur Loir**	154.26	356	*e*PKP1	PKPbc		03 32 02.7	-0.4
SMF	**Signal de Mont**	154.37	355	*e*PKP1	PKPbc		03 32 03.4	+0.1
MFF	**Saint Martin d**	154.52	2	⇑*i*PKP1	PKPdf		03 32 02.6	+8.0
	comp=Z,12nm,1.0s							
BGF	**Bois d'Agland**	154.53	357	*e*PKP1	PKPdf		03 32 04.1	+9.5
	comp=Z,8.1nm,0.6s							
TCF	**Toulx Ste Croi**	154.82	358	⇑*i*PKP1	PKPdf		03 32 03.3	+8.3
LPL	**La Plagne**	155.14	350	*e*PKP1	PKPdf		03 32 05.0	+10
	comp=Z,4.2nm,0.7s							
LPG	**La Plagne**	155.16	350	*e*PKP1	PKPdf		03 32 05.0	+9.5
	comp=Z,4.8nm,0.7s							
MBDF	**Montbardon**	155.90	350	⇑*i*PKP1	PKPdf		03 32 06.1	+10
	comp=Z,5.9nm,0.7s							
ESDC	**Sonseca Array**	161.01	11	PKPab	PKPab		03 32 48.9	-1.0
	comp=Z,2.2nm,0.9s,baz=347,slow=4.7,SNR=7.5							
KEST	**Kesra**	163.60	335	PKPab	PKPab		03 33 01.2	-0.2
	comp=Z,1.4nm,0.8s,baz=96,slow=3.3,SNR=9.6							
LIC	**Lamto**	164.19	158	*e*PKIKP	PKPdf		03 32 04.9	-1.6
	comp=Z,36nm,1.3s							
LIC	**Lamto**	164.19	158	*e*P	PKPab		03 33 04.2	-0.3
	comp=Z,18nm,0.7s							
LIC	**Lamto**	164.19	158	⇑*i*PKIKP	PKPdf		03 32 05.0	-1.5
	comp=Z,13nm,0.8s							
KIC	**Kosan Boka**	164.41	159	*e*PKIKP	PKPdf		03 32 04.8	-1.9
	comp=Z,15nm,0.8s							
TIC	**Toumodi**	164.58	158	*e*PKIKP	PKPdf		03 32 05.3	-1.6
	comp=Z,6.1nm,0.2s							
DBIC	**Dimbokro**	164.66	158	PKP	PKPdf		03 32 05.2	-1.7
	comp=Z,4.6nm,0.8s,baz=243,slow=1.1,SNR=6.1							
DBIC				PKPab	PKPab		03 33 06.5	-0.1
	comp=Z,3.0nm,0.7s,baz=173,slow=6.8,SNR=3.3							
DBIC	**Dimbokro**	164.66	158	PKP	PKPdf		03 32 05.2	-1.7
DBIC				PKPab	PKPab		03 33 06.5	-0.1
TAM	**Tamanrasset**	175.31	292	*e*PKPdf	PKPdf		03 32 12.2	-0.4

NNC 29 03:14:00.3±5.9, 39°.03N×75°.24E, h0km, mb3.8, mpv3.5, 3C-2D, Error ellipse: s-maj=50.5km s-min=38.7km az=177.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	0.75	49	Pg	Pg	03 14 06.3	-8.4
KSH				Sg	Sg	03 14 12.8	-12
KSH				smax			
	comp=N,19μm,0.3s						
KSH				smax			
	comp=E,22μm,0.1s						
TKM2	**Tokmak 2**	3.90	4	⇑Pn	Pn	03 15 02.4	+0.9
	comp=E,5.3nm,0.3s				

14nm,0.5s,mb4.8,baz=95,slow=7.3,SNR=126
WRA ScP ScP 03 40 43.3 +2.6
1.1nm,1.1s,baz=96,slow=4.5,SNR=3.4
WRA S S 03 42 04.5 -3.1
0.9nm,0.8s,baz=97,slow=13,SNR=3.3
ASAR Alice Springs 44.39 255 P P 03 36 19.1 +0.1
63nm,0.5s,mb5.4,baz=87,slow=8.7,SNR=295
ASAR ScP ScP 03 40 43.7 +2.4
0.8nm,0.8s,baz=122,slow=3.6,SNR=4.2
ASAR S S 03 42 09.0 -0.5
2.5nm,0.9s,baz=90,slow=15,SNR=21
KAKA Kakadu 47.24 269 *e*P P 03 36 40.2 -0.5
17nm,0.4s,mb4.9
KAKA Kakadu 47.24 269 *e*P P 03 36 40.0 -0.6
52nm,0.6s,mb5.2
FORT Forrest 49.58 245 *e*P P 03 36 56.9 -0.8
27nm,0.5s,mb4.9
FORT Forrest 49.58 245 *e*P P 03 36 57.0 -0.7
33nm,0.6s,mb4.9
FITZ Fitzroy Crossi 52.65 261 P P 03 37 19.9 -0.1
2.1nm,0.4s,mb3.8,baz=91,slow=7.3,SNR=13
FITZ Fitzroy Crossi 52.65 261 *e*P P 03 37 19.7 -0.2
4.3nm,0.4s,mb4.1
KLBR Kellerberrin 58.40 244 *e*P P 03 37 58.6 -0.7
9.6nm,0.6s,mb4.1
QSPA South Pole Qui 71.86 180 *e*P P 03 39 22.8 +0.5
13nm,1.1s,mb4.4
MURC Murrieta 78.06 49 ⇓P P 03 39 57.1 -0.4
baz=78
EDW2 Edwards Air Fo 78.17 47 ⇑P P 03 39 58.2 +0.2
baz=78
MDJ Mudanjiang 78.23 325 P P 03 39 59.0 +0.9
MDJ pmax pmax
comp=Z,5.0nm,1.1s,mb3.9
MDJ pmax pmax
comp=Z,64nm,4.0s
ISA Isabella 78.25 46 ⇓P P 03 39 58.0 -0.4
baz=78
ISA Isabella 78.25 46 *e*P P 03 39 58.2 -0.3
comp=Z,2.2nm,0.8s,mb3.6
MONP Monument Peak 78.25 50 ⇓P P 03 39 58.6 +0.1
baz=78
CMB Columbia Colle 78.28 43 *e*P P 03 39 58.2 -0.2
comp=Z,3.7nm,1.1s,mb3.7
YBH Yreka Blue Hor 78.96 39 P P 03 40 02.0 0.0
comp=Z,1.9nm,0.5s,mb3.6,baz=168,slow=2.3,SNR=9.4
MPMC Manual Prospec 79.14 46 ⇓P P 03 40 02.8 -0.3
baz=79
HUMO Hull Mountain 79.33 38 *e*P P 03 40 04.4 +0.5
comp=Z,5.5nm,1.1s,mb3.8
WCN Washoe City 79.39 43 ⇓P P 03 40 04.2 -0.2
baz=80
IRM Iron Mountain 79.81 49 ⇑P P 03 40 06.5 -0.1
baz=80
NVAR Mina Array Bea 79.86 44 P P 03 40 06.8 0.0
comp=Z,1.9nm,0.7s,mb3.5,baz=224,slow=8.8,SNR=21
U10A Ash Meadows, A 80.13 47 ⇑P P 03 40 07.8 -0.4
baz=80
Z13A Yuma Proving G 80.42 50 ⇑P P 03 40 09.8 -0.1
baz=80
WHN Wuhan 80.50 306 *e*P P 03 40 14.0 +3.7
Y13A Salome 80.59 50 ⇓P P 03 40 10.7 -0.1
baz=81
K05A Summer Lake 80.63 39 ⇑P P 03 40 10.8 +0.1
baz=81
X13A Yucca 80.97 49 ⇑P P 03 40 12.2 -0.4
baz=81
H04A Detroit Lake 81.02 37 ⇑P P 03 40 12.4 -0.2
baz=81
Y14A Wickenburg 81.25 50 ⇓P P 03 40 13.9 -0.2
baz=81
E03A Lebam 81.38 35 ⇑P P 03 40 14.6 +0.2
baz=82
U12A Valley of Fire 81.38 47 ⇑P P 03 40 14.8 +0.1
baz=82
V13A Grand Canyon W 81.48 48 ⇓P P 03 40 15.2 0.0
baz=82
216A Three Points, 81.49 52 ⇑P P 03 40 15.2 -0.2
baz=82
X14A Yava 81.59 50 ⇓P P 03 40 15.9 0.0
baz=82
R11A Troy Canyon, C 81.63 45 ⇓P P 03 40 15.4 -0.5
baz=82
Y15A Casa Rosa Ranc 81.75 50 ⇓P P 03 40 16.4 -0.2
baz=82
U13A Pakoon Wash 81.77 48 ⇑P P 03 40 16.8 +0.1
baz=82
W14A Seligman 81.81 49 ⇓P P 03 40 17.1 +0.2
baz=82,SNR=5.0
WVOR Wild Horse Val 81.84 40 *e*P P 03 40 16.5 -0.4
comp=Z,4.3nm,1.3s,mb3.8
217A Green Valley 81.87 53 ⇑P P 03 40 17.3 +0.1
baz=82
V14A Boquillas Ranc 82.00 49 ⇑P P 03 40 17.9 +0.1
baz=82,SNR=5.2
X15A Humboldt 82.07 50 ⇓P P 03 40 18.4 +0.2
baz=82
T13A Saint George 82.11 47 ⇓P P 03 40 18.8 +0.4
baz=82
Z16A Peralta Trail, 82.13 51 ⇓P P 03 40 19.2 +0.6
baz=82
G06A Carlson Farm, 82.24 37 ⇓P P 03 40 18.4 -0.4
baz=82
I07A Izee 82.24 39 ⇑P P 03 40 18.6 -0.2
baz=82
117A Oracle 82.29 52 ⇓P P 03 40 19.7 +0.3
baz=82
U14A Mt Trumbull 82.32 48 ⇑P P 03 40 19.5 +0.1
baz=82,SNR=6.9
Y16A Circle Bar Ran 82.34 51 ⇓P P 03 40 19.9 +0.2
baz=82
318A Bisbee 82.35 54 ⇓P P 03 40 19.8 +0.2
baz=82
J08A Circle Bar Ran 82.45 40 ⇓P P 03 40 20.1 +0.1
baz=83
X16A Lo Mia Camp, P 82.62 50 ⇓P P 03 40 21.4 +0.4
baz=83
T14A Hurricane 82.70 47 ⇓P P 03 40 21.7 +0.4
baz=83
V15A Kaibab Nationa 82.75 49 ⇑P P 03 40 22.3 +0.7
baz=83
319A Douglas 82.86 54 ⇓P P 03 40 23.0 +0.8
baz=83
W16A Flagstaff 82.87 50 ⇓P P 03 40 22.8 +0.5
baz=83
118A Homack Ranch, 82.90 52 ⇓P P 03 40 22.7 +0.3
baz=83
PMR Palmer 82.96 14 *e*P P 03 40 20.4 -1.6
comp=Z,1.2nm,0.5s,mb3.7
U15A North Rim 82.96 48 ⇑P P 03 40 23.1 +0.5
baz=83
X17A Forest Lakes 83.05 51 ⇑P P 03 40 23.5 +0.4
baz=83
219A White Tail Can 83.15 53 ⇑P P 03 40 24.2 +0.5
baz=83
T15A Red Dirt Ranch 83.17 48 ⇑P P 03 40 23.9 +0.2
baz=83
G08A Pilot Rock 83.24 38 ⇑P P 03 40 23.7 0.0
baz=83
Y18A Canyon Day Jun 83.36 51 ⇓P P 03 40 25.2 +0.5
baz=83
320A Kipp Ranch, An 83.42 54 ⇓P P 03 40 25.8 +0.7
baz=84
MAW Mawson 83.48 200 P P 03 40 24.8 +0.1
comp=Z,0.8nm,0.4s,mb3.6,baz=108,slow=3.2,SNR=3.5
Q14A Sevier Lake (B 83.51 46 ⇑P P 03 40 25.6 +0.3
baz=84
U16A Tuba City 83.65 49 ⇓P P 03 40 26.2 +0.2
baz=84
V17A Tonalea, Kykot 83.65 49 ⇓P P 03 40 26.4 +0.3
baz=84
220A Playas Peak, P 83.67 54 ⇑P P 03 40 26.3 0.0
baz=84
Y19A Nutrioso 84.03 52 ⇓P P 03 40 27.8 -0.2
baz=84
MFID Camas Ranch 84.11 41 ⇓P P 03 40 28.2 +0.1
baz=84
D08A Wollman Farm, 84.26 36 ⇑P P 03 40 28.5 -0.3
baz=84
T17A Navajo Res., N 84.28 48 ⇓P P 03 40 29.1 -0.1
baz=84
TRF Thorofare Moun 84.36 12 *e*P P 03 40 26.8 -2.0
comp=Z,55nm,2.3s,mb4.7
F10A Beach Ranch, E 84.63 38 ⇑P P 03 40 30.1 -0.4
baz=85
U18A Rough Rock, Ch 84.68 49 ⇓P P 03 40 30.5 -0.6
baz=85
I12A Atlanta 84.73 41 ⇓P P 03 40 31.0 -0.2
baz=85
B08A Colville Reser 84.76 35 ⇑P P 03 40 29.8 -1.4
baz=85
X20A Quemado 84.84 51 ⇓P P 03 40 31.9 0.0
baz=85
GYA Guiyang 84.89 300 *e*P P 03 40 33.0 +0.7
GYA pP pP 03 42 44.5 -1.6
GYA sP sP 03 43 45.8 -3.7
GYA PP PP 03 44 02.0 +0.4
GYA SKS 03 49 56.0
GYA S S 03 50 11.0 +1.2
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
MCK McKinley 84.89 13 *e*P P 03 40 30.7 -0.7
T18A Mexican Hat 85.00 48 ⇓P P 03 40 32.7 0.0
baz=85
R17A Hanksville Air 85.00 47 ⇓P P 03 40 32.9 +0.3
baz=85
HLID Hailey 85.06 41 ⇓P P 03 40 33.2 +0.4
baz=85
HLID Hailey 85.06 41 *e*P P 03 40 33.1 +0.4
comp=Z,2.1nm,0.8s,mb3.8
W20A Ramah 85.10 51 ⇑P P 03 40 33.7 +0.6
baz=85
U19A Dine' College, 85.10 49 ⇑P P 03 40 33.0 -0.1
baz=85
J13A Cove Ranch, Pi 85.13 41 ⇑P P 03 40 33.1 0.0
baz=85
H12A Diamond D Ranc 85.30 40 ⇑P P 03 40 32.6 -1.2
baz=85,SNR=5.4
G12A Big Creek, Yel 85.31 39 ⇓P P 03 40 33.5 -0.4
baz=85
K14A Jones Ranch, D 85.34 42 ⇓P P 03 40 33.8 -0.2
baz=85
SRU San Rafael 85.45 46 ⇓P P 03 40 34.6 -0.1
baz=86
J14A Carey 85.51 42 ⇑P P 03 40 34.9 0.0
baz=86,SNR=5.0
R18A Canyonlands Na 85.56 47 ⇓P P 03 40 35.1 -0.2
baz=86
F12A Elk City 85.68 39 ⇓P P 03 40 34.6 -1.0
baz=86,SNR=5.7
Y22A Socorro 85.73 52 ⇓P P 03 40 36.2 0.0
baz=86
S19A Harvey Farm, M 85.80 48 ⇑P P 03 40 35.8 -0.6
baz=86
O17A Robinson Place 85.81 45 ⇓P P 03 40 36.4 0.0
baz=86
I14A Mackay 85.85 41 ⇓P P 03 40 37.0 +0.5
baz=86
425A Indio Mountain 85.95 56 ⇑P P 03 40 37.3 0.0
baz=86
G13A Cobalt 85.95 40 ⇓P P 03 40 36.8 -0.2
baz=86
R19A Curley Farm, L 85.96 48 ⇓P P 03 40 37.1 -0.1
baz=86
Z23A Rita Site, Whi 86.00 53 ⇓P P 03 40 37.6 +0.1
baz=86
224A Cornudas Mount 86.06 55 ⇓P P 03 40 38.1 +0.3
baz=86
626A Big Bend Ranch 86.14 57 ⇑P P 03 40 38.4 +0.2
baz=86
PV10 Paradox Valley 86.15 48 *e*P P 03 40 37.7 -0.4
C11A Tepee Creek (N 86.20 37 ⇓P P 03 40 37.3 -0.7
baz=86,SNR=5.5
325A Bean Ranch, Si 86.20 55 ⇓P P 03 40 38.5 0.0
baz=86
L16A Fish Haven 86.21 44 ⇑P P 03 40 38.4 +0.2
baz=86
J15A Blackfoot 86.23 42 ⇑P P 03 40 38.5 +0.2
baz=86,SNR=6.1
ILAR Eielson Array 86.24 13 P P 03 40 36.0 -1.9
comp=Z,1.4nm,0.6s,mb3.8,baz=233,slow=5.5,SNR=6.3
H14A Leadore 86.25 41 ⇓P P 03 40 38.8 +0.4
baz=86
F13A Darby 86.25 39 ⇑P P 03 40 37.7 -0.6
baz=86
U21A Nageezi 86.28 50 ⇑P P 03 40 38.8 +0.1
baz=86
124A Stringfield Ra 86.37 54 ⇓P P 03 40 39.2 0.0
baz=86
526A Mary Lane Ranc 86.38 57 ⇓P P 03 40 39.9 +0.6
baz=86
TXAR Lajitas Array 86.43 58 P P 03 40 40.1 +0.6
comp=Z,3.6nm,0.8s,mb4.0,baz=220,slow=5.7,SNR=40
I15A Monteview 86.49 41 ⇑P P 03 40 40.0 +0.5
baz=87
K16A Soda Springs 86.50 43 ⇑P P 03 40 39.8 +0.2
baz=87
ANMO Albuquerque 86.53 52 P P 03 40 39.6 -0.3
baz=306,slow=8.7
225A Deer Hill, Car 86.61 55 ⇓P P 03 40 40.7 +0.3
baz=87
426A McDonald Obser 86.66 56 ⇑P P 03 40 40.5 -0.1
baz=87
J16A Bone 86.69 42 ⇓P P 03 40 41.0 +0.6
baz=87,SNR=6.2
627A Terlingua Ranc 86.70 58 ⇑P P 03 40 40.9 +0.1
baz=87
S21A Coal Bank Pass 86.72 49 ⇓P P 03 40 41.0 +0.3
baz=87
527A Woodward Ranch 86.79 57 ⇑P P 03 40 41.1 -0.1
baz=87
Y24A Capitan 86.88 53 ⇑P P 03 40 41.8 +0.2
baz=87
RRI2 Red Ridge 86.92 42 *e*P P 03 40 41.6 +0.1
comp=Z,4.4nm,0.9s,mb4.2
G15A Dillon 87.06 40 ⇑P P 03 40 42.1 -0.1
baz=87
I16A Newdale 87.06 42 ⇓P P 03 40 42.6 +0.4
baz=87
628A Black Gap, Mar 87.11 58 ⇑P P 03 40 42.6 -0.2
baz=87
226A Malaga, Loving 87.16 55 ⇓P P 03 40 42.5 -0.5
baz=87
427A Hayter Ranch, 87.23 56 ⇑P P 03 40 43.4 +0.1
baz=87
HHC Hu-ho-hao-te 87.23 315 *e*P P 03 40 44.0 +0.9
HHC pP pP 03 42 54.0 -3.9
HHC sP sP 03 43 52.3 -8.7
HHC PP PP 03 44 22.0 +2.2
HHC SKS 03 50 13.5
HHC S S 03 50 31.8 +0.6
HHC sS sS 03 54 21.5 -10
HHC SS SS 03 56 38.0 +1.8
HHC pmax pmax
comp=Z,17nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,150nm,5.3s
K18A Toltan Ranch, 87.41 43 ⇓P P 03 40 44.4 +0.6
baz=88
IMW Indian Meadow 87.42 42 *e*P P 03 40 44.3 +0.4
comp=Z,46nm,2.7s,mb4.7
528A Cox Ranch, San 87.45 57 ⇓P P 03 40 44.7 +0.3
baz=88
H16A Russell Place, 87.61 41 ⇓P P 03 40 45.2 +0.5
baz=88
L19A Farson 87.62 44 ⇑P P 03 40 44.6 -0.2
baz=88
KMI Kunming 87.66 297 P P 03 40 46.8 +1.4
KMI pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
J18A Kendall Valley 87.69 43 ⇑P P 03 40 44.7 -0.4
baz=88
Z26A Caprock 87.73 54 ⇑P P 03 40 45.1 -0.4
baz=88
BW06 Boulder Array 87.79 44 ⇑P P 03 40 45.4 -0.2
baz=88
B14A Marquette Ranc 88.18 37 ⇑P P 03 40 46.7 -0.6
baz=88
L20A Wamsutter 88.25 45 ⇓P P 03 40 47.8 0.0
baz=88
N21A Black Mountain 88.26 46 ⇓P P 03 40 48.2 +0.3
baz=88
J19A Crowheart 88.34 43 ⇑P P 03 40 48.1 -0.1
baz=88
A14A Double T Ranch 88.40 37 ⇑P P 03 40 48.2 -0.1
baz=88
M21A Separation Pea 88.73 45 ⇑P P 03 40 49.9 -0.1
baz=89
MSTX Muleshoe 88.93 54 ⇓P P 03 40 50.6 -0.6
baz=89
N22A Wattenberg Ran 89.01 46 ⇑P P 03 40 51.5 +0.2
baz=89
J20A Shoshoni 89.02 44 ⇑P P 03 40 51.6 +0.3
baz=89
H19A Powell 89.02 42 ⇓P P 03 40 51.5 +0.2
baz=89
RLMT Red Lodge 89.05 42 ⇓P P 03 40 51.8 +0.4
baz=89
D17A Six Diamond Ra 89.11 39 ⇑P P 03 40 51.8 +0.2
baz=89
I20A Worland 89.25 43 ⇓P P 03 40 52.8 +0.4
baz=89
C17A Wharram Farm, 89.30 39 ⇓P P 03 40 52.6 +0.1
baz=89
N23A Red Feather La 89.40 46 ⇓P P 03 40 53.6 +0.4
baz=90
J21A Lysite 89.43 44 ⇓P P 03 40 53.7 +0.5
baz=90
A16A West Butte Ran 89.43 37 ⇓P P 03 40 52.8 -0.3
baz=90
L22A Ellis Ranch, M 89.54 45 ⇓P P 03 40 54.1 +0.4
baz=90
I21A Big Trails, Te 89.73 43 ⇑P P 03 40 54.5 -0.1
baz=90
L23A Garrett 90.07 45 ⇓P P 03 40 56.6 +0.3
baz=90
J22A Midwest 90.10 44 ⇑P P 03 40 55.7 -0.6
baz=90
C19A Slack Wire Ran 90.37 39 ⇓P P 03 40 57.9 +0.4
baz=90
VNA3 Neumayer Olymp 90.48 176 *e*P P 03 40 54.5 -3.1
LZH Lanzhou 90.80 308 *e*P P 03 41 03.0 +3.3
LZH sP sP 03 44 05.5 -13
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.8
VNA2 Neumayer--Watz 90.91 177 *e*P P 03 40 56.4 -3.2
baz=206,slow=4.3
C20A Veseth Ranch, 90.99 40 ⇑P P 03 41 00.1 -0.2
baz=91
VNA1 Neumayer--Stat 91.14 177 *e*P P 03 40 58.5 -2.2
D21A La Casta Ranch 91.33 41 ⇑P P 03 41 01.7 -0.1
baz=91
A20A Cobblestone Ra 91.55 39 ⇑P P 03 41 02.1 -0.7
baz=92
C21A Desert Coulee 91.59 40 ⇑P P 03 41 02.9 -0.1
baz=92
MK31 Makanchi Array 109.09 314 *e*PKPdf PKiKP 03 46 20.4 -1.0
MKAR Makanchi Array 109.09 314 PKiKP PKiKP 03 46 19.8 -1.6
comp=Z,0.4nm,0.5s,baz=88,slow=1.3,SNR=5.1
ARCES ARCESS Array B 126.54 350 PKP PKPdf 03 46 52.8 -1.4
comp=Z,3.7nm,0.9s,baz=3.8,slow=3.6,SNR=5.9
HFS Hagfors 137.16 351 PKhKP PKPpre 03 47 05.8
comp=Z,1.5nm,0.7s,baz=103,slow=3.2,SNR=4.2
AKASG Malin Array Be 140.66 332 PKhKP PKPpre 03 47 13.4
comp=Z,0.7nm,0.4s,baz=41,slow=4.0,SNR=4.6
EKA Eskdalemuir Ar 142.78 4 PKhKP PKPpre 03 47 20.9
comp=Z,1.2nm,0.7s,baz=9.2,slow=2.6,SNR=4.4
BUR08 Bucovina Ar. S 144.69 332 *e*PKPdf PKPdf 03 47 29.4 +1.2
BRTR Keskin Array B 144.74 314 PKP PKPdf 03 47 28.7 +0.1
comp=Z,1.1nm,0.6s,baz=107,slow=2.8,SNR=7.7
BRTR Keskin Array B 144.74 314 PKP PKPdf 03 47 28.7 +0.1
CLZ Clausthal 145.66 350 *e*PKPbc PKPbc 03 47 31.1 -0.4
CLL Collm 145.67 347 *e*PKPbc PKPbc 03 47 30.9 -0.6
CLL Collm 145.67 347 ⇑*i*PKPbc PKPbc 03 47 30.8 -0.7
comp=Z,13nm,0.6s
BRG Berggiesshubel 145.86 346 *e*PKPbc PKPbc 03 47 31.5 -0.6
BRG Berggiesshubel 145.86 346 *i* PKP PKPdf 03 47 31.5 +1.4
comp=Z,4.7nm,0.6s
FBE Freiberg 145.95 346 *e*PKPbc PKPbc 03 47 32.2 -0.1
MOX Moxa 146.58 348 *e*PKPbc PKPbc 03 47 33.4 -0.7
TANN Tannenbergstha 146.62 347 *e*PKPbc PKPbc 03 47 33.8 -0.4
WERD Werda 146.63 347 *e*PKPbc PKPbc 03 47 33.6 -0.6
GUNZ Gunzen 146.70 347 *e*PKPbc PKPbc 03 47 34.1 -0.3
TNS Taunus Mts 147.53 351 *e*PKPbc PKPbc 03 47 36.2 -0.3
KHC Kasperske Hory 147.57 345 ⇑*e*PKP PKPbc 03 47 35.5 -1.2
GERES GERESS Array B 147.80 344 PKPbc PKPbc 03 47 36.9 -0.4
comp=Z,1.9nm,0.7s,baz=20,slow=3.4,SNR=18
GIVF Givet 148.04 356 *e*PKP1 PKPbc 03 47 37.1 -0.7
comp=Z,11nm,0.6s
DOU Dourbes 148.06 356 PKPbc PKPbc 03 47 37.3 -0.5
BAIF Baives 148.12 356 *e*PKP1 PKPbc 03 47 37.4 -0.6
comp=Z,6.5nm,0.4s
WLF Walferdange 148.36 354 PKPbc PKPbc 03 47 38.7 +0.1
WLF Walferdange 148.36 354 *e*PKPbc PKPbc 03 47 38.7 +0.1
CDF Champ du Feu 149.46 352 ⇑*i*PKP1 PKPbc 03 47 40.7 -0.6
FLN La Foliniere 149.48 2 ⇑*i*PKP1 PKPbc 03 47 40.3 -1.1
comp=Z,15nm,0.7s
MEZF Maizieres J'vi 149.61 355 *e*PKP1 PKPbc 03 47 41.4 -0.3
LDF La Drutiere 149.66 2 ⇑*i*PKP1 PKPbc 03 47 40.5 -1.3
comp=Z,5.0nm,0.5s
GRR Gorron 149.84 3 ⇑*i*PKP1 PKPbc 03 47 41.2 -1.0
comp=Z,11nm,0.6s
SGMF Saint Gilles 149.86 5 *e*PKP1 PKPbc 03 47 41.1 -1.2
comp=Z,6.6nm,0.7s
SFTF Sexfontaines 149.91 355 ⇑*i*PKP1 PKPbc 03 47 41.9 -0.5
comp=Z,25nm,0.8s
HAU Haudompre 149.97 353 *e*PKP1 PKPbc 03 47 41.8 -0.8
comp=Z,3.4nm,0.5s
ABTA Abfaltersbach 150.05 344 ⇑*i*PKPbc PKPbc 03 47 41.1 -1.7
comp=Z,5.4nm,0.7s
HINF Hinteralfeld 150.10 352 *e*PKP1 PKPbc 03 47 41.9 -1.0
comp=Z,3.4nm,0.6s
FETA Feichten 150.21 347 ⇑*i*PKPbc PKPbc 03 47 42.1 -1.0
comp=Z,2.8nm,0.8s
LOR Lormes 150.93 356 *e*PKP1 PKPbc 03 47 43.4 -1.4
comp=Z,5.4nm,0.6s
SSF Saint Saulge 151.15 357 ⇑*i*PKP1 PKPbc 03 47 44.5 -0.8
comp=Z,7.6nm,0.8s
CABF La Chapelle 151.38 353 *e*PKP1 PKPbc 03 47 45.6 -0.2
comp=Z,3.4nm,0.7s
MFF Saint Martin d 151.65 2 ⇑*i*PKP1 PKPbc 03 47 45.3 -1.1
comp=Z,4.9nm,0.6s
BGF Bois d'Agland 151.68 358 *e*PKP1 PKPbc 03 47 45.6 -0.9
TCF Toulx Ste Croi 151.97 359 *e*PKP1 PKPbc 03 47 46.2 -0.9
RJF Les Rejaudoux 152.97 360 *e*PKP1 PKPbc 03 47 48.4 -0.9
comp=Z,7.1nm,1.0s
TORD Torodi Ar. Bea 174.96 185 PKP PKPdf 03 47 59.8 -1.8
comp=Z,0.6nm,0.9s,baz=321,slow=1.7,SNR=3.8
TORD PKPab PKPab 03 49 41.1 -0.1
comp=Z,0.4nm,0.6s,baz=185,slow=3.3,SNR=5.8

*NEIC **29** 03:29:23.4, 19°.01N×68°.61W, h182km, MD3.9(RSPR), After RSPR.*

RSPR 29 03:29:23.4, 19°.01N×68°.61W, h182km±3km, MD3.9/6, 5C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.52**	**111**	⇑*e*P	Pn	03 29 56.4	+0.7
AGPR	**Aguadilla, PR**	**1.52**	**111**	*e*S	Sn	03 30 20.6	+0.1
AGPR	**Aguadilla, PR**	**1.52**	**111**	*e*Pn	Pn	03 29 57.0	+1.4
AGPR				*e*Sn	Sn	03 30 22.1	+1.6
CRPR	**Cabo Rojo, PR**	**1.74**	**125**	⇑*e*P	Pn	03 29 57.5	-0.3
CRPR	**Cabo Rojo, PR**	**1.74**	**125**	*e*S	Sn	03 30 25.2	+0.8
CRPR	**Cabo Rojo, PR**	**1.74**	**125**	*e*Pn	Pn	03 29 56.8	-1.0
CRPR				*e*S	Sn	03 30 25.2	+0.8
AOPR	**Arecibo Observ**	**1.88**	**110**	⇑*e*P	Pn	03 29 59.8	+0.6
AOPR				*e*S	Sn	03 30 27.8	+0.8
OBIP	**Obispado Ponce**	**2.13**	**117**	*e*Pn	Pn	03 30 01.7	-0.2
OBIP				*e*S	Sn	03 30 31.9	+0.1
CELP	**Cerrillos**	**2.14**	**116**	⇑*e*P	Pn	03 30 02.2	+0.1
CELP				*e*S	Sn	03 30 32.3	+0.3
SJG	**San Juan**	**2.50**	**111**	*e*S	Sn	03 30 40.6	+1.3
SJG	**San Juan**	**2.50**	**111**	⇑*e*P	Pn	03 30 06.9	+0.8
SJG	**San Juan**	**2.50**	**111**	*e*Pn	Pn	03 30 07.5	+1.3
SJG				*e*S	Sn	03 30 40.1	+0.8
HUMP	**Col San Antoni**	**2.75**	**108**	⇓*e*P	Pn	03 30 09.6	+0.4
HUMP				*e*S	Sn	03 30 45.6	+1.0

*NEIC **29** 03:40:43.0, 34°.48S×70°.66W, h107km, mb4.0/1, MD3.4(GUC), After GUC.*

GUC 29 03:40:43.0±0.6, 34°.48S×70°.66W, h107km±3km, MD3.4, ML3.6, 14C-10D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.36**	**8**	⇓*i*P	Pn	03 40 58.8	+0.1
CACH				*i* S	Sn	03 41 10.7	+0.3
CACH	**El Canelo**	**0.36**	**8**	⇓*i*P	Pn	03 40 58.8	+0.1
CACH				*i* S	Sn	03 41 10.7	+0.3
CHCH	**Chadas Angostu**	**0.54**	**1**	*e*P	Pn	03 40 59.7	-0.2
CHCH				*i* S	Sn	03 41 12.2	-0.2
CHCH	**Chadas Angostu**	**0.54**	**1**	*e*P	Pn	03 40 59.7	-0.2
CHCH				*i* S	Sn	03 41 12.2	-0.2
LNV	**Longovilo**	**0.81**	**310**	P	Pn	03 41 02.2	+0.1
LNV				S	Sn	03 41 16.0	-0.3
LNV	**Longovilo**	**0.81**	**310**	⇑*i*P	Pn	03 41 02.2	+0.1
LNV				*i* S	Sn	03 41 16.0	-0.3
TACH	**Talagante**	**0.85**	**344**	⇓*i*P	Pn	03 41 02.7	+0.2

TACH				*i* S	Sn	03 41 17.3	+0.2
TACH	**Talagante**	**0.85**	**344**	⇓*i*P	Pn	03 41 02.7	+0.2
TACH				*i* S	Sn	03 41 17.3	+0.2
PCH	**Pirque**	**0.86**	**8**	⇑*i*P	Pn	03 41 02.8	+0.2
PCH				*i* S	Sn	03 41 17.5	+0.2
PCH	**Pirque**	**0.86**	**8**	⇑*i*P	Pn	03 41 02.8	+0.2
PCH				*i* S	Sn	03 41 17.5	+0.2
SJCH	**San Jose de Ma**	**0.87**	**17**	⇓*i*P	Pn	03 41 02.9	+0.2
SJCH				*e*S	Sn	03 41 18.1	+0.7
SJCH	**San Jose de Ma**	**0.87**	**17**	⇓*i*P	Pn	03 41 02.9	+0.2
SJCH				*e*S	Sn	03 41 18.1	+0.7
SJCH				AML	AML	03 41 19.6	
	comp=N,1μm,0.4s						
ANTU	**Antumapu**	**0.91**	**2**	⇑*i*P	Pn	03 41 03.2	+0.2
ANTU				*i* S	Sn	03 41 18.6	+0.5
ANTU	**Antumapu**	**0.91**	**2**	⇑*i*P	Pn	03 41 03.2	+0.2
ANTU				*i* S	Sn	03 41 18.6	+0.5
ANTU				AML	AML	03 41 21.4	
	comp=N,2μm,0.3s						
FSR	**Penalolen**	**1.00**	**7**	*e*P	Pn	03 41 04.2	+0.2
FSR				*i* S	Sn	03 41 20.4	+0.6
FSR	**Penalolen**	**1.00**	**7**	*e*P	Pn	03 41 04.2	+0.2
FSR				*i* S	Sn	03 41 20.4	+0.6
FSR				AML	AML	03 41 21.6	
	comp=N,784nm,0.6s						
SAN	**Santiago**	**1.02**	**0**	*e*P	Pn	03 41 04.3	+0.1
SAN				*i* S	Sn	03 41 20.5	+0.4
SAN	**Santiago**	**1.02**	**0**	*e*P	Pn	03 41 04.3	+0.1
SAN				*i* S	Sn	03 41 20.5	+0.4
SAN				AML	AML	03 41 21.5	
	comp=N,2μm,0.6s						
LACH	**Col Las Americ**	**1.03**	**6**	⇑*i*P	Pn	03 41 04.4	+0.1
LACH				*i* S	Sn	03 41 20.7	+0.4
LACH				AML	AML	03 41 22.1	
	comp=N,936nm,0.5s						
CLCH	**Cerro Calan**	**1.08**	**6**	⇑*i*P	Pn	03 41 05.1	+0.3
CLCH				*i* S	Sn	03 41 21.7	+0.4
CLCH				AML	AML	03 41 22.9	
	comp=N,2μm,0.5s						
FCH	**Farellones**	**1.19**	**15**	⇓*i*P	Pn	03 41 08.0	+2.0
FCH				*i* S	Sn	03 41 26.3	+2.9
FCH				AML	AML	03 41 27.2	
	comp=E,886nm,0.3s						
TALC	**Talca**	**1.22**	**221**	⇑*i*P	Pn	03 41 06.1	-0.2
TALC				*i* S	Sn	03 41 24.0	0.0
TALC	**Talca**	**1.22**	**221**	⇑*i*P	Pn	03 41 06.1	-0.2
TALC				*i* S	Sn	03 41 24.0	0.0
TALC				AML	AML	03 41 25.4	
	comp=E,6μm,0.1s						
LCCH	**Las Cruces**	**1.25**	**323**	⇓*i*P	Pn	03 41 06.9	+0.2
LCCH				*i* S	Sn	03 41 25.0	+0.4
LCCH	**Las Cruces**	**1.25**	**323**	⇓*i*P	Pn	03 41 06.9	+0.2
LCCH				*i* S	Sn	03 41 25.0	+0.4
PEL	**Peldehue**	**1.33**	**359**	⇓*i*P	Pn	03 41 07.9	+0.3
PEL				*i* S	Sn	03 41 26.9	+0.7
PEL				AML	AML	03 41 29.3	
	comp=N,3μm,0.3s						
ROCH	**El Roble**	**1.53**	**349**	⇑*i*P	Pn	03 41 10.6	+0.6
ROCH				S	Sn	03 41 30.5	+0.1
ROCH	**El Roble**	**1.53**	**349**	⇑*i*P	Pn	03 41 10.4	+0.4
ROCH				⇑*i*P		03 41 10.6	
ROCH				*e*S	Sn	03 41 30.5	+0.1
ROCH				*i* S	Sn	03 41 31.4	+1.0
ROCH				AML	AML	03 41 35.6	
	comp=E,2μm,0.5s						
LNCH	**Linares**	**1.57**	**209**	⇑*i*P	Pn	03 41 10.6	+0.1
LNCH				*i* S	Sn	03 41 32.0	+0.6
LNCH	**Linares**	**1.57**	**209**	⇑*i*P	Pn	03 41 10.6	+0.1
LNCH				*i* S	Sn	03 41 32.0	+0.6
LNCH				AML	AML	03 41 33.0	
	comp=N,1μm,0.6s						
JACH	**Jahuel**	**1.79**	**2**	*e*P	Pn	03 41 13.5	+0.3
JACH				*i* S	Sn	03 41 37.0	+0.8
JACH	**Jahuel**	**1.79**	**2**	*e*P	Pn	03 41 13.5	+0.3
JACH				*i* S	Sn	03 41 37.0	+0.8
CCHI	**Chillan**	**2.41**	**208**	*e*P	Pn	03 41 20.4	-0.8
CCHI				*e*S	Sn	03 41 49.3	-1.2
CCHI	**Chillan**	**2.41**	**208**	*e*P	Pn	03 41 20.4	-0.8
CCHI				*e*S	Sn	03 41 49.3	-1.2
CCHI				AML	AML	03 41 50.7	
	comp=E,195nm,0.3s						
LCO	**Las Campanas**	**5.45**	**360**	Pn	Pn	03 42 01.1	-0.8
LCO				*e*S	Sn	03 43 01.2	-2.1
TRQA	**Tornquist**	**7.87**	**119**	*e*Pn	Pn	03 42 32.5	-2.1
	comp=E,3.0nm,0.8s						

*ISCJB **29** 03:43:36.7±0.8,36°.92N±0°.05×27°.93E±0°.05,h10km, Error ellipse: s-maj=6.9km s-min=5.4km az=153.4*
*CSEM **29** 03:43:36.8±0.6,36°.91N×27°.94E,h10km,ML1.6, Error ellipse: s-maj=12.8km s-min=9.9km az=171.0*
*ISK **29** 03:43:37.5,37°.01N×27°.75E,h5km,ML1.6*
*DDA **29** 03:43:39.6,36°.97N×27°.85E,h7km±2km,Md3.0*

ISC 29 03:43:38.0±0.9,36°.93N±0°.05×27°.87E±0°.06,h10km,n11, σ1°48/19,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.31**	**229**	*e*PG	**Pg**	**03 43 44.5**	**+0.3**
DAT				*e*SG	**Sg**	**03 43 50.2**	**+1.9**
DAT	**Datca**	**0.31**	**229**	*e*Pg	**Pg**	**03 43 44.5**	**+0.4**
DAT				*e*Sg	**Sg**	**03 43 50.2**	**+1.9**
MLSB	**Milas**	**0.37**	**349**	*e*PG	**Pg**	**03 43 44.0**	**-1.3**
MLSB	**Milas**	**0.37**	**349**	*e*Pg	**Pg**	**03 43 44.1**	**-1.2**
YER	**Yerkesik**	**0.39**	**59**	*e*PG	**Pg**	**03 43 47.9**	**+2.2**
BODT	**Bodrum**	**0.46**	**286**	*e*PG	**Pg**	**03 43 45.9**	**-1.2**
BODT				*e*SG	**Sg**	**03 43 52.0**	**-1.2**
BODT	**Bodrum**	**0.46**	**286**	*e*Pg	**Pg**	**03 43 45.9**	**-1.2**
BODT				*e*Sg	**Sg**	**03 43 52.0**	**-1.2**
TURN	**Turunc**	**0.59**	**95**	*i* P	**Pg**	**03 43 47.0**	**-2.5**
TURN				*i* S	**Sg**	**03 43 52.8**	**-4.5**
TURN	**Turunc**	**0.59**	**95**	*i* P	**Pg**	**03 43 47.0**	**-2.5**
TURN				*i* S	**Sg**	**03 43 52.8**	**-4.5**
AYDN	**Tasoluk**	**0.73**	**1**	*i* P	**Pg**	**03 43 53.1**	**+1.0**
AYDN				*i* S	**Sg**	**03 44 02.7**	**+1.1**
AYDN	**Tasoluk**	**0.73**	**1**	*i* P	**Pg**	**03 43 53.1**	**+1.0**
AYDN				*i* S	**Sg**	**03 44 02.7**	**+1.1**

IDC 29 03:47:09.5±3.3,17°.32S×75°.62W,h0km,mb4.1/1, mb1 4.0/3,mb1mx3.6/17,mbtmp4.0/3,ML3.9/2,MS2.7/1, Ms1 2.8/1,ms1mx2.5/25,Error ellipse: s-maj=66.5km s-min=30.3km az=42.0,Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**5.43**	**347**	Pn	Pn	03 48 32.7	+0.9
	2.8nm,0.3s,baz=162,slow=17,SNR=5.9						
NNA				Sn	Sn	03 49 34.4	-0.7
	5.1nm,0.3s,baz=211,slow=22,SNR=4.2						
LPAZ	**La Paz**	**7.24**	**83**	Pn	Pn	03 48 57.4	+0.7
	1.1nm,0.3s,baz=277,slow=8.8,SNR=39						
LPAZ				Sn	Sn	03 50 23.4	+3.7
	baz=27,slow=20,SNR=2.5						
LPAZ				LR	LR	03 52 11.3	
	comp=Z,54nm,20.1s,baz=92,slow=42						
BDFB	**Brasilia**	**26.51**	**90**	P	P	03 52 48.7	-0.3
	1.0nm,0.6s,baz=266,slow=13,SNR=3.5						
TORD	**Torodi Ar. Bea**	**82.09**	**74**	P	P	03 59 32.7	+0.2
	2.3nm,0.9s,baz=258,slow=5.2,SNR=12						

NNC 29 03:48:18.9±16.0,36°.72N×69°.13E,h0km,mb3.6,mpv3.5, 2C-3D,Error ellipse: s-maj=143.6km s-min=114.6km az=168.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.46**	**9**	⇓Pn	Pn	03 49 58.0	+2.7
	0.7nm,0.3s,baz=197,slow=14,SNR=16						
KK31				⇑Sn	Sn	03 51 12.4	+2.7
	1.6nm,0.3s,baz=197,slow=24,SNR=12						
TKM2	**Tokmak 2**	**7.94**	**37**	⇓Pn	Pn	03 50 13.5	-2.1
	2.5nm,0.6s						
TKM2				⇓Sn	Sn	03 51 43.7	-2.4
	1.3nm,0.7s						
AB31	**Akbulak array**	**14.20**	**335**	⇑P	Pn	03 51 41.4	+0.2
	0.1nm,0.3s,baz=163,slow=11,SNR=8.3						

*CSEM **29** 03:49:55.5±0.9,77°.45N×23°.00E,h2km,ML3.0, Error ellipse: s-maj=32.4km s-min=6.5km az=62.0*
*BER **29** 03:49:57.1±2.2,77°.48N×24°.35E,h15km±17km,MD2.5, ML3.5*
*ISCJB **29** 03:49:58.6±0.9,76°.99N±0°.06×19°.3E±0°.3,h10km, Error ellipse: s-maj=12.7km s-min=6.8km az=145.3*
*NAO **29** 03:50:01.7±1.8,77°.01N×18°.78E,h18km±16km,ML3.0*

ISC 29 03:50:00.7±0.9,77°.00N±0°.06×19°.0E±0°.3,h10km,n14, σ1°05/22,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.79**	**272**	*e*P	**Pg**	**03 50 16.5**	**+0.7**
HSP				*e*S	**Sg**	**03 50 25.6**	**-0.4**
SPA0	**Spitsbergen Ar**	**1.31**	**335**	Pg	**Pg**	**03 50 25.9**	**+0.1**
	baz=149,slow=18						
SPA0				Lg		03 50 42.2	
	baz=155,slow=28						
SPA0	**Spitsbergen Ar**	**1.31**	**335**	Pg	**Pg**	**03 50 26.0**	**+0.1**
	baz=149,slow=16,SNR=299						
KBS	**Kingsbay**	**2.43**	**326**	Pn	**Pn**	**03 50 40.7**	**+0.2**
KBS				Pg	**Pg**	**03 50 46.2**	**-1.1**
KBS				Lg		03 51 14.9	
KBS	**Kingsbay**	**2.43**	**326**	*e*P	**Pn**	**03 50 40.6**	**+0.2**
KBS				*e*Pg	**Pg**	**03 50 46.4**	**-0.9**
KBS				*e*S	**Sn**	**03 51 15.5**	**+5.3**
KBS				AML	AML	03 51 24.4	
	comp=Z,786nm,0.8s						
KBS	**Kingsbay**	**2.43**	**326**	Pn	**Pn**	**03 50 40.7**	**+0.3**
BJO	**Bjornoya**	**2.51**	**179**	*e*P	**Pn**	**03 50 47.0**	**+5.5**
BJO				*e*S	**Sn**	**03 51 21.6**	**+9.4**
BJO				AML	AML	03 51 26.1	
	comp=Z,167nm,0.7s						
BJO	**Bjornoya**	**2.51**	**179**	*e*P	**Pn**	**03 50 47.0**	**+5.5**
	SNR=50						
BJO				*e*S	**Sn**	**03 51 21.6**	**+9.5**
	comp=Z,167nm,0.7s,SNR=50						
TRO	**Tromso**	**7.41**	**180**	*e*Pn	**Pn**	**03 51 51.3**	**+2.5**
TRO	**Tromso**	**7.41**	**180**	*e*Pn	**Pn**	**03 51 51.3**	**+2.6**
	SNR=50						
ARA0	**ARCESS Array S**	**7.73**	**163**	Pn	**Pn**	**03 51 52.5**	**-0.6**
	baz=355,slow=11						
ARA0				Sn	**Sn**	**03 53 14.9**	**-5.6**
	baz=1.3,slow=22						
ARA0	**ARCESS Array S**	**7.73**	**163**	Pn	**Pn**	**03 51 52.5**	**-0.6**
	baz=355,slow=11,SNR=0.1						
KTK1	**Kautokeino**	**8.13**	**169**	*e*Pn	**Pn**	**03 51 59.1**	**+0.6**
KTK1				*e*Sn	**Sn**	**03 53 28.5**	**-1.7**
KTK1	**Kautokeino**	**8.13**	**169**	*e*Pn	**Pn**	**03 51 59.1**	**+0.6**
	SNR=50						

*ISK **29** 03:57:48.8,36°.96N×29°.16E,h8km,MD3.0*
*ISCJB **29** 03:57:49.3±0.5,36°.97N±0°.03×29°.13E±0°.03,h3km±6km, Error ellipse: s-maj=4.7km s-min=4.7km az=13.4*
*CSEM **29** 03:57:49.5±0.2,36°.97N×29°.13E,h8km,MD3.0,Error ellipse: s-maj=4.1km s-min=3.5km az=33.0*
*DDA **29** 03:57:50.4,37°.01N×29°.13E,h7km±6km,Md3.2*

ISC 29 03:57:49.7±0.5,36°.96N±0°.03×29°.14E±0°.04,h8km±5km, n34,σ0°62/50,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.33**	**188**	PG	**Pg**	**03 57 55.6**	**-0.5**
FETY				*e*SG	**Sg**	**03 58 00.8**	**+0.4**
FETY	**Fethiye**	**0.33**	**188**	*i* Pg	**Pg**	**03 57 55.6**	**-0.5**
FETY				*e*Sg	**Sg**	**03 58 00.8**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.35**	**56**	*e*PG	**Pg**	**03 57 55.9**	**-0.6**
GLHS				*e*SG	**Sg**	**03 58 01.2**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.35**	**56**	*e*Pg	**Pg**	**03 57 55.9**	**-0.6**
GLHS				*e*Sg	**Sg**	**03 58 01.2**	**+0.1**
ELL	**Elmali**	**0.65**	**109**	*e*PG	**Pg**	**03 58 01.5**	**-0.8**
ELL				*e*SG	**Sg**	**03 58 11.1**	**+0.3**
ELL	**Elmali**	**0.65**	**109**	*e*Pg	**Pg**	**03 58 01.5**	**-0.8**
ELL				*e*Sg	**Sg**	**03 58 11.1**	**+0.3**
YER	**Yerkesik**	**0.70**	**285**	*e*PG	**Pg**	**03 58 03.2**	**0.0**
YER	**Yerkesik**	**0.70**	**285**	*e*Pg	**Pg**	**03 58 03.2**	**-0.1**
DNZL	**Cakiroluk**	**0.73**	**354**	*i* P	**Pg**	**03 58 03.0**	**-0.8**
DNZL				*i* S	**Sg**	**03 58 14.1**	**+0.8**
DNZL	**Cakiroluk**	**0.73**	**354**	*i* P	**Pg**	**03 58 03.0**	**-0.8**
DNZL				*i* S	**Sg**	**03 58 14.1**	**+0.8**
DENT	**Denizli**	**0.80**	**354**	*e*PG	**Pg**	**03 58 04.5**	**-0.5**
DENT	**Denizli**	**0.80**	**354**	*e*Pg	**Pg**	**03 58 04.5**	**-0.5**
AKAS	**Kas**	**0.82**	**152**	*i* P	**Pg**	**03 58 04.8**	**-0.5**
AKAS				*i* S	**Sg**	**03 58 19.9**	**+4.0**
AKAS	**Kas**	**0.82**	**152**	*i* P	**Pg**	**03 58 04.8**	**-0.6**
AKAS				*i* S	**Sg**	**03 58 19.9**	**+3.9**
KORT	**Korkueli**	**0.97**	**87**	*i* P	**Pg**	**03 58 09.3**	**+1.0**
KORT				*i* S	**Sg**	**03 58 24.4**	**+3.4**
KORT	**Korkueli**	**0.97**	**87**	*i* P	**Pg**	**03 58 09.4**	**+1.1**
KORT				*i* S	**Sg**	**03 58 24.4**	**+3.4**
MLSB	**Milas**	**1.14**	**288**	*e*PN	**Pg**	**03 58 11.3**	**-0.2**
MLSB	**Milas**	**1.14**	**288**	*e*Pn	**Pg**	**03 58 11.3**	**-0.2**
AYDN	**Tasoluk**	**1.22**	**305**	*i* P	**Pb**	**03 58 13.4**	**+0.4**
AYDN				*i* S	**Sb**	**03 58 29.4**	**+0.4**
AYDN	**Tasoluk**	**1.22**	**305**	*i* P	**Pb**	**03 58 13.4**	**+0.3**
AYDN				*i* S	**Sb**	**03 58 29.4**	**+0.4**
BCK	**Bucak**	**1.26**	**66**	*e*PN	**Pn**	**03 58 13.1**	**-0.6**
BCK	**Bucak**	**1.26**	**66**	*e*Pn	**Pn**	**03 58 13.1**	**-0.5**
DAT	**Datca**	**1.27**	**260**	*e*PN	**Pn**	**03 58 14.2**	**+0.5**
DAT	**Datca**	**1.27**	**260**	*e*Pn	**Pn**	**03 58 14.3**	**+0.5**
KHAL	**Karahalli**	**1.44**	**11**	*i* P	**Pn**	**03 58 16.1**	**0.0**
KHAL				*i* S	**Sn**	**03 58 34.9**	**-0.2**
KHAL	**Karahalli**	**1.44**	**11**	*i* P	**Pn**	**03 58 16.0**	**0.0**
KHAL				*i* S	**Sn**	**03 58 34.9**	**-0.2**
BODT	**Bodrum**	**1.47**	**275**	*e*PN	**Pn**	**03 58 16.3**	**-0.1**
BODT	**Bodrum**	**1.47**	**275**	*e*Pn	**Pn**	**03 58 16.3**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.57**	**70**	*e*PN	**Pn**	**03 58 17.5**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.57**	**70**	*e*Pn	**Pn**	**03 58 17.5**	**-0.4**
KULA	**Kula-Manisa**	**1.60**	**346**	*e*PN	**Pn**	**03 58 18.6**	**+0.3**
KULA	**Kula-Manisa**	**1.60**	**346**	*e*Pn	**Pn**	**03 58 18.6**	**+0.4**
SHUT	**Suhut-Afyon**	**1.94**	**35**	*e*PN	**Pn**	**03 58 23.0**	**0.0**
SHUT	**Suhut-Afyon**	**1.94**	**35**	*e*Pn	**Pn**	**03 58 23.0**	**0.0**

*IDC **29** 03:57:46.6±1.1,26°.85N×55°.90E,h0km,mb3.8/13, mb1 3.9/13,mb1mx3.8/27,mbtmp3.8/13,Error ellipse: s-maj=25.6km s-min=18.9km az=9.0*
*CSEM **29** 03:57:48.9±0.2,26°.92N×55°.95E,h10km,mb4.3/26,Error ellipse: s-maj=7.3km s-min=5.5km az=81.0*
*TEH **29** 03:57:48.0,26°.73N×56°.12E,h6km*
*SGS **29** 03:57:48.6,26°.89N×56°.14E,h11km*
*NEIC **29** 03:57:48.0,26°.73N×56°.12E,h6km,mb4.3/29, MN3.7(TEH),After TEH.*
*THR **29** 03:57:48.0±0.4,26°.88N×55°.92E,h6km±6km,ML3.8*
*MOS **29** 03:57:49.9±0.9,26°.79N×55°.85E,h33km,mb4.5/29,Error ellipse: s-maj=14.8km s-min=5.1km az=130.3*
*ISCJB **29** 03:57:50.2±0.7,26°.93N±0°.03×55°.94E±0°.04,h32km±5km, mb4.1/47,Error ellipse: s-maj=6.4km s-min=4.0km az=165.1*
*OMAN **29** 03:57:51.1±3.9,26°.85N×56°.16E,h7km±17km,Error ellipse: s-maj=36.8km s-min=23.7km az=79.0*

ISC 29 03:57:51.3±0.7,26°.92N±0°.03×55°.99E±0°.04,h29km±5km, n290,σ1°09/295,mb4.1/47,24C-12D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.51**	**18**	*e*Pg	**Pb**	**03 57 59.2**	**-2.6**
BNDS				*e*Sg	**Sb**	**03 58 07.5**	**-1.4**
IBND	**Bandar-abas**	**0.72**	**42**	*e*Sg	**Sb**	**03 58 13.1**	**-1.8**
IBND				*e*Pg	**Pb**	**03 58 03.0**	**-2.3**
BANOM	**Banah**	**1.03**	**164**	P	**Pn**	**03 58 09.1**	**-0.7**
	SNR=497						
BANOM				S	**Sn**	**03 58 22.1**	**-1.1**
BANOM	**Banah**	**1.03**	**164**	P	**Pn**	**03 58 09.1**	**-0.7**
	SNR=497						
BANOM				⇓		03 58 22.1	
BANOM				⇓S	**Sn**	**03 58 22.1**	**-1.1**
BANOM				ml		03 58 25.3	
	SNR=578						
HATD	**Hatta, Dubai**	**2.09**	**177**	P	**Pn**	**03 58 25.7**	**+1.3**
HATD	**Hatta, Dubai**	**2.09**	**177**	⇓P	**Pn**	**03 58 25.7**	**+1.4**
ASHO	**Ashiyiah**	**2.23**	**178**	P	**Pn**	**03 58 27.6**	**+1.3**
	SNR=35						
ASHO				ml		03 59 11.5	
	SNR=270						
ASUD	**Al Ashush, Dub**	**2.36**	**195**	P	**Pn**	**03 58 30.1**	**+2.0**
	SNR=43						
ASUD	**Al Ashush, Dub**	**2.36**	**195**	P	**Pn**	**03 58 30.1**	**+2.0**
	SNR=43						
ASUD				ml		03 59 20.9	
	SNR=96						
KRBR	**Kerman**	**3.13**	**12**	*e*Pn	**Pn**	**03 58 40.9**	**+2.3**
KRBR				AML	AML	03 59 32.5	
	comp=N,220nm,0.5s						
KRBR				AML	AML	03 59 39.8	
	comp=E,262nm,0.5s						
KRBR	**Kerman**	**3.13**	**12**	*e*Pn	**Pn**	**03 58 40.9**	**+2.2**
HOQ	**Hoqain**	**3.53**	**160**	P	**Pn**	**03 58 45.5**	**+1.3**
HOQ	**Hoqain**	**3.53**	**160**	⇓P	**Pn**	**03 58 45.5**	**+1.3**
ISRV	**Sarvestan**	**3.54**	**315**	Pn	**Pn**	**03 58 46.0**	**+1.7**
ISRV	**Sarvestan**	**3.54**	**315**	*e*Pn	**Pn**	**03 58 45.8**	**+1.5**
ISRV				*e*		04 00 14.9	
	comp=Z,3μm,0.4s						
ISRV	**Sarvestan**	**3.54**	**315**	*e*Pn	**Pn**	**03 58 45.8**	**+1.5**
ARQ	**Araqi**	**3.60**	**172**	P	**Pn**	**03 58 47.1**	**+1.9**
ARQ	**Araqi**	**3.60**	**172**	⇑P	**Pn**	**03 58 47.1**	**+1.9**
IPAR	**Pars**	**3.90**	**319**	Pn	**Pn**	**03 58 51.0**	**+1.7**
IPAR	**Pars**	**3.90**	**319**	*e*Pn	**Pn**	**03 58 51.0**	**+1.7**
IPAR				*e*		04 00 13.2	
	comp=Z,732nm,0.4s						
IPAR	**Pars**	**3.90**	**319**	Pn	**Pn**	**03 58 51.0**	**+1.7**
SMDO	**Samad**	**4.27**	**154**	⇓P	**Pn**	**03 58 55.6**	**+1.2**
BSY	**Bisya**	**4.30**	**165**	⇑P	**Pn**	**03 58 55.6**	**+0.9**
IMEH	**Mehriz**	**4.62**	**345**	Pn	**Pn**	**03 59 00.6**	**+1.5**
IMEH				Sn	**Sn**	**03 59 54.5**	**+2.7**
IMEH	**Mehriz**	**4.62**	**345**	*e*Pn	**Pn**	**03 59 01.5**	**+2.4**
IMEH				*e*		03 59 11.1	
	comp=Z,563nm,0.3s						
IMEH				*e*Sn	**Sn**	**03 59 54.7**	**+2.9**
IMEH	**Mehriz**	**4.62**	**345**	Pn	**Pn**	**03 59 00.6**	**+1.5**
IMEH				Sn	**Sn**	**03 59 54.5**	**+2.7**
IBAF	**Bafgh**	**4.67**	**356**	Pn	**Pn**	**03 59 01.1**	**+1.2**
IBAF	**Bafgh**	**4.67**	**356**	*e*Pn	**Pn**	**03 59 00.9**	**+1.0**
IBAF				*e*		04 00 30.2	
	comp=Z,511nm,0.4s						
IBAF	**Bafgh**	**4.67**	**356**	*e*Pn	**Pn**	**03 59 00.9**	**+1.0**
WBK	**Wadi Bani Khal**	**5.07**	**147**	⇓P	**Pn**	**03 59 05.5**	**+0.1**
ISAD	**Sadrabad**	**5.37**	**339**	Pn	**Pn**	**03 59 10.9**	**+1.4**
ISAD	**Sadrabad**	**5.37**	**339**	*e*Pn	**Pn**	**03 59 12.4**	**+2.9**
ISAD				*e*		03 59 27.4	
	comp=Z,470nm,0.2s						
ISAD	**Sadrabad**	**5.37**	**339**	Pn	**Pn**	**03 59 10.9**	**+1.4**
BTHS		**5.46**	**240**	P	**Pn**	**03 59 10.8**	**0.0**
BTHS		**5.46**	**240**	P	**Pn**	**03 59 10.8**	**0.0**
ICHK	**Chekchek**	**5.49**	**346**	Pn	**Pn**	**03 59 12.3**	**+1.2**
ICHK	**Chekchek**	**5.49**	**346**	*e*Pn	**Pn**	**03 59 11.7**	**+0.6**
ICHK				*e*		03 59 18.6	
	comp=Z,432nm,0.2s						
ICHK	**Chekchek**	**5.49**	**346**	*e*Pn	**Pn**	**03 59 11.7**	**+0.6**
IGAR	**Gharneh**	**6.46**	**329**	*e*Pn	**Pn**	**03 59 26.1**	**+1.7**
IGAR				*e*		03 59 32.4	
	comp=Z,345nm,0.1s						
NASN	**Na'in**	**6.48**	**335**	*e*Pn	**Pn**	**03 59 26.6**	**+1.9**
NASN	**Na'in**	**6.48**	**335**	*e*Pn	**Pn**	**03 59 26.6**	**+1.9**
IZEF	**Zefreh**	**6.75**	**333**	Pn	**Pn**	**03 59 29.7**	**+1.2**
IZEF	**Zefreh**	**6.75**	**333**	*e*Pn	**Pn**	**03 59 28.8**	**+0.3**
IZEF				*e*		03 59 30.0	
	comp=Z,168nm,0.2s						
IZEF	**Zefreh**	**6.75**	**333**	*e*Pn	**Pn**	**03 59 28.8**	**+0.3**
HRDDS		**7.14**	**238**	S	**Sn**	**04 00 51.4**	**-2.5**
HRDDS		**7.14**	**238**	P	**Pn**	**03 59 32.9**	**-0.9**
IPIR	**Pirpir**	**7.26**	**324**	Pn	**Pn**	**03 59 36.5**	**+1.1**
IPIR	**Pirpir**	**7.26**	**324**	*e*Pn	**Pn**	**03 59 37.0**	**+1.6**
IPIR				*e*		03 59 38.1	
	comp=Z,971nm,0.3s						
IPIR	**Pirpir**	**7.26**	**324**	Pn	**Pn**	**03 59 36.5**	**+1.1**
IKLH	**Kolahrood**	**7.44**	**330**	Pn	**Pn**	**03 59 38.9**	**+1.0**
IKLH	**Kolahrood**	**7.44**	**330**	*e*Pn	**Pn**	**03 59 38.8**	**+0.9**
IKLH				*e*		03 59 46.9	
	comp=Z,157nm,0.2s						
IKLH	**Kolahrood**	**7.44**	**330**	*e*Pn	**Pn**	**03 59 38.8**	**+0.9**
RDF	**Al-Radifah**	**7.73**	**287**	*e*P	**Pn**	**03 59 42.1**	**+0.2**
RDF	**Al-Radifah**	**7.73**	**287**	*e*P	**Pn**	**03 59 42.1**	**+0.1**
UMR	**Umm Al-Rimmam**	**7.76**	**292**	*e*P	**Pn**	**03 59 42.3**	**0.0**
UMR	**Umm Al-Rimmam**	**7.76**	**292**	*e*P	**Pn**	**03 59 42.3**	**0.0**
MIB	**Mutribah**	**8.15**	**293**	*e*P	**Pn**	**03 59 47.9**	**+0.3**
MIB				AML	AML	04 01 23.3	
	comp=Z,14nm,0.4s						
MIB	**Mutribah**	**8.15**	**293**	*e*P	**Pn**	**03 59 47.9**	**+0.2**
ASYS		**10.39**	**276**	P	**Pn**	**04 00 16.5**	**-1.9**
ASYS		**10.39**	**276**	P	**Pn**	**04 00 16.5**	**-1.9**
GNI	**Garni**	**16.17**	**328**	Pn	**Pn**	**04 01 37.3**	**+0.9**
GNI	**Garni**	**16.17**	**328**	*i* P	**Pn**	**04 01 38.7**	**+2.2**
GNI	**Garni**	**16.17**	**328**	Pn	**Pn**	**04 01 37.3**	**+0.8**
GNI	**Garni**	**16.17**	**328**	*i* P	**Pn**	**04 01 38.7**	**+2.2**
ASF	**Jabal al

PLOR	Plostina	30.00 317	⇑iP	P	04 03 58.4	+1.1
PLOR	Plostina	30.00 317	P	P	04 03 58.4	+1.1
MLR	Muntele Rosu	30.26 316	⇑P	P	04 04 01.9	+2.2
MLR	Muntele Rosu	30.26 316	⇑iP	P	04 04 01.9	+2.2
MLR	Muntele Rosu	30.26 316	P	P	04 04 01.9	+2.2
VOIR		30.80 315	⇓P	P	04 04 04.7	+0.3
VOIR		30.80 315	⇓iP	P	04 04 04.7	+0.3
VOIR		30.80 315	P	P	04 04 04.7	+0.3
AKASG	Malin Array Be	31.30 327	P	P	04 04 08.1	-0.6
	comp=Z,1.6nm,0.5s,mb4.1,baz=134,slow=8.4,SNR=11					
AKASG	Malin Array Be	31.30 327	iP	P	04 04 08.1	-0.6
AKASG			pmax	pmax		
	comp=Z,2.0nm,0.5s					
AKASG	Malin Array Be	31.30 327	P	P	04 04 08.1	-0.6
BURAR	Bucovina Array	31.72 319	⇑P	P	04 04 12.6	+0.1
BURAR	Bucovina Array	31.72 319	⇑iP	P	04 04 12.6	+0.1
DRGR		32.86 316	⇑P	P	04 04 22.6	+0.1
DRGR		32.86 316	⇑iP	P	04 04 22.5	0.0
DRGR		32.86 316	P	P	04 04 22.6	+0.1
KOLS	Kolonicke sedl	34.08 319	eP	P	04 04 34.0	+0.9
KOLS	Kolonicke sedl	34.08 319	eP	P	04 04 34.0	+0.9
KOLS	Kolonicke sedl	34.08 319	eP	P	04 04 34.0	+0.9
CRVS	Cervenica-Dubn	34.54 319	eP	P	04 04 36.9	-0.2
CRVS	Cervenica-Dubn	34.54 319	eP	P	04 04 36.9	-0.2
CRVS	Cervenica-Dubn	34.54 319	eP	P	04 04 36.9	-0.2
CRVS	Cervenica-Dubn	34.54 319	eP	P	04 04 36.9	-0.2
KECS	Kecovo	34.94 318	eP	P	04 04 41.8	+1.3
KECS	Kecovo	34.94 318	eP	P	04 04 41.8	+1.3
PKSM	Moragy	35.23 313	⇓P	P	04 04 42.8	-0.2
PKSM	Moragy	35.23 313	⇓iP	P	04 04 42.8	-0.2
PKSM	Moragy	35.23 313	P	P	04 04 42.8	-0.2
OJC	Ojcow	36.10 320	eP	P	04 04 50.5	0.0
OJC	Ojcow	36.10 320	eP	P	04 04 50.5	0.0
OJC	Ojcow	36.10 320	eP	P	04 04 50.5	0.0
MORC	Moravsky Berou	37.23 318	eP	P	04 04 59.9	-0.2
	comp=Z,3.5nm,0.6s,mb4.4					
MORC	Moravsky Berou	37.23 318	eP	P	04 04 59.9	-0.3
MORC			pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3					
MORC	Moravsky Berou	37.23 318	⇓iP	P	04 05 00.6	+0.4
MORC	Moravsky Berou	37.23 318	eP	P	04 04 59.9	-0.3
	comp=Z,3.5nm,0.6s,mb4.4					
DPC	Dobruska-Polom	38.18 319	eP	P	04 05 08.2	+0.1
	comp=Z,70nm,2.6s,mb4.9					
DPC	Dobruska-Polom	38.18 319	eP	P	04 05 07.9	-0.3
DPC	Dobruska-Polom	38.18 319	eP	P	04 05 07.9	-0.3
DPC	Dobruska-Polom	38.18 319	eP	P	04 05 07.9	-0.3
GERES	GERESS Array B	39.25 315	P	P	04 05 16.7	-0.5
	comp=Z,0.6nm,0.4s,mb3.6,baz=100,slow=7.5,SNR=9.7					
GERES	GERESS Array B	39.25 315	P	P	04 05 16.7	-0.5
GERES			pmax	pmax		
	comp=Z,1.0nm,0.4s					
GERES	GERESS Array B	39.25 315	P	P	04 05 16.7	-0.5
KHC	Kasperske Hory	39.42 316	eP	P	04 05 17.3	-1.3
	comp=Z,3.1nm,0.8s,mb4.1					
KHC	Kasperske Hory	39.42 316	eP	P	04 05 17.5	-1.1
KHC	Kasperske Hory	39.42 316	eP	P	04 05 17.5	-1.1
KHC	Kasperske Hory	39.42 316	eP	P	04 05 17.5	-1.1
BRG	Berggiesshubel	39.78 318	e(P)	P	04 05 21.3	-0.3
	comp=Z,3.7nm,1.0s,mb4.1					
BRG	Berggiesshubel	39.78 318	eP	P	04 05 21.3	-0.3
BRG			pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8					
BRG	Berggiesshubel	39.78 318	eP	P	04 05 21.3	-0.3
	comp=Z,2.0nm,1.0s,mb3.8					
FINES	FINESS Array B	39.94 338	P	P	04 05 22.2	-0.5
	comp=Z,2.7nm,0.7s,mb4.1,baz=144,slow=12,SNR=5.7					
FINES	FINESS Array B	39.94 338	P	P	04 05 22.2	-0.5
FINES			pmax	pmax		
	comp=Z,3.0nm,0.7s					
FINES	FINESS Array B	39.94 338	P	P	04 05 22.2	-0.5
WTTA	Wattenberg	40.14 312	⇑iP	P	04 05 24.1	-0.4
	comp=Z,5.1nm,0.5s,mb4.5					
CLL	Collm	40.49 319	eP	P	04 05 26.0	-1.4
CLL	Collm	40.49 319	eP	P	04 05 26.0	-1.4
CLL	Collm	40.49 319	eP	P	04 05 26.0	-1.4
CLL	Collm	40.49 319	eP	P	04 05 26.0	-1.4
MOTA	Moosalm	40.51 312	⇑iP	P	04 05 26.8	-0.9
	comp=Z,4.0nm,0.5s,mb4.3					
FETA	Feichten	40.68 312	⇑iP	P	04 05 28.6	-0.4
	comp=Z,9.1nm,0.9s,mb4.4					
DAVA	Damuels	41.30 312	⇑iP	P	04 05 33.4	-0.8
	comp=Z,12nm,0.5s,mb4.8					
SBF	Sospel	42.41 306	eP	P	04 05 42.6	-0.6
	comp=Z,18nm,0.9s,mb4.4					
SBF	Sospel	42.41 306	eP	P	04 05 42.6	-0.6
	comp=Z,9.1nm,0.9s,mb4.4					
SBF	Sospel	42.41 306	eP	P	04 05 42.6	-0.6
SBF			pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4					
SBF	Sospel	42.41 306	eP	P	04 05 42.6	-0.6
	comp=Z,9.1nm,0.9s,mb4.4					
MBDF	Montbardon	42.99 308	eP	P	04 05 47.6	-0.3
	comp=Z,7.6nm,0.8s,mb4.2					
MBDF	Montbardon	42.99 308	eP	P	04 05 47.6	-0.3
	comp=Z,3.8nm,0.8s,mb4.2					
MBDF	Montbardon	42.99 308	eP	P	04 05 47.6	-0.3
MBDF			pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2					
MBDF	Montbardon	42.99 308	eP	P	04 05 47.6	-0.3
	comp=Z,3.8nm,0.8s,mb4.2					
LPG	La Plagne	43.11 309	eP	P	04 05 47.8	-1.1
	comp=Z,7.0nm,0.8s,mb4.1					
LPG	La Plagne	43.11 309	eP	P	04 05 47.8	-1.1
	comp=Z,3.5nm,0.8s,mb4.1					
LPG	La Plagne	43.11 309	eP	P	04 05 47.8	-1.1
LPG			pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2					
LPG	La Plagne	43.11 309	eP	P	04 05 47.8	-1.1
	comp=Z,3.5nm,0.8s,mb4.1					
LPL	La Plagne	43.12 309	eP	P	04 05 47.9	-1.1
	comp=Z,8.2nm,0.9s,mb4.1					
LPL	La Plagne	43.12 309	eP	P	04 05 47.9	-1.1
	comp=Z,4.1nm,0.9s,mb4.2					
LPL	La Plagne	43.12 309	eP	P	04 05 47.9	-1.1
LPL			pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2					
LPL	La Plagne	43.12 309	eP	P	04 05 47.9	-1.1
	comp=Z,4.1nm,0.9s,mb4.2					
ECH	Echery	43.30 313	eP	P	04 05 49.4	-0.9
	comp=Z,4.3nm,1.1s,mb4.1					
ECH	Echery	43.30 313	eP	P	04 05 49.4	-1.0
ECH			pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1					
ECH	Echery	43.30 313	eP	P	04 05 49.4	-1.0
	comp=Z,4.3nm,1.1s,mb4.1					
ORIF	Oris-en-Rattie	43.64 308	eP	P	04 05 53.0	-0.2
	comp=Z,3.3nm,0.7s,mb3.9					
ORIF	Oris-en-Rattie	43.64 308	eP	P	04 05 53.0	-0.2
	comp=Z,1.6nm,0.7s,mb3.9					
ORIF	Oris-en-Rattie	43.64 308	eP	P	04 05 53.0	-0.2
ORIF			pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0					
ORIF	Oris-en-Rattie	43.64 308	eP	P	04 05 53.0	-0.2
	comp=Z,1.6nm,0.7s,mb3.9					
CABF	La Chapelle	43.73 310	eP	P	04 05 53.2	-0.7
	comp=Z,6.1nm,0.6s,mb4.2					
CABF	La Chapelle	43.73 310	eP	P	04 05 53.2	-0.7
	comp=Z,3.0nm,0.6s,mb4.2					
CABF	La Chapelle	43.73 310	eP	P	04 05 53.2	-0.7
CABF			pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2					
CABF	La Chapelle	43.73 310	eP	P	04 05 53.2	-0.7
	comp=Z,3.0nm,0.6s,mb4.2					
SMRF	Simiane la Rot	43.76 306	eP	P	04 05 53.6	-0.5
SMRF	Simiane la Rot	43.76 306	eP	P	04 05 53.6	-0.5
SONM	Songino Array	44.26 48	P	P	04 05 59.7	+1.5
	comp=Z,0.6nm,0.7s,mb3.4,baz=268,slow=7.0,SNR=3.6					
SONM	Songino Array	44.26 48	P	P	04 05 59.7	+1.6
SONM			pmax	pmax		
	comp=Z,1.0nm,0.7s					
SONM	Songino Array	44.26 48	P	P	04 05 59.7	+1.6
VIVF	Saint-Julien-l	44.49 308	eP	P	04 05 58.8	-1.2
	comp=Z,5.5nm,0.8s,mb4.0					
VIVF	Saint-Julien-l	44.49 308	eP	P	04 05 58.8	-1.2
VIVF	Saint-Julien-l	44.49 308	eP	P	04 05 58.8	-1.2
VIVF			pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1					
VIVF	Saint-Julien-l	44.49 308	eP	P	04 05 58.8	-1.2
	comp=Z,2.8nm,0.8s,mb4.0					
MEZF	Maizieres J'vi	44.73 313	eP	P	04 06 01.2	-0.7
MEZF	Maizieres J'vi	44.73 313	eP	P	04 06 01.2	-0.7
LASF	Ste Croix	45.00 306	eP	P	04 06 03.3	-0.8
	comp=Z,8.6nm,0.8s,mb4.3					
LASF	Ste Croix	45.00 306	eP	P	04 06 03.3	-0.8
GIVF	Givet	45.17 315	eP	P	04 06 05.6	+0.2
GIVF	Givet	45.17 315	eP	P	04 06 05.6	+0.2
GIVF	Givet	45.17 315	eP	P	04 06 05.6	+0.2
SMF	Signal de Mont	45.27 310	eP	P	04 06 05.1	-1.1
	comp=Z,15nm,0.9s,mb4.5					
SMF	Signal de Mont	45.27 310	eP	P	04 06 05.1	-1.1
	comp=Z,7.6nm,0.9s,mb4.5					
SMF	Signal de Mont	45.27 310	eP	P	04 06 05.1	-1.1
SMF			pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5					
SMF	Signal de Mont	45.27 310	eP	P	04 06 05.1	-1.1
	comp=Z,7.6nm,0.9s,mb4.5					
LOR	Lormes	45.33 311	eP	P	04 06 05.6	-1.1
LOR	Lormes	45.33 311	eP	P	04 06 05.6	-1.1
LOR	Lormes	45.33 311	eP	P	04 06 05.6	-1.1
SSF	Saint Saulge	45.55 311	⇑iP	P	04 06 07.5	-0.9
	comp=Z,4.7nm,0.6s,mb4.3					
SSF	Saint Saulge	45.55 311	⇑iP	P	04 06 07.5	-0.9
	comp=Z,2.3nm,0.6s,mb4.3					
SSF	Saint Saulge	45.55 311	⇑iP	P	04 06 07.5	-0.9
SSF			pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2					
SSF	Saint Saulge	45.55 311	⇑iP	P	04 06 07.5	-0.9
	comp=Z,2.3nm,0.6s,mb4.3					
BAIF	Baives	45.55 315	eP	P	04 06 08.6	+0.2
BAIF	Baives	45.55 315	eP	P	04 06 08.6	+0.2
BAIF	Baives	45.55 315	eP	P	04 06 08.6	+0.2
AVF	Avril sur Loir	45.62 310	eP	P	04 06 07.7	-1.3
	comp=Z,4.3nm,0.7s,mb4.2					
AVF	Avril sur Loir	45.62 310	eP	P	04 06 07.7	-1.3
	comp=Z,2.2nm,0.7s,mb4.2					
AVF	Avril sur Loir	45.62 310	eP	P	04 06 07.7	-1.3
AVF			pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2					
AVF	Avril sur Loir	45.62 310	eP	P	04 06 07.7	-1.3
	comp=Z,2.2nm,0.7s,mb4.2					
TAM	Tamanrasset	45.74 276	eP	P	04 06 11.1	+0.8
	comp=Z,3.7nm,0.9s,mb4.3					
TAM	Tamanrasset	45.74 276	eP	P	04 06 11.1	+0.8
TAM			pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3					
TAM	Tamanrasset	45.74 276	eP	P	04 06 11.1	+0.8
	comp=Z,3.7nm,0.9s,mb4.3					
BGF	Bois d'Agland	45.94 310	eP	P	04 06 10.5	-1.0
	comp=Z,8.3nm,0.6s,mb4.5					
BGF	Bois d'Agland	45.94 310	eP	P	04 06 10.5	-1.0
	comp=Z,4.2nm,0.6s,mb4.5					
BGF	Bois d'Agland	45.94 310	eP	P	04 06 10.5	-1.0
BGF			pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5					
BGF	Bois d'Agland	45.94 310	eP	P	04 06 10.5	-1.0
	comp=Z,4.2nm,0.6s,mb4.5					
MTLF	Montolieu	46.14 305	eP	P	04 06 13.0	-0.1
	comp=Z,6.9nm,0.8s,mb4.3					
MTLF	Montolieu	46.14 305	eP	P	04 06 13.0	-0.1
	comp=Z,3.5nm,0.8s,mb4.3					
MTLF	Montolieu	46.14 305	eP	P	04 06 13.0	-0.1
MTLF			pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3					
MTLF	Montolieu	46.14 305	eP	P	04 06 13.0	-0.1
	comp=Z,3.5nm,0.8s,mb4.3					
HYF	Humbligny	46.16 311	eP	P	04 06 12.9	-0.3
HYF	Humbligny	46.16 311	eP	P	04 06 12.9	-0.3
CAF	Calviac	46.34 307	eP	P	04 06 14.2	-0.5
	comp=Z,8.5nm,0.8s,mb4.4					
CAF	Calviac	46.34 307	eP	P	04 06 14.2	-0.5
	comp=Z,4.3nm,0.8s,mb4.4					
CAF	Calviac	46.34 307	eP	P	04 06 14.2	-0.5
CAF			pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4					
CAF	Calviac	46.34 307	eP	P	04 06 14.2	-0.5
	comp=Z,4.2nm,0.8s,mb4.4					
TCF	Toulx Ste Croi	46.35 309	⇑iP	P	04 06 14.0	-0.7
	comp=Z,3.8nm,0.6s,mb4.2					
TCF	Toulx Ste Croi	46.35 309	⇑iP	P	04 06 14.0	-0.7
	comp=Z,1.9nm,0.6s,mb4.2					
TCF	Toulx Ste Croi	46.35 309	⇑iP	P	04 06 14.0	-0.7
TCF			pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2					
TCF	Toulx Ste Croi	46.35 309	⇑iP	P	04 06 14.0	-0.7
	comp=Z,1.9nm,0.6s,mb4.2					
RJF	Les Rejaudoux	46.75 308	eP	P	04 06 17.6	-0.3
	comp=Z,9.7nm,1.0s,mb4.4					
RJF	Les Rejaudoux	46.75 308	eP	P	04 06 17.6	-0.3
	comp=Z,4.8nm,1.0s,mb4.4					
RJF	Les Rejaudoux	46.75 308	eP	P	04 06 17.6	-0.3
RJF			pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4					
RJF	Les Rejaudoux	46.75 308	eP	P	04 06 17.6	-0.3
	comp=Z,4.8nm,1.0s,mb4.4					
LFF	La Frestale	47.28 307	eP	P	04 06 21.7	-0.3
	comp=Z,8.4nm,0.7s,mb4.5					
LFF	La Frestale	47.28 307	eP	P	04 06 21.7	-0.3
	comp=Z,4.2nm,0.7s,mb4.5					
LFF	La Frestale	47.28 307	eP	P	04 06 21.7	-0.3
LFF			pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5					
LFF	La Frestale	47.28 307	eP	P	04 06 21.7	-0.3
	comp=Z,4.2nm,0.7s,mb4.5					
LDF	La Druitiere	48.15 312	eP	P	04 06 27.2	-1.5
	comp=Z,2.9nm,0.5s,mb4.3					
LDF	La Druitiere	48.15 312	eP	P	04 06 27.2	-1.5
	comp=Z,1.5nm,0.5s,mb4.3					
LDF	La Druitiere	48.15 312	eP	P	04 06 27.2	-1.5
LDF			pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1					
LDF	La Druitiere	48.15 312	eP	P	04 06 27.2	-1.5
	comp=Z,1.5nm,0.5s,mb4.3					
ETSF	Etsaut	48.16 305	eP	P	04 06 29.7	+0.8
	comp=Z,13nm,1.0s,mb4.6					
ETSF	Etsaut	48.16 305	eP	P	04 06 29.7	+0.8
	comp=Z,6.7nm,1.0s,mb4.6					
ETSF	Etsaut	48.16 305	eP	P	04 06 29.7	+0.8
ETSF			pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7					
ETSF	Etsaut	48.16 305	eP	P	04 06 29.7	+0.8
	comp=Z,6.7nm,1.0s,mb4.6					
FLN	La Foliniere	48.40 312	eP	P	04 06 29.5	-1.2
FLN	La Foliniere	48.40 312	eP	P	04 06 29.5	-1.2
FLN	La Foliniere	48.40 312	eP	P	04 06 29.5	-1.2
SJPF	Ste Jean	48.65 305	eP	P	04 06 32.6	-0.1
	comp=Z,26nm,1.0s,mb4.9					
SJPF	Ste Jean	48.65 305	eP	P	04 06 32.6	-0.1
	comp=Z,13nm,1.0s,mb4.9					
SJPF	Ste Jean	48.65 305	eP	P	04 06 32.6	-0.1
SJPF			pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9					
SJPF	Ste Jean	48.65 305	eP	P	04 06 32.6	-0.1
	comp=Z,13nm,1.0s,mb4.9					
SGMF	Saint Gilles	49.74 312	eP	P	04 06 40.0	-0.9
SGMF	Saint Gilles	49.74 312	eP	P	04 06 40.0	-0.9
SGMF	Saint Gilles	49.74 312	eP	P	04 06 40.0	-0.9
QUIF	Quistinic	50.13 311	eP	P	04 06 42.6	-1.3
QUIF	Quistinic	50.13 311	eP	P	04 06 42.6	-1.3
QUIF	Quistinic	50.13 311	eP	P	04 06 42.6	-1.3
ROSF	Rostrenen	50.22 312	eP	P	04 06 43.3	-1.3
ROSF	Rostrenen	50.22 312	eP	P	04 06 43.3	-1.3
ROSF	Rostrenen	50.22 312	eP	P	04 06 43.3	-1.3
WHN	Wuhan	50.81 71	eP	P	04 06 55.0	+5.7
ESDC	Sonseca Array	50.85 301	P	P	04 06 49.1	-0.4
	comp=Z,0.4nm,0.5s,mb3.6,baz=66,slow=6.2,SNR=4.4					
ESDC	Sonseca Array	50.85 301	P	P	04 06 49.1	-0.4
TORD	Torodi Ar. Bea	52.46 266	P	P	04 07 01.1	-0.7
	comp=Z,4.7nm,0.5s,mb4.7,baz=64,slow=7.4,SNR=5.0					
ILAR	Eielson Array	86.89 10	P	P	04 10 32.4	-0.6
	comp=Z,0.3nm,0.7s,mb3.6,baz=326,slow=3.2,SNR=5.5					
ILAR	Eielson Array	86.89 10	P	P	04 10 32.4	-0.6
ILAR	Eielson Array	86.89 10	P	P	04 10 32.4	-0.6
WRA	Warramunga Arr	89.03 113	P	P	04 10 43.6	-0.3
	comp=Z,0.3nm,0.7s,mb3.7,baz=310,slow=4.2,SNR=2.7					
WRA	Warramunga Arr	89.03 113	P	P	04 10 43.6	-0.3
WRA	Warramunga Arr	89.03 113	P	P	04 10 43.6	-0.3
ASAR	Alice Springs	90.47 116	P	P	04 10 51.0	+0.4
	comp=Z,0.1nm,0.4s,mb3.5,baz=308,slow=5.0,SNR=3.6					
ASAR	Alice Springs	90.47 116	P	P	04 10 51.0	+0.4
ASAR	Alice Springs	90.47 116	P	P	04 10 51.0	+0.4

CASC 29 04:10:22.6±2.3, 13°.37N×90°.22W, h30km±9km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	San Blas	0.74	51	eP	Pn	04 10 36.9	-0.1
SBLS				eS	Sb	04 10 49.3	+2.4
RTR	El Retiro	0.77	47	eP	Pn	04 10 37.3	0.0
RTR				eS	Sb	04 10 48.9	+1.4
SNJE	San Jose	0.78	50	eP	Pn	04 10 37.1	-0.3
SNJE				eS	Sb	04 10 48.7	+0.8
RBDL	Robledal	0.90	35	eP	Pn	04 10 39.5	+0.3
LFRS	El Faro	1.16	77	eP	Pn	04 10 42.1	-0.5
NBG	Las Nubes	1.21	354	eP	Pn	04 10 45.4	+1.9
NBG				eS	Sn	04 11 03.8	+4.8
FUG	Fuego 3	1.23	331	eP	Pn	04 10 43.3	-0.4
FUG				eS	Sn	04 10 59.2	-0.1
FG6		1.34	332	eP	Pn	04 10 45.1	-0.2
FG6				eS	Sn	04 11 03.0	+0.9
TP2	Tecpan 2	1.60	331	eP	Pn	04 10 49.8	+0.9
TP2				eS	Sn	04 11 11.8	+3.3

*NEIC **29** 04:27:15.9, 16°.21N×98°.21W, h4km, MD3.9(MEX), After MEX.*

MEX 29 04:27:15.9±0.6, 16°.21N×98°.21W, h4km±3km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.20	23	iP	Pg	04 27 19.6	-0.3
PNIG				iS	Sg	04 27 22.5	0.0
PNIG	Pinotepa	0.20	23	iP	Pg	04 27 19.6	-0.3
PNIG				iS	Sg	04 27 22.5	0.0
VHO	Vista Hermosa	1.66	58	iP	Pn	04 27 42.0	-3.7
VHO				iS	Sn	04 28 03.1	-4.3
VHO	Vista Hermosa	1.66	58	iP	Pn	04 27 42.0	-3.7
VHO				iS	Sn	04 28 03.1	-4.3
UTMO	Huajuapan	1.66	13	iP	Pn	04 27 42.2	-3.5
UTMO				iS	Sn	04 28 03.5	-4.0
OXX	Oaxaca	1.67	58	eP	Pn	04 27 43.0	-2.9
OXX				iS	Sn	04 28 01.9	-5.8
OXX	Oaxaca	1.67	58	eP	Pn	04 27 43.0	-2.9
OXX				iS	Sn	04 28 01.9	-5.8
ACX	Acapulco	1.71	293	iP	Pn	04 27 43.4	-3.2
ACX				iS	Sn	04 28 05.0	-3.9
ACX	Acapulco	1.71	293	iP	Pn	04 27 43.4	-3.2
ACX				iS	Sn	04 28 05.0	-3.9
HUIG	Huatulco	2.07	102	iP	Pn	04 27 48.2	-3.2
HUIG				iS	Sn	04 28 13.2	-4.4
HUIG	Huatulco	2.07	102	iP	Pn	04 27 48.2	-3.2
HUIG				iS	Sn	04 28 13.2	-4.4
CAIG	El Cayaco	2.14	293	iP	Pn	04 27 49.4	-3.1
CAIG				iS	Sn	04 28 15.6	-3.9
CAIG	El Cayaco	2.14	293	iP	Pn	04 27 49.4	-3.1
CAIG				iS	Sn	04 28 15.6	-3.9
MEIG	Mezcala	2.18	322	iP	Pn	04 27 50.6	-2.3
MEIG				iS	Sn	04 28 16.0	-4.3
TPIG	Tehuac#an	2.34	20	eP	Pn	04 27 52.7	-2.5
TPIG				iS	Sn	04 28 20.1	-4.4
PLIG	Platanillo	2.50	331	iP	Pn	04 27 54.6	-2.7
PLIG				iS	Sn	04 28 23.6	-4.7
PLIG	Platanillo	2.50	331	iP	Pn	04 27 54.6	-2.7
PLIG				iS	Sn	04 28 23.6	-4.7
YAIG	Yautepec	2.77	343	eP	Pn	04 27 59.1	-1.9
YAIG				iS	Sn	04 28 30.4	-4.4
YAIG	Yautepec	2.77	343	eP	Pn	04 27 59.1	-1.9
YAIG				iS	Sn	04 28 30.4	-4.4
MZVM		3.12	342	eP	Pn	04 28 02.8	-3.1
MZVM				iS	Sn	04 28 40.1	-3.5
SZVM	Salazar	3.29	340	eP	Pn	04 28 05.3	-2.9
SZVM				iS	Sn	04 28 45.5	-2.3
SZVM	Salazar	3.29	340	eP	Pn	04 28 05.3	-2.9
SZVM				iS	Sn	04 28 45.5	-2.3
PBVM	Pinon	3.32	346	eP	Pn	04 28 05.2	-3.4
PBVM				iS	Sn	04 28 44.8	-3.8
PBVM	Pinon	3.32	346	eP	Pn	04 28 05.2	-3.4
PBVM				iS	Sn	04 28 44.8	-3.8
IIO	Organos	3.40	352	iP	Pn	04 28 07.7	-2.1
IIO				iS	Sn	04 28 48.0	-2.5
IIO	Organos	3.40	352	iP	Pn	04 28 07.7	-2.1
IIO				iS	Sn	04 28 48.0	-2.5
ZIIG	Zihuatanejo	3.42	295	eP	Pn	04 28 08.0	-1.9
ZIIG				iS	Sn	04 28 45.9	-4.9
ZIIG	Zihuatanejo	3.42	295	eP	Pn	04 28 08.0	-1.9
ZIIG				iS	Sn	04 28 45.9	-4.9
PTVM	Pico Tres Padr	3.48	346	eP	Pn	04 28 07.4	-3.4
PTVM				iS	Sn	04 28 49.7	-2.6
PTVM	Pico Tres Padr	3.48	346	eP	Pn	04 28 07.4	-3.4
PTVM				iS	Sn	04 28 49.7	-2.6

*TEH **29** 04:30:20.8, 26°.70N×56°.11E, h6km*
*OMAN **29** 04:30:21.8±11.0, 26°.95N×56°.14E, h3km±39km, Error ellipse: s-maj=110.0km s-min=80.6km az=50.0*
*ISCJB **29** 04:30:22.3±0.5, 26°.94N±0°.03×55°.97E±0°.06, h10km, Error ellipse: s-maj=8.1km s-min=4.2km az=6.5*
*CSEM **29** 04:30:22.1±0.2, 26°.93N×56°.00E, h2km, ML2.9, Error ellipse: s-maj=11.4km s-min=3.0km az=91.0*

ISC 29 04:30:23.3±0.5, 26°.91N±0°.03×56°.05E±0°.07, h10km, n18, σ0§67/22, 2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.50	13	ePg	Pg	04 30 31.4	-1.6
BNDS				eSg	Sg	04 30 39.3	-0.4
IBND	Bandar-abas	0.69	39	ePg	Pg	04 30 36.0	-0.7
IBND				eSg	Sg	04 30 47

3.4nm,0.3s,baz=32,slow=9.7,SNR=113
FITZ Sn **Sn** **04 38 38.1 -0.8**
2.7nm,0.3s,baz=101,slow=19,SNR=6.5
FITZ LR LR 04 41 47.0
comp=Z,57nm,19.0s,baz=185,slow=43
FITZ Fitzroy Crossi 10.73 200 *e*Pn **Pn** **04 36 42.0 +2.0**
FITZ *e*S **Sn** **04 38 38.0 -0.9**
FITZ Sn **Sn** **04 38 38.1 -0.8**
FITZ LR LR 04 41 47.0
WRA Warramunga Arr 12.77 159 Pn **Pn** **04 37 09.1 +1.1**
2.1nm,0.3s,baz=337,slow=12,SNR=28
WRA Sn **Sn** **04 39 27.2 -1.8**
2.2nm,0.3s,baz=334,slow=22,SNR=8.1
WRA Warramunga Arr 12.77 159 Pn **Pn** **04 37 09.1 +1.1**
WRA Sn **Sn** **04 39 27.2 -1.8**
WB2 Warramunga Arr 12.78 159 *e*Pn **Pn** **04 37 09.1 +1.0**
MBWA Marble Bar 16.13 215 *e*Pn **Pn** **04 37 53.5 +0.5**
4.5nm,0.6s
MBWA *e*S **S** **04 40 45.1 -18**
ASAR Alice Springs 16.15 165 Pn **Pn** **04 37 53.9 +0.7**
1.0nm,0.3s,baz=337,slow=9.3,SNR=37
ASAR Sn **Sn** **04 40 49.5 -1.7**
0.4nm,0.3s,baz=344,slow=20,SNR=5.3
STKA Stephens Creek 26.30 156 P **P** **04 39 44.3 +3.1**
1.1nm,0.5s,mb3.6,baz=343,slow=9.0,SNR=4.7
MK31 Makanchi Array 68.78 327 *e*P **P** **04 45 07.4 -1.9**
MKAR Makanchi Array 68.78 327 P **P** **04 45 07.7 -1.6**
0.5nm,0.4s,mb3.8,baz=111,slow=7.9,SNR=10.0

*IDC **29** 04:49:24.1±1.5,35°.24N×70°.11E,h0km,mb3.7/4,*
mb1 3.9/5,mb1mx3.5/25,mbtmp3.7/5,ML3.9/1,MS2.6/1,
Ms1 2.6/1,ms1mx2.2/30,Error ellipse: s-maj=51.6km
s-min=27.7km az=56.0
*ISCJB **29** 04:49:52.3±0.5,36°.61N±0°.03×71°.09E±0°.08,h217km±7km,*
mb3.3/4,Error ellipse: s-maj=10.7km s-min=4.8km
az=176.7
*NEIC **29** 04:49:53.4±0.8,36°.59N×71°.03E,h230km±10km,mb4.5/12,*
Error ellipse: s-maj=14.6km s-min=8.5km az=73.0
ISC 29 04:49:53.4±0.5,36°.63N±0°.03×71°.13E±0°.08,h204km±7km,
n28,σ1§00/37,mb3.3/4,3C-2D,Afghanistan-Tajikistan
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.69**	**220**	*e*Pn	**Pn**	**04 50 40.6**	**+1.0**
KBL				*e*S	**Sn**	**04 51 15.9**	**+0.2**
CEP	**Cherat**	**2.87**	**167**	⇑P	**Pn**	**04 50 41.8**	**+0.1**
CEP				S	**Sn**	**04 51 18.0**	**-1.5**
CHCP	**Chirah Chowk**	**3.44**	**149**	P	**Pn**	**04 50 48.3**	**-0.2**
KSH	**Kashi**	**4.79**	**52**	Pn	**Pn**	**04 51 01.0**	**-4.1**
KSH				Sn	**Sn**	**04 51 51.8**	**-10**
KSH				smax			
comp=N,84nm,0.4s
KSH smax
comp=E,58nm,0.3s
AML Almayashu 5.84 19 *e*Pn **Pn** **04 51 19.4 +0.8**
comp=E,31nm,0.5s
AML *e*S **Sn** **04 52 25.4 -0.7**
EKS2 Erkin-Say 6.36 18 *e*Pn **Pn** **04 51 25.1 -0.2**
comp=E,2.8nm,0.4s
EKS2 *e*S **Sn** **04 52 36.1 -2.0**
KK31 Karatay Array 6.49 356 ⇓Pn **Pn** **04 51 28.0 +1.2**
comp=E,1.3nm,0.3s,baz=178,slow=12,SNR=31
KK31 ⇑Sn **Sn** **04 52 40.3 -0.7**
comp=E,5.0nm,0.3s,baz=178,slow=22,SNR=3.5
KKAR Karatay Array 6.49 356 *e*Pn **Pn** **04 51 27.7 +0.9**
comp=E,3.5nm,0.3s
KKAR *e*S **Sn** **04 52 40.0 -1.0**
AAK Ala-Archa 6.54 22 *e*Pn **Pn** **04 51 28.9 +1.4**
comp=E,7.7nm,0.3s
AAK *e*S **Sn** **04 52 35.7 -6.6**
SDNR Sundarnagar 7.05 135 *e*PKP **Pn** **04 51 29.5 -4.7**
SDNR *e*S **Sn** **04 52 45.5 -8.9**
TKM2 Tokmak 2 7.17 27 ⇓Pn **Pn** **04 51 36.4 +0.8**
comp=E,3.5nm,0.5s
TKM2 ⇑Sn **Sn** **04 52 57.5 +0.5**
comp=E,4.0nm,0.7s
TKM2 Tokmak 2 7.17 27 *e*Pn **Pn** **04 51 36.5 +0.9**
comp=E,5.3nm,0.6s
MK31 Makanchi Array 13.13 36 Pn **Pn** **04 52 52.3 +0.2**
MKAR Makanchi Array 13.13 36 Pn **Pn** **04 52 54.4 +2.3**
comp=E,0.5nm,0.3s,baz=221,slow=14,SNR=12
KOLN Koldanda 13.76 126 *e*P **Pn** **04 53 01.8 +1.7**
comp=E,7.4nm,0.3s
GKN Gorkha 14.29 123 *e*P **Pn** **04 53 07.2 +0.5**
comp=E,15nm,0.3s
DMN Daman 14.86 123 *e*P **Pn** **04 53 13.8 +0.1**
comp=E,7.7nm,0.3s
KKN Kakani 14.86 122 *e*P **Pn** **04 53 13.6 -0.1**
comp=E,16nm,0.4s
PKIN Phulchoki 15.07 123 *e*P **Pn** **04 53 15.6 -0.7**
comp=E,9.8nm,0.4s
PKI Pulchoki 15.09 123 *e*P **Pn** **04 53 16.5 0.0**
comp=E,7.2nm,0.3s
GUN Gumba 15.19 121 *e*P **Pn** **04 53 16.8 -1.0**
comp=E,9.5nm,0.3s
TAPN Taplejung 16.82 119 *e*P **P** **04 53 35.0 -1.0**
comp=E,14nm,0.5s
GNI Garni 20.95 288 LR LR 05 04 07.6
comp=E,17nm,20.6s,baz=280,slow=43
ARCES ARCESS Array B 41.07 338 P **P** **04 57 16.0 -0.5**
comp=E,0.9nm,0.6s,mb3.4,baz=121,slow=8.7,SNR=4.4
NB2 NORSAR Subarra 44.34 323 P **P** **04 57 41.2 -1.6**
comp=Z,1.9nm,0.8s,mb3.5,baz=95,slow=7.9
NOA NORSAR Array B 44.34 323 P **P** **04 57 41.4 -1.4**
comp=Z,1.3nm,0.7s,mb3.4,baz=96,slow=7.8,SNR=3.3
WRA Warramunga Arr 81.97 122 P **P** **05 01 45.7 -4.8**
comp=Z,0.2nm,0.3s,mb3.2,baz=324,slow=4.8,SNR=3.6
ASAR Alice Springs 84.24 125 P **P** **05 01 57.6 -4.4**
comp=Z,0.3nm,0.7s,mb3.1,baz=313,slow=5.7,SNR=4.0

*IDC **29** 04:59:04.5±1.4,23°.83N×93°.98E,h0km,mb3.7/5,*
mb1 3.8/6,mb1mx3.6/26,mbtmp3.7/6,ML3.8/1,Error
ellipse: s-maj=61.2km s-min=17.9km az=61.0
*NEIC **29** 04:59:10.6±0.8,23°.75N×93°.90E,h46km±11km,mb3.9/1,*
Error ellipse: s-maj=18.0km s-min=7.2km az=45.0
*ISCJB **29** 04:59:14.7±1.3,23°.9N±0°.1×93°.42E±0°.07,h111km±12km,*
mb3.6/6,Error ellipse: s-maj=20.7km s-min=8.7km
az=19.2
ISC 29 04:59:15.2±1.3,23°.8N±0°.1×93°.48E±0°.08,h92km±13km,
n23,σ1§00/36,mb3.6/6,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.27**	**321**	*e*PN	**Pn**	**04 59 50.0**	**-1.1**
SHL				*e*SN	**Sn**	**05 00 17.0**	**-1.5**
LSA	**Lhasa**	**6.23**	**341**	P	**Pn**	**05 00 44.0**	**-0.5**
LSA	**Lhasa**	**6.23**	**341**	*e*Pn	**Pn**	**05 00 43.8**	**-0.7**
TAPN	**Taplejung**	**6.29**	**305**	*e*Pn	**Pn**	**05 00 46.4**	**+1.0**
TAPN				*e*Sn	**Sn**	**05 01 55.9**	**+0.1**
46nm,0.4s
ODAN Odare 6.29 300 *e*Pn **Pn** **05 00 46.5 +1.1**
ODAN *e*Sn **Sn** **05 01 55.6 -0.2**
151nm,0.4s
CMAR Chiang Mai Arr 7.37 135 Pn **Pn** **05 00 51.5 -8.7**
0.5nm,0.3s,baz=313,slow=15,SNR=4.7
CMAR Sn **Sn** **05 02 09.7 -13**
0.3nm,0.3s,baz=149,slow=45,SNR=3.3
GUN Gumba 7.97 302 *e*Pn **Pn** **05 01 09.0 +0.8**
GUN *e*Sn **Sn** **05 02 35.9 -0.9**
67nm,0.4s
PKI Pulchoki 8.19 299 *e*Pn **Pn** **05 01 12.0 +0.8**
PKI *e*Sn **Sn** **05 02 42.1 +0.1**
28nm,0.5s
PKI Pulchoki 8.19 299 *e*Pn **Pn** **05 01 12.2 +1.0**
PKI *e*Sn **Sn** **05 02 42.1 +0.1**
PKIN Phulchoki 8.20 299 *e*Pn **Pn** **05 01 12.2 +0.8**
PKIN *e*Sn **Sn** **05 02 42.1 -0.2**
46nm,0.5s
KKN Kakani 8.38 300 *e*Pn **Pn** **05 01 14.8 +0.9**
KKN *e*Sn **Sn** **05 02 45.7 -1.2**
34nm,0.4s
DMN Daman 8.45 298 *e*Pn **Pn** **05 01 16.0 +1.3**
DMN *e*Sn **Sn** **05 02 47.9 -0.5**
28nm,0.4s
GKN Gorkha 8.99 300 *e*Pn **Pn** **05 01 22.2 +0.1**
GKN *e*Sn **Sn** **05 03 01.1 -0.5**
53nm,0.3s
KOLN Koldanda 9.74 296 *e*Pn **Pn** **05 01 32.4 +0.1**
KOLN *e*Sn **Sn** **05 03 18.4 -1.4**
36nm,0.4s
DANN Dangsing 9.84 299 *e*Pn **Pn** **05 01 34.2 +0.5**
DANN *e*Sn **Sn** **05 03 20.6 -1.7**
23nm,0.3s
AAK Ala-Archa 24.49 325 P **P** **05 04 28.9 +3.3**
0.6nm,0.3s,mb3.5,baz=203,slow=9.5,SNR=3.5
MK31 Makanchi Array 24.63 341 *e*P **P** **05 04 28.0 +1.1**
MKAR Makanchi Array 24.63 341 P **P** **05 04 26.9 0.0**
1.5nm,0.5s,mb3.7,baz=152,slow=9.8,SNR=15
MKAR Makanchi Array 24.63 341 P **P** **05 04 26.9 0.0**
EKS2 Erkin-Say 24.89 324 *e*P **P** **05 04 33.3 +3.9**
2.8nm,0.7s,mb3.8
SONM Songino Array 26.09 20 P **P** **05 04 38.9 -1.2**
0.4nm,0.5s,mb3.1,baz=200,slow=11,SNR=2.4
WRA Warramunga Arr 58.96 134 P **P** **05 09 03.6 -1.7**
0.3nm,0.3s,mb3.9,baz=324,slow=7.3,SNR=3.8
ASAR Alice Springs 61.38 137 P **P** **05 09 20.3 -1.3**
0.5nm,0.5s,mb3.8,baz=324,slow=7.2,SNR=7.9

*ATH **29** 05:17:11.7,36°.04N×21°.60E,h5km±4km,MD3.7/10*
*ISCJB **29** 05:17:13.3±0.9,36°.09N±0°.04×21°.59E±0°.06,h10km,Error*
ellipse: s-maj=7.5km s-min=6.1km az=167.3
*THE **29** 05:17:13.9,36°.12N×21°.51E,h0km±6km,ML3.2/2,Error*
ellipse: s-maj=12.2km s-min=1.9km az=258.0
*CSEM **29** 05:17:14.4±0.7,36°.12N×21°.61E,h2km,ML3.2/2,Error*
ellipse: s-maj=16.8km s-min=10.1km az=68.0
ISC 29 05:17:12.4±1.5,36°.05N±0°.05×21°.56E±0°.07,h4km±8km,
n45,σ1§09/64,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.85**	**10**	*e*PB	**Pg**	**05 17 28.6**	**-0.2**
PYL				*e*SB	**Sg**	**05 17 40.6**	**+0.7**
PYL	**PYLOS**	**0.85**	**10**	P	**Pg**	**05 17 29.0**	**+0.2**
PYL				S	**Sg**	**05 17 41.1**	**+1.2**
PYL	**PYLOS**	**0.85**	**10**	*e*Pb	**Pg**	**05 17 28.6**	**-0.2**
PYL	**PYLOS**	**0.85**	**10**	P	**Pg**	**05 17 29.0**	**+0.2**
PYL				*e*Sb	**Sg**	**05 17 40.6**	**+0.7**
PYL				S	**Sg**	**05 17 41.1**	**+1.2**
ITM	**Ithomi**	**1.16**	**15**	*e*PB	**Pg**	**05 17 34.5**	**-0.2**
ITM				*e*SB	**Sg**	**05 17 50.2**	**+0.4**
ITM	**Ithomi**	**1.16**	**15**	P	**Pg**	**05 17 34.4**	**-0.3**
ITM				S	**Sg**	**05 17 50.8**	**+1.0**
ITM	**Ithomi**	**1.16**	**15**	*e*Pb	**Pg**	**05 17 34.5**	**-0.2**
ITM				*e*Sb	**Sg**	**05 17 50.2**	**+0.4**
ITM				S	**Sg**	**05 17 50.8**	**+1.0**
VLI	**Veliai**	**1.30**	**59**	*e*PN	**Pn**	**05 17 35.3**	**-2.0**
VLI				*e*SB	**Sg**	**05 17 54.4**	**+0.4**
VLI	**Veliai**	**1.30**	**59**	*e*Pn	**Pn**	**05 17 35.3**	**-2.0**
VLI				*e*Sb	**Sg**	**05 17 54.4**	**+0.4**
VLX	**Vlachokerasia**	**1.47**	**26**	*e*PG	**Pg**	**05 17 39.1**	**-1.5**
VLX				*e*SB	**Sg**	**05 18 00.0**	**+0.3**
VLX	**Vlachokerasia**	**1.47**	**26**	P	**Pn**	**05 17 38.9**	**-0.8**
VLX				S	**Sg**	**05 18 01.3**	**+1.6**
VLX	**Vlachokerasia**	**1.47**	**26**	P	**Pn**	**05 17 38.9**	**-0.8**
VLX				*e*Sb	**Sg**	**05 18 00.0**	**+0.3**
VLX				S	**Sg**	**05 18 01.3**	**+1.6**
DID	**Didima**	**1.98**	**42**	*e*PG	**Pb**	**05 17 48.0**	**-1.0**
DID	**Didima**	**1.98**	**42**	P	**Pb**	**05 17 48.0**	**-1.0**
DID				S	**Sb**	**05 18 13.7**	**-0.3**
DID	**Didima**	**1.98**	**42**	*e*Pg	**Pb**	**05 17 48.0**	**-1.0**
DID				S	**Sb**	**05 18 13.7**	**-0.3**
GUR	**Goura**	**1.98**	**18**	*e*PG	**Pb**	**05 17 48.4**	**-0.6**
GUR	**Goura**	**1.98**	**18**	P	**Pb**	**05 17 48.2**	**-0.8**
GUR	**Goura**	**1.98**	**18**	P	**Pb**	**05 17 48.2**	**-0.8**
RLS	**Riolos of Patr**	**2.00**	**358**	*e*PG	**Pb**	**05 17 49.2**	**-0.2**
RLS	**Riolos of Patr**	**2.00**	**358**	*e*Pg	**Pb**	**05 17 49.2**	**-0.2**
KARN	**Karanos**	**2.03**	**108**	*e*PN	**Pb**	**05 17 49.4**	**-0.4**
KARN	**Karanos**	**2.03**	**108**	P	**Pb**	**05 17 49.5**	**-0.3**
KARN	**Karanos**	**2.03**	**108**	*e*Pn	**Pb**	**05 17 49.4**	**-0.4**
VLS	**Valsamata**	**2.26**	**340**	P	**Pb**	**05 17 53.3**	**-0.4**
VLS	**Valsamata**	**2.26**	**340**	P	**Pb**	**05 17 53.3**	**-0.4**
LTK	**Loutraki**	**2.27**	**29**	*e*PN	**Pb**	**05 17 53.1**	**-0.8**
LTK	**Loutraki**	**2.27**	**29**	P	**Pb**	**05 17 52.2**	**-1.7**
LTK				S	**Sb**	**05 18 21.3**	**-1.0**
LTK	**Loutraki**	**2.27**	**29**	P	**Pb**	**05 17 52.2**	**-1.7**
LTK	**Loutraki**	**2.27**	**29**	*e*Pn	**Pb**	**05 17 53.1**	**-0.8**
LTK				S	**Sb**	**05 18 21.3**	**-1.0**
EFP	**Efpalio**	**2.39**	**7**	*e*PN	**Pb**	**05 17 55.0**	**-0.9**
EFP	**Efpalio**	**2.39**	**7**	*e*Pn	**Pb**	**05 17 55.0**	**-0.9**
DSF	**Desfina**	**2.48**	**18**	P	**Pn**	**05 17 54.5**	**+1.0**
DSF	**Desfina**	**2.48**	**18**	P	**Pn**	**05 17 54.5**	**+1.0**
VLY	**Voula,Athens**	**2.54**	**44**	*e*PN	**Pn**	**05 17 56.5**	**+2.2**
VLY	**Voula,Athens**	**2.54**	**44**	*e*Pn	**Pn**	**05 17 56.5**	**+2.2**
LKR	**Lokris**	**2.84**	**23**	P	**Pn**	**05 17 58.8**	**+0.4**
LKR	**Lokris**	**2.84**	**23**	P	**Pn**	**05 17 58.8**	**+0.4**
SIVA	**Sivas**	**2.85**	**110**	*e*PN	**Pn**	**05 18 00.1**	**+1.5**
SIVA	**Sivas**	**2.85**	**110**	*e*Pn	**Pn**	**05 18 00.1**	**+1.5**
ATAL	**Atalanti**	**2.88**	**23**	P	**Pn**	**05 18 00.8**	**+1.7**
ATAL	**Atalanti**	**2.88**	**23**	P	**Pn**	**05 18 00.8**	**+1.7**
NEST	**Nestorio**	**4.37**	**355**	P	**Pn**	**05 18 23.4**	**+3.8**
NEST	**Nestorio**	**4.37**	**355**	P	**Pn**	**05 18 23.4**	**+3.8**
KRUS	**Krusevo**	**5.31**	**357**	*i* Pn	**Pn**	**05 18 34.3**	**+1.8**
STON	**Ston**	**7.43**	**338**	*e*Pn	**Pn**	**05 19 01.0**	**-0.6**
STON				Sn	**Sn**	**05 20 22.0**	**-4.3**

*MOS **29** 05:29:52.8±0.7,54°.05N×161°.28E,h65km,mb4.3/7,Error*
ellipse: s-maj=23.9km s-min=9.3km az=73.2
*ISCJB **29** 05:29:53.4±0.4,54°.08N±0°.03×161°.23E±0°.06,h72km±4km,*
mb3.8/12,Error ellipse: s-maj=6.7km s-min=3.3km
az=30.6
*KRSC **29** 05:29:53.7±0.5,54°.12N×161°.12E,h63km±56km,ML4.6*
*NEIC **29** 05:29:55.8±1.2,54°.25N×160°.77E,h86km±11km,mb4.0/2,*
Error ellipse: s-maj=21.8km s-min=12.9km az=146.0
*IDC **29** 05:29:56.8±1.7,54°.32N×160°.69E,h93km±17km,mb3.7/9,*
mb1 4.0/10,mb1mx3.6/25,mbtmp3.7/10,Error ellipse:
s-maj=32.5km s-min=14.8km az=144.0
ISC 29 05:29:54.5±0.4,54°.09N±0°.03×161°.20E±0°.06,h67km±5km,
n63,σ0§80/86,mb3.8/12,1C,Near east coast of
Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.56**	**34**	*i* P	**Pn**	**05 30 07.7**	**+0.1**
MKZ				*i* S	**Sn**	**05 30 17.6**	**+0.4**
MKZ	**Mys Kozlova**	**0.56**	**34**	PN	**Pn**	**05 30 07.7**	**+0.1**
MKZ				S	**Sn**	**05 30 17.6**	**+0.4**
KII	**Karymskiy**	**1.03**	**268**	*e*P	**Pn**	**05 30 12.4**	**-0.8**
SPN	**Mys Shipunski**	**1.22**	**216**	*e*P	**Pn**	**05 30 14.9**	**-0.6**
SPN				*i* S	**Sn**	**05 30 29.8**	**-1.5**
SPN	**Mys Shipunski**	**1.22**	**216**	PN	**Pn**	**05 30 14.9**	**-0.6**
SPN				S	**Sn**	**05 30 29.8**	**-1.5**
TUMR	**Tumrok**	**1.34**	**333**	*i* P	**Pn**	**05 30 17.0**	**-0.2**
TUMR				*i* S	**Sn**	**05 30 33.9**	**-0.3**
AVH	**Avacha**	**1.68**	**242**	*e*P	**Pn**	**05 30 22.2**	**+0.5**
AVH				*i* S	**Sn**	**05 30 43.1**	**+0.8**
KMNR	**Kamenistaya**	**1.76**	**342**	*e*P	**Pn**	**05 30 23.1**	**+0.4**
KMNR				*i* S	**Sn**	**05 30 44.0**	**-0.2**
PET	**Petropavlovsk**	**1.86**	**236**	*e*P	**Pn**	**05 30 24.2**	**+0.2**
PET				*i* S	**Sn**	**05 30 46.1**	**-0.4**
PET	**Petropavlovsk**	**1.86**	**236**	*e*Pn	**Pn**	**05 30 24.0**	**-0.1**
PET				*e*Sn	**Sn**	**05 30 46.0**	**-0.5**
PET	**Petropavlovsk**	**1.86**	**236**	*e*PN	**Pn**	**05 30 24.3**	**+0.3**
PET				*e*S	**Sn**	**05 30 46.2**	**-0.3**
PET				pmax	pmax		
comp=Z,258nm,0.5s
PET smax
comp=N,1μm,0.4s
PET smax
comp=E,2μm,0.4s
BZMR Bezymyannaya 1.89 348 *e*P **Pn** **05 30 24.9 +0.4**
KIRR Kirishev 1.93 346 *e*P **Pn** **05 30 25.3 +0.3**
ZLN Zelenaya 1.94 353 *e*P **Pn** **05 30 25.8 +0.6**
ZLN *i* S **Sn** **05 30 49.1 +0.5**
KPT Kopyto 1.96 344 *e*P **Pn** **05 30 25.5 0.0**
GNL Ganaly 1.97 260 *e*P **Pn** **05 30 25.6 +0.1**
GNL *i* S **Sn** **05 30 48.8 -0.4**
CIRR Tsirk 2.05 353 *e*P **Pn** **05 30 27.2 +0.6**
CIRR *i* S **Sn** **05 30 52.0 +0.9**
KOZ Kozyrevsk 2.11 339 *e*P **Pn** **05 30 27.5 0.0**
KOZ *i* S **Sn** **05 30 51.5 -1.2**
KOZR Kozyr 2.12 340 PN **Pn** **05 30 27.5 -0.1**
KOZR S **Sn** **05 30 51.5 -1.3**
KRSR Krestovskiy 2.16 351 *e*P **Pn** **05 30 28.3 +0.1**
KRSR *i* S **Sn** **05 30 54.2 +0.3**
KLY Klyuchi 2.25 352 *e*P **Pn** **05 30 29.2 -0.2**
KLY *i* S **Sn** **05 30 55.8 -0.2**
KLY Klyuchi 2.25 352 PN **Pn** **05 30 29.2 -0.2**
KLY S **Sn** **05 30 55.8 -0.2**
PEA0B Petropavlovsk- 2.31 246 *e*Pn **Pn** **05 30 30.0 -0.1**
PETK Petropavlovsk- 2.31 246 P **Pn** **05 30 30.1 0.0**
comp=E,14nm,0.3s,baz=74,slow=19,SNR=75
PETK S **Sn** **05 30 58.1 +0.7**
comp=E,38nm,0.3s,baz=328,slow=13,SNR=11
PETK Petropavlovsk- 2.31 246 *e*PN **Pn** **05 30 30.1 0.0**
PETK pmax pmax
comp=Z,14nm,0.3s
KBTR Krutoberegovo 2.32 23 *e*P **Pn** **05 30 30.5 +0.2**
KBTR *i* S **Sn** **05 30 57.7 0.0**
KBTR Krutoberegovo 2.32 23 PN **Pn** **05 30 30.5 +0.2**
KBTR S **Sn** **05 30 57.7 0.0**
SRDR Sredinnyy 2.39 340 *e*P **Pn** **05 30 30.5 -0.7**
GRL Gorelyy 2.43 232 *e*P **Pn** **05 30 32.8 +1.1**
GRL *i* S **Sn** **05 31 01.2 +0.9**
BDR Baidarnaya 2.48 0 *e*P **Pn** **05 30 33.1 +0.6**
SMKR Semkarok 2.50 3 *e*P **Pn** **05 30 33.1 +0.3**
SRKR Sorokina 2.57 360 *e*P **Pn** **05 30 34.0 +0.3**
SRKR *i* S **Sn** **05 31 03.5 -0.3**
BKI Bering 2.99 66 *e*P **Pn** **05 30 39.0 -0.4**
BKI *i* S **Sn** **05 31 12.2 -1.9**
BKI Bering 2.99 66 PN **Pn** **05 30 39.0 -0.4**
BKI S **Sn** **05 31 12.2 -1.9**
SKR Severo-Kuril's 4.62 224 *e*PN **Pn** **05 31 09.5 +7.9**
SKR pmax pmax
comp=Z,60nm,0.5s
BILL Bilibino 14.20 8⇑ *e*P **Pn** **05 33 13.3 +1.4**
BILL *e*S **Sn** **05 35 52.0 +4.3**
BILL pmax pmax
comp=Z,9.0nm,1.2s
ERM Erimo 17.01 232 *e*P **Pn** **05 33 43.5 -4.2**
MAJO Matsushiro 23.68 232 *e*P **P** **05 34 59.1 -0.7**
comp=Z,5.0nm,0.6s,mb4.0
MAJO Matsushiro 23.68 232 *e*P **P** **05 34 59.1 -0.7**
MAJO pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
MJAR Matsushiro Arr 23.68 232 P **P** **05 34 59.2 -0.6**
comp=Z,0.9nm,0.5s,mb3.4,baz=24,slow=10,SNR=4.9
MJAR Matsushiro Arr 23.68 232 P **P** **05 34 59.3 -0.5**
MJAR pmax pmax
comp=Z,1.0nm,0.5s
ILAR Eielson Array 27.65 47 P **P** **05 35 35.0 -0.4**
comp=Z,1.0nm,0.7s,mb3.4,baz=263,slow=8.1,SNR=11
ILAR Eielson Array 27.65 47 P **P** **05 35 35.0 -0.4**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
TLY Talaya 33.99 290 *e*P pP 05 36 47.3 -0.2
TLY pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
WHN Wuhan 40.87 254 *e*P **P** **05 37 32.3 +2.6**
KURK Kurchatov 47.77 302 *e*P **P** **05 38 22.0 -2.4**
comp=Z,1.0nm,0.5s,mb3.9
KURK Kurchatov 47.77 302 *e*P **P** **05 38 22.0 -2.5**
KURK pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
MKAR Makanchi Array 48.32 295 P **P** **05 38 24.6 -4.2**
comp=Z,0.3nm,0.4s,mb3.5,baz=60,slow=8.2,SNR=3.0
MKAR Makanchi Array 48.32 295 P **P** **05 38 24.6 -4.2**
NVAR Mina Array Bea 54.79 71 P **P** **05 39 18.8 +1.6**
comp=Z,1.9nm,0.5s,mb4.3,baz=298,slow=7.5,SNR=17
ULM Lac du Bonnet 57.66 48 P **P** **05 39 37.6 +0.2**
comp=Z,1.6nm,0.4s,mb4.4,baz=304,slow=10,SNR=4.1
TXAR Lajitas Array 69.65 68 P **P** **05 40 57.7 +1.1**
comp=Z,1.8nm,0.5s,mb4.1,baz=296,slow=5.0,SNR=46
TXAR Lajitas Array 69.65 68 P **P** **05 40 57.7 +1.1**
TXAR Lajitas Array 69.65 68 P **P** **05 40 57.7 +1.1**
TXAR pmax pmax
comp=Z,2.0nm,0.5s
BRTR Keskin Array B 76.27 321 P **P** **05 41 34.3 -1.3**
comp=Z,0.3nm,0.6s,mb3.2,baz=62,slow=2.8,SNR=2.7
BRTR Keskin Array B 76.27 321 P **P** **05 41 34.3 -1.3**
WRA Warramunga Arr 77.26 206 P **P** **05 41 40.7 -0.6**
comp=Z,1.1nm,0.4s,mb4.0,baz=19,slow=5.9,SNR=4.6
WRA Warramunga Arr 77.26 206 P **P** **05 41 40.7 -0.6**
WRA Warramunga Arr 77.26 206 P **P** **05 41 40.7 -0.5**
WRA pmax pmax
comp=Z,1.0nm,0.4s
ASAR Alice Springs 80.94 205 P **P** **05 42 01.2 0.0**
comp=Z,1.0nm,0.8s,mb3.7,baz=12,slow=5.3,SNR=12
ASAR Alice Springs 80.94 205 *e*P **P** **05 42 01.2 0.0**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
QSPA South Pole Qui 143.84 180 PKP PKPdf 05 49 17.0 -3.1
comp=Z,2.1nm,0.9s,baz=298,slow=2.6,SNR=6.3
QSPA South Pole Qui 143.84 180 *e*PKPdf PKPdf 05 49 17.0 -3.0

CASC 29 05:39:41.9±2.7,13°.90N×91°.56W,h20km±16km,MD3.8,
Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.42**	**349**	*e*P	Pb	05 39 52.1	+1.4
JAT				*e*S	Sb	05 39 57.4	+0.7
FUG	**Fuego 3**	**0.88**	**52**	*e*P	Pb	05 39 58.6	+0.1
FG6		**0.93**	**45**	*e*P	Pb	05 39 59.2	-0.1
FG6				*e*S	Sb	05 40 12.4	+1.2
TP2	**Tecpan 2**	**1.02**	**31**	*e*P	Pb	05 40 00.2	-0.7
TP2				*e*S	Sb	05 40 14.6	+0.7
PCG	**Pacaya**	**1.04**	**62**	*e*P	Pb	05 40 01.7	+0.4
PCG				*e*S	Sb	05 40 16.6	+2.0
NBG	**Las Nubes**	**1.36**	**60**	*e*P	Pn	05 40 06.8	+1.1
NBG				*e*S	Sn	05 40 27.1	+4.0
RBDL	**Robledal**	**1.83**	**83**	*e*P	Pn	05 40 12.5	+0.3
RTR	**El Retiro**	**1.86**	**90**	*e*P	Pn	05 40 13.1	+0.5
RTR				*e*S	Sn	05 40 35.7	+0.2
SBLS	**San Blas**	**1.88**	**92**	*e*P	Pn	05 40 13.0	+0.1
SBLS				*e*S	Sn	05 40 35.2	-0.8
SNJE	**San Jose**	**1.90**	**91**	*e*P	Pn	05 40 13.7	+0.6
MRL	**Marmol**	**2.15**	**57**	*e*S	Sn	05 40 49.0	+6.4
BOQS	**Boqueron**	**2.22**	**94**	*e*P	Pn	05 40 18.2	+0.6
BOQS				*e*S	Sn	05 40 43.4	-1.0
SNET	**Serv Nac Est T**	**2.27**	**95**	*e*P	Pn	05 40 18.3	+0.1
SNET				*e*S	Sn	05 40 47.5	+1.9
LFRS	**El Faro**	**2.44**	**96**	*e*P	Pn	05 40 21.3	+0.7
LBRS	**Las Brisas**	**2.45**	**93**	*e*P	Pn	05 40 20.8	+0.1
SNVI	**San Vicente**	**2.66**	**96**	*e*P	Pn	05 40 24.1	+0.6
CAHU	**Cacacuatique**	**3.25**	**92**	*e*P	Pn	05 40 32.0	+0.2
BLLM	**Bellamira**	**3.26**	**98**	*e*P	Pn	05 40 32.0	+0.2
CNCH	**Conchagua**	**3.67**	**99**	*e*P	Pn	05 40 37.9	+0.3
CSAN		**5.29**	**108**	*e*P	Pn	05 41 04.1	+4.3

*ISCJB **29** 06:09:08.5±1.4,19°.1S±0°.3×169°.2E±0°.1,h230km±19km,*
mb3.8/10,Error ellipse: s-maj=46.4km s-min=13.3km
az=159.5
*NEIC **29** 06:09:10.8±1.8,19°.02S×169°.27E,h246km±23km,mb4.0/6,*
Error ellipse: s-maj=39.6km s-min=11.7km az=161.0
*IDC **29** 06:09:12.4±15.0,18°.96S×169°.15E,h257km±150km,*
mb3.4/8,mb1 3.6/8,mb1mx3.5/16,mbtmp3.4/8,Error
ellipse: s-maj=66.3km s-min=51.5km az=161.0
ISC 29 06:09:08.8±1.5,19°.0S±0°.3×169°.2E±0°.1,h214km±21km,
n20,σ1§00/19,mb3.8/10,Vanuatu Islands

| Code | Station Name

2.3nm,0.8s,mb3.7
SONM Songino Array 86.99 323 P **P 06 21 29.7 +0.1**
0.4nm,0.6s,mb3.4,baz=154,slow=4.6,SNR=4.2
NVAR Mina Array Bea 88.70 49 P **P 06 21 38.1 +0.2**
0.2nm,0.6s,mb3.1,baz=226,slow=7.4,SNR=3.7
ILAR Eielson Array 90.03 17 P **P 06 21 40.6 -2.8**
0.5nm,0.8s,mb3.4,baz=224,slow=4.8,SNR=6.0
GERES GERESS Array B 144.25 332 PKP PKPdf 06 28 16.6 -2.4
0.6nm,0.5s,baz=34,slow=5.7,SNR=4.4

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*IDC **29** 06:16:36.1±22.0, 31°.52N×78°.62E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/26, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=822.2km s-min=48.6km az=82.0*
ISC 29 06:15:59.4±2.0, 31°.07N±0°.08×69°.5E±0°.2, h35km, n13, σ0°73/15, mb3.4/2, 1C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**2.60**	**48**	⇓P	**Pn**	**06 16 38.5**	**-0.4**
SARP	**Sargodha**	**2.88**	**72**	P	**Pn**	**06 16 43.2**	**+0.4**
SARP				S	**Sn**	**06 17 17.0**	**+0.8**
CEP	**Cherat**	**3.44**	**36**	⇑P	**Pn**	**06 16 51.1**	**+0.6**
CEP				S	**Sn**	**06 17 29.0**	**-1.1**
DANN	**Dangsing** 8.2nm,0.3s	**12.73**	**99**	*e*P	**Pn**	**06 18 59.2**	**+1.3**
KOLN	**Koldanda** 8.2nm,0.4s	**12.76**	**101**	*e*P	**Pn**	**06 18 58.7**	**+0.3**
GKN	**Gorkha** 11nm,0.4s	**13.57**	**99**	*e*P	**Pn**	**06 19 09.5**	**+0.1**
DMN	**Daman** 6.4nm,0.5s	**14.08**	**100**	*e*P	**Pn**	**06 19 15.5**	**-0.9**
KKN	**Kakani** 22nm,0.6s	**14.18**	**99**	*e*P	**Pn**	**06 19 17.2**	**-0.5**
PKI	**Pulchoki** 13nm,0.5s	**14.35**	**100**	*e*P	**Pn**	**06 19 19.7**	**-0.4**
GUN	**Gumba** 14nm,0.4s	**14.65**	**98**	*e*P	**Pn**	**06 19 23.1**	**-1.0**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=198,slow=8.8,SNR=6.4	**18.57**	**29**	Pn	**Pn**	**06 20 14.3**	**+0.7**
WRA	**Warramunga Arr** 0.4nm,0.6s,mb3.5,baz=320,slow=5.2,SNR=5.7	**80.30**	**120**	P	**P**	**06 28 13.1**	**+6.1**
ASAR	**Alice Springs** 0.2nm,0.6s,mb3.2,baz=317,slow=5.0,SNR=3.5	**82.28**	**123**	P	**P**	**06 28 27.2**	**+10**

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*ISCJB **29** 06:39:43.6±0.6, 48°.44S±0°.08×87°.2W±0°.2, h10km, mb4.0/12, MS3.7/8, Error ellipse: s-maj=16.9km s-min=10.8km az=1.5*
*IDC **29** 06:39:43.3±0.7, 48°.37S×87°.31W, h0km, mb4.0/7, mb1 4.1/8, mb1mx4.0/17, mbtmp3.9/8, ML3.5/1, MS3.7/9, Ms1 3.7/9, ms1mx3.6/19, Error ellipse: s-maj=30.7km s-min=18.0km az=101.0*
*NEIC **29** 06:39:44.8±0.4, 48°.41S×87°.33W, h10km, mb4.3/7, Error ellipse: s-maj=14.4km s-min=10.7km az=118.0*
ISC 29 06:39:45.2±0.6, 48°.45S±0°.07×87°.2W±0°.2, h10km, n32, σ0°84/21, mb4.0/13, MS3.7/8, Southern Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores** 0.1nm,0.3s,baz=242,slow=11,SNR=2.5	**14.14**	**63**	Pn	**Pn**	**06 43 06.8**	**+1.4**
PLCA	comp=Z,440nm,21.4s,baz=343,slow=32			LR	LR	06 47 21.3	
TRQA	**Tornquist** 12nm,1.2s,mb4.1	**21.02**	**70**	*e*P	**P**	**06 44 29.0**	**+0.1**
CFAA	**Coronel Fontan** 0.5nm,0.9s,mb3.0,baz=217,slow=12	**22.13**	**47**	P	**P**	**06 44 39.8**	**-1.1**
CFAA	comp=Z,33nm,18.6s,MS2.8,baz=230,slow=32			LR	LR	06 51 28.0	
CPUP	**Villa Florida** comp=Z,126nm,18.0s,MS3.6,baz=191,slow=36	**32.09**	**57**	LR	LR	06 59 09.9	
LPAZ	**La Paz** 1.0nm,0.7s,mb3.9,baz=167,slow=7.2,SNR=6.7	**35.68**	**33**	P	**P**	**06 46 44.2**	**+0.6**
LPAZ	comp=Z,47nm,20.1s,MS3.2,baz=348,slow=30			LR	LR	06 57 14.5	
VNA3	**Neumayer Olymp**	**41.20**	**151**	*e*	**P**	**06 47 28.5**	**-1.0**
VNA3				*e*		06 49 23.7	
VNA1	**Neumayer--Stat**	**41.76**	**151**	*e*	**P**	**06 47 33.5**	**-0.6**
QSPA	**South Pole Qui** 3.2nm,1.1s,mb3.9,baz=143,slow=5.7,SNR=4.2	**41.79**	**180**	P	**P**	**06 47 36.1**	**+1.9**
QSPA				PcP	PcP	06 49 31.0	+1.0
QSPA	**South Pole Qui** 5.1nm,1.1s,mb4.1	**41.79**	**180**	*e*P	**P**	**06 47 35.9**	**+1.7**
QSPA				PcP	PcP	06 49 31.0	+1.0
VNA2	**Neumayer--Watz** baz=242,slow=11	**41.99**	**151**	*e*	**P**	**06 47 35.1**	**-0.8**
SNAA	**Sanae** 1.4nm,1.0s,mb3.6,baz=246,slow=5.8,SNR=10	**43.25**	**153**	P	**P**	**06 47 46.8**	**+0.7**
BDFB	**Brasilia** 1.0nm,0.4s,mb4.1,baz=176,slow=16,SNR=3.1	**45.81**	**58**	P	**P**	**06 48 06.4**	**-0.9**
BDFB	comp=Z,160nm,18.1s,MS4.0,baz=198,slow=37			LR	LR	07 08 05.9	
OTAV	**Otavalo** 4.1nm,0.9s,mb4.5	**49.08**	**12**	*e*P	**P**	**06 48 33.6**	**+0.9**
ROSC	**El Rosal** comp=Z,59nm,21.5s,MS3.6,baz=23,slow=33	**54.27**	**16**	LR	LR	07 09 19.6	
PPT	**Papeete** 191nm,25.8s	**58.77**	**279**	*e*LR	LR	07 06 50.4	
PPT	**Papeete** comp=Z,136nm,19.7s,MS4.1,baz=135,slow=28	**58.77**	**279**	LR	LR	07 06 59.3	
MAW	**Mawson** 3.9nm,0.8s,mb4.6,baz=264,slow=2.0,SNR=6.7	**62.10**	**168**	P	**P**	**06 50 05.9**	**+0.3**
MAW	**Mawson** 1.0nm,0.9s,mb4.0	**62.10**	**168**	*e*P	**P**	**06 50 05.6**	**+0.1**
TXAR	**Lajitas Array** 1.7nm,1.0s,mb3.9,baz=162,slow=8.7,SNR=13	**78.82**	**345**	P	**P**	**06 51 48.2**	**+0.2**
SWET	**Sewanee**	**83.30**	**1**	*e*P	**P**	**06 52 11.0**	**-0.7**
WMOK	**Wichita Mounta** 2.8nm,1.1s,mb4.2	**83.45**	**350**	*e*P	**P**	**06 52 11.9**	**-0.6**
ANMO	**Albuquerque** 4.2nm,1.4s,mb4.4	**84.78**	**344**	*e*P	**P**	**06 52 20.0**	**+0.7**
KSU1	**Kansas State U** 6.5nm,0.7s,mb5.0	**87.56**	**353**	*e*P	**P**	**06 52 32.0**	**-0.9**
STKA	**Stephens Creek** comp=Z,103nm,20.1s,MS4.2,baz=24,slow=30	**88.91**	**220**	LR	LR	07 23 57.8	
DBIC	**Dimbokro** comp=Z,35nm,18.6s,MS3.8,baz=141,slow=34	**89.89**	**80**	LR	LR	07 31 07.6	
NVAR	**Mina Array Bea**	**90.80**	**336**	P	**P**	**06 52 48.2**	**+0.1**
NVAR	**Mina Array Bea** 0.2nm,0.5s,mb3.7,baz=163,slow=6.6,SNR=2.2	**90.80**	**336**	P	**P**	**06 52 48.2**	**+0.1**
ILAR	**Eielson Array** 0.5nm,0.8s,baz=151,slow=1.2,SNR=7.4	**122.00**	**334**	PKP	PKPdf	06 58 37.0	-1.5
BRTR	**Keskin Array B** 0.8nm,0.8s,baz=90,slow=1.4,SNR=3.8	**137.59**	**79**	PKP	PKPdf	06 59 09.0	+0.2
MJAR	**Matsushiro Arr** 0.7nm,0.5s,baz=167,slow=3.2,SNR=4.3	**144.95**	**267**	PKP	PKPdf	06 59 20.7	-1.4
CMAR	**Chiang Mai Arr** 1.1nm,0.5s,baz=214,slow=3.7,SNR=13	**149.67**	**192**	PKPbc	PKPbc	06 59 32.6	-2.5
CHTO	**Chiang Mai**	**150.02**	**192**	*e*PKPbc	PKPbc	06 59 35.8	-0.2

IGQ 29 06:53:13.6, 0°.16S×78°.64W, h5km±2km, Mb4.0, Ms3.8, 25C-2D, Error ellipse: s-maj=2.1km s-min=0.9km az=12.8, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TERV	**Terraza Guagua**	**0.04**	**110**	⇑P	Pg	06 53 14.9	+0.1
GGP	**Refugio Guagua**	**0.05**	**107**	⇓P	Pg	06 53 14.9	0.0
JUA2	**San Juan 2**	**0.07**	**145**	⇑P	Pg	06 53 15.2	0.0
YANA	**Yana**	**0.08**	**60**	⇑P	Pg	06 53 15.7	+0.3
PITA	**Cotopaxi Volc**	**0.45**	**152**	⇑P	Pg	06 53 23.2	+1.0
NAS2	**Nasa**	**0.51**	**160**	⇑S	Sg	06 53 32.6	+2.4
NAS2	**Nasa**	**0.51**	**160**	⇑P	Pg	06 53 24.7	+1.2
CAMI	**Rancho Maria**	**0.53**	**165**	⇑P	Pg	06 53 25.2	+1.3
VC1	**Cotopaxi 1**	**0.54**	**153**	⇑P	Pg	06 53 24.9	+0.9
BREF	**Cotopaxi Volca**	**0.55**	**158**	⇑P	Pg	06 53 25.6	+1.5
BVC2	**Cotopaxi Volca**	**0.55**	**155**	⇑P	Pg	06 53 25.5	+1.3
ANTI	**Antisana**	**0.56**	**121**	⇑S	Sg	06 53 33.0	+1.2
ANTI	**Antisana**	**0.56**	**121**	⇑P	Pg	06 53 24.8	+0.4
BTAM	**Cotopaxi Volca**	**0.57**	**154**	⇑P	Pg	06 53 25.8	+1.3
COTA	**Cotacachi**	**0.58**	**32**	⇑P	Pg	06 53 25.3	+0.5
COV1	**Cotopaxi Volc**	**0.58**	**149**	⇑P	Pg	06 53 25.4	+0.6
MOV1	**Cotopaxi Vol s**	**0.59**	**160**	P	Pg	06 53 25.8	+0.9
BMOR	**Cotopaxi Volca**	**0.60**	**162**	P	Pg	06 53 26.1	+1.0
TAMB	**Tambo**	**0.60**	**153**	⇑P	Pg	06 53 26.0	+0.9
CAYR	**Refugio Cayamb**	**0.66**	**75**	⇑S	Sg	06 53 36.5	+1.6
CAYR	**Refugio Cayamb**	**0.66**	**75**	⇑P	Pg	06 53 27.0	+0.7
CAYA	**Cayambe**	**0.69**	**71**	⇑P	Pg	06 53 27.3	+0.4
PISA	**Pisayambo**	**0.93**	**164**	⇑P	Pg	06 53 32.2	+0.7
LITE	**Lita**	**1.00**	**16**	⇑P	Pg	06 53 32.8	0.0
LITE	**Lita**	**1.00**	**16**	⇑S	Sg	06 53 46.7	+0.8
CONE	**Cono NE Rev Vo**	**1.00**	**85**	⇑P	Pg	06 53 33.7	+0.8
BRUN	**Tungurahua Vol**	**1.27**	**170**	P	Pg	06 53 38.0	0.0
BMAS	**Trigal station**	**1.34**	**173**	⇓P	Pn	06 53 39.1	0.0
ARRY	**Arrayan**	**1.35**	**172**	⇑S	Sb	06 53 56.7	-0.4
ARRY	**Arrayan**	**1.35**	**172**	⇑P	Pn	06 53 38.6	-0.5
PAT1	**Patacocha**	**1.35**	**171**	P	Pn	06 53 39.2	0.0

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*KISR **29** 06:55:51.9±1.0, 31°.45N×45°.78E, h2km±999km, ML2.6*
*TEH **29** 06:55:55.3, 32°.31N×47°.45E, h34km*
ISC 29 06:55:51.1±2.2, 32°.21N±0°.05×47°.37E±0°.09, h7km±18km, n11, σ0°70/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.96**	**3**	*e*Pn	**Pn**	**06 56 24.6**	**-0.1**
IKOM				*e*		06 57 06.4	
comp=Z,2μm,0.3s							
IGHG	**Ghaleghazi**	**2.22**	**343**	*e*Pn	**Pn**	**06 56 28.5**	**+0.3**
IGHG				*e*		06 57 15.7	
comp=Z,1μm,0.4s							
IVIS	**Veis**	**2.35**	**349**	*e*Pn	**Pn**	**06 56 30.3**	**+0.2**
IVIS				*e*Sg	**Sg**	**06 57 06.1**	**-0.6**
IVIS				*e*		06 57 15.6	
comp=E,1μm,0.4s							
MIB	**Mutribah**	**2.40**	**181**	*e*P	**Pn**	**06 56 31.1**	**+0.4**
MIB				*e*S	**Sn**	**06 57 01.7**	**+1.3**
MIB				AML	AML	06 57 04.0	
comp=Z,68nm,0.5s							
IDHR	**Dehrash**	**2.62**	**342**	*e*Pn	**Pn**	**06 56 33.6**	**-0.1**
IDHR				*e*Sg	**Sg**	**06 57 15.5**	**+0.3**
IDHR				*e*		06 57 23.6	
comp=Z,1μm,0.2s							
NAY	**Al-Naaiem**	**2.95**	**182**	*e*P	**Pn**	**06 56 37.8**	**-0.5**
NAY				*e*S	**Sn**	**06 57 11.3**	**-2.7**
NAY				AML	AML	06 57 15.9	
comp=Z,11nm,0.4s							
IPIR	**Pirpir**	**3.01**	**80**	*e*Pn	**Pn**	**06 56 39.3**	**+0.1**
IPIR				*e*		06 57 42.4	
comp=Z,628nm,0.4s							
RDF	**Al-Radifah**	**3.28**	**177**	*e*P	**Pn**	**06 56 43.5**	**+0.7**
RDF				*e*S	**Sn**	**06 57 21.8**	**-0.2**
RDF				AML	AML	06 57 29.4	
comp=Z,26nm,0.5s							
IKLH	**Kolahrood**	**3.71**	**72**	*e*Pn	**Pn**	**06 56 48.9**	**+0.1**
IKLH				*e*		06 57 55.8	
comp=E,433nm,0.2s							
IGAR	**Gharneh**	**3.96**	**86**	*e*Pn	**Pn**	**06 56 51.9**	**-0.3**
IGAR				*e*		06 57 44.1	
comp=Z,448nm,0.2s							
IZEF	**Zefreh**	**4.24**	**79**	*e*Pn	**Pn**	**06 56 56.0**	**0.0**
IZEF				*e*		06 57 52.2	
comp=N,178nm,0.1s							

IDC 29 06:56:15.6±1.1, 13°.26N×120°.29E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.7/21, mbtmp3.9/4, MS2.5/1, Ms1 2.5/1, ms1mx2.4/28, Error ellipse: s-maj=25.6km s-min=12.0km az=113.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City** 321nm,0.3s,baz=236,slow=3.3,SNR=37	**1.05**	**37**	Pg	Pg	06 56 36.8	+1.0
TGY	381nm,0.3s,baz=124,slow=20,SNR=5.8			Lg		06 56 49.4	
DAV	**Davao City (W)** comp=Z,34nm,19.6s,baz=278,slow=46	**8.05**	**139**	LR	LR	07 02 26.6	
WRA	**Warramunga Arr** 1.1nm,0.5s,baz=336,slow=9.6,SNR=13	**35.77**	**157**	P	P	07 03 16.0	-0.5
SONM	**Songino Array** 1.1nm,0.6s,baz=160,slow=9.3,SNR=7.2	**36.37**	**344**	P	P	07 03 21.0	-0.4
ASAR	**Alice Springs** 0.9nm,0.4s,baz=340,slow=7.3,SNR=23	**39.04**	**160**	P	P	07 03 44.6	+0.4
MKAR	**Makanchi Array** 1.0nm,0.9s,baz=131,slow=7.1,SNR=4.7	**46.15**	**324**	P	P	07 04 42.2	+0.3

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*TAP **29** 07:11:36.4, 23°.78N×121°.64E, h39km±1km, ML3.5, D*
*ISCJB **29** 07:11:37.3±0.3, 23°.79N±0°.02×121°.63E±0°.02, h40km±6km, Error ellipse: s-maj=3.8km s-min=2.7km az=41.5*
*JMA **29** 07:11:37.6±0.1, 24°.91N×121°.77E, h110km*
ISC 29 07:11:37.8±0.3, 23°.79N±0°.02×121°.62E±0°.02, h38km±5km, n40, σ0°74/74, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village** baz=229	**0.11**	**223**	*e*P	**Pn**	**07 11 44.6**	**+0.4**
ESF	**Shoufeng Towns** baz=308	**0.13**	**308**	P	**Pn**	**07 11 44.2**	**-0.1**
ESF				*e*S	**Sn**	**07 11 49.2**	**+0.4**
baz=308							
HWA	**Hwalien** baz=354	**0.19**	**355**	P	**Pn**	**07 11 43.7**	**-1.1**
HWA				*e*S	**Sn**	**07 11 51.6**	**+2.0**
baz=354							
TWD	**Chiawan** baz=354	**0.29**	**355**	*i* P	**Pn**	**07 11 45.5**	**-0.2**
TWD				*i* S	**Sn**	**07 11 51.3**	**0.0**
baz=354							
EHY	**Hungye** baz=226	**0.39**	**224**	P	**Pn**	**07 11 45.9**	**-1.1**
EHY				S	**Sn**	**07 11 52.3**	**-1.1**
baz=226							
WHF	**Hehuan Shan** baz=317	**0.48**	**318**	*i* P	**Pn**	**07 11 47.8**	**-0.4**
WHF				S	**Sn**	**07 11 55.3**	**-0.2**
baz=317							
TWF1	**Yuli** baz=215	**0.53**	**215**	*i* P	**Pn**	**07 11 47.5**	**-1.3**
TWF1				S	**Sn**	**07 11 55.2**	**-1.4**
baz=215							
TWT	**Tachien** baz=317	**0.62**	**319**	*e*P	**Pn**	**07 11 50.1**	**+0.1**
TWT				*e*S	**Sn**	**07 11 58.4**	**-0.4**
baz=317							
SMLT	**Sun Moon Lake** baz=278	**0.67**	**278**	⇑*i*P	**Pn**	**07 11 50.2**	**-0.5**
SMLT				S	**Sn**	**07 11 59.5**	**-0.5**
baz=278							
YUS	**Yu-Shan** baz=245	**0.68**	**244**	*e*P	**Pn**	**07 11 51.1**	**+0.2**
YUS				*e*S	**Sn**	**07 12 00.6**	**+0.2**
baz=245							
TYC	**Yuchr** baz=280	**0.71**	**279**	*e*P	**Pn**	**07 11 50.6**	**-0.7**
TYC				*e*S	**Sn**	**07 12 00.6**	**-0.4**
baz=280							
CHKT	**Chengkung** baz=199	**0.72**	**199**	P	**Pn**	**07 11 50.8**	**-0.7**
CHKT				S	**Sn**	**07 12 01.1**	**-0.2**
baz=199							
ALS	**Alishan** baz=250	**0.80**	**250**	*i* P	**Pn**	**07 11 52.6**	**+0.1**
ALS				S	**Sn**	**07 12 03.8**	**+0.6**
baz=250							
ELDTW	**Lidau** baz=223	**0.81**	**223**	*i* P	**Pn**	**07 11 51.4**	**-1.4**
ELDTW				S	**Sn**	**07 12 02.6**	**-1.0**
baz=223							
WNT	**Mingjian** baz=276	**0.86**	**276**	*e*P	**Pn**	**07 11 53.4**	**0.0**
WNT				*e*S	**Sn**	**07 12 05.5**	**+0.8**
baz=276							
CHN5	**Tsauling** baz=258	**0.89**	**258**	*e*P	**Pn**	**07 11 53.7**	**0.0**
CHN5				*e*S	**Sn**	**07 12 05.6**	**+0.3**
baz=258							
NSK	**Sanguang** baz=344	**0.92**	**345**	*i* P	**Pn**	**07 11 53.6**	**-0.6**
NSK				S	**Sn**	**07 12 04.9**	**-1.2**
baz=344							
TWE	**Neicheng** baz=2.0	**0.93**	**3**	P	**Pn**	**07 11 53.4**	**-1.0**
TWE				*e*S	**Sn**	**07 12 05.5**	**-1.0**
baz=2.0							
TCU	**Taichung** baz=292	**0.94**	**293**	*e*P	**Pn**	**07 11 54.9**	**+0.5**
TCU				*e*S	**Sn**	**07 12 07.2**	**+0.7**
baz=292							
TWQ1	**Liyutan** baz=306	**0.95**	**306**	*e*P	**Pn**	**07 11 55.4**	**+0.8**
TWQ1				S	**Sn**	**07 12 07.0**	**-0.1**
baz=306							
WGK	**Gukeng** baz=264	**0.98**	**264**	*e*P	**Pn**	**07 11 54.4**	**-0.6**
NSY	**Sanyi** baz=308	**1.00**	**309**	*e*P	**Pn**	**07 11 55.6**	**+0.2**
NSY				*e*S	**Sn**	**07 12 08.8**	**+0.5**
baz=308							
STYT	**Tauyuan** baz=232	**1.01**	**232**	*e*P	**Pn**	**07 11 55.5**	**+0.1**
STYT				*e*S	**Sn**	**07 12 08.2**	**-0.2**
baz=232							
NSTT	**Nanjuang** baz=326	**1.01**	**326**	P	**Pn**	**07 11 56.0**	**+0.5**
NSTT				S	**Sn**	**07 12 08.3**	**-0.1**
baz=326							
WTP	**Ta-pu** baz=240	**1.07**	**240**	P	**Pn**	**07 11 56.3**	**0.0**
WTP				S	**Sn**	**07 12 10.8**	**+0.9**
baz=240							
TWG	**Pinlang** baz=208	**1.09**	**208**	*e*P	**Pn**	**07 11 54.4**	**-2.1**
CHN1	**Nanshi** baz=239	**1.17**	**239**	P	**Pn**	**07 11 57.8**	**+0.2**
CHN1				S	**Sn**	**07 12 13.4**	**+1.0**
baz=239							
SGST	**Jiashian** baz=234	**1.19**	**234**	*e*P	**Pn**	**07 11 58.1**	**+0.2**
SGST				*e*S	**Sn**	**07 12 14.1**	**+1.4**
baz=234							
TWA	**Mucha** baz=358	**1.19**	**358**	P	**Pn**	**07 11 57.6**	**-0.3**
TWA				S	**Sn**	**07 12 12.2**	**-0.6**
baz=358							
WTCT	**Ta-ch'eng** baz=273	**1.23**	**274**	*e*P	**Pn**	**07 11 58.6**	**+0.2**
WTCT				*e*S	**Sn**	**07 12 15.1**	**+1.2**
baz=273							
TWB1	**Santiao Chiao** baz=15	**1.26**	**15**	*e*P	**Pn**	**07 11 59.3**	**+0.4**
NWF	**Wu-fen Shan** baz=5.0	**1.28**	**6**	*e*P	**Pn**	**07 11 58.9**	**-0.4**
NWF				*e*S	**Sn**	**07 12 15.1**	**-0.1**
baz=5.0							
TWS1	**Kuangyinshan** baz=351	**1.32**	**352**	*e*P	**Pn**	**07 11 59.6**	**-0.1**
TWS1				*e*S	**Sn**	**07 12 16.7**	**+0.6**
baz=351							
YOJ	**Yonaguni jima**	**1.44**	**62**	P	**Pn**	**07 12 01.4**	**+0.1**
YOJ				*e*S	**Sn**	**07 12 19.2**	**+0.3**
TWM1	**Shoushan** baz=229	**1.46**	**229**	*e*P	**Pn**	**07 12 02.7**	**+1.0**
EAST	**Anshuo** baz=207	**1.57**	**207**	*e*P	**Pn**	**07 12 04.3**	**+1.2**
SCZT	**Fangliau** baz=213	**1.69**	**213**	*e*P	**Pn**	**07 12 04.5**	**-0.2**
SCZT				*e*S	**Sn**	**07 12 26.2**	**+1.1**
baz=213							
IRIF	**Iriomote-Funau**	**2.00**	**74**	P	**Pn**	**07 12 09.4**	**+0.3**
IRIF				*e*S	**Sn**	**07 12 33.6**	**+0.7**
JKRS	**Kuro-shima**	**2.23**	**78**	P	**Pn**	**07 12 12.9**	**+0.7**
JKRS				*e*S	**Sn**	**07 12 40.1**	**+1.6**
JIJ	**Ishigaki jima**	**2.38**	**76**	P	**Pn**	**07 12 14.1**	**-0.1**
JIJ				*e*S	**Sn**	**07 12 41.7**	**-0.4**

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*IDC **29** 07:15:09.0±0.7, 0°.31S×125°.06E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/19, mbtmp3.9/10, MS3.1/1, Ms1 3.1/1, ms1mx2.4/26, Error ellipse: s-maj=46.9km s-min=16.3km az=68.0*
*DJA **29** 07:15:14, 0°.34S×125°.41E, h11km, MLv3.9/6*
*ISCJB **29** 07:15:17.2±0.5, 0°.30S±0°.04×125°.47E±0°.04, h78km±6km, mb4.0/14, Error ellipse: s-maj=7.8km s-min=5.3km az=32.2*
*NEIC **29** 07:15:19.4±2.7, 0°.31S×125°.42E, h83km±26km, mb4.1/6, Error ellipse: s-maj=24.4km s-min=10.4km az=48.0*
ISC 29 07:15:18.1±0.5, 0°.29S±0°.04×125°.47E±0°.04, h70km±6km, n32, σ1°32/36, mb4.0/14, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.72**	**300**	P	**Pn**	**07 15 39.5**	**-6.4**
KMSI				S	**Sn**	**07 16 05.4**	**-1.6**
MNI	**Manado**	**1.84**	**340**	P	**Pn**	**07 15 45.5**	**-2.0**
MNI				S	**Sn**	**07 16 10.6**	**+0.7**
LBMI	**Labuha**	**2.06**	**100**	P	**Pn**	**07 15 50.2**	**-0.4**
LBMI				S	**Sn**	**07 16 15.1**	**-0.2**
TNTI	**Ternate**	**2.17**	**61**	P	**Pn**	**07 15 55.0**	**+2.9**
TNTI				S	**Sn**	**07 16 22.3**	**+4.2**
LUWI	**Luwuk**	**2.79**	**255**	P	**Pn**	**07 16 01.3**	**+0.8**
LUWI				S	**Sn**	**07 16 34.1**	**+1.0**
NLAI	**Namlea**	**3.35**	**151**	P	**Pn**	**07 16 07.6**	**-0.5**
NLAI				S	**Sn**	**07 16 46.0**	**-0.7**
MRSI	**Marisa**	**3.61**	**282**	P	**Pn**	**07 16 05.6**	**-6.0**
APSI	**Ampana**	**3.87**	**261**	P	**Pn**	**07 16 17.2**	**+2.1**
APSI				S	**Sn**	**07 17 02.2**	**+2.9**
KDI	**Kendari**	**4.62**	**218**	P	**Pn**	**07 16 22.4**	**-3.0**
TTSI	**Tana Toraja**	**6.27**	**244**	P	**Pn**	**07 16 45.2**	**-2.8**
DAV	**Davao City (W)** comp=Z,126nm,19.4s,baz=188,slow=40	**7.32**	**1**	LR	LR	07 20 04.3	
KAKA	**Kakadu**	**14.14**	**151**	*e*Pn	**Pn**	**07 18 34.4**	**-0.7**
KSM	**Kuching** 5.1nm,0.4s	**15.26**	**277**	*e*Pn	**Pn**	**07 18 51.3**	**+1.7**
FITZ	**Fitzroy Crossi** 1.4nm,0.6s	**17.70**	**179**	*e*P	**Pn**	**07 19 20.2**	**+0.2**
WRA	**Warramunga Arr** 1.5nm,0.5s,mb3.6,baz=338,slow=12,SNR=8.5	**21.37**	**157**	P	**P**	**07 19 59.0**	**-0.9**
COEN	**Coen** 30nm,0.7s,mb4.7	**22.17**	**129**	*e*P	**P**	**07 20 10.3**	**+1.8**
ASAR	**Alice Springs** 0.7nm,0.4s,mb3.4,baz=342,slow=8.7,SNR=16	**24.64**	**161**	P	**P**	**07 20 32.7**	**+0.6**
STKA	**Stephens Creek** 1.0nm,0.4s,mb4.0,baz=330,slow=10,SNR=6.1	**34.92**	**156**	P	**P**	**07 22 04.6**	**+1.4**
SONM	**Songino Array** 0.8nm,0.7s,mb3.9,baz=160,slow=8.8,SNR=5.1	**50.73**	**343**	P	**P**	**07 24 10.1**	**-0.6**
PETK	**Petropavlovsk-** 3.6nm,0.7s,mb4.5,baz=197,slow=6.7,SNR=3.0	**59.61**	**22**	P	**P**	**07 25 16.9**	**+2.4**
PETK	**Petropavlovsk-**	**59.61**	**22**	P	**P**	**07 25 16.9**	**+2.4**
MKAR	**Makanchi Array** 1.7nm,0.6s,mb4.2,baz=122,slow=8.4,SNR=15	**60.17**	**327**	P	**P**	**07 25 17.0**	**-1.5**
AML	**Almayashu** 2.0nm,0.7s,mb4.2	**62.81**	**319**	*e*P	**P**	**07 25 37.6**	**+1.1**
ZALV	**Zalesovo Beam** 0.6nm,0.3s,mb3.9,baz=118,slow=8.3,SNR=3.5	**63.62**	**335**	P	**P**	**07 25 39.9**	**-1.6**
KURK	**Kurchatov** 3.9nm,0.8s,mb4.3	**64.48**	**329**	*e*P	**P**	**07 25 47.4**	**+0.2**
ABKAR	**Akbulak array** 0.6nm,0.5s,mb3.6	**74.48**	**322**	*e*P	**P**	**07 26 47.9**	**-1.0**
AKTK	**Aktyubinsk**	**76.03**	**323**	P	**P**	**07 26 57.2**	**-0.6**
AKTO	**Aktyubinsk** 1.8nm,0.5s,mb4.1,baz=79,slow=5.0,SNR=4.2	**76.03**	**323**	P	**P**	**07 26 57.2**	**-0.6**
ILAR	**Eielson Array** 0.1nm,0.5s,mb3.1,baz=235,slow=4.1,SNR=4.5	**89.25**	**25**	P	**P**	**07 28 06.2**	**+0.1**
BRTR	**Keskin Array B** 0.5nm,0.6s,mb3.9,baz=138,slow=9.4,SNR=3.9	**91

KULA	Kula-Manisa	0.87 223	PG	Pg	07 16 58.1	-0.4
KULA	Kula-Manisa	0.87 223	*i* Pg	Pg	07 16 58.1	-0.5
SHUT	Suhut-Afyon	1.07 124	*e*PG	Pg	07 17 02.5	0.0
SHUT			*e*SG	Sg	07 17 17.3	+0.8
SHUT	Suhut-Afyon	1.07 124	*e*Pg	Pg	07 17 02.6	0.0
SHUT			*e*Sg	Sg	07 17 17.3	+0.8
CAVI	Cavuskoy	1.10 18	*e*PN	Pg	07 17 02.9	-0.1
CAVI			*e*SN	Sg	07 17 19.6	+2.3
CAVI	Cavuskoy	1.10 18	*e*Pn	Pg	07 17 02.9	-0.1
CAVI			*e*Sn	Sg	07 17 19.6	+2.3
ESKT	Eskisehir	1.18 71	*i* P	Pg	07 17 03.0	-1.5
ESKT			*i* S	Sg	07 17 18.2	-1.6
SEYT	Eskypehyr	1.18 71	*i* P	Pg	07 17 03.0	-1.5
SEYT			*i* S	Sg	07 17 18.2	-1.5
AKHS	Akhisar	1.27 258	*i* P	Pg	07 17 06.6	+0.2
AKHS			*i* S	Sg	07 17 23.0	+0.2
AKHS	Akhisar	1.27 258	*i* P	Pg	07 17 06.6	+0.2
AKHS			*i* S	Sg	07 17 23.0	+0.1
MDNY	Mudanya-Bursa	1.28 342	*e*PN	Pn	07 17 05.5	-1.4
MDNY	Mudanya-Bursa	1.28 342	*e*Pn	Pn	07 17 05.5	-1.5
BALB	Balikesir	1.28 293	*e*PN	Pn	07 17 06.1	-0.9
BALB	Balikesir	1.28 293	*e*Pn	Pn	07 17 06.1	-0.9
GEMT	Gemlik	1.29 353	*e*PN	Pn	07 17 06.5	-0.7
GEMT	Gemlik	1.29 353	*e*Pn	Pn	07 17 06.5	-0.6
ADVT	Abdulvahap	1.30 11	*e*PN	Pn	07 17 06.3	-1.0
ADVT	Abdulvahap	1.30 11	*e*Pn	Pn	07 17 06.3	-1.0
GPA	Golpazari	1.33 31	*e*PN	Pn	07 17 07.0	-0.7
GPA	Golpazari	1.33 31	*e*Pn	Pn	07 17 07.0	-0.6
DENT	Denizli	1.43 192	*e*PN	Pn	07 17 08.5	-0.5
DENT	Denizli	1.43 192	*e*Pn	Pn	07 17 08.5	-0.5
ARMT	Armutlu	1.47 344	*e*PN	Pn	07 17 08.5	-1.1
ARMT	Armutlu	1.47 344	*e*Pn	Pn	07 17 08.5	-1.1
DNZL	Cakiroluk	1.49 191	*i* P	Pn	07 17 28.8	-1.1
DNZL			*i* S	Sb	07 17 29.0	-0.8
DNZL	Cakiroluk	1.49 191	*i* P	Pn	07 17 08.8	-1.0
DNZL			*i* S	Sb	07 17 29.0	-0.8
GULT	Gulveren	1.53 33	*e*PN	Pn	07 17 10.5	0.0
GULT	Gulveren	1.53 33	*e*Pn	Pn	07 17 10.5	0.0
ISP	Isparta	1.59 146 ⇓	*i*P	Pn	07 17 10.4	-0.8
ISP			S	Sn	07 17 34.1	+1.7
ISP	Isparta	1.59 146 ⇓	*i*P	Pn	07 17 10.4	-0.8
ISP			S	Sn	07 17 34.1	+1.7
GONE	Gonen-Balikesi	1.60 304	*e*PN	Pn	07 17 11.0	-0.4
GONE	Gonen-Balikesi	1.60 304	*e*Pn	Pn	07 17 11.0	-0.4
BNT	Bandirma	1.66 317	*e*PN	Pn	07 17 12.0	-0.2
SVRH	Sivrihisar-ESK	1.67 79	*e*PN	Pn	07 17 11.9	-0.4
SVRH	Sivrihisar-ESK	1.67 79	*e*Pn	Pn	07 17 11.9	-0.4
HRT	Hereke	1.68 7	*e*PN	Pn	07 17 11.7	-0.7
HRT	Hereke	1.68 7	*e*Pn	Pn	07 17 11.7	-0.7
SPNC	Sapanca-Adapaz	1.68 24	*e*PN	Pn	07 17 12.6	+0.2
SPNC	Sapanca-Adapaz	1.68 24	*e*Pn	Pn	07 17 12.6	+0.1
IZM	Izmir	1.84 246	*e*PN	Pn	07 17 14.2	-0.4
MDU	Mudurnu	1.91 46	*e*PN	Pn	07 17 16.1	+0.5
MDU	Mudurnu	1.91 46	*e*Pn	Pn	07 17 16.1	+0.5
ISK	Istanbul-Kandi	1.93 352	*e*PN	Pn	07 17 15.9	+0.1
ISK	Istanbul-Kandi	1.93 352	*e*Pn	Pn	07 17 16.0	+0.1
BCK	Bucak	1.93 151	*e*PN	Pn	07 17 15.8	-0.1
BCK	Bucak	1.93 151	*e*Pn	Pn	07 17 15.8	-0.1
KIZT	Kizilcal	1.94 97	*e*PN	Pn	07 17 16.3	+0.2
KIZT	Kizilcal	1.94 97	*e*Pn	Pn	07 17 16.3	+0.2
GLHS	Gihisar (BURDU	2.00 178	*e*PN	Pn	07 17 16.7	-0.2
GLHS	Gihisar (BURDU	2.00 178	*e*Pn	Pn	07 17 16.7	-0.1
BLCB	Balcova	2.00 248	*e*PN	Pn	07 17 17.0	+0.1
BLCB	Balcova	2.00 248	*e*Pn	Pn	07 17 17.0	+0.1
SILT	Sile	2.00 5	*e*PN	Pn	07 17 16.8	-0.2
SILT	Sile	2.00 5	*e*Pn	Pn	07 17 16.8	-0.1
BGKT	Bogazkoy	2.08 347	*e*PN	Pn	07 17 17.9	-0.1
BGKT	Bogazkoy	2.08 347	*e*Pn	Pn	07 17 17.9	-0.1
SUTC	Sutluce-Ispart	2.09 143	*e*PN	Pn	07 17 18.5	+0.4
SUTC	Sutluce-Ispart	2.09 143	*e*Pn	Pn	07 17 18.5	+0.4
KLYT	Kilyos	2.12 352	*e*PN	Pn	07 17 17.7	-0.8
KLYT	Kilyos	2.12 352	*e*Pn	Pn	07 17 17.7	-0.8
CTKS	Kestanelik-??a	2.19 342	*e*PN	Pn	07 17 19.6	+0.1
CTKS	Kestanelik-??a	2.19 342	*e*Pn	Pn	07 17 19.7	+0.2
YER	Yerkesik	2.20 204	*e*PN	Pn	07 17 19.9	+0.2
YER	Yerkesik	2.20 204	*e*Pn	Pn	07 17 19.9	+0.2
MLSB	Milas	2.26 215	*e*PN	Pn	07 17 20.8	+0.3
MLSB	Milas	2.26 215	*e*Pn	Pn	07 17 20.8	+0.4
SLVT	Silivri	2.27 336	*e*PN	Pn	07 17 20.6	+0.1
SLVT	Silivri	2.27 336	*e*Pn	Pn	07 17 20.6	0.0
RKY	Sarkoy-Tekirda	2.30 312	*e*PN	Pn	07 17 21.1	+0.1
RKY	Sarkoy-Tekirda	2.30 312	*e*Pn	Pn	07 17 21.1	+0.1
MFT	Murefte	2.31 316	*e*PN	Pn	07 17 21.9	+0.8
MFT	Murefte	2.31 316	*e*Pn	Pn	07 17 21.9	+0.8
TKR	Tekirdag	2.33 322	*e*PN	Pn	07 17 21.5	+0.1
TKR	Tekirdag	2.33 322	*e*Pn	Pn	07 17 21.5	+0.1
CRLT	Corlu	2.35 327	*e*PN	Pn	07 17 22.0	+0.3
CRLT	Corlu	2.35 327	*e*Pn	Pn	07 17 22.0	+0.3
LPK	Lapseki	2.38 302	*e*PN	Pn	07 17 22.5	+0.5
LPK	Lapseki	2.38 302	*e*Pn	Pn	07 17 22.5	+0.4
ELL	Elmali	2.43 171	*e*PN	Pn	07 17 22.9	+0.1
ELL	Elmali	2.43 171	*e*Pn	Pn	07 17 22.9	+0.1
CTYL	Yal??k??y-??at	2.47 340	*e*PN	Pn	07 17 23.4	0.0
CTYL	Yal??k??y-??at	2.47 340	*e*Pn	Pn	07 17 23.4	+0.1
EZN	Ezine	2.48 287	*e*PN	Pn	07 17 23.8	+0.3
EZN	Ezine	2.48 287	*e*Pn	Pn	07 17 23.8	+0.3
FETY	Fethiye	2.53 186	*e*PN	Pn	07 17 23.3	-0.8
FETY	Fethiye	2.53 186	*e*Pn	Pn	07 17 23.3	-0.8
GELI	Tayfur-Gelibol	2.58 300	*e*PN	Pn	07 17 25.3	+0.5
GELI	Tayfur-Gelibol	2.58 300	*e*Pn	Pn	07 17 25.3	+0.5
KONT	Konya--Tatoy	2.61 117	*e*PN	Pn	07 17 25.2	0.0
KONT	Konya--Tatoy	2.61 117	*e*Pn	Pn	07 17 25.2	0.0
BODT	Bodrum	2.67 219	*e*PN	Pn	07 17 26.5	+0.5
BODT	Bodrum	2.67 219	*e*Pn	Pn	07 17 26.5	+0.5
ERIK	Erikli-Kesan	2.69 305	*e*PN	Pn	07 17 26.8	+0.4
ERIK	Erikli-Kesan	2.69 305	*e*Pn	Pn	07 17 26.8	+0.4
DAT	Datca	2.82 211	*e*PN	Pn	07 17 28.9	+0.7
DAT	Datca	2.82 211	*e*Pn	Pn	07 17 28.9	+0.7
AFSR	Af¨ar-Bala (A	2.86 83	*e*PN	Pn	07 17 29.0	+0.4
AFSR	Af¨ar-Bala (A	2.86 83	*e*Pn	Pn	07 17 29.0	+0.4
GADA	Gvkgeada	2.90 292	*e*PN	Pn	07 17 30.1	+0.9
GADA	Gvkgeada	2.90 292	*e*Pn	Pn	07 17 30.1	+0.9
ENEZ	Enez	2.96 303	*e*PN	Pn	07 17 30.2	+0.1
ENEZ	Enez	2.96 303	*e*Pn	Pn	07 17 30.2	+0.1
SAFT	Safranbolu	3.26 49	*e*PN	Pn	07 17 35.0	+0.8
SAFT	Safranbolu	3.26 49	*e*Pn	Pn	07 17 35.1	+0.9
EDRB	Edirne	3.37 324	*e*PN	Pn	07 17 35.4	-0.3
EDRB	Edirne	3.37 324	*e*Pn	Pn	07 17 35.4	-0.3
YOZ	Yozgat	4.61 82	*e*PN	Pn	07 17 53.6	+1.0
YOZ	Yozgat	4.61 82	*e*Pn	Pn	07 17 53.6	+0.9
TIRR	Tirgusor	5.35 352 ⇓	*i*P	Pn	07 18 03.2	+0.3
TIRR	Tirgusor	5.35 352 ⇓	*i*P	Pn	07 18 03.2	+0.3
VTS	Vitosha	5.82 308 ⇓	*i*P	Sg	07 19 45.3	-3.6
CFR	Carcaliu	6.09 351 ⇑	*i*P	Pn	07 18 12.8	-0.3
CFR	Carcaliu	6.09 351 ⇑	*i*P	Pn	07 18 12.8	-0.3
MLR	Muntele Rosu	6.83 339 ⇑	*i*P	Pn	07 18 23.9	+0.7
MLR	Muntele Rosu	6.83 339 ⇑	*i*P	Pn	07 18 23.9	+0.7
VRI	Vrincioaia	6.99 344 ⇑	*i*P	Pn	07 18 26.3	+0.8
VRI	Vrincioaia	6.99 344 ⇑	*i*P	Pn	07 18 26.3	+0.8
PLOR	Plostina	7.00 344 ⇑	*i*P	Pn	07 18 25.7	+0.2
PLOR	Plostina	7.00 344 ⇑	*i*P	Pn	07 18 25.7	+0.2

JMA 29 07:29:22.5±0.2, 43°.82N×147°.64E, h13km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.45	252	P	Pn	07 29 48.6	+0.2
NEM2				*e*S	Sn	07 30 07.9	+0.6
JRA	Rausu	1.82	275	P	Pn	07 29 54.3	+0.8
JRA				*e*S	Sn	07 30 17.7	+1.2
JNK	Nakash	2.13	265	P	Pn	07 29 58.3	+0.6
JNK				*e*S	Sn	07 30 25.0	+0.9
JAK	Akkeshi	2.30	250	P	Pn	07 30 01.0	+1.0
JAK				*e*S	Sn	07 30 29.0	+0.8
JAR	Ashorobuto	2.86	261	P	Pn	07 30 09.6	+1.8
JOB	Onbets	2.92	253	P	Pn	07 30 10.5	+1.9
JCH	Churui	3.35	250	P	Pn	07 30 15.7	+1.2
JCH				*e*S	Sn	07 30 55.4	+1.3

*IDC **29** 08:34:09.8±1.1, 3°.21S×129°.15E, h0km, mb4.1/5, mb1 4.3/6, mb1mx3.9/19, mbtmp4.2/6, ML4.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.9/21, Error ellipse: s-maj=65.1km s-min=16.5km az=70.0*
*DJA **29** 08:34:14, 2°.69S×129°.56E, h119km, MLv4.0/5*
*NEIC **29** 08:34:14.4±0.8, 2°.97S×129°.53E, h35km, mb4.2/4, Error ellipse: s-maj=26.2km s-min=12.8km az=66.0*

*ISCJB **29** 08:34:15.7±1.5, 2°.9S±0°.1×129°.63E±0°.08, h68km±14km, mb4.0/6, Error ellipse: s-maj=22.3km s-min=10.1km az=25.8*

ISC 29 08:34:15.1±1.3, 2°.94S±0°.08×129°.68E±0°.09, h42km±13km, n22, σ1¶42/23, mb4.1/6, MS3.1/2, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.58	172	P	Pn	08 34 46.3	+5.6
BNDI				S	Sn	08 35 11.9	+12
NLAI	Namlea	2.59	263	P	Pn	08 34 54.9	+0.3
NLAI				S	Sn	08 35 26.8	+1.9
LBMI	Labuha	3.16	316	P	Pn	08 34 59.7	-2.7
TLE	Tual	4.05	131	P	Pn	08 35 18.4	+3.7
KAKA	Kakadu	10.08	164	*e*Pn	Pn	08 36 36.3	-1.1
KAKA	23nm,0.6s			*e*Sn	Sn	08 38 27.5	-1.7
FITZ	Fitzroy Crossi	15.58	194	*e*P	Pn	08 37 52.4	+0.6
COEN	2.4nm,0.6s Coen	17.24	130	*e*P	Pn	08 38 14.5	+1.5
WRA	40nm,0.9s Warramunga Arr	17.50	165	P	Pn	08 38 14.0	-2.1
WRA	1.3nm,0.3s,baz=348,slow=12,SNR=18			S	S	08 41 20.1	-16
WB2	0.1nm,0.3s,baz=344,slow=22,SNR=4.0 Warramunga Arr	17.50	165	*e*P	Pn	08 38 13.8	-2.3
ASAR	Alice Springs	21.00	169	P	P	08 38 55.2	+0.1
ASAR	12nm,0.8s,mb4.3,baz=348,slow=11,SNR=74			S	S	08 42 46.4	-0.5
ASAR	1.7nm,0.8s,baz=353,slow=23,SNR=6.6			PcP	PcP	08 43 02.3	+0.9
CTA	0.5nm,0.6s,baz=1.8,slow=1.9,SNR=5.7 Charters Tower	23.49	138	P	P	08 39 22.8	+1.4
CTAO	3.7nm,0.8s,mb3.9,baz=323,slow=11,SNR=8.3 Charters Tower	23.49	138	*e*P	P	08 39 22.8	+1.4
STKA	4.3nm,0.9s,mb3.9 Stephens Creek	30.89	160	P	P	08 40 28.9	+1.2
MJAR	0.5nm,0.4s,mb3.7,baz=335,slow=8.8,SNR=4.7 Matsushiro Arr	40.08	11	LR	LR	08 56 19.9	
KSRS	comp=Z,40nm,19.3s,MS3.3,baz=215,slow=33 Korea Array	40.23	358	LR	LR	08 58 11.2	
MKAR	comp=Z,22nm,19.6s,MS3.0,baz=205,slow=36 Makanchi Array	64.69	326	P	P	08 44 47.9	-0.9
MKAR	0.9nm,0.6s,mb4.0,baz=126,slow=7.6,SNR=6.8 Makanchi Array	64.69	326	P	P	08 44 47.9	-0.9
KURK	3.6nm,0.8s,mb4.3 Kurchatov	68.92	328	*e*P	P	08 45 14.7	-1.0
QSPA	2.1nm,1.1s,mb4.3,baz=298,slow=3.1,SNR=3.3 South Pole Qui	87.01	180	P	P	08 46 56.5	+1.0
QSPA	2.1nm,1.1s,mb4.3,baz=298,slow=3.1,SNR=3.3 South Pole Qui	87.01	180	P	P	08 46 56.5	+1.0
CPUP	Villa Florida	150.12	167	PKPbc	PKPbc	08 54 03.2	+1.0
CPUP	0.6nm,0.5s,baz=147,slow=1.2,SNR=3.9 Villa Florida	150.12	167	PKPbc	PKPbc	08 54 03.2	+1.0

MEX 29 08:36:07.8±1.2, 14°.35N×94°.00W, h13km±22km, MD3.9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.54	29	*i* P	Pn	08 36 30.8	-4.1
PCIG				*i* S	Sn	08 36 49.0	-5.9
THIG		1.77	72	*e*P	Pn	08 36 34.5	-3.6
THIG				*i* S	Sn	08 36 56.1	-4.3
HUIG	Huatulco	2.48	305	*i* P	Pn	08 36 45.0	-2.8
HUIG				*i* S	Sn	08 37 13.4	-4.5
TGIG		2.56	19	*i* P	Pn	08 36 47.6	-1.3
TGIG				*i* S	Sn	08 37 17.2	-2.7
CCIG	Comitan	2.63	43	*e*P	Pn	08 36 48.3	-1.6
CCIG				*i* S	Sn	08 37 19.0	-2.7
CMIG	Matias Romero	2.85	343	*e*P	Pn	08 36 50.4	-2.6
CMIG				*i* S	Sn	08 37 24.1	-3.1

*ISCJB **29** 08:36:38.4±0.7, 60°.2S±0°.1×25°.7W±0°.3, h10km, mb4.2/10, MS3.6/6, Error ellipse: s-maj=26.8km s-min=8.5km az=141.0*
*IDC **29** 08:36:40.6±0.7, 59°.83S×25°.91W, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.1/16, mbtmp4.1/8, MS3.5/7, Ms1 3.5/7, ms1mx3.4/21, Error ellipse: s-maj=27.4km s-min=17.8km az=37.0*
*NEIC **29** 08:36:46.1±0.4, 59°.85S×25°.91W, h35km, mb4.5/5, Error ellipse: s-maj=15.8km s-min=10.7km az=207.0*

ISC 29 08:36:40.6±0.7, 60°.2S±0°.1×25°.7W±0°.3, h10km, n28, σ1¶10/22, mb4.2/10, MS3.6/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.71	153	*e*P	Pn	08 39 40.6	-0.5
VNA1				*e*S	Sn	08 41 55.1	-7.3
VNA3	Neumayer Olymp	12.86	156	*e*P	Pn	08 39 41.7	-1.5
VNA3				*e*S	Sn	08 41 51.4	-15
VNA2	Neumayer--Watz	13.11	153	*e*P	Pn	08 39 46.1	-0.4
VNA2	baz=313,slow=14			*e*S	Sn	08 42 02.5	-10
SNAA	Sanae	14.69	151	Pn	Pn	08 40 09.1	+1.0
SNAA	0.3nm,0.3s,baz=313,slow=13,SNR=35			LR	LR	08 44 42.7	
EFI	comp=Z,44nm,18.3s,baz=210,slow=32 East Falkland	19.86	281	*e*P	Pn	08 41 13.3	+0.2
USHA	26nm,0.7s Ushuaia	23.27	264	P	P	08 41 49.7	+1.7
USHA	25nm,0.9s,mb4.7,baz=92,slow=8.3,SNR=14			LR	LR	08 49 08.2	
USHA	comp=Z,255nm,18.7s,MS3.7,baz=320,slow=32 Ushuaia	23.27	264	P	P	08 41 49.7	+1.7
USHA				LR	LR	08 49 08.2	
QSPA	2.8nm,0.9s,mb4.0,baz=204,slow=5.0,SNR=14 South Pole Qui	30.09	180	P	P	08 42 54.3	+4.8
QSPA	8.4nm,1.0s,mb4.4 South Pole Qui	30.09	180	*e*P	P	08 42 54.2	+4.7
TRQA	4.1nm,0.8s,mb4.3 Tornquist	31.82	298	*e*P	P	08 43 05.0	-0.2
PLCA	2.5nm,0.9s,mb4.2,baz=169,slow=8.8,SNR=5.9 Paso Flores	33.68	285	P	P	08 43 20.8	-0.6
PLCA				LR	LR	08 54 16.6	
PLCA	comp=Z,92nm,20.3s,MS3.5,baz=151,slow=32 Paso Flores	33.68	285	*e*P	P	08 43 20.9	-0.5
PLCA	3.6nm,0.8s,mb4.3			LR	LR	08 54 16.6	
CFAA	Coronel Fontan	40.02	296	P	P	08 44 14.7	-0.7
CPUP	0.6nm,0.6s,mb3.5,baz=150,slow=8.8,SNR=18 Villa Florida	40.18	313	P	P	08 44 15.9	-0.9
CPUP	0.7nm,0.4s,mb3.7,baz=139,slow=6.8,SNR=5.8 Villa Florida	40.18	313	*e*P	P	08 44 15.6	-1.2
BOSA	6.8nm,0.5s,mb4.6 Boshof	46.38	70	LR	LR	09 02 30.1	
BDFB	comp=Z,59nm,18.1s,MS3.6,baz=348,slow=33 Brasilia	47.34	330	P	P	08 45 13.2	-1.2
BDFB	1.4nm,0.5s,mb4.2,baz=118,slow=12,SNR=3.1			LR	LR	09 03 11.3	
LPAZ	comp=Z,62nm,20.5s,MS3.6,baz=336,slow=34 La Paz	53.44	306	P	P	08 46 00.8	+0.3
LPAZ	2.1nm,0.5s,mb4.3,baz=110,slow=5.1,SNR=27			LR	LR	09 06 53.3	
TORD	comp=Z,62nm,20.6s,MS3.6,baz=94,slow=34 Torodi Ar. Bea	76.29	27	P	P	08 48 30.8	+1.5
SJG	20nm,0.9s,mb5.1,baz=196,slow=6.2,SNR=5.1 San Juan	84.59	322	LR	LR	09 25 32.3	
ASAR	comp=Z,24nm,21.0s,MS3.6,baz=281,slow=35 Alice Springs	94.83	161	P	P	08 50 05.0	+2.5
ABKAR	0.2nm,0.7s,mb3.7,baz=181,slow=3.7,SNR=2.9 Akbulak array	128.98	57	*e*PKPdf	PKPdf	08 55 49.4	+2.1
ARCES	ARCESS Array B	134.45	23	PKP	PKPdf	08 55 59.4	+2.4
MKAR	5.1nm,0.9s,baz=181,slow=4.3,SNR=3.8 Makanchi Array	137.31	75	PKP	PKPdf	08 56 04.5	+1.4
YKA	0.2nm,0.6s,baz=177,slow=2.6,SNR=3.0 Yellowknife Ar	139.70	314	PKP	PKPdf	08 56 07.3	+0.4
SONM	1.1nm,0.6s,baz=136,slow=2.0,SNR=5.8 Songino Array	149.95	92	PKPbc	PKPbc	08 56 31.9	+1.9
SONM	0.7nm,0.5s,baz=235,slow=2.7,SNR=4.0			PKPab	PKPab	08 56 36.2	+0.4
KSRS	1.7nm,0.9s,baz=217,slow=1.9,SNR=6.6 Korea Array	151.74	132	PKPbc	PKPbc	08 56 38.3	+3.8
KSRS	0.3nm,0.3s,baz=202,slow=3.7,SNR=2.9			PKPab	PKPab	08 56 45.9	+2.4
ILAR	1.9nm,0.8s,baz=204,slow=2.7,SNR=4.8 Eielson Array	153.32	305	PKPbc	PKPbc	08 56 37.8	+0.6
ILAR	0.7nm,0.4s,baz=142,slow=1.3,SNR=22			PKPab	PKPab	08 56 47.6	-1.8
	0.8nm,0.6s,baz=118,slow=1.0,SNR=9.3						

IDC 29 08:37:19.5±53.0, 19°.98S×179°.38W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.7/3, Error ellipse: s-maj=968.5km s-min=151.7km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.86	243	P	P	08 44 29.2	-0.5
ASAR	0.6nm,0.4s,baz=105,slow=14,SNR=3.1 Alice Springs	43.38	256	P	P	08 45 23.9	0.0
WRA	0.9nm,0.5s,baz=92,slow=8.4,SNR=12 Warramunga Arr	43.39	262	P	P	08 45 24.6	+0.4
	0.3nm,0.3s,baz=96,slow=7.7,SNR=5.0						

IDC 29 08:52:36.6±2.8, 12°.87S×167°.14E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.5/16, mbtmp3.4/4, Error ellipse: s-maj=129.5km s-min=31.6km az=136.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	30.13	227	P	P	08 58 49.0	+0.7
WRA	1.4nm,0.9s,baz=83,slow=8.1,SNR=3.0 Warramunga Arr	32.20	253	P	P	08 59 06.7	+0.1
ASAR	0.1nm,0.5s,baz=86,slow=9.0,SNR=2.7 Alice Springs	33.26	246	P	P	08 59 15.4	-0.5
ILAR	0.1nm,0.5s,baz=75,slow=9.4,SNR=4.8 Eielson Array	84.80	18	P	P	09 05 12.6	0.0
	0.3nm,0.6s,baz=244,slow=5.0,SNR=6.2						

*NAO **29** 08:59:27.9±1.5, 71°.25N×4°.69W, ML2.6*
*ISCJB **29** 08:59:28.3±0.6, 71°.36N±0°.07×4°.6W±0°.2, h10km, mb3.3/5, Error ellipse: s-maj=10.6km s-min=7.5km az=166.3*
*IDC **29** 08:59:29.7±0.9, 71°.23N×4°.73W, h0km, mb3.3/4, mb1 3.6/8, mb1mx3.5/26, mbtmp3.5/8, ML3.5/4, MS2.9/2, Ms1 2.9/2, ms1mx2.4/42, Error ellipse: s-maj=22.5km s-min=17.2km az=24.0*

ISC 29 08:59:30.1±0.6, 71°.31N±0°.07×4°.8W±0°.2, h10km, n19, σ1¶40/18, mb3.3/5, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	Jan Mayen	1.25	257	Pg	Pg	08 59 51.2	-2.9
JMIC				Lg		09 00 09.7	
JMIC	Jan Mayen	1.25	257	Pn	Pn	08 59 53.3	-0.3
JMIC	5.1nm,0.3s,baz=90,slow=16,SNR=2.3			Sn	Sn	09 00 09.4	-1.0
KBS	13nm,0.3s,baz=148,slow=21,SNR=2.5 Kingsbay	8.72	22	Pn	Pn	09 01 35.2	-0.9
SPA0	Spitsbergen Ar	8.79	29	Pn	Pn	09 01 37.0	0.0
SPITS	baz=226,slow=16 Spitsbergen Ar	8.79	29	Pn	Pn	09 01 36.8	-0.1
ARA0	baz=211,slow=14,SNR=38 ARCESS Array S	10.26	85	Pn	Pn	09 01 55.1	-1.9
ARCES	baz=283,slow=14 ARCESS Array B	10.26	85	Pn	Pn	09 01 53.2	-3.8
NOA	0.5nm,0.3s,baz=315,slow=14,SNR=7.0 NORSAR Array B	12.11	140	LR	LR	09 06 24.9	
HFS	comp=Z,38nm,19.9s,baz=35,slow=34 Hagfors	13.46	137	Pn	Pn	09 02 40.9	+0.1
HFS	baz=342,slow=12 Hagfors	13.46	137	Pn	Pn	09 02 40.5	-0.3
FIA0	0.5nm,0.3s,baz=345,slow=11,SNR=10 FINESS Array S	15.61	114	P	Pn	09 03 08.5	-1.2
FINES	FINESS Array B	15.61	114	Pn	Pn	09 03 09.1	-0.6
EKA	0.4nm,0.3s,baz=334,slow=12,SNR=2.6 Eskdalemuir Ar	16.05	177	Pn	Pn	09 03 16.9	+1.3
VRAC	0.1nm,0.3s,baz=15,slow=14,SNR=3.0 Vranov	24.19	144	LR	LR	09 13 46.1	
AKASG	comp=Z,41nm,18.1s,baz=201,slow=36 Malin Array Be	25.78	125	P	P	09 04 59.8	-0.9
ILAR	0.4nm,0.4s,mb3.3,baz=339,slow=9.9,SNR=2.8 Eielson Array	41.74	337	P	P	09 07 20.6	+2.0
MKAR	0.1nm,0.6s,mb2.6,baz=24,slow=9.2,SNR=2.7 Makanchi Array	45.65	74	P	P	09 07 51.6	+1.4
TORD	0.3nm,0.6s,mb3.4,baz=358,slow=7.6,SNR=3.0 Torodi Ar. Bea	58.26	173	P	P	09 09 26.2	+1.8
TXAR	0.6nm,0.8s,mb3.7,baz=349,slow=7.6,SNR=4.4 Lajitas Array	65.30	288	P	P	09 10 13.9	+2.1
	0.2nm,0.6s,mb3.3,baz=48,slow=5.1,SNR=3.8						

*CSEM **29** 09:05:38.0, 38°.42N×29°.78W, h10km, ML2.7, After PDA*
PDA 29 09:05:38.0±0.8, 38°.42N×29°.78W, h10km, MD3.5, ML2.7, Error ellipse: s-maj=21.7km s-min=7.3km az=170.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	Caldeira	0.86	79	*e*P	Pg	09 05 51.3	-3.2
CALA	Caldeira	0.86	79	*e*P	Pg	09 05 51.3	-3.2
PCED	Cedros	0.87	75	*i* P	Pg	09 05 51.1	-3.6
PCED				*e*S	Sg	09 06 01.7	-4.3
PCED				A		09 06 01.8	
	31nm,0.2s						
HOR	Horta	0.91	83	*e*S	S

comp=Z,50nm,18.6s,baz=216,slow=42
WRA Warramunga Arr 22.49 119 P **P 09 41 27.0 -0.8**
0.6nm,0.5s,mb3.3,baz=296,slow=12,SNR=7.6
WRA PcP PcP 09 45 20.7 +0.6
0.4nm,0.7s,baz=322,slow=1.5,SNR=4.8
ASAR Alice Springs 23.88 128 P **P 09 41 42.3 +1.0**
0.9nm,0.6s,mb3.4,baz=306,slow=9.7,SNR=19
ASAR PcP PcP 09 45 24.9 +2.0
0.2nm,0.3s,baz=323,slow=1.4,SNR=3.8
CMAR Chiang Mai Arr 31.48 333 P **P 09 42 50.0 +0.6**
2.0nm,0.7s,mb4.1,baz=168,slow=8.5,SNR=10
STKA Stephens Creek 34.07 134 P **P 09 43 13.0 +1.1**
2.7nm,0.8s,mb4.3,baz=303,slow=9.1,SNR=7.3
SONM Songino Array 57.63 354 P **P 09 46 16.4 -0.5**
2.0nm,0.4s,mb4.5,baz=178,slow=8.4,SNR=15
SONM PcP PcP 09 47 10.4 +1.0
0.3nm,0.4s,baz=177,slow=2.5,SNR=2.2
MKAR Makanchi Array 62.78 336 P **P 09 46 51.6 -0.6**
1.2nm,0.4s,mb4.4,baz=152,slow=7.9,SNR=14
MAW Mawson 66.80 199 P **P 09 47 16.7 -1.4**
1.5nm,0.8s,mb4.1,baz=5.2,slow=11,SNR=3.9
ABKAR Abkulak array 75.12 327 *eP* **P 09 48 08.4 -0.3**
1.3nm,0.5s,mb4.1
BRTR Keskin Array B 88.48 311 P **P 09 49 19.4 +0.3**
1.1nm,0.7s,mb4.2,baz=117,slow=7.1,SNR=6.6

*ISCJB **29** 09:51:23.4±1.5,5°.4S±0°.1×146°.8E±0°.1,h230km±18km, mb3.6/5, Error ellipse: s-maj=24.3km s-min=13.0km az=40.2*
*NEIC **29** 09:51:23.7±1.9,5°.30S×146°.79E,h218km±21km, Error ellipse: s-maj=22.7km s-min=12.3km az=151.0*
*IDC **29** 09:51:26.2±2.5,5°.46S×146°.79E,h245km±26km, mb3.3/5, mb1 3.5/8, mb1mx3.4/18, mbtmp3.4/8, Error ellipse: s-maj=30.1km s-min=10.9km az=112.0*
ISC 29 09:51:24.0±1.5,**5°.3S**±0°.1×**146°.8E**±0°.1,**h220**km±16km,**n13,** σ0°**74**/14,**mb3.6/5,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.06**	**175**	*e*Pn	**Pn**	**09 52 26.8**	**-0.4**
COEN	**Coen**	**9.27**	**202**	Pn	**Pn**	**09 53 34.5**	**+0.7**
HNR	**Honiara**	**13.67**	**108**	P	**Pn**	**09 54 29.2**	**0.0**
	0.6nm,0.3s,baz=160,slow=3.1,SNR=3.8						
CTA	**Charters Tower**	**14.67**	**182**	P	**Pn**	**09 54 42.5**	**+1.1**
	0.1nm,0.3s,baz=20,slow=9.8,SNR=3.8						
CTAO	**Charters Tower**	**14.67**	**182**	Pn	**Pn**	**09 54 41.6**	**+0.2**
KAKA	**Kakadu**	**15.94**	**242**	*e*P	**Pn**	**09 54 55.9**	**-0.9**
	50nm,0.6s						
WRA	**Warramunga Arr**	**18.91**	**219**	P	**P**	**09 55 28.3**	**-0.1**
	0.7nm,0.3s,baz=41,slow=11,SNR=44						
WRA				S	**S**	**09 58 45.9**	**-5.6**
	0.1nm,0.3s,baz=39,slow=20,SNR=5.5						
ASAR	**Alice Springs**	**22.05**	**213**	P	**P**	**09 56 01.2**	**+0.2**
	5.7nm,0.6s,mb4.3,baz=42,slow=7.5,SNR=166						
ASAR				S	**S**	**09 59 48.1**	**0.0**
	0.5nm,0.7s,baz=38,slow=17,SNR=5.0						
FITZ	**Fitzroy Crossi**	**24.24**	**237**	P	**P**	**09 56 20.7**	**-0.4**
	2.0nm,0.3s,mb4.2,baz=61,slow=9.3,SNR=25						
KSRS	**Korea Array**	**46.06**	**339**	P	**P**	**09 59 26.5**	**+0.6**
	0.7nm,0.5s,mb3.3,baz=150,slow=8.6,SNR=4.0						
SONM	**Songino Array**	**63.73**	**331**	P	**P**	**10 01 33.4**	**+1.2**
	0.4nm,0.5s,mb3.3,baz=141,slow=7.4,SNR=3.2						
ILAR	**Eielson Array**	**84.96**	**23**	P	**P**	**10 03 32.7**	**-1.5**
	0.2nm,0.8s,mb2.9,baz=276,slow=4.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**144.72**	**285**	PKP	PKPdf	10 10 33.8	-1.7
	0.2nm,0.7s,baz=74,slow=4.8,SNR=3.7						

*ISCJB **29** 10:19:21.8±0.9,36°.71N±0°.05×7°.24W±0°.04,h61km±11km, Error ellipse: s-maj=8.4km s-min=5.2km az=5.6*
*MDD **29** 10:19:22.8±1.0,36°.63N×7°.26W,h39km±18km,mbLg2.1/8, Error ellipse: s-maj=10.8km s-min=5.4km az=12.0, PRXIMO*
*CSEM **29** 10:19:22.7±0.3,36°.69N×7°.24W,h40km,ML1.7, Error ellipse: s-maj=5.3km s-min=3.2km az=3.0*
*IGIL **29** 10:19:23.3,36°.66N×7°.30W,h21km*
*NEIC **29** 10:19:23.1,36°.66N×7°.25W,h48km,MG3.8(MDD), After MDD.*
*INMG **29** 10:19:23.1±1.2,36°.61N×7°.30W,h30km±11km,ML1.7, Error ellipse: s-maj=4.9km s-min=4.4km az=15.0*
ISC 29 10:19:22.6±0.9,**36°.69N**±0°.05×**7°.24W**±0°.04,**h46**km±23km, **n53,** σ0°**65**/93,**1C-3D,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.78**	**315**	*i* P	**Pn**	**10 19 37.2**	**-0.1**
PBDV				*e*S	**Sn**	**10 19 47.5**	**-0.4**
PBDV				A		10 19 48.5	
	9.4nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.78**	**315**	⇓P	**Pn**	**10 19 37.2**	**-0.1**
PBDV				S	**Sn**	**10 19 47.5**	**-0.4**
	9.4nm,0.2s						
PVAQ	**Vaqueiros**	**0.81**	**332**	*i* P	**Pn**	**10 19 37.9**	**+0.3**
PVAQ				*e*S	**Sn**	**10 19 48.9**	**+0.4**
PVAQ				A		10 19 49.9	
	9.4nm,0.1s						
PVAQ	**Vaqueiros**	**0.81**	**332**	⇓P	**Pn**	**10 19 37.9**	**+0.3**
PVAQ				S	**Sn**	**10 19 48.9**	**+0.4**
	9.4nm,0.1s						
EGRO	**El Granado**	**0.86**	**347**	P	**Pn**	**10 19 38.8**	**+0.4**
EGRO				S	**Sn**	**10 19 50.5**	**+0.6**
EGRO	**El Granado**	**0.86**	**347**	P	**Pn**	**10 19 38.8**	**+0.4**
	3.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**10 19 50.3**	**+0.4**
	7.7nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**0.86**	**347**	P	**Pn**	**10 19 38.8**	**+0.4**
	3.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**10 19 50.5**	**+0.6**
	7.7nm,0.1s,SNR=7.9						
ESPR	**Espera**	**1.13**	**81**	⇓P	**Pn**	**10 19 42.0**	**+0.1**
ESPR				S	**Sn**	**10 19 56.8**	**+0.6**
ESPR	**Espera**	**1.13**	**81**	⇑P	**Pn**	**10 19 41.8**	**-0.1**
	9.7nm,0.1s,SNR=18						
ESPR				S	**Sn**	**10 19 56.3**	**+0.1**
	25nm,0.2s,SNR=7.9						
ESPR	**Espera**	**1.13**	**81**	P	**Pn**	**10 19 42.0**	**+0.1**
	9.7nm,0.1s,SNR=18						
ESPR				S	**Sn**	**10 19 56.8**	**+0.5**
	25nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.17**	**23**	P	**Pn**	**10 19 42.6**	**+0.2**
EMIN				S	**Sn**	**10 19 57.1**	**-0.1**
EMIN	**Mina Concepcio**	**1.17**	**23**	P	**Pn**	**10 19 42.7**	**+0.3**
	0.2nm,0.1s,SNR=11						
EMIN				S	**Sn**	**10 19 57.0**	**-0.2**
	4.3nm,0.1s,SNR=13						
EMIN	**Mina Concepcio**	**1.17**	**23**	P	**Pn**	**10 19 42.7**	**+0.2**
	0.2nm,0.1s,SNR=11						
EMIN				S	**Sn**	**10 19 57.1**	**-0.1**
	4.3nm,0.1s,SNR=13						
MORF	**Marmelete**	**1.28**	**299**	*e*S	**Sn**	**10 19 59.1**	**-1.0**
MORF				A		10 19 59.8	
	13nm,0.3s						
MORF	**Marmelete**	**1.28**	**299**	S	**Sn**	**10 19 59.1**	**-1.0**
	13nm,0.3s						
MORF	**Marmelete**	**1.28**	**299**	*e*S	**Sn**	**10 19 59.1**	**-1.0**
	13nm,0.3s						
PFVI	**Vila Bisbo**	**1.34**	**290**	*e*P	**Pn**	**10 19 44.6**	**-0.3**
PFVI				S	**Sn**	**10 19 59.8**	**-1.8**
PFVI				A		10 20 03.3	
	7.9nm,0.5s						
PFVI	**Vila Bisbo**	**1.34**	**290**	P	**Pn**	**10 19 44.6**	**-0.3**
PFVI				S	**Sn**	**10 20 00.6**	**-1.0**
PFVI	**Vila Bisbo**	**1.34**	**290**	P	**Pn**	**10 19 44.3**	**-0.6**
	1.3nm,0.2s,SNR=4.0						
PFVI				S	**Sn**	**10 20 00.4**	**-1.2**
	4.3nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**1.34**	**290**	P	**Pn**	**10 19 44.6**	**-0.3**
	1.3nm,0.1s,SNR=4.0						
PFVI				S	**Sn**	**10 20 00.6**	**-1.0**
	4.3nm,0.1s,SNR=7.9						
MESJ	**Messejana**	**1.39**	**326**	*e*P	**Pn**	**10 19 46.0**	**+0.5**
MESJ				*e*S	**Sn**	**10 20 02.3**	**-0.3**
MESJ				*e*S	**Sn**	**10 20 02.4**	**-0.3**
PTEO	**Sao Teotonio**	**1.46**	**306**	*e*P	**Pn**	**10 19 46.6**	**+0.1**
PTEO				*e*S	**Sn**	**10 20 04.2**	**-0.2**
PTEO	**Sao Teotonio**	**1.46**	**306**	P	**Pn**	**10 19 46.6**	**+0.1**
PTEO				S	**Sn**	**10 20 04.2**	**-0.2**
PTEO	**Sao Teotonio**	**1.46**	**306**	*e*P	**Pn**	**10 19 46.6**	**+0.1**
PTEO				*e*S	**Sn**	**10 20 04.2**	**-0.2**
PBAR	**Barrancos**	**1.49**	**6**	*e*P	**Pn**	**10 19 47.6**	**+0.7**
PBAR				*e*S	**Sn**	**10 20 05.9**	**+0.7**
PBAR				A		10 20 11.0	
	6.2nm,0.2s						
PBAR	**Barrancos**	**1.49**	**6**	P	**Pn**	**10 19 47.6**	**+0.7**
PBAR				S	**Sn**	**10 20 05.9**	**+0.7**
	6.2nm,0.2s						
PBAR	**Barrancos**	**1.49**	**6**	*e*P	**Pn**	**10 19 47.6**	**+0.7**
PBAR				*e*S	**Sn**	**10 20 05.9**	**+0.7**
	6.2nm,0.2s						
ECAB	**El Cabril**	**2.00**	**46**	P	**Pn**	**10 19 54.0**	**0.0**
ECAB				S	**Sn**	**10 20 16.3**	**-1.5**
ECAB	**El Cabril**	**2.00**	**46**	P	**Pn**	**10 19 54.3**	**+0.4**
	0.2nm,0.1s,SNR=4.0						
ECAB				S	**Sn**	**10 20 16.3**	**-1.5**
	2.8nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**2.00**	**46**	P	**Pn**	**10 19 54.0**	**+0.1**
	0.5nm,0.0s,SNR=4.0						
ECAB				S	**Sn**	**10 20 16.3**	**-1.5**
	2.8nm,0.1s,SNR=7.9						
MOE	**Montemor**	**2.03**	**335**	*e*Sn	**Sn**	**10 20 19.0**	**+0.6**
MOE	**Montemor**	**2.03**	**335**	Sn	**Sn**	**10 20 19.0**	**+0.6**
MOE	**Montemor**	**2.03**	**335**	*e*Sn	**Sn**	**10 20 19.0**	**+0.6**
EBAD	**Badajoz**	**2.07**	**5**	P	**Pn**	**10 19 55.5**	**+0.7**
EBAD				S	**Sn**	**10 20 18.9**	**-0.5**
EBAD	**Badajoz**	**2.07**	**5**	P	**Pn**	**10 19 55.6**	**+0.8**
	0.5nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**10 20 18.9**	**-0.5**
	2.4nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**2.07**	**5**	P	**Pn**	**10 19 55.5**	**+0.7**
	0.5nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**10 20 18.9**	**-0.5**
	2.4nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**2.19**	**353**	*e*Sn	**Sn**	**10 20 22.4**	**0.0**
PESTR	**Estremoz**	**2.19**	**353**	Sn	**Sn**	**10 20 22.4**	**0.0**
PESTR	**Estremoz**	**2.19**	**353**	*e*Sn	**Sn**	**10 20 22.4**	**0.0**
PMTG	**Montargil**	**2.50**	**342**	*e*Pn	**Pn**	**10 20 00.9**	**+0.2**
PMTG	**Montargil**	**2.50**	**342**	*e*Pn	**Pn**	**10 20 00.9**	**+0.2**
EADA	**Adamuz**	**2.58**	**54**	S	**Sn**	**10 20 30.4**	**-1.6**
	0.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**2.58**	**54**	S	**Sn**	**10 20 30.4**	**-1.6**
	0.6nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**2.73**	**358**	*e*Pn	**Pn**	**10 20 04.7**	**+0.7**
PMRV				*e*Sn	**Sn**	**10 20 36.3**	**+0.5**
PMRV	**Marv??o**	**2.73**	**358**	Pn	**Pn**	**10 20 04.7**	**+0.7**
PMRV				Sn	**Sn**	**10 20 36.3**	**+0.5**
PMRV	**Marv??o**	**2.73**	**358**	*e*Pn	**Pn**	**10 20 04.7**	**+0.7**
PMRV				*e*Sn	**Sn**	**10 20 36.3**	**+0.5**
EBAN	**Banos Encina**	**3.12**	**61**	P	**Pn**	**10 20 09.3**	**+0.1**
	4.9nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**3.15**	**357**	*e*Pn	**Pn**	**10 20 10.3**	**+0.6**
PCBR				*e*Sn	**Sn**	**10 20 45.8**	**-0.2**
PCBR	**Castelo Branco**	**3.15**	**357**	Pn	**Pn**	**10 20 10.3**	**+0.6**
PCBR				Sn	**Sn**	**10 20 45.8**	**-0.2**
PCBR	**Castelo Branco**	**3.15**	**357**	*e*Pn	**Pn**	**10 20 10.3**	**+0.6**
PCBR				*e*Sn	**Sn**	**10 20 45.8**	**-0.2**
EPLA	**Plasencia**	**3.49**	**15**	P	**Pn**	**10 20 14.9**	**+0.6**
EPLA				S	**Sn**	**10 20 53.2**	**-1.1**
EPLA	**Plasencia**	**3.49**	**15**	P	**Pn**	**10 20 14.9**	**+0.6**
	0.8nm,0.0s,SNR=7.9						
EPLA				S	**Sn**	**10 20 52.7**	**-1.6**
	0.8nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**3.49**	**15**	P	**Pn**	**10 20 14.9**	**+0.6**
	0.6nm,0.0s,SNR=7.9						
EPLA				S	**Sn**	**10 20 53.2**	**-1.1**
	0.8nm,0.1s,SNR=7.9						

*ISCJB **29** 10:30:25.9±0.8,37°.35N±0°.07×71°.8E±0°.2,h116km±50km, Error ellipse: s-maj=26.6km s-min=10.3km az=8.9*
*NNC **29** 10:30:27.2±6.9,37°.64N×71°.82E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=55.9km s-min=40.0km az=171.0*
ISC 29 10:30:27.1±1.0,**37°.33N**±0°.06×**71°.8E**±0°.2,**h123**km±40km, **n5,** σ0°**53**/8,**3C,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.50**	**179**	P	**Pn**	**10 31 19.9**	**-0.1**
CEP				S	**Sn**	**10 32 01.0**	**+0.1**
CHCP	**Chirah Chowk**	**3.85**	**162**	P	**Pn**	**10 31 24.5**	**-0.2**
KK31	**Karatay Array**	**5.86**	**351**	Pn	**Pn**	**10 31 52.3**	**+0.7**
	1.6nm,0.3s,baz=172,slow=12,SNR=54						
KK31				⇑Sn	**Sn**	**10 32 57.0**	**-0.4**
	20nm,0.5s,baz=168,slow=21,SNR=4.7						
TKM2	**Tokmak 2**	**6.30**	**26**	⇑Pn	**Pn**	**10 31 58.0**	**+0.5**
	2.2nm,0.8s						
TKM2				⇑Sn	**Sn**	**10 33 07.8**	**-0.3**
	1.4nm,0.6s						
AB31	**Abkulak array**	**14.70**	**328**	P	**Pn**	**10 33 48.6**	**-0.2**
	0.3nm,0.5s,baz=360,slow=23,SNR=9.3						

*IDC **29** 10:37:55.8±0.7,55°.48N×164°.23E,h0km,mb3.8/10, mb1 4.0/12,mb1mx3.8/27,mbtmp3.8/12,ML3.5/2,MS3.4/3, Ms1 3.4/3,ms1mx2.7/48, Error ellipse: s-maj=34.3km s-min=13.9km az=155.0*
*KRSC **29** 10:37:59.4±0.7,55°.31N×164°.25E,h39km±29km,ML4.5*
*MOS **29** 10:37:59.7±1.5,55°.33N×164°.24E,h47km,mb4.0/7, Error ellipse: s-maj=15.1km s-min=10.2km az=55.0*
*NEIC **29** 10:38:00.5±2.8,55°.43N×164°.23E,h30km±21km,mb4.0/2, Error ellipse: s-maj=13.5km s-min=7.1km az=166.0*
ISC 29 10:37:57.3±1.0,**55°.32N**±0°.05×**164°.29E**±0°.05,**h6**km±7km, **n60,** σ1°**10**/72,**mb3.8**/12,**MS3.4**/3,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.97**	**96**	*e*P	**Pg**	**10 38 15.4**	**-0.5**
BKI				*i* S	**Sg**	**10 38 27.7**	**-0.7**
BKI	**Bering**	**0.97**	**96**	PN	**Pg**	**10 38 15.4**	**-0.5**
BKI				S	**Sg**	**10 38 27.7**	**-0.7**
KBTR	**Krutoberegovo**	**1.22**	**317**	*e*P	**Pg**	**10 38 18.1**	**-2.5**
KBTR				*i* S	**Sg**	**10 38 33.1**	**-3.3**
KBTR	**Krutoberegovo**	**1.22**	**317**	PN	**Pg**	**10 38 18.1**	**-2.5**
KBTR				S	**Sg**	**10 38 33.1**	**-3.3**
MKZ	**Mys Kozlova**	**1.67**	**244**	*e*P	**Pn**	**10 38 26.0**	**-0.9**
MKZ				*i* S	**Sn**	**10 38 45.5**	**-3.0**
MKZ	**Mys Kozlova**	**1.67**	**244**	PN	**Pn**	**10 38 26.0**	**-0.9**
MKZ				S	**Sn**	**10 38 45.5**	**-3.0**
SMKR	**Semkarok**	**2.03**	**310**	*e*P	**Pn**	**10 38 31.5**	**-0.4**
ZLN	**Zelenaya**	**2.10**	**291**	*e*P	**Pn**	**10 38 33.8**	**+1.0**
BDR	**Baidarnaya**	**2.14**	**307**	*e*P	**Pn**	**10 38 33.9**	**+0.5**
SRKR	**Sorokina**	**2.21**	**309**	*e*P	**Pn**	**10 38 34.4**	**+0.1**
BZMR	**Bezymyannaya**	**2.24**	**287**	*e*P	**Pn**	**10 38 35.4**	**+0.6**
KLY	**Klyuchi**	**2.28**	**297**	*e*P	**Pn**	**10 38 34.1**	**-1.3**
KLY	**Klyuchi**	**2.28**	**297**	PN	**Pn**	**10 38 34.1**	**-1.3**
KRSR	**Krestovskiy**	**2.29**	**295**	*e*P	**Pn**	**10 38 35.5**	**0.0**
KIRR	**Kirishev**	**2.33**	**287**	*e*P	**Pn**	**10 38 36.7**	**+0.7**
KMNR	**Kamenistaya**	**2.35**	**282**	*e*P	**Pn**	**10 38 37.4**	**+1.1**
TUMR	**Tumrok**	**2.37**	**271**	*e*P	**Pn**	**10 38 37.4**	**+0.8**
TUMR				*i* S	**Sn**	**10 39 05.4**	**-0.5**
KPT	**Kopyto**	**2.40**	**287**	*e*P	**Pn**	**10 38 37.7**	**+0.8**
KOZR	**Kozyr**	**2.60**	**288**	PN	**Pn**	**10 38 41.4**	**+1.7**
KOZ	**Kozyrevsk**	**2.61**	**288**	*e*P	**Pn**	**10 38 41.4**	**+1.5**
SRDR	**Sredinnyy**	**2.77**	**293**	*e*P	**Pn**	**10 38 43.0**	**+0.9**
SPN	**Mys Shipunski**	**3.35**	**230**	P	**Pn**	**10 38 49.8**	**-0.3**
SPN				*i* S	**Sn**	**10 39 25.5**	**-4.6**
SPN	**Mys Shipunski**	**3.35**	**230**	PN	**Pn**	**10 38 49.8**	**-0.3**
NLC	**Nalytchevo**	**3.61**	**235**	*e*P	**Pn**	**10 38 53.8**	**+0.1**
NLC				*i* S	**Sn**	**10 39 33.0**	**-3.6**
NLC	**Nalytchevo**	**3.61**	**235**	PN	**Pn**	**10 38 53.8**	**+0.1**
NLC				S	**Sn**	**10 39 33.0**	**-3.6**
AVH	**Avacha**	**3.85**	**240**	*e*P	**Pn**	**10 38 58.4**	**+1.5**
AVH				*i* S	**Sn**	**10 39 40.8**	**-1.6**
PET	**Petropavlovsk**	**4.04**	**238**	*e*P	**Pn**	**10 39 00.1**	**+0.6**
PET				*i* S	**Sn**	**10 39 44.0**	**-2.9**
PET	**Petropavlovsk**	**4.04**	**238**	*e*Pn	**Pn**	**10 38 59.7**	**+0.3**
PET				*e*Sn	**Sn**	**10 39 44.6**	**-2.3**
PET	**Petropavlovsk**	**4.04**	**238**	*e*PN	**Pn**	**10 39 00.2**	**+0.7**
PET				pmax	pmax		
	comp=Z,70nm,0.6s						
GNL	**Ganaly**	**4.04**	**249**	*e*P	**Pn**	**10 39 01.2**	**+1.6**
PETK	**Petropavlovsk-**	**4.46**	**243**	Pn	**Pn**	**10 39 06.6**	**+1.3**
	comp=Z,3.3nm,0.3s,baz=69,slow=18,SNR=16						
PETK				Sn	**Sn**	**10 39 57.8**	**+0.3**
	comp=Z,3.9nm,0.3s,baz=74,slow=33,SNR=9.0						
PETK	**Petropavlovsk-**	**4.46**	**243**	PN	**Pn**	**10 39 06.6**	**+1.3**
PETK						10 39 57.8	
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK				smax			
	comp=N,4.0nm,0.3s						
SKR	**Severo-Kuril's**	**6.78**	**230**	*e*PN	**Pn**	**10 39 36.9**	**-0.2**
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
AMKA	**Amchitka**	**9.80**	**108**	Pn	**Pn**	**10 40 20.2**	**+1.7**
ASAJ	**Asahikawa**	**17.87**	**240**	P	**Pn**	**10 42 06.0**	**-0.2**
	comp=E,0.3nm,0.3s,baz=63,slow=9.0,SNR=3.0						
ASAJ	**Asahikawa**	**17.87**	**240**	P	**Pn**	**10 42 06.1**	**-0.2**
TIXI	**Tiksi**	**22.21**	**331**	*e*P	**P**	**10 42 53.6**	**-0.2**
	comp=E,2.1nm,0.6s,mb3.7						
TIXI	**Tiksi**	**22.21**	**331**	*e*P	**P**	**10 42 53.6**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
KDAK	**Kodiak Island**	**23.60**	**66**	P	**P**	**10 43 07.8**	**-0.8**
	comp=Z,1.8nm,0.5s,mb3.8,baz=270,slow=1.0,SNR=5.2						
KDAK	**Kodiak Island**	**23.60**	**66**	P	**P**	**10 43 07.8**	**-0.8**
KDAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
ILAR	**Eielson Array**	**25.49**	**49**	P	**P**	**10 43 24.6**	**-1.2**
	comp=Z,0.6nm,0.7s,mb3.2,baz=266,slow=9.4,SNR=9.7						
ILAR	**Eielson Array**	**25.49**	**49**	P	**P**	**10 43 24.6**	**-1.2**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**25.86**	**234**	P	**P**	**10 43 30.8**	**+1.5**
	comp=Z,1.0nm,0.6s,mb3.6,baz=35,slow=7.6,SNR=3.4						
MJAR	**Matsushiro Arr**	**25.86**	**234**	P	**P**	**10 43 30.9**	**+1.5**
SONM	**Songino Array**	**35.80**	**283**	P	**P**	**10 44 55.9**	**-1.1**
	comp=Z,0.7nm,0.5s,mb3.8,baz=56,slow=8.5,SNR=4.8						
SONM				LR	LR	11 00 49.1	
	comp=Z,42nm,18.8s,MS3.2,baz=45,slow=38						
SONM	**Songino Array**	**35.80**	**283**	P	**P**	**10 44 55.9**	**-1.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,42nm,18.8s						
ZALV	**Zalesovo Beam**	**43.65**	**303**	LR	LR	11 08 11.0	
	comp=Z,15nm,18.3s,MS3.0,baz=342,slow=42						
MKAR	**Makanchi Array**	**49.40**	**296**	P	**P**	**10 46 45.5**	**-1.7**
	comp=Z,0.4nm,0.3s,mb4.0,baz=52,slow=7.9,SNR=5.5						
MKAR	**Makanchi Array**	**49.40**	**296**	P	**P**	**10 46 45.6**	**-1.7**
WAKR	**Walker**	**52.03**	**75**	*e*P	**P**	**10 47 08.0**	**+0.7**
	comp=Z,2.3nm,0.7s,mb4.2						
NVAR	**Mina Array Bea**	**52.71**	**74**	P	**P**	**10 47 12.3**	**0.0**
	comp=Z,0.4nm,0.6s,mb3.5,baz=298,slow=6.0,SNR=4.2						
CMAR	**Chiang Mai Arr**	**61.02**	**260**	P	**P**	**10 48 11.2**	**-0.3**
	comp=Z,0.8nm,0.6s,mb4.0,baz=24,slow=6.8,SNR=5.3						
CMAR	**Chiang Mai Arr**	**61.02**	**260**	P	**P**	**10 48 11.2**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**67.53**	**71**	P	**P**	**10 48 53.9**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=304,slow=5.5,SNR=7.3						
TXAR	**Lajitas Array**	**67.53**	**71**	P	**P**	**10 48 53.9**	**-0.2**
WRA	**Warramunga Arr**	**79.18**	**209**	P	**P**	**10 50 02.0**	**-0.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=23,slow=6.1,SNR=5.8						
WRA	**Warramunga Arr**	**79.18**	**209**	P	**P**	**10 50 02.0**	**-0.6**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PPT	**Papeete**	**82.43**	**136**	LR	LR	11 21 06.2	
	comp=Z,86nm,21.9s,MS4.1,baz=234,slow=31						
ASAR	**Alice Springs**	**82.84**	**208**	P	**P**	**10 50 22.2**	**+0.1**
	comp=Z,1.5nm,0.7s,mb4.1,baz=15,slow=5.9,SNR=27						
ASAR	**Alice Springs**	**82.84**	**208**	P	**P**	**10 50 22.3**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						

*ISCJB **29** 10:52:37.5±2.4,2°.0N±0°.2×128°.2E±0°.2,h136km±21km, mb3.8/5, Error ellipse: s-maj=40.8km s-min=16.3km az=143.5*
*IDC **29** 10:52:38.6±8.9,1°.97N×128°.41E,h131km±85km,mb3.6/5, mb1 3.7/5, mb1mx3.4/17, mbtmp3.6/5, Error ellipse: s-maj=110.1km s-min=17.2km az=69.0*
*DJA **29** 10:52:54,1°.12N×127°.28E,h46km,MLv3.1/3*
ISC 29 10:52:38.8±2.5,**1°.9N**±0°.2×**128°.2E**±0°.2,**h131**km±21km,**n10,** σ0°**50**/10,**mb3.8/5,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.40**	**216**	P	**Pn**	**10 53 05.2**	**-0.7**
LBMI	**Labuha**	**2.62**	**195**	P	**Pn**	**10 53 21.7**	**+1.0**
MNI	**Manado**	**3.38**	**262**	P	**Pn**	**10 53 30.1**	**-0.4**
LUWI	**Luwuk**	**6.16**	**242**	P	**Pn**	**10 54 08.1**	**+0.5**
MRSI	**Marisa**	**6.41**	**257**	P	**Pn**	**10 54 10.8**	**-0.1**
WRA	**Warramunga Arr**	**22.54**	**165**	P	**P**	**10 57 27.9**	**-0.3**
	0.6nm,0.4s,mb

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.95**	**341**	*i* P	**Pg**	**11 02 43.0**	**-1.1**
KEMA				*i* S	**Sg**	**11 02 57.5**	**+1.0**
KEMA	**Kemaliye**	**0.95**	**341**	*i* P	**Pg**	**11 02 43.0**	**-1.1**
ATAB	**Bozova**	**1.02**	**208**	*i* P	**Pg**	**11 02 44.6**	**-0.8**
ATAB				*i* S	**Sg**	**11 02 59.1**	**+0.5**
ATAB	**Bozova**	**1.02**	**208**	*i* P	**Pg**	**11 02 44.7**	**-0.7**
DIYA	**Diyarbakir**	**1.06**	**115**	*i* P	**Pg**	**11 02 46.0**	**-0.2**
DIYA				*i* S	**Sg**	**11 03 00.8**	**+0.7**
DIYA	**Diyarbakir**	**1.06**	**115**	*i* P	**Pg**	**11 02 46.0**	**-0.2**
BINT	**Bingol**	**1.34**	**67**	*e*PN	**Pn**	**11 02 50.9**	**-0.4**
BINT	**Bingol**	**1.34**	**67**	*e*Pn	**Pn**	**11 02 50.9**	**-0.4**
EZC	**Erzincan**	**1.42**	**14**	*e*PN	**Pn**	**11 02 51.9**	**-0.5**
EZC	**Erzincan**	**1.42**	**14**	*e*Pn	**Pn**	**11 02 51.9**	**-0.5**
GZT	**Gaziantep**	**1.46**	**227**	*i* P	**Pn**	**11 02 51.1**	**-1.8**
GZT				*i* S	**Sb**	**11 03 13.6**	**+1.1**
SARI	**SarD1z-Kayseri**	**1.75**	**281**	*e*PN	**Pn**	**11 02 59.2**	**+2.3**
SARI	**SarD1z-Kayseri**	**1.75**	**281**	*e*Pn	**Pn**	**11 02 59.2**	**+2.3**
GAZ	**Gaziantep**	**1.79**	**229**	*e*PN	**Pn**	**11 02 57.7**	**+0.2**
GAZ	**Gaziantep**	**1.79**	**229**	*e*Pn	**Pn**	**11 02 57.7**	**+0.2**
KMRS	**Kahramanmaras**	**1.80**	**242**	*e*PN	**Pn**	**11 02 57.8**	**+0.2**
KMRS	**Kahramanmaras**	**1.80**	**242**	*e*Pn	**Pn**	**11 02 57.8**	**+0.2**
GUMT	**Gumushane**	**2.13**	**12**	*e*PN	**Pn**	**11 03 02.5**	**+0.4**
GUMT	**Gumushane**	**2.13**	**12**	*e*Pn	**Pn**	**11 03 02.5**	**+0.4**
BAYT	**Ayd¨–ntepe-Bay**	**2.24**	**25**	*e*PN	**Pn**	**11 03 03.7**	**+0.2**
BAYT	**Ayd¨–ntepe-Bay**	**2.24**	**25**	*e*Pn	**Pn**	**11 03 03.7**	**+0.1**
EZM	**Erzurum**	**2.45**	**51**	*e*PN	**Pn**	**11 03 06.2**	**-0.3**
KOZT	**Kozan**	**2.59**	**251**	*e*PN	**Pn**	**11 03 08.4**	**0.0**
YOZ	**Yozgat**	**3.06**	**296**	*e*PN	**Pn**	**11 03 14.6**	**-0.3**
YOZ	**Yozgat**	**3.06**	**296**	*e*Pn	**Pn**	**11 03 14.6**	**-0.3**

NAO ***29*** *11:03:51.8±1.3, 71°.23N×4°.51W, ML3.3*
MOS ***29*** *11:03:52.8±0.9, 71°.51N×4°.73W, h10km, mb4.9/81, Error ellipse: s-maj=19.3km s-min=3.2km az=96.6*
CSEM ***29*** *11:03:53.8±0.1, 71°.43N×4°.19W, h2km, mb4.8/94, Ms3.9, Mw4.8, Error ellipse: s-maj=3.8km s-min=2.5km az=54.0*
IDC ***29*** *11:03:53.7±0.5, 71°.38N×4°.41W, h0km, mb4.2/18, mb1 4.5/22, mb1mx4.5/27, mbtmp4.3/22, ML4.5/4, MS3.9/42, Ms1 3.9/42, ms1mx3.9/53, Error ellipse: s-maj=15.4km s-min=11.3km az=60.0*
ISCJB ***29*** *11:03:53.9±0.1, 71°.43N±0°.02×4°.40W±0°.06, h10km, mb4.7/155, MS4.0/69, Error ellipse: s-maj=3.4km s-min=1.6km az=135.4*
BER ***29*** *11:03:54.7±2.7, 71°.49N×4°.70W, h10km, MD3.0, ML3.3*
NEIC ***29*** *11:03:55.6±0.1, 71°.40N×4°.19W, h10km, mb4.8/91, MS4.0/4, Error ellipse: s-maj=3.7km s-min=2.3km az=55.0*
BJI ***29*** *11:03:55.7, 71°.92N×3°.64W, h10km, mB5.1/17, mb4.8/23, Ms4.8/6, Ms7 4.5/13*
GCMT ***29*** *11:03:56.1±0.2, 71°.34N×4°.35W, h12km, MW4.8, Moment Tensor Solution. s13,c17; s75,c124; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.12±.08; $M_{\theta\theta}$1.71±.07; $M_{\phi\phi}$-0.59±.07; $M_{r\theta}$-0.13±.22; $M_{r\phi}$1.82±.06; $M_{\theta\phi}$-0.01±.21; Best double couple: $M_0$2.20000×10^{16} NP1:ϕ_s196.00000°, δ84.00000°, λ-177.00000°. NP2:ϕ_s106.00000°, δ87.00000°, λ-6.00000°. Principal axes: T 2.7200, Plg2.0000°, Azm151.0000°; N -1.1200, Plg83.0000°, Azm256.0000°; P -1.6000, Plg6.0000°, Azm61.0000°; Data Used: II IU CN IC G.*
SZGRF ***29*** *11:04:06.2, 70°.78N×3°.17W, h33km, mb4.8, Jan Mayen Island region*

ISC 29 11:03:55.7±0.1, 71°.42N±0°.02×4°.18W±0°.05, h10km, (h14km±1.8km:pP-P), n1062, σ0°76/1055, mb4.7/155, MS4.0/69, 248C-202D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.40**	**254**	⇑*i* P	**Pn**	**11 04 16.7**	**-4.6**
JNE	**Jan Mayen East**	**1.40**	**254**	⇑*i* P	**Pn**	**11 04 16.7**	**-4.6**
SNR=50							
JNW	**Jan Mayen West**	**1.43**	**256**	⇑*i* P	**Pn**	**11 04 17.1**	**-4.6**
JNW	**Jan Mayen West**	**1.43**	**256**	⇑*i* P	**Pn**	**11 04 17.1**	**-4.5**
SNR=50							
JMIC	**Jan Mayen**	**1.47**	**255**	Pg	**Pg**	**11 04 17.4**	**-6.5**
JMIC				Lg		11 04 33.6	
JMIC	**Jan Mayen**	**1.47**	**255**	*e*P	**Pn**	**11 04 17.3**	**-4.9**
JMIC				*e*S	**Sn**	**11 04 33.7**	**-7.7**
JMIC				AML	AML	11 04 35.8	
comp=Z,360nm,0.5s							
JMIC	**Jan Mayen**	**1.47**	**255**	Pn	**Pn**	**11 04 17.0**	**-5.2**
comp=Z,51nm,0.3s,baz=44,slow=5.7,SNR=30							
JMIC				Sn	**Sn**	**11 04 33.7**	**-7.8**
comp=Z,89nm,0.3s,baz=6.1,slow=23,SNR=21							
JMIC	**Jan Mayen**	**1.47**	**255**	*e*P	**Pn**	**11 04 17.3**	**-4.9**
JMIC				*e*S	**Sn**	**11 04 33.7**	**-7.7**
JMIC	**Jan Mayen**	**1.47**	**255**	Pg	**Pg**	**11 04 17.4**	**-6.5**
JMI	**Jan Mayen**	**1.56**	**254**	*e*P	**Pn**	**11 04 18.9**	**-4.5**
JMI				*e*S	**Sn**	**11 04 36.5**	**-7.1**
JMI				AML	AML	11 04 39.1	
comp=Z,651nm,0.5s							
JMI	**Jan Mayen**	**1.56**	**254**	*e*P	**Pn**	**11 04 18.9**	**-4.5**
JMI				*e*S	**Sn**	**11 04 36.5**	**-7.1**
JMI	**Jan Mayen**	**1.56**	**254**	*e*P	**Pn**	**11 04 18.9**	**-4.5**
SNR=50							
SCO	**Scoresbysund**	**5.89**	**269**	*i* P	**Pn**	**11 05 25.4**	**+2.6**
SCO	**Scoresbysund**	**5.89**	**269**	*i* P	**Pn**	**11 05 25.4**	**+2.6**
DAG	**Danmarks Havn**	**6.67**	**330**	⇑*i* P	**Pn**	**11 05 30.4**	**-3.1**
DAG				*i* S	**Sn**	**11 06 41.3**	**-8.0**
DAG				pmax	pmax		
comp=Z,110nm,0.8s							
DAG	**Danmarks Havn**	**6.67**	**330**	⇑*i* P	**Pn**	**11 05 30.4**	**-3.1**
comp=Z,1μm,0.8s							
DAG				*i* S	**Sn**	**11 06 41.3**	**-8.0**
LOF	**Lofoten**	**6.95**	**110**	*e*P	**Pn**	**11 05 35.3**	**-2.1**
LOF	**Lofoten**	**6.95**	**110**	*e*P	**Pn**	**11 05 35.3**	**-2.1**
SNR=47							
STEI	**Steigen**	**7.59**	**108**	*e*P	**Pn**	**11 05 44.7**	**-1.5**
TRO	**Tromso**	**7.90**	**92**	*e*P	**Pn**	**11 05 47.8**	**-2.6**
TRO	**Tromso**	**7.90**	**92**	*e*P	**Pn**	**11 05 47.8**	**-2.6**
TRO	**Tromso**	**7.90**	**92**	*e*P	**Pn**	**11 05 47.8**	**-2.6**
SNR=47							
KONS	**Konsvik**	**7.92**	**120**	*e*P	**Pn**	**11 05 48.7**	**-1.9**
KONS				*e*S	**Sn**	**11 07 09.7**	**-10**
KONS				AML	AML	11 07 16.3	
comp=Z,37nm,0.6s							
FLOS	**Flostrand**	**8.10**	**120**	*e*P	**Pn**	**11 05 51.0**	**-2.1**
MOR8	**Moi Rana**	**8.52**	**119**	*e*P	**Pn**	**11 05 57.4**	**-1.5**
MOR8	**Moi Rana**	**8.52**	**119**	*e*P	**Pn**	**11 05 57.4**	**-1.5**
SNR=47							
KBS	**Kingsbay**	**8.55**	**21**	Pn	**Pn**	**11 05 58.9**	**-0.4**
KBS				Sn	**Sn**	**11 07 29.8**	**-5.8**
KBS	**Kingsbay**	**8.55**	**21**	*e*Pn	**Pn**	**11 05 58.6**	**-0.7**
KBS	**Kingsbay**	**8.55**	**21**	*e*P	**Pn**	**11 05 58.6**	**-0.7**
KBS	**Kingsbay**	**8.55**	**21**	*e*P	**Pn**	**11 05 58.6**	**-0.7**
SPB4	**Spitsbergen Ar**	**8.60**	**29**	*e*Pn	**Pn**	**11 06 01.0**	**+1.0**
SPB4	**Spitsbergen Ar**	**8.60**	**29**	*e*Pn	**Pn**	**11 06 01.0**	**+1.1**
SPA0	**Spitsbergen Ar**	**8.60**	**29**	Pn	**Pn**	**11 06 00.6**	**+0.6**
baz=224,slow=11							
SPA0	**Spitsbergen Ar**	**8.60**	**29**	Pn	**Pn**	**11 06 00.6**	**+0.6**
baz=224,slow=11,SNR=287							
SPITS	**Spitsbergen Ar**	**8.60**	**29**	Pn	**Pn**	**11 06 00.6**	**+0.7**
baz=215,slow=15,SNR=295							
SPITS	**Spitsbergen Ar**	**8.60**	**29**	P	**Pn**	**11 06 00.6**	**+0.6**
SPITS	**Spitsbergen Ar**	**8.60**	**29**	P	**Pn**	**11 06 00.6**	**+0.6**
NSS	**Namsos**	**9.16**	**131**	*e*P	**Pn**	**11 06 05.0**	**-2.6**
NSS				*e*S	**Sn**	**11 07 43.1**	**-7.4**
NSS				AML	AML	11 07 45.4	
comp=Z,28nm,0.5s							
NSS	**Namsos**	**9.16**	**131**	*e*P	**Pn**	**11 06 05.0**	**-2.6**
SNR=47							
BORG	**Borgarnes**	**9.23**	**232**	Pn	**Pn**	**11 06 11.4**	**+2.8**
comp=Z,1.2nm,0.3s,baz=19,slow=3.3,SNR=6.1							
BORG				Sn	**Sn**	**11 07 49.5**	**-2.8**
comp=Z,0.4nm,0.3s,baz=326,slow=7.3,SNR=2.4							
BORG	**Borgarnes**	**9.23**	**232**	*e*Pn	**Pn**	**11 06 07.7**	**-0.9**
BORG				Sn	**Sn**	**11 07 49.5**	**-2.8**
BORG	**Borgarnes**	**9.23**	**232**	P	**Pn**	**11 06 11.5**	**+2.9**
BORG						11 07 49.6	
BORG				pmax	pmax		
comp=Z,1.0nm,0.3s							
BORG	**Borgarnes**	**9.23**	**232**	*e*Pn	**Pn**	**11 06 07.7**	**-0.9**
BORG				S	**Sn**	**11 07 49.6**	**-2.7**
KTK1	**Kautokeino**	**9.55**	**91**	*e*P	**Pn**	**11 06 10.6**	**-2.4**
KTK1	**Kautokeino**	**9.55**	**91**	*e*P	**Pn**	**11 06 10.6**	**-2.4**
SNR=47							
ARA0	**ARCESS Array S**	**10.05**	**86**	Pn	**Pn**	**11 06 17.9**	**-1.9**
baz=292,slow=11							
ARA0	**ARCESS Array S**	**10.05**	**86**	Pn	**Pn**	**11 06 17.9**	**-1.9**
baz=292,slow=11,SNR=4.9							
ARCES	**ARCESS Array B**	**10.05**	**86**	Pn	**Pn**	**11 06 18.3**	**-1.5**
comp=Z,3.9nm,0.3s,baz=289,slow=11,SNR=74							
ARCES				LR	LR	11 09 48.5	
comp=Z,380nm,21.0s,baz=106,slow=35							
ARCES	**ARCESS Array B**	**10.05**	**86**	Pn	**Pn**	**11 06 18.3**	**-1.5**
ARCES				LR	LR	11 09 48.5	
ARCES	**ARCESS Array B**	**10.05**	**86**	P	**Pn**	**11 06 18.3**	**-1.5**
ARCES				pmax	pmax		
comp=Z,4.0nm,0.3s							
ARCES	**ARCESS Array B**	**10.05**	**86**	P	**Pn**	**11 06 18.3**	**-1.5**
comp=Z,4.0nm,0.3s							
ARE0	**ARCESS Array S**	**10.05**	**86**	*e*Pn	**Pn**	**11 06 19.2**	**-0.6**
ARE0	**ARCESS Array S**	**10.05**	**86**	*e*Pn	**Pn**	**11 06 19.2**	**-0.6**
KEV	**Kevo**	**10.44**	**84**	*e*Pn	**Pn**	**11 06 23.6**	**-1.5**
KEV	**Kevo**	**10.44**	**84**	*e*P	**Pn**	**11 06 23.6**	**-1.5**
KEV	**Kevo**	**10.44**	**84**	*e*P	**Pn**	**11 06 23.6**	**-1.5**
SUMG	**Summit**	**10.58**	**292**	*e*Pn	**Pn**	**11 06 25.9**	**-1.1**
SUMG	**Summit**	**10.58**	**292**	*i* P	**Pn**	**11 06 25.3**	**-1.7**
comp=Z,22nm,0.8s							
SUMG				*i* S	**Sn**	**11 08 17.2**	**-8.1**
SUMG	**Summit**	**10.58**	**292**	*i* P	**Pn**	**11 06 25.3**	**-1.7**
comp=Z,22nm,0.8s							
SUMG	**Summit**	**10.58**	**292**	*e*Pn	**Pn**	**11 06 25.9**	**-1.1**
HYA	**Hoyanger**	**11.08**	**153**	*e*Pn	**Pn**	**11 06 32.2**	**-1.7**
HYA				*e*Sn	**Sn**	**11 08 32.3**	**-5.4**
HYA	**Hoyanger**	**11.08**	**153**	*e*Pn	**Pn**	**11 06 32.2**	**-1.7**
SNR=50							
NB2	**NORSAR Subarra**	**12.07**	**142**	Pn	**Pn**	**11 06 45.2**	**-2.2**
baz=327,slow=14							
NB2	**NORSAR Subarra**	**12.07**	**142**	Pn	**Pn**	**11 06 45.2**	**-2.2**
baz=327,slow=13,SNR=5.2							
NOA	**NORSAR Array B**	**12.07**	**142**	Pn	**Pn**	**11 06 44.8**	**-2.6**
comp=Z,1.4nm,0.3s,baz=342,slow=15,SNR=14							
NOA				LR	LR	11 09 48.8	
comp=Z,177nm,21.7s,baz=335,slow=29							
NOA	**NORSAR Array B**	**12.07**	**142**	P	**Pn**	**11 06 44.8**	**-2.6**
NOA				pmax	pmax		
comp=Z,1.0nm,0.3s							
NOA	**NORSAR Array B**	**12.07**	**142**	P	**Pn**	**11 06 44.8**	**-2.6**
comp=Z,1.0nm,0.3s							
NAO01	**NORSAR Array S**	**12.18**	**143**	*e*Pn	**Pn**	**11 06 47.0**	**-2.0**
comp=Z,7.4nm,0.5s							
NAO01	**NORSAR Array S**	**12.18**	**143**	*e*Pn	**Pn**	**11 06 47.0**	**-2.0**
comp=Z,7.3nm,0.5s							
BLS5	**Blasjo**	**12.79**	**155**	*i* P	**Pn**	**11 06 56.0**	**-1.3**
BLS5	**Blasjo**	**12.79**	**155**	*i* P	**Pn**	**11 06 56.0**	**-1.3**
KONO	**Kongsberg**	**13.06**	**148**	*e*Pn	**Pn**	**11 06 59.4**	**-1.6**
comp=Z,58nm,1.0s							
KONO	**Kongsberg**	**13.06**	**148**	*e*P	**Pn**	**11 06 59.4**	**-1.6**
KONO				pmax	pmax		
comp=Z,58nm,1.0s							
KONO	**Kongsberg**	**13.06**	**148**	*e*P	**Pn**	**11 06 59.4**	**-1.6**
comp=Z,58nm,1.0s							
APA0	**Apatity Array**	**13.39**	**88**	Pn	**Pn**	**11 07 03.1**	**-2.3**
baz=314,slow=14							
APA0	**Apatity Array**	**13.39**	**88**	Pn	**Pn**	**11 07 03.1**	**-2.3**
baz=314,slow=13,SNR=4.4							
HFS	**Hagfors**	**13.40**	**139**	Pn	**Pn**	**11 07 03.8**	**-1.8**
baz=317,slow=12							
HFS				Sn	**Sn**	**11 09 25.7**	**-8.7**
baz=331,slow=22							
HFS	**Hagfors**	**13.40**	**139**	Pn	**Pn**	**11 07 04.0**	**-1.7**
comp=Z,6.6nm,0.3s,baz=336,slow=10.0,SNR=152							
HFS				Sn	**Sn**	**11 09 26.6**	**-7.8**
comp=Z,0.7nm,0.3s,baz=332,slow=24,SNR=3.8							
HFS	**Hagfors**	**13.40**	**139**	P	**Pn**	**11 07 04.0**	**-1.6**
HFS				pmax	pmax		
comp=Z,7.0nm,0.3s							
HFS	**Hagfors**	**13.40**	**139**	Pn	**Pn**	**11 07 03.8**	**-1.8**
baz=317,slow=12,SNR=139							
LVZ	**Lovozero**	**13.76**	**86**	*e*Pn	**Pn**	**11 07 07.8**	**-2.7**
LVZ	**Lovozero**	**13.76**	**86**	*d i* P	**Pn**	**11 07 08.1**	**-2.4**
LVZ	**Lovozero**	**13.76**	**86**	*i* P	**Pn**	**11 07 08.1**	**-2.4**
FIA0	**FINESS Array S**	**15.47**	**115**	P	**Pn**	**11 07 31.2**	**-2.3**
baz=332,slow=16							
FINES	**FINESS Array B**	**15.47**	**115**	Pn	**Pn**	**11 07 31.3**	**-2.3**
comp=Z,1.0nm,0.3s,baz=323,slow=16,SNR=17							
FINES				LR	LR	11 12 52.8	
comp=Z,834nm,19.0s,baz=116,slow=35							
FINES	**FINESS Array B**	**15.47**	**115**	Pn	**Pn**	**11 07 31.3**	**-2.3**
FINES				LR	LR	11 12 52.8	
FINES	**FINESS Array B**	**15.47**	**115**	P	**Pn**	**11 07 31.3**	**-2.2**
FINES				pmax	pmax		
comp=Z,1.0nm,0.3s							
FINES				MLR	MLR		
comp=Z,834nm,19.0s							
FINES	**FINESS Array B**	**15.47**	**115**	Pn	**Pn**	**11 07 31.3**	**-2.2**
EKA	**Eskdalemuir Ar**	**16.15**	**178**	Pn	**Pn**	**11 07 40.5**	**-2.0**
comp=Z,2.9nm,0.3s,baz=354,slow=12,SNR=49							
EKA	**Eskdalemuir Ar**	**16.15**	**178**	P	**Pn**	**11 07 40.5**	**-1.9**
EKA				pmax	pmax		
comp=Z,3.0nm,0.3s							
EKA	**Eskdalemuir Ar**	**16.15**	**178**	Pn	**Pn**	**11 07 40.5**	**-1.9**
ESK	**Eskdalemuir**	**16.17**	**178**	*e*Pn	**Pn**	**11 07 40.9**	**-1.7**
comp=Z,68nm,0.8s							
ESK	**Eskdalemuir**	**16.17**	**178**	*i* P	**Pn**	**11 07 46.1**	**+3.5**
ESK	**Eskdalemuir**	**16.17**	**178**	*e*Pn	**Pn**	**11 07 40.9**	**-1.7**
comp=Z,68nm,0.8s							
ESK	**Eskdalemuir**	**16.17**	**178**	*i* P	**Pn**	**11 07 46.1**	**+3.5**
PUL	**Pulkovo**	**18.07**	**112**	*c i* P	**Pn**	**11 08 08.1**	**+1.7**
PUL				pmax	pmax		
comp=Z,138nm,0.4s							
BSD	**Bornholm Skovb**	**18.31**	**143**	⇑*i* P	**Pn**	**11 08 09.7**	**+0.3**
BSD				pmax	pmax		
comp=Z,48nm,0.8s							
BSD	**Bornholm Skovb**	**18.31**	**143**	*i* P	**Pn**	**11 08 09.7**	**+0.3**
comp=Z,48nm,0.8s							
NRDL	**Niedersach Rie**	**20.03**	**154**	*e*P	**P**	**11 08 29.0**	**+0.7**
comp=Z,24nm,0.9s							
KLMR	**Klimovskoe**	**20.04**	**99**	*e*P	**P**	**11 08 27.1**	**-1.3**
KLMR				pmax	pmax		
comp=Z,119nm,1.6s							
KLMR	**Klimovskoe**	**20.04**	**99**	*e*P	**P**	**11 08 27.1**	**-1.3**
comp=Z,119nm,1.6s							
WTSB	**Winterswijk**	**20.13**	**160**	*e*P	**P**	**11 08 29.2**	**-0.3**
comp=Z,28nm,0.8s							
WTSB	**Winterswijk**	**20.13**	**160**	*e*P	**P**	**11 08 29.2**	**-0.2**
comp=Z,28nm,0.8s							
GKP	**Gorka Klasztor**	**20.51**	**141**	*e*P	**P**	**11 08 31.8**	**-1.7**
GKP				*e*pP		11 08 33.5	
GKP				LMZ		11 16 48.6	
comp=Z,1μm,17.6s							
GKP	**Gorka Klasztor**	**20.51**	**141**	*e*P	**P**	**11 08 31.8**	**-1.7**
GKP				*e**PP		11 08 33.5	
GKP				MLR	MLR		
comp=Z,1μm,17.6s,MS4.4							
GKP	**Gorka Klasztor**	**20.51**	**141**	*e*P	**P**	**11 08 31.8**	**-1.7**
comp=Z,1μm,17.6s							
RUE	**Ruedersdorf**	**20.62**	**148**	*e*P	**P**	**11 08 35.3**	**+0.6**
comp=Z,62nm,0.9s							
BUG	**Bochum--Univer**	**20.70**	**159**	*e*P	**P**	**11 08 36.2**	**+0.6**
comp=Z,59nm,1.3s							
CLZ	**Clausthal**	**20.70**	**154**	*e*P	**P**	**11 08 36.3**	**+0.7**
comp=Z,25nm,1.0s							
CLZ	**Clausthal**	**20.70**	**154**	*e*P	**P**	**11 08 36.3**	**+0.7**
CLZ				pmax	pmax		
comp=Z,25nm,1.0s							
CLZ	**Clausthal**	**20.70**	**154**	*e*P	**P**	**11 08 36.3**	**+0.7**
comp=Z,25nm,1.0s							
SUW	**Suwalki**	**21.14**	**131**	*e*P	**P**	**11 08 39.5**	**-0.8**
SUW				*e*pP		11 08 42.7	
SUW				LMZ		11 15 37.6	
comp=Z,700nm,23.2s							
SUW	**Suwalki**	**21.14**	**131**	*e*P	**P**	**11 08 39.0**	**-1.3**
comp=Z,229nm,0.9s,mb5.5							
SUW	**Suwalki**	**21.14**	**131**	*e*P	**P**	**11 08 39.5**	**-0.8**
SUW				*e**PP		11 08 42.7	
SUW				MLR	MLR		
comp=Z,700nm,23.2s,MS4.0							
SUW	**Suwalki**	**21.14**	**131**	*e*P	**P**	**11 08 39.0**	**-1.3**
comp=Z,229nm,0.9s,mb5.5							
BEBN	**Eben Emael**	**21.17**	**163**	P	**P**	**11 08 40.5**	**-0.2**
comp=Z,20nm,1.0s,mb4.4							
HGN	**Heimansgroeve**	**21.23**	**162**	*e*P	**P**	**11 08 41.1**	**-0.3**
comp=Z,53nm,0.8s,mb4.9							
HGN	**Heimansgroeve**	**21.23**	**162**	*e*S	**S**	**11 12 43.5**	**+6.6**
NACGM	**Naroch**	**21.24**	**125**	*e*	**P**	**11 08 38.0**	**-3.4**
SNF	**Senefte**	**21.33**	**165**	P	**P**	**11 08 42.1**	**-0.3**
SNF				AP		11 08 45.0	
MEM	**Membach**	**21.39**	**162**	P	**P**	**11 08 42.7**	**-0.4**
comp=Z,30nm,1.0s,mb4.6							
BCLA	**Clavier**	**21.51**	**163**	P	**P**	**11 08 44.3**	**-0.1**
comp=Z,29nm,1.5s,mb4.5							
NEUB	**Neuenburg**	**21.53**	**152**	*e*P	**P**	**11 08 44.9**	**+0.4**
comp=Z,100nm,1.3s,mb5.1							
CLL	**Collm**	**21.62**	**150**	*e*P	**P**	**11 08 45.6**	**+0.1**
comp=Z,125nm,2.0s,mb5.0							
CLL	**Collm**	**21.62**	**150**	*i* P	**P**	**11 08 45.2**	**-0.3**
comp=Z,52nm,1.4s,mb4.8							
CLL				*e*S	**S**	**11 12 48.0**	**+3.4**
CLL	**Collm**	**21.62**	**150**	*i* P	**P**	**11 08 45.2**	**-0.3**
CLL				*e*S	**S**	**11 12 48.0**	**+3.4**
CLL				pmax	pmax		
comp=Z,52nm,1.4s,mb4.8							
CLL	**Collm**	**21.62**	**150**	*i* P	**P**	**11 08 45.2**	**-0.3**
comp=Z,52nm,1.4s,mb4.8							
CLL				*e*S	**S**	**11 12 48.0**	**+3.4**
CLL				L		11 16 00.0	
comp=Z,400nm,21.1s							
CLL	**Collm**	**21.62**	**150**	*i* P	**P**	**11 08 45.2**	**-0.3**
comp=Z,52nm,1.4s,mb4.8							
CLL				*e*S	**S**	**11 12 48.0**	**+3.4**
UBBA	**Unterbreizbach**	**21.65**	**155**	*e*P	**P**	**11 08 46.3**	**+0.4**
comp=Z,71nm,1.8s,mb4.8							
DOU	**Dourbes**	**21.77**	**165**	P	**P**	**11 08 46.6**	**-0.5**
comp=Z,15nm,1.2s,mb4.3							
DOU				AP		11 08 49.1	
BAIF	**Baives**	**21.77**	**165**	⇑*i* P	**P**	**11 08 46.6**	**-0.6**
comp=Z,87nm,1.0s,mb4.8							
BAIF	**Baives**	**21.77**	**165**	⇑*i* P	**P**	**11 08 46.6**	**-0.6**
comp=Z,44nm,1.0s,mb4.8							
BAIF	**Baives**	**21.77**	**165**	⇑*i* P	**P**	**11 08 46.6**	**-0.6**
BAIF				pmax	pmax		
comp=Z,44nm,1.0s,mb4.8							
BAIF	**Baives**	**21.77**	**165**	⇑*i* P	**P**	**11 08 46.6**	**-0.6**
comp=Z,44nm,1.0s,mb4.8							
GIVF	**Givet**	**21.78**	**164**	⇑*i* P	**P**	**11 08 46.7**	**-0.6**
comp=Z,72nm,0.9s,mb4.8							
GIVF	**Givet**	**21.78**	**164**	⇑*i* P	**P**	**11 08 46.7**	**-0.6**
comp=Z,36nm,0.9s,mb4.8							
GIVF	**Givet**	**21.78**	**164**	⇑*i* P	**P**	**11 08 46.7**	**-0.6**
GIVF				pmax	pmax		
comp=Z,36nm,0.9s,mb4.8							
GIVF	**Givet**	**21.78**	**164**	⇑*i* P	**P**	**11 08 46.7**	**-0.6**
comp=Z,36nm,0.9s,mb4.8							
MNK	**Minsk**	**21.88**	**124**	*e*P	**P**	**11 08 47.0**	**-1.3**
MICGM	**Minsk**	**21.89**	**124**	*e*	**P**	**11 08 47.0**	**-1.4**
TNS	**Taunus Mts**	**22.04**	**158**	*e*P	**P**	**11 08 50.5**	**+0.5**
comp=Z,98nm,1.4s,mb5.0							
TNS	**Taunus Mts**	**22.04**	**158**	*e*P	**P**	**11 08 50.5**	**+0.5**
TNS				pmax	pmax		
comp=Z,98nm,1.4s,mb5.0							
TNS	**Taunus Mts**	**22.04**	**158**	*e*P	**P**	**11 08 50.5**	**+0.5**
comp=Z,98nm,1.4s,mb5.0							
MOX	**Moxa**	**22.05**	**153**	*e*P	**P**	**11 08 49.8**	**-0.3**
comp=Z,76nm,1.5s,mb4.9							
MOX	**Moxa**	**22.05**	**153**	*e*P	**P**	**11 08 50.6**	**+0.5**
comp=Z,54nm,1.3s,mb4.8							
MOX	**Moxa**	**22.05**	**153**	*e*P	**P**	**11 08 49.8**	**-0.3**
MOX				pmax	pmax		
comp=Z,76nm,1.5s,mb4.9							
MOX	**Moxa**	**22.05**	**153**	*e*P	**P**	**11 08 49.8**	**-0.3**
comp=Z,76nm,1.5s,mb4.9							
FBE	**Freiberg**	**22.05**	**149**	*e*P	**P**	**11 08 50.3**	**+0.2**
comp=Z,73nm,1.2s,mb5.0							
BRG	**Berggiesshubel**	**22.20**	**149**	*e*P	**P**	**11 08 51.6**	**-0.1**
comp=Z,49nm,1.3s,mb4.8							
BRG	**Berggiesshubel**	**22.20**	**149**	*e*P	**P**	**11 08 50.9**	**-0.7**
comp=Z,25nm,0.9s,mb4.6							
BRG				*e*		11 08 57.3	

LDF La Druitiere 22.97 173⇑ *i*P P 11 08 59.1 -0.8
LDF pmax pmax
comp=Z,23nm,0.9s,mb4.6
LDF La Druitiere 22.97 173⇑ *i*P P 11 08 59.1 -0.8
comp=Z,23nm,0.9s,mb4.6
DPC Dobruska-Polom 23.12 145 *e*P P 11 09 00.8 -0.6
comp=Z,109nm,1.2s,mb5.2
DPC Dobruska-Polom 23.12 145 *e*P P 11 09 01.4 0.0
DPC MLR MLR
comp=Z,600nm,14.4s,MS4.2
DPC Dobruska-Polom 23.12 145 *e*P P 11 09 01.4 0.0
DPC AMS AMS 11 19 30.0
comp=Z,600nm,14.4s
DPC Dobruska-Polom 23.12 145 *e*P P 11 09 00.8 -0.6
comp=Z,109nm,1.2s,mb5.2
PRU Pruhonice 23.15 148 *e*P P 11 09 02.5 +0.7
PRU *e* 11 09 07.5
PRU MLR MLR
comp=Z,400nm,15.9s,MS4.0
PRU Pruhonice 23.15 148 *e*P P 11 09 02.5 +0.7
PRU *e*pP 11 09 07.5
PRU AMS AMS 11 18 30.0
comp=Z,400nm,15.9s
GRR Gorron 23.15 174⇑ *i*P P 11 09 00.8 -1.0
comp=Z,52nm,0.7s,mb4.8
GRR Gorron 23.15 174⇑ *i*P P 11 09 00.8 -1.0
comp=Z,26nm,0.7s,mb4.8
GRR Gorron 23.15 174⇑ *i*P P 11 09 00.8 -1.0
GRR pmax pmax
comp=Z,26nm,0.7s,mb4.8
GRR Gorron 23.15 174⇑ *i*P P 11 09 00.8 -1.0
comp=Z,26nm,0.7s,mb4.8
ROSF Rostrenen 23.16 178 *e*P P 11 09 00.8 -1.1
ROSF Rostrenen 23.16 178 *e*P P 11 09 00.8 -1.1
ROSF Rostrenen 23.16 178 *e*P P 11 09 00.8 -1.1
LANF Langenberg 23.19 160 *e*P P 11 09 03.1 +0.9
LANF Langenberg 23.19 160 *e*P P 11 09 02.0 -0.2
LANF Langenberg 23.19 160 *e*P P 11 09 02.0 -0.2
LANF Langenberg 23.19 160 *e*P P 11 09 03.1 +0.9
SGMF Saint Gilles 23.25 177 *e*P P 11 09 02.4 -0.4
comp=Z,76nm,1.2s,mb4.7
SGMF Saint Gilles 23.25 177 *e*P P 11 09 02.4 -0.4
comp=Z,38nm,1.2s,mb4.7
SGMF Saint Gilles 23.25 177 *e*P P 11 09 02.4 -0.4
SGMF pmax pmax
comp=Z,38nm,1.2s,mb4.7
SGMF Saint Gilles 23.25 177 *e*P P 11 09 02.4 -0.4
comp=Z,38nm,1.2s,mb4.7
MEZF Maizieres J'vi 23.39 164 *e*P P 11 09 03.9 -0.4
MEZF Maizieres J'vi 23.39 164 *e*P P 11 09 03.9 -0.4
QUIF Quistinic 23.58 178⇑ *i*P P 11 09 05.6 -0.6
comp=Z,107nm,1.2s,mb4.8
QUIF Quistinic 23.58 178⇑ *i*P P 11 09 05.6 -0.6
comp=Z,54nm,1.2s,mb4.8
QUIF Quistinic 23.58 178⇑ *i*P P 11 09 05.6 -0.6
QUIF pmax pmax
comp=Z,54nm,1.2s,mb4.8
QUIF Quistinic 23.58 178⇑ *i*P P 11 09 05.6 -0.6
comp=Z,54nm,1.2s,mb4.8
MOS Moscow 23.60 110 *e*P P 11 09 06.1 -0.3
MOS pmax pmax
comp=Z,119nm,1.5s,mb5.1
SFTF Sexfontaines 23.68 165 *e*P P 11 09 07.1 -0.1
comp=Z,112nm,1.2s,mb4.8
SFTF Sexfontaines 23.68 165 *e*P P 11 09 07.1 -0.1
comp=Z,112nm,1.3s,mb5.1
SFTF Sexfontaines 23.68 165 *e*P P 11 09 07.1 -0.1
comp=Z,56nm,1.2s,mb4.8
CDF Champ du Feu 23.69 161⇑ *i*P P 11 09 07.6 +0.3
CDF Champ du Feu 23.69 161⇑ *i*P P 11 09 07.6 +0.3
CDF Champ du Feu 23.69 161⇑ *i*P P 11 09 07.6 +0.3
WET Wettzell 23.70 151 *e*P P 11 09 08.3 +0.9
comp=Z,46nm,1.4s,mb4.7
WET Wettzell 23.70 151 *e*P P 11 09 08.3 +0.9
WET pmax pmax
comp=Z,46nm,1.4s,mb4.7
WET Wettzell 23.70 151 *e*P P 11 09 08.3 +0.9
comp=Z,46nm,1.4s,mb4.7
THEF They Montfort 23.75 163 *e*P P 11 09 08.1 +0.3
THEF They Montfort 23.75 163 *e*P P 11 09 08.1 +0.3
THEF They Montfort 23.75 163 *e*P P 11 09 08.1 +0.3
OBN Obninsk 23.82 112 *e*P P 11 09 09.1 +0.7
OBN Obninsk 23.82 112⇑ *e*P P 11 09 07.8 -0.6
OBN *e* 11 09 36.6
OBN *i* S S 11 13 21.5 -2.1
OBN pmax pmax
comp=Z,44nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,600nm,18.0s,MS4.1
OBN Obninsk 23.82 112 *e*P P 11 09 09.1 +0.7
KHC Kasperske Hory 23.82 150 *e*P P 11 09 08.2 -0.2
comp=Z,47nm,1.6s,mb4.7
KHC Kasperske Hory 23.82 150 *e*P P 11 09 08.2 -0.3
KHC pmax pmax
comp=Z,47nm,1.6s,mb4.7
KHC Kasperske Hory 23.82 150 *e*P P 11 09 08.1 -0.4
KHC *e*pP 11 09 13.5
KHC AMS AMS 11 17 30.0
comp=Z,400nm,17.6s
KHC Kasperske Hory 23.82 150 *e*P P 11 09 08.2 -0.3
comp=Z,47nm,1.6s,mb4.7
ECH Echery 23.87 161 *e*P P 11 09 09.6 +0.7
ECH Echery 23.87 161 *e*P P 11 09 09.0 0.0
comp=Z,23nm,1.0s,mb4.6
ECH Echery 23.87 161 *e*P P 11 09 09.0 +0.1
ECH pmax pmax
comp=Z,23nm,1.0s,mb4.6
ECH Echery 23.87 161 *e*P P 11 09 09.6 +0.7
BFO Black Forest 23.89 159 *e*P P 11 09 10.0 +0.9
comp=Z,44nm,1.2s,mb4.8
BFO Black Forest 23.89 159 *e*P P 11 09 10.0 +0.9
BFO pmax pmax
comp=Z,44nm,1.2s,mb4.8
BFO Black Forest 23.89 159 *e*P P 11 09 10.0 +0.9
comp=Z,44nm,1.2s,mb4.8
MORC Moravsky Berou 23.89 144 *e*P P 11 09 08.3 -0.8
comp=Z,24nm,1.1s,mb4.5
MORC Moravsky Berou 23.89 144 *e*P P 11 09 08.3 -0.8
MORC pmax pmax
comp=Z,24nm,1.1s,mb4.5
MORC Moravsky Berou 23.89 144⇓ *i*P P 11 09 08.5 -0.6
MORC Moravsky Berou 23.89 144 *e*P P 11 09 08.3 -0.8
comp=Z,24nm,1.1s,mb4.5
OJC Ojcow 23.92 140 *e*P P 11 09 09.2 -0.1
OJC *e* 11 09 14.6
OJC Ojcow 23.92 140 *e*P P 11 09 08.8 -0.5
comp=Z,53nm,0.9s,mb5.0
OJC Ojcow 23.92 140 *e*P P 11 09 09.2 -0.1
OJC *e* 11 09 14.6
OJC Ojcow 23.92 140 *e*P P 11 09 08.9 -0.4
comp=Z,53nm,0.9s,mb5.0
OKC Ostrava-Krasne 23.95 143 AMS AMS 11 19 40.0
comp=Z,900nm,15.7s
TREC Trest 23.98 147 *e*P P 11 09 10.3 +0.4
TREC MLR MLR
comp=Z,500nm,15.1s,MS4.1
TREC Trest 23.98 147 *e*P P 11 09 10.3 +0.4
TREC AMS AMS 11 18 50.0
comp=Z,500nm,15.1s
HAU Haudompre 24.00 162 *e*P P 11 09 10.2 +0.1
HAU *e*MLR MLR
comp=Z,674nm,21.0s,MS3.8
HAU Haudompre 24.00 162 *e*P P 11 09 10.2 +0.1
HAU LR LR
comp=Z,670nm,21.0s,MS4.1
HAU Haudompre 24.00 162 *e*P P 11 09 10.2 +0.1
HAU MLR MLR
comp=Z,670nm,21.0s,MS4.1
HAU Haudompre 24.00 162 *e*P P 11 09 10.2 +0.1
GEC2 GERESS Array S 24.12 150 *e*P P 11 09 12.5 +1.3
comp=Z,37nm,1.4s,mb4.6
GEC2 GERESS Array S 24.12 150 *e*P P 11 09 12.5 +1.3
GEC2 pmax pmax
comp=Z,37nm,1.4s,mb4.6
GEC2 GERESS Array S 24.12 150 *e*P P 11 09 12.5 +1.3
comp=Z,37nm,1.4s,mb4.6
GERES GERESS Array B 24.12 150 P **P 11 09 11.8 +0.6**
comp=Z,7.6nm,0.9s,mb4.1,baz=352,slow=8.8,SNR=35
GERES GERESS Array B 24.12 150 P **P 11 09 11.8 +0.6**
GERES pmax pmax
comp=Z,8.0nm,0.9s
GERES GERESS Array B 24.12 150 P P 11 09 11.8 +0.6
SPAK Spaichingen-Ko 24.17 158 *e*P P 11 09 12.1 +0.5
SPAK Spaichingen-Ko 24.17 158 *e*P P 11 09 12.1 +0.5
VRAC Vranov 24.17 145 P **P 11 09 11.8 +0.2**
comp=Z,13nm,0.7s,mb4.4,baz=344,slow=9.8,SNR=11
VRAC LR LR 11 18 44.3
comp=Z,324nm,21.8s,MS3.8,baz=337,slow=37
VRAC Vranov 24.17 145 P **P 11 09 11.8 +0.2**
VRAC pmax pmax
comp=Z,13nm,0.7s
VRAC MLR MLR
comp=Z,324nm,21.8s
VRAC Vranov 24.17 145⇓ *i*P P 11 09 11.9 +0.3
VRAC Vranov 24.17 145 P **P 11 09 11.8 +0.2**
RES Resolute Bay 24.21 320 LR LR 11 18 15.9
comp=Z,881nm,20.2s,MS4.2,baz=263,slow=36
MOF Molkenrain 24.23 161 *e*P P 11 09 12.6 +0.4
MOF Molkenrain 24.23 161 *e*P P 11 09 12.6 +0.4
MOF Molkenrain 24.23 161 *e*P P 11 09 12.6 +0.4
HINF Hinteralfeld 24.24 162 *e*P P 11 09 12.2 0.0
HINF Hinteralfeld 24.24 162 *e*P P 11 09 12.2 0.0
HINF Hinteralfeld 24.24 162 *e*P P 11 09 12.2 0.0
FELD Feldberg im Sc 24.30 160 *e*P P 11 09 12.8 0.0
FELD Feldberg im Sc 24.30 160 *e*P P 11 09 13.7 +0.9
FUR Furstenfeldbru 24.42 154 *e*P P 11 09 15.3 +1.4
FUR Furstenfeldbru 24.42 154 *e*P P 11 09 15.3 +1.4
FUR Furstenfeldbru 24.42 154 *e*P P 11 09 15.3 +1.4
HYF Humbligny 24.44 169 *e*P P 11 09 13.8 -0.3
HYF Humbligny 24.44 169 *e*P P 11 09 13.8 -0.3
LOR Lormes 24.52 167⇑ *i*P P 11 09 14.5 -0.3
comp=Z,48nm,0.6s,mb4.9
LOR *e*MLR MLR
comp=Z,470nm,22.5s,MS3.6
LOR Lormes 24.52 167⇑ *i*P P 11 09 14.5 -0.3
comp=Z,24nm,0.6s,mb4.9
LOR LR LR
comp=Z,470nm,22.5s,MS3.9
LOR Lormes 24.52 167⇑ *i*P P 11 09 14.5 -0.3
LOR pmax pmax
comp=Z,24nm,0.6s,mb4.9
LOR MLR MLR
comp=Z,470nm,22.5s,MS3.9
LOR Lormes 24.52 167⇑ *i*P P 11 09 14.5 -0.3
comp=Z,24nm,0.6s,mb4.9
BBS Basel-Blauen 24.65 161 *e*P P 11 09 16.1 +0.1
BBS Basel-Blauen 24.65 161 *e*P P 11 09 16.1 +0.1
BBS Basel-Blauen 24.65 161 *e*P P 11 09 17.4 +1.4
LOMF Lomont 24.70 162 *e*P P 11 09 18.0 +1.6
LOMF Lomont 24.70 162 *e*P P 11 09 18.0 +1.6
LOMF Lomont 24.70 162 *e*P P 11 09 18.0 +1.6
SSF Saint Saulge 24.70 167⇑ *i*P P 11 09 16.0 -0.5
comp=Z,39nm,0.7s,mb4.7
SSF Saint Saulge 24.70 167⇑ *i*P P 11 09 16.0 -0.5
comp=Z,19nm,0.7s,mb4.7
SSF Saint Saulge 24.70 167⇑ *i*P P 11 09 16.0 -0.5
SSF pmax pmax
comp=Z,19nm,0.7s,mb4.7
SSF Saint Saulge 24.70 167⇑ *i*P P 11 09 16.0 -0.5
comp=Z,19nm,0.7s,mb4.7
NIE Niedzica 24.79 140 *e*P P 11 09 19.5 +2.3
NIE Niedzica 24.79 140 *e*P P 11 09 19.5 +2.3
AVF Avril sur Loir 24.96 168⇑ *i*P P 11 09 18.4 -0.4
comp=Z,46nm,0.8s,mb4.7
AVF Avril sur Loir 24.96 168⇑ *i*P P 11 09 18.4 -0.4
comp=Z,23nm,0.8s,mb4.8
AVF Avril sur Loir 24.96 168⇑ *i*P P 11 09 18.4 -0.4
AVF pmax pmax
comp=Z,23nm,0.8s,mb4.8
AVF Avril sur Loir 24.96 168⇑ *i*P P 11 09 18.4 -0.4
comp=Z,23nm,0.8s,mb4.7
MFF Saint Martin d 24.96 173⇑ *i*P P 11 09 18.5 -0.4
comp=Z,64nm,0.7s,mb5.0
MFF Saint Martin d 24.96 173⇑ *i*P P 11 09 18.5 -0.4
comp=Z,32nm,0.7s,mb5.0
MFF Saint Martin d 24.96 173⇑ *i*P P 11 09 18.5 -0.4
MFF pmax pmax
comp=Z,32nm,0.7s,mb5.0
MFF Saint Martin d 24.96 173⇑ *i*P P 11 09 18.5 -0.4
comp=Z,32nm,0.7s,mb5.0
RJOB Jochberg 25.06 152 *e*P P 11 09 21.1 +1.4
comp=Z,20nm,0.9s,mb4.7
KWP Kalwaria Pacla 25.10 136 *e*P P 11 09 19.8 -0.3
KWP LMZ 11 18 45.2
comp=Z,700nm,21.1s
KWP Kalwaria Pacla 25.10 136 *e*P P 11 09 19.8 -0.3
comp=Z,107nm,1.4s,mb5.2
KWP Kalwaria Pacla 25.10 136 *e*P P 11 09 19.8 -0.3
KWP MLR MLR
comp=Z,700nm,21.1s,MS4.1
KWP Kalwaria Pacla 25.10 136⇑ *i*P P 11 09 20.7 +0.6
KWP Kalwaria Pacla 25.10 136 *e*P P 11 09 19.8 -0.3
comp=Z,107nm,1.4s,mb5.2
DAVA Damuels 25.10 157⇑ *i*P P 11 09 20.2 0.0
comp=Z,24nm,1.1s,mb4.7,SNR=7.4
DAVA Damuels 25.10 157 P **P 11 09 20.2 +0.1**
comp=Z,24nm,1.1s,mb4.7,SNR=7.4
SMF Signal de Mont 25.14 167⇑ *i*P P 11 09 19.9 -0.6
comp=Z,101nm,0.8s,mb5.1
SMF Signal de Mont 25.14 167⇑ *i*P P 11 09 19.9 -0.6
comp=Z,50nm,0.8s,mb5.1
SMF Signal de Mont 25.14 167⇑ *i*P P 11 09 19.9 -0.6
SMF pmax pmax
comp=Z,51nm,0.8s,mb5.1
SMF Signal de Mont 25.14 167⇑ *i*P P 11 09 19.9 -0.6
comp=Z,50nm,0.8s,mb5.1
BGF Bois d'Agland 25.16 169⇑ *i*P P 11 09 20.2 -0.4
comp=Z,101nm,0.8s,mb5.1
BGF Bois d'Agland 25.16 169⇑ *i*P P 11 09 20.2 -0.4
comp=Z,50nm,0.8s,mb5.1
BGF Bois d'Agland 25.16 169⇑ *i*P P 11 09 20.2 -0.4
BGF pmax pmax
comp=Z,50nm,0.8s,mb5.1
BGF Bois d'Agland 25.16 169⇑ *i*P P 11 09 20.2 -0.4
comp=Z,50nm,0.8s,mb5.1
MOA Molln 25.18 150 *i* P P 11 09 21.2 +0.4
comp=Z,27nm,1.3s,mb4.6,SNR=7.9
MOA Molln 25.18 150 P **P 11 09 21.2 +0.4**
comp=Z,27nm,1.3s,mb4.6,SNR=7.9
MOTA Moosalm 25.20 155⇑ *i*P P 11 09 21.8 +0.8
comp=Z,19nm,1.0s,mb4.6
MOTA Moosalm 25.20 155 P **P 11 09 21.8 +0.8**
comp=Z,19nm,1.0s,mb4.6
LVV L'vov 25.22 134 *e*P P 11 09 22.2 +1.0
ZST Bratislava 25.33 145 *e*P P 11 09 23.1 +0.9
comp=Z,25nm,1.5s,mb4.5
ZST Bratislava 25.33 145 *e*P P 11 09 23.1 +0.9
ZST pmax pmax
comp=Z,25nm,1.5s,mb4.5
ZST Bratislava 25.33 145 *e*P P 11 09 23.1 +0.9
ZST Bratislava 25.33 145 *e*P P 11 09 23.1 +0.9
comp=Z,25nm,1.5s,mb4.5
WTTA Wattenberg 25.36 154⇑ *i*pP pP 11 09 24.6 -0.9
comp=Z,48nm,1.1s,SNR=11
CABF La Chapelle 25.36 163 *e*P P 11 09 22.4 0.0
comp=Z,90nm,1.2s,mb4.9
CABF La Chapelle 25.36 163 *e*P P 11 09 22.4 0.0
comp=Z,45nm,1.2s,mb4.9
CABF La Chapelle 25.36 163 *e*P P 11 09 22.4 0.0
CABF pmax pmax
comp=Z,45nm,1.2s,mb4.9
CABF La Chapelle 25.36 163 *e*P P 11 09 22.4 0.0
comp=Z,45nm,1.2s,mb4.9
CONA Conrad Observa 25.37 147⇑ *i*P P 11 09 23.0 +0.5
comp=Z,42nm,0.9s,mb5.0,SNR=20
CONA Conrad Observa 25.37 147 P **P 11 09 23.0 +0.5**
comp=Z,42nm,0.9s,mb5.0,SNR=20
VYHS Vyhne 25.37 143 *e*P P 11 09 23.2 +0.7
comp=Z,8.6nm,1.3s,mb4.1
VYHS Vyhne 25.37 143 *e*P P 11 09 23.2 +0.7
VYHS pmax pmax
comp=Z,9.0nm,1.3s,mb4.1
VYHS Vyhne 25.37 143 *e*P P 11 09 23.2 +0.7
VYHS Vyhne 25.37 143 *e*P P 11 09 23.2 +0.7
comp=Z,8.6nm,1.3s,mb4.1
TCF Toulx Ste Croi 25.39 170⇑ *i*P P 11 09 22.1 -0.6
comp=Z,81nm,0.9s,mb5.0
TCF Toulx Ste Croi 25.39 170⇑ *i*P P 11 09 22.1 -0.6
comp=Z,41nm,0.9s,mb5.0
TCF Toulx Ste Croi 25.39 170⇑ *i*P P 11 09 22.1 -0.6
TCF pmax pmax
comp=Z,41nm,0.9s,mb5.0
TCF Toulx Ste Croi 25.39 170⇑ *i*P P 11 09 22.1 -0.6
comp=Z,41nm,0.9s,mb5.0
FETA Feichten 25.47 156⇓ *i*P P 11 09 24.4 +0.9
comp=Z,13nm,1.0s,mb4.4,SNR=5.7
FETA Feichten 25.47 156 P **P 11 09 24.4 +0.9**
comp=Z,13nm,1.0s,mb4.4,SNR=5.7
CRVS Cervenica-Dubn 25.52 138 *e*P P 11 09 25.1 +1.2
CRVS Cervenica-Dubn 25.52 138 *e*P P 11 09 25.1 +1.2
CRVS Cervenica-Dubn 25.52 138 *e*P P 11 09 25.1 +1.2
CRVS Cervenica-Dubn 25.52 138 *e*P P 11 09 25.1 +1.2
DAVOX Davos/Dischmat 25.60 157 LR LR 11 20 40.8
comp=Z,246nm,18.2s,MS3.8,baz=263,slow=39
KOLS Kolonicke sedl 25.66 137 *e*P P 11 09 27.0 +1.8
comp=Z,14nm,0.8s,mb4.6
KOLS Kolonicke sedl 25.66 137 *e*P P 11 09 27.0 +1.8
KOLS pmax pmax
comp=Z,14nm,0.8s,mb4.5
KOLS Kolonicke sedl 25.66 137 *e*P P 11 09 27.0 +1.8
KOLS Kolonicke sedl 25.66 137 *e*P P 11 09 27.0 +1.8
comp=Z,14nm,0.8s,mb4.6
AGO Saint Agoulin 25.68 168 *e*P P 11 09 25.0 -0.4
AGO Saint Agoulin 25.68 168 *e*P P 11 09 25.0 -0.4
AKASG Malin Array Be 25.68 126 P **P 11 09 24.6 -0.7**
comp=Z,12nm,0.7s,mb4.5,baz=332,slow=9.3,SNR=17
AKASG LR LR 11 19 21.5
comp=Z,582nm,18.3s,MS4.1,baz=330,slow=36
AKASG Malin Array Be 25.68 126 P **P 11 09 24.6 -0.7**
AKASG pmax pmax
comp=Z,12nm,0.7s
AKASG MLR MLR
comp=Z,582nm,18.3s
AKASG Malin Array Be 25.68 126 P **P 11 09 24.6 -0.7**
KIEV Kiev 25.68 126 *e*P P 11 09 24.4 -1.0
comp=Z,25nm,1.0s,mb4.7
KIEV Kiev 25.68 126 *e*P P 11 09 24.4 -1.0
KIEV pmax pmax
comp=Z,25nm,1.0s,mb4.7
KIEV Kiev 25.68 126 *e*P P 11 09 24.4 -1.0
comp=Z,25nm,1.0s,mb4.7
KECS Kecovo 25.71 140 *e*P P 11 09 26.2 +0.6
comp=Z,4,6nm,0.8s,mb4.1
KECS Kecovo 25.71 140 *e*P P 11 09 26.2 +0.6
KECS pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
KECS Kecovo 25.71 140 *e*P P 11 09 26.2 +0.6
SENIN Lac Senin/Sane 25.72 161 *e*P P 11 09 26.2 +0.4
comp=Z,20nm,0.8s,mb4.7
SENIN Lac Senin/Sane 25.72 161 *e*P P 11 09 26.2 +0.5
comp=Z,20nm,0.8s,mb4.7
SOP Sopron 25.73 147⇓ *i*P P 11 09 28.5 +2.7
KBA Koelnbreinsper 25.79 152 *i* P P 11 09 27.7 +1.3
comp=Z,20nm,1.0s,mb4.6,SNR=9.7
PLDF La Plantade 25.80 167 *e*P P 11 09 26.1 -0.3
PLDF La Plantade 25.80 167 *e*P P 11 09 26.1 -0.3
PLDF La Plantade 25.80 167 *e*P P 11 09 26.1 -0.3
FUORN Ofenpass-Fuorn 25.80 157 *e*P P 11 09 28.1 +1.6
comp=Z,20nm,1.3s,mb4.5
FUORN Ofenpass-Fuorn 25.80 157 *e*P P 11 09 28.1 +1.6
comp=Z,20nm,1.3s,mb4.5
TUE Stuetta 25.84 158 *e*P P 11 09 27.8 +1.0
comp=Z,25nm,1.2s,mb4.6
TUE Stuetta 25.84 158 *e*P P 11 09 27.8 +1.0
comp=Z,25nm,1.2s,mb4.6
UZH Uzhgorod 25.95 137 *e*P P 11 09 24.7 -3.1
UZH *e* pP 11 09 26.3 -4.5
UZH *i* 11 09 31.9
UZH *e*PPP 11 10 19.5
UZH *e*S S 11 13 49.6 -8.2
UZH *e*SSS 11 15 16.1
UZH MLR MLR
comp=Z,1μm,14.0s,MS4.5
ARSA Arzberg 25.97 148⇓ *i*P P 11 09 28.8 +0.9
comp=Z,22nm,1.2s,mb4.5
ARSA Arzberg 25.97 148 P **P 11 09 28.8 +0.8**
comp=Z,22nm,1.2s,mb4.5
PYM Petit Puy Mans 25.97 168 *e*P P 11 09 28.2 +0.2
PYM Petit Puy Mans 25.97 168 *e*P P 11 09 28.2 +0.2
PYM Petit Puy Mans 25.97 168 *e*P P 11 09 28.2 +0.2
PSZ Piszkesteto 26.13 141 *e*P P 11 09 30.4 +1.0
comp=Z,66nm,1.7s,mb4.9
PSZ Piszkesteto 26.13 141 *e*P P 11 09 30.4 +1.0
PSZ pmax pmax
comp=Z,66nm,1.7s,mb4.9
PSZ Piszkesteto 26.13 141⇑ *i*P P 11 09 30.4 +1.0
PSZ Piszkesteto 26.13 141⇓ *e*P P 11 09 30.5 +1.1
PSZ Piszkesteto 26.13 141 *e*P P 11 09 30.4 +1.0
comp=Z,66nm,1.7s,mb4.9
COLF Collangettes 26.25 167 *e*P P 11 09 30.7 +0.2
COLF Collangettes 26.25 167 *e*P P 11 09 30.7 +0.2
RJF Les Rejaudoux 26.33 171⇑ *i*P P 11 09 30.8 -0.5
comp=Z,118nm,0.8s,mb5.2
RJF *e*MLR MLR
comp=Z,498nm,20.5s,MS3.7
RJF Les Rejaudoux 26.33 171⇑ *i*P P 11 09 30.8 -0.5
comp=Z,59nm,0.8s,mb5.2
RJF LR LR
comp=Z,500nm,20.5s,MS4.0
RJF Les Rejaudoux 26.33 171⇑ *i*P P 11 09 30.8 -0.5
RJF pmax pmax
comp=Z,59nm,0.8s,mb5.2
RJF MLR MLR
comp=Z,500nm,20.5s,MS4.0
RJF Les Rejaudoux 26.33 171⇑ *i*P P 11 09 30.8 -0.5
comp=Z,59nm,0.8s,mb5.2
TRPA Tarpa 26.48 138⇑ *i*P P 11 09 35.6 +3.0
LPL La Plagne 26.50 163⇑ *i*P P 11 09 33.5 +0.7
comp=Z,14nm,0.7s,mb4.3
LPL La Plagne 26.50 163⇑ *i*P P 11 09 33.5 +0.7
comp=Z,6.9nm,0.7s,mb4.3
LPL La Plagne 26.50 163⇑ *i*P P 11 09 33.5 +0.7
LPL pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
LPL La Plagne 26.50 163⇑ *i*P P 11 09 33.5 +0.7
comp=Z,6.9nm,0.7s,mb4.3
LBL Lubilhac 26.50 168 *e*P P 11 09 32.8 0.0
LBL Lubilhac 26.50 168 *e*P P 11 09 31.6 -1.2
LBL Lubilhac 26.50 168 *e*P P 11 09 31.6 -1.2
LBL Lubilhac 26.50 168 *e*P P 11 09 32.8 0.0
LPG La Plagne 26.52 163⇑ *i*P P 11 09 33.9 +0.9
comp=Z,57nm,1.3s,mb4.7
LPG La Plagne 26.52 163⇑ *i*P P 11 09 33.9 +0.9
comp=Z,28nm,1.3s,mb4.6
LPG La Plagne 26.52 163⇑ *i*P P 11 09 33.9 +0.9
LPG pmax pmax
comp=Z,28nm,1.3s,mb4.6
LPG La Plagne 26.52 163⇑ *i*P P 11 09 33.9 +0.9
comp=Z,28nm,1.3s,mb4.7
SSB Saint Sauveur 26.55 166 *e*P P 11 09 32.9 -0.3
comp=Z,34nm,1.5s,mb4.7
SSB Saint Sauveur 26.55 166 *e*P P 11 09 32.9 -0.3
SSB pmax pmax
comp=Z,34nm,1.5s,mb4.7
SSB Saint Sauveur 26.55 166 *e*P P 11 09 32.9 -0.3
comp=Z,34nm,1.5s,mb4.7
SOKR Solikamsk 26.55 85 *e*P P 11 09 32.1 -1.1
SOKR S S 11 14 08.4 +1.3
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
SOKR MLR MLR
comp=Z,220nm,13.0s,MS3.9
LFF La Frestale 26.66 172 *e*P P 11 09 33.9 -0.3
comp=Z,42nm,0.9s,mb4.7
LFF La Frestale 26.66 172 *e*P P 11 09 33.9 -0.3
comp=Z,21nm,0.9s,mb4.7
LFF La Frestale 26.66 172 *e*P P 11 09 33.9 -0.3
LFF pmax pmax
comp=Z,21nm,0.9s,mb4.7
LFF La Frestale 26.66 172 *e*P P 11 09 33.9 -0.3
comp=Z,21nm,0.9s,mb4.7
CAF Calviac 26.74 170⇑ *i*P P 11 09 34.6 -0.3
comp=Z,50nm,0.9s,mb4.7
CAF Calviac 26.74 170⇑ *i*P P 11 09 34.6 -0.3
comp=Z,25nm,0.9s,mb4.8
CAF Calviac 26.74 170⇑ *i*P P 11 09 34.6 -0.3
CAF pmax pmax
comp=Z,25nm,0.9s,mb4.7
CAF Calviac 26.74 170⇑ *i*P P 11 09 34.6 -0.3
comp=Z,25nm,0.9s,mb4.7
BNI Bardonecchia 26.96 163 *e*P P 11 09 37.7 +0.8
comp=Z,43nm,1.5s,mb4.8
BNI Bardonecchia 26.96 163 *e*P P 11 09 37.7 +0.8
BNI pmax pmax
comp=Z,43nm,1.5s,mb4.8
BNI Bardonecchia 26.96 163 *e*P P 11 09 37.7 +0.8
comp=Z,43nm,1.5s,mb4.8
VIVF Saint-Julien-I 26.98 166⇑ *i*P P 11 09 37.2 +0.1
comp=Z,75nm,1.2s,mb4.8
VIVF Saint-Julien-I 26.98 166⇑ *i*P P 11 09 37.2 +0.1
comp=Z,38nm,1.2s,mb4.8
VIVF Saint-Julien-I 26.98 166⇑ *i*P P 11 09 37.2 +0.1
VIVF pmax pmax
comp=Z,37nm,1.2s,mb4.8
VIVF Saint-Julien-I 26.98 166⇑ *i*P P 11 09 37.2 +0.1
comp=Z,38nm,1.2s,mb4.8
ORIF Oris-en-Rattie 27.02 164⇑ *i*P P 11 09 37.6 +0.1

comp=Z,48nm,1.0s,mb4.7
ORIF eMLR MLR
ORIF Oris-en-Rattie 27.02 164⇑iP P 11 09 37.6 +0.1
comp=Z,24nm,1.0s,mb4.7
ORIF Oris-en-Rattie 27.02 164⇑iP P 11 09 37.6 +0.1
ORIF pmax pmax
comp=Z,24nm,1.0s,mb4.7
ORIF Oris-en-Rattie 27.02 164⇑iP P 11 09 37.6 +0.1
comp=Z,24nm,1.0s,mb4.7
MBDF Montbardon 27.29 163⇑iP P 11 09 40.9 +1.0
comp=Z,34nm,0.8s,mb4.6
MBDF Montbardon 27.29 163⇑iP P 11 09 40.9 +1.0
comp=Z,17nm,0.8s,mb4.6
MBDF Montbardon 27.29 163⇑iP P 11 09 40.9 +1.0
MBDF pmax pmax
comp=Z,17nm,0.8s,mb4.6
MBDF Montbardon 27.29 163⇑iP P 11 09 40.9 +1.0
comp=Z,17nm,0.8s,mb4.6
BUR08 Bucovina Ar. S 27.53 134 eP P 11 09 42.8 +0.7
BUR08 Bucovina Ar. S 27.53 134 eP P 11 09 42.8 +0.7
BURAR Bucovina Array 27.56 134⇓iP P 11 09 43.7 +1.4
DRGR 27.79 138⇓iP P 11 09 44.9 +0.6
SMRF Simiane la Rot 27.93 165⇑iP P 11 09 45.8 +0.2
comp=Z,25nm,1.1s,mb4.5
SMRF Simiane la Rot 27.93 165⇑iP P 11 09 45.8 +0.2
comp=Z,25nm,1.1s,mb4.8
SMRF Simiane la Rot 27.93 165⇑iP P 11 09 45.8 +0.2
comp=Z,12nm,1.1s,mb4.5
VSR Storozhevoye 27.98 113 eP P 11 09 45.5 -0.6
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,6.0nm,0.5s
AUTN L'Aution 28.08 162 eP P 11 09 47.4 +0.4
AUTN L'Aution 28.08 162 eP P 11 09 47.4 +0.4
AUTN L'Aution 28.08 162 eP P 11 09 47.4 +0.4
SAOF Saorge 28.10 162 eP P 11 09 48.2 +1.1
SAOF Saorge 28.10 162 eP P 11 09 48.2 +1.1
SAOF Saorge 28.10 162 eP P 11 09 48.2 +1.1
MVIF Mont Vial 28.15 162 eP P 11 09 49.4 +1.8
MVIF Mont Vial 28.15 162 eP P 11 09 49.4 +1.8
MVIF Mont Vial 28.15 162 eP P 11 09 49.4 +1.8
SBF Sospel 28.21 162 eP P 11 09 48.9 +0.8
SBF Sospel 28.21 162 eP P 11 09 48.9 +0.8
SBF Sospel 28.21 162 eP P 11 09 48.9 +0.8
VLC Villacollemand 28.24 158 eP P 11 09 49.8 +1.4
comp=E,26nm,0.8s,mb4.9
VLC Villacollemand 28.24 158 eP P 11 09 49.8 +1.4
comp=E,26nm,0.8s,mb4.9
VORD Divnogorie 28.24 113 eP P 11 09 48.7 +0.3
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
VORD MLR MLR
comp=N,600nm,17.0s
VORD MLR MLR
comp=Z,840nm,17.0s,MS4.4
VORD MLR MLR
comp=E,90nm,4.0s
MTLF Montolieu 28.33 170 eP P 11 09 49.4 +0.2
comp=E,30nm,1.1s,mb4.5
MTLF Montolieu 28.33 170 eP P 11 09 49.4 +0.2
comp=E,15nm,1.1s,mb4.5
MTLF Montolieu 28.33 170 eP P 11 09 49.4 +0.2
MTLF pmax pmax
comp=Z,15nm,1.1s,mb4.5
MTLF Montolieu 28.33 170 eP P 11 09 49.4 +0.2
comp=Z,15nm,1.1s,mb4.5
SJPF Ste Jean 28.41 175 eP P 11 09 49.7 -0.3
comp=Z,25nm,1.0s,mb4.5
SJPF Ste Jean 28.41 175 eP P 11 09 49.7 -0.3
comp=Z,13nm,1.0s,mb4.5
SJPF Ste Jean 28.41 175 eP P 11 09 49.7 -0.3
SJPF pmax pmax
comp=Z,13nm,1.0s,mb4.5
SJPF Ste Jean 28.41 175 eP P 11 09 49.7 -0.3
comp=Z,13nm,1.0s,mb4.5
FRF La Foret Royal 28.43 163 eP P 11 09 50.0 -0.1
FRF La Foret Royal 28.43 163 eP P 11 09 50.0 -0.1
FRF La Foret Royal 28.43 163 eP P 11 09 50.0 -0.1
EPF Esparros 28.55 173⇑iP P 11 09 50.6 -0.6
comp=Z,74nm,0.8s,mb5.1
EPF Esparros 28.55 173⇑iP P 11 09 50.6 -0.6
comp=Z,37nm,0.8s,mb5.2
EPF Esparros 28.55 173⇑iP P 11 09 50.6 -0.6
EPF pmax pmax
comp=Z,37nm,0.8s,mb5.2
EPF Esparros 28.55 173⇑iP P 11 09 50.6 -0.6
comp=Z,37nm,0.8s,mb5.1
LMR La Mourre 28.64 164 eP P 11 09 52.8 +0.8
LMR La Mourre 28.64 164 eP P 11 09 52.8 +0.8
LMR La Mourre 28.64 164 eP P 11 09 52.8 +0.8
ETSF Etsaut 28.65 174⇑iP P 11 09 52.7 +0.7
ETSF Etsaut 28.65 174⇑iP P 11 09 52.7 +0.7
ETSF Etsaut 28.65 174⇑iP P 11 09 52.7 +0.7
VIEF Viey 28.68 174 eP P 11 09 53.8 +1.4
VIEF Viey 28.68 174 eP P 11 09 53.4 +1.0
VIEF Viey 28.68 174 eP P 11 09 53.8 +1.4
VRHR Novokhopersk 28.82 110 eP P 11 09 53.8 +0.3
VRHR pmax pmax
comp=N,9.0nm,0.4s
VRHR pmax pmax
comp=E,5.0nm,0.4s
VRHR pmax pmax
comp=Z,7.0nm,0.4s,mb4.7
SALF Salau 28.85 172 eP P 11 09 55.5 +1.6
SALF Salau 28.85 172 eP P 11 09 54.8 +0.9
SALF Salau 28.85 172 eP P 11 09 55.5 +1.6
CARF Carcanieres 28.94 170 eP P 11 09 55.3 +0.6
CARF Carcanieres 28.94 170 eP P 11 09 55.0 +0.3
CARF Carcanieres 28.94 170 eP P 11 09 55.3 +0.6
VRI Vrincioaia 29.56 133⇑iP P 11 09 57.3 -2.8
ARU Arti 29.64 87c iP P 11 10 01.9 +1.2
ARU e 11 10 53.3
ARU S S 11 14 59.6 +4.0
ARU SS SS 11 16 29.5 -32
ARU pmax pmax
comp=Z,20nm,1.7s,mb4.6
PGF Pioggiola 29.67 160 eP P 11 10 01.9 +0.8
PGF Pioggiola 29.67 160 eP P 11 10 01.9 +0.8
PGF Pioggiola 29.67 160 eP P 11 10 01.9 +0.8
PBRG Braganca 29.71 184 eP P 11 10 07.4 +5.9
PBRG eLR LR 11 18 12.7
comp=Z,360nm,18.0s
MVO Moncorvo 30.36 184 eLQ 11 17 08.6
MVO eLR LR 11 18 35.7
comp=Z,273nm,16.0s
PVIS Viseu 30.83 186 eP P 11 10 17.2 +5.8
SCHQ Schefferville 30.93 271 LR LR 11 21 00.3
comp=Z,207nm,19.7s,MS3.8,baz=57,slow=33
MTE Manteigas 31.14 185 eP P 11 10 14.7 +0.6
MTE eLQ 11 17 15.4
MTE eLR LR 11 18 48.3
comp=Z,462nm,18.0s
MTE Manteigas 31.14 185 eP P 11 10 14.7 +0.6
ESDC Sonseca Array 31.81 180 P P 11 10 20.1 0.0
comp=Z,2.7nm,0.8s,mb4.2,baz=1.4,slow=9.4,SNR=8.9
ESDC LR LR 11 22 44.2
comp=Z,147nm,19.3s,MS3.7,baz=315,slow=36
ESDC Sonseca Array 31.81 180 P P 11 10 20.1 0.0
ESDC LR LR 11 22 44.2
ESDC Sonseca Array 31.81 180 P P 11 10 20.1 +0.1
PAB San Pablo 31.94 180 eP P 11 10 21.3 +0.2
comp=Z,41nm,1.5s,mb5.0
PAB San Pablo 31.94 180 eP P 11 10 21.3 +0.1
PAB pmax pmax
comp=Z,41nm,1.5s,mb5.0
PAB San Pablo 31.94 180 eP P 11 10 21.3 +0.1
comp=Z,41nm,1.5s,mb5.0
PTOM Tomar 31.94 186 eP P 11 10 26.9 +5.7
PMRV Marv??o 32.10 185 eP P 11 10 22.2 -0.4
PMRV eLR LR 11 20 01.2
comp=Z,380nm,20.0s
PMRV Marv??o 32.10 185 eP P 11 10 22.2 -0.4
SIM Simferopol' 32.26 124 eP P 11 10 26.1 +2.2
SIM pmax pmax
comp=Z,15nm,0.7s,mb4.9
SIM MLR MLR
comp=Z,460nm,14.2s,MS4.3

PMTG Montargil 32.48 186 eP P 11 10 30.9 +5.0
PMTG eLR LR 11 19 45.5
comp=Z,445nm,20.0s
PMAFR Mafra 32.64 187 eLR LR 11 19 39.6
comp=Z,284nm,18.0s
PESTR Estremoz 32.67 185 eLR LR 11 19 01.0
comp=Z,368nm,20.0s
PBAR Barrancos 33.34 184 eLR LR 11 19 22.3
comp=Z,395nm,20.0s
PVAQ Vaqueiros 34.13 185 eLR LR 11 20 13.1
comp=Z,406nm,18.0s
MORF Marmelete 34.26 186 eLR LR 11 20 56.5
comp=Z,559nm,20.0s
PBDV Barranco-do-Ve 34.30 185 eLR LR 11 20 54.8
comp=Z,425nm,20.0s
PFVI Vila Bisbo 34.44 187 eLR LR 11 20 44.2
comp=Z,541nm,20.0s
GOF Gofitskoye 34.66 114 eP P 11 10 40.1 -4.7
KIV Kislovodsk 35.56 115 eP P 11 10 54.0 +1.4
KIV pmax pmax
comp=Z,19nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,123nm,13.0s,MS3.9
ABKAR Akbulak array 36.17 93 eP P 11 10 58.2 +0.5
ABKAR Akbulak array 36.17 93 eP P 11 10 58.2 +0.4
BRVK Borovoye 36.19 80 eP P 11 10 58.5 +0.6
comp=Z,6.0nm,0.9s,mb4.5
BRVK Borovoye 36.19 80 eP P 11 10 58.5 +0.6
BRVK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BRVK Borovoye 36.19 80 eP P 11 10 58.5 +0.6
comp=Z,6.0nm,0.9s,mb4.5
KEST Kesra 36.45 161 P P 11 11 00.2 -0.1
comp=Z,3.4nm,0.8s,mb4.3,baz=285,slow=4.4,SNR=16
KEST LR LR 11 26 21.1
comp=Z,121nm,19.2s,MS3.7,baz=318,slow=37
KEST Kesra 36.45 161 eP P 11 11 00.6 +0.3
KEST Kesra 36.45 161 eP P 11 11 00.6 +0.3
INK Inuvik 36.51 331 LR LR 11 26 54.7
comp=Z,304nm,21.5s,MS4.0,baz=345,slow=38
BRTR Keskin Array B 37.03 128 P P 11 11 06.0 +0.8
comp=Z,3.0nm,0.8s,mb4.2,baz=350,slow=6.3,SNR=13
BRTR LR LR 11 28 22.4
comp=Z,163nm,18.9s,MS3.8,baz=168,slow=40
BRTR Keskin Array B 37.03 128 iP P 11 11 06.6 +1.4
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 37.03 128 P P 11 11 06.0 +0.8
YKA Yellowknife Ar 38.10 315 P P 11 11 13.2 -0.8
comp=Z,5.0nm,0.8s,mb4.3,baz=28,slow=9.2,SNR=4.8
YKA LR LR 11 26 28.6
comp=Z,43nm,18.5s,MS3.3,baz=245,slow=36
YKA Yellowknife Ar 38.10 315 P P 11 11 13.2 -0.8
YKA pmax pmax
comp=Z,5.0nm,0.8s
YKA MLR MLR
comp=Z,43nm,18.5s
YKA Yellowknife Ar 38.10 315 P P 11 11 13.2 -0.8
MDT Midelt 38.66 181 LR LR 11 25 28.9
comp=Z,100nm,20.9s,MS3.6,baz=98,slow=34
MALT Malatya 39.60 123 eP P 11 11 29.1 +2.2
comp=Z,27nm,1.5s,mb4.8
MALT Malatya 39.60 123 eP P 11 11 29.1 +2.2
MALT pmax pmax
comp=Z,27nm,1.5s,mb4.8
MALT Malatya 39.60 123⇑iP P 11 11 29.5 +2.6
MALT Malatya 39.60 123 eP P 11 11 29.0 +2.1
comp=Z,27nm,1.5s,mb4.8
GNI Garni 39.66 115 LR LR 11 28 24.5
comp=Z,173nm,18.9s,MS3.9,baz=115,slow=37
GNI Garni 39.66 115 eP P 11 11 27.8 +0.5
GNI pmax pmax
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 39.88 67 P P 11 11 28.9 -0.1
comp=Z,1.1nm,0.6s,mb3.7,baz=322,slow=9.4,SNR=3.5
ZALV LR LR 11 31 33.1
comp=Z,104nm,18.6s,MS3.7,baz=327,slow=42
ZALV Zalesovo Beam 39.88 67 P P 11 11 28.9 -0.1
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
ZALV MLR MLR
comp=Z,104nm,18.6s,MS3.7
BILL Bilibino 40.65 6⇓eP P 11 11 36.1 +0.9
BILL e 11 13 07.0
BILL eS S 11 17 50.5 +6.1
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb3.8
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.0
KURK Kurchatov 40.82 75 eP P 11 11 36.8 0.0
comp=Z,6.4nm,0.8s,mb4.3
KURK Kurchatov 40.82 75d iP P 11 11 36.6 -0.2
KURK pmax pmax
comp=Z,12nm,1.2s,mb4.4
KURK Kurchatov 40.82 75 eP P 11 11 36.8 0.0
comp=Z,6.4nm,0.8s,mb4.3
EGAK Eagle 40.94 334 eP P 11 11 37.5 -0.1
comp=Z,12nm,1.1s,mb4.4
EGAK Eagle 40.94 334 eP P 11 11 37.5 -0.1
comp=Z,12nm,1.1s,mb4.4
DAWY Dawson 41.35 332 eP P 11 11 41.0 0.0
DAWY Dawson 41.35 332 eP P 11 11 41.0 0.0
ILAR Eielson Array 41.72 337 P P 11 11 44.4 +0.4
comp=Z,4.4nm,0.9s,mb4.1,baz=9.5,slow=7.0,SNR=47
ILAR LR LR 11 30 43.7
comp=Z,197nm,19.8s,MS4.0,baz=298,slow=39
ILAR Eielson Array 41.72 337 P P 11 11 44.4 +0.4
ILAR pmax pmax
comp=Z,4.0nm,0.9s
ILAR MLR MLR
comp=Z,197nm,19.8s
ILAR Eielson Array 41.72 337 P P 11 11 44.3 +0.3
FFC Flin Flon 41.73 300 eP P 11 11 43.8 -0.4
comp=Z,20nm,0.9s,mb4.7
FFC Flin Flon 41.73 300ceP P 11 11 44.3 +0.1
FFC Flin Flon 41.73 300 eP P 11 11 43.8 -0.4
comp=Z,20nm,0.9s,mb4.7
COLA College 41.74 338 eP P 11 11 45.0 +0.9
comp=Z,5.5nm,1.0s,mb4.1
COLA College 41.74 338 eP P 11 11 45.0 +0.9
COLA pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
COLA College 41.74 338 eP P 11 11 45.0 +0.9
comp=Z,5.5nm,1.0s,mb4.1
DOT Dot Lake 42.42 335 eP P 11 11 50.8 +1.0
comp=Z,27nm,1.1s,mb4.8
DOT Dot Lake 42.42 335 eP P 11 11 50.8 +1.1
comp=Z,27nm,1.1s,mb4.8
MCK McKinley 42.97 338 eP P 11 11 55.3 +1.1
comp=Z,23nm,1.6s,mb4.7
MCK McKinley 42.97 338 eP P 11 11 55.3 +1.1
MCK pmax pmax
comp=Z,23nm,1.6s,mb4.7
MCK McKinley 42.97 338 eP P 11 11 55.3 +1.1
comp=Z,23nm,1.6s,mb4.7
PAX Paxson 43.26 335 eP P 11 11 57.0 +0.5
comp=Z,9.6nm,1.1s,mb4.4
PAX Paxson 43.26 335 eP P 11 11 57.0 +0.4
PAX pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
PAX Paxson 43.26 335 eP P 11 11 57.0 +0.4
comp=Z,9.6nm,1.1s,mb4.4
SADO Sadowa 43.61 274 LR LR 11 28 35.8
comp=Z,117nm,19.6s,MS3.8,baz=51,slow=34
ULM Lac du Bonnet 43.94 292 P P 11 12 01.4 -0.8
comp=Z,7.1nm,0.9s,mb4.4,baz=36,slow=8.4,SNR=4.0
ULM Lac du Bonnet 43.94 292 P P 11 12 01.4 -0.7
BOD Bodaibo 44.02 43 eP P 11 12 01.9 -0.8
BOD pmax pmax
comp=Z,14nm,1.5s,mb4.5
ASF Jabal al Asfar 45.02 128 LR LR 11 32 25.2
comp=Z,183nm,20.8s,MS4.0,baz=207,slow=38
DLBC Dease Lake 45.02 323 LR LR 11 31 09.3
comp=Z,578nm,20.0s,MS4.5,baz=332,slow=36
MKAR Makanchi Array 45.43 74 P P 11 12 14.2 +0.2
comp=Z,1.0nm,0.4s,mb4.0,baz=344,slow=6.7,SNR=14
MKAR LR LR 11 35 09.0
comp=Z,193nm,18.4s,MS4.1,baz=329,slow=41
MKAR Makanchi Array 45.43 74 iP P 11 12 14.5 +0.4
MKAR pmax pmax
comp=Z,1.0nm,0.4s
AGMN Agassiz Nation 45.67 291 eP P 11 12 15.9 0.0
comp=Z,27nm,1.5s,mb5.0
AGMN Agassiz Nation 45.67 291 eP P 11 12 15.9 -0.1
comp=Z,26nm,1.5s,mb5.0
EKS2 Erkin-Say 46.46 84 eP P 11 12 23.8 +1.5
comp=Z,4.9nm,1.3s,mb4.3

EKS2 Erkin-Say 46.46 84 eP P 11 12 23.8 +1.6
comp=Z,4.9nm,1.3s,mb4.3
IRK Irkutsk 46.80 53 eP P 11 12 24.2 -0.6
IRK pmax pmax
comp=Z,24nm,1.7s,mb4.8
TKM2 Tokmak 2 46.80 83 eP P 11 12 26.8 +1.8
TKM2 Tokmak 2 46.80 83 eP P 11 12 26.8 +1.9
TKM2 Tokmak 2 46.80 83 eP P 11 12 26.8 +1.9
KBK Karagaybulak 46.83 83 eP P 11 12 27.6 +2.4
KBK Karagaybulak 46.83 83 eP P 11 12 27.6 +2.4
CLNS Chul'man 47.14 36 eP P 11 12 27.7 +0.3
CLNS pmax pmax
comp=Z,27nm,1.1s,mb5.1
CLNS pmax pmax
comp=N,13nm,1.2s
CLNS pmax pmax
comp=E,4.0nm,1.0s
TLY Talaya 47.15 54 eP P 11 12 24.1 -3.4
TLY eS S 11 19 24.4 +5.0
TLY eSS SS 11 22 47.2 +1.4
TLY pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TLY MLR MLR
comp=Z,81nm,16.0s,MS3.8
A24A Westby 47.48 298⇑P P 11 12 30.0 -0.2
baz=47
DGMT Dagmar 47.95 298⇓P P 11 12 34.1 +0.3
baz=48
A22A Carney Farms, 47.95 300⇑P P 11 12 34.0 +0.2
baz=48,SNR=5.5
B23A Brockton 48.17 299⇓P P 11 12 35.8 +0.2
baz=48
A21A Bergtoll Ranch 48.24 301⇓P P 11 12 36.2 +0.2
baz=48
ZAK Zakamensk 48.24 55 eP P 11 12 36.7 +0.7
ZAK pmax pmax
comp=Z,2.0nm,1.5s,mb3.9
B22A Reddig Ranch S 48.60 299⇓P P 11 12 39.1 +0.2
baz=48
A20A Cobblestone Ra 48.61 301⇓P P 11 12 38.9 0.0
baz=48
A19A Klindworth Far 48.79 302⇓P P 11 12 40.2 0.0
baz=48
JFWS Jewell Farm 48.80 283 eP P 11 12 40.6 +0.3
comp=Z,17nm,1.0s,mb5.0
JFWS Jewell Farm 48.80 283 eP P 11 12 40.7 +0.3
JFWS pmax pmax
comp=Z,17nm,1.0s,mb5.0
JFWS Jewell Farm 48.80 283 eP P 11 12 40.7 +0.3
comp=Z,17nm,1.0s,mb5.0
C23A Lambert 48.83 298⇑P P 11 12 40.9 +0.3
baz=49
TAM Tamanrasset 48.97 168 eP P 11 12 43.0 +1.1
comp=Z,17nm,1.3s,mb4.9
TAM Tamanrasset 48.97 168 eP P 11 12 43.0 +1.1
TAM pmax pmax
comp=Z,17nm,1.3s,mb4.9
TAM Tamanrasset 48.97 168 eP P 11 12 43.0 +1.1
comp=Z,17nm,1.3s,mb4.9
B20A Solberg Farm, 49.04 301⇑P P 11 12 42.0 -0.1
baz=49
C22A Vida 49.08 299⇓P P 11 12 42.2 -0.3
baz=49
A18A Metzger Ranch, 49.10 303⇑P P 11 12 42.1 -0.5
baz=49
KDAK Kodiak Island 49.19 338 LR LR 11 32 10.2
comp=Z,187nm,20.7s,MS4.1,baz=35,slow=34
D24A Glendive 49.21 297⇓P P 11 12 43.9 +0.3
baz=49
A17A Triple J Farms 49.30 304⇑P P 11 12 43.6 -0.6
baz=49
C21A Desert Coulee 49.34 300⇓P P 11 12 44.4 -0.1
baz=49
D23A Lindsay 49.41 298⇓P P 11 12 45.0 0.0
baz=49
B18A Beardsley Farm 49.56 302⇓P P 11 12 45.5 -0.6
baz=49
D22A Cohagen 49.70 299⇓P P 11 12 47.6 +0.4
baz=49
WMQ Urumqi 49.76 71 eP P 11 12 49.0 +1.2
WMQ sP sP 11 12 56.0 +3.9
WMQ PP PP 11 14 45.0 +3.0
WMQ S S 11 19 57.0 +0.5
WMQ ScS ScS 11 22 37.0 -1.7
WMQ SS SS 11 23 26.0 -2.3
WMQ pmax pmax
comp=Z,14nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,38nm,5.0s
WMQ LR LR
comp=N,110nm,16.0s,MS4.2
WMQ LR LR
comp=E,180nm,16.0s,MS4.2
WMQ LR LR
comp=Z,100nm,16.0s,MS3.9
A15A Johnson Ranch, 49.81 305⇓P P 11 12 47.7 -0.4
baz=50
EGMT Eagleton 49.89 302⇑P P 11 12 48.7 0.0
baz=50,SNR=7.4
EGMT Eagleton 49.89 302 eP P 11 12 48.8 +0.1
EGMT Eagleton 49.89 302 eP P 11 12 48.8 +0.1
B17A L&G Farms, Che 49.93 303⇑P P 11 12 48.3 -0.6
baz=50
C19A Slack Wire Ran 49.97 302⇑P P 11 12 49.1 -0.1
baz=50
A14A Double T Ranch 50.00 306⇑P P 11 12 49.1 -0.4
baz=50,SNR=5.8
KSH Kashi 50.01 84 eP P 11 12 52.8 +3.1
KSH epP pP 11 12 57.3 +4.5
KSH eSP sP 11 12 59.8 +5.8
KSH ePcP PcP 11 14 13.0 +3.6
KSH ePP PP 11 14 48.8 +4.5
KSH eScP ScP 11 18 06.8 +2.1
KSH ePcS PcS 11 18 08.5 +2.2
KSH eS S 11 20 02.0 +2.0
KSH esS sS 11 20 09.5 +4.3
KSH eScS ScS 11 22 40.8 +0.3
KSH eSS SS 11 23 31.5 -0.8
KSH pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KSH pmax pmax
comp=Z,330nm,4.8s
D21A La Casta Ranch 50.01 300⇑P P 11 12 49.5 -0.1
baz=50,SNR=5.9
ECSD EROS Data Cent 50.01 289 eP P 11 12 49.7 0.0
ECSD EROS Data Cent 50.01 289 eP P 11 12 49.7 0.0
WALA Waterton Lakes 50.05 306 eP P 11 12 49.4 -0.5
WALA Waterton Lakes 50.05 306 eP P 11 12 49.3 -0.5
B16A M & M Farms, S 50.06 304⇓P P 11 12 49.6 -0.4
baz=50
LAO LASA Array 50.14 299⇓P P 11 12 50.2 -0.4
baz=50
A13A Flathead Natio 50.29 306⇓P P 11 12 51.2 -0.5
baz=50
D20A Manuel Ranch, 50.30 300⇓P P 11 12 51.7 -0.1
baz=50,SNR=9.7
B15A Bradely Ranch, 50.38 305⇑P P 11 12 51.7 -0.6
baz=50,SNR=5.6
D19A Cripps Ranch, 50.44 301⇓P P 11 12 52.4 -0.5
baz=50,SNR=11
BBB Bella Bella 50.49 319 LR LR 11 34 29.1
comp=Z,227nm,20.4s,MS4.2,baz=258,slow=36
E21A Keefer Ranch, 50.51 299⇓P P 11 12 53.4 0.0
baz=50
B14A Marquette Ranc 50.52 305⇑P P 11 12 52.7 -0.7
baz=50
C17A Wharram Farm, 50.52 303⇑P P 11 12 53.0 -0.5
baz=50
A12A Yaak River Ran 50.61 307⇓P P 11 12 53.5 -0.6
baz=50
D18A Linhart Farms, 50.66 302⇓P P 11 12 54.4 -0.1
baz=50,SNR=5.1
B13A Whitefish 50.82 306⇓P P 11 12 55.2 -0.5
baz=50
E20A Meyer Farm, Mu 50.84 300⇓P P 11 12 55.5 -0.4
baz=51,SNR=6.7
C15A Salmond Ranch, 50.88 304⇓P P 11 12 55.5 -0.7
baz=51,SNR=6.4
D17A Six Diamond Ra 50.94 303⇑P P 11 12 56.4 -0.3
baz=51
B12A Libby 51.02 307⇑P P 11 12 56.7 -0.5
baz=51
E19A Rath Farm, Rou 51.06 301⇑P P 11 12 57.3 -0.2
baz=51,SNR=5.3
C14A Swan Lake 51.19 305⇑P P 11 12 57.8 -0.7
baz=51

E18A	Harlowton	51.27	302	⇑P	P	11 12 59.1 0.0
	baz=51,SNR=7.3					
D16A	Dana Ranch, Ca	51.29	303	⇓P	P	11 12 59.1 -0.1
	baz=51					
BSMT	Bassoo Peak	51.38	306	eP	P	11 13 00.2 +0.3
BSMT	Bassoo Peak	51.38	306	eP	P	11 13 00.2 +0.2
SONM	Songino Array	51.39	54	P	P	11 13 00.7 +0.7
	comp=Z,1.3nm,1.0s,mb3.8,baz=316,slow=4.1,SNR=10					
SONM				LR	LR	11 37 29.4
	comp=Z,111nm,18.3s,MS3.9,baz=339,slow=39					
SONM	Songino Array	51.39	54	P	P	11 13 00.7 +0.7
SONM				pmax	pmax	
	comp=Z,1.0nm,1.0s					
SONM				MLR	MLR	
	comp=Z,111nm,18.3s					
SONM	Songino Array	51.39	54	P	P	11 13 00.7 +0.7
C13A	Hot Springs	51.49	306	⇓P	P	11 13 00.4 -0.4
	baz=51,SNR=7.4					
SWMT	Swartz Lake	51.50	305	eP	P	11 13 00.9 +0.2
SWMT	Swartz Lake	51.50	305	eP	P	11 13 00.9 +0.1
ULN	Ulaanbaatar	51.53	53	eP	P	11 13 02.1 +1.1
ULN	Ulaanbaatar	51.53	53	eP	P	11 13 02.1 +1.1
ULN	Ulaanbaatar	51.53	53	eP	P	11 13 02.1 +1.1
D15A	Lincoln	51.54	304	⇓P	P	11 13 00.2 -0.9
	baz=51,SNR=5.6					
NEW	Newport	51.60	308	⇑P	P	11 13 01.6 0.0
	baz=51					
SLMT	Seeley Lake	51.61	305	eP	P	11 13 01.5 -0.1
SLMT	Seeley Lake	51.61	305	eP	P	11 13 01.5 -0.1
E17A	Martinsdale	51.62	302	⇓P	P	11 13 01.8 0.0
	baz=51					
F19A	Roth Farm, Mol	51.66	300	⇓P	P	11 13 02.0 0.0
	baz=51					
C12B	Naegeli Ranch,	51.69	307	⇓P	P	11 13 02.3 0.0
	baz=51					
G21A	Lodge Grass	51.75	299	⇓P	P	11 13 02.8 0.0
	baz=52					
D14A	Greenough	51.76	305	⇓P	P	11 13 02.5 -0.2
	baz=52					
C11A	Tepee Creek (N	51.77	307	⇑P	P	11 13 02.6 -0.2
	baz=52					
F18A	Big Timber	51.83	301	⇓P	P	11 13 02.9 -0.4
	baz=52,SNR=8.7					
CHMT	Chamberlain Mo	51.85	305	eP	P	11 13 02.9 -0.5
CHMT	Chamberlain Mo	51.85	305	eP	P	11 13 02.9 -0.5
D13A	Huson	52.00	306	⇓P	P	11 13 04.4 -0.1
	baz=52					
G20A	Bridger	52.04	300	⇓P	P	11 13 04.3 -0.6
	baz=52,SNR=6.2					
B08A	Colville Reser	52.06	310	⇓P	P	11 13 04.3 -0.7
	baz=52,SNR=5.7					
F17A	Fitzpatrick Pl	52.08	302	⇑P	P	11 13 04.8 -0.4
	baz=52,SNR=5.5					
MSO	Missoula	52.11	305	⇑P	P	11 13 04.6 -0.7
	baz=52					
MSO	Missoula	52.11	305	eP	P	11 13 05.1 -0.3
	comp=Z,4.6nm,1.1s,mb4.3					
MSO	Missoula	52.11	305	eP	P	11 13 05.1 -0.3
	comp=Z,4.6nm,1.1s,mb4.3					
E15A	Deer Lodge	52.14	304	⇓P	P	11 13 04.7 -0.9
	baz=52					
H21A	Big Horn, Sher	52.26	298	⇓P	P	11 13 05.9 -0.6
	baz=52					
D12A	Red Ives Fores	52.27	306	⇓P	P	11 13 06.0 -0.6
	baz=52					
G18A	Lazy EL Ranch,	52.33	301	⇑P	P	11 13 06.8 -0.2
	baz=52					
E14A	Clinton	52.37	304	⇓P	P	11 13 06.7 -0.6
	baz=52					
RLMT	Red Lodge	52.42	300	⇓P	P	11 13 07.4 -0.4
	baz=52					
E13A	Victor	52.53	305	⇓P	P	11 13 07.7 -0.9
	baz=52,SNR=6.2					
BOZ	Bozeman (W)	52.59	303	⇑P	P	11 13 08.3 -0.6
	baz=52					
F15A	Butte	52.64	303	⇓P	P	11 13 09.1 -0.2
	baz=52					
G17A	Pierce Place,	52.64	302	⇓P	P	11 13 09.4 0.0
	baz=52					
H20A	Greybull	52.65	299	⇓P	P	11 13 09.1 -0.4
	baz=52,SNR=8.4					
H19A	Powell	52.76	300	⇑P	P	11 13 10.0 -0.2
	baz=52					
F14A	Wisdom	52.90	304	⇑P	P	11 13 10.9 -0.3
	baz=53					
E12A	Beaver Dam Sad	52.92	306	⇓P	P	11 13 10.5 -0.8
	baz=53					
H18A	Shoshone NF, C	52.94	301	⇓P	P	11 13 11.2 -0.3
	baz=53					
G16A	Moss Hill, Enn	53.02	303	⇓P	P	11 13 12.3 +0.1
	baz=53					
I21A	Big Trails, Te	53.08	298	⇓P	P	11 13 12.1 -0.5
	baz=53,SNR=14					
F13A	Darby	53.17	305	⇓P	P	11 13 12.5 -0.7
	baz=53					
I20A	Worland	53.19	299	⇓P	P	11 13 13.2 -0.2
	baz=53					
J22A	Midwest	53.21	297	⇓P	P	11 13 12.7 -0.8
	baz=53					
G15A	Dillon	53.26	303	⇑P	P	11 13 13.9 0.0
	baz=53					
I19A	Meeteetse	53.35	300	⇓P	P	11 13 14.3 -0.2
	baz=53					
H16A	Russell Place,	53.35	302	⇑P	P	11 13 14.1 -0.5
	baz=53					
TKL	Tuckaleechee C	53.36	273	LR	LR	11 34 37.7
	comp=Z,108nm,18.1s,MS3.9,baz=31,slow=35					
F12A	Elk City	53.45	306	⇓P	P	11 13 15.0 -0.2
	baz=53					
H17A	Grant Village	53.45	301	⇓P	P	11 13 16.2 +0.9
	baz=53,SNR=7.1					
YFT	Old Faithful	53.47	301	eP	P	11 13 17.9 +2.4
YFT	Old Faithful	53.47	301	eP	P	11 13 17.9 +2.4
E09A	Wood Farm, Sta	53.48	308	⇑P	P	11 13 14.8 -0.7
	baz=53					
J21A	Lysite	53.55	298	⇓P	P	11 13 15.5 -0.6
	baz=53,SNR=6.3					
MCMT	McKenzie Canyo	53.67	303	eP	P	11 13 16.6 -0.3
	comp=Z,1.9nm,1.2s,mb3.9					
MCMT	McKenzie Canyo	53.67	303	eP	P	11 13 16.6 -0.3
	comp=Z,1.9nm,1.2s,mb3.9					
J20A	Shoshoni	53.72	299	⇓P	P	11 13 17.0 -0.3
	baz=54,SNR=7.2					
F10A	Beach Ranch, E	53.75	307	⇑P	P	11 13 16.7 -0.8
	baz=54					
G13A	Cobalt	53.79	304	⇓P	P	11 13 17.4 -0.5
	baz=54,SNR=10					
H15A	Lima	53.81	303	⇑P	P	11 13 17.9 -0.1
	baz=54,SNR=7.5					
I18A	Diamond G Ranc	53.88	300	⇓P	P	11 13 18.1 -0.5
	baz=54					
I17A	Pilgrim Ck.	53.89	301	⇓P	P	11 13 18.0 -0.6
	baz=54					
K22A	Casper	53.93	297	⇓P	P	11 13 17.6 -1.2
	baz=54,SNR=12					
HAWA	Hanford	53.94	309	eP	P	11 13 19.1 +0.2
HAWA	Hanford	53.94	309	eP	P	11 13 19.1 +0.2
H14A	Leadore	54.01	304	⇓P	P	11 13 18.8 -0.6
	baz=54,SNR=6.6					
IMW	Indian Meadow	54.01	301	eP	P	11 13 20.5 +1.1
IMW	Indian Meadow	54.01	301	eP	P	11 13 20.5 +1.1
G12A	Big Creek, Yel	54.05	305	⇓P	P	11 13 18.8 -0.8
	baz=54					
J19A	Crowheart	54.08	299	⇓P	P	11 13 19.8 -0.1
	baz=54,SNR=8.2					
K21A	Alcova	54.15	298	⇑P	P	11 13 19.4 -1.1
	baz=54					
I16A	Newdale	54.18	302	⇑P	P	11 13 20.7 0.0
	baz=54,SNR=8.3					
L23A	Garrett	54.19	296	⇓P	P	11 13 19.8 -0.9
	baz=54					
KSU1	Kansas State U	54.24	287	eP	P	11 13 20.0 -1.2
KSU1	Kansas State U	54.24	287	eP	P	11 13 20.0 -1.2
H13A	Challis	54.29	304	⇓P	P	11 13 21.2 -0.2
	baz=54,SNR=8.8					
I15A	Monteview	54.34	303	⇑P	P	11 13 22.0 +0.2
	baz=54					
J18A	Kendall Valley	54.40	300	⇑P	P	11 13 22.3 0.0
	baz=54,SNR=5.1					
K19A	Absolon Red Bu	54.42	299	⇓P	P	11 13 21.6 -0.8
	baz=54					
K20A	Yellowstone Ra	54.44	298	⇓P	P	11 13 21.6 -0.9
	baz=54					
J17A	Brown Place, J	54.45	301	⇓P	P	11 13 22.9 +0.3
	baz=54					
H12A	Diamond D Ranc	54.46	305	⇓P	P	11 13 22.1 -0.6
	baz=54,SNR=7.8					
L22A	Ellis Ranch, M	54.47	297	⇑P	P	11 13 22.9 +0.1
	baz=54					
F07A	Phinny Hill Vi	54.51	309	⇓P	P	11 13 23.0 0.0
	baz=54					
M24A	Cheyenne	54.53	295	⇓P	P	11 13 23.3 +0.1
	baz=54					
RRI2	Red Ridge	54.63	301	eP	P	11 13 24.7 +0.8
I14A	Mackay	54.67	303	⇑P	P	11 13 23.9 -0.3
	baz=54					
BW06	Boulder Array	54.68	300	⇓P	P	11 13 23.5 -0.8
	baz=54,SNR=6.7					
J16A	Bone	54.77	301	⇓P	P	11 13 25.2 +0.2
	baz=54					
M23A	Laramie	54.79	296	⇑P	P	11 13 24.8 -0.3
	baz=54,SNR=5.5					
L21A	Rawlins	54.80	297	⇑P	P	11 13 24.5 -0.7
	baz=54,SNR=6.3					
BMO	Blue Mountains	54.82	307	eP	P	11 13 24.2 -1.1
	comp=Z,7.8nm,1.4s,mb4.5					
BMO	Blue Mountains	54.82	307	eP	P	11 13 24.2 -1.1
	comp=Z,7.8nm,1.4s,mb4.5					
G08A	Pilot Rock	54.83	308	⇓P	P	11 13 25.2 -0.2
	baz=55,SNR=10					
I13A	Wildhorse Cree	54.86	304	⇑P	P	11 13 25.0 -0.6
	baz=55,SNR=5.9					
PHWY	Pilot Hill	54.86	295	eP	P	11 13 25.6 -0.1
PHWY	Pilot Hill	54.86	295	eP	P	11 13 25.6 -0.1
J15A	Blackfoot	54.88	302	⇓P	P	11 13 26.1 +0.3
	baz=55					
N25A	Grover	54.91	294	⇓P	P	11 13 26.4 +0.3
	baz=55					
K18A	Toltan Ranch,	54.93	300	⇓P	P	11 13 26.1 -0.1
	baz=55					
L20A	Wamsutter	55.04	298	⇑P	P	11 13 26.8 -0.1
	baz=55					
M22A	Cedar Creek Ra	55.10	296	⇑P	P	11 13 26.9 -0.4
	baz=55					
PETK	Petropavlovsk-	55.11	13	LR	LR	11 37 01.0
	comp=Z,61nm,18.9s,MS3.7,baz=222,slow=36					
M21A	Separation Pea	55.13	297	⇑P	P	11 13 27.3 -0.3
	baz=55					
N24A	Carr	55.13	295	⇓P	P	11 13 27.6 -0.1
	baz=55					
K16A	Soda Springs	55.18	301	⇑P	P	11 13 28.0 +0.1
	baz=55					
L19A	Farson	55.24	299	⇓P	P	11 13 28.4 +0.1
	baz=55					
I12A	Atlanta	55.24	305	⇓P	P	11 13 27.5 -0.8
	baz=55					
HLID	Hailey	55.26	304	⇓P	P	11 13 28.0 -0.6
	baz=55,SNR=6.6					
HLID	Hailey	55.26	304	eP	P	11 13 28.5 0.0
HLID	Hailey	55.26	304	eP	P	11 13 28.5 0.0
G06A	Carlson Farm,	55.30	310	⇓P	P	11 13 29.0 +0.3
	baz=55					
J13A	Cove Ranch, Pi	55.35	304	⇓P	P	11 13 28.8 -0.3
	baz=55					
N23A	Red Feather La	55.38	296	⇓P	P	11 13 29.3 -0.1
	baz=55,SNR=10					
CBKS	Cedar Bluff	55.46	289	⇓P	P	11 13 29.6 -0.4
	baz=55					
M20A	Sweetwater, Wa	55.47	298	⇑P	P	11 13 29.9 -0.2
	baz=55					
K15A	Arbon	55.57	302	⇓P	P	11 13 31.4 +0.7
	baz=55					
L18A	Fontenelle, Gr	55.59	300	⇓P	P	11 13 31.1 +0.2
	baz=55,SNR=5.3					
N22A	Wattenberg Ran	55.61	296	⇓P	P	11 13 30.9 -0.2
	baz=55,SNR=5.3					
O24A	Longmont	55.84	294	⇑P	P	11 13 33.0 +0.3
	baz=56					
K14A	Jones Ranch, D	55.88	302	⇑P	P	11 13 33.5 +0.6
	baz=56					
L16A	Fish Haven	55.89	301	⇓P	P	11 13 33.8 +0.7
	baz=56					
O23A	Lake Granby, G	56.00	295	⇓P	P	11 13 34.5 +0.6
	baz=56,SNR=5.4					
M18A	Lyman	56.06	299	⇑P	P	11 13 34.2 0.0
	baz=56					
I07A	Izee	56.10	308	⇓P	P	11 13 34.3 -0.2
	baz=56					
N20A	Spence Gulch,	56.10	298	⇓P	P	11 13 34.7 +0.1
	baz=56,SNR=13					
P25A	Willow Gulch B	56.14	293	⇓P	P	11 13 35.0 +0.1
	baz=56					
L15A	Malad City	56.16	302	⇑P	P	11 13 35.1 +0.1
	baz=56					
M17A	Scullys Gap (B	56.19	300	⇑P	P	11 13 35.1 0.0
	baz=56					
H04A	Detroit Lake	56.20	311	⇑P	P	11 13 34.8 -0.4
	baz=56					
OXF	Oxford	56.21	278	eP	P	11 13 34.4 -1.0
	comp=Z,17nm,1.0s,mb5.0					
OXF	Oxford	56.21	278	eP	P	11 13 34.4 -1.0
OXF				pmax	pmax	
	comp=Z,17nm,1.0s,mb5.0					
OXF	Oxford	56.21	278	eP	P	11 13 34.4 -1.0
	comp=Z,17nm,1.0s,mb5.0					
O22A	Kremmling	56.23	296	⇓P	P	11 13 35.5 0.0
	baz=56					
ISCO	Idaho Springs	56.30	295	⇑P	P	11 13 35.8 -0.2
	baz=56					
N19A	John Jarvie Ra	56.30	298	⇓P	P	11 13 36.0 0.0
	baz=56					
HWUT	Hardware Ranch	56.31	301	eP	P	11 13 36.1 +0.1
	comp=Z,5.7nm,0.9s,mb4.6					
HWUT	Hardware Ranch	56.31	301	eP	P	11 13 36.1 +0.1
	comp=Z,5.7nm,0.9s,mb4.6					
L14A	Malta	56.37	302	⇑P	P	11 13 36.5 +0.1
	baz=56,SNR=5.1					
J08A	Circle Bar Ran	56.51	307	⇑P	P	11 13 36.4 -1.0
	baz=56					
M16A	Huntsville	56.60	301	⇑P	P	11 13 38.2 +0.1
	baz=56,SNR=8.0					
Q25A	Bedland, Calha	56.72	293	⇓P	P	11 13 39.0 0.0
	baz=56					
N17A	Moffit Pass	56.72	300	⇓P	P	11 13 39.2 +0.2
	baz=56,SNR=7.9					
O20A	White River Ci	56.74	297	⇓P	P	11 13 39.5 +0.3
	baz=56,SNR=11					
P23A	Jefferson	56.76	295	⇓P	P	11 13 39.5 +0.2
	baz=56					
O19A	Miners Draw (B	56.84	298	⇑P	P	11 13 40.3 +0.5
	baz=57					
Q24A	Divide	56.93	294	⇑P	P	11 13 40.9 +0.4
	baz=57					
N16A	Rees Ranch, Co	56.94	300	⇓P	P	11 13 40.8 +0.2
	baz=57					
JLU	Jordanelle	57.21	300	eP	P	11 13 42.1 -0.3
	comp=Z,2.1nm,0.7s,mb4.3					
JLU	Jordanelle	57.21	300	eP	P	11 13 42.1 -0.4
	comp=Z,2.0nm,0.7s,mb4.3					
BBTS	Babate	57.22	194	LR	LR	11 33 33.5
	comp=Z,133nm,21.4s,MS4.0,baz=347,slow=31					
P20A	De Beque	57.38	297	⇑P	P	11 13 44.1 +0.5
	baz=57					
O17A	Robinson Place	57.39	299	⇑P	P	11 13 44.0 +0.2
	baz=57,SNR=11					
GTA	Gaotai	57.39	63	eP	P	11 13 45.3 +1.5
GTA				pP	pP	11 13 50.0 +3.0
GTA				sP	sP	11 13 52.3 +4.1
GTA				pmax	pmax	
	comp=Z,7.0nm,1.4s,mb4.5					
P19A	Cripple Cowboy	57.42	298	⇓P	P	11 13 43.9 0.0
	baz=57					
R25A	Fountain Ranch	57.44	293	⇑P	P	11 13 44.6 +0.5
	baz=57					
MIAR	Mount Ida	57.49	282	eP	P	11 13 43.7 -0.8
	comp=Z,7.0nm,0.9s,mb4.7					
MIAR	Mount Ida	57.49	282	eP	P	11 13 43.7 -0.8
MIAR				pmax	pmax	
	comp=Z,7.0nm,0.9s,mb4.7					
MIAR	Mount Ida	57.49	282	eP	P	11 13 43.7 -0.8
	comp=Z,7.0nm,0.9s,mb4.7					
Q22A	Crested Butte,	57.54	296	⇓P	P	11 13 45.2 +0.4
	baz=57					
R24A	Sanders Place,	57.60	294	⇓P	P	11 13 45.9 +0.6
	baz=57					
K05A	Summer Lake	57.72	309	⇓P	P	11 13 47.1 +1.1
	baz=57					
O15A	The Old Anders	57.79	301	⇑P	P	11 13 46.9 +0.4
	baz=58					
Q20A	Ridgley Place,	57.85	297	⇑P	P	11 13 47.1 +0.1
	baz=58					
S25A	Robets Cordova	57.93	293	⇑P	P	11 13 47.5 -0.1
	baz=58,SNR=9.6					
DUG	Dugway	57.97	301	⇓P	P	11 13 48.1 +0.4
	baz=58,SNR=9.3					
DUG	Dugway	57.97	301	eP	P	11 13 48.2 +0.4
	comp=Z,6.2nm,0.9s,mb4.6					
DUG	Dugway	57.97	301	eP	P	11 13 48.2 +0.4
DUG				pmax	pmax	
	comp=Z,6.0nm,0.9s,mb4.6					
DUG	Dugway	57.97	301	eP	P	11 13 48.2 +0.4
	comp=Z,6.2nm,0.9s,mb4.6					
R22A	Saguache, Gunn	58.08	295	⇑P	P	11 13 49.1 +0.5
	baz=58					
Q19A	Hogan Spring (	58.13	298	⇓P	P	11 13 48.8 -0.1
	baz=58					
SDCO	Great Sand Dun	58.17	294	⇓P	P	11 13 49.0 -0.2
	baz=58					
R21A	Cimarron	58.18	296	⇑P	P	11 13 50.3 +1.0
	baz=58					
Q18A	Rafter H Ranch	58.24	298	⇓P	P	11 13 49.8 +0.1
	baz=58,SNR=5.7					
SRU	San Rafael	58.34	299	⇓P	P	11 13 50.5 +0.1
	baz=58					
SRU	San Rafael	58.34	299	eP	P	11 13 50.5 +0.1
	comp=Z,5.8nm,0.4s,mb5.0					
SRU	San Rafael	58.34	299	eP	P	11 13 50.5 +0.1
SRU				pmax	pmax	
	comp=Z,6.0nm,0.4s,mb5.0					
SRU	San Rafael	58.34	299	eP	P	11 13 50.5 +0.1
	comp=Z,5.8nm,0.4s,mb5.0					
TORD	Torodi Ar. Bea	58.35	173	P	P	11 13 50.0 -0.7
	comp=Z,7.2nm,0.8s,mb4.7,baz=353,slow=7.0,SNR=43					
TORD				LR	LR	11 38 52.3
	comp=Z,177nm,18.5s,MS4.2,baz=345,slow=36					
TORD	Torodi Ar. Bea	58.35	173	P	P	11 13 50.0 -0.7
TORD				LR	LR	11 38 52.3
S23A	Nye Farm, Mont	58.35	294	⇓P	P	11 13 50.9 +0.4
	baz=58					
S22A	4UR Ranch, Cre	58.55	295	⇓P	P	11 13 52.4 +0.5
	baz=58,SNR=6.0					
R20A	Redvale	58.59	296	⇑P	P	11 13 52.1 -0.1
	baz=58					
P14A	Drum Mountains	58.60	301	⇓P	P	11 13 52.6 +0.4
	baz=58,SNR=5.9					
T24A	Torres, Weston	58.66	293	⇑P	P	11 13 52.8 +0.2
	baz=58					
PV01	Paradox Valley	58.70	297	eP	P	11 13 52.7 -0.2
	comp=Z,949nm,1.0s					
PV01	Paradox Valley	58.70	297	eP	P	11 13 52.7 -0.2
	comp=Z,949nm,1.0s					
R19A	Curley Farm, L	58.75	297	⇑P	P	11 13 53.4 +0.1
	baz=58					
R18A	Canyonlands Na	58.84	298	⇑P	P	11 13 53.8 -0.1
	baz=59,SNR=10					
U26A	Atchley Ranch,	58.90	292	⇓P	P	11 13 54.4 +0.1
	baz=59,SNR=7.7					
S21A	Coal Bank Pass	58.91	296	⇑P	P	11 13 54.3 -0.1
	baz=59					
S20A	Disappointment	58.92	296	⇓P	P	11 13 54.4 -0.1
	baz=59					
WMOK	Wichita Mounta	58.93	287	eP	P	11 13 54.3 -0.3
	comp=Z,12nm,1.3s,mb4.8					
WMOK	Wichita Mounta	58.93	287	eP	P	11 13 54.3 -0.3
WMOK				pmax	pmax	
	comp=Z,12nm,1.3s,mb4.8					
WMOK	Wichita Mounta	58.93	287	eP	P	11 13 54.3 -0.3
	comp=Z,12nm,1.3s,mb4.8					
Q15A	Fillmore	58.96	300	⇓P	P	11 13 54.5 -0.2
	baz=59					
T23A	Casias Ranch,	58.98	294	⇑P	P	11 13 54.8 -0.1
	baz=59					
R17A	Hanksville Air	59.04	299	⇑P	P	11 13 55.1 -0.2
	baz=59					
U25A	Circle Dot Ran	59.09	292	⇑P	P	11 13 56.0 +0.3
	baz=59					
YBH	Yreka Blue Hor	59.10	310	LR	LR	11 39 30.0
	comp=Z,242nm,19.8s,MS4.3,baz=7.0,slow=36					
S19A	Harvey Farm, M	59.22	297	⇑P	P	11 13 56.8 +0.3
	baz=59,SNR=6.0					
Q14A	Sevier Lake (B	59.22	301	⇑P	P	11 13 57.2 +0.6
	baz=59,SNR=18					
HHC	Hu-ho-hao-te	59.24	53	eP	P	11 13 57.0 +0.4
HHC				pP	pP	11 14 01.8 +2.0
HHC				sP	sP	11 14 04.0 +3.0
HHC				PcP	PcP	11 14 46.0 +1.2
HHC				PP	PP	11 16 09.3 +2.3
HHC				ScP	ScP	11 18 44.8 -0.2
HHC				S	S	11 22 02.3 -1.8
HHC				sS	sS	11 22 09.8 +0.5
HHC				ScS	ScS	11 23 42.5 -3.7
HHC				SS	SS	11 25 56.5 -1.1
HHC				pmax	pmax	
	comp=Z,12nm,1.0s,mb4.9					
HHC				pmax	pmax	
	comp=Z,140nm,5.1s					
HHC				LR	LR	
	comp=N,390nm,16.1s,MS4.7					
HHC				LR	LR	
	comp=E,310nm,16.2s,MS4.7					
HHC				LR	LR	
	comp=Z,200nm,16.6s,MS4.3					
T22A	Edith	59.26	295	⇓P	P	11 13 57.0 +0.2
	baz=59,SNR=9.3					
MSU	Marysvale	59.36	300	eP	P	11 13 58.2 +0.7
	comp=Z,6.9nm,1.2s,mb4.6					
MSU	Marysvale	59.36	300	eP	P	11 13 58.2 +0.7
MSU				pmax	pmax	
	comp=Z,7.0nm,1.2s,mb4.6					
MSU	Marysvale	59.36	300	eP	P	11 13 58.2 +0.7
	comp=Z,6.9nm,1.2s,mb4.6					
R16A	Teasdale	59.38	299	⇓P	P	11 13 57.8 +0.2
	baz=59					
T21A	Navajo Lake	59.46	295	⇓P	P	11 13 58.0 -0.2
	baz=59					
S18A	Hurst Farm, Bl	59.52	298	⇑P	P	11 13 58.5 -0.1
	baz=59					
CN2	Changchun	59.65	40	eP	P	11 14 00.0 +0.6
CN2				eS	S	11 22 07.5 -1.9
CN2				pmax	pmax	
	comp=Z,20nm,0.8s,mb5.2					
CN2				pmax	pmax	
	comp=Z,200nm,5.0s					
CN2				LR	LR	
	comp=N,200nm,10.0s,MS4.7					
CN2				LR	LR	
	comp=E,200nm,10.0s,MS4.7					
CN2				LR	LR	
	comp=Z,600nm,10.0s,MS5.0					
R15A	Junction	59.67	300	⇓P	P	11 14 00.1 +0.4
	baz=59					
V25A	Rancho No Teng	59.67	292	⇓P	P	11 13 59.3 -0.4
	baz=59					
U23A	El Rito	59.68	294	⇑P	P	11 13 59.7 -0.1
	baz=59					
MDJ	Mudanjiang	59.70	37	P	P	11 13 58.5 -1.2
MDJ				pmax	pmax	
	comp=Z,4.0nm,0.9s,mb4.5					
MDJ				pmax	pmax	
	comp=Z,110nm,4.0s					
S17A	Black Ridge (B	59.79	298	⇑P	P	11 14 00.7 +0.2
	baz=60					
U22A	Llaves	59.83	294	⇓P	P	11 14 00.6 -0.2
	baz=60					
W27A	Bowe Ranch, En	59.93	291	⇑P	P	11 14 01.3 -0.2
	baz=60					
S16A	Weppner Ranch,	59.94	299	⇑P	P	11 14 01.4 -0.1
	baz=60					
V24A	Rampart Ranch,	59.97	293	⇑P	P	11 14 02.1 +0.3
	baz=60,SNR=5.4					
T18A	Mexican Hat	60.00	297	⇑P	P	11 14 02.0 +0.1
	baz=60					
U21A	Nageezi	60.02	295	⇓P	P	11 14 01.9 -0.2
	baz=60					
T19A	Beclabito	60.04	296	⇓P	P	11 14 02.1 -0.1
	baz=60					
R13A	O'Grain Ranch,	60.17	301	⇓P	P	11 14 03.7 +0.7
	baz=60					
S15A	Panguitch	60.19	300	⇓P	P	11 14 04.2 +0.9
	baz=60,SNR=6.5					
V23A

W24A	**Lazy 6 Ranch,** baz=60	**60.49 293**	⇓P	**P**	**11 14 05.5 +0.2**
U19A	**Dine' College,** baz=60	**60.59 296**	⇓P	**P**	**11 14 06.0 0.0**
X26A	**CR and CF Fran** baz=60	**60.63 291**	⇑P	**P**	**11 14 06.1 -0.1**
WCN	**Washoe City** baz=60,SNR=9.0	**60.65 307**	⇓P	**P**	**11 14 06.9 +0.5**
WCN	**Washoe City** comp=Z,35nm,1.8s,mb5.2	**60.65 307**	*e*P	**P**	**11 14 06.8 +0.4**
WCN	**Washoe City** comp=Z,35nm,1.8s,mb5.2	**60.65 307**	*e*P	**P**	**11 14 06.8 +0.4**
WCN			pmax	pmax	
WCN	**Washoe City** comp=Z,35nm,1.8s,mb5.2	**60.65 307**	*e*P	**P**	**11 14 06.8 +0.4**
U18A	**Rough Rock, Ch** baz=60	**60.66 297**	⇓P	**P**	**11 14 06.8 +0.3**
S13A	**Holt Ranch, En** baz=60	**60.70 301**	⇑P	**P**	**11 14 06.8 +0.1**
W23A	**Werner Place,** baz=60	**60.76 293**	⇑P	**P**	**11 14 08.0 +0.8**
T15A	**Red Dirt Ranch** baz=60	**60.81 299**	⇓P	**P**	**11 14 07.2 -0.3**
V20A	**Brimhall** baz=61	**60.84 296**	⇓P	**P**	**11 14 07.5 -0.2**
MSTX	**Muleshoe** baz=61	**60.86 290**	⇑P	**P**	**11 14 07.7 -0.1**
T14A	**Hurricane** baz=61,SNR=6.2	**60.97 300**	⇓P	**P**	**11 14 09.0 +0.4**
ANMO	**Albuquerque** comp=Z,90nm,18.9s,MS3.9,baz=34,slow=35	**61.05 293**	LR	LR	11 39 37.4
ANMO	**Albuquerque** comp=Z,3.0nm,1.0s,mb4.4	**61.05 293**	*e*P	**P**	**11 14 08.9 -0.1**
ANMO	**Albuquerque** comp=Z,3.0nm,1.0s	**61.05 293**	*e*P	**P**	**11 14 09.0 -0.1**
ANMO			pmax	pmax	
ANMO	**Albuquerque** comp=Z,3.0nm,1.0s,mb4.4	**61.05 293**	*e*P	**P**	**11 14 08.9 -0.2**
Y27A	**Causey** baz=61,SNR=8.3	**61.06 290**	⇓P	**P**	**11 14 09.2 0.0**
NVAR	**Mina Array Bea** comp=Z,1.3nm,0.9s,mb4.0,baz=30,slow=5.5,SNR=10	**61.10 305**	P	**P**	**11 14 08.8 -0.5**
NVAR	comp=Z,153nm,20.1s,MS4.2,baz=307,slow=37		LR	LR	11 41 09.4
NVAR	**Mina Array Bea**	**61.10 305**	P	**P**	**11 14 08.9 -0.5**
BJI	**Beijing**	**61.15 49**	P	**P**	**11 14 09.0 -0.7**
BJI			S	**S**	**11 22 27.5 -1.1**
BJI			SS	SS	11 26 28.5 +0.9
BJI	comp=Z,11nm,0.6s,mb5.2		pmax	pmax	
BJI	comp=Z,120nm,5.4s		pmax	pmax	
BJI	comp=N,160nm,22.6s,MS4.3		LR	LR	
BJI	comp=E,220nm,22.6s,MS4.3		LR	LR	
BJI	comp=Z,170nm,23.5s,MS4.1		LR	LR	
Y26A	**Elida** baz=61	**61.22 291**	⇓P	**P**	**11 14 10.5 +0.3**
T13A	**Saint George** baz=61	**61.24 301**	⇑P	**P**	**11 14 10.9 +0.6**
W21A	**San Fidel** baz=61	**61.24 295**	⇓P	**P**	**11 14 10.6 +0.2**
U16A	**Tuba City** baz=61	**61.28 298**	⇓P	**P**	**11 14 11.0 +0.3**
U15A	**North Rim** baz=61	**61.34 299**	⇓P	**P**	**11 14 10.9 -0.2**
V18A	**Ganado** baz=61	**61.34 297**	⇓P	**P**	**11 14 11.0 -0.1**
Y25A	**Mesa, Roswell** baz=61	**61.48 291**	⇓P	**P**	**11 14 12.4 +0.4**
U14A	**Mt Trumbull** baz=61	**61.60 300**	⇑P	**P**	**11 14 12.9 +0.1**
Z27A	**Tatum** baz=61	**61.60 290**	⇓P	**P**	**11 14 13.1 +0.3**
X22A	**Bernardo** baz=61	**61.62 294**	⇓P	**P**	**11 14 13.2 +0.2**
LZH	**Lanzhou**	**61.63 61**	*e*P	**P**	**11 14 13.5 +0.4**
LZH			pP	pP	11 14 18.0 +1.7
LZH			sP	sP	11 14 19.5 +2.0
LZH	comp=Z,13nm,1.0s,mb5.0		pmax	pmax	
V17A	**Tonalea, Kykot** baz=61,SNR=5.5	**61.67 298**	⇓P	**P**	**11 14 13.1 -0.3**
Y24A	**Capitan** baz=61,SNR=6.0	**61.70 292**	⇑P	**P**	**11 14 14.0 +0.5**
U13A	**Pakoon Wash** baz=62,SNR=6.0	**61.82 301**	⇓P	**P**	**11 14 14.9 +0.6**
Z26A	**Caprock** baz=62	**61.87 291**	⇑P	**P**	**11 14 14.5 -0.2**
Y23A	**Lovelace Mesa,** baz=62,SNR=6.2	**61.88 293**	⇑P	**P**	**11 14 15.0 +0.3**
V15A	**Kaibab Nationa** baz=62,SNR=6.4	**61.88 299**	⇑P	**P**	**11 14 14.8 +0.1**
X21A	**Alamocita Cree** baz=62,SNR=5.8	**61.91 294**	⇓P	**P**	**11 14 15.0 +0.1**
MLAC	**Mammoth Lakes** baz=62	**61.99 305**	⇓P	**P**	**11 14 15.8 +0.3**
CMB	**Columbia Colle** comp=Z,5.3nm,1.4s,mb4.5	**62.01 307**	*e*P	**P**	**11 14 15.4 -0.2**
CMB	**Columbia Colle** comp=Z,5.0nm,1.4s,mb4.5	**62.01 307**	*e*P	**P**	**11 14 15.4 -0.2**
CMB			pmax	pmax	
CMB	**Columbia Colle** comp=Z,5.3nm,1.4s,mb4.5	**62.01 307**	*e*P	**P**	**11 14 15.4 -0.2**
X20A	**Quemado** baz=62,SNR=5.1	**62.02 295**	⇓P	**P**	**11 14 15.4 -0.2**
SHPR	**Sheep Range** comp=Z,3.9nm,1.2s,mb4.4	**62.06 302**	*e*P	**P**	**11 14 15.8 -0.1**
SHPR	**Sheep Range** comp=Z,3.9nm,1.2s,mb4.4	**62.06 302**	*e*P	**P**	**11 14 15.8 -0.1**
Z25A	**Roswell** baz=62	**62.09 291**	⇑P	**P**	**11 14 16.3 +0.2**
Y22A	**Socorro** baz=62	**62.14 294**	⇓P	**P**	**11 14 16.6 +0.1**
W17A	**Winslow** baz=62	**62.16 297**	⇑P	**P**	**11 14 16.8 +0.2**
GRAC	**Grapevine Rang** baz=62	**62.19 304**	⇓P	**P**	**11 14 17.3 +0.5**
Z24A	**Sheeppen Canyo** baz=62	**62.23 292**	⇓P	**P**	**11 14 17.5 +0.4**
Y21A	**Point of Rocks** baz=62	**62.28 294**	⇓P	**P**	**11 14 18.1 +0.6**
V14A	**Boquillas Ranc** baz=62,SNR=8.0	**62.31 300**	⇓P	**P**	**11 14 17.9 +0.2**
V13A	**Grand Canyon W** baz=62,SNR=5.5	**62.35 300**	⇓P	**P**	**11 14 18.1 +0.2**
X19A	**St. Johns** baz=62	**62.36 296**	⇓P	**P**	**11 14 17.8 -0.1**
ASAJ	**Asahikawa** comp=Z,102nm,19.6s,MS4.0,baz=176,slow=35	**62.36 26**	LR	LR	11 40 25.1
W16A	**Flagstaff** baz=62	**62.38 298**	⇑P	**P**	**11 14 18.4 +0.4**
Z23A	**Rita Site, Whi** baz=62	**62.55 293**	⇓P	**P**	**11 14 19.5 +0.3**
FURC	**Furnace Creek,** baz=62	**62.56 303**	⇑P	**P**	**11 14 19.4 +0.1**
Y20A	**Horse Springs,** baz=62	**62.58 295**	⇑P	**P**	**11 14 19.6 +0.1**
125A	**Gardner Draw,** baz=62	**62.65 291**	⇑P	**P**	**11 14 20.1 +0.2**
W14A	**Seligman** baz=62	**62.70 299**	⇑P	**P**	**11 14 20.9 +0.6**
V12A	**Nelson** baz=62	**62.71 301**	⇑P	**P**	**11 14 20.6 +0.4**
V11A	**Goodsprings** baz=62	**62.76 302**	⇓P	**P**	**11 14 21.1 +0.5**
Z22A	**Elephant Butte** baz=62,SNR=7.3	**62.77 293**	⇓P	**P**	**11 14 21.2 +0.4**
Y19A	**Nutrioso** baz=62	**62.79 296**	⇑P	**P**	**11 14 21.2 +0.4**
227A	**Bennet, Jal** baz=63	**62.84 289**	⇓P	**P**	**11 14 21.2 +0.1**
124A	**Stringfield Ra** baz=63,SNR=7.0	**62.85 292**	⇓P	**P**	**11 14 21.3 +0.1**
X17A	**Forest Lakes** baz=63	**62.88 297**	⇑P	**P**	**11 14 22.2 +0.8**
Z21A	**St. Cloud Mine** baz=63,SNR=9.9	**62.93 294**	⇓P	**P**	**11 14 22.3 +0.5**
X16A	**Lo Mia Camp, P** baz=63	**62.98 298**	⇓P	**P**	**11 14 22.4 +0.3**
W13A	**Hualapai Mount** baz=63	**63.03 300**	⇑P	**P**	**11 14 22.4 0.0**
226A	**Malaga, Loving** baz=63,SNR=7.1	**63.04 290**	⇑P	**P**	**11 14 22.3 -0.2**
MPMC	**Manual Prospec** baz=63,SNR=6.2	**63.11 303**	⇓P	**P**	**11 14 22.8 -0.1**
X15A	**Humboldt** baz=63	**63.15 298**	⇑P	**P**	**11 14 23.3 +0.1**
123A	**Bell Site, Whi** baz=63	**63.15 292**	⇑P	**P**	**11 14 23.3 +0.1**
Y18A	**Canyon Day Jun** baz=63	**63.18 296**	⇑P	**P**	**11 14 23.8 +0.4**
JCT	**Junction City** baz=63	**63.20 286**	⇑P	**P**	**11 14 23.5 -0.1**
JCT	**Junction City** comp=Z,20nm,1.5s,mb5.0	**63.20 286**	*e*P	**P**	**11 14 23.2 -0.4**
JCT	**Junction City**	**63.20 286**	*e*P	**P**	**11 14 23.2 -0.4**
JCT			pmax	pmax	
JCT	**Junction City** comp=Z,20nm,1.5s,mb5.0	**63.20 286**	*e*P	**P**	**11 14 23.2 -0.4**
225A	**Deer Hill, Car** baz=63	**63.21 291**	⇓P	**P**	**11 14 23.7 +0.1**
328A	**Wristen Ranch,** baz=63	**63.28 289**	⇑P	**P**	**11 14 23.8 -0.3**
122A	**Conniff Cattle** baz=63	**63.30 293**	⇓P	**P**	**11 14 24.6 +0.3**
RCTC	**Rector, Farmer** baz=63	**63.34 305**	⇓P	**P**	**11 14 25.2 +0.8**
X14A	**Yava** baz=63	**63.34 299**	⇓P	**P**	**11 14 24.8 +0.3**
Z20A	**Nine Sixteen R** baz=63,SNR=5.3	**63.38 295**	⇑P	**P**	**11 14 24.8 +0.1**
X13A	**Yucca** baz=63	**63.49 300**	⇓P	**P**	**11 14 26.1 +0.6**
Y16A	**Circle Bar Ran** baz=63	**63.50 297**	⇑P	**P**	**11 14 25.7 +0.2**
GSC	**Goldstone** baz=63	**63.64 303**	⇑P	**P**	**11 14 26.6 +0.1**
121A	**Cookes Peak, D** baz=63	**63.69 294**	⇓P	**P**	**11 14 27.3 +0.4**
326A	**Caldwell Ranch** baz=63	**63.69 290**	⇓P	**P**	**11 14 26.7 -0.2**
LRMC	**Laurel Mountai** baz=63	**63.71 303**	⇑P	**P**	**11 14 27.4 +0.5**
ISA	**Isabella** baz=64,SNR=6.9	**63.75 304**	⇑P	**P**	**11 14 27.2 0.0**
ISA	**Isabella** comp=Z,5.5nm,1.0s,mb4.5	**63.75 304**	*e*P	**P**	**11 14 27.7 +0.5**
ISA	**Isabella**	**63.75 304**	*e*P	**P**	**11 14 27.7 +0.5**
ISA			pmax	pmax	
ISA	**Isabella** comp=Z,5.0nm,1.0s,mb4.5	**63.75 304**	*e*P	**P**	**11 14 27.7 +0.5**
GMRC	**Granite Mounta** baz=64	**63.82 301**	⇑P	**P**	**11 14 27.8 +0.1**
428A	**Kincaid Ranch,** baz=64	**63.85 288**	⇓P	**P**	**11 14 28.0 +0.1**
PDMCI	**Parker Dam,Lak** baz=64	**63.85 300**	⇓P	**P**	**11 14 28.4 +0.5**
Y14A	**Wickenburg** baz=64	**63.88 299**	⇑P	**P**	**11 14 28.4 +0.4**
119A	**Ashpeak Ranch,** baz=64	**63.92 295**	⇓P	**P**	**11 14 28.7 +0.4**
120A	**U Bar Ranch, L** baz=64	**63.93 294**	⇓P	**P**	**11 14 28.7 +0.3**
427A	**Hayter Ranch,** baz=64,SNR=8.4	**63.95 289**	⇑P	**P**	**11 14 28.3 -0.3**
HEC	**Hector,Ludlow** baz=64	**63.96 302**	⇑P	**P**	**11 14 29.3 +0.8**
324A	**Moseley Ranch,** baz=64	**64.03 291**	⇑P	**P**	**11 14 28.2 -0.9**
SJG	**San Juan** comp=Z,109nm,18.8s,MS4.1,baz=96,slow=31	**64.15 249**	LR	LR	11 36 40.0
221A	**Mesquite Ranch** baz=64	**64.18 293**	⇓P	**P**	**11 14 30.5 +0.5**
118A	**Homack Ranch,** baz=64	**64.23 296**	⇓P	**P**	**11 14 31.0 +0.7**
IRM	**Iron Mountain** baz=64	**64.26 301**	⇓P	**P**	**11 14 31.0 +0.4**
426A	**McDonald Obser** baz=64,SNR=16	**64.31 290**	P	**P**	**11 14 30.9 0.0**
528A	**Cox Ranch, San** baz=64	**64.41 288**	⇓P	**P**	**11 14 31.5 -0.1**
Y12C	**Blythe** baz=64	**64.48 300**	⇑P	**P**	**11 14 32.1 +0.2**
425A	**Indio Mountain** baz=64,SNR=6.9	**64.49 291**	⇑P	**P**	**11 14 31.4 -0.8**
220A	**Playas Peak, P** baz=64	**64.50 294**	⇓P	**P**	**11 14 32.3 +0.2**
117A	**Oracle** baz=64	**64.51 296**	⇓P	**P**	**11 14 32.2 0.0**
219A	**White Tail Can** baz=64	**64.62 295**	⇓P	**P**	**11 14 33.3 +0.3**
BELC	**Belle Mtn. Jos** baz=64	**64.65 301**	⇑P	**P**	**11 14 33.5 +0.4**
DBIC	**Dimbokro** comp=Z,2.1nm,0.6s,mb4.3,baz=14,slow=3.4,SNR=3.9	**64.67 181**	P	**P**	**11 14 32.2 -1.2**
DBIC	comp=Z,146nm,18.9s,MS4.2,baz=351,slow=35		LR	LR	11 42 01.7
DBIC	**Dimbokro**	**64.67 181**	P	**P**	**11 14 32.2 -1.2**
DBIC			LR	LR	11 42 01.7
DBIC	**Dimbokro**	**64.67 181**	P	**P**	**11 14 32.2 -1.2**
DBIC	comp=Z,2.0nm,0.6s		pmax	pmax	
DBIC	**Dimbokro**	**64.67 181**	P	**P**	**11 14 32.2 -1.2**
527A	**Woodward Ranch** baz=64	**64.68 289**	⇓P	**P**	**11 14 33.0 -0.4**
TIC	**Toumodi** comp=Z,15nm,0.2s,mb5.7	**64.70 181**	*e*P	**P**	**11 14 32.3 -1.3**
Z13A	**Yuma Proving G** baz=64	**64.75 299**	⇓P	**P**	**11 14 33.7 -0.1**
115A	**Sonoran Desert** baz=65	**64.82 298**	⇑P	**P**	**11 14 34.9 +0.7**
BC3	**Big Chuckawall** baz=65	**64.82 301**	⇑P	**P**	**11 14 34.8 +0.6**
BFSC	**Mount Baldy Ra** baz=65	**64.87 303**	⇑P	**P**	**11 14 35.0 +0.4**
218A	**Dragoon** baz=65	**64.87 295**	⇓P	**P**	**11 14 35.1 +0.5**
526A	**Mary Lane Ranc** baz=65	**64.90 289**	⇓P	**P**	**11 14 35.0 +0.3**
KIC	**Kosan Boka** comp=Z,16nm,0.8s,mb5.1	**64.98 181**	*e*P	**P**	**11 14 34.4 -1.0**
KIC	**Kosan Boka** comp=Z,16nm,0.8s,mb5.1	**64.98 181**	*e*P	**P**	**11 14 34.4 -1.0**
320A	**Kipp Ranch, An** baz=65	**65.03 294**	⇓P	**P**	**11 14 35.6 0.0**
628A	**Black Gap, Mar** baz=65,SNR=7.6	**65.07 288**	⇓P	**P**	**11 14 34.9 -1.0**
LIC	**Lamto** comp=Z,29nm,1.0s,mb5.3	**65.12 181**	*e*P	**P**	**11 14 32.1 -4.2**
LIC	**Lamto** comp=Z,23nm,1.0s,mb4.8	**65.12 181**	⇑*i*P	**P**	**11 14 35.0 -1.3**
LIC	comp=Z,160nm,19.2s,MS3.9		*e*MLR	MLR	
LIC	**Lamto** comp=Z,11nm,1.0s,mb4.8	**65.12 181**	⇑*i*P	**P**	**11 14 35.0 -1.3**
LIC	comp=Z,80nm,19.3s,MS3.9		LR	LR	
LIC	**Lamto** comp=Z,11nm,1.0s,mb4.8	**65.12 181**	⇑*i*P	**P**	**11 14 35.0 -1.3**
319A	**Douglas** baz=65	**65.21 295**	⇓P	**P**	**11 14 36.9 +0.1**
627A	**Terlingua Ranc** baz=65,SNR=6.7	**65.25 289**	⇑P	**P**	**11 14 36.3 -0.8**
217A	**Green Valley** baz=65	**65.28 296**	⇓P	**P**	**11 14 37.5 +0.2**
318A	**Bisbee** baz=65	**65.36 295**	⇑P	**P**	**11 14 37.2 -0.5**
626A	**Big Bend Ranch** baz=65,SNR=13	**65.39 289**	⇑P	**P**	**11 14 37.2 -0.7**
TXAR	**Lajitas Array** comp=Z,2.1nm,0.8s,mb4.2,baz=48,slow=4.8,SNR=29	**65.45 289**	P	**P**	**11 14 37.5 -0.8**
TXAR	comp=Z,92nm,20.6s,MS4.0,baz=5.0,slow=34		LR	LR	11 41 07.8
TXAR	**Lajitas Array**	**65.45 289**	P	**P**	**11 14 37.5 -0.9**
TXAR	comp=Z,2.0nm,0.8s		pmax	pmax	
TXAR	**Lajitas Array**	**65.45 289**	P	**P**	**11 14 37.5 -0.9**
KSRS	**Korea Array** comp=Z,1.1nm,0.6s,mb4.0,baz=356,slow=6.4,SNR=5.3	**66.27 40**	P	**P**	**11 14 42.7 -0.8**
KSRS	comp=Z,82nm,19.1s,MS4.0,baz=174,slow=38		LR	LR	11 45 33.8
KSRS	**Korea Array**	**66.27 40**	P	**P**	**11 14 42.7 -0.8**
KSRS	comp=Z,1.0nm,0.6s,mb4.0		pmax	pmax	
KSRS	comp=Z,82nm,19.1s,MS4.0		MLR	MLR	
MJAR	**Matsushiro Arr** comp=Z,2.5nm,1.0s,mb4.1,baz=346,slow=7.6,SNR=4.7	**69.09 32**	P	**P**	**11 15 01.6 +0.3**
MJAR	**Matsushiro Arr**	**69.09 32**	P	**P**	**11 15 01.6 +0.3**
MJAR	comp=Z,3.0nm,1.0s		pmax	pmax	
MJAR	**Matsushiro Arr**	**69.09 32**	P	**P**	**11 15 01.6 +0.3**
NJ2	**Nanjing**	**69.40 50**	*e*P	**P**	**11 15 04.3 +1.0**
NJ2	comp=Z,10.0nm,0.6s,mb4.9		pmax	pmax	
WHN	**Wuhan**	**69.70 54**	*e*P	**P**	**11 15 07.5 +2.3**
GYA	**Guiyang**	**71.49 62**	P	**P**	**11 15 17.0 +0.9**
GYA			PP	PP	11 17 57.8 +3.5
GYA			S	S	11 24 33.0 -1.5
GYA			SKS		11 25 15.5
GYA			SS	SS	11 29 10.3 +1.8
GYA	comp=Z,10.0nm,1.0s,mb4.7		pmax	pmax	
GYA	comp=Z,90nm,5.4s		pmax	pmax	
GYA	comp=Z,460nm,18.9s,MS4.8		LR	LR	
KMI	**Kunming**	**71.62 66**	P	**P**	**11 15 18.5 +1.6**
KMI			S	S	11 24 34.8 -1.2
KMI	comp=Z,5.0nm,0.7s,mb4.5		pmax	pmax	
KMI	comp=Z,200nm,3.2s		pmax	pmax	
KMI	comp=Z,67nm,28.4s,MS3.8		LR	LR	
MSKU	**Masuku** comp=Z,92nm,19.2s,MS4.1,baz=342,slow=35	**73.86 161**	LR	LR	11 46 57.1
CMAR	**Chiang Mai Arr** comp=Z,2.5nm,0.9s,mb4.1,baz=323,slow=6.2,SNR=13	**76.76 72**	P	**P**	**11 15 47.5 +0.5**
CMAR	comp=Z,56nm,19.2s,MS3.9,baz=238,slow=40		LR	LR	11 55 41.9
CMAR	**Chiang Mai Arr**	**76.76 72**	P	**P**	**11 15 47.5 +0.5**
CMAR	comp=Z,3.0nm,1.0s		pmax	pmax	
CMAR	**Chiang Mai Arr**	**76.76 72**	P	**P**	**11 15 47.5 +0.5**
ROSC	**El Rosal** comp=Z,52nm,20.5s,MS3.9,baz=19,slow=32	**79.16 253**	LR	LR	11 45 31.8
RCBR	**Riachuelo** comp=Z,90nm,20.7s,MS4.1,baz=256,slow=29	**79.87 212**	LR	LR	11 42 37.7
BDFB	**Brasilia** comp=Z,88nm,18.5s,MS4.2,baz=117,slow=31	**91.77 222**	LR	LR	11 51 50.1
DAV	**Davao City (W)** comp=Z,47nm,21.8s,MS3.9,baz=321,slow=39	**95.03 50**	LR	LR	12 05 02.4
WRA	**Warramunga Arr** comp=Z,0.2nm,0.8s,baz=343,slow=1.8,SNR=3.6	**123.17 48**	PKP	PKPdf	11 22 50.5 -1.5
WRA	**Warramunga Arr**	**123.17 48**	PKIKP	PKPdf	11 22 50.5 -1.4
WRA	**Warramunga Arr**	**123.17 48**	PKIKP	PKPdf	11 22 50.5 -1.4
ASAR	**Alice Springs** comp=Z,0.3nm,0.7s,baz=356,slow=2.1,SNR=8.5	**126.64 50**	PKP	PKPdf	11 22 57.6 -0.9
ASAR	**Alice Springs**	**126.64 50**	PKIKP	PKPdf	11 22 57.6 -0.9
ASAR	**Alice Springs**	**126.64 50**	PKIKP	PKPdf	11 22 57.6 -0.9
MAW	**Mawson** comp=Z,2.7nm,0.8s,baz=353,slow=6.8,SNR=4.7	**145.79 141**	PKPbc	PKPbc	11 23 32.4 -0.5
QSPA	**South Pole Qui** comp=Z,3.0nm,0.9s,baz=256,slow=4.7,SNR=3.3	**161.36 180**	PKPab	PKPab	11 24 38.3 -0.2

MEX 29 11:14:43.5±0.6, 17°.96N×101°.27W, h30km±30km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.40**	**208**	*i* P	Pb	11 14 51.0	-1.3
ZIIG				*i* S	Sb	11 14 56.2	-2.2
CAIG	**El Cayaco**	**1.31**	**133**	*e*P	Pn	11 15 04.2	-1.6
CAIG				*i* S	Sn	11 15 19.3	-3.1
MMIG	**Aquila**	**2.00**	**280**	*e*P	Pn	11 15 12.9	-2.4
MMIG				*i* S	Sn	11 15 36.3	-3.0
UTMO	**Huajuapan**	**3.30**	**92**	*i* P	Pn	11 15 30.8	-2.4
UTMO				*i* S	Sn	11 16 09.3	-2.1
PNIG	**Pinotepa**	**3.38**	**117**	*e*P	Pn	11 15 31.5	-2.8
PNIG				*i* S	Sn	11 16 11.1	-2.3

ISCJB ***29*** *11:26:39.3±0.4, 51°.46N±0°.02×16°.12E±0°.02, h0km, mb3.4/2, Error ellipse: s-maj=3.1km s-min=1.9km az=15.7*
IDC ***29*** *11:26:40.6±0.7, 51°.52N×15°.93E, h0km, mb3.3/1, mb1 3.6/9, mb1mx3.5/26, mbtmp3.5/9, ML3.2/8, MS3.4/1, Ms1 3.4/1, ms1mx2.3/44, Error ellipse: s-maj=14.1km s-min=7.1km az=114.0*
NEIC ***29*** *11:26:40.0±0.6, 51°.61N×16°.25E, h5km, ML3.3(SZGRF), Error ellipse: s-maj=8.1km s-min=6.2km az=200.0*
CSEM ***29*** *11:26:40.7±0.2, 51°.50N×16°.14E, h2km, ML3.7/12, Error ellipse: s-maj=3.5km s-min=2.1km az=18.0*
BGR ***29*** *11:26:42.0±0.3, 51°.50N×16°.13E, h1km, ML3.3/16, Error ellipse: s-maj=3.3km s-min=2.2km az=18.0*
IPEC ***29*** *11:26:41.2±0.3, 51°.51N×16°.25E, h0km, ML2.7/4, Error ellipse: s-maj=3.9km s-min=2.0km az=86.0*
WAR ***29*** *11:26:42.0, 51°.51N×16°.12E, ML2.9, Mining Induced*
PRU ***29*** *11:26:42.3, 51°.47N×16°.11E, h0km*
VIE ***29*** *11:26:44.0±0.5, 51°.24N×16°.12E, h0km, mb2.8/6, ML3.1/6, Error ellipse: s-maj=3.1km s-min=2.8km az=0.0 64 km*
WNW of Wroclaw Suspected Mining induced.

ISC 29 11:26:40.3±0.3, 51°.52N±0°.02×16°.16E±0°.02, h0km, n121, σ0°.99/220, mb3.4/2, 6C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**173**	*e*Pg	**Pg**	**11 26 54.4**	**+1.1**
KSP				*e*Sg	**Sg**	**11 27 03.4**	**+1.4**
KSP	**Ksiaz**	**0.68**	**173**	*i* Pg	**Pg**	**11 26 54.4**	**+1.1**
KSP				*e*Sg	**Sg**	**11 27 03.3**	**+1.3**
KSP				*e*L		11 27 08.1	
KSP	**Ksiaz**	**0.68**	**173**	*e*Pg	**Pg**	**11 26 54.4**	**+1.1**
KSP	**Ksiaz**	**0.68**	**173**	*e*Pg	**Pg**	**11 26 54.3**	**+1.0**
KSP	baz=358			*e*Sg	**Sg**	**11 27 01.5**	**-0.5**
KSP	baz=358						
UPC	**Upice**	**1.01**	**185**	*e*PG	**Pg**	**11 27 00.5**	**+0.8**
UPC	**Upice**	**1.01**	**185**	Pg	**Pg**	**11 27 00.5**	**+0.8**
DPC	**Dobruska-Polom** SNR=40	**1.17**	**175**	*e*Pg	**Pg**	**11 27 03.3**	**+0.6**
DPC				*e*Sg	**Sg**	**11 27 18.8**	**+1.0**
DPC	**Dobruska-Polom**	**1.17**	**175**	*e*PG	**Pg**	**11 27 03.2**	**+0.5**
DPC	comp=Z,157nm,1.0s			*e*SG	**Sg**	**11 27 18.0**	**+0.1**
DPC	**Dobruska-Polom**	**1.17**	**175**	Pg	**Pg**	**11 27 03.2**	**+0.5**
DPC	comp=Z,157nm,1.0s			Sg	**Sg**	**11 27 18.0**	**+0.1**
PVCC	**Panska Ves**	**1.41**	**226**	*e*PG	**Pg**	**11 27 07.4**	**+0.2**
PVCC	comp=Z,319nm,0.6s			*e*SG	**Sg**	**11 27 25.6**	**+0.1**
PVCC	**Panska Ves**	**1.41**	**226**	Pg	**Pg**	**11 27 07.4**	**+0.2**
PVCC	comp=Z,319nm,0.6s			Sg	**Sg**	**11 27 25.6**	**+0.1**
BRG	**Berggiesshubel** SNR=2.1	**1.53**	**246**	*e*Pn	**Pn**	**11 27 08.8**	**0.0**
BRG	SNR=25			*e*Pg	**Pg**	**11 27 10.2**	**+0.5**
BRG				*e*Sg	**Sg**	**11 27 30.0**	**+0.5**
BRG	**Berggiesshubel**	**1.53**	**246**	PN	**Pn**	**11 27 08.3**	**-0.6**
BRG				PG	**Pg**	**11 27 09.8**	**+0.1**
BRG	comp=Z,174nm,0.4s			SG	**Sg**	**11 27 29.8**	**+0.3**
BRG	**Berggiesshubel** SNR=2.1	**1.53**	**246**	Pn	**Pn**	**11 27 08.8**	**-0.1**
BRG	**Berggiesshubel** SNR=25	**1.53**	**246**	Pg	**Pg**	**11 27 10.2**	**+0.5**
BRG				Sg	**Sg**	**11 27 30.0**	**+0.5**
RUE	**Ruedersdorf**	**1.76**	**304**	*e*Pn	**Pn**	**11 27 11.2**	**-0.8**
RUE				*e*Sn	**Sn**	**11 27 37.2**	**+2.2**
RUE	**Ruedersdorf**	**1.76**	**304**	*e*Pn	**Pn**	**11 27 11.2**	**-0.8**
RUE				*e*Sn	**Sn**	**11 27 37.2**	**+2.2**
PRU	**Pruhonice** SNR=2.3	**1.84**	**214**	*e*Pn	**Pn**	**11 27 13.7**	**+0.7**
PRU	SNR=15			*e*Pg	**Pg**	**11 27 15.9**	**+0.3**
PRU				*e*Sg	**Sg**	**11 27 40.3**	**+0.9**
PRU	**Pruhonice**	**1.84**	**214**	*e*PN	**Pn**	**11 27 13.7**	**+0.6**
PRU				*e*PG	**Pg**	**11 27 15.7**	**+0.2**
PRU	comp=Z,117nm,0.5s			*e*SG	**Sg**	**11 27 38.9**	**-0.5**
PRU	**Pruhonice** SNR=2.3	**1.84**	**214**	Pn	**Pn**	**11 27 13.7**	**+0.6**
FBE	**Freiberg** SNR=1.1	**1.86**	**252**	*e*Pn	**Pn**	**11 27 14.1**	**+0.7**
FBE				*e*Sg	**Sg**	**11 27 40.1**	**+0.1**
FBE	**Freiberg** SNR=1.1	**1.86**	**252**	Pn	**Pn**	**11 27 14.1**	**+0.7**
FBE				Sg	**Sg**	**11 27 40.1**	**+0.1**
GKP	**Gorka Klasztor**	**1.88**	**20**	*e*Pn	**Pn**	**11 27 20.6**	**+7.0**
GKP				*e*Pg	**Pg**	**11 27 22.7**	**+6.4**
GKP				*e*Sn	**Sn**	**11 27 46.4**	**+8.4**

MORC	**Moravsky Berou**	**1.95**	**153**	*e*Pn	**Pn**	**11 27 14.9**	**+0.3**
	SNR=24						
MORC	**Moravsky Berou**	**1.95**	**153**	*e*Pn	**Pn**	**11 27 14.6**	**0.0**
MORC				*e*Sn	**Sn**	**11 27 40.2**	**+0.5**
MORC	**Moravsky Berou**	**1.95**	**153**	*e*Pn	**Pn**	**11 27 14.8**	**+0.2**
	baz=335						
MORC				*e*Sn	**Sn**	**11 27 40.2**	**+0.4**
MORC				*e*Sg	**Sg**	**11 27 41.7**	**-1.2**
	comp=Z,38nm,0.3s,baz=335						
CLL	**Collm**	**1.99**	**265**	*e*Pn	**Pn**	**11 27 14.6**	**-0.5**
	SNR=6.5						
CLL				*e*Pg	**Pg**	**11 27 18.1**	**-0.2**
	SNR=25						
CLL				*e*Sg	**Sg**	**11 27 44.6**	**+0.6**
CLL	**Collm**	**1.99**	**265**	*i* Pn	**Pn**	**11 27 14.6**	**-0.5**
CLL				*i* Pg	**Pg**	**11 27 18.1**	**-0.2**
CLL				*e*Sg	**Sg**	**11 27 45.0**	**+0.9**
CLL	**Collm**	**1.99**	**265**	*i* Pn	**Pn**	**11 27 14.6**	**-0.5**
	comp=Z,18nm,0.5s						
CLL				*i* Pg	**Pg**	**11 27 18.1**	**-0.2**
CLL				*i*		11 27 20.9	
CLL				*e*Sg	**Sg**	**11 27 45.0**	**+0.9**
	comp=Z,122nm,0.6s						
CLL	**Collm**	**1.99**	**265**	Pn	**Pn**	**11 27 14.6**	**-0.5**
	SNR=6.5						
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*Pn	**Pn**	**11 27 17.0**	**+0.3**
	SNR=1.8						
OKC				*e*Pg	**Pg**	**11 27 21.0**	**+0.4**
	SNR=10						
OKC				*e*Sg	**Sg**	**11 27 48.4**	**+0.6**
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*PG	**Pg**	**11 27 20.5**	**-0.1**
OKC				*e*SG	**Sg**	**11 27 46.8**	**-1.0**
	comp=Z,140nm,0.9s						
OKC	**Ostrava-Krasne**	**2.10**	**142**	Pn	**Pn**	**11 27 17.0**	**+0.3**
	SNR=1.8						
OKC	**Ostrava-Krasne**	**2.10**	**142**	Pg	**Pg**	**11 27 21.0**	**+0.4**
	SNR=10						
OKC				Sg	**Sg**	**11 27 48.4**	**+0.6**
VRAC	**Vranov**	**2.23**	**173**	Pn	**Pn**	**11 27 18.0**	**-0.4**
	comp=Z,3.4nm,0.3s,baz=338,slow=15,SNR=7.3						
VRAC				Lg		11 27 51.7	
	comp=Z,15nm,0.3s,baz=73,slow=20,SNR=11						
VRAC	**Vranov**	**2.23**	**173**	Pn	**Pn**	**11 27 18.0**	**-0.4**
VRAC				*e*Sg	**Sg**	**11 27 51.0**	**-0.8**
	comp=Z,36nm,0.3s,baz=354						
VRAC				Lg		11 27 51.7	
TREC	**Trest**	**2.26**	**191**	*e*PG	**Pg**	**11 27 23.3**	**-0.3**
TREC	**Trest**	**2.26**	**191**	Pg	**Pg**	**11 27 23.3**	**-0.3**
KRUC	**Moravsky**	**2.46**	**176**	*e*Pg	**Pg**	**11 27 26.4**	**-1.0**
	baz=358						
KRUC				*e*Sg	**Sg**	**11 27 58.1**	**-1.2**
	comp=Z,23nm,0.3s,baz=358						
TANN	**Tannenbergstha**	**2.58**	**246**	*e*Pn	**Pn**	**11 27 23.8**	**+0.5**
	SNR=5.0						
TANN				*e*Pg	**Pg**	**11 27 29.9**	**+0.1**
	SNR=23						
TANN				*e*Sg	**Sg**	**11 28 02.8**	**-0.4**
TANN	**Tannenbergstha**	**2.58**	**246**	Pn	**Pn**	**11 27 23.8**	**+0.5**
	SNR=5.0						
OJC	**Ojcow**	**2.65**	**118**	*e*Pg	**Pg**	**11 27 31.2**	**+0.2**
OJC				*e*Sg	**Sg**	**11 28 06.6**	**+1.3**
OJC	**Ojcow**	**2.65**	**118**	*e*Pg	**Pg**	**11 27 31.2**	**+0.2**
OJC				*e*Sg	**Sg**	**11 28 06.6**	**+1.3**
WERD	**Werda**	**2.66**	**248**	*e*Pn	**Pn**	**11 27 24.7**	**+0.4**
	SNR=2.5						
WERD				*e*Pg	**Pg**	**11 27 32.0**	**+0.8**
	SNR=23						
WERD				*e*Sg	**Sg**	**11 28 06.4**	**+0.8**
WERD	**Werda**	**2.66**	**248**	Pn	**Pn**	**11 27 24.7**	**+0.4**
	SNR=2.5						
WERD	**Werda**	**2.66**	**248**	Pg	**Pg**	**11 27 32.0**	**+0.8**
	SNR=23						
WERD				Sg	**Sg**	**11 28 06.4**	**+0.8**
NKC	**Novy Kostel**	**2.68**	**243**	*e*Pn	**Pn**	**11 27 24.9**	**+0.3**
	SNR=3.2						
NKC				*e*Pg	**Pg**	**11 27 32.0**	**+0.4**
	SNR=14						
NKC				*e*Sg	**Sg**	**11 28 07.6**	**+1.3**
NKC	**Novy Kostel**	**2.68**	**243**	*e*PN	**Pn**	**11 27 25.1**	**+0.5**
NKC				*e*PG	**Pg**	**11 27 31.5**	**-0.1**
NKC				*e*SG	**Sg**	**11 28 06.4**	**+0.2**
	comp=Z,122nm,0.4s						
NKC	**Novy Kostel**	**2.68**	**243**	Pn	**Pn**	**11 27 24.9**	**+0.3**
	SNR=3.2						
NKC	**Novy Kostel**	**2.68**	**243**	Pg	**Pg**	**11 27 32.0**	**+0.4**
	SNR=14						
NKC				Sg	**Sg**	**11 28 06.4**	**+0.2**
	comp=Z,122nm,0.4s						
GUNZ	**Gunzen**	**2.68**	**246**	*e*Pn	**Pn**	**11 27 25.6**	**+1.0**
	SNR=3.1						
GUNZ				*e*Pg	**Pg**	**11 27 31.4**	**-0.2**
	SNR=17						
GUNZ				*e*Sg	**Sg**	**11 28 06.5**	**+0.1**
GUNZ	**Gunzen**	**2.68**	**246**	Pn	**Pn**	**11 27 25.6**	**+1.0**
	SNR=3.1						
WERN	**Wernitzgruen**	**2.69**	**244**	*e*Pn	**Pn**	**11 27 25.9**	**+1.1**
	SNR=4.4						
WERN				*e*Pg	**Pg**	**11 27 31.8**	**0.0**
	SNR=21						
WERN				*e*Sg	**Sg**	**11 28 06.2**	**-0.4**
WERN	**Wernitzgruen**	**2.69**	**244**	Pn	**Pn**	**11 27 25.9**	**+1.1**
	SNR=4.4						
NEUB	**Neuenburg**	**2.76**	**265**	*e*Pg	**Pg**	**11 27 33.1**	**-0.2**
	SNR=5.9						
NEUB				*e*Sg	**Sg**	**11 28 09.7**	**+0.7**
NEUB	**Neuenburg**	**2.76**	**265**	Pg	**Pg**	**11 27 33.1**	**-0.1**
	SNR=5.9						
NEUB				Sg	**Sg**	**11 28 09.7**	**+0.7**
JAVC	**Velka Javorina**	**2.83**	**159**	*e*Pn	**Pn**	**11 27 29.4**	**+2.7**
JAVC				*e*Sg	**Sg**	**11 28 12.8**	**+1.6**
	comp=Z,55nm,0.8s						
KHC	**Kasperske Hory**	**2.90**	**216**	*e*Pn	**Pn**	**11 27 28.2**	**+0.5**
	SNR=4.6						
KHC				*e*Pg	**Pg**	**11 27 34.5**	**-1.4**
	SNR=12						
KHC				*e*Sg	**Sg**	**11 28 12.7**	**-0.8**
KHC	**Kasperske Hory**	**2.90**	**216**	*e*Pn	**Pn**	**11 27 28.0**	**+0.3**
KHC	**Kasperske Hory**	**2.90**	**216**	*e*PN	**Pn**	**11 27 27.9**	**+0.2**
KHC				*e*PG	**Pg**	**11 27 34.3**	**-1.6**
KHC				*e*SN	**Sn**	**11 28 01.5**	**-1.7**
KHC				*e*SG	**Sg**	**11 28 11.6**	**-1.9**
	comp=Z,31nm,0.3s						
KHC	**Kasperske Hory**	**2.90**	**216**	Pn	**Pn**	**11 27 27.9**	**+0.2**
KHC	**Kasperske Hory**	**2.90**	**216**	Pg	**Pg**	**11 27 34.5**	**-1.4**
	SNR=12						
KHC				Sn	**Sn**	**11 28 01.5**	**-1.7**
KHC				Sg	**Sg**	**11 28 12.7**	**-0.8**
MOX	**Moxa**	**2.99**	**255**	*e*PG	**Pg**	**11 27 37.1**	**-0.5**
MOX				*e*SG	**Sg**	**11 28 17.6**	**+1.2**
MOX	**Moxa**	**2.99**	**255**	*e*Pg	**Pg**	**11 27 37.2**	**-0.5**
	SNR=4.4						
MOX				*e*Sg	**Sg**	**11 28 16.3**	**-0.1**
MOX	**Moxa**	**2.99**	**255**	Pg	**Pg**	**11 27 37.2**	**-0.4**
	SNR=4.4						
MOX				Sg	**Sg**	**11 28 16.3**	**-0.1**
GEC2	**GERESS Array S**	**3.10**	**212**	*e*Pn	**Pn**	**11 27 31.9**	**+1.5**
	SNR=3.7						
GEC2				*e*Pg	**Pg**	**11 27 39.8**	**+0.1**
	SNR=7.8						
GEC2				*e*Sg	**Sg**	**11 28 18.6**	**-1.3**
GEC2	**GERESS Array S**	**3.10**	**212**	*e*Pn	**Pn**	**11 27 31.9**	**+1.4**
GEC2				*e*Pg	**Pg**	**11 27 39.8**	**+0.1**
GEC2				*e*Sg	**Sg**	**11 28 18.6**	**-1.3**
GEC2	**GERESS Array S**	**3.10**	**212**	Pn	**Pn**	**11 27 31.9**	**+1.4**
	SNR=3.7						
GERES	**GERESS Array B**	**3.10**	**212**	Pn	**Pn**	**11 27 29.9**	**-0.5**
	comp=Z,2.5nm,0.3s,baz=32,slow=12,SNR=31						
GERES				Pg	**Pg**	**11 27 36.5**	**-3.2**
	comp=Z,4.8nm,0.3s,baz=31,slow=19,SNR=32						
GERES				Sn	**Sn**	**11 28 06.7**	**-1.5**
	comp=Z,3.7nm,0.3s,baz=20,slow=27,SNR=4.8						
GERES				Lg		11 28 17.8	
	comp=Z,8.5nm,0.3s,baz=34,slow=28,SNR=9.2						
GERES	**GERESS Array B**	**3.10**	**212**	Pn	**Pn**	**11 27 29.9**	**-0.6**
GERES	**GERESS Array B**	**3.10**	**212**	Pg	**Pg**	**11 27 36.5**	**-3.2**
WET	**Wettzell**	**3.17**	**223**	*e*Pn	**Pn**	**11 27 32.1**	**+0.7**
	SNR=4.1						
WET				*e*Sg	**Sg**	**11 28 21.9**	**-0.1**
WET	**Wettzell**	**3.17**	**223**	*e*Pn	**Pn**	**11 27 32.1**	**+0.7**
WET				*e*Sg	**Sg**	**11 28 21.9**	**-0.2**
WET	**Wettzell**	**3.17**	**223**	Pn	**Pn**	**11 27 32.1**	**+0.7**
	SNR=4.1						
WET				Sg	**Sg**	**11 28 21.9**	**-0.2**
KOLL	**Kolacno**	**3.28**	**153**	*e*SN	**Sb**	**11 28 21.2**	**+1.6**
NIE	**Niedzica**	**3.38**	**127**	*e*P	**Pg**	**11 27 44.6**	**-0.5**
NIE				*e*S	**Sg**	**11 28 28.2**	**-0.8**
ASSE	**Asse, Remlinge**	**3.46**	**282**	*e*Pg	**Pg**	**11 27 46.1**	**-0.4**
	SNR=3.9						
ASSE	**Asse, Remlinge**	**3.46**	**282**	Pg	**Pg**	**11 27 46.1**	**-0.4**
	SNR=3.9						
VYHS	**Vyhne**	**3.48**	**149**	*e*Pn	**Pn**	**11 27 35.7**	**0.0**
VYHS				*e*Pg	**Pg**	**11 27 48.3**	**+1.3**
VYHS	**Vyhne**	**3.48**	**149**	*e*PN	**Pn**	**11 27 35.6**	**-0.1**
VYHS				*e*PG	**Pg**	**11 27 48.3**	**+1.3**
VYHS	**Vyhne**	**3.48**	**149**	*e*Pn	**Pn**	**11 27 35.7**	**0.0**
CONA	**Conrad Observa**	**3.59**	**183**	⇑*i* Sg	**Sg**	**11 28 34.0**	**-1.7**
	comp=Z,29nm,0.4s						
CONA	**Conrad Observa**	**3.59**	**183**	Sg	**Sg**	**11 28 34.0**	**-1.7**
	comp=Z,29nm,0.4s						
CLZ	**Clausthal**	**3.62**	**277**	*e*Pn	**Pn**	**11 27 38.2**	**+0.8**
	SNR=3.9						
CLZ				*e*Pg	**Pg**	**11 27 49.2**	**-0.4**
	SNR=11						
CLZ	**Clausthal**	**3.62**	**277**	*e*Pn	**Pn**	**11 27 38.2**	**+0.7**
CLZ				*e*Pg	**Pg**	**11 27 49.2**	**-0.3**
CLZ	**Clausthal**	**3.62**	**277**	Pn	**Pn**	**11 27 38.2**	**+0.7**
	SNR=3.9						
GRA1	**Grafenberg Arr**	**3.63**	**242**	*e*Pn	**Pn**	**11 27 39.4**	**+1.6**
GRA1				*e*Sg	**Sg**	**11 28 36.7**	**-0.3**
GRA1	**Grafenberg Arr**	**3.63**	**242**	Pn	**Pn**	**11 27 39.4**	**+1.6**
	SNR=2.6						
GRA1				Sg	**Sg**	**11 28 36.7**	**-0.3**
GRF	**Grafenberg Arr**	**3.63**	**242**	*e*Pn	**Pn**	**11 27 39.4**	**+1.7**
	SNR=2.6						
GRF				*e*Sg	**Sg**	**11 28 36.7**	**-0.3**
GRF	**Grafenberg Arr**	**3.63**	**242**	*e*Pn	**Pn**	**11 27 39.4**	**+1.6**
GRF				*e*Sg	**Sg**	**11 28 36.7**	**-0.3**
GRF	**Grafenberg Arr**	**3.63**	**242**	*e*Pn	**Pn**	**11 27 39.4**	**+1.6**
GRF				*e*Sg	**Sg**	**11 28 36.7**	**-0.3**
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P	**Pn**	**11 27 37.3**	**-1.1**
BSD				*i* S	**Sn**	**11 28 19.8**	**-2.7**
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P	**Pn**	**11 27 37.3**	**-1.1**
BSD				*i* S	**Sn**	**11 28 19.8**	**-2.7**
MOA	**Molln**	**3.87**	**199**	⇑*i*Pn	**Pn**	**11 27 41.8**	**+0.9**
MOA				⇑*i*Sg	**Sg**	**11 28 43.0**	**-1.5**
	comp=Z,30nm,0.5s						
MOA	**Molln**	**3.87**	**199**	Pn	**Pn**	**11 27 41.8**	**+0.8**
MOA				Sg	**Sg**	**11 28 43.0**	**-1.5**
	comp=Z,30nm,0.5s						
UBBA	**Unterbreizbach**	**3.94**	**262**	*e*Pg	**Pg**	**11 27 55.8**	**+0.1**
	SNR=4.6						
UBBA				*e*Sg	**Sg**	**11 28 45.9**	**-0.8**
UBBA	**Unterbreizbach**	**3.94**	**262**	Pg	**Pg**	**11 27 55.8**	**+0.1**
	SNR=4.6						
UBBA				Sg	**Sg**	**11 28 45.9**	**-0.8**
KECS	**Kecovo**	**4.12**	**136**	*e*Pn	**Pn**	**11 27 45.5**	**+1.0**
KECS				*e*Pg	**Pg**	**11 28 00.6**	**+1.3**
KECS	**Kecovo**	**4.12**	**136**	*e*PN	**Pn**	**11 27 45.5**	**+1.0**
KECS				*e*PG	**Pg**	**11 28 00.6**	**+1.3**
ARSA	**Arzberg**	**4.29**	**186**	⇑*i*Pn	**Pn**	**11 27 47.1**	**+0.4**
ARSA				⇓*i*Sg	**Sg**	**11 28 56.5**	**-1.5**
	comp=Z,27nm,0.6s						
ARSA	**Arzberg**	**4.29**	**186**	Pn	**Pn**	**11 27 47.1**	**+0.4**
ARSA				Sg	**Sg**	**11 28 56.5**	**-1.5**
	comp=Z,27nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.29**	**125**	*e*PG	**Pg**	**11 28 03.0**	**+0.4**
CRVS	**Cervenica-Dubn**	**4.29**	**125**	*e*Pg	**Pg**	**11 28 03.1**	**+0.5**
KWP	**Kalwaria Pacla**	**4.58**	**112**	*e*Pg	**Pg**	**11 28 05.9**	**-2.2**
KWP	**Kalwaria Pacla**	**4.58**	**112**	*e*Pg	**Pg**	**11 28 05.9**	**-2.1**
KOLS	**Kolonicke sedl**	**4.70**	**121**	*e*Pn	**Pn**	**11 27 50.7**	**-1.7**
KOLS				*e*Pg	**Pg**	**11 28 10.8**	**+0.5**
KOLS	**Kolonicke sedl**	**4.70**	**121**	*e*PN	**Pn**	**11 27 50.7**	**-1.7**
KOLS				*e*PG	**Pg**	**11 28 10.8**	**+0.5**
KOLS	**Kolonicke sedl**	**4.70**	**121**	*e*Pn	**Pn**	**11 27 50.7**	**-1.7**
KBA	**Koelnbreinsper**	**4.81**	**204**	⇑*i*Pn	**Pn**	**11 27 55.0**	**+1.2**
KBA				⇑*i*Sg	**Sg**	**11 29 14.7**	**+0.1**
	comp=Z,21nm,0.5s						
KBA	**Koelnbreinsper**	**4.81**	**204**	Pn	**Pn**	**11 27 55.0**	**+1.2**
KBA				Sg	**Sg**	**11 29 14.7**	**+0.1**
	comp=Z,21nm,0.5s						
DAVOX	**Davos/Dischmat**	**6.28**	**223**	Pn	**Pn**	**11 28 13.7**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=34,slow=18,SNR=2.8						
DAVOX				Lg		11 29 57.2	
	comp=Z,0.6nm,0.3s,baz=352,slow=23,SNR=3.3						
DAVOX	**Davos/Dischmat**	**6.28**	**223**	Pn	**Pn**	**11 28 13.7**	**-0.3**
AKASG	**Malin Array Be**	**8.27**	**91**	Pn	**Pn**	**11 28 40.1**	**-1.2**
	comp=Z,1.9nm,0.3s,baz=278,slow=12,SNR=6.4						
AKASG	**Malin Array Be**	**8.27**	**91**	Pn	**Pn**	**11 28 40.2**	**-1.1**
HFS	**Hagfors**	**8.75**	**352**	Pn	**Pn**	**11 28 45.0**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=155,slow=14,SNR=3.3						
FINES	**FINESS Array B**	**11.35**	**25**	Pn	**Pn**	**11 29 21.4**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=190,slow=9.7,SNR=4.8						
EKA	**Eskdalemuir Ar**	**12.13**	**296**	Pn	**Pn**	**11 29 30.7**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=102,slow=13,SNR=3.2						
ARCES	**ARCESS Array B**	**18.61**	**10**	P	**Pn**	**11 30 58.1**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=190,slow=12,SNR=6.2						
TORD	**Torodi Ar. Bea**	**40.02**	**202**	P	**P**	**11 34 15.6**	**-1.2**
	comp=Z,0.3nm,0.7s,mb3.0,baz=4.6,slow=7.2,SNR=2.5						
MKAR	**Makanchi Array**	**42.19**	**69**	P	**P**	**11 34 35.7**	**+1.3**
	comp=Z,0.4nm,0.2s,mb3.7,baz=318,slow=8.5,SNR=2.0						
RES	**Resolute Bay**	**46.13**	**340**	LR	LR	11 53 38.5	
	comp=Z,43nm,21.6s,baz=213,slow=35						

*IDC **29** 11:43:14.9±1.0, 14°.38N×144°.26E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/21, mbtmp3.7/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/37, Error ellipse: s-maj=34.0km s-min=14.6km az=60.0*

*NEIC **29** 11:43:16.4±0.6, 14°.40N×144°.28E, h10km, Error ellipse: s-maj=16.0km s-min=10.5km az=66.0*

*ISCJB **29** 11:43:18.0±0.7, 14°.42N±0°.09×144°.2E±0°.1, h33km, mb3.7/7, MS3.0/2, Error ellipse: s-maj=18.9km s-min=8.7km az=145.3*

ISC 29 11:43:19.8±0.7, 14°.40N±0°.08×144°.3E±0°.1, h35km, n11, σ0°.80/10, mb3.7/7, MS3.0/2, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.97**	**146**	Pn	**Pn**	**11 43 35.5**	**-1.5**
	46nm,0.3s,baz=275,slow=3.1,SNR=5.8						
GUMO				Sn	**Sn**	**11 43 50.0**	**+0.4**
	79nm,0.3s,baz=121,slow=21,SNR=8.9						
WAKE	**Wake Island**	**21.92**	**74**	P	**P**	**11 48 10.2**	**-0.1**
MJAR	**Matsushiro Arr**	**22.71**	**347**	P	**P**	**11 48 19.0**	**+0.5**
	2.2nm,0.9s,mb3.6,baz=170,slow=8.8,SNR=5.7						
MJAR				LR	LR	11 54 59.7	
	comp=Z,47nm,19.9s,MS2.9,baz=90,slow=31						
WRA	**Warramunga Arr**	**35.51**	**196**	P	**P**	**11 50 13.7**	**+0.2**
	2.3nm,0.9s,mb4.1,baz=4.5,slow=10.0,SNR=5.5						
ASAR	**Alice Springs**	**39.18**	**195**	P	**P**	**11 50 45.6**	**+1.1**
	0.2nm,0.6s,mb3.0,baz=18,slow=12,SNR=6.5						
PETK	**Petropavlovsk-**	**40.05**	**13**	LR	LR	12 05 00.9	
	comp=Z,22nm,21.4s,MS3.0,baz=61,slow=33						
CMAR	**Chiang Mai Arr**	**43.62**	**282**	P	**P**	**11 51 19.6**	**-1.5**
	0.3nm,0.4s,mb3.4,baz=91,slow=7.7,SNR=2.8						
SONM	**Songino Array**	**45.76**	**325**	P	**P**	**11 51 38.1**	**+0.4**
	0.6nm,0.8s,mb3.6,baz=138,slow=7.8,SNR=4.0						
STKA	**Stephens Creek**	**46.09**	**183**	P	**P**	**11 51 40.9**	**+0.3**
	1.7nm,0.8s,mb4.0,baz=12,slow=9.3,SNR=3.5						
MKAR	**Makanchi Array**	**60.53**	**316**	P	**P**	**11 53 26.6**	**0.0**
	0.4nm,0.2s,mb4.1,baz=96,slow=7.6,SNR=3.6						
LPAZ	**La Paz**	**148.68**	**98**	PKPbc	PKPbc	12 03 05.8	+1.6
	0.7nm,0.7s,baz=293,slow=2.6,SNR=5.8						

*NIED **29** 11:49:00, 35°.00N×132°.90E, h5km, Mw3.5 Best double couple: M0=2.01000×10^14 NP1:φs=299.00000°, δ67.00000°, λ-35.00000°. NP2:φs=44.00000°, δ58.00000°, λ-153.00000°.*

*ISCJB **29** 11:49:50.6±0.5, 35°.01N±0°.03×132°.92E±0°.04, h9km±5km, mb3.3/2, Error ellipse: s-maj=5.8km s-min=5.0km az=156.8*

*JMA **29** 11:49:50.6, 35°.02N×132°.93E, h7km±1km, M3.4*

JMA Felt III J1.

*NEIC **29** 11:49:50.7, 35°.02N×132°.93E, h7km, MG3.4(JMA), After JMA.*

*IDC **29** 11:49:53.1±1.6, 34°.42N×133°.35E, h0km, mb3.2/2, mb1 3.4/4, mb1mx3.2/25, mbtmp3.1/4, ML2.9/2, Error ellipse: s-maj=34.3km s-min=22.0km az=140.0*

ISC 29 11:49:51.1±0.5, 35°.02N±0°.03×132°.92E±0°.04, h6km±5km, n11, σ0°.95/18, mb3.3/2, 2C-3D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHS	**Saijyo**	**0.16**	**96**	⇓P	**Pg**	**11 49 53.9**	**-0.5**
JHS				S	**Sg**	**11 49 56.4**	**-0.2**
JJG	**Jouge**	**0.42**	**152**	⇑P	**Pg**	**11 49 58.9**	**-0.3**
JJG				S	**Sg**	**11 50 04.8**	**+0.1**
JGT	**Gotsu**	**0.48**	**272**	⇓P	**Pg**	**11 50 00.1**	**-0.2**
JGT				S	**Sg**	**11 50 06.8**	**+0.2**
JNM	**Ikuma**	**0.49**	**11**	⇑P	**Pg**	**11 50 00.5**	**0.0**
JNM				S	**Sg**	**11 50 07.6**	**+0.7**
JHT	**Toyohira**	**0.54**	**229**	⇓P	**Pg**	**11 50 01.1**	**-0.4**
JHT				S	**Sg**	**11 50 08.5**	**0.0**
JNU	**Nakatsue**	**2.54**	**222**	*e*Pn	**Pn**	**11 50 34.3**	**+1.4**
JNU				*e*Sn	**Sn**	**11 51 05.6**	**+1.6**
MAJO	**Matsushiro**	**4.56**	**69**	*e*Pn	**Pn**	**11 51 00.7**	**0.0**
MJAR	**Matsushiro Arr**	**4.56**	**69**	Pn	**Pn**	**11 51 03.1**	**+2.4**
	0.8nm,0.3s,baz=249,slow=14,SNR=11						
MJAR				Lg		11 52 15.9	
	0.7nm,0.3s,baz=241,slow=28,SNR=6.0						
KSRS	**Korea Array**	**4.71**	**303**	Pn	**Pb**	**11 51 14.4**	**+0.3**
	0.3nm,0.3s,baz=121,slow=14,SNR=3.2						
KSRS				Sn	**Sn**	**11 51 56.2**	**-1.5**
	1.0nm,0.3s,baz=118,slow=24,SNR=8.2						
WRA	**Warramunga Arr**	**54.67**	**178**	P	**P**	**11 59 19.6**	**-1.3**
	0.5nm,0.9s,mb3.5,baz=355,slow=8.2,SNR=3.7						
ASAR	**Alice Springs**	**58.37**	**179**	P	**P**	**11 59 45.7**	**-1.5**
	0.2nm,0.9s,mb3.2,baz=1.1,slow=5.0,SNR=2.8						

IDC 29 12:01:10.3±1.4, 13°.27N×120°.11E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=31.2km s-min=13.7km az=117.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.15**	**44**	Pg	Pg	12 01 34.4	+2.0
	125nm,0.3s,baz=198,slow=3.2,SNR=2.5						
TGY				Lg		12 01 46.2	
	165nm,0.3s,baz=194,slow=4.2,SNR=3.7						
WRA	**Warramunga Arr**	**35.85**	**157**	P	P	12 08 11.3	-0.6
	0.3nm,0.6s,baz=332,slow=10,SNR=6.1						
SONM	**Songino Array**	**36.31**	**344**	P	P	12 08 15.6	-0.1
	0.3nm,0.5s,baz=154,slow=8.0,SNR=2.2						
ASAR	**Alice Springs**	**39.11**	**160**	P	P	12 08 39.8	+0.3
	0.6nm,0.5s,baz=338,slow=6.8,SNR=22						

IDC 29 12:03:23.3±3.3, 16°.98S×173°.41W, h295km±31km, mb3.2/3, mb1 3.2/4, mb1mx3.0/18, mbtmp3.1/4, Error ellipse: s-maj=99.3km s-min=37.8km az=129.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.44**	**28**	P	Pn	12 04 21.5	-1.8
	1.6nm,0.3s,baz=206,slow=18,SNR=11						
AFI				S	S	12 05 12.4	+1.2
	10nm,0.3s,baz=214,slow=23,SNR=13						
WRA	**Warramunga Arr**	**49.49**	**258**	P	P	12 11 45.1	+0.4
	0.3nm,0.3s,baz=96,slow=7.6,SNR=30						
ASAR	**Alice Springs**	**49.62**	**253**	P	P	12 11 45.5	-0.2
	0.5nm,0.5s,baz=85,slow=8.7,SNR=22						
SONM	**Songino Array**	**96.01**	**318**	P	P	12 16 16.7	-0.3
	0.1nm,0.4s,baz=116,slow=3.4,SNR=2.6						

IDC 29 12:12:03.4±1.9, 8°.85S×125°.40E, h0km, mb3.6/1, mb1 3.4/4, mb1mx3.3/16, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=107.8km s-min=27.8km az=67.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.20**	**179**	Pn	Pn	12 14 17.8	+0.4
	0.3nm,0.3s,baz=0.7,slow=14,SNR=8.1						
FITZ				Sn	Sn	12 15 57.7	-3.9
	0.3nm,0.3s,baz=295,slow=19,SNR=4.5						
WRA	**Warramunga Arr**	**14.01**	**143**	Pn	Pn	12 15 22.6	-0.7
	0.1nm,0.3s,baz=316,slow=15,SNR=6.9						
WRA				Sn	Sn	12 17 52.2	-7.5
	0.1nm,0.3s,baz=323,slow=24,SNR=5.5						
ASAR	**Alice Springs**	**16.83**	**152**	Pn	Pn	12 16 00.8	+0.3
	0.1nm,0.3s,baz=334,slow=12,SNR=6.6						
MKAR	**Makanchi Array**	**67.38**	**329**	P	P	12 23 00.6	+0.1
	0.4nm,0.7s,baz=132,slow=7.8,SNR=

TRIZ				S	Sg	12 37 52.0	+0.2
KALE	**Kalithea**	**0.30**	**86**	P	Pg	12 37 49.0	-0.6
KALE				S	Sg	12 37 53.9	+0.4
KALE	**Kalithea**	**0.30**	**86**	P	Pg	12 37 49.0	-0.6
KALE				S	Sg	12 37 53.9	+0.4
RLS	**Riolos of Patr**	**0.39**	**217**	P	Pg	12 37 50.8	-0.4
RLS	**Riolos of Patr**	**0.39**	**217**	*e*PB	Pg	12 37 51.3	+0.1
RLS				*e*SB	Sg	12 37 56.6	+0.3
RLS	**Riolos of Patr**	**0.39**	**217**	P	Pg	12 37 50.8	-0.4
RLS	**Riolos of Patr**	**0.39**	**217**	*e*Pb	Pg	12 37 51.3	+0.1
RLS				*e*Sb	Sg	12 37 56.6	+0.3
EVR	**Evrytania**	**0.55**	**4**	P	Pg	12 37 53.3	-1.0
EVR	**Evrytania**	**0.55**	**4**	*e*PN	Pg	12 37 53.8	-0.5
EVR	**Evrytania**	**0.55**	**4**	P	Pg	12 37 53.3	-1.0
EVR	**Evrytania**	**0.55**	**4**	*e*Pn	Pg	12 37 53.8	-0.5
DSF	**Desfina**	**0.60**	**86**	P	Pg	12 37 53.9	-1.5
DSF				S	Sg	12 38 03.9	+0.7
DSF	**Desfina**	**0.60**	**86**	P	Pg	12 37 53.9	-1.5
DSF				S	Sg	12 38 03.9	+0.7
GUR	**Goura**	**0.63**	**133**	*e*PB	Pg	12 37 54.8	-1.1
GUR				*e*SN	Sg	12 38 04.3	+0.3
GUR	**Goura**	**0.63**	**133**	P	Pg	12 37 54.7	-1.2
GUR				S	Sg	12 38 04.3	+0.3
GUR	**Goura**	**0.63**	**133**	*e*Pb	Pg	12 37 54.8	-1.1
GUR				S	Sg	12 38 04.3	+0.3
AGG	**Agios Georgios**	**0.79**	**34**	P	Pg	12 37 57.2	-1.8
AGG	**Agios Georgios**	**0.79**	**34**	P	Pg	12 37 57.2	-1.8
AGG				S	Sg	12 38 09.9	+0.7
AGG	**Agios Georgios**	**0.79**	**34**	P	Pg	12 37 57.2	-1.8
AGG				S	Sg	12 38 09.9	+0.7
KFL	**Anninata**	**0.81**	**252**	P	Pg	12 37 58.8	-0.5
KFL	**Anninata**	**0.81**	**252**	P	Pg	12 37 58.8	-0.5
VLS	**Valsamata**	**0.94**	**259**	*e*PN	Pg	12 38 00.3	-1.4
VLS	**Valsamata**	**0.94**	**259**	P	Pg	12 38 00.3	-1.5
VLS				S	Sg	12 38 16.0	+1.9
VLS	**Valsamata**	**0.94**	**259**	P	Pg	12 38 00.3	-1.5
VLS				S	Sg	12 38 16.0	+1.9
LKD2	**Lefkada island**	**0.96**	**296**	P	Pg	12 38 01.0	-1.2
LKD2	**Lefkada island**	**0.96**	**296**	P	Pg	12 38 01.0	-1.2
LKR	**Lokris**	**1.01**	**73**	P	Pg	12 38 01.6	-1.6
LKR	**Lokris**	**1.01**	**73**	*e*PB	Pg	12 38 01.1	-2.1
LKR	**Lokris**	**1.01**	**73**	P	Pg	12 38 01.3	-1.9
LKR				S	Sg	12 38 16.7	+0.4
LKR	**Lokris**	**1.01**	**73**	*e*Pb	Pg	12 38 01.1	-2.1
LKR	**Lokris**	**1.01**	**73**	P	Pg	12 38 01.6	-1.6
LKR				S	Sg	12 38 16.7	+0.4
LTK	**Loutraki**	**1.01**	**110**	*e*PN	Pg	12 38 02.4	-0.8
LTK	**Loutraki**	**1.01**	**110**	P	Pg	12 38 01.9	-1.3
LTK				S	Sg	12 38 17.4	+1.1
LTK	**Loutraki**	**1.01**	**110**	P	Pg	12 38 01.9	-1.3
LTK	**Loutraki**	**1.01**	**110**	*e*Pn	Pg	12 38 02.4	-0.8
LTK				S	Sg	12 38 17.4	+1.1
ATAL	**Atalanti**	**1.04**	**71**	P	Pg	12 38 02.8	-0.9
ATAL				S	Sg	12 38 16.9	-0.3
ATAL	**Atalanti**	**1.04**	**71**	P	Pg	12 38 02.8	-0.9
ATAL				S	Sg	12 38 16.9	-0.3
VLX	**Vlachokerasia**	**1.11**	**154**	*e*PN	Pg	12 38 03.9	-1.2
VLX	**Vlachokerasia**	**1.11**	**154**	P	Pg	12 38 04.0	-1.1
VLX	**Vlachokerasia**	**1.11**	**154**	P	Pg	12 38 04.0	-1.1
ITM	**Ithomi**	**1.19**	**174**	P	Pg	12 38 06.5	-0.2
ITM	**Ithomi**	**1.19**	**174**	*e*PN	Pn	12 38 05.9	-1.3
ITM	**Ithomi**	**1.19**	**174**	P	Pg	12 38 05.8	-0.9
ITM				S	Sg	12 38 24.3	+2.1
ITM	**Ithomi**	**1.19**	**174**	P	Pg	12 38 05.8	-0.9
ITM				S	Sg	12 38 24.3	+2.1
THL	**Klokotos Trika**	**1.21**	**9**	*e*PN	Pg	12 38 05.9	-1.1
THL	**Klokotos Trika**	**1.21**	**9**	P	Pg	12 38 05.9	-1.1
THL				S	Sg	12 38 23.6	+0.9
THL	**Klokotos Trika**	**1.21**	**9**	P	Pg	12 38 05.9	-1.1
THL				S	Sg	12 38 23.6	+0.9
DID	**Didima**	**1.45**	**126**	*e*PN	Pn	12 38 10.1	-0.6
DID				*e*SN	Sn	12 38 30.4	+0.3
DID	**Didima**	**1.45**	**126**	P	Pn	12 38 09.9	-0.8
DID				S	Sb	12 38 30.8	+0.8
DID	**Didima**	**1.45**	**126**	*e*Pn	Pn	12 38 10.1	-0.6
DID				*e*Sn	Sn	12 38 30.4	+0.3
DID				S	Sb	12 38 30.8	+0.8
PYL	**PYLOS**	**1.47**	**181**	*e*PN	Pn	12 38 10.5	-0.5
PYL	**PYLOS**	**1.47**	**181**	P	Pn	12 38 10.7	-0.3
PYL	**PYLOS**	**1.47**	**181**	*e*Pn	Pn	12 38 10.5	-0.5
NEO	**Neokhori**	**1.48**	**50**	P	Pn	12 38 09.8	-1.3
NEO	**Neokhori**	**1.48**	**50**	*e*PN	Pn	12 38 10.1	-1.0
NEO	**Neokhori**	**1.48**	**50**	P	Pn	12 38 09.8	-1.3
NEO	**Neokhori**	**1.48**	**50**	*e*Pn	Pn	12 38 10.1	-1.0
ATH	**Athens Observa**	**1.59**	**104**	*e*PN	Pn	12 38 12.3	-0.3
ATH	**Athens Observa**	**1.59**	**104**	*e*Pn	Pn	12 38 12.3	-0.3
ATHU	**Athens Univers**	**1.65**	**104**	P	Pn	12 38 14.1	+0.7
ATHU				S	Sn	12 38 35.4	+0.5
ATHU	**Athens Univers**	**1.65**	**104**	P	Pn	12 38 14.1	+0.7
ATHU				S	Sn	12 38 35.4	+0.5
VLY	**Voula,Athens**	**1.68**	**107**	P	Pn	12 38 13.4	-0.5
VLY	**Voula,Athens**	**1.68**	**107**	*e*PN	Pn	12 38 13.1	-0.8
VLY	**Voula,Athens**	**1.68**	**107**	*e*Pn	Pn	12 38 13.1	-0.8
VLY	**Voula,Athens**	**1.68**	**107**	P	Pn	12 38 13.4	-0.5
PTL	**Penteli**	**1.69**	**100**	*e*PN	Pn	12 38 12.8	-1.2
PTL	**Penteli**	**1.69**	**100**	*e*Pn	Pn	12 38 12.8	-1.2
LIT	**Litokhoron**	**1.82**	**18**	P	Pn	12 38 16.1	+0.3
LIT	**Litokhoron**	**1.82**	**18**	P	Pn	12 38 15.1	-0.7
LIT				S	Sn	12 38 39.3	0.0
LIT	**Litokhoron**	**1.82**	**18**	P	Pn	12 38 16.1	+0.3
LIT				S	Sn	12 38 39.3	0.0
AOS	**Alonnisos**	**1.84**	**64**	P	Pn	12 38 15.2	-0.9
AOS	**Alonnisos**	**1.84**	**64**	P	Pn	12 38 15.2	-0.9
VLI	**Veliai**	**1.89**	**150**	P	Pn	12 38 18.4	+1.6
VLI	**Veliai**	**1.89**	**150**	*e*Pn	Pn	12 38 17.9	+1.1
VLI	**Veliai**	**1.89**	**150**	P	Pn	12 38 18.4	+1.6
KZN	**Kozani**	**1.94**	**0**	P	Pn	12 38 18.7	+1.3
KZN	**Kozani**	**1.94**	**0**	P	Pn	12 38 18.7	+1.3
SRN	**Sarande**	**2.04**	**318**	*e*PN	Pn	12 38 19.5	+0.7
SRN	**Sarande**	**2.04**	**318**	*e*Pn	Pn	12 38 19.5	+0.7
PAIG	**Paliouri**	**2.16**	**43**	P	Pn	12 38 19.3	-1.1
PAIG	**Paliouri**	**2.16**	**43**	P	Pn	12 38 19.3	-1.1
KBN	**Korca**	**2.38**	**342**	*e*PN	Pn	12 38 26.7	+3.3
KBN	**Korca**	**2.38**	**342**	*e*Pn	Pn	12 38 26.7	+3.3
PLG	**Polygyros**	**2.39**	**33**	P	Pn	12 38 23.9	+0.3
PLG	**Polygyros**	**2.39**	**33**	P	Pn	12 38 23.9	+0.3
FNA	**Florina**	**2.43**	**353**	P	Pn	12 38 25.6	+1.4
FNA	**Florina**	**2.43**	**353**	P	Pn	12 38 25.6	+1.4
HORT	**Hortiatis**	**2.46**	**25**	P	Pn	12 38 24.9	+0.4
HORT	**Hortiatis**	**2.46**	**25**	P	Pn	12 38 24.9	+0.4
OUR	**Ouranopolis**	**2.61**	**41**	P	Pn	12 38 26.7	0.0
OUR	**Ouranopolis**	**2.61**	**41**	P	Pn	12 38 26.7	0.0
GRG	**Griva**	**2.63**	**11**	P	Pn	12 38 28.1	+1.2
GRG	**Griva**	**2.63**	**11**	P	Pn	12 38 28.1	+1.2
SOH	**Sokhos**	**2.74**	**26**	P	Pn	12 38 28.5	0.0
SOH	**Sokhos**	**2.74**	**26**	*e*PN	Pn	12 38 27.7	-0.8
SOH	**Sokhos**	**2.74**	**26**	*e*Pn	Pn	12 38 27.7	-0.8
SOH	**Sokhos**	**2.74**	**26**	P	Pn	12 38 28.5	0.0
VAY	**Valandovo**	**3.01**	**12**	*i* Pn	Pn	12 38 36.0	+3.8
KRUS	**Krusevo**	**3.02**	**353**	*i* Pn	Pn	12 38 35.0	+2.7
APE	**Apeiranthos**	**3.26**	**112**	P	Pn	12 38 36.4	+0.8
APE	**Apeiranthos**	**3.26**	**112**	P	Pn	12 38 36.4	+0.8
PUK	**Puka**	**3.94**	**339**	*e*PN	Pn	12 38 47.2	+2.3
PUK	**Puka**	**3.94**	**339**	*e*Pn	Pn	12 38 47.2	+2.3
TAR1	**Taranto**	**4.08**	**303**	*e*Pn	Pn	12 38 45.7	-1.2
BCI	**Bajram Curri**	**4.20**	**343**	*e*PN	Pn	12 38 50.5	+2.0
BCI	**Bajram Curri**	**4.20**	**343**	*e*Pn	Pn	12 38 50.5	+2.0
VTS	**Vitosha**	**4.36**	**14**	⇑*i*P	Sn	12 39 42.8	+0.9
BARS	**Barje**	**4.44**	**104**	*e*Pn	Pn	12 38 52.3	+0.5
SG1	**Sgolgore (BA)**	**4.64**	**304**	*e*Pn	Pn	12 38 54.5	0.0
SG1				*e*Sn	Sn	12 39 47.5	-1.2
CUC	**Castrocucco**	**4.90**	**291**	*e*Pn	Pn	12 38 59.1	+1.0
CUC	**Castrocucco**	**4.90**	**291**	*e*Pn	Pn	12 38 59.1	+1.0
CDT	**Castel del Mon**	**5.02**	**304**	*e*Pn	Pn	12 38 59.6	-0.2
SLNA	**Salina**	**5.44**	**274**	Pn	Pn	12 39 06.1	+0.5
SLNA	**Salina**	**5.44**	**274**	Pn	Pn	12 39 06.1	+0.5
DIVS	**Divibare**	**5.88**	**347**	*e*Pn	Pn	12 39 11.4	-0.1
VAE	**Valguarnera**	**5.88**	**264**	LR	LR	12 40 56.3	
	comp=Z,68nm,21.1s,baz=309,slow=34						
INTR	**Introdacqua**	**7.03**	**304**	Pn	Pn	12 39 28.4	+1.1
INTR	**Introdacqua**	**7.03**	**304**	Pn	Pn	12 39 28.4	+1.1
VOIR		**7.48**	**18**	⇑*i*P	Pn	12 39 35.9	+2.4
VOIR		**7.48**	**18**	⇑*i*P	Pn	12 39 35.9	+2.4
MLR	**Muntele Rosu**	**7.77**	**22**	⇓*i*P	Pn	12 39 41.7	+4.2
NRCA	**Norcia**	**7.95**	**307**	Pn	Pn	12 39 40.8	+0.9
NRCA	**Norcia**	**7.95**	**307**	Pn	Pn	12 39 40.8	+0.9
VRI	**Vrincioaia**	**8.35**	**25**	⇑*i*P	Pn	12 39 50.5	+5.0
BRTR	**Keskin Array B**	**9.34**	**78**	Pn	Pn	12 40 00.2	+1.1
	0.3nm,0.3s,baz=258,slow=12,SNR=12						
BRTR	**Keskin Array B**	**9.34**	**78**	Pn	Pn	12 40 00.2	+1.1
ESDC	**Sonseca Array**	**20.01**	**282**	P	P	12 42 14.4	-3.0
	0.4nm,0.3s,baz=76,slow=11,SNR=3.9						
HFS	**Hagfors**	**22.38**	**349**	P	P	12 42 40.6	-2.1
	2.2nm,0.8s,mb3.7,baz=152,slow=13,SNR=4.2						
TORD	**Torodi Ar. Bea**	**30.80**	**221**	P	P	12 43 57.8	-2.8
	0.2nm,0.4s,mb3.3,baz=33,slow=7.6,SNR=2.6						
ARCES	**ARCESS Array B**	**31.29**	**3**	P	P	12 44 02.4	-2.0
	5.0nm,1.1s,mb4.3,baz=195,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**44.37**	**59**	P	P	12 45 53.7	-1.3
	4.8nm,0.4s,mb4.6,baz=275,slow=7.7,SNR=61						
ZALV	**Zalesovo Beam**	**44.84**	**48**	P	P	12 45 57.0	-1.6
	2.5nm,0.4s,mb4.4,baz=274,slow=8.5,SNR=5.3						

*NEIC **29** 12:43:45.6, 16°.94N×95°.40W, h138km, MD3.9(MEX), After MEX.*

MEX 29 12:43:45.6±0.6, 16°.94N×95°.40W, h138km±8km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXX	**Oaxaca**	**1.27**	**276**	*e*P	Pn	12 44 10.1	-1.8
OXX				*i* S	Sn	12 44 29.5	-2.4
OXX	**Oaxaca**	**1.27**	**276**	*e*P	Pn	12 44 10.1	-1.8
OXX				*i* S	Sn	12 44 29.5	-2.4
VHO	**Vista Hermosa**	**1.28**	**276**	*i* P	Pn	12 44 11.1	-0.9
VHO				*i* S	Sn	12 44 31.0	-1.0
VHO	**Vista Hermosa**	**1.28**	**276**	*i* P	Pn	12 44 11.1	-0.9
VHO				*i* S	Sn	12 44 31.0	-1.0
HUIG	**Huatulco**	**1.35**	**210**	*i* P	Pn	12 44 11.3	-1.4
HUIG				*i* S	Sn	12 44 31.5	-1.9
HUIG	**Huatulco**	**1.35**	**210**	*i* P	Pn	12 44 11.3	-1.4
HUIG				*i* S	Sn	12 44 31.5	-1.9
TGIG		**2.19**	**94**	*i* P	Pn	12 44 21.2	-1.1
TGIG				*i* S	Sn	12 44 48.4	-2.1
TPIG	**Tehuac#an**	**2.38**	**308**	*e*P	Pn	12 44 23.6	-1.0
TPIG				*i* S	Sn	12 44 53.0	-1.6
PCIG		**2.43**	**120**	*e*P	Pn	12 44 24.2	-1.1
PCIG				*i* S	Sn	12 44 54.4	-1.4
UTMO	**Huajuapan**	**2.46**	**291**	*i* P	Pn	12 44 24.3	-1.3
UTMO				*i* S	Sn	12 44 55.1	-1.4
PNIG	**Pinotepa**	**2.67**	**259**	*i* P	Pn	12 44 26.6	-1.7
PNIG				*i* S	Sn	12 44 58.5	-2.7
PNIG	**Pinotepa**	**2.67**	**259**	*i* P	Pn	12 44 26.6	-1.7
PNIG				*i* S	Sn	12 44 58.5	-2.7
CCIG	**Comitan**	**3.20**	**101**	*i* P	Pn	12 44 35.0	0.0
CCIG				*i* S	Sn	12 45 11.4	-1.9
CCIG	**Comitan**	**3.20**	**101**	*i* P	Pn	12 44 35.0	0.0
CCIG				*i* S	Sn	12 45 11.4	-1.9

*ISCJB **29** 13:00:54.2±0.8, 6°.7N±0°.1×126°.1E±0°.1, h152km±8km, mb3.6/4, Error ellipse: s-maj=24.9km s-min=17.5km az=149.0*

*IDC **29** 13:00:55.1±1.7, 6°.75N×126°.12E, h146km±9km, mb3.2/4, mb1 3.4/4, mb1mx3.1/21, mbtmp3.2/4, Error ellipse: s-maj=78.2km s-min=18.5km az=68.0*

ISC 29 13:00:55.4±0.8, 6°.7N±0°.1×126°.1E±0°.1, h146km±8km, n10, σ0s57/13, mb3.6/4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.28**	**28**	*e*P	Pn	13 01 14.7	-0.8
MATI				*e*S	Sn	13 01 22.3	-8.4
DAV	**Davao City (W)**	**0.66**	**305**	P	Pn	13 01 17.0	-0.2
	188nm,0.3s,baz=216,slow=19,SNR=17						
DAV				S	Sn	13 01 34.4	+0.6
	134nm,0.3s,baz=121,slow=6.7,SNR=7.2						
KCP	**Kidapawan**	**1.07**	**287**	⇑*e*P	Pn	13 01 19.9	-0.6
KCP				*i* S	Sn	13 01 39.6	+0.1
BUKP	**Musuan**	**1.58**	**318**	*e*P	Pn	13 01 25.3	-0.2
BUTP	**Butuan**	**2.31**	**348**	*e*P	Pn	13 01 35.0	+0.9
PAGZ	**Pagadian**	**2.95**	**293**	*e*P	Pn	13 01 42.2	+0.2
FITZ	**Fitzroy Crossi**	**24.64**	**181**	P	P	13 06 02.6	0.0
	0.8nm,0.4s,mb3.6,baz=357,slow=10.0,SNR=6.7						
WRA	**Warramunga Arr**	**27.68**	**163**	P	P	13 06 30.9	+1.0
	0.3nm,0.3s,mb3.5,baz=344,slow=10,SNR=11						
ASAR	**Alice Springs**	**31.12**	**166**	P	P	13 06 60.0	-0.3
	0.5nm,0.3s,mb3.7,baz=339,slow=7.2,SNR=18						
MKAR	**Makanchi Array**	**54.80**	**324**	P	P	13 10 09.5	-0.6
	0.4nm,0.4s,mb3.5,baz=126,slow=6.1,SNR=3.9						

*BJI **29** 13:03:58.6, 24°.30S×67°.00W, h120km, mB5.1/5*

*ISCJB **29** 13:04:00.3±0.8, 24°.27S±0°.04×66°.97W±0°.06, h160km±7km, mb4.4/69, Error ellipse: s-maj=9.5km s-min=6.1km az=162.5*

*IDC **29** 13:04:01.8±1.4, 24°.25S×67°.04W, h164km±12km, mb4.1/11, mb1 4.3/15, mb1mx4.2/18, mbtmp4.1/15, Error ellipse: s-maj=13.7km s-min=10.0km az=80.0*

*NEIC **29** 13:04:01.6±0.7, 24°.26S×67°.01W, h160km±7km, mb4.6/60, Error ellipse: s-maj=7.4km s-min=5.7km az=63.0*

ISC 29 13:04:01.1±0.7, 24°.28S±0°.04×66°.92W±0°.06, h153km±7km, n493, σ0s60/472, mb4.4/69, 177C-202D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**5.80**	**215**	*e*P	Pn	13 05 23.9	-1.2
	242nm,0.7s						
CFAA	**Coronel Fontan**	**7.39**	**189**	P	Pn	13 05 47.4	+1.1
	0.3nm,0.3s,baz=0.6,slow=12,SNR=22						
CFAA				S	Sn	13 07 07.8	-1.1
	1.0nm,0.3s,baz=289,slow=21,SNR=8.8						
CFAA	**Coronel Fontan**	**7.39**	**189**	P	Pn	13 05 47.4	+1.1
CFAA				S	Sn	13 07 07.8	-1.1
LPAZ	**La Paz**	**8.03**	**352**	P	Pn	13 05 56.4	+1.4
	10nm,0.3s,baz=158,slow=6.8,SNR=143						
LPAZ				S	Sn	13 07 22.4	-2.2
	0.4nm,0.3s,baz=198,slow=20,SNR=2.0						
CPUP	**Villa Florida**	**8.92**	**105**	P	Pn	13 06 08.8	+2.2
	2.5nm,0.3s,baz=278,slow=15,SNR=31						
TRQA	**Tornquist**	**14.36**	**164**	*e*Pn	Pn	13 07 17.7	+0.3
	34nm,0.6s						
TRQA				*e*		13 07 21.2	
PLCA	**Paso Flores**	**16.68**	**190**	P	Pn	13 07 46.3	+0.4
	0.7nm,0.3s,baz=7.0,slow=12,SNR=20						
SPB	**Sao Paulo**	**17.83**	**92**	*e*P	Pn	13 07 60.0	+0.2
	40nm,0.8s						
BDFB	**Brasilia**	**19.72**	**68**	P	P	13 08 20.4	+1.4
	12nm,0.3s,baz=238,slow=11,SNR=94						
RCBR	**Riachuelo**	**34.98**	**63**	P	P	13 10 39.5	+0.5
	28nm,0.9s,mb4.9,baz=231,slow=10,SNR=14						
CELP	**Cerrillos**	**42.10**	**0**	*e*P	P	13 11 35.1	-3.1
VNA3	**Neumayer Olymp**	**56.86**	**161**	*e*P	P	13 13 27.3	-2.1
VNA1	**Neumayer--Stat**	**57.06**	**160**	*e*P	P	13 13 29.4	-1.4
VNA2	**Neumayer--Watz**	**57.43**	**160**	*e*P	P	13 13 31.3	-2.1
	baz=290,slow=7.2						
SNAA	**Sanae**	**59.06**	**161**	P	P	13 13 45.3	+0.6
	1.6nm,0.6s,mb4.0,baz=283,slow=7.4,SNR=54						
CPCT	**Cooper Cave**	**61.70**	**344**	*e*P	P	13 14 01.2	-1.8
SWET	**Sewanee**	**61.85**	**342**	*e*P	P	13 14 02.5	-1.5
JCT	**Junction City**	**62.92**	**328**	⇓P	P	13 14 10.2	-1.0
	baz=63,SNR=8.6						
JCT	**Junction City**	**62.92**	**328**	*e*P	P	13 14 09.9	-1.3
	19nm,0.8s,mb5.0						
WVT	**Waverly**	**63.25**	**341**	*e*P	P	13 14 11.2	-2.1
	23nm,0.9s,mb5.0						
628A	**Black Gap, Mar**	**63.66**	**325**	⇓P	P	13 14 15.9	-0.2
	baz=64,SNR=17						
MIAR	**Mount Ida**	**63.74**	**336**	*e*P	P	13 14 14.6	-1.9
	13nm,1.0s,mb4.7						
627A	**Terlingua Ranc**	**63.89**	**325**	⇓P	P	13 14 17.1	-0.5
	baz=64,SNR=9.3						
TXAR	**Lajitas Array**	**63.95**	**324**	P	P	13 14 17.2	-0.8
	3.0nm,0.8s,mb4.2,baz=152,slow=8.0,SNR=24						
528A	**Cox Ranch, San**	**64.15**	**326**	⇓P	P	13 14 18.4	-0.9
	baz=64,SNR=11						
626A	**Big Bend Ranch**	**64.37**	**324**	⇓P	P	13 14 20.6	-0.1
	baz=65,SNR=33						
428A	**Kincaid Ranch,**	**64.55**	**326**	⇑P	P	13 14 21.5	-0.4
	baz=65						
527A	**Woodward Ranch**	**64.56**	**325**	⇑P	P	13 14 21.3	-0.6
	baz=65,SNR=10.0						
526A	**Mary Lane Ranc**	**64.75**	**325**	⇓P	P	13 14 22.9	-0.2
	baz=65,SNR=13						
427A	**Hayter Ranch,**	**65.01**	**326**	⇑P	P	13 14 24.1	-0.8
	baz=65,SNR=10						
328A	**Wristen Ranch,**	**65.14**	**326**	⇓P	P	13 14 24.9	-0.8
	baz=65,SNR=12						
327A	**Balmorhea Ranc**	**65.47**	**326**	⇓P	P	13 14 27.5	-0.4
	baz=66						
326A	**Caldwell Ranch**	**65.68**	**326**	⇑P	P	13 14 28.6	-0.6
	baz=66,SNR=8.0						
FVM	**French Village**	**65.75**	**340**	*e*P	P	13 14 28.0	-1.5
	11nm,0.8s,mb4.7						
425A	**Indio Mountain**	**65.79**	**324**	⇓P	P	13 14 29.2	-0.7
	baz=66,SNR=21						
227A	**Bennet, Jal**	**65.89**	**326**	⇑P	P	13 14 30.2	-0.3
	baz=66,SNR=6.5						
WMOK	**Wichita Mounta**	**66.02**	**332**	*e*P	P	13 14 29.5	-1.7
	2.8nm,0.7s,mb4.2						
325A	**Bean Ranch, Si**	**66.24**	**325**	⇓P	P	13 14 32.1	-0.7
	baz=66,SNR=33						
226A	**Malaga, Loving**	**66.34**	**326**	⇓P	P	13 14 33.1	-0.2
	baz=66,SNR=9.7						
127A	**Arkansas Junct**	**66.45**	**327**	⇑P	P	13 14 33.4	-0.7
	baz=67						
324A	**Moseley Ranch,**	**66.57**	**325**	⇑P	P	13 14 33.4	-1.4
	baz=67,SNR=21						
225A	**Deer Hill, Car**	**66.75**	**325**	⇓P	P	13 14 35.3	-0.6
	baz=67,SNR=13						
126A	**Clayton Basin,**	**66.76**	**326**	⇓P	P	13 14 35.5	-0.6
	baz=67,SNR=5.7						
Z27A	**Tatum**	**66.90**	**327**	⇓P	P	13 14 35.7	-1.2
	baz=67,SNR=12						
224A	**Cornudas Mount**	**67.09**	**325**	⇑P	P	13 14 37.0	-1.1
	baz=67,SNR=27						
125A	**Gardner Draw,**	**67.10**	**326**	⇓P	P	13 14 36.9	-1.3
	baz=67,SNR=10						
MSTX	**Muleshoe**	**67.21**	**328**	⇓P	P	13 14 37.9	-1.0
	baz=67,SNR=14						
Z26A	**Caprock**	**67.24**	**327**	⇑P	P	13 14 38.3	-0.8
	baz=67,SNR=16						
Y27A	**Causey**	**67.33**	**328**	⇑P	P	13 14 38.3	-1.3
	baz=68,SNR=9.6						
AMTX	**Amarillo**	**67.45**	**330**	⇓P	P	13 14 39.2	-1.1
	baz=68						
AMTX	**Amarillo**	**67.45**	**330**	*e*P	P	13 14 39.3	-1.0
	19nm,0.1s						
124A	**Stringfield Ra**	**67.54**	**325**	⇑P	P	13 14 40.4	-0.5
	baz=68,SNR=14						
Z25A	**Roswell**	**67.62**	**326**	⇓P	P	13 14 40.4	-1.1
	baz=68,SNR=11						
Y26A	**Elida**	**67.69**	**327**	⇑P	P	13 14 40.5	-1.3
	baz=68,SNR=10.0						
DBIC	**Dimbokro**	**67.82**	**71**	P	P	13 14 42.6	-0.6
	2.6nm,0.5s,mb4.2,baz=219,slow=8.7,SNR=9.4						
222A	**Williams Famil**	**67.95**	**324**	⇓P	P	13 14 43.5	0.0
	baz=68						
Z24A	**Sheeppen Canyo**	**67.99**	**326**	⇑P	P	13 14 43.2	-0.6
	baz=68,SNR=15						
Y25A	**Mesa, Roswell**	**68.12**	**327**	⇓P	P	13 14 43.4	-1.1
	baz=68,SNR=11						
320A	**Kipp Ranch, An**	**68.15**	**322**	⇑P	P	13 14 45.0	+0.2
	baz=68						
X26A	**CR and CF Fran**	**68.19**	**328**	⇓P	P	13 14 44.3	-0.6
	baz=68,SNR=9.3						
221A	**Mesquite Ranch**	**68.24**	**323**	⇓P	P	13 14 45.7	+0.4
	baz=68						
W27A	**Bowe Ranch, En**	**68.24**	**329**	⇓P	P	13 14 44.3	-0.9
	baz=68,SNR=6.8						
122A	**Conniff Cattle**	**68.35**	**324**	⇑P	P	13 14 46.5	+0.4
	baz=68						
Z23A	**Rita Site, Whi**	**68.39**	**325**	⇓P	P	13 14 46.2	-0.1
	baz

S25A	Robets Cordova baz=71,SNR=19	70.99 329 ⇓P	P	13 15 02.3	+0.2
W20A	Ramah baz=71,SNR=6.6	71.01 325 ⇓P	P	13 15 02.8	+0.5
214A	Organ Pipe Nat baz=71,SNR=5.6	71.06 320 ⇑P	P	13 15 02.9	+0.2
V21A	Milan baz=71	71.09 326 ⇓P	P	13 15 03.4	+0.7
U22A	Llaves baz=71,SNR=9.6	71.14 327 ⇓P	P	13 15 03.7	+0.7
Y17A	Roosevelt baz=71,SNR=23	71.20 322 ⇓P	P	13 15 03.8	+0.3
T23A	Casias Ranch, baz=72	71.26 328 ⇓P	P	13 15 04.0	+0.3
R25A	Fountain Ranch baz=72,SNR=5.8	71.32 330 ⇑P	P	13 15 03.9	-0.1
X18A	Snowflake baz=72	71.33 324 ⇑P	P	13 15 04.7	+0.5
S24A	Houchin Ranch, baz=72,SNR=12	71.34 329 ⇑P	P	13 15 04.9	+0.7
W19A	Sanders baz=72,SNR=8.0	71.47 324 ⇑P	P	13 15 05.3	+0.3
V20A	Brimhall baz=72,SNR=5.6	71.51 325 ⇑P	P	13 15 05.4	+0.1
SDCO	Great Sand Dun baz=72,SNR=18	71.56 329 ⇑P	P	13 15 05.7	+0.2
SDCO	Great Sand Dun 4.9nm,0.7s,mb4.3	71.56 329 eP	P	13 15 05.8	+0.3
U21A	Nageezi baz=72,SNR=9.1	71.58 326 ⇑P	P	13 15 06.0	+0.4
X17A	Forest Lakes baz=72,SNR=11	71.66 323 ⇓P	P	13 15 06.9	+0.8
W18A	Petrified Fore baz=72	71.66 324 ⇑P	P	13 15 06.5	+0.3
T22A	Edith baz=72,SNR=7.7	71.66 327 ⇓P	P	13 15 06.7	+0.6
114A	Black Gap (USA baz=72	71.68 320 ⇑P	P	13 15 06.4	+0.1
Y16A	Circle Bar Ran baz=72,SNR=9.2	71.69 322 ⇑P	P	13 15 06.9	+0.5
V19A	Window Rock baz=72	71.75 325 ⇑P	P	13 15 07.0	+0.3
R24A	Sanders Place, baz=72,SNR=7.2	71.77 329 ⇓P	P	13 15 07.2	+0.4
Q25A	Bedland, Calha baz=72	71.92 330 ⇑P	P	13 15 07.4	-0.2
U20A	Newcomb baz=72,SNR=5.7	71.98 326 ⇓P	P	13 15 08.2	+0.1
X16A	Lo Mia Camp, P baz=72,SNR=11	72.07 322 ⇓P	P	13 15 09.1	+0.5
S22A	4UR Ranch, Cre baz=72,SNR=6.3	72.20 328 ⇓P	P	13 15 09.6	+0.3
113A	Mohawk Valley, baz=72	72.20 320 ⇑P	P	13 15 09.3	-0.1
Y15A	Casa Rosa Ranc baz=72,SNR=7.7	72.23 322 ⇓P	P	13 15 09.9	+0.3
P25A	Willow Gulch B baz=73,SNR=7.4	72.37 331 ⇓P	P	13 15 10.7	+0.4
Q24A	Divide baz=73,SNR=8.8	72.38 330 ⇑P	P	13 15 10.6	+0.3
Z13A	Yuma Proving G baz=73	72.45 320 ⇓P	P	13 15 11.1	+0.2
R22A	Saguache, Gunn baz=73	72.55 328 ⇑P	P	13 15 12.0	+0.6
X15A	Humboldt baz=73,SNR=10	72.57 322 ⇑P	P	13 15 12.0	+0.4
T19A	Beclabito baz=73,SNR=12	72.59 326 ⇑P	P	13 15 11.9	+0.3
Y14A	Wickenburg baz=73,SNR=5.2	72.60 321 ⇓P	P	13 15 11.7	-0.1
V17A	Tonalea, Kykot baz=73,SNR=13	72.61 324 ⇑P	P	13 15 12.3	+0.5
S21A	Coal Bank Pass baz=73,SNR=6.8	72.61 327 ⇑P	P	13 15 12.1	+0.4
W16A	Flagstaff baz=73,SNR=5.1	72.62 323 ⇓P	P	13 15 12.5	+0.6
OGNE	Ogallala baz=73	72.63 333 ⇑P	P	13 15 11.7	-0.1
U18A	Rough Rock, Ch baz=73,SNR=6.0	72.72 325 ⇑P	P	13 15 12.7	+0.3
X14A	Yava baz=73,SNR=7.5	72.92 322 ⇑P	P	13 15 14.0	+0.3
ECSD	EROS Data Cent 8.1nm,0.8s,mb4.5	72.97 338 eP	P	13 15 12.3	-1.3
Y13A	Salome baz=73	72.99 321 ⇑P	P	13 15 14.3	+0.2
S20A	Disappointment baz=73	73.03 327 ⇑P	P	13 15 14.9	+0.7
GLA	Glamis baz=73,SNR=5.3	73.03 319 ⇓P	P	13 15 14.3	0.0
R21A	Cimarron baz=73,SNR=5.6	73.04 328 ⇑P	P	13 15 14.7	+0.5
W15A	Williams baz=73	73.09 322 ⇓P	P	13 15 15.3	+0.7
Q22A	Crested Butte, baz=73	73.12 328 ⇓P	P	13 15 15.4	+0.6
U16A	Tuba City baz=73,SNR=5.1	73.18 324 ⇓P	P	13 15 15.8	+0.7
ISCO	Idaho Springs baz=74,SNR=9.1	73.26 330 ⇓P	P	13 15 15.8	+0.3
ISCO	Idaho Springs 10nm,1.1s,mb4.5	73.26 330 eP	P	13 15 15.9	+0.4
SYO	Syowa Base	73.26 159⇑ eP	P	13 15 14.4	-0.8
T18A	Mexican Hat baz=74,SNR=16	73.26 325 ⇑P	P	13 15 15.6	0.0
R20A	Redvale baz=74,SNR=6.4	73.31 327 ⇓P	P	13 15 16.6	+0.7
Y12C	Blythe baz=74,SNR=5.6	73.35 320 ⇑P	P	13 15 16.5	+0.3
S19A	Harvey Farm, M baz=74,SNR=16	73.35 326 ⇑P	P	13 15 16.3	+0.2
PV01	Paradox Valley 1μm,1.1s	73.36 327 eP	P	13 15 16.7	+0.5
N25A	Grover baz=74	73.40 331 ⇓P	P	13 15 16.8	+0.5
SMCO	Snowmass 4.0nm,0.6s,mb4.3	73.40 329 eP	P	13 15 17.1	+0.8
Q21A	Lamborn Mesa, baz=74	73.42 328 ⇑P	P	13 15 16.8	+0.3
V15A	Kaibab Nationa baz=74,SNR=6.0	73.51 323 ⇓P	P	13 15 17.7	+0.6
DVTC	Desert V Tower baz=74	73.53 318 ⇓P	P	13 15 17.5	+0.3
SWSC	Sam W. Stewart baz=74	73.54 319 ⇓P	P	13 15 17.5	+0.2
X13A	Yucca baz=74,SNR=8.2	73.55 321 ⇑P	P	13 15 17.5	+0.2
W14A	Seligman baz=74,SNR=6.8	73.57 322 ⇑P	P	13 15 18.1	+0.6
P22A	Eagle baz=74,SNR=5.4	73.63 329 ⇓P	P	13 15 18.2	+0.5
T17A	Navajo Res., N baz=74,SNR=11	73.65 325 ⇓P	P	13 15 18.8	+0.9
O23A	Lake Granby, G baz=74	73.73 330 ⇑P	P	13 15 18.7	+0.4
S18A	Hurst Farm, Bl baz=74,SNR=20	73.75 326 ⇓P	P	13 15 19.1	+0.6
N24A	Carr baz=74	73.76 331 ⇓P	P	13 15 18.8	+0.4
BC3	Big Chuckawall baz=74,SNR=8.1	73.83 319 ⇓P	P	13 15 19.1	+0.1
R19A	Curley Farm, L baz=74,SNR=7.3	73.83 327 ⇓P	P	13 15 19.0	+0.1
MONP	Monument Peak baz=74	73.88 318 ⇓P	P	13 15 19.6	+0.3
V14A	Boquillas Ranc baz=74,SNR=12	73.89 322 ⇓P	P	13 15 20.1	+0.8
P21A	Newcastle baz=74	73.90 328 P	P	13 15 20.0	+0.7
W13A	Hualapai Mount baz=74	73.94 321 ⇓P	P	13 15 20.2	+0.6
O22A	Kremmling baz=74,SNR=7.6	73.98 329 ⇓P	P	13 15 20.0	+0.3
IRM	Iron Mountain baz=74,SNR=7.6	74.00 320 ⇓P	P	13 15 20.0	0.0
T16A	Glen Canyon Da baz=74	74.01 324 ⇑P	P	13 15 20.3	+0.4
U15A	North Rim baz=74,SNR=14	74.02 323 ⇑P	P	13 15 20.9	+0.9
S17A	Black Ridge (B baz=74,SNR=7.4	74.12 325 ⇓P	P	13 15 21.0	+0.4
R18A	Canyonlands Na baz=74,SNR=6.1	74.22 326 ⇓P	P	13 15 21.4	+0.2
M24A	Cheyenne baz=74	74.25 331 ⇓P	P	13 15 22.1	+0.8
N23A	Red Feather La baz=74,SNR=7.6	74.29 330 ⇑P	P	13 15 21.8	+0.3
P20A	De Beque baz=74	74.33 328 ⇑P	P	13 15 22.0	+0.2
Q19A	Hogan Spring (baz=74,SNR=8.7	74.34 327 ⇑P	P	13 15 23.2	+1.3
BELC	Belle Mtn. Jos baz=75	74.39 319 ⇑P	P	13 15 22.6	+0.3
PFO	Pinyon Flat Ob baz=75	74.40 319 ⇑P	P	13 15 22.7	+0.5
PHWY	Pilot Hill 7.5nm,1.0s,mb4.4	74.40 331 eP	P	13 15 21.7	-0.4
N22A	Wattenberg Ran baz=75,SNR=7.2	74.45 330 ⇓P	P	13 15 23.2	+0.8
U14A	Mt Trumbull baz=75,SNR=19	74.50 323 ⇑P	P	13 15 23.6	+0.8
T15A	Red Dirt Ranch baz=75,SNR=14	74.50 324 ⇑P	P	13 15 23.6	+0.8
V13A	Grand Canyon W baz=75,SNR=9.1	74.54 322 ⇑P	P	13 15 23.4	+0.4
S16A	Weppner Ranch, baz=75	74.61 325 ⇑P	P	13 15 23.6	+0.2
M23A	Laramie baz=75,SNR=7.3	74.65 331 ⇓P	P	13 15 23.8	+0.2
R17A	Hanksville Air baz=75,SNR=8.2	74.67 326 ⇑P	P	13 15 23.9	+0.2
P19A	Cripple Cowboy baz=75,SNR=16	74.73 328 ⇑P	P	13 15 24.6	+0.5
GMRC	Granite Mounta baz=75,SNR=14	74.74 320 ⇓P	P	13 15 24.8	+0.5
O20A	White River Ci baz=75,SNR=5.4	74.76 328 ⇑P	P	13 15 24.6	+0.4
MURC	Murrieta baz=75	74.84 318 ⇑P	P	13 15 25.1	+0.2
Q18A	Rafter H Ranch baz=75,SNR=5.2	74.89 327 ⇓P	P	13 15 25.2	+0.2
N21A	Black Mountain baz=75	74.91 329 ⇑P	P	13 15 26.4	+1.4
T14A	Hurricane baz=75,SNR=10	74.92 323 ⇓P	P	13 15 25.8	+0.7
U13A	Pakoon Wash baz=75	74.93 322 ⇑P	P	13 15 25.8	+0.5
V12A	Nelson baz=75,SNR=6.5	74.94 321 ⇑P	P	13 15 25.5	+0.1
R16A	Teasdale baz=75,SNR=5.8	74.97 325 ⇓P	P	13 15 25.7	+0.3
M22A	Cedar Creek Ra baz=75	74.99 330 ⇓P	P	13 15 26.0	+0.5
SRU	San Rafael baz=75,SNR=20	75.09 326 ⇓P	P	13 15 26.3	+0.1
SRU	San Rafael 13nm,0.7s,mb4.7	75.09 326 eP	P	13 15 26.3	+0.1
L23A	Garrett baz=75	75.16 331 ⇓P	P	13 15 27.2	+0.7
HEC	Hector,Ludlow baz=75,SNR=8.1	75.17 320 ⇑P	P	13 15 27.1	+0.4
U12A	Valley of Fire baz=76,SNR=8.0	75.27 322 ⇑P	P	13 15 27.5	+0.3
O19A	Miners Draw (B baz=76	75.31 328 ⇓P	P	13 15 27.6	+0.2
N20A	Spence Gulch, baz=76,SNR=8.5	75.31 329 ⇑P	P	13 15 27.5	+0.2
R15A	Junction baz=76	75.33 325 ⇓P	P	13 15 28.0	+0.5
T13A	Saint George baz=76	75.34 323 ⇑P	P	13 15 28.2	+0.6
P18A	Preston Nutter baz=76,SNR=15	75.35 327 ⇑P	P	13 15 28.1	+0.5
L22A	Ellis Ranch, M baz=76	75.42 331 ⇓P	P	13 15 28.6	+0.6
CCUT	Cedar City 16nm,0.8s,mb4.7	75.42 323 eP	P	13 15 29.2	+1.1
CIS	Catalina Islan baz=76	75.45 317 ⇓P	P	13 15 28.3	0.0
S14A	Cedar City baz=76	75.47 324 ⇓P	P	13 15 29.1	+0.7
P17A	Butcher Ranch, baz=76	75.48 326 ⇓P	P	13 15 28.8	+0.4
RWWY	Rawlins 13nm,1.0s,mb4.5	75.50 330 eP	P	13 15 27.1	-1.3
MSU	Marysvale 13nm,0.8s,mb4.6	75.50 325 eP	P	13 15 29.1	+0.6
M21A	Separation Pea baz=76,SNR=6.2	75.50 330 ⇑P	P	13 15 28.7	+0.3
BFSC	Mount Baldy Ra baz=76	75.56 319 ⇓P	P	13 15 28.9	0.0
ARUT	Antelope Range 5.9nm,0.7s,mb4.3	75.64 324 eP	P	13 15 30.5	+1.2
S13A	Holt Ranch, En baz=76,SNR=10	75.72 323 ⇑P	P	13 15 30.6	+0.8
GSC	Goldstone baz=76,SNR=6.8	75.78 320 ⇓P	P	13 15 30.2	+0.1
GSC	Goldstone 16nm,1.4s,mb4.5	75.78 320 eP	P	13 15 30.6	+0.5
L21A	Rawlins baz=76,SNR=14	75.79 330 ⇓P	P	13 15 30.0	-0.1
M20A	Sweetwater, Wa baz=76	75.79 329 ⇑P	P	13 15 30.2	+0.1
K22A	Casper baz=76	75.95 331 ⇑P	P	13 15 31.5	+0.5
Q15A	Fillmore baz=76	75.97 325 ⇓P	P	13 15 31.5	+0.3
O17A	Robinson Place baz=76,SNR=22	76.02 327 ⇓P	P	13 15 32.2	+0.8
RSSD	Black Hills 2.6nm,0.5s,mb4.1	76.09 333 eP	P	13 15 31.9	+0.2
N18A	Larsen Ranch, baz=76	76.10 328 ⇑P	P	13 15 31.8	0.0
EDW2	Edwards Air Fo baz=76	76.19 319 ⇓P	P	13 15 32.4	-0.1
R13A	O'Grain Ranch, baz=76	76.21 324 ⇓P	P	13 15 33.2	+0.6
M19A	Rock Springs baz=76	76.26 329 ⇓P	P	13 15 33.0	+0.3
K21A	Alcova baz=76,SNR=16	76.26 331 ⇓P	P	13 15 33.1	+0.3
L20A	Wamsutter baz=76,SNR=8.9	76.27 329 ⇓P	P	13 15 33.0	+0.2
U10A	Ash Meadows, A baz=76	76.28 321 ⇓P	P	13 15 33.5	+0.5
P15A	Leamington baz=76	76.34 326 ⇑P	P	13 15 33.5	+0.2
O16A	Springville baz=77	76.42 326 ⇑P	P	13 15 34.0	+0.3
LRMC	Laurel Mountai baz=77	76.42 319 ⇑P	P	13 15 33.9	+0.1
Q14A	Sevier Lake (B baz=77,SNR=16	76.43 325 ⇓P	P	13 15 34.6	+0.8
J22A	Midwest baz=77	76.54 331 ⇓P	P	13 15 33.9	-0.4
TORD	Torodi Ar. Bea 3.4nm,0.4s,mb4.3,baz=258,slow=5.9,SNR=39	76.60 69 P	P	13 15 34.9	-0.3
TORD	Torodi Ar. Bea	76.60 69 P	P	13 15 34.9	-0.3
FURC	Furnace Creek, baz=77	76.62 321 ⇑P	P	13 15 35.2	+0.3
M18A	Lyman baz=77	76.64 328 ⇑P	P	13 15 34.7	-0.1
N17A	Moffit Pass baz=77,SNR=18	76.64 327 ⇓P	P	13 15 35.4	+0.5
MPMC	Manual Prospec baz=77,SNR=6.3	76.70 320 ⇓P	P	13 15 35.3	0.0
P14A	Drum Mountains baz=77,SNR=17	76.76 325 ⇑P	P	13 15 36.4	+0.8
AGMN	Agassiz Nation 5.0nm,0.7s,mb4.2	76.77 341 eP	P	13 15 34.5	-0.9
K20A	Yellowstone Ra baz=77,SNR=7.2	76.78 330 ⇓P	P	13 15 35.3	-0.3
L19A	Farson baz=77,SNR=7.3	76.82 329 ⇑P	P	13 15 36.0	+0.1
N16A	Rees Ranch, Co baz=77	76.90 327 ⇑P	P	13 15 36.7	+0.3
O15A	The Old Anders baz=77	76.96 326 ⇑P	P	13 15 37.1	+0.4
L18A	Fontenelle, Gr baz=77,SNR=8.7	77.00 328 ⇑P	P	13 15 37.0	+0.1
ISA	Isabella baz=77,SNR=10.0	77.01 319 ⇑P	P	13 15 37.4	+0.3
ISA	Isabella 8.4nm,0.9s,mb4.4	77.01 319 eP	P	13 15 37.4	+0.3
DUG	Dugway baz=77,SNR=5.5	77.08 326 ⇓P	P	13 15 37.6	+0.2
DUG	Dugway 8.4nm,1.2s,mb4.2	77.08 326 eP	P	13 15 37.6	+0.3
K19A	Absolon Red Bu baz=77,SNR=8.1	77.14 330 ⇓P	P	13 15 37.2	-0.4
J20A	Shoshoni baz=77	77.21 331 ⇓P	P	13 15 38.4	+0.4
R11A	Troy Canyon, C baz=77,SNR=15	77.22 323 ⇓P	P	13 15 38.8	+0.6
I21A	Big Trails, Te baz=77,SNR=18	77.22 331 ⇑P	P	13 15 37.6	-0.5
CWC	Cottonwood Cre baz=78	77.31 320 ⇓P	P	13 15 38.9	+0.1
M16A	Huntsville baz=78	77.31 327 ⇑P	P	13 15 38.8	+0.1
PKM	Peak Mountain baz=78,SNR=7.7	77.31 318 ⇑P	P	13 15 39.1	+0.3
BW06	Boulder Array baz=78,SNR=6.2	77.42 329 ⇑P	P	13 15 38.9	-0.3
VES	Vestal, Richgr baz=78	77.50 319 ⇓P	P	13 15 39.8	-0.1
HWUT	Hardware Ranch 8.2nm,0.6s,mb4.5	77.50 327 eP	P	13 15 39.5	-0.2
L17A	Cokeville baz=78,SNR=8.2	77.54 328 ⇑P	P	13 15 39.4	-0.4
K18A	Toltan Ranch, baz=78,SNR=12	77.55 329 ⇓P	P	13 15 40.3	+0.4
J19A	Crowheart baz=78,SNR=13	77.58 330 ⇑P	P	13 15 39.8	-0.2
I20A	Worland baz=78,SNR=6.7	77.70 331 ⇓P	P	13 15 40.5	-0.2
L16A	Fish Haven baz=78,SNR=5.6	77.74 328 ⇓P	P	13 15 40.8	-0.2
H21A	Big Horn, Sher baz=78,SNR=8.5	77.76 332 ⇑P	P	13 15 40.3	-0.7
M15A	Larsen Ranch, baz=78	77.83 327 ⇓P	P	13 15 41.0	-0.5
J18A	Kendall Valley baz=78,SNR=15	77.98 329 ⇑P	P	13 15 42.2	-0.1
K17A	Gardner Place, baz=78,SNR=6.2	78.06 328 ⇑P	P	13 15 42.5	-0.3
H20A	Greybull baz=78	78.06 331 ⇑P	P	13 15 42.0	-0.7
AHID	Auburn Hatcher 12nm,0.5s,mb4.8	78.15 328 eP	P	13 15 43.2	0.0
I19A	Meeteetse baz=78,SNR=8.4	78.15 330 ⇓P	P	13 15 43.3	+0.1
L15A	Malad City baz=78,SNR=12	78.20 327 ⇑P	P	13 15 43.2	-0.3
I18A	Diamond G Ranc baz=78,SNR=8.8	78.27 330 ⇓P	P	13 15 44.1	+0.3
G21A	Lodge Grass baz=78,SNR=11	78.31 332 ⇑P	P	13 15 43.7	-0.4
J17A	Brown Place, J baz=79,SNR=6.4	78.42 329 ⇑P	P	13 15 45.1	+0.3
K16A	Soda Springs baz=79,SNR=15	78.44 328 ⇑P	P	13 15 45.3	+0.5
REDW	Red Top Meadow 6.8nm,0.9s,mb4.3	78.49 329 eP	P	13 15 45.2	+0.1
ULM	Lac du Bonnet 8.7nm,0.6s,mb4.5,baz=154,slow=5.7,SNR=10	78.52 342 P	P	13 15 44.0	-1.0
MLAC	Mammoth Lakes baz=79,SNR=5.2	78.56 320 ⇑P	P	13 15 46.1	+0.5
LOHW	Long Hollow 3.7nm,0.6s,mb4.2	78.56 329 eP	P	13 15 45.5	+0.1
TPAW	Teton Pass 13nm,1.2s,mb4.4	78.63 329 eP	P	13 15 46.1	+0.3
H19A	Powell baz=79	78.64 331 ⇓P	P	13 15 45.6	-0.3
L14A	Malta baz=79,SNR=5.0	78.65 327 ⇓P	P	13 15 45.8	-0.3
D24A	Glendive baz=79	78.67 335 ⇑P	P	13 15 45.9	0.0
RRI2	Red Ridge 26nm,1.4s,mb4.7	78.70 329 eP	P	13 15 46.5	+0.3
MOOW	Moose Ponds 1.3nm,0.6s,mb3.7	78.73 329 eP	P	13 15 46.3	-0.1
G20A	Bridger baz=79,SNR=14	78.74 332 ⇑P	P	13 15 45.8	-0.6
F21A	Absaloka Mine, baz=79	78.75 333 ⇓P	P	13 15 46.0	-0.4
J16A	Bone baz=79	78.78 328 ⇓P	P	13 15 46.5	-0.2
K15A	Arbon baz=79,SNR=11	78.78 328 ⇓P	P	13 15 46.7	0.0
I17A	Pilgrim Ck. baz=79	78.79 329 ⇑P	P	13 15 47.4	+0.7
SCHQ	Schefferville 1.8nm,0.5s,mb4.0,baz=219,slow=8.5,SNR=7.5	78.79 0 P	P	13 15 45.4	-1.0
NVAR	Mina Array Bea 2.5nm,0.7s,mb4.0,baz=148,slow=5.7,SNR=24	78.80 321 P	P	13 15 47.0	+0.1
IMW	Indian Meadow 11nm,1.0s,mb4.4	78.94 329 eP	P	13 15 47.7	+0.2
H18A	Shoshone NF, C baz=79,SNR=12	78.95 330 ⇑P	P	13 15 47.4	-0.1
FLWY	Flagg Ranch 31nm,1.4s,mb4.8	78.97 329 eP	P	13 15 47.7	0.0
K14A	Jones Ranch, D baz=79	79.00 327 ⇓P	P	13 15 47.6	-0.2
C24A	Savage baz=79	79.05 335 ⇓P	P	13 15 48.0	0.0
D23A	Lindsay baz=79	79.06 334 ⇑P	P	13 15 48.2	0.0
LAO	LASA Array baz=79,SNR=6.1	79.08 334 ⇓P	P	13 15 47.8	-0.4
LAO	LASA Array 6.3nm,0.6s,mb4.4	79.08 334 eP	P	13 15 47.8	-0.4
RLMT	Red Lodge baz=79,SNR=8.7	79.12 331 ⇑P	P	13 15 48.6	+0.1
RLMT	Red Lodge 3.8nm,0.7s,mb4.1	79.12 331 eP	P	13 15 48.5	0.0
H17A	Grant Village baz=79	79.15 330 ⇓P	P	13 15 50.0	+1.3
F20A	Billings baz=79	79.17 332 ⇓P	P	13 15 48.1	-0.6
I16A	Newdale baz=79,SNR=5.9	79.18 329 ⇑P	P	13 15 48.9	+0.1
J15A	Blackfoot baz=80,SNR=11	79.27 328 ⇓P	P	13 15 49.7	+0.4
E21A	Keefer Ranch, baz=80	79.31 333 ⇓P	P	13 15 49.2	-0.2
G18A	Lazy EL Ranch, baz=80,SNR=5.6	79.41 331 ⇑P	P	13 15 49.8	-0.3
D22A	Cohagen baz=80	79.43 334 ⇓P	P	13 15 50.1	0.0
WAKR	Walker 11nm,1.2s,mb4.4	79.50 321 eP	P	13 15 51.3	+0.6
F19A	Roth Farm, Mol baz=80,SNR=9.5	79.55 332 ⇑P	P	13 15 50.3	-0.5
C23A	Lambert baz=80	79.57 335 ⇑P	P	13 15 50.8	-0.1
D21A	La Casta Ranch baz=80,SNR=15	79.69 333 ⇑P	P	13 15 51.3	-0.2
H16A	Russell Place, baz=80,SNR=7.2	79.70 330 ⇓P	P	13 15 52.1	+0.5
E20A	Meyer Farm, Mu baz=80,SNR=14	79.72 332 ⇑P	P	13 15 51.4	-0.2
DGMT	Dagmar baz=80,SNR=7.4	79.74 336 ⇓P	P	13 15 51.8	+0.1
DGMT	Dagmar 16nm,0.7s,mb4.8	79.74 336 eP	P	13 15 51.5	-0.3
J14A	Carey baz=80	79.74 327 ⇓P	P	13 15 52.3	+0.4
I15A	Monteview baz=80	79.75 328 ⇑P	P	13 15 52.7	+0.8
C22A	Vida baz=80	79.80 334 ⇓P	P	13 15 51.9	-0.2
GCMT	Greycliff 9.6nm,1.0s,mb4.4	79.82 331 eP	P	13 15 52.0	-0.2
QLMT	Earthquake Lak 0.8nm,0.7s,mb3.5	79.88 330 eP	P	13 15 53.6	+1.0
F18A	Big Timber baz=80,SNR=14	79.93 331 ⇓P	P	13 15 52.7	-0.1
E19A	Rath Farm, Rou baz=80,SNR=15	79.96 332 ⇑P	P	13 15 52.8	-0.2
B23A	Brockton baz=80	80.04 335 ⇑P	P	13 15 53.1	-0.3
A24A	Westby baz=80	80.05 336 ⇓P	P	13 15 53.6	+0.2
J13A	Cove Ranch, Pi baz=80,SNR=7.0	80.12 327 ⇓P	P	13 15 54.6	+0.6
I14A	Mackay baz=80,SNR=12	80.16 328 ⇓P	P	13 15 54.7	+0.6
D20A	Manuel Ranch, baz=80,SNR=9.9	80.18 333 ⇑P	P	13 15 53.7	-0.5
WCN	Washoe City baz=80	80.22 321 ⇓P	P	13 15 54.6	0.0
H15A	Lima baz=80,SNR=5.6	80.28 329 ⇓P	P	13 15 55.4	+0.6
PAHR	Pah Rah Range 18nm,0.9s,mb4.7	80.29 322 eP	P	13 15 55.3	+0.4
B22A	Reddig Ranch S baz=80,SNR=5.6	80.29 335 ⇓P	P	13 15 54.5	-0.2
C21A	Desert Coulee baz=81,SNR=12	80.34 334 ⇑P	P	13 15 54.4	-0.6
F17A	Fitzpatrick Pl baz=81,SNR=10	80.35 331 ⇓P	P	13 15 55.3	+0.2
G16A	Moss Hill, Enn baz=81	80.35 330 ⇓P	P	13 15 55.3	+0.2

HLID	Hailey	80.36	327	⇓P	P	13 15 55.6	+0.4
	baz=81,SNR=34						
HLID	Hailey	80.36	327	*e*P	P	13 15 55.6	+0.4
	15nm,0.8s,mb4.7						
I13A	Wildhorse Cree	80.47	327	⇑P	P	13 15 56.5	+0.7
	baz=81,SNR=17						
E18A	Harlowton	80.53	332	⇓P	P	13 15 55.7	-0.4
	baz=81						
MCMT	McKenzie Canyo	80.54	329	*e*P	P	13 15 56.6	+0.5
	5.3nm,0.8s,mb4.2						
BOSA	Boshof	80.54	117	P	P	13 15 57.2	+0.5
	1.7nm,0.4s,mb4.1,baz=246,slow=6.3,SNR=8.6						
BOSA	Boshof	80.54	117	P	P	13 15 57.2	+0.5
D19A	Cripps Ranch,	80.55	332	⇓P	P	13 15 55.6	-0.5
	baz=81,SNR=8.4						
BOZ	Bozeman (W)	80.59	330	⇓P	P	13 15 56.0	-0.4
	baz=81						
G15A	Dillon	80.62	329	⇓P	P	13 15 56.8	+0.2
	baz=81,SNR=10						
H14A	Leadore	80.63	328	⇑P	P	13 15 57.1	+0.5
	baz=81,SNR=6.2						
F16A	Kennard Place,	80.69	330	⇓P	P	13 15 56.5	-0.4
	baz=81						
B21A	Ellsworth Farm	80.80	334	⇑P	P	13 15 57.1	-0.3
	baz=81,SNR=12						
DLMT	Dillon	80.82	329	*e*P	P	13 15 57.5	-0.1
	16nm,1.4s,mb4.5						
A22A	Carney Farms,	80.82	335	⇓P	P	13 15 57.5	-0.1
	baz=81,SNR=7.2						
E17A	Martinsdale	80.86	331	⇑P	P	13 15 57.7	-0.1
	baz=81,SNR=10						
I12A	Atlanta	80.89	327	⇑P	P	13 15 58.3	+0.3
	baz=81,SNR=15						
MFID	Camas Ranch	80.96	326	⇓P	P	13 15 58.5	+0.1
	baz=81						
D18A	Linhart Farms,	80.97	332	⇑P	P	13 15 58.1	-0.3
	baz=81,SNR=5.4						
H13A	Challis	81.02	328	⇓P	P	13 15 59.0	+0.3
	baz=81,SNR=23						
C19A	Slack Wire Ran	81.07	333	⇑P	P	13 15 58.4	-0.4
	baz=81,SNR=6.6						
LRM	Limekiln Ridge	81.10	330	*e*P	P	13 15 59.2	+0.1
	78nm,1.0s,mb5.3						
F15A	Butte	81.13	330	⇓P	P	13 15 59.3	0.0
	baz=81,SNR=16						
MAW	Mawson	81.15	163	P	P	13 15 59.0	-0.1
	4.8nm,0.6s,mb4.3,baz=214,slow=7.1,SNR=17						
B20A	Solberg Farm,	81.21	334	⇑P	P	13 15 59.3	-0.3
	baz=81						
A21A	Bergtoll Ranch	81.21	335	⇓P	P	13 15 59.3	-0.3
	baz=81						
E16A	East Helena	81.28	331	⇓P	P	13 16 00.0	0.0
	baz=82,SNR=5.1						
H12A	Diamond D Ranc	81.30	328	⇓P	P	13 16 00.2	+0.1
	baz=82,SNR=12						
D17A	Six Diamond Ra	81.32	331	⇓P	P	13 15 59.9	-0.3
	baz=82,SNR=14						
G13A	Cobalt	81.39	328	⇓P	P	13 16 01.0	+0.4
	baz=82,SNR=42						
A20A	Cobblestone Ra	81.52	334	⇓P	P	13 16 00.5	-0.7
	baz=82,SNR=16						
B19A	Brinkman Farms	81.59	333	⇑P	P	13 16 01.2	-0.4
	baz=82						
EGMT	Eagleton	81.59	333	⇓P	P	13 16 00.9	-0.7
	baz=82,SNR=5.9						
EGMT	Eagleton	81.59	333	*e*P	P	13 16 00.8	-0.8
	14nm,1.1s,mb4.5						
D16A	Dana Ranch, Ca	81.61	331	⇑P	P	13 16 01.8	+0.1
	baz=82,SNR=19						
E15A	Deer Lodge	81.64	330	⇑P	P	13 16 01.9	0.0
	baz=82,SNR=6.5						
C17A	Wharram Farm,	81.72	332	⇑P	P	13 16 01.6	-0.7
	baz=82,SNR=7.8						
A19A	Klindworth Far	81.89	334	⇓P	P	13 16 02.6	-0.6
	baz=82						
B18A	Beardsley Farm	81.89	333	⇑P	P	13 16 02.7	-0.5
	baz=82,SNR=14						
G12A	Big Creek, Yel	81.95	328	⇑P	P	13 16 03.3	-0.2
	baz=82						
F13A	Darby	81.95	329	⇑P	P	13 16 03.6	0.0
	baz=82,SNR=37						
E14A	Clinton	82.02	330	⇑P	P	13 16 04.1	+0.2
	baz=82,SNR=6.2						
D15A	Lincoln	82.05	330	⇑P	P	13 16 04.2	+0.1
	baz=82,SNR=7.1						
B17A	L&G Farms, Che	82.25	332	⇓P	P	13 16 04.1	-0.9
	baz=82,SNR=6.6						
C16A	Fuhringer Ranc	82.28	331	⇑P	P	13 16 04.7	-0.5
	baz=82,SNR=7.1						
J08A	Circle Bar Ran	82.29	325	⇑P	P	13 16 05.1	-0.3
	baz=82,SNR=14						
A18A	Metzger Ranch,	82.33	333	⇓P	P	13 16 04.4	-1.0
	baz=83						
E13A	Victor	82.37	329	⇑P	P	13 16 05.8	+0.1
	baz=83,SNR=16						
F12A	Elk City	82.37	328	⇓P	P	13 16 05.5	-0.2
	baz=83						
D14A	Greenough	82.52	330	⇓P	P	13 16 06.4	-0.1
	baz=83						
MSO	Missoula	82.54	330	⇓P	P	13 16 06.4	-0.2
	baz=83						
C15A	Salmond Ranch,	82.64	331	⇑P	P	13 16 07.2	+0.1
	baz=83,SNR=20						
SLMT	Seeley Lake	82.64	330	*e*P	P	13 16 06.8	-0.3
	8.0nm,0.9s,mb4.5						
A17A	Triple J Farms	82.71	333	⇓P	P	13 16 06.8	-0.6
	baz=83,SNR=12						
BMO	Blue Mountains	82.73	326	*e*P	P	13 16 06.9	-0.7
	2.9nm,0.8s,mb4.1						
D13A	Huson	82.97	329	⇓P	P	13 16 08.8	-0.1
	baz=83,SNR=10						
E12A	Beaver Dam Sad	83.00	328	⇓P	P	13 16 08.7	-0.3
	baz=83						
B15A	Bradely Ranch,	83.02	331	⇓P	P	13 16 08.1	-1.0
	baz=83,SNR=5.6						
SWMT	Swartz Lake	83.07	330	*e*P	P	13 16 09.2	-0.1
	3.8nm,0.9s,mb4.1						
A16A	West Butte Ran	83.09	332	⇓P	P	13 16 08.9	-0.5
	baz=83,SNR=21						
C14A	Swan Lake	83.14	330	⇓P	P	13 16 09.6	-0.1
	baz=83						
K05A	Summer Lake	83.16	323	⇓P	P	13 16 10.2	+0.3
	baz=83,SNR=11						
I07A	Izee	83.33	325	⇓P	P	13 16 10.7	-0.1
	baz=84,SNR=6.1						
D12A	Red Ives Fores	83.36	329	⇓P	P	13 16 10.6	-0.2
	baz=84						
JTMT	Jette	83.37	330	*e*P	P	13 16 10.7	-0.1
	3.5nm,0.6s,mb4.3						
B14A	Marquette Ranc	83.37	331	⇓P	P	13 16 10.8	-0.1
	baz=84						
C13A	Hot Springs	83.45	330	⇓P	P	13 16 11.2	-0.1
	baz=84,SNR=5.5						
F10A	Beach Ranch, E	83.49	327	⇑P	P	13 16 12.0	+0.5
	baz=84,SNR=11						
A15A	Johnson Ranch,	83.60	332	⇑P	P	13 16 12.4	+0.4
	baz=84						
BSMT	Bassoo Peak	83.68	330	*e*P	P	13 16 12.2	-0.2
	5.9nm,0.9s,mb4.3						
G08A	Pilot Rock	83.88	326	⇓P	P	13 16 13.1	-0.4
	baz=84						
C12B	Naegeli Ranch,	83.89	329	⇑P	P	13 16 13.3	-0.2
	baz=84						
A14A	Double T Ranch	83.90	331	⇑P	P	13 16 12.6	-0.9
	baz=84						
B13A	Whitefish	83.92	330	⇑P	P	13 16 13.1	-0.5
	baz=84						
A13A	Flathead Natio	84.31	331	⇓P	P	13 16 15.5	0.0
	baz=84						
E09A	Wood Farm, Sta	84.32	327	⇑P	P	13 16 14.9	-0.8
	baz=84						
C11A	Tepee Creek (N	84.35	329	⇑P	P	13 16 15.2	-0.6
	baz=85						
B12A	Libby	84.50	330	⇓P	P	13 16 16.4	-0.1
	baz=85						
G06A	Carlson Farm,	84.71	325	⇑P	P	13 16 17.2	-0.4
	baz=85						
A12A	Yaak River Ran	84.86	330	⇑P	P	13 16 17.8	-0.5
	baz=85						
HAWA	Hanford	84.93	326	*e*P	P	13 16 17.9	-0.9
	21nm,1.4s,mb4.7						
NEW	Newport	85.06	329	⇓P	P	13 16 19.2	-0.2
	baz=85						
D08A	Wollman Farm,	85.08	327	⇑P	P	13 16 19.3	-0.2
	baz=85						
H04A	Detroit Lake	85.16	324	⇑P	P	13 16 19.5	-0.5
	baz=85						
E07A	Sunnyside	85.20	326	⇓P	P	13 16 19.6	-0.5
	baz=85						
C09A	Chrisman Ranch	85.28	328	⇓P	P	13 16 19.9	-0.6
	baz=86,SNR=7.8						
G04A	Mulino	85.66	324	⇑P	P	13 16 22.3	-0.1
	baz=86						
F04A	Amboy	86.11	325	⇑P	P	13 16 24.4	-0.2
	baz=86						
ETW	Entiat	86.16	327	*e*P	P	13 16 24.4	-0.4
	21nm,0.9s,mb4.9						
B08A	Colville Reser	86.18	328	⇓P	P	13 16 24.5	-0.4
	baz=86						
LON	Longmire	86.33	326	*e*P	P	13 16 24.2	-1.5
	5.3nm,1.3s,mb4.1						
ESDC	Sonseca Array	86.55	44	P	P	13 16 26.4	-0.5
	0.2nm,0.2s,mb3.5,baz=248,slow=4.8,SNR=2.9						
D05A	Enumclaw	86.71	326	⇓P	P	13 16 27.1	-0.5
	baz=87						
B06A	Marblemount	87.34	327	⇑P	P	13 16 29.6	-0.9
	baz=88						
A05A	Maple Falls	87.96	327	⇓P	P	13 16 32.3	-1.1
	baz=88						
LSZ	Lusaka	88.36	106	*e*P	P	13 16 38.6	+2.4
	13nm,1.4s,mb4.6						
CASY	Casey	89.71	179	*e*P	P	13 16 41.4	-0.1
	17nm,1.1s,mb4.9						
YKA	Yellowknife Ar	94.41	340	P	P	13 17 02.1	-0.9
	4.4nm,0.7s,mb4.7,baz=133,slow=4.5,SNR=15						
YKA	Yellowknife Ar	94.41	340	P	P	13 17 02.1	-0.9
ILAR	Eielson Array	107.54	334	PP	PP	13 22 30.8	-0.9
	0.4nm,0.8s,baz=97,slow=4.6,SNR=4.6						
CTA	Charters Tower	125.33	219	PKP	PKPdf	13 22 43.6	-0.9
	3.3nm,0.6s,baz=157,slow=2.4,SNR=7.3						
ASAR	Alice Springs	128.23	205	PKP	PKPdf	13 22 49.0	-1.0
	5.0nm,0.7s,baz=149,slow=2.3,SNR=72						
WRA	Warramunga Arr	131.41	207	PKhKP	PKPpre	13 22 42.5	
	0.3nm,0.4s,baz=148,slow=2.9,SNR=12						
WRA				PKP	PKPdf	13 22 55.2	-0.9
	3.4nm,0.5s,baz=159,slow=1.7,SNR=77						
WRA				SKPbc	SKPbc	13 26 03.1	-4.1
	0.9nm,0.5s,baz=149,slow=3.4,SNR=15						
WRA	Warramunga Arr	131.41	207	PKP	PKPpre	13 22 42.5	
WRA				PKP	PKPdf	13 22 55.2	-0.9
WRA				SKPbc	SKPbc	13 26 03.1	-4.1
PETK	Petropavlovsk-	135.88	323	PKhKP	PKPpre	13 22 55.8	
	5.2nm,1.0s,baz=52,slow=2.0,SNR=2.6						
PETK				PKP	PKPdf	13 23 02.5	-0.9
	3.9nm,0.7s,baz=82,slow=1.9,SNR=4.3						
PETK	Petropavlovsk-	135.88	323	PKP	PKPpre	13 22 55.8	
PETK				PKP	PKPdf	13 23 02.5	-0.9
FITZ	Fitzroy Crossi	136.13	197	PKP	PKPdf	13 23 04.7	-0.2
	2.6nm,0.7s,baz=168,slow=5.7,SNR=5.7						
ZALV	Zalesovo Beam	143.61	28	PKP	PKPdf	13 23 15.2	-2.2
	6.7nm,0.5s,baz=302,slow=3.7,SNR=19						
KSH	Kashi	145.30	55	*e*PKPbc	PKPbc	13 23 21.0	+0.1
KSH				*e*pPKP	pPKPdf	13 23 56.3	-5.0
MKAR	Makanchi Array	146.69	40	PKPbc	PKPbc	13 23 22.6	-2.3
	15nm,0.8s,baz=294,slow=1.0,SNR=22						
GUMO	Guam	148.18	256	PKPbc	PKPbc	13 23 26.8	-2.9
	32nm,0.7s,baz=190,slow=6.1,SNR=3.3						
WMQ	Urumqi	151.51	41	*e*PKPbc	PKPbc	13 23 34.0	-3.0
MJAR	Matsushiro Arr	155.20	305	PKPbc	PKPdf	13 23 44.3	+8.1
	2.2nm,0.8s,baz=77,slow=1.9,SNR=4.4						
MJAR				PKPab	PKPab	13 24 00.4	-1.5
	5.3nm,0.8s,baz=96,slow=2.3,SNR=11						
MAJO	Matsushiro	155.20	305	*e*PKPab	PKPab	13 24 01.0	-0.9
MAT	Matsushiro	155.20	305	*e*PKP	PKPdf	13 23 43.7	+7.4
SONM	Songino Array	155.90	11	PKPab	PKPab	13 24 04.0	-0.4
	1.5nm,0.6s,baz=334,slow=4.3,SNR=5.4						
CN2	Changchun	158.04	335	*e*PKP	PKPdf	13 23 41.3	+1.6
KSRS	Korea Array	161.74	319	PKPab	PKPab	13 24 29.8	-0.3
	1.4nm,0.8s,baz=45,slow=4.7,SNR=5.2						
HHC	Hu-ho-hao-te	163.43	4	*e*PKP	PKPdf	13 23 44.0	-1.6
HHC				PKS		13 27 16.5	
HHC				SKS	SKSdf	13 30 38.5	+2.6
HHC				AMB	AMB		
	comp=Z,140nm,6.3s						
HHC				LR	LR		
	comp=N,110nm,19.2s						
HHC				LR	LR		
	comp=E,120nm,19.9s						
HHC				LR	LR		
	comp=Z,65nm,20.3s						
CMAR	Chiang Mai Arr	165.62	111	PKPab	PKPab	13 24 47.9	0.0
	comp=Z,0.7nm,0.6s,baz=259,slow=5.5,SNR=4.4						
LZH	Lanzhou	165.79	32	*e*PKP	PKPdf	13 23 52.0	+4.2
LZH				pPKP	pPKPdf	13 24 23.0	-5.5
LZH				sPKP		13 24 33.0	
KMI	Kunming	170.56	83	PKP	PKPdf	13 23 52.0	+0.6
GYA	Guiyang	173.81	68	*e*PKP	PKPdf	13 23 52.0	-0.8
GYA				pPKP	pPKPdf	13 24 24.5	-9.0
GYA				sPKP		13 24 37.0	
GYA				PKPab	PKPab	13 25 24.8	+0.8
GYA				PKS		13 27 22.5	
GYA				PP	PP	13 29 18.0	+1.6
GYA				AMB	AMB		
	comp=Z,70nm,8.8s						

*NNC **29** 13:15:09.0±4.4, 37°.79N×70°.37E, h185km±38km, mb3.2, mpv4.8, Error ellipse: s-maj=35.6km s-min=28.5km az=1.0*
*IDC **29** 13:15:11.6±1.0, 38°.51N×70°.38E, h0km, mb3.8/6, mb1 4.1/11, mb1mx3.8/27, mbtmp4.0/11, ML3.9/5, MS3.7/2, Ms1 3.6/2, ms1mx2.5/34, Error ellipse: s-maj=17.2km s-min=11.9km az=142.0*
*ISCJB **29** 13:15:12.7±0.8, 38°.76N±0°.07×69°.86E±0°.07, h10km, mb3.6/9, MS3.7/2, Error ellipse: s-maj=10.6km s-min=6.6km az=157.1*
*NEIC **29** 13:15:13.3±0.9, 38°.43N×70°.26E, h10km, Error ellipse: s-maj=17.4km s-min=9.2km az=152.0*
*BJI **29** 13:15:15.0, 38°.83N×70°.16E, h23km, mb3.7/4, ML3.9/3*
*MOS **29** 13:15:16.1±1.9, 38°.78N×70°.18E, h33km, mb4.1/7, Error ellipse: s-maj=16.2km s-min=8.5km az=83.8*

ISC 29 13:15:13.4±0.8, 38°.62N±0°.07×69°.87E±0°.07, h10km, n69, σ1§46/83, mb3.7/10, MS3.7/2, 10C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	4.50	6	P	Pn	13 16 23.0	+1.3
	46nm,0.5s,baz=176,slow=11,SNR=543						
KK31				S	Sb	13 17 31.1	+4.2
	99nm,0.7s,baz=179,slow=25,SNR=3.7						
KK31	Karatay Array	4.50	6	*i* PN	Pn	13 16 22.9	+1.2
KK31				pmax	pmax		
	comp=Z,47nm,0.3s						
KKAR	Karatay Array	4.50	6	*e*P	Pn	13 16 22.7	+1.1
KKAR	Karatay Array	4.50	6	*e*PN	Pn	13 16 22.7	+1.0
AML	Almayashu	4.56	39	P	Pn	13 16 22.9	+0.4
	SNR=26						
AML	Almayashu	4.56	39	*e*P	Pn	13 16 22.3	-0.2
KSH	Kashi	4.84	77	Pn	Pn	13 16 21.0	-5.2
KSH				Sn	Sn	13 17 12.0	-10
KSH				smax			
	comp=N,610nm,1.3s						
KSH				smax			
	comp=E,200nm,0.5s						
EKS2	Erkin-Say	5.01	35	P	Pn	13 16 29.7	+1.0
	SNR=47						
EKS2	Erkin-Say	5.01	35	*e*P	Pn	13 16 28.8	+0.1
	comp=E,59nm,0.8s						
AAK	Ala-Archa	5.33	40	P	Pn	13 16 33.2	+0.1
	SNR=22						
AAK	Ala-Archa	5.33	40	Pn	Pn	13 16 32.9	-0.2
	comp=E,0.2nm,0.3s,baz=199,slow=8.4,SNR=71						
AAK				Sn	Sn	13 17 35.5	+1.0
	comp=E,0.1nm,0.3s,baz=34,slow=22,SNR=4.8						
AAK				Lg		13 17 52.6	
	comp=E,0.2nm,0.3s,baz=288,slow=20,SNR=4.1						
AAK	Ala-Archa	5.33	40	*e*P	Pn	13 16 33.1	0.0
	comp=E,71nm,0.4s						
AAK	Ala-Archa	5.33	40	*ce*PN	Pn	13 16 33.0	-0.1
AAK				pmax	pmax		
	comp=Z,31nm,0.6s						
KZA	Kyzart	5.37	48	P	Pn	13 16 36.2	+2.7
	SNR=9.6						
KZA	Kyzart	5.37	48	*e*P	Pn	13 16 33.8	+0.2
	comp=Z,158nm,0.6s						
KBK	Karagaybulak	5.58	42	P	Pn	13 16 37.3	+0.8
	SNR=85						
CHMS	Chumysh	5.73	39	P	Pn	13 16 38.5	0.0
	SNR=36						
CHMS	Chumysh	5.73	39	*e*P	Pn	13 16 38.2	-0.3
USP	Ospenovka	5.82	36	P	Pn	13 16 39.4	-0.3
	SNR=16						
ULHL	Ulahol	6.06	51	P	Pn	13 16 45.5	+2.4
	SNR=11						
TKM2	Tokmak 2	6.11	44	⇓P	Pn	13 16 43.7	0.0
	comp=Z,57nm,0.5s						
TKM2				⇑S	Sn	13 17 56.3	+2.6
	comp=Z,24nm,0.6s						
TKM2	Tokmak 2	6.11	44	P	Pn	13 16 45.6	+1.9
	SNR=21						
TKM2	Tokmak 2	6.11	44	*e*P	Pn	13 16 43.4	-0.3
	comp=Z,97nm,0.4s						
TKM2	Tokmak 2	6.11	44	*e*PN	Pn	13 16 43.4	-0.4
TKM2				pmax	pmax		
	comp=Z,97nm,0.4s						
MK31	Makanchi Array	12.24	44	⇓P	Pn	13 18 06.9	-0.9
	comp=Z,1.1nm,0.6s,baz=229,slow=14,SNR=13						
MK31				⇓S	Sn	13 20 23.5	-0.7
	comp=Z,3.7nm,0.9s,baz=124,slow=34,SNR=4.2						
MK31	Makanchi Array	12.24	44	*e*P	Pn	13 18 06.6	-1.1
MK31	Makanchi Array	12.24	44	*ce*P	Pn	13 18 06.4	-1.4
MK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	12.24	44	Pn	Pn	13 18 06.2	-1.6
	comp=Z,0.3nm,0.3s,baz=230,slow=14,SNR=9.5						
MKAR				Lg		13 21 33.9	
	comp=Z,0.1nm,0.3s,baz=230,slow=29,SNR=2.9						
MKAR	Makanchi Array	12.24	44	*e*P	Pn	13 18 06.2	-1.6
AB31	Akbulak array	12.80	329	P	Pn	13 18 15.1	-0.2
	comp=Z,4.1nm,0.5s,baz=144,slow=12,SNR=105						
AB31	Akbulak array	12.80	329	*ce*P	Pn	13 18 15.0	-0.3
AB31				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KURBB	Kurchatov Arra	13.48	24	⇓P	Pn	13 18 19.6	-5.0
	comp=Z,0.8nm,0.8s						
KURBB				⇑S	Sn	13 20 53.8	-0.5
	comp=Z,1.1nm,0.9s						
KURK	Kurchatov	13.59	24	⇓P	Pn	13 18 21.6	-4.5
	comp=Z,1.2nm,0.7s						
KURK				⇓S	Sn	13 20 58.0	+0.9
	comp=Z,5.3nm,0.8s						
KURK	Kurchatov	13.59	24	*e*P	Pn	13 18 21.7	-4.4
VOSK	Vostochnaya	14.13	3	⇓P	Pn	13 18 30.4	-3.0
	comp=Z,6.6nm,0.8s						
VOSK				⇑S	Sn	13 21 15.5	+5.4
	comp=Z,5.0nm,0.8s						
ZRNK	Zerenda	14.35	358	⇓P	Pn	13 18 34.8	-1.6
	comp=Z,3.4nm,0.8s						
ZRNK				⇑S	Sn	13 21 21.1	+5.7
	comp=Z,5.7nm,0.8s						
ZRNK	Zerenda	14.35	358	P	Pn	13 18 33.5	-2.9
ZRNK				S	Sn	13 21 11.3	-4.1
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZRNK				smax			
	comp=Z,10.0nm,1.3s						
BVA0	Borovoye Array	14.41	1	⇑P	Pn	13 18 34.2	-3.1
	comp=Z,1.0nm,0.8s						
BVA0				⇓S	Sn	13 21 24.1	+7.1
	comp=Z,1.0nm,0.8s,baz=218,slow=21,SNR=4.2						
BVA0	Borovoye Array	14.41	1	P	Pn	13 18 34.2	-3.1
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	14.41	1	Pn	Pn	13 18 34.5	-2.8
	comp=Z,0.9nm,0.3s,baz=170,slow=12,SNR=31						
BVAR				Sn	Sn	13 21 11.5	-5.6
	comp=Z,0.5nm,0.3s,baz=181,slow=27,SNR=3.6						
BVAR	Borovoye Array	14.41	1	P	Pn	13 18 34.5	-2.8
BVAR						13 21 11.5	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	Borovoye	14.44	1	*e*P	Pn	13 18 35.4	-2.4
	comp=N,5.2nm,0.6s						
BRVK	Borovoye	14.44	1	*c i*P	Pn	13 18 35.0	-2.7
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKTK	Aktyubinsk	14.50	328	Pn	Pn	13 18 38.7	+0.2
AKTK				Sn	Sn	13 21 15.2	-4.1
AKTO	Aktyubinsk	14.50	328	⇑P	Pn	13 18 40.1	+1.6
	comp=Z,2.0nm,0.7s						
AKTO	Aktyubinsk	14.50	328	Pn	Pn	13 18 38.7	+0.2
	comp=Z,0.6nm,0.3s,baz=144,slow=14,SNR=12						
AKTO				Sn	Sn	13 21 15.2	-4.1
	comp=Z,0.3nm,0.3s,baz=186,slow=19,SNR=4.3						
AKTO	Aktyubinsk	14.50	328	P	Pn	13 18 38.7	+0.2
AKTO						13 21 15.2	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	18.43	29	P	Pn	13 19 25.4	-3.4
	comp=Z,0.7nm,0.3s,baz=228,slow=13,SNR=15						
ZALV	Zalesovo Beam	18.43	29	P	Pn	13 19 25.4	-3.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVS	Novosibirsk	18.58	25	*e*P	Pn	13 19 28.2	-2.4
NVS				pmax	pmax		
	comp=Z,15nm,1.3s						
NVS				pmax	pmax		
	comp=N,3.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.0s						
ARU	Arti	19.34	341	P	Pn	13 19 39.4	-0.3
KIV	Kislovodsk	21.06	293	*e*P	P	13 20 03.8	+6.3
KIV				*e*S	S	13 23 59.3	+7.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.1						
GTA	Gaotai	23.24	79	*e*P	P	13 20 20.5	-0.3
GTA				pP		13 20 25.0	
GTA				sP	sP	13 20 27.5	+2.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.6						
ZAK	Zakamensk	26.35	53	*e*P	P	13 20 50.2	+0.8
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
BRTR	Keskin Array B	27.99	284	P	P	13 21 08.8	+4.5
	comp=Z,0.6nm,0.8s,mb3.3,baz=61,slow=10,SNR=3.3						
BRTR	Keskin Array B	27.99	284	P	P	13 21 08.8	+4.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	38.84	337	P	P	13 22 40.3	+2.0
	comp=Z,2.1nm,0.8s,mb3.9,baz=105,slow=7.6,SNR=4.8						
ARCES				LR	L

*ISCJB **29** 13:24:33.4±0.8, 16.4°S±0.1°×175.9°W±0.1°, h361km±10km, mb4.1/13, Error ellipse: s-maj=21.6km s-min=12.9km az=148.3*
*IDC **29** 13:24:33.1±1.3, 16.53°S×175.83°W, h345km±19km, mb3.7/8, mb1 3.9/9, mb1mx3.6/20, mbtmp3.8/9, Error ellipse: s-maj=31.1km s-min=14.5km az=128.0*
*NEIC **29** 13:24:35.4±1.0, 16.14°S×175.98°W, h356km±10km, mb4.3/4, Error ellipse: s-maj=25.3km s-min=13.5km az=147.0*
ISC 29 13:24:34.1±0.7, 16.55°S±0.1°×175.7°W±0.1°, h360km±9km, n24, σ0.73/30, mb4.1/13, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.58**	**57**	P	**Pn**	13 25 50.0	**+0.2**
	14nm,0.3s,baz=43,slow=3.3,SNR=33						
AFI				S	**S**	13 26 49.5	**-1.4**
	15nm,0.3s,baz=260,slow=18,SNR=6.1						
AFI	**Afiamalu**	**4.58**	**57**	*e*P	**Pn**	13 25 50.3	**+0.5**
AFI				S	**S**	13 26 49.5	**-1.4**
AFI				*e*S	**S**	13 26 50.7	**-0.2**
MSVF	**Nonsavu**	**6.09**	**257**	*e*P	**Pn**	13 26 07.6	**+1.2**
	29nm,0.8s						
URZ	**Urewera**	**22.60**	**195**	P	**P**	13 29 03.7	**-1.3**
	6.1nm,0.3s,mb4.3,baz=326,slow=18,SNR=11						
URZ				S	**S**	13 32 60.0	**+14**
	7.8nm,0.9s,baz=90,slow=20,SNR=2.0						
URZ	**Urewera**	**22.60**	**195**	*e*P	**P**	13 29 04.3	**-0.7**
URZ				S	**S**	13 32 60.0	**+15**
CTA	**Charters Tower**	**36.24**	**258**	P	**P**	13 31 03.5	**-1.0**
	1.7nm,0.3s,mb3.7,baz=81,slow=4.4,SNR=3.8						
CNB	**Canberra Magne**	**36.33**	**232**	*e*P	**P**	13 31 05.6	**+0.5**
TOO	**Toolangi**	**40.06**	**231**	*e*P	**P**	13 31 36.4	**+0.5**
STKA	**Stephens Creek**	**41.57**	**240**	P	**P**	13 31 48.0	**-0.2**
	3.6nm,0.5s,mb3.8,baz=90,slow=9.9,SNR=17						
STKA	**Stephens Creek**	**41.57**	**240**	*e*P	**P**	13 31 48.5	**+0.3**
	3.2nm,0.6s,mb3.6						
WRA	**Warramunga Arr**	**47.44**	**258**	P	**P**	13 32 33.4	**-0.8**
	2.8nm,0.7s,mb3.6,baz=90,slow=7.2,SNR=52						
WRA				PcP	PcP	13 33 59.1	+0.8
	0.5nm,0.5s,baz=94,slow=3.6,SNR=4.3						
WRA				S	**S**	13 39 01.0	**+0.1**
	0.2nm,0.9s,baz=93,slow=14,SNR=5.4						
ASAR	**Alice Springs**	**47.66**	**253**	P	**P**	13 32 35.6	**-0.3**
	18nm,0.7s,mb4.4,baz=89,slow=7.9,SNR=566						
ASAR				S	**S**	13 39 00.9	**-3.1**
	0.6nm,0.8s,baz=82,slow=15,SNR=5.9						
FORT	**Forrest**	**52.94**	**244**	*e*P	**P**	13 33 14.5	**-0.5**
	14nm,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**55.81**	**259**	P	**P**	13 33 35.4	**-0.2**
	1.4nm,0.5s,mb3.6,baz=113,slow=7.7,SNR=13						
KLBR	**Kellerberrin**	**61.77**	**243**	*e*P	**P**	13 34 15.9	**-0.1**
	8.8nm,0.6s,mb4.5						
SBA	**Scott Base**	**62.01**	**184**	*e*P	**P**	13 34 22.0	**+5.2**
	3.7nm,0.7s,mb4.0						
PETK	**Petropavlovsk-**	**73.00**	**344**	P	**P**	13 35 25.2	**+0.1**
	4.0nm,0.7s,mb4.2,baz=114,slow=8.5,SNR=5.8						
QSPA	**South Pole Qui**	**73.57**	**180**	*e*P	**P**	13 35 32.1	**+3.9**
	7.1nm,1.1s,mb4.3						
COLA	**College**	**83.84**	**12**	*e*P	**P**	13 36 24.2	**+0.6**
	4.7nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**83.94**	**12**	P	**P**	13 36 24.7	**+0.6**
	0.9nm,0.5s,mb3.8,baz=211,slow=5.5,SNR=22						
VNA3	**Neumayer Olymp**	**91.98**	**176**	*e*	**P**	13 37 02.4	**+0.1**
VNA2	**Neumayer--Watz**	**92.45**	**176**	*e*	**P**	13 37 04.6	**+0.2**
	baz=206,slow=3.8						
VNA1	**Neumayer--Stat**	**92.66**	**176**	*e*	**P**	13 37 06.1	**+0.7**
BRTR	**Keskin Array B**	**145.53**	**318**	PKPbc	PKPbc	13 43 32.8	+1.8
	0.6nm,0.7s,baz=46,slow=5.3,SNR=3.8						

MEX 29 13:37:07.5±0.6, 15.65N×95.73W, h10km±8km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.39**	**289**	*i* P	Pg	13 37 14.5	-0.6
HUIG				*i* S	Sg	13 37 20.7	+0.4
VHO	**Vista Hermosa**	**1.72**	**326**	*i* P	Pn	13 37 35.0	-2.5
VHO				*i* S	Sn	13 37 54.3	-5.1
PCIG		**2.42**	**88**	*e*P	Pn	13 37 44.4	-2.7
PCIG				*i* S	Sn	13 38 12.3	-4.5
PNIG	**Pinotepa**	**2.42**	**288**	*i* P	Pn	13 37 44.3	-2.9
PNIG				*i* S	Sn	13 38 12.7	-4.2
TGIG		**2.75**	**65**	*e*P	Pn	13 37 48.9	-2.7
TGIG				*i* S	Sn	13 38 21.7	-3.1
UTMO	**Huajuapan**	**2.94**	**318**	*i* P	Pn	13 37 52.6	-1.8
UTMO				*i* S	Sn	13 38 26.6	-3.2

IDC 29 14:04:06.1±2.0, 15.78S×173.50W, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.9/18, mbtmp3.7/6, ML1.6/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/27, Error ellipse: s-maj=112.0km s-min=20.7km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.50**	**42**	Pn	Pn	14 04 46.2	-1.8
	8.0nm,0.3s,baz=308,slow=1.9,SNR=20						
AFI				Sn	Sn	14 05 14.4	-4.8
	17nm,0.3s,baz=61,slow=22,SNR=6.2						
HNR	**Honiara**	**26.66**	**281**	LR	LR	14 18 25.3	
	comp=Z,80nm,20.0s,baz=182,slow=32						
WRA	**Warramunga Arr**	**49.67**	**257**	P	P	14 12 59.7	-0.4
	0.2nm,0.4s,baz=91,slow=6.9,SNR=8.3						
ASAR	**Alice Springs**	**49.91**	**252**	P	P	14 13 01.1	-0.7
	1.9nm,0.6s,baz=88,slow=7.9,SNR=29						
NVAR	**Mina Array Bea**	**74.67**	**42**	P	P	14 15 48.0	+0.5
	0.6nm,0.7s,baz=229,slow=10,SNR=7.5						
TXAR	**Lajitas Array**	**80.90**	**56**	P	P	14 16 22.9	+0.4
	0.2nm,0.6s,baz=241,slow=6.7,SNR=4.0						
ILAR	**Eielson Array**	**82.84**	**11**	P	P	14 16 32.1	+0.3
	0.4nm,0.6s,baz=224,slow=6.2,SNR=10						
BRTR	**Keskin Array B**	**146.39**	**321**	PKPbc	PKPbc	14 23 50.4	+1.1
	0.9nm,0.8s,baz=103,slow=2.7,SNR=5.2						

*ATH **29** 14:20:47.3, 41.21°N×24.34°E, h31km±3km, MD3.1/3*
*ISCJB **29** 14:20:48.6±0.5, 41.17°N±0.03°×24.35°E±0.04, h9km±7km, Error ellipse: s-maj=5.9km s-min=3.9km az=137.4*
*CSEM **29** 14:20:48.9±0.3, 41.16°N×24.38°E, h9km, ML1.9/5, Error ellipse: s-maj=7.1km s-min=5.4km az=14.0*
*THE **29** 14:20:50.1, 41.13°N×24.35°E, h8km±1km, ML1.9/5, Error ellipse: s-maj=1.5km s-min=0.5km az=204.0*
*BEO **29** 14:20:51.9±1.2, 40.96°N×23.52°E, h0km, ML2.0/3*
ISC 29 14:20:49.5±0.5, 41.15N±0.03°×24.36E±0.04, h10km±6km, n27, σ1.07/52, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAVA	**Kavala**	**0.19**	**143**	P	**Pg**	14 20 53.5	**0.0**
KAVA				S	**Sg**	14 20 56.9	**+0.8**
KAVA	**Kavala**	**0.19**	**143**	P	**Pg**	14 20 53.5	**0.0**
KAVA				S	**Sg**	14 20 56.9	**+0.8**
NVR	**Nevrokopi**	**0.43**	**298**	*e*PB	**Pg**	14 20 56.5	**-1.4**
NVR				*e*SB	**Sg**	14 21 03.0	**-0.6**
NVR	**Nevrokopi**	**0.43**	**298**	*e*Pb	**Pg**	14 20 56.5	**-1.4**
NVR				*e*Sb	**Sg**	14 21 03.0	**-0.6**
SRS	**Serrai**	**0.58**	**267**	P	**Pg**	14 21 00.7	**-0.1**
SRS				S	**Sg**	14 21 09.4	**+0.9**
SRS	**Serrai**	**0.58**	**267**	P	**Pg**	14 21 00.7	**-0.1**
SRS				S	**Sg**	14 21 09.4	**+0.9**
SOH	**Sokhos**	**0.83**	**247**	*e*PB	**Pg**	14 21 03.2	**-2.3**
SOH				*e*SN	**Sg**	14 21 15.9	**-0.4**
SOH	**Sokhos**	**0.83**	**247**	*e*Pb	**Pg**	14 21 03.2	**-2.3**
SOH				*e*Sn	**Sg**	14 21 15.9	**-0.4**
OUR	**Ouranopolis**	**0.86**	**200**	P	**Pg**	14 21 06.1	**0.0**
OUR				S	**Sg**	14 21 18.4	**+1.1**
OUR	**Ouranopolis**	**0.86**	**200**	P	**Pg**	14 21 06.1	**0.0**
OUR				S	**Sg**	14 21 18.4	**+1.1**
PLG	**Polygyros**	**1.04**	**222**	*e*PN	**Pg**	14 21 06.9	**-2.6**
PLG				*e*SN	**Sg**	14 21 22.0	**-1.0**
PLG	**Polygyros**	**1.04**	**222**	P	**Pg**	14 21 08.9	**-0.6**
PLG				S	**Sg**	14 21 23.6	**+0.6**
PLG	**Polygyros**	**1.04**	**222**	*e*Pn	**Pg**	14 21 06.9	**-2.6**
PLG	**Polygyros**	**1.04**	**222**	P	**Pg**	14 21 08.9	**-0.6**
PLG				*e*Sn	**Sg**	14 21 22.0	**-1.0**
PLG				S	**Sg**	14 21 23.6	**+0.6**
HORT	**Hortiatis**	**1.10**	**241**	P	**Pg**	14 21 10.8	**+0.1**
HORT	**Hortiatis**	**1.10**	**241**	P	**Pg**	14 21 10.8	**+0.1**
KNT	**Kendrikon**	**1.11**	**271**	P	**Pg**	14 21 10.7	**0.0**
KNT				S	**Sg**	14 21 26.6	**+1.5**
KNT	**Kendrikon**	**1.11**	**271**	P	**Pg**	14 21 10.7	**0.0**
KNT				S	**Sg**	14 21 26.6	**+1.5**
ALN	**Alexandroupoli**	**1.30**	**101**	*e*PN	**Pn**	14 21 11.8	**-1.8**
ALN				*e*SN	**Sn**	14 21 29.3	**-1.7**
ALN	**Alexandroupoli**	**1.30**	**101**	P	**Pn**	14 21 13.5	**-0.1**
ALN				S	**Sb**	14 21 32.3	**+1.7**
ALN	**Alexandroupoli**	**1.30**	**101**	*e*Pn	**Pn**	14 21 11.8	**-1.8**
ALN	**Alexandroupoli**	**1.30**	**101**	P	**Pn**	14 21 13.5	**-0.1**
ALN				*e*Sn	**Sn**	14 21 29.3	**-1.7**
ALN				S	**Sb**	14 21 32.3	**+1.7**
VTS	**Vitosha**	**1.68**	**329**	*e*Pg	**Pg**	14 21 21.2	**-0.5**
VTS				*e*Sg	**Sg**	14 21 44.0	**+0.5**
VTS	**Vitosha**	**1.68**	**329**	*e*Pg	**Pg**	14 21 21.2	**-0.5**
VTS				*e*Sg	**Sg**	14 21 44.0	**+0.5**
ZAPS	**Zavoj**	**2.48**	**329**	*e*Pn	**Pn**	14 21 32.0	**+2.0**
ZAPS				*e*Sg	**Sg**	14 22 09.2	**0.0**
BARS	**Barje**	**2.53**	**312**	*e*Pn	**Pn**	14 21 31.2	**+0.6**
BARS				*e*Sg	**Sg**	14 22 02.9	**-7.8**
BARS	**Barje**	**2.53**	**312**	*e*Pn	**Pn**	14 21 31.2	**+0.6**
BARS				*e*Sg	**Sg**	14 22 02.9	**-7.8**

IDC 29 14:38:54.8±13.0, 5.95S×129.77E, h355km±107km, mb3.2/1, mb1 3.2/4, mb1mx2.8/16, mbtmp3.1/4, Error ellipse: s-maj=143.3km s-min=57.5km az=147.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.73**	**198**	P	P	14 41 44.8	+0.5
	0.1nm,0.3s,baz=14,slow=8.3,SNR=2.3						
FITZ				S	S	14 44 05.2	+0.5
	0.1nm,0.3s,baz=299,slow=13,SNR=2.4						
WRA	**Warramunga Arr**	**14.60**	**163**	P	P	14 42 06.1	+1.2
	1.0nm,0.3s,baz=341,slow=11,SNR=30						
ASAR	**Alice Springs**	**18.06**	**168**	P	P	14 42 41.5	-0.7
	1.1nm,0.3s,baz=343,slow=12,SNR=120						
STKA	**Stephens Creek**	**28.06**	**158**	P	P	14 44 15.0	0.0
	1.8nm,1.1s,baz=331,slow=13,SNR=4.3						

*ISCJB **29** 14:41:36.0±1.7, 12.24N±0.07°×144.3E±0.1°, h47km±16km, mb4.2/21, MS3.8/5, Error ellipse: s-maj=22.2km s-min=12.1km az=0.9*
*NEIC **29** 14:41:37.7±1.2, 12.30N×144.40E, h49km±11km, mb4.4/7, Error ellipse: s-maj=13.2km s-min=7.1km az=85.0*
*IDC **29** 14:41:38.4±1.7, 12.26N×144.43E, h54km±16km, mb3.9/14, mb1 4.0/14, mb1mx3.9/22, mbtmp3.9/14, MS3.8/6, Ms1 3.8/6, ms1mx3.6/31, Error ellipse: s-maj=22.4km s-min=11.8km az=97.0*
ISC 29 14:41:37.8±1.6, 12.27N±0.07°×144.4E±0.1°, h48km±15km, n36, σ0.72/28, mb4.2/21, MS3.8/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.40**	**20**	P	**Pn**	14 41 60.0	**-0.9**
	140nm,0.3s,baz=186,slow=5.1,SNR=115						
GUMO				S	**Sn**	14 42 19.1	**+0.9**
	391nm,0.3s,baz=287,slow=19,SNR=27						
GUMO	**Guam**	**1.40**	**20**	*e*Pn	**Pn**	14 41 60.0	**-1.0**
GUMO				S	**Sn**	14 42 19.1	**+0.9**
DAV	**Davao City (W)**	**19.23**	**256**	LR	LR	14 51 59.6	
	comp=Z,219nm,21.2s,baz=162,slow=32						
MJAR	**Matsushiro Arr**	**24.80**	**348**	P	**P**	14 46 54.7	**-0.6**
	0.8nm,0.3s,mb3.7,baz=133,slow=11,SNR=6.2						
MJAR				LR	LR	14 55 51.4	
	comp=Z,167nm,18.4s,MS3.6,baz=135,slow=34						
KSRS	**Korea Array**	**29.09**	**332**	LR	LR	14 59 25.8	
	comp=Z,158nm,19.0s,MS3.6,baz=157,slow=37						
CTA	**Charters Tower**	**32.21**	**177**	P	**P**	14 48 01.9	**+0.4**
	0.8nm,0.3s,mb4.0,baz=356,slow=9.6,SNR=5.3						
CTAO	**Charters Tower**	**32.21**	**177**	P	**P**	14 48 02.3	**+0.8**
	2.8nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**33.50**	**197**	P	**P**	14 48 12.3	**-0.4**
	2.9nm,0.6s,mb4.4,baz=20,slow=9.7,SNR=26						
ASAR	**Alice Springs**	**37.15**	**196**	P	**P**	14 48 44.1	**0.0**
	2.3nm,0.6s,mb4.2,baz=18,slow=9.9,SNR=37						
STKA	**Stephens Creek**	**43.97**	**183**	P	**P**	14 49 40.1	**-0.2**
	2.7nm,1.1s,mb3.9,baz=350,slow=13,SNR=3.7						
CMAR	**Chiang Mai Arr**	**44.15**	**284**	P	**P**	14 49 43.0	**+1.0**
	1.6nm,0.4s,mb4.1,baz=80,slow=6.3,SNR=15						
CMAR				PcP	PcP	14 51 28.7	+2.2
	0.5nm,0.5s,baz=74,slow=1.4,SNR=5.4						
CMAR				LR	LR	15 06 06.2	
	comp=Z,156nm,19.9s,MS3.9,baz=112,slow=33						
PSI	**Prapat**	**45.96**	**262**	LR	LR	15 07 52.9	
	comp=Z,60nm,19.6s,MS3.5,slow=34						
ULN	**Ulaanbaatar**	**47.19**	**326**	*e*P	**P**	14 50 05.7	**0.0**
	0.9nm,0.6s,mb3.9						
SONM	**Songino Array**	**47.53**	**326**	P	**P**	14 50 08.7	**+0.4**
	1.1nm,0.6s,mb4.1,baz=146,slow=7.5,SNR=9.9						
SONM				LR	LR	15 10 30.8	
	comp=Z,255nm,19.6s,MS4.2,baz=141,slow=36						
GTA	**Gaotai**	**47.70**	**313**	*e*P	**P**	14 50 19.0	**+9.3**
GTA				pP	pP	14 50 22.8	0.0
GTA				sP	sP	14 50 25.0	-3.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
MKAR	**Makanchi Array**	**62.10**	**317**	P	**P**	14 51 54.4	**+0.6**
	comp=Z,1.2nm,0.5s,mb4.3,baz=90,slow=8.4,SNR=16						
ZALV	**Zalesovo Beam**	**62.41**	**325**	P	**P**	14 51 55.4	**-0.3**
	comp=Z,0.9nm,0.4s,mb4.2,baz=94,slow=7.7,SNR=4.9						
KURK	**Kurchatov**	**65.28**	**320**	*e*P	**P**	14 52 14.1	**-0.5**
AML	**Almayashu**	**67.56**	**311**	*e*P	**P**	14 52 30.4	**+1.0**
	comp=Z,3.1nm,0.8s,mb4.4						
KKAR	**Karatay Array**	**69.95**	**312**	*e*P	**P**	14 52 44.3	**+0.1**
	comp=Z,3.9nm,0.9s,mb4.3						
ILAR	**Eielson Array**	**69.96**	**25**	P	**P**	14 52 42.4	**-1.5**
	comp=Z,0.4nm,0.5s,mb3.6,baz=251,slow=5.6,SNR=11						
BRVK	**Borovoye**	**70.73**	**322**	*e*P	**P**	14 52 48.2	**-0.6**
	comp=Z,6.5nm,0.9s,mb4.6						
ABKAR	**Akbulak array**	**77.19**	**318**	*e*P	**P**	14 53 26.4	**-0.2**
	comp=Z,2.1nm,0.5s,mb4.3						
YKA	**Yellowknife Ar**	**84.25**	**27**	P	**P**	14 54 04.7	**+0.7**
	comp=Z,0.4nm,0.4s,mb3.9,baz=286,slow=5.3,SNR=2.9						
YKA	**Yellowknife Ar**	**84.25**	**27**	P	**P**	14 54 04.7	**+0.7**
BMO	**Blue Mountains**	**87.26**	**45**	*e*P	**P**	14 54 20.7	**+1.3**
	comp=Z,1.7nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**88.12**	**51**	P	**P**	14 54 23.9	**+0.2**
	comp=Z,0.7nm,0.6s,mb4.1,baz=264,slow=5.3,SNR=7.1						
ARCES	**ARCESS Array B**	**88.19**	**342**	P	**P**	14 54 23.1	**-0.2**
	comp=Z,2.7nm,0.7s,mb4.6,baz=72,slow=7.8,SNR=8.7						
FINES	**FINESS Array B**	**92.15**	**335**	P	**P**	14 54 40.6	**-1.3**
	comp=Z,2.9nm,0.5s,mb4.8,baz=68,slow=4.4,SNR=18						
TORD	**Torodi Ar. Bea**	**135.19**	**303**	PKP	PKPdf	15 00 52.8	-0.3
	comp=Z,0.2nm,0.5s,baz=34,slow=2.8,SNR=2.9						
DBIC	**Dimbokro**	**144.08**	**300**	PKP	PKPdf	15 01 07.9	-1.4
	comp=Z,2.0nm,0.4s,baz=20,slow=2.8,SNR=13						
KIC	**Kosan Boka**	**144.15**	**299**	*e*PKP2	PKPdf	15 01 08.0	-1.4
	comp=Z,6.5nm,0.5s						
TIC	**Toumodi**	**144.24**	**300**	*e*PKP2	PKPdf	15 01 08.5	-1.0
	comp=Z,19nm,0.2s						
LIC	**Lamto**	**144.46**	**299**	*e*PKP2	PKPdf	15 01 09.2	-0.7
	comp=Z,30nm,0.5s						
LPAZ	**La Paz**	**148.27**	**101**	PKPbc	PKPbc	15 01 20.8	+1.2
	comp=Z,0.6nm,0.6s,baz=267,slow=1.4,SNR=2.6						
LPAZ	**La Paz**	**148.27**	**101**	PKPbc	PKPbc	15 01 20.8	+1.2

*CSEM **29** 14:43:44.8±0.7, 32.52N×47.12E, h20km, ML2.7, Error ellipse: s-maj=22.2km s-min=9.4km az=123.0*
*KISR **29** 14:43:45.7±1.0, 32.39N×47.43E, h41km±999km, ML2.7*
*SGS **29** 14:43:47.9, 32.18N×47.45E, h13km*
*TEH **29** 14:43:49.7, 32.36N×47.37E, h31km*
ISC 29 14:43:46.3±2.0, 32.35N±0.03°×47.33E±0.08, h9km±13km, n20, σ0.96/29, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.83**	**5**	*e*Pn	**Pn**	14 44 18.9	**+1.0**
IKOM				*e*Sn	**Sn**	14 44 40.3	**-1.0**
IKOM				*e*		14 44 47.2	
	comp=Z,5μm,0.4s						
IGHG	**Ghaleghazi**	**2.08**	**342**	*e*Pn	**Pn**	14 44 23.3	**+1.9**
IGHG				*e*		14 45 08.3	
	comp=Z,4μm,0.4s						
IVIS	**Veis**	**2.21**	**350**	*e*Pn	**Pn**	14 44 23.5	**+0.3**
IVIS				*e*		14 45 02.0	
	comp=Z,1μm,0.2s						
IDHR	**Dehrash**	**2.48**	**342**	*e*Pn	**Pn**	14 44 27.3	**+0.5**
IDHR				*e*Sn	**Sn**	14 44 56.0	**-1.2**
IDHR				*e*		14 45 08.3	
	comp=Z,2μm,0.2s						
IPIR	**Pirpir**	**3.03**	**83**	*e*Pn	**Pn**	14 44 35.5	**+1.1**
IPIR				*e*		14 45 35.9	
	comp=Z,713nm,0.3s						
NAY	**Al-Naaiem**	**3.09**	**181**	*e*P	**Pn**	14 44 35.4	**+0.2**
NAY				*e*S	**Sn**	14 45 12.7	**+0.4**
NAY				AML	AML	14 45 21.9	
	comp=Z,10nm,0.5s						
NAY	**Al-Naaiem**	**3.09**	**181**	*e*P	**Pn**	14 44 35.4	**+0.2**
NAY				*e*S	**Sn**	14 45 12.7	**+0.4**
ASAO	**Ashtian**	**3.15**	**45**	*e*Sg	**Sg**	14 45 25.8	**-1.6**
RDF	**Al-Radifah**	**3.41**	**177**	*e*P	**Pn**	14 44 40.5	**+0.7**
RDF				*e*S	**Sn**	14 45 21.3	**+1.0**
RDF				AML	AML	14 45 24.1	
	comp=Z,24nm,0.7s						
RDF	**Al-Radifah**	**3.41**	**177**	*e*P	**Pn**	14 44 40.5	**+0.8**
RDF				*e*S	**Sn**	14 45 21.3	**+1.0**
QRN	**Al-Qurain**	**3.62**	**172**	*e*P	**Pn**	14 44 42.7	**+0.1**
QRN				*e*S	**Sn**	14 45 25.7	**+0.1**
QRN				AML	AML	14 45 31.4	
	comp=Z,20nm,0.6s						
IKLH	**Kolahrood**	**3.71**	**74**	*e*Pn	**Pn**	14 44 43.7	**-0.1**
IKLH				*e*		14 45 56.4	
	comp=Z,389nm,0.3s						
IRAZ	**Razeghan**	**3.74**	**35**	*e*Pn	**Pn**	14 44 45.0	**+0.8**
IRAZ				*e*		14 45 02.4	
	comp=Z,490nm,0.2s						
KFJS		**4.18**	**173**	P	**Pn**	14 44 49.7	**-0.6**
KFJS		**4.18**	**173**	P	**Pn**	14 44 49.7	**-0.5**
KFJS				S	**Sn**	14 45 37.5	**-1.7**
IZEF	**Zefreh**	**4.26**	**81**	*e*Pn	**Pn**	14 44 51.3	**0.0**
IZEF				*e*		14 44 53.5	
	comp=Z,246nm,0.1s						
IVRN	**Varamin**	**4.52**	**53**	*e*Pn	**Pn**	14 44 55.1	**+0.2**
IVRN				*e*		14 46 24.7	
	comp=Z,282nm,0.4s						
IDMV	**Damavand**	**5.07**	**49**	*e*Pn	**Pn**	14 45 02.4	**0.0**
IDMV				*e*		14 46 34.7	
	comp=Z,170nm,0.4s						
ASYS		**5.48**	**209**	P	**Pn**	14 45 06.2	**-1.9**
ASYS		**5.48**	**209**	P	**Pn**	14 45 06.2	**-1.9**
ASYS				S	**Sn**	14 46 07.4	**-3.8**

*WEL **29** 15:19:21.6±1.8, 30.34S×175.43W, h33km, ML6.7/67, Mw7.3, Error ellipse: s-maj=17.6km s-min=10.9km az=90.0*
WEL Felt from Bay of Plenty to Otago, maximum reported intensity MM 4.
*IDC **29** 15:19:26.3±0.3, 29.80S×177.67W, h0km, mb6.0/25, mb1 6.0/25, mb1mx6.0/25, mbtmp5.9/25, MS6.6/33, Ms1 6.6/33, ms1mx6.6/34, Error ellipse: s-maj=13.7km s-min=12.6km az=179.0*
*SZGRF **29** 15:19:26.8, 30.53S×175.94W, h33km, mb7.2, Kermadec Islands region*
*BJI **29** 15:19:27.7, 29.46S×177.03W, h26km, mB7.0/32, mb6.2/49, Ms7.1/66, Ms7 7.0/62*
*MOS **29** 15:19:29.9±1.1, 29.79S×177.67W, h33km, mb6.7/73, MS7.0/92, Error ellipse: s-maj=9.1km s-min=7.3km az=59.7*
*ISCJB **29** 15:19:29.1±0.1, 30.08S±0.02×177.70W±0.02, h33km, mb6.5/309, MS6.8/267, Error ellipse: s-maj=3.5km s-min=2.0km az=141.1*
*NEIC **29** 15:19:31.6±0.1, 29.76S×177.68W, h36km, mb6.5/214, ME6.6, MS6.7/180, MW7.0, MW6.9, Error ellipse: s-maj=5.9km s-min=4.3km az=154.0, Moment Tensor Solution. s74 Moment tensor: Scale 10^{19}Nm; M_{rr}2.68; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$-1.68; $M_{r\theta}$0.09; $M_{\theta\phi}$-0.33; $M_{\phi r}$1.23; Best double couple: $M_0$2.70000×10^{19} NP1:ϕ_s14.00000°, δ59.00000°, λ.85.00000°. NP2:ϕ_s204.00000°, δ31.00000°, λ.98.00000°. Principal axes: T 3.0000, Plg75.0000°, Azm270.0000°; N -0.9000, Plg4.0000°, Azm16.0000°; P -2.1100, Plg14.0000°, Azm107.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt in parts of the North Island.
*DJA **29** 15:19:37, 30.06S×177.71W, h82km, Mw7.2/80*
*GCMT **29** 15:19:42.9±0.1, 29.85S×177.46W, h51km, MW7.0, Moment Tensor Solution. s121, c325; s99, c276; Moment tensor: Scale 10^{19}Nm; M_{rr}3.95±.02; $M_{\theta\theta}$-0.23±.01; $M_{\phi\phi}$-3.72±.01; $M_{r\theta}$0.46±.02; $M_{\theta\phi}$-1.10±.01; $M_{\phi r}$1.93±.02; Best double couple: $M_0$4.50000×10^{19} NP1:ϕ_s197.00000°, δ32.00000°, λ.92.00000°. NP2: ϕ_s15.00000°, δ58.00000°, λ.89.00000°. Principal axes: T 4.4200, Plg77.0000°, Azm281.0000°; N 0.0900, Plg1.0000°, Azm16.0000°; P -4.5000, Plg13.0000°, Azm106.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle wave period 150 sec. Mantle waves from 116 sta. Surface waves: sta=118, comp=295, per=50.*
*NOU **29** 15:21:16.5±3.7, 30.37S×170.16E, h0km±999km*
**ISC 29 15:19:30.8±0.1, 30.10S±0.02×177.63W±0.02, h35km, (h34km±1.3km:pP-P), n2265, σ

SNZO South Karori 12.80 207 *e*PN **Pn 15 22 24.4 -5.8**
SNZO South Karori 12.80 207 P **Pn 15 22 39.9 +10**
62nm,0.9s
MSVF Nonsavu 12.92 341 *e*P **Pn 15 22 31.1 -1.0**
4µm,1.4s
MSVF Nonsavu 12.92 341 Pn **Pn 15 22 31.0 -1.0**
8µm,1.0s,SNR=63
TUWZ Tuamarina 13.21 209 *e*PN **Pn 15 22 30.1 -5.7**
NNZ Nelson 13.28 211 *e*PN **Pn 15 22 31.5 -5.3**
BSWZ Blackbirch Sta 13.47 208 *e*PN **Pn 15 22 35.8 -3.6**
CTZ Chatham Island 13.64 177 *e*PN **Pn 15 22 41.1 -0.6**
THZ Tophouse 13.93 211 *e*PN **Pn 15 22 40.2 -5.4**
KHZ Kahutara 14.20 208 *e*PN **Pn 15 22 43.6 -5.6**
KHZ Kahutara 14.20 208 *e*P **Pn 15 22 48.8 -0.5**
2µm,0.9s
DSZ Denniston Nort 14.42 213 *e*PN **Pn 15 22 49.9 -2.4**
LTZ Lake Taylor 15.03 210 PN **Pn 15 22 55.1 -5.4**
CRLZ Canterbury Las 15.54 207 PN **Pn 15 23 05.8 -1.3**
MQZ McQueen's Vall 15.63 207 PN **Pn 15 23 02.9 -5.5**
PLUM Mont Dore 16.11 295 *e*P **Pn 15 23 22.0 +7.3**
LASL Noumea 16.21 295 *e*P **Pn 15 23 22.8 +6.8**
RPZ Rata Peaks 16.30 210 *e*PN **Pn 15 23 12.1 -4.9**
RPZ Rata Peaks 16.30 210 Pn **Pn 15 23 14.2 -2.8**
6.2nm,0.3s,baz=310,slow=10,SNR=25
RPZ Sn **Sn 15 26 11.6 -5.2**
70nm,0.3s,baz=358,slow=22,SNR=7.3
RPZ Rata Peaks 16.30 210 *e*P **Pn 15 23 16.9 -0.1**
3.7nm,0.3s
DZM Mont Dzumac 16.37 295 *e*P **Pn 15 23 23.3 +5.3**
12µm,1.6s
DZM *e*LR LR 15 27 12.5
3253µm,25.3s,baz=119
DZM Mont Dzumac 16.37 295 *e*P pP 15 23 29.2 -0.5
NOUC Port Laguerre 16.47 295 *e*P **Pn 15 23 27.2 +8.0**
FOZ Fox Glacier 16.82 213 *e*PN **Pn 15 23 19.0 -4.4**
AFI Afiamalu 16.99 20 Pn **Pn 15 23 15.4 -10**
12nm,0.3s,baz=275,slow=2.3,SNR=20
AFI Sn Sn 15 26 13.3 -20
22nm,0.3s,baz=53,slow=20,SNR=4.6
AFI Afiamalu 16.99 20 *e*P **Pn 15 23 15.4 -10**
640nm,0.6s
AFI Afiamalu 16.99 20 P **Pn 15 23 15.4 -10**
AFI pmax pmax
comp=Z,12nm,0.3s
LBZ Lake Benmore 17.22 211 *e*PN **Pn 15 23 27.5 -1.0**
ODZ Otahua Downs 17.55 209 *e*PN **Pn 15 23 27.4 -5.1**
ODZ Otahua Downs 17.55 209 *e*P **Pn 15 23 33.5 +0.9**
comp=Z,1µm,0.6s
JCZ Jackson Bay 17.64 214 *e*PN **Pn 15 23 31.8 -1.9**
WKZ Wanaka 18.09 212 *e*PN **Pn 15 23 35.2 -4.0**
EAZ Earnscleugh 18.27 211 *e*PN **Pn 15 23 38.5 -2.9**
RAR Rarotonga 18.35 65 P **Pn 15 23 35.5 -7.1**
comp=Z,11nm,0.3s,baz=234,slow=6.6,SNR=15
RAR S S 15 26 47.7 -23
comp=Z,23nm,0.3s,baz=76,slow=14,SNR=3.6
RAR LR LR 15 29 17.2
comp=Z,125µm,20.4s,baz=238,slow=32
RAR Rarotonga 18.35 65 *e*P **Pn 15 23 34.5 -8.1**
comp=Z,2µm,1.0s
RAR Rarotonga 18.35 65 P **Pn 15 23 35.5 -7.1**
RAR pmax pmax
comp=Z,11nm,0.3s
RAR MLR MLR
comp=Z,125µm,20.4s
MSZ Milford Sound 18.49 214 *e*PN **Pn 15 23 41.9 -2.2**
TUZ Tuapeka 18.70 209 *e*PN **Pn 15 23 45.5 -1.2**
MLZ Mavora Lakes 18.87 212 PN **Pn 15 23 47.9 -0.8**
SYZ Scrubby Hill 19.38 208 *e*PN **Pn 15 23 55.0 +0.2**
WHZ Wether Hill Ro 19.39 212 PN **Pn 15 23 53.5 -1.4**
FUNA Funafuti 21.66 351 *e*P **P 15 24 14.0 -4.5**
comp=Z,793nm,1.2s,mb6.0
FUNA LR LR
comp=Z,293µm,21.0s,MS6.7
TBI Tubuai 26.00 82 *e*P **P 15 24 59.8 -0.8**
comp=Z,1µm,1.3s,mb6.3
TBI *e*LR LR 15 29 54.0
TBI *e*LR LR 15 31 17.0
comp=Z,502µm,30.5s,baz=246
ARMA Armidale 26.52 261⇑ *i*P **P 15 25 09.6 +4.5**
ARMA *e*SCP ScP 15 32 12.6 +6.0
ARMA *e*SCS ScS 15 36 07.5 +10
ARMA *e*PKIKP PKiKP 15 36 13.7 +5.7
ARMA Armidale 26.52 261 *e*P **P 15 25 09.5 +4.4**
comp=Z,1µm,0.8s,mb6.4
RIV Riverview 26.68 254 *e*P **P 15 25 11.6 +5.0**
RIV *e* 15 25 14.4
EIDS Eidsvold 28.04 272 *e*P **P 15 25 21.1 +2.3**
comp=Z,1µm,0.8s,mb6.5
CNB Canberra Magne 28.18 251 *e*P **P 15 25 23.9 +3.9**
CNB *e*pP pP 15 25 29.4 -0.6
CNB *e*PCP PcP 15 28 40.1 +6.9
CNB *e* 15 32 20.7
CNB *e*PKIKP PKiKP 15 36 14.5 +5.6
PAE Paea 28.40 71 *e*P **P 15 25 20.4 -1.7**
comp=Z,158nm,1.4s,mb5.5
PAE Paea 28.40 71 *e*P **P 15 25 20.4 -1.7**
PAE pmax pmax
comp=Z,158nm,1.4s,mb5.5
PPT Papeete 28.45 70 *e*P **P 15 25 20.5 -2.1**
comp=Z,285nm,1.3s,mb5.7
PPT *e*LR LR 15 32 21.8
comp=Z,520µm,29.2s,baz=241
PPT Papeete 28.45 70 P **P 15 25 22.2 -0.4**
comp=Z,46nm,0.8s,mb5.2,baz=187,slow=14,SNR=3.9
PPT LR LR 15 33 58.3
comp=Z,79µm,21.2s,MS6.3,baz=227,slow=31
PPT Papeete 28.45 70 P **P 15 25 22.2 -0.4**
PPT pmax pmax
comp=Z,46nm,0.8s
CAN Canberra 28.47 251 *e*P **P 15 25 26.5 +3.9**
comp=Z,1µm,0.9s,mb6.5
CAN LR LR
comp=Z,442µm,22.0s,MS7.0
CAN Canberra 28.47 251 *e*P **P 15 25 26.5 +3.9**
CAN pmax pmax
comp=Z,1µm,0.9s,mb6.5
CAN MLR MLR
comp=Z,442µm,22.0s,MS7.0
TIAR Tiarei 28.64 71 *e*P **P 15 25 21.1 -3.2**
comp=Z,534nm,0.9s,mb6.3
HNR Honiara 29.35 310 P **P 15 25 28.7 -1.8**
comp=Z,150nm,0.7s,mb5.8,baz=176,slow=3.7,SNR=19
HNR ScP ScP 15 32 20.0 +4.5
comp=Z,90nm,0.9s,baz=224,slow=7.9,SNR=3.4
HNR LR LR 15 35 14.3
comp=Z,303µm,21.8s,MS6.9,baz=141,slow=32
HNR Honiara 29.35 310 *e*P **P 15 25 28.1 -2.5**
comp=Z,2µm,1.1s,mb6.8
HNR LR LR
comp=Z,276µm,21.0s,MS6.9
HNR Honiara 29.35 310 P **P 15 25 28.7 -1.8**
HNR pmax pmax
comp=Z,150nm,0.7s,mb5.8
HNR pmax pmax
comp=N,90nm,0.9s
MEH Mehetia 29.53 72 *e*P **P 15 25 30.5 -1.7**
comp=N,254nm,1.0s,mb5.9
MOO Moorlands 30.70 237 *e*P **P 15 25 44.8 +2.5**
MOO *e*PCP PcP 15 28 43.6 +4.0
MOO *e*SCP ScP 15 32 23.9 +4.4
MOO *e*SCS ScS 15 36 20.1 +4.2
TAU Tasmania Unive 30.71 236 *e*P **P 15 25 44.9 +2.5**
comp=N,1µm,0.9s,mb6.7
TAU LR LR
comp=Z,238µm,20.0s,MS6.8
TAU Tasmania Unive 30.71 236 *e*P **P 15 25 44.9 +2.5**
TAU pmax pmax
comp=Z,1µm,0.9s,mb6.7
TAU MLR MLR
comp=Z,238µm,20.0s,MS6.8
TAU Tasmania Unive 30.71 236 P **P 15 25 45.2 +2.8**
comp=Z,3µm,1.2s,mb7.0,SNR=12
PMOR Pomariorio Ree 31.18 68 *e*P **P 15 25 44.6 -2.2**
comp=Z,860nm,1.4s,mb6.4
TOO Toolangi 31.37 246 *e*P **P 15 25 51.3 +3.0**
TOO *e*PCP PcP 15 28 47.3 +5.9
TOO *e*PKIKP PKiKP 15 36 15.9 +5.0
CTA Charters Tower 34.06 279 P **P 15 26 14.2 +2.3**
comp=Z,875nm,0.8s,mb6.8,baz=101,slow=11,SNR=233
CTA LR LR 15 38 59.6
comp=Z,699µm,18.1s,MS7.4,baz=118,slow=34
CTA P3KPbc 15 57 23.5
comp=Z,1.9nm,0.7s,baz=272,slow=9.7,SNR=4.0
CTA Charters Tower 34.06 279 *e*P **P 15 26 14.2 +2.2**
comp=Z,1µm,0.8s,mb6.8
CTA *e*S **S 15 31 41.6 +6.1**
CTA *e*PKIKP PKiKP 15 36 16.3 +3.0
CTA *e*SCS ScS 15 36 38.3 +4.6
CTA Charters Tower 34.06 279 P **P 15 26 14.2 +2.3**
CTA LR LR 15 38 59.6
CTA *e* 15 57 23.5
CTA Charters Tower 34.06 279 P **P 15 26 14.3 +2.3**
CTA pmax pmax
comp=Z,875nm,0.8s
CTA MLR MLR
comp=Z,699µm,18.1s
CTAO Charters Tower 34.06 279 *e*P **P 15 26 14.0 +2.0**
comp=Z,2µm,0.9s,mb7.0
CTAO *e* pP 15 26 20.9 -1.2
CTAO LR LR
comp=Z,768µm,22.0s,MS7.4
CTAO Charters Tower 34.06 279 *e*P **P 15 26 14.0 +2.0**
CTAO *e* pP 15 26 20.9 -1.2
CTAO pmax pmax
comp=Z,2µm,0.9s,mb7.0
CTAO MLR MLR
comp=Z,768µm,22.0s,MS7.4
CTAO Charters Tower 34.06 279 P **P 15 26 15.2 +3.2**
comp=Z,2µm,1.0s,mb7.0
STKA Stephens Creek 34.86 256 P **P 15 26 21.4 +2.7**
comp=Z,338nm,0.6s,mb6.4,baz=96,slow=8.6,SNR=183
STKA ScP ScP 15 32 39.3 +5.2
comp=Z,41nm,0.9s,baz=63,slow=4.5,SNR=3.2
STKA PKiKP PKiKP 15 36 16.8 +3.2
comp=Z,11nm,0.8s,baz=65,slow=3.7,SNR=3.8
STKA LR LR 15 39 39.1
comp=Z,550µm,18.6s,MS7.3,baz=89,slow=35
STKA P3KPbc 15 57 20.0
comp=Z,2.7nm,0.9s,baz=332,slow=12,SNR=3.7
STKA P3KP 15 58 33.5
comp=Z,2.8nm,0.8s,baz=44,slow=1.7,SNR=3.1
STKA PKPPKP 15 59 34.1
comp=Z,5.6nm,0.9s,baz=65,slow=3.5,SNR=3.7
STKA Stephens Creek 34.86 256 *e*P **P 15 26 21.4 +2.7**
comp=Z,817nm,0.4s,mb7.0
STKA *e*PKIKP PKiKP 15 36 16.8 +3.2
STKA Stephens Creek 34.86 256 *e*P **P 15 26 21.2 +2.5**
comp=Z,0.1nm,0.2s
STKA *e* 15 26 26.7
XMAS Kiritimati 37.33 35 *e*P **P 15 26 40.1 +0.1**
comp=Z,530nm,1.0s,mb6.3
XMAS LR LR
comp=Z,22µm,19.0s,MS6.0
RKT Rikitea 38.60 90 *e*P **P 15 26 50.1 -0.6**
comp=Z,258nm,1.3s,mb5.8
RKT *e*S **S 15 32 40.3 -4.4**
comp=Z,114µm,33.0s
RKT *e*LQ 15 35 35.9
comp=Z,68µm,33.0s
RKT *e*LR LR 15 37 10.5
comp=Z,283µm,29.5s,baz=253
RKT Rikitea 38.60 90 *e*P **P 15 26 50.1 -0.6**
comp=Z,258nm,1.3s,mb5.8
RKT *e*S **S 15 32 40.3 -4.4**
RKT *e*LQ 15 35 35.9
RKT Rikitea 38.60 90 *e*P **P 15 26 50.1 -0.6**
RKT *e*S **S 15 32 40.3 -4.4**
RKT pmax pmax
comp=Z,258nm,1.3s,mb5.8
PMG Port Moresby 38.77 295 *e*P **P 15 26 52.2 0.0**
comp=Z,938nm,1.4s,mb6.3
PMG LR LR
comp=Z,474µm,22.0s,MS7.3
PMG Port Moresby 38.77 295 *ce*P **P 15 26 52.1 -0.1**
PMG pmax pmax
comp=Z,1µm,1.6s
PMG Port Moresby 38.77 295 P **P 15 26 53.6 +1.4**
comp=Z,509nm,1.5s,mb6.0
COEN Coen 39.49 285 *e*P **P 15 26 59.2 +0.9**
comp=Z,45nm,0.4s,mb5.5
COEN Coen 39.49 285 P **P 15 27 00.6 +2.4**
TAOE Nuku Hiva Isla 40.90 67 *e*S **S 15 33 11.5 -7.8**
comp=Z,57µm,26.3s
TAOE *e*LQ 15 36 26.4
comp=Z,71µm,31.9s
TAOE *e*LR LR 15 38 16.2
comp=Z,239µm,30.0s,baz=242
KWAJ Kwajalein Atol 41.19 338 *e*P **P 15 27 12.2 0.0**
comp=Z,220nm,0.8s,mb5.8
PTCN Pitcairn Islan 42.20 95 P **P 15 27 20.6 +0.1**
PTCN LR LR
comp=Z,95µm,21.0s,MS6.7
ASAR Alice Springs 43.44 266 P **P 15 27 31.1 +0.5**
comp=Z,333nm,0.7s,mb6.2,baz=104,slow=7.3,SNR=241
ASAR PcP PcP 15 29 19.6 +1.1
comp=Z,26nm,0.6s,baz=117,slow=3.3,SNR=2.1
ASAR ScP ScP 15 33 12.5 +5.3
comp=Z,31nm,0.9s,baz=107,slow=4.4,SNR=3.8
ASAR PKiKP PKiKP 15 36 24.4 +3.3
comp=Z,4.0nm,0.6s,baz=75,slow=1.8,SNR=5.1
ASAR P3KP 15 58 15.7
comp=Z,2.9nm,0.8s,baz=339,slow=1.3,SNR=7.3
ASAR PKPPKP 15 59 21.1
comp=Z,3.4nm,0.9s,baz=260,slow=1.6,SNR=4.6
ASAR P4KP 16 07 57.5
comp=Z,1.0nm,1.2s,baz=134,slow=2.7,SNR=3.4
ASAR Alice Springs 43.44 266 P **P 15 27 31.1 +0.5**
ASAR PcP PcP 15 29 19.6 +1.1
ASAR ScP ScP 15 33 12.5 +5.3
ASAR Alice Springs 43.44 266 P **P 15 27 31.1 +0.5**
ASAR 15 29 19.6
ASAR pmax pmax
comp=Z,333nm,0.7s
WRA Warramunga Arr 44.40 272 P **P 15 27 38.6 +0.3**
comp=Z,655nm,0.9s,mb6.3,baz=110,slow=7.5,SNR=298
WRA PcP PcP 15 29 27.1 +5.4
comp=Z,251nm,0.9s,baz=133,slow=3.8,SNR=3.0
WRA ScP ScP 15 33 16.6 +5.3
comp=Z,66nm,1.1s,baz=106,slow=3.6,SNR=5.7
WRA S **S 15 34 11.0 +0.2**
comp=Z,27nm,0.8s,baz=107,slow=14,SNR=8.2
WRA PKiKP PKiKP 15 36 23.4 +1.4
comp=Z,7.2nm,0.8s,baz=108,slow=0.4,SNR=4.5
WRA LR LR 15 44 26.9
comp=Z,391µm,21.9s,MS7.3,baz=110,slow=34
WRA P3KP 15 58 15.9
comp=Z,20nm,0.8s,baz=272,slow=1.5,SNR=6.3
WRA Warramunga Arr 44.40 272 P **P 15 27 38.6 +0.3**
WRA PcP PcP 15 29 27.1 +5.4
WRA ScP ScP 15 33 16.6 +5.3
WRA S **S 15 34 11.0 +0.2**
WRA Warramunga Arr 44.40 272 P **P 15 27 38.6 +0.3**
WRA 15 29 27.2
WRA S **S 15 34 11.0 +0.2**
WRA pmax pmax
comp=Z,655nm,0.9s
WRA pmax pmax
comp=Z,251nm,0.9s
WRA smax
comp=N,27nm,0.8s
DRV Dumont d'Urvil 44.54 202 P **P 15 27 45.0 +6.2**
DRV S **S 15 34 14.0 +2.4**
DRV SS SS 15 37 37.0 +5.4
DRV R 15 41 00.0
MMPI Merauke 44.74 290 P **P 15 27 44.5 +3.4**
comp=N,1µm,1.5s,mb6.5
FORT Forrest 46.43 255 *e*P **P 15 27 54.5 +0.2**
comp=N,1µm,0.6s,mb7.1
FORT *e*PCP PcP 15 29 32.4 +3.7
FORT *e*S **S 15 34 42.8 +2.9**
FORT Forrest 46.43 255 *e*P **P 15 27 53.9 -0.4**
comp=N,2µm,0.6s,mb7.1
JOHN Johnston Islan 47.21 11 *e*P **P 15 27 57.8 -2.5**
comp=N,4µm,1.5s,mb7.1
JOHN LR LR
comp=Z,49µm,20.0s,MS6.5
JAY Jayapura 48.04 297 P **P 15 28 06.8 -0.2**
JAY Jayapura 48.04 297 P **P 15 28 06.8 -0.2**
JAY Jayapura 48.04 297 P **P 15 28 06.7 -0.3**
comp=Z,395nm,0.9s,mb6.5
SBA Scott Base 48.36 184 P **P 15 28 13.9 +5.3**
SBA LR LR
comp=Z,48µm,22.0s,MS6.4
SBA Scott Base 48.36 184 P **P 15 28 13.9 +5.3**
SBA MLR MLR
comp=Z,48µm,22.0s,MS6.4
KAKA Kakadu 49.19 279 *e*P **P 15 28 16.0 +0.2**
comp=Z,633nm,0.7s,mb6.8
KAKA *e*PCP PcP 15 29 46.0 +7.2
KAKA *e*S **S 15 35 21.7 +2.4**
KAKA Kakadu 49.19 279 *e*P **P 15 28 15.0 -0.9**
comp=Z,2µm,0.7s,mb7.1
KAKA Kakadu 49.19 279 P **P 15 28 16.6 +0.8**
comp=Z,9µmcomp=Z,1µm,0.9s,mb7.0
KNA Kununurra 50.96 274 P **P 15 28 30.5 +1.2**
comp=Z,3µm,0.8s,mb7.3
WAKE Wake Island 51.37 341 *e*P **P 15 28 31.3 -0.8**
comp=Z,7µm,1.5s,mb7.3
WAKE LR LR
comp=Z,136µm,20.0s,MS7.0
BAKI Biak 52.46 294 P **P 15 28 40.7 +0.3**
BAKI Biak 52.46 294 P **P 15 28 41.1 +0.7**
comp=Z,900nm,1.8s,mb6.4
FITZ Fitzroy Crossi 52.68 269 P **P 15 28 42.2 +0.2**
comp=Z,303nm,1.0s,mb6.2,baz=122,slow=7.3,SNR=63
FITZ S **S 15 36 09.9 +2.4**
comp=Z,20nm,1.0s,baz=188,slow=21,SNR=6.4
FITZ LR LR 15 49 36.8
comp=Z,203µm,20.4s,MS7.2,baz=123,slow=34
FITZ Fitzroy Crossi 52.68 269 *e*P **P 15 28 42.1 +0.1**
comp=Z,1µm,0.8s,mb6.8
FITZ *e*S **S 15 36 07.9 +0.4**
FITZ Fitzroy Crossi 52.68 269 *e*P **P 15 28 41.9 -0.1**
comp=Z,491nm,0.8s,mb6.5
FITZ Fitzroy Crossi 52.68 269 P **P 15 28 43.4 +1.4**
comp=Z,1µm,0.8s,mb7.0
KHU Kahuku 53.45 26 P **P 15 28 47.0 -0.5**
KHU Kahuku 53.45 26 P **P 15 28 47.0 -0.5**
PUH Pauahi 53.72 27 P **P 15 28 47.9 -1.6**
STCH Steam Cracks 53.76 27 *e*P **P 15 28 52.1 +2.3**
POHA Pohakuloa 53.94 26 *e*P **P 15 28 49.5 -1.6**
comp=Z,1µm,1.2s,mb6.7
POHA LR LR
comp=Z,18µm,19.0s,MS6.2
HON Honolulu 54.50 23 *e*P **P 15 28 54.5 -0.7**
HON Honolulu 54.50 23 *e*P **P 15 28 54.5 -0.7**
KIP Kipapa 54.59 23 *e*P **P 15 28 53.7 -2.1**
comp=Z,811nm,1.0s,mb6.7
KIP LR LR
comp=Z,27µm,20.0s,MS6.3
KIP Kipapa 54.59 23 *c i*P **P 15 28 55.6 -0.2**
KLBR Kellerberrin 54.75 251 *e*P **P 15 28 56.4 -0.6**
comp=Z,1µm,1.1s,mb6.9
KLBR *e*SCP ScP 15 34 07.7 +13
KLBR *e*S **S 15 36 35.8 +0.5**
NWAO Narrogin (SRO) 54.80 249 P **P 15 28 57.3 -0.1**
comp=Z,204nm,1.1s,mb6.1,baz=112,slow=7.6,SNR=28
NWAO S **S 15 36 38.1 +2.1**
comp=Z,23nm,0.8s,baz=136,slow=21,SNR=3.0
NWAO LR LR 15 51 28.2
comp=Z,195µm,20.5s,MS7.2,baz=99,slow=35
NWAO Narrogin (SRO) 54.80 249 *e*P **P 15 28 56.0 -1.4**
comp=Z,436nm,1.4s,mb6.3
NWAO LR LR
comp=Z,154µm,20.0s,MS7.1
NWAO Narrogin (SRO) 54.80 249 P **P 15 28 57.3 -0.1**
NWAO S **S 15 36 38.1 +2.1**
NWAO pmax pmax
comp=Z,204nm,1.1s
NWAO smax
comp=N,23nm,0.8s
NWAO Narrogin (SRO) 54.80 249 P **P 15 28 58.0 +0.6**
SNR=22
NWAO mb pP 15 29 08.3 +0.4
SNR=28
CASY Casey 55.55 208 *e*P **P 15 29 03.6 +1.3**
CASY *e*S **S 15 36 44.9 -0.2**
CASY Casey 55.55 208 *e*P **P 15 29 03.8 +1.5**
comp=N,150nm,0.7s,mb6.1
CASY LR LR
comp=Z,49µm,19.0s,MS6.6
BNDI Bandanaira 55.56 287 P **P 15 29 02.5 -0.6**
comp=Z,2µm,1.1s,mb7.1
GUMO Guam 56.49 315 P **P 15 29 07.9 -1.7**
comp=Z,1µm,1.1s,mb6.8,baz=181,slow=11,SNR=16
GUMO LR LR 15 50 28.8
comp=Z,96µm,20.3s,MS6.9,baz=143,slow=33
GUMO Guam 56.49 315 *e*P **P 15 29 06.8 -2.9**
comp=Z,3µm,1.3s,mb7.1
GUMO LR LR
comp=Z,92µm,20.0s,MS6.9
GUMO Guam 56.49 315 P **P 15 29 07.9 -1.7**
GUMO Guam 56.49 315 P **P 15 29 11.2 +1.6**
comp=Z,2µm,1.7s,mb6.8
MBWA Marble Bar 56.57 263 *e*P **P 15 29 09.4 -0.9**
comp=Z,596nm,1.0s,mb6.6
MBWA LR LR
comp=Z,429µm,19.0s,MS7.6
MBWA Marble Bar 56.57 263 P **P 15 29 10.2 -0.1**
comp=Z,681nm,0.9s,mb6.7
MBWA Marble Bar 56.57 263 P **P 15 29 10.3 0.0**
SNR=47
MBWA mb pP 15 29 20.0 -0.8
SNR=84
MIDW Midway 57.98 0 *e*P **P 15 29 17.7 -2.2**
comp=Z,1µm,1.4s,mb6.7
MIDW LR LR
comp=Z,82µm,20.0s,MS6.8
NLAI Namlea 58.60 286 P **P 15 29 24.8 +0.2**
comp=Z,1µm,1.4s,mb6.7
RPN Rapa Nui 59.21 105 P **P 15 29 31.1 +2.4**
comp=Z,225nm,0.9s,mb6.2,baz=259,slow=4.8,SNR=4.4
RPN LR LR 15 49 03.8
comp=Z,45µm,21.7s,MS6.6,baz=330,slow=30
RPN Rapa Nui 59.21 105 *e*P **P 15 29 32.5 +3.7**
comp=Z,923nm,1.4s,mb6.6
RPN LR LR
comp=Z,46µm,20.0s,MS6.6
RPN Rapa Nui 59.21 105 *e*P **P 15 29 32.5 +3.8**
RPN pmax pmax
comp=Z,923nm,1.4s,mb6.6
RPN MLR MLR
comp=Z,46µm,20.0s,MS6.6
MMRI Maumere 59.92 278 P **P 15 29 33.9 +0.2**
comp=Z,1µm,1.3s,mb6.9
QSPA South Pole Qui 60.01 180 P **P 15 29 37.0 +3.6**
comp=Z,341nm,1.0s,mb6.3,baz=36,slow=2.4,SNR=66
QSPA S **S 15 38 00.5 +17**
comp=Z,72nm,1.0s,baz=283,slow=21,SNR=14
QSPA LR LR 15 54 23.3
comp=Z,40µm,18.3s,MS6.6,baz=225,slow=35
QSPA PKPPKP 15 58 58.7
comp=Z,16nm,0.9s,baz=272,slow=4.4,SNR=6.7
QSPA P4KPbc 16 06 50.8
comp=Z,7.3nm,0.9s,baz=15,slow=1.8,SNR=11
QSPA South Pole Qui 60.01 180 P **P 15 29 37.0 +3.6**
QSPA S **S 15 38 00.5 +17**
QSPA LR LR 15 54 23.3
QSPA P'P' 15 58 58.7
WSI Waingapu 61.09 276 P **P 15 29 42.6 +0.9**
comp=Z,3µm,1.7s,mb7.1
BBSI Bau Bau 61.22 281 P **P 15 29 43.5 +0.9**
comp=Z,502nm,1.1s,mb6.5
KDI Kendari 61.98 283 P **P 15 29 47.5 -0.2**
comp=Z,392nm,0.8s,mb6.6
MIR Mirnyy 62.54 207⇑ *i*P **P 15 29 52.8 +2.2**
MIR *e* 15 32 16.0
MIR *e*S **S 15 38 22.0 +6.5**
MIR *e* 15 39 46.0
MIR pmax pmax
comp=Z,456nm,1.6s,mb6.3
MIR pmax pmax
comp=Z,5µm,4.0s
MIR pmax pmax
comp=E,2µm,4.0s
MIR pmax pmax
comp=N,900nm,7.0s
MIR smax
comp=N,9µm,7.0s
MIR MLR MLR
comp=N,25µm,18.0s,MS6.7
MIR MLR MLR
comp=E,38µm,18.0s,MS6.7
MIR MLR MLR
comp=Z,57µm,18.0s,MS6.8
BMNI Bima 63.02 276 P **P 15 29 54.5 -0.2**
comp=Z,1µm,1.6s,mb6.7
KMSI Cibinong 63.30 288 P **P 15 29 56.2 -0.3**
comp=Z,2µm,1.2s,mb7.2
BKSI Bulukumba 63.39 280 P **P 15 29 57.1 -0.1**
comp=Z,360nm,0.8s,mb6.5
LUWI Luwuk 63.41 285 P **P 15 29 57.1 -0.2**
comp=Z,1µm,1.3s,mb6.9
SPSI Sidrap Palu 64.39 281 P **P 15 30 02.8 -1.0**
comp=Z,460nm,1.2s,mb6.4
MSSI Masamba 64.66 282 P **P 15 30 05.0 -0.5**
comp=Z,627nm,0.8s,mb6.7
TTSI Tana Toraja 64.83 282 P **P 15 30 06.1 -0.5**

comp=Z,651nm,1.2s,mb6.5
MRSI Marisa 64.94 286 P **P 15 30 05.3 -2.0**
comp=Z,463nm,0.7s,mb6.6
MTNI Mataram 65.15 274 P **P 15 30 08.9 +0.2**
comp=Z,1μm,1.0s,mb6.9
MATI Mati 65.18 295 *eP* **P 15 30 07.8 -1.0**
MJSI Majene 65.28 281 P **P 15 30 10.8 +1.3**
comp=Z,1μm,1.3s,mb6.8
KHKI Kahang-Kahang 65.76 274 P **P 15 30 11.7 -1.0**
comp=Z,1μm,1.3s,mb6.7
DAV Davao City (W) 65.79 294⇑ *eP* **P 15 30 10.0 -2.8**
DMPH Davao City--Mi 65.85 294 *eP* **P 15 30 12.2 -1.0**
IGBI Denpasar 65.94 274 P **P 15 30 14.4 +0.6**
comp=Z,5μm,1.4s,mb7.3
PCI Palu 65.95 284 P **P 15 30 11.1 -2.7**
KCP Kidapawan 66.14 294⇑ *eP* **P 15 30 13.4 -1.6**
KCP *i* S sP 15 30 29.5 -0.4
SRBI Singaraja 66.24 274 P **P 15 30 16.0 +0.3**
comp=Z,940nm,1.5s,mb6.6
TOLI Toli-Toli 66.25 286 P **P 15 30 20.1 +4.3**
comp=Z,455nm,0.7s,mb6.6
NBBI Negara 66.61 274 P **P 15 30 19.3 +1.2**
comp=Z,1μm,1.6s,mb6.6
BUKP Musuan 66.68 295 *eP* **P 15 30 18.5 0.0**
BUTP Butuan 66.91 296 *eP* **P 15 30 19.1 -0.8**
JAGI Jajag, Banyuwa 66.97 274 P **P 15 30 19.7 -0.7**
comp=Z,1μm,1.3s,mb6.8
SCPH Surigao 67.51 297⇑ *eP* **P 15 30 22.3 -1.4**
GMJI Gumukmas 67.68 273 P **P 15 30 24.3 -0.6**
comp=Z,1μm,1.0s,mb6.8
KBKI Kotabaru 67.81 279 P **P 15 30 25.7 0.0**
comp=Z,604nm,1.5s,mb6.4
KMMI Kalianget 67.82 275 P **P 15 30 26.8 +1.0**
comp=Z,2μm,1.4s,mb6.8
PAGZ Pagadian 67.99 294 *eP* **P 15 30 27.2 +0.4**
MSLP Maasin 68.21 297 *eP* **P 15 30 27.0 -1.1**
KRKI Karangkates 68.59 273 P **P 15 30 31.6 +1.0**
comp=Z,3μm,1.4s,mb7.0
IPIL Ipil 68.60 293 *eP* **P 15 30 30.1 -0.5**
CBIJ Chichi jima 68.64 322 LR LR 15 54 46.3
comp=Z,65μm,21.1s,MS6.8,baz=151,slow=31
TBP Tagbilaran 68.72 296‖ *eP* **P 15 30 31.5 +0.2**
PLP Palo 68.75 298‖ *eP* **P 15 30 31.6 0.0**
BBKI Banjar Baru 68.86 279 P **P 15 30 33.4 +1.1**
comp=Z,2μm,1.2s,mb6.9
OCLP Ormoc 68.97 297 *eP* **P 15 30 32.2 -0.6**
LLP Lapu-Lapu 69.02 296 *eP* **P 15 30 32.2 -1.0**
PWJI Pagerwojo 69.22 273 P **P 15 30 35.3 +0.8**
comp=Z,1μm,1.6s,mb6.6
SJI Sawahan 69.39 273 P **P 15 30 35.8 +0.2**
comp=Z,966nm,0.6s,mb6.9
PCJI Pacitan 69.68 272 P **P 15 30 38.2 +0.8**
comp=Z,3μm,0.7s,mb7.4
CNP Catarman 69.83 298 *eP* **P 15 30 36.8 -1.4**
NGJI Ngawi 69.83 273 P **P 15 30 40.4 +2.1**
comp=Z,1μm,0.9s,mb6.8
PLKI Palangkaraya 70.26 279 P **P 15 30 41.1 +0.2**
comp=Z,2μm,1.5s,mb6.9
GUIM Jordan 70.28 296 *eP* **P 15 30 38.3 -2.7**
UGM Wanagama 70.38 272 P **P 15 30 45.8 +4.1**
comp=Z,1μm,1.2s,mb6.7
MYLDM Lahad Datu 70.40 288 P **P 15 30 42.5 +0.7**
TSM Tawau 70.42 287 P **P 15 30 42.5 +0.6**
YOGI Yogyakarta 70.63 272 P **P 15 30 48.0 +4.8**
comp=Z,3μm,0.9s,mb7.2
SMRI Semarang 70.87 273 P **P 15 30 50.0 +5.3**
comp=Z,1μm,1.3s,mb6.6
BJII Banjamegara 71.37 272 P **P 15 30 50.7 +3.0**
comp=Z,752nm,1.4s,mb6.4
CUYO Cuyo Island 71.65 295 *eP* **P 15 30 49.0 -0.3**
SDKM Sandakan 71.73 288 P **P 15 30 50.4 +0.6**
OTRP Odiongan 71.77 297 *eP* **P 15 30 54.3 +4.3**
CLJI Cilicap 71.78 272 P **P 15 30 57.2 +7.0**
comp=Z,2μm,1.5s,mb6.8
PMSA Palmer Station 72.41 156 LR LR 15 59 31.0
comp=Z,27μm,18.7s,MS6.5,baz=240,slow=33
PMSA Palmer Station 72.41 156 PFAKE 15 31 10.0 +17
PMSA LR LR
comp=Z,25μm,19.0s,MS6.5
BOAC Boac 72.57 297 *eP* **P 15 30 54.1 -0.7**
MAW Mawson 72.70 200 P **P 15 30 57.3 +2.5**
comp=Z,368nm,0.9s,mb6.3,baz=122,slow=7.2,SNR=106
MAW PKKP PKKPbc 15 50 17.3 -20
comp=Z,1.9nm,0.8s,baz=250,slow=1.2,SNR=3.7
MAW PKPPKP 15 58 39.6
comp=Z,11nm,1.1s,baz=297,slow=7.2,SNR=5.2
MAW LR LR 16 01 48.7
comp=Z,109μm,20.4s,MS7.1,baz=119,slow=35
MAW Mawson 72.70 200 *eP* **P 15 30 57.2 +2.5**
comp=Z,517nm,1.0s,mb6.4
MAW *e*S S 15 40 17.9 +0.6
MAW Mawson 72.70 200 *eP* **P 15 30 57.2 +2.5**
comp=Z,0.8nm,0.2s
MAW LR LR
comp=Z,176μm,21.0s,MS7.3
MAW Mawson 72.70 200 P **P 15 30 57.3 +2.5**
MAW pmax pmax
comp=Z,368nm,0.9s
KDM Kudat 72.74 289 P **P 15 30 56.6 +0.8**
KKM Kota Kinabalu 72.77 288 P **P 15 30 56.4 +0.4**
KKM Kota Kinabalu 72.77 288 *eP* **P 15 30 55.3 -0.7**
comp=Z,3μm,1.4s,mb7.0
KKM LR LR
comp=Z,64μm,20.0s,MS6.9
CISI Cisompet, Garu 72.90 271 P **P 15 30 56.7 -0.1**
comp=Z,1μm,1.3s,mb6.7
BUSP Coron 72.97 295 *eP* **P 15 30 57.0 -0.1**
BATP Bataraza 73.02 291 *eP* **P 15 30 57.0 -0.4**
JCJI Jatiwangi 73.02 272 P **P 15 30 57.7 +0.1**
comp=Z,2μm,1.0s,mb7.1
ENPP El Nido 73.11 294 *eP* **P 15 30 57.9 -0.1**
POLP Polilio Island 73.28 299 *eP* **P 15 31 01.2 +2.3**
XMIS Christmas Isla 73.38 267 P **P 15 30 59.3 -0.4**
comp=Z,434nm,2.3s,mb6.0
LEM Lembang 73.42 272 P **P 15 31 01.0 +1.1**
comp=Z,2μm,0.9s,mb7.1
STKI Sintang 73.55 280 P **P 15 31 01.7 +1.0**
comp=Z,1μm,1.6s,mb6.6
TGY Tagaytay City 73.66 297 P **P 15 31 01.7 +0.6**
comp=Z,203nm,0.3s,mb6.5,baz=315,slow=6.1,SNR=6.8
TGY LR LR 16 02 30.6
comp=Z,148nm,19.9s,baz=305,slow=35
TGY Tagaytay City 73.66 297 P **P 15 31 01.7 +0.6**
TGY P'P' 15 58 37.5
TGY LR LR 16 02 30.6
TGY Tagaytay City 73.66 297 P **P 15 31 01.7 +0.5**
TGY pmax pmax
comp=Z,203nm,0.4s
BTM Bintulu 73.83 284 P **P 15 31 02.8 +0.5**
SBUM Sibu 74.17 282 P **P 15 31 04.9 +0.6**
BALP Baler 74.17 299 *eP* **P 15 31 03.0 -1.2**
SKJI Sukabumi 74.26 271 P **P 15 31 05.9 +1.1**
comp=Z,2μm,1.2s,mb6.8
DBJI Dramaga 74.31 271 P **P 15 31 05.2 +0.1**
comp=Z,2μm,0.9s,mb7.0
PALP Palanan 74.35 301 *eP* **P 15 31 09.1 +3.9**
TNG Tangerang 74.58 272 P **P 15 31 11.4 +4.7**
comp=Z,3μm,1.7s,mb7.0
TNG Tangerang 74.58 272 P **P 15 31 11.2 +4.5**
comp=Z,2μm,1.6s,mb6.8
JHJ Hachijo jima 2 74.68 324 LR LR 15 59 33.4
comp=Z,55μm,22.0s,MS6.8,baz=167,slow=32
CAUP Cauayan 74.73 300 *eP* **P 15 31 11.4 +4.1**
SBJI Serang 75.06 272 P **P 15 31 10.7 +1.2**
comp=Z,1μm,1.4s,mb6.7
KSM Kuching 75.28 280 P **P 15 31 11.0 +0.3**
KSM Kuching 75.28 280 *eP* **P 15 31 10.1 -0.6**
comp=Z,3μm,1.5s,mb7.0
KSM LR LR
comp=Z,68μm,20.0s,MS6.9
SGCP Mt. Cagua 75.37 301 *eP* **P 15 31 15.0 +4.0**
TPI Tanjungpandan 75.40 275 P **P 15 31 11.1 -0.3**
comp=Z,774nm,1.3s,mb6.5
SCZP Santa Cruz 75.46 298 *eP* **P 15 31 19.4 +7.8**
RBSI Rajabasa 75.53 272 P **P 15 31 15.8 +3.6**
comp=Z,1μm,1.1s,mb6.8
APYP Conner 75.73 301 *eP* **P 15 31 17.0 +3.9**
BOLP Bolinao 75.83 299 *eP* **P 15 31 16.6 +2.9**
USHA Ushuaia 75.99 146 LR LR 15 57 07.4
comp=Z,29μm,21.7s,MS6.5,baz=162,slow=30
USHA PKPPKP 15 58 37.5
comp=Z,15nm,0.8s,baz=20,slow=6.3,SNR=4.2
ABRA Dolores 76.00 300 *eP* **P 15 31 17.3 +2.7**
BLSI Bandar Lampung 76.19 272 P **P 15 31 15.2 -0.8**
comp=Z,1μm,1.0s,mb6.7
PIP Pasuquin 76.48 301⇑ *eP* **P 15 31 22.0 +4.6**

JOW Kunigami 76.69 312 LR LR 16 00 29.5
comp=Z,57μm,21.9s,MS6.8,baz=131,slow=32
JOW Kunigami 76.69 312 *eP* **P 15 31 16.1 -2.4**
comp=Z,361nm,1.1s,mb6.2
KASI Kota Agung 76.76 271 P **P 15 31 19.3 +0.1**
comp=Z,1μm,1.1s,mb6.8
KLI Kotabumi 76.78 272 P **P 15 31 19.4 +0.1**
comp=Z,2μm,1.1s,mb6.8
KLSI 76.97 272 P **P 15 31 19.6 -0.8**
comp=Z,2μm,1.1s,mb6.9
PPBI Pangkal Pinang 77.01 275 P **P 15 31 21.2 +0.6**
comp=Z,613nm,1.4s,mb6.3
LWLI Liwa 77.39 271 P **P 15 31 23.1 +0.4**
comp=Z,2μm,0.8s,mb7.1
SYO Syowa Base 77.48 193‖ *iP* **P 15 31 22.4 +0.1**
MDSI Maura Dua 77.55 272 P **P 15 31 22.7 -0.9**
comp=Z,2μm,1.0s,mb6.9
MJAR Matsushiro Arr 78.17 325 P **P 15 31 24.7 -1.8**
comp=Z,97nm,1.1s,mb5.6,baz=167,slow=5.7,SNR=53
MJAR PKPPKP 15 58 34.4
comp=Z,2.1nm,0.9s,baz=287,slow=1.4,SNR=3.0
MJAR LR LR 16 02 10.0
comp=Z,27μm,21.6s,MS6.5,baz=130,slow=33
MJAR Matsushiro Arr 78.17 325 P **P 15 31 24.7 -1.8**
MJAR pmax pmax
comp=Z,97nm,1.1s
MAJO Matsushiro 78.18 325 *eP* **P 15 31 24.7 -1.8**
comp=Z,1μm,1.1s,mb6.8
MAJO LR LR
comp=Z,45μm,19.0s,MS6.8
MAJO Matsushiro 78.18 325 *eP* **P 15 31 24.7 -1.8**
MAJO pmax pmax
comp=Z,1μm,1.1s,mb6.8
MAJO MLR MLR
comp=Z,45μm,19.0s,MS6.8
MAT Matsushiro 78.18 325 P **P 15 31 24.7 -1.8**
MAT S S 15 41 17.0 -1.5
SNAA Sanae 78.45 178 P **P 15 31 29.0 +1.4**
comp=Z,66nm,1.0s,mb5.5,baz=196,slow=4.8,SNR=58
SNAA S S 15 41 33.1 +12
comp=Z,7.4nm,1.1s,baz=194,slow=19,SNR=5.9
SNAA PKKPbc PKKPbc 15 50 26.5 +1.4
comp=Z,2.7nm,0.7s,baz=307,slow=0.6,SNR=18
SNAA Sanae 78.45 178 P **P 15 31 29.0 +1.4**
SNAA S S 15 41 33.1 +12
SNAA pmax pmax
comp=Z,66nm,1.0s
SNAA smax
comp=N,7.0nm,1.1s
VNA3 Neumayer Olymp 78.59 176 *eP* **P 15 31 26.7 -1.7**
VNA3 *e* pP 15 31 37.1 -2.2
VNA3 *e* 15 41 33.8
MNAI Manna 78.67 272 P **P 15 31 29.6 -0.2**
comp=N,1μm,1.2s,mb6.6
COYC Coyhaique 78.94 136⇑ *iP* **P 15 31 34.2 +3.5**
COYC Coyhaique 78.94 136⇑ *iP* **P 15 31 34.2 +3.5**
TWG Pinlang 78.95 304 *eP* **P 15 31 31.1 0.0**
comp=N,418nm,0.6s,mb6.5
VNA2 Neumayer--Watz 79.02 177 *eP* **P 15 31 29.5 -1.3**
baz=177,slow=4.4
VNA2 *e* pP 15 31 40.9 -0.8
YULB Yu-li 79.15 305 *eP* **P 15 31 32.4 +0.2**
comp=N,83nm,0.6s,mb5.8
NVL N'lazarevskaya 79.20 183 *eP* **P 15 31 32.3 +0.6**
NVL *e* pP 15 31 40.2 -2.5
NVL *e**PP pP 15 31 44.2 +1.5
NVL *e**SP sP 15 31 48.7 +2.0
NVL *e*S S 15 41 24.3 -4.4
NVL *e**SS sS 15 41 39.5 -7.3
NVL *e* 15 41 52.6
NVL pmax pmax
comp=Z,503nm,1.0s,mb6.4
NVL MLR MLR
comp=Z,30μm,16.0s,MS6.7
VNA1 Neumayer--Stat 79.25 176 *eP* **P 15 31 31.2 -0.8**
VNA1 *e* pP 15 31 42.5 -0.5
KSI Kapahiang 79.33 272 P **P 15 31 32.5 -1.0**
comp=Z,2μm,0.8s,mb7.1
NACB Ninganchiao 79.44 306 *eP* **P 15 31 32.9 -0.9**
comp=Z,475nm,1.0s,mb6.4
JNU Nakatsue 79.54 318 *eP* **P 15 31 33.4 -0.7**
comp=Z,632nm,1.3s,mb6.4
TPUB Ta-pu 79.57 305 P **P 15 31 35.4 +0.9**
comp=Z,466nm,0.8s,mb6.5
YHNB Yeheng 79.91 306 P **P 15 31 38.7 +2.5**
comp=Z,429nm,1.1s,mb6.3
YHNB LR LR
comp=Z,87μm,22.0s,MS7.0
TATO Taipei 80.02 306 *eP* **P 15 31 38.6 +1.7**
comp=Z,907nm,1.1s,mb6.6
TATO LR LR
comp=Z,91μm,22.0s,MS7.1
COCO West Island 80.17 262 *eP* **P 15 31 40.4 +2.4**
comp=Z,5μm,1.9s,mb7.2
COCO LR LR
comp=Z,166μm,21.0s,MS7.4
COCO West Island 80.17 262 *eP* **P 15 31 40.4 +2.4**
COCO pmax pmax
comp=Z,5μm,1.9s,mb7.2
COCO MLR MLR
comp=Z,166μm,21.0s,MS7.4
ERM Erimo 80.34 331 *eP* **P 15 31 39.3 +1.1**
comp=Z,539nm,1.0s,mb6.4
ERM LR LR
comp=Z,89μm,21.0s,MS7.1
ERM Erimo 80.34 331 *d iP* **P 15 31 38.5 +0.3**
ERM pmax pmax
comp=Z,97nm,0.9s,mb5.7
ERM Erimo 80.34 331 P **P 15 31 43.4 +5.2**
comp=Z,3μm,1.0s,mb7.1,SNR=18
ILCA Isla Las Cabra 80.51 133 *eP* **P 15 31 42.1 +2.7**
PAF Port-aux-Franc 80.58 218 P **P 15 31 41.8 +2.2**
comp=Z,4μm,1.6s,mb7.1
PAF LR LR
comp=Z,78μm,21.0s,MS7.0
PAF Port-aux-Franc 80.58 218 P **P 15 31 41.8 +2.2**
PAF MLR MLR
comp=Z,78μm,21.0s,MS7.0
MYKOM Kota Tinggi 80.97 277 P **P 15 31 42.6 +0.3**
YUK Yuzh-Kuril'sk 80.98 334⇑ *iP* **P 15 31 36.2 -5.3**
YUK *i* 15 34 47.8
YUK *i* S S 15 41 43.0 -4.8
YUK *i* SS SS 15 47 00.3 -3.1
YUK *i* SSS 15 50 21.8
YUK pmax pmax
comp=Z,1μm,1.1s,mb6.8
YUK pmax pmax
comp=E,500nm,1.8s
YUK pmax pmax
comp=Z,2μm,1.8s,mb6.6
YUK pmax pmax
comp=N,789nm,1.6s
YUK smax
comp=N,3μm,4.2s
YUK smax
comp=E,4μm,4.2s
KRJI Kerinci 81.08 273 P **P 15 31 47.9 +5.0**
comp=E,3μm,0.9s,mb7.2
AMKA Amchitka 81.16 358 *eP* **P 15 31 41.8 -0.5**
comp=E,223nm,1.0s,mb6.0
AMKA LR LR
comp=Z,200nm,23.0s
RGRI Rengat 81.20 275 P **P 15 31 44.3 +0.8**
comp=Z,2μm,1.0s,mb6.9
KGM Kluang 81.54 277 P **P 15 31 45.9 +0.6**
SDSI Sungai Dareh 81.69 274 P **P 15 31 44.5 -1.6**
comp=Z,8μmcomp=Z,306nm,1.2s,mb6.1
QZH Quanzhou 82.04 305⇑ *iP* **P 15 31 47.8 +0.2**
QZH S S 15 41 55.0 -4.7
QZH pmax pmax
comp=Z,960nm,1.1s,mb6.6
QZH pmax pmax
comp=Z,23μm,12.1s
QZH LR LR
comp=N,24μm,14.7s,MS6.9
QZH LR LR
comp=E,31μm,14.6s,MS6.9
QZH LR LR
comp=Z,92μm,26.4s
ASAJ Asahikawa 82.32 332 P **P 15 31 49.1 +0.6**
comp=Z,207nm,0.9s,mb6.1,baz=231,slow=11,SNR=46
ASAJ LR LR 16 06 37.4
comp=Z,84μm,19.5s,MS7.1,baz=240,slow=34
ASAJ Asahikawa 82.32 332 *eP* **P 15 31 48.7 +0.1**
comp=Z,276nm,0.9s,mb6.2
ASAJ Asahikawa 82.32 332 P **P 15 31 49.2 +0.6**

ASAJ pmax pmax
comp=Z,207nm,0.9s
PLCA Paso Flores 82.48 133 P **P 15 31 49.5 -0.3**
comp=Z,112nm,1.1s,mb5.7,baz=261,slow=4.1,SNR=34
PLCA PKKP PKKPbc 15 50 03.4 -12
comp=Z,3.6nm,1.0s,baz=18,slow=2.5,SNR=3.4
PLCA PKPPKP 15 58 16.2
comp=Z,11nm,0.9s,baz=3.3,slow=1.9,SNR=12
PLCA LR LR 15 59 59.3
comp=Z,47μm,21.7s,MS6.8,baz=278,slow=29
PLCA Paso Flores 82.48 133 *eP* **P 15 31 51.2 +1.4**
comp=Z,310nm,1.0s,mb6.2
PLCA *e* pP 15 32 02.3 +1.4
PLCA LR LR
comp=Z,45μm,21.0s,MS6.8
PLCA Paso Flores 82.48 133 P **P 15 31 49.6 -0.2**
PLCA pmax pmax
comp=Z,113nm,1.1s
PDSI Padang 82.54 273 P **P 15 31 48.9 -1.6**
comp=Z,2μm,1.1s,mb7.0
BKNI Bangkinang 82.65 275 P **P 15 31 51.8 +0.6**
comp=Z,2μm,1.0s,mb7.0
SMY Shemya 82.79 355 *eP* **P 15 31 50.0 -0.8**
comp=Z,3μm,1.7s,mb7.1
SMY LR LR
comp=Z,71μm,23.0s,MS7.0
SMY Shemya 82.79 355 *eP* **P 15 31 50.0 -0.8**
SMY MLR MLR
comp=Z,71μm,23.0s,MS7.0
PPI Padang Panjang 82.82 274 P **P 15 31 50.8 -1.2**
comp=Z,392nm,0.9s,mb6.4
EFI East Falkland 82.87 147 *eP* **P 15 31 52.5 +0.8**
comp=Z,408nm,0.9s,mb6.5
EFI LR LR
comp=Z,22μm,22.0s,MS6.5
EFI East Falkland 82.87 147 *eP* **P 15 31 52.5 +0.9**
EFI pmax pmax
comp=Z,408nm,0.9s,mb6.5
EFI MLR MLR
comp=Z,22μm,22.0s,MS6.5
EFI East Falkland 82.87 147 P **P 15 31 53.9 +2.3**
comp=Z,3μm,0.7s,mb7.4,SNR=14
NIKO Nikolski 83.07 5 *eP* **P 15 31 50.7 -1.5**
comp=Z,2μm,1.3s,mb7.1
KTGM Kuala Trenggan 83.39 280 P **P 15 31 55.2 +0.3**
SISI Saibi 83.52 272 P **P 15 31 57.0 +1.4**
SNCC San Nicolas Is 83.60 46⇑ P **P 15 31 55.9 +0.4**
baz=84
SNCC ⇑S S 15 42 17.6 +2.3
baz=84
SNCC San Nicolas Is 83.60 46 *eP* **P 15 31 57.3 +1.8**
comp=Z,374nm,1.2s,mb6.4
FRIM Kepong 83.61 277 P **P 15 31 56.2 +0.1**
HKC Hong Kong Obse 83.69 300⇑ *iP* **P 15 31 56.0 -0.2**
SKR Severo-Kuril's 83.71 344 *eP* **P 15 31 54.2 -1.4**
SKR *e* 15 42 04.0
SKR *e*S S 15 42 14.0 -1.5
SKR *e*PS 15 43 11.0
SKR *e*SS SS 15 47 41.0 -2.8
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=E,220nm,1.0s
SKR pmax pmax
comp=Z,670nm,1.0s,mb6.7
SKR pmax pmax
comp=N,9μm,20.0s
SKR pmax pmax
comp=E,6μm,20.0s
SKR pmax pmax
comp=Z,22μm,20.0s
SKR smax
comp=N,19μm,20.0s
SKR smax
comp=E,13μm,20.0s
SKR MLR MLR
comp=N,56μm,18.0s,MS7.1
SKR MLR MLR
comp=E,39μm,18.0s,MS7.1
SKR MLR MLR
comp=Z,74μm,18.0s,MS7.1
CCHI Chillan 83.73 129 *eP* **P 15 32 00.7 +4.3**
CCHI Chillan 83.73 129 *eP* **P 15 32 00.7 +4.3**
SCI San Clemente I 84.03 46⇓ P **P 15 31 58.0 +0.2**
baz=84
BSC Santa Cruz Isl 84.04 45⇑ P **P 15 31 57.6 -0.1**
baz=84
LPIG La Paz 84.11 58 *i* P **P 15 31 58.2 -0.1**
SSE Sheshan 84.15 311 P **P 15 32 01.5 +3.1**
SSE pP pP 15 32 13.0 +3.6
SSE PP PP 15 35 17.0 +3.7
SSE S S 15 42 20.5 -0.3
SSE pmax pmax
comp=Z,210nm,1.5s,mb6.0
SSE pmax pmax
comp=Z,14μm,10.9s
SSE LR LR
comp=N,43μm,24.7s,MS6.8
SSE LR LR
comp=E,31μm,24.7s,MS6.8
SSE LR LR
comp=Z,62μm,23.5s,MS6.9
UNV Unalaska Valle 84.15 7 *eP* **P 15 31 56.1 -1.6**
comp=Z,665nm,1.3s,mb6.6
SBC Santa Barbara 84.29 45⇓ P **P 15 31 59.3 +0.3**
baz=84
KSRS Korea Array 84.32 319 P **P 15 31 59.4 +0.3**
comp=Z,227nm,1.2s,mb6.2,baz=140,slow=4.9,SNR=38
KSRS PKIKP PKIKP 15 37 14.9 +1.5
comp=Z,2.0nm,0.8s,baz=138,slow=4.2,SNR=2.0
KSRS PKPPKP 15 58 19.6
comp=Z,1.8nm,1.0s,baz=334,slow=1.9,SNR=5.5
KSRS LR LR 16 08 39.4
comp=Z,49μm,19.1s,MS6.9,baz=144,slow=35
KSRS Korea Array 84.32 319 P **P 15 31 59.4 +0.3**
KSRS *i* 15 37 15.0
KSRS pmax pmax
comp=Z,227nm,1.2s,mb6.2
KSRS MLR MLR
comp=Z,49μm,19.1s,MS6.9
CIS Catalina Islan 84.41 46⇑ P **P 15 31 59.5 -0.2**
baz=84
AKUT Akutan 84.51 7 *eP* **P 15 31 59.5 -0.1**
comp=Z,2μm,2.0s,mb6.9
AKUT LR LR
comp=Z,30μm,19.0s,MS6.7
PKM Peak Mountain 84.53 44⇑ P **P 15 32 00.9 +0.7**
baz=84,SNR=36
YSS Yuzh-Sakhalins 84.61 334 *eP* **P 15 32 00.4 +0.1**
comp=Z,2μm,0.9s,mb7.1
YSS LR LR
comp=Z,49μm,22.0s,MS6.8
YSS Yuzh-Sakhalins 84.61 334 *αeP* **P 15 32 00.0 -0.3**
YSS *e**PP pP 15 32 10.0 -1.4
YSS *e**SP sP 15 32 17.0 +1.6
YSS *e*PPP 15 37 18.0
YSS *e*S S 15 42 20.0 -4.7
YSS *e*SS SS 15 47 56.0 -1.3
YSS pmax pmax
comp=Z,220nm,1.3s,mb6.1
YSS pmax pmax
comp=N,80nm,1.2s
YSS pmax pmax
comp=E,130nm,1.2s
YSS MLR MLR
comp=Z,62μm,19.0s,MS7.0
YSS MLR MLR
comp=N,65μm,18.0s,MS7.1
YSS MLR MLR
comp=E,26μm,18.0s,MS7.1
FMP Fort Macarthur 84.68 46⇓ P **P 15 32 01.1 +0.1**
baz=85
FMP ⇑S S 15 42 24.3 -1.7
baz=85
SMMC Simmler 84.70 44⇓ P **P 15 32 01.9 +0.8**
baz=85,SNR=23
SMMC ⇑S S 15 42 25.8 -0.3
baz=85
IPM Ipoh 84.76 278 P **P 15 32 02.0 +0.1**
IPM Ipoh 84.76 278 *eP* **P 15 32 01.2 -0.7**
comp=E,2μm,1.2s,mb7.0
GZH Guangzhou 84.77 300 P **P 15 32 02.5 +0.8**
GZH S S 15 42 26.3 -1.1
GZH LR LR
comp=N,13μm,26.4s,MS6.7
GZH LR LR
comp=E,35μm,26.6s,MS6.7

GZH LR LR
comp=Z,83μm,25.5s,MS7.0
SAO San Andreas Ge 84.84 42 *e*P **P 15 32 01.8 +0.1**
comp=Z,504nm,1.4s,mb6.5
SAO LR LR
comp=Z,22μm,19.0s,MS6.6
SAO San Andreas Ge 84.84 42 *e*P **P 15 32 01.8 +0.1**
SAO pmax pmax
comp=Z,504nm,1.4s,mb6.5
SAO MLR MLR
comp=Z,22μm,19.0s,MS6.6
SAC San Andreas 84.85 41 *e*P **P 15 32 01.3 -0.5**
comp=Z,1μm,1.5s,mb6.8
SAC San Andreas 84.85 41 *e*P **P 15 32 01.3 -0.5**
SAC pmax pmax
comp=Z,1μm,1.5s,mb6.8
109C Camp Elliot, M 84.89 47 ⇓P **P 15 32 02.0 0.0**
baz=85
MCCM Marconi Confer 84.98 40 *e*P **P 15 32 02.1 -0.3**
comp=Z,1μm,1.6s,mb6.8
MCCM LR LR
comp=Z,25μm,19.0s,MS6.6
OSI Osito Adit 85.01 45 ⇓P **P 15 32 02.5 -0.1**
baz=85,SNR=10
OSI Osito Adit 85.01 45 *e*P **P 15 32 02.5 -0.1**
comp=Z,861nm,1.4s,mb6.7
DECC Green Verdugo 85.01 46 ⇑P **P 15 32 02.8 +0.1**
baz=85
BAR Barrett 85.03 48 *e*P **P 15 32 02.5 -0.2**
comp=Z,625nm,1.5s,mb6.5
PASC Pasadena Art C 85.05 46 *e*P **P 15 32 02.5 -0.4**
comp=Z,552nm,1.2s,mb6.6
INCN Inchon 85.08 319 *e*P **P 15 32 02.4 -0.5**
comp=Z,282nm,0.9s,mb6.4
INCN LR LR
comp=Z,31μm,22.0s,MS6.7
INCN Inchon 85.08 319 P **P 15 32 09.4 +6.5**
SNR=34
QIZ Qiongzhong 85.15 295 P **P 15 32 04.5 +0.8**
QIZ pP pP 15 32 13.0 -1.8
QIZ sP sP 15 32 18.8 0.0
QIZ S S 15 42 27.0 -4.3
QIZ sS sS 15 42 47.5 -2.1
QIZ LR LR
comp=N,19μm,31.1s,MS6.3
QIZ LR LR
comp=E,12μm,34.7s,MS6.3
QIZ LR LR
comp=Z,91μm,40.4s
QIZ Qiongzhong 85.15 295 P **P 15 32 03.3 -0.4**
comp=Z,486nm,1.4s,mb6.4
QIZ LR LR
comp=Z,31μm,20.0s,MS6.7
MWC Mount Wilson 85.16 46 *e*P **P 15 32 03.0 -0.4**
comp=Z,723nm,1.3s,mb6.7
MWC Mount Wilson 85.16 46 *e*P **P 15 32 03.1 -0.3**
MWC pmax pmax
comp=Z,723nm,1.3s,mb6.7
ARVC Arvin 85.29 45 ⇓P **P 15 32 03.8 -0.2**
baz=85,SNR=13
MURC Murrieta 85.29 47 ⇑P **P 15 32 04.2 +0.1**
baz=85
PET Petropavlovsk 85.31 346 *e*P **P 15 32 02.4 -1.3**
comp=Z,285nm,0.8s,mb6.5
PET *e* pP 15 32 12.5 -2.3
PET LR LR
comp=Z,64μm,22.0s,MS7.0
PET Petropavlovsk 85.31 346 *c i*P **P 15 32 02.7 -1.0**
PET *e* 15 35 25.2
PET *i* S S 15 42 21.5 -10
PET *e*PPS 15 43 26.7
PET *e*SS SS 15 48 07.1 -0.3
PET pmax pmax
comp=Z,352nm,1.0s,mb6.5
PET pmax pmax
comp=Z,20μm,16.3s
PET pmax pmax
comp=Z,16μm,18.9s
PET pmax pmax
comp=Z,7μm,20.0s
PET smax
comp=N,12μm,15.9s
PET MLR MLR
comp=Z,39μm,19.0s,MS6.8
PET MLR MLR
comp=Z,35μm,18.0s
MONP Monument Peak 85.33 48 ⇓P **P 15 32 04.7 +0.5**
baz=85
DVTC Desert V Tower 85.38 48 ⇑P **P 15 32 04.9 +0.3**
baz=85
BFSC Mount Baldy Ra 85.42 46 ⇓P **P 15 32 04.7 0.0**
baz=85,SNR=57
HOPS Hopland 85.47 40 *e*P **P 15 32 04.9 +0.1**
comp=Z,703nm,1.2s,mb6.7
HOPS LR LR
comp=Z,26μm,19.0s,MS6.6
FALS False Pass 85.49 8 *e*P **P 15 32 04.6 +0.1**
comp=Z,286nm,0.9s,mb6.4
FALS *e* 15 32 10.7
KULM Kulim 85.49 279 P **P 15 32 05.6 +0.1**
KULM Kulim 85.49 279 *e*P **P 15 32 04.6 -1.0**
comp=Z,2μm,1.3s,mb7.0
KULM *e* 15 32 10.6
KULM LR LR
comp=Z,93μm,20.0s,MS7.2
PEA0B Petropavlovsk- 85.60 345 *e*P **P 15 32 04.4 -0.7**
PETK Petropavlovsk- 85.60 345 P **P 15 32 04.4 -0.7**
comp=Z,260nm,0.8s,mb6.5,baz=120,slow=4.5,SNR=35
PKiKP PKiKP
comp=Z,10.0nm,1.0s,baz=92,slow=4.6,SNR=2.9
PETK LR LR 16 04 43.3
comp=Z,53μm,21.7s,MS6.9,baz=175,slow=32
PETK Petropavlovsk- 85.60 345 P **P 15 32 04.4 -0.7**
PETK *i* 15 37 15.3
PETK pmax pmax
comp=Z,260nm,0.8s,mb6.5
VES Vestal, Richgr 85.61 44 ⇑P **P 15 32 05.7 +0.1**
baz=86,SNR=25
EDW2 Edwards Air Fo 85.64 45 ⇑P **P 15 32 06.0 +0.3**
baz=86,SNR=81
KCPM Cahto Peak 85.68 39 *e*P **P 15 32 06.1 +0.2**
comp=Z,436nm,1.3s,mb6.5
SWSC Sam W. Stewart 85.76 48 ⇑P **P 15 32 06.8 +0.3**
baz=86
PFO Pinyon Flat Ob 85.77 47 ⇑P **P 15 32 06.7 +0.2**
baz=86,SNR=34
PFO Pinyon Flat Ob 85.77 47 *e*P **P 15 32 06.9 +0.4**
comp=Z,668nm,1.3s,mb6.7
PFO LR LR
comp=Z,18μm,19.0s,MS6.5
PFO Pinyon Flat Ob 85.77 47 *e*P **P 15 32 06.9 +0.5**
PFO pmax pmax
comp=Z,668nm,1.3s,mb6.7
PFO MLR MLR
comp=Z,18μm,19.0s,MS6.5
PFO Pinyon Flat Ob 85.77 47 P **P 15 32 07.3 +0.8**
comp=Z,2μm,1.2s,mb7.3,SNR=31
KIPM Iron Peak 85.83 39 *e*P **P 15 32 06.9 +0.3**
comp=Z,844nm,1.3s,mb6.8
RCTC Rector, Farmer 85.83 44 ⇑P **P 15 32 06.2 -0.5**
baz=86
ISA Isabella 85.86 45 ⇓P **P 15 32 07.3 +0.4**
baz=86,SNR=116
ISA Isabella 85.86 45 *e*P **P 15 32 07.1 +0.2**
comp=Z,1μm,1.4s,mb6.9
ISA *e* 15 32 14.4
ISA Isabella 85.86 45 *e*P **P 15 32 07.1 +0.2**
ISA *e* 15 32 14.4
ISA pmax pmax
comp=Z,1μm,1.4s,mb6.9
BBRC Big Bear Solar 85.90 46 ⇓P **P 15 32 07.6 +0.5**
baz=86
LRMC Laurel Mountai 86.22 45 ⇓P **P 15 32 08.9 +0.3**
baz=86,SNR=89
RRX Edison Barstow 86.25 46 ⇓P **P 15 32 08.7 -0.1**
baz=86
NJ2 Nanjing 86.29 310 *e*P **P 15 32 09.5 +0.4**
NJ2 pP pP 15 32 19.0 -1.1
NJ2 sP sP 15 32 22.3 -1.9
NJ2 PP PP 15 35 31.5 +0.8
NJ2 S S 15 42 38.5 -3.4
NJ2 sS sS 15 42 56.0 -4.3
NJ2 pmax pmax
comp=Z,70nm,0.9s,mb5.9
NJ2 pmax pmax
comp=Z,5μm,10.0s
NJ2 LR LR
comp=N,4μm,12.3s,MS6.3
NJ2 LR LR
comp=E,8μm,14.2s,MS6.3
NJ2 LR LR
comp=Z,17μm,20.0s
112A Yuma 86.29 49 ⇑P **P 15 32 09.6 +0.6**
baz=86
BELC Belle Mtn. Jos 86.31 47 ⇓P **P 15 32 09.7 +0.6**
baz=86,SNR=95
CMB Columbia Colle 86.32 42 *e*P **P 15 32 08.8 -0.3**
comp=Z,467nm,1.1s,mb6.6
CMB LR LR
comp=Z,19μm,19.0s,MS6.5
CMB Columbia Colle 86.32 42 *e*P **P 15 32 08.8 -0.3**
CMB pmax pmax
comp=Z,467nm,1.1s,mb6.6
CMB MLR MLR
comp=Z,19μm,19.0s,MS6.5
VLA Vladivostok 86.33 326 *c i*P **P 15 32 07.4 -1.6**
VLA pmax pmax
comp=Z,409nm,1.1s,mb6.6
VLA MLR MLR
comp=Z,33μm,20.0s,MS6.7
SDPT Sand Point 86.36 10 *e*P **P 15 32 08.1 -0.7**
comp=Z,2μm,1.0s,mb7.2
SDPT *e*P 15 32 11.0
SDPT LR LR
comp=Z,29μm,20.0s,MS6.7
BC3 Big Chuckawall 86.44 48 ⇓P **P 15 32 10.3 +0.6**
baz=86,SNR=61
KHMM Horse Mountain 86.45 38 *e*P **P 15 32 10.3 +0.7**
comp=Z,540nm,1.1s,mb6.7
ROCH El Roble 86.45 126 *e*P **P 15 32 13.9 +3.8**
GLA Glamis 86.46 48 ⇑P **P 15 32 10.8 +0.9**
baz=86,SNR=22
GLA Glamis 86.46 48 *e*P **P 15 32 10.7 +0.8**
comp=Z,1μm,1.3s,mb6.9
GLA Glamis 86.46 48 *e*P **P 15 32 10.7 +0.8**
GLA pmax pmax
comp=Z,1μm,1.3s,mb6.9
MAIG Mazatlaan 86.47 61 *e*P **P 15 32 09.8 -0.3**
SNG Songkhla 86.47 280 P **P 15 32 13.0 +2.6**
comp=Z,800nm,1.1s,mb6.9
CLCH Cerro Calan 86.55 127 *e*P **P 15 32 14.7 +4.2**
PEL Peldehue 86.59 126 *e*P **P 15 32 11.3 +0.5**
CWC Cottonwood Cre 86.61 44 ⇑P **P 15 32 11.0 +0.4**
baz=87,SNR=59
HEC Hector,Ludlow 86.64 46 ⇓P **P 15 32 10.8 +0.1**
baz=87,SNR=77
GSC Goldstone 86.65 46 ⇓P **P 15 32 11.2 +0.5**
baz=87,SNR=74
GSC Goldstone 86.65 46 *e*P **P 15 32 10.9 +0.2**
comp=Z,945nm,1.3s,mb6.9
GSC Goldstone 86.65 46 *e*P **P 15 32 10.9 +0.2**
GSC pmax pmax
comp=Z,945nm,1.3s,mb6.9
MPMC Manual Prospec 86.72 45 ⇑P **P 15 32 11.5 +0.4**
baz=87,SNR=96
FCH Fazeltones 86.76 127 *e*P **P 15 32 13.0 +1.4**
DAC Darwin (Calif) 86.80 45 PFAKE 15 32 20.0 +8.5
DAC LR LR
comp=Z,25μm,19.0s,MS6.6
KRMB Red Mountain 86.82 37 *e*P **P 15 32 11.7 +0.3**
comp=Z,458nm,1.4s,mb6.5
WDC Whiskeytown Da 86.88 39 *e*P **P 15 32 11.5 -0.2**
comp=Z,586nm,1.4s,mb6.6
WDC LR LR
comp=Z,18μm,21.0s,MS6.5
WDC Whiskeytown Da 86.88 39 *e*P **P 15 32 11.5 -0.2**
WDC pmax pmax
comp=Z,586nm,1.4s,mb6.6
WDC MLR MLR
comp=Z,18μm,21.0s,MS6.5
TIN Tinemaha 86.93 44 ⇓P **P 15 32 12.4 +0.3**
baz=87,SNR=19
IRM Iron Mountain 86.95 47 ⇓P **P 15 32 13.1 +0.8**
baz=87,SNR=152
MLAC Mammoth Lakes 86.95 43 ⇑P **P 15 32 12.9 +0.7**
baz=87,SNR=12
113A Mohawk Valley, 86.97 49 ⇑P **P 15 32 12.8 +0.4**
baz=87,SNR=31
UBT Ubonrachathani 86.97 289 ⇑P **P 15 32 13.9 +1.1**
GMRC Granite Mounta 87.03 47 ⇓P **P 15 32 13.3 +0.7**
baz=87,SNR=102
Y12C Blythe 87.09 48 ⇓P **P 15 32 13.4 +0.4**
baz=87,SNR=13
214A Organ Pipe Nat 87.10 50 ⇓P **P 15 32 13.4 +0.4**
baz=87,SNR=20
KBO Bosley Butte 87.14 37 *e*P **P 15 32 13.0 0.0**
comp=Z,512nm,1.4s,mb6.6
WAKR Walker 87.19 42 *e*P **P 15 32 13.5 +0.2**
comp=Z,30nm,0.4s,mb5.9
ZIIG Zihuatanejo 87.27 68 *i*P **P 15 32 16.8 +2.6**
TUQ Turquoise Moun 87.28 46 ⇓P **P 15 32 14.6 +0.7**
baz=87,SNR=60
Z13A Yuma Proving G 87.31 49 ⇓P **P 15 32 14.3 +0.3**
baz=87,SNR=80
SHOC Shoshone 87.36 46 ⇓P **P 15 32 14.3 +0.1**
baz=87,SNR=36
PAYG Puerto Ayora 87.37 89 P **P 15 32 17.6 +2.8**
comp=Z,1μm,1.9s,mb6.9
PAYG LR LR
comp=Z,38μm,22.0s,MS6.8
FURC Furnace Creek, 87.37 45 ⇓P **P 15 32 14.3 0.0**
baz=87,SNR=28
GRAC Grapevine Rang 87.41 44 ⇓P **P 15 32 15.2 +0.8**
baz=87,SNR=74
114A Black Gap (USA 87.54 50 ⇓P **P 15 32 15.3 +0.1**
baz=88,SNR=20
WCN Washoe City 87.55 41 ⇓P **P 15 32 15.2 +0.2**
baz=88,SNR=18
WCN Washoe City 87.55 41 *e*P **P 15 32 14.8 -0.2**
comp=Z,374nm,1.4s,mb6.4
WCN *e* 15 32 21.5
WCN Washoe City 87.55 41 *e*P **P 15 32 14.8 -0.2**
WCN *e* 15 32 21.5
WCN pmax pmax
comp=Z,375nm,1.4s,mb6.4
KEBM Edson Butte 87.56 36 *e*P **P 15 32 15.1 +0.1**
comp=Z,1μm,1.4s,mb6.9
KEBM *e* 15 32 22.2
LDFC Landfair 87.56 47 *e*P **P 15 32 16.1 +0.9**
comp=Z,2μm,1.4s,mb7.2
Y13A Salome 87.58 48 ⇓P **P 15 32 16.4 +1.1**
baz=88,SNR=15
CHGN Chignik 87.60 11 *e*P **P 15 32 14.0 -0.8**
YBH Yreka Blue Hor 87.60 38 P **P 15 32 15.4 +0.2**
comp=Z,31nm,1.1s,mb5.5,baz=170,slow=3.2,SNR=32
YBH LR LR 16 05 56.7
comp=Z,8μm,20.1s,MS6.1,baz=152,slow=32
YBH Yreka Blue Hor 87.60 38 *e*P **P 15 32 15.3 +0.1**
comp=Z,283nm,1.4s,mb6.3
YBH *e* 15 32 22.1
YBH LR LR
comp=Z,11μm,19.0s,MS6.3
YBH Yreka Blue Hor 87.60 38 P **P 15 32 15.4 +0.2**
U10A Ash Meadows, A 87.67 45 ⇑P **P 15 32 16.4 +0.8**
baz=88,SNR=60
NEE2 Needles Airpor 87.68 47 ⇑P **P 15 32 16.3 +0.6**
baz=88
PDMCI Parker Dam,Lak 87.69 48 ⇓P **P 15 32 16.8 +0.9**
baz=88,SNR=27
NVAR Mina Array Bea 87.80 43 P **P 15 32 16.4 +0.1**
comp=Z,38nm,0.8s,mb5.7,baz=220,slow=8.1,SNR=143
NVAR PKKP PKKPbc 15 50 00.6 -3.5
comp=Z,1.7nm,0.8s,baz=64,slow=3.5,SNR=3.9
NVAR PKKPbc PKKPbc 15 50 06.9 +2.8
comp=Z,7.9nm,0.4s,baz=107,slow=1.8,SNR=7.9
NVAR PKPPKP 15 58 12.9
comp=Z,1.6nm,0.8s,baz=97,slow=2.4,SNR=6.5
NVAR LR LR 16 05 50.0
comp=Z,16μm,20.0s,MS6.4,baz=127,slow=32
NVAR Mina Array Bea 87.80 43 P **P 15 32 16.4 +0.1**
NVAR PKKP PKKPbc 15 50 00.6 -3.5
NVAR PKKPbc PKKPbc 15 50 06.9 +2.8
NVAR P'P' 15 58 12.9
NVAR LR LR 16 05 50.0
V11A Goodsprings 87.85 46 ⇑P **P 15 32 17.1 +0.6**
baz=88,SNR=7.6
W12A Cal Nev Ari 87.86 47 ⇓P **P 15 32 17.4 +0.8**
baz=88
Z14A Wintersburg 87.88 49 ⇓P **P 15 32 17.8 +1.0**
baz=88,SNR=61
CAIG El Cayaco 87.94 69 *i*P **P 15 32 19.6 +2.2**
115A Sonoran Desert 87.94 50 ⇑P **P 15 32 17.7 +0.6**
baz=88
PAHR Pah Rah Range 88.03 41 *e*P **P 15 32 17.0 -0.3**
comp=Z,420nm,1.3s,mb6.5
216A Three Points, 88.03 51 ⇓P **P 15 32 18.2 +0.7**
baz=88,SNR=23
X13A Yucca 88.07 48 ⇑P **P 15 32 18.4 +0.8**
baz=88,SNR=77
HUMO Hull Mountain 88.08 37 *e*P **P 15 32 17.7 +0.2**
comp=Z,400nm,1.3s,mb6.5
HUMO LR LR
comp=Z,13μm,21.0s,MS6.3
V12A Nelson 88.14 46 ⇓P **P 15 32 18.6 +0.7**
baz=88,SNR=41
TLL Tololo Astrono 88.16 124 ⇑*i*P **P 15 32 21.5 +3.2**
TLL Tololo Astrono 88.16 124 ⇑*i*P **P 15 32 21.5 +3.1**
TLL Tololo Astrono 88.16 124 ⇑*i*P **P 15 32 21.5 +3.2**
Y14A Wickenburg 88.20 49 ⇓P **P 15 32 18.8 +0.5**
baz=88,SNR=33
116A Eloy 88.21 50 ⇑P **P 15 32 19.1 +0.7**
baz=88,SNR=11
U11A Corn Creek 88.25 46 ⇓P **P 15 32 19.2 +0.7**
baz=88
217A Green Valley 88.33 52 ⇑P **P 15 32 19.8 +0.8**
baz=88,SNR=38
Z15A Gila River Ind 88.35 50 ⇓P **P 15 32 19.8 +0.8**
baz=88,SNR=8.9
W13A Hualapai Mount 88.35 47 ⇓P **P 15 32 19.7 +0.7**
baz=88,SNR=49
WHN Wuhan 88.42 307 ⇓P **P 15 32 20.0 +0.6**
WHN sP sP 15 32 34.5 0.0
WHN S S 15 43 06.5 +4.0
WHN LR LR
comp=N,22μm,16.0s
WHN LR LR
comp=E,113μm,22.0s
WHN LR LR
comp=Z,129μm,21.0s,MS7.3
SHPR Sheep Range 88.44 46 *e*P **P 15 32 19.8 +0.4**
comp=Z,802nm,1.5s,mb6.7
MDJ Mudanjiang 88.56 325 P **P 15 32 19.3 -0.3**
MDJ pP pP 15 32 28.5 -2.3
MDJ sP sP 15 32 32.3 -2.5
MDJ S S 15 43 00.5 -2.6
MDJ sS sS 15 43 18.3 -3.2
MDJ pmax pmax
comp=Z,34nm,1.9s,mb5.3
MDJ LR LR
comp=N,44μm,22.1s,MS6.9
MDJ LR LR
comp=E,28μm,23.5s,MS6.9
MDJ LR LR
comp=Z,63μm,22.8s,MS7.0
MDJ Mudanjiang 88.56 325 *e*P **P 15 32 19.1 -0.6**
comp=Z,401nm,1.1s,mb6.7
MDJ LR LR
comp=Z,54μm,22.0s,MS6.9
X14A Yava 88.60 48 ⇓P **P 15 32 21.1 +0.9**
baz=89,SNR=94
MOIG Morelia 88.60 66 *i*P **P 15 32 24.1 +3.6**
Y15A Casa Rosa Ranc 88.64 49 ⇓P **P 15 32 21.3 +0.9**
baz=89,SNR=77
TUC Tucson 88.67 51 *e*P **P 15 32 21.5 +0.9**
comp=Z,1μm,1.4s,mb7.0
TUC *e*PKKPdf PKKPdf 15 49 59.5 +2.3
TUC LR LR
comp=Z,16μm,19.0s,MS6.5
TUC Tucson 88.67 51 *e*P **P 15 32 21.5 +1.0**
TUC MLR MLR
comp=Z,16μm,19.0s,MS6.5
318A Bisbee 88.69 52 ⇓P **P 15 32 21.3 +0.7**
baz=89,SNR=62
V13A Grand Canyon W 88.76 47 ⇑P **P 15 32 21.2 +0.3**
baz=89,SNR=86
U12A Valley of Fire 88.78 46 ⇓P **P 15 32 21.8 +0.9**
baz=89,SNR=29
T12A Moapa 88.86 46 ⇓P **P 15 32 21.9 +0.6**
baz=89
117A Oracle 88.86 51 ⇑P **P 15 32 22.4 +1.0**
baz=89,SNR=24
Z16A Peralta Trail, 88.87 50 ⇓P **P 15 32 22.3 +0.9**
baz=89,SNR=17
LCO Las Campanas 88.87 123 *e*P **P 15 32 22.3 +0.5**
comp=Z,202nm,1.1s,mb6.4
LCO LR LR
comp=Z,44μm,21.0s,MS6.9
W14A Seligman 88.94 48 ⇓P **P 15 32 22.8 +1.1**
baz=89,SNR=93
DL2 Dalian 88.94 317 *i*P **P 15 32 21.5 -0.1**
DL2 SKS 15 42 45.0
DL2 SS SS 15 49 03.5 +2.5
DL2 pmax pmax
comp=Z,300nm,1.1s,mb6.5
DL2 pmax pmax
comp=Z,8μm,7.9s
DL2 LR LR
comp=N,10μm,29.8s,MS6.5
DL2 LR LR
comp=E,24μm,25.0s,MS6.5
DL2 LR LR
comp=Z,38μm,27.1s,MS6.7
218A Dragoon 88.97 52 ⇓P **P 15 32 22.8 +0.8**
baz=89,SNR=38
X15A Humboldt 89.04 49 ⇓P **P 15 32 23.2 +1.0**
baz=89,SNR=70
MPOR Mary's Peak 89.13 35 P **P 15 32 22.8 +0.5**
U13A Pakoon Wash 89.13 46 ⇓P **P 15 32 23.4 +0.9**
baz=89,SNR=62
319A Douglas 89.14 53 ⇑P **P 15 32 23.5 +0.7**
baz=89,SNR=33
CFAA Coronel Fontan 89.16 126 PKKP PKKPbc 15 49 53.9 -5.4
comp=Z,0.3nm,0.8s,baz=355,slow=1.1,SNR=4.5
CFAA PKPPKP 15 58 10.2
comp=Z,0.7nm,0.8s,baz=222,slow=0.2,SNR=7.1
CFAA LR LR 16 03 55.2
comp=Z,5μm,21.4s,MS5.9,baz=311,slow=30
Y16A Circle Bar Ran 89.16 50 ⇑P **P 15 32 23.8 +1.0**
baz=89,SNR=156
V14A Boquillas Ranc 89.19 47 ⇑P **P 15 32 23.9 +1.1**
baz=89,SNR=72
K05A Summer Lake 89.26 38 ⇑P **P 15 32 23.2 +0.2**
baz=89
PLIG Platanillo 89.27 68 *i*P **P 15 32 26.9 +3.3**
COR Corvallis 89.31 35 P **P 15 32 22.4 -0.8**
comp=Z,354nm,1.3s,mb6.5
COR Corvallis 89.31 35 P **P 15 32 22.4 -0.8**
COR pmax pmax
comp=Z,354nm,1.3s,mb6.5
PNIG Pinotepa 89.34 71 *i*P **P 15 32 25.6 +1.6**
KKTK Khon Kaen 89.34 289 P **P 15 32 25.4 +1.4**
R11A Troy Canyon, C 89.36 44 ⇓P **P 15 32 23.5 -0.1**
baz=89,SNR=35
OHAK Old Harbor 89.38 13 *e*P **P 15 32 22.6 -0.6**
comp=Z,2μm,1.4s,mb7.2
OHAK LR LR
comp=Z,39μm,22.0s,MS6.8
TRQA Tornquist 89.42 135 *e*P **P 15 32 23.1 -1.1**
comp=Z,218nm,1.3s,mb6.3
TRQA LR LR
comp=Z,31μm,21.0s,MS6.7
118A Homack Ranch, 89.42 51 ⇓P **P 15 32 24.9 +0.9**
baz=89,SNR=131
W15A Williams 89.44 48 ⇓P **P 15 32 25.1 +1.1**
baz=89,SNR=26
Y17A Roosevelt 89.47 50 ⇓P **P 15 32 25.2 +1.0**
baz=90,SNR=49
Z17A San Carlos Hig 89.48 51 ⇑P **P 15 32 25.3 +1.0**
baz=90,SNR=9.8
X16A Lo Mia Camp, P 89.51 49 ⇓P **P 15 32 25.5 +1.0**
baz=90,SNR=135
219A White Tail Can 89.53 52 ⇓P **P 15 32 25.2 +0.7**
baz=90,SNR=28
HEBO Mount Hebo 89.53 35 *e*P **P 15 32 24.4 +0.2**
comp=Z,1μm,1.3s,mb7.0
T13A Saint George 89.55 46 ⇓P **P 15 32 25.2 +0.7**
baz=90
U14A Mt Trumbull 89.62 47 ⇓P **P 15 32 25.7 +0.8**
baz=90,SNR=88
320A Kipp Ranch, An 89.64 53 ⇑P **P 15 32 26.0 +0.9**
baz=90,SNR=34
Z18A Geronimo 89.64 51 ⇓P **P 15 32 25.8 +0.7**
baz=90
WIFE Three Sisters- 89.70 37 P **P 15 32 24.3 -0.7**
SNY Shenyang 89.76 320 ⇑P **P 15 32 25.0 -0.4**
SNY pP pP 15 32 34.3 -2.2
SNY sP sP 15 32 39.8 -0.7
SNY PP PP 15 35 57.3 -1.1
SNY SKS 15 42 51.5
SNY SS SS 15 49 12.8 0.0
SNY pmax pmax

comp=Z,39nm,1.4s,mb5.5
SNY pmax pmax
comp=Z,16µm,12.0s
SNY LR LR
comp=N,28µm,21.6s
SNY LR LR
comp=E,21µm,27.6s
SNY LR LR
comp=Z,56µm,28.4s
SZVM Salazar 89.86 68 *e*P **P 15 32 30.7 +4.3**
W16A Flagstaff 89.87 49 ⇑P **P 15 32 27.4 +1.3**
baz=90,SNR=73
X17A Forest Lakes 89.88 50 ⇓P **P 15 32 27.7 +1.5**
baz=90,SNR=62
V15A Kaibab Nationa 89.89 48 ⇓P **P 15 32 27.5 +1.3**
baz=90,SNR=98
S13A Holt Ranch, En 89.93 45 ⇑P **P 15 32 27.0 +0.8**
baz=90,SNR=47
H04A Detroit Lake 89.94 36 ⇑P **P 15 32 25.9 -0.3**
baz=90,SNR=24
119A Ashpeak Ranch, 89.95 52 ⇑P **P 15 32 27.5 +1.0**
baz=90,SNR=65
220A Playas Peak, P 89.97 53 ⇑P **P 15 32 27.6 +0.9**
baz=90,SNR=82
TIA Tai'an 90.00 313 P **P 15 32 27.5 +0.9**
TIA pmax pmax
comp=Z,280nm,1.2s,mb6.5
TIA LR LR
comp=N,60µm,29.4s,MS7.1
TIA LR LR
comp=E,70µm,26.0s,MS7.1
TIA LR LR
comp=Z,126µm,25.5s,MS7.2
KDAK Kodiak Island 90.04 13 P **P 15 32 25.9 -0.3**
comp=Z,83nm,1.0s,mb6.0,baz=123,slow=1.0,SNR=24
KDAK LR 16 12 14.4
comp=Z,23µm,18.6s,MS6.6,baz=178,slow=35
KDAK Kodiak Island 90.04 13 *e*P **P 15 32 24.8 -1.5**
comp=Z,442nm,1.1s,mb6.7
KDAK LR LR
comp=Z,38µm,21.0s,MS6.8
KDAK Kodiak Island 90.04 13 *i*P **P 15 32 28.2 +1.9**
KDAK Kodiak Island 90.04 13 P **P 15 32 26.0 -0.3**
comp=Z,2µm,1.4s,mb7.3,SNR=20
Y18A Canyon Day Jun 90.06 50 ⇑P **P 15 32 28.1 +1.1**
baz=90,SNR=130
T14A Hurricane 90.08 46 ⇑P **P 15 32 28.0 +1.0**
baz=90,SNR=30
CN2 Changchun 90.09 323 *e*P **P 15 32 26.5 -0.4**
CN2 *e*pP pP 15 32 37.3 -0.7
CN2 *e*sP sP 15 32 41.0 -1.0
CN2 PP PP 15 36 03.0 +2.0
CN2 *e*S S 15 43 19.5 +2.0
CN2 LR LR
comp=N,33µm,23.0s,MS6.8
CN2 LR LR
comp=E,22µm,23.0s,MS6.8
CN2 LR LR
comp=Z,48µm,22.0s,MS6.9
F03A Seaside 90.14 34 ⇑P **P 15 32 27.2 +0.2**
baz=90
PBVM Pinon 90.16 68 *e*P **P 15 32 36.3 +8.5**
G04A Mulino 90.16 35 ⇑P **P 15 32 27.0 -0.1**
baz=90
U15A North Rim 90.19 47 ⇓P **P 15 32 28.5 +1.0**
baz=90,SNR=149
PTVM Pico Tres Padr 90.21 68 *e*P **P 15 32 32.5 +4.5**
CCUT Cedar City 90.22 46 *e*P **P 15 32 28.4 +0.8**
comp=Z,3.3nm,0.2s,mb5.3
R13A O'Grain Ranch, 90.24 45 ⇓P **P 15 32 28.5 +0.8**
baz=90,SNR=48
120A U Bar Ranch, L 90.28 52 ⇓P **P 15 32 28.9 +0.8**
baz=90,SNR=47
WVOR Wild Horse Val 90.28 39 *e*P **P 15 32 27.8 0.0**
comp=Z,593nm,1.5s,mb6.7
WVOR LR LR
comp=Z,19µm,20.0s,MS6.5
WVOR Wild Horse Val 90.28 39 *e*P **P 15 32 27.8 0.0**
WVOR pmax pmax
comp=Z,593nm,1.5s,mb6.7
WVOR MLR MLR
comp=Z,19µm,20.0s,MS6.5
Z19A T-Link Ranch, 90.29 51 ⇓P **P 15 32 29.0 +1.0**
baz=90,SNR=13
ARUT Antelope Range 90.32 46 *e*P **P 15 32 28.6 +0.5**
comp=Z,670nm,1.6s,mb6.7
ARUT Antelope Range 90.32 46 *e*P **P 15 32 28.6 +0.5**
ARUT pmax pmax
comp=Z,670nm,1.6s,mb6.7
W17A Winslow 90.39 49 ⇓P **P 15 32 29.8 +1.3**
baz=90,SNR=21
S14A Cedar City 90.47 46 ⇓P **P 15 32 29.5 +0.7**
baz=90
T15A Red Dirt Ranch 90.50 47 ⇑P **P 15 32 29.6 +0.6**
baz=90,SNR=37
IIO Organos 90.52 68 *e*P **P 15 32 33.0 +3.5**
221A Mesquite Ranch 90.55 53 ⇑P **P 15 32 30.1 +0.8**
baz=90,SNR=29
X18A Snowflake 90.56 50 ⇑P **P 15 32 30.2 +0.9**
baz=91,SNR=41
E03A Lebam 90.58 34 ⇑P **P 15 32 29.3 +0.3**
baz=90,SNR=13
VIPM Ingram Point 90.63 37 P **P 15 32 29.5 +0.1**
VIPM Ingram Point 90.63 37 P **P 15 32 29.5 +0.1**
Z20A Nine Sixteen R 90.64 52 ⇑P **P 15 32 30.9 +1.2**
baz=91,SNR=96
V17A Tonalea, Kykot 90.67 49 ⇑P **P 15 32 30.4 +0.7**
baz=91
HUIG Huatulco 90.67 72 *i*P **P 15 32 30.6 +0.3**
BMW Boistfort Moun 90.69 34 P **P 15 32 30.1 +0.5**
BMW Boistfort Moun 90.69 34 P **P 15 32 30.1 +0.5**
Y19A Nutrioso 90.69 51 ⇑P **P 15 32 31.4 +1.5**
baz=91,SNR=64
F04A Amboy 90.70 35 ⇑P **P 15 32 29.4 -0.2**
baz=91
VFP Flag Point 90.75 36 P **P 15 32 29.9 -0.1**
U16A Tuba City 90.76 48 ⇑P **P 15 32 31.0 +0.8**
baz=91,SNR=50
VHO Vista Hermosa 90.83 71 *i*P **P 15 32 30.7 -0.2**
121A Cookes Peak, D 90.85 52 ⇓P **P 15 32 31.5 +0.8**
baz=91,SNR=33
S15A Panguitch 90.92 46 ⇑P **P 15 32 32.4 +1.5**
baz=91
I07A Izee 90.92 38 ⇑P **P 15 32 30.8 +0.1**
baz=91,SNR=44
KLR Kul'dur 90.93 330 *d i*P **P 15 32 27.0 -3.7**
KLR *e* 15 36 07.0
KLR *e*S SKSac 15 42 52.5 -7.0
KLR pmax pmax
comp=N,3µm,12.5s
KLR pmax pmax
comp=Z,12µm,12.5s
KLR MLR MLR
comp=N,22µm,19.0s
KLR MLR MLR
comp=Z,33µm,19.0s,MS6.8
X19A St. Johns 90.94 50 ⇑P **P 15 32 31.7 +0.6**
baz=91,SNR=33
J08A Circle Bar Ran 90.99 39 ⇑P **P 15 32 30.9 -0.2**
baz=91,SNR=16
NLWA Neilton Lookou 91.03 33 *e*P **P 15 32 31.3 +0.1**
comp=Z,176nm,1.1s,mb6.3
NLWA LR LR
comp=Z,26µm,21.0s,MS6.7
T16A Glen Canyon Da 91.03 47 ⇓P **P 15 32 32.4 +1.0**
baz=91,SNR=18
W18A Petrified Fore 91.06 49 ⇑P **P 15 32 32.5 +0.9**
baz=91,SNR=26
222A Williams Famil 91.08 53 ⇑P **P 15 32 31.9 +0.2**
baz=91
G06A Carlson Farm, 91.12 36 ⇑P **P 15 32 31.6 0.0**
baz=91,SNR=44
Q14A Sevier Lake (B 91.17 45 ⇓P **P 15 32 32.2 +0.2**
baz=91,SNR=87
NST Nakhon Sawan 91.21 287 P **P 15 32 33.0 +0.3**
comp=Z,662nm,0.8s,mb7.0
Y20A Horse Springs, 91.25 51 ⇓P **P 15 32 33.8 +1.2**
baz=91,SNR=99
V18A Ganado 91.28 49 ⇓P **P 15 32 33.4 +0.8**
baz=91,SNR=14
W19A Sanders 91.28 50 ⇓P **P 15 32 33.8 +1.1**
baz=91,SNR=8.1
R15A Junction 91.30 46 ⇑P **P 15 32 33.8 +1.1**
baz=91
Z21A St. Cloud Mine 91.38 52 ⇑P **P 15 32 34.0 +0.8**
baz=91,SNR=36
S16A Weppner Ranch, 91.42 46 ⇓P **P 15 32 33.6 +0.4**
baz=91,SNR=17
122A Conniff Cattle 91.49 53 ⇑P **P 15 32 34.7 +1.1**
baz=92
223A Chaparral, Ant 91.49 54 ⇓P **P 15 32 34.1 +0.4**
baz=92
T17A Navajo Res., N 91.49 47 ⇓P **P 15 32 34.6 +1.1**
baz=92,SNR=42
MVU Marysvale 91.52 46 PFAKE 15 32 40.0 +6.3
MVU LR LR
comp=Z,11µm,21.0s,MS6.3
X20A Quemado 91.54 51 ⇓P **P 15 32 35.1 +1.2**
baz=92,SNR=118
MSU Marysvale 91.55 46 *e*P **P 15 32 34.6 +0.8**
comp=Z,185nm,0.4s,mb6.8
MSU Marysvale 91.55 46 *e*P **P 15 32 34.6 +0.8**
MSU pmax pmax
comp=Z,185nm,0.4s,mb6.8
LON Longmire 91.58 35 *e*P **P 15 32 32.9 -0.8**
comp=Z,650nm,1.1s,mb6.9
LON Longmire 91.58 35 *e*P **P 15 32 32.9 -0.8**
LON pmax pmax
comp=Z,650nm,1.1s,mb6.9
HDW Hoodsport 91.60 33 P **P 15 32 34.3 +0.5**
GNW Green Mountain 91.65 34 *e*P **P 15 32 33.9 -0.2**
comp=Z,149nm,1.2s,mb6.2
P14A Drum Mountains 91.67 44 ⇓P **P 15 32 34.6 +0.3**
baz=92
WPW White Pass 91.67 35 P **P 15 32 34.2 +0.1**
GYA Guiyang 91.68 300 ⇑*i*P **P 15 32 35.0 +0.3**
GYA pP pP 15 32 47.0 +1.2
GYA PP PP 15 36 18.5 +4.6
GYA SKS 15 43 03.8
GYA S S 15 43 30.5 -2.3
GYA SS SS 15 49 42.8 +1.8
GYA pmax pmax
comp=Z,160nm,1.0s,mb6.3
GYA LR LR
comp=N,20µm,23.3s,MS6.8
GYA LR LR
comp=E,33µm,23.0s,MS6.8
GYA LR LR
comp=Z,46µm,23.4s,MS6.8
ENH Enshi 91.69 304 *e*P **P 15 32 34.6 -0.1**
comp=Z,628nm,1.1s,mb6.9
ENH LR LR
comp=Z,33µm,21.0s,MS6.8
Q15A Fillmore 91.72 45 ⇓P **P 15 32 35.0 +0.4**
baz=92
626A Big Bend Ranch 91.74 57 ⇑P **P 15 32 35.0 +0.1**
baz=92,SNR=42
U18A Rough Rock, Ch 91.74 48 ⇑P **P 15 32 35.1 +0.3**
baz=92,SNR=38
Y21A Point of Rocks 91.78 51 ⇑P **P 15 32 36.2 +1.2**
baz=92,SNR=86
D05A Enumclaw 91.79 34 ⇑P **P 15 32 35.3 +0.6**
baz=92,SNR=7.8
425A Indio Mountain 91.81 55 ⇑P **P 15 32 35.4 +0.1**
baz=92
Z22A Elephant Butte 91.83 52 ⇓P **P 15 32 35.6 +0.3**
baz=92,SNR=89
324A Moseley Ranch, 91.83 54 ⇑P **P 15 32 35.3 0.0**
baz=92,SNR=24
R16A Teasdale 91.84 46 ⇓P **P 15 32 36.0 +0.9**
baz=92,SNR=10
V19A Window Rock 91.86 49 ⇓P **P 15 32 35.9 +0.5**
baz=92,SNR=9.0
S17A Black Ridge (B 91.87 47 ⇑P **P 15 32 35.3 0.0**
baz=92,SNR=30
W20A Ranah 91.88 50 ⇑P **P 15 32 36.3 +0.9**
baz=92,SNR=122
F07A Phinny Hill Vi 91.93 36 ⇓P **P 15 32 35.4 0.0**
baz=92
TXAR Lajitas Array 91.96 57 P **P 15 32 36.0 +0.1**
comp=Z,27nm,1.0s,mb5.5,baz=216,slow=6.2,SNR=39
TXAR PKKPbc PKKPbc 15 49 55.7 +2.6
comp=Z,5.0nm,1.0s,baz=112,slow=2.8,SNR=5.8
TXAR PKPPKP 15 58 02.0
comp=Z,0.9nm,0.8s,baz=119,slow=1.6,SNR=3.5
TXAR LR LR 16 10 16.8
comp=Z,21µm,18.1s,MS6.6,baz=295,slow=33
TXAR Lajitas Array 91.96 57 P **P 15 32 36.0 +0.1**
TXAR PKKPbc PKKPbc 15 49 55.7 +2.6
TXAR P'P' 15 58 02.0
TXAR LR LR 16 10 16.8
TXAR Lajitas Array 91.96 57 P **P 15 32 36.0 +0.1**
TXAR 15 49 55.7
TXAR pmax pmax
comp=Z,27nm,1.0s
X21A Alamocita Cree 91.96 51 ⇓P **P 15 32 36.9 +1.1**
baz=92,SNR=94
123A Bell Site, Whi 91.96 53 ⇓P **P 15 32 36.5 +0.7**
baz=92
G08A Pilot Rock 92.03 37 ⇑P **P 15 32 35.9 +0.1**
baz=92,SNR=100
526A Mary Lane Ranc 92.05 56 ⇓P **P 15 32 36.6 +0.2**
baz=92,SNR=68
U19A Dine' College, 92.10 49 ⇑P **P 15 32 36.9 +0.5**
baz=92,SNR=23
PGC Sidney 92.13 33 *e*P **P 15 32 35.5 -0.7**
comp=Z,5.4nm,0.9s
P15A Leamington 92.13 45 ⇑P **P 15 32 36.9 +0.4**
baz=92,SNR=27
325A Bean Ranch, Si 92.15 55 ⇓P **P 15 32 36.5 -0.2**
baz=92,SNR=28
224A Cornudas Mount 92.16 54 ⇓P **P 15 32 37.1 +0.3**
baz=92,SNR=40
T18A Mexican Hat 92.17 48 ⇓P **P 15 32 37.3 +0.6**
baz=92,SNR=77
DUG Dugway 92.19 44 ⇓P **P 15 32 36.7 -0.1**
baz=92
DUG Dugway 92.19 44 *e*P **P 15 32 36.2 -0.5**
comp=Z,284nm,1.5s,mb6.4
DUG LR LR
comp=Z,21µm,19.0s,MS6.6
DUG Dugway 92.19 44 *e*P **P 15 32 36.2 -0.5**
DUG pmax pmax
comp=Z,284nm,1.5s,mb6.4
DUG MLR MLR
comp=Z,21µm,19.0s,MS6.6
Y22A Socorro 92.22 52 ⇓P **P 15 32 37.4 +0.3**
baz=92,SNR=43
627A Terlingua Ranc 92.23 57 ⇑P **P 15 32 37.1 0.0**
baz=92,SNR=68
V20A Brimhall 92.29 49 ⇓P **P 15 32 37.6 +0.3**
baz=92,SNR=20
Y22D IRIS PASSCAL I 92.33 52 ⇑P **P 15 32 38.4 +0.8**
baz=92
Z23A Rita Site, Whi 92.34 53 ⇓P **P 15 32 37.9 +0.3**
baz=92,SNR=25
LENM Lemitar 92.34 52 *e*P **P 15 32 37.9 +0.3**
comp=Z,243nm,1.2s,mb6.4
CMIG Matias Romero 92.36 72 P **P 15 32 41.5 +3.4**
comp=Z,20nm,1.1s,mb5.4,baz=223,slow=2.6,SNR=8.1
CMIG LR LR 16 08 03.8
comp=Z,10µm,18.9s,MS6.3,baz=148,slow=32
LAZ Ladron 92.37 51 *e*P **P 15 32 38.4 +0.6**
comp=Z,245nm,1.4s,mb6.3
R17A Hanksville Air 92.40 46 ⇓P **P 15 32 37.9 +0.1**
baz=92,SNR=14
Q16A Castle Valley 92.42 46 ⇓P **P 15 32 38.3 +0.5**
baz=92,SNR=12
S18A Hurst Farm, Bl 92.42 47 ⇑P **P 15 32 37.8 0.0**
baz=92,SNR=28
E07A Sunnyside 92.42 36 ⇓P **P 15 32 37.7 +0.1**
baz=92,SNR=13
426A McDonald Obser 92.43 56 ⇑P **P 15 32 38.0 -0.1**
baz=92,SNR=50
W21A San Fidel 92.44 50 ⇓P **P 15 32 38.6 +0.6**
baz=92,SNR=7.2
RSW Rattlesnake Hi 92.44 36 *e*P **P 15 32 37.6 -0.1**
comp=Z,476nm,1.3s,mb6.7
527A Woodward Ranch 92.44 56 ⇑P **P 15 32 38.0 -0.2**
baz=92,SNR=45
LVIG Laguna Verde 92.45 69 *i*P **P 15 32 37.6 -0.8**
O15A The Old Anders 92.45 44 ⇑P **P 15 32 38.1 +0.2**
baz=92,SNR=5.7
HAWA Hanford 92.47 36 *e*P **P 15 32 37.7 -0.2**
comp=Z,203nm,1.0s,mb6.4
HAWA LR LR
comp=Z,17µm,20.0s,MS6.5
MFID Camas Ranch 92.48 40 ⇓P **P 15 32 37.7 -0.2**
baz=92,SNR=37
NLU North Lily Min 92.49 44 *e*P **P 15 32 37.9 -0.3**
comp=Z,335nm,1.6s,mb6.4
RSO Redoubt South 92.51 12 P **P 15 32 39.9 +2.2**
comp=Z,505nm,1.1s,mb6.9
X22A Bernardo 92.52 51 ⇓P **P 15 32 39.1 +0.7**
baz=92
BGU Big Grassy Mou 92.52 43 *e*P **P 15 32 38.0 -0.3**
comp=Z,4µm,0.6s,mb8.0
JCW Jim Creek 92.52 34 *e*P **P 15 32 37.7 -0.4**
comp=Z,193nm,1.2s,mb6.4
T19A Beclabito 92.53 48 ⇑P **P 15 32 38.4 +0.1**
baz=92,SNR=21
P16A Fountain Green 92.53 45 ⇑P **P 15 32 38.8 +0.5**
baz=92
124A Stringfield Ra 92.56 53 ⇑P **P 15 32 38.8 +0.2**
baz=93,SNR=23
BNM Barren Site 92.57 52 *e*P **P 15 32 38.9 +0.2**
comp=Z,354nm,1.5s,mb6.6
U20A Newcomb 92.59 49 ⇑P **P 15 32 38.7 0.0**
baz=93
628A Black Gap, Mar 92.61 57 ⇓P **P 15 32 38.4 -0.5**
baz=93,SNR=56
BMO Blue Mountains 92.61 38 *e*P **P 15 32 37.9 -0.6**
comp=Z,266nm,1.5s,mb6.5
BMO LR LR
comp=Z,11µm,20.0s,MS6.3
BMO Blue Mountains 92.61 38 *e*P **P 15 32 37.9 -0.6**
BMO pmax pmax
comp=Z,266nm,1.5s,mb6.5
BMO MLR MLR
comp=Z,11µm,20.0s,MS6.3
TMUT Trail Mountain 92.62 45 *e*P **P 15 32 39.5 +0.7**
comp=Z,191nm,0.9s,mb6.5
SVW2 Sparrevohn 92.63 11 *e*P **P 15 32 36.0 -2.2**
comp=Z,195nm,1.0s,mb6.5
SVW2 LR LR
comp=Z,26µm,20.0s,MS6.7
LPM Los Pinos Moun 92.66 52 *e*P **P 15 32 39.2 +0.1**
comp=Z,265nm,1.3s,mb6.5
225A Deer Hill, Car 92.67 54 ⇓P **P 15 32 39.3 +0.1**
baz=93,SNR=15
LNOR Lincton Mounta 92.77 37 *e*P **P 15 32 38.3 -0.9**
comp=Z,219nm,1.6s,mb6.3
LNOR Lincton Mounta 92.77 37 *e*P **P 15 32 38.3 -0.9**
LNOR pmax pmax
comp=Z,219nm,1.6s,mb6.3
E08A Dider Farm, El 92.78 36 ⇓P **P 15 32 39.3 0.0**
baz=93
MPU Maple Canyon 92.80 45 *e*P **P 15 32 39.5 0.0**
comp=Z,137nm,1.2s,mb6.3
N15A Stansbury Isla 92.80 44 ⇑P **P 15 32 39.4 -0.1**
baz=93,SNR=15
SEW Seward 92.82 14 *e*P **P 15 32 38.5 -0.6**
comp=Z,457nm,1.2s,mb6.8
326A Caldwell Ranch 92.83 55 ⇑P **P 15 32 39.5 -0.4**
baz=93,SNR=7.9
Y23A Lovelace Mesa, 92.84 52 ⇑P **P 15 32 39.8 0.0**
baz=93,SNR=10
V21A Milan 92.84 50 ⇑P **P 15 32 40.2 +0.4**
baz=93,SNR=7.1
MID Middleton Isla 92.88 15 *e*P **P 15 32 42.3 +2.9**
comp=Z,892nm,1.3s,mb7.0
MID LR LR
comp=Z,18µm,18.0s,MS6.6
MID Middleton Isla 92.88 15 *e*P **P 15 32 42.3 +2.9**
MID MLR MLR
comp=Z,18µm,18.0s,MS6.6
NOQ North Oquirrh 92.89 44 *e*P **P 15 32 40.0 0.0**
comp=Z,696nm,1.5s,mb6.9
ETW Entiat 92.90 35 P **P 15 32 39.5 -0.3**
R18A Canyonlands Na 92.90 47 ⇓P **P 15 32 40.0 0.0**
baz=93,SNR=73
BJT Baijiatuau 92.92 315 *e*P **P 15 32 40.4 +0.3**
comp=Z,391nm,0.9s,mb6.8
BJT LR LR
comp=Z,80µm,22.0s,MS7.1
BJT Baijiatuau 92.92 315 *e*P **P 15 32 40.4 +0.3**
BJT pmax pmax
comp=Z,391nm,0.9s
BJT MLR MLR
comp=Z,80µm,22.0s
BJI Beijing 92.93 315 P **P 15 32 39.8 -0.3**
BJI S S 15 43 44.5 +1.1
BJI SS SS 15 50 01.5 +2.9
BJI pmax pmax
comp=Z,84nm,1.1s,mb6.1
BJI pmax pmax
comp=Z,11µm,11.5s
BJI LR LR
comp=N,50µm,22.6s,MS7.1
BJI LR LR
comp=E,49µm,22.1s,MS7.1
BJI LR LR
comp=Z,122µm,34.3s
SRU San Rafael 92.94 46 ⇑P **P 15 32 40.2 0.0**
baz=93,SNR=50
SRU San Rafael 92.94 46 *e*P **P 15 32 40.4 +0.2**
comp=Z,297nm,0.8s,mb6.8
SRU San Rafael 92.94 46 *e*P **P 15 32 40.4 +0.2**
SRU pmax pmax
comp=Z,297nm,0.8s,mb6.8
W22A Albuquerque 92.94 51 ⇓P **P 15 32 41.2 +0.9**
baz=93
BDT Bhumibol Dam 92.94 288 P **P 15 32 41.5 +0.8**
comp=Z,67nm,0.9s,mb6.1
B06A Marblemount 92.96 34 ⇓P **P 15 32 39.2 -0.8**
baz=93
Z24A Sheeppen Canyo 92.97 53 ⇑P **P 15 32 40.7 +0.2**
baz=93,SNR=25
427A Hayter Ranch, 92.98 56 ⇓P **P 15 32 40.5 -0.1**
baz=93,SNR=52
O16A Springville 93.00 45 ⇑P **P 15 32 40.6 +0.1**
baz=93
S19A Harvey Farm, M 93.00 48 ⇓P **P 15 32 40.3 -0.2**
baz=93,SNR=27
A05A Maple Falls 93.01 33 ⇑P **P 15 32 39.8 -0.5**
baz=93
P17A Butcher Ranch, 93.02 45 ⇓P **P 15 32 40.7 +0.1**
baz=93,SNR=13
SLKM Skilak Lake 93.03 13 *e*P **P 15 32 38.9 -1.2**
SLKM Skilak Lake 93.03 13 *e*P **P 15 32 38.9 -1.2**
528A Cox Ranch, San 93.05 57 ⇓P **P 15 32 40.7 -0.3**
baz=93,SNR=46
L14A Malta 93.08 42 ⇓P **P 15 32 41.0 +0.2**
baz=93,SNR=24
125A Gardner Draw, 93.09 54 ⇑P **P 15 32 41.2 +0.2**
baz=93,SNR=25
SPUT South Promonto 93.10 43 *e*P **P 15 32 40.9 0.0**
comp=Z,724nm,1.4s,mb6.9
I12A Atlanta 93.11 40 ⇑P **P 15 32 41.1 +0.2**
baz=93,SNR=50
X23A Hourglass Bar 93.11 52 ⇓P **P 15 32 41.2 +0.1**
baz=93,SNR=10
ANMO Albuquerque 93.14 51 P **P 15 32 41.4 +0.2**
comp=Z,25nm,0.9s,mb5.7,baz=213,slow=4.4,SNR=20
ANMO LR LR 16 10 47.5
comp=Z,14µm,18.3s,MS6.5,baz=245,slow=33
ANMO Albuquerque 93.14 51 *e*P **P 15 32 41.4 +0.2**
comp=Z,389nm,1.3s,mb6.7
ANMO LR LR
comp=Z,14µm,20.0s,MS6.4
ANMO Albuquerque 93.14 51 P **P 15 32 41.4 +0.1**
ANMO pmax pmax
comp=Z,25nm,0.9s
CTU Camp Tracy 93.14 44 *e*P **P 15 32 40.6 -0.5**
comp=Z,347nm,1.5s,mb6.6
226A Malaga, Loving 93.15 55 ⇓P **P 15 32 41.1 -0.2**
baz=93,SNR=11
Q18A Rafter H Ranch 93.17 46 ⇑P **P 15 32 41.3 0.0**
baz=93,SNR=29
U21A Nageezi 93.19 49 ⇑P **P 15 32 42.0 +0.5**
baz=93,SNR=61
M15A Larsen Ranch, 93.20 43 ⇑P **P 15 32 41.1 -0.2**
baz=93,SNR=55
HVU Hansel Valley 93.20 43 *e*P **P 15 32 41.5 +0.2**
comp=Z,677nm,1.4s,mb6.9
HVU Hansel Valley 93.20 43 *e*P **P 15 32 41.5 +0.2**
HVU pmax pmax
comp=Z,677nm,1.4s,mb6.9
NNA Nana 93.20 106 *e*P **P 15 32 43.9 +1.8**
comp=Z,80nm,1.0s,mb6.1
NNA LR LR
comp=Z,26µm,22.0s,MS6.6
327A Balmorhea Ranc 93.20 55 ⇓P **P 15 32 42.0 +0.4**
baz=93
D08A Wollman Farm, 93.23 36 ⇓P **P 15 32 41.2 -0.2**
baz=93,SNR=14
R19A Curley Farm, L 93.24 47 ⇓P **P 15 32 41.3 -0.3**
baz=93,SNR=9.5
Y24A Capitan 93.26 52 ⇑P **P 15 32 41.6 -0.2**
baz=93,SNR=9.8
E09A Wood Farm, Sta 93.27 37 ⇑P **P 15 32 41.0 -0.5**
baz=93,SNR=23

JLU	Jordanelle	93.27	44	eP	P	15 32 41.6	-0.1
	comp=Z,344nm,1.4s,mb6.6						
DAU	Daniels Canyon	93.27	44	eP	P	15 32 41.6	-0.1
	comp=Z,150nm,1.1s,mb6.3						
DAU	Daniels Canyon	93.27	44	eP	P	15 32 41.6	-0.1
DAU				pmax	pmax		
	comp=Z,150nm,1.1s,mb6.3						
CRAG	Craig	93.34	24	eP	P	15 32 41.9	+0.3
	comp=Z,297nm,2.2s,mb6.3						
CRAG				LR	LR		
	comp=Z,22µm,19.0s,MS6.6						
HLID	Hailey	93.37	41	⇑P	P	15 32 42.2	+0.1
	baz=93,SNR=42						
HLID	Hailey	93.37	41	eP	P	15 32 42.2	+0.2
	comp=Z,189nm,1.1s,mb6.4						
HLID				LR	LR		
	comp=Z,20µm,19.0s,MS6.6						
F10A	Beach Ranch, E	93.39	37	⇓P	P	15 32 41.4	-0.7
	baz=93,SNR=47						
V22A	San Miguel Ran	93.39	50	⇓P	P	15 32 42.6	+0.2
	baz=93,SNR=13						
Z25A	Roswell	93.39	53	⇓P	P	15 32 42.9	+0.4
	baz=93,SNR=26						
J13A	Cove Ranch, Pi	93.40	41	⇑P	P	15 32 42.3	+0.1
	baz=93,SNR=57						
P18A	Preston Nutter	93.42	46	⇑P	P	15 32 42.5	+0.1
	baz=93,SNR=16						
428A	Kincaid Ranch,	93.43	56	⇓P	P	15 32 42.9	+0.2
	baz=93,SNR=21						
K14A	Jones Ranch, D	93.44	42	⇑P	P	15 32 42.3	-0.2
	baz=93,SNR=31						
N16A	Rees Ranch, Co	93.45	44	⇑P	P	15 32 42.2	-0.3
	baz=93						
O17A	Robinson Place	93.45	45	⇑P	P	15 32 42.9	+0.4
	baz=93,SNR=18						
W23A	Werner Place,	93.47	51	⇑P	P	15 32 42.6	-0.2
	baz=94						
PV04	Paradox Valley	93.53	47	eP	P	15 32 42.7	-0.2
126A	Clayton Basin,	93.53	54	⇑P	P	15 32 42.8	-0.4
	baz=94						
S20A	Disappointment	93.55	48	⇑P	P	15 32 43.2	+0.2
	baz=94,SNR=17						
OD2	Odessa Site #2	93.56	36	eP	P	15 32 42.1	-0.8
	comp=Z,115nm,0.8s,mb6.4						
L15A	Malad City	93.56	43	⇓P	P	15 32 42.7	-0.3
	baz=94,SNR=50						
PV01	Paradox Valley	93.59	48	eP	P	15 32 42.4	-0.8
	comp=Z,31µm,1.6s						
M16A	Huntsville	93.59	44	⇓P	P	15 32 42.8	-0.3
	baz=94						
T21A	Navajo Lake	93.60	49	⇑P	P	15 32 43.7	+0.4
	baz=94						
CMAR	Chiang Mai Arr	93.60	289	P	P	15 32 44.5	+0.8
	comp=Z,22nm,1.0s,mb5.5,baz=144,slow=3.1,SNR=30						
CMAR				PP	PP	15 36 29.9	+0.8
	comp=Z,21nm,1.0s,baz=128,slow=5.6,SNR=4.4						
CMAR				PKiKP	PKiKP	15 37 30.6	+1.2
	comp=Z,6.0nm,1.0s,baz=217,slow=1.4,SNR=2.8						
CMAR				PKKP	PKKPbc	15 49 50.0	+1.6
	comp=Z,6.2nm,1.0s,baz=289,slow=4.9,SNR=7.3						
CMAR				PKPPKP		15 58 04.0	
	comp=Z,1.9nm,1.0s,baz=304,slow=3.9,SNR=5.6						
CMAR				LR	LR	16 15 13.1	
	comp=Z,15µm,20.2s,MS6.5,baz=135,slow=36						
CMAR	Chiang Mai Arr	93.60	289	P	P	15 32 44.5	+0.8
CMAR				PP	PP	15 36 29.9	+0.8
CMAR	Chiang Mai Arr	93.60	289	P	P	15 32 44.6	+0.9
CMAR						15 36 29.9	
CMAR				pmax	pmax		
	comp=Z,220nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,15µm,20.3s						
X24A	Lazy VL Ranch,	93.62	52	⇓P	P	15 32 43.5	+0.1
	baz=94						
CHRT	Chiangrai	93.63	291	⇑P	P	15 32 43.5	-0.4
	comp=Z,632nm,1.0s,mb7.0						
Q19A	Hogan Spring (	93.63	47	⇓P	P	15 32 43.1	-0.3
	baz=94,SNR=17						
GAMB	Gambell	93.67	3	eP	P	15 32 44.0	+1.0
	comp=Z,581nm,1.3s,mb6.8						
U22A	Llaves	93.69	50	⇑P	P	15 32 44.4	+0.6
	baz=94						
227A	Bennet, Jal	93.70	55	⇑P	P	15 32 45.0	+1.1
	baz=94						
328A	Wristen Ranch,	93.70	56	⇑P	P	15 32 43.0	-0.9
	baz=94,SNR=11						
J14A	Carey	93.73	41	⇑P	P	15 32 44.4	+0.7
	baz=94						
R20A	Redvale	93.74	48	⇑P	P	15 32 43.6	-0.3
	baz=94						
H12A	Diamond D Ranc	93.75	40	⇓P	P	15 32 43.5	-0.2
	baz=94,SNR=60						
I13A	Wildhorse Cree	93.76	40	⇓P	P	15 32 43.8	0.0
	baz=94,SNR=21						
Y25A	Mesa, Roswell	93.77	53	⇓P	P	15 32 44.0	-0.2
	baz=94,SNR=67						
V23A	Ortiz Mt. (NFS	93.78	51	⇑P	P	15 32 44.5	+0.4
	baz=94,SNR=9.3						
CHG	Chiang Mai	93.78	289	⇑P	P	15 32 46.6	+2.0
	comp=Z,43nm,1.2s,mb5.8						
HWUT	Hardware Ranch	93.81	43	eP	P	15 32 43.0	-1.1
	comp=Z,478nm,1.7s,mb6.7						
HWUT				LR	LR		
	comp=Z,18µm,19.0s,MS6.5						
S21A	Coal Bank Pass	93.82	48	⇓P	P	15 32 44.7	+0.4
	baz=94,SNR=20						
N17A	Moffit Pass	93.84	44	⇑P	P	15 32 44.4	0.0
	baz=94,SNR=10						
G12A	Big Creek, Yel	93.86	39	⇑P	P	15 32 43.9	-0.4
	baz=94						
SIT	Sitka	93.88	22	eP	P	15 32 45.5	+1.4
	comp=Z,196nm,1.4s,mb6.3						
SIT				LR	LR		
	comp=Z,25µm,20.0s,MS6.7						
SIT	Sitka	93.88	22	eP	P	15 32 45.5	+1.4
SIT				pmax	pmax		
	comp=Z,196nm,1.4s,mb6.3						
SIT				MLR	MLR		
	comp=Z,25µm,20.0s,MS6.7						
B08A	Colville Reser	93.90	35	⇓P	P	15 32 43.6	-0.8
	baz=94						
K15A	Arbon	93.90	42	⇑P	P	15 32 44.7	+0.2
	baz=94,SNR=40						
TIY	Taiyuan	93.90	312	eP	P	15 32 44.0	-0.7
TIY				pP	pP	15 32 54.5	-1.3
TIY				sP	sP	15 32 58.5	-1.3
TIY				SKS		15 43 15.8	
TIY				S	S	15 43 50.0	-2.1
TIY				pmax	pmax		
	comp=Z,77nm,0.9s,mb6.1						
TIY				pmax	pmax		
	comp=Z,6µm,11.4s						
TIY				LR	LR		
	comp=N,23µm,19.2s,MS6.8						
TIY				LR	LR		
	comp=E,16µm,18.8s,MS6.8						
TIY				LR	LR		
	comp=Z,59µm,25.1s						
Z26A	Caprock	93.90	54	⇓P	P	15 32 44.3	-0.5
	baz=94,SNR=32						
LPA	La Plata	93.94	134	ceP	P	15 32 46.0	+0.8
LPA				SKS		15 43 20.0	
LPA				PS	PS	15 45 16.0	+5.1
LPA				SS	SS	15 50 18.0	+6.4
LPA				SSS		15 53 58.0	
LPA							
	comp=Z,37µm,20.0s						
O18A	Roosevelt	93.94	45	⇓P	P	15 32 44.4	-0.4
	baz=94						
KMI	Kunming	93.97	297	P	P	15 32 46.5	+1.2
KMI				pP	pP	15 32 58.3	+1.9
KMI				sP	sP	15 33 01.8	+1.4
KMI				PP	PP	15 36 37.3	+5.4
KMI				SKS		15 43 16.8	
KMI				S	S	15 43 51.3	-1.9
KMI				sS	sS	15 44 10.8	-1.0
KMI				SS	SS	15 50 15.3	+1.4
KMI				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.7						
KMI				LR	LR		
	comp=N,35µm,17.6s,MS6.9						
KMI				LR	LR		
	comp=E,28µm,22.0s,MS6.9						
KMI				LR	LR		
	comp=Z,47µm,21.2s,MS6.9						
W24A	Lazy 6 Ranch,	94.00	51	⇓P	P	15 32 44.8	-0.4
	baz=94,SNR=25						
127A	Arkansas Junct	94.02	54	⇓P	P	15 32 44.7	-0.6
	baz=94,SNR=12						
T22A	Edith	94.02	49	⇓P	P	15 32 45.1	-0.1
	baz=94,SNR=8.3						
C09A	Chrisman Ranch	94.06	36	⇑P	P	15 32 44.2	-0.9
	baz=94						
H13A	Challis	94.09	40	⇑P	P	15 32 45.0	-0.4
	baz=94,SNR=41						
U23A	El Rito	94.10	50	⇑P	P	15 32 45.6	0.0
	baz=94						
X25A	Clemmons Ranch	94.13	52	⇑P	P	15 32 45.4	-0.4
	baz=94,SNR=6.2						
L16A	Fish Haven	94.14	43	⇓P	P	15 32 45.2	-0.5
	baz=94,SNR=30						
I14A	Mackay	94.14	41	⇓P	P	15 32 45.6	0.0
	baz=94,SNR=39						
XAN	Xi'an	94.18	307	P	P	15 32 48.8	+2.7
XAN				pP	pP	15 32 59.5	+2.3
XAN				sP	sP	15 33 03.0	+1.8
XAN				LR	LR		
	comp=N,34µm,24.9s,MS6.7						
XAN				LR	LR		
	comp=E,7µm,26.0s,MS6.7						
XAN				LR	LR		
	comp=Z,12µm,27.1s,MS6.2						
P19A	Cripple Cowboy	94.21	46	⇓P	P	15 32 45.9	-0.2
	baz=94,SNR=9.9						
CCIG	Comitan	94.22	74	iP	P	15 32 46.4	-0.3
PMR	Palmer	94.24	13	eP	P	15 32 44.6	-1.0
	comp=Z,53nm,1.0s,mb5.9						
PMR				LR	LR		
	comp=Z,25µm,20.0s,MS6.7						
PMR	Palmer	94.24	13	eP	P	15 32 44.6	-1.0
PMR				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.9						
PMR				MLR	MLR		
	comp=Z,25µm,20.0s,MS6.7						
Q20A	Ridgley Place,	94.24	47	⇓P	P	15 32 46.3	+0.1
	baz=94						
M17A	Scullys Gap (B	94.27	44	⇑P	P	15 32 45.9	-0.4
	baz=94,SNR=12						
F12A	Elk City	94.30	38	⇓P	P	15 32 45.8	-0.5
	baz=94,SNR=33						
TTA	Tatalina	94.30	10	eP	P	15 32 43.5	-2.4
TTA	Tatalina	94.30	10	eP	P	15 32 43.5	-2.4
WRAK	Wrangell Islan	94.36	23	eP	P	15 32 46.2	0.0
	comp=Z,149nm,1.1s,mb6.3						
WRAK				LR	LR		
	comp=Z,20µm,21.0s,MS6.6						
Y26A	Elida	94.37	53	⇑P	P	15 32 46.5	-0.5
	baz=94,SNR=31						
R21A	Cimarron	94.38	48	⇓P	P	15 32 46.9	0.0
	baz=94,SNR=27						
V24A	Rampart Ranch,	94.38	51	⇓P	P	15 32 47.1	+0.2
	baz=94,SNR=18						
J15A	Blackfoot	94.39	42	⇑P	P	15 32 47.0	+0.2
	baz=94,SNR=16						
G13A	Cobalt	94.44	39	⇑P	P	15 32 46.9	0.0
	baz=94,SNR=39						
Z27A	Tatum	94.46	54	⇑P	P	15 32 46.6	-0.7
	baz=94,SNR=12						
S22A	4UR Ranch, Cre	94.49	49	⇑P	P	15 32 47.3	-0.1
	baz=94,SNR=42						
P20A	De Beque	94.50	47	⇓P	P	15 32 46.8	-0.6
	baz=94,SNR=11						
O19A	Miners Draw (B	94.51	46	⇓P	P	15 32 46.8	-0.7
	baz=94						
L17A	Cokeville	94.52	43	⇓P	P	15 32 46.6	-0.8
	baz=94						
K16A	Soda Springs	94.54	42	⇓P	P	15 32 47.5	0.0
	baz=94,SNR=25						
E12A	Beaver Dam Sad	94.55	38	⇑P	P	15 32 46.3	-1.1
	baz=94,SNR=14						
N18A	Larsen Ranch,	94.57	45	⇑P	P	15 32 47.3	-0.4
	baz=94,SNR=12						
M18A	Lyman	94.60	44	⇓P	P	15 32 47.7	-0.1
	baz=95						
SML	Sawmill	94.60	13	P	P	15 32 48.7	+1.5
	comp=Z,79nm,1.4s,mb6.0						
SML	Sawmill	94.60	13	P	P	15 32 48.7	+1.4
SML				pmax	pmax		
	comp=Z,79nm,1.4s,mb6.0						
T23A	Casias Ranch,	94.61	50	⇑P	P	15 32 48.3	+0.4
	baz=95						
H14A	Leadore	94.62	40	⇓P	P	15 32 48.0	+0.2
	baz=95,SNR=33						
Q21A	Lamborn Mesa,	94.63	47	⇑P	P	15 32 48.1	0.0
	baz=95						
W25A	X Bar L Ranch,	94.65	52	⇓P	P	15 32 47.7	-0.4
	baz=95,SNR=44						
X26A	CR and CF Fran	94.72	53	⇓P	P	15 32 48.1	-0.5
	baz=95,SNR=12						
I15A	Monteview	94.73	41	⇑P	P	15 32 48.3	-0.1
	baz=95,SNR=5.7						
U24A	Moreno Valley	94.76	50	⇓P	P	15 32 49.1	+0.5
	baz=95						
AHID	Auburn Hatcher	94.78	43	eP	P	15 32 49.0	+0.3
	comp=Z,635nm,1.4s,mb6.9						
AHID				LR	LR		
	comp=Z,14µm,19.0s,MS6.5						
J16A	Bone	94.79	42	⇑P	P	15 32 48.6	-0.1
	baz=95						
Y27A	Causey	94.81	54	⇓P	P	15 32 47.9	-1.1
	baz=95,SNR=33						
R22A	Saguache, Gunn	94.81	48	⇑P	P	15 32 48.5	-0.4
	baz=95,SNR=19						
F13A	Darby	94.82	39	⇓P	P	15 32 47.8	-0.9
	baz=95,SNR=19						
N19A	John Jarvie Ra	94.83	45	⇓P	P	15 32 47.7	-1.1
	baz=95						
PNL	Peninsula	94.84	18	eP	P	15 32 47.7	-0.7
	comp=Z,222nm,1.1s,mb6.5						
K17A	Gardner Place,	94.88	43	⇓P	P	15 32 48.2	-0.8
	baz=95,SNR=17						
PPLA	Purkeypile	94.88	11	eP	P	15 32 50.2	+1.7
	comp=Z,359nm,1.4s,mb6.6						
V25A	Rancho No Teng	94.89	51	⇑P	P	15 32 48.5	-0.8
	baz=95,SNR=30						
L18A	Fontenelle, Gr	94.91	44	⇓P	P	15 32 48.7	-0.5
	baz=95						
NEW	Newport	94.94	36	⇑P	P	15 32 48.3	-0.9
	baz=95						
NEW	Newport	94.94	36	eP	P	15 32 48.0	-1.2
	comp=Z,19nm,0.8s,mb5.6						
NEW				LR	LR		
	comp=Z,20µm,19.0s,MS6.6						
NEW	Newport	94.94	36	eP	P	15 32 48.0	-1.2
NEW				pmax	pmax		
	comp=Z,19nm,0.8s						
NEW				MLR	MLR		
	comp=Z,20µm,19.0s						
G14A	Jackson	94.95	40	⇓P	P	15 32 48.9	-0.4
	baz=95						
O20A	White River Ci	94.96	46	⇑P	P	15 32 49.2	-0.3
	baz=95						
APG	El Apazote	94.99	76	LR	LR	16 05 14.6	
	comp=Z,19µm,21.5s,MS6.5,baz=151,slow=29						
S23A	Nye Farm, Mont	95.01	49	⇓P	P	15 32 50.0	+0.2
	baz=95						
RRI2	Red Ridge	95.01	42	eP	P	15 32 49.6	0.0
	comp=Z,448nm,1.5s,mb6.7						
H15A	Lima	95.02	41	⇑P	P	15 32 49.7	+0.1
	baz=95,SNR=20						
MCMT	McKenzie Canyo	95.04	40	eP	P	15 32 49.8	0.0
	comp=Z,57nm,0.4s,mb6.3						
W26A	Owens Ranch, T	95.05	52	⇓P	P	15 32 49.5	-0.6
	baz=95,SNR=11						
D12A	Red Ives Fores	95.07	37	⇑P	P	15 32 49.0	-0.8
	baz=95						
Q22A	Crested Butte,	95.07	48	⇑P	P	15 32 49.7	-0.3
	baz=95						
P21A	Newcastle	95.11	47	⇓P	P	15 32 49.8	-0.3
	baz=95						
C11A	Tepee Creek (N	95.11	36	⇓P	P	15 32 49.0	-0.9
	baz=95,SNR=18						
MSTX	Muleshoe	95.13	54	⇓P	P	15 32 49.6	-0.9
	baz=95,SNR=24						
M19A	Rock Springs	95.20	45	⇓P	P	15 32 50.1	-0.4
	baz=95						
SMCO	Snowmass	95.21	47	eP	P	15 32 50.8	+0.1
	comp=Z,200nm,1.4s,mb6.3						
I16A	Newdale	95.23	42	⇑P	P	15 32 51.0	+0.4
	baz=95,SNR=11						
DCID1	Drake Creek	95.23	42	eP	P	15 32 51.3	+0.6
	comp=Z,637nm,1.5s,mb6.8						
X27A	F and S Farms,	95.27	53	⇑P	P	15 32 51.1	0.0
	baz=95,SNR=8.8						
T24A	Torres, Weston	95.28	50	⇓P	P	15 32 50.9	-0.2
	baz=95						
REDW	Red Top Meadow	95.29	42	eP	P	15 32 50.5	-0.3
	comp=Z,325nm,1.4s,mb6.6						
KVTX	Kingsville	95.31	61	eP	P	15 32 52.4	+1.0
	comp=Z,826nm,1.6s,mb6.9						
KVTX				LR	LR		
	comp=Z,9µm,21.0s,MS6.2						
E13A	Victor	95.31	38	⇓P	P	15 32 50.3	-0.6
	baz=95						
TPAW	Teton Pass	95.31	42	eP	P	15 32 50.9	-0.1
	comp=Z,354nm,1.4s,mb6.6						
K18A	Toltan Ranch,	95.33	43	⇑P	P	15 32 51.2	+0.1
	baz=95,SNR=31						
U25A	Circle Dot Ran	95.34	51	⇓P	P	15 32 51.4	+0.1
	baz=95,SNR=15						
N20A	Spence Gulch,	95.35	46	⇓P	P	15 32 51.1	-0.2
	baz=95,SNR=31						
SDCO	Great Sand Dun	95.36	49	⇓P	P	15 32 51.1	-0.3
	baz=95,SNR=34						
SDCO	Great Sand Dun	95.36	49	eP	P	15 32 51.3	-0.1
	comp=Z,634nm,1.4s,mb6.9						
SDCO				LR	LR		
	comp=Z,12µm,19.0s,MS6.4						
F14A	Wisdom	95.36	39	⇑P	P	15 32 50.9	-0.3
	baz=95						
J17A	Brown Place, J	95.37	42	⇓P	P	15 32 51.2	-0.1
	baz=95,SNR=22						
JCT	Junction City	95.40	58	⇓P	P	15 32 50.8	-1.0
	baz=95						
JCT	Junction City	95.40	58	eP	P	15 32 50.4	-1.4
	comp=Z,122nm,1.2s,mb6.2						
JCT				LR	LR		
	comp=Z,28µm,19.0s,MS6.8						
JCT	Junction City	95.40	58	eP	P	15 32 50.4	-1.3
JCT				pmax	pmax		
	comp=Z,122nm,1.2s,mb6.2						
JCT				MLR	MLR		
	comp=Z,28µm,19.0s,MS6.8						
SNOW	Snow King Moun	95.41	42	eP	P	15 32 51.6	+0.1
	comp=Z,213nm,1.0s,mb6.5						
L19A	Farson	95.42	44	⇓P	P	15 32 51.2	-0.4
	baz=95,SNR=8.6						
V26A	Tequesquite Ra	95.42	52	⇑P	P	15 32 51.0	-0.7
	baz=95						
C12B	Naegeli Ranch,	95.43	37	⇓P	P	15 32 50.6	-0.8
	baz=95						
G15A	Dillon	95.45	40	⇑P	P	15 32 51.0	-0.5
	baz=95,SNR=47						
S24A	Houchin Ranch,	95.49	49	⇓P	P	15 32 52.1	+0.1
	baz=96,SNR=16						
O21A	Pagoda	95.49	46	⇑P	P	15 32 51.6	-0.3
	baz=96						
DLMT	Dillon	95.51	40	eP	P	15 32 51.7	-0.2
	comp=Z,236nm,1.4s,mb6.4						
W27A	Bowe Ranch, En	95.52	53	⇓P	P	15 32 51.5	-0.7
	baz=96,SNR=12						
IMW	Indian Meadow	95.56	42	eP	P	15 32 52.1	0.0
	comp=Z,230nm,1.3s,mb6.5						
D13A	Huson	95.57	38	⇓P	P	15 32 51.1	-1.0
	baz=96						
MOOW	Moose Ponds	95.58	42	eP	P	15 32 51.9	-0.3
	comp=Z,289nm,1.5s,mb6.5						
LOHW	Long Hollow	95.58	42	eP	P	15 32 51.9	-0.3
	comp=Z,222nm,1.3s,mb6.4						
P22A	Eagle	95.59	47	⇑P	P	15 32 52.0	-0.3
	baz=96						
TNA	Tin City	95.64	4	eP	P	15 32 51.3	-0.7
	comp=Z,345nm,1.0s,mb6.7						
E14A	Clinton	95.67	39	⇑P	P	15 32 51.8	-0.8
	baz=96						
MSO	Missoula	95.68	38	⇑P	P	15 32 52.3	-0.3
	baz=96						
MSO	Missoula	95.68	38	eP	P	15 32 52.5	-0.1
	comp=Z,50nm,1.4s,mb5.8						
MSO				LR	LR		
	comp=Z,9µm,20.0s,MS6.2						
J18A	Kendall Valley	95.69	43	⇓P	P	15 32 52.4	-0.4
	baz=96,SNR=60						
BW06	Boulder Array	95.70	43	⇑P	P	15 32 51.9	-0.9
	baz=96,SNR=38						
BW06	Boulder Array	95.70	43	eP	P	15 32 51.8	-1.0
	comp=Z,99nm,1.1s,mb6.2						
BW06				LR	LR		
	comp=Z,13µm,19.0s,MS6.4						
TRF	Thorofare Moun	95.73	12	eP	P	15 32 50.9	-1.5
	comp=Z,377nm,1.1s,mb6.7						
T25A	Trinidad	95.74	50	⇑P	P	15 32 52.7	-0.4
	baz=96,SNR=12						
SEY	Seymchan	95.75	347	ceP	P	15 32 51.7	-0.8
N21A	Black Mountain	95.77	46	⇓P	P	15 32 52.9	-0.3
	baz=96,SNR=16						
M20A	Sweetwater, Wa	95.78	45	⇑P	P	15 32 53.4	+0.2
	baz=96,SNR=8.2						
U26A	Atchley Ranch,	95.78	51	⇑P	P	15 32 52.6	-0.7
	baz=96						
I17A	Pilgrim Ck.	95.78	42	⇓P	P	15 32 53.8	+0.6
	baz=96						
Q23A	Hartsel	95.79	48	⇑P	P	15 32 53.1	-0.2
	baz=96						
FLWY	Flagg Ranch	95.81	42	eP	P	15 32 53.6	+0.4
	comp=Z,350nm,1.1s,mb6.7						
SKAG	Skagway	95.83	20	eP	P	15 32 53.1	+0.1
	comp=Z,20nm,1.2s,mb5.4						
SKAG				LR	LR		
	comp=Z,28µm,23.0s,MS6.7						
QLMT	Earthquake Lak	95.84	41	eP	P	15 32 54.0	+0.6
	comp=Z,55nm,1.1s,mb5.9						
B12A	Libby	95.86	36	⇓P	P	15 32 53.2	-0.1
	baz=96						
F15A	Butte	95.86	40	⇓P	P	15 32 53.3	-0.2
	baz=96						
H16A	Russell Place,	95.87	41	⇑P	P	15 32 53.9	+0.4
	baz=96,SNR=15						
G16A	Moss Hill, Enn	95.87	40	⇑P	P	15 32 53.2	-0.3
	baz=96,SNR=17						
LRM	Limekiln Ridge	95.87	40	eP	P	15 32 52.4	-1.1
	comp=Z,1µm,1.6s,mb7.1						
BSMT	Bassoo Peak	95.88	37	eP	P	15 32 54.7	+1.3
	comp=Z,22nm,0.9s,mb5.6						
C13A	Hot Springs	95.88	37	⇓P	P	15 32 52.9	-0.6
	baz=96						
R24A	Sanders Place,	95.89	49	⇓P	P	15 32 53.6	-0.1
	baz=96						
YFT	Old Faithful	95.95	41	eP	P	15 32 54.7	+0.9
	comp=Z,291nm,1.4s,mb6.5						
L20A	Wamsutter	95.99	45	⇑P	P	15 32 53.9	-0.2
	baz=96,SNR=11						
YMR	Madison River	96.01	41	eP	P	15 32 54.5	+0.3
	comp=Z,460nm,1.4s,mb6.7						
S25A	Robets Cordova	96.01	50	⇓P	P	15 32 54.1	-0.3
	baz=96						
O22A	Kremmling	96.04	47	⇑P	P	15 32 54.4	0.0
	baz=96,SNR=17						
P23A	Jefferson	96.05	48	⇑P	P	15 32 54.2	-0.2
	baz=96						
H17A	Grant Village	96.07	42	⇓P	P	15 32 54.9	+0.5
	baz=96,SNR=12						
D14A	Greenough	96.07	38	⇑P	P	15 32 54.3	0.0
	baz=96						
SWMT	Swartz Lake	96.08	38	eP	P	15 32 53.9	-0.4
	comp=Z,11nm,0.8s,mb5.3						
I18A	Diamond G Ranc	96.09	42	⇓P	P	15 32 54.1	-0.5
	baz=96,SNR=20						
CHMT	Chamberlain Mo	96.11	38	eP	P	15 32 53.4	-1.1
	comp=Z,132nm,0.6s,mb6.5						
A12A	Yaak River Ran	96.12	36	⇓P	P	15 32 54.7	+0.2
	baz=96						
E15A	Deer Lodge	96.14	39	⇑P	P	15 32 54

comp=E,45μm,21.6s,MS6.9
CD2 LR LR
comp=Z,54μm,21.6s,MS7.0
YNR Norris Junctio 96.20 41 *e*P **P 15 32 55.7 +0.7**
comp=Z,230nm,1.4s,mb6.4
BPAW Bear Paw Mtn. 96.20 11 *e*P **P 15 32 52.1 -2.4**
comp=Z,157nm,1.5s,mb6.2
BOZ Bozeman (W) 96.22 40 ⇓P **P 15 32 54.4 -0.7**
baz=96,SNR=99
BOZ Bozeman (W) 96.22 40 *e*P **P 15 32 54.8 -0.3**
comp=Z,214nm,1.4s,mb6.4
BOZ LR LR
comp=Z,17μm,19.0s,MS6.5
BOZ Bozeman (W) 96.22 40 *e*P **P 15 32 54.8 -0.3**
BOZ pmax pmax
comp=Z,214nm,1.4s,mb6.4
BOZ MLR MLR
comp=Z,17μm,19.0s,MS6.5
MCK McKinley 96.23 12 *e*P **P 15 32 52.8 -1.8**
comp=Z,2μm,1.1s,mb7.4
MCK McKinley 96.23 12 *e*P **P 15 32 52.8 -1.9**
PAX Paxson 96.24 14 *e*P **P 15 32 53.4 -1.3**
comp=Z,111nm,0.6s,mb6.5
PAX Paxson 96.24 14 *e*P **P 15 32 53.4 -1.3**
PAX pmax pmax
comp=Z,111nm,0.6s,mb6.5
HHC Hu-ho-hao-te 96.25 314 ⇑P **P 15 32 57.5 +2.1**
HHC pP pP 15 33 08.0 +1.5
HHC sP sP 15 33 12.5 +2.0
HHC SKS 15 43 31.0
HHC S S 15 44 17.5 +5.1
HHC pmax pmax
comp=Z,40nm,1.1s,mb5.8
HHC pmax pmax
comp=Z,8μm,8.1s
HHC LR LR
comp=N,24μm,21.8s,MS6.9
HHC LR LR
comp=E,42μm,21.6s,MS6.9
HHC LR LR
comp=Z,101μm,23.5s,MS7.2
Q24A Divide 96.27 48 ⇓P **P 15 32 55.1 -0.4**
baz=96
LKWY Lake 96.27 42 *e*P **P 15 32 56.6 +1.2**
comp=Z,241nm,1.4s,mb6.4
LKWY LR LR
comp=Z,22μm,20.0s,MS6.6
LKWY Lake 96.27 42 *e*P **P 15 32 56.6 +1.3**
LKWY pmax pmax
comp=Z,241nm,1.4s,mb6.4
LKWY MLR MLR
comp=Z,22μm,20.0s,MS6.6
J19A Crowheart 96.29 43 ⇑P **P 15 32 54.6 -0.9**
baz=96
F16A Kennard Place, 96.31 40 ⇑P **P 15 32 55.1 -0.3**
baz=96
M21A Separation Pea 96.35 45 ⇑P **P 15 32 55.4 -0.4**
baz=96,SNR=19
K20A Yellowstone Ra 96.36 44 ⇓P **P 15 32 54.9 -0.9**
baz=96,SNR=15
C14A Swan Lake 96.37 38 ⇓P **P 15 32 55.1 -0.6**
baz=96
B13A Whitefish 96.37 37 ⇑P **P 15 32 54.8 -0.9**
baz=96
AMTX Amarillo 96.38 53 ⇑P **P 15 32 55.8 -0.3**
baz=96,SNR=6.4
AMTX Amarillo 96.38 53 *e*P **P 15 32 54.9 -1.2**
comp=Z,228nm,1.5s,mb6.4
AMTX LR LR
comp=Z,15μm,20.0s,MS6.5
R25A Fountain Ranch 96.38 49 ⇓P **P 15 32 55.3 -0.7**
baz=96
ISCO Idaho Springs 96.43 48 ⇓P **P 15 32 55.7 -0.5**
baz=96
ISCO Idaho Springs 96.43 48 *e*P **P 15 32 56.7 +0.5**
comp=Z,149nm,1.6s,mb6.2
ISCO LR LR
comp=Z,12μm,20.0s,MS6.3
ISCO Idaho Springs 96.43 48 *e*P **P 15 32 56.7 +0.5**
ISCO pmax pmax
comp=Z,149nm,1.6s,mb6.2
ISCO MLR MLR
comp=Z,12μm,20.0s,MS6.3
N22A Wattenberg Ran 96.46 46 ⇓P **P 15 32 56.1 -0.2**
baz=96,SNR=12
O23A Lake Granby, G 96.47 47 ⇑P **P 15 32 56.0 -0.4**
baz=96,SNR=8.2
RWWY Rawlins 96.49 45 *e*P **P 15 32 55.7 -0.7**
comp=Z,337nm,1.4s,mb6.6
G17A Pierce Place, 96.53 41 ⇑P **P 15 32 56.5 0.0**
baz=96,SNR=6.0
L21A Rawlins 96.55 45 ⇓P **P 15 32 56.1 -0.6**
baz=96
D15A Lincoln 96.58 39 ⇓P **P 15 32 56.3 -0.4**
baz=96,SNR=10
MENT Mentasta 96.59 15 *e*P **P 15 32 55.7 -0.6**
HIA Hailar 96.66 324 *e*P **P 15 32 55.5 -1.4**
comp=Z,82nm,1.1s,mb6.1
HIA LR LR
comp=Z,62μm,22.0s,MS7.0
HIA Hailar 96.66 324 *e*P **P 15 32 55.5 -1.5**
HIA pmax pmax
comp=Z,82nm,1.1s
HIA MLR MLR
comp=Z,62μm,22.0s
M22A Cedar Creek Ra 96.71 46 ⇑P **P 15 32 56.7 -0.7**
baz=97,SNR=7.5
DLBC Dease Lake 96.72 23 P **P 15 32 55.8 -1.2**
P24A Kohler Place, 96.72 48 ⇓P **P 15 32 57.0 -0.5**
baz=97
E16A East Helena 96.73 39 ⇑P **P 15 32 56.9 -0.4**
baz=97
A13A Flathead Natio 96.75 36 ⇑P **P 15 32 56.8 -0.6**
baz=97,SNR=5.9
HRY Holter Researc 96.75 39 *e*P **P 15 32 56.7 -0.7**
comp=Z,59nm,0.9s,mb6.0
H18A Shoshone NF, C 96.76 42 ⇑P **P 15 32 57.2 -0.4**
baz=97,SNR=11
I19A Meeteetse 96.77 43 ⇓P **P 15 32 56.1 -1.5**
baz=97,SNR=22
Q25A Bedland, Calha 96.82 49 ⇑P **P 15 32 56.2 -1.8**
baz=97
N23A Red Feather La 96.83 46 ⇓P **P 15 32 58.0 0.0**
baz=97
J20A Shoshoni 96.92 44 ⇑P **P 15 32 57.8 -0.5**
baz=97,SNR=20
F17A Fitzpatrick Pl 96.92 40 ⇓P **P 15 32 58.4 +0.2**
baz=97,SNR=10
O24A Longmont 96.96 47 ⇑P **P 15 32 58.3 -0.3**
baz=97
C15A Salmond Ranch, 96.98 38 ⇓P **P 15 32 57.3 -1.2**
baz=97,SNR=11
B14A Marquette Ranc 96.99 37 ⇑P **P 15 32 56.8 -1.6**
baz=97,SNR=15
K21A Alcova 97.01 44 ⇓P **P 15 32 57.5 -1.2**
baz=97,SNR=24
BTO Baotou 97.09 313 *e*P **P 15 33 03.5 +4.4**
WALA Waterton Lakes 97.09 36 *e*P **P 15 32 58.0 -0.9**
comp=Z,3.7nm,1.3s
D16A Dana Ranch, Ca 97.10 39 ⇓P **P 15 32 58.2 -0.8**
baz=97
DOT Dot Lake 97.14 14 *e*P **P 15 32 58.9 +0.1**
comp=Z,337nm,0.9s,mb6.8
E17A Martinsdale 97.14 40 ⇓P **P 15 32 58.3 -1.0**
baz=97
H19A Powell 97.15 42 ⇑P **P 15 32 58.8 -0.5**
baz=97
L22A Ellis Ranch, M 97.17 45 ⇑P **P 15 32 59.2 -0.2**
baz=97
G18A Lazy EL Ranch, 97.19 41 ⇓P **P 15 32 58.9 -0.6**
baz=97
P25A Willow Gulch B 97.20 48 ⇓P **P 15 32 59.5 -0.2**
baz=97
TGUH Tegucigalpa,Un 97.22 78 P **P 15 33 01.3 +1.0**
TGUH LR LR
comp=Z,24μm,21.0s,MS6.7
I20A Worland 97.23 43 ⇓P **P 15 32 59.2 -0.5**
baz=97
RLMT Red Lodge 97.25 42 ⇑P **P 15 32 59.5 -0.3**
baz=97,SNR=9.7
RLMT Red Lodge 97.25 42 *e*P **P 15 32 58.8 -0.9**
comp=Z,92nm,1.3s,mb6.0
RLMT LR LR
comp=Z,15μm,20.0s,MS6.5
A14A Double T Ranch 97.29 37 ⇓P **P 15 32 59.2 -0.7**
baz=97,SNR=17
M23A Laramie 97.29 46 ⇑P **P 15 32 59.6 -0.5**
baz=97
J21A Lysite 97.29 44 ⇓P **P 15 32 59.8 -0.2**
baz=97,SNR=20
B15A Bradely Ranch, 97.33 38 ⇑P **P 15 32 59.1 -0.9**
baz=97
PHWY Pilot Hill 97.36 46 *e*P **P 15 32 58.6 -1.8**
comp=Z,60nm,1.5s,mb5.8
JTS JuntasAbangare 97.38 82 PFAKE 15 33 10.0 +8.9
JTS LR LR
comp=Z,25μm,21.0s,MS6.7
JTS JuntasAbangare 97.38 82 *e*P **P 15 33 03.7 +2.6**
F18A Big Timber 97.45 41 ⇓P **P 15 33 00.9 +0.2**
baz=97,SNR=11
C16A Fuhringer Ranc 97.46 38 ⇓P **P 15 33 00.3 -0.3**
baz=97
K22A Casper 97.46 45 ⇑P **P 15 32 59.9 -0.8**
baz=97,SNR=16
N24A Carr 97.47 47 ⇓P **P 15 33 00.8 0.0**
baz=97
COLA College 97.47 12 *e*P **P 15 32 59.1 -1.2**
comp=Z,142nm,0.9s,mb6.4
COLA LR LR
comp=Z,26μm,20.0s,MS6.7
COLA College 97.47 12 *e*P **P 15 32 59.1 -1.2**
COLA pmax pmax
comp=Z,142nm,0.9s,mb6.4
COLA MLR MLR
comp=Z,26μm,20.0s,MS6.7
ILAR Eielson Array 97.56 13 P **P 15 32 59.1 -1.5**
comp=Z,16nm,0.9s,mb5.6,baz=224,slow=5.8,SNR=32
ILAR PP PP 15 36 57.0 -1.9
comp=Z,14nm,1.0s,baz=226,slow=6.4,SNR=4.3
ILAR PKiKP PKiKP 15 37 37.9 +3.0
comp=Z,8.8nm,0.9s,baz=287,slow=2.1,SNR=9.9
ILAR PKKP PKKPbc 15 49 41.4 +1.8
comp=Z,4.4nm,0.7s,baz=339,slow=2.4,SNR=6.6
ILAR PKPPKP 15 57 50.0
comp=Z,1.2nm,0.9s,baz=345,slow=2.7,SNR=4.4
ILAR LR LR 16 16 40.2
comp=Z,10μm,18.9s,MS6.3,baz=240,slow=35
ILAR Eielson Array 97.56 13 P **P 15 32 59.1 -1.5**
ILAR PP PP 15 36 57.0 -1.9
ILAR Eielson Array 97.56 13 P **P 15 32 59.2 -1.5**
ILAR 15 36 57.0
ILAR pmax pmax
comp=Z,170nm,0.9s
ILAR MLR MLR
comp=Z,10μm,18.9s
O25A Wiggins 97.56 48 ⇓P **P 15 33 00.5 -0.8**
baz=98
H20A Greybull 97.62 43 ⇑P **P 15 33 00.5 -0.9**
baz=98
D17A Six Diamond Ra 97.64 39 ⇑P **P 15 33 01.1 -0.4**
baz=98,SNR=12
A15A Johnson Ranch, 97.65 37 ⇓P **P 15 33 00.0 -1.4**
baz=98,SNR=21
I21A Big Trails, Te 97.65 43 ⇑P **P 15 33 00.2 -1.4**
baz=98
L23A Garrett 97.66 46 ⇑P **P 15 33 00.7 -1.0**
baz=98
E18A Harlowton 97.73 40 ⇑P **P 15 33 01.0 -0.9**
baz=98
B16A M & M Farms, S 97.85 38 ⇓P **P 15 33 01.3 -1.1**
baz=98
M24A Cheyenne 97.85 46 ⇑P **P 15 33 01.4 -1.1**
baz=98
F19A Roth Farm, Mol 97.86 41 ⇑P **P 15 33 01.8 -0.6**
baz=98
C17A Wharram Farm, 97.89 39 ⇓P **P 15 33 01.5 -1.1**
baz=98,SNR=15
G20A Bridger 97.91 42 ⇑P **P 15 33 01.7 -1.0**
baz=98
J22A Midwest 97.91 44 ⇓P **P 15 33 02.2 -0.6**
baz=98
N25A Grover 97.96 47 ⇓P **P 15 33 02.7 -0.4**
baz=98
LPAZ La Paz 97.98 114 P **P 15 33 06.0 +2.1**
comp=Z,6.0nm,0.8s,mb5.2,baz=196,slow=3.6,SNR=18
LPAZ PKKP PKKPbc 15 49 42.0 +5.7
comp=Z,6.8nm,0.7s,baz=1.8,slow=6.4,SNR=9.9
LPAZ PKPPKP 15 57 50.0
comp=Z,3.7nm,1.1s,baz=2.3,slow=0.7,SNR=4.9
LPAZ LR LR 16 08 53.0
comp=Z,11μm,19.4s,MS6.4,baz=141,slow=30
LPAZ La Paz 97.98 114 *e*P **P 15 33 07.2 +3.4**
comp=Z,2.1nm,1.4s
LPAZ LR LR
comp=Z,12μm,20.0s,MS6.4
LPAZ La Paz 97.98 114 P **P 15 33 06.0 +2.2**
LPAZ pmax pmax
comp=Z,60nm,0.9s
OTAV Otavalo 98.07 94 *e*P **P 15 33 06.9 +2.6**
comp=Z,24nm,1.2s,mb5.6
OTAV *e*PKKPdf PKKPdf 15 49 41.0 +2.2
OTAV LR LR
comp=Z,24μm,22.0s,MS6.7
L24A Wheatland 98.10 46 ⇓P **P 15 33 03.0 -0.6**
baz=98
D18A Linhart Farms, 98.16 40 ⇓P **P 15 33 03.5 -0.3**
baz=98
A16A West Butte Ran 98.23 37 ⇓P **P 15 33 02.6 -1.5**
baz=98,SNR=12
H21A Big Horn, Sher 98.26 43 ⇑P **P 15 33 03.2 -1.1**
baz=98
B17A L&G Farms, Che 98.26 38 ⇓P **P 15 33 02.9 -1.4**
baz=98
F20A Billings 98.28 41 ⇓Pdiff **P 15 33 04.1 -0.3**
baz=98
E19A Rath Farm, Rou 98.30 41 ⇑Pdiff **P 15 33 04.0 -0.4**
baz=98
WMOK Wichita Mounta 98.34 55 P **P 15 33 03.7 -1.2**
comp=Z,60nm,1.4s,mb5.9
WMOK LR LR
comp=Z,13μm,20.0s,MS6.4
WMOK Wichita Mounta 98.34 55 P **P 15 33 03.7 -1.2**
WMOK pmax pmax
comp=Z,60nm,1.4s,mb5.9
WMOK MLR MLR
comp=Z,13μm,20.0s,MS6.4
G21A Lodge Grass 98.50 42 ⇑Pdiff **P 15 33 05.1 -0.3**
baz=98
DAWY Dawson 98.56 16 *e*P **P 15 33 04.7 -0.5**
BILL Bilibino 98.57 354 *e*P **P 15 33 03.8 -1.4**
comp=Z,244nm,1.5s,mb6.5
BILL LR LR
comp=Z,39μm,22.0s,MS6.9
BILL Bilibino 98.57 354 ⇑*e*P **P 15 33 04.5 -0.7**
BILL *i* 15 37 11.5
BILL *i* S SKSac 15 43 34.7 -5.1
BILL *i* PS PS 15 45 58.1 -2.9
BILL *e*SS SS 15 51 16.0 -1.5
BILL pmax pmax
comp=Z,227nm,2.2s,mb6.3
BILL MLR MLR
comp=Z,26μm,20.0s,MS6.7
D19A Cripps Ranch, 98.65 40 ⇑Pdiff **P 15 33 06.0 0.0**
baz=99
EGMT Eagleton 98.67 39 ⇑Pdiff **P 15 33 05.9 -0.1**
baz=99
EGMT Eagleton 98.67 39 *e*P **P 15 33 04.4 -1.7**
comp=Z,36nm,1.1s,mb5.8
EGMT LR LR
comp=Z,14μm,19.0s,MS6.5
E20A Meyer Farm, Mu 98.69 41 ⇓Pdiff **P 15 33 06.2 -0.1**
baz=99
A17A Triple J Farms 98.70 38 ⇑Pdiff **P 15 33 05.3 -0.9**
baz=99
EGAK Eagle 98.75 15 *e*P **P 15 33 05.9 -0.2**
comp=Z,157nm,1.2s,mb6.4
EGAK LR LR
comp=Z,26μm,20.0s,MS6.7
LZH Lanzhou 98.80 307 *e*P **P 15 33 07.3 +0.3**
LZH pP pP 15 33 16.5 -1.6
LZH sP sP 15 33 19.5 -2.6
LZH PP PP 15 37 11.0 +2.0
LZH SKS 15 43 41.0
LZH S S 15 44 33.0 -1.3
LZH pmax pmax
comp=Z,48nm,1.1s,mb5.9
LZH pmax pmax
comp=Z,420nm,7.3s
LZH LR LR
comp=N,24μm,20.4s,MS6.9
LZH LR LR
comp=E,33μm,17.6s,MS6.9
LZH LR LR
comp=Z,52μm,19.3s,MS7.0
B18A Beardsley Farm 98.87 39 ⇑Pdiff **P 15 33 06.3 -0.6**
baz=99
F21A Absaloka Mine, 98.89 42 ⇑Pdiff **P 15 33 06.5 -0.6**
baz=99
C19A Slack Wire Ran 98.89 40 ⇓Pdiff **P 15 33 06.9 -0.2**
baz=99
D20A Manuel Ranch, 99.03 40 ⇓Pdiff **P 15 33 07.1 -0.6**
baz=99
A18A Metzger Ranch, 99.14 38 ⇓Pdiff **P 15 33 07.7 -0.5**
baz=99
COLD Coldfoot 99.22 10 *e*P **P 15 33 07.3 -0.7**
comp=Z,109nm,1.2s,mb6.3
CLNS Chul'man 99.25 332 *e*P **P 15 33 07.2 -1.2**
CLNS *e* 15 37 06.3
CLNS *e*S SKSac 15 43 39.0 -4.6
CLNS pmax pmax
comp=Z,94nm,1.0s,mb6.3
CLNS pmax pmax
comp=E,37nm,1.2s
CLNS pmax pmax
comp=N,43nm,0.9s
CLNS pmax pmax
comp=Z,54nm,1.4s,mb5.9
CLNS pmax pmax
comp=N,67nm,1.2s
CLNS pmax pmax
comp=E,49nm,1.4s
CLNS smax
comp=N,2μm,10.3s
CLNS smax
comp=E,1μm,12.8s
E21A Keefer Ranch, 99.32 41 ⇓Pdiff **P 15 33 07.9 -1.1**
baz=99
TEIG Tepich 99.34 72 PFAKE 15 33 20.0 +10
TEIG LR LR
comp=Z,9μm,20.0s,MS6.3
OGNE Ogallala 99.35 48 ⇑Pdiff **P 15 33 08.2 -1.1**
baz=99
OGNE Ogallala 99.35 48 *e*P **P 15 33 10.2 +0.9**
comp=Z,36nm,0.8s,mb6.0
OGNE LR LR
comp=Z,19μm,19.0s,MS6.6
B19A Brinkman Farms 99.36 39 ⇓Pdiff **P 15 33 08.1 -1.0**
baz=99
D21A La Casta Ranch 99.66 41 ⇓Pdiff Pdif 15 33 09.1 -1.7
baz=100
A19A Klindworth Far 99.74 39 ⇓Pdiff Pdif 15 33 10.4 -0.7
baz=100
CBKS Cedar Bluff 99.76 51 ⇓Pdiff Pdif 15 33 10.9 -0.4
baz=100
CBKS Cedar Bluff 99.76 51 Pdif Pdif 15 33 11.4 +0.2
comp=Z,157nm,1.4s
CBKS LR LR
comp=Z,17μm,20.0s,MS6.5
CBKS Cedar Bluff 99.76 51 P Pdif 15 33 11.4 +0.2
CBKS pmax pmax
comp=Z,157nm,1.4s,mb6.2
CBKS MLR MLR
comp=Z,17μm,20.0s,MS6.5
RSSD Black Hills 99.78 45 *e*Pdif Pdif 15 33 10.7 -0.6
comp=Z,238nm,1.4s
RSSD Black Hills 99.78 45 *e*P Pdif 15 33 10.7 -0.6
RSSD pmax pmax
comp=Z,238nm,1.4s,mb6.4
NATX Nacogdoches 99.85 59 *e*Pdif Pdif 15 33 12.4 +0.8
NATX LR LR
comp=Z,14μm,19.0s,MS6.5
B20A Solberg Farm, 99.86 39 ⇑Pdiff Pdif 15 33 11.3 -0.4
baz=100
LAO LASA Array 99.89 41 ⇑Pdiff Pdif 15 33 11.7 -0.1
baz=100
LAO LASA Array 99.89 41 *e*Pdif Pdif 15 33 12.5 +0.7
comp=Z,176nm,1.6s
LAO LR LR
comp=Z,13μm,21.0s,MS6.4
CPUP Villa Florida 99.92 128 P Pdif 15 33 15.6 +3.6
comp=Z,6.3nm,0.9s,baz=242,slow=4.9,SNR=9.1
CPUP PKKPbc PKKPbc 15 49 32.9 +1.9
comp=Z,1.3nm,0.4s,baz=21,slow=3.3,SNR=5.7
CPUP Villa Florida 99.92 128 P Pdif 15 33 15.6 +3.6
CPUP PKKPbc PKKPbc 15 49 32.9 +1.9
CPUP Villa Florida 99.92 128 P Pdif 15 33 15.6 +3.6
CPUP pmax pmax
comp=Z,6.0nm,0.9s
C21A Desert Coulee 100.02 40 ⇓Pdiff Pdif 15 33 12.1 -0.4
baz=100
A20A Cobblestone Ra 100.16 39 ⇑Pdiff Pdif 15 33 12.4 -0.6
baz=100
D22A Cohagen 100.17 41 ⇑Pdiff Pdif 15 33 12.9 -0.1
baz=100
B21A Ellsworth Farm 100.40 40 ⇑Pdiff Pdif 15 33 13.3 -0.8
baz=100
C22A Vida 100.66 41 ⇓Pdiff Pdif 15 33 14.7 -0.5
baz=101
D23A Lindsay 100.73 41 ⇑Pdiff Pdif 15 33 14.9 -0.6
baz=101
A21A Bergtoll Ranch 100.77 39 ⇓Pdiff Pdif 15 33 15.2 -0.5
baz=101
B22A Reddig Ranch S 100.90 40 ⇓Pdiff Pdif 15 33 15.9 -0.4
baz=101
C23A Lambert 101.09 41 ⇓Pdiff Pdif 15 33 16.6 -0.5
baz=101
YAK Yakutsk 101.09 338 *e*Pdif Pdif 15 33 15.0 -2.2
comp=Z,140nm,0.8s
YAK LR LR
comp=Z,73μm,22.0s,MS7.2
YAK Yakutsk 101.09 338 *e*P Pdif 15 33 16.6 -0.5
YAK *e* 15 37 24.5
YAK *e*S SKSac 15 43 51.5 -0.9
YAK *e*PS PS 15 46 16.5 -12
YAK pmax pmax
comp=Z,128nm,1.2s
YAK pmax pmax
comp=N,19nm,1.3s
YAK pmax pmax
comp=E,26nm,1.3s
YAK pmax pmax
comp=E,252nm,1.9s
YAK pmax pmax
comp=Z,550nm,2.9s
YAK pmax pmax
comp=N,281nm,2.2s
YAK smax
comp=N,2μm,6.1s
YAK smax
comp=E,2μm,8.1s
YAK MLR MLR
comp=Z,50μm,25.0s,MS6.9
YAK MLR MLR
comp=E,18μm,21.0s,MS6.9
YAK MLR MLR
comp=N,36μm,25.0s,MS6.9
D24A Glendive 101.21 42 ⇑Pdiff Pdif 15 33 17.2 -0.5
baz=101
BCIP Isla Barro Col 101.25 86 PFAKE 15 33 30.0 +12
BCIP LR LR
comp=Z,14μm,20.0s,MS6.5
A22A Carney Farms, 101.32 40 ⇑Pdiff Pdif 15 33 17.7 -0.5
baz=101
C24A Savage 101.38 41 ⇑Pdiff Pdif 15 33 18.5 +0.1
baz=101
CIT Chita 101.46 324 *e*P Pdif 15 33 21.1 +2.3
CIT pmax pmax
comp=Z,114nm,1.3s
B23A Brockton 101.55 40 ⇓Pdiff Pdif 15 33 18.7 -0.5
baz=102
A23A Redstone 101.88 40 ⇓Pdiff Pdif 15 33 20.8 +0.1
baz=102
MIAR Mount Ida 101.98 57 *e*Pdif Pdif 15 33 21.9 +0.8
comp=Z,36nm,1.5s
MIAR LR LR
comp=Z,14μm,20.0s,MS6.5
MIAR Mount Ida 101.98 57 *e*P Pdif 15 33 21.9 +0.8
MIAR pmax pmax
comp=Z,36nm,1.5s
MIAR MLR MLR
comp=Z,14μm,20.0s,MS6.5
DGMT Dagmar 102.00 41 ⇓Pdiff Pdif 15 33 21.2 0.0
baz=102
DGMT Dagmar 102.00 41 PFAKE 15 33 30.0 +8.8
DGMT LR LR
comp=Z,12μm,22.0s,MS6.4
KSU1 Kansas State U 102.02 52 PFAKE 15 33 30.0 +8.7
KSU1 LR LR
comp=Z,12μm,19.0s,MS6.4
A24A Westby 102.35 40 ⇑Pdiff Pdif 15 33 22.2 -0.5
baz=102
AGT Agartala 102.49 290 *ex* x 15 33 32.0

AGT ex x 15 34 18.0
SHL Shillong 102.75 292 ePKP Pdif 15 33 28.0 +3.5
SHL eS SKSac 15 44 05.0 +2.9
ULN Ulaanbaatar 102.76 318 ePdif Pdif 15 33 24.0 -0.6
comp=Z,34nm,0.8s
ULN LR LR
comp=Z,35µm,19.0s,MS6.9
ULN Ulaanbaatar 102.76 318 eP Pdif 15 33 24.0 -0.6
ULN pmax pmax
comp=Z,34nm,0.8s
ULN MLR MLR
comp=Z,35µm,19.0s,MS6.9
ULN Ulaanbaatar 102.76 318 P Pdif 15 33 32.5 +7.9
SNR=21
UALR University of 102.99 57 ePdif Pdif 15 33 33.1 +7.5
comp=Z,63nm,1.5s
SONM Songino Array 103.13 318 P Pdif 15 33 27.2 +1.0
comp=Z,2.8nm,0.9s,baz=140,slow=4.2,SNR=9.8
SONM PP PP 15 37 42.2 +0.7
comp=Z,24nm,1.2s,baz=126,slow=7.5,SNR=5.0
SONM PKKPbc PKKPbc 15 49 26.2 +3.4
comp=Z,6.4nm,1.1s,baz=260,slow=4.0,SNR=4.9
SONM PKPPKP 15 57 38.4
comp=Z,1.5nm,1.0s,baz=260,slow=4.1,SNR=4.8
SONM Songino Array 103.13 318 P Pdif 15 33 27.2 +1.0
SONM 15 37 42.2
SONM pmax pmax
comp=Z,3.0nm,0.9s
VBMS Vicksburg 103.17 60 PFAKE 15 33 40.0 +14
VBMS LR LR
comp=Z,12µm,19.0s,MS6.4
GTA Gaotai 103.21 308 ⇑P Pdif 15 33 26.5 -0.1
GTA pP 15 33 37.0
GTA sP 15 33 41.0
GTA PP PP 15 37 44.8 +2.5
GTA SKS 15 44 02.0
GTA S Sdif 15 45 06.8 -4.3
GTA sS 15 45 24.3
GTA SS SS 15 52 22.8 -0.3
GTA LR LR
comp=N,18µm,23.2s,MS6.7
GTA LR LR
comp=E,21µm,23.2s,MS6.7
GTA LR LR
comp=Z,28µm,22.3s,MS6.8
DGAR Diego Garcia 103.23 253 PFAKE 15 33 40.0 +13
DGAR LR LR
comp=Z,91µm,21.0s,MS7.3
INK Inuvik 103.41 15 Pdiff Pdif 15 33 30.3 +2.9
comp=Z,29nm,1.1s,baz=256,slow=3.8,SNR=8.1
INK PP PP 15 37 38.3 -4.8
comp=Z,12nm,0.9s,baz=220,slow=7.6,SNR=4.0
INK Inuvik 103.41 15 ePdif Pdif 15 33 25.1 -2.3
comp=Z,51nm,1.3s
INK PP PP 15 37 38.3 -4.8
INK Inuvik 103.41 15 P Pdif 15 33 30.3 +2.9
INK 15 37 38.3
INK pmax pmax
comp=Z,29nm,1.1s
INK pmax pmax
comp=Z,12nm,0.9s
PALK Pallekele 103.68 271 ePdif Pdif 15 33 27.3 -1.3
comp=Z,42nm,1.0s
PALK Pallekele 103.68 271 eP Pdif 15 33 27.3 -1.4
PALK pmax pmax
comp=Z,42nm,1.0s
ROSC El Rosal 103.93 92 PKKP PKKPbc 15 49 29.4 +10
comp=Z,20nm,0.6s,baz=266,slow=22,SNR=6.3
ECSD EROS Data Cent 104.22 48 ePdif Pdif 15 33 28.3 -2.8
comp=Z,52nm,1.3s
ECSD LR LR
comp=Z,13µm,19.0s,MS6.5
CAL Calcutta 104.27 288 ⇑iP Pdif 15 33 30.9 -0.4
CAL ⇑ix x 15 37 51.5
BOD Bodaibo 104.50 329 eP Pdif 15 33 28.6 -3.7
BOD e 15 37 50.3
BOD pmax pmax
comp=Z,18nm,1.6s
OXF Oxford 105.02 59 PFAKE 15 33 50.0 +15
OXF LR LR
comp=Z,17µm,19.0s,MS6.6
YKA Yellowknife Ar 105.03 25 Pdiff Pdif 15 33 38.9 +4.2
comp=Z,1.8nm,0.8s,baz=244,slow=3.8,SNR=4.1
YKA PKIKP PKiKP 15 37 49.1 +0.7
comp=Z,3.7nm,0.6s,baz=253,slow=1.6,SNR=8.4
YKA PKKPbc PKKPbc 15 49 18.2 +0.7
comp=Z,15nm,0.7s,baz=30,slow=2.8,SNR=9.7
YKA PKPPKP 15 57 42.2
comp=Z,2.6nm,0.9s,baz=28,slow=2.1,SNR=4.2
YKA Yellowknife Ar 105.03 25 P Pdif 15 33 38.9 +4.2
YKA pmax pmax
comp=Z,2.0nm,0.8s
LSA Lhasa 105.19 296 ePdif Pdif 15 33 37.3 +1.9
comp=Z,26nm,1.2s
LSA LR LR
comp=Z,38µm,21.0s,MS6.9
LSA Lhasa 105.19 296 eP Pdif 15 33 37.3 +1.9
LSA pmax pmax
comp=Z,26nm,1.2s
LSA MLR MLR
comp=Z,38µm,21.0s,MS6.9
BRAL Brewton 105.26 63 PFAKE 15 38 00.0 +10
BRAL LR LR
comp=Z,9µm,20.0s,MS6.3
FVM French Village 105.81 55 Pdif Pdif 15 33 38.2 +0.1
comp=Z,12nm,0.9s
FVM French Village 105.81 55 P Pdif 15 33 38.3 +0.2
FVM pmax pmax
comp=Z,12nm,0.9s
ZAK Zakamensk 106.16 319 eP Pdif 15 33 38.8 -0.9
ZAK pmax pmax
comp=Z,71nm,1.0s
LRAL Lakeview Retre 106.19 61 PFAKE 15 38 00.0 +8.4
LRAL LR LR
comp=Z,13µm,20.0s,MS6.5
VIS Vishakhapatnam 106.30 281 iP PP 15 38 01.1 -4.5
VIS iS PS 15 47 21.0 -3.3
FFC Flin Flon 106.37 36 PFAKE 15 38 00.0 +8.8
FFC LR LR
comp=Z,15µm,20.0s,MS6.5
IRK Irkutsk 106.47 321 eP Pdif 15 33 51.8 +11
IRK e 15 38 14.9
IRK pmax pmax
comp=Z,38nm,4.0s
TLY Talaya 106.55 320 ePdif Pdif 15 33 33.7 -7.8
comp=Z,18nm,0.9s
TLY LR LR
comp=Z,29µm,21.0s,MS6.8
TLY Talaya 106.55 320 *c iP Pdif 15 33 38.6 -2.8
TLY e 15 38 06.0
TLY ePPP 15 40 17.6
TLY e 15 44 19.0
TLY e 15 47 28.9
TLY pmax pmax
comp=Z,19nm,0.9s
TLY MLR MLR
comp=Z,30µm,22.0s,MS6.8
AGMN Agassiz Nation 106.77 44 PFAKE 15 38 00.0 +7.9
AGMN LR LR
comp=Z,13µm,21.0s,MS6.5
MDRS Chennai 106.82 276 ex x 15 33 56.2
MDRS ex x 15 38 24.9
MDRS ex x 15 47 46.2
WVT Waverly 106.89 58 ePdif Pdif 15 33 36.8 -6.1
comp=Z,9.3nm,1.1s
WVT Waverly 106.89 58 eP Pdif 15 33 36.8 -6.1
WVT pmax pmax
comp=Z,9.0nm,1.1s
TAPN Taplejung 106.89 292 eP PKiKP 15 37 56.7 +3.7
TAPN Taplejung 106.89 292 eP Pdif 15 33 46.9 +3.9
comp=Z,106nm,1.1s
TAPN eP 15 37 56.7
ODAN Odare 106.94 292 eP PKiKP 15 37 54.7 +1.6
comp=Z,181nm,0.7s
ODAN Odare 106.94 292 eP Pdif 15 33 47.9 +4.7
comp=Z,76nm,1.0s
ODAN eP 15 37 54.7
MTDJ Mount Denham 107.43 79 PFAKE 15 38 10.0 +16
MTDJ LR LR
comp=Z,23µm,22.0s,MS6.7
TRD Trivandrum 107.52 270 ex x 15 38 00.5
ULM Lac du Bonnet 107.62 42 Pdiff Pdif 15 33 51.2 +5.0
comp=Z,2.1nm,0.4s,baz=270,slow=4.0,SNR=2.9
ULM PKiKP PKiKP 15 37 58.8 +5.2
comp=Z,3.0nm,0.4s,baz=284,slow=3.4,SNR=2.9
ULM PKKPbc PKKPbc 15 49 11.3 +2.2
comp=Z,19nm,0.8s,baz=64,slow=4.9,SNR=11
ULM Lac du Bonnet 107.62 42 Pdif Pdif 15 33 51.2 +5.0
ULM PKPdf PKiKP 15 37 58.8 +5.2
ULM PKKPbc PKKPbc 15 49 11.3 +2.2
RER Riviere de l'E 107.67 232 PFAKE 15 38 10.0 +15
RER LR LR
comp=Z,47µm,21.0s,MS7.0
HDIL Hopedale 107.70 53 PFAKE 15 38 10.0 +16
HDIL LR LR
comp=Z,14µm,20.0s,MS6.5
MOY Mondy 108.02 320 eP Pdif 15 33 57.6 +10
JFWS Jewell Farm 108.03 51 PFAKE 15 38 10.0 +15
JFWS LR LR
comp=Z,14µm,19.0s,MS6.5
SPB Sao Paulo 108.34 132 PFAKE 15 38 10.0 +14
SPB LR LR
comp=Z,29µm,22.0s,MS6.8
GUN Gumba 108.60 292 eP PKiKP 15 38 00.5 +4.3
GUN Gumba 108.60 292 eP Pdif 15 33 55.0 +4.5
comp=Z,62nm,0.9s
GUN eP 15 38 00.5
PKI Pulchoki 108.84 291 eP PKiKP 15 37 59.0 +2.3
comp=Z,96nm,0.6s
PKI Pulchoki 108.84 291 eP Pdif 15 33 56.4 +4.8
comp=Z,36nm,0.8s
PKI eP 15 37 59.4
PKI Pulchoki 108.84 291 eP Pdif 15 33 56.4 +4.8
PKI pmax pmax
comp=Z,36nm,0.8s
PKIN Phulchoki 108.85 291 eP Pdif 15 33 56.4 +4.7
comp=Z,36nm,0.8s
PKIN Phulchoki 108.85 291 eP PKiKP 15 37 59.4 +2.7
comp=Z,76nm,0.6s
WCI Wyandotte Cave 108.87 56 ePKiKP PKiKP 15 37 57.0 +0.6
GOGA Godfrey 109.03 62 PFAKE 15 38 10.0 +13
GOGA LR LR
comp=Z,11µm,21.0s,MS6.4
KKN Kakani 109.03 292 eP PKiKP 15 38 00.0 +3.0
comp=Z,90nm,0.6s
KKN Kakani 109.03 292 eP Pdif 15 33 56.2 +3.7
comp=Z,52nm,1.0s
KKN eP 15 38 00.0
KKN Kakani 109.03 292 eP Pdif 15 33 56.2 +3.7
KKN pmax pmax
comp=Z,52nm,1.0s
SDV Santo Domingo 109.08 91 ePKiKP PKiKP 15 37 59.9 +2.4
SDV ePKKP PKKPbc 15 49 13.0 +10
SDV LR LR
comp=Z,7µm,21.0s,MS6.2
DMN Daman 109.10 291 eP PKiKP 15 37 59.8 +2.6
comp=Z,451nm,1.3s
DMN Daman 109.10 291 eP Pdif 15 33 57.6 +4.8
comp=Z,44nm,0.8s
DMN eP 15 37 59.8
EYMN Ely 109.28 45 PFAKE 15 38 10.0 +13
EYMN LR LR
comp=Z,13µm,19.0s,MS6.5
GKN Gorkha 109.64 292 eP Pdif 15 33 59.2 +4.0
comp=Z,54nm,0.9s
GKN Gorkha 109.64 292 eP PKiKP 15 38 01.0 +2.8
comp=Z,132nm,1.0s
GKN Gorkha 109.64 292 eP Pdif 15 33 59.2 +4.0
GKN eP 15 38 01.0
HYB Hyderabad 110.24 279 i Pdiff Pdif 15 33 58.0 +0.2
HYB eSKS SKSac 15 44 35.0 -0.4
HYB LR LR 16 14 40.0
comp=Z,73nm,24.0s
KOLN Koldanda 110.38 291 eP Pdif 15 34 03.9 +5.4
comp=Z,34nm,0.9s
KOLN Koldanda 110.38 291 eP PKiKP 15 38 01.6 +2.0
comp=Z,89nm,0.7s
KOLN Koldanda 110.38 291 eP Pdif 15 34 03.9 +5.4
KOLN eP 15 38 01.6
DANN Dangsing 110.49 292 eP Pdif 15 34 02.6 +3.7
comp=Z,62nm,1.0s
DANN Dangsing 110.49 292 eP PKiKP 15 38 02.7 +2.9
comp=Z,102nm,0.5s
DANN Dangsing 110.49 292 eP Pdif 15 34 02.6 +3.7
DANN eP 15 38 02.7
NHSC New Hope 111.45 63 PFAKE 15 38 10.0 +8.6
NHSC LR LR
comp=Z,13µm,20.0s,MS6.5
TRIS Tristan da Cun 111.78 167 PFAKE 15 38 10.0 +7.9
TRIS LR LR
comp=Z,13µm,21.0s,MS6.5
ACSO Alum Creek Sta 112.01 55 PFAKE 15 38 10.0 +7.7
ACSO LR LR
comp=Z,26µm,19.0s,MS6.8
AAM Ann Arbor 112.28 53 PFAKE 15 38 10.0 +7.3
AAM LR LR
comp=Z,15µm,20.0s,MS6.6
BLA Blacksburg 112.79 59 PFAKE 15 38 20.0 +16
BLA LR LR
comp=Z,16µm,19.0s,MS6.6
AKL Akola 112.96 281 i P PKiKP 15 38 04.5 -0.2
AKL i x x 15 48 30.1
SDDR Presa de Saban 113.09 81 ePKiKP PKiKP 15 38 06.4 +1.5
SDDR LR LR
comp=Z,12µm,22.0s,MS6.5
WMQ Urumqi 113.29 308 ePdif Pdif 15 34 14.0 +2.6
WMQ PP PP 15 39 02.0 +6.2
WMQ SKS SKSdf 15 45 14.0 +0.1
WMQ S Sdif 15 46 33.0 -2.2
WMQ SS SS 15 54 40.0 +0.8
WMQ AMB AMB
comp=Z,10µm,10.0s
WMQ LR LR
comp=N,28µm,25.0s,MS7.1
WMQ LR LR
comp=E,57µm,25.0s,MS7.1
WMQ LR LR
comp=Z,66µm,25.0s,MS7.1
BDFB Brasilia 113.50 126 PKiKP PKiKP 15 38 08.6 +2.8
comp=Z,5.2nm,0.6s,baz=76,slow=13,SNR=4.9
BDFB PKKPab PKKPab 15 48 57.9 -0.8
comp=Z,19nm,0.7s,baz=74,slow=4.0,SNR=12
BDFB Brasilia 113.50 126 i PKIKP PKiKP 15 38 08.6 +2.7
BDFB pmax pmax
comp=Z,5.0nm,0.6s
BHPL Bhopal 113.66 284 ePKP PKiKP 15 38 06.4 +0.5
PTH Pithoragarh 113.81 291 ex PKiKP 15 38 01.1 -4.9
PTH ex x 15 41 40.0
CNNC Cliffs of the 113.99 62 PFAKE 15 38 20.0 +14
CNNC LR LR
comp=Z,12µm,19.0s,MS6.5
MCWV Mont Chateau 114.07 57 PFAKE 15 38 20.0 +14
MCWV LR LR
comp=Z,24µm,19.0s,MS6.8
POO Poona 114.75 278 ePKP PKiKP 15 38 08.4 +0.3
ERPA Erie 114.78 54 PFAKE 15 38 20.0 +13
ERPA LR LR
comp=Z,19µm,19.0s,MS6.7
AGRA Agra 114.79 288 ePKP PKiKP 15 38 07.8 -0.1
CBN Corbin 115.40 59 PFAKE 15 38 20.0 +11
CBN LR LR
comp=Z,12µm,19.0s,MS6.5
SUR Sutherland 115.45 197 Pdiff Pdif 15 34 27.3 +6.3
comp=Z,8.1nm,0.7s,baz=100,slow=6.0,SNR=3.1
SUR PKP PKPdf 15 38 12.3 +3.1
comp=Z,42nm,0.6s,baz=173,slow=2.5,SNR=12
SUR PKKPab PKKPab 15 48 51.3 +0.1
comp=Z,16nm,0.8s,baz=11,slow=2.2,SNR=6.6
SUR Sutherland 115.45 197 Pdif Pdif 15 34 27.3 +6.3
SUR ePKPdf PKPdf 15 38 12.3 +3.1
SUR LR LR
comp=Z,44µm,22.0s,MS7.0
SSPA Standing Stone 115.81 56 Pdif Pdif 15 34 22.7 +0.1
AYAN Aya Nagar 115.93 289 ePKP PKPdf 15 38 09.1 -1.0
NDI New Delhi 115.93 289 ex PKPdf 15 38 07.7 -2.5
KUDL Kundal 116.33 289 ePKP PKPdf 15 38 09.6 -1.3
RTK Rohtak 116.71 290 ePKP PKPdf 15 38 11.5 -0.1
SMLA Simla 116.84 292 i P PKPdf 15 38 12.2 +0.4
SMLA i P 15 38 13.2
KHET Khetri 116.86 288 ePKP PKPdf 15 38 11.3 -0.6
RES Resolute Bay 116.86 17 PKP PKPdf 15 38 11.9 +1.4
comp=Z,27nm,1.0s,baz=305,slow=5.1,SNR=6.5
RES Resolute Bay 116.86 17 PKPdf PKPdf 15 38 11.4 +0.8
RES Resolute Bay 116.86 17 PKIKP PKPdf 15 38 11.4 +0.8
SDNR Sundarnagar 117.13 292 ex PP 15 39 26.5 +3.4
SJG San Juan 117.13 84 PKKPab PKKPab 15 48 41.8 +1.3
comp=Z,31nm,0.5s,baz=315,slow=20,SNR=7.0
SJG San Juan 117.13 84 ePKPdf PKPdf 15 38 11.8 -0.9
SJG LR LR
comp=Z,9µm,19.0s,MS6.4
SJG San Juan 117.13 84 ePKIKP PKPdf 15 38 11.8 -0.9
SJG MLR MLR
comp=Z,9µm,19.0s
BHK Bhakra 117.54 292 ePKP PKPdf 15 38 14.0 +0.8
BINY Binghamton 117.64 55 ePKPdf PKPdf 15 38 14.6 +1.6
BINY LR LR
comp=Z,21µm,19.0s,MS6.8
BOSA Boshof 117.66 203 Pdiff Pdif 15 34 36.2 +5.3
comp=Z,3.9nm,0.9s,baz=178,slow=7.3,SNR=3.0
BOSA PKP PKPdf 15 38 14.6 +0.9
comp=Z,40nm,0.9s,baz=135,slow=2.4,SNR=20
BOSA PKKPab PKKPab 15 48 41.6 +0.3
comp=Z,17nm,0.9s,baz=316,slow=5.0,SNR=9.4
BOSA Boshof 117.66 203 Pdif Pdif 15 34 36.2 +5.3
BOSA ePKPdf PKPdf 15 38 16.3 +2.7
BOSA LR LR
comp=Z,29µm,21.0s,MS6.9
BOSA Boshof 117.66 203 P Pdif 15 34 36.2 +5.4
BOSA 15 38 14.6
BOSA pmax pmax
comp=Z,4.0nm,0.9s
MK31 Makanchi Array 117.82 310 ePKPdf PKPdf 15 38 12.2 -1.0
MK31 Makanchi Array 117.82 310 i PKIKP PKPdf 15 38 14.0 +0.8
MK31 pmax pmax
comp=Z,84nm,0.6s
MKAR Makanchi Array 117.82 310 Pdiff Pdif 15 34 35.8 +4.3
comp=Z,4.5nm,0.7s,baz=101,slow=5.6,SNR=12
MKAR PKP PKPdf 15 38 12.8 -0.4
comp=Z,39nm,0.7s,baz=137,slow=0.9,SNR=22
MKAR PKKPab PKKPab 15 48 37.8 +2.2
comp=Z,7.4nm,1.0s,baz=296,slow=3.4,SNR=3.9
MKAR Makanchi Array 117.82 310 P Pdif 15 34 35.8 +4.3
MKAR 15 38 12.8
MKAR pmax pmax
comp=Z,5.0nm,0.7s
ZAA0 Zalesovo Array 118.02 318 ePdif Pdif 15 34 30.4 -2.0
ZAA0 ePKPdf PKPdf 15 38 11.0 -2.3
ZALV Zalesovo Beam 118.02 318 Pdiff Pdif 15 34 38.9 +6.4
comp=Z,2.1nm,0.7s,baz=105,slow=4.4,SNR=7.9
ZALV PKP PKPdf 15 38 12.4 -0.9
comp=Z,45nm,0.7s,baz=176,slow=1.3,SNR=21
ZALV Zalesovo Beam 118.02 318 P Pdif 15 34 38.9 +6.5
ZALV 15 38 12.4
ZALV pmax pmax
comp=Z,2.0nm,0.7s
GRGR Grenville 118.39 92 PFAKE 15 38 30.0 +15
GRGR LR LR
comp=Z,14µm,22.0s,MS6.5
MSEY Mahe Island 118.56 245 PKPdf PKPdf 15 38 18.4 +2.7
MSEY LR LR
comp=Z,67µm,20.0s,MS7.3
MSEY Mahe Island 118.56 245 PKIKP PKPdf 15 38 18.4 +2.7
MSEY MLR MLR
comp=Z,67µm,20.0s,MS7.3
NVS Novosibirsk 119.11 319 ⇑iPKIKP PKPdf 15 38 13.7 -1.7
NVS i 15 45 00.6
NVS pmax pmax
comp=Z,198nm,1.0s
NVS pmax pmax
comp=N,33nm,0.8s
NVS pmax pmax
comp=E,62nm,0.8s
LONY Lake Ozonia 119.28 53 ePKPdf PKPdf 15 38 14.8 -1.2
LONY LR LR
comp=Z,17µm,21.0s,MS6.6
NCB Newcomb 119.36 54 ePKPdf PKPdf 15 38 15.2 -1.1
NCB LR LR
comp=Z,7µm,20.0s,MS6.3
TRY Troy 119.44 55 PKPdf PKPdf 15 38 18.2 +1.8
YLE Yale 119.59 57 ePKPdf PKPdf 15 38 17.6 +0.8
ACCN Adirondack Com 119.60 54 ePKPdf PKPdf 15 38 18.4 +1.7
FDF Fort de France 120.00 90 ePKPdf PKPdf 15 38 19.8 +1.5
FDF LR LR
comp=Z,10µm,21.0s,MS6.4
FDF Fort de France 120.00 90 ePKIKP PKPdf 15 38 19.8 +1.5
FDF MLR MLR
comp=Z,10µm,21.0s,MS6.4
FRNY Flat Rock 120.02 53 ePKPdf PKPdf 15 38 18.6 +1.2
MDV Middlebury 120.10 54 PKPdf PKPdf 15 38 18.7 +1.0
PHG Guadaloupe-2 120.13 88 eP PKPdf 15 38 15.7 -2.9
BHJ Bhuj 120.24 281 ePKP PKPdf 15 38 18.9 +0.3
QUA2 Belchertown 120.26 56 PKPdf PKPdf 15 38 19.7 +1.7
KSH Kashi 120.36 301 ePKP PKPdf 15 38 17.5 -0.8
KSH esPKP 15 38 32.0
KSH ePKS 15 41 53.0
KSH eSKS SKSdf 15 45 24.8 -2.8
KSH LR LR
comp=N,50µm,19.4s,MS7.3
KSH LR LR
comp=E,63µm,22.0s,MS7.3
KSH LR LR
comp=Z,122µm,27.6s
BBGH Gun Hill 120.67 92 PFAKE 15 38 30.0 +10
BBGH LR LR
comp=Z,24µm,22.0s,MS6.8
ANWB Willy Bob 120.71 86 PFAKE 15 38 30.0 +10
ANWB LR LR
comp=Z,11µm,22.0s,MS6.5
LBTB Lobatse 120.85 205 PKP PKPdf 15 38 21.1 +1.3
comp=Z,19nm,0.8s,baz=166,slow=3.4
LBTB PKKPab PKKPab 15 48 26.8 -0.6
comp=Z,17nm,1.1s,baz=342,slow=3.5,SNR=6.3
LBTB Lobatse 120.85 205 ePKPdf PKPdf 15 38 22.1 +2.3
LBTB LR LR
comp=Z,31µm,19.0s,MS7.0
LBTB Lobatse 120.85 205 ePKIKP PKPdf 15 38 22.1 +2.3
LBTB MLR MLR
comp=Z,31µm,19.0s,MS7.0
ULHL Ulahol 120.86 304 P PKPdf 15 38 19.7 +0.5
SNR=23
LBNH Lisbon 121.03 54 PKPdf PKPdf 15 38 18.2 -1.3
LBNH LR LR
comp=Z,23µm,19.0s,MS6.8
LBNH Lisbon 121.03 54 PKIKP PKPdf 15 38 18.2 -1.3
LBNH MLR MLR
comp=Z,23µm,19.0s,MS6.8
KURK Kurchatov 121.07 314 ePdif Pdif 15 34 44.7 -1.3
KURK ePKPdf PKPdf 15 38 18.1 -1.2
KURK LR LR
comp=Z,41µm,22.0s,MS7.0
KURK Kurchatov 121.07 314 eP Pdif 15 34 44.7 -1.3
KURK e 15 38 18.1
KURK MLR MLR
comp=Z,41µm,22.0s,MS7.0
KURK Kurchatov 121.07 314 P PKPdf 15 38 18.7 -0.6
SNR=56
TKM2 Tokmak 2 121.48 304 P PKPdf 15 38 19.9 -0.5
SNR=26
TKM2 Tokmak 2 121.48 304 ePKPdf PKPdf 15 38 19.6 -0.8
TKM2 LR LR
comp=Z,39µm,20.0s,MS7.0
TKM2 Tokmak 2 121.48 304 ePKIKP PKPdf 15 38 19.6 -0.8
TKM2 MLR MLR
comp=Z,39µm,20.0s,MS7.0
KZA Kyzart 121.53 303 P PKPdf 15 38 21.7 +1.2
SNR=16
KZA Kyzart 121.53 303 ePKPdf PKPdf 15 38 21.4 +0.9
KBK Karagaybulak 121.89 304 P PKPdf 15 38 21.5 +0.3
SNR=18
CHMS Chumysh 122.10 304 P PKPdf 15 38 21.1 -0.5
SNR=25
AAK Ala-Archa 122.21 304 P PKPdf 15 38 21.5 -0.2
SNR=18
AAK Ala-Archa 122.21 304 PKKPbc PKKPbc 15 48 21.6 +3.4
comp=Z,7.6nm,0.7s,baz=191,slow=5.1,SNR=9.0
AAK Ala-Archa 122.21 304 ePdif Pdif 15 34 50.9 -0.1
AAK ePKPdf PKPdf 15 38 21.2 -0.5
AAK LR LR
comp=Z,36µm,21.0s,MS7.0
AAK Ala-Archa 122.21 304 *c iPKIKP PKPdf 15 38 21.2 -0.6
AAK MLR MLR
comp=Z,34µm,22.0s,MS7.0
AAK Ala-Archa 122.21 304 P PKPdf 15 38 21.9 +0.1
SNR=49
USP Ospenovka 122.34 305 P PKPdf 15 38 21.6 -0.4
SNR=20
AML Almayashu 122.67 303 P PKPdf 15 38 23.6 +0.9
SNR=21
AML Almayashu 122.67 303 ePKPdf PKPdf 15 38 22.7 +0.1
AML LR LR
comp=Z,36µm,21.0s,MS7.0
WVL Waterville 122.69 54 ePKPdf PKPdf 15 38 23.7 +1.1
EKS2 Erkin-Say 122.73 304 P PKPdf 15 38 22.8 +0.1
SNR=20
EKS2 Erkin-Say 122.73 304 ePKPdf PKPdf 15 38 22.5 -0.2

EKS2 LR LR
comp=Z,55μm,21.0s,MS7.2
PKME Peaks-Kenny Pk 123.08 53 *e*PKPdf PKPdf 15 38 24.1 +0.7
PKME LR LR
comp=Z,18μm,19.0s,MS6.8
BBSR BB Station 123.48 69 PFAKE 15 38 40.0 +15
BBSR LR LR
comp=Z,8μm,20.0s,MS6.4
KBL Kabul 124.39 293 *e*PKPdf PKPdf 15 38 26.3 +0.1
KBL Kabul 124.39 293 *e*PKIKP PKPdf 15 38 26.3 +0.1
KK31 Karatay Array 125.17 304 *i* PKIKP PKPdf 15 38 27.4 0.0
KK31 pmax pmax
comp=Z,169nm,0.6s
KKAR Karatay Array 125.17 304 *e*PKPdf PKPdf 15 38 26.9 -0.6
KKAR Karatay Array 125.17 304 *e*PKIKP PKPdf 15 38 26.9 -0.5
SCHQ Schefferville 125.80 42 PKP PKPdf 15 38 27.8 -0.5
comp=Z,36nm,0.9s,baz=348,slow=3.4,SNR=9.1
SCHQ PKKPbc 15 48 07.6
comp=Z,5.6nm,0.7s,baz=35,slow=6.8,SNR=4.0
SCHQ SKKPbc 15 52 03.5
comp=Z,14nm,0.8s,baz=111,slow=7.0,SNR=5.2
SCHQ Schefferville 125.80 42 *e*PKPdf PKPdf 15 38 26.4 -1.8
BRVK Borovoye 126.47 316 *e*PKPdf PKPdf 15 38 28.7 -0.9
BRVK LR LR
comp=Z,39μm,22.0s,MS7.0
BRVK Borovoye 126.47 316*c* *i*PKIKP PKPdf 15 38 28.8 -0.8
BRVK pmax pmax
comp=Z,200nm,1.2s
BRVK Borovoye 126.47 316 P PKPdf 15 38 29.2 -0.4
SNR=83
ZRNK Zerenda 127.24 316 PKIKP PKPdf 15 38 29.1 -2.0
ZRNK pmax pmax
comp=Z,686nm,1.6s
LSZ Lusaka 128.48 212 *e*PKPpre PKPpre 15 38 26.2
LSZ LR LR
comp=Z,34μm,20.0s,MS7.0
LSZ Lusaka 128.48 212 *e*PKIKP PKPpre 15 38 26.2
LSZ MLR MLR
comp=Z,34μm,20.0s,MS7.0
LSZ Lusaka 128.48 212 P PKPdf 15 38 36.7 +2.1
SNR=52
RCBR Riachuelo 128.80 128 PKP PKPdf 15 38 36.5 +1.1
comp=Z,46nm,1.0s,baz=145,slow=2.6,SNR=12
RCBR SKPbc 15 42 01.1
comp=Z,35nm,1.1s,baz=198,slow=5.9,SNR=9.8
RCBR Riachuelo 128.80 128 *e*PKPdf PKPdf 15 38 36.0 +0.6
RCBR LR LR
comp=Z,14μm,20.0s,MS6.6
TSUM Tsumeb 128.84 199 *e*PKPdf PKPdf 15 38 36.6 +1.3
TSUM LR LR
comp=Z,35μm,19.0s,MS7.1
WBK Wadi Bani Khal 129.16 276 P PKPdf 15 38 37.1 +1.5
SNR=9.4
JMDO Jabal Madar 129.82 275 P PKPdf 15 38 37.1 +0.2
SNR=26
SMDO Samad 130.12 276 P PKPdf 15 38 38.0 +0.5
SNR=25
KBS Kingsbay 130.90 358 *e* Pdif 15 35 32.6 +2.9
KBS *e*PP PP 15 40 52.4 -1.7
KBS *e*SS SS 15 58 17.5 -3.9
KBS AMS AMS 16 25 16.2
comp=Z,26μm,25.2s,MS6.8
KBS Kingsbay 130.90 358 *e*PKPdf PKPdf 15 38 37.4 0.0
KBS LR LR
comp=Z,17μm,20.0s,MS6.8
KBS Kingsbay 130.90 358 *e*PKIKP PKPdf 15 38 37.4 0.0
KBS MLR MLR
comp=Z,17μm,20.0s,MS6.8
HOQ Hoqain 130.93 276 P PKPdf 15 38 44.1 +5.0
SNR=16
RBK Rabkut 131.31 267 P PKPdf 15 38 41.6 +1.7
SNR=31
SPB4 Spitsbergen Ar 131.42 356 *e*PKPpre PKPpre 15 38 31.8
SPITS Spitsbergen Ar 131.42 356 PKhKP PKPpre 15 38 31.2
comp=Z,7.4nm,0.6s,baz=94,slow=3.3,SNR=5.1
SPITS PKP PKPdf 15 38 38.9 +0.5
comp=Z,119nm,0.6s,baz=123,slow=3.1,SNR=11
SPITS SKPbc SKPbc 15 42 05.3 +4.5
comp=Z,302nm,1.1s,baz=108,slow=6.3,SNR=11
SPITS Spitsbergen Ar 131.42 356 PKIKP PKPpre 15 38 31.3
SPITS 15 38 38.9
SPITS pmax pmax
comp=Z,7.0nm,0.6s
ARQ Araqi 131.53 276 P PKPdf 15 38 40.8 +0.6
SNR=25
SFJD Kangerlussuaq 131.59 25 *e*PKPdf PKPdf 15 38 39.0 +0.1
SFJD LR LR
comp=Z,25μm,22.0s,MS6.9
SFJD Kangerlussuaq 131.59 25 *e*PKIKP PKPdf 15 38 42.2 +3.3
SFJD *e* 15 41 01.9
SFJD Kangerlussuaq 131.59 25 *i* P PKPdf 15 38 42.2 +3.3
SFJD *e* 15 41 01.9
SFJD *i* 15 42 07.6
SVE Sverdlovsk 131.86 321 *i* PKIKP PKPdf 15 38 39.7 0.0
SVE *e* 15 40 57.2
SVE *e*SP SP 15 51 06.0 -5.0
SVE *e*PS PS 15 51 11.4 -4.9
SVE pmax pmax
comp=Z,333nm,1.5s
ABTO Aybut 132.03 267 P PKPdf 15 38 45.3 +4.0
SNR=28
DAG Danmarks Havn 132.21 6 *e*PKIKP PKPdf 15 38 40.2 +0.3
DAG *e* 15 41 03.3
DAG pmax pmax
comp=Z,61nm,0.8s
DAG MLR MLR
comp=Z,19μm,20.0s,MS6.8
DAG Danmarks Havn 132.21 6 *i* P PKPdf 15 38 40.2 +0.3
comp=Z,614nm,0.8s
DAG *e* 15 41 03.3
DAG *i* 15 42 08.8
DAG
comp=Z,25μm,20.0s
SUMG Summit 132.33 15 *e*PKPpre PKPpre 15 38 35.5
SUMG Summit 132.33 15 *i* P PKPdf 15 38 37.0 -3.2
comp=Z,89nm,1.0s
SUMG *i* 15 41 01.9
SUMG
comp=Z,21μm,23.0s
HATD Hatta, Dubai 132.36 277 P PKPdf 15 38 43.1 +1.4
SNR=52
ASHO Ashiyiah 132.38 277 P PKPdf 15 38 43.1 +1.4
SNR=41
AB31 Akbulak array 132.95 311 *i* PKIKP PKPpre 15 38 34.2
AB31 pmax pmax
comp=Z,119nm,1.0s
ABKAR Akbulak array 132.95 311 *e*PKPpre PKPpre 15 38 32.0
ASUD Al Ashush, Dub 132.99 277 P PKPdf 15 38 43.5 +0.6
SNR=14
ARU Arti 133.06 321 *e*PKPpre PKPpre 15 38 34.2
ARU *e*PKPdf PKPdf 15 38 42.4 +0.4
ARU LR LR
comp=Z,41μm,22.0s,MS7.1
ARU Arti 133.06 321 *i* PKIKP PKPdf 15 38 41.7 -0.3
ARU 15 41 05.2
ARU SS SS 15 58 44.9 -4.0
SOKR Solikamsk 133.32 325*d* *i*PKIKP PKPdf 15 38 45.6 +3.2
SOKR *e* 15 52 59.0
SOKR *e* 16 03 43.4
SOKR pmax pmax
comp=Z,280nm,1.0s
SOKR MLR MLR
comp=Z,40μm,18.0s,MS7.2
SHEL Horse Pasture 133.55 169 PFAKE 15 39 00.0 +16
SHEL LR LR
comp=Z,25μm,22.0s,MS6.9
BJO Bjornoya 134.72 354 *e* PKPdf 15 38 50.5 +5.9
BJO *e*PP PP 15 41 19.1 +0.6
BJO *e*SS SS 15 59 06.1 -1.6
BJO AMS AMS 16 26 12.5
comp=Z,23μm,26.9s,MS6.8
BJO1 Bjornoya 134.74 354 *e*P PKPdf 15 38 50.5 +5.8
BJO1 LR LR
comp=Z,23μm,26.9s,MS6.8
SCO Scoresbysund 137.34 12 *e*PKIKP PKPdf 15 38 51.3 +1.7
SCO pmax pmax
comp=Z,74nm,0.8s
SCO MLR MLR
comp=Z,16μm,22.0s,MS6.7
SCO Scoresbysund 137.34 12 *i* P PKPdf 15 38 51.3 +1.7
comp=Z,74nm,0.8s
SCO
comp=Z,16μm,22.0s
LBOS 137.36 257 *e*P PKPdf 15 38 45.8 -5.5
LVZ Lovozero 137.66 343 *e*PKPpre PKPpre 15 38 41.9
LVZ *e*PKPdf PKPdf 15 38 50.4 +0.1
LVZ LR LR
comp=Z,38μm,21.0s,MS7.1
LVZ Lovozero 137.66 343 *i* PKIKP PKPdf 15 38 49.6 -0.7
KEV Kevo 137.90 347 *e*PKPpre PKPpre 15 38 44.4
KEV LR LR
comp=Z,56μm,22.0s,MS7.3
KEV Kevo 137.90 347 *e*PKIKP PKPpre 15 38 44.4
KEV MLR MLR
comp=Z,56μm,22.0s,MS7.3
TRBA At Turbah 138.00 256 *e*P PKPpre 15 38 46.9
APA Apatity 138.22 343⇑ *i*PKHKP PKPpre 15 38 36.0
APA *i* 15 38 53.0
APA *i* 15 53 50.0
APA *i* 15 59 52.0
APA pmax pmax
comp=Z,26nm,0.8s
APA pmax pmax
comp=Z,5μm,20.0s
APA MLR MLR
comp=Z,52μm,24.0s,MS7.2
ARCES ARCESS Array B 138.36 348 PKhKP PKPpre 15 38 43.0
comp=Z,34nm,0.7s,baz=35,slow=1.8,SNR=27
ARCES SKP 15 42 28.4
comp=Z,97nm,1.1s,baz=90,slow=1.8,SNR=5.3
ARCES ARCESS Array B 138.36 348 PKP PKPpre 15 38 43.0
ARCES SKP 15 42 28.4
ARCES ARCESS Array B 138.36 348 PKHKP PKPpre 15 38 43.0
ARCES pmax pmax
comp=Z,34nm,0.7s
DHBB Dhamar BB 138.43 258 *e*P PKPpre 15 38 47.8
JMIC Jan Mayen 138.62 5 *e*PKPdf PKPpre 15 38 48.1
JMIC *e*PP PP 15 41 39.3 -3.7
JMIC *e*SS SS 15 59 55.1 +1.1
JMIC Jan Mayen 138.62 5 *e*P PKPpre 15 38 47.4
KTK1 Kautokeino 139.22 349 *e*PKPdf PKPpre 15 38 48.0
KTK1 *e*PP PP 15 41 46.3 -0.4
KTK1 *e*SS SS 15 59 58.9 -2.3
KTK1 AMS AMS 16 30 12.3
comp=Z,73μm,23.8s,MS7.3
KTK1 Kautokeino 139.22 349 *e*P PKPpre 15 38 48.0
KTK1 LR LR
comp=Z,73μm,23.8s,MS7.3
MBAR Mbarara 139.23 227 PFAKE 15 39 10.0 +15
MBAR LR LR
comp=Z,558nm,22.0s,MS5.3
TRO Tromso 139.31 351 *e*PKPdf PKPpre 15 38 46.9
TRO *e*PP PP 15 41 47.3 0.0
TRO *e*SS SS 16 00 01.7 -0.5
TRO Tromso 139.31 351 *e*P PKPpre 15 38 47.1
TRO Tromso 139.31 351 *e*PKHKP PKPpre 15 38 47.1
AAE Adis Abeba 140.07 246 *e*P PKPdf 15 38 52.7 -3.6
QRN Al-Qurain 140.50 280 *e*P PKPdf 15 38 54.0 -2.7
QRN AMb AMB 15 39 06.3
comp=Z,908nm,1.0s
KLMR Klimovskoe 140.64 332*d* *i*PKIKP PKPdf 15 38 53.3 -2.6
KLMR *e* 15 41 58.9
RDF Al-Radifah 140.86 280 *e*P PKPdf 15 38 54.2 -3.1
RDF AMb AMB 15 39 09.6
comp=Z,1μm,1.0s
NAY Al-Naaiem 141.19 280 *e*P PKPdf 15 38 54.5 -3.4
NAY AMb AMB 15 39 08.3
comp=Z,256nm,1.4s
MIB Mutribah 141.23 281 *e*P PKPdf 15 38 54.5 -3.4
MIB AMb AMB 15 39 03.6
comp=Z,306nm,1.0s
STEI Steigen 141.37 352 *e*PKPdf PKPdf 15 38 52.0 -5.0
MAK Makhachkala 141.96 302 *e*PKIKP PKPdf 15 39 00.6 +1.8
MAK *i* 15 39 05.4
MAK *e* 15 42 07.7
MAK *e*PPP 15 45 17.5
MAK *e*SS SS 16 01 13.6 +38
BORG Borgarnes 142.29 16 *e*PKPdf PKPdf 15 38 59.1 +0.4
BORG LR LR
comp=Z,21μm,22.0s,MS6.9
BORG Borgarnes 142.29 16 *e*PKIKP PKPdf 15 38 59.2 +0.5
BORG MLR MLR
comp=Z,21μm,22.0s
KONS Konsvik 142.99 353 *e*PKPdf PKPdf 15 38 59.2 -0.8
MOR8 Moi Rana 143.15 352 *e*PKPdf PKPdf 15 38 58.6 -1.6
MOR8 AMb AMB 15 39 08.7
comp=Z,240nm,3.2s
MOR8 Moi Rana 143.15 352 *e*P PKPdf 15 38 58.7 -1.6
STOK Stokkvaagen 143.16 353 *e*PKPdf PKPdf 15 38 59.3 -0.9
STOK *e*PP PP 15 42 13.1 +2.4
STOK Stokkvaagen 143.16 353 *e*P PKPdf 15 38 58.6 -1.6
DGRG David-gareji 143.65 300 P PKPdf 15 38 58.6 -3.3
MTA Mtatsminda 144.07 301 P PKPdf 15 39 00.1 -2.5
TBLG Delisi 144.11 301 *e*PKIKP PKPdf 15 39 01.1 -1.6
TBLG Delisi 144.11 301 P PKPdf 15 39 01.1 -1.6
VRHR Novokhopersk 144.13 317 *e*PKIKP PKPdf 15 39 00.5 -1.9
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,120nm,0.7s
VRHR pmax pmax
comp=Z,260nm,0.7s
GNI Garni 144.21 298 PKP PKPdf 15 39 02.0 -0.9
comp=Z,84nm,1.0s,baz=198,slow=1.7,SNR=30
GNI Garni 144.21 298 *e*PKPdf PKPdf 15 39 01.3 -1.6
GNI LR LR
comp=Z,41μm,22.0s,MS7.2
GNI Garni 144.21 298*c* *i*PKHKP PKPpre 15 38 59.3
GNI Garni 144.21 298 P PKPdf 15 39 01.8 -1.1
SNR=109
MOS Moscow 144.26 326*c* *i*PKIKP PKPdf 15 38 59.8 -2.7
MOS *e* 15 42 15.3
MOS *i* PS 15 54 52.1
MOS pmax pmax
comp=Z,2μm,2.7s
MOS pmax pmax
comp=Z,385nm,1.1s
MOS MLR MLR
comp=E,27μm,22.0s,MS7.0
MOS MLR MLR
comp=Z,32μm,22.0s,MS7.0
MOS MLR MLR
comp=N,12μm,22.0s,MS7.0
BHD Baghdad 144.28 286 *i* x x 15 38 58.0
BHD *i* x x 15 42 20.0
BHD *e*x x 15 42 47.0
BHD *e*x x 15 46 20.0
BHD *e*x x 15 49 17.0
GOR Gori 144.55 301 P PKPdf 15 39 02.7 -0.8
ZEI Tsey 144.62 303 *i* PKIKP PKPdf 15 39 02.3 -1.2
ZEI pmax pmax
comp=Z,5μm,8.2s
ZEI pmax pmax
comp=Z,592nm,1.3s
ZEI pmax pmax
comp=N,613nm,1.3s
ZEI pmax pmax
comp=E,650nm,1.1s
ZEI MLR MLR
comp=Z,44μm,23.0s,MS7.2
ZEI MLR MLR
comp=N,3μm,16.0s
ZEI MLR MLR
comp=E,61μm,23.0s
PUL Pulkovo 144.86 336*c* *i*PKIKP PKPdf 15 39 02.0 -1.4
PUL pmax pmax
comp=Z,3μm,1.2s
CLDR Caldiran 144.89 296 *e*P PKPdf 15 39 02.4 -1.7
ONI Oni 144.97 302 P PKPdf 15 39 04.1 0.0
FINES FINESS Array B 144.97 340 PKP PKPdf 15 39 01.9 -1.6
comp=Z,2μm,0.9s,baz=60,slow=4.6,SNR=313
FINES FINESS Array B 144.97 340 PKIKP PKPdf 15 39 01.9 -1.6
NSS Namsos 145.02 353 *e*PKPdf PKPdf 15 39 01.6 -2.0
NSS *e*PP PP 15 42 21.0 -0.8
NSS *e*SS SS 16 01 12.4 +4.0
NSS AMS AMS 16 40 56.1
comp=Z,28μm,25.7s,MS6.9
NSS Namsos 145.02 353 *e*P PKPbc 15 39 02.7 -0.3
NSS LR LR
comp=Z,28μm,25.7s,MS6.9
DYDN Diyadin 145.05 297 *i* P PKPbc 15 39 01.4 -2.5
HKR Hakkari 145.05 294 *e*P PKPbc 15 39 04.3 +0.4
HAKT HAKKARI 145.08 294 *i* P PKPbc 15 38 59.3 -4.8
OBN Obninsk 145.10 326 *e*PKPdf PKPdf 15 39 02.8 -1.2
OBN LR LR
comp=Z,38μm,22.0s,MS7.1
OBN Obninsk 145.10 326⇑ *i*PKIKP PKPdf 15 39 02.7 -1.3
OBN *i* 15 42 23.6
OBN pmax pmax
comp=Z,956nm,1.2s
CUKT Cukurca 145.16 293 *e*P PKPbc 15 39 03.1 -1.2
DIGO Kars 145.24 299 *i* P PKPbc 15 38 57.1 -7.3
VOR Voronezh 145.30 319 *e*PKP2 PKPab 15 39 03.0 -1.4
VOR pmax pmax
comp=Z,1μm,2.0s
KIV Kislovodsk 145.32 305 *e*PKP PKPdf 15 39 04.3 -0.4
KIV LR LR
comp=Z,36μm,22.0s,MS7.1
KIV Kislovodsk 145.32 305 *e*PKHKP PKPpre 15 38 57.1
KIV *i* 15 39 03.6
KIV *e* 15 42 34.0
KIV *e*SS SS 16 01 05.5 -8.5
KIV *e*SSS 16 06 33.5
KIV pmax pmax
comp=Z,615nm,1.0s
VANB Van 145.32 295 *e*P PKPbc 15 39 04.8 0.0
VANT Van 145.42 295 *e*P PKPdf 15 39 06.6 +1.6
KARS Kars 145.45 299 *e*P PKPdf 15 39 05.6 +0.6
VSR Storozhevoye 145.52 318*c* *i*PKP2 PKPab 15 39 03.6 -1.6
VSR *e* 15 42 22.1
VSR *e* 15 46 05.1
VSR *e*PPS 15 54 53.6
VSR pmax pmax
comp=Z,990nm,1.9s
VSR pmax pmax
comp=N,130nm,2.4s
VSR pmax pmax
comp=E,80nm,1.1s
VSR pmax pmax
comp=Z,1μm,3.9s
VSR pmax pmax
comp=N,230nm,0.9s
VSR pmax pmax
comp=E,180nm,0.9s
VSR MLR MLR
comp=N,13μm,21.0s,MS7.1
VSR MLR MLR
comp=E,34μm,21.0s,MS7.1
VSR MLR MLR
comp=Z,51μm,21.0s,MS7.3
VORD Divnogorie 145.55 318 *e*PKP2 PKPab 15 39 03.6 -1.7
VORD *e* 15 42 26.7
VORD pmax pmax
comp=Z,11μm,5.5s
VORD pmax pmax
comp=N,350nm,0.8s
VORD pmax pmax
comp=E,570nm,1.1s
VORD pmax pmax
comp=Z,7μm,12.0s
VORD pmax pmax
comp=N,300nm,1.0s
VORD pmax pmax
comp=E,320nm,0.9s
VORD MLR MLR
comp=N,17μm,23.0s,MS7.0
VORD MLR MLR
comp=E,26μm,23.0s,MS7.0
VORD MLR MLR
comp=Z,35μm,23.0s,MS7.1
AGRB Hanur-Agry 145.59 297 *e*P PKPdf 15 39 05.7 +0.4
ARTV Artvin 146.26 300 *i* P PKPdf 15 39 02.5 -3.9
DAGI Agillar 146.28 300 *i* P PKPdf 15 39 00.3 -6.1
HOMI Horasan 146.39 298 *i* P PKPdf 15 39 03.5 -3.1
DDEM Demirkent 146.43 300 *i* P PKPdf 15 39 02.5 -4.2
DBOC Borcka 146.44 300 *i* P PKPdf 15 39 01.4 -5.3
DBAD Bademkaya 146.46 300 *i* P PKPdf 15 39 02.5 -4.3
BCA Borcka 146.46 301 *e*P PKPdf 15 39 06.3 -0.4
MSKU Masuku 146.65 201 PKPbc PKPbc 15 39 10.1 +0.6
comp=Z,425nm,1.0s,baz=139,slow=2.2,SNR=36
EZM Erzurum 146.82 298 *e*P PKPbc 15 39 11.0 +1.8
BEST Besiri 147.01 294 *i* P PKPdf 15 39 08.9 +1.1
BNGL BINGOL 147.05 296 *i* P PKPdf 15 39 04.6 -3.2
MARD Mardin 147.41 293 *i* P PKPdf 15 39 02.5 -6.0
KOPT Kop Dagi 147.47 298 *i* P PKPdf 15 39 07.8 -0.6
SOC Sochi 147.50 305*c* *i*PKP2 PKPbc 15 39 10.3 -0.7
SOC *i* 15 42 32.9
SOC *i* PPP 15 46 03.9
SOC *e* 15 55 14.9
SOC pmax pmax
comp=Z,136nm,0.9s
SOC MLR MLR
comp=Z,52μm,22.0s,MS7.3
BINT Bingol 147.57 296 *e*P PKPbc 15 39 12.4 +1.1
BAYT Ayd ̈–ntepe-Bay 147.70 299 *e*P PKPdf 15 39 10.2 +1.3
KTUT Trabzon 147.91 300 *e*P PKPbc 15 39 12.2 0.0
MACK Trabzon 147.91 300 *i* P PKPdf 15 39 05.7 -3.5
DIYA Diyarbakir 147.91 294 *i* P PKPdf 15 39 07.8 -1.5
GUMT Gumushane 148.19 299 *e*P PKPbc 15 39 11.8 -1.2
EZC Erzincan 148.37 298 *e*P PKPdf 15 39 11.9 +2.0
PTK Pertek 148.42 296 *e*P PKPdf 15 39 09.9 -0.2
FOO Floro 148.44 358 *e*PKPdf PKPdf 15 39 10.4 +1.1
FOO AMb AMB 15 39 23.6
comp=Z,4μm,1.6s
FOO *e*PP PP 15 42 40.2 -1.8
FOO *e*SS SS 16 01 47.4 +0.4
FOO Floro 148.44 358 *e*P PKPdf 15 39 10.7 +1.3
NB2 NORSAR Subarra148.50 352 PKP PKPbc 15 39 12.8 -0.3
baz=26,slow=3.0
NOA NORSAR Array B148.50 352 PKP PKPdf 15 39 09.6 +0.1
comp=Z,84nm,0.9s,baz=13,slow=4.3,SNR=51
NOA PKPbc PKPbc 15 39 13.0 -0.1
comp=Z,120nm,0.7s,baz=13,slow=4.3,SNR=50
NOA NORSAR Array B148.50 352 PKIKP PKPdf 15 39 09.6 +0.1
NOA 15 39 13.0
NOA pmax pmax
comp=Z,84nm,0.9s
NOA pmax pmax
comp=Z,120nm,0.7s
SVRC Sivrice-ELAZID 148.53 295 *e*P PKPbc 15 39 13.8 -0.1
ESPY Espiye-Giresun 148.70 300 *e*P PKPdf 15 39 11.1 +0.6
NAO01 NORSAR Array S 148.73 352 *e*PKPdf PKPdf 15 39 09.7 -0.1
NAO01 LR LR
comp=Z,27μm,20.0s,MS7.0
ELZG Elazig 148.77 295 *i* P PKPdf 15 39 07.8 -2.8
ANN Anapa 148.80 308*c* *i*PKIKP PKPdf 15 39 09.5 -1.0
ANN *i* 15 39 14.1
ANN *i* 15 42 45.5
ANN *e* 15 46 11.4
ANN pmax pmax
comp=Z,2μm,1.3s
ANN pmax pmax
comp=N,711nm,1.4s
ANN pmax pmax
comp=E,222nm,0.7s
ANN MLR MLR
comp=N,47μm,24.0s,MS7.3
ANN MLR MLR
comp=E,27μm,24.0s,MS7.3
ANN MLR MLR
comp=Z,46μm,24.0s,MS7.2
HYA Hoyanger 148.82 356 *e*PKPdf PKPbc 15 39 13.7 -0.3
HYA AMb AMB 15 39 23.6
comp=Z,1μm,1.5s
HYA Hoyanger 148.82 356 *e*P PKPbc 15 39 13.9 -0.1
URFA Urfa 148.97 293 *e*P PKPdf 15 39 10.5 -0.5
SUE Sulen 149.00 358 *e*PKPdf PKPbc 15 39 14.2 -0.2
SUE AMb AMB 15 39 23.2
comp=Z,1μm,1.5s
SUE Sulen 149.00 358 *e*P PKPbc 15 39 14.2 -0.1
HFS Hagfors 149.01 349 PKP PKPdf 15 39 09.7 -0.6
comp=Z,34nm,0.8s,baz=50,slow=2.3,SNR=26
HFS PKPbc PKPbc 15 39 13.2 -1.2
comp=Z,256nm,0.8s,baz=84,slow=4.5,SNR=50
HFS Hagfors 149.01 349 PKIKP PKPdf 15 39 09.7 -0.6
HFS 15 39 13.2
HFS pmax pmax
comp=Z,34nm,0.8s
HFS pmax pmax
comp=Z,256nm,0.8s
KEMA Kemaliye 149.08 297 *i* P PKPdf 15 39 07.8 -3.3
SUSE Susehri 149.19 299 *i* P PKPdf 15 39 04.6 -6.7
MALT Malatya 149.22 295 *e*PKPdf PKPdf 15 39 11.0 -0.4
MALT LR LR
comp=Z,57μm,20.0s,MS7.4
MALT Malatya 149.22 295 *e*PKIKP PKPdf 15 39 11.0 -0.4
MALT MLR MLR
comp=Z,57μm,20.0s,MS7.4
MALT Malatya 149.22 295‖ *i*P PKPbc 15 39 16.2 +0.5
MYA Malataya 149.22 295 *e*P PKPbc 15 39 17.3 +1.6
IZAR Zarasai 149.27 333 *e*P PKPbc 15 39 15.0 -0.2
IZAR AMB AMB 15 39 23.1
comp=Z,581nm,1.1s

ATAB	**Bozova**	**149.38 294**	*i* P	PKPdf	15 39 08.9	-2.8
IDID	**Didziasalis**	**149.39 332**	*e*P	PKPbc	15 39 15.4	-0.1
IDID			AMB	AMB	15 39 25.2	
comp=Z,386nm,1.4s						
ISAL	**Salakas**	**149.45 333**	*e*P	PKPbc	15 39 15.5	-0.2
ISAL			AMB	AMB	15 39 25.4	
comp=Z,432nm,1.3s						
MICGM	**Minsk**	**149.48 330⇓**	*i*PKP	PKPdf	15 39 10.0	-1.3
MNK	**Minsk**	**149.50 330⇓**	*i*PKIKP	PKPdf	15 39 10.0	-1.3
MNK			*e*		15 42 44.0	
MNK			*e*PPP		15 46 12.0	
MNK			*e*		15 46 15.0	
MNK			pmax	pmax		
comp=Z,1μm,1.5s						
MNK			pmax	pmax		
comp=N,590nm,1.5s						
MNK			pmax	pmax		
comp=Z,16μm,14.0s						
MNK			MLR	MLR		
comp=N,12μm,20.0s,MS7.4						
MNK			MLR	MLR		
comp=Z,155μm,20.0s,MS7.8						
MNK			MLR	MLR		
comp=E,55μm,20.0s,MS7.4						
ASK	**Askoy**	**149.55 357**	*e*PKPdf	PKPbc	15 39 14.6	-1.1
ASK	**Askoy**	**149.55 357**	*e*P	PKPbc	15 39 17.0	+1.3
IIGN	**Ignalina**	**149.57 333**	*e*P	PKPbc	15 39 16.0	0.0
IIGN			AMB	AMB	15 39 23.9	
comp=Z,458nm,1.5s						
RUND	**Rundenannen**	**149.62 357**	*e*PKPdf	PKPbc	15 39 14.7	-1.2
RUND	**Rundenannen**	**149.62 357**	*e*P	PKPbc	15 39 14.7	-1.2
AKCD	**Akcadag**	**149.62 295**	*i* P	PKPdf	15 39 05.7	-6.4
OSL	**Oslo**	**149.63 352**	*e*PKPdf	PKPbc	15 39 14.7	-1.2
OSL	**Oslo**	**149.63 352**	*e*P	PKPbc	15 39 14.8	-1.2
DARE	**Darende-Malaty**	**149.65 297**	*e*P	PKPdf	15 39 14.2	+2.1
NACGM	**Naroch**	**149.67 332**	*e*PKP	PKPdf	15 39 08.0	-3.6
WAL1	**Walls**	**149.72 4**	*e*P	PKPbc	15 39 14.8	-1.4
EGD	**Espegrend**	**149.76 357**	*e*PKPdf	PKPbc	15 39 18.1	+1.8
RSDY	**Resadiye-TOKAT**	**149.83 299**	*e*P	PKPdf	15 39 14.2	+1.9
LRW	**Lerwick**	**149.87 4**	*e*P	PKPbc	15 39 16.3	-0.2
LRW			AMS	AMS	16 48 05.5	
comp=Z,25μm,24.6s,MS6.9						
GZT	**Gaziantep**	**149.97 293**	*i* P	PKPdf	15 39 14.2	+1.6
KONO	**Kongsberg**	**150.04 353**	*e*PKPbc	PKPbc	15 39 16.2	-0.8
KONO			LR	LR		
comp=Z,35μm,21.0s,MS7.1						
KONO	**Kongsberg**	**150.04 353**	*e*PKP2	PKPbc	15 39 16.2	-0.8
KONO			MLR	MLR		
comp=Z,35μm,21.0s,MS7.1						
ODD1	**Odda**	**150.05 356**	*e*PKPdf	PKPbc	15 39 16.8	-0.2
ODD1			AMb	AMB	15 39 26.5	
comp=Z,1μm,1.7s						
ODD1	**Odda**	**150.05 356**	*e*P	PKPbc	15 39 17.4	+0.4
SCER	**sogukcermik**	**150.06 298**	*i* P	PKPdf	15 39 12.1	-0.6
GAZ	**Gaziantep**	**150.26 293**	*e*P	PKPdf	15 39 13.5	+0.4
ASF	**Jabal al Asfar**	**150.44 283**	PKP	PKPdf	15 39 13.8	+0.2
comp=Z,130nm,0.9s,baz=355,slow=0.9,SNR=16						
ASF			PKPbc	PKPbc	15 39 17.9	-1.0
comp=Z,151nm,1.0s,baz=339,slow=1.6,SNR=77						
ASF	**Jabal al Asfar**	**150.44 283**	PKIKP	PKPdf	15 39 13.8	+0.3
ASF					15 39 17.9	
ASF			pmax	pmax		
comp=Z,130nm,0.9s						
ASF			pmax	pmax		
comp=Z,151nm,1.0s						
TOKA	**Tokat**	**150.48 300**	*i* P	PKPdf	15 39 11.0	-2.3
KMRS	**Kahramanmaras**	**150.49 294**	*e*P	PKPdf	15 39 16.0	+2.5
SARI	**SarD1z-Kayseri**	**150.54 296**	*e*P	PKPdf	15 39 14.2	+0.7
BLS5	**Blasjo**	**150.54 356**	*e*PKPdf	PKPbc	15 39 17.8	-0.4
BLS5			AMb	AMB	15 39 31.6	
comp=Z,421nm,2.1s						
BLS5	**Blasjo**	**150.54 356**	*e*P	PKPbc	15 39 17.8	-0.4
KVT	**Kavak**	**150.67 301**	*e*P	PKPdf	15 39 12.9	-0.7
KMY	**Karmoy**	**150.82 357**	*e*PKPdf	PKPbc	15 39 18.1	-0.7
KMY			AMb	AMB	15 39 27.9	
comp=Z,1μm,1.4s						
KMY	**Karmoy**	**150.82 357**	*e*P	PKPbc	15 39 18.3	-0.5
ANDN	**Andirin**	**150.92 294**	*i* P	PKPdf	15 39 12.1	-2.0
FKH	**Fakeheh**	**150.97 287**	*e*P	PKPbc	15 39 19.9	-0.2
SIM	**Simferopol'**	**151.00 310**	*i* PKIKP	PKPbc	15 39 17.7	-2.1
SIM			*e*		15 43 02.0	
SIM			*e*PPS		15 55 48.0	
SIM			pmax	pmax		
comp=Z,600nm,18.3s						
STAV	**Stavanger**	**151.08 356**	*e*PKPdf	PKPbc	15 39 19.1	-0.4
STAV			AMb	AMB	15 39 28.4	
comp=Z,684nm,1.2s						
STAV	**Stavanger**	**151.08 356**	*e*P	PKPbc	15 39 19.3	-0.1
HTY	**Hatay**	**151.18 291**	*e*P	PKPbc	15 39 20.4	0.0
YAYL	**Yayladag**	**151.21 291**	*i* P	PKPdf	15 39 11.0	-3.5
ORE	**Reay**	**151.24 7**	*e*P	PKPbc	15 39 18.2	-1.7
AKASG	**Malin Array Be**	**151.25 323**	PKP	PKPdf	15 39 13.2	-0.9
comp=Z,4.0nm,0.8s,baz=57,slow=1.3,SNR=15						
AKASG			PKPbc	PKPbc	15 39 18.5	-1.6
comp=Z,184nm,0.9s,baz=47,slow=2.8,SNR=74						
AKASG	**Malin Array Be**	**151.25 323**	PKIKP	PKPdf	15 39 13.2	-1.0
AKASG					15 39 18.5	
AKASG			pmax	pmax		
comp=Z,4.0nm,0.8s						
AKASG			pmax	pmax		
comp=Z,184nm,0.9s						
KIEV	**Kiev**	**151.26 323**	*e*PKPbc	PKPbc	15 39 19.3	-0.9
KIEV			LR	LR		
comp=Z,40μm,22.0s,MS7.2						
KIEV	**Kiev**	**151.26 323**	*e*PKIKP	PKPbc	15 39 19.3	-0.9
KIEV			MLR	MLR		
comp=Z,40μm,22.0s,MS7.2						
RSC	**Scourie**	**151.28 8**	*e*P	PKPbc	15 39 19.3	-0.7
KOZT	**Kozan**	**151.34 294**	*e*P	PKPdf	15 39 15.2	+0.4
HWQ	**Hawqa**	**151.35 287**	*e*P	PKPdf	15 39 16.2	+1.4
RCY	**Rachaya**	**151.44 286**	*e*P	PKPbc	15 39 20.9	-0.3
CEYT	**Ceyhan**	**151.44 293**	*e*P	PKPdf	15 39 16.0	+1.1
RRH	**Rhenigidale**	**151.49 10**	*e*P	PKPbc	15 39 19.4	-1.0
BYBT	**Boyabat**	**151.53 302**	*e*P	PKPbc	15 39 20.0	-1.1
YURE	**YUREGIR**	**151.55 293**	*i* P	PKPdf	15 39 15.3	+0.2
SNART	**Snartemo**	**151.57 355**	*e*PKPdf	PKPbc	15 39 20.3	-0.3
SNART			AMb	AMB	15 39 30.8	
comp=Z,842nm,0.8s						
BHL	**Bhannes**	**151.59 286**	*e*P	PKPdf	15 39 15.2	0.0
RRR	**Rubha Reidh**	**151.67 9**	*e*P	PKPbc	15 39 20.1	-0.8
SUW	**Suwalki**	**151.75 334**	*e*PKP	PKPbc	15 39 21.1	-0.1
SUW			*e*PKiKP	PKiKP	15 39 23.5	+1.9
SUW			*e*pPKP	pPKPdf	15 39 24.9	-1.4
SUW			*e*PP	PP	15 43 03.6	+2.2
SUW			*e*SKS	SKSdf	15 46 16.4	-2.9
SUW			*e*		15 53 10.8	
SUW			LMZ		16 42 13.4	
comp=Z,63μm,24.6s						
SUW	**Suwalki**	**151.75 334**	*e*PKPbc	PKPbc	15 39 21.4	+0.3
SUW	**Suwalki**	**151.75 334**	*i* PKIKP	PKPbc	15 39 23.5	+2.3
SUW			*e*		15 39 24.9	
SUW			*e*		15 43 03.6	
SUW			*e*		15 46 16.4	
KRTS	**Karatas**	**151.77 292**	*e*P	PKPbc	15 39 18.7	-3.2
MVH1	**Achvaich**	**151.81 7**	*e*P	PKPbc	15 39 18.5	-2.7
CORM	**Corum**	**151.90 300**	*e*P	PKPdf	15 39 14.1	-1.4
AVNT	**Avonos**	**151.96 297**	*i* P	PKPbc	15 39 19.6	-2.6
BZK	**Bozkurt**	**151.97 304**	*e*P	PKPbc	15 39 19.1	-3.0
KARA	**Karaisali**	**151.97 294**	*e*P	PKPdf	15 39 16.0	+0.3
KAC	**Achnashellach**	**152.09 9**	*e*P	PKPbc	15 39 19.6	-2.3
GULE	**Gulek**	**152.19 294**	*i* P	PKPbc	15 39 20.7	-2.1
CDAG	**Cicekdag**	**152.19 299**	*i* P	PKPdf	15 39 08.9	-7.1
KPL	**Plockton**	**152.20 9**	*e*P	PKPbc	15 39 20.8	-1.3
KPL			AMS	AMS	16 50 01.7	
comp=Z,21μm,23.4s,MS6.9						
MCD	**Coleburn Disti**	**152.25 7**	*e*P	PKPbc	15 39 21.2	-1.0
MDO	**Dochfour**	**152.26 8**	*e*P	PKPdf	15 39 18.5	+3.1
ILGA	**Ilgaz**	**152.40 302**	*i* P	PKPdf	15 39 14.2	-2.0
CANT	**Cankiri**	**152.57 301**	*e*P	PKPdf	15 39 18.2	+1.7
BRTR	**Keskin Array B**	**152.73 299**	PKP	PKPdf	15 39 17.6	+0.9
comp=Z,18nm,0.9s,baz=86,slow=1.8,SNR=17						
BRTR			PKPbc	PKPbc	15 39 24.1	+0.3
comp=Z,72nm,0.8s,baz=141,slow=4.4,SNR=76						
BRTR			PKPab	PKPab	15 39 32.2	-2.6
comp=Z,247nm,0.8s,baz=117,slow=2.5,SNR=46						
BRTR			PP	PP	15 43 12.4	+4.4
comp=Z,24nm,1.1s,baz=39,slow=6.7,SNR=4.2						
BRTR	**Keskin Array B**	**152.73 299**	PKIKP	PKPdf	15 39 17.7	+0.9
BRTR					15 39 24.2	
BRTR					15 39 32.2	
BRTR					15 43 12.5	
BRTR			pmax	pmax		
comp=Z,19nm,0.9s						
BRTR			pmax	pmax		
comp=Z,247nm,0.8s						
BRTR			pmax	pmax		
comp=Z,24nm,1.1s						
ELDT	**Eldivan**	**152.74 301**	*i* P	PKPdf	15 39 08.9	-7.8
EREN	**Erenkoy**	**152.80 290**	*e*P	PKPbc	15 39 20.4	-3.7
PHNC	**Paralimni**	**152.93 289**	P	PKPbc	15 39 22.3	-2.2
PCED	**Cedros**	**153.08 63**	*e*PKP	PKPbc	15 39 23.7	-1.0
SULT	**Sultanhani-AKS**	**153.08 296**	*e*P	PKPdf	15 39 19.1	+1.8
CALA	**Caldeira**	**153.08 63**	*e*PKP	PKPbc	15 39 23.3	-1.4
SAFT	**Safranbolu**	**153.10 303**	*e*P	PKPdf	15 39 19.9	+2.7
IKL	**Isikli**	**153.15 291**	*e*P	PKPbc	15 39 25.8	+0.9
BBAL	**Bala**	**153.16 299**	*i* P	PKPdf	15 39 11.0	-6.3
AFSR	**Af´ar-Bala (A**	**153.22 299**	*e*P	PKPdf	15 39 16.4	-1.0
MUD	**Monsted U'grnd**	**153.22 352**	*e*PKIKP	PKPdf	15 39 16.3	-0.6
MUD			pmax	pmax		
comp=Z,360nm,0.8s						
MUD			MLR	MLR		
comp=Z,32μm,22.0s,MS7.1						
MUD	**Monsted U'grnd**	**153.22 352**	*i* P	PKPdf	15 39 16.3	-0.6
comp=Z,358nm,0.8s						
MUD			*e*		15 42 53.9	
MUD						
comp=Z,32μm,22.0s						
PCAN	**Candelaria**	**153.27 64**	*e*P	PKPbc	15 39 28.9	+3.8
LFK	**Lefkose**	**153.33 289**	*e*P	PKPdf	15 39 18.7	+0.9
LOD	**Lodumlu**	**153.36 300**	*e*P	PKPdf	15 39 18.2	+0.5
ROSA	**Rosais**	**153.42 63**	*e*PKP	PKPbc	15 39 27.4	+2.0
BSD	**Bornholm Skovb**	**153.43 344**	*i* PKIKP	PKPdf	15 39 18.6	+1.4
BSD			pmax	pmax		
comp=Z,480nm,0.7s						
BSD			MLR	MLR		
comp=Z,37μm,27.0s,MS7.1						
BSD	**Bornholm Skovb**	**153.43 344**	*i* P	PKPdf	15 39 18.6	+1.4
comp=Z,480nm,0.7s						
BSD			*i*		15 43 01.6	
BSD						
comp=Z,37μm,27.0s						
COP	**Copenhagen**	**153.44 347⇑**	*i*PKIKP	PKPdf	15 39 19.1	+1.9
COP			*i*	PP	15 43 10.8	+0.1
COP			pmax	pmax		
comp=Z,340nm,0.8s						
COP	**Copenhagen**	**153.44 347⇑**	*i*P	PKPdf	15 39 19.1	+1.9
comp=Z,343nm,0.8s						
COP			*i*		15 43 10.8	
KIS	**Kishinev**	**153.49 317**	*e*PKP	PKPdf	15 39 14.0	-3.6
comp=Z,6μm,12.0s						
KIS	**Kishinev**	**153.49 317**	*i* PKP2	PKPab	15 39 36.0	-1.7
KIS			*e*SKP		15 42 38.0	
KIS	**Kishinev**	**153.49 317**	*e*PP	PP	15 43 06.0	-5.8
comp=Z,10μm,18.0s						
KIS			*e*SKS	SKSdf	15 46 14.0	-7.7
KIS	**Kishinev**	**153.49 317**	*e*PS		15 54 18.0	
KIS	**Kishinev**	**153.49 317**	*e*PPS		15 56 17.0	
KIS			*e*SSS		16 08 48.0	
KIS			*e*LR	LR	16 35 20.0	
comp=Z,42μm,26.0s						
KIS	**Kishinev**	**153.49 317**	PKIKP	PKPbc	15 39 26.4	+1.1
EAB	**Aberfoyle**	**153.49 8**	*e*P	PKPdf	15 39 24.0	+6.7
CSS	**Prodhromos**	**153.51 289**	P	PKPbc	15 39 22.7	-3.0
comp=Z,18nm,1.1s						
CSS	**Prodhromos**	**153.51 289**	*e*PKPdf	PKPdf	15 39 16.9	-1.2
CSS			*e*PKPbc	PKPbc	15 39 25.6	-0.1
CSS			LR	LR		
comp=Z,86μm,20.0s,MS7.6						
EBH	**Black Hill**	**153.53 7**	*e*P	PKPbc	15 39 23.9	-1.2
PMAN	**Manadas**	**153.55 63**	*e*PKP	PKPbc	15 39 27.4	+1.7
MAMC	**Mammari**	**153.59 289**	P	PKPbc	15 39 23.0	-2.9
ERMK	**Ermenek**	**153.74 293**	*i* P	PKPdf	15 39 08.9	-9.4
LEF	**Lefka**	**153.86 289**	*e*P	PKPdf	15 39 21.3	+2.8
SZAC	**Souni-Zanaja**	**153.88 288**	P	PKPbc	15 39 24.7	-1.8
EDI	**Edinburgh**	**153.89 7**	*e*P	PKPbc	15 39 22.5	-3.4
EDI			AMS	AMS	16 57 54.9	
comp=Z,24μm,26.2s,MS6.9						
EAU	**Auchinoon**	**153.93 7**	*e*P	PKPbc	15 39 22.4	-3.5
WAR	**Warsaw**	**153.94 333**	*e*PKP	PKPdf	15 39 21.3	+3.2
WAR			*e*PKiKP	PKiKP	15 39 26.9	+0.7
WAR			*e*		15 39 31.9	
WAR			*e*PP	PP	15 43 17.2	+3.3
WAR			LMZ		16 39 29.6	
comp=Z,58μm,30.2s						
WAR	**Warsaw**	**153.94 333**	*e*PKIKP	PKPdf	15 39 21.3	+3.2
ESY	**Stoneypath**	**153.95 6**	*e*P	PKPdf	15 39 22.4	+4.5
KONT	**Konya--Tatoy**	**154.02 296**	*e*P	PKPdf	15 39 21.3	+2.7
HDMB	**Hadim**	**154.05 293**	*e*P	PKPdf	15 39 18.2	-0.5
EBL	**Broad Law**	**154.05 7**	*e*P	PKPdf	15 39 22.3	+4.2
LEOM	**Leova**	**154.09 316⇑**	PKIKP	PKPbc	15 39 29.3	+2.7
LEOM	**Leova**	**154.09 316⇑**	*i*P	PKPbc	15 39 29.3	+2.7
ALFC	**Alevga**	**154.10 289**	P	PKPbc	15 39 24.8	-2.2
comp=Z,10.0nm,0.6s						
KDHN	**Kadinhani**	**154.11 297**	*i* P	PKPdf	15 39 15.3	-3.5
ADH	**Angra Heroismo**	**154.21 63**	*e*PKP	PKPbc	15 39 25.4	-1.7
KIZT	**Kizilcal**	**154.23 298**	*e*P	PKPdf	15 39 23.1	+4.2
GAZI	**Gazipasa**	**154.25 292**	*i* P	PKPdf	15 39 14.2	-4.8
PPCY	**Paphos**	**154.32 289**	P	PKPbc	15 39 24.9	-2.6
MDU	**Mudurnu**	**154.38 302**	*e*P	PKPdf	15 39 18.2	-0.9
SVRH	**Sivrihisar-ESK**	**154.39 299**	*e*P	PKPdf	15 39 14.7	-4.4
LVV	**L'vov**	**154.40 326**	*i* PKIKP	PKPdf	15 39 23.0	+4.2
LVV			*i*		15 39 33.0	
LVV			*e*		15 43 18.0	
LVV			MLR	MLR		
comp=Z,48μm,24.0s,MS7.2						
GKP	**Gorka Klasztor**	**154.42 339**	*e*PKP	PKPdf	15 39 18.6	-0.1
GKP			*e*PKiKP	PKiKP	15 39 24.4	-2.7
GKP			*e*		15 39 33.1	
GKP			*e*PP	PP	15 43 15.4	-1.0
GKP			*e*		15 53 39.6	
GKP			LMZ		16 45 54.2	
comp=Z,47μm,23.5s						
GKP	**Gorka Klasztor**	**154.42 339**	*i* PKIKP	PKPbc	15 39 24.4	-2.7
GKP			*e*		15 39 33.1	
GKP			*e*		15 43 15.4	
EKA	**Eskdalemuir Ar**	**154.47 7**	PKP	PKPdf	15 39 19.1	+0.4
comp=Z,5.2nm,0.8s,baz=354,slow=1.1,SNR=8.2						
EKA			PKPbc	PKPbc	15 39 28.4	+1.3
comp=Z,19nm,0.7s,baz=348,slow=1.2,SNR=20						
EKA			PKPab	PKPab	15 39 41.6	+0.1
comp=Z,138nm,0.9s,baz=349,slow=3.3,SNR=14						
EKA	**Eskdalemuir Ar**	**154.47 7**	PKIKP	PKPdf	15 39 19.1	+0.4
EKA					15 39 28.5	
EKA					15 39 41.7	
EKA			pmax	pmax		
comp=Z,5.0nm,0.8s						
EKA			pmax	pmax		
comp=Z,138nm,0.9s						
ESK	**Eskdalemuir**	**154.48 7**	AMS	AMS	16 49 42.7	
comp=Z,21μm,20.9s,MS6.9						
ESK	**Eskdalemuir**	**154.48 7**	*e*PKPbc	PKPbc	15 39 28.1	+0.9
ESK			LR	LR		
comp=Z,25μm,21.0s,MS7.0						
ESK	**Eskdalemuir**	**154.48 7**	*e*PKIKP	PKPbc	15 39 28.1	+1.0
ESK			MLR	MLR		
comp=Z,25μm,21.0s,MS7.0						
GAL1	**Galloway**	**154.73 10**	*e*P	PKPbc	15 39 26.3	-1.4
GAL1			AMS	AMS	16 58 36.8	
comp=Z,22μm,23.5s,MS6.9						
CFR	**Carcaliu**	**154.78 314**	PKIKP	PKPbc	15 39 25.5	-2.6
GCD	**Castle Douglas**	**154.84 9**	*e*P	PKPbc	15 39 27.9	+0.1
GULT	**Gulveren**	**154.91 302**	*e*P	PKPdf	15 39 18.7	-1.2
TIRR	**Tirgusor**	**154.94 312**	*e*PKPdf	PKPdf	15 39 18.6	-1.2
TIRR	**Tirgusor**	**154.94 312**	*e*PKIKP	PKPdf	15 39 18.6	-1.1
TIRR	**Tirgusor**	**154.94 312⇓**	*i*P	PKPbc	15 39 25.4	-3.1
BOLV	**Bolvadin**	**154.97 298**	*i* P	PKPdf	15 39 15.3	-4.7
SPNC	**Sapanca-Adapaz**	**154.99 303**	*e*P	PKPdf	15 39 22.2	+2.3
TESR		**155.01 318⇑**	*i*P	PKPdf	15 39 28.5	+8.7
PETR		**155.08 316⇑**	*i*P	PKPdf	15 39 35.0	+15
BORA	**Eskisehir**	**155.09 301**	*i* P	PKPdf	15 39 14.2	-5.8
GPA	**Golpazari**	**155.09 302**	*e*P	PKPdf	15 39 28.5	+8.4
GMM	**Mts of Mourne**	**155.13 12**	*e*P	PKPdf	15 39 26.8	+7.2
KWP	**Kalwaria Pacla**	**155.15 327**	*e*PKP	PKPdf	15 39 21.6	+1.7
KWP			*e*PKIKP	PKiKP	15 39 26.6	-2.2
KWP			*e*		15 39 44.8	
KWP			*e*PP	PP	15 43 20.9	+0.1
KWP			*e*SKS	SKSdf	15 46 56.3	+33
KWP			LMZ		16 44 33.4	
comp=Z,70μm,26.5s						
KWP	**Kalwaria Pacla**	**155.15 327**	*e*PKPdf	PKPdf	15 39 19.3	-0.5
KWP			LR	LR		
comp=Z,59μm,22.0s,MS7.4						
KWP	**Kalwaria Pacla**	**155.15 327**	*i* PKIKP	PKPdf	15 39 26.6	+6.8
KWP			*e*		15 39 44.8	
KWP			*e*		15 43 20.9	
KWP			*e*		15 46 56.3	
KWP	**Kalwaria Pacla**	**155.15 327⇑**	*i*P	PKPdf	15 39 33.1	+13
BUR08	**Bucovina Ar. S**	**155.19 321**	*e*PKPdf	PKPdf	15 39 18.9	-1.1
BURAR	**Bucovina Array**	**155.19 321**	PKIKP	PKPdf	15 39 25.3	+5.3
BURAR	**Bucovina Array**	**155.19 321⇑**	*i*P	PKPdf	15 39 28.8	+8.8
CVD	**Cernavoda**	**155.24 312**	*i*PKIKP	PKPdf	15 39 34.2	+14
CVD	**Cernavoda**	**155.24 312⇓**	*i*P	PKPdf	15 39 34.2	+14
LIC	**Lamto**	**155.25 162**	*e*PKP2	PKPdf	15 39 23.1	+2.0
comp=Z,872nm,0.9s						
LIC	**Lamto**	**155.25 162**	*e*PKIKP	PKPdf	15 39 21.6	+0.5
comp=Z,267nm,0.9s						
LIC			*e*MLR	MLR		
comp=Z,34μm,22.5s,MS6.8						
LIC	**Lamto**	**155.25 162**	*e*PKPdf	PKPdf	15 39 21.6	+0.5
LIC			LR	LR		
comp=Z,17μm,22.5s,MS6.8						
VRI	**Vrincioaia**	**155.31 316**	P	PKPdf	15 39 24.0	+3.8
VRI	**Vrincioaia**	**155.31 316**	PKIKP	PKPdf	15 39 24.0	+3.8
VRI	**Vrincioaia**	**155.31 316⇑**	*i*P	PKPdf	15 39 32.3	+12
SHUT	**Suhut-Afyon**	**155.31 298**	*e*P	PKPdf	15 39 20.4	0.0
GIM	**North Isle of**	**155.32 10**	*e*P	PKPdf	15 39 27.2	+7.3
SILT	**Sile**	**155.33 304**	*e*P	PKPdf	15 39 23.6	+3.2
PLOR	**Plostina**	**155.36 316**	PKIKP	PKPdf	15 39 24.1	+3.8
PLOR	**Plostina**	**155.36 316⇑**	*i*P	PKPab	15 39 38.3	-7.4
GRER		**155.41 315⇑**	*i*P	PKPab	15 39 39.3	-6.6
HRT	**Hereke**	**155.41 303**	*e*P	PKPdf	15 39 22.7	+2.2
KIC	**Kosan Boka**	**155.46 163**	*e*PKP2	PKPdf	15 39 21.8	+0.4
comp=Z,417nm,0.8s						
CAVI	**Cavuskoy**	**155.46 302**	*e*P	PKPdf	15 39 23.1	+2.5
ISP	**Isparta**	**155.47 296**	*e*PKPdf	PKPdf	15 39 19.6	-1.0
ISP			LR	LR		
comp=Z,47μm,20.0s,MS7.3						
ISP	**Isparta**	**155.47 296**	PKIKP	PKPdf	15 39 19.8	-0.9
ADVT	**Abdulvahap**	**155.47 302**	*e*P	PKPdf	15 39 22.2	+1.6
BCK	**Bucak**	**155.48 295**	*e*P	PKPdf	15 39 22.7	+2.0
PSET	**Sete Cidades**	**155.53 64**	*e*PKP	PKPdf	15 39 23.9	+3.1
ALT	**Altintas**	**155.54 299**	*i* P	PKPdf	15 39 14.2	-6.5
PDA	**Ponta Delgada**	**155.58 64**	*e*PKP	PKPdf	15 39 25.8	+5.0
PGOR	**Pogoanele**	**155.63 314⇑**	*i*P	PKPdf	15 39 35.2	+15
TIC	**Toumodi**	**155.66 162**	*e*PKP2	PKPdf	15 39 22.2	+0.5
comp=Z,342nm,0.8s						
GRON	**Grota Negra**	**155.68 64**	*e*PKP	PKPdf	15 39 24.3	+3.3
CMLA	**Cha da Macela**	**155.69 64**	*e*PKP	PKPdf	15 39 22.2	+1.2
CMLA			*e*SS	SS	16 03 41.6	+32
CMLA	**Cha da Macela**	**155.69 64**	PFAKE		15 39 30.0	+9.0
CMLA			LR	LR		
comp=Z,19μm,19.0s,MS6.9						
DBIC	**Dimbokro**	**155.73 162**	PKP	PKPdf	15 39 21.9	+0.1
comp=Z,18nm,0.9s,baz=206,slow=1.4,SNR=14						
DBIC	**Dimbokro**	**155.73 162**	*e*PKPdf	PKPdf	15 39 22.1	+0.3
DBIC			LR	LR		
comp=Z,6μm,22.0s,MS6.3						
DBIC	**Dimbokro**	**155.73 162**	*e*PKIKP	PKPdf	15 39 22.1	+0.3
DBIC			MLR	MLR		
comp=Z,6μm,22.0s						
KORT	**Korkueli**	**155.74 294**	*i* P	PKPdf	15 39 18.5	-2.5
ISK	**Istanbul-Kandi**	**155.78 304**	*e*P	PKPdf	15 39 20.4	-0.5
BUY	**Buyukada**	**155.80 304**	*i* P	PKPdf	15 39 12.1	-8.9
KOLS	**Kolonicke sedl**	**155.84 327**	*e*PKP	PKPdf	15 39 19.8	-1.0
KOLS			*e*		15 43 22.3	
KOLS	**Kolonicke sedl**	**155.84 327**	*e*PKIKP	PKPdf	15 39 19.8	-1.0
KOLS			*e*		15 43 22.3	
KOLS	**Kolonicke sedl**	**155.84 327**	*e*PKP	PKPdf	15 39 19.8	-1.0
KOLS			*e*PP	PP	15 43 22.3	-2.4
GEMT	**Gemlik**	**155.88 303**	*e*P	PKPdf	15 39 22.2	+1.1
DLF	**Lyons Farm**	**155.92 13**	*e*P	PKPdf	15 39 24.3	+3.5
DLF	**Lyons Farm**	**155.92 13**	*e*P	PKPab	15 39 53.4	+5.6
BGKT	**Bogazkoy**	**155.95 305**	*e*P	PKPdf	15 39 24.5	+3.3
BART	**Pico Bartolome**	**155.96 64**	*e*PKP	PKPdf	15 39 21.0	-0.3
MLR	**Muntele Rosu**	**155.97 316**	⇑PKIKP	PKPdf	15 39 26.1	+5.0
MLR	**Muntele Rosu**	**155.97 316⇑**	*i*P	PKPdf	15 39 26.1	+5.0
OJC	**Ojcow**	**156.00 332**	*e*PKPdf	PKPdf

KECS	Kecovo	157.00 328	ePKIKP	PKPdf	15 39 24.4	+2.1
KECS	Kecovo	157.00 328	ePKP	PKPdf	15 39 24.4	+2.1
DRGR		157.05 322	⇑iP	PKPdf	15 39 39.7	+17
BALB	Balikesir	157.07 301	eP	PKPdf	15 39 21.8	-0.9
SZH	Strazhica	157.07 311	i P	PKPdf	15 39 22.1	-0.5
WIT	Witteveen	157.08 353	ePKP	PKPdf	15 39 26.8	+4.6
WIT	Witteveen	157.08 353	ex	PKPab	15 39 55.8	+3.0
GONE	Gonen-Balikesi	157.09 303	eP	PKPdf	15 39 24.9	+2.2
EDRB	Edirne	157.13 307	eP	PKPdf	15 39 24.5	+1.8
TURN	Turunc	157.14 294	i P	PKPdf	15 39 19.6	-3.3
MFT	Murefte	157.14 305	eP	PKPdf	15 39 23.3	+0.6
UPC	Upice	157.18 337	ePKIKP	PKPdf	15 39 22.2	-0.3
UPC			e		15 39 27.8	
UPC	Upice	157.18 337	ePKPDF	PKPdf	15 39 22.2	-0.3
UPC			ex	x	15 39 27.8	
UPC			ePKPAB	PKPab	15 39 57.4	+4.1
DPC	Dobruska-Polom	157.21 336	ePKIKP	PKPdf	15 39 22.2	-0.3
DPC			e		15 39 27.5	
DPC			e		15 47 10.8	
DPC			e		15 56 43.4	
DPC			MLR	MLR		
	comp=Z,68µm,22.1s,MS7.4					
DPC	Dobruska-Polom	157.21 336	ePKPDF	PKPdf	15 39 22.2	-0.3
DPC			ex	x	15 39 27.5	
DPC			ex	x	15 39 59.2	
DPC			ePP	PP	15 43 25.3	-6.6
DPC			ex	x	15 47 10.8	
DPC			eSKKS		15 53 49.9	
DPC			ex	x	15 56 43.4	
DPC			AMS	AMS	16 51 20.0	
	comp=Z,68µm,22.1s					
BALY	Balya	157.23 302	i P	PKPdf	15 39 16.4	-6.5
MORC	Moravsky Berou	157.24 334	ePKPdf	PKPdf	15 39 22.3	-0.3
MORC	Moravsky Berou	157.24 334	PKIKP	PKPdf	15 39 23.1	+0.5
SART	Tekirdag	157.25 304	i P	PKPdf	15 39 14.2	-8.7
RKY	Sarkoy-Tekirda	157.25 304	eP	PKPdf	15 39 20.9	-2.0
ZIMR		157.25 313	⇑PKIKP	PKPdf	15 39 38.7	+16
ZIMR		157.25 313	⇑iP	PKPdf	15 39 38.7	+16
AKHS	Akhisar	157.32 300	i P	PKPdf	15 39 15.3	-7.7
CLL	Collm	157.38 342	ePKPdf	PKPdf	15 39 21.8	-0.9
CLL	Collm	157.38 342	ePKP	PKPdf	15 39 22.0	-0.7
CLL			ePKP	PKPdf	15 39 40.0	+17
CLL	Collm	157.38 342	ePKIKP	PKPdf	15 39 22.0	-0.7
CLL			pmax	pmax		
	comp=Z,230nm,1.8s					
CLL			MLR	MLR		
	comp=Z,50µm,26.1s,MS7.2					
CLL	Collm	157.38 342	ePKPdf	PKPdf	15 39 22.0	-0.7
	comp=Z,230nm,1.8s					
CLL			ePKPlp		15 39 31.0	
	comp=Z,8µm,14.1s					
CLL			ePKPdif	PKPdf	15 39 40.0	+17
CLL			i PKPab	PKPab	15 39 54.9	+0.8
	comp=Z,1µm,1.5s					
CLL			i pPKPab	pPKPab	15 40 05.6	+0.3
CLL			i sPKPab		15 40 10.5	
CLL			ePP	PP	15 43 36.0	+3.3
	comp=N,8µm,27.0s					
CLL			ePP	PP	15 43 36.0	+3.3
	comp=E,4µm,24.8s					
CLL			ePP	PP	15 43 36.0	+3.3
	comp=Z,16µm,27.6s					
CLL			ePPP		15 47 11.0	
CLL			ePSKS		15 53 52.0	
CLL			ePPS		15 56 49.0	
CLL			eSS	SS	16 03 29.0	+3.8
CLL			eSSS		16 09 31.0	
IBBN	Ibbenburen	157.46 351	ePKPdf	PKPdf	15 39 22.1	-0.7
CLZ	Clausthal	157.48 347	ePKPdf	PKPdf	15 39 22.1	-0.7
CLZ			ePKPab	PKPab	15 39 54.5	0.0
CLZ	Clausthal	157.48 347	ePKIKP	PKPdf	15 39 22.1	-0.7
PVL	Pavlikeni	157.49 312	i P	PKPdf	15 39 22.5	-0.6
BRG	Berggiesshubel	157.51 341	ePKPdf	PKPdf	15 39 21.6	-1.3
BRG			ePKPab	PKPab	15 39 54.8	+0.1
BRG	Berggiesshubel	157.51 341	i PKP	PKPdf	15 39 22.6	-0.3
	comp=Z,165nm,1.4s					
BRG	Berggiesshubel	157.51 341	i PKP	PKPab	15 40 00.2	+5.5
	comp=Z,2µm,1.7s					
BRG			PP	PP	15 43 33.0	-0.5
BRG			i		15 47 14.0	
BRG			e		15 54 00.0	
BRG			i		15 56 53.0	
BRG			SS	SS	16 03 35.0	+8.3
BRG						
	comp=N,36µm,22.0s					
BRG						
	comp=E,40µm,24.4s					
BRG						
	comp=Z,62µm,23.0s					
BRG	Berggiesshubel	157.51 341	i PKIKP	PKPdf	15 39 22.6	-0.3
BRG					15 43 33.0	
BRG			i		15 47 14.0	
BRG			i		15 56 53.0	
BRG			pmax	pmax		
	comp=Z,99nm,1.4s					
BRG			MLR	MLR		
	comp=N,22µm,22.0s,MS7.1					
BRG			MLR	MLR		
	comp=E,24µm,24.4s,MS7.1					
BRG			MLR	MLR		
	comp=Z,37µm,23.0s,MS7.2					
AYDN	Tasoluk	157.56 296	i P	PKPdf	15 39 19.6	-3.8
PVCC	Panska Ves	157.63 339	ePKIKP	PKPdf	15 39 22.9	-0.1
PVCC			e		15 43 33.7	
PVCC			e		15 56 47.6	
PVCC			MLR	MLR		
	comp=Z,49µm,24.2s,MS7.3					
PVCC	Panska Ves	157.63 339	ePKPDF	PKPdf	15 39 22.9	-0.1
PVCC			ex	x	15 40 00.4	
PVCC			ePP	PP	15 43 33.7	-0.5
PVCC			eSKKS		15 53 52.5	
PVCC			ex	x	15 56 47.6	
PVCC			AMS	AMS	16 51 20.0	
	comp=Z,49µm,24.2s					
FBE	Freiberg	157.63 342	ePKPdf	PKPdf	15 39 22.6	-0.4
FBE			ePKPab	PKPab	15 39 55.5	+0.3
LPK	Lapseki	157.66 304	eP	PKPdf	15 39 22.2	-1.2
PSZ	Piszkesteto	157.68 328	ePKPdf	PKPdf	15 39 22.4	-0.8
PSZ			LR	LR		
	comp=Z,78µm,22.0s,MS7.5					
PSZ	Piszkesteto	157.68 328	PKIKP	PKPdf	15 39 23.3	+0.1
PSZ	Piszkesteto	157.68 328	⇑iP	PKPdf	15 39 28.5	+5.3
PSZ	Piszkesteto	157.68 328	⇑ePKP	PKPdf	15 39 22.2	-1.0
MLSB	Milas	157.71 296	eP	PKPdf	15 39 23.1	-0.5
VYHS	Vyhne	157.72 330	ePKP	PKPdf	15 39 23.4	+0.2
VYHS			e		15 39 57.4	
VYHS			e		15 43 32.9	
VYHS	Vyhne	157.72 330	ePKIKP	PKPdf	15 39 23.4	+0.2
VYHS			e		15 43 32.9	
VYHS	Vyhne	157.72 330	ePKP	PKPdf	15 39 23.4	+0.2
VYHS			e		15 39 57.4	
VYHS			ePP	PP	15 43 32.9	-2.0
ERIK	Erikli-Kesan	157.73 305	eP	PKPdf	15 39 22.7	-0.8
MCH1	Michaelchurch	157.76 9	eP	PKPdf	15 39 27.1	+3.9
MCH1			AMS	AMS	16 55 43.0	
	comp=Z,28µm,24.7s,MS7.0					
NEUB	Neuenburg	157.77 344	ePKPdf	PKPdf	15 39 22.4	-0.8
KOLL	Kolacno	157.84 331	ePKP	PKPdf	15 39 27.6	+4.2
KOLL	Kolacno	157.84 331	ePKIKP	PKPdf	15 39 27.6	+4.2
KOLL	Kolacno	157.84 331	ePKP	PKPdf	15 39 27.6	+4.2
GELI	Tayfur-Gelibol	157.85 304	eP	PKPdf	15 39 23.7	0.0
IZM	Izmir	157.87 299	eP	PKPdf	15 39 27.1	+3.4
GZR	Gura Zlata	157.87 319	⇓PKIKP	PKPdf	15 39 30.3	+6.8
GZR	Gura Zlata	157.87 319	⇓iP	PKPdf	15 39 30.3	+6.8
WTSB	Winterswijk	157.91 353	ePKP	PKPdf	15 39 22.2	-1.1
	comp=Z,184nm,2.9s					
WTSB	Winterswijk	157.91 353	ex	PKPab	15 39 55.5	-0.9
ENEZ	Enez	157.96 305	eP	PKPdf	15 39 25.4	+1.6
DAT	Datca	157.97 294	eP	PKPdf	15 39 26.7	+2.8
VRAC	Vranov	157.98 335	PKP	PKPdf	15 39 24.6	+1.1
	comp=Z,2.4nm,0.7s,baz=46,slow=1.4,SNR=7.6					
VRAC			PKPab	PKPab	15 39 57.1	+0.3
	comp=Z,46nm,0.7s,baz=95,slow=3.7,SNR=7.7					
VRAC			PP	PP	15 43 40.0	+3.8
	comp=Z,34nm,1.1s,baz=33,slow=8.7,SNR=3.2					
VRAC	Vranov	157.98 335	PKIKP	PKPdf	15 39 24.6	+1.1
VRAC					15 39 57.1	
VRAC					15 43 40.0	
VRAC			pmax	pmax		
	comp=Z,2.0nm,0.7s					
VRAC			pmax	pmax		
	comp=Z,47nm,0.7s					
VRAC			pmax	pmax		
	comp=Z,34nm,1.1s					
VRAC	Vranov	157.98 335	⇑iP	PKPdf	15 39 28.0	+4.5
BLCB	Balcova	158.03 299	eP	PKPdf	15 39 21.9	-2.1
GCAM	G?zelcaml?	158.05 297	i P	PKPdf	15 39 18.5	-5.5
PRA	Prague	158.07 339	PKPDF	PKPdf	15 39 25.0	+1.4
PRA			PKPAB	PKPab	15 39 58.0	+0.8
PRA			PP	PP	15 43 34.0	-2.6
PRA			AMS	AMS	16 51 00.0	
PRU	Pruhonice	158.11 339	ePKIKP	PKPdf	15 39 24.0	+0.3
PRU			e		15 39 28.9	
PRU			e		15 39 57.6	
PRU			e		15 43 33.7	
PRU			e		15 47 14.1	
PRU			e		15 56 48.3	
PRU			MLR	MLR		
	comp=Z,45µm,21.9s,MS7.3					
PRU	Pruhonice	158.11 339	ePKPDF	PKPdf	15 39 24.0	+0.3
PRU			ex	x	15 39 28.9	
PRU			ePKPAB	PKPab	15 39 57.6	+0.3
PRU			ePP	PP	15 43 33.7	-3.1
PRU			ex	x	15 47 14.1	
PRU			ex	x	15 53 56.6	
PRU			ex	x	15 56 48.3	
PRU			AMS	AMS	16 51 10.0	
	comp=Z,45µm,21.9s					
BODT	Bodrum	158.12 295	eP	PKPdf	15 39 24.5	+0.4
HGH	Gray Hill	158.14 9	eP	PKPdf	15 39 31.1	+7.5
EZN	Ezine	158.15 303	eP	PKPdf	15 39 22.7	-1.4
TANN	Tannenbergstha	158.33 342	ePKPdf	PKPdf	15 39 23.0	-0.9
TANN			ePKPab	PKPab	15 39 58.3	0.0
MOX	Moxa	158.33 344	ePKP	PKPdf	15 39 23.3	-0.6
	comp=Z,70nm,0.9s					
MOX			e		15 40 05.0	
	comp=Z,885nm,1.6s					
MOX			ePP	PP	15 43 35.0	-2.9
MOX						
	comp=Z,14µm,23.0s					
MOX	Moxa	158.33 344	ePKPdf	PKPdf	15 39 22.9	-1.0
MOX			ePKPab	PKPab	15 39 58.0	-0.3
MOX	Moxa	158.33 344	ePKP	PKPdf	15 39 23.3	-0.6
MOX			e		15 40 05.0	
MOX			ePP	PP	15 43 35.0	-2.9
MOX			eSS	SS	16 03 52.0	+17
MOX			LR	LR		
	comp=Z,14µm,23.0s,MS6.7					
MOX	Moxa	158.33 344	ePKIKP	PKPdf	15 39 23.3	-0.6
MOX			e		15 43 35.0	
MOX			MLR	MLR		
	comp=Z,14µm,23.0s,MS6.7					
GADA	Gvkgeada	158.34 304	eP	PKPdf	15 39 23.1	-1.1
WERD	Werda	158.34 343	ePKPdf	PKPdf	15 39 22.5	-1.4
WERD			ePKPab	PKPab	15 39 58.2	-0.1
BOZC	Bozcaada	158.35 303	i P	PKPdf	15 39 18.5	-5.8
BUG	Bochum--Univer	158.37 352	ePKPdf	PKPdf	15 39 22.9	-1.0
BZS	Buzias	158.38 321	P	PKPdf	15 39 23.1	-1.0
BZS	Buzias	158.38 321	⇑PKIKP	PKPdf	15 39 25.4	+1.3
BZS	Buzias	158.38 321	⇑iP	PKPdf	15 39 25.4	+1.3
SWN1	Swindon	158.38 7	AMS	AMS	16 54 40.1	
	comp=Z,24µm,22.8s,MS7.0					
URLA	Izmir	158.38 299	i P	PKPdf	15 39 18.5	-5.8
TREC	Trest	158.39 336	ePKIKP	PKPdf	15 39 23.4	-0.6
TREC			e		15 39 28.3	
TREC			e		15 56 57.3	
TREC			MLR	MLR		
	comp=Z,52µm,21.3s,MS7.3					
TREC	Trest	158.39 336	ePKPDF	PKPdf	15 39 23.4	-0.6
TREC			ex	x	15 39 28.3	
TREC			ex	x	15 53 55.8	
TREC			ex	x	15 56 57.3	
TREC			AMS	AMS	16 51 40.0	
	comp=Z,52µm,21.3s					
PLD	Plovdiv	158.41 310	i P	PKPdf	15 39 22.6	-1.7
GUNZ	Gunzen	158.41 342	ePKPdf	PKPdf	15 39 23.0	-1.0
GUNZ			ePKPab	PKPab	15 39 58.7	+0.1
WERN	Wernitzgruen	158.47 342	ePKPdf	PKPdf	15 39 23.2	-0.9
WERN			ePKPab	PKPab	15 39 59.1	+0.2
NKC	Novy Kostel	158.50 342	ePKIKP	PKPdf	15 39 23.7	-0.4
NKC			e		15 39 29.0	
NKC			e		15 39 59.1	
NKC			MLR	MLR		
	comp=Z,37µm,23.5s,MS7.2					
NKC	Novy Kostel	158.50 342	ePKPDF	PKPdf	15 39 23.7	-0.4
NKC			ex	x	15 39 29.0	
NKC			ePKPAB	PKPab	15 39 59.1	+0.1
NKC			ex	x	15 53 57.5	
NKC			AMS	AMS	16 46 20.0	
	comp=Z,37µm,23.5s					
HTL	Hartland	158.50 12	eP	PKPdf	15 39 29.7	+5.6
HTL			AMS	AMS	16 59 33.0	
	comp=Z,27µm,22.0s,MS7.0					
UBBA	Unterbreizbach	158.52 347	ePKPdf	PKPdf	15 39 23.0	-1.1
UBBA			ePKPab	PKPab	15 39 58.5	-0.6
PGB	Panagyurishte	158.56 311	i P	PKPdf	15 39 23.6	-0.8
RZN	Rozhen	158.58 309	i P	PKPdf	15 39 24.5	0.0
WOL	Wolverton	158.64 6	AMS	AMS	16 54 49.2	
	comp=Z,24µm,35.8s,MS6.8					
ZST	Bratislava	158.68 332	ePKP	PKPdf	15 39 22.8	-1.6
ZST	Bratislava	158.68 332	ePKIKP	PKPdf	15 39 22.8	-1.6
ZST	Bratislava	158.68 332	ePKP	PKPdf	15 39 22.8	-1.6
ROTZ	Rotzenmuhle	158.99 342	ePKPdf	PKPdf	15 39 23.7	-1.0
ROTZ			ePKPab	PKPab	15 40 01.4	+0.2
DYA	Yadsworthy	159.14 11	eP	PKPdf	15 39 28.9	+4.1
DYA			AMS	AMS	16 59 18.6	
	comp=Z,20µm,22.8s,MS6.9					
VTS	Vitosha	159.15 312	⇑PKIKP	PKPdf	15 39 31.7	+6.5
VTS	Vitosha	159.15 312	⇑iP	PKPdf	15 39 31.7	+6.5
VTS	Vitosha	159.15 312	P	PKPdf	15 39 29.5	+4.3
KHC	Kasperske Hory	159.16 339	ePKPdf	PKPdf	15 39 23.4	-1.5
KHC	Kasperske Hory	159.16 339	ePKIKP	PKPdf	15 39 23.1	-1.8
KHC			e		15 39 29.6	
KHC			e		15 40 01.8	
KHC			e		15 43 37.0	
KHC			e		15 57 01.9	
KHC			MLR	MLR		
	comp=Z,51µm,22.6s,MS7.3					
KHC	Kasperske Hory	159.16 339	ePKPDF	PKPdf	15 39 23.1	-1.8
KHC			ex	x	15 39 29.6	
KHC			ePKPAB	PKPab	15 40 01.8	-0.1
KHC			ePP	PP	15 43 37.0	-5.6
KHC			ex	x	15 54 05.0	
KHC			ex	x	15 57 01.9	
KHC			AMS	AMS	16 51 40.0	
	comp=Z,51µm,22.6s					
BEBN	Eben Emael	159.17 354	PKPdf	PKPdf	15 39 27.7	+2.8
BEBN			PKPab	PKPab	15 40 01.8	-0.1
HGN	Heimansgroeve	159.18 354	ePKP	PKPdf	15 39 24.1	-0.8
	comp=Z,126nm,2.9s					
HGN	Heimansgroeve	159.18 354	ex	PKPab	15 40 02.8	+0.9
HGN	Heimansgroeve	159.18 354	ePP	PP	15 43 43.7	+1.3
GRA3	Grafenberg Arr	159.22 343	ePP	PP	15 43 44.0	+1.2
MMB	Musomiste	159.29 309	i P	PKPdf	15 39 24.0	-1.3
GRA1	Grafenberg Arr	159.31 344	ePKPdf	PKPdf	15 39 24.1	-1.0
GRA1			ePKPab	PKPab	15 40 02.7	+0.2
GRA1			ePPP		15 47 25.0	
GRA1			LR	LR		
	comp=Z,38µm,21.3s,MS7.2					
GRF	Grafenberg Arr	159.31 344	ePKPdf	PKPdf	15 39 24.1	-1.0
GRF			ePKPab	PKPab	15 40 02.7	+0.2
GRF			ePPP		15 47 25.0	
GRF			eL		17 01 50.3	
	comp=Z,38µm,21.3s					
GRF	Grafenberg Arr	159.31 344	ePKP2	PKPab	15 40 02.7	+0.2
GRF			ePPP		15 47 25.0	
GRF			MLR	MLR		
	comp=Z,38µm,21.3s,MS7.2					
GRF	Grafenberg Arr	159.31 344	ePKIKP	PKPdf	15 39 24.1	-1.0
GRFO	Grafenberg	159.31 344	PKPdf	PKPdf	15 39 24.0	-1.1
GRFO	Grafenberg	159.31 344	PKIKP	PKPdf	15 39 24.0	-1.1
SOP	Sopron	159.31 332	⇑ePKP	PKPdf	15 39 20.7	-4.5
MEM	Membach	159.33 353	PKPdf	PKPdf	15 39 27.1	+2.0
MEM			PKPab	PKPab	15 40 02.2	-0.3
MEM			APKPab		15 40 12.9	
WET	Wettzell	159.36 340	ePKPdf	PKPdf	15 39 24.4	-0.8
WET			ePKPab	PKPab	15 40 03.0	+0.2
WET	Wettzell	159.36 340	ePKP2	PKPab	15 40 03.0	+0.2
GEC2	GERESS Array S	159.38 338	ePKPdf	PKPdf	15 39 24.0	-1.2
GEC2	GERESS Array S	159.38 338	ePKIKP	PKPdf	15 39 24.0	-1.2
GERES	GERESS Array B	159.38 338	PKP	PKPdf	15 39 25.4	+0.2
	comp=Z,5.7nm,1.0s,baz=124,slow=0.5,SNR=12					
GERES			PKPab	PKPab	15 40 02.8	-0.1
	comp=Z,64nm,0.9s,baz=34,slow=3.7,SNR=7.6					
GERES	GERESS Array B	159.38 338	PKIKP	PKPdf	15 39 25.4	+0.2
GERES					15 40 02.8	
GERES			pmax	pmax		
	comp=Z,6.0nm,1.0s					
GERES			pmax	pmax		
	comp=Z,64nm,1.0s					
TNS	Taunus Mts	159.38 349	ePKPdf	PKPdf	15 39 24.4	-0.8
TNS			ePKPab	PKPab	15 40 02.4	-0.4
TNS	Taunus Mts	159.38 349	ePKP2	PKPab	15 40 02.4	-0.4
CONA	Conrad Observa	159.39 334	⇑iPKPdf	PKPdf	15 39 23.5	-1.8
	comp=Z,5µm,7.0s,SNR=9.6					
PKSM	Moragy	159.51 326	⇑PKIKP	PKPdf	15 39 24.5	-0.9
PKSM	Moragy	159.51 326	⇑iP	PKPdf	15 39 24.5	-0.9
SNF	Seneffe	159.56 356	PKPdf	PKPdf	15 39 27.6	+2.2
SNF			PKPab	PKPab	15 40 02.9	-0.7
BCLA	Clavier	159.58 355	PKPdf	PKPdf	15 39 27.2	+1.8
BCLA			PKPab	PKPab	15 40 02.6	-1.1
KKB	Krupnik	159.59 311	P	PKPdf	15 39 24.6	-1.1
TOD	Tromm	159.91 348	PKP	PKPdf	15 39 25.4	-0.4
TOD	Tromm	159.91 348	PKIKP	PKPdf	15 39 25.4	-0.4
GIVF	Givet	159.93 355	ePKIKP	PKPdf	15 39 25.1	-0.7
	comp=Z,499nm,1.8s					
GIVF	Givet	159.93 355	ePKIKP	PKPdf	15 39 25.1	-0.7
DOU	Dourbes	159.95 356	PKPdf	PKPdf	15 39 26.3	+0.5
DOU			PKPab	PKPab	15 40 06.8	+1.5
BAIF	Baives	160.01 357	ePKIKP	PKPdf	15 39 25.4	-0.5
BAIF	Baives	160.01 357	ePKIKP	PKPdf	15 39 25.4	-0.5
MOA	Molln	160.05 336	⇑iPKPdf	PKPdf	15 39 24.9	-1.1
	comp=Z,6µm,8.8s,SNR=7.5					
ARSA	Arzberg	160.08 333	⇑iPKPdf	PKPdf	15 39 24.7	-1.4
	comp=Z,5µm,8.7s					
RUP	Ruppelstein	160.10 351	PKP	PKPdf	15 39 25.6	-0.4
RUP	Ruppelstein	160.10 351	PKIKP	PKPdf	15 39 25.6	-0.4
VAY	Valandovo	160.19 310	⇑iPKP	PKPdf	15 39 25.6	-0.8
VAY			i PKP	PKPab	15 40 12.7	+5.9
VAY			i PP	PP	15 43 54.1	+5.1
WLF	Walferdange	160.25 353	PKPdf	PKPdf	15 39 26.3	+0.2
WLF			PKPab	PKPab	15 40 06.2	-0.4
WLF	Walferdange	160.25 353	ePKPdf	PKPdf	15 39 26.0	-0.2
WLF			ePKPab	PKPab	15 40 06.5	-0.1
WLF	Walferdange	160.25 353	PFAKE		15 39 40.0	+14
WLF			LR	LR		
	comp=Z,51µm,22.0s					
SKO	Skopje	160.60 313	⇑iPKP	PKPdf	15 39 25.5	-1.3
SKO			i PKP	PKPab	15 40 11.4	+2.9
SKO			i PP	PP	15 43 53.0	+1.9
JSA	Saint Aubin	160.62 9	eP	PKPdf	15 39 29.5	+2.9
JSA			AMS	AMS	16 58 26.8	
	comp=Z,33µm,21.7s					
RJOB	Jochberg	160.64 338	ePKPdf	PKPdf	15 39 24.8	-1.9
RJOB			ePKPab	PKPab	15 40 09.0	+0.6
LANF	Langenberg	160.69 349	PKP	PKPdf	15 39 26.7	0.0
LANF	Langenberg	160.69 349	PKIKP	PKPdf	15 39 26.7	0.0
FUR	Furstenfeldbru	160.70 342	ePKPdf	PKPdf	15 39 25.3	-1.4
FUR			ePKPab	PKPab	15 40 08.9	+0.2
FUR	Furstenfeldbru	160.70 342	ePKIKP	PKPdf	15 39 25.3	-1.4
SOKA	Soboth	160.74 333	⇑iPKPdf	PKPdf	15 39 25.6	-1.2
	comp=Z,5µm,8.3s					
PERS	Pernice	160.74 333	ePKPdf	PKPdf	15 39 25.0	-1.8
PERS			ePKPab	PKPab	15 40 08.4	-0.5
PERS			ePP	PP	15 43 50.7	-0.5
PERS			e		15 50 33.7	
KBA	Koelnbreinsper	161.03 336	⇓iPKPdf	PKPdf	15 39 25.5	-1.6
	comp=Z,4µm,7.5s					
KRUS	Krusevo	161.03 311	⇑iPKP	PKPdf	15 39 25.1	-2.1
KRUS			ePKP	PKPab	15 40 12.6	+2.2
KRUS			ePP	PP	15 43 57.0	+3.5
IVA	Berane	161.04 317	⇓iPKP	PKPdf	15 39 28.4	+1.1
PLE	Pljevlja	161.05 319	⇓iPKP	PKPdf	15 39 26.7	-0.6
PLE	Pljevlja	161.05 319	⇓iPKP	PKPdf	15 39 26.8	-0.5
PLE	Pljevlja	161.05 319	⇓iPKIKP	PKPdf	15 39 26.8	-0.5
OBKA	Obir	161.07 333	⇑iPKPdf	PKPdf	15 39 25.9	-1.3
	comp=Z,6µm,7.9s					
PVY	Plav	161.16 316	⇓iPKP	PKPdf	15 39 27.8	+0.4
PVY	Plav	161.16 316	⇓iPKP	PKPdf	15 39 27.8	+0.4
BST	Brest	161.16 13	PKP	PKPdf	15 39 25.0	-2.2
BFO	Black Forest	161.23 348	ePKPdf	PKPdf	15 39 26.1	-1.2
BFO			ePKPab	PKPab	15 40 10.4	-0.5
BFO	Black Forest	161.23 348	ePKP2	PKPab	15 40 10.4	-0.5
FLN	La Foliniere	161.23 6	ePKIKP	PKPdf	15 39 26.7	-0.6
	comp=Z,117nm,0.8s					
FLN			eMLR	MLR		
	comp=Z,28µm,20.8s					
FLN	La Foliniere	161.23 6	ePKPdf	PKPdf	15 39 26.7	-0.6
FLN			LR	LR		
	comp=Z,28µm,20.8s					
FLN	La Foliniere	161.23 6	ePKIKP	PKPdf	15 39 26.7	-0.6
FLN			MLR	MLR		
	comp=Z,28µm,20.8s					
BCI	Bajram Curri	161.24 316	ePN	PKPdf	15 39 29.7	+2.2
ROSF	Rostrenen	161.28 12	ePKIKP	PKPdf	15 39 26.5	-0.8
	comp=Z,175nm,1.4s					
ROSF	Rostrenen	161.28 12	ePKIKP	PKPdf	15 39 26.5	-0.8
MYKA	Terra Mystica	161.31 335	⇑iPKPdf	PKPdf	15 39 26.1	-1.4
	comp=Z,5µm,8.8s					
CDF	Champ du Feu	161.33 350	ePKIKP	PKPdf	15 39 26.3	-1.1
	comp=Z,352nm,1.9s					
CDF	Champ du Feu	161.33 350	ePKIKP	PKPdf	15 39 26.3	-1.1
SPAK	Spaichingen-Ko	161.35 346	PKP	PKPdf	15 39 27.3	-0.1
WATA	Walderalm	161.37 340	⇓iPKPdf	PKPdf	15 39 27.7	+0.2
	comp=Z,206nm,2.1s					
UPM	Unac-Piva	161.41 319	⇓iPKP	PKPdf	15 39 23.8	-3.8
UPM	Unac-Piva	161.41 319	⇓iPKP	PKPdf	15 39 23.8	-3.8
WTTA	Wattenberg	161.42 340	⇑iPKPdf	PKPdf	15 39 26.6	-0.9
	comp=Z,4µm,5.2s,SNR=10					
LDF	La Druitiere	161.43 5	ePKIKP	PKPdf	15 39 26.7	-0.8
	comp=Z,61nm,0.7s					
LDF	La Druitiere	161.43 5	ePKIKP	PKPdf	15 39 26.7	-0.8
LJU	Ljubljana	161.46 333	i PKPdf	PKPdf	15 39 26.7	-0.9
LJU			epPKPdf	pPKPdf	15 39 35.2	-3.8
LJU			i PKPab	PKPab	15 40 18.4	+6.4
LJU			ePP	PP	15 43 55.1	0.0
LJU			e		15 47 41.3	
RETA	Reutte	161.46 342	⇑iPKPdf	PKPdf	15 39 26.7	-0.9
	comp=Z,5µm,7.3s,SNR=9.6					
SGMF	Saint Gilles	161.48 10

JAVS *e*PP PP 15 43 56.6 -0.2
JAVS *e*SKKSac SKKSac 15 50 40.2 -2.4
JAVS *e* 15 54 18.1
SFTF Sexfontaines 161.80 354 *e*PKIKP PKPdf 15 39 27.4 -0.5
comp=Z,765nm,1.6s
BRY Bratogost 161.81 319 ⇓*i*PKP PKPdf 15 39 24.1 -4.0
BRY Bratogost 161.81 319 ⇓*i*PKP PKPdf 15 39 24.1 -3.9
BRY Bratogost 161.81 319 ⇓*i*PKIKP PKPdf 15 39 24.1 -4.0
HAU Haudompre 161.86 351 *e*PKIKP PKPdf 15 39 27.1 -0.8
comp=Z,570nm,1.9s
HAU *e*MLR MLR
comp=Z,34μm,21.5s
HAU Haudompre 161.86 351 *e*PKPdf PKPdf 15 39 27.1 -0.8
HAU LR LR
comp=Z,34μm,21.5s
HAU Haudompre 161.86 351 *e*PKIKP PKPdf 15 39 27.1 -0.8
HAU MLR MLR
comp=Z,34μm,21.5s
DAVA Damuels 161.88 343 ⇑*i*PKPdf PKPdf 15 39 25.5 -2.5
comp=Z,5μm,6.3s,SNR=9.8
MOF Molkenrain 161.89 350 PKP PKPdf 15 39 26.9 -1.1
MOF Molkenrain 161.89 350 PKIKP PKPdf 15 39 26.9 -1.1
FETA Feichten 161.90 341 *i* PKPdf PKPdf 15 39 26.9 -1.1
comp=Z,5μm,7.4s,SNR=17
TIR Tirane 161.93 313 PFAKE 15 39 40.0 +12
TIR LR LR
comp=Z,50μm,21.0s
ULC Ulcinj 161.96 316 ⇓*i*PKP PKPdf 15 39 26.4 -1.9
ULC Ulcinj 161.96 316 ⇓*i*PKP PKPdf 15 39 26.4 -1.8
ULC Ulcinj 161.96 316 ⇓*i*PKIKP PKPdf 15 39 26.5 -1.8
HINF Hinteralfeld 161.97 350 *e*PKIKP PKPdf 15 39 27.1 -1.0
comp=Z,537nm,1.8s
HINF Hinteralfeld 161.97 350 *e*PKIKP PKPdf 15 39 27.1 -1.0
BUM Brajici-Budva 161.97 317 ⇓*i*PKP PKPdf 15 39 27.5 -0.7
BUM Brajici-Budva 161.97 317 ⇓*i*PKP PKPdf 15 39 27.6 -0.7
TRI Trieste 162.04 333 *e*PKPdf PKPdf 15 39 27.0 -1.2
TRI *e*PP PP 15 43 57.5 -0.7
TRI LR LR
comp=Z,42μm,21.0s
TRI Trieste 162.04 333 *e*PKIKP PKPdf 15 39 27.0 -1.2
TRI *e* 15 43 57.5
TRI MLR MLR
comp=Z,42μm,21.0s
CHIE El Hierro 162.05 93 PKP PKPdf 15 39 31.0 +2.2
HCY Herceg Novi 162.12 318 ⇓*i*PKP PKPdf 15 39 27.7 -0.7
HCY Herceg Novi 162.12 318 ⇓*i*PKIKP PKPdf 15 39 27.7 -0.7
BBS Basel-Blauen 162.21 349 PKP PKPdf 15 39 27.5 -0.8
BBS Basel-Blauen 162.21 349 PKIKP PKPdf 15 39 27.5 -0.8
EHIG Higuera 162.34 90 PKP PKPdf 15 39 32.8 +3.7
DAVOX Davos/Dischmat 162.35 343 PKP PKPdf 15 39 28.5 +0.1
comp=Z,11nm,0.9s,baz=283,slow=7.1,SNR=8.9
DAVOX PKPab PKPab 15 40 17.2 +1.3
comp=Z,146nm,0.8s,baz=14,slow=9.0,SNR=8.2
DAVOX PP PP 15 44 02.5 +2.9
comp=Z,28nm,1.1s,baz=30,slow=16,SNR=4.0
DAVOX Davos/Dischmat 162.35 343 PKIKP PKPdf 15 39 28.5 0.0
DAVOX 15 40 17.2
DAVOX 15 44 02.5
LOMF Lomont 162.43 350 PKP PKPdf 15 39 28.6 +0.1
LOMF Lomont 162.43 350 PKIKP PKPdf 15 39 28.6 +0.1
CTI Castel Tesino 162.50 338 PKP PKPdf 15 39 28.7 +0.1
CTI Castel Tesino 162.50 338 PKIKP PKPdf 15 39 28.7 +0.1
SRN Sarande 162.59 309 *e*PN PKPdf 15 39 28.4 -0.6
TUE Stuetta 162.77 344 *e*PKPdf PKPdf 15 39 27.6 -1.3
TUE LR LR
comp=Z,51μm,22.0s
LOR Lormes 162.81 357 *e*PKIKP PKPdf 15 39 28.5 -0.4
comp=Z,433nm,1.6s
LOR *e*MLR MLR
comp=Z,44μm,22.5s
LOR Lormes 162.81 357 *e*PKPdf PKPdf 15 39 28.5 -0.4
LOR LR LR
comp=Z,44μm,22.5s
LOR Lormes 162.81 357 *e*PKIKP PKPdf 15 39 28.5 -0.4
LOR MLR MLR
comp=Z,44μm,22.5s
HYF Humbligny 162.85 359 *e*PKIKP PKPdf 15 39 28.6 -0.4
SSF Saint Saulge 163.04 357 *e*PKIKP PKPdf 15 39 28.6 -0.5
comp=Z,188nm,1.1s
SSF Saint Saulge 163.04 357 *e*PKIKP PKPdf 15 39 28.6 -0.5
TORD Torodi Ar. Bea 163.12 178 PKP PKPdf 15 39 30.2 0.0
comp=Z,33nm,1.1s,baz=297,slow=0.3,SNR=12
TORD PKPab PKPab 15 40 24.2 +4.2
comp=Z,92nm,0.6s,baz=173,slow=2.9,SNR=7.0
TORD PP PP 15 44 09.2 +5.7
comp=Z,50nm,1.1s,baz=138,slow=5.2,SNR=4.7
TORD Torodi Ar. Bea 163.12 178 PKP PKPdf 15 39 30.2 0.0
TORD PKPab PKPab 15 40 24.2 +4.2
TORD PP PP 15 44 09.2 +5.7
CABF La Chapelle 163.26 351 *e*PKIKP PKPdf 15 39 29.3 -0.1
comp=Z,445nm,1.4s
CABF La Chapelle 163.26 351 *e*PKIKP PKPdf 15 39 29.3 -0.1
AVF Avril sur Loir 163.31 358 *e*PKIKP PKPdf 15 39 28.6 -0.8
comp=Z,283nm,1.7s
AVF Avril sur Loir 163.31 358 *e*PKIKP PKPdf 15 39 28.6 -0.8
CCAN Las Canadas 163.32 92 PKP PKPdf 15 39 32.2 +2.2
PMAR Madeira 163.33 76 *e*PKPdf PKPdf 15 39 35.3 +5.4
FUL Funchal 163.35 76 *e*PKPdf PKPdf 15 39 34.6 +4.7
MFF Saint Martin d 163.41 6 *e*PKIKP PKPdf 15 39 29.2 -0.3
comp=Z,236nm,1.1s
MFF Saint Martin d 163.41 6 *e*PKIKP PKPdf 15 39 29.2 -0.3
SMF Signal de Mont 163.44 356 *e*PKIKP PKPdf 15 39 28.8 -0.7
comp=Z,141nm,1.2s
SMF Signal de Mont 163.44 356 *e*PKIKP PKPdf 15 39 28.8 -0.7
BGF Bois d'Agland 163.56 359 *e*PKIKP PKPdf 15 39 29.3 -0.4
comp=Z,445nm,1.4s
BGF Bois d'Agland 163.56 359 *e*PKIKP PKPdf 15 39 29.3 -0.4
EBAJ Bajamar 163.60 91 PKP PKPdf 15 39 33.5 +3.2
TCF Toulx Ste Croi 163.83 0 *e*PKIKP PKPdf 15 39 29.4 -0.5
comp=Z,224nm,1.3s
TCF Toulx Ste Croi 163.83 0 *e*PKIKP PKPdf 15 39 29.4 -0.5
AGO Saint Agoulin 164.06 358 PKP PKPdf 15 39 30.5 +0.4
PLDF La Plantade 164.12 357 PKP PKPdf 15 39 29.8 -0.4
PLDF La Plantade 164.12 357 PKIKP PKPdf 15 39 29.8 -0.4
CING Cingoli 164.18 330 PKP PKPdf 15 39 30.1 -0.2
EOSO Osorio 164.20 93 PKP PKPdf 15 39 32.9 +2.0
LSD Lago del Serru 164.21 348 PKP PKPdf 15 39 30.6 +0.3
LSD Lago del Serru 164.21 348 PKIKP PKPdf 15 39 30.6 +0.3
LPL La Plagne 164.23 349 *e*PKIKP PKPdf 15 39 30.2 -0.1
comp=Z,82nm,0.8s
LPL La Plagne 164.23 349 *e*PKIKP PKPdf 15 39 30.2 -0.1
LPG La Plagne 164.24 349 *e*PKIKP PKPdf 15 39 30.2 -0.1
comp=Z,152nm,1.3s
LPG La Plagne 164.24 349 *e*PKIKP PKPdf 15 39 30.2 -0.1
EMAZ Mazaricos 164.28 32 PKP PKPdf 15 39 34.0 +3.5
SFI Santa Sofia 164.29 334 PKP PKPdf 15 39 30.8 +0.4
SFI Santa Sofia 164.29 334 PKIKP PKPdf 15 39 30.8 +0.4
PIEI Pieia 164.33 332 PKP PKPdf 15 39 29.8 -0.7
FNVD Fontana Vidola 164.33 336 PKP PKPdf 15 39 29.6 -0.8
ERBM Eremo 164.35 338 PKP PKPdf 15 39 30.6 +0.2
PYM Petit Puy Mans 164.36 358 PKP PKPdf 15 39 29.4 -1.0
PYM Petit Puy Mans 164.36 358 PKIKP PKPdf 15 39 29.4 -1.0
RSP Reno Superiore 164.49 347 PKP PKPdf 15 39 30.1 -0.4
RSP Reno Superiore 164.49 347 PKIKP PKPdf 15 39 30.1 -0.4
STS Santiago 164.53 31 PKP PKPdf 15 39 35.8 +5.1
STS Santiago 164.53 31 PKIKP PKPdf 15 39 35.8 +5.1
VLC Villacollemand 164.59 338 *e*PKPdf PKPdf 15 39 28.2 -2.4
VLC *e*PKPab PKPab 15 40 25.7 -0.1
VLC *e*PP PP 15 44 09.1 -2.4
VLC LR LR
comp=Z,43μm,20.0s
BDI Bagni Di Lucca 164.60 337 PKP PKPdf 15 39 29.7 -1.0
BDI Bagni Di Lucca 164.60 337 PKIKP PKPdf 15 39 29.7 -1.0
SC2M Scurtabo 164.63 340 PKP PKPdf 15 39 30.8 +0.1
GDM Grand'Maison 164.63 350 PKP PKPdf 15 39 30.9 +0.2
NRCA Norcia 164.65 329 PKP PKPdf 15 39 28.7 -2.1
GRN Grenoble 164.65 351 PKP PKPdf 15 39 31.3 +0.6
GRN Grenoble 164.65 351 PKIKP PKPdf 15 39 31.3 +0.6
BNI Bardonecchia 164.69 348 *e*PKPdf PKPdf 15 39 30.5 -0.2
BNI LR LR
comp=Z,39μm,22.0s
BNI Bardonecchia 164.69 348 *e*PKIKP PKPdf 15 39 30.5 -0.2
BNI MLR MLR
comp=Z,39μm,22.0s
SSB Saint Sauveur 164.75 354 *e*PKPdf PKPdf 15 39 30.4 -0.4
SSB LR LR
comp=Z,31μm,22.0s
SSB Saint Sauveur 164.75 354 *e*PKIKP PKPdf 15 39 30.4 -0.4
SSB MLR MLR
comp=Z,31μm,22.0s
EPON Pontenova 164.77 27 PKP PKPdf 15 39 36.4 +5.5
MAIM Mastiano 164.77 337 PKP PKPdf 15 39 29.1 -1.7
RJF Les Rejaudoux 164.80 2 *e*PKIKP PKPdf 15 39 30.5 -0.3
comp=Z,380nm,1.6s
RJF *e*MLR MLR
comp=Z,27μm,23.0s
RJF Les Rejaudoux 164.80 2 *e*PKPdf PKPdf 15 39 30.5 -0.3
RJF LR LR
comp=Z,27μm,23.0s
RJF Les Rejaudoux 164.80 2 *e*PKIKP PKPdf 15 39 30.5 -0.3
RJF MLR MLR
comp=Z,27μm,23.0s
CSNT Castellina Chi 164.87 334 PKP PKPdf 15 39 30.2 -0.7
LBL Lubilhac 164.88 358 PKP PKPdf 15 39 30.6 -0.3
LBL Lubilhac 164.88 358 PKIKP PKPdf 15 39 30.6 -0.3
AQU L'Aquila 164.89 327 *e*PKPdf PKPdf 15 39 28.8 -2.2
AQU *e*PKPab PKPab 15 40 29.8 +2.5
AQU *e*PP PP 15 44 12.8 -0.7
AQU LR LR
comp=Z,48μm,20.0s
AQU L'Aquila 164.89 327 ⇑*i*PKIKP PKPdf 15 39 36.9 +5.9
AQU L'Aquila 164.89 327 ⇑*i*P PKPdf 15 39 36.8 +5.8
INTR Introdacqua 164.91 325 PKP PKPdf 15 39 29.4 -1.6
MRLC Muro Lucano 164.93 318 PKP PKPdf 15 39 30.2 -0.9
ORIF Oris-en-Rattie 164.95 350 *e*PKIKP PKPdf 15 39 30.6 -0.4
comp=Z,131nm,1.2s
ORIF *e*MLR MLR
comp=Z,42μm,21.0s
ORIF Oris-en-Rattie 164.95 350 *e*PKIKP PKPdf 15 39 30.6 -0.4
MRB1 Monte Rocchett 164.98 320 PKP PKPdf 15 39 30.1 -1.0
MBDF Montbardon 164.99 348 *e*PKIKP PKPdf 15 39 30.4 -0.6
MBDF Montbardon 164.99 348 *e*PKIKP PKPdf 15 39 30.4 -0.6
RNI2 Rionero Sannit 165.01 324 PKP PKPdf 15 39 30.8 -0.3
EZAM Zamans 165.03 34 PKP PKPdf 15 39 35.4 +4.2
EZAM Zamans 165.03 34 PKIKP PKPdf 15 39 35.4 +4.3
FIAM Fiamignano 165.09 327 PKP PKPdf 15 39 30.6 -0.6
LFF La Frestale 165.13 5 *e*PKIKP PKPdf 15 39 31.0 -0.1
LFF La Frestale 165.13 5 *e*PKIKP PKPdf 15 39 31.0 -0.1
VIVF Saint-Julien-l 165.16 354 *e*PKIKP PKPdf 15 39 30.8 -0.3
comp=Z,478nm,1.8s
VIVF Saint-Julien-l 165.16 354 *e*PKIKP PKPdf 15 39 30.8 -0.3
CAF Calviac 165.19 1 *e*PKIKP PKPdf 15 39 31.2 0.0
comp=Z,161nm,1.3s
CAF Calviac 165.19 1 *e*PKIKP PKPdf 15 39 31.2 0.0
MNS Montasola 165.20 329 PKP PKPdf 15 39 29.1 -2.2
MNS Montasola 165.20 329 PKIKP PKPdf 15 39 29.1 -2.2
SURF Saint Ours 165.22 347 PKP PKPdf 15 39 32.0 +0.8
CUC Castrocucco 165.22 316 *e*PKPdf PKPdf 15 39 29.0 -2.4
CUC *e*PKPab PKPab 15 40 33.1 +4.2
CUC *e*PP PP 15 44 13.7 -1.9
CUC LR LR
comp=Z,29μm,22.0s
RORO Rocca Rossa 165.30 344 PKP PKPdf 15 39 31.5 +0.2
STV Sant Anna di V 165.34 346 PKP PKPdf 15 39 31.7 +0.4
STV Sant Anna di V 165.34 346 PKIKP PKPdf 15 39 31.7 +0.4
OCF Saint Nazaire 165.36 352 PKP PKPdf 15 39 32.0 +0.7
OG26 St.-Nazaire-De 165.36 352 PKP PKPdf 15 39 32.0 +0.7
EARI Arriondas 165.50 23 PKP PKPdf 15 39 33.6 +2.2
IMI Imperia 165.53 344 PKP PKPdf 15 39 30.9 -0.6
SAOF Saorge 165.54 345 PKP PKPdf 15 39 31.2 -0.3
SAOF Saorge 165.54 345 PKIKP PKPdf 15 39 31.2 -0.3
CFTV Fuerteventura 165.54 93 PKP PKPdf 15 39 33.2 +1.3
ERUA La Rua 165.54 29 PKP PKPdf 15 39 33.1 +1.5
ERUA La Rua 165.54 29 PKIKP PKPdf 15 39 33.1 +1.6
ELOB Lobios 165.55 33 PKP PKPdf 15 39 35.2 +3.7
AUTN L'Aution 165.56 345 PKP PKPdf 15 39 32.8 +1.3
AUTN L'Aution 165.56 345 PKIKP PKPdf 15 39 32.8 +1.3
LUCF Luceram 165.67 345 PKP PKPdf 15 39 36.3 +4.7
RDP Rocca di Papa 165.67 327 PKP PKPdf 15 39 31.0 -0.7
RDP Rocca di Papa 165.67 327 PKIKP PKPdf 15 39 31.0 -0.7
SBF Sospel 165.68 345 *e*PKIKP PKPdf 15 39 30.5 -1.1
comp=Z,223nm,1.2s
SBF Sospel 165.68 345 *e*PKIKP PKPdf 15 39 30.5 -1.1
PCAB Cabril 165.69 33 *e*PKPdf PKPdf 15 39 32.1 +0.4
PCAB Cabril 165.69 33 *e*PP PP 15 44 18.9 +1.3
REVF Revere 165.81 345 PKP PKPdf 15 39 34.5 +2.8
REVF Revere 165.81 345 PKIKP PKPdf 15 39 34.5 +2.8
CALN Calern 165.90 346 PKP PKPdf 15 39 35.9 +4.1
CALN Calern 165.90 346 PKIKP PKPdf 15 39 35.9 +4.1
SMRF Simiane la Rot 165.91 350 *e*PKIKP PKPdf 15 39 31.8 0.0
comp=Z,530nm,1.8s
LASF Ste Croix 166.00 356 *e*PKIKP PKPdf 15 39 31.8 -0.1
comp=Z,673nm,1.9s
ECAL Calabor 166.09 29 PKP PKPdf 15 39 34.3 +2.3
ELAN Lanestosa 166.09 18 PKP PKPdf 15 39 33.2 +1.3
FRF La Foret Royal 166.13 347 *e*PKIKP PKPdf 15 39 31.2 -0.8
comp=Z,162nm,1.1s
FRF La Foret Royal 166.13 347 *e*PKIKP PKPdf 15 39 31.2 -0.8
SOI Samo 166.16 309 PKP PKPdf 15 39 31.5 -0.7
SOI Samo 166.16 309 PKIKP PKPdf 15 39 31.5 -0.7
PVRL Vila Real 166.17 34 *e*PKPdf PKPdf 15 39 31.8 -0.3
PVRL Vila Real 166.17 34 *e*PKPab PKPab 15 40 36.5 +3.6
PVRL Vila Real 166.17 34 *e*PP PP 15 44 20.2 +0.1
PBRG Braganca 166.19 30 *e*PKPdf PKPdf 15 39 33.0 +0.9
PBRG Braganca 166.19 30 *e*PKPab PKPab 15 40 43.2 +10
PBRG Braganca 166.19 30 *e*PP PP 15 44 19.1 -1.0
PBRG *e*SS SS 16 05 10.9 +13
PBRG *e*LR LR 16 37 15.9
comp=Z,29μm,20.0s
LMR La Mourre 166.38 347 *e*PKIKP PKPdf 15 39 31.5 -0.7
comp=Z,152nm,1.3s
LMR La Mourre 166.38 347 *e*PKIKP PKPdf 15 39 31.5 -0.7
MTTG Motta San Giov 166.44 309 PKP PKPdf 15 39 31.6 -0.8
PGF Pioggiola 166.48 339 *e*PKIKP PKPdf 15 39 31.3 -1.0
comp=Z,259nm,1.4s
PGF Pioggiola 166.48 339 *e*PKIKP PKPdf 15 39 31.3 -1.0
PVIS Viseu 166.51 35 *e*PKPdf PKPdf 15 39 35.8 +3.4
PVIS Viseu 166.51 35 *e*PKPab PKPab 15 40 49.4 +15
PVIS Viseu 166.51 35 *e*PP PP 15 44 25.1 +3.2
EALK Alkurruntz 166.54 12 PKP PKPdf 15 39 35.1 +2.8
OSSF Osses 166.55 11 PKP PKPdf 15 39 35.7 +3.4
MVO Moncorvo 166.58 32 *e*PKPdf PKPdf 15 39 33.4 +1.0
MVO Moncorvo 166.58 32 *e*PKPab PKPab 15 40 42.7 +8.0
MVO Moncorvo 166.58 32 *e*PP PP 15 44 21.2 -1.0
MVO *e*SS SS 16 05 13.3 +12
MVO *e*LR LR 16 38 00.6
comp=Z,28μm,18.0s
MVO Moncorvo 166.58 32 PKP PKPdf 15 39 33.9 +1.5
ELIZ Elizondo 166.59 12 PKP PKPdf 15 39 35.2 +2.9
ELIZ Elizondo 166.59 12 PKIKP PKPdf 15 39 35.2 +2.9
ORDF Ordiarp 166.65 11 PKP PKPdf 15 39 36.3 +3.9
SJPF Ste Jean 166.69 11 *e*PKIKP PKPdf 15 39 32.9 +0.5
comp=Z,154nm,1.1s
SJPF Ste Jean 166.69 11 *e*PKIKP PKPdf 15 39 32.9 +0.5
MTLF Montolieu 166.78 0 *e*PKIKP PKPdf 15 39 32.2 -0.3
comp=Z,171nm,1.6s
MTLF Montolieu 166.78 0 *e*PKIKP PKPdf 15 39 32.2 -0.3
ATE Arette 166.81 10 PKP PKPdf 15 39 36.7 +4.2
LARF Larrau 166.81 11 PKP PKPdf 15 39 33.9 +1.4
REYF Montagne du Re 166.87 9 PKP PKPdf 15 39 33.8 +1.2
MTE Manteigas 166.93 36 *e*PKPdf PKPdf 15 39 33.5 +0.8
MTE Manteigas 166.93 36 *e*PKPab PKPab 15 40 44.7 +8.4
MTE Manteigas 166.93 36 *e*PP PP 15 44 20.2 -3.8
MTE *e*SS SS 16 05 17.4 +12
MTE *e*LR LR 16 38 06.5
comp=Z,26μm,22.0s
MTE Manteigas 166.93 36 *e*PKPdf PKPdf 15 39 32.9 +0.2
MTE LR LR
comp=Z,27μm,21.0s
LABF Labassere 166.94 7 PKP PKPdf 15 39 33.5 +0.9
PMAFR Mafra 166.96 44 *e*PKPdf PKPdf 15 39 32.8 0.0
PMAFR Mafra 166.96 44 *e*PKPab PKPab 15 40 47.7 +11
PMAFR Mafra 166.96 44 *e*PP PP 15 44 31.4 +6.9
PMAFR *e*SS SS 16 05 04.2 -2.1
PMAFR *e*LR LR 16 37 48.9
comp=Z,29μm,20.0s
EPF Esparros 166.99 7 *e*PKIKP PKPdf 15 39 32.8 +0.1
comp=Z,100nm,0.9s
EPF Esparros 166.99 7 *e*PKIKP PKPdf 15 39 32.8 +0.1
ETSF Etsaut 167.01 10 *e*PKIKP PKPdf 15 39 33.6 +0.9
comp=Z,114nm,1.2s
ETSF Etsaut 167.01 10 *e*PKIKP PKPdf 15 39 33.6 +0.9
PTOM Tomar 167.03 40 *e*PKPdf PKPdf 15 39 37.2 +4.4
PTOM Tomar 167.03 40 *e*PP PP 15 44 30.4 +5.7
VIEF Viey 167.10 8 PKP PKPdf 15 39 34.5 +1.8
LRDF Laroque-de-Fa 167.18 359 PKP PKPdf 15 39 32.8 0.0
MELF Melles 167.19 5 PKP PKPdf 15 39 36.0 +3.2
LIS Lisbon 167.19 45 *e*P PKPdf 15 39 33.2 +0.2
LIS *e*SS SS 16 05 08.1 -0.6
LIS Lisbon 167.19 45 *e*P PKPdf 15 39 33.2 +0.3
LIS *e*SS SS 16 05 08.1 -0.6
LIS Lisbon 167.19 45 *e*PKIKP PKPdf 15 39 33.2 +0.2
LIS *e*SS SS 16 05 08.1 -0.6
LIS Lisbon 167.19 45 AMS AMS 17 09 50.2
comp=E,28μm,18.7s
RESF Ens 167.21 7 PKP PKPdf 15 39 34.3 +1.5
EBIE Bielsa 167.31 7 PKP PKPdf 15 39 36.5 +3.6
SALF Salau 167.33 4 PKP PKPdf 15 39 36.1 +3.2
PCBR Castelo Branco 167.37 37 *e*PKPdf PKPdf 15 39 33.3 +0.3
PCBR Castelo Branco 167.37 37 *e*PP PP 15 44 26.8 +0.4
CARF Carcanieres 167.41 1 PKP PKPdf 15 39 32.1 -0.9
PMTG Montargil 167.51 41 *e*PKPdf PKPdf 15 39 33.2 0.0
PMTG Montargil 167.51 41 *e*PKPab PKPab 15 40 46.0 +7.1
PMTG Montargil 167.51 41 *e*PP PP 15 44 29.3 +2.1
PMTG *e*SS SS 16 05 24.2 +13
PMTG *e*LR LR 16 37 57.1
comp=E,24μm,18.0s
FILF Fillols 167.56 359 PKP PKPdf 15 39 32.9 -0.2
VAE Valguarnera 167.57 310 PKP PKPdf 15 39 34.7 +1.4
comp=E,4.5nm,0.3s,baz=323,slow=5.1,SNR=5.0
VAE PKPab PKPab 15 40 40.6 +1.3
comp=E,44nm,0.9s,baz=297,slow=0.4,SNR=4.5
CLLI Llivia 167.64 1 PKP PKPdf 15 39 36.6 +3.4
EJON La Jonquera 167.67 358 PKP PKPdf 15 39 35.7 +2.5
CSOR Sort 167.71 4 PKP PKPdf 15 39 37.5 +4.3
VALF Valcebollere 167.72 1 PKP PKPdf 15 39 33.5 +0.3
PMRV Marv??o 167.72 38 *e*PKPdf PKPdf 15 39 35.4 +2.1
PMRV Marv??o 167.72 38 *e*PKPab PKPab 15 40 47.3 +7.5
PMRV Marv??o 167.72 38 *e*PP PP 15 44 32.9 +4.7
PMRV *e*SS SS 16 05 26.1 +12
PMRV *e*LR LR 16 37 59.2
comp=E,27μm,18.0s
EPLA Plasencia 167.89 33 PKP PKPdf 15 39 35.4 +2.0
EPLA Plasencia 167.89 33 PKIKP PKPdf 15 39 35.4 +2.0
EVOP Sao Brissos 167.93 43 *e*PKPdf PKPdf 15 39 33.3 -0.2
EVOP Sao Brissos 167.93 43 *e*PKIKP PKPdf 15 39 33.3 -0.2
EVO Evora 167.99 43 *e*PKIKP PKPdf 15 39 33.3 -0.2
comp=E,297nm,1.3s
EVO *e*MLR MLR
comp=Z,44μm,20.2s
PESTR Estremoz 168.01 41 *e*PKPdf PKPdf 15 39 34.2 +0.7
PESTR Estremoz 168.01 41 *e*PKPab PKPab 15 40 48.7 +7.6
PESTR Estremoz 168.01 41 *e*PP PP 15 44 32.6 +2.8
PESTR *e*SS SS 16 05 10.7 -5.9
PESTR *e*LR LR 16 38 42.6
comp=Z,28μm,18.0s
ESAC San Caprasio 168.18 10 PKP PKPdf 15 39 36.3 +2.7
EMIR Miracle 168.19 3 PKP PKPdf 15 39 36.3 +2.8
DGI Dorgali Grotta 168.21 332 PKP PKPdf 15 39 34.0 +0.4
GUD Guadarrama 168.21 25 PKP PKPdf 15 39 36.1 +2.5
GUD Guadarrama 168.21 25 PKIKP PKPdf 15 39 36.1 +2.5
WDD Wield Dalam 168.29 303 PFAKE 15 39 50.0 +16
WDD LR LR
comp=Z,36μm,22.0s
MESJ Messejana 168.31 46 *e*P PKPdf 15 39 33.4 -0.4
MESJ *e*SS SS 16 05 19.0 -1.0
MESJ Messejana 168.31 46 *e*PKIKP PKPdf 15 39 33.4 -0.4
MESJ *e*SS SS 16 05 19.0 -1.0
MESJ Messejana 168.31 46 AMS AMS 17 10 39.8
comp=Z,26μm,15.4s
PFVI Vila Bisbo 168.33 50 *e*PKPdf PKPdf 15 39 34.8 +1.0
PFVI Vila Bisbo 168.33 50 *e*PP PP 15 44 35.6 +3.9
PFVI *e*SS SS 16 05 15.6 -4.9
PFVI *e*LR LR 16 38 50.6
comp=Z,20μm,18.0s
PFVI Vila Bisbo 168.33 50 PKP PKPdf 15 39 37.2 +3.4
MORF Marmelete 168.35 49 *e*PKPdf PKPdf 15 39 35.5 +1.7
MORF Marmelete 168.35 49 *e*PP PP 15 44 37.3 +5.5
MORF *e*SS SS 16 05 33.3 +13
MORF *e*LR LR 16 41 00.0
comp=Z,24μm,22.0s
MORF Marmelete 168.35 49 *e*PKIKP PKPdf 15 39 33.6 -0.2
MORF *e*SS SS 16 05 20.3 -0.3
CFON Fontmartina 168.36 360 PKP PKPdf 15 39 36.2 +2.5
EBAD Badajoz 168.41 39 PKP PKPdf 15 39 36.5 +2.7
PBEJ Beja 168.41 44 *e*PKPdf PKPdf 15 39 38.3 +4.5
PCVE Castro Verde 168.55 46 *e*PKPdf PKPdf 15 39 34.9 +1.0
PCVE Castro Verde 168.55 46 *e*PKPab PKPab 15 40 54.8 +11
PCVE Castro Verde 168.55 46 *e*PP PP 15 44 32.4 -0.3
PCVE *e*SS SS 16 05 38.0 +16
PCVE *e*LR LR 16 38 56.4
comp=Z,25μm,22.0s
EPOB Poblet 168.72 5 PKP PKPdf 15 39 37.3 +3.4
PBAR Barrancos 168.80 42 *e*SS SS 16 05 38.5 +14
PBAR *e*LR LR 16 38 20.1
comp=Z,26μm,20.0s
PBDV Barranco-do-Ve 168.85 48 *e*PKPdf PKPdf 15 39 36.2 +2.1
PBDV Barranco-do-Ve 168.85 48 *e*PKPab PKPab 15 40 57.0 +12
PBDV Barranco-do-Ve 168.85 48 *e*PP PP 15 44 40.2 +5.9
PBDV *e*SS SS 16 05 22.4 -3.2
PBDV *e*LR LR 16 41 24.6
comp=Z,26μm,20.0s
PVAQ Vaqueiros 168.89 46 *e*PKPdf PKPdf 15 39 37.0 +2.8
PVAQ Vaqueiros 168.89 46 *e*PKPab PKPab 15 40 52.8 +7.7
PVAQ Vaqueiros 168.89 46 *e*PP PP 15 44 34.6 +0.2
PVAQ *e*SS SS 16 05 38.3 +12
PVAQ *e*LR LR 16 38 47.2
comp=Z,25μm,20.0s
EGRO El Granado 168.96 45 PKP PKPdf 15 39 36.0 +1.8
VSL Villasalto 169.00 330 *e*PKPdf PKPdf 15 39 32.5 -1.6
VSL *e*PP PP 15 44 27.7 -6.7
VSL LR LR
comp=Z,22μm,20.0s
ERTA Horta de San J 169.04 8 PKP PKPdf 15 39 39.2 +5.1
PAB San Pablo 169.08 29 *e*PKPdf PKPdf 15 39 35.3 +1.1
PAB LR LR
comp=Z,41μm,22.0s
PAB San Pablo 169.08 29 *e*PKIKP PKPdf 15 39 35.3 +1.1
PAB MLR MLR
comp=Z,41μm,22.0s
ESDC Sonseca Array 169.13 27 PKP PKPdf 15 39 34.8 +0.6
comp=Z,7.2nm,0.9s,baz=342,slow=2.4,SNR=17
ESDC PKPab PKPab 15 40 47.1 +1.1
comp=Z,23nm,1.0s,baz=313,slow=2.5,SNR=4.8
ESDC PP PP 15 44 40.5 +5.5
comp=Z,44nm,1.2s,baz=342,slow=5.3,SNR=6.0
ESDC Sonseca Array 169.13 27 PKP PKPdf 15 39 34.8 +0.6
ESDC PKP PKPdf 15 39 38.3 +4.0
ESDC PKPab PKPab 15 40 47.1 +1.1
ESDC PP PP 15 44 40.5 +5.5
ESLA Sonseca Array 169.13 27 *e*PKPdf PKPdf 15 39 34.5 +0.3
ESLA LR LR
comp=Z,245μm,22.0s
EMIN Mina Concepcio 169.29 42 PKP PKPdf 15 39 37.5 +3.1
EMOS Mosqueruela 169.50 12 PKP PKPdf 15 39 36.8 +2.4
ECAB El Cabril 169.76 37 PKP PKPdf 15 39 36.9 +2.2
EADA Adamuz 170.11 34 PKP PKPdf 15 39 38.8 +3.9
ECHE Chera 170.14 15 PKP PKPdf 15 39 37.5 +2.7
ECHE Chera 170.14 15 PKIKP PKPdf 15 39 37.5 +2.7
ETOS Mallorca 170.34 358 PKP PKPdf 15 39 38.1 +3.2
ESPR Espera 170.37 43 PKP PKPdf 15 39 38.3 +3.2
SFS San Fernando 170.42 46 PFAKE 15 39 50.0 +15
SFS LR LR
comp=Z,94μm,20.0s
EBAN Banos Encina 170.48 31 PKP PKPdf 15 39 38.7 +3.6
EBAN Banos Encina 170.48 31 PKIKP PKPdf 15 39 38.7 +3.6
EVIA Vianos 170.58 24 PKP PKPdf 15 39 38.1 +3.0
EVIA Vianos 170.58 24 PKIKP PKPdf 15 39 38.1 +3.0
ELUQ Luque 170.74 35 PKP PKPdf 15 39 37.9 +2.6
ELUQ Luque 170.74 35 PKIKP PKPdf 15 39 37.9 +2.7
ETOB Tobarra 170.88 20 PKP PKPdf 15 39 38.9 +3.6
EJIF Jimena Fronter 170.88 44 PKP PKPdf 15 39 37.2 +1.9
EJIF Jimena Fronter 170.88 44 PKIKP PKPdf 15 39 37.2 +1.8
EIBI Ibiza 171.05 5 PKP PKPdf 15 39 39.9 +4.6
EQES Quesada 171.09 29 PKP PKPdf 15 39 37.5 +2.0
EBEN Beniarda 171.15 13 PKP PKPdf 15 39 37.1 +1.7
EMIJ Mijas 171.21 41 PKP PKPdf 15 39 39.0 +3.5
EHUE Huescar 171.27 27 PKP PKPdf 15 39 39.7 +4.2
EHUE Huescar 171.27 27 PKIKP PKPdf 15 39 39.7 +4.2
EGUA Guajares 171.65 35 PKP PKPdf 15 39 38.0 +2.3
EGUA Guajares 171.65 35 PKIKP PKPdf 15 39 38.0 +2.3
EMUR La Murta 171.72 20 PKP PKPdf 15 39 37.8 +2.0
KEST Kesra 171.88 316 PKP PKPdf 15 39 36.1 +0.3
comp=Z,12nm,0.9s,baz=306,slow=2.2,SNR=12
KEST PKPab PKPab 15 40 59.2 +0.8
comp=Z,24nm,1.1s,baz=337,slow=5.8,SNR=3.2
KEST PP PP 15 44 56.2 +6.9
comp=Z,13nm,1.0s,baz=17,slow=3.2,SNR=3.8
KEST Kesra 171.88 316 *e*PKPdf PKPdf 15 39 35.9 +0.1
EBER Berja 171.92 32 PKP PKPdf 15 39 38.2 +2.3
TAM Tamanrasset 172.19 202 *e*PKPdf PKPdf 15 39 37.2 +0.8
TAM LR LR
comp=Z,58μm,22.0s
TAM Tamanrasset 172.19 202 *e*PKIKP PKPdf 15 39 37.2 +0.8
TAM MLR MLR
comp=Z,58μm,22.0s
CMAH Djebel Manchou 172.24 328 P PKPdf 15 39

CAEH	'Ain El Ouahch	172.35 332	P		PKPdf	15 39 39.2	+3.2
ABSA	Djebel Ababsia	172.50 327	P		PKPdf	15 39 38.0	+1.9
CKFL	Kef-Lekhel	172.73 331	P		PKPdf	15 39 40.6	+4.4
DFRA	Djebel Bou Aff	172.93 336	P		PKPdf	15 39 43.3	+7.0
CASM	Aïn Smara	172.95 332	P		PKPdf	15 39 43.3	+7.0
CTEI	Djebel Teioual	173.15 331	P		PKPdf	15 39 43.5	+7.1
SET	Setif	173.40 338	P		PKPdf	15 39 38.0	+1.5
MDT	Midelt	173.45 64	PKP		PKPdf	15 39 36.0	-0.6
	comp=Z,26nm,1.1s,baz=242,slow=9.2,SNR=7.9						
MDT			PP		PP	15 45 08.2	+11
	comp=Z,28nm,1.2s,baz=311,slow=5.0,SNR=6.6						
CKHR	Kef el Ahmar	173.53 337	P		PKPdf	15 39 45.0	+8.4
EBNR	Beni Rached	173.78 6	P		PKPdf	15 39 42.0	+5.4
EMHD	Djebel Mahouad	173.89 356	P		PKPdf	15 39 28.2	-8.5
ECHA	Ech Chlef	173.91 8	P		PKPdf	15 39 40.0	+3.3
EANR	'Ain N'Sour	174.07 10	P		PKPdf	15 39 38.6	+1.9
ETRT	Tiaret	174.65 9	P		PKPdf	15 39 38.0	+1.0

DJA 29 15:21:41.0±14.5×122.99E, h75km, MLv4.1/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.92	194	P	Pn	15 21 58.2	-0.6
LUWI				S	Sn	15 22 13.1	+1.0
MRSI	Marisa	1.22	300	P	Pn	15 22 02.6	+0.1
MRSI				S	Sn	15 22 19.0	+0.5
KMSI	Cibinong	1.22	54	P	Pn	15 22 03.4	+0.9
TOLI	Toli-Toli	2.53	300	P	Pn	15 22 21.1	+1.2
KDI	Kendari	3.81	186	P	Pn	15 22 36.4	-0.9
TTSI	Tana Toraja	4.29	228	P	Pn	15 22 43.9	+0.1
SPSI	Sidrap Palu	4.98	220	P	Pn	15 22 53.3	0.0
NLAI	Namlea	5.13	127	P	Pn	15 22 55.0	-0.4
	0.3nm2μm48nm,0.6s						
BBSI	Bau Bau	5.33	185	P	Pn	15 22 58.5	+0.4

IDC 29 15:33:41.2±2.9, 30.04S×177.35W, h0km, mb4.1/3, mb1 4.4/4, mb1mx4.1/17, mbtmp4.3/4, ML4.0/1, Error ellipse: s-maj=65.7km s-min=46.1km az=125.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	9.39	208	Pn	Pn	15 35 58.7	+0.9
	1.5nm,0.3s,baz=17,slow=20,SNR=2.3						
URZ				Sn	Sn	15 37 39.2	-4.8
	baz=193,slow=18,SNR=1.6						
CTA	Charters Tower	34.30	278	P	P	15 40 30.7	+1.2
	5.1nm,0.8s,baz=111,slow=8.6,SNR=6.1						
ASAR	Alice Springs	43.69	266	P	P	15 41 47.4	-0.7
	0.8nm,0.6s,baz=104,slow=7.8,SNR=5.5						
WRA	Warramunga Arr	44.65	271	P	P	15 41 54.9	-0.9
	1.5nm,0.4s,baz=110,slow=8.2,SNR=51						
FINES	FINESS Array B	145.00	341	PKPbc	PKPdf	15 53 18.6	-1.1
	3.2nm,0.5s,baz=53,slow=3.4,SNR=9.0						

*IDC **29** 15:36:56.4±1.7, 30.17S×177.18W, h0km, mb4.2/4, mb1 4.3/5, mb1mx4.1/17, mbtmp4.2/5, ML3.1/1, Error ellipse: s-maj=51.7km s-min=28.9km az=138.0*
*NEIC **29** 15:37:01.4±1.1, 30.27S×177.13W, h35km, Error ellipse: s-maj=32.6km s-min=19.3km az=121.0*
ISC 29 15:36:57.1±5.1, 30.25S±0.1×176.5W±0.7, h35km, n10, σ0.89/7, mb4.1/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	9.57	212	Pn	Pn	15 39 12.3	0.0
	0.2nm,0.3s,baz=131,slow=19,SNR=1.8						
URZ				Sn	Sn	15 40 58.4	-0.1
	0.8nm,0.3s,baz=41,slow=20,SNR=3.1						
CTA	Charters Tower	35.02	278	P	P	15 43 46.6	+0.1
	3.0nm,0.7s,mb4.3,baz=86,slow=12,SNR=6.2						
STKA	Stephens Creek	35.75	256	P	P	15 43 54.4	+1.8
	2.8nm,0.8s,mb4.3,baz=97,slow=12,SNR=4.5						
STKA	Stephens Creek	35.75	256	eP	P	15 43 54.5	+1.9
	0.2nm,0.6s,mb3.2						
ASAR	Alice Springs	44.38	266	P	P	15 45 04.0	-0.4
	1.7nm,0.5s,mb4.0,baz=103,slow=7.4,SNR=22						
WRA	Warramunga Arr	45.36	271	P	P	15 45 10.9	-1.2
	1.5nm,0.5s,mb4.1,baz=110,slow=8.1,SNR=9.9						
FINES	FINESS Array B	145.42	341	PKPbc	PKPbc	15 56 34.4	+3.8
	5.2nm,0.4s,baz=56,slow=3.7,SNR=29						
NOA	NORSAR Array B	148.77	353	PKPbc	PKPbc	15 56 43.9	+3.8
	0.9nm,0.8s,baz=15,slow=4.3,SNR=2.7						
AKASG	Malin Array Be	151.93	324	PKPbc	PKPbc	15 56 52.5	+4.5
	2.0nm,0.6s,baz=50,slow=3.2,SNR=4.7						
BRTR	Keskin Array B	153.63	299	PKPbc	PKPbc	15 56 55.5	+3.5
	0.7nm,0.9s,baz=8.7,slow=1.9,SNR=3.9						

*IDC **29** 15:37:24.0±1.2, 13.19N×120.29E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/21, mbtmp3.7/4, Error ellipse: s-maj=25.5km s-min=12.1km az=117.0*
*ISCJB **29** 15:37:24.9±0.6, 13.28N±0.04×120.16E±0.08, h10km, mb3.7/4, Error ellipse: s-maj=11.2km s-min=5.3km az=8.1*
*MAN **29** 15:37:24, 13.21N×120.23E, h1km, mb4.5, ML3.4, MS3.3*
ISC 29 15:37:25.8±0.6, 13.28N±0.04×120.21E±0.08, h10km, n16, σ1.13/18, mb3.7/4, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.45	4	eP	Pg	15 37 34.0	-0.7
LUBP				eS	Sg	15 37 40.2	-0.5
TGY	Tagaytay City	1.08	41	Pg	Pg	15 37 45.7	-0.9
	271nm,0.3s,baz=229,slow=4.3,SNR=18						
TGY				Lg		15 38 00.4	
	469nm,0.3s,baz=84,slow=22,SNR=18						
TGY	Tagaytay City	1.08	41	⇓eP	Pb	15 37 45.7	-0.9
BUSP	Coron	1.27	181	eP	Pn	15 37 49.3	-0.4
BUSP				eS	Sb	15 38 00.4	-5.9
BOAC	Boac	1.60	84	eP	Pn	15 37 54.0	-0.2
OTRP	Odiongan	1.99	117	eP	Pn	15 38 01.6	+2.0
ENPP	El Nido	2.20	201	eP	Pn	15 38 02.4	-0.1
POLP	Polilio Island	2.21	49	eP	Pn	15 38 04.1	+1.5
AUQP	San Andres	2.40	89	eP	Pn	15 38 10.2	+5.0
CUYO	Cuyo Island	2.54	162	eP	Pn	15 38 06.8	-0.4
BALP	Baler	2.78	28	eP	Pn	15 38 12.6	+2.1
QUIM	Jordan	3.52	138	eP	Pn	15 38 20.9	+0.3
CMAR	Chiang Mai Arr	21.09	287	P	P	15 42 12.8	+2.2
	2.1nm,0.8s,mb3.5,baz=98,slow=9.1,SNR=5.8						
WRA	Warramunga Arr	35.82	157	P	P	15 44 24.0	-1.7
	1.3nm,0.9s,mb3.9,baz=336,slow=9.5,SNR=4.9						
SONM	Songino Array	36.32	344	P	P	15 44 29.2	-0.5
	1.2nm,0.6s,mb4.0,baz=157,slow=10.0,SNR=3.5						
ASAR	Alice Springs	39.09	160	P	P	15 44 52.5	-0.9
	0.8nm,0.7s,mb3.5,baz=337,slow=8.0,SNR=7.6						

IGQ 29 15:39:21.8, 1.14S×78.75W, h11km±2km, Mb4.0, Ms3.8, 8C-17D, Error ellipse: s-maj=2.5km s-min=0.6km az=176.1, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGUA	Igualata	0.37	162	⇑P	Pg	15 39 30.1	+0.9
IGUA	Igualata	0.37	162	⇑S	Sg	15 39 35.2	+1.1
PISA	Pisayambo	0.38	78	⇑P	Pg	15 39 29.4	+0.1
JUI6	Juive	0.40	135	P	Pg	15 39 29.8	0.0
BIL2	Estacion Bilba	0.40	142	S	Sg	15 39 35.8	+0.6
BIL2	Estacion Bilba	0.40	142	P	Pg	15 39 30.4	+0.6
BBIL	Ulba Tungurahu	0.41	140	P	Pg	15 39 30.5	+0.6
BBIL	Ulba Tungurahu	0.41	140	S	Sg	15 39 36.8	+1.4
RETU	Refugio	0.44	136	⇓P	Pg	15 39 31.3	+0.9
BRUN	Tungurahua Vol	0.44	130	⇓P	Pg	15 39 30.6	0.0
BMAS	Trigal station	0.46	143	⇓S	Sg	15 39 38.6	+1.7
BMAS	Trigal station	0.46	143	⇓P	Pg	15 39 31.3	+0.5
BULB	Ulba Tungurahu	0.46	131	⇓P	Pg	15 39 31.1	+0.3
ULBA	Ulba	0.46	132	⇓P	Pg	15 39 30.8	-0.1
ARRY	Arrayan	0.47	141	⇓P	Pg	15 39 31.0	-0.1
PAT1	Patacocha	0.48	140	⇑P	Pg	15 39 31.5	+0.2
BMOR	Cotopaxi Volca	0.50	36	⇓P	Pg	15 39 32.4	+0.8
CAMI	Rancho Maria	0.52	28	⇓P	Pg	15 39 33.0	+1.0
MOV1	Cotopaxi Vol s	0.52	37	⇓P	Pg	15 39 32.4	+0.3
BREF	Cotopaxi Volca	0.56	34	⇓P	Pg	15 39 33.8	+1.1
NAS2	Nasa	0.56	30	⇓P	Pg	15 39 33.8	+1.0
BTAM	Cotopaxi Volca	0.58	38	⇓P	Pg	15 39 33.9	+0.8
TAMB	Tambo	0.58	41	⇓P	Pg	15 39 33.7	+0.5
BVC2	Cotopaxi Volca	0.58	36	⇓P	Pg	15 39 34.0	+0.8
VC1	Cotopaxi 1	0.60	35	⇓P	Pg	15 39 34.2	+0.7
COV1	Cotopaxi Volc	0.62	41	P	Pg	15 39 33.5	-0.4
PITA	Cotopaxi Volc	0.66	29	⇑P	Pg	15 39 35.5	+1.0
ANTI	Antisana	0.90	41	⇑P	Pg	15 39 38.9	-0.3
JUA2	San Juan 2	0.93	9	⇑P	Pg	15 39 40.2	+0.5
TERV	Terraza Guagua	0.97	9	P	Pg	15 39 41.1	+0.6
GGP	Refugio Guagua	0.97	9	⇑P	Pg	15 39 40.9	+0.3
CAYR	Refugio Cayamb	1.36	33	P	Pn	15 39 49.3	+2.4
CAYA	Cayambe	1.42	32	⇓P	Pn	15 39 49.5	+1.8
CHAR	Charly	1.50	46	P	Pn	15 39 50.8	+2.0

*IDC **29** 15:41:40.3±2.0, 30.20S×177.18W, h0km, mb4.1/4, mb1 4.3/5, mb1mx4.0/17, mbtmp4.2/5, ML3.3/1, Error ellipse: s-maj=53.1km s-min=31.4km az=132.0*
*NEIC **29** 15:41:45.4±1.1, 30.25S×177.17W, h35km, mb4.5/1, Error ellipse: s-maj=26.9km s-min=17.5km az=112.0*
ISC 29 15:41:43.6±5.1, 30.25S±0.1×176.9W±0.7, h35km, n10, σ0.55/8, mb4.0/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	9.40	210	Pn	Pn	15 43 56.5	0.0
	0.3nm,0.3s,baz=319,slow=19,SNR=3.9						
URZ				Sn	Sn	15 45 40.9	-0.1
	1.3nm,0.3s,baz=305,slow=16,SNR=7.7						
CTA	Charters Tower	34.70	278	P	P	15 48 30.1	-0.1
	2.6nm,0.4s,mb4.5,baz=107,slow=7.5,SNR=7.3						
CTAO	Charters Tower	34.70	278	eP	P	15 48 30.4	+0.2
	2.6nm,0.4s,mb4.5						
STKA	Stephens Creek	35.42	256	P	P	15 48 37.5	+1.1
	1.3nm,0.7s,mb4.0,baz=86,slow=16,SNR=6.9						
STKA	Stephens Creek	35.42	256	P	P	15 48 37.6	+1.2
	0.1nm,0.3s,mb3.2						
ASAR	Alice Springs	44.05	266	P	P	15 49 47.8	-0.5
	1.1nm,0.5s,mb3.8,baz=103,slow=7.5,SNR=24						
WRA	Warramunga Arr	45.03	271	P	P	15 49 55.5	-0.6
	1.6nm,0.4s,mb4.2,baz=109,slow=8.1,SNR=6.6						
FINES	FINESS Array B	145.31	341	PKPbc	PKPbc	16 01 18.1	+1.4
	1.9nm,0.3s,baz=54,slow=2.9,SNR=21						
AKASG	Malin Array Be	151.73	324	PKPbc	PKPbc	16 01 36.2	+2.2
	0.4nm,0.4s,baz=45,slow=2.7,SNR=2.8						
BRTR	Keskin Array B	153.34	299	PKPbc	PKPbc	16 01 39.1	+1.1
	0.2nm,0.5s,baz=86,slow=4.5,SNR=2.7						

IDC 29 15:45:20.6±22.0, 29.71S×178.95W, h387km±205km, mb3.3/5, mb1 3.4/5, mb1mx3.2/16, mbtmp3.3/5, Error ellipse: s-maj=136.2km s-min=26.3km az=54.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	32.87	279	P	P	15 51 21.2	+0.9
	1.2nm,0.5s,baz=132,slow=12,SNR=2.3						
STKA	Stephens Creek	33.83	256	P	P	15 51 28.6	+0.3
	2.2nm,0.7s,baz=103,slow=11,SNR=3.6						
ASAR	Alice Springs	42.32	267	P	P	15 52 37.6	-0.8
	0.7nm,0.4s,baz=105,slow=7.5,SNR=10						
WRA	Warramunga Arr	43.25	272	P	P	15 52 45.1	-0.7
	0.8nm,0.3s,baz=108,slow=8.2,SNR=25						
QSPA	South Pole Qui	60.40	180	P	P	15 54 50.3	+0.4
	2.3nm,1.0s,baz=116,slow=3.1,SNR=6.2						
FINES	FINESS Array B	144.22	340	PKP	PKPdf	16 04 08.1	-2.2
	2.7nm,0.6s,baz=31,slow=2.7,SNR=8.0						
BRTR	Keskin Array B	151.54	299	PKPbc	PKPbc	16 04 30.5	+1.0
	0.6nm,1.0s,baz=74,slow=6.2,SNR=2.9						

*IDC **29** 15:46:17.5±1.6, 29.76S×178.16W, h0km, mb4.0/5, mb1 4.2/6, mb1mx4.0/17, mbtmp4.1/6, Error ellipse: s-maj=41.7km s-min=33.1km az=48.0*
*NEIC **29** 15:46:22.9±1.2, 29.91S×178.22W, h35km, Error ellipse: s-maj=29.9km s-min=22.6km az=88.0*
ISC 29 15:46:26.3±5.2, 30.1S±0.2×178.7W±0.3, h36km±40km, n10, σ1.50/8, mb4.0/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	8.82	202	Pn	Pn	15 48 31.5	+0.3
	0.9nm,0.3s,baz=36,slow=19,SNR=5.6						
URZ				Sn	Sn	15 50 09.0	-0.3
	0.8nm,0.3s,baz=164,slow=16,SNR=2.8						
CTA	Charters Tower	33.17	279	P	P	15 52 57.9	-1.7
	0.7nm,0.4s,mb3.9,baz=106,slow=7.4,SNR=2.2						
STKA	Stephens Creek	33.96	257	P	P	15 53 09.2	+2.9
	1.8nm,0.8s,mb4.1,baz=96,slow=14,SNR=2.8						
ASAR	Alice Springs	42.53	267	P	P	15 54 19.0	+0.5
	1.0nm,0.5s,mb3.8,baz=106,slow=6.8,SNR=7.2						
WRA	Warramunga Arr	43.49	272	P	P	15 54 26.3	-0.1
	1.2nm,0.6s,mb3.8,baz=112,slow=6.4,SNR=4.7						
QSPA	South Pole Qui	59.98	180	P	P	15 56 28.3	-0.2
	1.8nm,0.7s,mb4.2,baz=347,slow=2.8,SNR=5.4						
QSPA	South Pole Qui	59.98	180	P	P	15 56 28.3	-0.2
FINES	FINESS Array B	144.69	340	PKP	PKPdf	16 05 54.0	-4.4
	1.6nm,0.4s,baz=40,slow=2.4,SNR=4.1						
AKASG	Malin Array Be	150.73	322	PKPbc	PKPbc	16 06 11.0	-3.3
	0.4nm,0.4s,baz=55,slow=3.0,SNR=2.8						
BRTR	Keskin Array B	151.95	299	PKPbc	PKPbc	16 06 15.2	-2.2
	0.3nm,0.6s,baz=148,slow=4.1,SNR=3.2						

IDC 29 15:50:53.0±3.0, 30.11S×177.20W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/17, mbtmp4.0/4, ML3.0/1, Error ellipse: s-maj=63.5km s-min=36.4km az=112.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	9.39	209	Pn	Pn	15 53 09.4	-0.2
	0.2nm,0.3s,baz=294,slow=19,SNR=2.4						
URZ				Sn	Sn	15 54 56.8	+0.9
	0.3nm,0.3s,baz=127,slow=20,SNR=2.6						
CTA	Charters Tower	34.44	278	P	P	15 57 43.5	+1.1
	1.1nm,0.3s,baz=120,slow=3.2,SNR=4.0						
ASAR	Alice Springs	43.82	266	P	P	15 59 00.7	-0.1
	3.4nm,1.0s,baz=103,slow=7.0,SNR=6.7						
WRA	Warramunga Arr	44.78	271	P	P	15 59 07.7	-0.9
	1.4nm,0.8s,baz=111,slow=7.9,SNR=7.0						
FINES	FINESS Array B	145.11	341	PKPbc	PKPbc	16 10 30.4	-0.8
	0.6nm,0.3s,baz=33,slow=5.3,SNR=2.9						

IDC 29 15:54:00.1±4.6, 29.55S×177.45W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/14, mbtmp3.8/3, Error ellipse: s-maj=204.8km s-min=69.4km az=159.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.14	256	P	P	16 00 55.3	-0.2
	3.4nm,0.7s,baz=90,slow=9.9,SNR=4.6						
ASAR	Alice Springs	43.64	266	P	P	16 02 06.4	-0.1
	0.4nm,0.7s,baz=104,slow=7.1,SNR=2.6						
WRA	Warramunga Arr	44.55	271	P	P	16 02 14.1	+0.2
	0.4nm,0.3s,baz=109,slow=8.0,SNR=10						
FINES	FINESS Array B	144.51	341	PKP	PKPdf	16 13 37.2	-0.5
	1.7nm,0.5s,baz=58,slow=3.4,SNR=7.9						

IDC 29 15:57:17.4±6.0, 27.98S×177.87W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/14, mbtmp3.7/3, Error ellipse: s-maj=182.7km s-min=93.3km az=151.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	11.08	201	Sn	Sn	16 02 15.7	+14
	0.2nm,0.3s,baz=197,slow=19,SNR=1.9						
STKA	Stephens Creek	35.20	254	P	P	16 04 13.5	+0.2
	0.8nm,0.5s,baz=99,slow=11,SNR=3.1						
ASAR	Alice Springs	43.41	264	P	P	16 05 22.1	0.0
	0.5nm,0.5s,baz=104,slow=7.4,SNR=12						
WRA	Warramunga Arr	44.17	270	P	P	16 05 27.9	-0.4
	0.6nm,0.5s,baz=110,slow=7.7,SNR=6.4						
FINES	FINESS Array B	142.91	341	PKP	PKPdf	16 16 52.1	-0.2
	1.1nm,0.4s,baz=48,slow=4.3,SNR=8.3						

WEL 29 15:57:53.6±0.1, 39.42S×176.15E, h69km±2km, ML3.5/13, 5C-1D, Error ellipse: s-maj=1.0km s-min=0.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHHZ	Black Hill Sta	0.10	221	⇑PN	Pn	15 58 03.6	-0.2
BHHZ				SN	Sn	15 58 11.1	-0.1
MOVZ	Moawhango	0.30	271	⇑PN	Pn	15 58 04.3	-0.5
MOVZ				SN	Sn	15 58 11.8	-1.1
BKZ	Black Stump Fm	0.37	48	⇑PN	Pn	15 58 05.1	-0.1
BKZ				SN	Sn	15 58 13.2	-0.5
TUVZ	Tukino	0.41	291	PN	Pn	15 58 05.5	-0.1
MCHZ	McNeill Hill	0.43	94	PN	Pn	15 58 06.4	+0.7
WNVZ	Wahianoa	0.43	281	PN	Pn	15 58 05.6	-0.2
OTVZ	Oturere	0.45	304	PN	Pn	15 58 05.8	-0.1
DRZ	Dome Shelter	0.47	287	PN	Pn	15 58 06.3	+0.2
TRVZ	Turoa	0.48	284	PN	Pn	15 58 06.0	-0.1
NGZ	Ngauruhoe	0.48	299	PN	Pn	15 58 06.2	0.0
FWVZ	Far West T-bar	0.49	289	⇑PN	Pn	15 58 06.1	-0.2
RITZ	Rihia Road	0.49	333	PN	Pn	15 58 06.2	-0.1
PNHZ	Pukenui	0.50	175	PN	Pn	15 58 06.3	-0.1
KRVZ	Karewarewa	0.51	309	PN	Pn	15 58 06.3	-0.1
WPVZ	Whakapapa	0.51	294	PN	Pn	15 58 06.4	-0.1
MTVZ	Mangateitei	0.52	273	⇑PN	Pn	15 58 06.4	-0.2
WTVZ	West Tongariro	0.52	304	PN	Pn	15 58 06.4	-0.2
KATZ	Kakaramea	0.56	321	PN	Pn	15 58 06.9	-0.1
NMHZ	Naumai	0.60	59	PN	Pn	15 58 08.2	+0.7
RATZ	Rangitukua	0.62	332	PN	Pn	15 58 07.2	-0.4
PKVZ	Pokaka	0.63	281	PN	Pn	15 58 07.6	-0.1
TWVZ	Taurewa	0.65	302	PN	Pn	15 58 07.2	-0.7
TSZ	Takapari Road	0.66	192	PN	Pn	15 58 07.9	-0.2
KAHZ	Kahuranaki	0.68	124	PN	Pn	15 58 08.6	+0.3
WPHZ	Waipukurau	0.69	161	PN	Pn	15 58 08.4	+0.1
CKHZ	Cape Kidnapper	0.76	109	PN	Pn	15 58 09.6	+0.4
WATZ	Wairara	0.77	335	PN	Pn	15 58 08.9	-0.4
PXZ	Pawanui	0.83	138	PN	Pn	15 58 10.0	0.0
ALRZ	Allen Road	0.86	10	PN	Pn	15 58 09.7	-0.7
DVHZ	Dannevirke	0.88	179	PN	Pn	15 58 10.2	-0.4
RAHZ	Arahi	0.88	56	PN	Pn	15 58 10.9	+0.2
PRHZ	Porangahau	0.93	156	PN	Pn	15 58 11.3	+0.1
PRRZ	Plateau Road	0.94	12	PN	Pn	15 58 10.9	-0.4
WAZ	Wanganui	0.96	249	PN	Pn	15 58 12.2	+0.6
POWZ	Post Office Ro	1.02	196	PN	Pn	15 58 11.9	-0.4
RRRZ	Republican Roa	1.11	15	PN	Pn	15 58 13.0	-0.5
VRZ	Vera Road	1.11	285	PN	Pn	15 58 13.2	-0.3
KNZ	Kokohu	1.25	72	PN	Pn	15 58 14.9	-0.4
MRZ	Mangatainoka R	1.32	199	PN	Pn	15 58 15.3	-0.9
HIZ	Hauiti	1.35	311	PN	Pn	15 58 16.3	-0.3
RAEZ	Rainy Point	1.36	275	⇓PN	Pn	15 58 17.2	+0.5
URZ	Urewera	1.38	33	PN	Pn	15 58 16.2	-0.8
MHGZ	Mahia Peninsul	1.39	80	PN	Pn	15 58 17.3	+0.2
PRGZ	Paritu Road	1.44	71	PN	Pn	15 58 17.7	0.0
MHEZ	Mangahewa	1.45	283	PN	Pn	15 58 18.5	+0.5
DREZ	Durham Road	1.52	278	PN	Pn	15 58 19.6	+0.7
MWZ	Matawai	1.53	45	PN	Pn	15 58 18.4	-0.5
HOWZ	Holdsworth Sta	1.56	198	PN	Pn	15 58 18.0	-1.3
DFE	Dawson Falls	1.58	273	PN	Pn	15 58 20.6	+0.9
OGWZ	Otaki Gorge	1.59	208	PN	Pn	15 58 18.7	-1.0
NEZ	North Egmont	1.59	275	PN	Pn	15 58 20.6	+0.8
PKE	Pukeiti	1.69	277	PN	Pn	15 58 21.7	+0.7
TMWZ	Te Maipa	1.70	186	PN	Pn	15 58 19.9	-1.3
KIW	Kapiti Island	1.73	213	PN	Pn	15 58 20.5	-1.1
NWEZ	Newall Road	1.77	274	PN	Pn	15 58 23.3	+1.1
CNGZ	Carnagh Statio	1.86	61	PN	Pn	15 58 23.1	-0.2
CAW	Cannon Point	1.88	206	PN	Pn	15 58 22.0	-1.7
PUZ	Puketiti	2.13	52	PN	Pn	15 58 26.1	-0.8
SNZO	South Karori	2.19	210	PN	Pn	15 58 25.6	-2.1
DUWZ	D'Urville Isla	2.20	230	PN	Pn	15 58 26.6	-1.3
PLWZ	Palliser	2.26	197	PN	Pn	15 58 26.3	-2.4
TCW	Tory Channel	2.29	218	PN	Pn	15 58 27.1	-2.1
TUWZ	Tuamarina	2.62	219	PN	Pn	15 58 31.4	-2.3
NNZ	Nelson	2.78	229	PN	Pn	15 58 33.7	-2.0
THZ	Tophouse	3.41	225	PN	Pn	15 58 41.9	-2.4
KHZ	Kahutara	3.59	213	PN	Pn	15 58 43.7	-3.1
DSZ	Denniston Nort	4.04	233	PN	Pn	15 58 49.8	-3.2
LTZ	Lake Taylor	4.46	220	PN	Pn	15 58 55.2	-3.5
CTZ	Chatham Island	6.93	131	ePN	Pn	15 59 30.9	-1.5

IDC 29 15:58:44.6±1.8, 7.37S×156.10E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/17, mbtmp3.9/5, Error ellipse: s-maj=41.0km s-min=32.9km az=172.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.33	119	Pn	Pn	15 59 51.3	-0.4
	baz=274,slow=19						
HNR				Sn	Sn	16 00 51.6	+8.7
	3.3nm,0.3s,baz=288,slow=20,SNR=2.6						
WRA	Warramunga Arr	24.52	237	P	P	16 04 06.5	+0.5
	63nm,1.0s,baz=62,slow=9.6,SNR=24						
ASAR	Alice Springs	26.76	230	P	P	16 04 26.1	-0.2
	0.3nm,0.5s,baz=57,slow=10,SNR=14						
FITZ	Fitzroy Crossi	31.52	247	P	P	16 05 08.7	+0.1
	4.4nm,1.3

mb5.1/54,**MS5.6**/3,**150C-152D,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**8.61**	**202**	*e*PN	**Pn**	**16 12 37.5**	**-1.3**
PUZ				SN	**Sn**	**16 14 18.4**	**+2.5**
OUZ	**Omahuta**	**8.96**	**233**	*e*P	Px	16 12 54.7	
	60nm,0.6s						
CNGZ	**Carnagh Statio**	**9.00**	**201**	*e*PN	**Pn**	**16 12 44.7**	**+0.5**
CNGZ				SN	**Sn**	**16 14 29.9**	**+4.3**
URZ	**Urewera**	**9.19**	**207**	Pn	**Pn**	**16 12 50.3**	**+3.5**
	3.7nm,0.3s,baz=32,slow=12,SNR=12						
URZ				Sn	**Sn**	**16 14 32.4**	**+2.3**
	29nm,0.3s,baz=173,slow=18,SNR=12						
URZ	**Urewera**	**9.19**	**207**	*e*P	**Pn**	**16 12 49.4**	**+2.6**
	54nm,0.7s						
URZ	**Urewera**	**9.19**	**207**	*e*PN	**Pn**	**16 12 47.0**	**+0.2**
URZ				SN	**Sn**	**16 14 31.7**	**+1.5**
PXZ	**Pawanui**	**10.84**	**203**	SN	**Sn**	**16 15 09.1**	**-1.6**
TSZ	**Takapari Road**	**11.19**	**206**	*e*PN	**Pn**	**16 13 13.9**	**-0.4**
TSZ				SN	**Sn**	**16 15 17.6**	**-1.7**
TCW	**Tory Channel**	**12.85**	**209**	SN	**Sn**	**16 15 54.0**	**-5.8**
MSVF	**Nonsavu**	**12.97**	**341**	*e*P	**Pn**	**16 13 38.7**	**0.0**
	213nm,1.5s						
MSVF	**Nonsavu**	**12.97**	**341**	Pn	**Pn**	**16 13 38.6**	**-0.1**
	427nm,1.1s,SNR=6.5						
TUWZ	**Tuamarina**	**13.17**	**209**	SN	**Sn**	**16 16 02.0**	**-5.5**
NNZ	**Nelson**	**13.24**	**211**	SN	**Sn**	**16 16 05.7**	**-3.6**
CMWZ	**Cape Campbell**	**13.32**	**207**	SN	**Sn**	**16 16 08.9**	**-2.4**
CTZ	**Chatham Island**	**13.59**	**177**	SN	**Sn**	**16 16 06.0**	**-12**
THZ	**Tophouse**	**13.89**	**211**	*e*PN	**Pn**	**16 13 48.6**	**-2.5**
THZ				SN	**Sn**	**16 16 19.7**	**-5.4**
KHZ	**Kahutara**	**14.15**	**208**	*e*PN	**Pn**	**16 13 51.8**	**-2.9**
KHZ				SN	**Sn**	**16 16 24.8**	**-6.9**
LTZ	**Lake Taylor**	**14.99**	**210**	*e*PN	**Pn**	**16 14 09.2**	**+3.2**
MQZ	**McQueen's Vall**	**15.59**	**207**	SN	**Sn**	**16 16 56.0**	**-11**
RPZ	**Rata Peaks**	**16.27**	**211**	Pn	**Pn**	**16 14 26.4**	**+3.7**
	5.0nm,0.3s,baz=214,slow=0.5,SNR=21						
RPZ				Sn	**Sn**	**16 17 13.6**	**-9.4**
	1.7nm,0.3s,baz=190,slow=22,SNR=6.2						
RPZ	**Rata Peaks**	**16.27**	**211**	*e*P	**Pn**	**16 14 23.8**	**+1.1**
	40nm,0.6s						
DZM	**Mont Dzumac**	**16.40**	**296**	*e*P	**Pn**	**16 14 30.6**	**+6.0**
NOUC	**Port Laguerre**	**16.50**	**295**	*e*P	**Pn**	**16 14 31.3**	**+5.5**
AFI	**Afiamalu**	**17.04**	**20**	Pn	**Pn**	**16 14 27.6**	**-5.1**
	1.3nm,0.3s,baz=63,slow=16,SNR=3.0						
AFI				Sn	Sn	16 17 18.0	-24
	2.7nm,0.3s,baz=336,slow=20,SNR=3.8						
AFI	**Afiamalu**	**17.04**	**20**	Pn	**Pn**	**16 14 27.6**	**-5.1**
AFI				Sn	Sn	16 17 18.0	-24
AFI	**Afiamalu**	**17.04**	**20**	P	**Pn**	**16 14 27.6**	**-5.1**
ODZ	**Otahua Downs**	**17.51**	**209**	*e*P	**Pn**	**16 14 41.3**	**+3.0**
	188nm,0.8s						
ODZ	**Otahua Downs**	**17.51**	**209**	*e*PN	**Pn**	**16 14 39.8**	**+1.5**
RAR	**Rarotonga**	**18.37**	**65**	P	**Pn**	**16 14 41.6**	**-7.5**
	4.8nm,0.3s,baz=212,slow=11,SNR=4.4						
RAR	**Rarotonga**	**18.37**	**65**	P	**Pn**	**16 14 41.6**	**-7.5**
ARMA	**Armidale**	**26.52**	**262**	*e*P	**P**	**16 16 17.3**	**+5.3**
CNB	**Canberra Magne**	**28.17**	**251**	*e*P	**P**	**16 16 31.0**	**+4.3**
HNR	**Honiara**	**29.39**	**310**	P	**P**	**16 16 36.5**	**-1.2**
	28nm,0.7s,mb5.1,baz=157,slow=5.0,SNR=4.0						
HNR	**Honiara**	**29.39**	**310**	P	**P**	**16 16 36.5**	**-1.2**
MOO	**Moorlands**	**30.68**	**237**	*e*P	**P**	**16 16 52.7**	**+3.7**
TOO	**Toolangi**	**31.36**	**246**	*e*P	**P**	**16 16 59.3**	**+4.3**
CTA	**Charters Tower**	**34.08**	**279**	P	**P**	**16 17 20.7**	**+1.7**
	26nm,0.5s,mb5.4,baz=101,slow=10,SNR=62						
CTA	**Charters Tower**	**34.08**	**279**	*e*P	**P**	**16 17 20.8**	**+1.8**
	38nm,0.9s,mb5.3						
CTA	**Charters Tower**	**34.08**	**279**	P	**P**	**16 17 20.7**	**+1.7**
CTAO	**Charters Tower**	**34.08**	**279**	*e*P	**P**	**16 17 20.8**	**+1.8**
	72nm,1.0s,mb5.6						
CTAO	**Charters Tower**	**34.08**	**279**	*e*P	**P**	**16 17 20.8**	**+1.8**
CTAO				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.6						
STKA	**Stephens Creek**	**34.85**	**257**	P	**P**	**16 17 28.6**	**+3.1**
	comp=Z,42nm,0.8s,mb5.4,baz=93,slow=9.0,SNR=63						
STKA	**Stephens Creek**	**34.85**	**257**	*e*P	**P**	**16 17 28.5**	**+2.9**
	comp=Z,40nm,1.0s,mb5.3						
STKA	**Stephens Creek**	**34.85**	**257**	*e*P	**P**	**16 17 28.1**	**+2.6**
	comp=Z,12nm,1.0s,mb4.8						
PMG	**Port Moresby**	**38.80**	**295**	*e*P	**P**	**16 17 59.3**	**0.0**
PMG				pmax	pmax		
	comp=Z,17nm,1.2s						
COEN	**Coen**	**39.52**	**285**	*e*P	**P**	**16 18 06.6**	**+1.3**
	comp=Z,225nm,1.3s,mb5.7						
ASAR	**Alice Springs**	**43.45**	**267**	P	**P**	**16 18 38.1**	**+0.6**
	comp=Z,20nm,0.7s,mb5.0,baz=106,slow=7.1,SNR=103						
ASAR				PcP	PcP	16 20 27.1	+1.4
	comp=Z,4.6nm,0.7s,baz=116,slow=4.1,SNR=5.0						
ASAR	**Alice Springs**	**43.45**	**267**	P	**P**	**16 18 38.1**	**+0.6**
ASAR						16 20 27.1	
WRA	**Warramunga Arr**	**44.41**	**272**	P	**P**	**16 18 45.7**	**+0.4**
	comp=Z,43nm,0.7s,mb5.3,baz=110,slow=7.7,SNR=161						
WRA				S	**S**	**16 25 20.9**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=110,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**44.41**	**272**	P	**P**	**16 18 45.7**	**+0.4**
WRA				S	**S**	**16 25 20.9**	**+0.8**
FORT	**Forrest**	**46.43**	**255**	*e*P	**P**	**16 18 59.9**	**-1.3**
	comp=Z,33nm,0.7s,mb5.4						
FORT	**Forrest**	**46.43**	**255**	*e*P	**P**	**16 19 00.3**	**-0.8**
	comp=Z,36nm,0.7s,mb5.4						
SBA	**Scott Base**	**48.31**	**184**	*e*P	**P**	**16 19 20.8**	**+5.6**
	comp=Z,36nm,1.1s,mb5.3						
SBA	**Scott Base**	**48.31**	**184**	*e*P	**P**	**16 19 20.8**	**+5.6**
SBA				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.3						
KAKA	**Kakadu**	**49.21**	**279**	*e*P	**P**	**16 19 22.7**	**-0.2**
	comp=Z,20nm,0.8s,mb5.2						
KAKA	**Kakadu**	**49.21**	**279**	*e*P	**P**	**16 19 22.1**	**-0.8**
	comp=Z,56nm,0.8s,mb5.7						
FITZ	**Fitzroy Crossi**	**52.69**	**270**	P	**P**	**16 19 48.9**	**-0.2**
	comp=Z,20nm,1.0s,mb5.0,baz=132,slow=6.5,SNR=24						
FITZ	**Fitzroy Crossi**	**52.69**	**270**	*e*P	**P**	**16 19 49.3**	**+0.2**
	comp=Z,24nm,0.7s,mb5.2						
KIP	**Kipapa**	**54.63**	**23**	*d*↓P	**P**	**16 20 00.6**	**-2.5**
KLBR	**Kellerberrin**	**54.74**	**251**	*e*P	**P**	**16 20 03.3**	**-0.7**
	comp=Z,48nm,1.3s,mb5.4						
CASY	**Casey**	**55.51**	**208**	*e*P	**P**	**16 20 10.9**	**+1.9**
CASY	**Casey**	**55.51**	**208**	*e*P	**P**	**16 20 10.7**	**+1.7**
	comp=Z,79nm,0.7s,mb5.8						
MBWA	**Marble Bar**	**56.58**	**263**	*e*P	**P**	**16 20 17.4**	**0.0**
	comp=Z,5.0nm,0.6s,mb4.7						
QSPA	**South Pole Qui**	**59.96**	**180**	P	**P**	**16 20 43.8**	**+3.7**
	comp=Z,25nm,0.9s,mb5.2,baz=38,slow=3.1,SNR=48						
MAW	**Mawson**	**72.66**	**200**	P	**P**	**16 22 04.2**	**+2.6**
	comp=Z,24nm,0.8s,mb5.2,baz=127,slow=6.9,SNR=54						
MAW	**Mawson**	**72.66**	**200**	*e*P	**P**	**16 22 04.1**	**+2.5**
	comp=Z,22nm,0.8s,mb5.2						
MAW	**Mawson**	**72.66**	**200**	P	**P**	**16 22 04.2**	**+2.6**
SYO	**Syowa Base**	**77.43**	**193**	↓↓*i*P	**P**	**16 22 29.0**	**-0.1**
SYO	**Syowa Base**	**77.43**	**193**	↑↑PcP	PcP	16 22 39.0	-0.6
MJAR	**Matsushiro Arr**	**78.22**	**325**	P	**P**	**16 22 32.1**	**-1.7**
	comp=Z,7.4nm,0.8s,mb4.7,baz=167,slow=6.3,SNR=24						
MJAR	**Matsushiro Arr**	**78.22**	**325**	P	**P**	**16 22 32.1**	**-1.8**
MAJO	**Matsushiro**	**78.22**	**325**	*e*P	**P**	**16 22 33.4**	**-0.5**
	comp=Z,26nm,1.1s,mb5.1						
MAJO	**Matsushiro**	**78.22**	**325**	*e*P	**P**	**16 22 33.4**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
MAT	**Matsushiro**	**78.22**	**325**	P	**P**	**16 22 32.1**	**-1.8**
SNAA	**Sanae**	**78.40**	**178**	P	**P**	**16 22 35.9**	**+1.4**
	comp=Z,5.5nm,0.9s,mb4.5,baz=219,slow=4.2,SNR=43						
SNAA	**Sanae**	**78.40**	**178**	P	**P**	**16 22 35.9**	**+1.4**
VNA3	**Neumayer Olymp**	**78.53**	**176**	*e*P	**P**	**16 22 33.8**	**-1.4**
VNA2	**Neumayer--Watz**	**78.97**	**177**	*e*P	**P**	**16 22 36.7**	**-0.9**
	baz=179,slow=5.0						
MAIT	**Maitri**	**79.14**	**183**	*e*P	**P**	**16 22 40.5**	**+2.0**
NVL	**N'lazarevskaya**	**79.14**	**183**	*e*P	**P**	**16 22 40.3**	**+1.7**
VNA1	**Neumayer--Stat**	**79.20**	**176**	*e*P	**P**	**16 22 38.4**	**-0.5**
ASAJ	**Asahikawa**	**82.37**	**332**	P	**P**	**16 22 55.8**	**-0.3**
	comp=Z,17nm,1.0s,mb4.9,baz=229,slow=6.6,SNR=5.6						
PLCA	**Paso Flores**	**82.44**	**133**	P	**P**	**16 22 57.2**	**+0.4**
	comp=Z,6.4nm,1.0s,mb4.5,baz=227,slow=4.0,SNR=10						
PLCA	**Paso Flores**	**82.44**	**133**	P	**P**	**16 22 57.2**	**+0.4**
PLCA	**Paso Flores**	**82.44**	**133**	P	**P**	**16 22 57.2**	**+0.4**
KSRS	**Korea Array**	**84.37**	**319**	P	**P**	**16 23 07.0**	**+0.5**
	comp=Z,4.2nm,0.9s,mb4.6,baz=134,slow=5.3,SNR=7.1						
PKM	**Peak Mountain**	**84.56**	**44**	↓↓P	**P**	**16 23 07.7**	**+0.1**
	baz=85,SNR=5.2						
YSS	**Yuzh-Sakhalins**	**84.66**	**334**	*e*P	**P**	**16 23 07.8**	**+0.1**
	comp=Z,38nm,0.9s,mb5.5						
YSS	**Yuzh-Sakhalins**	**84.66**	**334**	*e*P	**P**	**16 23 07.1**	**-0.6**
YSS				*e*		16 23 23.8	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.4						
SMMC	**Simmler**	**84.73**	**44**	↑↑P	**P**	**16 23 09.1**	**+0.7**
	baz=85						
ARVC	**Arvin**	**85.32**	**45**	↑↑P	**P**	**16 23 11.3**	**0.0**
	baz=85						
MURC	**Murrieta**	**85.32**	**47**	↓↓P	**P**	**16 23 11.3**	**0.0**
	baz=85						
MONP	**Monument Peak**	**85.35**	**48**	↓↓P	**P**	**16 23 11.7**	**+0.2**
	baz=85						
DVTC	**Desert V Tower**	**85.41**	**48**	↑↑P	**P**	**16 23 11.7**	**-0.2**
	baz=85						
BFSC	**Mount Baldy Ra**	**85.45**	**46**	↓↓P	**P**	**16 23 12.2**	**+0.2**
	baz=86						
VES	**Vestal, Richgr**	**85.64**	**44**	↑↑P	**P**	**16 23 13.2**	**+0.3**
	baz=86						
PETK	**Petropavlovsk-**	**85.65**	**345**	P	**P**	**16 23 11.7**	**-0.8**
	comp=Z,17nm,0.8s,mb5.3,baz=109,slow=9.1,SNR=20						
PETK	**Petropavlovsk-**	**85.65**	**345**	P	**P**	**16 23 11.7**	**-0.8**
EDW2	**Edwards Air Fo**	**85.67**	**45**	↓↓P	**P**	**16 23 12.9**	**-0.2**
	baz=86,SNR=9.5						
SWSC	**Sam W. Stewart**	**85.79**	**48**	↑↑P	**P**	**16 23 14.1**	**+0.4**
	baz=86						
PFO	**Pinyon Flat Ob**	**85.80**	**47**	↓↓P	**P**	**16 23 14.3**	**+0.5**
	baz=86						
PFO	**Pinyon Flat Ob**	**85.80**	**47**	*e*P	**P**	**16 23 13.4**	**-0.3**
	comp=Z,10nm,1.2s,mb4.9						
PFO	**Pinyon Flat Ob**	**85.80**	**47**	*e*P	**P**	**16 23 13.4**	**-0.4**
PFO				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.9						
KIPM	**Iron Peak**	**85.86**	**39**	*e*P	**P**	**16 23 13.7**	**-0.3**
	comp=Z,9.0nm,0.8s,mb5.0						
ISA	**Isabella**	**85.89**	**44**	↑↑P	**P**	**16 23 13.9**	**-0.3**
	baz=86,SNR=18						
LRMC	**Laurel Mountai**	**86.25**	**45**	↓↓P	**P**	**16 23 16.0**	**0.0**
	baz=86,SNR=11						
NJ2	**Nanjing**	**86.33**	**310**	*e*P	**P**	**16 23 16.3**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,40nm,0.5s,mb5.9						
BELC	**Belle Mtn. Jos**	**86.34**	**47**	↓↓P	**P**	**16 23 16.6**	**+0.2**
	baz=86,SNR=9.2						
CMB	**Columbia Colle**	**86.36**	**42**	*e*P	**P**	**16 23 15.8**	**-0.7**
	comp=Z,24nm,1.0s,mb5.4						
CMB	**Columbia Colle**	**86.36**	**42**	*e*P	**P**	**16 23 15.8**	**-0.6**
CMB				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.4						
BC3	**Big Chuckawall**	**86.47**	**48**	↓↓P	**P**	**16 23 17.2**	**+0.2**
	baz=86						
GLA	**Glamis**	**86.48**	**48**	↓↓P	**P**	**16 23 17.2**	**0.0**
	baz=86						
GLA	**Glamis**	**86.48**	**48**	*e*P	**P**	**16 23 17.4**	**+0.2**
	comp=Z,5.5nm,0.5s,mb5.0						
GLA	**Glamis**	**86.48**	**48**	*e*P	**P**	**16 23 17.4**	**+0.2**
GLA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb5.1						
CWC	**Cottonwood Cre**	**86.64**	**44**	↓↓P	**P**	**16 23 17.4**	**-0.5**
	baz=87,SNR=14						
HEC	**Hector,Ludlow**	**86.67**	**46**	↑↑P	**P**	**16 23 17.8**	**-0.2**
	baz=87,SNR=8.5						
GSC	**Goldstone**	**86.68**	**46**	↑↑P	**P**	**16 23 18.2**	**+0.1**
	baz=87						
MPMC	**Manual Prospec**	**86.75**	**45**	↑↑P	**P**	**16 23 18.3**	**-0.1**
	baz=87,SNR=25						
TIN	**Tinemaha**	**86.96**	**44**	↑↑P	**P**	**16 23 19.6**	**+0.1**
	baz=87						
IRM	**Iron Mountain**	**86.98**	**47**	↓↓P	**P**	**16 23 19.6**	**0.0**
	baz=87,SNR=17						
113A	**Mohawk Valley,**	**87.00**	**49**	↓↓P	**P**	**16 23 19.7**	**0.0**
	baz=87						
GMRC	**Granite Mounta**	**87.06**	**47**	↓↓P	**P**	**16 23 19.9**	**-0.1**
	baz=87,SNR=11						
Y12C	**Blythe**	**87.12**	**48**	↑↑P	**P**	**16 23 20.7**	**+0.4**
	baz=87						
214A	**Organ Pipe Nat**	**87.12**	**50**	↓↓P	**P**	**16 23 20.6**	**+0.2**
	baz=87						
WAKR	**Walker**	**87.22**	**42**	*e*P	**P**	**16 23 19.8**	**-0.8**
	comp=Z,73nm,1.6s,mb5.7						
TUQ	**Turquoise Moun**	**87.31**	**46**	↓↓P	**P**	**16 23 20.9**	**-0.3**
	baz=87,SNR=8.4						
Z13A	**Yuma Proving G**	**87.34**	**49**	↑↑P	**P**	**16 23 21.7**	**+0.4**
	baz=87						
SHOC	**Shoshone**	**87.39**	**45**	↓↓P	**P**	**16 23 21.7**	**+0.2**
	baz=87						
GRAC	**Grapevine Rang**	**87.44**	**44**	↓↓P	**P**	**16 23 21.7**	**0.0**
	baz=88,SNR=14						
114A	**Black Gap (USA**	**87.57**	**50**	↓↓P	**P**	**16 23 22.7**	**+0.2**
	baz=88						
WCN	**Washoe City**	**87.58**	**41**	↓↓P	**P**	**16 23 22.5**	**+0.2**
	baz=88						
WCN	**Washoe City**	**87.58**	**41**	*e*P	**P**	**16 23 21.4**	**-1.0**
	comp=Z,4.5nm,0.7s,mb4.8						
WCN	**Washoe City**	**87.58**	**41**	*e*P	**P**	**16 23 21.4**	**-0.9**
WCN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
Y13A	**Salome**	**87.61**	**48**	↓↓P	**P**	**16 23 22.9**	**+0.3**
	baz=88						
YBH	**Yreka Blue Hor**	**87.63**	**38**	P	**P**	**16 23 21.4**	**-1.2**
	comp=Z,8.8nm,1.1s,mb4.9,baz=168,slow=2.7,SNR=12						
YBH	**Yreka Blue Hor**	**87.63**	**38**	P	**P**	**16 23 21.4**	**-1.1**
U10A	**Ash Meadows, A**	**87.70**	**45**	↓↓P	**P**	**16 23 23.3**	**+0.3**
	baz=88,SNR=13						
PDMCI	**Parker Dam,Lak**	**87.72**	**48**	↑↑P	**P**	**16 23 23.0**	**-0.1**
	baz=88,SNR=5.3						
LBCM	**Butte Creek Ri**	**87.74**	**39**	P	**P**	**16 23 22.7**	**-0.4**
NVAR	**Mina Array Bea**	**87.83**	**43**	P	**P**	**16 23 23.1**	**-0.5**
	comp=Z,14nm,0.9s,mb5.2,baz=220,slow=8.3,SNR=76						
V11A	**Godsprings**	**87.88**	**46**	↓↓P	**P**	**16 23 24.2**	**+0.3**
	baz=88						
Z14A	**Wintersburg**	**87.91**	**49**	↑↑P	**P**	**16 23 24.0**	**0.0**
	baz=88,SNR=6.9						
115A	**Sonoran Desert**	**87.97**	**50**	↑↑P	**P**	**16 23 24.6**	**+0.2**
	baz=88						
216A	**Three Points,**	**88.06**	**51**	↑↑P	**P**	**16 23 25.3**	**+0.4**
	baz=88						
X13A	**Yucca**	**88.10**	**48**	↓↓P	**P**	**16 23 25.3**	**+0.4**
	baz=88,SNR=14						
V12A	**Nelson**	**88.17**	**46**	↓↓P	**P**	**16 23 25.3**	**0.0**
	baz=88,SNR=7.3						
Y14A	**Wickenburg**	**88.22**	**49**	↓↓P	**P**	**16 23 25.4**	**-0.1**
	baz=88,SNR=7.3						
116A	**Eloy**	**88.24**	**50**	↓↓P	**P**	**16 23 26.1**	**+0.4**
	baz=88						
U11A	**Corn Creek**	**88.28**	**46**	↑↑P	**P**	**16 23 26.2**	**+0.4**
	baz=88						
217A	**Green Valley**	**88.36**	**52**	↑↑P	**P**	**16 23 26.3**	**0.0**
	baz=88,SNR=8.9						
W13A	**Hualapai Mount**	**88.38**	**47**	↑↑P	**P**	**16 23 26.4**	**+0.1**
	baz=88,SNR=11						
SHPR	**Sheep Range**	**88.47**	**46**	*e*P	**P**	**16 23 26.6**	**0.0**
	comp=Z,38nm,1.6s,mb5.4						
MDJ	**Mudanjiang**	**88.60**	**325**	P	**P**	**16 23 27.8**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,3μm,10.5s						
X14A	**Yava**	**88.63**	**48**	↑↑P	**P**	**16 23 27.7**	**+0.2**
	baz=89,SNR=9.7						
Y15A	**Casa Rosa Ranc**	**88.67**	**49**	↑↑P	**P**	**16 23 27.8**	**+0.1**
	baz=89,SNR=8.4						
TUC	**Tucson**	**88.70**	**51**	*e*P	**P**	**16 23 28.1**	**+0.2**
	comp=Z,57nm,1.7s,mb5.6						
TUC	**Tucson**	**88.70**	**51**	*e*P	**P**	**16 23 28.1**	**+0.2**
318A	**Bisbee**	**88.72**	**52**	↓↓P	**P**	**16 23 28.0**	**0.0**
	baz=89,SNR=8.8						
V13A	**Grand Canyon W**	**88.79**	**47**	↓↓P	**P**	**16 23 28.5**	**+0.3**
	baz=89,SNR=12						
U12A	**Valley of Fire**	**88.81**	**46**	↑↑P	**P**	**16 23 28.7**	**+0.4**
	baz=89,SNR=5.6						
W14A	**Seligman**	**88.97**	**48**	↓↓P	**P**	**16 23 29.4**	**+0.4**
	baz=89,SNR=19						
218A	**Dragoon**	**89.00**	**52**	↓↓P	**P**	**16 23 29.6**	**+0.3**
	baz=89,SNR=6.4						
X15A	**Humboldt**	**89.06**	**49**	↑↑P	**P**	**16 23 29.7**	**+0.2**
	baz=89,SNR=12						
CFAA	**Coronel Fontan**	**89.12**	**126**	P	**P**	**16 23 29.9**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=228,slow=3.6,SNR=9.0						
U13A	**Pakoon Wash**	**89.16**	**46**	↑↑P	**P**	**16 23 30.4**	**+0.5**
	baz=89,SNR=16						
319A	**Douglas**	**89.17**	**53**	↓↓P	**P**	**16 23 30.3**	**+0.3**
	baz=89						
Y16A	**Circle Bar Ran**	**89.19**	**50**	↑↑P	**P**	**16 23 30.5**	**+0.3**
	baz=89,SNR=21						
V14A	**Boquillas Ranc**	**89.21**	**47**	↓↓P	**P**	**16 23 30.7**	**+0.5**
	baz=89,SNR=29						
K05A	**Summer Lake**	**89.29**	**38**	↓↓P	**P**	**16 23 30.7**	**+0.4**
	baz=89						
R11A	**Troy Canyon, C**	**89.39**	**44**	↑↑P	**P**	**16 23 30.7**	**-0.3**
	baz=89						
118A	**Homack Ranch,**	**89.45**	**51**	↓↓P	**P**	**16 23 31.8**	**+0.4**
	baz=90,SNR=12						
W15A	**Williams**	**89.47**	**48**	↓↓P	**P**	**16 23 31.9**	**+0.5**
	baz=90						
Y17A	**Roosevelt**	**89.50**	**50**	↓↓P	**P**	**16 23 31.9**	**+0.3**
	baz=90,SNR=9.3						
Z17A	**San Carlos Hig**	**89.50**	**51**	↓↓P	**P**	**16 23 32.0**	**+0.4**
	baz=90						
X16A	**Lo Mia Camp, P**	**89.54**	**49**	↑↑P	**P**	**16 23 32.1**	**+0.4**
	baz=90,SNR=24						
219A	**White Tail Can**	**89.55**	**52**	↑↑P	**P**	**16 23 32.1**	**+0.3**
	baz=90,SNR=5.1						
T13A	**Saint George**	**89.58**	**46**	↑↑P	**P**	**16 23 32.3**	**+0.4**
	baz=90						
U14A	**Mt Trumbull**	**89.65**	**47**	↓↓P	**P**	**16 23 32.4**	**+0.2**
	baz=90,SNR=22						
320A	**Kipp Ranch, An**	**89.66**	**53**	↑↑P	**P**	**16 23 32.9**	**+0.5**
	baz=90						
Z18A	**Geronimo**	**89.67**	**51**	↑↑P	**P**	**16 23 32.7**	**+0.3**
	baz=90						
W16A	**Flagstaff**	**89.89**	**49**	↑↑P	**P**	**16 23 34.1**	**+0.7**
	baz=90,SNR=18						
X17A	**Forest Lakes**	**89.91**	**50**	↓↓P	**P**	**16 23 34.1**	**+0.6**
	baz=90,SNR=5.3						
V15A	**Kaibab Nationa**	**89.92**	**48**	↓↓P	**P**	**16 23 34.3**	**+0.8**
	baz=90,SNR=13						
S13A	**Holt Ranch, En**	**89.96**	**45**	↑↑P	**P**	**16 23 34.2**	**+0.6**
	baz=90						
119A	**Ashpeak Ranch,**	**89.97**	**52**	↑↑P	**P**	**16 23 34.4**	**+0.5**
	baz=90						
H04A	**Detroit Lake**	**89.98**	**36**	↑↑P	**P**	**16 23 33.1**	**-0.4**
	baz=90						
220A	**Playas Peak, P**	**90.00**	**53**	↓↓P	**P**	**16 23 34.7**	**+0.8**
	baz=90,SNR=10						
Y18A	**Canyon Day Jun**	**90.08**	**50**	↑↑P	**P**	**16 23 34.9**	**+0.6**
	baz=90,SNR=17						
T14A	**Hurricane**	**90.11**	**46**	↑↑P	**P**	**16 23 34.4**	**+0.1**
	baz=90						
CN2	**Changchun**	**90.14**	**323**	*e*P	**P**	**16 23 34.0**	**-0.3**
CN2				*e*S	S	16 34 28.3	+0.7
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
U15A	**North Rim**	**90.22**	**47**	↓↓P	**P**	**16 23 35.4**	**+0.5**
	baz=90,SNR=39						
R13A	**O'Grain Ranch,**	**90.27**	**45**	↓↓P	**P**	**16 23 35.7**	**+0.7**
	baz=90						
120A	**U Bar Ranch, L**	**90.30**	**52**	↑↑P	**P**	**16 23 36.0**	**+0.7**
	baz=90,SNR=9.9						
Z19A	**T-Link Ranch,**	**90.31**	**51**	↓↓P	**P**	**16 23 36.7**	**+1.3**
	baz=90						
WVOR	**Wild Horse Val**	**90.32**	**39**	*e*P	**P**	**16 23 34.4**	**-0.7**
	comp=Z,26nm,1.4s,mb5.4						
WVOR	**Wild Horse Val**	**90.32**	**39**	*e*P	**P**	**16 23 34.4**	**-0.8**
W17A	**Winslow**	**90.42**	**49**	↑↑P	**P**	**16 23 36.6**	**+0.7**
	baz=90						
S14A	**Cedar City**	**90.50**	**46**	↓↓P	**P**	**16 23 36.7**	**+0.6**
	baz=90						
T15A	**Red Dirt Ranch**	**90.53**	**47**	↑↑P	**P**	**16 23 36.8**	**+0.5**
	baz=91,SNR=6.7						
221A	**Mesquite Ranch**	**90.58**	**53**	↑↑P	**P**	**16 23 37.2**	**+

	baz=92							
325A	Bean Ranch, Si	92.17	55	⇑P		P	16 23 43.5	-0.5
	baz=92							
224A	Cornudas Mount	92.18	54	⇑P		P	16 23 44.1	0.0
	baz=92							
T18A	Mexican Hat	92.19	48	⇓P		P	16 23 44.0	0.0
	baz=92,SNR=13							
DUG	Dugway	92.23	44	⇓P		P	16 23 44.2	+0.1
	baz=92							
Y22A	Socorro	92.25	52	⇓P		P	16 23 44.0	-0.3
	baz=92,SNR=7.7							
627A	Terlingua Ranc	92.25	57	⇑P		P	16 23 44.1	-0.3
	baz=92,SNR=8.5							
V20A	Brimhall	92.32	49	⇓P		P	16 23 44.6	0.0
	baz=92							
Z23A	Rita Site, Whi	92.36	53	⇓P		P	16 23 44.9	0.0
	baz=92							
R17A	Hanksville Air	92.43	46	⇑P		P	16 23 44.9	-0.2
	baz=92							
S18A	Hurst Farm, Bl	92.45	47	⇑P		P	16 23 45.3	+0.1
	baz=92							
426A	McDonald Obser	92.45	56	⇑P		P	16 23 45.0	-0.4
	baz=92							
E07A	Sunnyside	92.46	36	⇓P		P	16 23 44.9	-0.1
	baz=92,SNR=6.4							
527A	Woodward Ranch	92.47	56	⇑P		P	16 23 44.6	-0.8
	baz=92							
RSW	Rattlesnake Hi	92.48	36	eP		P	16 23 44.9	-0.2
	comp=Z,14nm,0.8s,mb5.3							
O15A	The Old Anders	92.49	44	⇓P		P	16 23 45.4	+0.1
	baz=92							
MFID	Camas Ranch	92.52	40	⇑P		P	16 23 44.8	-0.6
	baz=92,SNR=6.1							
124A	Stringfield Ra	92.58	53	⇑P		P	16 23 46.0	+0.1
	baz=93							
BNM	Barren Site	92.60	52	eP		P	16 23 45.6	-0.4
	comp=Z,17nm,1.8s,mb5.2							
628A	Black Gap, Mar	92.63	57	⇓P		P	16 23 45.6	-0.6
	baz=93,SNR=6.2							
225A	Deer Hill, Car	92.69	54	⇑P		P	16 23 46.3	-0.2
	baz=93							
E08A	Dider Farm, El	92.82	36	⇑P		P	16 23 47.0	+0.4
	baz=93							
N15A	Stansbury Isla	92.83	44	⇓P		P	16 23 46.8	0.0
	baz=93							
Y23A	Lovelace Mesa,	92.86	52	⇑P		P	16 23 46.8	-0.4
	baz=93							
V21A	Milan	92.87	50	⇓P		P	16 23 47.6	+0.4
	baz=93							
R18A	Canyonlands Na	92.92	47	⇓P		P	16 23 46.9	-0.5
	baz=93,SNR=13							
SRU	San Rafael	92.96	46	⇓P		P	16 23 47.7	+0.2
	baz=93							
BJI	Beijing	92.97	315	P		P	16 23 48.5	+1.0
Z24A	Sheeppen Canyo	93.00	53	⇓P		P	16 23 47.7	-0.1
	baz=93							
427A	Hayter Ranch,	93.00	56	⇓P		P	16 23 47.5	-0.4
	baz=93,SNR=7.0							
O16A	Springville	93.03	45	⇓P		P	16 23 48.0	+0.2
	baz=93							
S19A	Harvey Farm, M	93.03	48	⇑P		P	16 23 47.6	-0.2
	baz=93,SNR=6.3							
P17A	Butcher Ranch,	93.05	45	⇓P		P	16 23 48.2	+0.3
	baz=93							
528A	Cox Ranch, San	93.07	57	⇑P		P	16 23 47.9	-0.3
	baz=93							
125A	Gardner Draw,	93.11	54	⇑P		P	16 23 48.0	-0.4
	baz=93							
L14A	Malta	93.12	42	⇓P		P	16 23 47.8	-0.4
	baz=93,SNR=6.7							
X23A	Hourglass Bar	93.14	52	⇓P		P	16 23 48.7	+0.3
	baz=93							
I12A	Atlanta	93.15	40	⇓P		P	16 23 48.2	-0.1
	baz=93,SNR=19							
ANMO	Albuquerque	93.17	51	P		P	16 23 48.3	-0.2
	comp=Z,4.1nm,0.8s,mb4.9,baz=210,slow=6.8,SNR=11							
ANMO	Albuquerque	93.17	51	P		P	16 23 48.3	-0.3
Q18A	Rafter H Ranch	93.20	46	⇑P		P	16 23 48.4	-0.2
	baz=93							
U21A	Nageezi	93.22	49	⇓P		P	16 23 49.1	+0.3
	baz=93,SNR=8.3							
M15A	Larsen Ranch,	93.23	43	⇓P		P	16 23 48.3	-0.4
	baz=93,SNR=9.3							
D08A	Wollman Farm,	93.27	36	⇓P		P	16 23 48.5	-0.2
	baz=93							
R19A	Curley Farm, L	93.27	47	⇓P		P	16 23 48.6	-0.4
	baz=93							
Y24A	Capitan	93.28	52	⇑P		P	16 23 48.8	-0.4
	baz=93,SNR=6.0							
DAU	Daniels Canyon	93.30	44	eP		P	16 23 49.4	+0.3
DAU	Daniels Canyon	93.30	44	eP		P	16 23 49.4	+0.4
E09A	Wood Farm, Sta	93.30	37	⇓P		P	16 23 48.1	-0.7
	baz=93,SNR=11							
HLID	Hailey	93.40	41	⇑P		P	16 23 49.3	-0.1
	baz=93,SNR=13							
HLID	Hailey	93.40	41	eP		P	16 23 49.1	-0.3
	comp=Z,12nm,1.0s,mb5.3							
V22A	San Miguel Ran	93.42	50	⇑P		P	16 23 49.9	+0.2
	baz=93							
Z25A	Roswell	93.42	53	⇑P		P	16 23 50.0	+0.2
	baz=93							
F10A	Beach Ranch, E	93.42	37	⇑P		P	16 23 48.1	-1.4
	baz=94,SNR=11							
J13A	Cove Ranch, Pi	93.43	41	⇑P		P	16 23 49.6	0.0
	baz=94,SNR=11							
P18A	Preston Nutter	93.45	46	⇑P		P	16 23 49.7	-0.1
	baz=94							
428A	Kincaid Ranch,	93.45	56	⇑P		P	16 23 49.9	-0.1
	baz=94							
K14A	Jones Ranch, D	93.47	42	⇑P		P	16 23 49.8	0.0
	baz=94							
O17A	Robinson Place	93.48	45	⇑P		P	16 23 49.8	-0.1
	baz=94,SNR=12							
S20A	Disappointment	93.57	48	⇓P		P	16 23 50.4	0.0
	baz=94							
L15A	Malad City	93.60	43	⇑P		P	16 23 49.7	-0.6
	baz=94,SNR=12							
PV01	Paradox Valley	93.62	48	eP		P	16 23 49.9	-0.7
	comp=Z,594nm,1.0s							
M16A	Huntsville	93.62	44	⇓P		P	16 23 50.4	-0.2
	baz=94							
CMAR	Chiang Mai Arr	93.63	289	P		P	16 23 51.1	+0.1
	comp=Z,1.0nm,0.7s,mb4.4,baz=128,slow=4.2,SNR=8.3							
CMAR				PP		PP	16 27 38.1	+1.9
	comp=Z,0.8nm,1.0s,baz=131,slow=4.6,SNR=5.0							
CMAR	Chiang Mai Arr	93.63	289	P		P	16 23 51.2	+0.1
CMAR							16 27 38.2	
Q19A	Hogan Spring (	93.66	47	⇓P		P	16 23 50.8	0.0
	baz=94							
J14A	Carey	93.76	41	⇓P		P	16 23 51.1	0.0
	baz=94							
R20A	Redvale	93.77	48	⇓P		P	16 23 51.0	-0.3
	baz=94							
H12A	Diamond D Ranc	93.78	40	⇓P		P	16 23 50.8	-0.3
	baz=94,SNR=20							
I13A	Wildhorse Cree	93.79	40	⇑P		P	16 23 50.8	-0.5
	baz=94,SNR=6.1							
Y25A	Mesa, Roswell	93.79	53	⇑P		P	16 23 50.7	-0.8
	baz=94,SNR=7.5							
S21A	Coal Bank Pass	93.84	48	⇑P		P	16 23 51.5	-0.1
	baz=94							
N17A	Moffit Pass	93.88	44	⇓P		P	16 23 52.1	+0.4
	baz=94							
G12A	Big Creek, Yel	93.89	39	⇓P		P	16 23 51.2	-0.4
	baz=94							
Z26A	Caprock	93.93	54	⇓P		P	16 23 51.6	-0.5
	baz=94							
K15A	Arbon	93.93	42	⇑P		P	16 23 51.5	-0.4
	baz=94,SNR=7.7							
KMI	Kunming	94.00	297	P		P	16 23 55.5	+2.8
KMI				pmax		pmax		
	comp=Z,4.0nm,1.3s,mb4.7							
W24A	Lazy 6 Ranch,	94.03	51	⇓P		P	16 23 52.4	-0.1
	baz=94							
H13A	Challis	94.12	40	⇑P		P	16 23 52.3	-0.5
	baz=94,SNR=8.7							
L16A	Fish Haven	94.17	43	⇑P		P	16 23 52.6	-0.4
	baz=94,SNR=5.0							
I14A	Mackay	94.17	41	⇓P		P	16 23 52.6	-0.3
	baz=94,SNR=8.9							
P19A	Cripple Cowboy	94.24	46	⇓P		P	16 23 53.3	-0.1
	baz=94							
Q20A	Ridgley Place,	94.27	47	⇑P		P	16 23 53.5	0.0
	baz=94							
M17A	Scullys Gap (B	94.30	44	⇑P		P	16 23 53.2	-0.4
	baz=94							
F12A	Elk City	94.33	38	⇑P		P	16 23 52.9	-0.8
	baz=94,SNR=16							
Y26A	Elida	94.39	53	⇑P		P	16 23 53.9	-0.4
	baz=94							
V24A	Rampart Ranch,	94.41	51	⇑P		P	16 23 54.2	-0.1
	baz=94							
R21A	Cimarron	94.41	48	⇑P		P	16 23 53.8	-0.4
	baz=94,SNR=5.8							
J15A	Blackfoot	94.43	42	⇑P		P	16 23 54.2	0.0
	baz=94,SNR=12							
G13A	Cobalt	94.47	39	⇓P		P	16 23 53.7	-0.6
	baz=94,SNR=10							
Z27A	Tatum	94.49	54	⇑P		P	16 23 54.5	-0.2
	baz=94							
S22A	4UR Ranch, Cre	94.52	49	⇓P		P	16 23 54.5	-0.2
	baz=94							
K16A	Soda Springs	94.57	42	⇓P		P	16 23 54.8	0.0
	baz=95,SNR=8.0							
E12A	Beaver Dam Sad	94.59	38	⇑P		P	16 23 54.4	-0.4
	baz=95							
N18A	Larsen Ranch,	94.60	45	⇑P		P	16 23 54.6	-0.5
	baz=95							
H14A	Leadore	94.65	40	⇓P		P	16 23 55.5	+0.4
	baz=95							
W25A	X Bar L Ranch,	94.67	52	⇓P		P	16 23 55.1	-0.4
	baz=95							
X26A	CR and CF Fran	94.75	53	⇓P		P	16 23 55.7	-0.1
	baz=95							
Y27A	Causey	94.83	54	⇑P		P	16 23 55.7	-0.5
	baz=95							
R22A	Saguache, Gunn	94.84	48	⇑P		P	16 23 56.9	+0.7
	baz=95							
F13A	Darby	94.85	39	⇑P		P	16 23 55.2	-0.8
	baz=95,SNR=8.8							
V25A	Rancho No Teng	94.91	51	⇑P		P	16 23 56.3	-0.2
	baz=95							
K17A	Gardner Place,	94.91	43	⇑P		P	16 23 56.5	+0.1
	baz=95							
G14A	Jackson	94.99	40	⇓P		P	16 23 56.7	0.0
	baz=95							
H15A	Lima	95.06	41	⇓P		P	16 23 57.5	+0.5
	baz=95							
MCMT	McKenzie Canyo	95.07	40	eP		P	16 23 56.4	-0.6
	comp=Z,5.0nm,1.1s,mb4.9							
D12A	Red Ives Fores	95.11	37	⇑P		P	16 23 57.1	0.0
	baz=95							
C11A	Tepee Creek (N	95.14	36	⇓P		P	16 23 56.9	-0.4
	baz=95							
MSTX	Muleshoe	95.15	54	⇓P		P	16 23 57.3	-0.4
	baz=95							
I16A	Newdale	95.26	42	⇑P		P	16 23 58.1	+0.1
	baz=95							
U25A	Circle Dot Ran	95.36	51	⇑P		P	16 23 59.0	+0.4
	baz=95							
K18A	Toltan Ranch,	95.36	43	⇑P		P	16 23 57.9	-0.6
	baz=95,SNR=5.7							
N20A	Spence Gulch,	95.38	45	⇑P		P	16 23 58.5	-0.1
	baz=95							
SDCO	Great Sand Dun	95.38	49	⇓P		P	16 23 58.6	-0.1
	baz=95							
J17A	Brown Place, J	95.40	42	⇓P		P	16 23 58.8	+0.2
	baz=95							
L19A	Farson	95.46	44	⇓P		P	16 23 58.4	-0.5
	baz=96							
G15A	Dillon	95.48	40	⇑P		P	16 23 58.4	-0.5
	baz=96,SNR=6.4							
S24A	Houchin Ranch,	95.51	49	⇑P		P	16 23 59.4	+0.2
	baz=96							
W27A	Bowe Ranch, En	95.54	53	⇑P		P	16 23 59.0	-0.5
	baz=96							
J18A	Kendall Valley	95.72	43	⇑P		P	16 23 59.6	-0.4
	baz=96							
N21A	Black Mountain	95.80	46	⇓P		P	16 24 00.4	-0.1
	baz=96							
SEY	Seymchan	95.81	347	eP		P	16 23 57.7	-2.3
M20A	Sweetwater, Wa	95.81	45	⇓P		P	16 24 00.3	-0.2
	baz=96							
QLMT	Earthquake Lak	95.87	41	eP		P	16 24 01.2	+0.4
	comp=Z,3.7nm,1.2s,mb4.7							
H16A	Russell Place,	95.90	41	⇑P		P	16 24 01.1	+0.2
	baz=96,SNR=5.1							
G16A	Moss Hill, Enn	95.90	40	⇑P		P	16 24 00.8	0.0
	baz=96							
YFT	Old Faithful	95.98	41	P		P	16 24 02.5	+1.3
L20A	Wamsutter	96.02	45	⇓P		P	16 24 01.8	+0.4
	baz=96							
YMR	Madison River	96.04	41	eP		P	16 24 02.0	+0.5
	comp=Z,18nm,1.4s,mb5.3							
O22A	Kremmling	96.07	47	⇑P		P	16 24 02.0	+0.2
	baz=96							
I18A	Diamond G Ranc	96.13	42	⇓P		P	16 24 02.0	+0.1
	baz=96							
E15A	Deer Lodge	96.17	39	⇑P		P	16 24 02.4	+0.4
	baz=96							
CD2	Chengdu	96.23	302	eP		P	16 24 03.5	+0.8
CD2				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb5.4							
BOZ	Bozeman (W)	96.25	40	⇓P		P	16 24 02.5	+0.1
	baz=96							
HHC	Hu-ho-hao-te	96.29	314	eP		P	16 24 04.3	+1.5
HHC				pP		pP	16 24 14.8	+8.3
HHC				sP		sP	16 24 18.8	+11
HHC				PP		PP	16 28 01.8	+5.1
HHC				SKS			16 34 37.0	
HHC				S		S	16 35 19.8	-2.6
HHC				sS		sS	16 35 38.0	+9.4
HHC				pmax		pmax		
	comp=Z,15nm,1.0s,mb5.4							
HHC				LR		LR		
	comp=Z,2μm,17.1s,MS5.6							
J19A	Crowheart	96.32	43	⇓P		P	16 24 02.1	-0.7
	baz=96							
K20A	Yellowstone Ra	96.39	44	⇓P		P	16 24 02.2	-1.0
	baz=96							
I19A	Meeteetse	96.81	43	⇑P		P	16 24 04.6	-0.3
	baz=97							
J20A	Shoshoni	96.95	44	⇓P		P	16 24 05.3	-0.4
	baz=97							
K21A	Alcova	97.04	44	⇓P		P	16 24 05.4	-0.6
	baz=97							
L22A	Ellis Ranch, M	97.19	45	⇑P		P	16 24 06.9	+0.1
	baz=97							
G18A	Lazy EL Ranch,	97.22	41	⇑P		P	16 24 07.4	+0.5
	baz=97							
RLMT	Red Lodge	97.28	42	⇑P		P	16 24 06.9	-0.2
	baz=97							
M23A	Laramie	97.32	46	⇑P		P	16 24 07.1	-0.3
	baz=97							
A14A	Double T Ranch	97.32	37	⇓P		P	16 24 06.6	-0.6
	baz=97							
J21A	Lysite	97.33	44	⇑P		P	16 24 07.3	0.0
	baz=97							
F18A	Big Timber	97.48	41	⇑P		P	16 24 07.9	-0.1
	baz=98							
K22A	Casper	97.49	45	⇑P		P	16 24 08.3	+0.2
	baz=98							
ILAR	Eielson Array	97.61	13	P		P	16 24 06.2	-1.9
	comp=Z,1.0nm,0.8s,mb4.4,baz=230,slow=5.1,SNR=7.0							
ILAR	Eielson Array	97.61	13	P		P	16 24 06.2	-1.9
I21A	Big Trails, Te	97.68	43	⇓P		P	16 24 08.6	-0.4
	baz=98							
A15A	Johnson Ranch,	97.69	37	⇓P		P	16 24 08.6	-0.3
	baz=98							
L23A	Garrett	97.69	46	⇓P		P	16 24 08.7	-0.3
	baz=98							
F19A	Roth Farm, Mol	97.89	41	⇑P		P	16 24 09.6	-0.2
	baz=98							
C17A	Wharram Farm,	97.92	39	⇓P		P	16 24 09.5	-0.4
	baz=98							
G20A	Bridger	97.94	42	⇓P		P	16 24 09.6	-0.5
	baz=98							
J22A	Midwest	97.94	44	⇑P		P	16 24 09.6	-0.5
	baz=98							
BILL	Bilibino	98.63	354	⇓eP		P	16 24 11.8	-0.8
BILL				eS		SKSac	16 34 54.6	+4.7
BILL				pmax		pmax		
	comp=Z,5.0nm,1.2s,mb4.9							
LZH	Lanzhou	98.83	307	eP		P	16 24 14.5	+0.2
LZH				pP		pP	16 24 25.5	+7.4
LZH				sP		sP	16 24 29.0	+10
LZH				pmax		pmax		
	comp=Z,13nm,1.0s,mb5.4							
SONM	Songino Array	103.17	318	PKKPbc		PKKPbc	16 40 30.0	0.0
	comp=Z,0.3nm,0.6s,baz=255,slow=2.9,SNR=4.1							
WMQ	Urumqi	113.33	308	ePdif		Pdif	16 25 19.0	+0.2
WMQ				PP		PP	16 30 07.0	+3.9
WMQ				SKS		SKSdf	16 36 19.0	-4.9
WMQ				S		Sdif	16 37 38.0	-7.2
WMQ				SS		SS	16 45 45.0	-4.0
MKAR	Makanchi Array	117.86	310	PKP		PKPdf	16 29 19.3	-1.3
	comp=Z,0.5nm,0.3s,baz=101,slow=1.2,SNR=12							
MKAR	Makanchi Array	117.86	310	i PKIKP		PKPdf	16 29 26.8	+6.2
ZALV	Zalesovo Beam	118.06	318	PKP		PKPdf	16 29 19.1	-1.7
	comp=Z,1.3nm,0.6s,baz=145,slow=1.2,SNR=7.3							
ZALV	Zalesovo Beam	118.06	318	PKIKP		PKPdf	16 29 19.1	-1.6
KURK	Kurchatov	121.11	314	ePKPdf		PKPdf	16 29 25.2	-1.5
KURK	Kurchatov	121.11	314	d iPKIKP		PKPdf	16 29 25.4	-1.3
AAK	Ala-Archa	122.24	304	ePKPdf		PKPdf	16 29 27.9	-1.2
AAK	Ala-Archa	122.24	304	i PKIKP		PKPdf	16 29 28.7	-0.4
KKAR	Karatay Array	125.20	304	ePKPdf		PKPdf	16 29 33.6	-1.2
KKAR	Karatay Array	125.20	304	ePKIKP		PKPdf	16 29 33.6	-1.2
BRVK	Borovoye	126.52	316	ePKPdf		PKPdf	16 29 36.2	-0.8
BRVK	Borovoye	126.52	316	d iPKIKP		PKPdf	16 29 36.1	-0.9
SPITS	Spitsbergen Ar	131.47	356	PKP		PKPdf	16 29 43.8	-2.0
	comp=Z,4.5nm,0.7s,baz=157,slow=11,SNR=3.3							
SPITS	Spitsbergen Ar	131.47	356	PKIKP		PKPdf	16 29 43.8	-2.0
ARU	Arti	133.10	321	i PKIKP		PKPdf	16 29 50.3	+0.9
ARU							16 32 15.3	
SOKR	Solikamsk	133.37	325	ePKHKP		PKPpre	16 29 33.4	
SOKR				pmax		pmax		
	comp=Z,10.0nm,0.6s							
ARCES	ARCESS Array B	138.41	348	PKhKP		PKPpre	16 29 50.2	
	comp=Z,7.6nm,0.9s,baz=96,slow=1.2,SNR=6.4							
ARCES				PKP		PKPdf	16 29 56.6	-2.3
	comp=Z,4.6nm,0.7s,baz=333,slow=1.4,SNR=7.4							
ARCES	ARCESS Array B	138.41	348	PKHKP		PKPpre	16 29 50.2	
ARCES							16 29 56.7	
KLMR	Klimovskoe	140.69	332	ePKIKP		PKPdf	16 30 02.5	-0.8
KLMR				pmax		pmax		
	comp=Z,31nm,1.6s							
VRHR	Novokhopersk	144.18	317	ePKIKP		PKPdf	16 30 08.6	-1.2
VRHR				pmax		pmax		
	comp=N,10.0nm,0.7s							
VRHR				pmax		pmax		
	comp=E,40nm,0.7s							
VRHR				pmax		pmax		
	comp=Z,10.0nm,0.7s							
GNI	Garni	144.24	298	PKP		PKPdf	16 30 08.6	-1.7
	comp=Z,4.8nm,0.6s,baz=206,slow=4.4,SNR=3.4							
GNI	Garni	144.24	298	ePKPdf		PKPdf	16 30 08.4	-1.9
GNI	Garni	144.24	298	i PKIKP		PKPdf	16 30 08.8	-1.5
GNI				pmax		pmax		
	comp=Z,19nm,1.2s							
MOS	Moscow	144.31	326	ePKHKP		PKPpre	16 30 07.1	
MOS				pmax		pmax		
	comp=Z,61nm,1.0s							
ZEI	Tsey	144.65	302	i PKIKP		PKPdf	16 30 09.0	-1.9
ZEI				pmax		pmax		
	comp=Z,44nm,1.3s							
PUL	Pulkovo	144.91	336	i PKHKP		PKPpre	16 30 08.3	
PUL				pmax		pmax		
	comp=Z,101nm,0.6s							
FINES	FINESS Array B	145.02	340	PKP		PKPdf	16 30 08.9	-2.1
	comp=Z,89nm,0.8s,baz=60,slow=4.6,SNR=144							
FINES	FINESS Array B	145.02	340	PKIKP		PKPdf	16 30 08.9	-2.0
OBN	Obninsk	145.15	326	ePKPbc		PKPbc	16 30 09.7	-1.2
OBN	Obninsk	145.15	326	⇑iPKIKP		PKPdf	16 30 09.8	-1.6
OBN				e			16 33 30.2	
OBN				pmax		pmax		
	comp=Z,276nm,1.7s							
OBN				MLR		MLR		
	comp=Z,3μm,17.0s,MS6.1							
KIV	Kislovodsk	145.35	305	ePKP		PKPdf	16 30 11.1	-1.0
KIV	Kislovodsk	145.35	305	ePKP2		PKPab	16 30 11.8	-0.3
KIV				pmax		pmax		
	comp=Z,33nm,1.1s							
VSR	Storozhevoye	145.57	318	ePKP2		PKPab	16 30 11.0	-1.7
VSR				pmax		pmax		
	comp=Z,110nm,0.9s							
VSR				pmax		pmax		
	comp=N,10.0nm,0.6s							
VSR				pmax		pmax		
	comp=E,30nm,0.8s							
VORD	Divnogorie	145.59	318	ePKP2		PKPab	16 30 11.1	-1.7
VORD				pmax		pmax		
	comp=N,7.0nm,0.8s							
VORD				pmax		pmax		
	comp=E,20nm,0.8s							
VORD				pmax		pmax		
	comp=Z,50nm,0.8s							
NOA	NORSAR Array B	148.55	352	PKPbc		PKPbc	16 30 19.2	-1.3
	comp=Z,14nm,0.8s,baz=17,slow=4.3,SNR=28							
NOA	NORSAR Array B	148.55	352	PKIKP		PKPbc	16 30 19.2	-1.3
NAO01	NORSAR Array S	148.78	352	ePKPbc		PKPbc	16 30 20.3	-0.8
MALT	Malatya	149.25	295	ePKPbc		PKPbc	16 30 23.3	+0.2
MALT	Malatya	149.25	295	⇓PKP2		PKPbc	16 30 23.8	+0.7
MALT	Malatya	149.25	295	⇓iP		PKPbc	16 30 23.8	+0.7
MICGM	Minsk	149.53	330	⇓eP		PKPdf	16 30 21.0	+2.3
MNK	Minsk	149.55	330	⇓ePKHKP		PKPdf	16 30 21.0	+2.3
MNK				pmax		pmax		
	comp=Z,150nm,1.5s							
NACGM	Naroch	149.72	332	e		PKPdf	16 30 21.0	+2.0
KONO	Kongsberg	150.10	353	ePKPbc		PKPbc	16 30 23.1	-1.3
KONO	Kongsberg	150.10	353	ePKHKP		PKPbc	16 30 23.1	-1.3
SIM	Simferopol'	151.04	310	i PKIKP		PKPbc	16 30 28.8	+1.7
SIM				pmax		pmax		
	comp=Z,29nm,1.0s							
AKASG	Malin Array Be	151.30	323	PKPbc		PKPbc	16 30 26.4	-1.1
	comp=Z,14nm,0.7s,baz=48,slow=2.7,SNR=57							
AKASG	Malin Array Be	151.30	323	PKPbc		PKPbc	16 30 26.4	-1.1
AKASG	Malin Array Be	151.30	323	PKIKP		PKPbc	16 30 26.4	-1.1
KIEV	Kiev	151.31	323	ePKPbc		PKPbc	16 30 26.3	-1.2
KIEV	Kiev	151.31	323	ePKIKP		PKPbc	16 30 26.3	-1.3
HWQ	Hawqa	151.38	287	eP		PKPbc	16 30 28.4	+0.1
RCY	Rachaya	151.46	285	eP		PKPbc	16 30 29.5	+1.0
BHL	Bhannes	151.61	286	eP		PKPbc	16 30 29.2	+0.4
SUW	Suwalki	151.80	334	ePKP		PKPbc	16 30 28.0	-0.6
SUW	Suwalki	151.80	334	ePKPbc		PKPbc	16 30 27.7	-0.9
SUW				ePKPab		PKPab	16 30 36.3	-1.2
SUW	Suwalki	151.80	334

KECS	**Kecovo**	**157.05 328**	*e*PKP	PKPab	16 30 59.3	-0.8
KECS	**Kecovo**	**157.05 328**	*e*PKP2	PKPab	16 30 59.3	-0.8
KECS	**Kecovo**	**157.05 328**	*e*PKP	PKPab	16 30 59.3	-0.8
DRGR		**157.09 322**	⇑PKP2	PKPab	16 31 00.2	-0.1
DRGR		**157.09 322**	⇑*i*P	PKPab	16 31 00.2	-0.1
UPC	**Upice**	**157.23 337**	*e*PKP2	PKPab	16 31 00.2	-0.6
UPC	**Upice**	**157.23 337**	*e*PKPAB	PKPab	16 31 00.2	-0.6
DPC	**Dobruska-Polom**	**157.26 336**	*e*PKP2	PKPab	16 31 00.6	-0.3
DPC	**Dobruska-Polom**	**157.26 336**	*e*PKPAB	PKPab	16 31 00.6	-0.3
MORC	**Moravsky Berou**	**157.29 334**	⇑PKP2	PKPab	16 31 00.7	-0.3
MORC	**Moravsky Berou**	**157.29 334**	⇑*i*P	PKPab	16 31 00.7	-0.3
CLL	**Collm**	**157.43 342**	*e*PKPab	PKPab	16 31 00.3	-1.3
CLL	**Collm**	**157.43 342**	*i* PKP	PKPab	16 30 59.6	-2.0
CLL	**Collm**	**157.43 342**	*i* PKP2	PKPab	16 30 59.6	-2.0
CLL			pmax	pmax		
	comp=Z,26nm,0.9s					
CLL	**Collm**	**157.43 342**	*i* PKPab	PKPab	16 30 59.6	-2.0
	comp=Z,26nm,0.9s					
CLL			*e*pPKPab	pPKPab	16 31 10.0	+4.7
IBBN	**Ibbenburen**	**157.51 351**	*e*PKPab	PKPab	16 31 01.0	-0.9
CLZ	**Clausthal**	**157.53 347**	*e*PKPab	PKPab	16 31 01.2	-0.8
CLZ	**Clausthal**	**157.53 347**	*e*PKP2	PKPab	16 31 01.2	-0.8
BRG	**Berggiesshubel**	**157.56 341**	*e*PKPab	PKPab	16 31 01.4	-0.8
BRG	**Berggiesshubel**	**157.56 341**	*i* PKP	PKPab	16 31 00.9	-1.3
	comp=Z,28nm,0.9s					
BRG			*e*		16 37 29.5	
	comp=Z,3.3nm,1.0s					
BRG	**Berggiesshubel**	**157.56 341**	*i* PKP2	PKPab	16 31 00.9	-1.3
BRG			*e*		16 37 29.5	
BRG			pmax	pmax		
	comp=Z,17nm,0.9s					
PVCC	**Panska Ves**	**157.68 339**	*e*PKP2	PKPab	16 31 02.0	-0.7
PVCC	**Panska Ves**	**157.68 339**	*e*PKPAB	PKPab	16 31 02.0	-0.7
FBE	**Freiberg**	**157.68 341**	*e*PKPab	PKPab	16 31 02.2	-0.5
VYHS	**Vyhne**	**157.77 330**	*e*PKP2	PKPab	16 31 01.9	-1.3
VYHS	**Vyhne**	**157.77 330**	*e*PKP	PKPab	16 31 01.9	-1.3
NEUB	**Neuenburg**	**157.82 344**	*e*PKPab	PKPab	16 31 02.3	-1.0
KOLL	**Kolacno**	**157.89 331**	*e*PKP2	PKPab	16 31 03.0	-0.7
KOLL	**Kolacno**	**157.89 331**	*e*PKP	PKPab	16 31 03.0	-0.7
VRAC	**Vranov**	**158.03 335**	⇑PKP2	PKPab	16 31 04.3	+0.1
VRAC	**Vranov**	**158.03 335**	⇑*i*P	PKPab	16 31 04.3	+0.1
PRU	**Pruhonice**	**158.16 339**	*e*PKP2	PKPab	16 31 04.6	-0.2
PRU	**Pruhonice**	**158.16 339**	*e*PKPAB	PKPab	16 31 04.6	-0.2
TANN	**Tannenbergstha**	**158.38 342**	*e*PKPab	PKPab	16 31 05.0	-0.7
MOX	**Moxa**	**158.38 344**	*e*PKP	PKPab	16 31 04.6	-1.1
	comp=Z,36nm,1.6s					
MOX	**Moxa**	**158.38 344**	*e*PKPab	PKPab	16 31 04.7	-1.0
WERD	**Werda**	**158.39 343**	*e*PKPab	PKPab	16 31 05.0	-0.8
BZS	**Buzias**	**158.43 321**	⇑*i*P	PKPdf	16 30 48.0	+16
TREC	**Trest**	**158.44 336**	*e*PKP2	PKPab	16 31 04.9	-1.1
TREC	**Trest**	**158.44 336**	*e*PKPAB	PKPab	16 31 04.9	-1.1
GUNZ	**Gunzen**	**158.46 342**	*e*PKPab	PKPab	16 31 05.4	-0.7
WERN	**Wernitzgruen**	**158.52 342**	*e*PKPab	PKPab	16 31 05.9	-0.4
NKC	**Novy Kostel**	**158.55 342**	*e*PKP2	PKPab	16 31 05.5	-1.0
NKC	**Novy Kostel**	**158.55 342**	*e*PKPAB	PKPab	16 31 05.5	-1.0
ROTZ	**Rotzenmuhle**	**159.04 342**	*e*PKPab	PKPab	16 31 08.2	-0.4
VTS	**Vitosha**	**159.19 312**	⇑PKP2	PKPab	16 31 07.7	-1.9
VTS	**Vitosha**	**159.19 312**	⇑*i*P	PKPab	16 31 07.7	-1.9
KHC	**Kasperske Hory**	**159.22 339**	*e*PKP2	PKPab	16 31 08.9	-0.5
KHC	**Kasperske Hory**	**159.22 339**	*e*PKPAB	PKPab	16 31 08.9	-0.5
KHC			*e*pPKP	pPKPdf	16 31 15.9	+40
GRF	**Grafenberg Arr**	**159.36 344**	*e*PKPab	PKPab	16 31 09.5	-0.5
GRF	**Grafenberg Arr**	**159.36 344**	*e*PKP2	PKPab	16 31 09.5	-0.5
MEM	**Membach**	**159.38 353**	PKPab	PKPab	16 31 09.1	-0.9
WET	**Wettzell**	**159.41 340**	*e*PKPab	PKPab	16 31 09.9	-0.3
WET	**Wettzell**	**159.41 340**	*e*PKP2	PKPab	16 31 09.9	-0.3
GEC2	**GERESS Array S**	**159.43 338**	*e*PKPab	PKPab	16 31 09.6	-0.7
GEC2	**GERESS Array S**	**159.43 338**	*e*PKP2	PKPab	16 31 09.6	-0.7
GERES	**GERESS Array B**	**159.43 338**	PKP	PKPdf	16 30 31.9	-0.7
	comp=Z,1.1nm,0.9s,baz=64,slow=3.1,SNR=5.0					
GERES			PKPab	PKPab	16 31 09.4	-0.9
	comp=Z,5.0nm,0.8s,baz=35,slow=4.9,SNR=19					
GERES	**GERESS Array B**	**159.43 338**	PKIKP	PKPdf	16 30 31.9	-0.7
GERES					16 31 09.4	
TNS	**Taunus Mts**	**159.43 349**	*e*PKPab	PKPab	16 31 09.2	-1.1
TNS	**Taunus Mts**	**159.43 349**	*e*PKP2	PKPab	16 31 09.2	-1.1
CONA	**Conrad Observa**	**159.44 333**	⇓⇓PKPab	PKPab	16 31 09.8	-0.6
	comp=Z,20nm,1.1s					
SNF	**Seneffe**	**159.61 357**	PKPab	PKPab	16 31 10.1	-0.9
BCLA	**Clavier**	**159.63 355**	PKPab	PKPab	16 31 09.4	-1.7
BCLA			APKPab		16 31 24.3	
GIVF	**Givet**	**159.98 355**	*e*PKP2	PKPab	16 31 10.9	-1.8
BAIF	**Baives**	**160.06 357**	*e*PKP2	PKPab	16 31 11.5	-1.5
	comp=Z,111nm,1.6s					
MOA	**Molln**	**160.10 336**	⇓⇓*i*PKPab	PKPab	16 31 12.6	-0.6
	comp=Z,16nm,1.1s					
ARSA	**Arzberg**	**160.13 333**	⇑⇑*i*PKPab	PKPab	16 31 12.0	-1.4
	comp=Z,8.4nm,1.1s					
WLF	**Walferdange**	**160.30 353**	PKPab	PKPab	16 31 13.1	-1.0
WLF			APKPab		16 31 23.2	
WLF	**Walferdange**	**160.30 353**	*e*PKPab	PKPab	16 31 13.3	-0.7
RJOB	**Jochberg**	**160.69 338**	*e*PKPab	PKPab	16 31 15.7	-0.1
FUR	**Furstenfeldbru**	**160.75 342**	*e*PKPab	PKPab	16 31 15.7	-0.4
FUR	**Furstenfeldbru**	**160.75 342**	*e*PKP2	PKPab	16 31 15.7	-0.4
SOKA	**Soboth**	**160.79 333**	⇑⇑*i*PKPab	PKPab	16 31 15.0	-1.3
	comp=Z,14nm,1.1s					
BFO	**Black Forest**	**161.28 348**	*e*PKPab	PKPab	16 31 17.2	-1.2
BFO	**Black Forest**	**161.28 348**	*e*PKP2	PKPab	16 31 17.2	-1.2
FLN	**La Foliniere**	**161.28 6**	*e*PKP2	PKPab	16 31 16.4	-2.0
	comp=Z,84nm,1.3s					
MYKA	**Terra Mystica**	**161.36 335**	⇓⇓*i*PKPab	PKPab	16 31 17.4	-1.4
	comp=Z,12nm,0.7s					
CDF	**Champ du Feu**	**161.38 350**	*e*PKP2	PKPab	16 31 17.1	-1.7
	comp=Z,27nm,1.1s					
WATA	**Walderalm**	**161.42 340**	⇓⇓*i*PKPab	PKPab	16 31 18.5	-0.6
	comp=Z,21nm,1.1s					
WTTA	**Wattenberg**	**161.47 340**	⇑⇑*i*PKPab	PKPab	16 31 18.8	-0.5
	comp=Z,30nm,0.9s					
RETA	**Reutte**	**161.52 342**	⇓⇓*i*PKPab	PKPab	16 31 18.8	-0.7
	comp=Z,19nm,1.0s					
MOTA	**Moosalm**	**161.55 341**	⇓⇓*i*PKPab	PKPab	16 31 18.9	-0.7
	comp=Z,20nm,1.0s					
MEZF	**Maizieres J'vi**	**161.56 354**	*e*PKP2	PKPab	16 31 18.1	-1.5
	comp=Z,58nm,1.2s					
GRR	**Gorron**	**161.62 7**	*e*PKP2	PKPab	16 31 17.9	-1.9
	comp=Z,131nm,1.5s					
ABTA	**Abfaltersbach**	**161.65 337**	⇑⇑*i*PKPab	PKPab	16 31 18.3	-1.8
	comp=Z,25nm,1.2s					
SFTF	**Sexfontaines**	**161.85 354**	*e*PKP2	PKPab	16 31 19.3	-1.6
	comp=Z,60nm,1.1s					
HAU	**Haudompre**	**161.91 351**	*e*PKP2	PKPab	16 31 19.4	-1.7
	comp=Z,51nm,1.4s					
DAVA	**Damuels**	**161.93 343**	⇓⇓*i*PKPab	PKPab	16 31 20.4	-0.8
	comp=Z,17nm,0.8s					
FETA	**Feichten**	**161.95 341**	⇑⇑*i*PKPab	PKPab	16 31 20.7	-0.7
	comp=Z,15nm,1.5s					
HINF	**Hinteralfeld**	**162.02 350**	*e*PKP2	PKPab	16 31 19.8	-1.8
LOR	**Lormes**	**162.87 357**	*e*PKP2	PKPab	16 31 23.6	-1.7
	comp=Z,30nm,1.2s					
SSF	**Saint Saulge**	**163.09 357**	*e*PKP2	PKPab	16 31 24.7	-1.6
	comp=Z,41nm,1.2s					
CABF	**La Chapelle**	**163.31 351**	*e*PKP2	PKPab	16 31 26.0	-1.3
	comp=Z,49nm,1.3s					
AVF	**Avril sur Loir**	**163.37 358**	*e*PKP2	PKPab	16 31 25.7	-1.8
	comp=Z,9.5nm,0.9s					
MFF	**Saint Martin d**	**163.46 6**	*e*PKP2	PKPab	16 31 26.2	-1.7
	comp=Z,22nm,1.1s					
SMF	**Signal de Mont**	**163.49 356**	*e*PKP2	PKPab	16 31 26.4	-1.7
	comp=Z,63nm,1.2s					
LPL	**La Plagne**	**164.28 349**	*e*PKP2	PKPab	16 31 31.0	-0.6
	comp=Z,20nm,0.9s					
LPG	**La Plagne**	**164.30 349**	*e*PKP2	PKPab	16 31 31.1	-0.6
	comp=Z,23nm,1.0s					
RJF	**Les Rejaudoux**	**164.85 2**	*e*PKP2	PKPab	16 31 32.0	-2.1
ORIF	**Oris-en-Rattie**	**165.00 350**	*e*PKP2	PKPab	16 31 33.8	-1.0
	comp=Z,27nm,1.1s					
MBDF	**Montbardon**	**165.04 348**	*e*PKP2	PKPab	16 31 33.7	-1.3
	comp=Z,24nm,1.0s					
LFF	**La Frestale**	**165.18 5**	*e*PKP2	PKPab	16 31 33.9	-1.6
VIVF	**Saint-Julien-l**	**165.21 354**	*e*PKP2	PKPab	16 31 34.5	-1.2
	comp=Z,46nm,1.3s					
CAF	**Calviac**	**165.25 1**	*e*PKP2	PKPab	16 31 34.4	-1.4
SBF	**Sospel**	**165.73 345**	*e*PKP2	PKPab	16 31 36.3	-1.7
	comp=Z,62nm,1.0s					
SMRF	**Simiane la Rot**	**165.97 350**	*e*PKP2	PKPab	16 31 38.2	-0.9
	comp=Z,49nm,1.5s					
LASF	**Ste Croix**	**166.05 356**	*e*PKP2	PKPab	16 31 38.0	-1.4
	comp=Z,22nm,1.4s					
FRF	**La Foret Royal**	**166.19 347**	*e*PKP2	PKPab	16 31 38.3	-1.7
	comp=Z,30nm,1.1s					
LMR	**La Mourre**	**166.43 347**	*e*PKP2	PKPab	16 31 37.6	-3.5
	comp=Z,35nm,1.1s					
PGF	**Pioggiola**	**166.53 339**	*e*PKP2	PKPab	16 31 40.1	-1.5
	comp=Z,29nm,1.0s					
SJPF	**Ste Jean**	**166.74 12**	*e*PKP2	PKPab	16 31 41.1	-1.4
	comp=Z,21nm,1.2s					
ESDC	**Sonseca Array**	**169.17 27**	PKP	PKPdf	16 30 41.2	-0.4
	comp=Z,0.3nm,0.4s,baz=335,slow=2.9,SNR=6.3					
ESDC			PKPab	PKPab	16 31 51.9	-1.5
	comp=Z,0.5nm,0.3s,baz=315,slow=5.1,SNR=5.0					
ESDC	**Sonseca Array**	**169.17 27**	PKP	PKPdf	16 30 41.2	-0.4
ESDC			PKPab	PKPab	16 31 51.9	-1.5
KEST	**Kesra**	**171.92 315**	PKP	PKPdf	16 30 43.0	-0.2
	comp=Z,0.6nm,0.7s,baz=356,slow=5.6,SNR=3.9					
KEST			PKPab	PKPab	16 32 05.3	-0.5
	comp=Z,1.6nm,0.9s,baz=223,slow=5.0,SNR=3.8					
KEST	**Kesra**	**171.92 315**	PKP	PKPdf	16 30 43.0	-0.3
KEST			PKPab	PKPab	16 32 05.3	-0.5

IDC 29 16:15:10.2±2.7, 29°.60S×177°.62W, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/15, mbtmp4.1/5, Error ellipse: s-maj=144.5km s-min=29.4km az=162.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.01**	**278**	P	P	16 21 57.2	+1.3
	3.4nm,0.4s,baz=106,slow=8.9,SNR=6.4						
STKA	**Stephens Creek**	**34.98**	**256**	P	P	16 22 06.0	+1.7
	0.9nm,0.4s,baz=88,slow=7.4,SNR=3.5						
ASAR	**Alice Springs**	**43.49**	**266**	P	P	16 23 14.5	-1.0
	1.6nm,0.8s,baz=106,slow=7.3,SNR=5.1						
WRA	**Warramunga Arr**	**44.40**	**271**	P	P	16 23 21.7	-1.2
	1.5nm,0.5s,baz=110,slow=8.1,SNR=10						
NVAR	**Mina Array Bea**	**87.43**	**43**	P	P	16 28 00.2	+0.8
	0.1nm,0.3s,baz=237,slow=7.4,SNR=3.2						
FINES	**FINESS Array B**	**144.51**	**341**	PKP	PKPdf	16 34 45.8	-2.1
	4.3nm,0.4s,baz=61,slow=3.5,SNR=21						

IDC 29 16:19:23.6±7.4, 30°.22S×177°.38W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/15, mbtmp3.4/2, Error ellipse: s-maj=309.2km s-min=58.5km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.66**	**266**	P	P	16 27 30.0	-0.2
	0.4nm,0.8s,baz=106,slow=7.2,SNR=4.6						
WRA	**Warramunga Arr**	**44.63**	**272**	P	P	16 27 38.1	0.0
	0.2nm,0.3s,baz=110,slow=8.1,SNR=11						
FINES	**FINESS Array B**	**145.16**	**340**	PKPbc	PKPbc	16 39 01.1	-0.8
	0.6nm,0.3s,baz=54,slow=3.3,SNR=5.7						

IDC 29 16:21:00.8±38.0, 28°.60S×174°.99W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, Error ellipse: s-maj=713.4km s-min=173.3km az=94.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.47**	**254**	P	P	16 28 15.8	-0.3
	1.7nm,0.9s,baz=110,slow=12,SNR=3.4						
ASAR	**Alice Springs**	**45.87**	**264**	P	P	16 29 24.6	-0.5
	0.6nm,0.8s,baz=104,slow=7.3,SNR=9.3						
WRA	**Warramunga Arr**	**46.71**	**269**	P	P	16 29 32.2	+0.5
	0.9nm,0.6s,baz=110,slow=7.7,SNR=11						

IDC 29 16:23:14.6±5.7, 29°.15S×177°.55W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/14, mbtmp3.6/2, Error ellipse: s-maj=319.3km s-min=80.4km az=165.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.59**	**265**	P	P	16 31 20.6	-0.1
	0.5nm,0.5s,baz=107,slow=7.2,SNR=13						
WRA	**Warramunga Arr**	**44.46**	**271**	P	P	16 31 27.7	-0.1
	0.4nm,0.3s,baz=110,slow=7.8,SNR=12						
FINES	**FINESS Array B**	**144.10**	**341**	PKP	PKPdf	16 42 51.1	-0.4
	1.4nm,0.8s,baz=47,slow=2.5,SNR=2.6						

IDC 29 16:31:20.0±4.8, 6°.90S×128°.56E, h275km±51km, mb2.9/1, mb1 3.0/4, mb1mx2.8/16, mbtmp2.9/4, Error ellipse: s-maj=57.5km s-min=20.3km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.49**	**194**	P	Pn	16 33 56.6	-0.3
	0.5nm,0.3s,baz=4.8,slow=11,SNR=18						
FITZ				S	S	16 36 02.7	-2.5
	0.2nm,0.3s,baz=84,slow=18,SNR=3.2						
WRA	**Warramunga Arr**	**14.13**	**157**	P	Pn	16 34 27.3	-1.7
	0.2nm,0.3s,baz=339,slow=12,SNR=9.2						
WRA				S	S	16 37 02.8	-2.2
	0.1nm,0.3s,baz=333,slow=22,SNR=6.6						
ASAR	**Alice Springs**	**17.44**	**163**	P	P	16 35 06.6	+1.4
	0.3nm,0.3s,baz=344,slow=11,SNR=46						
ASAR				S	S	16 38 13.2	+1.1
	0.0nm,0.3s,baz=343,slow=21,SNR=5.3						
MKAR	**Makanchi Array**	**67.36**	**327**	P	P	16 41 45.8	0.0
	0.2nm,0.4s,baz=132,slow=6.4,SNR=2.6						

*IDC **29** 16:48:58.5±1.4, 30°.14S×177°.60W, h0km, mb4.2/6, mb1 4.4/7, mb1mx4.1/17, mbtmp4.2/7, ML3.3/1, Error ellipse: s-maj=45.3km s-min=23.1km az=143.0*

*ISCJB **29** 16:49:03.4±1.0, 30°.15S±0°.09×177°.8W±0°.2, h33km, mb4.1/7, Error ellipse: s-maj=24.6km s-min=11.2km az=18.2*

*NEIC **29** 16:49:04.7±0.9, 30°.09S×177°.76W, h35km, mb4.3/2, Error ellipse: s-maj=24.4km s-min=18.3km az=123.0*

ISC 29 16:49:05.5±1.0, 30°.03S±0°.09×177°.8W±0°.2, h35km, n16, σ19°15/13, mb4.1/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.22**	**206**	Pn	**Pn**	**16 51 13.1**	**-2.8**
	0.3nm,0.3s,baz=30,slow=8.1,SNR=5.2						
URZ				Sn	**Sn**	**16 52 58.6**	**+0.3**
	1.4nm,0.3s,baz=184,slow=18,SNR=9.3						
CTA	**Charters Tower**	**33.90**	**279**	P	**P**	**16 55 45.8**	**+0.6**
	3.8nm,0.6s,mb4.5,baz=100,slow=11,SNR=10						
CTA	**Charters Tower**	**33.90**	**279**	*e*P	**P**	**16 55 47.1**	**+1.9**
	2.1nm,0.4s,mb4.4						
CTAO	**Charters Tower**	**33.90**	**279**	*e*P	**P**	**16 55 45.9**	**+0.7**
	2.6nm,0.5s,mb4.4						
STKA	**Stephens Creek**	**34.72**	**256**	P	**P**	**16 55 51.5**	**-0.7**
	1.5nm,0.6s,mb4.1,baz=84,slow=15,SNR=6.2						
STKA	**Stephens Creek**	**34.72**	**256**	*e*P	**P**	**16 55 54.3**	**+2.1**
	2.7nm,1.5s,mb4.0						
ASAR	**Alice Springs**	**43.29**	**266**	P	**P**	**16 57 03.4**	**-0.6**
	0.9nm,0.5s,mb3.8,baz=104,slow=7.5,SNR=42						
WRA	**Warramunga Arr**	**44.24**	**272**	P	**P**	**16 57 11.0**	**-0.7**
	3.5nm,0.5s,mb4.3,baz=110,slow=7.9,SNR=64						
WRA	**Warramunga Arr**	**44.24**	**272**	P	**P**	**16 57 11.0**	**-0.7**
QSPA	**South Pole Qui**	**60.08**	**180**	*e*P	**P**	**16 59 10.0**	**+1.5**
	1.3nm,0.7s,mb4.1						
PETK	**Petropavlovsk-**	**85.50**	**345**	P	**P**	**17 01 39.3**	**0.0**
	1.4nm,0.7s,mb4.2,baz=131,slow=7.8,SNR=2.8						
NVAR	**Mina Array Bea**	**87.86**	**43**	P	**P**	**17 01 50.5**	**-0.6**
	0.5nm,0.7s,mb3.9,baz=221,slow=9.3,SNR=5.9						
ARCES	**ARCESS Array B**	**138.27**	**348**	PKP	PKPdf	17 08 26.7	+0.7
	3.5nm,0.8s,baz=18,slow=8.2,SNR=3.6						
ARCES	**ARCESS Array B**	**138.27**	**348**	PKP	PKPdf	17 08 26.7	+0.7
FINES	**FINESS Array B**	**144.86**	**340**	PKPbc	PKPdf	17 08 34.8	-3.2
	6.1nm,0.7s,baz=54,slow=3.8,SNR=28						
NOA	**NORSAR Array B**	**148.41**	**352**	PKPbc	PKPbc	17 08 45.1	-2.4
	1.5nm,0.6s,baz=14,slow=4.4,SNR=5.4						

*BJI **29** 16:56:04.6, 4°.84S×125°.71E, h455km, mB5.1/3, mb4.4/12*

*ISCJB **29** 16:56:07.4±0.3, 4°.60S±0°.04×125°.50E±0°.04, h454km±3km, mb4.4/39, Error ellipse: s-maj=7.1km s-min=5.3km az=150.6*

*IDC **29** 16:56:07.7±1.2, 4°.62S×125°.52E, h440km±12km, mb3.8/18, mb1 3.8/20, mb1mx3.7/24, mbtmp3.7/20, Error ellipse: s-maj=18.6km s-min=8.2km az=73.0*

*NEIC **29** 16:56:08.9±0.7, 4°.64S×125°.49E, h459km±9km, mb4.6/19, Error ellipse: s-maj=9.7km s-min=4.7km az=53.0*

*DJA **29** 16:56:10, 4°.82S×125°.51E, h400km, mb4.8/17*

ISC 29 16:56:08.2±0.3, 4°.63S±0°.04×125°.53E±0°.05, h448km±4km, n83, σ0°92/87, mb4.4/39, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**2.09**	**49**	P	**P**	**16 57 09.3**	**+0.1**
NLAI				S	**S**	**16 57 55.9**	**-2.6**
KDI	**Kendari**	**2.98**	**283**	P	**P**	**16 57 15.2**	**+0.2**
KDI				S	**S**	**16 58 07.1**	**-2.0**
LUWI	**Luwuk**	**4.50**	**322**	P	**P**	**16 57 27.6**	**-0.3**
LUWI				S	**S**	**16 58 31.3**	**-1.3**
MMRI	**Maumere**	**5.15**	**219**	P	**P**	**16 57 34.0**	**0.0**
MMRI				S	**S**	**16 58 51.5**	**+7.7**
BKSI	**Bulukumba**	**5.43**	**263**	P	**P**	**16 57 36.8**	**+0.1**
	1.6nm4µm401nm,0.7s						
BKSI				S	**S**	**16 58 49.0**	**+0.1**
	1.6nm4µm401nm,0.7s						
MSSI	**Masamba**	**5.59**	**291**	P	**P**	**16 57 38.8**	**+0.4**
	0.5nm6µm168nm,0.6s						
SPSI	**Sidrap Palu**	**5.78**	**276**	P	**P**	**16 57 40.6**	**+0.3**
	0.8nm2µm238nm,1.0s						
TTSI	**Tana Toraja**	**5.91**	**285**	P	**P**	**16 57 42.4**	**+0.8**
	0.5nm2µm149nm,0.7s						
MRSI	**Marisa**	**6.21**	**325**	P	**P**	**16 57 45.1**	**+0.4**
	0.5nm145nm,0.6s						
KBKI	**Kotabaru**	**9.43**	**278**	P	**P**	**16 58 20.2**	**+1.0**
	58nm,1.0s						
MTNI	**Mataram**	**10.11**	**246**	P	**P**	**16 58 26.5**	**-0.1**
	521nm44nm,0.6s						
KHKI	**Kahang-Kahang**	**10.53**	**249**	P	**P**	**16 58 31.2**	**0.0**
	158nm,0.8s						
KAKA	**Kakadu**	**10.54**	**140**	*e*P	**P**	**16 58 31.8**	**+0.5**
	17nm,0.4s						
KAKA	**Kakadu**	**10.54**	**140**	*e*P	**P**	**16 58 31.7**	**+0.4**
	62nm,0.6s						
BBKI	**Banjar Baru**	**10.72**	**276**	P	**P**	**16 58 35.1**	**+1.8**
	437nm,0.7s						
SRBI	**Singaraja**	**10.81**	**251**	P	**P**	**16 58 35.1**	**+0.9**
	117nm,0.6s						
BAKI	**Biak**	**11.11**	**72**	P	**P**	**16 58 40.1**	**+2.6**
	96nm,0.7s						
KNA	**Kununurra**	**11.50**	**164**	P	**P**	**16 58 43.2**	**+1.5**
	494nm59nm,0.8s						
KMMI	**Kalianget**	**11.75**	**258**	P	**P**	**16 58 46.8**	**+2.3**
	219nm,1.0s						
JAGI	**Jajag, Banyuwa**	**11.92**	**251**	P	**P**	**16 58 45.6**	**-0.8**
	107nm,1.0s						
GMJI	**Gumukmas**	**12.54**	**253**	P	**P**	**16 58 52.8**	**-0.2**
	65nm,1.0s						
FITZ	**Fitzroy Crossi**	**13.39**	**180**	P	**P**	**16 59 01.8**	**-0.3**
	1.0nm,0.3s,baz=7.4,slow=7.6,SNR=44						
FITZ				S	**S**	**17 01 23.5**	**-2.3**
	0.3nm,0.3s,baz=194,slow=17,SNR=3.0						
FITZ	**Fitzroy Crossi**	**13.39**	**180**	*e*P	**P**	**16 59 02.4**	**+0.2**
	4.1nm,0.3s						
KKM	**Kota Kinabalu**	**14.10**	**319**	*e*P	**P**	**16 59 10.6**	**+0.7**
JAY	**Jayapura**	**15.29**	**83**	P	**P**	**16 59 26.6**	**+3.9**
KSM	**Kuching**	**16.37**	**291**	*e*P	**P**	**16 59 33.5**	**-0.6**
MBWA	**Marble Bar**	**17.37**	**198**	*e*P	**P**	**16 59 44.9**	**+0.4**
	3.3nm,0.6s						
WRA	**Warramunga Arr**	**17.47**	**151**	P	**P**	**16 59 45.4**	**-0.2**
	2.0nm,0.3s,baz=335,slow=10,SNR=76						
WRA				S	**S**	**17 02 42.5**	**-2.6**
	0.2nm,0.3s,baz=326,slow=20,SNR=8.0						
WRA				ScP	ScP	17 06 53.9	+0.9
	0.1nm,0.3s,baz=328,slow=2.1,SNR=5.1						
COEN	**Coen**	**19.71**	**119**	*e*P	**P**	**17 00 07.6**	**+0.4**
	56nm,0.5s						
ASAR	**Alice Springs**	**20.58**	**158**	P	**P**	**17 00 16.3**	**+1.3**
	2.5nm,0.5s,baz=351,slow=16,SNR=68						
ASAR				PcP	PcP	17 04 05.8	-0.5
	0.5nm,0.3s,baz=7.2,slow=1.5,SNR=6.3						
ASAR				ScP	ScP	17 07 00.7	+0.7
	2.0nm,0.4s,baz=348,slow=2.3,SNR=16						
CTA	**Charters Tower**	**25.36**	**129**	P	**P**	**17 00

comp=Z,5.0nm,0.8s,mb4.0
QRN Al-Qurain 81.40 300 *eP* **P 17 07 37.1 -0.5**
QRN AMb AMB 17 07 39.1
comp=Z,79nm,1.2s,mb5.1
UMR Umm Al-Rimmam 81.72 301 *eP* **P 17 07 38.5 -0.6**
UMR AMb AMB 17 07 39.9
comp=Z,33nm,0.6s,mb5.1
NAY Al-Naaiem 82.07 300 *eP* **P 17 07 40.3 -0.7**
NAY AMb AMB 17 07 41.4
comp=Z,20nm,0.6s,mb4.8
MIB Mutribah 82.08 301 *eP* **P 17 07 40.4 -0.7**
MIB AMb AMB 17 07 41.6
comp=Z,22nm,0.6s,mb4.9
QSPA South Pole Qui 85.33 180 *eP* **P 17 07 56.1 -0.1**
comp=Z,1.0nm,0.5s,mb3.7,baz=155,slow=2.9,SNR=5.9
QSPA South Pole Qui 85.33 180 *eP* **P 17 07 56.6 +0.3**
comp=Z,1.3nm,0.5s,mb3.8
KDAK Kodiak Island 89.56 32 P **P 17 08 15.6 -1.0**
comp=Z,2.7nm,0.8s,mb4.1,baz=168,slow=9.3,SNR=3.6
KDAK Kodiak Island 89.56 32 P **P 17 08 15.6 -1.0**
ILAR Eielson Array 93.12 25 P **P 17 08 31.6 -1.2**
comp=Z,1.7nm,0.6s,mb4.3,baz=238,slow=5.2,SNR=20
BRTR Keskin Array B 94.38 309 P **P 17 08 38.4 -0.8**
comp=Z,1.3nm,0.7s,mb4.1,baz=135,slow=5.3,SNR=9.6
AKASG Malin Array Be 97.55 320 P **P 17 08 51.8 -1.5**
comp=Z,1.1nm,0.6s,mb4.4,baz=12,slow=1.9,SNR=7.4
AKASG Malin Array Be 97.55 320 P **P 17 08 51.8 -1.5**
ARCES ARCESS Array B 97.82 340 P **P 17 08 53.0 -1.0**
comp=Z,4.5nm,0.9s,mb4.8,baz=75,slow=4.2,SNR=5.8
ARCES ARCESS Array B 97.82 340 P **P 17 08 53.0 -1.0**
CPUP Villa Florida 149.10 175 PKPbc PKPbc 17 15 05.3 -0.4
comp=Z,1.8nm,0.7s,baz=50,slow=3.1,SNR=4.5
CPUP Villa Florida 149.10 175 PKPbc PKPbc 17 15 05.3 -0.4
LPAZ La Paz 155.21 147 PKP PKPdf 17 15 04.8 -5.5
comp=Z,2.0nm,0.7s,baz=203,slow=1.7,SNR=6.2

IDC 29 16:57:15.3±4.4, 29°.24S×177°.33W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/15, mbtmp4.1/4, Error ellipse: s-maj=162.3km s-min=72.6km az=162.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.12**	**206**	Sn	Sn	17 01 16.4	-20
1.3nm,0.3s,baz=195,slow=21,SNR=5.6							
CTA	**Charters Tower**	**34.21**	**277**	P	P	17 04 03.6	+0.8
1.6nm,0.5s,baz=115,slow=11,SNR=3.8							
STKA	**Stephens Creek**	**35.32**	**255**	P	P	17 04 12.4	+0.1
2.2nm,0.7s,baz=102,slow=11,SNR=3.6							
ASAR	**Alice Springs**	**43.77**	**265**	P	P	17 05 22.9	+0.1
1.6nm,0.6s,baz=104,slow=7.9,SNR=9.1							
WRA	**Warramunga Arr**	**44.65**	**271**	P	P	17 05 28.9	-1.0
2.4nm,0.7s,baz=109,slow=8.1,SNR=5.4							
FINES	**FINESS Array B**	**144.25**	**341**	PKP	PKPdf	17 16 52.0	-0.4
6.5nm,0.8s,baz=29,slow=3.2,SNR=11							

IDC 29 16:59:31.0±4.7, 28°.25S×179°.18W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/14, mbtmp4.0/3, MS4.7/1, Ms1 4.7/1, ms1mx4.0/25, Error ellipse: s-maj=195.5km s-min=56.3km az=153.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**15.84**	**27**	LR	LR	17 08 22.5	
comp=Z,3μm,21.8s,baz=208,slow=34							
STKA	**Stephens Creek**	**34.02**	**254**	P	P	17 06 16.0	-0.8
1.8nm,0.6s,baz=97,slow=9.6,SNR=3.5							
ASAR	**Alice Springs**	**42.23**	**265**	P	P	17 07 26.1	-0.1
1.0nm,0.5s,baz=97,slow=7.6,SNR=4.6							
WRA	**Warramunga Arr**	**43.02**	**270**	P	P	17 07 33.1	+0.5
1.8nm,0.6s,baz=109,slow=8.0,SNR=6.8							
FINES	**FINESS Array B**	**142.78**	**340**	PKhKP	PKPpre	17 18 55.6	
2.5nm,0.8s,baz=41,slow=4.4,SNR=3.7							
AKASG	**Malin Array Be**	**148.97**	**324**	PKPbc	PKPbc	17 19 20.0	-0.5
0.2nm,0.3s,baz=50,slow=3.7,SNR=5.3							

IDC 29 17:01:54.0±4.4, 29°.12S×177°.42W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/15, mbtmp3.9/4, Error ellipse: s-maj=128.4km s-min=72.7km az=159.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.19**	**205**	Sn	Sn	17 05 52.5	-24
1.1nm,0.3s,baz=112,slow=23,SNR=5.9							
CTA	**Charters Tower**	**34.12**	**277**	P	P	17 08 42.7	+2.0
1.9nm,0.4s,baz=107,slow=11,SNR=7.5							
STKA	**Stephens Creek**	**35.27**	**255**	P	P	17 08 51.0	+0.4
0.8nm,0.5s,baz=115,slow=13,SNR=3.8							
ASAR	**Alice Springs**	**43.70**	**265**	P	P	17 09 59.5	-1.5
0.4nm,0.4s,baz=104,slow=7.4,SNR=8.4							
WRA	**Warramunga Arr**	**44.57**	**271**	P	P	17 10 07.2	-0.8
0.8nm,0.4s,baz=110,slow=7.7,SNR=24							
FINES	**FINESS Array B**	**144.11**	**341**	PKP	PKPdf	17 21 31.0	0.0
3.6nm,0.6s,baz=66,slow=4.7,SNR=17							

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*IDC **29** 17:18:16.1±3.4, 6°.95S×129°.69E, h59km±31km, mb3.8/11, mb1 4.0/13, mb1mx3.9/19, mbtmp3.9/13, ML4.5/3, Error ellipse: s-maj=32.1km s-min=13.6km az=66.0*
*NEIC **29** 17:18:20.2±1.7, 6°.96S×129°.70E, h99km±17km, mb4.3/1, Error ellipse: s-maj=15.1km s-min=11.1km az=64.0*
ISC 29 17:18:18.9±2.1, 7°.0S±0°.1×129°.6E±0°.1, h86km±22km, n23, σ1°09/25, mb4.0/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.30**	**154**	*eP*	**Pn**	**17 19 50.6**	**+1.3**
240nm,0.6s							
KAKA				*eS*	**Sn**	**17 20 50.3**	**-10**
FITZ	**Fitzroy Crossi**	**11.66**	**199**	P	**Pn**	**17 21 01.5**	**-0.8**
4.4nm,0.3s,baz=38,slow=9.8,SNR=78							
FITZ				S	**Sn**	**17 23 02.9**	**-7.6**
4.4nm,0.3s,baz=114,slow=20,SNR=6.4							
FITZ	**Fitzroy Crossi**	**11.66**	**199**	*eP*	**Pn**	**17 21 01.6**	**-0.7**
24nm,0.3s							
FITZ				*eS*	**Sn**	**17 23 02.5**	**-8.1**
WRA	**Warramunga Arr**	**13.63**	**161**	P	**Pn**	**17 21 25.9**	**-2.8**
1.8nm,0.3s,baz=340,slow=14,SNR=198							
WRA				S	**Sn**	**17 23 48.4**	**-10**
6.0nm,0.3s,baz=333,slow=23,SNR=16							
COEN	**Coen**	**15.02**	**118**	*eP*	**Pn**	**17 21 47.3**	**+0.7**
MBWA	**Marble Bar**	**16.98**	**213**	*eP*	**Pn**	**17 22 13.8**	**+2.8**
10nm,0.6s							
ASAR	**Alice Springs**	**17.05**	**166**	P	**Pn**	**17 22 11.4**	**-0.5**
2.4nm,0.3s,baz=346,slow=14,SNR=160							
ASAR				S	**S**	**17 25 08.9**	**-17**
0.5nm,0.3s,baz=352,slow=25,SNR=4.4							
CTA	**Charters Tower**	**20.73**	**130**	P	**P**	**17 22 53.3**	**+0.7**
2.2nm,0.8s,baz=335,slow=13,SNR=3.1							
STKA	**Stephens Creek**	**27.14**	**157**	P	**P**	**17 23 54.0**	**0.0**
2.2nm,0.4s,mb4.0,baz=338,slow=8.7,SNR=12							
STKA	**Stephens Creek**	**27.14**	**157**	*eP*	**P**	**17 23 54.7**	**+0.6**
1.5nm,0.4s,mb3.9							
CMAR	**Chiang Mai Arr**	**39.44**	**310**	P	**P**	**17 25 42.1**	**+1.2**
1.3nm,0.6s,mb4.0,baz=136,slow=6.9,SNR=7.7							
MJAR	**Matsushiro Arr**	**44.09**	**10**	P	**P**	**17 26 16.2**	**-2.4**
1.5nm,0.7s,mb3.8,baz=199,slow=12,SNR=5.4							
SONM	**Songino Array**	**58.34**	**342**	P	**P**	**17 28 05.0**	**0.0**
0.9nm,0.4s,mb4.1,baz=160,slow=6.9,SNR=11							
PETK	**Petropavlovsk-**	**64.48**	**18**	P	**P**	**17 28 46.2**	**0.0**
4.1nm,0.9s,mb4.2,baz=178,slow=4.9,SNR=5.7							
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**17 29 09.8**	**+0.7**
1.3nm,0.3s,mb4.2,baz=124,slow=7.8,SNR=24							
AAK	**Ala-Archa**	**70.30**	**320**	P	**P**	**17 29 23.3**	**+0.1**
0.8nm,0.4s,mb3.9,baz=198,slow=5.6,SNR=4.1							
ZALV	**Zalesovo Beam**	**71.43**	**334**	P	**P**	**17 29 29.0**	**-0.9**
1.4nm,0.6s,mb4.0,baz=106,slow=4.8,SNR=8.5							
BVAR	**Borovoye Array**	**77.88**	**328**	P	**P**	**17 30 07.1**	**0.0**
1.5nm,0.9s,mb3.7,baz=126,slow=7.5,SNR=6.7							
QSPA	**South Pole Qui**	**82.94**	**180**	P	**P**	**17 30 33.9**	**0.0**
1.0nm,0.5s,mb3.9,baz=205,slow=3.9,SNR=12							
QSPA	**South Pole Qui**	**82.94**	**180**	P	**P**	**17 30 33.9**	**0.0**
CPUP	**Villa Florida**	**146.16**	**169**	PKPbc	PKPbc	17 37 50.3	+0.3
2.3nm,0.5s,baz=190,slow=1.8,SNR=9.4							
LPAZ	**La Paz**	**150.94**	**143**	PKPbc	PKPbc	17 38 04.1	+1.3
1.7nm,0.4s,baz=56,slow=2.3,SNR=16							
LPAZ				PKPab	PKPab	17 38 11.7	+1.5
1.7nm,0.6s,baz=195,slow=5.2,SNR=7.4							
LPAZ	**La Paz**	**150.94**	**143**	PKPbc	PKPbc	17 38 04.1	+1.3
LPAZ				PKPab	PKPab	17 38 11.7	+1.5

MEX 29 17:29:27.6±0.5, 16°.39N×100°.14W, h18km±349km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.55**	**29**	*i* P	Pg	17 29 36.4	-2.2
ACX				*i* S	Sg	17 29 43.3	-2.8
CAIG	**El Cayaco**	**0.67**	**349**	*i* P	Pb	17 29 38.3	-2.5
CAIG				*i* S	Sb	17 29 46.6	-3.1
PNIG	**Pinotepa**	**1.93**	**90**	*i* P	Pn	17 29 57.2	-2.4
PNIG				*i* S	Sn	17 30 18.5	-4.9
UTMO	**Huajuapan**	**2.65**	**57**	*eP*	Pn	17 30 06.8	-2.7
UTMO				*i* S	Sn	17 30 38.3	-3.0

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*IDC **29** 17:42:25.2±1.1, 13°.26N×120°.12E, h0km, mb3.2/5, mb1 3.5/5, mb1mx3.4/21, mbtmp3.3/5, Error ellipse: s-maj=20.6km s-min=12.5km az=127.0*
*NEIC **29** 17:42:26.8±0.7, 13°.28N×120°.21E, h10km, mb3.9/1, Error ellipse: s-maj=14.1km s-min=12.1km az=108.0*
*ISCJB **29** 17:42:27.8±1.1, 13°.31N±0°.05×120°.11E±0°.09, h26km±10km, mb3.5/5, Error ellipse: s-maj=14.1km s-min=8.8km az=176.4*
*MAN **29** 17:42:27, 13°.30N×120°.18E, h7km, mb4.7, ML3.6, MS3.6*
ISC 29 17:42:27.5±1.4, 13°.28N±0°.05×120°.17E±0°.08, h11km±10km, n16, σ0°85/17, mb3.5/6, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.46**	**9**	*eP*	**Pg**	**17 42 36.4**	**-0.1**
LUBP				*eS*	**Sg**	**17 42 43.2**	**+0.5**
TGY	**Tagaytay City**	**1.11**	**42**	Pg	**Pg**	**17 42 47.9**	**-1.0**
142nm,0.3s,baz=226,slow=3.8,SNR=13							
TGY				Lg		17 43 02.8	
151nm,0.3s,baz=108,slow=20,SNR=14							
TGY	**Tagaytay City**	**1.11**	**42**	↑*eP*	**Pb**	**17 42 47.9**	**-0.8**
BUSP	**Coron**	**1.27**	**179**	*eP*	**Pn**	**17 42 51.6**	**+0.4**
BOAC	**Boac**	**1.64**	**84**	*eP*	**Pn**	**17 42 56.4**	**0.0**
ENPP	**El Nido**	**2.19**	**199**	*eP*	**Pn**	**17 43 04.6**	**+0.8**
POLP	**Polillo Island**	**2.24**	**50**	*eP*	**Pn**	**17 43 05.5**	**+0.9**
CUYO	**Cuyo Island**	**2.55**	**161**	*eP*	**Pn**	**17 43 08.7**	**-0.3**
BALP	**Balar**	**2.80**	**29**	*eP*	**Pn**	**17 43 14.8**	**+2.5**
GUIM	**Jordan**	**3.54**	**138**	*eP*	**Pn**	**17 43 23.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**21.05**	**287**	P	**P**	**17 47 12.0**	**+0.3**
0.8nm,0.7s,mb3.2,baz=94,slow=9.3,SNR=8.1							
WRA	**Warramunga Arr**	**35.84**	**157**	P	**P**	**17 49 26.3**	**-1.1**
0.3nm,0.4s,mb3.6,baz=333,slow=10,SNR=7.7							
SONM	**Songino Array**	**36.31**	**344**	P	**P**	**17 49 30.1**	**-1.1**
0.3nm,0.6s,mb3.4,baz=166,slow=11,SNR=3.7							
ASAR	**Alice Springs**	**39.10**	**160**	P	**P**	**17 49 54.8**	**-0.2**
0.5nm,0.6s,mb3.5,baz=341,slow=7.3,SNR=12							
MKAR	**Makanchi Array**	**46.06**	**324**	P	**P**	**17 50 50.2**	**-1.2**
0.1nm,0.2s,mb3.3,baz=113,slow=9.6,SNR=2.8							
KURK	**Kurchatov**	**50.25**	**327**	P	**P**	**17 51 24.2**	**+0.6**
1.1nm,0.8s,mb3.9							

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*IDC **29** 17:47:40.8±5.0, 43°.85S×167°.25E, h0km, mb3.1/2, mb1 3.4/3, mb1mx3.4/13, mbtmp3.3/3, ML3.9/1, Error ellipse: s-maj=313.6km s-min=28.0km az=11.0*
*ISCJB **29** 17:47:42.8±0.6, 44°.94S±0°.06×167°.56E±0°.09, h90km±6km, mb3.2/2, Error ellipse: s-maj=12.5km s-min=7.0km az=42.5*
*WEL **29** 17:47:44.0±0.3, 44°.97S×167°.41E, h81km±2km, ML4.1/15, Error ellipse: s-maj=2.8km s-min=1.4km az=90.0*
ISC 29 17:47:43.9±0.6, 44°.96S±0°.06×167°.56E±0°.09, h83km±6km, n25, σ0°87/27, mb3.2/2, 3C-2D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.39**	**42**	↑PN	**Pn**	**17 47 57.8**	**+0.7**
MSZ				SN	**Sn**	**17 48 07.4**	**+0.6**
MLZ	**Mavora Lakes**	**0.58**	**132**	↓PN	**Pn**	**17 47 58.9**	**+0.3**
DCZ	**Deep Cove**	**0.59**	**209**	PN	**Pn**	**17 47 58.0**	**-0.7**
DCZ				SN	**Sn**	**17 48 08.1**	**-1.6**
WHZ	**Wether Hill Ro**	**0.97**	**164**	↓PN	**Pn**	**17 48 02.8**	**0.0**
WKZ	**Wanaka**	**1.04**	**83**	↑PN	**Pn**	**17 48 05.1**	**+1.5**
JCZ	**Jackson Bay**	**1.23**	**44**	↑PN	**Pn**	**17 48 06.7**	**+0.8**
EAZ	**Earnscleugh**	**1.27**	**103**	PN	**Pn**	**17 48 07.5**	**+1.2**
PYZ	**Puysegur Point**	**1.35**	**207**	*e*PN	**Pn**	**17 48 07.6**	**+0.1**
TUZ	**Tuapeka**	**1.76**	**125**	PN	**Pn**	**17 48 13.3**	**+0.6**
APZ	**The Paps**	**1.89**	**171**	PN	**Pn**	**17 48 14.4**	**-0.1**
SYZ	**Scrubby Hill**	**1.92**	**146**	PN	**Pn**	**17 48 15.2**	**+0.3**
LBZ	**Lake Benmore**	**1.96**	**74**	PN	**Pn**	**17 48 15.5**	**+0.2**
FOZ	**Fox Glacier**	**2.07**	**48**	PN	**Pn**	**17 48 17.5**	**+0.7**
ODZ	**Otahua Downs**	**2.19**	**93**	PN	**Pn**	**17 48 18.7**	**+0.4**
RPZ	**Rata Peaks**	**2.80**	**65**	PN	**Pn**	**17 48 26.0**	**-0.6**
RPZ	**Rata Peaks**	**2.80**	**65**	Pn	**Pn**	**17 48 26.1**	**-0.5**
19nm,0.3s,baz=326,slow=3.6,SNR=81							
RPZ				Sn	**Sn**	**17 48 57.4**	**-2.0**
23nm,0.3s,baz=38,slow=19,SNR=16							
MQZ	**McQueen's Vall**	**3.86**	**73**	PN	**Pn**	**17 48 39.8**	**-1.1**
LTZ	**Lake Taylor**	**4.04**	**59**	PN	**Pn**	**17 48 42.0**	**-1.4**
DSZ	**Denniston Nort**	**4.46**	**45**	PN	**Pn**	**17 48 48.4**	**-0.7**
THZ	**Tophouse**	**5.04**	**52**	PN	**Pn**	**17 48 55.6**	**-1.4**
NNZ	**Nelson**	**5.67**	**51**	PN	**Pn**	**17 49 06.4**	**+0.8**
WCZ	**Waipu Caves**	**10.38**	**32**	PN	**Pn**	**17 50 10.2**	**+0.3**
ASAR	**Alice Springs**	**34.62**	**297**	P	**P**	**17 54 25.8**	**+0.7**
0.2nm,0.6s,mb3.1,baz=139,slow=7.2,SNR=5.1							
WRA	**Warramunga Arr**	**37.11**	**301**	P	**P**	**17 54 46.1**	**-0.2**
0.3nm,0.8s,mb3.3,baz=139,slow=7.4,SNR=4.9							
FINES	**FINESS Array B**	**152.20**	**320**	PKPbc	PKPbc	18 07 34.9	+6.2
2.2nm,0.5s,baz=56,slow=3.5,SNR=14							

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*ISCJB **29** 17:48:15.4±0.8, 19°.1S±0°.2×177°.5W±0°.1, h598km±16km, mb4.3/12, Error ellipse: s-maj=34.6km s-min=14.0km az=160.8*
*IDC **29** 17:48:15.1±1.5, 19°.44S×177°.58W, h546km±16km, mb3.7/8, mb1 3.9/9, mb1mx3.5/19, mbtmp3.7/9, Error ellipse: s-maj=33.7km s-min=11.9km az=153.0*
*NEIC **29** 17:48:15.8±0.9, 19°.56S×177°.49W, h560km±10km, mb4.6/2, Error ellipse: s-maj=25.7km s-min=12.4km az=156.0*
ISC 29 17:48:15.9±0.9, 19°.35±0°.2×177°.4W±0°.1, h579km±16km, n59, σ0°76/29, mb4.3/12, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.55**	**289**	*eP*	**P**	**17 49 44.6**	**+0.7**
AFI	**Afiamalu**	**7.61**	**46**	P	**P**	**17 50 11.0**	**+0.1**
14nm,0.3s,baz=33,slow=0.9,SNR=18							
AFI				S	**S**	**17 51 42.0**	**-3.0**
14nm,0.3s,baz=34,slow=23,SNR=12							
AFI	**Afiamalu**	**7.61**	**46**	P	**P**	**17 50 11.0**	**+0.1**
AFI				S	**S**	**17 51 42.0**	**-3.0**
DZM	**Mont Dzumac**	**15.34**	**257**	*eP*	**P**	**17 51 27.8**	**-0.3**
ARMA	**Armidale**	**30.09**	**242**	*eP*	**P**	**17 53 39.8**	**+0.2**
CNB	**Canberra Magne**	**33.36**	**235**	*eP*	**P**	**17 54 07.0**	**-0.3**
CTA	**Charters Tower**	**34.16**	**262**	P	**P**	**17 54 14.6**	**+0.4**
22nm,0.6s,mb5.0,baz=94,slow=10,SNR=43							
CTA	**Charters Tower**	**34.16**	**262**	*eP*	**P**	**17 54 14.5**	**+0.3**
12nm,0.4s,mb4.9							
CTAO	**Charters Tower**	**34.16**	**262**	*eP*	**P**	**17 54 14.3**	**+0.2**
20nm,0.6s,mb4.9							
TOO	**Toolangi**	**37.05**	**233**	*eP*	**P**	**17 54 37.6**	**-0.2**
STKA	**Stephens Creek**	**38.80**	**243**	P	**P**	**17 54 52.5**	**+0.3**
9.9nm,0.8s,mb4.4,baz=90,slow=9.7,SNR=24							
STKA	**Stephens Creek**	**38.80**	**243**	*eP*	**P**	**17 54 52.3**	**+0.1**
9.0nm,1.1s,mb4.2							
STKA	**Stephens Creek**	**38.80**	**243**	*eP*	**P**	**17 54 51.9**	**-0.2**
WRA	**Warramunga Arr**	**45.30**	**261**	P	**P**	**17 55 42.8**	**-0.5**
5.2nm,0.3s,mb4.5,baz=97,slow=7.7,SNR=264							
WRA				PcP	PcP	17 57 11.9	+1.3
2.0nm,0.7s,baz=91,slow=3.4,SNR=7.2							
ASAR	**Alice Springs**	**45.32**	**255**	P	**P**	**17 55 43.4**	**0.0**
19nm,0.9s,mb4.6,baz=86,slow=8.1,SNR=310							
ASAR				PcP	PcP	17 57 11.8	+1.2
3.3nm,0.7s,baz=102,slow=4.1,SNR=10							
ASAR				S	**S**	**18 01 41.1**	**-1.6**
0.6nm,0.8s,baz=86,slow=15,SNR=6.6							
KAKA	**Kakadu**	**48.49**	**270**	*eP*	**P**	**17 56 07.5**	**+0.2**
4.3nm,0.4s,mb4.3							
FORT	**Forrest**	**50.27**	**246**	*eP*	**P**	**17 56 19.4**	**-0.7**
31nm,0.7s,mb4.8							
FITZ	**Fitzroy Crossi**	**53.72**	**261**	P	**P**	**17 56 45.6**	**+0.5**
5.6nm,0.5s,mb4.2,baz=122,slow=3.5,SNR=66							
FITZ	**Fitzroy Crossi**	**53.72**	**261**	*eP*	**P**	**17 56 45.3**	**+0.2**
14nm,0.5s,mb4.5							
FITZ	**Fitzroy Crossi**	**53.72**	**261**	*eP*	**P**	**17 56 45.2**	**+0.1**
MBWA	**Marble Bar**	**58.64**	**257**	*eP*	**P**	**17 57 18.7**	**-0.2**
KLBR	**Kellerberrin**	**59.06**	**244**	*eP*	**P**	**17 57 21.3**	**-0.2**
14nm,0.7s,mb4.2							

QSPA South Pole Qui 70.79 180 *eP* **P 17 58 34.7 +0.5**
13nm,1.1s,mb4.4
MAW Mawson 82.89 200 P **P 17 59 40.3 +0.1**
0.9nm,0.4s,mb3.6,baz=137,slow=11,SNR=7.8
TXAR Lajitas Array 85.95 57 P **P 18 00 00.5 +4.7**
0.5nm,0.7s,mb3.3,baz=219,slow=6.4,SNR=8.3
CMAR Chiang Mai Arr 90.21 289 P **P 18 00 19.1 +3.2**
2.4nm,0.9s,mb4.0,baz=112,slow=2.7,SNR=15
MKAR Makanchi Array 110.74 314 PKiKP PKiKP 18 05 44.7 +1.1
0.5nm,0.5s,baz=223,slow=0.8,SNR=10
MKAR Makanchi Array 110.74 314 PKPdf PKiKP 18 05 44.7 +1.1
BOSA Boshof 127.58 205 PKP PKPdf 18 06 18.3 +1.8
2.4nm,1.0s,baz=211,slow=5.9,SNR=2.9
ARCES ARCESS Array B 127.81 350 PKP PKPdf 18 06 17.5 +1.8
8.1nm,1.1s,baz=48,slow=1.8,SNR=14
AKASG Malin Array Be 142.19 332 PKhKP PKPpre 18 06 39.7
0.4nm,0.3s,baz=41,slow=4.0,SNR=6.7
MALT Malatya 143.59 309 *eP* PKPdf 18 06 47.3 +1.6
BRTR Keskin Array B 146.39 314 PKPbc PKPbc 18 06 54.9 +2.0
2.9nm,0.6s,baz=142,slow=4.5,SNR=21
CLL Collm 146.99 348 ↓*i*P PKPbc 18 06 56.8 +2.7
CLL Collm 146.99 348 ↓*i*PKPbc PKPbc 18 06 56.8 +2.7
comp=Z,7.0nm,0.8s
BRG Berggiesshubel 147.20 347 *eP* PKPbc 18 06 57.2 +2.6
comp=Z,3.8nm,0.7s
VYHS Vyhne 148.01 339 *eP* PKPbc 18 06 59.5 +2.7
VYHS Vyhne 148.01 339 *e*PKP PKPbc 18 06 59.5 +2.7
KHC Kasperske Hory 148.92 346 *eP* PKPbc 18 07 02.0 +2.9
GERES GERESS Array B 149.16 346 PKPbc PKPbc 18 07 02.2 +2.5
comp=Z,2.9nm,0.7s,baz=29,slow=3.0,SNR=23
GERES GERESS Array B 149.16 346 PKPbc PKPbc 18 07 02.2 +2.5
GIVF Givet 149.19 357 *e*PKP1 PKPbc 18 07 02.7 +3.0
BAIF Baives 149.26 358 *e*PKP1 PKPbc 18 07 03.0 +3.2
CONA Conrad Observa 149.44 342 P PKPbc 18 07 03.3 +2.9
comp=Z,5.3nm,0.6s
FLN La Foliniere 150.48 4 *e*PKP1 PKPbc 18 07 04.8 +2.1
comp=Z,6.8nm,0.5s
LDF La Druitiere 150.67 4 *e*PKP1 PKPbc 18 07 05.0 +1.8
comp=Z,3.5nm,0.4s
CDF Champ du Feu 150.68 354 *e*PKP1 PKPbc 18 07 05.6 +2.4
MEZF Maizieres J'vi 150.78 357 *e*PKP1 PKPbc 18 07 05.9 +2.5
comp=Z,6.2nm,0.4s
SGMF Saint Gilles 150.80 7 *e*PKP1 PKPbc 18 07 05.3 +1.8
GRR Gorron 150.83 5 *e*PKP1 PKPbc 18 07 05.7 +2.2
comp=Z,7.0nm,0.5s
SFTF Sexfontaines 151.07 357 *e*PKP1 PKPbc 18 07 06.6 +2.5
WTTA Wattenberg 151.11 347 P PKPbc 18 07 06.7 +2.4
comp=Z,4.9nm,0.6s
HAU Haudompre 151.18 355 *e*PKP1 PKPbc 18 07 06.5 +2.2
HINF Hinteralfeld 151.32 354 *e*PKP1 PKPbc 18 07 06.7 +2.0
ABTA Abfaltersbach 151.41 346 P PKPbc 18 07 06.7 +1.8
comp=Z,5.3nm,0.6s
LOR Lormes 152.06 358 *e*PKP1 PKPbc 18 07 08.6 +2.3
comp=Z,4.4nm,0.6s
SSF Saint Saulge 152.28 359 *e*PKP1 PKPbc 18 07 09.1 +2.3
MFF Saint Martin d 152.66 4 *e*PKP1 PKPbc 18 07 09.6 +1.9
comp=Z,4.5nm,0.6s
BGF Bois d'Agland 152.79 360 *e*PKP1 PKPbc 18 07 09.6 +1.6

IDC 29 17:55:01.1±5.0, 29°.66S×177°.45W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/14, mbtmp3.5/2, Error ellipse: s-maj=280.0km s-min=73.3km az=165.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.63**	**266**	P	P	18 03 07.2	-0.3
0.1nm,0.3s,baz=105,slow=7.4,SNR=8.2							
WRA	**Warramunga Arr**	**44.55**	**271**	P	P	18 03 15.2	+0.2
0.5nm,0.3s,baz=110,slow=8.2,SNR=8.2							
FINES	**FINESS Array B**	**144.61**	**341**	PKP	PKPdf	18 14 38.4	-0.6
0.6nm,0.4s,baz=24,slow=2.3,SNR=6.2							

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*IDC **29** 18:02:00.7±1.4, 30°.02S×177°.15W, h0km, mb4.3/5, mb1 4.4/6, mb1mx4.1/17, mbtmp4.2/6, ML3.3/1, Error ellipse: s-maj=54.9km s-min=24.4km az=151.0*
*ISCJB **29** 18:02:05.2±1.3, 30°.2S±0°.1×177°.3W±0°.2, h33km, mb4.2/6, Error ellipse: s-maj=28.8km s-min=12.2km az=18.7*
*NEIC **29** 18:02:06.1±0.9, 30°.15S×177°.18W, h35km, mb4.6/2, Error ellipse: s-maj=27.0km s-min=18.1km az=128.0*
ISC 29 18:02:07.2±1.3, 30°.1S±0°.1×177°.3W±0°.2, h35km, n13, σ1°13/10, mb4.2/6, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.33**	**208**	Pn	**Pn**	**18 04 17.2**	**-1.9**
0.3nm,0.3s,baz=308,slow=19,SNR=3.8							
URZ				Sn	**Sn**	**18 06 03.2**	**+0.5**
4.0nm,0.3s,baz=233,slow=22,SNR=9.9							
CTA	**Charters Tower**	**34.34**	**278**	P	**P**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.64**	**173**	P	P	18 33 24.2	-0.6
	1.9nm,0.8s,baz=0.0,slow=6.1,SNR=7.8						
WRA	**Warramunga Arr**	**27.73**	**156**	P	P	18 34 02.1	+0.3
	2.2nm,0.3s,baz=337,slow=9.6,SNR=51						
ASAR	**Alice Springs**	**30.96**	**160**	P	P	18 34 31.0	+0.5
	1.0nm,0.3s,baz=336,slow=7.9,SNR=85						
STKA	**Stephens Creek**	**41.27**	**155**	P	P	18 35 58.2	-0.4
	1.4nm,0.3s,baz=337,slow=10,SNR=8.7						

IDC 29 18:28:45.6±3.3,29°.97S×177°.11W,h0km,mb3.7/3, mb1 3.9/4,mb1mx3.7/16,mbtmp3.8/4,ML3.2/1,Error ellipse: s-maj=75.6km s-min=45.8km az=120.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.55**	**209**	Pn	Pn	18 31 03.4	-0.9
	0.2nm,0.3s,baz=293,slow=7.7,SNR=2.3						
URZ				Sn	Sn	18 32 47.7	-4.7
	0.2nm,0.3s,baz=280,slow=12,SNR=4.9						
STKA	**Stephens Creek**	**35.32**	**256**	P	P	18 35 44.1	+1.6
	0.6nm,0.5s,baz=95,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**43.90**	**266**	P	P	18 36 54.1	0.0
	0.5nm,0.5s,baz=101,slow=7.0,SNR=12						
WRA	**Warramunga Arr**	**44.85**	**271**	P	P	18 37 00.5	-1.3
	0.5nm,0.5s,baz=110,slow=8.0,SNR=8.7						
FINES	**FINESS Array B**	**145.00**	**341**	PKPbc	PKPbc	18 48 22.8	-0.5
	1.7nm,0.7s,baz=62,slow=4.5,SNR=4.1						

*IDC **29** 18:32:17.1±2.6, 11°.91N×86°.84W, h0km, mb3.5/1, mb1 3.8/2, mb1mx3.5/22, mbtmp3.4/2, ML2.6/1, MS3.2/1, Ms1 3.2/1, ms1mx3.1/27, Error ellipse: s-maj=190.7km s-min=46.6km az=44.0*
*NEIC **29** 18:32:18.1±6.9, 11°.49N×87°.35W, h6km±43km, Error ellipse: s-maj=41.1km s-min=13.1km az=224.0*
*ISCJB **29** 18:32:19.8±0.8, 11°.39N±0°.05×87°.39W±0°.06, h33km, Error ellipse: s-maj=10.2km s-min=4.5km az=137.3*
*CASC **29** 18:32:22.3±2.4, 11°.56N×87°.21W, h58km±77km, MD4.2, ML3.8*
ISC 29 18:32:21.1±0.8,11°.46N±0°.06×87°.36W±0°.06,h35km,n28, σ1°14/33,1C,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.03**	**46**	*e*P	**Pn**	**18 32 38.5**	**-0.6**
COPN				*e*S	**Sn**	**18 32 54.7**	**+2.4**
COPN				AML	AML	18 32 58.3	
	comp=Z,3μm,0.4s						
CRUN	**El Crucero**	**1.16**	**63**	*e*P	**Pn**	**18 32 41.1**	**+0.3**
CSAN		**1.16**	**52**	*e*P	**Pn**	**18 32 39.9**	**-0.9**
XAVN	**Gruta Xavier**	**1.22**	**56**	*e*P	**Pn**	**18 32 41.5**	**-0.1**
MOMN	**Momotombo**	**1.23**	**40**	*e*P	**Pn**	**18 32 41.4**	**-0.4**
TICN	**Ticuantepe**	**1.24**	**63**	*e*P	**Pn**	**18 32 41.5**	**-0.4**
TISN	**Laguna Tiscapa**	**1.26**	**58**	*e*P	**Pn**	**18 32 42.5**	**+0.3**
HUEN		**1.45**	**53**	*e*P	**Pn**	**18 32 43.9**	**-0.9**
CNCH	**Conchagua**	**1.86**	**346**	*e*P	**Pn**	**18 32 50.0**	**-0.5**
NY14	**Universidad de**	**1.97**	**114**	*i* P	**Pn**	**18 32 51.6**	**-0.4**
NY14				*i* S	**Sn**	**18 33 14.4**	**-1.0**
LAPC	**Finca la Perla**	**2.01**	**110**	*i* S	**Sn**	**18 33 16.1**	**-0.4**
MESS	**Mesas**	**2.24**	**108**	*i* P	**Pn**	**18 32 56.3**	**+0.6**
CAHU	**Cacacuatique**	**2.44**	**340**	*e*P	**Pn**	**18 32 59.2**	**+0.8**
TGUH	**Tegucigalpa,Un**	**2.58**	**2**	*e*P	**Pn**	**18 33 00.6**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.58**	**2**	*e*P	**Pn**	**18 33 00.4**	**0.0**
JTS	**JuntasÁbangare**	**2.63**	**116**	*e*P	**Pn**	**18 33 01.1**	**0.0**
JTS	**JuntasÁbangare**	**2.63**	**116**	*e*P	**Pn**	**18 33 01.3**	**+0.2**
CGA2	**Cerro Gallo 2**	**3.19**	**117**	*e*P	**Pn**	**18 33 10.9**	**+2.1**
CGA2				*e*S	**Sn**	**18 33 44.8**	**-0.7**
PRS1	**Puriscal**	**3.34**	**116**	*e*P	**Pn**	**18 33 13.2**	**+2.4**
PRS1				*e*S	**Sn**	**18 33 49.2**	**0.0**
LAJ	**Bijagual**	**3.56**	**116**	*e*P	**Pn**	**18 33 11.6**	**-2.2**
URSC	**Urasca**	**3.87**	**114**	*e*P	**Pn**	**18 33 21.2**	**+3.0**
URSC				*e*S	**Sn**	**18 34 02.6**	**+0.1**
APG	**El Apazote**	**4.64**	**320**	Pn	**Pn**	**18 33 28.5**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=141,slow=18,SNR=2.4						
APG				Sn	**Sn**	**18 34 18.4**	**-3.0**
	comp=Z,0.4nm,0.3s,baz=64,slow=20,SNR=1.9						
APG				LR	LR	18 35 44.6	
	comp=Z,296nm,19.7s,baz=336,slow=44						
APG	**El Apazote**	**4.64**	**320**	Pn	**Pn**	**18 33 28.5**	**-0.2**
APG				Sn	**Sn**	**18 34 18.4**	**-3.0**
APG				LR	LR	18 35 44.6	
ACR	**Cerro Adams**	**4.98**	**124**	*e*P	**Pn**	**18 33 34.9**	**+1.5**
ACR				*e*S	**Sn**	**18 34 27.9**	**-1.9**
TXAR	**Lajitas Array**	**23.39**	**322**	P	**P**	**18 37 27.8**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=136,slow=10.0,SNR=13						
ASAR	**Alice Springs**	**138.98**	**247**	PKP	PKPdf	18 51 48.0	+3.3
	comp=Z,0.2nm,0.8s,baz=110,slow=1.9,SNR=4.2						
WRA	**Warramunga Arr**	**139.07**	**253**	PKP	PKPdf	18 51 46.8	+1.8
	comp=Z,0.5nm,0.8s,baz=90,slow=1.9,SNR=7.3						
CMAR	**Chiang Mai Arr**	**149.63**	**348**	PKPbc	PKPbc	18 52 08.2	+0.3
	comp=Z,0.4nm,0.6s,baz=353,slow=3.6,SNR=5.8						

*ISCJB **29** 18:38:52.6±0.6, 13°.40N±0°.04×120°.26E±0°.07, h10km, mb4.0/5, Error ellipse: s-maj=9.9km s-min=6.3km az=5.9*
*IDC **29** 18:38:52.0±1.1, 13°.31N×120°.27E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.6/22, mbtmp3.9/4, Error ellipse: s-maj=25.2km s-min=11.7km az=117.0*
*NEIC **29** 18:38:52.8±0.6, 13°.98N×121°.89E, h10km, mb4.0/1, Error ellipse: s-maj=16.5km s-min=9.1km az=46.0*
*MAN **29** 18:38:54, 13°.40N×120°.33E, h16km, mb4.5, ML3.3, MS3.2*
ISC 29 18:38:53.9±0.5,13°.39N±0°.05×120°.32E±0°.07,h10km,n20, σ1°13/20,mb4.0/5,1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.34**	**349**	*e*P	**Pg**	**18 38 59.2**	**-1.5**
TGY	**Tagaytay City**	**0.93**	**41**	Pg	**Pg**	**18 39 10.9**	**-0.9**
	201nm,0.3s,baz=181,slow=3.5,SNR=15						
TGY				Lg		18 39 26.6	
	686nm,0.3s,baz=47,slow=21,SNR=13						
TGY	**Tagaytay City**	**0.93**	**41**	*e*P	**Pg**	**18 39 10.7**	**-1.1**
BUSP	**Coron**	**1.39**	**185**	*e*P	**Pn**	**18 39 19.2**	**-0.1**
BOAC	**Boac**	**1.49**	**87**	*e*P	**Pn**	**18 39 19.6**	**-1.2**
OTRP	**Odiongan**	**1.95**	**121**	*e*P	**Pn**	**18 39 28.4**	**+1.2**
POLP	**Polilio Island**	**2.06**	**50**	*e*P	**Pn**	**18 39 28.5**	**-0.1**
AUQP	**San Andres**	**2.30**	**91**	*e*P	**Pn**	**18 39 34.3**	**+2.4**
ENPP	**El Nido**	**2.34**	**202**	*e*P	**Pn**	**18 39 32.4**	**-0.1**
CUYO	**Cuyo Island**	**2.62**	**165**	*e*P	**Pn**	**18 39 35.7**	**-0.6**
BALP	**Baler**	**2.63**	**27**	*e*P	**Pn**	**18 39 37.1**	**+0.5**
GUIM	**Jordan**	**3.54**	**141**	*e*P	**Pn**	**18 39 49.5**	**+0.6**
CAUP	**Cauayan**	**3.82**	**22**	*e*P	**Pn**	**18 39 56.7**	**+3.9**
WRA	**Warramunga Arr**	**35.88**	**157**	P	**P**	**18 45 53.0**	**-1.3**
	2.4nm,0.5s,mb4.3,baz=333,slow=9.9,SNR=42						
WB2	**Warramunga Arr**	**35.89**	**157**	*e*P	**P**	**18 45 53.1**	**-1.2**
SONM	**Songino Array**	**36.25**	**344**	P	**P**	**18 45 55.9**	**-1.2**
	0.6nm,0.7s,mb3.6,baz=166,slow=8.9,SNR=4.6						
ASAR	**Alice Springs**	**39.16**	**160**	P	**P**	**18 46 21.7**	**-0.3**
	2.4nm,0.5s,mb4.2,baz=338,slow=6.7,SNR=89						
KURK	**Kurchatov**	**50.24**	**327**	P	**P**	**18 47 51.8**	**+1.6**
	1.4nm,0.7s,mb4.1						
BVAR	**Borovoye Array**	**55.82**	**326**	P	**P**	**18 48 32.6**	**+1.4**
	0.5nm,0.6s,mb3.7,baz=107,slow=8.5,SNR=5.4						
BRVK	**Borovoye**	**55.89**	**326**	*e*P	**P**	**18 48 33.0**	**+1.2**

*NEIC **29** 18:39:30.5±1.9, 31°.18S×176°.96W, h35km, mb4.3/1, Error ellipse: s-maj=38.1km s-min=20.0km az=101.0*
IDC 29 18:39:26.6±2.8,30°.93S×177°.17W,h0km,mb3.9/3, mb1 4.1/4,mb1mx3.8/16,mbtmp4.0/4,ML3.2/1,Error ellipse: s-maj=64.2km s-min=43.2km az=128.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.70**	**211**	Pn	Pn	18 41 32.4	-1.4
	0.3nm,0.3s,baz=69,slow=4.3,SNR=2.2						
URZ				Sn	Sn	18 43 19.1	+6.5
	0.5nm,0.3s,baz=331,slow=23,SNR=2.4						
CTA	**Charters Tower**	**34.59**	**279**	P	P	18 46 18.4	+0.9
	1.9nm,0.4s,baz=104,slow=10,SNR=7.4						
CTAO	**Charters Tower**	**34.59**	**279**	*e*P	P	18 46 18.7	+1.3
	1.9nm,0.5s						
STKA	**Stephens Creek**	**35.06**	**257**	P	P	18 46 25.9	+4.6
	0.4nm,0.4s,baz=94,slow=15,SNR=3.8						
ASAR	**Alice Springs**	**43.80**	**267**	P	P	18 47 34.2	-0.2
	0.5nm,0.5s,baz=103,slow=7.7,SNR=8.8						
WRA	**Warramunga Arr**	**44.84**	**272**	P	P	18 47 42.4	-0.3
	0.7nm,0.3s,baz=110,slow=8.0,SNR=18						
FINES	**FINESS Array B**	**145.89**	**340**	PKPbc	PKPbc	18 59 06.4	-0.8
	2.5nm,0.4s,baz=56,slow=3.8,SNR=25						

*CSEM **29** 19:08:20.0, 38°.00N×20°.15E, h11km, MD3.3, After ATH*
ATH 29 19:08:20.0,38°.00N×20°.15E,h11km±1km,MD3.3/7, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.39**	**63**	*e*PB	Pg	19 08 28.3	+0.6
VLS				*e*SB	Sg	19 08 33.6	+0.7
VLS	**Valsamata**	**0.39**	**63**	*e*Pb	Pg	19 08 28.3	+0.6
VLS				*e*Sb	Sg	19 08 33.6	+0.7
RLS	**Riolos of Patr**	**1.04**	**86**	*e*PG	Pg	19 08 39.5	-0.5
RLS				*e*SB	Sg	19 08 54.1	+0.5
RLS	**Riolos of Patr**	**1.04**	**86**	*e*Pg	Pg	19 08 39.5	-0.5
RLS				*e*Sb	Sg	19 08 54.1	+0.5
EFP	**Efpalio**	**1.45**	**72**	*e*PG	Pg	19 08 46.7	-1.1
EFP				*e*SB	Sb	19 09 07.9	+2.5
EFP	**Efpalio**	**1.45**	**72**	*e*Pg	Pg	19 08 46.7	-1.1
EFP				*e*Sb	Sb	19 09 07.9	+2.5
EVR	**Evrytania**	**1.59**	**54**	*e*PB	Pb	19 08 50.4	+1.0
EVR				*e*SB	Sb	19 09 11.9	+2.4
EVR	**Evrytania**	**1.59**	**54**	*e*Pb	Pb	19 08 50.4	+1.0
EVR				*e*Sb	Sb	19 09 11.9	+2.4
ITM	**Ithomi**	**1.63**	**120**	*e*PG	Pg	19 08 50.2	-1.1
ITM				*e*SB	Sb	19 09 13.5	+2.8
ITM	**Ithomi**	**1.63**	**120**	*e*Pg	Pg	19 08 50.2	-1.1
ITM				*e*Sb	Sb	19 09 13.5	+2.8
GUR	**Goura**	**1.73**	**91**	*e*PN	Pn	19 08 51.7	+1.7
GUR				*e*SN	Sn	19 09 15.3	+3.2
GUR	**Goura**	**1.73**	**91**	*e*Pn	Pn	19 08 51.7	+1.7
GUR				*e*Sn	Sn	19 09 15.3	+3.2
VLX	**Vlachokerasia**	**1.88**	**109**	*e*PG	Pg	19 08 54.7	-1.3
VLX				*e*SN	Sn	19 09 19.4	+3.7
VLX	**Vlachokerasia**	**1.88**	**109**	*e*Pg	Pg	19 08 54.7	-1.3
VLX				*e*Sn	Sn	19 09 19.4	+3.7
DID	**Didima**	**2.50**	**100**	*e*PN	Pn	19 09 03.5	+3.0
DID				*e*SN	Sn	19 09 34.1	+3.2
DID	**Didima**	**2.50**	**100**	*e*Pn	Pn	19 09 03.5	+3.0
DID				*e*Sn	Sn	19 09 34.1	+3.2

IDC 29 19:14:46.6±5.1,29°.77S×177°.40W,h0km,mb3.4/2, mb1 3.7/2,mb1mx3.6/15,mbtmp3.4/2,Error ellipse: s-maj=293.0km s-min=73.9km az=166.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.67**	**266**	P	P	19 22 53.3	0.0
	0.2nm,0.6s,baz=106,slow=7.7,SNR=4.6						
WRA	**Warramunga Arr**	**44.60**	**271**	P	P	19 23 00.7	-0.1
	0.4nm,0.3s,baz=110,slow=8.2,SNR=22						
FINES	**FINESS Array B**	**144.73**	**341**	PKP	PKPdf	19 34 24.0	-0.6
	1.8nm,0.8s,baz=193,slow=7.4,SNR=4.2						

*BJI **29** 19:16:41.4, 71°.30N×4°.40W, h10km, mB5.2/8, mb4.7/19, Ms4.7/2, Ms7 4.7/6*
*CSEM **29** 19:16:44.7±0.1, 71°.32N×4°.48W, h2km, mb4.7/87, Ms4.1, Error ellipse: s-maj=3.4km s-min=3.0km az=37.0*
*ISCJB **29** 19:16:44.9±0.1, 71°.28N±0°.02×4°.51W±0°.05, h10km, mb4.6/160, MS4.5/19, Error ellipse: s-maj=2.8km s-min=1.6km az=137.7*
*MOS **29** 19:16:44.7±1.1, 71°.39N×4°.05W, h10km, mb4.8/70, MS4.4/11, Error ellipse: s-maj=16.6km s-min=3.1km az=96.8*
*IDC **29** 19:16:44.8±0.5, 71°.34N×4°.44W, h0km, mb4.2/22, mb1 4.4/27, mb1mx4.3/34, mbtmp4.3/27, ML4.4/5, Error ellipse: s-maj=13.2km s-min=10.7km az=33.0*
*BER **29** 19:16:45.2±2.6, 71°.75N×4°.53W, h26km±49km, MD2.7, ML3.7*
*NEIC **29** 19:16:46.4±0.1, 71°.34N×4°.41W, h10km, mb4.7/97, MS4.2/2, Error ellipse: s-maj=3.9km s-min=2.5km az=58.0*
*BGS **29** 19:16:49.2±1.9, 71°.01N×2°.84W, h10km, mb4.9, MS4.3*
*REY **29** 19:16:52.1, 71°.01N×6°.01W, h10km, ML3.1, ML4.1*
*SZGRF **29** 19:16:55.2, 70°.87N×3°.62W, h33km, mb4.8, Jan Mayen Island region*
ISC 29 19:16:46.8±0.1,71°.28N±0°.01×4°.32W±0°.05,h10km, (h14km±1.5km:pP-P),n888,σ0°92/907,mb4.6/160, MS4.5/19,131C-108D,Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**1.33**	**259**	*e*P	**Pn**	**19 17 07.5**	**-3.8**
JNE				*e*S	**Sb**	**19 17 23.6**	**-5.1**
JNE				AML	AML	19 17 26.3	
	comp=Z,2μm,0.4s						
JNE	**Jan Mayen East**	**1.33**	**259**	*e*P	**Pn**	**19 17 07.5**	**-3.8**
JNE				*e*S	**Sb**	**19 17 23.6**	**-5.1**
JNE	**Jan Mayen East**	**1.33**	**259**	*e*P	**Pn**	**19 17 07.5**	**-3.8**
	SNR=62						
JNE				*e*S	**Sb**	**19 17 23.6**	**-5.1**
	comp=Z,2μm,0.4s,SNR=62						
JNW	**Jan Mayen West**	**1.36**	**261**	*e*P	**Pn**	**19 17 08.4**	**-3.3**
JNW				*e*S	**Sb**	**19 17 27.3**	**-2.3**
JNW				AML	AML	19 17 28.6	
	comp=Z,1μm,0.6s						
JNW	**Jan Mayen West**	**1.36**	**261**	*e*P	**Pn**	**19 17 08.4**	**-3.3**
JNW				*e*S	**Sb**	**19 17 27.3**	**-2.3**
JNW	**Jan Mayen West**	**1.36**	**261**	*e*P	**Pn**	**19 17 08.4**	**-3.3**
	SNR=62						
JNW				*e*S	**Sb**	**19 17 27.3**	**-2.3**
	comp=Z,1μm,0.6s,SNR=62						
JMIC	**Jan Mayen**	**1.40**	**260**	Pn	**Pn**	**19 17 09.0**	**-3.3**
	comp=Z,23nm,0.3s,baz=45,slow=6.1,SNR=16						
JMIC				Sn	**Sn**	**19 17 27.8**	**-2.9**
	comp=Z,119nm,0.3s,baz=17,slow=20,SNR=21						
JMIC	**Jan Mayen**	**1.40**	**260**	Pn	**Pn**	**19 17 09.0**	**-3.2**
JMIC				Sn	**Sn**	**19 17 27.8**	**-2.9**
JMI	**Jan Mayen**	**1.48**	**258**	*e*P	**Pn**	**19 17 10.2**	**-3.2**
JMI				*e*S	**Sn**	**19 17 27.7**	**-5.0**
JMI				AML	AML	19 17 33.2	
	comp=Z,1μm,0.7s						
JMI	**Jan Mayen**	**1.48**	**258**	*e*P	**Pn**	**19 17 10.2**	**-3.2**
JMI				*e*S	**Sn**	**19 17 27.7**	**-5.0**
JMI	**Jan Mayen**	**1.48**	**258**	*e*P	**Pn**	**19 17 10.2**	**-3.2**
	SNR=62						
JMI				*e*S	**Sn**	**19 17 27.7**	**-5.0**
	comp=Z,1μm,0.7s,SNR=62						
SCO	**Scoresbysund**	**5.84**	**271**	*e*P	**Pn**	**19 18 16.7**	**+3.4**
SCO	**Scoresbysund**	**5.84**	**271**	*i* P	**Pn**	**19 18 16.7**	**+3.4**
ILEI	**Leirhofn**	**6.57**	**228**	P	**Pn**	**19 18 21.4**	**-1.8**
DAG	**Danmarks Havn**	**6.77**	**331**	*i* P	**Pn**	**19 18 20.3**	**-5.6**
DAG	**Danmarks Havn**	**6.77**	**331**	*i* P	**Pn**	**19 18 20.3**	**-5.6**
DAG				*i* S	**Sn**	**19 18 27.2**	**-16**
IGIL	**Gilhagi**	**6.81**	**226**	P	**Pn**	**19 18 25.7**	**-0.8**
IHED	**Heoinshofoi**	**7.03**	**229**	P	**Pn**	**19 18 27.6**	**-2.0**
IGRS	**Grimsstaoir**	**7.12**	**223**	P	**Pn**	**19 18 30.4**	**-0.4**
IGRS				S	**Sn**	**19 19 49.7**	**-2.0**
IGRA	**Granastaoir**	**7.23**	**228**	P	**Pn**	**19 18 31.5**	**-0.8**
IREN	**Reynihlio**	**7.29**	**225**	P	**Pn**	**19 18 32.3**	**-0.8**
IREN				S	**Sn**	**19 19 54.3**	**-1.5**
IGLU	**Glumsstadir**	**7.48**	**218**	P	**Pn**	**19 18 34.9**	**-0.8**
IGLU				S	**Sn**	**19 20 00.3**	**-0.1**
IADA	**Aoalbol**	**7.54**	**219**	P	**Pn**	**19 18 36.4**	**-0.2**
IADA				S	**Sn**	**19 20 00.1**	**-1.9**
STEI	**Steigen**	**7.59**	**107**	*e*P	**Pn**	**19 18 34.1**	**-3.1**
ISVA	**Svartarkot**	**7.63**	**225**	P	**Pn**	**19 18 37.9**	**+0.1**
IMKO	**Mokollar**	**7.74**	**221**	P	**Pn**	**19 18 38.4**	**-0.8**
IVSH	**V-Sauoahnukur**	**7.76**	**219**	P	**Pn**	**19 18 38.7**	**-0.9**
IBRU	**Bruarjokull**	**7.82**	**220**	P	**Pn**	**19 18 39.4**	**-0.9**
HSP	**Hornsund**	**7.87**	**34**	*e*P	**Pn**	**19 18 38.6**	**-2.4**
KONS	**Konsvik**	**7.89**	**119**	*e*P	**Pn**	**19 18 38.5**	**-2.8**
IKRE	**Kreppuhraun**	**7.92**	**221**	P	**Pn**	**19 18 40.8**	**-0.9**
TRO	**Tromso**	**7.94**	**91**	*e*P	**Pn**	**19 18 36.3**	**-5.7**
TRO	**Tromso**	**7.94**	**91**	*e*P	**Pn**	**19 18 36.3**	**-5.7**
STOK	**Stokkvaagen**	**7.98**	**120**	*e*P	**Pn**	**19 18 39.9**	**-2.6**
FLOS	**Flostrand**	**8.07**	**119**	*e*P	**Pn**	**19 18 39.9**	**-3.9**
MOR8	**Moi Rana**	**8.50**	**118**	*e*P	**Pn**	**19 18 46.4**	**-3.2**
KBS	**Kingsbay**	**8.70**	**21**	*e*P	**Pn**	**19 18 49.6**	**-2.8**
	comp=Z,55nm,0.3s						
KBS	**Kingsbay**	**8.70**	**21**	*e*P	**Pn**	**19 18 49.6**	**-2.8**
KBS				pmax	pmax		
	comp=Z,55nm,0.3s						
KBS	**Kingsbay**	**8.70**	**21**	*e*P	**Pn**	**19 18 49.6**	**-2.8**
	comp=Z,55nm,0.3s						
SPB4	**Spitsbergen Ar**	**8.74**	**29**	*e*P	**Pn**	**19 18 51.3**	**-1.7**
SPB4	**Spitsbergen Ar**	**8.74**	**29**	*e*P	**Pn**	**19 18 51.3**	**-1.7**
SPITS	**Spitsbergen Ar**	**8.74**	**29**	Pn	**Pn**	**19 18 51.3**	**-1.7**
	baz=216,slow=15,SNR=360						
SPITS	**Spitsbergen Ar**	**8.74**	**29**	P	**Pn**	**19 18 51.3**	**-1.7**
SPITS	**Spitsbergen Ar**	**8.74**	**29**	P	**Pn**	**19 18 51.3**	**-1.7**
NSS	**Namsos**	**9.10**	**130**	*e*P	**Pn**	**19 18 54.9**	**-3.0**
BORG	**Borgarnes**	**9.11**	**232**	Pn	**Pn**	**19 18 57.4**	**-0.6**
	comp=Z,1.5nm,0.3s,baz=270,slow=4.0,SNR=4.7						
BORG	**Borgarnes**	**9.11**	**232**	P	**Pn**	**19 18 57.4**	**-0.6**
BORG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BORG	**Borgarnes**	**9.11**	**232**	P	**Pn**	**19 18 57.4**	**-0.6**
	comp=Z,2.0nm,0.3s						
SOFL	**Sornfelli, Far**	**9.31**	**188**	P	**Pn**	**19 19 00.6**	**-0.1**
SOFL				AMB	AMB	19 19 07.5	
	comp=Z,147nm,2.8s						
SOFL				AMS	AMS	19 25 15.7	
	comp=Z,6μm,15.3s						
SOFL	**Sornfelli, Far**	**9.31**	**188**	*e*P	**Pn**	**19 19 00.6**	**-0.1**
SOFL				AMB	AMB	19 19 07.5	
	comp=Z,147nm,2.8s						
SOFL				AMS	AMS	19 25 15.7	
	comp=Z,6μm,15.3s						
SOFL	**Sornfelli, Far**	**9.31**	**188**	*e*P	**Pn**	**19 19 00.6**	**-0.1**
KTK1	**Kautokeino**	**9.59**	**90**	*e*P	**Pn**	**19 18 59.4**	**-5.3**
MOL	**Molde**	**9.88**	**146**	*e*P	**Pn**	**19 19 05.3**	**-3.2**
ARCES	**ARCESS Array B**	**10.10**	**86**	Pn	**Pn**	**19 19 08.0**	**-3.6**
	comp=Z,3.5nm,0.3s,baz=287,slow=12,SNR=84						
ARCES	**ARCESS Array B**	**10.10**	**86**	P	**Pn**	**19 19 08.0**	**-3.6**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ARE0	**ARCESS Array S**	**10.10**	**86**	*e*P	**Pn**	**19 19 08.6**	**-3.0**
FOO	**Floro**	**10.40**	**154**	*e*P	**Pn**	**19 19 14.5**	**-1.1**
FOO	**Floro**	**10.40**	**154**	*e*P	**Pn**	**19 19 14.5**	**-1.1**
	SNR=57						
KEV	**Kevo**	**10.50**	**83**	*e*P	**Pn**	**19 19 12.6**	**-4.4**
	comp=Z,21nm,0.5s						
KEV	**Kevo**	**10.50**	**83**	*e*P	**Pn**	**19 19 12.6**	**-4.4**
KEV				pmax	pmax		
	comp=Z,21nm,0.5s						
SUMG	**Summit**	**10.59**	**293**	*e*P	**Pn**	**19 19 16.9**	**-1.3**
	comp=Z,50nm,0.9s						
SUMG	**Summit**	**10.59**	**293**	*i* P	**Pn**	**19 19 18.1**	**-0.1**
SUMG				*e*S	**Sn**	**19 21 08.6**	**-8.0**
SUMG	**Summit**	**10.59**	**293**	*e*P	**Pn**	**19 19 16.9**	**-1.3**
	comp=Z,50nm,0.9s						
SUE	**Sulen**	**10.88**	**156**	*e*P	**Pn**	**19 19 21.0**	**-1.2**
SUE	**Sulen**	**10.88**	**156**	*e*P	**Pn**	**19 19 21.0**	**-1.2**
	SNR=57						
HYA	**Hoyanger**	**10.97**	**152**	*e*P	**Pn**	**19 19 22.1**	**-1.5**
HYA	**Hoyanger**	**10.97**	**152**	*e*P	**Pn**	**19 19 22.1**	**-1.4**
	SNR=57						
WAL1	**Walls**	**11.12**	**173**	*e*P	**Pn**	**19 19 23.6**	**-2.0**
WAL1	**Walls**	**11.12**	**173**	*e*P	**Pn**	**19 19 23.6**	**-1.9**
LRW	**Lerwick**	**11.26**	**172**	*e*P	**Pn**	**19 19 25.8**	**-1.6**
LRW				AMB	AMB	19 19 37.2	
	comp=Z,139nm,3.4s						
LRW				AMS	AMS	19 26 12.8	
	comp=Z,4μm,19.5s						
LRW	**Lerwick**	**11.26**	**172**	*e*P	**Pn**	**19 19 25.8**	**-1.6**
ASK	**Askoy**	**11.49**	**156**	*e*P	**Pn**	**19 19 27.2**	**-3.4**
RUND	**Rundenannen**	**11.58**	**155**	*e*P	**Pn**	**19 19 27.8**	**-4.0**
NOA	**NORSAR Array B**	**11.98**	**141**	Pn	**Pn**	**19 19 35.2**	**-2.1**
	comp=Z,2.1nm,0.3s,baz=336,slow=14,SNR=20						
NOA				Sn	**Sn**	**19 21 45.8**	**-5.1**
	comp=Z,0.7nm,0.3s,baz=291,slow=14,SNR=3.1						
NOA	**NORSAR Array B**	**11.98**	**141**	P	**Pn**	**19 19 35.3**	**-2.0**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NAO01	**NORSAR Array S**	**12.10**	**142**	*e*P	**Pn**	**19 19 36.8**	**-2.1**
	comp=Z,7.9nm,0.6s						
ODD1	**Odda**	**12.24**	**153**	*e*P	**Pn**	**19 19 39.0**	**-1.8**
ODD1	**Odda**	**12.24**	**153**	*e*P	**Pn**	**19 19 39.0**	**-1.8**
	SNR=57						
BLS5	**Blasjo**	**12.69**	**154**	*e*P	**Pn**	**19 19 43.6**	**-3.4**
KMY	**Karmoy**	**12

MCH1 **Michaelchurch** 19.36 178 *eP* Pn 19 21 11.5 -1.6
IBBN **Ibbenburen** 19.79 158 *eP* Pn 19 21 17.1 -1.2
comp=Z,29nm,0.9s
NRDL **Niedersach Rie** 19.92 153 *eP* Pn 19 21 18.4 -1.5
comp=Z,77nm,1.8s
WTSB **Winterswijk** 20.02 160 *eP* P 19 21 19.6 +0.4
comp=Z,30nm,1.1s
WTSB **Winterswijk** 20.02 160 *eP* P 19 21 19.6 +0.4
comp=Z,30nm,1.1s
KLMR **Klimovskoe** 20.07 99 *eP* P 19 21 17.8 -1.9
KLMR pmax pmax
comp=Z,85nm,0.8s
KLMR **Klimovskoe** 20.07 99 *eP* P 19 21 17.8 -1.9
comp=Z,85nm,0.8s
GKP **Gorka Klasztor** 20.43 141 *eP* P 19 21 24.3 +0.6
GKP LMZ 19 29 38.4
comp=Z,4µm,18.1s
GKP **Gorka Klasztor** 20.43 141 *eP* P 19 21 24.3 +0.6
GKP **Gorka Klasztor** 20.43 141 *eP* P 19 21 24.3 +0.6
RUE **Ruedersdorf** 20.52 147 *eP* P 19 21 25.4 +0.6
comp=Z,51nm,0.8s
BUG **Bochum--Univer** 20.59 159 *eP* P 19 21 26.2 +0.8
comp=Z,36nm,1.2s
CLZ **Clausthal** 20.60 153 *eP* P 19 21 26.2 +0.7
comp=Z,28nm,1.1s
CLZ **Clausthal** 20.60 153 *eP* P 19 21 26.2 +0.7
CLZ pmax pmax
comp=Z,28nm,1.1s
CLZ **Clausthal** 20.60 153 *eP* P 19 21 26.2 +0.7
comp=Z,28nm,1.1s
BEBN **Eben Emael** 21.05 162 P P 19 21 31.2 +0.7
SUW **Suwalki** 21.08 131 *eP* P 19 21 29.4 -1.3
SUW LMZ 19 28 29.8
comp=Z,2µm,24.3s
SUW **Suwalki** 21.08 131 *eP* P 19 21 29.4 -1.3
comp=Z,125nm,0.8s,mb5.3
SUW **Suwalki** 21.08 131 *eP* P 19 21 29.5 -1.2
SUW **Suwalki** 21.08 131 *eP* P 19 21 29.5 -1.2
HGN **Heimansgroeve** 21.11 162 *eP* P 19 21 31.7 +0.6
comp=Z,42nm,1.7s,mb4.5
HGN **Heimansgroeve** 21.11 162 *eP* P 19 21 31.7 +0.6
comp=Z,42nm,1.7s,mb4.5
NACGM **Naroch** 21.20 124 *e* Px 19 21 57.0
SNF **Seneffe** 21.21 165 P P 19 21 33.0 +0.9
MEM **Membach** 21.27 162 P P 19 21 33.5 +0.6
comp=Z,19nm,1.0s,mb4.4
BCLA **Clavier** 21.39 163 P P 19 21 34.8 +0.7
NEUB **Neuenburg** 21.42 151 *eP* P 19 21 35.1 +0.6
comp=Z,64nm,1.1s,mb4.9
CLL **Collm** 21.52 149 *eP* P 19 21 35.8 +0.3
comp=Z,35nm,1.2s,mb4.7
CLL **Collm** 21.52 149 *i* P P 19 21 35.6 +0.1
comp=Z,34nm,1.2s,mb4.7
CLL *eS* S 19 25 37.0 +3.3
CLL LR LR
comp=Z,1µm,22.1s,MS4.3
CLL **Collm** 21.52 149 *i* P P 19 21 35.6 +0.1
CLL *eS* S 19 25 37.0 +3.3
CLL pmax pmax
comp=Z,34nm,1.2s,mb4.7
CLL MLR MLR
comp=Z,1µm,22.1s,MS4.3
CLL **Collm** 21.52 149⇑ *i* P P 19 21 35.6 +0.1
comp=Z,34nm,1.2s,mb4.7
CLL *i* pP 19 21 38.4
CLL *e* 19 21 49.0
CLL *eS* S 19 25 37.0 +3.3
CLL **Collm** 21.52 149 *i* P P 19 21 35.6 +0.1
comp=Z,34nm,1.2s,mb4.7
CLL *eS* S 19 25 37.0 +3.3
UBBA **Unterbreizbach** 21.54 155 *eP* P 19 21 36.4 +0.6
comp=Z,87nm,1.7s,mb4.9
DOU **Dourbes** 21.64 164 P P 19 21 36.9 0.0
comp=Z,13nm,1.6s,mb4.1
BAIF **Baives** 21.65 165 *eP* P 19 21 36.4 -0.5
comp=Z,46nm,0.8s,mb4.7
BAIF **Baives** 21.65 165 *eP* P 19 21 36.4 -0.5
comp=Z,23nm,0.8s,mb4.7
BAIF **Baives** 21.65 165 *eP* P 19 21 36.4 -0.5
BAIF pmax pmax
comp=Z,23nm,0.8s,mb4.7
BAIF **Baives** 21.65 165 *eP* P 19 21 36.4 -0.5
comp=Z,23nm,0.8s,mb4.7
GIVF **Givet** 21.66 164 *eP* P 19 21 37.2 +0.2
comp=Z,43nm,0.8s,mb4.6
GIVF **Givet** 21.66 164 *eP* P 19 21 37.2 +0.2
comp=Z,22nm,0.8s,mb4.6
GIVF **Givet** 21.66 164 *eP* P 19 21 37.2 +0.2
GIVF pmax pmax
comp=Z,21nm,0.8s,mb4.6
GIVF **Givet** 21.66 164 *eP* P 19 21 37.2 +0.2
comp=Z,22nm,0.8s,mb4.6
MNK **Minsk** 21.84 123⇓ *eP* P 19 21 37.0 -1.9
MNK pmax pmax
comp=E,110nm,1.5s
MNK pmax pmax
comp=Z,80nm,1.5s,mb4.9
MNK pmax pmax
comp=N,130nm,1.5s
MICGM **Minsk** 21.85 123⇓ *eP* P 19 21 37.0 -2.0
MOX **Moxa** 21.95 152 *eP* P 19 21 40.4 +0.3
comp=N,118nm,1.9s,mb5.0
MOX **Moxa** 21.95 152 *eP* P 19 21 40.6 +0.5
comp=Z,50nm,1.2s,mb4.8
MOX **Moxa** 21.95 152 *eP* P 19 21 40.4 +0.3
MOX pmax pmax
comp=Z,118nm,1.9s,mb5.0
MOX **Moxa** 21.95 152 *eP* P 19 21 40.4 +0.3
comp=Z,118nm,1.9s,mb5.0
FBE **Freiberg** 21.95 149 *eP* P 19 21 40.3 +0.2
comp=Z,102nm,1.5s,mb5.0
BRG **Berggiesshubel** 22.10 148 *eP* P 19 21 41.5 -0.2
comp=Z,44nm,1.5s,mb4.7
BRG **Berggiesshubel** 22.10 148 *i* P P 19 21 41.5 -0.2
comp=Z,45nm,1.5s,mb4.7
BRG
comp=N,2µm,22.5s
BRG
comp=E,838nm,16.9s
BRG
comp=Z,2µm,19.2s
BRG **Berggiesshubel** 22.10 148 *i* P P 19 21 41.5 -0.2
BRG pmax pmax
comp=Z,27nm,1.5s,mb4.5
BRG MLR MLR
comp=N,1µm,22.5s
BRG MLR MLR
comp=E,502nm,16.9s
BRG MLR MLR
comp=Z,1µm,19.2s,MS4.3
BRG **Berggiesshubel** 22.10 148 *i* P P 19 21 41.5 -0.2
comp=Z,1µm,19.2s
WLF **Walferdange** 22.22 162 P P 19 21 44.3 +1.4
WLF **Walferdange** 22.22 162 *eP* P 19 21 43.5 +0.5
comp=Z,18nm,1.0s,mb4.5
WLF **Walferdange** 22.22 162 *eP* P 19 21 43.5 +0.5
WLF pmax pmax
comp=Z,18nm,1.0s,mb4.5
WLF **Walferdange** 22.22 162 *eP* P 19 21 43.5 +0.5
comp=Z,18nm,1.0s,mb4.5
WERD **Werda** 22.24 151 *eP* P 19 21 43.7 +0.5
comp=Z,89nm,1.8s,mb4.9
RUP **Ruppelstein** 22.28 160 *eP* P 19 21 44.6 +1.0
RUP **Ruppelstein** 22.28 160 *eP* P 19 21 44.6 +1.0
RUP **Ruppelstein** 22.28 160 *eP* P 19 21 44.6 +1.0
TANN **Tannenbergstha** 22.30 151 *eP* P 19 21 44.3 +0.5
comp=Z,76nm,1.8s,mb4.8
GUNZ **Gunzen** 22.33 151 *eP* P 19 21 44.6 +0.4
comp=Z,82nm,1.7s,mb4.9
WERN **Wernitzgruen** 22.41 151 *eP* P 19 21 45.7 +0.7
comp=Z,81nm,1.5s,mb4.9
NKC **Novy Kostel** 22.48 151 *eP* P 19 21 46.2 +0.5
NKC **Novy Kostel** 22.48 151 *eP* P 19 21 46.2 +0.5
NKC **Novy Kostel** 22.48 151 *eP* P 19 21 46.2 +0.5
PVCC **Panska Ves** 22.54 147 *eP* P 19 21 46.4 0.0
PVCC *e* 19 21 54.1
PVCC **Panska Ves** 22.54 147 *eP* P 19 21 46.4 0.0
PVCC *eP* 19 21 54.1
PVCC **Panska Ves** 22.54 147 *eP* P 19 21 46.4 0.0
KSP **Ksiaz** 22.55 144 *eP* P 19 21 47.0 +0.5
KSP LMZ 19 28 35.9
comp=Z,3µm,32.7s
KSP **Ksiaz** 22.55 144⇑ *eP* P 19 21 46.7 +0.2
FLN **La Foliniere** 22.66 173 *eP* P 19 21 46.6 -1.0
comp=Z,48nm,0.7s,mb4.7
FLN *e*MLR MLR
comp=Z,1µm,22.5s,MS4.0
FLN **La Foliniere** 22.66 173 *eP* P 19 21 46.6 -1.0
comp=Z,24nm,0.7s,mb4.7
FLN LR LR
comp=Z,1µm,22.5s,MS4.2
FLN **La Foliniere** 22.66 173 *eP* P 19 21 46.6 -1.0
FLN pmax pmax
comp=Z,24nm,0.7s,mb4.7
FLN MLR MLR
comp=Z,1µm,22.5s,MS4.2
FLN **La Foliniere** 22.66 173 *eP* P 19 21 46.6 -1.0
comp=Z,24nm,0.7s,mb4.7
GRA1 **Grafenberg Arr** 22.82 153 *eP* P 19 21 50.0 +0.7
comp=Z,37nm,1.2s,mb4.7
GRA1 **Grafenberg Arr** 22.82 153 *eP* P 19 21 50.0 +0.7
comp=Z,37nm,1.2s,mb4.7
GRF **Grafenberg Arr** 22.82 153 *eP* P 19 21 50.0 +0.7
comp=Z,37nm,1.2s,mb4.7
GRF **Grafenberg Arr** 22.82 153 *eP* P 19 21 50.0 +0.7
GRF pmax pmax
comp=Z,37nm,1.2s,mb4.7
GRF **Grafenberg Arr** 22.82 153 *eP* P 19 21 50.0 +0.7
GRF pmax pmax
comp=Z,37nm,1.2s,mb4.7
GRF **Grafenberg Arr** 22.82 153 *eP* P 19 21 50.0 +0.7
comp=Z,37nm,1.2s,mb4.7
GRFO **Grafenberg** 22.82 153 *eP* P 19 21 49.8 +0.4
comp=Z,29nm,1.0s,mb4.7
GRFO **Grafenberg** 22.82 153 *eP* P 19 21 49.8 +0.5
GRFO pmax pmax
comp=Z,29nm,1.0s,mb4.7
GRFO **Grafenberg** 22.82 153 *eP* P 19 21 49.8 +0.5
comp=Z,29nm,1.0s,mb4.7
UPC **Upice** 22.82 145 *eP* P 19 21 49.4 +0.1
UPC *e* 19 21 57.4
UPC **Upice** 22.82 145 *eP* P 19 21 49.4 +0.1
UPC *e*pP 19 21 57.4
UPC **Upice** 22.82 145 *eP* P 19 21 49.4 +0.1
LDF **La Druitiere** 22.84 173 *eP* P 19 21 49.0 -0.6
comp=Z,19nm,0.5s,mb4.5
LDF **La Druitiere** 22.84 173 *eP* P 19 21 49.0 -0.6
comp=Z,9,4nm,0.5s,mb4.5
LDF **La Druitiere** 22.84 173 *eP* P 19 21 49.0 -0.6
LDF pmax pmax
comp=Z,9,0nm,0.5s,mb4.5
LDF **La Druitiere** 22.84 173 *eP* P 19 21 49.0 -0.6
comp=Z,9,4nm,0.5s,mb4.5
ROTZ **Rotzenmuhle** 22.89 152 *eP* P 19 21 50.3 +0.2
comp=Z,19nm,1.4s,mb4.3
ROSF **Rostrenen** 23.02 178 *eP* P 19 21 50.6 -0.9
ROSF **Rostrenen** 23.02 178 *eP* P 19 21 50.6 -0.9
ROSF **Rostrenen** 23.02 178 *eP* P 19 21 50.6 -0.9
GRR **Gorron** 23.02 174 *eP* P 19 21 50.1 -1.4
GRR **Gorron** 23.02 174 *eP* P 19 21 50.1 -1.4
GRR **Gorron** 23.02 174 *eP* P 19 21 50.1 -1.4
DPC **Dobruska-Polom** 23.03 145 *eP* P 19 21 51.6 +0.1
DPC *e* 19 21 57.1
DPC **Dobruska-Polom** 23.03 145 *eP* P 19 21 51.6 +0.1
DPC *e*pP 19 21 57.1
DPC **Dobruska-Polom** 23.03 145 *eP* P 19 21 51.6 +0.1
BST **Brest** 23.05 180 *eP* P 19 21 53.0 +1.2
BST **Brest** 23.05 180 *eP* P 19 21 52.3 +0.5
BST **Brest** 23.05 180 *eP* P 19 21 52.3 +0.5
PRU **Pruhonice** 23.06 148 *eP* P 19 21 52.5 +0.7
PRU *e* 19 21 57.8
PRU **Pruhonice** 23.06 148 *eP* P 19 21 52.5 +0.7
PRU *e*pP 19 21 57.8
PRU **Pruhonice** 23.06 148 *eP* P 19 21 52.5 +0.7
LANF **Langenberg** 23.07 159 *eP* P 19 21 53.5 +1.5
LANF **Langenberg** 23.07 159 *eP* P 19 21 53.5 +1.5
LANF **Langenberg** 23.07 159 *eP* P 19 21 53.5 +1.5
SGMF **Saint Gilles** 23.11 177 *eP* P 19 21 51.8 -0.6
comp=Z,96nm,1.2s,mb4.8
SGMF **Saint Gilles** 23.11 177 *eP* P 19 21 51.8 -0.6
comp=Z,48nm,1.2s,mb4.8
SGMF **Saint Gilles** 23.11 177 *eP* P 19 21 51.8 -0.6
SGMF pmax pmax
comp=Z,48nm,1.2s,mb4.8
SGMF **Saint Gilles** 23.11 177 *eP* P 19 21 51.8 -0.6
comp=Z,48nm,1.2s,mb4.8
MEZF **Maizieres J'vi** 23.27 164 *eP* P 19 21 54.9 +0.8
QUIF **Quistinic** 23.44 178 *eP* P 19 21 55.4 -0.5
QUIF **Quistinic** 23.44 178 *eP* P 19 21 55.4 -0.5
SFTF **Sexfontaines** 23.56 164 *eP* P 19 21 57.5 +0.4
CDF **Champ du Feu** 23.57 160 *eP* P 19 21 57.6 +0.3
CDF **Champ du Feu** 23.57 160 *eP* P 19 21 57.6 +0.3
MOS **Moscow** 23.60 109 *eP* P 19 21 52.6 -4.8
MOS *e* 19 22 33.3
MOS pmax pmax
comp=Z,48nm,1.0s,mb4.9
MOS MLR MLR
comp=E,1µm,14.0s,MS4.9
MOS MLR MLR
comp=N,3µm,16.0s,MS4.9
MOS MLR MLR
comp=Z,3µm,17.0s,MS4.8
WET **Wettzell** 23.60 151 *eP* P 19 21 57.9 +0.4
comp=Z,80nm,1.8s,mb4.8
WET **Wettzell** 23.60 151 *eP* P 19 21 57.9 +0.4
WET pmax pmax
comp=Z,80nm,1.8s,mb4.8
WET **Wettzell** 23.60 151 *eP* P 19 21 57.9 +0.4
comp=Z,80nm,1.8s,mb4.8
THEF **They Montfort** 23.63 163 *eP* P 19 21 58.2 +0.5
THEF **They Montfort** 23.63 163 *eP* P 19 21 58.2 +0.5
KHC **Kasperske Hory** 23.73 150 *eP* P 19 21 59.0 +0.4
comp=Z,82nm,1.8s,mb4.9
KHC **Kasperske Hory** 23.73 150 *eP* P 19 21 59.4 +0.8
KHC **Kasperske Hory** 23.73 150 *eP* P 19 21 59.4 +0.8
KHC **Kasperske Hory** 23.73 150 *eP* P 19 21 59.0 +0.4
comp=Z,82nm,1.8s,mb4.9
ECH **Echery** 23.75 161 *eP* P 19 21 59.3 +0.4
ECH **Echery** 23.75 161 *eP* P 19 21 59.8 +0.9
comp=Z,60nm,1.6s,mb4.8
ECH **Echery** 23.75 161 *eP* P 19 21 59.8 +0.9
ECH pmax pmax
comp=Z,60nm,1.6s,mb4.8
ECH **Echery** 23.75 161 *eP* P 19 21 59.8 +0.9
comp=Z,60nm,1.6s,mb4.8
BFO **Black Forest** 23.77 159 *eP* P 19 21 59.8 +0.7
comp=Z,57nm,1.5s,mb4.8
BFO **Black Forest** 23.77 159 *eP* P 19 21 59.8 +0.7
BFO pmax pmax
comp=Z,57nm,1.5s,mb4.8
BFO **Black Forest** 23.77 159 *eP* P 19 21 59.8 +0.7
comp=Z,57nm,1.5s,mb4.8
MORC **Moravsky Berou** 23.81 143 *eP* P 19 21 58.7 -0.7
comp=Z,12nm,0.9s,mb4.3
MORC **Moravsky Berou** 23.81 143 *eP* P 19 21 58.7 -0.7
MORC pmax pmax
comp=Z,12nm,0.9s,mb4.3
MORC **Moravsky Berou** 23.81 143⇑ *iP* P 19 21 59.0 -0.4
MORC **Moravsky Berou** 23.81 143 *eP* P 19 21 58.7 -0.7
comp=Z,12nm,0.9s,mb4.3
OBN **Obninsk** 23.81 111 *eP* P 19 21 57.8 -1.5
comp=Z,38nm,0.8s,mb4.9
OBN **Obninsk** 23.81 111⇑ *eP* P 19 21 58.7 -0.6
OBN *eS* S 19 26 16.9 +2.4
OBN pmax pmax
comp=Z,41nm,1.7s,mb4.6
OBN MLR MLR
comp=Z,2µm,17.0s,MS4.6
OBN **Obninsk** 23.81 111 *eP* P 19 21 57.8 -1.5
comp=Z,38nm,0.8s,mb4.9
OBN *eS* S 19 26 16.9 +2.4
comp=Z,2µm,17.0s
OJC **Ojcow** 23.84 140 *eP* P 19 21 59.4 -0.3
OJC i 19 22 00.6
OJC **Ojcow** 23.84 140 *eP* P 19 21 59.4 -0.3
OJC *e* 19 22 00.6
LIBD **Limburg** 23.87 160 *eP* P 19 22 00.6 +0.7
LIBD **Limburg** 23.87 160 *eP* P 19 22 00.6 +0.7
OKC **Ostrava-Krasne** 23.87 142 *eP* P 19 21 58.8 -1.1
OKC *e* 19 22 07.6
OKC **Ostrava-Krasne** 23.87 142 *eP* P 19 21 58.8 -1.1
OKC *e*pP 19 22 07.6
HAU **Haudompre** 23.88 162 *eP* P 19 22 00.5 +0.5
HAU *e*MLR MLR
comp=Z,2µm,22.2s,MS4.1
HAU **Haudompre** 23.88 162 *eP* P 19 22 00.5 +0.5
HAU LR LR
comp=Z,2µm,22.3s,MS4.4
HAU **Haudompre** 23.88 162 *eP* P 19 22 00.5 +0.5
HAU MLR MLR
comp=Z,2µm,22.3s,MS4.4
TREC **Trest** 23.89 147 *eP* P 19 22 00.9 +0.8
TREC **Trest** 23.89 147 *eP* P 19 22 00.9 +0.8
GEC2 **GERESS Array S** 24.02 150 *eP* P 19 22 02.5 +1.2
GEC2 **GERESS Array S** 24.02 150 *eP* P 19 22 02.5 +1.2
GEC2 **GERESS Array S** 24.02 150 *eP* P 19 22 02.5 +1.2
GERES **GERESS Array B** 24.02 150 P P 19 22 02.5 +1.1
comp=Z,5.0nm,0.8s,mb4.0,baz=352,slow=8.1,SNR=34
GERES **GERESS Array B** 24.02 150 P P 19 22 02.5 +1.1
GERES **GERESS Array B** 24.02 150 P P 19 22 02.5 +1.2
GERES pmax pmax
comp=Z,5.0nm,0.8s
GERES **GERESS Array B** 24.02 150 P P 19 22 02.5 +1.2
SPAK **Spaichingen-Ko** 24.05 158 *eP* P 19 22 02.6 +1.0
VRAC **Vranov** 24.08 145 P P 19 22 02.5 +0.7
comp=Z,8.8nm,0.7s,mb4.3,baz=353,slow=9.7,SNR=11
VRAC **Vranov** 24.08 145 ⇑ *iP* P 19 22 02.5 +0.7
VRAC **Vranov** 24.08 145 ⇑ *iP* P 19 22 02.5 +0.7
VRAC **Vranov** 24.08 145 P P 19 22 02.5 +0.7
MOF **Molkenrain** 24.11 161 *eP* P 19 22 03.1 +0.9
MOF **Molkenrain** 24.11 161 *eP* P 19 22 03.1 +0.9
HINF **Hinteralfeld** 24.12 161 *eP* P 19 22 02.7 +0.5
HINF **Hinteralfeld** 24.12 161 *eP* P 19 22 02.7 +0.5
FELD **Feldberg im Sc** 24.18 159 *eP* P 19 22 03.4 +0.6
FELD **Feldberg im Sc** 24.18 159 *eP* P 19 22 03.4 +0.6
HYF **Humbligny** 24.31 168 *eP* P 19 22 04.3 +0.3
FUR **Furstenfeldbru** 24.32 154 *eP* P 19 22 05.0 +1.0
comp=Z,151nm,1.9s,mb5.1
FUR **Furstenfeldbru** 24.32 154 *eP* P 19 22 05.0 +1.0
FUR pmax pmax
comp=Z,151nm,1.9s,mb5.1
FUR **Furstenfeldbru** 24.32 154 *eP* P 19 22 05.0 +1.0
comp=Z,151nm,1.9s,mb5.1
LOR **Lormes** 24.39 166 *eP* P 19 22 05.0 +0.3
comp=Z,74nm,0.9s,mb4.8
LOR *e*MLR MLR
comp=Z,638nm,21.5s,MS3.8
LOR **Lormes** 24.39 166 *eP* P 19 22 05.0 +0.3
comp=Z,37nm,0.9s,mb4.8
LOR LR LR
comp=Z,640nm,21.5s,MS4.1
LOR **Lormes** 24.39 166 *eP* P 19 22 05.0 +0.3
LOR pmax pmax
comp=Z,37nm,0.9s,mb4.8
LOR MLR MLR
comp=Z,640nm,21.5s,MS4.1
BBS **Basel-Blauen** 24.54 160 *eP* P 19 22 06.7 +0.7
BBS **Basel-Blauen** 24.54 160 *eP* P 19 22 06.7 +0.7
SSF **Saint Saulge** 24.57 167 *eP* P 19 22 06.5 +0.1
comp=Z,36nm,0.7s,mb4.7
SSF **Saint Saulge** 24.57 167 *eP* P 19 22 06.5 +0.1
comp=Z,18nm,0.7s,mb4.7
SSF **Saint Saulge** 24.57 167 *eP* P 19 22 06.5 +0.1
SSF pmax pmax
comp=Z,18nm,0.7s,mb4.7
LOMF **Lomont** 24.58 162 *eP* P 19 22 08.3 +1.9
LOMF **Lomont** 24.58 162 *eP* P 19 22 08.3 +1.9
NIE **Niedzica** 24.71 139 *eP* P 19 22 08.5 +0.9
NIE **Niedzica** 24.71 139 *eP* P 19 22 08.5 +0.9
MFF **Saint Martin d** 24.83 173 *eP* P 19 22 09.0 +0.3
comp=Z,51nm,0.7s,mb4.9
MFF **Saint Martin d** 24.83 173 *eP* P 19 22 09.0 +0.3
comp=Z,26nm,0.7s,mb4.9
MFF **Saint Martin d** 24.83 173 *eP* P 19 22 09.0 +0.3
MFF pmax pmax
comp=Z,26nm,0.7s,mb4.9
AVF **Avril sur Loir** 24.83 167 *eP* P 19 22 08.9 +0.2
comp=Z,24nm,0.8s,mb4.5
AVF **Avril sur Loir** 24.83 167 *eP* P 19 22 08.9 +0.2
comp=Z,12nm,0.8s,mb4.5
AVF **Avril sur Loir** 24.83 167 *eP* P 19 22 08.9 +0.2
AVF pmax pmax
comp=Z,12nm,0.8s,mb4.5
RJOB **Jochberg** 24.96 152 *eP* P 19 22 11.2 +1.3
comp=Z,18nm,0.8s,mb4.7
DAVA **Damuels** 24.99 157 ⇑ *iP* P 19 22 11.5 +1.4
comp=Z,19nm,1.1s,mb4.5
DAVA **Damuels** 24.99 157 P P 19 22 11.5 +1.3
comp=Z,19nm,1.1s,mb4.5
SMF **Signal de Mont** 25.01 167 *eP* P 19 22 10.2 -0.2
comp=Z,71nm,0.8s,mb4.9
SMF **Signal de Mont** 25.01 167 *eP* P 19 22 10.2 -0.2
comp=Z,35nm,0.8s,mb5.0
SMF **Signal de Mont** 25.01 167 *eP* P 19 22 10.2 -0.2
SMF pmax pmax
comp=Z,35nm,0.8s,mb4.9
BGF **Bois d'Agland** 25.03 168 *eP* P 19 22 10.7 +0.2
comp=Z,83nm,0.8s,mb5.0
BGF **Bois d'Agland** 25.03 168 *eP* P 19 22 10.7 +0.2
comp=Z,42nm,0.8s,mb5.0
BGF **Bois d'Agland** 25.03 168 *eP* P 19 22 10.7 +0.2
BGF pmax pmax
comp=Z,42nm,0.8s,mb5.0
KWP **Kalwaria Pacla** 25.03 136 ⇑ *iP* P 19 22 10.9 +0.4
KWP **Kalwaria Pacla** 25.03 136 ⇑ *iP* P 19 22 10.9 +0.4
MOTA **Moosalm** 25.10 155 ⇑ *iP* P 19 22 12.3 +1.2
comp=Z,14nm,1.0s,mb4.5
MOTA **Moosalm** 25.10 155 P P 19 22 12.3 +1.2
comp=Z,14nm,1.0s,mb4.5
KOLL **Kolacno** 25.12 143 *eP* P 19 22 12.3 +1.0
KOLL **Kolacno** 25.12 143 *eP* P 19 22 12.3 +1.0
KOLL **Kolacno** 25.12 143 *eP* P 19 22 12.3 +1.0
KOLL **Kolacno** 25.12 143 *eP* P 19 22 12.3 +1.0
LVV **L'vov** 25.16 134 *eP* P 19 22 11.2 -0.5
CABF **La Chapelle** 25.24 163 *eP* P 19 22 12.9 +0.5
comp=Z,69nm,1.1s,mb4.8
CABF **La Chapelle** 25.24 163 *eP* P 19 22 12.9 +0.5
comp=Z,34nm,1.1s,mb4.8
CABF **La Chapelle** 25.24 163 *eP* P 19 22 12.9 +0.5
CABF pmax pmax
comp=Z,35nm,1.1s,mb4.8
ZST **Bratislava** 25.24 145 *eP* P 19 22 13.7 +1.3
comp=Z,4,2nm,0.8s,mb4.0
ZST **Bratislava** 25.24 145 *eP* P 19 22 13.7 +1.3
ZST **Bratislava** 25.24 145 *eP* P 19 22 13.7 +1.3
ZST **Bratislava** 25.24 145 *eP* P 19 22 13.7 +1.3
comp=Z,4.2nm,0.8s,mb4.0
WTTA **Wattenberg** 25.25 154 ⇑ *iP* P 19 22 13.9 +1.4
comp=Z,32nm,1.0s,mb4.8
WTTA **Wattenberg** 25.25 154 P P 19 22 13.9 +1.4
comp=Z,32nm,1.0s,mb4.8
TCF **Toulx Ste Croi** 25.26 169 *eP* P 19 22 12.6 0.0
comp=Z,52nm,0.9s,mb4.8
TCF **Toulx Ste Croi** 25.26 169 *eP* P 19 22 12.6 0.0
comp=Z,26nm,0.9s,mb4.8
TCF **Toulx Ste Croi** 25.26 169 *eP* P 19 22 12.6 0.0
TCF pmax pmax
comp=Z,26nm,0.9s,mb4.8
CONA **Conrad Observa** 25.27 147 ⇑ *iP* P 19 22 15.1 +2.3
comp=Z,59nm,1.5s,mb4.9,SNR=24
CONA **Conrad Observa** 25.27 147 P P 19 22 15.1 +2.4
comp=Z,59nm,1.5s,mb4.9,SNR=24
VYHS **Vyhne** 25.29 142 *eP* P 19 22 13.4 +0.6
comp=Z,33nm,2.2s,mb4.5
VYHS **Vyhne** 25.29 142 *eP* P 19 22 13.4 +0.6
VYHS pmax pmax
comp=Z,33nm,2.2s,mb4.5
VYHS **Vyhne** 25.29 142 *eP* P 19 22 13.4 +0.6
VYHS **Vyhne** 25.29 142 *eP* P 19 22 13.4 +0.6
comp=Z,33nm,2.2s,mb4.5
FETA **Feichten** 25.36 156 P P 19 22 14.5 +0.9
comp=Z,12nm,1.2s,mb4.3
CRVS **Cervenica-Dubn** 25.44 138 *eP* P 19 22 15.9 +1.7
comp=Z,16nm,1.7s,mb4.3
CRVS **Cervenica-Dubn** 25.44 138 *eP* P 19 22 15.9 +1.7
CRVS pmax pmax
comp=Z,16nm,1.7s,mb4.3
CRVS **Cervenica-Dubn** 25.44 138 *eP* P 19 22 15.9 +1.7
CRVS **Cervenica-Dubn** 25.44 138 *eP* P 19 22 15.9 +1.7
comp=Z,16nm,1.7s,mb4.3
DAVOX **Davos/Dischmat** 25.49 157 P P 19 22 15.7 +1.1
comp=Z,2.9nm,0.7s,mb3.9,baz=318,slow=20,SNR=4.8
DAVOX **Davos/Dischmat** 25.49 157 P P 19 22 15.7 +1.0
DAVOX **Davos/Dischmat** 25.49 157 P P 19 22 15.7 +1.0
AGO **Saint Agoulin** 25.55 168 *eP* P 19 22 15.8 +0.5
KOLS **Kolonicke sedl** 25.59 137 *eP* P 19 22 16.1 +0.5
comp=Z,13nm,0.9s,mb4.5
KOLS **Kolonicke sedl** 25.59 137 *eP* P 19 22 16.1 +0.5
KOLS pmax pmax
comp=Z,13nm,0.9s,mb4.5
KOLS **Kolonicke sedl** 25.59 137 *eP* P 19 22 16.1 +0.5
KOLS **Kolonicke sedl** 25.59 137 *eP* P 19 22 16.1 +0.5
comp=Z,13nm,0.9s,mb4.5
KECS **Kecovo** 25.63 140 *eP* P 19 22 16.0 0.0
comp=Z,12nm,1.8s,mb4.1
KECS **Kecovo** 25.63 140 *eP* P 19 22 16.0 0.0

KECS pmax pmax
comp=Z,12nm,1.8s,mb4.1
KECS Kecovo 25.63 140 *e*P **P 19 22 16.0 0.0**
AKASG Malin Array Be 25.63 126 P **P 19 22 14.8 -1.2**
comp=Z,9.3nm,0.6s,mb4.5,baz=333,slow=9.2,SNR=14
AKASG Malin Array Be 25.63 126 P **P 19 22 14.8 -1.2**
AKASG pmax pmax
comp=Z,9.0nm,0.6s
AKASG Malin Array Be 25.63 126 P **P 19 22 14.8 -1.2**
SOP Sopron 25.63 146 *e*P **P 19 22 17.4 +1.4**
KIEV Kiev 25.64 126 *e*P **P 19 22 14.6 -1.4**
comp=Z,11nm,0.6s,mb4.6
KIEV Kiev 25.64 126 *e*P **P 19 22 14.6 -1.4**
KIEV pmax pmax
comp=Z,11nm,0.6s,mb4.6
KIEV Kiev 25.64 126 *e*P **P 19 22 14.6 -1.4**
comp=Z,11nm,0.6s,mb4.6
PLDF La Plantade 25.67 167 *e*P **P 19 22 16.7 +0.4**
PLDF La Plantade 25.67 167 *e*P **P 19 22 16.7 +0.4**
KBA Koelnbreinsper 25.68 151 ⇑*i*P **P 19 22 17.9 +1.5**
comp=Z,23nm,1.4s,mb4.5,SNR=9.2
KBA Koelnbreinsper 25.68 151 P **P 19 22 17.9 +1.4**
comp=Z,23nm,1.4s,mb4.5,SNR=9.2
TUE Stuetta 25.73 158 *e*P **P 19 22 18.6 +1.7**
comp=Z,25nm,1.3s,mb4.6
TUE Stuetta 25.73 158 *e*P **P 19 22 18.6 +1.8**
comp=Z,25nm,1.3s,mb4.6
VERF Verneugheol 25.81 169 *e*P **P 19 22 18.0 +0.4**
PYM Petit Puy Mans 25.84 168 *e*P **P 19 22 18.6 +0.7**
PYM Petit Puy Mans 25.84 168 *e*P **P 19 22 18.4 +0.5**
PYM Petit Puy Mans 25.84 168 *e*P **P 19 22 18.4 +0.5**
PYM Petit Puy Mans 25.84 168 *e*P **P 19 22 18.4 +0.5**
ARSA Arzberg 25.87 148 ⇑*i*pP pP 19 22 21.1 -0.1
comp=Z,11nm,0.9s,SNR=7.5
UZH Uzhgorod 25.88 137 *e*P **P 19 22 16.6 -1.6**
UZH *e* pP 19 22 18.8 -2.4
UZH *e* 19 22 56.6
UZH *e*PPP 19 23 16.0
UZH *e* 19 25 45.6
UZH *e*S **S 19 26 41.6 -6.1**
UZH *e*SS 19 27 46.4
UZH *e*SSS 19 28 05.4
UZH Uzhgorod 25.88 137 *e*PcP PcP 19 25 45.6 -1.1
PSZ Piszkesteto 26.05 141 *e*P **P 19 22 20.1 +0.4**
comp=Z,24nm,1.3s,mb4.6
PSZ Piszkesteto 26.05 141 ⇑P **P 19 22 22.0 +2.3**
PSZ Piszkesteto 26.05 141 ⇑*i*P **P 19 22 22.0 +2.3**
PSZ Piszkesteto 26.05 141 *e*P **P 19 22 20.4 +0.7**
PSZ Piszkesteto 26.05 141 *e*P **P 19 22 20.1 +0.4**
comp=Z,24nm,1.3s,mb4.6
COLF Collangettes 26.12 167 *e*P **P 19 22 21.3 +0.9**
RJF Les Rejaudoux 26.20 171 *e*P **P 19 22 21.3 +0.2**
comp=Z,77nm,0.9s,mb4.9
RJF *e*MLR MLR
comp=Z,792nm,19.6s,MS4.0
RJF Les Rejaudoux 26.20 171 *e*P **P 19 22 21.3 +0.2**
comp=Z,38nm,0.9s,mb4.9
RJF LR LR
comp=Z,790nm,19.6s,MS4.3
RJF Les Rejaudoux 26.20 171 *e*P **P 19 22 21.3 +0.2**
RJF pmax pmax
comp=Z,38nm,0.9s,mb4.9
RJF MLR MLR
comp=Z,790nm,19.6s,MS4.3
BUD Budapest 26.29 143 *e*P **P 19 22 21.1 -0.8**
SOKA Soboth 26.34 149 ⇑*i*P **P 19 22 23.5 +1.0**
comp=Z,5.5nm,0.9s,mb4.1
SOKA Soboth 26.34 149 P **P 19 22 23.5 +1.1**
comp=Z,5.5nm,0.9s,mb4.1
LBL Lubilhac 26.38 168 *e*P **P 19 22 23.7 +1.0**
LBL Lubilhac 26.38 168 *e*P **P 19 22 22.6 -0.1**
LBL Lubilhac 26.38 168 *e*P **P 19 22 22.6 -0.1**
LPL La Plagne 26.38 162 *e*P **P 19 22 23.4 +0.6**
comp=Z,43nm,1.2s,mb4.5
LPL La Plagne 26.38 162 *e*P **P 19 22 23.4 +0.6**
comp=Z,22nm,1.2s,mb4.5
LPL La Plagne 26.38 162 *e*P **P 19 22 23.4 +0.6**
LPL pmax pmax
comp=Z,22nm,1.2s,mb4.6
LPG La Plagne 26.40 162 *e*P **P 19 22 24.3 +1.3**
comp=Z,27nm,0.9s,mb4.5
LPG La Plagne 26.40 162 *e*P **P 19 22 24.3 +1.3**
comp=Z,13nm,0.9s,mb4.5
LPG La Plagne 26.40 162 *e*P **P 19 22 24.3 +1.3**
LPG pmax pmax
comp=Z,13nm,0.9s,mb4.5
TRPA Tarpa 26.41 137 ⇑*i*P **P 19 22 25.3 +2.3**
SSB Saint Sauveur 26.42 166 *e*P **P 19 22 22.4 -0.8**
comp=Z,18nm,1.1s,mb4.5
SSB Saint Sauveur 26.42 166 *e*P **P 19 22 22.4 -0.8**
SSB pmax pmax
comp=Z,18nm,1.1s,mb4.5
SSB Saint Sauveur 26.42 166 *e*P **P 19 22 22.4 -0.8**
comp=Z,18nm,1.1s,mb4.5
LFF La Frestale 26.53 172 *e*P **P 19 22 24.4 +0.3**
comp=Z,32nm,0.6s,mb4.7
LFF La Frestale 26.53 172 *e*P **P 19 22 24.4 +0.3**
comp=Z,16nm,0.6s,mb4.7
LFF La Frestale 26.53 172 *e*P **P 19 22 24.4 +0.3**
LFF pmax pmax
comp=Z,16nm,0.6s,mb4.7
CAF Calviac 26.61 170 *e*P **P 19 22 25.1 +0.3**
comp=Z,32nm,0.8s,mb4.6
CAF Calviac 26.61 170 *e*P **P 19 22 25.1 +0.3**
comp=Z,16nm,0.8s,mb4.6
CAF Calviac 26.61 170 *e*P **P 19 22 25.1 +0.3**
CAF pmax pmax
comp=Z,16nm,0.8s,mb4.6
SOKR Solikamsk 26.61 84 *d*i*P **P 19 22 23.0 -1.8**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.6
SOKR MLR MLR
comp=Z,810nm,15.0s,MS4.4
BNI Bardonecchia 26.84 163 *e*P **P 19 22 28.1 +1.3**
comp=Z,40nm,1.5s,mb4.7
BNI Bardonecchia 26.84 163 *e*P **P 19 22 28.2 +1.3**
BNI pmax pmax
comp=Z,40nm,1.5s,mb4.7
BNI Bardonecchia 26.84 163 *e*P **P 19 22 28.1 +1.2**
comp=Z,40nm,1.5s,mb4.7
VIVF Saint-Julien-l 26.86 166 *e*P **P 19 22 27.7 +0.6**
comp=Z,67nm,1.3s,mb4.7
VIVF Saint-Julien-l 26.86 166 *e*P **P 19 22 27.7 +0.6**
comp=Z,34nm,1.3s,mb4.7
VIVF Saint-Julien-l 26.86 166 *e*P **P 19 22 27.7 +0.6**
VIVF pmax pmax
comp=Z,34nm,1.3s,mb4.7
ORIF Oris-en-Rattie 26.89 164 *e*P **P 19 22 28.1 +0.7**
comp=Z,37nm,1.0s,mb4.5
ORIF *e*MLR MLR
comp=Z,1µm,22.1s,MS4.1
ORIF Oris-en-Rattie 26.89 164 *e*P **P 19 22 28.1 +0.7**
comp=Z,18nm,1.0s,mb4.6
ORIF Oris-en-Rattie 26.89 164 *e*P **P 19 22 28.1 +0.7**
ORIF pmax pmax
comp=Z,18nm,1.0s,mb4.6
MBDF Montbardon 27.17 163 *e*P **P 19 22 30.7 +0.8**
comp=Z,41nm,1.0s,mb4.6
MBDF Montbardon 27.17 163 *e*P **P 19 22 30.7 +0.8**
comp=Z,20nm,1.0s,mb4.6
MBDF Montbardon 27.17 163 *e*P **P 19 22 30.7 +0.8**
MBDF pmax pmax
comp=Z,20nm,1.0s,mb4.6
BUR08 Bucovina Ar. S 27.47 134 *e*P **P 19 22 31.3 -1.2**
BUR08 Bucovina Ar. S 27.47 134 *e*P **P 19 22 31.3 -1.2**
LASF Ste Croix 27.57 167 *e*P **P 19 22 34.0 +0.5**
comp=Z,23nm,1.0s,mb4.5
SMRF Simiane la Rot 27.80 165 *e*P **P 19 22 35.6 0.0**
comp=Z,12nm,0.9s,mb4.2
SMRF Simiane la Rot 27.80 165 *e*P **P 19 22 35.6 0.0**
comp=Z,12nm,0.9s,mb4.5
VSR Storozhevoye 27.97 113 *e*P **P 19 22 35.7 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR MLR MLR
comp=Z,2µm,18.0s,MS4.8
VSR MLR MLR
comp=N,760nm,13.0s
VSR MLR MLR
comp=E,740nm,20.0s
EARI Arriondas 28.05 181 P **P 19 22 38.9 +1.1**
comp=E,25nm,1.3s,mb4.7
EARI Arriondas 28.05 181 P **P 19 22 38.9 +1.1**
comp=E,25nm,1.3s,mb4.7
SBF Sospel 28.09 162 *e*P **P 19 22 39.2 +1.1**
comp=E,16nm,0.7s,mb4.4
SBF Sospel 28.09 162 *e*P **P 19 22 39.2 +1.1**
comp=E,7.8nm,0.7s,mb4.5
SBF Sospel 28.09 162 *e*P **P 19 22 39.2 +1.1**
SBF pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
ELAN Lanestosa 28.12 179 P **P 19 22 39.6 +1.2**
comp=Z,33nm,1.4s,mb4.8
ELAN Lanestosa 28.12 179 P **P 19 22 39.6 +1.2**
comp=Z,33nm,1.4s,mb4.8
VLC Villacollemand 28.13 157 *e*P **P 19 22 38.8 +0.3**
VLC Villacollemand 28.13 157 *e*P **P 19 22 38.8 +0.3**
EALK Alkurruntz 28.16 176 P **P 19 22 39.0 +0.2**
comp=Z,36nm,1.5s,mb4.8
EALK Alkurruntz 28.16 176 P **P 19 22 39.0 +0.2**
comp=Z,36nm,1.5s,mb4.8
MTLF Montolieu 28.20 170 *e*P **P 19 22 40.0 +0.9**
MTLF Montolieu 28.20 170 *e*P **P 19 22 40.0 +0.9**
VORD Divnogorie 28.23 113 *e*P **P 19 22 39.2 -0.1**
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD MLR MLR
comp=Z,2µm,17.0s,MS4.8
VORD MLR MLR
comp=N,830nm,14.0s,MS4.6
VORD MLR MLR
comp=E,320nm,11.0s,MS4.6
SJPF Ste Jean 28.28 175 *e*P **P 19 22 39.9 +0.1**
comp=E,17nm,0.9s,mb4.4
SJPF Ste Jean 28.28 175 *e*P **P 19 22 39.9 +0.1**
comp=E,8.6nm,0.9s,mb4.4
SJPF Ste Jean 28.28 175 *e*P **P 19 22 39.9 +0.1**
SJPF pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
FRF La Foret Royal 28.31 163 *e*P **P 19 22 39.7 -0.4**
FRF La Foret Royal 28.31 163 *e*P **P 19 22 39.7 -0.4**
EPF Esparros 28.41 173 *e*P **P 19 22 41.2 +0.2**
comp=Z,33nm,0.6s,mb4.9
EPF Esparros 28.41 173 *e*P **P 19 22 41.2 +0.2**
comp=Z,16nm,0.6s,mb4.8
EPF Esparros 28.41 173 *e*P **P 19 22 41.2 +0.2**
EPF pmax pmax
comp=Z,16nm,0.6s,mb4.8
ETSF Etsaut 28.51 174 *e*P **P 19 22 42.6 +0.7**
comp=Z,12nm,0.7s,mb4.4
ETSF Etsaut 28.51 174 *e*P **P 19 22 42.6 +0.7**
comp=Z,6.2nm,0.7s,mb4.5
ETSF Etsaut 28.51 174 *e*P **P 19 22 42.6 +0.7**
ETSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
LMR La Mourre 28.52 163 *e*P **P 19 22 42.0 0.0**
LMR La Mourre 28.52 163 *e*P **P 19 22 42.0 0.0**
EBIE Bielsa 28.75 173 P **P 19 22 44.9 +0.9**
comp=Z,27nm,1.2s,mb4.8
EBIE Bielsa 28.75 173 P **P 19 22 44.9 +0.9**
comp=Z,27nm,1.2s,mb4.8
CLLI Lliivia 29.04 170 P **P 19 22 47.4 +0.8**
CLLI Lliivia 29.04 170 P **P 19 22 47.4 +0.8**
CSOR Sort 29.10 172 P **P 19 22 48.8 +1.6**
comp=Z,42nm,1.5s,mb5.0
CSOR Sort 29.10 172 P **P 19 22 48.8 +1.7**
comp=Z,42nm,1.5s,mb5.0
EJON La Jonquera 29.12 169 P **P 19 22 46.9 -0.5**
comp=Z,29nm,1.4s,mb4.8
EJON La Jonquera 29.12 169 P **P 19 22 46.8 -0.5**
comp=Z,29nm,1.4s,mb4.8
PLOR Plostina 29.49 133 ⇑P **P 19 22 51.0 +0.4**
PLOR Plostina 29.49 133 ⇑*i*P **P 19 22 51.0 +0.4**
VRI Vrincioaia 29.50 133 ⇑P **P 19 22 48.9 -1.7**
VRI Vrincioaia 29.50 133 ⇑*i*P **P 19 22 48.9 -1.7**
PGF Pioggiola 29.56 160 *e*P **P 19 22 51.6 +0.4**
comp=Z,13nm,0.8s,mb4.4
PGF Pioggiola 29.56 160 *e*P **P 19 22 51.6 +0.4**
comp=Z,6.3nm,0.8s,mb4.4
PGF Pioggiola 29.56 160 *e*P **P 19 22 51.6 +0.4**
PGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
MLR Muntele Rosu 29.67 134 ⇑P **P 19 22 51.4 -0.7**
MLR Muntele Rosu 29.67 134 ⇑*i*P **P 19 22 51.4 -0.7**
ARU Arti 29.69 87 *e*P **P 19 22 51.7 -0.5**
comp=Z,14nm,0.8s,mb4.7
ARU Arti 29.69 87 *d*i*P **P 19 22 52.6 +0.4**
ARU *e* 19 23 43.6
ARU S **S 19 27 50.8 +3.3**
ARU SS SS 19 29 22.0 -31
ARU pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
ARU MLR MLR
comp=Z,2µm,19.0s,MS4.7
ARU Arti 29.69 87 *e*P **P 19 22 51.7 -0.5**
comp=Z,13nm,0.8s,mb4.7
MVO Moncorvo 30.22 184 *e*P **P 19 23 00.1 +3.1**
comp=Z,19nm,1.7s,mb4.5
ERTA Horta de San J 30.48 173 P **P 19 23 00.7 +1.3**
comp=Z,40nm,1.4s,mb5.0
ERTA Horta de San J 30.48 173 P **P 19 23 00.6 +1.2**
comp=Z,40nm,1.4s,mb5.0
GUD Guadarrama 30.71 180 P **P 19 23 02.3 +1.0**
comp=Z,16nm,1.0s,mb4.8
GUD Guadarrama 30.71 180 P **P 19 23 02.3 +1.0**
GUD pmax pmax
comp=Z,16nm,1.0s,mb4.8
GUD Guadarrama 30.71 180 P **P 19 23 02.3 +1.0**
comp=Z,16nm,1.0s,mb4.8
ESDC Sonseca Array 31.67 179 P **P 19 23 11.6 +1.7**
comp=Z,3.3nm,0.6s,mb4.3,baz=360,slow=8.0,SNR=17
ESDC Sonseca Array 31.67 179 P **P 19 23 11.5 +1.7**
comp=Z,6.7nm,0.6s,mb4.7
ESDC Sonseca Array 31.67 179 P **P 19 23 11.5 +1.6**
comp=Z,6.7nm,0.6s,mb4.7
PTOM Tomar 31.80 186 *e*P **P 19 23 15.1 +4.1**
ECHE Chera 31.80 175 P **P 19 23 13.4 +2.4**
comp=Z,31nm,1.3s,mb5.0
ECHE Chera 31.80 175 P **P 19 23 13.4 +2.4**
ECHE pmax pmax
comp=Z,31nm,1.3s,mb5.0
ECHE Chera 31.80 175 P **P 19 23 13.4 +2.4**
comp=Z,31nm,1.3s,mb5.0
PMRV Marv??o 31.96 185 *e*P **P 19 23 14.8 +2.4**
comp=Z,32nm,2.0s,mb4.8
PMRV Marv??o 31.96 185 *e*P **P 19 23 14.8 +2.4**
comp=Z,32nm,2.0s,mb4.8
PESTR Estremoz 32.52 185 *e*P **P 19 23 19.2 +1.9**
PESTR Estremoz 32.52 185 *e*P **P 19 23 19.2 +1.9**
EVIA Vianos 32.72 177 P **P 19 23 20.9 +1.8**
comp=Z,18nm,0.9s,mb5.0
EVIA Vianos 32.72 177 P **P 19 23 20.9 +1.8**
EVIA pmax pmax
comp=Z,18nm,0.9s,mb5.0
EVIA Vianos 32.72 177 P **P 19 23 20.9 +1.8**
comp=Z,18nm,0.9s,mb5.0
EADA Adamuz 33.18 180 P **P 19 23 24.9 +1.8**
comp=Z,44nm,1.7s,mb5.1
EADA Adamuz 33.18 180 P **P 19 23 24.9 +1.8**
comp=Z,44nm,1.7s,mb5.1
EBAN Banos Encina 33.18 179 P **P 19 23 24.6 +1.5**
comp=Z,10nm,0.8s,mb4.8
EBAN Banos Encina 33.18 179 P **P 19 23 24.6 +1.5**
EBAN pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
EBAN Banos Encina 33.18 179 P **P 19 23 24.6 +1.5**
comp=Z,10.0nm,0.8s,mb4.8
ANN Anapa 33.26 120 *e*P **P 19 23 21.0 -2.8**
ANN *e* 19 24 27.1
ANN *e*S **S 19 28 41.3 -2.2**
ANN pmax pmax
comp=Z,43nm,1.5s,mb5.2
ANN MLR MLR
comp=Z,4µm,16.0s,MS5.2
EHUE Huescar 33.54 178 P **P 19 23 27.9 +1.7**
comp=Z,8.4nm,0.8s,mb4.7
EHUE Huescar 33.54 178 P **P 19 23 27.9 +1.7**
EHUE pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
EHUE Huescar 33.54 178 P **P 19 23 27.9 +1.7**
comp=Z,8.0nm,0.8s,mb4.7
EQES Quesada 33.55 178 P **P 19 23 27.8 +1.5**
comp=Z,32nm,1.6s,mb5.0
EQES Quesada 33.55 178 P **P 19 23 27.8 +1.5**
comp=Z,32nm,1.6s,mb5.0
PCVE Castro Verde 33.77 185 *e*P **P 19 23 31.6 +3.4**
ELUQ Luque 33.78 180 P **P 19 23 31.5 +3.2**
comp=Z,10nm,0.7s,mb4.9
ELUQ Luque 33.78 180 P **P 19 23 31.5 +3.2**
ELUQ pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
PFVI Vila Bisbo 34.29 186 *e*P **P 19 23 37.0 +4.2**
comp=Z,218nm,1.5s,mb5.9
AKTK Aktyubinsk 34.56 93 P **P 19 23 35.9 +0.9**
AKTK Aktyubinsk 34.56 93 P **P 19 23 35.9 +0.9**
comp=Z,2.0nm,0.5s,mb4.3
AKTO Aktyubinsk 34.56 93 P **P 19 23 35.9 +0.9**
comp=Z,2.2nm,0.5s,mb4.3,baz=314,slow=9.9,SNR=8.8
AKTO Aktyubinsk 34.56 93 P **P 19 23 35.9 +0.9**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KIV Kislovodsk 35.54 115 *e*P **P 19 23 43.0 -0.5**
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.8
KIV Kislovodsk 35.54 115 *e*P **P 19 23 43.0 -0.5**
comp=Z,12nm,1.0s,mb4.8
BVAR Borovoye Array 36.32 80 P **P 19 23 49.7 -0.4**
comp=Z,3.6nm,0.6s,mb4.5,baz=324,slow=7.3,SNR=25
BVAR Borovoye Array 36.32 80 P **P 19 23 49.7 -0.4**
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 36.32 80 P **P 19 23 49.7 -0.4**
comp=Z,4.0nm,0.6s,mb4.5
KEST Kesra 36.33 161 P **P 19 23 51.3 +0.9**
comp=Z,2.0nm,0.8s,mb4.1,baz=13,slow=0.9,SNR=10
KEST Kesra 36.33 161 *e*P **P 19 23 51.2 +0.9**
KEST Kesra 36.33 161 *e*P **P 19 23 51.2 +0.9**
BRTR Keskin Array B 36.98 128 P **P 19 23 56.8 +0.9**
comp=Z,4.6nm,0.9s,mb4.3,baz=327,slow=6.6,SNR=18
BRTR Keskin Array B 36.98 128 P **P 19 23 56.8 +1.0**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 36.98 128 P **P 19 23 56.8 +1.0**
comp=Z,5.0nm,0.9s,mb4.3
YKA Yellowknife Ar 38.17 315 P **P 19 24 05.0 -0.6**
comp=Z,1.1nm,0.7s,mb3.7,baz=27,slow=9.2,SNR=3.8
YKA Yellowknife Ar 38.17 315 P **P 19 24 05.1 -0.5**
YKA Yellowknife Ar 38.17 315 P **P 19 24 05.1 -0.5**
MALT Malatya 39.57 123 *e*P **P 19 24 18.5 +0.9**
comp=Z,7.9nm,1.0s,mb4.4
MALT Malatya 39.57 123 ⇑P **P 19 24 18.9 +1.3**
MALT Malatya 39.57 123 ⇑*i*P **P 19 24 18.9 +1.3**
MALT Malatya 39.57 123 *e*P **P 19 24 18.5 +0.9**
comp=Z,7.9nm,1.0s,mb4.4
GNI Garni 39.64 115 P **P 19 24 18.8 +0.7**
comp=Z,2.7nm,0.6s,mb4.2,baz=332,slow=3.4,SNR=3.9
GNI Garni 39.64 115 P **P 19 24 18.9 +0.7**
GNI Garni 39.64 115 P **P 19 24 18.9 +0.7**
ZALV Zalesovo Beam 39.98 67 P **P 19 24 19.9 -1.0**
comp=Z,0.5nm,0.3s,mb3.7,baz=330,slow=8.6,SNR=4.2
ZALV Zalesovo Beam 39.98 67 P **P 19 24 19.9 -1.0**
KURK Kurchatov 40.91 74 *e*P **P 19 24 27.5 -1.0**
comp=Z,6.4nm,1.0s,mb4.2
KURK Kurchatov 40.91 74 *i*P **P 19 24 28.0 -0.5**
KURK pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
KURK Kurchatov 40.91 74 *i*P **P 19 24 28.0 -0.5**
comp=Z,10.0nm,1.2s,mb4.3
EGAK Eagle 41.05 333 *e*P **P 19 24 28.6 -1.0**
comp=Z,9.0nm,1.2s,mb4.3
EGAK Eagle 41.05 333 *e*P **P 19 24 28.6 -0.9**
comp=Z,8.9nm,1.2s,mb4.3
FFC Flin Flon 41.76 300 *e*P **P 19 24 35.3 -0.2**
comp=Z,17nm,1.1s,mb4.6
FFC Flin Flon 41.76 300 *c*e*P **P 19 24 36.0 +0.5**
FFC Flin Flon 41.76 300 *e*P **P 19 24 35.3 -0.2**
comp=Z,17nm,1.1s,mb4.6
ILAR Eielson Array 41.83 337 P **P 19 24 35.0 -0.9**
comp=Z,2.1nm,0.9s,mb3.7,baz=6.3,slow=6.9,SNR=17
ILAR Eielson Array 41.83 337 P **P 19 24 35.0 -0.9**
ILAR pmax pmax
comp=Z,2.0nm,1.0s
ILAR Eielson Array 41.83 337 P **P 19 24 35.0 -0.9**
comp=Z,2.0nm,1.0s,mb3.7
YAK Yakutsk 43.21 30 *e*P **P 19 24 44.6 -2.6**
PAX Paxson 43.37 335 *e*P **P 19 24 48.1 -0.4**
PAX Paxson 43.37 335 *e*P **P 19 24 48.1 -0.4**
PAX Paxson 43.37 335 *e*P **P 19 24 48.1 -0.4**
ULM Lac du Bonnet 43.95 292 P **P 19 24 53.1 -0.1**
comp=Z,10nm,0.9s,mb4.6,baz=28,slow=7.7,SNR=6.0
ULM Lac du Bonnet 43.95 292 P **P 19 24 53.2 -0.1**
BOD Bodaibo 44.15 43 *e*P **P 19 24 51.5 -3.3**
BOD pmax pmax
comp=Z,13nm,1.6s,mb4.4
ASF Jabal al Asfar 44.97 128 P **P 19 25 01.9 +0.2**
comp=Z,2.2nm,0.6s,mb4.2,baz=204,slow=5.1,SNR=6.5
ASF Jabal al Asfar 44.97 128 P **P 19 25 01.9 +0.3**
ASF pmax pmax
comp=Z,2.0nm,0.6s
MK31 Makanchi Array 45.51 74 *e*P **P 19 25 04.7 -1.1**
MK31 Makanchi Array 45.51 74 *e*P **P 19 25 04.7 -1.1**
MK31 Makanchi Array 45.51 74 *e*P **P 19 25 04.7 -1.1**
MKAR Makanchi Array 45.51 74 P **P 19 25 05.6 -0.2**
comp=Z,0.8nm,0.3s,mb4.2,baz=343,slow=6.3,SNR=12
MKAR Makanchi Array 45.51 74 P **P 19 25 05.6 -0.2**
MKAR Makanchi Array 45.51 74 P **P 19 25 05.6 -0.2**
MKAR pmax pmax
comp=Z,1.0nm,0.3s
AGMN Agassiz Nation 45.68 291 *e*P **P 19 25 07.1 0.0**
comp=Z,11nm,1.1s,mb4.7
AGMN Agassiz Nation 45.68 291 *e*P **P 19 25 07.1 0.0**
comp=Z,11nm,1.1s,mb4.7
MOY Mondy 46.58 56 *e*P **P 19 25 16.3 +2.2**
MOY Mondy 46.58 56 *e*P **P 19 25 16.3 +2.2**
B23A Brockton 48.20 299 ⇓P **P 19 25 27.2 +0.4**
baz=48
A19A Klindworth Far 48.83 302 ⇓P **P 19 25 31.9 +0.3**
baz=48
TAM Tamanrasset 48.84 168 *e*P **P 19 25 33.5 +1.5**
comp=Z,3.5nm,0.7s,mb4.5
TAM Tamanrasset 48.84 168 *e*P **P 19 25 33.5 +1.5**
TAM pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
TAM Tamanrasset 48.84 168 *e*P **P 19 25 33.5 +1.5**
comp=Z,4.0nm,0.7s,mb4.6
C23A Lambert 48.86 298 ⇑P **P 19 25 32.5 +0.7**
baz=49
B20A Solberg Farm, 49.07 301 ⇓P **P 19 25 33.6 +0.1**
baz=49
C22A Vida 49.11 299 ⇓P **P 19 25 34.1 +0.3**
baz=49
C21A Desert Coulee 49.37 300 ⇑P **P 19 25 36.1 +0.3**
baz=49
B18A Beardsley Farm 49.60 302 ⇓P **P 19 25 37.3 -0.2**
baz=49
D22A Cohagen 49.73 299 ⇑P **P 19 25 39.2 +0.7**
baz=49
WMQ Urumqi 49.85 71 *e*P **P 19 25 39.0 -0.5**
WMQ sP sP 19 25 46.0 +2.1
WMQ PP PP 19 27 34.0 +0.2
WMQ S **S 19 32 46.0 -2.8**
WMQ ScS ScS 19 35 27.0 -3.4
WMQ SS SS 19 36 16.0 -4.7
WMQ pmax pmax
comp=Z,15nm,1.0s,mb5.0
WMQ pmax pmax
comp=Z,46nm,5.0s
WMQ LR LR
comp=Z,900nm,16.0s,MS4.9
A15A Johnson Ranch, 49.86 305 ⇓P **P 19 25 39.8 +0.3**
baz=50
EGMT Eagleton 49.93 302 ⇓P **P 19 25 38.9 -1.1**
baz=50,SNR=7.5
EGMT Eagleton 49.93 302 *e*P **P 19 25 39.7 -0.3**
comp=Z,15nm,1.1s,mb4.9
EGMT Eagleton 49.93 302 *e*P **P 19 25 39.7 -0.3**
comp=Z,15nm,1.1s,mb4.9
ECSD EROS Data Cent 50.02 289 *e*P **P 19 25 40.6 -0.1**
comp=Z,12nm,1.1s,mb4.8
ECSD EROS Data Cent 50.02 289 *e*P **P 19 25 40.7 -0.1**
comp=Z,12nm,1.1s,mb4.8
D21A La Casta Ranch 50.04 300 ⇑P **P 19 25 40.6 -0.3**
baz=50
A14A Double T Ranch 50.04 306 ⇓P **P 19 25 40.1 -0.8**
baz=50,SNR=5.6
KSH Kashi 50.06 84 *e*P **P 19 25 44.8 +3.6**
KSH *e*pP pP 19 25 49.3 +5.0
KSH *e*sP sP 19 25 51.8 +6.3
KSH *e*PcP PcP 19 27 04.0 +3.3
KSH *e*PP PP 19 27 41.0 +5.1

KSH eScP ScP 19 30 58.0 +2.0
KSH ePcS PcS 19 30 59.8 +2.2
KSH eS **S** **19 32 55.5 +3.6**
KSH eSS sS 19 33 02.5 +5.4
KSH eScS ScS 19 35 32.5 +0.5
KSH eSS SS 19 36 25.3 +1.0
KSH pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KSH LR LR
comp=Z,2µm,26.4s,MS4.9
D20A Manuel Ranch, 50.34 300 ⇑P **P 19 25 43.0 -0.1**
baz=50,SNR=8.5
A13A Flathead Natio 50.34 306 ⇓P **P 19 25 42.5 -0.7**
baz=50
B15A Bradely Ranch, 50.42 305 ⇑P **P 19 25 43.0 -0.8**
baz=50,SNR=5.3
D19A Cripps Ranch, 50.47 301 ⇓P **P 19 25 44.0 -0.2**
baz=50,SNR=8.7
E21A Keefer Ranch, 50.54 299 ⇑P **P 19 25 44.7 +0.1**
baz=50
C17A Wharram Farm, 50.56 303 ⇑P **P 19 25 44.2 -0.6**
baz=50
B14A Marquette Ranc 50.56 305 ⇓P **P 19 25 44.2 -0.6**
baz=50
C16A Fuhringer Ranc 50.67 304 ⇓P **P 19 25 45.7 0.0**
baz=50
B13A Whitefish 50.87 306 ⇓P **P 19 25 46.6 -0.5**
baz=51
E20A Meyer Farm, Mu 50.87 300 ⇓P **P 19 25 47.0 -0.2**
baz=51
C15A Salmond Ranch, 50.93 304 ⇓P **P 19 25 46.5 -1.1**
baz=51
D17A Six Diamond Ra 50.98 303 ⇑P **P 19 25 47.6 -0.4**
baz=51
E19A Rath Farm, Rou 51.09 301 ⇓P **P 19 25 49.1 +0.3**
baz=51
C14A Swan Lake 51.23 305 ⇑P **P 19 25 49.6 -0.3**
baz=51
E18A Harlowton 51.31 302 ⇓P **P 19 25 50.4 -0.1**
baz=51,SNR=6.3
BSMT Bassoo Peak 51.43 306 *eP* **P 19 25 50.9 -0.5**
comp=Z,7.0nm,1.1s,mb4.5
BSMT Bassoo Peak 51.43 306 *eP* **P 19 25 50.9 -0.5**
comp=Z,7.0nm,1.1s,mb4.5
SONM Songino Array 51.51 54 P **P 19 25 52.7 +0.7**
comp=Z,0.6nm,0.6s,mb3.7,baz=325,slow=7.4,SNR=4.5
SONM Songino Array 51.51 54 P **P 19 25 52.7 +0.8**
SONM Songino Array 51.51 54 P **P 19 25 52.7 +0.8**
C13A Hot Springs 51.53 306 ⇑P **P 19 25 51.7 -0.4**
baz=51,SNR=5.3
SWMT Swartz Lake 51.54 305 *eP* **P 19 25 52.0 -0.2**
comp=Z,3.1nm,1.0s,mb4.2
SWMT Swartz Lake 51.54 305 *eP* **P 19 25 52.0 -0.2**
comp=Z,3.1nm,1.0s,mb4.2
D15A Lincoln 51.58 304 ⇓P **P 19 25 52.2 -0.2**
baz=51
NEW Newport 51.65 308 ⇓P **P 19 25 52.9 0.0**
baz=51
ULN Ulaanbaatar 51.65 53 *eP* **P 19 25 52.9 -0.1**
comp=Z,17nm,1.8s,mb4.7
ULN Ulaanbaatar 51.65 53 *eP* **P 19 25 52.9 -0.1**
ULN pmax pmax
comp=Z,17nm,1.8s,mb4.7
ULN Ulaanbaatar 51.65 53 *eP* **P 19 25 52.9 -0.1**
comp=Z,17nm,1.8s,mb4.7
SLMT Seeley Lake 51.65 305 *eP* **P 19 25 52.4 -0.7**
comp=Z,13nm,1.1s,mb4.8
SLMT Seeley Lake 51.65 305 *eP* **P 19 25 52.3 -0.7**
comp=Z,13nm,1.1s,mb4.8
E17A Martinsdale 51.66 302 ⇓P **P 19 25 53.0 -0.1**
baz=51
F19A Roth Farm, Mol 51.69 300 ⇓P **P 19 25 53.3 -0.1**
baz=51
D14A Greenough 51.80 305 ⇑P **P 19 25 53.8 -0.4**
baz=52
E16A East Helena 51.82 303 ⇑P **P 19 25 53.9 -0.3**
baz=52
C11A Tepee Creek (N 51.82 307 ⇓P **P 19 25 53.6 -0.7**
baz=52
F18A Big Timber 51.86 301 ⇑P **P 19 25 54.4 -0.2**
baz=52,SNR=6.1
CHMT Chamberlain Mo 51.89 305 *eP* **P 19 25 53.9 -0.9**
comp=Z,4.8nm,1.1s,mb4.3
CHMT Chamberlain Mo 51.89 305 *eP* **P 19 25 53.9 -0.9**
comp=Z,4.8nm,1.1s,mb4.3
GCMT Greycliff 51.95 301 *eP* **P 19 25 55.6 +0.3**
comp=Z,6.1nm,1.0s,mb4.5
GCMT Greycliff 51.95 301 *eP* **P 19 25 55.6 +0.3**
comp=Z,6.1nm,1.0s,mb4.5
D13A Huson 52.04 306 ⇓P **P 19 25 55.2 -0.8**
baz=52
G20A Bridger 52.07 300 ⇑P **P 19 25 55.9 -0.3**
baz=52,SNR=7.6
B08A Colville Reser 52.12 310 ⇓P **P 19 25 56.2 -0.3**
baz=52
F17A Fitzpatrick Pl 52.12 302 ⇓P **P 19 25 56.6 0.0**
baz=52
MSO Missoula 52.15 305 ⇑P **P 19 25 56.4 -0.4**
baz=52
D12A Red Ives Fores 52.32 306 ⇑P **P 19 25 57.3 -0.6**
baz=52
G18A Lazy EL Ranch, 52.36 301 ⇓P **P 19 25 57.9 -0.4**
baz=52
KBL Kabul 52.37 93 *eP* **P 19 25 59.3 +0.7**
comp=Z,6.6nm,1.4s,mb4.4
KBL Kabul 52.37 93 *eP* **P 19 25 59.3 +0.7**
KBL pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
KBL Kabul 52.37 93 *eP* **P 19 25 59.3 +0.7**
comp=Z,7.0nm,1.4s,mb4.4
E13A Victor 52.58 305 ⇓P **P 19 25 59.7 -0.2**
baz=52
BOZ Bozeman (W) 52.62 303 ⇑P **P 19 26 00.5 +0.3**
baz=52
BOZ Bozeman (W) 52.62 303 *eP* **P 19 25 59.9 -0.3**
comp=Z,3.6nm,1.2s,mb4.2
BOZ Bozeman (W) 52.62 303 *eP* **P 19 25 59.9 -0.4**
BOZ pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
BOZ Bozeman (W) 52.62 303 *eP* **P 19 25 59.9 -0.4**
comp=Z,4.0nm,1.2s,mb4.2
F15A Butte 52.68 303 ⇓P **P 19 26 00.6 -0.1**
baz=52
G17A Pierce Place, 52.68 302 ⇓P **P 19 26 00.7 +0.1**
baz=52
H20A Greybull 52.68 299 ⇑P **P 19 26 00.8 +0.1**
baz=52
H19A Powell 52.79 300 ⇑P **P 19 26 01.5 0.0**
baz=52
E12A Beaver Dam Sad 52.96 306 ⇑P **P 19 26 02.0 -0.7**
baz=53
H18A Shoshone NF, C 52.98 300 ⇑P **P 19 26 02.5 -0.4**
baz=53
I21A Big Trails, Te 53.10 298 ⇓P **P 19 26 03.6 -0.3**
baz=53,SNR=15
J22A Midwest 53.24 297 ⇓P **P 19 26 04.0 -0.9**
baz=53,SNR=8.6
I19A Meeteetse 53.38 300 ⇑P **P 19 26 05.4 -0.4**
baz=53
H16A Russell Place, 53.39 302 ⇓P **P 19 26 05.7 -0.2**
baz=53
F12A Elk City 53.49 306 ⇑P **P 19 26 06.3 -0.4**
baz=53
J20A Shoshoni 53.75 299 ⇓P **P 19 26 08.5 -0.1**
baz=54,SNR=9.5
G13A Cobalt 53.84 304 ⇓P **P 19 26 09.1 -0.1**
baz=54,SNR=8.4
H15A Lima 53.85 303 ⇓P **P 19 26 09.5 +0.2**
baz=54,SNR=6.0
K22A Casper 53.95 297 ⇓P **P 19 26 09.7 -0.3**
baz=54,SNR=7.8
H14A Leadore 54.05 303 ⇑P **P 19 26 10.7 -0.1**
baz=54
IMW Indian Meadow 54.05 301 *eP* **P 19 26 11.3 +0.6**
comp=Z,7.2nm,1.1s,mb4.5
IMW Indian Meadow 54.05 301 *eP* **P 19 26 11.4 +0.6**
comp=Z,7.2nm,1.1s,mb4.5
G12A Big Creek, Yel 54.09 305 ⇑P **P 19 26 10.8 -0.2**
baz=54,SNR=14
J19A Crowheart 54.10 299 ⇑P **P 19 26 10.9 -0.3**
baz=54,SNR=7.6
K21A Alcova 54.17 297 ⇓P **P 19 26 11.4 -0.3**
baz=54
L23A Garrett 54.21 296 ⇓P **P 19 26 11.2 -0.7**
baz=54
H13A Challis 54.33 304 ⇓P **P 19 26 12.2 -0.6**
baz=54
J18A Kendall Valley 54.43 300 ⇑P **P 19 26 13.5 0.0**
baz=54
K19A Absolon Red Bu 54.45 299 ⇓P **P 19 26 13.2 -0.5**
baz=54
K20A Yellowstone Ra 54.46 298 ⇑P **P 19 26 13.3 -0.5**
baz=54,SNR=5.9
L22A Ellis Ranch, M 54.49 297 ⇑P **P 19 26 13.8 -0.2**
baz=54
H12A Diamond D Ranc 54.51 305 ⇓P **P 19 26 14.0 -0.1**
baz=54,SNR=6.4
RRI2 Red Ridge 54.66 301 *eP* **P 19 26 15.8 +0.6**
comp=Z,2.5nm,0.8s,mb4.3
BW06 Boulder Array 54.71 299 ⇓P **P 19 26 15.6 0.0**
baz=54
M23A Laramie 54.81 296 ⇑P **P 19 26 16.6 +0.3**
baz=54,SNR=6.1
L21A Rawlins 54.83 297 ⇑P **P 19 26 16.2 -0.2**
baz=54
G08A Pilot Rock 54.88 308 ⇑P **P 19 26 16.9 +0.1**
baz=55,SNR=7.0
I13A Wildhorse Cree 54.90 304 ⇑P **P 19 26 17.0 +0.1**
baz=55
K18A Toltan Ranch, 54.96 300 ⇑P **P 19 26 17.4 0.0**
baz=55
L20A Wamsutter 55.06 298 ⇓P **P 19 26 17.9 -0.2**
baz=55
M22A Cedar Creek Ra 55.12 296 ⇓P **P 19 26 18.1 -0.4**
baz=55
I12A Atlanta 55.28 305 ⇓P **P 19 26 19.0 -0.7**
baz=55
HLID Hailey 55.30 304 ⇓P **P 19 26 19.6 -0.3**
baz=55
HLID Hailey 55.30 304 *eP* **P 19 26 19.7 -0.1**
comp=Z,2.9nm,1.0s,mb4.3
HLID Hailey 55.30 304 *eP* **P 19 26 19.7 -0.2**
comp=Z,2.9nm,1.0s,mb4.3
G06A Carlson Farm, 55.35 310 ⇓P **P 19 26 19.9 -0.3**
baz=55
N23A Red Feather La 55.40 296 ⇑P **P 19 26 21.1 +0.5**
baz=55,SNR=12
K15A Arbon 55.61 302 ⇑P **P 19 26 22.3 +0.2**
baz=55
L18A Fontenelle, Gr 55.62 299 ⇓P **P 19 26 22.1 -0.1**
baz=55
N22A Wattenberg Ran 55.63 296 ⇓P **P 19 26 22.9 +0.6**
baz=55
K14A Jones Ranch, D 55.91 302 ⇑P **P 19 26 24.4 +0.1**
baz=56
O23A Lake Granby, G 56.02 295 ⇑P **P 19 26 25.6 +0.5**
baz=56
N20A Spence Gulch, 56.13 298 ⇑P **P 19 26 25.9 +0.1**
baz=56,SNR=16
I07A Izee 56.15 308 ⇓P **P 19 26 25.4 -0.5**
baz=56
P25A Willow Gulch B 56.15 293 ⇓P **P 19 26 25.9 -0.1**
baz=56
O22A Kremmling 56.25 296 ⇑P **P 19 26 27.1 +0.3**
baz=56
HWUT Hardware Ranch 56.34 301 *eP* **P 19 26 26.5 -0.8**
HWUT Hardware Ranch 56.34 301 *eP* **P 19 26 26.5 -0.8**
L14A Malta 56.41 302 ⇓P **P 19 26 27.7 -0.1**
baz=56
O21A Pagoda 56.47 297 ⇓P **P 19 26 28.2 0.0**
baz=56
Q25A Bedland, Calha 56.73 293 ⇓P **P 19 26 30.0 -0.1**
baz=56
O20A White River Ci 56.77 297 ⇑P **P 19 26 30.6 +0.2**
baz=56,SNR=7.5
O19A Miners Draw (B 56.87 298 ⇑P **P 19 26 31.2 +0.1**
baz=57
Q24A Divide 56.95 294 ⇑P **P 19 26 31.8 +0.1**
baz=57
SMCO Snowmass 57.29 296 *eP* **P 19 26 34.6 +0.5**
comp=Z,3.7nm,0.7s,mb4.5
SMCO Snowmass 57.29 296 *eP* **P 19 26 34.6 +0.5**
comp=Z,3.7nm,0.7s,mb4.5
BGU Big Grassy Mou 57.38 302 *eP* **P 19 26 34.4 -0.4**
comp=Z,1.4nm,0.9s,mb4.0
BGU Big Grassy Mou 57.38 302 *eP* **P 19 26 34.3 -0.4**
comp=Z,1.4nm,0.9s,mb4.0
P20A De Beque 57.40 297 ⇑P **P 19 26 35.2 +0.4**
baz=57
O17A Robinson Place 57.42 299 ⇑P **P 19 26 35.4 +0.4**
baz=57,SNR=8.9
P19A Cripple Cowboy 57.44 298 ⇑P **P 19 26 35.6 +0.5**
baz=57,SNR=6.0
MIAR Mount Ida 57.48 282 *eP* **P 19 26 35.0 -0.5**
comp=Z,13nm,1.2s,mb4.8
MIAR Mount Ida 57.48 282 *eP* **P 19 26 35.0 -0.5**
comp=Z,13nm,1.2s,mb4.8
GTA Gaotai 57.50 63 *eP* **P 19 26 36.5 +1.0**
GTA pP pP 19 26 41.5 +2.8
GTA sP sP 19 26 43.5 +3.5
GTA pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
K05A Summer Lake 57.77 309 ⇑P **P 19 26 37.4 -0.1**
baz=58
P18A Preston Nutter 57.81 299 ⇓P **P 19 26 37.7 0.0**
baz=58
S25A Robets Cordova 57.94 293 ⇑P **P 19 26 39.2 +0.4**
baz=58
DUG Dugway 58.00 301 ⇓P **P 19 26 39.5 +0.4**
baz=58
DUG Dugway 58.00 301 *eP* **P 19 26 39.6 +0.5**
comp=Z,6.6nm,1.1s,mb4.6
DUG Dugway 58.00 301 *eP* **P 19 26 39.6 +0.5**
comp=Z,6.6nm,1.1s,mb4.6
R22A Saguache, Gunn 58.10 295 ⇓P **P 19 26 40.5 +0.7**
baz=58,SNR=7.9
Q19A Hogan Spring (58.15 298 ⇑P **P 19 26 40.2 0.0**
baz=58
SDCO Great Sand Dun 58.18 294 ⇑P **P 19 26 40.4 +0.1**
baz=58
S24A Houchin Ranch, 58.19 293 ⇑P **P 19 26 40.4 -0.1**
baz=58
R21A Cimarron 58.20 296 ⇑P **P 19 26 40.7 +0.1**
baz=58
Q18A Rafter H Ranch 58.27 298 ⇓P **P 19 26 40.7 -0.3**
baz=58
SRU San Rafael 58.37 299 ⇑P **P 19 26 41.6 0.0**
baz=58
S22A 4UR Ranch, Cre 58.57 295 ⇓P **P 19 26 43.4 +0.3**
baz=58
P14A Drum Mountains 58.63 301 ⇓P **P 19 26 44.2 +0.7**
baz=58,SNR=5.9
T24A Torres, Weston 58.67 293 ⇑P **P 19 26 44.1 +0.3**
baz=58
PV01 Paradox Valley 58.72 297 *eP* **P 19 26 44.4 +0.3**
comp=Z,962nm,1.1s
PV01 Paradox Valley 58.72 297 *eP* **P 19 26 44.4 +0.3**
comp=Z,962nm,1.1s
Q16A Castle Valley 58.73 299 ⇓P **P 19 26 44.5 +0.3**
baz=58
R19A Curley Farm, L 58.77 297 ⇓P **P 19 26 45.1 +0.6**
baz=58
R18A Canyonlands Na 58.86 298 ⇑P **P 19 26 45.5 +0.4**
baz=59,SNR=11
U26A Atchley Ranch, 58.91 292 ⇑P **P 19 26 45.7 +0.2**
baz=59
WMOK Wichita Mounta 58.93 287 *eP* **P 19 26 45.6 -0.1**
comp=Z,8.6nm,1.1s,mb4.7
WMOK Wichita Mounta 58.93 287 *eP* **P 19 26 45.6 0.0**
comp=Z,8.6nm,1.1s,mb4.7
S21A Coal Bank Pass 58.93 296 ⇑P **P 19 26 45.5 -0.1**
baz=59
S20A Disappointment 58.94 296 ⇓P **P 19 26 45.7 0.0**
baz=59
U25A Circle Dot Ran 59.10 292 ⇓P **P 19 26 46.8 0.0**
baz=59
S19A Harvey Farm, M 59.24 297 ⇓P **P 19 26 48.2 +0.4**
baz=59,SNR=6.5
Q14A Sevier Lake (B 59.25 301 ⇓P **P 19 26 48.5 +0.7**
baz=59,SNR=14
T22A Edith 59.27 295 ⇓P **P 19 26 48.4 +0.4**
baz=59,SNR=7.1
HHC Hu-ho-hao-te 59.36 52 *eP* **P 19 26 47.5 -1.0**
HHC pP pP 19 26 52.3 +0.6
HHC sP sP 19 26 54.8 +1.9
HHC PcP PcP 19 27 36.3 0.0
HHC PP PP 19 29 00.3 +1.2
HHC ScP ScP 19 31 34.5 -2.1
HHC S **S** **19 34 53.3 -3.4**
HHC sS sS 19 35 00.0 -2.0
HHC ScS ScS 19 36 32.8 -5.4
HHC SS SS 19 38 47.0 -3.6
HHC pmax pmax
comp=Z,21nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,200nm,5.7s
HHC LR LR
comp=Z,510nm,17.6s,MS4.7
R16A Teasdale 59.41 299 ⇑P **P 19 26 49.3 +0.4**
baz=59
S18A Hurst Farm, Bl 59.54 298 ⇑P **P 19 26 50.0 +0.2**
baz=59
V25A Rancho No Teng 59.69 292 ⇑P **P 19 26 50.9 0.0**
baz=59
S17A Black Ridge (B 59.82 298 ⇑P **P 19 26 52.1 +0.4**
baz=60
MDJ Mudanjiang 59.84 37 P **P 19 26 48.0 -3.7**
MDJ pP pP 19 26 50.8 -4.2
MDJ PP PP 19 28 58.5 -4.7
MDJ ScP ScP 19 31 36.0 -2.7
MDJ PcS PcS 19 31 37.3 -3.0
MDJ S **S** **19 34 56.8 -6.0**
MDJ ScS ScS 19 36 38.0 -3.6
MDJ pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
MDJ pmax pmax
comp=Z,26nm,3.2s
MDJ LR LR
comp=N,120nm,20.7s,MS4.3
MDJ LR LR
comp=E,230nm,24.7s,MS4.3
MDJ LR LR
comp=Z,270nm,27.8s,MS4.2
W27A Bowe Ranch, En 59.94 290 ⇑P **P 19 26 53.3 +0.7**
baz=60
S16A Weppner Ranch, 59.97 299 ⇑P **P 19 26 53.3 +0.5**
baz=60
V24A Rampart Ranch, 59.99 293 ⇑P **P 19 26 53.7 +0.8**
baz=60
T18A Mexican Hat 60.02 297 ⇓P **P 19 26 53.8 +0.7**
baz=60
U21A Nageezi 60.04 295 ⇓P **P 19 26 54.0 +0.7**
baz=60
T19A Beclabito 60.06 296 ⇑P **P 19 26 54.0 +0.6**
baz=60
R13A O'Grain Ranch, 60.20 301 ⇓P **P 19 26 55.4 +1.1**
baz=60,SNR=6.4
V22A San Miguel Ran 60.30 294 ⇑P **P 19 26 55.5 +0.5**
baz=60
T17A Navajo Res., N 60.42 298 ⇓P **P 19 26 55.9 0.0**
baz=60
R11A Troy Canyon, C 60.49 303 ⇓P **P 19 26 56.4 +0.1**
baz=60,SNR=8.8
W24A Lazy 6 Ranch, 60.51 293 ⇑P **P 19 26 56.6 +0.1**
baz=60
X26A CR and CF Fran 60.64 291 ⇑P **P 19 26 57.7 +0.3**
baz=60
U18A Rough Rock, Ch 60.69 297 ⇑P **P 19 26 57.8 +0.1**
baz=60
T15A Red Dirt Ranch 60.84 299 ⇑P **P 19 26 59.0 +0.3**
baz=61
T14A Hurricane 61.00 300 ⇑P **P 19 27 00.3 +0.5**
baz=61
Y27A Causey 61.06 290 ⇑P **P 19 27 00.5 +0.2**
baz=61
NVAR Mina Array Bea 61.14 305 P **P 19 27 01.2 +0.5**
comp=Z,0.9nm,0.9s,mb3.9,baz=34,slow=7.1,SNR=4.9
NVAR Mina Array Bea 61.14 305 P **P 19 27 01.2 +0.5**
U16A Tuba City 61.31 298 ⇑P **P 19 27 01.9 -0.1**
baz=61
U15A North Rim 61.37 299 ⇓P **P 19 27 02.4 +0.1**
baz=61
Y25A Mesa, Roswell 61.49 291 ⇓P **P 19 27 03.4 +0.2**
baz=61
Z27A Tatum 61.61 290 ⇓P **P 19 27 04.0 0.0**
baz=61
V17A Tonalea, Kykot 61.70 297 ⇓P **P 19 27 04.8 +0.2**
baz=61,SNR=5.7
Y24A Capitan 61.71 292 ⇓P **P 19 27 05.1 +0.4**
baz=61
LZH Lanzhou 61.74 61 *eP* **P 19 27 07.0 +2.2**
LZH pP pP 19 27 11.3 +3.2
LZH sP sP 19 27 13.5 +4.2
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.0
U13A Pakoon Wash 61.85 301 ⇓P **P 19 27 05.9 +0.3**
baz=62,SNR=5.5
W18A Petrified Fore 61.86 296 ⇑P **P 19 27 05.9 +0.2**
baz=62
Z26A Caprock 61.88 291 ⇓P **P 19 27 06.4 +0.6**
baz=62
Y23A Lovelace Mesa, 61.89 293 ⇑P **P 19 27 06.4 +0.6**
baz=62,SNR=9.9
V15A Kaibab Nationa 61.91 299 ⇑P **P 19 27 06.0 +0.1**
baz=62,SNR=5.3
X21A Alamocita Cree 61.92 294 ⇑P **P 19 27 06.6 +0.5**
baz=62
X20A Quemado 62.04 295 ⇑P **P 19 27 07.0 +0.2**
baz=62,SNR=6.5
Z25A Roswell 62.09 291 ⇑P **P 19 27 07.9 +0.6**
baz=62
Y22A Socorro 62.15 293 ⇓P **P 19 27 08.1 +0.4**
baz=62
Y21A Point of Rocks 62.30 294 ⇓P **P 19 27 09.9 +1.3**
baz=62
V14A Boquillas Ranc 62.34 299 ⇑P **P 19 27 09.3 +0.5**
baz=62,SNR=7.9
X19A St. Johns 62.38 296 ⇓P **P 19 27 09.5 +0.4**
baz=62
V13A Grand Canyon W 62.38 300 ⇓P **P 19 27 09.8 +0.7**
baz=62,SNR=5.0
Z23A Rita Site, Whi 62.56 293 ⇓P **P 19 27 10.9 +0.5**
baz=62,SNR=5.2
Y20A Horse Springs, 62.60 295 ⇓P **P 19 27 10.9 +0.3**
baz=62
125A Gardner Draw, 62.65 291 ⇓P **P 19 27 11.3 +0.3**
baz=62
W14A Seligman 62.73 299 ⇓P **P 19 27 11.6 +0.1**
baz=62
V12A Nelson 62.74 301 ⇓P **P 19 27 12.1 +0.6**
baz=62
Z22A Elephant Butte 62.79 293 ⇓P **P 19 27 12.6 +0.7**
baz=62
Y19A Nutrioso 62.81 295 ⇑P **P 19 27 12.7 +0.7**
baz=62
124A Stringfield Ra 62.85 292 ⇓P **P 19 27 12.5 +0.1**
baz=63,SNR=5.4
Z21A St. Cloud Mine 62.95 294 ⇓P **P 19 27 14.0 +1.1**
baz=63
SHOC Shoshone 62.97 302 ⇓P **P 19 27 13.5 +0.4**
baz=63
X16A Lo Mia Camp, P 63.01 298 ⇓P **P 19 27 14.1 +0.8**
baz=63
226A Malaga, Loving 63.04 290 ⇑P **P 19 27 14.5 +0.9**
baz=63
W13A Hualapai Mount 63.06 300 ⇑P **P 19 27 14.4 +0.7**
baz=63
MPMC Manual Prospec 63.15 303 ⇑P **P 19 27 14.7 +0.4**
baz=63
JCT Junction City 63.19 286 ⇓P **P 19 27 14.9 +0.3**
baz=63
328A Wristen Ranch, 63.28 289 ⇓P **P 19 27 15.5 +0.3**
baz=63
Z20A Nine Sixteen R 63.40 295 ⇑P **P 19 27 16.9 +1.0**
baz=63
X13A Yucca 63.52 300 ⇓P **P 19 27 17.6 +0.9**
baz=63
326A Caldwell Ranch 63.70 290 ⇑P **P 19 27 18.0 +0.1**
baz=63,SNR=5.8
121A Cookes Peak, D 63.71 294 ⇑P **P 19 27 18.3 +0.4**
baz=63
MNTX Cornudas Mount 63.77 291 P **P 19 27 18.4 0.0**
baz=64
ISA Isabella 63.79 304 ⇓P **P 19 27 19.0 +0.5**
baz=64
ISA Isabella 63.79 304 *eP* **P 19 27 18.8 +0.3**
comp=Z,5.3nm,1.1s,mb4.5
ISA Isabella 63.79 304 *eP* **P 19 27 18.8 +0.3**
ISA Isabella 63.79 304 *eP* **P 19 27 18.8 +0.3**
comp=Z,5.3nm,1.1s,mb4.5
GMRC Granite Mounta 63.85 301 ⇓P **P 19 27 19.5 +0.6**
baz=64
PDMCI Parker Dam,Lak 63.88 300 ⇑P **P 19 27 19.4 +0.2**
baz=64
Y14A Wickenburg 63.90 299 ⇓P **P 19 27 19.8 +0.5**
baz=64
LSA Lhasa 63.91 75 *eP* **P 19 27 20.2 +0.8**
comp=Z,3.9nm,1.1s,mb4.3
LSA Lhasa 63.91 75 *eP* **P 19 27 20.2 +0.8**
LSA Lhasa 63.91 75 *eP* **P 19 27 20.2 +0.8**
comp=Z,3.9nm,1.1s,mb4.3
119A Ashpeak Ranch, 63.94 295 ⇑P **P 19 27 20.1 +0.6**
baz=64
120A U Bar Ranch, L 63.94 294 ⇑P **P 19 27 20.4 +0.9**

baz=64
427A Hayter Ranch, 63.96 289 ⇑P **P 19 27 20.0 +0.3**
baz=64,SNR=8.0
324A Moseley Ranch, 64.04 291 ⇑P **P 19 27 20.1 -0.1**
baz=64
426A McDonald Obser 64.32 290 ⇑P **P 19 27 22.2 +0.2**
baz=64,SNR=19
528A Cox Ranch, San 64.41 288 ⇓P **P 19 27 22.9 +0.3**
baz=64
425A Indio Mountain 64.50 290 ⇓P **P 19 27 22.9 -0.3**
baz=64
220A Playas Peak, P 64.51 294 ⇓P **P 19 27 23.5 +0.3**
baz=64
DBIC Dimbokro 64.53 181 P **P 19 27 22.9 -0.6**
comp=Z,3.6nm,0.8s,mb4.5,baz=330,slow=4.9,SNR=4.1
DBIC Dimbokro 64.53 181 P **P 19 27 23.0 -0.6**
DBIC Dimbokro 64.53 181 P **P 19 27 23.0 -0.6**
TIC Toumodi 64.56 181 *e*PKP1 **P 19 27 22.3 -1.4**
comp=Z,21nm,0.9s,mb5.2
TIC Toumodi 64.56 181 *e*P **P 19 27 22.3 -1.4**
TIC Toumodi 64.56 181 *e*P **P 19 27 22.3 -1.4**
219A White Tail Can 64.64 295 ⇓P **P 19 27 24.2 +0.1**
baz=64
527A Woodward Ranch 64.68 289 ⇑P **P 19 27 24.4 0.0**
baz=64
KIC Kosan Boka 64.84 180 *e*PKP1 **P 19 27 23.4 -2.2**
comp=Z,25nm,1.0s,mb5.2
BC3 Big Chuckawall 64.86 301 ⇑P **P 19 27 25.9 +0.4**
baz=65
526A Mary Lane Ranc 64.90 289 ⇓P **P 19 27 25.7 -0.1**
baz=65,SNR=5.8
LIC Lamto 64.98 181 *e*PKP1 **P 19 27 23.6 -2.8**
comp=Z,52nm,1.5s,mb5.3
LIC Lamto 64.98 181 ⇑*i*P **P 19 27 25.6 -0.8**
comp=Z,20nm,0.9s,mb4.8
LIC Lamto 64.98 181 ⇑*i*P **P 19 27 25.6 -0.8**
comp=Z,9.9nm,0.9s,mb4.8
LIC Lamto 64.98 181 ⇑*i*P **P 19 27 25.6 -0.8**
comp=Z,9.9nm,0.9s,mb4.8
320A Kipp Ranch, An 65.04 294 ⇑P **P 19 27 26.7 -0.1**
baz=65
628A Black Gap, Mar 65.07 288 ⇑P **P 19 27 26.7 -0.2**
baz=65,SNR=7.5
217A Green Valley 65.30 296 ⇑P **P 19 27 28.9 +0.5**
baz=65,SNR=8.2
318A Bisbee 65.38 295 ⇑P **P 19 27 29.1 +0.1**
baz=65,SNR=5.2
626A Big Bend Ranch 65.39 289 ⇑P **P 19 27 29.2 +0.1**
baz=65,SNR=15
TXAR Lajitas Array 65.45 289 P **P 19 27 28.4 -1.0**
comp=Z,1.5nm,0.8s,mb4.1,baz=41,slow=5.1,SNR=15
TXAR PP PP 19 29 51.7 -1.3
comp=Z,0.3nm,0.9s,baz=46,slow=4.2,SNR=4.0
TXAR Lajitas Array 65.45 289 P **P 19 27 28.4 -1.0**
TXAR PP PP 19 29 51.7 -1.3
TXAR Lajitas Array 65.45 289 P **P 19 27 28.4 -1.0**
TXAR Lajitas Array 65.45 289 P **P 19 27 28.4 -1.0**
TXAR Lajitas Array 65.45 289 PP PP 19 29 51.7 -1.3
KSRS Korea Array 66.40 40 P **P 19 27 33.9 -1.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=350,slow=6.4,SNR=6.3
KSRS Korea Array 66.40 40 P **P 19 27 33.9 -1.5**
KSRS Korea Array 66.40 40 P **P 19 27 33.9 -1.5**
CD2 Chengdu 66.57 63 *e*P **P 19 27 35.8 -0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
CD2 pmax pmax
comp=Z,50nm,5.2s
NJ2 Nanjing 69.53 49 *e*P **P 19 27 51.5 -3.7**
NJ2 pmax pmax
comp=Z,20nm,0.7s,mb5.2
GYA Guiyang 71.59 62 *e*P **P 19 28 07.0 -0.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KMI Kunming 71.72 66 P **P 19 28 08.3 -0.3**
KMI pmax pmax
comp=Z,4.0nm,1.5s,mb4.1
KMI LR LR
comp=Z,390nm,34.2s,MS4.4
CMAR Chiang Mai Arr 76.85 72 P **P 19 28 38.0 -0.5**
comp=Z,2.2nm,0.9s,mb4.1,baz=317,slow=6.7,SNR=10
CMAR Chiang Mai Arr 76.85 72 P **P 19 28 38.0 -0.5**
CMAR Chiang Mai Arr 76.85 72 P **P 19 28 38.0 -0.6**
CMAR Chiang Mai Arr 76.85 72 P **P 19 28 38.0 -0.6**
WRA Warramunga Arr 123.30 48 PKhKP PKPpre 19 35 36.9
comp=Z,0.7nm,1.1s,baz=325,slow=2.9,SNR=2.3
WRA Warramunga Arr 123.30 48 PKIKP PKPpre 19 35 36.9
ASAR Alice Springs 126.77 50 PKP PKPdf 19 35 47.7 -2.1
comp=Z,0.6nm,0.9s,baz=354,slow=1.7,SNR=6.7
ASAR Alice Springs 126.77 50 PKIKP PKPdf 19 35 47.7 -2.1
ASAR Alice Springs 126.77 50 PKIKP PKPdf 19 35 47.7 -2.1
SNAA Sanae 142.72 179 PKP PKPdf 19 36 18.3 +0.4
comp=Z,0.5nm,1.0s,baz=305,slow=4.4,SNR=5.5
SNAA Sanae 142.72 179 PKIKP PKPdf 19 36 18.3 +0.3
MAW Mawson 145.71 141 PKPbc PKPbc 19 36 24.3 +0.6
comp=Z,2.1nm,0.7s,baz=297,slow=4.5,SNR=6.1
MAW Mawson 145.71 141 PKP2 PKPab 19 36 24.3 +0.2

NAO ***29*** *19:20:18.2s 1.4, 71°.26N×4°.50W, ML3.3*
MOS ***29*** *19:20:19.6s 1.4, 71°.55N×4°.01W, h10km, mb5.0/88, MS4.7/35, Error ellipse: s-maj=19.9km s-min=3.2km az=96.6*
BJI ***29*** *19:20:19.9, 71°.40N×4°.20W, h10km, mB5.4/17, mb4.9/28, Ms5.0/14, Ms7 4.8/16*
ISCJB ***29*** *19:20:20.8s 0.1, 71°.45N±0°.02×4°.12W±0°.06, h10km, mb4.8/202, MS4.7/58, Error ellipse: s-maj=3.5km s-min=1.7km az=138.6*
IDC ***29*** *19:20:21.4s 0.5, 71°.36N×4°.34W, h0km, mb4.2/24, mb1 4.4/28, mb1mx4.4/33, mbtmp4.3/28, ML4.3/4, MS4.7/33, Ms1 4.7/33, ms1mx4.5/49, Error ellipse: s-maj=14.2km s-min=10.0km az=44.0*
SZGRF ***29*** *19:20:21.0, 72°.16N×1°.34W, h33km, mb4.9, Jan Mayen Island region*
CSEM ***29*** *19:20:21.2s 0.1, 71°.42N×3°.87W, h2km, mb4.9/99, Ms4.7, Error ellipse: s-maj=4.8km s-min=3.5km az=60.0*
BER ***29*** *19:20:21.0s 2.1, 71°.51N×4°.57W, h10km, MD2.9, ML3.3*
NEIC ***29*** *19:20:23.0s 0.2, 71°.36N×4°.20W, h10km, mb5.0/128, Error ellipse: s-maj=5.9km s-min=3.7km az=57.0*
ISC 29 19:20:22.7s 0.1, 71°.43N±0°.02×3°.95W±0°.06, h10km, (h15km±1.1km: pP-P), n1006, σ1s 09/1001, mb4.8/202, MS4.7/57, 124C-110D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**1.50**	**256**	*e*P	**Pn**	**19 20 43.6**	**-6.0**
JNW				AML	AML	19 21 02.3	
comp=Z,727nm,0.6s							
JMIC	**Jan Mayen**	**1.54**	**255**	Pg	**Pg**	**19 20 44.1**	**-8.1**
JMIC				Lg		19 21 00.3	
JMIC	**Jan Mayen**	**1.54**	**255**	*e*P	**Pn**	**19 20 44.0**	**-6.2**
JMIC				*e*S	**Sn**	**19 21 01.6**	**-8.6**
JMIC				AML	AML	19 21 04.8	
comp=Z,431nm,0.6s							
JMIC	**Jan Mayen**	**1.54**	**255**	Pn	**Pn**	**19 20 43.9**	**-6.3**
comp=Z,41nm,0.3s,baz=19,slow=4.3,SNR=8.9							
JMIC				Sn	**Sn**	**19 21 01.1**	**-9.2**
comp=Z,87nm,0.3s,baz=356,slow=20,SNR=6.6							
JMIC	**Jan Mayen**	**1.54**	**255**	*e*P	**Pn**	**19 20 44.0**	**-6.2**
JMIC				*e*S	**Sn**	**19 21 01.6**	**-8.6**
JMI	**Jan Mayen**	**1.63**	**254**	*e*P	**Pn**	**19 20 45.6**	**-5.7**
JMI				AML	AML	19 21 10.3	
comp=Z,600nm,0.4s							
SCO	**Scoresbysund**	**5.96**	**269**	*i*P	**Pn**	**19 21 52.0**	**+1.2**
SCO	**Scoresbysund**	**5.96**	**269**	*i*P	**Pn**	**19 21 52.0**	**+1.2**
SCO	**Scoresbysund**	**5.96**	**269**	*i*P	**Pn**	**19 21 52.0**	**+1.2**
DAG	**Danmarks Havn**	**6.69**	**330**	*i*P	**Pn**	**19 21 56.2**	**-4.5**
DAG	**Danmarks Havn**	**6.69**	**330**	*i*P	**Pn**	**19 21 56.2**	**-4.5**
DAG				*i*S	**Sn**	**19 23 02.1**	**-15**
STEI	**Steigen**	**7.53**	**108**	*e*	**Pn**	**19 22 10.3**	**-1.9**
TRO	**Tromso**	**7.83**	**92**	*e*P	**Pn**	**19 22 12.6**	**-3.8**
TRO	**Tromso**	**7.83**	**92**	*e*P	**Pn**	**19 22 12.6**	**-3.8**
KONS	**Konsvik**	**7.86**	**121**	*e*P	**Pn**	**19 22 14.9**	**-2.0**
FLOS	**Flostrand**	**8.05**	**121**	*e*P	**Pn**	**19 22 16.8**	**-2.7**
MOR8	**Moi Rana**	**8.47**	**119**	*e*P	**Pn**	**19 22 23.5**	**-1.7**
MOR8	**Moi Rana**	**8.47**	**119**	*e*P	**Pn**	**19 22 23.5**	**-1.7**
SNR=47							
KBS	**Kingsbay**	**8.51**	**21**	Pn	**Pn**	**19 22 24.9**	**-0.7**
KBS	**Kingsbay**	**8.51**	**21**	*e*P	**Pn**	**19 22 25.0**	**-0.7**
comp=Z,91nm,1.1s							
KBS	**Kingsbay**	**8.51**	**21**	*e*P	**Pn**	**19 22 25.0**	**-0.7**
KBS				pmax	pmax		
comp=Z,91nm,1.1s							
KBS	**Kingsbay**	**8.51**	**21**	*e*P	**Pn**	**19 22 25.0**	**-0.7**
comp=Z,91nm,1.1s							
SPB4	**Spitsbergen Ar**	**8.55**	**29**	*e*P	**Pn**	**19 22 26.2**	**0.0**
SPB4	**Spitsbergen Ar**	**8.55**	**29**	*e*P	**Pn**	**19 22 26.2**	**0.0**
SPA0	**Spitsbergen Ar**	**8.55**	**29**	Pn	**Pn**	**19 22 26.3**	**+0.1**
baz=210,slow=14							
SPA0	**Spitsbergen Ar**	**8.55**	**29**	Pn	**Pn**	**19 22 26.3**	**+0.1**
baz=210,slow=12,SNR=0.2							
SPITS	**Spitsbergen Ar**	**8.55**	**29**	Pn	**Pn**	**19 22 26.9**	**+0.7**
baz=213,slow=15,SNR=57							
SPITS				LR	LR	19 24 51.3	
comp=Z,2μm,18.6s,baz=230,slow=31							
SPITS	**Spitsbergen Ar**	**8.55**	**29**	P	**Pn**	**19 22 26.9**	**+0.7**
SPITS	**Spitsbergen Ar**	**8.55**	**29**	P	**Pn**	**19 22 26.9**	**+0.7**
NSS	**Namsos**	**9.12**	**132**	*e*P	**Pn**	**19 22 30.3**	**-3.7**
NSS				*e*S	**Sn**	**19 24 05.2**	**-11**
NSS				AML	AML	19 24 14.6	
comp=Z,16nm,0.5s							
BORG	**Borgarnes**	**9.30**	**232**	Pn	**Pn**	**19 22 41.4**	**+4.9**
comp=Z,1.2nm,0.3s,baz=352,slow=7.1,SNR=3.7							
BORG	**Borgarnes**	**9.30**	**232**	P	**Pn**	**19 22 41.4**	**+4.9**
BORG				pmax	pmax		
comp=Z,1.0nm,0.3s							
KTK1	**Kautokeino**	**9.48**	**92**	*e*P	**Pn**	**19 22 36.6**	**-2.3**
KTK1	**Kautokeino**	**9.48**	**92**	*e*P	**Pn**	**19 22 36.7**	**-2.3**
SNR=47							
MOL	**Molde**	**9.95**	**148**	*e*P	**Pn**	**19 22 42.2**	**-3.2**
ARA0	**ARCESS Array S**	**9.98**	**87**	Pn	**Pn**	**19 22 44.1**	**-1.7**
baz=294,slow=12							
ARA0	**ARCESS Array S**	**9.98**	**87**	Pn	**Pn**	**19 22 44.1**	**-1.7**
baz=294,slow=12,SNR=5.7							
ARCES	**ARCESS Array B**	**9.98**	**87**	Pn	**Pn**	**19 22 44.2**	**-1.6**
comp=Z,1.7nm,0.3s,baz=290,slow=12,SNR=19							
ARCES				LR	LR	19 26 09.9	
comp=Z,3μm,18.4s,baz=298,slow=34							
ARCES	**ARCESS Array B**	**9.98**	**87**	Pn	**Pn**	**19 22 44.2**	**-1.6**
ARCES				LR	LR	19 26 09.8	
ARCES	**ARCESS Array B**	**9.98**	**87**	P	**Pn**	**19 22 44.2**	**-1.6**
ARCES				pmax	pmax		
comp=Z,2.0nm,0.3s							
ARCES				MLR	MLR		
comp=Z,3μm,18.5s							
ARCES	**ARCESS Array B**	**9.98**	**87**	Pn	**Pn**	**19 22 44.2**	**-1.6**
ARE0	**ARCESS Array S**	**9.98**	**87**	*e*P	**Pn**	**19 22 44.3**	**-1.5**
ARE0	**ARCESS Array S**	**9.98**	**87**	*e*P	**Pn**	**19 22 44.3**	**-1.5**
KEV	**Kevo**	**10.37**	**84**	*e*P	**Pn**	**19 22 49.0**	**-2.1**
KEV	**Kevo**	**10.37**	**84**	*e*P	**Pn**	**19 22 49.0**	**-2.1**
KEV	**Kevo**	**10.37**	**84**	*e*P	**Pn**	**19 22 49.0**	**-2.1**
FOO	**Floro**	**10.49**	**156**	*e*P	**Pn**	**19 22 48.7**	**-4.1**
SUMG	**Summit**	**10.64**	**292**	*e*P	**Pn**	**19 22 52.6**	**-2.2**
SUMG	**Summit**	**10.64**	**292**	*i*P	**Pn**	**19 22 54.1**	**-0.7**
SUMG				*i*S	**Sn**	**19 24 44.9**	**-8.8**
SUMG	**Summit**	**10.64**	**292**	*i*P	**Pn**	**19 22 54.2**	**-0.6**
SNR=82							
SUE	**Sulen**	**10.98**	**157**	*e*P	**Pn**	**19 22 55.7**	**-3.8**
ASK	**Askoy**	**11.59**	**157**	*e*P	**Pn**	**19 23 02.5**	**-5.3**
RUND	**Rundemannen**	**11.68**	**157**	*e*P	**Pn**	**19 23 03.9**	**-5.1**
NB2	**NORSAR Subarra**	**12.04**	**142**	Pn	**Pn**	**19 23 10.9**	**-3.1**
baz=330,slow=16							
NOA	**NORSAR Array B**	**12.04**	**142**	Pn	**Pn**	**19 23 11.4**	**-2.5**
comp=Z,1.6nm,0.3s,baz=337,slow=12,SNR=4.7							
NOA				Sn	**Sn**	**19 25 21.7**	**-6.3**
comp=Z,0.6nm,0.3s,baz=348,slow=6.3,SNR=3.2							
NOA				LR	LR	19 26 15.8	
comp=Z,876nm,21.2s,baz=335,slow=29							
NOA	**NORSAR Array B**	**12.04**	**142**	P	**Pn**	**19 23 11.5**	**-2.5**
NOA				pmax	pmax		
comp=Z,2.0nm,0.3s							
NOA				MLR	MLR		
comp=Z,876nm,21.2s							
NAO01	**NORSAR Array S**	**12.15**	**143**	*e*P	**Pn**	**19 23 11.7**	**-3.9**
KONO	**Kongsberg**	**13.04**	**148**	*e*P	**Pn**	**19 23 25.8**	**-1.9**
comp=Z,39nm,1.0s							
KONO	**Kongsberg**	**13.04**	**148**	*e*P	**Pn**	**19 23 25.8**	**-1.9**
KONO				pmax	pmax		
comp=Z,39nm,1.0s							
KONO	**Kongsberg**	**13.04**	**148**	*e*P	**Pn**	**19 23 25.8**	**-1.9**
comp=Z,39nm,1.0s							
HFS	**Hagfors**	**13.37**	**139**	Pn	**Pn**	**19 23 30.3**	**-1.9**
baz=334,slow=14							
HFS	**Hagfors**	**13.37**	**139**	Pn	**Pn**	**19 23 30.4**	**-1.7**
comp=Z,5.2nm,0.3s,baz=338,slow=11,SNR=21							
HFS				LR	LR	19 28 31.3	
comp=Z,7μm,20.8s,baz=329,slow=37							
HFS	**Hagfors**	**13.37**	**139**	P	**Pn**	**19 23 30.4**	**-1.8**
HFS				pmax	pmax		
comp=Z,5.0nm,0.3s							
HFS				MLR	MLR		
comp=Z,7μm,20.8s							
HFS	**Hagfors**	**13.37**	**139**	Pn	**Pn**	**19 23 30.4**	**-1.8**
LVZ	**Lovozero**	**13.69**	**86**	*e*P	**Pn**	**19 23 33.5**	**-3.0**
comp=Z,25nm,0.7s							
LVZ	**Lovozero**	**13.69**	**86**	*ce*P	**Pn**	**19 23 34.1**	**-2.4**
LVZ				pmax	pmax		
comp=Z,29nm,0.6s							
LVZ	**Lovozero**	**13.69**	**86**	*e*P	**Pn**	**19 23 34.1**	**-2.4**
comp=Z,29nm,0.6s							
FIA0	**FINESS Array S**	**15.41**	**115**	P	**Pn**	**19 23 57.9**	**-1.9**
baz=336,slow=14							
FINES	**FINESS Array B**	**15.41**	**115**	Pn	**Pn**	**19 23 58.7**	**-1.1**
comp=Z,0.9nm,0.3s,baz=324,slow=11,SNR=6.8							
FINES				LR	LR	19 29 20.8	
comp=Z,5μm,19.0s,baz=316,slow=35							
FINES	**FINESS Array B**	**15.41**	**115**	Pn	**Pn**	**19 23 58.7**	**-1.1**
FINES				LR	LR	19 29 20.8	
FINES	**FINESS Array B**	**15.41**	**115**	P	**Pn**	**19 23 58.7**	**-1.1**
FINES				pmax	pmax		
comp=Z,1.0nm,0.3s							
FINES				MLR	MLR		
comp=Z,5μm,19.0s							
FINES	**FINESS Array B**	**15.41**	**115**	Pn	**Pn**	**19 23 58.7**	**-1.1**
EKA	**Eskdalemuir Ar**	**16.17**	**178**	Pn	**Pn**	**19 24 06.5**	**-3.1**
comp=Z,1.4nm,0.3s,baz=355,slow=12,SNR=14							
EKA				Sn	**Sn**	**19 26 57.6**	**-11**
comp=Z,0.5nm,0.3s,baz=360,slow=25,SNR=5.0							
EKA	**Eskdalemuir Ar**	**16.17**	**178**	P	**Pn**	**19 24 06.6**	**-3.0**
EKA				pmax	pmax		
comp=Z,1.0nm,0.3s							
ESK	**Eskdalemuir**	**16.18**	**178**	*e*P	**Pn**	**19 24 06.7**	**-3.1**
comp=Z,59nm,1.0s							
ESK	**Eskdalemuir**	**16.18**	**178**	*i*P	**Pn**	**19 24 12.7**	**+2.9**
ESK	**Eskdalemuir**	**16.18**	**178**	*i*P	**Pn**	**19 24 12.7**	**+2.9**
KLMR	**Klimovskoe**	**19.98**	**100**	*e*P	**Pn**	**19 24 53.6**	**-2.8**
KLMR				pmax	pmax		
comp=Z,172nm,1.2s							
KLMR				MLR	MLR		
comp=Z,4μm,14.0s							
KLMR	**Klimovskoe**	**19.98**	**100**	*e*P	**Pn**	**19 24 53.6**	**-2.8**
comp=Z,4μm,14.0s							
NRDL	**Niedersach Rie**	**20.02**	**154**	*e*P	**P**	**19 24 54.9**	**-0.2**
comp=Z,46nm,1.3s							
WTSB	**Winterswijk**	**20.12**	**160**	*e*P	**P**	**19 24 57.1**	**+0.8**
comp=Z,40nm,1.3s							
WTSB	**Winterswijk**	**20.12**	**160**	*e*P	**P**	**19 24 57.1**	**+0.8**
comp=Z,40nm,1.3s							
GKP	**Gorka Klasztor**	**20.48**	**142**	*e*P	**P**	**19 24 59.6**	**-0.6**
GKP				LMZ		19 33 04.3	
comp=Z,6μm,18.5s							
GKP	**Gorka Klasztor**	**20.48**	**142**	*e*P	**P**	**19 24 59.6**	**-0.6**
GKP				MLR	MLR		
comp=Z,4μm,18.1s,MS4.8							
GKP				MLR	MLR		
comp=Z,6μm,18.5s							
GKP	**Gorka Klasztor**	**20.48**	**142**	*e*P	**P**	**19 24 59.6**	**-0.6**
comp=Z,6μm,18.5s							
RUE	**Ruedersdorf**	**20.60**	**148**	*e*P	**P**	**19 25 00.8**	**-0.6**
comp=Z,82nm,1.1s							
RUE	**Ruedersdorf**	**20.60**	**148**	*e*P	**P**	**19 25 00.8**	**-0.7**
comp=Z,82nm,1.1s							
CLZ	**Clausthal**	**20.69**	**154**	*e*P	**P**	**19 25 02.4**	**-0.1**
comp=Z,52nm,1.3s							
CLZ	**Clausthal**	**20.69**	**154**	*e*P	**P**	**19 25 02.4**	**-0.1**
CLZ				pmax	pmax		
comp=Z,52nm,1.3s							
CLZ	**Clausthal**	**20.69**	**154**	*e*P	**P**	**19 25 02.4**	**-0.1**
comp=Z,52nm,1.3s							
BUG	**Bochum-Univer**	**20.69**	**160**	*e*P	**P**	**19 25 03.9**	**+1.4**
comp=Z,58nm,1.3s							
SUW	**Suwalki**	**21.10**	**132**	*e*P	**P**	**19 25 07.4**	**+0.6**
SUW				LMZ		19 32 04.2	
comp=Z,3μm,24.0s							
SUW	**Suwalki**	**21.10**	**132**	*e*P	**P**	**19 25 05.3**	**-1.6**
comp=Z,281nm,1.0s,mb5.5							
SUW	**Suwalki**	**21.10**	**132**	*e*P	**P**	**19 25 07.4**	**+0.6**
SUW				MLR	MLR		
comp=Z,2μm,24.3s,MS4.4							
SUW	**Suwalki**	**21.10**	**132**	*e*P	**P**	**19 25 07.4**	**+0.6**
comp=Z,2μm,24.3s							
BEBN	**Eben Emael**	**21.17**	**163**	P	**P**	**19 25 07.9**	**+0.3**
comp=Z,17nm,1.0s,mb4.3							
NACGM	**Naroch**	**21.20**	**125**	*e*	**P**	**19 25 08.0**	**+0.1**
HGN	**Heimansgroeve**	**21.22**	**162**	*e*P	**P**	**19 25 07.9**	**-0.4**
comp=Z,37nm,0.8s,mb4.7							
HGN	**Heimansgroeve**	**21.22**	**162**	*e*P	**P**	**19 25 07.9**	**-0.3**
comp=Z,37nm,0.8s,mb4.7							
SNF	**Seneffe**	**21.33**	**165**	P	**P**	**19 25 10.7**	**+1.3**
comp=Z,20nm,1.5s,mb4.2							
MEM	**Membach**	**21.39**	**162**	P	**P**	**19 25 09.1**	**-0.9**
comp=Z,21nm,1.2s,mb4.3							
BCLA	**Clavier**	**21.51**	**164**	P	**P**	**19 25 10.9**	**-0.4**
NEUB	**Neuenburg**	**21.51**	**152**	*e*P	**P**	**19 25 11.1**	**-0.2**
comp=Z,77nm,1.0s,mb5.1							
CLL	**Collm**	**21.60**	**150**	*e*P	**P**	**19 25 11.7**	**-0.6**
comp=Z,51nm,1.2s,mb4.8							
CLL	**Collm**	**21.60**	**150**	*i*P	**P**	**19 25 10.7**	**-1.6**
comp=Z,51nm,1.2s,mb4.8							
CLL				*e*S	**S**	**19 29 17.0**	**+5.9**
CLL				LR	LR		
comp=Z,2μm,20.1s,MS4.5							
CLL	**Collm**	**21.60**	**150**	*i*P	**P**	**19 25 10.7**	**-1.6**
CLL				*e*S	**S**	**19 29 17.0**	**+5.9**
CLL				pmax	pmax		
comp=Z,51nm,1.2s,mb4.8							
CLL				MLR	MLR		
comp=Z,2μm,20.1s,MS4.5							
CLL	**Collm**	**21.60**	**150**	*i*P	**P**	**19 25 10.7**	**-1.6**
comp=Z,51nm,1.2s,mb4.8							
CLL				*e*Plp		19 25 12.0	
comp=N,600nm,13.5s							
CLL				*e*Plp		19 25 12.0	
comp=Z,700nm,14.1s							
CLL				*i*sP	sP	19 25 17.1	+0.7
CLL				*e*S	**S**	**19 29 17.0**	**+5.9**
comp=N,900nm,16.6s							
CLL				*e*S	**S**	**19 29 17.0**	**+5.9**
comp=E,1μm,17.0s							
CLL				L		19 33 00.0	
comp=Z,2μm,20.1s							
CLL	**Collm**	**21.60**	**150**	*i*P	**P**	**19 25 10.7**	**-1.6**
comp=Z,51nm,1.2s,mb4.8							
UBBA	**Unterbreizbach**	**21.64**	**155**	*e*P	**P**	**19 25 12.6**	**-0.1**
comp=Z,74nm,1.7s,mb4.8							
DOU	**Dourbes**	**21.77**	**165**	P	**P**	**19 25 14.5**	**+0.4**
BAIF	**Baives**	**21.77**	**166**	*e*P	**P**	**19 25 12.4**	**-1.7**
comp=Z,60nm,0.9s,mb4.7							
BAIF	**Baives**	**21.77**	**166**	*e*P	**P**	**19 25 12.4**	**-1.7**
comp=Z,30nm,0.9s,mb4.7							
BAIF	**Baives**	**21.77**	**166**	*e*P	**P**	**19 25 12.4**	**-1.7**
BAIF				pmax	pmax		
comp=Z,30nm,0.9s,mb4.7							
BAIF	**Baives**	**21.77**	**166**	*e*P	**P**	**19 25 12.4**	**-1.7**
comp=Z,30nm,0.9s,mb4.7							
GIVF	**Givet**	**21.78**	**165**	*e*P	**P**	**19 25 12.5**	**-1.7**
GIVF	**Givet**	**21.78**	**165**	*e*P	**P**	**19 25 12.5**	**-1.7**
GIVF	**Givet**	**21.78**	**165**	*e*P	**P**	**19 25 12.5**	**-1.7**
MNK	**Minsk**	**21.83**	**124**	‖*e*P	**P**	**19 25 13.0**	**-1.7**
MNK				*e*		19 25 17.0	
MNK	**Minsk**	**21.83**	**124**	*e*P	**P**	**19 25 13.0**	**-1.7**
MICGM	**Minsk**	**21.84**	**124**	‖*e*P	**P**	**19 25 13.0**	**-1.8**
TNS	**Taunus Mts**	**22.03**	**158**	*e*P	**P**	**19 25 18.4**	**+1.5**
comp=Z,66nm,1.1s,mb5.0							
TNS	**Taunus Mts**	**22.03**	**158**	*e*P	**P**	**19 25 18.4**	**+1.5**
TNS				pmax	pmax		
comp=Z,66nm,1.1s,mb5.0							
FBE	**Freiberg**	**22.03**	**150**	*e*P	**P**	**19 25 16.3**	**-0.6**
comp=Z,83nm,1.2s,mb5.0							
MOX	**Moxa**	**22.03**	**153**	*e*P	**P**	**19 25 15.6**	**-1.3**
comp=Z,116nm,1.7s,mb5.0							
MOX	**Moxa**	**22.03**	**153**	*e*P	**P**	**19 25 16.7**	**-0.2**
comp=Z,88nm,1.5s,mb5.0							
MOX	**Moxa**	**22.03**	**153**	*e*P	**P**	**19 25 15.6**	**-1.3**
MOX				pmax	pmax		
comp=Z,116nm,1.7s,mb5.0							
MOX	**Moxa**	**22.03**	**153**	*e*P	**P**	**19 25 15.6**	**-1.3**
comp=Z,116nm,1.7s,mb5.0							
BRG	**Berggiesshubel**	**22.17**	**149**	*e*P	**P**	**19 25 17.5**	**-0.9**
comp=Z,52nm,1.3s,mb4.8							
BRG	**Berggiesshubel**	**22.17**	**149**	*i*P	**P**	**19 25 18.0**	**-0.4**
comp=Z,43nm,1.5s,mb4.7							
BRG	**Berggiesshubel**	**22.17**	**149**	*i*P	**P**	**19 25 18.0**	**-0.4**
BRG				pmax	pmax		
comp=Z,26nm,1.5s,mb4.4							
ABH	**Alteburg**	**22.26**	**160**	*e*P	**P**	**19 25 20.6**	**+1.2**
ABH	**Alteburg**	**22.26**	**160**	*e*P	**P**	**19 25 20.6**	**+1.2**
WERD	**Werda**	**22.33**	**152**	*e*P	**P**	**19 25 19.8**	**-0.3**
comp=Z,49nm,1.2s,mb4.8							
WLF	**Walferdange**	**22.33**	**163**	P	**P**	**19 25 19.4**	**-0.7**
comp=Z,27nm,1.8s,mb4.4							
WLF	**Walferdange**	**22.33**	**163**	*e*P	**P**	**19 25 21.7**	**+1.6**
comp=Z,48nm,1.4s,mb4.7							
WLF	**Walferdange**	**22.33**	**163**	P	**P**	**19 25 19.1**	**-1.0**
comp=Z,40nm,1.3s,mb4.7							
WLF	**Walferdange**	**22.33**	**163**	P	**P**	**19 25 19.1**	**-1.0**
WLF				pmax	pmax		
comp=Z,40nm,1.3s,mb4.7							
WLF	**Walferdange**	**22.33**	**163**	P	**P**	**19 25 19.4**	**-0.7**
comp=Z,27nm,1.8s,mb4.4							
TANN	**Tannenbergstha**	**22.38**	**152**	*e*P	**P**	**19 25 20.2**	**-0.4**
comp=Z,52nm,1.4s,mb4.8							
RUP	**Ruppelstein**	**22.39**	**161**	*e*P	**P**	**19 25 21.6**	**+0.9**
RUP	**Ruppelstein**	**22.39**	**161**	*e*P	**P**	**19 25 21.6**	**+0.9**

LDF La Druitiere 22.98 173 *e*P **P 19 25 25.2 -1.8**
LDF pmax pmax
comp=Z,12nm,0.7s,mb4.4
LDF La Druitiere 22.98 173 *e*P **P 19 25 25.2 -1.8**
comp=Z,12nm,0.7s,mb4.4
DPC Dobruska-Polom 23.09 146 *e*P **P 19 25 27.1 -1.0**
DPC MLR MLR
comp=Z,2µm,14.2s,MS4.7
DPC Dobruska-Polom 23.09 146 *e*P **P 19 25 27.1 -1.0**
DPC AMS AMS 19 35 50.0
comp=Z,2µm,14.2s
DPC Dobruska-Polom 23.09 146 P **P 19 25 27.1 -1.0**
PRU Pruhonice 23.13 149 *e*P **P 19 25 29.1 +0.6**
PRU MLR MLR
comp=Z,2µm,25.4s,MS4.5
PRU Pruhonice 23.13 149 *e*P **P 19 25 29.1 +0.6**
PRU AMS AMS 19 33 20.0
comp=Z,2µm,25.4s
PRU Pruhonice 23.13 149 P **P 19 25 29.1 +0.6**
GRR Gorron 23.16 175 *e*P **P 19 25 26.9 -2.0**
comp=Z,34nm,0.6s,mb4.6
GRR Gorron 23.16 175 *e*P **P 19 25 26.9 -2.0**
comp=Z,17nm,0.6s,mb4.7
GRR Gorron 23.16 175 *e*P **P 19 25 26.9 -2.0**
GRR pmax pmax
comp=Z,17nm,0.6s,mb4.7
GRR Gorron 23.16 175 *e*P **P 19 25 26.9 -2.0**
comp=Z,17nm,0.6s,mb4.6
ROSF Rostrenen 23.17 179 *e*P **P 19 25 26.3 -2.7**
comp=Z,180nm,1.5s,mb5.0
ROSF Rostrenen 23.17 179 *e*P **P 19 25 26.3 -2.7**
comp=Z,90nm,1.5s,mb5.0
ROSF Rostrenen 23.17 179 *e*P **P 19 25 26.3 -2.7**
ROSF pmax pmax
comp=Z,90nm,1.5s,mb5.0
ROSF Rostrenen 23.17 179 *e*P **P 19 25 26.3 -2.7**
comp=Z,90nm,1.5s,mb5.0
LANF Langenberg 23.18 160 *e*P **P 19 25 29.9 +0.8**
LANF Langenberg 23.18 160 *e*P **P 19 25 29.9 +0.8**
LANF Langenberg 23.18 160 *e*P **P 19 25 29.9 +0.8**
BST Brest 23.21 180 *e*P **P 19 25 27.9 -1.5**
BST Brest 23.21 180 *e*P **P 19 25 27.9 -1.5**
SGMF Saint Gilles 23.26 178 *e*P **P 19 25 28.3 -1.7**
SGMF Saint Gilles 23.26 178 *e*P **P 19 25 28.3 -1.7**
SGMF Saint Gilles 23.26 178 *e*P **P 19 25 28.3 -1.7**
MEZF Maizieres J'vi 23.39 165 *e*P **P 19 25 30.6 -0.7**
MEZF Maizieres J'vi 23.39 165 *e*P **P 19 25 30.6 -0.7**
MOS Moscow 23.54 110 *e*P **P 19 25 32.9 +0.1**
MOS *e* 19 25 57.2
MOS pmax pmax
comp=Z,300nm,1.6s,mb5.5
MOS pmax pmax
comp=Z,148nm,1.2s,mb5.3
MOS MLR MLR
comp=Z,6µm,16.0s,MS5.1
MOS MLR MLR
comp=E,2µm,15.0s,MS5.1
MOS MLR MLR
comp=N,5µm,16.0s,MS5.1
QUIF Quistinic 23.59 179 *e*P **P 19 25 31.6 -1.8**
QUIF Quistinic 23.59 179 *e*P **P 19 25 31.6 -1.8**
QUIF Quistinic 23.59 179 *e*P **P 19 25 31.6 -1.8**
SFTF Sexfontaines 23.68 165 *e*P **P 19 25 33.0 -1.2**
SFTF Sexfontaines 23.68 165 *e*P **P 19 25 33.0 -1.2**
CDF Champ du Feu 23.68 161 *e*P **P 19 25 33.5 -0.7**
CDF Champ du Feu 23.68 161 *e*P **P 19 25 33.5 -0.7**
CDF Champ du Feu 23.68 161 *e*P **P 19 25 33.5 -0.7**
THEF They Montfort 23.74 163 *e*P **P 19 25 33.4 -1.3**
THEF They Montfort 23.74 163 *e*P **P 19 25 33.4 -1.3**
THEF They Montfort 23.74 163 *e*P **P 19 25 33.4 -1.3**
OBN Obninsk 23.76 112 *e*P **P 19 25 34.2 -0.6**
comp=N,43nm,0.9s,mb4.9
OBN Obninsk 23.76 112⇑*i*P **P 19 25 34.3 -0.5**
OBN *e* 19 26 02.7
OBN *e*S **S 19 29 51.9 +2.3**
OBN pmax pmax
comp=Z,41nm,1.7s,mb4.6
OBN MLR MLR
comp=Z,4µm,17.0s,MS4.9
OBN Obninsk 23.76 112 *e*P **P 19 25 34.2 -0.6**
comp=Z,43nm,0.9s,mb4.9
OBN *e*S **S 19 29 51.9 +2.3**
KHC Kasperske Hory 23.80 151 *e*P **P 19 25 35.5 +0.2**
comp=Z,51nm,1.6s,mb4.7
KHC Kasperske Hory 23.80 151 *e*P **P 19 25 35.5 +0.2**
KHC pmax pmax
comp=Z,51nm,1.6s,mb4.7
KHC Kasperske Hory 23.80 151 *e*P **P 19 25 35.3 0.0**
KHC AMS AMS 19 33 40.0
comp=Z,1µm,18.2s
KHC Kasperske Hory 23.80 151 *e*P **P 19 25 35.5 +0.2**
comp=Z,51nm,1.6s,mb4.7
MORC Moravsky Berou 23.86 144 *e*P **P 19 25 35.5 -0.3**
MORC Moravsky Berou 23.86 144 *e*P **P 19 25 35.6 -0.2**
MORC Moravsky Berou 23.86 144⇓*i*P **P 19 25 34.9 -0.9**
MORC Moravsky Berou 23.86 144 *e*P **P 19 25 35.5 -0.3**
ECH Echery 23.87 161 *e*P **P 19 25 36.3 +0.4**
ECH Echery 23.87 161 *e*P **P 19 25 36.0 +0.2**
comp=Z,78nm,1.7s,mb4.9
ECH Echery 23.87 161 *e*P **P 19 25 36.0 +0.1**
ECH pmax pmax
comp=Z,79nm,1.7s,mb4.9
ECH Echery 23.87 161 *e*P **P 19 25 36.3 +0.4**
BFO Black Forest 23.88 159 *e*P **P 19 25 36.0 0.0**
comp=Z,60nm,1.4s,mb4.8
BFO Black Forest 23.88 159 *e*P **P 19 25 36.0 0.0**
BFO pmax pmax
comp=Z,60nm,1.4s,mb4.8
BFO Black Forest 23.88 159 P **P 19 25 36.9 +0.9**
comp=Z,156nm,1.2s,mb5.3,SNR=6.4
BFO Black Forest 23.88 159 *e*P **P 19 25 36.0 0.0**
comp=Z,60nm,1.4s,mb4.8
OJC Ojcow 23.89 140 *e*P **P 19 25 36.5 +0.5**
OJC *e*pP 19 25 39.8
OJC Ojcow 23.89 140 *e*P **P 19 25 36.5 +0.5**
OJC *e**PP 19 25 39.8
OJC Ojcow 23.89 140 *e*P **P 19 25 36.5 +0.5**
OKC Ostrava-Krasne 23.92 143 *e*P **P 19 25 35.4 -0.9**
OKC Ostrava-Krasne 23.92 143 *e*P **P 19 25 35.4 -0.9**
OKC Ostrava-Krasne 23.92 143 P **P 19 25 35.4 -0.9**
TREC Trest 23.96 148 *e*P **P 19 25 38.3 +1.6**
TREC MLR MLR
comp=Z,2µm,12.8s,MS4.7
TREC Trest 23.96 148 *e*P **P 19 25 38.3 +1.6**
TREC AMS AMS 19 36 20.0
comp=Z,2µm,12.8s
TREC Trest 23.96 148 P **P 19 25 38.3 +1.6**
HAU Haudompre 24.00 163 *e*P **P 19 25 36.3 -0.7**
HAU *e*MLR MLR
comp=Z,2µm,22.0s,MS4.3
HAU Haudompre 24.00 163 *e*P **P 19 25 36.3 -0.7**
HAU LR LR
comp=Z,2µm,22.0s,MS4.6
HAU Haudompre 24.00 163 *e*P **P 19 25 36.3 -0.7**
HAU MLR MLR
comp=Z,2µm,22.0s,MS4.6
HAU Haudompre 24.00 163 *e*P **P 19 25 36.3 -0.7**
GERES GERESS Array B 24.10 151 P **P 19 25 38.3 +0.3**
comp=Z,8.0nm,1.0s,mb4.1,baz=356,slow=8.4,SNR=19
GERES GERESS Array B 24.10 151 P **P 19 25 38.3 +0.3**
GERES pmax pmax
comp=Z,8.0nm,1.0s
GERES GERESS Array B 24.10 151 P **P 19 25 38.3 +0.3**
VRAC Vranov 24.14 146 P **P 19 25 38.0 -0.3**
comp=Z,7.2nm,0.7s,mb4.2,baz=356,slow=8.4,SNR=11
VRAC LR LR 19 33 34.8
comp=Z,2µm,20.8s,MS4.6,baz=334,slow=33
VRAC Vranov 24.14 146 P **P 19 25 38.0 -0.3**
VRAC LR LR 19 33 34.8
VRAC Vranov 24.14 146⇑P **P 19 25 38.8 +0.5**
VRAC Vranov 24.14 146⇑*i*P **P 19 25 38.8 +0.5**
VRAC Vranov 24.14 146⇑*i*P **P 19 25 38.8 +0.5**
SPAK Spaichingen-Ko 24.16 159 *e*P **P 19 25 39.4 +0.9**
SPAK Spaichingen-Ko 24.16 159 *e*P **P 19 25 39.4 +0.9**
MOF Molkenrain 24.23 162 *e*P **P 19 25 40.0 +0.9**
MOF Molkenrain 24.23 162 *e*P **P 19 25 40.0 +0.9**
MOF Molkenrain 24.23 162 *e*P **P 19 25 40.0 +0.9**
HINF Hinteralfeld 24.23 162 *e*P **P 19 25 38.2 -1.0**
HINF Hinteralfeld 24.23 162 *e*P **P 19 25 38.2 -1.0**
HINF Hinteralfeld 24.23 162 *e*P **P 19 25 38.2 -1.0**
RES Resolute Bay 24.24 320 P **P 19 25 46.1 +7.0**
comp=Z,6.4nm,0.7s,mb4.2,baz=56,slow=12,SNR=5.8
RES LR LR 19 34 42.6
comp=Z,4µm,19.6s,MS4.9,baz=351,slow=36
RES Resolute Bay 24.24 320 P **P 19 25 46.1 +7.0**
RES pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
RES MLR MLR
comp=Z,4µm,19.6s,MS4.9
FELD Feldberg im Sc 24.29 160 *e*P **P 19 25 40.5 +0.8**
FELD Feldberg im Sc 24.29 160 *e*P **P 19 25 40.5 +0.8**
HYF Humbligny 24.44 169 *e*P **P 19 25 39.6 -1.5**
HYF Humbligny 24.44 169 *e*P **P 19 25 39.6 -1.5**
LOR Lormes 24.52 167 *e*P **P 19 25 40.4 -1.4**
comp=Z,44nm,0.9s,mb4.7
LOR *e*MLR MLR
comp=Z,2µm,22.2s,MS4.3
LOR Lormes 24.52 167 *e*P **P 19 25 40.4 -1.4**
comp=Z,22nm,0.9s,mb4.7
LOR LR LR
comp=Z,2µm,22.3s,MS4.6
LOR Lormes 24.52 167 *e*P **P 19 25 40.4 -1.4**
LOR pmax pmax
comp=Z,22nm,0.9s,mb4.7
LOR MLR MLR
comp=Z,2µm,22.3s,MS4.6
LOR Lormes 24.52 167 *e*P **P 19 25 40.4 -1.4**
comp=Z,22nm,0.9s,mb4.7
FRB Frobisher Bay 24.55 285 LR LR 19 34 44.7
comp=Z,3µm,19.9s,MS4.8,baz=37,slow=35
BBS Basel-Blauen 24.65 161 *e*P **P 19 25 43.9 +0.9**
BBS Basel-Blauen 24.65 161 *e*P **P 19 25 43.9 +0.9**
BBS Basel-Blauen 24.65 161 *e*P **P 19 25 43.9 +0.9**
LOMF Lomont 24.69 162 *e*P **P 19 25 45.7 +2.3**
LOMF Lomont 24.69 162 *e*P **P 19 25 45.7 +2.3**
LOMF Lomont 24.69 162 *e*P **P 19 25 45.7 +2.3**
SSF Saint Saulge 24.70 168 *e*P **P 19 25 42.0 -1.5**
comp=Z,37nm,1.0s,mb4.6
SSF Saint Saulge 24.70 168 *e*P **P 19 25 42.0 -1.5**
comp=Z,18nm,1.0s,mb4.6
SSF Saint Saulge 24.70 168 *e*P **P 19 25 42.0 -1.5**
SSF pmax pmax
comp=Z,19nm,1.0s,mb4.6
SSF Saint Saulge 24.70 168 *e*P **P 19 25 42.0 -1.5**
comp=Z,18nm,1.0s,mb4.6
NIE Niedzica 24.75 140 *e*P **P 19 25 44.7 +0.8**
NIE Niedzica 24.75 140 *e*P **P 19 25 44.7 +0.8**
NIE Niedzica 24.75 140 *e*P **P 19 25 44.7 +0.8**
AVF Avril sur Loir 24.96 168 *e*P **P 19 25 44.4 -1.4**
comp=Z,110nm,1.5s,mb4.9
AVF Avril sur Loir 24.96 168 *e*P **P 19 25 44.4 -1.4**
comp=Z,55nm,1.5s,mb4.9
AVF Avril sur Loir 24.96 168 *e*P **P 19 25 44.4 -1.4**
AVF pmax pmax
comp=Z,55nm,1.5s,mb4.9
AVF Avril sur Loir 24.96 168 *e*P **P 19 25 44.4 -1.4**
comp=Z,55nm,1.5s,mb4.9
MFF Saint Martin d 24.97 174 *e*P **P 19 25 44.6 -1.3**
comp=Z,40nm,0.8s,mb4.7
MFF Saint Martin d 24.97 174 *e*P **P 19 25 44.6 -1.3**
comp=Z,20nm,0.8s,mb4.7
MFF Saint Martin d 24.97 174 *e*P **P 19 25 44.6 -1.3**
MFF pmax pmax
comp=Z,20nm,0.8s,mb4.7
MFF Saint Martin d 24.97 174 *e*P **P 19 25 44.6 -1.3**
comp=Z,20nm,0.8s,mb4.7
DAVA Damuels 25.09 157⇓*i*P **P 19 25 47.7 +0.7**
comp=Z,28nm,1.4s,mb4.6,SNR=8.6
DAVA Damuels 25.09 157 P **P 19 25 47.7 +0.7**
comp=Z,28nm,1.4s,mb4.6,SNR=8.6
SMF Signal de Mont 25.14 167 *e*P **P 19 25 45.6 -1.9**
comp=Z,52nm,0.9s,mb4.8
SMF Signal de Mont 25.14 167 *e*P **P 19 25 45.6 -1.9**
comp=Z,26nm,0.9s,mb4.8
SMF Signal de Mont 25.14 167 *e*P **P 19 25 45.6 -1.9**
SMF pmax pmax
comp=Z,26nm,0.9s,mb4.8
SMF Signal de Mont 25.14 167 *e*P **P 19 25 45.6 -1.9**
comp=Z,26nm,0.9s,mb4.8
MOA Molln 25.16 150 *i*P **P 19 25 48.8 +1.1**
comp=Z,44nm,1.7s,mb4.7,SNR=9.2
MOA Molln 25.16 150 P **P 19 25 48.8 +1.2**
comp=Z,44nm,1.7s,mb4.7,SNR=9.2
BGF Bois d'Agland 25.16 169 *e*P **P 19 25 46.1 -1.5**
comp=Z,68nm,1.0s,mb4.8
BGF Bois d'Agland 25.16 169 *e*P **P 19 25 46.1 -1.5**
comp=Z,34nm,1.0s,mb4.8
BGF Bois d'Agland 25.16 169 *e*P **P 19 25 46.1 -1.5**
BGF pmax pmax
comp=Z,34nm,1.0s,mb4.8
BGF Bois d'Agland 25.16 169 *e*P **P 19 25 46.1 -1.5**
comp=Z,34nm,1.0s,mb4.8
KOLL Kolacno 25.18 144 *e*P **P 19 25 49.6 +1.8**
KOLL Kolacno 25.18 144 *e*P **P 19 25 49.6 +1.8**
KOLL Kolacno 25.18 144 *e*P **P 19 25 49.6 +1.8**
KOLL Kolacno 25.18 144 *e*P **P 19 25 49.6 +1.8**
LVV L'vov 25.18 134 *e*P **P 19 25 51.2 +3.4**
MOTA Moosalm 25.19 155⇓*i*P **P 19 25 48.1 +0.2**
comp=Z,18nm,1.0s,mb4.5,SNR=7.0
MOTA Moosalm 25.19 155 P **P 19 25 48.1 +0.2**
comp=Z,18nm,1.0s,mb4.5,SNR=7.0
VYHS Vyhne 25.34 143 *e*P **P 19 25 49.8 +0.5**
comp=Z,19nm,1.4s,mb4.4
VYHS Vyhne 25.34 143 *e*P **P 19 25 49.8 +0.5**
VYHS pmax pmax
comp=Z,19nm,1.4s,mb4.4
VYHS Vyhne 25.34 143 *e*P **P 19 25 49.8 +0.5**
VYHS Vyhne 25.34 143 *e*P **P 19 25 49.8 +0.5**
comp=Z,19nm,1.4s,mb4.4
WTTA Wattenberg 25.34 155⇑*i*P **P 19 25 50.4 +1.1**
comp=Z,55nm,1.3s,mb4.9,SNR=16
WTTA Wattenberg 25.34 155 P **P 19 25 50.4 +1.1**
comp=Z,55nm,1.3s,mb4.9,SNR=16
CONA Conrad Observa 25.34 148⇑*i*P **P 19 25 50.3 +1.0**
comp=Z,75nm,1.0s,mb5.2,SNR=22
CONA Conrad Observa 25.34 148 P **P 19 25 50.3 +1.0**
comp=Z,75nm,1.0s,mb5.2,SNR=22
CABF La Chapelle 25.35 164 *e*P **P 19 25 48.2 -1.2**
comp=Z,50nm,1.0s,mb4.7
CABF La Chapelle 25.35 164 *e*P **P 19 25 48.2 -1.2**
comp=Z,25nm,1.0s,mb4.7
CABF La Chapelle 25.35 164 *e*P **P 19 25 48.2 -1.2**
CABF pmax pmax
comp=Z,25nm,1.0s,mb4.7
CABF La Chapelle 25.35 164 *e*P **P 19 25 48.2 -1.2**
comp=Z,25nm,1.0s,mb4.7
TCF Toulx Ste Croi 25.39 170 *e*P **P 19 25 48.0 -1.8**
comp=Z,47nm,1.0s,mb4.7
TCF Toulx Ste Croi 25.39 170 *e*P **P 19 25 48.0 -1.8**
comp=Z,24nm,1.0s,mb4.7
TCF Toulx Ste Croi 25.39 170 *e*P **P 19 25 48.0 -1.8**
TCF pmax pmax
comp=Z,24nm,1.0s,mb4.7
TCF Toulx Ste Croi 25.39 170 *e*P **P 19 25 48.0 -1.8**
comp=Z,24nm,1.0s,mb4.7
FETA Feichten 25.46 156⇓*i*P **P 19 25 52.4 +2.1**
comp=Z,22nm,1.2s,mb4.5
FETA Feichten 25.46 156 P **P 19 25 52.4 +2.1**
comp=Z,22nm,1.2s,mb4.5
CRVS Cervenica-Dubn 25.48 139 *e*P **P 19 25 52.6 +2.1**
comp=Z,14nm,1.7s,mb4.2
CRVS Cervenica-Dubn 25.48 139 *e*P **P 19 25 52.6 +2.1**
CRVS pmax pmax
comp=Z,14nm,1.7s,mb4.2
CRVS Cervenica-Dubn 25.48 139 *e*P **P 19 25 52.5 +2.0**
CRVS Cervenica-Dubn 25.48 139 *e*P **P 19 25 52.6 +2.1**
comp=Z,14nm,1.7s,mb4.2
DAVOX Davos/Dischmat 25.59 158 P **P 19 25 53.4 +1.9**
comp=Z,4.3nm,0.9s,mb4.0,baz=324,slow=17,SNR=5.2
DAVOX LR LR 19 34 32.1
comp=Z,2µm,18.8s,MS4.6,baz=325,slow=33
DAVOX Davos/Dischmat 25.59 158 P **P 19 25 53.4 +1.9**
KOLS Kolonicke sedl 25.62 138 *e*P **P 19 25 53.8 +2.0**
KOLS Kolonicke sedl 25.62 138 *e*P **P 19 25 53.8 +2.0**
KOLS Kolonicke sedl 25.62 138 *e*P **P 19 25 53.8 +2.0**
KOLS Kolonicke sedl 25.62 138 *e*P **P 19 25 53.8 +2.0**
AKASG Malin Array Be 25.63 126 P **P 19 25 50.8 -1.1**
comp=Z,15nm,0.7s,mb4.6,baz=335,slow=9.3,SNR=15
AKASG LR LR 19 35 40.0
comp=Z,3µm,19.3s,MS4.9,baz=330,slow=36
AKASG Malin Array Be 25.63 126 P **P 19 25 50.8 -1.1**
AKASG LR LR 19 35 40.0
AKASG Malin Array Be 25.63 126 P **P 19 25 50.8 -1.1**
AKASG pmax pmax
comp=Z,15nm,0.7s
AKASG MLR MLR
comp=Z,3µm,19.3s
KIEV Kiev 25.63 126 *e*P **P 19 25 50.7 -1.2**
KIEV Kiev 25.63 126 *e*P **P 19 25 50.7 -1.2**
KECS Kecovo 25.68 141 *e*P **P 19 25 53.4 +1.1**
comp=Z,11nm,1.2s,mb4.2
KECS Kecovo 25.68 141 *e*P **P 19 25 53.4 +1.1**
KECS pmax pmax
comp=Z,11nm,1.2s,mb4.3
KECS Kecovo 25.68 141 *e*P **P 19 25 53.4 +1.1**
AGO Saint Agoulin 25.68 169 *e*P **P 19 25 52.3 -0.1**
AGO Saint Agoulin 25.68 169 *e*P **P 19 25 52.3 -0.1**
SOP Sopron 25.70 147⇑*e*P **P 19 25 54.6 +2.1**
KBA Koelnbreinsper 25.77 152⇓*i*P **P 19 25 53.9 +0.8**
comp=Z,34nm,1.4s,mb4.7,SNR=11
KBA Koelnbreinsper 25.77 152 P **P 19 25 53.9 +0.8**
comp=Z,34nm,1.4s,mb4.7,SNR=11
PLDF La Plantade 25.80 168 *e*P **P 19 25 53.1 -0.3**
PLDF La Plantade 25.80 168 *e*P **P 19 25 53.1 -0.3**
PLDF La Plantade 25.80 168 *e*P **P 19 25 53.1 -0.3**
TUE Stuetta 25.83 159 *e*P **P 19 25 52.9 -0.8**
comp=Z,45nm,1.5s,mb4.8
UZH Uzhgorod 25.92 138 *e*P **P 19 25 53.4 -1.1**
UZH *e* 19 26 34.0
UZH *e*PPP 19 26 43.8
UZH *e* 19 29 22.2
UZH *e*S **S 19 30 18.8 -5.4**
UZH *e*SS 19 31 22.6
UZH *e*SSS 19 31 42.4
UZH MLR MLR
comp=N,3µm,16.0s,MS5.0
UZH MLR MLR
comp=E,2µm,16.0s,MS5.0
UZH MLR MLR
comp=Z,2µm,16.0s,MS4.7
UZH Uzhgorod 25.92 138 *e*PcP PcP 19 29 22.2 -0.5
ARSA Arzberg 25.94 149⇑*i*pP pP 19 25 57.4 -0.4
comp=Z,20nm,1.1s,SNR=6.6
ABTA Abfaltersbach 25.97 154⇑*i*pP pP 19 25 57.8 -0.2
comp=Z,16nm,1.1s
PYM Petit Puy Mans 25.98 169 *e*P **P 19 25 54.3 -0.7**
PYM Petit Puy Mans 25.98 169 *e*P **P 19 25 54.3 -0.7**
PYM Petit Puy Mans 25.98 169 *e*P **P 19 25 54.3 -0.7**
PSZ Piszkesteto 26.10 142 *e*P **P 19 25 56.9 +0.7**
comp=Z,31nm,1.1s,mb4.8
PSZ Piszkesteto 26.10 142⇑P **P 19 25 58.6 +2.5**
PSZ Piszkesteto 26.10 142⇑*i*P **P 19 25 58.6 +2.5**
PSZ Piszkesteto 26.10 142 *e*P **P 19 25 57.0 +0.9**
PSZ Piszkesteto 26.10 142 *e*P **P 19 25 57.0 +0.9**
COLF Collangettes 26.25 168 *e*P **P 19 25 56.8 -0.7**
COLF Collangettes 26.25 168 *e*P **P 19 25 56.8 -0.7**
RSL Roselend 26.32 163 *e*P **P 19 25 59.0 +0.9**
RSL Roselend 26.32 163 *e*P **P 19 25 59.0 +0.9**
RSL Roselend 26.32 163 *e*P **P 19 25 59.0 +0.9**
RJF Les Rejaudoux 26.34 171 *e*P **P 19 25 56.7 -1.6**
comp=Z,56nm,0.8s,mb4.8
RJF *e*MLR MLR
comp=Z,2µm,21.2s,MS4.4
RJF Les Rejaudoux 26.34 171 *e*P **P 19 25 56.7 -1.6**
comp=Z,28nm,0.8s,mb4.8
RJF LR LR
comp=Z,2µm,21.3s,MS4.7
RJF Les Rejaudoux 26.34 171 *e*P **P 19 25 56.7 -1.6**
RJF pmax pmax
comp=Z,28nm,0.8s,mb4.8
RJF MLR MLR
comp=Z,2µm,21.3s,MS4.7
RJF Les Rejaudoux 26.34 171 *e*P **P 19 25 56.7 -1.6**
comp=Z,28nm,0.8s,mb4.8
BUD Budapest 26.35 143 *e*P **P 19 26 02.4 +4.0**
TRPA Tarpa 26.44 138⇓*i*P **P 19 26 01.7 +2.5**
TRPA Tarpa 26.44 138⇓*i*P **P 19 26 01.7 +2.5**
PERS Pernice 26.48 150 *e*P **P 19 26 06.0 +6.4**
SOKR Solikamsk 26.48 85*d*/*i*P **P 19 26 06.1 +6.6**
SOKR pmax pmax
comp=Z,40nm,1.0s,mb4.9
SOKR MLR MLR
comp=Z,1µm,15.0s,MS4.6
LPL La Plagne 26.50 163 *e*P **P 19 25 59.4 -0.4**
comp=Z,18nm,0.8s,mb4.3
LPL La Plagne 26.50 163 *e*P **P 19 25 59.4 -0.4**
comp=Z,9.1nm,0.8s,mb4.4
LPL La Plagne 26.50 163 *e*P **P 19 25 59.4 -0.4**
LPL pmax pmax
comp=Z,9.0nm,0.8s,mb4.3
LPL La Plagne 26.50 163 *e*P **P 19 25 59.4 -0.4**
comp=Z,9.1nm,0.8s,mb4.3
OBKA Obir 26.51 151⇑*i*P **P 19 25 59.6 -0.2**
comp=Z,14nm,1.1s,mb4.4
OBKA Obir 26.51 151 P **P 19 25 59.6 -0.2**
comp=Z,14nm,1.1s,mb4.4
LPG La Plagne 26.52 163 *e*P **P 19 25 59.7 -0.2**
comp=Z,28nm,1.1s,mb4.4
LPG La Plagne 26.52 163 *e*P **P 19 25 59.7 -0.2**
comp=Z,14nm,1.1s,mb4.4
LPG La Plagne 26.52 163 *e*P **P 19 25 59.7 -0.2**
LPG pmax pmax
comp=Z,14nm,1.1s,mb4.4
LPG La Plagne 26.52 163 *e*P **P 19 25 59.7 -0.2**
comp=Z,14nm,1.1s,mb4.4
SSB Saint Sauveur 26.55 167 *e*P **P 19 25 59.3 -0.9**
comp=Z,77nm,1.6s,mb5.0
SSB Saint Sauveur 26.55 167 *e*P **P 19 25 59.3 -0.9**
SSB pmax pmax
comp=Z,77nm,1.6s,mb5.0
SSB Saint Sauveur 26.55 167 *e*P **P 19 25 59.3 -0.9**
comp=Z,77nm,1.6s,mb5.0
LFF La Frestale 26.67 173 *e*P **P 19 25 59.9 -1.4**
comp=Z,38nm,0.8s,mb4.7
LFF La Frestale 26.67 173 *e*P **P 19 25 59.9 -1.4**
comp=Z,19nm,0.8s,mb4.7
LFF La Frestale 26.67 173 *e*P **P 19 25 59.9 -1.4**
LFF pmax pmax
comp=Z,19nm,0.8s,mb4.7
LFF La Frestale 26.67 173 *e*P **P 19 25 59.9 -1.4**
comp=Z,19nm,0.8s,mb4.7
CAF Calviac 26.74 170 *e*P **P 19 26 00.5 -1.5**
comp=Z,69nm,1.2s,mb4.8
CAF Calviac 26.74 170 *e*P **P 19 26 00.5 -1.5**
comp=Z,34nm,1.2s,mb4.8
CAF Calviac 26.74 170 *e*P **P 19 26 00.5 -1.5**
CAF pmax pmax
comp=Z,34nm,1.2s,mb4.8
CAF Calviac 26.74 170 *e*P **P 19 26 00.5 -1.5**
comp=Z,34nm,1.2s,mb4.8
BNI Bardonecchia 26.95 163 *e*P **P 19 26 03.5 -0.4**
comp=Z,51nm,1.6s,mb4.8
BNI Bardonecchia 26.95 163 *e*P **P 19 26 03.5 -0.4**
BNI pmax pmax
comp=Z,51nm,1.6s,mb4.8
BNI Bardonecchia 26.95 163 *e*P **P 19 26 03.5 -0.4**
comp=Z,51nm,1.6s,mb4.8
VIVF Saint-Julien-I 26.98 166 *e*P **P 19 26 03.2 -0.9**
comp=Z,124nm,1.6s,mb4.9
VIVF Saint-Julien-I 26.98 166 *e*P **P 19 26 03.2 -0.9**
comp=Z,62nm,1.6s,mb4.9
VIVF Saint-Julien-I 26.98 166 *e*P **P 19 26 03.2 -0.9**
VIVF pmax pmax
comp=Z,62nm,1.6s,mb4.9
VIVF Saint-Julien-I 26.98 166 *e*P **P 19 26 03.2 -0.9**
comp=Z,62nm,1.6s,mb4.9
ORIF Oris-en-Rattie 27.02 165 *e*P **P 19 26 03.6 -0.8**
comp=Z,46nm,1.1s,mb4.6
ORIF *e*MLR MLR
comp=Z,1µm,20.0s,MS4.2
ORIF Oris-en-Rattie 27.02 165 *e*P **P 19 26 03.6 -0.8**
comp=Z,23nm,1.0s,mb4.7
ORIF Oris-en-Rattie 27.02 165 *e*P **P 19 26 03.6 -0.8**
ORIF pmax pmax
comp=Z,23nm,1.0s,mb4.7
ORIF Oris-en-Rattie 27.02 165 *e*P **P 19 26 03.6 -0.8**
comp=Z,23nm,1.1s,mb4.6
JAVS Javornik 27.03 152 *i*P **P 19 26 06.8 +2.2**
VISS Visnje 27.24 151 *e*P **P 19 26 08.5 +2.1**
MBDF Montbardon 27.29 163 *e*P **P 19 26 06.8 0.0**
comp=Z,27nm,0.8s,mb4.6
MBDF Montbardon 27.29 163 *e*P **P 19 26 06.8 0.0**
comp=Z,14nm,0.8s,mb4.5
MBDF Montbardon 27.29 163 *e*P **P 19 26 06.8 0.0**
MBDF pmax pmax
comp=Z,14nm,0.8s,mb4.5
MBDF Montbardon 27.29 163 *e*P **P 19 26 06.8 0.0**
comp=Z,14nm,0.8s,mb4.6
BUR08 Bucovina Ar. S 27.49 134 *e*P **P 19 26 10.4 +1.7**
BUR08 Bucovina Ar. S 27.49 134 *e*P **P 19 26 10.4 +1.7**
PKSM Moragy 27.50 145⇑P **P 19 26 08.0 -0.7**
PKSM Moragy 27.50 145⇑*i*P **P 19 26 08.0 -0.7**
PKSM Moragy 27.50 145⇑*i*P **P 19 26 08.0 -0.7**
BURAR Bucovina Array 27.52 134⇓P **P 19 26 11.6 +2.6**
BURAR Bucovina Array 27.52 134⇓*i*P **P 19 26 11.6 +2.6**

LASF Ste Croix 27.70 168 *eP* **P 19 26 10.1 -0.5**
comp=Z,120nm,1.6s,mb5.0
LASF Ste Croix 27.70 168 *eP* **P 19 26 10.1 -0.5**
comp=Z,60nm,1.6s,mb5.0
SMRF Simiane la Rot 27.93 165 *eP* **P 19 26 11.6 -1.0**
comp=Z,56nm,1.4s,mb4.7
SMRF Simiane la Rot 27.93 165 *eP* **P 19 26 11.6 -1.0**
comp=Z,56nm,1.4s,mb5.0
SMRF Simiane la Rot 27.93 165 *eP* **P 19 26 11.6 -1.0**
comp=Z,28nm,1.4s,mb4.7
VSR Storozhevoye 27.93 113 *eP* **P 19 26 11.7 -0.8**
VSR pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,5.0nm,0.9s
VSR MLR MLR
comp=Z,2µm,14.0s,MS4.9
VSR MLR MLR
comp=N,1µm,15.0s,MS4.8
VSR MLR MLR
comp=E,1µm,13.0s,MS4.8
AUTN L'Aution 28.07 162 *eP* **P 19 26 15.0 +1.1**
AUTN L'Aution 28.07 162 *eP* **P 19 26 15.0 +1.1**
AUTN L'Aution 28.07 162 *eP* **P 19 26 15.0 +1.1**
SAOF Saorge 28.09 162 *eP* **P 19 26 19.7 +5.6**
VORD Divnogorie 28.18 113 *eP* **P 19 26 14.1 -0.7**
VORD pmax pmax
comp=N,70nm,0.5s
VORD pmax pmax
comp=Z,20nm,0.5s,mb5.0
VORD pmax pmax
comp=E,130nm,0.6s
VORD MLR MLR
comp=N,2µm,13.0s
VORD MLR MLR
comp=Z,2µm,13.0s,MS5.0
VORD MLR MLR
comp=E,920nm,19.0s
SBF Sospel 28.20 162 *eP* **P 19 26 14.6 -0.5**
comp=E,38nm,1.0s,mb4.7
SBF Sospel 28.20 162 *eP* **P 19 26 14.6 -0.5**
comp=E,19nm,1.0s,mb4.7
SBF Sospel 28.20 162 *eP* **P 19 26 14.6 -0.5**
SBF pmax pmax
comp=Z,19nm,1.0s,mb4.7
SBF Sospel 28.20 162 *eP* **P 19 26 14.6 -0.5**
comp=Z,19nm,1.0s,mb4.7
EARI Arriondas 28.21 182 P **P 19 26 16.4 +1.2**
comp=Z,60nm,1.6s,mb5.0
EARI Arriondas 28.21 182 P **P 19 26 16.4 +1.2**
comp=Z,60nm,1.6s,mb5.0
EPON Pontenova 28.23 185 P **P 19 26 15.6 +0.3**
comp=Z,71nm,1.5s,mb5.1
EPON Pontenova 28.23 185 P **P 19 26 15.6 +0.3**
comp=Z,71nm,1.5s,mb5.1
VLC Villacollemand 28.23 158 *eP* **P 19 26 17.4 +2.1**
comp=Z,14nm,0.8s,mb4.6
VLC Villacollemand 28.23 158 *eP* **P 19 26 17.5 +2.2**
comp=Z,14nm,0.8s,mb4.6
ELAN Lanestosa 28.28 179 P **P 19 26 16.9 +1.2**
comp=Z,41nm,2.1s,mb4.7
ELAN Lanestosa 28.28 179 P **P 19 26 16.9 +1.2**
comp=Z,41nm,2.1s,mb4.7
OSSF Osses 28.28 176 *eP* **P 19 26 16.2 +0.4**
OSSF Osses 28.28 176 *eP* **P 19 26 16.2 +0.4**
EALK Alkurruntz 28.32 176 P **P 19 26 14.9 -1.1**
comp=Z,92nm,1.6s,mb5.2
EALK Alkurruntz 28.32 176 P **P 19 26 14.9 -1.2**
comp=Z,92nm,1.6s,mb5.2
MTLF Montolieu 28.33 170 *eP* **P 19 26 15.4 -0.8**
comp=Z,105nm,1.5s,mb5.0
MTLF Montolieu 28.33 170 *eP* **P 19 26 15.4 -0.8**
comp=Z,52nm,1.5s,mb4.9
MTLF Montolieu 28.33 170 *eP* **P 19 26 15.4 -0.8**
MTLF pmax pmax
comp=Z,52nm,1.5s,mb4.9
MTLF Montolieu 28.33 170 *eP* **P 19 26 15.4 -0.8**
comp=Z,52nm,1.5s,mb5.0
ELIZ Elizondo 28.37 176 P **P 19 26 17.4 +0.9**
comp=Z,17nm,0.6s,mb4.8
ELIZ Elizondo 28.37 176 P **P 19 26 17.4 +0.8**
ELIZ pmax pmax
comp=Z,17nm,0.6s,mb4.8
ELIZ Elizondo 28.37 176 P **P 19 26 17.4 +0.8**
comp=Z,17nm,0.6s,mb4.8
SJPF Ste Jean 28.43 176 *eP* **P 19 26 16.4 -0.7**
comp=Z,89nm,1.4s,mb4.9
SJPF Ste Jean 28.43 176 *eP* **P 19 26 16.4 -0.7**
comp=Z,44nm,1.4s,mb4.9
SJPF Ste Jean 28.43 176 *eP* **P 19 26 16.4 -0.7**
SJPF pmax pmax
comp=Z,44nm,1.4s,mb4.9
SJPF Ste Jean 28.43 176 *eP* **P 19 26 16.4 -0.7**
comp=Z,44nm,1.4s,mb4.9
FRF La Foret Royal 28.43 164 *eP* **P 19 26 15.7 -1.4**
FRF La Foret Royal 28.43 164 *eP* **P 19 26 15.7 -1.4**
FRF La Foret Royal 28.43 164 *eP* **P 19 26 15.7 -1.4**
EPF Esparros 28.56 173 *eP* **P 19 26 16.5 -1.7**
comp=Z,112nm,1.1s,mb5.2
EPF Esparros 28.56 173 *eP* **P 19 26 16.5 -1.7**
comp=Z,56nm,1.1s,mb5.2
EPF Esparros 28.56 173 *eP* **P 19 26 16.5 -1.7**
EPF pmax pmax
comp=Z,56nm,1.1s,mb5.2
EPF Esparros 28.56 173 *eP* **P 19 26 16.5 -1.7**
comp=Z,56nm,1.1s,mb5.2
LMR La Mourre 28.64 164 *eP* **P 19 26 18.1 -0.9**
LMR La Mourre 28.64 164 *eP* **P 19 26 18.1 -0.9**
LMR La Mourre 28.64 164 *eP* **P 19 26 18.1 -0.9**
BZS Buzias 28.65 141 ⇑*P* **P 19 26 19.7 +0.7**
BZS Buzias 28.65 141 ⇑*P* **P 19 26 19.7 +0.7**
BZS Buzias 28.65 141 ⇑*P* **P 19 26 19.7 +0.7**
ETSF Etsaut 28.66 175 *eP* **P 19 26 18.6 -0.5**
comp=Z,73nm,1.3s,mb4.9
ETSF Etsaut 28.66 175 *eP* **P 19 26 18.6 -0.5**
comp=Z,36nm,1.3s,mb5.0
ETSF Etsaut 28.66 175 *eP* **P 19 26 18.6 -0.5**
ETSF pmax pmax
comp=Z,36nm,1.3s,mb4.9
ETSF Etsaut 28.66 175 *eP* **P 19 26 18.6 -0.5**
comp=Z,36nm,1.3s,mb4.9
VIEF Viey 28.69 174 *eP* **P 19 26 21.7 +2.3**
VIEF Viey 28.69 174 *eP* **P 19 26 21.7 +2.3**
STS Santiago 28.71 187 P **P 19 26 20.8 +1.2**
comp=Z,65nm,1.4s,mb5.2
STS Santiago 28.71 187 P **P 19 26 20.8 +1.2**
STS pmax pmax
comp=Z,65nm,1.4s,mb5.2
STS Santiago 28.71 187 P **P 19 26 20.8 +1.2**
comp=Z,65nm,1.4s,mb5.2
VRHR Novokhopersk 28.76 111 *eP* **P 19 26 19.5 -0.5**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VRHR pmax pmax
comp=E,4.0nm,0.3s
RESF Ens 28.78 173 *eP* **P 19 26 22.9 +2.7**
RESF Ens 28.78 173 *eP* **P 19 26 22.9 +2.7**
EBIE Bielsa 28.89 174 P **P 19 26 22.1 +0.9**
comp=E,32nm,1.0s,mb5.0
EBIE Bielsa 28.89 174 P **P 19 26 22.1 +0.9**
comp=E,32nm,1.0s,mb5.0
KIS Kishinev 28.96 130 *e* **P 19 26 26.0 +4.3**
KIS LRM 19 37 42.0
comp=E,1µm,16.0s
ERUA La Rua 29.16 185 P **P 19 26 25.0 +1.5**
comp=E,30nm,1.2s,mb4.9
ERUA La Rua 29.16 185 P **P 19 26 25.0 +1.4**
ERUA pmax pmax
comp=Z,31nm,1.2s,mb4.9
ERUA La Rua 29.16 185 P **P 19 26 25.0 +1.4**
comp=Z,30nm,1.2s,mb4.9
CLLI Llivia 29.18 171 P **P 19 26 22.9 -0.8**
CLLI Llivia 29.18 171 P **P 19 26 22.9 -0.8**
CSOR Sort 29.24 172 P **P 19 26 26.0 +1.7**
comp=Z,61nm,1.4s,mb5.1
CSOR Sort 29.24 172 P **P 19 26 26.0 +1.7**
comp=Z,61nm,1.4s,mb5.1
EJON La Jonquera 29.26 170 P **P 19 26 24.5 0.0**
comp=Z,56nm,1.5s,mb5.1
EJON La Jonquera 29.26 170 P **P 19 26 24.5 +0.1**
comp=Z,56nm,1.5s,mb5.1
VALF Valcebollere 29.26 171 *eP* **P 19 26 26.4 +2.0**

VALF Valcebollere 29.26 171 *eP* **P 19 26 26.4 +2.0**
PLOR Plostina 29.52 134 ⇑*P* **P 19 26 33.7 +7.0**
PLOR Plostina 29.52 134 ⇑*P* **P 19 26 33.7 +7.0**
VRI Vrincioaia 29.52 134 ⇑*P* **P 19 26 29.4 +2.7**
VRI Vrincioaia 29.52 134 ⇑*P* **P 19 26 29.4 +2.7**
VRI Vrincioaia 29.52 134 ⇑*P* **P 19 26 29.4 +2.7**
VOIR 29.55 136 ⇑*P* **P 19 26 33.0 +6.0**
VOIR 29.55 136 ⇑*P* **P 19 26 33.0 +6.0**
ARU Arti 29.56 87 *eP* **P 19 26 22.1 -4.9**
ARU Arti 29.56 87 *d P* **P 19 26 21.9 -5.1**
ARU S **S 19 31 14.2 -7.3**
ARU pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
ECAL Calabor 29.60 184 P **P 19 26 29.4 +1.9**
comp=Z,49nm,1.4s,mb5.0
ECAL Calabor 29.60 184 P **P 19 26 29.4 +1.9**
comp=Z,49nm,1.4s,mb5.0
PGF Pioggiola 29.66 160 *eP* **P 19 26 27.9 -0.1**
PGF Pioggiola 29.66 160 *eP* **P 19 26 27.9 -0.1**
PGF Pioggiola 29.66 160 *eP* **P 19 26 27.9 -0.1**
MLR Muntele Rosu 29.70 135 ⇑*P* **P 19 26 29.2 +0.9**
MLR Muntele Rosu 29.70 135 ⇑*P* **P 19 26 29.2 +0.9**
MLR Muntele Rosu 29.70 135 ⇑*P* **P 19 26 29.2 +0.9**
PBRG Braganca 29.74 184 *eP* **P 19 26 34.6 +5.9**
comp=Z,55nm,1.9s,mb5.0
ESAC San Caprasio 29.84 175 P **P 19 26 30.4 +0.8**
comp=Z,117nm,1.9s,mb5.3
ESAC San Caprasio 29.84 175 P **P 19 26 30.4 +0.8**
comp=Z,117nm,1.9s,mb5.3
CFON Fontmartina 29.92 170 P **P 19 26 28.0 -2.3**
comp=Z,37nm,1.6s,mb4.9
MVO Moncorvo 30.38 185 *eP* **P 19 26 39.0 +4.6**
comp=Z,36nm,1.3s,mb5.0
MVO Moncorvo 30.38 185 P **P 19 26 36.1 +1.7**
MVO Moncorvo 30.38 185 *eP* **P 19 26 39.0 +4.6**
comp=Z,36nm,1.3s,mb5.0
ERTA Horta de San J 30.63 174 P **P 19 26 37.9 +1.3**
comp=Z,55nm,1.6s,mb5.1
ERTA Horta de San J 30.63 174 P **P 19 26 37.9 +1.3**
comp=Z,55nm,1.6s,mb5.1
GUD Guadarrama 30.86 180 P **P 19 26 39.4 +0.8**
comp=Z,35nm,1.2s,mb5.1
GUD Guadarrama 30.86 180 P **P 19 26 39.4 +0.7**
GUD pmax pmax
comp=Z,35nm,1.2s,mb5.1
GUD Guadarrama 30.86 180 P **P 19 26 39.4 +0.7**
comp=Z,35nm,1.2s,mb5.1
SCHQ Schefferville 31.00 271 P **P 19 26 38.4 -1.4**
comp=Z,9.0nm,0.8s,mb4.6,baz=53,slow=7.6,SNR=6.1
SCHQ LR LR 19 37 58.0
comp=Z,2µm,20.9s,MS4.8,baz=36,slow=34
SCHQ Schefferville 31.00 271 P **P 19 26 38.3 -1.5**
MTE Manteigas 31.16 185 *eP* **P 19 26 44.3 +3.0**
comp=Z,40nm,1.9s,mb4.9
MTE Manteigas 31.16 185 *eP* **P 19 26 44.3 +3.0**
comp=Z,40nm,1.9s,mb4.9
EMOS Mosqueruela 31.19 175 P **P 19 26 42.0 +0.4**
comp=Z,38nm,1.6s,mb5.0
EMOS Mosqueruela 31.19 175 P **P 19 26 42.0 +0.4**
comp=Z,38nm,1.6s,mb5.0
ZIMR 31.31 137 ⇑*P* **P 19 26 44.7 +2.2**
ZIMR 31.31 137 ⇑*P* **P 19 26 44.7 +2.2**
EPLA Plasencia 31.46 183 P **P 19 26 45.3 +1.4**
comp=Z,44nm,2.0s,mb4.9
EPLA Plasencia 31.46 183 P **P 19 26 45.3 +1.4**
EPLA pmax pmax
comp=Z,44nm,2.0s,mb4.9
EPLA Plasencia 31.46 183 P **P 19 26 45.3 +1.4**
comp=Z,44nm,2.0s,mb4.9
ESDC Sonseca Array 31.83 180 P **P 19 26 47.4 +0.2**
comp=Z,3.5nm,0.7s,mb4.3,baz=360,slow=8.9,SNR=15
ESDC LR LR 19 38 42.4
comp=Z,586nm,20.8s,MS4.2,baz=355,slow=35
ESDC Sonseca Array 31.83 180 P **P 19 26 46.4 -0.7**
comp=Z,17nm,1.1s,mb4.8
ESDC Sonseca Array 31.83 180 P **P 19 26 46.4 -0.8**
comp=Z,17nm,1.1s,mb4.8
VTS Vitosha 31.87 140 ⇑*P* **P 19 26 45.1 -2.4**
VTS Vitosha 31.87 140 ⇑*P* **P 19 26 45.1 -2.4**
ECHE Chera 31.95 176 P **P 19 26 50.1 +1.8**
comp=Z,30nm,1.2s,mb5.0
ECHE Chera 31.95 176 P **P 19 26 50.1 +1.9**
ECHE pmax pmax
comp=Z,30nm,1.2s,mb5.0
ECHE Chera 31.95 176 P **P 19 26 50.1 +1.9**
comp=Z,30nm,1.2s,mb5.0
PMRV Marv??o 32.12 185 *eP* **P 19 26 52.3 +2.5**
comp=Z,59nm,1.5s,mb5.2
PMRV Marv??o 32.12 185 *eP* **P 19 26 52.3 +2.5**
comp=Z,59nm,1.5s,mb5.2
EVIA Vianos 32.87 178 P **P 19 26 58.0 +1.6**
comp=Z,26nm,0.8s,mb5.2
EVIA Vianos 32.87 178 P **P 19 26 58.0 +1.7**
EVIA pmax pmax
comp=Z,26nm,0.8s,mb5.2
EVIA Vianos 32.87 178 P **P 19 26 58.0 +1.7**
comp=Z,26nm,0.8s,mb5.2
ETOB Tobarra 32.88 177 P **P 19 26 58.1 +1.7**
comp=Z,50nm,1.3s,mb5.3
ETOB Tobarra 32.88 177 P **P 19 26 58.1 +1.7**
comp=Z,50nm,1.3s,mb5.3
ANN Anapa 33.24 121 *eP* **P 19 27 01.6 +2.1**
ANN *eS* **S 19 32 23.2 +4.1**
ANN pmax pmax
comp=Z,47nm,1.1s,mb5.3
ANN MLR MLR
comp=Z,2µm,13.0s,MS5.1
ANN Anapa 33.24 121 *eP* **P 19 27 01.6 +2.1**
comp=Z,47nm,1.1s,mb5.3
EADA Adamuz 33.34 181 P **P 19 27 01.7 +1.3**
comp=Z,84nm,1.9s,mb5.3
EADA Adamuz 33.34 181 P **P 19 27 01.7 +1.3**
comp=Z,84nm,1.9s,mb5.3
EBAN Banos Encina 33.34 180 P **P 19 27 02.3 +1.9**
comp=Z,16nm,0.8s,mb5.0
EBAN Banos Encina 33.34 180 P **P 19 27 02.3 +1.9**
EBAN pmax pmax
comp=Z,16nm,0.8s,mb5.0
EBAN Banos Encina 33.34 180 P **P 19 27 02.3 +1.9**
comp=Z,16nm,0.8s,mb5.0
EMUR La Murta 33.69 176 P **P 19 27 04.8 +1.4**
comp=Z,57nm,1.2s,mb5.4
EMUR La Murta 33.69 176 P **P 19 27 04.8 +1.3**
comp=Z,57nm,1.2s,mb5.4
EHUE Huescar 33.70 178 P **P 19 27 05.0 +1.5**
comp=Z,40nm,1.3s,mb5.2
EHUE Huescar 33.70 178 P **P 19 27 05.0 +1.5**
EHUE pmax pmax
comp=Z,40nm,1.3s,mb5.2
EHUE Huescar 33.70 178 P **P 19 27 05.0 +1.5**
comp=Z,40nm,1.3s,mb5.2
EQES Quesada 33.70 179 P **P 19 27 05.3 +1.8**
comp=Z,48nm,1.2s,mb5.3
EQES Quesada 33.70 179 P **P 19 27 05.3 +1.7**
comp=Z,48nm,1.2s,mb5.3
AKTK Aktyubinsk 34.46 94 P **P 19 27 11.9 +1.9**
AKTK LR LR 19 40 54.2
AKTK Aktyubinsk 34.46 94 P **P 19 27 11.9 +1.9**
comp=Z,1µm,21.0s
AKTO Aktyubinsk 34.46 94 P **P 19 27 11.9 +1.9**
comp=Z,3.2nm,0.9s,mb4.2,baz=326,slow=12,SNR=6.0
AKTO LR LR 19 40 54.2
comp=Z,1µm,21.0s,MS4.7,baz=347,slow=36
AKTO Aktyubinsk 34.46 94 P **P 19 27 11.9 +1.9**
AKTO MLR MLR
comp=Z,1µm,21.0s,MS4.7
EGUA Guajares 34.67 179 P **P 19 27 13.9 +2.0**
comp=Z,224nm,0.9s,mb6.1
EGUA Guajares 34.67 179 P **P 19 27 13.9 +2.0**
EGUA Guajares 34.67 179 P **P 19 27 13.9 +2.0**
comp=Z,224nm,0.9s,mb6.1
VAE Valguarnera 35.33 154 LR LR 19 41 27.1
comp=Z,948nm,18.7s,MS4.6,baz=277,slow=36
KIV Kislovodsk 35.50 115 *eP* **P 19 27 21.7 +2.6**
comp=Z,28nm,1.2s,mb5.1
KIV Kislovodsk 35.50 115 *eP* **P 19 27 20.1 +1.0**
KIV *eS* **S 19 32 56.1 +2.1**
KIV pmax pmax
comp=Z,22nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,967nm,15.0s,MS4.7
KIV Kislovodsk 35.50 115 *eP* **P 19 27 20.1 +1.0**
comp=Z,22nm,1.1s,mb5.0
BRVK Borovoye 36.12 80 *eP* **P 19 27 24.6 +0.4**
comp=Z,24nm,1.5s,mb4.9
BRVK Borovoye 36.12 80 *eP* **P 19 27 24.6 +0.4**

BRVK pmax pmax
comp=Z,24nm,1.5s,mb4.9
BRVK Borovoye 36.12 80 *eP* **P 19 27 24.6 +0.4**
comp=Z,24nm,1.5s,mb4.9
BVAR Borovoye Array 36.18 80 P **P 19 27 25.2 +0.5**
comp=Z,3.4nm,0.8s,mb4.3,baz=317,slow=8.0,SNR=9.4
BVAR Borovoye Array 36.18 80 P **P 19 27 25.2 +0.4**
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BVAR Borovoye Array 36.18 80 P **P 19 27 25.2 +0.4**
comp=Z,3.0nm,0.8s,mb4.3
KEST Kesra 36.45 162 P **P 19 27 28.2 +1.0**
comp=Z,3.3nm,1.0s,mb4.2,baz=276,slow=5.5,SNR=6.3
KEST LR LR 19 42 28.3
comp=Z,492nm,20.6s,MS4.3,baz=170,slow=36
KEST Kesra 36.45 162 *eP* **P 19 27 27.9 +0.7**
KEST Kesra 36.45 162 *eP* **P 19 27 27.9 +0.7**
INK Inuvik 36.53 331 P **P 19 27 29.0 +1.4**
comp=Z,9.3nm,1.0s,mb4.6,baz=14,slow=12,SNR=4.2
INK Inuvik 36.53 331 P **P 19 27 29.0 +1.4**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 36.53 331 P **P 19 27 29.0 +1.4**
comp=Z,9.0nm,1.0s,mb4.5
BRTR Keskin Array B 36.99 129 P **P 19 27 32.5 +0.7**
comp=Z,2.9nm,0.8s,mb4.1,baz=328,slow=6.3,SNR=14
BRTR PP PP 19 28 59.1 +3.3
comp=Z,1.9nm,1.0s,baz=334,slow=11,SNR=3.8
BRTR LR LR 19 44 49.8
comp=Z,1µm,18.1s,MS4.7,baz=352,slow=40
BRTR Keskin Array B 36.99 129 P **P 19 27 32.5 +0.7**
BRTR 19 28 59.1
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR MLR MLR
comp=Z,1µm,18.1s
BRTR Keskin Array B 36.99 129 P **P 19 27 32.5 +0.7**
comp=Z,3.0nm,0.8s,mb4.2
YKA Yellowknife Ar 38.14 315 P **P 19 27 41.9 +0.6**
comp=Z,3.8nm,0.8s,mb4.2,baz=30,slow=8.8,SNR=7.4
YKA PcP PcP 19 29 54.3 -1.3
comp=Z,3.1nm,1.0s,baz=34,slow=2.8,SNR=3.5
YKA LR LR 19 43 15.1
comp=Z,178nm,18.3s,MS3.9,baz=130,slow=36
YKA Yellowknife Ar 38.14 315 P **P 19 27 41.9 +0.6**
YKA 19 29 54.3
YKA pmax pmax
comp=Z,4.0nm,0.9s
YKA MLR MLR
comp=Z,178nm,18.3s
YKA Yellowknife Ar 38.14 315 P **P 19 27 41.9 +0.6**
comp=Z,4.0nm,0.9s,mb4.2
YKA Yellowknife Ar 38.14 315 PcP PcP 19 29 54.3 -1.4
NVS Novosibirsk 38.57 68 *i P* **P 19 27 46.0 +1.0**
NVS Novosibirsk 38.57 68 *i P* **P 19 27 46.0 +1.0**
MALT Malatya 39.55 124 *eP* **P 19 27 54.7 +1.3**
comp=Z,30nm,1.4s,mb4.8
MALT Malatya 39.55 124 ⇓*P* **P 19 27 55.4 +2.0**
MALT Malatya 39.55 124 ⇓*P* **P 19 27 55.3 +1.9**
MALT Malatya 39.55 124 *eP* **P 19 27 54.7 +1.3**
comp=Z,30nm,1.4s,mb4.8
GNI Garni 39.60 115 P **P 19 27 56.4 +2.6**
comp=Z,3.5nm,0.6s,mb4.3,baz=332,slow=5.1,SNR=4.4
GNI LR LR 19 44 52.0
comp=Z,1µm,18.9s,MS4.8,baz=340,slow=37
GNI Garni 39.60 115 *eP* **P 19 27 54.7 +0.9**
GNI pmax pmax
comp=Z,13nm,1.2s
GNI Garni 39.60 115 *eP* **P 19 27 54.7 +0.9**
comp=Z,13nm,1.2s,mb4.5
ZALV Zalesovo Beam 39.81 67 P **P 19 27 57.7 +2.4**
comp=Z,1.0nm,0.6s,mb3.7,baz=333,slow=8.7,SNR=6.4
ZALV Zalesovo Beam 39.81 67 P **P 19 27 57.8 +2.4**
BILL Biiibino 40.63 6⇑*eP* **P 19 28 06.0 +4.0**
BILL *e* 19 29 36.9
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
BILL MLR MLR
comp=Z,700nm,18.0s,MS4.6
KURK Kurchatov 40.75 75 *eP* **P 19 28 02.8 -0.4**
comp=Z,20nm,1.2s,mb4.6
KURK Kurchatov 40.75 75 *eP* **P 19 28 05.0 +1.8**
KURK pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
KURK Kurchatov 40.75 75 P **P 19 28 05.0 +1.8**
comp=Z,72nm,1.1s,mb5.2,SNR=5.7
KURK Kurchatov 40.75 75 *eP* **P 19 28 02.8 -0.4**
comp=Z,20nm,1.2s,mb4.6
EGAK Eagle 40.96 334 *eP* **P 19 28 05.4 +0.6**
comp=Z,16nm,1.3s,mb4.5
EGAK Eagle 40.96 334 *eP* **P 19 28 05.4 +0.7**
comp=Z,16nm,1.3s,mb4.5
ILAR Eielson Array 41.73 337 P **P 19 28 11.4 +0.4**
comp=Z,2.4nm,0.8s,mb3.9,baz=9.6,slow=7.2,SNR=10
ILAR PcP PcP 19 30 05.6 -1.5
comp=Z,1.6nm,1.0s,baz=341,slow=3.8,SNR=5.7
ILAR LR LR 19 47 09.8
comp=Z,872nm,19.0s,MS4.7,baz=42,slow=38
ILAR Eielson Array 41.73 337 P **P 19 28 11.4 +0.4**
ILAR 19 30 05.6
ILAR pmax pmax
comp=Z,2.0nm,0.8s
ILAR MLR MLR
comp=Z,873nm,19.0s
ILAR Eielson Array 41.73 337 P **P 19 28 11.4 +0.4**
comp=Z,2.0nm,0.8s,mb3.8
ILAR Eielson Array 41.73 337 PcP PcP 19 30 05.6 -1.5
FFC Flin Flon 41.78 300 *eP* **P 19 28 10.6 -1.0**
comp=Z,28nm,1.1s,mb4.8
FFC Flin Flon 41.78 300 *ceP* **P 19 28 13.6 +2.0**
FFC Flin Flon 41.78 300 P **P 19 28 11.1 -0.5**
comp=Z,135nm,1.1s,mb5.5,SNR=5.3
FFC Flin Flon 41.78 300 *eP* **P 19 28 13.6 +2.0**
YAK Yakutsk 43.01 30⇑*eP* **P 19 28 20.7 -0.8**
YAK Yakutsk 43.01 30 *eP* **P 19 28 20.7 -0.8**
PAX Paxson 43.27 335 *eP* **P 19 28 25.0 +1.3**
comp=Z,7.2nm,1.1s,mb4.3
PAX Paxson 43.27 335 *eP* **P 19 28 25.0 +1.4**
PAX pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
PAX Paxson 43.27 335 *eP* **P 19 28 25.0 +1.4**
comp=Z,7.2nm,1.1s,mb4.3
BOD Bodaibo 43.96 43 *eP* **P 19 28 27.8 -1.4**
BOD pmax pmax
comp=Z,29nm,1.5s,mb4.8
BOD Bodaibo 43.96 43 *eP* **P 19 28 27.8 -1.4**
comp=Z,29nm,1.5s,mb4.8
ULM Lac du Bonnet 43.99 293 P **P 19 28 29.6 0.0**
comp=Z,7.6nm,0.9s,mb4.4,baz=36,slow=7.6,SNR=5.4
ULM LR LR 19 46 32.2
comp=Z,1µm,18.0s,MS4.8,baz=61,slow=36
ULM Lac du Bonnet 43.99 293 P **P 19 28 29.6 0.0**
SEY Seymchan 44.92 15 *eP* **P 19 28 38.7 +1.9**
SEY Seymchan 44.92 15 *eP* **P 19 28 38.7 +1.9**
ASF Jabal al Asfar 44.97 128 P **P 19 28 39.4 +1.8**
comp=Z,4.1nm,0.8s,mb4.3,baz=82,slow=1.8,SNR=8.0
ASF Jabal al Asfar 44.97 128 P **P 19 28 39.4 +1.8**
ASF pmax pmax
comp=Z,4.0nm,0.8s
MK31 Makanchi Array 45.35 75 *eP* **P 19 28 39.6 -0.9**
MK31 Makanchi Array 45.35 75 *eP* **P 19 28 39.6 -0.9**
MK31 Makanchi Array 45.35 75 *eP* **P 19 28 39.6 -0.9**
MKAR Makanchi Array 45.35 75 P **P 19 28 41.6 +1.1**
comp=Z,2.9nm,1.0s,mb4.1,baz=338,slow=5.8,SNR=6.2
MKAR LR LR 19 48 22.4
comp=Z,633nm,18.4s,MS4.6,baz=336,slow=37
MKAR Makanchi Array 45.35 75 P **P 19 28 41.6 +1.1**
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MKAR MLR MLR
comp=Z,633nm,18.4s
AGMN Agassiz Nation 45.73 291 *eP* **P 19 28 44.2 +0.8**
comp=Z,52nm,1.3s,mb5.3
AGMN Agassiz Nation 45.73 291 *eP* **P 19 28 44.2 +0.8**
comp=Z,52nm,1.3s,mb5.3
EKS2 Erkin-Say 46.38 85 *eP* **P 19 28 49.1 +0.4**
comp=Z,5.8nm,1.0s,mb4.5
EKS2 Erkin-Say 46.38 85 *eP* **P 19 28 49.1 +0.5**
comp=Z,5.8nm,1.0s,mb4.5
MOY Mondy 46.39 56 *eP* **P 19 28 52.1 +3.5**
MOY pmax pmax
comp=Z,49nm,2.6s,mb5.0
TKM2 Tokmak 2 46.73 83 *eP* **P 19 28 51.4 +0.1**
comp=Z,18nm,1.3s,mb4.8

TKM2	Tokmak 2	46.73	83	eP	P	19 28 51.4	+0.1
TKM2				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
TKM2	Tokmak 2	46.73	83	eP	P	19 28 51.4	+0.1
	comp=Z,18nm,1.3s,mb4.8						
AML	Almayashu	46.84	85	eP	P	19 28 54.7	+2.5
	comp=Z,15nm,1.0s,mb4.9						
AML	Almayashu	46.84	85	eP	P	19 28 54.7	+2.5
	comp=Z,15nm,1.0s,mb4.9						
CLNS	Chul'man	47.08	36	eP	P	19 28 53.4	-0.5
CLNS				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
CLNS				pmax	pmax		
	comp=N,25nm,1.1s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.0s						
CLNS	Chul'man	47.08	36	eP	P	19 28 53.4	-0.5
	comp=E,25nm,1.1s,mb5.1						
KZA	Kyzart	47.38	84	eP	P	19 29 01.1	+4.7
	comp=E,21nm,1.2s,mb4.9						
A24A	Westby	47.53	298	⇑P	P	19 28 56.9	-0.6
	baz=47						
ZAK	Zakamensk	48.17	55	eP	P	19 29 04.3	+1.9
ZAK				e		19 30 27.7	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
ZAK	Zakamensk	48.17	55	eP	P	19 29 04.3	+1.9
	comp=Z,3.0nm,1.4s,mb4.1						
B23A	Brockton	48.23	299	⇓P	P	19 29 02.9	0.0
	baz=48						
A19A	Klindworth Far	48.84	302	⇓P	P	19 29 07.9	+0.2
	baz=49						
TAM	Tamanrasset	48.97	168	eP	P	19 29 09.9	+1.0
	comp=Z,24nm,1.4s,mb5.0						
TAM	Tamanrasset	48.97	168	eP	P	19 29 09.9	+1.0
TAM				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.0						
TAM	Tamanrasset	48.97	168	eP	P	19 29 09.9	+1.0
	comp=Z,24nm,1.4s,mb5.0						
ACSO	Alum Creek Sta	49.00	275	eP	P	19 29 10.9	+1.9
	comp=Z,9.1nm,0.8s,mb4.9						
ACSO	Alum Creek Sta	49.00	275	eP	P	19 29 10.9	+2.0
	comp=Z,9.1nm,0.8s,mb4.9						
B20A	Solberg Farm,	49.09	301	⇓P	P	19 29 09.5	0.0
	baz=49						
C22A	Vida	49.13	299	⇑P	P	19 29 09.9	0.0
	baz=49						
A18A	Metzger Ranch,	49.15	303	⇑P	P	19 29 09.7	-0.3
	baz=49						
CIT	Chita	49.20	46	eP	P	19 29 08.8	-1.6
CIT	Chita	49.20	46	eP	P	19 29 08.8	-1.6
C21A	Desert Coulee	49.40	300	⇓P	P	19 29 12.0	+0.1
	baz=49						
D23A	Lindsay	49.46	298	⇑P	P	19 29 12.3	-0.1
	baz=49						
WMQ	Urumqi	49.69	72	eP	P	19 29 15.0	+0.8
WMQ				sP	sP	19 29 22.0	+3.4
WMQ				PP	PP	19 31 10.0	+1.7
WMQ				S	S	19 36 22.0	-0.4
WMQ				ScS	ScS	19 39 03.0	-2.2
WMQ				SS	SS	19 39 52.0	-2.1
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,79nm,5.0s						
WMQ				LR	LR		
	comp=N,900nm,16.0s,MS5.0						
WMQ				LR	LR		
	comp=E,880nm,16.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,940nm,16.0s,MS4.9						
D22A	Cohagen	49.76	299	⇑P	P	19 29 14.9	+0.2
	baz=50						
A15A	Johnson Ranch,	49.86	305	⇑P	P	19 29 15.2	-0.2
	baz=50						
KSH	Kashi	49.93	84	eP	P	19 29 20.8	+4.7
KSH				epP	pP	19 29 25.5	+6.3
KSH				esP	sP	19 29 27.8	+7.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KSH				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
KSH				LR	LR		
	comp=N,240nm,5.8s						
KSH				LR	LR		
	comp=E,400nm,7.3s						
KSH				LR	LR		
	comp=Z,360nm,12.8s,MS4.6						
EGMT	Eagleton	49.94	302	⇓P	P	19 29 16.0	0.0
	baz=50						
EGMT	Eagleton	49.94	302	eP	P	19 29 14.9	-1.1
	comp=Z,58nm,1.5s,mb5.4						
EGMT	Eagleton	49.94	302	eP	P	19 29 14.9	-1.2
	comp=Z,58nm,1.5s,mb5.4						
A14A	Double T Ranch	50.05	306	⇑P	P	19 29 15.8	-1.1
	baz=50,SNR=11						
D21A	La Casta Ranch	50.06	300	⇑P	P	19 29 16.5	-0.5
	baz=50						
ECSD	EROS Data Cent	50.08	289	eP	P	19 29 15.5	-1.6
	comp=Z,45nm,1.6s,mb5.2						
ECSD	EROS Data Cent	50.08	289	eP	P	19 29 15.5	-1.6
	comp=Z,45nm,1.6s,mb5.2						
WALA	Waterton Lakes	50.09	306	eP	P	19 29 16.1	-1.0
	comp=Z,0.4nm,1.1s,mb3.4						
WALA	Waterton Lakes	50.09	306	eP	P	19 29 16.1	-1.1
	comp=Z,0.4nm,1.1s,mb3.4						
LAO	LASA Array	50.19	299	eP	P	19 29 19.6	+1.7
	comp=Z,40nm,1.5s,mb5.2						
LAO	LASA Array	50.19	299	eP	P	19 29 19.6	+1.6
	comp=Z,40nm,1.5s,mb5.2						
A13A	Flathead Natio	50.34	307	⇑P	P	19 29 18.2	-0.8
	baz=50						
D20A	Manuel Ranch,	50.36	301	⇑P	P	19 29 17.8	-1.4
	baz=50						
B15A	Bradely Ranch,	50.43	305	⇑P	P	19 29 18.1	-1.7
	baz=50,SNR=6.4						
D19A	Cripps Ranch,	50.49	301	⇑P	P	19 29 19.1	-1.1
	baz=50,SNR=7.5						
B14A	Marquette Ranc	50.57	305	⇑P	P	19 29 19.2	-1.5
	baz=50						
C17A	Wharram Farm,	50.57	303	⇑P	P	19 29 19.7	-1.1
	baz=50						
E20A	Meyer Farm, Mu	50.89	300	⇓P	P	19 29 22.6	-0.6
	baz=51						
C15A	Salmond Ranch,	50.93	305	⇓P	P	19 29 22.9	-0.7
	baz=51						
D17A	Six Diamond Ra	50.99	303	⇓P	P	19 29 23.5	-0.5
	baz=51						
E19A	Rath Farm, Rou	51.11	301	⇓P	P	19 29 24.4	-0.5
	baz=51						
C14A	Swan Lake	51.24	306	⇓P	P	19 29 25.4	-0.4
	baz=51						
SONM	Songino Array	51.32	54	P	P	19 29 27.5	+1.1
	comp=Z,1.7nm,1.1s,mb3.9,baz=316,slow=9.4,SNR=7.2						
SONM				PcP	PcP	19 30 42.6	+1.5
	comp=Z,0.3nm,0.4s,baz=270,slow=1.4,SNR=2.3						
SONM	Songino Array	51.32	54	P	P	19 29 27.5	+1.1
SONM						19 30 42.6	
SONM	Songino Array	51.32	54	P	P	19 29 27.5	+1.1
SONM	Songino Array	51.32	54	PcP	PcP	19 30 42.6	+1.5
D16A	Dana Ranch, Ca	51.34	303	⇓P	P	19 29 25.9	-0.7
	baz=51						
BSMT	Bassoo Peak	51.43	306	eP	P	19 29 27.3	0.0
	comp=Z,18nm,1.4s,mb4.8						
BSMT	Bassoo Peak	51.43	306	eP	P	19 29 27.3	0.0
	comp=Z,18nm,1.4s,mb4.8						
ULN	Ulaanbaatar	51.46	53	eP	P	19 29 27.6	+0.1
	comp=Z,174nm,2.7s,mb5.5						
ULN	Ulaanbaatar	51.46	53	eP	P	19 29 27.6	+0.1
ULN				pmax	pmax		
	comp=Z,173nm,2.7s,mb5.5						
ULN	Ulaanbaatar	51.46	53	eP	P	19 29 27.6	+0.1
	comp=Z,174nm,2.7s,mb5.5						
C13A	Hot Springs	51.53	306	⇓P	P	19 29 26.9	-1.2
	baz=51,SNR=12						
SWMT	Swartz Lake	51.54	306	eP	P	19 29 29.8	+1.7
	comp=Z,18nm,1.4s,mb4.8						
SWMT	Swartz Lake	51.54	306	eP	P	19 29 29.8	+1.7
	comp=Z,18nm,1.4s,mb4.8						
D15A	Lincoln	51.59	304	⇑P	P	19 29 27.7	-0.8
	baz=51						
SLMT	Seeley Lake	51.66	305	eP	P	19 29 30.2	+1.2
	comp=Z,24nm,1.2s,mb5.0						
SLMT	Seeley Lake	51.66	305	eP	P	19 29 30.2	+1.2
	comp=Z,24nm,1.2s,mb5.0						
E17A	Martinsdale	51.68	303	⇓P	P	19 29 28.4	-0.8
	baz=51						
F19A	Roth Farm, Mol	51.71	301	⇓P	P	19 29 29.2	-0.3
	baz=51						
D14A	Greenough	51.81	305	⇑P	P	19 29 30.2	+0.1
	baz=52						
F18A	Big Timber	51.88	301	⇓P	P	19 29 29.4	-1.3
	baz=52,SNR=9.1						
CHMT	Chamberlain Mo	51.90	305	eP	P	19 29 28.4	-2.4
	comp=Z,13nm,1.4s,mb4.7						
RSSD	Black Hills	51.92	296	eP	P	19 29 32.2	+1.2
	comp=Z,16nm,1.4s,mb4.8						
RSSD	Black Hills	51.92	296	eP	P	19 29 32.2	+1.2
RSSD				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
RSSD	Black Hills	51.92	296	eP	P	19 29 32.2	+1.2
	comp=Z,16nm,1.4s,mb4.8						
GCMT	Greycliff	51.97	301	eP	P	19 29 33.1	+1.7
	comp=Z,3.5nm,0.7s,mb4.4						
GCMT	Greycliff	51.97	301	eP	P	19 29 33.1	+1.8
	comp=Z,3.5nm,0.7s,mb4.4						
D13A	Huson	52.05	306	⇓P	P	19 29 31.2	-0.7
	baz=52						
G20A	Bridger	52.09	300	⇑P	P	19 29 32.0	-0.2
	baz=52						
F17A	Fitzpatrick Pl	52.13	302	⇑P	P	19 29 32.2	-0.4
	baz=52						
MSO	Missoula	52.16	305	⇑P	P	19 29 33.2	+0.5
	baz=52						
E15A	Deer Lodge	52.19	304	⇑P	P	19 29 33.1	+0.2
	baz=52						
KBL	Kabul	52.27	93	eP	P	19 29 37.6	+3.9
	comp=Z,7.4nm,1.2s,mb4.5						
KBL	Kabul	52.27	93	eP	P	19 29 37.6	+3.9
KBL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
D12A	Red Ives Fores	52.32	306	⇓P	P	19 29 33.5	-0.4
	baz=52						
RLMT	Red Lodge	52.48	301	eP	P	19 29 37.3	+2.2
	comp=Z,18nm,1.5s,mb4.8						
RLMT	Red Lodge	52.48	301	eP	P	19 29 37.3	+2.2
	comp=Z,18nm,1.5s,mb4.8						
E13A	Victor	52.58	305	⇑P	P	19 29 35.4	-0.4
	baz=52						
BOZ	Bozeman (W)	52.64	303	⇑P	P	19 29 36.0	-0.3
	baz=52						
BOZ	Bozeman (W)	52.64	303	eP	P	19 29 39.7	+3.4
	comp=Z,6.8nm,1.3s,mb4.4						
BOZ	Bozeman (W)	52.64	303	eP	P	19 29 39.7	+3.4
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
BOZ	Bozeman (W)	52.64	303	eP	P	19 29 39.7	+3.4
	comp=Z,6.8nm,1.3s,mb4.4						
F15A	Butte	52.69	304	⇑P	P	19 29 36.6	0.0
	baz=52						
G17A	Pierce Place,	52.70	302	⇑P	P	19 29 36.6	-0.1
	baz=52						
H20A	Greybull	52.71	299	⇓P	P	19 29 36.8	0.0
	baz=52						
E12A	Beaver Dam Sad	52.96	306	⇑P	P	19 29 38.1	-0.5
	baz=53						
H18A	Shoshone NF, C	52.99	301	⇓P	P	19 29 38.8	-0.1
	baz=53						
I21A	Big Trails, Te	53.13	298	⇓P	P	19 29 38.6	-1.3
	baz=53,SNR=8.7						
F13A	Darby	53.22	305	⇓P	P	19 29 40.6	0.0
	baz=53						
J22A	Midwest	53.27	297	⇓P	P	19 29 41.0	0.0
	baz=53						
SIUC	Southern Illin	53.27	280	eP	P	19 29 40.5	-0.5
	comp=Z,40nm,0.9s,mb5.3						
SIUC	Southern Illin	53.27	280	eP	P	19 29 40.5	-0.6
	comp=Z,40nm,0.9s,mb5.3						
G15A	Dillon	53.31	303	⇓P	P	19 29 41.5	+0.2
	baz=53						
QLMT	Earthquake Lak	53.34	302	eP	P	19 29 43.4	+1.9
	comp=Z,1.2nm,0.7s,mb3.9						
QLMT	Earthquake Lak	53.34	302	eP	P	19 29 43.4	+2.0
	comp=Z,1.2nm,0.7s,mb3.9						
I19A	Meeteetse	53.40	300	⇓P	P	19 29 41.7	-0.2
	baz=53						
FVM	French Village	53.41	281	eP	P	19 29 41.6	-0.4
	comp=Z,16nm,0.8s,mb5.0						
FVM	French Village	53.41	281	eP	P	19 29 41.6	-0.5
FVM				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
FVM	French Village	53.41	281	eP	P	19 29 41.6	-0.5
	comp=Z,16nm,0.8s,mb5.0						
TKL	Tuckaleechee C	53.43	274	eP	P	19 29 42.9	+0.7
TKL	Tuckaleechee C	53.43	274	eP	P	19 29 42.9	+0.7
TKL	Tuckaleechee C	53.43	274	eP	P	19 29 42.9	+0.7
F12A	Elk City	53.49	306	⇓P	P	19 29 42.3	-0.3
	baz=53						
MCMT	McKenzie Canyo	53.72	303	P	P	19 29 44.4	+0.1
	comp=Z,7.6nm,1.5s,mb4.4						
MCMT	McKenzie Canyo	53.72	303	P	P	19 29 44.4	+0.1
	comp=Z,7.6nm,1.5s,mb4.4						
J20A	Shoshoni	53.78	299	⇑P	P	19 29 43.9	-0.8
	baz=54,SNR=10						
G13A	Cobalt	53.84	305	⇓P	P	19 29 44.6	-0.5
	baz=54						
H15A	Lima	53.86	303	⇑P	P	19 29 45.0	-0.3
	baz=54						
K22A	Casper	53.98	297	⇓P	P	19 29 45.5	-0.7
	baz=54						
H14A	Leadore	54.05	304	⇑P	P	19 29 46.0	-0.8
	baz=54						
IMW	Indian Meadow	54.07	301	eP	P	19 29 48.4	+1.6
	comp=Z,18nm,1.3s,mb4.8						
IMW	Indian Meadow	54.07	301	eP	P	19 29 48.4	+1.6
	comp=Z,18nm,1.3s,mb4.8						
G12A	Big Creek, Yel	54.10	306	⇑P	P	19 29 45.9	-1.2
	baz=54,SNR=5.2						
J19A	Crowheart	54.13	300	⇑P	P	19 29 46.8	-0.5
	baz=54,SNR=10.0						
K21A	Alcova	54.21	298	⇓P	P	19 29 47.0	-0.9
	baz=54						
L23A	Garrett	54.24	296	⇓P	P	19 29 48.2	+0.1
	baz=54						
KSU1	Kansas State U	54.31	287	eP	P	19 29 47.2	-1.4
	comp=Z,77nm,1.4s,mb5.4						
KSU1	Kansas State U	54.31	287	eP	P	19 29 47.2	-1.4
	comp=Z,77nm,1.4s,mb5.4						
H13A	Challis	54.34	304	⇑P	P	19 29 47.8	-1.0
	baz=54,SNR=7.1						
J18A	Kendall Valley	54.45	300	⇓P	P	19 29 49.6	0.0
	baz=54						
K19A	Absolon Red Bu	54.48	299	⇑P	P	19 29 49.9	0.0
	baz=54						
K20A	Yellowstone Ra	54.49	299	⇑P	P	19 29 50.0	0.0
	baz=54						
H12A	Diamond D Ranc	54.51	305	⇓P	P	19 29 50.1	+0.1
	baz=54						
L22A	Ellis Ranch, M	54.53	297	⇓P	P	19 29 49.9	-0.3
	baz=54						
RRI2	Red Ridge	54.68	301	eP	P	19 29 53.0	+1.7
	comp=Z,5.3nm,0.8s,mb4.6						
I14A	Mackay	54.72	303	⇓P	P	19 29 51.2	-0.4
	baz=54						
BW06	Boulder Array	54.73	300	⇓P	P	19 29 51.4	-0.2
	baz=54						
M23A	Laramie	54.84	296	⇓P	P	19 29 52.4	-0.1
	baz=55						
L21A	Rawlins	54.86	297	⇓P	P	19 29 52.0	-0.6
	baz=55						
G08A	Pilot Rock	54.87	309	⇓P	P	19 29 51.9	-0.8
	baz=55,SNR=5.8						
I13A	Wildhorse Cree	54.91	304	⇓P	P	19 29 52.5	-0.4
	baz=55						
J15A	Blackfoot	54.93	302	⇑P	P	19 29 53.6	+0.5
	baz=55						
L20A	Wamsutter	55.09	298	⇓P	P	19 29 54.9	+0.6
	baz=55						
M22A	Cedar Creek Ra	55.16	297	⇓P	P	19 29 54.7	-0.1
	baz=55						
L19A	Farson	55.29	299	⇓P	P	19 29 55.8	0.0
	baz=55						
N23A	Red Feather La	55.44	296	⇑P	P	19 29 56.6	-0.2
	baz=55						
CBKS	Cedar Bluff	55.52	289	eP	P	19 29 58.9	+1.4
	comp=Z,73nm,1.5s,mb5.5						
CBKS	Cedar Bluff	55.52	289	eP	P	19 29 58.9	+1.5
CBKS				pmax	pmax		
	comp=Z,73nm,1.5s,mb5.5						
CBKS	Cedar Bluff	55.52	289	eP	P	19 29 58.9	+1.5
	comp=Z,73nm,1.5s,mb5.5						
M20A	Sweetwater, Wa	55.53	298	⇓P	P	19 29 57.8	+0.4
	baz=55						
N22A	Wattenberg Ran	55.67	296	⇓P	P	19 29 58.8	+0.3
	baz=55						
I07A	Izee	56.14	308	⇓P	P	19 30 01.6	-0.2
	baz=56						
N20A	Spence Gulch,	56.16	298	⇑P	P	19 30 01.1	-0.8
	baz=56,SNR=12						
OXF	Oxford	56.27	278	eP	P	19 30 01.9	-0.9
	comp=Z,64nm,1.2s,mb5.5						
OXF	Oxford	56.27	278	eP	P	19 30 02.0	-0.9
OXF				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.5						
OXF	Oxford	56.27	278	eP	P	19 30 02.0	-0.9
	comp=Z,64nm,1.2s,mb5.5						
O22A	Kremmling	56.29	296	⇑P	P	19 30 02.2	-0.7
	baz=56,SNR=6.1						
ISCO	Idaho Springs	56.35	295	⇓P	P	19 30 03.2	-0.1
	baz=56						
HWUT	Hardware Ranch	56.36	301	eP	P	19 30 03.9	+0.5
	comp=Z,4.4nm,0.9s,mb4.5						
HWUT	Hardware Ranch	56.36	301	eP	P	19 30 03.9	+0.5
	comp=Z,4.3nm,0.9s,mb4.5						
L14A	Malta	56.42	302	⇓P	P	19 30 03.3	-0.5
	baz=56						
M15A	Larsen Ranch,	56.74	302	⇑P	P	19 30 04.9	-1.2
	baz=56						
N17A	Moffit Pass	56.78	300	⇓P	P	19 30 05.5	-0.8
	baz=56						
O20A	White River Ci	56.80	297	⇓P	P	19 30 06.8	+0.3
	baz=56						
P23A	Jefferson	56.81	295	⇑P	P	19 30 06.4	-0.3
	baz=56						
O19A	Miners Draw (B	56.90	298	⇑P	P	19 30 07.2	-0.1
	baz=57						
N16A	Rees Ranch, Co	57.00	300	⇓P	P	19 30 07.8	-0.1
	baz=57						
GTA	Gaotai	57.32	63	P	P	19 30 12.3	+2.1
GTA				pP	pP	19 30 16.8	+3.4
GTA				sP	sP	19 30 19.3	+4.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.9s,mb4.2						
GTA				pmax	pmax		
	comp=Z,440nm,5.7s						
GTA				LR	LR		
	comp=N,440nm,17.5s,MS4.8						
GTA				LR	LR		
	comp=E,550nm,17.1s,MS4.8						
GTA				LR	LR		
	comp=Z,560nm,17.5s,MS4.7						
SMCO	Snowmass	57.32	296	P	P	19 30 09.1	-1.1
	comp=Z,3.6nm,0.4s,mb4.8						
O17A	Robinson Place	57.45	300	⇓P	P	19 30 10.7	-0.4
	baz=57,SNR=5.9						
P19A	Cripple Cowboy	57.47	298	⇓P	P	19 30 10.9	-0.4
	baz=57,SNR=7.1						
R25A	Fountain Ranch	57.49	293	⇑P	P	19 30 11.9	+0.4
	baz=57						
MIAR	Mount Ida	57.56	282	eP	P	19 30 11.6	-0.3
	comp=Z,55nm,1.4s,mb5.4						
MIAR	Mount Ida	57.56	282	eP	P	19 30 11.6	-0.4
MIAR				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.4						
MIAR	Mount Ida	57.56	282	eP	P	19 30 11.6	-0.4
	comp=Z,55nm,1.4s,mb5.4						
K05A	Summer Lake	57.76	309	⇑P	P	19 30 13.0	-0.3
	baz=58						
P18A	Preston Nutter	57.84	299	⇓P	P	19 30 13.2	-0.7
	baz=58						
S25A	Robets Cordova	57.99	293	⇓P	P	19 30 14.0	-1.0
	baz=58						
DUG	Dugway	58.02	301	⇑P	P	19 30 13.7	-1.4
	baz=58,SNR=5.8						
DUG	Dugway	58.02	301	eP	P	19 30 14.6	-0.6
	comp=Z,5.9nm,0.8s,mb4.7						
DUG	Dugway	58.02	301	eP	P	19 30 14.6	-0.5
DUG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
DUG	Dugway	58.02	301	eP	P	19 30 14.6	-0.5
	comp=Z,5.9nm,0.8s,mb4.7						
R22A	Saguache, Gunn	58.14	295	⇑P	P	19 30 15.0	-1.0
	baz=58,SNR=7.8						
Q19A	Hogan Spring (	58.18	298	⇓P	P	19 30 15.9	-0.4
	baz=58						
SDCO	Great Sand Dun	58.22	294	⇑P	P	19 30 15.7	-0.9
	baz=58						
R21A	Cimarron	58.24	296	⇑P	P	19 30 16.0	-0.8
	baz=58						
Q18A	Rafter H Ranch	58.29	299	⇑P	P	19 30 16.3	-0.8
	baz=58						
TORD	Torodi Ar. Bea	58.36	174	LR	LR	19 56 19.6	
	comp=Z,790nm,19.4s,MS4.8,baz=0.0,slow=37						
SRU	San Rafael	58.40	299	⇓P	P	19 30 17.1	-0.7
	baz=58						
S22A	4UR Ranch, Cre	58.61	295	⇑P	P	19 30 19.1	-0.2
	baz=58						
T24A	Torres, Weston	58.72	293	⇑P	P	19 30 21.0	+0.9
	baz=58						
PV01	Paradox Valley	58.75	297	eP	P	19 30 21.5	+1.2
	comp=Z,2μm,1.1s						
PV01	Paradox Valley	58.75	297	eP	P	19 30 21.5	+1.2
	comp=Z,2μm,1.1s						
R18A	Canyonlands Na	58.89	298	⇑P	P	19 30 20.9	-0.4
	baz=59,SNR=15						
U26A	Atchley Ranch,	58.96	292	⇑P	P	19 30 21.2	-0.6
	baz=59						
S21A	Coal Bank Pass	58.97	296	⇓P	P	19 30 21.8	0.0
	baz=59						
S20A	Disappointment	58.97	296	⇑P	P	19 30 22.3	+0.5
	baz=59						
WMOK	Wichita Mounta	58.99	287	eP	P	19 30 21.4	-0.6
	comp=Z,28nm,1.3s,mb5.1						
WMOK	Wichita Mounta	58.99	287	eP	P	19 30 21.4	-0.6
WMOK				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.1						
WMOK	Wichita Mounta	58.99	287	eP	P	19 30 21.4	-0.6
	comp=Z,28nm,1.3s,mb5.1						
U25A	Circle Dot Ran	59.15	292	⇑P	P	19 30 23.1	0.0
	baz=59						
HHC	Hu-ho-hao-te	59.17	53	eP	P	19 30 23.8	+0.7
HHC				pP	pP	19 30 28.5	+2.2
HHC				sP	sP	19 30 30.8	+3.3
HHC				PcP	PcP	19 31 12.5	+1.0
HHC				PP	PP	19 32 36.5	+3.2
HHC				ScP	ScP	19 35 11.5	-0.2
HHC				S	S	19 38 28.8	-1.4
HHC				ScS	ScS	19 40 09.3	-3.4
HHC				SS	SS	19 42 23.0	-0.6
HHC				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,280nm,5.6s						
HHC				LR	LR		
	comp=N,580nm,17.5s,MS4.9						
HHC				LR	LR		
	comp=E,370nm,15.5s,MS4.9						
HHC				LR	LR		
	comp=Z,750nm,16.9s,MS4.9						
Q14A	Sevier Lake (B	59.27	301	⇑P	P	19 30 23.5	-0.4
	baz=59,SNR=13						
S19A	Harvey Farm, M	59.27	297	⇑P	P	19 30 23.5	-0.4
	baz=59,SNR=5.3						
T22A	Edith	59.31	295	⇓P	P	19 30 24.0	-0.2
	baz=59						
MSU	Marysvale	59.41	300	eP	P	19 30 26.6	+1.8
	comp=Z,17nm,1.5s,mb4.8						
MSU	Marysvale	59.41	300

MDJ	Mudanjiang	59.64	37	eP	P	19 30 25.6	-0.7
	comp=Z,29nm,1.3s,mb5.1						
MDJ	Mudanjiang	59.64	37	eP	P	19 30 25.6	-0.7
	comp=Z,29nm,1.3s,mb5.1						
V25A	Rancho No Teng	59.73	292	⇓P	P	19 30 27.0	-0.1
	baz=60						
S17A	Black Ridge (B	59.85	299	⇓P	P	19 30 28.6	+0.7
	baz=60						
W27A	Bowe Ranch, En	59.99	291	⇓P	P	19 30 29.1	+0.2
	baz=60						
V24A	Rampart Ranch,	60.03	293	⇓P	P	19 30 29.5	+0.3
	baz=60						
T18A	Mexican Hat	60.05	298	⇓P	P	19 30 29.3	0.0
	baz=60						
U21A	Nageezi	60.08	295	⇓P	P	19 30 30.6	+1.1
	baz=60						
T19A	Beclabito	60.10	297	⇑P	P	19 30 29.8	+0.3
	baz=60						
R13A	O'Grain Ranch,	60.22	301	⇑P	P	19 30 30.5	+0.1
	baz=60						
V22A	San Miguel Ran	60.34	294	⇓P	P	19 30 31.8	+0.6
	baz=60						
T17A	Navajo Res., N	60.45	298	⇑P	P	19 30 31.9	0.0
	baz=60						
R11A	Troy Canyon, C	60.50	303	⇑P	P	19 30 31.4	-0.9
	baz=60,SNR=7.7						
W24A	Lazy 6 Ranch,	60.55	293	⇑P	P	19 30 32.4	-0.3
	baz=60						
U19A	Dine' College,	60.65	297	⇓P	P	19 30 33.5	+0.2
	baz=60						
X26A	CR and CF Fran	60.69	291	⇓P	P	19 30 34.3	+0.6
	baz=60						
WCN	Washoe City	60.70	307	eP	P	19 30 35.7	+2.0
	comp=Z,36nm,1.5s,mb5.3						
WCN	Washoe City	60.70	307	eP	P	19 30 35.7	+2.0
WCN				pmax	pmax		
	comp=Z,36nm,1.5s,mb5.3						
WCN	Washoe City	60.70	307	eP	P	19 30 35.7	+2.0
	comp=Z,36nm,1.5s,mb5.3						
U18A	Rough Rock, Ch	60.72	297	⇑P	P	19 30 34.2	+0.4
	baz=60						
S13A	Holt Ranch, En	60.75	301	⇑P	P	19 30 33.8	-0.3
	baz=60						
MSTX	Muleshoe	60.92	290	⇓P	P	19 30 35.7	+0.5
	baz=61						
T14A	Hurricane	61.02	300	⇓P	P	19 30 36.4	+0.5
	baz=61						
Y27A	Causey	61.12	290	⇓P	P	19 30 37.2	+0.6
	baz=61						
NVAR	Mina Array Bea	61.14	305	P	P	19 30 36.4	-0.3
	comp=Z,1.0nm,0.8s,mb4.0,baz=36,slow=3.8,SNR=6.3						
NVAR				LR	LR	19 56 43.8	
	comp=Z,698nm,21.2s,MS4.8,baz=162,slow=36						
NVAR	Mina Array Bea	61.14	305	P	P	19 30 36.4	-0.3
NVAR				LR	LR	19 56 43.8	
NVAR	Mina Array Bea	61.14	305	P	P	19 30 36.4	-0.3
U16A	Tuba City	61.34	298	⇑P	P	19 30 38.4	+0.4
	baz=61						
WAKR	Walker	61.37	306	eP	P	19 30 40.1	+1.9
	comp=Z,13nm,1.5s,mb4.8						
WAKR	Walker	61.37	306	eP	P	19 30 40.2	+2.0
	comp=Z,13nm,1.5s,mb4.8						
U15A	North Rim	61.40	299	⇑P	P	19 30 38.6	+0.1
	baz=61						
W20A	Ramah	61.53	296	⇓P	P	19 30 39.7	+0.3
	baz=61						
Y25A	Mesa, Roswell	61.54	292	⇑P	P	19 30 39.8	+0.4
	baz=61						
LZH	Lanzhou	61.56	61	eP	P	19 30 39.0	-0.6
LZH				pP	pP	19 30 44.3	+1.5
LZH				sP	sP	19 30 46.0	+2.0
LZH				pmax	pmax		
	comp=Z,42nm,1.6s,mb5.3						
LZH				pmax	pmax		
	comp=Z,170nm,5.2s						
U14A	Mt Trumbull	61.65	300	⇓P	P	19 30 40.7	+0.5
	baz=61						
Z27A	Tatum	61.66	290	⇓P	P	19 30 40.8	+0.5
	baz=61						
V17A	Tonalea, Kykot	61.73	298	⇓P	P	19 30 40.7	0.0
	baz=62						
Y24A	Capitan	61.76	292	⇓P	P	19 30 41.1	+0.2
	baz=62						
W19A	Sanders	61.80	296	⇓P	P	19 30 41.8	+0.6
	baz=62						
U13A	Pakoon Wash	61.87	301	⇑P	P	19 30 41.2	-0.5
	baz=62						
BNM	Barren Site	61.90	293	eP	P	19 30 44.0	+2.1
	comp=Z,12nm,1.4s,mb4.8						
BNM	Barren Site	61.90	293	eP	P	19 30 44.0	+2.1
	comp=Z,12nm,1.4s,mb4.8						
V15A	Kaibab Nationa	61.93	299	⇑P	P	19 30 42.1	0.0
	baz=62						
Z26A	Caprock	61.93	291	⇑P	P	19 30 42.1	0.0
	baz=62						
Y23A	Lovelace Mesa,	61.94	293	⇓P	P	19 30 42.0	-0.1
	baz=62,SNR=12						
X20A	Quemado	62.08	295	⇑P	P	19 30 43.3	+0.2
	baz=62						
Z25A	Roswell	62.15	291	⇑P	P	19 30 43.8	+0.3
	baz=62						
Y22A	Socorro	62.20	294	⇑P	P	19 30 43.8	0.0
	baz=62						
V14A	Boquillas Ranc	62.37	300	⇑P	P	19 30 44.5	-0.5
	baz=62,SNR=6.7						
V13A	Grand Canyon W	62.41	301	⇓P	P	19 30 44.9	-0.3
	baz=62						
Z23A	Rita Site, Whi	62.61	293	⇓P	P	19 30 47.0	+0.4
	baz=62						
W14A	Seligman	62.76	300	⇑P	P	19 30 47.2	-0.3
	baz=62						
V12A	Nelson	62.76	301	⇓P	P	19 30 47.6	0.0
	baz=62						
Z22A	Elephant Butte	62.83	293	⇓P	P	19 30 48.5	+0.4
	baz=63						
124A	Stringfield Ra	62.91	292	⇑P	P	19 30 49.0	+0.4
	baz=63						
CWC	Cottonwood Cre	62.96	304	⇓P	P	19 30 49.3	+0.4
	baz=63						
Z21A	St. Cloud Mine	62.99	294	⇑P	P	19 30 49.7	+0.5
	baz=63						
X16A	Lo Mia Camp, P	63.04	298	⇑P	P	19 30 49.5	0.0
	baz=63						
GDL2	Guadalupe Moun	63.05	291	eP	P	19 30 50.8	+1.3
	comp=Z,1.6nm,0.4s,mb4.5						
GDL2	Guadalupe Moun	63.05	291	eP	P	19 30 50.8	+1.3
	comp=Z,1.6nm,0.4s,mb4.5						
226A	Malaga, Loving	63.10	290	⇓P	P	19 30 50.1	+0.2
	baz=63						
MPMC	Manual Prospec	63.16	304	⇑P	P	19 30 49.8	-0.5
	baz=63						
JCT	Junction City	63.26	286	⇓P	P	19 30 51.2	+0.2
	baz=63						
JCT	Junction City	63.26	286	eP	P	19 30 51.2	+0.2
	comp=Z,42nm,1.4s,mb5.4						
JCT	Junction City	63.26	286	eP	P	19 30 51.2	+0.2
JCT				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.4						
JCT	Junction City	63.26	286	eP	P	19 30 51.2	+0.2
	comp=Z,42nm,1.4s,mb5.4						
225A	Deer Hill, Car	63.27	291	⇑P	P	19 30 50.9	-0.1
	baz=63						
328A	Wristen Ranch,	63.34	289	⇑P	P	19 30 51.7	+0.2
	baz=63						
X13A	Yucca	63.55	300	⇑P	P	19 30 53.1	+0.3
	baz=63						
326A	Caldwell Ranch	63.76	290	⇑P	P	19 30 53.4	-0.8
	baz=64,SNR=11						
LSA	Lhasa	63.76	75	P	P	19 30 57.5	+3.2
LSA	Lhasa	63.76	75	eP	P	19 30 57.0	+2.7
	comp=Z,22nm,1.4s,mb5.0						
LSA	Lhasa	63.76	75	eP	P	19 30 57.0	+2.7
LSA				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.0						
LSA	Lhasa	63.76	75	eP	P	19 30 57.0	+2.7
	comp=Z,22nm,1.4s,mb5.0						
ISA	Isabella	63.80	304	⇓P	P	19 30 54.1	-0.4
	baz=64						
GMRC	Granite Mounta	63.87	302	⇓P	P	19 30 55.9	+0.9
	baz=64						
428A	Kincaid Ranch,	63.91	289	⇓P	P	19 30 55.3	0.0
	baz=64						
119A	Ashpeak Ranch,	63.97	295	⇑P	P	19 30 55.9	+0.3
	baz=64						
120A	U Bar Ranch, L	63.98	295	⇓P	P	19 30 55.9	+0.1
	baz=64						
HEC	Hector,Ludlow	64.01	302	⇑P	P	19 30 56.4	+0.6
	baz=64						
427A	Hayter Ranch,	64.02	289	⇑P	P	19 30 55.1	-0.9
	baz=64,SNR=11						
324A	Moseley Ranch,	64.09	291	⇑P	P	19 30 57.1	+0.7
	baz=64						
426A	McDonald Obser	64.38	290	⇓P	P	19 30 58.9	+0.6
	baz=64						
528A	Cox Ranch, San	64.47	288	⇑P	P	19 30 58.2	-0.7
	baz=64						
425A	Indio Mountain	64.55	291	⇓P	P	19 30 59.7	+0.2
	baz=64						
219A	White Tail Can	64.68	295	⇓P	P	19 31 00.3	0.0
	baz=64						
DBIC	Dimbokro	64.69	181	P	P	19 30 59.8	-0.8
	comp=Z,4.0nm,0.8s,mb4.5,baz=9.2,slow=9.6,SNR=5.0						
DBIC				LR	LR	20 01 40.4	
	comp=Z,502nm,19.0s,MS4.7,baz=72,slow=38						
DBIC	Dimbokro	64.69	181	P	P	19 30 59.8	-0.7
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,502nm,19.0s						
DBIC	Dimbokro	64.69	181	P	P	19 30 59.8	-0.7
	comp=Z,502nm,19.0s						
TIC	Toumodi	64.72	181	eP	KIP	P	19 31 01.4	+0.7
	comp=Z,63nm,1.4s,mb5.5						
TIC	Toumodi	64.72	181	eP	P	19 31 01.4	+0.7
TIC	Toumodi	64.72	181	eP	P	19 31 01.4	+0.7
527A	Woodward Ranch	64.74	289	⇑P	P	19 30 59.6	-1.1
	baz=64,SNR=11						
TUC	Tucson	64.83	296	eP	P	19 31 02.7	+1.4
	comp=Z,28nm,1.6s,mb5.0						
TUC	Tucson	64.83	296	eP	P	19 31 02.7	+1.4
TUC				pmax	pmax		
	comp=Z,28nm,1.6s,mb5.0						
TUC	Tucson	64.83	296	eP	P	19 31 02.7	+1.4
	comp=Z,28nm,1.6s,mb5.0						
526A	Mary Lane Ranc	64.96	290	⇓P	P	19 31 01.1	-1.0
	baz=65,SNR=9.7						
KIC	Kosan Boka	65.00	181	eP	KIP	P	19 31 01.8	-0.7
	comp=Z,40nm,1.0s,mb5.4						
KIC	Kosan Boka	65.00	181	eP	KIP	P	19 31 01.8	-0.7
628A	Black Gap, Mar	65.13	288	⇑P	P	19 31 02.1	-1.2
	baz=65,SNR=12						
LIC	Lamto	65.14	181	eP	KIP	P	19 31 02.1	-1.3
	comp=Z,29nm,0.8s,mb5.4						
LIC	Lamto	65.14	181	eP	P	19 31 00.9	-2.5
	comp=Z,19nm,0.8s,mb4.9						
LIC				eMLR	MLR		
	comp=Z,413nm,21.4s,MS4.3						
LIC	Lamto	65.14	181	eP	P	19 31 00.9	-2.5
	comp=Z,9.3nm,0.8s,mb4.9						
LIC				LR	LR		
	comp=Z,210nm,21.4s,MS4.3						
LIC	Lamto	65.14	181	eP	P	19 31 00.9	-2.5
	comp=Z,9.3nm,0.8s,mb4.9						
319A	Douglas	65.27	295	⇓P	P	19 31 04.4	+0.3
	baz=65						
627A	Terlingua Ranc	65.32	289	⇓P	P	19 31 04.6	+0.1
	baz=65						
318A	Bisbee	65.42	295	⇓P	P	19 31 04.6	-0.5
	baz=65						
626A	Big Bend Ranch	65.45	289	⇑P	P	19 31 04.0	-1.4
	baz=65,SNR=17						
TXAR	Lajitas Array	65.51	289	P	P	19 31 05.9	+0.1
	comp=Z,3.4nm,0.8s,mb4.4,baz=50,slow=4.7,SNR=27						
TXAR				LR	LR	19 59 31.6	
	comp=Z,1μm,19.8s,MS5.1,baz=5.0,slow=36						
TXAR	Lajitas Array	65.51	289	P	P	19 31 05.9	+0.2
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TXAR				MLR	MLR		
	comp=Z,1μm,19.8s						
TXAR	Lajitas Array	65.51	289	P	P	19 31 05.9	+0.2
	comp=Z,1μm,19.8s						
KSRS	Korea Array	66.20	40	P	P	19 31 11.3	+1.3
	comp=Z,1.8nm,0.7s,mb4.2,baz=348,slow=6.6,SNR=11						
KSRS				LR	LR	20 04 13.7	
	comp=Z,377nm,18.0s,MS4.6,baz=345,slow=40						
KSRS	Korea Array	66.20	40	P	P	19 31 11.4	+1.3
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,377nm,18.0s,MS4.6						
KSRS	Korea Array	66.20	40	P	P	19 31 11.4	+1.3
	comp=Z,377nm,18.0s						
CD2	Chengdu	66.39	63	eP	P	19 31 11.8	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
SHL	Shillong	67.84	76	ex	x	19 31 25.0	
MAT	Matsushiro	69.03	32	P	P	19 31 27.7	-0.2
MJAR	Matsushiro Arr	69.03	32	P	P	19 31 27.2	-0.8
	comp=Z,4.0nm,0.9s,mb4.4,baz=341,slow=5.0,SNR=9.8						
MJAR				LR	LR	20 00 22.3	
	comp=Z,239nm,20.5s,MS4.4,baz=25,slow=35						
MJAR	Matsushiro Arr	69.03	32	P	P	19 31 27.2	-0.8
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR				MLR	MLR		
	comp=Z,239nm,20.5s						
MJAR	Matsushiro Arr	69.03	32	P	P	19 31 27.2	-0.8
NJ2	Nanjing	69.33	50	eP	P	19 31 28.5	-1.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.3						
WHN	Wuhan	69.64	54	P	PcP	19 31 56.5	+1.8
GYA	Guiyang	71.42	62	P	P	19 31 43.8	+1.1
GYA				PP	PP	19 34 22.8	+2.2
GYA				S	S	19 40 59.5	-1.1
GYA				SKS		19 41 41.8	
GYA				SS	SS	19 45 35.0	+0.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=N,530nm,19.4s,MS4.9						
GYA				LR	LR		
	comp=E,470nm,20.9s,MS4.9						
GYA				LR	LR		
	comp=Z,510nm,19.0s,MS4.8						
KMI	Kunming	71.54	66	P	P	19 31 44.5	+1.0
KMI				pP	pP	19 31 47.8	+1.1
KMI				sP	sP	19 31 49.0	+1.1
KMI				PP	PP	19 34 25.0	+3.2
KMI				S	S	19 41 01.0	-1.1
KMI				SS	SS	19 45 37.0	+0.6
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
KMI				LR	LR		
	comp=Z,390nm,34.2s,MS4.4						
SDV	Santo Domingo	74.30	250	eP	P	19 32 01.0	+1.2
	comp=Z,21nm,1.2s,mb5.0						
SDV	Santo Domingo	74.30	250	eP	P	19 32 01.0	+1.1
	comp=Z,21nm,1.2s,mb5.0						
CMAR	Chiang Mai Arr	76.69	72	P	P	19 32 15.2	+1.6
	comp=Z,7.3nm,1.1s,mb4.5,baz=320,slow=7.2,SNR=12						
CMAR				LR	LR	20 14 09.4	
	comp=Z,178nm,18.4s,MS4.4,baz=200,slow=42						
CMAR	Chiang Mai Arr	76.69	72	P	P	19 32 15.2	+1.6
CMAR				LR	LR	20 14 09.4	
CMAR	Chiang Mai Arr	76.69	72	P	P	19 32 15.2	+1.6
CMAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMAR				MLR	MLR		
	comp=Z,178nm,18.4s						
CMAR	Chiang Mai Arr	76.69	72	P	P	19 32 15.2	+1.6
ROSC	El Rosal	79.23	253	LR	LR	20 02 26.5	
	comp=Z,147nm,18.8s,MS4.3,baz=197,slow=32						
RCBR	Riachuelo	79.93	212	LR	LR	20 00 41.9	
	comp=Z,255nm,21.6s,MS4.5,baz=19,slow=30						
OTAV	Otavalo	84.86	255	eP	P	19 32 59.8	+2.5
	comp=Z,26nm,1.4s,mb5.2						
OTAV	Otavalo	84.86	255	eP	P	19 32 59.8	+2.5
	comp=Z,26nm,1.4s,mb5.2						
PSI	Prapat	91.45	77	LR	LR	20 23 41.3	
	comp=Z,796nm,18.8s,MS5.2,baz=148,slow=41						
BDFB	Brasilia	91.84	222	LR	LR	20 08 05.3	
	comp=Z,283nm,19.3s,MS4.7,baz=288,slow=31						
LBTB	Lobatse	98.37	153	LR	LR	20 19 23.6	
	comp=Z,278nm,20.8s,MS4.7,baz=60,slow=36						
WRA	Warramunga Arr	123.10	48	PKP	PKPdf	19 39 17.6	-1.1
	comp=Z,0.7nm,0.9s,baz=348,slow=3.3,SNR=4.6						
WRA	Warramunga Arr	123.10	48	PKIKP	PKPdf	19 39 17.7	-1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	123.10	48	PKIKP	PKPdf	19 39 17.6	-1.2
ASAR	Alice Springs	126.58	50	PKP	PKPdf	19 39 24.9	-0.4
	comp=Z,0.7nm,0.8s,baz=342,slow=2.4,SNR=6.1						
ASAR	Alice Springs	126.58	50	PKIKP	PKPdf	19 39 25.0	-0.3
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	126.58	50	PKIKP	PKPdf	19 39 25.0	-0.3
OUZ	Omahuta	143.70	3	eP	KPdf	PKPdf	19 39 58.8	+2.0
OUZ	Omahuta	143.70	3	eP	KIKP	PKPdf	19 39 58.8	+2.0
MAW	Mawson	145.76	141	PKPbc	PKPbc	19 40 01.6	+1.8
	comp=Z,2.5nm,0.5s,baz=13,slow=3.3,SNR=6.0						
MAW	Mawson	145.76	141	PKP2	PKPbc	19 40 01.6	+1.8
MAW				pmax	pmax		
	comp=Z,3.0nm,0.5s						

*ISCJB **29** 19:28:02.3±0.6, 71°.33N±0°.07×4°.5W±0°.2, h10km, mb3.2/5, Error ellipse: s-maj=9.9km s-min=8.8km az=7.1*
*IDC **29** 19:28:03.6±0.9, 71°.21N×4°.74W, h0km, mb3.4/5, mb1 3.8/11, mb1mx3.6/30, mbtmp3.6/11, ML3.4/6, Error ellipse: s-maj=22.0km s-min=15.4km az=22.0*
*NEIC **29** 19:28:04.5±0.6, 71°.28N×4°.60W, h10km, Error ellipse: s-maj=11.4km s-min=9.9km az=63.0*

ISC 29 19:28:04.2±0.6, 71°.28N±0°.07×4°.8W±0°.2, h10km, n13, σ1§28/14, mb3.2/5, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JMIC	Jan Mayen	1.24	258		Pn	Pn	19 28 27.4	-0.1
	3.1nm,0.3s,baz=150,slow=20,SNR=3.4							
JMIC					Sn	Sn	19 28 42.0	-2.2
	2.7nm,0.3s,baz=356,slow=23,SNR=4.3							
KBS	Kingsbay	8.76	21	eP	Pn	Pn	19 30 09.4	-1.2
SPITS	Spitsbergen Ar	8.82	29		Pn	Pn	19 30 10.9	-0.5
	baz=215,slow=16,SNR=14							
ARCES	ARCESS Array B	10.26	85		Pn	Pn	19 30 30.4	-0.8
	0.3nm,0.3s,baz=281,slow=12,SNR=7.7							
NOA	NORSAR Array B	12.09	140		Pn	Pn	19 30 55.8	-0.3
	0.1nm,0.3s,baz=339,slow=13,SNR=2.4							
HFS	Hagfors	13.44	137		Pn	Pn	19 31 14.1	-0.5
	0.7nm,0.3s,baz=339,slow=11,SNR=18							
FINES	FINESS Array B	15.60	113		Pn	Pn	19 31 41.4	-2.4
	0.1nm,0.3s,baz=339,slow=15,SNR=3.8							
EKA	Eskdalemuir Ar	16.02	177		Pn	Pn	19 31 50.0	+0.8
	0.1nm,0.3s,baz=355,slow=14,SNR=3.6							
GERES	GERESS Array B	24.10	149		P	P	19 33 20.0	+0.5
	0.4nm,0.8s,mb2.9,baz=6.6,slow=19,SNR=3.4							
AKASG	Malin Array Be	25.77	125		P	P	19 33 35.5	+1.0
	0.9nm,0.5s,mb3.6,baz=348,slow=37,SNR=3.0							
BVAR	Borovoye Array	36.48	79		P	P	19 35 11.2	+2.4
	0.4nm,0.7s,mb3.5,baz=308,slow=7.1,SNR=3.1							
ILAR	Eielson Array	41.76	337		P	P	19 35 53.9	+1.1
	0.3nm,0.8s,mb3.0,baz=33,slow=5.8,SNR=4.8							
TXAR	Lajitas Array	65.30	288		P	P	19 38 47.9	+2.1
	0.1nm,0.6s,mb3.1,baz=36,slow=4.9,SNR=3.4							

*ISCJB **29** 19:28:10.7±0.6, 31°.57N±0°.04×104°.17E±0°.07, h10km, mb3.5/4, Error ellipse: s-maj=9.1km s-min=5.0km az=9.0*
*IDC **29** 19:28:11.5±1.1, 31°.47N×104°.24E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/24, mbtmp3.4/6, ML3.2/1, Error ellipse: s-maj=38.1km s-min=21.3km az=59.0*
*BJI **29** 19:28:12.5, 31°.52N×104°.09E, h10km, ML3.7/13*
*NEIC **29** 19:28:13.3±0.7, 31°.48N×104°.17E, h10km, Error ellipse: s-maj=17.8km s-min=12.7km az=53.0*

ISC 29 19:28:12.7±0.5, 31°.54N±0°.03×104°.13E±0°.07, h10km, n12, σ1§03/20, mb3.5/4, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.71	207	⇑iPg		Pg	19 28 25.5	-0.9
CD2					Sg	Sg	19 28 36.0	+0.4
CD2					smax			
	comp=N,2μm,1.0s							
CD2					smax			
	comp=E,3μm,0.7s							
LZH	Lanzhou	4.54	357		Pg	Pg	19 29 38.3	-1.3
LZH					Sn	Sn	19 30 13.0	-1.2
LZH					Sg	Sg	19 30 37.5	-0.8
LZH					smax			
	comp=N,90nm,0.9s							
LZH					smax			
	comp=E,81nm,0.7s							
LZH					LR	LR		
	comp=N,590nm,4.6s							
LZH					LR	LR		
	comp=E,690nm,7.1s							
LZH					LR	LR		
	comp=Z,690nm,5.5s							
XAN	Xi'an	4.74	57		Pn	Pn	19 29 25.0	+0.9
XAN					Pg	Pb	19 29 37.0	+1.2
XAN					Sn	Sn	19 30 23.3	+4.2
XAN					Sg	Sg	19 30 39.8	-5.0
XAN					smax			
	comp=N,150nm,0.7s							
XAN					smax			
	comp=E,84nm,0.9s							
ENH	Enshi	4.77	104	eP		Pn	19 29 25.3	+0.7
GYA	Guiyang	5.53	156		Pn	Pn	19 29 35.5	+0.5
GYA					Sn	Sn	19 30 38.8	+0.1
GYA					Sg	Sg	19 31 08.0	-2.3
GYA					smax			
	comp=N,90nm,0.7s							
GYA					smax			
	comp=E,100nm,0.7s							
CMAR	Chiang Mai Arr	13.85	201		Pn	Pn	19 31 29.7	+0.6
	comp=E,0.0nm,0.3s,baz=11,slow=9.0,SNR=3.5							
SONM	Songino Array	16.36	5		Pn	Pn	19 32 07.4	+5.1
	comp=E,0.1nm,0.3s,baz=206,slow=16,SNR=2.9							
KSRS	Korea Array	20.45	67		P	P	19 32 49.8	-0.5
	comp=E,0.8nm,0.6s,baz=258,slow=12,SNR=3.9							
MKAR	Makanchi Array	22.67	318		P	P	19 33 14.8	+0.9
	comp=E,0.2nm,0.2s,mb3.1,baz=118,slow=14,SNR=3.0							
ZALV	Zalesovo Beam	26.34	334		P	P	19 33 50.7	+2.2
	comp=E,0.5nm,0.4s,mb3.4,baz=134,slow=12,SNR=4.1							
WRA	Warramunga Arr	58.82	146		P	P	19 38 10.9	-0.5
	comp=E,0.5nm,0.5s,mb3.8,baz=339,slow=7.8,SNR=20							
ASAR	Alice Springs	61.85	149		P	P	19 38 31.9	-0.2
	comp=E,0.3nm,0.8s,mb3.5,baz=340,slow=6.8,SNR=4.9							

*IDC **29** 19:37:37.3±0.7, 30°.11S×177°.56W, h0km, mb4.4/11, mb1 4.5/13, mb1mx4.4/21, mbtmp4.4/13, ML3.9/2, Error ellipse: s-maj=21.4km s-min=17.8km az=92.0*
*ISCJB **29** 19:37:40.4±0.6, 30°.17S±0°.07×177°.6W±0°.1, h33km, mb4.4/13, Error ellipse: s-maj=15.5km s-min=9.8km az=11.2*
*NEIC **29** 19:37:41.7±0.6, 30°.09S×177°.50W, h35km, mb4.9/3, Error ellipse: s-maj=19.5km s-min=12.7km az=103.0*

ISC 29 19:37:42.1±0.6, 30°.11S±0°.07×177°.5W±0°.1, h35km, n44, σ1§33/33, mb4.5/13, 1D, Kermadec Islands

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

FITZ	Fitzroy Crossi	52.84	269	eP		P	19 46 54.0 -0.4
	4.2nm,0.8s,mb4.4						
CASY	Casey	55.62	208	eP		P	19 47 14.6 +0.6
CASY	Casey	55.62	208	eP		P	19 47 14.3 +0.3
	20nm,0.6s,mb5.3						
QSPA	South Pole Qui	60.00	180	P		P	19 47 47.1 +2.5
	4.8nm,0.9s,mb4.5,baz=18,slow=2.8,SNR=9.5						
QSPA	South Pole Qui	60.00	180	eP		P	19 47 47.2 +2.6
MAW	Mawson	72.75	200	P		P	19 49 07.1 +0.8
	3.0nm,0.7s,mb4.4,baz=121,slow=8.4,SNR=9.3						
MAW	Mawson	72.75	200	eP		P	19 49 07.2 +0.9
	3.6nm,0.8s,mb4.3						
MAW	Mawson	72.75	200	eP		P	19 49 07.4 +1.1
	0.6nm,0.7s,mb3.6						
SYO	Syowa Base	77.51	193⇓	eP		P	19 49 36.2 +2.6
MJAR	Matsushiro Arr	78.27	325	P		P	19 49 39.8 +1.5
	1.4nm,0.5s,mb4.1,baz=167,slow=5.6,SNR=7.1						
SNAA	Sanae	78.43	178	P		P	19 49 38.9 +0.1
	1.0nm,0.8s,mb3.8,baz=223,slow=8.2,SNR=10.0						
VNA3	Neumayer Olymp	78.56	176	e		P	19 49 37.4 -2.1
VNA2	Neumayer--Watz	79.00	177	e		P	19 49 40.2 -1.7
	baz=184,slow=4.5						
VNA1	Neumayer--Stat	79.23	176	e		P	19 49 41.7 -1.5
KSRS	Korea Array	84.43	319	P		P	19 50 10.8 -0.1
	1.7nm,0.9s,mb4.2,baz=136,slow=5.6,SNR=3.6						
NVAR	Mina Array Bea	87.70	42	P		P	19 50 26.8 -0.2
	1.5nm,0.8s,mb4.3,baz=215,slow=8.2,SNR=8.5						
KBL	Kabul	124.54	293	ePKPdf		PKPdf	19 56 36.7 -1.0
ARCES	ARCESS Array B	138.40	348	PKP		PKPdf	19 57 01.5 -1.4
	2.7nm,0.8s,baz=1,9,slow=3.6,SNR=5.6						
FINES	FINESS Array B	145.03	340	PKPbc		PKPbc	19 57 12.7 -1.7
	9.2nm,0.7s,baz=58,slow=3.4,SNR=32						
MSKU	Masuku	146.70	200	PKPbc		PKPbc	19 57 21.0 +0.1
	6.0nm,0.6s,baz=329,slow=21,SNR=6.5						
NOA	NORSAR Array B	148.53	352	PKPbc		PKPbc	19 57 23.0 -1.4
	1.5nm,0.7s,baz=15,slow=4.3,SNR=5.2						
MALT	Malatya	149.37	295	ePKPbc		PKPbc	19 57 27.2 -0.1
AKASG	Malin Array Be	151.35	323	PKPbc		PKPbc	19 57 30.3 -1.3
	0.8nm,0.3s,baz=46,slow=3.0,SNR=6.2						
KIEV	Kiev	151.36	323	ePKPbc		PKPbc	19 57 30.1 -1.6
BRTR	Keskin Array B	152.87	299	PKPbc		PKPbc	19 57 34.4 -1.1
	1.4nm,0.6s,baz=128,slow=3.2,SNR=5.3						
BRTR				PKPab		PKPab	19 57 47.6 +1.0
	2.3nm,0.9s,baz=132,slow=3.5,SNR=7.3						
GERES	GERESS Array B	159.44	339	PKPab		PKPab	19 58 13.1 -1.3
	0.9nm,0.7s,baz=85,slow=4.7,SNR=7.4						
TORD	Torodi Ar. Bea	163.10	177	PKPab		PKPab	19 58 31.9 +0.7
	0.5nm,0.5s,baz=176,slow=3.4,SNR=3.7						

*IDC **29** 19:49:01.6±0.6,29.°91S×177.°54W,h0km,mb4.6/11, mb1 4.8/12,mb1mx4.7/17,mbtmp4.6/12,ML4.3/1,MS4.1/2, Ms1 4.1/2,ms1mx3.4/26,Error ellipse: s-maj=22.8km s-min=18.9km az=124.0*

*ISCJB **29** 19:49:03.2±3.7,30.°29S±0.°06×177.°6W±0.°1,h20km±25km, mb4.5/15,Error ellipse: s-maj=19.3km s-min=9.5km az=12.9*

*NEIC **29** 19:49:06.5±1.4,30.°23S×177.°46W,h36km±12km,mb5.0/4, Error ellipse: s-maj=16.3km s-min=10.2km az=104.0*

ISC 29 19:49:06.0±3.4,30.°28S±0.°06×177.°4W±0.°1,h28km±24km, h27km±.7km:pP-P,n111,σ1°15/32,mb4.6/15,4C-1D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	9.16	208	Pn		Pn	19 51 14.9 -1.3
	1.1nm,0.3s,baz=257,slow=5.3,SNR=8.7						
URZ				Sn		Sn	19 52 58.1 -0.1
	5.6nm,0.3s,baz=216,slow=18,SNR=11						
MSVF	Nonsavu	13.15	341	P		Pn	19 52 11.1 +0.1
	25nm,1.0s						
KHZ	Kahutara	14.13	208	eP		Pn	19 52 24.1 +0.1
RPZ	Rata Peaks	16.25	211	Pn		Pn	19 52 52.4 +0.3
	1.1nm,0.3s,baz=23,slow=3.6,SNR=4.7						
DZM	Mont Dzumac	16.62	296	eP		Pn	19 53 00.6 +3.6
RAR	Rarotonga	18.26	64	LR		LR	19 58 00.6
	comp=Z,423nm,21.7s,baz=281,slow=30						
ARMA	Armidale	26.68	262	eP		P	19 54 45.3 +2.7
CTA	Charters Tower	34.28	279	P		P	19 55 49.9 0.0
	42nm,1.1s,mb5.3,baz=102,slow=10,SNR=53						
CTA				LR		LR	20 08 04.6
	comp=Z,378nm,19.0s,baz=194,slow=34						
CTA	Charters Tower	34.28	279	eP		P	19 55 49.7 -0.1
	15nm,0.6s,mb5.1						
CTAO	Charters Tower	34.28	279	eP		P	19 55 50.0 +0.1
	20nm,0.7s,mb5.2						
STKA	Stephens Creek	35.00	257	P		P	19 55 57.2 +1.2
	9.1nm,0.7s,mb4.8,baz=94,slow=10,SNR=22						
STKA	Stephens Creek	35.00	257	eP		P	19 55 57.4 +1.4
	11nm,1.0s,mb4.8						
STKA	Stephens Creek	35.00	257	eP		P	19 55 57.1 +1.1
ASAR	Alice Springs	43.62	267	P		P	19 57 06.9 -1.1
	2.6nm,0.5s,mb4.2,baz=104,slow=7.7,SNR=24						
WRA	Warramunga Arr	44.60	272	P		P	19 57 14.2 -1.6
	12nm,0.6s,mb4.9,baz=111,slow=7.9,SNR=50						
CASY	Casey	55.48	208	eP		P	19 58 38.5 +0.7
CASY	Casey	55.48	208	eP		P	19 58 38.0 +0.2
	14nm,0.8s,mb5.0						
QSPA	South Pole Qui	59.83	180	P		P	19 59 11.9 +3.7
	6.7nm,1.0s,mb4.6,baz=48,slow=3.4,SNR=12						
MAW	Mawson	72.60	200	P		P	20 00 32.0 +1.8
	5.9nm,0.8s,mb4.6,baz=124,slow=8.6,SNR=15						
MAW	Mawson	72.60	200	eP		P	20 00 32.4 +2.2
	5.4nm,0.8s,mb4.5						
SYO	Syowa Base	77.35	193⇑	eP		P	20 00 57.6 0.0
VNA3	Neumayer Olymp	78.39	176	e		P	20 01 02.4 -1.0
VNA3				e		pP	20 01 10.8 -1.7
MJAR	Matsushiro Arr	78.43	325	P		P	20 01 01.5 -2.5
	1.6nm,0.6s,mb4.1,baz=163,slow=6.2,SNR=6.3						
VNA2	Neumayer--Watz	78.83	177	e		P	20 01 05.1 -0.7
	baz=176,slow=5.4						
VNA2				e		pP	20 01 12.7 -2.2
VNA1	Neumayer--Stat	79.06	176	e		P	20 01 06.8 -0.3
VNA1				e		pP	20 01 14.9 -1.2
KSRS	Korea Array	84.58	319	P		P	20 01 35.1 -1.4
	1.2nm,0.9s,mb4.0,baz=141,slow=6.4,SNR=5.1						
PETK	Petropavlovsk-	85.82	345	P		P	20 01 41.3 -1.0
	8.9nm,0.9s,mb5.0,baz=130,slow=6.0,SNR=6.5						
GSC	Goldstone	86.64	46	eP		P	20 01 46.7 -0.1
	9.0nm,1.0s,mb5.0						
NVAR	Mina Array Bea	87.81	42	P		P	20 01 53.7 +1.3
	2.4nm,0.8s,mb4.5,baz=230,slow=7.8,SNR=6.3						
TXAR	Lajitas Array	91.90	57	P		P	20 02 12.4 +0.6
	1.7nm,1.1s,mb4.3,baz=208,slow=1.7,SNR=5.7						
CMAR	Chiang Mai Arr	93.84	289	P		P	20 02 22.4 +1.5
	0.7nm,0.8s,mb4.1,baz=137,slow=4.0,SNR=5.0						
MCMT	McKenzie Canyo	95.05	40	eP		P	20 02 26.0 +0.2
	0.7nm,0.9s,mb4.1						
MKAR	Makanchi Array	118.08	310	PKP		PKPdf	20 07 47.7 -2.1
	0.4nm,0.2s,baz=102,slow=2.1,SNR=5.4						
BVAR	Borovoye Array	126.67	316	PKP		PKPdf	20 08 05.0 -1.1
	4.8nm,1.1s,baz=101,slow=3.0,SNR=12						
BRVK	Borovoye	126.73	316	ePKPdf		PKPdf	20 08 04.9 -1.3
AKTK	Aktyubinsk	134.39	313	PKP		PKPdf	20 08 20.1 -0.7
AKTO	Aktyubinsk	134.39	313	PKP		PKPdf	20 08 20.1 -0.8
	1.3nm,0.8s,baz=77,slow=4.3,SNR=5.1						
FINES	FINESS Array B	145.20	340	PKP		PKPdf	20 08 38.0 -2.1
	37nm,0.7s,baz=64,slow=4.4,SNR=74						
MSKU	Masuku	146.55	200	PKPbc		PKPbc	20 08 45.9 +0.5
	11nm,0.8s,baz=115,slow=4.1,SNR=9.6						
NOA	NORSAR Array B	148.70	352	PKPbc		PKPbc	20 08 48.8 -1.0
	3.7nm,0.7s,baz=14,slow=4.4,SNR=16						
NAO01	NORSAR Array S	148.93	352	ePKPab		PKPab	20 08 53.5 -0.9
HFS	Hagfors	149.22	349	PKPbc		PKPbc	20 08 49.6 -1.5
	7.9nm,0.7s,baz=70,slow=1.7,SNR=12						
MALT	Malatya	149.47	295	ePKPbc		PKPbc	20 08 52.1 -0.4
ASF	Jabal al Asfar	150.67	283	PKPbc		PKPbc	20 08 54.9 -0.7
	7.0nm,0.9s,baz=349,slow=1.2,SNR=18						
AKASG	Malin Array Be	151.51	323	PKPbc		PKPbc	20 08 55.6 -1.3
	1.9nm,0.5s,baz=47,slow=2.4,SNR=23						
KIEV	Kiev	151.52	323	ePKPbc		PKPbc	20 08 54.9 -2.0
BRTR	Keskin Array B	152.98	299	PKPbc		PKPbc	20 08 59.5 -1.0
	3.3nm,0.9s,baz=128,slow=3.5,SNR=16						
KOLS	Kolonicke sedl	156.10	327	ePKP		PKPab	20 09 23.7 -1.1
KOLS	Kolonicke sedl	156.10	327	ePKP		PKPab	20 09 23.7 -1.1
CRVS	Cervenica-Dubn	156.50	328	ePKP		PKPab	20 09 25.6 -1.0
CRVS	Cervenica-Dubn	156.50	328	ePKP		PKPab	20 09 25.6 -1.0
KECS	Kecovo	157.25	328	ePKP		PKPab	20 09 27.3 -2.5
KECS	Kecovo	157.25	328	ePKP		PKPab	20 09 27.3 -2.5
UPC	Upice	157.42	337	ePKPAB		PKPab	20 09 29.7 -0.8
DPC	Dobruska-Polom	157.45	337	ePKPAB		PKPab	20 09 30.0 -0.6
CLL	Collm	157.60	343	ePKPab		PKPab	20 09 29.8 -1.4
CLL	Collm	157.60	343	⇑iPKPab		PKPab	20 09 29.3 -1.9
	comp=Z,8.0nm,0.8s						
CLL				i pPKPab		pPKPab	20 09 37.9 -2.6
IBBN	Ibbenburen	157.66	352	ePKPab		PKPab	20 09 30.4 -1.0
CLZ	Clausthal	157.70	347	ePKPab		PKPab	20 09 30.6 -1.0
BRG	Berggiesshubel	157.74	341	ePKPab		PKPab	20 09 30.7 -1.1
BRG	Berggiesshubel	157.74	341	i PKP		PKPab	20 09 30.6 -1.2
	comp=Z,8.5nm,0.7s						
FBE	Freiberg	157.86	342	ePKPab		PKPab	20 09 31.6 -0.7
PVCC	Panska Ves	157.86	339	ePKPAB		PKPab	20 09 31.6 -0.8
VYHS	Vyhne	157.97	330	ePKP		PKPab	20 09 31.4 -1.5
NEUB	Neuenburg	158.00	344	ePKPab		PKPab	20 09 31.7 -1.2
VRAC	Vranov	158.22	335	PKPab		PKPab	20 09 32.9 -1.1
	comp=Z,1.9nm,0.7s,baz=63,slow=8.2,SNR=4.6						
PRU	Pruhonice	158.34	339	ePKPAB		PKPab	20 09 34.0 -0.5
MOX	Moxa	158.56	344	ePKPab		PKPab	20 09 34.2 -1.2
TANN	Tannenbergstha	158.56	343	ePKPab		PKPab	20 09 34.3 -1.1
WERD	Werda	158.57	343	ePKPab		PKPab	20 09 34.4 -1.0
TREC	Trest	158.63	336	ePKPAB		PKPab	20 09 33.5 -2.2
GUNZ	Gunzen	158.64	343	ePKPab		PKPab	20 09 34.8 -0.9
WERN	Wernitzgruen	158.70	343	ePKPab		PKPab	20 09 35.3 -0.7
NKC	Novy Kostel	158.73	342	ePKPAB		PKPab	20 09 35.1 -1.0
ROTZ	Rotzenmuhle	159.22	342	ePKPab		PKPab	20 09 37.5 -0.8
KHC	Kasperske Hory	159.40	339	ePKPAB		PKPab	20 09 38.1 -1.0
GRF	Grafenberg Arr	159.54	344	ePKPab		PKPab	20 09 38.8 -0.8
TNS	Taunus Mts	159.59	349	ePKPab		PKPab	20 09 38.7 -1.2
WET	Wettzell	159.60	340	ePKPab		PKPab	20 09 39.2 -0.7
GERES	GERESS Array B	159.61	339	PKPab		PKPab	20 09 38.5 -1.4
	comp=Z,1.7nm,0.7s,baz=34,slow=5.0,SNR=11						
RJOB	Jochberg	160.88	339	ePKPab		PKPab	20 09 45.0 -0.5
FUR	Furstenfeldbru	160.93	342	ePKPab		PKPab	20 09 45.2 -0.6
FLN	La Foliniere	161.39	6	ePKP2		PKPab	20 09 47.3 -0.4
BFO	Black Forest	161.44	348	ePKPab		PKPab	20 09 46.5 -1.5
CDF	Champ du Feu	161.54	350	ePKP2		PKPab	20 09 46.9 -1.5
LDF	La Druitiere	161.59	6	ePKP2		PKPab	20 09 47.5 -1.1
WTTA	Wattenberg	161.65	340	⇑iPKPab		PKPab	20 09 48.0 -0.9
	comp=Z,8.9nm,0.7s						
MEZF	Maizieres J'vi	161.70	355	ePKP2		PKPab	20 09 47.8 -1.3
	comp=Z,15nm,0.8s						
MOTA	Moosalm	161.73	341	⇓iPKPab		PKPab	20 09 48.3 -1.0
	comp=Z,11nm,1.0s						
ABTA	Abfaltersbach	161.84	338	⇑iPKPab		PKPab	20 09 48.1 -1.7
	comp=Z,5.0nm,1.0s						
SFTF	Sexfontaines	162.00	355	ePKP2		PKPab	20 09 49.0 -1.4
	comp=Z,22nm,0.9s						
HAU	Haudompre	162.06	352	ePKP2		PKPab	20 09 49.1 -1.6
	comp=Z,11nm,0.9s						
HINF	Hinteralfeld	162.18	351	ePKP2		PKPab	20 09 49.4 -1.8
DAVOX	Davos/Dischmat	162.58	343	PKPab		PKPab	20 09 51.6 -1.4
	comp=Z,5.7nm,0.7s,baz=351,slow=0.4,SNR=8.0						
LOR	Lormes	163.01	357	ePKP2		PKPab	20 09 53.5 -1.3
SSF	Saint Saulge	163.23	358	ePKP2		PKPab	20 09 54.5 -1.3
CABF	La Chapelle	163.47	351	ePKP2		PKPab	20 09 55.7 -1.2
MFF	Saint Martin d	163.56	7	ePKP2		PKPab	20 09 56.2 -1.1
	comp=Z,15nm,1.1s						
SMF	Signal de Mont	163.63	357	ePKP2		PKPab	20 09 56.2 -1.4
	comp=Z,23nm,1.2s						
TCF	Toulx Ste Croi	164.01	1	ePKP2		PKPab	20 09 57.9 -1.4
LPL	La Plagne	164.44	349	ePKP2		PKPab	20 10 00.6 -0.6
	comp=Z,8.7nm,0.8s						
LPG	La Plagne	164.46	349	ePKP2		PKPab	20 10 00.8 -0.5
	comp=Z,8.7nm,0.8s						
ORIF	Oris-en-Rattie	165.16	351	ePKP2		PKPab	20 10 03.5 -0.8
	comp=Z,11nm,0.9s						
MBDF	Montbardon	165.20	348	ePKP2		PKPab	20 10 03.3 -1.3
	comp=Z,9.4nm,1.0s						
VIVF	Saint-Julien-l	165.35	354	ePKP2		PKPab	20 10 04.3 -0.9
SBF	Sospel	165.90	345	ePKP2		PKPab	20 10 06.8 -0.9
	comp=Z,26nm,0.9s						
SMRF	Simiane la Rot	166.12	351	ePKP2		PKPab	20 10 07.7 -0.9
	comp=Z,18nm,1.2s						
FRF	La Foret Royal	166.35	347	ePKP2		PKPab	20 10 08.0 -1.7
LMR	La Mourre	166.60	348	ePKP2		PKPab	20 10 09.3 -1.5
	comp=Z,22nm,1.1s						
PGF	Pioggiola	166.72	339	ePKP2		PKPab	20 10 09.5 -1.8
MTLF	Montolieu	166.96	1	ePKP2		PKPab	20 10 11.3 -1.0
	comp=Z,3.9nm,0.9s						

*IDC **29** 19:58:27.9±3.0,11.°99N×142.°30E,h54km±29km,mb3.5/9, mb1 3.7/10,mb1mx3.6/23,mbtmp3.6/10,ML3.8/1,MS3.8/1, Ms1 3.8/1,ms1mx2.7/29,Error ellipse: s-maj=21.6km s-min=17.4km az=114.0*

*NEIC **29** 19:58:28.3±2.0,11.°99N×142.°30E,h58km±20km,mb4.4/3, Error ellipse: s-maj=18.1km s-min=14.2km az=89.0*

*ISCJB **29** 19:58:29.0±2.7,12.°0N±0.°1×142.°5E±0.°2,h90km±29km, mb3.9/12,Error ellipse: s-maj=30.5km s-min=18.3km az=9.6*

ISC 29 19:58:29.1±2.4,12.°0N±0.°1×142.°4E±0.°2,h67km±25km,n15, σ0°84/14,mb3.9/12,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	2.93	56	P		Pn	19 59 13.1 -0.2
	13nm,0.3s,baz=330,slow=2.1,SNR=8.0						
GUMO				S		Sn	19 59 47.6 +0.2
	7.3nm,0.3s,baz=180,slow=23,SNR=5.0						
WRA	Warramunga Arr	32.67	194	P		P	20 04 54.5 -0.5
	0.5nm,1.0s,mb3.3,baz=18,slow=10.0,SNR=4.0						
FITZ	Fitzroy Crossi	34.13	209	LR		LR	20 20 15.5
	comp=Z,136nm,19.4s,baz=189,slow=38						
ASAR	Alice Springs	36.37	193	P		P	20 05 27.0 +0.1
	0.2nm,0.5s,mb3.3,baz=23,slow=12,SNR=5.1						
CMAR	Chiang Mai Arr	42.31	284	P		P	20 06 16.9 +0.3
	1.0nm,0.5s,mb3.8,baz=86,slow=6.7,SNR=11						
SONM	Songino Array	46.70	327	P		P	20 06 51.7 +0.6
	0.6nm,0.5s,mb3.6,baz=140,slow=8.7,SNR=3.2						
LSA	Lhasa	50.59	299	P		P	20 07 22.6 +1.4
	0.8nm,0.5s,mb4.0						
MKAR	Makanchi Array	60.98	317	P		P	20 08 35.6 +0.3
	1.0nm,0.4s,mb4.2,baz=95,slow=8.8,SNR=12						
ZALV	Zalesovo Beam	61.54	325	P		P	20 08 38.1 -0.9
	0.6nm,0.4s,mb4.0,baz=108,slow=8.3,SNR=4.4						
KURK	Kurchatov	64.26	321	eP		P	20 08 56.0 -1.2
	4.2nm,0.8s,mb4.3						
BVAR	Borovoye Array	69.69	322	P		P	20 09 31.4 -0.1
	2.8nm,0.5s,mb4.4,baz=106,slow=7.5,SNR=16						
BRVK	Borovoye	69.76	322	eP		P	20 09 31.6 -0.3
	3.2nm,0.6s,mb4.3						
ILAR	Eielson Array	71.07	25	P		P	20 09 38.4 -1.4
	0.2nm,0.5s,mb3.2,baz=241,slow=6.2,SNR=4.7						
NVAR	Mina Array Bea	89.84	51	P		P	20 11 22.6 +1.9
	1.3nm,0.8s,mb4.1,baz=279,slow=7.6,SNR=7.3						
LPAZ	La Paz	150.14	102	PKPbc		PKPbc	20 18 15.7 +2.5
	1.5nm,0.9s,baz=334,slow=3.5,SNR=5.0						

IDC 29 20:03:56.1±9.3,30.°68S×178.°43W,h0km,mb3.2/2, mb1 3.4/2,mb1mx3.4/14,mbtmp3.2/2,Error ellipse: s-maj=396.4km s-min=62.2km az=156.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.73	267	P		P	20 11 54.8 -0.4
	0.3nm,0.9s,baz=107,slow=7.4,SNR=4.1						
WRA	Warramunga Arr	43.74	273	P		P	20 12 03.6 +0.2
	0.2nm,0.6s,baz=110,slow=8.1,SNR=4.7						
FINES	FINESS Array B	145.28	340	PKPbc		PKPbc	20 23 34.0 -0.8
	1.4nm,0.7s,baz=20,slow=6.1,SNR=4.3						

*DJA **29** 20:21:07,1.°22N×127.°27E,h30km,mb4.4/4*

*IDC **29** 20:21:07.3±1.8,0.°93N×126.°98E,h0km,mb3.9/3, mb1 4.1/4,mb1mx3.8/18,mbtmp3.9/4,MS3.8/1,Ms1 3.8/1, ms1mx3.1/29,Error ellipse: s-maj=105.7km s-min=23.3km az=69.0*

*ISCJB **29** 20:21:08.7±1.3,1.°11N±0.°09×127.°11E±0.°08,h33km, mb4.0/3,Error ellipse: s-maj=14.9km s-min=8.9km az=36.2*

ISC 29 20:21:09.5±1.7,1.°2N±0.°1×127.°17E±0.°09,h35km,n12, σ1°04/14,mb4.0/3,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	3.25	259	P		Pn	20 21 56.6 -1.4
KMSI				S		Sn	20 22 36.5 +1.0
NLAI	Namlea	4.42	181	P		Pn	20 22 14.6 +0.5
NLAI				S		Sn	20 23 04.6 +0.3
LUWI	Luwuk	4.93	243	P		Pn	20 22 24.0 +2.8
LUWI				S		Sn	20 23 23.0 +6.0
MRSI	Marisa	5.28	262	P		Pn	20 22 25.5 -0.4
	410nm32nm,0.7s						
KDI	Kendari	6.86	222	P		Pn	20 22 46.3 -1.3
	0.1nm19nm,0.8s						
TTSI	Tana Toraja	8.48	240	P		Pn	20 23 09.1 -0.8
	18nm,0.8s						
SPSI	Sidrap Palu	9.01	235	P		Pn	20 23 17.3 +0.2
FITZ	Fitzroy Crossi	19.25	184	P		Pn	20 25 30.9 -1.2
	0.2nm,0.3s,baz=29,slow=11,SNR=8.9						
WRA	Warramunga Arr	22.16	162	P		P	20 26 02.6 +0.1
	2.6nm,0.6s,mb3.8,baz=339,slow=11,SNR=39						
ASAR	Alice Springs	25.58	166	P		P	20 26 36.2 +0.8
	1.9nm,0.6s,mb3.8,baz=351,slow=14,SNR=36						
CTA	Charters Tower	28.25	140	LR		LR	20 39 15.5
	comp=Z,178nm,19.9s,baz=21,slow=39						
MKAR	Makanchi Array	59.87	326	P		P	20 31 15.7 +4.0
	1.3nm,0.6s,mb4.2,baz=119,slow=6.9,SNR=2.4						

*ISCJB **29** 20:21:33.8±1.4,2.°19N±0.°05×96.°12E±0.°05,h30km±10km, mb4.7/45,MS4.0/5,Error ellipse: s-maj=9.5km s-min=6.0km az=139.6*

*BJI **29** 20:21:33.6,2.°15N×96.°03E,h34km,mB5.1/17,mb4.8/35, Ms4.7/13,Ms7 4.4/13*

*NEIC **29** 20:21:36.9±0.3,2.°28N×96.°20E,h35km,mb5.0/21,Error ellipse: s-maj=8.3km s-min=4.4km az=216.0*

*DJA **29** 20:21:36,2.°26N×96.°21E,h20km,MLv4.5/8*

*IDC **29** 20:21:37.5±4.4,2.°28N×96.°23E,h43km±38km,mb4.2/16, mb1 4.3/18,mb1mx4.1/26,mbtmp4.2/18,ML3.8/2,Error ellipse: s-maj=34.6km s-min=12.6km az=54.0*

ISC 29 20:21:36.9±0.8,2.°24N±0.°05×96.°15E±0.°06,h35km±7km, h33km±1.3km:pP-P,n95,σ0°85/99,mb4.7/45,MS4.0/5, 1C-2D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		1.45	45	P		Pn	20 21 59.1 -1.4
TSI	Tuntungan	2.72	62	P		Pn	20 22 18.6 +0.6
PSI	Prapat	2.83	78	P		Pn	20 22 19.4 -0.1
	3.3nm,0.3s,baz=258,slow=5.2,SNR=24						
MNSI	Mandailing Nat	3.71	113	P		Pn	20 22 31.0 -0.7
SISI	Saibi	4.60	140	P		Pn	20 22 42.7 -1.2
PPI	Padang Panjang	5.01	122	P		Pn	20 22 50.5 +0.8
BKNI	Bangkinang	5.24	111	P		Pn	20 22 52.1 -0.7
	0.9nm1μm153nm,1.1s						
PDSI	Padang	5.32	126	P		Pn	20 22 53.8 -0.1
	0.4nm83nm,0.7s						
IPM	Ipoh	5.35	65	P		Pn	20 22 54.6 +0.4
IPM	Ipoh	5.35	65	eP		Pn	20 22 54.0 -0.2
	120nm,0.8s						
KULM	Kulim	5.42	56	P		Pn	20 22 55.2 0.0
KULM	Kulim	5.42	56	eP		Pn	20 22 54.8 -0.4
	219nm,0.8s						
FRIM	Kepong	5.56	80	P		Pn	20 22 57.9 +0.8
SDSI	Sungai Dareh	6.14	121	P		Pn	20 23 05.1 -0.1
RGRI	Rengat	6.69	112	P		Pn	20 23 12.6 -0.1
	0.4nm38nm,0.7s						
KRJI	Kerinci	6.83	129	P		Pn	20 23 22.5 +7.9
KGM	Kluang	7.17	92	P		Pn	20 23 19.9 +0.7
KTGM	Kuala Trenggan	7.61	66	P		Pn	20 23 25.9 +0.5
MYKOM	Kota Tinggi	7.71	93	P		Pn	20 23 26.8 +0.1
KSI	Kapahiang	8.70	132	P		Pn	20 23 40.3 +0.1
	152nm,0.7s						
MDSI	Maura Dua	10.44	130	P		Pn	20 24 02.9 -1.2
	47nm,0.9s						
LWLI	Liwa	10.69	132	P		Pn	20 24 06.7 -0.9
	114nm,0.8s						
PPBI	Pangkal Pinang	10.89	114	P		Pn	20 24 12.1 +1.7
KLSI		10.99	129	P		Pn	20 24 12.3 +0.6
KSM	Kuching	14.17	93	P		Pn	20 24 55.7 +0.5
KSM	Kuching	14.17	93	eP		Pn	20 24 55.7 +0.6
	31nm,0.9s						
STKI	Sintang	15.47	98	P		Pn	20 25 18.6 +6.0
SBUM	Sibu	16.06	89	P		Pn	20 25 21.1 +1.0
PALK	Palekele	16.19	289	eP		Pn	20 25 26.5 +4.7

HHC				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,150nm,6.1s						
HHC				LR	LR		
	comp=N,330nm,13.9s,MS4.5						
HHC				LR	LR		
	comp=E,350nm,13.5s,MS4.5						
HHC				LR	LR		
	comp=Z,200nm,13.3s,MS4.2						
KSH	**Kashi**	**41.41**	**336**	*e*P	**P**	**20 29 18.8**	**-1.0**
KSH				*e*pP	pP	20 29 28.5	-1.7
KSH				*e*sP	sP	20 29 32.5	-2.0
KSH				*e*PP	PP	20 30 56.8	+0.9
KSH				*e*PcP	PcP	20 31 20.0	+2.5
KSH				*e*ScP	ScP	20 35 05.8	+0.8
KSH				*e*PcS	PcS	20 35 09.8	+1.1
KSH				*e*S	**S**	**20 35 27.0**	**-5.4**
KSH				*e*sS	sS	20 35 43.5	-6.0
KSH				*e*SS	SS	20 38 24.3	-13
KSH				pmax	pmax		
	comp=Z,29nm,1.5s,mb4.7						
KSH				LR	LR		
	comp=N,250nm,4.7s						
KSH				LR	LR		
	comp=E,280nm,5.4s						
KSH				LR	LR		
	comp=Z,350nm,5.3s						
BJT	**Baijiatuau**	**41.77**	**23**	*e*P	**P**	**20 29 23.4**	**+0.6**
	comp=Z,49nm,0.6s,mb5.3						
WMQ	**Urumqi**	**42.09**	**351**	*e*P	**P**	**20 29 27.0**	**+1.7**
WMQ				pP	pP	20 29 37.0	+1.3
WMQ				sP	sP	20 29 41.0	+1.0
WMQ				PP	PP	20 31 07.0	+3.8
WMQ				S	**S**	**20 35 43.0**	**+0.6**
WMQ				sS	sS	20 36 00.0	+0.5
WMQ				SS	SS	20 38 45.0	-5.8
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
WMQ				pmax	pmax		
	comp=Z,48nm,4.0s						
WMQ				LR	LR		
	comp=N,120nm,16.0s,MS4.1						
WMQ				LR	LR		
	comp=E,140nm,16.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,180nm,16.0s,MS4.0						
WRA	**Warramunga Arr**	**43.47**	**122**	P	**P**	**20 29 36.4**	**-0.5**
	comp=Z,4.0nm,0.8s,mb4.2,baz=301,slow=9.0,SNR=20						
TKM2	**Tokmak 2**	**44.47**	**338**	*e*P	**P**	**20 29 45.4**	**+0.7**
	comp=Z,15nm,1.3s,mb4.6						
AML	**Almayashu**	**44.54**	**336**	*e*P	**P**	**20 29 45.9**	**+0.8**
	comp=Z,4.6nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**44.85**	**127**	P	**P**	**20 29 47.9**	**-0.1**
	comp=Z,1.8nm,0.6s,mb4.1,baz=302,slow=7.9,SNR=18						
EKS2	**Erkin-Say**	**44.95**	**337**	*e*P	**P**	**20 29 49.4**	**+1.0**
	comp=Z,6.9nm,0.7s,mb4.6						
KSRS	**Korea Array**	**45.61**	**36**	P	**P**	**20 29 52.1**	**-1.6**
	comp=Z,2.5nm,0.9s,mb4.1,baz=233,slow=7.4,SNR=7.8						
MK31	**Makanchi Array**	**46.00**	**347**	*e*P	**P**	**20 29 56.8**	**+0.2**
MKAR	**Makanchi Array**	**46.00**	**347**	P	**P**	**20 29 56.6**	**0.0**
	comp=Z,18nm,0.9s,mb5.0,baz=162,slow=7.8,SNR=116						
SONM	**Songino Array**	**46.28**	**10**	P	**P**	**20 29 58.7**	**-0.1**
	comp=Z,8.7nm,0.6s,mb4.8,baz=189,slow=9.1,SNR=47						
SONM				PcP	PcP	20 31 34.6	+0.7
	comp=Z,2.0nm,0.7s,baz=186,slow=3.1,SNR=4.2						
KURK	**Kurchatov**	**50.53**	**346**	*e*P	**P**	**20 30 31.5**	**-0.1**
	comp=Z,5.0nm,0.9s,mb4.4						
MDJ	**Mudanjiang**	**51.49**	**30**	P	**P**	**20 30 39.8**	**+0.9**
MDJ				pP	pP	20 30 48.5	-1.0
MDJ				sP	sP	20 30 52.5	-1.2
MDJ				PP	PP	20 32 36.8	+0.3
MDJ				ScP	ScP	20 35 47.5	+0.5
MDJ				PcS	PcS	20 35 50.8	+0.2
MDJ				S	**S**	**20 37 56.0**	**-0.7**
MDJ				sS	sS	20 38 11.5	-2.7
MDJ				ScS	ScS	20 40 27.5	+0.9
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,55nm,3.0s						
MDJ				LR	LR		
	comp=N,64nm,27.6s,MS3.6						
MDJ				LR	LR		
	comp=E,65nm,30.5s,MS3.6						
MJAR	**Matsushiro Arr**	**51.65**	**43**	P	**P**	**20 30 38.6**	**-1.6**
	comp=E,1.2nm,0.7s,mb4.0,baz=204,slow=6.2,SNR=5.5						
ZAA0	**Zalesovo Array**	**52.38**	**352**	*e*P	**P**	**20 30 45.0**	**-0.4**
ZALV	**Zalesovo Beam**	**52.38**	**352**	P	**P**	**20 30 45.2**	**-0.1**
	comp=E,18nm,0.6s,mb5.2,baz=178,slow=7.1,SNR=114						
CTA	**Charters Tower**	**53.90**	**117**	P	**P**	**20 30 57.3**	**+0.2**
	comp=E,1.0nm,0.3s,mb4.2,baz=310,slow=11,SNR=4.7						
CTA	**Charters Tower**	**53.90**	**117**	*e*P	**P**	**20 30 57.4**	**+0.3**
	comp=E,4.1nm,0.8s,mb4.4						
CTAO	**Charters Tower**	**53.90**	**117**	*e*P	**P**	**20 30 57.3**	**+0.2**
	comp=E,5.9nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**54.82**	**132**	P	**P**	**20 31 03.1**	**-0.5**
	comp=E,1.6nm,0.7s,mb4.2,baz=279,slow=8.8,SNR=3.8						
STKA	**Stephens Creek**	**54.82**	**132**	*e*P	**P**	**20 31 03.6**	**-0.1**
	comp=E,3.1nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**54.82**	**132**	*e*P	**P**	**20 31 03.4**	**-0.2**
BVAR	**Borovoye Array**	**54.94**	**341**	P	**P**	**20 31 03.6**	**-0.5**
	comp=E,6.4nm,0.7s,mb4.8,baz=140,slow=8.5,SNR=45						
BRVK	**Borovoye**	**55.00**	**341**	*e*P	**P**	**20 31 04.1**	**-0.4**
	comp=E,3.3nm,0.6s,mb4.5						
YAK	**Yakutsk**	**64.73**	**17**	*e*P	**P**	**20 32 09.5**	**-1.7**
	comp=E,36nm,0.8s,mb5.5						
BRTR	**Keskin Array B**	**67.64**	**312**	P	**P**	**20 32 29.8**	**-0.6**
	comp=E,1.2nm,0.7s,mb4.0,baz=119,slow=6.7,SNR=10.0						
AKASG	**Malin Array Be**	**73.81**	**322**	P	**P**	**20 33 07.0**	**-0.7**
	comp=E,2.3nm,0.6s,mb4.3,baz=96,slow=4.8,SNR=9.7						
AKASG	**Malin Array Be**	**73.81**	**322**	P	**P**	**20 33 07.0**	**-0.7**
BUR08	**Bucovina Ar. S**	**75.58**	**319**	*e*P	**P**	**20 33 18.5**	**+0.5**
FINES	**FINESS Array B**	**78.60**	**333**	P	**P**	**20 33 34.6**	**-0.1**
	comp=E,3.7nm,0.6s,mb4.5,baz=94,slow=5.0,SNR=12						
ARCES	**ARCESS Array B**	**81.22**	**340**	P	**P**	**20 33 49.1**	**+0.4**
	comp=E,4.4nm,0.7s,mb4.5,baz=102,slow=5.8,SNR=18						
GERES	**GERESS Array B**	**83.35**	**319**	P	**P**	**20 34 00.9**	**+0.7**
	comp=E,1.7nm,0.8s,mb4.1,baz=89,slow=5.6,SNR=12						
TXAR	**Lajitas Array**	**143.32**	**30**	PKP	PKPdf	20 41 04.9	-3.3
	comp=E,0.6nm,0.8s,baz=230,slow=1.0,SNR=6.9						

IDC 29 20:23:33.1±3.0, 29°.07S×177°.74W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/14, mbtmp3.5/2, Error ellipse: s-maj=116.1km s-min=46.4km az=22.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.42**	**265**	P	P	20 31 37.5	-0.3
	0.3nm,0.5s,baz=105,slow=7.0,SNR=4.9						
WRA	**Warramunga Arr**	**44.29**	**271**	P	P	20 31 45.0	+0.1
	0.7nm,0.6s,baz=110,slow=8.1,SNR=6.7						
FINES	**FINESS Array B**	**143.98**	**341**	PKP	PKPdf	20 43 08.9	-0.9
	0.9nm,0.4s,baz=39,slow=3.5,SNR=16						
TORD	**Torodi Ar. Bea**	**164.14**	**178**	PKPab	PKPab	20 44 32.2	-0.2
	13nm,0.9s,baz=186,slow=5.3,SNR=5.8						

*ISCJB **29** 20:41:21.9±1.3, 13°.39N±0°.05×120°.31E±0°.07, h7km±10km, mb3.9/7, Error ellipse: s-maj=11.5km s-min=8.1km az=176.1*
*IDC **29** 20:41:21.9±1.0, 13°.30N×120°.49E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.7/22, mbtmp3.8/6, Error ellipse: s-maj=24.0km s-min=15.0km az=93.0*
*MAN **29** 20:41:21, 13°.38N×120°.33E, h1km, mb4.5, ML3.4, MS3.3*
*NEIC **29** 20:41:23.0±0.8, 13°.35N×120°.55E, h10km, mb4.2/1, Error ellipse: s-maj=19.7km s-min=14.0km az=92.0*

ISC 29 20:41:22.2±1.2, 13°.37N±0°.04×120°.35E±0°.07, h0km±9km, n22, σ1.23/22, mb3.8/7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.38**	**345**	*e*P	**Pg**	**20 41 28.5**	**-0.9**
TGY	**Tagaytay City**	**0.93**	**38**	Pg	**Pg**	**20 41 39.9**	**-0.1**
	418nm,0.3s,baz=191,slow=3.7,SNR=18						
TGY	**Tagaytay City**	**0.93**	**38**	⇑*e*P	**Pg**	**20 41 39.9**	**-0.2**
BUSP	**Coron**	**1.36**	**186**	*e*P	**Pg**	**20 41 48.7**	**+0.4**
BOAC	**Boac**	**1.46**	**86**	*e*P	**Pn**	**20 41 48.9**	**-0.9**
OTRP	**Odiongan**	**1.91**	**121**	*e*P	**Pn**	**20 41 57.1**	**+1.1**
POLP	**Polilio Island**	**2.05**	**49**	*e*P	**Pn**	**20 41 57.3**	**-0.7**
AUQP	**San Andres**	**2.27**	**91**	*e*P	**Pn**	**20 42 04.6**	**+3.7**
ENPP	**El Nido**	**2.33**	**203**	*e*P	**Pn**	**20 42 01.7**	**0.0**
SCZP	**Santa Cruz**	**2.43**	**350**	*e*P	**Pn**	**20 41 58.9**	**-4.3**
CUYO	**Cuyo Island**	**2.58**	**165**	*e*P	**Pn**	**20 42 04.9**	**-0.4**
BALP	**Baler**	**2.64**	**27**	*e*P	**Pn**	**20 42 06.8**	**+0.7**
GUIM	**Jordan**	**3.50**	**141**	*e*P	**Pn**	**20 42 18.6**	**+0.8**
CAUP	**Cauayan**	**3.83**	**22**	*e*P	**Pn**	**20 42 24.8**	**+2.4**
APYP	**Conner**	**4.55**	**11**	*e*P	**Pn**	**20 42 36.7**	**+4.4**
CMAR	**Chiang Mai Arr**	**21.19**	**287**	P	**P**	**20 46 12.2**	**+2.7**
	0.5nm,0.5s,mb3.1,baz=93,slow=9.2,SNR=6.6						
WRA	**Warramunga Arr**	**35.85**	**157**	P	**P**	**20 48 22.2**	**-1.6**
	2.1nm,0.4s,mb4.3,baz=335,slow=9.7,SNR=44						
SONM	**Songino Array**	**36.28**	**344**	P	**P**	**20 48 26.0**	**-1.2**
	1.1nm,0.8s,mb3.7,baz=173,slow=7.9,SNR=4.1						
ASAR	**Alice Springs**	**39.12**	**160**	P	**P**	**20 48 50.5**	**-0.9**
	2.0nm,0.5s,mb4.0,baz=340,slow=7.1,SNR=51						
MKAR	**Makanchi Array**	**46.10**	**324**	P	**P**	**20 49 49.8**	**+1.7**
	0.2nm,0.2s,mb3.7,baz=134,slow=6.2,SNR=4.0						
KURK	**Kurchatov**	**50.28**	**327**	*e*P	**P**	**20 50 18.3**	**-1.9**
	3.0nm,1.0s,mb4.2						
BVAR	**Borovoye Array**	**55.86**	**326**	P	**P**	**20 51 01.6**	**+0.2**
	0.4nm,0.4s,mb3.8,baz=124,slow=9.5,SNR=4.7						

IDC 29 20:53:48.5±2.6, 3°.60N×96°.26E, h0km, mb3.5/5, mb1 3.5/6, mb1mx3.3/23, mbtmp3.4/6, ML2.6/1, MS3.7/2, Ms1 3.7/2, ms1mx3.0/24, Error ellipse: s-maj=89.6km s-min=22.0km az=50.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.77**	**106**	Pn	Pn	20 54 33.6	-0.7
	0.9nm,0.3s,baz=325,slow=12,SNR=5.7						
CMAR	**Chiang Mai Arr**	**15.00**	**10**	LR	LR	21 02 56.4	
	comp=Z,80nm,19.9s,baz=334,slow=36						
WRA	**Warramunga Arr**	**44.11**	**124**	P	P	21 01 59.4	+0.4
	0.2nm,0.8s,baz=302,slow=9.0,SNR=3.3						
MKAR	**Makanchi Array**	**44.70**	**346**	P	P	21 02 04.1	+0.8
	0.3nm,0.3s,baz=151,slow=7.7,SNR=6.8						
SONM	**Songino Array**	**44.93**	**10**	P	P	21 02 05.7	+0.6
	0.3nm,0.4s,baz=194,slow=10,SNR=2.7						
ZALV	**Zalesovo Beam**	**51.06**	**351**	P	P	21 02 52.3	-0.2
	0.7nm,0.5s,baz=178,slow=9.7,SNR=5.5						
BVAR	**Borovoye Array**	**53.69**	**341**	P	P	21 03 10.8	-1.3
	0.5nm,0.8s,baz=205,slow=6.1,SNR=3.1						
MAW	**Mawson**	**74.82**	**193**	LR	LR	21 31 24.6	
	comp=Z,172nm,21.3s,baz=227,slow=30						
TXAR	**Lajitas Array**	**142.09**	**29**	PKP	PKPdf	21 13 23.4	-0.1
	0.1nm,0.3s,baz=48,slow=1.3,SNR=3.8						

*ISK **29** 20:54:54.6, 37°.38N×38°.61E, h7km, ML3.7*
*ISCJB **29** 20:54:55.1±0.5, 37°.43N±0°.02×38°.60E±0°.02, h1km±4km, Error ellipse: s-maj=3.4km s-min=2.3km az=148.7*
*CSEM **29** 20:54:55.9±0.1, 37°.45N×38°.62E, h2km, ML3.7, Error ellipse: s-maj=3.5km s-min=2.9km az=137.0*
*DDA **29** 20:54:55.8, 37°.47N×38°.59E, h24km±1km, Ml4.4*
*NSSC **29** 20:54:58, 37°.38N×38°.65E, h13km±1km*

ISC 29 20:54:55.9±0.4, 37°.42N±0°.02×38°.61E±0°.02, h2km±3km, n108, σ0.94/153, 6C-21D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.17**	**82**	*e*PG	**Pg**	**20 54 58.6**	**-0.6**
URFA	**Urfa**	**0.17**	**82**	*e*Pg	**Pg**	**20 54 58.6**	**-0.5**
ATAB	**Bozova**	**0.26**	**282**	⇑*i*P	**Pg**	**20 55 01.1**	**+0.2**
ATAB				*i* S	**Sg**	**20 55 04.7**	**+0.5**
ATAB	**Bozova**	**0.26**	**282**	*i* P	**Pg**	**20 55 01.0**	**+0.2**
ATAB				*i* S	**Sg**	**20 55 04.7**	**+0.5**
GZT	**Gaziantep**	**0.84**	**266**	⇑*i*P	**Pg**	**20 55 11.9**	**-0.1**
GZT				*i* S	**Sg**	**20 55 23.8**	**+1.0**
MYA	**Malataya**	**0.92**	**351**	PG	**Pg**	**20 55 12.8**	**-0.7**
MYA	**Malataya**	**0.92**	**351**	*i* Pg	**Pg**	**20 55 12.8**	**-0.7**
AKCD	**Akcadag**	**1.03**	**328**	⇓*i*P	**Pg**	**20 55 15.7**	**0.0**
AKCD				*i* S	**Sg**	**20 55 27.1**	**-2.0**
AKCD	**Akcadag**	**1.03**	**328**	*i* P	**Pg**	**20 55 15.7**	**0.0**
AKCD				*i* S	**Sg**	**20 55 27.0**	**-2.1**
SVRC	**Sivrice-ELAZID**	**1.10**	**30**	*e*PN	**Pg**	**20 55 16.8**	**-0.3**
SVRC				*e*SN	**Sg**	**20 55 32.9**	**+1.4**
SVRC	**Sivrice-ELAZID**	**1.10**	**30**	*e*Pn	**Pg**	**20 55 16.8**	**-0.3**
SVRC				*e*Sn	**Sg**	**20 55 32.9**	**+1.5**
DRBT	**Darb Altahta**	**1.11**	**120**	⇓P	**Pg**	**20 55 15.0**	**-2.2**
DRBT				⇓S	**Sg**	**20 55 27.0**	**-4.6**
DRBT	**Darb Altahta**	**1.11**	**120**	⇓*i*P	**Pg**	**20 55 15.4**	**-1.8**
DRBT				⇓*i*S	**Sg**	**20 55 27.3**	**-4.3**
ELZG	**Elazig**	**1.12**	**15**	⇓*i*P	**Pg**	**20 55 17.1**	**-0.3**
ELZG				*i* S	**Sg**	**20 55 31.1**	**-0.8**
ELZG	**Elazig**	**1.12**	**15**	*i* P	**Pg**	**20 55 17.0**	**-0.3**
ELZG				*i* S	**Sg**	**20 55 31.1**	**-0.7**
GAZ	**Gaziantep**	**1.14**	**258**	*e*PN	**Pg**	**20 55 17.4**	**-0.5**
GAZ	**Gaziantep**	**1.14**	**258**	*e*Pn	**Pg**	**20 55 17.4**	**-0.4**
DIYA	**Diyarbakir**	**1.30**	**67**	⇑*i*P	**Pg**	**20 55 20.7**	**-0.1**
DIYA				*i* S	**Sg**	**20 55 38.9**	**+1.3**
DIYA	**Diyarbakir**	**1.30**	**67**	*i* P	**Pg**	**20 55 20.7**	**-0.1**
DIYA				*i* S	**Sg**	**20 55 38.9**	**+1.2**
SLMH	**Al Salmeh**	**1.32**	**205**	⇑P	**Pg**	**20 55 21.0**	**-0.2**
SLMH				⇑S	**Sg**	**20 55 38.0**	**-0.3**
SLMH	**Al Salmeh**	**1.32**	**205**	⇑*i*P	**Pg**	**20 55 21.8**	**+0.6**
SLMH				⇑*i*S	**Sg**	**20 55 38.5**	**+0.2**
KMRS	**Kahramanmaras**	**1.36**	**274**	*e*PN	**Pn**	**20 55 20.7**	**-1.3**
KMRS	**Kahramanmaras**	**1.36**	**274**	*e*Pn	**Pn**	**20 55 20.7**	**-1.3**
SFNV	**Sufian**	**1.56**	**129**	⇓P	**Pn**	**20 55 25.0**	**+0.3**
SFNV				⇓S	**Sn**	**20 55 45.0**	**-0.5**
SFNV	**Sufian**	**1.56**	**129**	⇓*i*P	**Pn**	**20 55 25.7**	**+1.0**
SFNV				⇓*i*S	**Sn**	**20 55 45.2**	**-0.3**
MNKR	**ALMNKUR**	**1.56**	**160**	⇑P	**Pn**	**20 55 26.0**	**+1.3**
MNKR				⇑S	**Sn**	**20 55 44.0**	**-1.6**
MNKR	**ALMNKUR**	**1.56**	**160**	⇑*i*P	**Pn**	**20 55 26.0**	**+1.3**
MNKR				⇑*i*S	**Sn**	**20 55 44.2**	**-1.4**
PTK	**Pertek**	**1.59**	**22**	*e*PN	**Pn**	**20 55 24.6**	**-0.6**
PTK	**Pertek**	**1.59**	**22**	*e*Pn	**Pn**	**20 55 24.6**	**-0.6**
KBSD	**Kabsdagh**	**1.60**	**105**	⇑P	**Pn**	**20 55 25.0**	**-0.2**
KBSD				⇑S	**Sn**	**20 55 46.0**	**-0.4**
KBSD	**Kabsdagh**	**1.60**	**105**	⇑*i*P	**Pn**	**20 55 25.2**	**0.0**
KBSD				⇑*i*S	**Sn**	**20 55 46.1**	**-0.3**
DARE	**Darende-Malaty**	**1.66**	**338**	*e*PN	**Pn**	**20 55 22.6**	**-3.4**
DARE				*e*SN	**Sn**	**20 55 41.9**	**-6.0**
MARD	**Mardin**	**1.73**	**93**	⇑*i*P	**Pn**	**20 55 25.2**	**-1.8**
MARD				*i* S	**Sn**	**20 55 50.8**	**+1.2**
JHLN	**Al Jahlan**	**1.75**	**185**	⇑P	**Pn**	**20 55 27.0**	**-0.2**
JHLN				⇑S	**Sn**	**20 55 49.0**	**-1.1**
JHLN	**Al Jahlan**	**1.75**	**185**	⇑*i*P	**Pn**	**20 55 28.0**	**+0.8**
JHLN				⇑*i*S	**Sn**	**20 55 49.6**	**-0.5**
DRWC	**Darouich**	**1.75**	**244**	⇑P	**Pn**	**20 55 28.0**	**+0.7**
DRWC				⇑S	**Sn**	**20 55 50.0**	**-0.1**
DRWC	**Darouich**	**1.75**	**244**	⇑*i*P	**Pn**	**20 55 28.2**	**+0.9**
DRWC				⇑*i*S	**Sn**	**20 55 50.0**	**-0.1**
ANDN	**Andirin**	**1.81**	**276**	⇑*i*P	**Pn**	**20 55 28.8**	**+0.7**
ANDN				*i* S	**Sn**	**20 55 52.4**	**+0.7**
ANDN	**Andirin**	**1.81**	**276**	*i* P	**Pn**	**20 55 28.8**	**+0.7**
ANDN				*i* S	**Sn**	**20 55 52.4**	**+0.7**
KEMA	**Kemaliye**	**1.85**	**357**	⇓*i*P	**Pn**	**20 55 28.6**	**-0.1**
KEMA				*i* S	**Sn**	**20 55 52.5**	**-0.1**
KEMA	**Kemaliye**	**1.85**	**357**	*i* P	**Pn**	**20 55 28.6**	**-0.1**
KEMA				*i* S	**Sn**	**20 55 52.5**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.97**	**310**	*e*PN	**Pn**	**20 55 29.9**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.97**	**310**	*e*Pn	**Pn**	**20 55 29.9**	**-0.4**
BINT	**Bingol**	**2.08**	**45**	*e*PN	**Pn**	**20 55 31.1**	**-0.7**
BINT	**Bingol**	**2.08**	**45**	*e*Pn	**Pn**	**20 55 31.1**	**-0.7**
COBT	**Iskenderun**	**2.09**	**245**	*i* P	**Pb**	**20 55 34.6**	**+0.1**
COBT				*i* S	**Sg**	**20 56 04.3**	**+1.3**
COBT	**Iskenderun**	**2.09**	**245**	*i* P	**Pb**	**20 55 34.7**	**+0.2**
COBT				*i* S	**Sg**	**20 56 04.3**	**+1.3**
BEST	**Besiri**	**2.16**	**77**	⇑*i*P	**Pn**	**20 55 32.6**	**-0.4**
BEST				*i* S	**Sn**	**20 56 02.3**	**+2.0**
BTCH	**Batrach**	**2.21**	**232**	⇓P	**Pn**	**20 55 35.0**	**+1.4**
BTCH				⇓S	**Sn**	**20 56 01.0**	**-0.5**
BTCH	**Batrach**	**2.21**	**232**	⇓*i*P	**Pn**	**20 55 35.9**	**+2.3**
BTCH				⇓*i*S	**Sn**	**20 56 01.3**	**-0.2**
KOZT	**Kozan**	**2.22**	**272**	*e*PN	**Pn**	**20 55 32.6**	**-1.1**
KOZT	**Kozan**	**2.22**	**272**	*e*Pn	**Pn**	**20 55 32.6**	**-1.1**
CEYT	**Ceyhan**	**2.32**	**261**	*e*PN	**Pn**	**20 55 33.7**	**-1.4**
CEYT	**Ceyhan**	**2.32**	**261**	*e*Pn	**Pn**	**20 55 33.7**	**-1.5**
HTY	**Hatay**	**2.37**	**238**	*e*PN	**Pn**	**20 55 34.4**	**-1.4**
HTY	**Hatay**	**2.37**	**238**	*e*Pn	**Pn**	**20 55 34.4**	**-1.4**
EZC	**Erzincan**	**2.40**	**14**	*e*PN	**Pn**	**20 55 36.0**	**-0.2**
EZC	**Erzincan**	**2.40**	**14**	*e*Pn	**Pn**	**20 55 36.0**	**-0.3**
BNGL	**BINGOL**	**2.52**	**52**	*i* P	**Pn**	**20 55 37.4**	**-0.5**
BNGL				*i* S	**Sn**	**20 56 10.2**	**+1.0**
WRDH	**Warideh**	**2.60**	**224**	⇓P	**Pn**	**20 55 40.0**	**+1.0**
WRDH				⇓S	**Sn**	**20 56 11.0**	**-0.2**
WRDH	**Warideh**	**2.60**	**224**	⇓*i*P	**Pn**	**20 55 40.1**	**+1.1**
WRDH				⇓*i*S	**Sn**	**20 56 11.0**	**-0.2**
SLNF	**Slenfeh**	**2.65**	**227**	⇑P	**Pn**	**20 55 42.0**	**+2.4**
SLNF				⇑S	**Sn**	**20 56 12.0**	**-0.3**
SLNF	**Slenfeh**	**2.65**	**227**	⇑*i*P	**Pn**	**20 55 42.0**	**+2.4**
SLNF				⇑*i*S	**Sn**	**20 56 12.5**	**+0.2**
KRTS	**Karatas**	**2.73**	**253**	*e*PN	**Pn**	**20 55 39.6**	**-1.1**
KRTS	**Karatas**	**2.73**	**253**	*e*Pn	**Pn**	**20 55 39.6**	**-1.1**
KARA	**Karaisali**	**2.84**	**268**	*e*PN	**Pn**	**20 55 41.3**	**-1.0**
KARA	**Karaisali**	**2.84**	**268**	*e*Pn	**Pn**	**20 55 41.3**	**-1.0**
BIDA	**Albida**	**3.03**	**218**	⇑P	**Pn**	**20 55 45.0**	**+0.1**
BIDA				⇑S	**Sn**	**20 56 20.0**	**-1.8**
BIDA	**Albida**	**3.03**	**218**	⇑*i*P	**Pn**	**20 55 45.8**	**+0.9**
BIDA				⇑*i*S	**Sn**	**20 56 20.2**	**-1.6**
GUMT	**Gumushane**	**3.11**	**12**	*e*PN	**Pn**	**20 55 46.5**	**+0.5**
GUMT	**Gumushane**	**3.11**	**12**	*e*Pn	**Pn**	**20 55 46.5**	**+0.5**
RSDY	**Resadiye-TOKAT**	**3.14**	**342**	*e*PN	**Pn**	**20 55 46.9**	**+0.5**
RSDY	**Resadiye-TOKAT**	**3.14**	**342**	*e*Pn	**Pn**	**20 55 46.9**	**+0.5**
BAYT	**Ayd¨–ntepe-Bay**	**3.20**	**21**	*e*PN	**Pn**	**20 55 47.5**	**+0.2**
BAYT	**Ayd¨–ntepe-Bay**	**3.20**	**21**	*e*Pn	**Pn**	**20 55 47.5**	**+0.2**
EZM	**Erzurum**	**3.29**	**40**	*e*PN	**Pn**	**20 55 48.4**	**0.0**
ERZM	**Erzurum**	**3.29**	**40**	*i* P	**Pn**	**20 55 48.4**	**0.0**
ERZM				*i* S	**Sn**	**20 56 18.2**	**-10**
ERZM	**Erzurum**	**3.29**	**40**	*i* P	**Pn**	**20 55 48.4**	**0.0**
TOKT	**Tokat**	**3.32**	**332**	*e*PN	**Pn**	**20 55 49.1**	**+0.3**
TOKT	**Tokat**	**3.32**	**332**	*e*Pn	**Pn**	**20 55 49.1**	**+0.3**
YOZ	**Yozgat**	**3.40**	**312**	*e*PN	**Pn**	**20 55 50.0**	**-0.1**
YOZ	**Yozgat**	**3.40**	**312**	*e*Pn	**Pn**	**20 55 50.0**	**0.0**
ROOS	**tl_alroos**	**3.42**	**199**	⇑P	**Pn**	**20 55 51.0**	**+0.8**
ROOS	**tl_alroos**	**3.42**	**199**	⇑*i*P	**Pn**	**20 55 51.7**	**+1.5**
HWQ	**Hawqa**	**3.81**	**215**	*e*P	**Pb**	**20 56 03.6**	**-0.3**
VANB	**Van**	**3.95**	**71**	*e*PN	**Pn**	**20 55 57.6**	**+0.1**
VANB	**Van**	**3.95**	**71**	*e*Pn	**Pn**	**20 55 57.7**	**+0.1**
CUKT	**Cukurca**	**3.98**	**91**	*e*PN	**Pn**	**20 55 57.0**	**-1.0**
CUKT	**Cukurca**	**3.98**	**91**	*e*Pn	**Pn**	**20 55 57.0**	**-1.0**
AGRB	**Hanur-Agry**	**4.06**	**57**	*e*PN	**Pn**	**20 55 59.1**	**+0.1**
AGRB	**Hanur-Agry**	**4.06**	**57**	*e*Pn	**Pn**	**20 55 59.1**	**+0.1**
HKR	**Hakkari**	**4.08**	**86**	*e*PN	**Pn**	**20 55 59.3**	**0.0**
HKR	**Hakkari**	**4.08**	**86**	*e*Pn	**Pn**	**20 55 59.3**	**-0.1**
SULT	**Sultanhani-AKS**	**4.11**	**282**	*e*PN	**Pn**	**20 55 59.9**	**+0.2**
SULT	**Sultanhani-AKS**	**4.11**	**282**	*e*Pn	**Pn**	**20 55 59.9**	**+0.2**
CORM	**Corum**	**4.16**	**313**	*e*PN	**Pn**	**20 56 00.6**	**+0.3**
CORM	**Corum**	**4.16**	**313**	*e*Pn	**Pn**	**20 56 00.6**	**+0.2**
KVT	**Kavak**	**4.17**	**332**	*e*PN	**Pn**	**20 56 01.2**	**+0.7**
KVT	**Kavak**	**4.17**	**

SSV			eS	Sb	21 02 32.1	+3.5
SVV	**Soufriere Volc**	**0.89 240**	eP	Pb	21 02 20.1	+2.2
SVV			eS	Sb	21 02 32.3	+2.9
MVM	**Montagne Vaucl**	**0.90 330**	eP	Pb	21 02 18.5	+0.4
SVB	**Belmont**	**0.94 238**	eP	Pb	21 02 20.9	+2.1
SVB			eS	Sb	21 02 34.5	+3.6
BIM	**Bigot**	**0.97 320**	eP	Pb	21 02 19.9	+0.6
FCV	**Fort Charlotte**	**1.00 233**	eS	Sb	21 02 34.5	+1.9
FDF	**Fort de France**	**1.19 324**	eP	Pn	21 02 22.9	+0.6
FDF			eS	Sn	21 02 38.8	+1.0
GRCU	**Cariacou**	**1.63 218**	eP	Pn	21 02 29.3	+0.9
GRCU			eS	Sn	21 02 50.6	+1.9
GRIC	**Isle de Caille**	**1.86 218**	eP	Pn	21 02 33.9	+2.4
GRIC			eS	Sn	21 02 55.7	+1.4
GRSS	**Sisters**	**1.86 218**	eP	Pn	21 02 33.0	+1.4
GRSS			eS	Sn	21 02 56.0	+1.6
LZG	**Guadaloupe-1**	**2.69 331**	eP	Pn	21 02 46.0	+3.0

*IDC **29** 21:03:10.4±1.6,3.″14S×143.″12E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.7/16, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=50.0km s-min=23.8km az=108.0*
*ISCJB **29** 21:03:14.7±2.5, 3.″29S±0.″09×143.″0E±0.″1, h42km±28km, mb3.8/8, Error ellipse: s-maj=23.2km s-min=13.0km az=24.3*
*NEIC **29** 21:03:17.3±1.5, 3.″27S×143.″04E, h50km±18km, mb4.0/5, Error ellipse: s-maj=16.3km s-min=9.2km az=116.0*
ISC 29 21:03:17.1±1.9, 3.″28S±0.″09×143.″0E±0.″1, h48km±23km, n18, σ0°79/18, mb3.8/8, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.34**	**146**	ePn	**Pn**	**21 05 02.1**	**+0.2**
COEN	**Coen**	**10.61**	**179**	ePn	**Pn**	**21 05 46.6**	**0.0**
GUMO	**Guam**	**16.85**	**6**	ePn	**Pn**	**21 07 09.7**	**-0.1**
	68nm,1.2s						
WRA	**Warramunga Arr**	**18.61**	**206**	P	**Pn**	**21 07 30.4**	**-0.9**
	0.3nm,0.3s,baz=24,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**22.11**	**203**	P	**P**	**21 08 09.5**	**+1.0**
	0.7nm,0.5s,mb3.3,baz=26,slow=9.5,SNR=4.7						
FITZ	**Fitzroy Crossi**	**22.52**	**228**	P	**P**	**21 08 13.2**	**+0.2**
	3.8nm,0.6s,mb4.0,baz=61,slow=9.8,SNR=8.1						
FITZ	**Fitzroy Crossi**	**22.52**	**228**	eP	**P**	**21 08 13.0**	**0.0**
	10.0nm,1.0s,mb4.2						
FITZ	**Fitzroy Crossi**	**22.52**	**228**	eP	**P**	**21 08 13.3**	**+0.3**
	4.2nm,0.7s,mb4.0						
KWAJ	**Kwajalein Atol**	**27.29**	**64**	P	**P**	**21 08 57.8**	**+0.3**
MBWA	**Marble Bar**	**28.80**	**230**	eP	**P**	**21 09 10.1**	**-0.7**
	4.2nm,0.8s,mb4.2						
KSM	**Kuching**	**33.05**	**278**	eP	**P**	**21 09 48.0**	**-0.3**
JNU	**Nakatsue**	**37.98**	**343**	P	**P**	**21 10 30.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**48.48**	**298**	P	**P**	**21 11 55.6**	**+0.2**
	0.7nm,0.9s,mb3.7,baz=107,slow=5.2,SNR=4.1						
MKAR	**Makanchi Array**	**72.90**	**321**	P	**P**	**21 14 43.2**	**+2.0**
	0.4nm,0.2s,mb3.9,baz=101,slow=7.5,SNR=4.7						
MKAR	**Makanchi Array**	**72.90**	**321**	P	**P**	**21 14 43.2**	**+2.0**
EKS2	**Erkin-Say**	**77.14**	**315**	eP	**P**	**21 15 06.1**	**+0.3**
	0.8nm,0.5s,mb3.9						
BRVK	**Borovoye**	**82.33**	**324**	eP	**P**	**21 15 33.7**	**0.0**
	0.6nm,0.5s,mb3.8						
ILAR	**Eielson Array**	**84.58**	**24**	P	**P**	**21 15 43.2**	**-1.8**
	0.3nm,0.5s,mb3.6,baz=234,slow=4.3,SNR=3.9						

*IDC **29** 21:04:51.4±3.5, 28.″64S×177.″64W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/15, mbtmp3.9/4, Error ellipse: s-maj=93.7km s-min=37.4km az=35.0*
*ISCJB **29** 21:04:53.6±0.8, 28.″3S±0.″1×177.″7W±0.″1, h33km, mb3.9/5, Error ellipse: s-maj=20.0km s-min=14.5km az=165.5*
*NEIC **29** 21:04:55.7±0.8, 28.″41S×177.″66W, h35km, mb4.1/3, Error ellipse: s-maj=20.0km s-min=14.6km az=165.0*
ISC 29 21:04:55.8±0.8, 28.″4S±0.″1×177.″6W±0.″1, h35km, n13, σ0°90/12, mb3.9/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**11.30**	**339**	ePn	**Pn**	**21 07 34.1**	**-0.8**
RAR	**Rarotonga**	**17.71**	**70**	Pn	**Pn**	**21 09 00.0**	**+0.3**
ARMA	**Armidale**	**26.82**	**258**	eP	**P**	**21 10 30.1**	**-2.8**
	9.4nm,1.1s,mb4.2						
EIDS	**Eidsvold**	**28.02**	**269**	P	**P**	**21 10 44.1**	**+0.4**
CTAO	**Charters Tower**	**33.84**	**276**	P	**P**	**21 11 35.4**	**+0.3**
STKA	**Stephens Creek**	**35.29**	**254**	P	**P**	**21 11 47.9**	**+0.4**
	1.0nm,0.4s,mb4.1,baz=101,slow=3.4,SNR=4.3						
STKA	**Stephens Creek**	**35.29**	**254**	eP	**P**	**21 11 46.8**	**-0.7**
	0.5nm,0.7s,mb3.5						
COEN	**Coen**	**39.07**	**283**	eP	**P**	**21 12 20.8**	**+1.2**
ASAR	**Alice Springs**	**43.57**	**265**	P	**P**	**21 12 56.5**	**0.0**
	0.8nm,0.6s,mb3.6,baz=101,slow=7.7,SNR=7.4						
WRA	**Warramunga Arr**	**44.38**	**270**	P	**P**	**21 13 03.9**	**+0.8**
	1.4nm,0.6s,mb3.9,baz=110,slow=8.0,SNR=29						
QSPA	**South Pole Qui**	**61.73**	**180**	P	**P**	**21 15 09.7**	**-0.4**
	0.7nm,0.4s,mb4.1,baz=74,slow=3.2,SNR=5.6						
QSPA	**South Pole Qui**	**61.73**	**180**	eP	**P**	**21 15 09.4**	**-0.6**
	0.8nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**143.34**	**341**	PKP	PKPdf	21 24 26.8	+1.0
	0.8nm,0.4s,baz=64,slow=4.4,SNR=6.7						

IDC 29 21:08:03.3±5.0, 29.″19S×177.″57W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/14, mbtmp3.8/3, Error ellipse: s-maj=200.3km s-min=76.8km az=159.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.13**	**255**	P	P	21 14 59.3	+0.7
	1.6nm,0.8s,baz=95,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**43.56**	**265**	P	P	21 16 07.5	-1.6
	0.5nm,0.6s,baz=101,slow=7.6,SNR=7.4						
WRA	**Warramunga Arr**	**44.44**	**271**	P	P	21 16 17.1	+0.9
	0.6nm,0.4s,baz=110,slow=8.1,SNR=11						
FINES	**FINESS Array B**	**144.13**	**341**	PKP	PKPdf	21 27 39.8	-0.5
	0.9nm,0.5s,baz=156,slow=1.4,SNR=6.1						

*ISCJB **29** 21:16:26.4±0.6, 85.″78N±0.″05×2.″4E±.″, h10km, mb3.6/8, MS2.9/2, Error ellipse: s-maj=11.9km s-min=6.7km az=9.4*
*IDC **29** 21:16:27.1±0.9, 85.″96N×26.″10E, h0km, mb3.6/7, mb1 4.0/10, mb1mx3.7/25, mbtmp3.8/10, ML4.3/3, MS3.0/4, Ms1 2.9/4, ms1mx2.7/31, Error ellipse: s-maj=23.1km s-min=16.1km az=87.0*
*NEIC **29** 21:16:28.3±0.5, 85.″86N×24.″62E, h10km, mb4.0/3, Error ellipse: s-maj=11.1km s-min=7.8km az=90.0*
ISC 29 21:16:28.3±0.6, 85.″83N±0.″05×2.″4E±.″, h10km, n21, σ0°79/24, mb3.6/8, MS2.9/2, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**7.10**	**200**	ePn	**Pn**	**21 18 12.0**	**0.0**
	31nm,0.7s						
KBS				Sn	**Sn**	**21 19 32.4**	**-0.2**
SPB4	**Spitsbergen Ar**	**7.76**	**192**	ePn	**Pn**	**21 18 21.4**	**+0.4**
SPITS	**Spitsbergen Ar**	**7.76**	**192**	Pn	**Pn**	**21 18 21.2**	**+0.1**
	baz=31,slow=12,SNR=34						
SPITS				Sn	**Sn**	**21 19 47.7**	**-1.1**
	baz=17,slow=20,SNR=4.4						
SPITS	**Spitsbergen Ar**	**7.76**	**192**	Pn	**Pn**	**21 18 21.2**	**+0.1**
SPITS				Sn	**Sn**	**21 19 47.7**	**-1.1**
SUMG	**Summit**	**16.05**	**256**	ePn	**Pn**	**21 20 13.6**	**0.0**
KEV	**Kevo**	**16.17**	**177**	ePn	**Pn**	**21 20 14.9**	**-0.3**
	9.3nm,0.7s						
ARCES	**ARCESS Array B**	**16.39**	**179**	Pn	**Pn**	**21 20 17.5**	**-0.5**
	1.2nm,0.3s,baz=357,slow=9.6,SNR=38						
ARCES				Sn	**Sn**	**21 23 10.4**	**-9.2**
	0.4nm,0.3s,baz=334,slow=37,SNR=5.2						
ARCES				LR	LR	21 27 39.1	
	comp=Z,25nm,19.7s,baz=129,slow=41						
RES	**Resolute Bay**	**17.84**	**311**	P	**Pn**	**21 20 34.5**	**-1.5**
	1.0nm,0.3s,baz=38,slow=12,SNR=8.4						
RES				LR	LR	21 26 48.6	
	comp=Z,86nm,18.7s,baz=76,slow=35						
RES	**Resolute Bay**	**17.84**	**311**	ePn	**Pn**	**21 20 35.2**	**-0.9**
	3.5nm,0.4s						
RES				LR	LR	21 26 48.6	
LVZ	**Lovozero**	**18.12**	**168**	ePn	**Pn**	**21 20 39.4**	**-0.2**
	5.3nm,0.6s						
FINES	**FINESS Array B**	**24.52**	**178**	P	**P**	**21 21 48.5**	**+1.2**
	1.9nm,0.8s,mb3.7,baz=21,slow=8.1,SNR=2.7						
BILL	**Bilibino**	**25.52**	**33**	P	**P**	**21 21 55.9**	**-0.5**
ILAR	**Eielson Array**	**29.54**	**352**	P	**P**	**21 22 31.9**	**-0.4**
	0.6nm,1.0s,mb3.3,baz=358,slow=6.6,SNR=3.9						
YKA	**Yellowknife Ar**	**30.95**	**324**	LR	LR	21 35 09.2	
	comp=Z,8.8nm,20.7s,MS2.4,baz=25,slow=36						
ESK	**Eskdalemuir**	**31.20**	**211**	P	**P**	**21 22 47.6**	**+0.7**
ZALV	**Zalesovo Beam**	**34.33**	**114**	P	**P**	**21 23 14.5**	**+0.1**
	0.8nm,0.3s,mb4.1,baz=317,slow=8.3,SNR=3.1						
GERES	**GERESS Array B**	**37.23**	**192**	P	**P**	**21 23 42.6**	**+3.3**
	0.3nm,0.7s,mb3.2,baz=13,slow=13,SNR=3.6						
SONM	**Songino Array**	**41.94**	**93**	P	**P**	**21 24 19.0**	**+0.5**
	1.1nm,0.9s,mb3.5,baz=345,slow=9.5,SNR=4.7						
SONM				LR	LR	21 42 40.0	
	comp=Z,58nm,21.8s,MS3.4,baz=253,slow=38						
TXAR	**Lajitas Array**	**63.47**	**310**	P	**P**	**21 26 59.1**	**+1.2**
	0.3nm,0.8s,mb3.5,baz=4.4,slow=1.6,SNR=3.9						
CMAR	**Chiang Mai Arr**	**70.58**	**104**	P	**P**	**21 27 41.9**	**-1.4**
	1.1nm,0.9s,mb3.8,baz=346,slow=7.3,SNR=6.4						
TORD	**Torodi Ar. Bea**	**73.07**	**203**	P	**P**	**21 27 58.8**	**+0.6**
	0.4nm,0.7s,mb3.5,baz=358,slow=6.5,SNR=6.5						

*IDC **29** 21:19:39.9±0.6, 13.″37N×120.″32E, h0km, mb4.1/15, mb1 4.3/15, mb1mx4.1/23, mbtmp4.1/15, MS3.3/3, Ms1 3.3/3, ms1mx2.9/24, Error ellipse: s-maj=15.1km s-min=10.0km az=114.0*
*NEIC **29** 21:19:41.3±0.2, 13.″46N×120.″47E, h10km, mb4.6/10, Error ellipse: s-maj=7.7km s-min=4.7km az=91.0*
*MAN **29** 21:19:41, 13.″43N×120.″25E, h11km, mb4.5, ML3.4, MS3.3*
ISC 29 21:19:42.7±1.0, 13.″46N±0.″03×120.″38E±0.″05, h17km±6km, n65, σ0°98/62, mb4.2/25, MS3.1/2, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.31**	**335**	eP	**Pg**	**21 19 47.4**	**-1.9**
TGY	**Tagaytay City**	**0.84**	**40**	Pg	**Pg**	**21 19 59.0**	**-0.1**
	526nm,0.3s,baz=230,slow=3.7,SNR=60						
TGY				Lg		21 20 11.5	
	1μm,0.3s,baz=90,slow=20,SNR=26						
BOAC	**Boac**	**1.43**	**90**	eP	**Pn**	**21 20 07.9**	**+0.1**
BUSP	**Coron**	**1.45**	**187**	eP	**Pn**	**21 20 07.4**	**-0.8**
OTRP	**Odiongan**	**1.94**	**124**	eP	**Pn**	**21 20 16.6**	**+1.8**
POLP	**Polilio Island**	**1.97**	**50**	eP	**Pn**	**21 20 16.6**	**+1.3**
AUQP	**San Andres**	**2.24**	**93**	eP	**Pn**	**21 20 22.3**	**+3.3**
SCZP	**Santa Cruz**	**2.35**	**349**	eP	**Pn**	**21 20 25.1**	**+4.6**
ENPP	**El Nido**	**2.42**	**203**	eP	**Pn**	**21 20 20.6**	**-0.8**
BALP	**Baler**	**2.55**	**27**	eP	**Pn**	**21 20 25.3**	**+2.1**
CUYO	**Cuyo Island**	**2.66**	**166**	eP	**Pn**	**21 20 24.0**	**-0.8**
GUIM	**Jordan**	**3.55**	**142**	eP	**Pn**	**21 20 37.8**	**+0.8**
CAUP	**Cauayan**	**3.74**	**22**	eP	**Pn**	**21 20 43.0**	**+3.4**
ABRA	**Dolores**	**4.18**	**4**	eP	**Pn**	**21 20 52.2**	**+6.5**
APYP	**Conner**	**4.46**	**11**	eP	**Pn**	**21 20 55.9**	**+6.4**
BATP	**Bataraza**	**5.28**	**209**	eP	**Pn**	**21 21 06.6**	**+5.9**
DAV	**Davao City (W)**	**8.15**	**141**	LR	LR	21 25 24.2	
	comp=Z,306nm,19.7s,baz=236,slow=42						
KKM	**Kota Kinabalu**	**8.43**	**210**	ePn	**Pn**	**21 21 46.2**	**+2.1**
	12nm,1.1s						
TWG	**Pinlang**	**9.34**	**4**	ePn	**Pn**	**21 21 56.7**	**+0.2**
TPUB	**Ta-pu**	**9.80**	**1**	Pn	**Pn**	**21 22 02.9**	**+0.1**
YHNB	**Yeheng**	**11.20**	**5**	Pn	**Pn**	**21 22 21.9**	**0.0**
KSM	**Kuching**	**15.53**	**221**	Pn	**Pn**	**21 23 22.5**	**+1.6**
CMAR	**Chiang Mai Arr**	**21.20**	**286**	P	**P**	**21 24 28.6**	**+1.1**
	1.7nm,0.9s,mb3.4,baz=99,slow=9.2,SNR=9.6						
PSI	**Prapat**	**23.70**	**245**	LR	LR	21 33 34.0	
	comp=Z,35nm,19.7s,MS2.8,baz=116,slow=35						
KSRS	**Korea Array**	**24.83**	**14**	LR	LR	21 35 34.2	
	comp=Z,99nm,18.2s,MS3.4,baz=200,slow=38						
LSA	**Lhasa**	**31.50**	**306**	eP	**P**	**21 26 04.8**	**+1.1**
FITZ	**Fitzroy Crossi**	**31.78**	**170**	eP	**P**	**21 26 06.3**	**0.0**
	12nm,1.5s,mb4.5						
MDJ	**Mudanjiang**	**32.04**	**12**	P	**P**	**21 26 07.6**	**-0.7**
MBWA	**Marble Bar**	**34.40**	**181**	eP	**P**	**21 26 29.1**	**-0.1**
	3.2nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**35.92**	**157**	P	**P**	**21 26 41.2**	**-1.1**
	9.0nm,0.6s,mb4.9,baz=335,slow=9.7,SNR=132						
ASAJ	**Asahikawa**	**35.99**	**28**	eP	**P**	**21 26 41.5**	**-1.1**
ULN	**Ulaanbaatar**	**36.06**	**345**	ePn	**P**	**21 26 43.3**	**+0.2**
	10nm,1.4s,mb4.6						
SONM	**Songino Array**	**36.20**	**344**	P	**P**	**21 26 45.1**	**+0.7**
	3.3nm,0.8s,mb4.3,baz=159,slow=10,SNR=10						
ASAR	**Alice Springs**	**39.19**	**160**	P	**P**	**21 27 09.8**	**-0.2**
	8.6nm,0.5s,mb4.7,baz=339,slow=6.8,SNR=163						
CTA	**Charters Tower**	**41.94**	**142**	P	**P**	**21 27 31.9**	**-0.9**
	1.2nm,0.3s,mb4.0,baz=320,slow=11,SNR=5.6						
CTAO	**Charters Tower**	**41.94**	**142**	P	**P**	**21 27 31.4**	**-1.3**
MK31	**Makanchi Array**	**46.04**	**324**	eP	**P**	**21 28 05.7**	**+0.3**
MKAR	**Makanchi Array**	**46.04**	**324**	P	**P**	**21 28 06.7**	**+1.3**
	1.0nm,0.7s,mb3.9,baz=134,slow=8.7,SNR=6.5						
NWAO	**Narrogin (SRO)**	**46.22**	**184**	P	**P**	**21 28 07.8**	**+0.9**
	3.5nm,0.6s,mb4.5,baz=7.3,slow=7.8,SNR=5.5						
TKM2	**Tokmak 2**	**48.38**	**316**	eP	**P**	**21 28 24.4**	**+0.7**
	0.9nm,0.5s,mb4.1						
ZALV	**Zalesovo Beam**	**49.13**	**333**	P	**P**	**21 28 29.4**	**+0.1**
	0.5nm,0.3s,mb4.0,baz=127,slow=6.5,SNR=3.6						
AML	**Almayashu**	**49.38**	**315**	eP	**P**	**21 28 31.6**	**+0.2**
	3.2nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**49.45**	**156**	P	**P**	**21 28 31.1**	**-0.8**
	1.2nm,0.8s,mb4.0,baz=326,slow=11,SNR=3.3						
STKA	**Stephens Creek**	**49.45**	**156**	eP	**P**	**21 28 31.0**	**-1.0**
	0.4nm,0.8s,mb3.5						
EKS2	**Erkin-Say**	**49.52**	**315**	eP	**P**	**21 28 33.0**	**+0.6**
KURK	**Kurchatov**	**50.22**	**327**	eP	**P**	**21 28 37.1**	**-0.5**
	5.3nm,0.8s,mb4.6						
KBL	**Kabul**	**50.78**	**304**	eP	**P**	**21 28 41.9**	**-0.3**
BRVK	**Borovoye**	**55.87**	**326**	eP	**P**	**21 29 19.7**	**+0.4**
	6.4nm,0.8s,mb4.7						
UNV	**Unalaska Valle**	**69.29**	**37**	eP	**P**	**21 30 48.0**	**-0.9**
KIV	**Kislovodsk**	**71.96**	**312**	eP	**P**	**21 31 04.3**	**-1.1**
MCK	**McKinley**	**78.35**	**27**	eP	**P**	**21 31 40.8**	**-1.0**
	2.2nm,0.6s,mb4.3						
BRTR	**Keskin Array B**	**79.06**	**308**	P	**P**	**21 31 48.0**	**+1.8**
	0.6nm,0.8s,mb3.6,baz=99,slow=3.9,SNR=4.8						
ILAR	**Eielson Array**	**79.11**	**26**	P	**P**	**21 31 45.9**	**0.0**
	0.4nm,0.7s,mb3.4,baz=216,slow=4.5,SNR=4.4						
ARE0	**ARCESS Array S**	**79.20**	**339**	eP	**P**	**21 31 45.7**	**-0.6**
CASY	**Casey**	**79.84**	**184**	eP	**P**	**21 31 49.1**	**-0.6**
	4.8nm,0.6s,mb4.6						
FINES	**FINESS Array B**	**80.35**	**331**	P	**P**	**21 31 51.8**	**-0.9**
	2.4nm,0.9s,mb4.1,baz=97,slow=11,SNR=3.0						
AKASG	**Malin Array Be**	**80.45**	**320**	P	**P**	**21 31 52.3**	**-1.2**
	0.5nm,0.4s,mb3.8,baz=64,slow=5.6,SNR=5.0						
SUW	**Suwalki**	**83.41**	**324**	eP	**P**	**21 32 08.7**	**-0.4**
	17nm,1.1s,mb5.0						
BUR08	**Bucovina Ar. S**	**83.63**	**317**	eP	**P**	**21 32 09.7**	**-0.6**
SIT	**Sitka**	**86.42**	**32**	eP	**P**	**21 32 22.5**	**-1.6**
NOA	**NORSAR Array B**	**87.33**	**333**	P	**P**	**21 32 27.7**	**-0.8**
	1.9nm,0.9s,mb4.3,baz=68,slow=4.8,SNR=3.5						
MORC	**Moravsky Berou**	**87.94**	**321**	eP	**P**	**21 32 31.8**	**+0.2**
RES	**Resolute Bay**	**89.32**	**9**	eP	**P**	**21 32 36.8**	**-0.9**
GERES	**GERESS Array B**	**90.62**	**321**	P	**P**	**21 32 44.7**	**+0.4**
	0.6nm,0.8s,mb4.0,baz=69,slow=7.6,SNR=3.8						
GERES	**GERESS Array B**	**90.62**	**321**	P	**P**	**21 32 44.7**	**+0.4**

IDC 29 21:25:10.7±5.2, 28.″92S×177.″52W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/14, mbtmp3.7/3, Error ellipse: s-maj=186.2km s-min=79.8km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.25**	**255**	P	P	21 32 07.7	+0.6
	2.0nm,1.0s,baz=90,slow=14,SNR=2.5						
ASAR	**Alice Springs**	**43.63**	**265**	P	P	21 33 16.3	-0.8
	0.3nm,0.6s,baz=104,slow=7.2,SNR=6.4						
WRA	**Warramunga Arr**	**44.48**	**270**	P	P	21 33 23.9	-0.1
	0.7nm,0.5s,baz=110,slow=8.1,SNR=16						
FINES	**FINESS Array B**	**143.89**	**341**	PKP	PKPdf	21 44 46.9	-0.3
	2.2nm,0.9s,baz=94,slow=4.2,SNR=5.4						

*ISCJB **29** 21:46:43.4±1.0, 21.″4N±0.″2×38.″17E±0.″08, h10km, Error ellipse: s-maj=24.9km s-min=5.4km az=23.2*
*CSEM **29** 21:46:44.2±0.3, 21.″32N×38.″19E, h10km, ML3.0, Error ellipse: s-maj=20.3km s-min=3.8km az=25.0*
*SGS **29** 21:46:46.6, 21.″31N×38.″15E, h24km*
*HLW **29** 21:46:46.0, 21.″26N×38.″00E, h17km±18km, Md2.9*
ISC 29 21:46:44.5±1.0, 21.″4N±0.″2×38.″23E±0.″08, h10km, n22, σ0°58/25, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHMS		**1.36**	**87**	P	**Pn**	**21 47 09.8**	**+0.2**
SHMS		**1.36**	**87**	P	**Pn**	**21 47 09.8**	**+0.3**
SHMS				S	**Sb**	**21 47 26.9**	**-0.6**
SHBS		**1.41**	**106**	P	**Pn**	**21 47 09.8**	**-0.4**
SHBS		**1.41**	**106**	P	**Pn**	**21 47 09.8**	**-0.4**
LBNS	**Jabal Laban**	**1.59**	**102**	P	**Pn**	**21 47 12.7**	**-0.1**
LBNS	**Jabal Laban**	**1.59**	**102**	P	**Pn**	**21 47 12.6**	**-0.2**
FRAS	**Faraa**	**2.16**	**98**	P	**Pn**	**21 47 21.6**	**+1.1**
FRAS	**Faraa**	**2.16**	**98**	P	**Pn**	**21 47 21.6**	**+1.1**
LTHS	**Al Lith**	**2.32**	**118**	P	**Pn**	**21 47 22.8**	**+0.1**
LTHS	**Al Lith**	**2.32**	**118**	P	**Pn**	**21 47 22.8**	**0.0**
HSHL	**Bi'r Shalatayn**	**3.13**	**304**	P	**Pn**	**21 47 33.0**	**-0.9**
	baz=308						
HSHL				S	**Sn**	**21 48 06.1**	**-5.2**
	baz=308						
HSHL	**Bi'r Shalatayn**	**3.13**	**304**	P	**Pn**	**21 47 32.9**	**-1.0**
HSHL				S	**Sn**	**21 48 06.1**	**-5.2**
HAGS	**Hagol**	**4.22**	**315**	P	**Pn**	**21 47 48.7**	**-0.1**
	baz=319						
HAGS	**Hagol**	**4.22**	**315**	P	**Pn**	**21 47 48.7**	**-0.1**
EMRS	**Mersa Alam**	**4.77**	**320**	P	**Pn**	**21 47 56.2**	**-0.2**
	baz=323						
EMRS	**Mersa Alam**	**4.77**	**320**	P	**Pn**	**21 47 56.2**	**-0.2**
HADB		**5.15**	**321**	P	**Pn**	**21 48 01.8**	**+0.1**
	baz=324						
HADB		**5.15**	**321**	P	**Pn**	**21 48 01.8**	**+0.2**
HEDF	**Idfu**	**5.93**	**309**	P	**Pn**	**21 48 12.1**	**-0.2**
	baz=312						
HEDF	**Idfu**	**5.93**	**309**	P	**Pn**	**21 48 12.1**	**-0.2**
HSFG		**6.48**	**323**	P	**Pn**	**21 48 21.1**	**+1.1**
	baz=326						
HSFG		**6.48**	**323**	P	**Pn**	**21 48 21.1**	**+1.1**

DJA 29 21:47:28, 6.″77S×111.″74E, h106km, MLv3.2/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGJI	**Ngawi**	**0.66**	**205**	P	Pn	21 47 47.7	+2.1
NGJI				S	Sn	21 48 01.5	+2.7
GRJI	**Gresik**	**0.75**	**101**	P	Pn	21 47 46.1	-0.3
SJI	**Sawahan**	**0.96**	**178**	P	Pn	21 47 49.7	+1.2
SJI				S	Sn	21 48 05.4	+1.5
PWJI	**Pagerwojo**	**1.25**	**177**	P	Pn	21 47 53.7	+2.1
PWJI				S	Sn	21 48 09.3	-0.2
SMRI	**Semarang**	**1.32**	**258**	P	Pn	21 47 52.8	+0.4
PCJI	**Pacitan**	**1.52**	**201**	P	Pn	21 47 55.2	+0.3
UGM	**Wanagama**	**1.66**	**227**	P	Pn	21 47 55.7	-0.8
YOGI	**Yogyakarta**	**1.77**	**234**	P	Pn	21 47 57.2	-0.7
KMMI	**Kalianget**	**2.23**	**97**	P	Pn	21 48 03.2	-0.6
BBKI	**Banjar Baru**	**4.51**	**43**	P	Pn	21 48 33.5	-0.7
TPI	**Tanjungpandan**	**5.70**	**314**	P	Pn	21 48 50.1	-0.2

*NIED **29** 21:50:00, 24.″00N×125.″90E, h11km, Mw4.1 Best double couple: M0 1.71000×1015 NP1:φ=57.00000°, δ62.00000°, λ79.00000°. NP2:φ=260.00000°, δ30.00000°, λ110.00000°.*
*IDC **29** 21:50:08.1±0.9, 23.″84N×125.″57E, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.9/25, mbtmp3.9/16, ML3.5/2, MS3.3/1, Ms1 3.5/1, ms1mx2.4/28, Error ellipse: s-maj=45.5km s-min=15.0km az=71.0*
*ISCJB **29** 21:50:09.3±1.4, 23.″95N±0.″05×126.″04E±0.″03, h28km±9km, mb4.0/23, Error ellipse: s-maj=8.4km s-min=4.9km az=163.7*
*JMA **29** 21:50:11.9±0.3, 24.″02N×125.″93E, h70km, M3.7*
*NEIC **29** 21:50:12.2±0.4, 23.″97N×126.″02E, h35km, mb4.8/10, MW4.1(NIED), Error ellipse: s-maj=8.5km s-min=7.9km az=148.0*
ISC 29 21:50:10.4±1.3, 23.″96N±0.″05×125.″99E±0.″03, h20km±8km, n52, σ0°90/62, mb4.0/23, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.96**	**326**	P	**Pb**	**21 50 29.0**	**+0.7**
JOGS				eS	**Sb**	**21 50 41.5**	**+1.0**
JMJ	**Miyako jima 2**	**1.06**	**323**	P	**Pb**	**21 50 30.3**	**+0.2**
JMJ				eS	**Sb**	**21 50 43.2**	**-0.3**
JTJ	**Tarama**	**1.36**	**300**	P	**Pn**	**21 50 34.0**	**-0.1**
JIJ	**Ishigaki jima

IDC 29 22:21:19.7±6.6, 30°.15S×177°.70W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/15, mbtmp3.5/2, Error ellipse: s-maj=273.3km s-min=55.3km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.38**	**267**	P	P	22 29 22.4	-1.7
	0.2nm,0.6s,baz=97,slow=7.6,SNR=2.8						
WRA	**Warramunga Arr**	**44.35**	**272**	P	P	22 29 32.8	+0.9
	0.5nm,0.4s,baz=109,slow=7.9,SNR=3.7						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	22 40 57.5	0.0
	1.1nm,0.5s,baz=52,slow=5.7,SNR=9.4						

MAN 29 22:28:50, 13°.65N×120°.35E, h52km, mb4.2, ML3.1, MS2.8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.13**	**309**	*e*P	Pn	22 29 00.2	+2.1
LUBP				*e*S	Sn	22 29 05.5	+1.5
PGP	**Puerto Galera**	**0.61**	**104**	*e*P	Pn	22 29 04.6	+1.9
BUSP	**Coron**	**1.65**	**185**	*e*P	Pn	22 29 17.9	+1.3
BUSP				*e*S	Sn	22 29 38.4	+1.8
ENPP	**El Nido**	**2.59**	**200**	*e*P	Pn	22 29 30.6	+1.1
CUYO	**Cuyo Island**	**2.86**	**167**	*e*P	Pn	22 29 30.9	-2.3

*IDC **29** 22:32:25.5±2.6, 15°.93N×145°.62E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/23, mbtmp3.8/7, ML3.9/1, MS2.9/1, Ms1 2.9/1, ms1mx1.9/34, Error ellipse: s-maj=86.6km s-min=18.9km az=83.0*
*ISCJB **29** 22:32:28.1±0.8, 15°.88N±0°.05×145°.7E±0°.1, h33km, mb3.8/9, Error ellipse: s-maj=20.3km s-min=7.4km az=178.8*
*NEIC **29** 22:32:30.3±0.5, 15°.90N×145°.63E, h35km, mb4.2/3, Error ellipse: s-maj=15.4km s-min=6.5km az=81.0*

ISC 29 22:32:29.7±6.3, 15°.86N±0°.06×145°.6E±0°.2, h29km±45km, n24, σ0s64/25, mb3.8/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.37**	**197**	Pn	Pn	22 33 06.6	0.0
	24nm,0.3s,baz=5.2,slow=3.4,SNR=8.4						
GUMO				Sn	Sn	22 33 32.9	-1.7
	47nm,0.3s,baz=333,slow=24,SNR=12						
GUMO	**Guam**	**2.37**	**197**	*e*Pn	Pn	22 33 06.6	+0.1
GUMO				*e*Sn	Sn	22 33 33.7	-0.9
CBIJ	**Chichi jima**	**11.62**	**345**	LR	LR	22 38 35.1	
	comp=Z,60nm,20.0s,baz=82,slow=32						
TWG	**Pinlang**	**24.13**	**290**	P	P	22 37 43.3	+0.1
YHNB	**Yeheng**	**24.32**	**295**	P	P	22 37 45.0	+0.1
KSRS	**Korea Array**	**26.59**	**327**	P	P	22 38 04.5	-0.9
	2.0nm,0.8s,mb3.7,baz=156,slow=9.7,SNR=6.8						
CTAO	**Charters Tower**	**35.73**	**179**	*e*P	P	22 39 26.0	0.0
	0.9nm,0.7s,mb3.8						
WB2	**Warramunga Arr**	**37.26**	**198**	*e*P	P	22 39 39.4	+0.4
WRA	**Warramunga Arr**	**37.26**	**198**	P	P	22 39 39.4	+0.4
	1.7nm,0.9s,mb3.9,baz=18,slow=9.6,SNR=7.1						
KSM	**Kuching**	**37.60**	**251**	*e*P	P	22 39 42.7	+0.6
HIA	**Hailar**	**39.41**	**333**	*e*P	P	22 39 56.8	0.0
ASAR	**Alice Springs**	**40.91**	**196**	P	P	22 40 10.4	+0.8
	0.3nm,0.6s,mb3.1,baz=17,slow=7.1,SNR=4.1						
ASAR	**Alice Springs**	**40.91**	**196**	P	P	22 40 10.4	+0.8
CMAR	**Chiang Mai Arr**	**44.56**	**280**	P	P	22 40 40.1	+0.8
	0.6nm,0.7s,mb3.5,baz=71,slow=5.8,SNR=4.8						
ULN	**Ulaanbaatar**	**44.95**	**324**	*e*P	P	22 40 40.7	-1.3
STKA	**Stephens Creek**	**47.62**	**185**	*e*P	P	22 41 03.2	+0.1
LSA	**Lhasa**	**51.62**	**295**	*e*P	P	22 41 34.0	+0.2
ZALV	**Zalesovo Beam**	**60.21**	**324**	P	P	22 42 36.0	+1.1
	0.4nm,0.4s,mb3.8,baz=100,slow=4.4,SNR=3.2						
KURK	**Kurchatov**	**63.32**	**319**	*e*P	P	22 42 55.0	-0.9
	9.0nm,1.4s,mb4.7						
TKM2	**Tokmak 2**	**64.78**	**310**	*e*P	P	22 43 05.7	+0.1
	1.4nm,0.8s,mb4.0						
MCK	**McKinley**	**65.10**	**27**	*e*P	P	22 43 07.1	-0.2
UCH	**Uchtor**	**65.56**	**309**	*e*P	P	22 43 11.6	+0.8
EKS2	**Erkin-Say**	**66.11**	**310**	*e*P	P	22 43 14.0	-0.3
BVAR	**Borovoye Array**	**68.60**	**321**	P	P	22 43 29.4	-0.5
	1.8nm,0.9s,mb4.0,baz=90,slow=5.9,SNR=8.3						

*IDC **29** 22:38:34.0±6.1, 30°.78N×140°.17E, h0km, mb3.9/7, mb1 3.9/7, mb1mx3.7/24, mbtmp3.9/7, Error ellipse: s-maj=180.6km s-min=96.3km az=14.0*
*JMA **29** 22:39:15.8±0.7, 31°.72N×138°.99E, h267km, M3.1*

ISC 29 22:39:18.4±2.4, 32°.2N±0°.2×138°.9E±0°.2, h296km±9km, n13, σ0s67/14, mb3.4/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**2.86**	**321**	P	Pn	22 40 13.2	+0.8
BSO3	**Boso 3**	**2.95**	**27**	S	S	22 40 58.3	+1.2
JWZ	**Kozaga**	**2.98**	**298**	P	Pn	22 40 12.6	-1.0
JKN2	**Miekihoku**	**2.99**	**314**	P	Pn	22 40 14.0	+0.3
BSO1	**Boso 1**	**3.03**	**35**	*e*S	S	22 40 57.7	-0.8
JAG	**Ashikaga**	**4.26**	**6**	P	Pn	22 40 27.2	0.0
JAG				*e*S	S	22 41 21.8	-0.5
SONM	**Songino Array**	**29.12**	**312**	P	P	22 44 53.3	+1.0
	0.5nm,0.4s,mb3.3,baz=103,slow=6.1,SNR=4.8						
ZALV	**Zalesovo Beam**	**43.80**	**316**	P	P	22 46 55.5	+0.2
	0.5nm,0.3s,mb3.2,baz=95,slow=8.7,SNR=2.9						
MKAR	**Makanchi Array**	**45.09**	**306**	P	P	22 47 05.3	-0.3
	0.6nm,0.3s,mb3.4,baz=85,slow=10,SNR=6.8						
BVAR	**Borovoye Array**	**52.39**	**315**	P	P	22 47 59.7	-1.0
	0.5nm,0.2s,mb3.4,baz=97,slow=8.8,SNR=8.1						
AKTO	**Aktyubinsk**	**60.42**	**313**	P	P	22 48 57.1	+0.1
	0.7nm,0.5s,mb3.4,baz=76,slow=15,SNR=3.8						
FINES	**FINESS Array B**	**72.12**	**332**	P	P	22 50 10.6	-0.1
	2.3nm,0.9s,mb3.8,baz=74,slow=5.5,SNR=9.9						
BRTR	**Keskin Array B**	**80.47**	**311**	P	P	22 50 57.9	+0.2
	0.6nm,0.7s,mb3.4,baz=102,slow=7.2,SNR=5.0						

*ISCJB **29** 22:44:13.1±0.6, 28°.29N±0°.05×57°.09E±0°.05, h10km, Error ellipse: s-maj=6.5km s-min=5.9km az=3.8*
*TEH **29** 22:44:15.4, 28°.19N×57°.53E, h11km*
*KISR **29** 22:44:15.2±0.8, 28°.25N×56°.67E, h34km±999km, ML3.4*
*CSEM **29** 22:44:17.7±0.4, 28°.23N×57°.23E, h50km, ML3.3, Error ellipse: s-maj=8.6km s-min=8.0km az=63.0*
*SGS **29** 22:44:18.8, 28°.28N×57°.25E, h55km*
*OMAN **29** 22:44:26.9±27.0, 27°.26N×57°.12E, h0km, Error ellipse: s-maj=305.0km s-min=53.2km az=19.0*

ISC 29 22:44:15.1±0.5, 28°.27N±0°.04×57°.20E±0°.05, h10km, n32, σ1s31/41, 1C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.00**	**216**	*e*Pg	Pg	22 44 36.1	+1.7
IBND				*e*		22 45 01.6	
	comp=N,36μm,0.1s						
BNDS	**Bandar-Abbas**	**1.25**	**227**	*e*Pn	Pn	22 44 40.2	+1.5
BNDS				*e*Sg	Sg	22 45 00.0	+4.5
KRBR	**Kerman**	**1.75**	**347**	*e*Pn	Pn	22 44 46.7	+1.2
BANOM	**Banah**	**2.47**	**199**	P	Pn	22 44 54.8	-0.6
	SNR=59						
BANOM	**Banah**	**2.47**	**199**	P	Pn	22 44 54.8	-0.5
	SNR=59						
BANOM				ml		22 45 01.1	
	SNR=37						
BANOM				ml		22 45 30.7	
	SNR=42						
ZHSF	**Zahedan**	**3.41**	**66**	*e*Pn	Pn	22 45 08.0	-0.3
IBAF	**Bafgh**	**3.60**	**337**	*e*Pn	Pn	22 45 13.1	+2.1
IBAF				*e*		22 45 28.5	
	comp=N,261nm,0.2s						
ASHO	**Ashiyiah**	**3.71**	**196**	P	Pn	22 45 12.8	+0.3
	SNR=22						
ASHO	**Ashiyiah**	**3.71**	**196**	P	Pn	22 45 12.8	+0.3
	SNR=22						
ASHO				ml		22 45 27.0	
	SNR=5.9						
ASHO				ml		22 46 20.0	
	SNR=8.6						
IMEH	**Mehriz**	**3.84**	**325**	*e*Pn	Pn	22 45 17.8	+3.6
IMEH				*e*		22 46 30.5	
	comp=N,154nm,0.2s						
ASUD	**Al Ashush, Dub**	**3.99**	**205**	P	Pn	22 45 17.4	+1.0
	SNR=16						
ASUD	**Al Ashush, Dub**	**3.99**	**205**	P	Pn	22 45 17.4	+1.0
	SNR=16						
ASUD				ml		22 46 06.5	
	SNR=4.5						
ASUD				ml		22 46 27.9	
	SNR=5.3						
IKOO	**Kooshah**	**4.43**	**20**	*e*Pn	Pn	22 45 21.3	-1.0
IKOO				*e*		22 45 43.6	
	comp=Z,201nm,0.2s						
ARQ	**Araqi**	**4.95**	**187**	P	Pn	22 45 28.9	-0.6
	SNR=7.2						
ARQ	**Araqi**	**4.95**	**187**	P	Pn	22 45 28.9	-0.5
	SNR=7.2						
IDAH	**Dahanechah**	**5.02**	**27**	*e*Pn	Pn	22 45 30.1	-0.3
IDAH				*e*Sn	Sn	22 46 24.1	-4.4
IDAH				*e*		22 46 29.6	
	comp=N,203nm,0.1s						
BSY	**Bisya**	**5.50**	**180**	⇑P	Pn	22 45 36.2	-0.8
BSYO	**Bisya**	**5.51**	**180**	P	Pn	22 45 36.2	-1.0
SLWS		**6.81**	**241**	P	Pn	22 45 54.8	-0.3
SLWS		**6.81**	**241**	P	Pn	22 45 54.8	-0.3
SLWS				S	Sn	22 47 10.3	-2.4
BTHS		**7.09**	**235**	P	Pn	22 45 57.6	-1.3
BTHS		**7.09**	**235**	P	Pn	22 45 57.6	-1.3
UMR	**Umm Al-Rimmam**	**8.41**	**281**	*e*P	Pn	22 46 18.6	+1.5
UMR	**Umm Al-Rimmam**	**8.41**	**281**	*e*P	Pn	22 46 18.5	+1.5
RDF	**Al-Radifah**	**8.51**	**277**	*e*P	Pn	22 46 19.9	+1.5
RDF				*e*S	Sn	22 47 52.9	-1.6
RDF	**Al-Radifah**	**8.51**	**277**	*e*P	Pn	22 46 19.9	+1.5
RDF				*e*S	Sn	22 47 52.9	-1.6
MIB	**Mutribah**	**8.77**	**282**	*e*P	Pn	22 46 23.1	+1.2
MIB				*e*S	Sn	22 47 59.6	-1.2
MIB				AML	AML	22 48 01.6	
	comp=Z,3.2nm,0.4s						
MIB	**Mutribah**	**8.77**	**282**	*e*P	Pn	22 46 23.1	+1.2
MIB				*e*S	Sn	22 47 59.6	-1.2
NAY	**Al-Naaiem**	**8.79**	**279**	*e*P	Pn	22 46 23.2	+0.9
NAY				*e*S	Sn	22 47 59.8	-1.7
NAY				AML	AML	22 48 00.7	
	comp=Z,2.0nm,0.5s						
NAY	**Al-Naaiem**	**8.79**	**279**	*e*P	Pn	22 46 23.2	+0.9
NAY				*e*S	Sn	22 47 59.8	-1.7
ASYS		**11.40**	**269**	P	Pn	22 46 56.0	-2.1
ASYS		**11.40**	**269**	P	Pn	22 46 56.0	-2.0

IDC 29 22:48:23.8±12.0, 30°.12S×177°.49W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.7/3, Error ellipse: s-maj=539.0km s-min=42.2km az=154.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.57**	**266**	P	P	22 56 29.4	-0.3
	0.1nm,0.3s,baz=94,slow=7.4,SNR=4.6						
WRA	**Warramunga Arr**	**44.53**	**272**	P	P	22 56 37.6	+0.1
	0.6nm,0.4s,baz=114,slow=7.8,SNR=5.8						
ILAR	**Eielson Array**	**97.55**	**13**	P	P	23 01 59.0	-0.2
	0.1nm,0.4s,baz=193,slow=7.4,SNR=4.2						
FINES	**FINESS Array B**	**145.03**	**340**	PKPbc	PKPbc	23 08 01.0	-0.7
	2.5nm,0.9s,baz=64,slow=4.4,SNR=7.3						

*ISCJB **29** 23:02:51.2±0.9, 15°.8S±0°.1×177°.55W±0°.10, h465km±10km, mb3.4/8, Error ellipse: s-maj=16.8km s-min=14.2km az=152.0*
*IDC **29** 23:02:51.7±8.8, 15°.87S×177°.45W, h457km±96km, mb3.1/5, mb1 3.4/5, mb1mx3.1/17, mbtmp3.1/5, Error ellipse: s-maj=139.5km s-min=32.0km az=149.0*
*NEIC **29** 23:02:51.2±0.8, 15°.87S×177°.49W, h451km±9km, mb3.4/3, Error ellipse: s-maj=12.9km s-min=10.7km az=167.0*

ISC 29 23:02:51.5±0.9, 15°.9S±0°.1×177°.50W±0°.09, h455km±10km, n20, σ0s83/19, mb3.4/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.65**	**246**	*e*P	P	23 04 11.3	-1.5
MSVF				*e*S	S	23 05 19.6	+0.6
FUNA	**Funafuti**	**7.97**	**336**	*e*P	P	23 04 47.7	+0.9
RAR	**Rarotonga**	**17.63**	**110**	*e*P	P	23 06 30.4	+0.1
CTA	**Charters Tower**	**34.69**	**258**	P	P	23 09 04.1	+2.2
	0.7nm,0.3s,mb3.6,baz=90,slow=10,SNR=2.5						
CTAO	**Charters Tower**	**34.69**	**258**	*e*P	P	23 09 02.4	+0.5
STKA	**Stephens Creek**	**40.40**	**239**	*e*P	P	23 09 48.5	-0.3
	0.3nm,0.8s,mb2.8						
MIDW	**Midway**	**43.81**	**0**	*e*P	P	23 10 15.8	0.0
WRA	**Warramunga Arr**	**45.89**	**257**	P	P	23 10 30.9	-1.2
	0.3nm,0.3s,mb3.2,baz=86,slow=6.8,SNR=3.9						
ASAR	**Alice Springs**	**46.21**	**252**	P	P	23 10 34.2	-0.3
	3.2nm,0.5s,mb4.0,baz=85,slow=8.0,SNR=42						
MBWA	**Marble Bar**	**59.44**	**255**	*e*P	P	23 12 10.1	+0.5
NWAO	**Narrogin (SRO)**	**60.95**	**241**	*e*P	P	23 12 19.2	-0.3
RPN	**Rapa Nui**	**63.76**	**113**	*e*P	P	23 12 37.5	-0.4
MAJO	**Matsushiro**	**66.81**	**322**	*e*P	P	23 12 56.8	-0.1
TPUB	**Ta-pu**	**71.92**	**301**	*e*P	P	23 13 28.2	+0.2
QSPA	**South Pole Qui**	**74.19**	**180**	*e*P	P	23 13 41.7	+1.6
	0.5nm,0.5s,mb3.3						
NVAR	**Mina Array Bea**	**77.35**	**44**	P	P	23 13 58.9	+0.5
	0.7nm,0.6s,mb3.4,baz=226,slow=9.7,SNR=5.2						
ILAR	**Eielson Array**	**83.70**	**13**	P	P	23 14 29.4	-1.5
	0.7nm,0.6s,mb3.4,baz=225,slow=6.6,SNR=7.2						
PLCA	**Paso Flores**	**92.11**	**133**	*e*P	P	23 15 11.5	+0.1
	0.4nm,0.5s,mb3.6						
BRTR	**Keskin Array B**	**143.91**	**317**	PKP	PKPdf	23 21 33.9	-0.5
	1.7nm,0.9s,baz=58,slow=4.2,SNR=8.0						
GERES	**GERESS Array B**	**145.84**	**347**	PKPbc	PKPbc	23 21 39.7	+0.7
	0.2nm,0.3s,baz=64,slow=6.7,SNR=3.3						

*NEIC **29** 23:17:05.6, 34°.78S×70°.15W, h12km, ML2.9(GUC), After GUC.*

GUC 29 23:17:05.6±0.7, 34°.78S×70°.15W, h12km±4km, MD3.6, ML2.9, 13C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.76**	**331**	⇑*i*P	Pg	23 17 19.4	-0.8
CACH				*i* S	Sg	23 17 30.4	+0.3
CACH	**El Canelo**	**0.76**	**331**	⇑*i*P	Pg	23 17 19.4	-0.8
CACH				*i* S	Sg	23 17 30.4	+0.3
CHCH	**Chadas Angostu**	**0.94**	**334**	⇑*i*P	Pg	23 17 22.9	-0.8
CHCH				*i* S	Sg	23 17 36.0	+0.1
CHCH	**Chadas Angostu**	**0.94**	**334**	⇑*i*P	Pg	23 17 22.9	-0.8
CHCH				*i* S	Sg	23 17 36.0	+0.1
PCH	**Pirque**	**1.19**	**345**	⇓*i*P	Pn	23 17 27.5	-0.6
PCH				*i* S	Sb	23 17 44.5	+0.9
PCH	**Pirque**	**1.19**	**345**	⇓*i*P	Pn	23 17 27.5	-0.6
PCH				*i* S	Sb	23 17 44.5	+0.9
ANTU	**Antumapu**	**1.27**	**342**	*e*P	Pn	23 17 29.0	-0.2
ANTU				*i* S	Sb	23 17 46.2	+0.5
ANTU	**Antumapu**	**1.27**	**342**	*e*P	Pn	23 17 29.0	-0.2
ANTU				*i* S	Sb	23 17 46.2	+0.5
ANTU				AML	AML	23 17 48.5	
	comp=E,347nm,0.6s						
TACH	**Talagante**	**1.30**	**330**	⇑*i*P	Pn	23 17 29.2	-0.3
TACH				*i* S	Sb	23 17 47.4	+0.9
TACH	**Talagante**	**1.30**	**330**	⇑*i*P	Pn	23 17 29.2	-0.3
TACH				*i* S	Sb	23 17 47.4	+0.9
LNV	**Longovilo**	**1.32**	**308**	⇑*i*P	Pn	23 17 29.6	-0.3
LNV				*i* S	Sb	23 17 47.7	+0.4
LNV	**Longovilo**	**1.32**	**308**	⇑*i*P	Pn	23 17 29.6	-0.3
LNV				*i* S	Sb	23 17 47.7	+0.4
RCDM	**Rinconada Maip**	**1.40**	**337**	*e*P	Pn	23 17 31.2	+0.3
RCDM				*i* S	Sn	23 17 50.8	+1.5
RCDM	**Rinconada Maip**	**1.40**	**337**	*e*P	Pn	23 17 31.2	+0.3
RCDM				*i* S	Sn	23 17 50.8	+1.5
RCDM				AML	AML	23 17 51.9	
	comp=E,511nm,0.3s						
CLCH	**Cerro Calan**	**1.42**	**347**	⇑*i*P	Pn	23 17 31.4	+0.2
CLCH				*i* S	Sn	23 17 51.1	+1.4
CLCH				AML	AML	23 17 54.4	
	comp=E,317nm,0.6s						
FCH	**Farellones**	**1.45**	**355**	⇑*i*P	Pn	23 17 32.1	+0.4
FCH				*i* S	Sn	23 17 52.2	+1.6
FCH				AML	AML	23 17 55.0	
	comp=E,112nm,0.3s						
PEL	**Peldehue**	**1.69**	**345**	⇑*i*P	Pn	23 17 36.1	+1.2
PEL				*i* S	Sn	23 17 59.5	+3.0
PEL				AML	AML	23 18 00.9	
	comp=E,452nm,0.3s						
LCCH	**Las Cruces**	**1.75**	**317**	⇑*i*P	Pn	23 17 37.6	+1.8
LCCH				*i* S	Sn	23 18 00.7	+2.6
LCCH	**Las Cruces**	**1.75**	**317**	⇑*i*P	Pn	23 17 37.6	+1.8
LCCH				*i* S	Sn	23 18 00.7	+2.6
ROCH	**El Roble**	**1.94**	**338**	*e*P	Pn	23 17 40.5	+2.1
ROCH				*i* S	Sn	23 18 07.4	+4.8

*NAO **29** 23:19:25.4±1.6, 71°.22N×4°.93W, ML2.6*
*ISCJB **29** 23:19:27.6±0.5, 71°.42N±0°.05×3°.9W±0°.2, h10km, mb3.9/15, Error ellipse: s-maj=7.9km s-min=6.9km az=18.6*
*IDC **29** 23:19:27.9±0.9, 71°.35N×4°.47W, h0km, mb3.4/5, mb1 3.7/11, mb1mx3.6/28, mbtmp3.6/11, ML3.4/6, MS3.4/1, Ms1 3.4/1, ms1mx2.4/29, Error ellipse: s-maj=25.4km s-min=16.1km az=49.0*
*NEIC **29** 23:19:29.6±0.4, 71°.36N×4°.11W, h10km, mb4.2/11, Error ellipse: s-maj=6.0km s-min=5.4km az=85.0*
*CSEM **29** 23:19:30.7±0.2, 71°.35N×4°.03W, h20km, mb4.2/10, Error ellipse: s-maj=7.2km s-min=6.1km az=94.0*
*BER **29** 23:19:32.0±2.7, 71°.41N×3°.97W, h0km±252km, ML2.4*

ISC 29 23:19:29.7±0.5, 71°.36N±0°.05×4°.1W±0°.2, h10km, n93, σ0s79/100, mb3.9/15, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.48**	**258**	Pg	Pg	23 19 47.0	-11
JMIC				Lg		23 20 05.2	
LOF	**Lofoten**	**6.91**	**109**	*e*P	Pn	23 21 10.1	-0.7
LOF				*e*S	Sn	23 22 23.8	-5.5
LOF	**Lofoten**	**6.91**	**109**	*e*P	Pn	23 21 10.1	-0.7
	SNR=47						
TRO	**Tromso**	**7.87**	**92**	*e*P	Pn	23 21 23.3	-0.7
TRO	**Tromso**	**7.87**	**92**	*e*P	Pn	23 21 23.3	-0.7
	SNR=47						
STOK	**Stokkvaagen**	**7.96**	**121**	*e*P	Pn	23 21 24.3	-0.9
STOK				*e*S	Sn	23 22 47.8	-7.2
STOK				AML	AML	23 23 01.4	
	comp=Z,5.4nm,0.7s						
STOK	**Stokkvaagen**	**7.96**	**121**	*e*P	Pn	23 21 24.3	-0.9
STOK				*e*S	Sn	23 22 47.8	-7.2
STOK	**Stokkvaagen**	**7.96**	**121**	*e*P	Pn	23 21 24.3	-0.9
STOK				*e*S	Sn	23 22 47.8	-7.2
MOR8	**Moi Rana**	**8.47**	**119**	*e*P	Pn	23 21 32.9	+0.6
MOR8				*e*S	Sn	23 23 01.4	-6.2
MOR8				AML	AML	23 23 04.1	
	comp=Z,3.3nm,0.7s						
MOR8	**Moi Rana**	**8.47**	**119**	*e*P	Pn	23 21 32.9	+0.6
MOR8				*e*S	Sn	23 23 01.4	-6.2
MOR8	**Moi Rana**	**8.47**	**119**	*e*P	Pn	23 21 32.8	+0.6
	SNR=47						
KBS	**Kingsbay**	**8.59**	**21**	Pn	Pn	23 21 34.2	+0.4
KBS	**Kingsbay**	**8.59**	**21**	Pn	Pn	23 21 34.2	+0.3
SPA0	**Spitsbergen Ar**	**8.64**	**29**	Pn	Pn	23 21 35.2	+0.7
	baz=224,slow=16						
SPA0	**Spitsbergen Ar**	**8.64**	**29**	Pn	Pn	23 21 35.2	+0.8
	baz=224,slow=14,SNR=9.4						
SPITS	**Spitsbergen Ar**	**8.64**	**29**	Pn	Pn	23 21 35.0	+0.6
	baz=219,slow=17,SNR=9.6						
SPITS	**Spitsbergen Ar**	**8.64**	**29**	Pn	Pn	23 21 35.0	+0.6
NSS	**Namsos**	**9.10**	**131**	*e*P	Pn	23 21 39.8	-1.1
NSS				*e*S	Sn	23 23 16.1	-7.1
NSS	**Namsos**	**9.10**	**131**	*e*P	Pn	23 21 39.8	-1.0
	SNR=47						
KTK1	**Kautokeino**	**9.52**	**91**	*e*P	Pn	23 21 46.6	0.0
KTK1	**Kautokeino**	**9.52**	**91**	*e*P	Pn	23 21 46.6	0.0
	SNR=47						
ARA0	**ARCESS Array S**	**10.02**	**86**	Pn	Pn	23 21 53.4	-0.1
	baz=288,slow=12						
ARA0	**ARCESS Array S**	**10.02**	**86**	Pn	Pn	23 21 53.4	-0.1
	baz=288,slow=12,SNR=8.0						
ARCES	**ARCESS Array B**	**10.02**	**86**	Pn	Pn	23 21 53.5	0.0
	comp=Z,0.2nm,0.3s,baz=299,slow=12,SNR=4.3						
ARCES	**ARCESS Array B**	**10.02**	**86**	Pn	Pn	23 21 53.5	0.0
SUMG	**Summit**	**10.62**	**293**	*e*Pn	Pn	23 22 01.4	-0.2
SUMG	**Summit**	**10.62**	**293**	*e*Pn	Pn	23 22 01.4	-0.2
NOA	**NORSAR Array B**	**12.01**	**142**	Pn	Pn	23 22 19.4	-1.2
	comp=Z,0.2nm,0.3s,baz=9.1,slow=12,SNR=3.6						
NOA	**NORSAR Array B**	**12.01**	**142**	Pn	Pn	23 22 19.4	-1.1
HFS	**Hagfors**	**13.34**	**139**	Pn	Pn	23 22 38.5	-0.3
	baz=337,slow=12						
HFS	**Hagfors**	**13.34**	**139**	Pn	Pn	23 22 38.7	-0.1
	comp=Z,0.9nm,0.3s,baz=339,slow=12,SNR=35						
HFS	**Hagfors**	**13.34**	**139**	Pn	Pn	23 22 38.7	-0.1
FIA0	**FINESS Array S**	**15.42**	**115**	P	Pn	23 23 08.0	+1.1
	baz=332,slow=12						
FINES	**FINESS Array B**	**15.42**	**115**	Pn	Pn	23 23 05.8	-1.1
	comp=Z,0.1nm,0.3s,baz=336,slow=12,SNR=4.6						
FINES	**FINESS Array B**	**15.42**	**115**	Pn	Pn	23 23 05.8	-1.1
EKA	**Eskdalemuir Ar**	**16.09**	**178**	Pn	Pn	23 23 14.7	-1.0
	comp=Z,0.3nm,0.3s,baz=354,slow=13,SNR=7.6						
EKA	**Eskdalemuir Ar**	**16.09**	**178**	Pn	Pn	23 23 14.7	-1.0
ESK	**Eskdalemuir**	**16.11**	**178**	*e*Pn	Pn	23 23 15.3	-0.6
	comp=Z,9.6nm,0.9s						
ESK	**Eskdalemuir**	**16.11**	**178**	*e*Pn	Pn	23 23 15.3	-0.6
	comp=Z,9.6nm,0.9s						
BAIF	**Baives**	**21.71**	**165**	*e*P	P	23 24 20.1	-0.4
BAIF	**Baives**	**21.71**	**165**	*e*P	P	23 24 20.1	-0.4
FLN	**La Foliniere**	**22.73**	**174**	*e*P	P	23 24 31.3	-0.1
FLN	**La Foliniere**	**22.73**	**174**	*e*P	P	23 24 31.3	-0.1
LDF	**La Druitiere**	**22.91**

EPF	Esparros	28.49 173	*e*P	P	23 25 24.8	+0.2
	comp=Z,9.4nm,1.0s,mb4.4					
EPF	Esparros	28.49 173	*e*P	P	23 25 24.8	+0.2
	comp=Z,9.4nm,1.0s,mb4.4					
BRTR	Keskin Array B	36.97 128	P	P	23 26 40.8	+2.1
	comp=Z,0.8nm,0.9s,mb3.5,baz=346,slow=9.2,SNR=3.5					
BRTR	Keskin Array B	36.97 128	P	P	23 26 40.8	+2.1
BRTR	Keskin Array B	36.97 128	P	P	23 26 40.8	+2.1
ILAR	Eielson Array	41.78 337	P	P	23 27 17.8	-0.7
	comp=Z,0.2nm,0.8s,baz=13,slow=8.6,SNR=4.1					
ILAR	Eielson Array	41.78 337	P	P	23 27 17.8	-0.7
TORD	Torodi Ar. Bea	58.29 173	P	P	23 29 24.3	+0.1
	comp=Z,0.8nm,0.9s,mb3.8,baz=350,slow=7.8,SNR=16					
TORD			LR	LR	23 53 56.5	
	comp=Z,32nm,19.7s,baz=80,slow=36					
TXAR	Lajitas Array	65.50 289	P	P	23 30 11.2	-1.5
	comp=Z,0.2nm,0.7s,mb3.3,baz=353,slow=6.4,SNR=1.9					
TXAR	Lajitas Array	65.50 289	P	P	23 30 11.2	-1.4

*ISCJB **29** 23:23:26.6±1.0, 49.8S±0.1×111.2E±0.4, h10km, mb4.1/6, MS3.6/4, Error ellipse: s-maj=34.5km s-min=17.5km az=22.1*
*IDC **29** 23:23:26.9±1.1, 49.87S×111.25E, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.0/15, mbtmp4.0/6, MS3.6/5, Ms1 3.6/5, ms1mx3.4/21, Error ellipse: s-maj=39.2km s-min=20.5km az=110.0*
*NEIC **29** 23:23:28.4±0.9, 49.87S×111.26E, h10km, mb4.4/1, Error ellipse: s-maj=33.8km s-min=17.1km az=111.0*
ISC 29 23:23:28.6±1.0, 49.9S±0.1×111.3E±0.4, h10km, n14, σ0.88/7, mb4.1/6, MS3.6/4, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	17.48	17	LR	LR	23 32 33.8	
	comp=Z,187nm,19.7s,baz=267,slow=31						
ASAR	Alice Springs	31.57	42	P	P	23 29 50.4	-0.8
	1.0nm,0.7s,mb3.8,baz=210,slow=8.2,SNR=5.2						
FITZ	Fitzroy Crossi	33.72	25	LR	LR	23 42 51.8	
	comp=Z,87nm,20.2s,MS3.5,baz=240,slow=34						
WRA	Warramunga Arr	35.05	40	P	P	23 30 20.7	-0.8
	3.5nm,0.7s,mb4.4,baz=206,slow=8.6,SNR=7.3						
WRA				LR	LR	23 44 47.6	
	comp=Z,85nm,20.4s,MS3.5,baz=225,slow=36						
QSPA	South Pole Qui	40.28 180	P	P	23 31 05.0	-0.2	
	6.6nm,0.7s,mb4.5,baz=310,slow=2.0,SNR=20						
QSPA	South Pole Qui	40.28 180	*e*P	P	23 31 04.9	-0.2	
	4.3nm,0.5s,mb4.4						
CTA	Charters Tower	40.65 56	LR	LR	23 45 42.9		
	comp=Z,133nm,18.8s,MS3.8,baz=148,slow=33						
URZ	Urewera	47.28 102	P	P	23 32 03.2	+1.3	
	8.4nm,0.8s,mb4.7,baz=214,slow=3.6,SNR=2.7						
SNAA	Sanae	50.25 202	P	P	23 32 23.8	-0.5	
	0.4nm,0.7s,mb3.6,baz=149,slow=11,SNR=8.1						
BOSA	Boshof	66.25 253	LR	LR	23 58 36.1		
	comp=Z,54nm,18.8s,MS3.8,baz=165,slow=32						
CMAR	Chiang Mai Arr	68.87 347	P	P	23 34 34.4	+1.2	
	1.0nm,0.6s,mb3.9,baz=200,slow=5.9,SNR=4.5						
NVAR	Mina Array Bea	143.28 89	PKP	PKPdf	23 42 59.9	-2.6	
	0.4nm,0.8s,baz=207,slow=5.8,SNR=2.5						
TXAR	Lajitas Array	146.61 115	PKPbc	PKPbc	23 43 09.3	-0.8	
	1.2nm,0.8s,baz=207,slow=3.7,SNR=13						
TXAR	Lajitas Array	146.61 115	PKPbc	PKPbc	23 43 09.3	-0.8	

IDC 29 23:34:47.9±2.1, 49.84S×111.38E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.7/14, mbtmp3.6/4, MS3.2/2, Ms1 3.2/2, ms1mx3.0/16, Error ellipse: s-maj=111.8km s-min=21.5km az=116.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	17.45	17	LR	LR	23 43 53.7	
	comp=Z,120nm,19.2s,baz=289,slow=31						
ASAR	Alice Springs	31.51	42	P	P	23 41 10.8	-0.7
	0.3nm,0.6s,baz=209,slow=8.1,SNR=5.4						
FITZ	Fitzroy Crossi	33.67	25	LR	LR	23 53 24.5	
	comp=Z,26nm,22.0s,baz=237,slow=33						
WRA	Warramunga Arr	34.99	40	P	P	23 41 42.0	+0.2
	0.8nm,0.6s,baz=205,slow=8.5,SNR=4.7						
QSPA	South Pole Qui	40.29 180	P	P	23 42 26.9	+0.8	
	1.7nm,0.6s,baz=328,slow=4.3,SNR=18						
SNAA	Sanae	50.29 202	P	P	23 43 44.7	-0.8	
	0.2nm,0.7s,baz=190,slow=12,SNR=5.1						
TXAR	Lajitas Array	146.54 115	PKPbc	PKPbc	23 54 31.1	+0.3	
	0.4nm,0.8s,baz=213,slow=6.3,SNR=3.7						

*ISCJB **29** 23:34:49.3±0.4, 38.80N±0.02×26.44E±0.04, h8km±4km, Error ellipse: s-maj=4.7km s-min=2.9km az=171.8*
*CSEM **29** 23:34:49.6±0.2, 38.80N×26.45E, h8km, MD3.2, Error ellipse: s-maj=4.2km s-min=2.7km az=73.0*
*DDA **29** 23:34:49.2, 38.78N×26.46E, h7km±4km, Md3.2*
*ATH **29** 23:34:49.7, 38.81N×26.39E, h24km±1km, MD3.0/4*
*ISK **29** 23:34:49.8, 38.87N×26.52E, h7km, MD3.0*
ISC 29 23:34:50.0±0.4, 38.80N±0.02×26.43E±0.04, h11km±4km, n49, σ0.92/73, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.46 164	*i* P	Pg		23 34 57.0	-2.0
URLA			*i* S	Sg		23 35 05.2	+0.2
URLA	Izmir	0.46 164	*i* P	Pg		23 34 57.0	-1.9
URLA			*i* S	Sg		23 35 05.2	+0.2
PRK	Paraskevi	0.46 344	*e*PB	Pg		23 34 59.2	+0.2
PRK			*e*SB	Sg		23 35 05.4	+0.2
PRK	Paraskevi	0.46 344	*e*Pb	Pg		23 34 59.2	+0.2
PRK			*e*Sb	Sg		23 35 05.4	+0.2
CHOS	Chios island	0.51 216	*e*PB	Pg		23 35 00.3	+0.5
CHOS			*e*SB	Sg		23 35 07.2	+0.7
CHOS	Chios island	0.51 216	*e*Pb	Pg		23 35 00.3	+0.5
CHOS			*e*Sb	Sg		23 35 07.2	+0.7
AYVA	Ayvalik	0.55 22	*i* P	Pg		23 34 59.8	-0.8
AYVA			*i* S	Sg		23 35 08.7	+0.9
AYVA	Ayvalik	0.55 22	*i* P	Pg		23 34 59.8	-0.8
AYVA			*i* S	Sg		23 35 08.7	+0.9
BLCB	Balcova	0.63 131	*e*PG	Pg		23 35 02.2	0.0
BLCB	Balcova	0.63 131	*e*Pg	Pg		23 35 02.3	+0.1
IZM	Izmir	0.77 121	*e*PG	Pg		23 35 04.2	-0.5
IZM			*e*SG	Sg		23 35 16.1	+1.4
IZM	Izmir	0.77 121	*e*Pg	Pg		23 35 04.2	-0.5
IZM			*e*Sg	Sg		23 35 16.1	+1.4
EZN	Ezine	1.03 355	*e*PG	Pg		23 35 09.2	-0.6
EZN			*e*SG	Sg		23 35 22.2	-0.9
EZN	Ezine	1.03 355	*e*Pg	Pg		23 35 09.2	-0.6
EZN			*e*Sg	Sg		23 35 22.2	-0.9
BOZC	Bozcaada	1.08 344	*i* P	Pg		23 35 11.3	+0.5
BOZC			*i* S	Sg		23 35 26.5	+1.7
AKS	Akhisar	1.08 85	*e*PG	Pg		23 35 09.7	-1.1
AKS	Akhisar	1.08 85	*e*Pg	Pg		23 35 09.7	-1.1
AKHS	Akhisar	1.08 85	*i* P	Pg		23 35 09.7	-1.1
AKHS			*i* S	Sg		23 35 25.3	+0.4
AKHS	Akhisar	1.08 85	*i* P	Pg		23 35 09.7	-1.1
AKHS			*i* S	Sg		23 35 25.3	+0.4
SMG	Samos	1.14 164	*e*PN	Pg		23 35 11.3	-0.5
SMG			*e*SN	Sg		23 35 27.9	+1.4
SMG	Samos	1.14 164	*e*Pn	Pg		23 35 11.3	-0.5
BALY	Balya	1.32 44	*i* P	Pn		23 35 13.2	-1.1
BALY			*i* S	Sb		23 35 33.2	+1.6
BALY	Balya	1.32 44	*i* P	Pn		23 35 13.2	-1.1
BALY			*i* S	Sb		23 35 33.2	+1.6
BALB	Balikesir	1.40 53	*e*PN	Pn		23 35 15.1	-0.4
BALB	Balikesir	1.40 53	*e*Pn	Pn		23 35 15.1	-0.4
GADA	Gvkgeada	1.45 344	*e*PN	Pn		23 35 16.5	+0.4
GADA	Gvkgeada	1.45 344	*e*Pn	Pn		23 35 16.5	+0.4
LIA	Limnos Island	1.46 319	*e*PN	Pn		23 35 16.7	+0.4
LIA			*e*SN	Sn		23 35 35.5	0.0
LIA	Limnos Island	1.46 319	*e*Pn	Pn		23 35 16.7	+0.4
LIA			*e*Sn	Sn		23 35 35.5	0.0
GONE	Gonen-Balikesi	1.58 38	*e*PN	Pn		23 35 17.1	-0.8
GONE	Gonen-Balikesi	1.58 38	*e*Pn	Pn		23 35 17.1	-0.8
LPK	Lapseki	1.59 9	*e*PN	Pn		23 35 17.6	-0.5
LPK	Lapseki	1.59 9	*e*Pn	Pn		23 35 17.6	-0.5
GELI	Tayfur-Gelibol	1.60 1	*e*PN	Pn		23 35 18.7	+0.5
GELI	Tayfur-Gelibol	1.60 1	*e*Pn	Pn		23 35 18.7	+0.6
KULA	Kula-Manisa	1.77 99	*e*PN	Pn		23 35 20.8	+0.3
KULA	Kula-Manisa	1.77 99	*e*Pn	Pn		23 35 20.8	+0.3
MLSB	Milas	1.84 144	*e*PN	Pn		23 35 22.4	+1.0
MLSB	Milas	1.84 144	*e*Pn	Pn		23 35 22.5	+1.0
APE	Apeiranthos	1.87 203	*e*PB	Pb		23 35 22.0	-2.1
APE			*e*SN	Sn		23 35 45.8	+0.3
APE	Apeiranthos	1.87 203	*e*Pb	Pb		23 35 22.0	-2.1
APE			*e*Sn	Sn		23 35 45.8	+0.3
ERIK	Erikli-Kesan	1.87 2	*e*PN	Pn		23 35 22.5	+0.6
ERIK	Erikli-Kesan	1.87 2	*e*Pn	Pn		23 35 22.5	+0.6
BNT	Bandirma	1.93 36	*e*PN	Pn		23 35 22.8	0.0
BNT	Bandirma	1.93 36	*e*Pn	Pn		23 35 22.8	0.0
ENEZ	Enez	1.95 354	*e*PN	Pn		23 35 23.7	+0.8
ENEZ	Enez	1.95 354	*e*Pn	Pn		23 35 23.7	+0.8
ALN	Alexandroupoli	2.12 352	*e*PB	Pb		23 35 26.0	-2.3
ALN			*e*SN	Sn		23 35 51.4	-0.2
ALN	Alexandroupoli	2.12 352	*e*Pb	Pb		23 35 26.0	-2.3
ALN			*e*Sn	Sn		23 35 51.4	-0.2

*IDC **29** 23:36:10.7±1.4, 29.98S×177.82W, h0km, mb4.3/4, mb1 4.5/5, mb1mx4.1/15, mbtmp4.3/5, ML3.2/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/22, Error ellipse: s-maj=49.0km s-min=27.3km az=134.0*
*ISCJB **29** 23:36:14.7±0.7, 30.04S±0.07×178.0W±0.1, h33km, mb4.3/10, Error ellipse: s-maj=16.5km s-min=9.8km az=2.8*
*NEIC **29** 23:36:16.0±0.5, 30.02S×177.79W, h35km, mb4.3/7, Error ellipse: s-maj=13.6km s-min=11.6km az=74.0*
ISC 29 23:36:16.1±0.7, 29.96S±0.07×177.8W±0.1, h35km, n34, σ0.91/26, mb4.3/10, 1C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	9.28 206	Pn	Pn		23 38 25.9	-1.5
	0.2nm,0.3s,baz=243,slow=6.8,SNR=3.3						
URZ				Sn	Sn	23 40 11.5	+1.0
	2.1nm,0.3s,baz=38,slow=22,SNR=9.1						
MCQ	Macquarie Isla	29.68 208	P	P		23 42 18.6	+0.1
TAU	Tasmania Unive	30.66 235	*e*P	P		23 42 26.4	-0.8
CTA	Charters Tower	33.89 278	P	P		23 42 58.5	+2.8
	5.5nm,0.7s,mb4.6,baz=104,slow=9.5,SNR=11						
CTAO	Charters Tower	33.89 278	*e*P	P		23 42 57.1	+1.3
	7.3nm,0.9s,mb4.6						
STKA	Stephens Creek	34.73 256	P	P		23 43 03.4	+0.4
	3.0nm,0.5s,mb4.5,baz=102,slow=8.8,SNR=6.4						
STKA	Stephens Creek	34.73 256	*e*P	P		23 43 02.8	-0.2
	0.5nm,0.4s,mb3.8						
ASAR	Alice Springs	43.29 266	P	P		23 44 15.1	+0.4
	2.6nm,0.6s,mb4.1,baz=102,slow=6.9,SNR=35						
WB2	Warramunga Arr	44.23 272	*e*P	P		23 44 22.6	+0.4
WRA	Warramunga Arr	44.24 272	P	P		23 44 20.0	-2.3
	3.7nm,0.5s,mb4.4,baz=112,slow=6.3,SNR=8.3						
WRA				PcP	PcP	23 46 07.0	+0.4
	0.5nm,0.4s,baz=114,slow=3.0,SNR=5.3						
WRA				LR	LR	00 02 37.8	
	comp=Z,95nm,21.3s,baz=120,slow=36						
WRA	Warramunga Arr	44.24 272	P	P		23 44 20.0	-2.3
WRA				PcP	PcP	23 46 07.0	+0.4
WRA				LR	LR	00 02 37.8	
SBA	Scott Base	48.48 184	*e*P	P		23 44 54.5	-0.3
	1.1nm,0.8s,mb3.9						
FITZ	Fitzroy Crossi	52.52 269	*e*P	P		23 45 26.2	+0.1
	2.4nm,0.8s,mb4.2						
CASY	Casey	55.60 208	*e*P	P		23 45 47.5	-0.4
	1.6nm,0.6s,mb4.2						
MBWA	Marble Bar	56.43 263	P	P		23 45 54.3	-0.3
QSPA	South Pole Qui	60.15 180	*e*P	P		23 46 23.6	+4.0
	3.9nm,0.7s,mb4.5						
KKM	Kota Kinabalu	72.58 288	*e*P	P		23 47 39.7	-0.5
MAW	Mawson	72.77 200	*e*P	P		23 47 40.3	-0.2
SYO	Syowa Base	77.58 193	*e*P	P		23 48 10.0	+1.9
TPUB	Ta-pu	79.36 305	P	P		23 48 18.4	-0.2
YHNB	Yeheng	79.70 306	*e*P	P		23 48 20.4	0.0
TATO	Taipei	79.82 306	*e*P	P		23 48 20.7	-0.4
	118nm,1.1s						
EFI	East Falkland	83.07 147	*e*P	P		23 48 37.3	-0.7
KSRS	Korea Array	84.12 320	P	P		23 48 44.7	+1.3
	1.6nm,0.8s,mb4.2,baz=127,slow=8.0,SNR=5.0						
TRQA	Tornquist	89.63 135	*e*P	P		23 49 10.7	+0.3
	1.5nm,0.9s,mb4.3						
MKAR	Makanchi Array	117.61 310	PKP	PKPdf		23 54 57.9	-0.2
	0.4nm,0.2s,baz=27,slow=0.3,SNR=3.3						
MKAR	Makanchi Array	117.61 310	PKP	PKPdf		23 54 57.9	-0.2
ARCES	ARCESS Array B	138.20 348	PKP	PKPdf		23 55 38.2	+1.7
	3.2nm,0.8s,baz=20,slow=1.1,SNR=4.4						
ARCES	ARCESS Array B	138.20 348	PKP	PKPdf		23 55 38.2	+1.7
FINES	FINESS Array B	144.79 340	PKP	PKPdf		23 55 47.4	-1.1
	4.9nm,0.5s,baz=64,slow=3.0,SNR=37						
NOA	NORSAR Array B	148.34 352	PKPbc	PKPbc		23 55 58.0	0.0
	2.6nm,0.6s,baz=14,slow=4.4,SNR=13						
AKASG	Malin Array Be	151.05 323	PKPbc	PKPbc		23 56 04.7	-0.3
	3.4nm,0.5s,baz=49,slow=3.0,SNR=8.9						
BRTR	Keskin Array B	152.53 299	PKPbc	PKPbc		23 56 08.8	0.0
	1.1nm,0.8s,baz=128,slow=3.3,SNR=6.8						
CLL	Collm	157.20 342	*e*PKPab	PKPab		23 56 41.0	+2.3

IDC 29 23:51:03.0±7.2, 28.85S×177.69W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.6/14, mbtmp3.4/2, Error ellipse: s-maj=444.7km s-min=89.6km az=165.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.48 265	P	P		23 59 07.4	-0.8
	0.2nm,0.2s,baz=102,slow=8.6,SNR=3.6						
WRA	Warramunga Arr	44.33 270	P	P		23 59 15.8	+0.7
	0.3nm,0.3s,baz=110,slow=7.5,SNR=5.2						
FINES	FINESS Array B	143.78 341	PKP	PKPdf		00 10 38.9	-0.5
	3.2nm,1.0s,baz=43,slow=3.9,SNR=4.2						

IDC 30 00:05:52.7±47.0, 15.40S×165.37E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, Error ellipse: s-maj=805.0km s-min=104.2km az=68.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	27.17 229	P	P		00 11 38.1	+0.1
	1.2nm,0.4s,baz=61,slow=11,SNR=4.3						
WRA	Warramunga Arr	29.88 257	P	P		00 12 02.2	-0.1
	0.2nm,0.4s,baz=83,slow=7.6,SNR=2.3						
ASAR	Alice Springs	30.72 250	P	P		00 12 09.6	-0.1
	0.6nm,0.5s,baz=77,slow=8.9,SNR=9.7						
FITZ	Fitzroy Crossi	38.09 260	P	P		00 13 13.6	+0.1
	1.3nm,0.9s,baz=86,slow=9.8,SNR=3.6						

*ISCJB **30** 00:07:02.6±5.3, 11.99N±0.08×144.0E±0.1, h13km±33km, mb3.9/7, Error ellipse: s-maj=23.8km s-min=9.5km az=24.9*
*IDC **30** 00:07:02.2±1.2, 11.97N×144.14E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/21, mbtmp3.6/4, Error ellipse: s-maj=55.5km s-min=19.5km az=110.0*
*NEIC **30** 00:07:07.2±0.4, 12.01N×144.11E, h35km, mb4.1/3, Error ellipse: s-maj=15.6km s-min=7.2km az=104.0*
ISC 30 00:07:02.6±6.4, 12.00N±0.08×144.1E±0.1, h2km±40km, n17, σ0.43/19, mb3.9/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.76 26	Pn	Pn		00 07 33.9	-0.2
	42nm,0.3s,baz=196,slow=7.1,SNR=23						
GUMO				Sn	Sn	00 07 57.4	+0.2
	81nm,0.3s,baz=17,slow=19,SNR=13						
GUMO	Guam	1.76 26	*e*Pn	Pn		00 07 34.1	0.0
GUMO			*e*Sn	Sn		00 07 56.9	-0.2
MAJO	Matsushiro	25.00 349	P	P		00 12 27.9	+0.1
WRA	Warramunga Arr	33.15 197	P	P		00 13 40.0	-0.5
	0.8nm,0.8s,mb3.7,baz=20,slow=9.5,SNR=4.2						
MDJ	Mudanjiang	34.80 342	P	P		00 13 54.8	+0.2
FITZ	Fitzroy Crossi	35.01 212	P	P		00 13 57.0	+0.4
KSM	Kuching	35.07 255	*e*P	P		00 13 57.5	+0.1
ASAR	Alice Springs	36.81 196	P	P		00 14 12.2	+0.1
	0.3nm,0.6s,mb3.3,baz=22,slow=12,SNR=2.9						
ASAR	Alice Springs	36.81 196	P	P		00 14 12.2	+0.1
MBWA	Marble Bar	40.71 216	*e*P	P		00 14 45.1	+0.2
	17nm,1.1s,mb4.6						
STKA	Stephens Creek	43.69 183	P	P		00 15 08.8	-0.1
MKAR	Makanchi Array	62.10 317	P	P		00 17 25.4	+0.5
	0.3nm,0.7s,mb3.5,baz=92,slow=8.4,SNR=2.8						
KURK	Kurchatov	65.30 320	*e*P	P		00 17 45.5	-0.5
	1.0nm,0.6s,mb4.0						
TKM2	Tokmak 2	66.18 312	P	P		00 17 52.3	+0.5
KBL	Kabul	71.02 303	*e*P	P		00 18 21.2	-1.0
	0.6nm,0.4s,mb3.9						
RES	Resolute Bay	86.27 13	P	P		00 19 44.9	-0.5
NVAR	Mina Array Bea	88.52 51	P	P		00 19 57.6	+0.6
	0.2nm,0.3s,mb3.9,baz=289,slow=5.6,SNR=3.0						

WEL 30 00:14:23.9±0.6, 37.21S×176.88E, h203km±5km, ML3.5/6, 1D, Error ellipse: s-maj=6.3km s-min=6.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	1.07 170	PN	Pn		00 14 54.4	0.0
URZ			SN	Sn		00 15 18.2	-0.1
PUZ	Puketiti	1.40 129	⇓PN	Pn		00 14 56.7	-0.2
PUZ			SN	Sn		00 15 21.8	-0.9
CNGZ	Carnagh Statio	1.66 141	PN	Pn		00 14 59.9	+0.7
NMHZ	Naumai	1.89 182	PN	Pn		00 15 02.2	+0.7
PRGZ	Paritu Road	1.89 155	SN	Sn		00 15 30.7	-0.2
BKZ	Black Stump Fm	1.98 189	PN	Pn		00 15 02.1	-0.3
BKZ			SN	Sn		00 15 32.6	+0.1
FWVZ	Far West T-bar	2.30 207	PN	Pn		00 15 06.5	+0.8
BHHZ	Black Hill Sta	2.37 195	PN	Pn		00 15 06.0	-0.4
CKHZ	Cape Kidnapper	2.45 176	PN	Pn		00 15 07.3	-0.1
KAHZ	Kahuranaki	2.58 180	PN	Pn		00 15 08.9	0.0
PNHZ	Pukenui	2.75 191	PN	Pn		00 15 10.2	-0.6
TSZ	Takapari Road	2.94 194	PN	Pn		00 15 12.2	-0.7
DVHZ	Dannevirke	3.14 190	*e*PN	Pn		00 15 13.7	-1.5
MRZ	Mangatainoka R	3.60 196	PN	Pn		00 15 19.0	-1.7
MRZ			SN	Sn		00 16 03.2	-2.3
HOWZ	Holdsworth Sta	3.84 196	PN	Pn		00 15 21.9	-1.8
OGWZ	Otaki Gorge	3.84 200	PN	Pn		00 15 21.8	-2.0
KIW	Kapiti Island	3.96 202	PN	Pn		00 15 23.2	-2.0
MTW	Mount Morrison	4.09 195	PN	Pn		00 15 24.4	-2.4
CAW	Cannon Point	4.14 199	PN	Pn		00 15 25.2	-2.3
PLWZ	Palliser	4.54 196	PN	Pn		00 15 29.7	-2.7
KHZ	Kahutara	5.80 205	PN	Pn		00 15 45.3	-3.3

*IDC **30** 00:22:07.4±2.7, 28.87S×176.69W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.9/15, mbtmp4.0/4, Error ellipse: s-maj=97.3km s-min=41.8km az=17.0*
NEIC 30 00:22:11.8±1.9, 30.15S×176.38W, h35km, mb3.9/2, Error ellipse: s-maj=38.7km s-min=19.6km az=99.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	9.71 212	Pn	Pn		00 24 28.9	0.0
CTA	Charters Tower	35.15 278	P	P		00 29 02.3	+0.1
	0.8nm,0.3s,baz=83,slow=8.1,SNR=2.8						
CTAO	Charters Tower	35.15 278	P	P		00 29 03.4	+1.1
	1.2nm,0.4s						
STKA	Stephens Creek	35.90 256	P	P		00 29 09.7	+1.0
	4.7nm,0.9s,baz=88,slow=11,SNR=5.4						
STKA	Stephens Creek	35.90 256	*e*P	P		00 29 09.6	+0.9
	0.6nm,0.7s						
PMG	Port Moresby	39.78 294	P	P		00 29 41.4	-0.2
ASAR	Alice Springs	44.52 266	P	P		00 30 19.4	-0.8
	0.7nm,0.8s,baz=96,slow=7.0,SNR=6.9						
WRA	Warramunga Arr	45.49 271	P	P		00 30 27.0	-0.9
	1.7nm,0.6s,baz=108,slow=7.9,SNR=9.6						
FITZ	Fitzroy Crossi	53.76 269	P	P		00 31 29.4	-1.5
	1.3nm,0.8s,baz=121,slow=5.9,SNR=2.3						
FINES	FINESS Array B	145.38 341	PKP	PKPdf		00 41 45.3	+0.1
	2.1nm,0.5s,baz=33,slow=3.3,SNR=13						
TORD	Torodi Ar. Bea	162.98 174	PKPab	PKPab		00 43 06.4	+6.1
	0.1nm,0.6s,baz=198,slow=3.0,SNR=2.8						

IDC 30 00:54:38.4±7.6, 28.13S×177.60W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/14, mbtmp3.4/2, MS3.5/1, Ms1 3.5/1, ms1mx3.0/9, Error ellipse: s-maj=450.4km s-min=100.4km az=163.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	27.82 74	LR	LR		01 09 24.5	
	comp=Z,91nm,19.5s,baz=296,slow=32						
ASAR	Alice Springs	43.63 264	P	P		01 02 44.8	+0.1
	0.2nm,0.4s,baz=96,slow=8.3,SNR=5.0						
WRA	Warramunga Arr	44.41 270	P	P		01 02 50.9	-0.2
	0.3nm,0.4s,baz=109,slow=8.1,SNR=2.6						
FINES	FINESS Array B	143.13 341	PKP	PKPdf		01 14 13.1	-0.5
	1.6nm,0.7s,baz=52,slow=2.3,SNR=5.8						

*DJA **30** 01:03:35.6±0.05N×123.62E, h537km, MLv4.6/5*
*ISCJB **30** 01:03:53.9±0.8, 4.2N±0.1×123.8E±0.2, h473km±10km, mb3.9/10, Error ellipse: s-maj=38.1km s-min=13.4km az=153.0*
*NEIC **30** 01:03:58.5±2.8, 4.11N×123.72E, h516km±35km, mb4.1/2, Error ellipse: s-maj=53.0km s-min=12.3km az=63.0*
*IDC **30** 01:03:59.1±3.9, 4.12N×123.73E, h523km±50km, mb3.4/8, mb1 3.5/8, mb1mx3.2/22, mbtmp3.4/8, Error ellipse: s-maj=66.7km s-min=13.6km az=67.0*
ISC 30 01:03:55.0±0.8, 4.2N±0.1×123.8E±0.2, h468km±10km, n21, σ0.67/18, mb3.9/10, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.81 107	P	P		01 04 49.7	-6.6
MNI	Manado	2.94 159	P	P		01 05 02.9	-0.2
KMSI	Cibinong	3.61 177	P	P		01 05 09.0	+0.8
	0.8nm161nm,0.9s						
MRSI	Marisa	4.14 207	P	P		01 05

GYA Sn **Sn** **01 18 36.5 +1.4**
GYA Sg **Sg** **01 18 54.0 -2.2**
GYA smax
comp=N,240nm,1.0s
GYA smax
comp=E,240nm,1.0s
CHRT Chiangrai 6.54 197 P Px 01 18 40.0
comp=E,555nm,0.7s
CHG Chiang Mai 7.78 201 ⇓P Px 01 19 06.3
comp=E,113nm,1.1s
CHTO Chiang Mai 7.78 201 *e*Pn **Pn** **01 18 38.0 +6.6**
comp=E,4.1nm,0.6s
CHTO Chiang Mai 7.78 201 *e*P **Pn** **01 18 38.0 +6.6**
CHTO pmax pmax
comp=Z,4.0nm,0.6s
ENH Enshi 7.89 57 *e*Pn **Pn** **01 18 33.2 +0.3**
comp=Z,83nm,0.8s
CMAR Chiang Mai Arr 8.12 200 Pn **Pn** **01 18 42.0 +5.9**
comp=Z,0.7nm,0.3s,baz=15,slow=12,SNR=28
CMAR Pg **Pg** **01 19 12.2 -0.4**
comp=Z,1.3nm,0.3s,baz=14,slow=15,SNR=5.0
CMAR Lg 01 21 00.1
comp=Z,0.5nm,0.3s,baz=12,slow=32,SNR=5.6
CMAR LR LR 01 21 52.7
comp=Z,179nm,18.5s,baz=193,slow=38
CMAR Chiang Mai Arr 8.12 200 P **Pn** **01 18 42.0 +6.0**
SHL Shillong 9.00 268 *e*PKP **Pn** **01 18 55.0 +6.9**
SHL *i* S Sn 01 20 53.0 +23
SHL *ex* x 01 21 52.0
XAN Xi'an 9.96 36 P **Pn** **01 19 00.3 -1.0**
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN pmax pmax
comp=Z,18nm,4.3s
XAN LR LR
comp=N,1μm,7.2s
XAN LR LR
comp=E,550nm,6.9s
XAN LR LR
comp=Z,180nm,6.9s
LZH Lanzhou 10.05 9 *e*P **Pn** **01 19 01.8 -0.7**
LZH pP 01 19 05.0
LZH sP 01 19 08.3
LZH pmax pmax
comp=Z,13nm,1.0s
LZH LR LR
comp=N,830nm,7.7s
LZH LR LR
comp=E,2μm,10.9s
LZH LR LR
comp=Z,3μm,11.3s
LSA Lhasa 10.10 293 P **Pn** **01 19 05.5 +2.3**
LSA S **Sn** **01 20 55.0 -2.2**
LSA LR LR
comp=N,450nm,9.5s
LSA LR LR
comp=E,350nm,5.9s
LSA LR LR
comp=Z,460nm,7.8s
LSA Lhasa 10.10 293 *e*Pn **Pn** **01 19 06.0 +2.7**
comp=Z,11nm,0.5s
LSA *e*S **Sn** **01 20 59.1 +1.9**
LSA Lhasa 10.10 293 *e*P **Pn** **01 19 06.0 +2.8**
LSA *e*S **Sn** **01 20 59.1 +1.9**
LSA pmax pmax
comp=Z,11nm,0.5s
GTA Gaotai 13.33 353 ⇑P **Pn** **01 19 58.5 +11**
GTA pP 01 20 02.0
GTA sP 01 20 04.5
GTA S **Sn** **01 22 34.0 +18**
GTA sS 01 22 39.5
GTA pmax pmax
comp=Z,16nm,0.8s
GTA pmax pmax
comp=Z,93nm,4.7s
GTA LR LR
comp=N,540nm,8.8s
GTA LR LR
comp=E,1μm,13.5s
GTA LR LR
comp=Z,410nm,9.5s
GUN Gumba 14.34 281 *e*P **Pn** **01 20 01.5 +0.2**
comp=Z,30nm,0.5s
PKI Pulchoki 14.75 279 *e*P **Pn** **01 20 06.0 -0.7**
comp=Z,25nm,0.6s
PKI Pulchoki 14.75 279 *e*P **Pn** **01 20 06.0 -0.7**
PKI pmax pmax
comp=Z,25nm,0.6s
DMN Daman 15.02 279 *e*P **Pn** **01 20 09.7 -0.7**
GKN Gorkha 15.45 281 *e*P **Pn** **01 20 16.4 +0.3**
DANN Dangsing 16.24 282 *e*P **Pn** **01 20 27.2 +0.8**
KOLN Koldanda 16.36 280 *e*P **Pn** **01 20 27.5 -0.4**
comp=Z,20nm,0.7s
BJT Baijiatuau 18.27 37 *e*Pn **Pn** **01 20 53.9 +2.0**
BJT Baijiatuau 18.27 37 *e*P **Pn** **01 20 53.9 +2.1**
BJI Beijing 18.29 37 P **Pn** **01 20 53.8 +1.8**
BJI LR LR
comp=N,580nm,14.1s
BJI LR LR
comp=E,650nm,18.5s
BJI LR LR
comp=Z,87nm,17.1s
WMQ Urumqi 21.05 330 P **P** **01 21 23.5 +1.2**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.3
SONM Songino Array 21.94 8 P **P** **01 21 31.5 -0.3**
comp=Z,16nm,0.8s,mb4.5,baz=192,slow=11,SNR=73
SONM LR LR 01 30 46.5
comp=Z,81nm,19.3s,MS3.1,baz=1.2,slow=39
SONM Songino Array 21.94 8 P **P** **01 21 31.5 -0.3**
ULN Ulaanbaatar 22.06 9 *e*P **P** **01 21 33.0 -0.1**
comp=Z,36nm,0.9s,mb4.8
ULN Ulaanbaatar 22.06 9 *e*P **P** **01 21 33.0 -0.1**
ULN pmax pmax
comp=Z,36nm,0.9s,mb4.8
ZAK Zakamensk 24.22 2 ⇓*i*P **P** **01 21 55.4 +0.4**
ZAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
KSRS Korea Array 24.78 57 P **P** **01 22 05.1 +4.7**
comp=Z,0.6nm,0.3s,mb3.7,baz=251,slow=7.9,SNR=5.1
KSRS LR LR 01 32 52.6
comp=Z,89nm,19.8s,MS3.3,baz=240,slow=40
KSRS Korea Array 24.78 57 P **P** **01 22 05.1 +4.8**
MK31 Makanchi Array 25.79 328 *e*P **P** **01 22 10.4 +1.0**
MK31 Makanchi Array 25.79 328 *e*P **P** **01 22 10.4 +1.0**
MKAR Makanchi Array 25.79 328 P **P** **01 22 10.1 +0.7**
comp=Z,22nm,0.8s,mb4.8,baz=138,slow=12,SNR=96
MKAR Makanchi Array 25.79 328 P **P** **01 22 10.1 +0.7**
CHCP Chirah Chowk 25.83 294 P **P** **01 22 10.5 +0.6**
CEP Cherat 26.97 294 P **P** **01 22 21.9 +1.7**
TKM2 Tokmak 2 27.18 315 *e*P **P** **01 22 23.8 +1.8**
comp=Z,3.2nm,1.0s,mb3.8
TKM2 Tokmak 2 27.18 315 *e*P **P** **01 22 23.8 +1.8**
TKM2 pmax pmax
comp=Z,3.0nm,1.0s,mb3.8
AAK Ala-Archa 27.76 313 P **P** **01 22 28.8 +1.6**
comp=Z,3.4nm,0.8s,mb4.0,baz=126,slow=10,SNR=6.7
AAK LR LR 01 35 09.6
comp=Z,321nm,20.0s,MS3.9,baz=285,slow=40
AAK Ala-Archa 27.76 313 P **P** **01 22 28.8 +1.6**
AML Almayashu 28.06 312 *e*P **P** **01 22 32.2 +2.3**
comp=Z,9.8nm,1.1s,mb4.3
EKS2 Erkin-Say 28.24 313 *e*P **P** **01 22 33.3 +1.8**
comp=Z,5.3nm,0.8s,mb4.2
KURK Kurchatov 30.30 330 *e*P **P** **01 22 50.0 +0.4**
comp=Z,10nm,0.8s,mb4.6
KURK Kurchatov 30.30 330 *e*P **P** **01 22 50.0 +0.4**
KURK pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
ZAA0 Zalesovo Array 30.51 340 *e*P **P** **01 22 51.4 -0.1**
ZALV Zalesovo Beam 30.51 340 P **P** **01 22 50.9 -0.6**
comp=Z,4.0nm,0.6s,mb4.4,baz=144,slow=10,SNR=24
ZALV LR LR 01 35 26.8
comp=Z,70nm,19.9s,MS3.3,baz=154,slow=37
ZALV Zalesovo Beam 30.51 340 P **P** **01 22 50.9 -0.6**
KKAR Karatay Array 30.60 312 *e*P **P** **01 22 53.0 +0.5**
comp=Z,0.5nm,0.4s,mb3.7
KKAR Karatay Array 30.60 312 *e*P **P** **01 22 53.0 +0.5**
MJAR Matsushiro Arr 32.56 63 LR LR 01 37 58.0
comp=Z,99nm,18.0s,MS3.5,baz=245,slow=39
BOD Bodaibo 32.80 12 *e*P **P** **01 23 11.0 -0.6**
VOSK Vostochnaya 35.20 327 P **P** **01 23 31.1 -1.4**
VOSK pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BVAR Borovoye Array 35.66 327 P **P** **01 23 36.6 +0.1**
comp=Z,5.2nm,0.6s,mb4.7,baz=121,slow=9.0,SNR=22
BVAR PcP PcP 01 26 03.8 -1.1
comp=Z,0.7nm,0.5s,baz=131,slow=4.4,SNR=3.5
BVAR Borovoye Array 35.66 327 P **P** **01 23 36.6 +0.1**
BVAR 01 26 03.8
BRVK Borovoye 35.73 327 *e*P **P** **01 23 37.9 +0.8**
comp=Z,19nm,0.9s,mb5.0
BRVK Borovoye 35.73 327 P **P** **01 23 36.5 -0.6**
BRVK pmax pmax
comp=Z,16nm,0.6s,mb5.1
ZRNK Zerenda 36.30 326 P **P** **01 23 40.7 -1.3**
ZRNK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
AB31 Akbulak array 39.70 317 *e*P **P** **01 24 11.3 +0.6**
AB31 pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
ABKAR Akbulak array 39.70 317 *e*P **P** **01 24 11.3 +0.7**
comp=Z,11nm,0.7s,mb4.7
ABKAR *e*PcP PcP 01 26 16.4 -1.0
AKTK Aktyubinsk 41.27 318 P **P** **01 24 24.1 +0.5**
AKTK PcP PcP 01 26 21.4 -1.0
AKTO Aktyubinsk 41.27 318 P **P** **01 24 24.1 +0.5**
comp=Z,1.8nm,0.6s,mb3.9,baz=76,slow=8.7,SNR=8.3
AKTO PcP PcP 01 26 21.4 -1.0
comp=Z,1.3nm,0.6s,baz=79,slow=5.2,SNR=4.1
AKTO Aktyubinsk 41.27 318 P **P** **01 24 23.9 +0.2**
GUMO Guam 42.15 99 LR LR 01 41 09.5
comp=Z,63nm,18.0s,MS3.5,baz=278,slow=35
ARU Arti 43.28 326 *e*P **P** **01 24 40.5 +0.5**
comp=Z,27nm,0.9s,mb5.0
ARU Arti 43.28 326 P **P** **01 24 40.1 +0.1**
RDF Al-Radifah 47.88 286 *e*P **P** **01 25 16.8 0.0**
MIB Mutribah 47.91 288 *e*P **P** **01 25 16.4 -0.7**
MIB AMb AMB 01 25 17.3
comp=Z,15nm,0.4s,mb5.4
NAY Al-Naaiem 48.09 287 *e*P **P** **01 25 17.7 -0.8**
NAY AMb AMB 01 25 19.3
comp=Z,19nm,1.1s,mb5.0
ZEI Tsey 49.63 305 *e*P **P** **01 25 29.5 -0.6**
ZEI pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
WRA Warramunga Arr 55.62 142 P **P** **01 26 14.7 0.0**
comp=Z,4.1nm,0.6s,mb4.7,baz=332,slow=8.2,SNR=13
WRA Warramunga Arr 55.62 142 P **P** **01 26 14.7 0.0**
BRTR Keskin Array B 57.57 302 P **P** **01 26 27.9 -0.4**
comp=Z,1.3nm,0.7s,mb4.1,baz=116,slow=6.1,SNR=14
BRTR Keskin Array B 57.57 302 P **P** **01 26 28.0 -0.4**
JOF Joensuu 58.21 329 *e*p **P** **01 26 31.6 -0.9**
comp=Z,11nm,0.6s,mb5.1
ASAR Alice Springs 58.43 145 P **P** **01 26 35.1 +0.6**
comp=Z,1.5nm,0.5s,mb4.3,baz=328,slow=7.1,SNR=16
ASAR Alice Springs 58.43 145 P **P** **01 26 35.1 +0.6**
AKASG Malin Array Be 59.41 315 P **P** **01 26 39.6 -1.4**
comp=Z,1.0nm,0.4s,mb4.2,baz=84,slow=5.8,SNR=6.5
AKASG Malin Array Be 59.41 315 P **P** **01 26 39.6 -1.4**
KAF Kangasniemi 60.50 328 *e*p **P** **01 26 47.7 -0.7**
comp=Z,6.3nm,0.7s,mb4.8,baz=88,slow=6.7
FINES FINESS Array B 60.62 328 P **P** **01 26 48.4 -0.8**
comp=Z,9.2nm,0.6s,mb5.1,baz=91,slow=7.5,SNR=53
FINES FINESS Array B 60.62 328 P **P** **01 26 48.4 -0.8**
ARCES ARCESS Array B 60.99 337 P **P** **01 26 50.9 -0.6**
comp=Z,0.8nm,0.4s,mb4.2,baz=83,slow=7.5,SNR=12
ARCES ARCESS Array B 60.99 337 P **P** **01 26 50.9 -0.6**
ARCES ARCESS Array B 60.99 337 P **P** **01 26 50.9 -0.7**
VRI Vrincioaia 61.65 310 ⇑*i*P **P** **01 26 56.2 -0.3**
PLOR Plostina 61.71 310 ⇑*i*P **P** **01 26 57.6 +0.8**
MLR Muntele Rosu 62.26 310 ⇓*i*P **P** **01 27 00.9 +0.4**
VOIR 62.88 310 ⇑*i*P **P** **01 27 04.4 -0.3**
KWP Kalwaria Pacla 63.70 315 ⇓*i*P **P** **01 27 10.2 +0.2**
DRGR 64.22 311 ⇓*i*P **P** **01 27 13.6 0.0**
VTS Vitosha 64.77 307 ⇓*i*P **P** **01 27 13.9 -3.3**
VRAC Vranov 67.66 315 ⇓*i*P **P** **01 27 35.6 -0.1**
NB2 NORSAR Subarra 67.78 328 P **P** **01 27 34.9 -1.3**
comp=Z,5.7nm,0.6s,mb4.8,baz=76,slow=6.5
NOA NORSAR Array B 67.78 328 P **P** **01 27 34.4 -1.8**
comp=Z,4.5nm,0.6s,mb4.7,baz=82,slow=4.2,SNR=21
NOA LR LR 01 59 04.4
comp=Z,43nm,19.6s,MS3.7,baz=90,slow=38
NOA NORSAR Array B 67.78 328 P **P** **01 27 34.4 -1.8**
CLL Collm 69.36 318 *e*P **P** **01 27 45.0 -1.2**
GERES GERESS Array B 69.62 315 P **P** **01 27 48.0 +0.1**
comp=Z,1.2nm,0.6s,mb4.0,baz=64,slow=5.7,SNR=12
GERES GERESS Array B 69.62 315 P **P** **01 27 48.0 +0.1**
FETA Feichten 72.08 314 ⇑*i*P **P** **01 28 02.5 -0.4**
comp=Z,4.0nm,0.9s,mb4.4
CDF Champ du Feu 73.79 316 *e*P **P** **01 28 13.3 +0.3**
comp=Z,8.0nm,0.8s,mb4.4
CDF Champ du Feu 73.79 316 *e*P **P** **01 28 13.3 +0.3**
comp=Z,4.0nm,0.8s,mb4.4
CDF Champ du Feu 73.79 316 *e*P **P** **01 28 13.3 +0.3**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BPAW Bear Paw Mtn. 73.90 26 *e*P **P** **01 28 14.4 +1.0**
comp=Z,3.7nm,0.7s,mb4.4
HINF Hinteralfeld 74.27 316 *e*P **P** **01 28 15.3 -0.5**
HINF Hinteralfeld 74.27 316 *e*P **P** **01 28 15.3 -0.5**
HAU Haudompre 74.52 316 *e*P **P** **01 28 16.8 -0.5**
HAU Haudompre 74.52 316 *e*P **P** **01 28 16.8 -0.5**
GIVF Givet 74.66 318 *e*P **P** **01 28 17.9 -0.1**
GIVF Givet 74.66 318 *e*P **P** **01 28 17.9 -0.1**
PGF Pioggiola 74.79 310 *e*P **P** **01 28 18.7 -0.3**
PGF Pioggiola 74.79 310 *e*P **P** **01 28 18.7 -0.3**
BAIF Baives 75.04 319 *e*P **P** **01 28 19.8 -0.5**
BAIF Baives 75.04 319 *e*P **P** **01 28 19.8 -0.5**
MEZF Maizieres J'vi 75.13 317 *e*P **P** **01 28 20.7 -0.1**
ILAR Eielson Array 75.14 24 P **P** **01 28 19.2 -1.3**
comp=Z,0.5nm,0.8s,mb3.5,baz=289,slow=5.5,SNR=5.3
ILAR LR LR 02 08 08.2
comp=Z,41nm,18.6s,MS3.8,baz=15,slow=41
ILAR Eielson Array 75.14 24 P **P** **01 28 19.2 -1.3**
ILAR LR LR 02 08 08.2
ILAR Eielson Array 75.14 24 P **P** **01 28 19.3 -1.3**
LPG La Plagne 75.20 314 *e*P **P** **01 28 21.7 +0.4**
comp=Z,17nm,0.8s,mb4.7
LPG La Plagne 75.20 314 *e*P **P** **01 28 21.7 +0.4**
comp=Z,8.6nm,0.8s,mb4.7
LPG La Plagne 75.20 314 *e*P **P** **01 28 21.7 +0.4**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LPL La Plagne 75.21 314 *e*P **P** **01 28 21.7 +0.4**
comp=Z,16nm,0.6s,mb4.8
LPL La Plagne 75.21 314 *e*P **P** **01 28 21.7 +0.4**
comp=Z,7.9nm,0.6s,mb4.8
LPL La Plagne 75.21 314 *e*P **P** **01 28 21.7 +0.4**
LPL pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
SFTF Sexfontaines 75.26 317 *e*P **P** **01 28 21.0 -0.5**
comp=Z,19nm,0.9s,mb4.7
SFTF Sexfontaines 75.26 317 *e*P **P** **01 28 21.0 -0.5**
comp=Z,19nm,0.9s,mb5.0
SBF Sospel 75.37 312 *e*P **P** **01 28 22.0 -0.3**
SBF Sospel 75.37 312 *e*P **P** **01 28 22.0 -0.3**
MBDF Montbardon 75.48 313 *e*P **P** **01 28 22.5 -0.4**
comp=Z,5.1nm,0.7s,mb4.3
MBDF Montbardon 75.48 313 *e*P **P** **01 28 22.5 -0.4**
comp=Z,2.5nm,0.7s,mb4.2
MBDF Montbardon 75.48 313 *e*P **P** **01 28 22.5 -0.4**
MBDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ORIF Oris-en-Rattie 75.99 313 *e*P **P** **01 28 25.3 -0.5**
ORIF Oris-en-Rattie 75.99 313 *e*P **P** **01 28 25.3 -0.5**
FRF La Foret Royal 76.01 312 *e*P **P** **01 28 26.3 +0.4**
FRF La Foret Royal 76.01 312 *e*P **P** **01 28 26.3 +0.4**
LMR La Mourre 76.19 312 *e*P **P** **01 28 26.5 -0.5**
LMR La Mourre 76.19 312 *e*P **P** **01 28 26.5 -0.5**
LOR Lormes 76.36 316 *e*P **P** **01 28 27.0 -0.8**
comp=Z,8.6nm,0.8s,mb4.4
LOR Lormes 76.36 316 *e*P **P** **01 28 27.0 -0.8**
comp=Z,4.3nm,0.8s,mb4.4
LOR Lormes 76.36 316 *e*P **P** **01 28 27.0 -0.8**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SMRF Simiane la Rot 76.56 312 *e*P **P** **01 28 28.9 -0.2**
SMF Signal de Mont 76.62 315 *e*P **P** **01 28 28.8 -0.5**
SMF Signal de Mont 76.62 315 *e*P **P** **01 28 28.8 -0.5**
SSF Saint Saulge 76.66 316 *e*P **P** **01 28 29.0 -0.6**
comp=Z,17nm,0.9s,mb4.7
SSF Saint Saulge 76.66 316 *e*P **P** **01 28 29.0 -0.6**
comp=Z,8.4nm,0.9s,mb4.7
SSF Saint Saulge 76.66 316 *e*P **P** **01 28 29.0 -0.6**
SSF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
VIVF Saint-Julien-l 76.81 314 *e*P **P** **01 28 30.0 -0.4**
VIVF Saint-Julien-l 76.81 314 *e*P **P** **01 28 30.0 -0.4**
AVF Avril sur Loir 76.87 316 *e*P **P** **01 28 30.2 -0.5**
comp=Z,9.3nm,0.7s,mb4.5
AVF Avril sur Loir 76.87 316 *e*P **P** **01 28 30.2 -0.5**
comp=Z,4.7nm,0.7s,mb4.5
AVF Avril sur Loir 76.87 316 *e*P **P** **01 28 30.2 -0.5**
AVF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
HYF Humbligny 77.11 316 *e*P **P** **01 28 32.2 +0.1**
BGF Bois d'Agland 77.28 316 *e*P **P** **01 28 32.7 -0.4**
BGF Bois d'Agland 77.28 316 *e*P **P** **01 28 32.7 -0.4**
LASF Ste Croix 77.66 313 *e*P **P** **01 28 35.1 -0.1**
comp=Z,19nm,1.1s,mb4.6
TCF Toulx Ste Croi 77.79 316 *e*P **P** **01 28 35.8 -0.1**
comp=Z,6.0nm,0.6s,mb4.4
TCF Toulx Ste Croi 77.79 316 *e*P **P** **01 28 35.8 -0.1**
comp=Z,3.0nm,0.6s,mb4.4
TCF Toulx Ste Croi 77.79 316 *e*P **P** **01 28 35.8 -0.1**
TCF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LDF La Druitiere 78.23 318 *e*P **P** **01 28 37.8 -0.5**
comp=Z,5.6nm,0.5s,mb4.5
LDF La Druitiere 78.23 318 *e*P **P** **01 28 37.8 -0.5**
comp=Z,2.8nm,0.5s,mb4.5
LDF La Druitiere 78.23 318 *e*P **P** **01 28 37.8 -0.5**
LDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
FLN La Foliniere 78.37 319 *e*P **P** **01 28 38.6 -0.5**
FLN La Foliniere 78.37 319 *e*P **P** **01 28 38.6 -0.5**
CAF Calviac 78.46 314 *e*P **P** **01 28 39.8 +0.1**
comp=Z,21nm,1.2s,mb4.7
CAF Calviac 78.46 314 *e*P **P** **01 28 39.8 +0.1**
comp=Z,10nm,1.2s,mb4.6
CAF Calviac 78.46 314 *e*P **P** **01 28 39.8 +0.1**
CAF pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
RJF Les Rejaudoux 78.65 315 *e*P **P** **01 28 41.0 +0.3**
comp=Z,19nm,0.9s,mb4.7
RJF Les Rejaudoux 78.65 315 *e*P **P** **01 28 41.0 +0.3**
comp=Z,9.4nm,0.9s,mb4.7
RJF Les Rejaudoux 78.65 315 *e*P **P** **01 28 41.0 +0.3**
RJF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
GRR Gorron 78.76 318 *e*P **P** **01 28 41.5 +0.3**
comp=Z,16nm,0.7s,mb4.8
GRR Gorron 78.76 318 *e*P **P** **01 28 41.5 +0.3**
comp=Z,8.1nm,0.7s,mb4.8
GRR Gorron 78.76 318 *e*P **P** **01 28 41.5 +0.3**
GRR pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
MTLF Montolieu 79.04 313 *e*P **P** **01 28 42.7 -0.2**
MTLF Montolieu 79.04 313 *e*P **P** **01 28 42.7 -0.2**
MFF Saint Martin d 79.12 317 *e*P **P** **01 28 43.0 -0.3**
comp=Z,14nm,0.9s,mb4.6
MFF Saint Martin d 79.12 317 *e*P **P** **01 28 43.0 -0.3**
comp=Z,7.1nm,0.9s,mb4.6
MFF Saint Martin d 79.12 317 *e*P **P** **01 28 43.0 -0.3**
MFF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
LFF La Frestale 79.31 315 *e*P **P** **01 28 44.5 +0.2**
comp=Z,7.7nm,0.7s,mb4.4
LFF La Frestale 79.31 315 *e*P **P** **01 28 44.5 +0.2**
comp=Z,3.8nm,0.7s,mb4.4
LFF La Frestale 79.31 315 *e*P **P** **01 28 44.5 +0.2**
LFF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SGMF Saint Gilles 79.83 319 *e*P **P** **01 28 47.2 +0.1**
comp=Z,23nm,0.6s,mb5.0
SGMF Saint Gilles 79.83 319 *e*P **P** **01 28 47.2 +0.1**
comp=Z,11nm,0.6s,mb5.0
SGMF Saint Gilles 79.83 319 *e*P **P** **01 28 47.2 +0.1**
SGMF pmax pmax
comp=Z,11nm,0.6s,mb5.0
ROSF Rostrenen 80.21 319 *e*P **P** **01 28 49.3 +0.1**
ROSF Rostrenen 80.21 319 *e*P **P** **01 28 49.3 +0.1**
QUIF Quistinic 80.35 319 *e*P **P** **01 28 50.4 +0.5**
QUIF Quistinic 80.35 319 *e*P **P** **01 28 50.4 +0.5**
EPF Esparros 80.41 313 *e*P **P** **01 28 50.8 +0.4**
EPF Esparros 80.41 313 *e*P **P** **01 28 50.8 +0.4**
ETSF Etsaut 81.06 313 *e*P **P** **01 28 54.2 +0.4**
comp=Z,8.2nm,0.7s,mb4.5
ETSF Etsaut 81.06 313 *e*P **P** **01 28 54.2 +0.4**
comp=Z,4.1nm,0.7s,mb4.5
ETSF Etsaut 81.06 313 *e*P **P** **01 28 54.2 +0.4**
ETSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SJPF Ste Jean 81.40 314 *e*P **P** **01 28 56.1 +0.5**
SJPF Ste Jean 81.40 314 *e*P **P** **01 28 56.1 +0.5**
ESDC Sonseca Array 84.85 312 P **P** **01 29 13.0 -0.6**
comp=Z,0.5nm,0.7s,mb3.8,baz=62,slow=4.1,SNR=4.3
YKA Yellowknife Ar 86.98 16 P **P** **01 29 22.8 -0.8**
comp=Z,1.2nm,0.7s,mb4.2,baz=335,slow=4.9,SNR=3.0
YKA Yellowknife Ar 86.98 16 P **P** **01 29 22.8 -0.9**
SDV Santo Domingo 144.41 347 *e*PKPdf PKPdf 01 36 13.1 -2.8
ROSC El Rosal 148.96 353 PKPbc PKPbc 01 36 28.0 +0.5
comp=Z,5.6nm,0.5s,baz=110,slow=20,SNR=4.9
BDFB Brasilia 150.04 284 PKPbc PKPbc 01 36 33.1 +3.0
comp=Z,1.7nm,0.4s,baz=175,slow=24,SNR=4.4
BDFB Brasilia 150.04 284 PKP2 PKPbc 01 36 33.2 +3.1

IDC 30 01:27:56.5±28.0, 21°.85S×172°.52W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/18, mbtmp4.1/4, Error ellipse: s-maj=518.1km s-min=167.9km az=75.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.45**	**265**	P	P	01 35 20.5	+0.2
	4.1nm,0.4s,baz=96,slow=12,SNR=9.2						
STKA	**Stephens Creek**	**41.87**	**246**	P	P	01 35 48.6	0.0
	1.0nm,0.7s,baz=82,slow=15,SNR=3.3						
ASAR	**Alice Springs**	**49.19**	**257**	P	P	01 36 46.5	-0.2
	0.7nm,0.4s,baz=94,slow=7.8,SNR=10						
WRA	**Warramunga Arr**	**49.48**	**262**	P	P	01 36 48.7	-0.2
	1.1nm,0.3s,baz=102,slow=8.1,SNR=6.9						

IDC 30 01:32:51.1±5.2, 29°.65S×177°.31W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.6/14, mbtmp3.6/2, MS3.5/1, Ms1 3.5/1, ms1mx2.9/19, Error ellipse: s-maj=306.8km s-min=74.6km az=166.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.28**	**278**	LR	LR	01 51 22.0	
	comp=Z,68nm,18.4s,baz=50,slow=32						
ASAR	**Alice Springs**	**43.75**	**266**	P	P	01 40 57.9	-0.5
	0.2nm,0.3s,baz=101,slow=7.1,SNR=2.9						
WRA	**Warramunga Arr**	**44.67**	**271**	P	P	01 41 06.2	+0.3
	0.6nm,0.3s,baz=110,slow=8.0,SNR=4.7						
FINES	**FINESS Array B**	**144.64**	**341**	PKP	PKPdf	01 52 28.5	-0.5
	1.1nm,0.6s,baz=51,slow=4.4,SNR=6.7						

IDC ***30*** *01:37:08.3±1.3, 29°.89S×177°.32W, h0km, mb4.2/5, mb1 4.3/5, mb1mx4.1/15, mbtmp4.2/5, Error ellipse: s-maj=44.8km s-min=31.6km az=11.0*

NEIC 30 01:37:13.2±0.9, 30°.01S×177°.23W, h35km, mb4.5/2, Error ellipse: s-maj=24.9km s-min=22.8km az=181.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.47**	**208**	Sn	Sn	01 41 04.9	-7.4
	0.6nm,0.3s,baz=165,slow=19,SNR=5.0						
CTA	**Charters Tower**	**34.40**	**278**	P	P	01 43 57.8	+0.4
	2.5nm,0.4s,baz=102,slow=11,SNR=6.3						
CTAO	**Charters Tower**	**34.40**	**278**	*e*P	P	01 43 58.5	+1.2
	2.6nm,0.4s						
STKA	**Stephens Creek**	**35.22**	**256**	P	P	01 44 05.0	+0.7
	1.5nm,0.6s,baz=110,slow=12,SNR=5.6						
ASAR	**Alice Springs**	**43.80**	**266**	P	P	01 45 15.2	-0.6
	1.4nm,0.5s,baz=104,slow=7.8,SNR=20						
WRA	**Warramunga Arr**	**44.76**	**271**	P	P	01 45 22.1	-1.4
	1.9nm,0.3s,baz=109,slow=7.9,SNR=14						
CASY	**Casey**	**55.80**	**208**	*e*P	P	01 46 46.4	0.0
	3.4nm,0.6s						
MAW	**Mawson**	**72.91**	**200**	P	P	01 48 38.6	+0.2
	1.3nm,0.8s,baz=101,slow=5.2,SNR=4.2						
FINES	**FINESS Array B**	**145.00**	**341**	PKP	PKPdf	01 56 45.4	-0.6
	5.3nm,0.7s,baz=50,slow=3.6,SNR=22						
NOA	**NORSAR Array B**	**148.46**	**352**	PKPbc	PKPbc	01 56 55.9	+0.5
	0.5nm,0.7s,baz=13,slow=4.4,SNR=3.1						
BRTR	**Keskin Array B**	**153.00**	**299**	PKPbc	PKPbc	01 57 06.7	-0.2
	0.4nm,0.7s,baz=134,slow=3.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**163.19**	**176**	PKPab	PKPab	01 58 04.8	+2.1
	0.4nm,1.0s,baz=174,slow=5.2,SNR=2.5						

*IDC **30** 01:41:22.5±7.6, 21°.52S×68°.12W, h117km±56km, mb4.1/2, mb1 4.0/3, mb1mx3.6/13, mbtmp3.9/3, Error ellipse: s-maj=63.1km s-min=41.1km az=24.0*
*ISCJB **30** 01:41:23.1±2.0, 21°.55S±0°.1×68°.2W±0°.4, h145km±20km, mb4.0/3, Error ellipse: s-maj=58.0km s-min=16.2km az=176.0*
*NEIC **30** 01:41:24.5±1.8, 21°.36S×68°.18W, h134km±16km, mb3.6/1, Error ellipse: s-maj=42.4km s-min=16.2km az=81.0*
ISC 30 01:41:24.3±1.8, 21°.5S±0°.1×68°.3W±0°.4, h141km±19km, n9, σ0°76/8, mb4.0/3, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.15**	**1**	P	**Pn**	**01 42 38.9**	**-0.7**
	2.4nm,0.3s,baz=179,slow=6.5,SNR=34						
LPAZ				S	**Sn**	**01 43 38.6**	**+0.4**
	0.2nm,0.3s,baz=191,slow=10.0,SNR=1.8						
TRQA	**Tornquist**	**17.41**	**163**	*e*P	**Pn**	**01 45 19.3**	**+0.8**
	2.1nm,0.6s						
VNA3	**Neumayer Olymp**	**59.92**	**161**	*e*	**P**	**01 51 14.5**	**-0.6**
VNA2	**Neumayer--Watz**	**60.49**	**161**	*e*	**P**	**01 51 18.4**	**-0.5**
	baz=275,slow=6.5						
DBIC	**Dimbokro**	**68.15**	**73**	P	**P**	**01 52 09.6**	**-0.1**
	2.7nm,0.7s,mb4.1,baz=193,slow=6.7,SNR=6.3						
TORD	**Torodi Ar. Bea**	**76.78**	**70**	P	**P**	**01 53 01.1**	**+0.2**
	0.8nm,0.5s,mb3.6,baz=257,slow=5.4,SNR=13						
YKA	**Yellowknife Ar**	**91.35**	**340**	P	**P**	**01 54 14.1**	**+0.5**
	1.2nm,0.5s,mb4.2,baz=135,slow=4.8,SNR=5.9						
WRA	**Warrumunga Arr**	**133.29**	**210**	PKP	PKPdf	02 00 25.3	+1.0
	0.2nm,0.3s,baz=149,slow=1.8,SNR=4.9						
MKAR	**Makanchi Array**	**145.25**	**36**	PKPbc	PKPbc	02 00 46.5	+1.3
	1.7nm,0.7s,baz=335,slow=3.5,SNR=15						

*ISCJB **30** 02:24:45.8±0.4, 38°.39N±0°.02×21°.74E±0°.03, h5km±4km, Error ellipse: s-maj=3.9km s-min=3.6km az=176.2*
*ATH **30** 02:24:45.7, 38°.37N×21°.73E, h11km±1km, MD3.2/11*
*CSEM **30** 02:24:45.5±0.1, 38°.39N×21°.74E, h6km, MD3.2, Error ellipse: s-maj=2.7km s-min=2.5km az=145.0*
*THE **30** 02:24:46.0, 38°.40N×21°.76E, h0km±2km, ML2.1/9, Error ellipse: s-maj=2.0km s-min=0.6km az=309.0*
ISC 30 01:24:46.2±0.5, 38°.38N±0°.03×21°.74E±0°.03, h7km±4km, n46, σ0°82/82, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.10**	**160**	*e*PG	**Pg**	**02 24 48.7**	**+0.2**
UPR				*e*SG	**Sg**	**02 24 50.9**	**+0.8**
UPR	**University Cam**	**0.10**	**160**	P	**Pg**	**02 24 48.5**	**0.0**
UPR				S	**Sg**	**02 24 51.1**	**+1.0**
UPR	**University Cam**	**0.10**	**160**	P	**Pg**	**02 24 48.5**	**0.0**
UPR				S	**Sg**	**02 24 51.1**	**+1.0**
EFP	**Efpalio**	**0.14**	**70**	*e*PG	**Pg**	**02 24 48.9**	**-0.2**
EFP				*e*SG	**Sg**	**02 24 51.2**	**+0.2**
EFP	**Efpalio**	**0.14**	**70**	P	**Pg**	**02 24 48.8**	**-0.3**
EFP				S	**Sg**	**02 24 51.2**	**+0.2**
EFP	**Efpalio**	**0.14**	**70**	*e*Pg	**Pg**	**02 24 48.9**	**-0.2**
EFP				S	**Sg**	**02 24 51.2**	**+0.2**
LAKA	**Lakka**	**0.23**	**127**	P	**Pg**	**02 24 50.5**	**-0.3**
LAKA				S	**Sg**	**02 24 54.1**	**+0.2**
LAKA	**Lakka**	**0.23**	**127**	P	**Pg**	**02 24 50.5**	**-0.3**
LAKA				S	**Sg**	**02 24 54.1**	**+0.2**
TRIZ	**Trizonia**	**0.26**	**93**	P	**Pg**	**02 24 50.9**	**-0.4**
TRIZ				S	**Sg**	**02 24 54.9**	**+0.1**
TRIZ	**Trizonia**	**0.26**	**93**	P	**Pg**	**02 24 50.9**	**-0.4**
TRIZ				S	**Sg**	**02 24 54.9**	**+0.1**
KALE	**Kalithea**	**0.31**	**88**	P	**Pg**	**02 24 51.9**	**-0.4**
KALE				S	**Sg**	**02 24 56.7**	**+0.3**
KALE	**Kalithea**	**0.31**	**88**	P	**Pg**	**02 24 51.9**	**-0.4**
KALE				S	**Sg**	**02 24 56.7**	**+0.3**
RLS	**Riolos of Patr**	**0.39**	**214**	*e*PB	**Pg**	**02 24 53.8**	**+0.1**
RLS	**Riolos of Patr**	**0.39**	**214**	*e*Pb	**Pg**	**02 24 53.8**	**+0.1**
EVR	**Evrytania**	**0.54**	**6**	*e*PB	**Pg**	**02 24 56.2**	**-0.3**
EVR				*e*SB	**Sg**	**02 25 04.5**	**+0.9**
EVR	**Evrytania**	**0.54**	**6**	*e*Pb	**Pg**	**02 24 56.2**	**-0.3**
EVR				*e*Sb	**Sg**	**02 25 04.5**	**+0.9**
DSF	**Desfina**	**0.62**	**87**	P	**Pg**	**02 24 56.8**	**-1.3**
DSF				S	**Sg**	**02 25 06.7**	**+0.6**
DSF	**Desfina**	**0.62**	**87**	P	**Pg**	**02 24 56.8**	**-1.3**
DSF				S	**Sg**	**02 25 06.7**	**+0.6**
GUR	**Goura**	**0.65**	**133**	*e*PB	**Pg**	**02 24 57.5**	**-1.2**
GUR				*e*SB	**Sg**	**02 25 07.1**	**0.0**
GUR	**Goura**	**0.65**	**133**	P	**Pg**	**02 24 57.5**	**-1.2**
GUR				S	**Sg**	**02 25 07.5**	**+0.4**
GUR	**Goura**	**0.65**	**133**	P	**Pg**	**02 24 57.5**	**-1.2**
GUR				*e*Sb	**Sg**	**02 25 07.1**	**0.0**
GUR				S	**Sg**	**02 25 07.5**	**+0.4**
AGG	**Agios Georgios**	**0.79**	**36**	*e*PG	**Pg**	**02 25 00.7**	**-0.6**
AGG				*e*SB	**Sg**	**02 25 12.1**	**+0.5**
AGG	**Agios Georgios**	**0.79**	**36**	P	**Pg**	**02 25 00.3**	**-1.0**
AGG				S	**Sg**	**02 25 12.5**	**+0.9**
AGG	**Agios Georgios**	**0.79**	**36**	P	**Pg**	**02 25 00.3**	**-1.0**
AGG	**Agios Georgios**	**0.79**	**36**	*e*Pg	**Pg**	**02 25 00.7**	**-0.6**
AGG				*e*Sb	**Sg**	**02 25 12.1**	**+0.5**
AGG				S	**Sg**	**02 25 12.5**	**+0.9**
VLS	**Valsamata**	**0.93**	**258**	*e*PB	**Pg**	**02 25 03.3**	**-0.7**
VLS	**Valsamata**	**0.93**	**258**	P	**Pg**	**02 25 03.3**	**-0.7**
VLS				S	**Sg**	**02 25 18.5**	**+2.5**
VLS	**Valsamata**	**0.93**	**258**	P	**Pg**	**02 25 03.3**	**-0.7**
VLS				S	**Sg**	**02 25 18.5**	**+2.5**
LKD2	**Lefkada island**	**0.94**	**296**	P	**Pg**	**02 25 03.7**	**-0.5**
LKD2				S	**Sg**	**02 25 20.4**	**+3.9**
LKD2	**Lefkada island**	**0.94**	**296**	P	**Pg**	**02 25 03.7**	**-0.5**
LKD2				S	**Sg**	**02 25 20.4**	**+3.9**
LKR	**Lokris**	**1.02**	**74**	P	**Pg**	**02 25 04.6**	**-1.2**
LKR				S	**Sg**	**02 25 19.8**	**+0.7**
LKR	**Lokris**	**1.02**	**74**	P	**Pg**	**02 25 04.6**	**-1.2**
LKR				S	**Sg**	**02 25 19.8**	**+0.7**
LTK	**Loutraki**	**1.03**	**110**	*e*PG	**Pg**	**02 25 04.9**	**-1.0**
LTK				*e*SB	**Sb**	**02 25 19.8**	**-0.2**
LTK	**Loutraki**	**1.03**	**110**	P	**Pg**	**02 25 05.2**	**-0.7**
LTK				S	**Sg**	**02 25 20.8**	**+1.5**
LTK	**Loutraki**	**1.03**	**110**	*e*Pg	**Pg**	**02 25 04.9**	**-1.0**
LTK	**Loutraki**	**1.03**	**110**	P	**Pg**	**02 25 05.2**	**-0.7**
LTK				*e*Sb	**Sb**	**02 25 19.8**	**-0.2**
LTK				S	**Sg**	**02 25 20.8**	**+1.5**
VLX	**Vlachokerasia**	**1.13**	**153**	*e*PG	**Pg**	**02 25 06.7**	**-1.1**
VLX	**Vlachokerasia**	**1.13**	**153**	*e*Pg	**Pg**	**02 25 06.7**	**-1.1**
ITM	**Ithomi**	**1.21**	**173**	*e*PB	**Pb**	**02 25 08.8**	**-0.5**
ITM	**Ithomi**	**1.21**	**173**	*e*Pb	**Pb**	**02 25 08.8**	**-0.5**
DID	**Didima**	**1.47**	**126**	*e*PB	**Pb**	**02 25 13.8**	**0.0**
DID	**Didima**	**1.47**	**126**	P	**Pn**	**02 25 13.1**	**+0.1**
DID				S	**Sn**	**02 25 34.2**	**+1.7**
DID	**Didima**	**1.47**	**126**	P	**Pn**	**02 25 13.1**	**+0.1**
DID	**Didima**	**1.47**	**126**	*e*Pb	**Pb**	**02 25 13.8**	**0.0**
DID				S	**Sn**	**02 25 34.2**	**+1.7**
PYL	**PYLOS**	**1.48**	**180**	*e*PB	**Pb**	**02 25 13.9**	**-0.1**
PYL	**PYLOS**	**1.48**	**180**	*e*Pb	**Pb**	**02 25 13.9**	**-0.1**

CASC 30 02:27:51.4±1.0, 8°.26N×82°.83W, h8km, MD3.7, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.54**	**15**	*i* P	Pg	02 28 02.9	+0.9
URSC	**Urasca**	**1.82**	**329**	*e*P	Pn	02 28 22.3	-0.7
URSC				*e*S	Sn	02 28 46.5	+0.1
LAJ	**Bijagual**	**2.04**	**321**	*e*P	Pn	02 28 28.0	+1.9
PRS1	**Puriscal**	**2.25**	**320**	*e*P	Pn	02 28 28.4	-0.6
PRS1				*e*S	Sn	02 28 57.2	+0.3
CGA2	**Cerro Gallo 2**	**2.38**	**317**	*e*P	Pn	02 28 31.2	+0.5
CGA2				*e*S	Sn	02 29 01.2	+1.2

*IDC **30** 02:32:00.1±1.3, 29°.70S×177°.26W, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.0/16, mbtmp4.1/6, MS3.5/1, Ms1 3.5/1, ms1mx2.8/22, Error ellipse: s-maj=39.0km s-min=28.4km az=27.0*
*NEIC **30** 02:32:05.3±1.0, 29°.82S×177°.21W, h35km, mb4.4/2, Error ellipse: s-maj=28.8km s-min=23.9km az=213.0*
ISC 30 02:32:09.2±1.4, 30°.2S±0°.1×177°.8W±0°.2, h35km, n16, σ1°07/11, mb4.2/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.05**	**207**	Sn	**Sn**	**02 35 58.0**	**0.0**
	0.9nm,0.3s,baz=195,slow=20,SNR=4.4						
CTA	**Charters Tower**	**33.97**	**279**	P	**P**	**02 38 50.6**	**+1.1**
	1.9nm,0.4s,mb4.4,baz=105,slow=12,SNR=6.6						
CTA				LR	LR	02 49 48.5	
	comp=Z,67nm,18.8s,baz=229,slow=31						
CTAO	**Charters Tower**	**33.97**	**279**	*e*P	**P**	**02 38 50.6**	**+1.1**
	1.9nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**34.71**	**257**	P	**P**	**02 38 57.6**	**+1.8**
	1.3nm,0.4s,mb4.2,baz=96,slow=14,SNR=8.6						
ASAR	**Alice Springs**	**43.32**	**267**	P	**P**	**02 40 06.9**	**-1.0**
	1.1nm,0.5s,mb3.8,baz=103,slow=7.8,SNR=16						
WRA	**Warramunga Arr**	**44.30**	**272**	P	**P**	**02 40 14.3**	**-1.5**
	2.4nm,0.3s,mb4.4,baz=110,slow=8.1,SNR=19						
CASY	**Casey**	**55.38**	**208**	*e*P	**P**	**02 41 38.3**	**-1.0**
	2.6nm,0.6s,mb4.4						
QSPA	**South Pole Qui**	**59.87**	**180**	P	**P**	**02 42 11.6**	**+0.8**
	0.8nm,0.8s,mb3.8,baz=358,slow=3.6,SNR=3.8						
MAW	**Mawson**	**72.53**	**200**	P	**P**	**02 43 31.7**	**-0.3**
	1.5nm,0.7s,mb4.0,baz=119,slow=8.7,SNR=3.7						
VNA3	**Neumayer Olymp**	**78.45**	**176**	*e*	**P**	**02 44 11.0**	**+5.0**
VNA2	**Neumayer--Watz**	**78.89**	**177**	*e*	**P**	**02 44 13.1**	**+4.7**
	baz=188,slow=5.8						
FINES	**FINESS Array B**	**145.06**	**340**	PKP	PKPdf	02 51 37.9	-4.1
	4.6nm,0.7s,baz=45,slow=4.4,SNR=22						
NOA	**NORSAR Array B**	**148.62**	**352**	PKPbc	PKPbc	02 51 48.3	-3.4
	0.4nm,0.7s,baz=13,slow=4.4,SNR=3.2						
AKASG	**Malin Array Be**	**151.29**	**323**	PKPbc	PKPbc	02 51 53.9	-4.7
	0.2nm,0.2s,baz=62,slow=6.4,SNR=2.7						
BRTR	**Keskin Array B**	**152.70**	**299**	PKPbc	PKPbc	02 51 57.4	-4.7
	1.0nm,1.0s,baz=98,slow=2.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**162.99**	**178**	PKPab	PKPab	02 52 57.1	-0.6
	0.4nm,1.0s,baz=177,slow=2.9,SNR=2.8						

*ISCJB **30** 02:48:57.1±1.5, 18°.0S±0°.3×178°.6W±0°.2, h615km±16km, mb3.9/9, Error ellipse: s-maj=47.6km s-min=20.7km az=150.4*
*NEIC **30** 02:48:57.5±1.2, 18°.05S×178°.51W, h608km±11km, mb4.4/2, Error ellipse: s-maj=35.0km s-min=15.2km az=150.0*
*IDC **30** 02:48:58.1±5.2, 17°.95S×178°.62W, h611km±61km, mb3.2/7, mb1 3.5/7, mb1mx3.3/16, mbtmp3.2/7, Error ellipse: s-maj=51.6km s-min=24.0km az=145.0*
ISC 30 02:48:57.7±1.5, 18°.1S±0°.3×178°.5W±0°.2, h608km±15km, n14, σ0°72/12, mb3.9/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.28**	**275**	*e*P	**P**	**02 50 19.0**	**-0.2**
CTAO	**Charters Tower**	**33.32**	**261**	*e*P	**P**	**02 54 47.2**	**-0.1**
	3.6nm,0.7s,mb4.1						
PMG	**Port Moresby**	**34.38**	**280**	*e*P	**P**	**02 54 57.2**	**+1.0**
	17nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**02 55 29.6**	**+0.3**
	4.8nm,0.8s,mb4.1,baz=95,slow=12,SNR=6.5						
STKA	**Stephens Creek**	**38.46**	**241**	*e*P	**P**	**02 55 29.9**	**+0.6**
WRA	**Warramunga Arr**	**44.50**	**260**	P	**P**	**02 56 16.4**	**-0.6**
	2.3nm,0.5s,mb4.0,baz=95,slow=7.2,SNR=26						
WRA				PcP	PcP	02 57 46.3	-0.5
	0.4nm,0.4s,baz=92,slow=3.6,SNR=2.8						
ASAR	**Alice Springs**	**44.65**	**254**	P	**P**	**02 56 17.9**	**-0.1**
	15nm,0.7s,mb4.6,baz=87,slow=8.7,SNR=194						
ASAR				PcP	PcP	02 57 46.6	-0.6
	0.9nm,0.5s,baz=100,slow=3.8,SNR=6.3						
NVAR	**Mina Array Bea**	**79.61**	**44**	P	**P**	**03 00 03.4**	**+0.3**
	0.5nm,0.7s,mb3.0,baz=218,slow=7.5,SNR=4.1						
NVAR	**Mina Array Bea**	**79.61**	**44**	P	**P**	**03 00 03.4**	**+0.3**
MAW	**Mawson**	**83.68**	**200**	P	**P**	**03 00 22.9**	**-0.4**
	1.9nm,0.9s,mb3.6,baz=90,slow=6.1,SNR=3.6						
ILAR	**Eielson Array**	**86.06**	**13**	P	**P**	**03 00 33.1**	**-1.5**
	0.2nm,0.4s,mb3.1,baz=217,slow=5.4,SNR=6.2						
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**03 00 37.0**	**+1.0**
	1.4nm,1.0s,mb3.6,baz=210,slow=5.1,SNR=12						
BRTR	**Keskin Array B**	**144.82**	**315**	PKP	PKPdf	03 07 27.1	+0.5
	0.7nm,0.5s,baz=124,slow=1.5,SNR=10						
GERES	**GERESS Array B**	**147.74**	**345**	PKPbc	PKPbc	03 07 34.9	-0.1
	1.1nm,0.6s,baz=40,slow=2.8,SNR=8.6						

*NNC **30** 02:50:50.5±1.0, 43°.31N×76°.51E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=12.6km s-min=3.4km az=174.0*
*ISCJB **30** 02:50:51.1±0.9, 43°.02N±0°.05×76°.63E±0°.05, h5km±7km, Error ellipse: s-maj=9.4km s-min=4.7km az=153.4*
*KNET **30** 02:50:52.2±0.7, 42°.98N×76°.53E, h18km±5km, ml2.9, Error ellipse: s-maj=5.3km s-min=2.4km az=60.0*
ISC 30 02:50:51.6±0.6, 43°.05N±0°.06×76°.63E±0°.06, h10km±6km, n16, σ0°93/24, 18C-12D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**0.29**	**56**	⇑P	**Pg**	**02 50 57.5**	**0.0**
	75nm,0.2s						
KNDC				⇑S	**Sg**	**02 51 02.1**	**+0.7**
	658nm,0.3s						
TKM2	**Tokmak 2**	**0.77**	**260**	⇑P	**Pg**	**02 51 05.8**	**-0.6**
	11nm,0.2s						
TKM2				⇓S	**Sg**	**02 51 16.5**	**0.0**
	261nm,0.4s						
TKM2	**Tokmak 2**	**0.77**	**260**	⇓P	**Pg**	**02 51 05.8**	**-0.6**
	46nm,0.1s,SNR=59						
TKM2				⇑S	**Sg**	**02 51 16.7**	**+0.2**
	618nm,0.1s						
ULHL	**Ulahol**	**0.86**	**200**	⇓P	**Pg**	**02 51 07.2**	**-0.9**
	35nm,0.1s,SNR=204						
ULHL				⇓S	**Sg**	**02 51 18.5**	**-0.7**
	92nm,0.1s						
KBK	**Karagaybulak**	**1.30**	**253**	⇑P	**Pn**	**02 51 15.4**	**-0.3**
	65nm,0.1s,SNR=28						
KBK				⇑S	**Sb**	**02 51 32.9**	**+0.2**
	273nm,0.3s						
CHMS	**Chumysh**	**1.38**	**268**	⇑P	**Pn**	**02 51 16.3**	**-0.5**
	22nm,0.1s,SNR=5.5						
CHMS				⇑S	**Sn**	**02 51 34.4**	**-0.7**
	309nm,0.2s						
KZA	**Kyzart**	**1.41**	**227**	⇑P	**Pn**	**02 51 17.0**	**-0.2**
	12nm,0.2s,SNR=7.8						
USP	**Ospenovka**	**1.57**	**278**	⇓P	**Pn**	**02 51 19.6**	**+0.1**
	29nm,0.2s,SNR=116						
USP				⇑S	**Sn**	**02 51 40.5**	**+0.6**
	139nm,0.2s						
AAK	**Ala-Archa**	**1.63**	**256**	⇑P	**Pn**	**02 51 20.9**	**+0.7**
	23nm,0.3s,SNR=24						
EKS2	**Erkin-Say**	**2.13**	**260**	⇓P	**Pn**	**02 51 29.5**	**+2.3**
	21nm,0.2s,SNR=55						
KK31	**Karatay Array**	**4.48**	**273**	⇑Pn	**Pn**	**02 52 01.1**	**+1.6**
	1.2nm,0.4s,baz=85,slow=17,SNR=32						
KK31				⇓Pg	**Pg**	**02 52 10.0**	**-7.4**
	0.8nm,0.3s,baz=89,slow=15,SNR=15						
KK31				⇓Lg		02 53 08.6	
	9.8nm,0.5s,baz=88,slow=29,SNR=21						
MK31	**Makanchi Array**	**5.49**	**45**	⇓Pn	**Pn**	**02 52 14.5**	**+1.2**
	1.7nm,0.3s,baz=69,slow=11,SNR=11						
MK31				⇑Sn	**Sn**	**02 53 20.8**	**+4.4**
	3.3nm,0.7s,baz=221,slow=25,SNR=3.8						
MK31				⇑Lg		02 53 38.6	
	2.9nm,0.5s,baz=222,slow=25,SNR=4.8						
KURBB	**Kurchatov Arra**	**7.68**	**9**	⇓Sn	**Sn**	**02 54 06.7**	**-3.6**
	0.6nm,0.4s						
KURBB				⇓Lg		02 54 47.1	
	2.6nm,0.6s						
KURK	**Kurchatov**	**7.78**	**9**	⇑Sn	**Sn**	**02 54 08.8**	**-4.0**
	2.4nm,0.8s						
KURK				⇑Lg		02 54 49.8	
	8.1nm,0.8s						
VOSK	**Vostochnaya**	**10.39**	**341**	⇑Sn	**Sn**	**02 55 11.7**	**-5.1**
	1.1nm,0.7s						
VOSK				⇑Lg		02 56 11.6	
	8.0nm,0.9s						
ZRNK	**Zerenda**	**11.13**	**335**	⇓Lg		02 56 36.2	
	8.6nm,1.2s						

*IDC **30** 03:11:05.0±4.2, 7°.11S×129°.38E, h85km±40km, mb3.9/7, mb1 4.0/9, mb1mx3.8/18, mbtmp3.9/9, Error ellipse: s-maj=41.1km s-min=16.4km az=55.0*
*NEIC **30** 03:11:05.7±1.5, 7°.13S×129°.36E, h93km±16km, mb4.2/6, Error ellipse: s-maj=13.6km s-min=8.9km az=213.0*
*DJA **30** 03:11:06, 7°.36S×129°.60E, h10km, mb4.9/8*
*ISCJB **30** 03:11:07.0±0.6, 7°.27S±0°.04×129°.56E±0°.07, h137km±8km, mb4.7/21, Error ellipse: s-maj=11.8km s-min=6.3km az=162.8*
ISC 30 03:11:08.0±0.6, 7°.30S±0°.04×129°.58E±0°.07, h130km±7km, n49, σ0°92/59, mb4.7/21, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.78**	**7**	P	**Pn**	**03 11 51.1**	**-0.7**
TLE	**Tual**	**3.55**	**62**	P	**Pn**	**03 12 02.5**	**+0.7**
TLE				S	**Sn**	**03 12 37.4**	**-6.0**
NLAI	**Namlea**	**4.73**	**328**	P	**Pn**	**03 12 16.9**	**-0.7**
KAKA	**Kakadu**	**6.07**	**153**	*e*Pn	**Pn**	**03 12 36.2**	**+0.7**
	220nm,0.5s						
KAKA				*e*S	**Sn**	**03 13 43.3**	**-0.6**
KAKA	**Kakadu**	**6.07**	**153**	P	**Pn**	**03 12 36.3**	**+0.7**
	9.9nm155nm,0.5s						
KDI	**Kendari**	**7.68**	**295**	P	**Pn**	**03 12 59.1**	**+1.8**
	0.1nm580nm14nm,1.4s						
KNA	**Kununurra**	**8.44**	**185**	P	**Pn**	**03 13 07.1**	**-0.3**
	3μm120nm,0.6s						
BAKI	**Biak**	**8.90**	**47**	P	**Pn**	**03 13 13.5**	**-0.2**
	4μm397nm,0.8s						
FITZ	**Fitzroy Crossi**	**11.40**	**199**	P	**Pn**	**03 13 45.3**	**-1.8**
	2.6nm,0.3s,baz=30,slow=9.5,SNR=89						
FITZ				S	**Sn**	**03 15 43.2**	**-10**
	12nm,0.3s,baz=277,slow=23,SNR=8.4						
FITZ	**Fitzroy Crossi**	**11.40**	**199**	*e*P	**Pn**	**03 13 45.6**	**-1.5**
	24nm,0.5s						
FITZ				*e*S	**Sn**	**03 15 43.0**	**-10**
FITZ	**Fitzroy Crossi**	**11.40**	**199**	*e*Pn	**Pn**	**03 13 45.6**	**-1.4**
FITZ				*e*S	**Sn**	**03 15 45.2**	**-7.6**
FITZ	**Fitzroy Crossi**	**11.40**	**199**	P	**Pn**	**03 13 45.7**	**-1.4**
	36nm,0.6s						
WRA	**Warramunga Arr**	**13.39**	**160**	P	**Pn**	**03 14 11.4**	**-1.6**
	4.1nm,0.3s,baz=334,slow=12,SNR=71						
WRA				S	**Sn**	**03 16 33.0**	**-7.8**
	7.4nm,0.3s,baz=334,slow=23,SNR=18						
WRA	**Warramunga Arr**	**13.39**	**160**	P	**Pn**	**03 14 11.4**	**-1.6**
WRA				S	**Sn**	**03 16 33.0**	**-7.8**
COEN	**Coen**	**14.90**	**117**	*e*Pn	**Pn**	**03 14 34.0**	**+1.6**
	98nm,0.6s						
COEN				*e*S	**Sn**	**03 17 08.3**	**-9.2**
COEN	**Coen**	**14.90**	**117**	P	**Pn**	**03 14 33.4**	**+1.1**
	52nm,0.8s						
BBKI	**Banjar Baru**	**15.16**	**284**	P	**Pn**	**03 14 40.2**	**+4.7**
	40nm,0.8s						
MBWA	**Marble Bar**	**16.75**	**214**	*e*Pn	**Pn**	**03 14 57.0**	**+1.9**
MBWA				*e*S	**S**	**03 17 49.3**	**-12**
ASAR	**Alice Springs**	**16.79**	**166**	P	**Pn**	**03 14 56.6**	**+1.1**
	1.2nm,0.3s,baz=335,slow=8.8,SNR=33						
ASAR				S	**S**	**03 17 59.1**	**-3.6**
	1.1nm,0.3s,baz=350,slow=26,SNR=9.5						
PMG	**Port Moresby**	**17.52**	**98**	*e*P	**Pn**	**03 15 08.6**	**+4.2**
	12nm,0.6s						
PMG	**Port Moresby**	**17.52**	**98**	P	**Pn**	**03 15 08.9**	**+4.5**
STKI	**Sintang**	**19.48**	**291**	P	**P**	**03 15 26.0**	**+0.9**
CTA	**Charters Tower**	**20.56**	**130**	P	**P**	**03 15 41.2**	**+4.5**
	1.5nm,0.3s,baz=280,slow=6.1,SNR=4.9						
CTA				S	**S**	**03 19 23.0**	**+3.4**
	1.2nm,0.3s,baz=246,slow=14,SNR=2.5						
CTA	**Charters Tower**	**20.56**	**130**	P	**P**	**03 15 41.2**	**+4.5**
CTA				S	**S**	**03 19 23.0**	**+3.4**
TGY	**Tagaytay City**	**22.93**	**338**	P	**P**	**03 15 59.9**	**-1.2**
	155nm,0.3s,mb5.9,baz=188,slow=7.1,SNR=4.3						
STKA	**Stephens Creek**	**26.90**	**157**	P	**P**	**03 16 40.6**	**+3.7**
	1.4nm,0.5s,mb3.8,baz=330,slow=12,SNR=5.0						
STKA	**Stephens Creek**	**26.90**	**157**	*e*P	**P**	**03 16 40.6**	**+3.7**
	2.4nm,1.0s,mb3.8						
PSI	**Prapat**	**32.20**	**287**	P	**P**	**03 17 23.9**	**-0.2**
	6.3nm,0.7s,mb4.4,baz=119,slow=10,SNR=5.4						
CMAR	**Chiang Mai Arr**	**39.61**	**311**	P	**P**	**03 18 27.4**	**+0.3**
	1.2nm,0.4s,mb3.9,baz=138,slow=6.9,SNR=8.0						
ODAN	**Odare**	**53.14**	**311**	*e*P	**P**	**03 20 12.4**	**-0.3**
	33nm,0.5s,mb5.3						
TAPN	**Taplejung**	**53.17**	**312**	*e*P	**P**	**03 20 12.7**	**-0.3**
	26nm,0.4s,mb5.3						
GUN	**Gumba**	**54.84**	**312**	*e*P	**P**	**03 20 24.9**	**-0.1**
	51nm,0.5s,mb5.5						
PKI	**Pulchoki**	**55.00**	**311**	*e*P	**P**	**03 20 26.1**	**-0.1**
	17nm,0.5s,mb5.0						
PKIN	**Phulchoki**	**55.02**	**311**	*e*P	**P**	**03 20 26.0**	**-0.3**
	15nm,0.5s,mb5.0						
KKN	**Kakani**	**55.22**	**311**	*e*P	**P**	**03 20 27.8**	**0.0**
	23nm,0.5s,mb5.2						
DMN	**Daman**	**55.25**	**311**	*e*P	**P**	**03 20 27.9**	**-0.1**
	22nm,0.5s,mb5.2						
GKN	**Gorkha**	**55.81**	**311**	*e*P	**P**	**03 20 32.1**	**+0.1**
	43nm,0.4s,mb5.7						
KOLN	**Koldanda**	**56.47**	**310**	*e*P	**P**	**03 20 36.8**	**+0.1

40nm,0.5s
MAJO eS Sn 03 28 14.9 -0.2
MAJO Matsushiro 5.85 263 eP Pn 03 27 10.9 +1.9
MAJO eS Sn 03 28 14.9 -0.2
MAJO pmax pmax
comp=Z,40nm,0.5s
MAT Matsushiro 5.85 263 P Pn 03 27 11.3 +2.3
MAT S Sn 03 28 14.2 -0.9
JHJ Hachijo jima 2 6.34 228 Pn Pn 03 27 15.1 -0.8
comp=Z,110nm,0.3s,baz=24,slow=17,SNR=23
JHJ Sn Sn 03 28 23.0 -4.5
comp=Z,170nm,0.3s,baz=66,slow=22,SNR=13
YUK Yuzh-Kuril'sk 6.54 3 c iP Pn 03 27 16.5 -2.0
YUK i S Sn 03 28 23.8 -8.4
YUK pmax pmax
comp=Z,3μm,0.2s
YUK pmax pmax
comp=N,510nm,0.2s
YUK pmax pmax
comp=E,567nm,0.2s
YUK pmax pmax
comp=Z,530nm,0.2s
YUK smax
comp=N,980nm,0.4s
YUK smax
comp=E,880nm,0.4s
YUK smax
comp=N,2μm,0.4s
YUK smax
comp=E,2μm,0.2s
ASAJ Asahikawa 6.95 343 Pn Pn 03 27 24.0 -0.1
comp=E,29nm,0.3s,baz=189,slow=11,SNR=54
ASAJ Sn Sn 03 28 40.0 -2.3
comp=E,14nm,0.3s,baz=256,slow=28,SNR=8.2
ASAJ Asahikawa 6.95 343 ePn Pn 03 27 23.9 -0.1
comp=E,35nm,0.4s
ASAJ eS Sn 03 28 25.6 -17
ASAJ Asahikawa 6.95 343 P Pn 03 27 24.0 -0.1
ASAJ 03 28 40.0
ASAJ pmax pmax
comp=Z,29nm,0.3s
ASAJ smax
comp=N,14nm,0.3s
KUR Kuril'sk 7.95 13 P Pn 03 27 35.0 -2.8
KUR eS Sn 03 28 58.5 -8.3
KUR pmax pmax
comp=N,60nm,0.5s
KUR pmax pmax
comp=Z,90nm,0.5s
KUR smax
comp=N,340nm,0.3s
KUR smax
comp=E,270nm,0.3s
YSS Yuzh-Sakhalins 9.65 349 ePn Pn 03 28 01.5 +0.4
comp=E,18nm,0.5s
YSS Yuzh-Sakhalins 9.65 349 eP Pn 03 28 01.0 -0.2
YSS e 03 29 44.0
CBIJ Chichi jima 10.72 196 Pn Pn 03 28 13.2 -2.8
comp=E,19nm,0.3s,baz=268,slow=23,SNR=3.6
CBIJ Sn Sn 03 30 07.5 -7.6
comp=E,43nm,0.3s,baz=288,slow=22,SNR=5.4
KSRS Korea Array 13.90 275 Pn Pn 03 29 02.1 +2.9
comp=E,0.3nm,0.3s,baz=92,slow=14,SNR=5.8
KSRS LR LR 03 34 07.0
comp=E,52nm,18.2s,baz=356,slow=36
KSRS Korea Array 13.90 275 P Pn 03 29 02.1 +2.9
KSRS MLR MLR
comp=Z,52nm,18.3s
KLR Kul'dur 15.34 324 eP Pn 03 29 13.0 -5.6
PETK Petropavlovsk- 17.80 25 P Pn 03 29 49.5 -0.2
comp=Z,0.3nm,0.3s,baz=262,slow=10.0,SNR=5.3
PETK LR LR 03 35 53.4
comp=Z,40nm,21.2s,baz=54,slow=34
PETK Petropavlovsk- 17.80 25 P Pn 03 29 49.6 -0.1
GUMO Guam 23.81 181 LR LR 03 39 19.9
comp=Z,53nm,18.5s,MS3.0,baz=42,slow=34
BOD Bodaibo 28.92 325 eP pP 03 31 52.4 +4.2
SONM Songino Array 30.20 303 P P 03 31 52.6 +0.5
comp=Z,0.5nm,0.7s,mb3.4,baz=108,slow=9.5,SNR=3.3
SONM pP pP 03 31 59.3 -0.4
comp=Z,0.3nm,0.4s,baz=98,slow=9.1,SNR=4.0
SONM LR LR 03 43 51.8
comp=Z,52nm,18.7s,MS3.2,baz=159,slow=36
SONM Songino Array 30.20 303 P P 03 31 52.6 +0.5
SONM pP pP 03 31 59.3 -0.4
SONM LR LR 03 43 51.8
SONM Songino Array 30.20 303 P P 03 31 52.6 +0.5
SONM *PP pP 03 31 59.3 -0.4
SONM pmax pmax
comp=Z,4.0nm,0.1s
ZALV Zalesovo Beam 43.97 312 P P 03 33 49.8 +1.1
comp=Z,1.2nm,0.4s,mb4.0,baz=90,slow=7.6,SNR=3.7
ZALV pPcP 03 35 49.2
comp=Z,1.4nm,0.5s,baz=53,slow=2.0,SNR=3.7
ZALV LR LR 03 53 22.8
comp=Z,38nm,18.4s,MS3.3,baz=63,slow=38
ZALV Zalesovo Beam 43.97 312 P P 03 33 49.8 +1.1
ZALV pPcP 03 35 49.2
ZALV LR LR 03 53 22.8
ZALV Zalesovo Beam 43.97 312 P P 03 33 49.8 +1.1
KDAK Kodiak Island 44.62 42 P P 03 33 52.7 -1.1
comp=Z,6.3nm,0.6s,mb4.6,baz=237,slow=5.6,SNR=11
KDAK Kodiak Island 44.62 42 P P 03 33 52.7 -1.1
KDAK Kodiak Island 44.62 42 P P 03 33 52.7 -1.1
CMAR Chiang Mai Arr 44.71 258 LR LR 03 53 53.6
comp=Z,15nm,20.8s,MS2.9,baz=60,slow=38
MKAR Makanchi Array 46.57 302 P P 03 34 09.9 +0.4
comp=Z,0.4nm,0.2s,mb3.9,baz=85,slow=8.8,SNR=3.8
MKAR Makanchi Array 46.57 302 P P 03 34 09.9 +0.4
ILAR Eielson Array 47.39 33 P P 03 34 14.9 -0.7
comp=Z,3.2nm,0.7s,mb4.4,baz=260,slow=6.4,SNR=39
ILAR Eielson Array 47.39 33 P P 03 34 15.0 -0.6
BVAR Borovoye Array 52.61 313 P P 03 34 55.3 -0.1
comp=Z,1.1nm,0.5s,mb4.0,baz=79,slow=7.9,SNR=5.3
BVAR Borovoye Array 52.61 313 P P 03 34 55.4 0.0
AAK Ala-Archa 53.07 299 LR LR 03 58 18.6
comp=Z,30nm,18.3s,MS3.4,baz=35,slow=37
WRA Warramunga Arr 58.08 192 P P 03 35 33.6 -1.4
comp=Z,1.8nm,0.6s,mb4.3,baz=12,slow=7.3,SNR=14
WRA pP pP 03 35 40.9 -2.1
comp=Z,3.1nm,0.9s,baz=11,slow=7.3,SNR=9.7
WRA Warramunga Arr 58.08 192 P P 03 35 33.7 -1.3
WRA *PP pP 03 35 40.9 -2.1
ABKAR Akbulak array 60.06 311 eP P 03 35 48.8 +0.2
comp=Z,0.7nm,0.6s,mb3.9
AKTO Aktyubinsk 60.72 313 LR LR 04 03 49.2
comp=Z,37nm,18.7s,MS3.6,baz=174,slow=38
ASAR Alice Springs 61.79 192 P P 03 35 59.0 -1.5
comp=Z,0.4nm,0.5s,mb3.8,baz=7.1,slow=6.8,SNR=7.1
ASAR Alice Springs 61.79 192 P P 03 35 59.0 -1.5
STKA Stephens Creek 69.11 183 P P 03 36 46.9 -0.8
comp=Z,2.0nm,0.7s,mb4.2,baz=344,slow=7.4,SNR=4.1
FINES FINESS Array B 69.86 334 P P 03 36 51.6 -0.4
comp=Z,2.9nm,0.7s,mb4.3,baz=52,slow=7.5,SNR=6.7
FINES pP pP 03 36 59.8 -0.4
comp=Z,1.9nm,0.9s,baz=46,slow=11,SNR=2.9
FINES LR LR 04 09 48.0
comp=Z,64nm,21.3s,MS3.8,baz=56,slow=38
FINES FINESS Array B 69.86 334 P P 03 36 51.6 -0.5
FINES *PP pP 03 36 59.8 -0.4
NVAR Mina Array Bea 72.13 55 P P 03 37 06.5 +0.3
comp=Z,0.2nm,0.6s,mb3.3,baz=280,slow=8.6,SNR=2.1
NVAR pP pP 03 37 14.0 -0.4
comp=Z,0.4nm,0.6s,baz=272,slow=5.7,SNR=3.9
HFS Hagfors 74.94 337 P P 03 37 22.0 -0.4
comp=Z,0.7nm,0.8s,mb3.6,baz=51,slow=14,SNR=4.5
HFS Hagfors 74.94 337 P P 03 37 22.0 -0.4
NB2 NORSAR Subarra 74.95 339 P P 03 37 21.6 -0.8
comp=Z,2.0nm,0.9s,mb4.0,baz=35,slow=5.9
NOA NORSAR Array B 74.95 339 P P 03 37 21.8 -0.7
comp=Z,0.9nm,0.8s,mb3.8,baz=36,slow=6.0,SNR=3.8
NOA LR LR 04 14 40.1
comp=Z,22nm,18.3s,MS3.5,baz=350,slow=39
NOA NORSAR Array B 74.95 339 P P 03 37 21.8 -0.6
LVV L'vov 78.84 326 eP P 03 37 46.0 +1.4

NEIC ***30*** *03:28:35.8±1.7, 35°.75N×0°.54W, h10km, MG3.2(MDD), Error ellipse: s-maj=20.3km s-min=5.5km az=155.0*
MDD ***30*** *03:28:39.6±0.2, 35°.86N×0°.57W, h0km, mb3.5/10, Error ellipse: s-maj=2.4km s-min=1.8km az=153.0, PRXIMO*
CRAAG ***30*** *03:28:39.5, 35°.80N×0°.68W, Ml3.2*
CSEM ***30*** *03:28:39.4±0.2, 36°.02N×0°.70W, h10km, ML3.2, Error ellipse: s-maj=5.3km s-min=4.7km az=2.0*

ISC 30 03:28:39.8±0.8,**35°.89N**±0°.06×**0°.60W**±0°.05,**h34**km±11km,
n92,σ1**°02**/154,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.16**	**166**	P	**Pb**	**03 28 44.0**	**-2.1**
USTO	**Oran**	**0.16**	**166**	P	**Pb**	**03 28 44.0**	**-2.1**
ODZI	**Dzioua**	**0.79**	**221**	P	**Pn**	**03 28 55.0**	**+0.5**
ODZI	**Dzioua**	**0.79**	**221**	P	**Pn**	**03 28 55.0**	**+0.5**
EANR	**'Ain N'Sour**	**1.38**	**87**	P	**Pn**	**03 29 07.5**	**+4.8**
EANR	**'Ain N'Sour**	**1.38**	**87**	P	**Pn**	**03 29 07.5**	**+4.8**
EANR	**'Ain N'Sour**	**1.38**	**87**	P	**Pn**	**03 29 07.5**	**+4.8**
ETRT	**Tiaret**	**1.62**	**107**	P	**Pn**	**03 29 14.8**	**+8.8**
ETRT	**Tiaret**	**1.62**	**107**	P	**Pn**	**03 29 14.8**	**+8.8**
CART	**Cartagena**	**1.73**	**349**	ePn	**Pn**	**03 29 06.4**	**-1.1**
CART				eS	**Sn**	**03 29 25.4**	**-3.0**
CART	**Cartagena**	**1.73**	**349**	ePn	**Pn**	**03 29 06.4**	**-1.1**
EBER	**Berja**	**2.11**	**299**	P	**Pn**	**03 29 12.2**	**-0.4**
EBER				S	**Sn**	**03 29 39.2**	**+1.5**
EBER	**Berja**	**2.11**	**299**	P	**Pn**	**03 29 12.2**	**-0.4**
	7.4nm,0.8s,SNR=17						
EBER				S	**Sn**	**03 29 38.8**	**+1.1**
	5.7nm,0.3s,SNR=6.6						
EBER	**Berja**	**2.11**	**299**	P	**Pn**	**03 29 12.2**	**-0.5**
	7.4nm,0.8s,SNR=17						
EBER				S	**Sn**	**03 29 39.2**	**+1.5**
EHUE	**Huescar**	**2.50**	**321**	P	**Pn**	**03 29 18.6**	**+0.5**
EHUE				S	**Sn**	**03 29 48.8**	**+1.3**
EHUE	**Huescar**	**2.50**	**321**	P	**Pn**	**03 29 18.6**	**+0.5**
	1.1nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**03 29 48.8**	**+1.3**
	2.3nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**2.50**	**321**	P	**Pn**	**03 29 18.6**	**+0.5**
	1.1nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**03 29 48.8**	**+1.3**
	2.3nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**2.58**	**292**	P	**Pn**	**03 29 18.8**	**-0.3**
EGUA				S	**Sn**	**03 29 49.5**	**+0.3**
EGUA	**Guajares**	**2.58**	**292**	P	**Pn**	**03 29 18.8**	**-0.3**
	5.3nm,0.4s,SNR=7.9						
EGUA				S	**Sn**	**03 29 49.5**	**+0.3**
	23nm,0.7s,SNR=7.9						
EGUA	**Guajares**	**2.58**	**292**	P	**Pn**	**03 29 18.8**	**-0.3**
	5.3nm,0.4s,SNR=7.9						
EGUA				S	**Sn**	**03 29 49.5**	**+0.3**
	23nm,0.7s,SNR=7.9						
EQUE	**Quentar**	**2.64**	**301**	P	**Pn**	**03 29 21.5**	**+1.5**
	1.9nm,0.3s,SNR=11						
EQUE				S	**Sn**	**03 29 52.3**	**+1.4**
	2.7nm,0.5s						
EQUE	**Quentar**	**2.64**	**301**	P	**Pn**	**03 29 21.5**	**+1.5**
	1.9nm,0.3s,SNR=11						
EQUE				S	**Sn**	**03 29 52.3**	**+1.5**
	2.7nm,0.5s						
EQES	**Quesada**	**2.75**	**315**	P	**Pn**	**03 29 23.0**	**+1.4**
EQES				S	**Sn**	**03 29 55.2**	**+1.5**
EQES	**Quesada**	**2.75**	**315**	P	**Pn**	**03 29 23.5**	**+1.9**
	1.6nm,0.3s,SNR=56						
EQES				S	**Sn**	**03 29 55.2**	**+1.5**
	5.8nm,0.3s						
EQES	**Quesada**	**2.75**	**315**	P	**Pn**	**03 29 23.0**	**+1.4**
EQES				S	**Sn**	**03 29 55.2**	**+1.5**
	5.8nm,0.3s						
EBEN	**Beniarda**	**2.83**	**6**	P	**Pn**	**03 29 23.2**	**+0.6**
EBEN				S	**Sn**	**03 29 56.0**	**+0.5**
EBEN	**Beniarda**	**2.83**	**6**	P	**Pn**	**03 29 23.0**	**+0.4**
	12nm,1.1s,SNR=11						
EBEN				S	**Sn**	**03 29 54.6**	**-0.9**
	12nm,0.9s						
EBEN	**Beniarda**	**2.83**	**6**	P	**Pn**	**03 29 23.0**	**+0.4**
	12nm,1.1s,SNR=11						
EBEN				S	**Sn**	**03 29 56.0**	**+0.5**
ETOB	**Tobarra**	**2.85**	**345**	P	**Pn**	**03 29 23.6**	**+0.7**
ETOB				S	**Sn**	**03 29 56.2**	**0.0**
ETOB	**Tobarra**	**2.85**	**345**	P	**Pn**	**03 29 23.6**	**+0.7**
	5.4nm,0.6s,SNR=28						
ETOB				S	**Sn**	**03 29 55.4**	**-0.8**
	3.4nm,0.3s,SNR=7.3						
ETOB	**Tobarra**	**2.85**	**345**	P	**Pn**	**03 29 23.6**	**+0.6**
	5.4nm,0.6s,SNR=28						
ETOB				S	**Sn**	**03 29 56.2**	**+0.1**
EVIA	**Vianos**	**3.14**	**332**	P	**Pn**	**03 29 26.9**	**0.0**
EVIA				S	**Sn**	**03 30 04.4**	**+1.3**
EVIA	**Vianos**	**3.14**	**332**	P	**Pn**	**03 29 27.6**	**+0.7**
	3.7nm,0.3s,SNR=6.6						
EVIA				S	**Sn**	**03 30 03.3**	**+0.2**
	6.8nm,0.2s						
EVIA	**Vianos**	**3.14**	**332**	P	**Pn**	**03 29 27.6**	**+0.7**
	3.7nm,0.3s,SNR=6.6						
EVIA				S	**Sn**	**03 30 03.3**	**+0.2**
	6.8nm,0.2s						
EBAN	**Banos Encina**	**3.42**	**313**	P	**Pn**	**03 29 31.1**	**+0.4**
EBAN				S	**Sn**	**03 30 11.2**	**+1.2**
EBAN	**Banos Encina**	**3.42**	**313**	P	**Pn**	**03 29 31.5**	**+0.8**
	1.3nm,0.1s,SNR=7.9						
EBAN				S	**Sn**	**03 30 11.2**	**+1.2**
	2.3nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**3.42**	**313**	P	**Pn**	**03 29 31.1**	**+0.4**
EBAN				S	**Sn**	**03 30 11.2**	**+1.2**
	2.3nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**3.44**	**283**	P	**Pn**	**03 29 30.4**	**-0.7**
EMIJ				S	**Sn**	**03 30 09.8**	**-0.8**
EMIJ	**Mijas**	**3.44**	**283**	P	**Pn**	**03 29 29.3**	**-1.8**
	0.6nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**03 30 09.8**	**-0.8**
	4.1nm,0.7s,SNR=7.9						
EMIJ	**Mijas**	**3.44**	**283**	P	**Pn**	**03 29 30.4**	**-0.7**
EMIJ				S	**Sn**	**03 30 09.8**	**-0.8**
	4.1nm,0.7s,SNR=7.9						
EIBI	**Ibiza**	**3.49**	**26**	P	**Pn**	**03 29 31.3**	**-0.5**
EIBI				S	**Sn**	**03 30 11.6**	**-0.3**
EIBI	**Ibiza**	**3.49**	**26**	P	**Pn**	**03 29 31.3**	**-0.5**
	0.6nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**03 30 11.3**	**-0.6**
	17nm,0.9s,SNR=7.9						
EIBI	**Ibiza**	**3.49**	**26**	P	**Pn**	**03 29 31.3**	**-0.5**
	0.6nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**03 30 11.6**	**-0.3**
EADA	**Adamuz**	**3.91**	**307**	P	**Pn**	**03 29 37.6**	**+0.1**
EADA				S	**Sn**	**03 30 22.1**	**-0.1**
EADA	**Adamuz**	**3.91**	**307**	P	**Pn**	**03 29 37.6**	**+0.1**
	0.2nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**03 30 22.1**	**-0.1**
	4.0nm,0.6s,SNR=7.9						
EADA	**Adamuz**	**3.91**	**307**	P	**Pn**	**03 29 37.6**	**+0.1**
	0.2nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**03 30 22.1**	**-0.2**
	4.0nm,0.6s,SNR=7.9						
ECAB	**El Cabril**	**4.43**	**301**	P	**Pn**	**03 29 44.2**	**-0.4**
ECAB	**El Cabril**	**4.43**	**301**	P	**Pn**	**03 29 44.2**	**-0.4**
	1.8nm,0.3s,SNR=7.9						
ECAB				S	**Sn**	**03 30 34.4**	**-0.7**
	1.1nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**4.43**	**301**	P	**Pn**	**03 29 44.2**	**-0.5**
	1.8nm,0.3s,SNR=7.9						
ECAB				S	**Sn**	**03 30 34.4**	**-0.7**
	1.1nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**4.47**	**1**	P	**Pn**	**03 29 46.0**	**+0.9**
EMOS				S	**Sn**	**03 30 35.3**	**-0.7**
EMOS	**Mosqueruela**	**4.47**	**1**	P	**Pn**	**03 29 46.0**	**+0.9**
	0.8nm,0.3s,SNR=8.5						
EMOS				S	**Sn**	**03 30 35.3**	**-0.7**
	38nm,1.5s						
EMOS	**Mosqueruela**	**4.47**	**1**	P	**Pn**	**03 29 46.0**	**+0.8**
	0.8nm,0.3s,SNR=8.5						
EMOS				S	**Sn**	**03 30 35.3**	**-0.7**
	38nm,1.5s						
ESDC	**Sonseca Array**	**4.62**	**326**	P	**Pn**	**03 29 47.7**	**+0.4**
ESDC				S	**Sn**	**03 30 39.3**	**-0.5**
ESDC	**Sonseca Array**	**4.62**	**326**	P	**Pn**	**03 29 47.7**	**+0.4**
	0.6nm,0.2s,baz=141,slow=13,SNR=19						
ESDC				S	**Sn**	**03 30 38.6**	**-1.2**
	0.6nm,0.2s,baz=140,slow=22,SNR=12						
ESDC	**Sonseca Array**	**4.62**	**326**	P	**Pn**	**03 29 47.7**	**+0.4**
	0.6nm,0.2s,slow=13,SNR=19						
ESDC				S	**Sn**	**03 30 39.3**	**-0.5**
ETOS	**Mallorca**	**4.72**	**34**	P	**Pn**	**03 29 48.5**	**-0.1**
ETOS				S	**Sn**	**03 30 40.8**	**-1.4**
ETOS	**Mallorca**	**4.72**	**34**	S	**Sn**	**03 30 40.8**	**-1.4**
	4.0nm,0.8s,SNR=7.9						
ETOS	**Mallorca**	**4.72**	**34**	P	**Pn**	**03 29 48.5**	**-0.1**
ETOS				S	**Sn**	**03 30 40.8**	**-1.4**
	4.0nm,0.8s,SNR=7.9						
ERTA	**Horta de San J**	**5.11**	**8**	P	**Pn**	**03 29 54.9**	**+0.8**
ERTA				S	**Sn**	**03 30 50.7**	**-1.1**
ERTA	**Horta de San J**	**5.11**	**8**	P	**Pn**	**03 29 54.8**	**+0.8**
	0.2nm,0.3s,SNR=7.9						
ERTA				S	**Sn**	**03 30 50.7**	**-1.1**
	1.7nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**5.11**	**8**	P	**Pn**	**03 29 54.8**	**+0.8**
	0.2nm,0.3s,SNR=7.9						
ERTA				S	**Sn**	**03 30 50.7**	**-1.1**
	1.7nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.22**	**293**	P	**Pn**	**03 29 55.5**	**0.0**
EMIN				S	**Sn**	**03 30 53.5**	**-1.0**
EMIN	**Mina Concepcio**	**5.22**	**293**	P	**Pn**	**03 29 55.5**	**0.0**
	0.4nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.22**	**293**	P	**Pn**	**03 29 55.5**	**0.0**
	0.4nm,0.4s,SNR=7.9						
EMIN				S	**Sn**	**03 30 53.5**	**-1.0**
GUD	**Guadarrama**	**5.51**	**331**	P	**Pn**	**03 30 00.0**	**+0.6**
GUD	**Guadarrama**	**5.51**	**331**	P	**Pn**	**03 30 00.0**	**+0.6**
	0.4nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**5.51**	**331**	P	**Pn**	**03 30 00.0**	**+0.5**
	0.4nm,0.2s,SNR=7.9						
PBAR	**Barrancos**	**5.64**	**296**	ePn	**Pn**	**03 30 02.0**	**+0.8**
PBAR				eSn	**Sn**	**03 31 02.5**	**-2.2**
PBAR	**Barrancos**	**5.64**	**296**	P	**Pn**	**03 30 02.0**	**+0.8**
PBAR				S	**Sn**	**03 31 02.5**	**-2.2**
PBAR	**Barrancos**	**5.64**	**296**	ePn	**Pn**	**03 30 02.0**	**+0.8**
PBAR				eSn	**Sn**	**03 31 02.5**	**-2.2**
EGRO	**El Granado**	**5.77**	**289**	P	**Pn**	**03 30 03.1**	**+0.1**
EGRO				S	**Sn**	**03 31 05.8**	**-2.3**
EGRO	**El Granado**	**5.77**	**289**	P	**Pn**	**03 30 03.1**	**+0.1**
EGRO				S	**Sn**	**03 31 05.8**	**-2.2**
EBAD	**Badajoz**	**5.86**	**301**	P	**Pn**	**03 30 04.6**	**+0.3**
EBAD				S	**Sn**	**03 31 08.1**	**-2.1**
EBAD	**Badajoz**	**5.86**	**301**	P	**Pn**	**03 30 04.6**	**+0.3**
	0.1nm,0.3s,SNR=7.9						
EBAD				S	**Sn**	**03 31 08.1**	**-2.1**
	13nm,0.8s,SNR=7.9						
EBAD	**Badajoz**	**5.86**	**301**	P	**Pn**	**03 30 04.6**	**+0.3**
	0.1nm,0.3s,SNR=7.9						
EBAD				S	**Sn**	**03 31 08.1**	**-2.1**
	13nm,0.8s,SNR=7.9						
PVAQ	**Vaqueiros**	**5.92**	**287**	ePn	**Pn**	**03 30 05.3**	**+0.2**
PVAQ				eSn	**Sn**	**03 31 09.8**	**-1.9**
PVAQ	**Vaqueiros**	**5.92**	**287**	P	**Pn**	**03 30 05.3**	**+0.2**
PVAQ				S	**Sn**	**03 31 09.8**	**-1.9**
PVAQ	**Vaqueiros**	**5.92**	**287**	ePn	**Pn**	**03 30 05.3**	**+0.2**
PVAQ				eSn	**Sn**	**03 31 09.8**	**-1.9**
PBDV	**Barranco-do-Ve**	**6.05**	**285**	eSn	**Sn**	**03 31 15.0**	**-0.1**
PBDV	**Barranco-do-Ve**	**6.05**	**285**	S	**Sn**	**03 31 15.0**	**-0.1**
PBDV	**Barranco-do-Ve**	**6.05**	**285**	eSn	**Sn**	**03 31 15.0**	**-0.1**
PCVE	**Castro Verde**	**6.22**	**288**	ePn	**Pn**	**03 30 10.0**	**+0.8**
PCVE	**Castro Verde**	**6.22**	**288**	P	**Pn**	**03 30 10.0**	**+0.8**
PCVE	**Castro Verde**	**6.22**	**288**	ePn	**Pn**	**03 30 10.0**	**+0.8**
PESTR	**Estremoz**	**6.31**	**300**	ePn	**Pn**	**03 30 11.3**	**+0.8**
PESTR	**Estremoz**	**6.31**	**300**	P	**Pn**	**03 30 11.3**	**+0.8**
PESTR	**Estremoz**	**6.31**	**300**	ePn	**Pn**	**03 30 11.3**	**+0.8**
ELAN	**Lanestosa**	**7.65**	**344**	P	**Pn**	**03 30 30.0**	**+1.1**
ELAN	**Lanestosa**	**7.65**	**344**	P	**Pn**	**03 30 30.0**	**+1.1**
EARI	**Arriondas**	**8.21**	**336**	P	**Pn**	**03 30 37.4**	**+0.8**
EARI	**Arriondas**	**8.21**	**336**	P	**Pn**	**03 30 37.4**	**+0.8**
	0.2nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**8.21**	**336**	P	**Pn**	**03 30 37.4**	**+0.9**
	0.2nm,0.2s,SNR=7.9						

IDC ***30*** *03:40:29.4±0.8, 23°.25S×169°.37E, h0km, mb4.4/11, mb1 4.6/11, mb1mx4.4/16, mbtmp4.4/11, MS4.0/11, Ms1 4.0/11, ms1mx3.8/25, Error ellipse: s-maj=25.7km s-min=21.0km az=144.0*
NOU ***30*** *03:40:30.7±1.8, 19°.58S×168°.18E, h30km, MD2.9, ML4.5*
BJI ***30*** *03:40:30.4, 22°.90S×169°.76E, h17km, mB5.1/2, mb4.9/6*
NEIC ***30*** *03:40:31.2±0.5, 23°.11S×169°.35E, h10km, mb4.8/7, Error ellipse: s-maj=15.6km s-min=10.8km az=168.0*
ISCJB ***30*** *03:40:32.6±0.4, 23°.26S±0°.08×169°.34E±0°.05, h33km, mb4.6/20, MS4.0/10, Error ellipse: s-maj=11.8km s-min=5.9km az=17.3*
GCMT ***30*** *03:40:35.6±0.3, 23°.09S×169°.20E, h12km, MW4.9, Moment Tensor Solution. s21,c27; s64,c92; Moment tensor: Scale 10^16Nm; Mrr=2.97±.10; Mθθ3.10±.10; Mφφ-0.13±.12; Mrθ0.15±.33; Mrφ-0.54±.08; Mθφ0.20±.40; Best double couple: M0 3.10000×10^16 NP1:φs 104.00000°, δ44.00000°, λ-84.00000°. NP2:φs 275.00000°, δ46.00000°, λ-96.00000°. Principal axes: T 3.1900, Plg1.0000°, Azm9.0000°; N -0.2000, Plg4.0000°, Azm279.0000°; P -2.9900, Plg85.0000°, Azm113.0000°; Data Used: II G IU IC CN.*

ISC 30 03:40:35.1±0.5,**23°20S**±0°.08×**169°33E**±0°.05,**h35**km,**n85**,
σ1**°21**/38,**mb4.6**/20,**MS4.0**/10,**5C-5D**,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.48**	**294**	eS	**Sn**	**03 41 44.6**	**+2.4**
NORM	**Noumea**	**2.80**	**290**	eP	**Pn**	**03 41 14.8**	**-2.6**
NORM				eS	**Sn**	**03 41 50.1**	**+0.2**
MVNO	**Noumea**	**2.82**	**289**	eS	**Sn**	**03 41 50.1**	**-0.4**
MVNO				AMP		03 42 03.4	
	comp=Z,32nm,6.1s						
DZM	**Mont Dzumac**	**2.89**	**292**	eP	**Pn**	**03 41 15.4**	**-3.2**
DZM				AMP		03 42 01.1	
	comp=Z,4μm,0.5s						
NOUC	**Port Laguerre**	**3.00**	**291**	eP	**Pn**	**03 41 17.1**	**-3.0**
NOUC				AMP		03 42 05.6	
	comp=Z,197nm,6.1s						
MSVF	**Nonsavu**	**9.82**	**58**	ePn	**Pn**	**03 42 53.8**	**0.0**
	comp=Z,73nm,1.4s						
OUZ	**Omahuta**	**12.54**	**164**	ePn	**Pn**	**03 43 32.3**	**+1.3**
URZ	**Urewera**	**16.42**	**158**	LR	LR	03 48 34.4	
	comp=Z,346nm,20.2s,baz=149,slow=30						
AFI	**Afiamalu**	**20.14**	**66**	LR	LR	03 51 15.9	
	comp=Z,181nm,21.6s,MS3.4,baz=76,slow=32						
RPZ	**Rata Peaks**	**20.51**	**176**	LR	LR	03 52 01.9	
	comp=Z,536nm,21.8s,MS3.9,baz=5.3,slow=34						
CTA	**Charters Tower**	**21.66**	**274**	P	**P**	**03 45 23.8**	**+1.0**
	comp=Z,14nm,1.0s,mb4.3,baz=90,slow=12,SNR=8.8						
CTA				LR	LR	03 53 02.7	
	comp=Z,134nm,19.0s,MS3.4,baz=235,slow=35						
CTA	**Charters Tower**	**21.66**	**274**	eP	**P**	**03 45 23.3**	**+0.5**
	comp=Z,11nm,1.0s,mb4.2						
CTAO	**Charters Tower**	**21.66**	**274**	eP	**P**	**03 45 23.9**	**+1.1**
	comp=Z,99nm,1.8s,mb4.9						
PMG	**Port Moresby**	**25.26**	**299**	eP	**P**	**03 45 59.2**	**+1.1**
	comp=Z,15nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**26.01**	**245**	P	**P**	**03 46 05.3**	**+0.5**
	comp=Z,4.3nm,0.9s,mb4.0,baz=75,slow=13,SNR=7.3						
STKA				LR	LR	03 56 54.3	
	comp=Z,314nm,18.6s,MS3.9,baz=255,slow=38						
STKA	**Stephens Creek**	**26.01**	**245**	eP	**P**	**03 46 06.1**	**+1.3**
	comp=Z,5.7n

KMI pmax pmax
comp=Z,17nm,1.4s,mb4.8
VNA3 Neumayer Olymp 85.81 180 *e* **P 03 53 05.9 -4.6**
VNA2 Neumayer--Watz 86.10 181 *e* **P 03 53 07.6 -4.3**
VNA1 Neumayer--Stat 86.39 181 *e* **P 03 53 09.8 -3.6**
CMB Columbia Colle 89.73 48 *eP* **P 03 53 29.8 0.0**
comp=Z,7.4nm,1.1s,mb4.9
ISA Isabella 89.90 51 *eP* **P 03 53 30.2 -0.4**
comp=Z,11nm,1.3s,mb5.0
SONM Songino Array 90.42 323 P **P 03 53 33.1 +0.3**
comp=Z,2.7nm,0.9s,mb4.6,baz=135,slow=4.1,SNR=14
WAKR Walker 90.61 48 *eP* **P 03 53 34.0 +0.2**
comp=Z,4.5nm,1.0s,mb4.8
NVAR Mina Array Bea 91.35 48 P **P 03 53 37.2 -0.1**
comp=Z,1.6nm,0.7s,mb4.5,baz=227,slow=6.8,SNR=14
NVAR LR LR 04 25 05.3
comp=Z,110nm,20.1s,MS4.3,baz=294,slow=29
NVAR Mina Array Bea 91.35 48 P **P 03 53 37.2 -0.1**
NVAR LR LR 04 25 05.3
ILAR Eielson Array 93.97 17 P **P 03 53 45.8 -3.0**
comp=Z,1.2nm,1.1s,mb4.2,baz=229,slow=6.9,SNR=7.2
ILAR LR LR 04 33 24.2
comp=Z,77nm,18.4s,MS4.2,baz=254,slow=34
TXAR Lajitas Array 98.57 62 LR LR 04 28 46.2
comp=Z,77nm,21.1s,MS4.2,baz=180,slow=29
KOLS Kolonicke sedl 143.48 323 *eP* PKPdf 04 00 04.4 -1.4
KOLS Kolonicke sedl 143.48 323 *eP*KP PKPdf 04 00 04.4 -1.4
CRVS Cervenica-Dubn 143.95 323 *eP* PKPdf 04 00 04.9 -1.7
CRVS Cervenica-Dubn 143.95 323 *eP*KP PKPdf 04 00 04.9 -1.7
DRGR 144.34 320↑*iP* PKPdf 04 00 05.8 -1.6
KECS Kecovo 144.72 323 *eP* PKPdf 04 00 07.4 -0.6
KECS Kecovo 144.72 323 *eP*KP PKPdf 04 00 07.4 -0.6
PSZ Piszkesteto 145.36 323↓*iP* PKPbc 04 00 09.1 +0.1
PSZ Piszkesteto 145.36 323↑*e* PKPbc 04 00 09.4 +0.4
MORC Moravsky Berou 145.47 327↑*iP* PKPdf 04 00 10.1 +0.9
BZS Buzias 145.58 318↑*iP* PKPdf 04 00 09.5 0.0
VYHS Vyhne 145.60 325 *eP* PKPdf 04 00 10.0 +0.5
VYHS Vyhne 145.60 325 *eP*KP PKPdf 04 00 10.0 +0.5
BUD Budapest 146.09 323↓*e* PKPbc 04 00 11.4 +0.1
VRAC Vranov 146.25 327 PKPbc PKPbc 04 00 09.9 -1.7
comp=Z,2.0nm,0.3s,baz=101,slow=4.7,SNR=9.6
VRAC Vranov 146.25 327↓*iP* PKPbc 04 00 12.7 +1.0
BRG Berggiesshubel 146.41 332 *eP*KP PKPbc 04 00 11.7 -0.4
comp=Z,34nm,1.7s
CLL Collm 146.50 333↓*i*PKPbc PKPbc 04 00 11.6 -0.8
comp=Z,15nm,1.2s
PKSM Moragy 147.03 321↑*iP* PKPbc 04 00 13.3 -0.8
SOP Sopron 147.31 325↓*e* PKPbc 04 00 14.4 -0.4
EKA Eskdalemuir Ar 147.43 352 PKPbc PKPbc 04 00 14.2 -0.7
comp=Z,5.6nm,0.8s,baz=3.6,slow=3.5,SNR=8.5
CONA Conrad Observa 147.51 326 P PKPbc 04 00 15.4 +0.1
comp=Z,12nm,1.1s
MOX Moxa 147.58 333 *eP* PKPbc 04 00 15.9 +0.5
comp=Z,18nm,1.5s
GERES GERESS Array B 147.97 329 PKPbc PKPbc 04 00 16.5 0.0
comp=Z,3.4nm,0.9s,baz=48,slow=2.0,SNR=18
GERES GERESS Array B 147.97 329 PKPbc PKPbc 04 00 16.5 0.0
SOKA Soboth 148.75 325 P PKPbc 04 00 18.0 -0.6
comp=Z,12nm,1.3s
KBA Koelnbreinsper 149.36 327 P PKPbc 04 00 19.1 -1.1
comp=Z,10nm,1.1s
ABTA Abfaltersbach 150.00 327 P PKPbc 04 00 20.5 -1.3
comp=Z,9.8nm,0.9s
WTTA Wattenberg 150.06 329 P PKPbc 04 00 21.6 -0.3
comp=Z,23nm,1.3s
MOTA Moosalm 150.26 329 P PKPbc 04 00 22.0 -0.4
comp=Z,7.2nm,0.7s
FETA Feichten 150.67 329 P PKPbc 04 00 22.7 -0.6
comp=Z,13nm,1.0s
CDF Champ du Feu 151.08 335 *e*PKP1 PKPbc 04 00 22.8 -1.5
comp=Z,22nm,1.1s
DAVOX Davos/Dischmat 151.24 330 PKPbc PKPbc 04 00 24.8 +0.1
comp=Z,8.0nm,0.9s,baz=235,slow=2.9,SNR=8.0
DAVOX Davos/Dischmat 151.24 330 PKPbc PKPbc 04 00 24.8 +0.1
HINF Hinteralfeld 151.73 335 *e*PKP1 PKPbc 04 00 24.2 -1.6
HAU Haudorpore 151.77 335 *e*PKP1 PKPbc 04 00 24.5 -1.4
comp=Z,8.9nm,0.7s
MEZF Maizieres J'vi 151.83 338 *e*PKP1 PKPbc 04 00 25.0 -1.0
comp=Z,14nm,0.6s
SFTF Sexfontaines 152.09 337 *e*PKP1 PKPbc 04 00 25.3 -1.3
SSF Saint Saulge 153.60 338 *e*PKP1 PKPbc 04 00 28.6 -1.4
DBIC Dimbokro 162.64 200 PKPab PKPab 04 01 23.4 +1.0
comp=Z,4.0nm,1.0s,baz=106,slow=8.2,SNR=4.3
TORD Torodi Ar. Bea 164.58 232 PKPab PKPab 04 01 28.6 -2.4
comp=Z,1.4nm,1.1s,baz=145,slow=4.6,SNR=6.2

IDC 30 03:42:09.7±2.1, 2°.22N×128°.12E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.6/4, Error ellipse: s-maj=124.0km s-min=23.7km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.34**	**187**	P	P	03 46 47.1	-0.7
	0.9nm,0.7s,baz=15,slow=8.0,SNR=4.3						
WRA	**Warramunga Arr**	**22.86**	**165**	P	P	03 47 15.4	+0.6
	1.6nm,0.4s,baz=346,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.34**	**168**	P	P	03 47 47.4	-0.1
	0.8nm,0.5s,baz=349,slow=7.5,SNR=8.4						
MKAR	**Makanchi Array**	**59.57**	**325**	P	P	03 52 15.3	+0.1
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.8						

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*NEIC **30** 03:49:37.3, 19°.28N×64°.94W, h46km, MD3.1(RSPR), After RSPR.*

RSPR 30 03:49:37.3, 19°.28N×64°.94W, h46km±9km, MD3.1/7, 5C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.91**	**160**↑	*eP*	Pn	03 49 52.6	-1.1
STVI	**Saint Thomas**	**0.92**	**181**↑	*eP*	Pn	03 49 52.8	-1.0
STVI				*eS*	Sn	03 50 05.0	-0.9
MTP	**Monte Pirata**	**1.31**	**206**↑	*eP*	Pn	03 49 58.4	-0.7
MTP	**Monte Pirata**	**1.31**	**206**	*eS*	Sn	03 50 14.4	-1.0
MTP	**Monte Pirata**	**1.31**	**206**	*eP*n	Pn	03 49 58.3	-0.8
MTP				*eS*	Sn	03 50 16.5	+1.1
CBYP	**Canovanas**	**1.32**	**221**↑	*eP*	Pn	03 49 59.3	0.0
CBYP	**Canovanas**	**1.32**	**221**	*eS*	Sn	03 50 14.7	-1.1
CBYP	**Canovanas**	**1.32**	**221**	*eP*n	Pn	03 49 58.8	-0.6
CBYP				*eS*	Sn	03 50 15.8	+0.1
HUMP	**Col San Antoni**	**1.42**	**218**↑	*eP*	Pn	03 49 59.5	-1.2
HUMP				*eS*	Sn	03 50 16.9	-1.2
SJG	**San Juan**	**1.63**	**225**↓	*eP*	Pn	03 50 02.6	-0.9
SJG				*eS*	Sn	03 50 22.4	-0.9
SJG	**San Juan**	**1.63**	**225**↓	*eP*	Pn	03 50 02.5	-1.0
SJG				*eS*	Sn	03 50 23.0	-0.3

IDC 30 03:51:48.4±2.1, 30°.18S×177°.78W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.8/4, Error ellipse: s-maj=56.0km s-min=35.1km az=36.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.10**	**206**	Pn	Pn	03 53 55.9	-5.1
	0.7nm,0.3s,baz=268,slow=5.0,SNR=4.2						
URZ				Sn	Sn	03 55 45.5	+1.4
	0.9nm,0.3s,baz=166,slow=6.6,SNR=7.1						
STKA	**Stephens Creek**	**34.71**	**257**	P	P	03 58 40.0	-0.1
	1.9nm,0.9s,baz=98,slow=15,SNR=3.0						
ASAR	**Alice Springs**	**43.31**	**267**	P	P	03 59 52.0	-0.1
	0.5nm,0.5s,baz=102,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**44.28**	**272**	P	P	04 00 00.5	+0.4
	0.8nm,0.3s,baz=111,slow=8.1,SNR=10						
QSPA	**South Pole Qui**	**59.93**	**180**	P	P	04 01 57.1	+1.4
	1.5nm,1.1s,baz=258,slow=1.6,SNR=3.3						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPdf	04 11 23.4	-3.4
	1.5nm,0.5s,baz=48,slow=2.8,SNR=4.6						

IDC 30 03:55:57.9±2.5, 5°.94S×130°.01E, h0km, mb3.6/1, mb1 3.5/4, mb1mx3.4/16, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=104.0km s-min=30.7km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.82**	**199**	Pn	Pn	03 59 02.0	+0.5
	0.1nm,0.3s,baz=46,slow=13,SNR=11						
FITZ				Sn	Sn	04 01 10.4	-15
	0.3nm,0.3s,baz=200,slow=18,SNR=6.2						
WRA	**Warramunga Arr**	**14.54**	**164**	Pn	Pn	03 59 26.7	+1.6
	0.1nm,0.3s,baz=346,slow=14,SNR=3.5						
WRA				Sn	Sn	04 01 53.7	-13
	0.2nm,0.3s,baz=341,slow=26,SNR=6.1						
ASAR	**Alice Springs**	**18.02**	**168**	P	Pn	04 00 08.5	-1.4
	0.1nm,0.3s,baz=341,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**67.35**	**327**	P	P	04 06 55.0	+0.2
	0.3nm,0.5s,baz=122,slow=7.0,SNR=2.6						

BJI 30 04:00:12.8, 30°.73N×103°.29E, h13km, ML3.6/14, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.44**	**66**↓	*i*Pg	Pg	04 00 19.0	-2.5
CD2				Sg	Sg	04 00 25.3	-2.2
CD2				smax			
	comp=N,11μm,0.7s						
CD2				smax			
	comp=E,3μm,0.8s						
GYA	**Guiyang**	**5.19**	**144**	Pn	Pn	04 01 29.5	-0.6
GYA				Sn	Sn	04 02 29.0	-0.8
GYA				Sg	Sg	04 02 57.8	-1.6
GYA				smax			
	comp=N,110nm,0.7s						
GYA				smax			
	comp=E,90nm,0.7s						
XAN	**Xi'an**	**5.79**	**54**	Pg	Pg	04 01 57.0	-6.8
XAN				Sg	Sg	04 03 08.0	-11
XAN				smax			
	comp=N,78nm,0.7s						
XAN				smax			
	comp=E,33nm,1.0s						

WEL 30 04:02:30.9±0.2, 40°.17S×174°.36E, h95km±2km, ML3.9/17, Error ellipse: s-maj=1.0km s-min=0.4km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.63**	**49**	PN	PN	04 02 47.5	+0.3
WAZ				*e*SN	Sn	04 02 59.5	+0.1
WAZ				*e*SN	Sn	04 02 59.5	+0.1
DUWZ	**D'Urville Isla**	**0.72**	**208**	PN	Pn	04 02 47.9	-0.2
DUWZ				SN	Sn	04 02 59.9	-1.0
KIW	**Kapiti Island**	**0.81**	**149**	PN	Pn	04 02 48.8	-0.1
KIW				SN	Sn	04 03 01.3	-1.1
DFE	**Dawson Falls**	**0.86**	**346**	PN	Pn	04 02 49.3	-0.2
RAEZ	**Rainy Point**	**0.88**	**1**	PN	Pn	04 02 49.6	0.0
OGWZ	**Otaki Gorge**	**0.89**	**137**	PN	Pn	04 02 49.8	0.0
OGWZ				SN	Sn	04 03 03.2	-0.8
NEZ	**North Egmont**	**0.92**	**347**	PN	Pn	04 02 49.8	-0.3
NWEZ	**Newall Road**	**0.97**	**337**	PN	Pn	04 02 50.5	-0.2
DREZ	**Durham Road**	**0.98**	**353**	PN	Pn	04 02 50.6	-0.1
DREZ				SN	Sn	04 03 05.6	-0.1
PKE	**Pukeiti**	**1.01**	**343**	PN	Pn	04 02 50.7	-0.4
PKE				SN	Sn	04 03 05.1	-1.1
TCW	**Tory Channel**	**1.05**	**184**	PN	Pn	04 02 51.4	-0.1
MRZ	**Mangatainoka R**	**1.05**	**118**	PN	Pn	04 02 51.5	0.0
CAW	**Cannon Point**	**1.08**	**151**	PN	Pn	04 02 51.9	+0.1
VRZ	**Vera Road**	**1.08**	**16**	PN	Pn	04 02 51.7	-0.2
MHEZ	**Mangahewa**	**1.09**	**358**	PN	Pn	04 02 52.0	+0.1
MHEZ				SN	Sn	04 03 07.7	-0.1
POWZ	**Post Office Ro**	**1.10**	**102**	PN	Pn	04 02 51.9	-0.1
HOWZ	**Holdsworth Sta**	**1.14**	**130**	PN	Pn	04 02 52.6	+0.1
MTVZ	**Mangateitei**	**1.16**	**48**	PN	Pn	04 02 52.8	+0.1
PKVZ	**Pokaka**	**1.16**	**41**	PN	Pn	04 02 52.9	+0.1
WEL	**Wellington**	**1.16**	**165**	PN	Pn	04 02 52.9	+0.2
SNZO	**South Karori**	**1.17**	**167**	PN	Pn	04 02 52.9	0.0
TSZ	**Takapari Road**	**1.23**	**85**	PN	Pn	04 02 52.4	-1.1
TRVZ	**Turoa**	**1.26**	**47**	PN	Pn	04 02 54.1	+0.2
WNVZ	**Wahianoa**	**1.27**	**49**	PN	Pn	04 02 54.2	+0.2
NNZ	**Nelson**	**1.29**	**215**	PN	Pn	04 02 53.9	-0.4
FWVZ	**Far West T-bar**	**1.29**	**46**	PN	Pn	04 02 54.5	+0.2
BHW	**Baring Head**	**1.30**	**163**	PN	Pn	04 02 54.3	-0.1
TUWZ	**Tuamarina**	**1.30**	**194**	PN	Pn	04 02 54.0	-0.4
MOVZ	**Moawhango**	**1.31**	**55**	PN	Pn	04 02 54.2	-0.3
MTW	**Mount Morrison**	**1.31**	**139**	PN	Pn	04 02 54.5	-0.1
WPVZ	**Whakapapa**	**1.32**	**44**	PN	Pn	04 02 54.8	+0.1
TUVZ	**Tukino**	**1.34**	**48**	PN	Pn	04 02 55.0	+0.1
TWVZ	**Taurewa**	**1.37**	**37**	PN	Pn	04 02 55.3	0.0
DVHZ	**Dannevirke**	**1.39**	**96**	PN	Pn	04 02 55.0	-0.4
WTVZ	**West Tongariro**	**1.41**	**42**	PN	Pn	04 02 55.8	0.0
MSWZ	**Moikau Station**	**1.42**	**152**	PN	Pn	04 02 55.8	0.0
PNHZ	**Pukenui**	**1.43**	**80**	PN	Pn	04 02 55.4	-0.6
BHHZ	**Black Hill Sta**	**1.47**	**63**	PN	Pn	04 02 55.9	-0.6
TMWZ	**Te Maipa**	**1.49**	**129**	PN	Pn	04 02 56.9	+0.2
PLWZ	**Palliser**	**1.56**	**155**	PN	Pn	04 02 57.3	-0.2
KATZ	**Kakaramea**	**1.57**	**41**	PN	Pn	04 02 58.2	+0.5
BSWZ	**Blackbirch Sta**	**1.59**	**193**	PN	Pn	04 02 58.1	+0.1
TRWZ	**Traveller**	**1.59**	**141**	PN	Pn	04 02 58.0	+0.1
WPHZ	**Waipukurau**	**1.59**	**87**	PN	Pn	04 02 57.9	-0.2
HIZ	**Hauiti**	**1.69**	**13**	PN	Pn	04 02 58.8	-0.5
PRHZ	**Porangahau**	**1.74**	**94**	PN	Pn	04 02 59.5	-0.4
THZ	**Tophouse**	**1.94**	**214**	PN	Pn	04 03 02.2	-0.3
KHZ	**Kahutara**	**2.33**	**195**	PN	Pn	04 03 07.2	-0.4
DSZ	**Denniston Nort**	**2.50**	**230**	PN	Pn	04 03 08.9	-0.9
MKAZ	**Moumakai**	**3.12**	**12**	PN	Pn	04 03 17.4	-0.7
KUZ	**Kuaotunu**	**3.58**	**18**	PN	Pn	04 03 23.6	-0.7
MQZ	**McQueen's Vall**	**3.76**	**199**	PN	Pn	04 03 23.8	-2.9
ODZ	**Otahua Downs**	**5.59**	**208**	PN	Pn	04 03 49.4	-2.1

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*BJI **30** 04:05:14.1, 3°.49N×126°.71E, h36km, mB5.1/29, mb5.2/50, Ms4.7/32, Ms7 4.5/34*

*MOS **30** 04:05:16.7±1.0, 3°.81N×126°.51E, h33km, mb5.3/33, Error ellipse: s-maj=13.1km s-min=5.7km az=118.3*

*NEIC **30** 04:05:18.5±0.2, 3°.82N×126°.56E, h35km, mb5.2/53, Error ellipse: s-maj=6.5km s-min=3.9km az=63.0*

*TEH **30** 04:05:18.0, 3°.79N×126°.58E, h35km*

*IDC **30** 04:05:18.3±2.3, 3°.72N×126°.45E, h34km±16km, mb4.7/27, mb1 4.7/28, mb1mx4.7/31, mbtmp4.7/28, ML4.7/1, MS4.1/13, Ms1 4.1/13, ms1mx3.8/26, Error ellipse: s-maj=18.2km s-min=7.7km az=76.0*

*ISCJB **30** 04:05:20.0±0.5, 3°.85N±0°.02×126°.72E±0°.03, h64km±4km, mb5.1/119, Error ellipse: s-maj=5.3km s-min=3.7km az=174.2*

*GCMT **30** 04:05:21.0±0.4, 3°.87N×126°.77E, h29km, MW5.0, Moment Tensor Solution. s33,c35; s54,c67; Moment tensor: Scale 10^{16}Nm; M_{rr}4.01±.25; $M_{\theta\theta}$-1.02±.16; $M_{\phi\phi}$-2.99±.18; $M_{r\theta}$-0.03±.28; $M_{r\phi}$-0.94±.10; $M_{\theta\phi}$0.85±.27; Best double couple: $M_0$3.80000×10^{16} NP1:ϕ_s206.00000°, δ39.00000°, λ96.00000°. NP2:ϕ_s17.00000°, δ51.00000°, λ85.00000°. Principal axes: T 4.1200, Plg83.0000°, Azm257.0000°; N -0.6700, Plg4.0000°, Azm21.0000°; P -3.4500, Plg6.0000°, Azm111.0000°; Data Used: II IC IU G CN.*

*DJA **30** 04:05:24, 3°.60N×126°.82E, h63km, mb5.0/31*

ISC 30 04:05:22.1±0.4, 3°.86N±0°.02×126°.70E±0°.03, h67km±3km, h36km±2.2km: pP-P, n350, σ1§20/324, mb5.0/119, 17C-13D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.18**	**262**	P	**Pn**	**04 05 40.3**	**-2.5**
MNI	**Manado**	**3.03**	**218**	P	**Pn**	**04 06 06.8**	**-0.9**
MATI	**Mati**	**3.10**	**352**	*eP*	**Pn**	**04 06 08.1**	**-0.6**
DAV	**Davao City (W)**	**3.38**	**341**	Pn	**Pn**	**04 06 08.5**	**-4.0**
	68nm,0.3s,baz=180,slow=12,SNR=2.3						
DAV				Lg		04 07 08.6	
	180nm,0.3s,baz=140,slow=21,SNR=4.0						
DMPH	**Davao City--Mi**	**3.42**	**340**	*eP*	**Pn**	**04 06 14.2**	**+1.2**
DMPH				*i* S	Sn	04 07 15.7	+23
KCP	**Kidapawan**	**3.52**	**333**↓	*eP*	**Pn**	**04 06 16.2**	**+1.8**
KCP				*i* S	**Sn**	**04 07 01.8**	**+7.0**
CTBH	**Cotabato--PC H**	**4.14**	**324**↓	*eP*	**Pn**	**04 06 22.3**	**-0.6**
KMSI	**Cibinong**	**4.24**	**220**	P	**Pn**	**04 06 25.3**	**+1.0**
BUKP	**Musuan**	**4.32**	**338**	*eP*	**Pn**	**04 06 25.4**	**+0.1**
LBMI	**Labuha**	**4.53**	**170**	P	**Pn**	**04 06 25.6**	**-2.7**
BUTP	**Butuan**	**5.19**	**348**	*eP*	**Pn**	**04 06 35.9**	**-1.3**
MRSI	**Marisa**	**5.82**	**235**	P	**Pn**	**04 06 45.9**	**0.0**
	3μm380nm,0.9s						
SCPH	**Surigao**	**6.01**	**349**↓	*eP*	**Pn**	**04 06 49.4**	**+1.0**
LUWI	**Luwuk**	**6.25**	**219**	P	**Pn**	**04 06 53.6**	**+1.8**
	2.8nm9μm792nm,1.2s						
TBP	**Tagbilaran**	**6.45**	**334**	*eP*	**Pn**	**04 06 53.8**	**-0.6**
TOLI	**Toli-Toli**	**6.50**	**245**	P	**Pn**	**04 06 54.4**	**-0.7**
	1.0nm2μm314nm,0.9s						
MSLP	**Maasin**	**6.50**	**344**	*eP*	**Pn**	**04 06 58.5**	**+3.3**
LLP	**Lapu-Lapu**	**6.97**	**337**	*eP*	**Pn**	**04 06 58.3**	**-3.3**
NLAI	**Namlea**	**7.06**	**177**	P	**Pn**	**04 06 59.5**	**-3.3**
	2μm81nm,0.6s						
MYLDM	**Lahad Datu**	**8.28**	**279**	P	**Pn**	**04 07 22.9**	**+3.4**
KDI	**Kendari**	**8.77**	**208**	P	**Pn**	**04 07 23.4**	**-2.8**
	1μm63nm,0.8s						
TSM	**Tawau**	**8.82**	**273**	P	**Pn**	**04 07 27.3**	**+0.4**
SDKM	**Sandakan**	**9.64**	**281**	P	**Pn**	**04 07 37.6**	**-0.5**
TTSI	**Tana Toraja**	**9.71**	**225**	P	**Pn**	**04 07 39.4**	**+0.3**
	3μm127nm,1.9s						
SPSI	**Sidrap Palu**	**10.41**	**222**	P	**Pn**	**04 07 50.6**	**+2.0**
	650nm46nm,1.2s						
BAKI	**Biak**	**10.65**	**118**	P	**Pn**	**04 07 51.4**	**-0.6**
	2μm155nm,1.1s						
KKM	**Kota Kinabalu**	**10.67**	**282**	P	**Pn**	**04 07 55.9**	**+3.7**
KKM	**Kota Kinabalu**	**10.67**	**282**	*e*Pn	**Pn**	**04 07 50.0**	**-2.2**
BKSI	**Bulukumba**	**11.24**	**216**	P	**Pn**	**04 07 59.6**	**-0.3**
	402nm23nm,1.6s						
KBKI	**Kotabaru**	**12.70**	**236**	P	**Pn**	**04 08 22.1**	**+2.2**
	1μm53nm,1.4s						
BBKI	**Banjar Baru**	**13.90**	**239**	P	**Pn**	**04 08 38.2**	**+2.1**
	2μm160nm,1.7s						
SBUM	**Sibu**	**14.53**	**265**	P	**Pn**	**04 08 45.8**	**+1.6**
BMNI	**Bima**	**14.68**	**213**	P	**Pn**	**04 08 48.2**	**+2.0**
	1μm110nm,0.7s						
JAY	**Jayapura**	**15.36**	**114**	P	**Pn**	**04 08 57.1**	**+2.1**
	73nm,1.1s						
STKI	**Sintang**	**15.67**	**256**	P	**Pn**	**04 09 02.8**	**+3.8**
	56nm,1.4s						
MTNI	**Mataram**	**16.26**	**220**	P	**Pn**	**04 09 07.6**	**+1.3**
	7μm154nm,0.8s						
KHKI	**Pahang-Kahang**	**16.43**	**222**	P	**Pn**	**04 09 10.2**	**+1.8**
	87nm,1.3s						
SRBI	**Singaraja**	**16.49**	**224**	P	**Pn**	**04 09 11.8**	**+2.5**
	2μm150nm,1.7s						
KSM	**Kuching**	**16.55**	**262**	P	**Pn**	**04 09 12.6**	**+2.6**
KSM	**Kuching**	**16.55**	**262**	*e*Pn	**Pn**	**04 09 11.5**	**+1.6**
	67nm,1.1s						
IGBI	**Denpasar**	**17.07**	**222**	P	**Pn**	**04 09 16.8**	**+0.4**
	88nm,0.8s						
KAKA	**Kakadu**	**17.42**	**161**	*e*P	**Pn**	**04 09 14.7**	**-6.0**
	36nm,0.6s						
KAKA	**Kakadu**	**17.42**	**161**	*e*Pn	**Pn**	**04 09 14.8**	**-5.9**
JAGI	**Jajag, Banyuwa**	**17.51**	**226**	P	**Pn**	**04 09 22.1**	**+0.3**
	78nm,1.0s						
GMJI	**Gumukmas**	**17.89**	**228**	P	**Pn**	**04 09 28.8**	**+2.3**
	1μm77nm,1.1s						
SJI	**Sawahan**	**18.83**	**232**	P	**Pn**	**04 09 41.4**	**+3.5**
	3μm48nm,0.8s						
PWJI	**Pagerwojo**	**18.98**	**232**	P	**Pn**	**04 09 45.5**	**+5.9**
KNA	**Kununurra**	**19.59**	**174**	P	**Pn**	**04 09 43.6**	**-3.2**
	3μm372nm,0.8s						
TWG	**Pinlang**	**19.62**	**344**	*e*P	**Pn**	**04 09 42.1**	**-5.1**
	47nm,0.5s						
YULB	**Yu-li**	**20.11**	**345**	*e*P	**P**	**04 09 47.7**	**-2.8**
	59nm,1.2s						
TPI	**Tanjungpandan**	**20.14**	**251**	P	**P**	**04 09 53.8**	**+2.9**
	56nm,1.2s						
TPUB	**Ta-pu**	**20.20**	**344**	*e*P	**P**	**04 09 49.7**	**-1.8**
	71nm,0.8s						
BJII	**Banjamegara**	**20.27**	**237**	P	pP	04 10 04.7	-1.8
GUMO	**Guam**	**20.38**	**61**	LR	LR	04 16 23.2	
	comp=Z,336nm,20.3s,baz=235,slow=32						
PPBI	**Pangkal Pinang**	**21.41**	**254**	P	**P**	**04 10 05.9**	**+1.3**
	9μm24nm,1.0s,mb4.5						
LEM	**Lembang**	**21.81**	**241**	P	**P**	**04 10 08.1**	**-0.8**
	59nm,1.0s,mb4.9						
FITZ	**Fitzroy Crossi**	**21.84**	**183**	P	**P**	**04 10 06.5**	**-2.6**
	14nm,0.7s,mb4.4,baz=12,slow=9.5,SNR=29						
FITZ				S	**S**	**04 14 03.6**	**-3.3**
	12nm,0.9s,baz=172,slow=18,SNR=9.9						
FITZ	**Fitzroy Crossi**	**21.84**	**183**	*e*P	**P**	**04 10 05.9**	**-3.3**
	17nm,0.5s,mb4.6						
FITZ				*e*S	**S**	**04 14 00.7**	**-6.2**
FITZ	**Fitzroy Crossi**	**21.84**	**183**	*e*P	**P**	**04 10 06.5**	**-2.7**
	19nm,0.8s,mb4.5						
FITZ				*e*S	**S**	**04 14 01.2**	**-5.6**
FITZ	**Fitzroy Crossi**	**21.84**	**183**	P	**P**	**04 10 07.1**	**-2.1**
	50nm,1.0s,mb4.8						
CBJI	**Citeko**	**22.29**	**243**	P	**P**	**04 10 13.5**	**-0.6**
	260nm,1.0s,mb5.5						
QIZ	**Qiongzhong**	**22.33**	**314**	P	**P**	**04 10 13.5**	**-0.9**
QIZ				sP	sP	04 10 27.5	-10
QIZ				S	**S**	**04 14 17.8**	**+1.8**
QIZ				pmax	pmax		
	comp=Z,1μm,5.2s						
QIZ				LR	LR		
	comp=N,3μm,4.4s						
QIZ				LR	LR		
	comp=E,590nm,4.9s						
QIZ				LR	LR		
	comp=Z,3μm,4.0s						
QZH	**Quanzhou**	**22.37**	**340**	P	**P**	**04 10 12.8**	**-1.9**
QZH				S	**S**	**04 14 12.5**	**-4.0**
QZH				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.1						
QZH				LR	LR		
	comp=Z,3μm,19.4s						
MYKOM	**Kota Tinggi**	**22.91**	**265**	P	**P**	**04 10 20.4**	**-0.2**
RBSI	**Rajabasa**	**23.04**	**245**	P	**P**	**04 10 23.4**	**+1.4**
	comp=Z,196nm,0.7s,mb5.5						
BLSI	**Bandar Lampung**	**23.31**	**247**	P	**P**	**04 10 26.0**	**+1.6**
	comp=Z,82nm,0.6s,mb5.3						
KGM	**Kluang**	**23.42**	**266**	P	**P**	**04 10 25.6**	**+0.1**
KTGM	**Kuala Trenggan**	**23.54**	**274**	P

CTA Charters Tower 30.58 142 P **P** **04 11 30.2 +0.5**
CTAO Charters Tower 30.58 142 *e*P **P** **04 11 30.0 +0.4**
comp=Z,18nm,1.0s,mb4.8
CTAO Charters Tower 30.58 142 *e*P **P** **04 11 30.0 +0.3**
CTAO pmax pmax
comp=Z,18nm,1.0s,mb4.8
CMAR Chiang Mai Arr 30.78 300 P **P** **04 11 31.6 0.0**
comp=Z,4.9nm,0.8s,mb4.3,baz=123,slow=7.8,SNR=23
CMAR Chiang Mai Arr 30.78 300 P **P** **04 11 31.6 +0.1**
ENH Enshi 30.91 330 *e*P **P** **04 11 31.4 -1.0**
comp=Z,40nm,0.9s,mb5.2
KMI Kunming 31.27 315 P **P** **04 11 37.8 +2.0**
KMI pP pP 04 11 48.0 -4.0
KMI sP sP 04 11 53.3 -6.6
KMI PP PP 04 12 42.3 -5.2
KMI S **S** **04 16 41.0 +3.2**
KMI sS sS 04 16 58.5 -7.1
KMI SS SS 04 18 29.5 -25
KMI pmax pmax
comp=Z,10.0nm,1.4s,mb4.3
KMI LR LR
comp=N,860nm,28.4s
KMI LR LR
comp=E,880nm,24.9s
KMI LR LR
comp=Z,780nm,23.9s
KSRS Korea Array 33.46 2 P **P** **04 11 55.3 +0.6**
comp=Z,12nm,0.7s,mb4.8,baz=180,slow=9.6,SNR=40
KSRS PcP PcP 04 14 36.5 +1.9
comp=Z,4.4nm,0.8s,baz=184,slow=2.8,SNR=12
KSRS LR LR 04 26 50.5
comp=Z,216nm,19.2s,baz=194,slow=38
MJAR Matsushiro Arr 34.21 17 P **P** **04 11 59.0 -2.2**
comp=Z,3.1nm,0.8s,mb4.2,baz=190,slow=8.8,SNR=5.3
MJAR PcP PcP 04 14 38.6 +1.8
comp=Z,3.6nm,0.8s,baz=184,slow=3.1,SNR=9.4
MJAR LR LR 04 24 10.8
comp=Z,296nm,21.6s,baz=205,slow=33
MJAR Matsushiro Arr 34.21 17 P **P** **04 11 59.0 -2.3**
MJAR 04 14 38.6
XAN Xi'an 34.29 333 P **P** **04 12 00.5 -1.5**
XAN pmax pmax
comp=Z,16nm,0.9s,mb4.8
XAN pmax pmax
comp=Z,80nm,4.5s
FORT Forrest 34.46 178 *e*P **P** **04 12 01.8 -1.7**
comp=Z,33nm,0.7s,mb5.3
FORT Forrest 34.46 178 *e*P **P** **04 12 02.4 -1.1**
comp=Z,42nm,0.8s,mb5.3
CD2 Chengdu 34.53 324 P **P** **04 12 03.3 -0.8**
CD2 pP pP 04 12 12.8 -7.7
CD2 sP sP 04 12 16.8 -12
CD2 PP PP 04 13 19.3 -4.2
CD2 S **S** **04 17 29.3 +1.1**
CD2 sS sS 04 17 45.3 -11
CD2 SS SS 04 19 42.0 -18
CD2 pmax pmax
comp=Z,30nm,1.0s,mb5.1
CD2 pmax pmax
comp=Z,100nm,4.2s
CD2 LR LR
comp=E,990nm,14.4s
CD2 LR LR
comp=Z,670nm,16.8s
DL2 Dalian 35.19 353 P **P** **04 12 10.5 +0.8**
DL2 *e*S **S** **04 17 41.0 +2.8**
DL2 pmax pmax
comp=Z,60nm,0.8s,mb5.5
DL2 LR LR
comp=N,320nm,18.3s
DL2 LR LR
comp=Z,240nm,21.4s
HNR Honiara 35.66 112 LR LR 04 25 43.8
comp=Z,138nm,19.1s,baz=303,slow=34
KLBR Kellerberrin 36.27 193 *e*P **P** **04 12 17.7 -1.3**
comp=Z,54nm,1.2s,mb5.4
BJT Baijiatuau 37.24 347 *e*P **P** **04 12 27.1 -0.1**
comp=Z,128nm,0.6s,mb6.0
BJT Baijiatuau 37.24 347 *e*P **P** **04 12 27.1 0.0**
BJI Beijing 37.26 347 P **P** **04 12 27.3 0.0**
BJI pmax pmax
comp=Z,180nm,0.6s,mb6.2
BJI pmax pmax
comp=Z,260nm,3.5s
BJI LR LR
comp=N,200nm,18.2s
BJI LR LR
comp=E,320nm,14.3s
BJI LR LR
comp=Z,140nm,24.9s
EIDS Eidsvold 37.47 142 *e*P **P** **04 12 28.6 -0.6**
comp=Z,16nm,0.8s,mb5.0
NWAO Narrogin (SRO) 37.67 193 P **P** **04 12 30.0 -0.8**
comp=Z,16nm,1.0s,mb4.8,baz=13,slow=12,SNR=6.9
NWAO Narrogin (SRO) 37.67 193 P **P** **04 12 30.0 -0.8**
SNY Shenyang 37.91 356 ⇓P **P** **04 12 33.5 +0.7**
SNY pmax pmax
comp=Z,46nm,0.6s,mb5.5
STKA Stephens Creek 38.26 159 P **P** **04 12 35.3 -0.5**
comp=Z,55nm,0.7s,mb5.5,baz=335,slow=8.3,SNR=72
STKA Stephens Creek 38.26 159 *e*P **P** **04 12 35.2 -0.6**
comp=Z,36nm,0.7s,mb5.3
STKA Stephens Creek 38.26 159 *e*P **P** **04 12 35.4 -0.4**
comp=Z,9.8nm,0.8s,mb4.7
STKA *e*PcP PcP 04 14 49.3 +0.3
LZH Lanzhou 38.38 330 *e*P **P** **04 12 37.0 +0.1**
LZH pP pP 04 12 47.0 -6.4
LZH sP sP 04 12 52.5 -8.7
LZH pmax pmax
comp=Z,27nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,150nm,5.0s
LZH LR LR
comp=N,360nm,12.0s
LZH LR LR
comp=E,480nm,15.0s
LZH LR LR
comp=Z,790nm,14.6s
HHC Hu-ho-hao-te 39.27 342 *e*P **P** **04 12 45.0 +0.8**
HHC pP pP 04 12 54.8 -6.0
HHC sP sP 04 12 58.8 -10
HHC PP PP 04 14 20.5 +5.0
HHC PcP PcP 04 14 52.5 +0.5
HHC S **S** **04 18 44.0 +3.9**
HHC sS sS 04 19 00.3 -8.1
HHC SS SS 04 21 31.0 -4.9
HHC ScS ScS 04 22 48.8 +2.2
HHC pmax pmax
comp=Z,27nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,95nm,5.9s
HHC LR LR
comp=N,470nm,13.1s
HHC LR LR
comp=E,330nm,13.5s
HHC LR LR
comp=Z,500nm,14.5s
VLA Vladivostok 39.37 6*d* *i*P **P** **04 12 45.1 +0.1**
VLA pmax pmax
comp=Z,39nm,1.2s,mb5.1
SHL Shillong 39.78 306 ⇑*i*P **P** **04 12 47.0 -1.7**
comp=Z,4.5nm,0.6s,mb4.5
SHL *e*S **S** **04 18 50.0 +1.8**
CN2 Changchun 39.79 359 *e*P **P** **04 12 48.5 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,16.0s
CN2 LR LR
comp=E,300nm,16.0s
CN2 LR LR
comp=Z,200nm,16.0s
MDJ Mudanjiang 40.67 3 P **P** **04 12 56.3 +0.5**
MDJ pP pP 04 13 03.8 -8.7
MDJ sP sP 04 13 08.0 -12
MDJ PP PP 04 14 33.0 +2.3
MDJ PcP PcP 04 14 52.5 -3.9
MDJ ScP ScP 04 18 40.5 +0.3
MDJ PcS PcS 04 18 44.3 -2.7
MDJ S **S** **04 19 08.5 +7.6**
MDJ ScS ScS 04 22 57.3 +2.5
MDJ pmax pmax
comp=Z,32nm,0.8s,mb5.2
MDJ pmax pmax
comp=Z,89nm,3.9s
MDJ LR LR
comp=N,82nm,23.8s
MDJ LR LR
comp=E,80nm,24.8s
MDJ LR LR
comp=Z,130nm,26.3s
MDJ Mudanjiang 40.67 3 *e*P **P** **04 12 56.5 +0.8**
comp=Z,21nm,0.8s,mb5.0
ARMA Armidale 41.59 147 *e*P **P** **04 13 04.0 +0.5**
ARMA Armidale 41.59 147 *e*P **P** **04 13 04.0 +0.6**
comp=Z,35nm,0.8s,mb5.1
LSA Lhasa 42.34 311 P **P** **04 13 10.3 +0.7**
LSA Lhasa 42.34 311 *e*P **P** **04 13 10.3 +0.6**
comp=Z,18nm,0.7s,mb4.9
LSA Lhasa 42.34 311 *e*P **P** **04 13 10.3 +0.7**
LSA pmax pmax
comp=Z,18nm,0.7s,mb4.9
ASAJ Asahikawa 42.48 17 P **P** **04 13 12.1 +1.5**
comp=Z,7.9nm,0.6s,mb4.6,baz=209,slow=14,SNR=6.3
GTA Gaotai 42.98 329 *e*P **P** **04 13 14.3 -0.4**
GTA pP pP 04 13 24.3 -7.2
GTA sP sP 04 13 28.0 -11
GTA S **S** **04 19 38.0 +2.9**
GTA sS sS 04 19 53.8 -10
GTA pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
GTA pmax pmax
comp=Z,79nm,5.7s
GTA LR LR
comp=N,360nm,19.0s
GTA LR LR
comp=E,580nm,19.9s
GTA LR LR
comp=Z,750nm,21.6s
YUK Yuzh-Kuril'sk 43.44 20 P **P** **04 13 24.7 +6.3**
YUK 04 15 09.8
YUK SSS 04 23 41.6
YUK pmax pmax
comp=N,300nm,1.3s
YUK pmax pmax
comp=Z,223nm,1.3s,mb5.7
YUK pmax pmax
comp=E,64nm,0.7s
YUK pmax pmax
comp=N,290nm,1.4s
TAPN Taplejung 43.92 306 *e*P **P** **04 13 21.5 -1.0**
comp=N,43nm,1.0s,mb5.1
ODAN Odare 43.97 305 *e*P **P** **04 13 22.2 -0.7**
CAN Canberra 44.23 154 *e*P **P** **04 13 25.6 +0.8**
comp=N,10nm,0.8s,mb4.6
CAN Canberra 44.23 154 *e*P **P** **04 13 25.6 +0.8**
CAN pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
CNB Canberra Magne 44.39 153 *e*P **P** **04 13 27.7 +1.6**
TOO Toolangi 44.77 159 *e*P **P** **04 13 26.6 -2.4**
KLR Kul'dur 45.41 5 *e*P **P** **04 13 30.3 -3.7**
KLR *e* 04 15 07.8
GUN Gumba 45.63 306 *e*P **P** **04 13 35.3 -0.8**
comp=Z,46nm,0.8s,mb5.3
HIA Hailar 45.63 354 *e*P **P** **04 13 36.9 +1.2**
comp=Z,61nm,0.3s,mb5.8
HIA Hailar 45.63 354 *e*P **P** **04 13 36.9 +1.2**
KKN Kakani 46.07 306 *e*P **P** **04 13 38.4 -1.1**
KKN Kakani 46.07 306 *e*P **P** **04 13 38.4 -1.1**
DMN Daman 46.14 305 *e*P **P** **04 13 39.2 -0.9**
GKN Gorkha 46.67 305 *e*P **P** **04 13 42.9 -1.4**
ULN Ulaanbaatar 46.99 342 *e*P **P** **04 13 46.4 0.0**
comp=Z,19nm,0.9s,mb4.8
ULN Ulaanbaatar 46.99 342 *e*P **P** **04 13 46.4 0.0**
ULN pmax pmax
comp=Z,19nm,0.9s,mb4.8
SONM Songino Array 47.17 341 P **P** **04 13 48.0 +0.2**
comp=Z,4.1nm,0.6s,mb4.4,baz=156,slow=8.6,SNR=30
SONM PcP PcP 04 15 19.5 +1.1
comp=Z,7.5nm,0.8s,baz=159,slow=2.7,SNR=9.1
SONM LR LR 04 34 46.2
comp=Z,245nm,21.9s,baz=156,slow=37
SONM Songino Array 47.17 341 P **P** **04 13 48.0 +0.2**
SONM 04 15 19.5
KOLN Koldanda 47.43 305 *e*P **P** **04 13 49.5 -0.7**
comp=Z,46nm,0.6s,mb5.4
DANN Dangsing 47.52 305 *e*P **P** **04 13 50.1 -0.8**
comp=Z,52nm,0.7s,mb5.5
HYB Hyderabad 49.05 290 *i*P **P** **04 14 01.0 -1.8**
TLY Talaya 51.40 342 *e*P **P** **04 14 21.1 +1.1**
TLY pmax pmax
comp=Z,12nm,0.8s,mb5.0
TLY MLR MLR
comp=Z,191nm,20.0s
MOY Mondy 52.25 340 *e*P **P** **04 14 27.4 +1.1**
WMQ Urumqi 52.61 325 *e*P **P** **04 14 31.0 +1.9**
WMQ pP pP 04 14 41.0 -5.4
WMQ sP sP 04 14 45.0 -9.0
WMQ PP PP 04 16 31.0 +2.2
WMQ S **S** **04 21 54.0 +2.6**
WMQ ScS ScS 04 24 15.0 +2.2
WMQ SS SS 04 25 31.0 +0.4
WMQ pmax pmax
comp=Z,130nm,1.0s,mb5.9
WMQ pmax pmax
comp=Z,430nm,5.0s
WMQ LR LR
comp=N,430nm,18.0s
WMQ LR LR
comp=E,380nm,18.0s
WMQ LR LR
comp=Z,370nm,18.0s
BOD Bodaibo 54.74 352 *e*P **P** **04 14 43.6 -0.8**
BOD pmax pmax
comp=Z,15nm,1.2s,mb4.9
MSVF Nonsavu 54.99 115 *e*P **P** **04 14 48.5 +1.6**
comp=Z,28nm,1.1s,mb5.2
PETK Petropavlovsk- 55.32 22 P **P** **04 14 50.0 +1.3**
comp=Z,13nm,1.0s,mb4.9,baz=190,slow=2.8,SNR=7.9
PETK PcP PcP 04 15 49.7 +1.1
comp=Z,12nm,0.9s,baz=191,slow=6.0,SNR=4.3
PETK LR LR 04 35 37.0
comp=Z,116nm,21.0s,baz=217,slow=33
PETK Petropavlovsk- 55.32 22 P **P** **04 14 50.0 +1.3**
PETK PcP PcP 04 15 49.7 +1.1
PETK LR LR 04 35 37.0
PETK Petropavlovsk- 55.32 22 P **P** **04 14 50.1 +1.4**
PETK 04 15 49.7
MK31 Makanchi Array 57.44 325 *e*P **P** **04 15 03.0 -0.9**
MK31 Makanchi Array 57.44 325 *e*P **P** **04 15 03.0 -0.9**
MKAR Makanchi Array 57.44 325 P **P** **04 15 03.1 -0.8**
comp=Z,3.6nm,0.4s,mb4.7,baz=119,slow=7.4,SNR=34
MKAR PcP PcP 04 15 57.8 +0.8
comp=Z,8.4nm,0.9s,baz=116,slow=5.6,SNR=5.1
MKAR ScP ScP 04 19 55.7 +4.5
comp=Z,0.3nm,0.4s,baz=120,slow=7.5,SNR=2.8
MKAR LR LR 04 41 43.8
comp=Z,330nm,18.6s,baz=118,slow=38
MKAR Makanchi Array 57.44 325 *i*P **P** **04 15 03.0 -0.9**
MKAR pmax pmax
comp=Z,4.0nm,0.4s
KSH Kashi 57.94 315 *e*P **P** **04 15 08.0 +0.5**
KSH *e*pP pP 04 15 18.0 -7.1
KSH *e*sP sP 04 15 22.0 -11
KSH *e*PcP PcP 04 16 01.5 +2.4
KSH *e*PP PP 04 17 17.0 +0.4
KSH *e*ScP ScP 04 19 57.0 +3.4
KSH *e*PcS PcS 04 20 01.0 +0.5
KSH *e*S **S** **04 23 00.8 -1.9**
KSH *e*ScS ScS 04 24 51.0 -0.2
KSH pmax pmax
comp=Z,140nm,1.8s,mb5.7
KSH LR LR
comp=N,280nm,5.3s
KSH LR LR
comp=E,270nm,5.1s
KSH LR LR
comp=Z,550nm,23.6s
YAK Yakutsk 58.08 2 *e*P **P** **04 15 08.4 +0.3**
comp=Z,61nm,0.7s,mb5.7
YAK Yakutsk 58.08 2 *e*P **P** **04 15 07.9 -0.2**
YAK pmax pmax
comp=Z,70nm,0.9s,mb5.7
YAK pmax pmax
comp=N,27nm,1.2s
TKM2 Tokmak 2 59.63 318 P **P** **04 15 20.3 +1.1**
SNR=14
TKM2 Tokmak 2 59.63 318 *e*P **P** **04 15 18.3 -1.0**
comp=N,14nm,1.0s,mb4.9
TKM2 Tokmak 2 59.63 318 *e*P **P** **04 15 18.3 -1.0**
TKM2 pmax pmax
comp=Z,14nm,1.0s,mb5.0
KBK Karagaybulak 59.95 318 P **P** **04 15 22.7 +1.3**
SNR=5.9
KBK Karagaybulak 59.95 318 *e*P **P** **04 15 22.7 +1.2**
comp=Z,16nm,1.1s,mb5.0
AAK Ala-Archa 60.24 318 P **P** **04 15 23.4 0.0**
comp=Z,2.7nm,0.8s,mb4.4,baz=179,slow=10,SNR=12
AAK Ala-Archa 60.24 318 *e*P **P** **04 15 22.4 -1.1**
comp=Z,7.8nm,1.0s,mb4.7
AAK Ala-Archa 60.24 318 *e*P **P** **04 15 24.3 +0.8**
AAK pmax pmax
comp=Z,9.0nm,1.7s,mb4.5
FRU Bishkek 60.25 318 *e*P **P** **04 15 24.0 +0.5**
ZAA0 Zalesovo Array 60.46 333 *e*P **P** **04 15 23.7 -1.0**
ZALV Zalesovo Beam 60.46 333 P **P** **04 15 23.3 -1.4**
comp=Z,3.7nm,0.3s,mb4.8,baz=126,slow=6.6,SNR=24
ZALV LR LR 04 43 24.9
comp=Z,162nm,18.6s,baz=74,slow=38
ZALV Zalesovo Beam 60.46 333 P **P** **04 15 23.3 -1.4**
USP Ospenovka 60.51 318 P **P** **04 15 25.7 +0.4**
SNR=13
AML Almayashu 60.58 317 P **P** **04 15 27.4 +1.6**
SNR=9.2
AML Almayashu 60.58 317 *e*P **P** **04 15 27.3 +1.5**
comp=Z,26nm,0.9s,mb5.3
EKS2 Erkin-Say 60.74 318 P **P** **04 15 28.1 +1.3**
SNR=15
EKS2 Erkin-Say 60.74 318 *e*P **P** **04 15 26.9 +0.1**
comp=Z,14nm,0.8s,mb5.0
KBL Kabul 61.42 307 *e*P **P** **04 15 31.1 -0.5**
comp=Z,19nm,0.9s,mb5.1
KBL Kabul 61.42 307 *e*P **P** **04 15 31.1 -0.5**
KBL pmax pmax
comp=Z,19nm,0.9s,mb5.1
KURK Kurchatov 61.62 327 *e*P **P** **04 15 31.8 -0.8**
comp=Z,34nm,1.0s,mb5.3
KURK Kurchatov 61.62 327 *e*P **P** **04 15 31.8 -0.8**
KURK pmax pmax
comp=Z,35nm,1.0s,mb5.3
NVS Novosibirsk 61.75 333 *e*P **P** **04 15 32.2 -1.2**
NVS pmax pmax
comp=N,6.0nm,0.8s
NVS pmax pmax
comp=E,6.0nm,0.8s
NVS pmax pmax
comp=Z,12nm,0.8s,mb5.0
RPZ Rata Peaks 61.88 145 P **P** **04 15 35.1 +0.7**
comp=Z,23nm,0.8s,mb5.3,baz=326,slow=7.6,SNR=4.5
SEY Seymchan 61.92 13*de*P **P** **04 15 36.4 +2.0**
KK31 Karatay Array 63.12 317*ce*P **P** **04 15 42.1 -0.7**
KK31 pmax pmax
comp=Z,14nm,0.8s,mb4.9
KKAR Karatay Array 63.12 317 *e*P **P** **04 15 42.0 -0.8**
KKAR Karatay Array 63.12 317 *e*P **P** **04 15 42.0 -0.8**
BVAR Borovoye Array 67.20 327 P **P** **04 16 08.4 -0.6**
comp=Z,28nm,1.0s,mb5.0,baz=116,slow=6.8,SNR=49
BVAR Borovoye Array 67.20 327 P **P** **04 16 08.4 -0.6**
BRVK Borovoye 67.27 327 *e*P **P** **04 16 08.9 -0.6**
comp=Z,36nm,1.0s,mb5.2
BRVK Borovoye 67.27 327*de*P **P** **04 16 09.1 -0.4**
BRVK pmax pmax
comp=Z,49nm,1.2s,mb5.2
IDAH Dahanechah 68.48 304 *e*P **P** **04 16 17.4 -0.1**
IMYA Miami 68.94 307 *e*P **P** **04 16 19.2 -1.1**
IKOO Kooshah 69.15 303 *e*P **P** **04 16 20.9 -0.8**
ISRO Mashad 69.43 307 *e*P **P** **04 16 22.9 -0.5**
BILL Bilibino 69.44 15 *e*P **P** **04 16 24.9 +2.2**
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
BILL MLR MLR
comp=Z,200nm,24.0s
IMOG Moghan 69.50 307 *e*P **P** **04 16 21.5 -2.3**
IPAY Payeh 69.84 307 *e*P **P** **04 16 25.0 -0.8**
IAKL Akhelmad 70.05 307 *e*P **P** **04 16 26.3 -0.9**
IKRD Kardeh 70.28 308 *e*P **P** **04 16 23.5 -5.0**
ISFR Sfrayin 70.73 308 *e*P **P** **04 16 31.2 -0.1**
CASY Casey 70.94 187 *e*P **P** **04 16 31.7 -0.2**
CASY Casey 70.94 187 *e*P **P** **04 16 32.2 +0.3**
comp=Z,4.3nm,0.8s,mb4.3
AB31 Akbulak array 72.03 321*ce*P **P** **04 16 38.3 -0.6**
AB31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
ABKAR Akbulak array 72.03 321 *e*P **P** **04 16 37.9 -1.0**
comp=Z,7.8nm,0.6s,mb4.7
AKTK Aktyubinsk 73.54 322 P **P** **04 16 47.4 -0.4**
AKTO Aktyubinsk 73.54 322 P **P** **04 16 47.4 -0.4**
comp=Z,17nm,0.8s,mb4.8,baz=100,slow=6.8,SNR=50
AKTO Aktyubinsk 73.54 322 P **P** **04 16 47.4 -0.4**
AKUT Akutan 73.83 34 *e*P **P** **04 16 50.3 +0.9**
comp=Z,118nm,1.4s,mb5.4
SVE Sverdlovsk 73.84 328⇓*e*P **P** **04 16 49.8 +0.4**
SVE pmax pmax
comp=Z,30nm,0.9s,mb5.0
MIR Mirnyy 74.27 193 *e*P **P** **04 16 52.0 +0.3**
MIR pmax pmax
comp=Z,30nm,1.2s,mb4.9
ARU Arti 74.81 328 *e*P **P** **04 16 54.8 -0.2**
comp=Z,16nm,0.7s,mb4.8
ARU Arti 74.81 328*c i*P **P** **04 16 54.9 -0.2**
ARU 04 19 39.3
ARU S S 04 26 30.9 +4.4
ARU SS SS 04 31 18.5 +2.9
ARU pmax pmax
comp=Z,22nm,1.0s,mb4.8
IKLH Kolahrood 75.46 303 *e*P **P** **04 16 57.9 -1.4**
IPIR Pirpir 75.99 303 *e*P **P** **04 17 01.7 -0.6**
SDPT Sand Point 77.11 34 *e*P **P** **04 17 08.9 +0.8**
comp=Z,78nm,0.8s,mb5.5
CHGN Chignik 78.43 33 *e*P **P** **04 17 15.4 -0.1**
SVW2 Sparrevohn 80.71 29 *e*P **P** **04 17 29.0 +1.3**
comp=Z,30nm,1.7s,mb4.8
TTA Tatalina 80.80 27 *e*P **P** **04 17 29.9 +1.7**
TTA Tatalina 80.80 27 *e*P **P** **04 17 29.9 +1.7**
OHAK Old Harbor 81.36 33 *e*P **P** **04 17 32.8 +1.5**
comp=Z,25nm,1.0s,mb5.0
KDAK Kodiak Island 81.80 32 *e*P **P** **04 17 34.6 +1.1**
comp=Z,25nm,0.9s,mb5.0
KDAK Kodiak Island 81.80 32*ce*P **P** **04 17 35.2 +1.6**
RSO Redoubt South 82.00 30 *e*P **P** **04 17 35.9 +1.4**
ZEI Tsey 82.11 312 *e*P **P** **04 17 34.5 -1.1**
ZEI pmax pmax
comp=Z,11nm,0.9s,mb4.7
PPLA Purkeypile 82.53 27 *e*P **P** **04 17 38.3 +1.0**
comp=Z,44nm,1.6s,mb5.0
KIV Kislovodsk 83.03 314 *e*P **P** **04 17 40.7 +0.4**
KIV pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
BPAW Bear Paw Mtn. 83.19 26 *e*P **P** **04 17 41.7 +1.0**
comp=Z,32nm,1.2s,mb5.0
TRF Thorofare Moun 83.44 27 *e*P **P** **04 17 42.9 +0.9**
comp=Z,25nm,1.1s,mb5.0
SEW Seward 83.61 30 *e*P **P** **04 17 43.4 +0.5**
comp=Z,35nm,1.0s,mb5.2
COLD Coldfoot 83.79 23 *e*P **P** **04 17 45.4 +1.7**
comp=Z,25nm,0.9s,mb5.0
PMR Palmer 83.85 29 *e*P **P** **04 17 44.5 +0.4**
comp=Z,39nm,1.0s,mb5.2
PMR Palmer 83.85 29 *e*P **P** **04 17 44.5 +0.4**
PMR pmax pmax
comp=Z,39nm,1.0s,mb5.2
MAW Mawson 83.86 200 P **P** **04 17 44.1 +0.1**
comp=Z,4.4nm,0.9s,mb4.3,baz=88,slow=3.1,SNR=6.8
MAW LR LR 04 52 02.5
comp=Z,97nm,20.6s,baz=270,slow=34
MAW Mawson 83.86 200 P **P** **04 17 44.1 +0.1**
MAW LR LR 04 52 02.5
MAW Mawson 83.86 200 P **P** **04 17 44.1 +0.1**
VRHR Novokhopersk 83.92 321 *e*P **P** **04 17 43.3 -1.4**
VRHR pmax pmax
comp=N,8.0nm,0.6s
VRHR pmax pmax
comp=E,8.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
MCK McKinley 84.06 26 *e*P **P** **04 17 45.8 +0.6**
comp=Z,23nm,0.9s,mb5.0
MCK McKinley 84.06 26 *e*P **P** **04 17 45.8 +0.6**
MCK pmax pmax
comp=Z,23nm,0.9s,mb5.0
ILAR Eielson Array 85.00 25 P **P** **04 17 50.0 +0.1**
comp=Z,2.0nm,0.9s,mb4.0,baz=251,slow=5.9,SNR=11
ILAR Eielson Array 85.00 25 P **P** **04 17 50.0 +0.1**
KLMR Klimovskoe 85.28 331 *e*P **P** **04 17 50.2 -1.2**

KLMR pmax pmax
comp=Z,129nm,1.4s,mb5.7
VORD Divnogorie 85.40 321 *e*P **P 04 17 51.7 -0.4**
VORD pmax pmax
comp=E,20nm,0.9s
VORD pmax pmax
comp=Z,20nm,0.9s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.6s
DIV Divide 85.45 29 *e*P **P 04 17 53.5 +1.2**
comp=N,32nm,0.9s,mb5.2
VSR Storozhevoye 85.47 321 *e*P **P 04 17 52.0 -0.5**
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VSR pmax pmax
comp=N,10.0nm,1.6s
VSR pmax pmax
comp=E,20nm,1.1s
PAX Paxson 85.60 27 *e*P **P 04 17 53.5 +0.5**
comp=E,7.5nm,0.8s,mb4.7
PAX Paxson 85.60 27 *e*P **P 04 17 53.5 +0.6**
PAX pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BMRM Bremner River 86.02 29 *e*P **P 04 17 55.6 +0.6**
comp=Z,20nm,1.0s,mb5.0
MALT Malatya 86.28 308 *e*P **P 04 17 56.8 0.0**
comp=Z,9.0nm,1.1s,mb4.6
MALT Malatya 86.28 308 *e*P **P 04 17 56.8 0.0**
MALT pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MALT Malatya 86.28 308⇓*i*P **P 04 17 57.5 +0.7**
MOS Moscow 86.32 325 *e*P **P 04 17 55.3 -1.3**
MOS pmax pmax
comp=Z,106nm,1.3s,mb5.6
ANN Anapa 86.79 315 *e*P **P 04 17 58.0 -1.2**
ANN pmax pmax
comp=Z,37nm,1.0s,mb5.3
OBN Obninsk 86.94 325 *e*P **P 04 17 59.3 -0.4**
comp=Z,59nm,1.2s,mb5.4
OBN Obninsk 86.94 325⇓*i*P **P 04 17 59.2 -0.5**
OBN *i* 04 18 06.2
OBN pmax pmax
comp=Z,77nm,1.5s,mb5.4
OBN MLR MLR
comp=Z,200nm,19.0s
APA Apatity 87.73 337⇑*e*P **P 04 18 12.2 +9.0**
APA pmax pmax
comp=Z,36nm,1.2s,mb5.3
APA MLR MLR
comp=Z,1μm,18.0s
BRTR Keskin Array B 89.92 310 P **P 04 18 13.2 -0.9**
comp=Z,7.2nm,0.9s,mb4.8,baz=116,slow=4.0,SNR=33
BRTR LR LR 05 07 57.1
comp=Z,56nm,20.3s,baz=261,slow=42
BRTR Keskin Array B 89.92 310*ce*P **P 04 18 13.1 -1.0**
BRTR pmax pmax
comp=Z,7.0nm,0.9s
ARCES ARCESS Array B 90.32 340 P **P 04 18 15.0 -0.3**
comp=Z,11nm,0.8s,mb5.0,baz=78,slow=5.4,SNR=30
ARCES ARCESS Array B 90.32 340 P **P 04 18 15.0 -0.3**
FINES FINESS Array B 91.71 332 P **P 04 18 20.9 -1.0**
comp=Z,3.3nm,0.7s,mb4.7,baz=85,slow=4.0,SNR=5.6
FINES FINESS Array B 91.71 332 P **P 04 18 20.9 -1.0**
AKASG Malin Array Be 91.78 321 P **P 04 18 21.3 -1.2**
comp=Z,7.9nm,0.7s,mb5.0,baz=72,slow=4.4,SNR=28
AKASG LR LR 05 05 13.9
comp=Z,115nm,21.2s,baz=60,slow=39
AKASG Malin Array Be 91.78 321*ce*P **P 04 18 21.2 -1.3**
AKASG pmax pmax
comp=Z,8.0nm,0.7s
KIEV Kiev 91.79 321 *e*P **P 04 18 20.7 -1.8**
comp=Z,11nm,1.0s,mb5.0
KIEV Kiev 91.79 321 *e*P **P 04 18 20.7 -1.9**
KIEV pmax pmax
comp=Z,11nm,1.0s,mb5.0
SYO Syowa Base 92.53 201⇑*e*P **P 04 18 25.0 -0.6**
VIB Van Inlet 93.35 36 T 06 01 41.4
SNR=20
DIB Dawson Inlet, 93.40 36 T 06 02 32.3
SNR=18
DLBC Dease Lake 93.65 31 P **P 04 18 32.5 +1.6**
comp=Z,4.5nm,0.8s,mb4.8,baz=274,slow=9.7,SNR=6.9
VRI Vrincioaia 94.19 316⇑*i*P **P 04 18 33.8 +0.1**
SUW Suwalki 94.81 325 *e*P **P 04 18 36.0 -0.3**
SUW Suwalki 94.81 325 *e*P **P 04 18 36.0 -0.3**
comp=Z,62nm,1.0s,mb6.0
SUW Suwalki 94.81 325 *e*P **P 04 18 36.0 -0.4**
BURAR Bucovina Array 94.89 318⇑*i*P **P 04 18 36.9 0.0**
BUR08 Bucovina Ar. S 94.89 318 *e*P **P 04 18 36.8 -0.1**
LVV L'vov 95.21 321 *e*P **P 04 18 37.5 -0.8**
KWP Kalwaria Pacla 96.09 321 *e*P **P 04 18 42.5 +0.2**
KWP Kalwaria Pacla 96.09 321 *e*P **P 04 18 42.5 +0.2**
KWP Kalwaria Pacla 96.09 321⇑*i*P **P 04 18 42.8 +0.5**
KOLS Kolonicke sedl 96.53 320 *e*P **P 04 18 44.6 +0.3**
comp=Z,8.5nm,1.5s,mb5.0
KOLS Kolonicke sedl 96.53 320 *e*P **P 04 18 44.6 +0.3**
KOLS pmax pmax
comp=Z,9.0nm,1.5s,mb5.0
KOLS Kolonicke sedl 96.53 320 *e*P **P 04 18 44.6 +0.3**
UZH Uzhgorod 96.59 320*c i*P **P 04 18 45.0 +0.4**
UZH *i* 04 18 53.0
UZH *e* pP 04 19 00.0 -3.4
DRGR 96.73 318⇓*i*P **P 04 18 45.3 0.0**
CRVS Cervenica-Dubn 97.06 320 *e*P **P 04 18 47.2 +0.5**
comp=Z,17nm,1.0s,mb5.4
CRVS Cervenica-Dubn 97.06 320 *e*P **P 04 18 47.2 +0.5**
CRVS pmax pmax
comp=Z,17nm,1.0s,mb5.4
CRVS Cervenica-Dubn 97.06 320 *e*P **P 04 18 47.2 +0.5**
RES Resolute Bay 97.69 10 P **P 04 18 49.7 +0.6**
comp=Z,7.6nm,0.8s,mb5.3,baz=321,slow=4.7,SNR=3.8
RES Resolute Bay 97.69 10 P **P 04 18 49.7 +0.6**
RES Resolute Bay 97.69 10 P **P 04 18 49.7 +0.6**
BZS Buzias 97.74 317⇑*i*P **P 04 18 48.7 -1.2**
KECS Kecovo 97.79 320 *e*P **P 04 18 49.4 -0.6**
KECS Kecovo 97.79 320 *e*P **P 04 18 49.4 -0.6**
KECS Kecovo 97.79 320 *e*P **P 04 18 49.4 -0.6**
NOA NORSAR Array B 98.66 334 P **P 04 18 52.7 -1.0**
comp=Z,5.4nm,0.8s,mb5.2,baz=66,slow=4.6,SNR=22
NOA LR LR 05 08 22.6
comp=Z,165nm,20.1s,baz=55,slow=38
NOA NORSAR Array B 98.66 334 P **P 04 18 52.7 -1.0**
VYHS Vyhne 98.84 320 *e*P **P 04 18 54.6 -0.2**
comp=Z,3.3nm,1.4s,mb4.7
VYHS Vyhne 98.84 320 *e*P **P 04 18 54.6 -0.2**
VYHS pmax pmax
comp=Z,3.0nm,1.4s,mb4.6
VYHS Vyhne 98.84 320 PDIF **P 04 18 54.6 -0.2**
OKC Ostrava-Krasne 98.90 322 *e*P **P 04 18 55.2 +0.2**
OKC Ostrava-Krasne 98.90 322 *e*PDIFF **P 04 18 55.2 +0.2**
MORC Moravsky Berou 99.29 322⇓*i*P **P 04 18 57.0 +0.3**
PKSM Moragy 99.60 318⇑*i*P Pdif 04 18 58.2 +0.2
DPC Dobruska-Polom 99.86 322 *e*P Pdif 04 19 00.0 +0.9
DPC Dobruska-Polom 99.86 322 *e*PDIFF Pdif 04 19 00.0 +0.9
UPC Upice 100.00 323 *e*P Pdif 04 19 00.7 +0.9
UPC Upice 100.00 323 *e*PDIFF Pdif 04 19 00.7 +0.9
TREC Trest 100.71 322 *e*P Pdif 04 19 02.9 0.0
TREC Trest 100.71 322 *e*PDIFF Pdif 04 19 02.9 0.0
BRG Berggiesshubel 101.12 323 *e*PKP Pdif 04 19 05.2 +0.4
comp=Z,14nm,1.2s
BRG Berggiesshubel 101.12 323 *e*P Pdif 04 19 05.2 +0.5
BRG pmax pmax
comp=Z,8.0nm,1.2s
CLL Collm 101.52 324 *i*P Pdif 04 19 07.7 +1.2
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 101.52 324 *i* Pdif Pdif 04 19 07.7 +1.2
comp=Z,4.0nm,0.8s
CLL LmV 05 11 00.0
comp=Z,100nm,22.0s
SOKA Soboth 101.84 319⇑*i*Pdiff Pdif 04 19 07.9 -0.1
comp=Z,3.9nm,1.1s
KHC Kasperske Hory 101.95 322 *e*P Pdif 04 19 08.6 +0.2
KHC Kasperske Hory 101.95 322 *e*PDIFF Pdif 04 19 08.6 +0.2
GERES GERESS Array B 101.97 322 P Pdif 04 19 08.2 -0.3
comp=Z,2.2nm,0.9s,baz=79,slow=5.1,SNR=11
GERES GERESS Array B 101.97 322 P Pdif 04 19 08.2 -0.3
BOJS Bojanci 102.07 318 *i*P Pdif 04 19 09.4 +0.4
VISS Visnje 102.25 318 *i*P Pdif 04 19 10.4 +0.6
JAVS Javornik 102.73 319 *i*P Pdif 04 19 11.4 -0.5
FETA Feichten 104.49 321⇑*i*Pdiff Pdif 04 19 20.1 +0.4
comp=Z,3.7nm,1.0s
NVAR Mina Array Bea 106.84 48 PKKP PKKPab 04 35 14.0 -0.9
comp=Z,0.6nm,0.8s,baz=119,slow=4.5,SNR=4.1
SCHQ Schefferville 120.45 9 PKP PKPdf 04 24 06.5 +0.7
comp=Z,5.4nm,0.9s,baz=288,slow=3.2,SNR=3.2
TXAR Lajitas Array 121.54 52 PKP PKPdf 04 24 10.1 +1.4
comp=Z,0.9nm,0.8s,baz=270,slow=0.6,SNR=8.0
TXAR Lajitas Array 121.54 52 PKIKP PKPdf 04 24 10.1 +1.4
TORD Torodi Ar. Bea 122.85 288 PKP PKPdf 04 24 11.3 -0.2
comp=Z,2.9nm,0.7s,baz=75,slow=1.7,SNR=21
TORD Torodi Ar. Bea 122.85 288 PKP PKPdf 04 24 11.3 -0.2
JCT Junction City 124.00 49 *e*PKPdf PKPdf 04 24 15.0 +1.6
JCT Junction City 124.00 49 *e*PKIKP PKPdf 04 24 15.0 +1.6
MIAR Mount Ida 126.20 41 *e*PKPdf PKPdf 04 24 19.6 +2.1
MIAR Mount Ida 126.20 41 *e*PKIKP PKPdf 04 24 19.6 +2.1
WVT Waverly 128.77 36 *e*PKPdf PKPdf 04 24 24.1 +1.7
WVT Waverly 128.77 36 *e*PKIKP PKPdf 04 24 24.1 +1.7
DBIC Dimbokro 130.52 282 PKP PKPdf 04 24 26.2 -0.1
comp=Z,4.1nm,1.1s,baz=170,slow=4.8,SNR=3.1
DBIC Dimbokro 130.52 282 PKIKP PKPdf 04 24 26.2 -0.1
PLCA Paso Flores 140.13 159 PKP PKPdf 04 24 44.9 +1.4
comp=Z,2.1nm,0.8s,baz=210,slow=15,SNR=2.8
PLCA Paso Flores 140.13 159 PKIKP PKPdf 04 24 44.9 +1.5
TRQA Tornquist 145.05 168 *e*PKPdf PKPdf 04 24 52.2 0.0
GTBY Guantanamo Bay 148.09 41 *e*PKPdf PKPdf 04 25 00.4 +2.6
GTBY *e*PKPbc PKPbc 04 25 03.1 +2.0
BCIP Isla Barro Col 150.55 64 *e*PKPbc PKPbc 04 25 08.3 +0.9
LPAZ La Paz 160.89 131 PKP PKPdf 04 25 18.5 +2.9
comp=Z,1.7nm,0.9s,baz=7.4,slow=9.0,SNR=4.7
LPAZ PKPab PKPab 04 26 00.0 +1.7
comp=Z,0.7nm,0.3s,baz=206,slow=2.5,SNR=11
LPAZ La Paz 160.89 131 PKIKP PKPdf 04 25 18.5 +2.9

DDA ***30*** *04:08:07.9, 34°.54N×32°.02E, h4km, Md3.3*
HLW ***30*** *04:08:13.8, 34°.83N×31°.71E, h33km±20km, Md3.1, Ml2.6*
ISK ***30*** *04:08:15.6, 34°.51N×32°.09E, h17km, MD3.6*
NEIC ***30*** *04:08:16.3, 34°.57N×31°.99E, h35km, MD3.4(ISK), ML3.1(NIC), After NIC.*
ISCJB ***30*** *04:08:16.6±0.4, 34°.50N±0°.03×32°.05E±0°.05, h39km±26km, Error ellipse: s-maj=6.9km s-min=4.7km az=153.5*
NIC ***30*** *04:08:16.3±0.2, 34°.57N×31°.99E, h35km, ML3.1, MW3.4*
CSEM ***30*** *04:08:17.2±0.2, 34°.53N×32°.13E, h20km, Mw3.4, Error ellipse: s-maj=5.0km s-min=4.1km az=104.0*

ISC 30 04:08:17.2±0.8,**34°.52N**±0°.03×**32°.09E**±0°.04,**h23**km±7km, **n54**,σ1°**04**/72,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.42**	**30**	P	**Pb**	**04 08 26.0**	**0.0**
PPCY	**Paphos**	**0.42**	**30**	P	**Pb**	**04 08 26.0**	**0.0**
SZAC	**Souni-Zanaja**	**0.70**	**70**	P	**Pb**	**04 08 30.3**	**-0.3**
SZAC				S	**Sb**	**04 08 41.8**	**+2.0**
SZAC	**Souni-Zanaja**	**0.70**	**70**	P	**Pb**	**04 08 30.3**	**-0.3**
ALFC	**Alevga**	**0.76**	**33**	P	**Pb**	**04 08 30.8**	**-1.0**
50nm,0.2s							
ALFC				S	**Sb**	**04 08 41.7**	**-0.1**
ALFC	**Alevga**	**0.76**	**33**	P	**Pb**	**04 08 30.8**	**-1.0**
50nm,0.2s							
ALFC				S	**Sb**	**04 08 41.7**	**-0.1**
LEF	**Lefka**	**0.89**	**47**	*e*PG	**Pb**	**04 08 32.8**	**-1.2**
LEF				*e*SG	**Sb**	**04 08 45.2**	**-0.2**
LEF	**Lefka**	**0.89**	**47**	*e*Pg	**Pb**	**04 08 32.8**	**-1.2**
LEF				*e*Sg	**Sb**	**04 08 45.2**	**-0.2**
CSS	**Prodhromos**	**1.11**	**66**	P	**Pn**	**04 08 36.2**	**-1.2**
8.3nm,0.3s							
CSS				S	**Sb**	**04 08 51.8**	**0.0**
CSS	**Prodhromos**	**1.11**	**66**	P	**Pn**	**04 08 36.2**	**-1.2**
8.3nm,0.3s							
CSS				S	**Sb**	**04 08 51.8**	**0.0**
MAMC	**Mammari**	**1.13**	**55**	P	**Pn**	**04 08 36.8**	**-0.9**
MAMC	**Mammari**	**1.13**	**55**	P	**Pn**	**04 08 36.8**	**-0.9**
LFK	**Lefkose**	**1.41**	**57**	*e*PN	**Pn**	**04 08 41.4**	**-0.1**
LFK				*e*SN	**Sn**	**04 08 59.8**	**+0.5**
LFK	**Lefkose**	**1.41**	**57**	*e*Pn	**Pn**	**04 08 41.4**	**-0.1**
LFK				*e*Sn	**Sn**	**04 08 59.8**	**+0.5**
PHNC	**Paralimni**	**1.67**	**73**	P	**Pn**	**04 08 43.0**	**-2.1**
2.4nm,0.3s							
PHNC				S	**Sn**	**04 09 05.8**	**0.0**
PHNC	**Paralimni**	**1.67**	**73**	P	**Pn**	**04 08 43.0**	**-2.1**
2.4nm,0.3s							
PHNC				S	**Sn**	**04 09 05.8**	**0.0**
ERMK	**Ermenek**	**2.22**	**17**	*i*P	**Pn**	**04 08 44.4**	**-8.2**
ERMK				*i*S	**Sn**	**04 09 13.9**	**-5.5**
HDMB	**Hadim**	**2.46**	**7**	*e*PN	**Pn**	**04 08 56.5**	**+0.6**
HDMB	**Hadim**	**2.46**	**7**	*e*Pn	**Pn**	**04 08 56.5**	**+0.6**
SUTC	**Sutluce-Ispart**	**3.08**	**344**	*e*PN	**Pn**	**04 09 05.3**	**+0.9**
SUTC	**Sutluce-Ispart**	**3.08**	**344**	*e*Pn	**Pn**	**04 09 05.3**	**+0.8**
BCK	**Bucak**	**3.18**	**338**	*e*PN	**Pn**	**04 09 06.8**	**+1.0**
BCK	**Bucak**	**3.18**	**338**	*e*Pn	**Pn**	**04 09 06.8**	**+1.0**
FETY	**Fethiye**	**3.23**	**312**	*e*PN	**Pn**	**04 09 06.6**	**0.0**
FETY	**Fethiye**	**3.23**	**312**	*e*Pn	**Pn**	**04 09 06.6**	**0.0**
GOLH	**Golhisar**	**3.40**	**324**	*i*P	**Pn**	**04 09 06.5**	**-2.4**
GOLH				*i*S	**Sn**	**04 09 45.2**	**-3.3**
GOLH	**Golhisar**	**3.40**	**324**	*i*P	**Pn**	**04 09 06.5**	**-2.4**
KONT	**Konya--Tatoy**	**3.43**	**4**	*e*PN	**Pn**	**04 09 10.1**	**+0.8**
KONT	**Konya--Tatoy**	**3.43**	**4**	*e*Pn	**Pn**	**04 09 10.1**	**+0.9**
KARA	**Karaisali**	**3.64**	**40**	*e*PN	**Pn**	**04 09 12.9**	**+0.7**
KARA	**Karaisali**	**3.64**	**40**	*e*Pn	**Pn**	**04 09 12.9**	**+0.7**
TURN	**Turunc**	**3.68**	**311**	*i*P	**Pn**	**04 09 13.9**	**+1.1**
TURN				*i*S	**Sn**	**04 09 57.1**	**+1.7**
TURN	**Turunc**	**3.68**	**311**	*i*P	**Pn**	**04 09 13.9**	**+1.1**
TURN				*i*S	**Sn**	**04 09 57.1**	**+1.6**
AMAG	**Maghara**	**3.98**	**166**	P	**Pn**	**04 09 17.9**	**+1.1**
baz=162							
AMAG	**Maghara**	**3.98**	**166**	P	**Pn**	**04 09 17.9**	**+1.1**
KOZT	**Kozan**	**4.23**	**45**	*e*PN	**Pn**	**04 09 20.6**	**+0.3**
KHAL	**Karahalli**	**4.38**	**332**	*i*P	**Pn**	**04 09 21.7**	**-0.6**
KHAL				*i*S	**Sn**	**04 10 11.9**	**-0.7**
KHAL	**Karahalli**	**4.38**	**332**	*i*P	**Pn**	**04 09 21.7**	**-0.6**
KHAL				*i*S	**Sn**	**04 10 11.9**	**-0.7**
HHAG	**Hagoal**	**4.55**	**180**	S	**Sn**	**04 10 15.5**	**-1.4**
baz=176							
HHAG				AMP		04 10 00.0	
comp=E,10μm,0.3s,logA/T=4.5,baz=176							
HHAG	**Hagoal**	**4.55**	**180**	S	**Sn**	**04 10 15.5**	**-1.4**
KOT	**Kottamia**	**4.58**	**183**	S	**Sn**	**04 10 16.3**	**-1.3**
baz=178							
KOT	**Kottamia**	**4.58**	**183**	S	**Sn**	**04 10 16.3**	**-1.4**
AYDN	**Tasoluk**	**4.63**	**314**	*i*P	**Pn**	**04 09 25.4**	**-0.4**
AYDN				*i*S	**Sn**	**04 10 13.2**	**-5.6**
AYDN	**Tasoluk**	**4.63**	**314**	*i*P	**Pn**	**04 09 25.4**	**-0.4**
HSAF	**As Saff**	**4.91**	**185**	P	**Pn**	**04 09 29.8**	**+0.2**
baz=182							
HSAF	**As Saff**	**4.91**	**185**	P	**Pn**	**04 09 29.8**	**+0.2**
GLL	**Jalalah**	**4.94**	**184**	P	**Pn**	**04 09 29.9**	**-0.1**
baz=181							
GLL	**Jalalah**	**4.94**	**184**	P	**Pn**	**04 09 29.9**	**-0.1**
HKAT	**Jabal Katrina**	**6.19**	**164**	P	**Pn**	**04 09 48.9**	**+1.6**
baz=162							
HKAT	**Jabal Katrina**	**6.19**	**164**	P	**Pn**	**04 09 48.9**	**+1.6**
TR2		**6.27**	**167**	P	**Pn**	**04 09 50.0**	**+1.7**
baz=164							
TR2		**6.27**	**167**	P	**Pn**	**04 09 50.0**	**+1.7**
MALT	**Malatya**	**6.36**	**52**	*e*Pn	**Pn**	**04 09 49.9**	**+0.4**
MALT	**Malatya**	**6.36**	**52**	*e*Pn	**Pn**	**04 09 49.9**	**+0.4**

BJI 30 04:10:41.4,33°.54N×97°.36E,h12km,ML3.7/4,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**6.18**	**18**	*e*P	Pn	04 12 04.5	-8.0
GTA				pP		04 12 11.0	
GTA				sP		04 12 14.5	
GTA				pmax	pmax		
comp=Z,4.0nm,1.0s							

DDA 30 04:24:48.5,36°.64N×34°.62E,h7km±3km,Md2.8,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GULE	**Gulek**	**0.66**	**11**	*i*P	Pg	04 25 01.1	-0.1
GULE				*i*S	Sg	04 25 12.7	+3.0

ISK ***30*** *04:25:47.1, 36°.97N×29°.15E, h5km, MD3.3*
DDA ***30*** *04:25:47.5, 36°.93N×29°.19E, h24km±2km, Md3.2*
ISCJB ***30*** *04:25:48.4±0.5, 36°.98N±0°.02×29°.16E±0°.03, h2km±5km, Error ellipse: s-maj=4.3km s-min=3.6km az=137.9*
CSEM ***30*** *04:25:48.3±0.2, 36°.95N×29°.15E, h2km, MD3.3, Error ellipse: s-maj=3.6km s-min=3.1km az=18.0*

ISC 30 04:25:48.9±0.5,**36°.97N**±0°.02×**29°.17E**±0°.03,**h3**km±4km, **n67**,σ0°**94**/86,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**55**	*e*PG	**Pg**	**04 25 54.9**	**-0.3**
GLHS				*e*SG	**Sg**	**04 26 00.5**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.33**	**55**	*e*Pg	**Pg**	**04 25 54.9**	**-0.3**
GLHS				*e*Sg	**Sg**	**04 26 00.5**	**+1.1**
FETY	**Fethiye**	**0.34**	**191**	*e*PG	**Pg**	**04 25 54.6**	**-0.9**
FETY				*e*SG	**Sg**	**04 26 00.7**	**+0.9**
FETY	**Fethiye**	**0.34**	**191**	*e*Pg	**Pg**	**04 25 54.6**	**-0.8**
FETY				*e*Sg	**Sg**	**04 26 00.7**	**+0.9**
GOLH	**Golhisar**	**0.41**	**50**	*i*P	**Pg**	**04 25 55.5**	**-1.4**
GOLH				*i*S	**Sg**	**04 26 03.0**	**+0.7**
GOLH	**Golhisar**	**0.41**	**50**	*i*P	**Pg**	**04 25 55.5**	**-1.4**
GOLH				*i*S	**Sg**	**04 26 03.0**	**+0.7**
ELL	**Elmali**	**0.64**	**110**	*e*PG	**Pg**	**04 26 01.0**	**-0.1**
ELL	**Elmali**	**0.64**	**110**	*e*Pg	**Pg**	**04 26 01.0**	**-0.1**
DNZL	**Cakiroluk**	**0.72**	**353**	*i*P	**Pg**	**04 26 02.0**	**-0.8**
DNZL				*i*S	**Sg**	**04 26 14.1**	**+1.8**
DNZL	**Cakiroluk**	**0.72**	**353**	*i*P	**Pg**	**04 26 02.0**	**-0.8**
DNZL				*i*S	**Sg**	**04 26 14.1**	**+1.8**
YER	**Yerkesik**	**0.72**	**283**	*e*PG	**Pg**	**04 26 01.7**	**-1.1**
YER				*e*SG	**Sg**	**04 26 12.9**	**+0.7**
YER	**Yerkesik**	**0.72**	**283**	*e*Pg	**Pg**	**04 26 01.7**	**-1.1**
YER				*e*Sg	**Sg**	**04 26 12.9**	**+0.7**
DENT	**Denizli**	**0.79**	**352**	*e*PG	**Pg**	**04 26 02.9**	**-1.2**
DENT	**Denizli**	**0.79**	**352**	*e*Pg	**Pg**	**04 26 02.9**	**-1.2**
AKAS	**Kas**	**0.81**	**154**	*i*P	**Pg**	**04 26 03.7**	**-0.9**
AKAS				*i*S	**Sg**	**04 26 19.6**	**+4.5**
AKAS	**Kas**	**0.81**	**154**	*i*P	**Pg**	**04 26 03.7**	**-0.8**
ARG	**Arkhangelos**	**1.12**	**228**	*e*P	**Pg**	**04 26 10.2**	**-0.3**
MLSB	**Milas**	**1.16**	**287**	*e*PN	**Pn**	**04 26 10.5**	**-1.5**
MLSB	**Milas**	**1.16**	**287**	*e*Pn	**Pn**	**04 26 10.5**	**-1.5**
ANTB	**Antalya**	**1.20**	**93**	*e*PN	**Pn**	**04 26 11.5**	**-1.1**
ANTB	**Antalya**	**1.20**	**93**	*e*Pn	**Pn**	**04 26 11.5**	**-1.0**
AYDN	**Tasoluk**	**1.24**	**304**	*i*P	**Pg**	**04 26 12.4**	**-0.2**
AYDN				*i*S	**Sg**	**04 26 29.7**	**+1.0**
AYDN	**Tasoluk**	**1.24**	**304**	*i*P	**Pg**	**04 26 12.4**	**-0.2**
AYDN				*i*S	**Sg**	**04 26 29.7**	**+1.1**
BCK	**Bucak**	**1.24**	**66**	*e*PN	**Pn**	**04 26 11.5**	**-1.6**
BCK	**Bucak**	**1.24**	**66**	*e*Pn	**Pn**	**04 26 11.5**	**-1.6**
DAT	**Datca**	**1.29**	**260**	*e*PN	**Pn**	**04 26 13.0**	**-0.9**
DAT	**Datca**	**1.29**	**260**	*e*Pn	**Pn**	**04 26 13.0**	**-0.9**
KHAL	**Karahalli**	**1.42**	**10**	*i*P	**Pn**	**04 26 15.4**	**-0.3**
KHAL				*i*S	**Sb**	**04 26 35.8**	**+1.2**
KHAL	**Karahalli**	**1.42**	**10**	*i*P	**Pn**	**04 26 15.4**	**-0.3**
KHAL				*i*S	**Sb**	**04 26 35.8**	**+1.2**
BODT	**Bodrum**	**1.49**	**274**	*e*PN	**Pn**	**04 26 15.9**	**-0.7**
BODT	**Bodrum**	**1.49**	**274**	*e*Pn	**Pn**	**04 26 15.9**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.55**	**70**	*e*PN	**Pn**	**04 26 17.7**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.55**	**70**	*e*Pn	**Pn**	**04 26 17.7**	**+0.3**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*PN	**Pn**	**04 26 17.3**	**-0.7**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*Pn	**Pn**	**04 26 17.3**	**-0.7**
SHUT	**Suhut-Afyon**	**1.93**	**34**	*e*PN	**Pn**	**04 26 22.8**	**+0.2**
SHUT	**Suhut-Afyon**	**1.93**	**34**	*e*Pn	**Pn**	**04 26 22.8**	**+0.2**
SMG	**Samos**	**2.00**	**292**	*e*P	**Pn**	**04 26 23.5**	**-0.1**
IZM	**Izmir**	**2.08**	**314**	*e*PN	**Pn**	**04 26 24.3**	**-0.3**
IZM	**Izmir**	**2.08**	**314**	*e*Pn	**Pn**	**04 26 24.3**	**-0.4**
DEMI	**Demirci**	**2.10**	**350**	*i*P	**Pn**	**04 26 24.5**	**-0.5**
DEMI				*i*S	**Sn**	**04 26 50.1**	**-1.5**
DEMI	**Demirci**	**2.10**	**350**	*i*P	**Pn**	**04 26 24.5**	**-0.5**
DEMI				*i*S	**Sn**	**04 26 50.1**	**-1.5**
KARP	**Karpathos**	**2.15**	**229**	*e*P	**Pn**	**04 26 27.2**	**+1.5**
AKHS	**Akhisar**	**2.19**	**331**	*i*P	**Pn**	**04 26 25.4**	**-0.7**
AKHS				*i*S	**Sn**	**04 26 53.7**	**0.0**
AKHS	**Akhisar**	**2.19**	**331**	*i*P	**Pn**	**04 26 25.4**	**-0.8**
AKHS				*i*S	**Sn**	**04 26 53.7**	**0.0**
AKS	**Akhisar**	**2.19**	**331**	*e*PN	**Pn**	**04 26 25.5**	**-0.7**
AKS	**Akhisar**	**2.19**	**331**	*e*Pn	**Pn**	**04 26 25.5**	**-0.7**
BLCB	**Balcova**	**2.20**	**311**	*e*PN	**Pn**	**04 26 25.6**	**-0.7**
BLCB	**Balcova**	**2.20**	**311**	*e*Pn	**Pn**	**04 26 25.6**	**-0.7**
HDMB	**Hadim**	**2.66**	**89**	*e*PN	**Pn**	**04 26 33.5**	**+0.8**
HDMB	**Hadim**	**2.66**	**89**	*e*Pn	**Pn**	**04 26 33.5**	**+0.8**
KONT	**Konya--Tatoy**	**2.72**	**68**	*e*PN	**Pn**	**04 26 34.3**	**+0.8**
KONT	**Konya--Tatoy**	**2.72**	**68**	*e*Pn	**Pn**	**04 26 34.3**	**+0.7**
CHOS	**Chios island**	**2.84**	**301**	*e*P	**Pn**	**04 26 35.8**	**+0.6**
BALB	**Balikesir**	**2.85**	**340**	*e*PN	**Pn**	**04 26 35.4**	**+0.1**
BALB	**Balikesir**	**2.85**	**340**	*e*Pn	**Pn**	**04 26 35.4**	**+0.1**
APE	**Apeiranthos**	**2.91**	**273**	*e*P	**Pn**	**04 26 36.7**	**+0.6**
ZKR	**Zakros**	**3.02**	**233**	*e*P	**Pn**	**04 26 39.7**	**+2.0**
SVRH	**Sivrihisar-ESK**	**3.09**	**36**	*e*PN	**Pn**	**04 26 39.4**	**+0.8**
SVRH	**Sivrihisar-ESK**	**3.09**	**36**	*e*Pn	**Pn**	**04 26 39.4**	**+0.8**
CAVI	**Cavuskoy**	**3.27**	**9**	*e*PN	**Pn**	**04 26 42.0**	**+0.9**
CAVI	**Cavuskoy**	**3.27**	**9**	*e*Pn	**Pn**	**04 26 42.0**	**+0.9**
GONE	**Gonen-Balikesi**	**3.28**	**340**	*e*PN	**Pn**	**04 26 41.5**	**+0.3**
GONE	**Gonen-Balikesi**	**3.28**	**340**	*e*Pn	**Pn**	**04 26 41.5**	**+0.2**
LAST	**Lasithi**	**3.49**	**240**	*e*P	**Pn**	**04 26 45.8**	**+1.7**
GULT	**Gulveren**	**3.62**	**17**	*e*PN	**Pn**	**04 26 46.8**	**+1.0**
GULT	**Gulveren**	**3.62**	**17**	*e*Pn	**Pn**	**04 26 46.8**	**+1.0**

DDA ***30*** *04:33:49.3, 36°.95N×29°.20E, h7km±6km, Md3.1*
ISCJB ***30*** *04:33:50.5±0.6, 36°.95N±0°.03×29°.18E±0°.04, h6km±6km, Error ellipse: s-maj=6.3km s-min=4.6km az=28.8*
ISK ***30*** *04:33:50.2, 36°.95N×29°.17E, h8km, MD2.9*
CSEM ***30*** *04:33:50.2±0.2, 36°.97N×29°.17E, h5km, MD2.9, Error ellipse: s-maj=5.2km s-min=4.9km az=145.0*

ISC 30 04:33:50.8±0.5,**36°.95N**±0°.03×**29°.17E**±0°.04,**h7**km±6km, **n30**,σ0°**92**/46,**Turkey**

| Code | Station Name

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.61**	**192**	*e*P	**Pn**	**04 50 29.8**	**+0.4**
DZM				*e*S	**Sn**	**04 51 10.4**	**-0.3**
CTA	**Charters Tower**	**19.87**	**262**	LR	LR	04 59 52.9	
	comp=Z,95nm,20.1s,baz=229,slow=32						
WRA	**Warramunga Arr**	**31.07**	**262**	P	**P**	**04 55 51.0**	**0.0**
	0.3nm,0.7s,mb3.2,baz=90,slow=8.8,SNR=3.7						
ASAR	**Alice Springs**	**31.47**	**255**	P	**P**	**04 55 54.8**	**+0.3**
	2.3nm,0.7s,mb4.1,baz=82,slow=8.9,SNR=27						
RPN	**Rapa Nui**	**76.11**	**114**	LR	LR	05 29 51.3	
	comp=Z,16nm,18.7s,baz=159,slow=32						
NVAR	**Mina Array Bea**	**89.76**	**49**	P	**P**	**05 02 31.8**	**+0.9**
	0.3nm,0.7s,mb3.8,baz=243,slow=8.0,SNR=3.4						
ILAR	**Eielson Array**	**90.12**	**18**	P	**P**	**05 02 30.7**	**-1.2**
	0.2nm,0.7s,mb3.6,baz=232,slow=4.4,SNR=5.7						

*ISCJB **30** 05:12:12.3±1.1, 1°.21S±0°.06×134°.32E±0°.05, h35km±11km, mb4.3/18, MS3.7/4, Error ellipse: s-maj=11.3km s-min=8.2km az=31.4*
*IDC **30** 05:12:13.1±0.6, 1°.22S×134°.29E, h28km±4km, mb3.9/8, mb1 4.2/10, mb1mx4.0/19, mbtmp4.0/10, ML4.6/2, MS3.6/5, Ms1 3.6/5, ms1mx3.2/24, Error ellipse: s-maj=30.7km s-min=11.7km az=75.0*
*DJA **30** 05:12:14, 1°.33S×134°.29E, h15km, mb4.9/15*
*NEIC **30** 05:12:14.6±0.4, 1°.16S×134°.26E, h35km, mb4.5/14, Error ellipse: s-maj=15.5km s-min=7.6km az=64.0*
NEIC Felt [III] at Manokwari.
*BJI **30** 05:12:16.5, 1°.20S×134°.30E, h35km, mb4.3/5*
ISC 30 05:12:14.1±0.9, 1°.21S±0°.06×134°.39E±0°.06, h35km±9km, h28km±2.2km:pP-P,n57,σ1§00/55, mb4.3/18, MS3.7/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**1.72**	**90**	P	**Pn**	**05 12 41.7**	**+0.2**
BNDI	**Bandanaira**	**5.56**	**234**	P	**Pn**	**05 13 35.0**	**+0.7**
	4.3nm411nm,1.1s						
NLAI	**Namlea**	**7.55**	**254**	P	**Pn**	**05 14 01.6**	**-0.2**
	0.5nm1μm115nm,0.8s						
KMSI	**Cibinong**	**10.55**	**280**	P	**Pn**	**05 14 44.7**	**+1.7**
	206nm,1.3s						
KAKA	**Kakadu**	**11.59**	**189**	*e*P	**Pn**	**05 14 56.9**	**-0.3**
	22nm,0.5s						
KAKA				*e*S	**Sn**	**05 16 57.6**	**-7.8**
KAKA	**Kakadu**	**11.59**	**189**	*e*Pn	**Pn**	**05 14 56.8**	**-0.4**
KAKA				*e*Sn	**Sn**	**05 16 57.7**	**-7.8**
KAKA	**Kakadu**	**11.59**	**189**	P	**Pn**	**05 14 56.9**	**-0.3**
	589nm64nm,0.8s						
LUWI	**Luwuk**	**11.61**	**271**	P	**Pn**	**05 14 56.3**	**-1.2**
	779nm79nm,1.0s						
KDI	**Kendari**	**12.07**	**257**	P	**Pn**	**05 15 02.8**	**-0.9**
	386nm34nm,1.1s						
MRSI	**Marisa**	**12.56**	**278**	P	**Pn**	**05 15 10.2**	**-0.2**
	27nm,1.2s						
TTSI	**Tana Toraja**	**14.67**	**263**	P	**Pn**	**05 15 46.9**	**+7.6**
BKSI	**Bulukumba**	**14.81**	**254**	P	**Pn**	**05 15 41.0**	**-0.2**
	624nm41nm,1.6s						
SPSI	**Sidrap Palu**	**14.86**	**259**	P	**Pn**	**05 15 42.2**	**+0.5**
	29nm,1.5s						
PMG	**Port Moresby**	**15.09**	**123**	*e*P	**Pn**	**05 15 48.6**	**+3.8**
	20nm,1.0s						
PMG	**Port Moresby**	**15.09**	**123**	P	**Pn**	**05 15 48.8**	**+3.9**
COEN	**Coen**	**15.37**	**146**	*e*P	**Pn**	**05 15 49.3**	**+0.9**
	191nm,1.3s						
COEN	**Coen**	**15.37**	**146**	P	**Pn**	**05 15 47.6**	**-0.8**
	51nm,1.2s						
KNA	**Kununurra**	**15.48**	**201**	P	**Pn**	**05 15 49.0**	**-0.8**
	2μm193nm,0.9s						
GUMO	**Guam**	**18.00**	**35**	LR	LR	05 21 52.0	
	comp=Z,85nm,18.5s,baz=242,slow=32						
WRA	**Warramunga Arr**	**18.62**	**180**	P	**Pn**	**05 16 28.2**	**-0.9**
	1.9nm,0.3s,baz=1.1,slow=12,SNR=79						
WRA				S	**S**	**05 19 46.8**	**-12**
	0.4nm,0.3s,baz=356,slow=23,SNR=4.8						
FITZ	**Fitzroy Crossi**	**18.86**	**207**	P	**Pn**	**05 16 30.2**	**-1.9**
	1.3nm,0.3s,baz=35,slow=11,SNR=29						
FITZ				S	**S**	**05 19 49.1**	**-14**
	1.1nm,0.3s,baz=154,slow=16,SNR=6.1						
FITZ	**Fitzroy Crossi**	**18.86**	**207**	*e*P	**Pn**	**05 16 30.2**	**-1.9**
	35nm,1.1s						
FITZ				*e*S	**S**	**05 19 47.3**	**-16**
FITZ	**Fitzroy Crossi**	**18.86**	**207**	*e*P	**Pn**	**05 16 31.2**	**-0.8**
	18nm,0.9s						
FITZ				*e*S	**S**	**05 19 51.1**	**-12**
FITZ	**Fitzroy Crossi**	**18.86**	**207**	P	**Pn**	**05 16 31.2**	**-0.9**
	34nm,1.0s						
CTA	**Charters Tower**	**22.07**	**149**	P	**P**	**05 17 07.8**	**+1.8**
	6.8nm,0.7s,mb4.2,baz=334,slow=12,SNR=12						
CTA	**Charters Tower**	**22.07**	**149**	*e*P	**P**	**05 17 09.3**	**+3.3**
	15nm,0.8s,mb4.5						
CTA	**Charters Tower**	**22.07**	**149**	P	**P**	**05 17 07.8**	**+1.8**
CTAO	**Charters Tower**	**22.07**	**149**	*e*P	**P**	**05 17 08.7**	**+2.7**
	20nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**22.07**	**149**	P	**P**	**05 17 09.3**	**+3.3**
	30nm,0.9s,mb4.7						
ASAR	**Alice Springs**	**22.33**	**181**	P	**P**	**05 17 09.2**	**+0.4**
	12nm,0.8s,mb4.4,baz=7.9,slow=12,SNR=53						
ASAR				S	**S**	**05 21 11.4**	**-1.3**
	1.2nm,0.7s,baz=5.2,slow=22,SNR=5.3						
KSM	**Kuching**	**24.22**	**276**	*e*P	**P**	**05 17 28.5**	**+0.7**
	28nm,1.1s,mb4.6						
MBWA	**Marble Bar**	**24.45**	**215**	*e*P	**P**	**05 17 32.2**	**+2.4**
	11nm,0.8s,mb4.3						
BJII	**Banjamegara**	**25.34**	**255**	P	**P**	**05 17 40.6**	**+2.6**
STKA	**Stephens Creek**	**31.26**	**168**	P	**P**	**05 18 30.4**	**-0.2**
	1.3nm,0.4s,mb4.1,baz=313,slow=8.9,SNR=7.6						
STKA	**Stephens Creek**	**31.26**	**168**	*e*P	**P**	**05 18 29.8**	**-0.7**
	1.6nm,0.9s,mb3.9						
STKA				*e*	pP	05 18 41.2	+0.5
ARMA	**Armidale**	**33.35**	**152**	*e*P	**P**	**05 18 52.7**	**+3.7**
	6.0nm,0.8s,mb4.6						
MJAR	**Matsushiro Arr**	**37.72**	**5**	LR	LR	05 32 41.5	
	comp=Z,77nm,18.2s,MS3.5,baz=155,slow=33						
CMAR	**Chiang Mai Arr**	**39.95**	**301**	P	**P**	**05 19 46.4**	**+0.9**
	0.6nm,0.3s,mb3.8,baz=119,slow=6.4,SNR=7.8						
GTA	**Gaotai**	**51.35**	**326**	*e*P	**P**	**05 21 23.0**	**+7.8**
GTA				pP	pP	05 21 28.0	+2.2
GTA				sP	sP	05 21 30.3	+0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
SONM	**Songino Array**	**54.59**	**337**	P	**P**	**05 21 38.9**	**-0.1**
	comp=Z,0.9nm,1.0s,mb3.7,baz=92,slow=4.6,SNR=3.2						
SONM				pP	pP	05 21 47.3	-2.3
	comp=Z,0.9nm,0.6s,baz=151,slow=7.0,SNR=5.0						
PETK	**Petropavlovsk-**	**57.53**	**16**	LR	LR	05 42 04.9	
	comp=Z,38nm,21.5s,MS3.5,baz=48,slow=31						
MK31	**Makanchi Array**	**66.00**	**324**	*e*P	**P**	**05 22 56.4**	**-0.5**
MK31				*e*	pP	05 23 05.2	-2.7
MKAR	**Makanchi Array**	**66.00**	**324**	P	**P**	**05 22 56.2**	**-0.7**
	comp=Z,3.0nm,0.9s,mb4.3,baz=112,slow=8.0,SNR=14						
MKAR				pP	pP	05 23 06.0	-1.8
	comp=Z,3.0nm,0.6s,baz=115,slow=6.3,SNR=10						
ZALV	**Zalesovo Beam**	**68.50**	**331**	P	**P**	**05 23 11.4**	**-1.3**
	comp=Z,0.7nm,0.3s,mb4.0,baz=77,slow=7.6,SNR=3.6						
TKM2	**Tokmak 2**	**68.51**	**318**	*e*P	**P**	**05 23 12.8**	**-0.2**
	comp=Z,3.1nm,0.8s,mb4.3						
TKM2				*e*	pP	05 23 21.8	-2.1
KURK	**Kurchatov**	**70.04**	**326**	*e*P	**P**	**05 23 21.8**	**-0.4**
	comp=Z,6.2nm,0.9s,mb4.5						
KKAR	**Karatay Array**	**72.05**	**316**	*e*P	**P**	**05 23 35.0**	**+0.4**
	comp=Z,3.8nm,0.8s,mb4.4						
KKAR				*e*	pP	05 23 42.6	-3.0
BRVK	**Borovoye**	**75.71**	**326**	*e*P	**P**	**05 23 55.5**	**-0.3**
	comp=Z,6.8nm,0.9s,mb4.6						
BRVK				*e*	pP	05 24 03.9	-3.0
ABKAR	**Akbulak array**	**80.80**	**320**	*e*P	**P**	**05 24 24.2**	**+0.1**
	comp=Z,4.4nm,1.0s,mb4.3						
ABKAR				*e*	pP	05 24 31.8	-3.5
KDAK	**Kodiak Island**	**82.03**	**31**	LR	LR	05 54 00.9	
	comp=Z,58nm,21.0s,MS3.9,baz=178,slow=30						
ILAR	**Eielson Array**	**86.28**	**25**	P	**P**	**05 24 51.1**	**-0.8**
	comp=Z,0.6nm,0.9s,mb3.8,baz=251,slow=4.3,SNR=6.9						
ILAR				pP	pP	05 24 59.9	-3.2
	comp=Z,1.8nm,0.8s,baz=242,slow=3.1,SNR=15						
QSPA	**South Pole Qui**	**88.73**	**180**	*e*P	**P**	**05 25 04.5**	**+1.1**
	comp=Z,4.5nm,1.1s,mb4.7						
QSPA				*e*	pP	05 25 14.8	+0.1
VIB	**Van Inlet**	**92.80**	**37**	T		07 08 53.6	
DIB	**Dawson Inlet,**	**92.84**	**37**	T		07 08 53.7	
	SNR=16						
FINES	**FINESS Array B**	**99.75**	**332**	LR	LR	06 14 03.1	
	comp=Z,32nm,20.4s,MS3.8,baz=92,slow=37						
LPAZ	**La Paz**	**151.78**	**129**	PKPbc	PKPbc	05 32 09.1	+3.0
	comp=Z,1.1nm,0.8s,baz=270,slow=4.0,SNR=6.3						
LPAZ				pPKPbc	pPKPbc	05 32 17.2	-0.4
	comp=Z,6.7nm,1.0s,baz=27,slow=4.0,SNR=14						
LPAZ	**La Paz**	**151.78**	**129**	*e*PKPbc	PKPbc	05 32 08.6	+2.6

*NEIC **30** 05:35:52.9, 16°.73N×99°.71W, h11km, MD3.5(MEX), After MEX.*
MEX 30 05:35:52.7±0.3, 16°.70N×99°.73W, h9km±2km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.21**	**323**	*i* P	Pg	05 35 57.3	+0.2
ACX				*i* S	Sg	05 36 00.9	+1.0
ACX	**Acapulco**	**0.21**	**323**	*i* P	Pg	05 35 57.3	+0.2
ACX				*i* S	Sg	05 36 00.9	+1.0
CAIG	**El Cayaco**	**0.62**	**304**	*i* P	Pg	05 36 03.7	-1.1
CAIG				*i* S	Sg	05 36 12.2	-0.8
CAIG	**El Cayaco**	**0.62**	**304**	*i* P	Pg	05 36 03.7	-1.1
CAIG				*i* S	Sg	05 36 12.2	-0.8
MEIG	**Mezcala**	**1.22**	**5**	*i* P	Pn	05 36 12.5	-3.5
MEIG				*i* S	Sb	05 36 27.3	-4.5
PNIG	**Pinotepa**	**1.56**	**101**	*i* P	Pn	05 36 17.3	-3.4
PNIG				*i* S	Sn	05 36 34.0	-7.1
PNIG	**Pinotepa**	**1.56**	**101**	*i* P	Pn	05 36 17.3	-3.4
PNIG				*i* S	Sn	05 36 36.0	-5.1
UTMO	**Huajuapan**	**2.15**	**58**	*i* P	Pn	05 36 26.2	-2.6
UTMO				*i* S	Sn	05 36 51.9	-3.7
MZVM		**2.52**	**11**	*i* P	Pn	05 36 30.1	-3.8
MZVM				*i* S	Sn	05 36 60.0	-4.7
VHO	**Vista Hermosa**	**2.89**	**82**	*e*P	Pn	05 36 35.9	-3.0
VHO				*i* S	Sn	05 37 09.3	-4.4
VHO	**Vista Hermosa**	**2.89**	**82**	*e*P	Pn	05 36 35.9	-3.0
VHO				*i* S	Sn	05 37 09.3	-4.4

*NEIC **30** 05:37:45.1, 45°.38N×14°.35E, h10km, ML2.9(ROM), After ROM.*
*LJU **30** 05:37:45.5, 45°.58N×14°.43E, h14km, ML2.3*
*VIE **30** 05:37:45.6±0.3, 45°.58N×14°.41E, h10km, mb2.0/4, ML2.7/4, Error ellipse: s-maj=2.2km s-min=1.1km az=179.0 27 km N of Rijeka*
*ISCJB **30** 05:37:45.1±0.4, 45°.56N±0°.02×14°.42E±0°.02, h10km, Error ellipse: s-maj=2.9km s-min=1.7km az=9.9*
*ROM **30** 05:37:45.1±1.3, 45°.38N×14°.35E, h10km, Md2.7/2, Ml2.9/2, Error ellipse: s-maj=32.9km s-min=13.6km az=41.0*
*CSEM **30** 05:37:45.2±0.2, 45°.54N×14°.42E, h15km, ML3.1/13, Error ellipse: s-maj=3.1km s-min=1.6km az=9.0*
ISC 30 05:37:45.3±0.5, 45°.53N±0°.02×14°.44E±0°.02, h16km±5km, n85, σ0§67/161, 15C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDS	**Knezji Dol**	**0.04**	**262**	⇓*i*Pg	**Pg**	**05 37 48.3**	**+0.2**
KNDS				*i* Sg	**Sg**	**05 37 50.0**	**-0.1**
KNDS							
	comp=Z,820nm,0.1s						
KNDS	**Knezji Dol**	**0.04**	**262**	Pg	**Pg**	**05 37 48.3**	**+0.2**
KNDS				*i* Sg	**Sg**	**05 37 50.0**	**-0.1**
	comp=Z,820nm,0.1s						
CEY	**Cerknica**	**0.21**	**358**	⇓*i*Pg	**Pg**	**05 37 49.7**	**-0.4**
CEY				*i* Sg	**Sg**	**05 37 52.5**	**-0.9**
CEY							
	comp=Z,548nm,0.1s						
CEY	**Cerknica**	**0.21**	**358**	⇓*i*Pg	**Pg**	**05 37 49.7**	**-0.4**
CEY				*i* Sg	**Sg**	**05 37 52.5**	**-0.9**
	comp=Z,548nm,0.1s						
SKDS	**Skadanscina**	**0.30**	**273**	⇑*i*Pg	**Pg**	**05 37 51.6**	**0.0**
SKDS				*i* Sg	**Sg**	**05 37 56.2**	**+0.4**
SKDS							
	comp=Z,109nm,0.1s						
VISS	**Visnje**	**0.39**	**46**	*i* Pg	**Pg**	**05 37 53.3**	**0.0**
VISS				*i* Sg	**Sg**	**05 37 58.6**	**-0.1**
VISS							
	comp=Z,152nm,0.1s						
VISS	**Visnje**	**0.39**	**46**	*i* Pg	**Pg**	**05 37 53.3**	**0.0**
VISS				*i* Sg	**Sg**	**05 37 58.6**	**-0.1**
	comp=Z,152nm,0.1s						
JAVS	**Javornik**	**0.44**	**324**	⇓*i*Pg	**Pg**	**05 37 53.5**	**-0.7**
JAVS				*i* Sg	**Sg**	**05 37 59.8**	**-0.4**
JAVS							
	comp=Z,262nm,0.3s						
JAVS	**Javornik**	**0.44**	**324**	⇓*i*Pg	**Pg**	**05 37 53.5**	**-0.7**
JAVS				*i* Sg	**Sg**	**05 37 59.8**	**-0.4**
	comp=Z,262nm,0.3s						
TRI	**Trieste**	**0.50**	**291**	⇓*e*Pg	**Pg**	**05 37 54.9**	**-0.4**
TRI				*e*Sg	**Sg**	**05 38 02.2**	**+0.2**
TRI	**Trieste**	**0.50**	**291**	Pg	**Pg**	**05 37 54.9**	**-0.4**
TRI				Sg	**Sg**	**05 38 02.3**	**+0.3**
TRI	**Trieste**	**0.50**	**291**	Pg	**Pg**	**05 37 54.9**	**-0.4**
TRI				Sg	**Sg**	**05 38 02.3**	**+0.3**
TRI	**Trieste**	**0.50**	**291**	Pg	**Pg**	**05 37 54.9**	**-0.4**
TRI				Sg	**Sg**	**05 38 02.3**	**+0.3**
LJU	**Ljubljana**	**0.52**	**7**	*i* Pg	**Pg**	**05 37 55.4**	**-0.1**
LJU				*i* Sg	**Sg**	**05 38 01.9**	**-0.5**
LJU							
	comp=Z,29nm,0.1s						
LJU	**Ljubljana**	**0.52**	**7**	*i* Pg	**Pg**	**05 37 55.4**	**-0.1**
LJU				*i* Sg	**Sg**	**05 38 01.9**	**-0.6**
	comp=Z,29nm,0.1s						
CRNS	**Crni Vrh**	**0.56**	**348**	*i* Pg	**Pg**	**05 37 55.6**	**-0.8**
CRNS				*i* Sg	**Sg**	**05 38 04.0**	**+0.1**
CRNS							
	comp=Z,27nm,0.1s						
BOJS	**Bojanci**	**0.57**	**93**	⇑*i*Pg	**Pg**	**05 37 57.0**	**+0.4**
BOJS				*i* Sg	**Sg**	**05 38 04.9**	**+0.6**
BOJS							
	comp=Z,61nm,0.2s						
BOJS	**Bojanci**	**0.57**	**93**	⇑*i*Pg	**Pg**	**05 37 57.0**	**+0.4**
BOJS				*i* Sg	**Sg**	**05 38 04.9**	**+0.6**
	comp=Z,61nm,0.2s						
VNDS	**Vrh nad Dolski**	**0.60**	**18**	*i* Pg	**Pg**	**05 37 57.0**	**-0.1**
VOY	**Vojsko**	**0.63**	**323**	⇑*e*Pg	**Pg**	**05 37 56.8**	**-0.8**
VOY				*e*Sg	**Sg**	**05 38 05.9**	**0.0**
VOY	**Vojsko**	**0.63**	**323**	⇑*e*Pg	**Pg**	**05 37 56.8**	**-0.8**
VOY				*e*Sg	**Sg**	**05 38 05.9**	**0.0**
PDKS	**Podkum**	**0.66**	**37**	*i* Pg	**Pg**	**05 37 58.4**	**+0.2**
PDKS				*i* Sg	**Sg**	**05 38 07.3**	**+0.3**
PDKS							
	comp=Z,59nm,0.1s						
PDKS	**Podkum**	**0.66**	**37**	*i* Pg	**Pg**	**05 37 58.4**	**+0.2**
PDKS				*i* Sg	**Sg**	**05 38 07.3**	**+0.3**
	comp=Z,59nm,0.1s						
SABO	**M.te Sabotino**	**0.74**	**308**	⇓*e*Pg	**Pg**	**05 37 58.8**	**-0.9**
SABO				*e*Sg	**Sg**	**05 38 09.6**	**+0.2**
SABO	**M.te Sabotino**	**0.74**	**308**	*e*Pg	**Pg**	**05 37 58.8**	**-0.8**
SABO				*e*Sg	**Sg**	**05 38 09.6**	**+0.2**
LEGS	**Legarje**	**0.74**	**56**	*i* Pg	**Pg**	**05 37 59.9**	**+0.1**
LEGS				*i* Sg	**Sg**	**05 38 09.8**	**+0.1**
LEGS	**Legarje**	**0.74**	**56**	*i* Pg	**Pg**	**05 37 59.9**	**+0.1**
LEGS				*i* Sg	**Sg**	**05 38 09.8**	**+0.1**
MOZS	**Mozjanca**	**0.76**	**0**	*i* Pg	**Pg**	**05 38 00.3**	**+0.2**
CRES	**Cresnjev**	**0.77**	**67**	*i* Pg	**Pg**	**05 38 00.5**	**+0.1**
CRES				*i* Sg	**Sg**	**05 38 10.9**	**+0.3**
CRES							
	comp=Z,29nm,0.2s						
CRES	**Cresnjev**	**0.77**	**67**	*i* Pg	**Pg**	**05 38 00.5**	**+0.1**
CRES				*i* Sg	**Sg**	**05 38 10.9**	**+0.3**
	comp=Z,29nm,0.2s						
GORS	**Gorjuse**	**0.84**	**339**	*i* Pg	**Pg**	**05 38 01.1**	**-0.6**
GORS				*i* Sg	**Sg**	**05 38 12.4**	**-0.3**
GORS							
	comp=Z,12nm,0.1s						
GORS	**Gorjuse**	**0.84**	**339**	*i* Pg	**Pg**	**05 38 01.1**	**-0.6**
GORS				*i* Sg	**Sg**	**05 38 12.4**	**-0.3**
	comp=Z,12nm,0.1s						
DRE	**Drenchia**	**0.85**	**319**	⇑*e*Pg	**Pg**	**05 38 00.6**	**-1.1**
DRE				*e*Sg	**Sg**	**05 38 13.2**	**+0.4**
DRE	**Drenchia**	**0.85**	**319**	*e*Pg	**Pg**	**05 38 00.6**	**-1.1**
DRE				*e*Sg	**Sg**	**05 38 13.2**	**+0.3**
CADS	**Cadrg**	**0.85**	**325**	*i* Pg	**Pg**	**05 38 00.5**	**-1.3**
CADS				*i* Sg	**Sg**	**05 38 13.2**	**+0.2**
CADS							
	comp=Z,63nm,0.2s						
CADS	**Cadrg**	**0.85**	**325**	*i* Pg	**Pg**	**05 38 00.5**	**-1.3**
CADS				*i* Sg	**Sg**	**05 38 13.2**	**+0.2**
	comp=Z,63nm,0.2s						
GCIS	**Gornji Cirnik**	**0.90**	**68**	*i* Pg	**Pg**	**05 38 03.1**	**+0.4**
GCIS				*i* Sg	**Sg**	**05 38 14.8**	**+0.2**
GCIS							
	comp=Z,21nm,0.1s						
DOBS	**Dobrina**	**0.95**	**49**	*i* Pg	**Pg**	**05 38 03.7**	**0.0**
DOBS				*i* Sg	**Sg**	**05 38 16.5**	**+0.3**
DOBS							
	comp=Z,48nm,0.1s						
DOBS	**Dobrina**	**0.95**	**49**	*i* Pg	**Pg**	**05 38 03.7**	**0.0**
DOBS				*i* Sg	**Sg**	**05 38 16.5**	**+0.3**
COLI	**Coloredo**	**0.95**	**309**	⇑*e*Pg	**Pg**	**05 38 03.0**	**-0.8**
COLI				*e*Sg	**Sg**	**05 38 17.1**	**+0.9**
COLI	**Coloredo**	**0.95**	**309**	*e*Pg	**Pg**	**05 38 03.0**	**-0.7**
COLI				*e*Sg	**Sg**	**05 38 17.1**	**+0.9**
GOLS	**Golise**	**0.96**	**60**	*i* Pg	**Pg**	**05 38 04.2**	**+0.3**
GOLS				*i* Sg	**Sg**	**05 38 16.2**	**-0.3**
GOLS							
	comp=Z,68nm,0.2s						
GOLS	**Golise**	**0.96**	**60**	*i* Pg	**Pg**	**05 38 04.2**	**+0.3**
GOLS				*i* Sg	**Sg**	**05 38 16.2**	**-0.3**
OBKA	**Obir**	**0.98**	**5**	⇑*e*Pg	**Pg**	**05 38 03.9**	**-0.3**
	SNR=39						
OBKA				⇓*i*Sg	**Sg**	**05 38 17.6**	**+0.5**
	comp=Z,34nm,0.2s						
OBKA	**Obir**	**0.98**	**5**	Pg	**Pg**	**05 38 03.9**	**-0.4**
	SNR=39						
OBKA				Sg	**Sg**	**05 38 17.6**	**+0.5**
	comp=Z,34nm,0.2s						
NVLJ	**Novalja**	**1.02**	**162**	*e*Pg	**Pg**	**05 38 06.2**	**+1.2**
NVLJ				Sg	**Sg**	**05 38 22.3**	**+4.0**
NVLJ	**Novalja**	**1.02**	**162**	*e*Pg	**Pg**	**05 38 06.1**	**+1.1**
NVLJ				Sg	**Sg**	**05 38 22.2**	**+3.9**
VINO	**Villanova**	**1.08**	**312**	*e*Pg	**Pg**	**05 38 06.2**	**0.0**
VINO				*e*Sg	**Sg**	**05 38 20.6**	**+0.3**
VINO	**Villanova**	**1.08**	**312**	*e*Pg	**Pg**	**05 38 06.2**	**0.0**
VINO				*e*Sg	**Sg**	**05 38 20.6**	**+0.2**
BAD	**Bernadia**	**1.09**	**311**	⇓*e*Pg	**Pg**	**05 38 05.8**	**-0.6**
BAD				*e*Sg	**Sg**	**05 38 21.0**	**+0.4**
BAD	**Bernadia**	**1.09**	**311**	*e*Pg	**Pg**	**05 38 05.8**	**-0.5**
BAD				*e*Sg	**Sg**	**05 38 21.0**	**+0.4**
GMNA	**Gemona**	**1.12**	**312**	Pg	**Pg**	**05 38 08.1**	**+1.2**
GMNA	**Gemona**	**1.12**	**312**	Pg	**Pg**	**05 38 08.1**	**+1.2**
GMNA	**Gemona**	**1.12**	**312**	Pg	**Pg**	**05 38 08.1**	**+1.2**
PTCC	**Patocco-Chiusa**	**1.15**	**320**	Pg	**Pg**	**05 38 07.1**	**-0.4**
PTCC				Sg	**Sg**	**05 38 24.5**	**+1.9**
PTCC	**Patocco-Chiusa**	**1.15**	**320**	Pg	**Pg**	**05 38 07.1**	**-0.4**
PTCC				Sg	**Sg**	**05 38 24.5**	**+1.9**
PTCC	**Patocco-Chiusa**	**1.15**	**320**	Pg	**Pg**	**05 38 07.1**	**-0.4**
PTCC				Sg	**Sg**	**05 38 24.5**	**+1.9**
GROS	**Grobnik**	**1.19**	**38**	*i* Pg	**Pg**	**05 38 08.3**	**0.0**
GROS							
	comp=Z,22nm,0.1s						
GROS	**Grobnik**	**1.19**	**38**	*i* Pg	**Pg**	**05 38 08.3**	**+0.1**
	comp=Z,22nm,0.1s						
ACOM	**Acomizza, Ital**	**1.20**	**328**	⇑*e*Pg	**Pg**	**05 38 08.4**	**-0.1**
ACOM				*e*Sg	**Sg**	**05 38 25.6**	**+1.5**
ACOM	**Acomizza, Ital**	**1.20**	**328**	*e*Pg	**Pg**	**05 38 08.4**	**-0.1**
ACOM				*e*Sg	**Sg**	**05 38 25.6**	**+1.5**
BISS	**Bistriski jare**	**1.22**	**23**	*i* Pg	**Pg**	**05 38 08.4**	**-0.3**
BISS	**Bistriski jare**	**1.22**	**23**	*i* Pg	**Pg**	**05 38 08.4**	**-0.3**
MYKA	**Terra Mystica**	**1.23**	**334**	⇑*i*Pg	**Pg**	**05 38 08.3**	**-0.6**
MYKA				⇓*i*Sg	**Sg**	**05 38 24.4**	**-0.6**
MYKA	**Terra Mystica**	**1.23**	**334**	Pg	**Pg**	**05 38 08.3**	**-0.7**
MYKA				Sg	**Sg**	**05 38 24.4**	**-0.6**
MPRI	**Monte Prat**	**1.23**	**306**	*e*Pg	**Pg**	**05 38 09.0**	**-0.1**
MPRI				*e*Sg	**Sg**	**05 38 26.8**	**+1.6**
MPRI	**Monte Prat**	**1.23**	**306**	*e*Pg	**Pg**	**05 38 09.0**	**-0.1**
MPRI				*e*Sg	**Sg**	**05 38 26.8**	**+1.6**
PLRO	**Paularo**	**1.35**	**319**	*e*Pg	**Pg**	**05 38 12.1**	**+0.7**
PLRO				*e*Sg	**Sg**	**05 38 30.1**	**+1.1**
PLRO	**Paularo**	**1.35**	**319**	*e*Pg	**Pg**	**05 38 12.1**	**+0.7**
PLRO				*e*Sg	**Sg**	**05 38 32.5**	**+3.5**
ZOU	**Zoufplan**	**1.44**	**316**	⇑*e*Pg	**Pg**	**05 38 12.8**	**-0.3**
ZOU				*e*Sg	**Sg**	**05 38 32.5**	**+0.6**
CAE	**Caneva**	**1.48**	**289**	⇓*e*Pg	**Pg**	**05 38 13.2**	**-0.5**
CAE				*e*Sg	**Sg**	**05 38 33.3**	**+0.5**
CAE	**Caneva**	**1.48**	**289**	*e*

SNR=6.3
KK31 **Karatay Array** 8.04 285 Pn Pb 06 07 28.6 -9.2
1.3nm,0.5s,baz=84,slow=16,SNR=15
KK31 ⇓Sn Sn 06 08 46.2 +0.1
3.3nm,0.4s,baz=87,slow=27,SNR=9.6
KURBB **Kurchatov Arra** 9.26 350 ⇑Lg 06 09 34.8
3.1nm,0.7s
KURK **Kurchatov** 9.34 350 ⇓Lg 06 09 37.2
19nm,0.8s

DJA 30 06:09:46,0.19N×98.62E,h37km,MLv3.7/6,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.13**	**58**	P	Pn	06 10 06.1	+0.7
MNSI				S	Sn	06 10 21.1	+1.4
SBSI	**Sibolga**	**1.38**	**11**	P	Pn	06 10 10.6	+1.8
SBSI				S	Sn	06 10 28.7	+2.9
SISI	**Saibi**	**1.58**	**163**	P	Pn	06 10 11.9	+0.4
PPI	**Padang Panjang**	**1.89**	**110**	P	Pn	06 10 17.2	+1.4
PDSI	**Padang**	**2.14**	**121**	P	Pn	06 10 20.2	+0.9
PDSI				S	Sn	06 10 46.5	+1.9
BKNI	**Bangkinang**	**2.42**	**87**	P	Pn	06 10 24.2	+1.1

*CSEM **30** 06:22:52.9±0.1,37.42N×38.64E,h10km,MD2.9,Error ellipse: s-maj=3.1km s-min=2.3km az=167.0*
*ISK **30** 06:22:52.8,37.44N×38.63E,h12km,MD2.9*
*ISCJB **30** 06:22:53.4±0.7,37.45N±0.04×38.59E±0.03,h3km±5km, Error ellipse: s-maj=6.6km s-min=4.3km az=7.9*
*DDA **30** 06:22:53.4,37.45N×38.57E,h27km±1km,Md3.1*
ISC 30 06:22:53.7±0.7,37.43N±0.04×38.59E±0.03,h5km±5km, n24,σ0.78/40,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.18**	**86**	*e*PG	**Pg**	**06 22 56.6**	**-0.8**
URFA				*e*SG	**Sg**	**06 22 59.5**	**-0.3**
URFA	**Urfa**	**0.18**	**86**	*e*Pg	**Pg**	**06 22 56.6**	**-0.8**
URFA				*e*Sg	**Sg**	**06 22 59.5**	**-0.3**
ATAB	**Bozova**	**0.24**	**280**	*i* P	**Pg**	**06 22 58.8**	**+0.4**
ATAB				*i* S	**Sg**	**06 23 02.6**	**+1.1**
ATAB	**Bozova**	**0.24**	**280**	*i* P	**Pg**	**06 22 58.8**	**+0.4**
ATAB				*i* S	**Sg**	**06 23 02.6**	**+1.1**
MYA	**Malataya**	**0.91**	**352**	*e*PG	**Pg**	**06 23 10.7**	**-0.4**
MYA				*e*SG	**Sg**	**06 23 23.4**	**+0.6**
MYA	**Malataya**	**0.91**	**352**	*e*Pg	**Pg**	**06 23 10.7**	**-0.4**
MYA				*e*Sg	**Sg**	**06 23 23.4**	**+0.5**
AKCD	**Akcadag**	**1.01**	**329**	*i* P	**Pg**	**06 23 13.4**	**+0.2**
AKCD				*i* S	**Sg**	**06 23 26.5**	**+0.2**
AKCD	**Akcadag**	**1.01**	**329**	*i* P	**Pg**	**06 23 13.4**	**+0.2**
AKCD				*i* S	**Sg**	**06 23 26.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.10**	**31**	*e*PN	**Pg**	**06 23 14.3**	**-0.6**
SVRC				*e*SN	**Sg**	**06 23 29.4**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.10**	**31**	*e*Pn	**Pg**	**06 23 14.3**	**-0.6**
SVRC				*e*Sn	**Sg**	**06 23 29.4**	**+0.1**
GAZ	**Gaziantep**	**1.13**	**257**	*e*PN	**Pg**	**06 23 15.6**	**+0.2**
GAZ	**Gaziantep**	**1.13**	**257**	*e*Pn	**Pg**	**06 23 15.6**	**+0.3**
DIYA	**Diyarbakir**	**1.31**	**67**	*i* P	**Pn**	**06 23 18.9**	**+0.2**
DIYA				*i* S	**Sb**	**06 23 37.2**	**+1.3**
DIYA	**Diyarbakir**	**1.31**	**67**	*i* P	**Pn**	**06 23 18.9**	**+0.2**
DIYA				*i* S	**Sb**	**06 23 37.2**	**+1.2**
KMRS	**Kahramanmaras**	**1.35**	**274**	*e*PN	**Pn**	**06 23 18.3**	**-0.9**
KMRS	**Kahramanmaras**	**1.35**	**274**	*e*Pn	**Pn**	**06 23 18.3**	**-0.9**
PTK	**Pertek**	**1.59**	**23**	*e*PN	**Pn**	**06 23 21.0**	**-1.6**
PTK	**Pertek**	**1.59**	**23**	*e*Pn	**Pn**	**06 23 21.0**	**-1.6**
MARD	**Mardin**	**1.75**	**93**	*i* P	**Pn**	**06 23 24.6**	**-0.1**
MARD				*i* S	**Sn**	**06 23 47.7**	**+0.3**
KEMA	**Kemaliye**	**1.84**	**358**	*i* P	**Pn**	**06 23 24.3**	**-1.6**
KEMA				*i* S	**Sn**	**06 23 49.6**	**0.0**
KEMA	**Kemaliye**	**1.84**	**358**	*i* P	**Pn**	**06 23 24.3**	**-1.7**
KEMA				*i* S	**Sn**	**06 23 49.7**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.95**	**310**	*e*PN	**Pn**	**06 23 27.4**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.95**	**310**	*e*Pn	**Pn**	**06 23 27.4**	**0.0**
BEST	**Besiri**	**2.18**	**77**	*i* P	**Pn**	**06 23 35.0**	**+4.4**
BEST				*i* S	**Sn**	**06 23 59.4**	**+1.5**

*IDC **30** 06:55:16.9±0.6,29.93S×177.48W,h0km,mb4.4/12, mb1 4.6/13,mb1mx4.5/18,mbtmp4.4/13,ML4.0/1,MS3.8/3, Ms1 3.7/3,ms1mx3.0/21,Error ellipse: s-maj=19.6km s-min=19.0km az=90.0*
*NEIC **30** 06:55:22.4±0.4,30.03S×177.51W,h35km,mb4.7/11, Error ellipse: s-maj=12.8km s-min=8.0km az=126.0*
*ISCJB **30** 06:55:23.9±3.0,30.18S±0.10×177.6W±0.1,h60km±26km, mb4.4/18,Error ellipse: s-maj=19.2km s-min=15.7km az=162.6*
ISC 30 06:55:25.3±2.4,30.21S±0.10×177.6W±0.1,h59km±20km, n54,σ1.14/40,mb4.4/18,MS3.8/3,2C,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUZ	**Omahuta**	**8.96**	**234**	*e*Pn	**Pn**	**06 57 32.0**	**0.0**
URZ	**Urewera**	**9.16**	**207**	Pn	**Pn**	**06 57 28.9**	**-5.8**
	0.1nm,0.3s,baz=4.3,slow=14,SNR=4.3						
URZ				Sn	**Sn**	**06 59 14.3**	**-1.9**
	0.9nm,0.3s,baz=47,slow=19,SNR=4.8						
URZ	**Urewera**	**9.16**	**207**	*e*Pn	**Pn**	**06 57 33.1**	**-1.5**
URZ				*e*Sn	**Sn**	**06 59 19.8**	**+3.6**
KHZ	**Kahutara**	**14.13**	**208**	*e*Pn	**Pn**	**06 58 44.0**	**+1.8**
RPZ	**Rata Peaks**	**16.24**	**211**	Pn	**Pn**	**06 59 08.2**	**-1.2**
	0.6nm,0.3s,baz=114,slow=7.0,SNR=3.6						
RPZ	**Rata Peaks**	**16.24**	**211**	*e*P	**Pn**	**06 59 09.3**	**-0.2**
	85nm,1.5s						
DZM	**Mont Dzumac**	**16.47**	**296**	*e*P	**Pn**	**06 59 18.9**	**+6.4**
	59nm,1.4s						
DZM				*e*LR	LR	07 03 09.8	
	395nm,23.9s						
TBI	**Tubuai**	**25.97**	**82**	*e*LR	LR	07 07 07.3	
	290nm,27.2s						
ARMA	**Armidale**	**26.55**	**262**	*e*P	**P**	**07 01 01.5**	**+3.8**
ARMA	**Armidale**	**26.55**	**262**	*e*P	**P**	**07 01 01.8**	**+4.1**
	8.4nm,0.8s,mb4.3						
PPT	**Papeete**	**28.43**	**70**	*e*LR	LR	07 08 08.1	
	305nm,25.0s						
CTA	**Charters Tower**	**34.13**	**279**	P	**P**	**07 02 05.8**	**+1.0**
	8.0nm,0.8s,mb4.7,baz=85,slow=12,SNR=13						
CTA	**Charters Tower**	**34.13**	**279**	*e*P	**P**	**07 02 05.6**	**+0.9**
	6.5nm,0.7s,mb4.7						
CTAO	**Charters Tower**	**34.13**	**279**	*e*P	**P**	**07 02 05.8**	**+1.1**
	10nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**34.88**	**257**	P	**P**	**07 02 12.4**	**+1.3**
	5.3nm,0.7s,mb4.6,baz=98,slow=8.3,SNR=19						
STKA				LR	LR	07 14 58.1	
	comp=Z,162nm,20.7s,MS3.8,baz=26,slow=34						
STKA	**Stephens Creek**	**34.88**	**257**	*e*P	**P**	**07 02 13.4**	**+2.3**
	6.5nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**34.88**	**257**	*e*P	**P**	**07 02 12.9**	**+1.8**
	2.2nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**43.49**	**267**	P	**P**	**07 03 22.4**	**-0.6**
	6.9nm,0.6s,mb4.5,baz=102,slow=6.9,SNR=22						
ASAR				PcP	PcP	07 05 09.6	-0.6
	1.2nm,0.7s,baz=117,slow=3.9,SNR=5.5						
WRA	**Warramunga Arr**	**44.46**	**272**	P	**P**	**07 03 29.9**	**-0.9**
	7.5nm,0.7s,mb4.5,baz=110,slow=8.2,SNR=72						
WRA				LR	LR	07 20 04.2	
	comp=Z,99nm,19.3s,MS3.8,baz=115,slow=33						
WRA	**Warramunga Arr**	**44.46**	**272**	P	**P**	**07 03 29.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**52.73**	**270**	*e*P	**P**	**07 04 34.2**	**-0.1**
	4.7nm,1.0s,mb4.4						
CASY	**Casey**	**55.48**	**208**	*e*P	**P**	**07 04 54.2**	**+0.5**
	15nm,0.9s,mb5.0						
QSPA	**South Pole Qui**	**59.90**	**180**	P	**P**	**07 05 27.4**	**+2.9**
	7.5nm,1.0s,mb4.7,baz=50,slow=3.0,SNR=14						
QSPA	**South Pole Qui**	**59.90**	**180**	*e*P	**P**	**07 05 26.2**	**+1.7**
	5.7nm,0.7s,mb4.7						
MAW	**Mawson**	**72.62**	**200**	P	**P**	**07 06 47.7**	**+1.6**
	4.7nm,0.7s,mb4.5,baz=117,slow=8.2,SNR=15						
MAW				LR	LR	07 36 59.4	
	comp=Z,71nm,21.2s,MS3.9,baz=311,slow=34						
MAW	**Mawson**	**72.62**	**200**	*e*P	**P**	**07 06 47.4**	**+1.4**
	4.4nm,1.4s,mb4.2						
SYO	**Syowa Base**	**77.39**	**193**	⇑*e*P	**P**	**07 07 13.2**	**-0.3**
SYO	**Syowa Base**	**77.39**	**193**	⇑*e*P	**P**	**07 07 18.0**	**+4.5**
MJAR	**Matsushiro Arr**	**78.29**	**325**	P	**P**	**07 07 17.0**	**-1.9**
	3.5nm,0.9s,mb4.3,baz=156,slow=5.4,SNR=4.4						
SNAA	**Sanae**	**78.34**	**178**	P	**P**	**07 07 19.5**	**+0.8**
	0.6nm,0.9s,mb3.5,baz=173,slow=4.0,SNR=5.8						
VNA3	**Neumayer Olymp**	**78.47**	**176**	*e*	**P**	**07 07 17.6**	**-1.9**
VNA3				*e*		07 07 25.4	
VNA2	**Neumayer--Watz**	**78.91**	**177**	*e*	**P**	**07 07 20.3**	**-1.6**
	baz=184,slow=5.6						
VNA2				*e*		07 07 29.0	
VNA2				*e*		07 10 17.9	
VNA1	**Neumayer--Stat**	**79.14**	**176**	*e*	**P**	**07 07 21.8**	**-1.3**
PLCA	**Paso Flores**	**82.37**	**133**	P	**P**	**07 07 41.3**	**+0.4**
	1.1nm,0.8s,mb3.9,baz=242,slow=9.9,SNR=3.4						
KSRS	**Korea Array**	**84.44**	**319**	P	**P**	**07 07 50.9**	**-0.5**
	0.6nm,0.4s,mb4.0,baz=123,slow=4.5,SNR=2.9						
ISA	**Isabella**	**85.90**	**44**	*e*P	**P**	**07 07 59.0**	**+0.3**
	7.8nm,1.4s,mb4.8						
CMB	**Columbia Colle**	**86.37**	**42**	*e*P	**P**	**07 08 01.2**	**+0.2**
	9.1nm,1.4s,mb4.8						
WAKR	**Walker**	**87.24**	**42**	*e*P	**P**	**07 08 05.7**	**+0.5**
	9.6nm,1.5s,mb4.8						
NVAR	**Mina Array Bea**	**87.84**	**42**	P	**P**	**07 08 08.5**	**+0.4**
	2.4nm,0.9s,mb4.4,baz=217,slow=8.4,SNR=19						
TXAR	**Lajitas Array**	**91.97**	**57**	P	**P**	**07 08 27.6**	**-0.1**
	0.8nm,1.1s,mb4.0,baz=196,slow=7.3,SNR=4.8						
MKAR	**Makanchi Array**	**117.93**	**310**	PKP	PKPdf	07 14 03.9	-1.0
	0.4nm,0.6s,baz=116,slow=3.4,SNR=3.5						
MKAR	**Makanchi Array**	**117.93**	**310**	PKP	PKPdf	07 14 03.9	-1.0
KKAR	**Karatay Array**	**125.27**	**304**	*e*PKPdf	PKPdf	07 14 18.4	-0.7
BVAR	**Borovoye Array**	**126.52**	**316**	PKP	PKPdf	07 14 20.6	-0.6
	0.6nm,0.6s,baz=90,slow=3.1,SNR=4.2						
FINES	**FINESS Array B**	**145.09**	**340**	PKP	PKPdf	07 14 53.5	-1.7
	21nm,0.8s,baz=62,slow=4.5,SNR=32						
NOA	**NORSAR Array B**	**148.61**	**352**	PKPbc	PKPbc	07 15 03.9	-1.0
	3.3nm,0.8s,baz=15,slow=4.4,SNR=9.8						
NOA	**NORSAR Array B**	**148.61**	**352**	PKPbc	PKPbc	07 15 03.9	-1.0
HFS	**Hagfors**	**149.13**	**349**	PKPbc	PKPbc	07 15 05.0	-1.3
	4.6nm,0.7s,baz=270,slow=0.3,SNR=8.9						
AKASG	**Malin Array Be**	**151.37**	**323**	PKPbc	PKPbc	07 15 10.8	-1.2
	1.3nm,0.5s,baz=42,slow=2.9,SNR=7.9						
BRTR	**Keskin Array B**	**152.83**	**299**	PKPbc	PKPbc	07 15 15.2	-0.5
	2.0nm,0.9s,baz=114,slow=4.1,SNR=7.6						
BRG	**Berggiesshubel**	**157.63**	**341**	*e*P	PKPab	07 15 46.2	-0.7
	4.8nm,0.8s						
BRG				*e*		07 15 51.6	
	6.5nm,1.0s						
GERES	**GERESS Array B**	**159.50**	**338**	PKPab	PKPab	07 15 54.1	-0.9
	0.6nm,0.5s,baz=25,slow=3.5,SNR=5.5						
DAVOX	**Davos/Dischmat**	**162.47**	**343**	PKPab	PKPab	07 16 07.7	-0.3
	2.8nm,0.6s,baz=7.1,slow=8.1,SNR=4.0						
TORD	**Torodi Ar. Bea**	**163.01**	**178**	PKPab	PKPab	07 16 11.8	+0.7
	0.9nm,0.9s,baz=188,slow=3.2,SNR=5.5						

*NEIC **30** 06:57:52.9±3.6,58.65S×25.78W,h78km±34km,mb3.8/1, Error ellipse: s-maj=19.1km s-min=16.7km az=49.0*
*IDC **30** 06:57:52.5±7.0,58.66S×25.79W,h72km±65km,mb3.6/5, mb1 3.6/6,mb1mx3.5/17,mbtmp3.6/6,ML3.8/1,Error ellipse: s-maj=25.5km s-min=22.4km az=59.0*
ISC 30 06:57:47.2±8.2,58.6S±0.2×25.8W±0.3,h23km±61km,n14, σ0.72/12,mb3.9/6,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.16**	**156**	*e*	**Pn**	**07 01 05.9**	**-0.1**
VNA1				*e*S	Sx	07 03 32.7	
VNA3	**Neumayer Olymp**	**14.35**	**159**	*e*	**Pn**	**07 01 07.4**	**-1.1**
VNA3				*e*S	Sx	07 03 27.7	
VNA2	**Neumayer--Watz**	**14.56**	**156**	*e*	**Pn**	**07 01 11.3**	**-0.1**
VNA2				*e*S	Sx	07 03 33.8	
SNAA	**Sanae**	**16.12**	**154**	P	**Pn**	**07 01 33.6**	**+1.7**
	0.3nm,0.3s,baz=321,slow=13,SNR=99						
SNAA				S	Sx	07 04 20.9	
	0.1nm,0.3s,baz=328,slow=19,SNR=8.0						
QSPA	**South Pole Qui**	**31.66**	**180**	P	**P**	**07 04 08.3**	**+0.2**
	0.9nm,0.5s,mb3.9,baz=198,slow=19,SNR=18						
QSPA	**South Pole Qui**	**31.66**	**180**	*e*P	**P**	**07 04 08.2**	**+0.1**
	1.2nm,0.6s,mb3.9						
MAW	**Mawson**	**37.67**	**141**	P	**P**	**07 04 59.3**	**-0.7**
	1.6nm,0.8s,mb3.8,baz=228,slow=14,SNR=3.8						
CFAA	**Coronel Fontan**	**39.29**	**295**	P	**P**	**07 05 13.9**	**0.0**
	0.2nm,0.6s,mb3.0,baz=157,slow=8.5,SNR=8.0						
BOSA	**Boshof**	**45.94**	**72**	P	**P**	**07 06 07.9**	**-0.1**
	1.4nm,0.4s,mb4.2,baz=222,slow=8.5,SNR=6.6						
DBIC	**Dimbokro**	**67.19**	**23**	P	**P**	**07 08 38.6**	**-0.5**
	1.2nm,0.3s,mb4.3,baz=185,slow=6.9,SNR=7.4						
TORD	**Torodi Ar. Bea**	**74.92**	**28**	P	**P**	**07 09 26.7**	**+0.7**
	2.7nm,0.5s,mb4.4,baz=200,slow=6.4,SNR=55						
TORD				pP	pP	07 09 48.1	+15
	0.7nm,0.4s,baz=201,slow=6.1,SNR=5.7						
TORD	**Torodi Ar. Bea**	**74.92**	**28**	P	**P**	**07 09 26.7**	**+0.7**
TORD				pP	pP	07 09 48.1	+15
SONM	**Songino Array**	**150.04**	**90**	PKPbc	PKPbc	07 17 33.0	-1.6
	0.4nm,0.4s,baz=222,slow=1.9,SNR=3.9						
ILAR	**Eielson Array**	**152.33**	**308**	PKPbc	PKPbc	07 17 38.4	-1.0
	0.2nm,0.5s,baz=145,slow=4.5,SNR=7.9						
ILAR				pPKPbc	pPKPbc	07 18 00.9	+14
	0.3nm,0.5s,baz=140,slow=3.5,SNR=4.8						

*CNRM **30** 07:06:43.8,35.63N×8.88W,h30km,MD3.5*
*ISCJB **30** 07:06:46.0±0.5,35.80N±0.02×8.44W±0.03,h87km±6km, Error ellipse: s-maj=4.9km s-min=2.9km az=150.1*
*MDD **30** 07:06:46.8±0.1,35.64N×8.67W,h59km±4km,mb4.8/27, Error ellipse: s-maj=1.6km s-min=1.0km az=64.0,PRXIMO*
*IGIL **30** 07:06:46.9,35.67N×8.63W,h30km*
*SFS **30** 07:06:47.0,35.66N×8.63W,h58km,ML4.8*
*INMG **30** 07:06:47.1±2.1,35.67N×8.56W,h38km±94km,MD2.7, ML3.0,Error ellipse: s-maj=6.0km s-min=3.2km az=66.0*
*NEIC **30** 07:06:47.6±0.4,35.72N×8.55W,h50km,Md3.3/1,Ml3.6/3, Error ellipse: s-maj=8.5km s-min=4.6km az=39.0*
*CSEM **30** 07:06:48.7±0.3,35.88N×8.46W,h60km,ML3.0,Error ellipse: s-maj=5.7km s-min=2.9km az=41.0*
ISC 30 07:06:47.3±0.5,35.79N±0.02×8.47W±0.03,h65km±13km, n223,σ1.15/370,7C-3D,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.37**	**348**	*e*P	**Pn**	**07 07 09.6**	**-0.7**
PFVI				*e*S	**Sn**	**07 07 26.7**	**-0.9**
PFVI				A		07 07 27.6	
	243nm,0.6s						
PFVI	**Vila Bisbo**	**1.37**	**348**	*e*P	**Pn**	**07 07 09.6**	**-0.7**
PFVI				*e*S	**Sn**	**07 07 26.7**	**-0.9**
	243nm,0.6s						
PBDV	**Barranco-do-Ve**	**1.51**	**16**	*e*P	**Pn**	**07 07 12.7**	**+0.5**
PBDV				S	**Sn**	**07 07 31.9**	**+0.9**
PBDV				A		07 07 37.8	
	72nm,0.6s						
PBDV	**Barranco-do-Ve**	**1.51**	**16**	P	**Pn**	**07 07 12.7**	**+0.5**
PBDV				S	**Sn**	**07 07 31.9**	**+0.9**
	72nm,0.6s						
PBDV	**Barranco-do-Ve**	**1.51**	**16**	*e*P	**Pn**	**07 07 12.7**	**+0.5**
PBDV				S	**Sn**	**07 07 31.9**	**+0.9**
	72nm,0.6s						
PVAQ	**Vaqueiros**	**1.72**	**20**	*e*P	**Pn**	**07 07 15.5**	**+0.5**
PVAQ				S	**Sn**	**07 07 36.8**	**+0.8**
PVAQ				A		07 07 38.3	
	51nm,0.3s						
PVAQ	**Vaqueiros**	**1.72**	**20**	P	**Pn**	**07 07 15.5**	**+0.5**
PVAQ				S	**Sn**	**07 07 36.8**	**+0.8**
	51nm,0.3s						
PVAQ	**Vaqueiros**	**1.72**	**20**	*e*P	**Pn**	**07 07 15.5**	**+0.5**
PVAQ				S	**Sn**	**07 07 36.8**	**+0.8**
	51nm,0.3s						
PTEO	**Sao Teotonio**	**1.76**	**353**	*e*P	**Pn**	**07 07 15.3**	**-0.3**
PTEO				S	**Sn**	**07 07 36.4**	**-0.6**
PTEO				A		07 07 38.2	
	122nm,0.3s						
PTEO	**Sao Teotonio**	**1.76**	**353**	P	**Pn**	**07 07 15.3**	**-0.3**
PTEO				S	**Sn**	**07 07 36.4**	**-0.6**
	61nm,0.3s						
PTEO	**Sao Teotonio**	**1.76**	**353**	*e*P	**Pn**	**07 07 15.3**	**-0.3**
PTEO				S	**Sn**	**07 07 36.4**	**-0.6**
	122nm,0.3s						
PCVE	**Castro Verde**	**1.87**	**11**	*e*P	**Pn**	**07 07 17.6**	**+0.6**
PCVE				S	**Sn**	**07 07 40.1**	**+0.5**
PCVE				A		07 07 41.5	
	44nm,0.2s						
PCVE	**Castro Verde**	**1.87**	**11**	⇑P	**Pn**	**07 07 17.6**	**+0.6**
PCVE				S	**Sn**	**07 07 40.1**	**+0.5**
	44nm,0.2s						
EGRO	**El Granado**	**1.91**	**24**	Pg	**Pn**	**07 07 18.5**	**+1.0**
EGRO				Lg		07 07 37.5	
EGRO	**El Granado**	**1.91**	**24**	⇑P	**Pn**	**07 07 18.5**	**+1.0**
	91nm,0.1s,SNR=18						
EGRO				S	**Sn**	**07 07 41.2**	**+0.6**
	38nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.91**	**24**	P	**Pn**	**07 07 18.5**	**+0.9**
	91nm,0.1s,SNR=18						
EGRO				S	**Sn**	**07 07 41.2**	**+0.6**
	38nm,0.1s,SNR=7.9						
MESJ	**Messejana**	**2.05**	**5**	*e*P	**Pn**	**07 07 19.9**	**+0.4**
MESJ				*e*S	**Sn**	**07 07 44.0**	**0.0**
MESJ				*e*S	**Sn**	**07 07 44.0**	**0.0**
RTC	**Rabat Centre**	**2.23**	**143**	P	**Pn**	**07 07 19.0**	**-3.0**
RTC				S	**Sn**	**07 07 45.0**	**-3.5**
PBEJ	**Beja**	**2.28**	**12**	*e*P	**Pn**	**07 07 23.0**	**+0.4**
PBEJ				S	**Sn**	**07 07 49.9**	**+0.3**
PBEJ				A		07 07 51.9	
	33nm,0.2s						
PBEJ	**Beja**	**2.28**	**12**	P	**Pn**	**07 07 23.0**	**+0.4**
PBEJ				S	**Sn**	**07 07 49.9**	**+0.3**
	17nm,0.2s						
PBEJ	**Beja**	**2.28**	**12**	*e*P	**Pn**	**07 07 23.0**	**+0.4**
PBEJ				S	**Sn**	**07 07 49.9**	**+0.3**
	33nm,0.2s						
RSA	**Sarsar**	**2.34**	**112**	P	**Pn**	**07 07 22.0**	**-1.4**
RSA				S	**Sn**	**07 07 51.0**	**-0.1**
RSA	**Sarsar**	**2.34**	**112**	*e*P	**Pn**	**07 07 22.0**	**-1.4**
RSA				*i* S	**Sn**	**07 07 51.0**	**-0.1**
ESPR	**Espera**	**2.37**	**62**	Pn	**Pn**	**07 07 24.6**	**+0.9**
ESPR				Lg		07 07 49.9	
ESPR	**Espera**	**2.37**	**62**	⇑P	**Pn**	**07 07 24.6**	**+0.9**
	98nm,0.2s,SNR=18						
ESPR				S	**Sn**	**07 07 52.4**	**+0.7**
	126nm,0.2s,SNR=6.4						
ESPR	**Espera**	**2.37**	**62**	P	**Pn**	**07 07 24.6**	**+0.8**
	98nm,0.2s,SNR=18						
ESPR				S	**Sn**	**07 07 52.4**	**+0.7**
	126nm,0.2s,SNR=6.4						
EMIN	**Mina Concepcio**	**2.44**	**36**	Pn	**Pn**	**07 07 25.5**	**+0.7**
EMIN				Lg		07 07 50.6	
EMIN	**Mina Concepcio**	**2.44**	**36**	⇑P	**Pn**	**07 07 25.5**	**+0.7**
	17nm,0.1s,SNR=18						
EMIN				S	**Sn**	**07 07 53.9**	**+0.4**
	26nm,0.1s,SNR=8.7						
EMIN	**Mina Concepcio**	**2.44**	**36**	P	**Pn**	**07 07 25.5**	**+0.7**
	17nm,0.1s,SNR=18						
EMIN				S	**Sn**	**07 07 53.9**	**+0.4**
	26nm,0.1s,SNR=8.7						
EJIF	**Jimena Fronter**	**2.52**	**74**	Pn	**Pn**	**07 07 27.5**	**+1.7**
EJIF				Sn	**Sn**	**07 07 52.6**	**-2.7**
EJIF	**Jimena Fronter**	**2.52**	**74**	⇓P	**Pn**	**07 07 27.5**	**+1.7**
	16nm,0.2s,SNR=18						
EJIF				S	**Sn**	**07 07 57.1**	**+1.7**
	37nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.52**	**74**	P	**Pn**	**07 07 27.5**	**+1.7**
	16nm,0.2s,SNR=18						
EJIF				Sn	**Sn**	**07 07 52.6**	**-2.7**
EJIF				S	**Sn**	**07 07 57.1**	**+1.8**
	37nm,0.4s,SNR=7.9						
DKH	**Dar Kharkhour**	**2.55**	**96**	P	**Pn**	**07 07 26.0**	**-0.2**
DKH				S	**Sn**	**07 07 58.0**	**+1.9**
DKH	**Dar Kharkhour**	**2.55**	**96**	*e*P	**Pn**	**07 07 26.0**	**-0.2**
DKH				*i* S	**Sn**	**07 07 58.0**	**+1.9**
PBAR	**Barrancos**	**2.64**	**25**	*e*P	**Pn**	**07 07 28.1**	**+0.6**
PBAR				S	**Sn**	**07 07 58.8**	**+0.5**
PBAR				A		07 08 02.1	
	24nm,0.1s						
PBAR	**Barrancos**	**2.64**	**25**	⇑P	**Pn**	**07 07 28.1**	**+0.6**
PBAR				S	**Sn**	**07 07 58.8**	**+0.5**
	24nm,0.1s						
LIJA	**Lijar**	**2.71**	**65**	⇑P	**Pn**	**07 07 29.0**	**+0.5**
LIJA				S	**Sn**	**07 07 56.2**	**-3.9**
LIJA	**Lijar**	**2.71**	**65**	*i* P	**Pn**	**07 07 29.0**	**+0.5**
LIJA				*e*S	**Sn**	**07 07 56.2**	**-3.9**
MOE	**Montemor**	**2.73**	**2**	*e*P	**Pn**	**07 07 29.1**	**+0.4**
MOE				S	**Sn**	**07 08 00.4**	**-0.1**
MOE	**Montemor**	**2.73**	**2**	*e*P	**Pn**	**07 07 29.2**	**+0.6**
MOE				*e*S	**Sn**	**07 08 00.4**	**-0.1**
MOE	**Montemor**	**2.73**	**2**	P	**Pn**	**07 07 29.1**	**+0.4**
MOE				S	**Sn**	**07 08 00.4**	**-0.1**
MOE	**Montemor**	**2.73**	**2**	*e*P	**Pn**	**07 07 29.1**	**+0.4**
MOE				S	**Sn**	**07 08 00.4**	**-0.1**
EVOP	**Sao Brissos**	**2.75**	**6**	*e*Pn	**Pn**	**07 07 28.8**	**-0.1**
EVOP				*e*Sn	**Sn**	**07 07 59.6**	**-1.3**
EVOP	**Sao Brissos**	**2.75**	**6**	*e*Pn	**Pn**	**07 07 28.8**	**-0.1**
EVOP				*e*Sn	**Sn**	**07 07 59.6**	**-

PTOM				A			07 08 27.6
	62nm,0.2s						
PTOM	**Tomar**	**3.82**	**1**	*e*P	**Pn**	**07 07 43.9**	**+0.3**
PTOM				*e*S	**Sn**	**07 08 25.8**	**-1.4**
PTOM	**Tomar**	**3.82**	**1**	P	**Pn**	**07 07 43.9**	**+0.3**
PTOM				S	**Sn**	**07 08 25.8**	**-1.4**
	31nm,0.2s						
PTOM	**Tomar**	**3.82**	**1**	*e*P	**Pn**	**07 07 43.9**	**+0.3**
PTOM				*e*S	**Sn**	**07 08 25.8**	**-1.4**
	62nm,0.2s						
EADA	**Adamuz**	**3.92**	**52**	Pn	**Pn**	**07 07 45.9**	**+1.0**
EADA				Lg		07 08 28.6	
EADA	**Adamuz**	**3.92**	**52**	⇑P	**Pn**	**07 07 45.9**	**+1.0**
	19nm,0.1s,SNR=18						
EADA				S	**Sn**	**07 08 28.6**	**-1.0**
	152nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.92**	**52**	P	**Pn**	**07 07 45.9**	**+1.0**
	19nm,0.1s,SNR=18						
EADA				S	**Sn**	**07 08 28.6**	**-0.9**
	152nm,0.1s,SNR=7.9						
CZD	**Col de Zad**	**3.95**	**133**	P	**Pn**	**07 07 44.0**	**-1.4**
CZD				S	**Sn**	**07 08 29.0**	**-1.4**
CZD	**Col de Zad**	**3.95**	**133**	*i* P	**Pn**	**07 07 44.0**	**-1.4**
CZD				*i* S	**Sn**	**07 08 29.0**	**-1.4**
TZC	**Tazercounte**	**3.99**	**155**	P	**Pn**	**07 07 41.0**	**-4.9**
TZC				S	**Sn**	**07 08 24.0**	**-7.4**
EGUA	**Guajares**	**4.09**	**74**	Pn	**Pn**	**07 07 48.7**	**+1.4**
EGUA				Sn	**Sn**	**07 08 30.6**	**-3.4**
EGUA				Lg		07 08 36.2	
EGUA	**Guajares**	**4.09**	**74**	P	**Pn**	**07 07 48.7**	**+1.4**
	6.7nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**07 08 32.3**	**-1.7**
	24nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**4.09**	**74**	P	**Pn**	**07 07 48.7**	**+1.4**
	6.7nm,0.2s,SNR=7.9						
EGUA				Sn	**Sn**	**07 08 30.5**	**-3.4**
EGUA				S	**Sn**	**07 08 32.3**	**-1.6**
	24nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**4.12**	**11**	*e*P	**Pn**	**07 07 48.2**	**+0.6**
PCBR				S	**Sn**	**07 08 33.8**	**-0.7**
PCBR				A		07 08 35.6	
	36nm,0.3s						
PCBR	**Castelo Branco**	**4.12**	**11**	P	**Pn**	**07 07 48.2**	**+0.6**
PCBR				S	**Sn**	**07 08 33.8**	**-0.7**
	18nm,0.3s						
PCBR	**Castelo Branco**	**4.12**	**11**	*e*P	**Pn**	**07 07 48.2**	**+0.6**
PCBR				S	**Sn**	**07 08 33.8**	**-0.7**
	36nm,0.3s						
CIA	**Chichaoua**	**4.22**	**183**	P	**Pn**	**07 07 42.0**	**-7.1**
CIA				S	**Sn**	**07 08 26.0**	**-11**
EQUE	**Quentar**	**4.29**	**69**	P	**Pn**	**07 07 51.4**	**+1.4**
	1.9nm,0.1s,SNR=13						
EQUE				S	**Sn**	**07 08 39.8**	**+1.0**
	17nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.29**	**69**	P	**Pn**	**07 07 51.3**	**+1.3**
	1.9nm,0.1s,SNR=13						
EQUE				S	**Sn**	**07 08 39.8**	**+1.1**
	17nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**4.43**	**56**	Pn	**Pn**	**07 07 52.5**	**+0.5**
EBAN				Sn	**Sn**	**07 08 37.5**	**-4.7**
EBAN				Lg		07 08 41.4	
EBAN	**Banos Encina**	**4.43**	**56**	⇓P	**Pn**	**07 07 52.5**	**+0.5**
	31nm,0.1s,SNR=18						
EBAN				S	**Sn**	**07 08 40.2**	**-2.1**
	3.7nm,0.3s,SNR=5.0						
EBAN	**Banos Encina**	**4.43**	**56**	P	**Pn**	**07 07 52.5**	**+0.5**
	31nm,0.1s,SNR=18						
EBAN				S	**Sn**	**07 08 40.2**	**-2.1**
	3.7nm,0.3s,SNR=5.0						
EBER	**Berja**	**4.64**	**75**	Pn	**Pn**	**07 07 56.1**	**+1.3**
EBER				Lg		07 08 48.4	
EBER	**Berja**	**4.64**	**75**	P	**Pn**	**07 07 56.1**	**+1.3**
	0.9nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**07 08 46.6**	**-0.6**
	9.6nm,0.3s,SNR=7.9						
EBER	**Berja**	**4.64**	**75**	P	**Pn**	**07 07 56.1**	**+1.4**
	0.9nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**07 08 46.6**	**-0.7**
	9.6nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**4.66**	**9**	*e*P	**Pn**	**07 07 55.5**	**+0.5**
MTE				S	**Sn**	**07 08 46.8**	**-0.9**
MTE				A		07 08 48.4	
	19nm,0.2s						
MTE	**Manteigas**	**4.66**	**9**	*e*P	**Pn**	**07 07 55.5**	**+0.5**
MTE				*e*S	**Sn**	**07 08 47.2**	**-0.6**
MTE	**Manteigas**	**4.66**	**9**	P	**Pn**	**07 07 55.5**	**+0.5**
MTE				S	**Sn**	**07 08 46.8**	**-0.9**
	9.6nm,0.2s						
MTE	**Manteigas**	**4.66**	**9**	*e*P	**Pn**	**07 07 55.5**	**+0.5**
MTE				*e*S	**Sn**	**07 08 47.2**	**-0.5**
EPLA	**Plasencia**	**4.66**	**23**	Pn	**Pn**	**07 07 54.8**	**-0.3**
EPLA				Sn	**Sn**	**07 08 42.8**	**-5.1**
EPLA				Lg		07 08 46.3	
EPLA	**Plasencia**	**4.66**	**23**	P	**Pn**	**07 07 54.8**	**-0.3**
	8.3nm,0.1s,SNR=37						
EPLA				S	**Sn**	**07 08 46.3**	**-1.6**
	5.7nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**4.66**	**23**	P	**Pn**	**07 07 54.8**	**-0.3**
	8.3nm,0.1s,SNR=37						
EPLA				Sn	**Sn**	**07 08 42.8**	**-5.1**
EPLA				S	**Sn**	**07 08 46.3**	**-1.6**
	5.7nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.77**	**64**	Pn	**Pn**	**07 07 57.2**	**+0.6**
EQES				Lg		07 08 51.9	
EQES	**Quesada**	**4.77**	**64**	P	**Pn**	**07 07 57.4**	**+0.8**
	4.4nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**07 08 50.9**	**+0.3**
	16nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.77**	**64**	P	**Pn**	**07 07 57.4**	**+0.8**
	4.4nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**07 08 50.9**	**+0.3**
	16nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**4.94**	**5**	*e*P	**Pn**	**07 07 59.4**	**+0.6**
PVIS				S	**Sn**	**07 08 53.2**	**-1.4**
PVIS				A		07 08 55.4	
	18nm,0.3s						
PVIS	**Viseu**	**4.94**	**5**	P	**Pn**	**07 07 59.4**	**+0.6**
PVIS				S	**Sn**	**07 08 53.2**	**-1.4**
	8.8nm,0.3s						
PVIS	**Viseu**	**4.94**	**5**	*e*P	**Pn**	**07 07 59.4**	**+0.6**
PVIS				S	**Sn**	**07 08 53.2**	**-1.4**
	18nm,0.3s						
ZFT	**Errachidia**	**5.08**	**136**	P	**Pn**	**07 08 00.0**	**-0.8**
ZFT				S	**Sn**	**07 08 55.0**	**-3.1**
ZFT	**Errachidia**	**5.08**	**136**	*i* P	**Pn**	**07 08 00.0**	**-0.8**
EHUE	**Huescar**	**5.13**	**65**	Pn	**Pn**	**07 08 01.8**	**+0.4**
EHUE				Lg		07 08 59.2	
EHUE	**Huescar**	**5.13**	**65**	P	**Pn**	**07 08 02.1**	**+0.6**
	7.1nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**07 08 57.9**	**-1.5**
	14nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**5.13**	**65**	Pn	**Pn**	**07 08 01.8**	**+0.3**
EHUE	**Huescar**	**5.13**	**65**	P	**Pn**	**07 08 02.1**	**+0.6**
	7.1nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**07 08 57.9**	**-1.4**
	14nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**5.27**	**41**	Pn	**Pn**	**07 08 04.4**	**+1.0**
ESDC				Lg		07 09 01.3	
ESDC	**Sonseca Array**	**5.27**	**41**	P	**Pn**	**07 08 04.2**	**+0.8**
	6.8nm,0.1s,baz=231,slow=13,SNR=7.0						
ESDC				S	**Sn**	**07 09 03.3**	**+0.5**
	4.1nm,0.3s,baz=226,slow=23,SNR=7.9						
ESDC	**Sonseca Array**	**5.27**	**41**	P	**Pn**	**07 08 04.2**	**+0.8**
	6.8nm,0.1s,slow=13,SNR=7.0						
ESDC				S	**Sn**	**07 09 03.3**	**+0.6**
	4.1nm,0.3s,baz=226,slow=23,SNR=7.9						
PTO	**Porto**	**5.34**	**359**	*e*S	**Sn**	**07 09 01.7**	**-2.8**
PTO	**Porto**	**5.34**	**359**	S	**Sn**	**07 09 01.7**	**-2.8**
PTO	**Porto**	**5.34**	**359**	*e*S	**Sn**	**07 09 01.7**	**-2.8**
MVO	**Moncorvo**	**5.48**	**11**	*e*P	**Pn**	**07 08 06.6**	**+0.3**
MVO				S	**Sn**	**07 09 06.1**	**-1.8**
MVO				A		07 09 07.9	
	12nm,0.4s						
MVO	**Moncorvo**	**5.48**	**11**	*e*P	**Pn**	**07 08 06.6**	**+0.3**
MVO				S	**Sn**	**07 09 06.1**	**-1.8**
	12nm,0.4s						
PVRL	**Vila Real**	**5.51**	**6**	*e*P	**Pn**	**07 08 07.5**	**+0.9**
PVRL				*e*S	**Sn**	**07 09 06.4**	**-2.2**
PVRL				A		07 09 11.0	
	20nm,0.1s						
PVRL	**Vila Real**	**5.51**	**6**	*e*P	**Pn**	**07 08 07.5**	**+0.8**
PVRL				*e*S	**Sn**	**07 09 06.4**	**-2.1**
PVRL	**Vila Real**	**5.51**	**6**	P	**Pn**	**07 08 07.5**	**+0.9**
PVRL				S	**Sn**	**07 09 06.4**	**-2.2**
	9.8nm,0.1s						
PVRL	**Vila Real**	**5.51**	**6**	*e*P	**Pn**	**07 08 07.5**	**+0.9**
PVRL				*e*S	**Sn**	**07 09 06.4**	**-2.2**
	20nm,0.1s						
EVIA	**Vianos**	**5.54**	**57**	Pn	**Pn**	**07 08 07.1**	**-0.1**
EVIA				Lg		07 09 08.0	
EVIA	**Vianos**	**5.54**	**57**	P	**Pn**	**07 08 07.1**	**-0.1**
	6.1nm,0.1s,SNR=13						
EVIA				S	**Sn**	**07 09 07.2**	**-2.3**
	13nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**5.54**	**57**	P	**Pn**	**07 08 07.1**	**-0.1**
	6.1nm,0.1s,SNR=13						
GUD	**Guadarrama**	**5.92**	**34**	Pn	**Pn**	**07 08 13.5**	**+1.2**
GUD				Lg		07 09 18.2	
GUD	**Guadarrama**	**5.92**	**34**	P	**Pn**	**07 08 13.4**	**+1.2**
	15nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**07 09 19.0**	**+0.4**
	6.1nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**5.92**	**34**	P	**Pn**	**07 08 13.4**	**+1.2**
	15nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**07 09 19.0**	**+0.4**
	6.1nm,0.4s,SNR=7.9						
PCAB	**Cabril**	**5.92**	**3**	*e*P	**Pn**	**07 08 12.5**	**+0.2**
PCAB				S	**Sn**	**07 09 15.8**	**-2.9**
PCAB				A		07 09 19.5	
	16nm,0.3s						
PCAB	**Cabril**	**5.92**	**3**	P	**Pn**	**07 08 12.5**	**+0.2**
PCAB				S	**Sn**	**07 09 15.8**	**-2.9**
	7.8nm,0.3s						
PCAB	**Cabril**	**5.92**	**3**	*e*P	**Pn**	**07 08 12.5**	**+0.2**
PCAB				S	**Sn**	**07 09 15.8**	**-2.9**
	16nm,0.3s						
YBT	**Youssef Ben Ta**	**5.99**	**189**	P	**Pn**	**07 08 09.0**	**-4.4**
ELOB	**Lobios**	**6.08**	**3**	Pn	**Pn**	**07 08 14.9**	**+0.5**
ELOB				Lg		07 09 21.1	
ELOB	**Lobios**	**6.08**	**3**	P	**Pn**	**07 08 14.9**	**+0.5**
	6.2nm,0.1s,SNR=20						
ELOB				S	**Sn**	**07 09 19.5**	**-3.0**
	12nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.08**	**3**	P	**Pn**	**07 08 14.9**	**+0.5**
	6.2nm,0.1s,SNR=20						
ELOB				S	**Sn**	**07 09 19.5**	**-3.0**
	12nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**6.15**	**68**	S	**Sn**	**07 09 21.4**	**-2.9**
	16nm,0.8s,SNR=7.9						
PBRG	**Braganca**	**6.15**	**12**	*e*P	**Pn**	**07 08 15.8**	**+0.3**
PBRG				*e*S	**Sn**	**07 09 22.2**	**-2.2**
PBRG				A		07 09 24.1	
	7.8nm,0.5s						
PBRG	**Braganca**	**6.15**	**12**	*e*P	**Pn**	**07 08 16.2**	**+0.7**
PBRG				*e*S	**Sn**	**07 09 22.9**	**-1.5**
PBRG	**Braganca**	**6.15**	**12**	P	**Pn**	**07 08 15.8**	**+0.3**
PBRG				S	**Sn**	**07 09 22.2**	**-2.2**
	3.9nm,0.5s						
PBRG	**Braganca**	**6.15**	**12**	*e*P	**Pn**	**07 08 15.8**	**+0.3**
PBRG				*e*S	**Sn**	**07 09 22.9**	**-1.5**
ETOB	**Tobarra**	**6.21**	**61**	Pn	**Pn**	**07 08 16.4**	**+0.1**
ETOB				Sn	**Sn**	**07 09 19.7**	**-6.2**
ETOB				Lg		07 09 25.3	
ETOB	**Tobarra**	**6.21**	**61**	P	**Pn**	**07 08 16.3**	**0.0**
	3.5nm,0.1s,SNR=25						
ETOB				S	**Sn**	**07 09 22.9**	**-3.0**
	20nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**6.21**	**61**	Pn	**Pn**	**07 08 16.4**	**+0.1**
ECAL	**Calabor**	**6.29**	**12**	Pn	**Pn**	**07 08 18.1**	**+0.8**
ECAL				Lg		07 09 26.7	
ECAL	**Calabor**	**6.29**	**12**	P	**Pn**	**07 08 18.1**	**+0.8**
	7.5nm,0.2s,SNR=21						
ECAL				S	**Sn**	**07 09 26.4**	**-1.3**
	5.8nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.29**	**12**	P	**Pn**	**07 08 18.1**	**+0.8**
	7.5nm,0.2s,SNR=21						
ECAL				S	**Sn**	**07 09 26.4**	**-1.3**
	5.8nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**6.35**	**358**	S	**Sn**	**07 09 27.0**	**-2.2**
	14nm,0.4s,SNR=7.9						
EZAM	**Zamans**	**6.35**	**358**	S	**Sn**	**07 09 27.0**	**-2.2**
	14nm,0.4s,SNR=7.9						
ECHE	**Chera**	**7.05**	**55**	Pn	**Pn**	**07 08 28.6**	**+0.8**
ECHE	**Chera**	**7.05**	**55**	P	**Pn**	**07 08 28.6**	**+0.8**
	1.8nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**07 09 45.3**	**-1.2**
	3.3nm,0.4s,SNR=7.9						
ECHE	**Chera**	**7.05**	**55**	P	**Pn**	**07 08 28.6**	**+0.8**
	1.8nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**07 09 45.3**	**-1.2**
	3.3nm,0.4s,SNR=7.9						
EMAZ	**Mazaricos**	**7.16**	**357**	Pn	**Pn**	**07 08 28.4**	**-0.9**
EMAZ				Lg		07 09 47.6	
EMAZ	**Mazaricos**	**7.16**	**357**	S	**Sn**	**07 09 44.7**	**-4.4**
	4.8nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**7.16**	**357**	Pn	**Pn**	**07 08 28.4**	**-0.8**
EBEN	**Beniarda**	**7.19**	**64**	Pn	**Pn**	**07 08 29.8**	**+0.2**
EBEN				Sn	**Sn**	**07 09 45.1**	**-4.7**
EBEN	**Beniarda**	**7.19**	**64**	P	**Pn**	**07 08 29.8**	**+0.1**
	0.6nm,0.1s,SNR=10						
EBEN				S	**Sn**	**07 09 45.9**	**-3.9**
	2.1nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**7.19**	**64**	P	**Pn**	**07 08 29.8**	**+0.2**
	0.6nm,0.1s,SNR=10						
EPON	**Pontenova**	**7.59**	**7**	S	**Sn**	**07 09 58.1**	**-1.6**
	1.3nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.59**	**7**	S	**Sn**	**07 09 58.1**	**-1.6**
	1.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**7.78**	**52**	Pn	**Pn**	**07 08 39.3**	**+1.5**
EMOS				Sn	**Sn**	**07 09 57.2**	**-7.2**
EMOS	**Mosqueruela**	**7.78**	**52**	P	**Pn**	**07 08 39.5**	**+1.7**
	1.0nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**07 10 01.6**	**-2.8**
	3.8nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**7.78**	**52**	Pn	**Pn**	**07 08 39.3**	**+1.5**
EARI	**Arriondas**	**7.91**	**18**	Pn	**Pn**	**07 08 40.3**	**+0.8**
EARI				Lg		07 10 06.6	
EARI	**Arriondas**	**7.91**	**18**	P	**Pn**	**07 08 40.9**	**+1.4**
	0.7nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**7.91**	**18**	Pn	**Pn**	**07 08 40.3**	**+0.8**
EARI	**Arriondas**	**7.91**	**18**	P	**Pn**	**07 08 40.9**	**+1.4**
	0.7nm,0.3s,SNR=7.9						
ECRI	**Cripan**	**8.23**	**32**	Pn	**Pn**	**07 08 45.1**	**+1.3**
ECRI	**Cripan**	**8.23**	**32**	P	**Pn**	**07 08 45.4**	**+1.6**
	4.5nm,0.1s,SNR=7.9						
ECRI	**Cripan**	**8.23**	**32**	Pn	**Pn**	**07 08 45.1**	**+1.3**
ECRI	**Cripan**	**8.23**	**32**	P	**Pn**	**07 08 45.4**	**+1.6**
	4.5nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**8.38**	**26**	Pn	**Pn**	**07 08 47.0**	**+1.0**
ELAN	**Lanestosa**	**8.38**	**26**	P	**Pn**	**07 08 47.0**	**+1.0**
	0.9nm,0.1s,SNR=6.5						
ELAN				S	**Sn**	**07 10 17.1**	**-2.0**
	2.7nm,0.5s,SNR=7.9						
ELAN	**Lanestosa**	**8.38**	**26**	P	**Pn**	**07 08 47.0**	**+1.0**
	0.9nm,0.1s,SNR=6.5						
ELAN				S	**Sn**	**07 10 17.1**	**-2.0**
	2.7nm,0.5s,SNR=7.9						
ESAC	**San Caprasio**	**8.61**	**44**	Pn	**Pn**	**07 08 50.9**	**+1.9**
ESAC	**San Caprasio**	**8.61**	**44**	P	**Pn**	**07 08 50.5**	**+1.5**
	18nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**8.61**	**44**	P	**Pn**	**07 08 50.5**	**+1.5**
	18nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**8.61**	**44**	Pn	**Pn**	**07 08 50.9**	**+1.9**
IELO	**Elcoad**	**9.00**	**36**	P	**Pn**	**07 08 56.2**	**+1.9**
	4.0nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**07 10 33.5**	**-0.6**
	2.6nm,0.3s,SNR=7.9						
IELO	**Elcoad**	**9.00**	**36**	P	**Pn**	**07 08 56.2**	**+1.9**
	4.0nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**07 10 33.5**	**-0.5**
	2.6nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**9.00**	**36**	P	**Pn**	**07 08 56.1**	**+1.8**
	4.0nm,0.1s,SNR=18						
EORO	**Oroz-Betelu**	**9.00**	**36**	P	**Pn**	**07 08 56.1**	**+1.7**
	4.0nm,0.1s,SNR=18						
ELIZ	**Elizondo**	**9.11**	**34**	Pn	**Pn**	**07 08 57.7**	**+1.9**
ELIZ	**Elizondo**	**9.11**	**34**	P	**Pn**	**07 08 57.7**	**+1.9**
	2.5nm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**9.11**	**34**	P	**Pn**	**07 08 57.7**	**+1.9**
	2.5nm,0.1s,SNR=7.9						
EALK	**Alkurruntz**	**9.16**	**34**	Pn	**Pn**	**07 08 58.0**	**+1.4**
EALK				Lg		07 10 38.5	
EALK	**Alkurruntz**	**9.16**	**34**	P	**Pn**	**07 08 57.9**	**+1.4**
	0.4nm,0.1s,SNR=6.3						
EALK				S	**Sn**	**07 10 38.5**	**+0.5**
	2.2nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**9.16**	**34**	P	**Pn**	**07 08 57.9**	**+1.3**
	0.4nm,0.1s,SNR=6.3						
EALK				S	**Sn**	**07 10 38.5**	**+0.5**
	2.2nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**9.21**	**35**	*e*Pn	**Pn**	**07 08 58.6**	**+1.4**
SJPF				*e*Sn	**Sn**	**07 10 34.3**	**-4.9**
	2.5nm,0.4s						
SJPF	**Ste Jean**	**9.21**	**35**	P	**Pn**	**07 08 58.6**	**+1.4**
SJPF				S	**Sn**	**07 10 34.3**	**-4.9**
	1.2nm,0.4s						
SJPF	**Ste Jean**	**9.21**	**35**	*e*Pn	**Pn**	**07 08 58.6**	**+1.4**
EPOB	**Poblet**	**9.31**	**51**	Pn	**Pn**	**07 09 00.6**	**+2.0**
EPOB	**Poblet**	**9.31**	**51**	Pn	**Pn**	**07 09 00.6**	**+2.0**
ETSF	**Etsaut**	**9.37**	**38**	*e*Pn	**Pn**	**07 09 00.0**	**+0.5**
ETSF				*e*Sn	**Sn**	**07 10 38.8**	**-4.4**
	1.7nm,0.4s						
ETSF	**Etsaut**	**9.37**	**38**	P	**Pn**	**07 09 00.0**	**+0.5**
ETSF				S	**Sn**	**07 10 38.8**	**-4.4**
	0.9nm,0.4s						
ETSF	**Etsaut**	**9.37**	**38**	*e*Pn	**Pn**	**07 09 00.0**	**+0.5**
EBIE	**Bielsa**	**9.59**	**42**	Pn	**Pn**	**07 09 04.5**	**+2.0**
EBIE				Lg		07 10 47.7	
EBIE	**Bielsa**	**9.59**	**42**	P	**Pn**	**07 09 04.3**	**+1.8**
	3.7nm,0.2s,SNR=21						
EBIE				S	**Sn**	**07 10 47.7**	**-0.8**
	1.4nm,0.4s,SNR=7.9						
EBIE	**Bielsa**	**9.59**	**42**	P	**Pn**	**07 09 04.3**	**+1.9**
	3.7nm,0.2s,SNR=21						
EPF	**Esparros**	**9.93**	**41**	*e*Pn	**Pn**	**07 09 06.8**	**-0.3**
EPF	**Esparros**	**9.93**	**41**	P	**Pn**	**07 09 06.8**	**-0.3**
EPF	**Esparros**	**9.93**	**41**	*e*Pn	**Pn**	**07 09 06.8**	**-0.3**
CSOR	**Sort**	**9.94**	**46**	Pn	**Pn**	**07 09 08.0**	**+0.7**
CSOR	**Sort**	**9.94**	**46**	P	**Pn**	**07 09 08.5**	**+1.2**
	1.1nm,0.1s,SNR=7.3						
CSOR	**Sort**	**9.94**	**46**	Pn	**Pn**	**07 09 07.9**	**+0.6**
CSOR	**Sort**	**9.94**	**46**	P	**Pn**	**07 09 08.5**	**+1.2**
	1.1nm,0.1s,SNR=7.3						
MTLF	**Montolieu**	**11.17**	**44**	*e*Pn	**Pn**	**07 09 24.3**	**+0.3**
MTLF	**Montolieu**	**11.17**	**44**	P	**Pn**	**07 09 24.3**	**+0.3**
MTLF	**Montolieu**	**11.17**	**44**	*e*Pn	**Pn**	**07 09 24.3**	**+0.3**
CAF	**Calviac**	**12.14**	**38**	*e*Pn	**Pn**	**07 09 37.6**	**+0.3**
CAF	**Calviac**	**12.14**	**38**	P	**Pn**	**07 09 37.6**	**+0.3**
CAF	**Calviac**	**12.14**	**38**	*e*Pn	**Pn**	**07 09 37.6**	**+0.3**
RJF	**Les Rejaudoux**	**12.15**	**36**	*e*Pn	**Pn**	**07 09 37.7**	**+0.3**
RJF	**Les Rejaudoux**	**12.15**	**36**	P	**Pn**	**07 09 37.7**	**+0.3**
RJF	**Les Rejaudoux**	**12.15**	**36**	*e*Pn	**Pn**	**07 09 37.7**	**+0.3**
MFF	**Saint Martin d**	**12.48**	**28**	*e*Pn	**Pn**	**07 09 42.1**	**+0.3**
MFF	**Saint Martin d**	**12.48**	**28**	P	**Pn**	**07 09 42.1**	**+0.3**
MFF	**Saint Martin d**	**12.48**	**28**	*e*Pn	**Pn**	**07 09 42.1**	**+0.3**
QUIF	**Quistinic**	**12.74**	**16**	*e*Pn	**Pn**	**07 09 45.4**	**0.0**
QUIF	**Quistinic**	**12.74**	**16**	P	**Pn**	**07 09 45.4**	**0.0**
QUIF	**Quistinic**	**12.74**	**16**	*e*Pn	**Pn**	**07 09 45.4**	**0.0**

WEL 30 07:07:00.3±0.7, 47°.59S×165°.82E, h12km, ML3.5/6, Error ellipse: s-maj=7.2km s-min=5.7km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ	**The Paps**	**1.66**	**64**	PN	Pn	07 07 28.0	-1.3
APZ				SN	Sn	07 07 48.8	-1.7
WHZ	**Wether Hill Ro**	**2.24**	**42**	PN	Pn	07 07 35.7	-1.5
WHZ				SN	Sn	07 08 03.3	-1.4
DCZ	**Deep Cove**	**2.30**	**24**	*e*PN	Pn	07 07 38.7	+0.7
SYZ	**Scrubby Hill**	**2.50**	**66**	PN	Pn	07 07 40.0	-0.7
SYZ				SN	Sn	07 08 10.2	-1.0
MLZ	**Mavora Lakes**	**2.77**	**37**	PN	Pn	07 07 43.0	-1.4
TUZ	**Tuapeka**	**3.09**	**59**	PN	Pn	07 07 48.0	-0.8
TUZ				SN	Sn	07 08 24.5	-1.1
EAZ	**Earnscleugh**	**3.37**	**47**	PN	Pn	07 07 52.5	-0.2
EAZ				*e*SN	Sn	07 08 30.4	-2.3
ODZ	**Otahua Downs**	**4.20**	**55**	PN	Pn	07 08 01.7	-2.4

*NEIC **30** 07:11:23.3, 17°.28N×100°.05W, h14km, MD3.5(MEX), After MEX.*

MEX 30 07:11:23.3±0.8, 17°.28N×100°.05W, h14km±11km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.31**	**222**	*i* P	Pg	07 11 28.9	-0.9
CAIG				*i* S	Sg	07 11 33.5	-0.7
CAIG	**El Cayaco**	**0.31**	**222**	*i* P	Pg	07 11 28.9	-0

ISP eSn Sn 07 30 41.9 -1.0
ISP Isparta 1.25 157 eP Pg 07 30 23.7 -1.2
ISP e 07 30 41.9
ISP Isparta 1.25 157 P Pg 07 30 24.0 -0.9
ISP S Sg 07 30 42.6 +1.6
ISP Isparta 1.25 157 ePn Pg 07 30 23.7 -1.2
ISP Isparta 1.25 157 P Pg 07 30 24.0 -0.9
ISP eS Sg 07 30 41.9 +0.9
DURS Dursunbey 1.27 300 ⇑iP Pg 07 30 24.1 -1.2
DURS i S Sg 07 30 41.6 -0.3
DURS Dursunbey 1.27 300 i P Pg 07 30 24.1 -1.3
DURS i S Sg 07 30 41.6 -0.3
ULDT Uludag 1.31 333 ⇑iP Pg 07 30 23.6 -2.4
ULDT i S Sg 07 30 40.9 -2.2
ULDT Uludag 1.31 333 i P Pg 07 30 23.6 -2.5
ULDT i S Sg 07 30 40.9 -2.2
SVRH Sivrihisar-ESK 1.35 69 ePN Pn 07 30 26.6 -0.3
SVRH Sivrihisar-ESK 1.35 69 ePn Pn 07 30 26.6 -0.3
GPA Golpazari 1.35 13 ePN Pn 07 30 26.6 -0.3
GPA Golpazari 1.35 13 ePn Pn 07 30 26.7 -0.3
DENT Denizli 1.40 210 ePN Pn 07 30 26.6 -0.9
DENT Denizli 1.40 210 ePn Pn 07 30 26.7 -0.9
DNZL Cakiroluk 1.45 208 ⇑iP Pn 07 30 27.6 -0.6
DNZL i S Sg 07 30 49.1 +1.7
DNZL Cakiroluk 1.45 208 i P Pn 07 30 27.6 -0.7
DNZL i S Sg 07 30 49.2 +1.8
ADVT Abdulvahap 1.47 355 ePN Pn 07 30 27.7 -0.8
ADVT Abdulvahap 1.47 355 ePn Pn 07 30 27.7 -0.8
GULT Gulveren 1.53 18 ePN Pn 07 30 29.8 +0.3
GULT Gulveren 1.53 18 ePn Pn 07 30 29.8 +0.3
KIZT Kizilcal 1.55 93 ePN Pn 07 30 29.5 -0.1
KIZT Kizilcal 1.55 93 ePn Pn 07 30 29.5 -0.1
GEMT Gemlik 1.56 340 ePN Pn 07 30 29.2 -0.6
GEMT Gemlik 1.56 340 ePn Pn 07 30 29.2 -0.7
MDNY Mudanya-Bursa 1.60 331 ePN Pn 07 30 29.9 -0.6
MDNY Mudanya-Bursa 1.60 331 ePn Pn 07 30 29.9 -0.5
BCK Bucak 1.60 160 ePN Pn 07 30 30.8 +0.4
BCK Bucak 1.60 160 ePn Pn 07 30 30.8 +0.4
AKHS Akhisar 1.63 267 ⇓iP Pn 07 30 29.7 -1.1
AKHS i S Sn 07 30 51.1 -1.4
AKHS Akhisar 1.63 267 i P Pn 07 30 29.7 -1.1
AKHS i S Sn 07 30 51.1 -1.4
AKS Akhisar 1.63 267 ePN Pn 07 30 30.6 -0.2
AKS Akhisar 1.63 267 ePn Pn 07 30 30.6 -0.2
BALB Balikesir 1.71 294 ePN Pn 07 30 31.5 -0.3
BALB Balikesir 1.71 294 ePn Pn 07 30 31.5 -0.3
SUTC Sutluce-Ispart 1.73 150 ePN Pn 07 30 32.5 +0.4
SUTC Sutluce-Ispart 1.73 150 ePn Pn 07 30 32.5 +0.4
SPNC Sapanca-Adapaz 1.74 10 ePN Pn 07 30 32.6 +0.3
SPNC Sapanca-Adapaz 1.74 10 ePn Pn 07 30 32.6 +0.3
GOLH Golhisar 1.75 189 ⇑iP Pn 07 30 31.8 -0.7
GOLH i S Sn 07 30 54.0 -1.4
GOLH Golhisar 1.75 189 i P Pn 07 30 31.8 -0.7
GOLH i S Sn 07 30 54.0 -1.4
ARMT Armutlu 1.78 334 ePN Pn 07 30 32.2 -0.7
ARMT Armutlu 1.78 334 ePn Pn 07 30 32.2 -0.7
KDHN Kadinhani 1.79 104 ⇑iP Pn 07 30 31.3 -1.7
KDHN i S Sn 07 31 02.0 +5.6
KDHN Kadinhani 1.79 104 i P Pn 07 30 31.3 -1.7
MDU Mudurnu 1.80 34 ePN Pn 07 30 34.1 +0.9
MDU Mudurnu 1.80 34 ePn Pn 07 30 34.1 +0.9
GLHS Gihisar (BURDU 1.84 190 ePN Pn 07 30 34.5 +0.8
GLHS Gihisar (BURDU 1.84 190 ePn Pn 07 30 34.5 +0.8
HRT Hereke 1.86 355 ePN Pn 07 30 34.3 +0.4
HRT Hereke 1.86 355 ePn Pn 07 30 34.3 +0.4
BALY Balya 1.93 294 ⇓iP Pn 07 30 34.3 -0.6
BALY i S Sn 07 31 00.1 +0.3
BALY Balya 1.93 294 i P Pn 07 30 34.3 -0.6
BALY i S Sn 07 31 00.1 +0.3
BUY Buyukada 1.97 342 ⇑iP Pn 07 30 33.9 -1.6
BUY i S Sn 07 31 02.1 +1.2
BUY Buyukada 1.97 342 i P Pn 07 30 33.9 -1.6
BUY i S Sn 07 31 02.1 +1.2
KORT Korkueli 2.00 170 ⇓iP Pn 07 30 36.4 +0.5
KORT i S Sn 07 31 05.0 +3.5
KORT Korkueli 2.00 170 i P Pn 07 30 36.4 +0.5
KORT i S Sn 07 31 05.0 +3.5
HENT Hendek 2.00 22 ⇑iP Pn 07 30 33.8 -2.1
HENT i S Sn 07 31 05.4 +3.8
HENT Hendek 2.00 22 i P Pn 07 30 33.8 -2.1
HENT i S Sn 07 31 05.4 +3.8
GONE Gonen-Balikesi 2.02 303 ePN Pn 07 30 35.7 -0.5
GONE Gonen-Balikesi 2.02 303 ePn Pn 07 30 35.7 -0.5
AYDN Tasoluk 2.06 231 ⇑iP Pn 07 30 36.8 +0.1
AYDN i S Sn 07 30 59.6 -3.5
AYDN Tasoluk 2.06 231 i P Pn 07 30 36.8 +0.1
AYDN i S Sn 07 30 59.6 -3.4
BNT Bandirma 2.06 313 ePN Pn 07 30 36.0 -0.7
BNT Bandirma 2.06 313 ePn Pn 07 30 36.0 -0.7
IZM Izmir 2.14 255 ePN Pn 07 30 37.1 -0.7
ANTB Antalya 2.15 164 ePN Pn 07 30 38.6 +0.6
ANTB Antalya 2.15 164 ePn Pn 07 30 38.6 +0.6
KONT Konya--Tatoy 2.19 117 ePN Pn 07 30 38.6 +0.2
KONT Konya--Tatoy 2.19 117 ePn Pn 07 30 38.6 +0.2
SILT Sile 2.19 355 ePN Pn 07 30 38.1 -0.3
SILT Sile 2.19 355 ePn Pn 07 30 38.1 -0.4
ISK Istanbul-Kandi 2.19 343 ePN Pn 07 30 39.0 +0.6
ISK Istanbul-Kandi 2.19 343 ePn Pn 07 30 39.1 +0.6
ELL Elmali 2.22 180 ePN Pn 07 30 39.5 +0.6
ELL Elmali 2.22 180 ePn Pn 07 30 39.5 +0.6
YER Yerkesik 2.24 215 ePN Pn 07 30 40.0 +0.8
YER Yerkesik 2.24 215 ePn Pn 07 30 40.0 +0.9
SGKT Sivrigoynuk 2.31 45 i P Pn 07 30 39.6 -0.5
SGKT Sivrigoynuk 2.31 45 i P Pn 07 30 39.6 -0.5
BLCB Balcova 2.31 256 ePN Pn 07 30 40.9 +0.7
BLCB Balcova 2.31 256 ePn Pn 07 30 40.9 +0.7
TURN Turunc 2.33 207 i P Pn 07 30 45.4 +4.9
TURN Turunc 2.33 207 i P Pn 07 30 45.4 +4.9
MLSB Milas 2.37 226 ePN Pn 07 30 41.5 +0.5
MLSB Milas 2.37 226 ePn Pn 07 30 41.5 +0.5
BGKT Bogazkoy 2.37 339 ePN Pn 07 30 41.4 +0.4
BGKT Bogazkoy 2.37 339 ePn Pn 07 30 41.4 +0.4
KLYT Kilyos 2.37 344 ePN Pn 07 30 40.9 -0.1
KLYT Kilyos 2.37 344 ePn Pn 07 30 40.9 -0.1
LOD Lodumlu 2.40 67 ePN Pn 07 30 41.8 +0.4
LOD Lodumlu 2.40 67 ePn Pn 07 30 41.8 +0.4
FETY Fethiye 2.42 196 ePN Pn 07 30 42.7 +1.0
FETY Fethiye 2.42 196 ePn Pn 07 30 42.7 +1.0
ELBA Catalca 2.45 333 i P Pn 07 30 40.3 -1.8
ELBA Catalca 2.45 333 i P Pn 07 30 40.3 -1.8
GCAM G?zelcaml? 2.45 240 i P Pn 07 30 41.4 -0.7
GCAM G?zelcaml? 2.45 240 i P Pn 07 30 41.4 -0.7
CTKS Kestanelik-??a 2.50 335 ePN Pn 07 30 43.3 +0.5
CTKS Kestanelik-??a 2.50 335 ePn Pn 07 30 43.3 +0.5
AFSR Af´ar-Bala (A 2.51 78 ePN Pn 07 30 44.1 +1.2
AFSR Af´ar-Bala (A 2.51 78 ePn Pn 07 30 44.1 +1.2
AYVA Ayvalik 2.52 279 ⇓iP Pn 07 30 42.4 -0.7
AYVA i S Sn 07 31 19.2 +4.8
AYVA Ayvalik 2.52 279 i P Pn 07 30 42.4 -0.6
BBAL Bala 2.56 76 i P Pn 07 30 43.8 +0.1
BBAL Bala 2.56 76 i P Pn 07 30 43.8 +0.1
SLVT Silivri 2.60 331 ePN Pn 07 30 44.5 +0.3
SLVT Silivri 2.60 331 ePn Pn 07 30 44.5 +0.3
KDZE Karadeniz Ereo 2.62 26 ePN Pn 07 30 45.0 +0.6
KDZE Karadeniz Ereo 2.62 26 ePn Pn 07 30 45.0 +0.6
URLA Izmir 2.66 258 i P Pn 07 30 42.8 -2.1
URLA Izmir 2.66 258 i P Pn 07 30 42.8 -2.2
SART Tekirdag 2.71 310 i P Pn 07 30 44.8 -0.8
SART Tekirdag 2.71 310 i P Pn 07 30 44.8 -0.8
RKY Sarkoy-Tekirda 2.71 310 ePN Pn 07 30 45.9 +0.3
RKY Sarkoy-Tekirda 2.71 310 ePn Pn 07 30 45.9 +0.3
MFT Murefte 2.71 313 ePN Pn 07 30 46.3 +0.6
MFT Murefte 2.71 313 ePn Pn 07 30 46.3 +0.6
TKR Tekirdag 2.71 319 ePN Pn 07 30 46.4 +0.7
TKR Tekirdag 2.71 319 ePn Pn 07 30 46.4 +0.7
SMG Samos 2.72 243 eP Pn 07 30 44.4 -1.4
SMG Samos 2.72 243 eP Pn 07 30 44.8 -1.0
CRLT Corlu 2.72 323 ePN Pn 07 30 46.9 +1.0
CRLT Corlu 2.72 323 ePn Pn 07 30 46.9 +1.1
AKAS Kas 2.74 185 ⇑iP Pn 07 30 46.7 +0.6
AKAS i S Sg 07 31 28.7 -0.4
AKAS Kas 2.74 185 i P Pn 07 30 46.7 +0.6
CTYL Yal??k??y-??at 2.79 334 ePN Pn 07 30 46.5 -0.3
CTYL Yal??k??y-??at 2.79 334 ePn Pn 07 30 46.5 -0.2
BODT Bodrum 2.80 228 ePN Pn 07 30 46.9 0.0
BODT Bodrum 2.80 228 ePn Pn 07 30 46.9 +0.1
LPK Lapseki 2.80 301 ePN Pn 07 30 47.2 +0.4
LPK Lapseki 2.80 301 ePn Pn 07 30 47.2 +0.3
PRK Paraskevi 2.84 277 P Pn 07 30 47.3 -0.1
PRK Paraskevi 2.84 277 eP Pn 07 30 44.8 -2.6
PRK Paraskevi 2.84 277 P Pn 07 30 47.3 -0.1
PRK Paraskevi 2.84 277 P Pn 07 30 46.9 -0.5
PRK Paraskevi 2.84 277 P Pn 07 30 47.3 -0.1
HDMB Hadim 2.86 134 ePN Pn 07 30 49.6 +1.9
HDMB Hadim 2.86 134 ePn Pn 07 30 49.6 +1.9
DAT Datca 2.90 220 ePN Pn 07 30 49.2 +0.9
DAT Datca 2.90 220 ePn Pn 07 30 49.2 +1.0
EZN Ezine 2.90 288 ePN Pn 07 30 48.7 +0.4
EZN Ezine 2.90 288 ePn Pn 07 30 48.7 +0.4
SULT Sultanhani-AKS 2.94 104 ePN Pn 07 30 50.1 +1.3
SULT Sultanhani-AKS 2.94 104 ePn Pn 07 30 50.1 +1.4
KAMT Kaman 2.99 81 ePN Pn 07 30 51.0 +1.5
KAMT Kaman 2.99 81 ePn Pn 07 30 51.0 +1.5
BR131 Keskin Array S 2.99 74 ePn Pn 07 30 49.8 +0.3
BR131 Keskin Array S 2.99 74 ePn Pn 07 30 49.8 +0.3
BRTR Keskin Array B 2.99 74 Pn Pn 07 30 49.0 -0.5
6.9nm,0.3s,baz=252,slow=14,SNR=139
BRTR Keskin Array B 2.99 74 i P Pn 07 30 49.4 -0.1
BRTR pmax pmax
comp=Z,42nm,0.5s
BRTR Keskin Array B 2.99 74 Pn Pn 07 30 49.0 -0.5
BRTR Keskin Array B 2.99 74 i P Pn 07 30 49.4 -0.1
comp=Z,42nm,0.5s
GELI Tayfur-Gelibol 3.00 299 ePN Pn 07 30 50.3 +0.6
GELI Tayfur-Gelibol 3.00 299 ePn Pn 07 30 50.3 +0.6
CHOS Chios island 3.07 260 eP Pn 07 30 50.0 -0.6
CHOS Chios island 3.07 260 P Pn 07 30 49.7 -0.9
CHOS Chios island 3.07 260 P Pn 07 30 49.7 -0.9
ARG Arkhangelos 3.09 208 P Pn 07 30 53.0 +2.1
ARG Arkhangelos 3.09 208 eP Pn 07 30 51.9 +1.0
ARG Arkhangelos 3.09 208 eP Pg 07 31 01.6 +1.4
ARG Arkhangelos 3.09 208 eP Pn 07 30 52.6 +1.7
ARG Arkhangelos 3.09 208 P Pn 07 30 53.0 +2.1
ARG Arkhangelos 3.09 208 P Pn 07 30 53.0 +2.1
BOZC Bozcaada 3.11 287 i P Pn 07 30 51.4 +0.3
BOZC ⇓iP 07 30 51.6
BOZC i S Sn 07 31 29.4 +0.6
ELDT Eldivan 3.11 60 i P Pn 07 30 51.0 -0.2
ELDT Eldivan 3.11 60 i P Pn 07 30 51.0 -0.2
ERIK Erikli-Kesan 3.11 304 ePN Pn 07 30 51.2 0.0
ERIK Erikli-Kesan 3.11 304 ePn Pn 07 30 51.2 0.0
SAFT Safranbolu 3.11 42 ePN Pn 07 30 52.4 +1.2
SAFT Safranbolu 3.11 42 ePn Pn 07 30 52.4 +1.2
SIGR SIGRI 3.16 276 P Pn 07 30 51.8 0.0
SIGR SIGRI 3.16 276 P Pn 07 30 51.2 -0.6
SIGR SIGRI 3.16 276 P Pn 07 30 51.8 0.0
NIS1 Nisyros Isl. 3.20 223 P Pn 07 30 54.6 +2.2
NIS1 Nisyros Isl. 3.20 223 P Pn 07 30 54.6 +2.2
CANT Cankiri 3.30 59 ePN Pn 07 30 55.6 +1.8
GADA Gvkgeada 3.33 293 ePN Pn 07 30 54.6 +0.5
GADA Gvkgeada 3.33 293 ePn Pn 07 30 54.6 +0.5
GAZI Gazipasa 3.34 144 i P Pn 07 30 54.3 +0.1
GAZI Gazipasa 3.34 144 i P Pn 07 30 54.3 0.0
ENEZ Enez 3.38 303 ePN Pn 07 30 55.0 +0.1
ENEZ Enez 3.38 303 ePn Pn 07 30 55.0 +0.1
CDAG Cicekdag 3.53 78 i P Pn 07 30 57.5 +0.6
CDAG Cicekdag 3.53 78 i P Pn 07 30 57.5 +0.6
ALN Alexandroupoli 3.53 304 P Pn 07 30 56.1 -0.9
ALN Alexandroupoli 3.53 304 eP Pn 07 30 56.4 -0.6
ALN Alexandroupoli 3.53 304 P Pn 07 30 56.1 -0.9
ALN Alexandroupoli 3.53 304 P Pn 07 30 56.4 -0.6
ALN Alexandroupoli 3.53 304 P Pn 07 30 56.4 -0.6
BALT Daday 3.69 45 i P Pn 07 30 59.0 -0.2
BALT Daday 3.69 45 i P Pn 07 30 59.0 -0.2
LIA Limnos Island 3.77 286 P Pn 07 31 01.5 +1.3
LIA Limnos Island 3.77 286 eP Pn 07 31 00.5 +0.3
LIA Limnos Island 3.77 286 P Pn 07 31 00.4 +0.2
LIA Limnos Island 3.77 286 P Pn 07 31 00.4 +0.2
TOS Tosya 3.78 56 ePN Pn 07 31 01.8 +1.5
TOS Tosya 3.78 56 ePn Pn 07 31 01.8 +1.5
CORM Corum 3.85 70 ePN Pn 07 31 03.4 +2.1
CORM Corum 3.85 70 ePn Pn 07 31 03.4 +2.1
APE Apeiranthos 3.94 243 P Pn 07 31 04.1 +1.5
APE Apeiranthos 3.94 243 eP Pn 07 31 02.2 -0.4
APE Apeiranthos 3.94 243 P Pn 07 31 04.1 +1.5
APE Apeiranthos 3.94 243 P Pn 07 31 04.1 +1.5
RDO Rodhopi 3.99 304 P Pn 07 31 02.8 -0.5
RDO Rodhopi 3.99 304 eP Pn 07 31 03.0 -0.3
RDO Rodhopi 3.99 304 eP Pn 07 31 03.0 -0.3
RDO Rodhopi 3.99 304 P Pn 07 31 03.1 -0.2
RDO Rodhopi 3.99 304 P Pn 07 31 03.1 -0.2
KARP Karpathos 4.06 213 P Pn 07 31 05.6 +1.4
KARP Karpathos 4.06 213 eP Pn 07 31 04.5 +0.3
KARP Karpathos 4.06 213 P Pn 07 31 05.6 +1.4
YOZ Yozgat 4.25 79 ePN Pn 07 31 09.3 +2.4
YOZ Yozgat 4.25 79 ePn Pn 07 31 09.3 +2.4
JMB Yambol 4.31 325 P Pn 07 31 08.2 +0.6
JMB Yambol 4.31 325 P Pn 07 31 08.2 +0.6
BZK Bozkurt 4.32 45 ePN Pn 07 31 09.8 +2.0
BZK Bozkurt 4.32 45 ePn Pn 07 31 09.8 +2.0
ALFC Alevga 4.38 150 P Pn 07 31 05.7 -2.9
comp=Z,6.4nm,0.6s
ALFC Alevga 4.38 150 P Pn 07 31 05.7 -2.9
comp=Z,6.4nm,0.6s
PPCY Paphos 4.52 154 P Pn 07 31 11.3 +0.7
PPCY Paphos 4.52 154 P Pn 07 31 11.3 +0.7
KAVA Kavala 4.61 298 P Pn 07 31 11.4 -0.3
KAVA Kavala 4.61 298 P Pn 07 31 11.4 -0.3
MAMC Mammari 4.63 144 P Pn 07 31 11.0 -1.0
MAMC Mammari 4.63 144 P Pn 07 31 11.0 -1.0
OUR Ouranopolis 4.77 288 P Pn 07 31 13.0 -0.9
OUR Ouranopolis 4.77 288 P Pn 07 31 13.0 -0.9
OUR Ouranopolis 4.77 288 P Pn 07 31 12.9 -1.0
OUR Ouranopolis 4.77 288 P Pn 07 31 13.0 -0.9
ZKR Zakros 4.85 219 eP Pn 07 31 16.6 +1.5
ZKR Zakros 4.85 219 P Pn 07 31 16.5 +1.4
ZKR Zakros 4.85 219 P Pn 07 31 16.5 +1.4
CSS Prodhromos 4.85 145 P Pn 07 31 13.8 -1.3
comp=Z,2.6nm,0.6s
CSS Prodhromos 4.85 145 P Pn 07 31 13.3 -1.8
CSS Prodhromos 4.85 145 P Pn 07 31 13.8 -1.3
PAIG Paliouri 4.91 283 P Pn 07 31 16.1 +0.2
PAIG Paliouri 4.91 283 P Pn 07 31 16.1 +0.2
PAIG Paliouri 4.91 283 P Pn 07 31 14.9 -1.0
PAIG Paliouri 4.91 283 P Pn 07 31 16.1 +0.2
NPS Neapolis 5.04 224 P Pn 07 31 20.2 +2.4
NPS Neapolis 5.04 224 eP Pn 07 31 18.3 +0.5
NPS Neapolis 5.04 224 eP Pn 07 31 18.5 +0.7
NPS Neapolis 5.04 224 P Pn 07 31 20.2 +2.4
NPS Neapolis 5.04 224 P Pn 07 31 20.2 +2.4
PLD Plovdiv 5.05 310 P Pn 07 31 17.4 -0.4
PLD Plovdiv 5.05 310 P Pn 07 31 17.4 -0.4
PHNC Paralimni 5.16 139 P Pn 07 31 18.0 -1.3
comp=Z,5.0nm,0.8s
PHNC Paralimni 5.16 139 P Pn 07 31 18.0 -1.3
KVT Kavak 5.17 64 ePN Pn 07 31 22.2 +2.8
KVT Kavak 5.17 64 ePn Pn 07 31 22.2 +2.8
PLG Polygyros 5.17 288 P Pn 07 31 19.1 -0.4
PLG Polygyros 5.17 288 eP Pn 07 31 19.2 -0.3
PLG Polygyros 5.17 288 P Pn 07 31 19.1 -0.4
PLG Polygyros 5.17 288 P Pn 07 31 19.2 -0.3
PLG Polygyros 5.17 288 P Pn 07 31 19.2 -0.3
LAST Lasithi 5.19 224 eP Pn 07 31 21.6 +1.8
LAST Lasithi 5.19 224 P Pn 07 31 22.8 +3.0
LAST Lasithi 5.19 224 P Pn 07 31 22.8 +3.0
NVR Nevrokopi 5.20 299 P Pn 07 31 20.0 +0.1
NVR Nevrokopi 5.20 299 eP Pn 07 31 19.4 -0.5
NVR Nevrokopi 5.20 299 P Pn 07 31 20.0 +0.1
NEO Neokhori 5.20 276 eP Pn 07 31 17.4 -2.5
SRS Serrai 5.29 296 P Pn 07 31 23.3 +2.1
SRS Serrai 5.29 296 P Pn 07 31 23.3 +2.1
SRS Serrai 5.29 296 P Pn 07 31 23.3 +2.1
SOH Sokhos 5.36 292 P Pn 07 31 22.8 +0.7
SOH Sokhos 5.36 292 P Pn 07 31 22.8 +0.7
SOH Sokhos 5.36 292 P Pn 07 31 22.8 +0.7
DID Didima 5.45 256 eP Pn 07 31 25.3 +2.0
HORT Hortiatis 5.49 289 P Pn 07 31 25.9 +2.1
HORT Hortiatis 5.49 289 P Pn 07 31 25.9 +2.1
TIRR Tirgusor 5.59 349 ePn Pn 07 31 24.9 -0.4
TIRR eSn Sn 07 32 26.7 -3.4
TIRR Tirgusor 5.59 349 eP Pn 07 31 24.9 -0.4
TIRR e 07 32 26.7
TIRR Tirgusor 5.59 349 ⇑iP Pn 07 31 24.9 -0.4
TIRR Tirgusor 5.59 349 eP Pn 07 31 24.9 -0.4
KNT Kendrikon 5.80 294 P Pn 07 31 28.4 +0.3
KNT Kendrikon 5.80 294 P Pn 07 31 28.4 +0.3
LIT Litokhoron 5.84 283 P Pn 07 31 29.0 +0.3
LIT Litokhoron 5.84 283 P Pn 07 31 29.0 +0.3
AGG Agios Georgios 5.90 273 P Pn 07 31 31.0 +1.5
AGG Agios Georgios 5.90 273 P Pn 07 31 31.0 +1.5
AGG Agios Georgios 5.90 273 P Pn 07 31 29.3 -0.2
AGG Agios Georgios 5.90 273 P Pn 07 31 29.3 -0.2
RSDY Resadiye-TOKAT 5.90 74 ePN Pn 07 31 31.8 +2.3
RSDY Resadiye-TOKAT 5.90 74 ePn Pn 07 31 31.8 +2.3
KARN Karanos 5.96 235 eP Pn 07 31 32.7 +2.4
KARN Karanos 5.96 235 P Pn 07 31 34.4 +4.1
GUR Goura 6.02 262 eP Pn 07 31 31.5 +0.3
GUR Goura 6.02 262 P Pn 07 31 31.5 +0.3
GUR Goura 6.02 262 P Pn 07 31 31.5 +0.3
VAY Valandovo 6.09 295 ePn Pn 07 31 32.5 +0.4
GRG Griva 6.09 291 P Pn 07 31 34.2 +2.1
GRG Griva 6.09 291 P Pn 07 31 34.2 +2.1
GRG Griva 6.09 291 P Pn 07 31 34.2 +2.1
KALE Kalithea 6.10 267 P Pn 07 31 32.8 +0.5
KALE Kalithea 6.10 267 P Pn 07 31 32.8 +0.5
VLX Vlachokerasia 6.14 257 eP Pn 07 31 31.0 -1.8
THL Klokotos Trika 6.15 278 eP Pn 07 31 33.3 +0.4
THL Klokotos Trika 6.15 278 P Pn 07 31 33.4 +0.5
THL Klokotos Trika 6.15 278 P Pn 07 31 33.4 +0.5
VTS Vitosha 6.24 308 P Pn 07 31 36.0 +1.9
VTS Vitosha 6.24 308 ⇓P Pn 07 31 35.5 +1.4
VTS Vitosha 6.24 308 P Pn 07 31 34.4 +0.3
VTS Vitosha 6.24 308 ⇓iP Pn 07 31 35.5 +1.4
VTS Vitosha 6.24 308 P Pn 07 31 34.4 +0.3
SEV Sevastopol' 6.24 26 eP Pn 07 31 31.3 -2.8
SEV eS Sn 07 32 37.6 -8.5
LAKA Lakka 6.25 266 P Pn 07 31 34.8 +0.5
LAKA Lakka 6.25 266 P Pn 07 31 34.8 +0.5
TLCR 6.26 353 ⇑P Pn 07 31 34.9 +0.5
TLCR 6.26 353 ⇑iP Pn 07 31 34.9 +0.5
TLCR 6.26 353 P Pn 07 31 34.9 +0.5
EFP Efpalio 6.28 268 eP Pn 07 31 34.5 -0.2
CFR Carcaliu 6.34 349 ⇑P Pn 07 31 34.9 -0.6
CFR Carcaliu 6.34 349 ⇑iP Pn 07 31 34.9 -0.6
CFR Carcaliu 6.34 349 P Pn 07 31 34.9 -0.6
YAL Yalta 6.36 29 eP Pn 07 31 35.6 -0.2
YAL eS Sn 07 32 44.0 -5.1
YAL Yalta 6.36 29 eP Pn 07 31 35.6 -0.2
ITM Ithomi 6.54 257 P Pn 07 31 41.0 +2.7
ITM Ithomi 6.54 257 P Pn 07 31 39.6 +1.3
ITM Ithomi 6.54 257 P Pn 07 31 39.6 +1.3
ALU Alushta 6.62 29 eP Pn 07 31 37.3 -2.1
ALU eS Sn 07 32 47.5 -8.0
MALT Malatya 6.71 93 ePn Pn 07 31 39.0 -1.5
MALT Malatya 6.71 93 eP Pn 07 31 39.1 -1.5
MALT Malatya 6.71 93 eP Pn 07 31 39.1 -1.5
SIM Simferopol' 6.75 26 deP Pn 07 31 43.0 +1.9
SIM eS Sn 07 32 55.6 -2.9
SIM pmax pmax
comp=Z,93nm,0.8s
SIM MLR MLR
comp=Z,400nm,16.0s
SIM Simferopol' 6.75 26 eP Pn 07 31 43.0 +1.9
comp=Z,93nm,0.8s
PYL PYLOS 6.77 255 eP Pn 07 31 40.2 -1.3
FNA Florina 6.80 288 P Pn 07 31 43.5 +1.6
FNA Florina 6.80 288 P Pn 07 31 43.5 +1.6
FNA Florina 6.80 288 P Pn 07 31 43.5 +1.6
BIA Bitola 6.90 290 ePn Pn 07 31 43.7 +0.6
SUDU Sudak 7.03 31 eP Pn 07 31 41.1 -3.9
SUDU eS Sn 07 33 01.4 -4.1
KRUS Krusevo 7.05 293 ePn Pn 07 31 45.5 +0.3
MLR Muntele Rosu 7.14 337 ⇓P Pn 07 31 47.4 +0.8
MLR Muntele Rosu 7.14 337 ⇓iP Pn 07 31 47.4 +0.8
MLR Muntele Rosu 7.14 337 P Pn 07 31 47.4 +0.8
VRI Vrincioaia 7.28 342 ⇓P Pn 07 31 48.8 +0.4
VRI Vrincioaia 7.28 342 ⇓iP Pn 07 31 48.8 +0.4
VRI Vrincioaia 7.28 342 P Pn 07 31 48.8 +0.4
PLOR Plostina 7.28 342 P Pn 07 31 49.3 +0.8
PLOR Plostina 7.28 342 ⇓iP Pn 07 31 49.2 +0.7
PLOR Plostina 7.28 342 P Pn 07 31 49.3 +0.8
LEOM Leova 7.59 351 P Pn 07 31 53.4 +0.7
LEOM Leova 7.59 351 ⇑iP Pn 07 31 53.8 +1.1
LEOM Leova 7.59 351 P Pn 07 31 53.4 +0.7
DOPR Dopca 7.75 336 ⇑iP Pn 07 31 55.4 +0.6
TESR 7.91 343 ⇑iP Pn 07 31 57.1 +0.1
TIR Tirane 8.04 290 ePn Pn 07 31 59.4 +0.5
TIR Tirane 8.04 290 eP Pn 07 31 59.4 +0.5
TIR Tirane 8.04 290 eP Pn 07 31 59.4 +0.5
KIS Kishinev 8.06 355 eP Pn 07 31 57.0 -2.1
KIS LRM 07 36 16.0
comp=Z,400nm,12.0s
KIS Kishinev 8.06 355 eP Pn 07 31 57.0 -2.1
KIS e 07 33 31.0
KIS MLR MLR
comp=Z,400nm,12.0s
KIS Kishinev 8.06 355 eS Sn 07 33 31.0 +0.1
comp=Z,400nm,12.0s
ANN Anapa 8.09 42 eP Pn 07 32 00.7 +1.2
ANN eS Sn 07 33 32.8 +1.2
ANN pmax pmax
comp=Z,35nm,1.0s
ANN MLR MLR
comp=N,217nm,7.0s
ANN MLR MLR
comp=E,308nm,7.0s
ANN MLR MLR
comp=Z,282nm,7.0s
ANN Anapa 8.09 42 eP Pn 07 32 00.7 +1.2
comp=Z,35nm,1.0s
ANN eS Sn 07 33 32.8 +1.2
HMAT Matruh 8.19 197 P Pn 07 32 01.9 +1.0
baz=198
HMAT AMP 07 33 00.0
comp=N,70μm,0.8s,logA/T=4.9,baz=198
HMAT Matruh 8.19 197 P Pn 07 32 01.9 +1.0
MDB Medias 8.24 332 ⇓P Pn 07 32 03.0 +1.4
MDB Medias 8.24 332 ⇓iP Pn 07 32 03.0 +1.4
MDB Medias 8.24 332 P Pn 07 32 03.0 +1.4
HBRG Burj al 'Arab 8.38 180 P Pn 07 32 02.2 -1.3
baz=181
HBRG AMP 07 33 00.0
comp=E,160μm,0.8s,logA/T=5.3,baz=181
HBRG Burj al 'Arab 8.38 180 P Pn 07 32 02.2 -1.3
SLUM 8.39 209 P Pn 07 32 02.6 -1.0
baz=209
SLUM 8.39 209 P Pn 07 32 02.6 -1.1
SOC Sochi 8.71 55 eP Pn 07 32 08.7 +0.7
SOC e 07 33 46.5
SOC MLR MLR
comp=Z,509nm,13.0s
SOC Sochi 8.71 55 eP Pn 07 32 08.7 +0.7
SOC eS Sn 07 33 46.5 -0.2
comp=Z,509nm,13.0s
AMAG Maghara 8.74 161 P Pn 07 32 06.3 -2.2
baz=160
AMAG Maghara 8.74 161 P Pn 07 32 06.3 -2.2
ASF Jabal al Asfar 8.86 138 Pn Pn 07 32 10.0 -0.1
comp=Z,0.2nm,0.3s,baz=0.0,slow=12,SNR=5.4
ASF Sn Sn 07 33 52.0 +1.5
baz=352,slow=15,SNR=2.5
ASF LR LR 07 36 18.1
comp=Z,333nm,18.6s,baz=189,slow=43
ASF Jabal al Asfar 8.86 138 P Pn 07 32 10.0 -0.1
ASF 07 33 52.0
BZS Buzias 9.04 320 ⇑P Pn 07 32 13.7 +1.2
BZS Buzias 9.04 320 ⇑iP Pn 07 32 13.7 +1.2
BZS Buzias 9.04 320 P Pn 07 32 13.7 +1.2
KOT Kottamia 9.16 169 P Pn 07 32 11.7 -2.5
baz=169
KOT AMP 07 33 00.0
comp=N,50μm,0.7s,logA/T=4.9,baz=169
BURAR Bucovina Array 9.29 340 ⇓P Pn 07 32 17.1 +1.2
BURAR Bucovina Array 9.29 340 ⇓iP Pn 07 32 17.1 +1.2
BURAR Bucovina Array 9.29 340 ⇓iP Pn 07 32 17.1 +1.2
FYM Al Fayyum 9.30 174 P Pn 07 32 16.4 +0.1
baz=173
FYM Al Fayyum 9.30 174 P Pn 07 32 16.4 +0.2
BUR08 Bucovina Ar. S 9.32 340 ePn Pn 07 32 16.5 +0.2
BUR08 Bucovina Ar. S 9.32 340 ePn Pn 07 32 16.5 +0.1
HNAT Natroun 9.34 176 P Pn 07 32 15.5 -1.1
baz=176
HNAT Natroun 9.34 176 P Pn 07 32 15.5 -1.2
DRGR 9.43 328 ⇑P Pn 07 32 18.6 +0.8
DRGR 9.43 328 ⇑iP Pn 07 32 18.6 +0.8
DRGR 9.43 328 P Pn 07 32 18.6 +0.8
HSAF As Saff 9.43 171 P Pn 07 32 16.5 -1.4
baz=171
HSAF As Saff 9.43 171 P Pn 07 32 16.5 -1.4
GLL Jalalah 9.49 170 P Pn 07 32 16.9 -1.9
baz=170

GLL Jalalah 9.49 170 P **Pn 07 32 16.9 -1.9**
HNKL Nakhl 9.63 158 P **Pn 07 32 18.9 -1.8**
baz=158
HNKL Nakhl 9.63 158 P **Pn 07 32 18.9 -1.8**
SWA2 10.38 202 P **Pn 07 32 30.1 -0.9**
baz=203
SWA2 10.38 202 P **Pn 07 32 30.1 -0.9**
KIV Kislovodsk 10.80 58 *e*P **Pn 07 32 38.6 +1.9**
KIV *e*S **Sn 07 34 39.2 +0.9**
KIV pmax pmax
comp=Z,18nm,1.2s
KIV MLR MLR
comp=Z,100nm,9.0s
KIV Kislovodsk 10.80 58 *e*P **Pn 07 32 38.6 +1.9**
comp=Z,18nm,1.2s
KIV *e*S **Sn 07 34 39.2 +0.9**
comp=Z,100nm,9.0s
CUC Castrocucco 10.94 280 *e*Pn **Pn 07 32 42.5 +3.9**
GRB Gharib 10.94 166 P **Pn 07 32 36.1 -2.6**
baz=166
UZH Uzhgorod 11.10 333 *e*P **Pn 07 32 40.5 -0.3**
UZH *e*S **Sn 07 34 44.5 -1.1**
UZH MLR MLR
comp=N,870nm,11.0s
UZH MLR MLR
comp=E,750nm,11.0s
UZH MLR MLR
comp=Z,700nm,11.0s
UZH Uzhgorod 11.10 333 *e*P **Pn 07 32 40.5 -0.3**
UZH *e*S **Sn 07 34 44.5 -1.1**
ZEI Tsey 11.26 66 *e*P **Pn 07 32 48.3 +5.4**
ZEI pmax pmax
comp=Z,20nm,1.4s
KOLS Kolonicke sedl 11.37 334 *e*Pn **Pn 07 32 46.5 +2.1**
KOLS Kolonicke sedl 11.37 334 *e*P **Pn 07 32 46.5 +2.1**
KOLS Kolonicke sedl 11.37 334 *e*PN **Pn 07 32 46.5 +2.1**
KOLS Kolonicke sedl 11.37 334 *e*P **Pn 07 32 46.5 +2.1**
GNI Garni 11.52 79 LR LR 07 37 20.4
comp=Z,359nm,20.0s,baz=88,slow=38
GNI Garni 11.52 79⇑ *e*P **Pn 07 32 46.9 +0.4**
GNI Garni 11.52 79 *e*P **Pn 07 32 46.9 +0.4**
LVV L'vov 11.62 341 *e*P **Pn 07 32 53.3 +5.4**
KECS Kecovo 11.69 327 *e*Pn **Pn 07 32 48.9 +0.1**
KECS Kecovo 11.69 327 *e*P **Pn 07 32 48.9 +0.1**
KECS Kecovo 11.69 327 *e*PN **Pn 07 32 48.9 +0.1**
KIEV Kiev 11.73 358 *e*Pn **Pn 07 32 47.2 -2.2**
KIEV Kiev 11.73 358 *e*P **Pn 07 32 47.2 -2.2**
AKASG Malin Array Be 11.74 358 Pn **Pn 07 32 46.9 -2.5**
comp=Z,2.2nm,0.3s,baz=174,slow=13,SNR=7.8
AKASG Sn **Sn 07 34 50.5 -11**
comp=Z,1.2nm,0.3s,baz=174,slow=27,SNR=3.9
AKASG Malin Array Be 11.74 358 Pn **Pn 07 32 46.9 -2.5**
AKASG Sn **Sn 07 34 50.5 -11**
AKASG Malin Array Be 11.74 358 P **Pn 07 32 46.9 -2.6**
AKBB Malin Array Si 11.74 358 *e*Pn **Pn 07 32 50.2 +0.7**
AKBB Malin Array Si 11.74 358 *e*P **Pn 07 32 50.2 +0.7**
AKBB Malin Array Si 11.74 358 *e*P **Pn 07 32 50.2 +0.7**
KWP Kalwaria Pacla 11.83 337 *e*Pn **Pn 07 32 52.2 +1.5**
comp=Z,22nm,0.9s
KWP Kalwaria Pacla 11.83 337 *e*P **Pn 07 32 52.2 +1.5**
KWP pmax pmax
comp=Z,22nm,0.9s
KWP Kalwaria Pacla 11.83 337 *e*P **Pn 07 32 52.2 +1.5**
comp=Z,22nm,0.9s
HFRF Wahat Farafira 11.87 187 P **Pn 07 32 48.7 -2.6**
baz=187
OJC Ojcow 13.34 331 *e*Pn **Pn 07 33 14.1 +2.8**
OJC Ojcow 13.34 331 *e*P **Pn 07 33 14.1 +2.8**
OJC Ojcow 13.34 331 *e*P **Pn 07 33 14.1 +2.8**
VORD Divnogorie 13.70 26 *e*P **Pn 07 33 19.9 +3.7**
VORD pmax pmax
comp=Z,20nm,0.9s
VORD pmax pmax
comp=N,60nm,0.8s
VORD pmax pmax
comp=E,40nm,0.8s
OKC Ostrava-Krasne 13.71 326 AMS AMS 07 39 30.0
comp=E,2μm,9.4s
VSR Storozhevoye 13.87 25 *e*P **Pn 07 33 18.2 -0.3**
VSR pmax pmax
comp=Z,4.0nm,0.4s
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR Storozhevoye 13.87 25 *e*P **Pn 07 33 18.2 -0.3**
comp=E,10.0nm,0.5s
MAK Makhachkala 13.88 68 *e*P **Pn 07 33 16.7 -2.1**
MAK MLR MLR
comp=Z,308nm,9.0s
KBA Koelnbreinsper 14.55 309⇑ *i*sP sP 07 33 36.2 +1.2
comp=Z,11nm,0.9s
KBA Koelnbreinsper 14.55 309 P **Pn 07 33 36.2 +8.3**
comp=Z,11nm,0.9s
TREC Trest 14.59 320 AMS AMS 07 40 00.0
comp=Z,600nm,14.7s
VRHR Novokhopersk 14.66 30 *e*P **Pn 07 33 32.3 +3.0**
VRHR pmax pmax
comp=E,9.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,3.0nm,0.3s
DPC Dobruska-Polom 14.90 324 *e*P **Pn 07 33 36.5 +3.9**
DPC MLR MLR
comp=Z,2μm,9.9s
DPC Dobruska-Polom 14.90 324 *e*P **Pn 07 33 36.5 +3.9**
DPC AMS AMS 07 40 20.0
comp=Z,2μm,9.9s
DPC Dobruska-Polom 14.90 324 *e*P **Pn 07 33 36.5 +3.9**
comp=Z,2μm,9.9s
GERES GERESS Array B 15.26 316 Pn **Pn 07 33 37.5 0.0**
comp=Z,0.2nm,0.3s,baz=121,slow=15,SNR=2.6
GERES GERESS Array B 15.26 316 P **Pn 07 33 37.5 +0.1**
GERES GERESS Array B 15.26 316 Pn **Pn 07 33 37.5 +0.1**
KHC Kasperske Hory 15.49 316 *e*Pn **Pn 07 33 43.7 +3.3**
comp=Z,28nm,1.8s
KHC Kasperske Hory 15.49 316 *e*P **Pn 07 33 43.7 +3.2**
KHC pmax pmax
comp=Z,28nm,1.8s
KHC Kasperske Hory 15.49 316 *e*P **Pn 07 33 43.4 +2.9**
KHC AMS AMS 07 40 30.0
comp=Z,600nm,15.4s
KHC Kasperske Hory 15.49 316 *e*P **Pn 07 33 43.7 +3.2**
comp=Z,28nm,1.8s
PRU Pruhonice 15.51 320 AMS AMS 07 40 40.0
comp=Z,800nm,10.8s
SUW Suwalki 15.73 345 *e*P **Pn 07 33 43.4 -0.2**
SUW Suwalki 15.73 345 *e*P **Pn 07 33 43.4 -0.2**
PVCC Panska Ves 15.84 322 AMS AMS 07 41 00.0
comp=Z,1μm,13.8s
NACGM Naroch 16.07 353 *e* **Pn 07 33 45.0 -3.0**
FETA Feichten 16.14 306⇑ *i*P **Pn 07 33 55.0 +6.0**
comp=Z,6.3nm,0.8s
FETA Feichten 16.14 306 P **Pn 07 33 55.0 +6.0**
comp=Z,6.3nm,0.8s
KEST Kesra 16.66 265 Pn **Pn 07 33 52.8 -2.9**
comp=Z,0.0nm,0.3s,baz=147,slow=17,SNR=2.2
KEST Kesra 16.66 265 *e*P **Pn 07 33 59.8 +4.1**
KEST Kesra 16.66 265 *e*P **Pn 07 33 59.8 +4.1**
NKC Novy Kostel 16.72 318 AMS AMS 07 41 20.0
comp=Z,900nm,13.0s
OBN Obninsk 16.76 13⇑ *e*P **Pn 07 33 58.3 +1.5**
OBN pmax pmax
comp=Z,47nm,1.6s
OBN MLR MLR
comp=Z,200nm,16.0s
OBN Obninsk 16.76 13 *e*P **Pn 07 33 58.3 +1.5**
comp=Z,200nm,16.0s
MIB Mutribah 17.03 117 *e*P **Pn 07 33 59.9 -0.5**
MIB AMb AMB 07 34 08.7
comp=Z,39nm,1.7s
MIB Mutribah 17.03 117 *e*P **Pn 07 33 59.9 -0.5**
comp=Z,39nm,1.7s
GRA1 Grafenberg Arr 17.08 315 *e*P **Pn 07 34 02.8 +1.9**
comp=Z,47nm,1.6s
GRA1 Grafenberg Arr 17.08 315 *e*P **Pn 07 34 02.8 +1.9**
comp=Z,47nm,1.6s
GRF Grafenberg Arr 17.08 315 *e*P **Pn 07 34 02.8 +1.9**
comp=Z,47nm,1.6s
GRF Grafenberg Arr 17.08 315 *e*P **Pn 07 34 02.8 +1.9**
GRF pmax pmax
comp=Z,47nm,1.6s
GRF Grafenberg Arr 17.08 315 *e*P **Pn 07 34 02.8 +1.9**
comp=Z,47nm,1.6s
GRF Grafenberg Arr 17.08 315 *e*P **Pn 07 34 02.8 +1.9**
comp=Z,47nm,1.6s
CLL Collm 17.10 322 *i*P **Pn 07 34 03.7 +2.6**
CLL pmax pmax
comp=Z,27nm,1.6s
CLL MLR MLR
comp=Z,1μm,13.8s
CLL Collm 17.10 322 *i*sP sP 07 34 03.7 +0.4
comp=Z,27nm,1.6s
CLL *e*SS 07 37 27.0
CLL Lmax 07 41 00.0
CLL Collm 17.10 322 *i*P **Pn 07 34 03.7 +2.6**
comp=Z,1μm,13.8s
NAY Al-Naaiem 17.30 119 *e*P **Pn 07 34 04.0 +0.3**
NAY AMb AMB 07 34 12.5
comp=Z,21nm,1.9s
NAY Al-Naaiem 17.30 119 *e*P **Pn 07 34 04.1 +0.3**
comp=Z,21nm,1.9s
UMR Umm Al-Rimmam 17.44 117 *e*P **Pn 07 34 05.2 -0.3**
UMR AMb AMB 07 34 11.2
comp=Z,50nm,1.4s
UMR Umm Al-Rimmam 17.44 117 *e*P **Pn 07 34 05.2 -0.3**
comp=Z,50nm,1.4s
MOS Moscow 17.55 15 *e*P **Pn 07 34 05.4 -1.3**
MBDF Montbardon 18.14 296 *e*P **Pn 07 34 16.4 +2.3**
comp=Z,35nm,0.9s
MBDF Montbardon 18.14 296 *e*P **Pn 07 34 16.4 +2.3**
comp=Z,17nm,0.9s
MBDF Montbardon 18.14 296 *e*P **Pn 07 34 16.4 +2.3**
MBDF pmax pmax
comp=Z,17nm,0.9s
MBDF Montbardon 18.14 296 *e*P **Pn 07 34 16.4 +2.3**
comp=Z,17nm,0.9s
BFO Black Forest 18.15 308 *e*P **Pn 07 34 16.5 +2.4**
comp=Z,16nm,1.2s
BFO Black Forest 18.15 308 *e*P **Pn 07 34 16.5 +2.4**
BFO pmax pmax
comp=Z,16nm,1.2s
BFO Black Forest 18.15 308 *e*P **Pn 07 34 16.5 +2.4**
comp=Z,16nm,1.2s
BNI Bardonecchia 18.27 297 *e*P **Pn 07 34 16.8 +1.1**
comp=Z,34nm,1.6s
BNI Bardonecchia 18.27 297 *e*P **Pn 07 34 16.8 +1.2**
BNI pmax pmax
comp=Z,34nm,1.6s
BNI Bardonecchia 18.27 297 *e*P **Pn 07 34 16.8 +1.2**
comp=Z,34nm,1.6s
LPG La Plagne 18.31 298 *e*P **Pn 07 34 19.1 +3.0**
LPG La Plagne 18.31 298 *e*P **Pn 07 34 19.1 +3.0**
LPG La Plagne 18.31 298 *e*P **Pn 07 34 19.1 +3.0**
LPL La Plagne 18.33 298 *e*P **Pn 07 34 18.4 +2.1**
comp=Z,42nm,1.2s
LPL La Plagne 18.33 298 *e*P **Pn 07 34 18.4 +2.1**
comp=Z,21nm,1.2s
LPL La Plagne 18.33 298 *e*P **Pn 07 34 18.4 +2.1**
LPL pmax pmax
comp=Z,21nm,1.2s
LPL La Plagne 18.33 298 *e*P **Pn 07 34 18.4 +2.1**
comp=Z,21nm,1.2s
CDF Champ du Feu 18.83 307 *e*P **Pn 07 34 22.2 -0.2**
CDF Champ du Feu 18.83 307 *e*P **Pn 07 34 22.2 -0.2**
CDF Champ du Feu 18.83 307 *e*P **Pn 07 34 22.2 -0.2**
ECH Echery 18.83 307 *e*P **Pn 07 34 24.5 +2.1**
comp=Z,7.1nm,0.7s
ECH Echery 18.83 307 *e*P **Pn 07 34 24.5 +2.0**
ECH pmax pmax
comp=Z,7.0nm,0.7s
ECH Echery 18.83 307 *e*P **Pn 07 34 24.5 +2.0**
comp=Z,7.1nm,0.7s
CABF La Chapelle 19.02 301 *e*P **Pn 07 34 24.7 -0.1**
CABF La Chapelle 19.02 301 *e*P **Pn 07 34 24.7 -0.1**
CABF La Chapelle 19.02 301 *e*P **Pn 07 34 24.7 -0.1**
SMF Signal de Mont 20.54 300 *e*P **P 07 34 42.8 +2.1**
SMF Signal de Mont 20.54 300 *e*P **P 07 34 42.8 +2.1**
SMF Signal de Mont 20.54 300 *e*P **P 07 34 42.8 +2.1**
LOR Lormes 20.67 302 *e*P **P 07 34 41.9 -0.2**
comp=Z,39nm,1.0s
LOR Lormes 20.67 302 *e*P **P 07 34 41.9 -0.2**
comp=Z,19nm,1.0s
LOR Lormes 20.67 302 *e*P **P 07 34 41.9 -0.2**
LOR pmax pmax
comp=Z,19nm,1.0s
LOR Lormes 20.67 302 *e*P **P 07 34 41.9 -0.2**
comp=Z,19nm,1.0s
AVF Avril sur Loir 20.90 301 *e*P **P 07 34 43.2 -1.4**
comp=Z,18nm,0.7s
AVF Avril sur Loir 20.90 301 *e*P **P 07 34 43.2 -1.4**
comp=Z,8.8nm,0.7s
AVF Avril sur Loir 20.90 301 *e*P **P 07 34 43.2 -1.4**
AVF pmax pmax
comp=Z,9.0nm,0.7s
AVF Avril sur Loir 20.90 301 *e*P **P 07 34 43.2 -1.4**
comp=Z,8.8nm,0.7s
BGF Bois d'Agland 21.19 300 *e*P **P 07 34 51.6 +3.9**
BGF Bois d'Agland 21.19 300 *e*P **P 07 34 51.6 +3.9**
CAF Calviac 21.48 295 *e*P **P 07 34 51.8 +0.9**
comp=Z,21nm,1.1s,mb4.1
CAF Calviac 21.48 295 *e*P **P 07 34 51.8 +0.9**
comp=Z,10nm,1.1s,mb4.1
CAF Calviac 21.48 295 *e*P **P 07 34 51.8 +0.9**
CAF pmax pmax
comp=Z,10.0nm,1.1s,mb4.1
CAF Calviac 21.48 295 *e*P **P 07 34 51.8 +0.9**
comp=Z,10nm,1.1s,mb4.1
TCF Toulx Ste Croi 21.57 299 *e*P **P 07 34 53.6 +1.7**
comp=Z,23nm,1.1s,mb4.2
TCF Toulx Ste Croi 21.57 299 *e*P **P 07 34 53.6 +1.7**
comp=Z,12nm,1.1s,mb4.2
TCF Toulx Ste Croi 21.57 299 *e*P **P 07 34 53.6 +1.7**
TCF pmax pmax
comp=Z,12nm,1.1s,mb4.2
TCF Toulx Ste Croi 21.57 299 *e*P **P 07 34 53.6 +1.7**
comp=Z,12nm,1.1s,mb4.2
FINES FINESS Array B 22.62 355 P **P 07 35 01.4 -1.5**
comp=Z,4.3nm,0.5s,mb4.2,baz=162,slow=10,SNR=16
FINES S **S 07 39 12.0 +0.4**
comp=Z,1.3nm,0.3s,baz=195,slow=16,SNR=7.9
FINES FINESS Array B 22.62 355 P **P 07 35 01.4 -1.5**
FINES S **S 07 39 12.0 +0.4**
FINES FINESS Array B 22.62 355 P **P 07 35 01.4 -1.5**
FINES S **S 07 39 12.0 +0.3**
FINES FINESS Array B 22.62 355 P **P 07 35 01.4 -1.5**
FINES S **S 07 39 12.0 +0.3**
KLMR Klimovskoe 22.72 12 *e*P **P 07 35 04.8 +0.9**
KLMR pmax pmax
comp=Z,106nm,1.5s,mb5.2
KLMR Klimovskoe 22.72 12 *e*P **P 07 35 04.8 +0.9**
comp=Z,106nm,1.5s,mb5.2
AKTK Aktyubinsk 22.89 51 P **P 07 35 04.8 -1.1**
AKTK Aktyubinsk 22.89 51 P **P 07 35 04.8 -1.1**
AKTO Aktyubinsk 22.89 51 P **P 07 35 04.8 -1.1**
comp=Z,5.9nm,0.6s,mb4.3,baz=266,slow=14,SNR=7.8
AKTO Aktyubinsk 22.89 51 P **P 07 35 04.8 -1.1**
HFS Hagfors 23.52 340 P **P 07 35 10.8 -1.6**
comp=Z,5.7nm,0.8s,mb4.2,baz=155,slow=11,SNR=6.2
HFS Hagfors 23.52 340 P **P 07 35 10.8 -1.6**
HFS Hagfors 23.52 340 P **P 07 35 10.8 -1.6**
ABKAR Akbulak array 23.75 55 *e*P **P 07 35 13.0 -1.7**
comp=Z,2.2nm,0.7s,mb3.8
ABKAR Akbulak array 23.75 55 *e*P **P 07 35 13.0 -1.7**
comp=Z,2.2nm,0.7s,mb3.8
SJPF Ste Jean 23.77 290 *e*P **P 07 35 14.2 -0.7**
SJPF Ste Jean 23.77 290 *e*P **P 07 35 14.2 -0.7**
SJPF Ste Jean 23.77 290 *e*P **P 07 35 14.2 -0.7**
NAO01 NORSAR Array S 24.90 338 *e*P **P 07 35 27.1 +2.0**
comp=Z,21nm,1.3s,mb4.7
NAO01 NORSAR Array S 24.90 338 *e*P **P 07 35 27.1 +2.0**
comp=Z,21nm,1.3s,mb4.7
NB2 NORSAR Subarra 24.96 338 P **P 07 35 24.2 -1.5**
comp=Z,20nm,1.2s,mb4.7,baz=142,slow=9.3
NB2 NORSAR Subarra 24.96 338 P **P 07 35 24.2 -1.5**
comp=Z,20nm,1.2s,mb4.7,baz=142,slow=9.3,SNR=1.2
NOA NORSAR Array B 24.96 338 P **P 07 35 24.0 -1.7**
comp=Z,5.2nm,0.9s,mb4.3,baz=143,slow=8.9,SNR=10.0
NOA LR LR 07 47 06.1
comp=Z,177nm,18.0s,MS3.6,baz=180,slow=41
NOA NORSAR Array B 24.96 338 P **P 07 35 24.0 -1.7**
NOA NORSAR Array B 24.96 338 P **P 07 35 24.0 -1.7**
ARU Arti 25.73 38 *e*P **P 07 35 33.3 +0.6**
comp=Z,49nm,1.0s,mb5.1
ARU Arti 25.73 38 *d i*P **P 07 35 33.4 +0.7**
ARU 07 36 07.6
ARU S **S 07 40 03.6 +1.3**
ARU SS 07 40 57.0
ARU pmax pmax
comp=Z,93nm,1.7s,mb5.1
ARU Arti 25.73 38 *e*P **P 07 35 33.3 +0.6**
comp=Z,49nm,1.0s,mb5.1
ARU S **S 07 40 03.6 +1.3**
ESDC Sonseca Array 26.12 282 P **P 07 35 35.4 -1.0**
comp=Z,1.0nm,0.5s,mb3.7,baz=79,slow=8.7,SNR=8.3
ESDC LR LR 07 46 38.2
comp=Z,99nm,18.2s,MS3.4,baz=210,slow=38
ESDC Sonseca Array 26.12 282 P **P 07 35 35.4 -1.0**
TAM Tamanrasset 26.30 239 *e*P **P 07 35 38.8 +0.7**
comp=Z,5.2nm,1.0s,mb4.1
TAM Tamanrasset 26.30 239 *e*P **P 07 35 38.8 +0.7**
TAM pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
TAM Tamanrasset 26.30 239 *e*P **P 07 35 38.8 +0.7**
comp=Z,5.2nm,1.0s,mb4.1
SVE Sverdlovsk 26.93 38 *e*P **P 07 35 49.0 +5.5**
SVE pmax pmax
comp=Z,35nm,1.3s,mb4.9
MTE Manteigas 28.72 285 *e*P **P 07 36 02.0 +2.4**
comp=Z,12nm,1.0s,mb4.7
MTE Manteigas 28.72 285 *e*P **P 07 36 02.0 +2.3**
comp=Z,12nm,1.0s,mb4.7
KKAR Karatay Array 30.69 69 *e*P **P 07 36 16.3 -0.9**
comp=Z,1.3nm,0.6s,mb4.0
KKAR Karatay Array 30.69 69 *e*P **P 07 36 16.3 -0.9**
KKAR pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
ARCES ARCESS Array B 30.72 357 P **P 07 36 16.6 -0.5**
comp=Z,5.6nm,0.8s,mb4.5,baz=169,slow=5.4,SNR=7.9
ARCES LR LR 07 49 23.5
comp=Z,170nm,18.6s,MS3.7,baz=78,slow=38
ARCES ARCESS Array B 30.72 357 P **P 07 36 16.6 -0.5**
ARCES ARCESS Array B 30.72 357 P **P 07 36 16.6 -0.5**
BRVK Borovoye 30.93 50⇑ *e*P **P 07 36 20.9 +1.8**
BRVK pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
BRVK Borovoye 30.93 50 *e*P **P 07 36 20.9 +1.8**
comp=Z,5.0nm,1.7s,mb4.2
AAK Ala-Archa 33.66 69 *e*P **P 07 36 43.1 0.0**
comp=Z,5.4nm,1.1s,mb4.4
AAK Ala-Archa 33.66 69 *e*P **P 07 36 43.2 0.0**
AAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
AAK Ala-Archa 33.66 69 *e*P **P 07 36 43.2 0.0**
comp=Z,5.4nm,1.1s,mb4.4
TORD Torodi Ar. Bea 35.83 232 P **P 07 37 01.1 -1.1**
comp=Z,7.4nm,1.0s,mb4.5,baz=36,slow=8.8,SNR=43
KURK Kurchatov 35.86 55⇓ *i*P **P 07 37 04.0 +1.9**
KURK pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
KURK Kurchatov 35.86 55 *i*P **P 07 37 04.0 +1.9**
comp=Z,7.0nm,1.2s,mb4.4
MKAR Makanchi Array 38.56 61 P **P 07 37 22.9 -2.1**
comp=Z,4.1nm,0.8s,mb4.1,baz=293,slow=7.4,SNR=5.9
MKAR LR LR 07 55 17.0
comp=Z,84nm,18.9s,MS3.6,baz=278,slow=39
MKAR Makanchi Array 38.56 61 P **P 07 37 22.9 -2.1**
MKAR LR LR 07 55 17.0
MKAR Makanchi Array 38.56 61 *i*P **P 07 37 25.8 +0.7**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
NVS Novosibirsk 38.72 48 *e*P **P 07 37 28.7 +2.4**
NVS Novosibirsk 38.72 48 *e*P **P 07 37 28.7 +2.4**
ZALV Zalesovo Beam 39.64 49 LR LR 07 57 57.8
comp=Z,51nm,19.9s,MS3.4,baz=67,slow=42
WMQ Urumqi 42.87 64 *e*P **P 07 38 00.0 -0.7**
WMQ sP sP 07 38 07.0 +5.9
WMQ PP PP 07 39 42.0 +2.1
WMQ S **S 07 44 23.0 -3.1**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb4.7
WMQ pmax pmax
comp=Z,45nm,4.0s
WMQ LR LR
comp=N,170nm,16.0s,MS4.2
WMQ LR LR
comp=E,210nm,16.0s,MS4.2
WMQ LR LR
comp=Z,110nm,16.0s,MS3.9
DBIC Dimbokro 44.89 233 P **P 07 38 15.9 -1.3**
comp=Z,4.7nm,0.8s,mb4.5,baz=51,slow=8.7,SNR=7.9
DBIC LR LR 07 59 47.6
comp=Z,60nm,19.6s,MS3.5,baz=21,slow=40
DBIC Dimbokro 44.89 233 *e*P **P 07 38 15.7 -1.6**
comp=Z,11nm,1.1s,mb4.7
DBIC Dimbokro 44.89 233 P **P 07 38 16.0 -1.3**
DBIC pmax pmax
comp=Z,5.0nm,0.8s
DBIC MLR MLR
comp=Z,60nm,19.7s
DBIC Dimbokro 44.89 233 P **P 07 38 16.0 -1.3**
comp=Z,60nm,19.7s
TIC Toumodi 45.02 234 *e*P **P 07 38 16.7 -1.6**
comp=Z,72nm,1.4s,mb5.4
TIC Toumodi 45.02 234 *e*P **P 07 38 16.7 -1.6**
TIC Toumodi 45.02 234 *e*P **P 07 38 16.7 -1.6**
comp=Z,72nm,1.4s,mb5.4
KIC Kosan Boka 45.06 233 *e*P **P 07 38 17.2 -1.4**
comp=Z,112nm,2.1s,mb5.4
KIC Kosan Boka 45.06 233 *e*P **P 07 38 17.2 -1.4**
comp=Z,112nm,2.1s,mb5.4
LIC Lamto 45.34 233 *e*P **P 07 38 19.4 -1.5**
comp=Z,48nm,1.4s,mb5.2
LIC Lamto 45.34 233 *e*P **P 07 38 19.4 -1.5**
comp=Z,8.1nm,0.9s,mb4.7
LSA Lhasa 50.58 81 P **P 07 39 00.5 -0.8**
ZAK Zakamensk 51.40 52 *e*P **P 07 39 05.4 -1.8**
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
ZAK Zakamensk 51.40 52 *e*P **P 07 39 05.4 -1.8**
comp=Z,2.0nm,1.2s,mb3.9
GTA Gaotai 52.88 66 *e*P **P 07 39 17.5 -0.9**
GTA pP 07 39 22.0
GTA sP sP 07 39 24.5 +5.7
GTA pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
SONM Songino Array 54.16 54 P **P 07 39 26.9 -0.7**
comp=Z,1.0nm,0.6s,mb4.0,baz=286,slow=7.1,SNR=7.8
SONM LR LR 08 05 44.8
comp=Z,140nm,18.1s,MS4.1,baz=346,slow=40
SONM Songino Array 54.16 54 P **P 07 39 26.9 -0.7**
SONM Songino Array 54.16 54 P **P 07 39 26.9 -0.7**
BOD Bodaibo 55.11 40 *e*P **P 07 39 32.1 -2.3**
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
LZH Lanzhou 57.18 68 *e*P **P 07 39 52.5 +3.0**
LZH pP 07 39 55.0
LZH sP sP 07 39 57.5 +7.6
LZH pmax pmax
comp=Z,26nm,1.2s,mb5.1
CD2 Chengdu 59.57 73 *e*P **P 07 40 07.5 +1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
HHC Hu-ho-hao-te 60.41 60 *e*P **P 07 40 11.0 -0.9**
HHC pP 07 40 15.5
HHC sP sP 07 40 18.0 +5.7
HHC PcP PcP 07 40 56.8 -0.1
HHC PP PP 07 42 26.0 +1.3
HHC ScP ScP 07 44 55.3 -3.9
HHC S **S 07 48 22.0 -5.7**
HHC sS sS 07 48 30.0 +1.8
HHC ScS ScS 07 49 57.3 -6.5
HHC SS SS 07 52 20.5 -4.3
HHC pmax pmax
comp=Z,22nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,120nm,5.0s
HHC LR LR
comp=N,180nm,15.8s,MS4.5
HHC LR LR
comp=E,190nm,14.3s,MS4.5
HHC LR LR
comp=Z,140nm,16.9s,MS4.2
KMI Kunming 61.77 79 P **P 07 40 21.0 -0.4**
KMI pP 07 40 24.0
KMI sP sP 07 40 25.8 +4.0
KMI PP PP 07 42 38.5 +1.4
KMI pmax pmax
comp=Z,15nm,0.7s,mb5.3
KMI LR LR
comp=Z,110nm,18.6s,MS4.0
CMAR Chiang Mai Arr 62.50 88 P **P 07 40 24.2 -2.1**
comp=Z,3.3nm,0.8s,mb4.6,baz=301,slow=7.8,SNR=13
CMAR Chiang Mai Arr 62.50 88 P **P 07 40 24.2 -2.1**
CMAR Chiang Mai Arr 62.50 88 P **P 07 40 24.2 -2.1**

SCHQ	Schefferville	62.74	320	P	P	07 40 25.7	-1.8
	comp=Z,5.8nm,0.8s,mb4.8,baz=65,slow=7.3,SNR=5.8						
SCHQ	Schefferville	62.74	320	P	P	07 40 25.7	-1.8
SCHQ	Schefferville	62.74	320	P	P	07 40 25.7	-1.7
BJI	Beijing	63.88	59	P	P	07 40 34.5	-0.7
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.1						
GYA	Guiyang	64.05	76	eP	P	07 40 36.0	-0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
WHN	Wuhan	67.56	68	P	P	07 41 00.5	+1.4
CN2	Changchun	67.82	51	eP	P	07 40 59.0	-1.6
BILL	Bilibino	68.40	16	⇓iP	P	07 41 05.6	+1.8
BILL				pmax	pmax		
	comp=Z,13nm,1.3s,mb5.0						
SEY	Seymchan	68.56	24	⇓eP	P	07 41 07.9	+3.0
KSRS	Korea Array	72.98	56	P	P	07 41 30.2	-2.0
	comp=Z,6.5nm,1.0s,mb4.7,baz=310,slow=5.9,SNR=9.8						
KSRS				LR	LR	08 16 56.5	
	comp=Z,83nm,18.9s,MS4.0,baz=160,slow=39						
KSRS	Korea Array	72.98	56	P	P	07 41 30.3	-1.9
KSRS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
KSRS				MLR	MLR		
	comp=Z,83nm,18.9s,MS4.0						
YKA	Yellowknife Ar	74.92	344	P	P	07 41 40.7	-2.4
	comp=Z,2.7nm,0.9s,mb4.3,baz=22,slow=5.4,SNR=4.0						
YKA				LR	LR	08 18 34.6	
	comp=Z,6.6nm,18.5s,MS3.0,baz=330,slow=39						
YKA	Yellowknife Ar	74.92	344	P	P	07 41 40.7	-2.5
ILAR	Eielson Array	76.56	359	P	P	07 41 50.5	-2.0
	comp=Z,0.8nm,0.6s,mb4.0,baz=337,slow=4.3,SNR=16						
ILAR	Eielson Array	76.56	359	P	P	07 41 50.5	-2.0
DAWY	Dawson	76.95	355	eP	P	07 41 54.6	-0.1
PETK	Petropavlovsk-	77.78	29	LR	LR	08 20 10.0	
	comp=Z,59nm,19.8s,MS3.9,baz=343,slow=39						
FFC	Flin Flon	77.97	334	eP	P	07 41 58.6	-1.9
	comp=Z,6.2nm,0.8s,mb4.8						
FFC	Flin Flon	77.97	334	iP	P	07 41 59.6	-1.0
ULM	Lac du Bonnet	79.18	328	P	P	07 42 04.6	-2.8
	comp=Z,6.6nm,1.0s,mb4.6,baz=53,slow=6.6,SNR=7.1						
ULM				LR	LR	08 16 55.2	
	comp=Z,76nm,18.8s,MS4.1,baz=73,slow=36						
ULM	Lac du Bonnet	79.18	328	P	P	07 42 04.6	-2.8
ULM				LR	LR	08 16 55.2	
MJAR	Matsushiro Arr	79.97	51	P	P	07 42 10.7	-1.2
	comp=Z,2.6nm,0.9s,mb4.2,baz=298,slow=5.4,SNR=5.0						
MJAR	Matsushiro Arr	79.97	51	P	P	07 42 10.7	-1.2
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ACSO	Alum Creek Sta	80.16	314	eP	P	07 42 14.2	+1.4
	comp=Z,30nm,1.4s,mb5.0						
TKL	Tuckaleechee C	83.77	311	eP	P	07 42 33.0	+1.1
TKL	Tuckaleechee C	83.77	311	eP	P	07 42 33.0	+1.1
CPCT	Cooper Cave	84.35	312	eP	P	07 42 33.2	-1.7
GOGA	Godfrey	85.14	310	eP	P	07 42 38.5	-0.4
	comp=Z,11nm,1.0s,mb5.0						
GOGA	Godfrey	85.14	310	eP	P	07 42 38.5	-0.4
GOGA				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.0						
SIUC	Southern Illin	85.37	316	eP	P	07 42 40.6	+0.6
	comp=Z,4.4nm,0.6s,mb4.9						
EGMT	Eagleton	86.25	334	eP	P	07 42 42.1	-2.1
	comp=Z,15nm,1.2s,mb5.0						
RSSD	Black Hills	87.42	329	eP	P	07 42 51.0	+1.0
	comp=Z,2.4nm,0.6s,mb4.6						
RSSD	Black Hills	87.42	329	eP	P	07 42 51.0	+1.1
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5						
NVAR	Mina Array Bea	97.62	335	LR	LR	08 33 01.2	
	comp=Z,81nm,18.2s,MS4.2,baz=311,slow=39						

*IDC **30** 07:35:14.8±0.5, 9°.29S×124°.49E, h0km, mb4.4/12, mb1 4.5/13, mb1mx4.4/18, mbtmp4.4/13, ML4.8/1, MS4.0/12, Ms1 4.0/12, ms1mx3.7/28, Error ellipse: s-maj=25.8km s-min=13.7km az=75.0*

*ISCJB **30** 07:35:18.5±0.6, 9°.54S±0°.03×124°.80E±0°.04, h38km±7km, mb4.5/35, MS4.1/11, Error ellipse: s-maj=6.7km s-min=4.9km az=135.5*

*NEIC **30** 07:35:20.5±0.4, 9°.40S×124°.54E, h35km, mb4.7/18, Error ellipse: s-maj=12.9km s-min=8.4km az=56.0*

*DJA **30** 07:35:20, 9°.59S×124°.68E, h15km, mb5.1/28*

*BJI **30** 07:35:21.5, 9°.40S×124°.50E, h35km, mB5.2/14, mb4.7/22, Ms4.8/9, Ms7 4.4/8*

ISC 30 07:35:21.1±0.5, 9°.54S±0°.03×124°.77E±0°.03, h43km±6km, h27km±4.1km:pP-P,n133,σ1$66/124, mb4.5/35, MS4.1/11, 1C-1D, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	2.66	290	P	Pn	07 35 57.8	-3.6
MMRI				S	Sn	07 36 34.1	+1.7
WSI	Waingapu	4.41	268	P	Pn	07 36 25.0	-0.5
WSI				S	Sn	07 37 16.7	+1.0
BBSI	Bau Bau	4.58	331	S	Sn	07 37 24.4	+4.6
KDI	Kendari	5.94	339	P	Pn	07 36 45.9	-0.7
	0.2nm859nm76nm,0.8s						
BMNI	Bima	6.08	279	P	Pn	07 36 47.7	-0.8
	1.1nm5μm301nm,1.3s						
BKSI	Bulukumba	6.23	312	P	Pn	07 36 50.3	-0.2
	0.3nm761nm71nm,0.7s						
NLAI	Namlea	6.68	20	P	Pn	07 37 00.5	+3.8
	0.5nm2μm160nm,0.7s						
KNA	Kununurra	7.30	148	P	Pn	07 37 05.6	+0.4
	18nm1μm,0.7s						
SPSI	Sidrap Palu	7.44	318	P	Pn	07 37 07.7	+0.6
	0.2nm772nm50nm,1.1s						
TTSI	Tana Toraja	8.11	322	P	Pn	07 37 17.5	+1.1
	882nm54nm,0.9s						
KAKA	Kakadu	8.16	113	eP	Pn	07 37 17.1	+0.1
	367nm,0.4s						
KAKA	Kakadu	8.16	113	ePn	Pn	07 37 17.4	+0.4
KAKA	Kakadu	8.16	113	P	Pn	07 37 18.8	+1.8
	729nm,0.5s						
MTNI	Mataram	8.54	275	P	Pn	07 37 20.5	-1.7
	76nm,0.9s						
FITZ	Fitzroy Crossi	8.55	174	Pn	Pn	07 37 22.0	-0.3
	8.0nm,0.3s,baz=9.0,slow=8.9,SNR=151						
FITZ				Sn	Sn	07 38 56.5	-1.1
	35nm,0.3s,baz=330,slow=20,SNR=17						
FITZ				LR	LR	07 41 03.6	
	comp=Z,410nm,20.5s,baz=357,slow=40						
FITZ	Fitzroy Crossi	8.55	174	eP	Pn	07 37 21.6	-0.8
	166nm,0.6s						
FITZ				eS	Sn	07 38 54.3	-3.3
FITZ	Fitzroy Crossi	8.55	174	ePn	Pn	07 37 21.8	-0.6
FITZ				eSn	Sn	07 38 56.7	-0.9
FITZ	Fitzroy Crossi	8.55	174	P	Pn	07 37 22.3	-0.1
	189nm,1.0s						
LUWI	Luwuk	8.67	347	P	Pn	07 37 24.7	+0.6
	2μm170nm,1.0s						
TLE	Tual	8.80	64	P	Pn	07 37 25.7	-0.1
	4μm357nm,0.9s						
KHKI	Kahang-Kahang	9.12	277	P	Pn	07 37 28.2	-2.1
	66nm,1.1s						
IGBI	Denpasar	9.53	274	P	Px	07 37 48.2	
MRSI	Marisa	10.34	344	P	Px	07 37 58.6	
BBKI	Banjar Baru	11.56	301	P	Pn	07 38 10.7	+7.1
MBWA	Marble Bar	12.53	202	ePn	Pn	07 38 15.9	-0.9
MBWA				eSn	Sn	07 40 31.5	-3.5
MBWA	Marble Bar	12.53	202	P	Pn	07 38 17.5	+0.7
	59nm,1.0s						
PWJI	Pagerwojo	12.90	276	P	Pn	07 38 22.3	+0.3
	48nm,0.8s						
SJI	Sawahan	12.98	277	P	Pn	07 38 30.4	+7.4
NGJI	Ngawi	13.34	278	P	Pn	07 38 35.4	+7.5
PCJI	Pacitan	13.49	275	P	Pn	07 38 33.3	+3.2
WRA	Warramunga Arr	13.87	139	Pn	Pn	07 38 31.9	-3.3
	9.9nm,0.3s,baz=316,slow=14,SNR=376						
WRA				Sn	Sn	07 41 03.1	-4.7
	10nm,0.3s,baz=307,slow=24,SNR=13						
BAKI	Biak	14.00	54	P	Pn	07 38 37.5	+0.5
	2μm172nm,1.3s						
UGM	Wanagama	14.17	275	ePn	Pn	07 38 36.5	-2.9
WAMI	Wamena	14.94	69	P	Pn	07 38 57.5	+8.0
BJII	Banjamegara	15.06	277	P	Pn	07 38 56.4	+5.3
STKI	Sintang	16.31	305	P	Pn	07 39 09.5	+2.3
	9μm26nm,1.4s						
DAV	Davao City (W)	16.52	3	LR	LR	07 44 57.7	
	comp=Z,207nm,20.9s,baz=182,slow=36						
ASAR	Alice Springs	16.54	149	Pn	Pn	07 39 07.7	-2.3
	3.9nm,0.3s,baz=325,slow=12,SNR=369						
ASAR				Sn	Sn	07 42 06.0	-6.7
	2.8nm,0.3s,baz=314,slow=22,SNR=8.7						
JCJI	Jatiwangi	16.61	279	P	Pn	07 39 12.8	+1.8
	135nm,1.1s						
CISI	Cisompet, Garu	16.88	275	P	Pn	07 39 14.1	-0.3
	156nm,1.0s						
LEM	Lembang	17.19	278	P	Pn	07 39 17.5	-0.7
	112nm,0.9s						
KKM	Kota Kinabalu	17.67	331	eP	Pn	07 39 26.1	+1.9
	88nm,1.5s						
CBJI	Citeko	18.01	279	P	Pn	07 39 24.7	-3.7
	473nm,0.9s						
DBJI	Dramaga	18.08	278	P	Pn	07 39 33.2	+3.9
KSM	Kuching	18.09	306	eP	Pn	07 39 27.1	-2.1
	21nm,0.9s						
SKJI	Sukabumi	18.20	277	P	Pn	07 39 38.8	+8.2
COEN	Coen	18.55	105	eP	Pn	07 39 33.0	-1.8
	482nm,0.6s						
COEN				eS	S	07 42 49.1	-15
COEN	Coen	18.55	105	P	Pn	07 39 33.5	-1.3
	350nm,0.8s						
CGJI	Cibinong	19.11	277	P	Pn	07 39 36.8	-4.8
PPBI	Pangkal Pinang	19.92	290	P	Pn	07 39 59.1	+7.8
KLSI		20.45	282	P	P	07 39 55.5	+0.3
	61nm,1.1s						
KASI	Kota Agung	20.48	280	P	P	07 39 55.2	-0.3
	112nm,1.1s						
MDSI	Maura Dua	21.04	282	P	P	07 40 07.0	+5.5
FORT	Forrest	21.35	172	eP	P	07 40 06.6	+1.9
	54nm,0.7s,mb5.0						
FORT				eS	S	07 43 52.3	-7.1
FORT	Forrest	21.35	172	eP	P	07 40 06.6	+1.9
	66nm,0.8s,mb5.0						
FORT				eS	S	07 43 54.5	-4.9
PMG	Port Moresby	22.09	92	eP	P	07 40 16.3	+3.5
	79nm,1.0s,mb5.1						
PMG	Port Moresby	22.09	92	P	P	07 40 16.8	+4.1
	828nm88nm,1.0s,mb5.2						
KLBR	Kellerberrin	22.89	196	eP	P	07 40 21.6	+0.6
	44nm,1.0s,mb4.8						
KLBR				eS	S	07 44 31.5	+3.7
CTA	Charters Tower	23.24	119	P	P	07 40 27.3	+2.4
	14nm,0.7s,mb4.5,baz=290,slow=12,SNR=20						
CTA				LR	LR	07 50 33.7	
	comp=Z,525nm,18.4s,MS4.0,baz=296,slow=39						
CTA	Charters Tower	23.24	119	eP	P	07 40 27.0	+2.1
	20nm,0.8s,mb4.6						
CTAO	Charters Tower	23.24	119	eP	P	07 40 27.0	+2.1
	33nm,1.0s,mb4.7						
CTAO	Charters Tower	23.24	119	P	P	07 40 27.3	+2.4
	610nm41nm,0.9s,mb4.8						
NWAO	Narrogin (SRO)	24.29	196	P	P	07 40 35.4	+1.0
	20nm,0.9s,mb4.5,baz=38,slow=14,SNR=2.4						
NWAO				S	sS	07 45 04.8	-5.0
	30nm,0.8s,baz=18,slow=20,SNR=4.8						
SDSI	Sungai Dareh	24.75	289	P	P	07 40 40.6	+1.8
STKA	Stephens Creek	27.16	147	P	P	07 41 03.0	+2.6
	8.3nm,0.4s,mb4.6,baz=316,slow=9.1,SNR=20						
STKA				S	sS	07 46 11.6	+16
	6.3nm,0.8s,baz=304,slow=7.3,SNR=3.0						
STKA				LR	LR	07 53 32.9	
	comp=Z,320nm,18.0s,MS3.9,baz=126,slow=40						
STKA	Stephens Creek	27.16	147	eP	P	07 41 03.3	+2.9
	24nm,0.8s,mb4.8						
STKA	Stephens Creek	27.16	147	eP	P	07 41 03.5	+3.1
	6.5nm,0.8s,mb4.2						
PSI	Prapat	28.52	294	LR	LR	07 53 08.0	
	comp=Z,474nm,21.5s,MS4.1,baz=273,slow=38						
ARMA	Armidale	32.53	133	eP	P	07 41 52.2	+4.1
ARMA	Armidale	32.53	133	eP	P	07 41 51.4	+3.3
	11nm,1.0s,mb4.8						
TOO	Toolangi	33.59	149	eP	P	07 42 02.4	+5.2
CNB	Canberra Magne	34.08	143	eP	P	07 42 04.4	+2.9
HNR	Honiara	34.69	93	LR	LR	07 58 06.9	
	comp=Z,255nm,18.4s,MS4.0,baz=57,slow=39						
CMAR	Chiang Mai Arr	37.73	317	P	P	07 42 30.5	-2.5
	6.2nm,0.9s,mb4.3,baz=143,slow=7.3,SNR=7.1						
CMAR				ScP	ScP	07 48 35.8	+2.1
	0.5nm,0.3s,baz=176,slow=2.9,SNR=7.3						
CMAR				LR	LR	07 57 45.7	
	comp=Z,234nm,21.1s,MS4.0,baz=293,slow=36						
CMAR	Chiang Mai Arr	37.73	317	P	P	07 42 30.4	-2.5
CMAR				ScP	ScP	07 48 35.8	+2.1
CMAR				LR	LR	07 57 45.7	
GYA	Guiyang	39.87	334	eP	P	07 42 54.8	+4.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
KMI	Kunming	40.60	329	P	P	07 43 00.5	+3.7
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
WHN	Wuhan	41.09	346	⇑P	P	07 42 59.0	-1.8
CD2	Chengdu	44.99	334	eP	P	07 43 35.5	+3.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
XAN	Xi'an	45.88	342	P	P	07 43 38.3	-1.0
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
XAN				pmax	pmax		
	comp=Z,34nm,3.7s						
KSRS	Korea Array	46.84	3	P	P	07 43 45.6	-1.2
	comp=Z,2.4nm,0.8s,mb4.2,baz=180,slow=11,SNR=7.7						
MJAR	Matsushiro Arr	47.55	15	P	P	07 43 49.9	-2.4
	comp=Z,1.7nm,0.6s,mb4.3,baz=197,slow=9.1,SNR=5.3						
MJAR	Matsushiro Arr	47.55	15	P	P	07 43 49.9	-2.4
LZH	Lanzhou	49.48	338	eP	P	07 44 13.0	+5.8
LZH				pP	pP	07 44 21.8	+2.4
LZH				sP	sP	07 44 24.5	+0.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
LSA	Lhasa	50.69	321	P	P	07 44 15.5	-1.0
LSA	Lhasa	50.69	321	eP	P	07 44 15.2	-1.3
	comp=Z,14nm,0.6s,mb5.1						
HHC	Hu-ho-hao-te	51.60	347	eP	P	07 44 27.8	+4.7
HHC				pP	pP	07 44 37.8	+2.5
HHC				sP	sP	07 44 41.8	+1.5
HHC				PcP	PcP	07 45 41.5	+5.0
HHC				PP	PP	07 46 26.5	+5.5
HHC				ScP	ScP	07 49 33.5	+3.6
HHC				S	S	07 51 46.8	+5.9
HHC				sS	sS	07 52 02.8	+1.5
HHC				ScS	ScS	07 54 12.0	+2.2
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,140nm,5.0s						
HHC				LR	LR		
	comp=N,180nm,14.1s,MS4.4						
HHC				LR	LR		
	comp=E,190nm,15.3s,MS4.4						
HHC				LR	LR		
	comp=Z,140nm,13.1s,MS4.2						
CN2	Changchun	53.09	1	eP	P	07 44 44.0	+10
GTA	Gaotai	53.94	336	eP	P	07 44 39.3	-1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
MDJ	Mudanjiang	54.08	4	P	P	07 44 45.3	+4.0
MDJ				pP	pP	07 44 54.0	+0.4
MDJ				sP	sP	07 44 58.0	-0.6
MDJ				PcP	PcP	07 45 49.0	+3.2
MDJ				PP	PP	07 46 47.5	+4.1
MDJ				ScP	ScP	07 49 44.8	+4.2
MDJ				PcS	PcS	07 49 49.5	+4.5
MDJ				S	S	07 52 21.8	+7.2
MDJ				ScS	ScS	07 54 30.3	+3.3
MDJ				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,97nm,6.0s						
CASY	Casey	57.49	187	eP	P	07 45 06.9	+1.4
	comp=Z,3.3nm,0.9s,mb4.4						
ULN	Ulaanbaatar	59.27	346	eP	P	07 45 19.9	+1.7
	comp=Z,3.8nm,0.4s,mb4.8						
SONM	Songino Array	59.40	346	P	P	07 45 16.7	-2.4
	comp=Z,3.5nm,0.7s,mb4.5,baz=165,slow=8.2,SNR=16						
SDNR	Sundarnagar	61.29	314	ePKP	P	07 45 33.5	+1.2
KSH	Kashi	66.53	321	eP	P	07 46 04.3	-2.3
KSH				epP	pP	07 46 10.0	-9.2
KSH				esP	sP	07 46 16.0	-8.2
KSH				ePP	PcP	07 46 36.5	+0.7
KSH				pmax	pmax		
	comp=Z,1.0nm,0.1s,mb4.8						
KSH				pmax	pmax		
	comp=Z,170nm,4.0s						
MK31	Makanchi Array	67.66	330	eP	P	07 46 10.8	-2.8
MKAR	Makanchi Array	67.66	330	P	P	07 46 11.2	-2.4
	comp=Z,2.5nm,0.7s,mb4.4,baz=132,slow=7.9,SNR=36						
PETK	Petropavlovsk-	68.42	21	P	P	07 46 18.2	0.0
	comp=Z,2.6nm,0.7s,mb4.4,baz=208,slow=5.9,SNR=3.1						
KBL	Kabul	68.56	313	eP	P	07 46 17.1	-2.4
	comp=Z,8.3nm,0.8s,mb4.7						
TKM2	Tokmak 2	68.78	323	eP	P	07 46 20.1	-0.6
	comp=Z,3.1nm,0.7s,mb4.3						
AAK	Ala-Archa	69.26	323	LR	LR	08 20 15.7	
	comp=Z,124nm,20.1s,MS4.2,baz=120,slow=39						
AAK	Ala-Archa	69.26	323	eP	P	07 46 22.6	-1.1
	comp=Z,4.5nm,0.7s,mb4.5						
AML	Almayashu	69.45	322	eP	P	07 46 28.5	+3.6
	comp=Z,6.2nm,0.8s,mb4.6						
EKS2	Erkin-Say	69.71	322	eP	P	07 46 25.1	-1.4
	comp=Z,4.0nm,0.8s,mb4.4						
MAW	Mawson	70.72	201	P	P	07 46 33.1	+0.8
	comp=Z,2.0nm,0.5s,mb4.3,baz=70,slow=6.0,SNR=11						
MAW				LR	LR	08 12 59.1	
	comp=Z,152nm,19.4s,MS4.3,baz=291,slow=32						
MAW	Mawson	70.72	201	eP	P	07 46 34.6	+2.3
	comp=Z,3.8nm,0.7s,mb4.4						
MAW	Mawson	70.72	201	eP	P	07 46 34.6	+2.3
	comp=Z,4.8nm,1.5s,mb4.2						
ZAA0	Zalesovo Array	71.69	336	eP	P	07 46 34.8	-3.5
ZALV	Zalesovo Beam	71.69	336	P	P	07 46 35.0	-3.3
	comp=Z,1.8nm,0.5s,mb4.2,baz=128,slow=5.1,SNR=8.3						
ZALV	Zalesovo Beam	71.69	336	P	P	07 46 35.0	-3.3
KKAR	Karatay Array	71.95	321	eP	P	07 46 43.3	+3.2
	comp=Z,0.5nm,0.5s,mb3.7						
KURK	Kurchatov	72.10	331	eP	P	07 46 38.1	-2.8
	comp=Z,7.7nm,0.9s,mb4.6						
SYO	Syowa Base	79.43	201	⇓eP	P	07 47 23.0	+0.6
QSPA	South Pole Qui	80.45	180	LR	LR	08 22 09.9	
	comp=Z,148nm,21.3s,MS4.3,baz=242,slow=35						
ABKAR	Akbulak array	81.34	323	eP	P	07 47 30.0	-3.0
AKTK	Aktyubinsk	82.97	324	P	P	07 47 39.5	-2.0
AKTO	Aktyubinsk	82.97	324	P	P	07 47 39.5	-2.0
	comp=Z,1.1nm,0.3s,mb4.3,baz=93,slow=6.4,SNR=3.4						
BOSA	Boshof	93.72	240	LR	LR	08 24 52.4	
	comp=Z,120nm,19.1s,MS4.4,baz=166,slow=32						
BRTR	Keskin Array B	96.88	309	LR	LR	08 37 12.8	
	comp=Z,37nm,21.9s,MS3.8,baz=326,slow=38						
AKASG	Malin Array Be	100.82	320	PP	PP	07 53 07.4	-6.0
	comp=Z,0.3nm,0.3s,baz=69,slow=10,SNR=4.5						
NVAR	Mina Array Bea	116.92	52	PKP	PKPdf	07 54 02.4	+1.0
	comp=Z,0.4nm,0.7s,baz=258,slow=2.5,SNR=3.9						
HLID	Hailey	118.71	45	ePKPdf	PKPdf	07 54 06.9	+2.2
REDW	Red Top Meadow	121.26	45	ePKPdf	PKPdf	07 54 11.1	+1.4
SNOW	Snow King Moun	121.29	45	ePKPdf	PKPdf	07 54 12.2	+2.5
TORD	Torodi Ar. Bea	124.16	279	PKP	PKPdf	07 54 16.6	+0.6
	comp=Z,2.4nm,0.7s,baz=72,slow=1.9,SNR=16						
PV01	Paradox Valley	124.45	50	ePKPdf	PKPdf	07 54 18.6	+2.7
DBIC	Dimbokro	130.08	271	PKP	PKPdf	07 54 27.8	+0.4
	comp=Z,2.7nm,0.9s,baz=124,slow=3.6,SNR=2.8						
TXAR	Lajitas Array	130.67	59	PKP	PKPdf	07 54 30.5	+2.4
	comp=Z,0.7nm,0.8s,baz=176,slow=1.8,SNR=8.8						
TXAR				SKPbc	SKPbc	07 57 52.3	+3.8
	comp=Z,0.7nm,0.8s,baz=266,slow=5.4,SNR=8.7						
JCT	Junction City	133.61	57	ePKPdf	PKPdf	07 54 36.4	+2.8
JCT				eSKPbc	SKPbc	07 58 02.8	+3.9
LRAL	Lakeview Retre	142.54	47	ePKPdf	PKPdf	07 54 53.1	+3.2
GOGA	Godfrey	144.80	43	ePKPdf	PKPdf	07 54 54.5	+0.6
LPAZ	La Paz	151.34	153	PKPbc	PKPbc	07 55 14.0	+3.0
	comp=Z,1.3nm,1.0s,baz=143,slow=5.1,SNR=4.5						
LPAZ	La Paz	151.34	153	ePKPbc	PKPbc	07 55 14.2	+3.2

*NEIC **30** 07:45:14.9, 16°.84N×100°.10W, h4km, MD3.6(MEX), After MEX.*

MEX 30 07:45:14.8±0.4, 16°.84N×100°.10W, h5km±4km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.23	82	iP	Pg	07 45 17.9	-1.4
ACX				iS	Sg	07 45 20.9	-1.5
ACX	Acapulco	0.23	82	iP	Pg	07 45 17.9	-1.4
ACX				iS	Sg	07 45 20.9	-1.5
CAIG	El Cayaco	0.27	323	iP	Pg	07 45 19.6	-0.4
CAIG				iS	Sg	07 45 23.8	+0.3
CAIG	El Cayaco	0.27	323	iP	Pg	07 45 19.6	-0.4
CAIG				iS	Sg	07 45 23.8	+0.3
ZIIG	Zihuatanejo	1.51	301	eP	Pn	07 45 39.3	-3.3
ZIIG				iS	Sn	07 45 58.2	-4.6
ZIIG	Zihuatanejo	1.51	301	eP	Pn	07 45 39.3	-3.3
ZIIG				iS	Sn	07 45 58.2	-4.6
PNIG	Pinotepa	1.94	103	iP	Pn	07 45 46.5	-2.0
PNIG				iS	Sn	07 46 08.3	-7.0
PNIG	Pinotepa	1.94	103	iP	Pn	07 45 45.9	-2.6
PNIG				iS	Sn	07 46 09.0	-4.3
UTMO	Huajuapan	2.41	65	eP	Pn	07 45 52.0	-2.9
UTMO				iS	Sn	07 46 20.1	-4.6
MZVM		2.48	19	iP	Pn	07 45 52.0	-4.0
MZVM				iS	Sn	07 46 22.9	-3.8

IDC 30 07:46:01.7±2.2, 3°.51S×135°.86E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/14, mbtmp4.1/4, ML4.1/1, Error ellipse: s-maj=86.4km s-min=27.6km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.40	185	Pn	Pn	07 49 51.0	-2.5
	0.5nm,0.3s,baz=356,slow=14,SNR=25						
WRA				Sn	Sn	07 52 41.7	-15
	1.1nm,0.3s,baz=8.2,sl

DJES	**Djerdap**	**1.87**	**163**	*e*Pg	**Pg**	**07 47 15.6**	**-0.8**
DJES				*e*Sn	**Sn**	**07 47 36.1**	**+0.4**
FRGS	**Fruska Gora**	**1.88**	**227**	*e*Pn	**Pn**	**07 47 13.4**	**+1.0**
FRGS				*e*Sn	**Sn**	**07 47 36.3**	**+0.3**
FRGS				*e*Sg	**Sg**	**07 47 42.3**	**+1.4**
PSZ	**Piszkesteto**	**1.94**	**320⇑**	*e*Pn	**Pn**	**07 47 13.4**	**+0.2**
PSZ				*e*Sn	**Sn**	**07 47 35.4**	**-2.0**
PSZ	**Piszkesteto**	**1.94**	**320⇑**	*e*Pn	**Pn**	**07 47 13.4**	**+0.2**
PSZ				*e*Sn	**Sn**	**07 47 35.4**	**-2.0**
PKSM	**Moragy**	**2.17**	**265**	*e*Sn	**Sn**	**07 47 42.2**	**-0.9**
KECS	**Kecovo**	**2.20**	**338**	*e*PN	**Pn**	**07 47 17.2**	**+0.4**
KECS				*e*SN	**Sn**	**07 47 42.9**	**-1.1**
TRUS	**Trudelj**	**2.43**	**204**	*e*Pn	**Pn**	**07 47 19.9**	**0.0**
TRUS				*e*Sn	**Sn**	**07 47 49.1**	**-0.4**
TRUS	**Trudelj**	**2.43**	**204**	*e*Pn	**Pn**	**07 47 19.9**	**0.0**
TRUS				*e*Sn	**Sn**	**07 47 49.1**	**-0.4**
KOLS	**Kolonicke sedl**	**2.50**	**8**	*e*PN	**Pn**	**07 47 21.3**	**+0.3**
KOLS				*e*SN	**Sg**	**07 48 00.0**	**-0.9**
KOLS	**Kolonicke sedl**	**2.50**	**8**	*e*Pn	**Pn**	**07 47 21.3**	**+0.3**
BURAR	**Bucovina Array**	**2.64**	**63⇓**	*i*P	**Pn**	**07 47 24.2**	**+1.4**
BURAR				*i* S	**Sn**	**07 47 56.6**	**+1.9**
BURAR	**Bucovina Array**	**2.64**	**63⇓**	*i*P	**Pn**	**07 47 24.2**	**+1.4**
BURAR	**Bucovina Array**	**2.64**	**63**	S	**Sn**	**07 47 56.6**	**+1.9**
BURAR	**Bucovina Array**	**2.64**	**63⇓**	*i*P	**Pn**	**07 47 24.2**	**+1.4**
BURAR				S	**Sn**	**07 47 56.6**	**+1.9**
DIVS	**Divibare**	**2.67**	**208**	*e*Pn	**Pn**	**07 47 24.2**	**+1.0**
DIVS				*e*Sn	**Sn**	**07 47 56.5**	**+1.1**
DIVS				*e*Sg	**Sg**	**07 48 06.4**	**+0.3**
DIVS	**Divibare**	**2.67**	**208**	*e*Pn	**Pn**	**07 47 24.2**	**+1.0**
DIVS				*e*Sn	**Sn**	**07 47 56.5**	**+1.1**
DIVS				*e*Sg	**Sg**	**07 48 06.4**	**+0.3**
VYHS	**Vyhne**	**2.84**	**317**	*e*PN	**Pn**	**07 47 26.1**	**+0.5**
VYHS				*e*SN	**Sn**	**07 47 57.9**	**-1.8**
VYHS	**Vyhne**	**2.84**	**317**	*e*Pn	**Pn**	**07 47 26.1**	**+0.5**
VYHS				*e*Sn	**Sn**	**07 47 57.9**	**-1.8**
MLR	**Muntele Rosu**	**3.08**	**107⇑**	*i*P	**Pn**	**07 47 30.1**	**+1.2**
MLR				*i* S	**Sn**	**07 48 05.9**	**+0.3**
MLR	**Muntele Rosu**	**3.08**	**107⇑**	*i*P	**Pn**	**07 47 30.1**	**+1.2**
MLR	**Muntele Rosu**	**3.08**	**107**	S	**Sn**	**07 48 05.9**	**+0.3**
MLR	**Muntele Rosu**	**3.08**	**107⇑**	*i*P	**Pn**	**07 47 30.1**	**+1.2**
MLR				S	**Sn**	**07 48 05.9**	**+0.3**
ZAPS	**Zavoj**	**3.24**	**169**	*e*Pn	**Pn**	**07 47 31.7**	**+0.6**
ZAPS				*e*Sg	**Sg**	**07 48 22.8**	**-1.8**
SJES	**Sjenica**	**3.44**	**202**	*e*Pn	**Pn**	**07 47 34.7**	**+0.9**
SJES				*e*Sn	**Sn**	**07 48 13.6**	**-0.8**
SJES	**Sjenica**	**3.44**	**202**	*e*Pn	**Pn**	**07 47 34.7**	**+0.9**
SJES				*e*Sn	**Sn**	**07 48 13.6**	**-0.8**
BARS	**Barje**	**3.64**	**179**	*e*Pn	**Pn**	**07 47 37.0**	**+0.4**
BARS				*e*Sn	**Sn**	**07 48 17.5**	**-1.9**
BARS				*e*Sg	**Sg**	**07 48 35.7**	**-1.6**
BARS	**Barje**	**3.64**	**179**	*e*Pn	**Pn**	**07 47 37.0**	**+0.4**
BARS				*e*Sn	**Sn**	**07 48 17.5**	**-1.9**
BARS				*e*Sg	**Sg**	**07 48 35.7**	**-1.6**
VTS	**Vitosha**	**4.00**	**164**	*e*Sn	**Sn**	**07 48 27.3**	**-1.0**
VTS				*e*Sg	**Sg**	**07 48 48.1**	**-0.9**
VTS	**Vitosha**	**4.00**	**164**	*e*Sn	**Sn**	**07 48 27.3**	**-1.0**
VTS				*e*Sg	**Sg**	**07 48 48.1**	**-0.9**

*ISCJB **30** 07:48:17.6±0.5, 24°.11N±0°.01×121°.74E±0°.03, h2km±3km, Error ellipse: s-maj=4.4km s-min=2.0km az=18.0*
*TAP **30** 07:48:17.8, 24°.12N×121°.70E, h6km, ML3.7, C*
*NEIC **30** 07:48:18.9±0.9, 24°.12N×121°.55E, h2km±15km, Error ellipse: s-maj=22.3km s-min=8.0km az=98.0*
ISC 30 07:48:18.0±0.5, 24°.11N±0°.01×121°.75E±0°.03, h7km±3km, n46, σ0°76/87, 5C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=255	**0.14**	**260⇑**	*i*P	**Pg**	**07 48 20.4**	**-0.6**
TWD				*i* S	**Sg**	**07 48 22.3**	**-0.7**
NACB	**Ninganchiao**	**0.15**	**296**	*e*Pg	**Pg**	**07 48 20.3**	**-0.9**
NACB				*e*Sg	**Sg**	**07 48 22.1**	**-1.2**
HWA	**Hwalien** baz=226	**0.18**	**225**	*e*P	**Pg**	**07 48 22.2**	**+0.5**
HWA				*e*S	**Sg**	**07 48 25.6**	**+1.4**
EHP	**Heping Village** baz=8.0	**0.20**	**359**	*i* P	**Pg**	**07 48 21.9**	**-0.2**
EHP				*i* S	**Sg**	**07 48 25.4**	**+0.5**
ESF	**Shoufeng Towns** baz=211	**0.32**	**223**	*e*P	**Pg**	**07 48 23.5**	**-0.8**
ENA	**Nanau** baz=4.0	**0.32**	**359⇑**	*i*P	**Pg**	**07 48 24.2**	**-0.1**
ENA				*e*S	**Sg**	**07 48 28.6**	**0.0**
ESL	**Shilin** baz=233	**0.41**	**225**	*e*P	**Pg**	**07 48 25.5**	**-0.5**
ESL				*e*S	**Sg**	**07 48 32.3**	**+1.0**
WHF	**Hehuan Shan** baz=273	**0.44**	**275**	P	**Pg**	**07 48 25.8**	**-0.8**
WHF				*e*S	**Sg**	**07 48 31.4**	**-1.0**
TWT	**Tachien** baz=284	**0.54**	**286**	*e*P	**Pg**	**07 48 27.9**	**-0.6**
TWT				*e*S	**Sg**	**07 48 35.7**	**+0.1**
ENTT	**Nioudou** baz=343	**0.56**	**343**	*i* P	**Pg**	**07 48 28.7**	**-0.1**
ENTT				S	**Sg**	**07 48 36.5**	**+0.4**
TWE	**Neicheng** baz=355	**0.62**	**353**	*i* P	**Pg**	**07 48 29.9**	**0.0**
TWE				*i* S	**Sg**	**07 48 38.7**	**+0.7**
YHNB	**Yeheng**	**0.66**	**329**	*e*Pg	**Pg**	**07 48 30.2**	**-0.4**
YHNB				*e*Sg	**Sg**	**07 48 39.1**	**-0.2**
NSK	**Sanguang** baz=328	**0.67**	**328⇑**	*i*P	**Pg**	**07 48 30.7**	**-0.3**
NSK				*e*S	**Sg**	**07 48 39.3**	**-0.4**
EHY	**Hungye** baz=222	**0.71**	**213**	*e*P	**Pg**	**07 48 31.2**	**-0.5**
EHY				*e*S	**Sg**	**07 48 42.5**	**+1.5**
SMLT	**Sun Moon Lake** baz=254	**0.81**	**254⇓**	*i*P	**Pg**	**07 48 33.1**	**-0.4**
SMLT				*e*S	**Sg**	**07 48 43.7**	**-0.2**
YULB	**Yu-li**	**0.82**	**210**	*e*Pg	**Pg**	**07 48 33.5**	**-0.4**
YULB				*e*Sg	**Sg**	**07 48 44.8**	**+0.4**
TYC	**Yuchr** baz=256	**0.84**	**256**	*e*P	**Pg**	**07 48 33.4**	**-0.7**
TYC				*e*S	**Sg**	**07 48 44.1**	**-0.9**
NSTT	**Nanjuang** baz=307	**0.86**	**308**	*e*P	**Pg**	**07 48 33.9**	**-0.6**
NSTT				*e*S	**Sg**	**07 48 45.5**	**-0.2**
TWA	**Mucha** baz=348	**0.88**	**350**	P	**Pg**	**07 48 34.8**	**-0.2**
TWA				S	**Sg**	**07 48 46.7**	**+0.1**
TATO	**Taipei**	**0.90**	**345**	*e*Pg	**Pg**	**07 48 35.1**	**-0.2**
TATO				*e*Sg	**Sg**	**07 48 48.4**	**+1.4**
TWQ1	**Liyutan** baz=285	**0.92**	**285**	*e*P	**Pg**	**07 48 35.2**	**-0.5**
TWB1	**Santiao Chiao** baz=3.0	**0.93**	**14**	P	**Pg**	**07 48 36.0**	**+0.2**
TWB1				*e*S	**Sg**	**07 48 48.3**	**+0.4**
NSY	**Sanyi** baz=288	**0.95**	**289**	*e*P	**Pg**	**07 48 35.4**	**-1.0**
NSY				*e*S	**Sg**	**07 48 50.0**	**+1.3**
TAP1	**Taipei** baz=335	**0.95**	**348**	*e*P	**Pg**	**07 48 35.9**	**-0.5**
TAP1				*e*S	**Sg**	**07 48 49.1**	**+0.4**
YUS	**Yu-Shan** baz=232	**0.95**	**230**	*i*P	**Pg**	**07 48 36.2**	**-0.1**
YUS				S	**Sg**	**07 48 49.2**	**+0.6**
NWF	**Wu-fen Shan** baz=350	**0.96**	**2⇑**	*i*P	**Pg**	**07 48 36.7**	**+0.1**
NWF				*e*S	**Sg**	**07 48 49.3**	**+0.3**
TCU	**Taichung** baz=266	**0.98**	**273**	*e*P	**Pg**	**07 48 37.4**	**+0.5**
TCU				*e*S	**Sg**	**07 48 51.1**	**+1.5**
HSN	**Hsinchu** baz=316	**0.99**	**315**	*e*P	**Pg**	**07 48 37.1**	**0.0**
HSN				*e*S	**Sg**	**07 48 50.0**	**0.0**
NCU	**National Centr** baz=328	**1.00**	**329**	*e*P	**Pg**	**07 48 36.5**	**-0.7**
NCU				*e*S	**Sg**	**07 48 51.5**	**+1.3**
TWS1	**Kuangyinshan** baz=342	**1.03**	**343**	*e*P	**Pg**	**07 48 37.7**	**-0.2**
TWS1				*e*S	**Sg**	**07 48 52.4**	**+1.0**
ALS	**Alishan** baz=238	**1.05**	**236⇑**	*i*P	**Pg**	**07 48 38.1**	**0.0**
ALS				S	**Sg**	**07 48 52.8**	**+1.1**
CHKT	**Chengkung** baz=194	**1.06**	**199**	*e*P	**Pg**	**07 48 37.8**	**-0.6**
CHKT				*e*S	**Sg**	**07 48 53.8**	**+1.6**
CHN5	**Tsauling** baz=244	**1.10**	**243**	P	**Pg**	**07 48 39.3**	**+0.2**
CHN5				*e*S	**Sg**	**07 48 55.2**	**+1.7**
ELDTW	**Lidau** baz=231	**1.13**	**216**	*e*P	**Pg**	**07 48 38.3**	**-1.5**
ELDTW				*e*S	**Sg**	**07 48 54.0**	**-0.4**
WGK	**Gukeng** baz=250	**1.16**	**249**	*e*P	**Pg**	**07 48 40.1**	**-0.2**
WGK				*e*S	**Sg**	**07 48 55.1**	**-0.3**
TWY	**Chenhua** baz=336	**1.17**	**353**	*e*P	**Pg**	**07 48 41.4**	**+0.8**
TPUB	**Ta-pu**	**1.30**	**232**	*e*Pn	**Pn**	**07 48 42.3**	**-0.4**
TPUB				*e*Sn	**Sn**	**07 48 59.3**	**-1.0**
STYT	**Tauyuan** baz=229	**1.30**	**224**	*e*P	**Pn**	**07 48 41.5**	**-1.2**
STYT				*e*S	**Sb**	**07 48 59.0**	**-0.9**
WTP	**Ta-pu** baz=235	**1.34**	**231**	*e*P	**Pn**	**07 48 42.8**	**-0.5**
WTP				*e*S	**Sb**	**07 49 02.3**	**+1.2**
WTCT	**Ta-ch'eng** baz=260	**1.36**	**260**	*e*P	**Pn**	**07 48 42.6**	**-0.9**
WTCT				*e*S	**Sb**	**07 49 01.6**	**+0.1**
TWG	**Pinlang** baz=214	**1.42**	**206**	*e*Pn	**Pn**	**07 48 45.3**	**+1.0**
TWG				*e*Sg	**Sg**	**07 48 59.5**	**-4.3**
TWG	**Pinlang** baz=235	**1.42**	**206**	*e*P	**Pn**	**07 48 43.9**	**-0.4**
CHN1	**Nanshi** baz=235	**1.45**	**231**	P	**Pn**	**07 48 44.6**	**0.0**
CHN1				*e*S	**Sn**	**07 49 05.1**	**+1.2**
SGST	**Jiashian** baz=231	**1.48**	**227**	*e*P	**Pn**	**07 48 45.2**	**+0.1**
SGST				*e*S	**Sn**	**07 49 05.8**	**+1.2**
TWM1	**Shoushan** baz=233	**1.76**	**224**	*e*P	**Pn**	**07 48 50.2**	**+1.1**
PNG	**Penghu** baz=256	**2.08**	**255**	*e*P	**Pn**	**07 48 52.3**	**-1.1**
PNG				*e*S	**Sn**	**07 49 19.2**	**-0.3**

BJI 30 07:55:57.6, 30°.39N×97°.05E, h10km, ML3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**6.63**	**225**	*e*PKP	**Pn**	07 57 32.0	-3.1
SHL				*e*S	**Sn**	07 58 47.0	-3.7
TAPN	**Taplejung**	**8.73**	**252**	*e*P	**Pn**	07 58 04.2	+0.3
ODAN	**Odare**	**9.19**	**250**	*e*P	**Pn**	07 58 09.6	-0.6
GUN	**Gumba** 15nm,0.5s	**10.07**	**259**	*e*P	**Pn**	07 58 19.3	-3.1
PKI	**Pulchoki** 16nm,0.5s	**10.57**	**257**	*e*P	**Pn**	07 58 26.3	-2.9
DMN	**Daman**	**10.82**	**258**	*e*P	**Pn**	07 58 29.5	-3.0
KOLN	**Koldanda** 16nm,0.6s	**12.05**	**261**	*e*P	**Pn**	07 58 44.1	-5.3

*BJI **30** 07:57:33.4, 6°.70N×73°.00W, h158km, mB4.9/1*
*FUNV **30** 07:57:34.1, 6°.67N×73°.21W, h167km, MW4.4*
*IDC **30** 07:57:34.7±1.4, 6°.84N×72°.90W, h155km±14km, mb4.0/10, mb1 4.1/15, mb1mx3.9/25, mbtmp4.0/15, MS2.8/1, Ms1 2.8/1, ms1mx1.9/28, Error ellipse: s-maj=18.4km s-min=11.7km az=69.0*
*ISCJB **30** 07:57:35.7±0.4, 6°.78N±0°.03×72°.83W±0°.03, h181km±3km, mb4.3/63, Error ellipse: s-maj=5.6km s-min=4.7km az=146.2*
*NEIC **30** 07:57:35.4±0.5, 6°.72N×73°.03W, h158km±5km, mb4.4/56, Error ellipse: s-maj=7.3km s-min=5.8km az=127.0*
ISC 30 07:57:36.5±0.3, 6°.79N±0°.03×72°.87W±0°.03, h168km±3km, n465, σ0°61/477, mb4.3/63, 195C-153D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.20**	**27⇑**	*i*P	**Pn**	**07 58 04.9**	**+0.2**
CAPV				*e*S	**Sn**	**07 58 26.4**	**0.0**
ROSC	**El Rosal** 450nm,0.3s,baz=349,slow=2.5,SNR=1970	**2.41**	**217**	P	**Pn**	**07 58 16.8**	**-0.8**
ROSC	406nm,0.3s,baz=75,slow=21,SNR=11			S	**Sn**	**07 58 47.7**	**-1.6**
ROSC	**El Rosal**	**2.41**	**217**	*e*Pn	**Pn**	**07 58 16.4**	**-1.2**
ROSC				*e*Sn	**Sn**	**07 58 43.3**	**-6.0**
SOCV	**Socops**	**2.48**	**53⇑**	*i*P	**Pn**	**07 58 19.6**	**+1.2**
SOCV				*e*S	**Sn**	**07 58 51.8**	**+1.0**
VIGV	**El Vigia**	**2.52**	**36⇑**	*i*P	**Pn**	**07 58 19.4**	**+0.5**
VIGV				*e*S	**Sn**	**07 58 51.6**	**0.0**
SDV	**Santo Domingo**	**3.04**	**47**	*e*Pn	**Pn**	**07 58 25.8**	**+0.7**
SDV				*e*Sn	**Sn**	**07 59 04.0**	**+1.1**
ELOV	**Elorza**	**3.37**	**86**	*e*P	**Pn**	**07 58 30.8**	**+1.6**
VIRV	**Villa del Rosa**	**3.72**	**7⇑**	*i*P	**Pn**	**07 58 31.7**	**-2.0**
VIRV				*e*S	**Sn**	**07 59 14.6**	**-3.7**
QARV	**Quebrada Arrib**	**4.11**	**34⇑**	*i*P	**Pn**	**07 58 39.3**	**+0.6**
QARV				*e*S	**Sn**	**07 59 26.4**	**-0.8**
SANV	**Sanarito**	**4.26**	**51⇑**	*i*P	**Pn**	**07 58 41.2**	**+0.6**
SANV				*e*S	**Sn**	**07 59 30.5**	**-0.1**
CURV	**Curarigua**	**4.30**	**42⇑**	*i*P	**Pn**	**07 58 41.6**	**+0.4**
CURV				*e*S	**Sn**	**07 59 31.9**	**+0.2**
DABV	**Dabajuro**	**4.66**	**28⇑**	*i*P	**Pn**	**07 58 45.6**	**-0.2**
DABV				*e*S	**Sn**	**07 59 38.8**	**-1.2**
TEPV	**Terepaima**	**4.81**	**49⇑**	*i*P	**Pn**	**07 58 48.4**	**+0.5**
TEPV				*e*S	**Sn**	**07 59 43.7**	**+0.1**
SIQV	**Siquisique**	**4.88**	**38⇑**	*i*P	**Pn**	**07 58 48.6**	**-0.1**
BAUV	**El Baul**	**5.24**	**66⇑**	*i*P	**Pn**	**07 58 53.1**	**-0.3**
BAUV				*e*S	**Sn**	**07 59 52.7**	**-0.9**
MAPV	**Macapo**	**5.31**	**55⇑**	*i*P	**Pn**	**07 58 54.8**	**+0.5**
MAPV				*e*S	**Sn**	**07 59 54.7**	**-0.5**
JACV	**Jacura**	**5.84**	**43**	*e*P	**Pn**	**07 59 01.5**	**+0.1**
IMOV	**Isla Los Monje**	**5.86**	**19**	*e*P	**Pn**	**07 59 00.2**	**-1.4**
MONV	**Montecano**	**5.87**	**29**	*e*P	**Pn**	**07 59 00.7**	**-1.1**
TURV	**Turiamo**	**6.16**	**53⇑**	*i*P	**Pn**	**07 59 05.1**	**-0.4**
CAOV	**Caicara del Or**	**6.52**	**85⇑**	*i*P	**Pn**	**07 59 10.1**	**-0.2**
MERV	**Las Mercedes**	**6.95**	**69⇑**	*i*P	**Pn**	**07 59 15.6**	**-0.3**
FUNV	**FUNVISIS**	**7.01**	**58⇑**	*i*P	**Pn**	**07 59 16.8**	**0.0**
BCIP	**Isla Barro Col**	**7.30**	**289**	*e*Pn	**Pn**	**07 59 14.7**	**-5.9**
BIRV	**Birongo**	**7.48**	**60⇑**	*i*P	**Pn**	**07 59 22.6**	**-0.3**
CUPV	**Cepira**	**7.72**	**65⇑**	*i*P	**Pn**	**07 59 26.0**	**-0.1**
OTAV	**Otavalo** 14nm,0.5s	**8.57**	**221**	*e*Pn	**Pn**	**07 59 34.1**	**-3.3**
OTAV				*e*Sn	**Sn**	**08 01 14.3**	**+1.2**
PCRV	**Puerto La Cruz**	**8.81**	**67**	*e*P	**Pn**	**07 59 40.5**	**-0.1**
IBAV	**Isla La Blanqu**	**9.59**	**58**	*e*P	**Pn**	**07 59 49.4**	**-1.5**
GUNV	**Guanoco**	**10.37**	**70**	*e*P	**Pn**	**08 00 01.2**	**+0.1**
PCJ	**Portland Cotta**	**11.66**	**339⇑**	*i*P	**Pn**	**08 00 18.4**	**+0.5**
HOJ	**Hope**	**11.77**	**342⇑**	*i*P	**Pn**	**08 00 21.6**	**+2.1**
GWJ	**Greenwich**	**11.83**	**342⇑**	*i*P	**Pn**	**08 00 21.0**	**+0.9**
STH	**Stony Hill**	**11.86**	**341**	*i* P	**Pn**	**08 00 20.7**	**+0.1**
BNJ	**Bonny Gate**	**12.13**	**341⇑**	*i*P	**Pn**	**08 00 24.6**	**+0.6**
SDDR	**Presa de Saban**	**12.22**	**7**	*e*Pn	**Pn**	**08 00 25.4**	**+0.2**
MTDJ	**Mount Denham**	**12.24**	**339**	*e*Pn	**Pn**	**08 00 26.6**	**+1.1**
MTDJ				*e*Sn	**Sn**	**08 02 39.2**	**-2.1**
GRGR	**Grenville**	**12.27**	**64**	*e*Pn	**Pn**	**08 00 33.2**	**+7.4**
BBJ	**Bamboo Saint A**	**12.30**	**340**	*i* P	**Pn**	**08 00 27.6**	**+1.4**
BBJ				*i* S	**Sn**	**08 02 31.0**	**-12**
ICM	**Isla Caja Muer**	**12.65**	**29**	*e*Pn	**Pn**	**08 00 31.2**	**+0.4**
SJG	**San Juan** 5.9nm,0.3s,baz=20,slow=23,SNR=8.1	**13.02**	**30**	P	**Pn**	**08 00 32.8**	**-2.6**
SJG	1.0nm,0.3s,baz=306,slow=19,SNR=2.6			S	**Sn**	**08 02 48.3**	**-12**
SJG	**San Juan**	**13.02**	**30**	P	**Pn**	**08 00 32.8**	**-2.6**
SJG				S	**Sn**	**08 02 48.3**	**-12**
GTBY	**Guantanamo Bay**	**13.24**	**351**	*e*Pn	**Pn**	**08 00 39.8**	**+1.6**
MTP	**Monte Pirata**	**13.31**	**32**	*e*Pn	**Pn**	**08 00 39.2**	**+0.1**
FDF	**Fort de France**	**13.95**	**55**	*e*Pn	**Pn**	**08 00 47.7**	**+0.5**
ATAH	**Atahualpa** 0.6nm,0.3s,baz=31,slow=12,SNR=6.0	**14.89**	**202**	P	**Pn**	**08 00 59.5**	**+0.6**
APG	**El Apazote** 0.3nm,0.3s,baz=224,slow=18,SNR=3.9	**19.10**	**297**	P	**P**	**08 01 43.7**	**-2.9**
APG	comp=Z,30nm,19.5s,baz=216,slow=39			LR	LR	08 09 55.5	
APG	**El Apazote**	**19.10**	**297**	P	**P**	**08 01 43.7**	**-2.9**
APG				LR	LR	08 09 55.5	
TEIG	**Tepich** 1.1nm,0.3s,baz=110,slow=16,SNR=13	**20.05**	**313**	P	**P**	**08 01 54.4**	**-2.4**
TEIG	**Tepich** 25nm,0.6s	**20.05**	**313**	*e*P	**P**	**08 01 55.8**	**-0.9**
LPAZ	**La Paz** 2.8nm,0.7s,mb3.8,baz=319,slow=9.8,SNR=12	**23.40**	**168**	P	**P**	**08 02 30.6**	**+0.2**
LPAZ	**La Paz** 9.0nm,0.8s,mb4.2	**23.40**	**168**	*e*P	**P**	**08 02 30.2**	**-0.3**
LPAZ				*e*		08 03 03.2	
GOGA	**Godfrey** 3.6nm,0.6s,mb4.3	**28.26**	**341**	*e*P	**P**	**08 03 14.4**	**+0.5**
LRAL	**Lakeview Retre** 4.5nm,0.6s,mb4.4	**29.23**	**335**	*e*P	**P**	**08 03 23.1**	**+0.5**
VBMS	**Vicksburg** 28nm,0.8s,mb5.0	**30.18**	**329**	*e*P	**P**	**08 03 31.6**	**+0.6**
CPCT	**Cooper Cave**	**30.47**	**341**	*e*P	**P**	**08 03 34.4**	**+0.9**
SWET	**Sewanee**	**30.74**	**339**	*e*P	**P**	**08 03 36.3**	**+0.4**
WVT	**Waverly** 25nm,1.2s,mb4.8	**32.26**	**337**	*e*P	**P**	**08 03 49.1**	**-0.1**
BDFB	**Brasilia** 2.8nm,0.5s,mb4.2,baz=291,slow=10,SNR=6.5	**33.21**	**132**	P	**P**	**08 03 58.9**	**+1.2**
WCI	**Wyandotte Cave** 9.3nm,0.6s,mb4.7	**33.58**	**341**	*e*P	**P**	**08 04 00.9**	**+0.2**
MIAR	**Mount Ida** 10nm,1.4s,mb4.4	**33.58**	**328**	*e*P	**P**	**08 03 59.3**	**-1.4**
USIN	**University of** 9.7nm,0.3s,mb5.0	**33.82**	**339**	*e*P	**P**	**08 04 02.9**	**+0.3**
SIUC	**Southern Illin** 29nm,0.7s,mb5.1	**34.18**	**337**	*e*P	**P**	**08 04 05.9**	**0.0**
ACSO	**Alum Creek Sta** 7.7nm,0.6s,mb4.5	**34.51**	**346**	*e*P	**P**	**08 04 09.6**	**+1.0**
BLO	**Bloomington** 25nm,0.7s,mb5.0	**34.51**	**341**	*e*P	**P**	**08 04 09.3**	**+0.7**
FVM	**French Village** 47nm,1.3s,mb5.0	**34.90**	**335**	*e*P	**P**	**08 04 12.0**	**0.0**
628A	**Black Gap, Mar** baz=36	**36.18**	**312**	⇓P	**P**	**08 04 22.0**	**-1.1**
528A	**Cox Ranch, San** baz=36,SNR=8.4	**36.47**	**313**	⇑P	**P**	**08 04 24.3**	**-1.3**
627A	**Terlingua Ranc** baz=36,SNR=11	**36.53**	**312**	⇑P	**P**	**08 04 25.1**	**-0.9**
WMOK	**Wichita Mounta** 5.0nm,0.7s,mb4.2	**36.66**	**323**	*e*P	**P**	**08 04 24.9**	**-2.1**
TXAR	**Lajitas Array** 2.8nm,0.6s,mb4.0,baz=127,slow=9.1,SNR=52	**36.67**	**312**	P	**P**	**08 04 26.3**	**-1.0**
TXAR	0.3nm,0.5s,baz=141,slow=5.1,SNR=5.5			PcP	PcP	08 06 46.0	-0.4
TXAR	**Lajitas Array**	**36.67**	**312**	P	**P**	**08 04 26.3**	**-1.0**
TXAR				PcP	PcP	08 06 46.0	-0.4
HDIL	**Hopedale** 13nm,0.5s,mb4.8	**36.70**	**339**	*e*P	**P**	**08 04 26.0**	**-1.3**
428A	**Kincaid Ranch,** baz=37,SNR=9.2	**36.71**	**314**	⇓P	**P**	**08 04 27.0**	**-0.6**
527A	**Woodward Ranch** baz=37,SNR=12	**37.06**	**313**	⇓P	**P**	**08 04 30.5**	**0.0**
626A	**Big Bend Ranch** baz=37	**37.13**	**311**	⇑P	**P**	**08 04 30.3**	**-0.9**
328A	**Wristen Ranch,** baz=37	**37.17**	**315**	⇑P	**P**	**08 04 30.5**	**-0.9**
427A	**Hayter Ranch,** baz=37,SNR=12	**37.29**	**314**	⇑P	**P**	**08 04 31.3**	**-1.1**
526A	**Mary Lane Ranc** baz=37,SNR=6.3	**37.37**	**312**	⇑P	**P**	**08 04 32.3**	**-0.7**
426A	**McDonald Obser** baz=38,SNR=12	**37.65**	**313**	⇑P	**P**	**08 04 34.8**	**-0.6**
326A	**Caldwell Ranch** baz=38	**37.96**	**314**	⇓P	**P**	**08 04 37.3**	**-0.8**
425A	**Indio Mountain** baz=38,SNR=8.2	**38.41**	**313**	⇑P	**P**	**08 04 40.9**	**-0.8**
226A	**Malaga, Loving** baz=38	**38.46**	**315**	⇓P	**P**	**08 04 41.5**	**-0.7**
AMTX	**Amarillo** baz=39,SNR=8.7	**38.54**	**321**	⇓P	**P**	**08 04 42.2**	**-0.7**
AMTX	**Amarillo** 15nm,1.0s,mb4.6	**38.54**	**321**	*e*P	**P**	**08 04 42.5**	**-0.4**
Z27A	**Tatum** baz=39,SNR=14	**38.57**	**317**	⇑P	**P**	**08 04 42.0**	**-1.2**
KSU1	**Kansas State U** 14nm,0.7s,mb4.7	**38.64**	**330**	*e*P	**P**	**08 04 42.1**	**-1.5**
MSTX	**Muleshoe** baz=39,SNR=6.4	**38.67**	**318**	⇓P	**P**	**08 04 42.9**	**-1.1**
325A	**Bean Ranch, Si** baz=39	**38.70**	**313**	⇓P	**P**	**08 04 43.0**	**-1.3**
CPRX	**Cap Rock** 7.0nm,0.7s,mb4.4	**38.85**	**316**	*e*P	**P**	**08 04 45.1**	**-0.4**
Y27A	**Causey** baz=39,SNR=7.5	**38.88**	**318**	⇑P	**P**	**08 04 44.4**	**-1.3**
225A	**Deer Hill, Car** baz=39,SNR=7.5	**39.00**	**314**	⇑P	**P**	**08 04 46.4**	**-0.3**
Z26A	**Caprock** baz=39,SNR=18	**39.07**	**317**	⇑P	**P**	**08 04 46.4**	**-0.8**
JFWS	**Jewell Farm** 24nm,0.6s,mb5.0	**39.11**	**340**	*e*P	**P**	**08 04 46.6**	**-0.8**
324A	**Moseley Ranch,** baz=39,SNR=7.6	**39.11**	**313**	⇓P	**P**	**08 04 46.9**	**-0.8**
125A	**Gardner Draw,** baz=39,SNR=12	**39.19**	**315**	⇓P	**P**	**08 04 47.7**	**-0.6**
X27A	**F and S Farms,** baz=39	**39.30**	**319**	⇓P	**P**	**08 04 48.5**	**-0.7**
Y26A	**Elida** baz=39	**39.34**	**318**	⇑P	**P**	**08 04 48.8**	**-0.7**
224A	**Cornudas Mount** baz=40,SNR=27	**39.48**	**314**	⇑P	**P**	**08 04 50.4**	**-0.3**
W27A	**Bowe Ranch, En** baz=40,SNR=11	**39.53**	**320**	⇑P	**P**	**08 04 50.5**	**-0.6**
Z25A	**Roswell** baz=40,SNR=15	**39.58**	**316**	⇑P	**P**	**08 04 51.2**	**-0.3**
X26A	**CR and CF Fran** baz=40,SNR=9.1	**39.71**	**318**	⇓P	**P**	**08 04 52.0**	**-0.5**
124A

Y22A	Socorro baz=42	41.50 315	⇑P	P	08 05 07.9 +0.6
220A	Playas Peak, P baz=42,SNR=6.8	41.58 312	⇑P	P	08 05 08.3 +0.3
W23A	Werner Place, baz=42	41.62 317	⇑P	P	08 05 08.8 +0.6
T25A	Trinidad baz=42	41.67 321	⇓P	P	08 05 09.4 +0.8
ANMO	Albuquerque 1.4nm,0.6s,mb3.8	41.71 317	eP	P	08 05 08.6 -0.3
U24A	Moreno Valley baz=42,SNR=6.0	41.78 320	⇓P	P	08 05 10.5 +1.0
X22A	Bernardo baz=42	41.84 316	⇓P	P	08 05 10.6 +0.5
LAZ	Ladron 4.8nm,1.1s,mb4.0	41.88 316	eP	P	08 05 10.3 0.0
319A	Douglas baz=42	41.89 311	⇓P	P	08 05 10.4 -0.1
120A	U Bar Ranch, L baz=42,SNR=5.8	41.98 312	⇑P	P	08 05 11.5 +0.4
V23A	Ortiz Mt. (NFS baz=42,SNR=7.2	41.98 318	⇓P	P	08 05 11.6 +0.5
S25A	Robets Cordova baz=42,SNR=10	42.02 322	⇑P	P	08 05 11.7 +0.3
T24A	Torres, Weston baz=42,SNR=6.4	42.04 320	⇓P	P	08 05 12.3 +0.7
219A	White Tail Can baz=42	42.17 311	⇑P	P	08 05 12.3 -0.5
Z20A	Nine Sixteen R baz=42	42.23 313	⇓P	P	08 05 13.2 0.0
ECSD	EROS Data Cent 13nm,1.1s,mb4.5	42.28 334	eP	P	08 05 12.0 -1.5
U23A	El Rito baz=42,SNR=7.6	42.33 319	⇑P	P	08 05 14.5 +0.7
X21A	Alamocita Cree baz=42,SNR=8.2	42.35 315	⇓P	P	08 05 14.4 +0.3
318A	Bisbee baz=42	42.46 310	⇑P	P	08 05 15.2 +0.1
Y20A	Horse Springs, baz=42,SNR=6.2	42.48 314	⇑P	P	08 05 15.8 +0.6
S24A	Houchin Ranch, baz=42	42.49 321	⇓P	P	08 05 15.8 +0.7
V22A	San Miguel Ran baz=43	42.56 318	⇑P	P	08 05 16.2 +0.4
119A	Ashpeak Ranch, baz=43	42.58 312	⇑P	P	08 05 16.2 +0.2
W21A	San Fidel baz=43	42.62 316	⇓P	P	08 05 16.6 +0.3
Q25A	Bedland, Calha baz=43	42.70 323	⇓P	P	08 05 17.3 +0.4
SDCO	Great Sand Dun baz=43,SNR=13	42.73 321	⇑P	P	08 05 17.6 +0.5
SDCO	Great Sand Dun 4.6nm,0.8s,mb4.2	42.73 321	eP	P	08 05 17.7 +0.5
218A	Dragoon baz=43,SNR=6.4	42.75 311	⇑P	P	08 05 17.4 0.0
R24A	Sanders Place, baz=43,SNR=10	42.79 322	⇑P	P	08 05 18.2 +0.6
U22A	Llaves baz=43	42.79 318	⇑P	P	08 05 18.3 +0.6
X20A	Quemado baz=43,SNR=6.8	42.90 315	⇑P	P	08 05 19.3 +0.7
V21A	Milan baz=43	42.99 317	⇑P	P	08 05 19.9 +0.7
118A	Homack Ranch, baz=43,SNR=9.5	43.01 312	⇓P	P	08 05 19.5 0.0
S23A	Nye Farm, Mont baz=43	43.02 321	⇑P	P	08 05 20.2 +0.7
Y19A	Nutrioso baz=43,SNR=7.2	43.13 314	⇑P	P	08 05 21.2 +0.8
T22A	Edith baz=43	43.19 319	⇓P	P	08 05 21.6 +0.8
W20A	Ramah baz=43	43.21 316	⇑P	P	08 05 21.5 +0.5
Z18A	Geronimo baz=43	43.27 312	⇓P	P	08 05 22.0 +0.5
Q24A	Divide baz=43	43.27 323	⇑P	P	08 05 22.0 +0.5
U21A	Nageezi baz=43	43.35 318	⇓P	P	08 05 22.1 0.0
X19A	St. Johns baz=43,SNR=5.2	43.40 314	⇓P	P	08 05 23.0 +0.5
117A	Oracle baz=44,SNR=5.1	43.55 311	⇑P	P	08 05 23.5 -0.3
S22A	4UR Ranch, Cre baz=44,SNR=8.4	43.57 320	⇑P	P	08 05 24.4 +0.5
T21A	Navajo Lake baz=44	43.59 319	⇓P	P	08 05 24.4 +0.4
Y18A	Canyon Day Jun baz=44	43.60 313	⇓P	P	08 05 24.1 -0.1
R22A	Saguache, Gunn baz=44	43.81 321	⇓P	P	08 05 26.3 +0.5
W19A	Sanders baz=44	43.82 315	⇓P	P	08 05 26.6 +0.7
X18A	Snowflake baz=44	43.92 314	⇓P	P	08 05 27.2 +0.5
P23A	Jefferson baz=44	43.95 323	⇓P	P	08 05 27.7 +0.8
O24A	Longmont baz=44	43.97 324	⇓P	P	08 05 27.7 +0.6
EYMN	Ely 18nm,0.6s,mb4.9	43.98 342	eP	P	08 05 26.4 -0.5
W18A	Petrified Fore baz=44	44.07 315	⇑P	P	08 05 28.3 +0.5
ISCO	Idaho Springs baz=44,SNR=9.3	44.08 323	⇓P	P	08 05 28.4 +0.5
ISCO	Idaho Springs 6.2nm,0.9s,mb4.2	44.08 323	eP	P	08 05 28.1 +0.1
S21A	Coal Bank Pass baz=44	44.14 319	⇓P	P	08 05 29.0 +0.5
Y17A	Roosevelt baz=44	44.15 313	⇑P	P	08 05 28.6 0.0
116A	Eloy baz=44	44.27 311	⇑P	P	08 05 29.3 -0.3
Q22A	Crested Butte, baz=44,SNR=5.5	44.29 321	⇓P	P	08 05 30.0 +0.4
N24A	Carr baz=44	44.32 325	⇑P	P	08 05 30.1 +0.3
U19A	Dine' College, baz=44	44.32 317	⇑P	P	08 05 29.9 0.0
X17A	Forest Lakes baz=44	44.44 313	⇓P	P	08 05 31.5 +0.6
T19A	Beclabito baz=44,SNR=5.4	44.49 318	⇑P	P	08 05 31.0 -0.2
O23A	Lake Granby, G baz=45	44.52 323	⇑P	P	08 05 32.4 +1.0
S20A	Disappointment baz=45,SNR=17	44.61 319	⇓P	P	08 05 32.6 +0.5
P22A	Eagle baz=45,SNR=8.2	44.64 322	⇑P	P	08 05 32.5 +0.1
Y16A	Circle Bar Ran baz=45,SNR=5.5	44.71 312	⇑P	P	08 05 33.1 +0.1
M24A	Cheyenne baz=45	44.71 326	⇓P	P	08 05 33.0 +0.1
115A	Sonoran Desert baz=45	44.72 311	⇓P	P	08 05 33.0 -0.1
R20A	Redvale baz=45,SNR=8.5	44.82 320	⇑P	P	08 05 34.4 +0.6
214A	Organ Pipe Nat baz=45	44.84 309	⇓P	P	08 05 33.8 -0.3
O22A	Kremmling baz=45,SNR=10	44.87 323	⇑P	P	08 05 34.2 0.0
PV01	Paradox Valley 351nm,0.8s	44.92 319	eP	P	08 05 35.0 +0.5
X16A	Lo Mia Camp, P baz=45	44.94 313	⇑P	P	08 05 35.0 +0.2
Z15A	Gila River Ind baz=45	44.94 311	⇓P	P	08 05 34.7 -0.1
N23A	Red Feather La baz=45,SNR=5.2	44.98 324	⇓P	P	08 05 35.4 +0.4
V17A	Tonalea, Kykot baz=45,SNR=11	45.07 315	⇓P	P	08 05 35.9 +0.1
S19A	Harvey Farm, M baz=45	45.07 319	⇑P	P	08 05 35.8 0.0
Q20A	Ridgley Place, baz=45	45.21 320	⇓P	P	08 05 37.5 +0.6
T18A	Mexican Hat baz=45,SNR=5.2	45.22 317	⇓P	P	08 05 36.8 -0.2
114A	Black Gap (USA baz=45	45.24 310	⇑P	P	08 05 37.4 +0.2
PV04	Paradox Valley	45.28 319	eP	P	08 05 37.3 -0.2
W16A	Flagstaff baz=45	45.33 314	⇑P	P	08 05 38.5 +0.6
PV10	Paradox Valley 44nm,0.3s	45.36 319	eP	P	08 05 38.3 +0.3
Y15A	Casa Rosa Ranc baz=45,SNR=7.4	45.37 312	⇑P	P	08 05 38.0 -0.2
X15A	Humboldt baz=46,SNR=5.1	45.55 313	⇑P	P	08 05 39.6 0.0
Z14A	Wintersburg baz=46	45.56 311	⇓P	P	08 05 39.6 -0.1
U16A	Tuba City baz=46,SNR=9.5	45.56 315	⇓P	P	08 05 39.8 +0.1
P20A	De Beque baz=46	45.59 321	⇑P	P	08 05 40.6 +0.7
S18A	Hurst Farm, Bl baz=46	45.60 318	⇓P	P	08 05 40.5 +0.5
L23A	Garrett baz=46	45.63 326	⇑P	P	08 05 40.6 +0.5
AGMN	Agassiz Nation 7.0nm,0.5s,mb4.5	45.74 339	eP	P	08 05 40.2 -0.7
N21A	Black Mountain baz=46	45.82 323	⇓P	P	08 05 42.3 +0.7
Q19A	Hogan Spring (baz=46,SNR=12	45.83 320	⇓P	P	08 05 42.2 +0.5
Y14A	Wickenburg baz=46,SNR=8.1	45.86 312	⇓P	P	08 05 41.8 -0.3
O20A	White River Ci baz=46	45.88 322	⇑P	P	08 05 42.7 +0.6
R18A	Canyonlands Na baz=46	45.92 319	⇑P	P	08 05 42.2 -0.2
113A	Mohawk Valley, baz=46	45.92 310	⇑P	P	08 05 42.5 -0.1
X14A	Yava baz=46	46.02 312	⇑P	P	08 05 43.5 +0.2
Z13A	Yuma Proving G baz=46,SNR=5.3	46.02 310	⇓P	P	08 05 43.0 -0.3
S17A	Black Ridge (B baz=46,SNR=7.9	46.12 317	⇑P	P	08 05 43.9 -0.1
V15A	Kaibab Nationa baz=46,SNR=17	46.14 314	⇓P	P	08 05 44.7 +0.5
M21A	Separation Pea baz=46	46.25 324	⇑P	P	08 05 45.6 +0.6
T16A	Glen Canyon Da baz=46	46.25 316	⇓P	P	08 05 45.3 +0.2
N20A	Spence Gulch, baz=46	46.31 323	⇓P	P	08 05 46.4 +0.9
Y13A	Salome baz=46	46.42 311	⇑P	P	08 05 46.8 +0.4
K22A	Casper baz=46	46.44 326	⇓P	P	08 05 46.4 0.0
Q18A	Rafter H Ranch baz=46	46.47 319	⇑P	P	08 05 46.9 +0.2
R17A	Hanksville Air baz=46,SNR=8.1	46.47 318	⇑P	P	08 05 46.5 -0.3
L21A	Rawlins baz=46	46.48 324	⇑P	P	08 05 47.0 +0.3
W14A	Seligman baz=46	46.50 313	⇑P	P	08 05 47.0 0.0
O19A	Miners Draw (B baz=46,SNR=7.7	46.52 321	⇑P	P	08 05 46.9 -0.2
U15A	North Rim baz=46,SNR=8.1	46.52 315	⇑P	P	08 05 47.6 +0.4
M20A	Sweetwater, Wa baz=47	46.67 323	⇓P	P	08 05 48.7 +0.5
S16A	Weppner Ranch, baz=47	46.70 317	⇓P	P	08 05 48.3 -0.2
V14A	Boquillas Ranc baz=47,SNR=5.0	46.71 314	⇑P	P	08 05 49.0 +0.3
SRU	San Rafael baz=47,SNR=7.4	46.73 319	⇑P	P	08 05 48.5 -0.2
SRU	San Rafael 5.3nm,0.9s,mb4.2	46.73 319	eP	P	08 05 49.0 +0.2
K21A	Alcova baz=47,SNR=10	46.84 325	⇑P	P	08 05 49.6 +0.1
T15A	Red Dirt Ranch baz=47	46.88 316	⇑P	P	08 05 49.9 0.0
N19A	John Jarvie Ra baz=47	46.90 322	⇑P	P	08 05 50.0 -0.1
J22A	Midwest baz=47,SNR=8.9	46.91 326	⇑P	P	08 05 49.6 -0.5
R16A	Teasdale baz=47,SNR=12	46.91 318	⇓P	P	08 05 50.5 +0.3
Q16A	Castle Valley baz=47	47.05 319	⇓P	P	08 05 51.6 +0.4
O18A	Roosevelt baz=47	47.05 321	⇑P	P	08 05 51.3 +0.1
P17A	Butcher Ranch, baz=47,SNR=5.3	47.07 320	⇑P	P	08 05 51.4 0.0
L20A	Wamsutter baz=47	47.07 324	⇓P	P	08 05 51.2 -0.1
U14A	Mt Trumbull baz=47,SNR=5.4	47.14 315	⇑P	P	08 05 52.2 +0.2
N18A	Larsen Ranch, baz=47	47.25 322	⇓P	P	08 05 52.8 0.0
T14A	Hurricane baz=47,SNR=9.9	47.38 315	⇓P	P	08 05 54.1 +0.2
ULM	Lac du Bonnet 9.1nm,0.4s,mb4.7,baz=146,slow=7.3,SNR=21	47.40 340	P	P	08 05 52.9 -0.9
V13A	Grand Canyon W baz=47	47.45 314	⇑P	P	08 05 54.2 -0.2
O17A	Robinson Place baz=48,SNR=12	47.47 320	⇑P	P	08 05 54.8 +0.4
K20A	Yellowstone Ra baz=48,SNR=10	47.48 324	⇑P	P	08 05 54.0 -0.4
MSU	Marysvale	47.50 318	eP	P	08 05 55.1 +0.4
IRM	Iron Mountain baz=48	47.56 311	⇓P	P	08 05 54.7 -0.6
I21A	Big Trails, Te baz=48,SNR=8.3	47.62 326	⇑P	P	08 05 55.1 -0.5
U13A	Pakoon Wash baz=48,SNR=5.0	47.70 314	⇓P	P	08 05 56.6 +0.3
L19A	Farson baz=48,SNR=5.4	47.73 323	⇓P	P	08 05 56.2 -0.2
P16A	Fountain Green baz=48	47.74 319	⇑P	P	08 05 56.6 0.0
M18A	Lyman baz=48,SNR=6.2	47.76 322	⇓P	P	08 05 56.3 -0.4
J20A	Shoshoni baz=48,SNR=8.1	47.77 325	⇑P	P	08 05 57.0 +0.2
S14A	Cedar City baz=48	47.79 316	⇓P	P	08 05 56.6 -0.4
K19A	Absolon Red Bu baz=48,SNR=5.4	47.87 324	⇓P	P	08 05 57.7 +0.1
Q15A	Fillmore baz=48	47.89 318	⇑P	P	08 05 57.9 +0.2
DAU	Daniels Canyon	47.92 320	eP	P	08 05 58.4 +0.5
T13A	Saint George baz=48,SNR=5.8	47.94 315	⇑P	P	08 05 58.6 +0.5
MPU	Maple Canyon 5.8nm,0.8s,mb4.3	47.94 320	eP	P	08 05 57.9 -0.3
N17A	Moffit Pass baz=48,SNR=8.5	47.95 321	⇑P	P	08 05 58.5 +0.4
O16A	Springville baz=48,SNR=6.7	47.96 320	⇓P	P	08 05 58.3 0.0
ARUT	Antelope Range 2.3nm,0.7s,mb3.9	47.99 316	eP	P	08 05 58.6 +0.1
V12A	Nelson baz=48,SNR=6.2	48.02 313	⇓P	P	08 05 58.5 -0.3
H21A	Big Horn, Sher baz=48	48.02 327	⇑P	P	08 05 58.4 -0.2
L18A	Fontenelle, Gr baz=48,SNR=11	48.03 323	⇓P	P	08 05 58.6 -0.2
BELC	Belle Mtn. Jos baz=48	48.13 310	⇓P	P	08 05 59.2 -0.4
JLU	Jordanelle 1.7nm,0.7s,mb3.8	48.15 320	eP	P	08 05 59.8 +0.1
SCHQ	Schefferville 4.8nm,0.6s,mb4.3,baz=184,slow=7.0,SNR=15	48.15 5	P	P	08 05 58.9 -0.6
SCHQ	Schefferville 13nm,1.2s,mb4.4	48.15 5	eP	P	08 05 60.0 +0.6
M17A	Scullys Gap (B baz=48	48.15 322	⇓P	P	08 05 59.4 -0.3
I20A	Worland baz=48,SNR=12	48.17 326	⇓P	P	08 05 59.6 -0.2
S13A	Holt Ranch, En baz=48,SNR=12	48.18 316	⇓P	P	08 06 00.5 +0.5
BW06	Boulder Array baz=48,SNR=7.2	48.25 324	⇓P	P	08 05 59.9 -0.5
BW06	Boulder Array 4.3nm,1.0s,mb4.0	48.25 324	eP	P	08 05 59.2 -1.3
J19A	Crowheart baz=48,SNR=6.6	48.26 325	⇑P	P	08 06 00.0 -0.5
N16A	Rees Ranch, Co baz=48,SNR=5.2	48.30 321	⇑P	P	08 06 01.0 +0.2
D24A	Glendive baz=48	48.37 332	⇓P	P	08 06 01.7 +0.4
T12A	Moapa baz=48	48.37 314	⇓P	P	08 06 01.2 -0.3
H20A	Greybull baz=48	48.45 327	⇑P	P	08 06 01.4 -0.5
K18A	Toltan Ranch, baz=48	48.46 323	⇑P	P	08 06 02.1 +0.1
Q14A	Sevier Lake (B baz=48,SNR=12	48.48 318	⇑P	P	08 06 02.8 +0.5
V11A	Goodsprings baz=48	48.49 313	⇓P	P	08 06 02.1 -0.3
G21A	Lodge Grass baz=49	48.50 328	⇑P	P	08 06 02.0 -0.3
R13A	O'Grain Ranch, baz=48	48.55 316	⇑P	P	08 06 03.1 +0.3
O15A	The Old Anders baz=49	48.62 319	⇓P	P	08 06 04.0 +0.6
L17A	Cokeville baz=49,SNR=23	48.64 322	⇓P	P	08 06 02.9 -0.6
P14A	Drum Mountains baz=49	48.65 318	⇑P	P	08 06 03.7 +0.2
M16A	Huntsville baz=49	48.66 321	⇓P	P	08 06 03.3 -0.3
TUQ	Turquoise Moun baz=49	48.68 312	⇓P	P	08 06 03.4 -0.4
I19A	Meeteetse baz=49	48.71 326	⇑P	P	08 06 04.0 0.0
C24A	Savage baz=49	48.72 332	⇑P	P	08 06 04.2 +0.3
HWUT	Hardware Ranch 2.8nm,0.6s,mb4.1	48.78 321	eP	P	08 06 03.8 -0.8
J18A	Kendall Valley baz=49,SNR=5.4	48.79 324	⇑P	P	08 06 04.1 -0.5
DUG	Dugway baz=49,SNR=7.1	48.80 319	⇑P	P	08 06 04.7 0.0
DUG	Dugway 3.8nm,0.8s,mb4.1	48.80 319	eP	P	08 06 04.7 0.0
D23A	Lindsay baz=49	48.83 331	⇑P	P	08 06 05.0 +0.3
L16A	Fish Haven baz=49,SNR=18	48.93 322	⇑P	P	08 06 05.2 -0.5
I18A	Diamond G Ranc baz=49,SNR=5.3	48.97 325	⇑P	P	08 06 05.8 -0.1
N15A	Stansbury Isla baz=49	48.99 320	⇑P	P	08 06 06.0 -0.1
LAO	LASA Array baz=49	48.99 330	⇓P	P	08 06 05.6 -0.4
LAO	LASA Array 4.1nm,0.7s,mb4.2	48.99 330	eP	P	08 06 05.1 -0.9
G20A	Bridger baz=49,SNR=11	49.04 327	⇑P	P	08 06 05.4 -1.0
K17A	Gardner Place, baz=49	49.05 323	⇓P	P	08 06 06.4 -0.1
H19A	Powell baz=49	49.11 326	⇑P	P	08 06 06.7 -0.2
M15A	Larsen Ranch, baz=49	49.25 321	⇑P	P	08 06 07.7 -0.4
C23A	Lambert baz=49,SNR=5.4	49.27 332	⇓P	P	08 06 08.1 +0.1
GSC	Goldstone baz=49	49.27 311	⇑P	P	08 06 08.0 -0.4
GSC	Goldstone 3.9nm,0.6s,mb4.2	49.27 311	eP	P	08 06 08.3 0.0
J17A	Brown Place, J baz=49,SNR=13	49.29 324	⇑P	P	08 06 08.3 0.0
D22A	Cohagen baz=49,SNR=14	49.29 330	⇑P	P	08 06 08.5 +0.2
DGMT	Dagmar baz=49,SNR=13	49.29 333	⇑P	P	08 06 08.4 +0.2
DGMT	Dagmar 28nm,0.6s,mb5.1	49.29 333	eP	P	08 06 08.5 +0.3
E21A	Keefer Ranch, baz=49,SNR=5.7	49.32 329	⇓P	P	08 06 08.1 -0.4
BGU	Big Grassy Mou 8.4nm,0.9s,mb4.4	49.33 320	eP	P	08 06 08.3 -0.4
REDW	Red Top Meadow 7.6nm,0.8s,mb4.4	49.37 324	eP	P	08 06 08.8 -0.1
SNOW	Snow King Moun 13nm,1.4s,mb4.4	49.37 324	eP	P	08 06 09.2 +0.3
LOHW	Long Hollow 4.1nm,0.6s,mb4.2	49.37 324	eP	P	08 06 09.0 0.0
F20A	Billings baz=49,SNR=9.9	49.38 328	⇓P	P	08 06 08.6 -0.4
H18A	Shoshone NF, C baz=50	49.49 326	⇑P	P	08 06 09.1 -0.7
TPAW	Teton Pass 4.1nm,0.6s,mb4.2	49.50 324	eP	P	08 06 10.1 +0.2
L15A	Malad City baz=50,SNR=9.2	49.51 321	⇓P	P	08 06 09.4 -0.7
MOOW	Moose Ponds 3.3nm,0.8s,mb4.0	49.54 324	eP	P	08 06 09.9 -0.3
A24A	Westby baz=50,SNR=9.9	49.54 333	⇓P	P	08 06 10.7 +0.6
RLMT	Red Lodge baz=50	49.55 326	⇓P	P	08 06 10.3 +0.1
RLMT	Red Lodge 9.0nm,1.3s,mb4.2	49.55 326	eP	P	08 06 10.0 -0.2
C22A	Vida baz=50,SNR=12	49.56 331	⇑P	P	08 06 10.5 +0.2
D21A	La Casta Ranch baz=50,SNR=12	49.63 330	⇑P	P	08 06 11.0 +0.1
RRI2	Red Ridge 9.4nm,0.6s,mb4.6	49.63 323	eP	P	08 06 10.1 -0.9
B23A	Brockton baz=50,SNR=7.2	49.65 332	⇑P	P	08 06 11.4 +0.4
IMW	Indian Meadow 4.4nm,0.6s,mb4.3	49.74 324	eP	P	08 06 11.1 -0.6
R11A	Troy Canyon, C baz=50,SNR=5.9	49.74 316	⇓P	P	08 06 11.8 0.0
J16A	Bone baz=50,SNR=13	49.77 323	⇓P	P	08 06 11.8 -0.1
G18A	Lazy EL Ranch, baz=50	49.83 327	⇓P	P	08 06 12.3 -0.1
E20A	Meyer Farm, Mu baz=50,SNR=19	49.83 329	⇑P	P	08 06 12.6 +0.2
F19A	Roth Farm, Mol baz=50	49.84 327	⇓P	P	08 06 11.8 -0.6
A23A	Redstone baz=50,SNR=7.3	49.96 333	⇓P	P	08 06 13.9 +0.7
K15A	Arbon baz=50,SNR=5.1	49.98 322	⇓P	P	08 06 13.2 -0.4
B22A	Reddig Ranch S baz=50,SNR=10.0	50.01 332	⇑P	P	08 06 14.0 +0.4
I16A	Newdale baz=50,SNR=7.4	50.04 324	⇑P	P	08 06 14.2 +0.2
L14A	Malta baz=50,SNR=7.0	50.06 321	⇑P	P	08 06 13.4 -0.8
E19A	Rath Farm, Rou baz=50,SNR=5.2	50.15 328	⇓P	P	08 06 14.6 -0.1
GCMT	Greycliff 5.0nm,0.9s,mb4.1	50.19 327	eP	P	08 06 15.1 0.0
C21A	Desert Coulee baz=50	50.20 330	⇑P	P	08 06 15.1 0.0
D20A	Manuel Ranch, baz=50,SNR=8.8	50.23 329	⇓P	P	08 06 15.4 +0.1
F18A	Big Timber baz=50,SNR=8.8	50.29 327	⇑P	P	08 06 16.0 +0.2
K14A	Jones Ranch, D baz=50	50.30 322	⇓P	P	08 06 15.9 0.0
J15A	Blackfoot baz=50	50.33 323	⇓P	P	08 06 16.3 +0.1
H16A	Russell Place, baz=50	50.40 325	⇑P	P	08 06 17.4 +0.7
A22A	Carney Farms, baz=50,SNR=17	50.46 332	⇓P	P	08 06 17.8 +0.7
G17A	Pierce Place, baz=50	50.48 326	⇓P	P	08 06 18.1 +0.8
C20A	Veseth Ranch, baz=51	50.58 330	⇓P	P	08 06 18.4 +0.5
QLMT	Earthquake Lak 0.6nm,0.5s,mb3.5	50.58 325	eP	P	08 06 18.9 +0.9
D19A	Cripps Ranch, baz=51,SNR=14	50.66 329	⇓P	P	08 06 18.6 +0.1
F17A	Fitzpatrick Pl baz=51	50.80 326	⇓P	P	08 06 20.3 +0.7
E18A	Harlowton baz=51,SNR=5.5	50.81 328	⇑P	P	08 06 19.7 0.0
A21A	Bergtoll Ranch baz=51,SNR=10	50.93 332	⇓P	P	08 06 21.1 +0.6
J14A	Carey baz=51,SNR=12	50.94 322	⇓P	P	08 06 20.9 +0.2
G16A	Moss Hill, Enn baz=51,SNR=6.5	51.03 325	⇓P	P	08 06 21.5 +0.2
B20A	Solberg Farm, baz=51	51.08 330	⇑P	P	08 06 22.3 +0.6
C19A	Slack Wire Ran baz=51,SNR=5.3	51.12 329	⇑P	P	08 06 22.0 0.0
BOZ	Bozeman (W) baz=51	51.18 326	⇓P	P	08 06 22.5 0.0
I14A	Mackay baz=51	51.24 323	⇓P	P	08 06 23.3 +0.4
E17A	Martinsdale baz=51,SNR=6.3	51.25 327	⇓P	P	08 06 22.9 -0.1
F16A	Kennard Place, baz=51	51.26 326	⇑P	P	08 06 23.2 +0.1
A20A	Cobblestone Ra baz=51,SNR=11	51.33 331	⇓P	P	08 06 23.9 +0.3
G15A	Dillon baz=51	51.38 325	⇓P	P	08 06 24.3 +0.3

J13A	Cove Ranch, Pi	51.38	322	⇓P		P	08 06 24.2 +0.2
	baz=51						
MCMT	McKenzie Canyo	51.39	324	eP		P	08 06 24.6 +0.5
	2.1nm,0.6s,mb3.9						
B19A	Brinkman Farms	51.54	330	⇑P		P	08 06 25.2 +0.1
	baz=52						
DLMT	Dillon	51.56	325	eP		P	08 06 26.1 +0.8
	8.1nm,1.3s,mb4.2						
H14A	Leadore	51.57	324	⇑P		P	08 06 26.1 +0.7
	baz=52						
D17A	Six Diamond Ra	51.59	328	⇓P		P	08 06 25.8 +0.2
	baz=52						
HLID	Hailey	51.62	322	⇑P		P	08 06 25.6 -0.1
	baz=52,SNR=7.6						
HLID	Hailey	51.62	322	eP		P	08 06 25.6 -0.1
	7.6nm,1.3s,mb4.2						
I13A	Wildhorse Cree	51.63	323	⇓P		P	08 06 26.0 +0.2
	baz=52,SNR=8.4						
NVAR	Mina Array Bea	51.69	315	P		P	08 06 26.3 -0.1
	1.6nm,0.7s,mb3.7,baz=124,slow=7.2,SNR=16						
E16A	East Helena	51.74	327	⇓P		P	08 06 27.0 +0.3
	baz=52						
LRM	Limekiln Ridge	51.75	325	eP		P	08 06 26.6 -0.1
A19A	Klindworth Far	51.76	331	⇑P		P	08 06 27.0 +0.2
	baz=52						
F15A	Butte	51.78	325	⇓P		P	08 06 27.1 +0.1
	baz=52						
B18A	Beardsley Farm	51.92	329	⇑P		P	08 06 28.0 +0.1
	baz=52,SNR=8.3						
HRY	Holter Researc	51.94	327	eP		P	08 06 28.3 +0.2
C17A	Wharram Farm,	51.94	328	⇑P		P	08 06 27.6 -0.4
	baz=52,SNR=5.1						
D16A	Dana Ranch, Ca	51.98	327	⇑P		P	08 06 29.0 +0.6
	baz=52						
G14A	Jackson	51.99	324	⇑P		P	08 06 28.7 +0.2
	baz=52						
H13A	Challis	52.07	323	⇑P		P	08 06 29.2 +0.1
	baz=52						
I12A	Atlanta	52.18	322	⇓P		P	08 06 29.7 -0.2
	baz=52,SNR=7.6						
E15A	Deer Lodge	52.21	326	⇑P		P	08 06 30.1 0.0
	baz=52						
F14A	Wisdom	52.26	325	⇑P		P	08 06 30.7 +0.2
	baz=52						
A18A	Metzger Ranch,	52.30	330	⇑P		P	08 06 30.4 -0.3
	baz=52,SNR=6.0						
G13A	Cobalt	52.35	324	⇓P		P	08 06 30.6 -0.5
	baz=52,SNR=5.9						
MFID	Camas Ranch	52.41	321	⇑P		P	08 06 31.4 -0.3
	baz=52,SNR=6.9						
H12A	Diamond D Ranc	52.42	323	⇑P		P	08 06 31.5 -0.2
	baz=52,SNR=7.8						
D15A	Lincoln	52.51	327	⇓P		P	08 06 32.5 +0.2
	baz=53						
C16A	Fuhringer Ranc	52.56	328	⇑P		P	08 06 32.7 +0.1
	baz=53						
E14A	Clinton	52.68	325	⇓P		P	08 06 33.6 0.0
	baz=53						
A17A	Triple J Farms	52.74	329	⇓P		P	08 06 33.5 -0.5
	baz=53						
F13A	Darby	52.80	324	⇑P		P	08 06 34.0 -0.4
	baz=53,SNR=6.1						
B16A	M & M Farms, S	52.92	328	⇑P		P	08 06 34.6 -0.7
	baz=53,SNR=5.6						
C15A	Salmond Ranch,	53.00	327	⇑P		P	08 06 36.8 +0.9
	baz=53						
G12A	Big Creek, Yel	53.02	323	⇑P		P	08 06 36.3 +0.2
	baz=53						
WCN	Washoe City	53.08	315	⇓P		P	08 06 37.1 +0.5
	baz=53						
SLMT	Seeley Lake	53.16	326	eP		P	08 06 35.9 -1.2
	3.3nm,0.8s,mb4.1						
MSO	Missoula	53.17	326	⇑P		P	08 06 37.3 +0.1
	baz=53						
A16A	West Butte Ran	53.20	329	⇑P		P	08 06 37.5 +0.1
	baz=53						
B15A	Bradely Ranch,	53.31	328	⇑P		P	08 06 38.0 -0.2
	baz=53						
F12A	Elk City	53.32	324	⇑P		P	08 06 37.8 -0.4
	baz=53,SNR=5.7						
C14A	Swan Lake	53.62	327	⇓P		P	08 06 40.9 +0.5
	baz=54						
D13A	Huson	53.62	326	⇑P		P	08 06 40.7 +0.4
	baz=54						
B14A	Marquette Ranc	53.71	328	⇓P		P	08 06 41.1 +0.1
	baz=54						
WVOR	Wild Horse Val	53.72	319	eP		P	08 06 40.8 -0.5
	4.7nm,0.9s,mb4.2						
A15A	Johnson Ranch,	53.80	328	⇑P		P	08 06 41.1 -0.6
	baz=54,SNR=5.5						
E12A	Beaver Dam Sad	53.87	324	⇑P		P	08 06 42.3 0.0
	baz=54						
C13A	Hot Springs	54.02	326	⇓P		P	08 06 43.3 0.0
	baz=54,SNR=5.2						
J08A	Circle Bar Ran	54.05	320	⇑P		P	08 06 43.5 -0.2
	baz=54						
D12A	Red Ives Fores	54.09	325	⇓P		P	08 06 43.7 -0.2
	baz=54						
A14A	Double T Ranch	54.16	328	⇓P		P	08 06 44.4 +0.1
	baz=54						
BSMT	Bassoo Peak	54.23	326	eP		P	08 06 45.1 +0.3
B13A	Whitefish	54.36	327	⇓P		P	08 06 46.2 +0.4
	baz=54						
C12B	Naegeli Ranch,	54.53	326	⇑P		P	08 06 47.1 +0.1
	baz=55,SNR=5.8						
F10A	Beach Ranch, E	54.60	323	⇑P		P	08 06 46.7 -0.8
	baz=55,SNR=6.7						
A13A	Flathead Natio	54.66	328	⇓P		P	08 06 47.8 -0.1
	baz=55						
B12A	Libby	55.03	327	⇓P		P	08 06 50.9 +0.4
	baz=55						
C11A	Tepee Creek (N	55.04	326	⇓P		P	08 06 50.9 +0.2
	baz=55						
I07A	Izee	55.05	320	⇓P		P	08 06 50.6 -0.3
	baz=55,SNR=7.1						
G08A	Pilot Rock	55.30	322	⇑P		P	08 06 52.2 -0.4
	baz=55,SNR=12						
A12A	Yaak River Ran	55.33	327	⇓P		P	08 06 52.8 +0.1
	baz=55,SNR=11						
E09A	Wood Farm, Sta	55.42	323	⇓P		P	08 06 53.4 0.0
	baz=55						
NEW	Newport	55.76	326	⇑P		P	08 06 55.6 -0.2
	baz=56						
YBH	Yreka Blue Hor	56.14	316	eP		P	08 06 56.5 -2.1
	1.1nm,0.5s,mb3.9						
C09A	Chrisman Ranch	56.17	325	⇓P		P	08 06 59.0 +0.3
	baz=56						
G06A	Carlson Farm,	56.31	321	⇑P		P	08 07 00.2 +0.5
	baz=56						
H04A	Detroit Lake	57.04	320	⇓P		P	08 07 05.1 +0.2
	baz=57						
B08A	Colville Reser	57.06	325	⇑P		P	08 07 04.9 -0.1
	baz=57						
ETW	Entiat	57.26	324	eP		P	08 07 06.8 +0.3
D05A	Enumclaw	58.05	323	⇑P		P	08 07 11.8 -0.1
	baz=58						
YKA	Yellowknife Ar	63.38	340	P		P	08 07 47.0 -0.7
	6.1nm,0.6s,mb4.6,baz=133,slow=6.6,SNR=40						
YKA	Yellowknife Ar	63.38	340	P		P	08 07 47.0 -0.7
SUMG	Summit	68.97	11	eP		P	08 08 24.2 +1.0
	5.1nm,0.6s,mb4.4						
SUMG	Summit	68.97	11	i P		P	08 08 24.1 +1.0
	7.0nm,0.8s,mb4.4						
SUMG				i		pP	08 09 03.3 0.0
INK	Inuvik	73.14	340	P		P	08 08 47.9 -0.4
	1.9nm,0.6s,mb4.0,baz=127,slow=20						
TORD	Torodi Ar. Bea	73.50	78	P		P	08 08 50.0 -1.4
	0.5nm,0.6s,mb3.4,baz=280,slow=6.0,SNR=5.0						
ILAR	Eielson Array	77.10	335	P		P	08 09 10.6 -0.4
	0.7nm,0.7s,mb3.4,baz=104,slow=3.9,SNR=11						
ARCES	ARCESS Array B	86.61	20	P		P	08 10 00.0 -0.6
	8.7nm,1.2s,mb4.5,baz=272,slow=3.5,SNR=2.6						
VNA3	Neumayer Olymp	88.07	163	eP		P	08 10 03.9 -3.5
VNA1	Neumayer--Stat	88.21	162	eP		P	08 10 05.0 -3.1
VNA2	Neumayer--Watz	88.59	163	eP		P	08 10 06.6 -3.2
	baz=303,slow=6.3						
MKAR	Makanchi Array	122.27	20	PKP		PKPdf	08 16 10.9 -0.8
	0.3nm,0.4s,baz=319,slow=3.5,SNR=5.7						
SONM	Songino Array	125.61	1	PKP		PKPdf	08 16 17.9 -0.2
	0.4nm,0.6s,baz=359,slow=0.2,SNR=3.0						
HHC	Hu-ho-hao-te	132.42	355	ePKP		PKPdf	08 16 30.3 -0.9
HHC				sPKP			08 17 30.3
HHC				PP		PP	08 19 00.0 +5.2
HHC				PKS			08 20 04.8
HHC				SKS		SKSdf	08 23 24.0 -2.9
HHC				SKKS		SKKSac	08 25 32.5 -3.1
HHC				SS		SS	08 36 23.3 +3.9
HHC				AMB		AMB	
	comp=Z,76nm,7.5s						
HHC				LR		LR	
	comp=N,91nm,20.6s						
HHC				LR		LR	
	comp=E,120nm,20.8s						
HHC				LR		LR	
	comp=Z,64nm,22.9s						
LZH	Lanzhou	137.24	4	ePKP		PKPdf	08 16 34.5 -5.9
LZH				sPKP			08 17 35.0
CD2	Chengdu	142.38	5	ePKP		PKPdf	08 16 48.8 -1.0
ASAR	Alice Springs	149.30	234	PKP		PKPdf	08 17 01.4 -0.3
	comp=Z,4.0nm,0.6s,baz=125,slow=2.8,SNR=25						
ASAR				PKPbc		PKPbc	08 17 05.2 -1.1
	comp=Z,4.1nm,0.6s,baz=116,slow=3.4,SNR=19						
WRA	Warramunga Arr	150.54	241	PKP		PKPdf	08 17 03.7 -0.1
	comp=Z,3.3nm,0.4s,baz=108,slow=2.1,SNR=70						
WRA				PKPbc		PKPbc	08 17 08.4 -0.9
	comp=Z,2.7nm,0.4s,baz=107,slow=2.5,SNR=108						

IDC 30 08:01:58.3±1.8, 2°.11N×127°.77E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/18, mbtmp3.8/4, Error ellipse: s-maj=128.2km s-min=23.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.84	164	P	P	08 07 03.7	+0.4
	2.8nm,0.4s,baz=343,slow=10,SNR=55						
ASAR	Alice Springs	26.31	167	P	P	08 07 35.8	-0.1
	0.3nm,0.4s,baz=351,slow=7.8,SNR=11						
STKA	Stephens Creek	36.26	160	P	P	08 09 02.7	-0.7
	0.9nm,0.4s,baz=331,slow=10,SNR=6.0						
MKAR	Makanchi Array	59.47	325	P	P	08 12 03.6	+0.5
	0.3nm,0.4s,baz=120,slow=7.8,SNR=6.9						

*IDC **30** 08:09:40.3±0.8, 29°.77S×177°.59W, h0km, mb4.4/9, mb1 4.6/9, mb1mx4.3/17, mbtmp4.4/9, MS3.5/3, Ms1 3.4/3, ms1mx3.0/21, Error ellipse: s-maj=26.2km s-min=22.8km az=169.0*

*NEIC **30** 08:09:47.8±3.2, 29°.91S×177°.65W, h54km±27km, mb4.6/9, Error ellipse: s-maj=23.3km s-min=17.7km az=216.0*

ISC 30 08:09:48.6±2.4, 30°.43S±0°.10×177°.7W±0°.1, h58km±20km, n49, σ1.9 17/47, mb4.5/11, MS3.6/2, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUZ	Omahuta	8.73	235	ePn	Pn	08 12 02.2	+10
MWZ	Matawai	8.81	205	ePN	Pn	08 11 54.1	+0.8
MWZ				SN	Sn	08 13 38.8	+7.8
URZ	Urewera	8.91	207	Pn	Pn	08 11 54.8	+0.2
	0.4nm,0.3s,baz=25,slow=14,SNR=3.1						
URZ				Sn	Sn	08 13 41.0	+7.7
	2.9nm,0.3s,baz=349,slow=9.5,SNR=14						
URZ	Urewera	8.91	207	ePn	Pn	08 11 59.8	+5.2
URZ				Sn	Sn	08 13 41.0	+7.7
MRZ	Mangatainoka R	11.58	206	SN	Sn	08 14 37.5	-1.2
NNZ	Nelson	12.96	211	SN	Sn	08 15 11.7	-0.7
THZ	Tophouse	13.61	211	ePN	Pn	08 12 59.4	+0.7
KHZ	Kahutara	13.87	208	ePn	Pn	08 13 08.6	+6.3
KHZ				eSn	Sn	08 15 34.4	-0.2
KHZ	Kahutara	13.87	208	PN	Pn	08 13 00.6	-1.7
KHZ				SN	Sn	08 15 32.2	-2.4
MQZ	McQueen's Vall	15.31	207	SN	Sn	08 16 03.6	-5.9
RPZ	Rata Peaks	15.99	211	Pn	Pn	08 13 31.1	+1.5
	1.1nm,0.3s,baz=170,slow=12,SNR=8.6						
RPZ				Sn	Sn	08 16 21.0	-4.9
	0.4nm,0.3s,baz=60,slow=18,SNR=2.4						
RPZ	Rata Peaks	15.99	211	eP	Pn	08 13 34.0	+4.3
	8.8nm,0.5s						
RPZ				Sn	Sn	08 16 21.0	-4.9
ODZ	Otahua Downs	17.23	209	eP	Pn	08 13 49.9	+4.8
	69nm,0.8s						
AFI	Afiamalu	17.33	20	LR	LR	08 19 09.7	
	comp=Z,61nm,21.2s,baz=118,slow=34						
ARMA	Armidale	26.40	262	eP	P	08 15 24.0	+4.3
CTA	Charters Tower	34.05	279	P	P	08 16 28.2	+0.8
	10nm,0.5s,mb5.0,baz=102,slow=10,SNR=28						
CTA	Charters Tower	34.05	279	eP	P	08 16 28.6	+1.2
	8.5nm,0.4s,mb5.0						
CTAO	Charters Tower	34.05	279	eP	P	08 16 28.1	+0.7
	11nm,0.7s,mb4.9						
STKA	Stephens Creek	34.71	257	P	P	08 16 35.5	+2.4
	2.3nm,0.5s,mb4.4,baz=101,slow=12,SNR=14						
STKA				LR	LR	08 29 40.0	
	comp=Z,132nm,18.1s,MS3.7,baz=184,slow=34						
STKA	Stephens Creek	34.71	257	eP	P	08 16 35.4	+2.4
	4.2nm,1.1s,mb4.3						
STKA	Stephens Creek	34.71	257	eP	P	08 16 35.4	+2.3
	0.9nm,0.8s,mb3.8						
STKA				LR	LR	08 29 40.0	
ASAR	Alice Springs	43.35	267	P	P	08 17 45.1	-0.2
	3.5nm,0.5s,mb4.4,baz=104,slow=7.5,SNR=30						
WRA	Warramunga Arr	44.35	272	P	P	08 17 52.3	-1.0
	4.2nm,0.6s,mb4.3,baz=109,slow=7.9,SNR=15						
FORT	Forrest	46.28	255	eP	P	08 18 08.6	+0.1
	39nm,1.1s,mb5.2						
KAKA	Kakadu	49.18	280	eP	P	08 18 29.8	-1.4
FITZ	Fitzroy Crossi	52.61	270	P	P	08 18 56.1	-0.8
	3.4nm,0.8s,mb4.3,baz=171,slow=9.3,SNR=5.6						
FITZ				LR	LR	08 41 09.5	
	comp=Z,47nm,19.0s,MS3.5,baz=357,slow=36						
FITZ	Fitzroy Crossi	52.61	270	eP	P	08 18 57.2	+0.3
	6.8nm,0.9s,mb4.6						
FITZ	Fitzroy Crossi	52.61	270	eP	P	08 18 56.8	-0.1
	7.7nm,1.0s,mb4.6						
FITZ				LR	LR	08 41 09.5	
CASY	Casey	55.23	208	eP	P	08 19 18.2	+2.9
CASY	Casey	55.23	208	eP	P	08 19 17.7	+2.4
	3.6nm,0.6s,mb4.6						
QSPA	South Pole Qui	59.68	180	P	P	08 19 51.8	+5.4
	3.0nm,1.0s,mb4.3,baz=40,slow=2.9,SNR=6.9						
QSPA	South Pole Qui	59.68	180	eP	P	08 19 51.8	+5.4
	5.3nm,0.6s,mb4.8						
MAW	Mawson	72.37	201	P	P	08 21 10.7	+2.7
	3.4nm,0.7s,mb4.4,baz=119,slow=5.3,SNR=10						
MAW	Mawson	72.37	201	eP	P	08 21 11.7	+3.7
	2.8nm,0.6s,mb4.4						
MAW	Mawson	72.37	201	eP	P	08 21 11.7	+3.7
	0.9nm,0.7s,mb3.8						
VNA3	Neumayer Olymp	78.26	176	e	P	08 21 41.6	-0.1
VNA2	Neumayer--Watz	78.70	177	e	P	08 21 44.1	0.0
	baz=168,slow=3.9						
VNA1	Neumayer--Stat	78.93	176	e	P	08 21 45.6	+0.2
PETK	Petropavlovsk-	85.90	345	P	P	08 22 20.6	-1.1
	1.7nm,0.8s,mb4.4,baz=128,slow=8.3,SNR=4.2						
NVAR	Mina Array Bea	88.09	43	P	P	08 22 31.2	-1.5
	0.8nm,0.7s,mb4.1,baz=223,slow=8.3,SNR=7.5						
NVAR	Mina Array Bea	88.09	43	P	P	08 22 31.2	-1.5
ARCES	ARCESS Array B	138.67	348	PKP	PKPdf	08 29 05.6	-1.4
	1.6nm,0.9s,baz=42,slow=2.8,SNR=2.4						
KAF	Kangasniemi	144.66	341	epkp	PKPdf	08 29 13.2	-4.7
	4.0nm,0.6s,baz=40,slow=3.3						
FINES	FINESS Array B	145.26	340	PKP	PKPdf	08 29 16.0	-3.0
	20nm,0.6s,baz=56,slow=3.5,SNR=68						
NOA	NORSAR Array B	148.81	352	PKPbc	PKPbc	08 29 26.5	-2.4
	2.6nm,0.7s,baz=17,slow=2.9,SNR=10						
AKASG	Malin Array Be	151.47	323	PKPbc	PKPbc	08 29 33.6	-2.0
	3.8nm,0.7s,baz=51,slow=2.6,SNR=12						
BRTR	Keskin Array B	152.83	299	PKPbc	PKPbc	08 29 37.3	-1.8
	1.0nm,0.8s,baz=116,slow=3.6,SNR=6.1						
CLL	Collm	157.67	342	ePKPab	PKPab	08 30 10.0	-0.4
TORD	Torodi Ar. Bea	162.79	178	PKPab	PKPab	08 30 37.3	+3.7
	0.8nm,0.6s,baz=189,slow=3.8,SNR=4.8						

*CSEM **30** 08:22:57.8±0.2, 42°.31N×20°.12E, h2km, ML2.8, Error ellipse: s-maj=3.6km s-min=3.4km az=163.0*

*TIR **30** 08:22:57.3±0.8, 42°.33N×19°.97E, h9km±3km, ML2.8*

*ISCJB **30** 08:22:57.9±0.3, 42°.31N±0°.02×20°.12E±0°.03, h10km, Error ellipse: s-maj=3.0km s-min=2.4km az=42.7*

*NEIC **30** 08:22:58.4, 42°.34N×20°.08E, h12km, ML2.5(PDG), After PDG.*

*PDG **30** 08:22:58.4±0.2, 42°.34N×20°.08E, h12km±2km, MD2.5/1, ML2.5/8, Error ellipse: s-maj=0.5km s-min=1.0km az=0.0*

*BEO **30** 08:22:59.2±0.4, 42°.33N×20°.14E, h2km±2km, ML2.1/6*

*SKO **30** 08:23:01.9, 42°.31N×20°.26E, h0km*

ISC 30 08:22:58.6±0.4, 42°.32N±0°.02×20°.12E±0°.03, h4km±4km, n47, σ1.9 10/88, 7C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCI	Bajram Curri	0.06	319	ePG	Pg	08 22 59.5	-0.5
BCI				i SG	Sg	08 23 00.9	0.0
BCI	Bajram Curri	0.06	319	ePg	Pg	08 22 59.5	-0.5
	SNR=142						
BCI				i Sg	Sg	08 23 00.9	-0.1
	SNR=142						
PVY	Plav	0.30	338	⇑iPg	Pg	08 23 03.7	-0.6
PVY				eSg	Sg	08 23 08.7	+0.5
PVY	Plav	0.30	338	ePG	Pg	08 23 03.7	-0.7
PVY				i SG	Sg	08 23 08.7	+0.5
PVY	Plav	0.30	338	ePg	Pg	08 23 03.7	-0.6
	SNR=97						
PVY				i Sg	Sg	08 23 08.7	+0.5
	SNR=97						
PUK	Puka	0.33	212	ePG	Pg	08 23 04.2	-0.6
PUK				i SG	Sg	08 23 09.8	+0.8
PUK	Puka	0.33	212	ePg	Pg	08 23 04.2	-0.6
	SNR=96						
PUK				i Sg	Sg	08 23 09.8	+0.8
	SNR=96						
BEY	Berane	0.58	343	ePG	Pg	08 23 08.9	-0.8
BEY				i SG	Sg	08 23 17.5	+0.3
BEY	Berane	0.58	343	ePg	Pg	08 23 08.9	-0.8
	SNR=93						
BEY				i Sg	Sg	08 23 17.5	+0.3
	SNR=93						
IVA	Berane	0.58	343	⇑iPg	Pg	08 23 08.9	-0.8
IVA				eSg	Sg	08 23 17.5	+0.3
IVA	Berane	0.58	343	⇑iPg	Pg	08 23 08.9	-0.8
IVA				eSg	Sg	08 23 17.5	+0.3
PDG	Podgorica	0.65	280	⇓iPg	Pg	08 23 09.4	-1.6
PDG				eSg	Sg	08 23 19.4	0.0
TTG	Podgorica	0.65	280	⇓iPg	Pg	08 23 09.4	-1.6
TTG				eSg	Sg	08 23 19.4	0.0
TTG	Podgorica	0.65	280	⇓iPg	Pg	08 23 09.4	-1.6
TTG				eSg	Sg	08 23 19.4	0.0
ULC	Ulcinj	0.74	242	⇓iPg	Pg	08 23 11.8	-1.0
ULC				eSg	Sg	08 23 23.6	+1.2
ULC	Ulcinj	0.74	242	ePG	Pg	08 23 11.8	-1.0
ULC				i SG	Sg	08 23 23.6	+1.2
ULC	Ulcinj	0.74	242	ePg	Pg	08 23 11.8	-1.0
	SNR=92						
ULC				i Sg	Sg	08 23 23.6	+1.2
	SNR=92						
BUM	Brajici-Budva	0.91	269	⇓iPg	Pg	08 23 15.0	-1.0
BUM				eSg	Sg	08 23 28.9	+1.1
BUM	Brajici-Budva	0.91	269	⇓iPg	Pg	08 23 15.0	-1.0
BUM				eSg	Sg	08 23 28.9	+1.1
SJES	Sjenica	0.95	353	ePg	Pg	08 23 15.7	-1.1
SJES				eSg	Sg	08 23 29.5	+0.4
SJES	Sjenica	0.95	353	ePg	Pg	08 23 15.7	-1.1
SJES				eSg	Sg	08 23 29.5	+0.4
TIR	Tirane	0.99	191	ePg	Pg	08 23 17.4	-0.1
TIR				eSn	Sn	08 23 32.7	-0.9
TIR	Tirane	0.99	191	ePg	Pg	08 23 17.4	-0.1
TIR				eSn	Sn	08 23 32.7	-0.9
SKO	Skopje	1.04	109	ePg	Pg	08 23 16.8	-1.7
SKO				eSg	Sg	08 23 32.7	+0.8
SKO	Skopje	1.04	109	ePg	Pg	08 23 16.8	-1.7
SKO				eSg	Sg	08 23 32.7	+0.8
PLE	Pljevlja	1.14	332	⇓iPg	Pg	08 23 19.1	-1.4
PLE				eSg	Sg	08 23 36.3	+0.9
PLE	Pljevlja	1.14	332	⇓iPg	Pg	08 23 19.1	-1.4
PLE				eSg	Sg	08 23 36.3	+0.9
SELS	Selova	1.16	39	ePn	Pn	08 23 20.6	-1.0
SELS	Selova	1.16	39	ePn	Pn	08 23 20.6	-1.0
HCY	Herceg Novi	1.21	277	⇑iPg	Pn	08 23 20.0	-2.2
HCY				eSg	Sg	08 23 39.0	+1.5
HCY	Herceg Novi	1.21	277	⇑iPg	Pn	08 23 20.0	-2.2
HCY				eSg	Sg	08 23 39.0	+1.5
UPM	Unac-Piva	1.26	315	⇑iPg	Pn	08 23 21.2	-1.7
UPM				eSg	Sg	08 23 40.5	+1.5
UPM	Unac-Piva	1.26	315	⇑iPg	Pn	08 23 21.2	-1.7
UPM				eSg	Sg	08 23 40.5	+1.5
KRUS	Krusevo	1.27	138	ePg	Pg	08 23 23.0	+0.2
KRUS				eSg	Sg	08 23 39.8	+0.5
BRY	Bratogost	1.30	297	⇓iPg	Pn	08 23 21.5	-2.0
BRY				eSg	Sg	08 23 41.9	+1.4
BRY	Bratogost	1.30	297	⇓iPg	Pn	08 23 21.5	-2.0
BRY				eSg	Sg	08 23 41.9	+1.4
BARS	Barje	1.34	68	ePg	Pg	08 23 23.7	-0.7
BARS				eSn	Sn	08 23 43.2	+0.8
BARS	Barje	1.34	68	ePg	Pg	08 23 23.7	-0.7
BARS				eSn	Sn	08 23 43.2	+0.8
BIA	Bitola	1.58	145	ePn	Pn	08 23 29.9	+2.6
BIA				eSg	Sg	08 23 50.1	+0.8
BBLS	Lazići	1.63	341	ePn	Pn	08 23 29.7	+1.6
BBLS	Lazići	1.63	341	ePn	Pn	08 23 29.7	+1.6
DIVS	Divibare	1.78	357	ePn	Pn	08 23 30.7	+0.6
DIVS	Divibare	1.78	357	ePn	Pn	08 23 30.7	+0.6
STON	Ston	1.87	288	ePn	Pn	08 23 30.8	-0.6
STON				Sn	Sn	08 23 59.4	+4.0
STON	Ston	1.87	288	ePn	Pn	08 23 30.7	-0.7
STON				Sn	Sn	08 23 59.4	+4.0
ZAPS	Zavoj	2.08	62	ePn	Pn	08 23 34.7	+0.5
ZAPS				eSn	Sn	08 24 01.6	+1.1
ZAPS	Zavoj	2.08	62	ePn	Pn	08 23 34.7	+0.5
ZAPS				eSn	Sn	08 24 01.6	+1.1

KRSC 30 08:30:58.9±0.8, 51°.22N×160°.45E, h41km±40km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	1.71	316	eP	Pn	08 31 27.5	+1.4
RUS				i S	Sn	08 31 48.6	+1.9
SPN	Mys Shipunski	1.90	352	P	Pn	08 31 30.7	+2.0
SPN				i S	Sn	08 31 54.0	+2.6
GRL	Gorelyy	1.99

PYL	**PYLOS**	**1.13**	**9**	P	**Pg**	**08 52 02.3**	**+0.8**
PYL				*e*Sn	**Sn**	**08 52 11.3**	**-7.4**
KYTH	**Kithira**	**1.32**	**67**	*e*PB	**Pb**	**08 52 06.0**	**+0.6**
KYTH	**Kithira**	**1.32**	**67**	*e*Pb	**Pb**	**08 52 06.0**	**+0.6**
ITM	**Ithomi**	**1.44**	**13**	*e*PN	**Pn**	**08 52 06.7**	**-0.2**
ITM				*e*SN	**Sn**	**08 52 19.8**	**-6.5**
ITM	**Ithomi**	**1.44**	**13**	P	**Pn**	**08 52 07.2**	**+0.3**
ITM				S	**Sb**	**08 52 30.8**	**+4.7**
ITM	**Ithomi**	**1.44**	**13**	*e*Pn	**Pn**	**08 52 06.7**	**-0.2**
ITM	**Ithomi**	**1.44**	**13**	P	**Pn**	**08 52 07.2**	**+0.3**
ITM				*e*Sn	**Sn**	**08 52 19.8**	**-6.5**
ITM				S	**Sb**	**08 52 30.8**	**+4.7**
VLI	**Veliai**	**1.48**	**50**	*e*PN	**Pn**	**08 52 08.4**	**+1.0**
VLI	**Veliai**	**1.48**	**50**	*e*Pn	**Pn**	**08 52 08.4**	**+1.0**
VLX	**Vlachokerasia**	**1.73**	**23**	*e*PN	**Pn**	**08 52 11.1**	**+0.2**
VLX	**Vlachokerasia**	**1.73**	**23**	P	**Pn**	**08 52 12.4**	**+1.5**
VLX	**Vlachokerasia**	**1.73**	**23**	*e*Pn	**Pn**	**08 52 11.1**	**+0.2**
VLX	**Vlachokerasia**	**1.73**	**23**	P	**Pn**	**08 52 12.4**	**+1.5**
DID	**Didima**	**2.21**	**38**	*e*PN	**Pn**	**08 52 18.4**	**+0.9**
DID	**Didima**	**2.21**	**38**	P	**Pn**	**08 52 18.1**	**+0.6**
DID	**Didima**	**2.21**	**38**	P	**Pn**	**08 52 18.1**	**+0.6**
DID	**Didima**	**2.21**	**38**	*e*Pn	**Pn**	**08 52 18.4**	**+0.9**
GUR	**Goura**	**2.25**	**17**	*e*PN	**Pn**	**08 52 19.3**	**+1.2**
GUR	**Goura**	**2.25**	**17**	P	**Pn**	**08 52 19.4**	**+1.3**
GUR	**Goura**	**2.25**	**17**	P	**Pn**	**08 52 19.4**	**+1.3**
RLS	**Riolos of Patr**	**2.28**	**359**	*e*PB	**Pb**	**08 52 20.1**	**-1.5**
RLS	**Riolos of Patr**	**2.28**	**359**	*e*Pb	**Pb**	**08 52 20.1**	**-1.5**
LAKA	**Lakka**	**2.48**	**8**	P	**Pn**	**08 52 22.8**	**+1.5**
LAKA	**Lakka**	**2.48**	**8**	P	**Pn**	**08 52 22.8**	**+1.5**
VLS	**Valsamata**	**2.51**	**343**	P	**Pn**	**08 52 23.1**	**+1.5**
VLS				S	**Sn**	**08 52 53.7**	**+0.9**
VLS	**Valsamata**	**2.51**	**343**	P	**Pn**	**08 52 23.1**	**+1.5**
VLS				S	**Sn**	**08 52 53.7**	**+0.9**
LTK	**Loutraki**	**2.52**	**27**	*e*PB	**Pn**	**08 52 22.8**	**+1.0**
LTK	**Loutraki**	**2.52**	**27**	P	**Pn**	**08 52 23.9**	**+2.1**
LTK	**Loutraki**	**2.52**	**27**	*e*Pb	**Pn**	**08 52 22.8**	**+1.0**
LTK	**Loutraki**	**2.52**	**27**	P	**Pn**	**08 52 23.9**	**+2.1**
EFP	**Efpalio**	**2.66**	**6**	*e*Pn	**Pb**	**08 52 27.3**	**-0.9**
VLY	**Voula,Athens**	**2.76**	**41**	*e*PB	**Pb**	**08 52 27.7**	**-2.1**
VLY	**Voula,Athens**	**2.76**	**41**	*e*Pn	**Pb**	**08 52 27.7**	**-2.1**
LKR	**Lokris**	**3.10**	**22**	P	**Pn**	**08 52 31.6**	**+1.9**
LKR	**Lokris**	**3.10**	**22**	P	**Pn**	**08 52 31.6**	**+1.9**
EVR	**Evrytania**	**3.14**	**4**	*e*Pb	**Pb**	**08 52 34.4**	**-2.0**
THR5	**Thira Island,**	**3.16**	**77**	P	**Pn**	**08 52 30.2**	**-0.4**
THR5	**Thira Island,**	**3.16**	**77**	P	**Pn**	**08 52 30.2**	**-0.4**
AGG	**Agios Georgios**	**3.30**	**11**	*e*PN	**Pn**	**08 52 34.8**	**+2.3**
AGG	**Agios Georgios**	**3.30**	**11**	P	**Pn**	**08 52 34.4**	**+1.9**
AGG	**Agios Georgios**	**3.30**	**11**	P	**Pn**	**08 52 34.4**	**+1.9**
AGG	**Agios Georgios**	**3.30**	**11**	*e*Pn	**Pn**	**08 52 34.8**	**+2.3**
LTBQ	**Tobruq**	**4.21**	**151**	*i* P	**Pn**	**08 52 47.4**	**+2.4**
	SNR=102						
LJBD	**Adjabya**	**4.98**	**193**	*i* P	**Pn**	**08 52 54.0**	**-1.5**
	SNR=100						
KRUS	**Krusevo**	**5.59**	**358**	*e*Pn	**Pn**	**08 53 03.0**	**-0.9**
VAY	**Valandovo**	**5.60**	**8**	*e*Pn	**Pn**	**08 53 03.8**	**-0.2**
VAE	**Valguarnera**	**5.97**	**289**	Pn	**Pn**	**08 53 09.9**	**+0.7**
	1.8nm,0.3s,baz=85,slow=20,SNR=5.2						
VAE				Sn	**Sn**	**08 54 18.2**	**+0.2**
	3.5nm,0.3s,baz=45,slow=1.4,SNR=2.5						
BARS	**Barje**	**7.03**	**2**	*i* Pn	**Pn**	**08 53 22.9**	**-0.9**
BRTR	**Keskin Array B**	**10.37**	**64**	Pn	**Pn**	**08 54 09.6**	**+0.1**
	0.1nm,0.3s,baz=259,slow=14,SNR=6.8						
AKASG	**Malin Array Be**	**15.92**	**18**	Pn	**Pn**	**08 55 21.9**	**-2.9**
	0.6nm,0.3s,baz=215,slow=12,SNR=3.0						
HFS	**Hagfors**	**24.89**	**351**	P	**P**	**08 57 01.9**	**-1.8**
	1.3nm,0.6s,mb3.6,baz=156,slow=7.4,SNR=6.6						
TORD	**Torodi Ar. Bea**	**28.75**	**223**	P	**P**	**08 57 39.3**	**+0.4**
	2.2nm,0.7s,mb4.0,baz=32,slow=8.9,SNR=17						
ARCES	**ARCESS Array B**	**33.88**	**3**	P	**P**	**08 58 22.4**	**-1.1**
	5.1nm,0.9s,mb4.4,baz=198,slow=10,SNR=5.1						
DBIC	**Dimbokro**	**37.74**	**226**	P	**P**	**08 58 57.5**	**+0.3**
	3.4nm,1.0s,mb4.0,baz=34,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**45.91**	**57**	P	**P**	**09 00 02.3**	**-1.5**
	1.0nm,0.5s,mb4.0,baz=286,slow=6.2,SNR=9.8						
SONM	**Songino Array**	**61.37**	**50**	P	**P**	**09 01 55.5**	**-1.6**
	0.7nm,0.6s,mb4.0,baz=284,slow=7.5,SNR=5.0						

*ISCJB **30** 09:03:26.6±0.5, 39.°00N±0.°03×29.°89E±0.°04, h7km±8km, Error ellipse: s-maj=5.0km s-min=4.7km az=13.8*
*DDA **30** 09:03:26.5, 38.°98N×29.°90E, h8km±6km, Md2.8*
*ISK **30** 09:03:27.6, 38.°87N×29.°88E, h20km, ML2.3*
*CSEM **30** 09:03:27.1±0.2, 38.°99N×29.°88E, h2km, MD2.8, Error ellipse: s-maj=3.8km s-min=3.4km az=138.0*

ISC 30 09:03:27.1±0.5,**38.°99N**±0.°03×**29.°88E**±0.°04,**h13**km±7km, **n22**,σ0**°73**/34,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.33**	**289**	*i* P	**Pg**	**09 03 33.1**	**-0.7**
GDZ				*i* S	**Sg**	**09 03 38.1**	**-0.2**
GDZ	**Gediz**	**0.33**	**289**	*i* P	**Pg**	**09 03 33.1**	**-0.7**
GDZ				*i* S	**Sg**	**09 03 38.1**	**-0.2**
SHUT	**Suhut-Afyon**	**0.68**	**129**	*e*PG	**Pg**	**09 03 40.7**	**+0.3**
SHUT				*e*SG	**Sg**	**09 03 49.1**	**-0.3**
SHUT	**Suhut-Afyon**	**0.68**	**129**	*e*Pg	**Pg**	**09 03 40.7**	**+0.3**
SHUT				*e*Sg	**Sg**	**09 03 49.1**	**-0.2**
KHAL	**Karahalli**	**0.69**	**206**	*i* P	**Pg**	**09 03 40.3**	**-0.1**
KHAL				*i* S	**Sg**	**09 03 49.9**	**+0.4**
KHAL	**Karahalli**	**0.69**	**206**	*i* P	**Pg**	**09 03 40.3**	**-0.2**
KHAL				*i* S	**Sg**	**09 03 49.9**	**+0.4**
DEMI	**Demirci**	**0.91**	**274**	*i* P	**Pg**	**09 03 44.9**	**+0.2**
DEMI				*i* S	**Sg**	**09 03 57.7**	**+1.2**
DEMI	**Demirci**	**0.91**	**274**	*i* P	**Pg**	**09 03 44.9**	**+0.2**
DEMI				*i* S	**Sg**	**09 03 57.7**	**+1.2**
BORA	**Eskisehir**	**1.00**	**26**	*i* P	**Pg**	**09 03 46.1**	**-0.3**
BORA				*i* S	**Sg**	**09 03 59.4**	**-0.1**
BORA	**Eskisehir**	**1.00**	**26**	*i* P	**Pg**	**09 03 46.1**	**-0.3**
BORA				*i* S	**Sg**	**09 03 59.4**	**0.0**
KULA	**Kula-Manisa**	**1.06**	**244**	*e*PG	**Pg**	**09 03 47.3**	**-0.3**
KULA	**Kula-Manisa**	**1.06**	**244**	*e*Pg	**Pg**	**09 03 47.3**	**-0.3**
CAVI	**Cavuskoy**	**1.22**	**359**	*e*PN	**Pn**	**09 03 51.0**	**+1.2**
CAVI	**Cavuskoy**	**1.22**	**359**	*e*Pn	**Pn**	**09 03 51.0**	**+1.2**
ULDT	**Uludag**	**1.29**	**334**	*i* P	**Pn**	**09 03 46.7**	**-4.0**
ULDT				*i* S	**Sb**	**09 04 07.2**	**-0.5**
SVRH	**Sivrihisar-ESK**	**1.36**	**70**	*e*PN	**Pn**	**09 03 52.6**	**+0.9**
SVRH	**Sivrihisar-ESK**	**1.36**	**70**	*e*Pn	**Pn**	**09 03 52.6**	**+0.9**
DNZL	**Cakiroluk**	**1.45**	**207**	*i* P	**Pn**	**09 03 51.3**	**-1.7**
DNZL				*i* S	**Sg**	**09 04 17.9**	**+4.1**
GULT	**Gulveren**	**1.53**	**19**	*e*PN	**Pg**	**09 03 56.6**	**+0.1**
GULT	**Gulveren**	**1.53**	**19**	*e*Pn	**Pg**	**09 03 56.6**	**+0.2**
GEMT	**Gemlik**	**1.54**	**340**	*e*PN	**Pg**	**09 03 56.3**	**-0.4**
GEMT	**Gemlik**	**1.54**	**340**	*e*Pn	**Pg**	**09 03 56.3**	**-0.5**

KRSC 30 09:23:05.4±0.5,**53.°36N**×**160.°54E**,**h46**km±35km,**ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.41**	**230**	*e*P	Pn	09 23 15.5	+0.2
SPN				*i* S	Sn	09 23 22.5	+0.3
NLC	**Nalytchevo**	**0.74**	**256**	*e*P	Pn	09 23 20.1	+0.6
NLC				*i* S	Sn	09 23 30.2	+0.5
KII	**Karymskiy**	**0.94**	**317**	*e*P	Pn	09 23 22.6	+0.5
KII				*i* S	Sn	09 23 35.6	+1.2
AVH	**Avacha**	**1.08**	**266**	*e*P	Pn	09 23 25.4	+1.3
AVH				*i* S	Sn	09 23 40.7	+2.7
PET	**Petropavlovsk**	**1.18**	**254**	*e*P	Pn	09 23 26.2	+0.7
PET				*i* S	Sn	09 23 40.9	+0.5
MKZ	**Mys Kozlova**	**1.39**	**30**	*e*P	Pn	09 23 28.0	-0.3
MKZ				*i* S	Sn	09 23 43.7	-1.7
RUS	**Russkaya**	**1.54**	**234**	*e*P	Pn	09 23 30.4	+0.1
RUS				*i* S	Sn	09 23 49.0	-0.1
GNL	**Ganaly**	**1.59**	**283**	*e*P	Pn	09 23 32.8	+1.8
GNL				*i* S	Sn	09 23 53.2	+2.9
GRL	**Gorelyy**	**1.70**	**243**	*e*P	Pn	09 23 34.1	+1.6
GRL				*i* S	Sn	09 23 54.6	+1.6
KBTR	**Krutoberegovo**	**3.14**	**24**	*e*P	Pn	09 23 53.6	+1.3
KBTR				*i* S	Sn	09 24 29.8	+1.2

*ISCJB **30** 09:27:00.2±1.6, 5.°3S±0.°2×68.°4E±0.°3, h10km, mb4.0/9, MS3.5/6, Error ellipse: s-maj=44.9km s-min=20.1km az=140.9*
*IDC **30** 09:27:01.1±1.4, 5.°32S×68.°49E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/24, mbtmp4.0/8, MS3.3/5, Ms1 3.3/5, ms1mx2.9/39, Error ellipse: s-maj=44.2km s-min=22.7km az=52.0*
*NEIC **30** 09:27:03.0±0.7, 5.°27S×68.°53E, h10km, mb4.1/1, Error ellipse: s-maj=23.8km s-min=15.9km az=51.0*

ISC 30 09:27:02.7±1.6,**5.°3S**±0.°2×**68.°5E**±0.°3,**h10**km,**n23**, σ0**°54**/10,**mb4.0**/9,**MS3.5**/6,**Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**31.45**	**277**	LR	LR	09 44 12.9	
	comp=Z,53nm,19.3s,MS3.2,baz=98,slow=33						
CMAR	**Chiang Mai Arr**	**38.21**	**51**	P	**P**	**09 34 22.9**	**-0.1**
	0.5nm,0.5s,mb3.5,baz=232,slow=10.0,SNR=4.9						
BOSA	**Boshof**	**47.02**	**235**	LR	LR	09 52 41.7	
	comp=Z,30nm,18.2s,MS3.3,baz=245,slow=33						
AAK	**Ala-Archa**	**48.03**	**6**	P	**P**	**09 35 42.8**	**+0.8**
	0.4nm,0.3s,mb4.0,baz=204,slow=10.0,SNR=4.1						
AAK				LR	LR	09 53 01.7	
	comp=Z,21nm,19.8s,MS3.1,baz=28,slow=32						
MKAR	**Makanchi Array**	**53.30**	**12**	P	**P**	**09 36 20.8**	**-1.0**
	0.8nm,0.6s,mb3.8,baz=199,slow=8.0,SNR=7.0						
MKAR				PcP	PcP	09 37 29.9	+0.6
	1.1nm,0.9s,baz=207,slow=2.9,SNR=4.0						
MKAR	**Makanchi Array**	**53.30**	**12**	P	**P**	**09 36 20.8**	**-1.0**
MKAR				PcP	PcP	09 37 29.9	+0.6
ABKAR	**Akbulak array**	**54.85**	**353**	*e*P	**P**	**09 36 32.8**	**-0.2**
	1.7nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**55.13**	**328**	P	**P**	**09 36 35.4**	**+0.2**
	1.8nm,1.1s,mb4.0,baz=147,slow=8.1,SNR=5.2						
FITZ	**Fitzroy Crossi**	**57.18**	**108**	LR	LR	09 56 17.7	
	comp=Z,50nm,18.2s,MS3.6,baz=269,slow=31						
ZALV	**Zalesovo Beam**	**60.62**	**11**	P	**P**	**09 37 13.0**	**-0.5**
	1.9nm,0.3s,mb4.7,baz=204,slow=8.3,SNR=3.2						
ZALV				LR	LR	10 02 15.9	
	comp=Z,24nm,18.4s,MS3.4,baz=66,slow=35						
SONM	**Songino Array**	**62.53**	**28**	P	**P**	**09 37 27.5**	**+0.9**
	1.4nm,0.6s,mb4.2,baz=226,slow=6.4,SNR=11						
ASAR	**Alice Springs**	**65.39**	**113**	P	**P**	**09 37 46.0**	**0.0**
	0.5nm,0.6s,mb3.7,baz=285,slow=6.0,SNR=7.4						
WRA	**Warramunga Arr**	**65.53**	**109**	P	**P**	**09 37 46.9**	**0.0**
	1.2nm,0.6s,mb4.1,baz=282,slow=6.2,SNR=16						
JHJ	**Hachijo jima 2**	**77.42**	**55**	LR	LR	10 12 42.9	
	comp=Z,287nm,18.1s,MS4.6,baz=135,slow=35						
DUG	**Dugway**	**145.25**	**2**	*e*PKPbc	PKPbc	09 46 41.9	+1.1
SMCO	**Snowmass**	**146.04**	**354**	*e*PKPbc	PKPbc	09 46 44.9	+1.7
WAKR	**Walker**	**146.19**	**11**	*e*PKPbc	PKPbc	09 46 45.5	+1.8
NVAR	**Mina Array Bea**	**146.46**	**10**	PKPbc	PKPbc	09 46 45.2	+0.7
	1.7nm,0.8s,baz=11,slow=2.2,SNR=17						
MIAR	**Mount Ida**	**146.50**	**333**	*e*PKPbc	PKPbc	09 46 45.8	+1.0
MSU	**Marysvale**	**146.95**	**1**	*e*PKPdf	PKPdf	09 46 44.1	+0.1
MSU				*e*PKPbc	PKPbc	09 46 45.9	0.0
MSU				*e*PKPab	PKPab	09 46 47.9	+0.6
PV01	**Paradox Valley**	**147.22**	**356**	*e*PKPdf	PKPdf	09 46 45.3	+0.8
PV01				*e*PKPbc	PKPbc	09 46 47.7	+1.0
TXAR	**Lajitas Array**	**154.98**	**344**	PKPbc	PKPbc	09 47 04.2	-1.2
	0.2nm,0.5s,baz=56,slow=4.6,SNR=6.0						
TXAR				PKPab	PKPab	09 47 21.5	+0.9
	0.8nm,0.8s,baz=61,slow=2.4,SNR=6.9						
TXAR	**Lajitas Array**	**154.98**	**344**	PKPbc	PKPbc	09 47 04.2	-1.2
TXAR				PKPab	PKPab	09 47 21.5	+0.9

*ISCJB **30** 09:57:37.4±0.8, 59.°39N±0.°04×26.°7E±0.°1, h10km, Error ellipse: s-maj=10.2km s-min=5.6km az=161.6*
*CSEM **30** 09:57:39.6±0.6, 59.°22N×27.°55E, h20km, ML2.4, Error ellipse: s-maj=16.9km s-min=6.3km az=94.0*
*IDC **30** 09:57:40.2±2.3, 59.°29N×26.°86E, h0km, mb1 3.3/3, mb1mx3.1/25, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=22.5km s-min=14.5km az=118.0*
*NAO **30** 09:57:40.1±1.1, 59.°28N×26.°92E, ML2.4*

ISC 30 09:57:39.5±0.8,**59.°32N**±0.°04×**26.°8E**±0.°1,**h10**km,**n15**, σ0**°93**/20,**Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.86**	**181**	Pg	**Pg**	**09 57 56.3**	**+0.2**
VSU				Lg		09 58 07.3	
VSU	**Vasula**	**0.86**	**181**	*e*P	**Pg**	**09 57 56.0**	**-0.1**
	SNR=90						
VSU	**Vasula**	**0.86**	**181**	Pg	**Pg**	**09 57 56.3**	**+0.2**
VSU				*e*S	**Sg**	**09 58 07.0**	**-0.3**
	235nm,0.8s,SNR=90						
MEF	**Metsahovi**	**1.50**	**308**	*e*P	**Pn**	**09 58 10.5**	**+4.2**
	SNR=50						
MEF				*e*S	**Sn**	**09 58 31.6**	**+5.7**
	54nm,0.6s,SNR=50						
FIA0	**FINESS Array S**	**2.16**	**351**	Pn	**Pn**	**09 58 17.8**	**+2.4**
	baz=164,slow=18						
FIA0				Lg		09 58 49.9	
	baz=175,slow=37						
FIA0				Rg		09 59 01.5	
	baz=170,slow=37						
FIA0	**FINESS Array S**	**2.16**	**351**	Pn	**Pn**	**09 58 17.8**	**+2.4**
	baz=164,slow=16,SNR=3.2						
FINES	**FINESS Array B**	**2.16**	**351**	Pn	**Pn**	**09 58 18.1**	**+2.7**
	3.1nm,0.3s,baz=168,slow=16,SNR=41						
FINES				Pg	**Pg**	**09 58 19.2**	**-1.5**
	3.1nm,0.3s,baz=166,slow=17,SNR=40						
FINES				Lg		09 58 49.6	
	4.7nm,0.3s,baz=169,slow=30,SNR=18						
FINES				Rg		09 59 01.4	
	94nm,1.0s,baz=165,slow=30,SNR=13						
RAF	**Rauma**	**3.02**	**307**	*e*P	**Pn**	**09 58 33.1**	**+5.8**
	SNR=50						
RAF				*e*S	**Sn**	**09 59 11.4**	**+7.9**
	12nm,0.5s,SNR=50						
HFS	**Hagfors**	**6.66**	**283**	Sn	**Sn**	**10 00 33.7**	**+0.7**
	baz=86,slow=28						
HFS				Lg		10 01 11.2	
	baz=86,slow=22						
HFS	**Hagfors**	**6.66**	**283**	Sn	**Sn**	**10 00 33.1**	**+0.1**
	0.2nm,0.3s,baz=96,slow=22,SNR=3.0						
HFS				Lg		10 01 09.2	
	0.4nm,0.3s,baz=92,slow=31,SNR=6.2						
NOA	**NORSAR Array B**	**7.94**	**289**	Pn	**Pn**	**09 59 34.5**	**-0.2**
	0.3nm,0.3s,baz=87,slow=13,SNR=5.5						
NOA				Sn	**Sn**	**10 01 04.2**	**-0.3**
	0.3nm,0.3s,baz=112,slow=5.8,SNR=2.8						
NOA				Lg		10 01 48.8	
	0.6nm,0.3s,baz=113,slow=20,SNR=5.1						
AKASG	**Malin Array Be**	**8.76**	**170**	Lg		10 02 10.3	
	0.5nm,0.3s,baz=350,slow=30,SNR=4.3						
ARA0	**ARCESS Array S**	**10.27**	**358**	Pn	**Pn**	**10 00 06.6**	**0.0**
	baz=170,slow=16						
ARA0	**ARCESS Array S**	**10.27**	**358**	Pn	**Pn**	**10 00 06.6**	**0.0**
	baz=170,slow=14,SNR=9.4						
ARCES	**ARCESS Array B**	**10.27**	**358**	Pn	**Pn**	**10 00 06.5**	**-0.2**
	0.1nm,0.3s,baz=175,slow=12,SNR=7.0						
ARCES				Sn	**Sn**	**10 01 57.0**	**-4.6**
	0.1nm,0.3s,baz=172,slow=26,SNR=2.9						

*NIED **30** 10:06:00.24.°10N×143.°60E, h14km, Mw4.3 Best double couple: M0 3.51000×10^15 NP1:φs 299.00000°, δ76.00000°, λ-128.00000°. NP2:φs 192.00000°, δ41.00000°, λ-22.00000°.*
*IDC **30** 10:06:41.8±0.6, 23.°67N×143.°01E, h0km, mb4.3/19, mb1 4.4/22, mb1mx4.4/28, mbtmp4.3/22, ML4.1/3, MS3.5/13, Ms1 3.5/13, ms1mx3.4/31, Error ellipse: s-maj=20.9km s-min=13.3km az=87.0*
*BJI **30** 10:06:41.6, 23.°70N×143.°05E, h12km, mB4.8/19, mb4.7/24, Ms4.6/14, Ms7 4.0/13*
*NEIC **30** 10:06:43.8±0.2, 23.°69N×142.°89E, h10km, mb4.8/36, MW4.3(NIED), Error ellipse: s-maj=6.5km s-min=5.7km az=105.0*
*ISCJB **30** 10:06:44.0±0.2, 23.°80N±0.°04×142.°91E±0.°04, h16km, mb4.6/74, MS3.7/17, Error ellipse: s-maj=6.2km s-min=4.0km az=38.8*
*MOS **30** 10:06:45.6±1.0, 23.°72N×142.°85E, h33km, mb4.9/21, Error ellipse: s-maj=13.3km s-min=7.5km az=93.7*

ISC 30 10:06:45.1±1.6,**23.°74N**±0.°04×**142.°96E**±0.°04,**h16**km±9km, **h18**km±4.3km:**pP-P**,**n449**,σ0**°54**/458,**mb4.6**/74,**MS3.7**/17, **139C-158D**,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.97**	**346**	P	**Pn**	**10 07 33.0**	**+1.4**
JHHJ				S	**Sn**	**10 08 06.4**	**-0.5**
CBIJ	**Chichi jima**	**3.42**	**348**	Pn	**Pn**	**10 07 39.1**	**+1.4**
	34nm,0.3s,baz=224,slow=4.4,SNR=9.5						
CBIJ				Sn	**Sn**	**10 08 16.6**	**-1.4**
	125nm,0.3s,baz=306,slow=21,SNR=13						
CBIJ				LR	LR	10 08 58.6	
	comp=Z,427nm,19.9s,baz=98,slow=39						
CBIJ	**Chichi jima**	**3.42**	**348**	P	**Pn**	**10 07 38.2**	**+0.4**
CBIJ				*e*S	**Sn**	**10 08 16.2**	**-1.8**
GUMO	**Guam**	**10.26**	**170**	LR	LR	10 12 38.0	
	comp=Z,303nm,19.3s,baz=209,slow=35						
BSO1	**Boso 1**	**11.01**	**351**	P	**Pn**	**10 09 22.2**	**+0.1**
BSO1				*e*S	**Sn**	**10 11 20.1**	**-4.8**
BSO3	**Boso 3**	**11.23**	**350**	P	**Pn**	**10 09 24.8**	**-0.2**
JIM2	**Oshima 3**	**11.37**	**345**	P	**Pn**	**10 09 26.5**	**-0.4**
BSO4	**Boso 4**	**11.44**	**349**	P	**Pn**	**10 09 29.3**	**+1.4**
BSO4				*e*S	**Sn**	**10 11 31.4**	**-4.1**
JOD2	**Odawara 2**	**11.97**	**345**	P	**Pn**	**10 09 35.4**	**+0.3**
JHU	**Hanno**	**12.49**	**346**	P	**Pn**	**10 09 40.8**	**-1.4**
JRY	**Ryogami san**	**12.73**	**345**	P	**Pn**	**10 09 44.0**	**-1.5**
JHO	**Hitachi**	**12.99**	**351**	P	**Pn**	**10 09 48.9**	**-0.2**
MJAR	**Matsushiro Arr**	**13.40**	**343**	Pn	**Pn**	**10 09 54.3**	**-0.5**
	0.9nm,0.3s,baz=155,slow=10.0,SNR=23						
MJAR				Sn	**Sn**	**10 12 14.9**	**-8.5**
	0.3nm,0.3s,baz=103,slow=20,SNR=3.8						
MJAR	**Matsushiro Arr**	**13.40**	**343**	P	**Pn**	**10 09 54.3**	**-0.4**
MJAR						10 12 14.9	
MAJO	**Matsushiro**	**13.40**	**343**	*e*Pn	**Pn**	**10 09 54.6**	**-0.2**
MAJO	**Matsushiro**	**13.40**	**343**	*e*P	**Pn**	**10 09 54.6**	**-0.1**
MAT	**Matsushiro**	**13.40**	**343**	P	**Pn**	**10 09 53.7**	**-1.0**
MAT				*e*S	**Sn**	**10 12 13.0**	**-10**
ERM	**Erimo**	**18.23**	**0**	*de*P	**Pn**	**10 10 57.6**	**+0.2**
ERM				pmax	pmax		
	comp=Z,22nm,1.0s						
KSRS	**Korea Array**	**18.79**	**320**	P	**Pn**	**10 11 04.2**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=137,slow=10,SNR=14						
KSRS				LR	LR	10 17 46.7	
	comp=Z,150nm,18.4s,baz=130,slow=35						
ASAJ	**Asahikawa**	**20.33**	**359**	P	**P**	**10 11 22.1**	**+1.5**
	comp=Z,9.0nm,0.9s,baz=56,slow=7.3,SNR=2.5						
DAV	**Davao City (W)**	**23.52**	**228**	LR	LR	10 19 32.2	
	comp=Z,164nm,20.3s,MS3.5,baz=324,slow=33						
CN2	**Changchun**	**24.65**	**329**	*e*P	**P**	**10 12 05.8**	**+0.8**
KLR	**Kul'dur**	**26.93**	**344**	*e*P	**P**	**10 12 21.8**	**-3.8**
BJI	**Beijing**	**27.80**	**312**	P	**P**	**10 12 33.5**	**-0.1**
BJI				S	**S**	**10 17 11.0**	**-4.9**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.7						
BJI				LR	LR		
	comp=Z,55nm,16.3s,MS3.2						
HHC	**Hu-ho-hao-te**	**31.33**	**311**	*e*P	**P**	**10 13 06.0**	**+1.2**
HHC				pP	pP	10 13 10.5	+0.9
HHC				sP	sP	10 13 13.0	+1.4
HHC				PP	PP	10 14 10.0	-5.6
HHC				PcP	PcP	10 15 59.3	+0.7
HHC				S	**S**	**10 18 12.0**	**+0.8**
HHC				sS	sS	10 18 19.3	+0.1
HHC				ScP	ScP	10 19 41.0	-0.2
HHC				SS	SS	10 19 59.3	-26
HHC				ScS	ScS	10 23 37.5	-1.1
HHC				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,100nm,6.4s						
HHC				LR	LR		
	comp=N,170nm,13.8s,MS4.0						
HHC				LR	LR		
	comp=E,170nm,14.1s,MS4.0						
HHC				LR	LR		
	comp=Z,140nm,14.7s,MS3.8						
PETK	**Petropavlovsk-**	**31.39**	**17**	LR	LR	10 23 14.6	
	comp=Z,78nm,20.9s,MS3.4,baz=102,slow=32						
GYA	**Guiyang**	**32.91**	**282**	P	**P**	**10 13 19.8**	**+0.9**
GYA				PP	PP	10 14 30.0	-3.4
GYA				PcP	PcP	10 16 03.5	+0.3
GYA				S	**S**	**10 18 36.0**	**-0.3**
GYA				ScP	ScP	10 19 47

comp=Z,49nm,15.0s,MS3.6
ZALV Zalesovo Beam 52.50 321 LR LR 10 39 28.9
comp=Z,33nm,18.2s,MS3.4,baz=66,slow=37
MKAR Makanchi Array 53.18 312 P P **10 16 01.9 -0.5**
comp=Z,0.8nm,0.5s,mb3.9,baz=99,slow=7.5,SNR=4.0
MKAR Makanchi Array 53.18 312 *ce*P P **10 16 04.1 +1.6**
MKAR pmax pmax
comp=Z,10.0nm,0.5s
STKA Stephens Creek 55.31 181 P P **10 16 16.7 -1.4**
comp=Z,3.3nm,0.6s,mb4.5,baz=4.0,slow=8.4,SNR=7.6
STKA LR LR 10 40 58.3
comp=Z,104nm,21.3s,MS3.9,baz=206,slow=37
STKA Stephens Creek 55.31 181 *e*P P **10 16 16.6 -1.4**
comp=Z,2.3nm,0.6s,mb4.4
STKA Stephens Creek 55.31 181 P P **10 16 16.7 -1.4**
STKA LR LR 10 40 58.3
STKA Stephens Creek 55.31 181 P P **10 16 16.7 -1.3**
KURK Kurchatov 55.86 316 *e*P P **10 16 22.1 +0.2**
comp=Z,11nm,1.5s,mb4.7
KURK Kurchatov 55.86 316 *e*P P **10 16 22.1 +0.3**
KURK pmax pmax
comp=Z,11nm,1.5s,mb4.7
KDAK Kodiak Island 56.66 35 P P **10 16 26.2 -1.2**
comp=Z,2.2nm,0.5s,mb4.4,baz=181,slow=5.0,SNR=4.3
KDAK Kodiak Island 56.66 35 P P **10 16 26.2 -1.2**
AFI Afiamalu 57.95 126 LR LR 10 35 19.5
comp=Z,82nm,20.8s,MS3.8,baz=95,slow=30
BPAW Bear Paw Mtn. 58.47 28 *e*P P **10 16 40.7 +0.6**
comp=Z,12nm,1.1s,mb4.8
TRF Thorofare Moun 58.66 29 *e*P P **10 16 41.5 +0.1**
comp=Z,12nm,1.0s,mb4.9
PMR Palmer 58.91 31 *e*P P **10 16 42.5 -0.8**
comp=Z,31nm,1.6s,mb5.1
PMR Palmer 58.91 31 *e*P P **10 16 42.5 -0.7**
PMR pmax pmax
comp=Z,31nm,1.6s,mb5.1
SML Sawmill 59.32 31 *e*P P **10 16 46.3 +0.3**
comp=Z,4.7nm,1.0s,mb4.5
SML Sawmill 59.32 31 *e*P P **10 16 46.3 +0.3**
SML pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
ILAR Eielson Array 60.33 28 P P **10 16 51.5 -1.4**
comp=Z,4.7nm,0.9s,mb4.5,baz=260,slow=5.6,SNR=42
ILAR Eielson Array 60.33 28 P P **10 16 51.6 -1.3**
BVAR Borovoye Array 61.00 319 P P **10 16 56.5 -1.2**
comp=Z,2.6nm,0.7s,mb4.5,baz=97,slow=7.6,SNR=8.8
BVAR Borovoye Array 61.00 319 P P **10 16 56.5 -1.2**
BRVK Borovoye 61.06 319 ⇊*e*P P **10 16 58.0 -0.1**
BRVK pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
KKAR Karatay Array 61.65 307 *e*P P **10 17 02.5 +0.3**
KKAR Karatay Array 61.65 307 *e*P P **10 17 02.5 +0.2**
ARU Arti 67.51 323 *d i*P P **10 17 40.1 -0.2**
ARU 10 20 06.3
ARU S S 10 26 35.7 -0.3
ARU SS SS 10 30 50.0 -5.9
ARU pmax pmax
comp=Z,20nm,1.2s,mb5.0
DLBC Dease Lake 68.56 34 *e*P P **10 17 47.9 +1.0**
AKTK Aktyubinsk 68.94 317 P P **10 17 49.9 +0.5**
AKTO Aktyubinsk 68.94 317 P P **10 17 49.9 +0.5**
comp=Z,0.9nm,0.5s,mb3.9,baz=43,slow=7.1,SNR=2.7
AKTO Aktyubinsk 68.94 317 P P **10 17 49.9 +0.5**
YKA Yellowknife Ar 74.76 28 P P **10 18 23.7 -0.4**
comp=Z,3.4nm,0.7s,mb4.4,baz=294,slow=5.8,SNR=9.7
YKA LR LR 10 48 39.3
comp=Z,4.1nm,19.3s,MS2.7,baz=170,slow=34
YKA Yellowknife Ar 74.76 28 P P **10 18 23.7 -0.4**
YKA LR LR 10 48 39.3
YKA Yellowknife Ar 74.76 28 P P **10 18 23.7 -0.4**
APA Apatity 75.41 338 ⇑*i*P P **10 18 30.0 +2.2**
APA *e*S S 10 28 10.0 +3.1
APA pmax pmax
comp=Z,18nm,1.0s,mb5.0
APA MLR MLR
comp=Z,1μm,21.0s
JCW Jim Creek 75.94 43 *e*P P **10 18 31.8 +0.6**
F04A Amboy 76.40 46 ⇑P P **10 18 33.7 -0.2**
baz=76
G04A Mulino 76.61 46 ⇊P P **10 18 35.2 +0.2**
baz=76
ARCES ARCESS Array B 76.93 341 P P **10 18 37.6 +1.2**
comp=Z,2.5nm,0.6s,mb4.4,baz=77,slow=8.8,SNR=14
ARCES ARCESS Array B 76.93 341 P P **10 18 37.6 +1.2**
H04A Detroit Lake 76.99 47 ⇊P P **10 18 36.9 -0.3**
baz=77
ETW Entiat 77.16 44 *e*P P **10 18 38.5 +0.4**
B08A Colville Reser 77.51 43 ⇊P P **10 18 39.5 -0.5**
baz=77
YBH Yreka Blue Hor 77.66 50 *e*P P **10 18 41.8 +0.7**
comp=Z,3.4nm,0.9s,mb4.3
YBH Yreka Blue Hor 77.66 50 *e*P P **10 18 41.8 +0.7**
YBH pmax pmax
comp=Z,3.0nm,0.9s
G06A Carlson Farm, 77.82 46 ⇊P P **10 18 41.4 -0.5**
baz=78
F07A Phinny Hill Vi 78.04 45 ⇑P P **10 18 42.9 -0.2**
baz=78
HAWA Hanford 78.11 45 *e*P P **10 18 43.9 +0.4**
comp=Z,17nm,1.8s,mb4.7
WDC Whiskeytown Da 78.19 51 *e*P P **10 18 44.3 +0.3**
comp=Z,19nm,2.0s,mb4.7
WDC Whiskeytown Da 78.19 51 *e*P P **10 18 44.3 +0.3**
WDC pmax pmax
comp=Z,19nm,2.0s,mb4.7
D08A Wollman Farm, 78.25 44 ⇊P P **10 18 43.9 -0.3**
baz=78
E08A Dider Farm, El 78.38 44 ⇑P P **10 18 44.8 -0.1**
baz=78
JOF Joensuu 78.39 334 *e*p P **10 18 43.9 -0.8**
comp=Z,6.3nm,0.5s,mb4.8
K05A Summer Lake 78.56 48 ⇊P P **10 18 46.0 0.0**
baz=78
G08A Pilot Rock 78.90 45 ⇊P P **10 18 47.5 -0.4**
baz=79
NEW Newport 78.91 42 ⇊P P **10 18 47.8 -0.1**
baz=79
NEW Newport 78.91 42 *e*P P **10 18 48.0 +0.1**
comp=Z,8.4nm,1.1s,mb4.6
NEW Newport 78.91 42 *e*P P **10 18 48.0 +0.2**
NEW pmax pmax
comp=Z,8.0nm,1.1s
E09A Wood Farm, Sta 78.95 44 ⇊P P **10 18 47.8 -0.3**
baz=79
C11A Tepee Creek (N 79.61 42 ⇑P P **10 18 51.5 -0.2**
baz=80
OBN Obninsk 79.69 326 ⇊*e*P P **10 18 51.4 -0.5**
OBN pmax pmax
comp=Z,20nm,1.6s,mb4.8
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.2
F10A Beach Ranch, E 79.75 44 ⇑P P **10 18 52.6 +0.1**
baz=80
J08A Circle Bar Ran 79.96 47 ⇑P P **10 18 53.0 -0.6**
baz=80
VSR Storozhevoye 79.99 322 *e*P P **10 18 52.4 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.5s
VORD Divnogorie 80.03 321 *e*P P **10 18 54.2 +0.3**
VORD pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
VORD pmax pmax
comp=N,2.0nm,0.5s
VORD pmax pmax
comp=E,20nm,1.3s
A13A Flathead Natio 80.28 41 ⇊P P **10 18 54.9 -0.3**
baz=80
B13A Whitefish 80.48 41 ⇊P P **10 18 56.8 +0.4**
baz=80
E12A Beaver Dam Sad 80.62 43 ⇊P P **10 18 57.0 -0.1**
baz=80
WCN Washoe City 80.66 51 ⇑P P **10 18 57.6 +0.1**
baz=80
CMB Columbia Colle 80.69 53 *e*P P **10 18 57.8 +0.1**
comp=E,15nm,1.4s,mb4.7
CMB Columbia Colle 80.69 53 *e*P P **10 18 57.8 +0.1**
CMB pmax pmax
comp=Z,15nm,1.4s,mb4.7
C13A Hot Springs 80.71 42 ⇑P P **10 18 57.6 0.0**
baz=81,SNR=8.1
KAF Kangasniemi 80.80 335 *e*p P **10 18 55.7 -2.1**
A14A Double T Ranch 80.86 40 ⇑P P **10 18 58.9 +0.5**
baz=81,SNR=6.5
JTMT Jette 80.86 42 *e*P P **10 18 58.8 +0.3**
D13A Huson 81.03 42 ⇊P P **10 18 59.2 -0.1**
baz=81
F12A Elk City 81.10 44 ⇊P P **10 18 59.9 +0.2**
baz=81
C14A Swan Lake 81.18 42 ⇊P P **10 18 60.0 -0.1**
baz=81
WAKR Walker 81.20 52 *e*P P **10 19 00.9 +0.5**
comp=Z,1.6nm,0.7s,mb4.1
B14A Marquette Ranc 81.21 41 ⇊P P **10 19 00.4 +0.1**
baz=81,SNR=6.2
FINES FINESS Array B 81.26 334 P P **10 18 59.1 -1.1**
comp=Z,2.8nm,0.5s,mb4.5,baz=71,slow=4.9,SNR=9.6
FINES LR LR 10 58 50.5
comp=Z,36nm,21.4s,MS3.7,baz=69,slow=38
FINES FINESS Array B 81.26 334 P P **10 18 59.2 -1.1**
A15A Johnson Ranch, 81.26 40 ⇊P P **10 18 59.9 -0.6**
baz=81,SNR=8.2
G12A Big Creek, Yel 81.31 45 ⇊P P **10 19 00.6 -0.3**
baz=81
E13A Victor 81.48 43 ⇑P P **10 19 01.6 -0.1**
baz=81
SLMT Seeley Lake 81.56 42 *e*P P **10 19 02.4 +0.3**
D14A Greenough 81.62 42 ⇊P P **10 19 02.4 -0.1**
baz=82
B15A Bradely Ranch, 81.66 41 ⇊P P **10 19 02.6 0.0**
baz=82,SNR=7.9
F13A Darby 81.67 44 ⇑P P **10 19 01.8 -0.9**
baz=82,SNR=5.5
MFID Camas Ranch 81.70 46 ⇊P P **10 19 02.7 -0.3**
baz=82
H12A Diamond D Ranc 81.86 45 ⇑P P **10 19 03.5 -0.3**
baz=82
C15A Salmond Ranch, 81.87 41 ⇊P P **10 19 03.5 -0.3**
baz=82
A16A West Butte Ran 81.95 40 ⇑P P **10 19 03.9 -0.2**
baz=82
I12A Atlanta 82.00 46 ⇊P P **10 19 04.5 0.0**
baz=82
G13A Cobalt 82.03 44 ⇑P P **10 19 04.1 -0.5**
baz=82,SNR=12
NVAR Mina Array Bea 82.04 52 P P **10 19 05.0 +0.1**
comp=Z,3.6nm,0.9s,mb4.3,baz=279,slow=5.4,SNR=19
NVAR Mina Array Bea 82.04 52 P P **10 19 05.0 +0.1**
B16A M & M Farms, S 82.12 40 ⇑P P **10 19 04.5 -0.6**
baz=82,SNR=7.5
H13A Challis 82.24 45 ⇊P P **10 19 05.8 0.0**
baz=82
PKM Peak Mountain 82.34 55 ⇊P P **10 19 05.9 -0.6**
baz=82
C16A Fuhringer Ranc 82.38 41 ⇊P P **10 19 05.9 -0.5**
baz=82,SNR=7.6
E15A Deer Lodge 82.45 43 ⇊P P **10 19 06.5 -0.3**
baz=82
A17A Triple J Farms 82.47 40 ⇑P P **10 19 06.8 -0.1**
baz=82
VES Vestal, Richgr 82.51 54 ⇑P P **10 19 06.8 -0.6**
baz=82
HLID Hailey 82.57 46 ⇊P P **10 19 07.2 -0.3**
baz=82
HLID Hailey 82.57 46 *e*P P **10 19 07.9 +0.3**
comp=Z,59nm,3.0s
I13A Wildhorse Cree 82.61 45 ⇑P P **10 19 07.4 -0.3**
baz=82,SNR=5.2
B17A L&G Farms, Che 82.72 40 ⇑P P **10 19 07.9 -0.3**
baz=83,SNR=17
H14A Leadore 82.79 44 ⇊P P **10 19 08.4 -0.3**
baz=83
F15A Butte 82.80 43 ⇊P P **10 19 08.5 -0.2**
baz=83,SNR=7.0
J13A Cove Ranch, Pi 82.80 46 ⇊P P **10 19 08.5 -0.2**
baz=83
LRM Limekiln Ridge 82.84 43 *e*P P **10 19 09.2 +0.3**
D16A Dana Ranch, Ca 82.85 42 ⇊P P **10 19 09.1 +0.2**
baz=83
A18A Metzger Ranch, 82.98 39 ⇊P P **10 19 09.3 -0.3**
baz=83,SNR=8.8
E16A East Helena 82.99 42 ⇑P P **10 19 09.5 -0.2**
baz=83,SNR=5.3
ISA Isabella 83.04 54 ⇊P P **10 19 09.6 -0.5**
baz=83
I14A Mackay 83.04 45 ⇑P P **10 19 10.5 +0.6**
baz=83,SNR=6.1
C17A Wharram Farm, 83.04 41 ⇊P P **10 19 09.7 -0.2**
baz=83
G15A Dillon 83.11 44 ⇊P P **10 19 10.6 +0.3**
baz=83
MIB Mutribah 83.11 299 *e*P P **10 19 10.1 -0.5**
MIB AMb AMB 10 19 11.3
comp=Z,40nm,0.8s,mb5.5
J14A Carey 83.27 46 ⇊P P **10 19 11.6 +0.4**
baz=83,SNR=5.7
B18A Beardsley Farm 83.27 40 ⇑P P **10 19 10.7 -0.4**
baz=83
RDF Al-Radifah 83.29 299 *e*P P **10 19 11.0 -0.6**
RDF AMb AMB 10 19 15.5
comp=Z,27nm,1.1s,mb5.2
GRAC Grapevine Rang 83.30 53 ⇊P P **10 19 11.4 -0.1**
baz=83
D17A Six Diamond Ra 83.31 41 ⇑P P **10 19 11.4 +0.1**
baz=83
F16A Kennard Place, 83.37 43 ⇊P P **10 19 11.3 -0.3**
baz=83
NAY Al-Naaiem 83.41 299 *e*P P **10 19 11.6 -0.6**
NAY AMb AMB 10 19 12.9
comp=Z,28nm,1.1s,mb5.2
EGMT Eagleton 83.46 40 ⇊P P **10 19 12.0 0.0**
baz=83
G16A Moss Hill, Enn 83.51 43 ⇑P P **10 19 12.2 -0.2**
baz=83,SNR=6.5
E17A Martinsdale 83.53 42 ⇊P P **10 19 12.5 +0.1**
baz=83
A19A Klindworth Far 83.62 39 ⇑P P **10 19 13.0 +0.2**
baz=84,SNR=7.7
LRMC Laurel Mountai 83.70 54 ⇑P P **10 19 12.9 -0.6**
baz=84
EDW2 Edwards Air Fo 83.72 55 ⇑P P **10 19 13.1 -0.5**
baz=84
B19A Brinkman Farms 83.73 40 ⇑P P **10 19 13.5 +0.1**
baz=84,SNR=10
D18A Linhart Farms, 83.83 41 ⇑P P **10 19 13.9 -0.1**
baz=84
K14A Jones Ranch, D 83.83 46 ⇊P P **10 19 13.9 -0.2**
baz=84
FURC Furnace Creek, 83.90 53 ⇑P P **10 19 14.5 0.0**
baz=84
F17A Fitzpatrick Pl 83.91 42 ⇊P P **10 19 14.5 +0.1**
baz=84
J15A Blackfoot 83.94 45 ⇊P P **10 19 15.0 +0.4**
baz=84,SNR=10
C19A Slack Wire Ran 84.02 40 ⇑P P **10 19 15.1 +0.2**
baz=84
R11A Troy Canyon, C 84.02 51 ⇊P P **10 19 14.7 -0.4**
baz=84,SNR=5.7
L14A Malta 84.02 47 ⇊P P **10 19 15.2 +0.2**
baz=84
E18A Harlowton 84.06 42 ⇑P P **10 19 15.2 +0.1**
baz=84,SNR=5.7
H16A Russell Place, 84.10 44 ⇑P P **10 19 15.9 +0.5**
baz=84
A20A Cobblestone Ra 84.11 39 ⇑P P **10 19 15.4 +0.1**
baz=84
G17A Pierce Place, 84.13 43 ⇊P P **10 19 15.8 +0.3**
baz=84
K15A Arbon 84.20 46 ⇊P P **10 19 16.1 +0.2**
baz=84
FFC Flin Flon 84.21 32 *e*P P **10 19 15.5 -0.2**
comp=Z,9.9nm,0.9s,mb4.9
FFC Flin Flon 84.21 32 *i*P P **10 19 16.3 +0.6**
U10A Ash Meadows, A 84.31 53 ⇊P P **10 19 16.4 -0.3**
baz=84
I16A Newdale 84.33 44 ⇑P P **10 19 17.0 +0.4**
baz=84,SNR=6.0
D19A Cripps Ranch, 84.39 41 ⇑P P **10 19 16.8 -0.1**
baz=84,SNR=5.6
GSC Goldstone 84.43 54 ⇊P P **10 19 17.1 -0.1**
baz=84
GSC Goldstone 84.43 54 *e*P P **10 19 17.3 0.0**
comp=Z,3.9nm,0.9s,mb4.5
GSC Goldstone 84.43 54 *e*P P **10 19 17.3 0.0**
GSC pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
F18A Big Timber 84.49 42 ⇑P P **10 19 17.1 -0.2**
baz=84
J16A Bone 84.53 45 ⇑P P **10 19 18.0 +0.4**
baz=84,SNR=9.2
L15A Malad City 84.60 46 ⇊P P **10 19 17.6 -0.4**
baz=84
A21A Bergtoll Ranch 84.63 38 ⇑P P **10 19 17.6 -0.4**
baz=84,SNR=9.0
C20A Veseth Ranch, 84.64 40 ⇑P P **10 19 18.0 -0.1**
baz=84
DCID1 Drake Creek 84.66 45 *e*P P **10 19 19.8 +1.5**
comp=Z,12nm,1.2s,mb4.9
H17A Grant Village 84.67 44 ⇑P P **10 19 19.9 +1.6**
baz=84,SNR=5.8
IMW Indian Meadow 84.67 44 *e*P P **10 19 19.3 +1.0**
comp=Z,4.8nm,0.9s,mb4.6
RRI2 Red Ridge 84.68 45 *e*P P **10 19 19.2 +0.8**
comp=Z,4.3nm,0.9s,mb4.6
LKWY Lake 84.70 43 *e*P P **10 19 20.9 +2.5**
comp=Z,106nm,2.9s,mb5.5
LKWY Lake 84.70 43 *e*P P **10 19 20.9 +2.5**
LKWY pmax pmax
comp=Z,106nm,2.9s,mb5.5
FLWY Flagg Ranch 84.74 44 *e*P P **10 19 20.0 +1.4**
comp=Z,5.8nm,0.8s,mb4.8
K16A Soda Springs 84.75 45 ⇑P P **10 19 19.6 +0.9**
baz=85,SNR=7.8
E19A Rath Farm, Rou 84.79 41 ⇊P P **10 19 18.8 -0.1**
baz=85
M15A Larsen Ranch, 84.81 47 ⇑P P **10 19 18.7 -0.4**
baz=85,SNR=6.7
TPAW Teton Pass 84.86 45 *e*P P **10 19 20.1 +0.9**
comp=Z,3.5nm,0.9s,mb4.5
MOOW Moose Ponds 84.87 44 *e*P P **10 19 20.0 +0.7**
comp=Z,6.1nm,1.3s,mb4.6
D20A Manuel Ranch, 84.87 40 ⇊P P **10 19 19.3 +0.1**
baz=85,SNR=8.5
HEC Hector,Ludlow 84.98 54 ⇊P P **10 19 19.8 -0.3**
baz=85
F19A Roth Farm, Mol 84.99 42 ⇊P P **10 19 20.0 +0.2**
baz=85
N15A Stansbury Isla 85.02 47 ⇑P P **10 19 20.1 0.0**
baz=85
LOHW Long Hollow 85.02 44 *e*P P **10 19 20.5 +0.5**
comp=Z,4.0nm,1.1s,mb4.5
TUQ Turquoise Moun 85.02 54 ⇊P P **10 19 19.9 -0.4**
baz=85
H18A Shoshone NF, C 85.11 43 ⇑P P **10 19 21.1 +0.6**
baz=85
C21A Desert Coulee 85.12 39 ⇊P P **10 19 20.5 +0.1**
baz=85,SNR=8.8
SHPR Sheep Range 85.12 52 *e*P P **10 19 21.0 +0.3**
DUG Dugway 85.14 48 ⇊P P **10 19 20.6 -0.1**
baz=85,SNR=9.4
DUG Dugway 85.14 48 *e*P P **10 19 20.9 +0.2**
comp=Z,5.6nm,0.8s,mb4.8
DUG Dugway 85.14 48 *e*P P **10 19 20.9 +0.2**
DUG pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
RLMT Red Lodge 85.14 43 ⇊P P **10 19 21.2 +0.5**
baz=85,SNR=8.6
RLMT Red Lodge 85.14 43 *e*P P **10 19 21.4 +0.7**
comp=Z,7.2nm,0.8s,mb4.8
E20A Meyer Farm, Mu 85.16 41 ⇊P P **10 19 20.8 0.0**
baz=85
A22A Carney Farms, 85.20 38 ⇑P P **10 19 20.5 -0.3**
baz=85
V11A Goodsprings 85.21 53 ⇑P P **10 19 20.7 -0.5**
baz=85
L16A Fish Haven 85.23 46 ⇑P P **10 19 21.2 0.0**
baz=85
P14A Drum Mountains 85.23 49 ⇊P P **10 19 20.7 -0.5**
baz=85,SNR=7.7
R13A O'Grain Ranch, 85.23 50 ⇑P P **10 19 21.2 0.0**
baz=85
HWUT Hardware Ranch 85.33 46 *e*P P **10 19 21.6 -0.1**
comp=Z,9.3nm,1.3s,mb4.8
Q14A Sevier Lake (B 85.36 49 ⇊P P **10 19 21.4 -0.5**
baz=85,SNR=8.2
PFO Pinyon Flat Ob 85.41 55 ⇑P P **10 19 21.7 -0.6**
baz=85
PFO Pinyon Flat Ob 85.41 55 *e*P P **10 19 22.0 -0.2**
comp=Z,7.8nm,1.2s,mb4.7
PFO Pinyon Flat Ob 85.41 55 *e*P P **10 19 22.0 -0.2**
PFO pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
M16A Huntsville 85.42 47 ⇑P P **10 19 21.6 -0.5**
baz=85
GMRC Granite Mounta 85.50 54 ⇊P P **10 19 22.4 -0.3**
baz=85
B22A Reddig Ranch S 85.51 39 ⇑P P **10 19 21.8 -0.6**
baz=85
H19A Powell 85.54 43 ⇊P P **10 19 22.5 -0.1**
baz=85
L17A Cokeville 85.56 46 ⇑P P **10 19 22.9 +0.1**
baz=85
D21A La Casta Ranch 85.56 40 ⇑P P **10 19 22.6 -0.1**
baz=85,SNR=8.1
S13A Holt Ranch, En 85.58 51 ⇑P P **10 19 22.5 -0.5**
baz=85,SNR=6.2
BELC Belle Mtn. Jos 85.58 55 ⇑P P **10 19 22.9 -0.2**
baz=86
J18A Kendall Valley 85.59 45 ⇊P P **10 19 22.8 -0.1**
baz=85,SNR=11
V12A Nelson 85.68 53 ⇊P P **10 19 23.0 -0.5**
baz=86
AKASG Malin Array Be 85.74 324 P P **10 19 23.0 -0.5**
comp=Z,0.8nm,0.5s,mb4.2,baz=52,slow=5.6,SNR=3.8
AKASG Malin Array Be 85.74 324 P P **10 19 23.0 -0.5**
MONP Monument Peak 85.74 56 ⇑P P **10 19 23.6 -0.3**
baz=86
G20A Bridger 85.75 42 ⇊P P **10 19 23.3 -0.4**
baz=86
E21A Keefer Ranch, 85.78 41 ⇊P P **10 19 23.4 -0.3**
baz=86
P15A Leamington 85.79 49 ⇊P P **10 19 23.7 -0.3**
baz=86
T13A Saint George 85.80 51 ⇑P P **10 19 23.8 -0.3**
baz=86,SNR=6.9
I19A Meeteetse 85.84 43 ⇑P P **10 19 24.4 +0.3**
baz=86
K18A Toltan Ranch, 85.85 45 ⇊P P **10 19 24.7 +0.5**
baz=86
C22A Vida 85.86 39 ⇑P P **10 19 23.7 -0.5**
baz=86
JLU Jordanelle 85.87 47 *e*P P **10 19 24.7 +0.3**
comp=Z,5.6nm,0.8s,mb4.8
CCUT Cedar City 85.95 51 *e*P P **10 19 25.3 +0.5**
comp=Z,19nm,2.0s,mb5.0
Q15A Fillmore 85.98 49 ⇑P P **10 19 24.8 -0.1**
baz=86
M17A Scullys Gap (B 85.99 46 ⇊P P **10 19 24.6 -0.4**
baz=86
S14A Cedar City 85.99 50 ⇊P P **10 19 25.0 0.0**
baz=86
D22A Cohagen 86.00 40 ⇑P P **10 19 24.8 -0.1**
baz=86
B23A Brockton 86.00 38 ⇊P P **10 19 24.4 -0.5**
baz=86,SNR=5.3
O16A Springville 86.02 48 ⇊P P **10 19 25.1 0.0**
baz=86
U13A Pakoon Wash 86.02 52 ⇊P P **10 19 24.8 -0.4**
baz=86,SNR=11
DAU Daniels Canyon 86.09 47 *e*P P **10 19 25.9 +0.5**
DAU Daniels Canyon 86.09 47 *e*P P **10 19 26.0 +0.5**
N17A Moffit Pass 86.13 47 ⇑P P **10 19 25.1 -0.5**
baz=86
BC3 Big Chuckawall 86.14 55 ⇑P P **10 19 25.7 -0.2**
baz=86
IRM Iron Mountain 86.15 54 ⇊P P **10 19 25.2 -0.6**
baz=86
J19A Crowheart 86.18 44 ⇑P P **10 19 25.8 0.0**
baz=86,SNR=8.6
L18A Fontenelle, Gr 86.19 46 ⇑P P **10 19 26.2 +0.2**
baz=86
LAO LASA Array 86.21 40 ⇑P P **10 19 25.9 0.0**
baz=86,SNR=9.0
LAO LASA Array 86.21 40 *e*P P **10 19 26.3 +0.4**
comp=Z,17nm,1.1s,mb5.2
C23A Lambert 86.24 39 ⇊P P **10 19 25.8 -0.2**
baz=86
H20A Greybull 86.24 43 ⇊P P **10 19 26.1 0.0**
baz=86
V13A Grand Canyon W 86.26 52 ⇊P P **10 19 26.2 -0.2**
baz=86
MSU Marysvale 86.34 49 *e*P P **10 19 27.3 +0.6**
MSU Marysvale 86.34 49 *e*P P **10 19 27.3 +0.6**
G21A Lodge Grass 86.36 42 ⇊P P **10 19 26.9 +0.3**
baz=86
T14A Hurricane 86.36 51 ⇊P P **10 19 27.0 +0.1**
baz=86,SNR=6.0
M18A Lyman 86.41 46 ⇊P P **10 19 26.7 -0.3**
baz=86

R15A	Junction	86.41	50	⇑P	P	10 19 27.3	+0.2
	baz=86						
I20A	Worland	86.43	43	⇓P	P	10 19 27.2	+0.1
	baz=86						
K19A	Absolon Red Bu	86.53	44	⇑P	P	10 19 26.9	-0.6
	baz=86,SNR=5.1						
O17A	Robinson Place	86.54	47	⇓P	P	10 19 27.6	-0.1
	baz=86,SNR=6.5						
L19A	Farson	86.55	45	⇑P	P	10 19 28.0	+0.4
	baz=86						
D23A	Lindsay	86.55	39	⇑P	P	10 19 28.2	+0.6
	baz=86						
U14A	Mt Trumbull	86.59	52	⇓P	P	10 19 27.8	-0.2
	baz=86,SNR=6.3						
W13A	Hualapai Mount	86.67	53	⇑P	P	10 19 28.4	0.0
	baz=86						
J20A	Shoshoni	86.75	44	⇑P	P	10 19 28.3	-0.4
	baz=87						
Y12C	Blythe	86.80	55	⇓P	P	10 19 29.1	+0.1
	baz=87						
C24A	Savage	86.82	39	⇓P	P	10 19 29.4	+0.5
	baz=87						
PDMCI	Parker Dam,Lak	86.84	54	⇓P	P	10 19 29.0	-0.3
	baz=87						
Q16A	Castle Valley	86.85	49	⇑P	P	10 19 29.2	0.0
	baz=87,SNR=6.4						
GLA	Glamis	86.88	55	⇑P	P	10 19 29.3	-0.2
	baz=87						
GLA	Glamis	86.88	55	*e*P	P	10 19 29.7	+0.2
	comp=Z,10nm,1.0s,mb5.0						
GLA	Glamis	86.88	55	*e*P	P	10 19 29.7	+0.2
GLA				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.0						
N18A	Larsen Ranch,	86.88	46	⇑P	P	10 19 29.3	0.0
	baz=87						
P17A	Butcher Ranch,	86.88	48	⇑P	P	10 19 29.1	-0.3
	baz=87						
T15A	Red Dirt Ranch	86.88	51	⇓P	P	10 19 29.3	-0.2
	baz=87,SNR=6.6						
R16A	Teasdale	86.93	49	⇓P	P	10 19 29.3	-0.3
	baz=87,SNR=12						
K20A	Yellowstone Ra	86.93	44	⇓P	P	10 19 28.9	-0.6
	baz=87						
X13A	Yucca	86.94	54	⇑P	P	10 19 29.3	-0.4
	baz=87						
NOA	NORSAR Array B	86.98	339	P	P	10 19 27.8	-1.6
	comp=Z,1.7nm,0.9s,mb4.3,baz=52,slow=4.3,SNR=3.3						
NOA	NORSAR Array B	86.98	339	P	P	10 19 27.8	-1.6
NOA	NORSAR Array B	86.98	339	P	P	10 19 27.8	-1.6
V14A	Boquillas Ranc	87.00	52	⇑P	P	10 19 29.8	-0.2
	baz=87,SNR=7.5						
O18A	Roosevelt	87.00	47	⇓P	P	10 19 30.0	+0.1
	baz=87						
I21A	Big Trails, Te	87.02	43	⇑P	P	10 19 30.1	+0.1
	baz=87						
D24A	Glendive	87.09	39	⇓P	P	10 19 30.2	0.0
	baz=87						
S16A	Weppner Ranch,	87.11	50	⇑P	P	10 19 30.5	0.0
	baz=87						
P18A	Preston Nutter	87.15	48	⇑P	P	10 19 30.7	+0.1
	baz=87						
SRU	San Rafael	87.20	48	⇓P	P	10 19 30.4	-0.5
	baz=87,SNR=7.2						
SRU	San Rafael	87.20	48	*e*P	P	10 19 30.8	-0.1
	comp=Z,5.8nm,0.9s,mb4.8						
SRU	San Rafael	87.20	48	*e*P	P	10 19 30.8	-0.1
SRU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
W14A	Seligman	87.20	53	⇓P	P	10 19 31.0	-0.1
	baz=87,SNR=6.8						
U15A	North Rim	87.22	51	⇓P	P	10 19 30.9	-0.2
	baz=87,SNR=8.7						
Y13A	Salome	87.29	54	⇑P	P	10 19 31.5	+0.1
	baz=87						
R17A	Hanksville Air	87.40	49	⇓P	P	10 19 31.5	-0.4
	baz=87,SNR=11						
Q18A	Rafter H Ranch	87.47	48	⇑P	P	10 19 31.8	-0.4
	baz=87						
T16A	Glen Canyon Da	87.52	51	⇓P	P	10 19 31.9	-0.7
	baz=87						
V15A	Kaibab Nationa	87.59	52	⇑P	P	10 19 33.3	+0.4
	baz=88						
M20A	Sweetwater, Wa	87.61	45	⇑P	P	10 19 33.4	+0.6
	baz=88						
K21A	Alcova	87.64	44	⇑P	P	10 19 32.7	-0.3
	baz=88						
X14A	Yava	87.68	53	⇑P	P	10 19 33.2	-0.2
	baz=88,SNR=5.2						
Z13A	Yuma Proving G	87.69	55	⇓P	P	10 19 33.1	-0.3
	baz=88,SNR=6.9						
S17A	Black Ridge (B	87.71	50	⇑P	P	10 19 32.7	-0.7
	baz=88,SNR=5.3						
J22A	Midwest	87.73	43	⇑P	P	10 19 33.5	+0.1
	baz=88						
113A	Mohawk Valley,	87.80	55	⇑P	P	10 19 33.8	-0.2
	baz=88						
W15A	Williams	87.81	52	⇑P	P	10 19 34.4	+0.4
	baz=88						
Y14A	Wickenburg	87.84	54	⇑P	P	10 19 33.7	-0.4
	baz=88,SNR=9.3						
N20A	Spence Gulch,	87.89	46	⇓P	P	10 19 34.3	+0.1
	baz=88						
L21A	Rawlins	87.90	45	⇑P	P	10 19 34.0	-0.3
	baz=88						
R18A	Canyonlands Na	87.98	49	⇓P	P	10 19 34.4	-0.3
	baz=88,SNR=6.0						
P19A	Cripple Cowboy	88.00	47	⇑P	P	10 19 34.8	+0.1
	baz=88,SNR=10						
T17A	Navajo Res., N	88.01	50	⇓P	P	10 19 34.9	+0.1
	baz=88						
Q19A	Hogan Spring (	88.14	48	⇑P	P	10 19 35.4	-0.1
	baz=88						
X15A	Humboldt	88.16	53	⇓P	P	10 19 36.0	+0.4
	baz=88,SNR=8.7						
U16A	Tuba City	88.18	51	⇑P	P	10 19 35.8	+0.1
	baz=88						
O20A	White River Ci	88.25	47	⇑P	P	10 19 35.6	-0.3
	baz=88						
S18A	Hurst Farm, Bl	88.25	49	⇑P	P	10 19 35.9	-0.1
	baz=88						
Y15A	Casa Rosa Ranc	88.33	54	⇑P	P	10 19 36.0	-0.5
	baz=88,SNR=12						
W16A	Flagstaff	88.39	52	⇑P	P	10 19 37.0	+0.3
	baz=88						
N21A	Black Mountain	88.41	46	⇓P	P	10 19 36.6	-0.1
	baz=88						
P20A	De Beque	88.46	47	⇑P	P	10 19 37.1	+0.2
	baz=88						
R19A	Curley Farm, L	88.46	49	⇓P	P	10 19 36.7	-0.3
	baz=88,SNR=5.5						
114A	Black Gap (USA	88.47	55	⇓P	P	10 19 36.9	-0.2
	baz=88,SNR=5.1						
T18A	Mexican Hat	88.60	50	⇑P	P	10 19 37.1	-0.6
	baz=88						
V17A	Tonalea, Kykot	88.67	51	⇑P	P	10 19 37.9	-0.1
	baz=88,SNR=7.7						
X16A	Lo Mia Camp, P	88.77	53	⇓P	P	10 19 38.3	-0.2
	baz=89						
Q20A	Ridgley Place,	88.80	48	⇑P	P	10 19 38.8	+0.3
	baz=89						
BRTR	Keskin Array B	88.80	313	P	P	10 19 37.2	-1.3
	comp=Z,2.1nm,0.9s,mb4.5,baz=66,slow=4.1,SNR=8.1						
BRTR	Keskin Array B	88.80	313	*ce*P	P	10 19 37.2	-1.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
S19A	Harvey Farm, M	88.81	49	⇓P	P	10 19 38.3	-0.3
	baz=89						
214A	Organ Pipe Nat	88.89	56	⇓P	P	10 19 39.0	-0.1
	baz=89,SNR=7.0						
U18A	Rough Rock, Ch	88.95	50	⇓P	P	10 19 39.3	0.0
	baz=89						
115A	Sonoran Desert	88.99	55	⇑P	P	10 19 39.7	+0.2
	baz=89						
Y16A	Circle Bar Ran	88.99	53	⇓P	P	10 19 40.1	+0.5
	baz=89,SNR=5.3						
PV01	Paradox Valley	89.01	48	*e*P	P	10 19 39.6	+0.1
	comp=Z,346nm,1.1s						
R20A	Redvale	89.12	48	⇑P	P	10 19 40.2	+0.2
	baz=89						
V18A	Ganado	89.24	51	⇑P	P	10 19 41.0	+0.3
	baz=89,SNR=5.6						
X17A	Forest Lakes	89.27	53	⇓P	P	10 19 41.4	+0.5
	baz=89						
T19A	Beclabito	89.34	50	⇓P	P	10 19 41.0	-0.1
	baz=89,SNR=7.0						
Q21A	Lamborn Mesa,	89.34	47	⇓P	P	10 19 41.3	+0.2
	baz=89						
N23A	Red Feather La	89.37	45	⇓P	P	10 19 41.2	0.0
	baz=89						
U19A	Dine' College,	89.47	50	⇑P	P	10 19 41.8	0.0
	baz=89						
P22A	Eagle	89.50	46	⇓P	P	10 19 42.3	+0.4
	baz=89						
Y17A	Roosevelt	89.55	53	⇑P	P	10 19 42.6	+0.4
	baz=89						
SMCO	Snowmass	89.57	47	*e*P	P	10 19 43.4	+1.2
	comp=Z,18nm,1.9s,mb5.1						
R21A	Cimarron	89.59	48	⇑P	P	10 19 42.2	-0.1
	baz=89,SNR=5.2						
Q22A	Crested Butte,	89.78	47	⇓P	P	10 19 43.3	+0.2
	baz=90,SNR=5.8						
S21A	Coal Bank Pass	89.78	49	⇑P	P	10 19 43.5	+0.3
	baz=90						
M24A	Cheyenne	89.79	44	⇑P	P	10 19 43.1	-0.1
	baz=90						
W19A	Sanders	89.92	51	⇑P	P	10 19 44.5	+0.6
	baz=90						
R22A	Saguache, Gunn	90.20	48	⇓P	P	10 19 45.8	+0.6
	baz=90						
V20A	Brimhall	90.24	50	⇑P	P	10 19 45.3	-0.1
	baz=90						
X19A	St. Johns	90.33	52	⇓P	P	10 19 45.9	+0.1
	baz=90						
S22A	4UR Ranch, Cre	90.40	48	⇓P	P	10 19 46.3	+0.3
	baz=90						
U21A	Nageezi	90.49	50	⇑P	P	10 19 46.9	+0.4
	baz=90						
W20A	Ramah	90.55	51	⇓P	P	10 19 47.1	+0.3
	baz=90						
Y19A	Nutrioso	90.58	52	⇑P	P	10 19 47.2	+0.3
	baz=90						
T22A	Edith	90.72	49	⇓P	P	10 19 47.8	+0.3
	baz=91						
X20A	Quemado	90.84	52	⇓P	P	10 19 48.8	+0.6
	baz=91,SNR=5.6						
218A	Dragoon	90.96	54	⇓P	P	10 19 49.3	+0.5
	baz=91						
O25A	Wiggins	90.96	45	⇓P	P	10 19 48.9	+0.3
	baz=91						
S23A	Nye Farm, Mont	90.98	48	⇓P	P	10 19 49.3	+0.5
	baz=91						
U22A	Llaves	91.08	49	⇑P	P	10 19 49.3	0.0
	baz=91,SNR=5.1						
119A	Ashpeak Ranch,	91.12	53	⇓P	P	10 19 49.8	+0.2
	baz=91						
Y20A	Horse Springs,	91.24	52	⇑P	P	10 19 50.3	+0.2
	baz=91						
318A	Bisbee	91.25	55	⇑P	P	10 19 50.3	+0.1
	baz=91						
V22A	San Miguel Ran	91.28	50	⇓P	P	10 19 50.2	0.0
	baz=91						
SDCO	Great Sand Dun	91.30	48	⇑P	P	10 19 50.3	0.0
	baz=91,SNR=6.0						
SDCO	Great Sand Dun	91.30	48	*e*P	P	10 19 50.7	+0.4
	comp=Z,2.0nm,0.8s,mb4.5						
R24A	Sanders Place,	91.31	47	⇓P	P	10 19 50.7	+0.4
	baz=91,SNR=5.7						
X21A	Alamocita Cree	91.40	51	⇓P	P	10 19 51.0	+0.2
	baz=91						
Z20A	Nine Sixteen R	91.47	53	⇑P	P	10 19 51.0	-0.1
	baz=91,SNR=7.0						
Q25A	Bedland, Calha	91.52	46	⇓P	P	10 19 51.5	+0.2
	baz=91						
219A	White Tail Can	91.53	54	⇓P	P	10 19 51.5	+0.1
	baz=91						
S24A	Houchin Ranch,	91.55	47	⇓P	P	10 19 51.7	+0.2
	baz=91						
U23A	El Rito	91.56	49	⇓P	P	10 19 51.6	+0.1
	baz=91,SNR=8.6						
Y21A	Point of Rocks	91.69	52	⇓P	P	10 19 52.9	+0.7
	baz=92						
120A	U Bar Ranch, L	91.72	53	⇑P	P	10 19 52.8	+0.5
	baz=92						
R25A	Fountain Ranch	91.91	47	⇓P	P	10 19 52.7	-0.4
	baz=92,SNR=5.1						
T24A	Torres, Weston	91.96	48	⇓P	P	10 19 53.9	+0.6
	baz=92						
Z21A	St. Cloud Mine	92.05	52	⇓P	P	10 19 54.3	+0.5
	baz=92						
S25A	Robets Cordova	92.06	47	⇓P	P	10 19 53.8	0.0
	baz=92						
ANMO	Albuquerque	92.08	50	*e*P	P	10 19 54.7	+0.8
	comp=Z,4.4nm,1.0s,mb4.7						
ANMO	Albuquerque	92.08	50	*e*P	P	10 19 54.7	+0.8
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
220A	Playas Peak, P	92.12	54	⇓P	P	10 19 54.4	+0.2
	baz=92						
U24A	Moreno Valley	92.15	49	⇓P	P	10 19 54.7	+0.5
	baz=92,SNR=7.9						
Y22A	Socorro	92.24	51	⇓P	P	10 19 55.2	+0.5
	baz=92						
121A	Cookes Peak, D	92.35	53	⇑P	P	10 19 55.4	+0.2
	baz=92						
T25A	Trinidad	92.36	48	⇑P	P	10 19 55.3	+0.1
	baz=92						
320A	Kipp Ranch, An	92.40	54	⇓P	P	10 19 55.7	+0.2
	baz=92						
V24A	Rampart Ranch,	92.51	49	⇑P	P	10 19 56.2	+0.3
	baz=92						
Z22A	Elephant Butte	92.59	52	⇑P	P	10 19 56.4	+0.1
	baz=92						
W24A	Lazy 6 Ranch,	92.69	50	⇓P	P	10 19 56.9	+0.2
	baz=92,SNR=6.5						
U25A	Circle Dot Ran	92.75	48	⇑P	P	10 19 57.0	0.0
	baz=93,SNR=8.7						
Y23A	Lovelace Mesa,	92.89	51	⇓P	P	10 19 57.8	+0.1
	baz=93						
V25A	Rancho No Teng	92.91	49	⇑P	P	10 19 57.9	+0.2
	baz=93						
U26A	Atchley Ranch,	93.21	48	⇓P	P	10 19 59.2	+0.1
	baz=93						
W25A	X Bar L Ranch,	93.34	49	⇑P	P	10 19 59.7	-0.1
	baz=93						
ECSD	EROS Data Cent	93.48	39	*e*P	P	10 20 00.1	-0.1
	comp=Z,6.9nm,1.1s,mb5.0						
V26A	Tequesquite Ra	93.50	48	⇓P	P	10 20 00.5	+0.1
	baz=93						
X25A	Clemmons Ranch	93.57	50	⇓P	P	10 20 01.0	+0.2
	baz=93						
Y25A	Mesa, Roswell	93.86	50	⇑P	P	10 20 02.1	-0.1
	baz=94						
Z25A	Roswell	94.19	51	⇓P	P	10 20 03.7	0.0
	baz=94						
224A	Cornudas Mount	94.23	52	⇓P	P	10 20 04.1	+0.2
	baz=94						
W27A	Bowe Ranch, En	94.39	49	⇑P	P	10 20 04.7	+0.2
	baz=94						
125A	Gardner Draw,	94.55	51	⇓P	P	10 20 05.3	-0.1
	baz=94						
324A	Moseley Ranch,	94.59	53	⇓P	P	10 20 05.5	-0.1
	baz=94						
Y27A	Causey	94.96	50	⇑P	P	10 20 07.5	+0.3
	baz=95						
Z27A	Tatum	95.23	50	⇑P	P	10 20 08.8	+0.4
	baz=95						
AMTX	Amarillo	95.44	48	⇑P	P	10 20 09.7	+0.4
	baz=95						
TXAR	Lajitas Array	97.03	54	P	P	10 20 16.3	-0.4
	comp=Z,0.6nm,0.9s,mb4.0,baz=298,slow=2.7,SNR=4.5						
TXAR				LR	LR	10 59 59.9	
	comp=Z,39nm,18.5s,MS3.9,baz=180,slow=33						
TXAR	Lajitas Array	97.03	54	P	P	10 20 16.3	-0.4
TXAR				LR	LR	10 59 59.9	
TXAR	Lajitas Array	97.03	54	P	P	10 20 16.3	-0.4
628A	Black Gap, Mar	97.52	53	⇓P	P	10 20 18.2	-0.7
	baz=97						
VNA2	Neumayer--Watz	129.78	192	*e*PKPdf	PKPdf	10 25 49.8	-3.1
	baz=252,slow=0.3						
LPAZ	La Paz	149.91	82	PKPbc	PKPbc	10 26 35.6	+0.1
	comp=Z,1.2nm,0.5s,baz=254,slow=4.3,SNR=7.8						

ISCJB ***30*** *10:06:46.9±0.4, 84°.28N±0°.09×109°.0E±0°.7, h10km, mb4.1/25, MS3.1/7, Error ellipse: s-maj=15.3km s-min=7.6km az=148.0*
IDC ***30*** *10:06:46.9±0.7, 84°.32N×109°.43E, h0km, mb3.9/16, mb1 4.1/16, mb1mx4.0/26, mbtmp3.9/16, MS3.2/7, Ms1 3.2/7, ms1mx2.7/38, Error ellipse: s-maj=19.9km s-min=14.9km az=153.0*
NEIC ***30*** *10:06:48.6±0.4, 84°.26N×109°.14E, h10km, mb4.5/7, Error ellipse: s-maj=14.3km s-min=6.2km az=151.0*
ISC 30 10:06:48.9±0.4, 84°.27N±0°.09×109°.0E±0°.7, h10km, n38, σ0s.72/33, mb4.1/25, MS3.1/7, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	20.71	279	P	P	10 11 29.1	+0.3
	16nm,1.1s,baz=36,slow=10,SNR=6.2						
RES	Resolute Bay	20.81	18	LR	LR	10 20 00.0	
	comp=Z,72nm,18.8s,MS3.1,baz=3.7,slow=38						
ILAR	Eielson Array	27.32	65	P	P	10 12 33.2	+0.1
	1.5nm,1.1s,mb3.5,baz=350,slow=8.1,SNR=10						
FINES	FINESS Array B	28.54	274	P	P	10 12 44.2	+0.1
	4.2nm,0.8s,mb4.2,baz=29,slow=13,SNR=6.8						
FINES	FINESS Array B	28.54	274	P	P	10 12 44.2	+0.1
NOA	NORSAR Array B	30.40	288	P	P	10 13 01.2	+0.6
	0.9nm,0.8s,mb3.6,baz=21,slow=9.2,SNR=2.8						
ZALV	Zalesovo Beam	31.05	208	LR	LR	10 26 41.4	
	comp=Z,37nm,19.6s,MS3.0,baz=60,slow=38						
YKA	Yellowknife Ar	32.07	37	LR	LR	10 27 12.4	
	comp=Z,4.6nm,18.2s,MS2.2,baz=15,slow=38						
BVAR	Borovoye Array	32.83	224	P	P	10 13 22.4	+0.5
	1.1nm,0.6s,mb3.9,baz=9.6,slow=9.8,SNR=4.9						
AKTK	Aktyubinsk	36.36	237	P	P	10 13 52.6	+0.2
AKTK				LR	LR	10 29 59.2	
AKTO	Aktyubinsk	36.36	237	P	P	10 13 52.6	+0.2
	1.0nm,0.6s,mb4.0,baz=351,slow=9.6,SNR=3.8						
AKTO				LR	LR	10 29 59.2	
	comp=Z,46nm,19.4s,MS3.3,baz=9.3,slow=38						
SONM	Songino Array	36.60	183	P	P	10 13 55.2	+0.6
	2.0nm,1.0s,mb3.9,baz=357,slow=7.6,SNR=7.3						
SONM	Songino Array	36.60	183	P	P	10 13 55.2	+0.6
SONM	Songino Array	36.60	183	P	P	10 13 55.2	+0.7
MKAR	Makanchi Array	38.32	210	P	P	10 14 08.2	-0.9
	1.3nm,0.9s,mb3.6,baz=348,slow=5.4,SNR=7.9						
AKASG	Malin Array Be	38.82	267	P	P	10 14 12.5	-0.7
	0.9nm,0.5s,mb3.8,baz=11,slow=9.0,SNR=4.6						
CLL	Collm	39.84	283	*e*P	P	10 14 22.0	+0.3
GERES	GERESS Array B	42.20	282	P	P	10 14 39.6	-1.6
	0.9nm,0.6s,mb3.5,baz=336,slow=8.6,SNR=4.7						
AAK	Ala-Archa	42.90	218	LR	LR	10 35 02.2	
	comp=Z,34nm,19.1s,MS3.2,baz=19,slow=40						
ULM	Lac du Bonnet	45.23	22	LR	LR	10 33 15.8	
	comp=Z,45nm,18.3s,MS3.4,baz=46,slow=35						
NEW	Newport	46.08	42	*e*P	P	10 15 12.7	+0.5
	8.1nm,1.3s,mb4.5						
JTMT	Jette	46.78	39	*e*P	P	10 15 17.7	-0.1
	5.4nm,1.2s,mb4.3						
LAO	LASA Array	48.30	32	*e*P	P	10 15 29.6	0.0
	11nm,1.2s,mb4.8						
BOZ	Bozeman (W)	49.03	37	*e*P	P	10 15 35.4	+0.1
	7.6nm,1.4s,mb4.5						
BRTR	Keskin Array B	49.24	260	P	P	10 15 38.2	+1.3
	2.7nm,0.8s,mb4.3,baz=6.7,slow=4.8,SNR=11						
COR	Corvallis	49.30	48	*e*P	P	10 15 36.9	-0.4
	14nm,1.0s,mb4.9						
MCMT	McKenzie Canyo	49.77	38	*e*P	P	10 15 42.0	+1.1
	2.3nm,1.3s,mb4.0						
FLWY	Flagg Ranch	50.65	37	*e*P	P	10 15 54.9	+7.3
	17nm,1.4s,mb4.8						
ESDC	Sonseca Array	52.96	297	P	P	10 16 03.8	-1.1
	0.3nm,0.3s,mb3.7,baz=348,slow=7.8,SNR=2.2						
DUG	Dugway	54.39	39	*e*P	P	10 16 15.4	0.0
	8.0nm,1.4s,mb4.5						
KEST	Kesra	55.62	284	P	P	10 16 25.6	+1.3
	2.6nm,0.9s,mb4.3,baz=5.6,slow=2.9,SNR=6.3						
NVAR	Mina Array Bea	55.78	44	P	P	10 16 25.4	0.0
	0.7nm,0.8s,mb3.7,baz=354,slow=4.3,SNR=6.0						
NVAR	Mina Array Bea	55.78	44	P	P	10 16 25.4	0.0
MSU	Marysvale	56.10	39	*e*P	P	10 16 28.2	+0.5
	4.3nm,1.0s,mb4.4						
PV01	Paradox Valley	56.70	35	*e*P	P	10 16 32.0	+0.1
TXAR	Lajitas Array	65.73	31	P	P	10 17 31.6	-1.6
	0.9nm,0.6s,mb4.0,baz=338,slow=4.3,SNR=15						
CMAR	Chiang Mai Arr	65.98	190	P	P	10 17 34.1	-0.8
	0.7nm,0.7s,mb3.8,baz=345,slow=8.8,SNR=5.1						
CMAR				LR	LR	10 47 59.5	
	comp=Z,26nm,19.5s,MS3.5,baz=145,slow=37						
TORD	Torodi Ar. Bea	78.71	289	P	P	10 18 50.5	-0.5
	3.0nm,0.7s,mb4.3,baz=358,slow=6.0,SNR=25						

DDA ***30*** *10:12:09.9, 38°.39N×39°.03E, h20km±2km, Md2.9*
ISCJB ***30*** *10:12:10.8±0.5, 38°.37N±0°.03×39°.03E±0°.03, h8km±4km, Error ellipse: s-maj=5.4km s-min=4.1km az=178.1*
CSEM ***30*** *10:12:10.7±0.1, 38°.40N×39°.03E, h8km, MD2.9, Error ellipse: s-maj=3.1km s-min=2.8km az=149.0*
ISK ***30*** *10:12:10.2, 38°.40N×39°.04E, h8km, MD2.9*
ISC 30 10:12:11.1±0.4, 38°.38N±0°.03×39°.02E±0°.03, h9km±4km, n25, σ0s.77/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.12	347	*i* P	Pg	10 12 14.3	+0.3
ELZG				*i* S	Sg	10 12 16.3	+0.4
ELZG	Elazig	0.12	347	*i* P	Pg	10 12 14.3	+0.4
ELZG				*i* S	Sg	10 12 16.3	+0.4
SVRC	Sivrice-ELAZID	0.22	89	*e*PG	Pg	10 12 15.2	-0.5
SVRC				*e*SG	Sg	10 12 18.4	-0.3
SVRC	Sivrice-ELAZID	0.22	89	*e*Pg	Pg	10 12 15.2	-0.4
SVRC				*e*Sg	Sg	10 12 18.4	-0.3
MYA	Malataya	0.47	264	*e*PG	Pg	10 12 20.3	+0.1
MYA				*e*SG	Sg	10 12 27.2	+0.8
MYA	Malataya	0.47	264	*e*Pg	Pg	10 12 20.3	+0.1
MYA				*e*Sg	Sg	10 12 27.3	+0.9
PTK	Pertek	0.59	29	*e*PG	Pg	10 12 21.6	-1.0
PTK	Pertek	0.59	29	*e*Pg	Pg	10 12 21.6	-0.9
URFA	Urfa	0.95	190	*e*PG	Pg	10 12 29.2	-0.1
URFA	Urfa	0.95	190	*e*Pg	Pg	10 12 29.2	-0.1
DIYA	Diyarbakir	0.98	117	*i* P	Pg	10 12 29.9	+0.1
DIYA				*i* S	Sg	10 12 43.8	+1.2
DIYA	Diyarbakir	0.98	117	*i* P	Pg	10 12 29.9	+0.1
DIYA				*i* S	Sg	10 12 43.8	+1.2
KEMA	Kemaliye	0.98	335	*i* P	Pg	10 12 29.3	-0.6
KEMA				*i* S	Sg	10 12 43.1	+0.4
KEMA	Kemaliye	0.98	335	*i* P	Pg	10 12 29.3	-0.7
KEMA				*i* S	Sg	10 12 43.1	+0.4
ATAB	Bozova	1.07	213	*i* P	Pg	10 12 30.9	-0.7
ATAB				*i* S	Sg	10 12 45.2	-0.4
ATAB	Bozova	1.07	213	*i* P	Pg	10 12 30.9	-0.7
ATAB				*i* S	Sg	10 12

SZVM				*i* S	Sn	10 37 24.5	-3.0
SZVM	**Salazar**	**2.47**	**37**	*i* P	Pn	10 36 55.2	-2.3
SZVM				*i* S	Sn	10 37 24.5	-3.0
MMIG	**Aquila**	**2.48**	**293**	*i* P	Pn	10 36 54.8	-2.8
MMIG				*i* S	Sn	10 37 23.4	-4.3
PBVM	**Pinon**	**2.74**	**40**	*e*P	Pn	10 36 58.5	-2.7
PBVM				*i* S	Sn	10 37 31.3	-2.8
PBVM	**Pinon**	**2.74**	**40**	*e*P	Pn	10 36 58.5	-2.7
PBVM				*i* S	Sn	10 37 31.3	-2.8
PTVM	**Pico Tres Padr**	**2.84**	**37**	*i* P	Pn	10 37 00.6	-2.0
PTVM				*i* S	Sn	10 37 33.9	-2.6
PTVM	**Pico Tres Padr**	**2.84**	**37**	*i* P	Pn	10 37 00.6	-2.0
PTVM				*i* S	Sn	10 37 33.9	-2.6
PNIG	**Pinotepa**	**2.85**	**109**	*i* P	Pn	10 36 59.1	-3.7
PNIG				*i* S	Sn	10 37 33.6	-3.4
PNIG	**Pinotepa**	**2.85**	**109**	*i* P	Pn	10 36 59.1	-3.7
PNIG				*i* S	Sn	10 37 33.6	-3.4
UTMO	**Huajuapan**	**3.03**	**80**	*e*P	Pn	10 37 03.0	-2.2
UTMO				*i* S	Sn	10 37 37.0	-4.4
IIO	**Organos**	**3.08**	**43**	*i* P	Pn	10 37 03.3	-2.6
IIO				*i* S	Sn	10 37 40.5	-2.0
IIO	**Organos**	**3.08**	**43**	*i* P	Pn	10 37 03.3	-2.6
IIO				*i* S	Sn	10 37 40.5	-2.0

KRSC 30 10:45:02.5±1.5, 54°.65N×158°.25E, h273km±53km, ML3.8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.93**	**131**	S	S	10 46 08.3	-0.7
GNL	**Ganaly**	**0.97**	**191**	*e*P	Pn	10 45 42.5	+2.6
AVH	**Avacha**	**1.42**	**168**	*e*P	Pn	10 45 45.3	+2.9
NLC	**Nalytchevo**	**1.62**	**156**	*e*P	Pn	10 45 45.6	+1.8
NLC				*e*S	S	10 46 17.2	+0.6
SRDR	**Sredinnyy**	**1.87**	**26**	P	Pn	10 45 47.5	+1.9
SPN	**Mys Shipunski**	**1.88**	**145**	P	Pn	10 45 47.7	+1.8
SPN				S	S	10 46 20.8	+0.6
MKZ	**Mys Kozlova**	**2.03**	**91**	*e*P	Pn	10 45 48.7	+1.7
MKZ				*e*S	S	10 46 22.2	-0.1
RUS	**Russkaya**	**2.23**	**176**	*e*P	Pn	10 45 49.6	+0.7
RUS				*e*S	S	10 46 24.1	-1.6
KBTR	**Krutoberegovo**	**3.04**	**57**	*e*P	Pn	10 45 58.5	+1.9
KBTR				*e*S	S	10 46 39.6	-0.1

IDC 30 11:17:19.8±2.0, 3°.18S×151°.69E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.5/15, mbtmp3.6/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/15, Error ellipse: s-maj=170.8km s-min=26.9km az=125.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**10.29**	**128**	LR	LR	11 23 02.1	
	comp=Z,35nm,21.3s,baz=196,slow=33						
WRA	**Warramunga Arr**	**23.76**	**224**	P	P	11 22 34.6	+0.4
	1.4nm,0.7s,baz=49,slow=9.6,SNR=15						
ASAR	**Alice Springs**	**26.66**	**219**	P	P	11 23 00.4	-0.1
	0.5nm,0.8s,baz=51,slow=9.4,SNR=5.9						
ILAR	**Eielson Array**	**81.08**	**22**	P	P	11 29 36.5	-0.1
	0.4nm,0.7s,baz=244,slow=5.4,SNR=9.2						

*ISCJB **30** 11:33:25.7±1.1, 40°.32N±0°.04×21°.76E±0°.10, h10km, Error ellipse: s-maj=10.7km s-min=6.0km az=176.2*
*SKO **30** 11:33:25.9, 40°.29N×21°.71E, h17km, M1.8, ML2.2*
*ATH **30** 11:33:30.0, 40°.27N×21°.99E, h18km±8km, MD3.3/4*
*CSEM **30** 11:33:30.0, 40°.27N×21°.99E, h18km, MD3.3, After ATH*

ISC 30 11:33:26.6±1.1, 40°.39N±0°.05×21°.8E±0°.1, h4km±12km, n10, σ0s83/15, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIT	**Litokhoron**	**0.58**	**120**	*e*PB	**Pg**	**11 33 38.3**	**+0.6**
LIT				*e*SB	**Sg**	**11 33 44.8**	**-0.4**
LIT	**Litokhoron**	**0.58**	**120**	*e*Pb	**Pg**	**11 33 38.3**	**+0.6**
LIT				*e*Sb	**Sg**	**11 33 44.8**	**-0.4**
THL	**Klokotos Trika**	**0.84**	**171**	*e*PN	**Pn**	**11 33 43.5**	**-1.6**
THL				*e*SN	**Sg**	**11 33 53.5**	**0.0**
THL	**Klokotos Trika**	**0.84**	**171**	*e*Pn	**Pn**	**11 33 43.5**	**-1.6**
THL				*e*Sn	**Sg**	**11 33 53.5**	**0.0**
KRUS	**Krusevo**	**1.07**	**336**	*e*Pg	**Pg**	**11 33 47.4**	**+0.2**
VAY	**Valandovo**	**1.08**	**31**	*e*Pg	**Pg**	**11 33 46.7**	**-0.6**
VAY				*e*Sg	**Sg**	**11 34 06.0**	**+4.6**
VAY				*e*Lg		11 34 06.5	
	comp=E,34nm,0.8s						
VAY				*e*Lg		11 34 09.5	
	comp=N,88nm,0.9s						
PLG	**Polygyros**	**1.23**	**90**	*e*PN	**Pn**	**11 33 50.8**	**+0.3**
PLG	**Polygyros**	**1.23**	**90**	*e*Pn	**Pn**	**11 33 50.8**	**+0.3**
AGG	**Agios Georgios**	**1.42**	**164**	*e*PN	**Pn**	**11 33 54.5**	**+1.3**
AGG	**Agios Georgios**	**1.42**	**164**	*e*Pn	**Pn**	**11 33 54.5**	**+1.3**

*ISCJB **30** 11:36:08.6±0.4, 37°.44N±0°.03×76°.05E±0°.05, h133km±7km, mb3.4/8, Error ellipse: s-maj=7.1km s-min=4.6km az=171.4*
*NEIC **30** 11:36:09.1±0.5, 37°.43N×76°.10E, h122km±6km, mb4.7/10, Error ellipse: s-maj=8.5km s-min=4.4km az=62.0*
*IDC **30** 11:36:10.1±5.2, 37°.49N×75°.97E, h128km±46km, mb3.3/7, mb1 3.5/11, mb1mx3.3/27, mbtmp3.3/11, Error ellipse: s-maj=29.2km s-min=18.4km az=14.0*
*BJI **30** 11:36:14.7, 37°.79N×76°.50E, h122km*

ISC 30 11:36:09.6±0.4, 37°.43N±0°.03×76°.09E±0°.05, h126km±6km, n46, σ1s07/55, mb3.5/8, 3C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.08**	**357**	P	**Pn**	**11 36 42.8**	**-1.5**
KSH				S	**Sn**	**11 37 05.3**	**-5.7**
KSH				smax			
	comp=N,1μm,0.6s						
KSH				smax			
	comp=E,2μm,0.5s						
CHCP	**Chirah Chowk**	**4.41**	**212**	⇑P	**Pn**	**11 37 18.3**	**+3.5**
KZA	**Kyzart**	**4.69**	**352**	P	**Pn**	**11 37 19.3**	**+1.0**
	SNR=5.7						
KZA	**Kyzart**	**4.69**	**352**	*e*Pn	**Pn**	**11 37 19.2**	**+0.8**
ULHL	**Ulahol**	**4.81**	**1**	P	**Pn**	**11 37 21.0**	**+1.0**
	SNR=9.5						
CEP	**Cherat**	**4.96**	**225**	⇑P	**Pn**	**11 37 24.1**	**+2.1**
CEP				S	**Sn**	**11 38 17.0**	**-1.3**
AML	**Almayashu**	**5.04**	**339**	P	**Pn**	**11 37 23.8**	**+0.7**
	SNR=14						
AML	**Almayashu**	**5.04**	**339**	*e*Pn	**Pn**	**11 37 23.5**	**+0.4**
	comp=E,27nm,0.5s						
KBK	**Karagaybulak**	**5.29**	**351**	P	**Pn**	**11 37 27.6**	**+1.2**
	SNR=19						
AAK	**Ala-Archa**	**5.34**	**347**	P	**Pn**	**11 37 28.1**	**+1.1**
	SNR=11						
EKS2	**Erkin-Say**	**5.52**	**342**	P	**Pn**	**11 37 30.4**	**+0.9**
	SNR=7.0						
EKS2	**Erkin-Say**	**5.52**	**342**	*e*Pn	**Pn**	**11 37 30.3**	**+0.9**
	comp=E,13nm,0.6s						
THW	**Thamme Wali**	**5.84**	**219**	P	**Pn**	**11 37 35.3**	**+1.4**
SARP	**Sargodha**	**6.18**	**208**	P	**Pn**	**11 37 39.7**	**+1.3**
SMLA	**Simla**	**6.35**	**172**	*i* P	**Pn**	**11 37 42.2**	**+1.4**
SMLA				*i* S	**Sn**	**11 38 48.5**	**-3.4**
SMLA				*i* S	**Sn**	**11 38 49.9**	**-2.1**
SMLA				⇓		11 38 53.9	
	comp=N,2μm,0.2s						
SMLA				⇓		11 38 54.4	
	comp=E,2μm,0.3s						
KBL	**Kabul**	**6.40**	**245**	*e*Pn	**Pn**	**11 37 42.0**	**+0.5**
	comp=E,14nm,0.5s						
KBL				*e*Sn	**Sn**	**11 38 51.6**	**-1.6**
KK31	**Karatay Array**	**7.09**	**325**	P	**Pn**	**11 37 49.5**	**-1.1**
	comp=E,2.3nm,0.3s,baz=141,slow=12,SNR=50						
KK31				⇑S	**Sn**	**11 39 01.3**	**-8.4**
	comp=E,5.1nm,0.6s,baz=141,slow=23,SNR=8.3						
KKAR	**Karatay Array**	**7.09**	**325**	*e*Pn	**Pn**	**11 37 49.6**	**-1.1**
	comp=E,5.7nm,0.3s						
KKAR				*e*Sn	**Sn**	**11 39 05.0**	**-4.8**
NDI	**New Delhi**	**8.78**	**174**	*e*PKP	**Pn**	**11 38 09.8**	**-3.7**
NDI				AMb	AMB	11 38 11.4	
	comp=Z,12nm,0.2s						
NDI				*e*S	**Sn**	**11 39 39.2**	**-11**
AYAN	**Aya Nagar**	**8.97**	**174**	*e*PKP	**Pn**	**11 38 17.1**	**+0.9**
AYAN				AMb	AMB	11 38 18.1	
	comp=Z,27nm,0.0s						
SONA	**Sohna**	**9.19**	**175**	*e*PKP	**Pn**	**11 38 20.1**	**+0.9**
SONA				AMb	AMB	11 38 21.2	
	comp=Z,37nm,0.8s						
SONA				*e*S	**Sn**	**11 39 53.7**	**-7.1**
KHET	**Khetri**	**9.33**	**182**	*e*S	**Sn**	**11 39 58.6**	**-5.7**
MK31	**Makanchi Array**	**10.42**	**24**	*e*Pn	**Pn**	**11 38 35.3**	**-0.2**
MKAR	**Makanchi Array**	**10.42**	**24**	P	**Pn**	**11 38 35.1**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=200,slow=13,SNR=12						
DANN	**Dangsing**	**11.11**	**142**	*e*P	**Pn**	**11 38 44.8**	**+0.1**
	comp=Z,29nm,0.4s						
KOLN	**Koldanda**	**11.52**	**145**	*e*P	**Pn**	**11 38 50.3**	**+0.1**
	comp=Z,18nm,0.4s						
GKN	**Gorkha**	**11.83**	**140**	*e*P	**Pn**	**11 38 54.3**	**0.0**
	comp=Z,14nm,0.3s						
KKN	**Kakani**	**12.34**	**139**	*e*P	**Pn**	**11 39 00.1**	**-0.8**
	comp=Z,12nm,0.4s						
DMN	**Daman**	**12.39**	**140**	*e*P	**Pn**	**11 39 01.2**	**-0.4**
GUN	**Gumba**	**12.56**	**136**	*e*P	**Pn**	**11 39 03.3**	**-0.6**
	comp=Z,7.9nm,0.3s						
PKIN	**Phulchoki**	**12.57**	**139**	*e*P	**Pn**	**11 39 02.7**	**-1.2**
PKI	**Pulchoki**	**12.58**	**139**	*e*P	**Pn**	**11 39 03.1**	**-1.0**
KURK	**Kurchatov**	**13.40**	**7**	*e*Pn	**Pn**	**11 39 12.4**	**-2.2**
	comp=Z,5.8nm,1.0s						
BVAR	**Borovoye Array**	**16.09**	**347**	P	**Pn**	**11 39 47.7**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=162,slow=10,SNR=7.3						
ABKAR	**Akbulak array**	**16.62**	**320**	*e*Pn	**Pn**	**11 39 55.1**	**+0.3**
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**17.58**	**17**	P	**Pn**	**11 40 05.2**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=219,slow=11,SNR=4.6						
AKTK	**Aktyubinsk**	**18.33**	**321**	P	**P**	**11 40 13.7**	**-0.2**
AKTO	**Aktyubinsk**	**18.33**	**321**	P	**P**	**11 40 13.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=117,slow=16,SNR=2.2						
SONM	**Songino Array**	**24.45**	**55**	P	**P**	**11 41 18.6**	**+2.2**
	comp=Z,0.4nm,0.3s,mb3.2,baz=252,slow=8.8,SNR=5.1						
BRTR	**Keskin Array B**	**33.05**	**287**	P	**P**	**11 42 32.2**	**-0.6**
	comp=Z,0.6nm,0.7s,mb3.6,baz=100,slow=7.4,SNR=5.4						
ARCES	**ARCESS Array B**	**41.90**	**336**	P	**P**	**11 43 47.3**	**+0.4**
	comp=Z,4.0nm,0.9s,mb4.1,baz=106,slow=8.9,SNR=5.9						
TORD	**Torodi Ar. Bea**	**69.80**	**271**	P	**P**	**11 47 06.4**	**-0.1**
	comp=Z,0.4nm,0.4s,mb3.6,baz=50,slow=6.0,SNR=6.9						
ILAR	**Eielson Array**	**72.71**	**18**	P	**P**	**11 47 22.7**	**-0.5**
	comp=Z,0.3nm,0.7s,mb3.2,baz=306,slow=3.5,SNR=4.5						
WRA	**Warramunga Arr**	**79.11**	**125**	P	**P**	**11 48 01.2**	**+1.1**
	comp=Z,0.2nm,0.5s,mb3.2,baz=322,slow=4.9,SNR=7.1						
YKA	**Yellowknife Ar**	**80.05**	**5**	P	**P**	**11 48 04.3**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=344,slow=5.7,SNR=2.9						
ASAR	**Alice Springs**	**81.53**	**128**	P	**P**	**11 48 14.2**	**+1.1**
	comp=Z,0.7nm,0.7s,mb3.6,baz=319,slow=5.0,SNR=13						

IDC 30 11:50:48.5±6.0, 28°.64S×177°.84W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/14, mbtmp3.5/2, Error ellipse: s-maj=269.9km s-min=94.8km az=163.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.37**	**265**	P	P	11 58 52.2	-0.6
	0.3nm,0.6s,baz=105,slow=7.2,SNR=5.9						
WRA	**Warramunga Arr**	**44.20**	**270**	P	P	11 58 60.0	+0.4
	0.7nm,0.6s,baz=110,slow=8.0,SNR=9.0						
FINES	**FINESS Array B**	**143.53**	**341**	PKP	PKPdf	12 10 23.9	-0.5
	0.7nm,0.3s,baz=70,slow=2.1,SNR=1.3						

*ISCJB **30** 11:59:53.0±1.0, 55°.46S±0°.06×159°.1E±0°.6, h10km, mb3.9/5, Error ellipse: s-maj=48.0km s-min=7.2km az=175.4*
*NEIC **30** 11:59:56.0±0.7, 55°.36S×158°.89E, h10km, Error ellipse: s-maj=30.4km s-min=11.3km az=82.0*
*IDC **30** 11:59:57.7±4.5, 55°.75S×157°.02E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.9/15, mbtmp3.9/5, Error ellipse: s-maj=223.7km s-min=20.6km az=73.0*

ISC 30 11:59:54.5±1.4, 55°.4S±0°.1×159°.3E±0°.9, h10km, n12, σ1s00/11, mb3.9/5, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**0.93**	**347**	*e*Pn	**Pn**	**12 00 13.7**	**+0.1**
MCQ				*e*Sg	**Sg**	**12 00 24.5**	**0.0**
QSPA	**South Pole Qui**	**34.71**	**180**	P	**P**	**12 06 46.2**	**+2.3**
	2.0nm,0.9s,mb4.0,baz=20,slow=7.0,SNR=5.4						
ASAR	**Alice Springs**	**36.85**	**319**	P	**P**	**12 07 03.0**	**+0.3**
	1.5nm,0.8s,mb3.9,baz=159,slow=8.4,SNR=15						
WRA	**Warramunga Arr**	**40.10**	**322**	P	**P**	**12 07 30.0**	**-0.2**
	1.9nm,0.8s,mb3.9,baz=158,slow=7.1,SNR=11						
FITZ	**Fitzroy Crossi**	**45.16**	**312**	P	**P**	**12 08 11.2**	**0.0**
	0.9nm,0.8s,mb3.7,baz=209,slow=13,SNR=3.6						
FITZ	**Fitzroy Crossi**	**45.16**	**312**	P	**P**	**12 08 11.2**	**0.0**
FITZ				P	pP	12 08 12.7	-1.7
SNAA	**Sanae**	**52.60**	**187**	P	**P**	**12 09 08.9**	**+1.3**
	1.4nm,1.1s,mb3.8,baz=179,slow=11,SNR=8.3						
VNA3	**Neumayer Olymp**	**53.41**	**184**	*e*	**P**	**12 09 12.3**	**-1.4**
VNA2	**Neumayer--Watz**	**53.61**	**185**	*e*	**P**	**12 09 13.8**	**-1.4**
	baz=159,slow=6.7						
VNA1	**Neumayer--Stat**	**53.93**	**185**	*e*	**P**	**12 09 17.0**	**-0.5**
KHMM	**Horse Mountain**	**115.96**	**55**	*e*PKPdf	PKPdf	12 18 39.5	+2.9
AKASG	**Malin Array Be**	**150.17**	**282**	PKPbc	PKPbc	12 19 44.7	+0.3
	1.2nm,0.4s,baz=75,slow=2.9,SNR=4.2						

*IDC **30** 12:02:28.8±0.6, 27°.12S×176°.59W, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.2/19, mbtmp4.1/13, ML3.8/1, MS3.7/4, Ms1 3.6/4, ms1mx3.1/21, Error ellipse: s-maj=21.2km s-min=19.5km az=48.0*
*ISCJB **30** 12:02:33.1±0.7, 27°.3S±0°.1×176°.8W±0°.1, h33km, mb4.1/13, MS3.7/4, Error ellipse: s-maj=17.7km s-min=15.5km az=3.8*
*NEIC **30** 12:02:34.5±0.6, 27°.17S×176°.71W, h35km, mb4.6/2, Error ellipse: s-maj=16.8km s-min=14.7km az=94.0*

ISC 30 12:02:35.1±0.7, 27°.2S±0°.1×176°.7W±0°.1, h35km, n30, σ0s93/23, mb4.1/13, MS3.7/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.15**	**204**	Pn	**Pn**	**12 05 25.0**	**-0.6**
	0.6nm,0.3s,baz=108,slow=6.4,SNR=4.4						
URZ				Sn	**Sn**	**12 07 32.8**	**-7.0**
	1.9nm,0.3s,baz=209,slow=20,SNR=14						
AFI	**Afiamalu**	**14.04**	**20**	Pn	**Pn**	**12 05 39.8**	**-12**
	1.9nm,0.3s,baz=233,slow=21,SNR=6.0						
AFI				Sn	**Sn**	**12 08 04.7**	**-22**
	0.8nm,0.3s,baz=41,slow=19,SNR=2.7						
AFI	**Afiamalu**	**14.04**	**20**	Pn	**Pn**	**12 05 42.6**	**-9.1**
AFI				*e*Sn	**Sn**	**12 08 14.4**	**-12**
HNR	**Honiara**	**28.25**	**304**	LR	LR	12 18 25.2	
	comp=Z,99nm,18.3s,MS3.4,baz=158,slow=34						
CTA	**Charters Tower**	**34.54**	**274**	P	**P**	**12 09 21.8**	**+1.4**
	6.5nm,0.4s,mb4.9,baz=100,slow=10,SNR=16						
CTAO	**Charters Tower**	**34.54**	**274**	*e*P	**P**	**12 09 19.8**	**-0.6**
	4.9nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**36.38**	**252**	LR	LR	12 22 33.9	
	comp=Z,104nm,19.4s,MS3.6,baz=27,slow=33						
ASAR	**Alice Springs**	**44.48**	**263**	P	**P**	**12 10 43.5**	**+0.2**
	0.8nm,0.4s,mb3.8,baz=98,slow=6.8,SNR=34						
WRA	**Warramunga Arr**	**45.19**	**268**	P	**P**	**12 10 48.6**	**-0.3**
	1.1nm,0.4s,mb4.0,baz=110,slow=8.2,SNR=19						
FITZ	**Fitzroy Crossi**	**53.55**	**267**	P	**P**	**12 11 51.3**	**-1.5**
	1.4nm,0.8s,mb3.9,baz=75,slow=9.9,SNR=2.4						
CASY	**Casey**	**58.45**	**207**	*e*P	**P**	**12 12 27.4**	**+0.3**
	3.7nm,0.9s,mb4.4						
QSPA	**South Pole Qui**	**62.87**	**180**	P	**P**	**12 12 57.3**	**+0.4**
	6.0nm,0.8s,mb4.8,baz=40,slow=2.6,SNR=33						
QSPA	**South Pole Qui**	**62.87**	**180**	P	**P**	**12 12 57.3**	**+0.4**
MAW	**Mawson**	**75.65**	**200**	P	**P**	**12 14 17.0**	**+0.7**
	1.1nm,0.5s,mb4.1,baz=157,slow=4.4,SNR=6.8						
MJAR	**Matsushiro Arr**	**76.30**	**324**	P	**P**	**12 14 19.8**	**-0.5**
	1.6nm,0.8s,mb4.0,baz=161,slow=5.7,SNR=6.1						
SNAA	**Sanae**	**81.28**	**178**	P	**P**	**12 14 46.4**	**-0.8**
	0.8nm,1.0s,mb3.6,baz=188,slow=14,SNR=5.8						
KSRS	**Korea Array**	**82.68**	**319**	P	**P**	**12 14 56.0**	**+1.1**
	1.9nm,0.9s,mb4.1,baz=129,slow=5.8,SNR=5.1						
PLCA	**Paso Flores**	**83.85**	**133**	P	**P**	**12 15 02.1**	**+0.9**
	0.6nm,0.5s,mb4.0,baz=207,slow=2.3,SNR=2.3						
NVAR	**Mina Array Bea**	**85.17**	**42**	P	**P**	**12 15 04.5**	**-3.2**
	0.5nm,0.6s,mb3.8,baz=224,slow=8.2,SNR=5.2						
NVAR	**Mina Array Bea**	**85.17**	**42**	P	**P**	**12 15 04.5**	**-3.2**
PSI	**Prapat**	**86.23**	**275**	LR	LR	12 54 52.2	
	comp=Z,36nm,20.9s,MS3.7,baz=344,slow=36						
KDAK	**Kodiak Island**	**87.08**	**13**	LR	LR	12 49 08.5	
	comp=Z,44nm,19.0s,MS3.9,baz=113,slow=32						
TXAR	**Lajitas Array**	**89.74**	**57**	P	**P**	**12 15 30.4**	**+0.4**
	0.1nm,0.6s,mb3.4,baz=194,slow=11,SNR=3.4						
ENH	**Enshi**	**90.75**	**304**	*e*P	**P**	**12 15 35.9**	**+1.3**
	34nm,1.4s						
MKAR	**Makanchi Array**	**116.56**	**311**	PKP	PKPdf	12 21 12.8	-2.4
	0.4nm,0.6s,baz=90,slow=1.9,SNR=2.7						
NOA	**NORSAR Array B**	**145.77**	**353**	PKPbc	PKPbc	12 22 08.1	-1.7
	1.7nm,0.8s,baz=6.4,slow=4.2,SNR=5.5						
HFS	**Hagfors**	**146.34**	**351**	PKPbc	PKPbc	12 22 10.0	-1.6
	4.0nm,0.7s,baz=338,slow=1.6,SNR=6.5						
AKASG	**Malin Array Be**	**149.35**	**327**	PKPbc	PKPbc	12 22 17.8	-2.1
	3.0nm,0.8s,baz=38,slow=3.8,SNR=4.7						
BRTR	**Keskin Array B**	**151.90**	**304**	PKPbc	PKPbc	12 22 25.4	-1.0
	0.6nm,0.8s,baz=114,slow=3.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**165.91**	**174**	PKPab	PKPab	12 23 35.1	-1.5
	1.3nm,0.7s,baz=193,slow=3.9,SNR=7.4						

*ISCJB **30** 12:17:33.9±0.5, 21°.09S±0°.03×68°.86W±0°.09, h152km±8km, mb4.0/2, Error ellipse: s-maj=14.4km s-min=5.7km az=0.6*
*NEIC **30** 12:17:34.5, 21°.12S×68°.90W, h134km, MD3.9(GUC), After GUC.*
*GUC **30** 12:17:34.5±0.5, 21°.12S×68°.90W, h134km±5km, MD3.9, ML3.9*
*IDC **30** 12:17:36.0±2.8, 21°.07S×68°.36W, h132km±27km, mb3.9/2, mb1 3.6/4, mb1mx3.4/15, mbtmp3.5/4, Error ellipse: s-maj=36.6km s-min=22.8km az=107.0*

ISC 30 12:17:34.7±0.5, 21°.09S±0°.03×68°.87W±0°.09, h150km±7km, n20, σ1s00/25, mb4.0/2, 1C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**1.25**	**310**	⇑*i* P	**Pn**	**12 18 01.7**	**0.0**
HMBC				*e*S	**Sn**	**12 18 22.1**	**-0.3**
HMBC				AML	AML	12 18 22.9	
	comp=N,4μm,0.3s						
PSGC	**Pisagua**	**1.89**	**321**	*e*P	**Pn**	**12 18 08.4**	**-0.2**
PSGC				*i* S	**Sn**	**12 18 34.2**	**-0.4**
PSGC				AML	AML	12 18 38.1	
	comp=E,534nm,0.6s						
SPCH	**San Pedro de A**	**1.91**	**161**	*e*P	**Pn**	**12 18 08.8**	**0.0**
SPCH				*e*S	**Sn**	**12 18 35.0**	**-0.1**
SPCH	**San Pedro de A**	**1.91**	**161**	*e*P	**Pn**	**12 18 08.8**	**0.0**
SPCH				*e*S	**Sn**	**12 18 35.0**	**-0.1**
SPCH				AML	AML	12 18 53.0	
	comp=E,370nm,0.6s						
MNMC	**Miæe Miæ**	**2.06**	**341**	*e*P	**Pn**	**12 18 11.0**	**+0.4**
MNMC				*i* S	**Sn**	**12 18 38.8**	**+0.5**
MNMC				AML	AML	12 18 40.5	
	comp=N,2μm,0.5s						
MECH	**Mejillones**	**2.48**	**216**	*e*P	**Pn**	**12 18 16.1**	**+0.6**
MECH				*e*S	**Sn**	**12 18 46.7**	**-0.4**
MECH				AML	AML	12 18 55.5	
	comp=E,450nm,0.4s						
ANCH	**Antofagasta**	**2.95**	**209**	⇓*i* P	**Pn**	**12 18 21.4**	**+0.1**
ANCH				*e*S	**Sn**	**12 18 56.8**	**-0.7**
ANCH	**Antofagasta**	**2.95**	**209**	⇓*i* P	**Pn**	**12 18 21.4**	**+0.1**
ANCH				*e*S	**Sn**	**12 18 56.8**	**-0.7**
ANCH				AML	AML	12 18 59.0	
	comp=E,580nm,0.1s						
LPAZ	**La Paz**	**4.83**	**8**	P	**Pn**	**12 18 48.4**	**+2.5**
	comp=E,1.4nm,0.3s,baz=191,slow=6.3,SNR=26						
LPAZ				S	**Sn**	**12 19 40.8**	**-0.6**
	comp=E,0.3nm,0.3s,baz=202,slow=19,SNR=2.9						
PLCA	**Paso Flores**	**19.63**	**184**	P	**P**	**12 21 54.4**	**+2.9**
	comp=E,0.2nm,0.3s,baz=1.5,slow=11,SNR=7.7						
PLCA	**Paso Flores**	**19.63**	**184**	P	**P**	**12 21 54.4**	**+2.9**
BDFB	**Brasilia**	**20.52**	**78**	P	**P**	**12 21 59.4**	**-1.8**
	comp=E,4.4nm,0.4s,baz=238,slow=13,SNR=5.9						
WVL	**Waterville**	**65.34**	**359**	*e*P	**P**	**12 27 57.9**	**-2.6**
DBIC	**Dimbokro**	**68.58**	**74**	P	**P**	**12 28 22.0**	**+0.3**
	comp=E,3.0nm,0.8s,mb4.1,baz=201,slow=12,SNR=3.2						
DBIC	**Dimbokro**	**68.58**	**74**	P	**P**	**12 28 22.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**77.19**	**70**	P	**P**	**12 29 12.9**	**+0.5**
	comp=E,2.7nm,0.7s,mb4.0,baz=255,slow=5.2,SNR=3.0						
ASAR	**Alice Springs**	**130.29**	**208**	PKP	PKPdf	12 36 31.3	+3.5
	comp=E,0.2nm,0.9s,baz=102,slow=2.0,SNR=3.0						
WRA	**Warramunga Arr**	**133.32**	**211**	PKP	PKPdf	12 36 37.4	+3.8
	comp=E,0.2nm,0.5s,baz=156,slow=1.6,SNR=4.7						
MKAR	**Makanchi Array**	**145.28**	**36**	PKP	PKPdf	12 36 58.2	+3.8
	comp=E,0.6nm,0.8s,baz=318,slow=1.6,SNR=3.6						

*TIR **30** 12:46:27.6±6.0, 40°.51N×20°.16E, h2km±741km, ML3.1*
*CSEM **30** 12:46:31.9±0.2, 40°.53N×20°.04E, h2km, ML3.1, Error ellipse: s-maj=4.7km s-min=2.6km az=65.0*
*ISCJB **30** 12:46:31.3±0.5, 40°.54N±0°.02×20°.01E±0°.03, h0km±3km, Error ellipse: s-maj=3.8km s-min=2.5km az=159.1*
*ATH **30** 12:46:31.4, 40°.46N×19°.87E, h23km±1km, MD3.3/8*
*SKO **30** 12:46:31.8, 40°.43N×20°.01E, h0km, M2.3, ML2.8*
*THE **30** 12:46:32.6, 40°.50N×20°.05E, h2km±1km, ML2.9/6, Error ellipse: s-maj=1.7km s-min=0.9km az=311.0*
*NEIC **30** 12:46:37.2, 40°.91N×19°.97E, h2km, ML2.9(PDG), After PDG.*
*PDG **30** 12:46:37.2±0.8, 40°.91N×19°.97E, h2km±1km, ML2.9/10, Error ellipse: s-maj=1.9km s-min=5.2km az=0.0*

ISC 30 12:46:32.5±0.4, 40°.52N±0°.02×20°.02E±0°.03, h5km±3km, n82, σ0°97/135, 12C-9D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.23**	**181**	*e*PG	**Pg**	**12 46 36.5**	**-0.4**
TPE				*i* SG	**Sg**	**12 46 41.0**	**+1.1**
TPE	**Tepelena**	**0.23**	**181**	*e*Pg	**Pg**	**12 46 36.5**	**-0.4**
	SNR=92						
TPE				*i* Sg	**Sg**	**12 46 41.0**	**+1.1**
	SNR=92						
KBN	**Korca**	**0.59**	**80**	*e*PG	**Pg**	**12 46 49.5**	**+5.6**
SRN	**Sarande**	**0.64**	**181**	*e*PG	**Pg**	**12 46 44.0**	**-0.8**
SRN				*i* SG	**Sg**	**12 46 54.0**	**+0.9**
SRN	**Sarande**	**0.64**	**181**	*e*Pg	**Pg**	**12 46 44.0**	**-0.8**
	SNR=91						
SRN				*i* Sg	**Sg**	**12 46 54.0**	**+0.8**
	SNR=91						
NEST	**Nestorio**	**0.80**	**98**	P	**Pg**	**12 46 46.3**	**-1.4**
NEST				S	**Sg**	**12 46 58.9**	**+0.9**
NEST	**Nestorio**	**0.80**	**98**	P	**Pg**	**12 46 46.3**	**-1.4**
NEST				S	**Sg**	**12 46 58.9**	**+0.9**
TIR	**Tirane**	**0.83**	**352**	*e*PN	**Pg**	**12 46 48.5**	**+0.1**
TIR	**Tirane**	**0.83**	**352**	P	**Pg**	**12 46 48.2**	**-0.2**
TIR				S	**Sg**	**12 47 01.8**	**+2.6**
TIR	**Tirane**	**0.83**	**352**	P	**Pg**	**12 46 48.2**	**-0.2**
TIR	**Tirane**	**0.83**	**352**	*e*Pn	**Pg**	**12 46 48.5**	**+0.1**
TIR				S	**Sg**	**12 47 01.8**	**+2.6**
IGT	**Igoumenitsa**	**1.02**	**166**	P	**Pg**	**12 46 51.4**	**-0.6**
IGT				S	**Sg**	**12 47 06.2**	**+1.0**
IGT	**Igoumenitsa**	**1.02**	**166**	P	**Pg**	**12 46 51.4**	**-0.6**
IGT				S	**Sg**	**12 47 06.2**	**+1.0**
FNA	**Florina**	**1.07**	**75**	P	**Pg**	**12 46 51.4**	**-1.5**
FNA				S	**Sg**	**12 47 07.4**	**+0.6**
FNA	**Florina**	**1.07**	**75**	P	**Pg**	**12 46 51.4**	**-1.5**
FNA				S	**Sg**	**12 47 07.4**	**+0.6**
JAN	**Janina**	**1.08**	**143**	*e*PN	**Pg**	**12 46 51.8**	**-1.3**
JAN				*e*SN	**Sg**	**12 47 07.5**	**+0.4**
JAN	**Janina**	**1.08**	**143**	*e*Pn	**Pg**	**12 46 51.8**	**-1.3**
JAN				*e*Sn	**Sg**	**12 47 07.5**	**+0.4**
BIA	**Bitola**	**1.11**	**63**	P	**Pg**	**12 46 51.7**	**-2.0**
BIA	**Bitola**	**1.11**	**63**	*e*Pg	**Pg**	**12 46 51.7**	**-2.1**
BIA				*e*Sg	**Sg**	**12 47 08.8**	**+0.6**
BIA				*e*Lg		12 47 09.7	
	comp=E,116nm,0.4s						
BIA				*e*Lg		12 47 10.9	
	comp=N,109nm,0.5s						
BIA	**Bitola**	**1.11**	**63**	P	**Pg**	**12 46 51.7**	**-2.0**
KRUS	**Krusevo**	**1.26**	**47**	*e*Pg	**Pg**	**12 46 54.6**	**-2.0**
KZN	**Kozani**	**1.36**	**99**	*e*PN	**Pn**	**12 46 57.9**	**-0.2**
KZN	**Kozani**	**1.36**	**99**	P	**Pn**	**12 46 57.3**	**-0.8**
KZN				S	**Sb**	**12 47 16.5**	**+0.5**
KZN	**Kozani**	**1.36**	**99**	P	**Pn**	**12 46 57.3**	**-0.8**
KZN	**Kozani**	**1.36**	**99**	*e*Pn	**Pn**	**12 46 57.9**	**-0.2**
KZN				S	**Sb**	**12 47 16.5**	**+0.5**
PUK	**Puka**	**1.52**	**357**	*e*PG	**Pn**	**12 47 00.1**	**-0.3**
PUK				*i* SG	**Sn**	**12 47 19.1**	**-1.4**
PUK	**Puka**	**1.52**	**357**	*e*Pg	**Pn**	**12 47 00.1**	**-0.2**
	SNR=91						
PUK				*i* Sg	**Sn**	**12 47 19.1**	**-1.4**
	SNR=91						
ULC	**Ulcinj**	**1.55**	**338**	⇑*i*Pg	**Pn**	**12 46 59.8**	**-0.9**
ULC				*e*Sg	**Sn**	**12 47 18.1**	**-3.1**
ULC	**Ulcinj**	**1.55**	**338**	*e*PG	**Pn**	**12 46 59.8**	**-1.0**
ULC	**Ulcinj**	**1.55**	**338**	*e*Pg	**Pn**	**12 46 59.8**	**-0.9**
	SNR=91						
ULC				*e*Sg	**Sn**	**12 47 18.1**	**-3.1**
SKO	**Skopje**	**1.80**	**36**	*e*Pn	**Pn**	**12 47 05.6**	**+1.4**
SKO				*e*Sg	**Sg**	**12 47 30.6**	**+0.3**
SKO				*e*Lg		12 47 30.9	
	comp=E,123nm,0.9s						
SKO				*e*Lg		12 47 30.9	
	comp=N,68nm,0.5s						
LKD2	**Lefkada island**	**1.80**	**164**	P	**Pn**	**12 47 03.1**	**-1.1**
LKD2				S	**Sn**	**12 47 27.4**	**0.0**
LKD2	**Lefkada island**	**1.80**	**164**	P	**Pn**	**12 47 03.1**	**-1.1**
LKD2				S	**Sn**	**12 47 27.4**	**0.0**
THL	**Klokotos Trika**	**1.81**	**121**	*e*PN	**Pn**	**12 47 04.7**	**+0.4**
THL	**Klokotos Trika**	**1.81**	**121**	P	**Pn**	**12 47 03.7**	**-0.6**
THL				S	**Sn**	**12 47 27.9**	**+0.3**
THL	**Klokotos Trika**	**1.81**	**121**	P	**Pn**	**12 47 03.7**	**-0.6**
THL	**Klokotos Trika**	**1.81**	**121**	*e*Pn	**Pn**	**12 47 04.7**	**+0.4**
THL				S	**Sn**	**12 47 27.9**	**+0.3**
BCI	**Bajram Curri**	**1.84**	**1**	*e*PG	**Pn**	**12 47 05.8**	**+1.1**
BCI				*i* SG	**Sg**	**12 47 30.9**	**-0.7**
BCI	**Bajram Curri**	**1.84**	**1**	*e*Pg	**Pn**	**12 47 05.8**	**+1.1**
	SNR=91						
BCI				*i* Sg	**Sg**	**12 47 30.9**	**-0.7**
	SNR=91						
GRG	**Griva**	**1.86**	**76**	P	**Pn**	**12 47 05.4**	**+0.4**
GRG	**Griva**	**1.86**	**76**	P	**Pn**	**12 47 05.4**	**+0.4**
LIT	**Litokhoron**	**1.94**	**102**	*e*PB	**Pn**	**12 47 06.4**	**+0.3**
LIT	**Litokhoron**	**1.94**	**102**	P	**Pn**	**12 47 05.9**	**-0.2**
LIT				S	**Sn**	**12 47 31.0**	**+0.2**
LIT	**Litokhoron**	**1.94**	**102**	P	**Pn**	**12 47 05.9**	**-0.2**
LIT	**Litokhoron**	**1.94**	**102**	*e*Pb	**Pn**	**12 47 06.4**	**+0.3**
LIT				S	**Sn**	**12 47 31.0**	**+0.2**
BUM	**Brajici-Budva**	**1.96**	**335**	⇓*i*Pn	**Pn**	**12 47 05.8**	**-0.6**
BUM				*e*Sn	**Sn**	**12 47 32.2**	**+0.7**
BUM	**Brajici-Budva**	**1.96**	**335**	⇓*i*Pn	**Pn**	**12 47 05.8**	**-0.6**
BUM				*e*Sn	**Sn**	**12 47 32.2**	**+0.7**
PDG	**Podgorica**	**1.99**	**344**	⇓*i*Pn	**Pn**	**12 47 06.4**	**-0.3**
PDG				*e*Sn	**Sn**	**12 47 32.4**	**+0.4**
TTG	**Podgorica**	**1.99**	**344**	⇓*i*Pn	**Pn**	**12 47 06.4**	**-0.3**
TTG				*e*Sn	**Sn**	**12 47 32.4**	**+0.4**
TTG	**Podgorica**	**1.99**	**344**	⇓*i*Pn	**Pn**	**12 47 06.4**	**-0.3**
TTG				*e*Sn	**Sn**	**12 47 32.4**	**+0.4**
PVY	**Plav**	**2.07**	**359**	⇑*i*Pn	**Pn**	**12 47 08.0**	**+0.1**
PVY				*e*Sn	**Sn**	**12 47 33.7**	**-0.4**
PVY	**Plav**	**2.07**	**359**	⇑*i*Pn	**Pn**	**12 47 08.0**	**+0.1**
PVY				*e*Sn	**Sn**	**12 47 33.7**	**-0.4**
VAY	**Valandovo**	**2.09**	**67**	*e*Pn	**Pn**	**12 47 08.4**	**+0.2**
VAY				*e*Sg	**Sg**	**12 47 40.6**	**+0.9**
VAY				*e*Lg		12 47 41.3	
	comp=N,42nm,0.7s						
VAY				*e*Lg		12 47 41.8	
	comp=E,88nm,1.3s						
HCY	**Herceg Novi**	**2.23**	**330**	⇑*i*Pn	**Pn**	**12 47 11.4**	**+1.2**
HCY				*e*Sn	**Sn**	**12 47 39.2**	**+1.1**
HCY	**Herceg Novi**	**2.23**	**330**	⇑*i*Pn	**Pn**	**12 47 11.4**	**+1.2**
HCY				*e*Sn	**Sn**	**12 47 39.2**	**+1.1**
KNT	**Kendrikon**	**2.28**	**73**	P	**Pn**	**12 47 09.8**	**-0.9**
KNT	**Kendrikon**	**2.28**	**73**	P	**Pn**	**12 47 09.8**	**-0.9**
AGG	**Agios Georgios**	**2.33**	**129**	*e*PB	**Pn**	**12 47 11.7**	**+0.2**
AGG	**Agios Georgios**	**2.33**	**129**	*e*Pb	**Pn**	**12 47 11.7**	**+0.2**
BEY	**Berane**	**2.35**	**358**	⇑*i*Pn	**Pn**	**12 47 12.9**	**+1.2**
BEY				*e*Sn	**Sn**	**12 47 40.5**	**-0.4**
IVA	**Berane**	**2.35**	**358**	⇑*i*Pn	**Pn**	**12 47 12.9**	**+1.2**
IVA				*e*Sn	**Sn**	**12 47 40.5**	**-0.4**
IVA	**Berane**	**2.35**	**358**	⇑*i*Pn	**Pn**	**12 47 12.9**	**+1.2**
IVA				*e*Sn	**Sn**	**12 47 40.5**	**-0.4**
VLS	**Valsamata**	**2.38**	**169**	*e*PN	**Pn**	**12 47 11.0**	**-1.2**
VLS	**Valsamata**	**2.38**	**169**	*e*Pn	**Pn**	**12 47 11.0**	**-1.2**
NKY	**Niksic**	**2.41**	**342**	⇑*i*Pn	**Pn**	**12 47 14.2**	**+1.6**
NKY				*e*Sn	**Sn**	**12 47 42.0**	**-0.5**
NKY	**Niksic**	**2.41**	**342**	⇑*i*Pn	**Pn**	**12 47 14.2**	**+1.6**
NKY				*e*Sn	**Sn**	**12 47 42.0**	**-0.5**
BRY	**Bratogost**	**2.62**	**336**	⇓*i*Pn	**Pn**	**12 47 16.5**	**+1.1**
BRY				*e*Sn	**Sn**	**12 47 47.7**	**+0.1**
BRY	**Bratogost**	**2.62**	**336**	⇓*i*Pn	**Pn**	**12 47 16.5**	**+1.1**
BRY				*e*Sn	**Sn**	**12 47 47.7**	**+0.1**
PLG	**Polygyros**	**2.62**	**92**	*e*PN	**Pn**	**12 47 16.0**	**+0.5**
PLG	**Polygyros**	**2.62**	**92**	*e*Pn	**Pn**	**12 47 16.0**	**+0.5**
BARS	**Barje**	**2.66**	**30**	*e*Pn	**Pn**	**12 47 15.4**	**-0.6**
SJES	**Sjenica**	**2.74**	**359**	*e*Pn	**Pn**	**12 47 16.8**	**-0.2**
UPM	**Unac-Piva**	**2.80**	**343**	⇑*i*Pn	**Pn**	**12 47 18.6**	**+0.7**
UPM				*e*Sn	**Sn**	**12 47 51.9**	**-0.2**
UPM	**Unac-Piva**	**2.80**	**343**	⇑*i*Pn	**Pn**	**12 47 18.6**	**+0.7**
UPM				*e*Sn	**Sn**	**12 47 51.9**	**-0.2**
PLE	**Pljevlja**	**2.84**	**351**	⇓*i*Pn	**Pn**	**12 47 19.6**	**+1.1**
PLE				*e*Sn	**Sn**	**12 47 53.2**	**+0.1**
PLE	**Pljevlja**	**2.84**	**351**	⇓*i*Pn	**Pn**	**12 47 19.6**	**+1.1**
PLE				*e*Sn	**Sn**	**12 47 53.2**	**+0.1**
STON	**Ston**	**2.92**	**324**	*e*Pn	**Pn**	**12 47 16.6**	**-3.0**
STON				Sn	**Sn**	**12 47 51.6**	**-3.4**
STON	**Ston**	**2.92**	**324**	*e*Pn	**Pn**	**12 47 16.5**	**-3.0**
STON				Sn	**Sn**	**12 47 51.5**	**-3.5**
PTRP	**Pietrapertosa**	**3.02**	**271**	Pn	**Pg**	**12 47 30.6**	**+0.4**
DIVS	**Divibare**	**3.57**	**360**	*e*Pn	**Pn**	**12 47 32.4**	**+3.9**
NRCA	**Norcia**	**5.66**	**296**	Pn	**Pn**	**12 47 57.1**	**-0.1**
NRCA	**Norcia**	**5.66**	**296**	Pn	**Pn**	**12 47 57.1**	**-0.1**

*IDC **30** 12:50:34.4±5.1, 27°.26N×128°.99E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/22, mbtmp3.4/4, MS3.0/5, Ms1 3.0/5, ms1mx2.6/32, Error ellipse: s-maj=266.1km s-min=26.3km az=63.0*
*ISCJB **30** 12:50:36.4±0.6, 27°.31N±0°.04×129°.62E±0°.04, h36km±10km, mb3.5/5, MS3.4/2, Error ellipse: s-maj=7.0km s-min=5.2km az=43.4*
*JMA **30** 12:50:36.2±0.2, 27°.30N×129°.61E, h34km, M3.4*
*NEIC **30** 12:50:40.2±0.8, 26°.48N×127°.37E, h10km, MG3.4(JMA), Error ellipse: s-maj=18.5km s-min=17.2km az=174.0*

ISC 30 12:50:36.3±1.1, 27°.32N±0°.04×129°.62E±0°.04, h26km±9km, n21, σ0°76/27, mb3.5/5, MS3.4/2, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.75**	**308**	P	**Pb**	**12 50 50.3**	**-0.5**
JTK				*e*S	**Sb**	**12 51 01.1**	**+0.4**
JZK	**Kikaishima**	**1.03**	**17**	P	**Pn**	**12 50 55.6**	**+0.5**
JZK				*e*S	**Sb**	**12 51 09.0**	**+0.3**
JAM	**Amami Oshima**	**1.08**	**359**	P	**Pn**	**12 50 55.2**	**-0.6**
JAM				*e*S	**Sn**	**12 51 09.7**	**-0.2**
JOW	**Kunigami**	**1.30**	**248**	*e*Pn	**Pn**	**12 50 58.6**	**0.0**
JOW				*e*Sg	**Sn**	**12 51 06.2**	**-9.0**
JOW	**Kunigami**	**1.30**	**248**	P	**Pn**	**12 50 58.6**	**-0.1**
JOW				*e*S	**Sn**	**12 51 14.6**	**-0.6**
JIH	**Iheya**	**1.50**	**259**	P	**Pn**	**12 51 01.5**	**0.0**
JIH				*e*S	**Sn**	**12 51 20.1**	**-0.1**
JJT2	**Tamagusuku 2**	**2.05**	**235**	P	**Pn**	**12 51 09.5**	**+0.5**
JJT2				*e*S	**Sn**	**12 51 34.1**	**+0.4**
NAH1	**Naha**	**2.06**	**238**	P	**Pn**	**12 51 09.5**	**+0.4**
NAH1				*e*S	**Sn**	**12 51 33.9**	**0.0**
JMZ	**Minamidaito 2**	**2.07**	**136**	P	**Pn**	**12 51 09.0**	**-0.4**
JMZ				*e*S	**Sn**	**12 51 33.1**	**-1.2**
JAGN	**Aguni-jima**	**2.25**	**252**	P	**Pn**	**12 51 11.6**	**-0.1**
JAGN				*e*S	**Sn**	**12 51 39.1**	**+0.5**
JKE	**Kume jima 2**	**2.72**	**249**	P	**Pn**	**12 51 17.7**	**-0.6**
JKE				*e*S	**Sn**	**12 51 49.4**	**-0.9**
KSRS	**Korea Array**	**10.20**	**352**	LR	LR	12 56 50.9	
	comp=Z,46nm,18.5s,baz=170,slow=37						
MJAR	**Matsushiro Arr**	**11.73**	**36**	LR	LR	12 57 44.3	
	comp=Z,34nm,18.7s,baz=180,slow=36						
GUMO	**Guam**	**19.74**	**131**	LR	LR	13 01 31.7	
	comp=Z,36nm,20.1s,baz=86,slow=33						
KMI	**Kunming**	**24.20**	**271**	P	**P**	**12 55 42.0**	**-8.8**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.8s,mb3.9						
MKAR	**Makanchi Array**	**41.75**	**311**	P	**P**	**12 58 21.7**	**-1.5**
	comp=Z,0.2nm,0.4s,mb3.1,baz=96,slow=11,SNR=2.4						
WRA	**Warramunga Arr**	**47.21**	**174**	P	**P**	**12 59 08.2**	**+1.3**
	comp=Z,0.2nm,0.5s,mb3.3,baz=353,slow=8.4,SNR=4.4						
ASAR	**Alice Springs**	**50.86**	**175**	P	**P**	**12 59 37.4**	**+2.5**
	comp=Z,0.3nm,0.6s,mb3.4,baz=4.4,slow=15,SNR=8.0						
GNI	**Garni**	**69.26**	**305**	LR	LR	13 35 34.2	
	comp=Z,18nm,18.5s,MS3.3,baz=275,slow=39						
BRTR	**Keskin Array B**	**77.34**	**308**	P	**P**	**13 02 29.4**	**+0.6**
	comp=Z,0.8nm,0.6s,mb3.8,baz=119,slow=5.5,SNR=5.3						
NOA	**NORSAR Array B**	**78.88**	**334**	LR	LR	13 42 12.9	
	comp=Z,16nm,18.8s,MS3.4,baz=195,slow=39						

IDC 30 12:59:54.2±8.7, 17°.30N×147°.42E, h52km±65km, mb3.3/4, mb1 3.6/5, mb1mx3.3/22, mbtmp3.4/5, ML3.7/1, Error ellipse: s-maj=69.8km s-min=26.5km az=76.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.44**	**214**	P	Pn	13 00 59.6	+0.6
	3.6nm,0.3s,baz=180,slow=20,SNR=3.8						
GUMO				S	Sn	13 01 49.8	+0.4
	1.7nm,0.3s,baz=204,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**39.18**	**200**	P	P	13 07 17.1	-0.1
	2.0nm,0.7s,baz=25,slow=9.5,SNR=18						
ASAR	**Alice Springs**	**42.81**	**198**	P	P	13 07 47.2	+0.1
	0.2nm,0.4s,baz=19,slow=8.1,SNR=11						
CMAR	**Chiang Mai Arr**	**46.04**	**279**	P	P	13 08 13.1	0.0
	0.4nm,0.5s,baz=57,slow=7.1,SNR=4.6						
MKAR	**Makanchi Array**	**60.60**	**314**	P	P	13 09 59.5	-0.1
	0.2nm,0.7s,baz=79,slow=7.5,SNR=2.6						

*IDC **30** 13:25:41.1±4.4, 6°.47S×129°.99E, h116km±43km, mb3.9/13, mb1 4.1/16, mb1mx4.0/21, mbtmp4.0/16, Error ellipse: s-maj=24.7km s-min=14.8km az=75.0*
*ISCJB **30** 13:25:44.9±0.5, 6°.61S±0°.03×130°.07E±0°.05, h176km±5km, mb4.2/26, Error ellipse: s-maj=8.8km s-min=5.2km az=170.0*
*NEIC **30** 13:25:45.1±1.2, 6°.50S×129°.98E, h155km±12km, mb4.5/12, Error ellipse: s-maj=9.7km s-min=6.6km az=51.0*
*DJA **30** 13:25:46, 6°.60S×130°.30E, h163km, mb4.9/10*

ISC 30 13:25:45.4±0.5, 6°.61S±0°.03×130°.10E±0°.05, h164km±5km, n71, σ1°11/87, mb4.2/26, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.08**	**355**	P	**Pn**	**13 26 24.1**	**+1.7**
BNDI	**Bandanaira**	**2.08**	**355**	P	**Pn**	**13 26 24.0**	**+1.6**
NLAI	**Namlea**	**4.49**	**318**	P	**Pn**	**13 26 55.6**	**+3.2**
NLAI				S	**Sn**	**13 27 50.7**	**+6.0**
NLAI	**Namlea**	**4.49**	**318**	P	**Pn**	**13 26 46.0**	**-6.4**
SWI	**Sorong**	**5.83**	**12**	P	**Pn**	**13 27 09.2**	**-0.8**
	1.0nm8μm100nm,0.8s						
SWI				S	**Sn**	**13 28 13.8**	**-2.6**
	1.0nm8μm100nm,0.8s						
SWI	**Sorong**	**5.83**	**12**	P	**Pn**	**13 27 09.0**	**-1.0**
	8μm100nm,0.8s						
LBMI	**Labuha**	**6.47**	**336**	P	**Pn**	**13 27 19.4**	**+0.8**
	0.8nm3μm302nm,0.9s						
LBMI				S	**Sn**	**13 28 30.7**	**-1.1**
	0.8nm3μm302nm,0.9s						
LBMI	**Labuha**	**6.47**	**336**	P	**Pn**	**13 27 19.0**	**+0.4**
KAKA	**Kakadu**	**6.49**	**159**	*e*P	**Pn**	**13 27 19.8**	**+1.1**
	52nm,0.1s						
KAKA				*e*S	**Sn**	**13 28 29.4**	**-2.6**
KAKA	**Kakadu**	**6.49**	**159**	*e*P	**Pn**	**13 27 19.8**	**+1.1**
	195nm,0.4s						
KAKA				*e*S	**Sn**	**13 28 29.3**	**-2.7**
KAKA	**Kakadu**	**6.49**	**159**	P	**Pn**	**13 27 20.2**	**+1.5**
	6.8nm198nm,0.7s						
KAKA				S	**Sn**	**13 28 31.3**	**-0.7**
	6.8nm198nm,0.7s						
TNTI	**Ternate**	**7.82**	**340**	P	**Pn**	**13 27 36.4**	**-0.1**
	0.3nm59nm,0.9s						
BAKI	**Biak**	**8.06**	**48**	P	**Pn**	**13 27 43.1**	**+3.5**
BAKI				S	**Sn**	**13 29 09.9**	**+0.2**
BAKI	**Biak**	**8.06**	**48**	P	**Pn**	**13 27 42.8**	**+3.2**
	6μm508nm,1.0s						
KNA	**Kununurra**	**9.18**	**188**	P	**Pn**	**13 27 53.8**	**-0.5**
	386nm,0.3s						
KNA				S	**Sn**	**13 29 32.1**	**-4.3**
	386nm,0.3s						
KNA	**Kununurra**	**9.18**	**188**	P	**Pn**	**13 27 53.7**	**-0.6**
SPSI	**Sidrap Palu**	**10.61**	**284**	P	**Pn**	**13 28 16.0**	**+2.7**
	474nm47nm,0.6s						
MRSI	**Marisa**	**10.76**	**311**	P	**Pn**	**13 28 15.9**	**+0.6**
	1μm117nm,1.1s						
TTSI	**Tana Toraja**	**10.84**	**289**	P	**Pn**	**13 28 25.4**	**+9.2**
FITZ	**Fitzroy Crossi**	**12.22**	**200**	P	**Pn**	**13 28 31.7**	**-2.5**
	3.9nm,0.3s,baz=33,slow=9.8,SNR=91						
FITZ				S	**Sn**	**13 30 39.7**	**-10**
	4.6nm,0.3s,baz=55,slow=19,SNR=9.0						
FITZ	**Fitzroy Crossi**	**12.22**	**200**	*e*P	**Pn**	**13 28 32.2**	**-2.0**
	24nm,0.2s						
FITZ				*e*S	**Sn**	**13 30 37.3**	**-12**
FITZ	**Fitzroy Crossi**	**12.22**	**200**	*e*P	**Pn**	**13 28 32.1**	**-2.0**
FITZ				*e*S	**Sn**	**13 30 39.7**	**-10**
FITZ	**Fitzroy Crossi**	**12.22**	**200**	P	**Pn**	**13 28 33.1**	**-1.1**
	42nm,0.6s						
FITZ				S	**Sn**	**13 30 41.1**	**-8.5**
	42nm,0.6s						
WRA	**Warramunga Arr**	**13.88**	**163**	P	**Pn**	**13 28 53.5**	**-1.8**
	2.7nm,0.3s,baz=346,slow=13,SNR=69						
WRA				S	**Sn**	**13 31 20.4**	**-9.0**
	5.7nm,0.3s,baz=334,slow=22,SNR=16						
WRA	**Warramunga Arr**	**13.88**	**163**	P	**Pn**	**13 28 53.5**	**-1.8**
WRA				S	**Sn**	**13 31 20.4**	**-9.0**
KBKI	**Kotabaru**	**14.26**	**283**	P	**Pn**	**13 29 01.1**	**+1.0**
	34nm,1.1s						
COEN	**Coen**	**14.79**	**121**	*e*P	**Pn**	**13 29 07.7**	**+1.0**
	97nm,0.7s						
COEN				*e*S	**Sn**	**13 31 40.3**	**-11**
COEN	**Coen**	**14.79**	**121**	P	**Pn**	**13 29 11.4**	**+4.7**
BBKI	**Banjar Baru**	**15.51**	**281**	P	**Pn**	**13 29 19.0**	**+3.4**
ASAR	**Alice Springs**	**17.35**	**168**	P	**Pn**	**13 29 39.1**	**+1.4**
	3.4nm,0.3s,baz=348,slow=9.7,SNR=184						
ASAR				S	**S**	**13 32 47.6**	**-1.1**
	1.5nm,0.3s,baz=356,slow=27,SNR=6.3						
MBWA	**Marble Bar**	**17.60**	**214**	*e*P	**Pn**	**13 29 39.8**	**-1.0**
	15nm,0.6s						
KKM	**Kota Kinabalu**	**18.71**	**312**	*e*P	**P**	**13 29 51.4**	**-0.1**
CTA	**Charters Tower**	**20.62**	**132**	P	**P**	**13 30 15.7**	**+3.6**
	9.2nm,0.6s,baz=312,slow=12,SNR=12						
CTA	**Charters Tower**	**20.62**	**132**	*e*P	**P**	**13 30 10.9**	**-1.2**
	8.9nm,0.8s						
CTAO	**Charters Tower**	**20.62**	**132**	P	**P**	**13 30 18.3**	**+6.2**
KSM	**Kuching**	**21.32**	**291**	*e*P	**P**	**13 30 18.4**	**-1.2**
FORT	**Forrest**	**24.12**	**184**	*e*P	**P**	**13 30 47.5**	**+1.4**
	25nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**27.34**	**158**	P	**P**	**13 31 17.1**	**+2.1**
	6.3nm,0.3s,mb4.7,baz=337,slow=8.2,SNR=48						
STKA	**Stephens Creek**	**27.34**	**158**	*e*P	**P**	**13 31 17.2**	**+2.2**
	5.4nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**27.34**	**158**	*e*P	**P**	**13 31 16.8**	**+1.8**
	1.4nm,0.4s,mb3.9						
KLBR	**Kellerberrin**	**27.40**	**203**	*e*P	**P**	**13 31 16.3**	**+0.7**
	3.3nm,0.3s,mb4.4						
NWAO	**Narrogin (SRO)**	**28.79**	**203**	P	**P**	**13 31 28.7**	**+0.8**
	3.0nm,0.3s,mb4.5,baz=14,slow=12,SNR=11						
PSI	**Prapat**	**32.49**	**286**	P	**P**	**13 31 59.5**	**-1.3**
	6.1nm,0.7s,mb4.4,baz=180,slow=3.0,SNR=3.8						
PSI	**Prapat**	**32.49**	**286**	P	**P**	**13 31 59.5**	**-1.3**
CNB	**Canberra Magne**	**33.62**	**151**	*e*P	**P**	**13 32 14.2**	**+4.0**
TOO	**Toolangi**	**33.85**	**158**	*e*P	**P**	**13 32 16.1**	**+3.9**
CMAR	**Chiang Mai Arr**	**39.56**	**310**	P	**P**	**13 33 00.1**	**-0.6**
	1.8nm,0.6s,mb3.9,baz=139,slow=7.4,SNR=16						
MJAR	**Matsushiro Arr**	**43.59**	**9**	P	**P**	**13 33 33.0**	**-0.2**
	1.7nm,0.7s,mb3.8,baz=198,slow=10.0,SNR=5.7						
TAPN	**Taplejung**	**53.10**	**311**	*e*P	**P**	**13 34 45.5**	**-0.7**
	9.5nm,0.4s,mb4.9						
GTA	**Gaotai**	**53.68**	**331**	*e*P	**P**	**13 34 50.8**	**+0.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb3.9						
GUN	**Gumba**	**54.77**	**311**	*e*P	**P**	**13 34 57.9**	**-0.4**
	comp=Z,15nm,0.5s,mb5.0						
PKI	**Pulchoki**	**54.95**	**310**	*e*P	**P**	**13 34 58.8**	**-0.8**
PKIN	**Phulchoki**	**54.96**	**310**	*e*P	**P**	**13 34 58.7**	**-1.0**
	comp=Z,3.4nm,0.4s,mb4.4						
KOLN	**Koldanda**	**56.43**	**310**	*e*P	**P**	**13 35 09.7**	**-0.5**
ULN	**Ulaanbaatar**	**57.93**	**342**	*e*P	**P**	**13 35 21.0**	**+0.7**
	comp=Z,2.7nm,0.6s,mb4.2						

	baz=234					
TYC	**Yuchr**	**1.37**	**244**	*e*P	**Pn**	**13 54 52.5 +1.1**
	baz=235					
TYC				*e*S	**Sn**	**13 55 09.3 +0.5**
	baz=235					
IRIF	**Iriomote-Funau**	**1.41**	**97**	P	**Pn**	**13 54 51.5 -0.4**
IRIF				*e*S	**Sn**	**13 55 09.5 -0.2**
YUS	**Yu-Shan**	**1.53**	**228**	*e*P	**Pn**	**13 54 54.3 +0.8**
	baz=220					
YUS				*e*S	**Sn**	**13 55 13.2 +0.6**
	baz=220					
HATJ	**Hateruma jima**	**1.54**	**107**	P	**Pn**	**13 54 54.5 +0.9**
HATJ				*e*S	**Sn**	**13 55 13.8 +1.0**
CHKT	**Chengkung**	**1.60**	**209**	*e*P	**Pn**	**13 54 53.4 -1.1**
	baz=196					
CHKT				*e*S	**Sn**	**13 55 12.3 -2.0**
	baz=196					
ALS	**Alishan**	**1.62**	**232**	*e*P	**Pn**	**13 54 55.7 +1.0**
	baz=221					
ALS				*e*S	**Sn**	**13 55 16.6 +1.8**
	baz=221					
JKRS	**Kuro-shima**	**1.67**	**99**	P	**Pn**	**13 54 55.5 +0.1**
JKRS				*e*S	**Sn**	**13 55 16.5 +0.4**
ELDTW	**Lidau**	**1.71**	**220**	*e*P	**Pn**	**13 54 55.7 -0.1**
	baz=213					
JIJ	**Ishigaki jima**	**1.78**	**94**	P	**Pn**	**13 54 56.4 -0.4**
JIJ				*e*S	**Sn**	**13 55 17.6 -1.0**
JTJ	**Tarama**	**2.28**	**86**	P	**Pn**	**13 55 03.6 -0.1**
JTJ				*e*S	**Sn**	**13 55 31.0 +0.2**

KRSC 30 14:03:11.2±0.4, 56°.38N×163°.28E, h9km±11km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.31**	**236**	*e*P	Pg	14 03 17.0	-0.3
SMKR	**Semkarok**	**1.02**	**282**	*e*P	Pg	14 03 30.7	-0.2
SMKR				*i* S	Sg	14 03 46.0	+1.8
ZLN	**Zelenaya**	**1.43**	**256**	*e*P	Pn	14 03 37.7	+0.4
ZLN				*i* S	Sn	14 03 57.5	+1.3
KLY	**Klyuchi**	**1.47**	**268**	*e*P	Pn	14 03 35.8	-1.9
KLY				*i* S	Sn	14 03 54.3	-2.7
KRSR	**Krestovskiy**	**1.52**	**265**	*e*P	Pn	14 03 38.6	+0.1
KRSR				*e*S	Sn	14 03 58.5	+0.1
BZWR	**Bezymyannyi-We**	**1.61**	**256**	*e*P	Pn	14 03 40.2	+0.4
BZWR				*i* S	Sn	14 04 01.6	+1.0
BZMR	**Bezymyannaya**	**1.62**	**255**	*e*P	Pn	14 03 40.3	+0.4
BZMR				*e*S	Sn	14 04 01.8	+0.9
KIRR	**Kirishev**	**1.70**	**257**	*e*P	Pn	14 03 39.8	-1.1
KIRR				*e*S	Sn	14 04 01.1	-1.7
KPT	**Kopyto**	**1.76**	**258**	*e*P	Pn	14 03 42.6	+0.8
KPT				*e*S	Sn	14 04 06.2	+1.9
KMNR	**Kamenistaya**	**1.82**	**251**	*e*P	Pn	14 03 43.7	+1.1
KMNR				*i* S	Sn	14 04 07.1	+1.4
KOZ	**Kozyrevsk**	**1.93**	**262**	*e*P	Pn	14 03 45.5	+1.4
KOZ				*i* S	Sn	14 04 09.9	+1.4
SRDR	**Sredinnyy**	**1.98**	**270**	*e*P	Pn	14 03 46.2	+1.3
SRDR				*i* S	Sn	14 04 11.1	+1.3
MKZ	**Mys Kozlova**	**2.03**	**206**	*e*P	Pn	14 03 46.3	+0.8
MKZ				*i* S	Sn	14 04 12.0	+1.1
TUMR	**Tumrok**	**2.08**	**239**	*e*P	Pn	14 03 47.5	+1.3
TUMR				*e*S	Sn	14 04 13.4	+1.2
SPN	**Mys Shipunski**	**3.79**	**211**	P	Pn	14 04 09.6	-0.1
SPN				*i* S	Sn	14 04 53.4	-1.0
NLC	**Nalytchevo**	**3.94**	**217**	P	Pn	14 04 12.8	+1.0
NLC				*i* S	Sn	14 04 57.7	-0.3
AVH	**Avacha**	**4.08**	**222**	P	Pn	14 04 16.4	+2.7
AVH				*i* S	Sn	14 05 04.1	+2.6
GNL	**Ganaly**	**4.08**	**231**	P	Pn	14 04 16.1	+2.4
PET	**Petropavlovsk**	**4.30**	**221**	P	Pn	14 04 20.1	+3.4
PET				*i* S	Sn	14 05 09.3	+2.3

CASC 30 14:11:28.1±2.3, 11°.96N×86°.49W, h84km±10km, MD3.7, ML3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.19**	**82**	*e*P	Pn	14 11 40.8	+0.6
CSAN		**0.24**	**17**	*e*P	Pn	14 11 40.6	+0.1
COPN	**Copaltepe**	**0.24**	**336**	*e*P	Pn	14 11 40.3	-0.2
XAVN	**Gruta Xavier**	**0.25**	**40**	*e*P	Pn	14 11 40.0	-0.6
TICN	**Ticuantepe**	**0.27**	**73**	*e*P	Pn	14 11 40.4	-0.2
TISN	**Laguna Tiscapa**	**0.29**	**50**	*e*P	Pn	14 11 40.5	-0.2
MGAN	**Managua**	**0.30**	**52**	*e*P	Pn	14 11 40.3	-0.5
MGAN				*e*S	Sn	14 11 51.1	+0.9
MGAN				AML	AML	14 11 52.1	
	comp=N,2μm,0.3s						
WILN	**Americas 2**	**0.36**	**56**	*e*P	Pn	14 11 40.7	-0.4
WILN				*e*S	Sn	14 11 51.8	+1.0
WILN				AML	AML	14 11 53.7	
	comp=N,2μm,0.4s						
MOMN	**Momotombo**	**0.45**	**354**	*e*P	Pn	14 11 42.3	+0.4
HUEN		**0.49**	**39**	*e*P	Pn	14 11 42.2	+0.1
SSN	**San Juan del S**	**0.90**	**136**	*e*P	Pn	14 11 45.1	-1.2
CONN	**Concepcion**	**0.93**	**115**	*e*P	Pn	14 11 45.9	-0.7
CNCH	**Conchagua**	**1.85**	**315**	*e*P	Pn	14 11 58.7	+0.5
VCR	**Vista de Mar**	**2.00**	**155**	*e*S	Sn	14 12 27.1	+2.4
JCR	**Jicaral**	**2.49**	**147**	*e*P	Pn	14 12 09.3	+2.6
CGA2	**Cerro Gallo 2**	**2.77**	**134**	*e*P	Pn	14 12 10.7	+0.3
PRS1	**Puriscal**	**2.90**	**132**	*e*P	Pn	14 12 13.8	+1.6
LAJ	**Bijagual**	**3.12**	**132**	*e*P	Pn	14 12 13.6	-1.6
URSC	**Urasca**	**3.40**	**128**	*e*P	Pn	14 12 18.1	-0.8

*IDC **30** 14:27:29.5±8.0, 17°.97S×178°.15W, h534km±94km, mb3.2/7, mb1 3.5/7, mb1mx3.3/16, mbtmp3.2/7, Error ellipse: s-maj=54.2km s-min=29.7km az=159.0*
*ISCJB **30** 14:27:30.8±1.4, 18°.1S±0°.2×178°.2W±0°.2, h571km±15km, mb3.7/9, Error ellipse: s-maj=35.3km s-min=19.5km az=148.9*
*NEIC **30** 14:27:31.2±1.1, 18°.15S×178°.11W, h563km±10km, mb3.9/2, Error ellipse: s-maj=24.4km s-min=13.5km az=148.0*

ISC 30 14:27:31.5±1.5, 18°.1S±0°.2×178°.1W±0°.2, h565km±15km, n20, σ0s55/16, mb3.7/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.66**	**275**	*e*P	**P**	**14 28 51.9**	**-0.1**
AFI	**Afiamalu**	**7.40**	**57**	P	**P**	**14 29 17.2**	**-6.7**
	4.0nm,0.3s,baz=54,slow=17,SNR=12						
AFI	**Afiamalu**	**7.40**	**57**	*e*P	**P**	**14 29 17.7**	**-6.3**
CTAO	**Charters Tower**	**33.67**	**261**	*e*P	**P**	**14 33 26.8**	**+0.3**
	3.8nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**38.76**	**241**	P	**P**	**14 34 08.3**	**+0.1**
	3.6nm,0.6s,mb4.0,baz=101,slow=9.3,SNR=8.0						
STKA	**Stephens Creek**	**38.76**	**241**	*e*P	**P**	**14 34 08.7**	**+0.4**
WB2	**Warramunga Arr**	**44.84**	**260**	*e*P	**P**	**14 34 55.8**	**-0.5**
WRA	**Warramunga Arr**	**44.86**	**260**	P	**P**	**14 34 56.1**	**-0.2**
	1.7nm,0.4s,mb4.0,baz=97,slow=6.9,SNR=130						
ASAR	**Alice Springs**	**44.99**	**254**	P	**P**	**14 34 57.6**	**+0.3**
	9.6nm,0.6s,mb4.5,baz=88,slow=9.1,SNR=282						
KAKA	**Kakadu**	**47.84**	**269**	*e*P	**P**	**14 35 19.4**	**+0.4**
MJAR	**Matsushiro Arr**	**68.23**	**323**	P	**P**	**14 37 36.1**	**-0.2**
	0.6nm,0.5s,mb3.4,baz=164,slow=9.5,SNR=4.1						
QSPA	**South Pole Qui**	**71.94**	**180**	*e*P	**P**	**14 37 57.0**	**-0.6**
	2.5nm,1.1s,mb3.6						
NVAR	**Mina Array Bea**	**79.39**	**44**	P	**P**	**14 38 39.5**	**0.0**
	0.4nm,0.6s,mb2.9,baz=226,slow=9.7,SNR=5.0						
TXAR	**Lajitas Array**	**85.88**	**58**	P	**P**	**14 39 13.6**	**+1.2**
	0.6nm,0.8s,mb3.3,baz=216,slow=6.2,SNR=7.3						
ILAR	**Eielson Array**	**86.03**	**13**	P	**P**	**14 39 11.1**	**-1.0**
	0.3nm,0.4s,mb3.3,baz=220,slow=5.6,SNR=7.0						
ILAR	**Eielson Array**	**86.03**	**13**	P	**P**	**14 39 11.1**	**-1.0**
BRTR	**Keskin Array B**	**145.12**	**315**	PKPbc	PKPbc	14 46 07.1	+0.9
	0.4nm,0.8s,baz=154,slow=5.5,SNR=3.7						
CLL	**Collm**	**145.72**	**348**	*i* PKPbc	PKPbc	14 46 08.4	+0.9
	comp=Z,5.0nm,0.7s						
GERES	**GERESS Array B**	**147.88**	**345**	PKPbc	PKPbc	14 46 14.3	+0.9
	comp=Z,1.0nm,0.5s,baz=20,slow=4.3,SNR=5.0						
GERES	**GERESS Array B**	**147.88**	**345**	PKPbc	PKPbc	14 46 14.3	+0.9

*CSEM **30** 14:32:51.4, 46°.38N×6°.92E, h-0km, ML1.1, Suspected Mining explosion. After ZUR*

ZUR 30 14:32:51.4, 46°.38N×6°.92E, h-0km±2km, ML1.1/4, 4C, Suspected Mining explosion., Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIGLE	**Aigle**	**0.05**	**148**	⇑*i*Pg		14 32 52.7	
AIGLE	**Aigle**	**0.05**	**148**	⇑*i*Pg		14 32 52.7	
GRYON	**Gryon**	**0.19**	**134**	*e*Pg		14 32 55.4	
	36nm,1.1s						
GRYON				*e*Sg		14 32 58.3	
	36nm,1.1s						
GRYON	**Gryon**	**0.19**	**134**	*e*Pg		14 32 55.4	
	36nm,1.1s						
GRYON				*e*Sg		14 32 58.3	
	36nm,1.1s						
SALAN	**Lac Salanfe**	**0.24**	**171**	*e*Pg		14 32 56.5	
	22nm,1.0s						
SALAN				*e*Sg		14 33 00.0	
	22nm,1.0s						
SALAN	**Lac Salanfe**	**0.24**	**171**	*e*Pg		14 32 56.5	
	22nm,1.0s						
SALAN				*e*Sg		14 33 00.0	
	22nm,1.0s						
SENIN	**Lac Senin/Sane**	**0.27**	**94**	*e*Pg		14 32 56.9	
	129nm,1.4s						
SENIN	**Lac Senin/Sane**	**0.27**	**94**	*e*Pg		14 32 56.9	
	129nm,1.4s						
EMV	**Vieux Emosson**	**0.32**	**182**	⇑*i*Pg		14 32 57.9	
	67nm,1.5s						
EMV	**Vieux Emosson**	**0.32**	**182**	⇑*i*Pg		14 32 57.9	
	67nm,1.5s						

IDC 30 14:36:38.2±17.0, 5°.21S×154°.47E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, Error ellipse: s-maj=285.3km s-min=105.0km az=37.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.46**	**231**	P	P	14 41 59.0	+0.1
	0.5nm,1.0s,baz=59,slow=8.9,SNR=6.8						
ASAR	**Alice Springs**	**27.01**	**225**	P	P	14 42 21.4	-0.6
	0.3nm,0.7s,baz=57,slow=9.7,SNR=6.0						
STKA	**Stephens Creek**	**29.14**	**203**	P	P	14 42 42.0	+1.0
	2.0nm,1.1s,baz=50,slow=7.9,SNR=2.0						

IDC 30 14:39:40.5±6.1, 4°.13S×102°.10E, h0km, mb3.2/3, mb1 3.3/3, mb1mx3.2/20, mbtmp3.2/3, Error ellipse: s-maj=298.9km s-min=27.7km az=51.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.12**	**119**	P	P	14 46 36.1	+0.1
	0.2nm,0.4s,baz=302,slow=8.9,SNR=5.0						
ASAR	**Alice Springs**	**36.31**	**125**	P	P	14 46 45.2	-0.9
	0.1nm,0.4s,baz=295,slow=7.2,SNR=4.1						
MKAR	**Makanchi Array**	**53.64**	**343**	P	P	14 49 03.1	-0.6
	0.2nm,0.4s,baz=149,slow=6.4,SNR=3.6						
TXAR	**Lajitas Array**	**145.00**	**41**	PKPbc	PKPbc	14 59 20.6	+0.8
	0.1nm,0.4s,baz=215,slow=3.0,SNR=3.5						

*IDC **30** 14:42:09.3±1.7, 1°.97N×124°.53E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.7/21, mbtmp3.9/4, Error ellipse: s-maj=119.5km s-min=23.3km az=67.0*
*ISCJB **30** 14:42:35.4±5.3, 1°.4N±0°.3×123°.9E±0°.3, h263km±55km, mb3.6/4, Error ellipse: s-maj=59.9km s-min=13.4km az=137.0*
*NEIC **30** 14:42:39.6±3.9, 1°.26N×123°.75E, h288km±42km, mb3.9/1, Error ellipse: s-maj=40.5km s-min=9.0km az=47.0*

ISC 30 14:42:38.8±5.4, 1°.3N±0°.3×123°.8E±0°.3, h279km±58km, n11, σ0s50/11, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**13.48**	**271**	*e*P	**Pn**	**14 45 39.8**	**-0.1**
KAKA	**Kakadu**	**16.35**	**149**	*e*P	**P**	**14 46 12.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.36**	**175**	P	**P**	**14 46 43.8**	**-0.5**
	0.6nm,0.3s,baz=0.7,slow=9.3,SNR=15						
FITZ	**Fitzroy Crossi**	**19.36**	**175**	*e*P	**P**	**14 46 43.7**	**-0.6**
IPM	**Ipoh**	**22.95**	**278**	P	**P**	**14 47 19.9**	**+0.5**
WRA	**Warramunga Arr**	**23.50**	**154**	P	**P**	**14 47 24.2**	**0.0**
	3.7nm,0.6s,mb3.9,baz=335,slow=10.0,SNR=39						
WB2	**Warramunga Arr**	**23.51**	**154**	*e*P	**P**	**14 47 24.1**	**-0.3**
ASAR	**Alice Springs**	**26.69**	**159**	P	**P**	**14 47 53.2**	**+0.4**
	0.5nm,0.4s,mb3.3,baz=333,slow=7.3,SNR=17						
MK31	**Makanchi Array**	**57.94**	**328**	*e*P	**P**	**14 52 03.0**	**+0.6**
MKAR	**Makanchi Array**	**57.94**	**328**	P	**P**	**14 52 02.4**	**+0.1**
	0.7nm,0.4s,mb3.4,baz=122,slow=8.6,SNR=6.5						
KURK	**Kurchatov**	**62.26**	**329**	*e*P	**P**	**14 52 30.4**	**-1.0**
	1.4nm,0.5s,mb3.9						

*ISCJB **30** 14:48:16.9±0.9, 32°.98N±0°.04×140°.50E±0°.08, h57km±9km, mb3.3/2, Error ellipse: s-maj=10.9km s-min=7.2km az=11.6*
*JMA **30** 14:48:18.2±0.2, 33°.00N×140°.43E, h52km±4km, M3.6*
*IDC **30** 14:48:19.1±2.0, 32°.72N×139°.77E, h42km±53km, mb3.1/2, mb1 3.4/3, mb1mx3.1/23, mbtmp3.1/3, ML3.1/1, Error ellipse: s-maj=138.0km s-min=17.8km az=68.0*

ISC 30 14:48:17.8±1.0, 32°.98N±0°.05×140°.52E±0°.08, h45km±13km, n16, σ1s09/28, mb3.3/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.60**	**283**	P	**Pn**	**14 48 30.2**	**+0.2**
JHJ2				S	**Sn**	**14 48 38.1**	**-0.8**
JHJ	**Hachijo jima 2**	**0.63**	**283**	P	**Pn**	**14 48 30.2**	**-0.2**
	141nm,0.3s,baz=83,slow=21,SNR=248						
JHJ				S	**Sn**	**14 48 38.0**	**-1.6**
	321nm,0.3s,baz=75,slow=20,SNR=28						
JMY	**Miyakejima3**	**1.38**	**323**	*e*S	**Sn**	**14 48 56.7**	**-0.8**
JKO	**Kozu shima**	**1.67**	**317**	P	**Pn**	**14 48 45.4**	**+0.9**
JKO				*e*S	**Sn**	**14 49 05.3**	**+0.6**
BSO1	**Boso 1**	**1.71**	**13**	P	**Pn**	**14 48 44.9**	**-0.2**
BSO1				S	**Sn**	**14 49 04.2**	**-1.6**
BSO2	**Boso 2**	**1.78**	**6**	*e*S	**Sn**	**14 49 06.6**	**-0.8**
BSO3	**Boso 3**	**1.82**	**360**	P	**Pn**	**14 48 46.9**	**+0.3**
BSO3				S	**Sn**	**14 49 07.6**	**-0.8**
JIM2	**Oshima 3**	**1.96**	**333**	P	**Pn**	**14 48 49.0**	**+0.6**
JIM2				S	**Sn**	**14 49 10.4**	**-1.4**
BSO4	**Boso 4**	**2.01**	**356**	P	**Pn**	**14 48 50.0**	**+0.8**
BSO4				*e*S	**Sn**	**14 49 12.9**	**-0.2**
JIZS	**Izushimoda**	**2.21**	**322**	P	**Pn**	**14 48 53.6**	**+1.7**
JIZS				*e*S	**Sn**	**14 49 17.9**	**0.0**
KTJJ	**Kamata 2**	**2.29**	**328**	P	**Pn**	**14 48 54.0**	**+1.0**
KTJJ				*e*S	**Sn**	**14 49 19.2**	**-0.7**
JOD2	**Odawara 2**	**2.57**	**333**	P	**Pn**	**14 48 57.8**	**+1.0**
JOD2				*e*S	**Sn**	**14 49 25.1**	**-1.7**
MJAR	**Matsushiro Arr**	**4.03**	**332**	P	**Pn**	**14 49 19.6**	**+2.7**
	1.2nm,0.3s,baz=165,slow=13,SNR=12						
MJAR				S	**Sn**	**14 50 03.9**	**+1.0**
	1.3nm,0.3s,baz=84,slow=9.1,SNR=7.4						
MAT	**Matsushiro**	**4.03**	**332**	P	**Pn**	**14 49 18.9**	**+2.0**
MAT				S	**Sn**	**14 50 04.2**	**+1.3**
WRA	**Warramunga Arr**	**52.95**	**187**	P	**P**	**14 57 28.9**	**-0.7**
	0.2nm,0.4s,mb3.4,baz=2.9,slow=7.6,SNR=13						
ASAR	**Alice Springs**	**56.68**	**187**	P	**P**	**14 57 55.0**	**-1.5**
	0.2nm,0.9s,mb3.2,baz=14,slow=8.6,SNR=4.5						

*CSEM **30** 14:51:47.6±0.3, 42°.94N×20°.00E, h2km, ML1.8, Error ellipse: s-maj=5.5km s-min=5.0km az=42.0*

BEO 30 14:51:49.8±1.0, 43°.00N×20°.08E, h3km±3km, ML1.8/4, 4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.27**	**343**	⇓*i*Pg	Pg	14 51 54.2	-0.9
SJES				*e*Sg	Sg	14 51 59.6	+1.0
SJES	**Sjenica**	**0.27**	**343**	⇓*i*Pg	Pg	14 51 54.2	-0.9
SJES				*e*Sg	Sg	14 51 59.6	+1.0
BCI	**Bajram Curri**	**0.63**	**181**	*e*PG	Pg	14 52 03.9	+2.0
BCI				*i* SG	Sg	14 52 04.7	-5.4
SELS	**Selova**	**0.79**	**74**	*e*Pg	Pg	14 52 04.4	-0.6
SELS				*e*Sg	Sg	14 52 14.7	-0.5
SELS	**Selova**	**0.79**	**74**	*e*Pg	Pg	14 52 04.4	-0.6
SELS				*e*Sg	Sg	14 52 14.7	-0.5
PUK	**Puka**	**0.97**	**188**	*e*PG	Pg	14 52 15.4	+7.1
PUK				*i* SG	Sg	14 52 17.3	-3.5
PUK	**Puka**	**0.97**	**188**	*i* Sg	Sg	14 52 17.3	-3.5
DIVS	**Divibare**	**1.10**	**357**	*e*Pg	Pg	14 52 08.8	-2.1
DIVS				*e*Sg	Sg	14 52 24.8	-0.3
DIVS	**Divibare**	**1.10**	**357**	*e*Pg	Pg	14 52 08.8	-2.1
DIVS				*e*Sg	Sg	14 52 24.8	-0.3
BARS	**Barje**	**1.29**	**98**	⇓*i*Pg	Pg	14 52 13.2	-1.3
BARS				*e*Sg	Sg	14 52 30.3	-0.9
BARS	**Barje**	**1.29**	**98**	⇓*i*Pg	Pg	14 52 13.2	-1.3
BARS				*e*Sg	Sg	14 52 30.3	-0.9
STON	**Ston**	**1.75**	**267**	*e*Pn	Pn	14 52 17.8	-3.3
STON				Sn	Sn	14 52 42.3	-1.7
STON	**Ston**	**1.75**	**267**	*e*Pn	Pn	14 52 17.7	-3.4
STON				Sn	Sn	14 52 42.2	-1.7
ZAPS	**Zavoj**	**1.89**	**81**	*e*Pn	Pn	14 52 22.9	-0.1
ZAPS				*e*Sn	Sn	14 52 47.7	+0.4
ZAPS	**Zavoj**	**1.89**	**81**	*e*Pn	Pn	14 52 22.9	-0.1
ZAPS				*e*Sn	Sn	14 52 47.7	+0.4

*DJA **30** 15:06:30, 12°.59S×121°.78E, h103km, mb4.9/4*
*ISCJB **30** 15:06:37.0±0.7, 11°.50S±0°.05×117°.79E±0°.06, h33km, mb4.0/3, Error ellipse: s-maj=10.2km s-min=5.9km az=142.3*
*IDC **30** 15:06:36.8±1.2, 10°.85S×118°.33E, h0km, mb4.0/3, mb1 3.7/6, mb1mx3.6/18, mbtmp3.7/6, ML3.4/3, Error ellipse: s-maj=54.1km s-min=21.1km az=60.0*
*NEIC **30** 15:06:41.8±1.0, 10°.88S×118°.42E, h35km, Error ellipse: s-maj=32.5km s-min=14.3km az=50.0*

ISC 30 15:06:39.7±0.7, 11°.43S±0°.06×117°.81E±0°.06, h35km, n18, σ1s14/23, mb4.0/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**3.00**	**17**	P	**Pn**	**15 07 25.7**	**+1.0**
WSI	**Waingapu**	**3.01**	**55**	P	**Pn**	**15 07 19.9**	**-4.9**
WSI				S	**Sn**	**15 07 59.2**	**-0.5**
MTNI	**Mataram**	**3.21**	**330**	P	**Sn**	**15 08 04.5**	**-0.2**
	5μm158nm,0.8s						
KHKI	**Kahang-Kahang**	**3.74**	**324**	P	**Sn**	**15 08 16.3**	**-1.4**
	96nm,0.8s						
SRBI	**Singaraja**	**4.20**	**322**	P	**Sn**	**15 08 22.7**	**-6.3**
JAGI	**Jajag, Banyuwa**	**4.65**	**309**	P	**Pn**	**15 07 48.1**	**+0.6**
BKSI	**Bulukumba**	**6.48**	**21**	P	**Pn**	**15 08 15.4**	**+2.7**
	498nm41nm,0.6s						
MBWA	**Marble Bar**	**9.85**	**169**	*e*P	**Pn**	**15 08 58.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**10.06**	**132**	Pn	**Pn**	**15 09 01.8**	**0.0**
	0.4nm,0.3s,baz=308,slow=11,SNR=20						
FITZ				Sn	**Sn**	**15 10 46.7**	**-6.8**
	1.2nm,0.3s,baz=191,slow=21,SNR=10						
FITZ	**Fitzroy Crossi**	**10.06**	**132**	*e*P	**Pn**	**15 09 02.6**	**+0.8**
FITZ				Sn	**Sn**	**15 10 46.7**	**-6.8**
WRA	**Warramunga Arr**	**18.01**	**120**	P	**Pn**	**15 10 46.0**	**-1.3**
	0.1nm,0.3s,baz=298,slow=14,SNR=7.4						
WRA				S	**S**	**15 13 52.3**	**-20**
	0.1nm,0.3s,baz=287,slow=24,SNR=3.9						
WB2	**Warramunga Arr**	**18.02**	**120**	*e*P	**Pn**	**15 10 46.5**	**-1.0**
ASAR	**Alice Springs**	**19.56**	**131**	P	**Pn**	**15 11 08.3**	**+2.3**
	0.1nm,0.3s,baz=298,slow=12,SNR=9.4						
ASAR				S	**S**	**15 14 34.3**	**-9.4**
	0.1nm,0.3s,baz=293,slow=22,SNR=8.7						
NWAO	**Narrogin (SRO)**	**21.40**	**181**	P	**P**	**15 11 32.5**	**+8.1**
	4.5nm,0.3s,mb4.2,baz=2.9,slow=12,SNR=12						
NWAO	**Narrogin (SRO)**	**21.40**	**181**	*e*P	**P**	**15 11 32.4**	**+7.9**
MKAR	**Makanchi Array**	**66.09**	**334**	P	**P**	**15 17 23.9**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=144,slow=8.4,SNR=4.8						
ZALV	**Zalesovo Beam**	**70.89**	**340**	P	**P**	**15 17 53.2**	**+0.3**
	0.8nm,0.4s,mb4.0,baz=134,slow=6.0,SNR=4.3						
ZALV	**Zalesovo Beam**	**70.89**	**340**	P	**P**	**15 17 53.2**	**+0.3**

DJA 30 15:22:21, 0°.12S×122°.86E, h61km, MLv3.7/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.92**	**186**	P	Pn	15 22 37.9	-0.2
LUWI				S	Sn	15 22 51.1	+0.4
MRSI	**Marisa**	**1.09**	**303**	P	Pn	15 22 41.3	+1.0
KMSI	**Cibinong**	**1.32**	**58**	P	Pn	15 22 44.3	+1.0
KMSI				S	Sn	15 23 01.4	+1.5
TOLI	**Toli-Toli**	**2.41**	**301**	P	Pn	15 22 58.0	0.0
MNI	**Manado**	**2.52**	**52**	P	Pn	15 23 00.5	+1.0
MSSI	**Masamba**	**3.50**	**226**	P	Pn	15 23 14.2	+1.2
TTSI	**Tana Toraja**	**4.21**	**226**	P	Pn	15 23 23.1	+0.5
SPSI	**Sidrap Palu**	**4.91**	**219**	P	Pn	15 23 32.5	+0.2

*ISCJB **30** 15:22:27.5±0.5, 54°.50N±0°.03×160°.42E±0°.10, h121km±4km, mb3.1/3, Error ellipse: s-maj=9.9km s-min=3.5km az=22.0*
*KRSC **30** 15:22:27.6±0.7, 54°.52N×160°.37E, h116km±45km, ML3.6*
*IDC **30** 15:22:28.2±5.1, 53°.74N×161°.19E, h98km±59km, mb3.1/3, mb1 3.4/4, mb1mx3.1/25, mbtmp3.1/4, ML2.9/1, Error ellipse: s-maj=125.2km s-min=29.2km az=142.0*

ISC 30 15:22:28.4±0.5, 54°.50N±0°.03×160°.43E±0°.10, h117km±5km, n25, σ0s59/43, mb3.1/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.74**	**231**	*e*P	**Pn**	**15 22 47.9**	**+0.1**
KII				*i* S	**Sn**	**15 23 02.7**	**+0.3**
MKZ	**Mys Kozlova**	**0.76**	**85**	*e*P	**Pn**	**15 22 48.2**	**+0.2**
MKZ				*i* S	**Sn**	**15 23 02.9**	**+0.1**
TUMR	**Tumrok**	**0.

GTA				LR	LR			
	comp=N,980nm,8.3s							
GTA				LR	LR			
	comp=E,860nm,8.3s							
GTA				LR	LR			
	comp=Z,400nm,8.5s							
LZH	**Lanzhou**	**2.71**	**131**	Pn	**Pn**	**15 33 25.0**	**+0.7**	
LZH				Pg	**Pb**	**15 33 28.3**	**-1.1**	
LZH				Sn	**Sn**	**15 33 58.8**	**+1.8**	
LZH				Sg	**Sb**	**15 34 01.8**	**-0.7**	
LZH				smax				
	comp=N,1μm,0.8s							
LZH				smax				
	comp=E,620nm,0.7s							
XAN	**Xi'an**	**7.27**	**120**	Pg	**Pb**	**15 34 50.3**	**+3.2**	
XAN				Sg	**Sb**	**15 36 18.5**	**+4.8**	
XAN				smax				
	comp=N,23nm,1.1s							
XAN				smax				
	comp=E,13nm,0.8s							
BTO	**Baotou**	**7.29**	**65**	*e*Pg	**Pb**	**15 34 47.5**	**0.0**	
BTO				Sg	**Sb**	**15 36 17.0**	**+2.6**	
BTO				smax				
	comp=N,19nm,0.6s							
BTO				smax				
	comp=E,16nm,0.6s							
SONM	**Songino Array**	**10.63**	**19**	Pn	**Pn**	**15 35 13.0**	**+0.1**	
	comp=E,0.7nm,0.3s,baz=202,slow=15,SNR=3.8							
SONM				Lg		15 38 12.3		
	comp=E,1.0nm,0.3s,baz=207,slow=28,SNR=9.0							
SONM				LR	LR	15 39 43.4		
	comp=E,56nm,18.1s,baz=46,slow=40							
ULN	**Ulaanbaatar**	**10.83**	**21**	*e*P	**Pn**	**15 35 14.1**	**-1.7**	
MKAR	**Makanchi Array**	**16.61**	**308**	Pn	**Pn**	**15 36 33.9**	**+0.4**	
	comp=E,0.0nm,0.3s,baz=132,slow=13,SNR=2.5							
CMAR	**Chiang Mai Arr**	**19.46**	**187**	P	**Pn**	**15 37 09.2**	**+0.4**	
	comp=E,0.1nm,0.3s,baz=360,slow=11,SNR=4.5							
ZALV	**Zalesovo Beam**	**19.66**	**330**	P	**Pn**	**15 37 11.3**	**+0.4**	
	comp=E,0.1nm,0.3s,baz=113,slow=11,SNR=2.8							
TKM2	**Tokmak 2**	**20.18**	**293**	*e*P	**P**	**15 37 22.5**	**+7.2**	
	comp=E,4.9nm,0.9s							
AAK	**Ala-Archa**	**20.97**	**292**	LR	LR	15 46 35.7		
	comp=E,36nm,18.5s,MS2.8,baz=87,slow=40							
KSRS	**Korea Array**	**21.06**	**83**	P	**P**	**15 37 22.7**	**-2.1**	
	comp=E,5.1nm,0.5s,mb4.1,baz=278,slow=8.0,SNR=24							
KSRS				LR	LR	15 45 54.0		
	comp=E,19nm,20.0s,MS2.5,baz=280,slow=38							
AML	**Almayashu**	**21.53**	**290**	*e*P	**P**	**15 37 35.5**	**+5.7**	
	comp=E,2.5nm,0.7s,mb3.8							
MJAR	**Matsushiro Arr**	**29.30**	**81**	LR	LR	15 50 55.9		
	comp=E,48nm,18.2s,MS3.2,baz=240,slow=38							
BRTR	**Keskin Array B**	**51.60**	**294**	P	**P**	**15 41 49.0**	**+1.9**	
	comp=E,0.8nm,0.6s,mb3.8,baz=95,slow=2.4,SNR=4.2							
ILAR	**Eielson Array**	**64.76**	**26**	P	**P**	**15 43 17.2**	**-1.6**	
	comp=E,0.4nm,0.8s,mb3.5,baz=294,slow=6.7,SNR=3.8							
WRA	**Warramunga Arr**	**65.37**	**146**	P	**P**	**15 43 22.0**	**-1.2**	
	comp=E,0.5nm,0.6s,mb3.7,baz=346,slow=6.9,SNR=15							
WRA	**Warramunga Arr**	**65.37**	**146**	P	**P**	**15 43 22.0**	**-1.2**	
ASAR	**Alice Springs**	**68.46**	**148**	P	**P**	**15 43 42.5**	**-0.3**	
	comp=E,0.6nm,0.7s,mb3.8,baz=335,slow=6.8,SNR=11							

*ISCJB **30** 15:47:38.9±0.8, 27°.4N±0°.1×140°.0E±0°.2, h456km±10km, mb3.4/9, Error ellipse: s-maj=33.5km s-min=17.6km az=171.1*
*NEIC **30** 15:47:38.3±1.5, 27°.36N×140°.14E, h435km±17km, MG4.3(JMA), Error ellipse: s-maj=22.7km s-min=11.9km az=87.0*
*IDC **30** 15:47:40.0±0.7, 27°.35N×140°.16E, h454km±11km, mb3.1/9, mb1 3.3/9, mb1mx3.0/22, mbtmp3.1/9, Error ellipse: s-maj=28.6km s-min=17.8km az=82.0*

ISC 30 15:47:39.9±0.8, 27°.4N±0°.1×140°.1E±0°.2, h452km±10km, n13, σ0§56/14, mb3.4/9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.90**	**98**	P	**P**	**15 48 40.8**	**+0.8**
	20nm,0.3s,baz=294,slow=22,SNR=7.6						
CBIJ				S	**S**	**15 49 28.5**	**-0.1**
	26nm,0.3s,baz=290,slow=21,SNR=7.1						
MAJO	**Matsushiro**	**9.27**	**351**	P	**P**	**15 49 47.6**	**-1.3**
WB2	**Warramunga Arr**	**47.37**	**187**	*e*P	**P**	**15 55 31.4**	**-0.4**
WRA	**Warramunga Arr**	**47.37**	**187**	P	**P**	**15 55 31.4**	**-0.4**
	0.3nm,0.3s,mb3.2,baz=5.9,slow=7.7,SNR=14						
ZALV	**Zalesovo Beam**	**48.05**	**319**	P	**P**	**15 55 36.3**	**-0.2**
	0.6nm,0.3s,mb3.4,baz=106,slow=6.3,SNR=3.4						
MKAR	**Makanchi Array**	**48.85**	**309**	P	**P**	**15 55 43.4**	**+0.8**
	0.3nm,0.6s,mb2.8,baz=85,slow=8.5,SNR=3.2						
BVAR	**Borovoye Array**	**56.56**	**317**	P	**P**	**15 56 38.5**	**+0.5**
	3.0nm,0.4s,mb4.0,baz=90,slow=6.3,SNR=16						
ILAR	**Eielson Array**	**58.36**	**29**	P	**P**	**15 56 50.5**	**+0.4**
	0.2nm,0.5s,mb2.8,baz=268,slow=6.9,SNR=3.0						
ARCES	**ARCESS Array B**	**72.65**	**340**	P	**P**	**15 58 20.4**	**+0.3**
	4.1nm,0.9s,mb3.9,baz=76,slow=10,SNR=4.2						
YKA	**Yellowknife Ar**	**72.77**	**28**	P	**P**	**15 58 20.6**	**-0.3**
	0.5nm,0.5s,mb3.3,baz=300,slow=5.6,SNR=3.1						
YKA	**Yellowknife Ar**	**72.77**	**28**	P	**P**	**15 58 20.6**	**-0.3**
FINES	**FINESS Array B**	**76.85**	**333**	P	**P**	**15 58 44.1**	**+0.3**
	2.1nm,0.4s,mb4.0,baz=72,slow=5.8,SNR=19						
NOA	**NORSAR Array B**	**82.64**	**338**	P	**P**	**15 59 14.0**	**-0.4**
	0.7nm,0.7s,mb3.3,baz=45,slow=4.4,SNR=2.7						

*ISCJB **30** 15:48:53.2±0.4, 49°.83N±0°.02×18°.35E±0°.03, h0km, Error ellipse: s-maj=3.4km s-min=2.3km az=19.6*
*IPEC **30** 15:48:54.4±0.2, 49°.81N×18°.52E, h0km, ML2.3/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*CSEM **30** 15:48:54.0±0.2, 49°.84N×18°.44E, h2km, ML3.0/9, Error ellipse: s-maj=3.6km s-min=2.5km az=17.0*
*VIE **30** 15:48:55.6±0.6, 49°.69N×18°.38E, h0km, mb2.2/4, ML2.5/4, Error ellipse: s-maj=4.2km s-min=2.2km az=94.0 18 km SSE of Ostrava Suspected Mining induced.*
*PRU **30** 15:48:56.0, 49°.83N×18°.37E, h0km, Rockburst In Mine Lazy- Region, Felt In Orlova Mining induced.*

ISC 30 15:48:54.5±0.4, 49°.83N±0°.02×18°.42E±0°.03, h0km, n46, σ1§23/84, 2C-1D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.17**	**273**	*e*PG	**Pg**	**15 48 59.4**	**+1.6**
OKC				*e*SG	**Sg**	**15 49 02.4**	**+2.4**
	comp=Z,638nm,0.5s						
OKC	**Ostrava-Krasne**	**0.17**	**273**	*e*Pg	**Pg**	**15 48 59.0**	**+1.2**
	baz=96						
OKC				Sg	**Sg**	**15 49 02.4**	**+2.4**
	comp=Z,638nm,0.5s						
MORC	**Moravsky Berou**	**0.57**	**265**	*e*Pg	**Pg**	**15 49 06.2**	**+0.9**
	baz=86						
MORC				*e*Sg	**Sg**	**15 49 14.2**	**+1.5**
	comp=Z,64nm,0.3s,baz=86						
LIKS	**Likavka**	**0.90**	**150**	*e*PG	**Pg**	**15 49 14.2**	**+2.5**
LIKS				*e*SG	**Sg**	**15 49 30.1**	**+6.8**
LIKS	**Likavka**	**0.90**	**150**	*e*Pg	**Pg**	**15 49 14.2**	**+2.5**
OJC	**Ojcow**	**0.97**	**66**	*e*Pg	**Pg**	**15 49 12.5**	**-0.6**
OJC				*e*Sg	**Sg**	**15 49 25.1**	**-0.6**
OJC	**Ojcow**	**0.97**	**66**	*e*Pg	**Pg**	**15 49 12.1**	**-1.0**
	baz=244						
OJC				*e*Sg	**Sg**	**15 49 25.1**	**-0.6**
KOLL	**Kolacno**	**1.25**	**180**	*e*PG	**Pg**	**15 49 18.5**	**+0.1**
KOLL				*e*SG	**Sg**	**15 49 34.9**	**+0.3**
KOLL	**Kolacno**	**1.25**	**180**	*e*Pg	**Pg**	**15 49 18.5**	**+0.1**
KOLL				*e*Sg	**Sg**	**15 49 34.9**	**+0.3**
VRAC	**Vranov**	**1.30**	**247**	*e*Pg	**Pg**	**15 49 19.6**	**+0.3**
	baz=67						
VRAC				*e*Sg	**Sg**	**15 49 36.9**	**+0.9**
	comp=Z,60nm,0.5s,baz=67						
NIE	**Niedzica**	**1.30**	**108**	*e*Pg	**Pg**	**15 49 19.3**	**-0.1**
NIE				*e*Sg	**Sg**	**15 49 38.6**	**+2.4**
NIE	**Niedzica**	**1.30**	**108**	*e*Pg	**Pg**	**15 49 19.3**	**-0.1**
NIE				*e*Sg	**Sg**	**15 49 38.6**	**+2.4**
VYHS	**Vyhne**	**1.36**	**168**	*e*PG	**Pg**	**15 49 20.1**	**-0.5**
VYHS				*e*SN	**Sn**	**15 49 39.3**	**-0.2**
VYHS	**Vyhne**	**1.36**	**168**	*e*Pg	**Pg**	**15 49 20.1**	**-0.5**
VYHS				*e*Sn	**Sn**	**15 49 39.3**	**-0.2**
DPC	**Dobruska-Polom**	**1.45**	**292**	*e*PG	**Pg**	**15 49 21.9**	**-0.2**
DPC				*e*SG	**Sg**	**15 49 41.9**	**+1.0**
	comp=Z,24nm,0.6s						
DPC	**Dobruska-Polom**	**1.45**	**292**	Pg	**Pg**	**15 49 21.9**	**-0.2**
DPC				*e*Sg	**Sg**	**15 49 41.7**	**+0.8**
	baz=110						
SMOL	**Smolenice**	**1.47**	**207**	*e*PG	**Pg**	**15 49 22.0**	**-0.5**
SMOL				*e*SG	**Sg**	**15 49 42.0**	**+0.5**
SMOL	**Smolenice**	**1.47**	**207**	*e*Pg	**Pg**	**15 49 22.0**	**-0.5**
SMOL				*e*Sg	**Sg**	**15 49 42.0**	**+0.5**
KRUC	**Moravsky**	**1.53**	**241**	*e*Pg	**Pg**	**15 49 23.0**	**-0.7**
	baz=61						
KRUC				*e*Sg	**Sg**	**15 49 43.6**	**+0.2**
	comp=Z,20nm,0.3s,baz=61						
UPC	**Upice**	**1.69**	**295**	*e*PG	**Pg**	**15 49 26.3**	**-0.5**
UPC				*e*SG	**Sg**	**15 49 49.4**	**+0.7**
UPC	**Upice**	**1.69**	**295**	Pg	**Pg**	**15 49 26.3**	**-0.5**
UPC				Sg	**Sg**	**15 49 49.4**	**+0.7**
KSP	**Ksiaz**	**1.70**	**308**	*e*Pg	**Pg**	**15 49 26.4**	**-0.5**
KSP				*e*Sn	**Sn**	**15 49 49.7**	**+2.1**
KSP	**Ksiaz**	**1.70**	**308**	*e*Pg	**Pg**	**15 49 24.9**	**-2.1**
KSP				*e*Sg	**Sg**	**15 49 49.7**	**+0.8**
KSP	**Ksiaz**	**1.70**	**308**	*e*Pg	**Pg**	**15 49 26.3**	**-0.7**
KSP				*e*Sg	**Sg**	**15 49 49.7**	**+0.8**
ZST	**Bratislava**	**1.85**	**208**	*e*PG	**Pg**	**15 49 27.4**	**-2.5**
ZST				*e*SG	**Sg**	**15 49 51.1**	**-2.7**
ZST	**Bratislava**	**1.85**	**208**	*e*Pg	**Pg**	**15 49 27.4**	**-2.5**
ZST				*e*Sg	**Sg**	**15 49 51.1**	**-2.7**
STHS	**Stebnicka Huta**	**1.89**	**102**	*e*PN	**Pn**	**15 49 30.0**	**+2.1**
STHS				*e*SN	**Sn**	**15 49 56.0**	**+3.7**
STHS	**Stebnicka Huta**	**1.89**	**102**	*e*Pn	**Pn**	**15 49 30.0**	**+2.1**
STHS				*e*Sn	**Sn**	**15 49 56.0**	**+3.7**
KECS	**Kecovo**	**1.91**	**134**	*e*PN	**Pn**	**15 49 27.4**	**-0.9**
KECS				*e*SN	**Sn**	**15 49 51.8**	**-1.2**
TREC	**Trest**	**1.98**	**255**	*e*PG	**Pg**	**15 49 31.1**	**-1.3**
TREC	**Trest**	**1.98**	**255**	Pg	**Pg**	**15 49 31.1**	**-1.3**
CRVS	**Cervenica-Dubn**	**2.20**	**114**	*e*PN	**Pn**	**15 49 35.3**	**+3.1**
CRVS	**Cervenica-Dubn**	**2.20**	**114**	*e*Pn	**Pn**	**15 49 35.3**	**+3.1**
PRU	**Pruhonice**	**2.51**	**275**	*e*PG	**Pg**	**15 49 40.2**	**-2.3**
PRU				*e*SG	**Sg**	**15 50 15.0**	**0.0**
	comp=Z,11nm,0.4s						
PRU	**Pruhonice**	**2.51**	**275**	Pg	**Pg**	**15 49 40.2**	**-2.3**
PRU				Sg	**Sg**	**15 50 15.0**	**0.0**
	comp=Z,11nm,0.4s						
CONA	**Conrad Observa**	**2.54**	**223**	⇑*i*Pn	**Pn**	**15 49 36.4**	**-0.5**
CONA				⇑*i*Sg	**Sg**	**15 50 16.5**	**+0.4**
	comp=Z,6.8nm,0.5s						
CONA	**Conrad Observa**	**2.54**	**223**	Pn	**Pn**	**15 49 36.4**	**-0.5**
CONA				Sg	**Sg**	**15 50 16.5**	**+0.4**
	comp=Z,6.8nm,0.5s						
BRG	**Berggiesshubel**	**3.05**	**292**	PG	**Pg**	**15 49 50.5**	**-2.4**
BRG				SG	**Sg**	**15 50 31.9**	**-0.5**
	comp=Z,11nm,0.4s						
KHC	**Kasperske Hory**	**3.23**	**259**	*e*PN	**Pn**	**15 49 46.6**	**+0.2**
KHC				*e*PG	**Pg**	**15 49 53.1**	**-3.2**
KHC				*e*SG	**Sg**	**15 50 38.9**	**+0.7**
	comp=Z,12nm,0.5s						
KHC	**Kasperske Hory**	**3.23**	**259**	Pn	**Pn**	**15 49 46.6**	**+0.2**
KHC				Sg	**Sg**	**15 50 38.9**	**+0.7**
	comp=Z,12nm,0.5s						
MOA	**Molln**	**3.38**	**236**	⇓*i*Sg	**Sg**	**15 50 43.5**	**+0.4**
	comp=Z,3.6nm,0.3s						
MOA	**Molln**	**3.38**	**236**	Sg	**Sg**	**15 50 43.5**	**+0.5**
	comp=Z,3.6nm,0.3s						
CLL	**Collm**	**3.75**	**295**	*e*Pg	**Pg**	**15 50 05.0**	**-1.4**
CLL				*e*Sg	**Sg**	**15 50 54.0**	**-1.0**
	comp=Z,14nm,1.1s						
NKC	**Novy Kostel**	**3.87**	**278**	*e*SG	**Sg**	**15 50 58.2**	**-0.5**
	comp=Z,10nm,0.4s						
NKC	**Novy Kostel**	**3.87**	**278**	Sg	**Sg**	**15 50 58.2**	**-0.5**
	comp=Z,10nm,0.4s						
MOX	**Moxa**	**4.44**	**283**	*e*PG	**Pg**	**15 50 18.9**	**-0.6**
MOX				*e*SG	**Sg**	**15 51 21.5**	**+4.5**

IDC 30 16:09:41.8±5.1, 29°.03S×177°.57W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.6/14, mbtmp3.7/3, Error ellipse: s-maj=187.6km s-min=79.5km az=157.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.17**	**255**	P	P	16 16 37.5	0.0
	3.5nm,1.1s,baz=79,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**43.58**	**265**	P	P	16 17 47.4	-0.4
	0.2nm,0.5s,baz=103,slow=7.4,SNR=7.1						
WRA	**Warramunga Arr**	**44.44**	**271**	P	P	16 17 55.1	+0.3
	0.5nm,0.3s,baz=111,slow=8.0,SNR=34						
FINES	**FINESS Array B**	**143.99**	**341**	PKP	PKPdf	16 29 17.8	-0.8
	2.1nm,0.7s,baz=41,slow=3.5,SNR=5.5						

*IDC **30** 16:35:58.7±0.8, 29°.80S×177°.48W, h0km, mb4.4/9, mb1 4.5/9, mb1mx4.3/17, mbtmp4.4/9, MS3.4/2, Ms1 3.4/2, ms1mx2.9/22, Error ellipse: s-maj=25.2km s-min=22.4km az=161.0*
*ISCJB **30** 16:36:02.1±0.8, 30°.19S±0°.08×177°.5W±0°.1, h33km, mb4.3/10, MS3.5/2, Error ellipse: s-maj=18.2km s-min=10.9km az=16.3*
*NEIC **30** 16:36:03.7±0.8, 30°.01S×177°.47W, h35km, mb4.4/3, Error ellipse: s-maj=21.3km s-min=17.0km az=101.0*

ISC 30 16:36:03.7±0.8, 30°.12S±0°.08×177°.4W±0°.1, h35km, n28, σ1§13/21, mb4.3/10, MS3.5/2, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.29**	**208**	Pn	**Pn**	**16 38 12.4**	**-2.7**
	0.3nm,0.3s,baz=171,slow=13,SNR=3.9						
URZ				Sn	**Sn**	**16 39 58.9**	**+0.5**
	2.4nm,0.3s,baz=117,slow=19,SNR=10.0						
URZ	**Urewera**	**9.29**	**208**	P	**Pn**	**16 38 13.5**	**-1.6**
URZ				Sn	**Sn**	**16 39 58.9**	**+0.5**
EIDS	**Eidsvold**	**28.21**	**272**	*e*P	**P**	**16 41 52.9**	**-0.4**
CTA	**Charters Tower**	**34.24**	**278**	P	**P**	**16 42 46.8**	**+0.4**
	2.8nm,0.5s,mb4.5,baz=86,slow=13,SNR=11						
CTA				LR	LR	16 53 43.6	
	comp=Z,87nm,21.0s,MS3.5,baz=62,slow=31						
CTAO	**Charters Tower**	**34.24**	**278**	*e*P	**P**	**16 42 47.3**	**+1.0**
STKA	**Stephens Creek**	**35.02**	**256**	P	**P**	**16 42 54.5**	**+1.5**
	3.6nm,0.6s,mb4.5,baz=91,slow=8.9,SNR=17						
STKA	**Stephens Creek**	**35.02**	**256**	*e*P	**P**	**16 42 54.5**	**+1.5**
	0.6nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**43.62**	**266**	P	**P**	**16 44 04.2**	**-0.7**
	2.9nm,0.5s,mb4.2,baz=105,slow=7.8,SNR=70						
WRA	**Warramunga Arr**	**44.58**	**272**	P	**P**	**16 44 11.7**	**-0.9**
	4.5nm,0.5s,mb4.5,baz=110,slow=7.9,SNR=92						
FITZ	**Fitzroy Crossi**	**52.85**	**269**	P	**P**	**16 45 15.8**	**-0.4**
	2.5nm,1.2s,mb4.0,baz=69,slow=1.3,SNR=3.6						
CASY	**Casey**	**55.62**	**208**	*e*P	**P**	**16 45 36.6**	**+1.0**
	3.5nm,0.4s,mb4.7						
QSPA	**South Pole Qui**	**59.99**	**180**	P	**P**	**16 46 10.0**	**+3.9**
	2.2nm,1.0s,mb4.1,baz=30,slow=2.6,SNR=7.8						
QSPA	**South Pole Qui**	**59.99**	**180**	*e*P	**P**	**16 46 09.8**	**+3.7**
	2.7nm,0.7s,mb4.4						
MAW	**Mawson**	**72.75**	**200**	P	**P**	**16 47 29.5**	**+1.7**
	1.0nm,0.5s,mb4.0,baz=120,slow=5.4,SNR=8.6						
MJAR	**Matsushiro Arr**	**78.29**	**325**	LR	LR	17 18 23.5	
	comp=Z,19nm,19.6s,MS3.4,baz=45,slow=33						
VNA3	**Neumayer Olymp**	**78.55**	**176**	*e*	**P**	**16 47 59.5**	**-1.5**
VNA3				*e*	pP	16 48 08.7	-3.3
VNA2	**Neumayer--Watz**	**78.99**	**177**	*e*	**P**	**16 48 02.3**	**-1.2**
	baz=179,slow=4.9						
VNA2				*e*	pP	16 48 10.7	-3.7
PETK	**Petropavlovsk-**	**85.66**	**345**	P	**P**	**16 48 37.7**	**-0.5**
	4.2nm,1.0s,mb4.6,baz=106,slow=9.4,SNR=5.3						
PETK	**Petropavlovsk-**	**85.66**	**345**	P	**P**	**16 48 37.7**	**-0.5**
NVAR	**Mina Array Bea**	**87.70**	**42**	P	**P**	**16 48 49.6**	**+1.0**
	1.8nm,0.8s,mb4.4,baz=222,slow=7.9,SNR=12						
ARCES	**ARCESS Array B**	**138.42**	**348**	PKP	PKPdf	16 55 24.1	-0.4
	3.6nm,1.0s,baz=85,slow=3.0,SNR=4.6						
KAF	**Kangasniemi**	**144.44**	**341**	*e*p	PKPdf	16 55 32.0	-3.5
FINES	**FINESS Array B**	**145.05**	**340**	PKP	PKPdf	16 55 34.8	-1.7
	12nm,0.7s,baz=58,slow=4.7,SNR=30						
NOA	**NORSAR Array B**	**148.54**	**352**	PKPbc	PKPbc	16 55 45.6	-0.5
	1.9nm,0.8s,baz=17,slow=2.8,SNR=5.6						
AKASG	**Malin Array Be**	**151.37**	**323**	PKPbc	PKPbc	16 55 52.4	-0.9
	1.2nm,0.5s,baz=47,slow=3.5,SNR=7.1						
BRTR	**Keskin Array B**	**152.89**	**299**	PKPbc	PKPbc	16 55 56.0	-1.1
	0.7nm,0.8s,baz=95,slow=3.1,SNR=4.5						
GERES	**GERESS Array B**	**159.46**	**339**	PKPab	PKPab	16 56 35.0	-1.0
	0.6nm,0.5s,baz=48,slow=4.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**163.09**	**17**	PKPab	PKPab	16 56 53.6	+0.9
	4.7nm,0.9s,baz=182,slow=3.6,SNR=3.7						

JMA 30 16:39:09.2±0.3, 33°.19N×137°.25E, h47km±3km, M1.3, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO2	**TONANKAI O.B.S**	**0.57**	**341**	P	Pn	16 39 21.2	0.0
TTO2				*e*S	Sn	16 39 28.8	-1.0
TTO1	**TONANKAI O.B.S**	**0.58**	**318**	P	Pn	16 39 21.3	0.0
TTO1				S	Sn	16 39 31.0	+1.1
TK01	**Tokai 1**	**0.64**	**26**	*e*S	Sn	16 39 31.4	+0.1
TTO4	**TONANKAI O.B.S**	**0.85**	**16**	P	Pn	16 39 24.9	+0.1
TK02	**Tokai 2**	**0.86**	**29**	*e*S	Sn	16 39 37.3	+0.7
JIE	**Ise**	**1.28**	**339**	P	Pn	16 39 31.6	+0.9
JKN2	**Miekihoku**	**1.32**	**322**	P	Pn	16 39 31.5	+0.2
JWZ	**Kozaga**	**1.33**	**285**	P	Pn	16 39 31.3	0.0
JAA	**Atsumi**	**1.44**	**356**	P	Pn	16 39 33.4	+0.6
JAA				*e*S	Sn	16 39 51.0	+0.4

*ISCJB **30** 16:44:19.6±0.8, 17°.7S±0°.3×178°.4W±0°.1, h600km±17km, mb4.0/6, Error ellipse: s-maj=46.8km s-min=15.7km az=163.2*
*IDC **30** 16:44:19.2±1.6, 17°.85S×178°.34W, h565km±31km, mb3.3/5, mb1 3.5/6, mb1mx3.1/19, mbtmp3.4/6, Error ellipse: s-maj=43.1km s-min=21.0km az=177.0*
*NEIC **30** 16:44:19.8±0.7, 17°.58S×178°.28W, h596km±12km, mb3.9/2, Error ellipse: s-maj=39.4km s-min=14.6km az=171.0*

ISC 30 16:44:20.2±0.8, 17°.6S±0°.3×178°.3W±0°.1, h593km±16km, n13, σ0§33/14, mb4.0/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.48**	**268**	*e*P	**P**	**16 45 41.8**	**+0.1**
AFI	**Afiamalu**	**7.29**	**61**	P	**P**	**16 46 12.1**	**-0.6**
	3.2nm,0.3s,baz=75,slow=1.7,SNR=8.4						
AFI				S	**S**	**16 47 45.0**	**+0.3**
	0.7nm,0.3s,baz=72,slow=20,SNR=2.1						
CTA	**Charters Tower**	**33.59**	**260**	P	**P**	**16 50 12.7**	**-0.1**
	2.2nm,0.7s,mb3.9,baz=102,slow=15,SNR=3.3						
CTAO	**Charters Tower**	**33.59**	**260**	*e*P	**P**	**16 50 13.0**	**+0.2**
	12nm,1.3s,mb4.4						
CNB	**Canberra Magne**	**33.68**	**232**	*e*P	**P**	**16 50 13.3**	**-0.1**
STKA	**Stephens Creek**	**38.85**	**241**	P	**P**	**16 50 56.1**	**+0.2**
	3.6nm,0.5s,mb4.2,baz=85,slow=11,SNR=22						
STKA	**Stephens Creek**	**38.85**	**241**	*e*P	**P**	**16 50 56.1**	**+0.2**
	2.9nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**38.85**	**241**	*e*P	**P**	**16 50 55.7**	**-0.2**
	0.8nm,0.6s,mb3.4						
WB2	**Warramunga Arr**	**44.77**	**259**	*e*P	**P**	**16 51 42.2**	**-0.3**
WRA	**Warramunga Arr**	**44.78**	**259**	P	**P**	**16 51 42.0**	**-0.5**
	1.2nm,0.5s,mb3.7,baz=95,slow=7.0,SNR=66						
WRA				PcP	PcP	16 53 13.2	+1.6
	0.1nm,0.8s,baz=88,slow=3.9,SNR=6.8						
ASAR	**Alice Springs**	**44.96**	**254**	P	**P**	**16 51 44.0**	**+0.2**
	11nm,0.5s,mb4.7,baz=88,slow=8.5,SNR=348						
ASAR				PcP	PcP	16 53 13.8	+1.7
	0.4nm,0.4s,baz=106,slow=4.0,SNR=4.8						
KAKA	**Kakadu**	**47.69**	**269**	*e*P	**P**	**16 52 05.1**	**+0.6**
	2.0nm,0.3s,mb4.1						
QSPA	**South Pole Qui**	**72.43**	**180**	P	**P**	**16 54 46.9**	**+0.1**
	0.9nm,0.7s,mb3.4,baz=273,slow=3.9,SNR=7.6						

JMA 30 16:54:15.9±0.4, 31°.98N×142°.28E, h35km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.37**	**299**	P	Pn	16 54 53.9	+1.7
JHJ2				*e*S	Sn	16 55 21.8	+1.8
JHU	**Hanno**	**4.60**	**328**	P	Pn	16 55 26.0	+3.1
JHU				*e*S	Sn	16 56 17.2	+2.2
JHO	**Hitachi**	**4.83**	**343**	P	Pn	16 55 27.9	+1.8
JHO				*e*S	Sn	16 56 21.6	+0.8
JRY	**Ryogami san**	**4.91**	**326**	P	Pn	16 55 30.0	+2.9
JAG	**Ashikaga**	**5.01**	**333**	P	Pn	16 55 30.8	+2.2
JAG				*e*S	Sn	16 56 28.1	+2.8
JMK	**Ichinoseki**	**7.01**	**353**	P	Pn	16 55 57.6	+1.6
JMK				S	Sn	16 57 13.2	-1.2

*ISCJB **30** 16:57:09.2±3.0, 24°.3S±0°.4×115°.5W±0°.6, h10km, mb4.0/6, MS4.1/11, Error ellipse: s-maj=89.1km s-min=20.6km az=147.5*
*IDC **30** 16:57:10.6±1.2, 24°.20S×115°.17W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.8/16, mbtmp3.6/4, MS4.0/12, Ms1 4.0/12, ms1mx3.9/19, Error ellipse: s-maj=45.5km s

n42, σ0°97/59, 2C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.16**	**300**	Pg	**Pg**	**17 21 42.6**	**-1.2**
AOI				Sg	**Sg**	**17 21 44.8**	**-1.2**
	3μm,0.2s						
AOI	**Ancona**	**0.16**	**300**	Pg	**Pg**	**17 21 42.6**	**-1.2**
AOI				Sg	**Sg**	**17 21 44.8**	**-1.2**
	3μm,0.2s						
CING	**Cingoli**	**0.45**	**258**	⇓*i*Pg	**Pg**	**17 21 48.6**	**-0.5**
CING				Sg	**Sg**	**17 21 55.8**	**+0.9**
	131nm,0.2s						
CING	**Cingoli**	**0.45**	**258**	⇓*i*Pg	**Pg**	**17 21 48.6**	**-0.5**
CING				Sg	**Sg**	**17 21 55.8**	**+0.9**
	131nm,0.2s						
SENI	**Senigallia**	**0.47**	**300**	Pg	**Pg**	**17 21 50.4**	**+0.9**
SENI				Sg	**Sg**	**17 21 57.0**	**+1.3**
	245nm,0.7s						
SENI	**Senigallia**	**0.47**	**300**	Pg	**Pg**	**17 21 50.4**	**+0.9**
SENI				Sg	**Sg**	**17 21 57.0**	**+1.3**
	245nm,0.7s						
ARVD	**Arcevia**	**0.62**	**273**	Pg	**Pg**	**17 21 51.6**	**-0.8**
ARVD				Sg	**Sg**	**17 22 01.6**	**+1.1**
	40nm,0.2s						
ARVD	**Arcevia**	**0.62**	**273**	Pg	**Pg**	**17 21 51.6**	**-0.8**
ARVD				Sg	**Sg**	**17 22 01.6**	**+1.1**
	40nm,0.2s						
FDMO	**Fiordimonte**	**0.67**	**230**	Pg	**Pg**	**17 21 53.1**	**-0.3**
FDMO				Sg	**Sg**	**17 22 04.3**	**+2.1**
	138nm,0.2s						
FDMO	**Fiordimonte**	**0.67**	**230**	Pg	**Pg**	**17 21 53.1**	**-0.3**
FDMO				Sg	**Sg**	**17 22 04.3**	**+2.1**
	138nm,0.2s						
FSSB	**Fossombrone**	**0.77**	**287**	Pg	**Pg**	**17 21 54.3**	**-1.0**
	58nm,0.4s						
FSSB	**Fossombrone**	**0.77**	**287**	Pg	**Pg**	**17 21 54.3**	**-1.0**
	58nm,0.4s						
NRCA	**Norcia**	**0.81**	**218**	Pg	**Pg**	**17 21 55.7**	**-0.3**
	38nm,0.2s						
NRCA	**Norcia**	**0.81**	**218**	Pg	**Pg**	**17 21 55.7**	**-0.3**
	38nm,0.2s						
TERO	**Teramo**	**0.86**	**189**	Pg	**Pg**	**17 21 57.4**	**+0.5**
	103nm,0.4s						
TERO	**Teramo**	**0.86**	**189**	Pg	**Pg**	**17 21 57.4**	**+0.5**
	103nm,0.4s						
PIEI	**Pieia**	**0.92**	**275**	Pg	**Pg**	**17 21 56.4**	**-1.7**
	35nm,0.3s						
PIEI	**Pieia**	**0.92**	**275**	Pg	**Pg**	**17 21 56.4**	**-1.7**
	35nm,0.3s						
ASSB	**Assisi San Ben**	**0.93**	**243**	Pg	**Pg**	**17 21 57.7**	**-0.6**
ASSB				Sg	**Sg**	**17 22 13.1**	**+2.6**
ASSB	**Assisi San Ben**	**0.93**	**243**	Pg	**Pg**	**17 21 57.7**	**-0.6**
MURB	**Monte Urbino**	**0.95**	**258**	Pg	**Pg**	**17 21 58.2**	**-0.4**
	140nm,0.2s						
MURB	**Monte Urbino**	**0.95**	**258**	Pg	**Pg**	**17 21 58.2**	**-0.4**
	140nm,0.2s						
CAMP	**Campotosto**	**0.98**	**197**	Pg	**Pg**	**17 21 59.8**	**+0.6**
	10.0nm,0.5s						
CAMP	**Campotosto**	**0.98**	**197**	Pg	**Pg**	**17 21 59.8**	**+0.6**
	10.0nm,0.5s						
LNSS	**Leonessa**	**1.03**	**213**	Pg	**Pg**	**17 22 00.2**	**0.0**
	285nm,0.7s						
LNSS	**Leonessa**	**1.03**	**213**	Pg	**Pg**	**17 22 00.2**	**0.0**
	285nm,0.7s						
BADI	**Badiali**	**1.13**	**273**	Pg	**Pg**	**17 22 01.6**	**-0.5**
	54nm,0.4s						
BADI	**Badiali**	**1.13**	**273**	Pg	**Pg**	**17 22 01.6**	**-0.5**
	54nm,0.4s						
PARC	**Parchiule**	**1.15**	**279**	Pg	**Pg**	**17 22 01.0**	**-1.4**
	42nm,0.6s						
PARC	**Parchiule**	**1.15**	**279**	Pg	**Pg**	**17 22 01.0**	**-1.4**
	42nm,0.6s						
CESX	**Cesi**	**1.24**	**226**	Pg	**Pg**	**17 22 04.1**	**-0.1**
	85nm,0.4s						
CESX	**Cesi**	**1.24**	**226**	Pg	**Pg**	**17 22 04.1**	**-0.1**
	85nm,0.4s						
NVLJ	**Novalja**	**1.34**	**35**	*e*Pn	**Pn**	**17 22 05.1**	**-0.5**
NVLJ				Sg	**Sg**	**17 22 24.3**	**+0.7**
NVLJ	**Novalja**	**1.34**	**35**	*e*Pn	**Pn**	**17 22 05.0**	**-0.6**
NVLJ				Sg	**Sg**	**17 22 24.2**	**+0.6**
MGAB	**Montegabbione**	**1.35**	**246**	Pg	**Pg**	**17 22 06.1**	**-0.2**
	69nm,0.6s						
MGAB	**Montegabbione**	**1.35**	**246**	Pg	**Pg**	**17 22 06.1**	**-0.2**
	69nm,0.6s						
MNS	**Montasola**	**1.36**	**217**	Pg	**Pg**	**17 22 06.0**	**-0.5**
	59nm,0.4s						
MNS	**Montasola**	**1.36**	**217**	Pg	**Pg**	**17 22 06.0**	**-0.5**
	59nm,0.4s						
STON	**Ston**	**2.92**	**100**	*e*Pn	**Pn**	**17 22 26.7**	**-0.5**
STON				Sn	**Sn**	**17 23 02.7**	**+0.1**
STON	**Ston**	**2.92**	**100**	*e*Pn	**Pn**	**17 22 26.7**	**-0.5**
STON				Sn	**Sn**	**17 23 02.6**	**+0.1**
OBKA	**Obir**	**3.09**	**10**	⇑*i*Pn	**Pn**	**17 22 29.9**	**+0.4**
OBKA				⇑*i*Sg	**Sg**	**17 23 21.4**	**+1.8**
	9.0nm,0.6s						
OBKA	**Obir**	**3.09**	**10**	Pn	**Pn**	**17 22 29.9**	**+0.4**
OBKA				Sg	**Sg**	**17 23 21.4**	**+1.9**
	9.0nm,0.6s						

IDC 30 17:23:38.7±2.2, 5°91S×130°71E, h0km, mb3.5/2, mb1 3.5/5, mb1mx3.5/16, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=79.9km s-min=25.6km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.09**	**202**	Pn	Pn	17 26 46.2	+0.1
	0.3nm,0.3s,baz=28,slow=11,SNR=25						
FITZ				Sn	Sn	17 28 55.7	-17
	0.6nm,0.3s,baz=95,slow=16,SNR=9.0						
WRA	**Warramunga Arr**	**14.39**	**166**	Pn	Pn	17 27 03.5	-0.3
	0.1nm,0.3s,baz=348,slow=13,SNR=9.5						
WRA				Sn	Sn	17 29 30.5	-14
	0.2nm,0.3s,baz=343,slow=23,SNR=5.2						
ASAR	**Alice Springs**	**17.92**	**170**	P	Pn	17 27 49.5	0.0
	0.1nm,0.3s,baz=346,slow=10,SNR=9.1						
ASAR				S	Sn	17 30 57.4	-13
	0.1nm,0.3s,baz=195,slow=14,SNR=4.2						
CMAR	**Chiang Mai Arr**	**39.59**	**308**	P	P	17 31 12.3	+0.2
	0.4nm,0.9s,baz=121,slow=8.7,SNR=4.6						
MKAR	**Makanchi Array**	**67.71**	**326**	P	P	17 34 37.9	0.0
	0.4nm,0.4s,baz=114,slow=7.6,SNR=10						

*KISR **30** 17:32:42.8±1.1, 28°51N×56°51E, h12km±999km, ML3.7*
*ISCJB **30** 17:32:45.0±0.5, 28°33N±0°03×56°47E±0°04, h10km, Error ellipse: s-maj=5.4km s-min=4.2km az=26.0*
*CSEM **30** 17:32:45.3±0.6, 28°44N×56°56E, h2km, ML3.7, Error ellipse: s-maj=14.2km s-min=10.1km az=125.0*
*SGS **30** 17:32:46.8, 28°35N×56°67E, h16km*
*TEH **30** 17:32:47.0, 28°27N×56°80E, h15km*

ISC 30 17:32:47.0±0.6, 28°28N±0°03×56°56E±0°04, h10km, n26, σ1°19/38, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.82**	**181**	*e*Sg	**Sg**	**17 33 14.9**	**+1.3**
IBND				*e*Pg	**Pg**	**17 33 02.5**	**-0.3**
IBND				*e*		17 33 30.3	
	comp=Z,12μm,0.2s						
BNDS	**Bandar-Abbas**	**0.94**	**201**	*e*Pg	**Pg**	**17 33 05.9**	**+0.9**
KRBR	**Kerman**	**1.71**	**6**	*e*Sg	**Sn**	**17 33 13.3**	**-3.5**
KRBR				*e*Sg	**Sn**	**17 33 34.4**	**-4.3**
IBAF	**Bafgh**	**3.41**	**346**	*e*Pn	**Pn**	**17 33 40.2**	**0.0**
IBAF				*e*Lg		17 34 35.4	
IBAF				*e*		17 34 41.6	
	comp=Z,380nm,0.3s						
IPAR	**Pars**	**3.44**	**298**	*e*Pn	**Pb**	**17 33 49.1**	**+1.0**
IPAR				*e*Sn	**Sn**	**17 34 23.6**	**+2.0**
IPAR				*e*		17 34 58.6	
	comp=Z,385nm,0.4s						
IMEH	**Mehriz**	**3.53**	**332**	*e*Pn	**Pn**	**17 33 43.7**	**+1.8**
IMEH				*e*		17 34 02.1	
	comp=Z,217nm,0.2s						
ZHSF	**Zahedan**	**3.93**	**69**	*e*Pn	**Pn**	**17 33 47.6**	**+0.3**
IKOO	**Kooshah**	**4.64**	**26**	*e*Pn	**Pn**	**17 33 55.6**	**-1.6**
IKOO				*e*		17 34 09.4	
	comp=Z,248nm,0.2s						
IKOO				*e*Sn	**Sn**	**17 34 45.2**	**-5.9**
IDAH	**Dahanechah**	**5.29**	**32**	*e*	**Pg**	**17 34 31.5**	**+3.3**
	comp=Z,96nm,0.2s						
IDAH				*e*Pn	**Pn**	**17 34 05.9**	**-0.1**
NASN	**Na'in**	**5.55**	**325**	*e*Pn	**Pn**	**17 34 07.5**	**-2.1**
IZEF	**Zefreh**	**5.87**	**323**	*e*Pn	**Pn**	**17 34 14.4**	**+0.4**
IZEF				*e*		17 34 18.2	
	comp=Z,24nm,0.1s						
SLWS		**6.33**	**238**	S	**Sn**	**17 35 32.2**	**-0.4**
SLWS		**6.33**	**238**	S	**Sn**	**17 35 32.2**	**-0.5**
IPIR	**Pirpir**	**6.57**	**313**	*e*Pn	**Pn**	**17 34 25.5**	**+1.8**
IPIR				*e*		17 34 36.1	
	comp=Z,39nm,0.2s						
BTHS		**6.64**	**232**	P	**Pn**	**17 34 24.1**	**-0.5**
BTHS		**6.64**	**232**	P	**Pn**	**17 34 24.1**	**-0.5**
BTHS				S	**Sn**	**17 35 38.5**	**-1.8**
UMR	**Umm Al-Rimmam**	**7.85**	**281**	*e*P	**Pn**	**17 34 41.5**	**+0.2**
UMR				*e*S	**Sn**	**17 36 10.3**	**+0.1**
UMR				AML	AML	17 36 12.8	
	comp=Z,11nm,0.4s						
UMR	**Umm Al-Rimmam**	**7.85**	**281**	*e*P	**Pn**	**17 34 41.5**	**+0.3**
UMR				*e*S	**Sn**	**17 36 10.3**	**+0.1**
RDF	**Al-Radifah**	**7.95**	**277**	*e*P	**Pn**	**17 34 43.1**	**+0.6**
RDF				*e*S	**Sn**	**17 36 12.4**	**-0.1**
RDF				AML	AML	17 36 15.1	
	comp=Z,7.4nm,0.2s						
RDF	**Al-Radifah**	**7.95**	**277**	*e*P	**Pn**	**17 34 43.1**	**+0.6**
RDF				*e*S	**Sn**	**17 36 12.4**	**-0.1**
MIB	**Mutribah**	**8.21**	**283**	*e*P	**Pn**	**17 34 45.7**	**-0.4**
MIB				*e*S	**Sn**	**17 36 18.5**	**-0.6**
MIB				AML	AML	17 36 21.8	
	comp=Z,4.4nm,0.5s						
MIB	**Mutribah**	**8.21**	**283**	*e*P	**Pn**	**17 34 45.7**	**-0.5**
MIB				*e*S	**Sn**	**17 36 18.5**	**-0.5**
NAY	**Al-Naaiem**	**8.23**	**279**	*e*P	**Pn**	**17 34 46.4**	**0.0**
NAY	**Al-Naaiem**	**8.23**	**279**	*e*P	**Pn**	**17 34 46.4**	**-0.1**
ASYS		**10.84**	**269**	P	**Pn**	**17 35 19.7**	**-2.4**
ASYS		**10.84**	**269**	P	**Pn**	**17 35 19.7**	**-2.4**

IDC 30 17:52:41.2±6.8, 8°63S×120°14E, h73km±72km, mb3.4/2, mb1 3.3/5, mb1mx3.2/20, mbtmp3.2/5, ML2.7/2, Error ellipse: s-maj=161.5km s-min=29.9km az=53.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.83**	**151**	P	Pn	17 55 13.6	+0.2
	0.1nm,0.3s,baz=327,slow=14,SNR=4.2						
FITZ				S	Sn	17 57 14.1	+1.2
	0.0nm,0.3s,baz=60,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	**17.75**	**131**	P	Pn	17 56 43.1	-0.5
	0.0nm,0.3s,baz=306,slow=13,SNR=2.5						
ASAR	**Alice Springs**	**19.93**	**140**	P	Pn	17 57 07.8	-1.8
	0.2nm,0.3s,baz=316,slow=9.7,SNR=35						
STKA	**Stephens Creek**	**30.54**	**142**	P	P	17 58 47.5	-0.3
	2.5nm,1.0s,baz=324,slow=14,SNR=4.5						
MKAR	**Makanchi Array**	**64.65**	**332**	P	P	18 03 11.3	+0.1
	0.1nm,0.5s,baz=131,slow=6.6,SNR=2.9						

*NNC **30** 17:57:04.4±2.7, 38°13N×71°01E, h0km, mb3.8, mpv4.1, Error ellipse: s-maj=27.1km s-min=19.9km az=92.0*

ISC 30 17:57:03.3±2.6, 38°2N±0°5×73°2E±0°8, h249km±30km, n11, σ0°77/14, 3C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.31**	**338**	⇑Pn	**Pn**	**17 58 23.3**	**+0.6**
	11nm,0.3s,baz=178,slow=13,SNR=70						
KK31				⇑Sn	**S**	**17 59 25.5**	**-0.6**
	3.6nm,0.2s,baz=174,slow=23,SNR=18						
DANN	**Dangsing**	**13.21**	**135**	*e*P	**Pn**	**18 00 01.0**	**-0.8**
	11nm,0.3s						
KOLN	**Koldanda**	**13.57**	**137**	*e*P	**Pn**	**18 00 04.5**	**-1.8**
	7.0nm,0.4s						
GKN	**Gorkha**	**13.97**	**133**	*e*P	**Pn**	**18 00 10.7**	**-0.4**
	18nm,0.4s						
KKN	**Kakani**	**14.50**	**132**	*e*P	**Pn**	**18 00 17.5**	**-0.1**
DMN	**Daman**	**14.54**	**133**	*e*P	**Pn**	**18 00 18.3**	**+0.3**
	9.6nm,0.4s						
AB31	**Akbulak array**	**14.60**	**323**	P	**Pn**	**18 00 19.3**	**+0.8**
	0.5nm,0.3s,baz=133,slow=15,SNR=61						
AB31				S	**S**	**18 02 53.0**	**-6.6**
	0.5nm,0.4s,baz=156,slow=22,SNR=5.0						
PKIN	**Phulchoki**	**14.73**	**132**	*e*P	**Pn**	**18 00 21.2**	**+0.9**
PKI	**Pulchoki**	**14.74**	**132**	*e*P	**Pn**	**18 00 20.9**	**+0.5**
GUN	**Gumba**	**14.77**	**130**	*e*P	**Pn**	**18 00 21.6**	**+0.8**
	7.7nm,0.4s						
AKTO	**Aktyubinsk**	**16.32**	**323**	⇑P	**P**	**18 00 42.7**	**+5.3**
	0.3nm,0.7s						
AKTO				⇓S	**S**	**18 03 34.9**	**-0.5**
	0.2nm,0.7s						

*IDC **30** 18:17:24.1±0.9, 12°25N×144°48E, h0km, mb4.0/8, mb1 4.3/8, mb1mx4.0/21, mbtmp4.0/8, Error ellipse: s-maj=33.4km s-min=15.8km az=106.0*
*ISCJB **30** 18:17:28.4±2.3, 12°3N±0°1×144°2E±0°2, h37km±22km, mb4.1/10, Error ellipse: s-maj=35.4km s-min=17.3km az=13.3*
*NEIC **30** 18:17:30.2±2.2, 12°31N×144°43E, h45km±20km, mb4.3/2, Error ellipse: s-maj=28.5km s-min=17.1km az=102.0*

ISC 30 18:17:29.2±5.8, 12°3N±0°1×144°3E±0°2, h32km±42km, n18, σ1°14/20, mb4.1/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.44**	**24**	Pn	**Pn**	**18 17 52.4**	**-0.7**
	79nm,0.3s,baz=193,slow=8.7,SNR=71						
GUMO				Sn	**Sn**	**18 18 11.7**	**+0.7**
	90nm,0.3s,baz=347,slow=23,SNR=24						
GUMO	**Guam**	**1.44**	**24**	Pn	**Pn**	**18 17 52.5**	**-0.7**
GUMO				*e*Pn	**Pn**	**18 17 53.0**	**-0.2**
GUMO				Sn	**Sn**	**18 18 11.7**	**+0.7**
GUMO				*e*Sn	**Sn**	**18 18 12.5**	**+1.5**
WRA	**Warramunga Arr**	**33.46**	**197**	P	**P**	**18 24 05.7**	**+0.1**
	1.4nm,0.6s,mb4.1,baz=21,slow=9.8,SNR=28						
WRA	**Warramunga Arr**	**33.46**	**197**	P	**P**	**18 24 05.7**	**+0.1**
ASAR	**Alice Springs**	**37.12**	**196**	P	**P**	**18 24 37.4**	**+0.3**
	1.2nm,0.6s,mb3.9,baz=20,slow=10,SNR=32						
ASAR	**Alice Springs**	**37.12**	**196**	P	**P**	**18 24 37.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**44.06**	**284**	P	**P**	**18 25 36.9**	**+2.4**
	0.7nm,0.5s,mb3.7,baz=80,slow=6.2,SNR=17						
MKAR	**Makanchi Array**	**62.05**	**317**	P	**P**	**18 27 47.1**	**+0.4**
	0.4nm,0.4s,mb3.9,baz=89,slow=9.0,SNR=12						
KURK	**Kurchatov**	**65.23**	**320**	*e*P	**P**	**18 28 06.9**	**-0.7**
	4.8nm,1.1s,mb4.4						
ILAR	**Eielson Array**	**70.01**	**25**	P	**P**	**18 28 35.0**	**-2.5**
	0.2nm,0.5s,mb3.3,baz=249,slow=5.4,SNR=3.6						
ILAR	**Eielson Array**	**70.01**	**25**	P	**P**	**18 28 35.0**	**-2.5**
KBL	**Kabul**	**71.05**	**302**	*e*P	**P**	**18 28 43.8**	**-0.7**
	3.0nm,1.0s,mb4.2						
ARCES	**ARCESS Array B**	**88.16**	**342**	P	**P**	**18 30 16.8**	**+0.2**
	9.5nm,1.2s,mb4.9,baz=47,slow=7.1,SNR=4.3						
NVAR	**Mina Array Bea**	**88.20**	**51**	P	**P**	**18 30 18.8**	**+1.3**
	0.4nm,0.5s,mb3.9,baz=242,slow=6.7,SNR=4.0						
NVAR	**Mina Array Bea**	**88.20**	**51**	P	**P**	**18 30 18.8**	**+1.3**
FINES	**FINESS Array B**	**92.11**	**335**	P	**P**	**18 30 33.8**	**-1.4**
	1.9nm,0.7s,mb4.5,baz=52,slow=5.9,SNR=11						
DBIC	**Dimbokro**	**144.00**	**300**	PKP	PKPdf	18 37 01.0	-1.6
	4.0nm,0.7s,baz=0.7,slow=5.4,SNR=11						
DBIC	**Dimbokro**	**144.00**	**300**	PKP	PKPdf	18 37 01.0	-1.7

IDC 30 18:19:33.1±14.0, 6°54S×129°99E, h120km±157km, mb3.2/1, mb1 3.1/4, mb1mx2.9/17, mbtmp2.9/4, ML2.8/3, Error ellipse: s-maj=97.2km s-min=59.1km az=29.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.25**	**200**	P	Pn	18 22 24.3	+0.7
	0.0nm,0.3s,baz=347,slow=19,SNR=2.3						
FITZ				S	Sn	18 24 28.1	-10
	0.2nm,0.3s,baz=51,slow=20,SNR=1.4						
WRA	**Warramunga Arr**	**13.98**	**163**	P	Pn	18 22 44.6	-1.4
	0.0nm,0.3s,baz=342,slow=11,SNR=3.9						
WRA				S	Sn	18 25 14.6	-5.8
	0.1nm,0.3s,baz=336,slow=22,SNR=5.2						
ASAR	**Alice Springs**	**17.44**	**168**	P	Pn	18 23 29.1	0.0
	0.1nm,0.3s,baz=345,slow=9.9,SNR=15						
MKAR	**Makanchi Array**	**67.83**	**327**	P	P	18 30 18.4	+0.1
	0.3nm,0.5s,baz=119,slow=6.3,SNR=4.4						

IDC 30 18:28:30.8±4.8, 29°01S×176°86W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/14, mbtmp3.7/3, Error ellipse: s-maj=177.9km s-min=75.8km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.51**	**207**	Sn	Sn	18 32 40.1	-21
	0.7nm,0.3s,baz=131,slow=19,SNR=3.3						
STKA	**Stephens Creek**	**35.78**	**255**	P	P	18 35 31.4	-0.4
	1.6nm,0.8s,baz=120,slow=14,SNR=2.6						
ASAR	**Alice Springs**	**44.20**	**265**	P	P	18 36 41.8	0.0
	0.5nm,0.7s,baz=104,slow=7.3,SNR=8.0						
WRA	**Warramunga Arr**	**45.07**	**270**	P	P	18 36 48.9	+0.1
	1.0nm,0.6s,baz=110,slow=7.6,SNR=18						
FINES	**FINESS Array B**	**144.16**	**341**	PKP	PKPdf	18 48 07.4	-0.5
	0.9nm,0.5s,baz=30,slow=4.6,SNR=6.4						

IDC 30 18:32:55.4±2.1, 2°05S×127°85E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/18, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=141.8km s-min=26.7km az=67.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.89**	**161**	P	Pn	18 37 17.1	-0.9
	0.2nm,0.3s,baz=340,slow=12,SNR=11						
ASAR	**Alice Springs**	**22.28**	**165**	P	P	18 37 54.6	+0.3
	0.3nm,0.4s,baz=346,slow=11,SNR=9.2						
MKAR	**Makanchi Array**	**62.93**	**327**	P	P	18 43 23.8	+0.1
	0.3nm,0.6s,baz=141,slow=7.4,SNR=4.5						

*BUC **30** 18:41:02.7±1.1, 44°94N×22°37E, h5km, MD3.2/3, Error ellipse: s-maj=17.6km s-min=9.8km az=62.0*
*ISCJB **30** 18:41:03.6±0.4, 44°96N±0°02×22°35E±0°02, h9km±3km, Error ellipse: s-maj=2.9km s-min=2.8km az=176.1*
*CSEM **30** 18:41:04.4±0.1, 44°97N×22°38E, h8km, ML3.0, Error ellipse: s-maj=2.7km s-min=2.2km az=105.0*
*BEO **30** 18:41:04.8±0.5, 44°94N×22°50E, h8km±2km, ML3.0/12*

ISC 30 18:41:04.5±0.4, 44°97N±0°01×22°37E±0°03, h10km±3km, n103, σ1°06/151, 50C-11D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJES	**Djerdap**	**0.33**	**161**	⇓*i*Pg	**Pg**	**18 41 11.1**	**+0.1**
DJES				*e*Sg	**Sg**	**18 41 14.8**	**-0.5**
GZR	**Gura Zlata**	**0.51**	**34**	⇑*i*P	**Pg**	**18 41 13.8**	**-0.6**
GZR				*i* S	**Sg**	**18 41 20.2**	**-1.0**
GZR	**Gura Zlata**	**0.51**	**34**	⇑*i*P	**Pg**	**18 41 13.7**	**-0.7**
GZR				*i* S	**Sg**	**18 41 20.1**	**-1.1**
GZR	**Gura Zlata**	**0.51**	**34**	⇑*i*P	**Pg**	**18 41 13.8**	**-0.6**
GZR				*i* S	**Sg**	**18 41 20.2**	**-1.0**
BZS	**Buzias**	**0.83**	**321**	⇑*i*Pg	**Pg**	**18 41 21.1**	**+0.5**
BZS				*e*Sg	**Sg**	**18 41 32.4**	**+0.9**
BZS	**Buzias**	**0.83**	**321**	⇑*i*P	**Pg**	**18 41 21.1**	**+0.5**
BZS				*i* S	**Sg**	**18 41 31.1**	**-0.4**
BZS	**Buzias**	**0.83**	**321**	⇑*i*P	**Pg**	**18 41 21.2**	**+0.6**
BZS	**Buzias**	**0.83**	**321**	S	**Sg**	**18 41 32.3**	**+0.8**
BZS	**Buzias**	**0.83**	**321**	⇑*i*P	**Pg**	**18 41 21.1**	**+0.5**
BZS				*i* S	**Sg**	**18 41 31.1**	**-0.4**
BZS				*e*Sg	**Sg**	**18 41 32.4**	**+0.9**
DEV	**Deva**	**0.98**	**22**	⇑*i*P	**Pg**	**18 41 22.8**	**-0.7**
DEV				*i* S	**Sg**	**18 41 36.2**	**-0.1**
DEV	**Deva**	**0.98**	**22**	⇓*i*P	**Pg**	**18 41 23.1**	**-0.4**
DEV	**Deva**	**0.98**	**22**	S	**Sg**	**18 41 35.7**	**-0.6**
DEV	**Deva**	**0.98**	**22**	⇑*i*P	**Pg**	**18 41 22.8**	**-0.7**
DEV				*i* S	**Sg**	**18 41 36.2**	**-0.1**
SVIS	**Svilajnac**	**1.09**	**230**	*e*Pg	**Pg**	**18 41 26.1**	**+0.7**
SVIS				*e*Sg	**Sg**	**18 41 40.4**	**+0.9**
TIM	**Timisoara**	**1.11**	**314**	*i* S	**Sb**	**18 41 40.9**	**+0.5**
TIM	**Timisoara**	**1.11**	**314**	S	**Sb**	**18 41 41.9**	**+1.5**
TIM	**Timisoara**	**1.11**	**314**	*i* S	**Sb**	**18 41 40.9**	**+0.5**
BOLS	**Boljevac**	**1.18**	**195**	⇑*i*Pg	**Pg**	**18 41 26.6**	**-0.6**
BOLS				*e*Sg	**Sg**	**18 41 42.8**	**+0.2**
BOLS	**Boljevac**	**1.18**	**195**	⇑*i*Pg	**Pg**	**18 41 26.6**	**-0.6**
BOLS				*e*Sg	**Sg**	**18 41 42.8**	**+0.2**
CRAR	**CRAIOVA**	**1.21**	**122**	*i* S	**Sb**	**18 41 42.9**	**-0.2**
CRAR	**CRAIOVA**	**1.21**	**122**	S	**Sb**	**18 41 43.0**	**-0.1**
CRAR	**CRAIOVA**	**1.21**	**122**	*i* S	**Sb**	**18 41 42.9**	**-0.2**
GRUS	**Gruza**	**1.61**	**228**	*e*Pn	**Pn**	**18 41 36.0**	**+3.1**
GRUS				*e*Sg	**Sg**	**18 41 57.9**	**+1.7**
ZAPS	**Zavoj**	**1.71**	**174**	⇑*i*Pn	**Pn**	**18 41 34.5**	**+0.1**
ZAPS				*e*Sg	**Sg**	**18 41 58.6**	**-0.9**
FRGS	**Fruska Gora**	**1.82**	**277**	*e*Pn	**Pn**	**18 41 40.2**	**+4.3**
FRGS				*e*Sg	**Sg**	**18 42 07.0**	**+3.9**
MDB	**Medias**	**1.83**	**50**	⇑*i*P	**Pn**	**18 41 36.4**	**+0.3**
MDB				*i* S	**Sn**	**18 42 00.7**	**+1.4**
MDB	**Medias**	**1.83**	**50**	⇑*i*P	**Pn**	**18 41 37.1**	**+1.0**
MDB	**Medias**	**1.83**	**50**	S	**Sn**	**18 42 00.3**	**+1.0**
MDB	**Medias**	**1.83**	**50**	⇑*i*P	**Pn**	**18 41 36.4**	**+0.3**
MDB				*i* S	**Sn**	**18 42 00.7**	**+1.4**
DRGR		**1.83**	**7**	⇑*i*P	**Pn**	**18 41 35.6**	**-0.5**
DRGR				*i* S	**Sn**	**18 42 01.3**	**+2.0**
DRGR		**1.83**	**7**	⇑*i*P	**Pn**	**18 41 35.7**	**-0

PSZ	**Piszkesteto**	**3.41**	**331**	⇓*i*P	**Pn**	**18 41 58.0**	**+0.3**
PSZ	**Piszkesteto**	**3.41**	**331**	⇓*i*P	**Pn**	**18 41 58.0**	**+0.3**
PSZ	**Piszkesteto**	**3.41**	**331**	S	**Sn**	**18 42 36.7**	**-1.4**
PSZ	**Piszkesteto**	**3.41**	**331**	*e*Pn	**Pn**	**18 42 01.3**	**+3.6**
PSZ				*e*Sn	**Sn**	**18 42 36.1**	**-2.0**
PSZ	**Piszkesteto**	**3.41**	**331**	⇓*i*P	**Pn**	**18 41 58.0**	**+0.3**
PSZ	**Piszkesteto**	**3.41**	**331**	⇑*e*Pn	**Pn**	**18 42 01.3**	**+3.6**
PSZ				*e*Sn	**Sn**	**18 42 36.1**	**-2.0**
VAY	**Valandovo**	**3.65**	**178**	*e*Pn	**Pn**	**18 42 00.6**	**-0.4**
KRUS	**Krusevo**	**3.69**	**193**	*e*Pn	**Pn**	**18 42 01.8**	**+0.1**
KECS	**Kecovo**	**3.74**	**340**	*e*PN	**Pn**	**18 42 00.8**	**-1.5**
KECS				*e*SN	**Sn**	**18 42 44.2**	**-2.2**
KOLS	**Kolonicke sedl**	**3.96**	**359**	*e*PN	**Pn**	**18 42 05.4**	**+0.1**
KOLS				*e*PG	**Pg**	**18 42 20.5**	**+0.1**
KOLS				*e*SN	**Sn**	**18 42 48.8**	**-3.0**
KOLS				*e*SG	**Sg**	**18 43 10.9**	**-0.8**
KOLS	**Kolonicke sedl**	**3.96**	**359**	*e*Pn	**Pn**	**18 42 05.4**	**+0.1**
CRVS	**Cervenica-Dubn**	**3.98**	**351**	*e*PN	**Pn**	**18 42 05.7**	**+0.2**
CRVS				*e*PG	**Pg**	**18 42 21.7**	**+1.0**
CRVS	**Cervenica-Dubn**	**3.98**	**351**	*e*Pn	**Pn**	**18 42 05.7**	**+0.2**
CFR	**Carcaliu**	**4.09**	**85**	⇑*i*P	**Pn**	**18 42 06.1**	**-1.0**
CFR	**Carcaliu**	**4.09**	**85**	⇑*i*P	**Pn**	**18 42 06.6**	**-0.5**
CFR	**Carcaliu**	**4.09**	**85**	S	**Sn**	**18 42 49.9**	**-5.0**
CFR	**Carcaliu**	**4.09**	**85**	⇑*i*P	**Pn**	**18 42 06.1**	**-1.0**
VYHS	**Vyhne**	**4.28**	**327**	*e*PN	**Pn**	**18 42 09.3**	**-0.3**
VYHS	**Vyhne**	**4.28**	**327**	*e*Pn	**Pn**	**18 42 09.3**	**-0.3**
TIRR	**Tirgusor**	**4.34**	**95**	⇓*i*P	**Pn**	**18 42 10.2**	**-0.3**
TIRR				*i* S	**Sn**	**18 43 00.1**	**-1.0**
TIRR	**Tirgusor**	**4.34**	**95**	⇓*i*P	**Pn**	**18 42 10.2**	**-0.3**
TIRR				*i* S	**Sn**	**18 43 00.1**	**-1.0**
KOLL	**Kolacno**	**4.52**	**324**	*e*PN	**Pn**	**18 42 12.6**	**-0.4**
KOLL	**Kolacno**	**4.52**	**324**	*e*Pn	**Pn**	**18 42 12.6**	**-0.4**

*ISCJB **30** 18:53:52.9±0.9, 31°.30N±0°.07×104°.11E±0°.09, h0km±8km, mb3.5/3, Error ellipse: s-maj=16.7km s-min=6.2km az=41.1*
*IDC **30** 18:53:54.7±1.4, 31°.29N×103°.97E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/24, mbtmp3.3/5, ML3.2/1, Error ellipse: s-maj=39.0km s-min=27.2km az=59.0*
*BJI **30** 18:53:56.6, 31°.14N×103°.63E, h12km, ML3.2/10*
ISC 30 18:53:55.9±0.9, 31°.27N±0°.06×103°.98E±0°.10, h6km±8km, n8, σ0§91/10, mb3.5/3, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**208**	⇑*i*Pg	**Pg**	**18 54 02.8**	**-1.0**
CD2				Sg	**Sg**	**18 54 09.5**	**+0.4**
CD2				smax			
	comp=N,7μm,0.5s						
CD2				smax			
	comp=E,10μm,0.4s						
LZH	**Lanzhou**	**4.80**	**359**	*e*Pg	**Pg**	**18 55 28.5**	**+0.6**
XAN	**Xi'an**	**5.00**	**55**	Pg	**Pg**	**18 55 28.3**	**-3.3**
XAN				Sg	**Sg**	**18 56 36.8**	**+0.4**
XAN				smax			
	comp=N,40nm,0.8s						
XAN				smax			
	comp=E,22nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.55**	**201**	Pn	**Pn**	**18 57 10.2**	**+1.5**
	comp=E,0.0nm,0.3s,baz=9.5,slow=9.0,SNR=2.6						
KSRS	**Korea Array**	**20.68**	**66**	P	**P**	**18 58 37.0**	**+0.4**
	comp=E,1.3nm,0.7s,baz=258,slow=10.0,SNR=4.2						
MKAR	**Makanchi Array**	**22.78**	**319**	P	**P**	**18 58 58.3**	**-0.7**
	comp=E,1.1nm,1.0s,mb3.2,baz=122,slow=10,SNR=8.1						
WRA	**Warramunga Arr**	**58.67**	**146**	P	**P**	**19 03 54.0**	**-0.3**
	comp=E,0.7nm,0.9s,mb3.7,baz=342,slow=7.5,SNR=5.2						
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**19 04 14.2**	**-0.6**
	comp=E,0.3nm,1.0s,mb3.4,baz=346,slow=6.9,SNR=4.6						

IDC 30 18:57:33.5±6.0, 28°.22S×177°.73W, h0km, mb3.5/2, mb1 3.7/2, mb1mx3.6/14, mbtmp3.5/2, Error ellipse: s-maj=227.1km s-min=97.7km az=161.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.51**	**265**	P	P	19 05 38.5	-0.5
	0.3nm,0.5s,baz=104,slow=7.0,SNR=9.5						
WRA	**Warramunga Arr**	**44.30**	**270**	P	P	19 05 45.8	+0.4
	0.6nm,0.7s,baz=110,slow=8.0,SNR=9.3						
FINES	**FINESS Array B**	**143.18**	**341**	PKP	PKPdf	19 17 08.3	-0.6
	4.0nm,1.0s,baz=68,slow=5.2,SNR=4.6						

*CASC **30** 19:08:09.8±2.3, 13°.43N×91°.96W, h36km±999km, MD4.4, ML3.8*
*IDC **30** 19:08:11.5±5.3, 13°.60N×91°.83W, h33km±37km, mb4.2/7, mb1 4.5/10, mb1mx4.1/25, mbtmp4.2/10, ML4.3/3, MS3.6/8, Ms1 3.6/8, ms1mx3.1/32, Error ellipse: s-maj=30.9km s-min=21.1km az=39.0*
*NEIC **30** 19:08:13.3±0.9, 13°.62N×91°.54W, h60km±7km, mb4.3/30, Error ellipse: s-maj=11.2km s-min=7.0km az=213.0*
ISC 30 19:08:11.8±1.1, 13°.58N±0°.05×91°.85W±0°.02, h30km±8km, n232, σ0§93/242, mb4.3/33, MS3.6/6, 72C-71D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.76**	**15**	*e*P	**Pb**	**19 08 27.1**	**+0.6**
FUG	**Fuego 3**	**1.30**	**48**	*e*P	**Pn**	**19 08 34.3**	**+0.3**
FG6		**1.35**	**44**	*e*P	**Pn**	**19 08 35.0**	**+0.3**
FG6				*e*S	**Sn**	**19 08 56.2**	**+4.6**
TP2	**Tecpan 2**	**1.44**	**34**	*e*P	**Pn**	**19 08 36.5**	**+0.6**
PCG	**Pacaya**	**1.45**	**56**	*e*P	**Pn**	**19 08 36.6**	**+0.5**
PCG				*e*S	**Sn**	**19 09 02.2**	**+8.2**
IXG	**Ixpaco**	**1.48**	**66**	*e*P	**Pn**	**19 08 35.9**	**-0.5**
NBG	**Las Nubes**	**1.77**	**55**	*e*P	**Pn**	**19 08 41.9**	**+1.5**
APG	**El Apazote**	**1.95**	**43**	Pn	**Pn**	**19 08 43.6**	**+0.7**
	104nm,0.3s,baz=199,slow=8.9,SNR=514						
APG				Lg		19 09 13.6	
	78nm,0.3s,baz=294,slow=16,SNR=5.0						
RTR	**El Retiro**	**2.16**	**81**	*e*P	**Pn**	**19 08 45.3**	**-0.5**
RBDL	**Robledal**	**2.16**	**76**	*e*P	**Pn**	**19 08 45.9**	**+0.1**
SBLS	**San Blas**	**2.18**	**83**	*e*P	**Pn**	**19 08 45.3**	**-0.7**
SBLS				*e*S	**Sn**	**19 09 12.6**	**+0.6**
SNJE	**San Jose**	**2.20**	**82**	*e*P	**Pn**	**19 08 45.7**	**-0.6**
SNJE				*e*S	**Sn**	**19 09 14.2**	**+1.8**
BOQS	**Boqueron**	**2.50**	**86**	*e*P	**Pn**	**19 08 50.1**	**-0.3**
BOQS				AML	AML	19 09 27.6	
	comp=Z,612nm,0.4s						
SNET	**Serv Nac Est T**	**2.54**	**87**	*e*P	**Pn**	**19 08 54.3**	**+3.2**
SNET				*e*S	**Sn**	**19 09 21.6**	**+0.6**
SNET				AML	AML	19 09 38.2	
	comp=Z,690nm,1.0s						
MTO2	**Montecristo 2**	**2.55**	**71**	*e*P	**Pn**	**19 08 50.9**	**-0.2**
MRL	**Marmol**	**2.56**	**54**	*e*P	**Pn**	**19 08 53.0**	**+1.7**
MRL				*e*S	**Sn**	**19 09 29.9**	**+8.5**
CCIG	**Comitan**	**2.70**	**354**	*i* P	**Pn**	**19 08 54.7**	**+1.4**
CCIG				*i* S	**Sn**	**19 09 24.1**	**-0.9**
LFRS	**El Faro**	**2.71**	**89**	*e*P	**Pn**	**19 08 52.9**	**-0.4**
LFRS				*e*S	**Sn**	**19 09 26.1**	**+1.0**
LBRS	**Las Brisas**	**2.73**	**86**	*e*P	**Pn**	**19 08 53.9**	**+0.3**
SNVI	**San Vicente**	**2.92**	**89**	*e*P	**Pn**	**19 08 57.1**	**+0.8**
SNVI				*e*S	**Sn**	**19 09 33.1**	**+2.6**
SCX	**San Cristobal**	**3.23**	**346**	*i* P	**Pn**	**19 09 02.3**	**+1.7**
SCX				*i* S	**Sn**	**19 09 39.3**	**+1.3**
VSM	**San Miguel**	**3.48**	**92**	*e*P	**Pn**	**19 09 05.3**	**+1.4**
BLLM	**Bellamira**	**3.51**	**92**	*e*P	**Pn**	**19 09 04.4**	**0.0**
CNCH	**Conchagua**	**3.92**	**94**	*e*P	**Pn**	**19 09 09.5**	**-0.4**
CNCH				*e*S	**Sn**	**19 09 54.4**	**-0.5**
TGUH	**Tegucigalpa,Un**	**4.47**	**83**	*e*Pn	**Pn**	**19 09 15.5**	**-2.0**
TGUH	**Tegucigalpa,Un**	**4.47**	**83**	*e*P	**Pn**	**19 09 17.0**	**-0.5**
CMIG	**Matias Romero**	**4.56**	**320**	Pn	**Pn**	**19 09 16.6**	**-2.2**
	comp=Z,4.6nm,0.3s,baz=149,slow=10,SNR=22						
CMIG				Sn	**Sn**	**19 10 11.6**	**+0.8**
	comp=Z,14nm,0.3s,baz=104,slow=15,SNR=6.8						
HUIG	**Huatulco**	**4.66**	**298**	*i* P	**Pn**	**19 09 21.4**	**+1.1**
HUIG				*i* S	**Sn**	**19 10 15.1**	**+1.7**
VHO	**Vista Hermosa**	**5.86**	**307**	*i* P	**Pn**	**19 09 42.7**	**+6.1**
VHO				*i* S	**Sn**	**19 10 45.5**	**+2.7**
PNIG	**Pinotepa**	**6.68**	**296**	*i* P	**Pn**	**19 09 45.6**	**-2.4**
PNIG				*i* S	**Sn**	**19 10 58.7**	**-4.4**
TEIG	**Tepich**	**7.44**	**27**	Pn	**Pn**	**19 09 58.8**	**+0.5**
	comp=Z,18nm,0.3s,baz=257,slow=1.3,SNR=45						
TEIG				Sn	**Sn**	**19 11 21.9**	**+0.1**
	baz=137,slow=20,SNR=0.7						
TEIG				LR	LR	19 13 14.6	
	comp=Z,820nm,19.6s,baz=197,slow=41						
TEIG	**Tepich**	**7.44**	**27**	*e*Pn	**Pn**	**19 09 58.4**	**0.0**
	comp=Z,91nm,0.5s						
JTS	**JuntasAbangare**	**7.50**	**115**	*e*Pn	**Pn**	**19 09 54.2**	**-4.9**
	comp=Z,36nm,0.8s						
PPM	**Popocatepetl**	**8.49**	**311**	*i* P	**Pn**	**19 10 18.0**	**+5.1**
PPM				*i* S	**Sn**	**19 11 54.6**	**+6.9**
JCT	**Junction City**	**18.35**	**338**	P	**Pn**	**19 12 24.7**	**+0.5**
	comp=Z,6.0nm,0.7s						
628A	**Black Gap, Mar**	**18.85**	**329**	⇓P	**Pn**	**19 12 30.0**	**-0.2**
	baz=19,SNR=6.3						
627A	**Terlingua Ranc**	**19.08**	**328**	⇓P	**Pn**	**19 12 33.3**	**+0.4**
	baz=19,SNR=19						
TXAR	**Lajitas Array**	**19.13**	**327**	P	**Pn**	**19 12 32.8**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=151,slow=10,SNR=31						
TXAR				LR	LR	19 19 57.1	
	comp=Z,59nm,19.0s,baz=0.0,slow=37						
TXAR	**Lajitas Array**	**19.13**	**327**	P	**Pn**	**19 12 32.8**	**-0.7**
TXAR				LR	LR	19 19 57.1	
528A	**Cox Ranch, San**	**19.35**	**330**	⇓P	**Pn**	**19 12 35.3**	**-0.9**
	baz=20						
626A	**Big Bend Ranch**	**19.55**	**326**	⇓P	**Pn**	**19 12 37.8**	**-0.8**
	baz=20,SNR=28						
527A	**Woodward Ranch**	**19.75**	**328**	⇑P	**Pn**	**19 12 39.8**	**-1.1**
	baz=20						
428A	**Kincaid Ranch,**	**19.77**	**331**	⇑P	**Pn**	**19 12 40.3**	**-0.9**
	baz=20,SNR=8.0						
LRAL	**Lakeview Retre**	**19.87**	**12**	*e*P	**Pn**	**19 12 39.2**	**-3.1**
	comp=Z,16nm,1.1s						
526A	**Mary Lane Ranc**	**19.93**	**327**	⇓P	**Pn**	**19 12 42.3**	**-0.8**
	baz=20,SNR=7.9						
427A	**Hayter Ranch,**	**20.22**	**330**	⇓P	**P**	**19 12 45.3**	**+0.9**
	baz=20						
426A	**McDonald Obser**	**20.38**	**329**	⇑P	**P**	**19 12 46.9**	**+0.7**
	baz=21,SNR=11						
328A	**Wristen Ranch,**	**20.38**	**332**	⇑P	**P**	**19 12 46.9**	**+0.7**
	baz=21,SNR=15						
326A	**Caldwell Ranch**	**20.88**	**330**	⇑P	**P**	**19 12 52.3**	**+0.7**
	baz=21,SNR=8.2						
MIAR	**Mount Ida**	**20.93**	**356**	*e*P	**P**	**19 12 48.5**	**-3.7**
	comp=Z,11nm,0.9s						
OXF	**Oxford**	**20.96**	**6**	P	**P**	**19 12 48.6**	**-3.8**
	comp=Z,44nm,0.9s						
425A	**Indio Mountain**	**20.97**	**327**	⇓P	**P**	**19 12 53.2**	**+0.6**
	baz=21,SNR=18						
227A	**Bennet, Jal**	**21.14**	**332**	⇑P	**P**	**19 12 54.6**	**+0.3**
	baz=21,SNR=5.4						
GOGA	**Godfrey**	**21.17**	**20**	*e*P	**P**	**19 12 53.1**	**-1.6**
	comp=Z,12nm,0.6s,mb4.4						
SDV	**Santo Domingo**	**21.32**	**100**	*e*P	**P**	**19 12 53.5**	**-3.0**
	comp=Z,3.9nm,0.6s,mb3.9						
325A	**Bean Ranch, Si**	**21.43**	**328**	⇑P	**P**	**19 12 57.1**	**-0.4**
	baz=22,SNR=13						
226A	**Malaga, Loving**	**21.55**	**331**	⇓P	**P**	**19 12 58.5**	**-0.3**
	baz=22,SNR=11						
CLNB	**Carlsbad**	**21.62**	**331**	*e*P	**P**	**19 12 59.3**	**-0.2**
	comp=Z,5.1nm,0.6s,mb4.1						
127A	**Arkansas Junct**	**21.73**	**333**	⇑P	**P**	**19 12 59.9**	**-0.8**
	baz=22						
324A	**Moseley Ranch,**	**21.75**	**327**	⇑P	**P**	**19 13 00.5**	**-0.4**
	baz=22,SNR=19						
GDL2	**Guadalupe Moun**	**21.79**	**330**	*e*P	**P**	**19 13 01.1**	**-0.3**
	comp=Z,16nm,0.9s,mb4.5						
225A	**Deer Hill, Car**	**21.94**	**329**	⇑P	**P**	**19 13 02.5**	**-0.5**
	baz=22,SNR=21						
WMOK	**Wichita Mounta**	**21.98**	**345**	*e*P	**P**	**19 13 01.0**	**-2.4**
	comp=Z,9.8nm,1.0s,mb4.2						
126A	**Clayton Basin,**	**22.00**	**332**	⇓P	**P**	**19 13 02.6**	**-1.0**
	baz=22						
SWET	**Sewanee**	**22.20**	**13**	*e*P	**P**	**19 13 03.4**	**-2.3**
Z27A	**Tatum**	**22.21**	**334**	⇑P	**P**	**19 13 04.1**	**-1.7**
	baz=22,SNR=14						
CPRX	**Cap Rock**	**22.25**	**332**	*e*P	**P**	**19 13 05.9**	**-0.4**
	comp=Z,20nm,0.8s,mb4.6						
224A	**Cornudas Mount**	**22.27**	**328**	⇓P	**P**	**19 13 06.3**	**-0.2**
	baz=22,SNR=28						
125A	**Gardner Draw,**	**22.31**	**330**	⇑P	**P**	**19 13 06.2**	**-0.7**
	baz=22,SNR=19						
Z26A	**Caprock**	**22.51**	**333**	⇓P	**P**	**19 13 08.2**	**-0.8**
	baz=23,SNR=18						
MSTX	**Muleshoe**	**22.59**	**336**	⇓P	**P**	**19 13 08.5**	**-1.4**
	baz=23,SNR=7.9						
Y27A	**Causey**	**22.68**	**335**	⇑P	**P**	**19 13 09.3**	**-1.5**
	baz=23						
124A	**Stringfield Ra**	**22.73**	**329**	⇓P	**P**	**19 13 12.0**	**+0.6**
	baz=23,SNR=41						
WVT	**Waverly**	**22.74**	**8**	*e*P	**P**	**19 13 08.9**	**-2.5**
	comp=Z,11nm,0.7s,mb4.4						
CPCT	**Cooper Cave**	**22.76**	**16**	*e*P	**P**	**19 13 09.5**	**-2.1**
Z25A	**Roswell**	**22.85**	**331**	⇑P	**P**	**19 13 11.9**	**-0.8**
	baz=23						
Y26A	**Elida**	**22.99**	**334**	⇓P	**P**	**19 13 12.6**	**-1.5**
	baz=23,SNR=8.8						
AMTX	**Amarillo**	**23.00**	**339**	⇑P	**P**	**19 13 12.6**	**-1.6**
	baz=23,SNR=20						
AMTX	**Amarillo**	**23.00**	**339**	*e*P	**P**	**19 13 12.4**	**-1.8**
	comp=Z,30nm,0.5s,mb5.0						
TKL	**Tuckaleechee C**	**23.16**	**17**	P	**P**	**19 13 13.9**	**-1.9**
	comp=Z,11nm,0.8s,mb4.4,baz=189,slow=11,SNR=13						
TKL				LR	LR	19 23 14.7	
	comp=Z,231nm,19.6s,MS3.6,baz=176,slow=39						
Z24A	**Sheeppen Canyo**	**23.20**	**330**	⇓P	**P**	**19 13 16.0**	**-0.3**
	baz=23						
X27A	**F and S Farms,**	**23.32**	**336**	⇓P	**P**	**19 13 15.9**	**-1.7**
	baz=24,SNR=7.4						
Y25A	**Mesa, Roswell**	**23.37**	**332**	⇓P	**P**	**19 13 17.5**	**-0.6**
	baz=24,SNR=16						
X26A	**CR and CF Fran**	**23.52**	**335**	⇑P	**P**	**19 13 18.2**	**-1.4**
	baz=24,SNR=8.9						
Z23A	**Rita Site, Whi**	**23.57**	**329**	⇑P	**P**	**19 13 21.2**	**+1.2**
	baz=24,SNR=15						
W27A	**Bowe Ranch, En**	**23.67**	**337**	⇑P	**P**	**19 13 19.7**	**-1.2**
	baz=24,SNR=19						
Y24A	**Capitan**	**23.72**	**331**	⇑P	**P**	**19 13 21.6**	**+0.2**
	baz=24,SNR=23						
220A	**Playas Peak, P**	**23.80**	**323**	⇑P	**P**	**19 13 22.9**	**+0.7**
	baz=24						
121A	**Cookes Peak, D**	**23.84**	**325**	⇓P	**P**	**19 13 23.4**	**+0.9**
	baz=24,SNR=5.6						
319A	**Douglas**	**23.88**	**321**	⇑P	**P**	**19 13 24.3**	**+1.4**
	baz=24						
Z22A	**Elephant Butte**	**23.95**	**327**	⇓P	**P**	**19 13 23.7**	**+0.2**
	baz=24,SNR=8.2						
W26A	**Owens Ranch, T**	**23.97**	**335**	⇓P	**P**	**19 13 22.7**	**-0.9**
	baz=24						
Y23A	**Lovelace Mesa,**	**24.02**	**330**	⇑P	**P**	**19 13 24.5**	**+0.4**
	baz=24						
SIUC	**Southern Illin**	**24.15**	**5**	*e*P	**P**	**19 13 21.0**	**-4.3**
	comp=Z,27nm,0.8s,mb4.7						
X24A	**Lazy VL Ranch,**	**24.25**	**332**	⇓P	**P**	**19 13 26.4**	**+0.2**
	baz=24,SNR=7.9						
219A	**White Tail Can**	**24.30**	**322**	⇓P	**P**	**19 13 27.9**	**+1.1**
	baz=24						
120A	**U Bar Ranch, L**	**24.33**	**324**	⇓P	**P**	**19 13 27.8**	**+0.8**
	baz=24						
318A	**Bisbee**	**24.37**	**320**	⇑P	**P**	**19 13 28.3**	**+0.9**
	baz=25						
W25A	**X Bar L Ranch,**	**24.37**	**334**	⇑P	**P**	**19 13 27.4**	**+0.1**
	baz=24						
BNM	**Barren Site**	**24.48**	**329**	*e*P	**P**	**19 13 29.0**	**+0.6**
	comp=Z,12nm,0.9s,mb4.3						
Y22A	**Socorro**	**24.48**	**328**	⇓P	**P**	**19 13 29.1**	**+0.8**
	baz=25						
V26A	**Tequesquite Ra**	**24.59**	**336**	⇑P	**P**	**19 13 29.5**	**+0.2**
	baz=25						
LPM	**Los Pinos Moun**	**24.61**	**330**	*e*P	**P**	**19 13 30.3**	**+0.8**
	comp=Z,6.4nm,0.7s,mb4.3						
LENM	**Lemitar**	**24.66**	**329**	*e*P	**P**	**19 13 31.0**	**+0.9**
	comp=Z,6.2nm,0.7s,mb4.2						
Z20A	**Nine Sixteen R**	**24.72**	**325**	⇓P	**P**	**19 13 31.2**	**+0.7**
	baz=25						
218A	**Dragoon**	**24.77**	**321**	⇓P	**P**	**19 13 31.4**	**+0.4**
	baz=25						
W24A	**Lazy 6 Ranch,**	**24.77**	**333**	⇑P	**P**	**19 13 31.3**	**+0.3**
	baz=25,SNR=6.8						
Y21A	**Point of Rocks**	**24.90**	**327**	⇑P	**P**	**19 13 32.6**	**+0.5**
	baz=25						
LAZ	**Ladron**	**24.93**	**329**	*e*P	**P**	**19 13 35.0**	**+2.5**
	comp=Z,4.1nm,0.9s,mb4.0						
V25A	**Rancho No Teng**	**24.96**	**335**	⇓P	**P**	**19 13 32.6**	**-0.2**
	baz=25						
ANMO	**Albuquerque**	**25.04**	**331**	P	**P**	**19 13 33.4**	**0.0**
	comp=Z,4.3nm,0.7s,mb4.1,baz=143,slow=11,SNR=12						
ANMO	**Albuquerque**	**25.04**	**331**	*e*P	**P**	**19 13 33.0**	**-0.4**
	comp=Z,4.2nm,0.7s,mb4.1						
U26A	**Atchley Ranch,**	**25.10**	**337**	⇓P	**P**	**19 13 33.7**	**-0.2**
	baz=25,SNR=11						
217A	**Green Valley**	**25.11**	**319**	⇑P	**P**	**19 13 35.0**	**+0.9**
	baz=25						
V24A	**Rampart Ranch,**	**25.15**	**334**	⇑P	**P**	**19 13 34.5**	**+0.1**
	baz=25						
Y20A	**Horse Springs,**	**25.20**	**326**	⇑P	**P**	**19 13 35.9**	**+1.0**
	baz=25,SNR=9.3						
X21A	**Alamocita Cree**	**25.30**	**328**	⇓P	**P**	**19 13 36.8**	**+1.1**
	baz=26,SNR=6.8						
U25A	**Circle Dot Ran**	**25.36**	**336**	⇓P	**P**	**19 13 36.5**	**+0.2**
	baz=26						
V23A	**Ortiz Mt. (NFS**	**25.57**	**332**	⇑P	**P**	**19 13 39.5**	**+1.3**
	baz=26						
T25A	**Trinidad**	**26.01**	**337**	⇑P	**P**	**19 13 42.9**	**+0.8**
	baz=26						
V22A	**San Miguel Ran**	**26.04**	**331**	⇑P	**P**	**19 13 43.0**	**+0.6**
	baz=26						
X19A	**St. Johns**	**26.09**	**326**	⇑P	**P**	**19 13 44.0**	**+1.1**
	baz=26						
W20A	**Ramah**	**26.20**	**328**	⇓P	**P**	**19 13 44.8**	**+0.9**
	baz=26						
T24A	**Torres, Weston**	**26.21**	**336**	⇑P	**P**	**19 13 44.6**	**+0.7**
	baz=26						
U22A	**Llaves**	**26.39**	**332**	⇓P	**P**	**19 13 46.1**	**+0.4**
	baz=27						
S25A	**Robets Cordova**	**26.48**	**337**	⇑P	**P**	**19 13 46.8**	**+0.4**
	baz=27						
T22A	**Edith**	**26.94**	**333**	⇑P	**P**	**19 13 51.5**	**+0.9**
	baz=27						
SDCO	**Great Sand Dun**	**26.97**	**336**	*e*P	**P**	**19 13 50.2**	**-0.6**
	comp=Z,1.2nm,0.7s,mb3.5						
S22A	**4UR Ranch, Cre**	**27.52**	**334**	⇓P	**P**	**19 13 56.2**	**+0.5**
	baz=28						
ACSO	**Alum Creek Sta**	**27.67**	**15**	*e*P	**P**	**19 13 54.2**	**-2.9**
	comp=Z,12nm,0.7s,mb4.7						
V17A	**Tonalea, Kykot**	**27.80**	**325**	⇑P	**P**	**19 13 59.1**	**+0.8**
	baz=28						
PV01	**Paradox Valley**	**28.62**	**332**	*e*P	**P**	**19 14 06.5**	**+1.0**
	comp=Z,198nm,0.7s						
T17A	**Navajo Res., N**	**28.83**	**327**	⇓P	**P**	**19 14 08.6**	**+1.1**
	baz=29						
S18A	**Hurst Farm, Bl**	**28.95**	**329**	⇑P	**P**	**19 14 09.2**	**+0.7**
	baz=29						
V14A	**Boquillas Ranc**	**29.13**	**323**	⇓P	**P**	**19 14 11.0**	**+0.9**
	baz=29						
U14A	**Mt Trumbull**	**29.71**	**324**	⇓P	**P**	**19 14 16.1**	**+0.7**
	baz=30						
Q18A	**Rafter H Ranch**	**30.12**	**331**	⇓P	**P**	**19 14 19.9**	**+1.0**
	baz=30						
CCUT	**Cedar City**	**30.62**	**325**	*e*P	**P**	**19 14 24.1**	**+0.8**
	comp=Z,5.1nm,0.9s,mb4.3						
N20A	**Spence Gulch,**	**30.71**	**335**	⇓P	**P**	**19 14 24.4**	**+0.2**
	baz=31						
ARUT	**Antelope Range**	**30.83**	**325**	*e*P	**P**	**19 14 26.7**	**+1.5**
	comp=Z,6.2nm,0.8s,mb4.5						
L23A	**Garrett**	**30.87**	**340**	⇓P	**P**	**19 14 25.5**	**+0.1**
	baz=31						
O17A	**Robinson Place**	**31.27**	**331**	⇑P	**P**	**19 14 30.0**	**+1.0**
	baz=32						
N18A	**Larsen Ranch,**	**31.43**	**334**	⇓P	**P**	**19 14 30.8**	**+0.4**
	baz=32						
RSSD	**Black Hills**	**32.18**	**343**	*e*P	**P**	**19 14 35.4**	**-1.6**
HWUT	**Hardware Ranch**	**32.77**	**332**	*e*P	**P**	**19 14 42.3**	**+0.1**
	comp=Z,3.1nm,0.7s,mb4.3						
BW06	**Boulder Array**	**32.86**	**336**	⇑P	**P**	**19 14 42.9**	**-0.1**
	baz=33						
K18A	**Toltan Ranch,**	**32.95**	**335**	⇑P	**P**	**19 14 44.2**	**+0.4**
	baz=33						
L16A	**Fish Haven**	**33.04**	**333**	⇑P	**P**	**19 14 44.9**	**+0.4**
	baz=33						
M15A	**Larsen Ranch,**	**33.07**	**331**	⇓P	**P**	**19 14 45.1**	**+0.3**
	baz=33						
I20A	**Worland**	**33.33**	**338**	⇑P	**P**	**19 14 47.2**	**+0.2**
	baz=34						
J18A	**Kendall Valley**	**33.42**	**336**	⇓P	**P**	**19 14 48.0**	**+0.1**
	baz=34						
L15A	**Malad City**	**33.46**	**332**	⇓P	**P**	**19 14 48.9**	**+

C16A	Fuhringer Ranc	37.93	338	⇑P	P	19 15 26.1	-0.4
	baz=38						
D14A	Greenough	38.01	336	⇓P	P	19 15 27.3	+0.2
	baz=38						
E12A	Beaver Dam Sad	38.34	333	⇑P	P	19 15 29.9	0.0
	baz=38						
D13A	Huson	38.40	335	⇑P	P	19 15 29.9	-0.6
	baz=39,SNR=6.1						
I07A	Izee	38.51	328	⇑P	P	19 15 31.5	0.0
	baz=39						
A17A	Triple J Farms	38.54	340	⇓P	P	19 15 30.4	-1.2
	baz=39,SNR=6.7						
B15A	Bradely Ranch,	38.66	338	⇓P	P	19 15 32.1	-0.5
	baz=39						
D12A	Red Ives Fores	38.74	334	⇑P	P	19 15 32.8	-0.5
	baz=39						
F10A	Beach Ranch, E	38.75	331	⇓P	P	19 15 33.2	-0.2
	baz=39,SNR=10						
C13A	Hot Springs	38.92	335	⇑P	P	19 15 34.0	-0.8
	baz=39						
B13A	Whitefish	39.43	336	⇓P	P	19 15 39.1	0.0
	baz=40						
E09A	Wood Farm, Sta	39.58	331	⇓P	P	19 15 40.2	-0.1
	baz=40						
C11A	Tepee Creek (N	39.74	334	⇑P	P	19 15 41.9	+0.3
	baz=40						
H04A	Detroit Lake	40.34	326	⇓P	P	19 15 46.7	0.0
	baz=40,SNR=9.5						
C09A	Chrisman Ranch	40.59	333	⇑P	P	19 15 48.9	+0.2
	baz=41						
LON	Longmire	41.52	329	eP	P	19 15 56.1	-0.3
	comp=Z,5.5nm,0.8s,mb4.2						
B06A	Marblemount	42.59	331	⇓P	P	19 16 04.8	-0.2
	baz=43						
SCHQ	Schefferville	45.56	20	P	P	19 16 25.2	-3.6
	comp=Z,16nm,0.7s,mb5.0,baz=224,slow=7.9,SNR=25						
SCHQ				LR	LR	19 36 30.6	
	comp=Z,312nm,19.6s,MS4.2,baz=223,slow=37						
SCHQ	Schefferville	45.56	20	eP	P	19 16 25.1	-3.7
	comp=Z,12nm,0.6s,mb5.0						
CFAA	Coronel Fontan	50.31	154	P	P	19 17 04.6	-1.3
	comp=Z,0.2nm,0.4s,mb3.5,baz=316,slow=11,SNR=2.1						
CFAA				LR	LR	19 35 36.8	
	comp=Z,11nm,19.4s,MS2.9,baz=252,slow=33						
YKA	Yellowknife Ar	51.47	347	P	P	19 17 12.2	-2.0
	comp=Z,5.0nm,0.6s,mb4.6,baz=148,slow=7.6,SNR=28						
DLBC	Dease Lake	53.10	336	eP	P	19 17 26.5	+0.2
TRQA	Tornquist	58.50	153	eP	P	19 18 00.6	-4.7
INK	Inuvik	60.88	344	P	P	19 18 20.0	-1.3
	comp=Z,4.4nm,0.7s,mb4.7,baz=103,slow=4.4,SNR=7.3						
ILAR	Eielson Array	63.28	337	P	P	19 18 36.7	-0.8
	comp=Z,1.3nm,0.7s,mb4.1,baz=170,slow=4.9,SNR=19						
ILAR	Eielson Array	63.28	337	P	P	19 18 36.7	-0.8
TRF	Thorofare Moun	64.08	335	eP	P	19 18 41.9	-0.8
	comp=Z,24nm,1.5s,mb5.0						
SUMG	Summit	66.60	15	eP	P	19 18 56.7	-2.2
	comp=Z,3.6nm,0.7s,mb4.5						
ESLA	Sonseca Array	79.86	52	P	P	19 20 13.4	-4.4
	comp=Z,0.9nm,1.0s,mb3.6						
NOA	NORSAR Array B	84.44	28	LR	LR	19 59 17.7	
	comp=Z,24nm,18.0s,MS3.6,baz=345,slow=36						
MKAR	Makanchi Array	119.68	5	PKP	PKPdf	19 26 57.8	-1.3
	comp=Z,0.2nm,0.7s,baz=35,slow=5.3,SNR=2.8						
HHC	Hu-ho-hao-te	121.67	339	ePKP	PKPdf	19 26 59.0	-4.1
HHC				PKS		19 30 34.3	
HHC				SKS	SKSdf	19 33 59.5	-14
HHC				SKKS	SKKSac	19 35 28.3	-4.8
HHC				AMB	AMB		
	comp=Z,88nm,9.0s						
HHC				LR	LR		
	comp=N,100nm,20.6s						
HHC				LR	LR		
	comp=E,82nm,19.4s						
HHC				LR	LR		
	comp=Z,80nm,20.2s						
WRA	Warramunga Ar	135.44	255	PKP	PKPdf	19 27 29.2	-0.6
	comp=Z,0.2nm,0.7s,baz=85,slow=1.3,SNR=3.0						
CM31	Chiang Mai Arr	146.44	341	ePKPbc	PKPbc	19 27 49.6	-1.2
CMAR	Chiang Mai Arr	146.44	341	PKPbc	PKPbc	19 27 49.6	-1.2
	comp=Z,3.8nm,0.7s,baz=342,slow=3.2,SNR=32						

*IDC **30** 19:13:26.0±1.2,2°.38S×121°.67E,h0km,mb3.7/6, mb1 4.0/7,mb1mx3.7/21,mbtmp3.8/7,ML3.4/1,MS3.1/1, Ms1 3.1/1,ms1mx2.0/26,Error ellipse: s-maj=65.5km s-min=17.4km az=52.0*
*DJA **30** 19:13:29,2°.49S×121°.54E,h18km,MLv4.2/13*
*NEIC **30** 19:13:32.3±1.8,2°.43S×121°.65E,h50km±20km,mb3.7/1, Error ellipse: s-maj=40.5km s-min=9.7km az=56.0*
NEIC Felt [II] at Poso.

ISC 30 19:13:27.0±1.4,2°.50S±0°.04×121°.54E±0°.04,h2km±10km, n24,σ19°32/29,mb3.5/6,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSSI	Masamba	1.22	267	P	Pg	19 13 49.1	-1.3
MSSI				S	Sg	19 14 07.8	+1.6
APSI	Ampana	1.58	4	P	Pn	19 13 54.2	-1.9
KDI	Kendari	1.80	143	P	Pn	19 14 00.4	+1.3
KDI				S	Sn	19 14 23.0	+0.4
TTSI	Tana Toraja	1.80	253	P	Pn	19 13 56.8	-2.3
TTSI				S	Sn	19 14 21.9	-0.7
LUWI	Luwuk	1.90	40	P	Pn	19 13 59.1	-1.4
LUWI				S	Sn	19 14 27.5	+2.5
SPSI	Sidrap Palu	2.29	231	P	Pn	19 14 05.3	-0.5
SPSI				S	Sn	19 14 35.7	+1.1
PCI	Palu	2.33	313	P	Pn	19 14 06.5	+0.2
MJSI	Majene	2.76	248	P	Pn	19 14 14.3	+2.0
MRSI	Marisa	2.98	8	P	Pn	19 14 14.2	-1.2
BKSI	Bulukumba	3.14	207	P	Pn	19 14 15.7	-1.8
TOLI	Toli-Toli	3.67	348	P	Pn	19 14 26.2	+1.3
KMSI	Cibinong	3.91	39	P	Pn	19 14 30.9	+2.8
MNI	Manado	5.12	40	P	Pn	19 14 45.0	+0.2
	0.4nm1μm83nm,0.8s						
KBKI	Kotabaru	5.43	261	P	Pn	19 14 49.3	+0.3
	0.2nm30nm,1.0s						
NLAI	Namlea	5.60	98	P	Pn	19 14 51.2	-0.2
KKM	Kota Kinabalu	10.02	328	ePn	Pn	19 15 53.7	+1.6
FITZ	Fitzroy Crossi	16.02	166	Pn	Pn	19 17 15.7	+2.1
	0.1nm,0.3s,baz=347,slow=8.0,SNR=5.1						
FITZ				LR	LR	19 24 57.6	
	comp=Z,62nm,19.0s,baz=177,slow=43						
WRA	Warramunga Arr	21.37	145	P	P	19 18 14.3	-1.6
	1.8nm,0.9s,mb3.4,baz=320,slow=13,SNR=14						
PSI	Prapat	23.21	283	P	P	19 18 35.6	-0.1
	3.2nm,0.8s,mb3.8,baz=121,slow=17,SNR=3.8						
ASAR	Alice Springs	24.20	151	P	P	19 18 44.3	-0.8
	2.0nm,0.7s,mb3.6,baz=323,slow=7.6,SNR=23						
CMAR	Chiang Mai Arr	30.47	314	P	P	19 19 41.0	-0.5
	0.3nm,0.6s,mb3.2,baz=140,slow=7.1,SNR=4.9						
STKA	Stephens Creek	34.79	149	P	P	19 20 19.6	+0.4
	3.6nm,0.8s,mb4.3,baz=317,slow=11,SNR=6.5						
STKA	Stephens Creek	34.79	149	eP	P	19 20 19.2	0.0
	0.7nm,0.8s,mb3.6						
MKAR	Makanchi Array	59.99	330	P	P	19 23 34.3	-0.8
	0.1nm,0.6s,mb3.1,baz=118,slow=8.3,SNR=2.2						

*ISCJB **30** 19:31:14.8±0.4,43°.00N±0°.02×13°.12E±0°.04,h9km±5km, Error ellipse: s-maj=4.9km s-min=3.1km az=162.7*
*ROM **30** 19:31:14.1±0.1,43°.01N×13°.11E,h7km,Md2.4/15, Ml2.0/11,Error ellipse: s-maj=1.1km s-min=0.7km az=77.0*
*CSEM **30** 19:31:14.8±0.1,43°.00N×13°.12E,h8km,ML2.5/11,Error ellipse: s-maj=2.8km s-min=1.8km az=73.0*

ISC 30 19:31:15.3±0.4,43°.01N±0°.02×13°.13E±0°.04,h7km±5km, n34,σ0°72/60,4C-4D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.04	318	⇓iPg	Pg	19 31 16.1	-0.7
FDMO				Sg	Sg	19 31 16.9	-0.9
	3μm,0.2s						
FDMO	Fiordimonte	0.04	318	⇓iPg	Pg	19 31 16.1	-0.7
FDMO				Sg	Sg	19 31 16.9	-0.9
	3μm,0.2s						
NRCA	Norcia	0.17	183	Pg	Pg	19 31 18.7	-0.1
NRCA				Sg	Sg	19 31 21.6	+0.5
	101nm,0.5s						
NRCA	Norcia	0.17	183	Pg	Pg	19 31 18.7	-0.1
NRCA				Sg	Sg	19 31 21.6	+0.5
	101nm,0.5s						
SNTG	Esanatoglia	0.28	332	Pg	Pg	19 31 20.6	-0.2
SNTG				Sg	Sg	19 31 25.2	+0.6
	48nm,0.1s						
SNTG	Esanatoglia	0.28	332	Pg	Pg	19 31 20.6	-0.2
SNTG				Sg	Sg	19 31 25.2	+0.6
	48nm,0.1s						
ASSB	Assisi San Ben	0.34	276	⇑iPg	Pg	19 31 21.5	-0.5
ASSB				Sg	Sg	19 31 27.1	+0.6
	2μm,0.2s						
ASSB	Assisi San Ben	0.34	276	⇑iPg	Pg	19 31 21.5	-0.5
ASSB				Sg	Sg	19 31 27.1	+0.6
	2μm,0.2s						
ASS	Assisi	0.35	280	Pg	Pg	19 31 21.7	-0.4
ASS				Sg	Sg	19 31 27.2	+0.4
	111nm,0.2s						
ASS	Assisi	0.35	280	Pg	Pg	19 31 21.7	-0.4
ASS				Sg	Sg	19 31 27.2	+0.4
	111nm,0.2s						
CING	Cingoli	0.37	8	⇑iPg	Pg	19 31 22.2	-0.3
CING				Sg	Sg	19 31 28.5	+1.0
	102nm,0.1s						
CING	Cingoli	0.37	8	⇑iPg	Pg	19 31 22.2	-0.3
CING				Sg	Sg	19 31 28.5	+1.0
	102nm,0.1s						
LNSS	Leonessa	0.41	189	Pg	Pg	19 31 22.9	-0.2
LNSS				Sg	Sg	19 31 29.4	+0.9
	209nm,0.3s						
LNSS	Leonessa	0.41	189	Pg	Pg	19 31 22.9	-0.2
LNSS				Sg	Sg	19 31 29.4	+0.9
	209nm,0.3s						
MURB	Monte Urbino	0.51	301	Pg	Pg	19 31 24.6	-0.5
MURB				Sg	Sg	19 31 33.2	+1.4
	168nm,0.3s						
MURB	Monte Urbino	0.51	301	Pg	Pg	19 31 24.6	-0.5
MURB				Sg	Sg	19 31 33.2	+1.4
	168nm,0.3s						
ARVD	Arcevia	0.51	345	Pg	Pg	19 31 24.6	-0.5
ARVD				Sg	Sg	19 31 33.1	+1.3
	31nm,0.2s						
ARVD	Arcevia	0.51	345	Pg	Pg	19 31 24.6	-0.5
ARVD				Sg	Sg	19 31 33.1	+1.3
	31nm,0.2s						
CAMP	Campotosto	0.51	156	⇓iPg	Pg	19 31 24.5	-0.7
CAMP				Sg	Sg	19 31 32.8	+0.9
	9.0nm,0.2s						
CAMP	Campotosto	0.51	156	⇓iPg	Pg	19 31 24.5	-0.7
CAMP				Sg	Sg	19 31 32.8	+0.9
	9.0nm,0.2s						
TERO	Teramo	0.52	137	Pg	Pg	19 31 24.9	-0.4
TERO				Sg	Sg	19 31 33.3	+1.2
	77nm,0.3s						
TERO	Teramo	0.52	137	Pg	Pg	19 31 24.9	-0.4
TERO				Sg	Sg	19 31 33.3	+1.2
	77nm,0.3s						
CESX	Cesi	0.56	226	Pg	Pg	19 31 25.3	-0.8
CESX				Sg	Sg	19 31 34.1	+0.7
	104nm,0.3s						
CESX	Cesi	0.56	226	Pg	Pg	19 31 25.3	-0.8
CESX				Sg	Sg	19 31 34.1	+0.7
	104nm,0.3s						
PIEI	Pieia	0.68	321	Pg	Pg	19 31 27.7	-0.7
	24nm,0.3s						
PIEI	Pieia	0.68	321	Pg	Pg	19 31 27.7	-0.7
	24nm,0.3s						
MNS	Montasola	0.70	208	Pg	Pg	19 31 28.1	-0.6
	34nm,0.3s						
MNS	Montasola	0.70	208	Pg	Pg	19 31 28.1	-0.6
	34nm,0.3s						
FIAM	Fiamignano	0.74	180	Pg	Pg	19 31 28.5	-0.9
FIAM	Fiamignano	0.74	180	Pg	Pg	19 31 28.5	-0.9
MGAB	Montegabbione	0.75	263	Pg	Pg	19 31 29.2	-0.5
MGAB	Montegabbione	0.75	263	Pg	Pg	19 31 29.2	-0.5
NVLJ	Novalja	2.01	38	ePn	Pn	19 31 49.0	-0.5
NVLJ				Sn	Sn	19 32 14.9	+0.1
NVLJ	Novalja	2.01	38	ePn	Pn	19 31 48.9	-0.6
NVLJ				Sn	Sn	19 32 14.9	+0.1

*IDC **30** 19:35:00.9±3.7,6°.38N×124°.68E,h14km±25km,mb3.6/8, mb1 3.8/8,mb1mx3.7/21,mbtmp3.6/8,Error ellipse: s-maj=22.0km s-min=15.3km az=86.0*
*NEIC **30** 19:35:00.5±1.4,6°.39N×124°.69E,h11km±10km,mb4.4/7, Error ellipse: s-maj=9.3km s-min=6.8km az=66.0*
*ISCJB **30** 19:35:01.1±0.8,6°.39N±0°.02×124°.58E±0°.04,h24km±7km, mb4.0/16,Error ellipse: s-maj=5.9km s-min=4.0km az=174.8*
*DJA **30** 19:35:02,6°.46N×124°.41E,h31km,MLv4.8/5*
*MAN **30** 19:35:02,6°.55N×124°.59E,h26km,mb4.8,ML3.7,MS3.7*

ISC 30 19:35:00.5±0.8,6°.41N±0°.03×124°.60E±0°.04,h6km±6km, n48,σ19°40/60,mb4.0/16,2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	0.77	39	⇑eP	Pg	19 35 16.0	+0.8
KCP				i S	Sg	19 35 27.4	+2.2
CTBH	Cotabato--PC H	0.88	336	⇑iP	Pg	19 35 16.6	-0.7
CTBH				i S	Sg	19 35 27.5	-1.2
DMPH	Davao City--Mi	1.12	54	eP	Pg	19 35 20.6	-1.4
DMPH				eS	Sg	19 35 41.6	+5.1
DAV	Davao City (W)	1.17	56	Pg	Pg	19 35 21.7	-1.2
	264nm,0.3s,baz=74,slow=3.1,SNR=17						
DAV				Lg		19 35 38.3	
	174nm,0.3s,baz=296,slow=22,SNR=4.2						
DAV	Davao City (W)	1.17	56	Pg	Pg	19 35 21.7	-1.2
DAV				ePn	Pn	19 35 21.8	-1.7
DAV				Lg		19 35 38.3	
DAV	Davao City (W)	1.17	56	P	Pg	19 35 22.1	-0.9
BUKP	Musuan	1.53	17	eP	Pn	19 35 26.2	-2.1
MATI	Mati	1.73	72	eP	Pn	19 35 29.7	-1.5
PAGZ	Pagadian	1.87	320	eP	Pn	19 35 32.0	-1.0
IPIL	Ipil	2.43	304	eP	Pn	19 35 41.0	+0.2
ZMPH	Zamboanga City	2.58	282	⇓iP	Pn	19 35 41.1	-1.7
ZMPH				i S	Sn	19 36 13.5	-0.9
SGSI	Sangihe	2.86	161	P	Pn	19 35 47.5	+0.8
SGSI				S	Sn	19 36 24.0	+2.5
SNPH	Sibulan	3.21	335	eP	Pn	19 35 53.9	+2.4
SNPH				eS	Sn	19 36 36.5	+6.4
MSLP	Maasin	3.71	4	eP	Pn	19 36 03.0	+4.7
LLP	Lapu-Lapu	3.93	351	eP	Pn	19 36 05.0	+3.7
LLP				eS	Sn	19 36 49.6	+1.7
GUIM	Jordan	4.63	335	eP	Pn	19 36 14.0	+2.9
MNI	Manado	4.94	177	P	Pn	19 36 16.1	+0.8
	0.7nm2μm177nm,0.6s						
MNI				S	Sn	19 37 12.4	-0.5
	0.7nm2μm177nm,0.6s						
KMSI	Cibinong	5.83	186	P	Pn	19 36 29.0	+1.4
	2μm191nm,0.9s						
TNTI	Ternate	6.25	154	P	Pn	19 36 36.1	+2.8
	0.2nm676nm57nm,0.9s						
MRSI	Marisa	6.47	204	P	Pn	19 36 36.6	+0.3
	2μm108nm,0.6s						
MRSI				S	Sn	19 37 48.9	-1.6
	2μm108nm,0.6s						
TOLI	Toli-Toli	6.48	216	P	Pn	19 36 35.6	-0.9
TOLI				S	Sn	19 37 49.1	-1.8
ENPP	El Nido	6.99	313	eP	Pn	19 36 43.2	-0.3
BATP	Bataraza	7.14	290	eP	Pn	19 36 48.8	+3.2
LUWI	Luwuk	7.63	194	P	Pn	19 36 54.8	+2.5
LUWI				S	Sn	19 38 20.9	+1.8
KKM	Kota Kinabalu	8.34	268	ePn	Pn	19 37 03.3	+1.2
NLAI	Namlea	9.91	165	P	Pn	19 37 26.8	+3.2
KDI	Kendari	10.49	191	P	Pn	19 37 34.1	+2.6
KSM	Kuching	15.07	252	ePn	Pn	19 38 34.2	0.0
KAKA	Kakadu	20.54	158	eP	P	19 39 39.2	-0.7
	50nm,0.6s						
FITZ	Fitzroy Crossi	24.38	178	P	P	19 40 18.6	-1.1
	3.0nm,0.9s,mb3.7,baz=8.9,slow=11,SNR=8.3						
CMAR	Chiang Mai Arr	27.72	298	P	P	19 40 50.5	+0.6
	0.4nm,0.8s,mb3.1,baz=104,slow=7.5,SNR=4.5						
WRA	Warramunga Arr	27.89	160	P	P	19 40 49.8	-1.5
	0.7nm,0.6s,mb3.5,baz=332,slow=11,SNR=8.1						
ASAR	Alice Springs	31.25	163	P	P	19 41 19.9	-1.3
	0.4nm,0.4s,mb3.6,baz=342,slow=7.0,SNR=11						
LZH	Lanzhou	35.13	330	eP	P	19 41 56.5	+1.6
LZH				pP	pP	19 42 01.5	+4.7
LZH				sP	sP	19 42 03.0	+5.5
LZH				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
LSA	Lhasa	39.09	310	P	P	19 42 30.3	+1.6
LSA	Lhasa	39.09	310	eP	P	19 42 30.3	+1.6
	comp=Z,7.7nm,1.4s,mb4.2						
GTA	Gaotai	39.72	329	eP	P	19 42 35.0	+1.2
GTA				pP	pP	19 42 39.5	+3.9
GTA				sP	sP	19 42 42.0	+5.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
NWAO	Narrogin (SRO)	39.74	190	P	P	19 42 32.7	-1.3
	comp=Z,25nm,1.2s,mb4.8						
STKA	Stephens Creek	41.38	158	P	P	19 42 47.0	-0.7
	comp=Z,1.1nm,0.7s,mb3.6,baz=346,slow=12,SNR=3.1						
ULN	Ulaanbaatar	43.94	343	P	P	19 43 09.2	+1.0
	comp=Z,2.1nm,1.0s,mb3.8						
TLY	Talaya	48.34	343	P	P	19 43 47.4	+4.5
MK31	Makanchi Array	54.16	325	eP	P	19 44 26.5	0.0
MKAR	Makanchi Array	54.16	325	P	P	19 44 26.9	+0.3
	comp=Z,1.7nm,0.8s,mb4.0,baz=128,slow=8.1,SNR=19						
MKAR				PcP	PcP	19 45 29.4	-1.8
	comp=Z,0.6nm,0.6s,baz=128,slow=2.9,SNR=3.7						
ZALV	Zalesovo Beam	57.25	333	P	P	19 44 47.4	-1.2
	comp=Z,0.6nm,0.5s,mb3.9,baz=114,slow=7.2,SNR=4.4						
KBL	Kabul	58.22	307	eP	P	19 44 55.2	-0.7
	comp=Z,1.4nm,0.8s,mb4.0						
KURK	Kurchatov	58.35	328	eP	P	19 44 55.7	-0.8
	comp=Z,3.0nm,0.7s,mb4.4						
BRVK	Borovoye	64.00	327	P	P	19 45 33.4	-1.4
	comp=Z,3.7nm,0.8s,mb4.5						
ILAR	Eielson Array	83.61	26	P	P	19 47 28.6	-0.9
	comp=Z,0.2nm,0.6s,mb3.5,baz=207,slow=3.8,SNR=4.2						

*DDA **30** 19:53:10.3,39°.15N×29°.40E,h7km±4km,Md3.1*
*ISK **30** 19:53:10.2,39°.13N×29°.32E,h2km,MD3.0*
*ISCJB **30** 19:53:11.3±0.3,39°.12N±0°.02×29°.38E±0°.03,h10km,Error ellipse: s-maj=3.6km s-min=3.1km az=157.8*
*CSEM **30** 19:53:11.0±0.1,39°.15N×29°.40E,h2km,MD3.1,Error ellipse: s-maj=2.1km s-min=1.8km az=128.0*

ISC 30 19:53:11.2±0.5,39°.14N±0°.03×29°.39E±0°.03,h1km±6km, n49,σ0°77/67,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.53	260	i P	Pg	19 53 21.7	+0.3
DEMI				i S	Sg	19 53 28.9	+0.6
DEMI	Demirci	0.53	260	i P	Pg	19 53 21.7	+0.3
DEMI				i S	Sg	19 53 28.9	+0.6
KHAL	Karahalli	0.77	174	i P	Pg	19 53 25.8	-0.2
KHAL				i S	Sg	19 53 36.3	+0.3
KHAL	Karahalli	0.77	174	i P	Pg	19 53 25.8	-0.2
KHAL				i S	Sg	19 53 36.3	+0.3
KULA	Kula-Manisa	0.84	223	ePG	Pg	19 53 26.7	-0.7
KULA				eSG	Sg	19 53 38.2	-0.1
KULA	Kula-Manisa	0.84	223	ePg	Pg	19 53 26.7	-0.7
KULA				eSg	Sg	19 53 38.2	-0.1
DURS	Dursunbey	0.84	303	i P	Pg	19 53 26.6	-0.8
DURS				i S	Sg	19 53 38.2	-0.2
DURS	Dursunbey	0.84	303	i P	Pg	19 53 26.6	-0.8
DURS				i S	Sg	19 53 38.2	-0.2
SHUT	Suhut-Afyon	1.08	122	ePN	Pg	19 53 32.5	+0.6
SHUT	Suhut-Afyon	1.08	122	ePn	Pg	19 53 32.5	+0.6
BORA	Eskisehir	1.11	48	i P	Pg	19 53 31.4	-1.0
BORA				i S	Sg	19 53 46.5	-0.3
BORA	Eskisehir	1.11	48	i P	Pg	19 53 31.5	-1.0
BORA				i S	Sg	19 53 46.5	-0.3
CAVI	Cavuskoy	1.12	18	ePN	Pg	19 53 32.6	-0.1
CAVI				eSN	Sg	19 53 49.4	+2.3
CAVI	Cavuskoy	1.12	18	ePn	Pg	19 53 32.6	-0.1
CAVI				eSn	Sg	19 53 49.4	+2.2
AKHS	Akhisar	1.25	259	i P	Pg	19 53 35.5	+0.3
AKHS				i S	Sg	19 53 52.8	+1.3
AKHS	Akhisar	1.25	259	i P	Pg	19 53 35.5	+0.3
AKHS				i S	Sg	19 53 52.8	+1.3
BALB	Balikesir	1.27	294	ePN	Pn	19 53 34.7	-1.4
BALB	Balikesir	1.27	294	ePn	Pn	19 53 34.7	-1.4
MDNY	Mudanya-Bursa	1.29	343	ePN	Pn	19 53 35.7	-0.6
MDNY	Mudanya-Bursa	1.29	343	ePn	Pn	19 53 35.7	-0.6
BOLV	Bolvadin	1.29	109	i P	Pg	19 53 34.0	-2.0
BOLV				i S	Sg	19 53 52.6	-0.1
BOLV	Bolvadin	1.29	109	i P	Pg	19 53 34.0	-1.9
BOLV				i S	Sg	19 53 52.6	0.0
GEMT	Gemlik	1.30	353	ePN	Pn	19 53 35.5	-1.0
GEMT	Gemlik	1.30	353	ePn	Pn	19 53 35.5	-1.0
ADVT	Abdulvahap	1.32	12	ePN	Pn	19 53 36.0	-0.8
ADVT	Abdulvahap	1.32	12	ePn	Pn	19 53 36.0	-0.8
GPA	Golpazari	1.35	31	ePN	Pn	19 53 37.3	+0.2
GPA	Golpazari	1.35	31	ePn	Pn	19 53 37.3	+0.1
ARMT	Armutlu	1.48	344	ePN	Pn	19 53 38.8	-0.1
ARMT	Armutlu	1.48	344	ePn	Pn	19 53 38.8	-0.2
BALY	Balya	1.50	294	i P	Pn	19 53 39.2	+0.1
BALY				i S	Sb	19 53 59.3	+0.1
BALY	Balya	1.50	294	i P	Pn	19 53 39.2	+0.1
BALY				i S	Sb	19 53 59.3	+0.1
GULT	Gulveren	1.56	34	ePN	Pn	19 53 40.5	+0.5
GULT	Gulveren	1.56	34	ePn	Pn	19 53 40.5	+0.5
GONE	Gonen-Balikesi	1.60	305	ePN	Pn	19 53 40.1	-0.5
GONE	Gonen-Balikesi	1.60	305	ePn	Pn	19 53 40.1	-0.5
BNT	Bandirma	1.66	318	ePN	Pn	19 53 41.0	-0.4
SVRH	Sivrihisar-ESK	1.69	79	ePN	Pn	19 53 42.6	+0.8
SVRH	Sivrihisar-ESK	1.69	79	ePn	Pn	19 53 42.6	+0.8
HRT	Hereke	1.69	7	ePN	Pn	19 53 42.2	+0.3
HRT	Hereke	1.69	7	ePn	Pn	19 53 42.2	+0.3
SPNC	Sapanca-Adapaz	1.70	24	ePN	Pn	19 53 42.5	+0.5
SPNC	Sapanca-Adapaz	1.70	24	ePn	Pn	19 53 42.5	+0.5
MDU	Mudurnu	1.93	46	ePN	Pn	19 53 46.0	+0.9
MDU	Mudurnu	1.93	46	ePn	Pn	19 53 46.0	+0.8
KIZT	Kizilcal	1.96	97	ePN	Pn	19 53 46.7	+1.2
KIZT

TMWZ	Te Maipa	2.71 181	PN	Pn	20 10 22.2	-2.3
MTW	Mount Morrison	2.79 187	PN	Pn	20 10 22.7	-2.7
CAW	Cannon Point	2.79 193	PN	Pn	20 10 23.0	-2.5
SNZO	South Karori	3.06 198	PN	Pn	20 10 25.8	-3.1
MSWZ	Moikau Station	3.07 190	PN	Pn	20 10 25.9	-3.0
TCW	Tory Channel	3.09 204	PN	Pn	20 10 26.3	-2.9
PLWZ	Palliser	3.22 189	PN	Pn	20 10 27.7	-3.2
NNZ	Nelson	3.44 214	SN	Sn	20 11 10.6	-4.1
THZ	Tophouse	4.09 214	PN	Pn	20 10 38.6	-3.5
MQZ	McQueen's Vall	5.86 204	SN	Sn	20 12 01.6	-10

*MOS **30** 20:23:28.3±1.1, 43°.57N×44°.85E, h22km, mb3.9/1, Error ellipse: s-maj=12.4km s-min=8.7km az=77.9*
*CSEM **30** 20:23:28.3, 43°.57N×44°.85E, h22km, mb3.9, After OBN*
*ISCJB **30** 20:23:29.2±0.6, 43°.58N±0°.03×44°.93E±0°.04, h17km±6km, Error ellipse: s-maj=5.2km s-min=4.3km az=21.1*

ISC 30 20:23:28.6±0.5, 43°.55N±0°.03×44°.98E±0°.03, h14km±3km, n34, σ1°14/65, 5C-4D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKR	Terskaya	0.25	313	⇓iPG	Pg	20 23 34.1	+0.1
TRKR				i S	Sg	20 23 39.8	+2.2
TRKR	Terskaya	0.25	313	i Pg	Pg	20 23 34.1	+0.1
TRKR				i Sg	Sg	20 23 39.8	+2.2
BTKR	Batakoyurt	0.37	241	⇑iPG	Pg	20 23 35.0	-1.0
BTKR				i S	Sg	20 23 41.8	+0.8
BTKR	Batakoyurt	0.37	241	i Pg	Pg	20 23 35.0	-1.0
BTKR				i Sg	Sg	20 23 41.8	+0.8
SNJR	Sundja	0.50	195	⇓iPG	Pg	20 23 37.5	-1.0
SNJR				eS	Sg	20 23 45.8	+0.7
SNJR	Sundja	0.50	195	i Pg	Pg	20 23 37.5	-1.0
SNJR				eSg	Sg	20 23 45.8	+0.7
PRTR	Priterechnaya	0.55	292	⇑iPG	Pg	20 23 39.2	-0.1
PRTR				i S	Sg	20 23 48.4	+1.8
PRTR	Priterechnaya	0.55	292	i Pg	Pg	20 23 39.2	-0.1
PRTR				i Sg	Sg	20 23 48.4	+1.8
VLKR	Vladikavkaz	0.55	204	ePG	Pg	20 23 38.6	-0.9
VLKR				eS	Sg	20 23 47.6	+0.8
VLKR	Vladikavkaz	0.55	204	ePg	Pg	20 23 38.6	-0.9
VLKR				eSg	Sg	20 23 47.6	+0.8
ARNR	Ardon	0.63	235	⇑iPG	Pg	20 23 40.3	-0.6
ARNR				eS	Sg	20 23 50.3	+1.1
ARNR	Ardon	0.63	235	i Pg	Pg	20 23 40.3	-0.6
ARNR				eSg	Sg	20 23 50.3	+1.1
KORR	Kora	0.81	235	⇓iPG	Pg	20 23 43.5	-0.9
KORR				eS	Sg	20 23 55.6	+0.5
KORR	Kora	0.81	235	i Pg	Pg	20 23 43.5	-0.9
KORR				eSg	Sg	20 23 55.6	+0.5
LSNR	Lesken	0.90	252	⇓iPG	Pg	20 23 45.3	-0.6
LSNR				i S	Sg	20 23 58.6	+1.0
LSNR	Lesken	0.90	252	i Pg	Pg	20 23 45.3	-0.6
LSNR				i Sg	Sg	20 23 58.6	+1.0
ZEI	Tsey	1.11	226	⇑iPG	Pg	20 23 47.9	-2.2
ZEI				i S	Sb	20 24 03.2	-0.8
ZEI	Tsey	1.11	226	i Pg	Pg	20 23 47.9	-2.2
ZEI				i Sg	Sb	20 24 03.2	-0.8
DIGR	Digorskoe uzhe	1.22	238	⇑iPG	Pg	20 23 49.7	-2.3
DIGR				i S	Sb	20 24 06.5	-0.4
DIGR	Digorskoe uzhe	1.22	238	i Pg	Pg	20 23 49.7	-2.3
DIGR				i Sg	Sb	20 24 06.5	-0.4
BTLR	Botlikh	1.27	134	ePG	Pg	20 23 52.5	-0.5
BTLR				i S	Sg	20 24 10.0	+0.5
BTLR	comp=Z,32nm,0.2s			pmax	pmax		
BTLR	Botlikh	1.27	134	ePg	Pg	20 23 52.5	-0.5
BTLR	comp=Z,32nm,0.2s						
BTLR				i Sg	Sg	20 24 10.0	+0.5
DBC	Dubki	1.45	111	ePG	Pg	20 23 55.0	-1.5
DBC				eS	Sg	20 24 16.5	+1.2
DBC	Dubki	1.45	111	ePg	Pg	20 23 55.0	-1.5
DBC				eSg	Sg	20 24 16.5	+1.2
ONI	Oni	1.48	230	P	Pn	20 23 54.2	-0.5
ONI				S	Sn	20 24 14.2	+0.3
UNCR	Uncukul	1.57	122	PN	Pn	20 23 57.0	+1.0
UNCR				eS	Sg	20 24 19.0	-0.1
UNCR	comp=Z,34nm,0.2s			pmax	pmax		
UNCR	Uncukul	1.57	122	Pn	Pn	20 23 57.0	+1.0
UNCR	comp=Z,34nm,0.2s						
UNCR				eSg	Sg	20 24 19.0	-0.1
TBLG	Delisi	1.83	186	ePN	Pn	20 24 00.8	+1.2
TBLG				eS	Sg	20 24 25.8	-1.6
TBLG	Delisi	1.83	186	P	Pn	20 24 00.8	+1.2
TBLG				S	Sn	20 24 25.8	+3.3
TBLG	Delisi	1.83	186	ePn	Pn	20 24 00.8	+1.2
TBLG				eSg	Sg	20 24 25.8	-1.6
MTA	Mtatsminda	1.86	184	P	Pn	20 24 00.4	+0.4
MTA				S	Sn	20 24 25.8	+2.4
GOF	Gofitskoye	2.06	318	ePG	Sn	20 24 26.4	-1.8
GOF	Gofitskoye	2.06	318	ePg	Sn	20 24 26.4	-1.8
DGRG	David-gareji	2.12	172	P	Pn	20 24 03.7	+0.1
DGRG				S	Sx	20 25 02.8	

*HLW **30** 20:36:53.6, 36°.63N×28°.22E, h27km±70km, Ml3.1*
*ISCJB **30** 20:36:54.7±0.4, 36°.70N±0°.03×28°.29E±0°.03, h62km±7km, Error ellipse: s-maj=4.4km s-min=4.0km az=152.0*
*DDA **30** 20:36:54.5, 36°.72N×28°.30E, h57km±1km*
*ATH **30** 20:36:55.2, 36°.73N×28°.22E, h54km±23km, MD3.4/9*
*ISK **30** 20:36:55.1, 36°.89N×28°.34E, h19km, MD3.3*
*CSEM **30** 20:36:55.3±0.2, 36°.67N×28°.34E, h48km±6km, MD3.3, Error ellipse: s-maj=3.8km s-min=3.6km az=37.0*

ISC 30 20:36:55.6±0.4, 36°.69N±0°.02×28°.31E±0°.03, h53km±8km, n66, σ0°92/92, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	Turunc	0.30	53	i P	Pn	20 37 04.0	-0.9
TURN				i S	Sn	20 37 10.5	-1.1
TURN	Turunc	0.30	53	i P	Pn	20 37 04.1	-0.8
TURN				i S	Sn	20 37 10.5	-1.1
DAT	Datca	0.59	274	ePG	Pn	20 37 08.4	+0.4
DAT				eSG	Sn	20 37 17.2	+0.2
DAT	Datca	0.59	274	ePg	Pn	20 37 08.4	+0.4
DAT				eSg	Sn	20 37 17.2	+0.2
FETY	Fethiye	0.63	95	ePG	Pn	20 37 08.3	-0.2
FETY				eSG	Sn	20 37 18.3	+0.4
FETY	Fethiye	0.63	95	ePg	Pn	20 37 08.4	-0.1
FETY				eSg	Sn	20 37 18.3	+0.4
MLSB	Milas	0.73	325	ePG	Pn	20 37 08.0	-1.9
BODT	Bodrum	0.88	295	ePG	Pn	20 37 10.9	-0.8
AYDN	Tasoluk	1.02	341	i P	Pn	20 37 14.3	+0.6
AYDN				i S	Sn	20 37 27.8	+0.8
AYDN	Tasoluk	1.02	341	i P	Pn	20 37 14.3	+0.6
AYDN				i S	Sn	20 37 27.8	+0.8
GLHS	Glhisar (BURDU	1.06	64	ePG	Pn	20 37 14.1	-0.1
GOLH	Golhisar	1.14	61	i P	Pn	20 37 15.5	+0.2
GOLH				i S	Sn	20 37 31.4	+1.5
GOLH	Golhisar	1.14	61	i P	Pn	20 37 15.5	+0.2
GOLH				i S	Sn	20 37 31.4	+1.5
AKAS	Kas	1.14	113	i P	Pn	20 37 14.4	-0.9
AKAS				i S	Sn	20 37 31.7	+1.8
AKAS	Kas	1.14	113	i P	Pn	20 37 14.4	-0.9
AKAS				i S	Sn	20 37 31.7	+1.8
DNZL	Cakiroluk	1.16	31	i P	Pn	20 37 15.9	+0.4
DNZL				i S	Sn	20 37 31.4	+1.1
DNZL	Cakiroluk	1.16	31	i P	Pn	20 37 15.9	+0.4
DNZL				i S	Sn	20 37 31.4	+1.2
DENT	Denizli	1.21	29	ePG	Pn	20 37 15.4	-0.7
ELL	Elmali	1.29	87	ePN	Pn	20 37 18.2	+1.0
ELL	Elmali	1.29	87	ePn	Pn	20 37 18.2	+1.0
GCAM	G?zelcaml?	1.32	320	i P	Pn	20 37 18.0	+0.3
GCAM				i S	Sn	20 37 34.2	+0.1
GCAM	G?zelcaml?	1.32	320	i P	Pn	20 37 18.0	+0.3
GCAM				i S	Sn	20 37 34.2	0.0
KARP	Karpathos	1.47	219	eP	Pn	20 37 20.1	+0.4
KARP				eS	Sn	20 37 38.4	+0.6
KARP	Karpathos	1.47	219	eP	Pn	20 37 20.1	+0.4
KARP				eS	Sn	20 37 38.4	+0.6
SMG	Samos	1.55	311	eP	Pn	20 37 20.7	-0.1
SMG				eS	Sn	20 37 39.5	-0.2
SMG	Samos	1.55	311	eP	Pn	20 37 20.7	-0.1
SMG				eS	Sn	20 37 39.5	-0.2
KULA	Kula-Manisa	1.84	9	ePN	Pn	20 37 23.7	-1.0
KULA	Kula-Manisa	1.84	9	ePn	Pn	20 37 23.7	-1.0
IZM	Izmir	1.89	334	ePN	Pn	20 37 25.1	-0.3
IZM	Izmir	1.89	334	ePn	Pn	20 37 25.1	-0.3
BLCB	Balcova	1.96	330	ePN	Pn	20 37 26.0	-0.4
BLCB	Balcova	1.96	330	ePn	Pn	20 37 26.0	-0.4
BCK	Bucak	1.98	67	ePN	Pn	20 37 27.1	+0.5
BCK	Bucak	1.98	67	ePn	Pn	20 37 27.1	+0.5
AKHS	Akhisar	2.22	350	i P	Px	20 37 50.0	
AKHS				i S	Sn	20 37 55.7	-0.3
APE	Apeiranthos	2.26	280	eP	Pn	20 37 30.4	0.0
APE				eS	Sn	20 37 55.9	-1.1
APE	Apeiranthos	2.26	280	eP	Pn	20 37 30.4	0.0
APE				eS	Sn	20 37 55.9	-1.1
SUTC	Sutluce-Ispart	2.29	69	ePN	Pn	20 37 31.8	+0.9
SUTC	Sutluce-Ispart	2.29	69	ePn	Pn	20 37 31.8	+0.9
ZKR	Zakros	2.31	228	eP	Pn	20 37 32.1	+0.9
ZKR				eS	Sn	20 37 59.2	+0.7
ZKR	Zakros	2.31	228	eP	Pn	20 37 32.1	+0.9
ZKR				eS	Sn	20 37 59.2	+0.7
DEMI	Demirci	2.37	8	i P	Pn	20 37 31.8	-0.2
DEMI				i S	Sn	20 37 58.8	-0.9
DEMI	Demirci	2.37	8	i P	Pn	20 37 31.8	-0.1
DEMI				i S	Sn	20 37 58.8	-1.0
CHOS	Chios island	2.46	314	eP	Pn	20 37 33.6	+0.4
CHOS	Chios island	2.46	314	eP	Pn	20 37 33.6	+0.4
NPS	Neapolis	2.61	238	eP	Pn	20 37 35.5	+0.2
NPS	Neapolis	2.61	238	eP	Pn	20 37 35.5	+0.2
LAST	Lasithi	2.76	237	eP	Pn	20 37 37.9	+0.6
LAST	Lasithi	2.76	237	eP	Pn	20 37 37.9	+0.6
PRK	Paraskevi	3.01	328	eP	Pn	20 37 41.1	+0.3
PRK	Paraskevi	3.01	328	eP	Pn	20 37 41.1	+0.3
GONE	Gonen-Balikesi	3.38	352	ePN	Pn	20 37 45.2	-0.6
GONE	Gonen-Balikesi	3.38	352	ePn	Pn	20 37 45.2	-0.6
VAM	Vamos	3.57	250	eP	Pn	20 37 50.5	+2.1
VAM	Vamos	3.57	250	eP	Pn	20 37 50.5	+2.1
KARN	Karanos	3.78	251	eP	Pn	20 37 53.0	+1.7
KARN	Karanos	3.78	251	eP	Pn	20 37 53.0	+1.7
GADA	Gvkgeada	3.97	332	ePN	Pn	20 37 54.6	+0.7
GADA	Gvkgeada	3.97	332	ePn	Pn	20 37 54.6	+0.7
ALN	Alexandroupoli	4.55	338	eP	Pn	20 38 02.1	+0.2
ALN	Alexandroupoli	4.55	338	eP	Pn	20 38 02.1	+0.2
HMAT	Matruh	5.67	191	P	Pn	20 38 16.5	-0.8
SLUM		5.79	207	P	Pn	20 38 17.5	-1.4
AMAG	Maghara	7.29	144	P	Pn	20 38 37.3	-2.1
KOT	Kottamia	7.36	155	P	Pn	20 38 38.4	-2.0
HKAT	Jabal Katrina	9.45	148	P	Pn	20 39 07.6	-1.4

*MOS **30** 21:03:22.1±1.0, 43°.55N×44°.84E, h20km, mb4.0/1, Error ellipse: s-maj=11.3km s-min=8.5km az=80.5*
*CSEM **30** 21:03:22.1, 43°.55N×44°.84E, h20km, mb4.0, After OBN*
*ISCJB **30** 21:03:23.1±0.6, 43°.57N±0°.03×44°.94E±0°.03, h16km±7km, Error ellipse: s-maj=5.6km s-min=4.2km az=175.8*

ISC 30 21:03:22.5±0.6, 43°.56N±0°.03×44°.99E±0°.03, h12km±3km, n35, σ1°08/69, 5C-3D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKR	Terskaya	0.25	311	⇑iPG	Pg	21 03 27.6	0.0
TRKR				i S	Sg	21 03 33.5	+2.4
TRKR	Terskaya	0.25	311	i Pg	Pg	21 03 27.6	0.0
TRKR				i Sg	Sg	21 03 33.5	+2.4
BTKR	Batakoyurt	0.38	240	⇓iPG	Pg	21 03 28.8	-1.2
BTKR				i S	Sg	21 03 35.6	+0.6
BTKR	Batakoyurt	0.38	240	i Pg	Pg	21 03 28.8	-1.2
BTKR				i Sg	Sg	21 03 35.6	+0.6
SNJR	Sundja	0.51	195	⇓iPG	Pg	21 03 31.4	-1.0
SNJR				i S	Sg	21 03 39.5	+0.3
SNJR	Sundja	0.51	195	i Pg	Pg	21 03 31.4	-1.0
SNJR				i Sg	Sg	21 03 39.5	+0.3
PRTR	Priterechnaya	0.55	291	⇑iPG	Pg	21 03 32.7	-0.5
PRTR				i S	Sg	21 03 42.2	+1.8
PRTR	Priterechnaya	0.55	291	i Pg	Pg	21 03 32.7	-0.5
PRTR				i Sg	Sg	21 03 42.2	+1.8
VLKR	Vladikavkaz	0.56	204	ePG	Pg	21 03 32.3	-1.1
VLKR				i S	Sg	21 03 41.1	+0.3
VLKR	Vladikavkaz	0.56	204	ePg	Pg	21 03 32.3	-1.1
VLKR				i Sg	Sg	21 03 41.1	+0.3
ARNR	Ardon	0.64	235	ePG	Pg	21 03 34.2	-0.7
ARNR				i S	Sg	21 03 44.4	+1.2
ARNR	Ardon	0.64	235	ePg	Pg	21 03 34.2	-0.7
ARNR				i Sg	Sg	21 03 44.4	+1.2
KORR	Kora	0.82	235	⇓iPG	Pg	21 03 37.0	-1.4
KORR				i S	Sg	21 03 49.7	+0.6
KORR	Kora	0.82	235	i Pg	Pg	21 03 37.0	-1.4
KORR				i Sg	Sg	21 03 49.7	+0.6
LSNR	Lesken	0.90	252	⇑iPG	Pg	21 03 39.0	-0.9
LSNR				i S	Sg	21 03 52.9	+1.2
LSNR	Lesken	0.90	252	i Pg	Pg	21 03 39.0	-0.9
LSNR				i Sg	Sg	21 03 52.9	+1.2
ZEI	Tsey	1.12	226	⇑iPG	Pg	21 03 41.5	-2.6
ZEI				i S	Sb	21 03 57.4	-1.0
ZEI	Tsey	1.12	226	i Pg	Pg	21 03 41.5	-2.6
ZEI				i Sg	Sb	21 03 57.4	-1.0
DIGR	Digorskoe uzhe	1.22	238	⇑iPG	Pn	21 03 43.1	-2.3
DIGR				i S	Sb	21 04 00.8	-0.5
DIGR	Digorskoe uzhe	1.22	238	i Pg	Pn	21 03 43.1	-2.3
DIGR				i Sg	Sb	21 04 00.8	-0.5
BTLR	Botlikh	1.27	134	PG	Pg	21 03 46.0	-0.9
BTLR				i S	Sg	21 04 04.0	+0.6
BTLR	comp=Z,26nm,0.2s			pmax	pmax		
BTLR	Botlikh	1.27	134	Pg	Pg	21 03 46.0	-0.9
BTLR	comp=Z,26nm,0.2s						
BTLR				i Sg	Sg	21 04 04.0	+0.6
DLMR	Dylym	1.29	112	PG	Pg	21 03 47.8	+0.5
DLMR				S	Sg	21 04 07.5	+3.4
DLMR	comp=Z,46nm,0.2s			pmax	pmax		
DLMR	Dylym	1.29	112	Pg	Pg	21 03 47.8	+0.5
DLMR	comp=Z,46nm,0.2s						
DLMR				Sg	Sg	21 04 07.5	+3.4
DBC	Dubki	1.45	111	ePG	Pg	21 03 49.5	-0.8
DBC				eS	Sg	21 04 10.0	+0.9
DBC	Dubki	1.45	111	ePg	Pg	21 03 49.5	-0.8
DBC				eSg	Sg	21 04 10.0	+0.9
ONI	Oni	1.49	230	P	Pn	21 03 48.4	-0.6
ONI				S	Sn	21 04 09.0	+0.6
UNCR	Uncukul	1.57	122	PN	Pn	21 03 50.0	-0.2
UNCR				eS	Sg	21 04 13.0	+0.1
UNCR	comp=Z,34nm,0.2s			pmax	pmax		
UNCR	Uncukul	1.57	122	Pn	Pn	21 03 50.0	-0.2
UNCR	comp=Z,34nm,0.2s						
UNCR				eSg	Sg	21 04 13.0	+0.1
GOR	Gori	1.70	203	P	Pn	21 03 51.7	-0.3
GOR				S	Sn	21 04 15.3	+1.6
TBLG	Delisi	1.84	186	ePN	Pn	21 03 53.7	-0.2
TBLG				eS	Sn	21 04 19.3	+2.3
TBLG	Delisi	1.84	186	P	Pn	21 03 53.8	-0.1
TBLG				S	Sn	21 04 19.4	+2.3
TBLG	Delisi	1.84	186	ePn	Pn	21 03 53.7	-0.2
TBLG				eSg	Sn	21 04 19.3	+2.3
MTA	Mtatsminda	1.87	185	P	Pn	21 03 54.2	-0.1
MTA				S	Sn	21 04 18.8	+0.9
DGRG	David-gareji	2.13	172	P	Pn	21 03 57.4	-0.4
DGRG				S	x	21 05 04.7	

IDC 30 21:10:43.4±6.7, 27°.93S×177°.91W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/14, mbtmp3.4/2, Error ellipse: s-maj=284.6km s-min=104.6km az=162.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.38	264	P	P	21 18 47.6	-0.2
	0.2nm,0.7s,baz=100,slow=7.7,SNR=5.3						
WRA	Warramunga Arr	44.14	270	P	P	21 18 54.0	0.0
	0.3nm,0.4s,baz=110,slow=7.7,SNR=7.4						
VNA3	Neumayer Olymp	80.76	176	eP	P	21 23 01.5	+3.2
VNA2	Neumayer--Watz	81.20	177	eP	P	21 23 05.1	+4.5
	baz=327,slow=13						
FINES	FINESS Array B	142.85	341	PKP	PKPdf	21 30 17.9	-0.3
	0.4nm,0.3s,baz=62,slow=4.5,SNR=4.5						

IDC 30 21:15:50.1±3.2, 16°.16N×48°.55W, h0km, mb3.8/2, mb1 4.2/2, mb1mx3.5/23, mbtmp3.8/2, MS3.3/2, Ms1 3.3/2, ms1mx2.6/34, Error ellipse: s-maj=147.5km s-min=31.3km az=15.0, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKL	Tuckaleechee C	36.89	309	LR	LR	21 35 18.7	
	comp=Z,38nm,19.7s,baz=344,slow=32						
TORD	Torodi Ar. Bea	48.61	87	P	P	21 24 35.9	-0.1
	120nm,0.3s,baz=283,slow=7.8,SNR=1.7						
TXAR	Lajitas Array	52.07	295	P	P	21 25 02.0	-0.1
	0.6nm,0.9s,baz=96,slow=9.2,SNR=5.3						
HFS	Hagfors	62.39	30	LR	LR	21 50 15.4	
	comp=Z,22nm,19.9s,baz=150,slow=33						
ILAR	Eielson Array	79.04	334	P	P	21 27 56.0	+0.2
	1.4nm,0.8s,baz=73,slow=4.9,SNR=14						

*ISCJB **30** 21:21:48.4±1.0, 38°.13N±0°.04×23°.63E±0°.07, h28km±9km, Error ellipse: s-maj=9.2km s-min=6.3km az=157.9*
*CSEM **30** 21:21:48.5±0.3, 38°.13N×23°.61E, h26km±3km, MD2.6, Error ellipse: s-maj=4.7km s-min=2.8km az=80.0*
*THE **30** 21:21:48.9, 38°.12N×23°.58E, h28km±1km, ML1.5/3, Error ellipse: s-maj=1.6km s-min=0.8km az=97.0*
*ATH **30** 21:21:49.1, 38°.11N×23°.54E, h15km±5km, MD2.6/4, ML1.5*

ISC 30 21:21:48.4±1.0, 38°.13N±0°.04×23°.63E±0°.07, h27km±9km, n19, σ0°58/37, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATH	Athens Observa	0.17	156	ePB	Pb	21 21 53.6	-0.4
ATH				eSB	Sb	21 21 56.5	-1.2
ATH	Athens Observa	0.17	156	ePb	Pb	21 21 53.6	-0.4
ATH				eSb	Sb	21 21 56.5	-1.2
PTL	Penteli	0.20	113	ePB	Pb	21 21 54.5	+0.2
PTL				eSB	Sb	21 21 58.1	-0.2
PTL	Penteli	0.20	113	ePb	Pb	21 21 54.5	+0.2
PTL				eSb	Sb	21 21 58.1	-0.2
ATHU	Athens Univers	0.20	143	P	Pb	21 21 55.9	+1.6
ATHU				S	Sb	21 21 59.2	+0.8
ATHU	Athens Univers	0.20	143	P	Pb	21 21 55.9	+1.6
ATHU				S	Sb	21 21 59.2	+0.8
VLY	Voula,Athens	0.31	154	ePB	Pb	21 21 55.8	+0.1
VLY				eSB	Sb	21 22 00.0	-0.6
VLY	Voula,Athens	0.31	154	ePb	Pb	21 21 55.8	+0.1
VLY				eSb	Sb	21 22 00.0	-0.6
NAIG	Nisos Aigina	0.39	196	ePB	Pb	21 21 56.5	-0.3
NAIG	Nisos Aigina	0.39	196	ePb	Pb	21 21 56.5	-0.3
LTK	Loutraki	0.53	259	P	Pb	21 21 59.2	0.0
LTK				S	Sb	21 22 06.5	0.0
LTK	Loutraki	0.53	259	P	Pb	21 21 59.2	0.0
LTK				S	Sb	21 22 06.5	0.0
DID	Didima	0.69	207	P	Pb	21 22 01.9	0.0
DID				S	Sb	21 22 11.6	+0.5
DID	Didima	0.69	207	P	Pb	21 22 01.9	0.0
DID				S	Sb	21 22 11.6	+0.5
LKR	Lokris	0.72	317	ePB	Pb	21 22 02.0	-0.3
LKR				eSN	Sn	21 22 12.3	-0.5
LKR	Lokris	0.72	317	P	Pb	21 22 02.0	-0.3
LKR				S	Sb	21 22 12.0	+0.2
LKR	Lokris	0.72	317	P	Pb	21 22 02.0	-0.3
LKR				S	Sb	21 22 12.0	+0.2
LKR				eSn	Sn	21 22 12.3	-0.5
ATAL	Atalanti	0.74	320	P	Pb	21 22 02.5	-0.1
ATAL				S	Sb	21 22 12.6	+0.3
ATAL	Atalanti	0.74	320	P	Pb	21 22 02.5	-0.1
ATAL				S	Sb	21 22 12.6	+0.3

MAN 30 21:50:30, 16°.25N×120°.08E, h25km, mb3.6, ML2.3, MS1.8, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.20	309	eP	Pb	21 50 38.0	+2.2
BOLP				eS	Sb	21 50 40.6	+1.0
BCPH	Baguio City Da	0.50	75	⇓iP	Pb	21 50 42.5	+2.3
BCPH				i S	Sb	21 50 51.2	+4.1
SCZP	Santa Cruz	0.50	199	eP	Pb	21 50 41.5	+1.3
SCZP				eS	Sb	21 50 46.5	-0.7
BALP	Baler	1.53	109	eP	Pn	21 50 58.5	+2.9

*ISCJB **30** 21:55:18.0±1.2, 17°.2S±0°.1×179°.09W±0°.10, h541km±17km, mb3.5/9, Error ellipse: s-maj=17.7km s-min=12.9km az=150.3*
*IDC **30** 21:55:18.4±10.0, 17°.17S×179°.01W, h530km±120km, mb3.0/5, mb1 3.3/5, mb1mx3.0/16, mbtmp3.0/5, Error ellipse: s-maj=91.4km s-min=42.4km az=157.0*
*NEIC **30** 21:55:20.1±0.6, 17°.23S×178°.99W, h557km±7km, mb3.7/5, Error ellipse: s-maj=12.4km s-min=9.5km az=157.0*

ISC 30 21:55:19.8±0.9, 17°.2S±0°.1×179°.01W±0°.09, h552km±12km, n25, σ0°81/23, mb3.5/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.85	259	eP	P	21 56 36.8	+2.7
AFI	Afiamalu	7.71	66	eP	P	21 57 14.3	-0.5
RAO	Raoul Island	12.03	175	eP	P	21 57 57.1	-1.3
RAR	Rarotonga	18.60	105	eP	P	21 59 02.6	-0.5
HNR	Honiara	21.87	288	eP	P	21 59 32.3	-0.5
SNZO	South Karori	24.62	191	eP	P	21 59 56.9	+0.1
	55nm,1.0s						
CTAO	Charters Tower	33.00	260	P	P	22 01 08.9	-1.0
STKA	Stephens Creek	38.47	240	P	P	22 01 55.0	0.0
	2.6nm,0.8s,mb3.8,baz=75,slow=14,SNR=5.8						
STKA	Stephens Creek	38.47	240	eP	P	22 01 55.3	+0.4
	0.3nm,0.5s,mb3.1						
WRA	Warramunga Arr	44.20	259	P	P	22 02 40.5	+0.1
	0.4nm,0.6s,mb3.1,baz=91,slow=7.1,SNR=11						
ASAR	Alice Springs	44.43	254	P	P	22 02 42.5	+0.3
	4.0nm,0.6s,mb4.1,baz=88,slow=8.4,SNR=48						
FITZ	Fitzroy Crossi	52.58	260	eP	P	22 03 43.2	+0.4
	5.

σ0°87/26, mb4.2/12, MS3.8/15, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**23.60**	**178**	*e*		**P**	**22 36 30.7**	**-0.5**
VNA1				*e*			22 36 39.2	
VNA2	**Neumayer--Watz**	**23.90**	**177**	*e*		**P**	**22 36 32.9**	**-1.0**
	baz=341,slow=11							
VNA2				*e*			22 36 40.3	
VNA3	**Neumayer Olymp**	**24.16**	**179**	*e*		**P**	**22 36 34.7**	**-1.6**
SNAA	**Sanae**	**24.90**	**174**	P		**P**	**22 36 44.3**	**+1.3**
	3.1nm,1.0s,mb3.8,baz=348,slow=10,SNR=27							
SNAA				LR		LR	22 43 58.1	
	comp=Z,67nm,18.2s,MS3.2,baz=194,slow=30							
SUR	**Sutherland**	**28.44**	**70**	LR		LR	22 45 31.8	
	comp=Z,236nm,18.6s,MS3.8,baz=231,slow=30							
EFI	**East Falkland**	**30.41**	**244**	*eP*		**P**	**22 37 30.7**	**-1.9**
	14nm,0.7s,mb4.8							
PMSA	**Palmer Station**	**33.18**	**219**	LR		LR	22 48 44.7	
	comp=Z,369nm,20.2s,MS4.1,baz=328,slow=31							
BOSA	**Boshof**	**33.80**	**70**	P		**P**	**22 38 02.0**	**-0.5**
	6.6nm,1.0s,mb4.5,baz=214,slow=12,SNR=5.6							
BOSA				LR		LR	22 48 45.7	
	comp=Z,156nm,21.7s,MS3.7,baz=228,slow=31							
BOSA	**Boshof**	**33.80**	**70**	*eP*		**P**	**22 38 02.5**	**0.0**
	9.2nm,1.0s,mb4.7							
BOSA				LR		LR	22 48 45.7	
USHA	**Ushuaia**	**35.93**	**236**	LR		LR	22 48 47.4	
	comp=Z,150nm,18.1s,MS3.8,baz=306,slow=29							
LBTB	**Lobatse**	**36.55**	**66**	P		**P**	**22 38 25.3**	**-1.0**
	2.6nm,0.4s,mb4.4,baz=254,slow=9.8,SNR=5.9							
LBTB	**Lobatse**	**36.55**	**66**	*eP*		**P**	**22 38 25.6**	**-0.7**
	5.0nm,0.8s,mb4.4							
TRQA	**Tornquist**	**37.89**	**265**	*eP*		**P**	**22 38 38.1**	**+0.7**
	4.1nm,0.8s,mb4.2							
MAW	**Mawson**	**41.66**	**146**	P		**P**	**22 39 09.5**	**+1.0**
CPUP	**Villa Florida**	**41.69**	**283**	P		**P**	**22 39 09.6**	**+0.3**
	2.3nm,0.7s,mb4.0,baz=101,slow=7.3,SNR=7.4							
CPUP				LR		LR	22 52 14.2	
	comp=Z,76nm,21.9s,MS3.5,baz=276,slow=30							
CPUP	**Villa Florida**	**41.69**	**283**	*eP*		**P**	**22 39 08.7**	**-0.5**
	7.5nm,0.8s,mb4.4							
CPUP				LR		LR	22 52 14.2	
PLCA	**Paso Flores**	**42.33**	**256**	*eP*		**P**	**22 39 14.2**	**-0.1**
QSPA	**South Pole Qui**	**43.10**	**180**	P		**P**	**22 39 22.1**	**+2.0**
	6.8nm,0.8s,mb4.4,baz=221,slow=7.2,SNR=19							
QSPA				LR		LR	22 54 49.7	
	comp=Z,179nm,20.9s,MS4.0,baz=202,slow=33							
QSPA	**South Pole Qui**	**43.10**	**180**	*eP*		**P**	**22 39 21.9**	**+1.9**
	7.8nm,0.9s,mb4.4							
QSPA				LR		LR	22 54 49.7	
BDFB	**Brasilia**	**43.78**	**303**	P		**P**	**22 39 26.6**	**+0.3**
	4.3nm,0.6s,mb4.4,baz=316,slow=22,SNR=5.8							
BDFB				LR		LR	22 54 20.8	
	comp=Z,184nm,20.1s,MS4.0,baz=172,slow=32							
CFAA	**Coronel Fontan**	**45.75**	**269**	P		**P**	**22 39 42.1**	**+0.3**
	0.6nm,0.7s,mb3.6,baz=115,slow=9.6,SNR=4.1							
MSKU	**Masuku**	**50.19**	**33**	P		**P**	**22 40 17.2**	**+0.9**
	6.6nm,0.7s,mb4.8,baz=204,slow=9.9,SNR=6.6							
DBIC	**Dimbokro**	**53.89**	**8**	LR		LR	22 57 44.0	
	comp=Z,80nm,20.5s,MS3.8,baz=83,slow=30							
LPAZ	**La Paz**	**55.87**	**283**	P		**P**	**22 40 58.5**	**+0.3**
	0.7nm,0.4s,mb4.0,baz=120,slow=5.8,SNR=4.6							
LPAZ				LR		LR	23 01 24.8	
	comp=Z,79nm,18.4s,MS3.8,baz=154,slow=32							
CASY	**Casey**	**58.44**	**156**	*eP*		**P**	**22 41 15.2**	**-0.6**
TORD	**Torodi Ar. Bea**	**61.13**	**14**	P		**P**	**22 41 34.2**	**-0.7**
	0.3nm,0.5s,mb3.7,baz=194,slow=7.5,SNR=14							
TORD				LR		LR	23 01 52.0	
	comp=Z,120nm,21.2s,MS4.0,baz=165,slow=30							
KMBO	**Kilima Mbogo**	**62.16**	**58**	LR		LR	23 06 16.8	
	comp=Z,104nm,19.6s,MS4.0,baz=85,slow=34							
ROSC	**El Rosal**	**75.78**	**293**	LR		LR	23 16 41.4	
	comp=Z,56nm,18.6s,MS3.9,baz=142,slow=36							
KEST	**Kesra**	**84.55**	**17**	LR		LR	23 17 45.6	
	comp=Z,31nm,18.6s,MS3.7,baz=214,slow=33							
SNZO	**South Karori**	**91.75**	**184**	*eP*		**P**	**22 44 28.6**	**+0.5**
COCO	**West Island**	**93.04**	**111**	P		**P**	**22 44 34.6**	**+0.2**
BRTR	**Keskin Array B**	**95.28**	**33**	LR		LR	23 23 33.1	
	comp=Z,30nm,21.5s,MS3.7,baz=43,slow=33							
MALT	**Malatya**	**95.94**	**37**	P		**P**	**22 44 46.8**	**-0.2**
STKA	**Stephens Creek**	**97.59**	**157**	P		**P**	**22 44 55.4**	**+0.4**
ILAR	**Eielson Array**	**150.44**	**323**	PKPbc		PKPbc	22 51 10.9	+0.1
	2.3nm,0.7s,baz=3.1,slow=1.0,SNR=32							

*ATH **30** 22:44:37.2, 39°.48N×19°.97E, h4km, MD3.1/4*
*CSEM **30** 22:44:37.2, 39°.48N×19°.97E, h4km, MD3.1, After ATH*
*ISCJB **30** 22:44:39.0±1.2, 39°.46N±0°.06×20°.09E±0°.09, h10km, Error ellipse: s-maj=10.6km s-min=7.0km az=150.5*

ISC 30 22:44:38.8±1.3, 39°.43N±0°.06×20°.07E±0°.09, h10km, n10, σ0°93/14, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.45**	**353**	*ePG*		**Pg**	**22 44 46.5**	**-1.0**
SRN				*i* SG		**Sg**	**22 44 55.1**	**+1.6**
JAN	**Janina**	**0.65**	**70**	*ePG*		**Pg**	**22 44 50.3**	**-0.9**
JAN				*eSG*		**Sg**	**22 44 59.9**	**+0.2**
JAN	**Janina**	**0.65**	**70**	*ePg*		**Pg**	**22 44 50.3**	**-0.9**
JAN				*eSg*		**Sg**	**22 44 59.9**	**+0.2**
LSK	**Leskovik**	**0.82**	**30**	*ePG*		**Pg**	**22 44 53.5**	**-1.1**
LSK				*i* SG		**Sg**	**22 44 58.7**	**-6.7**
VLS	**Valsamata**	**1.32**	**162**	*ePB*		**Pb**	**22 45 03.7**	**+0.1**
VLS	**Valsamata**	**1.32**	**162**	*ePb*		**Pb**	**22 45 03.7**	**+0.1**
THL	**Klokotos Trika**	**1.51**	**84**	*ePB*		**Pb**	**22 45 07.8**	**+0.9**
THL	**Klokotos Trika**	**1.51**	**84**	*ePb*		**Pb**	**22 45 07.8**	**+0.9**
AGG	**Agios Georgios**	**1.81**	**102**	*ePB*		**Pb**	**22 45 12.3**	**+0.4**
AGG	**Agios Georgios**	**1.81**	**102**	*ePb*		**Pb**	**22 45 12.3**	**+0.4**

MAN 30 22:51:04, 16°.67N×120°.09E, h38km, mb4.1, ML2.9, MS2.6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.33**	**211**	*eP*		Pn	22 51 16.1	+3.5
BOLP				*eS*		Sn	22 51 19.9	+1.5
BCPH	**Baguio City Da**	**0.55**	**121**	⇑*iP*		Pn	22 51 16.7	+1.4
BCPH				*i* S		Sn	22 51 26.8	+3.4
SCZP	**Santa Cruz**	**0.90**	**191**	*eP*		Pn	22 51 21.4	+1.1
SCZP				*eS*		Sn	22 51 32.4	+0.3
APYP	**Conner**	**1.62**	**43**	*eP*		Pn	22 51 30.6	+0.6

*CSEM **30** 23:00:16.9±0.2, 39°.70N×25°.51E, h2km, ML2.4/8, Error ellipse: s-maj=3.8km s-min=3.4km az=20.0*
*DDA **30** 23:00:17.8, 39°.77N×25°.52E, h20km, Md3.2*
*ISCJB **30** 23:00:17.0±0.5, 39°.70N±0°.02×25°.56E±0°.03, h6km±4km, Error ellipse: s-maj=3.7km s-min=3.1km az=31.4*
*ATH **30** 23:00:17.7, 39°.71N×25°.66E, h36km±3km, MD3.3/5*
*THE **30** 23:00:17.9, 39°.67N×25°.55E, h11km, ML2.4/8, Error ellipse: s-maj=0.9km s-min=0.4km az=62.0*
*ISK **30** 23:00:18.9, 39°.79N×25°.77E, h5km, MD3.0*

ISC 30 23:00:17.5±0.5, 39°.70N±0°.02×25°.54E±0°.03, h9km±3km, n61, σ1°03/91, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.34**	**306**	P		**Pg**	**23 00 25.6**	**+1.3**
LIA				S		**Sg**	**23 00 30.3**	**+1.5**
BOZC	**Bozcaada**	**0.42**	**70**	*i* P		**Pg**	**23 00 26.4**	**+0.8**
BOZC				*i* S		**Sg**	**23 00 31.9**	**+0.7**
SIGR	**SIGRI**	**0.54**	**153**	P		**Pg**	**23 00 27.7**	**-0.3**
SIGR				S		**Sg**	**23 00 35.3**	**+0.2**
SIGR	**SIGRI**	**0.54**	**153**	P		**Pg**	**23 00 27.7**	**-0.3**
SIGR				S		**Sg**	**23 00 35.3**	**+0.2**
GADA	**Gvkgeada**	**0.56**	**29**	*ePG*		**Pg**	**23 00 28.2**	**-0.2**
GADA				*eSG*		**Sg**	**23 00 35.0**	**-0.8**
GADA	**Gvkgeada**	**0.56**	**29**	*ePg*		**Pg**	**23 00 28.2**	**-0.3**
GADA				*eSg*		**Sg**	**23 00 35.0**	**-0.9**
EZN	**Ezine**	**0.62**	**78**	*ePG*		**Pg**	**23 00 28.5**	**-1.0**
EZN				*eSG*		**Sg**	**23 00 35.4**	**-2.1**
EZN	**Ezine**	**0.62**	**78**	*ePg*		**Pg**	**23 00 28.5**	**-0.9**
EZN				*eSg*		**Sg**	**23 00 35.4**	**-2.1**
PRK	**Paraskevi**	**0.72**	**128**	*ePN*		**Pg**	**23 00 31.1**	**-0.3**
PRK				*eSN*		**Sg**	**23 00 41.3**	**+0.5**
PRK	**Paraskevi**	**0.72**	**128**	P		**Pg**	**23 00 31.1**	**-0.3**
PRK				S		**Sg**	**23 00 41.4**	**+0.6**
PRK	**Paraskevi**	**0.72**	**128**	P		**Pg**	**23 00 31.1**	**-0.3**
PRK				S		**Sg**	**23 00 41.4**	**+0.6**
AYVA	**Ayvalik**	**0.97**	**113**	*i* P		**Pg**	**23 00 36.3**	**+0.2**
AYVA				*i* S		**Sg**	**23 00 49.7**	**+1.0**
AYVA	**Ayvalik**	**0.97**	**113**	*i* P		**Pg**	**23 00 36.3**	**+0.2**
AYVA				*i* S		**Sg**	**23 00 49.7**	**+1.0**
GELI	**Tayfur-Gelibol**	**1.00**	**45**	*ePG*		**Pg**	**23 00 35.8**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.00**	**45**	*ePg*		**Pg**	**23 00 35.8**	**-1.0**
ENEZ	**Enez**	**1.14**	**24**	*ePG*		**Pg**	**23 00 38.8**	**-0.6**
ENEZ	**Enez**	**1.14**	**24**	*ePg*		**Pg**	**23 00 38.8**	**-0.6**
LPK	**Lapseki**	**1.15**	**54**	*ePG*		**Pg**	**23 00 37.8**	**-1.8**
LPK	**Lapseki**	**1.15**	**54**	*ePg*		**Pg**	**23 00 37.8**	**-1.9**
ERIK	**Erikli-Kesan**	**1.23**	**37**	*ePG*		**Pg**	**23 00 40.3**	**-0.7**
ERIK	**Erikli-Kesan**	**1.23**	**37**	*ePg*		**Pg**	**23 00 40.3**	**-0.7**
ALN	**Alexandroupoli**	**1.26**	**18**	*ePN*		**Pn**	**23 00 40.6**	**-0.7**
ALN				*eSN*		**Sn**	**23 00 55.7**	**-2.6**
ALN	**Alexandroupoli**	**1.26**	**18**	P		**Pn**	**23 00 40.6**	**-0.7**
ALN				S		**Sb**	**23 00 58.2**	**+0.5**
ALN	**Alexandroupoli**	**1.26**	**18**	P		**Pn**	**23 00 40.6**	**-0.7**
ALN				*eSn*		**Sn**	**23 00 55.7**	**-2.6**
ALN				S		**Sb**	**23 00 58.2**	**+0.5**
OUR	**Ouranopolis**	**1.36**	**298**	P		**Pn**	**23 00 41.6**	**-1.0**
OUR				S		**Sb**	**23 01 00.8**	**+0.3**
OUR	**Ouranopolis**	**1.36**	**298**	P		**Pn**	**23 00 41.6**	**-1.0**
OUR				S		**Sb**	**23 01 00.8**	**+0.3**
CHOS	**Chios island**	**1.37**	**163**	*ePN*		**Pn**	**23 00 41.8**	**-1.0**
CHOS				*eSN*		**Sn**	**23 00 59.8**	**-1.2**
CHOS	**Chios island**	**1.37**	**163**	P		**Pn**	**23 00 41.7**	**-1.1**
CHOS				S		**Sb**	**23 01 00.0**	**-0.8**
CHOS	**Chios island**	**1.37**	**163**	P		**Pn**	**23 00 41.7**	**-1.1**
CHOS				*eSn*		**Sn**	**23 00 59.8**	**-1.2**
AOS	**Alonnisos**	**1.39**	**248**	P		**Pn**	**23 00 42.3**	**-0.8**
AOS				S		**Sb**	**23 01 01.7**	**+0.2**
AOS	**Alonnisos**	**1.39**	**248**	P		**Pn**	**23 00 42.3**	**-0.8**
AOS				S		**Sb**	**23 01 01.7**	**+0.2**
PAIG	**Paliouri**	**1.45**	**280**	P		**Pn**	**23 00 43.2**	**-0.7**
PAIG				S		**Sn**	**23 01 02.6**	**-0.5**
PAIG	**Paliouri**	**1.45**	**280**	P		**Pn**	**23 00 43.2**	**-0.7**
PAIG				S		**Sn**	**23 01 02.6**	**-0.5**
KAVA	**Kavala**	**1.52**	**329**	P		**Pn**	**23 00 44.1**	**-0.7**
KAVA	**Kavala**	**1.52**	**329**	P		**Pn**	**23 00 44.1**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.60**	**51**	*ePN*		**Pn**	**23 00 46.6**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.60**	**51**	*ePn*		**Pn**	**23 00 46.6**	**+0.7**
BALY	**Balya**	**1.60**	**88**	*i* P		**Pn**	**23 00 48.3**	**+2.3**
BALY				*i* S		**Sn**	**23 01 06.4**	**-0.4**
BALY	**Balya**	**1.60**	**88**	*i* P		**Pn**	**23 00 48.3**	**+2.3**
BALY				*i* S		**Sn**	**23 01 06.4**	**-0.4**
GONE	**Gonen-Balikesi**	**1.69**	**77**	*ePN*		**Pn**	**23 00 48.0**	**+0.8**
GONE	**Gonen-Balikesi**	**1.69**	**77**	*ePn*		**Pn**	**23 00 48.0**	**+0.8**
PLG	**Polygyros**	**1.75**	**293**	*ePN*		**Pn**	**23 00 48.1**	**+0.1**
PLG	**Polygyros**	**1.75**	**293**	P		**Pn**	**23 00 47.7**	**-0.3**
PLG	**Polygyros**	**1.75**	**293**	P		**Pn**	**23 00 47.7**	**-0.3**
PLG	**Polygyros**	**1.75**	**293**	*ePn*		**Pn**	**23 00 48.1**	**+0.1**
BLCB	**Balcova**	**1.75**	**138**	*ePN*		**Pn**	**23 00 51.0**	**+2.9**
BLCB	**Balcova**	**1.75**	**138**	*ePn*		**Pn**	**23 00 51.0**	**+2.9**
BALB	**Balikesir**	**1.81**	**91**	*ePN*		**Pn**	**23 00 49.9**	**+1.1**
BALB	**Balikesir**	**1.81**	**91**	*ePn*		**Pn**	**23 00 49.9**	**+1.1**
CRLT	**Corlu**	**2.20**	**49**	*ePN*		**Pn**	**23 00 55.2**	**+1.0**
CRLT	**Corlu**	**2.20**	**49**	*ePn*		**Pn**	**23 00 55.2**	**+0.9**
SMG	**Samos**	**2.23**	**153**	*ePN*		**Pn**	**23 00 54.2**	**-0.4**
SMG	**Samos**	**2.23**	**153**	*ePn*		**Pn**	**23 00 54.2**	**-0.4**
DURS	**Dursunbey**	**2.27**	**91**	*i* P		**Pn**	**23 00 55.6**	**+0.5**
DURS				*i* S		**Sn**	**23 01 23.2**	**+0.1**
DURS	**Dursunbey**	**2.27**	**91**	*i* P		**Pn**	**23 00 55.6**	**+0.5**
DURS				*i* S		**Sn**	**23 01 23.2**	**0.0**
EDRB	**Edirne**	**2.33**	**23**	*ePN*		**Pn**	**23 00 57.8**	**+1.7**
EDRB	**Edirne**	**2.33**	**23**	*ePn*		**Pn**	**23 00 57.8**	**+1.7**
CTKS	**Kestanelik-??a**	**2.73**	**55**	*ePN*		**Pn**	**23 01 02.8**	**+1.3**
CTKS	**Kestanelik-??a**	**2.73**	**55**	*ePn*		**Pn**	**23 01 02.8**	**+1.2**
CTYL	**Yal??k??y-??at**	**2.74**	**49**	*ePN*		**Pn**	**23 01 03.1**	**+1.4**
CTYL	**Yal??k??y-??at**	**2.74**	**49**	*ePn*		**Pn**	**23 01 03.1**	**+1.4**

KRSC 30 23:03:21.7±0.6, 49°.68N×156°.84E, h21km±21km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.45**	**326**	*eP*		Pn	23 03 47.4	+0.8
ALID				*eS*		Sn	23 04 05.6	+0.6
AVH	**Avacha**	**3.78**	**18**	*eP*		Pn	23 04 21.4	+2.7
AVH				*eS*		Sn	23 05 06.4	+3.9
NLC	**Nalytchevo**	**3.83**	**23**	S		Sn	23 05 04.6	+0.9
SPN	**Mys Shipunski**	**3.96**	**29**	S		Sn	23 05 08.6	+1.7
GNL	**Ganaly**	**4.08**	**9**	*eP*		Pn	23 04 25.1	+2.3

IDC 30 23:24:58.3±2.4, 8°.47S×129°.13E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.3/16, mbtmp3.3/3, ML3.4/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/21, Error ellipse: s-maj=260.0km s-min=31.6km az=66.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.47**	**157**	Pn		Pn	23 27 56.7	-0.5
	0.3nm,0.3s,baz=334,slow=14,SNR=11						
WRA						Sn	Sn	23 30 13.4	-3.6
	0.3nm,0.3s,baz=330,slow=23,SNR=4.2						
ASAR	**Alice Springs**	**15.79**	**164**	Pn		Pn	23 28 43.0	+0.8
	0.1nm,0.3s,baz=346,slow=10,SNR=3.4						
CTA	**Charters Tower**	**20.20**	**127**	LR		LR	23 37 25.4	
	comp=Z,51nm,19.9s,baz=56,slow=37						
MKAR	**Makanchi Array**	**68.98**	**328**	P		P	23 36 05.6	+0.1
	0.1nm,0.3s,baz=126,slow=7.3,SNR=2.1						

*JMA **30** 23:30:02.4±0.5, 33°.55N×141°.95E, h61km, M3.3*
*ISCJB **30** 23:30:03.8±0.7, 33°.29N±0°.04×141°.31E±0°.09, h33km, mb3.7/2, Error ellipse: s-maj=11.2km s-min=5.5km az=168.9*
*IDC **30** 23:30:03.2±3.0, 33°.38N×141°.12E, h0km, mb3.7/2, mb1 3.7/3, mb1mx3.4/23, mbtmp3.5/3, ML2.7/1, Error ellipse: s-maj=90.2km s-min=28.6km az=67.0*
*NEIC **30** 23:30:07.1±0.7, 33°.43N×141°.10E, h35km, mb4.4/3, Error ellipse: s-maj=13.1km s-min=8.9km az=103.0*

ISC 30 23:30:05.9±0.7, 33°.31N±0°.04×141°.27E±0°.09, h35km, n21, σ1°44/30, mb3.7/2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.24**	**261**	P		**Pn**	**23 30 33.1**	**+6.4**
BSO1	**Boso 1**	**1.36**	**350**	P		**Pn**	**23 30 25.5**	**-2.9**
BSO1				*eS*		**Sn**	**23 30 43.3**	**-1.9**
BSO2	**Boso 2**	**1.50**	**343**	*eS*		**Sn**	**23 30 49.5**	**+0.9**
BSO3	**Boso 3**	**1.61**	**337**	P		**Pn**	**23 30 30.7**	**-1.2**
BSO3				*eS*		**Sn**	**23 30 52.8**	**+1.4**
BSO4	**Boso 4**	**1.84**	**335**	P		**Pn**	**23 30 34.8**	**-0.2**
BSO4				*eS*		**Sn**	**23 30 58.9**	**+1.8**
JYN	**Shimob**	**3.14**	**315**	P		**Pn**	**23 30 54.2**	**+1.4**
JYN				*eS*		**Sn**	**23 31 34.1**	**+5.1**
JRY	**Ryogami san**	**3.33**	**325**	P		**Pn**	**23 30 55.4**	**-0.1**
JRY				*eS*		**Sn**	**23 31 37.2**	**+3.4**
JAG	**Ashikaga**	**3.45**	**335**	P		**Pn**	**23 30 56.1**	**-0.9**
JAG				*eS*		**Sn**	**23 31 34.8**	**-1.8**
MJAR	**Matsushiro Arr**	**4.09**	**323**	**Pn**		**Pn**	**23 31 03.0**	**-2.9**
	0.5nm,0.3s,baz=140,slow=14,SNR=4.7						
MJAR						**Sn**	**Sn**	**23 31 53.8**	**+1.3**
	0.9nm,0.3s,baz=144,slow=28,SNR=4.4						
MAJO	**Matsushiro**	**4.09**	**323**	*ePn*		**Pn**	**23 31 04.9**	**-1.0**
MAJO				*eSn*		**Sn**	**23 31 49.4**	**-3.1**
MAT	**Matsushiro**	**4.09**	**323**	P		**Pn**	**23 31 06.3**	**+0.4**
MAT				S		**Sn**	**23 31 54.1**	**+1.6**
ERM	**Erimo**	**8.81**	**9**	Pn		**Pn**	**23 32 10.6**	**-0.1**
ASAJ	**Asahikawa**	**10.84**	**5**	*ePn*		**Pn**	**23 32 37.9**	**-0.5**
INCN	**Inchon**	**12.65**	**293**	*ePn*		**Pn**	**23 33 02.1**	**-1.1**
JOW	**Kunigami**	**12.97**	**244**	*ePn*		**Pn**	**23 33 08.1**	**+0.4**
TATO	**Taipei**	**19.15**	**249**	P		**Pn**	**23 34 26.6**	**-0.7**
	13nm,0.5s						
YHNB	**Yeheng**	**19.40**	**249**	*eP*		**Pn**	**23 34 28.2**	**-2.0**
	15nm,0.8s						
GUMO	**Guam**	**19.91**	**170**	*eP*		**Pn**	**23 34 36.3**	**0.0**
	24nm,0.7s						
MKAR	**Makanchi Array**	**46.08**	**305**	P		**P**	**23 38 28.2**	**+2.0**
	0.4nm,0.2s,mb3.9,baz=90,slow=8.9,SNR=6.3						
WRA	**Warramunga Arr**	**53.37**	**188**	P		**P**	**23 39 24.6**	**+2.7**
	0.2nm,0.3s,mb3.5,baz=8.7,slow=7.7,SNR=2.8						
PAX	**Paxson**	**53.38**	**33**	*eP*		**P**	**23 39 23.1**	**+1.6**

*ISCJB **30** 23:33:42.1±0.5, 0°.26S±0°.06×132°.8E±0°.1, h33km, mb4.2/6, Error ellipse: s-maj=16.7km s-min=8.2km az=167.0*
*IDC **30** 23:33:44.0±2.6, 0°.73S×131°.46E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=130.9km s-min=24.5km az=76.0*
*NEIC **30** 23:33:44.4±0.3, 0°.26S×132°.74E, h35km, mb4.5/4, Error ellipse: s-maj=11.6km s-min=5.5km az=78.0*

ISC 30 23:33:44.4±0.5, 0°.29S±0°.06×132°.8E±0°.1, h35km, n28, σ0°63/30, mb4.2/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.03**	**201**	P		**Pn**	**23 37 57.9**	**-6.5**
	0.2nm,0.3s,baz=10,slow=11,SNR=4.7						
FITZ				S		S	23 41 06.0	-32
	0.0nm,0.3s,baz=180,slow=20,SNR=2.1						
FITZ	**Fitzroy Crossi**	**19.03**	**201**	*eP*		**Pn**	**23 38 03.6**	**-0.8**
	2.8nm,1.0s						
FITZ				S		S	23 41 06.0	-32
WRA	**Warramunga Arr**	**19.59**	**176**	P		**Pn**	**23 38 10.5**	**-0.7**
	0.1nm,0.3s,baz=355,slow=13,SNR=4.8						
WRA				S		**S**	**23 41 33.2**	**-16**
	0.0nm,0.3s,baz=350,slow=24,SNR=3.0						
WRA	**Warramunga Arr**	**19.59**	**176**	P		**Pn**	**23 38 10.5**	**-0.7**
WRA				S		**S**	**23 41 33.2**	**-16**
ASAR	**Alice Springs**	**23.26**	**177**	P		**P**	**23 38 50.2**	**+1.2**
	1.1nm,0.6s,mb3.5,baz=352,slow=12,SNR=15						
MBWA	**Marble Bar**	**24.33**	**211**	*eP*		**P**	**23 38 58.7**	**-0.3**
NACB	**Ninganchiao**	**26.62**	**337**	*eP*		**P**	**23 39 19.5**	**-0.2**
	11nm,0.6s,mb4.6						
YHNB	**Yeheng**	**27.15**	**337**	*eP*		**P**	**23 39 24.1**	**-0.3**
HNR	**Honiara**	**28.55**	**109**	*eP*		**P**	**23 39 37.4**	**+0.2**
	22nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**32.51**	**166**	*eP*		**P**	**23 40 11.5**	**-0.4**
MAJO	**Matsushiro**	**36.99**	**7**	*eP*		**P**	**23 40 50.2**	**-0.4**
	2.2nm,0.3s,mb4.5						
COCO	**West Island**	**37.54**	**250**	*eP*		**P**	**23 40 55.2**	**-0.3**
ENH	**Enshi**	**37.60**	**326**	*eP*		**P**	**23 40 55.7**	**-0.1**
CM31	**Chiang Mai Arr**	**38.08**	**301**	*eP*		**P**	**23 40 59.7**	**-0.3**
BJT	**Baijiatuau**	**42.88**	**341**	*eP*		**P**	**23 41 39.3**	**-0.1**
LSA	**Lhasa**	**49.60**	**311**	*eP*		**P**	**23 42 32.8**	**+0.4**
HIA	**Hailar**	**50.62**	**349**	*eP*		**P**	**23 42 39.6**	**-0.2**
PALK	**Pallekele**	**52.45**	**279**	*eP*		**P**	**23 42 54.3**	**+0.2**
ULN	**Ulaanbaatar**	**52.91**	**339**	*eP*		**P**	**23 42 56.9**	**0.0**
TLY	**Talaya**	**57.31**	**339**	*eP*		**P**	**23 43 28.4**	**-0.2**
MCQ	**Macquarie Isla**	**58.17**	**162**	*eP*		**P**	**23 43 34.2**	**-0.4**
YAK	**Yakutsk**	**62.20**	**358**	*eP*		**P**	**23 44 01.9**	**-0.2**
	30nm,0.3s						
MKAR	**Makanchi Array**	**64.29**	**324**	P		**P**	**23 44 18.7**	**+2.4**
	0.2nm,0.4s,mb3.5,baz=124,slow=7.6,SNR=2.9						
TKM2	**Tokmak 2**	**66.73**	**318**	*eP*		**P**	**23 44 31.1**	**-1.0**
CASY	**Casey**	**67.72**	**190**	*eP*		**P**	**23 44 38.7**	**+0.8**
EKS2	**Erkin-Say**	**67.86**	**317**	P		**P**	**23 44 39.1**	**-0.2**
KURK	**Kurchatov**	**68.37**	**326**	*eP*		**P**	**23 44 42.7**	**+0.5**
	1.0nm,0.8s,mb3.9						
KBL	**Kabul**	**68.72**	**307**	*eP*		**P**	**23 44 45.5**	**+0.7**

KRSC 30 23:43:15.7±0.6, 51°.48N×157°.67E, h101km±70km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.09**

ABTA	**Abfaltersbach**	**149.03**	**345**	⇑ *i*PKPbc	PKPbc	00 09 41.4	-0.7
	2.7nm,0.7s						
DAVOX	**Davos/Dischmat**	**149.56**	**349**	PKPbc	PKPbc	00 09 44.0	+0.5
	2.8nm,0.3s,baz=353,slow=2.4,SNR=9.5						
LOR	**Lormes**	**149.81**	**357**	*e*PKP1	PKPbc	00 09 43.8	-0.2
SSF	**Saint Saulge**	**150.03**	**357**	*e*PKP1	PKPbc	00 09 44.4	-0.2
	13nm,1.0s						
AVF	**Avril sur Loir**	**150.31**	**357**	*e*PKP1	PKPbc	00 09 44.7	-0.5
	2.9nm,0.5s						
MFF	**Saint Martin d**	**150.50**	**2**	*e*PKP1	PKPbc	00 09 45.3	-0.4
BGF	**Bois d'Agland**	**150.56**	**358**	*e*PKP1	PKPbc	00 09 45.6	-0.2
	9.8nm,0.7s						
TCF	**Toulx Ste Croi**	**150.84**	**359**	*e*PKP1	PKPbc	00 09 46.0	-0.5
LPL	**La Plagne**	**151.29**	**352**	*e*PKP1	PKPbc	00 09 48.4	+0.9
	3.4nm,0.6s						
LPG	**La Plagne**	**151.31**	**352**	*e*PKP1	PKPbc	00 09 48.3	+0.7
	4.4nm,0.7s						
ORIF	**Oris-en-Rattie**	**151.98**	**353**	*e*PKP1	PKPbc	00 09 49.1	0.0
	4.9nm,0.7s						
MBDF	**Montbardon**	**152.06**	**352**	*e*PKP1	PKPbc	00 09 49.3	0.0
	8.3nm,0.7s						
VIVF	**Saint-Julien-l**	**152.16**	**355**	*e*PKP1	PKPbc	00 09 49.6	+0.1
CAF	**Calviac**	**152.21**	**359**	*e*PKP1	PKPbc	00 09 48.6	-1.0
TOA0	**Torodi Ar. Sit**	**176.11**	**182**	PKPdf	PKPdf	00 10 04.6	+0.3

KRSC 30 23:52:49.4±0.7, 52°.76N×160°.60E, h11km±11km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.49**	**314**	*e*P	Pg	23 53 00.6	+1.7
SPN				*i* S	Sg	23 53 08.2	+2.9
NLC	**Nalytchevo**	**0.86**	**299**	*e*P	Pg	23 53 06.5	+0.5
NLC				*i* S	Sg	23 53 19.1	+1.8
PET	**Petropavlovsk**	**1.21**	**283**	*e*P	Pn	23 53 12.0	-0.2
PET				*i* S	Sb	23 53 28.4	+0.5
AVH	**Avacha**	**1.23**	**295**	*e*P	Pn	23 53 12.9	+0.4
AVH				*i* S	Sb	23 53 30.6	+2.0
RUS	**Russkaya**	**1.31**	**256**	*e*P	Pn	23 53 13.5	-0.1
RUS				*i* S	Sb	23 53 31.0	+0.1
KII	**Karymskiy**	**1.45**	**332**	*e*P	Pn	23 53 16.4	+0.9
KII				*i* S	Sn	23 53 35.8	+1.2
GRL	**Gorelyy**	**1.55**	**263**	*e*P	Pn	23 53 18.0	+1.1
GRL				*i* S	Sn	23 53 38.9	+1.9
GNL	**Ganaly**	**1.85**	**301**	*e*P	Pn	23 53 22.8	+1.8
GNL				*i* S	Sn	23 53 47.7	+3.3
MKZ	**Mys Kozlova**	**1.92**	**20**	*e*P	Pn	23 53 21.6	-0.4
MKZ				*i* S	Sn	23 53 45.3	-0.8
KMNR	**Kamenistaya**	**3.01**	**356**	*e*P	Pn	23 53 40.0	+3.1

IDC 30 23:57:47.6±3.5, 3°.93S×138°.65E, h0km, mb3.3/2, mb1 3.7/4, mb1mx3.6/14, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=114.3km s-min=28.6km az=91.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.46**	**194**	Pn	Pn	00 01 40.8	+0.7
	0.4nm,0.3s,baz=18,slow=12,SNR=22						
FITZ	**Fitzroy Crossi**	**18.99**	**221**	P	Pn	00 02 10.3	-1.3
	0.1nm,0.3s,baz=34,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**20.15**	**193**	P	P	00 02 23.9	+0.3
	1.3nm,0.5s,baz=17,slow=9.1,SNR=21						
MKAR	**Makanchi Array**	**70.71**	**323**	P	P	00 09 05.6	+0.2
	0.1nm,0.5s,baz=103,slow=6.4,SNR=3.1						

ISC Computed Locations for September 2008

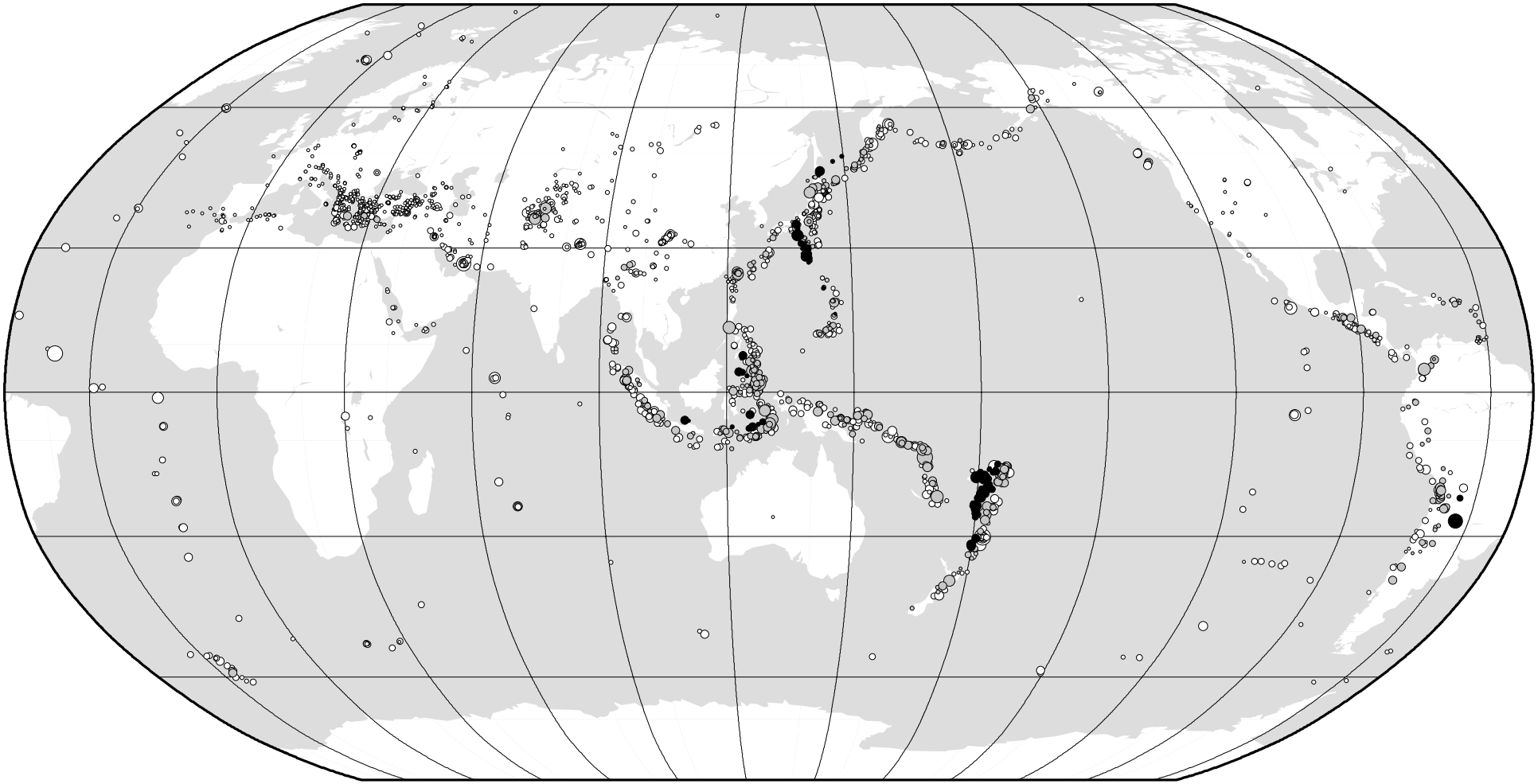

Depth (km)	0-70	70-300	>300
M=8	○	●	●
M=6.5	○	●	●
M=4	○	●	●

Robinson Projection, centred on 0˚N,130˚E

2367 Events